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

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

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

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

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

The following example illustrates the changes :-

September 2002

NEIC ***01*** *18:45:41.7±1.7,21.70S×179.55W,h600*^{km}*,mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
IDC ***01*** *18:45:46.3±2.6,21.76S×179.70W,h627*^{km}*±37*^{km}*,mb3.5/4,*
mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:43.1±2.7**,22.3S**±0.2×**179.6W**±0.3**,h613**^{km}±42^{km}**,**
n22,σ**1**^{s}**15**/21**,mb4.4**/9**,1C,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HBZ	**Hicks Bay**	**15.41**	**186**	*e*P	**P**	**18 48 53.1**	**-1.7**
URZ	**Urewera**	**16.21**	**189**	P	**P**	**18 49 01.5**	**-0.9**
MRZ	**Mangatainoka R**	**18.81**	**192**	*e*P	**P**	**18 49 26.7**	**0.0**
DIW	**D'Urville Isla**	**19.30**	**195**	*e*P	**P**	**18 49 27.3**	**-3.9**
CAW	**Cannon Point**	**19.34**	**192**	*e*P	**P**	**18 49 31.7**	**+0.1**
OTW	**Orongorongo Tu**	**19.52**	**192**	*e*P	**P**	**18 49 33.0**	**-0.2**
MOW	**Moikau**	**19.61**	**192**	*e*P	**P**	**18 49 35.5**	**+1.5**
THZ	**Tophouse**	**20.46**	**196**	*e*P	**P**	**18 49 42.0**	**+0.2**
KHZ	**Kahutara**	**20.93**	**194**	P	**P**	**18 49 46.2**	**+0.2**
ARMA	**Armidale**	**27.03**	**246**	*e*P	**P**	**18 50 42.4**	**+2.3**
	4.9nm,0.5s,mb4.4						
CTA	**Charters Tower**	**31.93**	**267**	⇑*i*P	**P**	**18 51 22.3**	**+0.4**
	13nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**35.75**	**246**	*e*P	**P**	**18 51 55.3**	**+1.8**
	3.1nm,0.4s,mb4.2						
ASAR	**Alice Springs**	**42.74**	**259**	P	**P**	**18 52 50.1**	**+0.3**
	9.8nm,0.5s,mb4.6,baz=92,slow=8.2,SNR=47						
ASAR				S	**S**	**18 58 31.3**	**-0.1**
	1.0nm,0.8s,baz=95,slow=15,SNR=5.7						
ASPA	**Alice Springs**	**42.74**	**259**	*e*P	**P**	**18 52 50.1**	**+0.2**
WRA	**Warramunga Arr**	**42.96**	**264**	P	**P**	**18 52 51.0**	**-0.7**
	1.8nm,0.3s,mb4.0,baz=96,slow=7.8,SNR=93						
WRA				S	**S**	**18 58 33.0**	**-1.5**
	0.3nm,0.9s,baz=99,slow=14,SNR=3.0						
KAKA	**Kakadu**	**46.64**	**273**	*e*P	**P**	**18 53 18.2**	**-1.8**
	14nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.39**	**264**	*e*P	**P**	**18 53 54.3**	**-0.7**
	12nm,0.3s,mb4.8						
MBWA	**Marble Bar**	**56.08**	**259**	*e*P	**P**	**18 54 27.1**	**-0.7**
	11nm,0.6s,mb4.2						
CMAR	**Chiang Mai Arr**	**89.35**	**290**	P	**P**	**18 57 38.1**	**+1.0**
	1.3nm,0.8s,mb3.8,baz=135,slow=3.1,SNR=8.1						
ARCES	**ARCESS Array B**	**130.36**	**349**	PKP	PKP	19 03 43.7	-0.5
	0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5						
FINES	**FINESS Array B**	**137.02**	**342**	PKP	PKP	19 03 57.3	+0.5
	3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4						
MLR	**Muntele Rosu**	**148.85**	**324**	PKPbc	PKP	19 04 22.7	+5.2
	0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3						

Epicentral Estimates

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

Observational Data

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

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

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

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

ATH 01 00:01:13.3,38.63N×23.88E,h24^{km}±1^{km},MD3.1/10, ML3.4

NEIC 01 00:01:13.3,38.63N×23.88E,h24^{km},ML3.4(ATH),After ATH.

CSEM 01 00:01:14.0±0.1,38.54N×23.95E,h40^{km},ML3.4,Error ellipse: s-maj=2.3km s-min=0.8km az=95.0

THE 01 00:01:16.5,38.71N×23.94E,h20^{km}

ISC 01 00:01:13.6±0.7,38.62N±0.03×23.94E±0.08,h22^{km}±8^{km}, n20,σ1^{s}.12/24,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAR	**Parnis Oros**	**0.49**	**199**	*e*PB	**Pb**	**00 01 23.5**	**0.0**
MPAR				*e*SB	**Sb**	**00 01 31.0**	**+0.7**
AOS	**Alonnisos**	**0.55**	**356**	*e*Pg	**Pb**	**00 01 27.5**	**+2.9**
PTL	**Penteli**	**0.57**	**186**	*e*PN	**Pn**	**00 01 24.5**	**-1.7**
ATH	**Athens Observa**	**0.67**	**195**	*e*PB	**Pb**	**00 01 26.0**	**-0.5**
NSAL	**Nisos Salamina**	**0.80**	**208**	*e*PN	**Pn**	**00 01 28.5**	**-1.0**
MGER	**Gerania Oros**	**0.82**	**220**	*e*PB	**Pb**	**00 01 28.5**	**-0.6**
NEO	**Neokhori**	**0.88**	**321**	*e*PN	**Pn**	**00 01 30.0**	**-0.7**
NAIG	**Nisos Aigina**	**0.93**	**202**	*e*PN	**Pn**	**00 01 31.0**	**-0.3**
XOR	**Xorichti**	**0.94**	**322**	*e*Pg	**Pb**	**00 01 32.3**	**+1.1**
AGG	**Agios Georgios**	**1.32**	**288**	*e*Pg	**Pn**	**00 01 38.3**	**+1.4**
AGG				*e*Sg	**Sn**	**00 01 55.3**	**+1.4**
PAIG	**Paliouri**	**1.32**	**351**	*e*Pg	**Pn**	**00 01 37.4**	**+0.4**
PAIG				*e*Sg	**Sn**	**00 01 54.0**	**0.0**
LOS	**Limnos**	**1.59**	**34**	*e*Pg	**Pn**	**00 01 40.9**	**+0.1**
EVR	**Evrytania**	**1.69**	**281**	*e*PN	**Pn**	**00 01 43.0**	**+0.8**
OUR	**Ouranopolis**	**1.71**	**1**	*e*Pg	**Pn**	**00 01 42.9**	**+0.3**
PLG	**Polygyros**	**1.79**	**348**	*e*PB	**Pb**	**00 01 44.0**	**-1.6**
LIT	**Litokhoron**	**1.86**	**323**	*e*Pb	**Pb**	**00 01 44.7**	**-2.0**
APE	**Apeiranthos**	**2.00**	**140**	*e*PN	**Pn**	**00 01 48.5**	**+1.9**
SOH	**Sokhos**	**2.25**	**349**	*e*Pn	**Pn**	**00 01 50.5**	**+0.4**
SOH	**Sokhos**	**2.25**	**349**	*e*Pn	**Pn**	**00 01 50.5**	**+0.3**
GRG	**Griva**	**2.62**	**334**	*e*Pn	**Pn**	**00 01 55.4**	**-0.1**
GRG				*e*Sn	**Sn**	**00 02 25.2**	**-1.7**

NNC 01 00:06:43.4±5.2,39.53N×72.36E,h214^{km}±54^{km},mpv3.6, Error ellipse: s-maj=65.5km s-min=25.5km az=12.0

ISC 01 00:06:40.4±2.5,39.3N±0.2×72.4E±0.2,h194^{km}±24^{km},n11, σ0^{s}.96/14,1C-5D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.00**	**19**	P	**P**	**00 07 28.9**	**-1.3**
	SNR=144						
UCH	**Uchtor**	**3.34**	**28**	P	**P**	**00 07 33.5**	**-1.0**
	SNR=10						
EKS2	**Erkin-Say**	**3.52**	**17**	P	**P**	**00 07 37.8**	**+1.2**
	SNR=7.1						
KZA	**Kyzart**	**3.53**	**37**	P	**P**	**00 07 36.2**	**-0.6**
	SNR=14						
AAK	**Ala-Archa**	**3.70**	**25**	P	**P**	**00 07 39.0**	**+0.2**
	SNR=7.5						
AAK	**Ala-Archa**	**3.70**	**25**	P	**P**	**00 07 39.5**	**+0.7**
	8.9nm,0.5s						
AAK				⇓S	**S**	**00 08 24.6**	**+0.7**
	33nm,0.7s						
KK31	**Karatay Array**	**4.05**	**340**	⇓P	**P**	**00 07 42.7**	**-0.5**
	4.3nm,0.3s,baz=145,slow=11,SNR=82						
KK31				⇑S	**S**	**00 08 31.6**	**-0.2**
	8.4nm,0.3s,baz=154,slow=15,SNR=4.2						
ULHL	**Ulahol**	**4.16**	**44**	P	**P**	**00 07 44.9**	**+0.3**
	SNR=11						
USP	**Ospenovka**	**4.27**	**21**	P	**P**	**00 07 47.0**	**+1.0**
	SNR=6.1						
MK31	**Makanchi Array**	**10.42**	**41**	⇓P	**P**	**00 09 05.0**	**-0.9**
	0.9nm,0.8s,baz=214,slow=11,SNR=12						
AB31	**Akbulak array**	**13.34**	**322**	⇓P	**P**	**00 09 45.5**	**+2.5**
	0.9nm,0.5s,baz=128,slow=13,SNR=32						
AB31				⇓S	**S**	**00 12 06.4**	**-0.7**
	0.9nm,0.5s						

IDC 01 00:15:00.4±1.5,8.66S×130.23E,mb3.8/3,mb1 4.0/4, mb1mx3.8/13,mbtmp3.9/4,ML4.0/1,Error ellipse: s-maj=76.0km s-min=26.0km az=77.0

ISC 01 00:15:01.9±1.1,8.92S±0.07×130.3E±0.1,h33^{km},n6, σ1^{s}.32/9,mb3.8/3,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.18**	**206**	Pn	**P**	**00 17 30.7**	**+1.9**
	0.9nm,0.3s,baz=45,slow=12,SNR=18						
FITZ				Sn	**S**	**00 19 21.8**	**-1.2**
	1.9nm,0.3s,baz=140,slow=12,SNR=4.0						
WRA	**Warramunga Arr**	**11.64**	**161**	Pn	**P**	**00 17 47.9**	**-0.9**
	0.2nm,0.3s,baz=340,slow=13,SNR=4.4						
WRA				Sn	**S**	**00 19 57.5**	**-1.1**
	0.8nm,0.3s,baz=336,slow=21,SNR=8.0						
ASAR	**Alice Springs**	**15.07**	**167**	Pn	**P**	**00 18 33.9**	**-0.3**
	0.1nm,0.3s,baz=344,slow=14,SNR=4.1						
ASAR				Sn	**S**	**00 21 23.4**	**+2.8**
	0.2nm,0.3s,baz=357,slow=29,SNR=6.4						
STKA	**Stephens Creek**	**25.15**	**157**	P	**P**	**00 20 29.7**	**+4.0**
	0.9nm,0.5s,mb3.5,baz=328,slow=13,SNR=3.3						
SONM	**Songino Array**	**60.34**	**342**	P	**P**	**00 25 09.3**	**-0.6**
	0.5nm,0.6s,mb3.7,baz=164,slow=7.0,SNR=5.0						
MKAR	**Makanchi Array**	**69.97**	**327**	P	**P**	**00 26 12.4**	**+0.3**
	1.5nm,0.7s,mb4.0,baz=124,slow=7.8,SNR=17						

IDC 01 00:24:49.3±1.8,2.63S×126.96E,mb3.8/2,mb1 4.3/4, mb1mx3.9/17,mbtmp4.1/4,ML4.5/1,Error ellipse: s-maj=114.8km s-min=24.1km az=68.0,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.43**	**185**	Pn	P	00 28 30.5	+0.3
	1.6nm,0.3s,baz=23,slow=7.0,SNR=16						
WRA	**Warramunga Arr**	**18.65**	**158**	P	P	00 29 09.1	-1.8
	0.3nm,0.3s,baz=335,slow=12,SNR=5.4						
ASAR	**Alice Springs**	**21.96**	**163**	P	P	00 29 44.0	-2.6
	4.1nm,0.7s,baz=341,slow=11,SNR=41						
MKAR	**Makanchi Array**	**62.94**	**327**	P	P	00 35 17.8	-2.1
	0.6nm,0.6s,baz=128,slow=7.7,SNR=8.3						

IDC 01 00:43:30.4±1.2,7.48S×155.79E,mb4.0/5,mb1 4.2/6, mb1mx4.0/16,mbtmp4.1/6,ML4.1/1,Error ellipse: s-maj=28.2km s-min=27.1km az=26.0

ISC 01 00:43:33.7±0.8,7.5S±0.2×155.82E±0.09,h33^{km},n6, σ0^{s}.57/7,mb3.9/5,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.51**	**115**	Pn	**Pn**	**00 44 41.1**	**-0.4**
	9.3nm,0.3s,baz=200,slow=12,SNR=3.6						
HNR				Sn	**Sn**	**00 45 33.8**	**+0.3**
	8.7nm,0.3s,baz=22,slow=19,SNR=4.9						
WRA	**Warramunga Arr**	**24.21**	**237**	P	**P**	**00 48 49.5**	**+0.8**
	1.3nm,0.4s,mb3.7,baz=62,slow=9.5,SNR=8.8						
ASAR	**Alice Springs**	**26.46**	**230**	P	**P**	**00 49 09.0**	**-0.8**
	0.7nm,0.7s,mb3.3,baz=71,slow=8.5,SNR=4.9						
SONM	**Songino Array**	**70.21**	**327**	P	**P**	**00 54 45.6**	**+0.3**
	1.3nm,0.8s,mb3.9,baz=137,slow=6.7,SNR=11						
MKAR	**Makanchi Array**	**84.33**	**319**	P	**P**	**00 56 04.2**	**+0.4**
	2.1nm,0.6s,mb4.5,baz=103,slow=6.3,SNR=26						
ZAL	**Zalesovo**	**85.07**	**326**	P	**P**	**00 56 06.8**	**-0.6**
	1.2nm,0.6s,mb4.2,baz=16,slow=1.4,SNR=5.8						

DJA 01 00:59:02.7±0.8,9.67S×115.17E,h33^{km},ML4.7/4,4C-5D, Error ellipse: s-maj=18.9km s-min=7.7km az=1.0,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	**Rata**	**1.01**	**21**	⇑*e*Pn	Pn	00 59 18.3	-2.4
	1μm,0.2s						
RATI				⇓*e*Sn	Sn	00 59 30.2	-3.6
KEDI	**Kedomdong**	**1.50**	**38**	⇑*e*Pg	P	00 59 26.2	-1.3
	270nm,0.2s						
KEDI	**Kedomdong**	**1.50**	**38**	⇓*e*Pn	Pn	00 59 27.1	-0.6
KEDI				⇓*e*Sn	Sn	00 59 43.8	-2.5
SRDI	**Scrawed**	**1.56**	**319**	⇑*e*Pn	Pn	00 59 26.9	-1.7
	1μm,0.2s						
SRDI				⇓*e*Sn	Sn	00 59 45.4	-2.5
KELI	**Kelakatan**	**1.60**	**335**	⇓*e*Pn	Pn	00 59 27.7	-1.4
	691nm,0.2s						
KELI				⇑*e*Sn	Sn	00 59 47.4	-1.4

NIED 01 01:01:00,35.70N×140.70E,h62^{km},Mw4.1 Best double couple: $M_0$1.61×10^{15} NP1:ϕ_s11°,δ88°,λ107°. NP2:ϕ_s108°, δ17°,λ7°.

JMA 01 01:01:25.3±0.1,35.76N×140.67E,h49^{km}±1^{km},M3.9

JMA Felt I J1.

IDC 01 01:01:26.2±2.9,35.73N×140.65E,h46^{km}±26^{km},mb3.4/5, mb1 3.6/7,mb1mx3.4/23,mbtmp3.7/7,Error ellipse: s-maj=37.4km s-min=14.3km az=77.0

NEIC 01 01:01:28.4±1.8,35.76N×140.50E,h67^{km}±14^{km},mb4.3/2, Error ellipse: s-maj=22.1km s-min=16.0km az=78.0

ISC 01 01:01:24.7±0.6,35.72N±0.05×140.74E±0.09,h57^{km}±5^{km}, n22,σ0^{s}.75/26,mb3.8/7,1C-3D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.10**	**98**	⇑P	**P**	**01 01 33.2**	**0.0**
CHOJ				S	**S**	**01 01 39.3**	**-0.2**
JCN	**Nagara**	**0.53**	**236**	⇓P	**P**	**01 01 37.3**	**+0.6**
JYT	**Yasato**	**0.68**	**319**	P	**P**	**01 01 37.9**	**-0.5**
BSO4	**Boso 4**	**0.80**	**204**	⇓P	**P**	**01 01 40.5**	**+0.5**
JHO	**Hitachi**	**0.90**	**351**	⇓P	**P**	**01 01 41.5**	**+0.1**
BSO3	**Boso 3**	**0.93**	**192**	P	**P**	**01 01 42.0**	**+0.2**
BSO1	**Boso 1**	**1.08**	**169**	P	**P**	**01 01 44.2**	**+0.3**
JAG	**Ashikaga**	**1.26**	**305**	P	**P**	**01 01 45.7**	**-0.7**
JOD2	**Odawara 2**	**1.42**	**252**	P	**P**	**01 01 48.4**	**-0.3**
JIM2	**Oshima 3**	**1.46**	**227**	P	**P**	**01 01 48.4**	**-0.9**
MJAR	**Matsushiro Arr**	**2.21**	**293**	P	**P**	**01 02 00.0**	**+0.3**
	18nm,0.3s,baz=92,slow=14,SNR=113						
MAJO	**Matsushiro**	**2.21**	**293**	*e*P	**P**	**01 02 00.6**	**+0.9**
MAT	**Matsushiro**	**2.21**	**293**	*e*P	**P**	**01 02 00.0**	**+0.3**
MAT				*e*S	**S**	**01 02 34.0**	**+8.2**
MAT	**Matsushiro**	**2.21**	**293**	P	**P**	**01 02 00.4**	**+0.7**
MAT				S	**S**	**01 02 27.7**	**+1.9**
JHJ	**Hachijo jima 2**	**2.71**	**197**	P	**P**	**01 02 05.5**	**-1.4**
	61nm,0.3s,baz=71,slow=23,SNR=13						
JHJ				S	**S**	**01 02 39.0**	**+0.5**
	62nm,0.3s,baz=65,slow=23,SNR=7.3						
ENH	**Enshi**	**26.70**	**267**	*e*P	**P**	**01 06 58.9**	**-1.6**
	6.0nm,0.6s,mb4.3						
SONM	**Songino Array**	**28.09**	**306**	P	**P**	**01 07 12.3**	**-0.7**
	0.7nm,0.7s,mb3.4,baz=108,slow=9.1,SNR=5.5						
MKAR	**Makanchi Array**	**44.37**	**303**	P	**P**	**01 09 31.1**	**+0.2**
	1.0nm,0.6s,mb3.7,baz=90,slow=9.2,SNR=10						
CHKZ	**Chkalovo**	**50.82**	**314**	*e*P	**P**	**01 10 20.7**	**-0.5**
	3.5nm,1.2s,mb4.2						
ILAR	**Eielson Array**	**50.90**	**32**	P	**P**	**01 10 22.5**	**+0.8**
	0.6nm,0.8s,mb3.6,baz=268,slow=6.5,SNR=4.5						
WRA	**Warramunga Arr**	**55.69**	**187**	P	**P**	**01 10 57.4**	**-0.2**
	0.6nm,0.5s,mb3.9,baz=2.9,slow=7.2,SNR=3.4						
ASAR	**Alice Springs**	**59.41**	**187**	P	**P**	**01 11 25.2**	**+1.4**
	0.2nm,0.4s,mb3.5,baz=18,slow=10.0,SNR=4.1						

IDC 01 01:06:44.2±9.6,1.83N×96.61E,mb3.8/4,mb1 4.0/5, mb1mx3.7/20,mbtmp3.8/5,ML3.9/1,MS3.6/2,Ms1 3.7/2, ms1mx3.1/17,Error ellipse: s-maj=196.3km s-min=99.2km az=145.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.68**	**8**	Pn	P	01 10 39.5	-1.7
	0.2nm,0.3s,baz=198,slow=11,SNR=8.9						
CMAR				LR	LR	01 17 22.8	
	comp=Z,88nm,19.0s,baz=185,slow=38						
MKAR	**Makanchi Array**	**46.49**	**346**	P	P	01 15 13.1	-1.9
	1.3nm,0.8s,baz=153,slow=8.1,SNR=10						
SONM	**Songino Array**	**46.60**	**9**	P	P	01 15 13.9	-2.1
	0.2nm,0.4s,baz=202,slow=6.7,SNR=4.9						
ZAL	**Zalesovo**	**52.84**	**351**	P	P	01 16 02.3	-1.5
	1.1nm,0.3s,baz=197,slow=1.4,SNR=4.5						
BVAR	**Borovoye Array**	**55.47**	**341**	P	P	01 16 20.2	-2.9
	1.0nm,0.8s,baz=149,slow=8.6,SNR=6.1						
MAW	**Mawson**	**73.19**	**193**	LR	LR	01 46 44.1	
	comp=Z,86nm,18.9s,baz=70,slow=33						

IDC 01 01:09:57.9±2.1,6.66S×129.47E,mb3.8/2,mb1 4.2/5, mb1mx3.9/15,mbtmp4.0/5,ML4.1/3,Error ellipse: s-maj=72.4km s-min=25.3km az=72.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.97**	**198**	Pn	P	01 12 49.9	-3.1
	3.1nm,0.3s,baz=25,slow=9.3,SNR=45						
FITZ				Sn	S	01 14 50.1	-18
	2.9nm,0.3s,baz=61,slow=7.9,SNR=5.8						
WRA	**Warramunga Arr**	**14.03**	**161**	Pn	P	01 13 18.1	-2.3
	1.0nm,0.3s,baz=339,slow=13,SNR=13						
WRA				Sn	S	01 15 40.4	-18
	2.8nm,0.3s,baz=334,slow=22,SNR=13						
ASAR	**Alice Springs**	**17.44**	**166**	P	P	01 14 03.0	-1.3
	0.4nm,0.3s,baz=346,slow=10,SNR=11						
ASAR				S	S	01 17 05.8	-12
	0.9nm,0.3s,baz=318,slow=15,SNR=9.2						
CMAR	**Chiang Mai Arr**	**39.11**	**310**	P	P	01 17 27.6	-1.3
	1.3nm,0.7s,baz=132,slow=7.6,SNR=5.7						
MKAR	**Makanchi Array**	**67.65**	**327**	P	P	01 20 56.5	-2.5
	0.4nm,0.3s,baz=118,slow=7.7,SNR=4.7						

IDC 01 01:40:40.8±9.3,0.09N×98.36E,mb3.9/4,mb1 4.0/4, mb1mx3.7/17,mbtmp3.9/4,Error ellipse: s-maj=222.6km s-min=105.0km az=137.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**48.07**	**7**	P	P	01 49 22.1	-1.9
	0.3nm,0.4s,baz=191,slow=8.1,SNR=5.7						
MKAR	**Makanchi Array**	**48.60**	**345**	P	P	01 49 26.1	-2.0
	0.9nm,0.4s,baz=155,slow=7.8,SNR=11						
ZAL	**Zalesovo**	**54.83**	**350**	P	P	01 50 12.3	-2.6
	0.9nm,0.3s,baz=253,slow=3.6,SNR=3.7						
FINES	**FINESS Array B**	**81.51**	**332**	P	P	01 52 60.0	-1.3
	0.9nm,0.8s,baz=117,slow=4.3,SNR=5.9						

CASC 01 01:44:14.6±1.6,13.91N×91.56W,h23^{km}±7^{km},MD4.2, 7C-1D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**1.11**	**76**	⇑*e*P	Pn	01 44 34.0	-0.8
IXG				*e*S	Sb	01 44 50.2	+1.2
RBDL	**Robledal**	**1.83**	**84**	⇓*e*P	Pn	01 44 45.2	0.0
RBDL				*e*S	Sn	01 45 09.1	+1.2
RTR	**El Retiro**	**1.86**	**90**	⇑*e*P	Pn	01 44 45.7	0.0
RTR				*e*S	Sn	01 45 10.1	+1.5
SBLS	**San Blas**	**1.89**	**92**	⇑*e*P	Pn	01 44 45.6	-0.4
SBLS				*e*S	Sn	01 45 09.2	-0.1
SNJE	**San Jose**	**1.90**	**91**	*e*P	Pn	01 44 45.9	-0.3
SNJE				*e*S	Sn	01 45 10.0	+0.3
MRL	**Marmol**	**2.15**	**57**	⇑*e*P	Pn	01 44 49.4	-0.3
MRL				*e*S	Sn	01 45 17.1	+1.2
BOQS	**Boqueron**	**2.23**	**94**	⇑*e*P	Pn	01 44 50.6	-0.3
BOQS				*e*S	Sn	01 45 17.1	-0.7
LFRS	**El Faro**	**2.45**	**96**	⇑*e*P	Pn	01 44 53.7	-0.3
LFRS				*e*S	Sn	01 45 22.4	-1.2
LCBS	**La Ceiba**	**2.52**	**96**	⇑*e*P	Pn	01 44 55.0	-0.1
LCBS				*e*S	Sn	01 45 26.1	+0.6

CSEM 01 02:06:17.3±0.8,38.61N×28.60W,h10^{km},ML2.4,Error ellipse: s-maj=29.1km s-min=17.0km az=20.0,After PDA

PDA 01 02:06:17.3±1.2,38.61N×28.60W,h10^{km},MD3.2,ML2.4, Error ellipse: s-maj=4.8km s-min=3.0km az=175.0

SVSA 01 02:06:17.3±1.2,38.61N×28.60W,h10^{km},MD3.2,ML2.4, Error ellipse: s-maj=4.8km s-min=3.0km az=175.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.08**	**281**	*i* P	Pg	02 06 19.1	-0.6
PCED				*i* S	Sg	02 06 21.4	+0.1
	1μm,0.2s						
CALA	**Caldeira**	**0.08**	**248**	*i* P	Pg	02 06 19.6	-0.2
CALA				*e*S	Sg	02 06 21.6	+0.2
HOR	**Horta**	**0.09**	**194**	*i* P	Pg	02 06 19.1	-0.7
HOR				*i* S	Sg	02 06 21.2	-0.3
PICO	**Pico**	**0.18**	**129**	*e*P	Pg	02 06 20.6	-0.7
PICO				*e*S	Sg	02 06 23.8	-0.2
PMAN	**Manadas**	**0.40**	**87**	*i* P	Pg	02 06 23.9	-1.6
PMAN				*e*S	Sg	02 06 29.7	-1.4
	127nm,0.2s						
PSBA	**Serra de Santa**	**1.01**	**81**	*e*P	Pb	02 06 32.5	-4.0
PSBA				*e*S	Sb	02 06 44.9	-4.7
	14nm,0.1s						

CSEM 01 02:09:58.9±0.1,41.99N×23.16E,h2^{km},MD2.6,Error ellipse: s-maj=3.1km s-min=2.3km az=115.0

ATH 01 02:09:59.1,41.90N×23.07E,h6^{km},MD3.2/3

SOF 01 02:09:59.4,41.95N×23.21E,h8^{km},MD2.6

THE 01 02:10:03.7,41.77N×23.08E,h2^{km},ML3.1

ISC 01 02:09:59.1±0.7,41.93N±0.04×23.10E±0.06,h10^{km},n19, σ0^{s}.95/26,2C-1D,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.06**	**189**	*i* Pg	**Pg**	**02 10 02.5**	**+1.2**
MMB	**Musomiste**	**0.58**	**126**	*i* Pg	**Pg**	**02 10 10.8**	**-0.1**
VTS	**Vitosha**	**0.67**	**7**	*i* Pg	**Pg**	**02 10 12.5**	**-0.1**
VAY	**Valandovo**	**0.72**	**213**	⇑*i*Pg	**Pg**	**02 10 14.2**	**+0.5**
VAY				*i*		02 10 16.2	
VAY				*i* Sg	**Sg**	**02 10 24.2**	**+0.7**
VAY	**Valandovo**	**0.72**	**213**	⇑*i*Pg	**Pg**	**02 10 14.2**	**+0.5**
VAY				*i* Sg	**Sg**	**02 10 24.2**	**+0.7**
NVR	**Nevrokopi**	**0.81**	**135**	*e*PB	**Pb**	**02 10 14.5**	**-0.4**
PGB	**Panagyurishte**	**1.01**	**52**	*i* Pg	**Pg**	**02 10 17.5**	**-1.8**
GRG	**Griva**	**1.10**	**208**	*e*Pg	**Pg**	**02 10 21.3**	**0.0**
GRG				*e*Sg	**Sg**	**02 10 35.9**	**-0.2**
GRG	**Griva**	**1.10**	**208**	*e*Pg	**Pg**	**02 10 21.3**	**+0.1**
GRG				*e*Sg	**Sg**	**02 10 35.8**	**-0.2**
SOH	**Sokhos**	**1.12**	**170**	*e*Pg	**Pg**	**02 10 22.3**	**+0.7**
SOH				*e*Sg	**Sg**	**02 10 36.0**	**-0.7**
PLD	**Plovdiv**	**1.21**	**81**	*e*P	**Pb**	**02 10 22.8**	**+1.1**
RZN	**Rozhen**	**1.23**	**101**	*i* P	**Pb**	**02 10 22.0**	**-0.1**
BARS	**Barje**	**1.30**	**314**	⇓*i*Pg	**Pg**	**02 10 34.9**	**+10**
BARS				Sg	**Sg**	**02 10 52.2**	**+10**
PLG	**Polygyros**	**1.58**	**170**	*e*PB	**Pb**	**02 10 27.8**	**-0.2**
FNA	**Florina**	**1.73**	**229**	*e*Pg	**Pg**	**02 10 32.5**	**-1.1**
FNA	**Florina**	**1.73**	**229**	*e*Pg	**Pg**	**02 10 32.5**	**-1.2**
OUR	**Ouranopolis**	**1.73**	**157**	*e*Pg	**Pg**	**02 10 31.9**	**-1.8**
KDZ	**Kurdzhali**	**1.76**	**98**	*e*P	**Pn**	**02 10 30.0**	**+0.1**
RDO	**Rodhopi**	**1.99**	**112**	*e*PN	**Pn**	**02 10 35.3**	**+2.0**
RDO				*e*SN	**Sn**	**02 11 02.4**	**+3.9**

NEIC 01 02:18:25.6±0.4,0.33N×97.55E,mb4.5/1,Error ellipse: s-maj=14.0km s-min=10.1km az=59.0

IDC 01 02:18:25.7±0.5,0.37N×97.58E,h27^{km}±2^{km},mb4.0/14, mb1 4.2/14,mb1mx4.0/22,mbtmp4.2/14,MS3.6/1, Ms1 3.6/1,ms1mx2.7/24,Error ellipse: s-maj=22.0km s-min=11.7km az=51.0

ISC 01 02:18:24.0±0.6,0.4N±0.1×97.6E±0.1,h28^{km}, h28^{km}±.6^{km}:pP-P,n21,σ0^{s}.57/17,mb4.2/15,MS3.5/1, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.76**	**32**	*e*P	**Pn**	**02 19 50.1**	**+0.2**
NWAO	**Narrogin (SRO)**	**37.96**	**153**	LR	LR	02 39 25.2	
	comp=Z,86nm,20.0s,MS3.5,baz=308,slow=33						
WRA	**Warramunga Arr**	**41.29**	**121**	P	**P**	**02 26 08.5**	**-0.4**
	1.2nm,0.4s,mb3.9,baz=302,slow=8.9,SNR=5.5						
WRA				pP	pP	02 26 17.1	-0.2
	1.4nm,0.6s,baz=302,slow=9.0,SNR=3.5						
WRA				sP	sP	02 26 21.1	+0.2
	1.4nm,0.6s,baz=302,slow=9.0,SNR=4.7						
ASAR	**Alice Springs**	**42.61**	**127**	P	**P**	**02 26 20.1**	**+0.3**
	1.2nm,0.5s,mb3.9,baz=296,slow=7.8,SNR=11						
ASAR				pP	pP	02 26 27.2	-1.0
	1.3nm,0.6s,baz=297,slow=7.7,SNR=5.9						
ASAR				PcP	PcP	02 28 12.4	+0.1
	0.7nm,0.5s,baz=298,slow=3.0,SNR=5.7						
SONM	**Songino Array**	**47.88**	**8**	P	**P**	**02 27 02.4**	**+0.8**
	1.0nm,0.4s,mb4.2,baz=191,slow=10,SNR=15						
SONM				pP	pP	02 27 10.3	+0.2
	2.0nm,0.6s,baz=191,slow=8.9,SNR=14						
SONM				PcP	PcP	02 28 30.1	-0.1
	0.7nm,0.6s,baz=190,slow=3.6,SNR=3.4						
SONM				pPcP		02 28 38.7	
	0.6nm,0.5s,baz=185,slow=4.2,SNR=3.7						
MKAR	**Makanchi Array**	**48.12**	**346**	P	**P**	**02 27 03.8**	**+0.3**
	1.0nm,0.5s,mb4.1,baz=156,slow=8.5,SNR=14						
MKAR				pP	pP	02 27 11.7	-0.3
	1.9nm,0.6s,baz=153,slow=8.1,SNR=11						
STKA	**Stephens Creek**	**52.53**	**132**	P	**P**	**02 27 37.2**	**-0.2**
	1.2nm,0.6s,mb4.0,baz=332,slow=14,SNR=3.5						
ZAL	**Zalesovo**	**54.41**	**351**	P	**P**	**02 27 51.0**	**+0.2**
	2.6nm,0.7s,mb4.3,baz=279,slow=6.6,SNR=11						
BVAR	**Borovoye Array**	**57.14**	**341**	P	**P**	**02 28 09.2**	**-1.4**
	2.0nm,0.7s,mb4.3,baz=149,slow=8.6,SNR=15						
BVAR				pP	pP	02 28 18.0	-1.3
	2.1nm,0.8s,baz=149,slow=8.6,SNR=8.6						
CHKZ	**Chkalovo**	**57.62**	**341**	*e*P	**P**	**02 28 13.1**	**-0.8**
	4.1nm,0.8s,mb4.5						
CHKZ				*e*pP	pP	02 28 21.8	-0.8
ASF	**Jabal al Asfar**	**65.24**	**305**	P	**P**	**02 29 06.2**	**+0.6**
	1.8nm,0.8s,mb4.1,baz=49,slow=9.3,SNR=3.9						
MATP	**Matopo**	**70.57**	**248**	P	**P**	**02 29 39.4**	**+0.4**
	2.6nm,0.6s,mb4.3,baz=90,slow=7.7,SNR=10						
MATP				pP	pP	02 29 48.8	+0.9
	2.6nm,0.8s,baz=93,slow=7.8,SNR=4.2						
MATP	**Matopo**	**70.57**	**248**	P	**P**	**02 29 39.4**	**+0.4**
MATP				pP	pP	02 29 48.8	+0.9
AKASG	**Malin Array Be**	**76.13**	**322**	P	**P**	**02 30 10.1**	**-1.0**
	2.0nm,0.7s,mb4.2,baz=90,slow=4.5,SNR=11						
AKASG				pP	pP	02 30 19.4	-0.6
	3.6nm,0.7s,baz=88,slow=4.7,SNR=9.6						
MLR	**Muntele Rosu**	**76.92**	**317**	P	**P**	**02 30 15.7**	**+0.1**
	3.1nm,0.7s,mb4.3,baz=159,slow=7.4,SNR=6.4						
MLR				pP	pP	02 30 25.4	+0.9
	4.0nm,0.7s,baz=144,slow=5.6,SNR=4.7						
FINES	**FINESS Array B**	**80.89**	**333**	P	**P**	**02 30 36.9**	**0.0**
	1.1nm,0.6s,mb4.0,baz=108,slow=6.0,SNR=7.5						
FINES				pP	pP	02 30 46.0	+0.1
	4.0nm,1.0s,baz=90,slow=11,SNR=2.2						
ARCES	**ARCESS Array B**	**83.43**	**340**	P	**P**	**02 30 50.2**	**+0.4**
	5.2nm,0.9s,mb4.5,baz=90,slow=4.5,SNR=4.5						
ARCES				pP	pP	02 30 59.0	+0.1
	1.8nm,0.6s,baz=104,slow=5.0,SNR=2.2						
GERES	**GERESS Array B**	**85.67**	**319**	P	**P**	**02 31 01.9**	**+0.3**
	0.9nm,0.8s,mb4.0,baz=90,slow=4.0,SNR=7.2						
GERES				pP	pP	02 31 11.7	+1.1
	1.8nm,0.9s,baz=76,slow=5.5,SNR=7.0						
TXAR	**Lajitas Array**	**144.16**	**33**	PKP	PKPdf	02 37 58.2	-4.6
	0.5nm,0.7s,baz=294,slow=1.3,SNR=7.5						
TXAR				pPKP		02 38 08.3	
	0.3nm,0.6s,baz=71,slow=0.9,SNR=3.4						
TXAR	**Lajitas Array**	**144.16**	**33**	PKP	PKPdf	02 37 58.2	-4.6
TXAR				pPKP		02 38 08.3	
CPUP	**Villa Florida**	**144.65**	**221**	PKP	PKPdf	02 37 59.3	-4.5
	6.2nm,0.7s,baz=129,slow=2.9,SNR=24						
CPUP				pPKP		02 38 08.9	
	5.3nm,0.8s,baz=155,slow=4.4,SNR=10						

BGR 01 02:25:49.8±0.2,48.36N×6.65E,h10^{km},ML1.7/2,Error ellipse: s-maj=2.2km s-min=2.2km az=89.0

STR 01 02:25:50.1±0.1,48.34N×6.64E,h5^{km}±1^{km},Ml2.2,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0

CSEM 01 02:25:50.0±0.1,48.35N×6.63E,h12^{km},ML2.5/19,Error ellipse: s-maj=1.0km s-min=0.7km az=4.0

LDG 01 02:25:50.1±0.0,48.35N×6.62E,h11^{km},Md2.7/2,Ml2.4/20, Error ellipse: s-maj=0.8km s-min=0.6km az=167.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECH	**Echery**	**0.38**	**110**	*e*Pg	Pg	02 25 57.3	-0.7
	SNR=15						
ECH				*e*Sg	Sg	02 26 02.1	-1.2
	SNR=12						
ECH	**Echery**	**0.38**	**110**	Pg	Pg	02 25 57.3	-0.7
ECH				Sg	Sg	02 26 02.0	-1.3
HAU	**Haudompre**	**0.39**	**208**	*e*Pg	Pg	02 25 57.8	-0.4
HAU				*e*Sg	Sg	02 26 02.6	-1.0
	32nm,0.2s						
CDF	**Champ du Feu**	**0.44**	**82**	*e*Pg	Pg	02 25 58.4	-0.7
CDF				*e*Pn	Pn	02 26 00.6	-1.3
CDF				*e*Sg	Sg	02 26 04.0	-1.1
	28nm,0.3s						
THEF	**They Montfort**	**0.44**	**254**	*e*Pg	Pg	02 25 58.8	-0.3
	SNR=7.8						
THEF				*e*Sg	Sg	02 26 04.9	-0.4

	SNR=1.8						
THEF	**They Montfort**	**0.44**	**254**	Pg	Pg	02 25 58.8	-0.4
THEF				Sg	Sg	02 26 04.8	-0.4
WLS	**Welschbruch**	**0.49**	**82**	*e*Pg	Pg	02 25 59.4	-0.7
	SNR=9.0						
WLS				*e*Sg	Sg	02 26 05.7	-1.1
	SNR=2.9						
WLS	**Welschbruch**	**0.49**	**82**	Pg	Pg	02 25 59.4	-0.7
WLS				Sg	Sg	02 26 05.9	-0.9
HINF	**Hinteralfeld**	**0.56**	**164**	*e*Pg	Pg	02 26 00.5	-0.9
HINF				*e*Pn	Pn	02 26 02.3	-1.3
HINF				*e*Sg	Sg	02 26 07.4	-1.5
HINF				*e*Sn	Sn	02 26 10.4	-2.3
	22nm,0.2s						
MOF	**Molkenrain**	**0.60**	**145**	*e*Pg	Pg	02 26 01.3	-1.0
	SNR=2.8						
MOF				*e*Sg	Sg	02 26 09.6	-1.0
	SNR=2.8						
LIBD	**Limburg**	**0.68**	**107**	Pg	Pg	02 26 03.6	-0.3
RFYF	**Reffroy**	**0.81**	**290**	*e*Pn	Pn	02 26 05.8	-1.5
RFYF				*e*P		02 26 06.6	
	baz=106						
RFYF				*e*Sg	Sg	02 26 16.1	-1.3
RFYF				*e*Sn	Sn	02 26 17.3	-2.0
	28nm,0.2s,baz=117						
LANF	**Langenberg**	**1.01**	**51**	*e*Pg	Pg	02 26 08.6	-1.7
	SNR=2.5						
LANF				*e*Sg	Sg	02 26 21.8	-1.9
	SNR=1.3						
LOMF	**Lomont**	**1.01**	**172**	*e*Pg	Pg	02 26 09.3	-1.0
	SNR=1.7						
LOMF				*e*Sg	Sg	02 26 22.4	-1.5
	SNR=1.7						
FELD	**Feldberg**	**1.04**	**117**	*e*Pg	Pg	02 26 09.9	-1.1
	SNR=14						
FELD				*e*Sg	Sg	02 26 21.6	-3.2
	SNR=12						
FELD	**Feldberg**	**1.04**	**117**	Pg	Pg	02 26 09.7	-1.3
MEZF	**Maizieres J'vi**	**1.06**	**279**	*e*Pn	Pn	02 26 08.9	-1.8
MEZF				*e*Pg	Pg	02 26 09.9	-1.4
MEZF				*e*P		02 26 10.8	
MEZF				*e*Sn	Sn	02 26 22.7	-2.8
MEZF				*e*Sg	Sg	02 26 23.8	-1.7
	18nm,0.2s,baz=105						
BBS	**Basel-Blauen**	**1.07**	**146**	*e*Pg	Pg	02 26 10.2	-1.3
	SNR=3.6						
BBS				*e*Sg	Sg	02 26 23.2	-2.7
	SNR=1.2						
BBS	**Basel-Blauen**	**1.07**	**146**	Pg	Pg	02 26 10.1	-1.4
BBS				Sg	Sg	02 26 24.3	-1.5
SFTF	**Sexfontaines**	**1.07**	**263**	*e*Pg	Pg	02 26 10.1	-1.4
	baz=87						
SFTF				*e*P		02 26 11.1	
	baz=90						
SFTF				*e*Sn	Sn	02 26 23.1	-2.7
SFTF				*e*Sg	Sg	02 26 24.3	-1.5
	21nm,0.2s,baz=82						
BFO	**Black Forest**	**1.14**	**90**	*e*Pn	Pn	02 26 10.4	-1.5
	SNR=2.1						
BFO				*e*Pg	Pg	02 26 11.2	-1.7
BFO				*e*Sg	Sg	02 26 24.3	-3.8
	SNR=7.1						
WLF	**Walferdange**	**1.35**	**347**	*e*Pn	Pn	02 26 12.3	-2.6
	SNR=1.0						
WLF				*e*Pg	Pg	02 26 15.9	-1.3
WLF				*e*Sg	Sg	02 26 31.6	-3.6
	SNR=3.4						
KTD	**Kalmit**	**1.37**	**44**	*e*Pg	Pg	02 26 15.7	-1.8
	SNR=4.4						
KTD				*e*Sg	Sg	02 26 34.1	-1.7
	SNR=4.4						
SPAK	**Spaichingen**	**1.47**	**99**	*e*Sg	Sg	02 26 35.6	-3.5
	SNR=1.7						
ABH	**Alteburg**	**1.65**	**21**	*e*Sg	Sg	02 26 41.6	-3.5
	SNR=2.4						
CABF	**La Chapelle**	**1.78**	**192**	*e*Pn	Pn	02 26 19.4	-1.7
CABF				*e*Pg	Pg	02 26 23.5	-2.2
CABF				*e*Sn	Sn	02 26 40.1	-3.7
CABF				*e*Sg	Sg	02 26 46.3	-3.1
	15nm,0.7s						
TOD	**Tromm**	**1.91**	**48**	*e*Sg	Sg	02 26 50.0	-3.7
	SNR=2.7						
GIVF	**Givet**	**2.11**	**327**	*e*Pn	Pn	02 26 23.3	-2.6
LOR	**Lormes**	**2.15**	**241**	*e*Pn	Pn	02 26 24.2	-2.3
	baz=65						
LOR				*e*Pg	Pg	02 26 30.3	-2.9
	baz=61						
LOR				*e*Sg	Sg	02 26 56.9	-5.0
	8.3nm,0.2s,baz=63						
TNS	**Taunus Mts**	**2.22**	**32**	*e*Sg	Sg	02 26 59.3	-4.8
	SNR=2.3						
BAIF	**Baives**	**2.33**	**318**	*e*Pg	Pg	02 26 33.4	-3.3
BAIF				*e*Sg	Sg	02 27 03.2	-4.6
	1.8nm,0.3s						
SSF	**Saint Saulge**	**2.47**	**240**	*e*Pn	Pn	02 26 28.6	-2.3
SSF				*e*Pg	Pg	02 26 36.1	-3.3
SSF				*e*Sn	Sn	02 26 56.8	-4.5
SSF				*e*Sg	Sg	02 27 07.7	-4.7
	4.2nm,0.2s						
SSF	**Saint Saulge**	**2.47**	**240**	*e*Pg	Pg	02 26 36.1	-3.3
SSF				*e*Sn	Sn	02 26 56.8	-4.5
SSF				*e*Sg	Sg	02 27 07.7	-4.7
	2.1nm,0.2s						
SMF	**Signal de Mont**	**2.54**	**229**	*e*Pn	Pn	02 26 29.1	-2.9
SMF				*e*Pg	Pg	02 26 37.6	-3.3
SMF				*e*Sn	Sn	02 26 58.4	-4.8
SMF				*e*Sg	Sg	02 27 09.7	-5.1
	6.6nm,0.3s						
AVF	**Avril sur Loir**	**2.71**	**236**	*e*Pn	Pn	02 26 31.9	-2.5
AVF				*e*Pg	Pg	02 26 40.5	-3.7
AVF				*e*Sn	Sn	02 27 02.4	-5.0
AVF				*e*Sg	Sg	02 27 14.8	-5.6
	1.4nm,0.2s						
LPL	**La Plagne**	**2.84**	**178**	*e*Pn	Pn	02 26 33.7	-2.5
LPL				*e*Pg	Pg	02 26 43.1	-3.7
LPG	**La Plagne**	**2.86**	**178**	*e*Pn	Pn	02 26 33.9	-2.6
LPG				*e*Pg	Pg	02 26 43.5	-3.6
LPG				*e*Sg	Sg	02 27 20.2	-5.0
	1.6nm,0.4s						
HYF	**Humbligny**	**2.90**	**250**	*e*Pn	Pn	02 26 34.1	-2.9
HYF				*e*Pg	Pg	02 26 43.8	-4.1
HYF				*e*Sg	Sg	02 27 20.6	-5.9
HYF	**Humbligny**	**2.90**	**250**	*e*Pg	Pg	02 26 43.8	-4.1
HYF				*e*Sg	Sg	02 27 20.6	-5.9
BGF	**Bois d'Agland**	**3.13**	**236**	*e*Pn	Pn	02 26 37.4	-2.9
BGF				*e*Pg	Pg	02 26 48.2	-4.4
BGF				*e*Sg	Sg	02 27 28.3	-6.0
	8.7nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.47**	**189**	*e*Pn	Pn	02 26 42.7	-2.5
ORIF				*e*Sg	Sg	02 27 38.8	-6.9
	1.5nm,0.3s						
MBDF	**Montbardon**	**3.63**	**178**	*e*Pn	Pn	02 26 44.6	-2.8
TCF	**Toulx Ste Croi**	**3.64**	**237**	*e*Pn	Pn	02 26 44.6	-3.0
TCF				*e*Sn	Sn	02 27 24.8	-6.3
TCF				*e*Sg	Sg	02 27 44.5	-6.9
	0.8nm,0.2s						
VIVF	**Saint-Julien-l**	**3.75**	**202**	*e*Pn	Pn	02 26 46.1	-3.0
VIVF				*e*Sg	Sg	02 27 47.3	-7.5
	1.7nm,0.3s						
RJF	**Les Rejaudoux**	**4.64**	**231**	*e*Sg	Sg	02 28 15.7	-9.0
	1.5nm,0.4s						
CAF	**Calviac**	**4.65**	**224**	*e*Sg	Sg	02 28 15.7	-9.1
	0.5nm,0.2s						
FLN	**La Foliniere**	**4.74**	**278**	*e*Sg	Sg	02 28 18.2	-10
	1.1nm,0.2s						
MFF	**Saint Martin d**	**4.91**	**252**	*e*Sg	Sg	02 28 23.9	-10
	0.8nm,0.3s						
GRR	**Gorron**	**4.99**	**273**	*e*Sg	Sg	02 28 26.0	-10
	1.1nm,0.2s						

CSEM ***01*** *02:30:31.8±0.1, 38.18N×26.44W, ML2.4, Error ellipse: s-maj=29.9km s-min=1.7km az=36.0, After PDA*

PDA ***01*** *02:30:31.8±1.3, 38.18N×26.44W, MD2.9, ML2.4, Error ellipse: s-maj=8.1km s-min=1.4km az=39.0*

SVSA 01 02:30:31.8±1.3**, 38.18N×26.44W, MD2.9, ML2.4, Error ellipse: s-maj=8.1km s-min=1.4km az=39.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SET4	**Mosteiros**	**0.59**	**121**	*e*P	Pg	02 30 41.8	-1.8
SET4				*e*S	Sg	02 30 49.9	-1.6
SET2	**Ginetes**	**0.60**	**124**	*e*P	Pg	02 30 42.1	-1.7
SET2				*e*S	Sg	02 30 50.9	-1.0
PFET	**Feteiras**	**0.63**	**125**	*e*rx		02 30 42.2	
PSAN	**Santo Antonio**	**0.65**	**120**	*e*P	Pg	02 30 42.8	-2.0
PSAN				*e*S	Sg	02 30 51.5	-2.0
PSET	**Sete Cidades**	**0.67**	**122**	*i* P	Pg	02 30 42.4	-2.8
PSET				*e*S	Sg	02 30 51.1	-3.0
	54nm,0.1s						
PSET	**Sete Cidades**	**0.67**	**122**	*e*S	Sg	02 30 51.1	-3.0
	54nm,0.1s						
PFAV	**Pico das Favas**	**0.73**	**316**	*e*P	Pg	02 30 44.0	-2.4
PFAV				*e*S	Sg	02 30 53.6	-2.6
	34nm,0.3s						
PFAV	**Pico das Favas**	**0.73**	**316**	*e*P	Pg	02 30 44.0	-2.4
PFAV				*e*S	Sg	02 30 53.6	-2.6
	34nm,0.3s						
PSCM	**Serra do Cume**	**0.74**	**314**	*e*P	Pg	02 30 44.3	-2.3
PSCM				*i* S	Sg	02 30 54.4	-2.1
	81nm,0.2s						
PSCM	**Serra do Cume**	**0.74**	**314**	*e*P	Pg	02 30 44.3	-2.3
PSCM				*i* S	Sg	02 30 54.4	-2.1
	81nm,0.2s						
FAC	**Faja de Cima**	**0.74**	**123**	*e*P	Pg	02 30 44.3	-2.4
RIB2	**Ribeirinha**	**0.76**	**310**	*e*P	Pg	02 30 44.8	-2.1
RIB2				*e*S	Sg	02 30 54.5	-2.5
	91nm,0.2s						
RIB2	**Ribeirinha**	**0.76**	**310**	*e*P	Pg	02 30 44.8	-2.1
RIB2				*e*S	Sg	02 30 54.5	-2.5
	91nm,0.2s						
ADH	**Angra Heroismo**	**0.78**	**307**	*e*S	Sg	02 30 55.1	-2.8
PVNV	**Vila Nova**	**0.81**	**316**	*e*P	Pg	02 30 45.3	-2.6
PVNV				*e*S	Sg	02 30 55.6	-3.1
	82nm,0.1s						
PVNV	**Vila Nova**	**0.81**	**316**	*e*P	Pg	02 30 45.3	-2.6
PVNV				*e*S	Sg	02 30 55.6	-3.1
	82nm,0.1s						
CML	**Cha da Macela**	**0.82**	**120**	*e*P	Pg	02 30 45.1	-3.0
CML				*e*S	Sg	02 30 55.1	-3.9
PPAD	**Pico dos Padre**	**0.84**	**308**	*e*P	Pg	02 30 46.0	-2.7
PPAD				*e*S	Sg	02 30 56.5	-3.4
	38nm,0.2s						
PPAD	**Pico dos Padre**	**0.84**	**308**	*e*P	Pg	02 30 46.0	-2.7
PPAD				*e*S	Sg	02 30 56.5	-3.4
	38nm,0.2s						
PMAT	**Coroa da Mata**	**0.85**	**115**	*e*P	Pg	02 30 46.3	-2.4
PMAT				*e*S	Sg	02 30 56.9	-3.1
	74nm,0.1s						
PMAT	**Coroa da Mata**	**0.85**	**115**	*e*P	Pg	02 30 46.3	-2.4
PMAT				*e*S	Sg	02 30 56.9	-3.1
	74nm,0.1s						
LFA	**Lagoa do Fogo**	**0.86**	**118**	*e*P	Pg	02 30 46.2	-2.7
PBIS	**Biscoitos**	**0.86**	**312**	*e*S	Sg	02 30 57.6	-2.9
	17nm,0.2s						
PBIS	**Biscoitos**	**0.86**	**312**	*e*S	Sg	02 30 57.6	-2.9
	17nm,0.2s						
MESC	**Monte Escuro**	**0.88**	**116**	*e*P	Pg	02 30 46.9	-2.4
MESC				*e*S	Sg	02 30 57.6	-3.3
ASBA	**Santa Barbara**	**0.88**	**308**	*e*P	Pg	02 30 46.8	-2.6
ASBA				*e*S	Sg	02 30 57.7	-3.4
	42nm,0.2s						
ASBA	**Santa Barbara**	**0.88**	**308**	*e*P	Pg	02 30 46.8	-2.6
ASBA				*e*S	Sg	02 30 57.7	-3.4
	42nm,0.2s						
PRCH	**Ribeira Ch**	**0.88**	**121**	*e*P	Pg	02 30 46.8	-2.6
PRCH				*e*S	Sg	02 30 57.6	-3.6
	64nm,0.2s						
PRCH	**Ribeira Ch**	**0.88**	**121**	*e*P	Pg	02 30 46.8	-2.6
PRCH				*e*S	Sg	02 30 57.6	-3.6
	64nm,0.2s						
VIF	**Vila Franca**	**0.90**	**119**	*e*P	Pg	02 30 47.5	-2.3
VIF				*e*S	Sg	02 30 58.1	-3.7
	20nm,0.2s						
VIF	**Vila Franca**	**0.90**	**119**	*e*P	Pg	02 30 47.5	-2.3
VIF				*e*S	Sg	02 30 58.1	-3.7
	20nm,0.2s						
PSBA	**Serra de Santa**	**0.91**	**310**	*e*P	Pg	02 30 46.8	-3.1
PSBA				*e*S	Sg	02 30 58.7	-3.4
	68nm,0.3s						
PSBA	**Serra de Santa**	**0.91**	**310**	*e*P	Pg	02 30 46.8	-3.1
PSBA				*e*S	Sg	02 30 58.7	-3.4
	68nm,0.3s						
PCNG	**Congro**	**0.92**	**116**	*e*P	Pg	02 30 47.4	-2.8
PCNG				*e*S	Sg	02 30 59.0	-3.5
	33nm,0.2s						
PFAD	**Fenais da Ajud**	**0.94**	**111**	*e*P	Pg	02 30 47.4	-3.3
FRA1	**Furnas**	**0.96**	**117**	*e*P	Pg	02 30 48.2	-2.8
FRA1				*e*S	Sg	02 30 59.8	-4.0
MIRA	**Miradouro**	**1.00**	**113**	*e*P	Pb	02 30 48.4	-3.2
PMAN	**Manadas**	**1.37**	**290**	*e*P	Pb	02 30 53.6	-4.5
PMAN				*e*S	Sb	02 31 09.5	-6.6
	28nm,0.2s						
PICO	**Pico**	**1.60**	**282**	*e*P	Pn	02 30 56.7	-4.7
PICO				*e*S	Sb	02 31 15.1	-7.4
PSMN	**Pico do Norte,**	**1.60**	**137**	*e*S	Sb	02 31 14.5	-8.3
CALA	**Caldeira**	**1.82**	**283**	*e*S	Sn	02 31 20.5	-8.3
PCED	**Cedros**	**1.83**	**285**	*e*S	Sn	02 31 20.7	-8.4
	20nm,0.4s						

BJI ***01*** *02:41:12.6, 7.19S×156.08E, h32^{km}, mB4.9, mb4.9, Ms4.9, Msz4.3*

MOS ***01*** *02:41:18.8±1.0, 6.73S×155.33E, h33^{km}, mb5.1/16, Error ellipse: s-maj=10.4km s-min=8.1km az=71.5*

HRVD ***01*** *02:41:19.4±0.6, 7.04S×155.33E, h38^{km}±1^{km}, MW4.9/33, Centroid moment Tensor Solution. LP body waves: s24,c32;Mantle waves: s33,c41; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.64±.23; M$_{\theta\theta}$-2.08±.15; M$_{\phi\phi}$-0.55±.17; M$_{r\theta}$0.52±.18; M$_{\theta\phi}$1.75±.14; M$_{\phi r}$0.13±.15; Best double couple: M$_0$2.992×10^{16} NP1:ϕ_s314°, δ42°, λ106°. NP2:ϕ_s113°, δ49°, λ76°. Principal axes: T 2.736, Plg79°, Azm322°; N .519, Plg10°, Azm122°; P -3.249, Plg4°, Azm213°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***01*** *02:41:19.4±0.2, 6.72S×155.35E, mb5.0/26 Error ellipse: s-maj=7.4km s-min=5.7km az=128.0*

IDC ***01*** *02:41:19.3±0.5, 6.81S×155.26E, h31^{km}±3^{km}, mb4.4/12, mb1 4.6/13, mb1mx4.6/16, mbtmp4.6/13, ML4.5/1, MS4.1/17, Ms1 4.1/17, ms1mx3.9/26, Error ellipse: s-maj=20.9km s-min=12.1km az=111.0*

ISC 01 02:41:17.8±0.3**, 6.79S**±0.05×**155.37E**±0.05**, h32**^{km}**, h32**^{km}±.6^{km}**:pP-P, n172,** σ1^{s}**01**/116**, mb4.9**/49**, MS4.1**/20**, 17C-4D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.24**	**120**	P	**Pn**	**02 42 37.7**	**+1.6**
HNR						02 43 42.1	
HNR				pmax	pmax		
	comp=Z,481nm,0.8s						
HNR	**Honiara**	**5.24**	**120**	Pn	**Pn**	**02 42 41.7**	**+5.6**
	comp=Z,22nm,0.3s,baz=160,slow=5.0,SNR=6.4						
HNR				Sn	**Sn**	**02 43 42.1**	**+5.9**
	baz=351,slow=19,SNR=2.4						
HNR				LR	LR	02 43 50.3	
	comp=Z,235nm,19.7s,baz=325,slow=28						
HNR	**Honiara**	**5.24**	**120**	P	**Pn**	**02 42 37.7**	**+1.6**
	comp=Z,481nm,0.8s						
HNR				Pn	**Pn**	**02 42 41.7**	**+5.6**
HNR				Sn	**Sn**	**02 43 42.1**	**+5.9**
HNR				LR	LR	02 43 50.3	
PMG	**Port Moresby**	**8.53**	**252**	P	**P**	**02 43 23.9**	**+1.7**
PMG						02 45 00.5	
PMG				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PMG				smax			
	comp=N,6.0nm,0.3s						
PMG				MLR	MLR		
	comp=Z,1µm,20.8s						
PMG	**Port Moresby**	**8.53**	**252**	Pn	**P**	**02 43 23.9**	**+1.8**
	comp=Z,3.7nm,0.3s,baz=56,slow=12,SNR=18						
PMG				Sn	**Sn**	**02 45 00.5**	**+2.2**
	comp=Z,5.6nm,0.3s,baz=49,slow=17,SNR=13						
PMG				LR	LR	02 46 31.6	
	comp=Z,1µm,20.8s,baz=56,slow=37						
PMG	**Port Moresby**	**8.53**	**252**	*e*P	**P**	**02 43 23.7**	**+1.5**
	comp=Z,55nm,0.6s						
CTA	**Charters Tower**	**15.90**	**213**	*e*P	**P**	**02 45 15.9**	**+15**
CTA	**Charters Tower**	**15.90**	**213**	Pn	**P**	**02 45 02.3**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=38,slow=18,SNR=3.2						
CTA				LR	LR	02 50 24.8	
	comp=Z,819nm,19.9s,baz=48,slow=34						
CTAO	**Charters Tower**	**15.90**	**213**	*e*P	**P**	**02 45 03.2**	**+2.0**
CTAO				pmax	pmax		
	comp=Z,41nm,0.9s						
CTAO	**Charters Tower**	**15.90**	**213**	*e*P	**P**	**02 45 03.2**	**+2.1**
	comp=Z,41nm,0.9s						
DZM	**Mont Dzumac**	**18.58**	**146**	P	**P**	**02 45 36.0**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=337,slow=8.3,SNR=12						
DZM				LR	LR	02 51 51.1	
	comp=Z,437nm,19.0s,baz=196,slow=34						
KAKA	**Kakadu**	**23.34**	**254**	*e*P	**P**	**02 46 24.8**	**+0.3**
WRAB	**Tennant Creek**	**24.22**	**235**	*c* *i*P	**P**	**02 46 33.7**	**+0.6**
WRAB	**Tennant Creek**	**24.22**	**235**	*e*P	**P**	**02 46 33.3**	**+0.3**
	comp=Z,107nm,1.0s,mb5.2						
WB2	**Warramunga Arr**	**24.22**	**235**	⇑*i*P	**P**	**02 46 33.7**	**+0.6**
WB2				*e*		02 46 41.8	
WRA	**Warramunga Arr**	**24.23**	**235**	P	**P**	**02 46 33.9**	**+0.7**
	comp=Z,18nm,0.7s,mb4.6,baz=59,slow=9.5,SNR=40						
WRA				pP		02 46 41.7	
	comp=Z,52nm,0.9s,baz=59,slow=9.7,SNR=24						
WRA				sP		02 46 44.6	
	comp=Z,52nm,0.9s,baz=59,slow=9.4,SNR=19						
ASAR	**Alice Springs**	**26.58**	**229**	P	**P**	**02 46 54.4**	**-0.8**
	comp=Z,5.6nm,0.6s,mb4.2,baz=62,slow=9.1,SNR=34						
ASAR				pP	pP	02 47 03.3	-1.3
	comp=Z,22nm,0.8s,baz=63,slow=8.3,SNR=26						
ASAR				PcP	PcP	02 50 19.0	-0.5
	comp=Z,2.2nm,0.7s,baz=63,slow=2.3,SNR=5.5						
ASPA	**Alice Springs**	**26.58**	**229**	⇑*i*P	**P**	**02 46 54.2**	**-1.0**
ASPA				*e*	pP	02 47 04.7	+0.1
STKA	**Stephens Creek**	**28.07**	**205**	P	**P**	**02 47 07.2**	**-1.5**
	comp=Z,5.0nm,0.7s,mb4.3,baz=35,slow=16,SNR=9.5						
STKA				PcP	PcP	02 50 21.9	-1.1
	comp=Z,1.6nm,0.5s,baz=359,slow=5.0,SNR=4.5						
STKA				LR	LR	02 58 18.2	
	comp=Z,552nm,18.8s,MS4.2,baz=26,slow=36						
STKA	**Stephens Creek**	**28.07**	**205**	*e*P	**P**	**02 47 10.6**	**+1.9**
STKA				PcP	PcP	02 50 21.9	-1.1
STKA				LR	LR	02 58 18.2	
FITZ	**Fitzroy Crossi**	**31.07**	**246**	*e*P	**P**	**02 47 34.6**	**-1.0**
CBIJ	**Chichi jima**	**36.02**	**340**	LR	LR	02 59 07.8	
	comp=Z,625nm,20.8s,MS4.4,baz=79,slow=30						
MBWA	**Marble Bar**	**37.29**	**244**	*e*P	**P**	**02 48 28.0**	**-1.1**
	comp=Z,18nm,0.9s,mb4.9						
KKM	**Kota Kinabalu**	**41.10**	**287**	*e*P	**P**	**02 48 60.0**	**-0.7**
KLBR	**Kellerberrin**	**42.90**	**230**	*e*P	**P**	**02 49 14.2**	**-1.2**
NWAO	**Narrogin (SRO)**	**43.90**	**228**	*e*P	**P**	**02 49 20.7**	**-2.8**
NWAO				pmax	pmax		
	comp=Z,19nm,1.2s						
NWAO	**Narrogin (SRO)**	**43.90**	**228**	LR	LR	03 08 22.5	
	comp=Z,307nm,19.4s,MS4.2,baz=66,slow=37						
NWAO	**Narrogin (SRO)**	**43.90**	**228**	*e*P	**P**	**02 49 20.7**	**-2.8**
	comp=Z,19nm,1.2s,mb4.7						
YHNB	**Yeheng**	**45.54**	**315**	*e*P	**P**	**02 49 37.0**	**+0.2**
KSM	**Kuching**	**45.71**	**279**	*e*P	**P**	**02 49 37.9**	**-0.3**
MJAR	**Matsushiro Arr**	**46.01**	**341**	P	**P**	**02 49 39.0**	**-1.2**
	comp=Z,2.0nm,0.7s,mb4.2,baz=155,slow=1.8,SNR=6.8						
MJAR				LR	LR	03 07 29.1	
	comp=Z,70nm,18.4s,MS3.6,baz=215,slow=34						
SSE	**Sheshan**	**49.88**	**321**	P	**P**	**02 50 11.7**	**+1.2**
SSE				AP	pP	02 50 20.7	+0.4
SSE				XP	sP	02 50 24.6	+0.5
SSE				PP	PP	02 52 05.4	-0.7
SSE				S	**S**	**02 57 21.4**	**+4.3**
SSE				XS		02 57 36.8	
SSE				SCS	ScS	03 00 00.2	+3.9
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.6						
SSE				AMB	AMB		
	comp=Z,40nm,3.9s						
SSE				LR	LR		
	comp=Z,70nm,23.0s,MS3.6						
QIZ	**Qiongzhong**	**51.67**	**301**	⇑*i*P	**P**	**02 50 25.2**	**+0.9**
ASAJ	**Asahikawa**	**51.97**	**348**	LR	LR	03 10 16.4	
	comp=Z,138nm,19.6s,MS4.0,baz=140,slow=33						
NJ2	**Nanjing**	**51.99**	**320**	*e*P	**P**	**02 50 28.1**	**+1.5**
NJ2				AP	pP	02 50 38.3	+1.9
NJ2				XP	sP	02 50 42.4	+2.2
NJ2				PP	PP	02 52 28.7	+3.5
NJ2				S	**S**	**02 57 50.0**	**+3.8**
NJ2				XS		02 58 06.0	
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.4						
NJ2				LR	LR		
	comp=N,130nm,15.5s,MS4.3						
NJ2				LR	LR		
	comp=E,180nm,14.6s,MS4.3						
NJ2				LR	LR		
	comp=Z,410nm,14.1s,MS4.6						
YSS	**Yuzh-Sakhalins**	**54.67**	**349**	*i* P	**P**	**02 50 47.7**	**+1.6**
PPT	**Papeete**	**54.70**	**107**	LR	LR	03 08 57.3	
	comp=Z,185nm,20.2s,MS4.2,baz=156,slow=30						
MDJ	**Mudanjiang**	**56.19**	**338**	P	**P**	**02 50 57.0**	**-0.2**
MDJ				AMB	AMB		
	comp=Z,40nm,5.7s						
MDJ				LR	LR		
	comp=Z,50nm,21.1s,MS3.6						
KKTK	**Khon Kaen**	**56.84**	**294**	P	**P**	**02 51 00.0**	**-2.2**
CN2	**Changchun**	**57.17**	**335**	*e*P	**P**	**02 51 05.6**	**+1.4**
CN2				*e*AP	pP	02 51 15.5	+1.5
CN2				*e*S	**S**	**02 58 57.6**	**+2.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CN2				LR	LR		
	comp=Z,120nm,22.0s,MS4.0						
ENH	**Enshi**	**57.37**	**312**	P	**P**	**02 51 05.4**	**-0.4**
	comp=Z,17nm,1.0s,mb5.0						
GYA	**Guiyang**	**57.62**	**307**	⇑*i*P	**P**	**02 51 08.3**	**+0.7**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
NST	**Nakhon Sawan**	**59.07**	**293**	P	**P**	**02 51 17.0**	**-0.8**
	comp=Z,58nm,0.8s,mb5.7						
KLR	**Kul'dur**	**59.48**	**342**	*e*P	**P**	**02 51 16.4**	**-3.8**
NANT	**Nan**	**59.57**	**296**	P	**P**	**02 51 21.0**	**-0.2**
	comp=Z,250nm,0.4s						
XAN	**Xi'an**	**59.82**	**316**	P	**P**	**02 51 21.8**	**-0.9**
XAN				AP	pP	02 51 30.4	-2.3
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CHG	**Chiang Mai**	**61.14**	**296**	⇑P	**P**	**02 51 32.1**	**+0.1**
	comp=Z,34nm,1.1s,mb5.4						
FX1	**Attu Island--F**	**61.34**	**12**	P	**P**	**02 51 33.6**	**+0.8**
FX1				pmax	pmax		
	comp=Z,16nm,0.6s						
FX1	**Attu Island--F**	**61.34**	**12**	P	**P**	**02 51 33.6**	**+0.7**
	comp=Z,16nm,0.6s,mb5.4,baz=305,slow=4.6,SNR=9.0						
CD2	**Chengdu**	**61.96**	**310**	⇑*i*P	**P**	**02 51 37.6**	**+0.2**
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.4						
HHC	**Hu-ho-hao-te**	**62.15**	**324**	*e*P	**P**	**02 51 37.2**	**-1.3**
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.9						
HHC				AMB	AMB		
	comp=Z,120nm,5.5s						
HIA	**Hailar**	**63.90**	**335**	P	**P**	**02 51 49.7**	**-0.2**
HIA				pmax	pmax		
	comp=Z,17nm,0.9s						
HIA	**Hailar**	**63.90**	**335**	P	**P**	**02 51 49.7**	**-0.2**
	comp=Z,17nm,0.9s,mb5.1						
LZH	**Lanzhou**	**64.43**	**315**	⇓P	**P**	**02 51 53.9**	**+0.3**
LZH				AP	pP	02 52 04.5	+0.9
LZH				XP	sP	02 52 08.3	+1.1
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,80nm,6.4s						
LZH				LR	LR		
	comp=N,880nm,15.3s						
LZH				LR	LR		
	comp=Z,980nm,17.9s,MS5.0						
MA2	**Magadan**	**66.26**	**357**	*e*P	**P**	**02 52 04.4**	**-0.5**
MA2				*e*	pP	02 52 14.5	-0.4
MA2				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
MA2	**Magadan**	**66.26**	**357**	*e*P	**P**	**02 52 04.3**	**-0.6**
	comp=Z,8.9nm,0.8s,mb4.8						
MA2				*e*	pP	02 52 14.5	-0.4
CASY	**Casey**	**66.90**	**198**	*e*P	**P**	**02 52 07.4**	**-1.5**
	comp=Z,13nm,1.1s,mb4.9						
GTA	**Gaotai**	**68.84**	**317**	*e*P	**P**	**02 52 21.9**	**+0.4**
GTA				AP	pP	02 52 30.4	-1.1
GTA				XP	sP	02 52 35.4	+0.3
GTA				LR	LR		
	comp=N,50nm,15.2s,MS4.2						
GTA				LR	LR		
	comp=E,100nm,17.5s,MS4.2						
GTA				LR	LR		
	comp=Z,120nm,17.9s,MS4.2						
ULN	**Ulaanbaatar**	**69.03**	**327**	*e*P	**P**	**02 52 22.3**	**-0.2**

ULN				e*PP	pP	02 52 32.3	-0.2
ULN				e*SP	sP	02 52 36.8	+0.7
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**69.03**	**327**	eP	**P**	**02 52 22.3**	**-0.3**
	comp=Z,9.3nm,0.8s,mb4.8						
ULN				epP	pP	02 52 32.3	-0.2
ULN				esP	sP	02 52 36.8	+0.7
SONM	**Songino Array**	**69.36**	**327**	P	**P**	**02 52 24.6**	**0.0**
	comp=Z,8.2nm,0.9s,mb4.7,baz=127,slow=6.2,SNR=45						
SONM				pP	pP	02 52 33.7	-0.9
	comp=Z,4.2nm,0.6s,baz=141,slow=6.7,SNR=12						
SONM				sP	sP	02 52 38.7	+0.6
	comp=Z,13nm,0.9s,baz=139,slow=3.9,SNR=13						
SONM				PKPPKP		03 20 33.0	
	comp=Z,1.1nm,1.0s,baz=293,slow=3.1,SNR=6.7						
SONM				LR	LR	03 22 26.5	
	comp=Z,79nm,21.1s,MS3.9,baz=104,slow=36						
SHL	**Shillong**	**69.51**	**300**	⇓iP	**P**	**02 52 25.7**	**-0.2**
SEY	**Seymchan**	**69.56**	**359**	eP	**P**	**02 52 25.5**	**0.0**
SEY				e		02 52 51.5	
SEY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
VNDA	**Vanda**	**70.77**	**179**	eP	**P**	**02 52 31.9**	**-0.8**
VNDA				e*PP	pP	02 52 41.4	-1.3
VNDA				pmax	pmax		
	comp=Z,13nm,1.6s						
VNDA	**Vanda**	**70.77**	**179**	P	**P**	**02 52 32.0**	**-0.7**
	comp=Z,2.6nm,0.9s,mb4.2,baz=336,slow=6.3,SNR=15						
VNDA				LR	LR	03 16 57.7	
	comp=Z,142nm,20.1s,MS4.2,baz=347,slow=30						
VNDA	**Vanda**	**70.77**	**179**	eP	**P**	**02 52 31.9**	**-0.8**
	comp=Z,13nm,1.6s,mb4.6						
VNDA				epP	pP	02 52 41.4	-1.3
SBA	**Scott Base**	**71.27**	**177**	P	**P**	**02 52 35.6**	**-0.1**
SBA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
SBA	**Scott Base**	**71.27**	**177**	P	**P**	**02 52 35.6**	**-0.1**
	comp=Z,3.3nm,0.9s,mb4.3						
YAK	**Yakutsk**	**71.44**	**348**	⇓eP	**P**	**02 52 37.2**	**+0.3**
LSA	**Lhasa**	**71.46**	**304**	eP	**P**	**02 52 37.1**	**-0.5**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
LSA	**Lhasa**	**71.46**	**304**	eP	**P**	**02 52 37.1**	**-0.5**
	comp=Z,8.1nm,0.5s,mb4.9						
ZAK	**Zakamensk**	**72.52**	**328**	⇑iP	**P**	**02 52 43.2**	**-0.3**
ZAK				e	pP	02 52 52.6	-1.0
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
MIR	**Mirnyy**	**73.02**	**202**	d iP	**P**	**02 52 45.8**	**-0.4**
MIR				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
TLY	**Talaya**	**73.08**	**329**	⇑eP	**P**	**02 52 47.4**	**+0.6**
BILL	**Bilibino**	**75.05**	**4**	⇑eP	**P**	**02 52 58.3**	**+0.4**
GUN	**Gumba**	**75.33**	**301**	eP	**P**	**02 53 01.0**	**+0.7**
	comp=Z,71nm,0.7s,mb5.7						
PKI	**Pulchoki**	**75.64**	**301**	eP	**P**	**02 53 02.4**	**+0.3**
	comp=Z,61nm,1.1s,mb5.5						
KKN	**Kakani**	**75.81**	**301**	eP	**P**	**02 53 03.2**	**+0.1**
	comp=Z,40nm,0.7s,mb5.4						
KKN	**Kakani**	**75.81**	**301**	eP	**P**	**02 53 03.2**	**+0.1**
KKN				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
DMN	**Daman**	**75.91**	**301**	eP	**P**	**02 53 04.3**	**+0.7**
	comp=Z,90nm,0.9s,mb5.7						
GKN	**Gorkha**	**76.41**	**301**	eP	**P**	**02 53 06.1**	**-0.4**
	comp=Z,76nm,1.0s,mb5.6						
KOLN	**Koldanda**	**77.24**	**300**	eP	**P**	**02 53 10.6**	**-0.5**
	comp=Z,34nm,0.9s,mb5.3						
WMQ	**Urumqi**	**78.93**	**317**	eP	**P**	**02 53 20.0**	**0.0**
WMQ				AP	pP	02 53 30.0	-0.2
WMQ				XP	sP	02 53 34.0	+0.4
WMQ				LR	LR		
	comp=Z,20nm,18.8s,MS3.5						
HYB	**Hyderabad**	**79.55**	**289**	eP	**P**	**02 53 22.5**	**-1.4**
HYB				e	pP	02 53 32.5	-1.5
HYB	**Hyderabad**	**79.55**	**289**	i P	**P**	**02 53 22.5**	**-1.4**
HYB				ePcP	PcP	02 53 32.5	+0.4
TIXI	**Tiksi**	**80.21**	**352**	⇑eP	**P**	**02 53 27.5**	**+1.2**
IMA	**Indian Mountai**	**81.49**	**19**	eP	**P**	**02 53 33.9**	**+0.7**
IMA				e*PP	pP	02 53 44.3	+0.9
IMA				pmax	pmax		
	comp=Z,71nm,1.1s,mb5.5						
IMA	**Indian Mountai**	**81.49**	**19**	eP	**P**	**02 53 33.9**	**+0.7**
	comp=Z,71nm,1.1s,mb5.5						
IMA				epP	pP	02 53 44.3	+0.9
MCK	**McKinley**	**81.73**	**22**	eP	**P**	**02 53 33.2**	**-1.3**
MCK				e	pP	02 53 44.0	-0.7
MCK				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
MCK	**McKinley**	**81.73**	**22**	eP	**P**	**02 53 33.2**	**-1.2**
	comp=Z,14nm,1.0s,mb4.9						
MCK				e	pP	02 53 44.0	-0.7
COLA	**College**	**82.76**	**21**	eP	**P**	**02 53 38.7**	**-1.1**
COLA				e*PP	pP	02 53 49.3	-0.7
COLA				e*SP	sP	02 53 53.9	+0.5
COLA				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
COLA	**College**	**82.76**	**21**	eP	**P**	**02 53 38.7**	**-1.1**
	comp=Z,14nm,0.9s,mb5.0						
COLA				epP	pP	02 53 49.3	-0.7
COLA				esP	sP	02 53 53.9	+0.5
NDI	**New Delhi**	**82.93**	**300**	ex	x	02 53 39.0	
ILAR	**Eielson Array**	**83.05**	**21**	P	**P**	**02 53 40.4**	**-0.9**
	comp=Z,4.0nm,0.8s,mb4.5,baz=264,slow=5.1,SNR=23						
ILAR				pP	pP	02 53 51.5	0.0
	comp=Z,4.5nm,0.8s,baz=249,slow=4.6,SNR=8.2						
ILAR				LR	LR	03 26 34.8	
	comp=Z,190nm,20.4s,MS4.5,baz=180,slow=33						
ILAR	**Eielson Array**	**83.05**	**21**	P	**P**	**02 53 40.4**	**-0.9**
ILAR				pP	pP	02 53 51.5	0.0
ILAR				LR	LR	03 26 34.8	
QSPA	**South Pole Qui**	**83.18**	**180**	eP	**P**	**02 53 41.8**	**+0.1**
	comp=Z,22nm,1.1s,mb5.1						
MKAR	**Makanchi Array**	**83.50**	**319**	P	**P**	**02 53 43.7**	**-0.2**
	comp=Z,6.5nm,1.0s,mb4.6,baz=101,slow=6.2,SNR=25						
MKAR				pP	pP	02 53 53.4	-0.8
	comp=Z,6.1nm,0.8s,baz=108,slow=3.8,SNR=15						
MKAR				LR	LR	03 28 06.2	
	comp=Z,38nm,20.0s,MS3.8,baz=360,slow=34						
POO	**Poona**	**84.15**	**289**	eP	**P**	**02 53 45.5**	**-2.4**
DAWY	**Dawson**	**85.56**	**24**	eP	**P**	**02 53 54.7**	**+0.8**
DAWY				epP	pP	02 54 05.2	+1.0
DLBC	**Dease Lake**	**87.78**	**30**	eP	**P**	**02 54 04.6**	**-0.2**
AAK	**Ala-Archa**	**87.88**	**313**	i P	**P**	**02 54 07.2**	**+1.5**
INK	**Inuvik**	**89.40**	**21**	eP	**P**	**02 54 11.8**	**-0.6**
INK				e*PP	pP	02 54 23.6	+0.9
INK				pmax	pmax		
	comp=Z,14nm,0.9s						
INK	**Inuvik**	**89.40**	**21**	eP	**P**	**02 54 11.8**	**-0.6**
	comp=Z,14nm,0.9s,mb5.3						
INK				epP	pP	02 54 23.6	+0.9
NVAR	**Mina Array Bea**	**91.31**	**52**	P	**P**	**02 54 23.1**	**+1.2**
	comp=Z,1.7nm,0.7s,mb4.5,baz=244,slow=5.1,SNR=7.0						
NVAR				LR	LR	03 28 08.1	
	comp=Z,103nm,19.6s,MS4.3,baz=90,slow=31						
MNV	**Mina**	**91.42**	**52**	P	**P**	**02 54 21.8**	**-0.7**
MNV				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.5						
MNV	**Mina**	**91.42**	**52**	P	**P**	**02 54 21.8**	**-0.7**
	comp=Z,1.5nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**92.31**	**324**	eP	**P**	**02 54 23.2**	**-2.9**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.2						
CHKZ	**Chkalovo**	**92.31**	**324**	eP	**P**	**02 54 23.2**	**-2.9**
	comp=Z,1.2nm,0.7s,mb4.3						
SYO	**Syowa Base**	**92.64**	**199**	⇑P	**P**	**02 54 30.0**	**+2.7**
ELK	**Elko**	**93.92**	**50**	eP	**P**	**02 54 34.8**	**+0.9**
ELK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ELK	**Elko**	**93.92**	**50**	eP	**P**	**02 54 34.8**	**+0.9**
	comp=Z,1.1nm,0.9s,mb4.3						
YKA	**Yellowknife Ar**	**95.99**	**28**	P	**P**	**02 54 43.2**	**+0.4**
	comp=Z,2.0nm,0.5s,mb4.8,baz=265,slow=4.5,SNR=18						
YKA				pP	pP	02 54 54.0	+0.9
	comp=Z,1.9nm,0.8s,baz=267,slow=4.5,SNR=4.8						
YKA				LR	LR	03 34 22.9	
	comp=Z,110nm,19.7s,MS4.3,baz=295,slow=33						
YKA	**Yellowknife Ar**	**95.99**	**28**	P	**P**	**02 54 43.2**	**+0.4**
YKA				pP	pP	02 54 54.0	+0.9
YKA				LR	LR	03 34 22.9	
PDAR	**Pinedale Array**	**98.29**	**48**	P	**P**	**02 54 53.6**	**-0.1**
	comp=Z,0.8nm,0.8s,mb4.3,baz=270,slow=1.5,SNR=6.0						
PDAR				LR	LR	03 35 56.6	
	comp=Z,122nm,19.6s,MS4.4,baz=260,slow=33						
SNAA	**Sanae**	**100.39**	**187**	⇑iP	P	02 55 05.8	+3.2
SNAA				e		02 59 11.1	
SNAA				e		03 05 44.4	
SNAA				e		03 06 25.8	
SNAA	**Sanae**	**100.39**	**187**	⇑iPdif	P	02 55 05.8	+3.2
SNAA				e		02 55 16.9	
SNAA				e		02 55 22.9	
SNAA				e		02 59 11.1	
SNAA				e		02 59 27.6	
SNAA				e		02 59 41.0	
SNAA				e		02 59 43.7	
SNAA				e		03 05 44.4	
SNAA				e		03 05 54.5	
SNAA				e		03 06 07.6	
SNAA				e		03 06 25.8	
VNA3	**Neumayer Olymp**	**101.49**	**185**	⇑iPdif	P	02 55 09.8	+2.3
VNA3				e		02 55 20.0	
VNA3				e		02 55 26.3	
VNA3				e		02 59 28.9	
VNA3				e		02 59 39.9	
VNA2	**Neumayer--Watz**	**101.59**	**186**	⇑iPdif	P	02 55 10.2	+2.2
VNA2				e		02 55 20.5	
VNA2				e		02 55 27.6	
VNA2				e		02 59 19.7	
VNA2				e		02 59 31.5	
VNA2				e		02 59 41.9	
VNA2				e		02 59 46.1	
VNA2				e		03 05 48.8	
VNA2				e		03 05 58.8	
VNA2				e		03 06 09.8	
VNA2				e		03 06 32.5	
VNA1	**Neumayer--Stat**	**101.94**	**186**	⇑iPdif	P	02 55 13.2	+3.7
VNA1				e		02 55 24.2	
VNA1				e		02 55 30.6	
VNA1				e		02 59 20.2	
VNA1				e		02 59 32.8	
VNA1				e		02 59 44.4	
VNA1				e		02 59 49.0	
ARCES	**ARCESS Array B**	**109.50**	**343**	PKiKP		02 59 45.5	
	comp=Z,1.4nm,0.6s,baz=63,slow=2.7,SNR=8.5						
OBN	**Obninsk**	**111.78**	**327**	eP	Pdif	02 55 46.6	-6.5
OBN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FINES	**FINESS Array B**	**113.90**	**336**	PKiKP		02 59 54.0	
	comp=Z,3.0nm,1.0s,baz=90,slow=3.8,SNR=5.3						
FINES	**FINESS Array B**	**113.90**	**336**	PKPdf	PKPdf	02 59 54.0	-4.7
PLCA	**Paso Flores**	**116.66**	**142**	PKP	PKPdf	03 00 00.5	-4.0
	comp=Z,1.5nm,0.8s,baz=225,slow=5.7,SNR=5.9						
PLCA	**Paso Flores**	**116.66**	**142**	PKP	PKPdf	03 00 00.5	-4.0
HFS	**Hagfors**	**119.45**	**339**	PKP	PKPdf	03 00 04.3	-5.1
	comp=Z,1.0nm,0.4s,baz=135,slow=2.1,SNR=9.2						
NB2	**NORSAR Subarra**	**119.63**	**341**	PKPdf	PKPdf	03 00 04.8	-4.9
	comp=Z,1.1nm,0.6s,baz=45,slow=1.9						
NOA	**NORSAR Array B**	**119.63**	**341**	PKP	PKPdf	03 00 05.1	-4.6
	comp=Z,1.2nm,0.6s,baz=45,slow=1.9,SNR=4.9						
BOSA	**Boshof**	**120.43**	**231**	PKP	PKPdf	03 00 07.9	-4.2
	comp=Z,3.8nm,0.9s,baz=118,slow=7.4,SNR=3.1						
SCHQ	**Schefferville**	**121.43**	**27**	PKP	PKPdf	03 00 08.4	-5.0
	comp=Z,1.8nm,0.8s,baz=144,slow=3.7,SNR=5.6						
BSEG	**Bad Segeberg**	**125.17**	**336**	ePKIKP	PKPdf	03 00 18.9	-1.7
BRG	**Berggiesshubel**	**125.65**	**331**	ePKIKP	PKPdf	03 00 27.9	+6.3
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL	**Collm**	**125.81**	**332**	i PKIKP	PKPdf	03 00 18.1	-3.8
	comp=Z,logA/T=0.7						
CLL				e*PPKP		03 00 25.0	
CLL				e		03 00 28.0	
CLZ	**Clausthal**	**126.64**	**334**	ePKIKP	PKPdf	03 00 20.0	-3.5
MOX	**Moxa**	**126.91**	**332**	ePKIKP	PKPdf	03 00 20.3	-3.7
MOX	**Moxa**	**126.91**	**332**	i P	PKPdf	03 00 20.3	-3.7
KHC	**Kasperske Hory**	**126.95**	**329**	ePKIKP	PKPdf	03 00 20.5	-3.6
KHC				e		03 00 30.5	
KHC	**Kasperske Hory**	**126.95**	**329**	ePKPdf	PKPdf	03 00 20.5	-3.6
KHC				pPKP		03 00 30.5	
GEC2	**GERESS Array S**	**127.07**	**329**	ePKIKP	PKPdf	03 00 20.1	-4.3
GERES	**GERESS Array B**	**127.07**	**329**	PKP	PKPdf	03 00 20.6	-3.7
	comp=Z,1.6nm,0.7s,baz=45,slow=1.9,SNR=17						
GERES				pPKP		03 00 30.3	
	comp=Z,1.7nm,0.8s,baz=90,slow=1.3,SNR=7.4						
GERES				sPKP		03 00 35.3	
	comp=Z,2.4nm,0.8s,baz=45,slow=1.9,SNR=7.3						
GRA1	**Grafenberg Arr**	**127.74**	**331**	ePKPdf	PKPdf	03 00 21.2	-4.5
GRF	**Grafenberg Arr**	**127.74**	**331**	ePKIKP	PKPdf	03 00 21.2	-4.5
LVC	**Limon Verde**	**127.74**	**125**	eP	PKPdf	03 00 21.5	-4.9
EKA	**Eskdalemuir Ar**	**128.64**	**344**	PKP	PKPdf	03 00 23.1	-4.2
	comp=Z,1.3nm,0.5s,baz=17,slow=3.0,SNR=10						
TNS	**Taunus Mts**	**128.65**	**333**	ePKIKP	PKPdf	03 00 23.7	-3.7
CDF	**Champ du Feu**	**130.49**	**332**	ePKIKP	PKPdf	03 00 27.0	-4.0
HINF	**Hinteralfeld**	**131.11**	**332**	ePKIKP	PKPdf	03 00 28.3	-3.9
HAU	**Haudompre**	**131.21**	**333**	ePKIKP	PKPdf	03 00 29.2	-3.2
LPAZ	**La Paz**	**131.23**	**118**	ePKIKP	PKPdf	03 00 29.4	-3.8
LPAZ	**La Paz**	**131.23**	**118**	PKP	PKPdf	03 00 30.1	-3.1
	comp=Z,1.3nm,0.4s,baz=11,slow=2.5,SNR=14						
LPL	**La Plagne**	**132.82**	**330**	ePKIKP	PKPdf	03 00 31.7	-3.8
	comp=Z,6.5nm,0.7s						
LPG	**La Plagne**	**132.83**	**330**	ePKIKP	PKPdf	03 00 31.7	-3.8
	comp=Z,6.0nm,0.8s						
LOR	**Lormes**	**132.88**	**334**	ePKIKP	PKPdf	03 00 32.1	-3.5
SSF	**Saint Saulge**	**133.19**	**334**	ePKIKP	PKPdf	03 00 33.0	-3.1
FLN	**La Foliniere**	**133.45**	**338**	ePKIKP	PKPdf	03 00 32.0	-4.5
	comp=Z,9.8nm,0.8s						
ORIF	**Oris-en-Rattie**	**133.67**	**330**	ePKIKP	PKPdf	03 00 32.9	-4.2
GRR	**Gorron**	**133.90**	**338**	ePKIKP	PKPdf	03 00 33.4	-4.0
	comp=Z,6.7nm,0.8s						
CPUP	**Villa Florida**	**134.28**	**137**	PKP	PKPdf	03 00 34.1	-4.6
	comp=Z,2.2nm,0.7s,baz=355,slow=3.0,SNR=9.4						
VIVF	**Saint-Julien-l**	**134.31**	**331**	ePKIKP	PKPdf	03 00 33.6	-4.7
TCF	**Toulx Ste Croi**	**134.35**	**334**	ePKIKP	PKPdf	03 00 35.3	-3.0
	comp=Z,24nm,1.3s						
ROSF	**Rostrenen**	**134.80**	**340**	ePKIKP	PKPdf	03 00 35.6	-3.5
MFF	**Saint Martin d**	**135.09**	**336**	ePKIKP	PKPdf	03 00 35.5	-4.2
QUIF	**Quistinic**	**135.12**	**340**	ePKIKP	PKPdf	03 00 36.3	-3.4
LASF	**Ste Croix**	**135.28**	**331**	ePKIKP	PKPdf	03 00 34.8	-5.3
MTLF	**Montolieu**	**136.62**	**331**	ePKIKP	PKPdf	03 00 36.6	-5.9
EPF	**Esparros**	**137.73**	**333**	ePKIKP	PKPdf	03 00 40.7	-3.9
ETSF	**Etsaut**	**138.24**	**333**	ePKIKP	PKPdf	03 00 40.9	-4.7
	comp=Z,7.7nm,0.8s						
EVO	**Evora**	**145.01**	**337**	ePKIKP	PKPdf	03 00 53.3	-4.3
	comp=Z,13nm,0.8s						
BDFB	**Brasilia**	**147.86**	**134**	PKP	PKPdf	03 00 59.9	-3.1
	comp=Z,17nm,0.6s,baz=288,slow=1.9,SNR=48						
BDFB				PKPbc	PKPdf	03 01 01.7	-1.3
	comp=Z,17nm,0.6s,baz=282,slow=1.6,SNR=48						
BAO	**Brasilia Array**	**147.88**	**134**	PKPdf	PKPdf	03 01 09.0	+6.0
DBIC	**Dimbokro**	**160.36**	**271**	PKP2	PKPab	03 01 55.5	-2.7
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DBIC	**Dimbokro**	**160.36**	**271**	PKPab	PKPab	03 01 55.5	-2.7
	comp=Z,5.5nm,0.8s,baz=117,slow=7.3,SNR=4.8						

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*NEIC **01** 03:07:26.8±1.0, 4.64N×123.45E, h531^{km}±16^{km}, mb4.4/3, Error ellipse: s-maj=19.8km s-min=9.1km az=74.0*

*IDC **01** 03:07:27.5±1.8, 4.65N×123.48E, h540^{km}±21^{km}, mb3.4/8, mb1 3.5/8, mb1mx3.2/21, mbtmp4.3/8, Error ellipse: s-maj=37.1km s-min=13.7km az=82.0*

ISC 01 03:07:26.1±0.6, **4.64N**±0.09×**123.4E**±0.1, **h542**^{km}±13^{km}, **n22,** σ**0**^{s}**58**/22, **mb4.1**/10, **4D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**3.61**	**27**	eP	**P**	**03 08 45.5**	**+0.5**
TBP	**Tagbilaran**	**5.04**	**5**	eP	**P**	**03 08 56.8**	**+0.3**
GUIM	**Jordan**	**6.00**	**352**	eP	**P**	**03 09 04.3**	**-0.8**
KKM	**Kota Kinabalu**	**7.30**	**281**	eP	**P**	**03 09 17.6**	**0.0**
KAKA	**Kakadu**	**19.43**	**153**	eP	**P**	**03 11 18.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**22.70**	**175**	eP	**P**	**03 11 48.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**22.70**	**175**	P	**P**	**03 11 48.1**	**-0.3**
	3.3nm,0.4s,mb4.3,baz=359,slow=11,SNR=16						
MBWA	**Marble Bar**	**25.89**	**188**	P	**P**	**03 12 15.9**	**-0.8**
	4.0nm,0.5s,mb4.3						
WRAB	**Tennant Creek**	**26.68**	**157**	eP	**P**	**03 12 22.8**	**-1.0**
	13nm,0.4s,mb4.9						
WRA	**Warramunga Arr**	**26.68**	**157**	P	**P**	**03 12 23.2**	**-0.6**
	5.0nm,0.3s,mb4.6,baz=330,slow=10,SNR=34						
WRA				ScP		03 18 18.4	
	1.2nm,0.7s,baz=346,slow=3.4,SNR=5.9						
WB2	**Warramunga Arr**	**26.69**	**157**	⇓iP	**P**	**03 12 23.1**	**-0.7**
ASPA	**Alice Springs**	**29.93**	**160**	⇓iP	**P**	**03 12 52.2**	**+0.2**
ASAR	**Alice Springs**	**29.93**	**160**	P	**P**	**03 12 52.2**	**+0.3**
	3.9nm,0.4s,mb4.3,baz=337,slow=7.4,SNR=54						
ASAR				ScP		03 18 28.4	
	0.4nm,0.4s,baz=336,slow=2.7,SNR=7.8						
MJAR	**Matsushiro Arr**	**34.54**	**21**	P	**P**	**03 13 30.3**	**-0.3**
	2.5nm,0.7s,mb3.8,baz=197,slow=8.7,SNR=5.5						
FORT	**Forrest**	**35.49**	**173**	⇓iP	**P**	**03 13 39.3**	**+0.6**
KLBR	**Kellerberrin**	**36.43**	**188**	⇓iP	**P**	**03 13 46.3**	**-0.1**
NWAO	**Narrogin (SRO)**	**37.82**	**188**	P	**P**	**03 13 58.2**	**+0.6**
	8.2nm,0.6s,mb4.4,baz=55,slow=7.4,SNR=7.8						
NWAO	**Narrogin (SRO)**	**37.82**	**188**	eP	**P**	**03 13 58.3**	**+0.7**
	6.4nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**40.23**	**156**	P	**P**	**03 14 18.4**	**+1.2**
	4.5nm,0.6s,mb4.2,baz=327,slow=7.4,SNR=15						
MKAR	**Makanchi Array**	**54.95**	**326**	P	**P**	**03 16 08.3**	**+0.4**
	0.4nm,0.4s,mb3.0,baz=102,slow=9.9,SNR=5.0						
VNDA	**Vanda**	**84.75**	**172**	P	**P**	**03 19 03.1**	**-0.4**
	0.4nm,0.5s,mb3.2,baz=317,slow=6.1,SNR=4.0						
VNDA	**Vanda**	**84.75**	**172**	eP	**P**	**03 19 03.6**	**+0.1**
	0.4nm,0.6s,mb3.1						

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*HLW **01** 03:27:14.7, 31.83N×36.27E, h2^{km}, Mb4.0*

*SNSN **01** 03:27:23.4, 31.54N×35.22E, Ml3.7*

*GII **01** 03:27:28.5±0.2, 31.29N×35.41E, h11^{km}±1^{km}, mb4.2/1, ML3.7/5, Mw3.6/3*

*CSEM **01** 03:27:28.0±0.1, 31.26N×35.44E, h15^{km}, Mw3.6, Error ellipse: s-maj=2.1km s-min=1.0km az=109.0*

*GRAL **01** 03:27:30.7±7.3, 31.14N×35.36E, h0^{km}±41^{km}, MD3.9*

ISC 01 03:27:28.2±0.4, **31.26N**±0.02×**35.38E**±0.04, **h14**^{km}±3^{km}, **n72,** σ**0**^{s}**79**/88, **7C-15D, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MZDA	**Masada**	**0.05**	**341**	⇑Pg	**Pg**	**03 27 30.9**	**-0.1**
YTIR	**Yattir**	**0.25**	**294**	Pg	**Pg**	**03 27 34.5**	**+0.6**
YTIR	**Yattir**	**0.25**	**294**	⇑Pg	**Pg**	**03 27 34.4**	**+0.6**
DSI	**Dead Sea**	**0.31**	**360**	Pg	**Pg**	**03 27 34.9**	**0.0**
DSI	**Dead Sea**	**0.31**	**360**	⇑Pg	**Pg**	**03 27 34.9**	**+0.1**
MKRJ	**Makawir**	**0.36**	**37**	Pg	**Pg**	**03 27 35.7**	**-0.2**
MASH	**Mash‘abbe Sade**	**0.58**	**243**	Pg	**Pg**	**03 27 40.5**	**+0.5**
MASH	**Mash‘abbe Sade**	**0.58**	**243**	⇑Pg	**Pg**	**03 27 40.5**	**+0.5**
RTMM	**Retamin**	**0.63**	**251**	Pg	**Pg**	**03 27 41.6**	**+0.5**
RTMM	**Retamin**	**0.63**	**251**	⇑Pg	**Pg**	**03 27 41.6**	**+0.5**
ZFRI	**Zfri**	**0.73**	**194**	Pg	**Pg**	**03 27 43.1**	**+0.2**
ZFRI	**Zfri**	**0.73**	**194**	⇑Pg	**Pg**	**03 27 43.1**	**+0.2**
RMNI	**Mount Ramon**	**0.85**	**219**	Pg	**Pg**	**03 27 45.5**	**+0.1**
RMNI	**Mount Ramon**	**0.85**	**219**	⇑Pg	**Pg**	**03 27 45.5**	**+0.1**
KZIT	**Kziot**	**0.92**	**248**	Pg	**Pg**	**03 27 46.5**	**-0.2**
KZIT				Sg	**Sg**	**03 28 00.0**	**+1.0**
KZIT	**Kziot**	**0.92**	**248**	⇑Pg	**Pg**	**03 27 46.5**	**-0.2**
KZIT				Sg	**Sg**	**03 28 00.0**	**+1.0**
PRNI	**Paran**	**0.96**	**200**	Pg	**Pg**	**03 27 47.5**	**0.0**
PRNI				Sg	**Sg**	**03 28 02.0**	**+1.4**
PRNI	**Paran**	**0.96**	**200**	⇑Pg	**Pg**	**03 27 47.6**	**0.0**
PRNI				Sg	**Sg**	**03 28 02.0**	**+1.5**
SLTI	**Sal’it**	**1.02**	**343**	Pg	**Pg**	**03 27 47.3**	**-1.4**
SLTI	**Sal’it**	**1.02**	**343**	⇓Pg	**Pg**	**03 27 47.3**	**-1.4**
MMLI	**Mount Malkishu**	**1.17**	**2**	Pg	**Pg**	**03 27 49.6**	**-2.1**
MMLI	**Mount Malkishu**	**1.17**	**2**	⇓Pg	**Pg**	**03 27 49.6**	**-2.1**
KMTI	**Karmit**	**1.28**	**206**	Pn	**Pn**	**03 27 52.8**	**+1.0**
KMTI	**Karmit**	**1.28**	**206**	⇑Pn	**Pn**	**03 27 52.7**	**+1.0**
OFRI	**‘Ofer**	**1.40**	**346**	Pn	**Pn**	**03 27 53.4**	**+0.1**
OFRI	**‘Ofer**	**1.40**	**346**	⇓Pn	**Pn**	**03 27 53.4**	**+0.1**
HRSH	**Kfar Ka’horesh**	**1.46**	**259**	P	**Pn**	**03 27 53.6**	**-0.5**
RSH		**1.46**	**259**	P	**Pn**	**03 27 53.6**	**-0.6**
TCHB	**Talchebab**	**1.49**	**19**	⇑iP	**Pn**	**03 27 54.2**	**-0.4**
TCHB				⇑iS	**Sb**	**03 28 14.1**	**+0.4**
MBH	**Mount Berech**	**1.52**	**196**	Pn	**Pn**	**03 27 56.0**	**+0.9**
MBH	**Mount Berech**	**1.52**	**196**	⇓Pn	**Pn**	**03 27 56.0**	**+0.9**
HAF	**Haifa**	**1.54**	**349**	Pn	**Pn**	**03 27 55.6**	**+0.2**
AQBJ	**Aqaba**	**1.56**	**191**	Pn	**Pn**	**03 27 56.5**	**+0.9**
EIL	**Elat**	**1.63**	**193**	Pn	**Pn**	**03 27 57.2**	**+0.6**
QURS	**Qurayyt al Mil**	**1.67**	**85**	P	**Pn**	**03 27 55.8**	**-1.4**
QURS				S	**Sn**	**03 28 21.2**	**+2.8**
KSHT	**Keshet**	**1.75**	**12**	Pn	**Pn**	**03 27 58.5**	**+0.1**
HNKL	**Nakhl**	**1.80**	**223**	⇓P	**Pn**	**03 27 59.8**	**+0.7**
HNTI	**Hanita**	**1.82**	**354**	Pn	**Pn**	**03 28 00.3**	**+0.8**
SALA	**Sala**	**1.84**	**38**	⇓iP	**Pn**	**03 27 59.5**	**-0.2**
SALA				⇓iS	**Sn**	**03 28 23.4**	**+0.5**
KSDI	**Kefar Szold**	**1.94**	**7**	Pn	**Pn**	**03 28 01.5**	**+0.4**
ALWS	**Ilw as Safayha**	**1.96**	**188**	P	**Pn**	**03 28 01.7**	**+0.2**
ALWS				S	**Sn**	**03 28 31.0**	**+5.0**
AMAG	**Maghara**	**1.97**	**252**	⇑P	**Pn**	**03 28 01.3**	**-0.2**
HRI	**Mount Hermon**	**2.02**	**8**	Pn	**Pn**	**03 28 02.4**	**+0.1**
JMOS	**Jabal al Moall**	**2.10**	**187**	P	**Pn**	**03 28 03.6**	**+0.2**
JMOS				S	**Sn**	**03 28 35.2**	**+5.8**
HBST	**Basata**	**2.11**	**196**	⇑P	**Pn**	**03 28 01.6**	**-2.0**
HBST				S	**Sn**	**03 28 36.2**	**+6.5**
BRBR	**Barbar**	**2.20**	**12**	⇓iP	**Pn**	**03 28 04.8**	**0.0**
BRBR				⇓iS	**Sn**	**03 28 32.1**	**+0.2**
MATL	**Matirih**	**2.22**	**359**	ePN	**Pn**	**03 28 06.2**	**+1.0**
MATL				SN	**Sn**	**03 28 37.7**	**+5.2**
HAQS	**Haql**	**2.23**	**190**	P	**Pn**	**03 28 05.2**	**-0.1**
TOTH	**TOTAH**	**2.27**	**23**	⇑iP	**Pn**	**03 28 05.6**	**-0.3**
TOTH				⇓iS	**Sn**	**03 28 34.2**	**+0.4**
ZALF	**Zalf**	**2.34**	**45**	⇓iP	**Pn**	**03 28 06.4**	**-0.5**
QASN	**Qassioun**	**2.39**	**18**	⇑iP	**Pn**	**03 28 07.4**	**-0.1**
QASN				⇑iS	**Sn**	**03 28 36.6**	**-0.1**
JMQS	**Jabal Moqyreh**	**2.41**	**170**	P	**Pn**	**03 28 08.3**	**+0.6**
HDHB	**Dhahab**	**2.62**	**195**	⇑P	**Pn**	**03 28 08.9**	**-1.9**
SUZ		**2.62**	**238**	⇓P	**Pn**	**03 28 10.7**	**-0.1**
BHL	**Bhannes**	**2.65**	**5**	ePN	**Pn**	**03 28 12.6**	**+1.5**
BHL				SN	**Sn**	**03 28 51.1**	**+7.8**
TAYS	**Tayyib Ism**	**2.74**	**189**	P	**Pn**	**03 28 12.2**	**-0.2**
TAYS	**Tayyib Ism**	**2.74**	**189**	P	**Pn**	**03 28 12.2**	**-0.3**
BDAS	**Al Bad‘**	**2.83**	**185**	P	**Pn**	**03 28 13.9**	**+0.1**
HKAT	**Jabal Katrina**	**2.98**	**204**	⇓P	**Pn**	**03 28 14.8**	**-1.2**
HWQ	**Hawqa**	**3.04**	**9**	ePN	**Pn**	**03 28 20.6**	**+3.7**
HWQ				SN	**Sn**	**03 29 03.8**	**+10**
AYUS	**‘Aynunah**	**3.06**	**182**	P	**Pn**	**03 28 17.2**	**+0.1**
HHAG	**Hagoal**	**3.12**	**246**	⇓P	**Pn**	**03 28 17.4**	**-0.5**
ZAF		**3.15**	**232**	⇑P	**Pn**	**03 28 18.4**	**+0.1**
TBKS	**Tabuk**	**3.19**	**161**	P	**Pn**	**03 28 19.6**	**+0.6**
KOT	**Kottamia**	**3.34**	**247**	⇑P	**Pn**	**03 28 20.5**	**-0.5**
GLL	**Jalalah**	**3.59**	**243**	⇑P	**Pn**	**03 28 24.1**	**-0.5**
GLL	**Jalalah**	**3.59**	**243**	P	**Pn**	**03 28 24.1**	**-0.5**
HSAF	**As Saff**	**3.69**	**245**	⇓P	**Pn**	**03 28 25.4**	**-0.7**
GRB	**Gharib**	**3.74**	**218**	⇑P	**Pn**	**03 28 25.9**	**-0.8**
DBAS	**Duba**	**4.07**	**173**	P	**Pn**	**03 28 31.3**	**-0.1**
UMJS	**Umm Lajj**	**6.24**	**164**	P	**Pn**	**03 29 01.5**	**-0.7**
KBRS	**Khaybar**	**6.43**	**147**	P	**Pn**	**03 29 03.5**	**-1.3**

IDC 01 03:43:52.7±16.0, **0.17S**×**123.58E, mb4.1**/3, **mb1 4.4**/3, **mb1mx3.7**/17, **mbtmp4.2**/3, **Error ellipse: s-maj=306.5km s-min=237.0km az=38.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**15.24**	**145**	eP	P	03 47 45.2	+14
FITZ	**Fitzroy Crossi**	**17.93**	**174**	eP	P	03 48 05.7	+0.5
WRA	**Warramunga Arr**	**22.29**	**152**	P	P	03 48 52.2	-1.1
	4.0nm,0.4s,baz=333,slow=8.0,SNR=13						
WB2	**Warramunga Arr**	**22.30**	**152**	eP	P	03 48 52.2	-1.2
ASAR	**Alice Springs**	**25.41**	**157**	P	P	03 49 21.2	-2.4
	3.1nm,0.5s,baz=334,slow=8.4,SNR=42						
ASPA	**Alice Springs**	**25.41**	**157**	eP	P	03 49 21.3	-2.4
STKA	**Stephens Creek**	**35.84**	**153**	P	P	03 50 54.9	-1.3
	1.6nm,0.4s,baz=332,slow=7.9,SNR=6.1						

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*LDG **01** 04:12:32.8±0.2, 35.80N×89.34E, h10^{km}, Mb5.1/21, Ms3.9/7, Error ellipse: s-maj=7.4km s-min=4.0km az=120.0*

*MOS **01** 04:12:36.1±0.8, 35.61N×89.43E, h33^{km}, mb5.0/34, MS4.2/15, Error ellipse: s-maj=9.8km s-min=5.3km az=123.9*

*IDC **01** 04:12:37.9±5.5, 35.65N×89.51E, h32^{km}±41^{km}, mb4.3/18, mb1 4.4/22, mb1mx4.3/24, mbtmp4.4/22, ML3.5/3, MS4.1/13, Ms1 4.1/13, ms1mx4.0/20, Error ellipse: s-maj=19.2km s-min=12.0km az=41.0*

*BJI **01** 04:12:38.0, 35.75N×89.56E, h39^{km}, mB4.8, mb4.4, Ms4.8, Msz4.6*

*NEIC **01** 04:12:38.8±0.8, 35.69N×89.48E, h38^{km}±7^{km}, mb4.9/32, Error ellipse: s-maj=7.1km s-min=4.7km az=224.0*

*HRVD **01** 04:12:38.8±0.3, 35.70N×89.56E, h21^{km}±1^{km}, MW4.9/46, Centroid moment Tensor Solution. LP body waves: s23,c32; Mantle waves: s46,c76; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.17±.21; M$_{\theta\theta}$-1.11±.14;*

$M_{\phi\phi}$2.28±.14; $M_{r\theta}$0.61±.31; $M_{\theta\phi}$1.96±.11; $M_{\phi r}$-0.13±.24; Best double couple: $M_0$2.752×10^{16} NP1:ϕ_s343°,δ69°, λ-161°. NP2:ϕ_s246°,δ72°,λ-22°. Principal axes: T 3.181, Plg2°, Azm295°; N -.857, Plg62°, Azm28°; P -2.324, Plg28°, Azm204°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*NNC **01** 04:13:10.1±24.0,37.79N×88.00E,h134^{km}±162^{km} Error ellipse: s-maj=218.8km s-min=121.2km az=103.0*

ISC 01 04:12:35.2±1.1,**35.66N**±0.03×**89.45E**±0.03,**h25**^{km}±8^{km}, **h33**^{km}±5.3^{km}**:pP-P,n220,**σ**1**§**05**/221,**mb4.7**/64,**MS4.3**/31, **9C-7D,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.12**	**166**	P	**Pn**	**04 14 11.0**	**+4.6**
LSA				S	**Sn**	**04 15 17.4**	**+1.1**
LSA				AMB	AMB		
	comp=Z,10.0nm,1.1s						
LSA				LR	LR		
	comp=N,2µm,10.7s						
LSA				LR	LR		
	comp=E,10µm,11.9s						
LSA				LR	LR		
	comp=Z,6µm,9.5s						
LSA	**Lhasa**	**6.12**	**166**	*e*P	**Pn**	**04 14 10.2**	**+3.8**
LSA				pmax	pmax		
	comp=Z,92nm,1.1s						
LSA	**Lhasa**	**6.12**	**166**	*e*P	**Pn**	**04 14 10.2**	**+3.7**
	comp=Z,92nm,1.1s						
WMQ	**Urumqi**	**8.26**	**351**	*e*P	**P**	**04 14 37.0**	**+0.5**
WMQ				S	**Sn**	**04 16 00.0**	**-10**
WMQ				LR	LR		
	comp=N,3µm,10.2s						
WMQ				LR	LR		
	comp=E,2µm,9.2s						
WMQ				LR	LR		
	comp=Z,3µm,12.2s						
GUN	**Gumba**	**8.30**	**202**	*e*P	**P**	**04 14 37.9**	**+0.8**
	comp=Z,167nm,1.5s						
KKN	**Kakani**	**8.61**	**205**	*e*P	**P**	**04 14 42.1**	**+0.7**
	comp=Z,61nm,1.2s						
GKN	**Gorkha**	**8.66**	**210**	*e*P	**P**	**04 14 42.4**	**+0.3**
	comp=Z,57nm,1.1s						
PKI	**Pulchoki**	**8.77**	**204**	*e*P	**P**	**04 14 43.8**	**+0.2**
	comp=Z,77nm,1.1s						
DMN	**Daman**	**8.84**	**206**	*e*P	**P**	**04 14 46.1**	**+1.6**
	comp=Z,189nm,1.4s						
GTA	**Gaotai**	**9.04**	**62**	*e*P	**P**	**04 14 47.9**	**+0.6**
GTA				AP		04 14 57.2	
GTA				XP		04 15 01.6	
GTA				S	**Sn**	**04 16 33.7**	**+4.4**
GTA				LG1		04 17 24.2	
GTA				LG2		04 17 36.4	
GTA				AMB	AMB		
	comp=Z,50nm,6.8s						
GTA				LR	LR		
	comp=N,4µm,15.2s						
GTA				LR	LR		
	comp=E,3µm,11.8s						
GTA				LR	LR		
	comp=Z,3µm,13.7s						
KOLN	**Koldanda**	**9.31**	**214**	*e*P	**P**	**04 14 51.5**	**+0.5**
	comp=Z,28nm,1.1s						
SHL	**Shillong**	**10.28**	**168**	*e*P	**P**	**04 15 03.0**	**-1.3**
SHL				*e*x	x	04 18 05.0	
KSH	**Kashi**	**11.37**	**294**	*e*P	**P**	**04 15 22.5**	**+3.4**
KSH				*e*PP	PP	04 15 32.7	+5.1
KSH				*e*XP		04 15 40.1	
KSH				*e*S	**S**	**04 17 28.2**	**+1.9**
KSH				*e*XS		04 17 42.3	
KSH				*e*PCP	PcP	04 21 11.0	-0.5
KSH				LR	LR		
	comp=N,5µm,7.0s						
KSH				LR	LR		
	comp=E,8µm,7.7s						
LZH	**Lanzhou**	**11.69**	**84**	⇓P	**P**	**04 15 19.7**	**-3.8**
LZH				AP		04 15 28.7	
LZH				PP	PP	04 15 30.6	-1.8
LZH				XP		04 15 37.8	
LZH				*e*S	**S**	**04 17 32.1**	**-2.0**
LZH				XS		04 17 46.8	
LZH				SS	SS	04 17 48.3	-0.1
LZH				AMB	AMB		
	comp=Z,40nm,1.3s						
LZH				AMB	AMB		
	comp=Z,240nm,4.3s						
LZH				LR	LR		
	comp=N,1µm,9.2s						
LZH				LR	LR		
	comp=Z,2µm,11.5s						
ULHL	**Ulahol**	**12.20**	**307**	P	**P**	**04 15 30.5**	**+0.1**
	SNR=42						
MK31	**Makanchi Array**	**12.35**	**336**	⇑Pn	**P**	**04 15 29.5**	**-2.9**
	comp=Z,6.0nm,0.8s,baz=148,slow=14,SNR=18						
MK31				⇓Sn	S	04 17 21.6	-29
	comp=Z,11nm,0.8s,baz=159,slow=30						
MKAR	**Makanchi Array**	**12.35**	**336**	Pn	**P**	**04 15 29.8**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=142,slow=14,SNR=9.3						
MKAR				LR	LR	04 20 51.5	
	comp=Z,801nm,19.9s,baz=166,slow=40						
NDI	**New Delhi**	**12.48**	**240**	*e*P	**P**	**04 15 33.0**	**-1.2**
AYAN	**Aya Nagar**	**12.66**	**239**	*e*P	**P**	**04 15 35.7**	**-0.9**
AYAN				*e*x	x	04 15 37.0	
KZA	**Kyzart**	**12.78**	**304**	P	**P**	**04 15 42.3**	**+4.1**
	SNR=11						
SONA	**Sohna**	**12.84**	**238**	*e*P	**P**	**04 15 37.7**	**-1.2**
SONA				*e*x	x	04 15 40.9	
SONA				AMb	AMB	04 15 41.1	
	comp=Z,19nm,1.1s						
TKM2	**Tokmak 2**	**12.94**	**308**	P	**P**	**04 15 40.2**	**0.0**
	SNR=22						
CAL	**Calcutta**	**13.11**	**185**	*e*x	x	04 16 28.5	
CAL				*e*x	x	04 19 45.2	
UCH	**Uchtor**	**13.34**	**304**	P	**P**	**04 15 50.0**	**+4.4**
	SNR=8.7						
AAK	**Ala-Archa**	**13.53**	**305**	P	**P**	**04 15 49.7**	**+1.7**
	SNR=8.6						
AAK	**Ala-Archa**	**13.53**	**305**	⇑P	**P**	**04 15 47.8**	**-0.2**
	comp=Z,27nm,1.1s						
AAK	**Ala-Archa**	**13.53**	**305**	⇑*e*P	**P**	**04 15 47.8**	**-0.2**
AAK				pmax	pmax		
	comp=Z,23nm,1.0s						
AAK				MLR	MLR		
	comp=Z,500nm,21.0s						
AAK	**Ala-Archa**	**13.53**	**305**	*e*P	**P**	**04 15 46.9**	**-1.1**
	comp=Z,39nm,1.4s						
FRU	**Bishkek**	**13.54**	**306**	*e*P	**P**	**04 15 52.0**	**+3.9**
FRU				pmax	pmax		
	comp=Z,50nm,2.0s						
USP	**Ospenovka**	**13.81**	**308**	P	**P**	**04 15 51.7**	**0.0**
	SNR=7.1						
KHET	**Khetri**	**13.84**	**241**	*e*P	**P**	**04 15 49.6**	**-2.6**
KHET				*e*x	x	04 15 52.2	
EKS2	**Erkin-Say**	**14.02**	**305**	P	**P**	**04 15 56.0**	**+1.5**
	SNR=8.1						
BLSP	**Bilaspur**	**14.92**	**207**	*e*P	**P**	**04 16 04.6**	**-1.8**
BLSP				AMb	AMB	04 16 05.8	
	comp=Z,22nm,1.3s						
XAN	**Xi’an**	**16.07**	**90**	P	**P**	**04 16 22.5**	**+1.4**
XAN				AP		04 16 32.6	
XAN				AMB	AMB		
	comp=Z,10.0nm,1.3s						
XAN				LR	LR		
	comp=N,1µm,10.3s						
XAN				LR	LR		
	comp=E,720nm,10.3s						
XAN				LR	LR		
	comp=Z,930nm,9.3s						
BHPL	**Bhopal**	**16.20**	**223**	*e*P	**P**	**04 16 25.6**	**+2.8**
BHPL				AMb	AMB	04 16 27.2	
	comp=Z,77nm,1.5s						
KK31	**Karatay Array**	**16.40**	**303**	⇑P	**P**	**04 16 29.5**	**+4.2**
	comp=Z,18nm,1.4s,baz=118,slow=11,SNR=39						
KKAR	**Karatay Array**	**16.40**	**303**	P	**P**	**04 16 29.5**	**+4.2**
KKAR				pmax	pmax		
	comp=Z,25nm,1.4s						
BTO	**Baotou**	**16.91**	**67**	*e*P	**P**	**04 16 36.4**	**+4.7**
BTO				LR	LR		
	comp=N,2µm,14.2s						
BTO				LR	LR		
	comp=E,1µm,12.0s						
GYA	**Guiyang**	**17.35**	**117**	⇓*i*P	**P**	**04 16 34.2**	**-3.1**
GYA				AP		04 16 43.0	
GYA				XP		04 16 47.5	
GYA				AMB	AMB		
	comp=Z,20nm,1.0s						
GYA				AMB	AMB		
	comp=Z,220nm,3.9s						
GYA				LR	LR		
	comp=N,2µm,11.4s						
GYA				LR	LR		
	comp=E,1µm,13.4s						
GYA				LR	LR		
	comp=Z,1µm,8.7s						
SONM	**Songino Array**	**17.50**	**41**	P	**P**	**04 16 38.4**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=230,slow=9.6,SNR=36						
SONM				LR	LR	04 23 37.3	
	comp=Z,896nm,18.4s,baz=231,slow=38						
ENH	**Enshi**	**17.64**	**102**	P	**P**	**04 16 37.9**	**-3.0**
	comp=Z,6.5nm,0.8s						
ZAK	**Zakamensk**	**17.80**	**30**	⇑*i*P	**P**	**04 16 41.9**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.8s						
ULN	**Ulaanbaatar**	**17.87**	**42**	*i* P	**P**	**04 16 44.7**	**+1.1**
HHC	**Hu-ho-hao-te**	**18.11**	**67**	*e*P	**P**	**04 16 48.8**	**+2.1**
HHC				AP		04 16 59.8	
HHC				PP	PP	04 17 05.6	+4.0
HHC				S	**S**	**04 20 04.4**	**-0.5**
HHC				XS		04 20 19.3	
HHC				SS	SS	04 20 28.6	+0.2
HHC				PCP	PcP	04 21 22.7	+2.0
HHC				AMB	AMB		
	comp=Z,20nm,1.5s						
HHC				LR	LR		
	comp=N,4µm,20.8s						
HHC				LR	LR		
	comp=E,1µm,17.8s						
HHC				LR	LR		
	comp=Z,2µm,13.9s						
ZAL	**Zalesovo**	**18.56**	**351**	P	**P**	**04 16 51.5**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=302,slow=9.9,SNR=10						
TLY	**Talaya**	**18.96**	**28**	*e*P	**P**	**04 16 57.4**	**+0.4**
TLY				pmax	pmax		
	comp=Z,11nm,1.6s						
TLY				MLR	MLR		
	comp=Z,595nm,12.0s						
CMAR	**Chiang Mai Arr**	**19.09**	**151**	P	**P**	**04 16 57.2**	**-1.5**
	baz=330,slow=12,SNR=20						
CMAR				PcP	PcP	04 21 22.8	+0.2
	comp=Z,0.3nm,0.3s,baz=262,slow=2.9,SNR=4.2						
CMAR				LR	LR	04 24 24.6	
	comp=Z,211nm,19.3s,baz=332,slow=37						
IRK	**Irkutsk**	**19.65**	**28**	*e*P	**P**	**04 17 05.2**	**+0.3**
IRK				pmax	pmax		
	comp=Z,75nm,2.1s						
WHN	**Wuhan**	**21.45**	**97**	*e*P	**P**	**04 17 24.0**	**+0.2**
WHN				LR	LR		
	comp=Z,1µm,13.5s,MS4.5						
POO	**Poona**	**21.95**	**223**	*e*P	**P**	**04 17 28.1**	**-0.7**
POO				AMb	AMB	04 17 32.5	
	comp=Z,74nm,1.1s,mb5.0						
BVA0	**Borovoye Array**	**21.96**	**328**	⇑P	**P**	**04 17 29.5**	**+0.8**
	comp=Z,7.5nm,2.1s,mb3.8						
BVA0	**Borovoye Array**	**21.96**	**328**	P	**P**	**04 17 29.4**	**+0.7**
BVA0				pmax	pmax		
	comp=Z,16nm,2.1s,mb4.1						
BVAR	**Borovoye Array**	**21.96**	**328**	P	**P**	**04 17 29.0**	**+0.4**
	comp=Z,5.0nm,0.8s,mb4.0,baz=130,slow=12,SNR=16						
CHKZ	**Chkalovo**	**22.33**	**330**	⇓P	**P**	**04 17 33.0**	**+0.6**
	comp=Z,32nm,1.8s,mb4.5						
CHKZ	**Chkalovo**	**22.33**	**330**	*e*P	**P**	**04 17 32.7**	**+0.4**
CHKZ				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.5						
CHKZ	**Chkalovo**	**22.33**	**330**	*e*P	**P**	**04 17 32.6**	**+0.3**
	comp=Z,28nm,1.4s,mb4.5						
CIT	**Chita**	**23.70**	**39**	*e*P	**P**	**04 17 47.0**	**+1.3**
CIT				pmax	pmax		
	comp=Z,66nm,2.5s,mb4.6						
QIZ	**Qiongzhong**	**24.47**	**127**	P	**P**	**04 17 56.9**	**+3.4**
QIZ				S	**S**	**04 22 11.2**	**+2.1**
QIZ				XS		04 22 26.2	
QIZ				LR	LR		
	comp=N,650nm,8.9s						
QIZ				LR	LR		
	comp=Z,1µm,10.0s,MS4.6						
NJ2	**Nanjing**	**24.64**	**90**	*e*P	**P**	**04 17 55.6**	**+0.6**
NJ2				AP		04 18 05.1	
NJ2				XP		04 18 09.2	
NJ2				PP	PP	04 18 32.3	+0.8
NJ2				S	**S**	**04 22 13.0**	**+1.1**
NJ2				XS		04 22 29.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,300nm,4.2s						
NJ2				LR	LR		
	comp=N,960nm,12.4s,MS4.7						
NJ2				LR	LR		
	comp=E,1µm,12.4s,MS4.7						
NJ2				LR	LR		
	comp=Z,1µm,11.0s,MS4.7						
AB31	**Akbulak array**	**25.47**	**311**	P	**P**	**04 18 03.0**	**+0.2**
	comp=Z,3.6nm,0.7s,mb4.0,baz=104,slow=9.3,SNR=83						
HIA	**Hailar**	**25.95**	**49**	*e*P	**P**	**04 18 09.3**	**+2.1**
HIA				pmax	pmax		
	comp=Z,13nm,0.8s						
HIA	**Hailar**	**25.95**	**49**	*e*P	**P**	**04 18 09.3**	**+2.0**
	comp=Z,13nm,0.8s,mb4.5						
SSE	**Sheshan**	**26.82**	**91**	P	**P**	**04 18 14.9**	**-0.5**
SSE				AP	pP	04 18 23.6	+0.7
SSE				XP	sP	04 18 27.5	+1.3
SSE				PCP	PcP	04 21 38.4	+0.1
SSE				S	**S**	**04 22 48.4**	**+0.1**
SSE				XS		04 23 03.3	
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.7						
SSE				AMB	AMB		
	comp=Z,30nm,4.4s						
SSE				LR	LR		
	comp=N,340nm,11.8s,MS4.2						
SSE				LR	LR		
	comp=E,290nm,11.8s,MS4.2						
SSE				LR	LR		
	comp=Z,440nm,11.8s,MS4.2						
SNY	**Shenyang**	**27.20**	**67**	⇑*i*P	**P**	**04 18 15.5**	**-3.2**
SNY				AP	pP	04 18 27.4	+1.2
SNY				XP	sP	04 18 33.5	+3.9
SNY				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.1						
SNY				AMB	AMB		
	comp=Z,50nm,7.8s						
SNY				LR	LR		
	comp=N,1µm,12.2s						
SNY				LR	LR		
	comp=Z,1µm,11.8s,MS4.8						
CN2	**Changchun**	**28.67**	**62**	*e*P	**P**	**04 18 34.4**	**+2.3**
CN2				*e*S	**S**	**04 23 18.5**	**+0.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
CN2				LR	LR		
	comp=N,2µm,11.0s,MS5.2						
CN2				LR	LR		
	comp=E,3µm,11.0s,MS5.2						
CN2				LR	LR		
	comp=Z,3µm,12.0s,MS5.2						
ARU	**Arti**	**29.45**	**325**	*e*P	**P**	**04 18 24.1**	**-15**
ARU				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.1						
ARU				MLR	MLR		
	comp=N,200nm,15.0s,MS4.1						
ARU				MLR	MLR		
	comp=E,300nm,18.0s,MS4.1						
MDJ	**Mudanjiang**	**31.69**	**61**	P	**P**	**04 19 00.5**	**+1.6**
MDJ				AP	pP	04 19 12.1	+5.7
MDJ				XP	sP	04 19 18.2	+8.5
MDJ				S	**S**	**04 24 08.4**	**+2.7**
MDJ				PCS		04 25 34.5	
MDJ				AMB	AMB		
	comp=Z,70nm,6.7s						
MDJ				LR	LR		
	comp=N,140nm,13.4s,MS4.3						
MDJ				LR	LR		
	comp=E,420nm,14.0s,MS4.3						
MDJ				LR	LR		
	comp=Z,550nm,14.9s,MS4.4						
KULM	**Kulim**	**31.94**	**159**	*e*P	**P**	**04 18 59.7**	**-1.7**
KLR	**Kul’dur**	**33.58**	**53**	*e*P	**P**	**04 19 08.2**	**-7.0**
KLR				MLR	MLR		
	comp=E,1µm,11.0s						
KLR				MLR	MLR		
	comp=Z,2µm,11.0s,MS5.1						
HASS	**Wahat al Ahsa’**	**35.63**	**264**	P	**P**	**04 19 33.6**	**+0.5**
ONI	**Oni**	**35.99**	**295**	P	**P**	**04 19 30.0**	**-6.0**
GOF	**Gofitskoye**	**36.16**	**300**	*e*P	**P**	**04 19 37.6**	**+0.2**
KKM	**Kota Kinabalu**	**38.39**	**134**	*e*P	**P**	**04 19 57.3**	**+0.9**
SOC	**Sochi**	**38.63**	**297**	*e*P	**P**	**04 19 57.7**	**-0.5**
SOC				*e*		04 21 23.6	
SOC				*e*PPP	PPP	04 21 52.5	-0.8
SOC				*e*S	**S**	**04 25 58.6**	**+6.0**
SOC				pmax	pmax		
	comp=N,13nm,0.8s						
SOC				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
SOC				pmax	pmax		
	comp=E,7.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,157nm,17.0s,MS3.9						
SOC				MLR	MLR		
	comp=N,155nm,21.0s,MS3.9						
SOC				MLR	MLR		
	comp=E,113nm,18.0s,MS3.9						
MJAR	**Matsushiro Arr**	**39.06**	**74**	P	**P**	**04 20 01.7**	**-0.1**
	comp=E,4.8nm,0.8s,mb4.3,baz=286,slow=9.3,SNR=13						
ANN	**Anapa**	**40.15**	**300**	*e*P	**P**	**04 19 56.9**	**-14**
ANN				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.6						
MOS	**Moscow**	**40.24**	**317**	*e*P	**P**	**04 20 12.8**	**+1.4**
MOS				pmax	pmax		
	comp=Z,42nm,0.6s,mb5.3						
ARSS	**Ar Rass**	**40.57**	**269**	P	**P**	**04 20 15.1**	**+0.7**
OBN	**Obninsk**	**40.77**	**315**	⇓*e*P	**P**	**04 20 16.0**	**+0.3**
OBN				*e*		04 21 48.2	
OBN				*e*S	**S**	**04 26 31.4**	**+6.8**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.6						
OBN				MLR	MLR		
	comp=Z,200nm,12.0s,MS4.2						
ASAJ	**Asahikawa**	**41.02**	**61**	P	**P**	**04 20 18.7**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**41.02**	**61**	P	**P**	**04 20 18.7**	**+0.8**
	comp=Z,2.3nm,0.3s,mb4.3,baz=266,slow=16,SNR=2.4						
TIXI	**Tiksi**	**41.43**	**18**	*e*P	**P**	**04 20 17.8**	**-3.1**
TIXI				*e*S	**S**	**04 26 27.4**	**-6.8**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.3						
TIXI				MLR	MLR		
	comp=Z,499nm,12.0s,MS4.6						
AFFS	**‘Afif**	**41.63**	**267**	P	**P**	**04 20 24.0**	**+0.9**
KAMS	**Al Khamasin**	**42.11**	**261**	P	**P**	**04 20 27.6**	**+0.5**
TATS	**Tathlith**	**43.39**	**261**	P	**P**	**04 20 38.8**	**+1.3**
KBRS	**Khaybar**	**43.85**	**271**	P	**P**	**04 20 43.0**	**+1.8**
DJNS	**Zahran al Janu**	**44.31**	**259**	P	**P**	**04 20 47.0**	**+2.0**
AKASG	**Malin Array Be**	**45.17**	**309**	P	**P**	**04 20 51.3**	**-0.1**
	comp=Z,3.8nm,0.9s,mb4.2,baz=76,slow=6.6,SNR=14						
MA2	**Magadan**	**45.69**	**39**	⇓*e*P	**P**	**04 20 55.5**	**0.0**
DBAS	**Duba**	**45.92**	**275**	P	**P**	**04 20 59.4**	**+1.7**
FINES	**FINESS Array B**	**46.81**	**324**	P	**P**	**04 21 04.3**	**-0.1**
	comp=Z,1.3nm,0.6s,mb4.0,baz=108,slow=6.0,SNR=6.0						
FINES				LR	LR	04 41 59.2	
	comp=Z,178nm,20.1s,MS4.0,baz=152,slow=38						
ARCES	**ARCESS Array B**	**48.00**	**335**	P	**P**	**04 21 13.1**	**-0.5**
	comp=Z,9.7nm,1.0s,mb4.8,baz=34,slow=4.4,SNR=6.4						
ARCES	**ARCESS Array B**	**48.00**	**335**	P	**P**	**04 21 13.1**	**-0.5**
LVV	**L’vov**	**48.58**	**308**	*e*P	**P**	**04 21 18.4**	**+0.1**
KWP	**Kalwaria**	**49.46**	**308**	*e*P	**P**	**04 21 25.8**	**+0.7**
KWP				*e*		04 21 30.1	
KWP	**Kalwaria**	**49.46**	**308**	*e*P	**P**	**04 21 25.8**	**+0.7**
KWP				*e*		04 21 30.1	
TRO	**Tromso**	**50.30**	**335**	*e*P	**P**	**04 21 30.3**	**-1.0**
TRO				AMS	AMS	04 48 38.5	
	comp=Z,83nm,18.1s,MS3.8						
PET	**Petropavlovsk**	**50.41**	**47**	*e*P	**P**	**04 21 39.1**	**+6.8**
PET				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.6						
KECS	**Kecovo**	**51.12**	**307**	*e*P	**P**	**04 21 38.2**	**+0.5**
OJC	**Ojcow**	**51.19**	**309**	*e*P	**P**	**04 21 39.0**	**+0.7**
VYHS	**Vyhne**	**52.18**	**307**	*i* P	**P**	**04 21 46.7**	**+0.9**
OKC	**Ostrava-Krasne**	**52.32**	**309**	*e*P	**P**	**04 21 46.0**	**-0.8**
OKC				AMS	AMS	04 46 00.0	
	comp=Z,200nm,14.1s						
BILL	**Bilibino**	**52.58**	**27***c*	*i*P	**P**	**04 21 48.7**	**+0.2**
BILL				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.9						
BILL				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.5						
BILL	**Bilibino**	**52.58**	**27**	*e*P	**P**	**04 21 48.8**	**+0.3**
	comp=Z,12nm,1.1s,mb4.7						
KBS	**Kingsbay**	**52.88**	**346**	AMS	AMS	04 49 08.7	
	comp=Z,116nm,18.2s,MS4.0						
NSS	**Namsos**	**53.16**	**328**	*e*P	**P**	**04 21 51.2**	**-1.7**
NSS				*e*		04 38 36.6	
DPC	**Dobruska-Polom**	**53.34**	**310**	*e*P	**P**	**04 21 55.4**	**+1.0**
DPC				AMS	AMS	04 44 30.0	
	comp=Z,200nm,21.7s						
UPC	**Upice**	**53.50**	**310**	*e*P	**P**	**04 21 56.3**	**+0.8**
NB2	**NORSAR Subarra**	**54.00**	**324**	P	**P**	**04 21 58.1**	**-0.9**
	comp=Z,13nm,1.0s,mb4.8,baz=81,slow=7.4						
NB2	**NORSAR Subarra**	**54.00**	**324**	P	**P**	**04 21 58.1**	**-0.9**
	baz=81,slow=7.4						
NOA	**NORSAR Array B**	**54.00**	**324**	P	**P**	**04 21 58.5**	**-0.5**
	comp=Z,7.0nm,0.8s,mb4.6,baz=80,slow=7.2,SNR=19						
NOA				LR	LR	04 46 19.8	
	comp=Z,131nm,18.9s,MS4.0,baz=75,slow=37						
NOA	**NORSAR Array B**	**54.00**	**324**	P	**P**	**04 21 58.5**	**-0.5**
NOA				LR	LR	04 46 19.8	
PVCC	**Panska Ves**	**54.38**	**311**	*e*P	**P**	**04 22 02.8**	**+0.8**
PVCC				AMS	AMS	04 46 30.0	
	comp=Z,200nm,12.9s						
PRU	**Pruhonice**	**54.54**	**310**	*e*P	**P**	**04 22 03.6**	**+0.4**
PRU				AMS	AMS	04 45 20.0	
	comp=Z,200nm,21.7s						
BRG	**Berggiesshubel**	**54.68**	**311**	*e*P	**P**	**04 22 04.7**	**+0.5**
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
BRG				MLR	MLR		
	comp=N,430nm,21.5s,MS4.5						
BRG				MLR	MLR		
	comp=E,130nm,21.5s,MS4.5						
BRG				MLR	MLR		
	comp=Z,130nm,14.5s						
BRG	**Berggiesshubel**	**54.68**	**311**	*e*P	**P**	**04 22 04.7**	**+0.5**
	comp=Z,9.5nm,1.1s,mb4.7						
BRG				LR	LR		
	comp=Z,130nm,14.5s,MS4.1						
CLL	**Collm**	**55.14**	**312**	*e*P	**P**	**04 22 01.0**	**-6.6**
CLL				*e*	pP	04 22 08.0	-7.4
CLL	**Collm**	**55.14**	**312**	P	**P**	**04 22 08.0**	**+0.4**
	comp=Z,logA/T=0.9,mb4.7						
CLL				*e**PP	pP	04 22 14.0	-1.4
KHC	**Kasperske Hory**	**55.38**	**309**	*i* P	**P**	**04 22 09.6**	**+0.3**
KHC	**Kasperske Hory**	**55.38**	**309**	*e*P	**P**	**04 22 09.3**	**0.0**
KHC				AMS	AMS	04 45 50.0	
	comp=Z,200nm,16.8s						
GEC2	**GERESS Array S**	**55.38**	**309**	*e*P	**P**	**04 22 10.0**	**+0.6**
GEC2				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
GEC2	**GERESS Array S**	**55.38**	**309**	*e*P	**P**	**04 22 10.0**	**+0.6**
	comp=Z,11nm,1.1s,mb4.8						
GERES	**GERESS Array B**	**55.38**	**309**	P	**P**	**04 22 09.9**	**+0.5**
	comp=Z,4.2nm,0.8s,mb4.5,baz=76,slow=5.5,SNR=29						
GERES				LR	LR	04 48 23.7	
	comp=Z,126nm,18.4s,MS4.0,baz=223,slow=39						
NKC	**Novy Kostel**	**55.77**	**311**	*e*P	**P**	**04 22 12.7**	**+0.6**
MOX	**Moxa**	**56.16**	**311**	*e*P	**P**	**04 22 15.2**	**+0.2**
MOX				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.2						
MOX	**Moxa**	**56.16**	**311**	*i* P	**P**	**04 22 15.2**	**+0.2**
MOX				L		04 48 18.0	
CLZ	**Clausthal**	**56.57**	**313**	*e*P	**P**	**04 22 18.4**	**+0.5**
CLZ				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
CLZ	**Clausthal**	**56.57**	**313**	*e*P	**P**	**04 22 18.4**	**+0.5**
	comp=Z,10.0nm,1.1s,mb4.8						
GRA1	**Grafenberg Arr**	**56.69**	**310**	*e*P	**P**	**04 22 19.0**	**+0.3**
	comp=Z,16nm,1.0s,mb5.0						
GRF	**Grafenberg Arr**	**56.69**	**310**	*e*P	**P**	**04 22 19.0**	**+0.3**
GRF				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
GRF	**Grafenberg Arr**	**56.69**	**310**	*e*P	**P**	**04 22 19.0**	**+0.3**
GRF				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
GRF	**Grafenberg Arr**	**56.69**	**310**	*e*P	**P**	**04 22 19.0**	**+0.3**
	comp=Z,16nm,1.0s,mb5.0						
BER	**Bergen**	**56.96**	**324**	AMS	AMS	04 48 49.4	
	comp=Z,204nm,16.8s,MS4.3						

FUR	Furstenfeldbru	57.12	309	eP	P	04 22 22.6	+0.7
FUR				pmax	pmax		
	comp=Z,30nm,0.5s,mb5.6						
FUR	Furstenfeldbru	57.12	309	eP	P	04 22 22.6	+0.7
	comp=Z,30nm,0.5s,mb5.6						
TNS	Taunus Mts	58.22	312	eP	P	04 22 29.6	+0.1
TNS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
TNS	Taunus Mts	58.22	312	eP	P	04 22 29.6	+0.1
	comp=Z,4.0nm,0.8s,mb4.5						
BFO	Black Forest	58.93	310	eP	P	04 22 34.4	-0.1
BFO				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
BFO	Black Forest	58.93	310	eP	P	04 22 34.4	-0.1
	comp=Z,13nm,1.2s,mb4.8						
JMIC	Jan Mayen	59.25	338	AMS	AMS	04 51 31.6	
	comp=Z,92nm,19.8s,MS3.9						
CDF	Champ du Feu	59.56	310	eP	P	04 22 37.9	-0.9
	comp=Z,22nm,1.1s,mb4.8						
CDF	Champ du Feu	59.56	310	eP	P	04 22 37.9	-0.9
CDF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
HINF	Hinteralfeld	60.04	310	eP	P	04 22 41.3	-0.8
HAU	Haudompre	60.28	310	eP	P	04 22 42.8	-1.0
HAU				eR			
	comp=Z,163nm,21.5s						
GIVF	Givet	60.45	313	eP	P	04 22 47.8	+2.9
PGF	Pioggiola	60.60	303	eP	P	04 22 45.3	-0.8
	comp=Z,17nm,0.9s,mb4.9						
PGF	Pioggiola	60.60	303	eP	P	04 22 45.3	-0.8
PGF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
KMBO	Kilima Mbogo	60.81	245	P	P	04 22 47.9	+0.1
	comp=Z,2.4nm,0.8s,mb4.4,baz=50,slow=9.4,SNR=5.8						
KMBO	Kilima Mbogo	60.81	245	P	P	04 22 47.9	0.0
BAIF	Baives	60.84	313	eP	P	04 22 48.0	+0.5
LPG	La Plagne	60.97	307	eP	P	04 22 48.5	0.0
	comp=Z,53nm,0.9s,mb5.4						
LPG	La Plagne	60.97	307	eP	P	04 22 48.5	0.0
LPG				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.4						
CABF	La Chapelle	60.97	308	eP	P	04 22 47.5	-1.0
LPL	La Plagne	60.97	307	eP	P	04 22 48.5	0.0
	comp=Z,49nm,0.9s,mb5.3						
LPL	La Plagne	60.97	307	eP	P	04 22 48.5	0.0
LPL				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.3						
SBF	Sospel	61.15	305	eP	P	04 22 48.9	-0.8
	comp=Z,40nm,0.8s,mb5.3						
SBF	Sospel	61.15	305	eP	P	04 22 48.9	-0.8
SBF				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.3						
MBDF	Montbardon	61.25	306	eP	P	04 22 51.8	+1.4
	comp=Z,20nm,1.0s,mb4.9						
MBDF	Montbardon	61.25	306	eP	P	04 22 51.8	+1.4
MBDF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
ORIF	Oris-en-Rattie	61.76	307	eP	P	04 22 52.9	-1.0
	comp=Z,19nm,0.9s,mb4.9						
ORIF				eR			
	comp=Z,209nm,21.5s						
FRF	La Foret Royal	61.79	305	eP	P	04 22 53.0	-1.1
LMR	La Mourre	61.97	305	eP	P	04 22 54.3	-1.1
LOR	Lormes	62.12	310	eP	P	04 22 54.8	-1.5
LOR				eR			
	comp=Z,219nm,23.0s						
SMRF	Simiane la Rot	62.34	306	eP	P	04 22 56.8	-0.9
	comp=Z,63nm,1.5s,mb5.2						
SMF	Signal de Mont	62.38	309	eP	P	04 22 56.9	-1.1
	comp=Z,37nm,1.1s,mb5.1						
SMF	Signal de Mont	62.38	309	eP	P	04 22 56.9	-1.1
SMF				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.1						
SSF	Saint Saulge	62.42	310	eP	P	04 22 57.0	-1.3
VIVF	Saint-Julien-l	62.57	307	eP	P	04 22 58.5	-0.8
	comp=Z,22nm,1.0s,mb5.0						
VIVF	Saint-Julien-l	62.57	307	eP	P	04 22 58.5	-0.8
VIVF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
AVF	Avril sur Loir	62.63	309	eP	P	04 22 58.5	-1.1
	comp=Z,30nm,1.2s,mb5.0						
AVF	Avril sur Loir	62.63	309	eP	P	04 22 58.5	-1.1
AVF				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.0						
BGF	Bois d'Agland	63.04	309	eP	P	04 23 01.3	-1.1
LASF	Ste Croix	63.42	307	eP	P	04 23 04.3	-0.6
	comp=Z,31nm,1.0s,mb5.1						
TCF	Toulx Ste Croi	63.55	309	eP	P	04 23 05.2	-0.5
	comp=Z,38nm,1.1s,mb5.0						
TCF	Toulx Ste Croi	63.55	309	eP	P	04 23 05.2	-0.5
TCF				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.0						
CAF	Calviac	64.22	308	eP	P	04 23 09.6	-0.5
RJF	Les Rejaudoux	64.41	309	eP	P	04 23 10.8	-0.5
	comp=Z,35nm,1.3s,mb4.9						
RJF				eR			
	comp=Z,100nm,23.0s						
RJF	Les Rejaudoux	64.41	309	eP	P	04 23 10.8	-0.5
RJF				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.9						
RJF				MLR	MLR		
	comp=Z,100nm,23.0s,MS3.9						
GRR	Gorron	64.55	312	eP	P	04 23 10.9	-1.3
	comp=Z,8.4nm,0.7s,mb4.6						
GRR	Gorron	64.55	312	eP	P	04 23 10.9	-1.3
GRR				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
MFF	Saint Martin d	64.89	310	eP	P	04 23 13.3	-1.1
	comp=Z,17nm,1.1s,mb4.7						
MFF	Saint Martin d	64.89	310	eP	P	04 23 13.3	-1.1
MFF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
LFF	La Frestale	65.07	308	eP	P	04 23 15.3	-0.3
MBAR	Mbarara	65.37	250	⇑eP	P	04 23 17.6	-0.4
MBAR	Mbarara	65.37	250	eP	P	04 23 17.2	-0.8
	comp=Z,10.0nm,1.1s,mb4.8						
ROSF	Rostrenen	66.02	313	eP	P	04 23 20.8	-0.8
QUIF	Quistinic	66.14	313	eP	P	04 23 21.6	-0.8
ETSF	Etsaut	66.83	307	eP	P	04 23 26.7	-0.2
	comp=Z,39nm,1.1s,mb5.0						
ETSF	Etsaut	66.83	307	eP	P	04 23 26.7	-0.2
ETSF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
IMA	Indian Mountai	67.68	23	eP	P	04 23 32.2	+0.3
IMA				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
IMA	Indian Mountai	67.68	23	eP	P	04 23 32.2	+0.3
	comp=Z,18nm,0.8s,mb5.1						
WRA	Warramunga Arr	69.76	135	P	P	04 23 44.5	-0.9
	comp=Z,7.7nm,0.9s,mb4.7,baz=329,slow=6.4,SNR=15						
COLA	College	70.30	22	d iP	P	04 23 48.3	+0.3
COLA	College	70.30	22	eP	P	04 23 48.5	+0.5
	comp=Z,9.0nm,0.9s,mb4.7						
ESDC	Sonseca Array	70.63	305	P	P	04 23 50.8	+0.4
	comp=Z,3.6nm,0.7s,mb4.4,baz=52,slow=6.7,SNR=17						
ILAR	Eielson Array	70.67	22	P	P	04 23 50.0	-0.3
	comp=Z,3.8nm,0.9s,mb4.3,baz=302,slow=5.2,SNR=34						
ILAR				PP	PP	04 26 25.8	-3.2
	comp=Z,0.7nm,0.9s,baz=306,slow=9.5,SNR=5.1						
INK	Inuvik	71.50	16	eP	P	04 23 54.4	-0.8
INK				pmax	pmax		
	comp=Z,19nm,1.5s						
INK	Inuvik	71.50	16	eP	P	04 23 54.4	-0.8
	comp=Z,19nm,1.5s,mb4.8						
THY	Trims Highway	71.98	23	P	P	04 23 58.1	-0.1
ASAR	Alice Springs	72.46	138	P	P	04 24 01.2	-0.5
	comp=Z,4.9nm,0.8s,mb4.5,baz=326,slow=5.8,SNR=14						
DAWY	Dawson	73.40	20	eP	P	04 24 05.8	-0.6
EVO	Evora	73.91	306	eP	P	04 24 09.3	-0.6
	comp=Z,9.8nm,0.8s,mb4.5						
EVO				eR			
	comp=Z,109nm,19.2s						
CTA	Charters Tower	77.24	126	P	P	04 24 28.0	-1.1
	comp=Z,6.6nm,0.8s,mb4.6,baz=12,slow=9.3,SNR=3.3						
YKW3	Yellowknife Ar	80.22	11	eP	P	04 24 45.1	+0.6
YKA	Yellowknife Ar	80.28	11	P	P	04 24 45.4	+0.5
	comp=Z,3.0nm,0.8s,mb4.3,baz=338,slow=5.2,SNR=33						
YKA				LR	LR	05 01 47.8	
	comp=Z,81nm,18.7s,MS4.1,baz=305,slow=37						
DLBC	Dease Lake	80.62	20	LR	LR	05 03 51.4	
	comp=Z,100nm,18.4s,MS4.2,baz=326,slow=38						
STKA	Stephens Creek	83.10	137	P	P	04 24 59.9	-0.3
	comp=Z,3.8nm,0.8s,mb4.5,baz=260,slow=6.8,SNR=5.8						
SCHQ	Schefferville	87.59	347	P	P	04 25 21.3	-0.7
	comp=Z,1.6nm,0.8s,mb4.3,baz=124,slow=3.6,SNR=3.2						
SCHQ				LR	LR	05 05 00.1	
	comp=Z,136nm,21.7s,MS4.3,baz=42,slow=36						
SCHQ	Schefferville	87.59	347	P	P	04 25 21.3	-0.7
SCHQ				LR	LR	05 05 00.1	
BOSA	Boshof	87.99	232	P	P	04 25 24.2	-0.2
	comp=Z,5.7nm,1.0s,mb4.8,baz=56,slow=11,SNR=3.7						
FFC	Flin Flon	89.44	7	eP	P	04 25 31.1	+0.3
FFC				pmax	pmax		
	comp=Z,26nm,1.6s,mb5.3						
FFC	Flin Flon	89.44	7	eP	P	04 25 31.1	+0.4
	comp=Z,26nm,1.6s,mb5.3						
DBIC	Dimbokro	89.65	278	LR	LR	05 09 59.4	
	comp=Z,140nm,18.4s,MS4.4,baz=56,slow=38						
NEW	Newport	93.14	17	LR	LR	05 13 16.1	
	comp=Z,104nm,18.0s,MS4.3,baz=236,slow=39						
ULM	Lac du Bonnet	94.33	3	LR	LR	05 11 37.4	
	comp=Z,62nm,18.1s,MS4.1,baz=34,slow=38						
SADO	Sadowa	99.28	352	LR	LR	05 13 16.1	
	comp=Z,122nm,20.5s,MS4.4,baz=292,slow=37						
TXAR	Lajitas Array	114.18	13	PKP	PKPdf	04 31 13.0	-4.3
	comp=Z,0.1nm,0.5s,baz=270,slow=1.3,SNR=3.6						
CPUP	Villa Florida	150.16	279	PKPbc	PKPdf	04 32 25.5	+1.9
	comp=Z,7.3nm,0.9s,baz=89,slow=3.3,SNR=18						
LPAZ	La Paz	152.22	308	PKP	PKPdf	04 32 24.5	-2.4
	comp=Z,1.1nm,1.0s,slow=2.0,SNR=4.8						
LPAZ				PKPbc	PKPdf	04 32 31.8	+4.8
	comp=Z,2.5nm,1.2s,baz=14,slow=4.2,SNR=3.9						
LPAZ	La Paz	152.22	308	PKP	PKPdf	04 32 24.5	-2.4
LPAZ				PKPbc	PKPdf	04 32 31.8	+4.8

IDC 01 04:24:56.6±2.1**,39.23S**×**78.10E,mb3.8**/3**,mb1 4.1**/3**,mb1mx3.7**/14**,mbtmp3.8**/3**,MS3.7**/4**,Ms1 3.6**/4**,ms1mx3.5**/17**,3C,Error ellipse: s-maj=68.6km s-min=41.9km az=83.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	Mawson	29.66	192	LR	LR	04 39 54.3	
	comp=Z,180nm,20.4s,baz=49,slow=30						
NWAO	Narrogin (SRO)	32.07	91	LR	LR	04 41 29.6	
	comp=Z,230nm,19.4s,baz=220,slow=31						
ASAR	Alice Springs	49.34	89	LR	LR	04 52 22.3	
	comp=Z,116nm,18.2s,baz=311,slow=33						
SNAA	Sanae	50.49	204		P	04 34 12.8	+15
SNAA	Sanae	50.49	204	e	P	04 34 16.7	+19
VNDA	Vanda	50.72	164	P	P	04 33 57.3	-2.1
	1.3nm,1.0s,baz=276,slow=9.2,SNR=3.7						
VNDA				LR	LR	04 51 47.9	
	comp=Z,17nm,19.7s,baz=69,slow=32						
WRA	Warramunga Arr	51.72	85	P	P	04 34 05.6	-2.1
	2.3nm,1.0s,baz=236,slow=7.1,SNR=4.7						
VNA2	Neumayer--Watz	52.05	205	⇑i	P	04 34 06.5	-3.1
VNA2	Neumayer--Watz	52.05	205	e	P	04 34 10.2	+0.6
VNA1	Neumayer--Stat	52.39	205	⇑i	P	04 34 11.6	-0.6
VNA1	Neumayer--Stat	52.39	205	e	P	04 34 15.3	+3.1
VNA3	Neumayer Olymp	52.71	204	⇑i	P	04 34 11.7	-2.9
MKAR	Makanchi Array	85.72	3	P	P	04 37 37.0	-1.3
	0.3nm,0.6s,baz=180,slow=5.8,SNR=5.0						

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*TIF **01** 04:26:15.8,40.00N×42.10E,h15^{km}±42^{km}*
*CSEM **01** 04:26:17.5±0.1,39.99N×42.21E,h2^{km},MD3.7,Error ellipse: s-maj=3.9km s-min=3.0km az=142.0*
*ISK **01** 04:26:18.7,39.98N×42.22E,h10^{km},MD3.7*
ISC 01 04:26:18.9±0.4**,40.00N**±0.04×**42.21E**±0.04**,h2**^{km}**,n22,**σ**1**^{s}**04**/30**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZM	Erzurum	0.65	262	iP	Pg	04 26 32.0	+0.1
ERZM				iS	Sg	04 26 36.3	-4.4
EZM	Erzurum	0.66	262	iPG	Pg	04 26 32.0	0.0
KARS	Kars	0.91	48	PG	Pg	04 26 36.0	-1.0
KARS				SG	Sg	04 26 50.5	+1.3
BCA	Borcka	1.51	343	PN	Pn	04 26 46.8	-0.2
CLDR	Caldiran	1.58	122	PN	Pn	04 26 47.5	-0.5
TVAN	Van	1.74	147	iP	Pn	04 26 50.3	0.0
TVAN				iS	Sg	04 27 23.7	+6.9
BINT	Bingol	1.74	230	PN	Pn	04 26 50.3	-0.1
BTMT	Batman	1.89	197	PN	Pn	04 26 52.9	+0.4
GNI	Garni	1.95	85	ePN	Pn	04 26 52.0	-1.3
GUMT	Gumushane	2.14	283	PN	Pn	04 26 56.0	0.0
BEST	Besiri	2.23	199	iP	Pn	04 26 57.6	+0.2
BEST				iS	Sn	04 27 27.2	+1.3
KELT	Kelkit	2.27	275	iP	Pn	04 27 01.4	+3.5
KELT				iS	Sn	04 27 28.2	+1.3
TBLG	Delisi	2.58	47	P	Pn	04 27 03.5	+1.1
MTA	Mtatsminda	2.59	48	P	Pn	04 27 03.6	+1.2
TI2	Plekhanov	2.59	47	eP	Pn	04 27 00.0	-2.5
HKR	Hakkari	2.70	153	ePN	Pn	04 27 03.8	-0.3
ONI	Oni	2.74	20	P	Pn	04 27 06.1	+1.4
ONI				S	Sg	04 27 48.3	-1.7
DGRG	David-gareji	2.81	58	P	Pn	04 27 07.0	+1.4
ELZG	Elazig	2.92	240	iP	Pn	04 27 07.5	+0.3
ELZG				iS	Sn	04 27 42.5	-0.9
MALT	Malatya	3.39	241	ePN	Pn	04 27 12.8	-1.1
URFA	Urfa	3.68	227	ePN	Pn	04 27 17.2	-0.8
KAHT	Ahir Dag	4.79	242	iP	Pn	04 27 32.9	-0.9
KAHT				iS	Sn	04 28 40.9	+10

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*CSEM **01** 04:54:38.7±0.2,34.58N×23.81E,h2^{km},MD3.4,Error ellipse: s-maj=10.8km s-min=4.6km az=84.0*
*HLW **01** 04:54:41.5,34.80N×23.98E,h25^{km},Mb3.0*
*ATH **01** 04:54:43.9,34.86N×24.14E,h17^{km}±2^{km},MD3.4/5*
*NEIC **01** 04:54:43.7,34.85N×24.13E,h18^{km},MD3.4(ATH),After ATH.*
ISC 01 04:54:40.2±1.3**,34.59N**±0.07×**23.9E**±0.2**,h26**^{km}±14^{km}**,n10,**σ**1**^{s}**18**/11**,4C-1D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.31	39	⇓iPB	Pb	04 54 47.0	-0.5
VAM	Vamos	0.86	19	ePN	Pn	04 54 54.9	-1.8
XRY	Khrisi	1.54	79	ePN	Pn	04 55 08.0	+1.5
KYTH	Kithira	1.81	339	ePN	Pn	04 55 15.2	+4.9
VLI	Veliai	2.25	341	ePB	Pb	04 55 20.1	+0.1
VLI	Veliai	2.25	341	ePn	Pn	04 55 17.0	+0.5
HMAT	Matruh	4.43	141	⇑P	Pn	04 55 48.3	+0.7
SWA2		5.51	165	⇑P	Pn	04 56 03.6	+0.8
SWA1		5.54	163	⇑P	Pn	04 56 04.6	+1.2
SWA1				S	Sn	04 57 04.7	-2.4
HFRF	Wahat Farafira	8.35	151	⇑P	P	04 56 41.8	-0.9

MAN 01 04:56:56.7,20.17N×**121.97E,h198**^{km}**,mb3.9,ML2.6,MS2.2,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	0.27	358	eP	P	04 57 24.6	+1.4
BBP				eS	S	04 57 44.5	+0.8
SGCP	Mt. Cagua	1.92	178	eP	P	04 57 35.1	+0.5

SKHL 01 05:09:10.6±0.1**,52.94N**×**142.90E,h10**^{km}**,mb3.8**/2**,Sakhalin Island**

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*SKHL **01** 05:10:52.6±0.2,52.96N×142.93E,h10^{km}±1^{km},mb4.5/4,Ms4.2/1*
SKHL Felt (III) at Sabo.
*IDC **01** 05:10:59.0±1.0,52.86N×142.66E,mb3.6/7,mb1 3.9/7,mb1mx3.7/20,mbtmp3.6/7,MS3.2/1,Ms1 3.3/1,ms1mx2.3/34,Error ellipse: s-maj=38.3km s-min=20.3km az=156.0*
ISC 01 05:10:53.3±0.8**,52.94N**±0.03×**142.93E**±0.07**,h10**^{km}**,n18,**σ**1**^{s}**02**/31**,mb3.5**/7**,MS3.1**/1**,1C-3D,Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKH	Okha	0.62	0	⇓iPg	Pg	05 11 05.5	-0.3
OKH				⇓iPg	Pg	05 11 05.6	-0.2
OKH				AMB	AMB	05 11 06.4	
	2µm,0.4s						
OKH				pP		05 11 08.4	
OKH				eSg	Sg	05 11 14.4	+0.3
OKH				iSg	Sg	05 11 14.4	+0.3
OKH				A		05 11 16.3	
	7µm,0.5s						
OKH				A		05 11 16.3	
	10µm,0.5s						
NKL	Nikolayevsk	1.38	280	⇑iPg	Pg	05 11 19.5	-1.4
NKL				AMB	AMB	05 11 21.0	
	140nm,0.4s						
NKL				AMB	AMB	05 11 21.0	
	350nm,0.4s						
NKL				AMB	AMB	05 11 21.0	
	400nm,0.4s						
NKL				AMB	AMB	05 11 21.0	
	600nm,2.0s						
NKL				sP		05 11 24.0	
NKL				eSg	Sg	05 11 38.6	-0.7
NKL				A		05 11 41.0	
	1µm,0.3s						
NKL				A		05 11 41.0	
	100nm,0.3s						
TYV	Tymovskoe	2.08	185	ePb	Pb	05 11 31.5	+0.7
TYV				ePg	Pg	05 11 34.5	-0.5
TYV				AMB	AMB	05 11 35.0	
	54nm,0.3s						
TYV				AMB	AMB	05 11 35.0	
	36nm,0.3s						
TYV				AMB	AMB	05 11 35.0	
	27nm,0.3s						
TYV				pP		05 11 38.5	
TYV				eSg	Sg	05 12 03.5	+0.8
TYV				A		05 12 11.0	
	126nm,0.6s						
TYV				A		05 12 11.0	
	95nm,0.6s						
TYV				A		05 12 28.0	
	500nm,4.0s						
TYV				AMS	AMS	05 13 32.0	
	500nm,8.0s						
GRNR	Gornyy	4.58	244	ePg	Pg	05 12 23.0	-1.8
GRNR				eSg	Sg	05 13 26.0	+0.1
GRNR				A		05 13 28.0	
	212nm,1.0s						
EKMR	Ekimchan	6.03	275	ePn	Pn	05 12 25.5	+0.7
EKMR				⇓ePg	Pg	05 12 51.5	-2.2
EKMR				AMB	AMB	05 12 52.0	
	7.0nm,0.5s						
EKMR				AMB	AMB	05 12 52.0	
	8.0nm,0.5s						
EKMR				eSn	Sn	05 13 34.5	-0.2
EKMR				eSg	Sg	05 14 14.5	+0.4
EKMR				A		05 14 18.9	
	90nm,0.8s						
EKMR				A		05 14 18.9	
	66nm,0.8s						
EKMR				A		05 14 18.9	
	72nm,0.8s						
KLR	Kul'dur	7.96	247	eP	Pg	05 13 26.0	-6.2
KLR				eS	Sg	05 15 12.7	-5.6
KLR				AMS	AMS	05 16 07.5	
	500nm,7.0s						
KLR				AMS	AMS	05 16 07.5	
	800nm,7.0s						
BMKR	Bomnak	8.53	288	eP	P	05 13 00.5	+0.7
BMKR				eS	Sn	05 14 37.0	-0.1
TEY	Ternei	8.93	210	erx	rx	05 15 49.0	
YASR	Yasnyy	9.00	278	eP	P	05 13 05.5	-0.9
YASR				erx	rx	05 13 52.4	
YASR				eS	Sn	05 14 49.9	+1.0
ZEA	Zeya	9.42	281	erx	rx	05 14 27.5	
ZEA				eS	Sn	05 15 02.4	+3.2
KROS	Kirovskiy	9.59	285	eP	P	05 13 14.4	0.0
KROS				eS	Sn	05 15 05.0	+1.7
SONM	Songino Array	23.67	272	P	P	05 16 10.3	+4.9
	0.3nm,0.4s,mb3.1,baz=68,slow=7.8,SNR=2.7						
ILAR	Eielson Array	36.18	43	P	P	05 18 04.7	+7.2
	0.6nm,0.7s,mb3.6,baz=281,slow=9.2,SNR=7.3						
ILAR				LR	LR	05 33 60.0	
	comp=Z,36nm,21.7s,MS3.1,baz=357,slow=38						
MKAR	Makanchi Array	38.53	286	P	P	05 18 21.8	+4.4
	1.3nm,0.6s,mb3.8,baz=64,slow=8.5,SNR=14						
YKA	Yellowknife Ar	49.88	36	P	P	05 19 54.3	+6.1
	0.3nm,0.7s,mb3.4,baz=299,slow=7.7,SNR=3.0						
PDAR	Pinedale Array	66.15	50	P	P	05 21 50.4	+7.7
	0.4nm,0.7s,mb3.5,baz=333,slow=6.0,SNR=3.8						
ASAR	Alice Springs	76.68	189	P	P	05 22 51.2	+5.2
	0.5nm,0.5s,mb3.7,baz=3.2,slow=6.0,SNR=6.0						
TXAR	Lajitas Array	79.74	55	P	P	05 23 08.5	+5.7
	0.3nm,0.6s,mb3.4,baz=287,slow=5.7,SNR=5.6						

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*CSEM **01** 05:34:20.5±0.1,40.47N×20.74E,h5^{km},ML3.2,Error ellipse: s-maj=3.5km s-min=1.9km az=84.0*
*THE **01** 05:34:21.1,40.46N×20.82E,h10^{km},ML3.2*
*NEIC **01** 05:34:22.9,40.38N×20.95E,h5^{km},MD3.2(ATH),After ATH.*
*ATH **01** 05:34:23.9,40.36N×20.91E,h16^{km}±3^{km},MD3.2/4*
ISC 01 05:34:20.6±0.8**,40.44N**±0.03×**20.85E**±0.05**,h1**^{km}±7^{km}**,n17,**σ**1**^{s}**18**/24**,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	Florina	0.53	49	ePg	Pg	05 34 31.1	-0.1
FNA				eSg	Sg	05 34 39.8	+1.5
OHR	Ohrid	0.68	357	iPg	Pg	05 34 33.1	-1.0
OHR				iSg	Sg	05 34 43.1	0.0
MEV	Metsovon	0.71	156	ePg	Pg	05 34 34.9	0.0
KZN	Kozani	0.72	100	ePN	Pn	05 34 36.5	-1.1
KZN				eSN	Sn	05 34 46.5	-2.9
KZN	Kozani	0.72	100	ePb	Pb	05 34 35.5	-0.1
JAN	Janina	0.78	180	ePB	Pb	05 34 37.0	+0.3
JAN				eSN	Sb	05 34 47.3	-0.2
JAN	Janina	0.78	180	ePb	Pb	05 34 35.5	-1.2
JAN				eSb	Sb	05 34 47.3	-0.2
IGT	Igoumenitsa	0.99	204	ePg	Pg	05 34 40.0	-0.3
IGT	Igoumenitsa	0.99	204	ePg	Pg	05 34 40.0	-0.3
KEK	Kerkira	1.08	228	ePN	Pn	05 34 44.5	+1.7
GRG	Griva	1.29	66	ePg	Pg	05 34 45.1	-1.3
QSH	Qafa e Shtames	1.30	327	iPn	Pn	05 34 44.0	-1.9
QSH				iSn	Sn	05 35 07.0	+2.9
LIT	Litokhoron	1.30	104	ePg	Pg	05 34 46.5	-0.1
LIT				eSg	Sg	05 35 05.4	+1.5
SKO	Skopje	1.60	16	ePn	Pn	05 34 51.0	+0.8
EVR	Evrytania	1.69	154	ePN	Pn	05 34 53.7	+2.2
AGG	Agios Georgios	1.82	141	ePb	Pb	05 34 54.0	-0.4
XOR	Xorichti	2.10	120	ePn	Pn	05 34 57.5	+0.1

GUC 01 05:43:09.9±0.5**,34.84S**×**71.75W,h38**^{km}±2^{km}**,MD3.6,ML2.3,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNV	Longovilo	0.92	18	iP	P	05 43 26.7	+0.2
LNV				iS	S	05 43 39.6	+0.8
CACH	El Canelo	1.19	53	eP	P	05 43 31.1	+0.9
CACH				iS	S	05 43 47.2	+1.7
CICH	Cipreses	1.21	65	iP	P	05 43 31.7	+1.1
CICH				iS	S	05 43 47.8	+1.8
CHCH	Chadas Angostu	1.28	45	eP	P	05 43 32.6	+1.1
CHCH				iS	S	05 43 49.7	+2.0
RCDM	Rinconada Maip	1.55	30	eP	P	05 43 35.9	+0.3
RCDM				iS	S	05 43 56.2	+1.5
LMEL	Las Melosas	1.61	53	eP	P	05 43 37.5	+1.1
LMEL				iS	S	05 43 58.5	+2.3
LMEL				AMP		05 44 01.1	
	comp=N,61nm,0.5s						
FCH	Farellones	1.93	39	eP	P	05 43 42.2	+1.3
FCH				iS	S	05 44 06.7	+2.6
FCH				AMP		05 44 12.9	
	comp=N,36nm,0.2s						

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*IDC **01** 06:05:29.5±5.1,29.96S×177.66W,h41^{km}±42^{km},mb3.8/3,mb1 3.9/3,mb1mx3.6/14,mbtmp4.0/3,MS3.6/2,Ms1 3.6/2,ms1mx3.0/27,Error ellipse: s-maj=58.0km s-min=49.2km az=105.0*
ISC 01 06:05:29.1±5.2**,30.1S**±0.3×**178.0W**±0.8**,h33**^{km}**,n7,**σ**0**^{s}**46**/5**,mb3.9**/3**,MS4.0**/1**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.81	5	P	P	06 05 44.1	+0.1
	155nm,0.3s,baz=270,slow=20,SNR=5.1						
RAO				S	S	06 05 54.9	-0.1
	539nm,0.3s,baz=65,slow=23,SNR=13						
RAO				LR	LR	06 05 55.1	
	comp=Z,2µm,19.3s,slow=35						
RPZ	Rata Peaks	16.18	210	LR	LR	06 15 41.7	
	comp=Z,90nm,19.1s,baz=149,slow=37						

STKA	Stephens Creek	34.56	256	P	P	06 12 16.2	-0.6
	1.6nm,0.5s,mb4.2,baz=106,slow=13,SNR=3.8						
ASAR	Alice Springs	43.13	267	P	P	06 13 28.4	+0.1
	0.6nm,0.5s,mb3.6,baz=100,slow=7.5,SNR=8.4						
WRA	Warramunga Arr	44.09	272	P	P	06 13 36.5	+0.4
	1.1nm,0.4s,mb3.9,baz=110,slow=8.1,SNR=7.5						
MJAR	Matsushiro Arr	77.96	325	LR	LR	06 48 24.5	
	comp=Z,82nm,20.3s,MS4.0,baz=215,slow=33						
FINES	FINESS Array B	144.82	340	PKP	PKPdf	06 25 00.5	-1.5
	2.2nm,0.9s,baz=63,slow=4.3,SNR=7.1						

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*JMA **01** 06:20:12.1, 34.09N×135.40E, h7^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1:ϕ$_s$6°, δ41°, λ119°. NP2:ϕ$_s$150°, δ55°, λ67°. Principal axes: T Plg70°, Azm5°; N Plg19°, Azm164°; P Plg7°, Azm256°;*

JMA Felt I J1.

*IDC **01** 06:20:22.0±1.9, 35.45N×134.76E, mb3.4/2, mb1 3.5/4, mb1mx3.3/24, mbtmp3.4/4, ML3.2/2 Error ellipse: s-maj=48.5km s-min=14.5km az=164.0*

ISC 01 06:20:11.7±0.5**, 34.09N**±0.03×**135.39E**±0.03**, h5**^{km}±6^{km}**, n13,** σ**0^{s}78**/24**, mb3.2**/2**, 1C-4D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWY	Kouya	0.21	53	⇓P	Pg	06 20 16.3	+0.2
JWY				S	Sg	06 20 19.3	+0.3
JWM	Minabe	0.24	186	⇑P	Pg	06 20 17.1	+0.4
JWM				S	Sg	06 20 20.6	+0.6
JAJ2	Tsuna	0.53	308	⇓P	Pg	06 20 22.6	+0.2
JAJ2				S	Sg	06 20 30.1	+0.7
JHE	Heguri	0.61	24	⇓P	Pg	06 20 23.8	-0.2
JHE				S	Sg	06 20 32.1	-0.1
JWZ	Kozaga	0.62	154	P	Pg	06 20 24.3	+0.1
JWZ				*e*S	Sg	06 20 32.4	-0.1
JKN2	Miekihoku	0.75	78	P	Pg	06 20 26.1	-0.6
JKN2				*e*S	Sg	06 20 36.5	-0.3
JAI	Aioi	0.83	249	⇓P	Pb	06 20 28.1	-0.2
JAI				S	Sg	06 20 39.1	-0.4
JKS	Kasai	1.00	333	P	Pb	06 20 31.0	-0.1
JKS				S	Sb	06 20 44.6	+0.3
MAT	Matsushiro	3.36	43	P	Pn	06 21 07.9	+1.9
MJAR	Matsushiro Arr	3.36	43	Pn	Pn	06 21 11.4	+5.5
	1.4nm,0.3s,baz=219,slow=14,SNR=14						
MJAR				Pg	Pg	06 21 16.0	-2.9
	3.5nm,0.3s,baz=224,slow=16,SNR=18						
MJAR				Sn	Sn	06 21 47.5	+0.7
	0.6nm,0.3s,baz=228,slow=24,SNR=4.3						
MJAR				Lg		06 21 59.7	
	1.8nm,0.3s,baz=222,slow=28,SNR=5.7						
JNU	Nakatsue	3.88	257	Pn	Pn	06 21 24.2	+11
	2.8nm,0.3s,baz=42,slow=11,SNR=16						
JNU				Sn	Sn	06 22 12.9	+13
	baz=231,slow=14,SNR=1.8						
SONM	Songino Array	25.66	311	P	P	06 25 42.6	-1.2
	0.4nm,0.6s,mb3.1,baz=127,slow=9.8,SNR=5.3						
MKAR	Makanchi Array	41.60	304	P	P	06 28 01.2	-0.8
	0.3nm,0.4s,mb3.2,baz=82,slow=10,SNR=3.3						

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*IDC **01** 06:26:47.8±1.9, 26.89N×140.48E, h450^{km}±17^{km}, mb3.4/7, mb1 3.5/8, mb1mx3.2/22, mbtmp4.2/8, Error ellipse: s-maj=63.6km s-min=39.6km az=41.0*

*JMA **01** 06:26:49.5±0.1, 27.35N×141.11E, h451^{km}, M3.9*

ISC 01 06:26:47.6±0.8**, 27.1N**±0.1×**140.7E**±0.3**, h453**^{km}±9^{km}**, n21,** σ**1^{s}00**/25**, mb3.5**/7**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.34	91	P	P	06 27 46.0	+0.2
	33nm,0.3s,baz=299,slow=20,SNR=38						
CBIJ				S	S	06 28 29.6	-2.0
	39nm,0.3s,baz=286,slow=22,SNR=13						
CBIJ	Chichi jima	1.34	91	P	P	06 27 46.0	+0.3
CBIJ				*e*S	S	06 28 30.2	-1.5
JHHJ	Haha-jima-NKT	1.43	110	P	P	06 27 47.1	+1.0
JHHJ				*e*S	S	06 28 32.5	+0.2
JHJ	Hachijo jima 2	6.03	353	P	P	06 28 24.4	+1.1
	11nm,0.3s,baz=98,slow=15,SNR=4.8						
JHJ				S	S	06 29 36.8	-1.9
	4.3nm,0.3s,baz=18,slow=19,SNR=2.8						
BSO1	Boso 1	7.51	2	P	P	06 28 37.9	-1.1
JIE	Ise	8.01	336	P	P	06 28 46.1	+1.7
JWT	Wachi	9.30	332	P	P	06 29 00.2	+1.5
JAG	Ashikaga	9.33	354	P	P	06 28 58.2	-0.8
JHO	Hitachi	9.46	359	P	P	06 29 00.3	-0.1
JHK	Hiroka	10.19	352	P	P	06 29 09.0	+0.5
JFT	Otama	10.37	358	P	P	06 29 11.2	+0.8
JMK	Ichinoseki	11.80	2	P	P	06 29 27.2	+1.2
SONM	Songino Array	33.77	317	P	P	06 32 50.2	-0.9
	0.5nm,0.9s,mb2.9,baz=121,slow=7.2,SNR=3.6						
MKAR	Makanchi Array	49.42	310	P	P	06 34 55.1	-1.1
	0.6nm,0.4s,mb3.2,baz=91,slow=11,SNR=6.8						
MKAR				PcP	PcP	06 36 09.2	-1.5
	0.4nm,0.6s,baz=90,slow=5.8,SNR=3.0						
BVAR	Borovoye Array	57.11	317	P	P	06 35 50.2	-1.0
	3.5nm,0.4s,mb4.0,baz=91,slow=6.9,SNR=17						
ARCES	ARCESS Array B	73.07	341	P	P	06 37 32.3	+1.1
	3.0nm,0.8s,mb3.9,baz=66,slow=8.9,SNR=4.1						
KAF	Kangasniemi	76.86	334	*e*p	P	06 37 52.1	-0.5
FINES	FINESS Array B	77.33	333	P	P	06 37 55.2	+0.1
	2.5nm,0.4s,mb4.1,baz=72,slow=5.3,SNR=30						
AKASG	Malin Array Be	81.80	323	P	P	06 38 18.4	-0.3
	0.4nm,0.3s,mb3.4,baz=51,slow=5.3,SNR=7.6						
NB2	NORSAR Subarra	83.08	338	P	P	06 38 24.7	-0.3
	0.3nm,0.5s,mb3.1,baz=55,slow=4.5						
NOA	NORSAR Array B	83.08	338	P	P	06 38 24.5	-0.5
	0.4nm,0.4s,mb3.3,baz=51,slow=5.9,SNR=3.1						

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*BJI **01** 06:26:48.3, 2.06S×127.65E, h10^{km}, mB5.1, mb4.6*

*NEIC **01** 06:26:57.8±4.8, 1.12S×126.93E, h2^{km}±30^{km}, mb4.6/7, Error ellipse: s-maj=14.5km s-min=6.4km az=61.0*

*IDC **01** 06:26:57.5±0.7, 1.12S×126.93E, mb4.4/12, mb1 4.6/13, mb1mx4.4/21, mbtmp4.5/13, ML4.3/1, MS3.6/2, Ms1 3.6/2, ms1mx3.1/23, Error ellipse: s-maj=35.1km s-min=13.8km az=74.0*

*MOS **01** 06:26:59.8±1.4, 1.00S×127.11E, h33^{km}, mb4.5/5, Error ellipse: s-maj=27.2km s-min=10.1km az=114.4*

ISC 01 06:27:00.1±0.3**, 1.13S**±0.05×**127.01E**±0.10**, h33**^{km}**, (h31**^{km}±5.1^{km}**:pP-P), n52,** σ**1^{s}16**/49**, mb4.5**/21**, MS3.5**/2**, 2C-3D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	12.71	155	*e*P	P	06 30 00.3	-1.1
KSM	Kuching	16.89	279	*e*P	P	06 30 54.0	-1.8
FITZ	Fitzroy Crossi	16.92	184	Pn	P	06 30 56.6	+0.5
	0.8nm,0.3s,baz=17,slow=11,SNR=7.1						
WRAB	Tennant Creek	20.03	159	*e*P	P	06 31 31.4	-1.7
WRAB				pmax	pmax		
	comp=Z,18nm,0.8s						
WRAB	Tennant Creek	20.03	159	*e*P	P	06 31 31.4	-1.7
	comp=Z,18nm,0.8s						
WRA	Warramunga Arr	20.03	159	P	P	06 31 31.9	-1.3
	comp=Z,4.4nm,0.5s,baz=338,slow=10,SNR=17						
WB2	Warramunga Arr	20.04	159	*e*P	P	06 31 31.8	-1.4
MBWA	Marble Bar	21.14	199	*e*P	P	06 31 43.9	-0.7
ASPA	Alice Springs	23.38	164	*e*P	P	06 32 07.8	+0.8
ASAR	Alice Springs	23.38	164	P	P	06 32 07.8	+0.8
	comp=Z,9.2nm,0.7s,mb4.3,baz=338,slow=8.5,SNR=35						
YHNB	Yeheng	26.22	348	*e*P	P	06 32 34.5	+0.5
CTA	Charters Tower	26.64	136	P	P	06 32 42.9	+4.9
	comp=Z,8.2nm,0.8s,mb4.3,baz=309,slow=9.3,SNR=4.9						
CTAO	Charters Tower	26.64	136	P	P	06 32 40.5	+2.5
JOW	Kunigami	27.82	2	P	P	06 32 50.0	+1.2
	comp=Z,8.1nm,0.5s,mb4.7,baz=196,slow=12,SNR=5.9						
NWAO	Narrogin (SRO)	32.94	195	LR	LR	06 48 47.8	
	comp=Z,84nm,18.4s,MS3.5,baz=218,slow=40						
STKA	Stephens Creek	33.55	157	P	P	06 33 40.3	+1.2
	comp=Z,4.0nm,0.7s,mb4.4,baz=323,slow=6.9,SNR=10						
CMAR	Chiang Mai Arr	33.77	307	P	P	06 33 40.3	-0.9
	comp=Z,1.1nm,0.4s,mb4.2,baz=135,slow=7.2,SNR=5.1						
CMAR				PcP	PcP	06 36 21.7	+1.5
	comp=Z,1.4nm,0.4s,baz=154,slow=2.0,SNR=7.4						
ENH	Enshi	35.41	333	P	P	06 33 53.8	-1.4
JHJ	Hachijo jima 2	36.13	18	LR	LR	06 47 02.0	
	comp=Z,96nm,21.5s,MS3.5,baz=292,slow=33						
XAN	Xi'an	38.89	336	P	P	06 34 24.8	+0.5
XAN				AP	pP	06 34 36.1	+2.0
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
MJAR	Matsushiro Arr	38.90	14	P	P	06 34 24.0	-0.4
	comp=Z,2.3nm,0.4s,mb4.2,baz=186,slow=9.8,SNR=5.7						
LZH	Lanzhou	42.85	332	⇓P	P	06 34 57.8	+0.7
LZH				AP	pP	06 35 08.0	+1.1
LZH				XP	sP	06 35 12.3	+1.2
LZH				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.8						
GTA	Gaotai	47.42	331	*e*P	P	06 35 34.7	+1.2
GTA				AP	pP	06 35 40.5	-2.9
GTA				XP	sP	06 35 44.2	-3.3
GUN	Gumba	48.90	309	*e*P	P	06 35 45.6	+0.5
	comp=Z,18nm,0.4s,mb5.4						
PKI	Pulchoki	49.10	309	*e*P	P	06 35 48.3	+1.6
KKN	Kakani	49.30	309	*e*P	P	06 35 49.1	+0.8
DMN	Daman	49.35	309	*e*P	P	06 35 50.3	+1.7
GKN	Gorkha	49.91	309	*e*P	P	06 35 53.1	+0.2
	comp=Z,26nm,1.0s,mb5.2						
KLR	Kul'dur	50.33	4	*e*P	P	06 35 52.2	-3.6
KOLN	Koldanda	50.61	308	*e*P	P	06 35 59.0	+0.7
	comp=Z,64nm,0.8s						
HYB	Hyderabad	51.15	293	⇓*e*P	P	06 36 02.5	+0.1
HYB	Hyderabad	51.15	293	⇓*i*P	P	06 36 02.5	+0.1
SONM	Songino Array	51.97	342	P	P	06 36 08.9	+0.7
	comp=Z,2.1nm,0.6s,mb4.2,baz=153,slow=8.7,SNR=14						
ZAK	Zakamensk	55.18	342	*e*P	P	06 36 31.6	-0.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
NDI	New Delhi	56.09	306	*e*P	P	06 36 36.0	-2.8
WMQ	Urumqi	56.87	327	*e*P	P	06 36 43.6	-0.6
WMQ				AP	pP	06 36 53.6	-0.7
WMQ				XP	sP	06 36 57.6	-0.6
BOD	Bodaibo	59.68	352	*e*P	P	06 37 02.5	-1.1
MKAR	Makanchi Array	61.71	327	P	P	06 37 17.3	-0.2
	comp=Z,4.9nm,0.5s,mb4.9,baz=123,slow=8.7,SNR=47						
AAK	Ala-Archa	64.16	319	*e*P	P	06 37 31.7	-2.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
AAK	Ala-Archa	64.16	319	*e*P	P	06 37 31.7	-2.1
	comp=Z,2.3nm,0.8s,mb4.3						
BVAR	Borovoye Array	71.53	328	P	P	06 38 19.1	-0.5
	comp=Z,2.2nm,0.7s,mb4.2,baz=141,slow=9.5,SNR=7.3						
TIXI	Tiksi	72.66	1	⇑*i*P	P	06 38 23.9	-2.1
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
VNDA	Vanda	78.61	173	*e*P	P	06 38 59.9	+0.1
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VNDA	Vanda	78.61	173	P	P	06 39 00.5	+0.7
	comp=Z,1.3nm,0.8s,mb3.9,baz=300,slow=6.1,SNR=9.7						
VNDA	Vanda	78.61	173	*e*P	P	06 38 59.9	+0.1
	comp=Z,2.0nm,1.0s,mb4.0						
SBA	Scott Base	79.52	172	*e*P	P	06 39 06.6	+1.8
SBA				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
SBA	Scott Base	79.52	172	*e*P	P	06 39 06.6	+1.8
	comp=Z,1.2nm,0.9s,mb3.8						
OPO	Ambohidratompo	79.99	251	P	P	06 39 09.5	+1.1
	comp=Z,4.3nm,0.6s,mb4.6,baz=88,slow=5.3,SNR=12						
SYO	Syowa Base	88.03	201	⇑P	P	06 39 47.8	0.0
QSPA	South Pole Qui	88.81	180	*e*P	P	06 39 53.3	+1.9
	comp=Z,3.2nm,0.5s,mb4.9						
ARCES	ARCESS Array B	95.07	340	P	P	06 40 20.0	-0.5
	comp=Z,3.3nm,0.9s,mb4.8,slow=3.6,SNR=3.7						
CPUP	Villa Florida	152.38	172	PKPbc	PKPdf	06 46 56.5	+10
	comp=Z,1.6nm,0.7s,baz=158,slow=6.7,SNR=5.7						

IDC 01 06:31:24.6±17.0**, 20.38S**×**173.99W, mb4.2**/5**, mb1 4.3**/5**, mb1mx3.9**/19**, mbtmp4.2**/5**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.6**/29**, Error ellipse: s-maj=325.0km s-min=159.1km az=80.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	26.42	205	LR	LR	06 46 10.1	
	comp=Z,114nm,18.9s,baz=57,slow=34						
CTA	Charters Tower	37.24	263	P	P	06 38 39.0	-0.9
	1.6nm,0.3s,baz=82,slow=15,SNR=3.2						
STKA	Stephens Creek	41.23	245	P	P	06 39 11.1	-1.9
	1.0nm,0.5s,baz=121,slow=8.3,SNR=3.1						
ASAR	Alice Springs	48.20	256	P	P	06 40 06.7	-2.5
	1.7nm,0.8s,baz=98,slow=8.0,SNR=11						
WRA	Warramunga Arr	48.34	261	P	P	06 40 07.8	-2.4
	0.9nm,0.3s,baz=95,slow=8.0,SNR=17						
FITZ	Fitzroy Crossi	56.77	261	P	P	06 41 11.3	-1.8
	5.3nm,0.9s,baz=79,slow=5.2,SNR=6.8						

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*IDC **01** 07:22:28.6±2.5, 5.29S×151.00E, h98^{km}±22^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.6/15, mbtmp4.0/7, Error ellipse: s-maj=27.0km s-min=14.9km az=131.0*

ISC 01 07:22:29.8±3.5**, 5.3S**±0.2×**150.9E**±0.2**, h121**^{km}±32^{km}**, n8,** σ**1^{s}22**/10**, mb3.6**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.48	222	P	P	07 23 50.9	+0.5
	15nm,0.3s,baz=38,slow=7.4,SNR=25						
PMG				S	S	07 24 51.3	-1.4
	20nm,0.3s,baz=188,slow=18,SNR=3.8						
CTA	Charters Tower	15.37	196	P	P	07 26 04.8	+3.4
	0.4nm,0.3s,baz=30,slow=13,SNR=5.6						
WRA	Warramunga Arr	21.68	226	P	P	07 27 12.9	+1.0
	1.9nm,0.4s,mb3.8,baz=52,slow=9.8,SNR=16						
WRA				S	S	07 31 09.4	+10
	0.5nm,0.9s,baz=52,slow=16,SNR=5.4						
DZM	Mont Dzumac	22.50	139	P	P	07 27 19.9	0.0
	3.5nm,0.5s,mb4.0,baz=288,slow=9.6,SNR=7.6						
ASAR	Alice Springs	24.50	220	P	P	07 27 40.4	+1.1
	1.9nm,0.5s,mb3.7,baz=58,slow=8.4,SNR=26						
STKA	Stephens Creek	27.83	197	P	P	07 28 08.3	-1.7
	1.8nm,0.7s,mb3.7,baz=25,slow=12,SNR=4.4						
SONM	Songino Array	65.72	329	P	P	07 33 03.8	+0.1
	0.3nm,0.7s,mb3.2,baz=132,slow=5.5,SNR=4.1						
ILAR	Eielson Array	83.35	22	P	P	07 34 43.4	-0.9
	0.5nm,0.7s,mb3.5,baz=251,slow=5.8,SNR=5.9						

IDC 01 07:59:50.3±3.4**, 52.40N**×**35.34E, mb1 4.0**/2**, mb1mx3.5**/20**, mbtmp3.9**/2**, ML3.4**/3**, Error ellipse: s-maj=38.8km s-min=12.3km az=116.0, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	Malin Array Be	4.18	248	Pn	Pn	08 00 53.4	-3.4
	1.0nm,0.3s,baz=59,slow=11,SNR=5.2						
AKASG				Pg	Pg	08 01 04.0	-10
	1.9nm,0.3s,baz=55,slow=16,SNR=6.3						
AKASG				Sn	Sn	08 01 42.9	-4.1
	2.3nm,0.3s,baz=62,slow=22,SNR=5.1						
AKASG				Lg		08 02 00.1	
	3.3nm,0.3s,baz=154,slow=14,SNR=7.5						
FINES	FINESS Array B	10.37	335	Pn	P	08 02 15.8	-7.4
	0.2nm,0.3s,baz=155,slow=13,SNR=6.5						
FINES				Sn	S	08 04 07.0	-14
	0.3nm,0.3s,baz=158,slow=23,SNR=4.7						
ARCES	ARCESS Array B	17.80	349	P	P	08 03 57.5	-3.1
	0.4nm,0.3s,baz=159,slow=10,SNR=10						

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*NIED **01** 08:08:00, 33.90N×142.60E, h5^{km}, Mw4.1 Best double couple: M$_0$1.49×10^{15} NP1:ϕ$_s$186°, δ63°, λ-94°. NP2:ϕ$_s$14°, δ28°, λ-83°.*

*IDC **01** 08:08:28.5±0.5, 33.86N×142.59E, mb4.2/18, mb1 4.4/22, mb1mx4.3/26, mbtmp4.2/22, ML3.9/4, MS3.1/5, Ms1 3.1/5, ms1mx2.9/24, Error ellipse: s-maj=15.1km s-min=14.5km az=104.0*

*JMA **01** 08:08:30.5±0.3, 33.89N×142.63E, h74^{km}, M4.1*

*MOS **01** 08:08:31.3±1.5, 34.01N×142.62E, h33^{km}, mb4.8/5, Error ellipse: s-maj=17.3km s-min=8.8km az=113.6*

*BJI **01** 08:08:32.9, 34.01N×142.41E, h16^{km}, mB4.7, mb4.4, Ms3.9, Msz3.7*

*NEIC **01** 08:08:33.9±0.3, 33.89N×142.51E, mb4.7/2, MW4.1(NIED), Error ellipse: s-maj=7.7km s-min=5.8km az=207.0*

ISC 01 08:08:31.9±0.4**, 33.87N**±0.04×**142.51E**±0.04**, h33**^{km}**, (h34**^{km}±.7^{km}**:pP-P), n72,** σ**1^{s}14**/85**, mb4.2**/25**, MS3.7**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.49	302	P	P	08 08 56.8	+0.1
BSO1				*e*S	S	08 09 16.6	+1.4
BSO2	Boso 2	1.70	302	*e*S	S	08 09 22.7	+2.3
BSO3	Boso 3	1.90	300	P	P	08 09 02.9	+0.4
BSO3				*e*S	S	08 09 27.6	+2.1
BSO4	Boso 4	2.12	302	P	P	08 09 06.4	+0.8
BSO4				*e*S	S	08 09 33.5	+2.5
KTR	Katsuura	2.22	306	*e*S	S	08 09 34.9	+1.3
CHOJ	Chosi	2.28	324	P	P	08 09 07.6	-0.3
CHOJ				*e*S	S	08 09 34.6	-0.5
JHJ2	Mitsune	2.38	252	P	P	08 09 09.5	+0.2
JHJ2				*e*S	S	08 09 37.2	-0.4
JHJ	Hachijo jima 2	2.40	253	Pn	Pn	08 09 09.7	-0.2
	92nm,0.3s,baz=150,slow=2.0,SNR=62						
JHJ				Sn	Sn	08 09 36.9	-1.5
	208nm,0.3s,baz=65,slow=22,SNR=7.7						
JIM2	Oshima 3	2.69	289	P	P	08 09 13.0	-0.8
JOD2	Odawara 2	3.15	297	P	P	08 09 19.5	-0.8
JOD2				*e*S	S	08 09 57.0	-0.2
JAG	Ashikaga	3.58	316	P	P	08 09 25.4	-1.0
JAG				*e*S	S	08 10 05.5	-2.6
JYN	Shimob	3.65	298	P	P	08 09 27.1	-0.4
JYN				*e*S	S	08 10 09.8	-0.2
JRY	Ryogami san	3.66	307	P	P	08 09 27.2	-0.4
JRY				*e*S	S	08 10 09.9	-0.3
JMM	Marumori	4.23	341	P	P	08 09 32.6	-3.0
JMM				*e*S	S	08 10 17.5	-7.0
MJAR	Matsushiro Arr	4.42	308	Pn	Pn	08 09 38.3	-0.2
	6.4nm,0.3s,baz=95,slow=7.1,SNR=25						
MJAR				Sn	Sn	08 10 28.4	-1.1
	13nm,0.3s,baz=81,slow=21,SNR=8.4						
MAJO	Matsushiro	4.42	308	*e*P	P	08 09 36.5	-1.9
MAT	Matsushiro	4.42	308	P	P	08 09 38.0	-0.4
MAT				*e*S	S	08 10 25.0	-4.4
MAT	Matsushiro	4.42	308	P	P	08 09 38.1	-0.3
MAT				S	S	08 10 25.4	-4.0
MAT	Matsushiro	4.42	308	P	P	08 09 38.2	-0.2
MAT				*e*S	S	08 10 29.1	-0.3
JNS	Sasagawa	4.72	328	P	P	08 09 42.1	-0.5
JGM	Miyama	5.11	293	P	P	08 09 48.8	+0.7
JMK	Ichinoseki	5.18	349	P	P	08 09 45.3	-3.8
JYK	Kaneyama	5.33	342	P	P	08 09 49.0	-2.2
JSD	Sado	5.40	322	P	P	08 09 50.4	-1.8
CBIJ	Chichi jima	6.76	182	Pn	Pn	08 10 07.2	-4.3
	14nm,0.3s,baz=272,slow=22,SNR=18						
CBIJ				Sn	Sn	08 11 19.1	-8.9
	22nm,0.3s,baz=312,slow=23,SNR=7.2						
JNU	Nakatsue	9.75	269	Pn	P	08 10 51.9	-0.9
	0.4nm,0.3s,baz=92,slow=16,SNR=2.5						
JNU				LR	LR	08 14 32.7	
	comp=Z,72nm,18.3s,baz=100,slow=37						
ASAJ	Asahikawa	10.23	0	P	P	08 10 54.2	-5.3
ASAJ						08 12 42.2	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,41nm,21.6s						
ASAJ	Asahikawa	10.23	0	Pn	P	08 10 54.2	-5.3
	comp=Z,2.4nm,0.3s,baz=161,slow=33,SNR=5.9						
ASAJ				Sn	S	08 12 42.2	-12
	comp=Z,0.8nm,0.3s,baz=29,slow=19,SNR=2.6						
ASAJ				LR	LR	08 14 16.3	
	comp=Z,41nm,21.6s,baz=273,slow=34						
YSS	Yuzh-Sakhalins	13.07	1	*e*P	P	08 11 33.0	-4.8
YSS	Yuzh-Sakhalins	13.07	1	*e*P	P	08 11 32.0	-5.8
	comp=Z,19nm,0.8s						
JOW	Kunigami	14.15	244	LR	LR	08 16 25.8	
	comp=Z,108nm,20.3s,baz=264,slow=34						
HIA	Hailar	22.83	319	*e*P	P	08 13 34.2	+1.3
WHN	Wuhan	24.03	270	P	P	08 13 44.2	-0.6
HHC	Hu-ho-hao-te	25.48	295	*e*P	P	08 14 00.4	+1.8
HHC				AP	pP	08 14 09.9	+2.0
HHC				XP	sP	08 14 13.9	+2.2
HHC				PP	PP	08 14 37.7	-0.4
HHC				S	S	08 18 25.0	+3.9
HHC				XS		08 18 40.3	
HHC				SS	SS	08 19 21.9	-2.5
HHC				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
HHC				AMB	AMB		
	comp=Z,110nm,5.9s						
HHC				LR	LR		
	comp=N,190nm,30.9s,MS3.7						
HHC				LR	LR		
	comp=E,280nm,27.3s,MS3.7						
CIT	Chita	27.63	320	*e*P	P	08 14 21.3	+3.0
CIT				pmax	pmax		
	comp=Z,32nm,2.1s,mb4.6						
SONM	Songino Array	30.37	308	P	P	08 14 43.8	+1.0
	comp=Z,3.1nm,0.8s,mb4.1,baz=112,slow=7.4,SNR=20						
SONM				LR	LR	08 27 26.1	
	comp=Z,51nm,18.5s,MS3.2,baz=102,slow=37						
BOD	Bodaibo	30.70	330	*e*P	P	08 14 41.2	-4.4
BOD				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
ZAK	Zakamensk	32.99	312	*e*P	P	08 15 04.8	-1.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
KMI	Kunming	35.52	267	P	P	08 15 29.2	+1.4
CMAR	Chiang Mai Arr	41.69	260	P	P	08 16 19.6	+0.3
	comp=Z,1.0nm,0.4s,mb3.8,baz=45,slow=8.2,SNR=4.1						
WMQ	Urumqi	43.14	300	*e*P	P	08 16 33.0	+2.2
WMQ				AP	pP	08 16 43.0	+2.3
WMQ				XP	sP	08 16 47.0	+2.2
WMQ				LR	LR		
	comp=Z,520nm,17.0s,MS4.5						
ZAL	Zalesovo	44.76	315	P	P	08 16 44.3	+0.6
	comp=Z,1.1nm,0.3s,mb4.2,baz=28,slow=8.7,SNR=4.5						
MKAR	Makanchi Array	46.61	305	P	P	08 16 59.0	+0.4
	comp=Z,2.4nm,0.7s,mb4.2,baz=88,slow=10,SNR=16						
MKAR				LR	LR	08 35 16.9	
	comp=Z,32nm,19.7s,MS3.3,baz=51,slow=34						
ILAR	Eielson Array	51.71	31	P	P	08 17 36.3	-1.3
	comp=Z,1.3nm,0.7s,mb4.0,baz=260,slow=6.0,SNR=19						
BVAR	Borovoye Array	53.39	314	P	P	08 17 50.1	-0.2
	comp=Z,0.6nm,0.5s,mb3.8,baz=82,slow=10,SNR=3.9						
WRAB	Tennant Creek	54.06	189	*e*P	P	08 17 54.8	-0.9
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
WRAB	Tennant Creek	54.06	189	*e*P	P	08 17 54.8	-0.8
	comp=Z,6.0nm,0.6s,mb4.7						
WRA	Warramunga Arr	54.07	190	P	P	08 17 54.7	-1.1
	comp=Z,4.7nm,0.5s,mb4.7,baz=6.6,slow=7.5,SNR=57						
ASAR	Alice Springs	57.80	189	P	P	08 18 21.9	-0.6
	comp=Z,2.5nm,0.8s,mb4.3,baz=14,slow=9.1,SNR=19						
STKA	Stephens Creek	65.40	181	P	P	08 19 13.0	-0.5
	comp=Z,2.2nm,0.8s,mb4.2,baz=28,slow=16,SNR=4.6						
YKA	Yellowknife Ar	66.10	30	P	P	08 19 16.4	-1.0
	comp=Z,0.9nm,0.7s,mb3.9,baz=296,slow=6.5,SNR=6.2						
KAF	Kangasniemi	71.53	334	*e*p	P	08 19 50.0	-0.9
	comp=Z,3.6nm,0.7s,mb4.4,baz=49,slow=5.7						
KAF	Kangasniemi	71.53	334	*e*P	P	08 19 50.0	-0.9
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
FINES	FINESS Array B	72.03	333	P	P	08 19 53.8	-0.1
	comp=Z,5.3nm,1.1s,mb4.4,baz=34,slow=6.9,SNR=9.5						
FINES	FINESS Array B	72.03	333	P	P	08 19 53.8	-0.1
FFC	Flin Flon	75.88	33	*e*P	P	08 20 15.9	-0.4
FFC				*e**PP	pP	08 20 26.9	+0.3
FFC				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
FFC	Flin Flon	75.88	33	*e*P	P	08 20 15.9	-0.5
	comp=Z,6.3nm,1.0s,mb4.5						
FFC				*e*pP	pP	08 20 26.9	+0.3
NVAR	Mina Array Bea	76.17	53	P	P	08 20 19.6	+1.2
	comp=Z,1.8nm,0.7s,mb4.1,baz=277,slow=6.8,SNR=14						
AKASG	Malin Array Be	77.36	323	P	P	08 20 24.8	0.0
	comp=Z,1.3nm,0.4s,mb4.2,baz=45,slow=5.9,SNR=14						
NB2	NORSAR Subarra	77.45	338	P	P	08 20 25.3	+0.2
	comp=Z,1.8nm,0.6s,mb4.2,baz=40,slow=5.6						
NOA	NORSAR Array B	77.45	338	P	P	08 20 25.2	+0.2
	comp=Z,2.4nm,0.7s,mb4.2,baz=39,slow=5.7,SNR=9.2						
PDAR	Pinedale Array	79.24	45	P	P	08 20 36.1	+0.8
	comp=Z,0.8nm,0.7s,mb3.8,baz=292,slow=2.1,SNR=7.9						
PV10	Paradox Valley	82.18	49	*e*P	P	08 20 52.0	+1.1
PV01	Paradox Valley	82.62	49	*e*P	P	08 20 54.7	+1.5
PV01				*e*pP	pP	08 21 05.2	+1.6
ASF	Jabal al Asfar	84.03	305	P	P	08 21 00.7	+0.3
	comp=Z,1.2nm,0.4s,mb4.4,baz=189,slow=4.8,SNR=4.2						
CLL	Collm	84.29	331	P	P	08 21 03.0	+1.7
GERES	GERESS Array B	85.88	329	P	P	08 21 09.7	+0.5
	comp=Z,0.3nm,0.4s,mb3.9,baz=18,slow=8.4,SNR=5.7						
TXAR	Lajitas Array	91.32	53	P	P	08 21 36.7	+1.0
	comp=Z,0.9nm,0.5s,mb4.3,baz=304,slow=3.3,SNR=27						
SDV	Santo Domingo	127.11	43	PKP	PKPdf	08 27 35.4	+1.9
	comp=Z,2.5nm,0.7s,baz=326,slow=7.3,SNR=3.3						

SAML	Samuel	145.74	50	*e*P	PKPdf	08 28 09.3	+1.7
SAML				*e*pP		08 28 19.8	
LPAZ	La Paz	147.36	65	PKPbc	PKPdf	08 28 15.5	+5.3
	comp=Z,2.9nm,0.7s,baz=360,slow=9.9,SNR=18						
SIV	San Ignacio	152.28	56	PKPbc	PKPdf	08 28 26.3	+8.4
	comp=Z,1.5nm,0.7s,baz=244,slow=1.7,SNR=12						
SIV				PKPab	PKPab	08 28 36.1	-0.9
	comp=Z,0.9nm,0.7s,baz=300,slow=3.4,SNR=5.2						

IDC 01 08:22:16.1±4.1**, 9.15N**×**91.93E, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.5**/19**, mbtmp3.6**/3**, MS3.3**/1**, Ms1 3.2**/1**, ms1mx2.7**/18**, Error ellipse: s-maj=145.3km s-min=31.6km az=63.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	38.41	349	P	P	08 29 39.4	-1.6
	0.8nm,0.6s,baz=169,slow=8.7,SNR=7.1						
SONM	Songino Array	40.46	15	P	P	08 29 56.2	-1.8
	0.5nm,0.7s,baz=196,slow=9.0,SNR=6.6						
ZAL	Zalesovo	45.03	354	LR	LR	08 50 33.0	
	comp=Z,30nm,18.8s,baz=272,slow=38						
WRA	Warramunga Arr	50.78	125	P	P	08 31 18.5	-2.0
	0.2nm,0.5s,baz=302,slow=8.8,SNR=4.5						

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*ISK **01** 08:29:20.0, 40.13N×40.93E, h14^{km}, MD3.7*
*CSEM **01** 08:29:20.4±0.1, 40.12N×40.94E, h20^{km}, MD3.7, Error ellipse: s-maj=3.0km s-min=2.4km az=8.0*
*MOS **01** 08:29:25.1±2.2, 40.16N×40.70E, h10^{km}, mb3.7/1, Error ellipse: s-maj=21.0km s-min=12.8km az=83.9*
ISC 01 08:29:20.3±0.4**, 40.06N**±0.03×**40.91E**±0.04**, h10**^{km}**, n34, σ1**^{s}**14**/44**, mb3.4**/1**, 2C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZM	Erzurum	0.38	114	*i* PG	Pg	08 29 28.2	0.0
ERZM	Erzurum	0.39	113	*i* P	Pg	08 29 28.5	+0.3
ERZM				*i* S	Sg	08 29 34.0	+0.6
EZC	Erzincan	0.90	250	PN	Pn	08 29 44.3	+5.5
GUMT	Gumushane	1.16	291	*i* PN	Pn	08 29 42.7	+0.1
GUMT				*i* SN	Sn	08 29 58.1	-0.5
BINT	Bingol	1.23	195	PN	Pn	08 29 44.9	+1.4
BCA	Borcka	1.49	21	PN	Pn	08 29 45.6	-1.7
BCA				SN	Sn	08 30 05.0	-1.9
KARS	Kars	1.76	71	*e*PN	Pn	08 29 50.1	-1.1
BTMT	Batman	1.92	166	PN	Pn	08 29 54.2	+0.8
ELZG	Elazig	2.16	224	*i* P	Pg	08 30 00.4	-3.0
ELZG				*i* S	Sg	08 30 32.6	+0.4
BEST	Besiri	2.18	172	*i* P	Pg	08 30 01.4	-2.6
BEST				*i* S	Sg	08 30 33.0	-0.1
VANB	Van	2.42	126	*e*PN	Pn	08 30 00.4	-0.2
TVAN	Van	2.47	127	*i* P	Pg	08 30 05.2	-4.5
TVAN				*i* S	Sg	08 30 36.2	-6.4
MYA	Malataya	2.59	229	*e*PN	Pn	08 30 04.4	+1.3
MALT	Malatya	2.60	229	*e*PN	Pn	08 30 03.6	+0.4
GNI	Garni	2.94	87	*e*PN	Pn	08 30 08.0	-0.1
GNI	Garni	2.94	87*c*	*i*PN	Pn	08 30 15.2	+7.1
URFA	Urfa	3.08	213	*e*PN	Pn	08 30 09.9	-0.1
ONI	Oni	3.16	36	P	Pn	08 30 12.5	+1.2
ONI				S	Sn	08 30 56.1	+6.7
BCHG	Becho	3.23	22	P	Px	08 30 20.1	
BCHG				S	Sx	08 30 58.9	
TI2	Plekhanov	3.36	59	*e*PN	Pn	08 30 18.6	+4.6
TI2				*e*		08 31 11.0	
ZEI	Tsey	3.52	39	*e*PN	Pn	08 30 21.9	+5.6
ZEI				*e*		08 30 30.2	
ZEI				*e*		08 31 02.1	
ZEI				*i*		08 31 13.0	
ZEI				pmax	pmax		
	comp=Z,12nm,0.1s						
ZEI				pmax	pmax		
	comp=Z,19nm,0.2s						
ZEI				smax			
	comp=N,27nm,0.2s						
SOC	Sochi	3.63	346	*e*PN	Pn	08 30 19.1	+1.2
SOC				*e*		08 31 01.6	
SOC				pmax	pmax		
	comp=N,72nm,1.0s						
SOC				pmax	pmax		
	comp=Z,37nm,1.0s						
SOC				pmax	pmax		
	comp=E,9.0nm,0.6s						
SOC				smax			
	comp=E,84nm,0.7s						
DGRG	David-gareji	3.67	66	P	Px	08 30 29.2	
DGRG				S	Sx	08 31 42.7	
GZT	Gaziantep	3.76	225	*i* P	Pg	08 30 34.3	-1.0
GZT				*i* S	Sg	08 31 31.1	+5.6
KIV	Kislovodsk	4.11	18*c*	*i*PN	Pn	08 30 31.8	+7.1
CTKT	Corum	4.71	279	*i* P	Pg	08 30 48.2	-6.2
CTKT				*i* S	Sg	08 31 51.7	-5.4
BOYT	Boyabat	4.76	289	*i* P	Pn	08 30 38.7	+4.8
BOYT				*i* S	Pg	08 30 50.6	-4.8
CORM	Corum	4.81	273	*e*PN	Pn	08 30 34.3	-0.3
ANN	Anapa	5.39	333	*e*PN	Pn	08 30 43.9	+1.1
ANN				pmax	pmax		
	comp=Z,14nm,0.6s						
ANN	Anapa	5.39	333	*e*Pn	Pn	08 30 43.9	+1.1
	comp=Z,14nm,0.6s						
OBN	Obninsk	15.34	351⇓	*e*P	P	08 33 03.0	+4.7
OBN				*e*S	S	08 35 55.0	+6.1
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
OBN	Obninsk	15.34	351	*e*P	P	08 33 03.0	+4.7
	comp=Z,4.0nm,0.6s						
OBN				*e*S	S	08 35 55.0	+6.1
VSU	Vasula	20.53	338	*i* P	P	08 34 07.3	+6.1
AAK	Ala-Archa	25.25	73	*e*P	P	08 34 54.7	+6.8
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						

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*ATH **01** 08:41:16.3, 35.80N×27.34E, h13^{km}±1^{km}, MD3.2/3*
*NEIC **01** 08:41:16.0, 35.85N×27.28E, h4^{km}, MD3.2(ATH), After ATH.*
*CSEM **01** 08:41:16.5±0.2, 35.87N×27.31E, h10^{km}, MD3.2, Error ellipse: s-maj=6.4km s-min=3.4km az=147.0*
*ISK **01** 08:41:17.9, 35.79N×27.26E, h39^{km}, MD3.2*
ISC 01 08:41:15.6±1.5**, 35.87N**±0.06×**27.32E**±0.06**, h0**^{km}±13^{km}**, n10, σ0**^{s}**58**/17**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.35	202	*e*PG	Pg	08 41 22.0	-0.6
KARP				*e*SG	Sg	08 41 27.0	-0.2
ARG	Arkhangelos	0.74	62	*e*PB	Pb	08 41 31.0	0.0
ARG				*e*SB	Sb	08 41 41.5	+0.1
BODT	Bodrum	1.19	359	*e*PN	Pn	08 41 39.6	+0.1
BODT				*e*SN	Sn	08 41 55.8	-0.8
MLSB	Milas	1.47	14	*e*PN	Pn	08 41 44.8	+1.4
YER	Yerkesik	1.48	31	*e*PN	Pn	08 41 43.9	+0.3
NPS	Neapolis	1.52	247	*e*PB	Pn	08 41 43.8	-0.4
NPS				*e*SB	Sb	08 42 05.0	+0.8
NPS	Neapolis	1.52	247	*e*Pn	Pn	08 41 43.8	-0.4
NPS				*e*Sb	Sb	08 42 03.1	-1.1
FETY	Fethiye	1.61	61	*e*PN	Pn	08 41 45.8	+0.3
FETY				*e*SN	Sn	08 42 06.8	-0.5
XRY	Khrisi	1.66	234	*e*PB	Pb	08 41 46.9	+0.1
XRY				*e*SB	Sb	08 42 09.0	+0.8
APE	Apeiranthos	1.88	310	*e*PN	Pn	08 41 48.8	-0.5

IDC 01 08:41:48.4±1.9**, 2.79N**×**125.48E, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/16**, mbtmp3.7**/3**, Error ellipse: s-maj=172.2km s-min=24.5km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.20	159	P	P	08 47 06.4	-1.5
	2.1nm,0.6s,baz=338,slow=10,SNR=32						
ASAR	Alice Springs	27.54	163	P	P	08 47 38.0	-1.1
	0.7nm,0.5s,baz=340,slow=7.1,SNR=14						
MKAR	Makanchi Array	57.62	326	P	P	08 51 40.1	-2.6
	0.3nm,0.3s,baz=117,slow=6.7,SNR=3.3						

CASC 01 08:49:58.1±2.6**, 8.34N**×**82.80W, h22**^{km}±8^{km}**, MD3.5, MW3.8, 1C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTP1	Petroterminal	0.39	111⇓	*e*P	Pb	08 50 03.1	-3.3
PTP1				*e*S	Sb	08 50 07.7	-4.3
BRU2	Volcan	0.46	13	*e*P	Pb	08 50 08.1	+0.6
BRU2				*e*S	Sb	08 50 16.2	+2.3
SVTC	San Vito de Co	0.47	340⇓	*e*P	Pb	08 50 07.2	-0.4
SVTC				*e*S	Sb	08 50 15.6	+1.5
ACR	Cerro Adams	0.48	310⇑	*e*P	Pb	08 50 06.0	-1.8
ACR				*e*S	Sb	08 50 13.5	-0.9
SFX2	San Felix	0.92	93	*e*P	Pb	08 50 14.0	-1.3
SFX2				*e*S	Sb	08 50 26.1	-1.0
BUS	Buena Vista	1.53	322	*e*P	Pn	08 50 23.8	-0.7
BUS				*e*S	Sn	08 50 45.4	+1.5
LCR2	La Lucha 2	1.83	320	*e*P	Pn	08 50 29.1	+0.3
LAJ	Bijagual	2.00	319	*e*P	Pn	08 50 33.5	+2.4
PRS1	Puriscal	2.21	318	*e*P	Pn	08 50 34.1	-0.1
CGA2	Cerro Gallo 2	2.34	315	*e*P	Pn	08 50 37.3	+1.2

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*THR **01** 09:09:34.3±0.3, 35.42N×53.10E, h15^{km}±5^{km}, ML3.1*
*CSEM **01** 09:09:34.5±0.1, 35.48N×53.13E, h25^{km}, ML3.4, Error ellipse: s-maj=2.0km s-min=1.2km az=9.0*
*TEH **01** 09:09:35.8, 35.47N×53.10E, h13^{km}, Mn3.4*
ISC 01 09:09:33.6±0.5**, 35.52N**±0.05×**53.14E**±0.04**, h13**^{km}**, n25, σ1**^{s}**03**/26**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IFIR	Firoozkooh	0.34	291	Pg	Pg	09 09 42.5	+1.7
IDMV	Damavand	0.91	274	Pg	Pg	09 09 51.6	-0.3
DAMV	Damavand	0.96	277	*e*PG	Pg	09 09 52.4	-0.6
DAMV				*e*SG	Sg	09 10 05.4	-0.5
DAMV				AML	AML	09 10 11.8	
	comp=N,542nm,0.4s						
IAFJ	Afjeh	1.21	287	Pg	Pg	09 09 57.2	-0.7
IVRN	Varamin	1.27	246	Pg	Pg	09 09 57.6	-1.5
IVRN				Sn	Sn	09 10 15.3	+1.3
THKV	Tehran--Karaj	1.88	283	*e*PG	Pg	09 10 08.6	-2.7
IMHD	Mahdasht	2.02	275	Pn	Pn	09 10 09.3	+1.4
IMHD	Mahdasht	2.02	275	Lg		09 10 37.9	
IGZV	Gazvin	2.52	291	Pn	Pn	09 10 19.9	+4.8
IKLH	Kalahroud	2.55	211	Pn	Pn	09 10 15.7	+0.3
IZEF	Zefreh	2.70	195	Pn	Pn	09 10 18.1	+0.5
NASN	Na’in	2.73	186	*e*PN	Pn	09 10 18.5	+0.5
NASN				AML	AML	09 11 13.1	
	comp=N,68nm,0.3s						
ASAO	Ashtian	2.73	250	*e*PN	Pn	09 10 19.1	+1.1
ASAO				AML	AML	09 11 00.2	
	comp=N,119nm,0.5s						
IGAR	Garneh	3.36	194	Pn	Pn	09 10 25.4	-1.5
ICHK	Chekchek	3.43	162	Pn	Pn	09 10 28.0	0.0
ISHV	Shirvan	4.18	60	Pn	Pn	09 10 36.8	-1.8
ISFR	Esferayen	4.21	67	Pn	Pn	09 10 40.6	+1.6
IMEH	Mehriz	4.30	163	Pn	Pn	09 10 39.7	-0.6
IBAF	Bafgh	4.41	152	Pn	Pn	09 10 41.6	-0.3
IKRD	Kardeh	4.53	72	Pn	Pn	09 10 54.7	+11
SNGE	Sanandaj	4.76	267	*e*PN	Pn	09 10 47.3	+0.5
IEMG	Emamqoli	4.82	65	Pn	Pn	09 10 53.8	+6.1
IPAY	Payeh	4.84	77	Pn	Pn	09 10 48.0	+0.1
IMOG	Moghan	5.07	82	Pn	Pn	09 10 51.4	+0.2
IMYA	Miamay	5.71	80	Pn	Pn	09 11 00.2	0.0

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*IDC **01** 09:28:06.4±1.7, 19.21S×177.60W, h559^{km}±25^{km}, mb3.4/4, mb1 3.5/7, mb1mx3.1/20, mbtmp4.4/7, Error ellipse: s-maj=53.4km s-min=17.9km az=157.0*
*NEIC **01** 09:28:07.0±0.9, 19.20S×177.60W, h570^{km}±16^{km}, mb4.2/2, Error ellipse: s-maj=35.9km s-min=11.7km az=167.0*
ISC 01 09:28:06.2±0.8**, 19.1S**±0.2×**177.7W**±0.1**, h570**^{km}**, n10, σ0**^{s}**74**/10**, mb4.1**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.68	48	P	P	09 30 02.0	0.0
	2.6nm,0.3s,baz=214,slow=18,SNR=4.2						
AFI				S	S	09 31 34.5	0.0
	3.8nm,0.3s,baz=11,slow=23,SNR=7.0						
DZM	Mont Dzumac	15.15	256	P	P	09 31 19.5	+3.2
	0.7nm,0.3s,baz=73,slow=19,SNR=8.6						
RAR	Rarotonga	16.94	100	P	P	09 31 33.7	+0.2
	0.7nm,0.3s,baz=286,slow=12,SNR=3.6						
CTA	Charters Tower	33.95	262	P	P	09 34 05.0	+0.7
	4.1nm,0.3s,mb4.4,baz=90,slow=12,SNR=13						
CTAO	Charters Tower	33.95	262	*e*P	P	09 34 04.8	+0.6
	3.8nm,0.5s,mb4.2						
STKA	Stephens Creek	38.67	243	P	P	09 34 42.6	-0.3
	4.4nm,1.0s,mb4.0,baz=76,slow=8.9,SNR=8.4						
WRAB	Tennant Creek	45.09	261	*e*P	P	09 35 33.4	-0.5
	2.5nm,0.4s,mb4.1						
WRA	Warramunga Arr	45.10	261	P	P	09 35 33.5	-0.5
	1.6nm,0.4s,mb3.9,baz=97,slow=7.9,SNR=57						
ASAR	Alice Springs	45.14	255	P	P	09 35 33.9	-0.4
	3.0nm,0.4s,mb4.2,baz=88,slow=8.3,SNR=84						
ASAR				PcP	PcP	09 37 02.0	-0.7
	0.5nm,0.5s,baz=104,slow=4.4,SNR=4.2						
GERES	GERESS Array B	148.96	345	PKPbc	PKPdf	09 46 52.2	+7.3
	0.3nm,0.3s,baz=59,slow=7.8,SNR=4.3						

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*IDC **01** 09:41:34.5±0.5, 15.53S×167.19E, mb4.7/20, mb1 4.8/22, mb1mx4.8/24, mbtmp4.7/22, ML5.1/2, MS4.6/29, Ms1 4.6/29, ms1mx4.5/33, Error ellipse: s-maj=16.7km s-min=13.9km az=94.0*
*CSEM **01** 09:41:36.5, 15.58S×167.80E, h33^{km}, mb5.6*
*LDG **01** 09:41:36.4±0.3, 15.55S×166.67E, h10^{km}, Mb5.5/4, Ms4.6/7, Error ellipse: s-maj=39.1km s-min=9.2km az=85.0*
*HRVD **01** 09:41:38.2±0.2, 15.57S×166.93E, h26^{km}, MW5.2/55, Centroid moment Tensor Solution. LP body waves: s53,c90;Mantle waves: s55,c95; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.81±.02; $M_{\theta\theta}$0.12±.02; $M_{\phi\phi}$-0.92±.02; $M_{r\theta}$-0.07±.04; $M_{\theta\phi}$0.29±.01; $M_{\phi r}$-0.15±.03; Best double couple: M_0.923×10^{17} NP1:ϕ_s336°, δ42°, λ76°. NP2:ϕ_s175°, δ50°, λ102°. Principal axes: T .836, Plg80°, Azm143°; N .173, Plg9°, Azm347°; P -1.009, Plg4°, Azm256°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **01** 09:41:38.2±0.2, 15.59S×167.18E, mb5.1/28, MS4.8/92 Error ellipse: s-maj=6.9km s-min=5.5km az=105.0*
*BJI **01** 09:41:39.2, 15.60S×167.20E, h24^{km}, mB5.3, mb5.1, Ms5.1, Msz4.7*
*MOS **01** 09:41:39.0±1.4, 15.50S×166.93E, h33^{km}, mb5.2/27, MS4.6/21, Error ellipse: s-maj=9.7km s-min=8.5km az=120.7*
ISC 01 09:41:36.5±0.3**, 15.64S**±0.04×**167.11E**±0.06**, h24**^{km}**, h24**^{km}±.6^{km}**:pP-P, n291, σ1**^{s}**04**/149**, mb5.0**/62**, MS4.7**/124**, 11C-7D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.43	186	*e*P	Pn	09 43 10.9	-1.5
DZM				*e*S	Sn	09 44 20.5	-5.3
DZM	Mont Dzumac	6.43	186	Pn	Pn	09 43 11.0	-1.4
	30nm,0.3s,baz=38,slow=20,SNR=174						
DZM				Sn	Sn	09 44 20.1	-5.7
	11nm,0.3s,baz=322,slow=19,SNR=3.3						
DZM				LR	LR	09 45 22.0	
	comp=Z,7µm,20.0s,baz=10,slow=35						
DZM	Mont Dzumac	6.43	186	*e*P	Pn	09 43 10.8	-1.5
DZM				*e*S	Sn	09 44 20.5	-5.3
NOUC	Port Laguerre	6.48	187	*e*P	Pn	09 43 11.3	-1.6
NOUC				*e*S	Sn	09 44 21.5	-5.4
NOUC	Port Laguerre	6.48	187	*e*P	Pn	09 43 11.3	-1.6
NOUC				*e*S	Sn	09 44 21.4	-5.4
HNR	Honiara	9.32	311	P	P	09 43 50.2	-2.4
HNR						09 45 33.1	
HNR				pmax	pmax		
	comp=Z,22nm,0.3s						
HNR				smax			
	comp=N,20nm,0.3s						
HNR	Honiara	9.32	311	Pn	P	09 43 50.2	-2.4
	comp=N,22nm,0.3s,baz=109,slow=23,SNR=5.9						
HNR				Sn	Sn	09 45 33.1	-4.6
	comp=N,20nm,0.3s,baz=16,slow=20,SNR=3.2						
HNR	Honiara	9.32	311	*e*P	P	09 43 51.5	-1.1
	comp=N,182nm,0.7s						
RAO	Raoul Island	19.34	137	LR	LR	09 51 57.5	
	comp=N,2µm,21.3s,baz=326,slow=32						
CTA	Charters Tower	20.33	254	*e*P	P	09 46 15.0	+1.0
CTA	Charters Tower	20.33	254	P	P	09 46 14.6	+0.6
CTA				pmax	pmax		
	comp=Z,53nm,0.9s						
CTA				MLR	MLR		
	comp=Z,2µm,19.5s						
CTA	Charters Tower	20.33	254	P	P	09 46 14.6	+0.6
	comp=Z,52nm,0.9s,baz=82,slow=12,SNR=26						
CTA				LR	LR	09 53 10.4	
	comp=Z,2µm,19.5s,MS4.4,baz=159,slow=34						
CTAO	Charters Tower	20.33	254	*e*P	P	09 46 14.4	+0.4
CTAO				pmax	pmax		
	comp=Z,71nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,2µm,19.0s,MS4.5						
CTAO	Charters Tower	20.33	254	*e*P	P	09 46 14.4	+0.4
	comp=Z,71nm,0.9s						
CTAO				LR	LR		
	comp=Z,2µm,19.0s,MS4.5						
PMG	Port Moresby	20.43	285	P	P	09 46 15.7	+0.7
PMG				pmax	pmax		
	comp=Z,29nm,1.0s						
PMG				MLR	MLR		
	comp=Z,4µm,18.8s						
PMG	Port Moresby	20.43	285	P	P	09 46 15.7	+0.7
	comp=Z,29nm,0.9s,baz=143,slow=15,SNR=2.9						
PMG				LR	LR	09 53 26.2	
	comp=Z,4µm,18.8s,MS4.8,baz=139,slow=35						
PMG	Port Moresby	20.43	285	*e*P	P	09 46 17.3	+2.3
	comp=Z,33nm,0.9s						
PMG				LR	LR		
	comp=Z,4µm,20.0s,MS4.7						
ARMA	Armidale	20.45	221	*e*P	P	09 46 17.3	+2.2
AFI	Afiamalu	20.49	88	LR	LR	09 52 19.8	
	comp=Z,1µm,18.2s,MS4.3,baz=268,slow=32						
URZ	Urewera	24.20	161	P	P	09 46 54.5	+2.1
	comp=Z,64nm,1.1s,mb5.0,baz=33,slow=5.2,SNR=8.7						
URZ				LR	LR	09 55 23.7	
	comp=Z,1µm,18.9s,MS4.4,baz=5.0,slow=34						
KWAJ	Kwajalein Atol	24.28	1	PFAKE		09 47 00.0	+6.6
KWAJ				LR	LR		
	comp=Z,428nm,19.0s,MS4.0						
CNB	Canberra Magne	25.23	216	*e*P	P	09 47 03.1	+0.8
SNZO	South Karori	26.42	167	PFAKE		09 47 30.0	+17
SNZO				LR	LR		
	comp=Z,2µm,21.0s,MS4.7						
RPZ	Rata Peaks	28.19	174	P	P	09 47 30.7	+1.3
	comp=Z,28nm,1.0s,mb4.8,baz=82,slow=11,SNR=3.7						
RPZ				LR	LR	09 57 22.0	
	comp=Z,1µm,19.6s,MS4.5,baz=354,slow=34						
RPZ	Rata Peaks	28.19	174	P	P	09 47 30.7	+1.3
RPZ				LR	LR	09 57 22.0	
STKA	Stephens Creek	28.30	231	*e*P	P	09 47 30.5	+0.1
STKA	Stephens Creek	28.30	231	P	P	09 47 30.4	-0.1
	comp=Z,6.2nm,0.7s,mb4.3,baz=58,slow=6.9,SNR=16						
STKA				LR	LR	09 58 22.8	
	comp=Z,1µm,18.7s,MS4.6,baz=29,slow=36						
WB2	Warramunga Arr	31.45	257	*e*P	P	09 47 57.4	-1.3
WRAB	Tennant Creek	31.46	257	*e*P	P	09 47 57.8	-0.9
WRAB				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
WRAB				MLR	MLR		
	comp=Z,859nm,20.0s,MS4.4						
WRAB	Tennant Creek	31.46	257	*e*P	P	09 47 57.8	-0.9
	comp=Z,28nm,1.0s,mb5.0						
WRAB				LR	LR		
	comp=Z,859nm,20.0s,MS4.4						
WRA	Warramunga Arr	31.47	257	P	P	09 47 57.6	-1.1
	comp=Z,2.6nm,0.7s,mb4.2,baz=87,slow=9.0,SNR=27						
ASAR	Alice Springs	32.22	250	P	P	09 48 04.2	-1.1
	comp=Z,18nm,0.8s,mb4.9,baz=78,slow=9.1,SNR=95						
ASAR				LR	LR	10 00 24.6	
	comp=Z,1µm,19.9s,MS4.6,baz=70,slow=35						
ASPA	Alice Springs	32.22	250⇑	*i*P	P	09 48 04.7	-0.6
ASPA				*i*	pP	09 48 11.3	-1.1
KAKA	Kakadu	33.72	270	*e*P	P	09 48 24.3	+5.9
PPT	Papeete	41.49	99	*e*P	P	09 49 09.6	-14
	comp=Z,178nm,36.2s						
PPT				*e*S	S	09 55 24.5	-13
	comp=Z,418nm,26.5s						
PPT				*e*LQ		09 58 51.0	
	comp=Z,1µm,25.0s						
PPT				*e*LR	LR	10 00 39.9	
	comp=Z,1µm,23.5s,baz=266						
PPT	Papeete	41.49	99	LR	LR	10 02 41.5	
	comp=Z,924nm,19.6s,MS4.7,baz=82,slow=31						
TBI	Tubuai	41.53	108	*e*S	S	09 55 25.5	-13
	comp=Z,397nm,29.5s						
TBI				*e*LQ		09 58 55.8	
	comp=Z,1µm,33.0s						
TBI				*e*LR	LR	10 00 43.9	
	comp=Z,608nm,30.2s,baz=306						
MBWA	Marble Bar	45.16	256	*e*P	P	09 49 52.8	-0.8
	comp=Z,11nm,0.8s,mb4.7						
MBWA				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
KLBR	Kellerberrin	47.53	241	*e*P	P	09 50 11.3	-0.9
NWAO	Narrogin (SRO)	48.16	240	*e*P	P	09 50 16.5	-0.5
NWAO				*e**PP	pP	09 50 23.2	-1.1
NWAO				pmax	pmax		
	comp=Z,16nm,0.9s						
NWAO				MLR	MLR		
	comp=Z,834nm,20.0s						
NWAO	Narrogin (SRO)	48.16	240	*e*P	P	09 50 16.5	-0.5
	comp=Z,16nm,0.9s,mb5.0						
NWAO				*e*pP	pP	09 50 23.2	-1.1
NWAO				LR	LR		
	comp=Z,834nm,20.0s,MS4.7						
CBIJ	Chichi jima	48.88	330	LR	LR	10 09 31.6	
	comp=Z,529nm,19.6s,MS4.5,baz=151,slow=34						
MUN	Mundaring	48.89	241	*e*P	P	09 50 22.3	-0.3
KKM	Kota Kinabalu	54.81	289	*e*P	P	09 51 07.2	-0.2
KKM				*e*	pP	09 51 14.5	-0.2
RKT	Rikitea	54.85	107	*e*S	S	09 58 29.6	-16
	comp=Z,330nm,27.0s						
RKT				*e*SS	SS	10 02 18.3	-10
	comp=Z,271nm,28.2s						
RKT				*e*LR	LR	10 06 52.9	
	comp=Z,869nm,26.0s,baz=290						
JOW	Kunigami	56.61	318	LR	LR	10 13 38.4	
	comp=Z,362nm,21.3s,MS4.4,baz=110,slow=34						
KSM	Kuching	58.63	282	*e*P	P	09 51 34.1	-0.5
KSM				*e*	pP	09 51 41.9	-0.2
MJAR	Matsushiro Arr	58.63	333	P	P	09 51 32.5	-1.8
	comp=Z,5.1nm,0.8s,mb4.6,baz=165,slow=8.2,SNR=12						
MJAR				LR	LR	10 16 06.8	
	comp=Z,157nm,18.6s,MS4.2,baz=195,slow=35						
MAJO	Matsushiro	58.64	333	*e*P	P	09 51 32.9	-1.4
MAJO				*e*	pP	09 51 39.8	-2.0
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MAJO				MLR	MLR		
	comp=Z,376nm,22.0s,MS4.5						
MAJO	Matsushiro	58.64	333	*e*P	P	09 51 32.9	-1.4
	comp=Z,10nm,0.9s,mb4.8						
MAJO				*e*	pP	09 51 39.8	-2.0
MAJO				LR	LR		
	comp=Z,376nm,22.0s,MS4.5						
MAT	Matsushiro	58.64	333	*e*P	P	09 51 33.0	-1.3
MAT				*e*S	S	09 59 37.0	+1.6
MAT				LR	LR		
	comp=Z,360nm,21.0s,MS4.5						
MAT	Matsushiro	58.64	333	P	P	09 51 32.6	-1.7
MAT				S	S	09 59 36.0	+0.6
NACB	Ninganchiao	59.50	311	*e*P	P	09 51 42.3	+1.8
JNU	Nakatsue	59.57	325	LR	LR	10 13 55.5	
	comp=Z,298nm,20.0s,MS4.4,baz=246,slow=33						
YHNB	Yeheng	59.96	311	*e*P	P	09 51 43.5	-0.2
VNDA	Vanda	61.96	181	*e*P	P	09 51 55.6	-0.9
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VNDA	Vanda	61.96	181	P	P	09 51 56.0	-0.5
	comp=Z,2.7nm,0.8s,mb4.5,baz=355,slow=6.6,SNR=16						
VNDA				LR	LR	10 16 41.2	
	comp=Z,278nm,20.2s,MS4.4,baz=8.8,slow=34						
VNDA	Vanda	61.96	181	*e*P	P	09 51 55.6	-1.0
	comp=Z,9.3nm,1.1s,mb4.8						
SBA	Scott Base	62.23	180	*e*P	P	09 51 59.3	+0.9
SBA				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.2						
SBA	Scott Base	62.23	180	*e*P	P	09 51 59.3	+0.9
	comp=Z,20nm,1.0s,mb5.2						
CASY	Casey	62.63	202⇓	*i*P	P	09 52 01.0	-0.1
ASAJ	Asahikawa	63.54	340	P	P	09 52 06.5	-0.9
	comp=Z,16nm,0.8s,mb5.1,baz=229,slow=9.7,SNR=12						
ASAJ				LR	LR	10 18 23.7	
	comp=Z,615nm,20.5s,MS4.8,baz=353,slow=35						
SSE	Sheshan	64.07	317	P	P	09 52 11.6	+0.5
SSE				S	S	10 00 51.4	+6.8
SSE				XS		10 01 02.2	

SSE				SS	SS	10 05 03.1	+7.9
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
SSE				AMB	AMB		
	comp=Z,90nm,10.0s						
SSE				LR	LR		
	comp=N,110nm,21.5s,MS4.2						
SSE				LR	LR		
	comp=E,150nm,21.7s,MS4.2						
SSE				LR	LR		
	comp=Z,230nm,22.2s,MS4.3						
INCN	**Inchon**	**65.12**	**325**	PFAKE		09 52 30.0	+12
INCN				LR	LR		
	comp=Z,389nm,20.0s,MS4.6						
YSS	**Yuzh-Sakhalins**	**66.04**	**342**	*e*P	**P**	**09 52 23.9**	**+0.4**
YSS				*e*	pP	09 52 31.1	+0.1
YSS	**Yuzh-Sakhalins**	**66.04**	**342**	*e*P	**P**	**09 52 23.6**	**+0.1**
	comp=Z,5.8nm,0.6s,mb4.8						
QIZ	**Qiongzhong**	**66.04**	**299**	P	**P**	**09 52 24.7**	**+0.7**
QIZ				AP	pP	09 52 32.3	+0.8
QIZ				S	S	10 01 10.3	+1.3
QIZ				LR	LR		
	comp=Z,350nm,29.4s,MS4.4						
QIZ	**Qiongzhong**	**66.04**	**299**	P	**P**	**09 52 24.4**	**+0.3**
	comp=Z,13nm,1.1s,mb4.9						
QIZ				*e*pP	pP	09 52 30.9	-0.6
QIZ				LR	LR		
	comp=Z,381nm,20.0s,MS4.6						
NJ2	**Nanjing**	**66.22**	**316**	*e*P	**P**	**09 52 32.0**	**+7.1**
NJ2				AP	pP	09 52 42.2	+10
NJ2				S	S	10 01 19.0	+8.0
NJ2				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,720nm,8.2s						
NJ2				LR	LR		
	comp=N,1µm,18.2s,MS5.4						
NJ2				LR	LR		
	comp=E,2µm,20.0s,MS5.4						
NJ2				LR	LR		
	comp=Z,3µm,19.4s,MS5.5						
SMY	**Shemya**	**68.35**	**5**	PFAKE		09 52 50.0	+12
SMY				LR	LR		
	comp=Z,687nm,20.0s,MS4.9						
WHN	**Wuhan**	**68.43**	**312**	P	**P**	**09 52 45.5**	**+6.5**
PET	**Petropavlovsk**	**68.76**	**355**	*e*P	**P**	**09 52 40.4**	**-0.2**
PET				*e*S	S	10 01 41.9	+0.8
PET				pmax	pmax		
	comp=Z,100nm,14.6s						
PET				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
PET				pmax	pmax		
	comp=Z,200nm,3.3s						
PET				pmax	pmax		
	comp=Z,300nm,3.3s						
PET				smax			
	comp=N,100nm,14.1s						
PET				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.4						
PET	**Petropavlovsk**	**68.76**	**355**	PFAKE		09 52 50.0	+9.4
PET				LR	LR		
	comp=Z,435nm,21.0s,MS4.7						
MDJ	**Mudanjiang**	**69.00**	**332**	P	**P**	**09 52 41.9**	**-0.3**
MDJ				AP	pP	09 52 48.8	-0.9
MDJ				PCP	PcP	09 53 05.8	-0.6
MDJ				S	S	10 01 46.4	+2.3
MDJ				XS		10 01 57.3	
MDJ				SCS	ScS	10 02 40.9	+3.4
MDJ				SS	SS	10 06 11.8	-0.1
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,90nm,7.0s						
MDJ				LR	LR		
	comp=N,140nm,21.3s,MS4.2						
MDJ				LR	LR		
	comp=E,60nm,20.6s,MS4.2						
MDJ				LR	LR		
	comp=Z,220nm,21.3s,MS4.4						
MDJ	**Mudanjiang**	**69.00**	**332**	*e*P	**P**	**09 52 42.9**	**+0.6**
	comp=Z,5.0nm,0.5s,mb4.7						
MDJ				*e*pP	pP	09 52 49.3	-0.4
MDJ				LR	LR		
	comp=Z,320nm,21.0s,MS4.5						
MIR	**Mirnyy**	**69.44**	**204**	d *i*P	**P**	**09 52 44.2**	**-0.3**
MIR				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
CN2	**Changchun**	**70.34**	**329**	*e*P	**P**	**09 52 56.9**	**+6.5**
CN2				*e*XP	sP	09 53 08.0	+7.4
CN2				*e*S	S	10 02 08.0	+8.1
CN2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,250nm,20.0s,MS4.6						
CN2				LR	LR		
	comp=E,280nm,20.0s,MS4.6						
CN2				LR	LR		
	comp=Z,460nm,23.0s,MS4.7						
KLR	**Kul'dur**	**71.77**	**336**	*e*P	**P**	**09 52 55.8**	**-3.1**
ENH	**Enshi**	**71.82**	**310**	*e*P	**P**	**09 52 59.3**	**-0.3**
	comp=Z,16nm,0.8s,mb5.0						
ENH				*e*pP	pP	09 53 06.8	-0.3
ENH				LR	LR		
	comp=Z,342nm,20.0s,MS4.6						
GYA	**Guiyang**	**72.10**	**305**	⇑*i*P	**P**	**09 53 02.0**	**+0.7**
GYA				AP	pP	09 53 09.3	+0.5
GYA				XP	sP	09 53 12.2	+0.7
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
GYA				LR	LR		
	comp=N,430nm,18.2s,MS4.9						
GYA				LR	LR		
	comp=E,510nm,18.6s,MS4.9						
GYA				LR	LR		
	comp=Z,400nm,18.9s,MS4.7						
NST	**Nakhon Sawan**	**73.08**	**292**	P	pP	09 53 15.6	+0.8
NANT	**Nan**	**73.77**	**295**	P	**P**	**09 53 11.0**	**-0.3**
	comp=Z,325nm,0.4s						
XAN	**Xi'an**	**74.19**	**313**	P	**P**	**09 53 13.0**	**-0.4**
XAN				AP	pP	09 53 20.9	-0.1
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
QSPA	**South Pole Qui**	**74.40**	**180**	⇓*i*P	**P**	**09 53 14.9**	**+1.2**
	comp=Z,41nm,1.1s,mb5.3						
KMI	**Kunming**	**74.65**	**302**	P	**P**	**09 53 17.5**	**+1.2**
KMI				AP	pP	09 53 24.6	+0.8
KMI				XP	sP	09 53 28.0	+1.5
KMI				PP	PP	09 56 12.0	+6.7
KMI				PPP	PPP	09 57 53.3	+3.0
KMI				S	S	10 02 52.9	+3.6
KMI				PS	PS	10 03 29.7	+2.1
KMI				SS	SS	10 07 39.0	0.0
KMI				SSS	SSS	10 11 04.3	+12
KMI				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
KMI				AMB	AMB		
	comp=Z,160nm,4.9s						
KMI				LR	LR		
	comp=N,160nm,21.4s,MS4.5						
KMI				LR	LR		
	comp=E,190nm,19.4s,MS4.5						
KMI				LR	LR		
	comp=Z,310nm,24.9s						
CMAR	**Chiang Mai Arr**	**75.18**	**294**	P	**P**	**09 53 20.6**	**+1.2**
	comp=Z,6.2nm,1.0s,mb4.5,baz=124,slow=4.5,SNR=14						
CMAR				LR	LR	10 26 28.4	
	comp=Z,164nm,18.9s,MS4.3,baz=136,slow=36						
CHG	**Chiang Mai**	**75.31**	**295**	⇑P	pP	09 53 28.6	+0.8
	comp=Z,32nm,1.3s						
MA2	**Magadan**	**76.11**	**352**	*e*P	**P**	**09 53 23.2**	**-0.7**
MA2				e*PP	pP	09 53 31.0	-0.5
MA2				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
MA2				MLR	MLR		
	comp=Z,661nm,22.0s,MS4.9						
MA2	**Magadan**	**76.11**	**352**	*e*P	**P**	**09 53 23.2**	**-0.7**
	comp=Z,7.4nm,0.9s,mb4.6						
MA2				*e*pP	pP	09 53 30.9	-0.5
MA2				LR	LR		
	comp=Z,661nm,22.0s,MS4.9						
HHC	**Hu-ho-hao-te**	**76.17**	**320**	*e*P	**P**	**09 53 25.7**	**+1.1**
HHC				AP	pP	09 53 32.4	+0.2
HHC				XP	sP	09 53 37.1	+2.3
HHC				PP	PP	09 56 18.1	+0.6
HHC				S	S	10 03 08.2	+2.4
HHC				XS		10 03 21.5	
HHC				SKS	SKS	10 03 27.4	-9.0
HHC				SCS	ScS	10 03 38.1	+3.4
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
HHC				AMB	AMB		
	comp=Z,160nm,5.5s						
HHC				LR	LR		
	comp=N,300nm,22.6s						
HHC				LR	LR		
	comp=E,370nm,32.1s						
HHC				LR	LR		
	comp=Z,270nm,25.0s,MS4.5						
CD2	**Chengdu**	**76.44**	**308**	*e*P	**P**	**09 53 27.3**	**+1.0**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.3s,mb5.2						
HIA	**Hailar**	**76.99**	**330**	*e*P	**P**	**09 53 29.7**	**+0.7**
HIA				MLR	MLR		
	comp=Z,348nm,21.0s						
BTO	**Baotou**	**77.00**	**319**	*e*P	pP	09 53 37.2	+0.3
LZH	**Lanzhou**	**78.81**	**312**	⇑P	**P**	**09 53 41.2**	**+1.9**
LZH				AP	pP	09 53 49.2	+2.2
LZH				XP	sP	09 53 52.5	+3.0
LZH				*e*PP	PP	09 56 42.1	+2.4
LZH				*e*S	S	10 03 37.2	+2.8
LZH				XS		10 03 49.5	
LZH				SS	SS	10 08 46.7	+4.5
LZH				AMB	AMB		
	comp=Z,40nm,1.4s,mb5.2						
LZH				AMB	AMB		
	comp=Z,120nm,6.2s						
LZH				LR	LR		
	comp=N,610nm,15.0s						
LZH				LR	LR		
	comp=Z,980nm,17.8s,MS5.2						
SEY	**Seymchan**	**79.16**	**353**	*e*P	**P**	**09 53 40.5**	**-0.1**
SEY				*e*	pP	09 53 48.2	-0.1
SEY						09 56 36.9	
SEY				*e*PPP	PPP	09 58 36.5	+4.5
SEY				*e*S	S	10 03 37.5	0.0
SEY						10 03 58.0	
SEY				*e*SS	SS	10 08 44.2	-2.6
SEY				*e*SSS	SSS	10 12 06.2	+0.1
SEY				pmax	pmax		
	comp=E,4.0nm,1.1s						
SEY				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
SEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
SEY				smax			
	comp=N,50nm,4.5s						
SEY				smax			
	comp=E,20nm,4.9s						
SEY				MLR	MLR		
	comp=N,210nm,21.0s,MS4.7						
SEY				MLR	MLR		
	comp=E,310nm,21.0s,MS4.7						
SEY				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.4						
CLNS	**Chul'man**	**80.30**	**338**	*e*P	**P**	**09 53 44.7**	**-2.2**
CLNS				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
CLNS				pmax	pmax		
	comp=N,14nm,1.2s						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.5s						
KDAK	**Kodiak Island**	**80.36**	**21**	PFAKE		09 54 00.0	+13
KDAK				LR	LR		
	comp=Z,148nm,20.0s,MS4.3						
MAW	**Mawson**	**80.99**	**202**	P	**P**	**09 53 51.7**	**+1.3**
	comp=Z,6.2nm,0.9s,mb4.5,baz=102,slow=5.2,SNR=7.2						
MAW				LR	LR	10 25 09.6	
	comp=Z,313nm,18.3s,MS4.7,baz=292,slow=32						
CIT	**Chita**	**81.77**	**330**	*e*P	**P**	**09 53 55.6**	**+0.9**
CIT				pmax	pmax		
	comp=Z,91nm,1.4s,mb5.5						
ULN	**Ulaanbaatar**	**82.77**	**324**	*e*P	**P**	**09 53 59.9**	**-0.1**
ULN				e*PP	pP	09 54 08.5	+0.8
ULN				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
ULN	**Ulaanbaatar**	**82.77**	**324**	*e*P	**P**	**09 53 59.9**	**-0.1**
	comp=Z,13nm,0.9s,mb5.0						
ULN				*e*pP	pP	09 54 08.5	+0.8
YAK	**Yakutsk**	**82.85**	**343**	*e*P	**P**	**09 53 59.6**	**-0.5**
YAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				MLR	MLR		
	comp=Z,169nm,16.0s,MS4.5						
YAK				MLR	MLR		
	comp=N,114nm,18.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,149nm,16.0s,MS4.5						
YAK	**Yakutsk**	**82.85**	**343**	*i* P	**P**	**09 54 00.3**	**+0.2**
SONM	**Songino Array**	**83.13**	**324**	P	**P**	**09 54 02.6**	**+0.7**
	comp=E,8.9nm,1.0s,mb4.7,baz=150,slow=6.6,SNR=48						
SONM				LR	LR	10 31 17.2	
	comp=E,330nm,20.6s,MS4.7,baz=115,slow=36						
GTA	**Gaotai**	**83.18**	**314**	*e*P	**P**	**09 54 04.2**	**+1.9**
GTA				AP	pP	09 54 10.9	+0.9
GTA				XP	sP	09 54 14.3	+1.8
GTA				PP	PP	09 57 19.2	+3.6
GTA				PPP	PPP	09 59 14.0	+5.1
GTA				S	S	10 04 24.2	+4.7
GTA				XS		10 04 37.2	
GTA				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
GTA				AMB	AMB		
	comp=Z,160nm,5.7s						
GTA				LR	LR		
	comp=N,270nm,21.3s,MS4.8						
GTA				LR	LR		
	comp=E,310nm,22.4s,MS4.8						
GTA				LR	LR		
	comp=Z,430nm,22.1s,MS4.8						
BILL	**Bilibino**	**83.44**	**360**	*e*P	**P**	**09 54 02.2**	**-0.8**
BILL				e*PP	pP	09 54 11.0	+0.3
BILL				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.4						
BILL				MLR	MLR		
	comp=Z,212nm,22.0s,MS4.5						
BILL	**Bilibino**	**83.44**	**360**	*e*P	**P**	**09 54 02.1**	**-0.9**
	comp=Z,46nm,1.2s,mb5.4						
BILL				*e*pP	pP	09 54 11.0	+0.3
BILL				LR	LR		
	comp=Z,212nm,22.0s,MS4.5						
SHL	**Shillong**	**83.86**	**299**	⇓*i*P	**P**	**09 54 07.5**	**+1.4**
PMR	**Palmer**	**84.40**	**19**	*e*P	**P**	**09 54 07.4**	**-0.6**
HOPS	**Hopland**	**84.77**	**47**	PFAKE		09 54 20.0	+10
HOPS				LR	LR		
	comp=Z,684nm,19.0s,MS5.1						
BOD	**Bodaibo**	**85.22**	**335**	*e*P	**P**	**09 54 11.4**	**-0.7**
BOD				pmax	pmax		
	comp=Z,17nm,1.5s,mb5.0						
LSA	**Lhasa**	**85.91**	**302**	P	**P**	**09 54 17.8**	**+1.5**
LSA	**Lhasa**	**85.91**	**302**	*e*P	**P**	**09 54 17.5**	**+1.2**
LSA				e*PP	pP	09 54 25.7	+1.7
LSA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.1						
LSA				MLR	MLR		
	comp=Z,216nm,20.0s,MS4.5						
LSA	**Lhasa**	**85.91**	**302**	*e*P	**P**	**09 54 17.5**	**+1.2**
	comp=Z,10nm,0.8s,mb5.1						
LSA				*e*pP	pP	09 54 25.7	+1.7
LSA				LR	LR		
	comp=Z,216nm,20.0s,MS4.5						
MCK	**McKinley**	**86.06**	**18**	*e*P	**P**	**09 54 16.1**	**-0.1**
MCK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.5						
MCK	**McKinley**	**86.06**	**18**	*e*P	**P**	**09 54 16.1**	**-0.1**
	comp=Z,2.0nm,0.7s,mb4.5						
ZAK	**Zakamensk**	**86.20**	**325**	*e*P	**P**	**09 54 17.1**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.2						
CMB	**Columbia Colle**	**86.31**	**49**	PFAKE		09 54 30.0	+12
CMB				LR	LR		
	comp=Z,524nm,22.0s,MS4.9						
HUMO	**Hull Mountain**	**86.36**	**44**	PFAKE		09 54 30.0	+12
HUMO				LR	LR		
	comp=Z,354nm,20.0s,MS4.8						
IMA	**Indian Mountai**	**86.56**	**15**	*e*P	**P**	**09 54 18.6**	**0.0**
IRK	**Irkutsk**	**86.61**	**327**	*e*P	**P**	**09 54 18.3**	**-0.8**
IRK				pmax	pmax		
	comp=Z,45nm,2.2s,mb5.3						
TLY	**Talaya**	**86.65**	**326**	*e*P	**P**	**09 54 19.7**	**+0.3**
TLY				*e*		09 57 38.1	
TLY				*e*S	S	10 04 49.1	-4.1
TLY				*e*PS	PS	10 05 47.2	-10
TLY				*e*PPS	PPS	10 06 03.6	-19
TLY				*e*SSS	SSS	10 14 08.5	+0.4
TLY				pmax	pmax		
	comp=Z,46nm,1.7s,mb5.4						
TLY				MLR	MLR		
	comp=Z,269nm,20.0s,MS4.7						
TLY	**Talaya**	**86.65**	**326**	*e*P	**P**	**09 54 20.1**	**+0.7**
	comp=Z,19nm,1.3s,mb5.2						
TLY				*e*pP	pP	09 54 27.1	0.0
TLY				LR	LR		
	comp=Z,72nm,20.0s,MS4.1						
SIT	**Sitka**	**86.67**	**28**	PFAKE		09 54 30.0	+11
SIT				LR	LR		
	comp=Z,434nm,19.0s,MS4.9						
COR	**Corvallis**	**86.98**	**42**	PFAKE		09 54 30.0	+8.9
COR				LR	LR		
	comp=Z,315nm,19.0s,MS4.7						
COLA	**College**	**87.22**	**18**	*e*P	**P**	**09 54 22.5**	**+0.7**
ILAR	**Eielson Array**	**87.43**	**18**	P	**P**	**09 54 21.1**	**-1.7**
	comp=Z,4.6nm,0.9s,mb4.7,baz=234,slow=5.9,SNR=26						
ILAR				LR	LR	10 29 23.6	
	comp=Z,446nm,19.0s,MS4.9,baz=232,slow=33						
BBB	**Bella Bella**	**87.61**	**34**	LR	LR	10 25 17.7	
	comp=Z,464nm,20.3s,MS4.9,baz=233,slow=30						
PFO	**Pinyon Flat Ob**	**87.65**	**54**	PFAKE		09 54 40.0	+15
PFO				LR	LR		
	comp=Z,201nm,20.0s,MS4.5						
DAC	**Darwin (Calif)**	**87.72**	**51**	PFAKE		09 54 40.0	+15
DAC				LR	LR		
	comp=Z,250nm,20.0s,MS4.6						
SYO	**Syowa Base**	**87.80**	**197**	⇑P	**P**	**09 54 22.5**	**-2.0**
SYO	**Syowa Base**	**87.80**	**197**	⇑PcP	PcP	09 54 25.3	-1.5
SYO	**Syowa Base**	**87.80**	**197**	⇑pP	pP	09 54 32.2	0.0
MOD	**Modoc**	**87.88**	**45**	PFAKE		09 54 40.0	+14
MOD				LR	LR		
	comp=Z,362nm,21.0s,MS4.8						
NVAR	**Mina Array Bea**	**87.97**	**49**	P	**P**	**09 54 25.2**	**-0.8**
	comp=Z,1.2nm,0.9s,mb4.1,baz=213,slow=5.7,SNR=6.1						
NVAR				LR	LR	10 25 54.8	
	comp=Z,274nm,20.0s,MS4.7,baz=265,slow=30						
MNV	**Mina**	**88.08**	**49**	*e*P	**P**	**09 54 27.3**	**+0.7**
MNV				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.3						
MNV				MLR	MLR		
	comp=Z,474nm,22.0s,MS4.9						
MNV	**Mina**	**88.08**	**49**	*e*P	**P**	**09 54 27.3**	**+0.7**
	comp=Z,2.3nm,1.1s,mb4.3						
MNV				LR	LR		
	comp=Z,474nm,22.0s,MS4.9						
PALK	**Pallekele**	**88.50**	**278**	PFAKE		09 54 40.0	+11
PALK				LR	LR		
	comp=Z,93nm,19.0s,MS4.2						
TPH	**Tonopah**	**88.64**	**50**	PFAKE		09 54 40.0	+11
TPH				LR	LR		
	comp=Z,269nm,19.0s,MS4.7						
LDFC	**Landfair**	**89.20**	**53**	P	**P**	**09 54 29.0**	**-3.0**
WVOR	**Wild Horse Val**	**89.22**	**45**	PFAKE		09 54 40.0	+8.0
WVOR				LR	LR		
	comp=Z,407nm,19.0s,MS4.9						
BMN	**Battle Mountai**	**89.48**	**48**	PFAKE		09 54 40.0	+6.8
BMN				LR	LR		
	comp=Z,324nm,19.0s,MS4.8						
NEN	**Nelson**	**89.59**	**53**	P	**P**	**09 54 33.9**	**0.0**
GUN	**Gumba**	**89.70**	**299**	*e*P	**P**	**09 54 35.3**	**+0.8**
	comp=Z,82nm,1.2s,mb6.0						
DLBC	**Dease Lake**	**89.81**	**28**	LR	LR	10 27 49.3	
	comp=Z,284nm,20.6s,MS4.7,baz=250,slow=31						
PKI	**Pulchoki**	**89.99**	**299**	*e*P	**P**	**09 54 36.4**	**+0.5**
	comp=Z,141nm,1.4s,mb6.1						
PKI	**Pulchoki**	**89.99**	**299**	*e*P	**P**	**09 54 36.4**	**+0.5**
PKI				pmax	pmax		
	comp=Z,71nm,1.4s,mb5.8						
HAWA	**Hanford**	**90.13**	**42**	PFAKE		09 54 50.0	+14
HAWA				LR	LR		
	comp=Z,17nm,20.0s						
KKN	**Kakani**	**90.17**	**299**	*e*P	**P**	**09 54 36.9**	**+0.2**
	comp=Z,98nm,1.2s,mb6.0						
KKN	**Kakani**	**90.17**	**299**	*e*P	**P**	**09 54 36.9**	**+0.2**
KKN				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.7						
DMN	**Daman**	**90.26**	**299**	*e*P	**P**	**09 54 37.6**	**+0.4**
	comp=Z,170nm,1.2s,mb6.3						
GKN	**Gorkha**	**90.77**	**299**	*e*P	**P**	**09 54 39.7**	**+0.2**
	comp=Z,90nm,1.2s,mb6.0						
TIXI	**Tiksi**	**90.82**	**349**	*e*P	**P**	**09 54 35.4**	**-3.3**
TIXI				*e*S	S	10 05 20.9	-10
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.9						
TIXI	**Tiksi**	**90.82**	**349**	*i* P	**P**	**09 54 38.4**	**-0.3**
ELK	**Elko**	**91.01**	**48**	P	**P**	**09 54 40.5**	**+0.2**
ELK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ELK				MLR	MLR		
	comp=Z,493nm,22.0s						
ELK	**Elko**	**91.01**	**48**	P	**P**	**09 54 40.8**	**+0.5**
	comp=Z,0.4nm,0.3s,mb4.2,slow=2.0,SNR=2.3						
ELK	**Elko**	**91.01**	**48**	P	**P**	**09 54 40.5**	**+0.2**
	comp=Z,3.7nm,1.1s,mb4.6						
ELK				LR	LR		
	comp=Z,493nm,22.0s,MS4.9						
BMO	**Blue Mountains**	**91.01**	**44**	PFAKE		09 54 50.0	+10
BMO				LR	LR		
	comp=Z,263nm,20.0s,MS4.7						
KOLN	**Koldanda**	**91.58**	**298**	*e*P	**P**	**09 54 43.2**	**0.0**
	comp=Z,50nm,1.4s,mb5.7						
TUC	**Tucson**	**91.74**	**57**	P	**P**	**09 54 43.9**	**0.0**
NEW	**Newport**	**92.35**	**40**	PFAKE		09 55 00.0	+14
NEW				LR	LR		
	comp=Z,272nm,19.0s,MS4.7						
DGAR	**Diego Garcia**	**92.48**	**262**	PFAKE		09 55 00.0	+12
DGAR				LR	LR		
	comp=Z,180nm,22.0s,MS4.5						
MVU	**Marysvale**	**92.50**	**51**	PFAKE		09 55 00.0	+13
MVU				LR	LR		
	comp=Z,395nm,19.0s,MS4.9						
HLID	**Hailey**	**92.52**	**45**	PFAKE		09 55 00.0	+13
HLID				LR	LR		
	comp=Z,398nm,21.0s,MS4.8						
DUG	**Dugway**	**92.58**	**49**	PFAKE		09 55 00.0	+12
DUG				LR	LR		
	comp=Z,400nm,20.0s,MS4.9						
SNAA	**Sanae**	**92.64**	**183**	*e*P	**P**	**09 54 56.7**	**+10**
SNAA	**Sanae**	**92.64**	**183**	*e*P	**P**	**09 54 46.3**	**-0.8**
SNAA				*e*		09 54 56.7	
SNAA				*i*		09 54 57.8	
SNAA				pmax	pmax		
	comp=Z,20nm,1.3s						
SNAA	**Sanae**	**92.64**	**183**	*e*P	**P**	**09 54 46.3**	**-0.7**
	comp=Z,20nm,1.3s,mb5.4						
SNAA				*e*P		09 54 56.7	
SNAA				⇑*i*P		09 54 57.8	
WMQ	**Urumqi**	**93.25**	**315**	P	**P**	**09 54 51.6**	**+1.1**
WMQ				AP	pP	09 54 59.6	+1.4
WMQ				XP	sP	09 55 02.8	+2.1
WMQ				PP	PP	09 58 38.1	+1.0
WMQ				*e*S	S	10 05 54.6	+1.3
WMQ				SS	SS	10 12 14.6	+1.2
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
WMQ				LR	LR		
	comp=N,230nm,22.0s,MS4.9						
WMQ				LR	LR		
	comp=E,370nm,23.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,320nm,25.0s,MS4.7						
VNA3	**Neumayer Olymp**	**93.31**	**181**	*e*	pP	09 54 59.5	+1.6
VNA3	**Neumayer Olymp**	**93.31**	**181**	*e*	pP	09 55 00.8	+2.9
VNA3	**Neumayer Olymp**	**93.31**	**181**	⇓*i*P	**P**	**09 54 50.6**	**+0.4**
VNA3				*e*	pP	09 54 59.5	+1.6
VNA3				*e*		09 55 00.8	
VNA2	**Neumayer--Watz**	**93.58**	**182**	*e*	**P**	**09 54 55.8**	**+4.4**
VNA2	**Neumayer--Watz**	**93.58**	**182**	*e*	pP	09 55 00.2	+1.1
VNA2	**Neumayer--Watz**	**93.58**	**182**	*e*	pP	09 55 01.4	+2.3
VNA2	**Neumayer--Watz**	**93.58**	**182**	⇑*i*P	**P**	**09 54 54.9**	**+3.5**
VNA2				*e*		09 54 55.8	
VNA2				*e*		09 55 00.2	
VNA2				*e*	pP	09 55 01.4	+2.3

INK	**Inuvik**	**93.79**	**19**	LR	LR	10 34 22.0	
	comp=Z,471nm,19.5s,MS5.0,baz=243,slow=34						
MSO	**Missoula**	**93.89**	**42**	PFAKE		09 55 00.0	+6.6
MSO				LR	LR		
	comp=Z,154nm,19.0s,MS4.5						
HWUT	**Hardware Ranch**	**93.91**	**48**	PFAKE		09 55 10.0	+16
HWUT				LR	LR		
	comp=Z,342nm,19.0s,MS4.8						
AHID	**Auburn Hatcher**	**94.58**	**47**	PFAKE		09 55 10.0	+13
AHID				LR	LR		
	comp=Z,349nm,21.0s,MS4.8						
BOZ	**Bozeman (W)**	**95.06**	**44**	PFAKE		09 55 10.0	+11
BOZ				LR	LR		
	comp=Z,251nm,19.0s,MS4.7						
LKWY	**Lake**	**95.58**	**45**	PFAKE		09 55 10.0	+8.8
LKWY				LR	LR		
	comp=Z,551nm,20.0s,MS5.0						
BW06	**Boulder Array**	**95.67**	**47**	PFAKE		09 55 10.0	+8.3
BW06				LR	LR		
	comp=Z,277nm,21.0s,MS4.7						
PDAR	**Pinedale Array**	**95.67**	**47**	LR	LR	10 29 02.5	
	comp=Z,181nm,21.6s,MS4.5,baz=263,slow=30						
ANMO	**Albuquerque**	**95.94**	**56**	PFAKE		09 55 10.0	+6.9
ANMO				LR	LR		
	comp=Z,397nm,20.0s,MS4.9						
LTX	**Lajitas**	**96.84**	**62**	PFAKE		09 55 20.0	+13
LTX				LR	LR		
	comp=Z,368nm,19.0s,MS4.9						
TXAR	**Lajitas Array**	**96.84**	**62**	P	**P**	**09 55 09.2**	**+1.9**
	comp=Z,0.1nm,0.5s,baz=219,slow=5.8,SNR=2.7						
TXAR				LR	LR	10 32 36.4	
	comp=Z,312nm,18.4s,baz=230,slow=32						
SDCO	**Great Sand Dun**	**97.38**	**53**	PFAKE		09 55 20.0	+10
SDCO				LR	LR		
	comp=Z,590nm,20.0s,MS5.1						
MKAR	**Makanchi Array**	**97.75**	**316**	P	**P**	**09 55 12.1**	**+1.1**
	comp=Z,3.9nm,0.8s,mb5.0,baz=103,slow=6.2,SNR=24						
MKAR				PP	PP	09 59 08.4	-3.6
	comp=Z,0.6nm,0.8s,baz=149,slow=8.4,SNR=3.3						
MKAR				LR	LR	10 39 01.0	
	comp=Z,168nm,20.2s,MS4.5,baz=148,slow=35						
ISCO	**Idaho Springs**	**97.79**	**51**	PFAKE		09 55 20.0	+8.7
ISCO				LR	LR		
	comp=Z,339nm,19.0s,MS4.9						
ZAL	**Zalesovo**	**98.04**	**324**	P	**P**	**09 55 11.5**	**-0.5**
	comp=Z,2.5nm,0.5s,mb5.0,baz=356,slow=3.2,SNR=13						
ZAL				LR	LR	10 41 13.4	
	comp=Z,272nm,18.6s,MS4.8,baz=6.2,slow=36						
YKA	**Yellowknife Ar**	**98.42**	**27**	P	**P**	**09 55 12.6**	**-1.0**
	comp=Z,1.7nm,0.8s,mb4.6,baz=255,slow=4.6,SNR=13						
YKA				LR	LR	10 31 21.1	
	comp=Z,179nm,20.3s,MS4.5,baz=235,slow=30						
LAO	**LASA Array**	**98.96**	**44**	PFAKE		09 55 30.0	+14
LAO				LR	LR		
	comp=Z,215nm,19.0s,MS4.7						
NVS	**Novosibirsk**	**99.15**	**324**	*i* P	**P**	**09 55 24.4**	**+7.3**
AMTX	**Amarillo**	**99.74**	**57**	PFAKE		09 55 30.0	+10
AMTX				LR	LR		
	comp=Z,364nm,19.0s,MS4.9						
JCT	**Junction City**	**100.37**	**61**	PFAKE		09 55 30.0	+6.7
JCT				LR	LR		
	comp=Z,356nm,19.0s,MS4.9						
PAYG	**Puerto Ayora**	**101.95**	**94**	PFAKE		09 55 40.0	+9.2
PAYG				LR	LR		
	comp=Z,395nm,19.0s,MS5.0						
CBKS	**Cedar Bluff**	**102.04**	**53**	PFAKE		09 55 40.0	+9.5
CBKS				LR	LR		
	comp=Z,386nm,21.0s,MS4.9						
FFC	**Flin Flon**	**103.12**	**37**	PFAKE		09 55 50.0	+15
FFC				LR	LR		
	comp=Z,130nm,21.0s,MS4.4						
NATX	**Nacogdoches**	**104.94**	**61**	PFAKE		09 55 50.0	+6.5
NATX				LR	LR		
	comp=Z,381nm,19.0s,MS5.0						
MIAR	**Mount Ida**	**106.26**	**58**	PFAKE		10 00 10.0	
MIAR				LR	LR		
	comp=Z,74nm,21.0s,MS4.2						
TEIG	**Tepich**	**108.68**	**74**	PFAKE		10 00 20.0	
TEIG				LR	LR		
	comp=Z,1.0nm,19.0s						
EYMN	**Ely**	**109.04**	**44**	PFAKE		10 00 20.0	
EYMN				LR	LR		
	comp=Z,256nm,19.0s,MS4.8						
OXF	**Oxford**	**109.67**	**59**	PFAKE		10 00 20.0	
OXF				LR	LR		
	comp=Z,247nm,20.0s,MS4.8						
JTS	**JuntasAbangare**	**109.85**	**85**	PFAKE		10 00 20.0	
JTS				LR	LR		
	comp=Z,144nm,21.0s,MS4.5						
PLAL	**Pickwick Lake**	**110.80**	**58**	PFAKE		10 00 20.0	+7.7
PLAL				LR	LR		
	comp=Z,273nm,19.0s,MS4.8						
LRAL	**Lakeview Retre**	**111.53**	**60**	PFAKE		10 00 20.0	+6.3
LRAL				LR	LR		
	comp=Z,252nm,19.0s,MS4.8						
ARU	**Arti**	**113.14**	**325**	PFAKE		10 00 20.0	+3.7
ARU				LR	LR		
	comp=Z,80nm,20.0s,MS4.3						
OTAV	**Otavalo**	**113.56**	**97**	PFAKE		10 00 30.0	+12
OTAV				LR	LR		
	comp=Z,127nm,19.0s,MS4.5						
GOGA	**Godfrey**	**114.51**	**60**	PFAKE		10 00 30.0	+10
GOGA				LR	LR		
	comp=Z,292nm,21.0s,MS4.9						
ACSO	**Alum Creek Sta**	**115.05**	**53**	PFAKE		10 00 30.0	+10
ACSO				LR	LR		
	comp=Z,498nm,21.0s,MS5.1						
KBS	**Kingsbay**	**115.58**	**355**	PFAKE		10 00 30.0	+9.3
KBS				LR	LR		
	comp=Z,242nm,19.0s,MS4.8						
LPAZ	**La Paz**	**116.93**	**118**	PFAKE		10 00 30.0	+5.4
LPAZ				LR	LR		
	comp=Z,191nm,20.0s,MS4.7						
BLA	**Blacksburg**	**117.08**	**56**	PFAKE		10 00 30.0	+5.5
BLA				LR	LR		
	comp=Z,240nm,20.0s,MS4.8						
ERPA	**Erie**	**117.25**	**50**	PFAKE		10 00 30.0	+5.3
ERPA				LR	LR		
	comp=Z,314nm,20.0s,MS4.9						
MCWV	**Mont Chateau**	**117.48**	**53**	PFAKE		10 00 30.0	+4.8
MCWV				LR	LR		
	comp=Z,441nm,21.0s,MS5.1						
FRB	**Frobisher Bay**	**118.79**	**25**	PKP	PKPdf	10 00 22.0	-5.2
	comp=Z,2.9nm,0.6s,baz=333,slow=6.6,SNR=4.4						
CBN	**Corbin**	**119.47**	**55**	PFAKE		10 00 40.0	+11
CBN				LR	LR		
	comp=Z,386nm,20.0s,MS5.0						
CPUP	**Villa Florida**	**119.95**	**134**	PKP	PKPdf	10 00 26.6	-3.6
	comp=Z,2.8nm,0.8s,baz=332,slow=1.5,SNR=8.4						
BINY	**Binghamton**	**120.21**	**50**	PFAKE		10 00 40.0	+10
BINY				LR	LR		
	comp=Z,627nm,22.0s,MS5.2						
ARCES	**ARCESS Array B**	**121.08**	**345**	PKP	PKPdf	10 00 28.2	-3.3
	comp=Z,1.9nm,0.6s,baz=45,slow=1.7,SNR=16						
BOSA	**Boshof**	**122.59**	**220**	PKP	PKPdf	10 00 33.2	-2.1
	comp=Z,3.3nm,0.8s,baz=159,slow=2.0,SNR=3.9						
SCHQ	**Schefferville**	**123.13**	**34**	PKP	PKPdf	10 00 31.3	-4.4
	comp=Z,4.9nm,0.8s,baz=285,slow=1.7,SNR=7.6						
SDV	**Santo Domingo**	**123.31**	**90**	PFAKE		10 00 50.0	+13
SDV				LR	LR		
	comp=Z,299nm,20.0s,MS5.0						
HRV	**Harvard--Oak R**	**123.42**	**49**	PFAKE		10 00 40.0	+3.4
HRV				LR	LR		
	comp=Z,438nm,19.0s,MS5.1						
WVL	**Waterville**	**124.38**	**46**	PFAKE		10 00 50.0	+12
WVL				LR	LR		
	comp=Z,2µm,21.0s						
GNI	**Garni**	**124.57**	**308**	PKP	PKPdf	10 00 35.8	-3.1
	comp=Z,5.0nm,0.5s,baz=355,slow=16,SNR=3.5						
GNI	**Garni**	**124.57**	**308**	PKP	PKPdf	10 00 35.8	-3.1
GNI				LR	LR		
	comp=Z,148nm,19.0s,MS4.7						
ZEI	**Tsey**	**124.74**	**311**	*i* PKIKP	PKPdf	10 00 30.9	-8.3
ZEI				*e*		10 00 35.8	
PQI	**Presque Isle**	**125.00**	**44**	PFAKE		10 00 50.0	+10
PQI				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
KIV	**Kislovodsk**	**125.35**	**313**	*i* PKIKP	PKPdf	10 00 45.4	+5.0
KIV				*e*		10 02 36.5	
KIV				*e*SS	SS	10 19 36.5	+12
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV				pmax	pmax		
	comp=N,8.0nm,0.8s						
KIV				pmax	pmax		
	comp=E,7.0nm,0.8s						
KIV				MLR	MLR		
	comp=Z,131nm,24.0s,MS4.5						
KIV				MLR	MLR		
	comp=N,80nm,20.0s,MS4.7						
KIV				MLR	MLR		
	comp=E,153nm,24.0s,MS4.7						
KIV	**Kislovodsk**	**125.35**	**313**	PFAKE		10 00 50.0	+10
KIV				LR	LR		
	comp=Z,41nm,22.0s,MS4.0						
OBN	**Obninsk**	**125.38**	**328**	⇓*i*PKIKP	PKPdf	10 00 34.7	-5.4
OBN				*i*		10 02 34.1	
OBN				*e*PS	PS	10 12 19.2	-8.0
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
OBN	**Obninsk**	**125.38**	**328**	PFAKE		10 00 50.0	+10
OBN				LR	LR		
	comp=Z,54nm,20.0s,MS4.2						
EMMW	**East Machias**	**125.88**	**46**	PFAKE		10 00 50.0	+8.7
EMMW				LR	LR		
	comp=Z,3µm,20.0s						
FINES	**FINESS Array B**	**126.50**	**338**	PKP	PKPdf	10 00 39.7	-2.3
	comp=Z,1.9nm,0.9s,baz=90,slow=1.9,SNR=6.4						
LSZ	**Lusaka**	**129.11**	**235**	PFAKE		10 01 00.0	+12
LSZ				LR	LR		
	comp=Z,255nm,19.0s,MS4.9						
SJG	**San Juan**	**129.12**	**79**	PFAKE		10 01 00.0	+12
SJG				LR	LR		
	comp=Z,234nm,19.0s,MS4.9						
BBSR	**BB Station**	**130.30**	**61**	PFAKE		10 01 00.0	+10
BBSR				LR	LR		
	comp=Z,178nm,19.0s,MS4.8						
AKASG	**Malin Array Be**	**131.39**	**325**	PKP	PKPdf	10 00 49.5	-2.2
	comp=Z,0.4nm,0.4s,baz=37,slow=1.4,SNR=7.5						
AKASG				PP	PP	10 03 10.5	+0.3
	comp=Z,0.2nm,0.3s,baz=47,slow=5.8,SNR=4.8						
AKASG				SKP		10 04 27.3	
	comp=Z,0.3nm,0.3s,baz=35,slow=3.2,SNR=5.1						
AKASG	**Malin Array Be**	**131.39**	**325**	PKP	PKPdf	10 00 49.5	-2.2
AKASG				PP	PP	10 03 10.5	+0.3
AKASG				SKP		10 04 27.3	
NOA	**NORSAR Array B**	**131.45**	**345**	PKP	PKPdf	10 00 47.6	-4.0
	comp=Z,0.8nm,0.8s,baz=336,slow=20,SNR=2.5						
KONO	**Kongsberg**	**133.06**	**345**	PFAKE		10 01 00.0	+5.4
KONO				LR	LR		
	comp=Z,183nm,19.0s,MS4.8						
BDFB	**Brasilia**	**133.43**	**130**	PKP	PKPdf	10 00 53.8	-2.6
	comp=Z,4.8nm,0.7s,baz=107,slow=2.0,SNR=5.5						
MBAR	**Mbarara**	**133.99**	**254**	PFAKE		10 01 10.0	+12
MBAR				LR	LR		
	comp=Z,97nm,21.0s,MS4.5						
TSUM	**Tsumeb**	**134.20**	**222**	PFAKE		10 01 10.0	+12
TSUM				LR	LR		
	comp=Z,396nm,20.0s,MS5.1						
BRG	**Berggiesshubel**	**138.76**	**334**	*e*PKIKP	PKPdf	10 01 08.2	+2.9
BRG				*e*		10 01 13.3	
BRG				*e*		10 01 19.8	
BRG				*e*		10 16 07.0	
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRG				MLR	MLR		
	comp=N,270nm,23.7s,MS5.0						
BRG				MLR	MLR		
	comp=E,140nm,23.7s,MS5.0						
BRG				MLR	MLR		
	comp=Z,310nm,23.7s,MS5.0						
CLL	**Collm**	**138.81**	**335**	*e*PKIKP	PKPdf	10 01 09.0	+3.6
CLL				*i*		10 01 14.7	
CLL				MLR	MLR		
	comp=Z,300nm,17.0s,MS5.1						
CLL	**Collm**	**138.81**	**335**	*e**PPKP		10 01 09.0	
CLL				*i*		10 01 14.7	
KHC	**Kasperske Hory**	**140.22**	**333**	*e*PKIKP	PKPdf	10 01 05.5	-2.5
KHC				*e*		10 01 18.5	
KHC	**Kasperske Hory**	**140.22**	**333**	*e*PKPdf	PKPdf	10 01 05.5	-2.5
KHC				x	x	10 01 18.5	
GERES	**GERESS Array B**	**140.37**	**332**	PKP	PKPdf	10 01 04.1	-4.2
	comp=Z,0.4nm,0.3s,baz=45,slow=4.2,SNR=2.4						
GRA1	**Grafenberg Arr**	**140.78**	**335**	*e*PKP	PKPdf	10 01 09.5	+0.5
GRF	**Grafenberg Arr**	**140.78**	**335**	*e*PKIKP	PKPdf	10 01 09.5	+0.5
OBKA	**Obir**	**141.65**	**329**	⇑*i*P	PKPdf	10 01 11.9	+1.3
KBA	**Koelnbreinsper**	**141.83**	**331**	⇑*i*P	PKPdf	10 01 11.0	+0.1
DAVA	**Damuels**	**143.22**	**334**	⇓*i*P	PKPbc	10 01 08.1	+1.1
CDF	**Champ du Feu**	**143.35**	**337**	*e*PKP1	PKPbc	10 01 06.5	-0.8
HAU	**Haudompre**	**144.03**	**338**	*e*PKP1	PKPbc	10 01 08.8	-0.5
HAU				*e*R			
	comp=Z,161nm,20.9s						
MEZF	**Maizieres J'vi**	**144.06**	**340**	*e*PKP1	PKPbc	10 01 09.4	0.0
CII	**Carovilli**	**145.00**	**323**	*e*PKPdf	PKPdf	10 01 14.3	-2.3
TIP	**Timpagrande**	**145.02**	**318**	*e*PKPdf	PKPdf	10 01 12.9	-3.8
AQU	**L'Aquila**	**145.09**	**325**	*e*PKIKP	PKPdf	10 01 14.4	-2.3
CABF	**La Chapelle**	**145.30**	**337**	*e*PKP1	PKPbc	10 01 13.8	+1.0
	comp=Z,94nm,1.2s						
FLN	**La Foliniere**	**145.43**	**345**	*e*PKP1	PKPbc	10 01 13.2	+0.1
	comp=Z,41nm,0.4s						
FLN				*e*R			
	comp=Z,206nm,21.2s						
LOR	**Lormes**	**145.53**	**340**	*e*PKP1	PKPbc	10 01 14.1	+0.7
	comp=Z,125nm,1.2s						
LOR				*e*R			
	comp=Z,265nm,20.5s						
SSF	**Saint Saulge**	**145.83**	**340**	*e*PKP1	PKPbc	10 01 14.7	+0.5
	comp=Z,113nm,1.1s						
GRR	**Gorron**	**145.87**	**346**	*e*PKP1	PKPbc	10 01 14.9	+0.7
	comp=Z,120nm,0.9s						
LPL	**La Plagne**	**145.95**	**335**	*e*PKP1	PKPbc	10 01 16.2	+1.7
	comp=Z,125nm,1.3s						
LPG	**La Plagne**	**145.96**	**335**	*e*PKP1	PKPbc	10 01 16.3	+1.8
	comp=Z,21nm,0.5s						
SMF	**Signal de Mont**	**146.08**	**339**	*e*PKP1	PKPbc	10 01 16.2	+1.4
	comp=Z,79nm,1.1s						
AVF	**Avril sur Loir**	**146.12**	**340**	*e*PKP1	PKPbc	10 01 16.4	+1.5
	comp=Z,59nm,1.0s						
BNI	**Bardonecchia**	**146.35**	**335**	*e*PKP2	PKPab	10 01 17.8	-0.6
SGMF	**Saint Gilles**	**146.38**	**347**	*e*PKP1	PKPbc	10 01 17.0	+1.6
	comp=Z,56nm,0.8s						
ROSF	**Rostrenen**	**146.44**	**348**	*e*PKP1	PKPbc	10 01 17.2	+1.6
	comp=Z,36nm,0.9s						
BGF	**Bois d'Agland**	**146.49**	**340**	*e*PKP1	PKPbc	10 01 17.8	+2.1
	comp=Z,22nm,0.6s						
MBDF	**Montbardon**	**146.57**	**334**	*e*PKP1	PKPbc	10 01 16.0	0.0
	comp=Z,21nm,0.5s						
ORIF	**Oris-en-Rattie**	**146.78**	**335**	*e*PKP1	PKPbc	10 01 18.0	+1.5
	comp=Z,57nm,1.0s						
ORIF				*e*R			
	comp=Z,275nm,21.8s						
QUIF	**Quistinic**	**146.82**	**348**	*e*PKP1	PKPbc	10 01 17.3	+0.8
	comp=Z,18nm,0.7s						
TCF	**Toulx Ste Croi**	**146.93**	**341**	*e*PKP1	PKPbc	10 01 18.2	+1.4
SBF	**Sospel**	**146.98**	**333**	*e*PKP1	PKPdf	10 01 17.9	-2.0
PGF	**Pioggiola**	**147.26**	**329**	*e*PKP1	PKPdf	10 01 17.6	-2.8
MFF	**Saint Martin d**	**147.34**	**344**	*e*PKP1	PKPdf	10 01 19.2	-1.2
	comp=Z,46nm,0.8s						
FRF	**La Foret Royal**	**147.56**	**333**	*e*PKP1	PKPdf	10 01 18.2	-2.6
LMR	**La Mourre**	**147.81**	**333**	*e*PKP1	PKPdf	10 01 20.2	-1.0
RJF	**Les Rejaudoux**	**148.03**	**341**	*e*PKP1	PKPdf	10 01 22.2	+0.7
RJF				*e*R			
	comp=Z,192nm,20.2s						
CAF	**Calviac**	**148.19**	**340**	*e*PKP1	PKPdf	10 01 22.9	+1.1
RCBR	**Riachuelo**	**148.79**	**131**	PFAKE		10 01 30.0	+6.3
RCBR				LR	LR		
	comp=Z,218nm,19.0s,MS5.0						
MTLF	**Montolieu**	**149.52**	**338**	*e*PKP1	PKPdf	10 01 25.1	+1.1
ETSF	**Etsaut**	**150.85**	**341**	*e*PKP1	PKPdf	10 01 29.7	+3.7
	comp=Z,38nm,1.0s						
DBIC	**Dimbokro**	**168.11**	**222**	PFAKE		10 01 50.0	+3.7
DBIC				LR	LR		
	comp=Z,285nm,19.0s						

GUC 01 10:02:50.5±0.6**,35.07S**×**70.48W,h13**^{km}±41^{km}**,MD3.7,**
ML2.2,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CICH	**Cipreses**	**0.75**	**4**	*i* P	Pb	10 03 04.7	-0.3
CICH				*i* S	Sb	10 03 15.1	+0.3
CACH	**El Canelo**	**0.96**	**354**	*e*P	Pb	10 03 07.4	-1.0
CACH				*i* S	Sb	10 03 20.9	0.0
CHCH	**Chadas Angostu**	**1.14**	**353**	*e*P	Pb	10 03 11.0	-0.7
CHCH				*i* S	Sb	10 03 26.4	+0.2
LMEL	**Las Melosas**	**1.24**	**11**	*e*P	Pb	10 03 12.7	-0.7
LMEL				*i* S	Sb	10 03 29.4	+0.3
LMEL				AMP		10 03 31.0	
	comp=N,74nm,0.2s						
LNV	**Longovilo**	**1.35**	**325**	*i* P	Pn	10 03 14.3	-0.9
LNV				*i* S	Sb	10 03 31.6	-0.7
FCH	**Farellones**	**1.75**	**5**	*e*P	Pn	10 03 21.0	+0.2
FCH				*e*S	Sn	10 03 44.5	+1.5
FCH				AMP		10 03 46.5	
	comp=E,41nm,0.1s						

*MOS **01** 10:05:56.4±1.5,35.45N×140.03E,h33^{km},mb4.6/1,Error ellipse: s-maj=24.9km s-min=13.0km az=115.7*

*JMA **01** 10:05:59.2±0.2,35.55N×139.82E,h29^{km}±2^{km},M4.1 Broadband fault plane solution: P waves. NP1:φs261°, δ25°,λ82°. NP2:φs90°,δ65°,λ94°. Principal axes: T Plg70°, Azm7°; N Plg3°, Azm268°; P Plg20°, Azm177°;*

JMA Felt II J1.

*NEIC **01** 10:06:01.7±1.4,35.43N×139.63E,h58^{km}±12^{km},mb4.4/1 Error ellipse: s-maj=21.5km s-min=11.7km az=78.0*

NEIC Felt at Tokyo.

*IDC **01** 10:06:01.2±1.8,35.38N×139.79E,h55^{km}±16^{km},mb3.4/8, mb1 3.6/10,mb1mx3.5/24,mbtmp3.8/10,ML4.2/2,Error ellipse: s-maj=30.1km s-min=5.7km az=66.0*

ISC 01 10:05:58.1±0.5**,35.47N**±0.03×**139.89E**±0.05**,h45**^{km}±4^{km}**,**
n31,σ1^{s}**05**/44**,mb3.7**/9**,2C-6D,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.24**	**334**	⇓P	**P**	**10 06 05.4**	**-0.9**
TOK				*e*S	**S**	**10 06 09.9**	**-2.1**
JCN	**Nagara**	**0.26**	**102**	⇑P	**P**	**10 06 07.4**	**+0.9**
JYO	**Yokosk**	**0.31**	**217**	⇑P	**P**	**10 06 07.2**	**+0.3**
JYO				*e*S	**S**	**10 06 13.7**	**+0.6**
JHU	**Hanno**	**0.62**	**308**	⇓P	**P**	**10 06 09.9**	**-0.8**
JHU				*e*S	**S**	**10 06 18.4**	**-1.4**
JOD2	**Odawara 2**	**0.69**	**253**	⇓P	**P**	**10 06 11.5**	**0.0**
JOD2				*e*S	**S**	**10 06 20.9**	**-0.4**
BSO3	**Boso 3**	**0.84**	**142**	P	**P**	**10 06 15.0**	**+1.4**
JIM2	**Oshima 3**	**0.84**	**207**	P	**P**	**10 06 13.6**	**0.0**
JIM2				*e*S	**S**	**10 06 25.1**	**0.0**
JRY	**Ryogami san**	**0.97**	**304**	⇓P	**P**	**10 06 15.0**	**-0.5**
JRY				*e*S	**S**	**10 06 28.4**	**+0.1**
JAG	**Ashikaga**	**1.01**	**340**	⇓P	**P**	**10 06 16.4**	**+0.3**
JAG				*e*S	**S**	**10 06 29.2**	**-0.3**
JYN	**Shimob**	**1.10**	**272**	P	**P**	**10 06 17.4**	**+0.2**
JYN				*e*S	**S**	**10 06 31.7**	**+0.2**
JIZS	**Izushimoda**	**1.12**	**228**	⇓P	**P**	**10 06 17.4**	**-0.1**
JIZS				*e*S	**S**	**10 06 31.6**	**-0.4**
MJAR	**Matsushiro Arr**	**1.73**	**309**	P	**P**	**10 06 27.4**	**+1.1**
	82nm,0.3s,baz=137,slow=15,SNR=398						
MJAR				S	**S**	**10 06 49.8**	**+2.5**
	68nm,0.3s,baz=177,slow=30,SNR=9.1						
MAJO	**Matsushiro**	**1.73**	**309**	*e*P	**P**	**10 06 27.8**	**+1.5**
MAT	**Matsushiro**	**1.73**	**309**	*e*P	**P**	**10 06 28.0**	**+1.7**
MAT				*e*S	**S**	**10 06 51.0**	**+3.7**
MAT	**Matsushiro**	**1.73**	**309**	P	**P**	**10 06 27.6**	**+1.3**
MAT				S	**S**	**10 06 51.0**	**+3.7**
JHJ	**Hachijo jima 2**	**2.35**	**182**	P	**P**	**10 06 35.8**	**+0.7**
	79nm,0.3s,baz=84,slow=23,SNR=47						
JHJ				S	**S**	**10 07 03.4**	**+0.6**
	62nm,0.3s,baz=245,slow=23,SNR=12						
CBIJ	**Chichi jima**	**8.58**	**166**	P	**P**	**10 08 00.1**	**-2.4**
	12nm,0.3s,baz=122,slow=22,SNR=9.3						
CBIJ				S	**S**	**10 09 35.0**	**-3.9**
	4.0nm,0.3s,baz=285,slow=20,SNR=3.0						
ASAJ	**Asahikawa**	**8.88**	**13**	P	**P**	**10 08 03.4**	**-3.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**8.88**	**13**	P	**P**	**10 08 03.4**	**-3.3**
	comp=Z,0.6nm,0.3s,baz=311,slow=20,SNR=2.8						
SONM	**Songino Array**	**27.68**	**307**	P	**P**	**10 11 42.5**	**-1.3**
	comp=Z,0.3nm,0.8s,mb3.0,baz=107,slow=12,SNR=2.5						
MKAR	**Makanchi Array**	**43.92**	**303**	P	**P**	**10 14 01.1**	**-0.8**
	comp=Z,0.7nm,0.6s,mb3.6,baz=86,slow=10.0,SNR=6.9						
BVAR	**Borovoye Array**	**50.72**	**313**	P	**P**	**10 14 55.5**	**+0.4**
	comp=Z,0.6nm,0.3s,mb4.0,baz=102,slow=9.8,SNR=5.3						
BVAR	**Borovoye Array**	**50.72**	**313**	P	**P**	**10 14 55.5**	**+0.4**
ILAR	**Eielson Array**	**51.47**	**32**	P	**P**	**10 15 02.0**	**+1.4**
	comp=Z,0.2nm,0.6s,mb3.2,baz=275,slow=6.6,SNR=5.0						
WRAB	**Tennant Creek**	**55.35**	**186**	P	**P**	**10 15 28.8**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
WRAB	**Tennant Creek**	**55.35**	**186**	P	**P**	**10 15 28.8**	**-1.1**
	comp=Z,3.3nm,0.9s,mb4.4						
WRA	**Warramunga Arr**	**55.36**	**186**	P	**P**	**10 15 28.9**	**-1.0**
	comp=Z,0.9nm,0.6s,mb4.0,baz=2.5,slow=7.7,SNR=8.5						
ASAR	**Alice Springs**	**59.09**	**186**	P	**P**	**10 15 56.5**	**+0.3**
	comp=Z,0.2nm,0.5s,mb3.4,baz=6.3,slow=6.5,SNR=3.4						
FINES	**FINESS Array B**	**69.62**	**332**	P	**P**	**10 17 03.6**	**-0.5**
	comp=Z,2.1nm,0.8s,mb4.1,baz=79,slow=5.2,SNR=4.1						
NOA	**NORSAR Array B**	**75.14**	**337**	P	**P**	**10 17 37.4**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.5,baz=50,slow=12,SNR=3.0						
LPAZ	**La Paz**	**148.54**	**60**	PKPbc	PKPdf	10 25 43.6	+7.0
	comp=Z,0.6nm,0.7s,baz=14,slow=8.3,SNR=3.3						

*NEIC **01** 10:17:19.9±0.9,51.57N×175.96W,h45^{km}±8^{km},mb3.8/2, ML3.6(AEIC),Error ellipse: s-maj=16.5km s-min=6.9km az=160.0*

*IDC **01** 10:17:20.6±0.8,51.66N×175.90W,h50^{km}±7^{km},mb3.5/7, mb1 3.8/9,mb1mx3.5/25,mbtmp3.7/9,Error ellipse: s-maj=28.1km s-min=14.4km az=171.0*

ISC 01 10:17:19.4±0.8**,51.6N**±0.1×**175.99W**±0.06**,h53**^{km}±7^{km}**,**
n26,σ0^{s}**65**/35**,mb3.7**/8**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ETKA	**Kagalaska Isla**	**0.38**	**316**	P	**P**	**10 17 29.1**	**-0.4**
ETKA				S	**S**	**10 17 35.9**	**-1.0**
GSIG	**Igitkin Island**	**0.40**	**5**	P	**P**	**10 17 29.8**	**+0.1**
GSIG				S	**S**	**10 17 37.2**	**-0.1**
GSMY	**Great Sitkin M**	**0.46**	**354**	P	**P**	**10 17 30.7**	**+0.4**
GSTD	**Great Sitkin T**	**0.48**	**348**	P	**P**	**10 17 31.1**	**+0.5**
GSTD				S	**S**	**10 17 38.9**	**+0.2**
GSTR	**Great Sitkin T**	**0.51**	**355**	P	**P**	**10 17 31.6**	**+0.7**
GSSP	**Great Sitkin S**	**0.52**	**347**	P	**P**	**10 17 31.6**	**+0.6**
GSSP				S	**S**	**10 17 39.9**	**+0.4**
ADAG	**Mount Adagdak**	**0.55**	**316**	P	**P**	**10 17 31.7**	**+0.4**
ADAG				S	**S**	**10 17 39.9**	**-0.2**
KIWB	**Kanaga Island**	**0.77**	**290**	P	**P**	**10 17 34.4**	**+0.1**
KINC	**Kanaga Island**	**0.79**	**296**	P	**P**	**10 17 34.6**	**+0.2**
KINC				S	**S**	**10 17 45.7**	**+0.1**
KIKV	**Kanaga Island**	**0.79**	**292**	P	**P**	**10 17 34.7**	**+0.2**
KIKV				S	**S**	**10 17 45.4**	**-0.3**
KIMD	**Kanaga Island**	**0.80**	**283**	P	**P**	**10 17 34.5**	**0.0**
KIMD				S	**S**	**10 17 44.5**	**-1.3**
ATKA	**Atka Island**	**1.27**	**60**	P	**P**	**10 17 41.5**	**+0.4**
ATKA				S	**S**	**10 17 57.0**	**-0.3**
FX1	**Attu Island--F**	**6.79**	**285**	P	**P**	**10 18 59.1**	**+0.3**
	2.3nm,0.3s,baz=175,slow=4.1,SNR=13						
FX1				S	**S**	**10 20 15.7**	**+0.2**
	0.7nm,0.3s,baz=72,slow=19,SNR=2.7						
BILL	**Bilibino**	**18.62**	**339**	*e*P	**P**	**10 21 35.6**	**+1.0**
	3.9nm,1.0s						
ILAR	**Eielson Array**	**19.99**	**38**	P	**P**	**10 21 46.2**	**-3.5**
	0.1nm,0.3s,baz=240,slow=9.6,SNR=11						
INK	**Inuvik**	**26.28**	**35**	P	**P**	**10 22 49.6**	**-1.5**
	1.4nm,0.9s,mb3.5,baz=223,slow=4.4,SNR=4.4						
YKA	**Yellowknife Ar**	**33.80**	**47**	P	**P**	**10 23 56.6**	**-1.3**
	0.2nm,0.3s,mb3.5,baz=266,slow=9.9,SNR=3.4						
YKA				PcP	PcP	10 26 35.4	-0.9
	0.6nm,0.7s,baz=284,slow=2.6,SNR=5.5						
BW06	**Boulder Array**	**44.56**	**74**	*e*P	**P**	**10 25 27.6**	**+0.2**
	2.9nm,0.9s,mb4.1						
PDAR	**Pinedale Array**	**44.56**	**74**	P	**P**	**10 25 28.1**	**+0.7**
	0.6nm,0.6s,mb3.6,baz=304,slow=5.3,SNR=5.2						
PDAR				pP	pP	10 25 40.6	-0.8
	1.6nm,0.7s,baz=308,slow=4.1,SNR=7.8						
PDAR				sP	sP	10 25 46.1	-1.6
	2.1nm,0.8s,baz=315,slow=6.3,SNR=8.1						
TXAR	**Lajitas Array**	**56.88**	**83**	P	**P**	**10 27 00.3**	**-0.7**
	0.3nm,0.5s,mb3.6,baz=304,slow=6.3,SNR=7.9						
TXAR				pP	pP	10 27 13.4	-2.1
	0.4nm,0.6s,baz=298,slow=4.5,SNR=4.7						
TXAR	**Lajitas Array**	**56.88**	**83**	P	**P**	**10 27 00.3**	**-0.7**
TXAR				pP	pP	10 27 13.4	-2.1
WRA	**Warramunga Arr**	**83.41**	**226**	P	**P**	**10 29 41.9**	**-0.3**
	0.2nm,0.6s,mb3.4,baz=33,slow=5.8,SNR=4.9						
WRA	**Warramunga Arr**	**83.41**	**226**	P	**P**	**10 29 41.9**	**-0.3**
ASAR	**Alice Springs**	**86.86**	**225**	P	**P**	**10 29 59.9**	**+0.6**
	0.5nm,0.7s,mb3.9,baz=18,slow=4.3,SNR=5.9						
STKA	**Stephens Creek**	**91.08**	**215**	P	**P**	**10 30 19.8**	**+0.7**
	1.5nm,1.0s,mb4.3,baz=41,slow=19,SNR=3.4						
BOSA	**Boshof**	**152.08**	**317**	PKPbc	PKPdf	10 37 09.4	+7.8

2.4nm,0.7s,baz=114,slow=8.5,SNR=5.4

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*IDC **01** 10:39:57.6±1.6, 35.45N×140.09E, h45^{km}±16^{km}, mb3.6/8, mb1 3.8/11, mb1mx3.6/25, mbtmp3.9/11, ML3.9/3, Error ellipse: s-maj=23.8km s-min=6.1km az=66.0*

*JMA **01** 10:39:57.3±0.1, 35.55N×139.82E, h28^{km}±2^{km}, M4.1 Broadband fault plane solution: P waves. NP1:ϕ_s267°, δ27°, λ88°. NP2:ϕ_s89°, δ63°, λ91°. Principal axes: T Plg72°, Azm1°; N Plg1°, Azm268°; P Plg18°, Azm178°;*

JMA Felt II J1.

*NEIC **01** 10:39:58.9±1.6, 35.46N×139.76E, h53^{km}±12^{km} Error ellipse: s-maj=22.4km s-min=12.2km az=79.0*

*NIED **01** 10:40:00, 35.50N×139.80E, h29^{km}, Mw3.8 Best double couple: M$_0$5.01×10^{14} NP1:ϕ_s87°, δ68°, λ95°. NP2:ϕ_s253°, δ23°, λ77°.*

ISC 01 10:39:56.0±0.5**, 35.49N**±0.04×**139.87E**±0.06**, h45**^{km}±4^{km}**, n27, σ0^{s}95**/36**, mb3.8**/8**, 3C-6D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOK	Tokyo	0.22	334	⇓P	P	10 40 03.3	-0.6
TOK				S	S	10 40 07.6	-1.8
JCN	Nagara	0.28	105	⇑P	P	10 40 05.3	+0.8
JYO	Yokosk	0.32	213	⇑P	P	10 40 05.2	+0.3
JHU	Hanno	0.60	307	⇓P	P	10 40 07.9	-0.4
JHU				*e*S	S	10 40 16.3	-0.9
JOD2	Odawara 2	0.68	251	⇓P	P	10 40 09.5	+0.2
JOD2				S	S	10 40 18.9	-0.2
BSO3	Boso 3	0.86	143	P	P	10 40 13.0	+1.1
JRY	Ryogami san	0.95	304	⇓P	P	10 40 13.0	-0.1
JAG	Ashikaga	0.99	340	⇓P	P	10 40 14.2	+0.5
JYN	Shimob	1.08	271	P	P	10 40 15.4	+0.4
JIZS	Izushimoda	1.12	227	⇓P	P	10 40 15.5	0.0
JIZS				S	S	10 40 29.5	-0.5
MJAR	Matsushiro Arr	1.71	308	P	P	10 40 25.2	+1.3
	78nm,0.3s,baz=137,slow=14,SNR=285						
MJAR				S	S	10 40 49.4	+4.6
	52nm,0.3s,baz=293,slow=41,SNR=12						
MAJO	Matsushiro	1.71	308	⇑*i*P	P	10 40 25.7	+1.7
MAT	Matsushiro	1.71	308	*e*P	P	10 40 26.0	+2.0
MAT				*e*S	S	10 40 49.0	+4.2
MAT	Matsushiro	1.71	308	P	P	10 40 25.5	+1.5
MAT				S	S	10 40 49.0	+4.2
JHJ	Hachijo jima 2	2.37	182	P	P	10 40 33.7	+0.4
	72nm,0.3s,baz=69,slow=20,SNR=49						
JHJ				S	S	10 41 01.6	+0.3
	56nm,0.3s,baz=218,slow=23,SNR=9.1						
CBIJ	Chichi jima	8.60	166	P	P	10 41 58.1	-2.5
	11nm,0.3s,baz=115,slow=24,SNR=8.1						
CBIJ				S	S	10 43 32.4	-5.0
	4.7nm,0.3s,baz=252,slow=20,SNR=2.8						
ASAJ	Asahikawa	8.87	13	P	P	10 42 01.4	-3.0
	0.6nm,0.3s,baz=225,slow=8.6,SNR=3.8						
MKAR	Makanchi Array	43.90	303	P	P	10 47 59.9	0.0
	0.8nm,0.6s,mb3.6,baz=92,slow=8.8,SNR=2.6						
CHKZ	Chkalovo	50.47	314	*e*P	P	10 48 50.6	-0.6
BVAR	Borovoye Array	50.70	313	P	P	10 48 52.7	-0.3
	0.5nm,0.3s,mb3.9,baz=90,slow=8.9,SNR=4.1						
ILAR	Eielson Array	51.46	32	P	P	10 48 59.1	+0.5
	0.4nm,0.8s,mb3.4,baz=275,slow=6.1,SNR=4.5						
WRA	Warramunga Arr	55.38	186	P	P	10 49 26.9	-1.1
	0.3nm,0.3s,mb3.8,baz=1.7,slow=7.8,SNR=15						
WRA	Warramunga Arr	55.38	186	P	P	10 49 26.9	-1.1
ASAR	Alice Springs	59.10	186	P	P	10 49 54.1	-0.2
	0.2nm,0.4s,mb3.5,baz=0.1,slow=6.2,SNR=3.9						
ARCES	ARCESS Array B	65.00	339	P	P	10 50 33.0	-0.1
	6.0nm,1.1s,mb4.6,baz=39,slow=13,SNR=3.5						
FINES	FINESS Array B	69.60	332	P	P	10 51 01.6	-0.4
	0.8nm,0.6s,mb3.9,baz=63,slow=4.3,SNR=4.3						
NOA	NORSAR Array B	75.12	337	P	P	10 51 35.2	+0.6
	0.7nm,0.7s,mb3.7,baz=42,slow=5.7,SNR=3.2						

ISC 01 11:10:47.1±0.7**, 39.91N**±0.06×**28.84E**±0.05**, h10**^{km}**, n6, σ0^{s}93**/10**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORLT	Orhaneli	0.14	19	*i* PG	Pg	11 10 49.8	-0.7
ULDT	Uludag	0.33	45	*i* P	Pg	11 10 53.2	-0.7
ULDT				*i* S	Sg	11 11 02.4	+4.0
DST	Dursunbey	0.34	208	*e*PG	Pg	11 10 53.9	-0.2
KCT	Karacabey	0.51	314	PG	Pg	11 10 57.2	-0.3
KCT				SG	Sg	11 11 05.4	+1.0
BTOK	Tokmak	0.64	257	*i* P	Pb	11 10 59.5	-0.3
BTOK				*i* S	Sg	11 11 08.9	+0.4
ESKT	Eskisehir	1.60	103	*i* P	Pn	11 11 14.6	-1.1
ESKT				*i* S	Sb	11 11 38.4	+1.9

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*NDI **01** 11:28:38.4±3.9, 25.03N×73.55E, h10^{km}, MD3.6, ML3.8*

ISC 01 11:28:39.4±0.6**, 24.96N**±0.03×**73.92E**±0.06**, h33**^{km}**, n32, σ1^{s}49**/49**, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AJM	Ajmer	1.65	23	*e*P	P	11 29 08.6	+2.2
AJM				*e*S	S	11 29 31.0	+4.4
AJM				AML	AML	11 29 33.3	
	comp=E,2μm,0.2s						
AJM				AML	AML	11 29 33.3	
	comp=N,1μm,0.2s						
JASL	Jaisalmer	3.35	306	*e*P	P	11 29 25.8	-4.9
JASL				*e*x	x	11 30 11.6	
KHET	Khetri	3.53	28	*e*P	P	11 29 35.7	+2.5
KHET				*e*S	S	11 30 15.8	+1.4
KHET				AML	AML	11 30 21.0	
	comp=E,156nm,0.4s						
KHET				AML	AML	11 30 21.2	
	comp=N,138nm,0.3s						
BHV	Bhavnagar	3.59	207	*e*P	P	11 29 25.0	-9.0
BHV				*e*SG	S	11 30 26.0	+10
BHPL	Bhopal	3.63	117	*e*P	P	11 29 38.2	+3.7
BHPL				*e*S	S	11 30 24.3	+7.5
BHPL				AML	AML	11 30 40.9	
	comp=E,310nm,0.2s						
BHPL				AML	AML	11 30 41.8	
	comp=N,488nm,0.2s						
SONA	Sohna	4.33	40	*e*P	P	11 29 47.1	+2.5
SONA				*i* S	S	11 30 39.5	+4.9
SONA				AML	AML	11 30 57.1	
	comp=E,414nm,0.6s						
SONA				AML	AML	11 30 57.6	
	comp=N,256nm,0.4s						
AYAN	Aya Nagar	4.53	39	*e*P	P	11 29 50.1	+2.6
AYAN				*i* S	S	11 30 40.7	+1.1
RTK	Rohtak	4.63	28	*e*P	P	11 29 49.8	+1.0
RTK				*e*S	S	11 30 42.0	-0.1
NDI	New Delhi	4.74	38	*e*P	P	11 29 52.0	+1.7
NDI				*e*S	S	11 30 44.5	-0.3
NDI				*e*x	x	11 31 04.5	
AKL	Akola	5.11	145	*i* P	P	11 29 59.0	+3.5
AKL				*i* S	S	11 30 58.8	+4.7
	comp=N,45nm,0.5s						
NGP	Nagpur	6.05	128	*e*P	P	11 30 11.2	+2.4
NGP				*e*S	S	11 31 22.9	+5.0
BOM	Bombay	6.12	190	*e*P	P	11 30 10.0	+0.3
BOM				*e*x	x	11 31 45.9	
POO	Poona	6.40	181	*i* P	P	11 30 12.6	-1.1
POO				*e*S	S	11 31 23.5	-3.0
POO				AML	AML	11 32 04.2	
	comp=E,107nm,0.4s						
POO				AML	AML	11 32 05.3	
	comp=N,77nm,0.2s						
SMLA	Simla	6.78	24	*i* S	S	11 31 33.2	-2.9
BHK	Bhakra	6.80	18	*e*S	S	11 31 33.5	-3.0
BHK				*e*x	x	11 32 13.5	
SDNR	Sundarnagar	7.05	22	*e*P	P	11 30 23.0	+0.1
SDNR				*e*S	S	11 31 40.4	-2.3
LGTI	Lohaghat	7.19	50	*e*S	S	11 31 39.0	-7.2
LGTI				*e*x	x	11 32 22.7	
PONG	Pong	7.20	14	*e*x	S	11 31 45.0	-1.3
PTH	Pithoragarh	7.23	49	*e*S	S	11 31 46.2	-1.0
PTH				*e*x	x	11 32 27.8	
KLP	Kalpa	7.58	29	*e*P	P	11 30 31.9	+1.7
KLP				*i* x	x	11 31 47.4	
KLP				*e*x	S	11 31 56.0	0.0
KLP				AML	AML	11 32 03.6	
	comp=N,99nm,0.6s						
KLP				AML	AML	11 32 04.4	
	comp=E,140nm,0.5s						
THN	Thein Dam	7.61	12	*e*P	P	11 30 28.8	-1.9
THN				*e*x	S	11 31 57.1	+0.3
KAD	Karad	7.62	178	*e*P	P	11 30 28.7	-2.0
KAD				*e*S	S	11 31 51.6	-5.2
BLSP	Bilaspur	8.04	109	*e*S	S	11 32 06.8	-0.6
HYB	Hyderabad	8.65	149	*e*P	P	11 30 45.0	-0.2
HYB				*e*S	S	11 32 19.0	-3.7
KOLN	Koldanda	9.12	70	*e*P	P	11 30 52.0	+0.4
	comp=E,16nm,0.3s						
KOLN				*e*S	S	11 32 33.6	-0.6
GKN	Gorkha	10.06	70	*e*P	P	11 31 05.3	+0.6
	comp=E,16nm,0.3s						
GKN				*e*S	S	11 32 56.8	-0.8
DMN	Daman	10.38	73	*e*P	P	11 31 09.1	+0.1
	comp=E,15nm,0.2s						
KKN	Kakani	10.57	72	*e*P	P	11 31 11.6	0.0
	comp=E,14nm,0.3s						
PKI	Pulchoki	10.63	73	*e*P	P	11 31 12.4	-0.1
	comp=E,28nm,0.4s						
GUN	Gumba	11.11	72	*e*P	P	11 31 18.8	-0.2
	comp=E,35nm,0.4s						
GUN				*e*S	S	11 33 21.8	-1.3
VIS	Vishakhapatnam	11.34	128	*i* x	x	11 34 31.6	
SHL	Shillong	16.26	84	*e*x	x	11 33 48.0	
SHL				*e*x	x	11 37 20.0	

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*NEIC **01** 11:29:33.4±0.6, 33.87N×142.58E, h10^{km}, mb4.5/1, Error ellipse: s-maj=16.3km s-min=9.6km az=51.0*

*JMA **01** 11:29:34.6±0.3, 33.82N×142.53E, h43^{km}, M3.6*

*IDC **01** 11:29:37.0±0.9, 33.88N×142.46E, h33^{km}±6^{km}, mb3.4/4, mb1 3.8/7, mb1mx3.5/22, mbtmp3.7/7, ML3.6/2, Error ellipse: s-maj=23.7km s-min=17.8km az=118.0*

ISC 01 11:29:33.9±1.8**, 33.83N**±0.05×**142.52E**±0.06**, h29**^{km}±15^{km}**, h33**^{km}±.9^{km}**:pP-P, n25, σ0^{s}90**/37**, mb3.8**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	1.52	303	P	Pn	11 30 00.1	+0.6
BSO1				S	Sn	11 30 18.9	+0.4
BSO3	Boso 3	1.92	301	P	Pn	11 30 06.4	+1.1
BSO3				S	Sn	11 30 30.4	+1.6
BSO4	Boso 4	2.14	303	P	Pn	11 30 09.8	+1.3
BSO4				S	Sn	11 30 35.1	+0.8
JHJ2	Mitsune	2.37	253	P	Pn	11 30 12.2	+0.5
JHJ2				S	Sn	11 30 39.9	-0.2
JHJ	Hachijo jima 2	2.39	254	Pn	Pn	11 30 12.8	+0.7
	70nm,0.3s,baz=98,slow=5.9,SNR=24						
JHJ				Sn	Sn	11 30 39.9	-0.9
	66nm,0.3s,baz=78,slow=23,SNR=8.9						
JOD2	Odawara 2	3.17	298	P	Pn	11 30 22.8	-0.3
JOD2				S	Sn	11 30 59.4	-1.0
JAG	Ashikaga	3.61	317	P	Pn	11 30 28.9	-0.4
JYN	Shimob	3.67	298	P	Pn	11 30 30.7	+0.4
JYN				S	Sn	11 31 12.7	-0.4
JRY	Ryogami san	3.69	307	P	Pn	11 30 30.4	0.0
JRY				S	Sn	11 31 13.6	+0.2
JMM	Marumori	4.26	341	P	Pn	11 30 36.3	-2.4
MJAR	Matsushiro Arr	4.45	309	Pn	Pn	11 30 41.0	-0.3
	1.3nm,0.3s,baz=4.8,slow=16,SNR=13						
MJAR				Sn	Sn	11 31 31.1	-1.6
	2.1nm,0.3s,baz=40,slow=31,SNR=6.4						
MJAR	Matsushiro Arr	4.45	309	Pn	Pn	11 30 41.0	-0.3
MJAR				Sn	Sn	11 31 31.1	-1.6
MAJO	Matsushiro	4.45	309	*e*P	Pn	11 30 41.7	+0.4
MAT	Matsushiro	4.45	309	P	Pn	11 30 41.0	-0.3
MAT				*e*S	Sn	11 31 32.0	-0.8
MAT	Matsushiro	4.45	309	P	Pn	11 30 41.2	-0.1
MAT				S	Sn	11 31 32.4	-0.4
CBIJ	Chichi jima	6.72	183	Pn	Pn	11 31 11.8	-1.5
	5.5nm,0.3s,baz=287,slow=19,SNR=9.3						
CBIJ				Sn	Sn	11 32 21.1	-8.5
	4.7nm,0.3s,baz=307,slow=20,SNR=3.2						
ASAJ	Asahikawa	10.27	0	P	P	11 31 57.5	-5.1
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	10.27	0	Pn	P	11 31 57.5	-5.1
	comp=Z,0.6nm,0.3s,baz=188,slow=7.1,SNR=4.6						
ILAR	Eielson Array	51.74	31	P	P	11 38 39.6	-0.8
	comp=Z,0.5nm,0.8s,mb3.5,baz=262,slow=5.5,SNR=5.3						
WRAB	Tennant Creek	54.02	190	P	P	11 38 57.9	-0.1
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
WRAB	Tennant Creek	54.02	190	P	P	11 38 57.9	0.0
	comp=Z,5.5nm,1.1s,mb4.4						
WRA	Warramunga Arr	54.03	190	P	P	11 38 57.7	-0.3
	comp=Z,0.5nm,0.4s,mb3.8,baz=6.6,slow=7.5,SNR=17						
WRA				pP	pP	11 39 08.4	+1.5
	comp=Z,0.9nm,0.5s,baz=6.3,slow=7.5,SNR=7.3						
ASAR	Alice Springs	57.76	189	P	P	11 39 25.8	+1.0
	comp=Z,0.4nm,0.8s,mb3.5,baz=2.2,slow=6.4,SNR=3.5						
ASAR				pP	pP	11 39 35.9	+2.0
	comp=Z,0.7nm,0.8s,baz=2.4,slow=5.7,SNR=4.3						
TXAR	Lajitas Array	91.34	53	P	P	11 42 40.0	+1.6
	comp=Z,0.2nm,0.5s,mb3.7,baz=289,slow=3.2,SNR=6.5						
TXAR				pP	pP	11 42 50.0	+2.3
	comp=Z,0.3nm,0.6s,baz=289,slow=2.3,SNR=4.5						
LPAZ	La Paz	147.38	65	PKPbc	PKPdf	11 49 18.8	+0.9
	comp=Z,0.7nm,0.5s,baz=1.2,slow=6.9,SNR=4.2						

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*IDC **01** 11:32:52.0±2.1, 21.11S×179.40W, h605^{km}±24^{km}, mb3.2/7, mb1 3.5/9, mb1mx3.3/17, mbtmp4.2/9, Error ellipse: s-maj=19.8km s-min=16.0km az=166.0*

*NEIC **01** 11:32:54.4±3.4, 21.24S×179.36W, h643^{km}±39^{km}, mb4.3/4, Error ellipse: s-maj=26.6km s-min=15.7km az=61.0*

ISC 01 11:32:53.1±2.1**, 21.3S**±0.1×**179.4W**±0.1**, h640**^{km}±25^{km}**, n18, σ0^{s}79**/18**, mb3.8**/11**, 4C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	13.21	264	P	P	11 35 44.8	+1.3
	0.4nm,0.3s,baz=73,slow=21,SNR=7.1						
URZ	Urewera	17.20	189	P	P	11 36 19.6	-1.5
	0.8nm,0.3s,baz=41,slow=9.3,SNR=6.9						
CTAO	Charters Tower	32.15	266	*e*P	P	11 38 33.4	+0.9
	6.9nm,0.6s,mb4.4						
STKA	Stephens Creek	36.30	245	P	P	11 39 06.0	-0.7
	2.3nm,0.7s,mb3.8,baz=108,slow=10,SNR=3.9						
ASAR	Alice Springs	43.10	258	P	P	11 40 00.5	-0.7
	5.9nm,0.6s,mb4.2,baz=99,slow=7.6,SNR=69						
ASAR				ScP		11 44 32.5	
	0.9nm,0.7s,baz=96,slow=4.7,SNR=8.7						
ASAR				S	S	11 45 44.1	+0.3
	1.1nm,0.7s,baz=92,slow=16,SNR=13						
WRAB	Tennant Creek	43.22	263	*e*P	P	11 40 01.6	-0.6
	7.8nm,0.6s,mb4.3						
WRA	Warramunga Arr	43.23	263	P	P	11 40 02.4	+0.1
	2.1nm,0.4s,mb4.0,baz=96,slow=7.5,SNR=182						
MBWA	Marble Bar	56.44	258	*e*P	P	11 41 38.1	-0.4
	7.3nm,0.8s,mb3.9						
VNDA	Vanda	57.03	185	P	P	11 41 43.0	+1.2
	1.4nm,0.7s,mb3.2,baz=351,slow=5.8,SNR=18						
QSPA	South Pole Qui	68.80	180	*e*P	P	11 42 57.3	+0.9
	9.1nm,0.9s,mb4.1						
MJAR	Matsushiro Arr	70.08	325	P	P	11 43 04.3	-0.3
	1.0nm,0.5s,mb3.5,baz=158,slow=5.9,SNR=5.0						
SNAA	Sanae	87.27	179	⇑*i*	P	11 44 33.0	-1.1
VNA3	Neumayer Olymp	87.45	177	⇑*i*	P	11 44 35.0	0.0
VNA2	Neumayer--Watz	87.88	177	⇑*i*	P	11 44 37.1	+0.1
VNA1	Neumayer--Stat	88.11	177	⇑*i*	P	11 44 38.7	+0.6
TXAR	Lajitas Array	88.55	58	P	P	11 44 41.6	+0.6
	0.7nm,0.8s,mb3.4,baz=217,slow=6.3,SNR=8.5						
ILAR	Eielson Array	89.35	13	P	P	11 44 43.2	-0.7
	0.4nm,0.5s,mb3.4,baz=235,slow=6.0,SNR=4.9						
AKASG	Malin Array Be	143.05	330	PKP	PKPdf	11 51 14.8	-0.6
	1.8nm,0.4s,baz=40,slow=4.5,SNR=21						

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*NIED **01** 11:44:00, 35.50N×139.80E, h23^{km}, Mw3.8 Best double couple: M$_0$5.96×10^{14} NP1:ϕ_s86°, δ70°, λ92°. NP2:ϕ_s262°, δ20°, λ86°.*

*MOS **01** 11:44:09.1±1.5, 35.36N×139.78E, h33^{km}, mb4.6/4, Error ellipse: s-maj=18.0km s-min=10.0km az=105.6*

*JMA **01** 11:44:11.4±0.2, 35.55N×139.82E, h28^{km}±2^{km}, M4.3 Broadband fault plane solution: P waves. NP1:ϕ_s263°, δ25°, λ92°. NP2:ϕ_s80°, δ65°, λ89°. Principal axes: T Plg70°, Azm348°; N Plg1°, Azm81°; P Plg20°, Azm171°;*

JMA Felt III J1.

*IDC **01** 11:44:12.4±1.4, 35.41N×139.59E, h43^{km}±15^{km}, mb3.7/14, mb1 3.9/17, mb1mx3.9/27, mbtmp4.0/17, ML4.0/3, MS2.8/2, Ms1 2.8/2, ms1mx2.4/33 Error ellipse: s-maj=19.3km s-min=10.0km az=76.0*

*NEIC **01** 11:44:14.5±1.1, 35.46N×139.48E, h62^{km}±9^{km}, mb4.5/2, MW3.8(NIED), Error ellipse: s-maj=11.9km s-min=9.9km az=101.0*

NEIC Felt at Ayase, Hachioji, Matsudo, Tokyo, Yokosuka, Zama and Zushi. Recorded [3 JMA] in Kanagawa and Tokyo; [1 JMA] in Chiba, Saitama and Yamanashi Prefectures.

ISC 01 11:44:10.8±0.4**, 35.49N**±0.03×**139.79E**±0.05**, h42**^{km}±3^{km}**, n49, σ1^{s}08**/59**, mb4.0**/17**, 3C-6D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOK	Tokyo	0.20	352	⇓P	P	11 44 17.4	-0.9
TOK				*e*S	S	11 44 22.0	-1.5
JYO	Yokosk	0.28	202	⇑P	P	11 44 19.3	+0.2
JYO				*e*S	S	11 44 25.9	+1.1
JCN	Nagara	0.34	101	⇑P	P	11 44 19.5	-0.2
JHU	Hanno	0.56	311	⇓P	P	11 44 22.0	-0.4
JHU				*e*S	S	11 44 30.4	-0.2
JOD2	Odawara 2	0.62	249	⇓P	P	11 44 23.6	+0.4
JOD2				*e*S	S	11 44 32.7	+0.5
JIM2	Oshima 3	0.82	201	P	P	11 44 25.8	-0.2
JIM2				*e*S	S	11 44 37.2	0.0
JRY	Ryogami san	0.90	306	⇓P	P	11 44 27.1	0.0
JRY				*e*S	S	11 44 40.3	+1.2
BSO3	Boso 3	0.90	139	P	P	11 44 27.3	+0.2
JAG	Ashikaga	0.98	344	⇓P	P	11 44 28.4	+0.2
JYN	Shimob	1.02	271	P	P	11 44 29.4	+0.6
JIZS	Izushimoda	1.07	225	⇓P	P	11 44 29.6	+0.1
JIZS				*e*S	S	11 44 43.7	+0.2
MJAR	Matsushiro Arr	1.66	310	P	P	11 44 38.9	+0.9
	116nm,0.3s,baz=136,slow=14,SNR=601						
MJAR				S	S	11 44 52.1	-6.2
	129nm,0.3s,baz=137,slow=12,SNR=17						
MJAR	Matsushiro Arr	1.66	310	P	P	11 44 38.9	+0.9
MJAR				S	S	11 44 52.1	-6.2
MAJO	Matsushiro	1.66	310	⇑*i*P	P	11 44 39.8	+1.8
MAT	Matsushiro	1.66	310	*e*P	P	11 44 39.0	+1.0
MAT				S	S	11 44 57.0	-1.3
MAT	Matsushiro	1.66	310	P	P	11 44 39.4	+1.4
MAT				*e*S	S	11 44 57.1	-1.2
JHJ	Hachijo jima 2	2.36	180	P	P	11 44 47.8	-0.2
	144nm,0.3s,baz=119,slow=1.4,SNR=91						
JHJ				S	S	11 45 15.3	-0.6
	133nm,0.3s,baz=74,slow=21,SNR=6.2						
JHJ				LR	LR	11 45 20.6	
	comp=Z,406nm,19.2s,baz=143,slow=30						
CBIJ	Chichi jima	8.61	166	P	P	11 46 12.1	-3.6
	18nm,0.3s,baz=121,slow=23,SNR=11						
ASAJ	Asahikawa	8.89	13	P	P	11 46 18.0	-1.5
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,36nm,20.9s						
ASAJ	Asahikawa	8.89	13	P	P	11 46 17.9	-1.5
	comp=Z,0.5nm,0.3s,baz=197,slow=11,SNR=4.1						
ASAJ				LR	LR	11 50 12.3	
	comp=Z,36nm,20.9s,baz=155,slow=40						
SONM	Songino Array	27.61	307	P	P	11 49 54.0	-2.1
	comp=Z,0.5nm,0.7s,mb3.2,baz=110,slow=9.7,SNR=4.5						
MKAR	Makanchi Array	43.85	303	P	P	11 52 13.4	-1.0
	comp=Z,1.4nm,0.6s,mb3.9,baz=91,slow=10,SNR=10						
CHKZ	Chkalovo	50.42	314	*e*P	P	11 53 02.6	-3.3
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
CHKZ	Chkalovo	50.42	314	*e*P	P	11 53 02.6	-3.3
	comp=Z,4.2nm,0.9s,mb4.5						
BVAR	Borovoye Array	50.66	313	P	P	11 53 06.9	-0.8
	comp=Z,2.2nm,0.6s,mb4.3,baz=90,slow=7.4,SNR=15						
COLA	College	51.08	32	*e*P	P	11 53 11.2	+0.5
ILAR	Eielson Array	51.50	32	P	P	11 53 13.8	0.0
	comp=Z,0.9nm,0.9s,mb3.7,baz=268,slow=6.7,SNR=9.9						
WRAB	Tennant Creek	55.35	186	*e*P	P	11 53 41.3	-1.6
WRA	Warramunga Arr	55.36	186	P	P	11 53 41.1	-1.9
	comp=Z,1.1nm,0.5s,mb4.2,baz=1.7,slow=7.6,SNR=27						
INK	Inuvik	56.36	26	P	P	11 53 50.6	+1.1
	comp=Z,1.9nm,0.7s,mb4.3,baz=302,slow=6.0,SNR=3.3						
ASAR	Alice Springs	59.09	186	P	P	11 54 08.5	-0.8
	comp=Z,0.4nm,0.5s,mb3.7,baz=1.1,slow=7.9,SNR=4.7						
RES	Resolute Bay	64.42	14	*e*P	P	11 54 43.5	-0.8
RES				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
RES	Resolute Bay	64.42	14	*e*P	P	11 54 43.5	-0.8
	comp=Z,6.1nm,1.0s,mb4.6						
YKA	Yellowknife Ar	65.80	29	P	P	11 54 52.8	-0.5
	comp=Z,0.6nm,0.8s,mb3.7,baz=296,slow=6.3,SNR=7.0						
KIV	Kislovodsk	70.93	311	*e*P	P	11 55 25.3	-0.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
KIV				pmax	pmax		
	comp=N,9.0nm,1.1s						
AKASG	Malin Array Be	74.71	322	P	P	11 55 46.6	-0.9
	comp=N,0.5nm,0.4s,mb3.8,baz=47,slow=5.7,SNR=6.9						
NB2	NORSAR Subarra	75.10	337	P	P	11 55 49.2	-0.3
	comp=N,0.9nm,0.6s,mb3.9,baz=41,slow=5.6						
NB2	NORSAR Subarra	75.10	337	P	P	11 55 49.2	-0.3
	baz=41,slow=5.9						
NOA	NORSAR Array B	75.10	337	P	P	11 55 48.8	-0.8
	comp=N,2.5nm,0.9s,mb4.1,baz=42,slow=5.4,SNR=4.3						
NVAR	Mina Array Bea	76.97	52	P	P	11 56 02.5	+1.8
	comp=N,1.2nm,0.8s,mb3.9,baz=297,slow=3.9,SNR=6.5						
ELK	Elko	77.55	49	P	P	11 56 05.8	+2.0
ELK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ELK	Elko	77.55	49	P	P	11 56 05.8	+2.0
	comp=Z,0.6nm,0.6s,mb3.7,baz=303,slow=8.9,SNR=4.4						
ELK	Elko	77.55	49	P	P	11 56 03.9	+0.1
PV10	Paradox Valley	82.78	48	*e*P	P	11 56 34.3	+2.6
TUC	Tucson	85.55	53	P	P	11 56 47.3	+1.5
SCHQ	Schefferville	87.18	15	P	P	11 56 54.8	+1.6
	comp=Z,2.8nm,0.9s,mb4.5,baz=215,slow=4.2,SNR=3.6						
TXAR	Lajitas Array	92.11	51	P	P	11 57 18.5	+1.5
	comp=Z,0.1nm,0.5s,mb3.4,SNR=3.8						
LPAZ	La Paz	148.60	60	PKPbc	PKPdf	12 03 56.4	+6.5
	comp=Z,0.8nm,0.7s,baz=31,slow=7.9,SNR=2.9						
SIV	San Ignacio	153.08	49	PKPbc	PKPdf	12 04 06.3	+10
	comp=Z,0.4nm,0.5s,baz=273,slow=3.9,SNR=3.9						

JMA 01 11:44:23.4±0.3**, 35.53N×139.85E, h25**^{km}±3^{km}**, M3.9, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOK	Tokyo	0.17	334	*e*S	Sb	11 44 33.9	+1.6
JYO	Yokosk	0.34	206	S	Sb	11 44 37.9	+1.7
JOD2	Odawara 2	0.68	247	*e*S	Sb	11 44 44.9	-0.6
JYT	Yasato	0.75	22	*e*S	Sb	11 44 47.8	+0.2
JIZS	Izushimoda	1.14	225	S	Sb	11 44 55.4	-3.2

IDC 01 11:50:21.5±1.8**, 3.25N×124.03E, mb3.9**/4**, mb1 4.0**/4**, mb1mx3.7**/18**, mbtmp3.9**/4**, MS4.6**/1**, Ms1 4.6**/1**, ms1mx3.3**/23**, Error ellipse: s-maj=185.0km s-min=26.0km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	Kunigami	23.80	9	LR	LR	12 04 50.2	
	comp=Z,2μm,20.8s,baz=265,slow=36						
WRA	Warramunga Arr	25.17	157	P	P	11 55 48.8	-1.4
	1.9nm,0.3s,baz=334,slow=11,SNR=23						
ASAR	Alice Springs	28.43	161	P	P	11 56 18.3	-1.9
	0.5nm,0.5s,baz=346,slow=7.4,SNR=5.3						
STKA	Stephens Creek	38.72	156	P	P	11 57 47.0	-2.2
	1.0nm,0.5s,slow=11,SNR=2.9						
MKAR	Makanchi Array	56.44	327	P	P	12 00 05.2	-2.2
	0.4nm,0.4s,baz=117,slow=6.4,SNR=4.4						

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*CSEM **01** 11:52:19.2±0.1, 58.98N×18.38E, h2^{km}, ML3.2, Error ellipse: s-maj=2.6km s-min=1.9km az=131.0, Mining explosion.*

*HEL **01** 11:52:20.7±0.1, 59.00N×18.24E, ML2.1, ML3.0(UPP), ML2.3(NAO), Explosion*

*BER **01** 11:52:20.6±3.8, 58.84N×18.10E, ML2.3(NAO), Suspected explosion*

*UPP **01** 11:52:20.2, 59.00N×18.20E, h0^{km}, ML3.2, Mining explosion.*

*IDC **01** 11:52:22.0±1.6, 59.12N×18.05E, mb1 3.0/4,* *mb1mx2.9/22, mbtmp2.9/4, ML2.7/4, Error ellipse: s-maj=20.1km s-min=5.7km az=179.0*

NAO ***01*** *11:52:22.7±2.3, 59.17N×18.13E, ML2.3*

ISC 01 11:52:19.0±0.4**, 59.04N**±0.03×**18.37E**±0.05**, n57, σ1^{s}24**/103**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NYNU	**Nynaeshamn**	0.19	260	i P	Pg	11 52 22.4	-0.4
NRTU	**Norrtaelje**	0.66	12	i P	Pg	11 52 33.8	+1.7
NRTU				i S	Sg	11 52 43.2	+2.4
NRTU	**Norrtaelje**	0.66	12	P	Pg	11 52 33.7	+1.6
UPP	**Uppsala**	0.91	336	eP	Pg	11 52 37.5	+0.4
ESKU	**Eskilstuna**	1.04	282	eP	Pb	11 52 38.0	-1.5
ESKU	**Eskilstuna**	1.04	282	P	Pb	11 52 37.9	-1.6
BACU	**Backbrunna**	1.04	322	eP	Pb	11 52 39.3	-0.3
FLYU	**Flymyra**	1.12	348	eP	Pb	11 52 41.7	+0.7
GRAU	**Graesoe**	1.30	4	eP	Pb	11 52 44.4	+0.3
FORU	**Forsmark**	1.36	356	eP	Pb	11 52 46.1	+1.1
GOTU	**Gotland**	1.36	175	eP	Pb	11 52 44.3	-0.7
AAL	**Aland**	1.41	35	eP	Pb	11 52 47.8	+1.9
VSTU	**Vaestervik**	1.69	216	eP	Pn	11 52 49.6	-0.3
LNKU	**Linkoeping**	1.71	243	eP	Pn	11 52 49.6	-0.6
NRAU	**Nora**	1.79	289	eP	Pn	11 52 51.7	+0.3
ASKU	**Askersund**	1.84	267	eP	Pn	11 52 52.0	-0.1
ASPU	**Aespoe**	1.87	211	eP	Pn	11 52 52.9	+0.3
IGGU	**Iggoen**	1.92	344	eP	Pn	11 52 54.5	+1.3
IGGU				eS	Sn	11 53 20.6	+2.3
IGGU	**Iggoen**	1.92	344	P	Pn	11 52 54.5	+1.3
IGGU				S	Sn	11 53 20.6	+2.2
FALU	**Falun**	1.94	320	eP	Pn	11 52 54.6	+1.0
FALU	**Falun**	1.94	320	P	Pn	11 52 54.5	+0.9
EKSU	**Eksjoe**	2.19	229	eP	Pn	11 52 57.9	+0.9
OSKU	**Oskarshamn**	2.21	214	eP	Pn	11 52 58.3	+1.0
HFS	**Hagfors**	2.62	297	eP	Pn	11 53 04.2	+1.0
HFS				eSB	Sb	11 53 38.0	-1.4
HFS	**Hagfors**	2.62	297	Pn	Pn	11 53 02.2	-1.0
	0.2nm,0.3s,baz=112,slow=16,SNR=45						
HFS				Pg	Pg	11 53 03.8	-7.4
	0.2nm,0.3s,baz=122,slow=19,SNR=45						
HFS				Sn	Sn	11 53 32.1	-4.2
	0.1nm,0.3s,baz=135,slow=24,SNR=5.2						
HFS				Lg		11 53 37.9	
	1.3nm,0.3s,baz=112,slow=31,SNR=33						
HFS	**Hagfors**	2.62	297	Pn	Pn	11 53 04.2	+1.0
	baz=124,slow=16						
HFS				Lg		11 53 38.0	
	baz=116,slow=37						
HFS	**Hagfors**	2.62	297	P	Pn	11 53 04.2	+1.0
ARNU	**Arnoeviken**	2.71	350	eP	Pn	11 53 05.3	+0.7
ARNU	**Arnoeviken**	2.71	350	P	Pn	11 53 05.2	+0.7
ROTU	**Roteberg**	2.71	333	eP	Pn	11 53 07.9	+3.4
FINU	**Finntorp**	3.05	279	eP	Pn	11 53 09.2	-0.2
BLEU	**Blekinge**	3.06	208	eP	Pn	11 53 09.5	-0.1
BLEU	**Blekinge**	3.06	208	P	Pn	11 53 09.4	-0.2
PVF	**Pernaja**	4.08	65	eP	Pn	11 53 24.2	+0.2
PVF				eS	Sn	11 54 12.4	-0.8
PVF				eSG	Sg	11 54 28.2	-6.6
PVF				MSG		11 54 33.2	
PVF	**Pernaja**	4.08	65	P	Pn	11 53 24.1	+0.1
PVF				S	Sn	11 54 12.4	-0.8
PVF				Sg	Sg	11 54 28.1	-6.6
NB2	**NORSAR Subarra**	4.11	302	eP	Pn	11 53 23.8	-0.7
NB2				ePG	Pg	11 53 33.0	-8.1
NB2				eSG	Sg	11 54 27.5	-8.4
NB2	**NORSAR Subarra**	4.11	302	Pn	Pn	11 53 23.8	-0.7
	baz=125,slow=14						
NB2				Pg	Pg	11 53 33.0	-8.1
NB2				Lg		11 54 27.5	
	baz=121,slow=37						
NOA	**NORSAR Array B**	4.11	302	Pn	Pn	11 53 23.2	-1.2
	0.2nm,0.3s,baz=142,slow=9.2,SNR=2.5						
NOA				Pg	Pg	11 53 31.6	-9.4
	0.4nm,0.3s,baz=126,slow=16,SNR=2.8						
NOA				Sn	Sn	11 54 06.8	-7.2
	0.3nm,0.3s,baz=226,slow=22,SNR=2.4						
NOA				Lg		11 54 25.1	
	1.2nm,0.3s,baz=128,slow=27,SNR=7.2						
KEF	**Keuruu**	4.49	43	eP	Pn	11 53 31.3	+1.5
KEF				eS	Sn	11 54 22.2	-1.3
KEF				eSG	Sg	11 54 41.1	-7.3
KEF	**Keuruu**	4.49	43	P	Pn	11 53 31.3	+1.5
KEF				S	Sn	11 54 22.2	-1.3
KEF				Sg	Sg	11 54 41.0	-7.3
VAF	**Ylistaro**	4.53	26	eP	Pn	11 53 31.9	+1.5
VAF				eS	Sn	11 54 22.9	-1.7
VAF				eSG	Sg	11 54 41.8	-8.0
VAF	**Ylistaro**	4.53	26	P	Pn	11 53 31.8	+1.4
VAF				S	Sn	11 54 22.8	-1.8
VAF				Sg	Sg	11 54 41.7	-8.1
FIA0	**FINESS Array S**	4.54	55	Pn	Pn	11 53 32.5	+2.0
	baz=243,slow=12						
FIA0				Pg	Pg	11 53 43.2	-6.4
FIA0				Sn	Sn	11 54 25.9	+1.1
	baz=240,slow=22						
FIA0				Lg		11 54 46.0	
	baz=220,slow=22						
FIA0	**FINESS Array S**	4.54	55	eP	Pn	11 53 31.9	+1.4
FIA0				eS	Sn	11 54 23.6	-1.3
FIA0				eSG	Sg	11 54 41.8	-8.3
FIA0				MSG		11 54 46.2	
	comp=Z,2.5nm,0.2s						
FIA0	**FINESS Array S**	4.54	55	P	Pn	11 53 31.8	+1.3
FIA0	**FINESS Array S**	4.54	55	Pg	Pg	11 53 43.2	-6.4
	SNR=90						
FIA0				S	Sn	11 54 23.5	-1.3
FIA0				Sg	Sg	11 54 41.7	-8.3
	comp=Z,2.5nm,0.2s						
FINES	**FINESS Array B**	4.54	55	Pn	Pn	11 53 32.3	+1.8
	comp=Z,0.4nm,0.3s,baz=249,slow=13,SNR=22						
FINES				Pg	Pg	11 53 42.7	-6.9
	comp=Z,0.4nm,0.3s,baz=249,slow=15,SNR=8.4						
FINES				Sn	Sn	11 54 25.5	+0.7
	comp=Z,0.7nm,0.3s,baz=243,slow=22,SNR=7.8						
FINES				Lg		11 54 42.9	
	comp=Z,1.5nm,0.3s,baz=248,slow=25,SNR=11						
VJF	**Virojoki**	4.88	68	eP	Pn	11 53 35.3	-0.1
VJF				eSB	Sb	11 54 45.5	+0.4
KAF	**Kangasniemi**	4.98	48	eP	Pn	11 53 37.4	+0.6
KAF				eS	Sn	11 54 35.5	-0.6
KAF				eSG	Sg	11 54 55.8	-9.1
KAF	**Kangasniemi**	4.98	48	P	Pn	11 53 37.4	+0.5
KAF				S	Sn	11 54 35.4	-0.7
KAF				Sg	Sg	11 54 55.7	-9.2
SUF	**Sumiainen**	5.30	43	eP	Pn	11 53 42.3	+1.0
SUF				eS	Sn	11 54 41.8	-2.2
SUF				eSG	Sg	11 55 04.8	-11
SUF				MSG		11 55 08.7	
	comp=Z,1.3nm,0.2s						
SUF	**Sumiainen**	5.30	43	P	Pn	11 53 42.3	+1.0
SUF				S	Sn	11 54 41.7	-2.3
SUF				Sg	Sg	11 55 04.8	-11
	comp=Z,1.3nm,0.2s						
KJN	**Kajaani**	6.75	37	eP	Pn	11 54 00.5	-1.2
KJN				eS	Sn	11 55 15.2	-5.0
KJN				eSG	Sg	11 55 50.5	-13
KJN				MSG		11 55 53.7	
	comp=Z,2.3nm,0.3s						
OUL	**Oulu**	7.02	27	eP	Pn	11 54 04.7	-0.9
OUL				eS	Sn	11 55 21.6	-5.5
ARA0	**ARCESS Array S**	10.97	13	Pn	P	11 54 56.8	-3.3
	baz=194,slow=14						
ARA0				Sn	S	11 56 53.5	-11
	baz=201,slow=28						
ARA0	**ARCESS Array S**	10.97	13	eP	P	11 54 56.8	-3.3
ARA0				eS	S	11 56 53.5	-11
ARCES	**ARCESS Array B**	10.97	13	Pn	P	11 54 56.5	-3.6
	comp=Z,0.2nm,0.3s,baz=188,slow=13,SNR=11						
ARCES				Sn	S	11 56 54.3	-11
	comp=Z,0.1nm,0.3s,baz=201,slow=22,SNR=2.6						

WEL 01 11:57:46.3±0.5**, 35.48S**×**178.98E, h262^{km}**±25^{km}**, ML3.7**/4**, Error ellipse: s-maj=25.3km s-min=11.7km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	2.15	195	PN	P	11 58 31.2	-0.3
MXZ				SN	S	11 59 05.1	-1.5
PUZ	**Puketiti**	2.65	192	PN	P	11 58 36.2	-0.2
PUZ				SN	S	11 59 13.5	-1.8
MWZ	**Matawai**	3.08	202	PN	P	11 58 41.0	+0.1
MWZ				SN	S	11 59 23.0	-0.2
URZ	**Urewera**	3.15	208	PN	P	11 58 41.2	-0.4
URZ				SN	S	11 59 24.6	-0.1
KNZ	**Kokohu**	3.69	196	PN	P	11 58 47.4	-0.2

LDG ***01*** *12:00:20.3±0.0, 43.02N×0.22E, h15^{km}, Md2.2/1, Ml2.3/6, Error ellipse: s-maj=1.0km s-min=0.6km az=159.0*

MDD ***01*** *12:00:20.9±0.2, 43.01N×0.24E, h11^{km}, mbLg1.7/16, Error ellipse: s-maj=2.0km s-min=1.5km az=7.0, PRXIMO*

STR ***01*** *12:00:20.7±0.1, 43.01N×0.23E, h5^{km}±1^{km}, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

CSEM ***01*** *12:00:20.5±0.0, 43.03N×0.22E, h10^{km}, ML2.5/7, Error ellipse: s-maj=1.1km s-min=0.8km az=152.0*

ISC 01 12:00:18.8±0.3**, 43.08N**±0.02×**0.26E**±0.02**, h15^{km}, n38, σ0^{s}90**/59**, 1C, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPF	**Esparros**	0.08	131	ePg	Pg	12 00 23.5	+1.6
EPF				eSg	Sg	12 00 25.7	+1.7
	164nm,0.2s						
LABF	**Labassere**	0.14	255	Pg	Pg	12 00 23.9	+1.2
LABF				Sg	Sg	12 00 26.4	+1.2
LABF	**Labassere**	0.14	255	Pg	Pg	12 00 23.8	+1.2
LABF				Lg		12 00 26.3	
VIEF	**Viey**	0.26	220	Pg	Pg	12 00 25.0	+0.3
VIEF				Sg	Sg	12 00 28.1	-0.6
VIEF	**Viey**	0.26	220	Pg	Pg	12 00 25.0	+0.3
VIEF				Lg		12 00 28.3	
RESF	**Ens**	0.28	168	Pg	Pg	12 00 25.5	+0.4
RESF				Sg	Sg	12 00 29.2	0.0
RESF	**Ens**	0.28	168	Pg	Pg	12 00 25.4	+0.3
RESF				Lg		12 00 29.0	
EBIE	**Bielsa**	0.41	192	⇑Pg	Pg	12 00 27.3	-0.1
	12nm,0.1s,SNR=18						
EBIE				Lg		12 00 31.9	
	22nm,0.0s,SNR=7.9						
EBIE	**Bielsa**	0.41	192	Pg	Pg	12 00 27.3	-0.1
	12nm,0.1s,SNR=18						
EBIE				Lg		12 00 31.9	
	22nm,0.0s,SNR=7.9						
MELF	**Melles**	0.42	120	Pg	Pg	12 00 28.1	+0.4
MELF	**Melles**	0.42	120	Pg	Pg	12 00 28.2	+0.5
MELF				Lg		12 00 33.4	
REYF	**Montagne du Re**	0.48	268	Pg	Pg	12 00 28.9	+0.2
REYF				Sg	Sg	12 00 36.2	+0.9
REYF	**Montagne du Re**	0.48	268	Pg	Pg	12 00 29.3	+0.6
REYF				Lg		12 00 36.2	
ETSF	**Etsaut**	0.63	253	ePg	Pg	12 00 31.6	0.0
ETSF				eSg	Sg	12 00 39.6	-0.5
	37nm,0.3s						
MLS	**Moulis**	0.63	101	Pg	Pg	12 00 32.7	+1.1
MLS				Sg	Sg	12 00 42.0	+1.8
MLS	**Moulis**	0.63	101	Pg	Pg	12 00 32.9	+1.2
MLS				Lg		12 00 41.6	
FDAF	**Les Forges d'A**	0.66	247	Pg	Pg	12 00 32.2	-0.1
FDAF				Sg	Sg	12 00 40.9	-0.3
FDAF	**Les Forges d'A**	0.66	247	Pg	Pg	12 00 32.1	-0.1
FDAF				Lg		12 00 40.6	
ATE	**Arette**	0.70	270	Pg	Pg	12 00 34.2	+1.2
ATE				Lg		12 00 43.1	
SALF	**Salau**	0.76	115	Pg	Pg	12 00 34.4	+0.2
SALF				Lg		12 00 44.4	
EGRA	**Graus**	0.89	177	Pg	Pg	12 00 36.3	-0.5
	1.1nm,0.1s,SNR=6.1						
EGRA				Lg		12 00 44.8	
	1.3nm,0.1s,SNR=14						
SJPF	**Ste Jean**	1.08	272	ePg	Pg	12 00 40.4	-0.2
SJPF				eSg	Sg	12 00 54.5	-0.7
	4.2nm,0.2s						
EALK	**Alkurruntz**	1.30	277	Pg	Pg	12 00 43.7	-1.1
	0.7nm,0.1s,SNR=8.7						
EALK				Lg		12 01 02.0	
	1.5nm,0.1s,SNR=5.0						
ELIZ	**Elizondo**	1.31	274	Pg	Pg	12 00 44.9	-0.2
	1.5nm,0.4s,SNR=4.0						
ELIZ				Lg		12 01 04.2	
	3.2nm,0.2s,SNR=4.0						
ELIZ	**Elizondo**	1.31	274	Pg	Pg	12 00 45.0	-0.1
	SNR=4.0						
MTLF	**Montolieu**	1.46	79	ePn	Pn	12 00 45.4	+0.7
MTLF				ePg	Pg	12 00 48.5	+0.5
MTLF				eSg	Sg	12 01 07.8	+0.3
	4.2nm,0.2s						
ESAC	**San Caprasio**	1.46	202	Pg	Pg	12 00 47.6	-0.6
	5.4nm,0.1s,SNR=6.9						
ESAC				Lg		12 01 06.0	
	9.7nm,0.1s,SNR=5.0						
ESAC	**San Caprasio**	1.46	202	Pg	Pg	12 00 47.6	-0.5
	5.4nm,0.1s,SNR=6.9						
EMIR	**Miracle**	1.50	141	Pg	Pg	12 00 48.3	-0.6
	0.8nm,0.1s,SNR=8.3						
EMIR				Lg		12 01 07.6	
	3.0nm,0.1s,SNR=5.0						
EMIR	**Miracle**	1.50	141	Pg	Pg	12 00 48.3	-0.6
	0.8nm,0.1s,SNR=8.3						
EPOB	**Poblet**	1.83	160	Pg	Pg	12 00 53.2	-2.3
	0.6nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	12 01 10.8	-2.4
	6.9nm,0.6s,SNR=4.0						
EPOB				Lg		12 01 16.6	
	3.9nm,0.2s,SNR=7.9						
EPOB	**Poblet**	1.83	160	Pg	Pg	12 00 53.2	-2.3
	0.6nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	12 01 10.8	-2.4
	6.9nm,0.6s,SNR=4.0						
LFF	**La Frestale**	1.89	10	ePn	Pn	12 00 51.3	+0.4
LFF				ePg	Pg	12 00 56.8	+0.2
LFF				eSg	Sg	12 01 22.0	+0.2
	7.9nm,0.3s						
ERTA	**Horta de San J**	2.13	178	Pg	Pg	12 00 57.1	-4.3
	0.2nm,0.1s,SNR=7.9						
ERTA				Lg		12 01 25.7	
	2.0nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	2.13	178	Pg	Pg	12 00 57.1	-4.2
	0.2nm,0.1s,SNR=7.9						
CAF	**Calviac**	2.26	35	ePn	Pn	12 00 56.5	+0.3
CAF				ePg	Pg	12 01 03.6	-0.3
CAF				eSg	Sg	12 01 33.6	-0.5
	6.1nm,0.4s						
RJF	**Les Rejaudoux**	2.40	22	ePn	Pn	12 00 58.3	+0.1
RJF				ePg	Pg	12 01 06.2	-0.5
RJF				eSg	Sg	12 01 38.1	-0.7
	3.1nm,0.2s						
LASF	**Ste Croix**	2.80	68	ePn	Pn	12 01 03.6	-0.3
LASF				ePg	Pg	12 01 13.1	-1.6
LASF				eSg	Sg	12 01 50.2	-1.9
	2.5nm,0.3s						

IDC 01 12:22:40.1±4.9**, 7.45N**×**92.30E, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.5**/19**, mbtmp3.5**/4**, ML3.5**/1**, Error ellipse: s-maj=137.6km s-min=29.7km az=78.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	12.71	30	Pn	P	12 25 42.0	-3.1
	0.1nm,0.3s,baz=220,slow=15,SNR=3.8						
SONM	**Songino Array**	41.99	14	P	P	12 30 33.0	-1.6
	0.2nm,0.4s,baz=207,slow=9.7,SNR=4.2						
WRA	**Warramunga Arr**	49.52	124	P	P	12 31 32.7	-2.2
	0.5nm,0.4s,baz=302,slow=9.0,SNR=17						
ASAR	**Alice Springs**	51.06	128	P	P	12 31 44.8	-1.8
	0.5nm,0.6s,baz=301,slow=8.0,SNR=9.0						

IDC ***01*** *12:24:19.0±0.6, 18.43N×68.94W, h100^{km}±5^{km}, mb3.9/15, mb1 4.1/16, mb1mx4.0/22, mbtmp4.2/16, Error ellipse: s-maj=13.1km s-min=8.6km az=20.0*

RSPR ***01*** *12:24:21.5, 18.46N×68.75W, h148^{km}±2^{km}, MD4.1/15, MD4.1/15*

NEIC ***01*** *12:24:21.5, 18.46N×68.75W, h148^{km}, mb4.2/11, MD4.1(RSPR), After RSPR.*

ISC 01 12:24:20.8±0.6**, 18.54N**±0.05×**68.82W**±0.06**, h135^{km}**±6^{km}**, h105^{km}**±2.8^{km}**:pP-P, n59, σ0^{s}93**/70**, mb4.0**/24**, 13C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	1.63	92	⇑eP	P	12 24 51.4	+0.3
AGPR				eS	S	12 25 14.9	+0.7
MPR	**Mayaguez**	1.63	101	⇑eP	P	12 24 52.1	+1.0
MPR				eS	S	12 25 14.8	+0.5
CRPR	**Cabo Rojo, PR**	1.71	108	⇓iP	P	12 24 52.0	0.0
CRPR				eS	S	12 25 15.6	-0.3
MGP	**Maguayo**	1.73	108	⇑eP	P	12 24 52.3	+0.1
LRS	**Lares**	1.90	97	⇑eP	P	12 24 54.6	+0.5
AOPR	**Arecibo Observ**	1.98	95	⇑eP	P	12 24 55.0	-0.2
AOPR				eS	S	12 25 21.9	+0.5
PORP	**Portuguez**	2.13	103	⇑eP	P	12 24 57.8	+0.6
CELP	**Cerrillos**	2.18	102	⇑eP	P	12 24 57.8	0.0
CELP				eS	S	12 25 26.1	+0.1
ICM	**Isla Caja Muer**	2.28	106	⇑eP	P	12 24 59.0	0.0
ICM				eS	S	12 25 28.1	0.0
SJG	**San Juan**	2.58	99	⇑eP	P	12 25 02.8	0.0
SJG				eS	S	12 25 34.4	-0.5
SJG	**San Juan**	2.58	99	P	P	12 25 02.0	-0.9
	85nm,0.3s,baz=312,slow=11,SNR=29						
SJG				S	S	12 25 31.9	-2.9
	114nm,0.3s,baz=295,slow=14,SNR=8.9						
SJG	**San Juan**	2.58	99	⇑eP	P	12 25 02.7	-0.1
SJG				eS	S	12 25 34.7	-0.2
CBYP	**Canovanas**	2.83	95	⇑eP	P	12 25 05.9	-0.2
CBYP				eS	S	12 25 40.4	-0.3
HUMP	**Col San Antoni**	2.85	98	⇑eP	P	12 25 06.0	-0.5
HUMP				eS	S	12 25 40.6	-0.6
MTP	**Monte Pirata**	3.13	98	⇑eP	P	12 25 10.1	-0.1
MTP				eS	S	12 25 48.0	+0.2
STVI	**Saint Thomas**	3.67	92	⇓eP	P	12 25 16.6	-0.7
STVI				eS	S	12 25 58.6	-1.9
CDVI	**St. Croix**	3.94	101	eS	S	12 26 06.7	-0.1
PCRV	**Puerto La Cruz**	9.25	153	P	P	12 26 32.0	0.0
	2.5nm,0.3s,baz=228,slow=1.7,SNR=13						
PCRV				S	S	12 28 08.7	-5.9
	3.7nm,0.3s,baz=343,slow=20,SNR=6.1						
PCRV	**Puerto La Cruz**	9.25	153	P	P	12 26 32.0	0.0
PCRV				S	S	12 28 08.7	-5.9
SDV	**Santo Domingo**	9.76	191	P	P	12 26 38.7	-0.2
	24nm,0.3s,baz=59,slow=7.3,SNR=101						
SDV				S	S	12 28 20.1	-6.7
	9.0nm,0.3s,baz=349,slow=16,SNR=4.0						
SDV	**Santo Domingo**	9.76	191	eP	P	12 26 39.0	+0.2
	98nm,0.7s						
ROSC	**El Rosal**	14.63	202	P	P	12 27 44.0	+1.7
	1.0nm,0.3s,baz=72,slow=19,SNR=5.4						
JSC	**Jenkinsville**	19.20	327	eP	P	12 28 35.2	-1.3
OTAV	**Otavalo**	20.50	209	eP	P	12 28 51.3	+1.4
	37nm,1.1s						
PLAL	**Pickwick Lake**	23.67	318	eP	P	12 29 22.3	+1.4
	9.7nm,0.8s,mb4.4						
PLAL				epP		12 29 45.2	
SAML	**Samuel**	27.88	168	eP	P	12 29 59.3	-0.9
	6.8nm,0.6s,mb4.5						
WMOK	**Wichita Mounta**	31.10	307	eP	P	12 30 27.3	-1.3
	0.8nm,0.4s,mb3.8						
WMOK				epP	pP	12 30 52.7	-5.1
TXAR	**Lajitas Array**	33.49	295	P	P	12 30 48.6	-0.7
	0.3nm,0.4s,mb3.4,baz=116,slow=8.9,SNR=5.3						
TXAR				pP	pP	12 31 12.1	-6.9
	0.2nm,0.3s,baz=117,slow=8.1,SNR=1.6						
TXAR				PcP	PcP	12 33 27.7	+0.4
	0.4nm,0.4s,baz=117,slow=5.6,SNR=4.5						
LPAZ	**La Paz**	34.62	179	P	P	12 30 59.6	+0.6
	0.8nm,0.4s,mb3.8,baz=30,slow=8.1,SNR=5.9						
LPAZ	**La Paz**	34.62	179	eP	P	12 30 57.7	-1.2
	1.5nm,0.7s,mb3.7						
SIV	**San Ignacio**	35.15	167	P	P	12 31 02.7	-0.9
	1.4nm,0.7s,mb3.7,baz=6.2,slow=10,SNR=7.9						
SCHQ	**Schefferville**	36.26	2	P	P	12 31 13.8	+1.3
	8.0nm,0.5s,mb4.6,baz=191,slow=6.5,SNR=23						
SDCO	**Great Sand Dun**	37.26	309	P	P	12 31 22.0	+0.9
ISCO	**Idaho Springs**	38.11	312	eP	P	12 31 28.9	+0.8
	2.7nm,0.8s,mb3.9						
ISCO				epP	pP	12 31 54.6	-3.7
LVC	**Limon Verde**	40.90	180	P	P	12 31 49.8	-1.5
	3.8nm,0.6s,mb4.2,baz=348,slow=5.6,SNR=7.9						
LVC	**Limon Verde**	40.90	180	P	P	12 31 49.8	-1.5
PDAR	**Pinedale Array**	41.99	314	PcP	PcP	12 33 53.7	+0.3
	0.7nm,0.6s,baz=90,slow=3.0,SNR=5.0						
FFC	**Flin Flon**	44.09	333	eP	P	12 32 15.7	-1.2
	3.0nm,0.8s,mb4.0						
FCC	**Fort Churchill**	44.20	341	eP	P	12 32 17.4	-0.3
	3.3nm,0.8s,mb4.0						
FCC				epP	pP	12 32 43.7	-4.7
NVAR	**Mina Array Bea**	47.17	306	P	P	12 32 41.1	-0.4
	0.7nm,0.7s,mb3.4,baz=80,slow=7.7,SNR=5.4						
NVAR				pP	pP	12 33 04.1	-8.4
	1.0nm,0.9s,baz=93,slow=15,SNR=3.9						
EDM	**Edmonton**	48.76	326	P	P	12 32 52.7	-0.8
NEW	**Newport**	48.94	319	P	P	12 32 54.5	-0.5
	2.3nm,0.5s,mb4.1,baz=73,slow=8.2,SNR=4.4						
YKA	**Yellowknife Ar**	54.05	336	P	P	12 33 32.4	-0.7
	2.0nm,0.6s,mb4.0,baz=114,slow=7.5,SNR=15						
YKA				pP	pP	12 33 58.3	-6.5
	1.9nm,0.7s,baz=114,slow=7.2,SNR=6.7						
SUMG	**Summit**	56.77	10	eP	P	12 33 52.5	-0.1
	5.0nm,0.6s,mb4.5						
ESDC	**Sonseca Array**	59.20	54	P	P	12 34 11.3	+1.3
	2.0nm,0.7s,mb4.1,baz=273,slow=7.1,SNR=10						
DBIC	**Dimbokro**	63.25	92	P	P	12 34 38.3	+0.7
	5.0nm,1.1s,mb4.3,baz=271,slow=8.4,SNR=8.4						
INK	**Inuvik**	63.63	338	P	P	12 34 37.8	-1.4
	1.6nm,0.8s,mb3.9						
ILAR	**Eielson Array**	68.31	333	P	P	12 35 08.8	-0.2
	1.0nm,0.8s,mb3.6,baz=104,slow=4.3,SNR=6.4						
ILAR				pP	pP	12 35 34.5	-7.5
	0.5nm,0.7s,baz=90,slow=2.7,SNR=3.0						
NB2	**NORSAR Subarra**	69.15	31	P	P	12 35 16.1	+1.9
	1.6nm,0.7s,mb3.9,baz=270,slow=6.5						
NOA	**NORSAR Array B**	69.15	31	P	P	12 35 15.2	+1.0
	1.4nm,0.8s,mb3.8,baz=269,slow=6.4,SNR=4.9						
IMA	**Indian Mountai**	71.14	335	eP	P	12 35 24.0	-2.1
	71nm,1.8s,mb5.1						
GERES	**GERESS Array B**	71.41	44	P	P	12 35 29.7	+1.7
	0.2nm,0.3s,mb3.3,baz=284,slow=5.5,SNR=4.8						
ARCES	**ARCESS Array B**	74.30	21	P	P	12 35 46.1	+1.6
	3.5nm,0.5s,mb4.3,baz=284,slow=5.0,SNR=22						
ARCES				pP	pP	12 36 11.3	-6.9
	2.1nm,0.6s,baz=292,slow=6.5,SNR=2.2						
ARCES	**ARCESS Array B**	74.30	21	P	P	12 35 46.1	+1.6
ARCES				pP	pP	12 36 11.3	-6.9
FINES	**FINESS Array B**	76.22	30	P	P	12 35 57.4	+1.9
	2.9nm,0.5s,mb4.2,baz=275,slow=4.5,SNR=26						
STKA	**Stephens Creek**	149.56	238	PKPbc	PKPdf	12 43 56.4	+6.6
	2.5nm,0.6s,baz=105,slow=1.7,SNR=12						
STKA	**Stephens Creek**	149.56	238	PKPbc	PKPdf	12 43 56.4	+6.6
WRA	**Warramunga Arr**	158.09	263	PKPab	PKPab	12 44 38.5	-0.1
	0.6nm,1.1s,baz=84,slow=3.8,SNR=3.2						
ASAR	**Alice Springs**	158.20	253	PKP	PKPdf	12 44 03.2	+1.2
	0.5nm,0.7s,baz=99,slow=1.1,SNR=6.0						
ASAR				PKPab	PKPab	12 44 38.5	-0.5
	0.7nm,0.7s,baz=96,slow=4.4,SNR=7.8						

MEX 01 12:36:23.5±1.4**, 14.87N**×**94.11W, h22^{km}**±129^{km}**, MD4.1, 1D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	2.33	342	i P	Pn	12 36 58.1	-3.3
CMIG				i S	Sn	12 37 25.0	-4.7
SCX	**San Cristobal**	2.34	37	i P	Pn	12 37 00.0	-1.6
SCX				i S	Sn	12 37 27.0	-2.9
CCIG	**Comitan**	2.37	53	⇓iP	Pn	12 36 58.5	-3.5
CCIG				i S	Sn	12 37 25.7	-4.9
OXX	**Oaxaca**	3.34	312	eP	Pn	12 37 11.0	-4.7
OXX				i S	Sn	12 37 51.0	-4.2
EVV	**El Vigia**	3.76	342	eP	Pn	12 37 24.0	+2.3
EVV				i S	Sn	12 38 08.0	+2.1

IDC ***01*** *12:38:47.3±1.3, 13.68N×92.90E, mb3.8/5, mb1 3.9/6, mb1mx3.7/19, mbtmp3.7/6, ML3.4/1, MS4.1/1, Ms1 4.1/1, ms1mx3.0/29, Error ellipse: s-maj=44.9km s-min=21.4km az=63.0*

ISC 01 12:38:51.0±1.0**, 13.8N**±0.1×**93.2E**±0.1**, h33^{km}, n6, σ0^{s}82**/7**, mb3.8**/5**, MS4.0**/1**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	7.18	49	Pn	Pn	12 40 37.3	+0.8
	0.2nm,0.3s,baz=241,slow=16,SNR=2.6						
CMAR				Sn	Sn	12 41 57.0	-0.8
	0.3nm,0.3s,baz=243,slow=29,SNR=8.7						
MKAR	**Makanchi Array**	34.12	347	P	P	12 45 34.8	0.0
	0.6nm,0.7s,mb3.6,baz=141,slow=9.2,SNR=3.5						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	35.64	15	P	P	12 45 49.2	+1.4
	0.4nm,0.7s,mb3.4,baz=220,slow=5.5,SNR=4.4						
SONM				LR	LR	13 04 03.7	
	comp=Z,250nm,18.8s,MS4.0,baz=278,slow=42						
WRA	Warramunga Arr	52.57	129	P	P	12 48 03.8	-0.1
	0.7nm,0.5s,mb3.8,baz=300,slow=9.6,SNR=8.4						
WRA				PcP	PcP	12 49 14.0	+0.1
	0.4nm,0.4s,baz=321,slow=3.2,SNR=7.5						
ASAR	Alice Springs	54.52	133	P	P	12 48 18.2	0.0
	1.4nm,0.4s,mb4.4,baz=311,slow=7.1,SNR=59						
GERES	GERESS Array B	72.83	317	P	P	12 50 17.0	-1.2
	0.3nm,0.3s,mb3.8,baz=54,slow=12,SNR=3.5						

IDC 01 13:25:50.1±1.5**,23.49S**×**66.90W,h209**^{km}±22^{km}**, mb1 3.3**/4**,mb1mx3.2**/17**,mbtmp3.8**/4**,Error ellipse: s-maj=35.6km s-min=20.3km az=143.0,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.05	295	P	P	13 26 30.1	0.0
	16nm,0.3s,baz=128,slow=5.3,SNR=58						
LVC				S	S	13 27 01.5	+0.6
	5.9nm,0.3s,baz=284,slow=23,SNR=14						
SIV	San Ignacio	9.25	37	P	P	13 27 59.7	-0.7
	0.2nm,0.3s,baz=216,slow=12,SNR=3.2						
PLCA	Paso Flores	17.47	189	P	P	13 29 39.9	-2.2
	0.1nm,0.3s,baz=350,slow=9.1,SNR=3.8						
BDFB	Brasilia	19.42	70	P	P	13 30 00.8	-1.6
	0.4nm,0.3s,baz=226,slow=11,SNR=6.1						
WRA	Warramunga Arr	132.12	207	PKP	PKPdf	13 44 38.3	-1.5
	0.1nm,0.3s,baz=150,slow=2.1,SNR=6.5						
MKAR	Makanchi Array	146.07	39	PKPbc	PKPbc	13 45 05.0	-0.3
	0.5nm,0.6s,baz=288,slow=3.8,SNR=3.7						

IDC 01 13:37:27.8±3.8**,0.43N**×**96.64E,mb3.7**/6**,mb1 3.8**/6**, mb1mx3.7**/17**,mbtmp3.7**/6**,Error ellipse: s-maj=160.4km s-min=21.3km az=60.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	42.11	121	P	P	13 45 21.3	-2.4
	0.6nm,0.9s,baz=298,slow=8.9,SNR=3.8						
ASAR	Alice Springs	43.39	126	P	P	13 45 32.6	-1.5
	0.3nm,0.5s,baz=298,slow=8.0,SNR=7.2						
MKAR	Makanchi Array	47.85	347	P	P	13 46 06.8	-2.6
	0.6nm,0.8s,baz=158,slow=8.7,SNR=3.6						
SONM	Songino Array	47.97	9	P	P	13 46 08.7	-1.6
	0.4nm,0.7s,baz=200,slow=9.0,SNR=5.1						
STKA	Stephens Creek	53.26	131	P	P	13 46 49.0	-1.8
	0.4nm,0.5s,baz=301,slow=19,SNR=2.8						
ZAL	Zalesovo	54.22	351	P	P	13 46 55.2	-2.2
	1.1nm,0.4s,baz=316,slow=2.2,SNR=4.0						

IDC 01 13:52:33.8±3.2**,1.63N**×**96.19E,mb3.8**/3**,mb1 3.9**/4**, mb1mx3.6**/19**,mbtmp3.8**/4**,ML3.6**/1**,Error ellipse: s-maj=70.4km s-min=34.5km az=132.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.94	9	Pn	P	13 56 32.5	-1.5
	0.1nm,0.3s,baz=196,slow=12,SNR=5.1						
MKAR	Makanchi Array	46.59	347	P	P	14 01 03.4	-2.0
	1.0nm,0.7s,baz=165,slow=8.0,SNR=9.6						
MKAR				pP	pP	14 01 09.8	+4.4
	0.3nm,0.3s,baz=156,slow=8.1,SNR=7.3						
SONM	Songino Array	46.86	9	P	P	14 01 05.7	-1.9
	0.5nm,0.5s,baz=190,slow=9.8,SNR=7.5						
SONM				pP	pP	14 01 12.4	+4.9
	0.3nm,0.5s,baz=190,slow=7.5,SNR=3.8						
ZAL	Zalesovo	52.97	352	P	P	14 01 52.5	-1.8
	0.9nm,0.3s,baz=353,slow=6.4,SNR=3.5						

IDC 01 13:53:24.9±8.3**,7.01S**×**149.81E,h60**^{km}±62^{km}**,mb3.3**/2**, mb1 3.6**/4**,mb1mx3.3**/15**,mbtmp3.7**/4**,ML3.0**/1**,Error ellipse: s-maj=84.1km s-min=55.4km az=140.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.54	228	P	P	13 54 18.6	-0.2
	12nm,0.3s,baz=35,slow=4.1,SNR=53						
PMG				S	S	13 54 58.2	-1.5
	26nm,0.3s,baz=358,slow=11,SNR=11						
WRA	Warramunga Arr	19.76	228	P	P	13 57 50.4	-2.3
	0.3nm,0.3s,baz=52,slow=11,SNR=27						
ASAR	Alice Springs	22.53	221	P	P	13 58 21.4	+0.5
	1.1nm,0.7s,baz=57,slow=9.2,SNR=14						
STKA	Stephens Creek	25.90	196	P	P	13 58 50.3	-2.9
	0.4nm,0.3s,baz=36,slow=8.7,SNR=3.0						

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*HRVD **01** 13:56:21.9±0.4,32.77S×178.62W,h51^{km}±1^{km},MW5.1/47, Centroid moment Tensor Solution. LP body waves: s38,c65;Mantle waves: s47,c76; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.44±.27; M$_{\theta\theta}$0.07±.20; M$_{\phi\phi}$-4.51±.19; M$_{r\theta}$0.60±.17; M$_{\theta\phi}$-1.93±.21; M$_{\phi r}$1.24±.16; Best double couple: M$_0$5.021×10^{16} NP1:ϕ_s198°,δ37°,λ87°. NP2:ϕ_s22°,δ53°,λ93°. Principal axes: T 4.636, Plg82°, Azm305°; N .767, Plg2°, Azm201°; P -5.406, Plg8°, Azm110°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **01** 13:56:21.9±0.2,32.76S×179.14W,h10^{km},mb5.2/19, MS4.6/12 Error ellipse: s-maj=9.9km s-min=7.5km az=142.0*

*BJI **01** 13:56:22.0,32.80S×179.10W,h10^{km},mB5.2,mb5.0, Ms5.1,Msz4.7*

*MOS **01** 13:56:24.7±1.1,32.83S×179.14W,h33^{km},mb5.4/13, MS4.5/7,Error ellipse: s-maj=12.0km s-min=10.4km az=71.4*

*IDC **01** 13:56:26.8±1.4,32.84S×179.09W,h44^{km}±12^{km},mb4.4/15, mb1 4.5/16,mb1mx4.5/18,mbtmp4.6/16,ML5.0/1,MS4.3/18, Ms1 4.3/18,ms1mx4.2/24,Error ellipse: s-maj=12.7km s-min=9.0km az=125.0*

ISC 01 13:56:23.8±0.3**,33.08S**±0.03×**179.21W**±0.06**,h33**^{km}**, n263,**$\sigma 1\overset{s}{.}$**52**/173**,mb5.0**/35**,MS4.4**/30**,15C-4D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	3.97	17	P	P	13 57 19.9	-4.0
RAO				S	S	13 58 03.8	-6.2
RAO				pmax	pmax		
	comp=Z,479nm,0.3s						
RAO	Raoul Island	3.97	17	P	P	13 57 19.9	-4.0
	comp=Z,479nm,0.3s,baz=153,slow=7.1,SNR=18						
RAO				S	S	13 58 03.8	-6.1
	comp=Z,1µm,0.3s,baz=84,slow=23,SNR=11						
RAO	Raoul Island	3.97	17	*e*P	P	13 57 19.1	-4.8
MXZ	Matakaoa Point	4.92	204	PN	Pn	13 57 40.1	+2.6
MXZ				SN	Sn	13 58 40.9	+6.9
WIZ	White Island	5.33	212	PN	Pn	13 57 49.0	+5.7
PUZ	Puketiti	5.40	202	PN	Pn	13 57 46.1	+1.8
PUZ				SN	Sn	13 58 50.4	+4.4
KUZ	Kuaotunu	5.54	227	PN	Pn	13 57 53.6	+7.3
MYRZ	Mayor Island	5.61	220	PN	Pn	13 57 55.2	+7.9
MWZ	Matawai	5.88	206	PN	Pn	13 57 52.4	+1.4
MWZ				SN	Sn	13 59 04.2	+6.1
TGRZ	Tauranga	5.94	217	PN	Pn	13 57 57.1	+5.3
MARZ	Manawahe	5.94	213	PN	Pn	13 57 57.1	+5.3
URZ	Urewera	5.98	209	P	P	13 57 54.2	+2.0
	comp=Z,37nm,0.3s,baz=41,slow=2.0,SNR=83						
URZ				S	S	13 59 05.7	+5.3
	comp=Z,81nm,0.3s,baz=201,slow=20,SNR=7.0						
URZ	Urewera	5.98	209	PN	Pn	13 57 54.7	+2.3
URZ				SN	Sn	13 59 07.5	+7.0
EDRZ	Edgecumbe	6.01	212	PN	Pn	13 57 57.8	+4.9
WCZ	Waipu Caves	6.04	240	PN	Pn	13 58 01.4	+8.1
MTAZ	Motutapu	6.08	231	PN	Pn	13 58 02.0	+8.0
LIRZ	Lichensteins R	6.09	215	PN	Pn	13 57 59.9	+5.9
MKAZ	Moumakai	6.12	227	PN	Pn	13 58 01.7	+7.3
OTAZ	Otara	6.17	230	PN	Pn	13 58 03.4	+8.2
TAZ	Tarawera	6.21	213	PN	Pn	13 58 01.4	+5.7
KAAZ	Kauri Point	6.24	231	PN	Pn	13 58 05.1	+9.0
OUZ	Omahuta	6.33	248	PN	Pn	13 58 04.9	+7.5
WTAZ	Waiatarua	6.39	231	PN	Pn	13 58 06.8	+8.6
KNZ	Kokohu	6.45	202	PN	Pn	13 57 59.6	+0.6
KNZ				SN	Sn	13 59 14.7	+2.5
PATZ	Paeroa	6.45	214	PN	Pn	13 58 05.3	+6.2
BKZ	Black Stump Fm	7.00	209	PN	Pn	13 58 08.1	+1.3
BKZ				SN	Sn	13 59 28.9	+2.8
NGZ	Ngauruhoe	7.39	213	PN	Pn	13 58 15.6	+3.3
CNZ	Chateau	7.44	213	PN	Pn	13 58 16.5	+3.6
FWVZ	Far West T-bar	7.48	213	PN	Pn	13 58 16.0	+2.5
DRZ	Dome Shelter	7.49	213	PN	Pn	13 58 17.9	+4.2
MOVZ	Moawhango	7.51	211	PN	Pn	13 58 15.8	+1.8
MOVZ				SN	Sn	13 59 42.5	+3.5
PWZ	Pawanui	7.62	203	PN	Pn	13 58 15.3	-0.3
PWZ				SN	Sn	13 59 42.1	+0.4
TSZ	Takapari Road	7.98	208	PN	P	13 58 21.6	+1.4
TSZ				SN	Sn	13 59 51.2	+0.7
WAZ	Wanganui	8.14	213	PN	P	13 58 24.8	+2.3
BFZ	Birch Farm	8.42	204	PN	P	13 58 24.8	-1.5
BFZ				SN	Sn	14 00 00.4	-1.0
MRZ	Mangatainoka R	8.64	207	PN	P	13 58 27.9	-1.6
MRZ				SN	Sn	14 00 05.8	-1.3
KIW	Kapiti Island	9.08	209	PN	P	13 58 33.8	-1.7
MTW	Mount Morrison	9.10	206	PN	P	13 58 33.4	-2.5
CAW	Cannon Point	9.23	208	PN	P	13 58 35.9	-1.7
PAWZ	Paruwai Farm	9.33	206	PN	P	13 58 36.9	-2.0
PAWZ				SN	Sn	14 00 21.1	-2.9
MSWZ	Moikau Station	9.42	206	PN	P	13 58 38.2	-2.0
DUWZ	D'Urville Isla	9.47	213	PN	P	13 58 40.2	-0.7
MRW	Makara Radio	9.48	209	PN	P	13 58 39.6	-1.4
WEL	Wellington	9.50	209	PN	P	13 58 40.5	-0.8
SNZO	South Karori	9.54	209	PN	P	13 58 39.1	-2.8
BHW	Baring Head	9.56	208	PN	P	13 58 41.0	-1.1
TCW	Tory Channel	9.64	211	PN	P	13 58 41.0	-2.3
TUWZ	Tuamarina	9.96	211	PN	P	13 58 45.7	-2.0
NNZ	Nelson	10.05	214	PN	P	13 58 47.1	-1.7
QRZ	Quartz Range	10.17	218	PN	P	13 58 49.6	-0.9
BSWZ	Blackbirch Sta	10.22	211	PN	P	13 58 49.6	-1.6
THZ	Tophouse	10.70	214	PN	P	13 58 55.4	-2.4
THZ				SN	S	14 00 55.6	-1.8
KHZ	Kahutara	10.95	209	PN	P	13 58 58.7	-2.5
DSZ	Denniston Nort	11.22	217	PN	P	13 59 03.9	-0.9
LTZ	Lake Taylor	11.79	212	PN	P	13 59 09.9	-2.7
CRLZ	Canterbury Las	12.28	209	PN	P	13 59 16.1	-3.1
MQZ	McQueen's Vall	12.38	209	PN	P	13 59 16.2	-4.3
RPZ	Rata Peaks	13.07	213	P	P	13 59 26.3	-3.5
	comp=Z,2.9nm,0.3s,baz=152,slow=2.3,SNR=16						
RPZ				S	S	14 01 48.5	-6.5
	comp=Z,7.2nm,0.3s,baz=16,slow=19,SNR=10						
RPZ	Rata Peaks	13.07	213	PN	P	13 59 26.2	-3.5
LBZ	Lake Benmore	13.99	213	PN	P	13 59 39.9	-1.8
ODZ	Otahua Downs	14.30	210	PN	P	13 59 42.3	-3.5
JCZ	Jackson Bay	14.44	217	PN	P	13 59 45.2	-2.5
WKZ	Wanaka	14.87	214	PN	P	13 59 50.0	-3.2
EAZ	Earnscleugh	15.04	213	PN	P	13 59 54.2	-1.2
MSZ	Milford Sound	15.29	217	PN	P	13 59 58.3	-0.5
TUZ	Tuapeka	15.46	210	PN	P	13 59 59.8	-1.1
DZM	Mont Dzumac	16.77	307	*e*P	P	14 00 23.5	+5.8
DZM	Mont Dzumac	16.77	307	P	P	14 00 22.6	+4.9
	comp=Z,0.7nm,0.3s,baz=112,slow=16,SNR=20						
DZM				LR	LR	14 05 41.5	
	comp=Z,3µm,18.7s,baz=156,slow=33						
NOUC	Port Laguerre	16.84	307	*e*P	P	14 00 24.4	+5.7
AFI	Afiamalu	20.25	21	P	P	14 00 49.5	-10
	comp=Z,2.8nm,0.3s,baz=246,slow=20,SNR=4.1						
AFI				S	S	14 04 19.7	-20
	comp=Z,2.3nm,0.3s,baz=270,slow=20,SNR=3.1						
AFI	Afiamalu	20.25	21	P	P	14 00 49.5	-10
AFI				S	S	14 04 19.7	-20
RAR	Rarotonga	20.91	60	P	P	14 01 04.8	-1.1
	comp=Z,13nm,0.4s,baz=176,slow=3.3,SNR=16						
RAR				S	S	14 04 34.4	-18
	comp=Z,4.8nm,0.3s,baz=73,slow=19,SNR=4.1						
RAR				LR	LR	14 07 33.9	
	comp=Z,239nm,21.3s,MS3.5,baz=166,slow=32						
CNB	Canberra Magne	26.04	256	*e*P	P	14 02 00.9	+5.1
TAU	Tasmania Unive	27.98	240	P	P	14 02 11.6	-1.9
HNR	Honiara	30.38	316	P	P	14 02 33.9	-1.3
	comp=Z,133nm,0.5s,mb6.0,baz=132,slow=2.8,SNR=18						
HNR				LR	LR	14 12 35.8	
	comp=Z,348nm,19.3s,MS4.0,baz=355,slow=32						
HNR	Honiara	30.38	316	*e*P	P	14 02 33.2	-2.0
	comp=Z,209nm,0.9s,mb5.9						
HNR				LR	LR		
	comp=Z,408nm,19.0s,MS4.1						
PPT	Papeete	30.78	67	*e*S	Sx	14 07 16.7	
	comp=Z,249nm,25.5s						
PPT				*e*LQ		14 08 32.3	
PPT				*e*LR	LR	14 10 02.1	
	comp=Z,1µm,26.2s,baz=235						
PPT	Papeete	30.78	67	LR	LR	14 11 34.9	
	comp=Z,395nm,18.9s,MS4.1,baz=211,slow=30						
STKA	Stephens Creek	32.96	261	P	P	14 03 00.1	+2.5
	comp=Z,3.6nm,0.4s,mb4.7,baz=103,slow=8.6,SNR=17						
STKA				PcP	PcP	14 05 39.1	-2.3
	comp=Z,3.5nm,0.4s,baz=110,slow=4.4,SNR=4.8						
STKA				LR	LR	14 15 18.6	
	comp=Z,1µm,18.8s,MS4.6,baz=25,slow=34						
CTA	Charters Tower	33.33	284	*e*P	P	14 03 03.6	+2.7
CTA	Charters Tower	33.33	284	P	P	14 03 02.8	+1.9
	comp=Z,88nm,0.5s,mb5.9,baz=113,slow=10,SNR=224						
CTA				LR	LR	14 14 31.3	
	comp=Z,489nm,20.2s,MS4.2,baz=49,slow=32						
CTAO	Charters Tower	33.33	284	*e*P	P	14 03 01.9	+1.0
CTAO				pmax	pmax		
	comp=Z,84nm,0.6s,mb5.8						
CTAO				MLR	MLR		
	comp=Z,888nm,22.0s,MS4.4						
CTAO	Charters Tower	33.33	284	*e*P	P	14 03 01.9	+1.0
	comp=Z,84nm,0.6s,mb5.8						
CTAO				LR	LR		
	comp=Z,888nm,22.0s,MS4.4						
PMG	Port Moresby	38.92	300	P	P	14 03 49.8	+1.5
PMG				pmax	pmax		
	comp=Z,102nm,0.8s						
PMG	Port Moresby	38.92	300	P	P	14 03 49.8	+1.5
	comp=Z,102nm,0.8s,mb5.6,baz=113,slow=5.8,SNR=35						
PMG	Port Moresby	38.92	300	*e*P	P	14 03 49.2	+0.9
	comp=Z,89nm,0.8s,mb5.5						
RKT	Rikitea	40.02	87	*e*S	S	14 09 48.3	-12
	comp=Z,247nm,26.2s						
RKT				*e*LR	LR	14 14 29.9	
	comp=Z,1µm,27.5s,baz=251						
ASAR	Alice Springs	42.01	270	P	P	14 04 15.7	+1.8
	comp=Z,89nm,0.7s,mb5.5,baz=109,slow=7.5,SNR=569						
ASAR				LR	LR	14 22 17.5	
	comp=Z,231nm,18.8s,MS4.1,baz=124,slow=37						
ASAR	Alice Springs	42.01	270	P	P	14 04 15.7	+1.8
ASAR				LR	LR	14 22 17.5	
ASPA	Alice Springs	42.02	270	*e*P	P	14 04 15.8	+1.9
WB2	Warramunga Arr	43.24	276	*e*P	P	14 04 25.2	+1.3
WRAB	Tennant Creek	43.24	276	*i* P	P	14 04 25.1	+1.2
WRAB	Tennant Creek	43.24	276	*e*P	P	14 04 24.4	+0.5
	comp=Z,134nm,0.7s,mb5.8						
WRAB				LR	LR		
	comp=Z,248nm,21.0s,MS4.1						
WRA	Warramunga Arr	43.25	276	P	P	14 04 25.2	+1.2
	comp=Z,66nm,0.3s,mb5.8,baz=114,slow=8.1,SNR=248						
WRA				S	S	14 10 48.6	+0.3
	comp=Z,1.7nm,1.0s,baz=117,slow=13,SNR=3.7						
SBA	Scott Base	45.30	184	*e*P	P	14 04 44.0	+4.2
SBA				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
SBA	Scott Base	45.30	184	*e*P	P	14 04 44.0	+4.2
	comp=Z,12nm,0.8s,mb4.8						
VNDA	Vanda	45.34	186	P	P	14 04 42.7	+2.6
VNDA						14 06 20.4	
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VNDA	Vanda	45.34	186	P	P	14 04 42.7	+2.7
	comp=Z,2.8nm,0.7s,mb4.2,baz=7.9,slow=7.3,SNR=25						
VNDA				PcP	PcP	14 06 20.4	+0.7
	comp=Z,3.1nm,0.6s,baz=7.3,slow=5.7,SNR=5.5						
VNDA				LR	LR	14 19 39.6	
	comp=Z,150nm,20.8s,MS3.9,baz=48,slow=31						
VNDA	Vanda	45.34	186	*e*P	P	14 04 42.9	+2.8
	comp=Z,4.1nm,0.8s,mb4.3						
VNDA				LR	LR		
	comp=Z,349nm,21.0s,MS4.3						
KAKA	Kakadu	48.45	283	⇑*i*P	P	14 05 05.6	+0.3
CASY	Casey	52.30	209	*e*P	P	14 05 34.8	+0.9
NWAO	Narrogin (SRO)	52.53	252	P	P	14 05 35.5	-0.6
	comp=Z,14nm,0.7s,mb5.0,baz=120,slow=7.4,SNR=12						
KLBR	Kellerberrin	52.55	253	⇑*i*P	P	14 05 35.8	-0.4
MUN	Mundaring	53.66	252	*e*P	P	14 05 44.3	-0.2
MBWA	Marble Bar	54.96	266	*e*P	P	14 05 52.9	-1.2
	comp=Z,19nm,0.8s,mb5.2						
MBWA				LR	LR		
	comp=Z,528nm,19.0s,MS4.6						
QSPA	South Pole Qui	57.04	180	⇑*i*P	P	14 06 12.0	+3.6
	comp=Z,65nm,0.6s,mb5.8						
MIR	Mirnyy	59.28	208	*c i*P	P	14 06 24.4	+0.2
MIR				pmax	pmax		
	comp=Z,72nm,1.4s,mb5.5						
MAW	Mawson	69.45	201	P	P	14 07 30.8	+0.7
	comp=Z,8.9nm,0.5s,mb5.0,baz=130,slow=8.3,SNR=57						
MAW				LR	LR	14 36 54.5	
	comp=Z,240nm,20.7s,MS4.4,baz=303,slow=35						
KKM	Kota Kinabalu	72.44	290	*e*P	P	14 07 48.1	-1.0
SYO	Syowa Base	74.28	194	⇓P	P	14 07 59.8	+1.0
SYO	Syowa Base	74.28	194	⇓pP	pP	14 08 02.8	-6.3
KSM	Kuching	74.54	282	*e*P	P	14 08 00.8	-0.7
SNAA	Sanae	75.52	179	⇑*i*P	P	14 08 12.7	+6.8
SNAA	Sanae	75.52	179	*i* P	P	14 08 07.9	+2.0
SNAA	Sanae	75.52	179	*e*P	P	14 08 07.7	+1.8
	comp=Z,38nm,0.8s,mb5.4						
VNA3	Neumayer Olymp	75.71	177	⇑*i*P	P	14 08 10.2	+3.2
VNA3	Neumayer Olymp	75.71	177	⇑*i*	P	14 08 15.3	+8.3
VNA2	Neumayer--Watz	76.13	177	⇑*i*P	P	14 08 12.9	+3.5
VNA2	Neumayer--Watz	76.13	177	⇑*i*	P	14 08 17.9	+8.5
NVL	N'lazarevskaya	76.15	184	⇑*i*P	P	14 08 10.6	+1.1
NVL				*i* *SP	sP	14 08 18.2	-5.3
NVL				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
VNA1	Neumayer--Stat	76.37	177	⇑*i*P	P	14 08 14.6	+3.8
VNA1	Neumayer--Stat	76.37	177	⇑*i*	P	14 08 19.4	+8.6
MJAR	Matsushiro Arr	79.87	326	P	P	14 08 29.3	-1.4
	comp=Z,2.2nm,0.7s,mb4.2,baz=161,slow=4.2,SNR=6.3						
MJAR				LR	LR	14 41 19.8	
	comp=Z,95nm,20.2s,MS4.1,baz=120,slow=34						
JNU	Nakatsue	80.89	319	LR	LR	14 37 53.2	
	comp=Z,175nm,19.2s,MS4.4,baz=305,slow=31						
PLCA	Paso Flores	81.44	133	P	P	14 08 40.4	+1.4
	comp=Z,2.4nm,0.6s,mb4.3,baz=227,slow=6.1,SNR=7.0						
PLCA				LR	LR	14 34 56.1	
	comp=Z,205nm,20.5s,MS4.5,baz=189,slow=28						
ASAJ	Asahikawa	84.34	333	P	P	14 08 53.9	+0.1
	comp=Z,9.5nm,0.8s,mb5.0,baz=164,slow=8.6,SNR=6.5						
ASAJ				LR	LR	14 39 28.1	
	comp=Z,244nm,21.2s,MS4.6,baz=163,slow=31						
YSS	Yuzh-Sakhalins	86.71	335	*c i*P	P	14 09 05.7	+0.4
YSS				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.6						
YSS	Yuzh-Sakhalins	86.71	335	*e*P	P	14 09 05.2	-0.1
	comp=Z,29nm,0.8s,mb5.6						
YSS				LR	LR		
	comp=Z,296nm,22.0s,MS4.7						
CMB	Columbia Colle	89.43	43	*e*P	P	14 09 17.0	-1.6
CMB				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.4						
CMB	Columbia Colle	89.43	43	*e*P	P	14 09 17.0	-1.5
	comp=Z,20nm,1.1s,mb5.4						
MDJ	Mudanjiang	90.25	326	P	P	14 09 22.0	-0.2
MDJ				PP	PP	14 12 55.3	-3.4
MDJ				S	S	14 20 17.1	+5.5
MDJ				XS		14 20 22.1	
MDJ				SS	SS	14 26 18.4	+3.2
MDJ				AMB	AMB		
	comp=Z,40nm,4.7s						
MDJ				LR	LR		
	comp=N,90nm,22.6s,MS4.2						
MDJ				LR	LR		
	comp=E,30nm,22.6s,MS4.2						
MDJ				LR	LR		
	comp=Z,150nm,24.3s,MS4.3						
LDFC	Landfair	90.57	48	*e*P	P	14 09 25.0	+1.0
KEBM	Edson Butte	90.75	37	P	P	14 09 25.8	+1.2
YBH	Yreka Blue Hor	90.76	39	P	P	14 09 24.8	+0.1
	comp=Z,6.0nm,1.0s,mb4.9,baz=246,slow=1.9,SNR=5.8						
YBH	Yreka Blue Hor	90.76	39	*e*P	P	14 09 24.8	+0.1
	comp=Z,10.0nm,1.3s,mb5.0						
NVAR	Mina Array Bea	90.89	43	P	P	14 09 25.3	-0.1
	comp=Z,8.9nm,0.9s,mb5.1,baz=200,slow=6.2,SNR=32						
NVAR				LR	LR	14 45 16.4	
	comp=Z,89nm,18.4s,MS4.2,baz=270,slow=32						
MNV	Mina	90.98	43	*e*P	P	14 09 24.8	-1.0
MNV				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.0						
MNV				MLR	MLR		
	comp=Z,280nm,21.0s,MS4.7						
MNV	Mina	90.98	43	*e*P	P	14 09 24.8	-1.0
	comp=Z,8.1nm,1.1s,mb5.0						
MNV				LR	LR		
	comp=Z,280nm,21.0s,MS4.7						
NEN	Nelson	91.11	47	*e*P	P	14 09 26.6	+0.1
TPH	Tonopah	91.28	44	*e*P	P	14 09 26.8	-0.4
TPH				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.4						
TPH				MLR	MLR		
	comp=Z,144nm,20.0s,MS4.4						
TPH	Tonopah	91.28	44	*e*P	P	14 09 26.8	-0.4
	comp=Z,22nm,1.1s,mb5.4						
TPH				LR	LR		
	comp=Z,144nm,20.0s,MS4.4						
TUC	Tucson	91.58	52	*e*P	P	14 09 29.9	+1.2
TUC				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb5.0						
TUC				MLR	MLR		
	comp=Z,224nm,20.0s,MS4.6						
TUC	Tucson	91.58	52	*e*P	P	14 09 29.9	+1.1
	comp=Z,9.6nm,1.3s,mb5.0						
TUC				LR	LR		
	comp=Z,224nm,20.0s,MS4.6						
CN2	Changchun	91.66	323	*e*P	P	14 09 28.5	-0.3
CN2				*e*XP	sP	14 09 35.7	-7.1
CN2				*e*S	S	14 20 25.5	+1.5
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
CN2				LR	LR		
	comp=N,190nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=E,120nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=Z,170nm,22.0s						
MOD	Modoc	92.16	40	*e*P	P	14 09 30.4	-0.8
	comp=Z,15nm,1.2s,mb5.2						
MOD				LR	LR		
	comp=Z,299nm,19.0s,MS4.8						
CMAR	Chiang Mai Arr	93.32	290	*i* P	P	14 09 38.7	+1.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	93.32	290	P	P	14 09 36.0	-1.0
	comp=Z,1.0nm,0.6s,mb4.4,baz=148,slow=3.7,SNR=5.3						
CMAR				PP	PP	14 13 22.1	-1.7
	comp=Z,3.6nm,0.8s,baz=133,slow=7.8,SNR=7.6						
WVOR	Wild Horse Val	93.43	40	*e*P	P	14 09 36.9	0.0
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.2						
WVOR	Wild Horse Val	93.43	40	*e*P	P	14 09 36.9	0.0
	comp=Z,10.0nm,1.1s,mb5.2						
ELK	Elko	94.20	43	*e*P	P	14 09 40.4	-0.1
ELK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ELK				MLR	MLR		
	comp=Z,204nm,19.0s						
ELK	Elko	94.20	43	P	P	14 09 40.0	-0.5
	comp=Z,2.8nm,0.9s,mb4.7,baz=255,slow=5.7,SNR=9.4						
ELK	Elko	94.20	43	*e*P	P	14 09 40.4	-0.1
	comp=Z,5.2nm,1.2s,mb4.8						
ELK				LR	LR		
	comp=Z,204nm,19.0s,MS4.6						
TXAR	Lajitas Array	94.69	58	P	P	14 09 42.9	-0.1
	comp=Z,0.7nm,0.7s,mb4.2,baz=219,slow=5.8,SNR=4.9						
TXAR				LR	LR	14 47 09.9	
	comp=Z,112nm,18.6s,MS4.4,baz=225,slow=32						
HLID	Hailey	96.49	41	*e*P	P	14 09 50.8	-0.1
	comp=Z,3.0nm,0.9s,mb4.7						
HLID				LR	LR		
	comp=Z,219nm,20.0s,MS4.6						
LPAZ	La Paz	97.97	115	P	P	14 09 58.6	+0.4
	comp=Z,0.6nm,0.6s,mb4.3,baz=247,slow=7.7,SNR=2.9						
LPAZ				LR	LR	14 43 37.0	
	comp=Z,148nm,21.3s,MS4.5,baz=206,slow=29						
PDAR	Pinedale Array	98.77	44	P	P	14 10 00.2	-1.0
	comp=Z,0.7nm,0.7s,mb4.3,baz=146,slow=5.3,SNR=5.4						
PDAR				PKKPbc		14 26 28.8	
	comp=Z,0.6nm,0.7s,baz=72,slow=4.7,SNR=4.4						
PDAR				LR	LR	14 45 14.4	
	comp=Z,120nm,21.9s,MS4.3,baz=248,slow=30						
CPUP	Villa Florida	99.11	129	LR	LR	14 46 40.0	
	comp=Z,163nm,20.9s,MS4.5,baz=79,slow=30						

ILAR	**Eielson Array**	**100.76**	**13**	P	P	14 10 07.6	-2.1
	comp=Z,2.1nm,0.8s,baz=207,slow=3.2,SNR=10						
ILAR				PKKPbc		14 26 24.0	
	comp=Z,0.5nm,0.5s,baz=30,slow=2.9,SNR=8.8						
SONM	**Songino Array**	**104.43**	**318**	PKKPbc		14 26 12.5	
	comp=Z,0.2nm,0.3s,baz=297,slow=3.2,SNR=3.9						
YKA	**Yellowknife Ar**	**108.29**	**26**	PKKPbc		14 25 59.0	
	comp=Z,2.8nm,0.6s,baz=41,slow=3.1,SNR=18						
TIXI	**Tiksi**	**110.56**	**345**	*i* PKIKP	PKPdf	14 14 51.1	-0.9
WMQ	**Urumqi**	**114.05**	**308**	*e*PKP	PKPdf	14 15 00.3	+0.8
WMQ				LR	LR		
	comp=N,380nm,20.0s,MS5.3						
WMQ				LR	LR		
	comp=E,690nm,20.4s,MS5.3						
WMQ				LR	LR		
	comp=Z,630nm,24.0s,MS5.1						
BOSA	**Boshof**	**114.40**	**204**	PKP	PKPdf	14 15 03.0	+2.4
	comp=Z,2.8nm,0.5s,baz=157,slow=3.2,SNR=6.3						
MKAR	**Makanchi Array**	**118.68**	**309**	PKP	PKPdf	14 15 07.8	-0.6
	comp=Z,4.8nm,0.6s,baz=196,slow=1.3,SNR=43						
RES	**Resolute Bay**	**120.10**	**18**	PKIKP	PKPdf	14 15 09.7	-0.9
NVS	**Novosibirsk**	**120.46**	**318**	*i* PKIKP	PKPdf	14 15 10.3	-1.4
NVS				pmax	pmax		
	comp=N,4.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.7s						
KZA	**Kyzart**	**122.01**	**302**	P	PKPdf	14 15 13.0	-1.9
	SNR=10						
TKM2	**Tokmak 2**	**122.02**	**303**	P	PKPdf	14 15 15.2	+0.3
	SNR=8.8						
NCB	**Newcomb**	**122.18**	**55**	*e*PKPdf	PKPdf	14 15 14.8	-0.4
KBK	**Karagaybulak**	**122.39**	**303**	P	PKPdf	14 15 16.5	+0.8
	SNR=8.5						
UCH	**Uchtor**	**122.58**	**302**	P	PKPdf	14 15 17.4	+1.3
	SNR=17						
CHMS	**Chumysh**	**122.63**	**303**	P	PKPdf	14 15 16.4	+0.3
	SNR=7.9						
AAK	**Ala-Archa**	**122.71**	**303**	*e*PKIKP	PKPdf	14 15 15.5	-0.8
USP	**Ospenovka**	**122.89**	**303**	P	PKPdf	14 15 16.8	+0.2
	SNR=9.6						
AML	**Almayashu**	**123.13**	**302**	P	PKPdf	14 15 17.8	+0.7
	SNR=20						
LSZ	**Lusaka**	**125.25**	**213**	*e*PKIKP	PKPdf	14 15 23.7	+1.9
CHKZ	**Chkalovo**	**127.50**	**315**	*e*PKIKP	PKPdf	14 15 24.0	-1.2
FRB	**Frobisher Bay**	**128.19**	**32**	PKP	PKPdf	14 15 26.9	+0.6
	comp=E,4.6nm,0.7s,baz=303,slow=6.2,SNR=5.1						
KMBO	**Kilima Mbogo**	**131.65**	**233**	PKP	PKPdf	14 15 36.9	+2.7
	comp=E,0.2nm,0.3s,baz=41,slow=24,SNR=5.5						
ARU	**Arti**	**134.46**	**319**	*i* PKIKP	PKPdf	14 15 38.3	0.0
ARU				*e*		14 18 12.7	
ARU	**Arti**	**134.46**	**319**	*e*P	Pdif	14 12 42.4	+4.2
SUMG	**Summit**	**135.55**	**16**	*e*PKPdf	PKPdf	14 15 40.4	+0.5
ARCES	**ARCESS Array B**	**140.96**	**346**	PKhKP		14 15 42.8	
	comp=E,3.6nm,0.6s,baz=27,slow=3.5,SNR=21						
ARCES				PKP	PKPdf	14 15 51.4	+1.7
	comp=E,17nm,0.7s,baz=45,slow=1.3,SNR=21						
ARCES	**ARCESS Array B**	**140.96**	**346**	PKP		14 15 42.8	
ARCES				PKP	PKPdf	14 15 51.4	+1.7
LOF	**Lofoten**	**144.13**	**352**	*e*P	PKPbc	14 15 55.5	+1.1
LOF				AMb	AMB	14 16 03.6	
	comp=Z,28nm,1.1s						
GNI	**Garni**	**144.31**	**294**	*i* PKIKP	PKPdf	14 15 57.7	+1.4
ONI	**Oni**	**145.31**	**298**	P	PKPdf	14 15 59.3	+1.3
MELSS	**Ber_school_2**	**145.32**	**351**	*e*P	PKPdf	14 15 57.3	0.0
GOF	**Gofitskoye**	**145.46**	**303**	*i* PKP2	PKPab	14 15 58.7	-1.7
GOF				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV	**Kislovodsk**	**145.80**	**301**	*i* PKP2	PKPab	14 16 00.4	-1.3
MOR8	**Moi Rana**	**145.87**	**350**	*e*P	PKPdf	14 15 57.8	-0.4
MOR8				AMb	AMB	14 15 60.0	
	comp=Z,76nm,1.4s						
MOS	**Moscow**	**145.89**	**323**	*e*PKP2	PKPab	14 16 00.7	-1.0
MOS				pmax	pmax		
	comp=Z,109nm,1.3s						
STOK	**Stokkvaagen**	**145.91**	**351**	*e*P	PKPdf	14 15 59.0	+0.7
STOK	**Stokkvaagen**	**145.91**	**351**	*e*P	PKPdf	14 15 59.2	+1.0
STOK				AMb	AMB	14 16 00.3	
	comp=Z,184nm,1.1s						
VOR	**Voronezh**	**146.56**	**315**	PKIKP	PKPdf	14 16 01.0	+1.2
VOR				pmax	pmax		
	comp=Z,80nm,1.5s						
KAF	**Kangasniemi**	**146.68**	**338**	*e*pkp	PKPdf	14 16 00.4	+0.7
	baz=34,slow=2.6						
OBN	**Obninsk**	**146.71**	**322**	*d i*PKIKP	PKPdf	14 16 00.7	+0.7
OBN				*e*		14 19 23.9	
OBN				pmax	pmax		
	comp=Z,54nm,1.8s						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.6						
OBN	**Obninsk**	**146.71**	**322**	*e*PKPdf	PKPdf	14 16 00.4	+0.5
FINES	**FINESS Array B**	**147.26**	**338**	PKPbc	PKPdf	14 16 03.3	+2.6
	comp=Z,29nm,0.5s,baz=36,slow=3.2,SNR=222						
NSS	**Namsos**	**147.77**	**351**	*e*P	PKPdf	14 16 03.3	+1.9
NSS	**Namsos**	**147.77**	**351**	⇑*i*P	PKPdf	14 16 03.2	+1.8
NSS				AMb	AMB	14 16 07.7	
	comp=Z,59nm,1.2s						
SOC	**Sochi**	**147.97**	**301**	*i* PKP2	PKPab	14 16 06.1	-4.1
SOC				pmax	pmax		
	comp=Z,20nm,0.8s						
SOC				pmax	pmax		
	comp=N,4.0nm,0.5s						
SOC				pmax	pmax		
	comp=E,9.0nm,0.7s						
MALT	**Malatya**	**149.13**	**291**	*e*PKHKP		14 16 05.0	
ANN	**Anapa**	**149.43**	**303**	*i* PKHKP		14 16 08.7	
ANN				pmax	pmax		
	comp=Z,98nm,1.2s						
GZT	**Gaziantep**	**149.78**	**289**	*i* P	PKPdf	14 16 11.4	+5.9
MOL	**Molde**	**150.17**	**354**	⇑*i*P	PKPdf	14 16 14.8	+9.5
MOL				AMb	AMB	14 16 15.5	
	comp=Z,49nm,0.8s						
DOMB	**Dombas**	**150.53**	**352**	*e*P	PKPdf	14 16 11.7	+5.9
DOMB				AMb	AMB	14 16 13.0	
	comp=Z,46nm,1.0s						
EIL	**Elat**	**150.71**	**273**	*e*PKPbc	PKPdf	14 16 13.6	+6.4
COBT	**Iskenderun**	**150.77**	**287**	*i* P	PKPdf	14 16 13.9	+6.9
NB2	**NORSAR Subarra**	**151.21**	**349**	PKPabc	PKPdf	14 16 13.4	+6.5
	comp=Z,54nm,0.8s,baz=20,slow=2.7						
NB2	**NORSAR Subarra**	**151.21**	**349**	PKPa		14 16 13.4	
	baz=20,slow=2.7						
NOA	**NORSAR Array B**	**151.21**	**349**	PKP	PKPdf	14 16 07.5	+0.6
	comp=Z,2.8nm,0.9s,baz=46,slow=2.1,SNR=22						
NOA				PKPbc	PKPdf	14 16 13.3	+6.5
	comp=Z,33nm,0.7s,baz=16,slow=4.1,SNR=124						
FOO	**Floro**	**151.33**	**356**	*e*P	PKPdf	14 16 13.9	+6.9
FOO				AMb	AMB	14 16 14.9	
	comp=Z,129nm,0.9s						
SIM	**Simferopol’**	**151.72**	**305**	⇓*i*PKIKP	PKPdf	14 16 16.2	+8.0
SIM				pmax	pmax		
	comp=Z,23nm,0.8s						
BOYT	**Boyabat**	**151.74**	**297**	*i* P	PKPdf	14 16 15.7	+7.4
CDAG	**Cicekdag**	**152.28**	**293**	*i* P	PKPdf	14 16 15.6	+6.4
MEST	**Erdemli**	**152.47**	**287**	*i* P	PKPdf	14 16 16.9	+7.4
RUND	**Rundenannen**	**152.49**	**355**	*e*P	PKPdf	14 16 16.7	+7.9
RUND				AMb	AMB	14 16 18.0	
	comp=Z,114nm,0.8s						
AKASG	**Malin Array Be**	**152.71**	**319**	PKP	PKPdf	14 16 10.8	+1.4
	comp=Z,0.3nm,0.3s,baz=55,slow=1.9,SNR=6.7						
AKASG				PKPbc	PKPdf	14 16 16.2	+6.9
	comp=Z,17nm,0.7s,baz=54,slow=2.1,SNR=44						
KONO	**Kongsberg**	**152.78**	**350**	*i* PKIKP	PKPdf	14 16 16.8	+7.6
ELDT	**Eldivan**	**152.94**	**295**	*i* P	PKPdf	14 16 18.7	+8.6
DBIC	**Dimbokro**	**153.21**	**167**	PKIKP	PKPdf	14 16 13.6	+2.4
DBIC						14 16 20.9	
DBIC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DBIC				pmax	pmax		
	comp=Z,12nm,0.4s						
DBIC	**Dimbokro**	**153.21**	**167**	PKP	PKPdf	14 16 13.6	+2.4
	comp=Z,8.2nm,0.8s,baz=225,slow=2.2,SNR=7.1						
DBIC				PKPbc	PKPdf	14 16 20.9	+10
	comp=Z,12nm,0.4s,baz=199,slow=1.9,SNR=15						
DBIC	**Dimbokro**	**153.21**	**167**	*e*PKPdf	PKPdf	14 16 13.3	+2.1
SUW	**Suwalki**	**153.72**	**329**	*e*PKP	PKPdf	14 16 19.8	+9.1
KWP	**Kalwaria**	**156.80**	**322**	*e*PKP	PKPdf	14 16 24.4	+9.5
MLR	**Muntele Rosu**	**157.02**	**310**	PKP	PKPdf	14 16 17.2	+1.8
	comp=Z,1.8nm,0.5s,baz=65,slow=7.2,SNR=3.2						
MLR	**Muntele Rosu**	**157.02**	**310**	PKP	PKPdf	14 16 17.2	+1.8
KOLS	**Kolonicke sedl**	**157.45**	**321**	*i* PKP	PKPdf	14 16 17.6	+1.8
BSEG	**Bad Segeberg**	**158.07**	**345**	*e*PKP2	PKPab	14 16 51.5	-0.9
OKC	**Ostrava-Krasne**	**158.88**	**328**	*e*PKPAB	PKPab	14 16 55.1	-0.9
DPC	**Dobruska-Polom**	**159.28**	**331**	*e*PKPAB	PKPab	14 16 56.2	-1.5
DPC				*e*x	x	14 17 12.1	
UPC	**Upice**	**159.28**	**332**	*e*PKPAB	PKPab	14 16 56.2	-1.5
VYHS	**Vyhne**	**159.49**	**324**	*e*PKP	PKPab	14 16 57.8	-0.9
CLL	**Collm**	**159.71**	**337**	*i* PKP2	PKPab	14 16 57.8	-1.7
CLL				pmax	pmax		
	comp=Z,11nm,0.9s						
CLL	**Collm**	**159.71**	**337**	*i* PKP2	PKPab	14 16 57.8	-1.7
CLL				*i*		14 17 12.8	
BRG	**Berggiesshubel**	**159.76**	**335**	*e*PKP2	PKPab	14 16 59.2	-0.6
BRG				pmax	pmax		
	comp=Z,11nm,0.9s						
PVCC	**Panska Ves**	**159.82**	**334**	*e*PKPAB	PKPab	14 16 57.7	-2.3
PVCC				*e*x	x	14 17 13.2	
CLZ	**Clausthal**	**159.99**	**342**	*e*PKIKP	PKPdf	14 16 19.5	+0.8
CLZ				*e*		14 16 59.9	
PRU	**Pruhonice**	**160.27**	**333**	*e*PKPAB	PKPab	14 17 01.1	-0.9
PRU				*e*x	x	14 17 12.5	
ZST	**Bratislava**	**160.53**	**326**	*e*PKP	PKPdf	14 16 20.3	+0.9
MOX	**Moxa**	**160.72**	**339**	*e*PKP2	PKPab	14 17 03.2	-0.7
NKC	**Novy Kostel**	**160.81**	**337**	*e*PKPAB	PKPab	14 17 03.2	-1.1
NKC				*e*x	x	14 17 16.3	
KHC	**Kasperske Hory**	**161.33**	**333**	*e*PKP	PKPdf	14 16 19.5	-0.7
KHC				*e*		14 17 04.8	
KHC				*e*		14 17 16.3	
GEC2	**GERESS Array S**	**161.51**	**332**	*e*PKIKP	PKPdf	14 16 21.0	+0.6
GEC2				*e*		14 17 06.8	
GERES	**GERESS Array B**	**161.51**	**332**	PKP	PKPdf	14 16 20.8	+0.4
	comp=Z,0.4nm,0.3s,baz=146,slow=3.5,SNR=7.7						
GERES				PKPab	PKPab	14 17 05.6	-1.8
	comp=Z,1.3nm,0.5s,baz=34,slow=4.8,SNR=6.9						
GRA1	**Grafenberg Arr**	**161.68**	**338**	*e*PKPdf	PKPdf	14 16 21.6	+1.1
GRA1				*e*PKPab	PKPab	14 17 07.8	-0.3
GRF	**Grafenberg Arr**	**161.68**	**338**	*e*PKIKP	PKPdf	14 16 21.6	+1.1
GRF				*e*		14 17 07.8	
TNS	**Taunus Mts**	**161.95**	**344**	*e*PKP2	PKPab	14 17 09.6	+0.3
BFO	**Black Forest**	**163.74**	**342**	*e*PKP2	PKPab	14 17 15.6	-1.5
FLN	**La Foliniere**	**164.30**	**3**	*e*PKIKP	PKPdf	14 16 25.4	+2.2
	comp=Z,25nm,1.1s						
FLN				*e*R			
	comp=Z,182nm,22.8s						
GRR	**Gorron**	**164.65**	**4**	*e*PKIKP	PKPdf	14 16 26.1	+2.6
SSF	**Saint Saulge**	**165.88**	**352**	*e*PKIKP	PKPdf	14 16 24.3	-0.4
CABF	**La Chapelle**	**165.89**	**345**	*e*PKIKP	PKPdf	14 16 26.4	+1.7
	comp=Z,6.4nm,0.7s						
AVF	**Avril sur Loir**	**166.16**	**353**	*e*PKIKP	PKPdf	14 16 26.5	+1.5
MFF	**Saint Martin d**	**166.47**	**3**	*e*PKIKP	PKPdf	14 16 27.4	+2.2
LPL	**La Plagne**	**166.76**	**341**	*e*PKIKP	PKPdf	14 16 28.1	+2.7
LPG	**La Plagne**	**166.77**	**341**	*e*PKIKP	PKPdf	14 16 28.4	+3.0
MBDF	**Montbardon**	**167.47**	**340**	*e*PKIKP	PKPdf	14 16 28.6	+2.7
	comp=Z,8.2nm,0.9s						
ORIF	**Oris-en-Rattie**	**167.53**	**343**	*e*PKIKP	PKPdf	14 16 28.6	+2.7
	comp=Z,3.8nm,0.5s						
ORIF				*e*R			
	comp=Z,100nm,20.8s						
CAF	**Calviac**	**168.12**	**356**	*e*PKIKP	PKPdf	14 16 28.0	+1.7
PGF	**Pioggiola**	**168.53**	**328**	*e*PKIKP	PKPdf	14 16 29.1	+2.5
ESDC	**Sonseca Array**	**172.38**	**29**	PKP	PKPdf	14 16 29.2	+0.2
	comp=Z,1.1nm,0.7s,baz=18,slow=2.6,SNR=4.3						
ESDC				PKPab	PKPab	14 17 54.0	-1.3
	comp=Z,4.2nm,0.9s,baz=319,slow=4.3,SNR=11						

*NIED **01** 14:37:00,29.60N×130.10E,h11^{km},Mw3.8 Best double couple: $M_0$6.51×10^{14} NP1:ϕ_s328°,δ80°,λ-28°. NP2:ϕ_s64°,δ62°,λ-168°.*

*IDC **01** 14:37:51.8±1.2,29.51N×130.09E,mb3.8/3,mb1 3.9/6, mb1mx3.6/24,mbtmp3.7/6,ML3.4/3,Error ellipse: s-maj=40.0km s-min=17.6km az=99.0*

*JMA **01** 14:37:53.7±0.2,29.57N×130.14E,h25^{km}±3^{km},M3.7 JMA Felt I J1.*

ISC 01 14:37:53.2±0.9,**29.53N**±0.04×**130.14E**±0.10,**h23**^{km}±8^{km}, **n15,**σ**0^{s}80**/23,**mb3.8**/3,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.39**	**324**	P	**Pb**	**14 38 01.4**	**-0.1**
JNN				S	**Sb**	**14 38 07.0**	**-0.2**
JKC	**Kuchinoerabu**	**0.94**	**3**	P	**Pb**	**14 38 10.2**	**-0.4**
JKC				S	**Sb**	**14 38 22.9**	**+0.3**
JAM	**Amami Oshima**	**1.21**	**203**	P	**Pn**	**14 38 14.5**	**-0.3**
JAM				S	**Sb**	**14 38 30.3**	**-0.1**
JZK	**Kikaishima**	**1.22**	**187**	P	**Pn**	**14 38 16.9**	**+1.9**
JTN	**Tanegashima 3**	**1.34**	**33**	P	**Pn**	**14 38 16.6**	**-0.2**
JTN				S	**Sn**	**14 38 34.3**	**+0.3**
JTSR	**Tashiro 2**	**1.77**	**22**	P	**Pn**	**14 38 22.5**	**-0.4**
JTSR				S	**Sn**	**14 38 44.1**	**-0.8**
JTK	**Tokunoshima**	**2.02**	**211**	P	**Pn**	**14 38 26.2**	**-0.4**
JIH	**Iheya**	**3.13**	**218**	P	**Pn**	**14 38 43.5**	**+1.1**
JIH				*e*S	**Sn**	**14 39 17.7**	**-1.9**
JOW	**Kunigami**	**3.15**	**212**	Pn	**Pn**	**14 38 43.0**	**+0.4**
	12nm,0.3s,baz=92,slow=21,SNR=30						
JOW				Sn	**Sn**	**14 39 20.2**	**+0.4**
	11nm,0.3s,baz=176,slow=28,SNR=4.2						
JOW	**Kunigami**	**3.15**	**212**	P	**Pn**	**14 38 43.5**	**+0.9**
JNU	**Nakatsue**	**3.64**	**10**	Pn	**Pn**	**14 38 50.5**	**+0.9**
	2.6nm,0.3s,baz=307,slow=1.9,SNR=16						
JNU				Sn	**Sn**	**14 39 33.4**	**+1.1**
	0.6nm,0.3s,baz=19,slow=33,SNR=2.5						
MJAR	**Matsushiro Arr**	**9.73**	**42**	Pn	**P**	**14 40 13.8**	**-1.3**
	0.3nm,0.3s,baz=186,slow=11,SNR=2.7						
SONM	**Songino Array**	**25.87**	**322**	P	**P**	**14 43 24.9**	**+0.1**
	0.6nm,0.8s,mb3.1,baz=141,slow=11,SNR=4.0						
WRA	**Warramunga Arr**	**49.34**	**175**	P	**P**	**14 46 42.0**	**-1.0**
	2.6nm,0.7s,mb4.4,baz=354,slow=8.2,SNR=22						
ASAR	**Alice Springs**	**53.01**	**176**	P	**P**	**14 47 11.0**	**+0.3**
	1.1nm,0.6s,mb4.0,baz=5.8,slow=14,SNR=29						

*IDC **01** 14:47:30.5±1.1,21.41S×168.69E,mb4.0/8,mb1 4.2/9, mb1mx4.1/17,mbtmp4.1/9,ML4.3/1,MS3.4/5,Ms1 3.4/5, ms1mx3.1/31,Error ellipse: s-maj=41.6km s-min=21.1km az=157.0*

*NEIC **01** 14:47:36.2±0.8,21.45S×168.59E,h40^{km},mb4.5/1,Error ellipse: s-maj=32.9km s-min=13.5km az=156.0*

ISC 01 14:47:33.8±0.9,**21.4S**±0.2×**168.7E**±0.1,**h33**^{km}**,n21,** σ**1^{s}47**/18,**mb4.0**/9,**MS3.5**/5,**2C,Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.22**	**252**	*e*P	**P**	**14 48 08.2**	**-0.8**
DZM				*e*S	**S**	**14 48 34.9**	**-0.6**
DZM	**Mont Dzumac**	**2.22**	**252**	Pn	**Pn**	**14 48 08.4**	**-0.8**
	88nm,0.3s,baz=86,slow=20,SNR=827						
DZM				Sn	**Sn**	**14 48 37.7**	**+1.9**
	102nm,0.3s,baz=121,slow=23,SNR=14						
NOUC	**Port Laguerre**	**2.36**	**252**	*e*P	**P**	**14 48 09.8**	**-1.1**
NOUC				*e*S	**S**	**14 48 41.1**	**+2.2**
NOUC	**Port Laguerre**	**2.36**	**252**	*e*P	**P**	**14 48 09.8**	**-1.1**
NOUC				*e*S	**S**	**14 48 41.1**	**+2.2**
URZ	**Urewera**	**18.31**	**159**	LR	LR	14 57 17.4	
	comp=Z,117nm,19.2s,baz=258,slow=32						
AFI	**Afiamalu**	**20.01**	**71**	LR	LR	14 58 24.9	
	comp=Z,89nm,19.0s,MS3.1,baz=245,slow=33						
CTA	**Charters Tower**	**21.05**	**269**	P	**P**	**14 52 16.1**	**-1.2**
	12nm,1.1s,mb4.1,baz=73,slow=14,SNR=1.9						
CTA				LR	LR	14 58 10.2	
	comp=Z,74nm,18.8s,MS3.1,baz=79,slow=30						
STKA	**Stephens Creek**	**26.34**	**241**	P	**P**	**14 53 07.2**	**-1.4**
	2.2nm,0.4s,mb4.1,baz=58,slow=9.8,SNR=3.1						
STKA				LR	LR	15 01 39.6	
	comp=Z,89nm,21.8s,MS3.3,baz=25,slow=32						
STKA	**Stephens Creek**	**26.34**	**241**	P	**P**	**14 53 07.2**	**-1.4**
STKA				LR	LR	15 01 39.6	
WRA	**Warramunga Arr**	**32.16**	**266**	P	**P**	**14 53 59.4**	**-1.5**
	0.3nm,0.4s,mb3.5,baz=98,slow=8.5,SNR=16						
ASAR	**Alice Springs**	**32.19**	**259**	P	**P**	**14 53 59.4**	**-1.7**
	1.1nm,0.8s,mb3.7,baz=87,slow=9.2,SNR=13						
ASAR				LR	LR	15 04 50.1	
	comp=Z,78nm,20.0s,MS3.4,baz=299,slow=32						
MBWA	**Marble Bar**	**45.50**	**261**	P	**P**	**14 55 55.2**	**+3.1**
	6.1nm,0.9s,mb4.4						
CMAR	**Chiang Mai Arr**	**78.94**	**295**	P	**P**	**14 59 38.0**	**+1.8**
	1.3nm,1.1s,mb3.8,baz=151,slow=3.0,SNR=4.7						
SNAA	**Sanae**	**87.01**	**183**	P	**P**	**15 00 18.1**	**+1.8**
	1.0nm,0.8s,mb4.1,baz=184,slow=5.3,SNR=9.5						
SONM	**Songino Array**	**88.63**	**323**	P	**P**	**15 00 26.2**	**+1.5**
	0.4nm,0.7s,mb3.8,baz=146,slow=5.2,SNR=3.0						
NVAR	**Mina Array Bea**	**90.58**	**49**	P	**P**	**15 00 33.9**	**-0.2**
	0.4nm,0.4s,mb4.1,baz=202,slow=7.1,SNR=4.4						
BRG	**Berggiesshubel**	**144.55**	**332**	*i* P	PKPbc	15 07 07.7	+1.3
BRG				LR	LR		
	comp=Z,160nm,22.3s,MS4.7						
CLL	**Collm**	**144.63**	**334**	⇑*i*P	PKPbc	15 07 04.4	-2.2
CLL				*i*		15 07 07.3	
CLL	**Collm**	**144.63**	**334**	⇑*i*	PKPbc	15 07 04.4	-2.2
CLL				*i* PKIKP	PKPdf	15 07 07.3	+0.5
EKA	**Eskdalemuir Ar**	**145.55**	**352**	PKPbc	PKPbc	15 07 08.6	-0.3
	comp=Z,3.0nm,0.9s,slow=1.7,SNR=3.8						
GERES	**GERESS Array B**	**146.12**	**330**	PKPbc	PKPbc	15 07 12.3	+1.8
	comp=Z,2.8nm,0.7s,baz=27,slow=3.0,SNR=20						

*IDC **01** 15:00:08.3±1.9,1.59S×99.31E,mb3.8/4,mb1 3.9/5, mb1mx3.7/17,mbtmp3.7/5,ML3.1/1,Error ellipse: s-maj=88.8km s-min=22.2km az=58.0*

ISC 01 15:00:12.0±3.0,**1.4S**±0.4×**99.5E**±0.7,**h33**^{km}**,n7,**σ**0^{s}37**/5, **mb3.9**/4,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**19.75**	**358**	P	**P**	**15 04 42.2**	**+0.2**
	0.0nm,0.3s,baz=187,slow=11,SNR=6.1						
WRA	**Warramunga Arr**	**38.71**	**121**	P	**P**	**15 07 34.4**	**-0.4**
	2.3nm,0.7s,mb4.0,baz=303,slow=9.0,SNR=16						
ASAR	**Alice Springs**	**39.99**	**126**	P	**P**	**15 07 45.6**	**+0.2**
	0.6nm,0.7s,mb3.5,baz=299,slow=7.9,SNR=10						
STKA	**Stephens Creek**	**49.90**	**132**	P	**P**	**15 09 05.0**	**+0.3**
	1.9nm,0.6s,mb4.3,baz=297,slow=17,SNR=3.9						
MKAR	**Makanchi Array**	**50.34**	**345**	P	**P**	**15 09 07.6**	**-0.2**
	0.4nm,0.4s,mb3.8,baz=156,slow=7.2,SNR=5.7						
TXAR	**Lajitas Array**	**144.53**	**36**	PKP	PKPdf	15 19 47.3	+1.5
	0.7nm,0.6s,baz=274,slow=2.1,SNR=7.1						
CFAA	**Coronel Fontan**	**145.17**	**198**	PKP	PKPdf	15 19 47.4	+0.6
	0.2nm,0.5s,baz=206,slow=2.8,SNR=4.5						

JMA 01 15:06:37.2±0.2**,43.91N**×**147.57E,h12**^{km}**,M3.6,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.43**	**248**	P	Pn	15 07 03.1	-0.1
NEM2				*e*S	Sb	15 07 21.6	+0.1
JRA	**Rausu**	**1.77**	**272**	P	Pn	15 07 08.1	+0.2
JRA				*e*S	Sn	15 07 31.0	+0.5
JNK	**Nakash**	**2.09**	**262**	P	Pn	15 07 12.6	0.0
JNK				*e*S	Sn	15 07 38.7	0.0
JAK	**Akkeshi**	**2.28**	**247**	P	Pn	15 07 15.2	-0.1
JAK				*e*S	Sn	15 07 42.8	-0.8
JTKR	**Abashiri--Toko**	**2.65**	**273**	P	Pn	15 07 20.0	-0.5
JAR	**Ashorobuto**	**2.83**	**259**	P	Pn	15 07 23.5	+0.4
JAR				*e*S	Sn	15 07 57.6	+0.2
JOB	**Onbets**	**2.90**	**251**	P	Pn	15 07 24.5	+0.4
JOB				*e*S	Sn	15 07 59.1	-0.2
JMP	**Maruseppu**	**3.04**	**273**	P	Pn	15 07 25.7	-0.4
JCH	**Churui**	**3.33**	**249**	P	Pn	15 07 29.8	-0.5
JCH				*e*S	Sn	15 08 08.6	-1.6
JNBK	**Urakawa-nobuka**	**3.89**	**247**	P	Pn	15 07 37.7	-0.4
JNBK				*e*S	Sn	15 08 23.7	-0.5

*NEIC **01** 15:18:37.8,59.85N×153.11W,h116^{km},MG3.1(AEIC), After AEIC.*

*IDC **01** 15:18:40.5±6.4,60.25N×153.07W,h138^{km}±55^{km},mb3.5/4, mb1 3.5/7,mb1mx3.3/23,mbtmp3.8/7,Error ellipse: s-maj=55.3km s-min=28.4km az=36.0*

ISC 01 15:18:35.4±0.3,**59.86N**±0.02×**153.07W**±0.05, **h128**^{km}±2^{km}**,n87,**σ**0^{s}81**/118,**mb3.9**/4,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILS	**Iliamna Low So**	**0.10**	**359**	P	**P**	**15 18 53.3**	**+0.4**
ILS				S	**S**	**15 19 06.1**	**0.0**
IVS	**Iliamna South**	**0.15**	**357**	P	**P**	**15 18 53.5**	**+0.6**
IVE	**Iliamna Volcan**	**0.16**	**9**	P	**P**	**15 18 53.3**	**+0.3**
IVE				S	**S**	**15 19 06.2**	**-0.1**
INE	**Iliamna NE**	**0.20**	**1**	P	**P**	**15 18 53.5**	**+0.4**
ILW	**Iliamna West**	**0.20**	**350**	P	**P**	**15 18 53.5**	**+0.4**
ILW				S	**S**	**15 19 06.5**	**0.0**
OPT	**Oil Point**	**0.22**	**202**	P	**P**	**15 18 53.5**	**+0.4**
OPT				S	**S**	**15 19 06.3**	**-0.3**
ILIM	**Iliamna**	**0.23**	**14**	P	**P**	**15 18 53.6**	**+0.6**
ILIM				S	**S**	**15 19 06.5**	**-0.2**
AUL	**Augustine Lava**	**0.52**	**202**	P	**P**	**15 18 54.8**	**+0.3**
AUL				S	**S**	**15 19 08.6**	**-0.3**
AUE	**Augustine Isla**	**0.53**	**197**	P	**P**	**15 18 54.7**	**+0.2**
AUE				S	**S**	**15 19 07.7**	**-1.3**
AUP	**Augustine Pinn**	**0.53**	**200**	P	**P**	**15 18 54.9**	**+0.4**
AUP				S	**S**	**15 19 09.2**	**+0.2**
AUH	**Augustine H**	**0.53**	**201**	P	**P**	**15 18 55.0**	**+0.4**
AUW	**Augustine West**	**0.53**	**203**	P	**P**	**15 18 54.9**	**+0.4**
AUI	**Augustine Isla**	**0.56**	**199**	P	**P**	**15 18 54.9**	**+0.2**
AUI				S	**S**	**15 19 08.3**	**-1.1**
RED	**Redoubt Volcan**	**0.58**	**15**	P	**P**	**15 18 53.4**	**-1.4**
REF	**Redoubt East F**	**0.66**	**16**	P	**P**	**15 18 56.1**	**+0.7**
REF				S	**S**	**15 19 10.3**	**-0.3**
RDN	**Redoubt North**	**0.67**	**13**	P	**P**	**15 18 56.2**	**+0.8**
NCT	**North Crescent**	**0.71**	**5**	P	**P**	**15 18 56.4**	**+0.7**
NCT				S	**S**	**15 19 10.8**	**-0.4**
HOM	**Homer**	**0.75**	**105**	P	**P**	**15 18 56.9**	**+0.9**
XLV	**Seldovia**	**0.79**	**120**	P	**P**	**15 18 56.7**	**+0.4**
NNL	**Ninilchik**	**0.91**	**78**	P	**P**	**15 18 59.3**	**+1.9**
MCNL	**McNeil River**	**0.94**	**224**	P	**P**	**15 18 57.7**	**0.0**
MCNL				S	**S**	**15 19 13.8**	**-0.9**
CNPM	**China Poot**	**0.99**	**109**	P	**P**	**15 18 58.7**	**+0.5**
CNPM				S	**S**	**15 19 15.4**	**-0.1**
BRLK	**Bradley Lake**	**1.11**	**94**	P	**P**	**15 19 00.0**	**+0.6**
BRLK				S	**S**	**15 19 18.2**	**+0.7**
NKA	**Nikishka**	**1.27**	**45**	P	**P**	**15 19 03.5**	**+2.4**
SYI	**Shuyak Island**	**1.30**	**164**	P	**P**	**15 19 02.0**	**+0.5**
SYI				S	**S**	**15 19 20.7**	**-0.8**
CKL	**Chakachamna La**	**1.39**	**15**	P	**P**	**15 19 03.4**	**+0.9**
CKL				S	**S**	**15 19 24.1**	**+1.0**
SPU	**Mount Spurr**	**1.42**	**20**	*e*P	**P**	**15 19 03.2**	**+0.4**
KAPH	**Katmai Pasha**	**1.43**	**208**	P	**P**	**15 19 03.2**	**+0.3**
KAPH				S	**S**	**15 19 23.2**	**-0.8**
CKN	**Chakachatna No**	**1.44**	**17**	P	**P**	**15 19 04.0**	**+0.9**
SLKM	**Skilak Lake**	**1.56**	**64**	P	**P**	**15 19 05.1**	**+0.6**
KAHG	**Katmai Hook Gl**	**1.57**	**210**	P	**P**	**15 19 04.7**	**+0.2**
KAHG				S	**S**	**15 19 25.8**	**-0.9**
KAHC	**Katmai Hardscr**	**1.57**	**220**	P	**P**	**15 19 04.6**	**+0.1**
KAHC				S	**S**	**15 19 26.1**	**-0.7**
VOGL	**Vogel Lake**	**1.73**	**48**	P	**P**	**15 19 08.4**	**+2.0**
VOGL				S	**S**	**15 19 33.0**	**+2.9**
SVW2	**Sparrevohn**	**1.76**	**316**	P	**P**	**15 19 06.7**	**-0.1**
SEW	**Seward**	**1.83**	**81**	P	**P**	**15 19 08.0**	**+0.4**
SEW				S	**S**	**15 19 32.2**	**0.0**
FIB	**Fire Island**	**1.94**	**46**	P	**P**	**15 19 10.4**	**+1.5**
MPA	**Moose Pass**	**1.96**	**70**	P	**P**	**15 19 09.8**	**+0.8**
ACHA	**Angle Creek He**	**2.02**	**216**	P	**P**	**15 19 10.2**	**+0.3**
MGLS	**Mageik LS**	**2.02**	**216**	P	**P**	**15 19 10.4**	**+0.5**
RC01	**Rabbit Creek A**	**2.06**	**52**	P	**P**	**15 19 10.8**	**+0.5**
RC01				S	**S**	**15 19 36.3**	**-0.7**
ANCK	**Angle Creek**	**2.09**	**218**	P	**P**	**15 19 11.2**	**+0.4**
ANCK				S	**S**	**15 19 37.2**	**-0.5**
KDAK	**Kodiak Island**	**2.10**	**173**	P	**P**	**15 19 10.0**	**-0.9**
KDAK				S	**S**	**15 19 36.0**	**-1.9**
CAHL	**Cahill**	**2.15**	**214**	P	**P**	**15 19 11.9**	**+0.3**
PWA	**Palmer West**	**2.38**	**40**	P	**P**	**15 19 15.0**	**+0.4**
PWA				S	**S**	**15 19 43.5**	**-0.9**
PMR	**Palmer**	**2.60**	**46**	P	**P**	**15 19 16.7**	**-0.8**
PMR				S	**S**	**15 19 47.0**	**-2.5**
KNK	**Knik Glacier**	**2.75**	**54**	P	**P**	**15 19 19.1**	**-0.4**
GHO	**Glory Hole Cre**	**2.79**	**45**	P	**P**	**15 19 19.8**	**-0.2**
GHO				S	**S**	**15 19 52.4**	**-1.6**
CUT	**Chulitna**	**2.89**	**27**	P	**P**	**15 19 21.8**	**+0.4**
SML	**Sawmill**	**3.03**	**48**	P	**P**	**15 19 22.5**	**-0.7**
HIN	**Hinchinbrook I**	**3.33**	**78**	P	**P**	**15 19 27.4**	**+0.3**
TT01	**Tatalina**	**3.37**	**336**	P	**P**	**15 19 27.4**	**-0.3**
TTA	**Tatalina**	**3.39**	**337**	P	**P**	**15 19 27.4**	**-0.5**
SCM	**Sheep Creek Mo**	**3.44**	**52**	P	**P**	**15 19 28.1**	**-0.5**
MID	**Middleton Isla**	**3.44**	**94**	P	**P**	**15 19 28.5**	**-0.1**
VLZ	**Valdez**	**3.57**	**66**	P	**P**	**15 19 31.1**	**+0.8**
CVA	**Cordova**	**3.72**	**76**	P	**P**	**15 19 32.1**	**-0.2**
EYAK	**Cordova Ski Ar**	**3.72**	**76**	P	**P**	**15 19 32.5**	**+0.2**
EYAK				S	**S**	**15 20 13.7**	**-2.1**
DIV	**Divide**	**3.83**	**67**	P	**P**	**15 19 34.2**	**+0.4**
DIV				S	**S**	**15 20 16.5**	**-2.0**
TRF	**Thorofare Moun**	**3.84**	**19**	P	**P**	**15 19 33.7**	**-0.2**
TRF				S	**S**	**15 20 16.2**	**-2.5**
DHY	**Denali Highway**	**4.23**	**38**	P	**P**	**15 19 38.7**	**-0.5**
MCK	**McKinley**	**4.35**	**25**	P	**P**	**15 19 40.9**	**+0.1**
KAIM	**Kayak Island**	**4.36**	**85**	P	**P**	**15 19 41.3**	**+0.4**
PAX	**Paxson**	**4.80**	**46**	P	**P**	**15 19 46.6**	**-0.2**
GLB	**Gilahina Butte**	**4.82**	**67**	P	**P**	**15 19 47.5**	**+0.4**

THY	Trims Highway	4.99	41	P	P	15 19 49.9	+0.5
WRH	Wood River Hil	5.18	25	P	P	15 19 51.2	-0.7
MLY	Manley	5.30	11	P	P	15 19 53.5	-0.1
CCB	Clear Creek Bu	5.39	25	P	P	15 19 53.9	-0.8
MDM	Murphy Dome	5.59	22	P	P	15 19 56.8	-0.6
YAH	Yahtse	5.69	80	P	P	15 19 59.4	+0.8
IL1	Eielson Array	5.71	28	P	P	15 19 58.2	-0.8
ILAR	Eielson Array	5.71	28	P	P	15 19 58.4	-0.6
	2.2nm,0.3s,baz=217,slow=14,SNR=84						
ILAR				S	S	15 20 59.8	-4.0
	0.7nm,0.3s,baz=208,slow=16,SNR=4.4						
CTGM	Chitina Glacie	5.92	74	P	P	15 20 02.9	+1.1
IM3	Indian Mountai	6.16	357	P	P	15 20 05.1	0.0
IMA	Indian Mountai	6.24	358	*e*P	P	15 20 06.8	+0.6
BCA3	Beaver Creek A	6.29	54	P	P	15 20 06.6	-0.3
PNL	Peninsula	6.91	86	P	P	15 20 15.2	-0.1
COLD	Coldfoot	7.51	9	P	P	15 20 23.1	-0.3
BM3	Burnt Mountain	8.46	23	P	P	15 20 34.4	-1.8
DLBC	Dease Lake	11.90	87	P	P	15 21 25.7	+4.1
	0.5nm,0.3s,baz=299,slow=9.2,SNR=6.3						
YKA	Yellowknife Ar	18.54	65	P	P	15 22 44.5	+0.4
	baz=274,slow=10.0,SNR=3.2						
YKA	Yellowknife Ar	18.54	65	P	P	15 22 44.5	+0.4
SONM	Songino Array	54.85	306	P	P	15 27 54.8	+0.9
	0.6nm,0.5s,mb3.9,baz=37,slow=6.1,SNR=4.5						
ZAL	Zalesovo	57.48	324	P	P	15 28 12.7	+0.1
	1.5nm,0.5s,mb4.3,baz=94,slow=6.0,SNR=5.6						
BVAR	Borovoye Array	62.18	332	P	P	15 28 44.4	-0.4
	0.9nm,0.6s,mb4.0,baz=34,slow=5.3,SNR=6.2						
MKAR	Makanchi Array	64.52	321	P	P	15 28 59.2	-0.8
	0.4nm,0.5s,mb3.5,baz=40,slow=8.0,SNR=5.8						
MKAR	Makanchi Array	64.52	321	P	P	15 28 59.2	-0.8

IDC 01 15:19:16.6±6.8**,20.07S**×**175.84W,mb4.0**/3**,mb1 4.3**/3**, mb1mx3.8**/16**,mbtmp4.0**/3**,MS3.9**/2**,Ms1 3.9**/2**, ms1mx3.1**/33**,Error ellipse: s-maj=292.3km s-min=38.9km az=144.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	15.09	97	LR	LR	15 27 38.5	
	comp=Z,153nm,19.9s,baz=134,slow=33						
ASAR	Alice Springs	46.59	256	P	P	15 27 47.1	-1.2
	2.2nm,0.6s,baz=90,slow=8.6,SNR=59						
WRA	Warramunga Arr	46.67	261	P	P	15 27 46.5	-2.5
	1.0nm,0.4s,baz=99,slow=6.4,SNR=36						
ELK	Elko	82.60	42	LR	LR	15 59 20.4	
	comp=Z,188nm,20.3s,baz=23,slow=29						
ILAR	Eielson Array	87.46	12	P	P	15 32 05.6	-1.2
	0.3nm,0.5s,baz=216,slow=4.5,SNR=5.0						

IDC 01 15:21:20.5±2.3**,5.04S**×**128.18E,mb3.5**/1**,mb1 3.3**/3**, mb1mx3.2**/16**,mbtmp3.1**/3**,ML2.9**/1**,MS4.2**/1**,Ms1 4.2**/1**, ms1mx3.0**/21**,Error ellipse: s-maj=167.3km s-min=31.4km az=67.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.99	158	Pn	P	15 25 06.6	-2.0
	0.1nm,0.3s,baz=340,slow=12,SNR=6.8						
ASAR	Alice Springs	19.33	164	P	P	15 25 47.8	-2.4
	0.0nm,0.3s,baz=345,slow=10,SNR=5.0						
RPZ	Rata Peaks	53.89	142	LR	LR	15 54 45.3	
	comp=Z,212nm,19.4s,baz=22,slow=37						
MKAR	Makanchi Array	65.60	327	P	P	15 32 06.4	-2.2
	0.3nm,0.6s,baz=141,slow=7.8,SNR=3.6						

IDC ***01*** *15:33:29.2±1.0,39.63N×75.58E,mb3.8/6,mb1 3.9/9, mb1mx3.7/23,mbtmp3.7/9,ML3.1/3,MS3.6/1,Ms1 3.6/1, ms1mx2.8/25,Error ellipse: s-maj=23.3km s-min=18.1km az=73.0*

NEIC ***01*** *15:33:30.8±0.9,39.67N×75.55E,h10^{km},Error ellipse: s-maj=17.4km s-min=14.2km az=70.0*

MOS ***01*** *15:33:31.1±1.0,39.67N×75.55E,h23^{km},mb3.3/1,Error ellipse: s-maj=32.7km s-min=15.8km az=92.7*

BJI ***01*** *15:33:36.3,39.99N×75.87E,h15^{km},ML4.0*

NNC ***01*** *15:33:40.4±3.7,40.39N×75.81E,mpv4.0,Error ellipse: s-maj=60.3km s-min=21.9km az=62.0*

ISC 01 15:33:34.4±0.7**,39.73N**±0.06×**75.8E**±0.1**,h52**^{km}±6^{km}**,n28,** σ**0^{s}94**/27**,mb3.6**/7**,MS3.6**/1**,5C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	0.27	140	⇓*i*PG	P	15 33 43.1	-0.4
KSH				SG	S	15 33 49.8	-0.2
KSH				Smax			
	comp=N,10µm,0.3s						
KSH				Smax			
	comp=E,5µm,0.4s						
KZA	Kyzart	2.38	351	P	P	15 34 12.0	+0.1
	SNR=133						
ULHL	Ulahol	2.54	8	P	P	15 34 16.4	+2.1
	SNR=164						
UCH	Uchtor	2.67	340	P	P	15 34 16.2	+0.2
	SNR=49						
AML	Almayashu	2.86	328	P	P	15 34 18.7	-0.1
	SNR=432						
KBK	Karagaybulak	2.99	349	P	P	15 34 20.9	+0.3
	SNR=252						
AAK	Ala-Archa	3.06	342	P	P	15 34 21.9	+0.4
	SNR=69						
AAK	Ala-Archa	3.06	342	⇓Pn	P	15 34 21.8	+0.3
	comp=E,52nm,0.5s						
AAK				⇑Lg		15 34 58.0	
	comp=E,168nm,0.6s						
AAK	Ala-Archa	3.06	342	*e*P	P	15 34 20.6	-0.9
TKM2	Tokmak 2	3.19	358	P	P	15 34 24.0	+0.6
	SNR=88						
EKS2	Erkin-Say	3.29	334	P	P	15 34 25.2	+0.4
	SNR=14						
CHMS	Chumysh	3.35	347	P	P	15 34 25.9	+0.2
	SNR=24						
USP	Ospenovka	3.66	346	P	P	15 34 29.6	-0.5
	SNR=36						
MK31	Makanchi Array	8.52	32	Pn	P	15 35 36.6	-1.2
	comp=E,3.5nm,0.6s,baz=205,slow=15,SNR=17						
MK31				⇑Lg		15 37 53.5	
	comp=E,3.7nm,0.8s,baz=221,slow=28,SNR=4.0						
MKAR	Makanchi Array	8.52	32	Pn	P	15 35 37.4	-0.5
	comp=E,0.4nm,0.3s,baz=208,slow=15,SNR=22						
MKAR				Lg		15 38 02.2	
	comp=E,0.5nm,0.3s,baz=212,slow=27,SNR=4.5						
BVA0	Borovoye Array	13.80	346	⇑Pn	P	15 36 50.6	+1.8
	comp=E,0.5nm,0.8s,baz=151,slow=11,SNR=8.0						
BVA0				⇑Lg		15 40 39.8	
	comp=E,2.3nm,1.1s						
BVAR	Borovoye Array	13.80	346	Pn	P	15 36 45.6	-3.3
	comp=E,0.1nm,0.3s,baz=158,slow=16,SNR=4.4						
BVAR				Lg		15 40 46.2	
	comp=E,0.2nm,0.3s,baz=161,slow=26,SNR=6.0						
CHKZ	Chkalovo	14.39	348	⇑Lg		15 40 58.0	
	comp=E,12nm,1.6s						
ZAL	Zalesovo	15.48	20	Pn	P	15 37 09.6	-1.1
	comp=E,0.1nm,0.3s,baz=284,slow=8.8,SNR=3.2						
ZAK	Zakamensk	22.05	52	*e*P	P	15 38 32.9	+6.9
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.1						
AKASG	Malin Array Be	34.03	304	P	P	15 40 14.7	-0.7
	comp=Z,0.3nm,0.3s,mb3.6,baz=141,slow=14,SNR=5.7						
FINES	FINESS Array B	37.05	323	P	P	15 40 39.3	-1.5
	comp=Z,2.4nm,1.0s,mb4.0,baz=97,slow=11,SNR=4.3						
IDI	Anoyia	40.15	280	LR	LR	15 59 16.0	
	comp=Z,76nm,19.4s,MS3.6,baz=248,slow=39						
GERES	GERESS Array B	44.22	303	P	P	15 41 39.9	-0.1
	comp=Z,0.2nm,0.3s,mb3.3,baz=90,slow=4.0,SNR=4.6						
YKA	Yellowknife Ar	77.79	5	P	P	15 45 26.7	-0.4
	comp=Z,0.8nm,0.6s,mb3.8,baz=352,slow=5.8,SNR=6.1						
YKA	Yellowknife Ar	77.79	5	P	P	15 45 26.7	-0.4
WRA	Warramunga Arr	80.66	126	P	P	15 45 44.6	+1.1
	comp=Z,0.8nm,0.8s,mb3.7,baz=329,slow=5.2,SNR=8.0						
ASAR	Alice Springs	83.16	128	P	P	15 45 57.7	+1.3
	comp=Z,0.7nm,0.7s,mb3.8,baz=308,slow=4.9,SNR=10						

NIED ***01*** *15:36:00,36.00N×140.10E,h62^{km},Mw4.0 Best double couple: M$_0$1.24×10^{15} NP1:φ$_s$8°,δ64°,λ91°. NP2:φ$_s$184°, δ26°,λ87°.*

MOS ***01*** *15:36:36.1±1.6,35.86N×140.54E,h33^{km},mb4.5/1,Error ellipse: s-maj=19.8km s-min=13.1km az=123.9*

BJI ***01*** *15:36:41.3,35.93N×139.90E,h59^{km},mB4.8,mb4.3*

NEIC ***01*** *15:36:42.5±1.8,35.97N×140.16E,h70^{km}±14^{km},mb4.6/2, MW4.0(NIED),Error ellipse: s-maj=23.1km s-min=10.9km az=83.0*

NEIC Recorded [1 JMA] in Gumma, Kanagawa, Saitama, Tokyo and Tochigi Prefectures.

IDC ***01*** *15:36:43.0±1.6,35.97N×140.18E,h74^{km}±14^{km},mb3.8/10, mb1 3.9/13,mb1mx3.7/25,mbtmp4.1/13,MS3.7/3, Ms1 3.7/3,ms1mx3.0/33,Error ellipse: s-maj=20.3km s-min=7.5km az=65.0*

JMA ***01*** *15:36:43.2±0.1,36.03N×140.09E,h63^{km}±1^{km},M4.0 Broadband fault plane solution: P waves. NP1:φ$_s$198°, δ28°,λ102°. NP2:φ$_s$4°,δ62°,λ83°. Principal axes: T Plg72°, Azm259°; N Plg6°, Azm7°; P Plg17°, Azm99°;*

JMA Felt I J1.

ISC 01 15:36:41.3±0.5**,36.00N**±0.04×**140.20E**±0.07**,h76**^{km}±4^{km}**, n37,** σ**0^{s}75**/44**,mb4.0**/12**,1C-6D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.23	359	⇑P	P	15 36 53.2	+0.5
JYT				S	S	15 37 00.4	-0.9
JAG	Ashikaga	0.74	305	⇓P	P	15 36 57.4	+0.1
JAG				S	S	15 37 07.6	-1.5
JRY	Ryogami san	1.05	271	⇓P	P	15 37 01.3	+0.3
JRY				S	S	15 37 14.7	-1.0
JKT	Katashina	1.09	315	⇓P	P	15 37 01.7	+0.3
JOD2	Odawara 2	1.17	231	⇓P	P	15 37 02.7	+0.3
BSO3	Boso 3	1.22	168	P	P	15 37 04.1	+1.0
JIM2	Oshima 3	1.42	206	P	P	15 37 05.8	-0.2
JYN	Shimob	1.44	250	⇓P	P	15 37 06.7	+0.6
JFY	Yanaizu	1.46	344	⇓P	P	15 37 07.3	+0.8
JFY				S	S	15 37 25.7	+0.7
MJAR	Matsushiro Arr	1.70	289	P	P	15 37 09.2	-0.4
	161nm,0.3s,baz=116,slow=8.1,SNR=1088						
MJAR				S	S	15 37 31.2	+0.8
	46nm,0.3s,baz=304,slow=18,SNR=11						
MAJO	Matsushiro	1.70	289	*e*P	P	15 37 09.9	+0.3
MAT	Matsushiro	1.70	289	*e*P	P	15 37 09.0	-0.6
MAT				S	S	15 37 31.0	+0.5
MAT	Matsushiro	1.70	289	P	P	15 37 09.4	-0.2
MAT				*e*S	S	15 37 30.6	+0.1
JHJ	Hachijo jima 2	2.89	187	P	P	15 37 27.4	+1.2
	37nm,0.3s,baz=36,slow=23,SNR=55						
JHJ				S	S	15 37 59.8	-0.1
	100nm,0.3s,baz=246,slow=23,SNR=10						
JNU	Nakatsue	8.21	252	P	P	15 38 40.2	+0.5
	0.9nm,0.3s,baz=60,slow=14,SNR=5.6						
ASAJ	Asahikawa	8.31	12	P	P	15 38 40.0	-1.2
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	8.31	12	P	P	15 38 40.0	-1.2
	comp=Z,0.7nm,0.3s,baz=267,slow=15,SNR=4.7						
SONM	Songino Array	27.58	306	P	P	15 42 22.2	-0.9
	comp=Z,1.9nm,0.6s,mb3.8,baz=104,slow=8.3,SNR=12						
GTA	Gaotai	31.95	288	*e*P	P	15 43 02.3	+0.4
ZAL	Zalesovo	41.91	313	P	P	15 44 26.1	+0.7
	comp=Z,2.1nm,0.6s,mb4.0,baz=13,slow=8.4,SNR=10.0						
ZAL				LR	LR	16 04 47.7	
	comp=Z,72nm,19.3s,baz=265,slow=40						
ZAL	Zalesovo	41.91	313	P	P	15 44 26.1	+0.7
ZAL				LR	LR	16 04 47.7	
MKAR	Makanchi Array	43.85	303	P	P	15 44 41.7	+0.3
	comp=Z,3.4nm,0.7s,mb4.2,baz=90,slow=11,SNR=26						
MKAR				LR	LR	16 03 08.8	
	comp=Z,100nm,18.5s,baz=291,slow=36						
MKAR	Makanchi Array	43.85	303	P	P	15 44 41.7	+0.3
MKAR				LR	LR	16 03 08.8	
PMG	Port Moresby	45.63	170	LR	LR	16 00 22.8	
	comp=Z,129nm,20.4s,baz=30,slow=31						
BVAR	Borovoye Array	50.55	313	P	P	15 45 33.9	+0.1
	comp=Z,1.2nm,0.5s,mb4.2,baz=80,slow=8.0,SNR=7.7						
ILAR	Eielson Array	50.89	32	P	P	15 45 36.9	+0.7
	comp=Z,1.2nm,0.7s,mb4.0,baz=272,slow=5.8,SNR=14						
WRAB	Tennant Creek	55.90	187	*e*P	P	15 46 13.0	-0.7
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
WRAB	Tennant Creek	55.90	187	*e*P	P	15 46 13.0	-0.7
	comp=Z,1.8nm,0.6s,mb4.3						
WRA	Warramunga Arr	55.91	187	P	P	15 46 13.0	-0.8
	comp=Z,1.5nm,0.6s,mb4.2,baz=1.3,slow=7.6,SNR=48						
ASAR	Alice Springs	59.64	187	P	P	15 46 39.2	-0.6
	comp=Z,0.4nm,0.6s,mb3.6,baz=359,slow=7.2,SNR=17						
MBWA	Marble Bar	60.06	202	*e*P	P	15 46 40.3	-2.5
	comp=Z,17nm,1.3s,mb4.9						
ARCES	ARCESS Array B	64.62	339	P	P	15 47 12.4	0.0
	comp=Z,2.7nm,0.8s,mb4.1,baz=39,slow=7.8,SNR=3.8						
AKASG	Malin Array Be	74.52	322	P	P	15 48 12.8	-0.2
	comp=Z,0.5nm,0.4s,mb3.6,baz=46,slow=6.1,SNR=9.6						
AKASG	Malin Array Be	74.52	322	P	P	15 48 12.8	-0.2
NB2	NORSAR Subarra	74.76	337	P	P	15 48 14.5	+0.3
	comp=Z,0.2nm,0.7s,mb3.0,baz=48,slow=5.8						
NOA	NORSAR Array B	74.76	337	P	P	15 48 15.1	+0.9
	comp=Z,1.3nm,0.7s,mb3.7,baz=41,slow=5.8,SNR=6.7						
NOA	NORSAR Array B	74.76	337	P	P	15 48 15.1	+0.9

IDC 01 15:42:29.6±5.8**,5.96S**×**151.09E,h49**^{km}±50^{km}**,mb3.6**/3**, mb1 3.9**/4**,mb1mx3.5**/15**,mbtmp3.8**/4**,ML2.6**/1**,MS3.0**/1**, Ms1 3.0**/1**,ms1mx2.7**/25**,Error ellipse: s-maj=128.8km s-min=39.1km az=136.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.18	228	P	P	15 43 44.5	-2.1
	1.5nm,0.3s,baz=163,slow=10,SNR=11						
PMG				S	S	15 44 44.6	-1.3
	4.9nm,0.3s,baz=94,slow=18,SNR=4.1						
PMG				LR	LR	15 45 55.3	
	comp=Z,156nm,18.8s,baz=48,slow=40						
WRA	Warramunga Arr	21.41	228	P	P	15 47 12.8	-2.6
	2.4nm,0.7s,baz=54,slow=10,SNR=6.2						
WRA				PcP	PcP	15 51 15.8	-2.3
	0.5nm,0.6s,baz=47,slow=2.2,SNR=5.8						
ASAR	Alice Springs	24.15	221	P	P	15 47 41.2	-1.1
	1.4nm,0.8s,baz=56,slow=10,SNR=13						
NVAR	Mina Array Bea	94.14	52	P	P	15 55 43.7	-0.8
	0.2nm,0.4s,baz=270,slow=3.6,SNR=5.0						

IDC ***01*** *15:50:22.8±0.5,6.87S×131.13E,mb4.6/13,mb1 4.7/15, mb1mx4.7/17,mbtmp4.6/15,ML4.4/2,MS3.7/2,Ms1 3.6/2, ms1mx3.0/23,Error ellipse: s-maj=24.2km s-min=13.7km az=72.0*

MOS ***01*** *15:50:25.3±1.4,6.96S×131.05E,h33^{km},mb5.0/15,Error ellipse: s-maj=14.7km s-min=6.8km az=110.4*

BJI ***01*** *15:50:26.7,6.97S×131.28E,h56^{km},mB4.8,mb5.1,Ms4.5, Msz4.0*

NEIC ***01*** *15:50:29.0±1.1,6.81S×131.15E,h46^{km}±11^{km},mb5.0/20, Error ellipse: s-maj=9.7km s-min=5.6km az=53.0*

HRVD ***01*** *15:50:29.0±0.8,6.60S×131.34E,h94^{km}±7^{km},MW5.0/25, Centroid moment Tensor Solution. LP body waves: s13,c13;Mantle waves: s25,c36; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.17±.22; M$_{\theta\theta}$0.92±.27; M$_{\phi\phi}$-2.08±.29; M$_{r\theta}$0.20±.16; M$_{\theta\phi}$2.79±.20; M$_{\phi r}$0.67±.19; Best double couple: M$_0$3.275×10^{16} NP1:φ$_s$105°,δ73°,λ9°. NP2:φ$_s$12°,δ81°,λ163°. Principal axes: T 2.756, Plg18°, Azm328°; N 1.045, Plg71°, Azm166°; P -3.794, Plg5°, Azm60°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 01 15:50:20.9±2.4**,6.94S**±0.04×**131.22E**±0.08**,h4**^{km}±15^{km}**, h37**^{km}±3.8^{km}**:pP-P,n114,** σ**0^{s}97**/117**,mb4.9**/46**,MS4.0**/5**, 10C-3D,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	5.86	168	*e*P	Pn	15 51 53.8	+3.1
KAKA				*e*S	Sn	15 52 55.7	-3.5
WRAB	Tennant Creek	13.27	167	*e*P	P	15 53 31.6	-1.2
WRAB				pmax	pmax		
	comp=Z,29nm,0.4s						
WRAB	Tennant Creek	13.27	167	*e*P	P	15 53 31.6	-1.2
	comp=Z,29nm,0.4s						
WRAB				*e*S	S	15 55 49.6	-12
WRA	Warramunga Arr	13.28	167	Pn	P	15 53 32.1	-0.8
	comp=Z,2.5nm,0.3s,baz=344,slow=14,SNR=70						
WRA				Sn	S	15 55 51.6	-11
	comp=Z,10nm,0.3s,baz=341,slow=24,SNR=12						
WB2	Warramunga Arr	13.28	167	*e*P	P	15 53 31.7	-1.2
WB2				*e*S	S	15 55 49.2	-13
PMG	Port Moresby	15.96	100	Pn	P	15 54 11.6	+3.4
	comp=Z,3.1nm,0.3s,baz=273,slow=8.1,SNR=16						
PMG				Sn	S	15 56 57.2	-8.6
	comp=Z,2.1nm,0.3s,baz=35,slow=23,SNR=5.4						
PMG	Port Moresby	15.96	100	*e*P	P	15 54 12.1	+3.8
	comp=Z,82nm,0.9s						
ASAR	Alice Springs	16.83	171	Pn	P	15 54 18.8	-0.4
	comp=Z,2.6nm,0.3s,baz=347,slow=8.3,SNR=123						
ASAR				Sn	S	15 57 19.1	-6.7
	comp=Z,4.8nm,0.3s,baz=354,slow=27,SNR=12						
ASPA	Alice Springs	16.83	171	*e*P	P	15 54 18.5	-0.7
ASPA				*e*S	S	15 57 13.8	-12
MBWA	Marble Bar	17.98	217	*e*P	P	15 54 33.5	-0.1
	comp=Z,28nm,0.7s						
CTA	Charters Tower	19.58	133	P	P	15 54 56.3	+3.4
	comp=Z,0.6nm,0.3s,baz=299,slow=13,SNR=9.8						
CTAO	Charters Tower	19.58	133	*e*P	P	15 54 56.6	+3.7
CTAO				pmax	pmax		
	comp=Z,29nm,1.2s						
CTAO	Charters Tower	19.58	133	*e*P	P	15 54 56.6	+3.7
	comp=Z,29nm,1.2s						
KKM	Kota Kinabalu	19.76	310	*e*P	P	15 54 54.7	-0.2
KSM	Kuching	22.48	291	*e*P	P	15 55 23.3	+0.5
LUBP	Lubang	23.25	332	*e*P	P	15 55 32.7	+2.2
STKA	Stephens Creek	26.64	160	*e*P	P	15 56 03.7	+1.1
STKA	Stephens Creek	26.64	160	P	P	15 56 03.7	+1.1
	comp=Z,1.3nm,0.4s,mb3.8,baz=353,slow=7.8,SNR=10						
STKA				LR	LR	16 06 41.1	
	comp=Z,99nm,20.9s,MS3.3,baz=205,slow=37						
DZM	Mont Dzumac	37.14	118	P	P	15 57 36.5	+1.7
	comp=Z,2.5nm,0.5s,mb4.3,baz=184,slow=21,SNR=7.3						
SSE	Sheshan	39.02	346	P	P	15 57 51.4	+0.9
SSE				AP	pP	15 58 00.2	+8.4
SSE				PCP	PcP	15 59 59.6	-1.6
SSE				S	S	16 03 50.6	+0.9
SSE				XS		16 04 06.0	
SSE				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.2						
SSE				AMB	AMB		
	comp=Z,90nm,6.7s						
SSE				LR	LR		
	comp=N,80nm,18.3s,MS3.6						
SSE				LR	LR		
	comp=E,50nm,18.4s,MS3.6						
SSE				LR	LR		
	comp=Z,120nm,15.5s,MS3.8						
NANT	Nan	39.49	311	⇑P	P	15 57 54.0	-0.5
	comp=Z,450nm,0.5s						
NJ2	Nanjing	40.53	344	*e*P	P	15 58 02.9	0.0
NJ2				AP	pP	15 58 12.7	+8.5
NJ2				PP	PP	15 59 41.9	+2.1
NJ2				S	S	16 04 10.0	-2.3
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,620nm,4.8s						
NJ2				LR	LR		
	comp=N,840nm,18.4s,MS5.0						
NJ2				LR	LR		
	comp=E,2µm,19.4s,MS5.0						
WHN	Wuhan	40.63	337	*e*P	P	15 58 05.6	+1.9
CMAR	Chiang Mai Arr	40.63	309	*i* P	P	15 58 04.0	+0.1
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	Chiang Mai Arr	40.63	309	P	P	15 58 04.0	+0.1
	comp=Z,9.5nm,0.8s,mb4.5,baz=132,slow=7.0,SNR=54						
CHG	Chiang Mai	40.83	309	⇑P	P	15 58 05.6	+0.1
	comp=Z,27nm,1.0s,mb4.8						
KMI	Kunming	42.24	320	P	P	15 58 17.9	+0.8
KMI				AP	pP	15 58 32.2	+14
KMI				LR	LR		
	comp=Z,130nm,14.0s,MS4.0						
ENH	Enshi	42.47	332	*e*P	P	15 58 18.3	-0.6
	comp=Z,17nm,0.8s,mb4.7						
MJAR	Matsushiro Arr	43.74	8	P	P	15 58 28.6	-0.6
	comp=Z,7.1nm,1.0s,mb4.4,baz=188,slow=9.4,SNR=14						
MAJO	Matsushiro	43.74	8	*e*P	P	15 58 28.1	-1.1
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
MAJO	Matsushiro	43.74	8	*e*P	P	15 58 28.1	-1.1
	comp=Z,9.0nm,0.9s,mb4.5						
MAT	Matsushiro	43.74	8	*e*P	P	15 58 28.0	-1.2
MAT				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
MAT	Matsushiro	43.74	8	*e*P	P	15 58 28.0	-1.2
	comp=Z,12nm,1.0s,mb4.6						
MAT	Matsushiro	43.74	8	P	P	15 58 28.4	-0.8
XAN	Xi’an	45.90	334	P	P	15 58 45.0	-1.6
XAN				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
LZH	Lanzhou	49.93	331	⇑P	P	15 59 18.0	0.0
LZH				AP	pP	15 59 30.1	+11
LZH				XP	sP	15 59 34.2	+14
LZH				AMB	AMB		
	comp=Z,40nm,1.5s,mb5.2						
SHL	Shillong	50.06	312	⇑*i*P	P	15 59 18.5	-0.6
ASAJ	Asahikawa	51.84	10	P	P	15 59 32.6	+0.2
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ASAJ	Asahikawa	51.84	10	P	P	15 59 32.6	+0.2
	comp=Z,7.4nm,0.9s,mb4.6,baz=254,slow=14,SNR=5.8						
LSA	Lhasa	53.00	315	P	P	15 59 42.0	+0.7
LSA	Lhasa	53.00	315	*e*P	P	15 59 41.7	+0.4
LSA				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.1						
LSA	Lhasa	53.00	315	*e*P	P	15 59 41.7	+0.4
	comp=Z,15nm,0.6s,mb5.1						
GTA	Gaotai	54.51	330	P	P	15 59 52.5	+0.3
GTA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
YSS	Yuzh-Sakhalins	54.62	10	P	P	15 59 52.6	-0.3
YSS				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
YSS	Yuzh-Sakhalins	54.62	10	P	P	15 59 52.6	-0.4
	comp=Z,3.1nm,0.5s,mb4.6						
GUN	Gumba	55.83	310	*e*P	P	16 00 01.3	-0.7
	comp=Z,103nm,0.7s,mb5.9						
PKI	Pulchoki	56.01	310	*e*P	P	16 00 02.5	-0.8
	comp=Z,37nm,0.8s,mb5.5						
PKI	Pulchoki	56.01	310	*e*P	P	16 00 02.5	-0.8
PKI				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.2						
KKN	Kakani	56.22	310	*e*P	P	16 00 03.9	-0.9
	comp=Z,58nm,0.8s,mb5.6						
KKN	Kakani	56.22	310	*e*P	P	16 00 03.9	-0.9
KKN				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.4						
DMN	Daman	56.26	310	*e*P	P	16 00 04.4	-0.7
	comp=Z,82nm,0.9s,mb5.8						
GKN	Gorkha	56.82	310	*e*P	P	16 00 08.2	-0.9
	comp=Z,110nm,0.8s,mb5.9						
HYB	Hyderabad	57.38	296	*e*P	P	16 00 11.5	-1.7
HYB	Hyderabad	57.38	296	*i* P	P	16 00 11.5	-1.7
KOLN	Koldanda	57.50	309	*e*P	P	16 00 13.3	-0.6
	comp=Z,90nm,0.9s,mb5.8						
ULN	Ulaanbaatar	58.59	341	*c i*P	P	16 00 21.6	+0.4
ULN	Ulaanbaatar	58.59	341	*e*P	P	16 00 21.3	+0.1
	comp=Z,23nm,0.8s,mb5.2						
SONM	Songino Array	58.77	341	P	P	16 00 22.6	0.0
	comp=Z,9.4nm,0.7s,mb4.9,baz=158,slow=6.7,SNR=34						
CIT	Chita	60.65	348	*e*P	P	16 00 35.8	+0.4
ZAK	Zakamensk	62.01	340	*e*P	P	16 00 43.7	-0.9
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
NDI	New Delhi	62.91	307	*e*P	P	16 00 47.5	-3.4
TLY	Talaya	63.00	341	*e*P	P	16 00 51.0	-0.2
TLY				*e*		16 00 59.8	
TLY				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0						
WMQ	Urumqi	64.01	326	P	P	16 00 58.4	+0.4
WMQ				PCP	PcP	16 01 33.9	+0.7
WMQ				PP	PP	16 03 20.7	+0.2
WMQ				PPP	PPP	16 04 52.9	+0.4
WMQ				AMB	AMB		
	comp=Z,80nm,2.1s,mb5.4						
YAK	Yakutsk	68.77	359	*c i*P	P	16 01 27.4	-0.6
YAK				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.3						
YAK	Yakutsk	68.77	359	*e*P	P	16 01 27.2	-0.8
	comp=Z,29nm,0.8s,mb5.3						
MKAR	Makanchi Array	68.84	326	*i* P	P	16 01 28.6	-0.1
MKAR				pmax	pmax		
	comp=Z,33nm,0.7s						
MKAR	Makanchi Array	68.84	326	P	P	16 01 28.7	0.0
	comp=Z,39nm,0.7s,mb5.5,baz=124,slow=7.8,SNR=348						
FX1	Attu Island--F	69.39	26	P	P	16 01 33.2	+1.3
FX1				pmax	pmax		
	comp=Z,15nm,0.7s						

FX1	Attu Island--F	69.39	26	P	P	16 01 33.2	+1.3
	comp=Z,15nm,0.7s,mb5.0,baz=311,slow=3.2,SNR=6.0						
KZA	Kyzart	70.52	319	P	P	16 01 40.4	+1.4
	SNR=38						
TKM2	Tokmak 2	70.71	320	P	P	16 01 40.7	+0.5
	SNR=19						
KBK	Karagaybulak	71.00	320	P	P	16 01 43.0	+1.1
	SNR=13						
UCH	Uchtor	71.07	319	P	P	16 01 43.7	+1.3
	SNR=42						
AAK	Ala-Archa	71.28	319	P	P	16 01 44.9	+1.3
	SNR=11						
AAK	Ala-Archa	71.28	319	*i* P	P	16 01 43.0	-0.6
AAK				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
AAK	Ala-Archa	71.28	319	*e*P	P	16 01 43.2	-0.4
	comp=Z,20nm,1.0s,mb5.0						
CHMS	Chumysh	71.29	320	P	P	16 01 43.5	-0.1
	SNR=5.2						
SEY	Seymchan	71.53	10	*e*P	P	16 01 45.0	+0.3
SEY				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.5						
SEY				pmax	pmax		
	comp=E,1.0nm,0.8s						
AML	Almayashu	71.56	319	P	P	16 01 46.0	+0.6
	SNR=48						
USP	Ospenovka	71.58	320	P	P	16 01 45.7	+0.3
	SNR=24						
EKS2	Erkin-Say	71.76	319	P	P	16 01 47.4	+0.9
	SNR=11						
ZAL	Zalesovo	72.07	333	P	P	16 01 47.2	-0.9
	comp=E,7.0nm,0.9s,mb4.6,baz=0.8,slow=4.9,SNR=42						
VNDA	Vanda	72.37	173	*e*P	P	16 01 50.1	+0.5
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VNDA	Vanda	72.37	173	P	P	16 01 50.8	+1.2
	comp=Z,1.5nm,0.8s,mb4.0,baz=298,slow=5.3,SNR=9.0						
VNDA	Vanda	72.37	173	*e*P	P	16 01 50.1	+0.5
	comp=Z,1.1nm,0.7s,mb3.9						
NVS	Novosibirsk	73.35	333	*i* P	P	16 01 54.5	-1.2
NVS				*e*		16 02 15.8	
NVS				pmax	pmax		
	comp=N,10.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,12nm,1.2s						
KKAR	Karatay Array	74.09	318	*i* P	P	16 02 00.2	0.0
KKAR				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
MAW	Mawson	75.45	202	P	P	16 02 09.4	+1.9
	comp=Z,6.5nm,1.0s,mb4.5,baz=63,slow=8.0,SNR=6.9						
MAW				LR	LR	16 30 22.8	
	comp=Z,65nm,20.0s,MS3.9,baz=37,slow=32						
JMDO	Jabal Madar	77.20	295	⇓P	P	16 02 18.6	+0.3
SMDO	Samad	77.41	295	P	P	16 02 20.1	+0.7
	SNR=10.0						
BIDO	Bidbid	77.44	296	P	P	16 02 20.3	+0.7
	SNR=12						
TIXI	Tiksi	78.44	359	*i* P	P	16 02 23.1	-1.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
BVA0	Borovoye Array	78.66	327	P	P	16 02 25.4	-0.3
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
CHKZ	Chkalovo	78.84	328	*i* P	P	16 02 26.1	-0.6
CHKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
CHKZ	Chkalovo	78.84	328	*e*P	P	16 02 26.0	-0.7
	comp=Z,5.8nm,0.8s,mb4.6						
ASHO	Ashiyiah	79.55	297	⇑P	P	16 02 31.3	+0.2
BANOM	Banah	79.61	298	⇑P	P	16 02 32.2	+0.8
WHFO	Wadi Hawf	80.29	289	P	P	16 02 35.1	-0.1
	SNR=7.9						
ABTO	Aybut	80.63	289	P	P	16 02 37.4	+0.4
	SNR=9.8						
OPO	Ambohidratompo	82.19	252	P	P	16 02 46.3	+1.1
	comp=Z,1.4nm,0.6s,mb4.1,baz=17,slow=2.0,SNR=6.1						
QSPA	South Pole Qui	83.04	180	⇑*i*P	P	16 02 49.7	+1.3
	comp=Z,73nm,0.9s,mb5.7						
AB31	Akbulak array	83.22	321	P	P	16 02 49.0	-0.8
AB31				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
SYO	Syowa Base	84.16	201	⇓P	P	16 02 53.6	-0.6
ARU	Arti	86.29	328	⇑*i*P	P	16 03 04.3	-0.8
ARU				*e*		16 06 25.4	
ARU				*e*S	S	16 13 27.6	-12
ARU				*e*SS	SS	16 19 19.0	-2.9
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
ARU	Arti	86.29	328	*e*P	P	16 03 03.9	-1.2
	comp=Z,7.1nm,1.0s,mb4.8						
ILAR	Eielson Array	92.77	25	P	P	16 03 34.1	-1.3
	comp=Z,0.5nm,0.7s,mb4.1,baz=299,slow=4.0,SNR=5.8						
SNAA	Sanae	96.00	193	P	P	16 03 51.7	+1.6
	comp=Z,1.3nm,0.9s,mb4.3,baz=129,slow=5.2,SNR=9.3						
OBN	Obninsk	98.31	325	*d i*P	P	16 03 56.9	-4.0
OBN				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.4						
TXAR	Lajitas Array	123.85	59	PKP	PKPdf	16 09 23.1	-0.3
	comp=Z,0.6nm,0.9s,baz=270,slow=1.3,SNR=4.3						
LVC	Limon Verde	144.63	147	*e*PKPdf	PKPdf	16 10 00.8	-1.3
CPUP	Villa Florida	145.91	166	PKPbc	PKPbc	16 10 05.1	+2.4
	comp=Z,6.0nm,1.0s,baz=246,slow=3.5,SNR=12						
CPUP	Villa Florida	145.91	166	PKPbc	PKPbc	16 10 05.1	+2.4
LPAZ	La Paz	150.01	140	*e*PKIKP	PKPdf	16 10 12.0	+1.0
LPAZ						16 10 16.9	
LPAZ	La Paz	150.01	140	PKPbc	PKPdf	16 10 16.9	+5.9
	comp=Z,3.9nm,1.0s,baz=48,slow=3.1,SNR=14						

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*CSEM **01** 16:02:20.8±0.2,51.51N×16.14E,h2^{km},ML2.9,Error ellipse: s-maj=3.0km s-min=1.4km az=24.0*
*PRU **01** 16:02:21.7,51.47N×16.14E*
*WAR **01** 16:02:22.3,51.47N×16.11E,h1^{km},ML2.4,Mining Induced*
*NEIC **01** 16:02:22.9±1.6,51.36N×16.13E,h5^{km},ML2.9(BRG), ML2.9(VIE),Error ellipse: s-maj=17.5km s-min=7.9km az=206.0*
ISC 01 16:02:20.3±1.1**,51.43N**±0.05×**16.06E**±0.05**,n20,**σ**1^{s}22**/35**, 1C-1D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.61	166	*e*PG	Pg	16 02 34.0	+1.6
KSP				*e*SG	Sg	16 02 43.0	+2.5
KSP	Ksiaz	0.61	166	⇓*i*Pg	Pg	16 02 34.0	+1.6
KSP				*e*Sg	Sg	16 02 42.4	+1.9
UPC	Upice	0.93	182	*e*PG	Pg	16 02 39.9	+1.2
DPC	Dobruska-Polom	1.09	171	*e*PG	Pg	16 02 42.7	+0.6
DPC				*e*SG	Sg	16 02 57.4	+0.7
	18nm,0.4s						
DPC	Dobruska-Polom	1.09	171	Pg	Pg	16 02 42.7	+0.6
	18nm,0.4s						
DPC				*e*Sg	Sg	16 02 57.4	+0.7
PVCC	Panska Ves	1.30	227	*e*PG	Pg	16 02 47.1	+0.8
BRG	Berggiesshubel	1.45	248	*i* Pg	Pg	16 02 49.4	+0.3
BRG				*i* Sg	Sg	16 03 09.1	+0.7
PRU	Pruhonice	1.74	214	*e*PG	Pg	16 02 54.7	-0.2
PRU				*e*x	x	16 03 11.2	
PRU				*e*SG	Sg	16 03 19.0	+0.9
PRU	Pruhonice	1.74	214	Pg	Pg	16 02 54.7	-0.2
PRU				Sg	Sg	16 03 19.0	+0.9
MORC	Moravsky Berou	1.91	150	*e*P	Pn	16 02 54.5	+0.1
MORC	Moravsky Berou	1.91	150	*e*P	Pn	16 02 54.5	+0.2
MORC	Moravsky Berou	1.91	150	*e*Pn	Pn	16 02 54.6	+0.3
MORC				*e*Sg	Sg	16 03 22.0	-1.8
CLL	Collm	1.92	268	*e*PG	Pg	16 02 58.0	-0.6
CLL				*i*		16 03 01.7	
CLL				*i* SG	Sg	16 03 24.0	-0.2
CLL	Collm	1.92	268	*e*Pg	Pg	16 02 58.0	-0.6
CLL				*i* Sg	Sg	16 03 24.0	-0.2
OKC	Ostrava-Krasne	2.08	139	*e*PG	Pg	16 03 00.2	-1.5
OKC				*e*SG	Sg	16 03 27.1	-2.3
VRAC	Vranov	2.15	171	*e*Pn	Pn	16 02 59.4	+1.5
NKC	Novy Kostel	2.58	244	*e*SG	Sg	16 03 45.0	-1.3
KHC	Kasperske Hory	2.80	216	*e*PN	Pn	16 03 07.0	-0.1
KHC				*e*PG	Pg	16 03 13.9	-2.2
KHC				*e*SG	Sg	16 03 51.6	-1.8
KHC	Kasperske Hory	2.80	216	*e*Pg	Pg	16 03 13.9	-2.2
KHC				*e*Sg	Sg	16 03 51.6	-1.8
MOA	Molln	3.77	199	⇑*i*PN	Pn	16 03 22.2	+1.3
MOA				*i* SG	Sg	16 04 25.4	-0.4
	3.0nm,0.3s						

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*TEH **01** 16:08:25.8,33.96N×48.22E,h11^{km},Mn3.4*
*THR **01** 16:08:25.4±1.0,34.40N×48.43E,h15^{km}±8^{km},ML3.1*
*CSEM **01** 16:08:25.5±0.2,34.20N×48.23E,h18^{km},ML3.4,Error ellipse: s-maj=4.8km s-min=2.8km az=141.0*
ISC 01 16:08:24.9±0.5**,34.19N**±0.04×**48.24E**±0.05**,h11^{km},n19,** σ**1^{s}12**/23**,Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKOM	Komasi	0.60	269	Pg	Pg	16 08 37.1	0.0
SNGE	Sanandaj	1.17	321	*e*PG	Pn	16 08 46.0	-1.1
SNGE				*e*SG	Sn	16 09 02.3	-0.8
SNGE				AML	AML	16 09 10.0	
	comp=N,517nm,0.5s						
SNGE	Sanandaj	1.17	321	*e*Pg	Pn	16 08 46.0	-1.2
	SNR=91						
SNGE				*e*Sg	Sn	16 09 02.3	-0.9
	SNR=91						
IGHG	Ghaleghazi	1.39	276	Pn	Pn	16 08 51.4	+1.0
ASAO	Ashtian	1.52	76	*e*PG	Pn	16 08 50.0	-2.2
ASAO				*e*SG	Sn	16 09 08.1	-4.0
ASAO				AML	AML	16 09 11.8	
	comp=N,340nm,0.5s						
IRAZ	Razeghan	1.84	48	Pn	Pn	16 08 56.3	-0.6
IQOM	Qom	2.43	74	Pn	Pn	16 09 09.2	+4.0
IMHD	Mahdasht	2.49	52	Pn	Pn	16 09 06.5	+0.4
IGZV	Gazvin	2.73	36	Pn	Pn	16 09 12.0	+2.5
IKLH	Kalahroud	2.91	106	Pn	Pn	16 09 11.0	-1.1
IVRN	Varamin	2.99	73	Pn	Pn	16 09 13.8	+0.6
IAFJ	Afjeh	3.30	59	Pn	Pn	16 09 18.8	+1.2
DAMV	Damavand	3.39	64	*e*PN	Pn	16 09 17.3	-1.5
IDMV	Damavand	3.41	65	Pn	Pn	16 09 20.1	+0.9
IZEF	Zefreh	3.65	110	Pn	Pn	16 09 21.4	-1.2
IFIR	Firoozkooh	3.98	67	Pn	Pn	16 09 28.7	+1.4
NASN	Na'in	4.06	109	*e*PN	Pn	16 09 28.7	+0.3
NASN				AML	AML	16 10 37.3	
	comp=N,20nm,0.7s						
KBD	Kabd	5.02	185	*e*P	Pn	16 09 42.1	+0.1
RDF	Al-Radifah	5.28	187	*e*P	Pn	16 09 46.5	+0.8
RDF				*e*S	Sn	16 10 47.0	-0.3

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*NIED **01** 16:20:00,24.70N×122.00E,h62^{km},Mw5.4 Best double couple: M$_0$1.19×10^{17} NP1:φ$_s$156°,δ89°,λ42°. NP2:φ$_s$65°, δ48°,λ179°.*
*MOS **01** 16:20:00.9±0.9,24.75N×122.08E,h37^{km},mb5.7/81, MS4.5/35,Error ellipse: s-maj=6.8km s-min=3.8km az=116.4*
*BJI **01** 16:20:04.1,24.67N×122.06E,h59^{km},mB5.4,mb5.4, ML5.6,Ms5.0,Msz4.7*
*HRVD **01** 16:20:04.9±0.2,24.64N×121.99E,h71^{km}±1^{km},MW5.4/68, Centroid moment Tensor Solution. LP body waves: s57,c108;Mantle waves: s68,c144; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.93±.04; M$_{\theta\theta}$0.22±.03; M$_{\phi\phi}$-1.15±.03; M$_{r\theta}$0.09±.02; M$_{\theta\phi}$-0.57±.03; M$_{\phi r}$-0.90±.02; Best double couple: M$_0$1.481×10^{17} NP1:φ$_s$45°,δ32°,λ130°. NP2:φ$_s$180°,δ66°,λ68°. Principal axes: T 1.341, Plg63°, Azm55°; N .282, Plg20°, Azm190°; P -1.62, Plg18°, Azm286°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **01** 16:20:04.9±0.1,24.72N×122.06E,mb5.4/112,MW5.4 Error ellipse: s-maj=3.8km s-min=3.5km az=184.0, Moment Tensor Solution. s11 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.07; M$_{\theta\theta}$0.54; M$_{\phi\phi}$-1.61; M$_{r\theta}$0.22; M$_{\theta\phi}$-0.07; M$_{\phi r}$-0.80; Best double couple: M$_0$1.6×10^{17} NP1:φ$_s$21°, δ33°,λ120°. NP2:φ$_s$168°,δ62°,λ72°. Principal axes: T 1.36, Plg68°, Azm43°; N .47, Plg15°, Azm176°; P -1.83, Plg15°, Azm270°;*
NEIC Felt [IV] at Taipei. Felt at Hsin-chu, Hsin-chuang, Hsin-tien, Shu-lin, Su-ao, Ta-ch'i, T'ai-nan, T'ao-yuan, Ts'ao-t'un and Yung-ho. Recorded [4 TAP] in I-lan and T'ai-pei; [3 TAP] in Hua-lien, Miao-li, T'ai-chung and T'ao-yuan; [2 TAP] in Chang-hua, Hsin-chu, Nan-t'ou and Yun-lin; [1 TAP] in Chia-i, P'eng-hu, T'ai-nan and T'ai-tung Counties. Also recorded [1 JMA] on Iriomote-jima and Yonaguni-jima, Ryukyu Islands.
*TAP **01** 16:20:05.7,24.64N×122.07E,h65^{km},ML6.0*
TAP Felt III J at Suao, III J at Ilan, IV J at Nanau, III J at Santiao Chiao, IV J at Nioudou, IV J, II J at Mucha, III J at Taipai, III J at Sanguang, IV J at Nanshan, II J at Chiawan, III J at Kuangyinshan, III J at Hualien, III J at Jungli (National Central University), III J at Tachien, III J at Nanjuang, II J at Shilin, II J at Hsinchu, II J at Sanyi, II J at Liyutan, II J at Ryuetan, II J at Hungye, I J at Yuchr, II J at Mingjian, I J at Alishan, II J at Tsauling, II J at Chenggung, II J at Gukeng, I J at Lidau, II J at Dacheng, I J at Tsaushan, II J at Chiayi, II J at Szhu, I J, II J at Anpu.
*JMA **01** 16:20:05.3±0.3,24.65N×122.02E,h65^{km},M5.5*
JMA Felt I J1.
*IDC **01** 16:20:06.7±1.2,24.73N×122.12E,h75^{km}±9^{km},mb4.9/33, mb1 5.0/36,mb1mx5.0/37,mbtmp5.2/36,MS4.4/23, Ms1 4.4/23,ms1mx4.3/32,Error ellipse: s-maj=10.6km s-min=7.1km az=58.0*
ISC 01 16:20:05.2±0.1**,24.67N**±0.01×**122.05E**±0.01**,h74^{km}**±1^{km}**, h63^{km}**±2.3^{km}**:pP-P,n776,**σ**1^{s}08**/823**,mb5.3**/175**,68C-51D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.19	251	⇓*i*P	P	16 20 15.8	-0.5
ILA	Ilan	0.29	289	⇓P	P	16 20 16.7	-0.2
ILA				S	S	16 20 25.0	-0.6
TWB1	Santiao Chiao	0.34	351	⇓*i*P	P	16 20 16.9	-0.4
ENA	Nanau	0.37	229	⇓*i*P	P	16 20 17.2	-0.2
ENA				S	S	16 20 25.7	-0.8
ENTT	Nioudou	0.44	266	⇓*i*P	P	16 20 18.3	+0.4
EHP	Heping Village	0.45	218	P	P	16 20 17.9	-0.2
EHP				S	S	16 20 27.0	-0.7
NWF	Wu-fen Shan	0.47	329	⇓*i*P	P	16 20 18.2	0.0
TWA	Mucha	0.52	306	⇓*i*P	P	16 20 18.7	0.0
TWA				S	S	16 20 27.7	-1.1
TATO	Taipei	0.59	301	*e*P	P	16 20 18.2	-1.3
TAP1	Taipei	0.60	308	⇓*i*P	P	16 20 19.6	0.0
YHNB	Yeheng	0.61	270	⇑*i*P	P	16 20 19.7	0.0
TAP	Taipei	0.61	307	⇓*i*P	P	16 20 19.6	-0.1
TAP				S	S	16 20 29.6	-0.7
NSK	Sanguang	0.62	271	⇑P	P	16 20 20.1	+0.3
NACB	Ninganchiao	0.64	220	⇑*i*P	P	16 20 18.9	-1.1
NNS	Nan Shan	0.65	250	⇓*i*P	P	16 20 20.4	+0.3
NNS				S	S	16 20 30.7	-0.4
TWS1	Kuangyinshan	0.71	307	⇑*i*P	P	16 20 21.0	+0.3
TWS1				S	S	16 20 31.8	-0.6
TWD	Chiawan	0.72	215	⇓*i*P	P	16 20 20.0	-0.8
TWD				S	S	16 20 31.0	-1.4
TWY	Chenhua	0.73	326	⇑P	P	16 20 21.1	+0.2
TWY				S	S	16 20 32.5	-0.1
HWA	Hwalien	0.80	210	⇓*i*P	P	16 20 21.4	-0.3
NCU	National Centr	0.83	291	⇑P	P	16 20 22.8	+0.6
NCU				S	S	16 20 35.4	+0.6
TWT	Tachien	0.89	243	⇓*i*P	P	16 20 23.7	+0.9
YOJ	Yonaguni jima	0.90	103	P	P	16 20 22.7	-0.2
YOJ				S	S	16 20 35.5	-0.7
ESF	Shoufeng Towns	0.94	212	*e*P	P	16 20 22.6	-0.8
ESF				S	S	16 20 35.5	-1.4
NSTT	Nanjuang	0.95	268	⇑*i*P	P	16 20 24.0	+0.4
PCYT	Pengchaiyu	0.96	1	⇓*i*P	P	16 20 24.2	+0.6
PCYT				S	S	16 20 37.8	+0.4
HSN	Hsinchu	0.99	278	*e*P	P	16 20 24.1	+0.1
HSN				S	S	16 20 37.7	-0.4
ESL	Shilin	1.02	213	⇓P	P	16 20 23.3	-1.2
TEGC	Jichi Village	1.06	206	*e*P	P	16 20 24.7	-0.2
TEGC				S	S	16 20 38.9	-0.8
NSY	Sanyi	1.20	258	*e*P	P	16 20 27.5	+0.8
TWQ1	Liyutan	1.20	255	⇑P	P	16 20 27.4	+0.6
TWQ1				S	S	16 20 43.5	+0.6
SMLT	Sun Moon Lake	1.31	233	⇓P	P	16 20 28.9	+0.6
SMLT				S	S	16 20 46.4	+1.0
TYC	Yuchr	1.32	235	⇓*i*P	P	16 20 29.2	+0.6
EHY	Hungye	1.33	210	*e*P	P	16 20 26.9	-1.7
TCU	Taichung	1.35	248	⇑*i*P	P	16 20 29.5	+0.6
WNT	Mingjian	1.47	238	⇑P	P	16 20 31.2	+0.7
WNT				S	S	16 20 50.0	+0.9
TWF1	Yuli	1.48	208	*e*P	P	16 20 28.9	-1.7
TWF1				S	S	16 20 47.4	-1.9
IRIF	Iriomote-Funau	1.57	102	P	P	16 20 31.4	-0.4
IRIF				S	S	16 20 51.0	-0.4
ALS	Alishan	1.62	225	*e*P	P	16 20 33.4	+1.0
ALS				S	S	16 20 54.9	+2.5
CHN5	Tsauling	1.64	230	*e*P	P	16 20 33.6	+0.9
WGK	Gukeng	1.67	234	*e*P	P	16 20 33.9	+0.8
WGK				S	S	16 20 54.8	+1.1
CHKT	Chengkung	1.68	202	⇓P	P	16 20 31.7	-1.6
CHKT				S	S	16 20 50.3	-3.6
HATJ	Hateruma jima	1.72	110	P	P	16 20 33.9	+0.2
HATJ				S	S	16 20 56.2	+1.5
ELDTW	Lidau	1.75	213	*e*P	P	16 20 33.0	-1.1
WTCT	Ta-ch'eng	1.80	244	*e*P	P	16 20 34.8	0.0
WTCT				S	S	16 20 56.5	-0.2
CHN2	Minshiung	1.83	232	*e*P	P	16 20 36.1	+0.9
CHN2				S	S	16 20 58.9	+1.6
JKRS	Kuro-shima	1.84	103	P	P	16 20 35.6	+0.2
JKRS				S	S	16 20 58.4	+0.8
CHN4	Tsaushan	1.87	226	*e*P	P	16 20 36.7	+0.9
CHN4				S	S	16 21 00.2	+2.0
CHY	Chiayi	1.89	232	*e*P	P	16 20 36.6	+0.6
CHY				S	S	16 20 58.8	+0.1
WTP	Ta-pu	1.93	223	⇑P	P	16 20 37.6	+1.0
JIJ	Ishigaki jima	1.94	99	P	P	16 20 36.2	-0.5
JIJ				S	S	16 20 59.4	-0.5
WSF	Szhu	1.96	239	⇑P	P	16 20 37.1	+0.2
WSF				S	S	16 21 00.3	-0.1
CHN1	Nanshi	2.03	224	⇑P	P	16 20 38.6	+0.7
CHN1				S	S	16 21 03.0	+0.9
TWG	Pinlang	2.04	206	*e*P	P	16 20 36.2	-2.0
TWG				S	S	16 20 59.6	-2.9
SGST	Jiashian	2.07	221	*e*P	P	16 20 39.7	+1.2
SGST				S	S	16 21 04.7	+1.5
TTN	Taitung	2.08	204	*e*P	P	16 20 38.1	-0.5
TTN				S	S	16 21 03.2	-0.2
CHN8	Yiju	2.13	232	*e*P	P	16 20 39.8	+0.4
CHN8				S	S	16 21 05.5	+0.7
CHN3	Shinhua	2.21	224	*e*P	P	16 20 41.7	+1.2
CHN3				S	S	16 21 08.4	+1.8
SCLT	Jiali	2.25	229	*e*P	P	16 20 41.5	+0.4
SCLT				S	S	16 21 08.2	+0.4
ECL	Taimali	2.29	206	*e*P	P	16 20 39.5	-2.2
SSD	Sandimen	2.31	214	*e*P	P	16 20 42.2	+0.3
SSD				S	S	16 21 10.2	+1.0
TAI1	Yung-k'ang	2.32	226	*e*P	P	16 20 43.0	+0.9
TAI1				S	S	16 21 08.8	-0.7
TWM1	Shoushan	2.36	219	*e*P	P	16 20 44.4	+1.7
SGLT	Jiouru	2.40	217	*e*P	P	16 20 45.1	+1.8
JTJ	Tarama	2.42	90	P	P	16 20 44.0	+0.6
JTJ				S	S	16 21 14.1	+2.2
PNG	Penghu	2.53	245	*e*P	P	16 20 43.7	-1.3
PNG				S	S	16 21 11.8	-2.9
TAW	Tawu	2.53	205	*e*P	P	16 20 43.6	-1.5
WDGT	Dungji	2.59	238	*e*P	P	16 20 45.2	-0.7
WDGT				S	S	16 21 14.4	-1.9
KAU	Kaohsiung	2.63	218	*e*P	P	16 20 46.7	+0.2
SCZT	Fangliau	2.63	210	*e*P	P	16 20 46.5	0.0
SCZT				S	S	16 21 17.0	-0.4
TWP	Hsiaoliuchiu	2.78	214	*e*P	P	16 20 49.6	+1.1
HEN	Hengchun	2.91	205	*e*P	P	16 20 50.5	+0.1
TWK1	Hengchun	2.94	203	*e*P	P	16 20 50.1	-0.7
TWK1				S	S	16 21 22.3	-2.8
TSEB	Hengchuen, Pin	2.95	201	*e*P	P	16 20 50.2	-0.8
TSEB				S	S	16 21 23.8	-1.6
JMJ	Miyako jima 2	2.96	87	P	P	16 20 51.8	+0.8
JMJ				*e*S	S	16 21 26.8	+1.4
JOGS	Gusukube	3.06	88	P	P	16 20 53.7	+1.3
JOGS				*e*S	S	16 21 28.6	+0.6
QZH	Quanzhou	3.15	276	⇓*i*P	P	16 20 52.7	-1.0
QZH				S	S	16 21 26.8	-3.5
QZH				Smax			
	comp=N,25µm,0.9s						
QZH				Smax			
	comp=E,15µm,0.8s						
QZH				LR	LR		
	comp=Z,42µm,6.2s						
KNM	Kinmen	3.30	266	*e*P	P	16 20 56.3	+0.5
KNM				S	S	16 21 33.1	-0.9
BBP	Basco	4.21	181	*i* P	P	16 21 06.7	-1.8
BBP				*i* S	S	16 21 49.8	-6.9
JKE	Kume jima 2	4.59	68	P	P	16 21 15.1	+1.3
JAGN	Aguni-jima	5.07	67	P	P	16 21 21.1	+0.8
JAGN				*e*S	S	16 22 18.9	+0.8
NAH1	Naha	5.33	72	P	P	16 21 25.7	+1.8
NAH1				*e*S	S	16 22 25.3	+0.7
JJT2	Tamagusuku 2	5.36	73	P	P	16 21 25.1	+0.8
JIH	Iheya	5.83	65	P	P	16 21 31.2	+0.4
JIH				*e*S	S	16 22 36.9	-0.2
JOW	Kunigami	6.01	68	P	P	16 21 32.8	-0.6
	comp=Z,36nm,0.3s,baz=262,slow=7.0,SNR=61						
JOW				S	S	16 22 40.6	-1.0
	comp=Z,18nm,0.3s,baz=146,slow=28,SNR=2.8						
JOW	Kunigami	6.01	68	P	P	16 21 32.9	-0.5
JOW				S	S	16 22 39.7	-1.9
SGCP	Mt. Cagua	6.40	180	*e*P	P	16 21 37.7	-1.0
SSE	Sheshan	6.45	353	P	P	16 21 38.0	-1.4
SSE				S	S	16 22 50.9	-1.4
SSE				Smax			
	comp=N,820nm,1.1s						
SSE				Smax			
	comp=E,870nm,1.2s						
SSE				LR	LR		
	comp=N,2µm,20.2s						
SSE				LR	LR		
	comp=E,5µm,20.2s						
SSE				LR	LR		
	comp=Z,3µm,11.9s						
APYP	Conner	6.81	186	*e*P	P	16 21 43.9	-0.7
APYP				*e*S	S	16 22 59.7	-1.7
JTK	Tokunoshima	6.93	62	P	P	16 21 45.2	-1.0
JTK				*e*S	S	16 23 02.0	-2.3
CVP	Callao Caves	6.94	182	*e*P	P	16 21 45.5	-0.8
CVP				*e*S	S	16 23 01.0	-3.3
ABRA	Dolores	7.10	190	*i* P	P	16 21 48.3	-0.2
CAUP	Cauayan	7.69	182	*e*P	P	16 21 57.9	+1.3
JAM	Amami Oshima	7.73	60	P	P	16 21 55.4	-1.7
JAM				*e*S	S	16 23 20.2	-3.7
NJ2	Nanjing	7.87	340	*e*P	P	16 21 57.1	-2.0
NJ2				XP		16 22 15.2	
NJ2				S	S	16 23 23.6	-3.9
NJ2				AMB	AMB		
	comp=Z,90nm,0.7s						
NJ2				Smax			
	comp=N,2µm,0.6s						
NJ2				Smax			
	comp=E,5µm,1.1s						
NJ2				LR	LR		
	comp=N,8µm,11.9s						
NJ2				LR	LR		
	comp=E,11µm,15.8s						
NJ2				LR	LR		
	comp=Z,59µm,11.6s						
JZK	Kikaishima	7.97	61	P	P	16 21 59.4	-1.1
JMZ	Minamidaito 2	8.39	80	P	P	16 22 02.1	-4.0
JNN	Nakanoshima	8.66	52	P	P	16 22 11.2	+1.3
BALP	Baler	8.89	183	*e*P	P	16 22 13.3	+0.2
WHN	Wuhan	8.99	312	P	P	16 22 11.8	-2.5
WHN				S	S	16 23 44.0	-11
WHN				LR	LR		
	comp=N,10µm,4.8s						
WHN				LR	LR		
	comp=E,8µm,2.0s						
WHN				LR	LR		
	comp=Z,8µm,16.5s						
SCZP	Santa Cruz	9.07	193	*i* P	P	16 22 16.1	+0.6
PCPH	Palayan	9.11	186	⇓*i*P	P	16 22 06.1	-10
JKC	Kuchinoerabu	9.25	50	P	P	16 22 19.2	+1.3
JSJ	Shimokoshiki	9.72	42	P	P	16 22 27.1	+2.7
POLP	Polilio Island	9.89	181	*e*P	P	16 22 29.7	+2.9
JFU	Fukue jima 2	9.89	35	P	P	16 22 30.4	+3.7
JTN	Tanegashima 3	9.91	51	P	P	16 22 30.5	+3.6
JSU	Suzuyama	10.07	46	P	P	16 22 30.7	+1.6
JTSR	Tashiro 2	10.17	49	P	P	16 22 30.3	-0.2
NGSJ	Nagasakinomoza	10.45	39	P	P	16 22 38.3	+4.0
JHD	Hondo	10.53	41	P	P	16 22 39.2	+3.9
JZO	Okuchi	10.58	43	P	P	16 22 37.2	+1.2
JNAR	Kushima--Naru	10.63	48	P	P	16 22 35.2	-1.4
JTZ	Takazaki	10.74	46	P	P	16 22 37.8	-0.3
JUR	Ureshino	10.88	38	P	P	16 22 43.6	+3.6
JIU2	Izumi 2	10.99	42	P	P	16 22 43.8	+2.2
JTA	Tamana	11.12	40	P	P	16 22 47.1	+3.9
PVCP	Virac	11.19	169	*i* P	P	16 22 45.0	+0.7

JII	**Iki**	**11.30**	**35**	P	**P**	**16 22 50.1**	**+4.5**
JFI	**Itaya**	**11.37**	**38**	P	**P**	**16 22 50.0**	**+3.4**
JNU	**Nakatsue**	**11.43**	**41**	P	**P**	**16 22 49.9**	**+2.5**
	comp=Z,2.0nm,0.3s,baz=201,slow=11,SNR=47						
JNU				LR	LR	16 28 02.1	
	comp=Z,2µm,19.1s,baz=217,slow=42						
JNU	**Nakatsue**	**11.43**	**41**	P	**P**	**16 22 50.3**	**+2.9**
JKIT	**Kitakata**	**11.44**	**44**	P	**P**	**16 22 47.9**	**+0.3**
JTU	**Tsushima**	**11.71**	**31**	P	**P**	**16 22 54.5**	**+3.3**
JFA	**Akaike**	**11.81**	**38**	P	**P**	**16 22 56.4**	**+3.9**
OIT2	**Oita 2**	**11.88**	**42**	P	**P**	**16 22 58.8**	**+5.3**
SJMP	**San Jose**	**12.18**	**184**	*e*P	**P**	**16 22 58.8**	**+1.3**
TIA	**Tai’an**	**12.26**	**341**	*e*P	**P**	**16 23 02.8**	**+4.3**
TIA				S	**S**	**16 25 20.0**	**+6.1**
TIA				AMB	AMB		
	comp=Z,80nm,1.3s						
TIA				LR	LR		
	comp=N,3µm,9.0s						
TIA				LR	LR		
	comp=E,3µm,10.0s						
CNP	**Catarman**	**12.35**	**168**	*e*P	**P**	**16 23 00.5**	**+0.8**
JTY	**Toyota**	**12.37**	**37**	P	**P**	**16 23 03.1**	**+3.2**
ENH	**Enshi**	**12.46**	**299**	*e*P	**P**	**16 23 01.2**	**0.0**
	comp=E,1µm,1.6s						
QIZ	**Qiongzhong**	**12.64**	**246**	P	**P**	**16 23 03.0**	**-0.6**
QIZ				S	**S**	**16 25 25.6**	**+2.5**
QIZ				SS	SS	16 25 43.2	+3.1
QIZ				AMB	AMB		
	comp=Z,40nm,1.4s						
QIZ				LR	LR		
	comp=E,4µm,19.6s						
QIZ				LR	LR		
	comp=Z,4µm,18.1s						
QIZ	**Qiongzhong**	**12.64**	**246**	*e*P	**P**	**16 23 03.3**	**-0.3**
	comp=Z,61nm,1.0s						
JKD	**Kudamatsu**	**12.68**	**40**	P	**P**	**16 23 07.3**	**+3.2**
BUSP	**Coron**	**12.72**	**188**	*e*P	**P**	**16 23 04.7**	**0.0**
JHIK	**Hikimi**	**13.05**	**39**	P	**P**	**16 23 13.0**	**+4.1**
INCN	**Inchon**	**13.36**	**16**	*e*P	**P**	**16 23 15.8**	**+2.8**
	comp=Z,1µm,1.4s						
ENPP	**El Nido**	**13.62**	**191**	*e*P	**P**	**16 23 19.7**	**+3.1**
JGT	**Gotsu**	**13.64**	**38**	P	**P**	**16 23 20.4**	**+3.8**
JMN	**Monobe**	**13.71**	**46**	P	**P**	**16 23 13.8**	**-3.8**
CUYO	**Cuyo Island**	**13.78**	**184**	*e*P	**P**	**16 23 25.7**	**+7.1**
GUIM	**Jordan**	**13.98**	**178**	*e*P	**P**	**16 23 27.1**	**+5.9**
GYA	**Guiyang**	**14.00**	**281**	⇑*i*P	**P**	**16 23 21.8**	**+0.5**
GYA				AP		16 23 32.9	
GYA				XP		16 23 41.6	
GYA				S	**S**	**16 25 49.2**	**-6.0**
GYA				AMB	AMB		
	comp=Z,190nm,0.9s						
GYA				AMB	AMB		
	comp=Z,860nm,6.6s						
GYA				LR	LR		
	comp=N,8µm,5.7s						
GYA				LR	LR		
	comp=E,4µm,5.8s						
GYA				LR	LR		
	comp=Z,5µm,5.7s						
JHS	**Saijyo**	**14.07**	**40**	P	**P**	**16 23 22.8**	**+0.6**
DL2	**Dalian**	**14.20**	**359**	⇑*i*P	**P**	**16 23 26.9**	**+3.0**
DL2				S	**S**	**16 26 07.3**	**+7.4**
DL2				XS		16 26 20.0	
DL2				SCS	ScS	16 35 40.5	+0.3
DL2				AMB	AMB		
	comp=Z,390nm,0.8s						
DL2				AMB	AMB		
	comp=Z,810nm,3.9s						
DL2				LR	LR		
	comp=E,860nm,18.6s						
JNM	**Ikuma**	**14.37**	**39**	P	**P**	**16 23 29.1**	**+3.0**
MSLP	**Maasin**	**14.70**	**169**	*e*P	**P**	**16 23 32.5**	**+1.9**
XAN	**Xi’an**	**14.76**	**312**	P	**P**	**16 23 31.8**	**+0.6**
XAN				AP		16 23 41.7	
XAN				S	**S**	**16 26 12.8**	**-0.4**
XAN				AMB	AMB		
	comp=Z,330nm,1.5s						
XAN				LR	LR		
	comp=N,3µm,5.5s						
XAN				LR	LR		
	comp=E,2µm,6.6s						
XAN				LR	LR		
	comp=Z,3µm,12.3s						
TIY	**Taiyuan**	**15.37**	**330**	*e*P	**P**	**16 23 39.6**	**+0.6**
TIY				S	**S**	**16 26 33.0**	**+5.7**
TIY				LR	LR		
	comp=N,4µm,10.0s						
TIY				LR	LR		
	comp=E,2µm,7.0s						
JWT	**Wachi**	**15.66**	**44**	P	**P**	**16 23 39.9**	**-2.8**
JIE	**Ise**	**16.00**	**49**	P	**P**	**16 23 49.7**	**+2.6**
BATP	**Bataraza**	**16.30**	**195**	*e*P	**P**	**16 23 53.2**	**+2.4**
BUKP	**Musuan**	**16.94**	**170**	*e*P	**P**	**16 24 01.6**	**+2.7**
SNY	**Shenyang**	**17.16**	**4**	⇑P	**P**	**16 24 02.8**	**+1.4**
SNY				AP		16 24 13.7	
SNY				XP		16 24 18.4	
SNY				S	**S**	**16 27 16.2**	**+8.1**
SNY				XS		16 27 23.7	
SNY				AMB	AMB		
	comp=Z,1µm,6.8s						
SNY				LR	LR		
	comp=E,2µm,17.3s						
SNY				LR	LR		
	comp=Z,1µm,11.6s						
CD2	**Chengdu**	**17.33**	**295**	⇓*i*P	**P**	**16 24 03.6**	**0.0**
CD2				AP		16 24 15.1	
CD2				XP		16 24 25.2	
CD2				S	**S**	**16 27 07.9**	**-4.0**
CD2				SS	SS	16 27 31.1	-5.0
CD2				AMB	AMB		
	comp=Z,350nm,0.9s						
CD2				LR	LR		
	comp=N,8µm,4.3s						
CD2				LR	LR		
	comp=Z,4µm,7.7s						
KMI	**Kunming**	**17.52**	**276**	P	**P**	**16 24 06.8**	**+0.7**
KMI				AP		16 24 17.1	
KMI				XP		16 24 23.0	
KMI				S	**S**	**16 27 20.3**	**+4.0**
KMI				AMB	AMB		
	comp=Z,70nm,1.1s						
KMI				AMB	AMB		
	comp=Z,1µm,6.3s						
KMI				LR	LR		
	comp=N,4µm,6.9s						
KMI				LR	LR		
	comp=E,5µm,7.7s						
KMI				LR	LR		
	comp=Z,5µm,10.0s						
JHJ	**Hachijo jima 2**	**17.65**	**57**	P	**P**	**16 24 10.8**	**+3.2**
	comp=Z,27nm,0.3s,baz=206,slow=6.8,SNR=32						
JHJ				LR	LR	16 30 32.8	
	comp=Z,2µm,21.1s,baz=120,slow=36						
JHJ2	**Mitsune**	**17.67**	**58**	P	**P**	**16 24 09.2**	**+1.3**
JOD2	**Odawara 2**	**18.13**	**50**	P	**P**	**16 24 13.0**	**-0.4**
MAJO	**Matsushiro**	**18.23**	**46**	*e*P	**P**	**16 24 11.4**	**-3.3**
MAJO				pmax	pmax		
	comp=Z,45nm,0.9s						
MAJO	**Matsushiro**	**18.23**	**46**	*e*P	**P**	**16 24 11.4**	**-3.3**
	comp=Z,45nm,0.9s						
MAT	**Matsushiro**	**18.23**	**46**	*e*P	**P**	**16 24 11.0**	**-3.7**
MAT				*e*S	**S**	**16 27 38.0**	**+5.8**
MAT				pmax	pmax		
	comp=Z,28nm,1.2s						
MAT	**Matsushiro**	**18.23**	**46**	*e*P	**P**	**16 24 11.0**	**-3.7**
	comp=Z,28nm,1.2s						
MAT				*e*S	**S**	**16 27 38.0**	**+5.8**
MAT	**Matsushiro**	**18.23**	**46**	P	**P**	**16 24 10.7**	**-4.0**
MAT				S	**S**	**16 27 38.0**	**+5.8**
MAT	**Matsushiro**	**18.23**	**46**	P	**P**	**16 24 12.8**	**-1.9**
MJAR	**Matsushiro Arr**	**18.23**	**46**	P	**P**	**16 24 12.6**	**-2.1**
	comp=Z,1.4nm,0.3s,baz=235,slow=9.5,SNR=36						
MJAR				PcP	PcP	16 28 43.2	-1.4
	comp=Z,0.6nm,0.3s,baz=170,slow=1.3,SNR=4.8						
MJAR				ScP		16 32 13.2	
	comp=Z,0.2nm,0.3s,baz=253,slow=2.4,SNR=9.9						
CBIJ	**Chichi jima**	**18.28**	**78**	P	**P**	**16 24 14.8**	**-0.6**
	comp=Z,55nm,0.3s,baz=258,slow=4.9,SNR=29						
CBIJ				LR	LR	16 30 36.8	
	comp=Z,1µm,20.4s,baz=27,slow=35						
CBIJ	**Chichi jima**	**18.28**	**78**	P	**P**	**16 24 12.6**	**-2.7**
HHC	**Hu-ho-hao-te**	**18.36**	**334**	*e*P	**P**	**16 24 18.2**	**+2.1**
HHC				AP		16 24 29.1	
HHC				PP	PP	16 24 35.4	+2.9
HHC				XP		16 24 37.6	
HHC				S	**S**	**16 27 43.4**	**+8.4**
HHC				XS		16 27 52.7	
HHC				SS	SS	16 28 02.5	+0.8
HHC				PCP	PcP	16 28 46.3	+1.6
HHC				SCS	ScS	16 35 56.3	+4.5
HHC				AMB	AMB		
	comp=Z,160nm,1.6s						
HHC				LR	LR		
	comp=N,2µm,12.3s						
HHC				LR	LR		
	comp=E,2µm,12.5s						
HHC				LR	LR		
	comp=Z,2µm,12.7s						
JRY	**Ryogami san**	**18.40**	**48**	P	**P**	**16 24 14.1**	**-2.5**
BTO	**Baotou**	**18.81**	**331**	*e*P	**P**	**16 24 21.9**	**+0.6**
BTO				AMB	AMB		
	comp=Z,100nm,1.5s						
BTO				LR	LR		
	comp=N,2µm,11.8s						
BTO				LR	LR		
	comp=E,2µm,13.3s						
JSD	**Sado**	**19.18**	**42**	P	**P**	**16 24 23.5**	**-1.9**
CN2	**Changchun**	**19.29**	**7**	*e*P	**P**	**16 24 26.5**	**-0.1**
CN2				*e*AP		16 24 38.6	
CN2				*e*S	**S**	**16 27 54.7**	**-0.6**
CN2				PCP	PcP	16 28 44.8	-1.5
CN2				AMB	AMB		
	comp=Z,300nm,1.1s						
CN2				LR	LR		
	comp=N,1µm,12.0s						
CN2				LR	LR		
	comp=E,1µm,12.0s						
CN2				LR	LR		
	comp=Z,1µm,11.0s						
KKM	**Kota Kinabalu**	**19.35**	**198**	*e*P	**P**	**16 24 26.1**	**-1.3**
KKM	**Kota Kinabalu**	**19.35**	**198**	P	**P**	**16 24 26.9**	**-0.5**
LZH	**Lanzhou**	**19.36**	**310**	⇓P	**P**	**16 24 29.0**	**+1.6**
LZH				AP		16 24 41.5	
LZH				PP	PP	16 24 48.4	+2.0
LZH				XP		16 24 50.0	
LZH				S	**S**	**16 28 00.0**	**+3.2**
LZH				XS		16 28 18.5	
LZH				SS	SS	16 28 29.3	+2.9
LZH				AMB	AMB		
	comp=Z,320nm,1.5s						
LZH				AMB	AMB		
	comp=Z,820nm,4.6s						
LZH				LR	LR		
	comp=N,3µm,10.0s						
LZH				LR	LR		
	comp=Z,4µm,12.2s						
KKTK	**Khon Kaen**	**19.80**	**249**	PG	**P**	**16 24 33.0**	**+0.7**
KKTK				SG	Px	16 24 36.0	
JYA	**Atsumi**	**20.42**	**43**	P	**P**	**16 24 32.6**	**-6.0**
TSM	**Tawau**	**20.65**	**192**	P	**P**	**16 24 42.2**	**+1.1**
NANT	**Nan**	**20.66**	**258**	⇓P	**P**	**16 24 42.0**	**+0.8**
	comp=Z,1µm,0.4s						
JMM	**Marumori**	**20.68**	**46**	P	**P**	**16 24 36.4**	**-4.9**
MDJ	**Mudanjiang**	**20.83**	**15**	P	**P**	**16 24 42.7**	**0.0**
MDJ				AP		16 24 55.9	
MDJ				PP	PP	16 25 08.5	+1.7
MDJ				S	**S**	**16 28 32.0**	**+6.3**
MDJ				PCP	PcP	16 28 47.9	-1.3
MDJ				SCP		16 32 19.2	
MDJ				AMB	AMB		
	comp=Z,130nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,530nm,7.5s						
MDJ				LR	LR		
	comp=N,1µm,14.8s						
MDJ				LR	LR		
	comp=E,2µm,13.6s						
MDJ				LR	LR		
	comp=Z,1µm,15.6s						
MDJ	**Mudanjiang**	**20.83**	**15**	*e*P	**P**	**16 24 42.6**	**0.0**
	comp=Z,189nm,1.1s						
CHG	**Chiang Mai**	**22.22**	**259**	⇓P	**P**	**16 24 58.5**	**+1.8**
CHTO	**Chiang Mai**	**22.22**	**259**	P	**P**	**16 24 58.2**	**+1.5**
CHTO				Sn	**S**	**16 29 03.8**	**+12**
CMAR	**Chiang Mai Arr**	**22.34**	**258**	P	**P**	**16 24 59.4**	**+1.5**
	comp=Z,37nm,0.8s,mb4.8,baz=62,slow=8.7,SNR=160						
CMAR				PcP	PcP	16 28 52.6	+0.3
	comp=Z,18nm,0.7s,baz=31,slow=0.8,SNR=38						
CMAR				ScP		16 32 23.4	
	comp=Z,15nm,1.1s,baz=18,slow=1.7,SNR=15						
CMAR				LR	LR	16 34 36.3	
	comp=Z,1µm,18.5s,baz=75,slow=39						
CMAR				PKiKP		16 36 36.1	
	comp=Z,1.4nm,0.7s,baz=317,slow=2.7,SNR=7.5						
JOT	**Ohata**	**22.98**	**39**	P	**P**	**16 25 00.9**	**-3.0**
GTA	**Gaotai**	**23.81**	**313**	P	**P**	**16 25 13.6**	**+1.6**
GTA				AP		16 25 28.0	
GTA				XP		16 25 35.0	
GTA				PCP	PcP	16 28 53.5	-1.7
GTA				S	**S**	**16 29 28.3**	**+9.1**
GTA				SCP		16 32 25.1	
GTA				PCS		16 32 29.0	
GTA				SCS	ScS	16 36 11.5	+0.5
GTA				AMB	AMB		
	comp=Z,110nm,1.5s,mb5.0						
GTA				AMB	AMB		
	comp=Z,700nm,6.1s						
GTA				LR	LR		
	comp=N,1µm,8.7s						
GTA				LR	LR		
	comp=E,1µm,12.6s						
GTA				LR	LR		
	comp=Z,1µm,11.4s						
JEW	**Eniwo**	**24.16**	**37**	P	**P**	**16 25 13.1**	**-2.3**
JEM	**Erimo**	**24.60**	**40**	P	**P**	**16 25 17.4**	**-2.2**
HIA	**Hailar**	**24.62**	**356**	*e*P	**P**	**16 25 18.9**	**-0.9**
HIA				pmax	pmax		
	comp=Z,130nm,0.8s						
HIA	**Hailar**	**24.62**	**356**	*e*P	**P**	**16 25 18.9**	**-0.9**
	comp=Z,130nm,0.8s,mb5.4						
IMP	**Imphal**	**25.52**	**276**	*i* P	**P**	**16 25 29.0**	**+0.5**
ASAJ	**Asahikawa**	**25.64**	**36**	P	**P**	**16 25 28.4**	**-1.1**
ASAJ						16 28 58.1	
ASAJ				pmax	pmax		
	comp=Z,25nm,0.7s						
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ASAJ				MLR	MLR		
	comp=Z,1µm,19.4s						
ASAJ	**Asahikawa**	**25.64**	**36**	P	**P**	**16 25 28.4**	**-1.1**
	comp=Z,25nm,0.7s,mb4.8,baz=242,slow=11,SNR=37						
ASAJ				PcP	PcP	16 28 58.0	-1.0
	comp=Z,6.7nm,0.7s,baz=206,slow=2.9,SNR=4.2						
ASAJ				LR	LR	16 35 53.6	
	comp=Z,1µm,19.4s,baz=238,slow=37						
ASAJ	**Asahikawa**	**25.64**	**36**	P	**P**	**16 25 28.2**	**-1.3**
KLR	**Kul’dur**	**25.67**	**15**κ	*i*P	**P**	**16 25 26.5**	**-3.2**
KLR				*e*		16 28 55.1	
KLR				pmax	pmax		
	comp=Z,800nm,6.0s						
KLR				pmax	pmax		
	comp=N,54nm,2.0s						
KLR				pmax	pmax		
	comp=E,120nm,2.0s						
KLR				pmax	pmax		
	comp=Z,190nm,2.0s,mb5.2						
KLR				MLR	MLR		
	comp=N,1µm,13.0s						
KLR				MLR	MLR		
	comp=E,600nm,13.0s						
KLR				MLR	MLR		
	comp=Z,2µm,13.0s						
KSM	**Kuching**	**25.70**	**208**	*e*P	**P**	**16 25 28.7**	**-1.6**
ULN	**Ulaanbaatar**	**26.02**	**337***c*	*i*P	**P**	**16 25 33.3**	**+0.3**
JWK2	**Keihoku**	**26.11**	**33**	P	**P**	**16 25 32.3**	**-1.6**
SONM	**Songino Array**	**26.24**	**336**	P	**P**	**16 25 35.2**	**+0.2**
	comp=Z,138nm,1.0s,mb5.3,baz=151,slow=8.4,SNR=351						
SONM				PcP	PcP	16 28 59.9	-0.5
	comp=Z,20nm,1.1s,baz=135,slow=1.7,SNR=6.3						
SONM				ScP		16 32 32.5	
	comp=Z,26nm,1.1s,baz=153,slow=2.8,SNR=29						
SONM				PKiKP		16 36 37.0	
	comp=Z,1.4nm,0.6s,baz=190,slow=1.8,SNR=5.5						
SONM				LR	LR	16 36 46.6	
	comp=Z,1µm,19.8s,baz=245,slow=38						
SHL	**Shillong**	**27.30**	**278**	⇓*i*P	**P**	**16 25 45.0**	**0.0**
SHL				*e*S	**S**	**16 30 21.0**	**+3.8**
YSS	**Yuzh-Sakhalins**	**27.70**	**31**	*e*P	**P**	**16 25 45.2**	**-3.2**
YSS				*e*	pP	16 25 58.5	-7.3
YSS				*e*		16 26 44.0	
YSS				*e*SSS	SSS	16 31 46.0	-22
YSS				pmax	pmax		
	comp=N,100nm,1.1s						
YSS				pmax	pmax		
	comp=Z,150nm,1.1s,mb5.4						
YSS				pmax	pmax		
	comp=E,60nm,1.0s						
YSS				pmax	pmax		
	comp=N,40nm,1.1s						
YSS				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.3						
YSS				MLR	MLR		
	comp=Z,500nm,18.0s						
YSS				MLR	MLR		
	comp=N,600nm,16.0s						
YSS				MLR	MLR		
	comp=E,700nm,16.0s						
YSS	**Yuzh-Sakhalins**	**27.70**	**31**	*e*P	**P**	**16 25 45.6**	**-2.8**
	comp=E,219nm,1.3s,mb5.5						
YSS				*e*		16 25 49.6	
LSA	**Lhasa**	**27.89**	**287**	P	**P**	**16 25 52.0**	**+1.7**
LSA				AP	pP	16 26 03.5	-4.2
LSA				XP	sP	16 26 15.5	-1.0
LSA				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.9						
LSA				LR	LR		
	comp=N,770nm,14.9s						
LSA				LR	LR		
	comp=E,1µm,31.4s						
LSA				LR	LR		
	comp=Z,2µm,34.4s						
LSA	**Lhasa**	**27.89**	**287**	*e*P	**P**	**16 25 51.9**	**+1.6**
LSA				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.1						
LSA	**Lhasa**	**27.89**	**287**	*e*P	**P**	**16 25 51.9**	**+1.6**
	comp=Z,52nm,0.8s,mb5.1						
CIT	**Chita**	**28.07**	**349**	*e*P	**P**	**16 25 50.4**	**-1.3**
CIT				*e*		16 29 03.8	
CIT				pmax	pmax		
	comp=Z,649nm,1.7s,mb5.9						
KULM	**Kulim**	**28.17**	**230**	*e*P	**P**	**16 25 53.4**	**+0.4**
IPM	**Ipoh**	**28.42**	**229**	P	**P**	**16 25 56.2**	**+1.1**
ZAK	**Zakamensk**	**29.50**	**335**	⇑*i*P	**P**	**16 26 03.5**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.5						
TLY	**Talaya**	**30.43**	**337**	*e*P	**P**	**16 26 12.1**	**-0.5**
TLY				*e*		16 27 17.1	
TLY				*e*S	**S**	**16 31 08.3**	**+1.6**
TLY				pmax	pmax		
	comp=Z,95nm,0.9s,mb5.4						
TLY				MLR	MLR		
	comp=Z,955nm,15.0s						
TLY	**Talaya**	**30.43**	**337**	*e*P	**P**	**16 26 12.0**	**-0.6**
	comp=Z,62nm,0.8s,mb5.3						
TLY				LR	LR		
	comp=Z,229nm,20.0s						
IRK	**Irkutsk**	**30.68**	**338**	*e*P	**P**	**16 26 14.0**	**-0.8**
IRK				*e*		16 29 06.9	
IRK				pmax	pmax		
	comp=Z,175nm,1.5s,mb5.6						
MOY	**Mondy**	**31.40**	**335**	*e*P	**P**	**16 26 20.6**	**-0.6**
MOY				pmax	pmax		
	comp=Z,108nm,1.9s,mb5.2						
CLNS	**Chul’man**	**32.20**	**3**	*e*P	**P**	**16 26 24.7**	**-3.4**
CLNS				*e**PP	pP	16 26 36.0	-10
CLNS				*e*PPP	PPP	16 27 38.0	-15
CLNS				*e*		16 29 12.2	
CLNS				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.9						
CLNS				pmax	pmax		
	comp=N,19nm,1.2s						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
CLNS				pmax	pmax		
	comp=N,15nm,0.9s						
CLNS				pmax	pmax		
	comp=E,16nm,0.9s						
CLNS				MLR	MLR		
	comp=N,400nm,12.0s						
CLNS				MLR	MLR		
	comp=Z,500nm,12.0s						
CLNS				MLR	MLR		
	comp=E,200nm,14.0s						
GUN	**Gumba**	**32.51**	**284**	*e*P	**P**	**16 26 31.9**	**+0.8**
	comp=E,86nm,0.7s,mb5.7						
PKI	**Pulchoki**	**32.95**	**283**	*e*P	**P**	**16 26 35.2**	**+0.3**
	comp=E,44nm,0.7s,mb5.4						
PKI	**Pulchoki**	**32.95**	**283**	*e*P	**P**	**16 26 35.2**	**+0.3**
PKI				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.1						
KKN	**Kakani**	**33.05**	**284**	*e*P	**P**	**16 26 36.0**	**+0.2**
	comp=Z,125nm,0.9s,mb5.7						
KKN	**Kakani**	**33.05**	**284**	*e*P	**P**	**16 26 36.0**	**+0.2**
KKN				pmax	pmax		
	comp=Z,62nm,0.9s,mb5.4						
DMN	**Daman**	**33.21**	**283**	*e*P	**P**	**16 26 37.6**	**+0.4**
	comp=Z,132nm,1.0s,mb5.7						
GKN	**Gorkha**	**33.61**	**284**	*e*P	**P**	**16 26 40.7**	**+0.1**
	comp=Z,187nm,1.1s,mb5.8						
BOD	**Bodaibo**	**33.62**	**352**	*e*P	**P**	**16 26 37.2**	**-3.2**
BOD				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
WMQ	**Urumqi**	**33.89**	**313**	⇓*i*P	**P**	**16 26 44.0**	**+1.1**
WMQ				AP	pP	16 26 59.2	-1.7
WMQ				XP	sP	16 27 06.5	-3.5
WMQ				PP	PP	16 27 59.0	+0.7
WMQ				PPP	PPP	16 28 17.7	+1.2
WMQ				PCP	PcP	16 29 22.0	+1.9
WMQ				S	**S**	**16 32 03.2**	**+2.3**
WMQ				SS	SS	16 34 12.5	+0.6
WMQ				SCS	ScS	16 37 00.2	+2.8
WMQ				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,70nm,4.0s						
WMQ				LR	LR		
	comp=N,990nm,19.0s						
WMQ				LR	LR		
	comp=E,400nm,19.0s						
WMQ				LR	LR		
	comp=Z,440nm,18.0s						
KOLN	**Koldanda**	**34.54**	**284**	*e*P	**P**	**16 26 49.2**	**+0.7**
	comp=Z,103nm,0.9s,mb5.7						
BLSP	**Bilaspur**	**36.63**	**274**	*e*P	**P**	**16 27 06.9**	**+0.6**
BLSP				AMb	AMB	16 27 09.4	
	comp=Z,61nm,0.7s,mb5.6						
LGTI	**Lohaghat**	**37.38**	**287**	*e*x	x	16 27 20.0	
PTH	**Pithoragarh**	**37.40**	**287**	*e*P	**P**	**16 27 14.3**	**+1.6**
YAK	**Yakutsk**	**37.70**	**6***c*	*i*P	**P**	**16 27 13.5**	**-1.4**
YAK				*e**PP	pP	16 27 23.2	-10
YAK				*e*		16 28 46.2	
YAK				*e*PPP	PPP	16 29 10.0	+2.6
YAK				*e*		16 29 25.3	
YAK				*e*SS	SS	16 36 12.0	+34
YAK				*i*		16 37 15.5	
YAK				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.2						
YAK				pmax	pmax		
	comp=N,21nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
YAK				pmax	pmax		
	comp=N,18nm,1.5s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.6s						
YAK				MLR	MLR		
	comp=Z,241nm,13.0s						
YAK				MLR	MLR		
	comp=N,218nm,12.0s						
YAK				MLR	MLR		
	comp=E,162nm,12.0s						
YAK	**Yakutsk**	**37.70**	**6**	*e*P	**P**	**16 27 12.9**	**-2.0**
	comp=E,48nm,0.6s,mb5.5						
YAK				*e*PP	PP	16 28 48.9	+4.2
YAK				*e*PcP	PcP	16 29 29.1	-2.2
YAK				LR	LR		
	comp=Z,429nm,19.0s						
KAKA	**Kakadu**	**38.51**	**164**	*e*P	**P**	**16 27 20.5**	**-1.6**
KAKA				*e*PCP	PcP	16 29 33.4	-0.8
MKAR	**Makanchi Array**	**38.54**	**315**	*i* P	**P**	**16 27 22.2**	**+0.2**
MKAR				pmax	pmax		

	comp=Z,26nm,0.5s						
MKAR	**Makanchi Array**	**38.54**	**315**	P	**P**	**16 27 22.2**	**+0.2**
	comp=Z,26nm,0.5s,mb5.4,baz=100,slow=10,SNR=495						
MKAR				PcP	PcP	16 29 32.8	-1.3
	comp=Z,6.2nm,0.7s,baz=173,slow=2.1,SNR=4.6						
MKAR				ScP		16 33 14.7	
	comp=Z,15nm,0.7s,baz=101,slow=5.5,SNR=27						
MKAR				PKiKP		16 36 45.4	
	comp=Z,0.8nm,0.7s,baz=244,slow=1.1,SNR=5.4						
MKAR				LR	LR	16 44 46.8	
	comp=Z,651nm,18.2s,baz=125,slow=38						
MKAR				PKPPKP		16 59 59.6	
	comp=Z,0.7nm,0.9s,baz=162,slow=4.6,SNR=3.6						
MKAR	**Makanchi Array**	**38.54**	**315**	P	**P**	**16 27 22.2**	**+0.2**
MKAR				PcP	PcP	16 29 32.8	-1.3
MKAR				ScP		16 33 14.7	
PET	**Petropavlovsk**	**39.47**	**35**	*e*P	**P**	**16 27 28.5**	**-1.2**
PET				*e*S	**S**	**16 33 27.9**	**+1.9**
PET				pmax	pmax		
	comp=Z,200nm,2.3s,mb5.5						
PET				pmax	pmax		
	comp=Z,200nm,16.0s						
PET				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.2						
PET				pmax	pmax		
	comp=Z,100nm,10.6s						
PET				pmax	pmax		
	comp=Z,100nm,3.0s						
PET				smax			
	comp=E,100nm,20.9s						
PET				MLR	MLR		
	comp=Z,2µm,24.0s						
PET	**Petropavlovsk**	**39.47**	**35**	*e*P	**P**	**16 27 27.0**	**-2.6**
	comp=Z,44nm,1.1s,mb5.2						
PET				*e*PcP	PcP	16 29 35.3	-1.5
PET				LR	LR		
	comp=Z,308nm,19.0s						
SMLA	**Simla**	**39.97**	**290**	*i* P	**P**	**16 27 31.8**	**-2.3**
SMLA				*i* x	x	16 33 19.8	
NDI	**New Delhi**	**40.08**	**286**	*e*P	**P**	**16 27 34.0**	**-1.0**
NDI				*e*x	x	16 33 33.5	
MA2	**Magadan**	**40.24**	**22**	*i* P	**P**	**16 27 34.5**	**-1.4**
MA2				pmax	pmax		
	comp=Z,37nm,1.9s,mb4.9						
MA2				MLR	MLR		
	comp=Z,700nm,25.0s						
MA2	**Magadan**	**40.24**	**22**	*e*P	**P**	**16 27 32.8**	**-3.2**
	comp=Z,16nm,0.8s,mb4.9						
MA2				*e*PcP	PcP	16 29 38.2	-1.1
ZAL	**Zalesovo**	**40.27**	**326**	P	**P**	**16 27 36.2**	**-0.1**
	comp=Z,33nm,0.5s,mb5.4,baz=358,slow=8.2,SNR=211						
ZAL				PcP	PcP	16 29 37.7	-1.8
	comp=Z,4.1nm,0.5s,baz=332,slow=4.3,SNR=3.5						
ZAL				ScP		16 33 20.7	
	comp=Z,3.6nm,0.8s,baz=344,slow=5.2,SNR=7.8						
ZAL				LR	LR	16 46 18.8	
	comp=Z,1µm,19.7s,baz=344,slow=39						
ZAL	**Zalesovo**	**40.27**	**326**	P	**P**	**16 27 36.2**	**-0.1**
ZAL				PcP	PcP	16 29 37.7	-1.8
ZAL				ScP		16 33 20.6	
ZAL				LR	LR	16 46 18.8	
BHPL	**Bhopal**	**40.67**	**278**	*e*P	**P**	**16 27 40.5**	**+0.6**
BHPL				AMb	AMB	16 27 43.2	
	comp=Z,40nm,0.8s,mb5.3						
HYB	**Hyderabad**	**41.09**	**269⇑**	*e*P	**P**	**16 27 45.0**	**+1.6**
HYB				*e*	pP	16 28 02.0	+0.3
HYB				*e*S	**S**	**16 33 54.0**	**+3.5**
HYB				pmax	pmax		
	comp=Z,150nm,1.4s,mb5.6						
HYB	**Hyderabad**	**41.09**	**269⇑**	*e*P	**P**	**16 27 45.0**	**+1.6**
	comp=Z,150nm,1.4s,mb5.6						
HYB				*e*	pP	16 28 02.0	+0.3
HYB				*e*S	**S**	**16 33 54.0**	**+3.5**
HYB	**Hyderabad**	**41.09**	**269⇑**	*i*P	**P**	**16 27 44.0**	**+0.6**
	comp=Z,150nm,1.4s,mb5.6						
HYB				*e*pP	pP	16 28 00.0	-1.7
HYB				*e*PPP	PPP	16 29 42.5	-11
HYB				*e*S	**S**	**16 33 52.5**	**+2.0**
KSH	**Kashi**	**41.30**	**302**	P	**P**	**16 27 47.5**	**+2.6**
KSH				*e*AP	pP	16 28 03.2	0.0
KSH				*e*XP	sP	16 28 10.4	-1.5
KSH				PP	PP	16 29 27.5	+3.2
KSH				*e*PCP	PcP	16 29 44.8	+1.9
KSH				*e*PPP	PPP	16 29 58.2	+2.7
KSH				SCP		16 33 27.7	
KSH				PCS		16 33 34.4	
KSH				S	**S**	**16 33 57.8**	**+4.5**
KSH				XS		16 34 23.4	
KSH				*e*SS	SS	16 36 58.2	+3.7
KSH				*e*SCS	ScS	16 37 40.1	+0.8
KSH				AMB	AMB		
	comp=Z,330nm,2.4s,mb5.7						
KSH				LR	LR		
	comp=N,1µm,10.1s						
KSH				LR	LR		
	comp=E,1µm,8.9s						
ULHL	**Ulahol**	**41.50**	**307**	P	**P**	**16 27 48.0**	**+1.5**
	SNR=11						
NVS	**Novosibirsk**	**41.53**	**327⇑**	*i*P	**P**	**16 27 45.5**	**-1.0**
NVS				e*PP	pP	16 28 03.0	-1.8
NVS				*e*		16 29 24.0	
NVS				*i* S	**S**	**16 33 53.2**	**-3.3**
NVS				pmax	pmax		
	comp=N,105nm,2.0s						
NVS				pmax	pmax		
	comp=E,121nm,2.0s						
NVS				pmax	pmax		
	comp=Z,184nm,2.0s,mb5.5						
NVS				smax			
	comp=N,33nm,2.0s						
NVS				smax			
	comp=E,20nm,2.4s						
PMG	**Port Moresby**	**41.80**	**141*c***	*i*P	**P**	**16 27 49.2**	**-0.1**
PMG	**Port Moresby**	**41.80**	**141**	PcP	PcP	16 29 44.5	-0.4
	comp=E,32nm,0.9s,baz=336,slow=4.9,SNR=3.8						
PMG				LR	LR	16 42 47.7	
	comp=E,368nm,19.7s,baz=213,slow=33						
PMG	**Port Moresby**	**41.80**	**141**	*e*P	**P**	**16 27 49.1**	**-0.2**
	comp=E,297nm,1.4s,mb5.8						
TKM2	**Tokmak 2**	**42.09**	**307**	P	**P**	**16 27 53.2**	**+1.9**
	SNR=148						
KZA	**Kyzart**	**42.20**	**306**	P	**P**	**16 27 54.8**	**+2.6**
	SNR=48						
KBK	**Karagaybulak**	**42.51**	**307**	P	**P**	**16 27 56.7**	**+1.8**
	SNR=71						
AJM	**Ajmer**	**42.61**	**283**	*i* P	**P**	**16 27 56.0**	**+0.2**
CHMS	**Chumysh**	**42.71**	**307**	P	**P**	**16 27 57.7**	**+1.2**
	SNR=38						
UCH	**Uchtor**	**42.76**	**306**	P	**P**	**16 27 59.4**	**+2.5**
	SNR=67						
FRU	**Bishkek**	**42.78**	**307**	*e*P	**P**	**16 27 59.0**	**+2.0**
FRU				pmax	pmax		
	comp=Z,50nm,1.8s,mb4.9						
AAK	**Ala-Archa**	**42.84**	**307**	P	**P**	**16 27 59.5**	**+2.0**
	SNR=22						
AAK	**Ala-Archa**	**42.84**	**307**	*e*P	**P**	**16 27 57.5**	**0.0**
AAK				*e*		16 29 46.3	
AAK				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.0						
AAK				MLR	MLR		
	comp=Z,141nm,20.0s						
AAK	**Ala-Archa**	**42.84**	**307**	*e*P	**P**	**16 27 57.5**	**0.0**
	comp=Z,24nm,0.8s,mb5.0						
AAK				*e*PcP	PcP	16 29 46.2	-1.7
AAK				LR	LR		
	comp=Z,141nm,20.0s						
USP	**Ospenovka**	**42.94**	**308**	P	**P**	**16 27 59.7**	**+1.4**
	SNR=30						
SEY	**Seymchan**	**43.26**	**20**	*e*P	**P**	**16 28 00.3**	**-0.3**
SEY				*PP	pP	16 28 18.7	-0.3
SEY						16 29 48.2	
SEY				*e*PPP	PPP	16 30 19.3	-1.4
SEY				*e*S	**S**	**16 34 19.5**	**-2.2**
SEY						16 37 51.9	
SEY				*e*SSS	SSS	16 38 27.8	+4.0
SEY				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
SEY				pmax	pmax		
	comp=E,9.0nm,1.0s						
SEY				smax			
	comp=N,160nm,9.0s						
SEY				smax			
	comp=E,60nm,8.3s						
SEY				MLR	MLR		
	comp=Z,620nm,24.0s						
SEY				MLR	MLR		
	comp=N,110nm,16.0s						
SEY				MLR	MLR		
	comp=E,230nm,28.0s						
AML	**Almayashu**	**43.35**	**306**	P	**P**	**16 28 04.3**	**+2.7**
	SNR=13						
EKS2	**Erkin-Say**	**43.37**	**307**	P	**P**	**16 28 03.6**	**+1.8**
	SNR=38						
POO	**Poona**	**45.05**	**272**	*e*P	**P**	**16 28 16.5**	**+0.9**
POO				AMb	AMB	16 28 19.8	
	comp=Z,71nm,0.8s,mb5.5						
KAD	**Karad**	**45.10**	**270**	*e*P	**P**	**16 28 16.8**	**+0.8**
KAD				AMb	AMB	16 28 36.3	
	comp=Z,48nm,1.4s,mb5.0						
MBWA	**Marble Bar**	**45.61**	**183**	*e*P	**P**	**16 28 16.5**	**-3.5**
	comp=Z,20nm,0.8s,mb4.9						
MBWA				*e*PcP	PcP	16 29 56.4	-1.4
KKAR	**Karatay Array**	**45.80**	**307**	*i* P	**P**	**16 28 22.0**	**+0.7**
KKAR				pmax	pmax		
	comp=Z,20nm,0.4s,mb5.2						
TRD	**Trivandrum**	**45.86**	**257**	*e*x	x	16 34 37.0	
TRD				*i* x	x	16 38 41.5	
WRAB	**Tennant Creek**	**45.92**	**164**	*e*P	**P**	**16 28 21.1**	**-1.4**
WRAB				*e*		16 29 57.7	
WRAB				pmax	pmax		
	comp=Z,249nm,1.0s,mb5.9						
WRAB	**Tennant Creek**	**45.92**	**164**	*e*P	**P**	**16 28 21.1**	**-1.4**
	comp=Z,250nm,1.0s,mb5.9						
WRAB				*e*PcP	PcP	16 29 57.7	-1.1
WRA	**Warramunga Arr**	**45.93**	**164**	P	**P**	**16 28 21.2**	**-1.4**
	comp=Z,101nm,0.7s,mb5.7,baz=346,slow=8.6,SNR=477						
WRA				PcP	PcP	16 29 57.7	-1.2
	comp=Z,28nm,0.7s,baz=346,slow=3.8,SNR=12						
WRA				PKPPKP		16 59 40.2	
	comp=Z,1.4nm,1.0s,baz=130,slow=2.2,SNR=4.7						
WB2	**Warramunga Arr**	**45.93**	**164**	*e*P	**P**	**16 28 21.1**	**-1.5**
WB2				*e*PCP	PcP	16 29 57.5	-1.4
TIXI	**Tiksi**	**47.17**	**3⇓**	*i*P	**P**	**16 28 27.5**	**-4.2**
TIXI				*e*S	**S**	**16 35 10.0**	**-7.7**
TIXI				*e*SS	SS	16 38 40.2	+1.1
TIXI				pmax	pmax		
	comp=Z,187nm,1.0s,mb5.8						
FX1	**Attu Island--F**	**47.45**	**40**	LR	LR	16 46 33.7	
	comp=Z,20nm,21.2s,baz=265,slow=34						
BVA0	**Borovoye Array**	**47.80**	**320**	*i* P	**P**	**16 28 36.4**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
BVAR	**Borovoye Array**	**47.80**	**320**	P	**P**	**16 28 36.8**	**0.0**
	comp=Z,45nm,0.5s,mb5.5,baz=100,slow=7.9,SNR=394						
BVAR				PcP	PcP	16 30 03.5	-1.6
	comp=Z,9.9nm,0.7s,baz=135,slow=4.2,SNR=5.1						
BVAR				ScP		16 33 51.9	
	comp=Z,7.3nm,0.8s,baz=108,slow=4.7,SNR=11						
BVAR				S	**S**	**16 35 27.7**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=108,slow=14,SNR=5.5						
CHKZ	**Chkalovo**	**47.85**	**321**	*i* P	**P**	**16 28 36.9**	**-0.3**
CHKZ				pmax	pmax		
	comp=Z,76nm,0.7s,mb5.6						
CHKZ	**Chkalovo**	**47.85**	**321**	*e*P	**P**	**16 28 36.2**	**-1.0**
ASAR	**Alice Springs**	**49.41**	**166**	P	**P**	**16 28 48.5**	**-1.1**
	comp=Z,23nm,0.7s,mb5.2,baz=340,slow=6.7,SNR=230						
ASAR				PcP	PcP	16 30 10.1	-1.2
	comp=Z,32nm,0.8s,baz=346,slow=3.4,SNR=16						
ASAR				S	**S**	**16 35 51.1**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=348,slow=13,SNR=4.2						
ASAR				LR	LR	16 50 20.7	
	comp=Z,106nm,20.3s,baz=335,slow=37						
ASAR				PKPPKP		16 59 42.5	
	comp=Z,1.0nm,0.8s,baz=83,slow=2.7,SNR=4.4						
ASPA	**Alice Springs**	**49.41**	**166**	*e*P	**P**	**16 28 48.4**	**-1.2**
ASPA				*i* PCP	PcP	16 30 10.2	-1.1
ASPA				*i*		16 34 04.2	
HNR	**Honiara**	**50.15**	**128**	LR	LR	16 48 37.2	
	comp=Z,371nm,19.8s,baz=116,slow=34						
CTA	**Charters Tower**	**50.34**	**150⇑**	*i*P	**P**	**16 28 56.7**	**-0.2**
CTA				*e*PCP	PcP	16 30 14.6	-0.1
CTA	**Charters Tower**	**50.34**	**150**	P	**P**	**16 28 56.8**	**-0.1**
	comp=Z,102nm,1.0s,mb5.7,baz=332,slow=8.9,SNR=50						
CTA				PcP	PcP	16 30 14.4	-0.3
	comp=Z,47nm,0.8s,baz=337,slow=4.0,SNR=8.4						
CTA				LR	LR	16 48 29.7	
	comp=Z,384nm,19.9s,baz=331,slow=34						
CTAO	**Charters Tower**	**50.34**	**150**	*e*P	**P**	**16 28 56.3**	**-0.6**
CTAO				*e*		16 30 14.1	
CTAO				pmax	pmax		
	comp=Z,165nm,1.1s,mb5.9						
CTAO	**Charters Tower**	**50.34**	**150**	*e*P	**P**	**16 28 56.3**	**-0.6**
	comp=Z,165nm,1.1s,mb5.9						
CTAO				*e*PcP	PcP	16 30 14.1	-0.6
AB31	**Akbulak array**	**53.67**	**314**	*i* P	**P**	**16 29 21.0**	**-0.4**
AB31				pmax	pmax		
	comp=Z,74nm,0.5s,mb6.0						
SVE	**Sverdlovsk**	**54.12**	**323*c***	*e*P	**P**	**16 29 22.0**	**-2.6**
SVE				*e*S	**S**	**16 36 56.0**	**+2.2**
SVE				*e*PS	PS	16 37 08.0	-8.2
SVE				*e*		16 39 11.0	
SVE				*e*		16 40 36.0	
SVE				MLR	MLR		
	comp=N,100nm,12.0s						
SVE				MLR	MLR		
	comp=E,400nm,12.0s						
SVE				MLR	MLR		
	comp=Z,500nm,12.0s						
ARU	**Arti**	**55.20**	**323*c***	*i*P	**P**	**16 29 30.8**	**-1.6**
ARU				pmax	pmax		
	comp=Z,135nm,0.7s,mb6.1						
ARU				MLR	MLR		
	comp=Z,500nm,24.0s						
ARU	**Arti**	**55.20**	**323**	*e*P	**P**	**16 29 30.9**	**-1.5**
	comp=Z,135nm,0.6s,mb6.2						
SOKR	**Solikamsk**	**56.55**	**326*c***	*i*P	**P**	**16 29 39.2**	**-2.9**
SOKR				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
SOKR				MLR	MLR		
	comp=Z,510nm,20.0s						
WBK	**Wadi Bani Khal**	**57.36**	**282**	⇑P	**P**	**16 29 49.3**	**+1.0**
NWAO	**Narrogin (SRO)**	**57.46**	**185**	P	**P**	**16 29 47.8**	**-1.1**
	comp=Z,10nm,0.7s,mb5.0,baz=27,slow=13,SNR=8.4						
NWAO				LR	LR	16 54 30.4	
	comp=Z,126nm,21.5s,baz=22,slow=36						
SMDO	**Samad**	**58.06**	**283**	⇓P	**P**	**16 29 54.7**	**+1.5**
HOQ	**Hoqain**	**58.58**	**284**	⇑P	**P**	**16 29 58.3**	**+1.6**
	SNR=7.3						
STKA	**Stephens Creek**	**59.25**	**161**	*e*P	**P**	**16 29 59.9**	**-1.4**
STKA				*e*PCP	PcP	16 30 47.3	-1.3
STKA	**Stephens Creek**	**59.25**	**161**	P	**P**	**16 30 00.3**	**-1.0**
	comp=Z,55nm,0.8s,mb5.7,baz=340,slow=7.0,SNR=123						
STKA				PcP	PcP	16 30 47.6	-1.0
	comp=Z,25nm,0.8s,baz=6.6,slow=4.0,SNR=4.4						
ASHO	**Ashiyiah**	**59.39**	**285**	⇑P	**P**	**16 30 04.4**	**+2.0**
ADE	**Adelaide**	**61.38**	**164**	*e*P	**P**	**16 30 15.6**	**-0.2**
ARMA	**Armidale**	**61.68**	**151**	*e*P	**P**	**16 30 18.0**	**+0.1**
RBK	**Rabkut**	**63.16**	**278**	⇑P	**P**	**16 30 27.6**	**-0.3**
	SNR=9.4						
DZM	**Mont Dzumac**	**63.39**	**133**	*e*P	**P**	**16 30 29.3**	**-0.1**
DZM	**Mont Dzumac**	**63.39**	**133**	P	**P**	**16 30 29.4**	**0.0**
	comp=Z,31nm,0.8s,mb5.3,baz=324,slow=7.0,SNR=29						
DZM				LR	LR	16 52 35.7	
	comp=Z,728nm,21.8s,baz=125,slow=31						
DZM	**Mont Dzumac**	**63.39**	**133**	*e*P	**P**	**16 30 29.3**	**-0.1**
WHFO	**Wadi Hawf**	**63.41**	**278**	P	**P**	**16 30 29.4**	**-0.2**
	SNR=8.1						
ABTO	**Aybut**	**64.03**	**278**	⇑P	**P**	**16 30 33.6**	**-0.1**
DGRG	**David-gareji**	**64.44**	**306**	P	**P**	**16 30 36.5**	**+0.5**
DGRG				S	**S**	**16 39 12.7**	**+5.5**
TTA	**Tatalina**	**64.70**	**30**	*e*P	**P**	**16 30 36.2**	**-1.0**
TI2	**Plekhanov**	**64.85**	**306**	*e*P	**P**	**16 30 37.4**	**-1.2**
ARNR	**Ardon**	**64.91**	**308⇑**	*i*P	**P**	**16 30 39.2**	**+0.2**
CNB	**Canberra Magne**	**65.03**	**156**	*e*P	**P**	**16 30 39.2**	**-0.7**
SVW2	**Sparrevohn**	**65.07**	**32**	*e*P	**P**	**16 30 39.4**	**-0.3**
GNI	**Garni**	**65.17**	**305**	*e*P	**P**	**16 30 40.1**	**-0.6**
GNI	**Garni**	**65.17**	**305*c***	*i*P	**P**	**16 30 41.7**	**+1.0**
GNI				pmax	pmax		
	comp=Z,78nm,2.0s						
GNI				MLR	MLR		
	comp=Z,300nm,25.0s						
GNI	**Garni**	**65.17**	**305**	P	**P**	**16 30 41.5**	**+0.7**
	comp=Z,7.4nm,0.5s,mb4.7,baz=340,slow=4.4,SNR=13						
GNI	**Garni**	**65.17**	**305**	*e*P	**P**	**16 30 41.5**	**+0.7**
	comp=Z,33nm,0.8s,mb5.2						
GNI				LR	LR		
	comp=Z,248nm,22.0s						
ZEI	**Tsey**	**65.26**	**307**	*e*P	**P**	**16 30 41.8**	**+0.5**
IMA	**Indian Mountai**	**65.42**	**27**	*e*P	**P**	**16 30 41.0**	**-0.9**
IMA				*e*		16 31 13.2	
IMA				pmax	pmax		
	comp=Z,270nm,0.8s,mb6.1						
IMA	**Indian Mountai**	**65.42**	**27**	*e*P	**P**	**16 30 41.4**	**-0.5**
GOF	**Gofitskoye**	**65.44**	**310⇑**	*i*P	**P**	**16 30 40.3**	**-2.0**
GOF				*i*	pP	16 30 57.3	-4.6
GOF				*i*		16 31 09.4	
GOF				pmax	pmax		
	comp=Z,80nm,1.3s,mb5.4						
ONI	**Oni**	**65.63**	**307**	P	**P**	**16 30 44.0**	**+0.4**
TOO	**Toolangi**	**65.72**	**160**	*e*P	**P**	**16 30 43.8**	**-0.5**
KIV	**Kislovodsk**	**65.89**	**309*c***	*i*P	**P**	**16 30 45.3**	**0.0**
KIV				e*PP	pP	16 31 10.3	+5.4
KIV				*i* S	S	16 39 28.7	+3.7
KIV				*e*SS	SS	16 43 39.8	-2.7
KIV				pmax	pmax		
	comp=Z,114nm,1.1s,mb5.6						
KIV				pmax	pmax		
	comp=N,56nm,0.9s						
KIV				smax			
	comp=N,96nm,2.8s						
KIV				MLR	MLR		
	comp=Z,294nm,22.0s						
KIV				MLR	MLR		
	comp=N,161nm,22.0s						
KIV	**Kislovodsk**	**65.89**	**309**	*e*P	**P**	**16 30 45.2**	**-0.1**
CLDR	**Caldiran**	**66.02**	**304**	*e*P	**P**	**16 30 46.2**	**+0.1**
LVZ	**Lovozero**	**66.43**	**336⇓**	*e*P	**P**	**16 30 38.6**	**-10**
LVZ				*e*S	S	16 39 31.9	+0.8
LVZ				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.0						
LVZ				pmax	pmax		
	comp=N,6.0nm,0.6s						
LVZ				smax			
	comp=E,180nm,3.2s						
LVZ				MLR	MLR		
	comp=Z,480nm,18.0s						
LVZ				MLR	MLR		
	comp=E,180nm,12.0s						
VOR	**Voronezh**	**66.70**	**318**	*e*P	**P**	**16 30 49.5**	**-0.7**
VOR				e*PP	pP	16 31 09.5	-0.4
VOR				*e*S	S	16 39 34.0	-0.6
VOR				pmax	pmax		
	comp=Z,170nm,1.3s,mb5.7						
VOR				pmax	pmax		
	comp=N,80nm,1.0s						
VOR				pmax	pmax		
	comp=E,120nm,1.3s						
VOR				smax			
	comp=N,80nm,1.6s						
SPU	**Mount Spurr**	**66.76**	**32**	*e*P	**P**	**16 30 49.1**	**-1.3**
VRSR	**Storozhevoye**	**66.81**	**317**	*e*P	**P**	**16 30 50.0**	**-0.9**
VRSR				pmax	pmax		
	comp=Z,100nm,0.8s,mb5.7						
VRSR				pmax	pmax		
	comp=N,50nm,0.9s						
VRSR				pmax	pmax		
	comp=E,60nm,1.0s						
MOS	**Moscow**	**66.90**	**322**	*e*P	**P**	**16 30 50.7**	**-0.7**
MOS				*e*		16 30 59.5	
MOS				e*PP	pP	16 31 09.5	-1.6
MOS				*e*		16 31 22.0	
MOS				*e*		16 33 16.0	
MOS				*e*PPP	PPP	16 34 52.0	-6.3
MOS				*e*S	S	16 39 35.0	-1.9
MOS				e*SS		16 40 06.7	
MOS				pmax	pmax		
	comp=Z,175nm,0.8s,mb5.9						
MOS				smax			
	comp=N,300nm,1.6s						
APA	**Apatity**	**66.95**	**335⇑**	*i*P	**P**	**16 30 50.6**	**-0.9**
APA				*i*		16 30 56.8	
APA				*i*		16 31 04.0	
APA				*i* S	S	16 39 36.0	-1.3
APA				*e*		16 40 22.0	
APA				pmax	pmax		
	comp=Z,73nm,1.0s,mb5.5						
APA				MLR	MLR		
	comp=Z,700nm,17.0s						
KDAK	**Kodiak Island**	**67.06**	**35**	*e*P	**P**	**16 30 51.1**	**-1.3**
KDAK				LR	LR		
	comp=Z,200nm,22.0s						
OBN	**Obninsk**	**67.61**	**322*c***	*i*P	**P**	**16 30 54.6**	**-1.2**
OBN				*i* S	S	16 39 46.5	+1.0
OBN				*e*SSS	SSS	16 47 04.5	-4.1
OBN				pmax	pmax		
	comp=Z,47nm,0.5s,mb5.6						
OBN				MLR	MLR		
	comp=Z,300nm,20.0s						
OBN	**Obninsk**	**67.61**	**322**	*e*P	**P**	**16 30 54.5**	**-1.4**
	comp=Z,68nm,0.7s,mb5.6						
SLKM	**Skilak Lake**	**67.76**	**32**	*e*P	**P**	**16 30 54.3**	**-2.4**
SLKM				*e*		16 31 21.6	
COLA	**College**	**68.00**	**27*c***	*i*P	**P**	**16 30 56.9**	**-1.2**
COLA	**College**	**68.00**	**27**	*e*P	**P**	**16 30 57.2**	**-0.9**
COLA				LR	LR		
	comp=Z,100nm,17.0s						
PMR	**Palmer**	**68.07**	**31**	*e*P	**P**	**16 30 58.5**	**-0.1**
PMR				MLR	MLR		
	comp=Z,200nm,22.0s						
SOC	**Sochi**	**68.08**	**309**	*i* P	**P**	**16 30 57.6**	**-1.3**
SOC				*e*	pP	16 31 16.7	-2.0
SOC				e*PP	pP	16 31 25.1	+6.4
SOC				*e*S	S	16 39 47.7	-3.6
SOC				pmax	pmax		
	comp=Z,60nm,0.7s,mb5.5						
SOC				pmax	pmax		
	comp=N,16nm,0.8s						
SOC				pmax	pmax		
	comp=E,15nm,0.8s						
SOC				pmax	pmax		
	comp=Z,51nm,0.5s,mb5.6						
SOC				MLR	MLR		
	comp=Z,471nm,22.0s						
SOC				MLR	MLR		
	comp=N,69nm,14.0s						
SOC				MLR	MLR		
	comp=E,390nm,25.0s						
SOC				MLR	MLR		
	comp=Z,187nm,16.0s						
SOC				MLR	MLR		
	comp=N,42nm,8.0s						
SOC				MLR	MLR		
	comp=E,155nm,16.0s						
ILAR	**Eielson Array**	**68.42**	**27**	P	**P**	**16 30 58.9**	**-1.8**
	comp=E,7.4nm,0.7s,mb4.7,baz=293,slow=2.8,SNR=64						
ILAR				PKPPKP		16 59 13.1	
	comp=E,0.6nm,0.8s,baz=154,slow=3.1,SNR=5.2						
ILAR				LR	LR	17 07 11.5	
	comp=E,114nm,18.5s,baz=294,slow=41						
KEV	**Kevo**	**68.82**	**338**	*e*p	**P**	**16 31 01.8**	**-1.3**
	comp=E,12nm,0.6s,mb4.9						
KEV	**Kevo**	**68.82**	**338**	*e*P	**P**	**16 31 01.8**	**-1.3**
KEV				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.1						
KEV	**Kevo**	**68.82**	**338**	*e*P	**P**	**16 31 01.8**	**-1.3**
	comp=Z,21nm,0.7s,mb5.1						
DIY	**Diyarbakir**	**69.13**	**303**	*e*P	**P**	**16 31 06.7**	**+1.1**
ANN	**Anapa**	**69.37**	**311**	*e*P	**P**	**16 31 05.6**	**-1.4**
ANN				e*PP	pP	16 31 25.2	-1.6
ANN				*e*S	S	16 40 07.1	+0.5
ANN				*e*SP	SP	16 40 36.3	+3.7
ANN				pmax	pmax		
	comp=Z,174nm,0.8s,mb5.9						
ARCES	**ARCESS Array B**	**69.38**	**338**	P	**P**	**16 31 06.0**	**-0.6**
	comp=Z,15nm,0.8s,mb4.8,baz=56,slow=7.2,SNR=24						
ARCES	**ARCESS Array B**	**69.38**	**338**	P	**P**	**16 31 06.0**	**-0.6**
KBS	**Kingsbay**	**69.71**	**349**	*e*P	**P**	**16 31 07.1**	**-1.4**
KBS				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.1						
KBS	**Kingsbay**	**69.71**	**349**	*e*P	**P**	**16 31 07.1**	**-1.4**
	comp=Z,39nm,1.3s,mb5.1						
KBS	**Kingsbay**	**69.71**	**349**	*e*P	**P**	**16 31 07.5**	**-1.0**
KBS				*e*S	S	16 40 08.7	-1.3
KBS				AMS	AMS	17 05 35.2	
	comp=Z,236nm,18.4s						
HSP	**Hornsund**	**69.77**	**347**	*e*P	**P**	**16 31 07.5**	**-1.4**
PUL	**Pulkovo**	**69.87**	**327**	*e*P	**P**	**16 31 09.6**	**-0.1**
PUL				*e*S	S	16 40 10.5	-1.7
PUL				pmax	pmax		
	comp=Z,89nm,0.5s,mb5.8						
PUL				pmax	pmax		
	comp=N,92nm,0.6s						
PUL				pmax	pmax		
	comp=E,264nm,0.9s						
PUL				MLR	MLR		

	comp=Z,710nm,20.0s						
PUL				MLR	MLR		
	comp=N,207nm,20.0s						
PUL				MLR	MLR		
	comp=E,559nm,18.0s						
MENT	**Mentasta**	70.22	29	eP	P	16 31 11.6	-0.2
URFA	**Urfa**	70.32	303	eP	P	16 31 12.4	-0.4
MYA	**Malataya**	70.38	304	eP	P	16 31 14.8	+1.7
MALT	**Malatya**	70.38	304	eP	P	16 31 13.3	+0.2
MALT	**Malatya**	70.38	304	eP	P	16 31 14.1	+0.9
MALT				pmax	pmax		
	comp=Z,80nm,0.8s,mb5.6						
MALT	**Malatya**	70.38	304	eP	P	16 31 14.1	+1.0
	comp=Z,80nm,0.8s,mb5.6						
HILS	**Ha'il**	70.92	292	P	P	16 31 17.6	+1.0
KAF	**Kangasniemi**	71.12	330	ep	P	16 31 15.8	-1.4
	comp=Z,7.1nm,0.5s,mb4.8,baz=72,slow=5.7						
KAF	**Kangasniemi**	71.12	330	eP	P	16 31 15.8	-1.4
KAF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
GZT	**Gaziantep**	71.31	303	i P	P	16 31 19.1	+0.4
FINES	**FINESS Array B**	71.42	330	i P	P	16 31 18.6	-0.4
FINES				pmax	pmax		
	comp=Z,9.0nm,0.4s						
FINES	**FINESS Array B**	71.42	330	P	P	16 31 18.6	-0.4
	comp=Z,9.3nm,0.4s,mb5.0,baz=52,slow=6.1,SNR=140						
FINES				LR	LR	17 05 59.6	
	comp=Z,511nm,19.2s,baz=72,slow=38						
TRO	**Tromso**	71.55	339	eP	P	16 31 18.2	-1.4
TRO				eS	S	16 40 31.7	+0.3
TRO				AMS	AMS	17 13 41.4	
	comp=Z,134nm,18.9s						
SIM	**Simferopol'**	71.60	312	⇑iP	P	16 31 20.1	-0.3
SIM				i S	S	16 40 34.2	+1.7
SIM				e*SS		16 41 02.0	
SIM				eSS	SS	16 45 18.0	+7.0
SIM				pmax	pmax		
	comp=Z,93nm,0.8s,mb5.7						
SIM				MLR	MLR		
	comp=Z,300nm,21.0s						
GAZ	**Gaziantep**	71.63	303	eP	P	16 31 21.6	+0.9
DAWY	**Dawson**	71.75	27	eP	P	16 31 19.9	-1.1
KAHT	**Ahir Dag**	71.75	304	i P	P	16 31 22.6	+1.1
VSU	**Vasula**	72.01	327	i P	P	16 31 22.2	-0.4
TATS	**Tathlith**	72.06	284	P	P	16 31 24.4	+0.8
BOYT	**Boyabat**	72.08	308	i P	P	16 31 23.9	+0.6
CTKT	**Corum**	72.40	307	i P	P	16 31 25.3	+0.1
COBT	**Iskenderun**	72.56	303	i P	P	16 31 26.2	-0.1
CORM	**Corum**	72.65	307	eP	P	16 31 26.9	+0.2
CEYT	**Ceyhan**	72.79	303	eP	P	16 31 28.7	+1.1
TOS	**Tosya**	72.83	308	eP	P	16 31 28.6	+0.9
AVNT	**Avonos**	72.92	305	i P	P	16 31 28.3	0.0
CDAG	**Cicekdag**	73.01	306	i P	P	16 31 29.1	+0.3
AKASG	**Malin Array Be**	73.03	318	P	P	16 31 27.2	-1.4
	comp=Z,31nm,0.8s,mb5.2,baz=58,slow=6.3,SNR=122						
NIG	**Nigde**	73.31	305	eP	P	16 31 27.3	-3.3
QURS	**Qurayyt al Mil**	73.34	297	P	P	16 31 31.7	+0.8
ASF	**Jabal al Asfar**	73.43	298	P	P	16 31 32.1	+0.7
	comp=Z,19nm,0.8s,mb5.0,baz=309,slow=3.1,SNR=30						
ELDT	**Eldivan**	73.43	307	i P	P	16 31 31.7	+0.5
KAMT	**Kaman**	73.58	306	eP	P	16 31 31.6	-0.5
KBRS	**Khaybar**	73.58	291	P	P	16 31 34.1	+1.7
BLJS	**Baljurashi**	73.59	285	P	P	16 31 33.7	+1.1
SAFT	**Safranbolu**	73.72	308	eP	P	16 31 33.3	+0.4
LOF	**Lofoten**	73.94	338	eP	P	16 31 34.5	+0.9
	comp=Z,73nm,1.8s,mb5.1						
LOF	**Lofoten**	73.94	338	eP	P	16 31 34.5	+0.9
LOF				AMb	AMB	16 31 39.5	
	comp=Z,73nm,1.8s,mb5.1						
ANTO	**Ankara**	74.09	307	eP	P	16 31 34.5	-0.6
LOD	**Lodumlu**	74.10	307	eP	P	16 31 35.7	+0.5
MEST	**Erdemli**	74.15	303	i P	P	16 31 35.1	-0.4
SGKT	**Sivrigoynuk**	74.39	308	i P	P	16 31 37.3	+0.4
MOR8	**Moi Rana**	74.49	336	eP	P	16 31 34.9	-1.9
	comp=Z,37nm,1.6s,mb4.9						
MOR8	**Moi Rana**	74.49	336	eP	P	16 31 34.9	-1.9
MOR8				AMb	AMB	16 31 50.8	
	comp=Z,37nm,1.6s,mb4.9						
IKL	**Isikli**	74.61	303	eP	P	16 31 37.9	-0.3
KDHN	**Kadinhani**	75.03	306	i P	P	16 31 40.1	-0.4
TBKS	**Tabuk**	75.03	294	P	P	16 31 41.9	+1.2
MDU	**Mudurnu**	75.03	308	eP	P	16 31 40.7	+0.1
KIZT	**Kizilcal**	75.08	306	eP	P	16 31 40.5	-0.3
TLCR		75.10	313	⇓iP	P	16 31 40.6	-0.2
YNBS	**Yanbu' al Bahr**	75.16	290	P	P	16 31 43.1	+1.5
JMQS	**Jabal Moqyreh**	75.36	295	P	P	16 31 43.2	+0.6
POHA	**Pohakuloa**	75.38	75	eP	P	16 31 43.5	+0.7
	comp=Z,463nm,1.2s,mb6.1						
SUW	**Suwalki**	75.39	323	⇑eP	P	16 31 41.3	-0.9
UMJS	**Umm Lajj**	75.43	291	P	P	16 31 44.8	+1.7
CFR	**Carcaliu**	75.55	313	⇑iP	P	16 31 42.9	-0.5
ESKT	**Eskisehir**	75.62	307	eP	P	16 31 43.3	-0.6
ESKT	**Eskisehir**	75.62	307	i P	P	16 31 43.4	-0.4
EIL	**Elat**	75.84	296	P	P	16 31 46.1	+0.7
	comp=Z,6.8nm,0.8s,mb4.4,baz=27,slow=7.1,SNR=14						
EIL	**Elat**	75.84	296	eP	P	16 31 45.0	-0.4
	comp=Z,41nm,1.5s,mb4.9						
HARR	**Harsova**	75.86	313	⇓iP	P	16 31 45.4	+0.3
ALWS	**Ilw as Safayha**	75.88	296	P	P	16 31 46.1	+0.6
JMOS	**Jabal al Moall**	75.89	296	P	P	16 31 46.1	+0.4
DAG	**Danmarks Havn**	76.01	351	⇓iP	P	16 31 44.0	-1.4
DAG				pmax	pmax		
	comp=Z,28nm,1.2s,mb4.9						
DAG	**Danmarks Havn**	76.01	351	⇓iP	P	16 31 44.0	-1.4
	comp=Z,28nm,1.2s,mb4.9						
PSN	**Preselentsi**	76.04	312	eP	P	16 31 46.0	-0.2
HAQS	**Haql**	76.08	296	P	P	16 31 47.2	+0.5
BDAS	**Al Bad'**	76.15	295	P	P	16 31 47.7	+0.5
NSS	**Namsos**	76.16	335	eP	P	16 31 44.7	-1.8
SIT	**Sitka**	76.18	33	eP	P	16 31 47.4	+0.7
SIT				MLR	MLR		
	comp=Z,100nm,21.0s						
VRI	**Vrincioaia**	76.23	314	⇑iP	P	16 31 47.2	0.0
TAYS	**Tayyib Ism**	76.30	295	P	P	16 31 48.5	+0.5
YLV	**Yalova**	76.32	308	eP	P	16 31 46.6	-1.2
LVV	**L'vov**	76.46	319	eP	P	16 31 48.8	+0.4
LVV				eS	S	16 41 20.4	-6.2
LVV				e		16 41 50.2	
LVV				MLR	MLR		
	comp=Z,100nm,17.0s						
LVV				MLR	MLR		
	comp=N,200nm,16.0s						
LVV				MLR	MLR		
	comp=E,200nm,17.0s						
TKTP	**Tekketepe**	76.52	306	i P	P	16 31 48.2	-0.8
BURAR	**Bucovina Array**	76.56	316	⇑iP	P	16 31 48.9	-0.1
BURAR	**Bucovina Array**	76.56	316	⇑iP	P	16 31 48.9	-0.1
ULDT	**Uludag**	76.64	308	i P	P	16 31 49.7	0.0
PRD	**Provadia**	76.75	312	eP	P	16 31 50.0	-0.2
GDZ	**Gediz**	76.76	307	i P	P	16 31 49.3	-1.1
MLR	**Muntele Rosu**	76.88	314	P	P	16 31 51.2	+0.3
MLR				pmax	pmax		
	comp=Z,24nm,0.5s						
MLR	**Muntele Rosu**	76.88	314	P	P	16 31 51.2	+0.3
	comp=Z,24nm,0.5s,mb5.2,baz=356,slow=3.9,SNR=38						
MLR	**Muntele Rosu**	76.88	314	⇑iP	P	16 31 50.8	0.0
MLR	**Muntele Rosu**	76.88	314	⇑iP	P	16 31 50.8	-0.1
ELL	**Elmali**	77.29	305	eP	P	16 31 53.4	0.0
KWP	**Kalwaria**	77.33	319	⇑eP	P	16 31 53.3	0.0
BNT	**Bandirma**	77.43	309	eP	P	16 31 54.1	+0.1
HFS	**Hagfors**	77.53	331	P	P	16 31 53.8	-0.3
	comp=Z,12nm,0.6s,mb4.8,baz=90,slow=4.4,SNR=26						
MTUR	**Matau**	77.56	314	P	P	16 31 55.0	+0.4
DNZL	**Cakiroluk**	77.59	306	i P	P	16 31 54.7	-0.3
MANT	**Manisa**	77.65	307	i P	P	16 31 54.8	-0.5
KOLS	**Kolonicke sedl**	77.87	318	i P	P	16 31 56.5	+0.3
RES	**Resolute Bay**	78.06	9	eP	P	16 31 55.6	-1.2
RES				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.0						
RES	**Resolute Bay**	78.06	9	eP	P	16 31 55.6	-1.2
	comp=Z,37nm,1.2s,mb5.0						
DLBC	**Dease Lake**	78.13	31	eP	P	16 31 58.0	+0.6
NB2	**NORSAR Subarra**	78.16	332	P	P	16 31 56.8	-0.8
	comp=Z,128nm,1.7s,mb5.4,baz=56,slow=5.8						
NB2	**NORSAR Subarra**	78.16	332	P	P	16 31 56.8	-0.8
	baz=56,slow=5.9						
NOA	**NORSAR Array B**	78.16	332	P	P	16 31 56.9	-0.8
	comp=Z,10nm,0.7s,mb4.7,baz=57,slow=5.7,SNR=53						
NOA				LR	LR	17 10 12.8	
	comp=Z,375nm,18.4s,baz=70,slow=38						
YER	**Yerkesik**	78.36	305	eP	P	16 31 59.4	+0.1
DIM	**Dimitrovgrad**	78.46	311	eP	P	16 32 00.0	+0.4
ALN	**Alexandroupoli**	78.54	310	eP	P	16 32 00.2	+0.1
JMIC	**Jan Mayen**	78.56	345	AMS	AMS	17 11 15.3	
	comp=Z,181nm,18.6s						
OJC	**Ojcow**	78.81	320	⇑eP	P	16 32 01.0	-0.4
OJC				ePcP	PcP	16 32 08.5	-1.7
OJC				eS	S	16 41 50.7	-1.0
OJC				MLR	MLR	17 12 08.8	
	comp=Z,200nm,23.8s						
ARG	**Arkhangelos**	78.82	305	eP	P	16 32 02.2	+0.4
NIE	**Niedzica**	78.84	319	⇑eP	P	16 32 02.2	+0.6
PRK	**Paraskevi**	79.02	308	eP	P	16 32 03.0	+0.2
BODT	**Bodrum**	79.11	306	eP	P	16 32 02.3	-1.0
KECS	**Kecovo**	79.13	318	i P	P	16 32 03.5	+0.3
RZN	**Rozhen**	79.16	311	eP	P	16 32 04.0	+0.5
PGB	**Panagyurishte**	79.19	312	eP	P	16 32 04.0	+0.3
PSZ	**Piszkesteto**	79.73	318	P	P	16 32 07.2	+0.8
PSZ	**Piszkesteto**	79.73	318	eP	P	16 32 05.7	-0.7
	comp=Z,34nm,1.4s,mb5.0						
PSZ	**Piszkesteto**	79.73	318	⇑iP	P	16 32 06.3	-0.1
KARP	**Karpathos**	79.80	304	eP	P	16 32 07.0	-0.1
VTS	**Vitosha**	79.82	312	eP	P	16 32 08.0	+0.9
VTS	**Vitosha**	79.82	312	P	P	16 32 07.5	+0.4
MMB	**Musomiste**	79.88	311	eP	P	16 32 06.0	-1.4
OKC	**Ostrava-Krasne**	79.93	320	eP	P	16 32 07.8	+0.3
OKC				eS	S	16 42 02.0	-1.6
OKC				AMS	AMS	17 13 00.0	
	comp=Z,200nm,15.8s						
VYHS	**Vyhne**	80.12	319	i P	P	16 32 08.9	+0.4
BOLS	**Boljevac**	80.15	314	⇑iP	P	16 32 05.9	-2.9
KKB	**Krupnik**	80.20	312	eP	P	16 32 09.0	-0.1
MORC	**Moravsky Berou**	80.31	320	eP	P	16 32 09.1	-0.4
MORC				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.7						
MORC	**Moravsky Berou**	80.31	320	eP	P	16 32 09.1	-0.4
	comp=Z,14nm,1.1s,mb4.7						
KOLL	**Kolacno**	80.34	319	i P	P	16 32 10.6	+0.9
KSP	**Ksiaz**	80.54	322	⇑eP	P	16 32 10.6	-0.1
KSP				e*PP	pP	16 32 28.9	-2.0
KSP				eS	S	16 42 11.0	+1.1
KSP	**Ksiaz**	80.54	322	⇑eP	P	16 32 10.6	-0.1
KSP				ePcP	PcP	16 32 16.3	-1.4
KSP				epP	pP	16 32 28.9	-2.0
KSP				eS	S	16 42 11.0	+1.1
KSP	**Ksiaz**	80.54	322	⇑eP	P	16 32 10.8	+0.1
PLG	**Polygyros**	80.57	310	eP	P	16 32 10.5	-0.6
PAIG	**Paliouri**	80.59	310	eP	P	16 32 12.1	+0.9
SANT	**Santorini**	80.74	306	eP	P	16 32 10.4	-1.7
	comp=Z,97nm,1.2s,mb5.5						
THR1	**Thera Island**	80.74	306	eP	P	16 32 10.7	-1.4
DPC	**Dobruska-Polom**	80.75	321	eP	P	16 32 12.5	+0.7
DPC				eS	S	16 42 12.1	0.0
DPC				MLR	MLR		
	comp=Z,200nm,17.6s						
DPC	**Dobruska-Polom**	80.75	321	eP	P	16 32 12.5	+0.7
DPC				eS	S	16 42 12.1	0.0
DPC				ex	x	16 53 30.7	
DPC				AMS	AMS	17 11 50.0	
	comp=Z,200nm,17.6s						
UPC	**Upice**	80.85	322	eP	P	16 32 12.9	+0.5
SMOL	**Smolenice**	80.95	319	eP	P	16 32 14.6	+1.7
GRG	**Griva**	81.05	311	eP	P	16 32 13.2	-0.4
VRAC	**Vranov**	81.07	320	P	P	16 32 14.4	+0.8
VRAC				pmax	pmax		
	comp=Z,12nm,0.8s						
VRAC	**Vranov**	81.07	320	P	P	16 32 14.4	+0.8
	comp=Z,12nm,0.8s,mb4.8,baz=47,slow=7.4,SNR=13						
VRAC	**Vranov**	81.07	320	P	P	16 32 14.2	+0.7
NPS	**Neapolis**	81.08	305	eP	P	16 32 13.5	-0.4
URZ	**Urewera**	81.13	139	P	P	16 32 12.8	-1.3
	comp=Z,12nm,0.5s,mb5.0,baz=28,slow=1.6,SNR=15						
XOR	**Xorichti**	81.16	309	eP	P	16 32 12.7	-1.5
XRY	**Khrisi**	81.17	304	eP	P	16 32 14.0	-0.4
SKO	**Skopje**	81.28	312	⇓iP	P	16 32 15.0	+0.2
SKO				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.2						
SKO	**Skopje**	81.28	312	⇓iP	P	16 32 15.0	+0.2
	comp=Z,0.0nm,0.7s						
ZST	**Bratislava**	81.28	319	eP	P	16 32 15.5	+0.8
LIT	**Litokhoron**	81.35	310	eP	P	16 32 14.1	-1.1
RPZ	**Rata Peaks**	81.55	146	P	P	16 32 16.2	+0.1
	comp=Z,118nm,0.8s,mb5.8,baz=260,slow=1.2,SNR=30						
IDI	**Anoyia**	81.61	305	P	P	16 32 15.9	-0.8
	comp=Z,19nm,0.5s,mb5.2,baz=25,slow=7.1,SNR=28						
PVCC	**Panska Ves**	81.65	322	eP	P	16 32 17.2	+0.6
PVCC				MLR	MLR		
	comp=Z,300nm,15.7s						
PVCC	**Panska Ves**	81.65	322	eP	P	16 32 17.2	+0.6
PVCC				ex	x	16 53 53.5	
PVCC				AMS	AMS	17 11 50.0	
	comp=Z,300nm,15.7s						
SCO	**Scoresbysund**	81.75	348	i P	P	16 32 16.5	-0.2
SCO				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
SCO	**Scoresbysund**	81.75	348	i P	P	16 32 16.5	-0.2
	comp=Z,8.1nm,0.7s,mb4.7						
KZN	**Kozani**	81.76	311	eP	P	16 32 16.5	-0.8
NVSS	**Nova Varos 2**	81.77	314	⇑iP	P	16 32 17.2	-0.1
BBLS	**Bajina Basta -**	81.80	315	⇑iP	P	16 32 17.6	+0.1
FNA	**Florina**	81.83	311	eP	P	16 32 16.8	-0.9
BRG	**Berggiesshubel**	81.84	323	eP	P	16 32 17.6	+0.1
BRG				i S	S	16 42 22.0	-1.3
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.5						
BRG				MLR	MLR		
	comp=N,290nm,15.6s						
BRG				MLR	MLR		
	comp=E,240nm,15.6s						
BRG				MLR	MLR		
	comp=Z,330nm,15.6s						
BRG	**Berggiesshubel**	81.84	323	eP	P	16 32 17.6	+0.1
	comp=Z,10nm,1.3s,mb4.5						
BRG				i S	S	16 42 22.0	-1.3
BRG				eSS	SS	16 47 38.0	-7.8
BRG				LR	LR		
	comp=Z,330nm,15.6s						
AGG	**Agios Georgios**	81.91	309	eP	P	16 32 16.4	-1.8
PRU	**Pruhonice**	81.93	322	eP	P	16 32 18.4	+0.4
PRU				eS	S	16 42 25.5	+1.3
PRU				MLR	MLR		
	comp=Z,300nm,18.2s						
PRU	**Pruhonice**	81.93	322	eP	P	16 32 18.4	+0.4
PRU				eS	S	16 42 25.5	+1.3
PRU				ex	x	16 53 55.7	
PRU				AMS	AMS	17 13 20.0	
	comp=Z,300nm,18.2s						
VAM	**Vamos**	82.07	305	eP	P	16 32 19.2	+0.2
SUMG	**Summit**	82.10	354	eP	P	16 32 18.4	-0.1
	comp=Z,46nm,1.1s,mb5.2						
BBB	**Bella Bella**	82.13	36	LR	LR	17 05 27.7	
	comp=Z,74nm,20.2s,baz=264,slow=33						
CLL	**Collm**	82.14	323	⇓iP	P	16 32 18.7	-0.3
CLL				i		16 32 25.8	
CLL				e*PP	pP	16 32 36.0	-3.3
CLL				eS	S	16 42 26.0	-0.3
CLL				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.9						
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.3						
CLL				MLR	MLR		
	comp=Z,500nm,19.2s						
CLL	**Collm**	82.14	323	⇓iP	P	16 32 18.7	-0.3
	comp=Z,15nm,0.7s,mb4.9						
CLL				i PcP	PcP	16 32 25.8	+1.2
CLL				epP	pP	16 32 36.0	-3.3
CLL				eS	S	16 42 26.0	-0.3
CLL				i PKKP	PKKP	16 50 47.1	+22
CLL				LR	LR		
	comp=Z,500nm,19.2s						
CLL	**Collm**	82.14	323	⇓P	P	16 32 18.7	-0.3
CLL				i PCP	PcP	16 32 25.8	+1.2
CLL				e*PP	pP	16 32 36.0	-3.3
CLL				ePP	PP	16 35 28.0	-1.6
CLL				eS	S	16 42 26.0	-0.3
CLL				e*SS		16 42 59.0	
CLL				i PKKP	PKKP	16 50 47.1	+22
YKW3	**Yellowknife Ar**	82.17	23	eP	P	16 32 18.2	-0.8
BSEG	**Bad Segeberg**	82.21	326	eP	P	16 32 20.3	+1.0
YKA	**Yellowknife Ar**	82.22	23	P	P	16 32 18.6	-0.6
	comp=Z,31nm,0.5s,mb5.4,baz=312,slow=5.0,SNR=334						
YKA				S	S	16 42 27.8	+0.9
	comp=Z,0.2nm,0.3s,baz=307,slow=10,SNR=7.2						
YKA				PKKPbc		16 50 44.7	
	comp=Z,1.7nm,0.8s,baz=125,slow=2.0,SNR=10						
YKA				LR	LR	17 12 01.0	
	comp=Z,143nm,20.9s,baz=300,slow=38						
YKA	**Yellowknife Ar**	82.22	23	P	P	16 32 18.6	-0.6
YKA				S	S	16 42 27.8	+0.9
YKA				PKKPbc		16 50 44.7	
YKA				LR	LR	17 12 01.0	
EVR	**Evrytania**	82.33	309	eP	P	16 32 19.5	-0.8
MEV	**Metsovon**	82.36	310	eP	P	16 32 19.1	-1.3
VLI	**Veliai**	82.45	307	eP	P	16 32 18.8	-2.2
KYTH	**Kithira**	82.56	306	eP	P	16 32 20.0	-1.5
ARSA	**Arzberg**	82.67	319	⇑iP	P	16 32 21.9	+0.1
	comp=Z,77nm,2.7s,mb5.1						
KHC	**Kasperske Hory**	82.90	321	eP	P	16 32 23.3	+0.4
KHC				eS	S	16 42 34.8	+0.8
KHC				MLR	MLR		
	comp=Z,200nm,16.6s						
KHC	**Kasperske Hory**	82.90	321	eP	P	16 32 23.3	+0.4
KHC				eS	S	16 42 34.8	+0.8
KHC				ex	x	16 53 46.7	
KHC				AMS	AMS	17 12 30.0	
	comp=Z,200nm,16.6s						
GEC2	**GERESS Array S**	82.97	321	eP	P	16 32 22.9	-0.4
GEC2				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.9						
GEC2	**GERESS Array S**	82.97	321	eP	P	16 32 22.9	-0.4
	comp=Z,18nm,1.0s,mb4.9						
GERES	**GERESS Array B**	82.97	321	P	P	16 32 23.7	+0.4
	comp=Z,16nm,1.0s,mb4.8,baz=56,slow=4.8,SNR=61						
GERES				PKKPbc		16 50 44.7	
	comp=Z,1.7nm,0.8s,baz=225,slow=1.9,SNR=11						
GERES				LR	LR	17 15 32.9	
	comp=Z,240nm,19.9s,baz=183,slow=40						
NKC	**Novy Kostel**	82.98	322	eP	P	16 32 23.9	+0.5
NKC				eS	S	16 42 42.1	+7.2
NKC				ex	x	16 54 01.1	
NKC				AMS	AMS	17 12 30.0	
	comp=Z,300nm,21.0s						
ITM	**Ithomi**	82.99	308	eP	P	16 32 22.5	-1.2
IGT	**Igoumenitsa**	83.09	310	eP	P	16 32 23.2	-1.0
MOA	**Molln**	83.13	320	⇑iP	P	16 32 24.2	+0.1
	comp=Z,80nm,2.3s,mb5.1						
GOLS	**Golise**	83.20	318	⇑eP	P	16 32 24.3	-0.2
MOX	**Moxa**	83.23	323	eP	P	16 32 25.6	+1.0
MOX				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.6						
MOX	**Moxa**	83.23	323	eP	P	16 32 25.6	+1.0
	comp=Z,12nm,1.2s,mb4.6						
MOX				eS	S	16 42 35.0	-2.3
MOX				LR	LR		
	comp=Z,300nm,19.0s						
MOX	**Moxa**	83.23	323	i P	P	16 32 25.6	+1.0
	comp=Z,logA/T=1.0,mb4.6						
MOX				S	S	16 42 35.0	-2.3
MOX				L		17 13 51.0	
LKD	**Levkas**	83.23	309	eP	P	16 32 23.1	-1.8
CLZ	**Clausthal**	83.28	325	eP	P	16 32 24.6	-0.2
VLS	**Valsamata**	83.51	309	eP	P	16 32 25.5	-0.8
OBKA	**Obir**	83.61	318	⇑iP	P	16 32 26.4	-0.2
	comp=Z,19nm,1.1s,mb4.8						
BOJS	**Bojanci**	83.67	317	⇑eP	P	16 32 27.0	+0.1
BOJS				e	pP	16 32 45.1	-2.2
LJU	**Ljubljana**	83.85	318	⇑eP	P	16 32 27.4	-0.4
GRA1	**Grafenberg Arr**	83.94	322	eP	P	16 32 28.4	+0.2
	comp=Z,42nm,1.4s,mb5.1						
GRA1				epP	pP	16 32 44.6	-3.9
GRA1				ePP	PP	16 35 42.3	-1.7
GRA1				eS	S	16 42 47.4	+3.0
GRA1				LR	LR		
	comp=Z,300nm,21.1s						
GRF	**Grafenberg Arr**	83.94	322	eP	P	16 32 28.4	+0.2
GRF				e*PP	pP	16 32 44.6	-3.9
GRF				e		16 35 42.3	
GRF				eS	S	16 42 47.4	+3.0
GRF				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.1						
GRF				MLR	MLR		
	comp=Z,300nm,21.1s						
GRF	**Grafenberg Arr**	83.94	322	eP	P	16 32 28.4	+0.2
GRF				e*PP	pP	16 32 44.6	-3.9
GRF				e		16 35 42.3	
GRF				eS	S	16 42 47.4	+3.0
GRF				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.1						
GRF				MLR	MLR		
	comp=Z,300nm,21.1s						
GRF	**Grafenberg Arr**	83.94	322	eP	P	16 32 28.4	+0.2
	comp=Z,42nm,1.4s,mb5.1						
GRF				epP	pP	16 32 44.6	-3.9
GRF				ePP	PP	16 35 42.3	-1.7
GRF				eS	S	16 42 47.4	+3.0
GRF				LR	LR		
	comp=Z,300nm,21.1s						
KBA	**Koelnbreinsper**	84.05	319	⇑iP	P	16 32 28.6	-0.2
	comp=Z,18nm,1.2s,mb4.8						
KBA	**Koelnbreinsper**	84.05	319	⇑iP	P	16 32 28.6	-0.2
KBA				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.8						
JAVS	**Javornik**	84.21	318	⇑eP	P	16 32 29.0	-0.7
FUR	**Furstenfeldbru**	84.70	321	eP	P	16 32 32.5	+0.5
FUR				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.5						
FUR	**Furstenfeldbru**	84.70	321	eP	P	16 32 32.5	+0.5
	comp=Z,54nm,0.9s,mb5.5						
WATA	**Walderalm**	84.96	320	⇓iP	P	16 32 33.7	+0.4
	comp=Z,10nm,1.0s,mb4.7						
WATA	**Walderalm**	84.96	320	⇓iP	P	16 32 33.7	+0.4
WATA				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
WTTA	**Wattenberg**	84.96	320	⇑iP	P	16 32 32.9	-0.4
	comp=Z,51nm,1.4s,mb5.3						
WTTA	**Wattenberg**	84.96	320	⇑iP	P	16 32 32.9	-0.4
WTTA				pmax	pmax		
	comp=Z,51nm,1.4s,mb5.3						
TNS	**Taunus Mts**	85.17	324	eP	P	16 32 34.1	-0.2
MOTA	**Moosalm**	85.23	320	⇓iP	P	16 32 34.6	-0.1
	comp=Z,12nm,1.1s,mb4.7						
MOTA	**Moosalm**	85.23	320	⇓iP	P	16 32 34.6	-0.1
MOTA				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
SQTA	**Sankt Quirin**	85.23	320	⇓iP	P	16 32 34.9	+0.2
	comp=Z,15nm,1.1s,mb4.8						
SQTA	**Sankt Quirin**	85.23	320	⇓iP	P	16 32 34.9	+0.2
SQTA				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
TOD	**Tromm**	85.32	323	eP	P	16 32 35.1	+0.1
STU	**Stuttgart**	85.55	322	eP	P	16 32 35.5	-0.7
TIP	**Timpagrande**	85.72	311	eP	P	16 32 36.7	-0.6
KMBO	**Kilima Mbogo**	85.73	267	i P	P	16 32 40.2	+2.3
KMBO				pmax	pmax		
	comp=Z,26nm,0.9s						
KMBO	**Kilima Mbogo**	85.73	267	P	P	16 32 39.6	+1.7
	comp=Z,26nm,0.9s,mb5.2,baz=47,slow=7.7,SNR=52						
KMBO				LR	LR	17 09 59.1	
	comp=Z,184nm,19.8s,baz=95,slow=35						
DAVA	**Damuels**	85.97	321	⇑iP	P	16 32 38.3	0.0
	comp=Z,34nm,1.7s,mb5.0						
LANF	**Langenberg**	86.21	323	eP	P	16 32 39.3	-0.1
DAVOX	**Davos**	86.24	320	P	P	16 32 40.3	+0.7
	comp=Z,6.6nm,0.6s,mb4.7,baz=27,slow=3.1,SNR=9.5						
DAVOX				PP	PP	16 35 59.9	-2.8
	comp=Z,3.6nm,0.7s,baz=108,slow=4.8,SNR=5.2						
DAVOX	**Davos**	86.24	320	P	P	16 32 40.3	+0.7
DAVOX				PP	PP	16 35 59.9	-2.8
BFO	**Black Forest**	86.28	322	eP	P	16 32 38.3	-1.5
AQU	**L'Aquila**	86.39	315	eP	P	16 32 41.5	+1.0
AQU				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.3						
AQU	**L'Aquila**	86.39	315	eP	P	16 32 41.5	+1.1
	comp=Z,36nm,0.8s,mb5.3						
PGC	**Sidney**	86.54	37	eP	P	16 32 41.5	+0.4
	comp=Z,38nm,0.8s,mb5.4						
OCWA	**Octopus Mounta**	86.63	38	eP	P	16 32 42.4	+0.9
	comp=Z,142nm,1.4s,mb5.7						
FELD	**Feldberg**	86.71	322	eP	P	16 32 38.6	-3.3
WLF	**Walferdange**	86.71	324	eP	P	16 32 42.3	+0.4
WLF				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
WLF	**Walferdange**	86.71	324	eP	P	16 32 42.3	+0.5
	comp=Z,20nm,0.8s,mb5.1						
WLS	**Welschbruch**	86.77	323	eP	P	16 32 41.7	-0.5
LIBD	**Limburg**	86.78	322	eP	P	16 32 42.1	-0.1
CDF	**Champ du Feu**	86.81	323	eP	P	16 32 41.8	-0.6
	comp=Z,41nm,1.2s,mb4.9						
CDF	**Champ du Feu**	86.81	323	eP	P	16 32 41.8	-0.6
CDF				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						

ECH	Echery	86.99	323	eP	P	16 32 44.0	+0.7
GIVF	Givet	87.16	325	eP	P	16 32 43.2	-0.8
BBS	Basel-Blauen	87.22	322	eP	P	16 32 44.0	-0.4
HINF	Hinteralfeld	87.39	322	eP	P	16 32 44.3	-0.9
BAIF	Baives	87.51	325	eP	P	16 32 44.9	-0.8
HAU	Haudompre	87.56	323	eP	P	16 32 45.1	-0.9
HAU				eR			
	comp=Z,349nm,20.2s						
THEF	They Montfort	87.63	323	eP	P	16 32 45.0	-1.3
EKA	Eskdalemuir Ar	87.65	332	P	P	16 32 46.5	+0.3
	comp=Z,2.6nm,0.6s,mb4.4,baz=27,slow=1.9,SNR=9.1						
LOMF	Lomont	87.66	322	eP	P	16 32 44.3	-2.2
MEZF	Maizieres J'vi	87.98	324	eP	P	16 32 47.4	-0.6
TTW	Tolt Reservoir	88.05	37	P	P	16 32 49.3	+0.9
PNT	Penticton	88.21	35	P	P	16 32 49.6	+0.5
RVC	Mount Rainier-	88.33	38	P	P	16 32 51.0	+1.3
CABF	La Chapelle	88.50	322	eP	P	16 32 49.3	-1.2
LON	Longmire	88.53	38	P	P	16 32 51.4	+0.7
LPG	La Plagne	88.76	321	eP	P	16 32 51.6	-0.2
	comp=Z,42nm,0.7s,mb5.3						
LPG	La Plagne	88.76	321	eP	P	16 32 51.6	-0.2
LPG				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.3						
LPL	La Plagne	88.76	321	eP	P	16 32 51.5	-0.3
	comp=Z,44nm,0.8s,mb5.2						
LPL	La Plagne	88.76	321	eP	P	16 32 51.5	-0.3
LPL				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2						
EDM	Edmonton	88.80	30	eP	P	16 32 52.2	+0.4
COR	Corvallis	88.90	41	eP	P	16 32 53.7	+1.2
COR				pmax	pmax		
	comp=Z,104nm,0.8s,mb5.9						
COR	Corvallis	88.90	41	eP	P	16 32 53.7	+1.3
	comp=Z,104nm,0.8s,mb5.9						
BNI	Bardonecchia	89.06	320	eP	P	16 32 53.2	0.0
BNI				e		16 36 23.6	
BNI				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
BNI	Bardonecchia	89.06	320	eP	P	16 32 53.2	+0.1
	comp=Z,13nm,0.8s,mb5.0						
BNI				ePP	PP	16 36 23.6	-2.4
PGF	Pioggiola	89.06	317	eP	P	16 32 53.4	+0.1
	comp=Z,66nm,0.7s,mb5.5						
PGF	Pioggiola	89.06	317	eP	P	16 32 53.4	+0.1
PGF				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.5						
SAOF	Saorge	89.14	319	eP	P	16 32 53.1	-0.5
MBDF	Montbardon	89.19	320	eP	P	16 32 53.2	-0.6
	comp=Z,12nm,0.7s,mb4.7						
MBDF	Montbardon	89.19	320	eP	P	16 32 53.2	-0.6
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
AUTN	L'Aution	89.21	319	eP	P	16 32 52.3	-1.6
KEBM	Edson Butte	89.23	42	eP	P	16 32 55.9	+1.8
SSOR	Sweet Springs	89.24	40	P	P	16 32 55.6	+1.5
SBF	Sospel	89.28	319	eP	P	16 32 53.0	-1.3
	comp=Z,56nm,0.8s,mb5.4						
SBF	Sospel	89.28	319	eP	P	16 32 53.0	-1.3
SBF				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.3						
TOUF	Mont Tournerai	89.31	319	eP	P	16 32 54.5	+0.1
LOR	Lormes	89.35	323	eP	P	16 32 53.3	-1.2
	comp=Z,24nm,1.1s,mb4.9						
LOR				eR			
	comp=Z,341nm,19.8s						
LOR	Lormes	89.35	323	eP	P	16 32 53.3	-1.2
LOR				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
LOR				MLR	MLR		
	comp=Z,340nm,19.8s						
REVF	Revere	89.39	319	eP	P	16 32 55.0	+0.2
ORIF	Oris-en-Rattie	89.60	320	eP	P	16 32 54.9	-0.8
	comp=Z,37nm,0.9s,mb5.2						
ORIF				eR			
	comp=Z,279nm,21.8s						
CALN	Calern	89.67	319	eP	P	16 32 54.8	-1.3
SSF	Saint Saulge	89.67	323	eP	P	16 32 54.8	-1.2
SSF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
SSF	Saint Saulge	89.67	323	eP	P	16 32 54.8	-1.2
	comp=Z,6.3nm,0.9s,mb4.8						
SMF	Signal de Mont	89.74	323	eP	P	16 32 55.4	-0.9
	comp=Z,66nm,1.0s,mb5.4						
SMF	Signal de Mont	89.74	323	eP	P	16 32 55.4	-0.9
SMF				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.4						
HBO	Huckleberry Mo	89.90	41	P	P	16 32 58.5	+1.3
AVF	Avril sur Loir	89.92	323	eP	P	16 32 56.0	-1.2
	comp=Z,45nm,1.0s,mb5.2						
AVF	Avril sur Loir	89.92	323	eP	P	16 32 56.0	-1.2
AVF				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.2						
FRF	La Foret Royal	89.92	319	eP	P	16 32 56.0	-1.3
	comp=Z,22nm,0.8s,mb5.0						
FRF	La Foret Royal	89.92	319	eP	P	16 32 56.0	-1.3
FRF				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
WRD	Warden	89.97	37	P	P	16 32 58.4	+1.0
HAWA	Hanford	90.01	37	eP	P	16 32 58.7	+1.0
	comp=Z,13nm,1.4s,mb4.9						
LMR	La Mourre	90.14	319	eP	P	16 32 57.4	-0.9
	comp=Z,39nm,1.0s,mb5.2						
LMR	La Mourre	90.14	319	eP	P	16 32 57.4	-0.9
LMR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.2						
NEW	Newport	90.16	35	eP	P	16 32 59.0	+0.7
NEW				pmax	pmax		
	comp=Z,68nm,0.9s						
NEW	Newport	90.16	35	eP	P	16 32 59.0	+0.7
	comp=Z,68nm,0.9s,mb5.8						
HUMO	Hull Mountain	90.22	42	eP	P	16 33 00.3	+1.6
	comp=Z,27nm,0.6s,mb5.5						
PLDF	La Plantade	90.26	322	eP	P	16 32 58.9	+0.1
SMRF	Simiane la Rot	90.32	320	eP	P	16 32 58.5	-0.7
VIVF	Saint-Julien-l	90.33	321	eP	P	16 32 58.3	-0.9
	comp=Z,25nm,0.8s,mb5.1						
VIVF	Saint-Julien-l	90.33	321	eP	P	16 32 58.3	-0.9
VIVF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1						
BGF	Bois d'Agland	90.34	323	eP	P	16 32 58.1	-1.1
VSL	Villasalto	90.48	314	eP	P	16 32 59.9	-0.2
	comp=Z,36nm,1.3s,mb5.3						
PYM	Petit Puy Mans	90.74	322	eP	P	16 33 00.8	-0.3
TCF	Toulx Ste Croi	90.85	323	eP	P	16 33 00.8	-0.8
	comp=Z,30nm,1.1s,mb5.0						
TCF	Toulx Ste Croi	90.85	323	eP	P	16 33 00.8	-0.8
TCF				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.0						
YBH	Yreka Blue Hor	90.87	43	eP	P	16 33 02.5	+0.7
YBH				pmax	pmax		
	comp=Z,56nm,1.0s						
YBH	Yreka Blue Hor	90.87	43	eP	P	16 33 02.5	+0.7
	comp=Z,56nm,1.0s,mb5.7						
LBL	Lubilhac	90.92	322	eP	P	16 33 02.0	+0.1
CASY	Casey	91.08	185	eP	P	16 33 02.2	0.0
LASF	Ste Croix	91.26	321	eP	P	16 33 02.9	-0.7
	comp=Z,34nm,1.1s,mb5.1						
MBAR	Mbarara	91.44	270	eP	P	16 33 05.0	-0.1
MBAR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
MBAR	Mbarara	91.44	270	eP	P	16 33 05.0	-0.1
	comp=Z,9.5nm,1.1s,mb4.8						
WDC	Whiskeytown Da	91.63	43	eP	P	16 33 05.7	+0.4
WDC				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.8						
WDC	Whiskeytown Da	91.63	43	eP	P	16 33 05.7	+0.4
	comp=Z,58nm,1.0s,mb5.8						
FCC	Fort Churchill	91.64	18	eP	P	16 33 04.2	-0.8
FCC				pmax	pmax		
	comp=Z,97nm,1.1s,mb6.0						
FCC	Fort Churchill	91.64	18	eP	P	16 33 04.2	-0.8
	comp=Z,97nm,1.1s,mb6.0						
CAF	Calviac	91.77	322	eP	P	16 33 05.7	-0.2
	comp=Z,69nm,1.1s,mb5.5						
CAF	Calviac	91.77	322	eP	P	16 33 05.7	-0.2
CAF				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.5						
RJF	Les Rejaudoux	91.84	323	eP	P	16 33 05.8	-0.4
	comp=Z,90nm,1.0s,mb5.6						
RJF				eR			
	comp=Z,221nm,21.5s						
RJF	Les Rejaudoux	91.84	323	eP	P	16 33 05.8	-0.4
RJF				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.7						
RJF				MLR	MLR		
	comp=Z,220nm,21.5s						
MFF	Saint Martin d	91.92	324	eP	P	16 33 05.3	-1.2
SGMF	Saint Gilles	92.09	327	eP	P	16 33 06.1	-1.2
BMO	Blue Mountains	92.19	38	eP	P	16 33 08.4	+0.7
	comp=Z,81nm,1.2s,mb5.8						
LBCM	Butte Creek Ri	92.22	43	P	P	16 33 08.6	+0.6
MOD	Modoc	92.24	41	eP	P	16 33 09.0	+0.9
	comp=Z,99nm,0.8s,mb6.1						
FFC	Flin Flon	92.37	24	eP	P	16 33 08.1	-0.3
FFC				pmax	pmax		
	comp=Z,89nm,0.8s,mb6.0						
FFC	Flin Flon	92.37	24	eP	P	16 33 08.1	-0.3
	comp=Z,89nm,0.8s,mb6.0						
ROSF	Rostrenen	92.40	327	eP	P	16 33 06.9	-1.8
LFF	La Frestale	92.50	323	eP	P	16 33 08.8	-0.4
QUIF	Quistinic	92.62	327	eP	P	16 33 08.1	-1.6
MTLF	Montolieu	92.65	321	eP	P	16 33 09.1	-0.9
	comp=Z,14nm,0.9s,mb5.0						
MTLF	Montolieu	92.65	321	eP	P	16 33 09.1	-0.9
MTLF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.0						
MSO	Missoula	92.73	35	eP	P	16 33 10.5	+0.3
	comp=Z,56nm,1.3s,mb5.7						
WVOR	Wild Horse Val	92.91	40	eP	P	16 33 12.4	+1.2
WVOR				pmax	pmax		
	comp=Z,159nm,1.5s,mb6.1						
WVOR	Wild Horse Val	92.91	40	eP	P	16 33 12.4	+1.2
	comp=Z,159nm,1.5s,mb6.1						
CHMT	Chamberlain Mo	93.03	34	eP	P	16 33 11.8	+0.2
HRY	Holter Researc	93.89	34	eP	P	16 33 16.4	+0.9
EPF	Esparros	93.92	321	eP	P	16 33 14.7	-1.0
PAHR	Pah Rah Range	94.10	43	eP	P	16 33 17.5	+0.9
	comp=Z,40nm,1.2s,mb5.6						
WCN	Washoe City	94.11	43	eP	P	16 33 17.5	+0.8
WCN				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.6						
WCN	Washoe City	94.11	43	eP	P	16 33 17.5	+0.8
	comp=Z,31nm,0.9s,mb5.6						
CMB	Columbia Colle	94.46	45	eP	P	16 33 18.6	+0.3
CMB				pmax	pmax		
	comp=Z,106nm,1.1s,mb6.1						
CMB	Columbia Colle	94.46	45	eP	P	16 33 18.6	+0.3
	comp=Z,106nm,1.1s,mb6.1						
ETSF	Etsaut	94.52	322	eP	P	16 33 16.8	-1.6
HLID	Hailey	94.61	37	eP	P	16 33 20.0	+1.2
	comp=Z,37nm,0.9s,mb5.8						
SJPF	Ste Jean	94.75	322	eP	P	16 33 19.5	0.0
BMN	Battle Mountai	94.98	41	eP	P	16 33 22.2	+1.6
BMN				pmax	pmax		
	comp=Z,85nm,1.3s,mb6.0						
BMN	Battle Mountai	94.98	41	eP	P	16 33 22.2	+1.5
	comp=Z,85nm,1.3s,mb6.0						
QLMT	Earthquake Lak	95.38	35	eP	P	16 33 23.5	+1.1
NVAR	Mina Array Bea	95.54	43	P	P	16 33 24.5	+1.3
	comp=Z,31nm,0.7s,mb5.8,baz=305,slow=4.0,SNR=194						
NVAR	Mina Array Bea	95.54	43	P	P	16 33 24.5	+1.3
OMM	Old Mammoth Mi	95.60	44	eP	P	16 33 24.4	+0.9
MNV	Mina	95.63	43	eP	P	16 33 24.6	+0.9
MNV				pmax	pmax		
	comp=Z,59nm,1.5s,mb5.8						
MNV	Mina	95.63	43	eP	P	16 33 24.6	+0.9
	comp=Z,59nm,1.5s,mb5.8						
PPT	Papeete	95.74	107	eP	P	16 33 19.0	-5.6
PPT				eLR	LR	17 03 45.3	
	comp=Z,802nm,26.2s,baz=299						
YFT	Old Faithful	95.94	35	eP	P	16 33 27.4	+2.5
ELK	Elko	95.95	40	eP	P	16 33 26.1	+1.1
ELK				pmax	pmax		
	comp=Z,38nm,1.5s						
ELK	Elko	95.95	40	eP	P	16 33 26.1	+1.0
	comp=Z,38nm,1.5s,mb5.6						
MTUM	Tungsten Hills	96.03	44	eP	P	16 33 26.6	+1.1
IMW	Indian Meadow	96.27	36	eP	P	16 33 28.2	+1.8
	comp=Z,9.6nm,0.8s,mb5.3						
TPH	Tonopah	96.43	43	eP	P	16 33 28.2	+0.9
TPH				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.8						
TPH	Tonopah	96.43	43	eP	P	16 33 28.2	+1.0
	comp=Z,29nm,0.8s,mb5.8						
MOOW	Moose Ponds	96.47	36	eP	P	16 33 28.5	+1.2
	comp=Z,12nm,1.2s,mb5.2						
TPAW	Teton Pass	96.54	36	eP	P	16 33 28.6	+1.0
	comp=Z,10nm,0.9s,mb5.2						
LAO	LASA Array	96.65	31	eP	P	16 33 28.6	+0.5
	comp=Z,38nm,1.1s,mb5.7						
BGU	Big Grassy Mou	97.11	39	eP	P	16 33 31.1	+0.7
TRCR	Troy Canyon	97.27	42	eP	P	16 33 31.6	+0.5
DAC	Darwin (Calif)	97.30	45	eP	P	16 33 31.4	+0.1
DAC				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.5						
DAC	Darwin (Calif)	97.30	45	eP	P	16 33 31.4	+0.1
	comp=Z,20nm,0.9s,mb5.5						
HWUT	Hardware Ranch	97.48	38	eP	P	16 33 32.7	+0.7
	comp=Z,5.3nm,0.4s,mb5.3						
DUG	Dugway	97.72	39	eP	P	16 33 34.2	+1.1
DUG				pmax	pmax		
	comp=Z,16nm,1.2s,mb5.4						
DUG	Dugway	97.72	39	eP	P	16 33 34.2	+1.1
	comp=Z,16nm,1.2s,mb5.4						
PDAR	Pinedale Array	97.78	36	P	P	16 33 33.5	+0.3
	comp=Z,1.8nm,0.5s,mb4.8,baz=21,slow=0.6,SNR=17						
PDAR				LR	LR	17 18 55.0	
	comp=Z,94nm,20.0s,baz=341,slow=36						
PDAR	Pinedale Array	97.78	36	P	P	16 33 33.5	+0.3
PDAR				LR	LR	17 18 55.0	
TBI	Tubuai	98.14	112	eLR	LR	17 04 59.8	
	comp=Z,352nm,26.2s,baz=292						
ULM	Lac du Bonnet	98.19	23	P	P	16 33 34.2	-0.8
	comp=Z,5.9nm,0.6s,mb5.3,baz=328,slow=5.9,SNR=9.1						
ULM				LR	LR	17 21 24.6	
	comp=Z,95nm,18.8s,baz=335,slow=38						
DAU	Daniels Canyon	98.46	38	eP	P	16 33 37.1	+0.7
ESDC	Sonseca Array	98.56	321	PKKPbc		16 50 07.4	
	comp=Z,0.2nm,0.3s,baz=268,slow=2.9,SNR=4.9						
MVU	Marysvale	99.19	40	eP	P	16 33 40.9	+1.1
	comp=Z,50nm,2.0s,mb5.7						
MSU	Marysvale	99.20	40	eP	P	16 33 40.6	+0.7
NEN	Nelson	99.44	44	eP	P	16 33 40.9	-0.2
RSSD	Black Hills	99.59	32	eP	P	16 33 41.5	0.0
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb5.1						
RSSD	Black Hills	99.59	32	eP	P	16 33 41.5	0.0
	comp=Z,3.0nm,0.6s,mb5.1						
LSZ	Lusaka	99.66	258	eP	P	16 33 41.9	-0.5
LSZ				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.8						
LSZ	Lusaka	99.66	258	eP	P	16 33 41.9	-0.5
	comp=Z,20nm,0.8s,mb5.8						
PFO	Pinyon Flat Ob	99.67	46	eP	P	16 33 42.5	+0.4
PFO				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.7						
PFO	Pinyon Flat Ob	99.67	46	eP	P	16 33 42.5	+0.4
	comp=Z,26nm,1.2s,mb5.7						
SCHQ	Schefferville	100.46	5	PKKPbc		16 49 58.3	
	comp=Z,3.2nm,0.6s,baz=114,slow=2.2,SNR=8.3						
TAOE	Nuku Hiva Isla	100.70	95	eLR	LR	17 06 34.1	
	comp=Z,1µm,34.0s						
WUAZ	Wupatki	101.67	42	ePdif	P	16 33 51.3	+0.3
	comp=Z,16nm,0.9s						
MAW	Mawson	101.81	200	PKiKP		16 38 13.1	
	comp=Z,2.8nm,0.8s,baz=317,slow=2.6,SNR=4.7						
MAW				PKKPbc		16 49 55.4	
	comp=Z,4.5nm,1.0s,baz=299,slow=3.4,SNR=5.3						
VNDA	Vanda	104.66	172	PKiKP		16 38 19.5	
	comp=Z,2.0nm,1.1s,baz=318,slow=2.2,SNR=3.8						
VNDA				PKKPbc		16 49 48.2	
	comp=Z,2.0nm,0.7s,baz=100,slow=1.3,SNR=11						
RKT	Rikitea	110.50	107	eLR	LR	17 10 30.5	
	comp=Z,494nm,26.2s,baz=312						
TXAR	Lajitas Array	110.64	42	Pdiff	Pdif	16 34 33.0	+2.3
	comp=Z,0.7nm,0.7s,baz=297,slow=2.8,SNR=7.8						
TXAR				PKiKP		16 38 30.0	
	comp=Z,1.3nm,0.4s,baz=270,slow=0.9,SNR=14						
BINY	Binghamton	111.41	14	ePKPdf	PKPdf	16 38 30.9	+0.3
JCT	Junction City	112.06	38	ePKIKP	PKPdf	16 38 33.2	+1.0
WVT	Waverly	113.27	26	ePKIKP	PKPdf	16 38 34.6	+0.2
QSPA	South Pole Qui	114.46	180	⇓iP	PKPdf	16 38 36.7	+0.9
DBIC	Dimbokro	119.65	294	PKIKP	PKPdf	16 38 47.9	+0.6
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
DBIC	Dimbokro	119.65	294	PKP	PKPdf	16 38 47.9	+0.5
	comp=Z,9.0nm,0.6s,baz=23,slow=0.8,SNR=24						
DBIC				PKKPbc		16 48 58.5	
	comp=Z,3.7nm,0.5s,baz=168,slow=8.7,SNR=11						
DBIC	Dimbokro	119.65	294	ePKPdf	PKPdf	16 38 47.7	+0.3
SNAA	Sanae	123.94	198	⇓iP	PKPdf	16 38 54.7	+0.4
SNAA	Sanae	123.94	198	PKKPbc		16 48 40.5	
	comp=Z,1.5nm,1.0s,baz=280,slow=4.4,SNR=6.9						
VNA2	Neumayer--Watz	125.59	198	⇓iP	PKPdf	16 38 59.7	+2.3
VNA1	Neumayer--Stat	125.98	198	⇓iP	PKPdf	16 39 00.7	+2.5
VNA3	Neumayer Olymp	126.06	197	⇓iP	PKPdf	16 39 00.2	+1.9
SDV	Santo Domingo	144.43	22	PKP	PKPdf	16 39 33.0	-0.7
	comp=Z,185nm,0.8s,baz=14,slow=1.6,SNR=159						
SDV	Santo Domingo	144.43	22	ePKPdf	PKPdf	16 39 32.4	-1.2
PCRV	Puerto La Cruz	144.76	11	PKP	PKPdf	16 39 32.8	-1.4
	comp=Z,173nm,0.6s,baz=348,slow=2.1,SNR=73						
ROSC	El Rosal	146.60	31	PKPbc	PKPbc	16 39 40.1	+1.2
	comp=Z,50nm,0.6s,baz=96,slow=9.4,SNR=28						
OTAV	Otavalo	148.26	42	ePKPdf	PKPdf	16 39 41.6	+1.5
USHA	Ushuaia	148.89	168	PKPbc	PKPdf	16 39 46.2	+6.4
	comp=Z,87nm,0.9s,baz=140,slow=2.8,SNR=11						
RCBR	Riachuelo	151.74	308	ePKPbc	PKPdf	16 39 53.6	+8.1
PLCA	Paso Flores	160.83	150	PKP	PKPdf	16 39 58.7	+2.5
	comp=Z,3.3nm,1.1s,baz=194,slow=6.9,SNR=3.4						
PLCA				PKPab	PKPab	16 40 41.4	+0.1
	comp=Z,14nm,0.8s,baz=219,slow=5.1,SNR=17						
PLCA	Paso Flores	160.83	150	PKP	PKPdf	16 39 58.7	+2.5
PLCA				PKPab	PKPab	16 40 41.4	+0.1
SAML	Samuel	163.59	19	ePKPdf	PKPdf	16 40 01.0	+1.2
SAML				ePKPab	PKPab	16 40 50.5	-3.7
SAML				ePP	PP	16 44 33.1	-7.3
BAO	Brasilia Array	167.03	312	PKPdf	PKPdf	16 40 03.0	+0.3
BDFB	Brasilia	167.05	312	PKP	PKPdf	16 40 04.5	+1.8
	comp=Z,16nm,0.8s,baz=134,slow=1.5,SNR=20						
BDFB				PKPab	PKPab	16 41 09.6	+0.4
	comp=Z,6.0nm,0.6s,baz=55,slow=3.8,SNR=5.0						
LPAZ	La Paz	167.34	51	PKIKP	PKPdf	16 40 06.1	+3.2
LPAZ						16 41 09.3	
LPAZ						16 44 55.4	
LPAZ				pmax	pmax		
	comp=Z,32nm,1.2s						
LPAZ				pmax	pmax		
	comp=Z,14nm,0.7s						
LPAZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
LPAZ	La Paz	167.34	51	PKP	PKPdf	16 40 06.0	+3.1
	comp=Z,32nm,1.2s,baz=18,slow=2.7,SNR=60						
LPAZ				PKPab	PKPab	16 41 09.3	-1.0
	comp=Z,14nm,0.7s,baz=346,slow=6.9,SNR=18						
LPAZ				PP	PP	16 44 55.4	-4.1
	comp=Z,4.2nm,1.1s,baz=342,slow=9.9,SNR=5.2						
LPAZ	La Paz	167.34	51	ePKPdf	PKPdf	16 40 05.6	+2.7
LPAZ				ePKPab	PKPab	16 41 09.2	-1.2
LPAZ				ePP	PP	16 44 55.1	-4.4
CFAA	Coronel Fontan	168.60	130	PKP	PKPdf	16 40 05.5	+2.2
	comp=Z,1.2nm,0.8s,baz=293,slow=2.4,SNR=22						
CFAA				PKPab	PKPab	16 41 14.7	-0.9
	comp=Z,1.5nm,0.9s,baz=258,slow=3.7,SNR=10						
CFAA	Coronel Fontan	168.60	130	PKP	PKPdf	16 40 05.5	+2.2
CFAA				PKPab	PKPab	16 41 14.7	-0.9
LVC	Limon Verde	169.75	81	PKP	PKPdf	16 40 07.9	+3.6
	comp=Z,5.5nm,0.8s,baz=274,slow=3.1,SNR=7.7						
LVC				PKPab	PKPab	16 41 22.6	+1.7
	comp=Z,22nm,0.8s,baz=282,slow=5.3,SNR=22						
LVC				PP	PP	16 45 11.0	-0.4
	comp=Z,3.1nm,0.5s,baz=351,slow=5.0,SNR=13						
LVC	Limon Verde	169.75	81	ePKPdf	PKPdf	16 40 07.6	+3.4
LVC				ePKPab	PKPab	16 41 22.2	+1.4
LVC				ePP	PP	16 45 09.6	-1.8
SIV	San Ignacio	170.88	19	PKP	PKPdf	16 40 07.3	+2.3
	comp=Z,26nm,0.8s,baz=131,slow=0.7,SNR=126						
SIV				PKPab	PKPab	16 41 24.0	-2.1
	comp=Z,12nm,0.8s,baz=337,slow=3.5,SNR=12						
SIV				PP	PP	16 45 11.8	-5.4
	comp=Z,6.4nm,1.0s,baz=35,slow=2.3,SNR=10						
CPUP	Villa Florida	178.25	199	PKP	PKPdf	16 40 09.0	+1.8
	comp=Z,4.9nm,0.8s,baz=9.8,slow=0.8,SNR=15						
CPUP				PKPab	PKPab	16 41 57.3	-1.1
	comp=Z,3.7nm,0.9s,baz=167,slow=5.0,SNR=6.6						

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*CSEM **01** 16:32:01.7±0.1, 59.01N×18.37E, h2km, ML2.8, Error ellipse: s-maj=4.7km s-min=3.0km az=136.0, Mining explosion.*

*UPP **01** 16:32:02.5, 59.00N×18.19E, h0km, ML2.8, Mining explosion.*

*HEL **01** 16:32:03.3±0.1, 59.00N×18.20E, ML2.1, ML3.0(UPP), ML2.0(NAO), Explosion*

*NAO **01** 16:32:05.1±2.5, 59.16N×18.12E, ML2.0*

*BER **01** 16:32:05.4±3.8, 59.10N×18.14E, ML2.0(NAO), Suspected explosion*

*IDC **01** 16:32:05.7±1.7, 59.17N×18.06E, mb1 3.1/4, mb1mx3.0/22, mbtmp2.9/4, ML2.4/3, Error ellipse: s-maj=20.7km s-min=6.4km az=179.0*

ISC 01 16:32:01.3±0.3**, 59.02N**±0.03×**18.36E**±0.05**, n51,** σ1^{s}**19**/82**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NYNU	Nynaeshamn	0.18	264	i P	Pg	16 32 04.7	-0.3
NRTU	Norrtaelje	0.67	12	i P	Pg	16 32 16.1	+1.4
UPP	Uppsala	0.92	336	eP	Pg	16 32 19.7	+0.1
VIKU	Vikbolandet	1.01	239	eP	Pb	16 32 19.9	-1.4
ESKU	Eskilstuna	1.03	282	eP	Pb	16 32 20.3	-1.4
BACU	Backbrunna	1.05	323	eP	Pb	16 32 21.6	-0.4
FLYU	Flymyra	1.13	348	eP	Pb	16 32 23.9	+0.5
GRAU	Graesoe	1.32	4	eP	Pb	16 32 26.7	+0.1
GOTU	Gotland	1.35	175	eP	Pb	16 32 26.6	-0.5
FORU	Forsmark	1.37	356	eP	Pb	16 32 28.4	+0.9
AAL	Aland	1.43	35	eP	Pb	16 32 30.1	+1.7
VSTU	Vaestervik	1.67	216	eP	Pn	16 32 31.9	-0.1
VSTU				eS	Sb	16 32 52.5	-1.6
LNKU	Linkoeping	1.69	243	eP	Pn	16 32 31.9	-0.4
NRAU	Nora	1.79	289	eP	Pn	16 32 34.0	+0.3
ASKU	Askersund	1.83	267	eP	Pn	16 32 34.3	+0.1
ASPU	Aespoe	1.86	211	eP	Pn	16 32 35.2	+0.6
IGGU	Iggoen	1.93	345	eP	Pn	16 32 36.9	+1.3
FALU	Falun	1.95	320	eP	Pn	16 32 37.4	+1.4
FALU	Falun	1.95	320	P	Pn	16 32 37.3	+1.3
EKSU	Eksjoe	2.17	229	eP	Pn	16 32 40.1	+1.0
OSKU	Oskarshamn	2.19	214	eP	Pn	16 32 40.6	+1.2
HFS	Hagfors	2.62	297	eP	Pn	16 32 46.5	+1.0
HFS				eSB	Sb	16 33 20.5	-1.2
HFS	Hagfors	2.62	297	Pn	Pn	16 32 46.5	+1.0
	0.2nm,0.3s,baz=114,slow=14,SNR=14						
HFS				Lg		16 33 20.4	
	1.1nm,0.3s,baz=115,slow=30,SNR=24						
HFS	Hagfors	2.62	297	Pn	Pn	16 32 46.5	+1.0
	baz=112,slow=14						
HFS				Lg		16 33 20.5	
	baz=120,slow=37						
BLEU	Blekinge	3.05	208	eP	Pn	16 32 51.7	+0.1
PVF	Pernaja	4.09	65	eP	Pn	16 33 07.4	+1.0
PVF				eS	Sn	16 33 54.5	-1.3
PVF				eSG	Sg	16 34 11.5	-5.9
PVF				MSG		16 34 11.7	
	comp=Z,2.2nm,0.3s						
PVF	Pernaja	4.09	65	P	Pn	16 33 07.3	+0.9
PVF				S	Sn	16 33 54.4	-1.3
PVF				Sg	Sg	16 34 11.5	-5.9
	comp=Z,2.2nm,0.3s						
NB2	NORSAR Subarra	4.11	302	eP	Pn	16 33 06.2	-0.6
NB2				ePG	Pg	16 33 15.0	-8.4
NB2				eSG	Sg	16 34 10.0	-8.3
NB2	NORSAR Subarra	4.11	302	Pn	Pn	16 33 06.2	-0.6
	baz=123,slow=14						
NB2				Pg	Pg	16 33 15.0	-8.4
NB2				Lg		16 34 10.0	
	baz=121,slow=28						
NB2	NORSAR Subarra	4.11	302	P	Pn	16 33 06.1	-0.7
NB2	NORSAR Subarra	4.11	302	Pg	Pg	16 33 15.0	-8.4
NB2				Sg	Sg	16 34 09.9	-8.3
NOA	NORSAR Array B	4.11	302	Pn	Pn	16 33 05.4	-1.4
	baz=106,slow=3.2,SNR=1.5						
NOA				Lg		16 34 08.6	
	comp=Z,1.0nm,0.3s,baz=123,slow=21,SNR=4.6						
KEF	Keuruu	4.50	43	eP	Pn	16 33 13.9	+1.7
KEF				eS	Sn	16 34 05.8	-0.3
KEF	Keuruu	4.50	43	P	Pn	16 33 13.9	+1.6
KEF				S	Sn	16 34 05.8	-0.3
VAF	Ylistaro	4.54	26	eP	Pn	16 33 14.7	+1.8
VAF				eS	Sn	16 34 05.9	-1.4
VAF	Ylistaro	4.54	26	P	Pn	16 33 14.6	+1.7
VAF				S	Sn	16 34 05.8	-1.5
FIA0	FINESS Array S	4.55	54	Pn	Pn	16 33 15.6	+2.6
	baz=244,slow=14						

FIA0				Pg	**Pg**	**16 33 25.3**	**-6.8**
FIA0				Sn	**Sn**	**16 34 08.0**	**+0.6**
	baz=253,slow=28						
FIA0				Lg		16 34 25.6	
	baz=243,slow=28						
FIA0	**FINESS Array S**	**4.55**	**54**	*e*P	**Pn**	**16 33 14.7**	**+1.7**
FIA0				*e*S	**Sn**	**16 34 06.2**	**-1.1**
FIA0				*e*SG	**Sg**	**16 34 25.6**	**-7.1**
FIA0				MSG		16 34 30.8	
	comp=Z,2.6nm,0.2s						
FIA0	**FINESS Array S**	**4.55**	**54**	P	**Pn**	**16 33 14.6**	**+1.6**
FIA0	**FINESS Array S**	**4.55**	**54**	Pg	**Pg**	**16 33 25.3**	**-6.8**
FIA0				S	**Sn**	**16 34 06.2**	**-1.2**
FIA0				Sg	**Sg**	**16 34 25.5**	**-7.2**
	comp=Z,2.6nm,0.2s						
FINES	**FINESS Array B**	**4.55**	**54**	Pn	**Pn**	**16 33 15.2**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=246,slow=13,SNR=16						
FINES				Pg	**Pg**	**16 33 25.6**	**-6.5**
	comp=Z,0.4nm,0.3s,baz=244,slow=14,SNR=8.6						
FINES				Sn	**Sn**	**16 34 08.5**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=243,slow=22,SNR=9.5						
FINES				Lg		16 34 28.1	
	comp=Z,1.4nm,0.3s,baz=246,slow=26,SNR=9.7						
VJF	**Virojoki**	**4.89**	**68**	*e*P	**Pn**	**16 33 18.9**	**+1.1**
VJF				*e*S	**Sn**	**16 34 14.8**	**-1.2**
KAF	**Kangasniemi**	**5.00**	**48**	*e*P	**Pn**	**16 33 20.3**	**+1.0**
KAF				*e*S	**Sn**	**16 34 17.7**	**-0.9**
SUF	**Sumiainen**	**5.31**	**42**	*e*P	**Pn**	**16 33 24.6**	**+0.8**
SUF				*e*S	**Sn**	**16 34 25.4**	**-1.3**
SUF				*e*SG	**Sg**	**16 34 48.4**	**-10**
SUF	**Sumiainen**	**5.31**	**42**	P	**Pn**	**16 33 24.6**	**+0.8**
SUF				S	**Sn**	**16 34 25.3**	**-1.3**
SUF				Sg	**Sg**	**16 34 48.3**	**-10**
KJN	**Kajaani**	**6.76**	**37**	*e*P	**Pn**	**16 33 44.5**	**+0.3**
KJN				*e*S	**Sn**	**16 35 00.5**	**-2.3**
KJN				*e*SG	**Sg**	**16 35 33.4**	**-13**
KJN				MSG		16 35 36.6	
	comp=Z,1.8nm,0.3s						
APA0	**Apatity Array**	**10.80**	**31**	Pn	**P**	**16 34 38.0**	**-2.1**
	baz=242,slow=16						
APA0	**Apatity Array**	**10.80**	**31**	*e*P	**P**	**16 34 38.0**	**-2.1**
ARA0	**ARCESS Array S**	**10.99**	**13**	Pn	**P**	**16 34 39.0**	**-3.6**
	baz=194,slow=14						
ARA0	**ARCESS Array S**	**10.99**	**13**	*e*P	**P**	**16 34 39.0**	**-3.6**
ARCES	**ARCESS Array B**	**10.99**	**13**	Pn	**P**	**16 34 39.5**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=192,slow=13,SNR=8.5						
ARCES				Sn	**S**	**16 36 34.7**	**-13**
	comp=Z,0.1nm,0.3s,baz=192,slow=21,SNR=2.7						

DJA 01 16:32:36.1±1.3**,9.21S**×**106.12E,h12**^{km}±24^{km}**,MD4.6**/1**,**
ML4.8/2**,6C-1D,Error ellipse: s-maj=74.7km**
s-min=6.7km az=47.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PULI	**Pulasari**	**2.85**	**357**	⇑*e*Pn	Pn	16 33 19.5	-2.8
	702nm,0.2s						
PULI				⇑*e*Sn	Sn	16 33 52.0	-4.9
PENI	**Pendagan**	**3.74**	**345**	⇑*e*Pn	Pn	16 33 32.5	-2.5
	138nm,0.2s						
PENI				⇑*e*Sn	Sn	16 34 13.0	-6.4
SRDI	**Scrawed**	**7.96**	**85**	⇓*e*P	Pn	16 34 35.0	+0.5
RATI	**Rata**	**9.31**	**88**	⇑*e*P	P	16 34 53.4	+0.1
KEDI	**Kedomdong**	**9.90**	**87**	⇑*e*P	P	16 35 00.8	-0.7

NNC 01 16:36:55.4±12.0**,36.75N**×**70.30E,h117**^{km}±223^{km}**,**
mpv3.0,1C-1D,Error ellipse: s-maj=97.2km
s-min=93.6km az=6.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.35**	**1**	P	P	16 38 26.2	-1.5
	0.4nm,0.3s,baz=190,slow=14,SNR=5.7						
KK31				⇑S	S	16 39 39.1	-0.3
	0.6nm,0.3s,baz=190,slow=25,SNR=5.2						
AAK	**Ala-Archa**	**6.70**	**28**	S	S	16 39 45.6	-2.4
	4.0nm,0.8s						
AB31	**Akbulak array**	**14.60**	**332**	P	P	16 40 17.0	0.0
	0.7nm,0.7s,baz=147,slow=14,SNR=12						
AB31				⇓S	S	16 42 54.4	-1.6
	0.6nm,0.5s,baz=157,slow=23,SNR=6.7						

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*IDC **01** 16:37:14.8±1.3,3.81N×95.49E,mb4.0/9,mb1 4.1/9,*
mb1mx4.0/20,mbtmp4.0/9,Error ellipse: s-maj=60.3km
s-min=20.2km az=54.0
*NEIC **01** 16:37:20.4±0.9,3.86N×95.84E,h30^{km},mb4.5/7,Error*
ellipse: s-maj=27.0km s-min=12.3km az=219.0
ISC 01 16:37:18.8±1.0**,3.9N**±0.2×**95.9E**±0.1**,h30**^{km}**,n18,**
σ**1**^{s}**13**/18**,mb4.3**/16**,Off west coast of northern**
Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**4.94**	**73**	*e*P	**Pn**	**16 38 32.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**14.79**	**11**	Pn	**P**	**16 40 53.9**	**+6.0**
	0.2nm,0.3s,baz=202,slow=12,SNR=7.9						
PKI	**Pulchoki**	**25.59**	**338**	*e*P	**P**	**16 42 48.4**	**+1.1**
	13nm,0.5s,mb4.7						
GUN	**Gumba**	**25.73**	**339**	*e*P	**P**	**16 42 50.3**	**+1.7**
	16nm,0.5s,mb4.8						
DMN	**Daman**	**25.74**	**338**	*e*P	**P**	**16 42 49.5**	**+0.8**
	14nm,0.8s,mb4.5						
KKN	**Kakani**	**25.84**	**338**	*e*P	**P**	**16 42 50.6**	**+1.0**
	12nm,0.6s,mb4.6						
GKN	**Gorkha**	**26.27**	**337**	*e*P	**P**	**16 42 54.5**	**+0.9**
	48nm,0.8s,mb5.1						
KOLN	**Koldanda**	**26.49**	**335**	*e*P	**P**	**16 42 56.6**	**+1.0**
	18nm,0.8s,mb4.7						
MKAR	**Makanchi Array**	**44.34**	**347**	P	**P**	**16 45 27.2**	**-0.9**
	0.7nm,0.4s,mb3.7,baz=162,slow=8.8,SNR=15						
WRA	**Warramunga Arr**	**44.58**	**124**	P	**P**	**16 45 31.6**	**+1.2**
	0.7nm,0.4s,mb3.8,baz=300,slow=9.2,SNR=6.0						
SONM	**Songino Array**	**44.71**	**10**	P	**P**	**16 45 30.5**	**-0.7**
	1.7nm,0.5s,mb4.1,baz=192,slow=9.3,SNR=11						
ASAR	**Alice Springs**	**46.06**	**128**	P	**P**	**16 45 42.5**	**+0.3**
	0.3nm,0.6s,mb3.4,baz=300,slow=7.8,SNR=5.6						
ZAL	**Zalesovo**	**50.72**	**352**	P	**P**	**16 46 17.0**	**-0.8**
	2.2nm,0.6s,mb4.3,baz=316,slow=7.3,SNR=11						
BVAR	**Borovoye Array**	**53.30**	**341**	P	**P**	**16 46 33.3**	**-4.0**
	1.3nm,0.6s,mb4.0,baz=153,slow=9.9,SNR=8.5						
CHKZ	**Chkalovo**	**53.78**	**342**	*e*P	**P**	**16 46 39.4**	**-1.4**
	8.5nm,1.2s,mb4.5						
AKASG	**Malin Array Be**	**72.35**	**322**	P	**P**	**16 48 41.0**	**-2.8**
	0.4nm,0.3s,mb3.8,baz=86,slow=4.9,SNR=6.1						
ARCES	**ARCESS Array B**	**79.58**	**340**	P	**P**	**16 49 23.1**	**-1.3**
	4.9nm,0.9s,mb4.4,baz=45,slow=5.1,SNR=3.9						
GERES	**GERESS Array B**	**81.95**	**319**	P	**P**	**16 49 36.4**	**-0.8**
	0.3nm,0.5s,mb3.5,baz=108,slow=8.4,SNR=4.6						

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*BJI **01** 17:11:18.8,32.81S×179.21W,h12^{km},mB5.6,mb5.2,*
Ms5.1,Msz4.7
*HRVD **01** 17:11:20.2±0.3,32.87S×178.68W,h49^{km}±1^{km},MW5.2/52,*
Centroid moment Tensor Solution. LP body waves:
s52,c91;Mantle waves: s51,c93; Half duration: 1^{s}0
Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.77±.03; M$_{\theta\theta}$0.01±.02;
M$_{\phi\phi}$-0.78±.02; M$_{r\theta}$0.07±.02; M$_{\theta\phi}$-0.21±.02; M$_{\phi r}$0.31±.02;
Best double couple: M$_0$.862×10^{17} NP1:ϕ_s194°,δ34°,λ91°.
NP2:ϕ_s14°,δ56°,λ90°. Principal axes: T .829, Plg79°,
Azm282°; N .066, Plg0°, Azm14°; P -.896, Plg11°,
Azm104°; nsta1 refers to body waves, cutoff=40s. nsta2
refers to surface waves, cutoff=50s.
*NEIC **01** 17:11:20.2±0.2,32.75S×179.18W,h10^{km},mb5.3/11,*
MS4.7/9 Error ellipse: s-maj=10.8km s-min=7.9km
az=123.0
*MOS **01** 17:11:23.0±1.2,32.80S×179.07W,h33^{km},mb5.5/6,*
MS4.7/14,Error ellipse: s-maj=13.5km s-min=10.4km
az=77.9
*IDC **01** 17:11:24.7±2.3,32.79S×179.07W,h37^{km}±18^{km},mb4.4/11,*
mb1 4.6/12,mb1mx4.5/15,mbtmp4.6/12,ML4.5/1,MS4.5/15,
Ms1 4.5/15,ms1mx4.4/25,Error ellipse: s-maj=14.8km
s-min=12.5km az=156.0
ISC 01 17:11:18.0±1.3**,32.87S**±0.03×**179.14W**±0.07**,h3**^{km}±8^{km}**,**
h12^{km}±2.2^{km}**:pP-P,n221,**σ**1**^{s}**34**/127**,mb5.0**/26**,MS4.6**/32**,**
21C-4D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.75**	**16**	Pn	**Pn**	**17 12 17.8**	**-0.3**
	384nm,0.3s,baz=248,slow=24,SNR=11						
RAO				Sn	**Sn**	**17 13 02.5**	**-0.8**
	966nm,0.3s,baz=76,slow=22,SNR=8.5						
MXZ	**Matakaoa Point**	**5.13**	**203**	PN	**Pn**	**17 12 38.8**	**+1.2**
MXZ				SN	**Sn**	**17 13 39.9**	**+1.7**
WIZ	**White Island**	**5.54**	**212**	PN	**Pn**	**17 12 45.0**	**+1.7**
PUZ	**Puketiti**	**5.61**	**202**	PN	**Pn**	**17 12 44.1**	**-0.3**
PUZ				SN	**Sn**	**17 13 50.5**	**+0.2**
KUZ	**Kuaotunu**	**5.73**	**226**	PN	**Pn**	**17 12 51.2**	**+5.1**
MYRZ	**Mayor Island**	**5.81**	**219**	PN	**Pn**	**17 12 50.6**	**+3.4**
MWZ	**Matawai**	**6.09**	**206**	PN	**Pn**	**17 12 51.0**	**-0.1**
MWZ				SN	**Sn**	**17 14 02.4**	**+0.1**
TGRZ	**Tauranga**	**6.14**	**217**	PN	**Pn**	**17 12 56.0**	**+4.2**
MARZ	**Manawahe**	**6.14**	**213**	PN	**Pn**	**17 12 55.2**	**+3.3**
URZ	**Urewera**	**6.19**	**209**	Pn	**Pn**	**17 12 53.3**	**+0.7**
	12nm,0.3s,baz=23,slow=1.6,SNR=42						
URZ				Sn	**Sn**	**17 14 03.7**	**-1.0**
	19nm,0.3s,baz=144,slow=19,SNR=3.7						
URZ	**Urewera**	**6.19**	**209**	PN	**Pn**	**17 12 52.5**	**0.0**
URZ				SN	**Sn**	**17 14 06.5**	**+1.8**
WCZ	**Waipu Caves**	**6.20**	**239**	PN	**Pn**	**17 12 59.8**	**+7.1**
TAZ	**Tarawera**	**6.42**	**212**	PN	**Pn**	**17 12 58.4**	**+2.5**
OUZ	**Omahuta**	**6.47**	**247**	PN	**Pn**	**17 13 03.4**	**+6.9**
UTU	**Utuhina**	**6.52**	**214**	PN	**Pn**	**17 13 01.7**	**+4.4**
KNZ	**Kokohu**	**6.66**	**202**	PN	**Pn**	**17 12 58.3**	**-0.9**
BKZ	**Black Stump Fm**	**7.21**	**208**	PN	**Pn**	**17 13 06.2**	**-0.7**
BKZ				SN	**Sn**	**17 14 28.0**	**-2.4**
NGZ	**Ngauruhoe**	**7.60**	**213**	PN	**Pn**	**17 13 13.9**	**+1.5**
CNZ	**Chateau**	**7.64**	**213**	PN	**Pn**	**17 13 16.1**	**+3.1**
TUVZ	**Tukino**	**7.65**	**212**	PN	**Pn**	**17 13 14.7**	**+1.6**
FWVZ	**Far West T-bar**	**7.69**	**212**	PN	**Pn**	**17 13 14.0**	**+0.4**
MOVZ	**Moawhango**	**7.72**	**211**	PN	**Pn**	**17 13 13.8**	**-0.3**
WNVZ	**Wahianoa**	**7.73**	**212**	PN	**Pn**	**17 13 14.6**	**+0.5**
PWZ	**Pawanui**	**7.84**	**203**	PN	**Pn**	**17 13 12.8**	**-2.9**
TSZ	**Takapari Road**	**8.19**	**207**	PN	**P**	**17 13 19.6**	**-1.0**
BFZ	**Birch Farm**	**8.63**	**204**	PN	**P**	**17 13 24.1**	**-2.6**
MRZ	**Mangatainoka R**	**8.86**	**207**	PN	**P**	**17 13 26.0**	**-3.9**
KIW	**Kapiti Island**	**9.29**	**209**	PN	**P**	**17 13 32.3**	**-3.6**
MTW	**Mount Morrison**	**9.32**	**206**	PN	**P**	**17 13 32.0**	**-4.3**
CAW	**Cannon Point**	**9.44**	**208**	PN	**P**	**17 13 33.8**	**-4.1**
CAW				SN	**Sn**	**17 15 16.5**	**-9.3**
PAWZ	**Paruwai Farm**	**9.54**	**205**	PN	**P**	**17 13 35.8**	**-3.5**
PAWZ				SN	**Sn**	**17 15 19.3**	**-8.9**
MSWZ	**Moikau Station**	**9.63**	**206**	PN	**P**	**17 13 37.9**	**-2.7**
MSWZ				SN	**Sn**	**17 15 21.0**	**-10**
DUWZ	**D'Urville Isla**	**9.68**	**213**	PN	**P**	**17 13 38.5**	**-2.7**
MRW	**Makara Radio**	**9.69**	**209**	PN	**P**	**17 13 37.9**	**-3.4**
WEL	**Wellington**	**9.71**	**208**	PN	**P**	**17 13 38.9**	**-2.8**
SNZO	**South Karori**	**9.75**	**208**	PN	**P**	**17 13 38.1**	**-4.1**
TCW	**Tory Channel**	**9.85**	**210**	PN	**P**	**17 13 39.5**	**-4.0**
TUWZ	**Tuamarina**	**10.17**	**211**	PN	**P**	**17 13 43.8**	**-4.2**
NNZ	**Nelson**	**10.25**	**214**	PN	**P**	**17 13 45.4**	**-3.7**
RPZ	**Rata Peaks**	**13.28**	**213**	Pn	**P**	**17 14 24.5**	**-5.5**
	1.5nm,0.3s,baz=351,slow=17,SNR=10						
RPZ				Sn	**S**	**17 16 44.5**	**-15**
	3.1nm,0.3s,baz=354,slow=15,SNR=8.3						
DZM	**Mont Dzumac**	**16.70**	**306**	*e*P	**P**	**17 15 22.1**	**+7.5**
DZM	**Mont Dzumac**	**16.70**	**306**	Pn	**P**	**17 15 22.0**	**+7.5**
	0.3nm,0.3s,baz=121,slow=14,SNR=16						
DZM				LR	LR	17 20 40.2	
	comp=Z,5µm,18.4s,baz=145,slow=33						
DZM	**Mont Dzumac**	**16.70**	**306**	*e*P	**P**	**17 15 22.1**	**+7.5**
NOUC	**Port Laguerre**	**16.77**	**306**	*e*P	**P**	**17 15 23.1**	**+7.5**
AFI	**Afiamalu**	**20.03**	**21**	P	**P**	**17 15 50.5**	**-4.5**
	2.8nm,0.3s,baz=270,slow=20,SNR=3.9						
AFI	**Afiamalu**	**20.03**	**21**	*e*P	**P**	**17 15 52.7**	**-2.3**
RAR	**Rarotonga**	**20.75**	**61**	P	**P**	**17 16 02.4**	**-0.2**
	11nm,0.6s,baz=207,slow=11,SNR=3.6						
RAR				LR	LR	17 21 08.5	
	comp=Z,966nm,21.8s,MS4.1,baz=248,slow=28						
TBI	**Tubuai**	**27.76**	**78**	*e*LQ		17 22 07.7	
	1µm,26.8s						
TBI				*e*LR	LR	17 23 27.5	
	3µm,28.0s,baz=242						
HNR	**Honiara**	**30.28**	**316**	*e*P	**P**	**17 17 33.1**	**+0.4**
HNR				pmax	pmax		
	comp=Z,201nm,1.0s,mb5.8						
HNR	**Honiara**	**30.28**	**316**	P	**P**	**17 17 32.8**	**0.0**
	comp=Z,86nm,0.5s,mb5.8,baz=188,slow=5.0,SNR=10.0						
HNR	**Honiara**	**30.28**	**316**	*e*P	**P**	**17 17 33.1**	**+0.4**
	comp=Z,201nm,1.0s,mb5.8						
PPT	**Papeete**	**30.64**	**67**	*e*LQ		17 23 27.1	
	comp=Z,854nm,26.0s						
PPT				*e*LR	LR	17 24 40.3	
	comp=Z,2µm,26.5s,baz=237						
PPT	**Papeete**	**30.64**	**67**	LR	LR	17 26 22.5	
	comp=Z,868nm,20.2s,MS4.4,baz=215,slow=29						
STKA	**Stephens Creek**	**33.05**	**261**	*e*P	**P**	**17 17 59.3**	**+2.4**
STKA	**Stephens Creek**	**33.05**	**261**	P	**P**	**17 17 59.0**	**+2.1**
	comp=Z,4.6nm,0.6s,mb4.6,baz=110,slow=9.3,SNR=18						
STKA				LR	LR	17 30 55.0	
	comp=Z,2µm,18.2s,MS4.8,baz=200,slow=35						
CTA	**Charters Tower**	**33.34**	**284**	*e*P	**P**	**17 18 02.1**	**+2.6**
CTAO	**Charters Tower**	**33.34**	**284**	*e*P	**P**	**17 18 01.8**	**+2.3**
CTAO				pmax	pmax		
	comp=Z,64nm,0.6s,mb5.7						
CTAO				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.5						
CTAO	**Charters Tower**	**33.34**	**284**	*e*P	**P**	**17 18 01.8**	**+2.3**
	comp=Z,64nm,0.6s,mb5.7						
CTAO				LR	LR		
	comp=Z,1µm,20.0s,MS4.5						
RKT	**Rikitea**	**39.94**	**87**	*e*LR	LR	17 29 07.4	
	comp=Z,2µm,27.5s,baz=245						
DRV	**Dumont d'Urvil**	**41.50**	**203**	P	**P**	**17 19 12.0**	**+4.4**
DRV				S	**S**	**17 25 31.0**	**+7.3**
DRV				R		17 31 00.0	
ASAR	**Alice Springs**	**42.08**	**270**	P	**P**	**17 19 13.6**	**+0.7**
	comp=Z,48nm,0.7s,mb5.2,baz=109,slow=7.3,SNR=347						
ASAR				S	**S**	**17 25 30.4**	**-2.3**
	comp=Z,1.2nm,1.0s,baz=109,slow=16,SNR=4.6						
ASAR				PKiKP		17 28 11.3	
	comp=Z,0.8nm,0.6s,baz=100,slow=1.4,SNR=16						
ASAR				LR	LR	17 35 22.8	
	comp=Z,299nm,18.1s,MS4.2,baz=111,slow=34						
ASPA	**Alice Springs**	**42.08**	**270**	*e*P	**P**	**17 19 14.1**	**+1.2**
TAOE	**Nuku Hiva Isla**	**43.19**	**65**	*e*LR	LR	17 30 14.4	
WB2	**Warramunga Arr**	**43.28**	**275**	⇑*i*P	**P**	**17 19 23.3**	**+0.6**
WRAB	**Tennant Creek**	**43.29**	**275**	*i* P	**P**	**17 19 23.6**	**+0.8**
WRAB	**Tennant Creek**	**43.29**	**275**	*e*P	**P**	**17 19 22.8**	**+0.1**
	comp=Z,75nm,0.5s,mb5.7						
WRAB				LR	LR		
	comp=Z,185nm,21.0s,MS4.0						
WRA	**Warramunga Arr**	**43.29**	**275**	P	**P**	**17 19 23.1**	**+0.3**
	comp=Z,56nm,0.4s,mb5.6,baz=115,slow=8.0,SNR=585						
WRA				S	**S**	**17 25 50.9**	**+0.3**
	comp=Z,1.2nm,1.0s,baz=113,slow=10,SNR=2.8						
WRA				PKiKP		17 28 12.7	
	comp=Z,1.0nm,0.6s,baz=112,slow=0.3,SNR=22						
WRA	**Warramunga Arr**	**43.29**	**275**	P	**P**	**17 19 23.1**	**+0.3**
WRA				S	**S**	**17 25 50.9**	**+0.3**
SBA	**Scott Base**	**45.51**	**184**	*e*P	**P**	**17 19 40.7**	**+0.7**
SBA				*e*		17 21 19.4	
SBA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
SBA	**Scott Base**	**45.51**	**184**	*e*P	**P**	**17 19 40.7**	**+0.7**
	comp=Z,8.7nm,0.9s,mb4.7						
SBA				*e*PcP	PcP	17 21 19.4	0.0
VNDA	**Vanda**	**45.55**	**186**	P	**P**	**17 19 41.8**	**+1.5**
	comp=Z,2.4nm,0.8s,mb4.2,baz=48,slow=5.8,SNR=17						
VNDA				PcP	PcP	17 21 20.2	+0.8
	comp=Z,2.3nm,0.6s,baz=8.6,slow=6.5,SNR=6.0						
VNDA				LR	LR	17 35 00.8	
	comp=Z,180nm,20.1s,MS4.0,baz=54,slow=31						
KAKA	**Kakadu**	**48.47**	**283**	⇑*i*P	**P**	**17 20 03.8**	**-0.2**
CASY	**Casey**	**52.51**	**209**	⇑*i*P	**P**	**17 20 33.2**	**-1.0**
KLBR	**Kellerberrin**	**52.67**	**253**	⇓*i*P	**P**	**17 20 34.3**	**-1.6**
MBWA	**Marble Bar**	**55.04**	**266**	*e*P	**P**	**17 20 51.6**	**-1.8**
	comp=Z,16nm,0.7s,mb5.2						
MBWA				LR	LR		
	comp=Z,842nm,22.0s,MS4.8						
QSPA	**South Pole Qui**	**57.25**	**180**	*e*P	**P**	**17 21 09.0**	**+0.5**
	comp=Z,38nm,0.7s,mb5.5						
MIR	**Mirnyy**	**59.49**	**208**	*d i*P	**P**	**17 21 22.6**	**-1.7**
MIR				pmax	pmax		
	comp=Z,77nm,1.8s,mb5.4						
RPN	**Rapa Nui**	**59.74**	**104**	PKiKP		17 28 32.0	
	comp=Z,69nm,0.4s,baz=145,slow=15,SNR=5.8						
MAW	**Mawson**	**69.66**	**201**	P	**P**	**17 22 29.8**	**-0.5**
	comp=Z,8.6nm,0.7s,mb4.8,baz=143,slow=8.3,SNR=30						
MAW				LR	LR	17 52 13.7	
	comp=Z,356nm,18.5s,MS4.6,baz=90,slow=35						
MAW	**Mawson**	**69.66**	**201**	P	**P**	**17 22 29.8**	**-0.5**
MAW				LR	LR	17 52 13.7	
CBIJ	**Chichi jima**	**70.06**	**324**	LR	LR	17 49 22.1	
	comp=Z,208nm,18.6s,MS4.4,baz=113,slow=32						
SYO	**Syowa Base**	**74.50**	**194**	⇓P	**P**	**17 22 57.0**	**-2.0**
SYO	**Syowa Base**	**74.50**	**194**	⇓pP	pP	17 23 00.3	+0.4
KSM	**Kuching**	**74.56**	**282**	*e*P	**P**	**17 22 58.5**	**-2.0**
SNAA	**Sanae**	**75.72**	**179**	⇑*i*	**P**	**17 23 10.3**	**+4.3**
SNAA	**Sanae**	**75.72**	**179**	⇑*i*P	**P**	**17 23 05.9**	**-0.1**
SNAA				⇑*i*P		17 23 10.3	
VNA3	**Neumayer Olymp**	**75.91**	**177**	⇑*i*P	**P**	**17 23 08.0**	**+1.0**
VNA3	**Neumayer Olymp**	**75.91**	**177**	⇑*i*	**P**	**17 23 13.9**	**+6.9**
VNA2	**Neumayer--Watz**	**76.33**	**177**	⇑*i*P	**P**	**17 23 10.9**	**+1.5**
VNA2	**Neumayer--Watz**	**76.33**	**177**	⇑*i*	**P**	**17 23 16.2**	**+6.8**
VNA2	**Neumayer--Watz**	**76.33**	**177**	⇑*i*	**P**	**17 23 23.2**	**+14**
VNA1	**Neumayer--Stat**	**76.57**	**177**	⇑*i*P	**P**	**17 23 12.7**	**+1.9**
VNA1	**Neumayer--Stat**	**76.57**	**177**	⇑*i*	**P**	**17 23 18.5**	**+7.7**
MJAR	**Matsushiro Arr**	**79.73**	**326**	P	**P**	**17 23 27.7**	**-1.1**
	comp=Z,0.9nm,0.4s,mb4.0,baz=183,slow=4.3,SNR=2.5						
MJAR				LR	LR	17 57 30.9	
	comp=Z,130nm,19.2s,MS4.3,baz=130,slow=35						
MAT	**Matsushiro**	**79.73**	**326**	P	**P**	**17 23 26.0**	**-2.8**
MAT				S	S	17 33 45.0	+14
MAT				pmax	pmax		
	comp=Z,42nm,1.7s,mb5.1						
MAT				MLR	MLR		
	comp=Z,360nm,21.0s,MS4.7						
MAT	**Matsushiro**	**79.73**	**326**	P	**P**	**17 23 26.0**	**-2.8**
	comp=Z,42nm,1.7s,mb5.1						
MAT				S	S	17 33 45.0	+14
MAT				LR	LR		
	comp=Z,360nm,21.0s,MS4.7						
MAT	**Matsushiro**	**79.73**	**326**	P	**P**	**17 23 25.8**	**-3.0**
MAT				*e*S	S	17 33 45.0	+14
PLCA	**Paso Flores**	**81.53**	**133**	P	**P**	**17 23 39.4**	**+1.1**
	comp=Z,1.8nm,0.6s,mb4.2,baz=245,slow=4.7,SNR=5.7						
PLCA				LR	LR	17 50 42.2	
	comp=Z,270nm,21.3s,MS4.6,baz=188,slow=29						
ASAJ	**Asahikawa**	**84.19**	**333**	LR	LR	17 56 19.3	
	comp=Z,281nm,21.2s,MS4.6,baz=162,slow=32						
SSE	**Sheshan**	**85.01**	**312**	P	**P**	**17 23 55.6**	**-0.6**
SSE				AP	pP	17 23 58.9	+1.7
SSE				XP	sP	17 24 00.2	+2.7
SSE				S	S	17 34 26.8	+2.1
SSE				XS		17 34 32.7	
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,100nm,8.8s						
SSE				LR	LR		
	comp=N,50nm,24.8s,MS4.0						
SSE				LR	LR		
	comp=E,50nm,24.8s,MS4.0						
SSE				LR	LR		
	comp=Z,110nm,25.6s,MS4.1						
YSS	**Yuzh-Sakhalins**	**86.55**	**335**	*i* P	**P**	**17 24 04.3**	**+0.8**
YSS				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.4						
YSS	**Yuzh-Sakhalins**	**86.55**	**335**	*e*P	**P**	**17 24 03.8**	**+0.3**
	comp=Z,26nm,0.9s,mb5.5						
YSS				LR	LR		
	comp=Z,281nm,20.0s,MS4.7						
NJ2	**Nanjing**	**87.12**	**311**	*e*P	**P**	**17 24 06.5**	**-0.2**
NJ2				AP	pP	17 24 17.0	+9.4
NJ2				XP	sP	17 24 20.9	+13
NJ2				PP	PP	17 27 33.5	+0.8
NJ2				S	S	17 34 43.0	-2.1
NJ2				AMB	AMB		
	comp=Z,110nm,1.0s,mb6.0						
NJ2				AMB	AMB		
	comp=Z,740nm,5.4s						
PET	**Petropavlovsk**	**87.70**	**347**	*e*P	**P**	**17 24 08.4**	**-0.5**
PET				pmax	pmax		
	comp=Z,100nm,17.5s						
PET				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.2						
CMB	**Columbia Colle**	**89.23**	**42**	*e*P	**P**	**17 24 16.5**	**-0.1**
CMB				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.1						
CMB	**Columbia Colle**	**89.23**	**42**	*e*P	**P**	**17 24 16.5**	**-0.1**
	comp=Z,9.7nm,1.1s,mb5.0						
MTUM	**Tungsten Hills**	**89.82**	**44**	*e*P	**P**	**17 24 20.0**	**+0.7**
MDJ	**Mudanjiang**	**90.12**	**326**	P	**P**	**17 24 20.7**	**+0.1**
MDJ				AP	pP	17 24 23.3	+1.8
MDJ				XP	sP	17 24 24.8	+3.0
MDJ				S	S	17 35 06.2	-6.3
MDJ				XS		17 35 21.3	
MDJ				SS	SS	17 41 16.4	+1.7
MDJ				AMB	AMB		
	comp=Z,70nm,6.6s						
MDJ				LR	LR		
	comp=N,160nm,23.9s,MS4.4						
MDJ				LR	LR		
	comp=E,60nm,24.4s,MS4.4						
MDJ				LR	LR		
	comp=Z,270nm,23.9s,MS4.6						
NVAR	**Mina Array Bea**	**90.70**	**43**	P	**P**	**17 24 23.6**	**+0.1**
	comp=Z,8.5nm,1.0s,mb5.0,baz=209,slow=6.1,SNR=25						
NVAR				LR	LR	17 55 51.3	
	comp=Z,158nm,20.9s,MS4.4,baz=230,slow=29						
NEN	**Nelson**	**90.92**	**47**	*e*P	**P**	**17 24 24.0**	**-0.5**
CN2	**Changchun**	**91.53**	**323**	*e*P	**P**	**17 24 27.7**	**+0.6**
CN2				*e*XP	sP	17 24 34.7	+6.3
CN2				*e*S	S	17 35 25.6	+0.5
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
CN2				AMB	AMB		
	comp=Z,400nm,6.0s						
CN2				LR	LR		
	comp=N,240nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=E,160nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=Z,170nm,20.0s,MS4.5						
WVOR	**Wild Horse Val**	**93.23**	**40**	*e*P	**P**	**17 24 34.9**	**0.0**
WVOR				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.2						
WVOR				MLR	MLR		
	comp=Z,468nm,19.0s,MS5.0						
WVOR	**Wild Horse Val**	**93.23**	**40**	*e*P	**P**	**17 24 34.9**	**0.0**
	comp=Z,13nm,1.2s,mb5.2						
WVOR				LR	LR		
	comp=Z,468nm,19.0s,MS5.0						
CMAR	**Chiang Mai Arr**	**93.31**	**290**	P	**P**	**17 24 37.4**	**+1.5**
	comp=Z,1.2nm,0.8s,mb4.4,baz=143,slow=2.5,SNR=6.1						
CMAR				PP	PP	17 28 20.1	-2.3
	comp=Z,2.4nm,0.8s,baz=131,slow=6.0,SNR=11						
ELK	**Elko**	**94.00**	**43**	*e*P	**P**	**17 24 38.4**	**-0.2**
ELK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ELK				MLR	MLR		
	comp=Z,340nm,21.0s						
ELK	**Elko**	**94.00**	**43**	*e*P	**P**	**17 24 38.4**	**-0.1**
	comp=Z,1.7nm,1.0s,mb4.4						
ELK				LR	LR		
	comp=Z,340nm,21.0s,MS4.8						
KMI	**Kunming**	**94.08**	**297**	P	**P**	**17 24 39.5**	**+0.3**
KMI				AP	pP	17 24 44.9	+4.7
KMI				PP	PP	17 28 28.6	+0.2
KMI				S	S	17 35 51.4	+3.6
KMI				AMB	AMB		
	comp=Z,60nm,5.0s						
KMI				LR	LR		
	comp=N,170nm,16.9s,MS4.7						
KMI				LR	LR		
	comp=E,160nm,15.7s,MS4.7						
KMI				LR	LR		
	comp=Z,200nm,33.8s						
MSU	**Marysvale**	**94.39**	**46**	P	**P**	**17 24 42.2**	**+1.8**
TXAR	**Lajitas Array**	**94.52**	**58**	P	**P**	**17 24 42.0**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=236,slow=4.5,SNR=6.6						
TXAR				LR	LR	18 04 26.7	
	comp=Z,163nm,18.0s,baz=285,slow=34						
NEW	**Newport**	**97.93**	**37**	LR	LR	18 04 03.4	
	comp=Z,349nm,18.2s,MS4.9,baz=234,slow=32						
PDAR	**Pinedale Array**	**98.58**	**44**	P	**P**	**17 24 59.4**	**+0.1**
	comp=Z,0.3nm,0.5s,mb4.1,baz=270,slow=1.5,SNR=3.6						
PDAR				LR	LR	18 00 46.3	
	comp=Z,189nm,20.1s,MS4.6,baz=240,slow=30						
LZH	**Lanzhou**	**99.42**	**307**	*e*P	**P**	**17 25 03.9**	**+0.6**
LZH				AP	pP	17 25 07.2	+3.0
LZH				XP	sP	17 25 08.7	+4.2
LZH				PP	PP	17 29 10.2	+1.3
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,70nm,5.6s						

LZH				LR	LR		
	comp=E,610nm,15.2s						
LZH				LR	LR		
	comp=Z,890nm,17.7s,MS5.3						
COLA	**College**	**100.45**	**13**	*i* P	P	17 25 09.2	+1.9
ILAR	**Eielson Array**	**100.54**	**13**	P	P	17 25 08.8	+1.2
	comp=Z,2.1nm,1.0s,baz=215,slow=5.4,SNR=7.3						
YKA	**Yellowknife Ar**	**108.08**	**26**	PKiKP		17 29 46.4	
	comp=Z,0.4nm,0.5s,baz=253,slow=1.4,SNR=4.0						
YKA				PKKPbc		17 40 58.9	
	comp=Z,1.6nm,0.6s,baz=36,slow=3.2,SNR=14						
TIXI	**Tiksi**	**110.38**	**345**	*i* PKIKP	PKPdf	17 29 50.5	-2.3
WMQ	**Urumqi**	**113.98**	**308**	*e*PKP	PKPdf	17 29 59.9	-0.7
WMQ				LR	LR		
	comp=N,70nm,22.0s						
WMQ				LR	LR		
	comp=Z,120nm,22.0s,MS4.5						
BOSA	**Boshof**	**114.62**	**204**	PKP	PKPdf	17 30 01.2	-0.8
	comp=Z,2.1nm,0.6s,baz=175,slow=5.2,SNR=4.8						
MKAR	**Makanchi Array**	**118.60**	**309**	PKP	PKPdf	17 30 05.7	-3.7
	comp=Z,3.3nm,0.6s,baz=191,slow=1.4,SNR=34						
MKAR				PP	PP	17 31 25.5	-4.0
	comp=Z,0.8nm,0.7s,baz=121,slow=7.1,SNR=3.7						
MKAR				PKKPbc		17 40 24.4	
	comp=Z,0.5nm,1.0s,baz=283,slow=2.7,SNR=2.3						
MKAR	**Makanchi Array**	**118.60**	**309**	PKP	PKPdf	17 30 05.7	-3.7
MKAR				PP	PP	17 31 25.5	-4.0
MKAR				PKKPbc		17 40 24.4	
RES	**Resolute Bay**	**119.88**	**18**	*e*PKIKP	PKPdf	17 30 06.5	-4.7
NVS	**Novosibirsk**	**120.35**	**318**	*e*PKIKP	PKPdf	17 30 09.1	-3.5
KZA	**Kyzart**	**121.95**	**302**	P	PKPdf	17 30 14.7	-1.3
	SNR=9.7						
TKM2	**Tokmak 2**	**121.96**	**303**	P	PKPdf	17 30 13.7	-2.3
	SNR=7.3						
KBK	**Karagaybulak**	**122.34**	**303**	P	PKPdf	17 30 14.7	-2.0
	SNR=5.4						
UCH	**Uchtor**	**122.52**	**302**	P	PKPdf	17 30 15.9	-1.1
	SNR=11						
CHMS	**Chumysh**	**122.57**	**303**	P	PKPdf	17 30 14.9	-2.2
	SNR=5.7						
AAK	**Ala-Archa**	**122.65**	**303**	*e*PKIKP	PKPdf	17 30 14.9	-2.4
AML	**Almayashu**	**123.08**	**302**	P	PKPdf	17 30 16.6	-1.5
	SNR=13						
EKS2	**Erkin-Say**	**123.17**	**303**	P	PKPdf	17 30 17.2	-1.1
	SNR=6.4						
LSZ	**Lusaka**	**125.46**	**213**	*e*PKIKP	PKPdf	17 30 22.2	-1.3
CHKZ	**Chkalovo**	**127.40**	**315**	*e*PKIKP	PKPdf	17 30 22.4	-3.8
SCHQ	**Schefferville**	**128.71**	**43**	PKP	PKPdf	17 30 29.3	+0.6
	comp=Z,2.9nm,0.8s,baz=260,slow=12,SNR=4.1						
SCHQ	**Schefferville**	**128.71**	**43**	PKP	PKPdf	17 30 29.3	+0.6
KMBO	**Kilima Mbogo**	**131.82**	**233**	PKP	PKPdf	17 30 36.0	+0.3
	comp=Z,3.0nm,0.8s,baz=225,slow=24,SNR=5.9						
ARU	**Arti**	**134.34**	**319**	*i* PKIKP	PKPdf	17 30 36.4	-2.8
ARU	**Arti**	**134.34**	**319**	*e*PKPdf	PKPdf	17 30 36.5	-2.7
ARU				LR	LR		
	comp=Z,58nm,20.0s,MS4.3						
APA	**Apatity**	**140.45**	**341**	⇑*i*PKHKP		17 30 29.5	
APA				pmax	pmax		
	comp=Z,13nm,1.0s						
APA				MLR	MLR		
	comp=Z,500nm,20.0s,MS5.3						
ARCES	**ARCESS Array B**	**140.77**	**347**	PKhKP		17 30 41.5	
	comp=Z,3.2nm,0.7s,baz=46,slow=4.6,SNR=19						
ARCES				PKP	PKPdf	17 30 50.3	-0.3
	comp=Z,7.1nm,0.6s,baz=27,slow=1.0,SNR=9.6						
GNI	**Garni**	**144.28**	**294**	*i* PKIKP	PKPdf	17 30 55.5	-2.0
GNI	**Garni**	**144.28**	**294**	*e*PKPdf	PKPdf	17 30 54.9	-2.6
TI2	**Plekhanov**	**144.31**	**297**	*e*PKIKP	PKPdf	17 30 54.0	-3.5
ZEI	**Tsey**	**144.93**	**299**	*e*PKIKP	PKPdf	17 30 55.6	-3.0
MELSS	**Ber_school_2**	**145.12**	**351**	*e*P	PKPbc	17 30 55.3	-0.9
ONI	**Oni**	**145.26**	**299**	P	PKPbc	17 30 56.2	-1.1
GOF	**Gofitskoye**	**145.40**	**303**	⇑*i*PKHKP		17 30 55.2	
GOF				pmax	pmax		
	comp=Z,20nm,1.0s						
MOR8	**Moi Rana**	**145.68**	**350**	*e*P	PKPbc	17 30 56.3	-1.3
MOR8				AMb	AMB	17 30 58.5	
	comp=Z,102nm,1.4s						
STOK	**Stokkvaagen**	**145.72**	**351**	*e*P	PKPbc	17 30 57.3	-0.4
STOK				AMb	AMB	17 30 58.7	
	comp=Z,172nm,1.1s						
KIV	**Kislovodsk**	**145.74**	**301**	c *i*PKP2	PKPab	17 30 58.6	-1.9
KIV	**Kislovodsk**	**145.74**	**301**	*e*PKPdf	PKPdf	17 30 58.4	-1.5
MOS	**Moscow**	**145.77**	**323**	*e*PKP2	PKPab	17 30 58.0	-2.2
MOS				pmax	pmax		
	comp=Z,87nm,1.1s						
VOR	**Voronezh**	**146.46**	**316**	PKP2	PKPab	17 31 00.0	-3.1
VOR				pmax	pmax		
	comp=Z,100nm,1.4s						
KAF	**Kangasniemi**	**146.51**	**339**	*e*pkp	PKPdf	17 30 59.0	-1.7
	baz=36,slow=2.6						
OBN	**Obninsk**	**146.59**	**322**	c *i*PKIKP	PKPdf	17 30 59.9	-1.1
OBN				*i*		17 31 15.8	
OBN				*e*		17 34 31.4	
OBN				*e*SSS	SSS	17 58 50.3	-4.6
OBN				pmax	pmax		
	comp=Z,36nm,1.4s						
OBN				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.9						
VRSR	**Storozhevoye**	**146.63**	**315**	*e*PKP2	PKPab	17 31 01.2	-2.5
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VRSR				pmax	pmax		
	comp=N,10.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,4.0nm,0.8s						
FINES	**FINESS Array B**	**147.09**	**338**	PKPbc	PKPdf	17 31 01.0	-0.7
	comp=E,25nm,0.6s,baz=39,slow=5.1,SNR=124						
NSS	**Namsos**	**147.58**	**351**	*e*P	PKPdf	17 31 01.4	-1.0
NSS	**Namsos**	**147.58**	**351**	⇑*i*P	PKPdf	17 31 01.3	-1.0
NSS				AMb	AMB	17 31 03.7	
	comp=Z,80nm,1.7s						
VSU	**Vasula**	**149.04**	**334**	*i* PKP2	PKPdf	17 31 06.6	+1.8
MALT	**Malatya**	**149.12**	**291**	*e*PKP2	PKPdf	17 31 08.2	+2.6
ANN	**Anapa**	**149.37**	**304**	*i* PKP2	PKPdf	17 31 08.8	+3.0
ANN				pmax	pmax		
	comp=Z,80nm,1.4s						
MOL	**Molde**	**149.98**	**354**	*e*P	PKPdf	17 31 14.8	+8.6
MOL				AMb	AMB	17 31 18.0	
	comp=Z,94nm,1.9s						
DOMB	**Dombas**	**150.34**	**352**	*e*P	PKPdf	17 31 09.9	+3.1
DOMB				AMb	AMB	17 31 12.4	
	comp=Z,52nm,1.0s						
EIL	**Elat**	**150.76**	**273**	*e*PKPbc	PKPdf	17 31 11.9	+3.4
NB2	**NORSAR Subarra**	**151.02**	**350**	PKPabc	PKPdf	17 31 11.6	+3.8
	comp=Z,39nm,0.7s,baz=18,slow=2.6						
NB2	**NORSAR Subarra**	**151.02**	**350**	PKPa		17 31 11.6	
	baz=18,slow=2.6						
NOA	**NORSAR Array B**	**151.02**	**350**	PKP	PKPdf	17 31 06.1	-1.8
	comp=Z,2.1nm,0.5s,baz=44,slow=3.2,SNR=21						
NOA				PKPbc	PKPdf	17 31 11.1	+3.3
	comp=Z,22nm,0.7s,baz=16,slow=4.1,SNR=90						
AKASG	**Malin Array Be**	**152.60**	**319**	PKP	PKPdf	17 31 10.4	-0.1
	comp=Z,0.6nm,0.3s,baz=47,slow=2.6,SNR=6.0						
AKASG				PKPbc	PKPdf	17 31 15.1	+4.7
	comp=Z,5.3nm,0.5s,baz=44,slow=1.7,SNR=64						
DBIC	**Dimbokro**	**153.40**	**167**	PKP	PKPdf	17 31 11.6	-1.1
	comp=Z,7.6nm,0.9s,baz=115,slow=2.5,SNR=5.0						
DBIC				PKPbc	PKPdf	17 31 19.1	+6.4
	comp=Z,6.4nm,0.4s,baz=156,slow=1.4,SNR=10						
DBIC				PKPab	PKPab	17 31 30.9	-1.7
	comp=Z,16nm,0.9s,baz=152,slow=2.2,SNR=5.8						
SUW	**Suwalki**	**153.58**	**330**	*e*PKP	PKPdf	17 31 17.9	+6.2
MLR	**Muntele Rosu**	**156.94**	**310**	PKP	PKPdf	17 31 15.7	-0.8
	comp=Z,2.7nm,0.8s,baz=162,slow=8.2,SNR=3.2						
MLR				PKPab	PKPab	17 31 46.8	0.0
	comp=Z,2.0nm,0.5s,baz=354,slow=2.6,SNR=4.5						
KOLS	**Kolonicke sedl**	**157.33**	**321**	*e*PKP	PKPdf	17 31 13.7	-3.2
OKC	**Ostrava-Krasne**	**158.74**	**328**	*e*PKPAB	PKPab	17 31 53.7	-0.7
OKC				AMS	AMS	18 42 50.0	
	comp=Z,200nm,21.5s						
DPC	**Dobruska-Polom**	**159.13**	**331**	*e*PKIKP	PKPdf	17 31 18.2	-0.8
DPC				*e*		17 31 55.4	
DPC				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.9						
DPC	**Dobruska-Polom**	**159.13**	**331**	*e*PKPDF	PKPdf	17 31 18.2	-0.8
DPC				*e*PKPAB	PKPab	17 31 55.4	-0.7
DPC				*e*x	x	18 02 21.6	
DPC				AMS	AMS	18 44 50.0	
	comp=Z,200nm,21.0s						
UPC	**Upice**	**159.13**	**332**	*e*PKPDF	PKPdf	17 31 17.7	-1.3
UPC				*e*PKPAB	PKPab	17 31 55.3	-0.8
VYHS	**Vyhne**	**159.36**	**324**	*i* PKP	PKPab	17 31 56.6	-0.5
CLL	**Collm**	**159.54**	**338**	⇑*i*PKP2	PKPab	17 31 57.3	-0.5
CLL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CLL	**Collm**	**159.54**	**338**	⇑*i*PKP2	PKPab	17 31 57.3	-0.5
CLL				*e*		17 32 10.0	
CLL				*e*		17 32 23.0	
CLL				*e*PP	PP	17 35 48.0	+8.2
BRG	**Berggiesshubel**	**159.60**	**336**	*e*PKP2	PKPab	17 31 57.6	-0.5
BRG				pmax	pmax		
	comp=Z,23nm,1.7s						
BRG				MLR	MLR		
	comp=N,170nm,25.0s,MS4.9						
BRG				MLR	MLR		
	comp=E,110nm,25.0s,MS4.9						
BRG				MLR	MLR		
	comp=Z,190nm,25.0s,MS4.8						
PVCC	**Panska Ves**	**159.66**	**334**	*e*PKPDF	PKPdf	17 31 18.1	-1.5
PVCC				*e*PKPAB	PKPab	17 31 57.8	-0.5
PVCC				AMS	AMS	18 44 50.0	
	comp=Z,200nm,23.6s						
PRU	**Pruhonice**	**160.11**	**333**	*e*PKIKP	PKPdf	17 31 18.3	-1.8
PRU				MLR	MLR		
	comp=Z,200nm,24.0s						
PRU	**Pruhonice**	**160.11**	**333**	*e*PKPDF	PKPdf	17 31 18.3	-1.8
PRU				*e*x	x	18 03 45.3	
PRU				AMS	AMS	18 43 00.0	
	comp=Z,200nm,24.0s						
ZST	**Bratislava**	**160.40**	**326**	*e*PKP	PKPdf	17 31 18.9	-1.6
ZST				*e*		17 32 01.0	
MOX	**Moxa**	**160.55**	**339**	*e*PKP2	PKPab	17 32 01.9	-0.3
MOX				pmax	pmax		
	comp=Z,17nm,1.5s						
MOX				MLR	MLR		
	comp=Z,100nm,21.0s						
NKC	**Novy Kostel**	**160.65**	**337**	*e*PKPAB	PKPab	17 32 02.3	-0.3
NKC				AMS	AMS	18 43 20.0	
	comp=Z,200nm,23.2s						
KHC	**Kasperske Hory**	**161.18**	**333**	*e*PKIKP	PKPdf	17 31 19.5	-1.7
KHC				*e*		17 32 04.1	
KHC				MLR	MLR		
	comp=Z,200nm,23.5s						
KHC	**Kasperske Hory**	**161.18**	**333**	*e*PKP	PKPdf	17 31 19.5	-1.7
KHC				*e*		17 32 04.1	
KHC				*e*		17 32 17.0	
KHC				*e*		18 02 53.9	
KHC				LR	LR		
	comp=Z,200nm,23.5s						
KHC	**Kasperske Hory**	**161.18**	**333**	*e*PKPDF	PKPdf	17 31 19.5	-1.7
KHC				*e*PKPAB	PKPab	17 32 04.1	-0.8
KHC				x	x	17 32 17.0	
KHC				*e*x	x	18 02 53.9	
KHC				AMS	AMS	18 48 00.0	
	comp=Z,200nm,23.5s						
GEC2	**GERESS Array S**	**161.36**	**333**	*e*PKIKP	PKPdf	17 31 19.5	-1.9
GEC2				*e*		17 32 04.4	
GERES	**GERESS Array B**	**161.36**	**333**	PKP	PKPdf	17 31 19.6	-1.8
	comp=Z,0.4nm,0.3s,baz=63,slow=2.2,SNR=5.9						
GERES				PKPab	PKPab	17 32 04.4	-1.4
	comp=Z,1.3nm,0.6s,baz=27,slow=3.0,SNR=7.2						
GRA1	**Grafenberg Arr**	**161.51**	**338**	*e*PKPdf	PKPdf	17 31 18.9	-2.6
GRA1				*e*PKPab	PKPab	17 32 06.5	+0.1
GRA1				*e*pPKPab		17 32 19.2	
GRF	**Grafenberg Arr**	**161.51**	**338**	*e*PKIKP	PKPdf	17 31 18.9	-2.6
GRF				*e*		17 32 06.5	
BOJS	**Bojanci**	**163.19**	**323**	*e*PKPdf	PKPdf	17 31 21.1	-2.2
ROBS	**Robic**	**163.49**	**328**	⇑*e*PKPdf	PKPdf	17 31 21.2	-2.5
ROBS	**Robic**	**163.49**	**328**	*e*PKPdf	PKPdf	17 31 21.2	-2.5
BFO	**Black Forest**	**163.56**	**342**	*e*PKP2	PKPab	17 32 14.2	-1.1
CDF	**Champ du Feu**	**163.74**	**345**	*e*PKP2	PKPab	17 32 14.5	-1.6
FLN	**La Foliniere**	**164.09**	**3**	*e*PKP2	PKPab	17 32 15.5	-2.1
FLN				*e*R			
	comp=Z,154nm,22.8s						
SGMF	**Saint Gilles**	**164.41**	**9**	*e*PKP2	PKPab	17 32 16.7	-2.4
	comp=Z,63nm,1.2s						
QUIF	**Quistinic**	**164.66**	**10**	*e*PKP2	PKPab	17 32 18.3	-1.8
SSF	**Saint Saulge**	**165.68**	**353**	*e*PKP2	PKPab	17 32 22.8	-1.8
	comp=Z,3.7nm,0.5s						
CABF	**La Chapelle**	**165.70**	**345**	*e*PKP2	PKPab	17 32 23.0	-1.7
AVF	**Avril sur Loir**	**165.97**	**353**	*e*PKP2	PKPab	17 32 24.3	-1.6
SMF	**Signal de Mont**	**166.05**	**351**	*e*PKP2	PKPab	17 32 24.4	-1.9
	comp=Z,21nm,1.1s						
MFF	**Saint Martin d**	**166.26**	**3**	*e*PKP2	PKPab	17 32 25.4	-1.8
	comp=Z,16nm,0.8s						
LPL	**La Plagne**	**166.58**	**342**	*e*PKP2	PKPab	17 32 25.0	-3.6
LPG	**La Plagne**	**166.59**	**342**	*e*PKP2	PKPab	17 32 25.0	-3.6
	comp=Z,5.4nm,0.7s						
MBDF	**Montbardon**	**167.30**	**341**	*e*PKP2	PKPab	17 32 30.0	-1.7
ORIF	**Oris-en-Rattie**	**167.35**	**344**	*e*PKP2	PKPab	17 32 25.4	-6.5
	comp=Z,12nm,0.9s						
ORIF				*e*R			
	comp=Z,167nm,21.0s						
ESDC	**Sonseca Array**	**172.17**	**28**	PKP	PKPdf	17 31 29.9	-0.1
	comp=Z,1.9nm,1.0s,baz=343,slow=3.1,SNR=6.7						
ESDC				PKPab	PKPab	17 32 52.2	-1.2
	comp=Z,0.3nm,0.3s,baz=331,slow=4.6,SNR=5.9						

KRSC 01 17:30:08.5±0.4, 54.27N×158.62E, h259^{km}±2^{km}, ML3.8, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KII	**Karymskiy**	**0.54**	**115**	*e*P	P	17 30 43.1	+0.3
GNL	**Ganaly**	**0.70**	**215**	*i* P	P	17 30 43.1	-0.2
GNL				*e*S	S	17 31 08.9	-1.6
KOK	**Koryaka**	**0.98**	**179**	*i* P	P	17 30 45.1	+0.6
AVH	**Avacha**	**1.01**	**176**	*e*P	P	17 30 45.2	+0.5
UGLR	**Uglovaya**	**1.07**	**173**	*i* P	P	17 30 45.8	+0.7
NLC	**Nalytchevo**	**1.18**	**158**	*i* P	P	17 30 45.6	-0.2
NLC				*e*S	S	17 31 12.8	-2.0
PET	**Petropavlovsk**	**1.25**	**179**	*i* P	P	17 30 46.5	+0.3
TUMR	**Tumrok**	**1.35**	**40**	*i* P	P	17 30 47.8	+0.9
TUMR				*e*S	S	17 31 16.3	-0.5
SPN	**Mys Shipunski**	**1.44**	**144**	*i* P	P	17 30 47.1	-0.4
SPN				*e*S	S	17 31 15.0	-2.9
KRMR	**Karymshinskiy**	**1.47**	**192**	*i* P	P	17 30 47.7	-0.1
APC	**Apacha**	**1.60**	**213**	*i* P	P	17 30 48.5	-0.3
APC				*e*S	S	17 31 17.7	-2.4
APC				Smax			
	20nm,1.1s						
ESO	**Esso**	**1.66**	**2**	P	P	17 30 48.2	-1.0
ESO				*e*S	S	17 31 17.5	-3.3
GRL	**Gorelyy**	**1.75**	**191**	*e*P	P	17 30 49.7	-0.2
KMNR	**Kamenistaya**	**1.76**	**31**	*e*P	P	17 30 50.1	+0.2
MKZ	**Mys Kozlova**	**1.84**	**80**	P	P	17 30 50.2	-0.4
MKZ				*e*S	S	17 31 20.2	-3.1
RUS	**Russkaya**	**1.84**	**182**	*e*P	P	17 30 50.1	-0.5
RUS				*e*S	S	17 31 20.7	-2.7
SRDR	**Sredinnyy**	**2.15**	**17**	*e*P	P	17 30 53.2	-0.1
MIPR	**Malaya Ipel’ka**	**2.29**	**210**	P	P	17 30 51.3	-3.4
KLY	**Klyuchi**	**2.35**	**29**	*e*P	P	17 30 54.0	-1.4
KBTR	**Krutoberegovo**	**3.09**	**49**	*e*P	P	17 31 02.6	-0.3
KBTR				*e*S	S	17 31 41.8	-3.4

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*DJA **01** 17:45:46.1±1.7, 1.23N×96.36E, h80^{km}, ML5.0/1, Error ellipse: s-maj=44.8km s-min=24.0km az=40.0*

*IDC **01** 17:45:49.4±1.0, 0.83N×97.36E, mb4.0/11, mb1 4.2/12, mb1mx4.1/18, mbtmp4.0/12, ML4.1/1, MS3.7/1, Ms1 3.7/1, ms1mx3.2/21, Error ellipse: s-maj=42.8km s-min=17.1km az=52.0*

*BJI **01** 17:45:54.0, 0.50N×97.47E, h70^{km}, mb4.7*

*NEIC **01** 17:45:56.2±2.5, 0.94N×97.51E, h45^{km}±20^{km}, mb4.3/6, Error ellipse: s-maj=23.1km s-min=7.4km az=52.0*

ISC 01 17:45:54.0±3.0, 0.9N±0.1×97.5E±0.2, h41^{km}±23^{km}, n33, $\sigma 0^{s}.90$/33, mb4.2/18, MS3.7/1, 2C-1D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEMI	**Semponon**	**1.80**	**31**	*e*Pn	**P**	**17 46 23.7**	**+0.5**
MRPI	**Mariponipon**	**1.99**	**69**	⇑*e*Pn	**P**	**17 46 24.9**	**-0.9**
	518nm,0.2s						
PSI	**Prapat**	**2.30**	**40**	⇓*e*Pn	**P**	**17 46 31.9**	**+1.6**
SIBI	**Sibayak Dolok**	**2.54**	**24**	⇑*e*Pn	**P**	**17 46 31.7**	**-2.0**
IPM	**Ipoh**	**5.10**	**44**	P	**P**	**17 47 10.5**	**+0.6**
KULM	**Kulim**	**5.39**	**36**	*e*P	**P**	**17 47 13.6**	**-0.4**
KGM	**Kluang**	**5.96**	**79**	P	**P**	**17 47 22.8**	**+0.8**
CMAR	**Chiang Mai Arr**	**17.50**	**5**	P	**P**	**17 49 55.9**	**-0.8**
	0.3nm,0.3s,baz=193,slow=11,SNR=11						
KMI	**Kunming**	**24.61**	**12**	P	**P**	**17 51 14.9**	**+3.0**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
SHL	**Shillong**	**25.10**	**348**	*e*P	**P**	**17 51 17.0**	**+0.4**
GUN	**Gumba**	**29.05**	**339**	*e*P	**P**	**17 51 52.2**	**-0.5**
	comp=Z,13nm,0.5s,mb4.9						
KKN	**Kakani**	**29.17**	**337**	*e*P	**P**	**17 51 53.6**	**-0.1**
	comp=Z,14nm,1.0s,mb4.7						
LSA	**Lhasa**	**29.25**	**349**	P	**P**	**17 51 56.0**	**+1.5**
LSA	**Lhasa**	**29.25**	**349**	*e*P	**P**	**17 51 55.5**	**+1.0**
	comp=Z,4.7nm,0.8s,mb4.3						
GKN	**Gorkha**	**29.61**	**337**	*e*P	**P**	**17 51 57.8**	**+0.1**
KOLN	**Koldanda**	**29.83**	**335**	*e*P	**P**	**17 51 59.5**	**-0.1**
	comp=Z,9.1nm,0.7s,mb4.6						
ENH	**Enshi**	**31.36**	**20**	P	**P**	**17 52 11.7**	**-1.5**
GTA	**Gaotai**	**38.38**	**3**	*e*P	**P**	**17 53 13.6**	**+0.6**
WRA	**Warramunga Arr**	**41.66**	**122**	P	**P**	**17 53 40.0**	**-0.5**
	comp=Z,1.2nm,0.5s,mb3.8,baz=302,slow=9.0,SNR=11						
WRAB	**Tennant Creek**	**41.67**	**122**	*e*P	**P**	**17 53 40.8**	**+0.3**
ASAR	**Alice Springs**	**43.01**	**127**	P	**P**	**17 53 51.1**	**-0.4**
	comp=Z,1.3nm,0.6s,mb3.8,baz=298,slow=7.7,SNR=21						
ASAR				LR	LR	18 11 37.6	
	comp=Z,86nm,18.3s,MS3.7,baz=115,slow=36						
SONM	**Songino Array**	**47.38**	**8**	P	**P**	**17 54 26.8**	**+0.8**
	comp=Z,1.7nm,0.6s,mb4.2,baz=192,slow=9.4,SNR=14						
ULN	**Ulaanbaatar**	**47.51**	**9**	*e*P	**P**	**17 54 25.9**	**-1.1**
	comp=Z,1.5nm,0.8s,mb4.1						
MKAR	**Makanchi Array**	**47.58**	**346**	P	**P**	**17 54 27.9**	**+0.2**
	comp=Z,5.6nm,0.7s,mb4.7,baz=159,slow=9.1,SNR=53						
MJAR	**Matsushiro Arr**	**51.73**	**42**	P	**P**	**17 54 59.1**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.9,baz=217,slow=6.7,SNR=4.0						
STKA	**Stephens Creek**	**52.97**	**132**	P	**P**	**17 55 08.9**	**0.0**
	comp=Z,1.2nm,0.9s,mb3.8,baz=298,slow=9.4,SNR=2.9						
CHKZ	**Chkalovo**	**57.08**	**341**	*e*P	**P**	**17 55 37.6**	**-0.9**
	comp=Z,3.5nm,0.9s,mb4.4						
AKASG	**Malin Array Be**	**75.64**	**322**	P	**P**	**17 57 35.6**	**-1.0**
	comp=Z,0.8nm,0.6s,mb3.9,baz=87,slow=4.6,SNR=5.7						
FINES	**FINESS Array B**	**80.38**	**332**	P	**P**	**17 58 02.2**	**-0.2**
	comp=Z,1.6nm,0.7s,mb4.1,baz=135,slow=5.4,SNR=6.8						
FINES	**FINESS Array B**	**80.38**	**332**	P	**P**	**17 58 02.2**	**-0.3**
ARCES	**ARCESS Array B**	**82.89**	**340**	P	**P**	**17 58 16.0**	**+0.6**
	comp=Z,2.8nm,0.9s,mb4.3,baz=90,slow=3.6,SNR=5.1						
GERES	**GERESS Array B**	**85.20**	**319**	P	**P**	**17 58 28.9**	**+1.5**
	comp=Z,0.2nm,0.4s,mb3.6,baz=90,slow=4.0,SNR=5.8						
NOA	**NORSAR Array B**	**87.38**	**331**	P	**P**	**17 58 38.1**	**+0.3**
	comp=Z,0.7nm,0.7s,mb4.0,baz=94,slow=5.1,SNR=3.4						

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*MOS **01** 18:07:22.7±0.9, 49.42N×156.94E, h15^{km}, mb4.3/1, Error ellipse: s-maj=65.9km s-min=13.7km az=79.7*

*KRSC **01** 18:07:25.2±0.9, 49.46N×156.89E, h40^{km}±32^{km}, ML4.0*

ISC 01 18:07:26.6±1.4, 49.72N±0.09×156.9E±0.2, h15^{km}, n25, $\sigma 1^{s}.13$/37, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril’s**	**1.08**	**334**	*e*PN	**Pn**	**18 07 40.5**	**-6.6**
SKR				pmax	pmax		
	comp=N,150nm,0.3s						
SKR				pmax	pmax		
	comp=Z,220nm,0.3s						
PAU	**Pauzhetka**	**1.75**	**359**	*e*P	**Pn**	**18 07 55.6**	**-1.1**
PAU				*e*S	**Sn**	**18 08 17.7**	**-1.1**
PAU				Smax			
	comp=Z,1μm,0.2s						
RUS	**Russkaya**	**2.91**	**20**	P	**Pn**	**18 08 12.6**	**-0.7**
RUS				S	**Sn**	**18 08 48.8**	**+0.6**
RUS	**Russkaya**	**2.91**	**20**	*e*P	**Pn**	**18 08 12.7**	**-0.6**
RUS				*e*S	**Sn**	**18 08 47.9**	**-0.3**
GRL	**Gorelyy**	**2.94**	**15**	*e*P	**Pn**	**18 08 13.9**	**+0.2**
GRL				*e*S	**Sn**	**18 08 49.9**	**+1.0**
APC	**Apacha**	**3.21**	**3**	P	**Pn**	**18 08 16.2**	**-1.4**
APC				Smax			
	comp=Z,20nm,1.1s						
KRMR	**Karymshinskiy**	**3.21**	**14**	P	**Pn**	**18 08 18.7**	**+1.1**
PET	**Petropavlovsk**	**3.49**	**18**	P	**Pn**	**18 08 21.9**	**+0.3**
PET				S	**Sn**	**18 09 05.4**	**+2.4**
PET	**Petropavlovsk**	**3.49**	**18**	P	**Pn**	**18 08 22.1**	**+0.5**
PET				*e*S	**Sn**	**18 09 03.9**	**+0.9**
UGLR	**Uglovaya**	**3.70**	**19**	*e*P	**Pn**	**18 08 25.6**	**+1.1**
AVH	**Avacha**	**3.74**	**18**	*e*P	**Pn**	**18 08 26.5**	**+1.5**
AVH				*e*S	**Sn**	**18 09 10.7**	**+1.5**
KOK	**Koryaka**	**3.74**	**17**	*e*P	**Pn**	**18 08 26.6**	**+1.5**
NLC	**Nalytchevo**	**3.79**	**23**	P	**Pn**	**18 08 24.5**	**-1.3**
NLC	**Nalytchevo**	**3.79**	**23**	*e*P	**Pn**	**18 08 25.6**	**-0.2**
NLC				*e*S	**Sn**	**18 09 08.7**	**-1.8**
SPN	**Mys Shipunski**	**3.92**	**29**	P	**Pn**	**18 08 27.4**	**-0.2**
SPN				S	**Sn**	**18 09 14.1**	**+0.3**
SPN	**Mys Shipunski**	**3.92**	**29**	*e*P	**Pn**	**18 08 27.8**	**+0.2**
SPN				*e*S	**Sn**	**18 09 13.6**	**-0.2**
GNL	**Ganaly**	**4.04**	**9**	*e*P	**Pn**	**18 08 29.8**	**+0.5**
MKZ	**Mys Kozlova**	**5.69**	**30**	P	**Pn**	**18 08 51.8**	**-0.9**
MKZ				S	**Sn**	**18 09 56.2**	**-2.3**
MKZ	**Mys Kozlova**	**5.69**	**30**	P	**Pn**	**18 08 51.7**	**-1.0**
MKZ				*e*S	**Sn**	**18 09 56.4**	**-2.1**
TUMR	**Tumrok**	**5.92**	**19**	P	**Pn**	**18 08 57.4**	**+1.5**
ESO	**Esso**	**6.31**	**9**	P	**Pn**	**18 09 00.0**	**-1.5**
KMNR	**Kamenistaya**	**6.38**	**17**	P	**Pn**	**18 09 02.1**	**-0.4**
KBTR	**Krutoberegovo**	**7.42**	**27**	P	**Pn**	**18 09 15.7**	**-1.4**
KBTR	**Krutoberegovo**	**7.42**	**27**	*e*P	**Pn**	**18 09 17.3**	**+0.2**
BKI	**Bering**	**7.81**	**42**	S	**Sn**	**18 10 42.9**	**-8.6**

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*OMAN **01** 18:26:12.4, 29.77N×58.35E, Error ellipse: s-maj=1117.0km s-min=129.3km az=9.0*

*IDC **01** 18:26:31.8±2.3, 28.12N×57.45E, mb3.8/5, mb1 3.9/5, mb1mx3.5/22, mbtmp3.8/5, Error ellipse: s-maj=75.8km s-min=33.6km az=52.0*

*THR **01** 18:26:36.7±0.4, 28.22N×57.56E, h26^{km}±4^{km}, ML3.5*

*CSEM **01** 18:26:36.0±0.1, 28.19N×57.63E, h25^{km}, ML3.5, Error ellipse: s-maj=1.9km s-min=1.0km az=82.0*

ISC 01 18:26:33.2±0.6, 28.28N±0.04×57.60E±0.06, h10^{km}, n20, $\sigma 1^{s}.33$/21, mb3.7/5, 1C-4D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**1.54**	**236**	*e*PG	**Pg**	**18 27 03.5**	**-0.5**
BNDS				*e*SG	**Sg**	**18 27 23.2**	**-1.4**
BNDS				AML	AML	18 27 28.3	
	comp=N,829nm,0.2s						
KRBR	**Kerman**	**1.85**	**337**	*e*PG	**Pg**	**18 27 10.8**	**+0.5**
KRBR				AML	AML	18 27 49.0	
	comp=N,445nm,0.6s						
BANOM	**Banah**	**2.62**	**207**	⇓P	**Pn**	**18 27 18.3**	**+2.0**
	SNR=34						
ZHSF	**Zahedan**	**3.08**	**64**	*e*PN	**Pn**	**18 27 26.9**	**+3.9**
ASHO	**Ashiyiah**	**3.84**	**201**	P	**Pn**	**18 27 35.7**	**+2.0**
	SNR=8.4						
GHIR	**Ghir-Karzin**	**4.07**	**271**	*e*PN	**Pn**	**18 27 39.4**	**+2.4**
GHIR				AML	AML	18 28 53.2	
	comp=N,50nm,0.4s						
HOQ	**Hoqain**	**4.68**	**183**	⇓P	**Pn**	**18 27 45.9**	**+0.2**
BIDO	**Bidbid**	**4.76**	**174**	⇓P	**Pn**	**18 27 45.4**	**-1.4**
ARQ	**Araqi**	**5.01**	**191**	⇑P	**Pn**	**18 27 52.6**	**+2.2**
	SNR=15						
WBK	**Wadi Bani Khal**	**5.78**	**167**	⇓P	**Pn**	**18 27 59.9**	**-1.2**
NASN	**Na’in**	**6.12**	**319**	*e*PN	**Pn**	**18 28 08.2**	**+2.3**
KBD	**Kabd**	**8.74**	**278**	*e*P	**P**	**18 28 41.6**	**-1.1**
UMR	**Umm Al-Rimmam**	**8.76**	**281**	*e*P	**P**	**18 28 42.8**	**-0.1**
RDF	**Al-Radifah**	**8.86**	**277**	*e*P	**P**	**18 28 43.9**	**-0.4**
BVAR	**Borovoye Array**	**26.48**	**17**	P	**P**	**18 32 12.2**	**0.0**
	comp=N,0.8nm,0.7s,mb3.4,baz=198,slow=9.4,SNR=5.5						
FINES	**FINESS Array B**	**39.23**	**337**	P	**P**	**18 34 02.2**	**-1.0**
	comp=N,1.1nm,0.6s,mb3.8,baz=143,slow=9.5,SNR=11						
NB2	**NORSAR Subarra**	**44.95**	**330**	P	**P**	**18 34 48.1**	**-1.8**
	comp=N,0.4nm,0.5s,mb3.5,baz=115,slow=7.9						
NOA	**NORSAR Array B**	**44.95**	**330**	P	**P**	**18 34 48.5**	**-1.3**
	comp=N,0.5nm,0.6s,mb3.5,baz=117,slow=7.4,SNR=3.6						
ARCES	**ARCESS Array B**	**45.26**	**345**	P	**P**	**18 34 51.6**	**-0.6**
	comp=N,2.2nm,0.8s,mb4.0,baz=135,slow=8.9,SNR=3.9						
WRA	**Warramunga Arr**	**88.25**	**114**	P	**P**	**18 39 25.6**	**-0.9**
	comp=N,0.4nm,0.7s,mb3.8,baz=318,slow=4.0,SNR=5.7						

PGC 01 18:29:39.8, 51.69N×130.78W, h20^{km}, ML3.7/24, Mw4.2/8, South of Moresby Island, British Columbia, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNB	**Barry Inlet**	**1.07**	**326**	P	Pb	18 29 58.9	-0.6
BNB				S	Sb	18 30 13.7	+0.7
BNB				Trac		18 30 18.0	
	comp=Z,28μm,0.4s						
MOBC	**Moresby Island**	**1.66**	**336**	Pn	Pn	18 30 07.5	-0.7
MOBC				Pg	Pn	18 30 09.4	+1.2
MOBC				Sn	Sn	18 30 29.1	0.0
MOBC				Sg	Sn	18 30 31.9	+2.8
MOBC				Trac		18 30 34.7	
	comp=Z,1μm,0.6s						

BBB	**Bella Bella**	**1.73**	**72**	Pn	Pn	18 30 09.4	+0.3
BBB				Pg	Pn	18 30 10.8	+1.7
BBB				Sg	Sn	18 30 33.4	+2.6
BBB				Trac		18 30 36.7	
	comp=Z,1µm,0.6s						
VIB	**Van Inlet**	**1.90**	**326**	Pn	Pn	18 30 10.5	-1.2
VIB				Sg	Sn	18 30 38.8	+3.6
VIB				Trac		18 30 40.8	
	comp=Z,579nm,0.4s						
HOLB	**Holberg**	**1.97**	**121**	Pn	Pn	18 30 12.0	-0.7
HOLB				Sg	Sn	18 30 40.1	+3.0
HOLB				Trac		18 30 48.6	
	comp=Z,378nm,0.5s						
PHC	**Port Hardy**	**2.33**	**114**	Pn	Pn	18 30 16.1	-1.7
PHC				Pg	Pn	18 30 21.1	+3.3
PHC				Sg	Sn	18 30 52.8	+6.7
PHC				Trac		18 30 59.0	
	comp=Z,309nm,0.6s						
BPBC	**Brooks Peninsu**	**2.45**	**128**	Pn	Pn	18 30 19.4	-0.1
BPBC				Sg	Sn	18 30 55.7	+6.6
BPBC				Trac		18 31 08.8	
	comp=Z,265nm,0.6s						
MAYB	**Maynard**	**2.62**	**118**	Pn	Pn	18 30 21.4	-0.6
MAYB				Sg	Sn	18 31 01.1	+7.6
MAYB				Trac		18 31 08.4	
	comp=Z,143nm,0.7s						
NDB	**Naden**	**2.62**	**331**	Pn	Pn	18 30 21.3	-0.7
NDB				Sg	Sn	18 31 01.3	+7.8
NDB				Trac		18 31 10.1	
	comp=Z,403nm,0.5s						
RUBB	**Prince Rupert**	**2.66**	**7**	Pn	Pn	18 30 23.1	+0.6
RUBB				Sg	Sn	18 31 03.5	+8.9
RUBB				Trac		18 31 07.4	
	comp=Z,1µm,0.9s						
EDB	**Eliza Dome**	**2.95**	**127**	Pn	Pn	18 30 28.2	+1.5
EDB				Sg	Sn	18 31 17.1	+15
EDB				Trac		18 31 19.8	
	comp=Z,65nm,0.6s						
WOSB	**Woss**	**3.07**	**118**	Pn	Pn	18 30 28.7	+0.3
WOSB				Sg	Sn	18 31 16.7	+12
WOSB				Trac		18 31 25.1	
	comp=Z,108nm,0.5s						
NCRB	**Newcastle Ridg**	**3.25**	**112**	Pn	Pn	18 30 31.2	+0.3
NCRB				Sg	Sn	18 31 19.4	+10
NCRB				Trac		18 31 27.1	
	comp=Z,89nm,0.6s						
GDR	**Gold River**	**3.57**	**120**	Sg	Sn	18 31 30.4	+13
GDR				Trac		18 31 34.9	
	comp=Z,26nm,0.3s						
CBB	**Campbell River**	**3.81**	**114**	Pg	Pn	18 30 45.5	+6.6
CBB				Sg	Sn	18 31 35.6	+12
CBB				Trac		18 31 45.4	
	comp=Z,98nm,0.8s						
BTB	**Buttle Lake**	**4.02**	**122**	Sg	Sn	18 31 46.8	+18
BTB				Trac		18 32 04.2	
	comp=Z,81nm,0.7s						
OZB	**Mount Ozzard**	**4.35**	**127**	Sg	Sn	18 31 53.2	+16
TXB	**Texada**	**4.50**	**114**	Sg	Sn	18 31 58.6	+17
TXB				Trac		18 32 12.5	
	comp=Z,80nm,0.8s						
ALB	**Alberni**	**4.51**	**120**	Sg	Sn	18 32 03.5	+22
ALB				Trac		18 32 18.7	
	comp=Z,24nm,0.6s						
MGB	**Mount Grey**	**4.74**	**122**	Sg	Sn	18 32 10.7	+24
MGB				Trac		18 32 26.9	
	comp=Z,63nm,1.1s						
FSB	**Fort Saint Jam**	**4.79**	**52**	Pn	Pn	18 30 53.2	+0.4
FSB				Sg	Sn	18 32 10.0	+22
FSB				Trac		18 32 18.0	
	comp=Z,149nm,0.7s						
NLLB	**Nanaimo Lost L**	**4.99**	**117**	Sg	Sn	18 32 14.3	+21
BIB	**Bowen Island**	**5.29**	**113**	Sg	Sn	18 32 21.9	+21
BIB				Trac		18 32 37.8	
	comp=Z,21nm,0.7s						
GOBB	**Galiano Island**	**5.41**	**118**	Sg	Sn	18 32 27.4	+23
GOBB				Trac		18 32 45.4	
	comp=Z,12nm,0.6s						
LZB	**Mount Lazard**	**5.43**	**122**	Trac		18 32 50.4	
	comp=Z,5.9nm,0.6s						
LLLB	**Lillooet**	**5.71**	**97**	Trac		18 32 54.5	
	comp=Z,12nm,0.5s						
LLLB	**Lillooet**	**5.71**	**97**	Sg	Sn	18 32 35.6	+24
BMBC	**Bull Mountain**	**6.72**	**46**	Pn	Pn	18 31 21.0	+1.0
BMBC				Sg	Sn	18 33 09.6	+33
BMBC				Trac		18 33 25.7	
	comp=Z,62nm,0.8s						
DLBC	**Dease Lake**	**6.78**	**3**	Pn	Pn	18 31 22.6	+1.8
DLBC				Sg	Sn	18 33 07.8	+30
DLBC				Trac		18 33 22.1	
	comp=Z,31nm,0.8s						
SLEB	**Sale Mountain**	**7.93**	**89**	Sg	Sn	18 33 49.0	+42
FNBB	**Fort Nelson**	**8.46**	**28**	Sg	Sn	18 34 03.9	+44
WHY	**Whitehorse**	**9.28**	**347**	Pn	P	18 31 55.6	0.0
WHY				Trac		18 34 42.8	
	comp=Z,4.0nm,0.7s						

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*HLW **01** 18:53:41.9,36.16N×25.25E,h21^{km},Mb3.9*

*ATH **01** 18:53:44.1,35.86N×25.25E,h20^{km}±2^{km},MD4.2/21, ML4.1*

*NEIC **01** 18:53:44.2,35.85N×25.26E,h21^{km},mb3.9/18, ML4.2(ATH),After ATH.*

*MOS **01** 18:53:46.6±1.1,35.76N×25.39E,h33^{km},mb4.4/11,Error ellipse: s-maj=7.9km s-min=3.8km az=117.8*

*IDC **01** 18:53:46.7±1.7,35.66N×25.28E,h31^{km}±22^{km},mb3.8/8, mb1 3.9/12,mb1mx3.8/27,mbtmp3.9/12,ML3.9/4,MS3.2/4, Ms1 3.2/4,ms1mx2.9/29,Error ellipse: s-maj=27.7km s-min=16.9km az=21.0*

*CSEM **01** 18:53:46.5±0.1,35.74N×25.49E,h40^{km},mb4.2/8,Error ellipse: s-maj=2.4km s-min=1.1km az=55.0*

ISC 01 18:53:44.1±0.8,**35.73N**±0.02×**25.36E**±0.02,**h15**^{km}±5^{km}, **n183**,σ1§27/199,**mb4.1**/17,**MS3.2**/1,**10C-4D**,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**0.51**	**156**	⇓iPN	**Pn**	**18 53 57.1**	**+0.5**
NPS				eSN	**Sn**	**18 54 05.5**	**+0.5**
IDI	**Anoyia**	**0.59**	**221**	Pg	**Pg**	**18 53 56.5**	**+0.3**
	544nm,0.3s,baz=311,slow=20,SNR=418						
IDI				Lg		18 54 05.5	
	1µm,0.3s,baz=283,slow=14,SNR=57						
SANT	**Santorini**	**0.64**	**7**	eP	**Pb**	**18 53 56.0**	**-0.4**
SANT	**Santorini**	**0.64**	**7**	iP	**Pb**	**18 53 57.2**	**+0.8**
SANT				iS	**Sb**	**18 54 06.5**	**+1.6**
SANT	**Santorini**	**0.64**	**7**	eP	**Pb**	**18 53 56.0**	**-0.5**
THR1	**Thera Island**	**0.64**	**7**	eP	**Pb**	**18 54 04.1**	**+7.6**
XRY	**Khrisi**	**0.90**	**162**	ePN	**Pn**	**18 54 04.0**	**+1.9**
VAM	**Vamos**	**1.00**	**251**	ePN	**Pn**	**18 54 02.6**	**-1.0**
VAM				eSN	**Sn**	**18 54 16.0**	**-1.4**
APE	**Apeiranthos**	**1.34**	**6**	iP	**Pn**	**18 54 08.2**	**-0.2**
APE	**Apeiranthos**	**1.34**	**6**	ePN	**Pn**	**18 54 08.2**	**-0.2**
GVD	**Gavdhos**	**1.37**	**230**	ePN	**Pn**	**18 54 11.2**	**+2.3**
KARP	**Karpathos**	**1.48**	**97**	⇑iPB	**Pb**	**18 54 12.3**	**+1.5**
BDRM	**Kayabasi**	**2.14**	**51**	iP	**Pn**	**18 54 21.7**	**+1.8**
BDRM				iS	**Sn**	**18 54 56.1**	**+10**
VLI	**Veliai**	**2.19**	**297**	⇑iPB	**Pb**	**18 54 19.4**	**-3.6**
VLI				eSN	**Sn**	**18 54 45.0**	**-2.6**
ARG	**Arkhangelos**	**2.29**	**77**	ePB	**Pb**	**18 54 24.2**	**-0.6**
ARG				eSN	**Sn**	**18 54 52.5**	**+2.3**
SMG	**Samos**	**2.30**	**31**	ePN	**Pn**	**18 54 22.4**	**+0.3**
NAIG	**Nisos Aigina**	**2.52**	**324**	ePB	**Pb**	**18 54 24.8**	**-3.8**
NAIG	**Nisos Aigina**	**2.52**	**324**	ePb	**Pb**	**18 54 25.6**	**-3.0**
ATH	**Athens Observa**	**2.59**	**330**	ePN	**Pn**	**18 54 25.0**	**-1.3**
ATH				eSN	**Sn**	**18 54 54.5**	**-3.3**
ATH	**Athens Observa**	**2.59**	**330**	ePn	**Pn**	**18 54 24.3**	**-2.0**
ATH				eSn	**Sn**	**18 54 54.5**	**-3.3**
NSAL	**Nisos Salamina**	**2.65**	**325**	ePN	**Pn**	**18 54 26.0**	**-1.1**
NSAL	**Nisos Salamina**	**2.65**	**325**	ePb	**Pb**	**18 54 27.5**	**-3.3**
MPAR	**Parnis Oros**	**2.74**	**332**	ePB	**Pb**	**18 54 28.0**	**-4.4**
MPAR	**Parnis Oros**	**2.74**	**332**	ePb	**Pb**	**18 54 28.5**	**-3.9**
MGER	**Gerania Oros**	**2.81**	**324**	ePN	**Pn**	**18 54 28.0**	**-1.4**
MGER	**Gerania Oros**	**2.81**	**324**	ePb	**Pb**	**18 54 29.4**	**-4.2**
KDAG	**Bornova**	**3.07**	**29**	iP	**Pn**	**18 54 33.3**	**+0.2**
KDAG				iS	**Sg**	**18 55 25.1**	**-1.3**
ITM	**Ithomi**	**3.12**	**299**	ePN	**Pn**	**18 54 33.5**	**-0.4**
ITM	**Ithomi**	**3.12**	**299**	ePb	**Pb**	**18 54 34.7**	**-4.2**
KSL	**Kastellorizon**	**3.45**	**82**	ePb	**Pb**	**18 54 44.5**	**-0.1**
KSL	**Kastellorizon**	**3.45**	**82**	ePN	**Pn**	**18 54 40.5**	**+2.0**
LKR	**Lokris**	**3.47**	**328**	ePN	**Pn**	**18 54 38.0**	**-0.8**
DNZL	**Cakiroluk**	**3.55**	**56**	iP	**Pn**	**18 54 44.1**	**+4.2**
DNZL				iS	**Sg**	**18 55 34.0**	**-8.3**
PRK	**Paraskevi**	**3.58**	**11**	ePN	**Pn**	**18 54 39.2**	**-1.2**
PRK	**Paraskevi**	**3.58**	**11**	ePn	**Pn**	**18 54 38.5**	**-1.9**
AOS	**Alonnisos**	**3.63**	**341**	eP	**Pn**	**18 54 46.0**	**+4.9**
RLS	**Riolos of Patr**	**3.89**	**308**	ePb	**Pb**	**18 54 45.9**	**-6.1**
NEO	**Neokhori**	**3.95**	**335**	ePN	**Pn**	**18 54 45.4**	**-0.2**
XOR	**Xorichti**	**4.01**	**335**	eP	**Pn**	**18 54 51.0**	**+4.4**
AGG	**Agios Georgios**	**4.07**	**325**	eP	**Pn**	**18 54 51.7**	**+4.3**
SLUM		**4.23**	**182**	⇓P	**Pn**	**18 54 50.0**	**+0.4**
SLUM				S	**Sn**	**18 55 40.1**	**+0.8**
SLUM		**4.23**	**182**	P	**Pn**	**18 54 50.0**	**+0.3**
SLUM				S	**Sn**	**18 55 40.2**	**+0.8**
EVR	**Evrytania**	**4.25**	**319**	ePN	**Pn**	**18 54 49.0**	**-1.0**
EVR	**Evrytania**	**4.25**	**319**	ePn	**Pn**	**18 54 50.0**	**0.0**
PAIG	**Paliouri**	**4.39**	**343**	eP	**Pn**	**18 54 56.5**	**+4.6**
VLS	**Valsamata**	**4.53**	**304**	ePN	**Pn**	**18 54 53.1**	**-0.8**
VLS				eSN	**Sn**	**18 55 43.4**	**-3.5**
LKD	**Levkas**	**4.79**	**310**	eP	**Pn**	**18 54 59.5**	**+1.9**
HMAT	**Matruh**	**4.85**	**162**	⇑P	**Pn**	**18 54 59.1**	**+0.7**
HMAT				S	**Sn**	**18 55 55.0**	**0.0**
PLG	**Polygyros**	**4.87**	**343**	ePN	**Pn**	**18 54 57.0**	**-1.7**
PLG	**Polygyros**	**4.87**	**343**	ePn	**Pn**	**18 54 57.9**	**-0.8**
LIT	**Litokhoron**	**4.91**	**333**	eP	**Pn**	**18 55 03.7**	**+4.4**
ALN	**Alexandroupoli**	**5.18**	**6**	eP	**Pn**	**18 55 07.3**	**+4.2**
MEV	**Metsovon**	**5.20**	**322**	eP	**Pn**	**18 55 07.0**	**+3.7**
SOH	**Sokhos**	**5.32**	**343**	eP	**Pn**	**18 55 09.2**	**+4.2**
SOH	**Sokhos**	**5.32**	**343**	eP	**Pn**	**18 55 09.2**	**+4.2**
RDO	**Rodhopi**	**5.41**	**1**	ePN	**Pn**	**18 55 05.0**	**-1.2**
RDO	**Rodhopi**	**5.41**	**1**	ePn	**Pn**	**18 55 06.9**	**+0.7**
IGT	**Igoumenitsa**	**5.50**	**315**	eP	**Pn**	**18 55 10.4**	**+2.8**
GRG	**Griva**	**5.71**	**337**	eP	**Pn**	**18 55 14.8**	**+4.3**
NVR	**Nevrokopi**	**5.73**	**349**	ePN	**Pn**	**18 55 08.6**	**-2.2**
KDZ	**Kurdzhali**	**5.91**	**0**	iP	**Pn**	**18 55 12.0**	**-1.3**
KEK	**Kerkira**	**5.93**	**314**	ePN	**Pn**	**18 55 12.1**	**-1.6**
FNA	**Florina**	**5.94**	**329**	eP	**Pn**	**18 55 17.7**	**+4.0**
RZN	**Rozhen**	**5.97**	**355**	iP	**Pn**	**18 55 15.0**	**+0.9**
MMB	**Musomiste**	**5.98**	**348**	iP	**Pn**	**18 55 13.0**	**-1.4**
HBRG	**Burj al 'Arab**	**6.37**	**143**	P	**Pn**	**18 55 19.4**	**-0.4**
KKB	**Krupnik**	**6.38**	**344**	iP	**Pn**	**18 55 18.0**	**-1.9**
SWA1		**6.46**	**177**	⇑P	**Pn**	**18 55 21.5**	**+0.4**
SWA1				S	**Sn**	**18 56 34.5**	**-0.7**
SWA2		**6.47**	**179**	⇑P	**Pn**	**18 55 20.9**	**-0.3**
SKO	**Skopje**	**6.94**	**335**	ePn	**Pn**	**18 55 31.5**	**+3.7**
VTS	**Vitosha**	**7.05**	**347**	iP	**Pn**	**18 55 29.0**	**-0.4**
TIP	**Timpagrande**	**7.66**	**299**	eP	**Pn**	**18 55 34.8**	**-3.1**
TIP	**Timpagrande**	**7.66**	**299**	eP	**Pn**	**18 55 34.8**	**-3.1**
KOT	**Kottamia**	**7.95**	**135**	⇑P	**Pn**	**18 55 41.0**	**-0.9**
KOT				S	**Sn**	**18 57 08.7**	**-3.7**
HSAF	**As Saff**	**8.03**	**138**	P	**P**	**18 55 43.2**	**+0.2**
GLL	**Jalalah**	**8.14**	**137**	⇑P	**P**	**18 55 44.0**	**-0.7**
SUZ		**8.61**	**131**	⇑P	**P**	**18 55 50.3**	**-0.8**
ZAF		**8.84**	**135**	⇑P	**P**	**18 55 53.5**	**-0.9**
HFRF	**Wahat Farafira**	**8.92**	**163**	P	**P**	**18 55 55.8**	**+0.3**
VAE	**Valguarnera**	**8.97**	**284**	Sn	**Sn**	**18 57 25.7**	**-12**
	1.0nm,0.3s,baz=309,slow=5.7,SNR=3.3						
MLR	**Muntele Rosu**	**9.76**	**2**	Pn	**P**	**18 56 07.5**	**+0.5**
	0.2nm,0.3s,baz=162,slow=12,SNR=4.4						
MLR				LR	LR	19 00 27.3	
	comp=Z,264nm,19.3s,baz=124,slow=41						
EIL	**Elat**	**10.09**	**124**	Pn	**P**	**18 56 10.0**	**-1.6**
	0.6nm,0.3s,baz=340,slow=19,SNR=9.5						
EIL				Sn	**S**	**18 57 55.9**	**-10**
	1.8nm,0.3s,baz=300,slow=31,SNR=4.6						
EIL				LR	LR	19 02 46.6	
	comp=Z,91nm,18.6s,baz=272,slow=54						
EIL	**Elat**	**10.09**	**124**	eP	**P**	**18 56 08.8**	**-2.8**
	9.9nm,0.6s						
ASF	**Jabal al Asfar**	**10.22**	**107**	Pn	**P**	**18 56 12.5**	**-0.9**
	0.5nm,0.3s,baz=42,slow=5.6,SNR=4.2						
ASF				Sn	**S**	**18 58 06.9**	**-1.7**
	0.8nm,0.3s,baz=61,slow=10,SNR=2.9						
HKAT	**Jabal Katrina**	**10.26**	**132**	⇓P	**P**	**18 56 12.2**	**-1.7**
NUB		**10.31**	**128**	⇑P	**P**	**18 56 13.2**	**-1.4**
CII	**Carovilli**	**10.50**	**308**	eP	**P**	**18 56 16.4**	**-0.8**
	18nm,0.6s						
CII	**Carovilli**	**10.50**	**308**	eP	**P**	**18 56 16.4**	**-0.8**
	18nm,0.6s						
MALT	**Malatya**	**10.76**	**72**	eP	**P**	**18 56 19.9**	**-0.9**
MALT				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MALT	**Malatya**	**10.76**	**72**	eP	**P**	**18 56 19.9**	**-0.9**
	comp=Z,3.1nm,0.7s						
MALT	**Malatya**	**10.76**	**72**	eP	**P**	**18 56 19.9**	**-0.9**
	comp=Z,3.1nm,0.7s						
PGF	**Pioggiola**	**14.39**	**303**	eP	**P**	**18 57 10.4**	**+1.1**
	comp=Z,38nm,1.3s						
PGF	**Pioggiola**	**14.39**	**303**	eP	**P**	**18 57 10.4**	**+1.1**
PGF				pmax	pmax		
	comp=Z,19nm,1.3s						
VRAC	**Vranov**	**15.01**	**337**	Pn	**P**	**18 57 22.5**	**+5.2**
	comp=Z,0.3nm,0.3s,baz=148,slow=8.2,SNR=9.6						
OKC	**Ostrava-Krasne**	**15.04**	**342**	AMS	AMS	19 04 00.0	
	comp=Z,200nm,8.2s						
MORC	**Moravsky Berou**	**15.15**	**340**	P	**P**	**18 57 18.9**	**-0.2**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MORC	**Moravsky Berou**	**15.15**	**340**	P	**P**	**18 57 18.9**	**-0.2**
	comp=Z,3.4nm,0.8s						
MORC	**Moravsky Berou**	**15.15**	**340**	P	**P**	**18 57 18.9**	**-0.2**
	comp=Z,3.4nm,0.8s						
AKASG	**Malin Array Be**	**15.22**	**9**	Pn	**P**	**18 57 23.5**	**+3.5**
	comp=Z,1.7nm,0.3s,baz=202,slow=11,SNR=18						
AKASG	**Malin Array Be**	**15.22**	**9**	Pn	**P**	**18 57 23.5**	**+3.5**
KIV	**Kislovodsk**	**15.62**	**53**	iP	**P**	**18 57 30.0**	**+4.8**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,100nm,17.0s						
KIV	**Kislovodsk**	**15.62**	**53**	eP	**P**	**18 57 30.4**	**+5.2**
GERES	**GERESS Array B**	**15.66**	**330**	Pn	**P**	**18 57 27.4**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=144,slow=12,SNR=23						
GERES				LR	LR	19 03 28.0	
	comp=Z,63nm,19.8s,baz=140,slow=37						
KHC	**Kasperske Hory**	**15.94**	**331**	eP	**P**	**18 57 32.4**	**+3.1**
KHC				ex	x	18 57 39.7	
KHC				AMS	AMS	19 04 30.0	
	comp=Z,200nm,15.4s						
ZEI	**Tsey**	**15.97**	**58**	eP	**P**	**18 57 29.3**	**-0.5**
DAVOX	**Davos**	**16.01**	**318**	LR	LR	19 03 49.1	
	comp=Z,67nm,20.2s,baz=267,slow=38						
DPC	**Dobruska-Polom**	**16.01**	**339**	eP	**P**	**18 57 32.4**	**+2.1**
DPC				AMS	AMS	19 06 00.0	
	comp=Z,100nm,12.2s						
UPC	**Upice**	**16.25**	**338**	eP	**P**	**18 57 37.1**	**+3.8**
UPC				ex	x	18 57 43.3	
PRU	**Pruhonice**	**16.28**	**334**	eP	**P**	**18 57 35.9**	**+2.2**
PRU				ex	x	18 57 42.5	
PRU				AMS	AMS	19 05 00.0	
	comp=Z,100nm,14.6s						
FRF	**La Foret Royal**	**16.37**	**304**	eP	**P**	**18 57 35.6**	**+0.7**
	comp=Z,15nm,1.2s						
FRF	**La Foret Royal**	**16.37**	**304**	eP	**P**	**18 57 35.6**	**+0.7**
FRF				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PVCC	**Panska Ves**	**16.73**	**335**	eP	**P**	**18 57 41.6**	**+2.3**
PVCC				ex	x	18 57 48.8	
PVCC				AMS	AMS	19 05 20.0	
	comp=Z,200nm,11.7s						
MBDF	**Montbardon**	**16.77**	**308**	eP	**P**	**18 57 41.0**	**+1.1**
	comp=Z,11nm,0.9s						
MBDF	**Montbardon**	**16.77**	**308**	eP	**P**	**18 57 41.0**	**+1.1**
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LPG	**La Plagne**	**17.13**	**310**	eP	**P**	**18 57 45.8**	**+1.3**
	comp=Z,8.8nm,0.8s						
LPG	**La Plagne**	**17.13**	**310**	eP	**P**	**18 57 45.8**	**+1.3**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LPL	**La Plagne**	**17.15**	**310**	eP	**P**	**18 57 46.2**	**+1.4**
BRG	**Berggiesshubel**	**17.23**	**335**	eP	**P**	**18 57 40.3**	**-5.4**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRG	**Berggiesshubel**	**17.23**	**335**	eP	**P**	**18 57 40.3**	**-5.4**
	comp=Z,2.3nm,0.8s						
SMRF	**Simiane la Rot**	**17.25**	**304**	eP	**P**	**18 57 47.2**	**+1.2**
NKC	**Novy Kostel**	**17.26**	**331**	eP	**P**	**18 57 50.7**	**+4.6**
NKC				AMS	AMS	19 05 30.0	
	comp=Z,200nm,13.0s						
ORIF	**Oris-en-Rattie**	**17.42**	**308**	eP	**P**	**18 57 49.1**	**+1.0**
CLL	**Collm**	**17.92**	**334**	e*PP		18 57 56.0	
CABF	**La Chapelle**	**18.08**	**313**	eP	**P**	**18 57 57.5**	**+1.2**
	comp=Z,22nm,0.9s						
CABF	**La Chapelle**	**18.08**	**313**	eP	**P**	**18 57 57.5**	**+1.2**
CABF				pmax	pmax		
	comp=Z,11nm,0.9s						
VIVF	**Saint-Julien-l**	**18.18**	**306**	eP	**P**	**18 57 58.6**	**+1.0**
HINF	**Hinteralfeld**	**18.28**	**317**	eP	**P**	**18 57 59.8**	**+0.9**
CDF	**Champ du Feu**	**18.40**	**319**	eP	**P**	**18 58 01.3**	**+1.0**
LASF	**Ste Croix**	**18.45**	**303**	eP	**P**	**18 58 01.5**	**+0.6**
HAU	**Haudompre**	**18.67**	**317**	eP	**P**	**18 58 05.1**	**+1.5**
MTLF	**Montolieu**	**19.36**	**300**	eP	**P**	**18 58 12.1**	**+0.3**
SMF	**Signal de Mont**	**19.46**	**311**	eP	**P**	**18 58 13.2**	**+0.3**
	comp=Z,8.3nm,0.8s						
SMF	**Signal de Mont**	**19.46**	**311**	eP	**P**	**18 58 13.2**	**+0.3**
SMF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LOR	**Lormes**	**19.73**	**312**	eP	**P**	**18 58 16.3**	**+0.3**
	comp=Z,5.8nm,0.7s						
LOR	**Lormes**	**19.73**	**312**	eP	**P**	**18 58 16.3**	**+0.3**
LOR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AVF	**Avril sur Loir**	**19.82**	**311**	eP	**P**	**18 58 17.5**	**+0.5**
SSF	**Saint Saulge**	**19.85**	**311**	eP	**P**	**18 58 17.2**	**-0.1**
SSF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SSF	**Saint Saulge**	**19.85**	**311**	eP	**P**	**18 58 17.2**	**-0.1**
	comp=Z,6.0nm,0.8s						
CAF	**Calviac**	**19.94**	**305**	eP	**P**	**18 58 18.0**	**-0.3**
TCF	**Toulx Ste Croi**	**20.33**	**308**	eP	**P**	**18 58 22.9**	**+0.5**
RJF	**Les Rejaudoux**	**20.43**	**305**	eP	**P**	**18 58 23.2**	**-0.2**
	comp=Z,7.6nm,0.8s						
RJF	**Les Rejaudoux**	**20.43**	**305**	eP	**P**	**18 58 23.2**	**-0.2**
RJF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EPF	**Esparros**	**20.62**	**298**	eP	**P**	**18 58 26.3**	**+0.9**
GIVF	**Givet**	**20.70**	**320**	eP	**P**	**18 58 27.6**	**+1.4**
LFF	**La Frestale**	**20.83**	**304**	eP	**P**	**18 58 27.1**	**-0.5**
OBN	**Obninsk**	**20.87**	**18**	⇓iP	**P**	**18 58 29.3**	**+1.4**
OBN				eS	**S**	**19 02 09.8**	**-5.4**
OBN				pmax	pmax		
	comp=Z,26nm,1.5s						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.2						
OBN	**Obninsk**	**20.87**	**18**	eP	**P**	**18 58 29.8**	**+2.0**
BAIF	**Baives**	**21.00**	**320**	eP	**P**	**18 58 26.9**	**-2.3**
	comp=Z,20nm,0.8s						
BAIF	**Baives**	**21.00**	**320**	eP	**P**	**18 58 26.9**	**-2.3**
BAIF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ETSF	**Etsaut**	**21.24**	**298**	eP	**P**	**18 58 32.3**	**+0.5**
SJPF	**Ste Jean**	**21.76**	**298**	eP	**P**	**18 58 37.3**	**+0.3**
MFF	**Saint Martin d**	**21.96**	**307**	eP	**P**	**18 58 37.9**	**-1.1**
	comp=Z,10nm,0.6s,mb4.1						
MFF	**Saint Martin d**	**21.96**	**307**	eP	**P**	**18 58 37.9**	**-1.1**
MFF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
FLN	**La Foliniere**	**23.01**	**312**	eP	**P**	**18 58 48.9**	**-0.4**
	comp=Z,16nm,0.7s,mb4.3						
FLN	**La Foliniere**	**23.01**	**312**	eP	**P**	**18 58 48.9**	**-0.4**
FLN				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.3						
GRR	**Gorron**	**23.08**	**311**	eP	**P**	**18 58 48.5**	**-1.5**
	comp=Z,7.6nm,0.7s,mb3.9						
GRR	**Gorron**	**23.08**	**311**	eP	**P**	**18 58 48.5**	**-1.5**
GRR				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.0						
ESDC	**Sonseca Array**	**23.48**	**288**	P	**P**	**18 58 53.3**	**-0.7**
	comp=Z,0.9nm,0.5s,mb3.4,baz=82,slow=9.8,SNR=9.1						
SGMF	**Saint Gilles**	**24.08**	**310**	eP	**P**	**18 59 00.3**	**+0.6**
QUIF	**Quistinic**	**24.35**	**309**	eP	**P**	**18 59 02.4**	**+0.1**
	comp=Z,25nm,1.0s,mb4.3						
QUIF	**Quistinic**	**24.35**	**309**	eP	**P**	**18 59 02.4**	**+0.1**
QUIF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.3						
ROSF	**Rostrenen**	**24.56**	**310**	eP	**P**	**18 59 02.9**	**-1.4**
HFS	**Hagfors**	**25.56**	**346**	P	**P**	**18 59 13.1**	**-0.6**
	comp=Z,1.5nm,0.8s,mb3.6,baz=131,slow=13,SNR=2.8						
FINES	**FINESS Array B**	**25.73**	**1**	P	**P**	**18 59 13.5**	**-1.8**
	comp=Z,1.9nm,0.9s,mb3.6,baz=162,slow=13,SNR=3.5						
EKA	**Eskdalemuir Ar**	**27.67**	**324**	P	**P**	**18 59 33.5**	**+0.3**
	comp=Z,2.5nm,0.5s,mb4.1,baz=118,slow=9.1,SNR=7.3						
ARCES	**ARCESS Array B**	**33.86**	**0**	P	**P**	**19 00 25.0**	**-2.8**
	comp=Z,0.9nm,0.6s,mb3.9,baz=180,slow=8.5,SNR=4.7						
BVAR	**Borovoye Array**	**35.84**	**47**	P	**P**	**19 00 47.6**	**+2.8**
	comp=Z,0.2nm,0.3s,mb3.5,baz=233,slow=7.4,SNR=4.0						
CHKZ	**Chkalovo**	**36.09**	**46**	eP	**P**	**19 00 47.8**	**+0.8**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
CHKZ	**Chkalovo**	**36.09**	**46**	eP	**P**	**19 00 47.8**	**+0.8**
	comp=Z,3.6nm,1.1s,mb4.2						
CHKZ	**Chkalovo**	**36.09**	**46**	eP	**P**	**19 00 47.8**	**+0.8**
	comp=Z,3.6nm,1.1s,mb4.2						
MKAR	**Makanchi Array**	**43.32**	**57**	iP	**P**	**19 01 46.9**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR	**Makanchi Array**	**43.32**	**57**	P	**P**	**19 01 46.9**	**-0.1**
	comp=Z,2.1nm,0.4s,mb4.2,baz=269,slow=8.3,SNR=35						
NVS	**Novosibirsk**	**43.57**	**45**	eP	**P**	**19 01 48.2**	**-0.6**
NVS				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
NVS				pmax	pmax		
	comp=E,5.0nm,0.9s						
NVS	**Novosibirsk**	**43.57**	**45**	eP	**P**	**19 01 48.2**	**-0.6**
	comp=E,6.0nm,0.7s,mb4.4						
GKN	**Gorkha**	**50.27**	**81**	eP	**P**	**19 02 42.4**	**+0.4**
	comp=E,11nm,0.6s,mb5.0						
DMN	**Daman**	**50.82**	**81**	eP	**P**	**19 02 46.2**	**+0.1**
PKI	**Pulchoki**	**51.08**	**81**	eP	**P**	**19 02 49.0**	**+0.9**
GUN	**Gumba**	**51.31**	**81**	eP	**P**	**19 02 50.3**	**+0.4**
LSA	**Lhasa**	**54.77**	**76**	P	**P**	**19 03 16.3**	**+0.8**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
LSA	**Lhasa**	**54.77**	**76**	P	**P**	**19 03 16.3**	**+0.8**
	comp=Z,2.3nm,0.6s,mb4.4						
LSA	**Lhasa**	**54.77**	**76**	P	**P**	**19 03 16.3**	**+0.8**
	comp=Z,2.0nm,0.6s,mb4.3						
SONM	**Songino Array**	**59.00**	**51**	P	**P**	**19 03 43.7**	**-1.7**
	comp=Z,0.4nm,0.5s,mb3.7,baz=214,slow=10,SNR=3.6						
SCHQ	**Schefferville**	**62.86**	**319**	P	**P**	**19 04 08.9**	**-2.5**
	comp=Z,1.4nm,0.5s,mb4.4,baz=73,slow=4.7,SNR=5.2						

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*IDC **01** 18:55:45.1±1.7,6.41N×92.46E,mb3.6/3,mb1 4.0/4, mb1mx3.6/19,mbtmp3.7/4,ML4.3/1,Error ellipse: s-maj=65.6km s-min=30.2km az=50.0*

*NEIC **01** 18:55:49.1±0.8,6.53N×92.44E,h30^{km},mb4.2/7,Error ellipse: s-maj=21.3km s-min=10.1km az=58.0*

ISC 01 18:55:48.0±1.1,**6.5N**±0.1×**92.5E**±0.2,**h33**^{km},**n11**, σ0§42/10,**mb4.3**/10,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**13.41**	**27**	Pn	**P**	**18 58 58.9**	**+0.4**
	0.5nm,0.3s,baz=231,slow=14,SNR=42						
PKI	**Pulchoki**	**21.99**	**343**	eP	**P**	**19 00 41.1**	**+0.1**
	5.8nm,0.3s,mb4.5						
DMN	**Daman**	**22.12**	**342**	eP	**P**	**19 00 42.1**	**-0.1**
	22nm,0.9s,mb4.6						
GUN	**Gumba**	**22.18**	**344**	eP	**P**	**19 00 42.7**	**-0.2**
	26nm,0.9s,mb4.7						
KKN	**Kakani**	**22.23**	**343**	eP	**P**	**19 00 43.4**	**0.0**
	13nm,0.7s,mb4.5						
GKN	**Gorkha**	**22.63**	**342**	eP	**P**	**19 00 47.0**	**-0.4**
	36nm,1.0s,mb4.8						
KOLN	**Koldanda**	**22.76**	**339**	eP	**P**	**19 00 48.8**	**+0.1**
	16nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**48.83**	**124**	P	**P**	**19 04 32.4**	**-0.1**
	0.8nm,0.6s,mb3.9,baz=302,slow=9.2,SNR=10						
CHKZ	**Chkalovo**	**50.27**	**343**	eP	**P**	**19 04 42.4**	**-0.7**
	1.5nm,0.6s,mb4.2						
ASAR	**Alice Springs**	**50.33**	**128**	P	**P**	**19 04 43.9**	**-0.1**
	0.4nm,0.6s,mb3.6,baz=303,slow=7.1,SNR=9.5						
GERES	**GERESS Array B**	**77.75**	**318**	P	**P**	**19 07 44.5**	**+1.0**
	0.4nm,0.6s,mb3.5,baz=135,slow=4.2,SNR=3.8						

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*ATH **01** 19:10:53.6,35.79N×25.24E,h36^{km}±4^{km},MD3.5/7*

*NEIC **01** 19:10:53.7,35.78N×25.24E,h37^{km},MD3.5(ATH),After ATH.*

*CSEM **01** 19:10:53.2±0.1,35.85N×25.28E,MD3.5,Error ellipse: s-maj=2.2km s-min=1.8km az=82.0*

ISC 01 19:10:54.8±0.6,**35.79N**±0.05×**25.28E**±0.06,**h36**^{km},**n11**, σ0§91/13,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**0.59**	**152**	ePN	**P**	**19 11 05.7**	**-0.9**
NPS				eSN	**S**	**19 11 15.1**	**-0.1**
SANT	**Santorini**	**0.60**	**14**	eP	**P**	**19 11 04.3**	**-2.5**
SANT	**Santorini**	**0.60**	**14**	eP	**P**	**19 11 04.3**	**-2.4**

VAM	**Vamos**	**0.96**	**247**	*e*PN	**P**	**19 11 11.6**	**-0.2**
VAM				*e*SN	**S**	**19 11 24.9**	**+0.4**
XRY	**Khrisi**	**0.97**	**159**	*e*PN	**P**	**19 11 12.4**	**+0.3**
APE	**Apeiranthos**	**1.29**	**9**	*e*PN	**P**	**19 11 17.0**	**+0.4**
KARP	**Karpathos**	**1.55**	**98**	*e*PN	**P**	**19 11 21.0**	**+0.6**
KYTH	**Kithira**	**1.88**	**286**	*e*PN	**P**	**19 11 25.0**	**-0.1**
KYTH	**Kithira**	**1.88**	**286**	*e*Pb	**P**	**19 11 26.5**	**+1.4**
VLI	**Veliai**	**2.11**	**297**	*e*PN	**P**	**19 11 27.7**	**-0.6**
SMG	**Samos**	**2.29**	**33**	*e*PB	**P**	**19 11 32.2**	**+1.3**

IDC ***01*** *19:13:35.9±1.5, 2.16N×95.92E, mb3.9/6, mb1 4.1/7, mb1mx3.9/18, mbtmp3.9/7, ML3.9/1, MS3.6/2, Ms1 3.7/2, ms1mx3.1/21, Error ellipse: s-maj=60.9km s-min=21.0km az=56.0*

BJI ***01*** *19:13:41.3, 2.30N×96.20E, h30^{km}, mB4.9, mb4.5, Ms3.9, Msz3.5*

NEIC ***01*** *19:13:41.4±0.7, 2.26N×96.22E, h30^{km}, mb4.5/8, Error ellipse: s-maj=16.3km s-min=9.9km az=225.0*

ISC 01 19:13:40.0±0.9**, 2.3N**±0.1×**96.2E**±0.1**, h33^{km}, n23, σ0^{s}90**/23**, mb4.3**/14**, MS3.5**/3**, 1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.33**	**56**	*e*P	**P**	**19 14 58.5**	**-0.8**
CMAR	**Chiang Mai Arr**	**16.31**	**9**	Pn	**P**	**19 17 29.3**	**+1.1**
	0.2nm,0.3s,baz=199,slow=11,SNR=18						
CMAR				LR	LR	19 24 34.8	
	comp=Z,144nm,18.9s,baz=205,slow=40						
KMI	**Kunming**	**23.57**	**15**	P	**P**	**19 18 49.9**	**+1.3**
KMI				LR	LR		
	comp=Z,120nm,17.7s,MS3.4						
GYA	**Guiyang**	**26.05**	**22**	⇓*i*P	**P**	**19 19 12.8**	**+0.4**
PKI	**Pulchoki**	**27.21**	**339**	*e*P	**P**	**19 19 24.0**	**+1.0**
	comp=Z,11nm,0.6s,mb4.6						
GUN	**Gumba**	**27.35**	**340**	*e*P	**P**	**19 19 25.1**	**+0.8**
	comp=Z,32nm,0.9s,mb4.9						
DMN	**Daman**	**27.35**	**338**	*e*P	**P**	**19 19 25.0**	**+0.7**
	comp=Z,16nm,0.9s,mb4.5						
KKN	**Kakani**	**27.45**	**339**	*e*P	**P**	**19 19 25.4**	**+0.2**
	comp=Z,22nm,0.8s,mb4.7						
LSA	**Lhasa**	**27.70**	**350**	P	**P**	**19 19 27.0**	**-0.5**
LSA	**Lhasa**	**27.70**	**350**	*e*P	**P**	**19 19 27.5**	**+0.1**
	comp=Z,3.5nm,0.8s,mb4.0						
GKN	**Gorkha**	**27.89**	**338**	*e*P	**P**	**19 19 29.0**	**-0.1**
	comp=Z,33nm,0.9s,mb5.0						
KOLN	**Koldanda**	**28.09**	**336**	*e*P	**P**	**19 19 31.4**	**+0.5**
	comp=Z,23nm,0.9s,mb4.8						
XAN	**Xi’an**	**33.76**	**19**	P	**P**	**19 20 18.4**	**-2.4**
GTA	**Gaotai**	**37.11**	**5**	*e*P	**P**	**19 20 48.4**	**-0.9**
GTA				AP	pP	19 20 58.2	-0.8
GTA				XP	sP	19 21 03.1	-0.2
GTA				PP	PP	19 22 19.3	+2.8
GTA				PPP	PPP	19 22 39.5	+2.8
GTA				S	**S**	**19 26 36.8**	**+4.0**
GTA				XS		19 26 50.0	
GTA				SS	SS	19 29 07.7	+4.0
GTA				AMB	AMB		
	comp=Z,40nm,8.7s						
GTA				LR	LR		
	comp=N,50nm,12.6s,MS3.7						
GTA				LR	LR		
	comp=E,60nm,12.9s,MS3.7						
GTA				LR	LR		
	comp=Z,80nm,16.7s,MS3.6						
NWAO	**Narrogin (SRO)**	**40.25**	**152**	LR	LR	19 38 33.2	
	comp=Z,88nm,19.8s,MS3.6,baz=229,slow=37						
WRA	**Warramunga Arr**	**43.42**	**122**	P	**P**	**19 21 42.5**	**+0.8**
	comp=Z,1.1nm,0.9s,mb3.6,baz=301,slow=9.2,SNR=4.7						
ASAR	**Alice Springs**	**44.81**	**127**	P	**P**	**19 21 53.4**	**+0.6**
	comp=Z,0.7nm,0.8s,mb3.6,baz=297,slow=7.5,SNR=9.8						
MKAR	**Makanchi Array**	**45.98**	**347**	P	**P**	**19 22 01.6**	**-0.3**
	comp=Z,6.8nm,0.7s,mb4.7,baz=163,slow=8.1,SNR=63						
SONM	**Songino Array**	**46.23**	**9**	P	**P**	**19 22 03.5**	**-0.3**
	comp=Z,3.5nm,0.8s,mb4.3,baz=193,slow=8.3,SNR=15						
ULN	**Ulaanbaatar**	**46.37**	**10**	*e*P	**P**	**19 22 04.8**	**-0.1**
	comp=Z,1.4nm,0.7s,mb4.0						
CHKZ	**Chkalovo**	**55.41**	**342**	*e*P	**P**	**19 23 12.3**	**-1.0**
	comp=Z,47nm,0.7s						
AKASG	**Malin Array Be**	**73.83**	**322**	P	**P**	**19 25 11.4**	**-1.6**
	comp=Z,0.3nm,0.4s,mb3.6,baz=80,slow=5.8,SNR=4.4						
FINES	**FINESS Array B**	**78.61**	**333**	P	**P**	**19 25 39.4**	**-0.5**
	comp=Z,0.8nm,0.7s,mb3.8,baz=124,slow=6.9,SNR=4.8						

IDC 01 19:33:31.0±3.7**, 0.31N**×**97.39E, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.4**/17**, mbtmp3.4**/3**, ML3.5**/1**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx3.2**/18**, Error ellipse: s-maj=137.1km s-min=29.3km az=58.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**18.10**	**5**	P	P	19 37 44.1	-1.6
	0.1nm,0.3s,baz=195,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**41.41**	**121**	P	P	19 41 19.5	-1.5
	0.5nm,1.0s,baz=302,slow=9.0,SNR=2.8						
MKAR	**Makanchi Array**	**48.14**	**346**	P	P	19 42 12.8	-2.1
	0.7nm,0.6s,baz=157,slow=7.0,SNR=8.4						
CTA	**Charters Tower**	**51.95**	**116**	LR	LR	20 08 23.9	
	comp=Z,135nm,18.0s,baz=107,slow=40						

BJI ***01*** *19:47:30.8, 3.90S×126.20E, h47^{km}, mB4.8, mb4.4*

NEIC ***01*** *19:47:30.9±2.0, 3.91S×126.22E, h47^{km}±22^{km}, mb4.6/6, Error ellipse: s-maj=16.6km s-min=8.5km az=223.0*

IDC ***01*** *19:47:33.1±3.2, 3.89S×126.19E, h68^{km}±30^{km}, mb3.9/7, mb1 4.0/7, mb1mx3.9/16, mbtmp4.2/7, Error ellipse: s-maj=32.4km s-min=15.4km az=54.0*

ISC 01 19:47:27.7±3.2**, 3.9S**±0.1×**126.3E**±0.1**, h34^{km}**±33^{km}**, n22, σ0^{s}90**/22**, mb4.4**/11**, Buru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**10.69**	**145**	*e*P	**P**	**19 50 01.7**	**0.0**
KSM	**Kuching**	**16.80**	**288**	*e*P	**P**	**19 51 23.4**	**+1.3**
WRAB	**Tennant Creek**	**17.80**	**154**	*e*P	**P**	**19 51 33.9**	**-0.7**
	18nm,0.6s						
WRA	**Warramunga Arr**	**17.80**	**154**	P	**P**	**19 51 33.0**	**-1.7**
	0.6nm,0.3s,baz=335,slow=11,SNR=22						
WB2	**Warramunga Arr**	**17.81**	**154**	*e*P	**P**	**19 51 34.0**	**-0.7**
MBWA	**Marble Bar**	**18.30**	**200**	*e*P	**P**	**19 51 41.3**	**+0.4**
	18nm,0.9s						
ASPA	**Alice Springs**	**21.01**	**160**	*e*P	**P**	**19 52 12.0**	**+1.2**
ASAR	**Alice Springs**	**21.01**	**160**	P	**P**	**19 52 11.8**	**+1.0**
	7.4nm,0.7s,mb4.1,baz=341,slow=12,SNR=56						
ASAR				ScP		19 59 47.2	
	0.3nm,0.7s,baz=323,slow=2.2,SNR=4.6						
PMG	**Port Moresby**	**21.47**	**106**	P	**P**	**19 52 16.6**	**+1.1**
	51nm,1.1s,mb4.8,baz=210,slow=6.0,SNR=3.9						
STKA	**Stephens Creek**	**31.35**	**154**	P	**P**	**19 53 47.4**	**-0.2**
	2.0nm,0.5s,mb4.2,baz=332,slow=10,SNR=11						
HNR	**Honiara**	**33.91**	**101**	P	**P**	**19 54 10.5**	**+0.6**
	60nm,0.3s,baz=218,slow=11,SNR=5.4						
CMAR	**Chiang Mai Arr**	**34.88**	**310**	P	**P**	**19 54 18.6**	**+0.4**
	3.5nm,0.7s,mb4.4,baz=135,slow=7.0,SNR=31						
XAN	**Xi’an**	**41.12**	**338**	P	**P**	**19 55 10.0**	**-0.3**
MJAR	**Matsushiro Arr**	**41.74**	**15**	P	**P**	**19 55 16.3**	**+0.8**
	1.3nm,0.6s,mb3.7,baz=188,slow=8.8,SNR=3.5						
LSA	**Lhasa**	**47.39**	**317**	P	**P**	**19 56 02.8**	**+1.9**
LSA	**Lhasa**	**47.39**	**317**	*e*P	**P**	**19 56 01.6**	**+0.8**
	4.5nm,0.6s,mb4.6						
GUN	**Gumba**	**50.11**	**312**	*e*P	**P**	**19 56 21.9**	**0.0**
	16nm,0.6s,mb5.2						
KKN	**Kakani**	**50.49**	**311**	*e*P	**P**	**19 56 24.3**	**-0.5**
GKN	**Gorkha**	**51.09**	**311**	*e*P	**P**	**19 56 28.8**	**-0.5**
	8.8nm,0.6s,mb4.9						
KOLN	**Koldanda**	**51.75**	**310**	*e*P	**P**	**19 56 33.8**	**-0.5**
	9.7nm,0.6s,mb4.9						
SONM	**Songino Array**	**54.37**	**344**	P	**P**	**19 56 52.4**	**-1.1**
	0.3nm,0.3s,mb3.6,baz=164,slow=9.0,SNR=3.6						
MKAR	**Makanchi Array**	**63.61**	**328**	P	**P**	**19 57 55.9**	**-1.7**
	1.3nm,0.7s,mb4.1,baz=127,slow=8.6,SNR=13						

IDC 01 19:55:07.6±13.0**, 3.04N**×**127.60E, h74^{km}**±127^{km}**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/17**, mbtmp3.9**/4**, Error ellipse: s-maj=141.7km s-min=25.5km az=63.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.78**	**164**	P	P	20 00 13.9	-0.5
	1.7nm,0.4s,baz=345,slow=10.0,SNR=16						
ASAR	**Alice Springs**	**27.25**	**167**	P	P	20 00 44.5	-2.6
	0.3nm,0.3s,baz=344,slow=7.0,SNR=6.7						
ASAR				PcP	PcP	20 04 03.0	-2.5
	0.3nm,0.7s,baz=3.9,slow=2.8,SNR=3.8						
STKA	**Stephens Creek**	**37.19**	**160**	P	P	20 02 11.9	-1.6
	1.3nm,0.3s,baz=341,slow=4.5,SNR=9.9						
MKAR	**Makanchi Array**	**58.61**	**325**	P	P	20 04 57.0	-2.3
	0.3nm,0.4s,baz=113,slow=8.1,SNR=11						

LDG ***01*** *20:06:37.7±0.2, 28.94N×94.48E, h10^{km}, Mb6.1/42, Ms5.6/8, Error ellipse: s-maj=8.1km s-min=5.3km az=155.0*

BJI ***01*** *20:06:39.3, 28.93N×94.60E, h26^{km}, mB5.9, mb5.6, ML6.4, Ms6.1, Msz5.9*

MOS ***01*** *20:06:40.6±0.8, 28.86N×94.57E, h33^{km}, mb6.1/109, MS5.8/56, Error ellipse: s-maj=6.7km s-min=3.0km az=128.4*

HRVD ***01*** *20:06:41.5±0.1, 28.81N×94.72E, h19^{km}, MW5.8/69, Centroid moment Tensor Solution. LP body waves: s60,c129;Mantle waves: s69,c175; Half duration: 2^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.42±.04; $M_{\theta\theta}$-0.89±.04; $M_{\phi\phi}$0.46±.04; $M_{r\theta}$6.89±.08; $M_{\theta\phi}$-0.57±.03; $M_{\phi r}$-0.32±.09; Best double couple: $M_0$6.954×10^{17} NP1: ϕ_s209°, δ6°, λ26°. NP2:ϕ_s93°, δ87°, λ95°. Principal axes: T 6.748, Plg47°, Azm8°; N .412, Plg5°, Azm273°; P -7.159, Plg42°, Azm178°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***01*** *20:06:41.5±0.1, 28.88N×94.63E, mb6.1/156, ME5.5, MS5.7/128, MW5.7 Error ellipse: s-maj=3.5km s-min=2.3km az=200.0 Broadband fault plane solution: P waves. NP1:ϕ_s95°, δ85°, λ90°. NP2:ϕ_s275°, δ5°, λ90°. Principal axes: T Plg50°, Azm5°; N Plg0°, Azm0°; P Plg40°, Azm185°; Moment Tensor Solution. s31 Moment tensor: Scale 10^{17} Nm; M_{rr}0.33; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-0.13; $M_{r\theta}$4.05; $M_{\theta\phi}$-0.56; $M_{\phi r}$0.00; Best double couple: $M_0$4.1×10^{17} NP1: ϕ_s193°, δ8°, λ14°. NP2:ϕ_s89°, δ88°, λ98°. Principal axes: T 4.15, Plg46°, Azm7°; N -.12, Plg8°, Azm269°; P -4.03, Plg43°, Azm172°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Minor damage in Arunachal Pradesh and Assam. Felt in Dibrugarh and Tinsukia. Landslides occurred in the Dibang Valley. Also felt in parts of southern Tibet.

IDC ***01*** *20:06:42.7±1.2, 28.86N×94.58E, h34^{km}±8^{km}, mb5.3/36, mb1 5.4/37, mb1mx5.4/37, mbtmp5.5/37, ML4.9/1, MS5.5/23, Ms1 5.5/23, ms1mx5.5/25 Error ellipse: s-maj=11.9km s-min=7.2km az=37.0*

BGS ***01*** *20:06:45.9±1.4, 29.12N×94.00E, h33^{km}, mb5.8*

ISC 01 20:06:39.6±0.1**, 28.83N**±0.02×**94.59E**±0.02**, h28^{km}, h28^{km}**±.9^{km}**:pP-P, n988, σ0^{s}96**/973**, mb5.9**/253**, MS5.7**/177**, 283C-29D, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.12**	**287**	PG	**Pn**	**20 07 33.8**	**+5.5**
LSA				S	**Sn**	**20 08 08.5**	**+3.4**
LSA	**Lhasa**	**3.12**	**287**	Pn	**Pn**	**20 07 33.6**	**+5.3**
SHL	**Shillong**	**4.04**	**217**	⇓*i*P	**Pn**	**20 07 42.0**	**+0.7**
SHL				*e*S	**Sn**	**20 08 29.4**	**+1.2**
IMP	**Imphal**	**4.07**	**188**	*i* P	**Pn**	**20 07 42.0**	**+0.3**
IMP				*i* x	x	20 09 33.0	
AGT	**Agartala**	**5.76**	**212**	*i* P	**Pn**	**20 08 04.0**	**-1.6**
AGT				*i* x	rx	20 08 34.0	
SLGI	**Shiliguri**	**5.86**	**250**	*e*PN	**Pn**	**20 08 20.0**	**+13**
SLGI				*e*SN	**Sn**	**20 09 21.8**	**+7.8**
GUN	**Gumba**	**7.72**	**265**	*e*Pn	**Pn**	**20 08 33.7**	**+0.5**
KMI	**Kunming**	**8.15**	**115**	P	**P**	**20 08 39.1**	**-0.1**
KMI				AP		20 08 45.2	
KMI				S	**Sn**	**20 10 07.8**	**-3.6**
KMI				LR	LR		
	comp=N,66µm,9.1s						
KMI				LR	LR		
	comp=E,41µm,8.9s						
KMI				LR	LR		
	comp=Z,39µm,9.6s						
PKI	**Pulchoki**	**8.19**	**263**	*e*Pn	**P**	**20 08 39.8**	**+0.1**
PKI				*e*Sn	**Sn**	**20 10 10.8**	**-1.5**
	comp=Z,2µm,0.8s						
PKI	**Pulchoki**	**8.19**	**263**	*e*Sn	**Sn**	**20 10 12.1**	**-0.2**
	comp=Z,2µm,0.8s						
PKI	**Pulchoki**	**8.19**	**263**	*e*P	**P**	**20 08 39.8**	**+0.1**
PKI				*e*		20 10 10.8	
PKI				pmax	pmax		
	comp=Z,862nm,0.8s						
PKI	**Pulchoki**	**8.19**	**263**	*e*Pn	**P**	**20 08 39.8**	**+0.1**
	comp=Z,862nm,0.8s						
PKI				*e*Sn	**Sn**	**20 10 10.8**	**-1.5**
CD2	**Chengdu**	**8.23**	**73**	⇑*i*P	**P**	**20 08 40.1**	**-0.1**
CD2				AP		20 08 49.8	
CD2				XP		20 08 52.6	
CD2				S	**Sn**	**20 10 09.5**	**-3.8**
CD2				XS		20 10 23.9	
CD2				AMB	AMB		
	comp=Z,100nm,0.9s						
CD2				AMB	AMB		
	comp=Z,830nm,3.8s						
CD2				LR	LR		
	comp=N,147µm,10.5s						
CD2				LR	LR		
	comp=Z,52µm,11.6s						
KKN	**Kakani**	**8.27**	**265**	*e*Pn	**P**	**20 08 40.8**	**+0.1**
KKN				*e*Sn	**Sn**	**20 10 12.2**	**-2.0**
CAL	**Calcutta**	**8.42**	**223**	*e*P	**P**	**20 08 42.0**	**-0.9**
CAL				*e*x	**Sn**	**20 10 17.0**	**-1.0**
DMN	**Daman**	**8.45**	**264**	*e*Pn	**P**	**20 08 43.1**	**-0.2**
DMN				*e*Sn	**Sn**	**20 10 17.1**	**-1.6**
GKN	**Gorkha**	**8.80**	**267**	*e*Pn	**P**	**20 08 46.0**	**-2.1**
GKN				*e*Sn	**Sn**	**20 10 22.7**	**-4.6**
	comp=Z,747nm,0.4s						
GKN	**Gorkha**	**8.80**	**267**	*e*Pn	**P**	**20 08 46.0**	**-2.1**
	comp=Z,374nm,0.4s						
GKN				*e*Sn	**Sn**	**20 10 22.7**	**-4.6**
BOK	**Bokaro**	**9.27**	**239**	*i* P	**P**	**20 08 53.5**	**-1.1**
BOK				*i* x	**Sn**	**20 10 35.5**	**-3.5**
KOLN	**Koldanda**	**9.74**	**266**	*e*Pn	**P**	**20 08 58.0**	**-3.1**
KOLN				*e*Sn	**Sn**	**20 10 44.3**	**-6.3**
	comp=Z,1µm,0.6s						
KOLN	**Koldanda**	**9.74**	**266**	*e*Pn	**P**	**20 08 58.0**	**-3.1**
	comp=Z,559nm,0.6s						
KOLN				*e*Sn	**Sn**	**20 10 44.3**	**-6.3**
LZH	**Lanzhou**	**10.65**	**45**	⇑P	**P**	**20 09 12.2**	**-1.4**
LZH				AP		20 09 19.7	
LZH				PP	PP	20 09 21.2	-0.2
LZH				XP		20 09 24.5	
LZH				S	**S**	**20 11 11.0**	**-2.0**
LZH				XS		20 11 22.7	
LZH				SS	SS	20 11 25.3	-1.4
LZH				AMB	AMB		
	comp=Z,830nm,1.3s						
LZH				AMB	AMB		
	comp=Z,3µm,4.5s						
LZH				LR	LR		
	comp=N,93µm,12.0s						
LZH				LR	LR		
	comp=Z,120µm,14.7s						
CHG	**Chiang Mai**	**10.73**	**157**	⇓P	**P**	**20 09 11.5**	**-3.2**
CHTO	**Chiang Mai**	**10.73**	**157**	Pn	**P**	**20 09 15.2**	**+0.5**
CHTO				sSn		20 11 23.4	
GYA	**Guiyang**	**10.97**	**100**	⇑*i*P	**P**	**20 09 16.9**	**-1.0**
GYA				AP		20 09 25.8	
GYA				XP		20 09 30.4	
GYA				S	**S**	**20 11 12.1**	**-8.6**
GYA				SCS	ScS	20 22 19.9	+1.6
GYA				AMB	AMB		
	comp=Z,400nm,0.9s						
GYA				AMB	AMB		
	comp=Z,620nm,4.8s						
GYA				LR	LR		
	comp=N,53µm,9.0s						
GYA				LR	LR		
	comp=E,21µm,9.5s						
GYA				LR	LR		
	comp=Z,29µm,10.8s						
CMAR	**Chiang Mai Arr**	**11.06**	**158**	Pn	**P**	**20 09 19.6**	**+0.4**
	comp=Z,2.3nm,0.3s,baz=331,slow=12,SNR=346						
CMAR				LR	LR	20 14 03.0	
	comp=Z,23µm,21.6s,baz=335,slow=40						
CMAR				ScP		20 18 46.5	
	comp=Z,0.2nm,0.3s,baz=286,slow=2.4,SNR=7.1						
GTA	**Gaotai**	**11.41**	**21**	⇑*i*P	**P**	**20 09 20.9**	**-3.0**
GTA				AP		20 09 30.3	
GTA				XP		20 09 33.8	
GTA				S	**S**	**20 11 27.3**	**-4.2**
GTA				XS		20 11 38.7	
GTA				LG1		20 12 25.1	
GTA				LG2		20 12 43.3	
GTA				SCP		20 18 47.3	
GTA				PCS		20 18 49.1	
GTA				SCS	ScS	20 22 20.2	+1.1
GTA				AMB	AMB		
	comp=Z,340nm,1.8s						
GTA				AMB	AMB		
	comp=Z,3µm,7.6s						
GTA				LR	LR		
	comp=N,109µm,11.8s						
GTA				LR	LR		
	comp=E,52µm,12.2s						
GTA				LR	LR		
	comp=Z,116µm,11.8s						
NANT	**Nan**	**11.44**	**149**	P	**P**	**20 09 25.0**	**+0.6**
	comp=Z,2µm,0.4s						
BWNR	**Bhubaneshwar**	**11.65**	**225**	*e*x	**P**	**20 09 31.2**	**+3.9**
BWNR				*i* S	**S**	**20 11 25.7**	**-12**
LGTI	**Lohaghat**	**12.55**	**276**	*e*P	**P**	**20 09 39.5**	**+0.2**
LGTI				*e*x	x	20 12 04.0	
PTH	**Pithoragarh**	**12.58**	**277**	*e*P	**P**	**20 09 38.1**	**-1.5**
ENH	**Enshi**	**13.05**	**80**	*e*P	**P**	**20 09 42.9**	**-3.0**
	comp=Z,211nm,0.8s						
BLSP	**Bilaspur**	**13.07**	**242**	*e*P	**P**	**20 09 43.8**	**-2.4**
BLSP				AMb	AMB	20 09 51.7	
	comp=Z,283nm,1.1s						
BLSP				*i* S	**S**	**20 11 59.5**	**-12**
XAN	**Xi’an**	**13.30**	**63**	P	**P**	**20 09 45.6**	**-3.5**
XAN				AP		20 09 55.1	
XAN				AMB	AMB		
	comp=Z,60nm,0.8s						
XAN				LR	LR		
	comp=N,35µm,13.7s						
XAN				LR	LR		
	comp=E,22µm,10.4s						
XAN				LR	LR		
	comp=Z,27µm,12.1s						
NST	**Nakhon Sawan**	**14.06**	**157**	P	**P**	**20 10 00.0**	**+0.7**
	comp=Z,477nm,0.9s						
DDI	**Dehra Dun**	**14.46**	**280**	*e*P	**P**	**20 10 02.0**	**-2.5**
DDI				*e*x	x	20 12 06.5	
KKTK	**Khon Kaen**	**14.56**	**147**	PG	**P**	**20 10 06.0**	**+0.1**
KKTK				SG	Px	20 10 10.3	
VIS	**Vishakhapatnam**	**15.12**	**225**	*e*P	**P**	**20 10 12.2**	**-1.0**
VIS				AMb	AMB	20 10 21.4	
	comp=Z,406nm,1.1s						
VIS				*e*S	**S**	**20 13 00.5**	**+0.1**
NDI	**New Delhi**	**15.24**	**274**	*e*x	**P**	**20 10 11.0**	**-3.7**
NDI				*e*x	x	20 12 46.5	
NDI				*e*x	x	20 15 38.5	
SMLA	**Simla**	**15.27**	**283**	*i* x	**P**	**20 10 07.9**	**-7.2**
SMLA				*i* x	x	20 12 46.3	
BHK	**Bhakra**	**15.93**	**284**	*e*x	**P**	**20 10 18.6**	**-5.0**
BHK				*e*x	x	20 13 01.2	
WMQ	**Urumqi**	**15.95**	**342**	⇑*i*P	**P**	**20 10 21.5**	**-2.3**
WMQ				AP		20 10 29.2	
WMQ				XP		20 10 33.8	
WMQ				PP	PP	20 10 34.8	-1.7
WMQ				PPP	PPP	20 10 42.8	-1.7
WMQ				S	**S**	**20 13 26.0**	**+6.4**
WMQ				SS	SS	20 13 36.8	-1.9
WMQ				PCP	PcP	20 15 18.3	-3.0
WMQ				AMB	AMB		
	comp=Z,1µm,1.1s						
WMQ				AMB	AMB		
	comp=Z,5µm,3.6s						
WMQ				LR	LR		
	comp=N,82µm,11.6s						
WMQ				LR	LR		
	comp=E,59µm,13.1s						
WMQ				LR	LR		
	comp=Z,92µm,12.4s						
NGP	**Nagpur**	**16.01**	**245**	*e*P	**P**	**20 10 22.2**	**-2.5**
NGP				*e*x	x	20 11 49.6	
NGP				*e*x	x	20 13 31.2	
PONG	**Pong**	**16.38**	**286**	*e*x	**P**	**20 10 24.0**	**-5.3**
BHPL	**Bhopal**	**16.39**	**254**	*e*P	**P**	**20 10 27.4**	**-2.0**
BHPL				AMb	AMB	20 10 39.7	
	comp=Z,342nm,1.1s						
BHPL				*e*x	x	20 13 22.9	
UBT	**Ubonrachathani**	**16.60**	**142**	⇓P	**P**	**20 10 32.5**	**+0.3**
	comp=Z,1µm,0.9s						
THN	**Thein Dam**	**16.63**	**287**	*e*x	**P**	**20 10 26.6**	**-5.9**
THN				*e*x	x	20 17 41.1	
NNT	**Nongplab**	**16.85**	**162**	P	**P**	**20 10 37.0**	**+1.7**
QIZ	**Qiongzhong**	**17.00**	**122**	P	**P**	**20 10 37.3**	**+0.1**
QIZ				XP		20 10 48.8	
QIZ				S	**S**	**20 13 44.3**	**+0.4**
QIZ				XS		20 13 55.5	
QIZ				SS	SS	20 14 10.2	+5.2
QIZ				AMB	AMB		
	comp=Z,1µm,3.8s						
QIZ				LR	LR		
	comp=N,9µm,14.1s						
QIZ				LR	LR		
	comp=E,8µm,13.5s						
QIZ				LR	LR		
	comp=Z,20µm,15.3s						
WHN	**Wuhan**	**17.26**	**79**	*e*P	**P**	**20 10 36.0**	**-4.4**
WHN				XS		20 13 56.0	
WHN				LR	LR		
	comp=Z,42µm,12.7s						
BTO	**Baotou**	**17.27**	**43**	*e*P	**P**	**20 10 37.2**	**-3.2**
BTO				S	**S**	**20 13 55.3**	**+5.5**
BTO				AMB	AMB		
	comp=Z,220nm,2.2s						
BTO				LR	LR		
	comp=N,30µm,12.2s						
BTO				LR	LR		
	comp=E,39µm,13.0s						
TIY	**Taiyuan**	**17.34**	**55**	⇑P	**P**	**20 10 36.0**	**-5.3**
TIY				S	**S**	**20 13 42.0**	**-10**
TIY				LR	LR		
	comp=N,28µm,14.0s						
GZH	**Guangzhou**	**17.80**	**104**	P	**P**	**20 10 44.1**	**-3.1**
GZH				LR	LR		
	comp=N,27µm,12.6s						
GZH				LR	LR		
	comp=E,9µm,11.8s						
GZH				LR	LR		
	comp=Z,17µm,15.5s						
AJM	**Ajmer**	**17.82**	**267**	*i* P	**P**	**20 10 45.0**	**-2.4**
AKL	**Akola**	**17.87**	**247**	*i* P	**P**	**20 10 47.5**	**-0.6**
AKL				*i* x	**S**	**20 13 51.6**	**-12**
	comp=Z,493nm,1.2s						
HHC	**Hu-ho-hao-te**	**18.35**	**45**	*e*P	**P**	**20 10 51.0**	**-2.9**
HHC				AP		20 10 58.2	
HHC				XP		20 11 03.7	
HHC				PP	PP	20 11 06.0	-3.1
HHC				S	**S**	**20 14 05.4**	**-9.1**
HHC				PCP	PcP	20 15 26.5	+1.4
HHC				SCS	ScS	20 22 38.0	+1.2
HHC				AMB	AMB		
	comp=Z,320nm,1.8s						
HHC				AMB	AMB		
	comp=Z,4µm,4.1s						
HHC				LR	LR		
	comp=N,51µm,14.3s						
HHC				LR	LR		
	comp=E,25µm,13.1s						
HHC				LR	LR		
	comp=Z,57µm,13.1s						
HYB	**Hyderabad**	**18.59**	**236**	*e*P	**P**	**20 10 54.0**	**-2.9**
HYB				*e*S	**S**	**20 14 28.0**	**+8.1**
HYB				pmax	pmax		
	comp=Z,320nm,1.0s						
HYB	**Hyderabad**	**18.59**	**236**	*e*P	**P**	**20 10 54.0**	**-2.9**
	comp=Z,320nm,1.0s						
HYB				*e*		20 14 06.0	
HYB				*e*S	**S**	**20 14 28.0**	**+8.1**
HYB	**Hyderabad**	**18.59**	**236**	*i* P	**P**	**20 10 54.0**	**-2.9**
	comp=Z,320nm,1.0s						
HYB				*e*		20 14 06.0	
HYB				*e*S	rx	20 15 00.0	
HYB				LR	LR	20 18 00.0	
	comp=Z,44nm,14.0s						
KSH	**Kashi**	**18.70**	**310**	⇑*i*P	**P**	**20 10 58.4**	**+0.3**
KSH				*e*AP		20 11 06.6	
KSH				*e*XP		20 11 10.7	

KSH				*e*PP	PP	20 11 14.2	+0.2
KSH				*e*PPP	PPP	20 11 23.1	+0.1
KSH				*e*S	**S**	**20 14 21.0**	**-1.3**
KSH				XS		20 14 34.0	
KSH				*e*SS	SS	20 14 46.8	-0.3
KSH				PCP	PcP	20 15 26.4	+0.7
KSH				AMB	AMB		
	comp=Z,6µm,5.2s						
KSH				LR	LR		
	comp=N,77µm,12.6s						
KSH				LR	LR		
	comp=E,108µm,13.2s						
HKC	**Hong Kong**	**18.82**	**106**⇓	*i*P	**P**	**20 11 00.0**	**+0.4**
HKC				*i* S	**S**	**20 14 34.0**	**+9.0**
LATR	**Latur**	**19.47**	**242**	*e*P	**P**	**20 11 06.2**	**-1.1**
ULHL	**Ulahol**	**20.00**	**317**	P	**P**	**20 11 13.9**	**+1.0**
	SNR=180						
AAA	**Alma-Ata**	**20.22**	**320**	*i* P	**P**	**20 11 15.5**	**+0.3**
AAA				*e*S	**S**	**20 15 00.0**	**+4.6**
AAA				pmax	pmax		
	comp=Z,8µm,2.0s						
AAA				smax			
	comp=N,10µm,4.0s						
AAA				MLR	MLR		
	comp=Z,35µm,14.0s,MS5.9						
MKAR	**Makanchi Array**	**20.36**	**335**	P	**P**	**20 11 15.5**	**-1.1**
MKAR				S	**S**	**20 14 56.3**	**-1.8**
MKAR				pmax	pmax		
	comp=Z,573nm,1.0s						
MKAR	**Makanchi Array**	**20.36**	**335**	P	**P**	**20 11 14.5**	**-2.0**
	comp=Z,87nm,0.5s,baz=140,slow=9.5,SNR=76						
MKAR				LR	LR	20 20 01.7	
	comp=Z,36µm,19.0s,MS5.8,baz=167,slow=39						
MKAR				P3KPbc		20 45 40.0	
	comp=Z,1.0nm,0.9s,baz=45,slow=3.4,SNR=5.3						
MKAR	**Makanchi Array**	**20.36**	**335**	P	**P**	**20 11 14.5**	**-2.0**
MKAR				LR	LR	20 20 01.7	
TIA	**Tai’an**	**20.36**	**63**	P	**P**	**20 11 14.6**	**-2.1**
TIA				S	**S**	**20 14 57.0**	**-1.2**
TIA				AMB	AMB		
	comp=Z,100nm,1.2s						
TIA				AMB	AMB		
	comp=Z,2µm,5.0s						
TIA				LR	LR		
	comp=N,7µm,13.0s						
TIA				LR	LR		
	comp=E,11µm,9.0s						
KZA	**Kyzart**	**20.51**	**315**	P	**P**	**20 11 20.8**	**+2.6**
	SNR=14						
MDRS	**Chennai**	**20.58**	**223**	*e*P	**P**	**20 11 18.0**	**-1.1**
MDRS				*e*x	x	20 15 10.0	
MDRS				*e*x	x	20 17 17.0	
TKM2	**Tokmak 2**	**20.78**	**318**	P	**P**	**20 11 22.0**	**+1.0**
	SNR=273						
KBK	**Karagaybulak**	**21.02**	**316**	P	**P**	**20 11 24.8**	**+1.4**
	SNR=368						
UCH	**Uchtor**	**21.05**	**315**	P	**P**	**20 11 24.9**	**+1.2**
	SNR=263						
SONM	**Songino Array**	**21.07**	**23**	P	**P**	**20 11 22.8**	**-1.1**
	comp=E,385nm,1.0s,mb5.7,baz=207,slow=8.3,SNR=347						
SONM				PcP	PcP	20 15 30.3	+0.2
	comp=E,6.9nm,0.6s,baz=200,slow=2.7,SNR=5.1						
SONM				ScP		20 19 05.4	
	comp=E,17nm,1.0s,baz=198,slow=2.3,SNR=9.4						
SONM				LR	LR	20 20 17.8	
	comp=E,51µm,18.8s,MS5.9,baz=210,slow=39						
SONM				P3KPbc		20 45 34.0	
	comp=E,0.3nm,0.7s,baz=18,slow=7.8,SNR=3.7						
NJ2	**Nanjing**	**21.16**	**75**	*e*P	**P**	**20 11 24.1**	**-0.8**
NJ2				AP		20 11 33.4	
NJ2				XP		20 11 37.5	
NJ2				PP	PP	20 11 47.1	-1.3
NJ2				S	**S**	**20 15 12.0**	**-1.9**
NJ2				XS		20 15 27.0	
NJ2				AMB	AMB		
	comp=Z,110nm,0.7s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,440nm,4.6s						
NJ2				LR	LR		
	comp=N,82µm,13.0s,MS6.3						
NJ2				LR	LR		
	comp=E,15µm,12.2s,MS6.3						
NJ2				LR	LR		
	comp=Z,36µm,10.6s,MS6.0						
AAK	**Ala-Archa**	**21.28**	**316**	P	**P**	**20 11 27.3**	**+1.2**
	SNR=189						
AAK	**Ala-Archa**	**21.28**	**316**	P	**P**	**20 11 27.4**	**+1.3**
AAK				S	**S**	**20 15 23.0**	**+7.0**
AAK				pmax	pmax		
	comp=Z,3µm,2.2s,mb6.2						
AAK	**Ala-Archa**	**21.28**	**316**	*e*P	**P**	**20 11 26.2**	**+0.1**
	comp=Z,585nm,1.1s,mb5.8						
AAK				LR	LR		
	comp=Z,4µm,19.0s,MS4.8						
FRU	**Bishkek**	**21.32**	**316**⇑	*i*P	**P**	**20 11 27.5**	**+1.1**
FRU				*i*		20 11 41.0	
FRU				*e*S	**S**	**20 15 24.0**	**+7.3**
FRU				pmax	pmax		
	comp=Z,3.0nm,3.0s						
FRU				pmax	pmax		
	comp=Z,2µm,2.1s,mb6.1						
FRU				smax			
	comp=N,10.0nm,13.0s						
ULN	**Ulaanbaatar**	**21.33**	**24**	*e*P	**P**	**20 11 25.1**	**-1.4**
ULN				pmax	pmax		
	comp=Z,798nm,1.0s						
ULN				MLR	MLR		
	comp=Z,531nm,19.0s						
ULN	**Ulaanbaatar**	**21.33**	**24**	*e*P	**P**	**20 11 25.1**	**-1.4**
	comp=Z,798nm,1.0s						
ULN				LR	LR		
	comp=Z,531nm,19.0s						
CHMS	**Chumysh**	**21.33**	**317**	P	**P**	**20 11 27.8**	**+1.2**
	SNR=6.0						
BHV	**Bhavnagar**	**21.46**	**256**	*e*P	**P**	**20 11 29.0**	**+1.0**
AML	**Almayashu**	**21.51**	**314**	P	**P**	**20 11 29.5**	**+1.1**
	SNR=133						
POO	**Poona**	**21.55**	**246**	*e*P	**P**	**20 11 26.9**	**-2.0**
POO				AMb	AMB	20 11 43.8	
	comp=Z,277nm,0.9s,mb5.7						
POO				*e*S	**S**	**20 15 24.6**	**+3.4**
USP	**Ospenovka**	**21.64**	**317**	P	**P**	**20 11 30.9**	**+1.2**
	SNR=26						
EKS2	**Erkin-Say**	**21.74**	**315**	P	**P**	**20 11 32.1**	**+1.4**
	SNR=214						
QZH	**Quanzhou**	**21.75**	**95**	P	**P**	**20 11 31.4**	**+0.5**
QZH				S	**S**	**20 15 29.4**	**+4.5**
QZH				AMB	AMB		
	comp=Z,380nm,1.4s,mb5.6						
QZH				LR	LR		
	comp=N,46µm,10.2s,MS6.2						
QZH				LR	LR		
	comp=E,18µm,11.9s,MS6.2						
QZH				LR	LR		
	comp=Z,18µm,16.6s,MS5.5						
KAD	**Karad**	**21.96**	**243**	*e*P	**P**	**20 11 33.8**	**+0.8**
KAD				AMb	AMB	20 11 50.6	
	comp=Z,834nm,1.3s,mb6.0						
KAD				*e*S	**S**	**20 15 33.4**	**+4.7**
BOM	**Bombay**	**22.20**	**248**	*e*x	**P**	**20 11 32.0**	**-3.4**
BOM				*e*S	**S**	**20 15 38.7**	**+5.5**
BOM	**Bombay**	**22.20**	**248**	*e*P	**P**	**20 11 32.0**	**-3.4**
BOM				*e*S	**S**	**20 15 39.7**	**+6.5**
SNG	**Songkhla**	**22.27**	**164**	P	**P**	**20 11 36.5**	**+0.3**
	comp=Z,602nm,0.8s,mb6.1						
ZAK	**Zakamensk**	**22.52**	**15**⇓	*i*P	**P**	**20 11 38.3**	**0.0**
ZAK				*e*		20 15 34.2	
ZAK				pmax	pmax		
	comp=Z,484nm,1.7s,mb5.7						
BHJ	**Bhuj**	**23.06**	**262**	*e*x		20 11 52.1	
BHJ				*e*S	**S**	**20 15 52.9**	**+4.2**
SSE	**Sheshan**	**23.14**	**78**	P	**P**	**20 11 44.9**	**+0.3**
SSE				AP		20 11 55.4	
SSE				XP		20 12 00.6	
SSE				S	**S**	**20 15 55.0**	**+4.9**
SSE				AMB	AMB		
	comp=Z,50nm,0.9s,mb4.9						
SSE				AMB	AMB		
	comp=Z,1µm,7.0s						
SSE				LR	LR		
	comp=N,28µm,14.6s,MS5.9						
SSE				LR	LR		
	comp=E,5µm,14.7s,MS5.9						
SSE				LR	LR		
	comp=Z,12µm,12.3s,MS5.6						
MOY	**Mondy**	**23.32**	**10**	*e*P	**P**	**20 11 47.2**	**+1.1**
MOY				pmax	pmax		
	comp=Z,2µm,2.5s,mb6.0						
TLY	**Talaya**	**23.82**	**14***c*	*i*P	**P**	**20 11 52.4**	**+1.4**
TLY				pmax	pmax		
	comp=Z,603nm,2.3s,mb5.6						
TLY				MLR	MLR		
	comp=Z,60µm,21.0s,MS6.0						
TLY	**Talaya**	**23.82**	**14**	*e*P	**P**	**20 11 52.0**	**+1.1**
	comp=Z,1µm,1.8s,mb6.0						
TLY				LR	LR		
	comp=Z,15µm,21.0s,MS5.4						
KKAR	**Karatay Array**	**24.03**	**313**	*i* P	**P**	**20 11 54.5**	**+1.4**
KKAR				pmax	pmax		
	comp=Z,2µm,2.1s,mb6.2						
KULM	**Kulim**	**24.10**	**165**	*e*P	**P**	**20 11 54.5**	**+0.3**
KULM				*e*ScP		20 19 13.9	
MNGI	**Mangalore**	**24.24**	**233**	*i* x	**P**	**20 11 48.5**	**-7.0**
MNGI				*i* x	**S**	**20 16 06.5**	**-2.8**
	comp=Z,281nm,1.3s						
YHNB	**Yeheng**	**24.26**	**94**	*e*P	**P**	**20 11 56.4**	**+0.9**
TATO	**Taipei**	**24.28**	**93**	*e*P	**P**	**20 11 57.2**	**+1.5**
	comp=Z,482nm,1.5s,mb5.7						
TATO				LR	LR		
	comp=Z,7µm,20.0s,MS5.2						
IRK	**Irkutsk**	**24.48**	**14**⇑	*i*P	**P**	**20 11 59.0**	**+1.6**
IRK				*e*		20 12 36.3	
IRK				pmax	pmax		
	comp=Z,3µm,2.2s,mb6.3						
DL2	**Dalian**	**24.52**	**59**⇑	*i*P	**P**	**20 11 59.0**	**+1.0**
DL2				S	**S**	**20 16 16.8**	**+2.9**
DL2				SCS	ScS	20 22 58.8	-0.1
DL2				AMB	AMB		
	comp=Z,170nm,1.4s,mb5.4						
DL2				AMB	AMB		
	comp=Z,2µm,3.9s						
DL2				LR	LR		
	comp=N,5µm,18.0s,MS5.2						
DL2				LR	LR		
	comp=E,3µm,17.7s,MS5.2						
DL2				LR	LR		
	comp=Z,7µm,13.7s,MS5.3						
NACB	**Ninganchiao**	**24.59**	**95**	*e*P	**P**	**20 12 00.5**	**+1.7**
IPM	**Ipoh**	**24.88**	**165**	P	**P**	**20 12 02.2**	**+0.5**
PALK	**Pallekele**	**25.12**	**214**	*e*P	**P**	**20 12 05.4**	**+1.4**
	comp=Z,125nm,1.0s,mb5.4						
PALK				LR	LR		
	comp=Z,2µm,21.0s,MS4.6						
TRD	**Trivandrum**	**26.14**	**223**	*e*P	**P**	**20 12 11.5**	**-2.0**
TRD				*i* x	x	20 16 47.5	
APYP	**Conner**	**26.74**	**108**	*e*P	**P**	**20 12 20.1**	**+1.2**
SNY	**Shenyang**	**26.84**	**53**	⇓P	**P**	**20 12 18.8**	**-0.8**
SNY				AP	pP	20 12 24.6	-3.2
SNY				XP	sP	20 12 27.0	-4.5
SNY				AMB	AMB		
	comp=Z,280nm,1.4s,mb5.6						
SNY				AMB	AMB		
	comp=Z,1µm,11.6s						
SNY				LR	LR		
	comp=N,13µm,12.1s,MS5.8						
SNY				LR	LR		
	comp=E,11µm,16.5s,MS5.8						
SNY				LR	LR		
	comp=Z,15µm,11.8s,MS5.8						
CIT	**Chita**	**27.14**	**26**⇑	*i*P	**P**	**20 12 21.6**	**-0.6**
CIT				*e*		20 13 23.2	
CIT				*e*		20 23 10.8	
CIT				pmax	pmax		
	comp=Z,374nm,2.5s,mb5.5						
NVS	**Novosibirsk**	**27.27**	**346**⇑	*i*P	**P**	**20 12 22.6**	**-0.7**
NVS				*e*S	**S**	**20 16 59.6**	**+0.5**
NVS				*i*		20 23 06.6	
NVS				pmax	pmax		
	comp=Z,485nm,1.4s,mb5.8						
NVS				pmax	pmax		
	comp=N,474nm,1.5s						
NVS				pmax	pmax		
	comp=E,298nm,1.7s						
NVS				smax			
	comp=N,633nm,2.3s						
NVS				smax			
	comp=E,362nm,2.4s						
CVP	**Callao Caves**	**27.30**	**108**	*e*P	**P**	**20 12 33.0**	**+9.0**
CAUP	**Cauayan**	**27.67**	**109**	*e*P	**P**	**20 12 32.9**	**+5.5**
KGM	**Kluang**	**27.93**	**161**	P	**P**	**20 12 30.1**	**+0.3**
HIA	**Hailar**	**28.03**	**36***c*	*i*P	**P**	**20 12 30.3**	**-0.1**
HIA	**Hailar**	**28.03**	**36**⇑	*i*P	**P**	**20 12 30.3**	**-0.1**
INCN	**Inchon**	**28.08**	**64**	*e*P	**P**	**20 12 29.7**	**-1.2**
	comp=E,78nm,0.9s,mb5.3						
INCN				LR	LR		
	comp=Z,5µm,19.0s,MS5.1						
BALP	**Baler**	**28.09**	**112**	*e*P	**P**	**20 12 30.9**	**-0.3**
CN2	**Changchun**	**28.81**	**50**	*e*P	**P**	**20 12 37.0**	**-0.4**
CN2				*e*AP	pP	20 12 46.5	+0.8
CN2				*e*XP	sP	20 12 50.5	+1.2
CN2				PP	PP	20 13 29.6	-1.2
CN2				*e*S	**S**	**20 17 21.6**	**-2.5**
CN2				SS	SS	20 18 48.7	-3.5
CN2				AMB	AMB		
	comp=Z,180nm,1.3s,mb5.6						
CN2				LR	LR		
	comp=N,7µm,16.0s,MS5.8						
CN2				LR	LR		
	comp=E,19µm,16.0s,MS5.8						
CN2				LR	LR		
	comp=Z,26µm,16.0s,MS5.9						
JOW	**Kunigami**	**29.80**	**86**	P	**P**	**20 12 45.5**	**-1.1**
	comp=Z,19nm,0.6s,mb5.0,baz=347,slow=28,SNR=7.4						
JOW				LR	LR	20 24 51.5	
	comp=Z,4µm,20.6s,MS5.0,baz=290,slow=36						
BVA0	**Borovoye Array**	**30.04**	**330**	*i* P	**P**	**20 12 48.6**	**+0.3**
BVA0				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.2						
BVAR	**Borovoye Array**	**30.04**	**330**	P	**P**	**20 12 48.5**	**+0.2**
	comp=Z,176nm,0.8s,mb5.9,baz=132,slow=9.0,SNR=346						
BVAR				P3KPbc		20 44 56.9	
	comp=Z,0.2nm,0.3s,baz=288,slow=4.7,SNR=4.8						
BVAR	**Borovoye Array**	**30.04**	**330**	P	**P**	**20 12 48.5**	**+0.2**
BVAR				*e*		20 44 56.9	
BRVK	**Borovoye**	**30.11**	**330**	PFAKE		20 13 00.0	+11
BRVK				LR	LR		
	comp=Z,1.0nm,22.0s						
CHKZ	**Chkalovo**	**30.40**	**331**	*i* P	**P**	**20 12 51.6**	**+0.1**
CHKZ				pmax	pmax		
	comp=Z,285nm,1.3s,mb5.8						
KKM	**Kota Kinabalu**	**30.53**	**134**	*e*P	**P**	**20 12 54.5**	**+1.4**
KKM	**Kota Kinabalu**	**30.53**	**134**	P	**P**	**20 12 54.8**	**+1.7**
KSM	**Kuching**	**31.06**	**148**	*e*P	**P**	**20 12 58.6**	**+0.8**
KSM				*e*ScP		20 19 32.1	
JNU	**Nakatsue**	**31.31**	**73**	P	**P**	**20 12 59.4**	**-0.4**
	comp=Z,22nm,0.9s,mb5.0,baz=264,slow=14,SNR=8.3						
MDJ	**Mudanjiang**	**31.89**	**51**	P	**P**	**20 13 03.8**	**-0.9**
MDJ				AP	pP	20 13 12.4	-0.6
MDJ				XP	sP	20 13 16.4	-0.2
MDJ				PCP	PcP	20 15 53.9	-1.1
MDJ				S	**S**	**20 18 12.2**	**-0.5**
MDJ				XS		20 18 26.8	
MDJ				SCP		20 19 34.1	
MDJ				AMB	AMB		
	comp=Z,60nm,1.6s,mb5.2						
MDJ				LR	LR		
	comp=N,7µm,18.7s,MS5.4						
MDJ				LR	LR		
	comp=E,3µm,18.7s,MS5.4						
MDJ				LR	LR		
	comp=Z,7µm,20.9s,MS5.3						
BOD	**Bodaibo**	**32.00**	**20**⇓	*i*P	**P**	**20 13 04.4**	**-1.1**
BOD				pmax	pmax		
	comp=Z,118nm,1.7s,mb5.4						
TSM	**Tawau**	**32.92**	**133**	P	**P**	**20 13 14.4**	**+0.4**
SMDO	**Samad**	**33.26**	**269**	P	**P**	**20 13 18.3**	**+1.5**
	SNR=12						
AB31	**Akbulak array**	**33.35**	**317**	*i* P	**P**	**20 13 18.0**	**+0.6**
AB31				S	**S**	**20 18 32.3**	**-3.0**
AB31				pmax	pmax		
	comp=Z,912nm,1.9s,mb6.4						
BSY	**Bisya**	**34.10**	**269**	P	**P**	**20 13 25.8**	**+1.6**
	SNR=8.2						
KLR	**Kul’dur**	**34.86**	**44**⇓	*i*P	**P**	**20 13 26.8**	**-3.6**
KLR				*e*		20 14 47.5	
KLR				*e*S	**S**	**20 18 50.5**	**-8.1**
KLR				pmax	pmax		
	comp=N,170nm,1.8s						
KLR				pmax	pmax		
	comp=E,170nm,1.8s						
KLR				pmax	pmax		
	comp=Z,180nm,1.8s,mb5.7						
KLR				MLR	MLR		
	comp=E,15µm,13.0s						
KLR				MLR	MLR		
	comp=Z,27µm,13.0s,MS6.2						
CLNS	**Chul’man**	**35.21**	**29***c*	*i*P	**P**	**20 13 33.8**	**+0.5**
CLNS				*e**PP	pP	20 13 40.5	-1.1
CLNS				*e*		20 14 46.0	
CLNS				*e*S	**S**	**20 19 05.5**	**+1.5**
CLNS				*e*SS	SS	20 21 21.4	+0.2
CLNS				*e*SSS	SSS	20 21 50.4	+2.0
CLNS				*e*		20 23 47.0	
CLNS				pmax	pmax		
	comp=E,103nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,244nm,1.0s,mb6.1						
CLNS				pmax	pmax		
	comp=N,130nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.3						
CLNS				pmax	pmax		
	comp=N,31nm,0.9s						
CLNS				pmax	pmax		
	comp=E,35nm,0.9s						
CLNS				smax			
	comp=N,32nm,0.9s						
CLNS				smax			
	comp=Z,12nm,1.5s						
CLNS				smax			
	comp=E,27nm,1.3s						
CLNS				MLR	MLR		
	comp=Z,22µm,14.0s,MS6.1						
CLNS				MLR	MLR		
	comp=N,8µm,13.0s,MS5.8						
CLNS				MLR	MLR		
	comp=E,5µm,13.0s,MS5.8						
SVE	**Sverdlovsk**	**36.79**	**329***c*	*i*P	**P**	**20 13 46.0**	**-0.6**
SVE				*e*		20 15 06.0	
SVE				*e*		20 16 04.0	
SVE				*e*S	**S**	**20 19 24.0**	**-4.4**
SVE				MLR	MLR		
	comp=N,5µm,13.0s,MS5.7						
SVE				MLR	MLR		
	comp=E,6µm,13.0s,MS5.7						
SVE				MLR	MLR		
	comp=Z,16µm,13.0s,MS6.0						
MAJO	**Matsushiro**	**37.26**	**67**	*e*P	**P**	**20 13 49.4**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.1						
MAJO				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.9						
MAJO	**Matsushiro**	**37.26**	**67**	*e*P	**P**	**20 13 49.4**	**-1.4**
	comp=Z,27nm,0.8s,mb5.1						
MAJO				*e*ScP		20 19 54.5	
MAJO				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
MAT	**Matsushiro**	**37.26**	**67**	*e*P	**P**	**20 13 49.0**	**-1.8**
MAT				*e*S	**S**	**20 19 33.0**	**-2.8**
MAT				pmax	pmax		
	comp=Z,338nm,2.2s,mb5.8						
MAT				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.8						
MAT	**Matsushiro**	**37.26**	**67**	*e*P	**P**	**20 13 49.0**	**-1.8**
	comp=Z,338nm,2.2s,mb5.8						
MAT				*e*S	**S**	**20 19 33.0**	**-2.8**
MAT				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
MAT	**Matsushiro**	**37.26**	**67**	P	**P**	**20 13 49.2**	**-1.6**
MAT				S	**S**	**20 19 32.0**	**-3.8**
MJAR	**Matsushiro Arr**	**37.26**	**67**	P	**P**	**20 13 49.9**	**-0.9**
	comp=Z,14nm,0.7s,mb4.9,baz=274,slow=8.0,SNR=48						
MJAR				ScP		20 19 54.6	
	comp=Z,9.3nm,1.0s,baz=271,slow=3.7,SNR=9.6						
MJAR				LR	LR	20 31 04.8	
	comp=Z,2µm,18.0s,MS4.9,baz=300,slow=39						
ARU	**Arti**	**37.53**	**328**⇑	*i*P	**P**	**20 13 53.5**	**+0.7**
ARU				*i*		20 15 18.0	
ARU				*e*		20 16 08.5	
ARU				*i* S	**S**	**20 19 41.2**	**+1.6**
ARU				*e*SSS	SSS	20 22 40.9	-4.1
ARU				*i*		20 24 03.4	
ARU				pmax	pmax		
	comp=Z,462nm,1.0s,mb6.2						
ARU				MLR	MLR		
	comp=N,9µm,17.0s,MS5.9						
ARU				MLR	MLR		
	comp=E,13µm,17.0s,MS5.9						
ARU				MLR	MLR		
	comp=Z,23µm,17.0s,MS6.0						
ARU	**Arti**	**37.53**	**328**⇑	*i*P	**P**	**20 13 53.3**	**+0.4**
	comp=Z,490nm,1.0s,mb6.2						
ARU				LR	LR		
	comp=Z,3µm,19.0s,MS5.1						
RBK	**Rabkut**	**38.63**	**262**	P	**P**	**20 14 03.6**	**+1.1**
	SNR=8.1						
WHFO	**Wadi Hawf**	**38.84**	**263**	P	**P**	**20 14 04.6**	**+0.4**
	SNR=32						
SOKR	**Solikamsk**	**40.02**	**331***c*	*i*P	**P**	**20 14 14.3**	**+0.7**
SOKR				*i* SS	SS	20 23 06.2	-2.6
SOKR				pmax	pmax		
	comp=Z,570nm,1.1s,mb6.2						
SOKR				MLR	MLR		
	comp=Z,8µm,21.0s,MS5.5						
MAK	**Makhachkala**	**40.15**	**304**	*e*P	**P**	**20 14 12.0**	**-2.9**
MAK				*e*		20 15 54.0	
MAK				*e*S	**S**	**20 20 15.5**	**-3.9**
MAK				*e*SS	SS	20 23 04.0	-7.8
MAK				*e*SSS	SSS	20 23 51.0	+2.9
MAK				*e*		20 24 15.0	
MAK				pmax	pmax		
	comp=Z,1µm,6.0s						
MAK				pmax	pmax		
	comp=N,600nm,6.0s						
MAK				pmax	pmax		
	comp=E,2µm,6.0s						
MAK				pmax	pmax		
	comp=Z,2µm,6.0s						
MAK				smax			
	comp=N,2µm,8.0s						
MAK				smax			
	comp=E,900nm,8.0s						
MAK				MLR	MLR		
	comp=Z,15µm,12.0s,MS6.1						
MAK				MLR	MLR		
	comp=N,4µm,13.0s,MS5.9						
MAK				MLR	MLR		
	comp=E,10µm,13.0s,MS5.9						
YAK	**Yakutsk**	**40.41**	**25***c*	*i*P	**P**	**20 14 16.6**	**-0.1**
YAK				*e**PP	pP	20 14 25.5	+0.3
YAK				*e*		20 15 49.0	
YAK				*e*PPP	PPP	20 16 15.6	-5.1
YAK				*e*		20 16 19.2	
YAK				*i* S	**S**	**20 20 22.0**	**-1.0**
YAK				*e*SS	SS	20 23 23.9	+6.8
YAK				*e*SSS	SSS	20 23 48.2	-5.9
YAK				*e*		20 24 19.0	
YAK				pmax	pmax		
	comp=Z,221nm,0.9s,mb5.9						
YAK				pmax	pmax		
	comp=N,91nm,1.2s						
YAK				pmax	pmax		
	comp=E,142nm,1.3s						
YAK				pmax	pmax		
	comp=Z,33nm,1.5s,mb4.8						
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,35nm,1.4s						
YAK				smax			
	comp=N,13nm,1.3s						
YAK				smax			
	comp=E,4.0nm,1.1s						
YAK				MLR	MLR		
	comp=N,13µm,11.0s,MS6.2						
YAK				MLR	MLR		
	comp=Z,25µm,11.0s,MS6.3						
YAK				MLR	MLR		
	comp=E,16µm,12.0s,MS6.2						
YAK	**Yakutsk**	**40.41**	**25**⇑	*i*P	**P**	**20 14 16.2**	**-0.5**
	comp=E,364nm,1.0s,mb6.1						
YAK				LR	LR		
	comp=Z,29µm,19.0s,MS6.2						
YSS	**Yuzh-Sakhalins**	**41.38**	**51**α	*e*P	**P**	**20 14 25.0**	**+0.1**
YSS				*e**SP	sP	20 14 41.0	+4.2
YSS				*e*		20 16 06.0	

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YSS                              ePPP    PPP      20 16 35.3 +1.2
YSS                              i S     S        20 20 38.0 +0.3
YSS                              pmax    pmax
      comp=Z,940nm,1.5s,mb6.2
YSS                              pmax    pmax
      comp=N,100nm,1.2s
YSS                              smax
      comp=N,2µm,8.0s
YSS                              smax
      comp=E,3µm,10.0s
YSS                              MLR     MLR
      comp=N,3µm,17.0s,MS5.8
YSS                              MLR     MLR
      comp=Z,9µm,17.0s,MS5.7
YSS                              MLR     MLR
      comp=E,10µm,15.0s,MS5.8
YSS   Yuzh-Sakhalins   41.38  51⇑iP      P        20 14 24.3 -0.6
      comp=E,493nm,1.1s,mb6.0
YSS                              LR      LR
      comp=Z,6µm,19.0s,MS5.5
DGRG  David-gareji     41.65 301 P       P        20 14 29.1 +1.9
DGRG                             S       S        20 21 00.7  +19
DGAR  Diego Garcia     41.87 214 PFAKE            20 14 40.0  +11
DGAR                             LR      LR
      comp=Z,1µm,19.0s,MS4.8
MTA   Mtatsminda       42.09 301 P       P        20 14 31.1 +0.3
GNI   Garni            42.12 299 eP      P        20 14 31.8 +0.8
GNI   Garni            42.12 299 P       P        20 14 32.9 +1.9
GNI                              pmax    pmax
      comp=Z,28nm,0.8s
GNI                              MLR     MLR
      comp=Z,3µm,18.4s
GNI   Garni            42.12 299 P       P        20 14 32.9 +1.8
      comp=Z,28nm,0.8s,mb4.9,baz=154,slow=4.1,SNR=8.0
GNI                              LR      LR       20 37 33.6
      comp=Z,3µm,18.4s,MS5.2,baz=99,slow=44
GNI   Garni            42.12 299⇑iP      P        20 14 32.6 +1.6
      comp=Z,110nm,1.1s,mb5.4
GNI                              LR      LR
      comp=Z,3µm,20.0s,MS5.2
TI2   Plekhanov        42.12 301⇑iP      P        20 14 31.2 +0.1
TI2                              eS      S        20 20 52.2 +3.5
TI2                              e                20 23 55.0
TI2                              MLR     MLR
      comp=N,2µm,13.0s,MS5.4
TI2                              MLR     MLR
      comp=Z,4µm,13.0s,MS5.4
TI2                              MLR     MLR
      comp=E,2µm,12.0s,MS5.4
TBLG  Delisi           42.13 301 P       P        20 14 31.7 +0.6
CLDR  Caldiran         42.77 298 eP      P        20 14 38.3 +1.8
ZEI   Tsey             42.79 303 eP      P        20 14 35.4 -1.1
ZEI                              i *PP   pP       20 14 45.7 +0.8
ZEI                              i                20 16 14.7
ZEI                              pmax    pmax
      comp=Z,39nm,0.9s,mb5.1
ONI   Oni              43.11 303 P       P        20 14 40.8 +1.7
ONI                              S       PP       20 16 14.7 -6.8
VANB  Van              43.21 297 eP      P        20 14 38.1 -1.9
YUK   Yuzh-Kuril’sk    43.27  55 eP      P        20 14 37.0 -3.4
YUK                              eS      S        20 21 05.0 -0.4
YUK                              pmax    pmax
      comp=Z,90nm,0.6s,mb5.7
YUK                              pmax    pmax
      comp=Z,3µm,2.0s,mb6.7
YUK                              smax
      comp=E,2µm,4.0s
YUK                              MLR     MLR
      comp=N,4µm,18.0s,MS5.5
YUK                              MLR     MLR
      comp=Z,6µm,18.0s,MS5.5
YUK                              MLR     MLR
      comp=E,4µm,20.0s,MS5.5
GOF   Gofitskoye       43.52 306⇓iP      P        20 14 41.1 -1.3
GOF                              i       pP       20 14 49.8 -1.0
GOF                              i                20 16 22.2
GOF                              i S     S        20 21 09.5 +0.4
GOF                              pmax    pmax
      comp=Z,150nm,1.1s,mb5.6
GOF                              pmax    pmax
      comp=Z,70nm,1.3s,mb5.2
GOF                              smax
      comp=N,430nm,2.5s
KIV   Kislovodsk       43.72 305c iP     P        20 14 44.4 +0.4
KIV                              pmax    pmax
      comp=Z,58nm,1.2s,mb5.2
KIV                              MLR     MLR
      comp=Z,4µm,15.0s,MS5.4
KIV   Kislovodsk       43.72 305 eP      P        20 14 44.3 +0.3
      comp=Z,6.9nm,1.1s
KIV                              LR      LR
      comp=Z,1µm,20.0s
MUKL  Al Mukalla       44.41 261⇑eP      P        20 14 51.0 +1.0
MUKL                             AMb     AMB      20 14 52.2
      comp=Z,249nm,0.9s,mb5.9
EZM   Erzurum          44.72 299 eP      P        20 14 54.3 +2.2
BTMT  Batman           44.73 296 eP      P        20 14 53.2 +0.9
PECR  Pechory          44.83 322 i P     P        20 14 53.4 +0.6
SOC   Sochi            45.86 304c iP     P        20 15 00.8 -0.3
SOC                              e                20 16 34.3
SOC                              eS      S        20 21 41.6 -1.1
SOC                              eSSS    SSS      20 26 07.2 +4.0
SOC                              pmax    pmax
      comp=N,14nm,0.9s
SOC                              pmax    pmax
      comp=Z,60nm,0.9s,mb5.5
SOC                              pmax    pmax
      comp=E,35nm,1.1s
SOC                              pmax    pmax
      comp=Z,138nm,1.1s,mb5.8
GUMT  Gumushane        46.13 300 eP      P        20 15 04.6 +1.3
KELT  Kelkit           46.32 299 i P     P        20 15 06.4 +1.6
ELZG  Elazig           46.66 297 i P     P        20 15 08.8 +1.3
VRSR  Storozhevoye     46.66 315 eP      P        20 15 07.1 -0.3
VRSR                             e*PP    pP       20 15 17.2 +1.4
VRSR                             e*SP    sP       20 15 20.5 +1.2
VRSR                             e                20 16 56.0
VRSR                             eS      S        20 21 53.4 -0.7
VRSR                             e                20 24 58.4
VRSR                             eSS     SS       20 25 11.4 -1.5
VRSR                             pmax    pmax
      comp=E,350nm,1.0s
VRSR                             pmax    pmax
      comp=Z,240nm,1.0s,mb6.1
VRSR                             pmax    pmax
      comp=N,110nm,0.9s
VRSR                             smax
      comp=Z,10.0nm,1.5s
VRSR                             smax
      comp=N,50nm,1.0s
VRSR                             smax
      comp=E,40nm,1.0s
VRSR                             MLR     MLR
      comp=Z,490nm,16.0s,MS4.6
VRSR                             MLR     MLR
      comp=E,260nm,17.0s
VOR   Voronezh         46.72 315⇑iP      P        20 15 08.0 +0.2
VOR                              eS      S        20 21 53.5 -1.4
VOR                              pmax    pmax
      comp=N,80nm,1.6s
VOR                              pmax    pmax
      comp=E,470nm,1.6s
VOR                              pmax    pmax
      comp=Z,870nm,1.6s,mb6.4
VOR                              smax
      comp=N,200nm,2.4s
VOR                              smax
      comp=Z,60nm,2.5s
VOR                              smax
      comp=E,150nm,1.8s
URFA  Urfa             46.90 296 eP      P        20 15 09.6 +0.1
MALT  Malatya          47.11 297 eP      P        20 15 11.5 +0.3
MALT  Malatya          47.11 297⇑iP      P        20 15 12.2 +1.0
MALT                             pmax    pmax
      comp=Z,45nm,1.1s,mb5.3
MALT  Malatya          47.11 297⇑iP      P        20 15 12.2 +1.0
      comp=Z,45nm,1.1s,mb5.3
ANN   Anapa            47.49 306 eP      P        20 15 10.9 -3.2
ANN                              i                20 17 00.4
ANN                              i S     S        20 22 02.3 -3.7
ANN                              eSS     SS       20 25 05.0  -23
ANN                              pmax    pmax
      comp=Z,92nm,1.1s,mb5.6
GZT   Gaziantep        47.90 296 i P     P        20 15 17.6 +0.2
LBOS                   47.97 263⇓eP      P        20 15 19.4 +1.2
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LBOS                             AMb     AMB      20 15 21.1
      comp=Z,271nm,0.9s,mb6.3
SVST  Sivas            48.11 299 i P     P        20 15 21.1 +2.1
GAZ   Gaziantep        48.21 296 eP      P        20 15 20.5 +0.8
MOS   Moscow           48.23 321αiP      P        20 15 20.4 +0.8
MOS                              e                20 15 34.8
MOS                              e                20 16 47.5
MOS                              e                20 17 12.7
MOS                              ePPP    PPP      20 17 59.5 -3.5
MOS                              i S     S        20 22 16.2  0.0
MOS                              e                20 25 11.2
MOS                              eSSS    SSS      20 26 57.3 -1.3
MOS                              pmax    pmax
      comp=Z,944nm,1.1s,mb6.7
MOS                              pmax    pmax
      comp=Z,2µm,1.8s,mb6.9
MOS                              smax
      comp=N,3µm,3.5s
MOS                              MLR     MLR
      comp=Z,14µm,18.0s,MS6.0
MOS                              MLR     MLR
      comp=N,6µm,18.4s,MS6.0
MOS                              MLR     MLR
      comp=E,12µm,17.5s,MS6.0
TOKT  Tokat            48.37 300 eP      P        20 15 21.1 +0.1
DHBB  Dhamar BB        48.41 264⇑eP      P        20 15 22.8 +1.3
DHBB                             AMb     AMB      20 15 24.7
      comp=Z,188nm,0.9s,mb6.1
KAHT  Ahir Dag         48.41 296 i P     P        20 15 22.1 +0.8
MA2   Magadan          48.59  34c iP     P        20 15 22.1 -0.3
MA2                              i       pP       20 15 30.8 -0.1
MA2                              i                20 16 48.9
MA2                              i                20 17 17.5
MA2                              i S     S        20 22 19.7 -1.6
MA2                              i PS    PS       20 22 29.6 -3.5
MA2                              i                20 25 08.8
MA2                              pmax    pmax
      comp=Z,200nm,1.9s,mb5.8
MA2                              pmax    pmax
      comp=E,60nm,1.6s
MA2                              pmax    pmax
      comp=N,20nm,1.5s
MA2                              MLR     MLR
      comp=Z,24µm,22.4s,MS6.1
MA2   Magadan          48.59  34⇑iP      P        20 15 21.8 -0.6
      comp=Z,248nm,1.4s,mb6.0
MA2                              ePP     PP       20 17 17.1 +2.0
MA2                              LR      LR
      comp=Z,10µm,21.0s,MS5.8
OBN   Obninsk          48.73 320c iP     P        20 15 23.5  0.0
OBN                              i                20 17 20.0
OBN                              i S     S        20 22 24.5 +1.2
OBN                              pmax    pmax
      comp=Z,1µm,2.0s,mb6.5
OBN                              MLR     MLR
      comp=Z,13µm,23.0s,MS5.8
OBN   Obninsk          48.73 320⇑iP      P        20 15 23.4 -0.1
      comp=Z,707nm,1.4s,mb6.5
OBN                              ePP     PP       20 17 17.4 +0.9
OBN                              LR      LR
      comp=Z,3µm,21.0s,MS5.2
COBT  Iskenderun       49.06 295 i P     P        20 15 26.1 -0.2
ASF   Jabal al Asfar   49.31 289 P       P        20 15 29.8 +1.5
      comp=Z,92nm,0.9s,mb5.8,baz=314,slow=5.2,SNR=91
ASF                              LR      LR       20 38 36.7
      comp=Z,1µm,18.2s,MS5.0,baz=309,slow=39
CEYT  Ceyhan           49.39 296 eP      P        20 15 29.3 +0.4
BOYT  Boyabat          49.52 301 i P     P        20 15 30.1 +0.4
CTKT  Corum            49.68 300 i P     P        20 15 31.2 +0.2
AVNT  Avonos           49.84 298 i P     P        20 15 33.0 +0.7
CORM  Corum            49.85 300 eP      P        20 15 32.6 +0.3
SIM   Simferopol’      49.85 306c iP     P        20 15 31.7 -0.5
SIM                              e*PP    pP       20 15 40.5 -0.3
SIM                              i S     S        20 22 38.0 -0.9
SIM                              pmax    pmax
      comp=Z,40nm,0.7s,mb5.6
CDAG  Cicekdag         50.11 299 i P     P        20 15 34.2 -0.2
NIG   Nigde            50.12 297 eP      P        20 15 35.5 +1.1
SEY   Seymchan         50.18  30 i P     P        20 15 34.3 -0.2
SEY                                               20 17 32.5
SEY                              eS      S        20 22 43.1 -0.1
SEY                                               20 25 22.5
SEY                              SS      SS       20 26 17.8 +4.3
SEY                              SSS     SSS      20 27 50.3 +6.0
SEY                              pmax    pmax
      comp=N,10.0nm,0.9s
SEY                              pmax    pmax
      comp=Z,50nm,0.9s,mb5.5
SEY                              pmax    pmax
      comp=E,30nm,0.8s
SEY                              smax
      comp=N,2µm,10.3s
SEY                              smax
      comp=E,1µm,8.4s
SEY                              MLR     MLR
      comp=Z,6µm,14.0s,MS5.7
SEY                              MLR     MLR
      comp=N,2µm,13.0s,MS5.6
SEY                              MLR     MLR
      comp=E,4µm,15.0s,MS5.6
TOS   Tosya            50.21 301 P       P        20 15 35.1  0.0
CANT  Cankiri          50.56 300 eP      P        20 15 37.8  0.0
KAMT  Kaman            50.65 299 eP      P        20 15 37.8 -0.6
MEST  Erdemli          50.72 295 i P     P        20 15 38.5 -0.5
ELDT  Eldivan          50.73 300 i P     P        20 15 38.8 -0.2
IKL   Isikli           51.15 295 eP      P        20 15 41.8 -0.5
SAFT  Safranbolu       51.19 301 eP      P        20 15 42.4 -0.1
ANTO  Ankara           51.28 300 eP      P        20 15 41.9 -1.3
LOD   Lodumlu          51.30 300 eP      P        20 15 43.0 -0.4
EIL   Elat             51.52 286 P       P        20 15 45.5 +0.3
      comp=E,192nm,0.9s,mb6.0,baz=23,slow=5.8,SNR=153
EIL   Elat             51.52 286⇑iP      P        20 15 45.2  0.0
      comp=E,190nm,0.8s,mb6.1
SGKT  Sivrigoynuk      51.75 301 i P     P        20 15 47.0 +0.2
HDMB  Hadim            51.97 296 eP      P        20 15 47.8 -0.7
KDHN  Kadinhani        52.00 298 i P     P        20 15 48.6 -0.1
PET   Petropavlovsk    52.12  43c iP     P        20 15 48.1 -1.3
PET                              pmax    pmax
      comp=Z,149nm,1.7s,mb5.6
PET                              MLR     MLR
      comp=Z,8µm,16.0s,MS5.8
PET   Petropavlovsk    52.12  43 eP      P        20 15 47.6 -1.8
      comp=Z,141nm,1.4s,mb5.7
PET                              LR      LR
      comp=Z,9µm,19.0s,MS5.8
KIZT  Kizilcal         52.13 299 P       P        20 15 49.1 -0.5
LVZ   Lovozero         52.39 336 i P     P        20 15 50.8 -0.4
LVZ                              e                20 17 47.3
LVZ                              eS      S        20 23 14.3 +0.7
LVZ                              pmax    pmax
      comp=Z,180nm,0.8s,mb6.0
LVZ                              pmax    pmax
      comp=N,40nm,0.9s
LVZ                              pmax    pmax
      comp=E,80nm,1.0s
LVZ                              smax
      comp=Z,450nm,3.0s
LVZ                              smax
      comp=N,320nm,2.5s
LVZ                              smax
      comp=E,570nm,4.2s
LVZ                              MLR     MLR
      comp=E,6µm,16.0s,MS5.9
LVZ                              MLR     MLR
      comp=Z,10µm,16.0s,MS5.9
LVZ                              MLR     MLR
      comp=N,6µm,14.0s,MS5.9
MDU   Mudurnu          52.40 301 eP      P        20 15 51.2 -0.5
HENT  Hendek           52.59 301 i P     P        20 15 51.8 -1.3
PUL   Pulkovo          52.66 325⇑iP      P        20 15 53.9 +0.5
APA   Apatity          52.75 335⇓iP      P        20 15 53.4 -0.5
APA                              i       pP       20 16 02.8 +0.3
APA                              i                20 17 50.0
APA                              i S     S        20 23 17.0 -1.6
APA                              eSS     SS       20 27 00.0 +3.7
APA                              pmax    pmax
      comp=Z,180nm,1.2s,mb5.9
APA                              pmax    pmax
      comp=Z,1µm,3.0s
APA                              MLR     MLR
      comp=Z,12µm,14.0s,MS6.1
ESKT  Eskisehir        52.82 299 eP      P        20 15 53.7 -1.1
ESKT  Eskisehir        52.82 299 i P     P        20 15 53.3 -1.5
AKASG Malin Array Be   52.93 314 P       P        20 15 54.1 -1.4
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AKASG                            S       S        20 23 21.2  0.0
AKASG Malin Array Be   52.93 314 P       P        20 15 54.1 -1.4
      comp=Z,150nm,0.8s,mb6.0,baz=76,slow=7.0,SNR=321
AKASG                            ScP              20 20 58.6
      comp=Z,0.7nm,0.4s,baz=62,slow=4.7,SNR=4.3
AKASG                            S       S        20 23 21.2  0.0
      comp=Z,1.6nm,0.8s,baz=88,slow=14,SNR=8.4
ALT   Altintas         53.46 299 eP      P        20 15 59.1 -0.4
TKTP  Tekketepe        53.48 298 i P     P        20 15 59.0 -0.6
HRT   Hereke           53.51 301 eP      P        20 15 59.0 -0.9
TLCR                   53.57 307⇑iP      P        20 15 59.5 -0.8
MNK   Minsk            53.73 318⇑iP      P        20 16 01.0 -0.3
GDZ   Gediz            53.94 299 i P     P        20 16 01.9 -1.1
ULDT  Uludag           54.02 300 i P     P        20 16 03.1 -0.5
ELL   Elmali           54.04 296 eP      P        20 16 03.6 -0.2
CFR   Carcaliu         54.05 307⇑iP      P        20 16 03.0 -0.8
PSN   Preselentsi      54.20 305 eP      P        20 16 05.0 +0.1
GOLH  Golhisar         54.22 297 i P     P        20 16 03.7 -1.4
IAS   Iasi             54.24 309⇑iP      P        20 16 04.1 -1.0
HARR  Harsova          54.25 306⇑iP      P        20 16 04.7 -0.6
IDID  Didziasalis      54.36 319⇑iP      P        20 16 06.0 +0.2
IDID                             AMb     AMB      20 16 09.1
      comp=Z,102nm,1.0s,mb5.7
AKAS  Kas              54.39 296 i P     P        20 16 06.4 +0.1
VSU   Vasula           54.41 323⇑iP      P        20 16 06.2  0.0
DNZL  Cakiroluk        54.53 298 i P     P        20 16 06.5 -0.9
IZAR  Zarasai          54.64 320 i P     P        20 16 08.2 +0.2
IZAR                             AMb     AMB      20 16 11.2
      comp=Z,124nm,1.1s,mb5.8
IIGN  Ignalina         54.66 319 eP      P        20 16 08.5 +0.5
ISAL  Salakas          54.71 320 i P     P        20 16 08.6 +0.2
ISAL                             AMb     AMB      20 16 11.8
      comp=Z,126nm,1.2s,mb5.8
FETY  Fethiye          54.72 296 eP      P        20 16 05.8 -3.0
MANT  Manisa           54.76 299 i P     P        20 16 08.4 -0.7
BRD   Bordesti         54.78 307⇑iP      P        20 16 10.1 +0.9
KAF   Kangasniemi      54.83 328 ep      P        20 16 08.4 -0.9
      comp=Z,66nm,1.1s,mb5.6,baz=93,slow=7.2
KAF   Kangasniemi      54.83 328 eP      P        20 16 08.4 -0.9
KAF                              pmax    pmax
      comp=Z,67nm,1.1s,mb5.6
PRD   Provadia         54.83 304 eP      P        20 16 10.0 +0.4
FINES FINESS Array B   54.89 327 i P     P        20 16 09.5 -0.3
FINES                            pmax    pmax
      comp=Z,43nm,0.7s
FINES FINESS Array B   54.89 327 P       P        20 16 09.5 -0.3
      comp=Z,43nm,0.7s,mb5.6,baz=96,slow=8.1,SNR=154
FINES                            LR      LR       20 41 26.2
      comp=Z,7µm,19.9s,MS5.8,baz=92,slow=38
BTOK  Tokmak           54.92 300 i P     P        20 16 09.6 -0.7
VRI   Vrincioaia       54.95 308⇑iP      P        20 16 10.6 +0.2
BALB  Balikesir        55.06 300 eP      P        20 16 10.4 -0.9
KAKA  Kakadu           55.17 133 eP      P        20 16 11.5 -0.9
ISR   Istrita          55.18 307⇑iP      P        20 16 13.1 +1.0
MBWA  Marble Bar       55.30 151⇓iP      P        20 16 12.8 -0.5
      comp=Z,47nm,0.8s,mb5.6
MBWA                             LR      LR
      comp=Z,2µm,21.0s,MS5.2
KEV   Kevo             55.52 337 ep      P        20 16 13.3 -0.9
      comp=Z,191nm,0.9s,mb6.1
KEV   Kevo             55.52 337 P       P        20 16 14.2  0.0
KEV   Kevo             55.52 337 eP      P        20 16 13.3 -0.9
KEV                              pmax    pmax
      comp=Z,191nm,0.9s,mb6.1
KEV   Kevo             55.52 337 PFAKE            20 16 30.0  +16
KEV                              LR      LR
      comp=Z,12µm,21.0s,MS6.0
JMB   Yambol           55.54 304 eP      P        20 16 15.0 +0.3
MLR   Muntele Rosu     55.55 307 P       P        20 16 15.1 +0.4
MLR                              S       S        20 23 58.1 +1.6
MLR                              pmax    pmax
      comp=Z,113nm,0.8s
MLR                              smax
      comp=N,1.0nm,0.4s
MLR                              MLR     MLR
      comp=Z,4µm,20.9s
MLR   Muntele Rosu     55.55 307 P       P        20 16 15.1 +0.3
      comp=Z,113nm,0.8s,mb5.9,baz=83,slow=1.5,SNR=104
MLR                              S       S        20 23 58.1 +1.6
      comp=Z,1.0nm,0.4s,baz=78,slow=20,SNR=3.7
MLR                              LR      LR       20 42 57.7
      comp=Z,4µm,20.9s,MS5.5,baz=58,slow=39
MLR   Muntele Rosu     55.55 307⇑iP      P        20 16 14.9 +0.1
MLR   Muntele Rosu     55.55 307⇑iP      P        20 16 14.9 +0.2
ARG   Arkhangelos      55.56 296 eP      P        20 16 14.5 -0.4
MLSB  Milas            55.60 297 eP      P        20 16 13.9 -1.3
BUC1  Bucharest        55.65 306 P       P        20 16 16.5 +1.0
BURAR Bucovina Array   55.78 310⇑iP      P        20 16 15.9 -0.5
BURAR Bucovina Array   55.78 310⇑iP      P        20 16 15.9 -0.4
SZH   Strazhica        55.88 305 eP      P        20 16 17.0 -0.1
BDRM  Kayabasi         55.91 297 i P     P        20 16 16.5 -1.0
BLCB  Balcova          55.94 299 eP      P        20 16 15.7 -1.9
ARCES ARCESS Array B   56.00 337 P       P        20 16 17.6  0.0
      comp=Z,84nm,0.9s,mb5.8,baz=80,slow=7.4,SNR=94
BODT  Bodrum           56.01 297 eP      P        20 16 16.6 -1.6
VOIR                   56.18 307⇑iP      P        20 16 18.5 -0.7
ALN   Alexandroupoli   56.21 302 eP      P        20 16 18.7 -0.9
SMG   Samos            56.24 298 eP      P        20 16 19.5 -0.3
LVV   L’vov            56.31 313⇑iP      P        20 16 19.6 -0.5
LVV                              e                20 17 18.2
LVV                              e                20 18 20.0
LVV                              e                20 19 42.2
LVV                              eS      S        20 24 01.0 -5.7
LVV                              e                20 24 23.0
LVV                              e                20 27 47.0
LVV                              e                20 30 09.4
LVV                              MLR     MLR
      comp=N,1µm,16.0s,MS5.7
LVV                              MLR     MLR
      comp=E,5µm,16.0s,MS5.7
LVV                              MLR     MLR
      comp=Z,6µm,16.0s,MS5.8
PRK   Paraskevi        56.36 300 eP      P        20 16 20.0 -0.6
DIM   Dimitrovgrad     56.38 303 eP      P        20 16 20.0 -0.7
SUW   Suwalki          56.47 318⇑eP      P        20 16 20.6 -0.6
SUW                              eS      S        20 24 08.6 -0.1
SUW   Suwalki          56.47 318⇑eP      P        20 16 20.6 -0.6
      comp=Z,1µm,1.0s,mb6.8
SUW                              eS      S        20 24 08.6 -0.1
SUW                              MLR     MLR      20 42 21.0
      comp=Z,8µm,18.3s,MS5.8
KARP  Karpathos        56.47 295 eP      P        20 16 21.0 -0.5
KDZ   Kurdzhali        56.54 303 eP      P        20 16 21.0 -0.9
RDO   Rodhopi          56.54 302 eP      P        20 16 22.5 +0.6
PLD   Plovdiv          56.98 304 eP      P        20 16 24.0 -1.0
RZN   Rozhen           57.05 303 eP      P        20 16 25.0 -0.5
LOS   Limnos           57.12 301 eP      P        20 16 25.0 -1.1
KWP   Kalwaria         57.19 313⇑eP      P        20 16 26.3 -0.1
      comp=Z,800nm,1.2s,mb6.6
KWP                              epP     pP       20 16 34.5 -0.6
KWP                              ePP     PP       20 18 33.9 -1.1
KWP                              eS      S        20 24 18.4 +0.2
KWP                              MLR     MLR      20 44 30.2
      comp=Z,9µm,21.6s,MS5.8
PGB   Panagyurishte    57.28 304 eP      P        20 16 27.0 -0.2
APE   Apeiranthos      57.40 298 eP      P        20 16 22.4 -5.7
APE   Apeiranthos      57.40 298 i P     P        20 16 27.8 -0.3
APE   Apeiranthos      57.40 298 eP      P        20 16 27.5 -0.6
KOLS  Kolonicke sedl   57.56 312 i P     P        20 16 28.4 -0.6
SANT  Santorini        57.62 297 eP      P        20 16 27.3 -2.3
      comp=Z,181nm,1.0s,mb6.1
THR1  Thera Island     57.62 297 eP      P        20 16 27.8 -1.8
MMB   Musomiste        57.79 303 eP      P        20 16 29.0 -1.7
XRY   Khrisi           57.80 295 eP      P        20 16 29.9 -1.0
OUR   Ouranopolis      57.86 302 eP      P        20 16 30.2 -1.0
WAR   Warsaw           57.93 316 eP      P        20 16 32.3 +0.8
WAR                              epP     pP       20 16 40.0 -0.2
WAR                              eS      S        20 24 29.1 +1.2
WAR                              esS              20 24 41.3
WAR                              MLR     MLR      20 44 30.2
      comp=Z,6µm,20.2s,MS5.7
VTS   Vitosha          57.97 304 eP      P        20 16 32.0  0.0
PAIG  Paliouri         58.17 301 eP      P        20 16 33.1 -0.4
AOS   Alonnisos        58.19 300 eP      P        20 16 32.0 -1.6
KKB   Krupnik          58.21 304 eP      P        20 16 31.0 -2.6
SOH   Sokhos           58.22 302 eP      P        20 16 31.8 -2.0
PLG   Polygyros        58.25 302 eP      P        20 16 33.5 -0.5
ZAPS  Zavoj/Pirot      58.26 305⇑iP      P        20 16 33.3 -0.7
TRO   Tromso           58.31 337 eP      P        20 16 32.4 -1.6
TRO                              pmax    pmax
      comp=Z,197nm,1.4s
TRO                              MLR     MLR
      comp=Z,8742µm,18.4s
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TRO	Tromso	58.31	337	*e*P	P	20 16 32.4	-1.5
	comp=Z,197nm,1.4s						
TRO				LR	LR		
	comp=Z,8742µm,18.4s						
TRO	Tromso	58.31	337	*e*P	P	20 16 32.4	-1.5
TRO				AMb	AMB	20 16 35.1	
	comp=Z,197nm,1.4s,mb5.9						
TRO				*e*S	S	20 24 34.2	+1.5
TRO				*e*SS	SS	20 28 24.1	-2.3
TRO				AMS	AMS	20 44 40.3	
	comp=Z,9µm,18.4s,MS5.9						
IDI	Anoyia	58.34	296	P	P	20 16 33.2	-1.4
	comp=Z,46nm,0.9s,mb5.5,baz=36,slow=7.4,SNR=23						
IDI				S	S	20 24 33.1	-0.4
	comp=Z,5.1nm,0.9s,baz=346,slow=16,SNR=3.0						
BZS	Buzias	58.53	308	⇑*i*P	P	20 16 35.3	-0.5
MPAR	Parnis Oros	58.53	299	*e*P	P	20 16 35.5	-0.5
BOLS	Boljevac	58.63	306	⇓*i*P	P	20 16 35.6	-0.9
XOR	Xorichti	58.67	301	*e*P	P	20 16 35.4	-1.5
VAY	Valandovo	58.70	303	⇑*i*P	P	20 16 36.0	-1.1
NIE	Niedzica	58.76	313	⇑*i*P	P	20 16 37.5	+0.1
KECS	Kecovo	58.80	312	*i* P	P	20 16 38.2	+0.5
NAIG	Nisos Aigina	58.82	299	*e*P	P	20 16 35.7	-2.3
VAM	Vamos	58.85	296	*e*P	P	20 16 37.7	-0.5
GRG	Griva	58.90	303	*e*P	P	20 16 37.4	-1.1
BARS	Barje	58.92	305	⇓*i*P	pP	20 16 49.8	+2.4
MGER	Gerania Oros	58.94	299	*e*P	P	20 16 36.5	-2.3
OJC	Ojcow	58.97	314	⇑*i*P	P	20 16 38.2	-0.6
OJC				*e*pP	pP	20 16 46.1	-1.5
OJC				*e*PP	PP	20 18 48.1	-2.9
OJC				*e*S	S	20 24 42.5	+0.9
OJC				*e*SS	SS	20 28 36.5	-0.7
OJC				MLR	MLR	20 44 18.4	
	comp=Z,8µm,19.8s,MS5.8						
LIT	Litokhoron	59.03	302	*e*P	P	20 16 38.0	-1.4
GVD	Gavdhos	59.09	295	*e*P	P	20 16 38.6	-1.3
	comp=Z,81nm,0.8s,mb5.8						
PSZ	Piszkesteto	59.29	311	P	P	20 16 41.0	-0.1
PSZ	Piszkesteto	59.29	311	⇑*i*P	P	20 16 40.7	-0.4
SKO	Skopje	59.38	304	⇑*i*P	P	20 16 40.9	-0.9
SKO				pmax	pmax		
	comp=Z,92nm,0.8s,mb5.9						
SKO	Skopje	59.38	304	⇑*i*P	P	20 16 40.9	-0.9
	comp=Z,0.1nm,0.8s						
AGG	Agios Georgios	59.40	300	*e*P	P	20 16 40.0	-2.0
BEO	Belgrade	59.49	307	⇑*i*P	P	20 16 41.9	-0.6
GRUS	Gruza	59.50	306	⇓*i*P	P	20 16 42.0	-0.6
VLI	Veliai	59.50	298	*e*P	P	20 16 40.0	-2.7
KZN	Kozani	59.52	302	*e*P	P	20 16 41.7	-1.1
KYTH	Kithira	59.54	297	*e*P	P	20 16 41.0	-2.0
LIKS	Likavka	59.60	312	*e*P	P	20 16 41.4	-1.9
HSP	Hornsund	59.67	345	*e*P	P	20 16 43.0	-0.4
FNA	Florina	59.70	303	*e*P	P	20 16 42.5	-1.6
EVR	Evrytania	59.82	300	*e*P	P	20 16 43.4	-1.5
VYHS	Vyhne	59.88	312	*i* P	P	20 16 45.0	-0.1
VYHS				*i* PP	PP	20 18 57.0	-2.2
VYHS				*i* S	S	20 24 53.2	-0.1
VYHS				*i* SS	SS	20 28 54.9	+4.0
DIVS	Divcibare	59.96	307	⇓*i*P	P	20 16 44.9	-0.9
RAC	Raciborz	60.01	314	*e*P	P	20 16 46.2	+0.2
RAC				*e*S	S	20 24 56.2	+1.2
RAC				MLR	MLR		
	comp=Z,8µm,18.7s,MS5.9						
RAC	Raciborz	60.01	314	*e*P	P	20 16 46.2	+0.2
RAC				*e*S	S	20 24 56.2	+1.2
RAC				LMN		20 43 34.8	
RAC				MLR	MLR	20 45 09.1	
RAC				LME		20 45 14.4	
	comp=Z,10µm,17.1s						
MEV	Metsovon	60.04	302	*e*P	P	20 16 44.6	-1.7
OHR	Ohrid	60.05	303	⇑*i*P	P	20 16 44.8	-1.6
MOR8	Moi Rana	60.05	332	⇑*i*P	P	20 16 44.5	-1.5
	comp=Z,198nm,2.0s,mb5.8						
MOR8	Moi Rana	60.05	332	⇑*i*P	P	20 16 44.5	-1.5
MOR8				AMb	AMB	20 16 47.2	
	comp=Z,198nm,2.0s,mb5.8						
GKP	Gorka Klasztor	60.07	317	⇑*e*P	P	20 16 46.1	-0.3
	comp=Z,0.5nm,0.9s						
GKP				*e*S	S	20 24 57.1	+1.4
GKP				LR	LR		
	comp=Z,8µm,17.5s						
GKP	Gorka Klasztor	60.07	317	⇑*e*P	P	20 16 46.1	-0.2
	comp=Z,500nm,0.9s,mb6.5						
GKP				*e*S	S	20 24 57.1	+1.3
GKP				MLR	MLR	20 44 38.6	
	comp=Z,8µm,17.5s,MS5.9						
OKC	Ostrava-Krasne	60.08	313	*e*P	P	20 16 46.4	-0.1
OKC				*e*PP	PP	20 19 04.0	+3.0
OKC				*e*S	S	20 24 56.2	+0.3
OKC				AMS	AMS	20 45 00.0	
	comp=Z,7µm,22.0s						
KOLL	Kolacno	60.15	312	*i* P	P	20 16 47.3	+0.3
ITM	Ithomi	60.16	298	*e*P	P	20 16 45.0	-2.3
LOF	Lofoten	60.27	335	*e*P	P	20 16 48.5	+0.9
	comp=Z,333nm,1.8s,mb6.1						
LOF	Lofoten	60.27	335	*e*P	P	20 16 48.5	+0.9
LOF				AMb	AMB	20 16 51.1	
	comp=Z,333nm,1.8s,mb6.1						
MELSS	Ber_school_2	60.29	333	*e*P	P	20 16 46.8	-0.9
IVA	Berane	60.30	305	⇑*i*P	P	20 16 47.6	-0.5
PVY	Plav	60.30	305	⇑*i*P	P	20 16 47.1	-1.1
SRO2	Moca	60.31	311	*e*P	P	20 16 49.3	+1.2
SRO	Srobarova	60.35	311	*e*P	P	20 16 49.2	+0.8
JAN	Janina	60.36	301	*e*P	P	20 16 47.5	-1.0
SRO1	Iza	60.41	311	*e*P	P	20 16 49.1	+0.3
BBLS	Bajina Basta -	60.42	306	⇓*i*P	P	20 16 48.3	-0.6
MORC	Moravsky Berou	60.48	313	P	P	20 16 49.3	+0.1
KBS	Kingsbay	60.51	347	*e*P	P	20 16 48.0	-1.1
KBS				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.7						
KBS				MLR	MLR		
	comp=Z,11µm,19.0s,MS6.0						
KBS	Kingsbay	60.51	347	*e*P	P	20 16 48.0	-1.1
	comp=Z,46nm,0.8s,mb5.7						
KBS				LR	LR		
	comp=Z,11µm,19.0s,MS6.0						
KBS	Kingsbay	60.51	347	*e*P	P	20 16 47.0	-2.1
KBS				*e*S	S	20 24 59.7	-1.3
KBS				AMS	AMS	20 48 40.6	
	comp=Z,7µm,17.5s,MS5.8						
PLE	Pljevlja	60.55	306	⇑*i*P	P	20 16 49.4	-0.4
STOK	Stokkvaagen	60.61	333	*e*P	P	20 16 48.4	-1.4
	comp=Z,200nm,1.9s,mb5.9						
STOK	Stokkvaagen	60.61	333	*e*P	P	20 16 48.4	-1.4
STOK				AMb	AMB	20 16 51.5	
	comp=Z,200nm,1.9s,mb5.9						
LKD	Levkas	60.74	300	*e*P	P	20 16 48.3	-2.9
IGT	Igoumenitsa	60.77	301	*e*P	P	20 16 49.3	-2.1
SMOL	Smolenice	60.80	312	*i* P	P	20 16 51.4	0.0
TTG	Podgorica	60.86	305	⇑*i*P	P	20 16 50.1	-1.8
UPM	Unac-Piva	60.93	306	⇑*i*P	P	20 16 51.9	-0.4
NKY	Niksic	60.95	305	⇑*i*P	P	20 16 51.1	-1.4
ULC	Ulcinj	60.98	304	⇑*i*P	P	20 16 51.5	-1.2
HFS	Hagfors	61.00	326	P	P	20 16 52.3	-0.3
	comp=Z,132nm,0.9s,mb6.1,baz=83,slow=9.5,SNR=86						
HFS				LR	LR	20 46 25.8	
	comp=Z,5µm,20.1s,MS5.7,baz=81,slow=39						
KSP	Ksiaz	61.07	315	⇑*e*P	P	20 16 53.1	-0.1
KSP				*e**PP	pP	20 16 59.9	-2.0
KSP				*e*PPP	PPP	20 20 32.0	-5.9
KSP				*e*S	S	20 25 07.0	-1.5
KSP				*e*		20 26 41.0	
KSP				*e*SS	SS	20 29 03.0	-6.7
KSP				MLR	MLR		
	comp=Z,14µm,18.4s,MS6.2						
KSP	Ksiaz	61.07	315	⇑*e*P	P	20 16 53.1	-0.1
KSP				*e*pP	pP	20 16 59.9	-2.0
KSP				*e*PP	PP	20 19 02.0	-7.8
KSP				*e*PPP	PPP	20 20 32.0	-5.9
KSP				*e*S	S	20 25 07.0	-1.5
KSP				*e*ScS	ScS	20 26 41.0	+2.5
KSP				*e*SS	SS	20 29 03.0	-6.7
KSP				*e*SSS	SSS	20 31 55.0	+7.2
KSP				LR	LR		
	comp=Z,14µm,18.4s,MS6.2						
KSP	Ksiaz	61.07	315	⇑*e*P	P	20 16 53.4	+0.2
	comp=Z,800nm,1.4s,mb6.7						
KSP				*e*pP	pP	20 17 01.7	-0.2
KSP				*e*S	S	20 25 10.6	+2.1
KSP				*e*SS	SS	20 29 09.7	0.0
KSP				MLR	MLR	20 45 46.7	
	comp=Z,11µm,18.8s,MS6.0						
ZST	Bratislava	61.07	312	*i* P	P	20 16 53.1	-0.2
ZST				*i* PP	PP	20 19 07.6	-2.3
ZST				*i* S	S	20 25 04.9	-3.7
ZST				*i* SS	SS	20 29 24.1	+14
BSD	Bornholm Skovb	61.12	320	⇓*i*P	P	20 16 52.7	-0.8
BSD				pmax	pmax		
	comp=Z,120nm,0.8s,mb6.1						
BSD	Bornholm Skovb	61.12	320	⇓*i*P	P	20 16 52.7	-0.8
	comp=Z,120nm,0.8s,mb6.1						
DPC	Dobruska-Polom	61.14	314	*e*P	P	20 16 54.0	+0.3
DPC				*e*PP	PP	20 19 07.8	-2.7
DPC				*e*S	S	20 25 10.0	+0.5
DPC				*e*SCS	ScS	20 26 44.3	+5.2
DPC				*e*SS	SS	20 29 12.3	+1.3
DPC				AMS	AMS	20 45 30.0	
	comp=Z,10µm,20.0s						
BUM	Brajici-Budva	61.15	305	⇑*i*P	P	20 16 52.7	-1.2
VRAC	Vranov	61.18	313	P	P	20 16 54.3	+0.3
	comp=Z,143nm,0.9s,mb6.1,baz=75,slow=8.6,SNR=99						
NSS	Namsos	61.23	331	*e*P	P	20 16 52.1	-2.0
	comp=Z,182nm,1.5s,mb6.0						
NSS	Namsos	61.23	331	*e*P	P	20 16 52.1	-2.0
NSS				AMb	AMB	20 16 55.0	
	comp=Z,182nm,1.5s,mb6.0						
NSS				*e*S	S	20 25 11.3	+0.8
NSS				AMS	AMS	20 46 34.7	
	comp=Z,8µm,17.2s,MS5.9						
BRY	Bratogost	61.26	306	⇑*i*P	P	20 16 53.5	-1.1
UPC	Upice	61.31	314	*e*P	P	20 16 55.1	+0.3
HCY	Herceg Novi	61.40	305	⇑*i*P	P	20 16 54.6	-0.9
SMY	Shemya	61.45	43	PFAKE		20 17 10.0	+14
SMY				LR	LR		
	comp=Z,9µm,21.0s,MS5.9						
SOP	Sopron	61.54	311	⇑*i*P	P	20 16 56.1	-0.3
VKA	Vienna	61.57	312	⇓*i*P	P	20 16 56.8	+0.2
	comp=Z,515nm,3.0s						
VKA	Vienna	61.57	312	⇓*i*P	P	20 16 56.8	+0.2
VKA				pmax	pmax		
	comp=Z,515nm,3.0s						
WRAB	Tennant Creek	61.83	137	*i* P	P	20 16 59.1	+0.3
WRAB	Tennant Creek	61.83	137	*e*P	P	20 16 58.6	-0.2
	comp=Z,189nm,1.1s,mb6.1						
WRAB				LR	LR		
	comp=Z,757nm,20.0s,MS4.8						
WRA	Warramunga Arr	61.84	137	*i* P	P	20 16 58.9	+0.1
WRA				pmax	pmax		
	comp=Z,48nm,0.9s						
WRA	Warramunga Arr	61.84	137	P	P	20 16 58.9	+0.1
	comp=Z,48nm,0.9s,mb5.6,baz=327,slow=7.4,SNR=141						
WRA				S	S	20 25 18.8	+0.2
	comp=Z,0.3nm,0.7s,baz=55,slow=13,SNR=6.8						
WRA				PKPPKP		20 46 10.2	
	comp=Z,1.1nm,0.9s,baz=140,slow=2.3,SNR=5.8						
WB2	Warramunga Arr	61.84	137	⇓*i*P	P	20 16 58.7	-0.2
WB2				*i* S	S	20 25 18.5	-0.2
STON	Ston	61.87	306	*i* P	P	20 16 57.0	-1.7
KOGS	Kog	62.02	310	⇑*i*P	P	20 16 59.1	-0.6
NB2	NORSAR Subarra	62.08	327	P	P	20 16 59.2	-0.7
	comp=Z,375nm,1.7s,mb6.2,baz=80,slow=6.5						
NB2	NORSAR Subarra	62.08	327	P	P	20 16 59.2	-0.7
	baz=80,slow=6.9						
NOA	NORSAR Array B	62.08	327	P	P	20 16 59.1	-0.8
	comp=Z,35nm,0.8s,mb5.6,baz=81,slow=6.7,SNR=118						
NOA				PP	PP	20 19 14.4	-4.2
	comp=Z,18nm,0.9s,baz=80,slow=8.7,SNR=5.3						
NOA				LR	LR	20 45 15.3	
	comp=Z,5µm,19.4s,MS5.7,baz=70,slow=37						
RGN	Rugen	62.13	319	*e*P	P	20 17 00.7	+0.4
	comp=Z,530nm,1.3s,mb6.5						
PVCC	Panska Ves	62.20	315	*e*P	P	20 17 02.0	+1.1
PVCC				*e*PP	PP	20 19 16.6	-3.3
PVCC				*e*S	S	20 25 24.2	+1.3
PVCC				AMS	AMS	20 46 20.0	
	comp=Z,7µm,19.3s						
RUE	Ruedersdorf	62.27	317	*e*P	P	20 17 00.7	-0.6
	comp=Z,173nm,0.8s,mb6.2						
ARSA	Arzberg	62.32	311	⇑*i*P	P	20 17 01.2	-0.5
	comp=Z,310nm,1.9s,mb6.1						
PRU	Pruhonice	62.34	314	*e*P	P	20 17 02.0	+0.2
PRU				*e*PP	PP	20 19 17.5	-3.4
PRU				*e*S	S	20 25 26.2	+1.6
PRU				*e*SCS	ScS	20 26 53.9	+5.8
PRU				*e*SS	SS	20 29 27.3	-2.8
PRU				AMS	AMS	20 46 20.0	
	comp=Z,6µm,13.7s						
KMBO	Kilima Mbogo	62.34	252	P	P	20 17 03.0	+0.7
	comp=Z,10nm,0.9s,mb5.0,baz=48,slow=11,SNR=14						
KMBO				S	S	20 25 26.4	+1.2
	comp=Z,0.4nm,0.3s,baz=231,slow=23,SNR=2.1						
KMBO				LR	LR	20 45 35.3	
	comp=Z,3µm,20.1s,MS5.4,baz=92,slow=37						
PRA	Prague	62.39	314	P	P	20 17 05.0	+2.9
PRA				AMS	AMS	20 48 00.0	
COP	Copenhagen	62.41	321	⇑*i*P	P	20 17 02.5	+0.3
COP				*e*	pP	20 17 10.6	-0.3
COP				*i* S	S	20 25 26.9	+1.5
COP				pmax	pmax		
	comp=Z,130nm,1.0s,mb6.0						
COP				MLR	MLR		
	comp=Z,7µm,18.0s,MS5.9						
COP	Copenhagen	62.41	321	⇑*i*P	P	20 17 02.5	+0.3
	comp=Z,128nm,1.0s,mb6.0						
COP				*e*	pP	20 17 10.6	-0.3
COP				*i*		20 19 29.2	
COP				*i* S	S	20 25 26.9	+1.5
COP				*i*		20 26 57.1	
	comp=Z,7µm,18.0s						
OSL	Oslo	62.51	326	*e*P	P	20 17 02.8	0.0
	comp=Z,274nm,1.4s,mb6.2						
OSL	Oslo	62.51	326	*e*P	P	20 17 02.8	0.0
OSL				AMb	AMB	20 17 05.6	
	comp=Z,274nm,1.4s,mb6.2						
BRG	Berggiesshubel	62.52	315	*e*P	P	20 17 03.0	+0.1
BRG				*e*		20 19 23.0	
BRG						20 20 55.0	
BRG				*i* S	S	20 25 29.0	+2.1
BRG				*i* SS	SS	20 29 29.0	-4.0
BRG				pmax	pmax		
	comp=Z,222nm,1.1s,mb6.2						
BRG				MLR	MLR		
	comp=N,4µm,14.9s,MS5.8						
BRG				MLR	MLR		
	comp=E,4µm,14.9s,MS5.8						
BRG				MLR	MLR		
	comp=Z,4µm,14.8s,MS5.7						
BRG	Berggiesshubel	62.52	315	*e*P	P	20 17 03.0	+0.1
	comp=Z,222nm,1.1s,mb6.2						
BRG				*e*PP	PP	20 19 23.0	+0.6
BRG				ScP		20 20 55.0	
BRG				*i* S	S	20 25 29.0	+2.1
BRG				*i* SS	SS	20 29 29.0	-4.0
BRG				LR	LR		
	comp=Z,4µm,14.8s,MS5.7						
PERS	Pernice	62.73	310	⇑*i*P	P	20 17 04.1	-0.3
	comp=Z,339nm,1.4s,mb6.3						
PERS				*e*pP	pP	20 17 13.2	0.0
PERS	Pernice	62.73	310	⇑*i*P	P	20 17 04.1	-0.3
	comp=Z,339nm,1.4s,mb6.3						
PERS				*e*pP	pP	20 17 13.2	0.0
CLL	Collm	63.00	316	⇑P	P	20 17 05.6	-0.5
	comp=Z,logA/T=2.2,mb6.1						
CLL				*e**PP	pP	20 17 15.0	+0.2
CLL				*e*PP	PP	20 19 18.0	-8.2
CLL				*e*PPP	PPP	20 20 54.0	-3.2
CLL				*e*S	S	20 25 33.0	+0.1
CLL				*e*SCS	ScS	20 26 54.0	+1.0
CLL				*e*SS	SS	20 29 38.0	-2.7
CLL				*e*SSS	SSS	20 32 42.0	+16
MOA	Molln	63.01	312	⇑*i*P	P	20 17 05.8	-0.4
	comp=Z,202nm,1.3s,mb6.1						
KONO	Kongsberg	63.12	325	c *i*P	P	20 17 06.4	-0.4
GEC2	GERESS Array S	63.13	313	*e*P	P	20 17 07.2	+0.2
GEC2				*e*		20 19 27.9	
GEC2				pmax	pmax		
	comp=Z,287nm,1.3s,mb6.2						
GEC2	GERESS Array S	63.13	313	*e*P	P	20 17 07.2	+0.2
	comp=Z,287nm,1.3s,mb6.2						
GEC2				*e*PP	PP	20 19 27.9	+0.4
GERES	GERESS Array B	63.13	313	P	P	20 17 07.2	+0.1
	comp=Z,81nm,0.8s,mb5.9,baz=76,slow=5.5,SNR=425						
GERES				S	S	20 25 33.8	-0.8
	comp=Z,0.2nm,0.5s,baz=35,slow=24,SNR=2.7						
GERES				PKPPKP		20 46 14.2	
	comp=Z,0.3nm,0.6s,baz=342,slow=4.2,SNR=3.9						
GERES				LR	LR	20 47 46.6	
	comp=Z,4µm,19.7s,MS5.6,baz=76,slow=39						
KHC	Kasperske Hory	63.14	313	*e*P	P	20 17 07.1	0.0
KHC				*e*		20 17 20.0	
KHC				*e*		20 17 40.5	
KHC				*e*		20 19 26.0	
KHC				*e*S	S	20 25 36.8	+2.0
KHC				*e*		20 26 58.7	
KHC				*e*SS	SS	20 29 41.5	-1.4
KHC				MLR	MLR		
	comp=Z,7µm,14.6s,MS6.0						
KHC	Kasperske Hory	63.14	313	*e*P	P	20 17 07.1	0.0
KHC				*e*		20 17 20.0	
KHC				*e*		20 17 40.5	
KHC				*e*PP	PP	20 19 26.0	-1.6
KHC				*e*S	S	20 25 36.8	+2.0
KHC				*e*SKS	SKS	20 26 58.7	-3.6
KHC				*e*SS	SS	20 29 41.5	-1.4
KHC				LR	LR		
	comp=Z,7µm,14.6s,MS6.0						
KHC	Kasperske Hory	63.14	313	*e*P	P	20 17 07.1	0.0
KHC				x	x	20 17 20.0	
KHC				PCP	PcP	20 17 40.5	-3.8
KHC				*e*PP	PP	20 19 26.0	-1.6
KHC				*e*S	S	20 25 36.8	+2.0
KHC				*e*SKS	SKS	20 26 58.7	-3.6
KHC				*e*SS	SS	20 29 41.5	-1.4
KHC				AMS	AMS	20 46 50.0	
	comp=Z,7µm,14.6s						
OBKA	Obir	63.15	310	⇑*i*P	P	20 17 06.7	-0.4
	comp=Z,419nm,2.2s,mb6.2						
LJU	Ljubljana	63.28	310	⇑*i*P	P	20 17 07.8	-0.2
LJU				*e*		20 19 25.7	
LJU				*e*S	S	20 25 36.2	-0.3
LJU				*e*SS	SS	20 29 47.5	+2.6
LJU				pmax	pmax		
	comp=Z,485nm,1.5s,mb6.4						
LJU	Ljubljana	63.28	310	⇑*i*P	P	20 17 07.8	-0.2
	comp=Z,485nm,1.5s,mb6.4						
LJU				*e*PP	PP	20 19 25.6	-3.1
LJU				*e*PPP	PPP	20 21 15.0	+15
LJU				*e*S	S	20 25 36.2	-0.3
LJU				*e*SKSac		20 26 59.7	
LJU				*e*SS	SS	20 29 47.5	+2.6
LJU				*e*SSS	SSS	20 32 48.7	+18
PMG	Port Moresby	63.36	119	*e*P	P	20 17 09.8	+0.8
PMG				pmax	pmax		
	comp=Z,88nm,1.1s						
PMG				MLR	MLR		
	comp=Z,670nm,20.0s						
PMG	Port Moresby	63.36	119	P	P	20 17 09.4	+0.4
	comp=Z,50nm,0.8s,mb5.7,baz=318,slow=6.2,SNR=8.8						
PMG	Port Moresby	63.36	119	*e*P	P	20 17 09.8	+0.7
	comp=Z,88nm,1.1s,mb5.8						
PMG				LR	LR		
	comp=Z,670nm,20.0s,MS4.8						
NVLJ	Novalja	63.42	308	*i* P	P	20 17 05.3	-3.6
CEY	Cerknica	63.42	310	⇑*i*P	P	20 17 08.6	-0.3
CEY				*e*pP	pP	20 17 16.6	-1.2
CEY				*e*S	S	20 25 37.3	-1.0
CEY				*e*SKSac		20 27 01.1	
MOL	Molde	63.51	329	⇑*i*P	P	20 17 10.5	+1.3
	comp=Z,236nm,1.7s,mb5.9						
MOL	Molde	63.51	329	⇑*i*P	P	20 17 10.5	+1.3
MOL				AMb	AMB	20 17 13.3	
	comp=Z,236nm,1.7s,mb6.0						
NKC	Novy Kostel	63.59	315	*e*P	P	20 17 10.3	+0.3
NKC				*e*PP	PP	20 19 29.6	-1.9
NKC				*e*S	S	20 25 41.8	+1.5
NKC				*e*SKS	SKS	20 27 10.1	+4.5
NKC				AMS	AMS	20 47 10.0	
	comp=Z,6µm,15.2s						
VOY	Vojsko	63.71	310	*e*P	P	20 17 10.2	-0.6
VOY				*e*	pP	20 17 20.0	+0.4
VOY				*e*		20 18 33.8	
VOY				*e*		20 18 44.8	
VOY				*e*		20 19 27.2	
VOY				*e*		20 19 47.6	
KBA	Koelnbreinsper	63.80	311	⇑*i*P	P	20 17 10.8	-0.6
	comp=Z,243nm,2.0s,mb5.9						
KBA	Koelnbreinsper	63.80	311	⇑*i*P	P	20 17 10.8	-0.6
KBA				pmax	pmax		
	comp=Z,243nm,2.0s,mb5.9						
MUN	Mundaring	63.87	160	*e*P	P	20 17 11.8	-0.3
BSEG	Bad Segeberg	63.98	319	*e*P	P	20 17 13.1	+0.6
KLBR	Kellerberrin	64.00	158	⇓*i*P	P	20 17 12.1	-0.9
MOX	Moxa	64.01	315	*e*P	P	20 17 12.7	0.0
MOX				pmax	pmax		
	comp=Z,319nm,1.7s,mb6.1						
MOX				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.6						
MOX	Moxa	64.01	315	*e*Pcu		20 17 12.7	
	comp=Z,319nm,1.7s						
MOX				*e*S	S	20 25 47.0	+1.5
MOX				*e*ScS	ScS	20 27 00.0	-0.7
MOX				*e*SS	SS	20 30 00.0	+4.2
MOX				*e*SSS	SSS	20 33 00.0	+15
MOX				LR	LR		
	comp=Z,4µm,20.0s,MS5.6						
MOX	Moxa	64.01	315	⇑*i*P	P	20 17 12.7	0.0
	comp=Z,logA/T=2.3,mb6.1						
MOX				S	S	20 25 47.0	+1.5
MOX				ScS	ScS	20 27 00.0	-0.7
MOX				SS	SS	20 30 00.0	+4.2
MOX				SSS	SSS	20 33 00.0	+15
MOX				QM		20 47 04.0	
MOX				RM		20 49 19.0	
MUD	Monsted U'grnd	64.03	322	⇑*i*P	P	20 17 12.9	+0.1
MUD				*i*		20 19 36.0	
MUD				*i* S	S	20 25 48.8	+3.2
MUD				*i*		20 27 07.2	
MUD				pmax	pmax		
	comp=Z,130nm,1.2s,mb5.8						
MUD				MLR	MLR		
	comp=Z,17µm,18.0s,MS6.3						
MUD	Monsted U'grnd	64.03	322	⇑*i*P	P	20 17 12.9	+0.1
	comp=Z,128nm,1.2s,mb5.8						
MUD				*i*		20 19 36.0	
MUD				*i* S	S	20 25 48.8	+3.2
MUD				*i*		20 27 07.2	
	comp=Z,17µm,18.0s						
CLZ	Clausthal	64.47	317	*e*P	P	20 17 16.0	+0.3
CLZ				pmax	pmax		
	comp=Z,434nm,1.0s,mb6.4						
CLZ	Clausthal	64.47	317	*e*P	P	20 17 16.0	+0.3
	comp=Z,434nm,1.0s,mb6.4						
ASPA	Alice Springs	64.47	140	⇓*i*P	P	20 17 16.6	+0.4
ASAR	Alice Springs	64.47	140	P	P	20 17 16.6	+0.3
	comp=Z,49nm,0.9s,mb5.5,baz=323,slow=6.2,SNR=131						
ASAR				PKPPKP		20 46 04.0	
	comp=Z,1.0nm,0.8s,baz=125,slow=4.1,SNR=6.2						
ASAR				LR	LR	20 48 46.6	
	comp=Z,2µm,20.2s,MS5.2,baz=311,slow=39						
GRA1	Grafenberg Arr	64.50	314	*e*P	P	20 17 16.5	+0.6
	comp=Z,346nm,1.1s,mb6.3						
GRA1				*e*PcP	PcP	20 17 50.6	+0.8
GRA1				*e*PP	PP	20 19 37.1	-2.6
GRA1				*e*S	S	20 25 53.6	+2.1
GRA1				*e*ScS	ScS	20 27 09.8	+5.4
GRA1				*e*SS	SS	20 30 07.0	+3.4
GRA1				*e*SSS	SSS	20 33 21.5	+28
GRA1				LR	LR		
	comp=Z,5µm,20.3s,MS5.7						
GRF	Grafenberg Arr	64.50	314	*e*P	P	20 17 16.5	+0.6
GRF				*e*		20 17 50.6	
GRF				*e*		20 19 37.1	
GRF				*e*S	S	20 25 53.6	+2.1
GRF				*e*		20 27 09.8	
GRF				*e*SS	SS	20 30 07.0	+3.4
GRF				pmax	pmax		
	comp=Z,346nm,1.1s,mb6.3						
GRF				MLR	MLR		
	comp=Z,5µm,20.3s,MS5.7						
GRF	Grafenberg Arr	64.50	314	*e*P	P	20 17 16.5	+0.6
GRF				*e*		20 17 50.6	
GRF				*e*		20 19 37.1	
GRF				*e*S	S	20 25 53.6	+2.1
GRF				*e*		20 27 09.8	
GRF				*e*SS	SS	20 30 07.0	+3.4
GRF				pmax	pmax		
	comp=Z,346nm,1.1s,mb6.3						
GRF				MLR	MLR		
	comp=Z,5µm,20.3s,MS5.7						
GRF	Grafenberg Arr	64.50	314	*e*P	P	20 17 16.5	+0.6
	comp=Z,346nm,1.1s,mb6.3						

GRF				*e*PcP	PcP	20 17 50.6	+0.8
GRF				*e*PP	PP	20 19 37.1	-2.6
GRF				*e*S	**S**	**20 25 53.6**	**+2.1**
GRF				*e*ScS	ScS	20 27 09.8	+5.4
GRF				*e*SS	SS	20 30 07.0	+3.4
GRF				*e*SSS	SSS	20 33 21.5	+28
GRF				LR	LR		
	comp=Z,5µm,20.3s,MS5.7						
FUR	**Furstenfeldbru**	**64.87**	**313**	*e*P	**P**	**20 17 18.7**	**+0.4**
FUR				pmax	pmax		
	comp=Z,592nm,1.0s,mb6.6						
FUR	**Furstenfeldbru**	**64.87**	**313**	*e*P	**P**	**20 17 18.7**	**+0.4**
	comp=Z,592nm,1.0s,mb6.6						
WTTA	**Wattenberg**	**64.88**	**312**	⇑*i*P	**P**	**20 17 17.9**	**-0.5**
	comp=Z,359nm,1.5s,mb6.2						
WTTA	**Wattenberg**	**64.88**	**312**	⇑*i*P	**P**	**20 17 17.9**	**-0.5**
WTTA				pmax	pmax		
	comp=Z,359nm,1.5s,mb6.2						
WATA	**Walderalm**	**64.90**	**312**	⇑*i*P	**P**	**20 17 17.6**	**-1.0**
	comp=Z,59nm,1.0s,mb5.6						
WATA	**Walderalm**	**64.90**	**312**	⇑*i*P	**P**	**20 17 17.6**	**-1.0**
WATA				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.6						
RUND	**Rundenannen**	**65.02**	**327**	*e*P	**P**	**20 17 19.7**	**+0.6**
RUND				AMb	AMB	20 17 22.0	
	comp=Z,226nm,1.6s,mb5.9						
BER	**Bergen**	**65.04**	**327**	*e*S	S	20 25 59.5	+1.5
BER				*e*SS	SS	20 30 15.6	+3.5
BER				AMS	AMS	20 47 54.0	
	comp=Z,8µm,17.5s,MS5.9						
AQU	**L'Aquila**	**65.06**	**306**	P	**P**	**20 17 20.0**	**+0.3**
NWAO	**Narrogin (SRO)**	**65.06**	**159**	*e*P	**P**	**20 17 17.2**	**-2.7**
NWAO				pmax	pmax		
	comp=Z,51nm,1.2s						
NWAO				MLR	MLR		
	comp=Z,2µm,20.0s						
NWAO	**Narrogin (SRO)**	**65.06**	**159**	P	**P**	**20 17 19.0**	**-0.9**
	baz=0.1,slow=3.8						
NWAO	**Narrogin (SRO)**	**65.06**	**159**	*e*P	**P**	**20 17 17.2**	**-2.7**
	comp=Z,51nm,1.2s,mb5.4						
NWAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
SQTA	**Sankt Quirin**	**65.17**	**312**	⇑*i*P	**P**	**20 17 19.7**	**-0.6**
	comp=Z,104nm,1.1s,mb5.8						
SQTA	**Sankt Quirin**	**65.17**	**312**	⇑*i*P	**P**	**20 17 19.7**	**-0.6**
SQTA				pmax	pmax		
	comp=Z,104nm,1.1s,mb5.8						
MOTA	**Moosalm**	**65.20**	**312**	⇑*i*P	**P**	**20 17 19.7**	**-0.8**
	comp=Z,92nm,1.0s,mb5.8						
MOTA	**Moosalm**	**65.20**	**312**	⇑*i*P	**P**	**20 17 19.7**	**-0.8**
MOTA				pmax	pmax		
	comp=Z,92nm,1.0s,mb5.8						
HDH	**Heidenheim**	**65.44**	**313**	⇑*e*P	**P**	**20 17 22.0**	**0.0**
SIND	**Sindeldorf**	**65.60**	**314**	⇑*e*P	**P**	**20 17 23.1**	**+0.1**
UBR	**Uberruh**	**65.76**	**312**	⇑*e*P	**P**	**20 17 23.7**	**-0.4**
VAE	**Valguarnera**	**65.81**	**301**	P	**P**	**20 17 25.3**	**+0.7**
	comp=Z,9.3nm,0.6s,mb5.0,baz=349,slow=11,SNR=8.2						
FUORN	**Ofenpass**	**65.96**	**311**	⇑*i*P	**P**	**20 17 25.1**	**-0.3**
DAVA	**Damuels**	**66.02**	**312**	⇑*i*P	**P**	**20 17 25.5**	**-0.2**
	comp=Z,276nm,1.2s,mb6.2						
BUCH	**Bad Urach**	**66.02**	**313**	⇑*e*P	**P**	**20 17 25.9**	**+0.2**
STU	**Stuttgart**	**66.03**	**314**	*e*P	**P**	**20 17 26.0**	**+0.2**
STU				pmax	pmax		
	comp=Z,358nm,1.1s,mb6.3						
STU	**Stuttgart**	**66.03**	**314**	*e*P	**P**	**20 17 26.0**	**+0.2**
	comp=Z,358nm,1.1s,mb6.3						
TOD	**Tromm**	**66.03**	**315**	*e*P	**P**	**20 17 25.7**	**-0.1**
TOD	**Tromm**	**66.03**	**315**	⇑*e*P	**P**	**20 17 25.9**	**+0.1**
TNS	**Taunus Mts**	**66.07**	**315**	*e*P	**P**	**20 17 26.2**	**+0.2**
TNS				pmax	pmax		
	comp=Z,219nm,1.0s,mb6.1						
TNS	**Taunus Mts**	**66.07**	**315**	*e*P	**P**	**20 17 26.2**	**+0.2**
	comp=Z,219nm,1.0s,mb6.1						
DAVOX	**Davos**	**66.17**	**312**	P	**P**	**20 17 26.6**	**-0.1**
	comp=Z,105nm,0.9s,mb5.9,baz=106,slow=6.8,SNR=103						
DAVOX				LR	LR	20 50 21.5	
	comp=Z,5µm,20.8s,MS5.7,baz=60,slow=40						
DAVOX	**Davos**	**66.17**	**312**	⇑*i*P	**P**	**20 17 26.5**	**-0.2**
BERNI	**Berninapass**	**66.18**	**311**	⇑*i*P	**P**	**20 17 26.5**	**-0.3**
LIENZ	**Alp Oberkamor**	**66.27**	**312**	⇑*i*P	**P**	**20 17 27.0**	**-0.3**
LBG	**Lerchenberg**	**66.31**	**314**	⇑*e*P	**P**	**20 17 28.0**	**+0.4**
WIT	**Witteveen**	**66.39**	**319**	⇑*e*P	**P**	**20 17 29.1**	**+1.1**
	comp=Z,505nm,1.2s,mb6.4						
PLONS	**Plons**	**66.41**	**312**	⇑*i*P	**P**	**20 17 27.8**	**-0.5**
SPAK	**Spaichingen**	**66.48**	**313**	*e*P	**P**	**20 17 28.6**	**-0.1**
VDL	**Val di Lei**	**66.53**	**311**	⇑*i*P	**P**	**20 17 28.8**	**-0.2**
WEIN	**Weingarten**	**66.53**	**313**	⇑*i*P	**P**	**20 17 28.4**	**-0.6**
STEIN	**Stein am Rhein**	**66.56**	**313**	⇑*i*P	**P**	**20 17 28.8**	**-0.4**
WTSB	**Winterswijk**	**66.56**	**318**	⇑*i*P	**P**	**20 17 29.5**	**+0.4**
	comp=Z,252nm,1.1s,mb6.2						
KTD	**Kalmit**	**66.56**	**315**	*e*P	**P**	**20 17 29.2**	**0.0**
WILA	**Wila**	**66.61**	**312**	⇑*i*P	**P**	**20 17 29.0**	**-0.5**
VLC	**Villacollemand**	**66.62**	**309**	*e*P	**P**	**20 17 28.7**	**-0.9**
	comp=Z,139nm,1.0s,mb5.9						
TRULL	**Truellikon**	**66.69**	**313**	⇑*i*P	**P**	**20 17 28.5**	**-1.5**
BFO	**Black Forest**	**66.71**	**314**	*e*P	**P**	**20 17 30.0**	**-0.1**
BFO				*e*		20 19 57.5	
BFO				pmax	pmax		
	comp=Z,227nm,1.5s,mb6.0						
BFO	**Black Forest**	**66.71**	**314**	*e*P	**P**	**20 17 30.0**	**-0.1**
	comp=Z,227nm,1.5s,mb6.0						
BFO				*e*PP	PP	20 19 57.5	-1.4
LLS	**Linth-Limmern**	**66.72**	**312**	⇑*i*P	**P**	**20 17 29.9**	**-0.3**
ABH	**Alteburg**	**66.73**	**315**	*e*P	**P**	**20 17 30.4**	**+0.2**
ABH	**Alteburg**	**66.73**	**315**	⇑*e*P	**P**	**20 17 30.5**	**+0.3**
SLE	**Schleitheim**	**66.77**	**313**	⇑*i*P	**P**	**20 17 30.3**	**-0.3**
LANF	**Langenberg**	**66.84**	**314**	*e*P	**P**	**20 17 31.1**	**+0.1**
MUO	**Muotathal**	**66.92**	**312**	⇑*i*P	**P**	**20 17 31.3**	**-0.2**
MUGIO	**Muggio**	**66.98**	**311**	⇑*i*P	**P**	**20 17 30.6**	**-1.3**
STR	**Strasbourg**	**66.99**	**314**	*e*P	**P**	**20 17 32.5**	**+0.6**
FELD	**Feldberg**	**67.05**	**313**	*e*P	**P**	**20 17 32.3**	**0.0**
FELD	**Feldberg**	**67.05**	**313**	⇑*e*P	**P**	**20 17 32.2**	**-0.1**
FUSIO	**Fusio**	**67.06**	**312**	⇑*i*P	**P**	**20 17 32.1**	**-0.3**
KIZ	**Kirchzarten**	**67.08**	**313**	⇑*e*P	**P**	**20 17 32.2**	**-0.3**
RUP	**Ruppelstein**	**67.08**	**315**	*e*P	**P**	**20 17 32.5**	**0.0**
RUP	**Ruppelstein**	**67.08**	**315**	⇑*e*P	**P**	**20 17 32.9**	**+0.4**
SULZ	**Sulz-Cheisache**	**67.09**	**313**	⇑*i*P	**P**	**20 17 32.1**	**-0.5**
BNALP	**Bannalp**	**67.09**	**312**	⇑*i*P	**P**	**20 17 32.3**	**-0.3**
TNA	**Tin City**	**67.14**	**27**	*e*P	**P**	**20 17 32.1**	**-0.5**
	comp=Z,105nm,1.3s,mb5.7						
TNA				LR	LR		
	comp=Z,4µm,19.0s,MS5.7						
JMIC	**Jan Mayen**	**67.17**	**340**	*e*S	S	20 26 25.9	+2.2
JMIC				AMS	AMS	20 51 33.9	
	comp=Z,5µm,19.3s,MS5.7						
LIBD	**Limburg**	**67.22**	**314**	*e*P	**P**	**20 17 33.4**	**0.0**
LIBD	**Limburg**	**67.22**	**314**	*e*P	**P**	**20 17 33.6**	**+0.2**
DAG	**Danmarks Havn**	**67.23**	**347**	⇓*i*P	**P**	**20 17 32.0**	**-1.0**
DAG				pmax	pmax		
	comp=Z,100nm,1.3s,mb5.7						
DAG				MLR	MLR		
	comp=Z,6µm,21.0s,MS5.8						
DAG	**Danmarks Havn**	**67.23**	**347**	⇓*i*P	**P**	**20 17 32.0**	**-1.0**
	comp=Z,103nm,1.3s,mb5.7						
	comp=Z,6µm,21.0s						
WLS	**Welschbruch**	**67.30**	**314**	*e*P	**P**	**20 17 33.9**	**0.0**
HASLI	**Hasliberg**	**67.31**	**312**	⇑*i*P	**P**	**20 17 33.7**	**-0.3**
CDF	**Champ du Feu**	**67.35**	**314**	⇑*i*P	**P**	**20 17 34.1**	**-0.1**
	comp=Z,450nm,1.0s,mb6.1						
CDF	**Champ du Feu**	**67.35**	**314**	⇑*i*P	**P**	**20 17 34.1**	**-0.1**
CDF				pmax	pmax		
	comp=Z,225nm,1.0s,mb6.2						
BALST	**Balsthal**	**67.42**	**313**	⇑*i*P	**P**	**20 17 34.3**	**-0.4**
HGN	**Heimansgroeve**	**67.44**	**317**	⇑*i*P	**P**	**20 17 34.8**	**+0.1**
	comp=Z,125nm,1.3s,mb5.8						
HGN				*e*PP	PP	20 19 59.7	-5.5
HGN				*e*S	S	20 26 32.9	+5.5
HGN				*e*SS	SS	20 30 40.1	-9.2
ECH	**Echery**	**67.48**	**314**	*e*P	**P**	**20 17 34.6**	**-0.5**
BBS	**Basel-Blauen**	**67.50**	**313**	*e*P	**P**	**20 17 34.9**	**-0.3**
BBS	**Basel-Blauen**	**67.50**	**313**	⇑*e*P	**P**	**20 17 34.8**	**-0.4**
MBAR	**Mbarara**	**67.56**	**256**	*e*P	**P**	**20 17 36.0**	**-0.1**
MBAR				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.3						
MBAR				MLR	MLR		
	comp=Z,696nm,20.0s,MS4.9						
MBAR	**Mbarara**	**67.56**	**256**	*e*P	**P**	**20 17 36.0**	**-0.1**
	comp=Z,32nm,1.0s,mb5.3						
MBAR				LR	LR		
	comp=Z,696nm,20.0s,MS4.9						
MOF	**Molkenrain**	**67.62**	**313**	*e*P	**P**	**20 17 36.0**	**+0.1**
MMK	**Mattmark**	**67.65**	**311**	⇑*i*P	**P**	**20 17 36.1**	**-0.1**
WLF	**Walferdange**	**67.66**	**315**	*e*P	**P**	**20 17 36.5**	**+0.4**
WLF				pmax	pmax		
	comp=Z,561nm,1.1s,mb6.5						
WLF	**Walferdange**	**67.66**	**315**	*e*P	**P**	**20 17 36.5**	**+0.4**
	comp=Z,561nm,1.1s,mb6.5						
WIMIS	**Wimmis**	**67.68**	**312**	⇑*i*P	**P**	**20 17 36.2**	**-0.1**
BOURR	**Bourrignon**	**67.70**	**313**	⇑*i*P	**P**	**20 17 36.2**	**-0.2**
LKBD	**Leukerbad**	**67.77**	**312**	⇑*i*P	**P**	**20 17 36.8**	**-0.1**
HINF	**Hinteralfeld**	**67.81**	**313**	⇑*i*P	**P**	**20 17 36.7**	**-0.4**
	comp=Z,132nm,0.8s,mb5.7						
HINF	**Hinteralfeld**	**67.81**	**313**	⇑*i*P	**P**	**20 17 36.7**	**-0.4**
HINF				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.7						
LOMF	**Lomont**	**67.97**	**313**	*e*P	**P**	**20 17 37.7**	**-0.4**
SENIN	**Lac Senin**	**67.99**	**312**	⇑*i*P	**P**	**20 17 38.4**	**+0.1**
DIX	**Grande Dixence**	**68.01**	**311**	⇑*i*P	**P**	**20 17 39.1**	**+0.7**
HAU	**Haudompre**	**68.07**	**314**	⇑*i*P	**P**	**20 17 38.4**	**-0.3**
	comp=Z,318nm,1.3s,mb5.9						
HAU				*e*R			
	comp=Z,7µm,21.6s						
HAU	**Haudompre**	**68.07**	**314**	⇑*i*P	**P**	**20 17 38.4**	**-0.3**
HAU				pmax	pmax		
	comp=Z,159nm,1.3s,mb5.9						
HAU				MLR	MLR		
	comp=Z,7µm,21.5s,MS5.8						
TORNY	**Torny**	**68.08**	**312**	⇑*i*P	**P**	**20 17 38.8**	**0.0**
PGF	**Pioggiola**	**68.10**	**307**	⇑*i*P	**P**	**20 17 38.8**	**-0.2**
	comp=Z,374nm,1.1s,mb6.0						
PGF	**Pioggiola**	**68.10**	**307**	⇑*i*P	**P**	**20 17 38.8**	**-0.2**
PGF				pmax	pmax		
	comp=Z,187nm,1.1s,mb6.0						
GRYON	**Gryon**	**68.15**	**312**	⇑*i*P	**P**	**20 17 39.3**	**0.0**
AIGLE	**Aigle**	**68.22**	**312**	⇑*i*P	**P**	**20 17 39.6**	**-0.1**
THEF	**They Montfort**	**68.22**	**314**	*e*P	**P**	**20 17 39.8**	**+0.1**
SALAN	**Lac Salanfe**	**68.28**	**312**	⇑*i*P	**P**	**20 17 40.2**	**+0.2**
GIVF	**Givet**	**68.33**	**316**	⇑*i*P	**P**	**20 17 40.5**	**+0.2**
	comp=Z,282nm,1.0s,mb6.0						
GIVF	**Givet**	**68.33**	**316**	⇑*i*P	**P**	**20 17 40.5**	**+0.2**
GIVF				pmax	pmax		
	comp=Z,141nm,1.0s,mb6.0						
BRANT	**Les Verrieres**	**68.34**	**313**	⇑*i*P	**P**	**20 17 40.3**	**-0.1**
EMV	**Vieux Emosson**	**68.35**	**312**	⇑*i*P	**P**	**20 17 40.8**	**+0.3**
OG01	**Vacheresse**	**68.40**	**312**	*e*P	**P**	**20 17 41.4**	**+0.6**
GIMEL	**Gimel**	**68.61**	**312**	⇑*i*P	**P**	**20 17 42.1**	**0.0**
SAOF	**Saorge**	**68.61**	**309**	*e*P	**P**	**20 17 42.3**	**+0.2**
LPG	**La Plagne**	**68.64**	**311**	⇑*i*P	**P**	**20 17 42.9**	**+0.6**
	comp=Z,595nm,0.9s,mb6.2						
LPG	**La Plagne**	**68.64**	**311**	⇑*i*P	**P**	**20 17 42.9**	**+0.6**
LPG				pmax	pmax		
	comp=Z,297nm,0.9s,mb6.2						
LPL	**La Plagne**	**68.64**	**311**	⇑*i*P	**P**	**20 17 42.9**	**+0.6**
	comp=Z,819nm,1.0s,mb6.3						
LPL	**La Plagne**	**68.64**	**311**	⇑*i*P	**P**	**20 17 42.9**	**+0.6**
LPL				pmax	pmax		
	comp=Z,410nm,1.0s,mb6.3						
RSL	**Roselend**	**68.66**	**311**	*e*P	**P**	**20 17 42.6**	**+0.2**
AUTN	**L'Aution**	**68.69**	**309**	*e*P	**P**	**20 17 44.2**	**+1.5**
CABF	**La Chapelle**	**68.70**	**312**	⇑*i*P	**P**	**20 17 42.5**	**-0.1**
	comp=Z,229nm,1.0s,mb5.7						
CABF	**La Chapelle**	**68.70**	**312**	⇑*i*P	**P**	**20 17 42.5**	**-0.1**
CABF				pmax	pmax		
	comp=Z,115nm,1.0s,mb5.8						
BAIF	**Baives**	**68.72**	**316**	⇑*i*P	**P**	**20 17 42.9**	**+0.2**
	comp=Z,389nm,1.3s,mb5.9						
BAIF	**Baives**	**68.72**	**316**	⇑*i*P	**P**	**20 17 42.9**	**+0.2**
BAIF				pmax	pmax		
	comp=Z,194nm,1.3s,mb5.9						
MEZF	**Maizieres J'vi**	**68.72**	**314**	⇑*i*P	**P**	**20 17 43.0**	**+0.2**
	comp=Z,691nm,1.0s,mb6.3						
SBF	**Sospel**	**68.73**	**309**	⇑*i*P	**P**	**20 17 42.8**	**-0.1**
	comp=Z,512nm,0.8s,mb6.2						
SBF	**Sospel**	**68.73**	**309**	⇑*i*P	**P**	**20 17 42.8**	**-0.1**
SBF				pmax	pmax		
	comp=Z,256nm,0.8s,mb6.2						
OG22	**Abries**	**68.74**	**310**	*e*P	**P**	**20 17 42.8**	**-0.1**
TOUF	**Mont Tournerai**	**68.81**	**309**	*e*P	**P**	**20 17 43.5**	**+0.1**
REVF	**Revere**	**68.82**	**309**	*e*P	**P**	**20 17 43.3**	**-0.1**
BNI	**Bardonecchia**	**68.84**	**311**	*e*P	**P**	**20 17 42.1**	**-1.4**
BNI				pmax	pmax		
	comp=Z,102nm,0.9s,mb5.8						
BNI	**Bardonecchia**	**68.84**	**311**	*e*P	**P**	**20 17 42.1**	**-1.4**
	comp=Z,102nm,0.9s,mb5.8						
VSL	**Villasalto**	**68.86**	**304**	*e*P	**P**	**20 17 43.0**	**-0.8**
	comp=Z,238nm,1.4s,mb5.9						
MBDF	**Montbardon**	**68.89**	**310**	⇑*i*P	**P**	**20 17 43.2**	**-0.6**
	comp=Z,305nm,0.8s,mb6.0						
MBDF	**Montbardon**	**68.89**	**310**	⇑*i*P	**P**	**20 17 43.2**	**-0.6**
MBDF				pmax	pmax		
	comp=Z,153nm,0.8s,mb6.0						
MVIF	**Mont Vial**	**68.91**	**309**	*e*P	**P**	**20 17 44.3**	**+0.3**
SURF	**Saint Ours**	**68.94**	**310**	*e*P	**P**	**20 17 44.5**	**+0.3**
CALN	**Calern**	**69.14**	**309**	*e*P	**P**	**20 17 45.5**	**+0.1**
GDM	**Grand'Maison**	**69.16**	**311**	*e*P	**P**	**20 17 45.8**	**+0.3**
FRF	**La Foret Royal**	**69.37**	**309**	⇑*i*P	**P**	**20 17 46.5**	**-0.3**
	comp=Z,382nm,1.2s,mb5.9						
FRF	**La Foret Royal**	**69.37**	**309**	⇑*i*P	**P**	**20 17 46.5**	**-0.3**
FRF				pmax	pmax		
	comp=Z,191nm,1.2s,mb5.9						
GRN	**Grenoble**	**69.39**	**311**	*e*P	**P**	**20 17 47.7**	**+0.8**
ORIF	**Oris-en-Rattie**	**69.41**	**311**	⇑*i*P	**P**	**20 17 46.9**	**-0.2**
	comp=Z,247nm,0.8s,mb5.9						
ORIF				*e*R			
	comp=Z,8µm,20.5s						
OG25	**Le Caire**	**69.48**	**310**	*e*P	**P**	**20 17 47.3**	**-0.2**
LMR	**La Mourre**	**69.55**	**309**	⇑*i*P	**P**	**20 17 47.8**	**-0.1**
	comp=Z,445nm,1.2s,mb6.0						
LMR	**La Mourre**	**69.55**	**309**	⇑*i*P	**P**	**20 17 47.8**	**-0.1**
LMR				pmax	pmax		
	comp=Z,222nm,1.2s,mb6.0						
CTA	**Charters Tower**	**69.65**	**128**	*e*P	**P**	**20 17 48.2**	**-0.7**
CTA	**Charters Tower**	**69.65**	**128**	P	**P**	**20 17 48.9**	**0.0**
CTA				pmax	pmax		
	comp=Z,35nm,1.0s						
CTA	**Charters Tower**	**69.65**	**128**	P	**P**	**20 17 48.9**	**0.0**
	comp=Z,35nm,1.0s,mb5.3,baz=318,slow=7.0,SNR=13						
CTAO	**Charters Tower**	**69.65**	**128**	*e*P	**P**	**20 17 48.6**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,64nm,1.1s,mb5.5						
CTAO				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
CTAO	**Charters Tower**	**69.65**	**128**	*e*P	**P**	**20 17 48.6**	**-0.3**
	comp=Z,64nm,1.1s,mb5.5						
CTAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
STOF	**St-Etienne Org**	**69.72**	**310**	*e*P	**P**	**20 17 49.7**	**+0.8**
TAVF	**Tavernes**	**69.75**	**309**	*e*P	**P**	**20 17 49.7**	**+0.5**
LOR	**Lormes**	**69.90**	**314**	⇑*i*P	**P**	**20 17 49.6**	**-0.4**
	comp=Z,221nm,0.9s,mb5.8						
LOR				*e*R			
	comp=Z,6µm,21.0s						
LOR	**Lormes**	**69.90**	**314**	⇑*i*P	**P**	**20 17 49.6**	**-0.4**
LOR				pmax	pmax		
	comp=Z,110nm,0.9s,mb5.8						
LOR				MLR	MLR		
	comp=Z,6µm,21.0s,MS5.8						
VILF	**Villemus**	**69.90**	**310**	*e*P	**P**	**20 17 50.9**	**+0.8**
OCF	**Saint Nazaire**	**69.92**	**310**	*e*P	**P**	**20 17 50.8**	**+0.7**
OG26	**St.-Nazaire-De**	**69.92**	**310**	*e*P	**P**	**20 17 50.8**	**+0.7**
SMRF	**Simiane la Rot**	**69.95**	**310**	⇑*i*P	**P**	**20 17 50.7**	**+0.3**
	comp=Z,321nm,1.1s,mb5.9						
PUYF	**Puyloubier**	**70.03**	**309**	*e*P	**P**	**20 17 51.6**	**+0.8**
BERF	**Bertagne**	**70.11**	**309**	*e*P	**P**	**20 17 52.0**	**+0.7**
SMF	**Signal de Mont**	**70.14**	**313**	⇑*i*P	**P**	**20 17 51.3**	**-0.1**
	comp=Z,505nm,0.9s,mb6.1						
SMF	**Signal de Mont**	**70.14**	**313**	⇑*i*P	**P**	**20 17 51.3**	**-0.1**
SMF				pmax	pmax		
	comp=Z,253nm,0.9s,mb6.2						
LMK	**Market Rasen**	**70.15**	**321**	⇑*e*P	**P**	**20 17 52.0**	**+0.6**
SSF	**Saint Saulge**	**70.20**	**313**	⇑*i*P	**P**	**20 17 51.8**	**0.0**
SSF				pmax	pmax		
	comp=Z,262nm,0.9s,mb6.2						
SSF	**Saint Saulge**	**70.20**	**313**	⇑*i*P	**P**	**20 17 51.8**	**0.0**
	comp=Z,262nm,0.9s,mb6.2						
TREF	**Trevaresse**	**70.21**	**309**	*e*P	**P**	**20 17 52.7**	**+0.8**
VIVF	**Saint-Julien-l**	**70.24**	**311**	⇑*i*P	**P**	**20 17 52.2**	**+0.1**
	comp=Z,440nm,1.1s,mb6.0						
VIVF	**Saint-Julien-l**	**70.24**	**311**	⇑*i*P	**P**	**20 17 52.2**	**+0.1**
VIVF				pmax	pmax		
	comp=Z,220nm,1.1s,mb6.0						
GELF	**Grande-Etoile**	**70.26**	**309**	*e*P	**P**	**20 17 52.7**	**+0.4**
PRAF	**Pradon**	**70.29**	**310**	*e*P	**P**	**20 17 53.2**	**+0.8**
AVF	**Avril sur Loir**	**70.40**	**313**	⇑*i*P	**P**	**20 17 52.9**	**-0.1**
	comp=Z,553nm,1.1s,mb6.1						
AVF	**Avril sur Loir**	**70.40**	**313**	⇑*i*P	**P**	**20 17 52.9**	**-0.1**
AVF				pmax	pmax		
	comp=Z,277nm,1.1s,mb6.1						
COLF	**Collangettes**	**70.64**	**312**	*e*P	**P**	**20 17 55.0**	**+0.5**
HYF	**Humbligny**	**70.67**	**314**	⇑*i*P	**P**	**20 17 55.3**	**+0.6**
	comp=Z,2µm,0.9s,mb6.7						
EDI	**Edinburgh**	**70.75**	**324**	⇑*e*P	**P**	**20 17 54.8**	**-0.2**
BGF	**Bois d'Agland**	**70.81**	**313**	⇑*i*P	**P**	**20 17 55.4**	**-0.1**
	comp=Z,149nm,0.8s,mb5.7						
BGF	**Bois d'Agland**	**70.81**	**313**	⇑*i*P	**P**	**20 17 55.4**	**-0.1**
BGF				pmax	pmax		
	comp=Z,75nm,0.8s,mb5.7						
KBI1	**Birley Grange**	**70.90**	**321**	⇑*e*P	**P**	**20 17 56.7**	**+0.8**
REB	**Eisghbrachaidh**	**70.93**	**326**	*e*P	**P**	**20 17 56.9**	**+0.8**
LHO	**Holmfirth**	**70.97**	**321**	⇑*e*P	**P**	**20 17 56.6**	**+0.3**
EKA	**Eskdalemuir Ar**	**70.97**	**323**	P	**P**	**20 17 56.7**	**+0.3**
	comp=Z,48nm,0.8s,mb5.5,baz=66,slow=6.3,SNR=71						
EKA				PP	PP	20 20 28.8	-7.0
	comp=Z,13nm,0.9s,baz=74,slow=9.2,SNR=3.6						
KWAJ	**Kwajalein Atol**	**70.97**	**90**	PFAKE		20 18 10.0	+13
KWAJ				LR	LR		
	comp=Z,410nm,19.0s,MS4.7						
ESK	**Eskdalemuir**	**71.00**	**323**	*e*P	**P**	**20 17 56.2**	**-0.3**
ESK				pmax	pmax		
	comp=Z,72nm,0.9s,mb5.6						
ESK				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.3						
ESK	**Eskdalemuir**	**71.00**	**323**	*e*P	**P**	**20 17 56.2**	**-0.3**
	comp=Z,72nm,0.9s,mb5.6						
ESK				LR	LR		
	comp=Z,2µm,21.0s,MS5.3						
ESK	**Eskdalemuir**	**71.00**	**323**	⇑*i*P	**P**	**20 17 56.6**	**+0.1**
ESK				AMb	AMB	20 18 00.3	
	comp=Z,145nm,1.5s,mb5.7						
ECK	**Cauldkaine Hil**	**71.01**	**323**	⇑*e*P	**P**	**20 17 56.2**	**-0.4**
ECK				AMb	AMB	20 17 59.4	
	comp=Z,123nm,2.0s,mb5.5						
LASF	**Ste Croix**	**71.07**	**310**	⇑*i*P	**P**	**20 17 57.6**	**+0.4**
	comp=Z,523nm,1.0s,mb6.1						
KWE	**Weaver Farm**	**71.17**	**321**	⇑*e*P	**P**	**20 17 57.5**	**-0.1**
TCF	**Toulx Ste Croi**	**71.31**	**313**	⇑*i*P	**P**	**20 17 59.1**	**+0.5**
	comp=Z,319nm,0.8s,mb6.0						
TCF	**Toulx Ste Croi**	**71.31**	**313**	⇑*i*P	**P**	**20 17 59.1**	**+0.5**
TCF				pmax	pmax		
	comp=Z,160nm,0.8s,mb6.0						
SCO	**Scoresbysund**	**71.34**	**341**	*i* P	**P**	**20 17 58.9**	**+0.6**
SCO				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
SCO	**Scoresbysund**	**71.34**	**341**	*i* P	**P**	**20 17 58.9**	**+0.6**
	comp=Z,19nm,0.9s,mb5.0						
CMAH	**Djebel Manchou**	**71.35**	**302**	P	**P**	**20 18 04.5**	**+5.5**
ABSA	**Djebel Ababsia**	**71.44**	**302**	P	**P**	**20 18 04.0**	**+4.5**
RRH	**Rhenigidale**	**71.69**	**327**	⇑*e*P	**P**	**20 18 01.2**	**+0.6**
CAF	**Calviac**	**71.93**	**312**	⇑*i*P	**P**	**20 18 03.0**	**+0.7**
	comp=Z,456nm,1.0s,mb6.0						
CAF	**Calviac**	**71.93**	**312**	⇑*i*P	**P**	**20 18 03.0**	**+0.7**
CAF				pmax	pmax		
	comp=Z,228nm,1.0s,mb6.1						
HLM1	**Long Mynd**	**71.94**	**320**	⇑*e*P	**P**	**20 18 02.6**	**+0.4**
HLM1				AMb	AMB	20 18 05.6	
	comp=Z,318nm,1.5s,mb6.0						
HAE	**Alders End**	**71.95**	**320**	⇑*e*P	**P**	**20 18 02.6**	**+0.3**
HAE				AMb	AMB	20 18 05.5	
	comp=Z,549nm,1.4s,mb6.3						
CKFL	**Kef-Lekhel**	**71.96**	**302**	P	**P**	**20 18 03.0**	**+0.4**
GAL1	**Galloway**	**71.97**	**323**	*e*P	**P**	**20 18 02.8**	**+0.4**
SBD1	**Bryn Du**	**72.00**	**321**	⇑*e*P	**P**	**20 18 03.2**	**+0.7**
FLN	**La Foliniere**	**72.04**	**316**	⇑*i*P	**P**	**20 18 03.0**	**+0.1**
	comp=Z,321nm,1.1s,mb5.9						
FLN				*e*R			
	comp=Z,5µm,18.8s						
FLN	**La Foliniere**	**72.04**	**316**	⇑*i*P	**P**	**20 18 03.0**	**+0.1**
FLN				pmax	pmax		
	comp=Z,160nm,1.1s,mb5.9						
FLN				MLR	MLR		
	comp=Z,5µm,18.8s,MS5.8						
SSP1	**Stoney Pound**	**72.11**	**320**	⇑*e*P	**P**	**20 18 03.1**	**-0.2**
RJF	**Les Rejaudoux**	**72.14**	**312**	⇑*i*P	**P**	**20 18 04.4**	**+0.8**
	comp=Z,776nm,1.1s,mb6.2						
RJF				*e*R			
	comp=Z,4µm,19.0s						
RJF	**Les Rejaudoux**	**72.14**	**312**	⇑*i*P	**P**	**20 18 04.4**	**+0.8**
RJF				pmax	pmax		
	comp=Z,388nm,1.1s,mb6.2						
RJF				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.7						
CASM	**Ain Smara**	**72.18**	**302**	P	**P**	**20 18 04.5**	**+0.5**
UNV	**Unalaska Valle**	**72.19**	**38**	PFAKE		20 18 20.0	+16
UNV				LR	LR		
	comp=Z,6µm,19.0s,MS5.9						
WPM1	**Penmaenmawr**	**72.21**	**321**	⇑*e*P	**P**	**20 18 04.3**	**+0.5**
WPM1				AMb	AMB	20 18 07.7	
	comp=Z,203nm,1.9s,mb5.7						
MCH1	**Michaelchurch**	**72.22**	**320**	⇑*e*P	**P**	**20 18 04.0**	**+0.2**
IMA	**Indian Mountai**	**72.22**	**23**	*e*P	**P**	**20 18 04.2**	**+0.5**
IMA				pmax	pmax		
	comp=Z,810nm,1.5s,mb6.4						
IMA	**Indian Mountai**	**72.22**	**23**	*e*P	**P**	**20 18 04.0**	**+0.3**
GMK	**Mull of Kintyr**	**72.23**	**324**	⇑*e*P	**P**	**20 18 04.2**	**+0.3**
WIM	**Isle of Man**	**72.25**	**322**	⇑*e*P	**P**	**20 18 04.5**	**+0.4**
WIM				AMb	AMB	20 18 07.5	
	comp=Z,256nm,1.5s,mb5.9						
HGH	**Gray Hill**	**72.26**	**320**	⇑*e*P	**P**	**20 18 04.4**	**+0.3**
HGH				AMb	AMB	20 18 07.8	
	comp=Z,416nm,1.5s,mb6.1						
CTEI	**Djebel Teioual**	**72.32**	**302**	P	**P**	**20 18 05.5**	**+0.7**
SJAF	**Saint Jean de**	**72.33**	**309**	*e*P	**P**	**20 18 04.3**	**-0.4**
HTR	**Trewern Hill**	**72.34**	**320**	⇑*e*P	**P**	**20 18 05.0**	**+0.5**
HTR				AMb	AMB	20 18 07.9	
	comp=Z,421nm,1.4s,mb6.2						
EJON	**La Jonquera**	**72.34**	**309**	P	**P**	**20 18 05.0**	**+0.1**
	comp=Z,116nm,1.2s,mb5.7						
LRDF	**Laroque-de-Fa**	**72.39**	**310**	*e*P	**P**	**20 18 05.3**	**+0.2**
GRR	**Gorron**	**72.42**	**316**	⇑*i*P	**P**	**20 18 05.3**	**+0.2**
	comp=Z,472nm,1.0s,mb6.1						
GRR	**Gorron**	**72.42**	**316**	⇑*i*P	**P**	**20 18 05.3**	**+0.2**
GRR				pmax	pmax		
	comp=Z,236nm,1.0s,mb6.1						
MTLF	**Montolieu**	**72.45**	**310**	⇑*i*P	**P**	**20 18 05.8**	**+0.4**
	comp=Z,397nm,1.1s,mb6.0						
MTLF	**Montolieu**	**72.45**	**310**	⇑*i*P	**P**	**20 18 05.8**	**+0.4**
MTLF				pmax	pmax		
	comp=Z,199nm,1.1s,mb6.0						
WLF1	**Llynfaes**	**72.46**	**322**	⇑*e*P	**P**	**20 18 05.9**	**+0.6**
WLF1				AMb	AMB	20 18 08.7	
	comp=Z,188nm,1.2s,mb5.9						
WCB1	**Church Bay**	**72.51**	**322**	*e*P	**P**	**20 18 05.8**	**+0.3**
FILF	**Fillols**	**72.52**	**309**	*e*P	**P**	**20 18 06.4**	**+0.5**
DFRA	**Djebel Bou Aff**	**72.53**	**302**	P	**P**	**20 18 07.0**	**+1.0**
YRC	**Rhoscolyn**	**72.58**	**322**	⇑*e*P	**P**	**20 18 06.6**	**+0.6**
YRC				AMb	AMB	20 18 09.4	
	comp=Z,188nm,1.4s,mb5.8						
YRE	**Yr Eifl**	**72.61**	**321**	⇑*e*P	**P**	**20 18 06.7**	**+0.6**
YRE				AMb	AMB	20 18 10.3	
	comp=Z,283nm,1.8s,mb5.9						
GCL	**Cushendall**	**72.63**	**324**	⇑*e*P	**P**	**20 18 06.6**	**+0.4**
MFF	**Saint Martin d**	**72.69**	**314**	⇑*i*P	**P**	**20 18 07.0**	**+0.2**
	comp=Z,179nm,0.9s,mb5.7						
MFF	**Saint Martin d**	**72.69**	**314**	⇑*i*P	**P**	**20 18 07.0**	**+0.2**
MFF				pmax	pmax		
	comp=Z,90nm,0.9s,mb5.7						
LFF	**La Frestale**	**72.79**	**312**	⇑*i*P	**P**	**20 18 08.1**	**+0.7**
CMER	**Merouana**	**72.87**	**302**	P	**P**	**20 18 10.0**	**+1.9**
GMM	**Mts of Mourne**	**72.89**	**323**	⇑*e*P	**P**	**20 18 07.8**	**+0.1**
TTA	**Tatalina**	**72.95**	**27**	*e*P	**P**	**20 18 08.7**	**+0.7**
VALF	**Valcebollere**	**72.95**	**309**	*e*P	**P**	**20 18 09.3**	**+0.9**
HSA	**Swansea**	**72.97**	**320**	⇑*e*P	**P**	**20 18 08.9**	**+0.6**
CKHR	**Kef el Ahmar**	**73.00**	**302**	P	**P**	**20 18 09.0**	**+0.2**
SET	**Setif**	**73.02**	**302**	P	**P**	**20 18 09.0**	**+0.1**
LCHF	**La Chataignera**	**73.04**	**314**	*e*P	**P**	**20 18 09.3**	**+0.5**
HEX	**Exmoor**	**73.06**	**319**	⇑*e*P	**P**	**20 18 08.7**	**-0.2**
HPE	**Pembroke**	**73.24**	**320**	⇑*e*P	**P**	**20 18 10.5**	**+0.6**
MLS	**Moulis**	**73.35**	**310**	*e*P	**P**	**20 18 10.7**	**0.0**
ETOS	**Mallorca**	**73.46**	**307**	P	**P**	**20 18 12.4**	**+1.0**
	comp=Z,485nm,1.6s,mb6.2						
HTL	**Hartland**	**73.48**	**319**	⇑*e*P	**P**	**20 18 11.9**	**+0.7**
EMIR	**Miracle**	**73.49**	**309**	P	**P**	**20 18 12.2**	**+0.7**
	comp=Z,417nm,0.8s,mb6.4						
SGMF	**Saint Gilles**	**73.51**	**316**	⇑*i*P	**P**	**20 18 12.1**	**+0.6**
	comp=Z,199nm,0.8s,mb5.8						
SGMF	**Saint Gilles**	**73.51**	**316**	⇑*i*P	**P**	**20 18 12.1**	**+0.6**
SGMF				pmax	pmax		
	comp=Z,100nm,0.8s,mb5.8						
HNR	**Honiara**	**73.57**	**111**	PFAKE		20 18 20.0	+7.5
HNR				LR	LR		
	comp=Z,924nm,21.0s,MS5.0						
LRYF	**La Roche-sur-Y**	**73.58**	**314**	*e*P	**P**	**20 18 12.5**	**+0.5**
MELF	**Melles**	**73.61**	**310**	*e*P	**P**	**20 18 12.1**	**-0.1**
DLF	**Lyons Farm**	**73.62**	**322**	⇑*i*P	**P**	**20 18 12.8**	**+0.8**

EPF	**Esparros**	**73.83**	**310**⇑	*i*P	**P**	**20 18 13.2**	**-0.3**
	comp=Z,61nm,0.9s,mb5.2						
EPF	**Esparros**	**73.83**	**310**⇑	*i*P	**P**	**20 18 13.2**	**-0.3**
EPF				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
ROSF	**Rostrenen**	**73.91**	**317**⇑	*i*P	**P**	**20 18 14.5**	**+0.7**
	comp=Z,485nm,1.1s,mb6.0						
ROSF	**Rostrenen**	**73.91**	**317**⇑	*i*P	**P**	**20 18 14.5**	**+0.7**
ROSF				pmax	pmax		
	comp=Z,243nm,1.1s,mb6.0						
RESF	**Ens**	**73.92**	**310**	*e*P	**P**	**20 18 15.0**	**+1.0**
DCN	**Croghan**	**74.00**	**322**⇑	*i*P	**P**	**20 18 15.4**	**+1.2**
LABF	**Labassere**	**74.00**	**311**	*e*P	**P**	**20 18 15.4**	**+1.0**
EPOB	**Poblet**	**74.02**	**309**	P	**P**	**20 18 14.9**	**+0.4**
	comp=Z,317nm,1.0s,mb6.2						
QUIF	**Quistinic**	**74.02**	**316**⇑	*i*P	**P**	**20 18 14.7**	**+0.2**
	comp=Z,310nm,1.3s,mb5.8						
QUIF	**Quistinic**	**74.02**	**316**⇑	*i*P	**P**	**20 18 14.7**	**+0.2**
QUIF				pmax	pmax		
	comp=Z,155nm,1.3s,mb5.8						
SVW2	**Sparrevohn**	**74.06**	**28**	*e*P	**P**	**20 18 15.3**	**+0.9**
VIEF	**Viey**	**74.10**	**310**	*e*P	**P**	**20 18 16.1**	**+1.1**
EBIE	**Bielsa**	**74.10**	**310**	P	**P**	**20 18 15.8**	**+0.7**
	comp=Z,385nm,1.7s,mb6.1						
EGRA	**Graus**	**74.19**	**310**	P	**P**	**20 18 16.4**	**+0.8**
	comp=Z,251nm,0.7s,mb6.2						
CRQ2	**Rosemanowes 2**	**74.23**	**319**⇑	*e*P	**P**	**20 18 16.3**	**+0.6**
CMA1	**Manaccan**	**74.25**	**319**⇑	*e*P	**P**	**20 18 16.4**	**+0.7**
CCA1	**Carnmenellis**	**74.26**	**319**⇑	*e*P	**P**	**20 18 16.4**	**+0.6**
CGH1	**Goonhilly**	**74.28**	**319**⇑	*e*P	**P**	**20 18 16.4**	**+0.5**
CGW	**Gweek**	**74.30**	**319**⇑	*e*P	**P**	**20 18 16.5**	**+0.5**
REYF	**Montagne du Re**	**74.30**	**311**	*e*P	**P**	**20 18 17.8**	**+1.6**
CPZ	**Penzance**	**74.48**	**319**⇑	*e*P	**P**	**20 18 17.6**	**+0.5**
CPZ				AMb	AMB	20 18 20.4	
	comp=Z,133nm,1.6s,mb5.6						
ETSF	**Etsaut**	**74.48**	**311**⇑	*i*P	**P**	**20 18 18.2**	**+0.9**
	comp=Z,310nm,0.7s,mb6.0						
ETSF	**Etsaut**	**74.48**	**311**⇑	*i*P	**P**	**20 18 18.2**	**+0.9**
ETSF				pmax	pmax		
	comp=Z,155nm,0.7s,mb6.0						
ABA	**Alger-Bouzarea**	**74.51**	**304**	P	**P**	**20 18 19.0**	**+1.5**
FDAF	**Les Forges d'A**	**74.52**	**311**	*e*P	**P**	**20 18 18.7**	**+1.2**
ORDF	**Ordiarp**	**74.60**	**311**	*e*P	**P**	**20 18 18.3**	**+0.4**
EBR	**Ebro Roquetas**	**74.64**	**308**	*e*P	**P**	**20 18 19.0**	**+0.8**
ERTA	**Horta de San J**	**74.70**	**308**	P	**P**	**20 18 18.9**	**+0.4**
	comp=Z,339nm,1.0s,mb6.2						
LARF	**Larrau**	**74.71**	**311**	*e*P	**P**	**20 18 19.6**	**+1.0**
OSSF	**Osses**	**74.80**	**311**	*e*P	**P**	**20 18 19.4**	**+0.3**
EMHD	**Djebel Mahouad**	**74.82**	**303**	P	**P**	**20 18 21.0**	**+1.6**
SJPF	**Ste Jean**	**74.84**	**311**⇑	*i*P	**P**	**20 18 19.8**	**+0.5**
	comp=Z,155nm,0.8s,mb5.7						
SJPF	**Ste Jean**	**74.84**	**311**⇑	*i*P	**P**	**20 18 19.8**	**+0.5**
SJPF				pmax	pmax		
	comp=Z,77nm,0.8s,mb5.7						
COLA	**College**	**74.91**	**23**	*e*P	**P**	**20 18 19.9**	**+0.6**
COLA				MLR	MLR		
	comp=Z,6µm,19.0s,MS5.9						
ESAC	**San Caprasio**	**74.92**	**309**	P	**P**	**20 18 20.4**	**+0.6**
	comp=Z,463nm,0.9s,mb6.4						
EALK	**Alkurruntz**	**74.98**	**311**	P	**P**	**20 18 21.1**	**+1.0**
	comp=Z,284nm,1.2s,mb6.1						
ELIZ	**Elizondo**	**75.02**	**311**	P	**P**	**20 18 21.5**	**+1.2**
ELIZ				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.4						
ELIZ	**Elizondo**	**75.02**	**311**	P	**P**	**20 18 21.5**	**+1.2**
	comp=Z,51nm,1.0s,mb5.4						
STKA	**Stephens Creek**	**75.11**	**140**⇓	*i*P	**P**	**20 18 21.3**	**+0.2**
STKA	**Stephens Creek**	**75.11**	**140**	P	**P**	**20 18 21.4**	**+0.3**
	comp=Z,14nm,0.8s,mb4.9,baz=325,slow=7.6,SNR=26						
STKA				LR	LR	20 58 02.0	
	comp=Z,2µm,20.1s,MS5.4,baz=288,slow=41						
ILAR	**Eielson Array**	**75.30**	**23**	P	**P**	**20 18 20.9**	**-0.7**
	comp=Z,58nm,0.9s,mb5.5,baz=296,slow=7.0,SNR=216						
ILAR				PP	PP	20 21 11.1	-1.2
	comp=Z,17nm,1.1s,baz=299,slow=7.1,SNR=4.8						
ILAR				LR	LR	20 54 36.4	
	comp=Z,5µm,19.3s,MS5.8,baz=329,slow=38						
SPU	**Mount Spurr**	**75.46**	**27**	*e*P	**P**	**20 18 22.3**	**-0.2**
SPU				*e*PP	PP	20 21 10.0	-3.6
EMOS	**Mosqueruela**	**75.50**	**308**	P	**P**	**20 18 24.5**	**+1.3**
	comp=Z,442nm,0.9s,mb6.4						
EBNR	**Beni Rached**	**75.83**	**304**	P	**P**	**20 18 27.0**	**+1.9**
ADE	**Adelaide**	**75.90**	**144**	P	**P**	**20 18 26.7**	**+1.2**
ECRI	**Cripan**	**75.91**	**311**	P	**P**	**20 18 27.0**	**+1.6**
ECRI				pmax	pmax		
	comp=Z,142nm,0.8s,mb6.0						
ECRI	**Cripan**	**75.91**	**311**	P	**P**	**20 18 27.0**	**+1.6**
	comp=Z,142nm,0.8s,mb6.0						
ECHA	**Ech Chlef**	**76.01**	**304**	P	**P**	**20 18 28.0**	**+1.9**
ECHF	**Ech Chlef**	**76.02**	**304**	P	**P**	**20 18 28.0**	**+1.8**
EBEN	**Beniarda**	**76.05**	**307**	P	**P**	**20 18 27.6**	**+1.3**
	comp=Z,328nm,1.7s,mb6.0						
PWA	**Palmer West**	**76.06**	**26**	*e*P	**P**	**20 18 26.0**	**+0.1**
ECHE	**Chera**	**76.18**	**308**	P	**P**	**20 18 28.5**	**+1.5**
ECHE				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.7						
ECHE	**Chera**	**76.18**	**308**	P	**P**	**20 18 28.5**	**+1.5**
	comp=Z,74nm,0.8s,mb5.7						
FIB	**Fire Island**	**76.22**	**27**	P	**P**	**20 18 26.7**	**-0.1**
EANR	**'Ain N'Sour**	**76.29**	**304**	P	**P**	**20 18 29.5**	**+1.8**
ETRT	**Tiaret**	**76.38**	**303**	P	**P**	**20 18 30.5**	**+2.3**
PMR	**Palmer**	**76.38**	**26**	*e*P	**P**	**20 18 27.8**	**+0.1**
RES	**Resolute Bay**	**76.56**	**3**	*e*P	**P**	**20 18 28.7**	**+0.2**
RES				pmax	pmax		
	comp=Z,117nm,1.3s,mb5.7						
RES	**Resolute Bay**	**76.56**	**3**	*e*P	**P**	**20 18 28.7**	**+0.2**
	comp=Z,117nm,1.3s,mb5.7						
SLKM	**Skilak Lake**	**76.59**	**27**	*e*P	**P**	**20 18 27.7**	**-1.1**
ETOB	**Tobarra**	**77.00**	**307**	P	**P**	**20 18 32.8**	**+1.2**
	comp=Z,247nm,1.1s,mb6.0						
CART	**Cartagena**	**77.09**	**306**	*e*P	**P**	**20 18 32.1**	**0.0**
	comp=Z,273nm,1.4s,mb6.0						
KDAK	**Kodiak Island**	**77.14**	**30**	*e*P	**P**	**20 18 31.7**	**-0.3**
KDAK				LR	LR		
	comp=Z,7µm,17.0s,MS6.1						
EMUR	**La Murta**	**77.14**	**306**	P	**P**	**20 18 32.0**	**-0.4**
	comp=Z,194nm,1.5s,mb5.8						
EARI	**Arriondas**	**77.36**	**312**	P	**P**	**20 18 33.7**	**+0.2**
	comp=Z,495nm,2.0s,mb6.1						
LSZ	**Lusaka**	**77.67**	**245**	*e*P	**P**	**20 18 35.8**	**0.0**
	comp=Z,8.4nm,0.8s						
LSZ				LR	LR		
	comp=Z,3µm,21.0s						
EVIA	**Vianos**	**77.67**	**307**	P	**P**	**20 18 35.7**	**+0.4**
EVIA				pmax	pmax		
	comp=Z,76nm,0.8s,mb5.7						
EVIA	**Vianos**	**77.67**	**307**	P	**P**	**20 18 35.7**	**+0.4**
	comp=Z,76nm,0.8s,mb5.7						
GUD	**Guadarrama**	**77.89**	**310**	P	**P**	**20 18 37.3**	**+0.8**
GUD				pmax	pmax		
	comp=Z,147nm,0.7s,mb6.0						
GUD	**Guadarrama**	**77.89**	**310**	P	**P**	**20 18 37.3**	**+0.8**
	comp=Z,147nm,0.7s,mb6.0						
DIV	**Divide**	**77.95**	**26**	PFAKE		20 18 50.0	+14
DIV				LR	LR		
	comp=Z,16µm,19.0s,MS6.4						
ESDC	**Sonseca Array**	**78.21**	**309**	P	**P**	**20 18 39.2**	**+0.9**
	comp=Z,53nm,0.9s,mb5.5,baz=51,slow=6.2,SNR=100						
ESDC	**Sonseca Array**	**78.21**	**309**	P	**P**	**20 18 38.3**	**+0.1**
	comp=Z,132nm,1.0s,mb5.8						
ENIJ	**Nijar**	**78.22**	**306**	P	**P**	**20 18 39.3**	**+0.9**
ENIJ				pmax	pmax		
	comp=Z,126nm,1.1s,mb5.8						
ENIJ	**Nijar**	**78.22**	**306**	P	**P**	**20 18 39.3**	**+1.0**
	comp=Z,126nm,1.1s,mb5.8						
EQES	**Quesada**	**78.45**	**307**	P	**P**	**20 18 39.6**	**0.0**
	comp=Z,357nm,1.2s,mb6.2						
PAB	**San Pablo**	**78.53**	**309**	P	**P**	**20 18 40.9**	**+0.9**
EPON	**Pontenova**	**78.60**	**313**	P	**P**	**20 18 41.4**	**+1.1**
	comp=Z,461nm,1.6s,mb6.2						
EBER	**Berja**	**78.74**	**306**	P	**P**	**20 18 42.3**	**+1.0**
	comp=Z,144nm,0.9s,mb5.9						
EBAN	**Banos Encina**	**78.79**	**307**	P	**P**	**20 18 42.5**	**+1.0**
EBAN				pmax	pmax		
	comp=Z,57nm,0.8s,mb5.5						
EBAN	**Banos Encina**	**78.79**	**307**	P	**P**	**20 18 42.5**	**+1.0**
	comp=Z,57nm,0.8s,mb5.5						
ECAL	**Calabor**	**79.00**	**312**	P	**P**	**20 18 43.7**	**+1.2**
	comp=Z,229nm,0.9s,mb6.1						
ERUA	**La Rua**	**79.04**	**312**	P	**P**	**20 18 44.3**	**+1.5**
ERUA				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.3						
ERUA	**La Rua**	**79.04**	**312**	P	**P**	**20 18 44.3**	**+1.5**
	comp=Z,34nm,0.8s,mb5.3						
ERON	**Agron**	**79.34**	**306**	P	**P**	**20 18 44.6**	**+0.2**
	comp=Z,35nm,0.8s,mb5.3						
EADA	**Adamuz**	**79.34**	**308**	P	**P**	**20 18 44.6**	**+0.2**
	comp=Z,281nm,1.3s,mb6.0						
ELUQ	**Luque**	**79.41**	**307**	P	**P**	**20 18 45.3**	**+0.5**
ELUQ				pmax	pmax		
	comp=Z,130nm,0.9s,mb5.9						
ELUQ	**Luque**	**79.41**	**307**	P	**P**	**20 18 45.3**	**+0.4**
	comp=Z,130nm,0.9s,mb5.9						
ELOJ	**Sierra Loja**	**79.52**	**307**	P	**P**	**20 18 45.1**	**-0.4**
ELOJ				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
ELOJ	**Sierra Loja**	**79.52**	**307**	P	**P**	**20 18 45.1**	**-0.3**
	comp=Z,16nm,0.7s,mb5.1						
STS	**Santiago**	**79.71**	**313**	P	**P**	**20 18 47.5**	**+1.2**
STS				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.7						
STS	**Santiago**	**79.71**	**313**	P	**P**	**20 18 47.5**	**+1.1**
	comp=Z,74nm,0.8s,mb5.7						
ELOB	**Lobios**	**79.90**	**312**	P	**P**	**20 18 48.3**	**+0.9**
	comp=Z,338nm,1.4s,mb6.1						
EMAZ	**Mazaricos**	**79.95**	**314**	P	**P**	**20 18 48.3**	**+0.6**
	comp=Z,251nm,1.3s,mb6.0						
PVRL	**Vila Real**	**79.96**	**312**	*e*P	**P**	**20 18 49.2**	**+1.5**
	comp=Z,71nm,1.2s,mb5.5						
EZAM	**Zamans**	**80.17**	**313**	P	**P**	**20 18 49.9**	**+1.1**
EZAM				pmax	pmax		
	comp=Z,110nm,0.8s,mb5.8						
EZAM	**Zamans**	**80.17**	**313**	P	**P**	**20 18 49.9**	**+1.1**
	comp=Z,110nm,0.8s,mb5.8						
EMIJ	**Mijas**	**80.23**	**306**	P	**P**	**20 18 48.9**	**-0.4**
	comp=Z,72nm,1.1s,mb5.5						
MTE	**Manteigas**	**80.28**	**311**	*e*P	**P**	**20 18 50.8**	**+1.3**
	comp=Z,191nm,1.8s,mb5.7						
MTE	**Manteigas**	**80.28**	**311**	*e*S	S	20 28 54.2	+2.6
MTE				*e*SS	SS	20 34 09.5	+3.5
MTE	**Manteigas**	**80.28**	**311**	*e*P	**P**	**20 18 50.8**	**+1.4**
	comp=Z,119nm,0.8s,mb5.9						
PVIS	**Viseu**	**80.36**	**311**	*e*P	**P**	**20 18 51.3**	**+1.5**
	comp=Z,134nm,1.5s,mb5.7						
MATP	**Matopo**	**80.37**	**240**	P	**P**	**20 18 50.6**	**+0.3**
	comp=Z,4.0nm,0.5s,baz=48,slow=4.7,SNR=11						
MATP				LR	LR	20 51 09.3	
	comp=Z,3µm,20.7s,baz=107,slow=33						
PCBR	**Castelo Branco**	**80.51**	**310**	*e*P	**P**	**20 18 51.7**	**+1.0**
	comp=Z,120nm,1.6s,mb5.6						
EBAD	**Badajoz**	**80.73**	**309**	P	**P**	**20 18 51.7**	**-0.1**
	comp=Z,269nm,1.2s,mb6.0						
ESPR	**Espera**	**80.85**	**307**	P	**P**	**20 18 53.5**	**+0.9**
	comp=Z,236nm,1.3s,mb6.0						
SFJD	**Kangerlussuaq**	**80.92**	**347**⇑	*i*P	**P**	**20 18 52.3**	**0.0**
SFJD				*i* S	S	20 28 57.2	-0.5
SFJD				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.5						
SFJD				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.8						
SFJD	**Kangerlussuaq**	**80.92**	**347**⇑	*i*P	**P**	**20 18 52.3**	**0.0**
	comp=Z,60nm,0.9s,mb5.5						
SFJD				*i*		20 19 11.5	
SFJD				*i* S	S	20 28 57.2	-0.5
	comp=Z,4µm,18.0s						
EMIN	**Mina Concepcio**	**80.98**	**308**	P	**P**	**20 18 53.8**	**+0.6**
	comp=Z,310nm,1.3s,mb6.1						
PTOM	**Tomar**	**81.25**	**310**	*e*P	**P**	**20 18 56.0**	**+1.4**
	comp=Z,238nm,1.0s,mb6.1						
EGRO	**El Granado**	**81.66**	**308**	P	**P**	**20 18 57.1**	**+0.4**
	comp=Z,386nm,1.6s,mb6.1						
PBEJ	**Beja**	**81.67**	**309**	*e*P	**P**	**20 18 58.2**	**+1.4**
	comp=Z,117nm,1.3s,mb5.7						
PALC	**Alcoutim**	**81.69**	**308**	*e*P	**P**	**20 18 58.4**	**+1.5**
	comp=Z,180nm,1.4s,mb5.8						
PLOU	**Loures**	**82.11**	**310**	*e*P	**P**	**20 19 00.7**	**+1.6**
	comp=Z,173nm,1.6s,mb5.7						
PTEO	**Sao Teotonio**	**82.50**	**309**	*e*P	**P**	**20 19 03.7**	**+2.6**
	comp=Z,142nm,1.5s,mb5.8						
SIT	**Sitka**	**84.67**	**25**	*e*P	**P**	**20 19 13.7**	**+2.0**
SIT				pmax	pmax		
	comp=Z,300nm,1.6s,mb6.2						
SIT	**Sitka**	**84.67**	**25**	*e*P	**P**	**20 19 14.4**	**+2.7**
SIT				LR	LR		
	comp=Z,6µm,18.0s,MS6.0						
DLBC	**Dease Lake**	**85.45**	**22**	P	**P**	**20 19 17.9**	**+2.4**
	comp=Z,52nm,1.1s,mb5.6,baz=322,slow=5.1,SNR=46						
DLBC				S	S	20 29 41.0	-2.3
	comp=Z,0.5nm,0.4s,baz=126,slow=26,SNR=6.2						
DLBC	**Dease Lake**	**85.45**	**22**	*e*P	**P**	**20 19 17.7**	**+2.1**
DLBC				*e*PP	PP	20 22 35.5	-0.1
YKW3	**Yellowknife Ar**	**85.97**	**13**⇑	*i*P	**P**	**20 19 18.4**	**+0.3**
YKA	**Yellowknife Ar**	**86.04**	**13**	*i* P	**P**	**20 19 18.8**	**+0.4**
YKA				pmax	pmax		
	comp=Z,44nm,0.7s						
YKA	**Yellowknife Ar**	**86.04**	**13**	P	**P**	**20 19 18.8**	**+0.5**
	comp=Z,44nm,0.7s,mb5.8,baz=329,slow=4.7,SNR=260						
YKA				PKKPbc		20 37 18.7	
	comp=Z,0.4nm,0.4s,baz=159,slow=2.4,SNR=5.7						
YKA				PKPPKP		20 45 35.4	
	comp=Z,0.2nm,0.3s,baz=134,slow=1.9,SNR=4.1						
YKA				LR	LR	21 00 42.2	
	comp=Z,3µm,19.3s,MS5.7,baz=310,slow=38						
YKA	**Yellowknife Ar**	**86.04**	**13**	P	**P**	**20 19 18.8**	**+0.5**
YKA				PKKPbc		20 37 18.8	
YKA				P'P'		20 45 35.4	
YKA				LR	LR	21 00 42.2	
TAU	**Tasmania Unive**	**86.27**	**144**	PFAKE		20 19 30.0	+10
TAU				LR	LR		
	comp=Z,335nm,19.0s,MS4.8						
FRB	**Frobisher Bay**	**86.78**	**353**	P	**P**	**20 19 22.3**	**+0.3**
	comp=Z,26nm,0.8s,mb5.5,baz=14,slow=5.6,SNR=24						
FRB	**Frobisher Bay**	**86.78**	**353**	P	**P**	**20 19 22.3**	**+0.3**
BOSA	**Boshof**	**87.49**	**235**	P	**P**	**20 19 27.2**	**+0.9**
	comp=Z,4.7nm,0.6s,mb4.9,baz=56,slow=5.0,SNR=3.7						
BOSA				LR	LR	20 57 35.9	
	comp=Z,2µm,18.8s,MS5.6,baz=63,slow=35						
BOSA	**Boshof**	**87.49**	**235**	P	**P**	**20 19 27.2**	**+0.9**
BOSA				LR	LR	20 57 35.9	
TSUM	**Tsumeb**	**88.30**	**247**	PFAKE		20 19 40.0	+10
TSUM				LR	LR		
	comp=Z,3µm,22.0s,MS5.6						
FCC	**Fort Churchill**	**92.45**	**5**⇑	*i*P	**P**	**20 19 48.5**	**-0.2**
FCC				pmax	pmax		
	comp=Z,82nm,1.4s,mb5.9						
FCC	**Fort Churchill**	**92.45**	**5**⇑	*i*P	**P**	**20 19 48.5**	**-0.2**
	comp=Z,82nm,1.4s,mb5.9						
FCC				*e*PP	PP	20 23 24.0	-8.5
SUR	**Sutherland**	**92.76**	**234**	PFAKE		20 20 00.0	+9.2
SUR				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
CMLA	**Cha da Macela**	**93.23**	**317**	PFAKE		20 20 10.0	+17
CMLA				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
DBIC	**Dimbokro**	**95.03**	**280**	P	**P**	**20 20 02.3**	**+0.7**
	comp=Z,8.8nm,0.8s,mb5.3,baz=44,slow=4.9,SNR=8.9						
DBIC				PP	PP	20 23 52.1	-1.1
	comp=Z,8.8nm,1.1s,baz=54,slow=9.0,SNR=3.4						
DBIC				LR	LR	21 07 33.4	
	comp=Z,1µm,18.4s,MS5.5,baz=37,slow=38						
SCHQ	**Schefferville**	**95.16**	**349**	P	**P**	**20 20 02.0**	**+0.7**
	comp=Z,17nm,0.9s,mb5.5,baz=29,slow=4.4,SNR=19						
SCHQ				LR	LR	21 06 36.4	
	comp=Z,4µm,20.8s,MS5.8,baz=0.3,slow=38						
FFC	**Flin Flon**	**95.58**	**10**	*e*P	**P**	**20 20 03.3**	**+0.1**
FFC				pmax	pmax		
	comp=Z,65nm,0.9s,mb6.1						
FFC				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.5						
FFC	**Flin Flon**	**95.58**	**10**	*e*P	**P**	**20 20 03.3**	**+0.1**
	comp=Z,65nm,0.9s,mb6.1						
FFC				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
CASY	**Casey**	**95.58**	**174**	PFAKE		20 20 20.0	+17
CASY				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
OCWA	**Octopus Mounta**	**96.19**	**25**	PFAKE		20 20 20.0	+14
OCWA				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
NEW	**Newport**	**98.16**	**21**	P	**P**	**20 20 15.7**	**+0.7**
	comp=Z,3.4nm,0.7s,mb5.0,baz=316,slow=7.2,SNR=9.0						
NEW	**Newport**	**98.16**	**21**	*e*P	**P**	**20 20 16.1**	**+1.1**
	comp=Z,4.5nm,0.8s,mb5.0						
NEW				LR	LR		
	comp=Z,6µm,19.0s,MS6.1						
HAWA	**Hanford**	**99.01**	**23**	PFAKE		20 20 30.0	+11
HAWA				LR	LR		
	comp=Z,184nm,21.0s,MS4.6						
MAW	**Mawson**	**99.03**	**192**	PKKPbc		20 36 45.8	
	comp=Z,10nm,0.7s,baz=210,slow=5.0,SNR=22						
MAW				LR	LR	21 02 27.6	
	comp=Z,2µm,19.4s,MS5.6,baz=13,slow=34						
COR	**Corvallis**	**99.17**	**26**	PFAKE		20 20 30.0	+10
COR				LR	LR		
	comp=Z,478nm,20.0s,MS5.0						
MSO	**Missoula**	**100.41**	**19**	PFAKE		20 20 40.0	+15
MSO				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
HUMO	**Hull Mountain**	**100.96**	**27**	PFAKE		20 20 40.0	+12
HUMO				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
HRY	**Holter Researc**	**101.11**	**18**	*e*Pdif	P	20 20 29.9	+1.4
BMO	**Blue Mountains**	**101.12**	**23**	PFAKE		20 20 40.0	+11
BMO				LR	LR		
	comp=Z,3µm,22.0s,MS5.8						
DRV	**Dumont d'Urvil**	**101.22**	**163**	Pdif	P	20 20 34.0	+5.5
DRV	**Dumont d'Urvil**	**101.22**	**163**	PP	PP	20 24 50.0	+10
DRV				SKKS		20 31 10.0	
DRV				SP	SP	20 33 38.0	+0.4
SNZO	**South Karori**	**101.65**	**131**	PFAKE		20 20 40.0	+9.0
SNZO				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
YBH	**Yreka Blue Hor**	**101.80**	**28**	PFAKE		20 20 40.0	+8.4
YBH				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
BOZ	**Bozeman (W)**	**102.14**	**18**	PFAKE		20 20 50.0	+17
BOZ				LR	LR		
	comp=Z,6µm,20.0s,MS6.1						
LAO	**LASA Array**	**102.52**	**15**	PFAKE		20 20 50.0	+15
LAO				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
MOD	**Modoc**	**102.60**	**26**	PFAKE		20 20 50.0	+15
MOD				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
WVOR	**Wild Horse Val**	**102.77**	**25**	*e*P	Pdif	20 20 38.4	+2.5
WVOR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WVOR				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.8						
WVOR	**Wild Horse Val**	**102.77**	**25**	*e*Pdif	Pdif	20 20 38.4	+2.6
	comp=Z,4.9nm,0.8s						
WVOR				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
WDC	**Whiskeytown Da**	**102.83**	**28**	PFAKE		20 20 50.0	+14
WDC				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
HLID	**Hailey**	**103.21**	**21**	PFAKE		20 20 50.0	+12
HLID				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
PQI	**Presque Isle**	**103.23**	**348**	PFAKE		20 20 50.0	+12
PQI				LR	LR		
	comp=Z,10µm,19.0s,MS6.3						
EYMN	**Ely**	**103.39**	**4**	PFAKE		20 20 50.0	+12
EYMN				LR	LR		
	comp=Z,6µm,20.0s,MS6.1						
LKWY	**Lake**	**103.48**	**18**	PFAKE		20 20 50.0	+11
LKWY				LR	LR		
	comp=Z,7µm,20.0s,MS6.2						
HOPS	**Hopland**	**103.93**	**29**	PFAKE		20 20 50.0	+8.9
HOPS				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
AHID	**Auburn Hatcher**	**104.94**	**19**	PFAKE		20 21 00.0	+15
AHID				LR	LR		
	comp=Z,287nm,20.0s,MS4.8						
EMMW	**East Machias**	**105.01**	**347**	PFAKE		20 21 00.0	+14
EMMW				LR	LR		
	comp=Z,6µm,22.0s,MS6.1						
BMN	**Battle Mountai**	**105.03**	**25**	PFAKE		20 21 00.0	+14
BMN				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
WCN	**Washoe City**	**105.05**	**27**	*e*PKiKP		20 25 08.3	
	comp=Z,271nm,2.2s						
HVU	**Hansel Valley**	**105.34**	**21**	*e*PKiKP		20 25 07.2	
BW06	**Boulder Array**	**105.38**	**18**	PFAKE		20 25 10.0	
BW06				LR	LR		
	comp=Z,7µm,20.0s,MS6.2						
PDAR	**Pinedale Array**	**105.38**	**18**	Pdiff	Pdif	20 20 49.0	+1.6
	comp=Z,0.5nm,0.6s,baz=32,slow=8.5,SNR=2.8						
PDAR				PKiKP		20 25 01.9	
	comp=Z,1.7nm,0.8s,baz=90,slow=1.5,SNR=4.8						
RSSD	**Black Hills**	**105.44**	**14**	*e*P	Pdif	20 20 48.6	+1.0
RSSD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RSSD				MLR	MLR		
	comp=Z,798nm,19.0s,MS5.3						
RSSD	**Black Hills**	**105.44**	**14**	*e*Pdif	Pdif	20 20 48.6	+1.1
	comp=Z,7.3nm,1.0s						
RSSD				LR	LR		
	comp=Z,798nm,19.0s,MS5.3						
ELK	**Elko**	**105.46**	**23**	PFAKE		20 25 10.0	
ELK				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
WVL	**Waterville**	**105.56**	**348**	PFAKE		20 25 10.0	
WVL				LR	LR		
	comp=Z,8µm,22.0s,MS6.2						
HWUT	**Hardware Ranch**	**105.87**	**20**	PKiKP		20 25 02.0	
HWUT				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
CMB	**Columbia Colle**	**105.87**	**28**	PFAKE		20 25 10.0	
CMB				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
NVAR	**Mina Array Bea**	**106.37**	**26**	Pdiff	Pdif	20 20 55.8	+4.0
	comp=Z,1.1nm,0.6s,baz=318,slow=3.1,SNR=7.6						
NVAR				PKiKP		20 25 05.1	
	comp=Z,4.1nm,0.7s,baz=300,slow=1.8,SNR=16						
MNV	**Mina**	**106.43**	**26**	PKiKP		20 25 04.7	
MNV				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
SAO	**San Andreas Ge**	**106.50**	**30**	PFAKE		20 25 20.0	
SAO				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
DUG	**Dugway**	**106.76**	**22**	PFAKE		20 25 20.0	
DUG				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
NCB	**Newcomb**	**106.84**	**352**	PFAKE		20 25 20.0	
NCB				LR	LR		
	comp=Z,5µm,22.0s,MS6.0						
TPH	**Tonopah**	**107.09**	**26**	PFAKE		20 25 20.0	
TPH				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
HRV	**Harvard--Oak R**	**107.88**	**349**	PFAKE		20 25 20.0	
HRV				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
WES	**Weston**	**107.96**	**349**	PFAKE		20 25 20.0	
WES				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
MVU	**Marysvale**	**108.49**	**22**	PFAKE		20 25 20.0	
MVU				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
DAC	**Darwin (Calif)**	**108.52**	**27**	PFAKE		20 25 20.0	
DAC				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
BINY	**Binghamton**	**108.80**	**353**	PFAKE		20 25 20.0	
BINY				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
ISCO	**Idaho Springs**	**109.19**	**16**	PFAKE		20 25 20.0	
ISCO				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
ERPA	**Erie**	**109.24**	**356**	PFAKE		20 25 20.0	
ERPA				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
SDCO	**Great Sand Dun**	**111.16**	**17**	PFAKE		20 25 20.0	+4.5
SDCO				LR	LR		
	comp=Z,7µm,19.0s,MS6.3						
PFO	**Pinyon Flat Ob**	**111.30**	**28**	PFAKE		20 25 20.0	+4.1
PFO				LR	LR		
	comp=Z,424nm,21.0s,MS5.0						
CBKS	**Cedar Bluff**	**111.40**	**12**	PFAKE		20 25 20.0	+4.1
CBKS				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
WUAZ	**Wupatki**	**111.48**	**23**	PFAKE		20 25 30.0	+14
WUAZ				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
KSU1	**Kansas State U**	**111.62**	**9**	PKiKP		20 25 12.9	
CBN	**Corbin**	**112.90**	**353**	PFAKE		20 25 30.0	+11
CBN				LR	LR		
	comp=Z,5µm,22.0s,MS6.1						
VNDA	**Vanda**	**113.23**	**167**	PKKPbc		20 36 02.2	
	comp=Z,2.1nm,0.8s,baz=143,slow=2.2,SNR=6.7						
VNDA	**Vanda**	**113.23**	**167**	PFAKE		20 25 30.0	+11
VNDA				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
WCI	**Wyandotte Cave**	**113.29**	**1**	PFAKE		20 25 30.0	+10
WCI				LR	LR		
	comp=Z,917nm,20.0s,MS5.4						
ANMO	**Albuquerque**	**113.53**	**19**	PFAKE		20 25 30.0	+10
ANMO				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						

BLA	**Blacksburg**	114.15	356	PFAKE		20 25 30.0	+8.6
BLA				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
SBA	**Scott Base**	114.32	167	PFAKE		20 25 30.0	+9.2
SBA				LR	LR		
	comp=Z,811nm,19.0s,MS5.3						
TUC	**Tucson**	114.60	24	PFAKE		20 25 30.0	+7.6
TUC				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
AMTX	**Amarillo**	114.80	15	PFAKE		20 25 30.0	+7.3
AMTX				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
WVT	**Waverly**	115.35	2	PFAKE		20 25 30.0	+6.2
WVT				LR	LR		
	comp=Z,3µm,22.0s,MS5.9						
WMOK	**Wichita Mounta**	115.53	12	*e*PKIKP	PKPdf	20 25 20.6	-3.6
WMOK				MLR	MLR		
	comp=Z,5µm,19.0s,MS6.1						
BBSR	**BB Station**	116.04	341	PFAKE		20 25 30.0	+4.8
BBSR				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
PLAL	**Pickwick Lake**	116.49	2	PFAKE		20 25 30.0	+4.0
PLAL				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
MIAR	**Mount Ida**	116.50	8	PFAKE		20 25 30.0	+3.9
MIAR				LR	LR		
	comp=Z,40nm,20.0s						
OXF	**Oxford**	116.89	4	PFAKE		20 25 40.0	+13
OXF				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
GOGA	**Godfrey**	118.08	358	PFAKE		20 25 40.0	+11
GOGA				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
NHSC	**New Hope**	118.21	355	PFAKE		20 25 40.0	+11
NHSC				LR	LR		
	comp=Z,6µm,20.0s,MS6.2						
LRAL	**Lakeview Retre**	118.46	2	PFAKE		20 25 40.0	+10
LRAL				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
NATX	**Nacogdoches**	119.11	9	PFAKE		20 25 40.0	+8.8
NATX				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
SNAA	**Sanae**	119.40	201	⇑*i*P	PKPdf	20 25 27.7	-3.1
SNAA	**Sanae**	119.40	201		PKPdf	20 25 31.4	+0.6
SNAA	**Sanae**	119.40	201		PKPdf	20 25 37.4	+6.6
SNAA	**Sanae**	119.40	201		PKPdf	20 25 44.2	+13
SNAA	**Sanae**	119.40	201	⇑*i*		20 35 39.5	
SNAA	**Sanae**	119.40	201	PKKPbc		20 35 40.6	
	comp=Z,1.3nm,0.7s,baz=266,slow=5.8,SNR=11						
JCT	**Junction City**	119.45	14	*e*PKIKP	PKPdf	20 25 28.8	-3.0
JCT				MLR	MLR		
	comp=Z,5µm,21.0s,MS6.2						
LTX	**Lajitas**	119.60	18	*e*PKIKP	PKPdf	20 25 29.4	-2.7
LTX				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.6						
TXAR	**Lajitas Array**	119.60	18	PKP	PKPdf	20 25 29.7	-2.5
	comp=Z,11nm,0.6s,baz=201,slow=1.2,SNR=78						
TXAR				PP	PP	20 26 52.7	-1.5
	comp=Z,11nm,1.2s,baz=342,slow=4.0,SNR=5.0						
TXAR				SKP		20 29 03.4	
	comp=Z,3.2nm,0.9s,baz=315,slow=1.8,SNR=4.8						
TXAR				PKKPbc		20 35 42.1	
	comp=Z,1.1nm,0.7s,baz=158,slow=6.7,SNR=6.4						
TXAR	**Lajitas Array**	119.60	18	PKP	PKPdf	20 25 29.7	-2.5
TXAR				PP	PP	20 26 52.7	-1.5
TXAR				SKP		20 29 03.4	
TXAR				PKKPbc		20 35 42.1	
PPT	**Papeete**	120.58	94	*e*P	PKPdf	20 25 32.6	-1.7
PPT				*e*SS	SS	20 43 16.2	-10
PPT				*e*LQ		20 57 05.5	
PPT				*e*LR	LR	21 02 05.4	
	comp=Z,559nm,24.5s						
VNA2	**Neumayer--Watz**	120.85	202	⇓*i*P	PKPdf	20 25 31.9	-1.8
VNA2	**Neumayer--Watz**	120.85	202	⇑*i*	PKPdf	20 25 39.4	+5.7
VNA2	**Neumayer--Watz**	120.85	202	⇑*i*	PKPdf	20 25 44.3	+11
VNA1	**Neumayer--Stat**	121.15	202	⇑*i*P	PKPdf	20 25 32.8	-1.4
VNA1	**Neumayer--Stat**	121.15	202	⇑*i*	PKPdf	20 25 39.9	+5.7
VNA1	**Neumayer--Stat**	121.15	202	⇑*i*	PKPdf	20 25 45.0	+11
VNA3	**Neumayer Olymp**	121.58	202	⇓*i*P	PKPdf	20 25 32.9	-2.2
VNA3	**Neumayer Olymp**	121.58	202	⇑*i*	PKPdf	20 25 40.4	+5.3
VNA3	**Neumayer Olymp**	121.58	202	⇑*i*	PKPdf	20 25 45.6	+11
DWPF	**Disney**	123.26	356	PFAKE		20 25 50.0	+11
DWPF				LR	LR		
	comp=Z,743nm,19.0s,MS5.4						
ZAIG	**Zacatecas**	126.11	20	*i* P	PKPdf	20 25 43.1	-1.8
RCBR	**Riachuelo**	127.97	286	PFAKE		20 26 00.0	+11
RCBR				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
SFJM	**Santa Fe**	128.11	21	*i* P	PKPdf	20 25 47.0	-1.9
SJG	**San Juan**	129.76	336	PFAKE		20 26 00.0	+7.9
SJG				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
PPM	**Popocatepetl**	130.71	17	*i* PKIKP	PKPdf	20 25 54.0	+0.1
TEIG	**Tepich**	131.16	4	PFAKE		20 26 00.0	+5.3
TEIG				LR	LR		
	comp=Z,1.0nm,20.0s						
CMIG	**Matias Romero**	133.45	13	⇑*i*P	PKPdf	20 25 55.5	-3.5
SDV	**Santo Domingo**	139.89	337	PKhKP		20 25 59.4	
	comp=Z,11nm,0.8s,baz=28,slow=3.7,SNR=12						
SDV				SKP		20 29 42.4	
	comp=Z,8.6nm,0.7s,baz=330,slow=2.8,SNR=4.4						
SDV	**Santo Domingo**	139.89	337	*e*PKPpre		20 25 59.5	
SDV				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
JTS	**JuntasAbangare**	141.11	359	PFAKE		20 26 20.0	+6.8
JTS				LR	LR		
	comp=Z,446nm,19.0s,MS5.2						
BAO	**Brasilia Array**	143.12	283	PKPdf	PKPdf	20 26 09.0	-7.5
BDFB	**Brasilia**	143.14	283	PKP	PKPdf	20 26 11.1	-5.4
	comp=Z,7.0nm,0.7s,baz=110,slow=4.4,SNR=8.6						
ROSC	**El Rosal**	144.86	341	PKP	PKPdf	20 26 17.2	-2.5
	comp=Z,140nm,0.9s,baz=99,slow=5.0,SNR=63						
OTAV	**Otavalo**	150.34	346	*e*PKPdf	PKPdf	20 26 27.5	-1.2
OTAV				LR	LR		
	comp=Z,1µm,22.0s,MS5.7						
SAML	**Samuel**	151.24	309	PFAKE		20 26 40.0	+10
SAML				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
USHA	**Ushuaia**	151.25	201	PKPbc	PKPdf	20 26 33.6	+4.8
	comp=Z,14nm,0.7s,baz=115,slow=7.3,SNR=4.0						
PAYG	**Puerto Ayora**	151.62	10	*e*PKPbc	PKPdf	20 26 34.1	+3.5
PAYG				LR	LR		
	comp=Z,1µm,22.0s,MS5.8						
SIV	**San Ignacio**	154.19	294	PKP	PKPdf	20 26 31.0	-3.1
	comp=Z,1.3nm,0.8s,baz=84,slow=3.5,SNR=8.2						
SIV				PKPbc	PKPdf	20 26 39.1	+5.1
	comp=Z,3.4nm,0.8s,baz=90,slow=3.5,SNR=15						
CPUP	**Villa Florida**	155.00	269	*e*PKIKP	PKPdf	20 26 38.1	+3.2
CPUP				MLR	MLR		
	comp=Z,2µm,19.0s						
CPUP	**Villa Florida**	155.00	269	PKPbc	PKPdf	20 26 40.0	+5.1
	comp=Z,3.6nm,0.7s,baz=104,slow=4.6,SNR=13						
TRQA	**Tornquist**	158.43	239	PFAKE		20 26 50.0	+11
TRQA				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
LPAZ	**La Paz**	159.77	304	PKP	PKPdf	20 26 39.9	-1.3
	comp=Z,0.7nm,0.3s,baz=13,slow=10,SNR=7.0						
LPAZ				PKPab	PKPab	20 27 17.8	+0.2
	comp=Z,4.8nm,1.1s,baz=360,slow=8.9,SNR=5.9						
LPAZ	**La Paz**	159.77	304	PKP	PKPdf	20 26 39.9	-1.3
LPAZ				PKPab	PKPab	20 27 17.8	+0.2
LPAZ				LR	LR		
	comp=Z,1µm,22.0s,MS5.7						
PLCA	**Paso Flores**	162.99	222	PKP2	PKPab	20 27 31.6	+0.8
PLCA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PLCA	**Paso Flores**	162.99	222	PKPab	PKPab	20 27 31.6	+0.8
	comp=Z,5.2nm,0.9s,baz=353,slow=3.3,SNR=5.3						
PLCA	**Paso Flores**	162.99	222	PFAKE		20 26 50.0	+6.3
PLCA				LR	LR		
	comp=Z,955nm,19.0s						
LVC	**Limon Verde**	163.90	289	PKPab	PKPab	20 27 36.1	+0.8
	comp=Z,6.3nm,0.3s,baz=86,slow=2.6,SNR=37						
LVC	**Limon Verde**	163.90	289	PFAKE		20 26 50.0	+4.8
LVC				LR	LR		
	comp=Z,2µm,22.0s						

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*ATH **01** 20:28:21.4, 38.12N×26.62E, h20^{km}, MD3.3/3*
*ISK **01** 20:28:21.8, 38.22N×26.84E, h20^{km}, MD3.1*
*NEIC **01** 20:28:21.4, 38.12N×26.62E, h20^{km}, MD3.3(ATH), After ATH.*
*CSEM **01** 20:28:21.7±0.1, 38.18N×26.85E, h15^{km}±1^{km}, MD3.1, Error ellipse: s-maj=4.1km s-min=1.9km az=98.0*
ISC 01 20:28:21.2±0.5**, 38.18N**±0.02×**26.79E**±0.04**, h10^{km}, n23, σ0^{s}90**/36**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	**Balcova**	0.29	44	*i* PG	**Pg**	20 28 27.6	+0.4
BLCB				*i* SG	**Sg**	20 28 31.8	+0.6
IZM	**Izmir**	0.43	60	*i* PG	**Pg**	20 28 30.5	+0.5
IZM				*i* SG	**Sg**	20 28 36.4	+0.5
KDAG	**Bornova**	0.44	59	*i* P	**Pg**	20 28 30.5	+0.4
KDAG				*i* S	**Sg**	20 28 36.9	+0.8
SMG	**Samos**	0.47	175	*e*PB	**Pb**	20 28 30.4	-0.7
SMG				*e*SB	**Sb**	20 28 37.2	-0.7
AYDN	**Tasoluk**	1.01	121	*i* P	**Pb**	20 28 40.6	+0.3
AYDN				*i* S	**Sb**	20 28 53.6	+0.2
AYVA	**Ayvalik**	1.13	356	*i* P	**Pb**	20 28 43.6	+1.2
AYVA				*i* S	**Sb**	20 29 01.8	+4.8
PRK	**Paraskevi**	1.14	339	*e*PN	**Pn**	20 28 43.5	+0.3
PRK				*e*SN	**Sn**	20 28 59.3	+0.4
MLSB	**Milas**	1.18	138	PN	**Pn**	20 28 44.3	+0.5
BODT	**Bodrum**	1.19	159	PN	**Pn**	20 28 43.9	0.0
BDRM	**Kayabasi**	1.23	155	*i* P	**Pb**	20 28 44.8	+0.7
BDRM				*i* S	**Sb**	20 29 00.6	+0.7
MANT	**Manisa**	1.43	77	*i* P	**Pn**	20 28 48.6	+1.3
MANT				*i* S	**Sb**	20 29 07.6	+2.1
APE	**Apeiranthos**	1.49	222	*e*PN	**Pn**	20 28 49.4	+1.2
APE	**Apeiranthos**	1.49	222	*e*PN	**Pn**	20 28 47.3	-0.9
EZN	**Ezine**	1.68	348	*e*PN	**Pn**	20 28 49.9	-1.1
BALB	**Balikesir**	1.69	30	*e*PN	**Pn**	20 28 51.1	0.0
BOZC	**Bozcaada**	1.76	341	*i* P	**Pn**	20 28 52.4	+0.4
BOZC				*i* S	**Sn**	20 29 19.5	+5.0
DNZL	**Cakiroluk**	1.85	105	*i* P	**Pg**	20 28 57.7	-0.5
DNZL				*i* S	**Sg**	20 29 21.9	-1.1
BTOK	**Tokmak**	1.85	31	*i* P	**Pg**	20 28 56.4	-1.9
BTOK				*i* S	**Sg**	20 29 21.4	-1.6
DST	**Dursunbey**	2.02	45	*e*PN	**Pn**	20 28 55.3	-0.5
LIA	**Limnos Island**	2.12	324	*e*PN	**Pn**	20 28 57.7	+0.4
ULDT	**Uludag**	2.68	42	*i* P	**Pg**	20 29 14.0	-0.8
ULDT				*i* S	**Sg**	20 29 44.2	-6.2
TKTP	**Tekketepe**	2.79	92	*i* P	**Pg**	20 29 15.4	-1.5
ESKT	**Eskisehir**	3.44	66	*i* P	**Pg**	20 29 28.5	-1.5

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*OMAN **01** 20:45:04.9, 28.62N×53.87E, h10^{km}, Error ellipse: s-maj=365.0km s-min=26.7km az=345.0*
*THR **01** 20:45:18.7±0.9, 27.29N×54.36E, h42^{km}±7^{km}, ML3.5*
*CSEM **01** 20:45:18.7, 27.29N×54.36E, h42^{km}, ML3.5, After THR*
*IDC **01** 20:45:20.2±2.3, 28.10N×54.95E, mb3.9/5, mb1 4.0/5, mb1mx3.6/20, mbtmp3.9/5, Error ellipse: s-maj=63.1km s-min=35.6km az=43.0*
ISC 01 20:45:22.3±0.6**, 27.47N**±0.06×**54.38E**±0.07**, h57^{km}**±11^{km}**, n17, σ1^{s}22**/21**, mb3.9**/5**, 2C-3D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	1.48	304	*e*PG	**P**	20 45 47.8	+0.6
GHIR				*e*SG	**S**	20 46 08.0	+2.4
GHIR				AML	AML	20 46 11.7	
	comp=N,563nm,0.5s						
GHIR	**Ghir-Karzin**	1.48	304	*e*Pg	**P**	20 45 47.8	+0.6
	SNR=100						
GHIR				*e*Sg	**S**	20 46 08.0	+2.4
	comp=N,563nm,0.5s,SNR=100						
BNDS	**Bandar-Abbas**	1.59	92	*e*PG	**P**	20 45 47.8	-0.9
BNDS				*e*SG	**S**	20 46 09.8	+1.6
BNDS				AML	AML	20 46 13.2	
	comp=N,734nm,0.4s						
BNDS	**Bandar-Abbas**	1.59	92	*e*Pg	**P**	20 45 47.8	-0.9
	SNR=100						
BNDS				*e*Sg	**S**	20 46 09.9	+1.6
	comp=N,734nm,0.4s,SNR=100						
BANOM	**Banah**	2.31	132	⇑P	**P**	20 45 58.6	-0.1
	SNR=49						
ASHO	**Ashiyiah**	3.16	151	⇓P	**P**	20 46 11.8	+1.0
	SNR=21						
KRBR	**Kerman**	3.26	39	*e*PN	**P**	20 46 11.6	-0.7
KRBR				AML	AML	20 47 04.7	
	comp=N,75nm,0.8s						
ARQ	**Araqi**	4.55	154	⇑P	**P**	20 46 30.7	+0.3
NASN	**Na'in**	5.48	346	*e*PN	**P**	20 46 42.0	-1.3
ASAO	**Ashtian**	7.98	333	*e*PN	**P**	20 47 16.1	-2.0
WHFO	**Wadi Hawf**	9.52	184	⇓P	**P**	20 47 38.7	-0.7
	SNR=7.3						
ABTO	**Aybut**	10.12	186	⇓P	**P**	20 47 46.0	-1.6
MKAR	**Makanchi Array**	29.20	41	P	**P**	20 51 16.3	-4.3
	comp=N,0.7nm,0.4s,mb3.7,baz=229,slow=11,SNR=12						
FINES	**FINESS Array B**	38.90	339	P	**P**	20 52 43.6	-0.1
	comp=N,0.7nm,0.5s,mb3.6,baz=149,slow=11,SNR=8.7						
ARCES	**ARCESS Array B**	45.32	346	P	**P**	20 53 36.1	+0.1
	comp=N,2.4nm,1.0s,mb4.0,baz=150,slow=12,SNR=3.6						
YKA	**Yellowknife Ar**	89.92	355	P	**P**	20 58 17.4	+1.5
	comp=N,0.5nm,0.6s,mb4.1,baz=9.6,slow=5.6,SNR=5.1						
WRA	**Warramunga Arr**	90.56	112	P	**P**	20 58 23.7	+3.7
	comp=N,0.5nm,0.8s,mb3.9,baz=314,slow=4.0,SNR=4.8						

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*NNC **01** 20:48:19.1±3.8, 36.91N×71.05E, h150^{km}±39^{km}, mpv4.4, Error ellipse: s-maj=41.4km s-min=33.1km az=11.0*
ISC 01 20:48:11.7±0.7**, 36.35N**±0.04×**71.3E**±0.1**, h150^{km}**±15^{km}**, n31, σ1^{s}07**/39**, 4C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	2.57	169	⇑P	**P**	20 48 55.0	+0.8
CHCP	**Chirah Chowk**	3.13	149	P	**P**	20 49 03.0	+1.6
SBDP	**Sheikh Budin**	4.06	186	⇑P	**P**	20 49 12.8	-0.8
SARP	**Sargodha**	4.56	165	⇑P	**P**	20 49 20.8	+0.7
SARP				S	**S**	20 50 00.0	-13
THN	**Thein Dam**	5.34	136	*e*P	**P**	20 49 31.1	+0.6
THN				*e*S	**S**	20 50 28.8	-2.7
AML	**Almayashu**	6.07	17	P	**P**	20 49 40.2	+0.1
	SNR=198						
UCH	**Uchtor**	6.38	22	P	**P**	20 49 44.7	+0.4
	SNR=37						
KZA	**Kyzart**	6.49	27	P	**P**	20 49 46.1	+0.2
	SNR=13						
EKS2	**Erkin-Say**	6.59	16	P	**P**	20 49 47.4	+0.2
	SNR=23						
AAK	**Ala-Archa**	6.74	20	P	**P**	20 49 49.9	+0.5
	SNR=23						
AAK	**Ala-Archa**	6.74	20	⇑P	**P**	20 49 49.7	+0.4
	8.8nm,0.3s						
AAK				⇓S	**S**	20 51 02.6	-2.6
	28nm,0.7s						
SDNR	**Sundarnagar**	6.75	134	*e*S	**S**	20 51 01.4	-3.9
KK31	**Karatay Array**	6.78	355	⇓P	**P**	20 49 48.4	-1.3
	14nm,0.3s,baz=179,slow=13,SNR=715						
KK31				S	**S**	20 50 59.3	-6.6
	6.1nm,0.5s,baz=185,slow=18,SNR=9.2						
KBK	**Karagaybulak**	6.90	23	P	**P**	20 49 52.1	+0.7
	SNR=11						
ULHL	**Ulahol**	7.02	32	P	**P**	20 49 53.6	+0.6
	SNR=15						
SMLA	**Simla**	7.13	135	*i* P	**P**	20 49 51.5	-3.1
SMLA				*i* S	**S**	20 51 09.4	-5.2
CHMS	**Chumysh**	7.15	21	P	**P**	20 49 54.9	+0.1
	SNR=15						
USP	**Ospenovka**	7.33	19	P	**P**	20 49 57.3	+0.1
	SNR=23						
TKM2	**Tokmak 2**	7.35	25	P	**P**	20 49 57.6	+0.2
	SNR=16						
KLP	**Kalpa**	7.50	128	*e*P	**P**	20 49 60.0	+0.4
KLP				*e*S	**S**	20 51 14.6	-8.9
KLP				AML	AML	20 51 28.2	
	comp=N,102nm,0.7s						
KLP				AML	AML	20 51 29.1	
	comp=E,65nm,0.2s						
KHET	**Khetri**	9.09	154	*e*P	**P**	20 50 19.4	-1.1
KHET				*e*S	**S**	20 51 54.1	-7.1
KHET				AML	AML	20 51 58.5	
	comp=N,24nm,0.3s						
KHET				AML	AML	20 51 58.5	
	comp=E,20nm,0.3s						
SONA	**Sohna**	9.44	147	*e*S	**S**	20 52 03.4	-6.1
SONA				AML	AML	20 52 07.2	
	comp=N,8.4nm,0.3s						
SONA				AML	AML	20 52 08.4	
	comp=E,23nm,0.2s						
MK31	**Makanchi Array**	13.27	35	P	**P**	20 51 16.2	+1.1
	comp=E,0.4nm,0.3s,baz=213,slow=14,SNR=30						
KOLN	**Koldanda**	13.47	126	*e*P	**P**	20 51 19.1	+1.4
	comp=E,5.0nm,0.3s						
GKN	**Gorkha**	14.01	123	*e*P	**P**	20 51 24.8	+0.2
	comp=E,27nm,0.7s						
DMN	**Daman**	14.58	123	*e*P	**P**	20 51 33.1	+1.2
	comp=E,6.7nm,0.3s						
KKN	**Kakani**	14.59	122	*e*P	**P**	20 51 31.0	-0.9
	comp=E,7.3nm,0.4s						
PKI	**Pulchoki**	14.81	122	*e*P	**P**	20 51 35.3	+0.5
	comp=E,6.0nm,0.3s						
GUN	**Gumba**	14.93	120	*e*P	**P**	20 51 36.5	+0.3
	comp=E,11nm,0.5s						
AB31	**Akbulak array**	15.34	331	⇓P	**P**	20 51 40.7	-0.5
	comp=E,1.0nm,0.6s,baz=241,slow=58,SNR=20						
AB31				S	**S**	20 54 17.3	-10
	comp=E,1.1nm,0.4s,baz=150,slow=18,SNR=12						
CHKZ	**Chkalovo**	17.34	359	P	**P**	20 52 04.6	-1.1

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*MOS **01** 21:00:54.6±2.5, 32.86N×140.57E, h33^{km}, mb4.7/1, Error ellipse: s-maj=32.9km s-min=10.7km az=107.5*
*NIED **01** 21:01:00, 33.20N×140.50E, h56^{km}, Mw4.3 Best double couple: $M_0 3.64\times10^{15}$ NP1: ϕ_s283°, δ67°, λ54°. NP2: ϕ_s165°, δ41°, λ145°.*
*NEIC **01** 21:01:00.2±0.5, 33.03N×140.61E, mb4.4/1, Error ellipse: s-maj=17.1km s-min=9.0km az=71.0*
NEIC Recorded [2 JMA] on Hachijo-jima.
*IDC **01** 21:01:00.3±0.6, 33.00N×140.43E, h55^{km}±5^{km}, mb3.7/12, mb1 4.0/14, mb1mx3.9/20, mbtmp4.0/14, MS3.9/2, Ms1 3.9/2, ms1mx3.4/31, Error ellipse: s-maj=11.7km s-min=9.4km az=51.0*
*JMA **01** 21:01:00.6±0.1, 33.20N×140.55E, h59^{km}±3^{km}, M4.2*
JMA Felt II J1.
ISC 01 21:00:58.6±0.4**, 33.07N**±0.03×**140.61E**±0.05**, h57^{km}, h57^{km}**±1.2^{km}**:pP-P, n48, σ1^{s}06**/58**, mb4.0**/13**, MS4.2**/1**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	0.67	273	P	**P**	21 01 14.1	+1.8
JHJ2				*e*S	**S**	21 01 23.4	+0.9
JHJ	**Hachijo jima 2**	0.69	274	P	**P**	21 01 14.0	+1.4
	2µm,0.3s,baz=210,slow=8.1,SNR=2115						
JHJ				S	**S**	21 01 22.9	-0.2
	7µm,0.3s,baz=66,slow=19,SNR=154						
JMY	**Miyakejima3**	1.35	318	P	**P**	21 01 21.9	+0.2
BSO1	**Boso 1**	1.60	11	P	**P**	21 01 25.0	-0.2
JKO	**Kozu shima**	1.66	312	P	**P**	21 01 26.5	+0.6
JKO				*e*S	**S**	21 01 45.1	-1.0
BSO2	**Boso 2**	1.68	4	*e*S	**S**	21 01 46.7	+0.1
NJJJ	**Nii jima 2**	1.72	321	P	**P**	21 01 27.3	+0.5
BSO3	**Boso 3**	1.73	357	P	**P**	21 01 27.1	+0.3
BSO3				*e*S	**S**	21 01 47.4	-0.3
JIM2	**Oshima 3**	1.91	329	P	**P**	21 01 29.6	+0.2
JIM2				*e*S	**S**	21 01 50.8	-1.4
BSO4	**Boso 4**	1.92	353	P	**P**	21 01 30.1	+0.5
JIZS	**Izushimoda**	2.18	319	P	**P**	21 01 33.9	+0.7
JIZS				*e*S	**S**	21 01 58.3	-0.7
KTJJ	**Kamata 2**	2.25	326	P	**P**	21 01 34.4	+0.2
KTJJ				*e*S	**S**	21 01 58.8	-1.9
TK03	**Tokai 3**	2.46	297	P	**P**	21 01 37.8	+0.6
JOD2	**Odawara 2**	2.52	330	P	**P**	21 01 38.1	0.0
JOD2				*e*S	**S**	21 02 04.5	-3.2
TK01	**Tokai 1**	2.62	286	P	**P**	21 01 39.7	+0.3
TK01				*e*S	**S**	21 02 09.0	-1.1
TK04	**Tokai 4**	2.63	301	P	**P**	21 01 40.7	+1.1
TK04				*e*S	**S**	21 02 10.3	0.0
MJAR	**Matsushiro Arr**	3.98	331	P	**P**	21 01 59.9	+1.2
	17nm,0.3s,baz=155,slow=13,SNR=102						
MJAR				S	**S**	21 02 46.5	+2.0
	1.3nm,0.3s,baz=106,slow=20,SNR=3.7						
MAJO	**Matsushiro**	3.98	331	*e*P	**P**	21 02 00.1	+1.4
MAT	**Matsushiro**	3.98	331	*e*P	**P**	21 02 00.0	+1.3
MAT				*e*S	**S**	21 02 43.0	-1.6
MAT	**Matsushiro**	3.98	331	P	**P**	21 01 59.7	+1.0
MAT				S	**S**	21 02 43.3	-1.3
CBIJ	**Chichi jima**	6.11	167	P	**P**	21 02 28.9	+0.5
	31nm,0.3s,baz=293,slow=22,SNR=22						
CBIJ				S	**S**	21 03 34.4	-3.5
	9.0nm,0.3s,baz=311,slow=20,SNR=2.6						
JNU	**Nakatsue**	8.16	273	P	**P**	21 02 58.0	+1.1
	1.2nm,0.3s,baz=232,slow=14,SNR=7.2						
ASAJ	**Asahikawa**	11.13	7	P	**P**	21 03 33.5	-3.9
	0.4nm,0.3s,baz=224,slow=14,SNR=12						
ASAJ				LR	LR	21 07 58.8	
	comp=Z,304nm,18.4s,baz=149,slow=37						
SONM	**Songino Array**	29.64	310	P	**P**	21 07 01.0	+0.4
	0.4nm,0.6s,mb3.3,baz=106,slow=10,SNR=3.3						
MKAR	**Makanchi Array**	45.76	305	P	**P**	21 09 14.2	-1.8
	0.6nm,0.6s,mb3.7,baz=83,slow=9.8,SNR=5.7						
MKAR				pP	pP	21 09 29.4	-1.5
	1.1nm,0.7s,baz=88,slow=9.7,SNR=5.5						
HNR	**Honiara**	46.11	153	LR	LR	21 26 30.0	
	comp=Z,261nm,19.1s,MS4.2,baz=325,slow=33						
CHKZ	**Chkalovo**	52.59	315	*e*P	**P**	21 10 03.2	-5.2
BVAR	**Borovoye Array**	52.81	314	P	**P**	21 10 08.7	-1.3
	0.2nm,0.4s,mb3.4,baz=79,slow=7.3,SNR=2.5						
BVAR				pP	pP	21 10 23.0	-2.3
	0.3nm,0.4s,baz=100,slow=9.0,SNR=4.1						
BVAR				PcP	PcP	21 11 18.2	-0.6
	0.7nm,0.7s,baz=90,slow=4.4,SNR=3.8						
WB2	**Warramunga Arr**	53.05	187	*e*P	**P**	21 10 11.2	-1.1
WRA	**Warramunga Arr**	53.06	187	P	**P**	21 10 11.2	-1.1
	5.9nm,0.5s,mb4.8,baz=3.6,slow=7.5,SNR=118						
WRA				PcP	PcP	21 11 20.7	+0.6
	0.3nm,0.5s,baz=357,slow=3.9,SNR=4.7						
ILAR	**Eielson Array**	53.21	31	P	**P**	21 10 13.8	+1.0
	0.5nm,0.6s,mb3.6,baz=270,slow=7.2,SNR=4.4						
ILAR				pP	pP	21 10 28.9	+0.8
	2.2nm,0.9s,baz=275,slow=8.3,SNR=9.0						
ASAR	**Alice Springs**	56.78	187	P	**P**	21 10 38.2	-1.1
	4.1nm,0.5s,mb4.7,baz=1.5,slow=6.2,SNR=71						
ASAR				PcP	PcP	21 11 35.5	+1.0
	1.0nm,0.6s,baz=17,slow=3.9,SNR=4.2						
ASPA	**Alice Springs**	56.78	187	*e*P	**P**	21 10 38.1	-1.3
INK	**Inuvik**	58.22	26	pP	pP	21 11 05.4	+1.1
	1.3nm,0.5s,baz=281,slow=4.8,SNR=3.4						
STKA	**Stephens Creek**	64.61	179	P	**P**	21 11 32.1	-0.2
	0.9nm,0.4s,mb4.1,baz=343,slow=9.4,SNR=4.3						
YKA	**Yellowknife Ar**	67.57	29	pP	pP	21 12 07.5	+1.0
	0.9nm,0.6s,baz=296,slow=6.2,SNR=6.0						
FINES	**FINESS Array B**	72.01	333	P	**P**	21 12 16.8	-0.9
	1.5nm,0.9s,mb3.9,baz=63,slow=4.3,SNR=7.5						
FINES	**FINESS Array B**	72.01	333	P	**P**	21 12 16.8	-0.9
AKASG	**Malin Array Be**	77.03	323	P	**P**	21 12 45.9	-0.8
	0.6nm,0.5s,mb3.8,baz=47,slow=6.6,SNR=7.2						
AKASG				pP	pP	21 13 02.3	-0.6
	0.6nm,0.4s,baz=47,slow=6.2,SNR=3.5						
AKASG	**Malin Array Be**	77.03	323	P	**P**	21 12 45.9	-0.9
AKASG				pP	pP	21 13 02.3	-0.6
NB2	**NORSAR Subarra**	77.58	337	P	**P**	21 12 46.5	-3.1
	1.1nm,0.9s,mb3.8,baz=41,slow=5.3						
NOA	**NORSAR Array B**	77.58	337	P	**P**	21 12 48.9	-0.7
	0.8nm,1.0s,mb3.6,baz=52,slow=4.4,SNR=2.7						
NOA				pP	pP	21 13 05.0	-0.7
	1.2nm,0.8s,baz=42,slow=5.7,SNR=4.3						
NVAR	**Mina Array Bea**	77.91	52	pP	pP	21 13 10.4	+2.4
	0.4nm,0.6s,baz=287,slow=6.8,SNR=2.9						
BRG	**Berggiesshubel**	84.11	329	*e*P	**P**	21 13 24.6	+0.4
BRG				*e*	pP	21 13 41.9	+1.4
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
BRG	**Berggiesshubel**	84.11	329	P	**P**	21 13 24.6	+0.4
	comp=Z,4.1nm,1.0s,mb4.5						
BRG				*e*	pP	21 13 41.9	+1.4
KHC	**Kasperske Hory**	85.56	328	*e*P	**P**	21 13 32.0	+0.6
GERES	**GERESS Array B**	85.72	328	P	**P**	21 13 32.5	+0.3
	comp=Z,0.5nm,0.6s,mb3.9,baz=53,slow=6.7,SNR=7.0						
GERES				pP	pP	21 13 48.4	-0.2
	comp=Z,0.2nm,0.3s,baz=45,slow=7.5,SNR=3.0						
TXAR	**Lajitas Array**	93.07	52	P	**P**	21 14 09.6	+2.2
	comp=Z,1.1nm,0.6s,mb4.5,baz=315,slow=3.5,SNR=10						

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*IDC **01** 21:17:45.6±2.2, 33.82N×141.64E, mb3.3/2, mb1 3.6/3, mb1mx3.3/20, mbtmp3.3/3, ML3.6/1, MS3.8/1, Ms1 4.0/1, ms1mx3.1/20, Error ellipse: s-maj=35.9km s-min=26.1km az=68.0*
*JMA **01** 21:17:46.2±0.7, 34.00N×141.63E, h23^{km}, M3.2*
ISC 01 21:17:43.5±2.0**, 33.96N**±0.06×**141.8E**±0.1**, h6^{km}**±16^{km}**, n16, σ0^{s}79**/18**, mb3.3**/2**, MS3.8**/1**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	0.94	317	P	**Pb**	21 18 02.0	+0.1

BSO3	**Boso 3**	**1.33**	**309**	P	**Pb**	**21 18 08.6**	**+0.1**
BSO4	**Boso 4**	**1.56**	**312**	P	**Pn**	**21 18 12.4**	**+0.5**
JHJ2	**Mitsune**	**1.83**	**243**	P	**Pn**	**21 18 16.6**	**+0.8**
JHJ	**Hachijo jima 2**	**1.85**	**244**	Pn	**Pn**	**21 18 16.9**	**+0.8**
	39nm,0.3s,baz=246,slow=22,SNR=50						
JHJ				Sn	**Sn**	**21 18 39.5**	**-0.5**
	48nm,0.3s,baz=227,slow=23,SNR=8.2						
JIM2	**Oshima 3**	**2.07**	**292**	P	**Pn**	**21 18 18.5**	**-0.7**
JIZS	**Izushimoda**	**2.50**	**288**	P	**Pn**	**21 18 25.2**	**-0.2**
JOD2	**Odawara 2**	**2.56**	**301**	P	**Pn**	**21 18 24.9**	**-1.3**
JYN	**Shimob**	**3.06**	**301**	P	**Pn**	**21 18 33.6**	**+0.3**
JAG	**Ashikaga**	**3.10**	**323**	P	**Pn**	**21 18 32.8**	**-1.1**
JRY	**Ryogami san**	**3.11**	**312**	P	**Pn**	**21 18 34.3**	**+0.1**
MJAR	**Matsushiro Arr**	**3.88**	**313**	Pn	**Pn**	**21 18 45.0**	**0.0**
	4.1nm,0.3s,baz=149,slow=11,SNR=28						
MJAR				Sn	**Sn**	**21 19 32.3**	**+0.8**
	0.4nm,0.3s,baz=109,slow=18,SNR=3.5						
MAT	**Matsushiro**	**3.88**	**313**	P	**Pn**	**21 18 45.2**	**+0.1**
MAT				S	**Sn**	**21 19 31.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**41.09**	**259**	LR	LR	21 41 59.1	
	comp=Z,121nm,18.6s,MS3.8,baz=164,slow=36						
MKAR	**Makanchi Array**	**46.04**	**305**	P	**P**	**21 26 11.8**	**+2.2**
	0.1nm,0.5s,mb3.0,baz=98,slow=7.8,SNR=3.7						
WRA	**Warramunga Arr**	**54.07**	**189**	P	**P**	**21 27 10.3**	**-1.0**
	0.2nm,0.3s,mb3.5,baz=2.5,slow=7.6,SNR=8.0						

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*SNSN **01** 21:31:23.3,30.30N×34.82E,h11^{km},Ml2.8*

*HLW **01** 21:31:24.4,30.27N×35.01E,h5^{km},Mb3.6*

*GII **01** 21:31:24.4±0.1,30.27N×35.01E,h10^{km}±1^{km},ML3.4/7,Mw3.1/6*

*CSEM **01** 21:31:24.3±0.1,30.26N×35.00E,h15^{km},Mw3.1,Error ellipse: s-maj=1.7km s-min=0.9km az=78.0*

ISC 01 21:31:24.2±0.3,**30.28N**±0.02×**35.02E**±0.04,**h10**^{km}±3^{km},**n52,σ0**^{s}**65**/64,**5C-4D,Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRNI	**Paran**	**0.07**	**347**	Pg	**Pg**	**21 31 27.0**	**+0.4**
PRNI				Sg	**Sg**	**21 31 29.1**	**+0.9**
PRNI	**Paran**	**0.07**	**347**	⇑Pg	**Pg**	**21 31 27.0**	**+0.4**
PRNI				Sg	**Sg**	**21 31 29.1**	**+0.9**
HRFI	**Mount Harif**	**0.24**	**177**	Pg	**Pg**	**21 31 29.7**	**+0.3**
HRFI				Sg	**Sg**	**21 31 33.5**	**+0.6**
HRFI	**Mount Harif**	**0.24**	**177**	Pg	**Pg**	**21 31 29.7**	**+0.3**
HRFI				Sg	**Sg**	**21 31 33.4**	**+0.5**
ZFRI	**Zfri**	**0.30**	**26**	⇑Pg	**Pg**	**21 31 30.6**	**0.0**
KMTI	**Karmit**	**0.31**	**236**	Pg	**Pg**	**21 31 31.1**	**+0.4**
RMNI	**Mount Ramon**	**0.39**	**325**	Pg	**Pg**	**21 31 32.4**	**+0.2**
RMNI	**Mount Ramon**	**0.39**	**325**	⇑Pg	**Pg**	**21 31 32.4**	**+0.2**
MBH	**Mount Berech**	**0.49**	**191**	⇑Pg	**Pg**	**21 31 34.3**	**0.0**
AQBJ	**Aqaba**	**0.55**	**178**	Pg	**Pg**	**21 31 35.5**	**+0.2**
EIL	**Elat**	**0.61**	**186**	Pg	**Pg**	**21 31 36.2**	**-0.4**
EIL	**Elat**	**0.61**	**186**	⇑Pg	**Pg**	**21 31 36.2**	**-0.4**
MASH	**Mash‘abbe Sade**	**0.74**	**344**	Pg	**Pg**	**21 31 39.0**	**-0.2**
RTMM	**Retamin**	**0.82**	**339**	Pg	**Pg**	**21 31 40.1**	**-0.7**
KZIT	**Kziot**	**0.83**	**319**	Pg	**Pg**	**21 31 40.3**	**-0.5**
KZIT				Sg	**Sg**	**21 31 51.5**	**-0.4**
KZIT	**Kziot**	**0.83**	**319**	⇑Pg	**Pg**	**21 31 40.3**	**-0.5**
KZIT				Sg	**Sg**	**21 31 51.5**	**-0.4**
ALWS	**Ilw as Safayha**	**0.97**	**178**	P	**Pb**	**21 31 42.5**	**-0.1**
ALWS				S	**Sb**	**21 31 57.1**	**+2.0**
HNKL	**Nakhl**	**0.97**	**249**	⇓P	**Pb**	**21 31 42.8**	**+0.2**
HNKL				S	**Sb**	**21 31 56.4**	**+1.2**
MZDA	**Masada**	**1.07**	**16**	Pg	**Pg**	**21 31 44.2**	**-1.4**
MZDA				Sg	**Sg**	**21 31 59.5**	**-0.4**
YTIR	**Yattir**	**1.08**	**4**	Pg	**Pg**	**21 31 44.4**	**-1.5**
YTIR	**Yattir**	**1.08**	**4**	⇑Pg	**Pg**	**21 31 44.4**	**-1.5**
HBST	**Basata**	**1.09**	**193**	⇑P	**Pb**	**21 31 44.9**	**+0.3**
JMOS	**Jabal al Moall**	**1.11**	**176**	P	**Pb**	**21 31 45.0**	**0.0**
AMZI	**Amatzia**	**1.18**	**355**	Pg	**Pg**	**21 31 47.4**	**-0.4**
AMZI				Sg	**Sg**	**21 32 05.7**	**+2.1**
HAQS	**Haql**	**1.22**	**184**	P	**Pb**	**21 31 47.0**	**0.0**
NUB		**1.29**	**195**	⇑P	**Pb**	**21 31 48.5**	**+0.4**
HRSH	**Kfar Ka’horesh**	**1.31**	**301**	P	**Pb**	**21 31 48.6**	**+0.2**
RSH		**1.31**	**301**	P	**Pb**	**21 31 48.6**	**+0.1**
DSI	**Dead Sea**	**1.32**	**13**	Pn	**Pn**	**21 31 49.0**	**+0.2**
MKRJ	**Makawir**	**1.38**	**23**	Pn	**Pn**	**21 31 49.5**	**0.0**
JMQS	**Jabal Moqyreh**	**1.57**	**152**	P	**Pn**	**21 31 52.2**	**-0.2**
HDHB	**Dhahab**	**1.59**	**193**	⇓P	**Pn**	**21 31 52.2**	**-0.4**
AMAG	**Maghara**	**1.61**	**283**	⇑P	**Pn**	**21 31 52.5**	**-0.3**
TAYS	**Tayyib Ism**	**1.73**	**184**	P	**Pn**	**21 31 53.9**	**-0.7**
BDAS	**Al Bad‘**	**1.84**	**178**	P	**Pn**	**21 31 55.4**	**-0.8**
SLTI	**Sal’it**	**1.96**	**0**	Pn	**Pn**	**21 31 57.9**	**+0.1**
SLTI				Sn	**Sn**	**21 32 23.4**	**+0.8**
HKAT	**Jabal Katrina**	**1.97**	**207**	⇑P	**Pn**	**21 31 57.6**	**-0.4**
AYUS	**‘Aynunah**	**2.09**	**174**	P	**Pn**	**21 31 58.8**	**-1.0**
HRDS	**Abu Rudays**	**2.17**	**224**	⇑P	**Pn**	**21 32 00.9**	**0.0**
MMLI	**Mount Malkishu**	**2.18**	**9**	Pn	**Pn**	**21 32 01.1**	**+0.1**
MMLI				Sn	**Sn**	**21 32 28.8**	**+0.6**
MMLI	**Mount Malkishu**	**2.18**	**9**	Pn	**Pn**	**21 32 01.1**	**+0.1**
QURS	**Qurayyt al Mil**	**2.27**	**60**	P	**Pn**	**21 32 03.0**	**+0.7**
OFRI	**‘Ofer**	**2.33**	**359**	Pn	**Pn**	**21 32 03.5**	**+0.3**
TBKS	**Tabuk**	**2.44**	**147**	P	**Pn**	**21 32 04.9**	**+0.1**
HAF	**Haifa**	**2.49**	**0**	Pn	**Pn**	**21 32 05.9**	**+0.4**
HHAG	**Hagoal**	**2.55**	**263**	P	**Pn**	**21 32 05.8**	**-0.6**
KSHT	**Keshet**	**2.78**	**14**	Pn	**Pn**	**21 32 09.4**	**-0.2**
KOT	**Kottamia**	**2.79**	**264**	⇓P	**Pn**	**21 32 09.3**	**-0.4**
GRB	**Gharib**	**2.80**	**225**	P	**Pn**	**21 32 09.0**	**-0.8**
GLL	**Jalalah**	**2.96**	**257**	⇓P	**Pn**	**21 32 11.8**	**-0.4**
BHL	**Bhannes**	**3.65**	**8**	Sn	**Sn**	**21 33 17.6**	**+12**
HWQ	**Hawqa**	**4.06**	**11**	Sn	**Sn**	**21 33 28.4**	**+12**

IDC 01 21:43:41.8±2.8,**9.33S**×**112.96E,mb3.5**/3,**mb1 3.7**/3,**mb1mx3.5**/15,**mbtmp3.5**/3,**Error ellipse: s-maj=156.8km s-min=26.4km az=47.0,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.20**	**119**	P	P	21 48 50.7	-0.7
	1.9nm,0.9s,baz=295,slow=11,SNR=8.3						
ASAR	**Alice Springs**	**24.58**	**128**	P	P	21 49 03.3	-1.5
	0.7nm,0.5s,baz=304,slow=9.1,SNR=7.4						
MKAR	**Makanchi Array**	**62.21**	**337**	P	P	21 54 05.3	-2.2
	0.2nm,0.4s,baz=152,slow=7.6,SNR=6.3						

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*MOS **01** 21:55:02.8±0.8,17.14N×46.48W,h10^{km},mb5.2/77,MS4.4/25,Error ellipse: s-maj=6.8km s-min=3.8km az=47.7*

*IDC **01** 21:55:02.8±0.4,17.15N×46.46W,mb4.6/29,mb1 4.7/30,mb1mx4.7/31,mbtmp4.6/30,ML6.1/1,MS4.3/21,Ms1 4.3/21,ms1mx4.3/25,Error ellipse: s-maj=13.1km s-min=10.1km az=122.0*

*BJI **01** 21:55:03.0,17.10N×46.50W,h10^{km},mB5.1,Msz4.7*

*HRVD **01** 21:55:04.6±0.4,17.16N×46.43W,h12^{km}±2^{km},MW5.0/34,Centroid moment Tensor Solution. LP body waves: s8,c10;Mantle waves: s34,c47; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.29±.23; M$_{\theta\theta}$0.55±.16; M$_{\phi\phi}$0.73±.17; M$_{r\theta}$-1.37±.51; M$_{\theta\phi}$1.63±.12; M$_{\phi r}$-3.05±.89; Best double couple: M$_0$3.84×10^{16} NP1:ϕ_s255°,δ20°,λ-40°. NP2:ϕ_s24°,δ78°,λ-105°. Principal axes: T 4.181, Plg31°, Azm126°; N -.683, Plg15°, Azm27°; P -3.498, Plg55°, Azm275°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **01** 21:55:04.6±0.1,17.09N×46.47W,h10^{km},mb5.1/120,MS4.5/35 Error ellipse: s-maj=4.0km s-min=2.2km az=167.0*

ISC 01 21:55:02.9±0.2,**17.14N**±0.04×**46.49W**±0.02,**h10**^{km},**(h23**^{km}±.6^{km}**:pP-P),n403,σ0**^{s}**79**/388,**mb4.9**/156,**MS4.4**/60,**80C-4D,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJG	**San Juan**	**18.77**	**276**	*e*P	**P**	**21 59 24.1**	**-0.4**
SJG				pmax	pmax		
	comp=Z,87nm,1.2s						
SJG	**San Juan**	**18.77**	**276**	P	**P**	**21 59 23.7**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=90,slow=7.7,SNR=9.1						
SJG	**San Juan**	**18.77**	**276**	*e*P	**P**	**21 59 24.1**	**-0.4**
	comp=Z,87nm,1.2s						
CS6B	**Jaguaretama**	**23.78**	**160**	*ce*P	**P**	**22 00 16.1**	**-0.7**
CS6B				*e*		22 00 20.9	
CS6B				*e*		22 00 31.2	
SDV	**Santo Domingo**	**24.89**	**254**	P	**P**	**22 00 28.1**	**+0.5**
	comp=Z,34nm,0.8s,mb4.9,baz=89,slow=5.7,SNR=44						
SDV				LR	LR	22 09 08.5	
	comp=Z,317nm,21.5s,MS3.8,baz=26,slow=34						
SDV	**Santo Domingo**	**24.89**	**254**	*e*P	**P**	**22 00 27.0**	**-0.5**
	comp=Z,35nm,0.8s,mb4.9						
ROSC	**El Rosal**	**29.88**	**249**	LR	LR	22 12 24.8	
	comp=Z,589nm,21.1s,MS4.2,baz=7.0,slow=35						
SAML	**Samuel**	**30.73**	**214**	*e*P	**P**	**22 01 19.6**	**-1.1**
	comp=Z,21nm,1.3s,mb4.8						
SAML				*e*		22 05 02.5	
BDFB	**Brasilia**	**32.60**	**183**	P	**P**	**22 01 37.0**	**-0.1**
	comp=Z,3.5nm,0.8s,mb4.4,baz=34,slow=10.0,SNR=4.2						
BDFB				LR	LR	22 16 04.4	
	comp=Z,222nm,18.6s,MS3.9,baz=248,slow=39						
EMMW	**East Machias**	**32.65**	**332**	*e*P	**P**	**22 01 38.2**	**+0.9**
	comp=Z,270nm,1.4s,mb6.0						
BRYW	**Bryant College**	**32.71**	**324**	*e*P	**P**	**22 01 37.8**	**+0.1**
	comp=Z,62nm,1.3s,mb5.4						
QUA2	**Belchertown**	**33.41**	**324**	*e*P	**P**	**22 01 43.9**	**+0.1**
	comp=Z,26nm,1.1s,mb5.1						
PAL	**Palisades**	**33.51**	**321**	*e*P	**P**	**22 01 45.0**	**+0.2**
PAL				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.3						
PAL	**Palisades**	**33.51**	**321**	*e*P	**P**	**22 01 45.0**	**+0.2**
	comp=Z,44nm,1.1s,mb5.3						
WVL	**Waterville**	**33.58**	**329**	*e*P	**P**	**22 01 46.2**	**+0.9**
	comp=Z,51nm,1.0s,mb5.4						
MVL	**Millersville**	**34.47**	**317**	*e*P	**P**	**22 01 53.4**	**+0.3**
MIV	**Mineville/With**	**35.23**	**325**	*e*P	**P**	**22 02 00.4**	**+0.9**
NCB	**Newcomb**	**35.54**	**325**	*e*P	**P**	**22 02 02.8**	**+0.6**
	comp=Z,13nm,1.2s,mb4.7						
OTAV	**Otavalo**	**35.67**	**245**	*e*P	**P**	**22 02 03.5**	**0.0**
	comp=Z,52nm,1.3s,mb5.3						
FRNY	**Flat Rock**	**35.77**	**326**	*e*P	**P**	**22 02 04.7**	**+0.6**
SIV	**San Ignacio**	**35.92**	**204**	P	**P**	**22 02 05.7**	**0.0**
	comp=Z,12nm,1.2s,mb4.7,baz=59,slow=9.7,SNR=21						
BLA	**Blacksburg**	**35.93**	**311**	*e*P	**P**	**22 02 06.6**	**+1.0**
BLA				MLR	MLR		
	comp=Z,594nm,21.0s,MS4.3						
SADO	**Sadowa**	**38.83**	**322**	P	**P**	**22 02 29.2**	**-0.6**
	comp=Z,5.8nm,0.7s,mb4.4,baz=144,slow=9.1,SNR=8.0						
SADO				LR	LR	22 15 41.9	
	comp=Z,541nm,19.9s,MS4.4,baz=145,slow=32						
PTEO	**Sao Teotonio**	**38.88**	**51**	*e*P	**P**	**22 02 32.5**	**+2.2**
SWET	**Sewanee**	**39.40**	**305**	*e*P	**P**	**22 02 36.4**	**+1.7**
LPAZ	**La Paz**	**39.47**	**214**	*e*P	**P**	**22 02 35.9**	**+0.4**
LPAZ				pmax	pmax		
	comp=Z,21nm,0.9s						
LPAZ	**La Paz**	**39.47**	**214**	P	**P**	**22 02 36.1**	**+0.6**
	comp=Z,16nm,0.8s,mb4.8,baz=22,slow=8.6,SNR=74						
LPAZ				LR	LR	22 18 29.7	
	comp=Z,288nm,20.7s,MS4.1,baz=205,slow=36						
LPAZ	**La Paz**	**39.47**	**214**	*e*P	**P**	**22 02 35.9**	**+0.4**
	comp=Z,21nm,0.9s,mb4.9						
PBEJ	**Beja**	**39.68**	**51**	*e*P	**P**	**22 02 37.8**	**+0.8**
	comp=Z,16nm,1.6s,mb4.5						
LRAL	**Lakeview Retre**	**39.69**	**301**	*e*P	**P**	**22 02 37.4**	**+0.3**
	comp=Z,28nm,1.0s,mb4.9						
LRAL				LR	LR		
	comp=Z,822nm,22.0s,MS4.5						
EVO	**Evora**	**39.76**	**50**	⇑*i*P	**P**	**22 02 36.9**	**-0.7**
	comp=Z,50nm,1.3s,mb4.8						
EVO				*e*R			
	comp=Z,779nm,20.2s						
PALC	**Alcoutim**	**39.78**	**52**	*e*P	**P**	**22 02 38.6**	**+0.8**
	comp=Z,34nm,1.8s,mb4.8						
EBAD	**Badajoz**	**40.57**	**50**	P	**P**	**22 02 43.8**	**-0.5**
	comp=Z,5.8nm,1.2s,mb4.1						
WCI	**Wyandotte Cave**	**40.63**	**309**	*e*P	**P**	**22 02 45.4**	**+0.6**
WCI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
WCI				MLR	MLR		
	comp=Z,543nm,22.0s,MS4.4						
WCI	**Wyandotte Cave**	**40.63**	**309**	*e*P	**P**	**22 02 45.4**	**+0.6**
	comp=Z,11nm,0.8s,mb4.5						
WCI				LR	LR		
	comp=Z,543nm,22.0s,MS4.4						
PCBR	**Castelo Branco**	**40.63**	**48**	*e*P	**P**	**22 02 44.9**	**+0.1**
	comp=Z,40nm,1.5s,mb4.8						
PVIS	**Viseu**	**40.68**	**47**	*e*P	**P**	**22 02 45.3**	**+0.1**
	comp=Z,24nm,1.4s,mb4.6						
SCHQ	**Schefferville**	**40.75**	**342**	P	**P**	**22 02 46.2**	**+0.7**
	comp=Z,17nm,1.0s,mb4.7,baz=145,slow=8.2,SNR=13						
SCHQ				LR	LR	22 17 02.7	
	comp=Z,372nm,21.3s,MS4.2,baz=265,slow=32						
SCHQ	**Schefferville**	**40.75**	**342**	P	**P**	**22 02 46.2**	**+0.7**
SCHQ				LR	LR	22 17 02.7	
MTE	**Manteigas**	**40.80**	**47**	*e*P	**P**	**22 02 46.5**	**+0.3**
	comp=Z,32nm,1.0s,mb4.9						
ESPR	**Espera**	**40.81**	**53**	P	**P**	**22 02 47.0**	**+0.7**
	comp=Z,8.9nm,1.2s,mb4.3						
PLAL	**Pickwick Lake**	**41.03**	**304**	*e*P	**P**	**22 02 48.8**	**+0.7**
	comp=Z,33nm,1.0s,mb4.9						
PLAL				LR	LR		
	comp=Z,563nm,20.0s,MS4.4						
PVRL	**Vila Real**	**41.03**	**46**	*e*P	**P**	**22 02 46.9**	**-1.2**
WVT	**Waverly**	**41.14**	**306**	*e*P	**P**	**22 02 49.6**	**+0.6**
WVT				pmax	pmax		
	comp=Z,59nm,1.4s,mb5.0						
WVT				MLR	MLR		
	comp=Z,650nm,19.0s,MS4.5						
WVT	**Waverly**	**41.14**	**306**	*e*P	**P**	**22 02 49.6**	**+0.6**
	comp=Z,59nm,1.4s,mb5.0						
WVT				LR	LR		
	comp=Z,650nm,19.0s,MS4.5						
ARE	**Arequipa**	**41.49**	**218**	*e*P	**P**	**22 02 51.0**	**-1.1**
EMIJ	**Mijas**	**41.55**	**54**	P	**P**	**22 02 52.8**	**+0.4**
	comp=Z,5.6nm,0.8s,mb4.2						
DBIC	**Dimbokro**	**41.95**	**99**	*e*P	**P**	**22 02 54.3**	**-1.7**
DBIC				pmax	pmax		
	comp=Z,13nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,652nm,20.0s						
DBIC	**Dimbokro**	**41.95**	**99**	P	**P**	**22 02 54.6**	**-1.4**
	comp=Z,13nm,0.7s,mb4.6,baz=266,slow=7.9,SNR=15						
DBIC				LR	LR	22 17 48.7	
	comp=Z,606nm,19.5s,MS4.5,baz=260,slow=33						
DBIC	**Dimbokro**	**41.95**	**99**	*e*P	**P**	**22 02 54.3**	**-1.7**
	comp=Z,13nm,0.8s,mb4.6						
DBIC				LR	LR		
	comp=Z,652nm,20.0s,MS4.5						
ELOJ	**Sierra Loja**	**42.20**	**53**	P	**P**	**22 02 57.8**	**+0.1**
ELOJ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
ELOJ	**Sierra Loja**	**42.20**	**53**	P	**P**	**22 02 57.8**	**+0.1**
	comp=Z,4.3nm,0.9s,mb4.1						
ESDC	**Sonseca Array**	**43.11**	**50**	P	**P**	**22 03 05.5**	**+0.4**
	comp=Z,1.9nm,0.8s,mb3.9,baz=256,slow=8.3,SNR=9.7						
ESDC	**Sonseca Array**	**43.11**	**50**	P	**P**	**22 03 05.2**	**+0.1**
	comp=Z,1.8nm,0.8s,mb3.9						
EQES	**Quesada**	**43.21**	**53**	P	**P**	**22 03 05.9**	**0.0**
	comp=Z,5.6nm,1.1s,mb4.2						
GUD	**Guadarrama**	**43.29**	**48**	P	**P**	**22 03 07.3**	**+0.7**
GUD				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
GUD	**Guadarrama**	**43.29**	**48**	P	**P**	**22 03 07.3**	**+0.7**
	comp=Z,4.0nm,0.9s,mb4.2						
CPUP	**Villa Florida**	**44.47**	**194**	*e*P	**P**	**22 03 15.5**	**-0.9**
CPUP				pmax	pmax		
	comp=Z,12nm,0.9s						
CPUP	**Villa Florida**	**44.47**	**194**	P	**P**	**22 03 15.8**	**-0.6**
	comp=Z,7.5nm,0.8s,mb4.5,baz=37,slow=10,SNR=19						
CPUP	**Villa Florida**	**44.47**	**194**	*e*P	**P**	**22 03 15.5**	**-0.8**
	comp=Z,12nm,0.9s,mb4.6						
ETOB	**Tobarra**	**44.59**	**52**	P	**P**	**22 03 17.4**	**+0.3**
	comp=Z,7.2nm,0.8s,mb4.5						
LVC	**Limon Verde**	**45.19**	**210**	P	**P**	**22 03 21.4**	**-0.7**
	comp=Z,18nm,0.9s,mb4.9,baz=36,slow=6.7,SNR=18						
LVC	**Limon Verde**	**45.19**	**210**	*e*P	**P**	**22 03 21.1**	**-1.0**
	comp=Z,114nm,1.6s,mb5.5						
SJPF	**Ste Jean**	**46.19**	**46**	⇑*i*P	**P**	**22 03 30.6**	**+0.8**
	comp=Z,66nm,1.1s,mb5.2						
SJPF	**Ste Jean**	**46.19**	**46**	⇑*i*P	**P**	**22 03 30.6**	**+0.8**
SJPF				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2						
ESAC	**San Caprasio**	**46.27**	**48**	P	**P**	**22 03 30.8**	**+0.4**
	comp=Z,12nm,0.7s,mb5.0						
ETSF	**Etsaut**	**46.58**	**47**	⇑*i*P	**P**	**22 03 33.9**	**+1.0**
	comp=Z,131nm,1.8s,mb5.3						
ETSF	**Etsaut**	**46.58**	**47**	⇑*i*P	**P**	**22 03 33.9**	**+1.0**
ETSF				pmax	pmax		
	comp=Z,66nm,1.8s,mb5.3						
ERTA	**Horta de San J**	**46.63**	**49**	P	**P**	**22 03 33.4**	**+0.1**
	comp=Z,5.8nm,1.2s,mb4.4						
QUIF	**Quistinic**	**46.80**	**39**	⇑*i*P	**P**	**22 03 34.3**	**-0.2**
	comp=Z,47nm,1.2s,mb5.0						
QUIF	**Quistinic**	**46.80**	**39**	⇑*i*P	**P**	**22 03 34.3**	**-0.2**
QUIF				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
ROSF	**Rostrenen**	**46.91**	**39**	⇑*i*P	**P**	**22 03 35.5**	**+0.1**
	comp=Z,54nm,1.0s,mb5.1						
ROSF	**Rostrenen**	**46.91**	**39**	⇑*i*P	**P**	**22 03 35.5**	**+0.1**
ROSF				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
EGRA	**Graus**	**46.98**	**48**	P	**P**	**22 03 37.0**	**+1.0**
	comp=Z,7.5nm,0.8s,mb4.7						
EBIE	**Bielsa**	**47.00**	**47**	P	**P**	**22 03 37.4**	**+1.2**
	comp=Z,9.6nm,1.3s,mb4.6						
EPF	**Esparros**	**47.25**	**47**	⇑*i*P	**P**	**22 03 39.0**	**+0.8**
	comp=Z,75nm,1.6s,mb5.1						
EPF	**Esparros**	**47.25**	**47**	⇑*i*P	**P**	**22 03 39.0**	**+0.8**
EPF				pmax	pmax		
	comp=Z,38nm,1.6s,mb5.1						
EPOB	**Poblet**	**47.28**	**49**	P	**P**	**22 03 37.9**	**-0.5**
	comp=Z,4.9nm,0.9s,mb4.4						
SGMF	**Saint Gilles**	**47.31**	**39**	⇑*i*P	**P**	**22 03 38.8**	**+0.2**
	comp=Z,80nm,1.2s,mb5.2						
SGMF	**Saint Gilles**	**47.31**	**39**	⇑*i*P	**P**	**22 03 38.8**	**+0.2**
SGMF				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.2						
EMIR	**Miracle**	**47.76**	**49**	P	**P**	**22 03 42.5**	**+0.3**
	comp=Z,9.6nm,0.8s,mb4.9						
LCHF	**La Chataignera**	**47.79**	**42**	*e*P	**P**	**22 03 42.9**	**+0.5**
EYMN	**Ely**	**47.83**	**320**	*e*P	**P**	**22 03 42.6**	**-0.1**
	comp=Z,11nm,0.9s,mb4.9						
EYMN				LR	LR		
	comp=Z,572nm,22.0s,MS4.5						
OXX	**Oaxaca**	**47.90**	**278**	*i* P	**P**	**22 03 43.0**	**-0.6**
VHO	**Vista Hermosa**	**47.91**	**278**	*i* P	**P**	**22 03 43.2**	**-0.5**
LFF	**La Frestale**	**48.14**	**44**	⇑*i*P	**P**	**22 03 44.9**	**-0.2**
	comp=Z,44nm,1.1s,mb5.1						
LFF	**La Frestale**	**48.14**	**44**	⇑*i*P	**P**	**22 03 44.9**	**-0.2**
LFF				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
MFF	**Saint Martin d**	**48.15**	**42**	⇑*i*P	**P**	**22 03 45.4**	**+0.3**
	comp=Z,129nm,1.1s,mb5.6						
MFF	**Saint Martin d**	**48.15**	**42**	⇑*i*P	**P**	**22 03 45.4**	**+0.3**
MFF				pmax	pmax		
	comp=Z,65nm,1.1s,mb5.6						
GRR	**Gorron**	**48.40**	**40**	⇑*i*P	**P**	**22 03 47.0**	**0.0**
	comp=Z,73nm,1.2s,mb5.3						
GRR	**Gorron**	**48.40**	**40**	⇑*i*P	**P**	**22 03 47.0**	**0.0**
GRR				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.3						
KSU1	**Kansas State U**	**48.63**	**307**	*e*P	**P**	**22 03 47.7**	**-1.3**
MTLF	**Montolieu**	**48.65**	**47**	⇑*i*P	**P**	**22 03 48.7**	**-0.4**
	comp=Z,57nm,1.3s,mb5.1						
MTLF	**Montolieu**	**48.65**	**47**	⇑*i*P	**P**	**22 03 48.7**	**-0.4**
MTLF				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.2						
FLN	**La Foliniere**	**48.77**	**39**	⇑*i*P	**P**	**22 03 49.8**	**-0.2**
	comp=Z,37nm,1.0s,mb5.0						
FLN				*e*R			
	comp=Z,329nm,19.5s						
FLN	**La Foliniere**	**48.77**	**39**	⇑*i*P	**P**	**22 03 49.8**	**-0.2**
FLN				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
FLN				MLR	MLR		
	comp=Z,330nm,19.5s,MS4.3						
RJF	**Les Rejaudoux**	**48.78**	**44**	⇑*i*P	**P**	**22 03 49.6**	**-0.4**
	comp=Z,24nm,1.1s,mb4.8						
RJF				*e*R			
	comp=Z,225nm,19.5s						
RJF	**Les Rejaudoux**	**48.78**	**44**	⇑*i*P	**P**	**22 03 49.6**	**-0.4**
RJF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
RJF				MLR	MLR		
	comp=Z,220nm,19.5s,MS4.2						
FRB	**Frobisher Bay**	**48.97**	**347**	P	**P**	**22 03 51.2**	**0.0**
	comp=Z,11nm,0.8s,mb5.0,baz=142,slow=11,SNR=7.3						
FRB	**Frobisher Bay**	**48.97**	**347**	P	**P**	**22 03 51.2**	**-0.1**
CAF	**Calviac**	**49.03**	**45**	⇑*i*P	**P**	**22 03 51.8**	**-0.1**
	comp=Z,25nm,1.0s,mb4.9						
CAF	**Calviac**	**49.03**	**45**	⇑*i*P	**P**	**22 03 51.8**	**-0.1**
CAF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
PPM	**Popocatepetl**	**49.45**	**281**	*i* P	**P**	**22 03 55.9**	**+0.4**
TCF	**Toulx Ste Croi**	**49.56**	**43**	⇑*i*P	**P**	**22 03 56.1**	**0.0**
	comp=Z,66nm,1.1s,mb5.3						
TCF	**Toulx Ste Croi**	**49.56**	**43**	⇑*i*P	**P**	**22 03 56.1**	**0.0**
TCF				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.3						
WMOK	**Wichita Mounta**	**49.63**	**301**	*e*P	**P**	**22 03 55.8**	**-0.9**
WMOK				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
WMOK				MLR	MLR		
	comp=Z,632nm,20.0s,MS4.6						
WMOK	**Wichita Mounta**	**49.63**	**301**	*e*P	**P**	**22 03 55.8**	**-0.9**
	comp=Z,19nm,0.9s,mb5.1						
WMOK				LR	LR		
	comp=Z,632nm,20.0s,MS4.6						
PYM	**Petit Puy Mans**	**49.92**	**44**	*e*P	**P**	**22 04 00.3**	**+1.5**
LBL	**Lubilhac**	**49.92**	**45**	*e*P	**P**	**22 04 00.3**	**+1.5**
LASF	**Ste Croix**	**50.00**	**46**	⇑*i*P	**P**	**22 03 59.9**	**+0.4**
	comp=Z,44nm,1.1s,mb5.1						
BGF	**Bois d’Agland**	**50.07**	**43**	⇑*i*P	**P**	**22 03 59.9**	**0.0**
	comp=Z,74nm,1.2s,mb5.3						
BGF	**Bois d’Agland**	**50.07**	**43**	⇑*i*P	**P**	**22 03 59.9**	**0.0**
BGF				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.3						
AGO	**Saint Agoulin**	**50.09**	**44**	*e*P	**P**	**22 04 00.5**	**+0.4**
JCT	**Junction City**	**50.14**	**296**	*e*P	**P**	**22 03 59.8**	**-0.9**
JCT				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.3						
JCT				MLR	MLR		
	comp=Z,401nm,22.0s,MS4.4						
JCT	**Junction City**	**50.14**	**296**	*e*P	**P**	**22 03 59.8**	**-0.9**
	comp=Z,28nm,0.8s,mb5.3						
JCT				LR	LR		
	comp=Z,401nm,22.0s,MS4.4						
HYF	**Humbligny**	**50.17**	**42**	*e*P	**P**	**22 04 00.8**	**+0.1**
PLIG	**Platanillo**	**50.35**	**280**	*i* P	**P**	**22 04 02.9**	**+0.4**
EKA	**Eskdalemuir Ar**	**50.38**	**31**	P	**P**	**22 04 01.0**	**-1.1**
	comp=Z,5.9nm,1.1s,mb4.5,baz=215,slow=8.7,SNR=4.9						
PLDF	**La Plantade**	**50.39**	**44**	*e*P	**P**	**22 04 03.8**	**+1.4**
AVF	**Avril sur Loir**	**50.47**	**43**	⇑*i*P	**P**	**22 04 02.8**	**-0.2**
	comp=Z,35nm,1.0s,mb5.0						
AVF	**Avril sur Loir**	**50.47**	**43**	⇑*i*P	**P**	**22 04 02.8**	**-0.2**
AVF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
SSF	**Saint Saulge**	**50.66**	**43**	⇑*i*P	**P**	**22 04 04.1**	**-0.3**
SSF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
SSF	**Saint Saulge**	**50.66**	**43**	⇑*i*P	**P**	**22 04 04.1**	**-0.3**
	comp=Z,15nm,1.0s,mb4.9						
SMF	**Signal de Mont**	**50.74**	**43**	⇑*i*P	**P**	**22 04 04.8**	**-0.3**
	comp=Z,38nm,1.1s,mb5.0						
SMF	**Signal de Mont**	**50.74**	**43**	⇑*i*P	**P**	**22 04 04.8**	**-0.3**
SMF				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
VIVF	**Saint-Julien-l**	**50.78**	**46**	⇑*i*P	**P**	**22 04 06.0**	**+0.7**
	comp=Z,33nm,1.1s,mb4.9						
VIVF	**Saint-Julien-l**	**50.78**	**46**	⇑*i*P	**P**	**22 04 06.0**	**+0.7**
VIVF				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
PRAF	**Pradon**	**50.84**	**47**	*e*P	**P**	**22 04 06.7**	**+0.8**
GELF	**Grande-Etoile**	**50.92**	**48**	*e*P	**P**	**22 04 06.9**	**+0.5**
TREF	**Trevaresse**	**50.95**	**47**	*e*P	**P**	**22 04 07.8**	**+1.1**
LOR	**Lormes**	**50.95**	**42**	⇑*i*P	**P**	**22 04 06.2**	**-0.4**
	comp=Z,38nm,1.1s,mb4.9						
LOR				*e*R			
	comp=Z,229nm,19.8s						
LOR	**Lormes**	**50.95**	**42**	⇑*i*P	**P**	**22 04 06.2**	**-0.4**
LOR				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
LOR				MLR	MLR		
	comp=Z,230nm,19.8s,MS4.2						
CBKS	**Cedar Bluff**	**50.97**	**306**	*e*P	**P**	**22 04 06.6**	**-0.3**
CBKS				pmax	pmax		
	comp=Z,147nm,1.4s,mb5.7						
CBKS				MLR	MLR		
	comp=Z,520nm,20.0s,MS4.5						
CBKS	**Cedar Bluff**	**50.97**	**306**	*e*P	**P**	**22 04 06.6**	**-0.3**
	comp=Z,147nm,1.4s,mb5.7						
CBKS				LR	LR		
	comp=Z,520nm,20.0s,MS4.5						
BERF	**Bertagne**	**51.09**	**48**	*e*P	**P**	**22 04 08.5**	**+0.8**
SMRF	**Simiane la Rot**	**51.17**	**47**	⇑*i*P	**P**	**22 04 09.4**	**+1.1**
	comp=Z,56nm,1.3s,mb5.0						
VILF	**Villemus**	**51.24**	**47**	*e*P	**P**	**22 04 09.7**	**+0.8**
ULM	**Lac du Bonnet**	**51.38**	**321**	P	**P**	**22 04 08.8**	**-1.1**
	comp=Z,11nm,0.7s,mb4.9,baz=110,slow=7.8,SNR=10						
ULM				LR	LR	22 25 15.3	
	comp=Z,438nm,19.4s,MS4.5,baz=97,slow=35						
ORIF	**Oris-en-Rattie**	**51.62**	**46**	⇑*i*P	**P**	**22 04 12.6**	**+0.8**
	comp=Z,36nm,1.5s,mb4.8						

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ORIF                                   eR
         comp=Z,528nm,19.5s
LMR      La Mourre         51.67  48⇑iP     P        22 04 11.9 -0.3
         comp=Z,65nm,1.6s,mb5.0
LMR      La Mourre         51.67  48⇑iP     P        22 04 11.9 -0.3
LMR                                 pmax    pmax
         comp=Z,33nm,1.5s,mb5.0
FRF      La Foret Royal    51.82  48⇑iP     P        22 04 13.0 -0.3
AMTX     Amarillo          52.02 301 eP     P        22 04 14.3 -0.6
         comp=Z,219nm,1.4s,mb5.9
AMTX                                LR      LR
         comp=Z,669nm,20.0s,MS4.7
CALN     Calern            52.04  48 eP     P        22 04 15.1 +0.2
BAIF     Baives            52.10  39⇑iP     P        22 04 14.6 -0.7
         comp=Z,40nm,1.0s,mb5.0
BAIF     Baives            52.10  39⇑iP     P        22 04 14.6 -0.7
BAIF                                pmax    pmax
         comp=Z,20nm,1.0s,mb5.0
MEZF     Maizieres J’vi    52.10  41⇑iP     P        22 04 15.1 -0.3
         comp=Z,113nm,1.1s,mb5.4
MBDF     Montbardon        52.19  46⇑iP     P        22 04 16.8 +0.8
         comp=Z,47nm,1.1s,mb5.0
MBDF     Montbardon        52.19  46⇑iP     P        22 04 16.8 +0.8
MBDF                                pmax    pmax
         comp=Z,23nm,1.1s,mb5.0
BNI      Bardonecchia      52.20  46 eP     P        22 04 16.9 +0.7
BNI                                 pmax    pmax
         comp=Z,39nm,1.4s,mb5.1
BNI      Bardonecchia      52.20  46 eP     P        22 04 16.9 +0.8
         comp=Z,38nm,1.4s,mb5.1
CABF     La Chapelle       52.21  44⇑iP     P        22 04 16.2  0.0
         comp=Z,32nm,1.0s,mb4.9
CABF     La Chapelle       52.21  44⇑iP     P        22 04 16.2  0.0
CABF                                pmax    pmax
         comp=Z,16nm,1.0s,mb4.9
TOUF     Mont Tournerai    52.35  47 eP     P        22 04 17.4 +0.1
LPL      La Plagne         52.36  45⇑iP     P        22 04 17.9 +0.6
LPG      La Plagne         52.36  45⇑iP     P        22 04 18.1 +0.7
REVF     Revere            52.37  48 eP     P        22 04 17.7 +0.2
SBF      Sospel            52.45  48⇑iP     P        22 04 17.8 -0.2
AUTN     L’Aution          52.47  47 eP     P        22 04 17.1 -1.1
GIVF     Givet             52.49  39 eP     P        22 04 17.6 -0.6
SAOF     Saorge            52.56  47 eP     P        22 04 18.6 -0.3
THEF     They Montfort     52.61  42 eP     P        22 04 18.4 -0.8
ZAIG     Zacatecas         52.76 286 i P    P        22 04 22.2 +1.6
CFAA     Coronel Fontan    52.77 203  P     P        22 04 19.4 -1.2
         comp=Z,1.4nm,0.9s,mb3.9,baz=17,slow=6.2,SNR=14
HAU      Haudompre         52.78  42⇑iP     P        22 04 19.5 -0.9
HAU                                eR
         comp=Z,241nm,18.1s
LOMF     Lomont            52.91  43 eP     P        22 04 21.0 -0.4
HINF     Hinteralfeld      53.05  43⇓iP     P        22 04 21.6 -0.9
VSL      Villasalto        53.08  53 eP     P        22 04 22.3 -0.5
         comp=Z,37nm,1.2s,mb5.2
MOF      Molkenrain        53.24  43 eP     P        22 04 23.1 -0.8
PGF      Pioggiola         53.30  49⇑iP     P        22 04 24.0 -0.4
         comp=Z,48nm,1.3s,mb5.0
PGF      Pioggiola         53.30  49⇑iP     P        22 04 24.0 -0.4
PGF                                 pmax    pmax
         comp=Z,24nm,1.3s,mb5.0
ECH      Echery            53.36  42 eP     P        22 04 23.8 -0.9
BBS      Basel-Blauen      53.38  43 eP     P        22 04 22.6 -2.3
SFJM     Santa Fe          53.42 283 i P    P        22 04 27.0 +1.5
LTX      Lajitas           53.47 294 eP     P        22 04 25.5 -0.3
LTX                                 pmax    pmax
         comp=Z,8.0nm,0.8s,mb4.7
LTX      Lajitas           53.47 294 eP     P        22 04 25.4 -0.3
         comp=Z,7.5nm,0.8s,mb4.7
TXAR     Lajitas Array     53.47 294  P     P        22 04 25.2 -0.5
         comp=Z,7.5nm,0.8s,mb4.7,baz=106,slow=9.1,SNR=49
TXAR                                PcP     PcP      22 05 32.8  0.0
         comp=Z,2.9nm,0.8s,baz=101,slow=6.4,SNR=4.8
TXAR                                LR      LR       22 28 16.8
         comp=Z,242nm,19.9s,MS4.2,baz=205,slow=37
CDF      Champ du Feu      53.49  42⇑iP     P        22 04 24.8 -0.9
WLS      Welschbruch       53.54  42 eP     P        22 04 25.2 -0.8
FELD     Feldberg          53.81  43 eP     P        22 04 27.1 -0.9
LANF     Langenberg        53.99  41 eP     P        22 04 28.5 -0.8
ABH      Alteburg          54.09  40 eP     P        22 04 30.1 +0.1
FCC      Fort Churchill    54.13 332 eP     P        22 04 29.5 -0.7
FCC                                 pmax    pmax
         comp=Z,53nm,1.5s,mb5.2
FCC      Fort Churchill    54.13 332 eP     P        22 04 29.5 -0.7
         comp=Z,53nm,1.5s,mb5.2
BFO      Black Forest      54.15  42 eP     P        22 04 29.7 -0.7
BFO                                 pmax    pmax
         comp=Z,17nm,1.2s,mb4.8
BFO      Black Forest      54.15  42 eP     P        22 04 29.7 -0.7
         comp=Z,17nm,1.2s,mb4.8
TNS      Taunus Mts        54.74  40 eP     P        22 04 34.3 -0.5
TNS                                 pmax    pmax
         comp=Z,18nm,0.9s,mb5.1
TNS      Taunus Mts        54.74  40 eP     P        22 04 34.3 -0.5
         comp=Z,18nm,0.9s,mb5.1
DAVOX    Davos             54.78  44  P     P        22 04 35.4 +0.2
         comp=Z,7.9nm,0.9s,mb4.7,baz=264,slow=10,SNR=8.9
DAVOX                               LR      LR       22 25 12.0
         comp=Z,384nm,19.8s,MS4.5,baz=239,slow=33
DAVA     Damuels           54.90  44⇑iP     P        22 04 36.0  0.0
         comp=Z,22nm,1.3s,mb5.0
MNTX     Cornudas Mount    54.96 297 eP     P        22 04 36.0 -0.6
         comp=Z,37nm,1.1s,mb5.3
RSSD     Black Hills       55.06 312 eP     P        22 04 36.6 -0.7
RSSD                                pmax    pmax
         comp=Z,21nm,1.3s,mb5.0
RSSD                                MLR     MLR
         comp=Z,764nm,21.0s,MS4.8
RSSD     Black Hills       55.06 312 eP     P        22 04 36.6 -0.7
         comp=Z,21nm,1.3s,mb5.0
RSSD                                LR      LR
         comp=Z,764nm,21.0s,MS4.8
ISCO     Idaho Springs     55.62 307 eP     P        22 04 34.9 -6.5
ISCO                                MLR     MLR
         comp=Z,517nm,20.0s,MS4.6
PHWY     Pilot Hill        55.67 309 eP     P        22 04 41.9 +0.2
MOTA     Moosalm           55.72  44⇑iP     P        22 04 41.5 -0.5
         comp=Z,26nm,1.3s,mb5.1
MOTA     Moosalm           55.72  44⇑iP     P        22 04 41.5 -0.5
MOTA                                pmax    pmax
         comp=Z,26nm,1.3s,mb5.1
SQTA     Sankt Quirin      55.77  44⇓iP     P        22 04 42.2 -0.1
         comp=Z,30nm,1.1s,mb5.2
SQTA     Sankt Quirin      55.77  44⇓iP     P        22 04 42.2 -0.1
SQTA                                pmax    pmax
         comp=Z,30nm,1.1s,mb5.2
ANMO     Albuquerque       55.94 301 i P    P        22 04 43.9 +0.2
ANMO     Albuquerque       55.94 301 eP     P        22 04 44.0 +0.2
         comp=Z,6.9nm,0.8s,mb4.7
ANMO                                LR      LR
         comp=Z,548nm,21.0s,MS4.6
FUR      Furstenfeldbru    56.02  43 eP     P        22 04 43.5 -0.6
FUR                                 pmax    pmax
         comp=Z,22nm,1.1s,mb5.1
FUR      Furstenfeldbru    56.02  43 eP     P        22 04 43.5 -0.6
         comp=Z,22nm,1.1s,mb5.1
WATA     Walderalm         56.04  44⇑iP     P        22 04 43.5 -0.7
         comp=Z,32nm,1.4s,mb5.2
WATA     Walderalm         56.04  44⇑iP     P        22 04 43.5 -0.7
WATA                                pmax    pmax
         comp=Z,32nm,1.4s,mb5.2
BNM      Barren Site       56.05 300 eP     P        22 04 44.7 +0.2
WTTA     Wattenberg        56.06  44⇑iP     P        22 04 43.9 -0.5
         comp=Z,19nm,1.6s,mb4.9
WTTA     Wattenberg        56.06  44⇑iP     P        22 04 43.9 -0.5
WTTA                                pmax    pmax
         comp=Z,19nm,1.6s,mb4.9
GRA1     Grafenberg Arr    56.33  41 eP     P        22 04 45.4 -0.9
         comp=Z,16nm,1.1s,mb5.0
GRA1                               epP      pP       22 04 52.2 +2.8
GRF      Grafenberg Arr    56.33  41 eP     P        22 04 45.4 -0.9
GRF                                 pmax    pmax
         comp=Z,16nm,1.1s,mb5.0
GRF      Grafenberg Arr    56.33  41 eP     P        22 04 45.4 -0.9
GRF                                 pmax    pmax
         comp=Z,16nm,1.1s,mb5.0
GRF      Grafenberg Arr    56.33  41 eP     P        22 04 45.4 -0.9
         comp=Z,16nm,1.1s,mb5.0
GRF                                epP      pP       22 04 52.2 +2.8
CLZ      Clausthal         56.36  39 eP     P        22 04 45.7 -0.8
CLZ                                 pmax    pmax
         comp=Z,16nm,1.1s,mb5.0
CLZ      Clausthal         56.36  39 eP     P        22 04 45.7 -0.8
         comp=Z,16nm,1.1s,mb5.0
FFC      Flin Flon         56.44 325 eP     P        22 04 45.7 -1.4
FFC                                 pmax    pmax
         comp=Z,30nm,1.1s,mb5.2
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FFC                                 MLR     MLR
         comp=Z,115nm,20.0s,MS4.0
FFC      Flin Flon         56.44 325 eP     P        22 04 45.7 -1.4
         comp=Z,30nm,1.1s,mb5.2
FFC                                 LR      LR
         comp=Z,115nm,20.0s,MS4.0
LAZ      Ladron            56.48 300 eP     P        22 04 48.2 +0.6
AQU      L’Aquila          56.49  50 eP     P        22 04 47.3 -0.3
AQU                                 pmax    pmax
         comp=Z,58nm,1.1s,mb5.5
AQU      L’Aquila          56.49  50 eP     P        22 04 47.3 -0.2
         comp=Z,58nm,1.1s,mb5.5
MOX      Moxa              56.81  40 eP     P        22 04 49.1 -0.6
MOX                                 pmax    pmax
         comp=Z,28nm,1.8s,mb5.0
MOX      Moxa              56.81  40 eP     P        22 04 49.1 -0.6
         comp=Z,28nm,1.8s,mb5.0
MOX      Moxa              56.81  40 i P    P        22 04 49.1 -0.6
         comp=Z,logA/T=1.2,mb5.0
VAE      Valguarnera       56.81  56  P     P        22 04 47.2 -2.8
         comp=Z,8.6nm,0.9s,mb4.8,baz=326,slow=16,SNR=2.5
VAE                                 LR      LR       22 27 08.4
         comp=Z,310nm,18.2s,MS4.4,baz=148,slow=34
BSEG     Bad Segeberg      56.93  36 eP     P        22 04 49.8 -0.8
LAO      LASA Array        57.03 315 eP     P        22 04 51.4  0.0
         comp=Z,22nm,0.9s,mb5.2
LAO                                 LR      LR
         comp=Z,520nm,20.0s,MS4.6
CII      Carovilli         57.08  51 eP     P        22 04 51.6 -0.2
         comp=Z,22nm,1.1s,mb5.1
KBA      Koelnbreinsper    57.17  45⇑iP     P        22 04 51.3 -1.1
         comp=Z,16nm,1.1s,mb5.0
KBA      Koelnbreinsper    57.17  45⇑iP     P        22 04 51.3 -1.1
KBA                                 pmax    pmax
         comp=Z,16nm,1.1s,mb5.0
NKC      Novy Kostel       57.23  41 eP     P        22 04 52.5 -0.2
NKC                                epP      pP       22 04 59.6 +3.8
NKC                                 AMS     AMS      22 27 10.0
         comp=Z,300nm,16.8s
KHC      Kasperske Hory    57.71  42 i P    P        22 04 55.3 -0.8
KHC      Kasperske Hory    57.71  42 eP     P        22 04 55.3 -0.8
KHC                                epP      pP       22 05 04.2 +5.0
KHC                                 AMS     AMS      22 30 00.0
         comp=Z,300nm,19.5s
GEC2     GERESS Array S    57.73  43 eP     P        22 04 55.1 -1.2
GEC2                                pmax    pmax
         comp=Z,13nm,1.3s,mb4.8
GEC2     GERESS Array S    57.73  43 eP     P        22 04 55.1 -1.2
         comp=Z,13nm,1.3s,mb4.8
GERES    GERESS Array B    57.73  43  P     P        22 04 54.9 -1.4
         comp=Z,1.7nm,0.7s,mb4.2,baz=243,slow=6.0,SNR=18
GERES                               LR      LR       22 28 33.4
         comp=Z,317nm,19.2s,MS4.4,baz=259,slow=35
LJU      Ljubljana         57.80  46 eP     P        22 04 56.4 -0.5
LJU                                epP      pP       22 05 03.5 +3.6
CLL      Collm             57.81  40 i P    P        22 04 56.0 -0.8
CLL                                 pmax    pmax
         comp=Z,18nm,1.0s,mb5.1
CLL      Collm             57.81  40 i P    P        22 04 56.0 -0.8
         comp=Z,18nm,1.0s,mb5.1
CLL                                i                 22 05 02.6
CLL      Collm             57.81  40  P     P        22 04 56.0 -0.8
         comp=Z,logA/T=1.3,mb5.1
CLL                                i *PP    pP       22 05 02.6 +2.7
CLL                                e                 22 05 09.0
OBKA     Obir              57.89  46⇑iP     P        22 04 56.9 -0.5
         comp=Z,21nm,1.0s,mb5.1
MOA      Molln             57.92  44⇑iP     P        22 04 56.4 -1.2
         comp=Z,18nm,1.2s,mb5.0
BRG      Berggiesshubel    58.30  40 eP     P        22 05 00.2  0.0
BRG                                 pmax    pmax
         comp=Z,10.0nm,1.1s,mb4.8
BRG                                 MLR     MLR
         comp=N,160nm,15.4s,MS4.4
BRG                                 MLR     MLR
         comp=E,190nm,15.4s,MS4.4
BRG                                 MLR     MLR
         comp=Z,230nm,15.4s,MS4.4
BRG      Berggiesshubel    58.30  40 eP     P        22 05 00.2  0.0
         comp=Z,10nm,1.1s,mb4.8
BRG                                e                 22 05 06.0
BRG                                 LR      LR
         comp=Z,230nm,15.4s,MS4.4
DOBS     Dobrina           58.47  46 eP     P        22 05 00.6 -0.9
PRU      Pruhonice         58.49  41 eP     P        22 05 01.1 -0.5
PRU                                 MLR     MLR
         comp=Z,300nm,16.3s,MS4.5
PRU      Pruhonice         58.49  41 eP     P        22 05 01.1 -0.5
PRU                                epP      pP       22 05 08.2 +3.5
PRU                                 AMS     AMS      22 28 50.0
         comp=Z,300nm,16.3s
PVCC     Panska Ves        58.62  41 eP     P        22 05 02.1 -0.3
PVCC                                MLR     MLR
         comp=Z,200nm,15.7s,MS4.3
PVCC     Panska Ves        58.62  41 eP     P        22 05 02.1 -0.3
PVCC                               epP      pP       22 05 09.1 +3.6
PVCC                                AMS     AMS      22 27 40.0
         comp=Z,200nm,15.7s
ARSA     Arzberg           58.66  45⇑iP     P        22 05 01.4 -1.4
         comp=Z,21nm,1.5s,mb5.0
BW06     Boulder Array     58.87 310  PFAKE          22 05 20.0  +16
BW06                                LR      LR
         comp=Z,513nm,22.0s,MS4.6
PDAR     Pinedale Array    58.87 310  P     P        22 05 04.0 -0.4
         comp=Z,8.3nm,0.9s,mb4.8,baz=112,slow=7.5,SNR=7.8
PDAR                                LR      LR       22 27 38.1
         comp=Z,430nm,21.7s,MS4.5,baz=130,slow=33
UPC      Upice             59.52  41 eP     P        22 05 08.5 -0.2
UPC                                epP      pP       22 05 15.5 +3.7
TUC      Tucson            59.54 298 eP     P        22 05 09.3 +0.2
TUC                                 MLR     MLR
         comp=Z,393nm,19.0s,MS4.6
DPC      Dobruska-Polom    59.69  41 eP     P        22 05 09.2 -0.7
DPC                                 MLR     MLR
         comp=Z,300nm,20.1s,MS4.4
DPC      Dobruska-Polom    59.69  41 eP     P        22 05 09.2 -0.7
DPC                                epP      pP       22 05 16.5 +3.5
DPC                                 AMS     AMS      22 29 40.0
         comp=Z,300nm,20.1s
NB2      NORSAR Subarra    59.70  28  P     P        22 05 09.6 -0.2
         comp=Z,12nm,1.2s,mb4.8,baz=251,slow=7.0
NOA      NORSAR Array B    59.70  28  P     P        22 05 09.4 -0.4
         comp=Z,4.4nm,1.1s,mb4.4,baz=250,slow=7.2,SNR=4.7
NOA                                 LR      LR       22 26 54.3
         comp=Z,226nm,18.6s,MS4.3,baz=255,slow=32
MOOW     Moose Ponds       59.82 311 eP     P        22 05 09.6 -1.3
         comp=Z,40nm,1.4s,mb5.2
ZST      Bratislava        59.86  44 eP     P        22 05 10.5 -0.6
IMW      Indian Meadow     59.97 311 eP     P        22 05 11.6 -0.3
         comp=Z,45nm,1.0s,mb5.5
WUAZ     Wupatki           59.97 301 eP     P        22 05 11.9 -0.2
         comp=Z,32nm,0.8s,mb5.4
WUAZ                                LR      LR
         comp=Z,591nm,20.0s,MS4.7
AHID     Auburn Hatcher    60.00 310  PFAKE          22 05 20.0 +7.9
AHID                                LR      LR
         comp=Z,526nm,20.0s,MS4.7
HWUT     Hardware Ranch    60.27 308 eP     P        22 05 13.6 -0.4
         comp=Z,45nm,1.0s,mb5.5
HWUT                                LR      LR
         comp=Z,607nm,21.0s,MS4.7
MORC     Moravsky Berou    60.37  42 eP     P        22 05 14.2 -0.4
MORC                                pmax    pmax
         comp=Z,24nm,1.5s,mb5.0
MORC     Moravsky Berou    60.37  42 eP     P        22 05 14.2 -0.4
         comp=Z,24nm,1.5s,mb5.0
QLMT     Earthquake Lak    60.40 312  P     P        22 05 14.1 -0.8
BOZ      Bozeman (W)       60.62 313 eP     P        22 05 15.6 -0.7
BOZ                                 pmax    pmax
         comp=Z,6.0nm,1.0s,mb4.7
BOZ                                 MLR     MLR
         comp=Z,405nm,21.0s,MS4.5
BOZ      Bozeman (W)       60.62 313 eP     P        22 05 15.6 -0.7
         comp=Z,6.2nm,1.0s,mb4.7
BOZ                                 LR      LR
         comp=Z,405nm,21.0s,MS4.5
OKC      Ostrava-Krasne    60.77  42 eP     P        22 05 17.4 +0.1
OKC                                epP      pP       22 05 24.3 +3.9
OKC                                 AMS     AMS      22 29 50.0
         comp=Z,200nm,16.9s
HRY      Holter Researc    60.86 314 eP     P        22 05 17.1 -0.8
SPUT     South Promonto    60.92 308 eP     P        22 05 18.2 -0.2
VYHS     Vyhne             61.04  44 i P    P        22 05 17.9 -1.2
VYHS                               e                 22 05 25.1
DUG      Dugway            61.16 307 eP     P        22 05 19.7 -0.4
DUG                                 pmax    pmax
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         comp=Z,10.0nm,0.7s,mb5.0
DUG      Dugway            61.16 307 eP     P        22 05 19.7 -0.3
         comp=Z,9.9nm,0.7s,mb5.0
BGU      Big Grassy Mou    61.35 308 eP     P        22 05 20.8 -0.5
ARUT     Antelope Range    61.62 304 eP     P        22 05 24.4 +1.2
PLCA     Paso Flores       61.76 201  P     P        22 05 24.9 +0.7
         comp=Z,2.3nm,0.8s,mb4.4,baz=39,slow=10,SNR=4.0
CHMT     Chamberlain Mo    61.85 314 eP     P        22 05 23.6 -1.1
OJC      Ojcow             61.87  42 eP     P        22 05 24.5 -0.3
NIE      Niedzica          62.11  43 eP     P        22 05 26.2 -0.2
SKO      Skopje            62.42  51 i P    P        22 05 28.5  0.0
HLID     Hailey            62.46 311 eP     P        22 05 28.4 -0.4
         comp=Z,19nm,1.2s,mb5.1
HLID                                LR      LR
         comp=Z,619nm,21.0s,MS4.8
NEN      Nelson            62.80 302 eP     P        22 05 31.6 +0.5
ELK      Elko              63.02 307 eP     P        22 05 32.8 +0.3
ELK                                 pmax    pmax
         comp=Z,33nm,0.8s
ELK                                 MLR     MLR
         comp=Z,562nm,20.0s
ELK      Elko              63.02 307 eP     P        22 05 32.8 +0.3
         comp=Z,33nm,0.8s,mb5.5
ELK                                 LR      LR
         comp=Z,562nm,20.0s,MS4.7
LDFC     Landfair          63.04 301 eP     P        22 05 34.6 +1.9
VAY      Valandovo         63.26  52⇑iP     P        22 05 34.0  0.0
VAY                                i                 22 05 40.7
TRCR     Troy Canyon       63.31 305 eP     P        22 05 35.1 +0.7
KOLS     Kolonicke sedl    63.35  43 eP     P        22 05 34.6 +0.1
KKB      Krupnik           63.64  51 eP     P        22 05 37.0 +0.4
KWP      Kalwaria          63.69  43 eP     P        22 05 36.7 -0.1
KWP                                 pmax    pmax
         comp=Z,26nm,1.4s,mb5.1
KWP      Kalwaria          63.69  43 eP     P        22 05 36.7 -0.1
         comp=Z,26nm,1.4s,mb5.1
VTS      Vitosha           63.74  51 eP     P        22 05 38.0 +0.8
MMB      Musomiste         64.12  52 eP     P        22 05 40.0 +0.2
PFO      Pinyon Flat Ob    64.23 299 eP     P        22 05 41.4 +0.8
PFO                                 pmax    pmax
         comp=Z,42nm,1.4s,mb5.3
PFO      Pinyon Flat Ob    64.23 299 eP     P        22 05 41.4 +0.7
         comp=Z,42nm,1.4s,mb5.3
PGB      Panagyurishte     64.45  51 eP     P        22 05 42.0 +0.1
BAR      Barrett           64.49 298 eP     P        22 05 42.8 +0.5
BMN      Battle Mountai    64.53 307  PFAKE          22 05 50.0 +7.5
BMN                                 LR      LR
         comp=Z,432nm,19.0s,MS4.7
NEW      Newport           64.55 316 eP     P        22 05 40.9 -1.5
NEW                                 pmax    pmax
         comp=Z,27nm,1.0s
NEW      Newport           64.55 316 eP     P        22 05 40.9 -1.6
         comp=Z,26nm,1.0s,mb5.2
LVV      L’vov             64.56  43 eP     P        22 05 42.5 +0.1
LVV                                e                 22 08 03.3
LVV                                e                 22 09 45.3
LVV                                eS       S        22 14 16.3 -3.9
LVV                                e                 22 18 26.5
LVV                                 MLR     MLR
         comp=Z,200nm,17.0s,MS4.4
TPH      Tonopah           64.61 304 eP     P        22 05 43.8 +0.8
TPH                                 pmax    pmax
         comp=Z,10.0nm,0.8s,mb4.9
TPH      Tonopah           64.61 304 eP     P        22 05 43.8 +0.8
         comp=Z,10nm,0.8s,mb4.9
YKA      Yellowknife Ar    64.86 332 i P    P        22 05 42.6 -1.6
YKA                                 pmax    pmax
         comp=Z,2.0nm,0.8s
YKA      Yellowknife Ar    64.86 332  P     P        22 05 42.3 -1.9
         comp=Z,2.4nm,0.8s,mb4.3,baz=101,slow=7.8,SNR=26
YKA                                 LR      LR       22 31 50.1
         comp=Z,428nm,19.7s,MS4.6,baz=100,slow=34
RZN      Rozhen            64.86  52 eP     P        22 05 45.0 +0.4
YKW3     Yellowknife Ar    64.88 332 eP     P        22 05 43.0 -1.3
DAC      Darwin (Calif)    64.99 302 eP     P        22 05 46.1 +0.6
DAC                                 pmax    pmax
         comp=Z,9.0nm,0.8s,mb4.8
DAC      Darwin (Calif)    64.99 302 eP     P        22 05 46.1 +0.6
         comp=Z,8.5nm,0.8s,mb4.8
IDI      Anoyia            65.28  59  LR    LR       22 32 33.8
         comp=Z,126nm,20.9s,MS4.1,baz=246,slow=34
MNV      Mina              65.32 305 eP     P        22 05 47.5 -0.1
MNV                                 pmax    pmax
         comp=Z,28nm,1.5s,mb5.1
MNV      Mina              65.32 305 eP     P        22 05 47.5 -0.1
         comp=Z,28nm,1.5s,mb5.1
KDZ      Kurdzhali         65.39  52 eP     P        22 05 48.0  0.0
NVAR     Mina Array Bea    65.44 305  P     P        22 05 47.9 -0.5
         comp=Z,4.2nm,0.8s,mb4.5,baz=84,slow=6.9,SNR=11
NVAR                                LR      LR       22 33 29.4
         comp=Z,240nm,19.6s,MS4.4,baz=90,slow=35
MWC      Mount Wilson      65.52 300 eP     P        22 05 49.5 +0.6
WVOR     Wild Horse Val    65.55 309 eP     P        22 05 49.1 +0.1
WVOR                                pmax    pmax
         comp=Z,20nm,1.1s,mb5.1
WVOR     Wild Horse Val    65.55 309 eP     P        22 05 49.1 +0.1
         comp=Z,20nm,1.1s,mb5.1
MTUM     Tungsten Hills    65.71 304 eP     P        22 05 50.9 +0.8
MLR      Muntele Rosu      65.72  47  P     P        22 05 49.9 -0.1
         comp=Z,26nm,1.1s,mb5.2,baz=2.8,slow=4.7,SNR=10
MLR                                 LR      LR       22 29 57.7
         comp=Z,253nm,21.1s,MS4.4,baz=300,slow=32
OMM      Old Mammoth Mi    66.03 304 eP     P        22 05 52.9 +0.8
FINES    FINESS Array B    66.77  30  P     P        22 05 55.0 -1.4
         comp=Z,7.3nm,1.2s,mb4.6,baz=248,slow=7.5,SNR=6.5
FINES                               LR      LR       22 30 11.2
         comp=Z,159nm,19.7s,MS4.2,baz=80,slow=32
MOD      Modoc             66.81 309 eP     P        22 05 56.9 -0.2
         comp=Z,24nm,1.4s,mb5.0
CMB      Columbia Colle    67.10 305 eP     P        22 05 59.6 +0.6
CMB                                 pmax    pmax
         comp=Z,18nm,1.3s,mb4.9
CMB                                 MLR     MLR
         comp=Z,424nm,22.0s,MS4.6
CMB      Columbia Colle    67.10 305 eP     P        22 05 59.5 +0.6
         comp=Z,18nm,1.3s,mb4.9
CMB                                 LR      LR
         comp=Z,424nm,22.0s,MS4.6
LRV      Little Rabbit     67.74 303 eP     P        22 06 04.4 +1.3
ARCES    ARCESS Array B    67.78  21  P     P        22 06 02.4 -0.4
         comp=Z,2.8nm,0.9s,mb4.3,baz=333,slow=5.4,SNR=6.9
AKASG    Malin Array Be    67.91  42  P     P        22 06 03.0 -0.9
         comp=Z,3.5nm,0.8s,mb4.5,baz=270,slow=6.1,SNR=14
AKASG    Malin Array Be    67.91  42  P     P        22 06 03.0 -0.9
ULDT     Uludag            68.28  53 i P    P        22 06 05.6 -0.7
HUMO     Hull Mountain     68.73 310  PFAKE          22 06 20.0  +11
HUMO                                LR      LR
         comp=Z,601nm,22.0s,MS4.8
GOLH     Golhisar          68.87  56 i P    P        22 06 10.6 +0.5
HOPS     Hopland           69.12 306  PFAKE          22 06 20.0 +8.4
HOPS                                LR      LR
         comp=Z,387nm,20.0s,MS4.6
ESKT     Eskisehir         69.65  54 i P    P        22 06 15.0 +0.2
SGKT     Sivrigoynuk       70.47  52 i P    P        22 06 19.5 -0.2
KDHN     Kadinhani         70.74  55 i P    P        22 06 20.2 -1.2
ELDT     Eldivan           71.51  52 i P    P        22 06 25.5 -0.6
OBN      Obninsk           72.18  37⇓iP     P        22 06 30.1 +0.3
OBN                                eS       S        22 15 43.1 -7.7
OBN                                 pmax    pmax
         comp=Z,48nm,1.7s,mb5.2
DLBC     Dease Lake        72.20 327 eP     P        22 06 30.9 +1.0
CDAG     Cicekdag          72.34  53 i P    P        22 06 30.3 -0.7
CTKT     Corum             72.53  52 i P    P        22 06 32.8 +0.6
MOS      Moscow            72.72  36 eP     P        22 06 34.1 +1.1
MOS                                 pmax    pmax
         comp=Z,31nm,0.8s,mb5.3
AVNT     Avonos            72.83  54 i P    P        22 06 34.0 +0.1
INK      Inuvik            73.13 337 eP     P        22 06 33.6 -1.5
INK                                 pmax    pmax
         comp=Z,41nm,1.5s
INK      Inuvik            73.13 337 eP     P        22 06 33.6 -1.4
         comp=Z,41nm,1.5s,mb5.1
ANN      Anapa             73.88  47 eP     P        22 06 48.6 +8.7
ANN                                 pmax    pmax
         comp=Z,104nm,1.6s,mb5.5
VRSR     Storozhevoye      74.16  41 eP     P        22 06 41.5 +0.1
VRSR                                pmax    pmax
         comp=Z,10.0nm,0.9s,mb4.8
VRSR                                pmax    pmax
         comp=N,7.0nm,1.0s
VRSR                                pmax    pmax
         comp=E,10.0nm,0.9s
EIL      Elat              74.45  63 eP     P        22 06 44.3 +0.8
         comp=E,26nm,1.5s,mb4.9
HAQS     Haql              74.55  64  P     P        22 06 44.9 +0.7
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JMOS	Jabal al Moall	74.68	64	P	P	22 06 45.7	+0.8
BDAS	Al Bad‘	74.82	65	P	P	22 06 46.1	+0.3
AYUS	‘Aynunah	75.01	65	P	P	22 06 47.6	+0.7
JMQS	Jabal Moqyreh	75.40	64	P	P	22 06 49.8	+0.8
MALT	Malatya	75.67	54	*e*P	P	22 06 50.9	+0.5
MALT				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
MALT	Malatya	75.67	54	*e*P	P	22 06 50.9	+0.5
	comp=Z,13nm,1.1s,mb4.8						
SOC	Sochi	75.69	48	*e*P	P	22 06 50.5	+0.1
SOC				*e*		22 09 36.6	
SOC				*e*PPP	PPP	22 11 24.0	-4.5
SOC				*e*S	S	22 16 29.3	-1.2
SOC				*e*		22 17 16.9	
SOC				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
SOC				pmax	pmax		
	comp=N,11nm,1.2s						
SOC				pmax	pmax		
	comp=E,11nm,0.8s						
SOC				MLR	MLR		
	comp=N,59nm,16.0s,MS4.1						
SOC				MLR	MLR		
	comp=Z,87nm,16.0s,MS4.2						
SOC				MLR	MLR		
	comp=E,68nm,18.0s,MS4.1						
DAWY	Dawson	76.01	333	*e*P	P	22 06 51.3	-0.5
TBKS	Tabuk	76.11	64	P	P	22 06 54.3	+1.3
QURS	Qurayyt al Mil	76.12	61	P	P	22 06 55.7	+2.6
UMJS	Umm Lajj	77.43	67	P	P	22 07 01.8	+1.3
KIV	Kislovodsk	77.73	48	*i* P	P	22 07 02.6	+0.8
KIV				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
KIV	Kislovodsk	77.73	48	*e*P	P	22 07 02.7	+0.9
	comp=Z,31nm,1.0s,mb5.2						
GOF	Gofitskoye	77.75	46	⇑*i*P	P	22 07 02.0	+0.2
GOF				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
MBAR	Mbarara	77.98	94	*i* P	P	22 07 03.1	-0.6
YNBS	Yanbu‘ al Bahr	78.23	68	P	P	22 07 06.2	+1.3
ILAR	Eielson Array	79.01	335	P	P	22 07 08.4	+0.1
	comp=Z,11nm,0.8s,mb4.8,baz=72,slow=4.6,SNR=47						
ILAR				LR	LR	22 40 38.4	
	comp=Z,183nm,20.0s,MS4.4,baz=174,slow=35						
KBRS	Khaybar	79.01	66	P	P	22 07 10.8	+1.7
COLA	College	79.38	335	*i* P	P	22 07 10.4	+0.1
COLA	College	79.38	335	*e*P	P	22 07 11.0	+0.6
	comp=Z,15nm,0.9s,mb4.9						
GNI	Garni	80.08	51	*e*P	P	22 07 14.7	+0.1
GNI				pmax	pmax		
	comp=Z,39nm,1.4s						
GNI	Garni	80.08	51	*e*P	P	22 07 14.7	+0.1
	comp=Z,39nm,1.4s,mb5.2						
IMA	Indian Mountai	81.25	337	*e*P	P	22 07 21.7	+1.4
SLKM	Skilak Lake	81.83	331	*e*P	P	22 07 23.8	+0.4
SPU	Mount Spurr	82.42	332	*e*P	P	22 07 26.3	-0.1
BOSA	Boshof	82.89	123	P	P	22 07 29.2	-0.3
	comp=Z,4.7nm,0.9s,mb4.5,baz=316,slow=7.9,SNR=5.8						
ARU	Arti	83.94	33	*i* P	P	22 07 35.6	+1.3
ARU				pmax	pmax		
	comp=Z,200nm,14.0s						
ARU	Arti	83.94	33	*e*P	P	22 07 35.2	+0.9
	comp=Z,26nm,1.4s,mb5.2						
ARU				LR	LR		
	comp=Z,62nm,20.0s,MS4.0						
KMBO	Kilima Mbogo	84.35	93	P	P	22 07 38.4	+1.0
	comp=Z,1.6nm,0.5s,mb4.4,baz=307,slow=7.4,SNR=5.6						
KMBO				LR	LR	22 44 14.2	
	comp=Z,400nm,19.2s,MS4.8,baz=100,slow=35						
TATS	Tathlith	84.38	71	P	P	22 07 40.1	+2.7
MZLS	Mizel	84.68	67	P	P	22 07 39.8	+1.0
KAMS	Al Khamasin	85.16	70	P	P	22 07 43.0	+1.7
TIXI	Tiksi	91.38	1	*e*P	P	22 08 08.2	-1.6
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.8						
VNA1	Neumayer--Stat	91.47	168	P	P	22 08 12.4	+2.1
VNA1	Neumayer--Stat	91.47	168		P	22 08 18.4	+8.1
VNA1	Neumayer--Stat	91.47	168		P	22 08 22.8	+13
VNA3	Neumayer Olymp	91.69	169	⇑*i*P	P	22 08 12.7	+1.4
VNA3	Neumayer Olymp	91.69	169	⇑*i*	P	22 08 17.5	+6.2
VNA3	Neumayer Olymp	91.69	169	⇑*i*	P	22 08 26.2	+15
BILL	Bilibino	91.78	348	*i* P	P	22 08 13.2	+1.4
BILL				pmax	pmax		
	comp=Z,15nm,1.3s,mb5.2						
BILL				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.5						
BILL	Bilibino	91.78	348	*e*P	P	22 08 12.4	+0.7
	comp=Z,56nm,1.9s,mb5.6						
VNA2	Neumayer--Watz	91.87	168	P	P	22 08 11.6	-0.5
VNA2	Neumayer--Watz	91.87	168		P	22 08 13.4	+1.3
VNA2	Neumayer--Watz	91.87	168		P	22 08 20.4	+8.3
SNAA	Sanae	93.38	167	P	P	22 08 18.3	-0.7
SNAA	Sanae	93.38	167	⇑*i*	P	22 08 28.0	+9.0
CN2	Changchun	118.91	7	*e*PKP	PKPdf	22 13 48.8	-6.2
CN2				LR	LR		
	comp=Z,170nm,19.0s,MS4.7						
LZH	Lanzhou	120.08	28	*e*PKP	PKPdf	22 13 56.5	-0.9
LZH				XPKP		22 14 01.0	
LZH				*e*PP	PP	22 15 24.5	+1.2
KMI	Kunming	128.40	36	PKP	PKPdf	22 14 12.0	-1.9
NJ2	Nanjing	129.11	16	*e*PKP	PKPdf	22 14 09.1	-6.0
NJ2				PP	PP	22 16 22.0	-2.6
NJ2				PKS	PKS	22 17 44.0	-3.3
CMAR	Chiang Mai Arr	130.94	45	PKP	PKPdf	22 14 18.0	-0.8
	comp=Z,0.9nm,0.8s,baz=298,slow=4.1,SNR=4.6						
KSM	Kuching	150.58	53	*e*PKPbc	PKPdf	22 14 57.4	+3.8
KKM	Kota Kinabalu	151.32	38	*e*PKPbc	PKPdf	22 15 01.2	+6.5
ASAR	Alice Springs	173.49	183	PKP	PKPdf	22 15 14.2	-1.9
	comp=Z,0.8nm,1.0s,baz=162,slow=2.9,SNR=3.8						
WRA	Warramunga Arr	177.10	196	PKP	PKPdf	22 15 14.9	-2.2
	comp=Z,3.2nm,1.2s,baz=89,slow=0.3,SNR=4.8						

NIED ***01*** *21:56:00,39.30N×140.40E,h5^{km},Mw3.6 Best double couple: M$_0$3.13×10^{14} NP1:φ$_s$207°,δ51°,λ119°. NP2: φ$_s$344°,δ47°,λ58°.*

JMA ***01*** *21:56:01.7,39.29N×140.36E,h10^{km}±1^{km},M4.0 Broadband fault plane solution: P waves. NP1:φ$_s$343°, δ44°,λ61°. NP2:φ$_s$200°,δ52°,λ115°. Principal axes: T Plg70°, Azm171°; N Plg19°, Azm4°; P Plg4°, Azm273°;*

JMA Felt III J1.

NEIC ***01*** *21:56:06.5±1.6,39.26N×140.15E,h50^{km}±16^{km}, MW3.6(NIED) Error ellipse: s-maj=21.2km s-min=13.9km az=98.0*

NEIC Recorded [3 JMA] in Akita and [1 JMA] in Iwate, Miyagi and Yamagata Prefectures.

IDC ***01*** *21:56:08.0±2.6,39.25N×140.16E,h64^{km}±25^{km},mb3.4/7, mb1 3.6/9,mb1mx3.4/22,mbtmp3.7/9,ML3.3/2,Error ellipse: s-maj=32.3km s-min=17.7km az=97.0*

ISC 01 21:56:01.2±0.7**,39.31N**±0.04×**140.43E**±0.10**,h21**^{km}±5^{km}**, n18,**σ**1**^{s}**01**/22**,mb3.9**/8**,1C-2D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	Rokugo	0.18	61	⇓P	Pb	21 56 06.9	+0.7
JYW	Yuwa	0.29	324	⇓P	Pb	21 56 07.7	0.0
JYW				S	Sb	21 56 12.1	0.0
JYK	Kaneyama	0.39	188	⇑P	Pb	21 56 09.0	-0.4
JYK				*i* S	Sb	21 56 13.9	-1.1
MAJO	Matsushiro	3.27	213	*e*P	Pn	21 56 52.9	+0.4
MAT	Matsushiro	3.27	213	*e*P	Pn	21 56 53.0	+0.5
MAT				*e*S	Sn	21 57 33.0	+1.8
MAT	Matsushiro	3.27	213	P	Pn	21 56 53.1	+0.6
MAT				S	Sn	21 57 32.7	+1.5
MJAR	Matsushiro Arr	3.27	213	P	Pn	21 56 53.6	+1.1
	2.4nm,0.3s,baz=327,slow=19,SNR=14						
ASAJ	Asahikawa	5.07	18	P	Pn	21 57 24.4	+6.5
	0.9nm,0.3s,baz=18,slow=33,SNR=3.6						
MKAR	Makanchi Array	42.28	300	P	P	22 03 54.4	-0.2
	0.4nm,0.5s,mb3.4,baz=85,slow=11,SNR=9.0						
MKAR	Makanchi Array	42.28	300	P	P	22 03 54.4	-0.2
IMA	Indian Mountai	45.15	32	*e*P	P	22 04 19.9	+2.4
	8.8nm,0.8s,mb4.6						
ILAR	Eielson Array	48.01	33	P	P	22 04 40.9	+0.7
	1.1nm,0.8s,mb4.0,baz=275,slow=7.0,SNR=7.9						
WRA	Warramunga Arr	59.21	187	P	P	22 06 01.6	-1.7
	0.3nm,0.5s,mb3.6,baz=2.9,slow=7.6,SNR=5.3						
ASAR	Alice Springs	62.94	187	P	P	22 06 27.9	-0.5
	0.4nm,0.6s,mb3.7,baz=9.2,slow=5.0,SNR=4.7						
FINES	FINESS Array B	66.45	331	P	P	22 06 49.4	-1.2
	1.3nm,0.7s,mb4.1,baz=45,slow=7.9,SNR=3.4						
NB2	NORSAR Subarra	71.79	337	P	P	22 07 22.8	-0.8
	1.0nm,0.7s,mb3.9,baz=39,slow=5.8						
NOA	NORSAR Array B	71.79	337	P	P	22 07 22.9	-0.7
	0.9nm,0.8s,mb3.8,baz=40,slow=6.0,SNR=3.5						
AKASG	Malin Array Be	72.03	321	P	P	22 07 24.1	-1.1
	0.5nm,0.4s,mb3.8,baz=44,slow=6.1,SNR=5.3						

IDC ***01*** *21:58:38.8±0.6,17.12N×46.40W,mb4.2/18,mb1 4.4/18, mb1mx4.3/25,mbtmp4.2/18,Error ellipse: s-maj=18.0km s-min=14.8km az=116.0*

NEIC ***01*** *21:58:40.5±0.2,17.07N×46.45W,h10^{km},mb4.8/30,Error ellipse: s-maj=6.4km s-min=3.7km az=161.0*

ISC 01 21:58:38.8±0.3**,17.11N**±0.07×**46.44W**±0.05**,h10**^{km}**,n90,** σ**0**^{s}**76**/90**,mb4.6**/48**,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDV	Santo Domingo	24.93	254	P	P	22 04 05.4	+1.6
	7.5nm,0.9s,mb4.2,baz=77,slow=5.2,SNR=5.0						
SDV	Santo Domingo	24.93	254	*e*P	P	22 04 04.2	+0.4
OTAV	Otavalo	35.70	245	*e*P	P	22 05 40.5	+0.8
	40nm,1.8s,mb5.0						
FRNY	Flat Rock	35.81	326	*e*P	P	22 05 40.7	+0.4
SIV	San Ignacio	35.92	204	P	P	22 05 41.1	-0.4
	1.8nm,0.8s,mb4.0,baz=342,slow=3.2,SNR=2.7						
LPAZ	La Paz	39.48	214	P	P	22 06 12.3	+1.0
	4.4nm,0.9s,mb4.2,baz=16,slow=8.6,SNR=6.5						
LPAZ	La Paz	39.48	214	*e*P	P	22 06 11.8	+0.5
LRAL	Lakeview Retre	39.74	301	P	P	22 06 13.5	+0.2
SCHQ	Schefferville	40.79	342	P	P	22 06 22.8	+1.0
	6.5nm,1.0s,mb4.2,baz=147,slow=6.8,SNR=3.8						
SCHQ	Schefferville	40.79	342	P	P	22 06 22.8	+1.0
PLAL	Pickwick Lake	41.08	304	*e*P	P	22 06 25.4	+1.0
WVT	Waverly	41.20	306	*e*P	P	22 06 26.1	+0.8
DBIC	Dimbokro	41.90	99	P	P	22 06 30.5	-0.9
	4.5nm,0.9s,mb4.1,baz=304,slow=7.3,SNR=3.0						
DBIC	Dimbokro	41.90	99	P	P	22 06 30.5	-0.9
CPUP	Villa Florida	44.46	194	P	P	22 06 51.9	-0.2
	3.1nm,0.8s,mb4.1,baz=34,slow=10,SNR=9.5						
CPUP	Villa Florida	44.46	194	*e*P	P	22 06 50.4	-1.7
LVC	Limon Verde	45.19	210	P	P	22 06 57.4	-0.6
	5.3nm,0.9s,mb4.3,baz=351,slow=4.0,SNR=4.2						
LVC	Limon Verde	45.19	210	*e*P	P	22 06 56.8	-1.2
SJPF	Ste Jean	46.17	46	*e*P	P	22 07 06.2	+0.7
	33nm,1.1s,mb4.9						
ETSF	Etsaut	46.56	47	*e*P	P	22 07 09.8	+1.2
	29nm,1.3s,mb4.8						
QUIF	Quistinic	46.78	39	*e*P	P	22 07 10.2	-0.1
	24nm,1.1s,mb4.8						
ROSF	Rostrenen	46.91	39	*e*P	P	22 07 11.4	+0.2
	27nm,1.0s,mb4.8						
EPF	Esparros	47.23	47	*e*P	P	22 07 14.6	+0.7
SGMF	Saint Gilles	47.30	39	*e*P	P	22 07 14.6	+0.3
	57nm,1.4s,mb5.0						
LFF	La Frestale	48.13	44	*e*P	P	22 07 20.7	-0.2
MFF	Saint Martin d	48.13	42	*e*P	P	22 07 21.1	+0.2
	37nm,1.0s,mb5.1						
GRR	Gorron	48.38	40	*e*P	P	22 07 22.6	-0.2
MTLF	Montolieu	48.63	47	*e*P	P	22 07 24.8	0.0
	20nm,1.3s,mb4.7						
FLN	La Foliniere	48.77	39	*e*P	P	22 07 25.6	-0.1
RJF	Les Rejaudoux	48.77	44	*e*P	P	22 07 25.6	-0.2
CAF	Calviac	49.01	45	*e*P	P	22 07 27.7	0.0
TCF	Toulx Ste Croi	49.55	43	*e*P	P	22 07 32.0	+0.2
	38nm,1.1s,mb5.0						
LASF	Ste Croix	49.98	46	*e*P	P	22 07 35.7	+0.5
	20nm,1.1s,mb4.8						
BGF	Bois d’Agland	50.05	43	*e*P	P	22 07 35.7	0.0
	27nm,1.0s,mb4.9						
HYF	Humbligny	50.16	42	*e*P	P	22 07 36.7	+0.3
AVF	Avril sur Loir	50.46	43	*e*P	P	22 07 38.6	-0.2
	17nm,1.1s,mb4.7						
SSF	Saint Saulge	50.65	43	*e*P	P	22 07 40.0	-0.2
	28nm,1.3s,mb4.8						
SMF	Signal de Mont	50.73	43	*e*P	P	22 07 40.7	-0.1
	23nm,1.1s,mb4.7						
VIVF	Saint-Julien-l	50.76	46	*e*P	P	22 07 41.3	+0.2
	21nm,1.2s,mb4.7						
LOR	Lormes	50.94	42	*e*P	P	22 07 42.1	-0.3
	24nm,1.3s,mb4.7						
SMRF	Simiane la Rot	51.15	47	*e*P	P	22 07 45.2	+1.1
ULM	Lac du Bonnet	51.43	321	P	P	22 07 44.8	-1.3
	4.2nm,0.7s,mb4.5,baz=100,slow=1.1,SNR=3.5						
ORIF	Oris-en-Rattie	51.60	46	*e*P	P	22 07 47.3	-0.2
BAIF	Baives	52.09	39	*e*P	P	22 07 50.4	-0.7
	21nm,1.1s,mb4.7						
MEZF	Maizieres J’vi	52.09	41	*e*P	P	22 07 50.9	-0.2
MBDF	Montbardon	52.17	46	*e*P	P	22 07 52.4	+0.6
BNI	Bardonecchia	52.19	46	P	P	22 07 52.6	+0.7
	9.6nm,1.2s,mb4.6						
CABF	La Chapelle	52.20	44	*e*P	P	22 07 52.1	+0.1
	38nm,1.3s,mb4.9						
LPL	La Plagne	52.34	45	*e*P	P	22 07 53.0	0.0
LPG	La Plagne	52.35	45	*e*P	P	22 07 53.9	+0.8
SBF	Sospel	52.43	47	*e*P	P	22 07 53.8	+0.1
	32nm,1.1s,mb4.9						
GIVF	Givet	52.48	39	*e*P	P	22 07 53.3	-0.7
HAU	Haudompre	52.77	42	*e*P	P	22 07 55.5	-0.7
HINF	Hinteralfeld	53.04	43	*e*P	P	22 07 57.4	-0.8
TXAR	Lajitas Array	53.52	294	P	P	22 08 01.8	-0.3
	2.6nm,0.9s,mb4.1,baz=108,slow=7.9,SNR=5.9						
TXAR				PcP	PcP	22 09 09.0	+0.1
	0.6nm,0.8s,baz=90,slow=4.5,SNR=2.7						
FCC	Fort Churchill	54.18	332	*e*P	P	22 08 05.7	-0.6
	16nm,1.3s,mb4.8						
DAVOX	Davos	54.77	44	P	P	22 08 11.7	+0.8
	1.3nm,0.4s,mb4.3,baz=265,slow=14,SNR=3.7						
MNTX	Cornudas Mount	55.01	297	*e*P	P	22 08 10.2	-2.8
	10nm,1.1s,mb4.8						
RSSD	Black Hills	55.12	312	*e*P	P	22 08 13.2	-0.3
ISCO	Idaho Springs	55.67	307	*e*P	P	22 08 18.7	+1.1
GRA1	Grafenberg Arr	56.32	41	*e*P	P	22 08 21.9	-0.2
	6.0nm,1.1s,mb4.5						
GRF	Grafenberg Arr	56.32	41	*e*P	P	22 08 21.9	-0.2
	6.0nm,1.1s,mb4.5						
AQU	L’Aquila	56.47	50	*e*P	P	22 08 22.9	-0.3
	15nm,0.9s,mb5.0						
FFC	Flin Flon	56.49	325	*e*P	P	22 08 21.6	-1.7
	5.3nm,1.0s,mb4.5						
LAZ	Ladron	56.54	300	*e*P	P	22 08 24.6	+0.7
KHC	Kasperske Hory	57.70	42	*e*P	P	22 08 30.5	-1.4
KHC				*e*		22 08 38.0	
KHC	Kasperske Hory	57.70	42	*e*P	P	22 08 30.5	-1.4
KHC				x	Px	22 08 38.0	
GERES	GERESS Array B	57.72	43	P	P	22 08 31.3	-0.8
	0.9nm,0.8s,mb3.8,baz=225,slow=3.8,SNR=5.8						
CLL	Collm	57.80	40	*i* P	P	22 08 32.5	-0.1
	9.0nm,1.1s,mb4.7						
CLL				*i*		22 08 38.1	
CLL	Collm	57.80	40	P	P	22 08 32.5	-0.1
	logA/T=0.9,mb4.7						
CLL				*i* *PP	pP	22 08 38.1	+2.4
CLL				*e*		22 08 43.0	
PDAR	Pinedale Array	58.92	310	P	P	22 08 40.0	-0.6
	4.5nm,1.1s,mb4.4,baz=101,slow=7.6,SNR=7.4						
TUC	Tucson	59.59	298	*e*P	P	22 08 44.1	-1.3
NB2	NORSAR Subarra	59.70	28	P	P	22 08 45.5	-0.2
	1.0nm,0.7s,mb4.0,baz=250,slow=7.0						
NOA	NORSAR Array B	59.70	28	P	P	22 08 43.9	-1.8
	1.5nm,1.0s,mb4.0,baz=248,slow=6.9,SNR=3.3						
NOA	NORSAR Array B	59.70	28	P	P	22 08 43.9	-1.8
IMW	Indian Meadow	60.02	311	*e*P	P	22 08 48.0	-0.1
	16nm,1.2s,mb4.9						
WUAZ	Wupatki	60.03	301	*e*P	P	22 08 49.1	+0.9
DUG	Dugway	61.22	307	*e*P	P	22 08 56.5	+0.2
NEN	Nelson	62.85	302	*e*P	P	22 09 07.5	+0.2
ELK	Elko	63.07	307	*e*P	P	22 09 08.4	-0.2
NEW	Newport	64.60	316	*e*P	P	22 09 18.2	-0.4
	16nm,1.3s,mb4.9						
YKA	Yellowknife Ar	64.91	332	P	P	22 09 18.7	-1.6
	0.8nm,0.7s,mb3.9,baz=103,slow=7.0,SNR=4.6						
NVAR	Mina Array Bea	65.50	305	P	P	22 09 24.1	-0.5
	1.2nm,0.9s,mb3.9,baz=94,slow=7.4,SNR=3.6						
OMM	Old Mammoth Mi	66.08	304	*e*P	P	22 09 29.7	+1.4
AKASG	Malin Array Be	67.90	42	P	P	22 09 38.5	-1.1
	0.9nm,0.6s,mb4.0,baz=275,slow=5.6,SNR=6.1						
EIL	Elat	74.42	63	*e*P	P	22 10 20.2	+1.0
	21nm,1.4s,mb4.9						
MALT	Malatya	75.65	54	*e*P	P	22 10 27.0	+0.9
	9.8nm,1.2s,mb4.6						
ILAR	Eielson Array	79.06	335	P	P	22 10 45.7	+1.3
	3.3nm,0.8s,mb4.3,baz=53,slow=4.2,SNR=11						
BOSA	Boshof	82.83	123	P	P	22 11 05.6	+0.5
	4.9nm,1.0s,mb4.5,baz=349,slow=2.2,SNR=3.1						
CHKZ	Chkalovo	91.36	32	*e*P	P	22 11 46.6	+0.6

JMA ***01*** *22:25:20.4,28.25N×129.54E,h19^{km}±1^{km},M4.0*

JMA Felt II J1.

IDC ***01*** *22:25:24.2±2.7,28.29N×129.45E,h50^{km}±23^{km},mb3.5/5, mb1 3.6/6,mb1mx3.5/21,mbtmp3.8/6,ML3.9/1,MS3.9/1, Ms1 3.9/1,ms1mx2.6/15,Error ellipse: s-maj=35.4km s-min=15.0km az=108.0*

ISC 01 22:25:20.4±0.6**,28.25N**±0.06×**129.55E**±0.09**,h22**^{km}±4^{km}**, n18,**σ**1**^{s}**01**/26**,mb3.6**/5**,MS3.9**/1**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	Amami Oshima	0.17	17	P	Pb	22 25 25.0	-0.4
JAM				S	Sb	22 25 28.2	-0.6
JZK	Kikaishima	0.38	79	P	Pb	22 25 28.3	-0.2
JTK	Tokunoshima	0.70	229	P	Pb	22 25 33.7	-0.1
JTK				*e*S	Sb	22 25 43.0	0.0
JNN	Nakanoshima	1.62	10	P	Pn	22 25 48.2	+0.2
JNN				*e*S	Sn	22 26 09.1	+0.8
JOW	Kunigami	1.81	219	P	Pn	22 25 51.2	+0.5
	214nm,0.3s,baz=93,slow=18,SNR=153						
JOW				S	Sn	22 26 14.6	+1.4
	122nm,0.3s,baz=145,slow=30,SNR=11						
JOW	Kunigami	1.81	219	P	Pn	22 25 51.2	+0.5
JOW				*e*S	Sn	22 26 14.9	+1.8
JIH	Iheya	1.85	230	P	Pn	22 25 51.5	+0.2
JIH				*e*S	Sn	22 26 14.7	+0.5
JKC	Kuchinoerabu	2.28	14	P	Pn	22 25 58.8	+1.3
JAGN	Aguni-jima	2.63	232	P	Pn	22 26 03.2	+0.7
JJT2	Tamagusuku 2	2.64	218	P	Pn	22 26 03.0	+0.3
JTN	Tanegashima 3	2.71	27	P	Pn	22 26 04.5	+0.9
JTN				*e*S	Sn	22 26 37.3	+1.3
JKE	Kume jima 2	3.11	233	P	Pn	22 26 09.4	0.0
JKE				*e*S	Sn	22 26 46.2	-0.1
JNU	Nakatsue	4.99	13	P	Pn	22 26 37.1	+1.0
	4.8nm,0.3s,baz=337,slow=2.9,SNR=26						
MKAR	Makanchi Array	41.11	310	P	P	22 33 03.0	-1.3
	0.6nm,0.7s,mb3.3,baz=98,slow=9.9,SNR=7.2						
MKAR				LR	LR	22 50 50.5	
	comp=Z,165nm,21.5s,MS3.9,baz=340,slow=37						
ASAR	Alice Springs	51.78	175	P	P	22 34 27.6	-1.2
	0.2nm,0.6s,mb3.2,slow=11,SNR=3.3						
FINES	FINESS Array B	71.69	331	P	P	22 36 39.9	-2.4
	1.7nm,0.7s,mb4.1,baz=72,slow=6.7,SNR=13						
AKASG	Malin Array Be	74.77	320	P	P	22 36 58.0	-2.3
	0.5nm,0.4s,mb3.8,baz=58,slow=6.1,SNR=5.7						
NOA	NORSAR Array B	78.03	334	P	P	22 37 16.5	-1.9
	0.6nm,0.6s,mb3.7,baz=52,slow=5.6,SNR=3.6						

OMAN ***01*** *22:38:42.2,31.57N×55.75E,h34^{km},Error ellipse: s-maj=4323.0km s-min=548.6km az=357.0*

CSEM ***01*** *22:39:34.2±0.1,27.23N×55.77E,h2^{km},ML3.3,Error ellipse: s-maj=3.2km s-min=2.1km az=155.0*

THR ***01*** *22:39:35.1±0.9,27.07N×55.95E,h15^{km},ML3.3*

ISC 01 22:39:36.0±0.6**,27.27N**±0.06×**55.76E**±0.05**,h10**^{km}**,n12,** σ**1**^{s}**40**/14**,4C-1D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.39	70	*e*PG	Pg	22 39 42.7	-1.2
BNDS				*e*SG	Sg	22 39 48.9	-0.5
BNDS				AML	AML	22 40 01.8	
	comp=N,2µm,0.5s						
BNDS	Bandar-Abbas	0.39	70	*e*Pg	Pg	22 39 42.7	-1.3
	SNR=96						
BNDS				*e*Sg	Sg	22 39 48.8	-0.5
	comp=N,2µm,0.5s,SNR=96						
BANOM	Banah	1.42	160	⇑P	Pn	22 40 03.7	+1.7
	SNR=11						
ASHO	Ashiyiah	2.59	174	⇑P	Pn	22 40 20.8	+2.1
	SNR=34						
GHIR	Ghir-Karzin	2.66	293	*e*PN	Pn	22 40 22.6	+3.0
GHIR				AML	AML	22 41 19.1	
	comp=N,91nm,0.4s						
KRBR	Kerman	2.84	18	*e*PN	Pn	22 40 24.8	+2.5
KRBR				AML	AML	22 41 13.3	
	comp=N,104nm,0.6s						
KBD	Kabd	7.36	287	*e*P	Pn	22 41 25.2	-1.0
RDF	Al-Radifah	7.43	285	*e*P	Pn	22 41 26.8	-0.4
UMR	Umm Al-Rimmam	7.44	290	*e*P	Pn	22 41 26.6	-0.6
WHFO	Wadi Hawf	9.48	192	⇑P	P	22 41 54.6	-1.0
RBK	Rabkut	9.82	189	⇓P	P	22 42 00.1	-0.3
ABTO	Aybut	10.12	193	⇑P	P	22 42 03.1	-1.5
	SNR=5.1						

CSEM ***01*** *23:36:31.8±0.1,37.80N×25.43W,h3^{km},ML2.7,Error ellipse: s-maj=2.3km s-min=1.4km az=21.0,After PDA*

PDA ***01*** *23:36:31.8±0.9,37.80N×25.43W,h3^{km}±1^{km},MD3.0, ML2.7,Error ellipse: s-maj=2.3km s-min=1.3km az=51.0*

SVSA 01 23:36:31.8±0.9**,37.80N×25.43W,h3**^{km}±1^{km}**,MD3.0, ML2.7,Error ellipse: s-maj=2.3km s-min=1.3km az=51.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MESC	Monte Escuro	0.02	240	*e*P	Pg	23 36 33.0	+0.5
MESC				*e*S	Sg	23 36 34.1	+1.1
PMAT	Coroa da Mata	0.04	291	*e*P	Pg	23 36 33.3	+0.5
PMAT				*e*S	Sg	23 36 34.4	+1.0
PCNG	Congro	0.04	146	*e*P	Pg	23 36 33.3	+0.5
PCNG				*e*S	Sg	23 36 34.8	+1.3
LFA	Lagoa do Fogo	0.05	237	*e*P	Pg	23 36 33.5	+0.5
VIF	Vila Franca	0.06	191	*e*P	Pg	23 36 33.6	+0.5
VIF				*e*S	Sg	23 36 35.3	+1.3
PVER	Pico Vermelho	0.07	266	*e*P	Pg	23 36 32.9	-0.4
PVER				*e*S	Sg	23 36 34.5	+0.2
FRA1	Furnas	0.08	137	*e*P	Pg	23 36 34.2	+0.7
PRCH	Ribeira Ch	0.09	210	*e*P	Pg	23 36 34.1	+0.5
PRCH				*e*S	Sg	23 36 35.8	+1.0
PFAD	Fenais da Ajud	0.09	66	*e*P	Pg	23 36 34.3	+0.6
CML	Cha da Macela	0.10	252	*e*P	Pg	23 36 33.6	-0.3
MIRA	Miradouro	0.12	98	*e*P	Pg	23 36 34.9	+0.7
FAC	Faja de Cima	0.18	261	*e*P	Pg	23 36 35.5	+0.1
PDA	Ponta Delgada	0.20	254	*i* P	Pg	23 36 35.0	-0.8
PDA				*e*S	Sg	23 36 40.0	+1.6
PDA	Ponta Delgada	0.20	254	*e*S	Sg	23 36 40.0	+1.6
PSAN	Santo Antonio	0.24	282	*e*P	Pg	23 36 36.6	-0.1
PFET	Feteiras	0.29	273	*e*P	Pg	23 36 37.0	-0.6
SET2	Ginetes	0.30	278	*e*P	Pg	23 36 37.3	-0.6
SET4	Mosteiros	0.30	284	*e*P	Pg	23 36 37.3	-0.6
PSMN	Pico do Norte,	0.85	160	*e*P	Pg	23 36 46.3	-2.4
PSMN				*e*S	Sg	23 36 57.1	-2.9
PFAV	Pico das Favas	1.59	305	*e*S	Sb	23 37 16.0	-5.9
	23nm,0.2s						
PFAV	Pico das Favas	1.59	305	*e*S	Sb	23 37 16.0	-5.9
	23nm,0.2s						
PSCM	Serra do Cume	1.61	304	*e*P	Pn	23 36 56.6	-4.6
PSCM				*e*S	Sb	23 37 15.7	-6.6
	50nm,0.3s						
PSCM	Serra do Cume	1.61	304	*e*P	Pn	23 36 56.6	-4.6
PSCM				*e*S	Sb	23 37 15.7	-6.6
	50nm,0.3s						
RIB2	Ribeirinha	1.63	303	*e*S	Sb	23 37 16.5	-6.4
	18nm,0.2s						
RIB2	Ribeirinha	1.63	303	*e*S	Sb	23 37 16.5	-6.4
	18nm,0.2s						
PVNV	Vila Nova	1.67	306	*e*S	Sb	23 37 17.4	-6.6
	13nm,0.3s						
PICO	Pico	2.47	287	*e*P	Pn	23 37 09.7	-3.8
PICO				*e*S	Sn	23 37 37.0	-7.5

NEIC ***01*** *23:47:06.4±0.7,2.00N×96.67E,mb4.4/2,Error ellipse: s-maj=16.4km s-min=11.3km az=56.0*

IDC ***01*** *23:47:06.1±1.1,1.94N×96.51E,h27^{km}±5^{km},mb3.8/7, mb1 4.0/8,mb1mx3.8/18,mbtmp4.0/8,ML4.2/1,MS3.2/1, Ms1 3.2/1,ms1mx2.8/16,Error ellipse: s-maj=55.4km s-min=17.3km az=52.0*

ISC 01 23:47:04.7±0.9**,2.0N**±0.1×**96.7E**±0.1**,h28**^{km}**, h28**^{km}±1.1^{km}**:pP-P,n13,**σ**0**^{s}**53**/12**,mb4.0**/9**,MS3.2**/1**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim	5.12	50	*e*P	Pn	23 48 20.8	-0.8
CMAR	Chiang Mai Arr	16.48	8	Pn	P	23 50 56.9	+0.9
	0.3nm,0.3s,baz=196,slow=11,SNR=25						
LSA	Lhasa	28.03	350	*e*P	P	23 52 56.2	+0.4
	5.2nm,0.7s,mb4.3						
WRA	Warramunga Arr	42.90	122	P	P	23 55 03.1	+0.1

	1.6nm,0.7s,mb3.8,baz=299,slow=9.2,SNR=4.2						
ASAR	**Alice Springs**	44.29	127	P	P	23 55 14.8	+0.5
	1.0nm,0.8s,mb3.6,baz=310,slow=7.9,SNR=6.3						
ASAR				pP	pP	23 55 23.1	+0.4
	0.5nm,0.6s,baz=302,slow=7.9,SNR=3.6						
MKAR	**Makanchi Array**	46.33	346	P	P	23 55 29.9	-0.2
	6.2nm,0.7s,mb4.6,baz=161,slow=7.7,SNR=70						
MKAR				LR	LR	00 18 33.9	
	comp=Z,25nm,19.3s,MS3.2,baz=273,slow=41						
SONM	**Songino Array**	46.40	9	P	P	23 55 31.2	+0.4
	2.5nm,0.8s,mb4.2,baz=196,slow=9.0,SNR=10.0						
CHKZ	**Chkalovo**	55.79	342	*e*P	P	23 56 40.8	-0.9
	5.2nm,1.0s,mb4.5						
FINES	**FINESS Array B**	79.04	333	P	P	23 59 07.8	+0.1
	1.0nm,0.8s,mb3.8,baz=135,slow=3.9,SNR=6.0						
FINES				pP	pP	23 59 16.1	-0.5
	0.3nm,0.5s,baz=104,slow=7.9,SNR=0.9						
FINES	**FINESS Array B**	79.04	333	P	P	23 59 07.8	+0.1
FINES				pP	pP	23 59 16.1	-0.5
ARCES	**ARCESS Array B**	81.60	340	P	P	23 59 21.2	0.0
	2.0nm,0.9s,mb4.1,baz=90,slow=6.1,SNR=5.0						
ARCES				pP	pP	23 59 29.7	-0.4
	2.2nm,0.8s,baz=78,slow=8.3,SNR=2.1						
GERES	**GERESS Array B**	83.86	319	P	P	23 59 32.8	-0.5
	0.3nm,0.7s,mb3.5,baz=101,slow=6.8,SNR=4.6						
GERES				pP	pP	23 59 42.8	+0.5
	0.2nm,0.6s,baz=45,slow=3.8,SNR=2.5						
CPUP	**Villa Florida**	145.25	224	pPKP		00 06 51.4	
	1.6nm,0.7s,baz=140,slow=3.6,SNR=3.7						

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*ROM **02** 00:41:54.5±0.1, 39.60N×15.30E, h10^{km}, Md3.0/26, Ml2.9/12, Error ellipse: s-maj=1.3km s-min=0.6km az=82.0*

*CSEM **02** 00:41:55.7±0.1, 39.62N×15.29E, h12^{km}, ML3.8/3, Error ellipse: s-maj=3.0km s-min=1.6km az=95.0*

ISC 02 00:41:55.6±0.3, 39.61N±0.02×15.33E±0.05, h10^{km}, n36, σ1^{s}18/43, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGR	**Morigerati**	0.56	18	Pg	Pg	00 42 06.0	-0.9
MGR				Sg	Sg	00 42 14.9	+0.5
	842nm,0.3s						
SLCN	**Sala Consilina**	0.82	17	Pg	Pg	00 42 11.0	-1.0
SLCN				Sg	Sg	00 42 25.1	+2.2
	340nm,0.4s						
SGO	**Sicignano**	0.95	359	Pg	Pg	00 42 12.7	-2.0
SGO				Sg	Sg	00 42 28.3	+0.9
ORI	**Oriolo Calabro**	0.98	62	Pg	Pg	00 42 15.0	-0.2
	184nm,0.4s						
SLNA	**Salina**	1.11	200	Pn	Pn	00 42 16.3	-0.9
	264nm,0.3s						
MRLC	**Muro Lucano**	1.15	6	Pg	Pg	00 42 17.8	-0.9
GRI	**Girifalco**	1.16	132	Pn	Pn	00 42 18.3	+0.5
GRI				Sn	Sn	00 42 35.3	+1.6
	284nm,0.5s						
TIP	**Timpagrande**	1.19	111	Pn	Pn	00 42 18.6	+0.3
	105nm,0.6s						
LLI	**Lipari**	1.20	194	Pn	Pn	00 42 19.0	+0.6
	451nm,0.6s						
ISOR	**Termini**	1.23	322	Pg	Pg	00 42 18.3	-2.0
ISOR				Sg	Sg	00 42 36.5	-0.4
VPL	**Vulcano Piano**	1.26	192	Pn	Pn	00 42 18.6	-0.6
VPL				Sn	Sn	00 42 36.8	+0.5
	261nm,0.6s						
CSSN	**Cassano Irpino**	1.27	350	Pn	Pn	00 42 18.9	-0.6
	48nm,0.4s						
SNAL	**S. Angelo Dei**	1.32	356	Pn	Pn	00 42 19.8	-0.3
	273nm,0.8s						
MSRU	**Castanea**	1.35	174	Pn	Pn	00 42 19.5	-1.1
	151nm,0.6s						
SCLL	**Scilla**	1.38	167	Pn	Pn	00 42 19.9	-1.1
	27nm,0.3s						
OVO	**Vesuviano**	1.41	330	Pn	Pn	00 42 23.2	+1.8
MSI	**Messina ING**	1.41	173	Pn	Pn	00 42 23.3	+1.8
	186nm,0.5s						
LTRZ	**Laterza**	1.52	49	Pn	Pn	00 42 24.3	+1.4
	462nm,1.6s						
MRB1	**Monte Rocchett**	1.54	350	Pn	Pn	00 42 24.8	+1.5
	230nm,0.7s						
SG1	**Sgolgore (BA)**	1.61	40	*e*Pg	Pg	00 42 25.5	-2.3
MTTG	**Motta San Giov**	1.63	170	Pn	Pn	00 42 24.0	-0.6
	66nm,0.6s						
SOI	**Samo**	1.64	159	Pn	Pn	00 42 23.9	-0.8
CDT	**Castel del Mon**	1.64	26	*e*Pg	Pg	00 42 27.7	-0.7
CDT				*e*Sg	Sg	00 42 48.6	-1.7
IPES	**Pescosannita**	1.67	347	Pn	Pn	00 42 28.5	+3.4
FG5	**Orsara di Pugl**	1.67	358	Pn	Pn	00 42 28.8	+3.6
	39nm,0.5s						
MNO	**Monte Soro**	1.74	197	Pn	Pn	00 42 26.1	-0.1
SACR	**S. Croce Del S**	1.85	345	Pn	Pn	00 42 29.7	+2.0
GIB	**Gibilmanna**	1.91	213	Pn	Pn	00 42 28.1	-0.5
	180nm,1.4s						
SGG	**Gregorio Mates**	1.92	338	Pn	Pn	00 42 32.3	+3.6
VAGA	**Valle Agricola**	1.99	336	Pn	Pn	00 42 34.0	+4.3
PE1	**Pezze di Greco**	2.00	53	*e*Pg	Pg	00 42 35.2	-0.4
BSSO	**Busso**	2.02	344	Pn	Pn	00 42 30.8	+0.7
RGNG	**Rignano Grg**	2.07	5	Pn	Pn	00 42 35.8	+4.9
AGST	**Augusta-Monte**	2.35	182	Pn	Pn	00 42 34.8	-0.1
	29nm,0.3s						
SSY	**Sortino**	2.46	185	Pn	Pn	00 42 36.8	+0.4
	122nm,0.4s						
HAVL	**Avola**	2.65	184	Pn	Pn	00 42 39.2	0.0
	46nm,0.8s						

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*ATH **02** 00:49:34.7, 35.78N×25.23E, h33^{km}±4^{km}, MD3.6/9*

*NEIC **02** 00:49:34.7, 35.78N×25.23E, h32^{km}, MD3.6(ATH), After ATH.*

*CSEM **02** 00:49:34.6±0.1, 35.78N×25.20E, h15^{km}, MD3.6, Error ellipse: s-maj=2.5km s-min=2.2km az=80.0*

ISC 02 00:49:33.7±1.4, 35.75N±0.05×25.25E±0.04, h10^{km}±10^{km}, n20, σ0^{s}67/25, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	**Neapolis**	0.57	148	*e*PN	Pn	00 49 46.5	-1.0
NPS				*e*SN	Sn	00 49 56.2	-0.8
SANT	**Santorini**	0.64	16	*e*Pg	Pg	00 49 46.4	-0.2
SANT				*e*Sg	Sg	00 49 55.1	-0.2
SANT	**Santorini**	0.64	16	*e*Pg	Pg	00 49 46.4	-0.3
SANT				*e*Sg	Sg	00 49 55.1	-0.2
THR1	**Thera Island**	0.64	16	*e*P	Pb	00 49 47.0	+0.5
THR5	**Thira Island,**	0.67	7	*e*P	Pb	00 49 47.9	+0.9
THR4	**Thira Island,**	0.72	10	*e*P	Pb	00 49 47.7	-0.1
VAM	**Vamos**	0.92	248	*e*PN	Pn	00 49 52.7	+0.2
VAM				*e*SN	Sn	00 50 05.2	-0.6
XRY	**Khrisi**	0.95	157	*e*PN	Pn	00 49 53.5	+0.6
GVD	**Gavdhos**	1.31	226	*e*Pn	Pn	00 50 00.1	+2.0
GVD	**Gavdhos**	1.31	226	*e*Pn	Pn	00 50 00.1	+2.0
APE	**Apeiranthos**	1.33	10	*e*PN	Pn	00 49 58.4	-0.1
KARP	**Karpathos**	1.57	97	*e*PB	Pb	00 50 02.4	-0.1
KARP				*e*SN	Sn	00 50 22.8	+0.4
KYTH	**Kithira**	1.87	287	*e*PB	Pb	00 50 06.9	-0.6
VLI	**Veliai**	2.10	298	*e*PN	Pn	00 50 09.2	-0.2
SMG	**Samos**	2.33	33	*e*PN	Pn	00 50 13.0	+0.2
SMG	**Samos**	2.33	33	*e*Pb	Pb	00 50 14.3	-1.2
ARG	**Arkhangelos**	2.38	78	*e*PN	Pn	00 50 14.0	+0.6
LKR	**Lokris**	3.41	329	*e*PN	Pn	00 50 27.5	-0.5
XOR	**Xorichti**	3.96	336	*e*P	Pn	00 50 35.8	-0.1
AGG	**Agios Georgios**	4.01	325	*e*P	Pn	00 50 37.1	+0.5

IDC 02 00:53:15.1±6.7, 19.28S×169.12E, h137^{km}±52^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.5/15, mbtmp4.0/4, Error ellipse: s-maj=97.4km s-min=55.9km az=145.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	3.74	222	P	P	00 54 12.6	+0.1
	1.2nm,0.3s,baz=26,slow=21,SNR=29						
DZM				S	S	00 54 55.3	-1.2
	4.0nm,0.3s,baz=40,slow=20,SNR=6.5						
STKA	**Stephens Creek**	27.73	238	P	P	00 58 52.0	-0.8
	1.1nm,0.6s,baz=66,slow=11,SNR=5.3						
WRA	**Warramunga Arr**	32.74	263	P	P	00 59 34.6	-2.5
	0.4nm,0.3s,baz=97,slow=8.3,SNR=5.9						
ASAR	**Alice Springs**	33.01	256	P	P	00 59 37.2	-2.2
	4.5nm,0.6s,baz=84,slow=8.9,SNR=61						
ASPA	**Alice Springs**	33.01	256	*e*P	P	00 59 37.1	-2.3
GERES	**GERESS Array B**	144.48	332	PKP	PKPdf	01 12 33.5	-1.5
	0.3nm,0.6s,baz=34,slow=4.8,SNR=5.0						

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*NEIC **02** 00:56:16.1, 29.93S×71.12W, h43^{km}, MD4.0(GUC), After GUC.*

NEIC Felt [II] at Coquimbo and La Serena.

GUC 02 00:56:16.1±0.6, 29.93S×71.12W, h43^{km}±2^{km}, MD4.0, ML3.5, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	**La Serena**	0.11	281	⇑*i*P	P	00 56 23.3	+0.3
LSCH				*i* S	S	00 56 28.2	+0.2
LSCH				AMP		00 56 28.8	
	comp=E,19μm,0.3s						
TLL	**Tololo Astrono**	0.36	131	AMP		00 56 37.6	
	comp=N,4μm,0.1s						
OVCH	**Ovalle**	0.68	186	*i* P	P	00 56 29.5	+0.1
OVCH				*i* S	S	00 56 39.8	+0.7
OVCH				AMP		00 56 40.5	
	comp=E,2μm,0.1s						
LCO	**Las Campanas**	0.98	22	*i* P	P	00 56 34.8	+1.1
LCO				*i* S	S	00 56 48.9	+2.2
LCO				AMP		00 56 49.9	
	comp=E,2μm,0.3s						
CMCH	**Combarbala**	1.24	175	⇑*i*P	P	00 56 38.0	+0.7
CMCH				*i* S	S	00 56 54.5	+1.3
CMCH				AMP		00 56 55.5	
	comp=N,2μm,0.5s						
VACH	**Vallenar**	1.39	13	⇑*i*P	P	00 56 40.0	+0.6
VACH				*i* S	S	00 56 57.8	+1.0
VACH				AMP		00 57 01.4	
	comp=N,4μm,0.1s						
ILCH	**Illapel**	1.70	182	⇑*i*P	P	00 56 44.5	+0.6
ILCH				*i* S	S	00 57 05.7	+1.1
ILCH				AMP		00 57 12.4	
	comp=N,508nm,0.8s						
ZON	**Zonda**	2.65	128	*e*P	P	00 57 04.5	+7.2

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*NEIC **02** 00:56:38.9, 37.01N×10.92W, h22^{km}, MG3.5(MDD), After MDD.*

*INMG **02** 00:56:40.2±0.7, 37.04N×10.79W, h10^{km}, ML1.7, Error ellipse: s-maj=5.4km s-min=3.9km az=64.0*

*CSEM **02** 00:56:40.1±0.7, 37.12N×10.85W, h20^{km}, ML2.8/10, Error ellipse: s-maj=12.6km s-min=9.0km az=49.0*

MDD 02 00:56:39.6±2.2, 37.09N×10.69W, mb3.4/6, Error ellipse: s-maj=19.5km s-min=15.4km az=59.0, PRXIMO, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	1.64	73	*e*Pn	Pn	00 57 08.5	-1.3
PTEO				*e*Sn	Sn	00 57 29.8	-2.0
	3.8nm,0.3s						
PTEO	**Sao Teotonio**	1.64	73	*e*Pn	Pn	00 57 08.5	-1.3
PTEO				*e*Sn	Sn	00 57 29.8	-2.0
	3.8nm,0.3s						
PLOU	**Loures**	2.17	34	*e*Sn	Sn	00 57 43.7	-1.7
PBEJ	**Beja**	2.44	66	*e*Pn	Pn	00 57 20.3	-0.9
PBEJ				*e*Sn	Sn	00 57 48.6	-3.6
	1.9nm,0.1s						
PBEJ	**Beja**	2.44	66	*e*Pn	Pn	00 57 20.3	-0.9
PBEJ				*e*Sn	Sn	00 57 48.6	-3.6
	1.9nm,0.1s						
PALC	**Alcoutim**	2.59	81	*e*Pn	Pn	00 57 21.7	-1.8
PALC				*e*Sn	Sn	00 57 52.3	-3.9
	2.6nm,0.3s						
PALC	**Alcoutim**	2.59	81	*e*Pn	Pn	00 57 21.7	-1.8
PALC				*e*Sn	Sn	00 57 52.3	-3.9
	2.6nm,0.3s						
EGRO	**El Granado**	2.60	79	Pn	Pn	00 57 21.5	-2.1
	0.4nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	00 57 52.5	-3.8
	2.6nm,0.2s,SNR=7.0						
EGRO	**El Granado**	2.60	79	Pn	Pn	00 57 21.5	-2.1
	0.4nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	00 57 52.5	-3.8
	2.6nm,0.2s,SNR=7.0						
EMIN	**Mina Concepcio**	3.27	77	Pn	Pn	00 57 30.6	-2.5
	0.3nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	00 58 08.2	-5.2
	0.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	3.27	77	Pn	Pn	00 57 30.6	-2.6
	0.3nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	00 58 08.2	-5.2
	0.5nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	3.35	59	Pn	Pn	00 57 31.9	-2.4
	0.3nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	00 58 11.0	-4.5
	1.3nm,0.1s,SNR=6.4						
EBAD	**Badajoz**	3.35	59	Pn	Pn	00 57 31.9	-2.4
	0.3nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	00 58 11.0	-4.4
	1.3nm,0.1s,SNR=6.4						
PCBR	**Castelo Branco**	3.73	42	*e*Pn	Pn	00 57 37.4	-2.3
PCBR				*e*Sn	Sn	00 58 20.0	-5.0
	1.1nm,0.3s						
	1.2nm,0.2s						
PCBR	**Castelo Branco**	3.73	42	Pn	Pn	00 57 37.4	-2.3
PCBR				Sn	Sn	00 58 20.0	-5.0
	0.6nm,0.3s						
ESPR	**Espera**	3.88	92	Pn	Pn	00 57 38.8	-3.0
	0.8nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	00 58 23.0	-5.8
	1.2nm,0.1s,SNR=7.9						
ESPR	**Espera**	3.88	92	Pn	Pn	00 57 38.8	-3.0
	0.8nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	00 58 23.0	-5.7
	1.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	4.97	76	Pn	Pn	00 57 53.6	-3.7
	0.4nm,0.1s,SNR=7.9						
EADA				Sn	Sn	00 58 49.8	-6.6
	1.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	4.97	76	Pn	Pn	00 57 53.6	-3.7
	0.4nm,0.1s,SNR=7.9						
EADA				Sn	Sn	00 58 49.8	-6.6
	1.5nm,0.2s,SNR=7.9						
ELOB	**Lobios**	5.19	22	Pn	Pn	00 57 56.4	-4.0
	0.4nm,0.1s,SNR=5.6						
ELOB				Sn	Sn	00 58 53.7	-8.3
	0.6nm,0.1s,SNR=7.9						
ELOB	**Lobios**	5.19	22	Pn	Pn	00 57 56.4	-4.0
	0.4nm,0.1s,SNR=5.6						
ELOB				Sn	Sn	00 58 53.7	-8.2
	0.6nm,0.1s,SNR=7.9						
ECAL	**Calabor**	5.73	31	Sn	Sn	00 59 05.9	-10
	0.4nm,0.1s,SNR=4.0						
ECAL	**Calabor**	5.73	31	Sn	Sn	00 59 05.9	-10
	0.4nm,0.1s,SNR=4.0						

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*NNC **02** 01:08:48.6±2.9, 43.20N×87.19E, h6^{km}±5^{km}, mpv4.1, Error ellipse: s-maj=26.7km s-min=12.8km az=104.0*

*IDC **02** 01:08:51.0±0.7, 43.36N×87.00E, mb4.0/13, mb1 4.2/15, mb1mx4.1/23, mbtmp4.0/15, ML3.7/3, MS3.1/1, Ms1 3.1/1, ms1mx2.7/22, Error ellipse: s-maj=25.7km s-min=11.3km az=44.0*

*MOS **02** 01:08:53.5±1.7, 43.23N×86.59E, h28^{km}, mb5.0/4, Error ellipse: s-maj=16.6km s-min=9.4km az=117.5*

*BJI **02** 01:08:55.5, 43.37N×86.92E, h20^{km}, mb4.4, ML4.3, Ms3.8, Msz3.2*

*NEIC **02** 01:08:56.9±1.1, 43.25N×86.61E, h42^{km}±11^{km}, mb4.5/6, Error ellipse: s-maj=12.9km s-min=9.2km az=219.0*

ISC 02 01:08:54.6±1.0, 43.28N±0.06×86.84E±0.07, h36^{km}±10^{km}, n48, σ1^{s}30/56, mb4.0/17, MS3.1/1, 5C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	0.82	49	PG	P	01 09 10.0	+0.3
WMQ				SG	S	01 09 20.0	-0.9
WMQ				Smax			
	comp=N,3μm,0.2s						
WMQ				Smax			
	comp=E,3μm,0.2s						
MK31	**Makanchi Array**	4.77	319	Pn	P	01 10 06.6	+0.6
	comp=E,5.6nm,0.4s,baz=136,slow=15,SNR=379						
MK31				Pg	P	01 10 20.1	+14
	comp=E,42nm,0.6s,baz=132,slow=16,SNR=9.8						
MK31				⇑Lg		01 11 26.3	
	comp=E,113nm,0.7s,baz=150,slow=28,SNR=4.1						
MKAR	**Makanchi Array**	4.77	319	P	P	01 10 06.5	+0.5
MKAR						01 11 00.3	
MKAR	**Makanchi Array**	4.77	319	Pn	P	01 10 06.5	+0.5
	comp=E,4.1nm,0.3s,baz=134,slow=15,SNR=92						
MKAR				Pg	P	01 10 19.3	+13
	comp=E,13nm,0.3s,baz=137,slow=16,SNR=31						
MKAR				Sn	S	01 11 00.3	-0.5
	comp=E,27nm,0.3s,baz=126,slow=26,SNR=7.0						
MKAR				Lg		01 11 20.1	
	comp=E,34nm,0.3s,baz=45,slow=51,SNR=6.3						
AAK	**Ala-Archa**	9.08	270	P	P	01 11 01.2	-5.0
GTA	**Gaotai**	10.49	107	P	P	01 11 24.5	-1.1
GTA				XP		01 11 36.1	
GTA				S	S	01 13 15.4	-7.5
GTA				PCP	PcP	01 17 34.0	+5.8
GTA				SCS	ScS	01 24 34.8	+4.6
GTA				LR	LR		
	comp=N,260nm,4.6s						
GTA				LR	LR		
	comp=E,140nm,5.7s						
GTA				LR	LR		
	comp=Z,50nm,5.7s						
NVS	**Novosibirsk**	11.81	350	*e*P	P	01 11 49.6	+6.3
KK31	**Karatay Array**	11.93	275	⇓Pn	P	01 11 44.9	-0.1
	comp=Z,1.5nm,0.8s,baz=73,slow=12,SNR=5.9						
KK31				⇑Lg		01 15 12.2	
	comp=Z,3.7nm,0.6s						
ZAK	**Zakamensk**	13.29	52	*e*P	P	01 12 11.7	+8.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
LSA	**Lhasa**	13.98	164	P	P	01 12 13.7	+1.4
TLY	**Talaya**	14.11	48	P	P	01 12 16.1	+2.4
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TLY	**Talaya**	14.11	48	P	P	01 12 16.1	+2.4
	comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	14.43	65	Pn	P	01 12 13.9	-4.1
	comp=Z,0.2nm,0.3s,baz=246,slow=22,SNR=2.6						
SONM				Lg		01 16 26.7	
	comp=Z,0.1nm,0.3s,baz=257,slow=25,SNR=3.7						
BVA0	**Borovoye Array**	14.65	317	⇑Pn	P	01 12 19.7	-1.2
	comp=Z,0.5nm,0.7s,baz=124,slow=14,SNR=4.6						
BVA0				⇓Sn	S	01 15 06.9	+4.1
	comp=Z,0.8nm,0.7s,baz=222,slow=39,SNR=3.6						
BVAR	**Borovoye Array**	14.65	317	Pn	P	01 12 18.4	-2.4
	comp=Z,0.4nm,0.3s,baz=127,slow=15,SNR=5.1						
BVAR				Sn	S	01 14 52.9	-10
	comp=Z,0.2nm,0.3s,baz=130,slow=25,SNR=3.7						
BVAR				Lg		01 16 38.8	
	comp=Z,0.3nm,0.3s,baz=101,slow=24,SNR=2.9						
ULN	**Ulaanbaatar**	14.87	65	*e*P	P	01 12 26.2	+2.4
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	**Ulaanbaatar**	14.87	65	*e*P	P	01 12 26.2	+2.4
	comp=Z,7.2nm,0.9s						
CHKZ	**Chkalovo**	14.93	320	⇑Pn	P	01 12 22.8	-1.7
	comp=Z,3.3nm,0.6s						
CHKZ				⇑Sn	S	01 15 11.9	+2.6
	comp=Z,3.8nm,0.7s						
CHKZ	**Chkalovo**	14.93	320	*e*P	P	01 12 20.9	-3.6
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CHKZ	**Chkalovo**	14.93	320	*e*P	P	01 12 20.9	-3.5
	comp=Z,5.7nm,0.6s						
AB31	**Akbulak array**	19.47	297	⇓P	P	01 13 20.1	-0.9
	comp=Z,1.1nm,0.5s,baz=102,slow=11,SNR=7.4						
ARU	**Arti**	22.29	316	*e*P	P	01 13 51.8	+2.0
ARU				*e*		01 14 05.4	
ARU				*e*SS	S	01 17 50.7	+2.9
ARU	**Arti**	22.29	316	*e*P	P	01 13 51.5	+1.7
	comp=Z,7.9nm,0.8s,mb4.2						
CMAR	**Chiang Mai Arr**	26.78	154	P	P	01 14 33.8	+0.7
	comp=Z,0.6nm,0.4s,mb3.5,baz=329,slow=9.8,SNR=4.2						
AKASG	**Malin Array Be**	39.11	302	P	P	01 16 19.5	-0.3
	comp=Z,0.4nm,0.3s,mb3.6,baz=62,slow=8.7,SNR=6.8						
KAF	**Kangasniemi**	39.48	320	*e*p	P	01 16 20.5	-2.3
	comp=Z,2.0nm,0.9s,mb3.9,baz=90,slow=8.2						
KAF	**Kangasniemi**	39.48	320	*e*P	P	01 16 20.5	-2.3
KAF				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
FINES	**FINESS Array B**	39.60	319	P	P	01 16 24.0	+0.2
	comp=Z,0.4nm,0.4s,mb3.5,baz=81,slow=8.2,SNR=9.0						
KEV	**Kevo**	39.81	332	*e*p	P	01 16 25.2	-0.3
ARCES	**ARCESS Array B**	40.30	332	P	P	01 16 29.9	+0.3
	comp=Z,2.4nm,0.8s,mb4.0,baz=91,slow=8.8,SNR=11						
MLR	**Muntele Rosu**	42.66	295	P	P	01 16 50.7	+1.6
	comp=Z,0.8nm,0.5s,mb3.8,baz=65,slow=23,SNR=3.7						
KWP	**Kalwaria**	43.44	302	*e*P	P	01 16 56.5	+1.1
KWP				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.7						
KWP	**Kalwaria**	43.44	302	*e*P	P	01 16 56.5	+1.2
	comp=Z,7.9nm,0.5s,mb4.7						
NB2	**NORSAR Subarra**	46.77	320	P	P	01 17 21.1	-0.6
	comp=Z,1.3nm,0.7s,mb4.0,baz=74,slow=7.4						
NOA	**NORSAR Array B**	46.77	320	P	P	01 17 21.6	-0.1
	comp=Z,1.3nm,0.6s,mb4.0,baz=75,slow=7.8,SNR=8.4						
GERES	**GERESS Array B**	49.25	303	LR	LR	01 39 45.6	
	comp=Z,21nm,20.2s,MS3.1,baz=215,slow=38						
ILAR	**Eielson Array**	64.41	23	P	P	01 19 27.3	-1.3
	comp=Z,1.0nm,0.8s,mb3.9,baz=311,slow=5.8,SNR=7.4						
ESDC	**Sonseca Array**	64.76	301	P	P	01 19 31.3	0.0
	comp=Z,0.3nm,0.4s,mb3.7,baz=56,slow=6.0,SNR=5.5						
YKA	**Yellowknife Ar**	73.18	10	P	P	01 20 22.2	-0.5
	comp=Z,0.7nm,0.7s,mb3.7,baz=334,slow=6.0,SNR=7.4						
YKA	**Yellowknife Ar**	73.18	10	P	P	01 20 22.2	-0.5
WRAB	**Tennant Creek**	76.55	134	P	P	01 20 40.3	-2.7
WRAB				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0						
WRAB	**Tennant Creek**	76.55	134	P	P	01 20 40.3	-2.7
	comp=Z,26nm,1.4s,mb5.0						
WRA	**Warramunga Arr**	76.55	135	P	P	01 20 43.6	+0.6
	comp=Z,1.1nm,0.6s,mb4.0,baz=335,slow=5.3,SNR=5.8						
ASAR	**Alice Springs**	79.43	137	P	P	01 20 59.4	+0.6
	comp=Z,0.7nm,0.6s,mb3.8,baz=336,slow=5.9,SNR=7.1						
DBIC	**Dimbokro**	86.71	276	P	P	01 21 34.3	-1.9
DBIC				pmax	pmax		
	comp=Z,12nm,1.0s						
DBIC	**Dimbokro**	86.71	276	P	P	01 21 35.7	-0.5
	comp=Z,12nm,1.1s,mb5.0,baz=31,slow=5.9,SNR=3.7						
DBIC	**Dimbokro**	86.71	276	P	P	01 21 34.3	-1.9
	comp=Z,12nm,1.0s,mb5.1						
STKA	**Stephens Creek**	90.02	136	P	P	01 21 50.8	-0.8
	comp=Z,0.4nm,0.4s,mb4.1,baz=131,slow=22,SNR=3.6						

IDC 02 01:20:02.6±4.5, 17.18S×174.82W, mb3.9/4, mb1 4.2/4, mb1mx3.8/16, mbtmp3.9/4, Error ellipse: s-maj=192.1km s-min=36.3km az=137.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	41.98	241	P	P	01 27 56.4	-0.8
	1.8nm,0.6s,baz=81,slow=13,SNR=5.8						
WRA	**Warramunga Arr**	48.13	258	P	P	01 28 44.3	-2.3
	0.4nm,0.4s,baz=97,slow=7.1,SNR=3.7						
ASAR	**Alice Springs**	48.28	253	P	P	01 28 45.4	-2.3
	4.7nm,0.8s,baz=89,slow=8.3,SNR=47						
ILAR	**Eielson Array**	84.45	12	P	P	01 32 36.8	-1.3
	0.1nm,0.4s,baz=234,slow=4.4,SNR=4.0						

WEL 02 01:35:07.6±0.8, 38.25S×179.39E, h33^{km}, ML3.6/4, Error ellipse: s-maj=7.2km s-min=3.5km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	**Puketiti**	0.91	281	PN	Pn	01 35 23.1	-1.1
PUZ				SN	Sn	01 35 35.3	-1.0
MXZ	**Matakaoa Point**	1.10	308	PN	Pn	01 35 26.4	-0.5
MXZ				SN	Sn	01 35 40.8	-0.3
MWZ	**Matawai**	1.47	266	PN	Pn	01 35 30.9	-1.3
MWZ				*e*SN	Sn	01 35 49.3	-1.2
BKZ	**Black Stump Fm**	2.44	247	PN	Pn	01 35 45.0	-1.2
BKZ				*e*SN	Sn	01 36 12.4	-2.9

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*HRVD **02** 02:11:14.6±0.1, 20.32S×179.01E, h22^{km}, MW5.6/67, Centroid moment Tensor Solution. LP body waves: s59,c131;Mantle waves: s67,c184; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}2.33±.04; $M_{\theta\theta}$-2.43±.03; $M_{\phi\phi}$0.09±.03; $M_{r\theta}$-0.00±.07; $M_{\theta\phi}$1.12±.03; $M_{\phi r}$1.01±.07; Best double couple: $M_0$2.817×10^{17} NP1: ϕ_s89°, δ45°, λ57°. NP2: ϕ_s312°, δ53°, λ119°. Principal axes: T 2.752, Plg67°, Azm282°; N .123, Plg23°, Azm114°; P -2.881, Plg4°, Azm22°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **02** 02:11:14.6±0.1, 20.21S×178.89E, mb5.8/81, MS5.1/118,* *MW5.5 Error ellipse: s-maj=5.2km s-min=3.5km az=144.0, Moment Tensor Solution. s24 Moment tensor: Scale 10^{17} Nm; M_{rr}1.68; $M_{\theta\theta}$-0.87; $M_{\phi\phi}$-0.81; $M_{r\theta}$1.11; $M_{\theta\phi}$1.80; $M_{\phi r}$0.62; Best double couple: $M_0$2.6×10^{17} NP1:ϕ_s345°, δ51°,λ140°. NP2:ϕ_s104°,δ60°,λ47°. Principal axes: T 2.61, Plg53°, Azm320°; N .06, Plg36°, Azm129°; P -2.67, Plg5°, Azm223°;*

NEIC Felt at Suva.

*MOS **02** 02:11:15.7±1.0,20.14S×178.84E,h33km,mb5.9/55, MS5.0/34 Error ellipse: s-maj=7.9km s-min=6.6km az=69.5*

*CRAAG **02** 02:11:15.8,20.11S×178.79E,Mb5.8*

*BJI **02** 02:11:16.8,19.85S×178.26E,h22km,mB5.7,mb5.8, Ms5.1,Msz4.9*

*IDC **02** 02:11:17.0±0.5,20.19S×178.95E,h38km±4km,mb5.4/23, mb1 5.4/26,mb1mx5.4/27,mbtmp5.6/26,ML4.7/4,MS4.9/30, Ms1 4.9/30,ms1mx4.9/33,Error ellipse: s-maj=12.3km s-min=11.8km az=115.0*

ISC 02 02:11:13.7±0.1,**20.20S**±0.03×**178.84E**±0.03,**h24km**, **h24km**±.8km**:pP-P,n823,**σ0s**80**/325,**mb5.7**/123,**MS5.0**/161, **178C-25D,South of Fiji Islands**

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Code  Station Name        Δ°   AZ°    Phase ID               Time     Res
                                      Op      ISC         h  m  s     ISC
RAO   Raoul Island       9.48 163    P       P          02 13 32.5 +0.5
RAO                                  pmax    pmax
      comp=Z,28nm,0.3s
RAO                                  MLR     MLR
      comp=Z,15µm,18.6s
RAO   Raoul Island       9.48 163    Pn      P          02 13 32.5 +0.5
      comp=Z,28nm,0.3s,baz=319,slow=19,SNR=2.8
RAO                                  LR      LR         02 16 35.4
      comp=Z,15µm,18.6s,baz=345,slow=34
RAO   Raoul Island       9.48 163    P       P          02 13 31.1  -0.9
AFI   Afiamalu          10.94  57⇑  eP      P          02 13 48.5  -3.5
AFI                                  pmax    pmax
      comp=Z,551nm,1.1s
AFI   Afiamalu          10.94  57⇑  eP      P          02 13 48.5  -3.6
      comp=Z,550nm,1.1s
DZM   Mont Dzumac       11.71 259    Pn      P          02 14 05.0 +2.4
      comp=Z,1.3nm,0.3s,baz=82,slow=19,SNR=21
DZM                                  LR      LR         02 17 37.5
      comp=Z,10µm,21.2s,baz=88,slow=32
NOUC  Port Laguerre     11.85 259   eP      P          02 14 09.8 +5.4
NOUC  Port Laguerre     11.85 259   eP      P          02 14 09.8 +5.4
OUZ   Omahuta           15.66 196   ePN     P          02 14 54.7  0.0
URZ   Urewera           18.06 184    P       P          02 15 24.9  -0.1
      comp=Z,3.6nm,0.3s,baz=46,slow=6.8,SNR=23
URZ                                  LR      LR         02 20 42.7
      comp=Z,6µm,19.8s,baz=217,slow=31
RAR   Rarotonga         20.04  97   eP      P          02 15 50.1 +2.0
RAR                                  pmax    pmax
      comp=Z,322nm,1.5s
RAR   Rarotonga         20.04  97    P       P          02 15 47.2  -0.8
      comp=Z,1.5nm,0.3s,baz=253,slow=8.7,SNR=3.4
RAR                                  LR      LR         02 21 42.5
      comp=Z,3µm,20.9s,MS4.6,baz=272,slow=31
RAR   Rarotonga         20.04  97   eP      P          02 15 50.1 +2.0
      comp=Z,322nm,1.5s
MRZ   Mangatainoka R    20.59 187   ePN     P          02 15 51.0  -2.7
HNR   Honiara           21.14 298   eP      P          02 16 01.0 +1.5
HNR                                  pmax    pmax
      comp=Z,670nm,1.0s,mb5.9
HNR   Honiara           21.14 298    P       P          02 16 00.6 +1.1
      comp=Z,417nm,0.7s,mb5.9,baz=168,slow=5.0,SNR=7.5
HNR                                  LR      LR         02 22 49.8
      comp=Z,3µm,21.6s,MS4.6,baz=136,slow=33
HNR   Honiara           21.14 298   eP      P          02 15 59.6 +0.1
      comp=Z,756nm,1.0s,mb6.0
HNR                                  LR      LR
      comp=Z,3µm,20.0s,MS4.6
QRZ   Quartz Range      21.26 193   ePN     P          02 16 01.7 +1.2
SNZO  South Karori      21.34 189   eP      P          02 15 59.4  -1.9
      comp=Z,546nm,1.2s,mb5.8
SNZO                                 LR      LR
      comp=Z,5µm,19.0s,MS5.0
THZ   Tophouse          22.08 192    PN      P          02 16 09.1 +0.3
KHZ   Kahutara          22.60 190    PN      P          02 16 13.8  -0.1
MQZ   McQueen's Vall    24.01 191   ePN     P          02 16 27.7 +0.1
RPZ   Rata Peaks        24.34 194    P       P          02 16 31.3 +0.5
      comp=Z,63nm,0.8s,mb5.1,baz=28,slow=3.5,SNR=12
RPZ                                  LR      LR         02 24 27.6
      comp=Z,4µm,19.1s,MS4.9,baz=292,slow=32
JCZ   Jackson Bay       25.25 197   ePN     P          02 16 39.8 +0.2
ARMA  Armidale          26.56 242   eP      P          02 16 53.3 +1.5
ARMA                                e                   02 17 04.7
TBI   Tubuai            29.58 102   eS      S          02 22 15.6 +4.0
      comp=Z,738nm,26.5s
TBI                                 eLQ                 02 23 40.6
      comp=Z,1µm,23.0s
TBI                                 eLR     LR          02 24 54.6
      comp=Z,6µm,26.5s,baz=272
CNB   Canberra Magne    29.98 234⇑ iP      P          02 17 24.0 +1.3
CNB                                 i                   02 17 35.1
CNB                                 ePCP    PcP         02 20 25.2 +0.3
CNB                                 e                   02 20 36.7
PPT   Papeete           29.98  90   eS      S          02 22 20.8 +2.8
      comp=Z,837nm,24.8s
PPT                                 eLQ                 02 23 49.6
      comp=Z,4µm,26.0s
PPT                                 eLR     LR          02 25 05.0
      comp=Z,6µm,25.8s,baz=260
PPT   Papeete           29.98  90    LR      LR         02 26 17.3
      comp=Z,2µm,18.4s,MS4.8,baz=264,slow=30
CTA   Charters Tower    30.56 264⇑ iP      P          02 17 28.7 +0.7
CTA                                 ePCP    PcP         02 20 24.8  -1.7
CTA   Charters Tower    30.56 264    P       P          02 17 28.5 +0.5
      comp=Z,35nm,0.8s,mb5.2,baz=98,slow=11,SNR=21
CTA                                  PcP     PcP        02 20 25.9  -0.7
      comp=Z,43nm,1.1s,baz=56,slow=1.5,SNR=4.1
CTA                                  LR      LR         02 28 25.3
      comp=Z,6µm,20.8s,MS5.2,baz=93,slow=34
CTAO  Charters Tower    30.56 264⇑ iP      P          02 17 28.8 +0.8
CTAO                                 pmax    pmax
      comp=Z,108nm,1.2s,mb5.5
CTAO                                 MLR     MLR
      comp=Z,6µm,20.0s,MS5.2
CTAO  Charters Tower    30.56 264⇑ iP      P          02 17 28.8 +0.8
      comp=Z,108nm,1.2s,mb5.6
CTAO                               ⇓epP     pP          02 17 35.3 +0.3
CTAO                                 LR      LR
      comp=Z,6µm,20.0s,MS5.2
PMG   Port Moresby      32.39 285⇑ eP      P          02 17 44.5 +0.5
PMG                                  pmax    pmax
      comp=Z,373nm,1.2s
PMG                                  MLR     MLR
      comp=Z,3µm,19.0s
PMG   Port Moresby      32.39 285    P       P          02 17 44.1 +0.1
      comp=Z,218nm,1.1s,mb5.9,baz=116,slow=3.9,SNR=28
PMG                                  LR      LR         02 29 54.6
      comp=Z,3µm,18.4s,MS5.0,baz=131,slow=34
PMG   Port Moresby      32.39 285⇑ eP      P          02 17 44.5 +0.4
      comp=Z,373nm,1.2s,mb6.1
PMG                                  LR      LR
      comp=Z,3µm,19.0s,MS5.0
TOO   Toolangi          33.71 232   eP      P          02 17 56.4 +1.0
TAU   Tasmania Unive    34.80 222   eP      P          02 18 05.6 +0.9
TAU                                 e                   02 18 16.3
TAU                                  pmax    pmax
      comp=Z,232nm,1.3s,mb6.0
TAU                                  MLR     MLR
      comp=Z,1µm,20.0s,MS4.6
TAU   Tasmania Unive    34.80 222   eP      P          02 18 05.6 +0.9
      comp=Z,232nm,1.3s,mb6.0
TAU                                 e                   02 18 16.3
TAU                                  LR      LR
      comp=Z,1µm,20.0s,MS4.6
STKA  Stephens Creek    35.26 243⇑ iP      P          02 18 09.8 +1.1
STKA                                e                   02 18 20.9
STKA                                i PCP   PcP         02 20 39.0  -0.4
STKA                                i S                 02 24 25.5
STKA  Stephens Creek    35.26 243    P       P          02 18 09.8 +1.1
      comp=Z,124nm,1.0s,mb5.8,baz=85,slow=9.6,SNR=142
STKA                                 PcP     PcP        02 20 38.5  -0.9
      comp=Z,21nm,1.0s,baz=23,slow=2.7,SNR=2.8
STKA                                 LR      LR         02 30 06.7
      comp=Z,3µm,21.2s,MS5.0,baz=29,slow=32
ADE   Adelaide          38.22 239⇑ iP      P          02 18 34.9 +1.3
TAOE  Nuku Hiva Isla    41.16  80   eLR     LR          02 30 05.0
      comp=Z,9µm,24.6s
WB2   Warramunga Arr    41.69 262   eP      P          02 19 01.7  -0.8
WRAB  Tennant Creek     41.69 262c iP      P          02 19 02.4  -0.1
WRAB  Tennant Creek     41.69 262   eP      P          02 19 01.4  -1.1
      comp=Z,123nm,1.1s,mb5.5
WRAB                               ⇓epP     pP          02 19 07.3  -2.3
WRAB                                 LR      LR
      comp=Z,3µm,20.0s,MS5.1
ASAR  Alice Springs     41.70 257    P       P          02 19 02.9 +0.4
      comp=Z,161nm,0.9s,mb5.7,baz=86,slow=8.3,SNR=596
ASAR                                 PcP     PcP        02 20 58.1  -1.5
      comp=Z,33nm,0.9s,baz=109,slow=3.4,SNR=9.3
ASAR                                 LR      LR         02 35 09.4
      comp=Z,1µm,19.6s,MS4.8,baz=96,slow=34
ASPA  Alice Springs     41.70 257⇑ iP      P          02 19 02.9 +0.3
ASPA                                eS                  02 24 47.2
WRA   Warramunga Arr    41.70 262    P       P          02 19 01.7  -0.9
      comp=Z,44nm,0.9s,mb5.1,baz=96,slow=7.1,SNR=80
WRA                                  PP      PP         02 20 41.5  -0.7
      comp=Z,30nm,1.1s,baz=97,slow=8.8,SNR=5.7
WRA                                  PcP     PcP        02 20 58.2  -1.4
      comp=Z,16nm,0.9s,baz=99,slow=4.3,SNR=6.8
RKT   Rikitea           42.90 103   eS      S          02 25 39.7 +4.3
      comp=Z,446nm,27.0s
RKT                                 eLR     LR          02 31 05.2
      comp=Z,4µm,27.0s,baz=261
KAKA  Kakadu            45.00 272   eP      P          02 19 29.2  -0.3
FORT  Forrest           46.69 246⇑ iP      P          02 19 42.5  -0.2
POHA  Pohakuloa         46.98  34   eP      P          02 19 45.3 +0.3
POHA                                epP     pP          02 19 52.3 +0.1
POHA                                esP     sP          02 19 55.3 +0.2
KIP   Kipapa            47.15  30    PFAKE              02 20 00.0  +14
KIP                                  LR      LR
      comp=Z,3µm,20.0s,MS5.2
PTCN  Pitcairn Islan    47.16 106    P       P          02 19 45.8  -0.7
      comp=Z,244nm,0.9s,mb6.1
PTCN                                 LR      LR
      comp=Z,2µm,20.0s,MS5.0
GUMO  Guam              47.37 312   eP      P          02 19 47.7  -0.5
GUMO                                 pmax    pmax
      comp=Z,585nm,1.3s,mb6.3
GUMO                                 MLR     MLR
      comp=Z,938nm,22.0s,MS4.7
GUMO  Guam              47.37 312   eP      P          02 19 47.7  -0.5
      comp=Z,586nm,1.3s,mb6.3
GUMO                                 LR      LR
      comp=Z,938nm,22.0s,MS4.7
HKL   Haleakala         47.40  32    P       P          02 19 49.3 +0.9
FITZ  Fitzroy Crossi    50.12 263⇑ iP      P          02 20 09.8 +0.4
FITZ  Fitzroy Crossi    50.12 263    LR      LR         02 41 19.8
      comp=Z,5µm,18.7s,MS5.6,baz=96,slow=36
DRV   Dumont d'Urvil    52.68 198    P       P          02 20 34.0 +5.8
DRV                                  S       S          02 27 56.0 +3.2
DRV                                  SS      SS         02 31 52.0  +22
DRV                                  R                  02 36 00.0
MBWA  Marble Bar        55.02 258⇑ eP      P          02 20 44.9  -1.1
      comp=Z,248nm,1.0s,mb6.2
MBWA                                 LR      LR
      comp=Z,4µm,20.0s,MS5.5
KLBR  Kellerberrin      55.49 245⇑ iP      P          02 20 47.9  -1.4
KLBR                                e                   02 20 59.3
NWAO  Narrogin (SRO)    55.85 243⇑ iP      P          02 20 50.3  -1.5
NWAO                                 pmax    pmax
      comp=Z,332nm,1.5s
NWAO                                 MLR     MLR
      comp=Z,1µm,20.0s
NWAO  Narrogin (SRO)    55.85 243⇑ iP      P          02 20 50.3  -1.6
      comp=Z,332nm,1.5s,mb6.2
NWAO                                 LR      LR
      comp=Z,1µm,20.0s,MS5.0
MUN   Mundaring         56.78 244   eP      P          02 20 57.3  -1.2
VNDA  Vanda             57.97 184    P       P          02 21 05.5  -0.8
      comp=Z,12nm,1.0s,mb4.9,baz=1.8,slow=7.6,SNR=44
VNDA                                 PcP     PcP        02 21 57.8  -0.3
      comp=Z,28nm,0.8s,baz=333,slow=5.3,SNR=14
VNDA                                 LR      LR         02 43 43.8
      comp=Z,737nm,18.3s,MS4.8,baz=24,slow=34
VNDA                                 PKP2bc             02 50 59.7
      comp=Z,1.3nm,0.7s,baz=107,slow=11,SNR=3.1
VNDA  Vanda             57.97 184⇑ iP      P          02 21 05.2  -1.0
      comp=Z,35nm,0.9s,mb5.4
VNDA                                 LR      LR
      comp=Z,600nm,19.0s,MS4.7
SBA   Scott Base        58.00 183⇑ iP      P          02 21 06.7 +0.2
SBA                                  pmax    pmax
      comp=Z,137nm,1.1s,mb5.9
SBA                                  MLR     MLR
      comp=Z,1µm,19.0s,MS5.0
SBA   Scott Base        58.00 183⇑ iP      P          02 21 06.7 +0.2
      comp=Z,137nm,1.1s,mb5.9
SBA                                  LR      LR
      comp=Z,1µm,19.0s,MS5.0
CBIJ  Chichi jima       58.92 322    P       P          02 21 12.9  -0.7
      comp=Z,67nm,0.8s,mb5.7,baz=131,slow=9.3
CBIJ                                 LR      LR         02 41 40.3
      comp=Z,546nm,20.2s,MS4.7,baz=113,slow=31
BUKP  Musuan            59.79 292   eP      P          02 21 18.7  -1.1
BUTP  Butuan            59.83 294   eP      P          02 21 19.7  -0.4
MSLP  Maasin            61.06 295   eP      P          02 21 27.4  -1.0
PAGZ  Pagadian          61.24 291   i P     P          02 21 29.6  0.0
TBP   Tagbilaran        61.70 294   eP      P          02 21 32.0  -0.7
SNPH  Sibulan           62.07 293⇑ eP      P          02 21 34.2  -1.0
CNP   Catarman          62.42 297   eP      P          02 21 36.7  -0.9
RCP   Roxas             63.57 295⇑ eP      P          02 21 44.5  -0.8
TSM   Tawau             64.59 285    P       P          02 21 51.6  -0.4
JHJ   Hachijo jima 2    64.82 324    LR      LR         02 44 08.0
      comp=Z,519nm,21.9s,MS4.7,baz=123,slow=30
BOAC  Boac              65.27 296   eP      P          02 21 56.8 +0.5
RPN   Rapa Nui          65.37 111   eP      P          02 21 52.5  -4.3
RPN                                 epP     pP          02 21 58.0  -6.2
SJMP  San Jose          65.39 295   eP      P          02 21 56.5  -0.5
ENPP  El Nido           66.25 293   eP      P          02 22 02.1  -0.5
BATP  Bataraza          66.58 290   eP      P          02 22 04.0  -0.7
BALP  Baler             66.63 298   eP      P          02 22 03.9  -1.1
KKM   Kota Kinabalu     66.82 286   eP      P          02 22 05.7  -0.5
KKM   Kota Kinabalu     66.82 286    P       P          02 22 06.0  -0.3
CAUP  Cauayan           67.04 299   eP      P          02 22 12.6 +5.1
JOW   Kunigami          67.72 312    P       P          02 22 11.7  -0.1
      comp=Z,54nm,0.9s,mb5.6,baz=158,slow=12,SNR=6.2
JOW                                  LR      LR         02 50 40.0
      comp=Z,537nm,18.9s,MS4.8,baz=128,slow=35
MJAR  Matsushiro Arr    68.25 326    P       P          02 22 14.2  -0.6
      comp=Z,143nm,0.9s,mb6.0,baz=158,slow=5.7,SNR=179
MJAR                                 LR      LR         02 46 16.2
      comp=Z,609nm,21.7s,MS4.8,baz=135,slow=31
MJAR                                 PKP2bc             02 50 30.1
      comp=Z,2.6nm,0.7s,baz=323,slow=4.7,SNR=8.1
MJAR  Matsushiro Arr    68.25 326    P       P          02 22 14.2  -0.6
MJAR                                 LR      LR         02 46 16.2
MJAR                               ⇑e                   02 50 30.1
MAJO  Matsushiro        68.25 326⇑ iP      P          02 22 14.7  -0.2
MAJO                                 pmax    pmax
      comp=Z,67nm,1.1s,mb5.6
MAJO                                 MLR     MLR
      comp=Z,623nm,20.0s,MS4.8
MAJO  Matsushiro        68.25 326⇑ iP      P          02 22 14.7  -0.2
      comp=Z,67nm,1.1s,mb5.6
MAJO                                 LR      LR
      comp=Z,623nm,20.0s,MS4.8
MAT   Matsushiro        68.25 326   eP      P          02 22 15.0 +0.1
MAT                                 eS      S           02 31 18.0 +5.5
MAT                                  pmax    pmax
      comp=Z,220nm,1.0s,mb6.1
MAT                                  MLR     MLR
      comp=Z,710nm,20.0s,MS4.9
MAT   Matsushiro        68.25 326   eP      P          02 22 15.0 +0.1
      comp=Z,220nm,1.0s,mb6.1
MAT                                 eS      S           02 31 18.0 +5.5
MAT                                  LR      LR
      comp=Z,710nm,20.0s,MS4.9
MAT   Matsushiro        68.25 326    P       P          02 22 14.7  -0.2
MAT                                  S       S          02 31 17.0 +4.5
QSPA  South Pole Qui    69.87 180   eP      P          02 22 24.3 +0.2
      comp=Z,301nm,1.0s,mb6.2
MIR   Mirnyy            70.01 205c iP      P          02 22 23.2  -1.9
MIR                                 i                   02 22 35.0
MIR                                 e                   02 22 35.0
MIR                                  pmax    pmax
      comp=Z,148nm,1.6s,mb5.7
MIR                                  pmax    pmax
      comp=Z,505nm,3.0s
MIR                                  MLR     MLR
      comp=N,690nm,16.0s,MS5.3
MIR                                  MLR     MLR
      comp=E,1µm,16.0s,MS5.3
MIR                                  MLR     MLR
      comp=Z,2µm,16.0s,MS5.5
JNU   Nakatsue          70.05 318    P       P          02 22 26.1 +0.2
      comp=Z,112nm,1.0s,mb5.7,baz=78,slow=9.2,SNR=22
JNU                                  LR      LR         02 49 21.0
      comp=Z,471nm,21.8s,MS4.7,baz=145,slow=33
KSM   Kuching           70.43 279   eP      P          02 22 28.0  -0.7
NACB  Ninganchiao       71.07 306   eP      P          02 22 31.3  -1.0
NACB                                epP     pP          02 22 38.9  -0.8
YHNB  Yeheng            71.51 306   eP      P          02 22 34.3  -0.7
TATO  Taipei            71.59 306   eP      P          02 22 34.5  -1.0
      comp=Z,143nm,1.1s,mb5.8
TATO                                e                   02 22 46.1
TATO                                 LR      LR
      comp=Z,1µm,20.0s,MS5.2
ASAJ  Asahikawa         72.09 333    P       P          02 22 39.0 +0.9
      comp=Z,83nm,1.0s,mb5.6,baz=211,slow=8.6,SNR=38
ASAJ                                 LR      LR         02 49 30.3
      comp=Z,1µm,20.7s,MS5.2,baz=3.7,slow=32
SMY   Shemya            72.73 357    PFAKE              02 22 50.0 +8.3
SMY                                  LR      LR
      comp=Z,855nm,19.0s,MS5.0
FX1   Attu Island--F    72.94 356    P       P          02 22 41.5  -1.4
FX1                                  pmax    pmax
      comp=Z,52nm,0.8s
FX1                                  MLR     MLR
      comp=Z,34nm,18.1s
FX1   Attu Island--F    72.94 356    P       P          02 22 41.5  -1.4
      comp=Z,52nm,0.8s,baz=131,slow=3.6,SNR=25
FX1                                  LR      LR         02 54 29.6
      comp=Z,34nm,18.1s,baz=197,slow=36
QZH   Quanzhou          73.78 305⇑ iP      P          02 22 48.4  0.0
QZH                                  S       S          02 32 19.0 +2.2
QZH                                  AMB     AMB
      comp=Z,560nm,1.6s,mb6.2
QZH                                  LR      LR
      comp=N,800nm,15.3s
QZH                                  LR      LR
      comp=E,2µm,22.2s
QZH                                  LR      LR
      comp=Z,2µm,23.6s
YSS   Yuzh-Sakhalins    74.34 335α iP      P          02 22 52.0 +0.9
YSS                                 e                   02 23 04.0
YSS                                 eS      S           02 32 27.0 +4.5
YSS                                 ePS     PS          02 32 50.0   -10
YSS                                  pmax    pmax
      comp=Z,320nm,1.0s,mb6.2
YSS                                  pmax    pmax
      comp=N,200nm,1.4s
YSS                                  pmax    pmax
      comp=E,190nm,1.2s
YSS                                  pmax    pmax
      comp=Z,1µm,4.0s
YSS                                  MLR     MLR
      comp=Z,500nm,17.0s,MS4.9
YSS                                  MLR     MLR
      comp=N,500nm,18.0s,MS5.0
YSS                                  MLR     MLR
      comp=E,500nm,18.0s,MS5.0
YSS   Yuzh-Sakhalins    74.34 335   eP      P          02 22 52.5 +1.4
      comp=E,337nm,1.1s,mb6.2
YSS                                 epP     pP          02 22 59.4 +0.8
YSS                                  LR      LR
      comp=Z,943nm,20.0s,MS5.1
UNV   Unalaska Valle    74.81   9   eP      P          02 22 52.2  -1.5
      comp=Z,288nm,1.3s,mb6.0
UNV                                  LR      LR
      comp=Z,4µm,20.0s,MS5.7
PET   Petropavlovsk     74.99 348α iP      P          02 22 54.0  -0.8
PET                                 e                   02 23 05.8
PET                                 i S     S           02 32 29.4  -0.3
PET                                 ePS     PS          02 33 00.3  -8.2
PET                                 ePPS    PPS         02 33 17.6  -5.9
PET                                 eSS     SS          02 37 20.0  -0.7
PET                                  pmax    pmax
      comp=Z,65nm,1.6s,mb5.3
PET                                  pmax    pmax
      comp=Z,600nm,2.5s,mb6.1
PET                                  pmax    pmax
      comp=N,300nm,2.1s
PET                                  pmax    pmax
      comp=N,50nm,0.7s
PET                                  pmax    pmax
      comp=Z,400nm,11.6s
PET                                  pmax    pmax
      comp=Z,55nm,1.3s,mb5.3
PET                                  smax
      comp=E,500nm,20.9s
PET                                  MLR     MLR
      comp=Z,600nm,16.0s,MS5.0
PET                                  MLR     MLR
      comp=Z,600nm,18.0s
PET   Petropavlovsk     74.99 348   eP      P          02 22 54.2  -0.5
      comp=Z,17nm,0.6s,mb5.2
PET                                 epP     pP          02 23 00.5  -1.7
PET                                  LR      LR
      comp=Z,504nm,19.0s,MS4.8
SSE   Sheshan           75.24 311    P       P          02 22 56.6  -0.1
SSE                                  XP      sP         02 23 05.8  -0.9
SSE                                  PCP     PcP        02 23 08.9  -1.5
SSE                                  PP      PP         02 25 44.9  -2.5
SSE                                  S       S          02 32 35.4 +2.4
SSE                                  XS                 02 32 47.2
SSE                                  SCS     ScS        02 33 07.8 +3.2
SSE                                  AMB     AMB
      comp=Z,30nm,1.3s,mb5.1
SSE                                  AMB     AMB
      comp=Z,340nm,11.2s
SSE                                  LR      LR
      comp=N,50nm,23.2s,MS4.4
SSE                                  LR      LR
      comp=E,230nm,23.2s,MS4.4
SSE                                  LR      LR
      comp=Z,270nm,20.4s,MS4.5
INCN  Inchon            75.52 320    PFAKE              02 23 10.0  +12
INCN                                 LR      LR
      comp=Z,515nm,19.0s,MS4.8
GZH   Guangzhou         77.00 301    P       P          02 23 06.4  -0.4
KGM   Kluang            77.13 277    P       P          02 23 07.5  -0.2
SDPT  Sand Point        77.28  12   eP      P          02 23 06.9  -0.7
SDPT                                 LR      LR
      comp=Z,500nm,21.0s,MS4.8
NJ2   Nanjing           77.42 311   eP      P          02 23 09.8 +0.9
NJ2                                  AP      pP         02 23 16.5 +0.1
NJ2                                  XP      sP         02 23 19.0 +0.1
NJ2                                  PP      PP         02 26 06.3 +1.1
NJ2                                  S       S          02 33 00.0 +3.3
NJ2                                  XS                 02 33 10.0
NJ2                                  AMB     AMB
      comp=Z,420nm,0.9s,mb6.4
NJ2                                  AMB     AMB
      comp=Z,340nm,5.9s
NJ2                                  LR      LR
      comp=N,1µm,22.0s
NJ2                                  LR      LR
      comp=E,900nm,31.1s
NJ2                                  LR      LR
      comp=Z,3µm,26.8s,MS5.5
QIZ   Qiongzhong        78.04 295    P       P          02 23 12.6 +0.1
QIZ                                 eS      S           02 33 04.5 +0.9
QIZ                                  PS      PS         02 33 42.3  -5.5
QIZ                                  AMB     AMB
      comp=Z,80nm,1.2s,mb5.5
QIZ                                  AMB     AMB
      comp=Z,410nm,4.9s
QIZ                                  LR      LR
      comp=E,400nm,20.2s
QIZ                                  LR      LR
      comp=Z,580nm,19.7s,MS4.9
QIZ   Qiongzhong        78.04 295    P       P          02 23 12.8 +0.3
QIZ   Qiongzhong        78.04 295   eP      P          02 23 12.6  0.0
      comp=Z,129nm,1.3s,mb5.7
QIZ                                 epP     pP          02 23 19.8  -0.2
QIZ                                 esP     sP          02 23 23.9 +1.4
MDJ   Mudanjiang        78.60 327    P       P          02 23 16.2 +1.1
MDJ                                  AP      pP         02 23 23.0 +0.4
MDJ                                  XP      sP         02 23 26.7 +1.6
MDJ                                  PP      PP         02 26 12.3  -2.6
MDJ                                  S       S          02 33 09.5 +0.4
MDJ                                  AMB     AMB
      comp=Z,150nm,0.9s,mb5.9
MDJ                                  AMB     AMB
      comp=Z,590nm,4.5s
MDJ                                  LR      LR
      comp=N,270nm,28.4s,MS4.7
MDJ                                  LR      LR
      comp=E,360nm,25.6s,MS4.7
MDJ                                  LR      LR
      comp=Z,490nm,25.6s,MS4.7
MDJ   Mudanjiang        78.60 327   eP      P          02 23 16.2 +1.1
      comp=Z,161nm,1.0s,mb5.9
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DL2	**Dalian**	**79.50**	**318**	P	**P**	**02 23 21.0**	**+0.8**
DL2				S	S	02 33 23.0	+4.2
DL2				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.4						
DL2				AMB	AMB		
	comp=Z,250nm,5.2s						
DL2				LR	LR		
	comp=E,190nm,21.6s						
DL2				LR	LR		
	comp=Z,300nm,26.1s,MS4.5						
SAO	**San Andreas Ge**	**79.87**	**45**	eP	**P**	**02 23 22.4**	**+0.2**
SAO				e*PP	pP	02 23 29.8	+0.1
SAO				e*SP	sP	02 23 32.8	+0.6
SAO				pmax	pmax		
	comp=Z,119nm,1.3s,mb5.7						
SAO				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.3						
SAO	**San Andreas Ge**	**79.87**	**45**	eP	**P**	**02 23 22.4**	**+0.1**
	comp=Z,119nm,1.3s,mb5.7						
SAO				epP	pP	02 23 29.8	+0.1
SAO				esP	sP	02 23 32.8	+0.6
SAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
WHN	**Wuhan**	**79.89**	**308**	⇑P	**P**	**02 23 23.0**	**+0.6**
WHN				AMB	AMB		
	comp=Z,270nm,1.1s,mb6.1						
WHN				LR	LR		
	comp=Z,1µm,25.7s,MS5.2						
LRV	**Little Rabbit**	**79.97**	**45**	eP	**P**	**02 23 23.6**	**+0.9**
LRV				e	pP	02 23 31.4	+1.1
SNY	**Shenyang**	**80.09**	**321**	⇑P	**P**	**02 23 23.7**	**+0.4**
SNY				AP	pP	02 23 35.1	+4.3
SNY				XP	sP	02 23 38.2	+4.9
SNY				S	S	02 33 31.0	+6.1
SNY				AMB	AMB		
	comp=Z,50nm,1.7s,mb5.2						
SNY				LR	LR		
	comp=N,200nm,16.8s,MS4.8						
SNY				LR	LR		
	comp=E,300nm,19.5s,MS4.8						
SNY				LR	LR		
	comp=Z,450nm,18.0s,MS4.9						
HOPS	**Hopland**	**80.11**	**42**	PFAKE		02 23 30.0	+6.6
HOPS				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
IPM	**Ipoh**	**80.19**	**279**	P	**P**	**02 23 23.9**	**-0.4**
CN2	**Changchun**	**80.28**	**324**	eP	**P**	**02 23 25.2**	**+1.0**
CN2				eAP	pP	02 23 35.5	+3.8
CN2				ePP	PP	02 26 25.6	-3.1
CN2				eS	S	02 33 28.2	+1.4
CN2				AMB	AMB		
	comp=Z,370nm,1.2s,mb6.2						
CN2				LR	LR		
	comp=N,400nm,27.0s,MS4.8						
CN2				LR	LR		
	comp=E,500nm,27.0s,MS4.8						
CN2				LR	LR		
	comp=Z,700nm,25.0s,MS4.9						
UBT	**Ubonrachathani**	**80.62**	**290**	P	**P**	**02 23 27.5**	**+0.9**
KLR	**Kul'dur**	**80.79**	**331**	κ iP	**P**	**02 23 25.0**	**-1.8**
KLR				eS	S	02 33 34.0	+2.0
KLR				pmax	pmax		
	comp=N,80nm,2.0s						
KLR				pmax	pmax		
	comp=E,80nm,2.0s						
KLR				pmax	pmax		
	comp=Z,150nm,2.0s,mb5.6						
KLR				pmax	pmax		
	comp=Z,900nm,7.5s						
KLR				smax			
	comp=N,500nm,10.0s						
KLR				smax			
	comp=E,700nm,10.0s						
KULM	**Kulim**	**80.79**	**279**	⇑iP	**P**	**02 23 27.1**	**-0.5**
MWC	**Mount Wilson**	**80.80**	**48**	eP	**P**	**02 23 26.4**	**-0.8**
MWC				e		02 23 37.3	
MAW	**Mawson**	**80.83**	**200**	P	**P**	**02 23 26.3**	**-0.3**
	comp=E,57nm,0.9s,mb5.5,baz=119,slow=6.7,SNR=104						
TIA	**Tai'an**	**80.90**	**314**	⇑P	**P**	**02 23 28.5**	**+0.8**
TIA				AMB	AMB		
	comp=Z,200nm,1.1s,mb6.0						
KDAK	**Kodiak Island**	**81.25**	**15**	eP	**P**	**02 23 27.3**	**-1.8**
KDAK				LR	LR		
	comp=Z,700nm,17.0s,MS5.1						
CMB	**Columbia Colle**	**81.28**	**44**	eP	**P**	**02 23 29.3**	**-0.3**
CMB				e*PP	pP	02 23 37.3	+0.1
CMB				e*SP	sP	02 23 41.5	+1.9
CMB				pmax	pmax		
	comp=Z,73nm,1.1s,mb5.5						
CMB				MLR	MLR		
	comp=Z,795nm,20.0s,MS5.1						
CMB	**Columbia Colle**	**81.28**	**44**	eP	**P**	**02 23 29.3**	**-0.4**
	comp=Z,73nm,1.1s,mb5.5						
CMB				epP	pP	02 23 37.3	+0.1
CMB				esP	sP	02 23 41.5	+1.8
CMB				LR	LR		
	comp=Z,795nm,20.0s,MS5.1						
WDC	**Whiskeytown Da**	**81.37**	**41**	eP	**P**	**02 23 30.1**	**+0.1**
WDC				e*SP	sP	02 23 41.5	+1.5
WDC				pmax	pmax		
	comp=Z,106nm,1.3s,mb5.6						
WDC				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.3						
WDC	**Whiskeytown Da**	**81.37**	**41**	eP	**P**	**02 23 30.1**	**+0.1**
	comp=Z,106nm,1.3s,mb5.6						
WDC				esP	sP	02 23 41.5	+1.4
WDC				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
SNG	**Songkhla**	**81.51**	**281**	P	**P**	**02 23 31.0**	**-0.3**
	comp=Z,252nm,0.9s,mb6.2						
PFO	**Pinyon Flat Ob**	**81.62**	**50**	eP	**P**	**02 23 31.2**	**-0.3**
PFO				e		02 23 43.1	
PFO				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.1						
PFO				MLR	MLR		
	comp=Z,378nm,20.0s,MS4.8						
PFO	**Pinyon Flat Ob**	**81.62**	**50**	eP	**P**	**02 23 31.2**	**-0.2**
	comp=Z,31nm,1.3s,mb5.1						
PFO				e		02 23 43.1	
PFO				LR	LR		
	comp=Z,378nm,20.0s,MS4.8						
YBH	**Yreka Blue Hor**	**81.94**	**40**	eP	**P**	**02 23 33.5**	**+0.5**
YBH				e*SP	sP	02 23 45.5	+2.5
YBH				pmax	pmax		
	comp=Z,65nm,1.1s						
YBH				MLR	MLR		
	comp=Z,1µm,19.0s						
YBH	**Yreka Blue Hor**	**81.94**	**40**	eP	**P**	**02 23 33.5**	**+0.6**
	comp=Z,65nm,1.1s,mb5.5						
YBH				esP	sP	02 23 45.5	+2.6
YBH				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
OMM	**Old Mammoth Mi**	**81.98**	**45**	eP	**P**	**02 23 33.6**	**+0.3**
OMM				esP	sP	02 23 45.1	+1.8
MTUM	**Tungsten Hills**	**82.12**	**46**	eP	**P**	**02 23 34.5**	**+0.5**
MTUM				esP	sP	02 23 45.6	+1.6
DAC	**Darwin (Calif)**	**82.20**	**47**	eP	**P**	**02 23 34.4**	**-0.1**
DAC				e*SP	sP	02 23 45.8	+1.3
DAC				pmax	pmax		
	comp=Z,66nm,1.6s,mb5.3						
DAC				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
DAC	**Darwin (Calif)**	**82.20**	**47**	eP	**P**	**02 23 34.4**	**-0.1**
	comp=Z,66nm,1.6s,mb5.3						
DAC				esP	sP	02 23 45.8	+1.4
DAC				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
LBCM	**Butte Creek Ri**	**82.25**	**41**	P	**P**	**02 23 35.0**	**+0.4**
HUMO	**Hull Mountain**	**82.31**	**39**	eP	**P**	**02 23 35.5**	**+0.7**
	comp=Z,99nm,1.2s,mb5.6						
HUMO				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
WCN	**Washoe City**	**82.40**	**43**	eP	**P**	**02 23 35.6**	**+0.2**
WCN				e*SP	sP	02 23 47.5	+2.1
WCN				pmax	pmax		
	comp=Z,101nm,1.2s,mb5.6						
WCN	**Washoe City**	**82.40**	**43**	eP	**P**	**02 23 35.6**	**+0.2**
	comp=Z,102nm,1.2s,mb5.6						
WCN				esP	sP	02 23 47.5	+2.0
PMSA	**Palmer Station**	**82.72**	**157**	eP	**P**	**02 23 36.4**	**-0.2**
	comp=Z,193nm,1.2s,mb6.0						
MA2	**Magadan**	**82.74**	**346**	c iP	**P**	**02 23 36.6**	**-0.1**
MA2				e		02 23 48.4	
MA2				eS	S	02 33 51.8	0.0
MA2				ePS	PS	02 34 46.6	+0.4
MA2				ePPS	PPS	02 35 09.8	+1.9
MA2				pmax	pmax		
	comp=E,20nm,1.2s						
MA2				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.7						
MA2				pmax	pmax		
	comp=N,40nm,1.1s						
MA2				MLR	MLR		
	comp=Z,600nm,18.0s,MS5.0						
MA2	**Magadan**	**82.74**	**346**	eP	**P**	**02 23 36.3**	**-0.5**
	comp=Z,515nm,1.6s,mb6.3						
MA2				LR	LR		
	comp=Z,595nm,20.0s,MS5.0						
PAHR	**Pah Rah Range**	**82.86**	**43**	eP	**P**	**02 23 38.6**	**+0.8**
	comp=Z,26nm,1.2s,mb5.1						
PAHR				epP	pP	02 23 45.3	0.0
PAHR				esP	sP	02 23 48.9	+1.1
NVAR	**Mina Array Bea**	**82.87**	**45**	P	**P**	**02 23 37.5**	**-0.3**
	comp=Z,23nm,1.0s,mb5.2,baz=214,slow=6.3,SNR=77						
NVAR				pP	pP	02 23 50.1	+4.7
	comp=Z,32nm,1.0s,baz=232,slow=10,SNR=13						
NVAR				PKPPKP		02 50 06.8	
	comp=Z,4.6nm,1.1s,baz=98,slow=3.2,SNR=12						
NVAR				LR	LR	02 56 23.9	
	comp=Z,833nm,18.3s,MS5.1,baz=265,slow=33						
MNV	**Mina**	**82.97**	**45**	eP	**P**	**02 23 38.4**	**0.0**
MNV				e*SP	sP	02 23 49.2	+0.8
MNV				pmax	pmax		
	comp=Z,95nm,1.3s,mb5.7						
MNV				MLR	MLR		
	comp=Z,957nm,19.0s,MS5.2						
MNV	**Mina**	**82.97**	**45**	eP	**P**	**02 23 38.4**	**0.0**
	comp=Z,95nm,1.3s,mb5.7						
MNV				esP	sP	02 23 49.2	+0.8
MNV				LR	LR		
	comp=Z,957nm,19.0s,MS5.2						
COR	**Corvallis**	**83.28**	**38**	PFAKE		02 23 50.0	+10
COR				LR	LR		
	comp=Z,418nm,20.0s,MS4.8						
LDFC	**Landfair**	**83.32**	**49**	eP	**P**	**02 23 40.8**	**+0.5**
LDFC				esP	sP	02 23 51.9	+1.6
TPH	**Tonopah**	**83.40**	**46**	eP	**P**	**02 23 41.3**	**+0.7**
TPH				e*SP	sP	02 23 52.7	+2.1
TPH				pmax	pmax		
	comp=Z,123nm,1.4s,mb5.7						
TPH				MLR	MLR		
	comp=Z,858nm,20.0s,MS5.1						
TPH	**Tonopah**	**83.40**	**46**	eP	**P**	**02 23 41.3**	**+0.6**
	comp=Z,123nm,1.4s,mb5.7						
TPH				epP	pP	02 23 48.4	+0.2
TPH				esP	sP	02 23 52.7	+2.1
TPH				LR	LR		
	comp=Z,858nm,20.0s,MS5.1						
ENH	**Enshi**	**83.43**	**305**	eP	**P**	**02 23 41.1**	**+0.2**
	comp=Z,258nm,1.0s,mb6.2						
MOD	**Modoc**	**83.51**	**41**	eP	**P**	**02 23 41.1**	**0.0**
	comp=Z,145nm,1.3s,mb6.0						
MOD				epP	pP	02 23 49.5	+0.9
MOD				esP	sP	02 23 53.3	+2.2
MOD				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
SVW2	**Sparrevohn**	**83.59**	**12**	eP	**P**	**02 23 40.7**	**-0.3**
NEN	**Nelson**	**83.79**	**49**	eP	**P**	**02 23 42.5**	**-0.2**
NEN				esP	sP	02 23 54.1	+1.4
GYA	**Guiyang**	**83.93**	**301**	⇑iP	**P**	**02 23 44.3**	**+0.7**
GYA				PP	PP	02 27 01.3	+2.2
GYA				AMB	AMB		
	comp=Z,90nm,1.1s,mb5.8						
GYA				AMB	AMB		
	comp=Z,360nm,9.3s						
GYA				LR	LR		
	comp=N,950nm,23.1s,MS5.2						
GYA				LR	LR		
	comp=E,420nm,21.1s,MS5.2						
GYA				LR	LR		
	comp=Z,670nm,23.1s,MS5.0						
SLKM	**Skilak Lake**	**84.24**	**15**	eP	**P**	**02 23 43.9**	**-0.4**
SLKM				e*SP	sP	02 23 55.9	+1.6
MID	**Middleton Isla**	**84.31**	**17**	eP	**P**	**02 23 45.0**	**+0.3**
NNT	**Nongplab**	**84.32**	**286**	P	**P**	**02 23 46.5**	**+0.7**
SPU	**Mount Spurr**	**84.41**	**14**	eP	**P**	**02 23 44.1**	**-1.1**
SPU				esP	sP	02 23 56.0	+0.8
TRCR	**Troy Canyon**	**84.65**	**46**	eP	**P**	**02 23 46.8**	**-0.1**
TRCR				epP	pP	02 23 55.2	+0.7
TRCR				esP	sP	02 23 59.3	+2.4
BMN	**Battle Mountai**	**84.65**	**44**	eP	**P**	**02 23 47.2**	**+0.3**
BMN				e*SP	sP	02 23 58.8	+1.9
BMN				pmax	pmax		
	comp=Z,124nm,1.4s,mb5.8						
BMN				MLR	MLR		
	comp=Z,765nm,20.0s,MS5.1						
BMN	**Battle Mountai**	**84.65**	**44**	eP	**P**	**02 23 47.2**	**+0.3**
	comp=Z,124nm,1.4s,mb5.8						
BMN				esP	sP	02 23 58.8	+1.9
BMN				LR	LR		
	comp=Z,765nm,20.0s,MS5.1						
OCWA	**Octopus Mounta**	**84.72**	**35**	eP	**P**	**02 23 47.8**	**+0.8**
	comp=Z,246nm,1.2s,mb6.2						
OCWA				epP	pP	02 23 54.9	+0.3
OCWA				esP	sP	02 23 59.3	+2.3
OCWA				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
FIB	**Fire Island**	**84.83**	**15**	PFAKE		02 24 00.0	+13
FIB				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
NST	**Nakhon Sawan**	**85.12**	**289**	⇓P	**P**	**02 23 51.5**	**+1.8**
	comp=Z,158nm,0.9s,mb6.2						
TUC	**Tucson**	**85.15**	**53**	eP	**P**	**02 23 50.2**	**+0.6**
TUC				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.4						
TUC				MLR	MLR		
	comp=Z,919nm,20.0s,MS5.2						
TUC	**Tucson**	**85.15**	**53**	eP	**P**	**02 23 50.2**	**+0.6**
	comp=Z,32nm,1.1s,mb5.4						
TUC				LR	LR		
	comp=Z,919nm,20.0s,MS5.2						
TTA	**Tatalina**	**85.19**	**11**	eP	**P**	**02 23 49.2**	**+0.2**
LON	**Longmire**	**85.41**	**36**	P	**P**	**02 23 50.5**	**0.0**
EYAK	**Cordova Ski Ar**	**85.42**	**17**	eP	**P**	**02 23 49.8**	**-0.3**
EYAK				esP	sP	02 24 01.0	+0.8
SEY	**Seymchan**	**85.44**	**348**	eP	**P**	**02 23 51.4**	**+1.1**
SEY				e		02 35 34.5	
SEY				pmax	pmax		
	comp=N,30nm,0.9s						
SEY				pmax	pmax		
	comp=E,50nm,0.9s						
SEY				pmax	pmax		
	comp=Z,80nm,0.9s,mb5.8						
PMR	**Palmer**	**85.45**	**15**	eP	**P**	**02 23 49.9**	**-0.4**
PMR				MLR	MLR		
	comp=Z,600nm,17.0s,MS5.0						
XAN	**Xi'an**	**85.61**	**309**	P	**P**	**02 23 52.5**	**+0.7**
XAN				AP	pP	02 24 02.9	+3.5
XAN				AMB	AMB		
	comp=Z,100nm,1.2s,mb5.9						
XAN				LR	LR		
	comp=N,200nm,21.5s,MS4.7						
XAN				LR	LR		
	comp=E,290nm,22.3s,MS4.7						
XAN				LR	LR		
	comp=Z,610nm,20.0s,MS5.0						
PGC	**Sidney**	**85.65**	**34**	eP	**P**	**02 23 51.9**	**+0.2**
	comp=Z,68nm,0.9s,mb5.9						
PGC				esP	sP	02 24 02.4	+0.8
CRAG	**Craig**	**85.67**	**25**	eP	**P**	**02 23 51.6**	**0.0**
CRAG				LR	LR		
	comp=Z,2µm,18.0s,MS5.5						
NANT	**Nan**	**85.81**	**292**	⇑P	**P**	**02 23 54.0**	**+0.8**
	comp=Z,525nm,0.5s						
SML	**Sawmill**	**85.83**	**15**	eP	**P**	**02 23 51.4**	**-0.8**
SML				e*SP	sP	02 24 01.3	-0.9
DIV	**Divide**	**85.90**	**16**	⇑iP	**P**	**02 23 52.3**	**-0.3**
	comp=Z,563nm,0.9s,mb6.8						
DIV				⇓epP	pP	02 23 57.9	-2.2
DIV				e		02 24 04.0	
DIV				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
SIT	**Sitka**	**85.98**	**23**	P	**P**	**02 23 54.0**	**+0.9**
SIT				e		02 24 06.0	
SIT				pmax	pmax		
	comp=Z,160nm,1.4s,mb6.1						
SIT	**Sitka**	**85.98**	**23**	eP	**P**	**02 23 53.4**	**+0.3**
	comp=Z,33nm,1.0s,mb5.5						
SIT				epP	pP	02 24 01.3	+0.6
SIT				esP	sP	02 24 05.1	+2.0
TTW	**Tolt Reservoir**	**86.03**	**36**	P	**P**	**02 23 53.6**	**+0.1**
TNA	**Tin City**	**86.08**	**5**	eP	**P**	**02 23 53.7**	**+0.2**
	comp=Z,121nm,1.3s,mb6.0						
TNA				esP	sP	02 24 05.7	+2.2
TNA				LR	LR		
	comp=Z,626nm,20.0s,MS5.0						
ELK	**Elko**	**86.10**	**44**	eP	**P**	**02 23 54.2**	**+0.1**
ELK				e*SP	sP	02 24 06.1	+2.0
ELK				pmax	pmax		
	comp=Z,31nm,1.0s						
ELK				MLR	MLR		
	comp=Z,786nm,21.0s						
ELK	**Elko**	**86.10**	**44**	eP	**P**	**02 23 54.2**	**+0.1**
	comp=Z,31nm,1.0s,mb5.5						
ELK				esP	sP	02 24 06.1	+2.0
ELK				LR	LR		
	comp=Z,786nm,21.0s,MS5.1						
TWW	**Teanaway**	**86.16**	**36**	P	**P**	**02 23 55.4**	**+1.1**
WUAZ	**Wupatki**	**86.20**	**50**	⇑eP	**P**	**02 23 55.2**	**+0.4**
	comp=Z,71nm,1.2s,mb5.8						
WUAZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
SYO	**Syowa Base**	**86.34**	**194**	⇓P	**P**	**02 23 52.3**	**-2.3**
SYO	**Syowa Base**	**86.34**	**194**	⇑pP	pP	02 24 00.5	-1.7
HAWA	**Hanford**	**86.49**	**38**	eP	**P**	**02 23 56.0**	**+0.2**
	comp=Z,13nm,1.3s,mb5.0						
HAWA				esP	sP	02 24 07.6	+1.7
HAWA				LR	LR		
	comp=Z,102nm,20.0s,MS4.2						
KMI	**Kunming**	**86.58**	**298**	⇑P	**P**	**02 23 57.9**	**+1.1**
KMI				AP	pP	02 24 06.2	+1.8
KMI				XP	sP	02 24 09.9	+3.1
KMI				PP	PP	02 27 19.9	-1.0
KMI				S	S	02 34 32.3	+1.9
KMI				AMB	AMB		
	comp=Z,80nm,1.7s,mb5.7						
KMI				AMB	AMB		
	comp=Z,530nm,4.4s						
KMI				LR	LR		
	comp=N,260nm,22.0s,MS4.8						
KMI				LR	LR		
	comp=E,310nm,19.1s,MS4.8						
KMI				LR	LR		
	comp=Z,430nm,28.1s						
KMI	**Kunming**	**86.58**	**298**	P	**P**	**02 23 58.2**	**+1.3**
HIA	**Hailar**	**86.75**	**326**	eP	**P**	**02 23 57.3**	**+0.2**
HIA				pmax	pmax		
	comp=Z,75nm,1.1s						
HIA	**Hailar**	**86.75**	**326**	eP	**P**	**02 23 57.2**	**+0.2**
	comp=Z,76nm,1.1s,mb5.8						
BMO	**Blue Mountains**	**86.95**	**40**	eP	**P**	**02 23 57.8**	**-0.4**
BMO				e*SP	sP	02 24 09.1	+0.9
BMO				pmax	pmax		
	comp=Z,72nm,1.5s,mb5.7						
BMO				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
BMO	**Blue Mountains**	**86.95**	**40**	eP	**P**	**02 23 57.8**	**-0.4**
	comp=Z,72nm,1.5s,mb5.7						
BMO				esP	sP	02 24 09.1	+0.9
BMO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
MVU	**Marysvale**	**87.03**	**47**	eP	**P**	**02 23 59.4**	**+0.7**
	comp=Z,36nm,1.3s,mb5.4						
MVU				esP	sP	02 24 10.5	+1.9
MVU				LR	LR		
	comp=Z,936nm,19.0s,MS5.2						
HHC	**Hu-ho-hao-te**	**87.04**	**316**	⇑iP	**P**	**02 24 00.2**	**+1.5**
HHC				AP	pP	02 24 06.8	+0.5
HHC				XP	sP	02 24 09.5	+0.8
HHC				PP	PP	02 27 20.2	-4.4
HHC				SKS	SKS	02 34 25.1	-4.0
HHC				S	S	02 34 34.2	-0.2
HHC				XS		02 34 46.8	
HHC				AMB	AMB		
	comp=Z,160nm,1.3s,mb6.1						
HHC				LR	LR		
	comp=N,290nm,15.5s,MS5.0						
HHC				LR	LR		
	comp=E,380nm,15.3s,MS5.0						
HHC				LR	LR		
	comp=Z,470nm,16.7s,MS5.0						
MSU	**Marysvale**	**87.05**	**47**	eP	**P**	**02 23 59.5**	**+0.7**
MSU				e*SP	sP	02 24 11.1	+2.3
MSU	**Marysvale**	**87.05**	**47**	eP	**P**	**02 23 59.5**	**+0.6**
MSU				epP	pP	02 24 06.9	+0.5
MSU				esP	sP	02 24 11.1	+2.3
CMAR	**Chiang Mai Arr**	**87.22**	**291**	P	**P**	**02 24 01.1**	**+1.0**
	comp=Z,70nm,1.0s,mb5.8,baz=121,slow=3.3,SNR=165						
CMAR				PP	PP	02 27 25.5	-1.1
	comp=Z,2.6nm,0.7s,baz=116,slow=5.7,SNR=4.4						
CMAR				PKKPbc		02 41 51.0	
	comp=Z,5.1nm,0.7s,baz=289,slow=4.6,SNR=17						
CMAR				LR	LR	02 58 54.2	
	comp=Z,307nm,20.2s,MS4.7,baz=120,slow=33						
CHG	**Chiang Mai**	**87.36**	**291**	⇑P	**P**	**02 24 01.4**	**+0.7**
	comp=Z,85nm,1.4s,mb5.8						
DUG	**Dugway**	**87.43**	**45**	eP	**P**	**02 23 59.9**	**-0.7**
DUG				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.0						
DUG				MLR	MLR		
	comp=Z,812nm,19.0s,MS5.2						
DUG	**Dugway**	**87.43**	**45**	eP	**P**	**02 23 59.9**	**-0.7**
	comp=Z,12nm,1.2s,mb5.0						
DUG				LR	LR		
	comp=Z,812nm,19.0s,MS5.2						
THY	**Trims Highway**	**87.83**	**15**	eP	**P**	**02 24 01.7**	**-0.2**
THY				epP	pP	02 24 09.2	-0.2
THY				esP	sP	02 24 13.3	+1.4
BTO	**Baotou**	**87.94**	**315**	eP	**P**	**02 24 04.6**	**+1.6**
BTO				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.8						
MENT	**Mentasta**	**87.94**	**16**	eP	**P**	**02 24 02.6**	**+0.1**
HLID	**Hailey**	**88.06**	**42**	eP	**P**	**02 24 04.0**	**+0.5**
	comp=Z,9.5nm,0.4s,mb5.4						
HLID				epP	pP	02 24 11.0	-0.1
HLID				esP	sP	02 24 15.6	+2.1
HLID				ePP	PP	02 27 20.8	-12
HLID				LR	LR		
	comp=Z,913nm,20.0s,MS5.2						
PNT	**Penticton**	**88.09**	**35**	P	**P**	**02 24 03.7**	**+0.2**
CD2	**Chengdu**	**88.14**	**304**	P	**P**	**02 24 05.2**	**+1.0**
MPU	**Maple Canyon**	**88.14**	**46**	eP	**P**	**02 24 04.0**	**0.0**
HVU	**Hansel Valley**	**88.23**	**44**	eP	**P**	**02 24 04.6**	**+0.2**
HVU				e		02 27 37.9	
SNAA	**Sanae**	**88.37**	**179**	e	**P**	**02 24 04.9**	**+0.6**
SNAA	**Sanae**	**88.37**	**179**	e	**P**	**02 24 08.1**	**+3.8**
SNAA	**Sanae**	**88.37**	**179**	e	**P**	**02 24 13.0**	**+8.7**
SNAA	**Sanae**	**88.37**	**179**	⇑iP	**P**	**02 24 03.1**	**-1.2**
SNAA				e		02 24 13.0	
SNAA	**Sanae**	**88.37**	**179**	⇑iP	**P**	**02 24 03.1**	**-1.2**
SNAA				e		02 24 04.9	
SNAA				e		02 24 08.1	
SNAA				e		02 24 13.0	
CTU	**Camp Tracy**	**88.38**	**45**	eP	**P**	**02 24 05.2**	**0.0**
BILL	**Bilibino**	**88.46**	**355**	⇑iP	**P**	**02 24 05.4**	**+0.5**
BILL				i		02 24 16.6	
BILL				pmax	pmax		
	comp=Z,281nm,1.1s,mb6.4						
BILL				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.8						
BILL	**Bilibino**	**88.46**	**355**	⇑iP	**P**	**02 24 05.1**	**+0.3**
	comp=Z,243nm,1.1s,mb6.3						
BILL				epP	pP	02 24 10.9	-1.5
BILL				LR	LR		
	comp=Z,530nm,22.0s,MS4.9						
IMA	**Indian Mountai**	**88.48**	**11**	eP	**P**	**02 24 04.8**	**-0.2**
JLU	**Jordanelle**	**88.54**	**46**	eP	**P**	**02 24 05.6**	**-0.3**
COLA	**College**	**88.58**	**14**	⇑iP	**P**	**02 24 04.6**	**-0.9**
COLA	**College**	**88.58**	**14**	eP	**P**	**02 24 04.3**	**-1.2**
COLA				LR	LR		
	comp=Z,800nm,17.0s,MS5.2						
DAU	**Daniels Canyon**	**88.58**	**46**	eP	**P**	**02 24 04.7**	**-1.4**
DAU				e		02 27 36.4	
VNA3	**Neumayer Olymp**	**88.61**	**177**	e	**P**	**02 24 06.1**	**+0.6**
VNA3	**Neumayer Olymp**	**88.61**	**177**	e	**P**	**02 24 10.0**	**+4.5**
VNA3	**Neumayer Olymp**	**88.61**	**177**	e	**P**	**02 24 15.4**	**+10**
VNA3	**Neumayer Olymp**	**88.61**	**177**	⇑iP	**P**	**02 24 04.6**	**-0.9**
VNA3				e		02 24 06.1	
VNA3				e		02 24 10.0	
VNA3				e		02 24 15.4	
ILAR	**Eielson Array**	**88.71**	**14**	P	**P**	**02 24 05.0**	**-1.1**
	comp=Z,70nm,0.9s,mb6.0,baz=235,slow=5.5,SNR=319						
ILAR				PKKPbc		02 41 45.7	
	comp=Z,0.3nm,0.7s,baz=286,slow=1.8,SNR=4.3						

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ILAR                               PKPPKP         02 49 53.5
      comp=Z,2.6nm,1.2s,baz=353,slow=3.6,SNR=6.5
ILAR                               LR     LR      03 00 02.6
      comp=Z,500nm,19.9s,MS4.9,baz=178,slow=33
TCUT  Toone Canyon      88.81  45 eP      P       02 24 07.7 +0.5
MAIT  Maitri            88.82 184⇑iP      P       02 24 05.9 -0.6
MAIT                              ePcP    PcP     02 24 17.4 +9.0
NVL   N’lazarevskaya    88.83 184⇓iP      P       02 24 02.7 -3.9
NVL                               i *PP   pP      02 24 16.4 +2.3
NVL                               i               02 27 35.5
NVL                               i PPP   PPP     02 29 35.7 -1.3
NVL                               i S     S       02 34 29.4  -21
NVL                               eSSS    SSS     02 44 24.9 +5.3
NVL                                pmax   pmax
      comp=Z,29nm,1.0s,mb5.6
NVL                                MLR    MLR
      comp=Z,100nm,16.9s,MS4.3
LENM  Lemitar           88.83  53 eP      P       02 24 08.0 +0.6
LENM                              epP     pP      02 24 14.4 -0.6
LENM                              esP     sP      02 24 19.0 +1.5
NEW   Newport           88.89  37 eP      P       02 24 06.7 -0.7
NEW                               e*SP    sP      02 24 18.4 +1.0
NEW                                pmax   pmax
      comp=Z,36nm,1.2s
NEW                                MLR    MLR
      comp=Z,932nm,20.0s
NEW   Newport           88.89  37  LR     LR      02 57 15.3
      comp=Z,887nm,19.7s,MS5.2,baz=186,slow=31
NEW   Newport           88.89  37 eP      P       02 24 06.7 -0.7
      comp=Z,36nm,1.2s,mb5.6
NEW                               esP     sP      02 24 18.4 +1.1
NEW                                LR     LR
      comp=Z,932nm,20.0s,MS5.2
HWUT  Hardware Ranch    88.94  45  PFAKE          02 24 20.0  +12
HWUT                               LR     LR
      comp=Z,871nm,20.0s,MS5.2
DLBC  Dease Lake        88.96  24  LR     LR      02 59 26.6
      comp=Z,1µm,18.5s,MS5.3,baz=150,slow=32
DLBC  Dease Lake        88.96  24 eP      P       02 24 07.8 +0.3
DLBC                              esP     sP      02 24 18.0 +0.6
MNTX  Cornudas Mount    89.02  56 eP      P       02 24 08.2 -0.2
      comp=Z,25nm,1.1s,mb5.5
MNTX                              epP     pP      02 24 15.1 -0.9
MNTX                              esP     sP      02 24 19.5 +1.1
MNTX                               LR     LR
      comp=Z,1µm,22.0s,MS5.2
VNA2  Neumayer--Watz    89.02 178 e       P       02 24 08.2 +0.7
VNA2  Neumayer--Watz    89.02 178 e       P       02 24 11.6 +4.1
VNA2  Neumayer--Watz    89.02 178 e       P       02 24 18.0  +11
VNA2  Neumayer--Watz    89.02 178⇑iP      P       02 24 06.8 -0.7
VNA2                              e               02 24 08.2
VNA2                              e               02 24 11.6
VNA2                              e               02 24 18.0
CLNS  Chul’man          89.02 334 eP      P       02 24 08.0 +0.2
CLNS                              e*PP    pP      02 24 16.1 +0.8
CLNS                              eS      S       02 34 48.3 -4.2
CLNS                              ePS     PS      02 36 01.4 -1.4
CLNS                               pmax   pmax
      comp=Z,70nm,1.1s,mb5.9
CLNS                               pmax   pmax
      comp=N,35nm,1.2s
CLNS                               pmax   pmax
      comp=E,13nm,0.9s
CLNS                               pmax   pmax
      comp=Z,8.0nm,0.6s,mb5.2
CLNS                               pmax   pmax
      comp=N,7.0nm,1.1s
CLNS                               pmax   pmax
      comp=E,9.0nm,0.7s
CLNS                               smax
      comp=N,190nm,9.5s
CLNS                               smax
      comp=Z,99nm,13.5s
CLNS                               smax
      comp=E,63nm,9.9s
CLNS                               MLR    MLR
      comp=Z,400nm,15.0s,MS5.0
CLNS                               MLR    MLR
      comp=N,300nm,14.0s,MS4.9
CLNS                               MLR    MLR
      comp=E,100nm,14.0s,MS4.9
BNM   Barren Site       89.09  53 eP      P       02 24 08.3 -0.4
BNM                               epP     pP      02 24 15.2 -1.0
BNM                               esP     sP      02 24 19.4 +0.7
PV10  Paradox Valley    89.17  48 eP      P       02 24 07.9 -1.1
VNA1  Neumayer--Stat    89.26 178 e       P       02 24 09.5 +0.9
VNA1  Neumayer--Stat    89.26 178 e       P       02 24 13.3 +4.7
VNA1  Neumayer--Stat    89.26 178 e       P       02 24 18.7  +10
VNA1  Neumayer--Stat    89.26 178⇑iP      P       02 24 08.2 -0.4
VNA1                              e               02 24 09.5
VNA1                              e               02 24 13.3
VNA1                              e               02 24 18.7
PV01  Paradox Valley    89.40  49 eP      P       02 24 09.4 -0.6
PV01                              epP     pP      02 24 16.8 -0.8
PV01                              esP     sP      02 24 21.1 +1.1
PV01                              ePP     PP      02 27 48.3 +4.8
LTX   Lajitas           89.41  58 eP      P       02 24 11.0 +0.7
LTX                               e*SP    sP      02 24 22.0 +1.7
LTX                                pmax   pmax
      comp=Z,72nm,1.1s,mb5.9
LTX                                MLR    MLR
      comp=Z,833nm,19.0s,MS5.2
LTX   Lajitas           89.41  58 eP      P       02 24 11.0 +0.7
      comp=Z,72nm,1.1s,mb5.9
LTX                               epP     pP      02 24 17.8 -0.1
LTX                               esP     sP      02 24 22.0 +1.7
LTX                                LR     LR
      comp=Z,833nm,19.0s,MS5.2
TXAR  Lajitas Array     89.41  58  P      P       02 24 11.2 +0.9
      comp=Z,44nm,1.0s,mb5.7,baz=224,slow=4.5,SNR=218
TXAR                               PKKPbc         02 41 44.8
      comp=Z,3.5nm,0.8s,baz=100,slow=2.8,SNR=24
TXAR                               PKPPKP         02 49 55.0
      comp=Z,1.6nm,1.1s,baz=180,slow=2.5,SNR=7.2
TXAR                               LR     LR      02 59 05.5
      comp=Z,730nm,18.0s,MS5.2,baz=325,slow=32
ANMO  Albuquerque       89.55  52 eP      P       02 24 10.8  0.0
ANMO                              e*SP    sP      02 24 21.4 +0.6
ANMO                               pmax   pmax
      comp=Z,18nm,1.2s
ANMO                               MLR    MLR
      comp=Z,852nm,20.0s
ANMO  Albuquerque       89.55  52 eP      P       02 24 10.8  0.0
      comp=Z,18nm,1.2s,mb5.3
ANMO                              esP     sP      02 24 21.4 +0.6
ANMO                               LR     LR
      comp=Z,852nm,20.0s,MS5.2
MCMT  McKenzie Canyo    89.67  41 eP      P       02 24 11.4 +0.3
MCMT                              esP     sP      02 24 21.7 +0.5
AHID  Auburn Hatcher    89.79  44  PFAKE          02 24 20.0 +8.2
AHID                               LR     LR
      comp=Z,526nm,20.0s,MS5.0
RRI2  Red Ridge         89.92  43 eP      P       02 24 12.2 -0.2
      comp=Z,60nm,0.9s,mb5.9
RRI2                              esP     sP      02 24 24.4 +2.1
MSO   Missoula          89.99  39 eP      P       02 24 11.8 -0.8
      comp=Z,30nm,1.6s,mb5.4
MSO                                LR     LR
      comp=Z,873nm,20.0s,MS5.2
GDL2  Guadalupe Moun    90.01  56 eP      P       02 24 13.4 +0.3
GDL2                              epP     pP      02 24 21.1 +0.5
GDL2                              esP     sP      02 24 24.9 +1.9
TPAW  Teton Pass        90.23  43 eP      P       02 24 14.3 +0.5
      comp=Z,132nm,1.6s,mb6.0
LZH   Lanzhou           90.24 309⇑iP      P       02 24 15.6 +1.6
LZH                                AP     pP      02 24 22.5 +0.9
LZH                                XP     sP      02 24 25.2 +1.2
LZH                                PP     PP      02 27 52.5 +2.1
LZH                                SKS    SKS     02 34 44.0 -5.2
LZH                               eS      S       02 35 06.5 +2.3
LZH                                XS             02 35 17.6
LZH                                AMB    AMB
      comp=Z,80nm,1.5s,mb5.8
LZH                                AMB    AMB
      comp=Z,310nm,6.0s
LZH                                LR     LR
      comp=E,680nm,15.2s
LZH                                LR     LR
      comp=Z,1µm,18.1s,MS5.4
SNOW  Snow King Moun    90.34  43 eP      P       02 24 14.7 +0.4
      comp=Z,50nm,1.0s,mb5.8
SNOW                              esP     sP      02 24 25.3 +1.0
WUWY  Wally Ulrich      90.38  43 eP      P       02 24 14.9 +0.4
WUWY                              esP     sP      02 24 26.7 +2.2
IMW   Indian Meadow     90.42  43 eP      P       02 24 15.2 +0.5
      comp=Z,60nm,1.1s,mb5.8
IMW                               esP     sP      02 24 26.8 +2.1
CHMT  Chamberlain Mo    90.44  39 eP      P       02 24 13.9 -0.7
CHMT                              epP     pP      02 24 21.5 -0.8
CHMT                              esP     sP      02 24 26.1 +1.5
MOOW  Moose Ponds       90.48  43 eP      P       02 24 15.0 +0.1
      comp=Z,51nm,1.5s,mb5.6
QLMT  Earthquake Lak    90.55  42 eP      P       02 24 16.4 +1.1
QLMT                              esP     sP      02 24 27.7 +2.4
PAYG  Puerto Ayora      90.59  91 eP      P       02 24 16.1 -0.1
      comp=Z,78nm,1.5s,mb5.8
CPRX  Cap Rock          90.73  55 eP      P       02 24 15.9 -0.5
YAK   Yakutsk           90.75 339c iP     P       02 24 15.7  0.0
YAK                               e               02 27 54.7
YAK                               ePPP    PPP     02 29 52.4 -1.1
YAK                               eSS     SS      02 41 09.4 -4.7
YAK                                pmax   pmax
      comp=Z,146nm,0.9s,mb6.3
YAK                                pmax   pmax
      comp=N,14nm,1.0s
YAK                                pmax   pmax
      comp=E,29nm,1.1s
YAK                                pmax   pmax
      comp=Z,10.0nm,0.9s,mb5.2
YAK                                pmax   pmax
      comp=N,6.0nm,1.1s
YAK                                pmax   pmax
      comp=E,7.0nm,1.0s
YAK   Yakutsk           90.75 339 eP      P       02 24 15.6 -0.1
      comp=E,272nm,0.8s,mb6.6
YAK                               esP     sP      02 24 27.3 +1.6
YAK                                LR     LR
      comp=Z,579nm,22.0s,MS5.0
YFT   Old Faithful      90.75  42 eP      P       02 24 17.8 +1.7
YFT                               esP     sP      02 24 29.8 +3.7
YMR   Madison River     90.77  42 eP      P       02 24 17.0 +0.8
YMR                               epP     pP      02 24 25.6 +1.8
YMR                               esP     sP      02 24 28.7 +2.5
BW06  Boulder Array     90.80  44  PFAKE          02 24 30.0  +14
BW06                               LR     LR
      comp=Z,608nm,20.0s,MS5.0
PDAR  Pinedale Array    90.80  44  P      P       02 24 16.1 -0.3
      comp=Z,9.8nm,0.8s,mb5.2,baz=207,slow=3.3,SNR=56
PDAR                               pP     pP      02 24 27.6 +3.7
      comp=Z,12nm,1.0s,baz=315,slow=6.3,SNR=12
PDAR                               PP     PP      02 27 50.6 -4.0
      comp=Z,3.0nm,1.1s,baz=256,slow=6.1,SNR=3.8
PDAR                               PKKPbc         02 41 40.6
      comp=Z,0.4nm,0.4s,baz=101,slow=7.6,SNR=4.3
PDAR                               PKPPKP         02 49 51.2
      comp=Z,1.9nm,1.0s,baz=63,slow=3.3,SNR=7.4
PDAR                               LR     LR      02 58 42.7
      comp=Z,521nm,19.0s,MS5.0,baz=328,slow=31
BOZ   Bozeman (W)       90.81  41 eP      P       02 24 16.5 +0.1
BOZ                               e*SP    sP      02 24 27.5 +1.1
BOZ                                pmax   pmax
      comp=Z,83nm,1.5s,mb5.8
BOZ                                MLR    MLR
      comp=Z,1µm,20.0s,MS5.4
BOZ   Bozeman (W)       90.81  41 eP      P       02 24 16.4  0.0
      comp=Z,83nm,1.5s,mb5.8
BOZ                               esP     sP      02 24 27.5 +1.1
BOZ                                LR     LR
      comp=Z,1µm,20.0s,MS5.4
YNR   Norris Junctio    90.97  42 eP      P       02 24 18.1 +1.0
YNR                               esP     sP      02 24 31.4 +4.2
LKWY  Lake              91.08  42  PFAKE          02 24 30.0  +12
LKWY                               LR     LR
      comp=Z,701nm,19.0s,MS5.1
HRY   Holter Researc    91.20  40 eP      P       02 24 18.0 -0.2
HRY                               esP     sP      02 24 30.8 +2.6
SDCO  Great Sand Dun    91.42  50 eP      P       02 24 19.2 -0.2
      comp=Z,15nm,1.2s,mb5.2
SDCO                              esP     sP      02 24 30.5 +1.1
SDCO                               LR     LR
      comp=Z,1µm,20.0s,MS5.3
CIT   Chita             91.56 326⇑iP      P       02 24 20.5 +0.9
CIT                               e               02 24 31.7
CIT                                pmax   pmax
      comp=Z,201nm,1.7s,mb6.2
PLCA  Paso Flores       91.62 135 eP      P       02 24 21.0 +0.8
PLCA                              e*SP    sP      02 24 32.5 +2.3
PLCA                               pmax   pmax
      comp=Z,53nm,1.0s
PLCA  Paso Flores       91.62 135  P      P       02 24 20.7 +0.5
      comp=Z,36nm,0.9s,mb5.7,baz=231,slow=4.8,SNR=37
PLCA                               LR     LR      02 55 32.6
      comp=Z,554nm,21.7s,MS5.0,baz=97,slow=29
PLCA  Paso Flores       91.62 135 eP      P       02 24 20.9 +0.7
      comp=Z,53nm,1.0s,mb5.8
PLCA                              esP     sP      02 24 32.5 +2.2
RWWY  Rawlins           91.89  46 eP      P       02 24 21.3 -0.2
      comp=Z,46nm,1.2s,mb5.7
RWWY                              esP     sP      02 24 32.9 +1.4
ISCO  Idaho Springs     92.19  48 eP      P       02 24 22.8 -0.1
ISCO                              e*SP    sP      02 24 34.7 +1.8
ISCO                               pmax   pmax
      comp=Z,29nm,1.5s,mb5.4
ISCO                               MLR    MLR
      comp=Z,563nm,19.0s,MS5.0
ISCO  Idaho Springs     92.19  48 eP      P       02 24 22.8 -0.1
      comp=Z,29nm,1.5s,mb5.4
ISCO                              epP     pP      02 24 30.0 -0.5
ISCO                              esP     sP      02 24 34.7 +1.8
ISCO                               LR     LR
      comp=Z,563nm,19.0s,MS5.0
PHWY  Pilot Hill        92.92  47 eP      P       02 24 26.2  0.0
JCT   Junction City     92.95  59 eP      P       02 24 26.1 -0.5
JCT                                pmax   pmax
      comp=Z,17nm,1.0s,mb5.4
JCT                                MLR    MLR
      comp=Z,706nm,19.0s,MS5.1
JCT   Junction City     92.95  59 eP      P       02 24 26.1 -0.5
      comp=Z,18nm,1.0s,mb5.4
JCT                                LR     LR
      comp=Z,706nm,19.0s,MS5.1
AMTX  Amarillo          93.12  54 eP      P       02 24 26.9 -0.4
      comp=Z,27nm,1.3s,mb5.5
AMTX                               LR     LR
      comp=Z,1µm,19.0s,MS5.4
ULN   Ulaanbaatar       93.21 320⇑iP      P       02 24 27.7 +0.3
ULN   Ulaanbaatar       93.21 320 eP      P       02 24 27.7 +0.3
      comp=Z,45nm,1.0s,mb5.8
ULN                                LR     LR
      comp=Z,386nm,21.0s,MS4.8
EDM   Edmonton          93.49  34 eP      P       02 24 27.5 -1.0
EDM                               e*SP    sP      02 24 39.1 +0.6
SONM  Songino Array     93.59 320  P      P       02 24 29.0 -0.1
      comp=Z,21nm,1.1s,mb5.5,baz=124,slow=4.5,SNR=58
SONM                               pP     pP      02 24 42.0 +5.3
      comp=Z,7.5nm,0.9s,baz=146,slow=4.5,SNR=5.7
SONM                               PP     PP      02 28 11.5 -5.3
      comp=Z,2.5nm,1.0s,baz=112,slow=6.7,SNR=3.7
SONM                               PKKPbc         02 41 33.3
      comp=Z,2.0nm,0.9s,baz=243,slow=2.8,SNR=8.3
SONM                               PKPPKP         02 49 42.8
      comp=Z,0.4nm,0.5s,baz=90,slow=6.2,SNR=3.8
SONM                               LR     LR      03 03 32.9
      comp=Z,476nm,21.1s,MS4.9,baz=92,slow=34
SONM  Songino Array     93.59 320  P      P       02 24 29.0 -0.1
SONM                               pP     pP      02 24 42.0 +5.3
SONM                               PP     PP      02 28 11.5 -5.3
SONM                               PKKPbc         02 41 33.3
SONM                               P’P’           02 49 42.8
SONM                               LR     LR      03 03 32.9
BOD   Bodaibo           94.37 331 eP      P       02 24 31.6 -0.8
BOD                                pmax   pmax
      comp=Z,21nm,2.1s,mb5.2
GTA   Gaotai            94.50 310  P      P       02 24 34.4 +0.9
GTA                                AP     pP      02 24 41.3 +0.2
GTA                                XP     sP      02 24 44.3 +0.8
GTA                                PP     PP      02 28 26.8 +3.0
GTA                                PPP    PPP     02 30 33.8 +6.0
GTA                                SKS    SKS     02 35 08.0 -5.2
GTA                                S      S       02 35 46.8 +5.4
GTA                                AMB    AMB
      comp=Z,50nm,1.0s,mb5.9
GTA                                AMB    AMB
      comp=Z,270nm,12.0s
GTA                                LR     LR
      comp=N,240nm,24.3s,MS4.9
GTA                                LR     LR
      comp=E,430nm,22.4s,MS4.9
GTA                                LR     LR
      comp=Z,540nm,20.9s,MS5.0
LAO   LASA Array        94.64  42 eP      P       02 24 34.6 +0.6
      comp=Z,58nm,1.1s,mb5.9
LAO                               epP     pP      02 24 40.8 -0.7
LAO                               esP     sP      02 24 45.0 +1.0
LAO                                LR     LR
      comp=Z,825nm,19.0s,MS5.2
INK   Inuvik            94.78  16 eP      P       02 24 33.1 -1.0
INK                               e*SP    sP      02 24 44.0 -0.1
INK                                pmax   pmax
      comp=Z,102nm,1.4s
INK   Inuvik            94.78  16 eP      P       02 24 33.1 -1.1
      comp=Z,102nm,1.4s,mb6.1
INK                               esP     sP      02 24 44.0 -0.1
RSSD  Black Hills       95.01  45  P      P       02 24 35.9 +0.1
RSSD                              e               02 24 47.5
RSSD                               pmax   pmax
      comp=Z,11nm,1.0s,mb5.2
RSSD  Black Hills       95.01  45 eP      P       02 24 35.1 -0.6
      comp=Z,8.1nm,0.9s,mb5.2
RSSD                              esP     sP      02 24 46.6 +0.8
RSSD                               LR     LR
      comp=Z,221nm,19.0s,MS4.7
WMOK  Wichita Mounta    95.29  55 eP      P       02 24 35.5 -1.8
WMOK                              e*PP    pP      02 24 43.0 -1.8
WMOK                               pmax   pmax
      comp=Z,9.0nm,1.5s,mb5.0
WMOK                               MLR    MLR
      comp=Z,1µm,21.0s,MS5.3
WMOK  Wichita Mounta    95.29  55 eP      P       02 24 35.5 -1.8
      comp=Z,8.9nm,1.5s,mb5.0
WMOK                              epP     pP      02 24 43.0 -1.8
WMOK                               LR     LR
      comp=Z,1µm,21.0s,MS5.3
CBKS  Cedar Bluff       96.02  51 eP      P       02 24 40.3 -0.2
CBKS                              e*SP    sP      02 24 51.9 +1.4
CBKS                               pmax   pmax
      comp=Z,51nm,1.3s,mb5.8
CBKS                               MLR    MLR
      comp=Z,485nm,20.0s,MS5.0
CBKS  Cedar Bluff       96.02  51 eP      P       02 24 40.3 -0.2
      comp=Z,50nm,1.3s,mb5.8
CBKS                              epP     pP      02 24 47.4 -0.7
CBKS                              esP     sP      02 24 51.9 +1.4
CBKS                               LR     LR
      comp=Z,485nm,20.0s,MS5.0
ZAK   Zakamensk         96.53 321⇑eP      P       02 24 42.4 -0.1
ZAK                                pmax   pmax
      comp=Z,9.0nm,1.4s,mb5.0
TLY   Talaya            96.84 323 eP      P       02 24 42.6 -1.3
TLY                               ePPP    PPP     02 30 48.9 +1.3
TLY                               ePS     PS      02 37 36.3 +5.6
TLY                                pmax   pmax
      comp=Z,16nm,1.1s,mb5.4
TLY   Talaya            96.84 323 i P     P       02 24 43.5 -0.4
TLY                                LR     LR
      comp=Z,101nm,22.0s,MS4.3
YKA   Yellowknife Ar    97.50  25  P      P       02 24 45.3 -1.3
      comp=Z,14nm,1.1s,mb5.3,baz=246,slow=4.4,SNR=62
YKA                                pP     pP      02 24 57.4 +3.3
      comp=Z,15nm,1.0s,baz=244,slow=4.3,SNR=13
YKA                                PP     PP      02 28 40.3 -6.4
      comp=Z,1.1nm,0.8s,baz=241,slow=7.5,SNR=4.2
YKA                                LR     LR      03 05 20.3
      comp=Z,2µm,18.4s,MS5.6,baz=245,slow=33
YKA   Yellowknife Ar    97.50  25  P      P       02 24 45.3 -1.3
YKA                                pP     pP      02 24 57.4 +3.3
YKA                                PP     PP      02 28 40.4 -6.4
YKA                                LR     LR      03 05 20.3
NATX  Nacogdoches       97.53  59  PFAKE          02 25 00.0  +13
NATX                               LR     LR
      comp=Z,632nm,20.0s,MS5.1
YKW3  Yellowknife Ar    97.53  25 eP      P       02 24 46.1 -0.6
YKW3                              esP     sP      02 24 57.8 +1.1
TIXI  Tiksi             97.71 346⇑iP      P       02 24 46.6 -0.8
TIXI                               MLR    MLR
      comp=Z,493nm,19.0s,MS5.0
TRQA  Tornquist         98.68 136 eP      P       02 24 52.4 -0.1
      comp=Z,8.2nm,1.1s,mb5.2
JTS   JuntasAbangare    99.26  82  P      P       02 24 57.7 +2.0
JTS                                pmax   pmax
      comp=Z,24nm,1.1s
JTS   JuntasAbangare    99.26  82 eP      P       02 24 55.1 -0.6
      comp=Z,24nm,1.1s,mb5.6
MIAR  Mount Ida         99.27  57  PFAKE          02 25 10.0  +15
MIAR                               LR     LR
      comp=Z,61nm,22.0s,MS4.1
PALK  Pallekele        100.08 274  PFAKE          02 25 10.0  +11
PALK                               LR     LR
      comp=Z,209nm,19.0s,MS4.7
FFC   Flin Flon        100.21  35  PFAKE          02 25 10.0  +11
FFC                                LR     LR
      comp=Z,266nm,21.0s,MS4.7
OTAV  Otavalo          102.01  94  PFAKE          02 25 20.0  +12
OTAV                               LR     LR
      comp=Z,626nm,22.0s,MS5.1
ULM   Lac du Bonnet    102.33  41  P      Pdif    02 25 08.8 +0.1
      comp=Z,1.5nm,0.6s,baz=270,slow=1.0,SNR=2.8
ULM                                pP             02 25 19.6
      comp=Z,2.3nm,0.8s,baz=175,slow=5.7,SNR=2.4
DGAR  Diego Garcia     102.64 257  PFAKE          02 25 20.0 +9.1
DGAR                               LR     LR
      comp=Z,561nm,22.0s,MS5.0
PLAL  Pickwick Lake    103.73  58  PFAKE          02 25 30.0  +15
PLAL                               LR     LR
      comp=Z,515nm,20.0s,MS5.1
LRAL  Lakeview Retre   104.09  60  PFAKE          02 25 30.0  +13
LRAL                               LR     LR
      comp=Z,495nm,20.0s,MS5.0
WVT   Waverly          104.22  56  PFAKE          02 25 30.0  +13
WVT                                LR     LR
      comp=Z,1µm,20.0s,MS5.4
EYMN  Ely              104.50  44  PFAKE          02 25 30.0  +12
EYMN                               LR     LR
      comp=Z,878nm,20.0s,MS5.3
LPAZ  La Paz           104.91 114  P      Pdif    02 25 22.2 +1.4
LPAZ                               pmax   pmax
      comp=Z,2.0nm,0.9s
LPAZ                               pmax   pmax
      comp=Z,2.0nm,0.8s
LPAZ  La Paz           104.91 114  Pdiff  Pdif    02 25 22.1 +1.4
      comp=Z,2.1nm,0.8s,baz=217,slow=2.4,SNR=12
LPAZ                               PKKPbc         02 41 02.9
      comp=Z,1.6nm,0.8s,baz=54,slow=5.3,SNR=6.8
LPAZ  La Paz           104.91 114 ePdif   Pdif    02 25 22.0 +1.2
      comp=Z,3.9nm,0.9s
LPAZ                               LR     LR
      comp=Z,482nm,21.0s,MS5.0
HYB   Hyderabad        105.20 283 eP              02 29 42.0
HYB   Hyderabad        105.20 283 i PKP           02 29 46.0
FCC   Fort Churchill   105.54  33 eP      Pdif    02 25 22.0 -0.6
FCC                                pmax   pmax
      comp=Z,13nm,1.4s
FCC   Fort Churchill   105.54  33 ePdif   Pdif    02 25 22.0 -0.6
      comp=Z,13nm,1.4s
WCI   Wyandotte Cave   105.92  55  PFAKE          02 29 50.0
WCI                                LR     LR
      comp=Z,243nm,20.0s,MS4.8
GOGA  Godfrey          107.06  60  PFAKE          02 29 50.0
GOGA                               LR     LR
      comp=Z,175nm,21.0s,MS4.6
DWPF  Disney           107.52  66  PFAKE          02 29 50.0
DWPF                               LR     LR
      comp=Z,74nm,19.0s,MS4.3
CPUP  Villa Florida    108.54 128 ePKPdf          02 29 40.6
CPUP                               LR     LR
      comp=Z,275nm,19.0s,MS4.8
MKAR  Makanchi Array   108.84 314  P      Pdif    02 25 37.9 +0.5
MKAR                                              02 30 09.5
MKAR  Makanchi Array   108.84 314  Pdiff  Pdif    02 25 37.9 +0.5
      comp=Z,1.9nm,0.9s,baz=108,slow=3.8,SNR=13
MKAR                               PKiKP          02 29 42.1
      comp=Z,5.5nm,0.9s,baz=63,slow=2.7,SNR=14
MKAR                               PP     PP      02 30 09.4 -3.4
      comp=Z,1.8nm,0.9s,baz=90,slow=5.8,SNR=2.9
MKAR                               PKKPbc         02 40 50.6
      comp=Z,7.7nm,0.8s,baz=270,slow=4.9,SNR=19
MKAR                               PKPPKP         02 49 14.9
      comp=Z,0.5nm,0.9s,baz=315,slow=1.7,SNR=3.5
ACSO  Alum Creek Sta   108.85  53  PFAKE          02 29 50.0
ACSO                               LR     LR
      comp=Z,1µm,20.0s,MS5.5
NVS   Novosibirsk      109.45 322 eP      Pdif    02 25 39.9  0.0
NVS                                pmax   pmax
      comp=Z,18nm,2.4s
NVS                                pmax   pmax
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	comp=E,8.0nm,1.6s						
NHSC	New Hope	109.68	61	PFAKE		02 30 00.0	
NHSC				LR	LR		
	comp=Z,531nm,21.0s,MS5.1						
BLA	Blacksburg	110.27	57	PFAKE		02 30 00.0	+12
BLA				LR	LR		
	comp=Z,826nm,20.0s,MS5.3						
MCWV	Mont Chateau	111.13	54	PFAKE		02 30 00.0	+10
MCWV				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
SDV	Santo Domingo	112.22	88	PKKPbc		02 40 39.0	
	comp=Z,2.6nm,0.2s,baz=210,slow=2.8,SNR=4.0						
SDV	Santo Domingo	112.22	88	ePKPdf	PKPdf	02 29 48.0	-4.6
SDV				esPKPdf		02 29 59.5	
SDV				LR	LR		
	comp=Z,312nm,20.0s,MS4.9						
SADO	Sadowa	112.35	49	PKKPbc		02 40 38.6	
	comp=Z,0.5nm,0.3s,baz=7.5,slow=19,SNR=3.3						
SAML	Samuel	112.48	109	PFAKE		02 30 00.0	+6.9
SAML				LR	LR		
	comp=Z,374nm,21.0s,MS5.0						
SSPA	Standing Stone	112.75	53	PFAKE		02 30 00.0	+7.0
SSPA				LR	LR		
	comp=Z,219nm,20.0s,MS4.8						
CBN	Corbin	112.82	56	PFAKE		02 30 00.0	+6.8
CBN				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
AAK	Ala-Archa	113.78	309	PFAKE		02 30 00.0	+4.9
AAK				LR	LR		
	comp=Z,107nm,22.0s,MS4.4						
CHKZ	Chkalovo	116.78	321	ePKIKP	PKPdf	02 29 54.8	-5.8
CHKZ				e		02 30 07.7	
BVAR	Borovoye Array	116.94	320	PKKPbc		02 40 23.3	
	comp=Z,1.6nm,0.8s,baz=270,slow=5.9,SNR=9.3						
HRV	Harvard--Oak R	117.65	52	PFAKE		02 30 10.0	+7.5
HRV				LR	LR		
	comp=Z,925nm,22.0s,MS5.4						
WES	Weston	117.82	52	PFAKE		02 30 10.0	+7.2
WES				LR	LR		
	comp=Z,659nm,22.0s,MS5.2						
FRB	Frobisher Bay	117.91	28	PKP	PKPdf	02 29 58.5	-4.0
	comp=Z,3.8nm,0.7s,baz=28,slow=2.7,SNR=5.4						
FRB	Frobisher Bay	117.91	28	PKP	PKPdf	02 29 58.5	-4.0
SJG	San Juan	118.93	80	ePKIKP	PKPdf	02 30 01.2	-4.4
SJG				MLR	MLR		
	comp=Z,183nm,19.0s						
WVL	Waterville	119.09	50	PFAKE		02 30 10.0	+4.7
WVL				LR	LR		
	comp=Z,5µm,21.0s,MS6.1						
PQI	Presque Isle	120.21	47	PFAKE		02 30 20.0	+13
PQI				LR	LR		
	comp=Z,5µm,21.0s						
SCHQ	Schefferville	120.25	38	PKP	PKPdf	02 30 01.9	-5.3
	comp=Z,2.9nm,0.9s,baz=220,slow=6.7,SNR=4.1						
SCHQ				PKKPbc		02 40 11.2	
	comp=Z,6.5nm,0.8s,baz=84,slow=4.1,SNR=12						
EMMW	East Machias	120.66	49	PFAKE		02 30 20.0	+12
EMMW				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
KBS	Kingsbay	120.90	357	PFAKE		02 30 20.0	+12
KBS				LR	LR		
	comp=Z,255nm,21.0s,MS4.8						
BDFB	Brasilia	121.80	124	PKP	PKPdf	02 30 07.0	-4.1
	comp=Z,22nm,0.9s,baz=246,slow=1.2,SNR=27						
BDFB				pPKP		02 30 19.1	
	comp=Z,17nm,0.9s,baz=104,slow=3.0,SNR=8.8						
BDFB				PKKPbc		02 40 05.6	
	comp=Z,3.6nm,0.8s,baz=63,slow=4.7,SNR=4.4						
BAO	Brasilia Array	121.82	124	PKPdf	PKPdf	02 30 04.5	-6.7
BBSR	BB Station	122.49	64	PFAKE		02 30 20.0	+7.9
BBSR				LR	LR		
	comp=Z,323nm,19.0s,MS5.0						
DAG	Danmarks Havn	122.70	5⇓	ePKIKP	PKPdf	02 30 04.1	-7.4
DAG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DAG	Danmarks Havn	122.70	5⇓	iP	PKPdf	02 30 04.1	-7.4
	comp=Z,7.6nm,1.1s						
ARU	Arti	123.26	325	i PKIKP	PKPdf	02 30 08.4	-4.6
ARU				e		02 31 52.4	
ARU				e		02 37 01.6	
ARU				MLR	MLR		
	comp=N,400nm,21.0s,MS5.2						
ARU				MLR	MLR		
	comp=E,500nm,21.0s,MS5.2						
ARU				MLR	MLR		
	comp=Z,800nm,21.0s,MS5.3						
ARU	Arti	123.26	325	ePKPdf	PKPdf	02 30 08.3	-4.7
ARU				LR	LR		
	comp=Z,183nm,20.0s,MS4.7						
SOKR	Solikamsk	123.30	329⇑	iPKIKP	PKPdf	02 30 06.7	-6.4
SOKR				i		02 30 19.4	
SOKR				pmax	pmax		
	comp=Z,40nm,0.9s						
BOSA	Boshof	125.17	209	PKP	PKPdf	02 30 14.1	-3.5
	comp=Z,28nm,1.0s,baz=133,slow=2.1,SNR=18						
BOSA	Boshof	125.17	209	ePKPdf	PKPdf	02 30 14.3	-3.2
BOSA				esPKPdf		02 30 26.2	
BOSA				LR	LR		
	comp=Z,574nm,20.0s,MS5.2						
KEV	Kevo	127.59	348	ePKIKP	PKPdf	02 30 14.3	-6.8
KEV				MLR	MLR		
	comp=Z,470nm,21.0s,MS5.2						
APA	Apatity	127.86	344⇑	iPKIKP	PKPdf	02 30 17.0	-4.7
APA				i		02 30 29.0	
APA				pmax	pmax		
	comp=Z,26nm,1.0s						
ARCES	ARCESS Array B	128.06	348	PKP	PKPdf	02 30 17.2	-4.8
	comp=Z,27nm,0.9s,SNR=31						
ARCES	ARCESS Array B	128.06	348	PKP	PKPdf	02 30 17.2	-4.8
SCO	Scoresbysund	128.20	9	i PKIKP	PKPdf	02 30 18.4	-3.8
SCO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SCO	Scoresbysund	128.20	9	i P	PKPdf	02 30 18.4	-3.8
	comp=Z,3.1nm,0.9s						
KAF	Kangasniemi	134.01	342	epkp		02 30 21.6	
MOS	Moscow	134.19	330	ePKIKP	PKPdf	02 30 30.4	-3.5
MOS				e		02 30 38.9	
MOS				e		02 32 59.2	
LSZ	Lusaka	134.45	222	P	Pdif	02 27 37.0	+6.1
LSZ				e		02 30 30.2	
LSZ	Lusaka	134.45	222	ePdif	Pdif	02 27 32.0	+1.2
LSZ				ePKPdf	PKPdf	02 30 29.7	-5.7
LSZ				LR	LR		
	comp=Z,708nm,20.0s,MS5.4						
FINES	FINESS Array B	134.61	342	PKhKP		02 30 26.4	
	comp=Z,7.5nm,0.9s,baz=124,slow=6.9,SNR=8.0						
FINES				PKP	PKPdf	02 30 30.1	-4.4
	comp=Z,20nm,1.0s,slow=2.8,SNR=22						
OBN	Obninsk	135.05	330⇑	iPKIKP	PKPdf	02 30 32.0	-3.5
OBN				i		02 30 42.7	
OBN				e		02 33 08.3	
OBN				eSS	SS	02 50 55.0	-5.0
OBN				pmax	pmax		
	comp=Z,56nm,1.3s						
OBN	Obninsk	135.05	330	ePKPdf	PKPdf	02 30 31.9	-3.6
OBN				esPKPdf		02 30 43.4	
OBN				LR	LR		
	comp=Z,86nm,19.0s,MS4.5						
CS6B	Jaguaretama	135.16	121	e(P)	PKPdf	02 30 33.1	-3.8
VOR	Voronezh	135.55	325	PKIKP	PKPdf	02 30 33.0	-3.5
VOR				pmax	pmax		
	comp=Z,50nm,1.3s						
TI2	Plekhanov	135.78	310	ePKIKP	PKPdf	02 30 34.0	-3.2
GOF	Gofitskoye	136.00	315	i PKHKP		02 30 19.0	
GOF				pmax	pmax		
	comp=Z,14nm,0.8s						
ZEI	Tsey	136.12	311	ePKIKP	PKPdf	02 30 27.9	-10
GNI	Garni	136.17	307	i PKIKP	PKPdf	02 30 33.8	-4.2
GNI	Garni	136.17	307	PKP	PKPdf	02 30 32.9	-5.1
	comp=Z,3.8nm,0.4s,baz=58,slow=11,SNR=4.0						
GNI	Garni	136.17	307	ePKPdf	PKPdf	02 30 32.6	-5.3
GNI				LR	LR		
	comp=Z,277nm,20.0s,MS5.0						
ONI	Oni	136.49	311	P	PKPdf	02 30 33.1	-5.4
KIV	Kislovodsk	136.60	313	i PKIKP	PKPdf	02 30 34.9	-3.7
KIV	Kislovodsk	136.60	313	i PKP	PKPdf	02 30 34.0	-4.6
KIV				LR	LR		
	comp=Z,136nm,20.0s,MS4.7						
TSUM	Tsumeb	136.75	206	ePKPpre		02 30 28.7	
TSUM				ePKPdf	PKPdf	02 30 35.8	-3.7
TSUM				esPKPdf		02 30 47.5	
TSUM				LR	LR		
	comp=Z,903nm,20.0s,MS5.5						
KMBO	Kilima Mbogo	136.81	245	PKhKP		02 30 24.7	
	comp=Z,2.8nm,0.9s,baz=209,slow=23,SNR=4.5						
KMBO				PKP	PKPdf	02 30 36.6	-3.2
	comp=Z,13nm,1.0s,baz=10,slow=1.0,SNR=10						
KMBO	Kilima Mbogo	136.81	245	PKP		02 30 24.7	
KMBO				PKP	PKPdf	02 30 36.6	-3.2
RCBR	Riachuelo	137.16	124	PFAKE		02 30 50.0	+10
RCBR				LR	LR		
	comp=Z,551nm,21.0s,MS5.3						
TATS	Tathlith	138.11	277	P		02 30 29.0	
NB2	NORSAR Subarra	138.27	351	PKPdf		02 30 27.9	
	comp=Z,11nm,0.9s,baz=31,slow=1.9						
NB2	NORSAR Subarra	138.27	351	PKPd		02 30 27.9	
	baz=31,slow=1.9						
NOA	NORSAR Array B	138.27	351	PKhKP		02 30 28.1	
	comp=Z,12nm,0.9s,baz=34,slow=2.1,SNR=41						
SOC	Sochi	138.75	314	i PKIKP	PKPdf	02 30 39.2	-3.4
SOC				eSSS	SSS	02 56 53.2	-2.4
SOC				pmax	pmax		
	comp=Z,15nm,0.9s						
SOC				pmax	pmax		
	comp=N,4.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,4.0nm,0.5s						
SOC				MLR	MLR		
	comp=N,159nm,24.0s,MS5.0						
SOC				MLR	MLR		
	comp=E,314nm,24.0s,MS5.0						
SOC				MLR	MLR		
	comp=Z,397nm,24.0s,MS5.1						
MNK	Minsk	139.28	334	ePKIKP	PKPdf	02 30 38.0	-5.3
ANN	Anapa	139.79	317	i PKHKP		02 30 35.6	
ANN				e		02 33 35.1	
ANN				pmax	pmax		
	comp=Z,143nm,8.9s						
KONO	Kongsberg	139.84	352	PFAKE		02 30 50.0	+5.9
KONO				LR	LR		
	comp=Z,345nm,20.0s,MS5.1						
BLJS	Baljurashi	139.91	277	P		02 30 36.9	
AKASG	Malin Array Be	141.27	329	PKhKP		02 30 34.7	
	comp=Z,11nm,1.0s,baz=39,slow=3.7,SNR=25						
AKASG				PP	PP	02 33 43.5	-5.1
	comp=Z,1.8nm,0.7s,baz=40,slow=6.6,SNR=6.4						
AKASG	Malin Array Be	141.27	329	PKP		02 30 34.7	
AKASG				PP	PP	02 33 43.5	-5.1
MALT	Malatya	141.38	307	ePKIKP	PKPdf	02 30 40.7	-6.8
SUW	Suwalki	141.46	337	ePKP	PKPdf	02 30 38.8	-8.4
SIM	Simferopol’	141.82	318	i PKHKP		02 30 37.5	
SIM				e		02 33 50.0	
SIM				pmax	pmax		
	comp=Z,90nm,11.6s						
MBAR	Mbarara	142.54	240	ePKHKP		02 30 41.0	
MBAR				MLR	MLR		
	comp=Z,138nm,19.0s,MS4.7						
GAZ	Gaziantep	142.62	305	eP	PKPdf	02 30 41.6	-8.1
MUD	Monsted U’grnd	142.98	350⇑	iPKHKP		02 30 42.2	
MUD				e		02 33 55.4	
MUD				pmax	pmax		
	comp=Z,65nm,1.1s						
MUD				MLR	MLR		
	comp=Z,180nm,22.0s,MS4.8						
MUD	Monsted U’grnd	142.98	350⇑	iP		02 30 42.2	
	comp=Z,65nm,1.1s						
MUD				i		02 30 54.3	
MUD				e		02 33 55.4	
	comp=Z,170nm,22.0s						
BSD	Bornholm Skovb	143.08	345⇓	iPKHKP		02 30 42.6	
BSD				pmax	pmax		
	comp=Z,70nm,0.9s						
BSD	Bornholm Skovb	143.08	345⇓	iP	PKPbc	02 30 42.6	-0.8
	comp=Z,70nm,0.9s						
BSD				e		02 30 56.2	
COP	Copenhagen	143.12	347⇓	iPKIKP	PKPbc	02 30 42.9	-0.6
COP				i	PP	02 33 56.6	-3.0
COP				pmax	pmax		
	comp=Z,66nm,1.0s						
COP				MLR	MLR		
	comp=Z,300nm,22.0s,MS5.0						
COP	Copenhagen	143.12	347⇓	iP	PKPbc	02 30 42.9	-0.6
	comp=Z,66nm,1.0s						
COP				i	PP	02 33 56.6	-3.0
COP				i S	tx	02 41 28.3	
	comp=Z,300nm,22.0s						
BNN	Bunyan	143.14	308	eP	PKPbc	02 30 44.1	+0.1
CORM	Corum	143.54	311	P	PKPbc	02 30 45.4	+0.2
YNBS	Yanbu‘ al Bahr	143.61	284	P	PKPbc	02 30 46.7	+0.7
TOS	Tosya	143.63	313	eP	PKPbc	02 30 45.3	-0.2
WAR	Warsaw	143.65	337	ePKP	PKPdf	02 30 45.5	-5.4
HTY	Hatay	143.74	304	eP	PKPbc	02 30 40.4	-5.6
CEYT	Ceyhan	143.79	306	eP	PKPbc	02 30 46.5	+0.4
KIS	Kishinev	143.81	325α	iPKHKP		02 30 42.0	
KIS				e		02 34 06.0	
KIS				pmax	pmax		
	comp=Z,400nm,1.8s						
KIS				pmax	pmax		
	comp=Z,500nm,2.0s						
AVNT	Avonos	143.89	309	i P	PKPbc	02 30 59.2	+13
RGN	Rugen	143.98	346	ePKPdf	PKPdf	02 30 45.8	-5.6
GKP	Gorka Klasztor	144.07	341	ePKP	PKPdf	02 30 46.5	-5.1
GKP				ePP	PP	02 34 03.0	-2.3
CANT	Cankiri	144.08	312	eP	PKPbc	02 30 47.7	+0.8
UMJS	Umm Lajj	144.24	285	P	PKPbc	02 30 48.5	+0.7
LVV	L’vov	144.29	332	ePKIKP	PKPdf	02 30 46.8	-5.3
LVV				e		02 30 57.6	
LVV				e		02 34 03.4	
LVV				e		02 37 45.8	
LVV				MLR	MLR		
	comp=Z,230nm,23.0s,MS4.9						
LVV				MLR	MLR		
	comp=N,630nm,24.0s,MS5.3						
LVV				MLR	MLR		
	comp=E,220nm,24.0s,MS5.3						
IAS	Iasi	144.36	326⇑	iP	PKPbc	02 30 47.3	-0.1
SAFT	Safranbolu	144.46	314	P	PKPbc	02 30 48.2	+0.3
KAMT	Kaman	144.50	310	P	PKPbc	02 30 47.9	-0.2
GMK	Mull of Kintyr	144.75	4⇑	iP	PKPbc	02 30 47.7	-0.5
TBKS	Tabuk	144.80	291	P	PKPbc	02 30 49.9	+0.7
ESK	Eskdalemuir	144.90	2	ePKPdf	PKPdf	02 30 48.2	-4.9
ESK				esPKPdf		02 30 59.5	
ESK	Eskdalemuir	144.90	2⇑	iP	PKPbc	02 30 47.5	-1.2
ESK				AMb	AMB	02 30 49.5	
	comp=Z,220nm,2.0s						
ANTO	Ankara	144.96	312	P	PKPbc	02 30 48.7	-0.6
ANTO	Ankara	144.96	312	P	PKPbc	02 30 50.2	+0.8
LOD	Lodumlu	144.97	312	P	PKPbc	02 30 50.0	+0.6
GCL	Cushendall	144.97	5⇑	eP	PKPbc	02 30 47.9	-1.0
KWP	Kalwaria	145.01	333	ePKP	PKPdf	02 30 49.7	-3.7
KWP				ePP	PP	02 34 09.2	-1.9
BWH	Wardlaw	145.03	2⇑	iP	PKPbc	02 30 48.6	-0.4
ECK	Cauldkaine Hil	145.04	2⇑	iP	PKPbc	02 30 48.5	-0.5
ECK				AMb	AMB	02 30 51.6	
	comp=Z,274nm,1.4s						
BBH	Bruntsheil	145.09	2⇑	iP	PKPbc	02 30 48.9	-0.3
BHH	Howats Hill	145.13	2⇑	eP	PKPbc	02 30 49.0	-0.3
MEST	Erdemli	145.14	306	i P	PKPbc	02 30 59.6	+10
BSEG	Bad Segeberg	145.19	348	ePKIKP	PKPdf	02 31 02.1	+8.5
BCC1	Chapelcross	145.20	2⇑	eP	PKPbc	02 30 49.2	-0.3
CFR	Carcaliu	145.28	323⇑	iP	PKPbc	02 30 50.5	+0.5
GAL1	Galloway	145.28	4⇑	eP	PKPbc	02 30 49.0	-0.6
BURAR	Bucovina Array	145.29	328⇑	iP	PKPbc	02 30 50.9	+1.0
BURAR	Bucovina Array	145.29	328⇑	iP	PKPbc	02 30 50.9	+1.0
GCD	Castle Douglas	145.33	3⇑	eP	PKPbc	02 30 49.4	-0.4
JMQS	Jabal Moqyreh	145.33	292	P	PKPbc	02 30 51.6	+1.0
BTA	Talkin	145.33	2⇑	iP	PKPbc	02 30 50.0	+0.2
BDL	Dobcross Hall	145.43	2⇑	iP	PKPbc	02 30 50.2	+0.2
BBO1	Bothel	145.48	2⇑	iP	PKPbc	02 30 50.1	-0.1
LCP	Cassop	145.52	0⇑	iP	PKPbc	02 30 50.5	+0.3
IKL	Isikli	145.60	305	P	PKPbc	02 30 50.9	-0.1
VRI	Vrincioaia	145.65	325⇑	iP	PKPbc	02 30 51.6	+0.7
BRD	Bordesti	145.68	324⇓	iP	PKPbc	02 30 53.2	+2.2
HARR	Harsova	145.69	322	PKP2	PKPab	02 30 52.7	-0.3
HARR	Harsova	145.69	322⇑	iP	PKPbc	02 30 52.1	+1.1
HARR	Harsova	145.69	322⇑	iP	PKPbc	02 30 52.1	+1.1
PHNC	Paralimni	145.70	303	P	PKPbc	02 30 52.2	+0.8
KOLS	Kolonicke sedl	145.72	332	i PKP	PKPdf	02 30 51.9	-2.7
OJC	Ojcow	145.74	336	i PKP2	PKPab	02 30 51.8	-1.2
OJC				e		02 34 13.0	
OJC	Ojcow	145.74	336⇑	iPKPb		02 30 51.8	
OJC				ePP	PP	02 34 13.0	-2.4
RUE	Ruedersdorf	145.75	344	ePKPdf	PKPdf	02 30 51.7	-2.9
MDU	Mudurnu	145.80	313	P	PKPbc	02 30 51.9	+0.5
GMM	Mts of Mourne	145.82	5⇑	eP	PKPbc	02 30 51.1	0.0
LWH	Whinny Nab	145.92	359⇑	iP	PKPbc	02 30 52.0	+0.8
AYUS	‘Aynunah	145.93	291	P	PKPbc	02 30 53.3	+1.2
JMOS	Jabal al Moall	145.96	292	P	PKPbc	02 30 53.4	+1.2
ALWS	Ilw as Safayha	145.98	293	P	PKPbc	02 30 53.4	+1.1
WIM	Isle of Man	146.00	4⇑	iP	PKPbc	02 30 51.9	+0.4
WIM				AMb	AMB	02 30 56.1	
	comp=Z,355nm,1.3s						
KIZT	Kizilcal	146.00	310	eP	PKPbc	02 30 52.0	0.0
KONT	Konya--Tatoy	146.02	309	eP	PKPbc	02 30 45.9	-6.1
EIL	Elat	146.04	293	ePKPdf	PKPdf	02 30 53.3	-2.5
BDAS	Al Bad‘	146.05	291	P	PKPbc	02 30 53.7	+1.3
PSN	Preselentsi	146.12	320	eP	PKPbc	02 30 54.0	+1.9
HAQS	Haql	146.13	292	P	PKPbc	02 30 53.8	+1.2
NIE	Niedzica	146.17	335	ePKP	PKPdf	02 30 52.4	-3.0
ISR	Istrita	146.22	324	PKP2	PKPab	02 30 53.7	-1.3
TAYS	Tayyib Ism	146.24	291	P	PKPbc	02 30 54.3	+1.5
CSS	Prodhromos	146.26	303	⇑P	PKPbc	02 30 53.0	+0.3
	comp=Z,2.0nm,0.8s						
CSS	Prodhromos	146.26	303⇑	eP	PKPbc	02 30 53.0	+0.3
HDMB	Hadim	146.28	307	eP	PKPbc	02 30 52.8	+0.1
MAMC	Mammari	146.29	304	⇑P	PKPbc	02 30 54.0	+1.2
HPK	Haverah Park	146.30	0⇑	iP	PKPbc	02 30 52.9	+0.7
MLR	Muntele Rosu	146.31	325⇑	iP	PKPbc	02 30 53.3	+0.8
RAC	Raciborz	146.45	337	ePKPdf	PKPdf	02 30 53.2	-2.6
KSP	Ksiaz	146.46	340	ePKIKP	PKPdf	02 30 51.9	-3.9
KSP				i		02 30 54.2	
KSP				e		02 31 04.3	
KSP				e		02 34 16.5	
KSP				eSS	SS	02 53 15.0	+2.4
KSP	Ksiaz	146.46	340	ePKP	PKPdf	02 30 52.5	-3.4
ESKT	Eskisehir	146.47	312	eP	PKPbc	02 30 52.2	-0.8
GPA	Golpazari	146.50	314	eP	PKPbc	02 30 53.3	+0.2
LEF	Lefka	146.56	304	eP	PKPbc	02 30 54.2	+0.8
DCN	Croghan	146.58	7⇑	iP	PKPbc	02 30 52.4	-0.4
DCN	Croghan	146.58	7⇑	iP	PKPbc	02 31 05.7	+13
SNX	Sinaia	146.63	325⇓	iP	PKPbc	02 30 55.0	+1.8
OKC	Ostrava-Krasne	146.67	337⇑	ePKPB	PKPbc	02 30 54.3	+1.1
OKC				AMS	AMS	03 47 30.0	
	comp=Z,300nm,19.5s						
SZAC	Souni-Zanaja	146.67	303	⇑P	PKPbc	02 30 54.7	+1.0
	comp=Z,1.4nm,0.6s						
HRT	Hereke	146.68	315	eP	PKPbc	02 30 53.9	+0.4
DLF	Lyons Farm	146.70	6⇑	iP	PKPbc	02 30 52.6	-0.5
DLF	Lyons Farm	146.70	6⇑	iP	PKPbc	02 31 06.0	+13
LHO	Holmfirth	146.71	1⇑	iP	PKPbc	02 30 53.9	+0.8
DSB	Dublin	146.77	6	ePKPdf	PKPdf	02 30 54.0	-2.2
WME	Myndd Eilian	146.77	3⇑	eP	PKPbc	02 30 53.7	+0.5
WCB1	Church Bay	146.78	4⇑	eP	PKPbc	02 30 53.9	+0.6
WCB1				AMb	AMB	02 30 55.4	
	comp=Z,226nm,1.2s						
ALFC	Alevga	146.78	304	P	PKPbc	02 30 54.4	+0.5
KECS	Kecovo	146.83	333	i PKP	PKPdf	02 30 55.5	-1.1
UPC	Upice	146.84	340⇑	ePKPB	PKPbc	02 30 55.1	+1.6
PRD	Provadia	146.86	320	eP	PKPbc	02 30 54.0	+0.2
DPC	Dobruska-Polom	146.87	339	ePKPDF	PKPdf	02 30 53.2	-3.4
DPC				⇑ePKPB	PKPbc	02 30 55.4	+1.8
DPC				AMS	AMS	03 43 20.0	
	comp=Z,300nm,17.2s						
WLF1	Llynfaes	146.87	4⇑	iP	PKPbc	02 30 54.3	+0.7
WLF1				AMb	AMB	02 30 56.4	
	comp=Z,262nm,1.1s						
WIT	Witteveen	146.88	351⇑	iPKiKP		02 30 55.8	
	comp=Z,2µm,1.0s						
WIT				ePKP	PKPdf	02 31 07.9	+11
	comp=Z,1µm,1.2s						
YRC	Rhoscolyn	146.90	4⇑	eP	PKPbc	02 30 53.9	+0.3
YRC				AMb	AMB	02 30 57.7	
	comp=Z,232nm,1.3s						
WPM1	Penmaenmawr	146.93	3⇑	eP	PKPbc	02 30 54.5	+0.8
WPM1				AMb	AMB	02 30 57.4	
	comp=Z,470nm,1.2s						
MORC	Moravsky Berou	146.94	338	ePKIKP	PKPdf	02 30 52.9	-3.8
MORC				e		02 30 55.1	
LIKS	Likavka	146.94	335	ePKP	PKPdf	02 30 56.6	-0.1
MTUR	Matau	146.96	325	PKP2	PKPab	02 30 56.1	-1.8
BUC1	Bucharest	146.98	323	PKP2	PKPab	02 30 55.4	-2.6
YLV	Yalova	147.00	315	eP	PKPbc	02 30 51.8	-2.5
KBI1	Birley Grange	147.00	0⇑	iP		02 30 54.7	
CLL	Collm	147.01	344⇑	ePKIKP	PKPdf	02 30 53.0	-3.8
CLL				i		02 30 55.5	
CLL				pmax	pmax		
	comp=Z,472nm,0.9s						
CLL	Collm	147.01	344	ePKP	PKPdf	02 30 53.0	-3.8
CLL				⇑iPKP	PKPdf	02 30 55.5	-1.3
CLL	Collm	147.01	344	ePKIKP	PKPdf	02 30 53.0	-3.8
CLL				i PKP1	PKPdf	02 30 55.5	-1.3
CLL				i PKP2	PKPab	02 30 57.8	-0.1
CLL				i		02 31 07.5	
CLL				ePP	PP	02 34 17.0	-6.1
YLL	Llanberis	147.03	3⇑	eP	PKPdf	02 30 54.8	-2.0
PPCY	Paphos	147.06	303	P	PKPdf	02 30 55.5	-1.9
DRGR		147.09	329⇑	iP	PKPdf	02 30 50.7	-6.3
BRG	Berggiesshubel	147.15	342	ePKIKP	PKPdf	02 30 53.2	-3.8
BRG				i		02 30 56.2	
BRG				i		02 30 58.9	
BRG				e		02 34 18.0	
BRG				i		02 47 01.0	
BRG				pmax	pmax		
	comp=Z,56nm,1.9s						
BRG				MLR	MLR		
	comp=N,270nm,22.0s,MS5.0						
BRG				MLR	MLR		
	comp=E,150nm,22.0s,MS5.0						
BRG				MLR	MLR		
	comp=Z,430nm,22.0s,MS5.2						
BRG	Berggiesshubel	147.15	342	ePKP	PKPdf	02 30 53.2	-3.8
BRG				i		02 30 56.2	
BRG				i		02 30 58.9	
BRG				ePP	PP	02 34 18.0	-5.9
BRG				e		02 41 15.7	
BRG				i		02 47 01.0	
BRG				i SS	SS	02 53 28.0	+7.2
BRG				LR	LR		
	comp=Z,430nm,22.0s,MS5.2						
CLZ	Clausthal	147.15	347	ePKIKP	PKPdf	02 30 53.3	-3.7
CLZ				e		02 31 08.2	
YRE	Yr Eifl	147.18	4⇑	eP	PKPdf	02 30 54.9	-2.1
ALT	Altintas	147.18	312	eP	PKPdf	02 30 54.0	-3.5
KWE	Weaver Farm	147.24	1⇑	iP	PKPdf	02 30 55.6	-1.5
PVCC	Panska Ves	147.27	341⇑	ePKPB	PKPdf	02 30 56.4	-0.8
PVCC				AMS	AMS	03 43 50.0	
	comp=Z,400nm,19.8s						
SBD1	Bryn Du	147.31	2⇑	iP	PKPdf	02 30 55.8	-1.4
CTT	Catalca	147.33	316	eP	PKPdf	02 30 55.7	-1.9
VYHS	Vyhne	147.50	335	i PKP	PKPdf	02 30 57.5	-0.1
PSZ	Piszkesteto	147.52	333	ePKIKP	PKPdf	02 30 53.7	-4.0
PSZ						02 30 57.3	
PSZ	Piszkesteto	147.52	333	ePKPdf	PKPdf	02 30 53.7	-4.0
PSZ				ePKPbc	PKPdf	02 30 57.0	-0.7
PSZ				P		02 30 57.2	
PSZ	Piszkesteto	147.52	333⇑	ePKP/p	PKPdf	02 30 57.0	-0.7
KOLL	Kolacno	147.60	335	i PKP	PKPdf	02 30 57.4	-0.4
VRAC	Vranov	147.67	338	PKP2	PKPab	02 30 57.7	-2.8
WTSB	Winterswijk	147.69	351	ePKP	PKPdf	02 30 54.1	-3.7
	comp=Z,35nm,1.7s						
WTSB				⇑iPKiKP		02 30 57.1	
	comp=Z,372nm,0.8s						
WTSB				ePKP	PKPdf	02 31 07.9	+10
	comp=Z,151nm,1.2s						
SZH	Strazhica	147.69	321	eP	PKPdf	02 30 57.0	-1.1
HLM1	Long Mynd	147.71	2⇑	iP	PKPdf	02 30 56.7	-1.1
HLM1				AMb	AMB	02 31 01.2	
	comp=Z,256nm,1.5s						
PRA	Prague	147.72	341	⇑PKPB	PKPdf	02 30 58.0	+0.1
PRU	Pruhonice	147.75	341	ePKPDF	PKPdf	02 30 54.2	-3.8
PRU				⇑ePKPB	PKPdf	02 30 57.4	-0.6
PRU				ePKPAB	PKPab	02 31 01.2	+0.3
PRU				AMS	AMS	03 34 30.0	
	comp=Z,400nm,26.2s						
JMB	Yambol	147.77	320	eP	PKPdf	02 30 57.0	-1.3
SSP1	Stoney Pound	147.81	2⇑	iP	PKPdf	02 30 57.2	-0.8
MOX	Moxa	147.98	345	ePKIKP	PKPdf	02 30 54.2	-4.1
MOX				e		02 30 58.4	
MOX				e		02 31 10.1	
MOX				pmax	pmax		
	comp=Z,457nm,1.8s						
MOX				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.6						
MOX	Moxa	147.98	345	i P	PKPdf	02 30 54.2	-4.1
MOX				PP2		02 30 58.0	
MOX				pPKP		02 31 10.0	
MOX				L		02 48 11.0	
SMOL	Smolenice	148.03	336	i PKP	PKPdf	02 30 59.1	+0.6
BNT	Bandirma	148.06	315	eP	PKPdf	02 30 57.6	-1.2
PVL	Pavlikeni	148.07	322	eP	PKPdf	02 30 59.0	+0.3

HTR	**Trewern Hill**	**148.14**	**2**	⇑*i*P	PKPdf	02 30 57.6	-0.9
HTR				AMb	AMB	02 31 02.9	
	comp=Z,178nm,1.6s						
NKC	**Novy Kostel**	**148.14**	**343**	⇑*e*PKPB	PKPdf	02 30 58.6	0.0
NKC				*e*PKPAB	PKPab	02 31 01.8	-0.6
NKC				AMS	AMS	03 40 40.0	
	comp=Z,300nm,19.5s						
HPE	**Pembroke**	**148.20**	**4**	⇑*i*P	PKPdf	02 30 57.6	-1.0
HAE	**Alders End**	**148.20**	**2**	⇑*i*P	PKPdf	02 30 58.0	-0.6
HAE				AMb	AMB	02 31 03.3	
	comp=Z,419nm,1.5s						
MCH1	**Michaelchurch**	**148.23**	**2**	⇑*e*P	PKPdf	02 30 57.2	-1.5
SRO	**Srobarova**	**148.25**	**335**	*i* PKP	PKPdf	02 30 59.4	+0.5
ELL	**Elmali**	**148.28**	**308**	*e*P	PKPdf	02 30 56.1	-3.2
SRO1	**Iza**	**148.33**	**335**	*i* PKP	PKPdf	02 30 59.5	+0.5
ZST	**Bratislava**	**148.41**	**336**	*i* PKP	PKPdf	02 31 00.2	+1.1
HSA	**Swansea**	**148.43**	**4**	⇑*i*P	PKPdf	02 30 58.4	-0.6
BALB	**Balikesir**	**148.45**	**314**	*e*P	PKPdf	02 30 58.9	-0.5
BZS	**Buzias**	**148.46**	**329**	P	PKPdf	02 30 55.5	-3.8
BZS				⇑*i*P		02 30 58.9	
BZS	**Buzias**	**148.46**	**329**	⇑*i*P	PKPdf	02 30 58.9	-0.4
DENT	**Denizli**	**148.51**	**310**	*e*P	PKPdf	02 31 00.1	+0.5
SKP1	**Kophill**	**148.54**	**360**	⇑*i*P	PKPdf	02 30 58.5	-0.7
HGH	**Gray Hill**	**148.60**	**2**	⇑*e*P	PKPdf	02 30 58.5	-0.8
HGH				AMb	AMB	02 31 04.0	
	comp=Z,231nm,1.1s						
VKA	**Vienna**	**148.64**	**337**	*e*PKP	PKPdf	02 30 56.0	-3.5
VKA				*i*		02 31 00.2	
DIM	**Dimitrovgrad**	**148.65**	**320**	*e*P	PKPdf	02 30 58.0	-1.7
SWN1	**Swindon**	**148.74**	**1**	⇑*i*P	PKPdf	02 30 59.6	+0.1
KSL	**Kastellorizon**	**148.75**	**307**	*e*P	PKPdf	02 31 00.0	0.0
KHC	**Kasperske Hory**	**148.81**	**341**	*e*PKPDF	PKPdf	02 30 56.1	-3.6
KHC				⇑*e*PKPB	PKPdf	02 31 00.2	+0.5
KHC				*e*PKPAB	PKPab	02 31 04.7	-0.5
KHC				AMS	AMS	03 40 30.0	
	comp=Z,400nm,20.1s						
FETY	**Fethiye**	**148.93**	**308**	*e*P	PKPdf	02 30 55.6	-4.7
KDZ	**Kurdzhali**	**148.95**	**319**	*e*P	PKPdf	02 30 56.0	-4.2
GRA1	**Grafenberg Arr**	**148.96**	**344**	*e*PKPdf	PKPdf	02 30 56.5	-3.4
GRA1				*e*PKPbc	PKPdf	02 31 01.1	+1.2
GRA1				*e*PKPab	PKPab	02 31 06.3	+0.6
GRA1				*e*pPKPbc		02 31 12.8	
GRA1				*e*pPKPab		02 31 18.2	
GRA1				LR	LR		
	comp=Z,300nm,20.3s,MS5.1						
GRF	**Grafenberg Arr**	**148.96**	**344**	*e*PKIKP	PKPdf	02 30 56.5	-3.4
GRF				*e*		02 31 01.1	
GRF				*e*		02 31 06.3	
GRF				*e*		02 31 12.8	
GRF				MLR	MLR		
	comp=Z,300nm,20.3s,MS5.1						
HGN	**Heimansgroeve**	**148.99**	**351**	*e*PKP	PKPdf	02 30 55.9	-4.1
	comp=Z,32nm,1.8s						
HGN				*e*PKiKP		02 31 00.5	
	comp=Z,141nm,1.6s						
HGN				*e*PKP	PKPdf	02 31 04.8	+4.9
	comp=Z,202nm,1.0s						
HGN				*e*PKP	PKPdf	02 31 16.8	+17
	comp=Z,173nm,1.3s						
ALN	**Alexandroupoli**	**148.99**	**318**	*e*P	PKPdf	02 30 59.2	-1.0
GEC2	**GERESS Array S**	**149.02**	**341**	*e*PKPdf	PKPdf	02 30 55.6	-4.5
GEC2				*e*PKPbc	PKPdf	02 31 00.9	+0.8
GEC2				*e*PKPab	PKPab	02 31 06.5	+0.5
GEC2				*e*pPKPbc		02 31 13.1	
GERES	**GERESS Array B**	**149.02**	**341**	PKP	PKPdf	02 30 54.9	-5.2
	comp=Z,49nm,1.0s,baz=90,slow=1.3,SNR=25						
GERES				PKPbc	PKPdf	02 31 00.6	+0.5
	comp=Z,73nm,0.9s,baz=45,slow=1.4,SNR=211						
GERES				pPKPbc		02 31 12.6	
	comp=Z,35nm,0.9s,slow=2.7,SNR=9.3						
SOP	**Sopron**	**149.04**	**336**	⇑*i*pPKP/F		02 31 01.1	
TNS	**Taunus Mts**	**149.08**	**348**	*e*PKPdf	PKPdf	02 30 56.3	-3.8
TNS				*e*PKPbc	PKPdf	02 31 01.1	+1.0
TNS				*e*PKPab	PKPab	02 31 06.1	-0.1
TNS				*e*pPKPbc		02 31 13.5	
TNS				*e*pPKPab		02 31 17.4	
SWK	**Warminster**	**149.10**	**1**	⇑*e*P	PKPdf	02 30 60.0	-0.1
HEX	**Exmoor**	**149.12**	**3**	⇑*i*P	PKPdf	02 31 00.4	+0.2
PGB	**Panagyurishte**	**149.16**	**322**	*e*P	PKPdf	02 30 56.0	-4.5
RDO	**Rodhopi**	**149.17**	**319**	*e*P	PKPdf	02 31 01.5	+0.9
RZN	**Rozhen**	**149.36**	**320**	*e*P	PKPdf	02 30 56.0	-4.8
IZM	**Izmir**	**149.47**	**313**	*e*P	PKPdf	02 31 00.5	-0.6
BOLS	**Boljevac**	**149.54**	**326**	⇓*i*PKP	PKPdf	02 30 57.8	-3.3
ZAPS	**Zavoj/Pirot**	**149.55**	**324**	⇑*i*PKP	PKPdf	02 30 56.5	-4.6
ABH	**Alteburg**	**149.58**	**349**	PKP	PKPdf	02 30 58.7	-2.2
ABH	**Alteburg**	**149.58**	**349**	⇑*e*P	PKPdf	02 31 02.3	+1.4
TOD	**Tromm**	**149.60**	**347**	PKHKP		02 30 58.3	
TOD	**Tromm**	**149.60**	**347**	⇑*e*P	PKPdf	02 31 02.2	+1.2
BEO	**Belgrade**	**149.60**	**329**	⇓*i*PKP	PKPdf	02 31 01.9	+0.7
MLSB	**Milas**	**149.61**	**310**	*e*P	PKPdf	02 31 02.5	+1.1
SIND	**Sindeldorf**	**149.66**	**346**	⇑*e*P	PKPdf	02 31 02.1	+1.0
VTS	**Vitosha**	**149.68**	**323**	*e*P	PKPdf	02 30 57.0	-4.3
VTS	**Vitosha**	**149.68**	**323**	P	PKPdf	02 31 03.2	+1.8
MOA	**Molln**	**149.71**	**339**	⇑*i*P	PKPdf	02 30 56.9	-4.3
MOA				*i*		02 31 02.2	
PRK	**Paraskevi**	**149.72**	**315**	*e*P	PKPdf	02 31 02.5	+1.0
CSA1	**St Austell**	**149.76**	**5**	⇑*e*P	PKPdf	02 31 01.6	+0.4
GIVF	**Givet**	**149.78**	**352**	*e*PKIKP	PKPdf	02 30 57.2	-4.0
ARSA	**Arzberg**	**149.79**	**337**	⇑*i*P	PKPdf	02 30 58.1	-3.2
ARSA				*i*		02 31 02.5	
ARG	**Arkhangelos**	**149.81**	**308**	*e*P	PKPdf	02 31 03.7	+2.0
RUP	**Ruppelstein**	**149.84**	**349**	PKHKP		02 30 59.4	
RUP	**Ruppelstein**	**149.84**	**349**	⇑*e*P	PKPdf	02 31 03.1	+1.8
BAIF	**Baives**	**149.90**	**353**	*e*PKIKP	PKPdf	02 30 57.4	-4.0
CCA1	**Carnmenellis**	**149.90**	**5**	⇑*i*P	PKPdf	02 31 02.3	+0.9
CRQ2	**Rosemanowes 2**	**149.93**	**5**	⇑*i*P	PKPdf	02 31 02.4	+0.9
CRQ2				AMb	AMB	02 31 03.9	
	comp=Z,277nm,1.0s						
CGW	**Gweek**	**149.99**	**5**	⇑*i*P	PKPdf	02 31 02.6	+1.1
MMB	**Musomiste**	**150.01**	**321**	*e*P	PKPdf	02 30 58.0	-3.9
CMA1	**Manaccan**	**150.01**	**5**	⇑*i*P	PKPdf	02 31 02.6	+1.0
KTD	**Kalmit**	**150.01**	**348**	PKHKP		02 30 59.2	
KTD	**Kalmit**	**150.01**	**348**	⇑*e*P	PKPdf	02 31 03.3	+1.7
WLF	**Walferdange**	**150.02**	**350**	*e*PKPdf	PKPdf	02 30 58.8	-2.8
WLF				*e*PKPbc	PKPdf	02 31 03.6	+2.0
WLF				*e*PKPab	PKPab	02 31 10.0	-0.1
CGH1	**Goonhilly**	**150.04**	**5**	⇑*e*P	PKPdf	02 31 02.7	+1.1
BODT	**Bodrum**	**150.04**	**310**	*e*P	PKPdf	02 31 02.8	+0.7
SMG	**Samos**	**150.09**	**312**	*e*P	PKPdf	02 31 03.5	+1.4
GRUS	**Gruza**	**150.15**	**327**	⇓*i*PKP	PKPdf	02 30 53.2	-8.8
HDH	**Heidenheim**	**150.24**	**345**	⇑*e*P	PKPdf	02 31 03.4	+1.4
BARS	**Barje**	**150.30**	**325**	⇑*i*PKP	PKPdf	02 31 16.2	+14
STU	**Stuttgart**	**150.30**	**346**	*e*PKIKP	PKPdf	02 30 59.0	-3.1
STU				*e*		02 31 04.2	
FUR	**Furstenfeldbru**	**150.34**	**343**	*e*PKPdf	PKPdf	02 30 59.1	-3.1
FUR				*e*PKPbc	PKPdf	02 31 04.1	+1.9
FUR				*e*PKPab	PKPab	02 31 11.9	+0.4
FUR				*e*pPKPab		02 31 22.9	
DIVS	**Divcibare**	**150.36**	**328**	⇑*i*PKP	PKPdf	02 30 58.4	-3.9
LANF	**Langenberg**	**150.39**	**348**	PKP	PKPdf	02 30 59.1	-3.1
PERS	**Pernice**	**150.46**	**337**	*e*PKPdf	PKPdf	02 30 57.6	-4.8
PERS				*e*PKPbc	PKPdf	02 31 03.7	+1.3
LBG	**Lerchenberg**	**150.49**	**347**	⇑*e*P	PKPdf	02 31 04.3	+1.9
BUCH	**Bad Urach**	**150.56**	**346**	⇑*e*P	PKPdf	02 31 04.4	+1.9
OUR	**Ouranopolis**	**150.60**	**319**	*e*P	PKPdf	02 31 03.8	+1.0
KBA	**Koelnbreinsper**	**150.69**	**340**	⇑*i*P	PKPdf	02 30 58.1	-4.6
KBA				*i*		02 31 04.2	
OBKA	**Obir**	**150.77**	**337**	⇓*i*P	PKPdf	02 30 59.5	-3.4
OBKA				*i*		02 31 04.5	
STR	**Strasbourg**	**150.78**	**348**	PKP	PKPdf	02 31 00.4	-2.4
KARP	**Karpathos**	**150.80**	**308**	*e*P	PKPdf	02 31 05.5	+2.2
BBLS	**Bajina Basta -**	**150.81**	**329**	⇓*i*PKP	PKPdf	02 31 04.7	+1.7
VAY	**Valandovo**	**150.85**	**322**	⇑*i*PKHKP		02 31 04.3	
VAY				*i* PKP2	PKPab	02 31 13.5	-0.4
BFO	**Black Forest**	**150.91**	**347**	*e*PKPdf	PKPdf	02 30 59.0	-4.0
BFO				*e*PKPbc	PKPdf	02 31 05.2	+2.2
BFO				*e*PKPab	PKPab	02 31 13.4	-0.5
BFO				*e*pPKPbc		02 31 17.5	
PLG	**Polygyros**	**150.91**	**319**	*e*P	PKPdf	02 31 04.5	+1.2
SISC	**Sisak**	**150.94**	**334**	*i* P	PKPdf	02 31 05.5	+2.4
WATA	**Walderalm**	**151.01**	**342**	⇓*i*P	PKPdf	02 31 00.8	-2.4
WATA				*i*		02 31 05.3	
SPAK	**Spaichingen**	**151.02**	**346**	PKP	PKPdf	02 31 00.1	-3.1
SPAK	**Spaichingen**	**151.02**	**346**	*e*P	PKPdf	02 31 05.2	+2.0
WLS	**Welschbruch**	**151.02**	**348**	PKP	PKPdf	02 30 59.8	-3.4
CDF	**Champ du Feu**	**151.04**	**348**	*e*PKIKP	PKPdf	02 30 59.0	-4.2
	comp=Z,83nm,1.8s						
WTTA	**Wattenberg**	**151.06**	**342**	⇑*i*P	PKPdf	02 30 59.0	-4.3
WTTA				*i*		02 31 05.8	
SKO	**Skopje**	**151.08**	**324**	*e*PKIKP	PKPdf	02 30 58.8	-4.7
SKO				⇑*i*PKHKP		02 31 05.7	
	comp=Z,0.1nm,1.0s						
SKO				⇓*i*PKP2	PKPab	02 31 15.6	+0.8
UBR	**Uberruh**	**151.10**	**344**	⇑*e*P	PKPdf	02 31 05.4	+2.1
MOTA	**Moosalm**	**151.14**	**343**	⇓*i*P	PKPdf	02 30 59.5	-3.9
MOTA				*i*		02 31 05.5	
LJU	**Ljubljana**	**151.18**	**337**	*e*PKPdf	PKPdf	02 30 59.5	-4.0
LJU				*e*PKPbc	PKPdf	02 31 05.7	+2.2
LJU				*e*		02 31 14.5	
LJU				*e*PKPab	PKPab	02 31 17.9	+2.9
GRG	**Griva**	**151.18**	**321**	*e*P	PKPdf	02 31 05.3	+1.6
PLE	**Pljevlja**	**151.21**	**328**	⇑*i*PKP	PKPdf	02 31 06.3	+2.6
SQTA	**Sankt Quirin**	**151.22**	**342**	⇓*i*P	PKPdf	02 31 00.0	-3.5
SQTA				*i*		02 31 06.0	
SQTA				*i*		02 31 15.3	
LIBD	**Limburg**	**151.23**	**348**	PKIKP	PKPdf	02 31 00.8	-2.7
LIBD	**Limburg**	**151.23**	**348**	*e*P	PKPdf	02 31 06.1	+2.6
ECH	**Echery**	**151.25**	**348**	PKP	PKPdf	02 31 01.0	-2.5
VISS	**Visnje**	**151.26**	**336**	*e*PKPdf	PKPdf	02 30 59.3	-4.3
VISS				*e*PKPbc	PKPdf	02 31 05.9	+2.3
VISS				*e*		02 31 14.9	
IVA	**Berane**	**151.29**	**327**	⇑*i*PKP	PKPdf	02 31 06.1	+2.4
MEZF	**Maizieres J'vi**	**151.32**	**351**	*e*PKIKP	PKPdf	02 30 59.9	-3.7
KIZ	**Kirchzarten**	**151.35**	**347**	⇑*e*P	PKPdf	02 31 05.7	+2.0
BOJS	**Bojanci**	**151.36**	**336**	*e*PKPdf	PKPdf	02 30 59.8	-3.9
BOJS				*e*PKPbc	PKPdf	02 31 06.4	+2.7
BOJS				*e*		02 31 15.6	
BOJS				*e*PKPab	PKPab	02 31 18.7	+2.9
BOJS				*e*		02 31 27.5	
FELD	**Feldberg**	**151.41**	**347**	PKP	PKPdf	02 30 59.6	-4.2
FELD	**Feldberg**	**151.41**	**347**	⇑*e*P	PKPdf	02 31 06.1	+2.3
VOY	**Vojsko**	**151.41**	**338**	*e*PKPdf	PKPdf	02 31 00.6	-3.2
VOY				*e*PKPbc	PKPdf	02 31 05.8	+2.0
PVY	**Plav**	**151.44**	**326**	⇑*i*PKP	PKPdf	02 31 06.2	+2.2
THEF	**They Montfort**	**151.45**	**350**	PKP	PKPdf	02 31 01.0	-2.8
FLN	**La Foliniere**	**151.50**	**359**	*e*PKIKP	PKPdf	02 30 59.6	-4.3
	comp=Z,83nm,1.3s						
FLN				*e*R			
	comp=Z,822nm,20.0s						
DAVA	**Damuels**	**151.52**	**344**	⇑*i*P	PKPdf	02 31 00.0	-4.0
DAVA				*i*		02 31 06.8	
DAVA				*i*		02 31 16.7	
UPM	**Unac-Piva**	**151.55**	**328**	⇑*i*PKP	PKPdf	02 31 06.5	+2.4
HAU	**Haudompre**	**151.60**	**349**	*e*PKIKP	PKPdf	02 30 59.8	-4.2
HAU				*e*R			
	comp=Z,504nm,21.8s						
MOF	**Molkenrain**	**151.60**	**348**	PKP	PKPdf	02 31 00.8	-3.3
XOR	**Xorichti**	**151.66**	**318**	*e*P	PKPdf	02 31 05.9	+1.5
SANT	**Santorini**	**151.68**	**310**	*e*PKPbc	PKPdf	02 31 05.4	+0.8
HINF	**Hinteralfeld**	**151.69**	**349**	*e*PKIKP	PKPdf	02 30 59.9	-4.3
	comp=Z,52nm,1.3s						
NKY	**Niksic**	**151.79**	**328**	⇑*i*PKP	PKPdf	02 31 07.1	+2.6
GRR	**Gorron**	**151.88**	**360**	*e*PKIKP	PKPdf	02 31 00.3	-4.1
ROSF	**Rostrenen**	**151.88**	**3**	*e*PKIKP	PKPdf	02 30 59.9	-4.5
FNA	**Florina**	**151.89**	**322**	*e*P	PKPdf	02 31 07.0	+2.3
BBS	**Basel-Blauen**	**151.90**	**347**	PKIKP	PKPdf	02 30 59.0	-5.5
BBS	**Basel-Blauen**	**151.90**	**347**	*e*P	PKPdf	02 31 07.4	+2.9
TTG	**Podgorica**	**151.93**	**327**	*e*PKP	PKPdf	02 31 07.3	+2.6
BRY	**Bratogost**	**151.95**	**328**	⇑*i*PKP	PKPdf	02 31 07.5	+2.7
PTL	**Penteli**	**151.95**	**315**	*e*P	PKPdf	02 31 07.4	+2.5
KZN	**Kozani**	**151.96**	**321**	*e*P	PKPdf	02 31 07.9	+3.0
MPAR	**Parnis Oros**	**151.98**	**315**	*e*P	PKPdf	02 31 07.0	+2.0
SGMF	**Saint Gilles**	**151.99**	**2**	*e*PKIKP	PKPdf	02 31 00.1	-4.5
	comp=Z,47nm,1.4s						
OHR	**Ohrid**	**152.01**	**323**	*i* PKIKP	PKPdf	02 31 01.2	-3.7
OHR				⇑*i*PKHKP		02 31 07.4	
OHR				⇑*i*PKP2	PKPab	02 31 18.0	-0.8
NPS	**Neapolis**	**152.06**	**308**	*e*P	PKPdf	02 31 08.9	+3.7
ATH	**Athens Observa**	**152.09**	**315**	*e*P	PKPdf	02 31 07.9	+2.8
LOMF	**Lomont**	**152.14**	**348**	PKP	PKPdf	02 31 01.2	-3.7
XRY	**Khrisi**	**152.17**	**307**	*e*P	PKPdf	02 31 08.5	+3.2
BUM	**Brajici-Budva**	**152.21**	**327**	⇑*i*PKP	PKPdf	02 31 07.0	+1.8
ULC	**Ulcinj**	**152.27**	**326**	*e*PKP	PKPdf	02 31 07.8	+2.6
NVLJ	**Novalja**	**152.29**	**335**	*i* P	PKPdf	02 31 07.5	+2.3
QUIF	**Quistinic**	**152.30**	**3**	*e*PKIKP	PKPdf	02 31 00.6	-4.5
	comp=Z,70nm,1.4s						
HCY	**Herceg Novi**	**152.31**	**328**	⇑*i*PKP	PKPdf	02 31 08.1	+2.8
NAIG	**Nisos Aigina**	**152.36**	**315**	*e*P	PKPdf	02 31 07.7	+2.2
MGER	**Gerania Oros**	**152.39**	**315**	*e*P	PKPdf	02 31 07.5	+2.0
AGG	**Agios Georgios**	**152.40**	**318**	*e*P	PKPdf	02 31 07.8	+2.3
MEV	**Metsovon**	**152.61**	**320**	*e*P	PKPdf	02 31 08.7	+2.9
LOR	**Lormes**	**152.69**	**353**	*e*PKIKP	PKPdf	02 31 01.8	-3.8
	comp=Z,81nm,1.6s						
LOR				*e*R			
	comp=Z,1µm,22.2s						
EVR	**Evrytania**	**152.79**	**318**	*e*P	PKPdf	02 31 09.5	+3.4
HYF	**Humbligny**	**152.82**	**354**	*e*PKIKP	PKPdf	02 31 02.4	-3.4
JAN	**Janina**	**152.92**	**321**	*e*P	PKPdf	02 31 10.2	+4.0
SSF	**Saint Saulge**	**152.93**	**353**	*e*PKIKP	PKPdf	02 31 02.0	-4.0
	comp=Z,84nm,1.6s						
CABF	**La Chapelle**	**152.99**	**349**	*e*PKIKP	PKPdf	02 31 02.7	-3.4
	comp=Z,104nm,1.5s						
VAM	**Vamos**	**153.03**	**309**	*e*P	PKPdf	02 31 09.5	+3.0
AVF	**Avril sur Loir**	**153.22**	**353**	*e*PKIKP	PKPdf	02 31 02.1	-4.3
	comp=Z,30nm,1.5s						
SMF	**Signal de Mont**	**153.30**	**352**	*e*PKIKP	PKPdf	02 31 02.4	-4.1
	comp=Z,52nm,1.5s						
IGT	**Igoumenitsa**	**153.31**	**321**	*e*P	PKPdf	02 31 09.6	+2.8
BGF	**Bois d'Agland**	**153.50**	**354**	*e*PKIKP	PKPdf	02 31 03.0	-3.8
	comp=Z,77nm,1.5s						
MFF	**Saint Martin d**	**153.65**	**358**	*e*PKIKP	PKPdf	02 31 03.0	-4.0
	comp=Z,94nm,1.5s						
ITM	**Ithomi**	**153.72**	**315**	*e*P	PKPdf	02 31 12.0	+4.6
TCF	**Toulx Ste Croi**	**153.83**	**355**	*e*PKIKP	PKPdf	02 31 03.4	-3.9
	comp=Z,134nm,1.7s						
LPL	**La Plagne**	**153.92**	**347**	*e*PKIKP	PKPdf	02 31 04.1	-3.3
LPG	**La Plagne**	**153.93**	**347**	*e*PKIKP	PKPdf	02 31 04.2	-3.2
	comp=Z,18nm,1.1s						
AGO	**Saint Agoulin**	**153.97**	**353**	PKP	PKPdf	02 31 05.9	-1.6
PLDF	**La Plantade**	**154.00**	**352**	PKP	PKPdf	02 31 06.6	-0.9
VLS	**Valsamata**	**154.00**	**318**	*e*P	PKPdf	02 31 13.0	+5.2
PYM	**Petit Puy Mans**	**154.28**	**353**	PKP	PKPdf	02 31 06.1	-1.8
BNI	**Bardonecchia**	**154.38**	**347**	*e*PKPdf	PKPdf	02 31 04.6	-3.4
BNI				*e*PKPbc	PKPdf	02 31 13.6	+5.5
BNI				*e*PKPab	PKPab	02 31 28.5	-0.1
ORIF	**Oris-en-Rattie**	**154.66**	**348**	*e*PKIKP	PKPdf	02 31 04.7	-3.7
	comp=Z,28nm,1.2s						
ORIF				*e*R			
	comp=Z,647nm,20.8s						
MBDF	**Montbardon**	**154.67**	**347**	*e*PKIKP	PKPdf	02 31 04.8	-3.6
AQU	**L'Aquila**	**154.72**	**334**	*e*PKPdf	PKPdf	02 31 04.9	-3.7
AQU				*e*PKPbc	PKPdf	02 31 14.3	+5.8
AQU				*e*PKPab	PKPab	02 31 30.2	+0.1
LBL	**Lubilhac**	**154.77**	**353**	PKP	PKPdf	02 31 06.9	-1.6
CII	**Carovilli**	**154.85**	**332**	*e*PKPdf	PKPdf	02 31 05.9	-2.8
CII				*e*PKPbc	PKPdf	02 31 15.0	+6.2
CII				*e*PKPab	PKPab	02 31 30.5	-0.1
RJF	**Les Rejaudoux**	**154.86**	**356**	*e*PKIKP	PKPdf	02 31 04.8	-3.9
	comp=Z,52nm,1.4s						
RJF				*e*R			
	comp=Z,1µm,22.2s						
SURF	**Saint Ours**	**154.89**	**346**	PKP	PKPdf	02 31 05.6	-3.1
VIVF	**Saint-Julien-l**	**154.94**	**350**	*e*PKIKP	PKPdf	02 31 05.2	-3.6
	comp=Z,77nm,1.5s						
SAOF	**Saorge**	**155.19**	**345**	PKP	PKPdf	02 31 06.7	-2.4
CAF	**Calviac**	**155.19**	**355**	*e*PKIKP	PKPdf	02 31 05.5	-3.6
	comp=Z,48nm,1.5s						
AUTN	**L'Aution**	**155.21**	**345**	PKP	PKPdf	02 31 05.7	-3.5
TOUF	**Mont Tournerai**	**155.24**	**345**	PKP	PKPdf	02 31 05.9	-3.3
LFF	**La Frestale**	**155.28**	**357**	*e*PKIKP	PKPdf	02 31 05.3	-3.9
	comp=Z,22nm,1.0s						
SBF	**Sospel**	**155.33**	**345**	*e*PKIKP	PKPdf	02 31 05.1	-4.2
	comp=Z,76nm,1.3s						
MVIF	**Mont Vial**	**155.37**	**345**	PKP	PKPdf	02 31 07.0	-2.4
REVF	**Revere**	**155.46**	**345**	PKP	PKPdf	02 31 07.1	-2.4
STOF	**St-Etienne Org**	**155.54**	**348**	PKP	PKPdf	02 31 06.7	-2.9
CALN	**Calern**	**155.57**	**346**	PKP	PKPdf	02 31 07.4	-2.2
TIP	**Timpagrande**	**155.58**	**325**	*e*PKPdf	PKPdf	02 31 06.0	-3.8
TIP				*e*PKPbc	PKPdf	02 31 16.2	+6.4
TIP				*e*PKPab	PKPab	02 31 33.8	-0.1
SMRF	**Simiane la Rot**	**155.63**	**348**	*e*PKIKP	PKPdf	02 31 06.1	-3.6
	comp=Z,79nm,1.6s						
VILF	**Villemus**	**155.72**	**348**	PKP	PKPdf	02 31 05.7	-4.1
FRF	**La Foret Royal**	**155.80**	**346**	*e*PKIKP	PKPdf	02 31 05.6	-4.3
	comp=Z,115nm,1.8s						
LASF	**Ste Croix**	**155.82**	**351**	*e*PKIKP	PKPdf	02 31 06.5	-3.5
	comp=Z,92nm,1.6s						
PRAF	**Pradon**	**155.87**	**349**	PKP	PKPdf	02 31 08.1	-1.9
TAVF	**Tavernes**	**155.88**	**347**	PKP	PKPdf	02 31 06.7	-3.3
TREF	**Trevaresse**	**156.01**	**348**	PKP	PKPdf	02 31 06.4	-3.8
PUYF	**Puyloubier**	**156.03**	**348**	PKP	PKPdf	02 31 07.8	-2.4
LMR	**La Mourre**	**156.05**	**346**	*e*PKIKP	PKPdf	02 31 06.2	-4.1
	comp=Z,36nm,1.3s						
PGF	**Pioggiola**	**156.12**	**341**	*e*PKIKP	PKPdf	02 31 06.1	-4.3
	comp=Z,94nm,1.6s						
GELF	**Grande-Etoile**	**156.23**	**348**	PKP	PKPdf	02 31 08.3	-2.2
BERF	**Bertagne**	**156.25**	**348**	PKP	PKPdf	02 31 06.4	-4.1
MTLF	**Montolieu**	**156.75**	**354**	*e*PKIKP	PKPdf	02 31 07.3	-3.9
	comp=Z,56nm,1.5s						
SJPF	**Ste Jean**	**157.15**	**0**	*e*PKIKP	PKPdf	02 31 08.2	-3.6
EPF	**Esparros**	**157.20**	**357**	*e*PKIKP	PKPdf	02 31 08.2	-3.7
	comp=Z,63nm,1.4s						
ETSF	**Etsaut**	**157.36**	**359**	*e*PKIKP	PKPdf	02 31 08.7	-3.4
	comp=Z,16nm,0.9s						
PVRL	**Vila Real**	**158.26**	**13**	*e*PKPdf	PKPdf	02 31 10.5	-2.8
PVRL	**Vila Real**	**158.26**	**13**	*e*PKPab	PKPab	02 31 43.5	-1.8
PVIS	**Viseu**	**158.75**	**14**	*e*PKPab	PKPab	02 31 46.8	-0.7
MTE	**Manteigas**	**159.14**	**14**	*e*PKPdf	PKPdf	02 31 11.1	-3.2
MTE	**Manteigas**	**159.14**	**14**	*e*PKPab	PKPab	02 31 47.8	-1.3
MTE	**Manteigas**	**159.14**	**14**	*e*PP	PP	02 35 32.8	+1.8
MTE	**Manteigas**	**159.14**	**14**	*e*LR	LR	03 29 50.6	
EBR	**Ebro Roquetas**	**159.39**	**356**	*i* PKPpB	PKPab	02 31 50.0	-0.2
PTOM	**Tomar**	**159.67**	**16**	*e*PKPdf	PKPdf	02 31 11.5	-3.5
PTOM	**Tomar**	**159.67**	**16**	*e*PKPab	PKPab	02 31 50.1	-1.3
PCBR	**Castelo Branco**	**159.69**	**14**	*e*PKPdf	PKPdf	02 31 11.7	-3.3
PCBR	**Castelo Branco**	**159.69**	**14**	*e*PKPab	PKPab	02 31 50.1	-1.4
PLOU	**Loures**	**160.14**	**19**	*e*PKPab	PKPab	02 31 52.9	-0.6
ESDC	**Sonseca Array**	**160.44**	**6**	PKP	PKPdf	02 31 11.7	-4.1
	comp=Z,1.9nm,0.8s,baz=332,slow=3.0,SNR=9.4						
ESDC				PKPab	PKPab	02 31 52.9	-1.9
	comp=Z,18nm,0.9s,baz=348,slow=4.1,SNR=31						
ESDC				PP	PP	02 35 34.9	-3.1
	comp=Z,4.2nm,1.1s,baz=3.7,slow=5.8,SNR=7.2						
EVO	**Evora**	**160.79**	**17**	*e*PKIKP	PKPdf	02 31 12.7	-3.5
	comp=Z,163nm,1.7s						
EVO				*e*R			
	comp=Z,2µm,22.0s						
PBEJ	**Beja**	**161.31**	**17**	*e*PKPdf	PKPdf	02 31 13.6	-3.1
PBEJ	**Beja**	**161.31**	**17**	*e*PKPab	PKPab	02 31 57.7	-0.9
PTEO	**Sao Teotonio**	**161.50**	**19**	*e*PKPdf	PKPdf	02 31 14.9	-2.0
PTEO	**Sao Teotonio**	**161.50**	**19**	*e*PKPab	PKPab	02 31 58.8	-0.6
PALC	**Alcoutim**	**161.94**	**16**	*e*PKPbc	PKPdf	02 31 14.5	-2.8
PALC	**Alcoutim**	**161.94**	**16**	*e*PKPab	PKPab	02 32 00.8	-0.6
SET	**Setif**	**163.05**	**342**	P	PKPab	02 32 05.0	-1.2
EMHD	**Djebel Mahouad**	**163.65**	**348**	P	PKPab	02 32 11.0	+2.2
ECHA	**Ech Chlef**	**163.95**	**353**	P	PKPab	02 32 12.0	+1.8
EANR	**'Ain N'Sour**	**164.18**	**353**	P	PKPab	02 32 11.0	-0.2
ETRT	**Tiaret**	**164.71**	**352**	P	PKPab	02 32 14.0	+0.6
DBIC	**Dimbokro**	**166.08**	**165**	*e*PKIKP	PKPdf	02 31 17.6	-4.4
DBIC				*e*		02 32 18.4	
DBIC				MLR	MLR		
	comp=Z,682nm,19.0s						
DBIC	**Dimbokro**	**166.08**	**165**	PKP	PKPdf	02 31 18.0	-4.0
	comp=Z,18nm,0.9s,baz=344,slow=2.6,SNR=6.3						
DBIC				PKPab	PKPab	02 32 18.4	-1.6
	comp=Z,46nm,1.1s,baz=175,slow=3.9,SNR=9.2						

JMA 02 02:31:24.5±0.4**, 44.00N**×**147.89E, M3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.68**	**249**	P	Pn	02 31 55.3	-0.1
NEM2				*e*S	Sb	02 32 17.9	+0.2
JRA	**Rausu**	**2.00**	**269**	P	Pn	02 32 00.3	+0.4
JRA				*e*S	Sn	02 32 26.6	+0.6
JNK	**Nakash**	**2.33**	**261**	P	Pn	02 32 04.9	+0.2
JAR	**Ashorobuto**	**3.07**	**258**	P	Pn	02 32 15.9	+0.7
JAR				*e*S	Sn	02 32 53.9	+0.7
JOB	**Onbets**	**3.15**	**251**	P	Pn	02 32 17.0	+0.7
JOB				*e*S	Sn	02 32 55.3	+0.1
JCH	**Churui**	**3.58**	**249**	P	Pn	02 32 22.9	+0.4
JCH				*e*S	Sn	02 33 06.0	-0.1
JNBK	**Urakawa-nobuka**	**4.13**	**247**	P	Pn	02 32 30.8	+0.5

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*NEIC **02** 02:36:26.6, 30.96S×71.68W, $h15^{km}$, ML2.9(GUC), After GUC.*

GUC 02 02:36:26.6±0.6**, 30.96S**×**71.68W, $h15^{km}$**±12^{km}**, MD3.9, ML2.9, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**0.62**	**110**	⇑*i*P	Pb	02 36 38.5	0.0
CMCH				*i* S	Sb	02 36 47.6	+0.8
CMCH				AMP		02 36 47.9	
	comp=N,5µm,0.1s						
ILCH	**Illapel**	**0.80**	**147**	*i* P	Pb	02 36 41.2	-0.5
ILCH				*i* S	Sb	02 36 52.1	+0.1
ILCH				AMP		02 36 54.3	
	comp=N,621nm,0.2s						
TLL	**Tololo Astrono**	**1.10**	**44**	*e*P	Pb	02 36 46.2	-0.5
TLL				*i* S	Sb	02 37 00.9	+0.3
TLL				AMP		02 37 07.5	
	comp=N,442nm,0.4s						
LSCH	**La Serena**	**1.12**	**20**	*e*P	Pb	02 36 46.2	-0.9
LSCH				*i* S	Sb	02 37 01.0	-0.1
LSCH				AMP		02 37 04.5	
	comp=N,217nm,0.3s						
FCH	**Farellones**	**2.64**	**154**	*e*P	Pn	02 37 10.3	+0.9

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*NNC **02** 02:38:36.6±18.0, 42.79N×85.58E, mpv2.6, Error ellipse: s-maj=554.4km s-min=210.8km az=60.0*

BJI 02 02:38:28.7, 42.24N×85.62E, $h10^{km}$, ML3.1, 2C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.19**	**43**	*e*P	Pn	02 39 07.7	+1.9
WMQ				SG	Sg	02 39 36.4	-5.4
WMQ				Smax			
	comp=N,90nm,0.4s						
WMQ				Smax			
	comp=E,170nm,0.4s						
MK31	**Makanchi Array**	**5.14**	**334**	⇑Pn	Pn	02 39 50.7	+3.1
	comp=E,0.4nm,0.3s,baz=153,slow=13,SNR=3.6						
MK31				⇑Lg		02 41 02.2	
	comp=E,9.8nm,0.8s,baz=146,slow=27,SNR=3.5						

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*IDC **02** 02:45:01.2±2.2, 0.13N×97.50E, mb4.0/6, mb1 4.2/7, mb1mx3.9/19, mbtmp4.0/7, ML4.5/1, Error ellipse: s-maj=92.6km s-min=17.9km az=59.0*

*NEIC **02** 02:45:06.0±0.8, 0.24N×97.67E, $h30^{km}$, mb4.5/4, Error ellipse: s-maj=19.3km s-min=9.3km az=64.0*

ISC 02 02:45:04.0±1.0**, 0.3N**±0.1×**97.7E**±0.2**, $h30^{km}$, n13, $\sigma 0^{s}66$**/13**, mb4.3**/10**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.81**	**31**	*e*Pn	**Pn**	**02 46 30.2**	**-0.4**
KULM				*e*		02 46 42.7	
CMAR	**Chiang Mai Arr**	**18.13**	**4**	P	**P**	**02 49 15.3**	**-0.3**
	0.6nm,0.3s,baz=192,slow=12,SNR=7.4						
KKM	**Kota Kinabalu**	**19.38**	**72**	P	**P**	**02 49 30.6**	**+0.1**
WRA	**Warramunga Arr**	**41.15**	**121**	P	**P**	**02 52 47.7**	**+0.2**
	1.6nm,0.6s,mb3.8,baz=303,slow=9.0,SNR=15						
WRAB	**Tennant Creek**	**41.15**	**121**	*e*P	**P**	**02 52 47.0**	**-0.6**
	8.7nm,0.9s,mb4.4						
ASAR	**Alice Springs**	**42.46**	**127**	P	**P**	**02 52 59.3**	**+0.9**
	1.8nm,0.8s,mb3.8,baz=296,slow=8.1,SNR=15						
SONM	**Songino Array**	**47.99**	**8**	P	**P**	**02 53 43.4**	**+1.2**
	3.0nm,0.7s,mb4.4,baz=190,slow=9.3,SNR=13						
ULN	**Ulaanbaatar**	**48.11**	**8**	*e*P	**P**	**02 53 43.5**	**+0.3**
	2.3nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	**48.26**	**346**	P	**P**	**02 53 45.0**	**+0.7**
	2.7nm,0.7s,mb4.4,baz=158,slow=8.1,SNR=20						
PMG	**Port Moresby**	**50.19**	**102**	*e*P	**P**	**02 53 55.4**	**-4.2**
	28nm,1.1s,mb5.2						
STKA	**Stephens Creek**	**52.38**	**132**	P	**P**	**02 54 15.4**	**-0.6**
	0.6nm,0.4s,mb3.9,baz=342,slow=3.2,SNR=3.6						
BVAR	**Borovoye Array**	**57.28**	**341**	P	**P**	**02 54 50.6**	**-0.8**
	1.3nm,0.6s,mb4.1,baz=143,slow=7.4,SNR=9.2						
CHKZ	**Chkalovo**	**57.76**	**341**	*e*P	**P**	**02 54 54.1**	**-0.6**
	3.4nm,0.8s,mb4.4						
CHKZ				*e*pP	pP	02 55 01.2	-2.7

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*IDC **02** 02:50:12.3±2.3, 0.30N×97.73E, mb4.1/5, mb1 4.3/6, mb1mx3.9/19, mbtmp4.1/6, ML4.5/1, Error ellipse: s-maj=89.4km s-min=19.8km az=59.0*

ISC 02 02:50:15.3±2.0**, 0.3N**±0.2×**97.7E**±0.4**, $h33^{km}$, n6, $\sigma 1^{s}11$**/6**, mb4.2**/5**, Northern Sumatera**

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

CMAR	**Chiang Mai Arr**	18.04	4	P	P	02 54 24.6	-0.7
	0.6nm,0.3s,baz=192,slow=11,SNR=9.7						
WRA	**Warramunga Arr**	41.14	121	P	P	02 57 58.0	-0.3
	1.7nm,0.5s,mb4.0,baz=303,slow=9.0,SNR=8.5						
ASAR	**Alice Springs**	42.47	127	P	P	02 58 09.3	+0.1
	1.8nm,0.6s,mb3.9,baz=296,slow=8.0,SNR=17						
SONM	**Songino Array**	47.90	8	P	P	02 58 53.5	+1.2
	2.3nm,0.5s,mb4.4,baz=194,slow=8.2,SNR=13						
MKAR	**Makanchi Array**	48.19	346	P	P	02 58 55.4	+0.8
	2.2nm,0.6s,mb4.4,baz=149,slow=8.4,SNR=13						
BVAR	**Borovoye Array**	57.23	341	P	P	03 00 00.6	-1.1
	1.3nm,0.6s,mb4.1,baz=153,slow=6.6,SNR=8.4						

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*ROM **02** 03:05:50.5±0.5, 39.59N×15.31E, h10^{km}±6^{km}, Md3.7/6,*
Ml3.8/14, Error ellipse: s-maj=2.9km s-min=1.5km az=90.0
*NEIC **02** 03:05:50.5, 39.59N×15.31E, h10^{km}, mb3.2/1,*
ML3.8(ROM), After ROM.
*CSEM **02** 03:05:54.1±0.1, 39.56N×15.34E, h35^{km}, mb3.1/1, Error*
ellipse: s-maj=1.7km s-min=1.2km az=82.0
*IDC **02** 03:05:58.3±2.0, 39.73N×14.41E, h39^{km}±26^{km}, mb3.2/4,*
mb1 3.5/8, mb1mx3.4/26, mbtmp3.5/8, ML3.7/4, Error
ellipse: s-maj=30.0km s-min=14.8km az=85.0
ISC 02 03:05:51.5±0.2**, 39.60N**±0.02×**15.34E**±0.03**, h10**^{km}**, n104,**
σ**1**^{s}**47**/116**, mb3.5**/3**, 4C-5D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGR	**Morigerati**	0.56	17	⇓*i*Pg	Pg	03 06 02.3	-0.5
MGR				Sg	Sg	03 06 11.4	+1.0
SLCN	**Sala Consilina**	0.82	16	Pg	Pg	03 06 07.3	-0.7
SLCN				Sg	Sg	03 06 20.4	+1.4
SGO	**Sicignano**	0.96	358	⇓*e*Pg	Pg	03 06 08.5	-2.2
ORI	**Oriolo Calabro**	0.97	61	Pg	Pg	03 06 11.1	+0.2
	892nm,0.5s						
SLNA	**Salina**	1.11	201	Pg	Pg	03 06 12.1	-1.5
GRI	**Girifalco**	1.14	132	Pg	Pg	03 06 13.8	-0.5
GRI				Sg	Sg	03 06 29.7	+0.1
	2µm,0.5s						
MRLC	**Muro Lucano**	1.16	6	Pg	Pg	03 06 13.8	-0.9
MRLC				Sg	Sg	03 06 30.2	-0.1
TIP	**Timpagrande**	1.18	110	Pg	Pg	03 06 14.6	-0.4
TIP				Sg	Sg	03 06 31.2	+0.5
	879nm,0.6s						
LLI	**Lipari**	1.19	195	Pg	Pg	03 06 14.2	-1.1
	6µm,0.6s						
ISOR	**Termini**	1.25	322	Pg	Pg	03 06 13.8	-2.7
VPL	**Vulcano Piano**	1.25	193	⇓*i*Pg	Pg	03 06 14.8	-1.7
	3µm,0.7s						
CSSN	**Cassano Irpino**	1.28	349	Pg	Pg	03 06 14.6	-2.6
	942nm,0.8s						
SNAL	**S. Angelo Dei**	1.33	356	Pg	Pg	03 06 16.2	-1.9
	2µm,0.8s						
MSRU	**Castanea**	1.34	174	⇓*i*Pg	Pg	03 06 15.8	-2.5
	2µm,0.6s						
SCLL	**Scilla**	1.37	168	Pg	Pg	03 06 16.5	-2.4
	282nm,0.3s						
MSI	**Messina ING**	1.40	173	Pg	Pg	03 06 16.5	-3.0
	940nm,0.4s						
OVO	**Vesuviano**	1.42	330	Pg	Pg	03 06 18.3	-1.6
LTRZ	**Laterza**	1.51	48	Pg	Pg	03 06 19.5	-2.2
	668nm,0.8s						
IPOZ	**Pozzuoli**	1.54	323	Pn	Pn	03 06 21.0	+1.9
FG4	**Candela**	1.54	5	Pg	Pg	03 06 20.1	-2.1
	90nm,0.6s						
MRB1	**Monte Rocchett**	1.55	350	Pn	Pn	03 06 20.1	+0.7
	1µm,0.7s						
SG1	**Sgolgore (BA)**	1.61	39	*e*Pg	Pg	03 06 20.6	-3.0
MTTG	**Motta San Giov**	1.62	170	Pg	Pg	03 06 20.0	-3.8
	531nm,0.5s						
SOI	**Samo**	1.62	160	Pn	Pn	03 06 20.2	-0.2
CDT	**Castel del Mon**	1.64	25	*e*Pg	Pg	03 06 20.8	-3.5
FG5	**Orsara di Pugl**	1.68	358	Pn	Pn	03 06 24.5	+3.3
	308nm,0.6s						
MNO	**Monte Soro**	1.74	197	⇓*i*Pg	Pg	03 06 22.5	-3.7
	409nm,0.3s						
PLLN	**Pollina**	1.86	211	Pn	Pn	03 06 23.5	-0.2
SACR	**S. Croce Del S**	1.86	345	Pn	Pn	03 06 24.4	+0.6
	635nm,1.1s						
VENT	**Ventotene**	1.89	310	Pg	Pn	03 06 22.1	-2.2
	724nm,1.2s						
USI	**Ustica**	1.90	243	⇑*i*Pg	Pn	03 06 22.5	-1.9
	89nm,0.2s						
MSC	**Monte Massico**	1.90	327	Pn	Pn	03 06 26.7	+2.3
GIB	**Gibilmanna**	1.91	213	Pn	Pn	03 06 24.1	-0.3
	752nm,0.8s						
BAI	**Bari**	1.91	37	*e*Pg	Pg	03 06 25.7	-4.0
SGG	**Gregorio Mates**	1.93	338	Pn	Pn	03 06 26.2	+1.4
RFI	**Roccamonfina**	1.99	329	Pn	Pn	03 06 26.4	+0.8
	57nm,0.8s						
PE1	**Pezze di Greco**	2.00	52	*e*Pg	Pg	03 06 27.7	-3.7
VAGA	**Valle Agricola**	2.00	335	Pn	Pn	03 06 29.1	+3.3
BSSO	**Busso**	2.03	344	Pn	Pn	03 06 26.8	+0.6
CIGN	**Sant’Elia a Pi**	2.08	351	Pn	Pn	03 06 28.3	+1.4
RGNG	**Rignano Grg**	2.08	5	Pn	Pn	03 06 27.8	+0.9
MS1	**Monte Sant’Ang**	2.15	12	*e*Pg	Pg	03 06 32.5	-2.0
FGMS	**Monte Sant’Ang**	2.16	12	Pn	Pn	03 06 31.8	+3.8
FG2	**Serracapriola**	2.21	357	Pn	Pn	03 06 32.8	+4.0
VAE	**Valguarnera**	2.24	199	Pn	Pn	03 06 32.3	+3.1
	9.7nm,0.3s,baz=120,slow=3.2,SNR=20						
VAE				Sn	Sn	03 07 02.0	+4.8
	14nm,0.3s,baz=149,slow=12,SNR=8.6						
TRIV	**Trivento**	2.25	345	Pn	Pn	03 06 31.2	+1.9
LCI	**Lecce**	2.25	70	Pn	Pn	03 06 30.1	+0.7
	73nm,0.6s						
CII	**Carovilli**	2.26	340	Pn	Pn	03 06 32.2	+2.7
	104nm,0.6s						
RNI2	**Rionero Sannit**	2.29	337	Pn	Pn	03 06 32.5	+2.6
AGST	**Augusta-Monte**	2.34	182	Pn	Pn	03 06 31.1	+0.5
	180nm,0.2s						
SDI	**San Donato**	2.41	332	Pn	Pn	03 06 31.7	+0.1
	26nm,0.4s						
SSY	**Sortino**	2.45	185	Pn	Pn	03 06 32.8	+0.6
SSY				Sn	Sn	03 07 04.8	+2.3
	716nm,0.3s						
PZI	**Palazzolo**	2.56	187	Pn	Pn	03 06 34.5	+0.8
	70nm,0.1s						
MFNL	**Monte Finestre**	2.62	227	Pn	Pn	03 06 35.4	+0.8
VVLD	**Villa Vallelon**	2.62	331	Pn	Pn	03 06 34.2	-0.4
HAVL	**Avola**	2.64	184	Pn	Pn	03 06 35.1	+0.2
	336nm,0.3s						
ERC	**Erice**	2.66	235	Pn	Pn	03 06 34.5	-0.7
ERC	**Erice**	2.66	235	Pn	Pn	03 06 34.4	-0.8
	133nm,0.7s						
FAVR	**Favara**	2.67	210	Pn	Pn	03 06 39.0	+3.6
HMDC	**Modica**	2.67	190	Pn	Pn	03 06 35.9	+0.5
	265nm,0.5s						
PTQR	**Pietraquaria**	2.83	329	Pn	Pn	03 06 41.3	+3.6
FAGN	**Fagnano**	2.98	334	Pn	Pn	03 06 43.0	+3.2
AQU	**L’Aquila**	3.12	333	*e*Pn	Pn	03 06 41.5	-0.2
AQU	**L’Aquila**	3.12	333	*e*Pn	Pn	03 06 41.5	-0.3
FIAM	**Fiamignano**	3.15	328	Pn	Pn	03 06 44.4	+2.2
TERO	**Teramo**	3.29	337	Pn	Pn	03 06 46.7	+2.5
MNS	**Montasola**	3.44	325	Pn	Pn	03 06 48.8	+2.6
KEK	**Kerkira**	3.44	87	*e*P	Pg	03 06 57.5	-2.7
KEK	**Kerkira**	3.44	87	Pn	Pn	03 06 46.2	-0.1
SRN	**Sarande**	3.60	84	*i* Sn	Sn	03 07 24.9	-6.8
NRCA	**Norcia**	3.64	333	Pn	Pn	03 06 50.3	+1.1
	8.0nm,0.6s						
PTS	**Pantelleria**	3.83	224	Pn	Pn	03 06 52.2	+0.3
	12nm,0.2s						
TREB	**Trebinje**	3.85	35	*e*Pn	Pn	03 06 51.9	-0.3
TREB				Sn	Sn	03 07 37.7	-0.4
IGT	**Igoumenitsa**	3.86	89	*e*P	Pn	03 06 52.6	+0.3
LKD	**Levkas**	4.22	100	*e*P	Pn	03 06 59.4	+1.9
JAN	**Janina**	4.25	87	*e*P	Pn	03 06 59.0	+1.1
VLS	**Valsamata**	4.33	107	*e*P	Pn	03 06 58.7	-0.3
MEV	**Metsovon**	4.55	86	*e*P	Pn	03 07 02.7	+0.7
VSL	**Villasalto**	4.61	271	*e*Pn	Pn	03 06 58.8	-4.1
VSL	**Villasalto**	4.61	271	*e*Pn	Pn	03 06 58.8	-4.1
FNA	**Florina**	4.77	74	*e*P	Pn	03 07 05.4	+0.1
EVR	**Evrytania**	5.07	96	*e*P	Pn	03 07 10.5	+1.1
SKO	**Skopje**	5.20	61	*e*Pn	Pn	03 07 12.5	+1.2
AGG	**Agios Georgios**	5.45	94	*e*P	Pn	03 07 15.8	+1.0
LIT	**Litokhoron**	5.53	83	*e*P	Pn	03 07 16.3	+0.4
GRG	**Griva**	5.57	74	*e*P	Pn	03 07 16.4	-0.1
XOR	**Xorichti**	6.08	90	*e*P	Pn	03 07 23.6	0.0
XOR	**Xorichti**	6.08	90	*e*P	Pn	03 07 23.6	-0.1
AOS	**Alonnisos**	6.63	91	*e*P	Pn	03 07 31.1	-0.4
OBKA	**Obir**	6.93	355	⇑*i*PN	Pn	03 07 35.0	-0.7
OBKA				*i* SN	Sn	03 08 52.9	-2.5
KBA	**Koelnbreinsper**	7.62	350	⇑*i*PN	Pn	03 07 43.8	-1.5
KBA				*i* SN	Sn	03 09 10.3	-2.3
DAVOX	**Davos**	8.21	333	Pn	P	03 07 54.6	+1.0
	0.2nm,0.3s,baz=345,slow=20,SNR=3.2						
MOA	**Molln**	8.29	355	⇑*i*PN	P	03 07 53.6	-1.0
MOA				*i* SN	Sn	03 09 26.7	-2.5
GERES	**GERESS Array B**	9.32	353	Pn	P	03 08 07.5	-1.4
	0.2nm,0.3s,baz=172,slow=14,SNR=6.0						
GERES				Sn	Sn	03 09 45.4	-9.5
	0.0nm,0.3s,baz=168,slow=24,SNR=3.2						
KHC	**Kasperske Hory**	9.61	353	*e*PN	P	03 08 11.0	-1.9
KHC				x	x	03 08 22.5	
MLR	**Muntele Rosu**	9.79	50	Pn	P	03 08 24.2	+8.9
	0.3nm,0.3s,baz=220,slow=14,SNR=3.2						
KWP	**Kalwaria**	11.31	25	*e*P	P	03 08 39.3	+3.1
AKASG	**Malin Array Be**	14.78	37	Pn	P	03 09 29.2	+7.0
	0.5nm,0.3s,baz=230,slow=7.4,SNR=4.1						
SUW	**Suwalki**	15.37	18	P	P	03 09 38.9	+9.0
HFS	**Hagfors**	20.58	358	P	P	03 10 33.1	+0.2
	2.0nm,0.8s,baz=197,slow=16,SNR=3.8						
NB2	**NORSAR Subarra**	21.62	355	P	P	03 10 43.2	-0.3
	0.8nm,0.8s,mb3.2,baz=172,slow=11						
NOA	**NORSAR Array B**	21.62	355	P	P	03 10 44.5	+1.0
	0.5nm,0.7s,mb3.1,baz=178,slow=10,SNR=3.1						
FINES	**FINESS Array B**	22.85	13	P	P	03 10 57.6	+2.0
	3.6nm,0.9s,mb3.8,baz=169,slow=9.7,SNR=7.7						
MKAR	**Makanchi Array**	48.00	58	P	P	03 14 36.5	+4.2
	0.3nm,0.6s,mb3.5,baz=270,slow=7.2,SNR=3.1						

NNC 02 03:15:23.4±1.1**, 42.40N**×**70.84E, mpv2.6, 5C-1D, Error**
ellipse: s-maj=6.2km s-min=4.5km az=5.0, Central
Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	0.74	341	⇑P	Pg	03 15 38.1	0.0
	3.3nm,0.3s,baz=163,slow=18,SNR=560						
KK31				⇑S	Sg	03 15 48.1	+0.1
	16nm,0.2s,baz=161,slow=29,SNR=5.2						
AAK	**Ala-Archa**	2.71	84	⇑Pg	Pg	03 16 12.3	-5.3
	2.5nm,0.6s,baz=161,slow=29						
AAK				⇑Lg		03 16 47.9	
	4.7nm,0.5s,baz=161,slow=29						
AB31	**Akbulak array**	10.23	316	⇑Pn	P	03 17 51.5	-3.0
	0.3nm,0.4s,baz=161,slow=29,SNR=8.2						
AB31				⇓Sn	S	03 19 48.2	-2.9
	1.1nm,0.5s,baz=161,slow=29,SNR=6.2						

WEL 02 03:19:11.6±0.2**, 39.93S**×**174.12E, h120**^{km}±2^{km}**, ML3.5**/10**,**
6C-2D, Error ellipse: s-maj=1.6km s-min=0.7km az=90.0,
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFE	**Dawson Falls**	0.60	359	PN	P	03 19 30.3	0.0
NRZ	**Ngariki Road**	0.61	346	PN	P	03 19 30.3	-0.1
NRZ				SN	S	03 19 44.3	-0.5
NEZ	**North Egmont**	0.65	358	PN	P	03 19 30.7	-0.1
RAEZ	**Rainy Point**	0.67	18	PN	P	03 19 30.8	-0.1
WAZ	**Wanganui**	0.69	76	PN	P	03 19 31.5	+0.5
PKE	**Pukeiti**	0.74	352	PN	P	03 19 31.1	-0.4
PKE				SN	S	03 19 45.0	-1.5
DUWZ	**D’Urville Isla**	0.89	190	⇑PN	P	03 19 32.7	-0.3
DUWZ				SN	S	03 19 48.4	-0.4
VRZ	**Vera Road**	0.94	32	PN	P	03 19 32.8	-0.7
VRZ				SN	S	03 19 49.4	-0.3
KIW	**Kapiti Island**	1.11	148	PN	P	03 19 35.0	-0.2
KIW				SN	S	03 19 51.0	-1.8
MTVZ	**Mangateitei**	1.17	63	PN	P	03 19 35.4	-0.4
MTVZ				SN	S	03 19 53.3	-0.6
WNVZ	**Wahianoa**	1.29	63	PN	P	03 19 36.7	-0.4
DRZ	**Dome Shelter**	1.29	60	*e*PN	P	03 19 37.5	+0.4
FWVZ	**Far West T-bar**	1.29	59	PN	P	03 19 36.7	-0.4
TCW	**Tory Channel**	1.29	175	PN	P	03 19 37.0	-0.1
TCW				SN	S	03 19 54.3	-2.0
WPVZ	**Whakapapa**	1.31	57	PN	P	03 19 36.7	-0.7
CNZ	**Chateau**	1.32	57	PN	P	03 19 36.6	-0.9
TWVZ	**Taurewa**	1.33	50	PN	P	03 19 36.7	-0.9
TWVZ				SN	S	03 19 55.7	-1.5
MRZ	**Mangatainoka R**	1.33	124	⇓PN	P	03 19 37.3	-0.4
MRZ				SN	S	03 19 55.3	-2.1
TUVZ	**Tukino**	1.35	61	PN	P	03 19 37.6	-0.3
MOVZ	**Moawhango**	1.36	68	PN	P	03 19 36.9	-1.0
NGZ	**Ngauruhoe**	1.37	57	PN	P	03 19 37.3	-0.7
MRW	**Makara Radio**	1.38	162	⇑PN	P	03 19 37.9	-0.2
MRW				SN	S	03 19 56.0	-2.2
CAW	**Cannon Point**	1.38	149	⇑PN	P	03 19 38.0	-0.2
CAW				SN	S	03 19 56.4	-2.0
WTVZ	**West Tongariro**	1.39	55	PN	P	03 19 37.7	-0.6
NNZ	**Nelson**	1.41	203	⇑PN	P	03 19 37.9	-0.6
NNZ				SN	S	03 19 57.7	-1.1
TSZ	**Takapari Road**	1.42	96	PN	P	03 19 37.8	-0.8
WEL	**Wellington**	1.45	160	PN	P	03 19 38.5	-0.3
SNZO	**South Karori**	1.45	162	PN	P	03 19 38.6	-0.4
SNZO				SN	S	03 19 57.2	-2.5
TUWZ	**Tuamarina**	1.51	185	PN	P	03 19 38.7	-0.9
QRZ	**Quartz Range**	1.51	233	⇑PN	P	03 19 38.3	-1.4
HIZ	**Hauiti**	1.52	22	⇓PN	P	03 19 38.6	-1.2
HIZ				SN	S	03 19 59.2	-1.9
KATZ	**Kakaramea**	1.54	53	*e*PN	P	03 19 39.4	-0.7
BHW	**Baring Head**	1.59	159	PN	P	03 19 39.9	-0.7
MTW	**Mount Morrison**	1.62	140	PN	P	03 19 40.3	-0.6
MSWZ	**Moikau Station**	1.72	150	PN	P	03 19 41.5	-0.6
PAWZ	**Paruwai Farm**	1.76	146	PN	P	03 19 42.1	-0.5
BFZ	**Birch Farm**	1.79	116	PN	P	03 19 42.2	-0.8
BSWZ	**Blackbirch Sta**	1.80	186	PN	P	03 19 42.9	-0.1
BKZ	**Black Stump Fm**	1.98	68	PN	P	03 19 43.9	-1.4
KHZ	**Kahutara**	2.53	190	⇑PN	P	03 19 51.1	-1.4
DSZ	**Denniston Nort**	2.53	223	PN	P	03 19 50.9	-1.6

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*IDC **02** 03:40:56.6±1.3, 6.78N×73.05W, h153^{km}±40^{km}, mb3.3/2,*
mb1 3.8/4, mb1mx3.3/21, mbtmp3.9/4, Error ellipse:
s-maj=103.7km s-min=8.0km az=134.0
*FUNV **02** 03:40:58.7, 7.02N×73.12W, h160^{km}, MW2.9*
ISC 02 03:40:56.0±0.7**, 6.9N**±0.1×**73.1W**±0.1**, h156**^{km}±9^{km}**, n15,**
σ**1**^{s}**20**/21**, mb3.5**/2**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	**Capacho**	1.21	40	*e*P	P	03 41 25.6	+2.2
CAPV				*e*S	S	03 41 45.0	+0.5
ROSC	**El Rosal**	2.41	211	P	P	03 41 37.4	+0.6
	45nm,0.3s,baz=89,slow=22,SNR=197						
ROSC				S	S	03 42 06.2	-1.9
	33nm,0.3s,baz=96,slow=20,SNR=11						
VIGV	**El Vigia**	2.55	42	*e*P	P	03 41 39.6	+0.9
VIGV				*e*S	S	03 42 09.6	-1.7
SOCV	**Socops**	2.59	59	*e*P	P	03 41 40.4	+1.2
SOCV				*e*S	S	03 42 10.7	-1.5
SDV	**Santo Domingo**	3.12	51	P	P	03 41 47.5	+1.7
	52nm,0.3s,baz=230,slow=4.7,SNR=443						
SDV				S	S	03 42 25.4	+1.5
	17nm,0.3s,baz=61,slow=12,SNR=11						
VIRV	**Villa del Rosa**	3.61	11	*e*P	P	03 41 52.3	+0.2
VIRV				*e*S	S	03 42 30.9	-4.3
QARV	**Quebrada Arrib**	4.13	38	*e*P	P	03 41 58.6	-0.3
QARV				*e*S	S	03 42 44.2	-3.1
SANV	**Sanarito**	4.35	54	*e*P	P	03 42 01.8	0.0
TEPV	**Terepaima**	4.90	52	*e*P	P	03 42 09.1	+0.1
SIQV	**Siquisique**	4.92	41	*e*P	P	03 42 08.8	-0.4
MONV	**Montecano**	5.86	32	*e*P	P	03 42 21.1	-0.6
TURV	**Turiamo**	6.26	56	*e*P	P	03 42 26.4	-0.7
LPAZ	**La Paz**	23.60	168	pP		03 46 25.1	
	0.9nm,0.8s,baz=350,slow=13,SNR=6.1						
TXAR	**Lajitas Array**	36.40	312	P	P	03 47 47.9	+0.7
	0.3nm,0.4s,mb3.2,baz=127,slow=8.9,SNR=8.7						
YKA	**Yellowknife Ar**	63.16	340	P	P	03 51 08.7	-0.6
	0.8nm,0.5s,mb3.8,baz=134,slow=6.9,SNR=10						

RSPR 02 03:49:30.4, 19.70N×**67.89W, h16**^{km}±31^{km}**, MD3.8**/14**,**
MD3.8/14**, 9C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	1.43	149	⇑*e*P	Pn	03 49 52.3	-3.7
AGPR	**Aguadilla, PR**	1.43	149	*e*S	Sb	03 50 10.5	-3.6
MPR	**Mayaguez**	1.64	154	⇑*e*P	Pn	03 49 55.5	-3.4
MPR	**Mayaguez**	1.64	154	*e*S	Sn	03 50 16.1	-3.8
LSP	**Las Mesas**	1.70	153	⇑*e*P	Pn	03 49 57.0	-2.8
LSP	**Las Mesas**	1.70	153	*e*S	Sn	03 50 17.0	-4.3
LRS	**Lares**	1.72	145	⇓*e*P	Pn	03 49 57.2	-2.8
LRS				*e*S	Sn	03 50 16.9	-4.8
AOPR	**Arecibo Observ**	1.73	141	⇓*e*P	Pn	03 49 57.6	-2.6
AOPR	**Arecibo Observ**	1.73	141	*e*S	Sn	03 50 18.0	-3.9
CRPR	**Cabo Rojo, PR**	1.84	156	⇑*e*P	Pn	03 49 58.1	-3.8
CRPR	**Cabo Rojo, PR**	1.84	156	*e*S	Sn	03 50 20.3	-4.6
MGP	**Maguayo**	1.85	156	⇓*e*P	Pn	03 49 58.1	-3.8
MGP				*e*S	Sn	03 50 20.9	-4.1
PORP	**Portuguez**	2.02	144	⇓*e*P	Pn	03 50 01.8	-2.6
PORP				*e*S	Sn	03 50 25.8	-3.8
CELP	**Cerrillos**	2.04	142	⇑*e*P	Pn	03 50 02.4	-2.2
CELP				*e*S	Sn	03 50 26.1	-3.8
ICM	**Isla Caja Muer**	2.22	144	*e*S	Sn	03 50 31.8	-2.7
ICM	**Isla Caja Muer**	2.22	144	⇑*e*P	Pn	03 50 06.8	-0.4
SJG	**San Juan**	2.28	134	⇑*e*P	Pn	03 50 04.0	-4.1
HUMP	**Col San Antoni**	2.48	129	*e*S	Sn	03 50 37.2	-3.9
HUMP	**Col San Antoni**	2.48	129	⇑*e*P	Pn	03 50 07.9	-3.0
MTP	**Monte Pirata**	2.73	126	⇓*e*P	Pn	03 50 11.2	-3.3
STVI	**Saint Thomas**	3.08	115	⇑*e*P	Pn	03 50 16.4	-3.0
STVI	**Saint Thomas**	3.08	115	*e*S	Sn	03 50 51.0	-5.2

IDC 02 04:42:38.3±1.2**, 12.19N**×**143.57E, mb3.7**/4**, mb1 4.0**/4**,**
mb1mx3.6/20**, mbtmp3.7**/4**, MS3.3**/1**, Ms1 3.3**/1**,**
ms1mx2.8/23**, Error ellipse: s-maj=100.7km**
s-min=24.7km az=104.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNU	**Nakatsue**	23.86	333	LR	LR	04 55 45.6	
	comp=Z,67nm,18.2s,baz=220,slow=33						
WRA	**Warramunga Arr**	33.20	196	P	P	04 49 16.5	-2.6
	0.3nm,0.4s,baz=18,slow=9.8,SNR=8.0						
ASAR	**Alice Springs**	36.87	195	P	P	04 49 49.0	-1.4
	0.3nm,0.7s,baz=20,slow=11,SNR=3.0						
ILAR	**Eielson Array**	70.37	25	P	P	04 53 53.8	-1.9
	0.7nm,0.6s,baz=250,slow=5.1,SNR=6.0						
FINES	**FINESS Array B**	91.89	335	P	P	04 55 48.3	-1.2
	1.7nm,1.0s,baz=218,slow=22,SNR=4.0						

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*NEIC **02** 04:50:07.8, 19.48N×103.57W, h7^{km}, MD4.1(MEX), After*
MEX.
MEX 02 04:50:08.1±1.0**, 19.47N**×**103.57W, h10**^{km}±15^{km}**, MD4.1,**
Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COLM	**Colima**	0.31	201	*i* P	Pg	04 50 13.0	-1.5
COLM				*i* S	Sg	04 50 19.2	+0.5
SFJM	**Santa Fe**	1.13	26	*i* P	Pb	04 50 27.0	-2.3
SFJM				*i* S	Sb	04 50 40.0	-3.9
CJM	**Chamela**	1.39	272	*i* P	Pn	04 50 30.0	-3.6
CJM				*i* S	Sb	04 50 46.2	-5.1
MOIG	**Morelia**	2.26	84	*e*P	Pn	04 50 42.6	-3.4
MOIG				*i* S	Sn	04 51 09.6	-4.6
ZAIG	**Zacatecas**	3.42	16	*e*P	Pn	04 51 00.4	-2.2
ZAIG				*i* S	Sn	04 51 36.9	-6.7
PLIG	**Platanillo**	4.00	105	*e*P	Pn	04 51 06.4	-4.4
PLIG				*i* S	Sn	04 51 51.8	-6.6

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*IDC **02** 05:14:44.2±2.4, 1.58N×97.53E, mb4.0/6, mb1 4.1/7,*
mb1mx3.8/21, mbtmp3.9/7, ML3.9/1, MS3.0/1, Ms1 3.2/1,
ms1mx2.8/19, Error ellipse: s-maj=102.3km s-min=20.4km
az=57.0
*NEIC **02** 05:14:47.3±1.2, 1.39N×97.18E, h30^{km}, mb4.6/4, Error*
ellipse: s-maj=28.2km s-min=16.5km az=64.0
ISC 02 05:14:45.4±1.1**, 1.4N**±0.1×**97.1E**±0.2**, h30**^{km}**, n15,**
σ**1**^{s}**12**/14**, mb4.2**/10**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	5.22	43	*e*Pn	Pn	05 16 04.8	+1.2
CMAR	**Chiang Mai Arr**	17.02	6	Pn	P	05 18 42.1	-1.0
	0.2nm,0.3s,baz=203,slow=12,SNR=3.4						
CMAR				LR	LR	05 25 50.3	
	comp=Z,56nm,19.7s,baz=220,slow=40						
CMAR	**Chiang Mai Arr**	17.02	6	Pn	P	05 18 42.1	-1.0
CMAR				LR	LR	05 25 50.3	
QIZ	**Qiongzhong**	21.49	35	P	P	05 19 27.6	-6.4
ENH	**Enshi**	31.00	21	P	P	05 21 01.1	-1.7
	14nm,1.1s,mb4.7						
WRA	**Warramunga Arr**	42.24	122	P	P	05 22 37.1	-0.9
	0.9nm,0.6s,mb3.5,baz=304,slow=8.9,SNR=8.6						
WRAB	**Tennant Creek**	42.24	122	P	P	05 22 30.7	-7.3
	3.2nm,0.8s,mb4.0						
ASAR	**Alice Springs**	43.61	127	P	P	05 22 48.6	-0.5
	0.5nm,0.7s,mb3.4,baz=292,slow=8.0,SNR=4.1						
SONM	**Songino Array**	46.92	9	P	P	05 23 14.1	-1.1
	1.4nm,0.5s,mb4.2,baz=198,slow=7.8,SNR=3.9						
MKAR	**Makanchi Array**	47.00	346	P	P	05 23 17.5	+1.7
	1.0nm,0.5s,mb4.0,baz=154,slow=8.1,SNR=12						
PMG	**Port Moresby**	51.00	103	*e*P	P	05 23 48.7	+1.6
	39nm,1.3s,mb5.2						
ZAL	**Zalesovo**	53.31	351	P	P	05 24 04.8	+0.8
	2.4nm,0.4s,mb4.5,baz=312,slow=5.7,SNR=6.4						
BVAR	**Borovoye Array**	56.00	341	P	P	05 24 23.7	+0.1
	1.7nm,0.7s,mb4.2,baz=142,slow=9.0,SNR=11						
CHKZ	**Chkalovo**	56.48	341	*e*P	P	05 24 26.9	-0.1
	3.8nm,0.8s,mb4.5						
SML	**Sawmill**	100.11	26	P	P	05 28 34.8	+5.4

IDC 02 05:21:04.8±6.5**, 22.10S**×**148.21E, mb1 3.6**/3**,**
mb1mx3.5/11**, mbtmp3.4**/3**, ML3.3**/2**, Error ellipse:**
s-maj=57.2km s-min=39.8km az=59.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	11.38	210	Pn	P	05 23 47.5	-4.2
	0.3nm,0.3s,baz=31,slow=15,SNR=8.3						
STKA				Lg		05 27 05.0	
	0.3nm,0.3s,baz=295,slow=19,SNR=3.4						
WRA	**Warramunga Arr**	13.13	277	Pn	P	05 24 13.6	-1.8
	0.2nm,0.3s,baz=98,slow=12,SNR=8.1						
WRA				Lg		05 28 00.3	
	0.4nm,0.3s,baz=100,slow=28,SNR=8.1						
ASAR	**Alice Springs**	13.28	261	Pn	P	05 24 16.1	-1.2
	0.1nm,0.3s,baz=87,slow=14,SNR=3.6						
ASAR				Lg		05 28 07.0	
	0.3nm,0.3s,baz=82,slow=28,SNR=4.7						

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*LDG **02** 05:46:41.4±0.0, 42.39N×1.47E, h5^{km}, Md2.6/2, Ml2.5/11,*
Error ellipse: s-maj=0.9km s-min=0.6km az=172.0
*STR **02** 05:46:41.5±0.3, 42.38N×1.47E, h5^{km}±1^{km}, Ml2.5, Error*
ellipse: s-maj=0.0km s-min=0.0km az=1.0
*CSEM **02** 05:46:41.8±0.1, 42.40N×1.48E, h10^{km}, ML2.6/10, Error*
ellipse: s-maj=1.2km s-min=0.9km az=141.0
*NEIC **02** 05:46:42.6, 42.36N×1.46E, ML2.5(LDG), ML2.4(STR),*
MN2.0(MDD), After MDD.
MDD 02 05:46:41.9±0.2**, 42.39N**×**1.48E, h10**^{km}**, mbLg1.9**/18**,**
Error ellipse: s-maj=1.9km s-min=1.4km az=89.0,
PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAND	**Andorre**	0.14	21	Pg	Pg	05 46 44.9	-0.4
PAND				Lg		05 46 47.3	
VALF	**Valcebollere**	0.40	88	Pg	Pg	05 46 49.3	-0.8
VALF				Sg	Sg	05 46 54.9	-0.6
VALF	**Valcebollere**	0.40	88	Pg	Pg	05 46 49.3	-0.8
VALF				Lg		05 46 54.9	
SALF	**Salau**	0.43	330	Pg	Pg	05 46 49.9	-0.7
SALF				Sg	Sg	05 46 55.6	-0.8
SALF	**Salau**	0.43	330	Pg	Pg	05 46 49.9	-0.7
SALF				Lg		05 46 55.5	
EMIR	**Miracle**	0.48	176	Pg	Pg	05 46 50.8	-0.8
	3.7nm,0.1s,SNR=18						
EMIR				Lg		05 46 57.2	
	44nm,0.1s,SNR=23						
EMIR	**Miracle**	0.48	176	Pg	Pg	05 46 50.8	-0.8
	3.7nm,0.1s,SNR=18						
CARF	**Carcanieres**	0.57	55	Pg	Pg	05 46 52.4	-0.9
CARF				Sg	Sg	05 47 00.5	-0.5
CARF	**Carcanieres**	0.57	55	Pg	Pg	05 46 52.5	-0.9
CARF				Lg		05 47 00.4	
MLS	**Moulis**	0.63	334	Pg	Pg	05 46 54.5	-0.2
MLS				Sg	Sg	05 47 02.0	-1.2
MLS	**Moulis**	0.63	334	Pg	Pg	05 46 54.0	-0.7
MLS				Lg		05 47 02.3	
MELF	**Melles**	0.72	313	Pg	Pg	05 46 55.1	-1.2
MELF				Sg	Sg	05 47 05.2	-0.7

MELF	**Melles**	**0.72**	**313**	Pg	Pg	05 46 55.4	-0.9
MELF				Lg		05 47 04.5	
FILF	**Fillols**	**0.82**	**78**	Pg	Pg	05 46 55.3	-3.0
FILF				Sg	Sg	05 47 04.9	-4.4
FILF	**Fillols**	**0.82**	**78**	Pg	Pg	05 46 55.4	-2.9
FILF				Lg		05 47 04.9	
EGRA	**Graus**	**0.88**	**258**	Pg	Pg	05 46 58.8	-0.8
	0.8nm,0.1s,SNR=7.5						
EGRA				Lg		05 47 11.7	
	1.5nm,0.1s,SNR=9.9						
RESF	**Ens**	**0.94**	**297**	Lg		05 47 11.8	
LRDF	**Laroque-de-Fa**	**0.95**	**55**	Pg	Pg	05 47 00.1	-0.9
LRDF				Sg	Sg	05 47 14.2	+0.4
LRDF	**Laroque-de-Fa**	**0.95**	**55**	Pg	Pg	05 47 00.1	-0.9
LRDF				Lg		05 47 13.4	
EBIE	**Bielsa**	**1.03**	**287**	Pg	Pg	05 47 01.0	-1.5
	0.4nm,0.1s,SNR=13						
EBIE				Lg		05 47 15.2	
	1.6nm,0.1s,SNR=13						
EBIE	**Bielsa**	**1.03**	**287**	Pg	Pg	05 47 01.0	-1.5
	0.4nm,0.1s,SNR=13						
SJAF	**Saint Jean de**	**1.04**	**84**	Lg		05 47 15.3	
EJON	**La Jonquera**	**1.05**	**86**	Pg	Pg	05 47 02.5	-0.3
	0.8nm,0.1s,SNR=9.1						
EJON				Lg		05 47 15.8	
	6.6nm,0.1s,SNR=11						
EJON	**La Jonquera**	**1.05**	**86**	Pg	Pg	05 47 02.5	-0.3
	0.8nm,0.1s,SNR=9.1						
EPF	**Esparros**	**1.05**	**308**	*e*Pg	Pg	05 47 01.1	-1.9
EPF				*e*Sg	Sg	05 47 15.0	-2.1
	7.9nm,0.2s						
EPOB	**Poblet**	**1.08**	**196**	Pg	Pg	05 47 01.7	-1.7
	2.2nm,0.1s,SNR=26						
EPOB				Lg		05 47 15.7	
	6.5nm,0.1s,SNR=21						
EPOB	**Poblet**	**1.08**	**196**	Pg	Pg	05 47 01.7	-1.8
	2.2nm,0.1s,SNR=26						
MTLF	**Montolieu**	**1.09**	**30**	*e*Pg	Pg	05 47 01.8	-2.0
MTLF				*e*P		05 47 03.4	
MTLF				*e*Sg	Sg	05 47 16.1	-2.4
	12nm,0.2s						
MTLF	**Montolieu**	**1.09**	**30**	Pg	Pg	05 47 01.8	-2.0
MTLF				Lg		05 47 16.1	
	5.9nm,0.2s						
VIEF	**Viey**	**1.18**	**295**	Lg		05 47 18.7	
ETSF	**Etsaut**	**1.59**	**289**	*e*Pn	Pn	05 47 08.5	-1.7
ETSF				*e*Pg	Pg	05 47 11.1	-2.5
ETSF				*e*Sg	Sg	05 47 31.5	-3.3
	7.3nm,0.2s						
ESAC	**San Caprasio**	**1.60**	**246**	Pg	Pg	05 47 10.7	-3.1
	3.1nm,0.1s,SNR=9.8						
ESAC				Lg		05 47 31.5	
	56nm,0.4s,SNR=8.9						
ESAC	**San Caprasio**	**1.60**	**246**	Pg	Pg	05 47 10.7	-3.1
	3.1nm,0.1s,SNR=9.8						
ERTA	**Horta de San J**	**1.67**	**211**	Pg	Pg	05 47 12.8	-2.5
	1.4nm,0.1s,SNR=10						
ERTA				Lg		05 47 34.0	
	6.8nm,0.1s,SNR=11						
ERTA	**Horta de San J**	**1.67**	**211**	Pg	Pg	05 47 12.8	-2.4
	1.4nm,0.1s,SNR=10						
EBR	**Ebro Roquetas**	**1.73**	**206**	*e*SN	Sn	05 47 35.5	+0.9
ATE	**Arette**	**1.75**	**294**	Lg		05 47 39.3	
SJPF	**Ste Jean**	**2.12**	**291**	*e*Pn	Pn	05 47 15.6	-2.2
SJPF				*e*Pg	Pg	05 47 20.4	-3.8
SJPF				*e*Sg	Sg	05 47 47.9	-4.5
	4.5nm,0.3s						
EALK	**Alkurruntz**	**2.35**	**292**	Pg	Pg	05 47 26.8	-1.9
EALK				Lg		05 47 57.0	
EALK	**Alkurruntz**	**2.35**	**292**	Pg	Pg	05 47 25.7	-3.0
	0.2nm,0.8s,SNR=7.9						
EALK				Lg		05 47 57.0	
	7.7nm,0.5s,SNR=7.3						
EALK	**Alkurruntz**	**2.35**	**292**	Pg	Pg	05 47 26.8	-2.0
	1.2nm,0.3s,SNR=7.9						
LASF	**Ste Croix**	**2.42**	**45**	*e*Pn	Pn	05 47 19.9	-2.3
LASF				*e*Pg	Pg	05 47 26.7	-3.5
LASF				*e*Sg	Sg	05 47 57.6	-5.0
	4.1nm,0.3s						
EMOS	**Mosqueruela**	**2.50**	**217**	Pn	Pn	05 47 23.4	+0.1
	0.2nm,0.3s,SNR=4.0						
EMOS				Pg	Pg	05 47 28.1	-3.7
	1.5nm,0.3s,SNR=7.9						
EMOS				Lg		05 48 00.8	
	0.8nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.50**	**217**	Pn	Pn	05 47 23.4	+0.1
	SNR=4.0						
EMOS	**Mosqueruela**	**2.50**	**217**	Pg	Pg	05 47 28.1	-3.7
	1.5nm,0.3s,SNR=7.9						
CAF	**Calviac**	**2.57**	**9**	*e*Pn	Pn	05 47 22.1	-2.2
CAF				*e*Sn	Sn	05 47 51.5	-4.4
CAF				*e*Sg	Sg	05 48 02.3	-5.2
	10nm,0.4s						
LFF	**La Frestale**	**2.60**	**348**	*e*Pn	Pn	05 47 22.3	-2.5
LFF				*e*Pg	Pg	05 47 29.4	-4.5
LFF				*e*Sg	Sg	05 48 02.8	-5.8
	5.9nm,0.3s						
RJF	**Les Rejaudoux**	**2.91**	**1**	*e*Pn	Pn	05 47 26.1	-3.1
RJF				*e*Sn	Sn	05 47 59.6	-5.0
RJF				*e*Sg	Sg	05 48 12.7	-6.2
	3.1nm,0.2s						
VIVF	**Saint-Julien-l**	**3.38**	**42**	*e*Pn	Pn	05 47 33.1	-2.8
VIVF				*e*Pg	Pg	05 47 44.3	-5.2
VIVF				*e*Sg	Sg	05 48 27.6	-7.0
	1.6nm,0.3s						
BGF	**Bois d'Agland**	**4.28**	**13**	*e*Pn	Pn	05 47 45.2	-3.4
BGF				*e*Sg	Sg	05 48 55.3	-9.1
	9.3nm,0.4s						

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*NEIC **02** 06:01:13.1±0.6, 24.20S×67.04W, h163^{km}±7^{km}, mb4.2/11, Error ellipse: s-maj=9.9km s-min=7.5km az=100.0*

*IDC **02** 06:01:13.9±1.2, 24.15S×67.02W, h167^{km}±14^{km}, mb3.7/3, mb1 3.8/9, mb1mx3.5/20, mbtmp4.2/9, Error ellipse: s-maj=18.1km s-min=17.3km az=176.0*

*GUC **02** 06:01:15.4±0.8, 24.42S×67.13W, h115^{km}±35^{km}, ML4.6*

ISC 02 06:01:12.0±0.6, **24.27S**±0.04×**67.09W**±0.07, **h163**^{km}±8^{km}, **n50,** σ**1**^{s}**34**/57, **mb3.9**/11, **9C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.35**	**314**	⇑*i*P	**P**	**06 01 55.1**	**+2.6**
LVC				*i* S	**S**	**06 02 25.2**	**+1.6**
LVC				AMP		06 02 27.7	
	comp=E,1µm,0.1s						
LVC	**Limon Verde**	**2.35**	**314**	P	**P**	**06 01 55.4**	**+2.9**
	comp=E,34nm,0.3s,baz=131,slow=9.2,SNR=380						
LVC				S	**S**	**06 02 25.1**	**+1.6**
	comp=E,188nm,0.3s,baz=253,slow=19,SNR=40						
LVC	**Limon Verde**	**2.35**	**314**	*e*Pn	**P**	**06 01 55.0**	**+2.5**
LVC				*e*Sn	**S**	**06 02 20.0**	**-3.6**
LVC				S	**S**	**06 02 25.1**	**+1.6**
CPN1	**Cerro Paranal**	**3.04**	**263**	*e*P	**P**	**06 02 02.7**	**+1.6**
CPN1				*i* S	**S**	**06 02 38.6**	**-0.1**
CPN1				AMP		06 02 40.4	
	comp=E,2µm,0.5s						
ANCH	**Antofagasta**	**3.09**	**280**	⇑*i*P	**P**	**06 02 03.3**	**+1.6**
ANCH				*i* S	**S**	**06 02 38.9**	**-0.9**
ANCH				AMP		06 02 41.8	
	comp=N,2µm,0.3s						
CRCH	**Chaqaral**	**3.81**	**236**	⇓*i*P	**P**	**06 02 11.4**	**+0.5**
CPCH	**Copiapo**	**4.25**	**223**	⇑*i*P	**P**	**06 02 16.6**	**-0.1**
CPCH				*i* S	**S**	**06 03 04.2**	**-2.4**
VACH	**Vallenar**	**5.40**	**217**	*i* S	**S**	**06 03 31.6**	**-2.0**
LCO	**Las Campanas**	**5.72**	**214**	⇑*i*P	**P**	**06 02 35.9**	**0.0**
LCO				*i* S	**S**	**06 03 39.9**	**-1.3**
LPAZ	**La Paz**	**8.00**	**353**	P	**P**	**06 03 07.0**	**+0.7**
	comp=N,9.6nm,0.3s,baz=148,slow=6.0,SNR=228						
LPAZ				S	**S**	**06 04 34.5**	**-1.0**
	comp=N,0.3nm,0.3s,baz=112,slow=19,SNR=2.3						
LPAZ	**La Paz**	**8.00**	**353**	*e*Pn	**P**	**06 03 06.8**	**+0.5**
LPAZ				*e*Sn	**S**	**06 04 31.5**	**-4.0**
LPAZ				S	**S**	**06 04 34.5**	**-1.0**
CPUP	**Villa Florida**	**9.07**	**105**	P	**P**	**06 03 21.2**	**+0.8**
	comp=N,0.1nm,0.3s,baz=299,slow=15,SNR=4.0						
CPUP	**Villa Florida**	**9.07**	**105**	*e*Pn	**P**	**06 03 21.0**	**+0.6**
SIV	**San Ignacio**	**9.99**	**36**	P	**P**	**06 03 30.9**	**-1.6**
	comp=N,1.8nm,0.3s,baz=250,slow=10,SNR=47						
TRQA	**Tornquist**	**14.42**	**164**	*e*P	**P**	**06 04 29.8**	**+0.3**
	comp=N,3.3nm,0.6s						
NNA	**Nana**	**15.32**	**321**	*e*P	**P**	**06 04 41.9**	**+0.9**
	comp=N,16nm,1.1s						
SAML	**Samuel**	**15.69**	**14**	*e*P	**P**	**06 04 43.8**	**-1.7**
	comp=N,3.4nm,0.8s						
PLCA	**Paso Flores**	**16.67**	**189**	P	**P**	**06 04 58.4**	**+0.9**
	comp=N,0.1nm,0.3s,baz=354,slow=9.2,SNR=2.1						
PLCA	**Paso Flores**	**16.67**	**189**	P	**P**	**06 04 58.4**	**+0.9**
BDFB	**Brasilia**	**19.86**	**68**	P	**P**	**06 05 31.3**	**-1.1**
	comp=N,2.4nm,0.3s,baz=249,slow=11,SNR=49						
BAO	**Brasilia Array**	**19.89**	**68**	P	**P**	**06 05 29.5**	**-3.2**
TEIG	**Tepich**	**48.80**	**333**	*e*P	**P**	**06 09 46.4**	**+3.8**
	comp=N,0.2nm,0.7s,mb2.9						
VNA3	**Neumayer Olymp**	**56.93**	**161**	*e*	**P**	**06 10 42.5**	**+0.6**
VNA3	**Neumayer Olymp**	**56.93**	**161**	*e*	**P**	**06 10 44.5**	**+2.6**
VNA3	**Neumayer Olymp**	**56.93**	**161**	⇑*i*P	**P**	**06 10 41.9**	**0.0**
VNA3				*e*		06 10 42.5	
VNA3				*e*		06 10 44.5	
VNA1	**Neumayer--Stat**	**57.12**	**160**	*e*	**P**	**06 10 44.3**	**+1.0**
VNA1	**Neumayer--Stat**	**57.12**	**160**	*e*	**P**	**06 10 46.1**	**+2.8**
VNA1	**Neumayer--Stat**	**57.12**	**160**	⇑*i*P	**P**	**06 10 43.7**	**+0.4**
VNA1				*e*		06 10 44.3	
VNA1				*e*		06 10 46.1	
VNA2	**Neumayer--Watz**	**57.49**	**160**	*e*	**P**	**06 10 46.5**	**+0.6**
VNA2	**Neumayer--Watz**	**57.49**	**160**	*e*	**P**	**06 10 48.6**	**+2.7**
VNA2	**Neumayer--Watz**	**57.49**	**160**	⇑*i*P	**P**	**06 10 45.9**	**0.0**
VNA2				*e*		06 10 46.5	
VNA2				*e*		06 10 48.6	
SNAA	**Sanae**	**59.13**	**161**	⇑*i*	**P**	**06 10 56.8**	**-0.5**
SNAA	**Sanae**	**59.13**	**161**	*e*	**P**	**06 10 57.8**	**+0.5**
SNAA	**Sanae**	**59.13**	**161**	*e*	**P**	**06 10 59.5**	**+2.2**
SNAA	**Sanae**	**59.13**	**161**	P	**P**	**06 10 56.9**	**-0.3**
	comp=N,0.4nm,0.6s,mb3.4,baz=274,slow=6.7,SNR=13						
SNAA	**Sanae**	**59.13**	**161**	*e*P	**P**	**06 10 56.7**	**-0.6**
	comp=N,6.9nm,1.3s,mb4.3						
SNAA				⇑*i*P		06 10 56.8	
SNAA				*e*		06 10 57.8	
SNAA				*e*		06 10 59.5	
MIAR	**Mount Ida**	**63.67**	**336**	P	**P**	**06 11 25.4**	**-2.8**
ACSO	**Alum Creek Sta**	**65.85**	**347**	*e*P	**P**	**06 11 34.7**	**-7.5**
	comp=N,11nm,1.1s,mb4.6						
QSPA	**South Pole Qui**	**65.94**	**180**	*e*P	**P**	**06 11 42.4**	**+0.3**
	comp=N,2.7nm,0.5s,mb4.3						
ANMO	**Albuquerque**	**69.73**	**326**	*e*P	**P**	**06 12 06.1**	**-0.1**
	comp=N,1.0nm,0.8s,mb3.6						
TSUM	**Tsumeb**	**77.66**	**106**	*e*P	**P**	**06 12 51.8**	**-0.6**
	comp=N,2.9nm,0.8s,mb4.0						
BOSA	**Boshof**	**80.69**	**117**	P	**P**	**06 13 08.7**	**+0.2**
	comp=N,2.9nm,0.4s,mb4.2,baz=5.2,slow=6.5,SNR=12						
MAW	**Mawson**	**81.21**	**163**	P	**P**	**06 13 11.5**	**+1.0**
	comp=N,0.8nm,0.4s,mb3.7,baz=210,slow=8.1,SNR=6.7						
LBTB	**Lobatse**	**82.36**	**114**	*e*P	**P**	**06 13 17.0**	**-0.2**
	comp=N,2.5nm,0.5s,mb4.1						
FCC	**Fort Churchill**	**85.70**	**346**	*e*P	**P**	**06 13 30.1**	**-3.1**
	comp=N,1.1nm,0.6s,mb3.8						
LSZ	**Lusaka**	**88.51**	**106**	*e*P	**P**	**06 13 50.1**	**+2.4**
	comp=N,3.9nm,0.9s,mb4.3						
ASAR	**Alice Springs**	**128.18**	**205**	PKP	PKPdf	06 20 00.3	+0.7
	comp=N,0.8nm,0.7s,baz=132,slow=1.9,SNR=8.9						
WRA	**Warramunga Arr**	**131.35**	**207**	PKP	PKPdf	06 20 06.5	+0.9
	comp=N,0.5nm,0.4s,baz=156,slow=1.7,SNR=14						
ZAL	**Zalesovo**	**143.67**	**28**	PKP	PKPdf	06 20 26.2	-0.7
	comp=N,0.8nm,0.3s,baz=261,slow=2.8,SNR=4.5						
MKAR	**Makanchi Array**	**146.78**	**40**	PKPbc	PKPbc	06 20 36.3	+2.1
	comp=N,2.0nm,0.6s,baz=357,slow=1.1,SNR=27						

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*CSEM **02** 06:26:26.4, 36.46N×10.40E, h18^{km}, MD3.5, After SBS*

TUN 02 06:26:26.4, 36.46N×10.40E, h18^{km}, MD3.5, Tunisia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZGN	**Zaghouan**	**0.26**	**250**	*i* P	Pb	06 26 37.5	+5.2
MBZ	**Menzel Bouzelf**	**0.31**	**45**	*i* P	Pb	06 26 38.5	+5.3
KCHT	**Kechabta**	**0.75**	**331**	*i* P	Pb	06 26 44.5	+4.0
TROT	**Trozza**	**1.10**	**216**	*i* P	Pb	06 26 50.5	+3.9
BERT	**Berda**	**2.49**	**208**	*i* P	Pn	06 27 07.5	+0.7

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*NEIC **02** 06:55:44.9, 34.34N×32.13E, h25^{km}, ML2.8(NIC), After NIC.*

*NIC **02** 06:55:44.9±0.3, 34.34N×32.13E, h25^{km}, ML2.8, MW3.1*

*ISK **02** 06:55:45.6, 34.48N×32.24E, h25^{km}, MD3.1*

*CSEM **02** 06:55:45.5±0.2, 34.48N×32.28E, h28^{km}±1^{km}, Mw3.1, Error ellipse: s-maj=5.4km s-min=2.8km az=13.0*

ISC 02 06:55:44.3±2.0, **34.3N**±0.1×**32.20E**±0.07, **h27**^{km}±9^{km}, **n11,** σ**0**^{s}**45**/20, **2C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.56**	**12**	P	**Pb**	**06 55 55.5**	**0.0**
	17nm,0.1s						
PPCY				S	**Sb**	**06 56 03.3**	**+0.1**
AKMC	**Akamas**	**0.70**	**9**	P	**Pb**	**06 55 57.6**	**-0.2**
AKMC				S	**Sb**	**06 56 07.3**	**+0.2**
SZAC	**Souni-Zanaja**	**0.70**	**53**	P	**Pb**	**06 55 58.1**	**+0.2**
	31nm,0.3s						
SZAC				S	**Sb**	**06 56 07.8**	**+0.6**
ALFC	**Alevga**	**0.88**	**22**	⇑P	**Pb**	**06 56 00.3**	**-0.6**
	24nm,0.2s						
ALFC				S	**Sb**	**06 56 12.0**	**-0.3**
LEF	**Lefka**	**0.96**	**36**	*i* PG	**Pn**	**06 56 02.2**	**0.0**
CSS	**Prodhromos**	**1.12**	**56**	⇑P	**Pn**	**06 56 03.9**	**-0.5**
	3.6nm,0.3s						
CSS				S	**Sn**	**06 56 19.3**	**+0.3**
CSS	**Prodhromos**	**1.12**	**56**	PG	**Pn**	**06 56 04.7**	**+0.3**
CSS				SG	**Sn**	**06 56 18.8**	**-0.2**
CSS	**Prodhromos**	**1.12**	**56**	*e*Pg	**Pn**	**06 56 04.7**	**+0.3**
CSS				*e*Sg	**Sn**	**06 56 18.8**	**-0.2**
CSS				S	**Sn**	**06 56 19.3**	**+0.3**
PHNC	**Paralimni**	**1.65**	**66**	P	**Pn**	**06 56 11.1**	**-0.8**
PHNC				S	**Sn**	**06 56 32.7**	**+0.3**
HDMB	**Hadim**	**2.63**	**5**	*e*PN	**Pn**	**06 56 25.5**	**-0.5**
FETY	**Fethiye**	**3.43**	**313**	*e*PN	**Pn**	**06 56 38.2**	**+0.9**

IDC 02 06:56:05.2±6.2, **9.14N**×**138.98E, mb3.5**/3, **mb1 3.8**/3, **mb1mx3.5**/20, **mbtmp3.5**/3, **Error ellipse: s-maj=264.9km s-min=30.5km az=77.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**29.26**	**189**	P	P	07 02 09.4	-2.0
	0.8nm,0.8s,baz=9.5,slow=8.0,SNR=6.8						
ASAR	**Alice Springs**	**32.98**	**189**	P	P	07 02 41.7	-2.4
	0.4nm,0.4s,baz=23,slow=10,SNR=7.6						
MKAR	**Makanchi Array**	**60.84**	**319**	P	P	07 06 19.5	-2.1
	0.3nm,0.4s,baz=101,slow=7.3,SNR=4.1						

DJA 02 07:08:57.9±0.9, **8.46S**×**114.65E, h133**^{km}±7^{km}, **MD5.1**/4, **ML3.9**/2, **5C-2D, Error ellipse: s-maj=38.3km s-min=10.3km az=7.0, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELI	**Kelakatan**	**0.29**	**326**	⇓*i*Pn	P	07 09 16.4	0.0
	129nm,0.2s						
KELI				⇑*i*Sn	S	07 09 29.9	-0.7
SRDI	**Scrawed**	**0.50**	**267**	⇑*i*Pn	P	07 09 17.2	-0.3
	57nm,0.2s						
SRDI				⇑*i*Sn	S	07 09 30.3	-2.1
RATI	**Rata**	**0.91**	**107**	⇑*i*Pn	P	07 09 20.5	+0.1
	273nm,0.2s						
RATI				⇓*i*Sn	S	07 09 36.7	-0.9
KEDI	**Kedomdong**	**1.45**	**91**	*e*Pn	P	07 09 25.0	-1.0
	74nm,0.2s						
KEDI				⇑*i*Sn	S	07 09 45.0	-2.5

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*CNRM **02** 07:14:35.1, 34.95N×1.83W, h2^{km}, MD3.3*

*CSEM **02** 07:14:36.9±0.3, 35.11N×2.20W, h48^{km}±4^{km}, MD3.3, Error ellipse: s-maj=7.1km s-min=4.8km az=92.0*

*MDD **02** 07:14:38.1±0.5, 35.32N×2.05W, mb3.5/9, Error ellipse: s-maj=4.3km s-min=3.6km az=83.0, PRXIMO*

*NEIC **02** 07:14:38.8, 35.36N×2.03W, MG3.7(MDD), After MDD.*

ISC 02 07:14:36.6±0.7, **35.29N**±0.03×**2.10W**±0.06, **h10**^{km}, **n35,** σ**1**^{s}**48**/59, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAI	**Zaio**	**0.62**	**239**	*i* P	**Pg**	**07 14 48.5**	**-0.5**
ZAI				*i* S	**Sg**	**07 14 59.0**	**+1.7**
OUJ	**Oujda**	**0.65**	**165**	*e*P	**Pb**	**07 14 50.0**	**+0.5**
OUJ				*i* S	**Sg**	**07 15 01.0**	**+2.6**
MELI	**Melilla**	**0.68**	**271**	Pg	**Pg**	**07 14 52.8**	**+2.5**
MELI				Lg		07 15 02.4	
EMLI	**Melilla**	**0.69**	**271**	S	**Sb**	**07 15 03.7**	**+4.0**
	926nm,0.2s,SNR=7.9						
EMEL	**Melilla**	**0.70**	**271**	Lg		07 15 03.7	
	926nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.00**	**311**	P	**Pb**	**07 14 57.2**	**+1.6**
EALB				S	**Sb**	**07 15 10.8**	**+2.2**
EALB	**Alboran**	**1.00**	**311**	Pg	**Pg**	**07 14 56.7**	**+0.1**
	45nm,0.2s,SNR=7.2						
EALB				Lg		07 15 10.8	
	89nm,0.3s						
EALB	**Alboran**	**1.00**	**311**	S	**Sb**	**07 15 10.8**	**+2.2**
	89nm,0.3s						
TOU	**Touzarine**	**1.39**	**257**	Pg	**Pg**	**07 15 02.5**	**-2.0**
TOU				Lg		07 15 22.5	
ENIJ	**Nijar**	**1.68**	**357**	Pn	**Pn**	**07 15 06.4**	**+0.1**
	2.9nm,0.4s,SNR=7.9						
ENIJ				Sn	**Sn**	**07 15 28.0**	**0.0**
	12nm,0.2s,SNR=4.0						
ENIJ	**Nijar**	**1.68**	**357**	S	**Sn**	**07 15 28.0**	**-0.1**
	12nm,0.2s,SNR=4.0						
EBER	**Berja**	**1.73**	**339**	Pn	**Pn**	**07 15 07.3**	**+0.3**
	4.1nm,0.2s,SNR=9.1						
EBER				Sn	**Sn**	**07 15 27.3**	**-1.9**
	25nm,0.2s,SNR=8.9						
EBER	**Berja**	**1.73**	**339**	P	**Pn**	**07 15 07.3**	**+0.3**
	4.1nm,0.2s,SNR=9.1						
EBER				S	**Sn**	**07 15 27.3**	**-2.0**
	25nm,0.2s,SNR=8.9						
EMIJ	**Mijas**	**2.52**	**301**	P	**Pn**	**07 15 20.1**	**+1.8**
EMIJ				S	**Sn**	**07 15 49.7**	**+0.4**
EMIJ	**Mijas**	**2.52**	**301**	Pn	**Pn**	**07 15 20.1**	**+1.8**
	1.6nm,0.2s,SNR=4.0						
EMIJ				Sn	**Sn**	**07 15 48.9**	**-0.4**
	7.5nm,0.3s,SNR=4.0						
EMIJ	**Mijas**	**2.52**	**301**	P	**Pn**	**07 15 20.0**	**+1.8**
	1.6nm,0.2s,SNR=4.0						
EMIJ				S	**Sn**	**07 15 49.7**	**+0.5**
	7.5nm,0.3s,SNR=4.0						
EQES	**Quesada**	**2.63**	**343**	Pn	**Pn**	**07 15 22.2**	**+2.4**
	4.0nm,0.1s,SNR=14						
EQES				Sn	**Sn**	**07 15 53.1**	**+1.0**
	15nm,0.4s,SNR=5.8						
EQES	**Quesada**	**2.63**	**343**	P	**Pn**	**07 15 22.2**	**+2.4**
	4.0nm,0.1s,SNR=14						
EQES				S	**Sn**	**07 15 53.1**	**+1.0**
	15nm,0.4s,SNR=5.8						
EMUR	**La Murta**	**2.64**	**15**	P	**Pn**	**07 15 20.3**	**+0.2**
EMUR	**La Murta**	**2.64**	**15**	Pn	**Pn**	**07 15 19.8**	**-0.3**
	0.8nm,0.3s,SNR=7.9						
EMUR				Sn	**Sn**	**07 15 51.8**	**-0.7**
	9.0nm,0.9s,SNR=7.9						
EMUR	**La Murta**	**2.64**	**15**	P	**Pn**	**07 15 20.3**	**+0.3**
CZD	**Col de Zad**	**3.32**	**228**	*e*P	**Pn**	**07 15 26.0**	**-3.6**
CZD				*e*S	**Sn**	**07 16 04.0**	**-5.6**
ETOB	**Tobarra**	**3.38**	**7**	P	**Pn**	**07 15 32.3**	**+1.8**
ETOB				S	**Sn**	**07 16 09.5**	**-1.6**
ETOB	**Tobarra**	**3.38**	**7**	Pn	**Pn**	**07 15 32.2**	**+1.7**
	2.0nm,0.1s,SNR=5.5						
ETOB				Sn	**Sn**	**07 16 09.5**	**-1.6**
	5.8nm,0.4s						
ETOB	**Tobarra**	**3.38**	**7**	P	**Pn**	**07 15 32.2**	**+1.7**
	2.0nm,0.1s,SNR=5.5						
ETOB				S	**Sn**	**07 16 09.5**	**-1.6**
	5.8nm,0.4s						
EADA	**Adamuz**	**3.50**	**326**	P	**Pn**	**07 15 32.8**	**+0.7**
EADA				S	**Sn**	**07 16 13.8**	**-0.3**
EADA	**Adamuz**	**3.50**	**326**	Pn	**Pn**	**07 15 32.7**	**+0.6**
	0.7nm,0.1s,SNR=6.1						
EADA				Sn	**Sn**	**07 16 13.8**	**-0.3**
	1.3nm,0.2s,SNR=5.0						
EADA	**Adamuz**	**3.50**	**326**	P	**Pn**	**07 15 32.7**	**+0.5**
	0.7nm,0.1s,SNR=6.1						
EADA				S	**Sn**	**07 16 13.8**	**-0.3**
	1.3nm,0.2s,SNR=5.0						
ZFT	**Errachidia**	**3.75**	**211**	*e*P	**Pn**	**07 15 31.0**	**-4.8**
ZFT				*i* S	**Sn**	**07 16 11.5**	**-9.0**
ECAB	**El Cabril**	**3.85**	**317**	Pn	**Pn**	**07 15 36.8**	**-0.5**
	0.8nm,0.4s,SNR=7.9						
ECAB				Sn	**Sn**	**07 16 20.0**	**-3.1**
	1.7nm,0.4s,SNR=7.9						
ECAB	**El Cabril**	**3.85**	**317**	P	**Pn**	**07 15 36.8**	**-0.5**
	0.8nm,0.4s,SNR=7.9						
ECAB				S	**Sn**	**07 16 20.0**	**-3.1**
	1.7nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.44**	**305**	Pn	**Pn**	**07 15 44.3**	**-1.3**
	0.9nm,0.1s,SNR=7.1						
EMIN				Sn	**Sn**	**07 16 34.5**	**-3.4**
	0.4nm,0.2s						
EMIN	**Mina Concepcio**	**4.44**	**305**	P	**Pn**	**07 15 44.3**	**-1.2**
	0.9nm,0.1s,SNR=7.1						
EMIN				S	**Sn**	**07 16 34.5**	**-3.4**
	0.4nm,0.2s						
EBAD	**Badajoz**	**5.24**	**313**	Pn	**Pn**	**07 15 56.0**	**-0.8**
	0.9nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**07 16 53.4**	**-4.6**
	1.7nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**5.24**	**313**	P	**Pn**	**07 15 56.0**	**-0.9**
	0.9nm,0.2s,SNR=7.9						

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*IDC **02** 07:37:20.9±7.6, 40.53N×141.11E, h106^{km}±55^{km}, mb3.4/5, mb1 3.4/6, mb1mx3.2/25, mbtmp3.6/6, Error ellipse: s-maj=95.2km s-min=19.7km az=70.0*

*JMA **02** 07:37:21.2±0.1, 40.48N×140.97E, h105^{km}±1^{km}, M3.0*

ISC 02 07:37:20.0±0.6, **40.50N**±0.06×**141.0E**±0.1, **h112**^{km}±4^{km}, **n13,** σ**0**^{s}**60**/18, **mb3.6**/5, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTM	**Tenmabayashi**	**0.29**	**6**	P	**P**	**07 37 36.4**	**+0.4**
JTM				S	**S**	**07 37 47.4**	**-0.7**
JANG	**Nango**	**0.39**	**108**	P	**P**	**07 37 36.9**	**+0.4**
JANG				*e*S	**S**	**07 37 48.5**	**-0.4**
JAH	**Hinai**	**0.43**	**225**	P	**P**	**07 37 36.8**	**0.0**
JAH				S	**S**	**07 37 48.6**	**-0.7**
JIW	**Iwasaki**	**0.79**	**277**	P	**P**	**07 37 39.7**	**+0.2**
JOT	**Ohata**	**0.89**	**1**	P	**P**	**07 37 41.1**	**+0.6**
JOM	**Ohasama**	**1.04**	**169**	P	**P**	**07 37 42.6**	**+0.5**
JOM				*e*S	**S**	**07 37 58.9**	**+0.3**
JSR	**Shiriuchi**	**1.13**	**336**	P	**P**	**07 37 43.5**	**+0.4**
JSR				*e*S	**S**	**07 38 00.1**	**-0.3**
MJAR	**Matsushiro Arr**	**4.53**	**210**	P	**P**	**07 38 28.2**	**+0.5**
	1.0nm,0.3s,baz=17,slow=16,SNR=6.4						
MKAR	**Makanchi Array**	**42.11**	**299**	P	**P**	**07 45 02.8**	**+0.5**
	0.8nm,0.7s,mb3.6,baz=82,slow=8.6,SNR=6.6						
BVAR	**Borovoye Array**	**48.07**	**310**	P	**P**	**07 45 49.1**	**-0.5**
	0.5nm,0.4s,mb3.7,baz=78,slow=10.0,SNR=3.7						
WRA	**Warramunga Arr**	**60.45**	**187**	P	**P**	**07 47 18.4**	**-1.8**
	0.4nm,0.3s,mb3.9,baz=3.6,slow=5.2,SNR=8.3						
ASAR	**Alice Springs**	**64.17**	**187**	P	**P**	**07 47 45.4**	**+0.4**
	0.3nm,0.7s,mb3.2,baz=3.4,slow=7.9,SNR=3.3						
HFS	**Hagfors**	**70.82**	**335**	P	**P**	**07 48 25.8**	**0.0**
	0.4nm,0.3s,mb3.7,baz=31,slow=8.4,SNR=5.8						

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*ATH **02** 07:41:28.7, 35.78N×25.25E, h32^{km}±3^{km}, MD3.5/7*

*NEIC **02** 07:41:28.7, 35.78N×25.25E, h32^{km}, MD3.5(ATH), After ATH.*

*CSEM **02** 07:41:28.7, 35.78N×25.25E, h32^{km}, MD3.5/8, After ATH*

ISC 02 07:41:27.3±1.1, **35.77N**±0.04×**25.26E**±0.05, **h9**^{km}±8^{km}, **n13,** σ**0**^{s}**74**/18, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.58**	**150**	*e*PN	**Pn**	07 41 40.6	-0.8
NPS				*e*SN	**Sn**	07 41 50.0	-1.0
THR1	**Thera Island**	**0.62**	**15**	*e*P	**Pg**	07 41 40.3	+0.5
SANT	**Santorini**	**0.62**	**15**	*e*Pg	**Pg**	07 41 39.5	-0.3
SANT				*e*Sg	**Sg**	07 41 47.4	-0.8
THR3	**Thira Island,**	**0.65**	**10**	*e*P	**Pb**	07 41 40.5	+0.2
THR5	**Thira Island,**	**0.65**	**6**	*e*P	**Pb**	07 41 40.8	+0.4
THR4	**Thira Island,**	**0.70**	**9**	*e*P	**Pb**	07 41 40.6	-0.5
VAM	**Vamos**	**0.94**	**248**	*e*PN	**Pn**	07 41 46.8	+0.4
VAM				*e*SN	**Sn**	07 41 59.7	-0.2
XRY	**Khrisi**	**0.96**	**158**	*e*PN	**Pn**	07 41 47.5	+0.7
APE	**Apeiranthos**	**1.32**	**10**	*e*PN	**Pn**	07 41 52.3	+0.4
APE				*e*SN	**Sn**	07 42 10.7	+1.1
GVD	**Gavdhos**	**1.33**	**226**	*e*PN	**Pn**	07 41 54.0	+1.9
KARP	**Karpathos**	**1.57**	**98**	*e*PB	**Pb**	07 41 55.9	-0.1
KYTH	**Kithira**	**1.87**	**286**	*e*PB	**Pb**	07 42 01.2	0.0
VLI	**Veliai**	**2.10**	**297**	*e*PN	**Pn**	07 42 02.5	-0.6
VLI				*e*SN	**Sn**	07 42 28.4	-1.2

*WAR **02** 07:43:25, 49.34N×19.85E, ML3.2, Mining Induced*
*IPEC **02** 07:43:26.6±0.2, 49.37N×19.84E, h5^{km}, ML2.5/4, Error ellipse: s-maj=1.3km s-min=1.1km az=144.0*
*NEIC **02** 07:43:27.1±0.6, 49.37N×19.83E, h5^{km}, ML2.8(VIE), Error ellipse: s-maj=7.5km s-min=7.0km az=214.0*
*CSEM **02** 07:43:27.4±0.2, 49.35N×19.81E, h0^{km}, ML2.8, Error ellipse: s-maj=3.8km s-min=1.8km az=30.0*
*PRU **02** 07:43:28.7, 49.40N×19.72E, Podhale*
*IDC **02** 07:43:30.5±2.7, 49.67N×19.67E, mb3.0/1, mb1 3.3/4, mb1mx3.2/21, mbtmp3.1/4, ML2.9/3, Error ellipse: s-maj=46.4km s-min=11.5km az=147.0*
ISC 02 07:43:25.3±0.3**, 49.40N**±0.02×**19.77E**±0.03**, n43, σ1ˢ62**/84**, 2C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIE	Niedzica	0.35	87	⇑ePg	Pg	07 43 31.5	-0.9
NIE				i Sg	Sg	07 43 35.9	-1.3
LIKS	Likavka	0.56	232	i PG	Pg	07 43 36.3	-0.2
LIKS				eSG	Sg	07 43 44.4	+0.5
OJC	Ojcow	0.82	1	ePG	Pg	07 43 42.0	+0.2
OJC				eSG	Sg	07 43 55.0	+2.3
OJC	Ojcow	0.82	1	ePg	Pg	07 43 42.5	+0.7
OJC				eSg	Sg	07 43 54.7	+2.0
KECS	Kecovo	1.03	153	i PG	Pg	07 43 44.9	-1.0
KECS				i SG	Sg	07 43 57.0	-2.7
VYHS	Vyhne	1.09	215	i PG	Pg	07 43 49.5	+2.3
VYHS				i SG	Sg	07 44 05.2	+3.4
OKC	Ostrava-Krasne	1.14	293	ePG	Pg	07 43 50.0	+1.8
OKC				eSG	Sg	07 44 06.2	+2.8
	101nm,0.3s						
OKC	Ostrava-Krasne	1.14	293	Pg	Pg	07 43 50.0	+1.8
OKC				eSg	Sg	07 44 05.1	+1.7
KOLL	Kolacno	1.22	228	i PG	Pg	07 43 51.5	+1.8
RAC	Raciborz	1.23	304	eP	Pg	07 43 52.0	+2.1
RAC				eSG	Sg	07 44 11.0	+4.7
RAC	Raciborz	1.23	304	ePg	Pg	07 43 52.0	+2.1
RAC				eSg	Sg	07 44 10.7	+4.4
PSZ	Piszkesteto	1.48	177	ePn	Pn	07 43 54.2	+0.8
PSZ				eSn	Sn	07 44 13.8	0.0
PSZ	Piszkesteto	1.48	177	⇓i	Pn	07 43 54.4	+1.0
PSZ				e		07 44 13.9	
PSZ	Piszkesteto	1.48	177	ePg	Pg	07 43 54.3	-0.7
PSZ				eS	Sb	07 44 13.9	+1.1
MORC	Moravsky Berou	1.50	285	ePn	Pn	07 43 55.9	+2.3
MORC				eSn	Sn	07 44 16.8	+2.6
MORC	Moravsky Berou	1.50	285	ePn	Pn	07 43 55.0	+1.4
MORC				eSg	Sg	07 44 16.1	+0.9
KOLS	Kolonicke sedl	1.71	105	ePN	Pn	07 43 56.6	0.0
KWP	Kalwaria	1.93	82	ePn	Pn	07 44 01.5	+1.7
KWP				ePg	Pg	07 44 03.1	-0.7
KWP				eSn	Sn	07 44 27.3	+2.3
KWP	Kalwaria	1.93	82	ePG	Pg	07 44 02.0	-1.8
KWP				eSG	Sg	07 44 27.0	-2.5
KWP	Kalwaria	1.93	82	ePn	Pn	07 44 01.8	+2.0
KWP				ePg	Pg	07 44 03.1	-0.7
KWP				eSn	Sn	07 44 27.3	+2.3
KWP	Kalwaria	1.93	82	ePn	Pn	07 44 01.5	+1.8
KWP	Kalwaria	1.93	82	ePg	Pg	07 44 03.1	-0.7
VRAC	Vranov	2.08	269	Pn	Pn	07 44 07.5	+5.6
	2.2nm,0.3s,baz=83,slow=15,SNR=7.8						
VRAC				Lg		07 44 34.3	
	8.5nm,0.3s,baz=346,slow=20,SNR=12						
VRAC	Vranov	2.08	269	ePg	Pg	07 44 05.2	-1.7
VRAC				eSg	Sg	07 44 33.4	-1.2
ZST	Bratislava	2.14	237	ePN	Pn	07 44 04.7	+2.0
ZST				ePG	Pg	07 44 07.2	-0.8
ZST				eSN	Sn	07 44 31.6	+1.3
ZST	Bratislava	2.14	237	ePg	Pg	07 44 07.2	-0.8
ZST				eSn	Sn	07 44 31.6	+1.3
KRUC	Moravsky	2.24	263	ePg	Pg	07 44 06.7	-3.3
KRUC				eSg	Sg	07 44 36.5	-3.4
DPC	Dobruska-Polom	2.43	294	ePG	Pg	07 44 11.8	-2.0
DPC				eSG	Sg	07 44 44.4	-1.7
	62nm,0.7s						
KSP	Ksiaz	2.67	304	ePn	Pn	07 44 13.0	+2.7
KSP				ePg	Pg	07 44 18.8	+0.3
KSP				eSn	Sn	07 44 44.8	+1.1
KSP				eSg	Sg	07 44 52.6	-1.5
KSP	Ksiaz	2.67	304	ePN	Pn	07 44 13.0	+2.7
KSP				ePG	Pg	07 44 19.0	+0.5
KSP				eSN	Sn	07 44 45.0	+1.3
KSP				eSG	Sg	07 44 53.0	-1.1
KSP	Ksiaz	2.67	304	ePg	Pg	07 44 18.8	+0.3
KSP				eSn	Sn	07 44 44.8	+1.1
KSP				eSg	Sg	07 44 52.6	-1.5
UPC	Upice	2.67	296	eSG	Sg	07 44 51.9	-2.3
PRU	Pruhonice	3.45	282	eSG	Sg	07 45 17.3	-2.8
MOA	Molln	3.97	249	⇑iPN	Pn	07 44 28.5	-0.3
MOA				i PG	Pg	07 44 41.1	-3.4
MOA				i SG	Sg	07 45 32.1	-5.3
	3.3nm,0.4s						
GERES	GERESS Array B	4.03	264	Pn	Pn	07 44 31.4	+1.8
	0.5nm,0.3s,baz=79,slow=14,SNR=8.8						
GERES				Sn	Sn	07 45 21.4	+3.3
	1.7nm,0.3s,baz=86,slow=25,SNR=11						
GERES				Lg		07 45 37.5	
	2.0nm,0.3s,baz=76,slow=27,SNR=6.5						
BRG	Berggiesshubel	4.03	294	ePg	Pg	07 44 44.0	-1.8
BRG				eSg	Sg	07 45 34.7	-4.8
KHC	Kasperske Hory	4.07	269	ePN	Pn	07 44 29.5	-0.7
KHC				ex	x	07 44 39.0	
KHC				ePG	Pg	07 44 45.0	-1.5
KHC				ex	x	07 44 45.5	
KHC				eSN	Sn	07 45 17.5	-1.7
KHC				eSG	Sg	07 45 36.6	-4.1
CLL	Collm	4.74	296	ePG	Pg	07 44 53.0	-6.9
CLL				e		07 45 00.0	
CLL				eSG	Sg	07 46 02.0	-1.0
RGN	Rugen	6.51	325	P	Pn	07 44 56.8	-8.0
AQU	L'Aquila	8.33	215	Pn	P	07 45 26.8	-3.4
FINES	FINESS Array B	12.58	14	Pn	P	07 46 21.3	-7.1
	0.1nm,0.3s,baz=207,slow=12,SNR=3.8						
FINES	FINESS Array B	12.58	14	Pn	P	07 46 21.3	-7.1
ARCES	ARCESS Array B	20.39	6	P	P	07 48 06.1	0.0
	0.4nm,0.5s,baz=197,slow=9.4,SNR=3.3						

*NEIC **02** 07:51:27.9±0.7, 24.39S×67.13W, h162^{km}±10^{km}, Error ellipse: s-maj=14.3km s-min=10.5km az=135.0*
*GUC **02** 07:51:28.6±0.8, 24.46S×67.39W, h165^{km}, ML4.3*
*IDC **02** 07:51:29.3±1.5, 24.19S×67.06W, h171^{km}±17^{km}, mb3.5/1, mb1 3.3/6, mb1mx3.2/18, mbtmp3.8/6, Error ellipse: s-maj=23.9km s-min=18.9km az=1.0*
ISC 02 07:51:27.0±0.7**, 24.47S**±0.06×**67.18W**±0.10**, h166**^{km}±16^{km}**, n15, σ1ˢ04**/21**, mb3.6**/1**, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.44	319	⇑iP	P	07 52 10.2	+1.5
LVC				i S	S	07 52 40.9	+0.1
LVC				AMP		07 52 44.9	
	comp=E,478nm,0.5s						
LVC	Limon Verde	2.44	319	P	P	07 52 10.2	+1.5
	comp=E,21nm,0.3s,baz=154,slow=4.9,SNR=240						
LVC				S	S	07 52 41.2	+0.4
	comp=E,96nm,0.3s,baz=326,slow=19,SNR=80						
CPN1	Cerro Paranal	2.94	266	eP	P	07 52 16.0	+1.0
CPN1				i S	S	07 52 51.4	-0.3
CPN1				AMP		07 52 55.9	
	comp=E,294nm,0.3s						
ANCH	Antofagasta	3.06	284	⇑iP	P	07 52 17.5	+1.1
ANCH				i S	S	07 52 53.8	-0.6
ANCH				AMP		07 52 56.9	
	comp=E,437nm,0.7s						
CRCH	Chaqaral	3.63	238	eP	P	07 52 24.2	+0.5
CRCH				i S	S	07 53 06.1	-1.3
CPCH	Copiapo	4.06	224	⇓iP	P	07 52 29.1	0.0
CPCH				i S	S	07 53 16.5	-0.6
CPCH				AMP		07 53 20.1	
	comp=E,1μm,0.1s						
LPAZ	La Paz	8.19	354	P	P	07 53 23.2	-0.6
	comp=E,0.3nm,0.3s,baz=152,slow=9.2,SNR=8.6						
LPAZ				S	S	07 54 49.5	-5.4
	comp=E,0.1nm,0.3s,baz=338,slow=19,SNR=2.6						
LPAZ	La Paz	8.19	354	P	P	07 53 23.2	-0.6
LPAZ				S	S	07 54 49.5	-5.4
CPUP	Villa Florida	9.09	104	P	P	07 53 36.5	+0.9
	comp=E,0.1nm,0.3s,baz=300,slow=15,SNR=6.7						
SIV	San Ignacio	10.19	35	P	P	07 53 47.4	-2.7
	comp=E,0.3nm,0.3s,baz=220,slow=14,SNR=17						
PLCA	Paso Flores	16.46	189	P	P	07 55 18.5	+8.7
	comp=E,0.2nm,0.3s,baz=262,slow=14,SNR=4.1						
BDFB	Brasilia	20.01	68	P	P	07 55 47.4	-1.2
	comp=E,0.6nm,0.3s,baz=222,slow=5.3,SNR=6.4						
MAW	Mawson	81.04	163	P	P	08 03 25.5	+1.3
	comp=E,1.6nm,1.0s,mb3.6,baz=273,slow=12,SNR=4.8						
WRA	Warramunga Arr	131.14	207	PKP	PKPdf	08 10 21.2	+1.3
	comp=E,0.3nm,0.6s,baz=159,slow=1.8,SNR=6.6						
MKAR	Makanchi Array	146.99	40	PKPbc	PKPbc	08 10 51.4	+2.1
	comp=E,0.4nm,0.8s,baz=301,slow=3.3,SNR=4.5						

WEL 02 07:56:07.2±0.3**, 38.66S×175.83E, h150**^{km}±2^{km}**, ML3.5**/15**, 6C, Error ellipse: s-maj=2.2km s-min=2.1km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WTVZ	West Tongariro	0.50	202	PN	P	07 56 28.7	-0.3
WTVZ				SN	S	07 56 45.2	-0.5
TWVZ	Taurewa	0.52	216	PN	P	07 56 28.6	-0.5
NGZ	Ngauruhoe	0.55	199	PN	P	07 56 29.1	-0.2
CNZ	Chateau	0.58	202	PN	P	07 56 29.1	-0.3
WPVZ	Whakapapa	0.59	202	⇑PN	P	07 56 29.2	-0.3
TUVZ	Tukino	0.63	192	⇑PN	P	07 56 29.6	-0.1
TUVZ				SN	S	07 56 46.3	-0.6
FWVZ	Far West T-bar	0.64	200	PN	P	07 56 29.4	-0.3
FWVZ				SN	S	07 56 46.4	-0.7
WNVZ	Wahianoa	0.69	195	PN	P	07 56 29.9	-0.1
WNVZ				eSN	S	07 56 46.9	-0.8
BKZ	Black Stump Fm	0.73	135	⇑PN	P	07 56 30.3	0.0
BKZ				SN	S	07 56 47.4	-0.6
MOVZ	Moawhango	0.75	184	⇑PN	P	07 56 30.0	-0.5
MOVZ				eSN	S	07 56 46.6	-1.7
URZ	Urewera	1.08	69	PN	P	07 56 32.4	-0.5
URZ				SN	S	07 56 51.4	-1.3
WAZ	Wanganui	1.28	210	⇑PN	P	07 56 34.0	-0.8
WAZ				SN	S	07 56 55.0	-1.1
MWZ	Matawai	1.37	77	PN	P	07 56 35.5	-0.3
MWZ				SN	S	07 56 56.6	-1.3
TSZ	Takapari Road	1.41	176	⇑PN	P	07 56 35.6	-0.5
TSZ				SN	S	07 56 56.3	-2.2
KNZ	Kokohu	1.49	105	PN	P	07 56 37.2	+0.2
KNZ				SN	S	07 56 59.1	-0.8
PUZ	Puketiti	2.00	74	PN	P	07 56 42.0	-0.6
PUZ				eSN	S	07 57 08.1	-1.8
MRZ	Mangatainoka R	2.01	185	PN	P	07 56 41.1	-1.7
MRZ				SN	S	07 57 06.9	-3.3
BFZ	Birch Farm	2.05	171	PN	P	07 56 42.1	-1.1
BFZ				SN	S	07 57 08.0	-2.9
MXZ	Matakaoa Point	2.24	62	PN	P	07 56 45.0	-0.7
MXZ				SN	S	07 57 13.9	-1.2
KIW	Kapiti Island	2.31	197	PN	P	07 56 44.0	-2.6
CAW	Cannon Point	2.52	193	PN	P	07 56 46.4	-2.7
MRW	Makara Radio	2.71	198	PN	P	07 56 48.4	-3.2
SNZO	South Karori	2.79	198	PN	P	07 56 49.1	-3.5
SNZO				SN	S	07 57 21.8	-5.5
MSWZ	Moikau Station	2.79	189	PN	P	07 56 49.4	-3.3
TCW	Tory Channel	2.82	205	ePN	P	07 56 49.8	-3.2
TCW				eSN	S	07 57 22.9	-5.0
TUWZ	Tuamarina	3.13	207	PN	P	07 56 53.2	-3.8
THZ	Tophouse	3.83	215	SN	S	07 57 45.7	-5.6
KHZ	Kahutara	4.14	204	PN	P	07 57 05.9	-4.3

WEL 02 08:02:16.7±0.5**, 44.61S×168.21E, h86**^{km}±4^{km}**, ML3.5**/7**, 4D, Error ellipse: s-maj=3.3km s-min=2.2km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.21	252	PN	P	08 02 28.8	-0.5
MSZ				SN	S	08 02 38.5	-0.2
WKZ	Wanaka	0.62	111	⇓PN	P	08 02 32.6	+0.4
WKZ				SN	S	08 02 44.0	+0.2
MLZ	Mavora Lakes	0.74	182	⇓PN	P	08 02 33.3	-0.2
MLZ				SN	S	08 02 44.9	-1.1
MLZ				SN	S	08 02 46.1	+0.1
EAZ	Earnscleugh	1.00	129	PN	P	08 02 36.3	0.0
EAZ				SN	S	08 02 49.6	-1.5
WHZ	Wether Hill Ro	1.30	188	PN	P	08 02 39.6	-0.6
WHZ				SN	S	08 02 56.3	-1.3
LBZ	Lake Benmore	1.43	82	⇓PN	P	08 02 41.3	-0.6
LBZ				SN	S	08 02 58.4	-2.0
FOZ	Fox Glacier	1.49	46	PN	P	08 02 42.8	+0.2
FOZ				SN	S	08 03 02.0	+0.2
TUZ	Tuapeka	1.68	144	PN	P	08 02 44.7	-0.4
TUZ				SN	S	08 03 03.5	-2.5
ODZ	Otahua Downs	1.79	105	PN	P	08 02 45.8	-0.6
ODZ				SN	S	08 03 05.5	-3.0
RPZ	Rata Peaks	2.23	67	⇓PN	P	08 02 51.0	-1.6
RPZ				SN	S	08 03 17.2	-1.9
MQZ	McQueen's Vall	3.32	76	PN	P	08 03 05.2	-2.5
MQZ				eSN	S	08 03 40.3	-5.8
LTZ	Lake Taylor	3.46	60	PN	P	08 03 06.6	-3.0
LTZ				SN	S	08 03 46.3	-3.4
DSZ	Denniston Nort	3.88	44	PN	P	08 03 12.1	-3.4
THZ	Tophouse	4.46	52	ePN	P	08 03 20.0	-3.4
QRZ	Quartz Range	4.94	42	ePN	P	08 03 28.5	-1.4

*IDC **02** 08:11:25.9±1.4, 11.02N×126.19E, mb3.7/4, mb1 4.0/4, mb1mx3.7/20, mbtmp3.7/4, MS3.1/1, Ms1 3.1/1, ms1mx2.6/23, Error ellipse: s-maj=102.1km s-min=25.5km az=84.0*
*MAN **02** 08:11:34.8, 11.05N×125.64E, h27^{km}, mb4.4, ML3.3, MS3.1*
ISC 02 08:11:32.8±0.9**, 11.03N**±0.05×**125.83E**±0.09**, h66**^{km}±9^{km}**, n18, σ1ˢ02**/21**, mb3.6**/4**, 1C-2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.69	326	eP	P	08 11 47.3	-0.1
BESP				eS	S	08 11 58.1	-0.2
PLP	Palo	0.85	279	⇓iP	P	08 11 48.1	-1.2
PLP				i S	S	08 11 58.5	-3.2
MSLP	Maasin	1.31	227	eP	P	08 11 56.3	+0.7
CNP	Catarman	1.87	322	i P	P	08 12 03.4	+0.3
CNP				i S	S	08 12 26.2	+0.7
LLP	Lapu-Lapu	1.97	249	eP	P	08 12 03.1	-1.5
LLP				eS	S	08 12 28.6	+0.6
BUTP	Butuan	2.06	186	i P	P	08 12 07.1	+1.3
TBP	Tagbilaran	2.35	236	eP	P	08 12 10.8	+0.9
TBP				eS	S	08 12 37.2	-0.4
MMPH	Masbate	2.54	302	eP	S	08 12 37.0	-5.3
SNPH	Sibulan	3.06	237	⇓eP	P	08 12 20.1	+0.1
RCP	Roxas	3.08	280	⇑eP	P	08 12 20.6	+0.4
GUIM	Jordan	3.21	263	eP	P	08 12 22.0	-0.1
PAGZ	Pagadian	3.98	218	eP	P	08 12 34.1	+1.3
JOW	Kunigami	15.89	8	LR	LR	08 20 00.5	
	comp=Z,78nm,20.8s,baz=148,slow=32						
WRA	Warramunga Arr	31.89	165	P	P	08 17 51.9	-2.3
	0.5nm,0.9s,mb3.2,baz=350,slow=9.3,SNR=5.5						
ASAR	Alice Springs	35.37	167	P	P	08 18 22.8	-1.4
	0.4nm,0.4s,mb3.6,baz=347,slow=7.3,SNR=8.8						
ILAR	Eielson Array	78.95	26	P	P	08 23 30.9	+0.4
	0.4nm,0.6s,mb3.4,baz=240,slow=4.5,SNR=5.9						
ARCES	ARCESS Array B	83.34	340	P	P	08 23 54.3	+0.8
	3.4nm,1.0s,mb4.1,baz=56,slow=6.5,SNR=4.1						
TXAR	Lajitas Array	117.65	49	PKP	PKPdf	08 30 14.8	+2.9
	0.1nm,0.5s,baz=0.1,slow=1.3,SNR=4.4						

*ISK **02** 08:15:08.7, 37.99N×27.09E, h26^{km}, MD3.3*
*CSEM **02** 08:15:08.7±0.1, 37.98N×27.17E, h20^{km}, MD3.3, Error ellipse: s-maj=4.1km s-min=1.6km az=82.0*
*ATH **02** 08:15:09.9, 37.94N×27.11E, h19^{km}±3^{km}, MD3.3/3*
ISC 02 08:15:09.2±0.5**, 37.95N**±0.02×**27.16E**±0.04**, h8**^{km}±4^{km}**, n21, σ1ˢ05**/34**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.35	227	⇑iPB	Pb	08 15 16.5	-0.8
SMG				eSB	Sb	08 15 22.0	-0.7
BLCB	Balcova	0.44	348	i PG	Pg	08 15 18.0	-0.1
BLCB				i SG	Sg	08 15 23.8	-0.3
KDAG	Bornova	0.46	10	i P	Pg	08 15 18.4	0.0
KDAG				i S	Sg	08 15 25.8	+1.3
URLA	Izmir	0.60	312	i P	Pg	08 15 21.0	-0.3
URLA				i S	Sg	08 15 29.4	0.0
AYDN	Tasoluk	0.64	117	i P	Pg	08 15 22.6	+0.6
AYDN				i S	Sg	08 15 29.7	-0.9
MLSB	Milas	0.82	143	i PG	Pg	08 15 25.3	-0.3
MLSB				i SG	Sg	08 15 37.6	+1.1
BODT	Bodrum	0.90	172	i PG	Pg	08 15 27.2	0.0
BODT				i SG	Sg	08 15 39.7	+0.5
BDRM	Kayabasi	0.92	166	i P	Pb	08 15 27.2	+0.3
BDRM				i S	Sb	08 15 40.2	+1.3
MANT	Manisa	1.22	64	i P	Pb	08 15 33.5	+1.3
MANT				i S	Sb	08 15 47.5	-0.3
AYVA	Ayvalik	1.40	345	i P	Pn	08 15 36.0	+0.9
AYVA				i S	Sb	08 15 54.4	+1.3
PRK	Paraskevi	1.47	332	ePN	Pn	08 15 37.5	+1.5
PRK				eSN	Sn	08 15 57.2	+1.6
DNZL	Cakiroluk	1.52	99	i P	Pn	08 15 41.3	+4.5
DNZL				i S	Sb	08 15 57.0	+0.6
APE	Apeiranthos	1.57	236	PN	Pn	08 15 34.9	-2.6
APE	Apeiranthos	1.57	236	ePN	Pn	08 15 38.4	+0.9
BALB	Balikesir	1.77	18	ePN	Pn	08 15 38.9	-1.5
DST	Dursunbey	2.01	34	ePN	Pn	08 15 42.2	-1.6
FETY	Fethiye	2.02	130	ePN	Pn	08 15 43.2	-0.8
BNT	Bandirma	2.47	14	ePN	Pn	08 15 48.2	-2.2
KCT	Karacabey	2.49	22	ePN	Pn	08 15 49.0	-1.7
ORLT	Orhaneli	2.49	32	ePN	Pn	08 15 49.1	-1.6
ULDT	Uludag	2.67	35	i P	Pn	08 15 59.1	+5.8
ULDT				i S	Sn	08 16 26.7	+0.5

*IGQ **02** 08:24:29.9, 2.44S×79.25W, h43^{km}±4^{km}, mb4.3, Error ellipse: s-maj=11.0km s-min=3.1km az=67.4*
*NEIC **02** 08:24:31.9±0.8, 2.42S×78.99W, h115^{km}±7^{km}, mb4.2/16, MD4.4(IGQ), Error ellipse: s-maj=11.2km s-min=6.4km az=68.0*
*IDC **02** 08:24:33.0±8.2, 2.29S×78.82W, h123^{km}±81^{km}, mb3.2/6, mb1 3.4/8, mb1mx3.3/21, mbtmp3.5/8, MS3.1/1, Ms1 3.1/1, ms1mx2.6/11, Error ellipse: s-maj=71.1km s-min=18.3km az=66.0*
ISC 02 08:24:30.6±0.6**, 2.43S**±0.05×**79.06W**±0.08**, h114**^{km}±6^{km}**, n56, σ0ˢ81**/54**, mb4.0**/17**, 12C, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	Igualata	1.02	24	⇑P	P	08 24 52.3	-0.5
ARRY	Arrayan	1.10	33	⇑P	P	08 24 52.6	-0.9
ARRY				S	S	08 25 10.2	-0.5
CUSU	Cusua	1.14	30	P	P	08 24 53.5	-0.5
JUIV	Juive	1.16	31	P	P	08 24 53.5	-0.8
ULBA	Ulba	1.17	34	⇑P	P	08 24 53.6	-0.7
RUN5	Runtun	1.19	32	P	P	08 24 54.1	-0.5
CAMI	Rancho Maria	1.83	18	P	P	08 25 02.4	+0.3
TAMB	Tambo	1.86	22	⇑P	P	08 25 02.8	+0.3
NAS1	Nasa	1.88	18	⇑P	P	08 25 03.3	+0.6
VC1	Cotopaxi 1	1.90	20	⇑P	P	08 25 03.3	+0.4
SALI	Salinas	1.95	277	P	P	08 24 59.8	-3.8
HOJA	Cerro de Hojas	2.02	313	⇑P	P	08 25 00.1	-4.5
ANTI	Antisana	2.16	24	⇑P	P	08 25 06.9	+0.5
JUA2	San Juan 2	2.25	12	P	P	08 25 07.9	+0.3
GGP	Refugio Guagua	2.29	12	⇑P	P	08 25 08.4	+0.2
PINO	Pino	2.30	11	⇑P	P	08 25 08.7	+0.4
YANA	Yana	2.35	12	⇑P	P	08 25 08.9	0.0
JOR1	San Jorge 1	2.45	10	⇑P	P	08 25 07.2	-3.1
JOR1				S	S	08 25 40.4	+0.2
CAYR	Refugio Cayamb	2.65	23	P	P	08 25 13.9	+0.9
CAYA	Cayambe	2.71	23	P	P	08 25 14.7	+1.0
OTAV	Otavalo	2.72	13	eP	P	08 25 13.3	-0.6
LAV3	Lava3-Reventad	2.72	32	P	P	08 25 13.7	-0.3
CONE	Cono NE Rev Vo	2.74	31	P	P	08 25 15.0	+0.9
COTA	Cotacachi	2.84	15	P	P	08 25 16.6	+1.1
ROSC	El Rosal	8.64	33	P	P	08 26 35.0	+0.9
	0.2nm,0.3s,baz=99,slow=22,SNR=2.2						
NNA	Nana	9.74	167	eP	P	08 26 49.1	0.0
	28nm,1.3s						
PAYG	Puerto Ayora	11.36	279	eP	P	08 27 11.7	+1.2
	24nm,1.0s						
SDV	Santo Domingo	14.03	37	P	P	08 27 42.2	-3.3
	0.1nm,0.3s,baz=316,slow=14,SNR=3.0						
SDV	Santo Domingo	14.03	37	eP	P	08 27 39.8	-5.8
	5.6nm,1.0s						
SAML	Samuel	17.06	113	eP	P	08 28 17.7	-6.0
	7.7nm,0.8s						
LPAZ	La Paz	17.47	143	P	P	08 28 29.1	+0.3
	0.0nm,0.3s,baz=306,slow=17,SNR=1.8						
SIV	San Ignacio	22.25	128	P	P	08 29 20.1	+1.1
	0.7nm,0.4s,mb3.3,baz=307,slow=9.7,SNR=5.1						
SJG	San Juan	24.05	31	eP	P	08 29 36.6	+0.1
	22nm,1.0s,mb4.4						
PLCA	Paso Flores	38.90	170	P	P	08 31 46.5	-0.1
	1.8nm,0.9s,mb3.9,baz=15,slow=13,SNR=3.2						
PLCA	Paso Flores	38.90	170	eP	P	08 31 45.7	-1.0
	13nm,1.3s,mb4.6						
TXAR	Lajitas Array	39.41	325	P	P	08 31 51.3	+0.3
	0.1nm,0.5s,mb2.9,baz=153,slow=10,SNR=3.5						
TXAR				LR	LR	08 46 53.9	
	comp=Z,28nm,21.5s,baz=245,slow=34						
TXAR	Lajitas Array	39.41	325	P	P	08 31 51.3	+0.3
TXAR				LR	LR	08 46 53.9	
WMOK	Wichita Mounta	41.35	335	eP	P	08 32 06.6	-0.3
	2.4nm,1.0s,mb4.0						
RCBR	Riachuelo	43.16	96	eP	P	08 32 16.7	-5.4
ANMO	Albuquerque	45.20	328	eP	P	08 32 38.3	+0.2
	2.2nm,0.9s,mb3.9						
SDCO	Great Sand Dun	46.88	331	eP	P	08 32 51.2	-0.1
	3.5nm,1.3s,mb3.9						
PV10	Paradox Valley	49.15	329	eP	P	08 33 08.8	-0.1
PDAR	Pinedale Array	52.74	332	P	P	08 33 35.4	-0.7
	0.7nm,0.7s,mb3.8,baz=121,slow=8.6,SNR=4.5						
HWUT	Hardware Ranch	52.84	330	eP	P	08 33 36.1	-0.7
	2.8nm,0.9s,mb4.3						
NVAR	Mina Array Bea	54.44	322	P	P	08 33 48.9	+0.4
	0.5nm,0.6s,mb3.7,baz=118,slow=6.8,SNR=4.1						
HLID	Hailey	55.71	329	eP	P	08 33 57.1	-0.5
	1.1nm,0.9s,mb3.9						
ILAR	Eielson Array	82.91	336	P	P	08 36 43.0	-0.8
	0.5nm,1.0s,mb3.3,baz=122,slow=2.7,SNR=4.5						
COLA	College	83.33	336	P	P	08 36 40.3	-5.5
	2.6nm,0.9s,mb4.1						
SNAA	Sanae	83.38	162	P	P	08 36 45.2	-0.8
	1.6nm,1.0s,mb3.8						
QSPA	South Pole Qui	87.64	180	eP	P	08 37 07.2	+0.5
	2.3nm,0.7s,mb4.3						
VNDA	Vanda	93.70	191	eP	P	08 37 37.0	+2.0
	4.0nm,1.3s,mb4.6						
TSUM	Tsumeb	95.47	109	eP	P	08 37 42.5	-1.9
	3.1nm,0.9s,mb4.7						
STKA	Stephens Creek	128.52	225	PKP	PKPdf	08 43 26.9	+2.0
	0.8nm,0.5s,baz=193,slow=3.1,SNR=3.8						
STKA	Stephens Creek	128.52	225	PKP	PKPdf	08 43 26.9	+2.0
ASAR	Alice Springs	138.75	229	PKP	PKPdf	08 43 44.6	+0.5
	0.5nm,0.7s,baz=111,slow=2.2,SNR=5.5						
WRA	Warramunga Arr	140.39	234	PKhKP		08 43 42.0	
	0.3nm,0.5s,baz=128,slow=2.8,SNR=5.2						
WRA				PKP	PKPdf	08 43 47.4	+0.2
	0.7nm,0.5s,baz=114,slow=2.2,SNR=17						

IDC 02 08:34:38.8±3.4**, 0.15S×102.12E, h32**^{km}±7^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/18**, mbtmp3.6**/3**, Error ellipse: s-maj=190.8km s-min=18.9km az=54.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	37.18	124	P	P	08 41 47.7	-1.3
	0.5nm,0.7s,baz=304,slow=9.0,SNR=8.1						
WRA				pP	pP	08 41 57.6	-1.1
	0.3nm,0.4s,baz=305,slow=9.0,SNR=6.5						
ASAR	Alice Springs	38.70	129	P	P	08 41 59.5	-2.3
	0.4nm,0.6s,baz=300,slow=8.0,SNR=7.9						
ASAR				pP	pP	08 42 08.4	-3.0
	0.5nm,0.5s,baz=301,slow=7.7,SNR=7.6						
MKAR	Makanchi Array	49.88	342	P	P	08 43 28.9	-2.3
	0.9nm,0.6s,baz=153,slow=8.1,SNR=11						
MKAR				pP	pP	08 43 39.1	-2.1
	0.4nm,0.5s,baz=158,slow=9.0,SNR=4.3						

IDC 02 08:43:05.2±7.0**, 9.79N×93.49E, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/20**, mbtmp3.4**/3**, Error ellipse: s-maj=369.2km s-min=30.0km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	38.09	348	P	P	08 50 25.8	-1.7
	0.3nm,0.5s,baz=153,slow=8.1,SNR=3.6						
WRA	Warramunga Arr	49.90	126	P	P	08 52 01.4	-1.6
	0.3nm,0.5s,baz=306,slow=8.4,SNR=13						
ASAR	Alice Springs	51.64	131	P	P	08 52 13.3	-2.7
	0.2nm,0.5s,baz=311,slow=6.8,SNR=6.0						

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*IDC **02** 08:52:57.2±1.1, 5.28N×125.44E, mb4.3/6, mb1 4.5/6, mb1mx4.1/19, mbtmp4.3/6, Error ellipse: s-maj=62.0km s-min=18.5km az=79.0*

*NEIC **02** 08:53:08.9±0.7, 5.21N×125.50E, h100^{km}, mb4.9/2, Error ellipse: s-maj=39.8km s-min=9.8km az=80.0*

ISC 02 08:53:01.5±2.2**, 5.00N**±0.09×**124.8E**±0.3**, h50**^{km}±23^{km}**, n17, σ1^{s}00**/18**, mb4.4**/8**, 1D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	2.02	9	⇓eP	P	08 53 33.3	-0.6
KCP				i S	S	08 53 57.9	-0.1
MATI	Mati	2.44	37	i P	P	08 53 33.2	-6.5
BUKP	Musuan	2.88	6	eP	P	08 53 46.0	0.0
BUKP				eS	S	08 54 23.2	+3.6
IPIL	Ipil	3.53	322	eP	P	08 53 46.6	-8.7
KAKA	Kakadu	19.17	157	eP	P	08 57 24.1	+0.3
WRAB	Tennant Creek	26.50	159	eP	P	08 58 36.1	-0.3
	24nm,0.8s,mb4.8						
WRA	Warramunga Arr	26.51	159	P	P	08 58 36.4	-0.1
	5.6nm,0.3s,mb4.5,baz=340,slow=10,SNR=72						
WB2	Warramunga Arr	26.51	159	eP	P	08 58 36.4	-0.1
ASAR	Alice Springs	29.85	163	P	P	08 59 07.0	+0.5
	1.5nm,0.5s,mb4.0,baz=352,slow=8.6,SNR=39						
ASPA	Alice Springs	29.85	163	eP	P	08 59 06.9	+0.4
MJAR	Matsushiro Arr	33.73	20	P	P	08 59 36.5	-3.9
	1.0nm,0.6s,mb3.9,baz=197,slow=9.6,SNR=4.5						
NWAO	Narrogin (SRO)	38.39	190	P	P	09 00 17.2	-2.6
	40nm,1.4s,mb5.0						
STKA	Stephens Creek	40.02	157	P	P	09 00 34.8	+1.4
	17nm,0.6s,mb4.9,baz=332,slow=8.1,SNR=67						
MKAR	Makanchi Array	55.41	326	P	P	09 02 34.5	+1.3
	0.5nm,0.4s,mb3.9,baz=117,slow=7.9,SNR=6.6						
MKAR	Makanchi Array	55.41	326	P	P	09 02 34.5	+1.3
ILAR	Eielson Array	84.81	25	P	P	09 05 30.4	-1.2
	0.6nm,0.5s,mb4.0,baz=244,slow=5.4,SNR=13						
JTS	JuntasAbangare	146.73	63	ePKPdf	PKPdf	09 12 37.0	-0.4

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*IDC **02** 08:53:00.2±0.8, 18.38S×173.78W, mb4.3/8, mb1 4.6/8, mb1mx4.3/18, mbtmp4.3/8, Error ellipse: s-maj=48.7km s-min=19.2km az=141.0*

*BJI **02** 08:53:10.1, 17.50S×174.30W, h65^{km}, mB4.0, mb4.8, Ms3.7, Msz3.6*

*NEIC **02** 08:53:10.2±2.3, 17.51S×174.27W, h66^{km}±20^{km}, mb4.5/13, Error ellipse: s-maj=30.5km s-min=11.2km az=148.0*

ISC 02 08:53:04.9±2.6**, 17.9S**±0.2×**174.1W**±0.1**, h38**^{km}±20^{km}**, n38, σ1^{s}18**/34**, mb4.5**/22**, 1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.56	30	ePn	P	08 54 13.4	+0.1
AFI				eSn	S	08 55 10.8	+5.0
DZM	Mont Dzumac	18.74	254	P	P	08 57 26.9	+3.8
	0.3nm,0.3s,baz=99,slow=23,SNR=3.6						
RPZ	Rata Peaks	28.62	203	P	P	08 58 56.6	-3.3
	14nm,0.6s,mb4.9,baz=40,slow=12,SNR=4.8						
CTA	Charters Tower	37.48	260	eP	P	09 00 18.1	+1.2
CTAO	Charters Tower	37.48	260	eP	P	09 00 18.1	+1.2
	12nm,0.7s,mb4.8						
WRAB	Tennant Creek	48.64	259	eP	P	09 01 45.3	-2.1
	9.2nm,0.8s,mb4.9						
WRA	Warramunga Arr	48.65	259	P	P	09 01 47.3	-0.2
	1.6nm,0.5s,mb4.3,baz=98,slow=8.4,SNR=14						
ASAR	Alice Springs	48.73	254	P	P	09 01 47.9	-0.1
	4.5nm,0.6s,mb4.7,baz=92,slow=8.0,SNR=22						
VNDA	Vanda	60.83	186	P	P	09 03 21.3	+5.9
	1.3nm,0.8s,mb4.1						
MBWA	Marble Bar	62.04	255	P	P	09 03 19.9	-4.2
QSPA	South Pole Qui	72.16	180	eP	P	09 04 28.9	+1.9
	4.6nm,0.8s,mb4.5						
CMB	Columbia Colle	75.08	41	P	P	09 04 44.0	-0.9
	5.7nm,1.1s,mb4.4						
NVAR	Mina Array Bea	76.64	42	P	P	09 04 54.1	+0.4
	2.6nm,0.8s,mb4.2,baz=217,slow=7.6,SNR=16						
TPH	Tonopah	77.12	43	eP	P	09 04 56.0	-0.5
	5.8nm,0.8s,mb4.6						
MSU	Marysvale	80.68	45	eP	P	09 05 16.4	+0.7
NJ2	Nanjing	81.13	308	eP	P	09 05 17.1	-1.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
PMSA	Palmer Station	82.18	156	P	P	09 05 28.1	+5.1
	comp=Z,9.5nm,0.6s,mb4.9						
MNTX	Cornudas Mount	82.26	53	eP	P	09 05 22.2	-2.0
	comp=Z,2.3nm,0.9s,mb4.1						
CN2	Changchun	82.56	321	eP	P	09 05 25.2	-0.2
TXAR	Lajitas Array	82.57	56	P	P	09 05 24.9	-0.8
	comp=Z,1.5nm,1.0s,mb4.0,baz=225,slow=7.1,SNR=11						
PV10	Paradox Valley	82.73	46	eP	P	09 05 26.0	-0.4
ANMO	Albuquerque	82.92	50	P	P	09 05 25.6	-1.9
	comp=Z,0.8nm,0.5s,mb4.0						
PV01	Paradox Valley	82.93	46	eP	P	09 05 27.5	+0.1
GDL2	Guadalupe Moun	83.26	53	eP	P	09 05 28.5	-0.7
MCMT	McKenzie Canyo	83.62	39	eP	P	09 05 31.0	+0.2
MCK	McKinley	83.69	11	P	P	09 05 30.6	-0.1
	comp=Z,3.6nm,1.0s,mb4.5						
SNOW	Snow King Moun	84.17	41	eP	P	09 05 34.2	+0.5
	comp=Z,3.8nm,1.0s,mb4.5						
QLMT	Earthquake Lak	84.47	39	eP	P	09 05 36.3	+1.2
PDAR	Pinedale Array	84.57	42	P	P	09 05 35.8	+0.1
	comp=Z,1.4nm,0.8s,mb4.2,baz=243,slow=3.3,SNR=11						
COLA	College	84.93	11	eP	P	09 05 39.5	+2.6
	comp=Z,7.8nm,0.9s,mb4.8						
ILAR	Eielson Array	85.02	11	P	P	09 05 40.5	+3.2
	comp=Z,1.6nm,0.8s,mb4.2,baz=232,slow=5.5,SNR=13						
SNAA	Sanae	90.46	177	P	P	09 06 10.9	+7.5
	comp=Z,7.9nm,1.6s,mb4.8						
YKA	Yellowknife Ar	92.65	24	P	P	09 06 15.3	+1.6
	comp=Z,0.7nm,0.8s,mb4.1,baz=240,slow=4.0,SNR=5.1						
BVAR	Borovoye Array	119.41	321	PKP	PKPdf	09 11 51.3	+0.9
	comp=Z,0.7nm,0.4s,baz=180,slow=5.9,SNR=4.7						
ARCES	ARCESS Array B	126.97	352	PKP	PKPdf	09 12 04.5	-0.1
	comp=Z,1.5nm,0.8s,baz=315,slow=1.7,SNR=3.9						
CLL	Collm	146.19	352	⇓iPKP1	PKPbc	09 12 45.2	+4.0
BRTR	Keskin Array B	147.60	318	PKPbc	PKPdf	09 12 49.3	+6.5
	comp=Z,1.7nm,0.8s,baz=153,slow=2.8,SNR=6.1						
GERES	GERESS Array B	148.49	350	PKPbc	PKPdf	09 12 51.4	+7.5
	comp=Z,0.9nm,0.6s,baz=27,slow=3.0,SNR=4.5						

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*NEIC **02** 09:07:43.6±0.5, 54.56S×142.47E, h10^{km}, mb4.6/6, Error ellipse: s-maj=25.1km s-min=8.9km az=88.0*

*IDC **02** 09:07:43.5±1.4, 54.58S×141.49E, mb3.8/5, mb1 4.0/5, mb1mx3.9/13, mbtmp3.8/5, MS3.8/5, Ms1 3.8/5, ms1mx3.5/21, Error ellipse: s-maj=108.7km s-min=19.1km az=87.0*

ISC 02 09:07:42.1±0.6**, 54.51S**±0.07×**142.5E**±0.4**, h10**^{km}**, (h7**^{km}±2.5^{km}**:pP-P), n31, σ1^{s}28**/24**, mb4.2**/10**, MS3.7**/5**, 4C, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	21.45	72	LR	LR	09 18 53.8	
	comp=Z,377nm,21.6s,MS3.8,baz=180,slow=30						
STKA	Stephens Creek	22.63	358	P	P	09 12 46.4	+2.2
	2.9nm,0.9s,mb3.7,baz=178,slow=14,SNR=4.5						
VNDA	Vanda	24.14	170	P	P	09 13 01.5	+3.0
	1.4nm,0.6s,mb3.5,baz=324,slow=13,SNR=4.6						
VNDA	Vanda	24.14	170	P	P	09 13 01.5	+3.0
	1.2nm,0.7s,mb3.4						
SBA	Scott Base	24.97	168	P	P	09 13 07.5	+1.0
	25nm,1.3s,mb4.6						
NWAO	Narrogin (SRO)	27.98	310	LR	LR	09 22 16.9	
	comp=Z,232nm,21.7s,MS3.7,baz=132,slow=32						
ASAR	Alice Springs	31.46	345	P	P	09 14 06.2	+0.4
	1.0nm,0.7s,mb3.8,baz=164,slow=9.2,SNR=14						
WRA	Warramunga Arr	35.06	347	P	P	09 14 37.0	-0.1
	2.9nm,0.7s,mb4.3,baz=168,slow=7.8,SNR=24						
WRAB	Tennant Creek	35.07	347	eP	P	09 14 36.2	-1.0
	6.3nm,0.7s,mb4.7						
WRAB				e		09 14 51.2	
QSPA	South Pole Qui	35.60	180	eP	P	09 14 39.2	-1.9
	5.3nm,0.8s,mb4.5						
DZM	Mont Dzumac	37.08	39	LR	LR	09 27 09.7	
	comp=Z,112nm,20.7s,MS3.6,baz=200,slow=31						
MBWA	Marble Bar	37.48	324	eP	P	09 15 02.0	+4.4
	12nm,1.1s,mb4.6						
MAW	Mawson	37.75	218	LR	LR	09 30 05.3	
	comp=Z,86nm,19.0s,MS3.6,baz=235,slow=36						
RAO	Raoul Island	38.05	65	P	P	09 15 01.7	-0.5
	982nm,1.1s						
PMG	Port Moresby	45.14	7	P	P	09 15 59.6	-0.9
	30nm,1.2s,mb5.0						
SNAA	Sanae	51.76	193	e	P	09 16 51.8	+0.6
SNAA	Sanae	51.76	193	e	P	09 16 54.0	+2.8
SNAA	Sanae	51.76	193	e	P	09 17 00.4	+9.2
SNAA	Sanae	51.76	193	P	P	09 16 49.8	-1.3
	1.3nm,1.0s,mb3.8,baz=166,slow=11,SNR=9.2						
SNAA	Sanae	51.76	193	⇑iP	P	09 16 50.5	-0.7
SNAA				e	pP	09 16 51.8	-2.4
SNAA				e	pP	09 16 54.0	-0.2
SNAA				e		09 17 00.4	
VNA3	Neumayer Olymp	53.00	191	e	P	09 17 00.4	0.0
VNA3	Neumayer Olymp	53.00	191	⇑iP	P	09 16 58.9	-1.5
VNA3				e	pP	09 17 00.4	-3.1
VNA2	Neumayer--Watz	53.03	192	e	P	09 17 01.2	+0.5
VNA2	Neumayer--Watz	53.03	192	e	P	09 17 03.0	+2.3
VNA2	Neumayer--Watz	53.03	192	e	P	09 17 10.8	+10
VNA2	Neumayer--Watz	53.03	192	⇑iP	P	09 16 59.6	-1.1
VNA2				e	pP	09 17 01.2	-2.5
VNA2				e	pP	09 17 03.0	-0.7
VNA2				e		09 17 10.8	
VNA1	Neumayer--Stat	53.39	192	⇑iP	P	09 16 56.3	-7.0
VNA1				e		09 17 07.4	
PMSA	Palmer Station	59.31	167	P	P	09 17 45.5	-0.3
	185nm,1.6s						
CMAR	Chiang Mai Arr	81.62	319	LR	LR	09 56 09.5	
	comp=Z,41nm,18.4s,MS3.8,baz=348,slow=36						
FINES	FINESS Array B	146.82	308	PKPbc	PKPbc	09 27 24.1	+1.4
	1.5nm,0.8s,baz=72,slow=6.0,SNR=5.8						
GERES	GERESS Array B	148.33	281	PKPbc	PKPdf	09 27 30.0	+2.9
	0.3nm,0.3s,baz=217,slow=6.7,SNR=4.3						

MAN 02 09:22:59.5, 9.69N×124.61E, h1^{km}**, mb3.9, ML2.7, MS2.3, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.50	29	i P	Pg	09 23 08.4	-1.1
TBP	Tagbilaran	0.74	270	eP	Pg	09 23 13.3	-0.9
TBP				eS	Sg	09 23 24.3	+0.2
SNPH	Sibulan	1.40	256	⇓iP	Pb	09 23 26.1	-0.1
SNPH				i S	Sb	09 23 46.7	+2.3
PAGZ	Pagadian	2.20	214	eP	Pn	09 23 37.8	+0.2

IDC 02 09:26:17.2±1.5**, 6.55N**×**92.49E, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.6**/21**, mbtmp3.6**/5**, ML4.2**/1**, Error ellipse: s-maj=56.9km s-min=24.2km az=52.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.40	27	Pn	P	09 29 30.9	-0.4
	0.4nm,0.3s,baz=231,slow=14,SNR=17						
MKAR	Makanchi Array	41.05	349	P	P	09 34 01.2	-2.8
	0.5nm,0.7s,baz=146,slow=10,SNR=3.2						
WRA	Warramunga Arr	48.86	124	P	P	09 35 04.4	-2.5
	0.3nm,0.5s,baz=299,slow=9.8,SNR=6.2						
ASAR	Alice Springs	50.35	128	P	P	09 35 16.9	-1.4
	0.4nm,0.8s,baz=302,slow=7.7,SNR=3.9						
BRTR	Keskin Array B	62.07	312	P	P	09 36 40.8	-1.4
	1.0nm,0.8s,baz=135,slow=8.2,SNR=4.6						

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*NIED **02** 09:29:00, 33.20N×137.20E, h11^{km}, Mw3.7 Best double couple: M$_0$3.75×10^{14} NP1:φ$_s$26°, δ68°, λ34°. NP2:φ$_s$282°, δ58°, λ154°.*

*JMA **02** 09:29:14.0±0.1, 33.23N×137.21E, h42^{km}±2^{km}, M3.8*

ISC 02 09:29:13.9±0.7**, 33.23N**±0.05×**137.21E**±0.03**, h47**^{km}±15^{km}**, n20, σ0^{s}64**/38**, 1C-9D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK01	Tokai 1	0.62	30	P	P	09 29 26.4	-0.1
TK01				S	S	09 29 35.2	-0.5
TK02	Tokai 2	0.85	32	P	P	09 29 29.6	0.0
TK02				eS	S	09 29 41.3	+0.2
TK03	Tokai 3	1.12	34	P	P	09 29 33.7	+0.3
TK03				S	S	09 29 48.1	+0.1
JIE	Ise	1.23	340	⇓P	P	09 29 35.7	+0.7
JIE				eS	S	09 29 50.6	-0.2
JKN2	Miekihoku	1.27	322	P	P	09 29 35.9	+0.3
JKN2				S	S	09 29 50.8	-1.1
TK04	Tokai 4	1.28	25	⇓P	P	09 29 36.0	+0.3
TK04				S	S	09 29 51.9	0.0
JWZ	Kozaga	1.29	284	⇓P	P	09 29 35.9	+0.1
JWZ				S	S	09 29 51.1	-1.1
TSUJ	Tsu 2	1.62	336	⇓P	P	09 29 41.0	+0.5
TSUJ				eS	S	09 30 00.2	-0.1
JWM	Minabe	1.67	292	⇓P	P	09 29 41.6	+0.4
JWM				S	S	09 30 01.0	-0.6
JWY	Kouya	1.67	307	⇓P	P	09 29 42.1	+0.8
JWY				S	S	09 30 01.6	0.0
JHE	Heguri	1.91	319	⇓P	P	09 29 45.2	+0.7
JHE				eS	S	09 30 07.6	+0.2
SHZ3	Shizuoka 3	2.01	24	P	P	09 29 46.0	0.0
SHZ3				eS	S	09 30 08.8	-1.2
JIZS	Izushimoda	2.03	43	P	P	09 29 46.6	+0.3
JHJ2	Mitsune	2.19	92	P	P	09 29 48.5	-0.1
JHJ2				eS	S	09 30 13.0	-1.5
JIM2	Oshima 3	2.37	51	P	P	09 29 51.8	+0.7
JIM2				eS	S	09 30 17.9	-1.2
JAI	Aioi	2.37	284	⇑P	P	09 29 51.6	+0.4
JAI				S	S	09 30 17.7	-1.6
JGM	Miyama	2.50	351	⇓P	P	09 29 53.5	+0.5
JGM				S	S	09 30 22.2	-0.2
JYN	Shimob	2.52	26	P	P	09 29 53.9	+0.6
JWT	Wachi	2.54	324	⇓P	P	09 29 54.3	+0.7
JWT				eS	S	09 30 23.4	0.0
MAT	Matsushiro	3.41	14	P	P	09 30 06.9	+1.0
MAT				S	S	09 30 45.7	+0.3

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*IDC **02** 09:29:37.1±0.7, 26.46N×44.67W, mb3.9/12, mb1 4.1/12, mb1mx4.0/26, mbtmp3.9/12, MS3.7/16, Ms1 3.7/16, ms1mx3.6/32, Error ellipse: s-maj=25.3km s-min=16.5km az=112.0*

*NEIC **02** 09:29:38.6±0.5, 26.45N×44.71W, h10^{km}, mb4.7/12, Error ellipse: s-maj=15.2km s-min=11.4km az=125.0*

ISC 02 09:29:36.6±0.5**, 26.46N**±0.09×**44.6W**±0.1**, h10**^{km}**, n35, σ1^{s}01**/23**, mb4.2**/21**, MS3.7**/16**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	21.55	252	LR	LR	09 41 29.7	
	comp=Z,114nm,18.2s,MS3.3,baz=85,slow=33						
SCHQ	Schefferville	32.68	336	LR	LR	09 47 32.6	
	comp=Z,61nm,19.9s,MS3.3,baz=127,slow=33						
WVT	Waverly	37.88	296	P	P	09 36 54.8	-0.7
	8.9nm,1.2s,mb4.4						
OXF	Oxford	39.15	293	eP	P	09 37 09.6	+3.4
	29nm,1.2s,mb4.9						
SAML	Samuel	39.54	210	eP	P	09 37 09.2	-0.5
	5.8nm,1.1s,mb4.2						
ESK	Eskdalemuir	41.59	35	P	P	09 37 24.5	-1.6
	16nm,1.1s,mb4.6						
BDFB	Brasilia	41.98	185	P	P	09 37 30.1	+0.4
	1.7nm,0.6s,mb3.8,baz=70,slow=12,SNR=2.9						
DBIC	Dimbokro	42.66	110	LR	LR	09 52 25.4	
	comp=Z,151nm,20.4s,MS3.9,baz=7.3,slow=32						
SIV	San Ignacio	45.12	203	P	P	09 37 54.7	-0.6
	0.8nm,0.8s,mb3.6,baz=16,slow=12,SNR=5.5						
ULM	Lac du Bonnet	45.56	315	LR	LR	09 54 11.6	
	comp=Z,65nm,19.3s,MS3.6,baz=20,slow=32						
WMOK	Wichita Mounta	46.85	294	eP	P	09 38 06.2	-2.5
	6.7nm,1.2s,mb4.5						
WMOK				e		09 38 16.0	
LPAZ	La Paz	48.24	211	P	P	09 38 19.9	+0.1
	2.2nm,0.7s,mb4.3,baz=24,slow=6.2,SNR=12						
LPAZ	La Paz	48.24	211	eP	P	09 38 19.6	-0.2
	5.6nm,1.0s,mb4.5						
LPAZ				P		09 38 19.9	
GERES	GERESS Array B	49.94	47	LR	LR	09 55 08.7	
	comp=Z,33nm,20.1s,MS3.3,baz=189,slow=31						
NOA	NORSAR Array B	50.80	31	P	P	09 38 39.1	+0.3
	0.9nm,0.9s,mb3.7,baz=253,slow=7.5,SNR=3.4						
NOA				LR	LR	09 56 23.3	
	comp=Z,50nm,19.6s,MS3.5,baz=265,slow=32						
TXAR	Lajitas Array	51.77	288	P	P	09 38 47.0	+0.4
	0.2nm,0.6s,mb3.2,baz=98,slow=8.8,SNR=3.8						
TXAR				LR	LR	09 57 10.1	
	comp=Z,68nm,21.5s,MS3.6,baz=150,slow=32						
GDL2	Guadalupe Moun	51.82	291	P	P	09 38 48.8	+1.8
PDAR	Pinedale Array	54.57	305	P	P	09 39 07.9	+0.7
	1.2nm,0.8s,mb4.0,baz=90,slow=5.9,SNR=8.7						
PDAR				LR	LR	10 01 09.8	
	comp=Z,71nm,18.0s,MS3.8,baz=68,slow=35						
YKA	Yellowknife Ar	57.65	329	P	P	09 39 28.5	-0.6
	0.9nm,0.8s,mb3.9,baz=92,slow=7.7,SNR=8.2						
YKA				LR	LR	10 03 05.4	
	comp=Z,130nm,20.3s,MS4.0,baz=95,slow=35						
FINES	FINESS Array B	57.93	32	P	P	09 39 30.5	-0.6
	1.7nm,0.7s,mb4.2,baz=236,slow=6.9,SNR=7.8						
KBS	Kingsbay	57.97	11	eP	P	09 39 22.0	-9.2
	9.2nm,0.9s,mb4.8						
ARCES	ARCESS Array B	58.53	23	P	P	09 39 34.6	-0.5
	2.2nm,0.6s,mb4.3,baz=263,slow=7.3,SNR=8.8						
ELK	Elko	59.04	303	LR	LR	10 02 56.5	
	comp=Z,76nm,19.2s,MS3.8,baz=103,slow=34						
NEW	Newport	59.33	312	LR	LR	10 03 16.7	
	comp=Z,105nm,18.6s,MS4.0,baz=75,slow=34						
NEW	Newport	59.33	312	eP	P	09 39 40.6	-0.5
	9.3nm,1.3s,mb4.7						
NVAR	Mina Array Bea	61.81	301	LR	LR	10 04 54.7	
	comp=Z,113nm,20.2s,MS4.0,baz=110,slow=34						
YBH	Yreka Blue Hor	64.37	306	LR	LR	10 07 50.3	
	comp=Z,79nm,18.2s,MS3.9,baz=45,slow=36						
BRTR	Keskin Array B	65.00	56	P	P	09 40 19.9	+0.9
	1.1nm,0.9s,mb3.9,baz=254,slow=6.9,SNR=3.6						
INK	Inuvik	65.29	336	LR	LR	10 08 25.2	
	comp=Z,75nm,18.4s,MS3.9,baz=74,slow=36						
BBB	Bella Bella	65.67	318	LR	LR	10 08 27.7	
	comp=Z,65nm,18.9s,MS3.9,baz=324,slow=36						
MALT	Malatya	68.97	57	eP	P	09 40 51.2	+7.0
	10nm,1.4s,mb4.6						
ILAR	Eielson Array	71.40	334	P	P	09 40 58.2	-0.2
	1.8nm,0.8s,mb4.1,baz=65,slow=5.2,SNR=21						
ILAR				LR	LR	10 11 46.6	
	comp=Z,46nm,19.5s,MS3.7,baz=0.3,slow=35						
COLA	College	71.74	334	eP	P	09 41 01.6	+1.1
	2.7nm,0.8s,mb4.2						
BVAR	Borovoye Array	82.87	33	P	P	09 42 03.9	+1.4
	0.8nm,0.5s,mb4.0,baz=281,slow=7.6,SNR=4.7						
VNDA	Vanda	127.38	187	PKP	PKPdf	09 48 43.5	-0.5
	1.0nm,0.8s,baz=1.1,slow=1.5,SNR=4.1						

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*THR **02** 09:32:18.8±0.4, 30.83N×56.80E, h18^{km}±7^{km}, ML3.4*

*CSEM **02** 09:32:18.6±0.2, 30.82N×56.77E, h16^{km}, ML3.6, Error ellipse: s-maj=8.0km s-min=3.6km az=47.0*

*TEH **02** 09:32:20.4, 30.92N×56.84E, h10^{km}, Mn3.6*

ISC 02 09:32:18.4±0.8**, 30.86N**±0.08×**56.8E**±0.1**, h10**^{km}**, n15, σ1^{s}13**/15**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.88	181	ePG	Pg	09 32 35.0	-0.9
KRBR				AML	AML	09 32 50.8	
	comp=N,1μm,0.1s						
IBAF	Bafgh	1.27	305	Pg	Pg	09 32 41.3	-2.5
IMEH	Mehriz	1.93	286	Pn	Pn	09 32 52.5	+0.8
ICHK	Chekchek	2.45	305	Pn	Pn	09 32 59.8	+0.7
ISAD	Sadrabad	2.85	292	Pn	Pn	09 33 04.3	-0.5
IPAR	Pars	3.38	253	Pn	Pn	09 33 13.9	+1.5
ZHSF	Zahedan	3.67	109	ePN	Pn	09 33 16.7	+0.2
NASN	Na’in	3.90	301	ePN	Pn	09 33 20.6	+1.0
NASN				eSG	Sg	09 34 21.0	-7.1
NASN				AML	AML	09 34 24.3	
	comp=N,66nm,0.5s						
IZEF	Zefreh	4.30	299	Pn	Pn	09 33 25.2	-0.2
IFIR	Firoozkooh	5.84	326	Pn	Pn	09 33 49.3	+2.1
IVRN	Varamin	5.92	315	Lg		09 35 24.7	
IVRN	Varamin	5.92	315	Pn	Pn	09 33 47.5	-0.8
IDMV	Damavand	6.16	321	Pn	Pn	09 33 51.6	-0.1
DAMV	Damavand	6.23	321	ePN	Pn	09 33 52.8	0.0
DAMV				AML	AML	09 35 51.7	
	comp=N,8.8nm,0.7s						
IRAZ	Razeghan	7.32	310	Pn	Pn	09 34 06.2	-1.8

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*MOS **02** 10:01:41.9±1.0, 16.08S×69.57W, h200^{km}, mb4.8/22, Error ellipse: s-maj=17.5km s-min=8.1km az=120.5*

*BJI **02** 10:01:44.8, 16.10S×69.50W, h216^{km}, mB4.8*

*NEIC **02** 10:01:44.8±0.1, 16.12S×69.49W, mb4.6/51, Error ellipse: s-maj=6.3km s-min=3.5km az=67.0*

*IDC **02** 10:01:44.2±0.5, 16.15S×69.59W, h206^{km}±3^{km}, mb4.1/19, mb1 4.3/22, mb1mx4.2/27, mbtmp4.6/22, Error ellipse: s-maj=11.5km s-min=8.0km az=48.0*

ISC 02 10:01:43.6±0.2**, 16.16S**±0.03×**69.58W**±0.05**, h220**^{km}**, h220**^{km}±2.7^{km}**:pP-P, n199, σ0^{s}98**/161**, mb4.5**/59**, 5C-5D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	1.40	95	P	P	10 02 19.6	+1.0
	2μm,0.3s,baz=301,slow=6.9						
LPAZ				S	S	10 02 45.6	0.0
	195nm,0.3s,baz=173,slow=24,SNR=8.6						
LPAZ	La Paz	1.40	95	eP	P	10 02 19.6	+1.1
ARE	Arequipa	1.86	261	⇑iP	P	10 02 20.0	-2.6
ARE				eS	S	10 02 49.0	-3.7
LVC	Limon Verde	6.45	174	P	P	10 03 17.2	-0.4
	27nm,0.3s,baz=17,slow=9.8,SNR=188						
LVC				S	S	10 04 25.9	-5.0
	126nm,0.3s,baz=76,slow=13,SNR=21						
LVC	Limon Verde	6.45	174	eP	P	10 03 15.5	-2.1
	142nm,0.7s						
NNA	Nana	8.18	300	eP	P	10 03 36.9	-3.0
	234nm,0.8s						
NNA				eS	S	10 05 02.8	-8.0
SIV	San Ignacio	8.18	90	P	P	10 03 38.5	-1.4
	13nm,0.3s,baz=276,slow=12,SNR=246						
SIV				S	S	10 05 21.7	+11
	6.9nm,0.3s,baz=195,slow=23,SNR=3.5						
SAML	Samuel	9.51	42	eP	P	10 03 56.0	-1.1
	26nm,0.6s						
CMCH	Combarbala	15.00	185	eP	P	10 05 04.6	-1.5
CPUP	Villa Florida	15.24	134	eP	P	10 05 07.2	-2.0
CPUP				pmax	pmax		
	comp=Z,22nm,1.0s						
CPUP	Villa Florida	15.24	134	P	P	10 05 07.6	-1.6
	comp=Z,0.6nm,0.3s,baz=331,slow=11,SNR=23						
CPUP	Villa Florida	15.24	134	eP	P	10 05 07.2	-2.0
	comp=Z,22nm,1.0s						
JACH	Jahuel	16.47	183	eP	P	10 05 24.2	+0.3
ROCH	El Roble	16.79	184	eP	P	10 05 27.0	-0.5
LCCH	Las Cruces	17.33	186	eP	P	10 05 32.7	-0.7
JATB	Jatai	17.38	98	c iP	P	10 05 33.8	-0.2
JATB				i		10 05 50.2	
PCH	Pirque	17.40	183	eP	P	10 05 33.9	-0.3
TACH	Talagante	17.46	184	eP	P	10 05 34.2	-0.5
SFDO	San Fernando	18.42	184	eP	P	10 05 44.3	-0.4
OTAV	Otavalo	18.50	331	eP	P	10 05 46.2	+0.5
	comp=Z,20nm,0.7s						
BDFB	Brasilia	20.75	92	P	P	10 06 08.6	+0.3
	comp=Z,35nm,0.5s,baz=272,slow=11,SNR=43						
BAO	Brasilia Array	20.77	92	P	P	10 06 08.0	-0.6
TRQA	Tornquist	22.82	164	eP	P	10 06 28.6	+0.2
	comp=Z,155nm,1.3s,mb5.4						
PLCA	Paso Flores	24.50	182	eP	P	10 06 43.9	-0.3
PLCA				pmax	pmax		
	comp=Z,78nm,1.1s						
PLCA	Paso Flores	24.50	182	P	P	10 06 44.1	-0.1
	comp=Z,49nm,1.0s,mb5.1,baz=354,slow=9.8,SNR=27						
PLCA				ScP		10 13 37.2	
	comp=Z,6.8nm,0.9s,baz=20,slow=6.9,SNR=7.5						
PLCA	Paso Flores	24.50	182	eP	P	10 06 43.9	-0.3
	comp=Z,78nm,1.1s,mb5.2						
SDV	Santo Domingo	24.91	358	P	P	10 06 47.1	-1.1
	comp=Z,1.5nm,0.3s,mb4.0,baz=203,slow=8.1,SNR=5.5						
SDV				pP		10 07 30.1	
	comp=Z,2.7nm,0.3s,baz=213,slow=8.1,SNR=2.5						
SDV	Santo Domingo	24.91	358	eP	P	10 06 46.5	-1.7
	comp=Z,18nm,1.3s,mb4.5						
PAYG	Puerto Ayora	25.57	305	P	P	10 07 00.7	+6.3
	comp=Z,21nm,1.0s,mb4.7						
JTS	JuntasAbangare	30.37	329	eP	P	10 07 37.8	+0.5
JTS				pmax	pmax		

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      comp=Z,26nm,1.0s
JTS   JuntasAbangare    30.37 329  eP      P        10 07 37.8 +0.5
      comp=Z,26nm,1.0s,mb4.8
CS6B  Jaguaretama       32.11  74c iP      P        10 07 51.9 -0.5
CS6B                               e                10 08 26.0
SJG   San Juan          34.23   6  eP      P        10 08 09.1 -1.4
SJG                                 pmax   pmax
      comp=Z,85nm,1.0s
SJG   San Juan          34.23   6  eP      P        10 08 09.1 -1.4
      comp=Z,85nm,1.0s,mb5.2
RCBR  Riachuelo         34.56  77  eP      P        10 08 13.7 +0.3
      comp=Z,66nm,0.9s,mb5.2
USHA  Ushuaia           38.60 179   P      P        10 08 46.4 -0.5
      comp=Z,28nm,0.9s,mb4.8,baz=336,slow=5.2,SNR=11
OXF   Oxford            53.81 340   P      P        10 10 42.3 -3.4
OXF                                 pmax   pmax
      comp=Z,20nm,1.1s,mb4.6
OXF   Oxford            53.81 340   P      P        10 10 42.3 -3.4
      comp=Z,20nm,1.1s,mb4.6
JCT   Junction City     54.74 328  eP      P        10 10 51.9 -0.7
JCT                                 pmax   pmax
      comp=Z,18nm,0.8s,mb4.7
JCT   Junction City     54.74 328  eP      P        10 10 51.9 -0.7
      comp=Z,18nm,0.8s,mb4.7
WVT   Waverly           54.80 342  eP      P        10 10 49.1 -3.8
WVT                                 pmax   pmax
      comp=Z,3.0nm,0.6s,mb4.0
WVT   Waverly           54.80 342  eP      P        10 10 49.0 -3.8
      comp=Z,2.6nm,0.6s,mb3.9
TXAR  Lajitas Array     55.94 324   P      P        10 11 00.4 -0.7
      comp=Z,2.0nm,0.6s,mb3.8,baz=148,slow=9.1,SNR=34
TXAR                                pP     pP       10 11 48.5 -2.0
      comp=Z,0.4nm,0.5s,baz=150,slow=7.3,SNR=1.6
LTX   Lajitas           55.94 324  eP      P        10 11 00.0 -1.1
LTX                                 pmax   pmax
      comp=Z,7.0nm,1.1s,mb4.1
LTX   Lajitas           55.94 324  eP      P        10 10 60.0 -1.1
      comp=Z,7.0nm,1.1s,mb4.1
FVM   French Village    57.31 340  eP      P        10 11 07.2 -3.5
FVM                                 pmax   pmax
      comp=Z,8.0nm,0.6s,mb4.5
FVM   French Village    57.31 340  eP      P        10 11 07.2 -3.4
      comp=Z,7.6nm,0.6s,mb4.5
WMOK  Wichita Mounta    57.73 332  eP      P        10 11 12.3 -1.4
WMOK                               e       pP       10 12 03.5 +0.1
WMOK                                pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.3
WMOK  Wichita Mounta    57.73 332  eP      P        10 11 12.2 -1.4
      comp=Z,6.9nm,0.8s,mb4.3
WMOK                               ePcP    PcP      10 12 03.5 -0.4
WMOK                               eScP             10 15 44.9
GDL2  Guadalupe Moun    58.50 325  eP      P        10 11 18.5 -0.6
MNTX  Cornudas Mount    58.69 324  eP      P        10 11 17.9 -2.4
      comp=Z,13nm,1.1s,mb4.5
MNTX                               ePcP    PcP      10 12 06.3 -1.4
CPRX  Cap Rock          58.88 326  eP      P        10 11 20.9 -0.7
CPRX                               ePcP    PcP      10 12 09.1 +0.7
AMTX  Amarillo          59.22 329  eP      P        10 11 22.7 -1.3
      comp=Z,18nm,0.9s,mb4.7
KSU1  Kansas State U    60.51 336   P      P        10 11 30.4 -2.2
KSU1                               e                10 11 37.2
BNM   Barren Site       61.22 325  eP      P        10 11 37.4  0.0
CBKS  Cedar Bluff       61.55 333  eP      P        10 11 38.8 -0.7
CBKS                                pmax   pmax
      comp=Z,24nm,0.9s,mb4.8
CBKS  Cedar Bluff       61.55 333  eP      P        10 11 38.8 -0.8
      comp=Z,24nm,0.9s,mb4.8
CBKS                               e                10 11 45.1
ANMO  Albuquerque       61.73 326  eP      P        10 11 39.8 -1.0
ANMO                                pmax   pmax
      comp=Z,13nm,1.2s
ANMO  Albuquerque       61.73 326   P      P        10 11 40.4 -0.4
      comp=Z,4.2nm,0.8s,mb4.1,baz=149,slow=7.8,SNR=15
ANMO  Albuquerque       61.73 326  eP      P        10 11 39.8 -1.0
      comp=Z,13nm,1.2s,mb4.4
SDCO  Great Sand Dun    63.37 329  eP      P        10 11 51.4 -0.2
      comp=Z,22nm,0.9s,mb4.8
SDCO                               e       pP       10 12 44.5 +2.1
ISCO  Idaho Springs     65.02 330  eP      P        10 12 02.2  0.0
ISCO                                pmax   pmax
      comp=Z,11nm,1.0s,mb4.4
ISCO  Idaho Springs     65.02 330  eP      P        10 12 02.2  0.0
      comp=Z,11nm,1.0s,mb4.4
PV01  Paradox Valley    65.23 327  eP      P        10 12 04.0 +0.3
PV01                               e       pP       10 12 55.6 +0.8
VNA3  Neumayer Olymp    65.32 162  e       P        10 12 11.2 +7.6
VNA3  Neumayer Olymp    65.32 162  e       PcP      10 12 35.4 +1.4
VNA3  Neumayer Olymp    65.32 162  e       pP       10 12 55.5 +0.7
VNA3  Neumayer Olymp    65.32 162  e       sP       10 13 11.8 -6.3
VNA3  Neumayer Olymp    65.32 162 ⇓iP      P        10 12 04.5 +0.9
VNA3                               e                10 12 11.2
VNA3                               e                10 12 35.4
VNA3                               e       pP       10 12 55.5 +0.7
VNA3                               e                10 13 11.8
VNA3                               e                10 13 22.2
VNA3                               e                10 14 31.8
VNA1  Neumayer--Stat    65.51 161  e       P        10 12 12.8 +7.9
VNA1  Neumayer--Stat    65.51 161  e       PcP      10 12 35.6 +0.8
VNA1  Neumayer--Stat    65.51 161  e       pP       10 12 56.2 +0.2
VNA1  Neumayer--Stat    65.51 161  e       sP       10 13 13.4 -6.0
VNA1  Neumayer--Stat    65.51 161   P      P        10 12 06.6 +1.7
VNA1                               e                10 12 12.8
VNA1                               e                10 12 35.6
VNA1                               e       pP       10 12 56.2 +0.2
VNA1                               e                10 13 13.4
VNA1                               e                10 13 24.9
PV10  Paradox Valley    65.66 327  eP      P        10 12 05.9 -0.4
VNA2  Neumayer--Watz    65.88 161  e       P        10 12 15.4 +8.2
VNA2  Neumayer--Watz    65.88 161  e       PcP      10 12 37.5 +1.2
VNA2  Neumayer--Watz    65.88 161  e       pP       10 12 59.3 +0.8
VNA2  Neumayer--Watz    65.88 161  e       sP       10 13 15.7 -6.1
VNA2  Neumayer--Watz    65.88 161 ⇓iP      P        10 12 08.0 +0.8
VNA2                               e                10 12 15.4
VNA2                               e                10 12 37.5
VNA2                               e       pP       10 12 59.3 +0.8
VNA2                               e                10 13 15.7
VNA2                               e                10 13 26.0
VNA2                               e                10 14 32.7
PHWY  Pilot Hill        66.12 331  eP      P        10 12 09.5 +0.2
BAR   Barrett           66.23 318  eP      P        10 12 10.8 +0.7
LDFC  Landfair          66.80 320  eP      P        10 12 14.8 +1.1
LDFC                               ePcP    PcP      10 12 41.2 +0.4
MSU   Marysvale         67.45 325  eP      P        10 12 18.3 +0.6
MSU                                e                10 12 44.2
MVU   Marysvale         67.47 325  eP      P        10 12 18.4 +0.7
      comp=Z,12nm,1.1s,mb4.5
MVU                                ePcP    PcP      10 12 44.0 +0.4
SNAA  Sanae             67.51 162  e       P        10 12 24.0 +6.5
SNAA  Sanae             67.51 162  e       PcP      10 12 41.0 -2.2
SNAA  Sanae             67.51 162  e       pP       10 13 10.2 +1.2
SNAA  Sanae             67.51 162  e       sP       10 13 24.2 -8.0
SNAA  Sanae             67.51 162 ⇓iP      P        10 12 18.0 +0.5
SNAA                               e                10 12 41.0
SNAA                               e       pP       10 13 10.2 +1.2
SNAA                               e                10 13 24.2
SNAA                               e                10 14 47.3
SNAA  Sanae             67.51 162 ⇓iP      P        10 12 18.0 +0.5
SNAA                               e                10 12 24.0
SNAA                               e                10 12 41.0
SNAA                               e       pP       10 13 10.2 +1.2
SNAA                               e                10 13 24.2
SNAA                               e                10 13 33.9
SNAA                               e                10 14 47.3
ARUT  Antelope Range    67.66 324  eP      P        10 12 20.4 +1.5
RSSD  Black Hills       67.74 334  eP      P        10 12 19.5 +0.1
RSSD                               e       pP       10 13 06.4 -4.5
RSSD                                pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.3
RSSD  Black Hills       67.74 334  eP      P        10 12 19.5 +0.1
      comp=Z,7.3nm,0.8s,mb4.4
RSSD                               e       pP       10 13 06.4 -4.4
DBIC  Dimbokro          67.94  76  eP      P        10 12 19.8 -1.2
DBIC                                pmax   pmax
      comp=Z,34nm,1.0s
DBIC  Dimbokro          67.94  76   P      P        10 12 20.1 -0.9
      comp=Z,13nm,0.5s,mb4.8,baz=230,slow=5.9,SNR=30
DBIC  Dimbokro          67.94  76  eP      P        10 12 19.8 -1.3
      comp=Z,34nm,1.0s,mb4.9
JLU   Jordanelle        68.56 327  eP      P        10 12 24.2 -0.2
JLU                                e       pP       10 13 16.4 +0.4
TCUT  Toone Canyon      68.91 327  eP      P        10 12 27.3 +0.8
DUG   Dugway            68.99 326  eP      P        10 12 27.9 +0.8
DUG                                 pmax   pmax
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      comp=Z,40nm,1.7s,mb4.8
DUG   Dugway            68.99 326  eP      P        10 12 27.9 +0.8
      comp=Z,40nm,1.7s,mb4.8
DAC   Darwin (Calif)    69.11 320  eP      P        10 12 28.5 +0.6
DAC                                 pmax   pmax
      comp=Z,6.0nm,0.8s,mb4.3
DAC   Darwin (Calif)    69.11 320  eP      P        10 12 28.5 +0.6
      comp=Z,6.3nm,0.8s,mb4.3
PDAR  Pinedale Array    69.20 330   P      P        10 12 28.2 -0.1
      comp=Z,2.4nm,0.7s,mb4.0,baz=127,slow=7.4,SNR=16
HWUT  Hardware Ranch    69.35 328  eP      P        10 12 29.0 -0.2
      comp=Z,5.4nm,0.7s,mb4.3
BGU   Big Grassy Mou    69.63 326  eP      P        10 12 30.9 -0.1
TPH   Tonopah           70.06 322  eP      P        10 12 34.2 +0.6
TPH                                 pmax   pmax
      comp=Z,10.0nm,0.9s,mb4.5
TPH   Tonopah           70.06 322  eP      P        10 12 34.2 +0.6
      comp=Z,9.8nm,0.9s,mb4.4
ULM   Lac du Bonnet     70.06 342   P      P        10 12 31.3 -2.1
      comp=Z,3.1nm,0.3s,mb4.4,baz=154,slow=6.8,SNR=8.9
HVU   Hansel Valley     70.10 327  eP      P        10 12 33.4 -0.4
SNOW  Snow King Moun    70.30 329  eP      P        10 12 34.8 -0.2
      comp=Z,6.9nm,0.8s,mb4.3
TPAW  Teton Pass        70.42 329  eP      P        10 12 36.0 +0.3
      comp=Z,6.1nm,0.7s,mb4.3
RRI2  Red Ridge         70.50 329  eP      P        10 12 36.6 +0.5
      comp=Z,25nm,0.8s,mb4.9
MOOW  Moose Ponds       70.51 330  eP      P        10 12 36.4 +0.2
      comp=Z,15nm,1.5s,mb4.4
ELK   Elko              70.70 325  eP      P        10 12 38.0 +0.6
ELK                                 pmax   pmax
      comp=Z,3.0nm,0.8s
ELK   Elko              70.70 325   P      P        10 12 38.4 +1.0
      comp=Z,3.7nm,0.8s,mb4.0,baz=121,slow=2.6,SNR=16
ELK   Elko              70.70 325  eP      P        10 12 38.0 +0.6
      comp=Z,3.2nm,0.8s,mb4.0
IMW   Indian Meadow     70.71 330  eP      P        10 12 37.8 +0.3
      comp=Z,23nm,1.3s,mb4.6
SCHQ  Schefferville     70.75   2   P      P        10 12 36.1 -1.3
      comp=Z,2.8nm,0.8s,mb3.9,baz=190,slow=2.7,SNR=5.3
SCHQ                                pP     pP       10 13 27.7 -1.7
      comp=Z,2.7nm,0.9s,baz=171,slow=7.1,SNR=3.6
SCHQ  Schefferville     70.75   2   P      P        10 12 36.1 -1.3
SCHQ                                pP     pP       10 13 27.7 -1.7
OMM   Old Mammoth Mi    70.83 320  eP      P        10 12 39.3 +1.0
NVAR  Mina Array Bea    70.93 321   P      P        10 12 40.0 +1.2
      comp=Z,4.3nm,0.8s,mb4.1,baz=129,slow=7.2,SNR=25
YMR   Madison River     71.30 330  eP      P        10 12 42.3 +1.4
QLMT  Earthquake Lak    71.64 330   P      P        10 12 43.5 +0.5
CMB   Columbia Colle    71.95 320  eP      P        10 12 45.3 +0.3
CMB                                 pmax   pmax
      comp=Z,4.0nm,0.8s,mb4.1
CMB   Columbia Colle    71.95 320  eP      P        10 12 45.3 +0.4
      comp=Z,4.4nm,0.8s,mb4.1
MAIT  Maitri            72.00 160  eP      P        10 12 45.4 +0.7
NVL   N'lazarevskaya    72.03 160 ⇑iP      P        10 12 45.1 +0.2
NVL                                i *PP   PcP      10 13 03.9 +1.6
NVL                                i S     ScS      10 22 32.2 +6.1
NVL                                 pmax   pmax
      comp=Z,3.0nm,0.8s,mb4.0
NVL                                 MLR    MLR
      comp=Z,30nm,16.1s
HLID  Hailey            72.22 327  eP      P        10 12 47.6 +1.2
      comp=Z,9.0nm,0.9s,mb4.4
MCMT  McKenzie Canyo    72.33 329  eP      P        10 12 47.9 +0.9
HRY   Holter Researc    73.22 331  eP      P        10 12 52.6 +0.3
WVOR  Wild Horse Val    73.73 324  eP      P        10 12 55.4 +0.1
WVOR                                pmax   pmax
      comp=Z,21nm,1.8s,mb4.5
WVOR  Wild Horse Val    73.73 324  eP      P        10 12 55.4 +0.1
      comp=Z,21nm,1.8s,mb4.5
QSPA  South Pole Qui    74.00 180 ⇓iP      P        10 12 57.6 +1.4
      comp=Z,32nm,1.1s,mb4.9
CHMT  Chamberlain Mo    74.03 331  eP      P        10 12 57.7 +0.7
MOD   Modoc             74.33 323  eP      P        10 12 59.8 +1.0
      comp=Z,5.4nm,0.8s,mb4.2
BMO   Blue Mountains    74.61 327  eP      P        10 13 00.7 +0.3
      comp=Z,5.4nm,0.8s,mb4.2
BMO                                e                10 13 06.5
YBH   Yreka Blue Hor    75.63 322   P      P        10 13 05.8 -0.4
      comp=Z,3.5nm,0.6s,mb4.1,baz=93,slow=3.6,SNR=5.7
HBO   Huckleberry Mo    76.70 324   P      P        10 13 13.1 +1.1
NEW   Newport           76.84 330   P      P        10 13 12.8 +0.1
NEW                                 pmax   pmax
      comp=Z,2.0nm,0.8s
NEW   Newport           76.84 330   P      P        10 13 12.8  0.0
      comp=Z,2.1nm,0.8s,mb3.8
FCC   Fort Churchill    77.31 347  eP      P        10 13 14.4 -0.7
FCC                                 pmax   pmax
      comp=Z,6.0nm,1.1s,mb4.1
FCC   Fort Churchill    77.31 347  eP      P        10 13 14.4 -0.7
      comp=Z,6.3nm,1.1s,mb4.2
WTV   Waterville        77.88 328   P      P        10 13 19.7 +1.3
EDM   Edmonton          78.68 335  eP      P        10 13 22.0 -0.7
EDM                                e                10 14 07.6
FRB   Frobisher Bay     79.66   0   pP     pP       10 14 19.6 -1.1
      comp=Z,5.5nm,0.9s,baz=178,slow=5.6,SNR=4.7
PGC   Sidney            80.29 327   P      P        10 13 31.9 +0.6
      comp=Z,28nm,0.8s,mb5.0
SBA   Scott Base        80.94 190   P      P        10 13 33.8 -0.4
SBA                                 pmax   pmax
      comp=Z,11nm,1.1s,mb4.4
SBA   Scott Base        80.94 190   P      P        10 13 33.8 -0.5
      comp=Z,11nm,1.1s,mb4.4
SYO   Syowa Base        81.70 160 ⇑P       P        10 13 38.5 +0.2
VNDA  Vanda             81.97 190  eP      P        10 13 40.9 +1.4
VNDA                                pmax   pmax
      comp=Z,14nm,1.4s
VNDA  Vanda             81.97 190   P      P        10 13 41.3 +1.8
      comp=Z,3.8nm,1.1s,mb4.0,baz=147,slow=4.3,SNR=9.1
VNDA  Vanda             81.97 190  eP      P        10 13 40.9 +1.4
      comp=Z,14nm,1.4s,mb4.4
TSUM  Tsumeb            82.22 108  eP      P        10 13 43.2 +1.3
TSUM                               e                10 13 47.9
ESDC  Sonseca Array     82.51  45   P      P        10 13 43.9 +0.8
      comp=Z,2.9nm,0.6s,mb4.2,baz=250,slow=5.6,SNR=13
YKA   Yellowknife Ar    85.97 341   P      P        10 14 00.6 +0.8
      comp=Z,1.4nm,0.4s,mb4.0,baz=135,slow=4.7,SNR=21
YKW3  Yellowknife Ar    86.02 341  eP      P        10 14 00.3 +0.3
LBTB  Lobatse           87.84 115   P      P        10 14 11.6 +2.0
LBTB                                pmax   pmax
      comp=Z,17nm,1.1s,mb4.8
LBTB  Lobatse           87.84 115   P      P        10 14 11.6 +2.0
      comp=Z,17nm,1.1s,mb4.8
DLBC  Dease Lake        89.20 333   P      P        10 14 17.1 +1.9
      comp=Z,8.2nm,0.8s,mb4.6,baz=152,slow=4.1,SNR=18
DLBC  Dease Lake        89.20 333  eP      P        10 14 16.5 +1.3
MAW   Mawson            89.60 164  eP      P        10 14 18.5 +1.6
MAW   Mawson            89.60 164   P      P        10 14 18.6 +1.7
      comp=Z,7.9nm,0.8s,mb4.6,baz=220,slow=4.5,SNR=17
LSZ   Lusaka            93.03 107   P      P        10 14 34.4 +0.4
LSZ                                 pmax   pmax
      comp=Z,9.0nm,1.2s,mb4.7
LSZ   Lusaka            93.03 107   P      P        10 14 34.4 +0.4
      comp=Z,9.2nm,1.2s,mb4.7
INK   Inuvik            95.73 340   P      P        10 14 45.4 +0.4
INK                                 pmax   pmax
      comp=Z,3.0nm,0.9s
INK   Inuvik            95.73 340   P      P        10 14 45.7 +0.7
      comp=Z,2.1nm,0.8s,mb4.4,baz=75,slow=5.4,SNR=4.2
INK   Inuvik            95.73 340   P      P        10 14 45.4 +0.3
      comp=Z,3.4nm,0.9s,mb4.6
ILAR  Eielson Array     99.17 335   P      P        10 15 00.1 -0.7
      comp=Z,0.6nm,1.0s,mb3.9,baz=201,slow=1.4,SNR=4.5
STKA  Stephens Creek   123.65 212   PKP    PKPdf    10 20 17.3 +1.9
      comp=Z,2.9nm,0.6s,baz=314,slow=0.2,SNR=12
ARU   Arti             124.04  32  ePKIKP  PKPdf    10 20 18.2 +2.6
CHKZ  Chkalovo         131.42  31  ePKIKP  PKPdf    10 20 32.3 +2.5
BVAR  Borovoye Array   131.68  31   PKP    PKPdf    10 20 33.5 +3.2
      comp=Z,0.9nm,0.4s,baz=270,slow=3.0,SNR=9.7
BVAR                                SKPbc           10 23 40.3
      comp=Z,9.5nm,0.8s,baz=270,slow=3.0,SNR=43
ASAR  Alice Springs    134.24 211   PKhKP           10 20 24.8
      comp=Z,0.4nm,0.5s,baz=139,slow=2.1,SNR=8.6
ASAR                                PKP    PKPdf    10 20 37.5 +1.7
      comp=Z,3.1nm,0.6s,baz=134,slow=2.1,SNR=30
ASAR                                pPKP            10 21 30.4
      comp=Z,0.2nm,0.7s,baz=135,slow=2.6,SNR=0.6
ASAR                                PP     PP       10 23 08.8 -5.0
      comp=Z,0.9nm,1.0s,baz=148,slow=5.3,SNR=4.4
ASAR                                SKPbc           10 23 47.4
      comp=Z,14nm,1.1s,baz=146,slow=3.6,SNR=24
ASPA  Alice Springs    134.24 211  eP      PKPdf    10 20 37.8 +2.0
WB2   Warramunga Arr   137.10 214  eP      PKPdf    10 20 43.5 +2.4
WRA   Warramunga Arr   137.11 214   PKP    PKPdf    10 20 43.5 +2.3
      comp=Z,4.8nm,0.6s,baz=150,slow=1.9,SNR=34
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WRA                                 SKPbc           10 23 56.5
      comp=Z,16nm,0.9s,baz=142,slow=2.5,SNR=45
ZAL   Zalesovo         137.34  22   PKP    PKPdf    10 20 41.6 +0.9
      comp=Z,4.5nm,0.7s,baz=177,slow=1.4,SNR=19
ZAL                                 SKPbc           10 23 58.1
      comp=Z,3.8nm,0.8s,baz=148,slow=4.0,SNR=10
MKAR  Makanchi Array   141.56  31   PKP    PKPdf    10 20 50.5 +2.0
      comp=Z,0.7nm,0.5s,baz=323,slow=2.0,SNR=7.3
MKAR                                SKPbc           10 24 09.8
      comp=Z,5.8nm,0.7s,baz=337,slow=2.2,SNR=26
MKAR  Makanchi Array   141.56  31   PKP    PKPdf    10 20 50.5 +2.0
MKAR                                SKPbc           10 24 09.8
KAKA  Kakadu           143.98 218  eP      PKPbc    10 20 53.5 +0.5
TLY   Talaya           144.16   7  ePKIKP  PKPdf    10 20 55.1 +2.3
TLY                                 pmax   pmax
      comp=Z,11nm,1.0s
TLY   Talaya           144.16   7  ePKPdf  PKPdf    10 20 54.0 +1.2
ZAK   Zakamensk        145.38   8  ePKP2   PKPab    10 20 57.8 -0.3
ZAK                                 pmax   pmax
      comp=Z,9.0nm,1.3s
ZAK                                 pmax   pmax
      comp=Z,3.0nm,1.3s
HIA   Hailar           146.12 349  ePKPbc  PKPbc    10 21 00.0 +2.4
HIA                                e                10 21 56.0
WMQ   Urumqi           146.35  30  ePKP    PKPdf    10 21 02.1 +5.3
NDI   New Delhi        146.99  62  eP      PKPdf    10 21 02.0 +3.7
MJAR  Matsushiro Arr   148.06 315   PKPbc  PKPdf    10 21 06.0 +6.2
      comp=Z,7.5nm,0.8s,baz=66,slow=1.6,SNR=32
MJAR                                pPKPbc          10 21 57.9
      comp=Z,0.7nm,0.4s,baz=132,slow=12,SNR=1.0
MJAR  Matsushiro Arr   148.06 315   PKPbc  PKPdf    10 21 06.0 +6.1
MJAR                                pPKPbc          10 21 57.9
MAJO  Matsushiro       148.07 315  ePKP2   PKPab    10 21 04.7 -4.3
MAT   Matsushiro       148.07 315  ePKP    PKPdf    10 21 06.0 +6.2
MAT   Matsushiro       148.07 315   PKP    PKPdf    10 21 05.8 +6.0
SONM  Songino Array    148.24   5   PKPbc  PKPdf    10 21 06.5 +6.7
      comp=Z,8.5nm,0.5s,baz=318,slow=1.9,SNR=37
SONM                                pPKPbc          10 21 57.7
      comp=Z,0.8nm,0.6s,baz=225,slow=2.0,SNR=0.8
CN2   Changchun        149.63 338  ePKP    PKPdf    10 21 01.0 -1.1
LZH   Lanzhou          159.31  15  ePKP    PKPdf    10 21 16.5 +1.0
LZH                                 APKP            10 22 08.6
SSE   Sheshan          162.18 328   PKP    PKPdf    10 21 16.9 -1.7
NJ2   Nanjing          162.42 336  ePKP    PKPdf    10 21 17.4 -1.4
NJ2                                 PKP2   PKPab    10 22 09.3 -0.8
NJ2                                 APKP            10 22 15.2
NJ2                                 XPKP            10 22 38.8
NJ2                                 PKS    PKS      10 24 50.0 -0.8
NJ2                                 PP     PP       10 25 54.0 -1.4
NJ2                                 PP     PP
      comp=Z,70nm,8.0s
NJ2                                 LR     LR
      comp=N,330nm,17.7s
NJ2                                 LR     LR
      comp=E,270nm,13.0s
NJ2                                 LR     LR
      comp=Z,110nm,13.8s
KMI   Kunming          168.55  38   PKP    PKPdf    10 21 26.2 +2.2
CMAR  Chiang Mai Arr   168.80  77   PKPab  PKPab    10 22 38.6 +0.4
      comp=Z,3.4nm,0.9s,baz=276,slow=5.9,SNR=11
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ROM ***02*** *10:12:08.2±0.2, 44.86N×8.71E, h10^{km}±1^{km}, Md2.9/6, Ml2.6/5, Error ellipse: s-maj=2.6km s-min=1.7km az=144.0*

CSEM ***02*** *10:12:09.5±0.1, 44.81N×8.84E, h10^{km}, ML3.1/21, Error ellipse: s-maj=1.4km s-min=1.3km az=123.0*

GEN ***02*** *10:12:09.7, 44.87N×8.79E, h8^{km}, ML3.1*

LDG ***02*** *10:12:12.2±0.1, 44.89N×8.64E, h10^{km}, Ml3.1/23, Error ellipse: s-maj=3.2km s-min=3.1km az=68.0*

NEIC ***02*** *10:12:12.9, 44.94N×8.41E, h10^{km}, ML3.1(LDG), ML3.0(STR), After STR.*

STR ***02*** *10:12:12.9±0.5, 44.94N×8.41E, h10^{km}±1^{km}, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 02 10:12:08.7±0.3**, 44.88N**±0.01×**8.71E**±0.02**, h11**^{km}±2^{km}**,**
n86, σ1^{s}**26**/137**, 6C, Northern Italy**

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Code  Station Name       Δ°   AZ°    Phase ID            Time    Res
                                    Op     ISC       h  m  s   ISC
PCP   Pian Castagno     0.35 200    P      Pg       10 12 16.7 +0.6
GENL  Genova Univers    0.50 159    P      Pg       10 12 19.2 +0.2
BOB   Bobbio (Coli)     0.53 101    Pg     Pg       10 12 19.7 +0.1
BOB                                 Sg     Sg       10 12 27.6 +0.8
      550nm,0.8s
FIN   Finale Ligure     0.76 209    Pg     Pg       10 12 23.4 -0.6
      54nm,0.2s
FIN   Finale Ligure     0.76 209    P      Pb       10 12 24.3 +0.9
ROB   Roburent          0.84 226    P      Pb       10 12 25.5 +0.7
ORO   Oropa             0.91 326    Pg     Pg       10 12 28.1 +1.0
ORO                                 Sg     Sg       10 12 42.1 +2.8
      325nm,0.2s
CODM                    0.94 120    P      Pb       10 12 26.2 -0.4
CODM                                S      Sb       10 12 37.4 -1.5
VAI   Varese            0.99   2    Pg     Pg       10 12 28.8 +0.1
      61nm,0.3s
GRAM                    1.04 111    P      Pb       10 12 27.8 -0.4
GRAM                                S      Sb       10 12 40.2 -1.4
MONE  Monesi            1.05 221    P      Pb       10 12 29.4 +1.0
MUGIO Muggio            1.07  12    Pg     Pg       10 12 29.5 -0.7
MUGIO                               Sg     Sg       10 12 44.6  0.0
DOI   San Damiano       1.11 251    Pg     Pg       10 12 29.1 -1.9
      101nm,0.4s
ENR   Entracque         1.13 235    P      Pb       10 12 30.7 +0.9
IMI   Imperia           1.13 212    Pg     Pg       10 12 30.4 -1.0
IMI                                 Sg     Sg       10 12 47.0 +0.4
      37nm,0.2s
MDI   Monti di Nese     1.14  38    Pg     Pg       10 12 30.8 -0.9
      133nm,0.3s
STV2  Anna di Valdie    1.18 238    P      Pb       10 12 31.3 +0.7
MCGN  Macugnaga         1.20 335    Pg     Pg       10 12 31.7 -1.0
MCGN                                Sg     Sg       10 12 48.9 +0.2
      132nm,0.3s
VALM                    1.22 115    P      Pb       10 12 30.8 -0.4
VALM                                S      Sb       10 12 45.3 -1.4
SAOF  Saorge            1.22 223    Pn     Pn       10 12 32.3 +0.7
SAOF                                Sg     Sg       10 12 50.9 +1.5
NEGI  Negi              1.26 216    P      Pb       10 12 31.9 -0.1
VINC  Vinca             1.26 125    P      Pb       10 12 31.8 -0.3
VINC                                S      Sb       10 12 46.6 -1.6
AUTN  L'Aution          1.27 227    Pn     Pn       10 12 33.2 +0.7
AUTN                                Sg     Sg       10 12 52.8 +1.5
MMK   Mattmark          1.29 336    Pg     Pg       10 12 32.5 -2.0
MMK                                 Sg     Sg       10 12 51.5 -0.3
TOUF  Mont Tournerai    1.36 231    Pn     Pn       10 12 34.8 +1.1
SBF   Sospel            1.37 223   ePn     Pn       10 12 34.3 +0.5
SBF                                eSn     Sn       10 12 52.8 +0.9
      104nm,0.3s
RRL   Cesana Torines    1.37 273    P      Pn       10 12 34.7 +0.8
MBDF  Montbardon        1.39 265   ePn     Pn       10 12 34.8 +0.7
MBDF                               eSn     Sn       10 12 53.5 +1.0
      77nm,0.3s
SARO  Sassorosso        1.39 119    P      Pn       10 12 33.8 -0.3
SARO                                S      Sb       10 12 49.9 -1.9
VLC   Villacollemand    1.40 120   ePn     Pn       10 12 33.6 -0.6
VLC                                eSn     Sn       10 12 53.3 +0.7
VLC   Villacollemand    1.40 120   ePn     Pn       10 12 33.6 -0.6
SURF  Saint Ours        1.41 254    Pn     Pn       10 12 35.2 +0.8
GSCL  Gusciola          1.44 111    Pg     Pg       10 12 36.0 -1.5
      11nm,0.3s
BNI   Bardonecchia      1.46 278   ePn     Pn       10 12 36.5 +1.4
BNI                                eSn     Sn       10 12 51.3 -2.9
BNI   Bardonecchia      1.46 278    Pg     Pg       10 12 36.2 -1.7
      36nm,0.7s
BNI   Bardonecchia      1.46 278   ePn     Pn       10 12 36.5 +1.4
BNI                                eSn     Sn       10 12 51.3 -2.9
SAL   Salo              1.48  60    Pn     Pn       10 12 37.5 +2.2
SAL                                 Sn     Sn       10 12 58.5 +3.8
      213nm,0.6s
MVIF  Mont Vial         1.49 229    Pn     Pn       10 12 36.7 +1.2
MVIF                                Sg     Sg       10 12 59.6 +1.2
REVF  Revere            1.49 221    Pn     Pn       10 12 36.3 +0.7
REVF                                Sg     Sg       10 12 58.2 -0.3
DIX   Grande Dixence    1.51 323    Pn     Pn       10 12 37.3 +1.4
DIX                                 Sn     Sn       10 12 59.9 +4.2
LPG   La Plagne         1.52 295   ePn     Pn       10 12 36.6 +0.6
LPG                                eSn     Sn       10 12 56.1 +0.3
      34nm,0.2s
LPL   La Plagne         1.54 295   ePn     Pn       10 12 37.1 +0.8
LPL                                eSn     Sn       10 12 56.7 +0.4
      51nm,0.3s
BDI   Bagni Di Lucca    1.57 120    Pg     Pg       10 12 36.4 -3.8
      17nm,0.4s
MAIM                    1.60 126    P      Pn       10 12 36.6 -0.5
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CALN	**Calern**	1.73	230	Pn	Pn	10 12 40.5	+1.6
CALN				Sg	Sg	10 13 03.7	-2.6
MABI	**Malga Bissina**	1.73	46	Pn	Pn	10 12 39.6	+0.6
	38nm,0.2s						
EMV	**Vieux Emosson**	1.74	314	Pn	Pn	10 12 41.4	+2.2
OG25	**Le Caire**	1.95	256	Pg	Pg	10 12 44.9	-2.9
OG25				Sg	Sg	10 13 10.1	-3.7
FRF	**La Foret Royal**	1.98	229	*e*Pn	Pn	10 12 43.0	+0.4
FRF				*e*Sn	Sn	10 13 07.6	0.0
	51nm,0.4s						
ORIF	**Oris-en-Rattie**	2.01	272	*e*Pn	Pn	10 12 46.0	+2.9
ORIF				*e*Sn	Sn	10 13 07.8	-0.6
	54nm,0.3s						
FUORN	**Ofenpass**	2.06	31	Pn	Pn	10 12 45.1	+1.5
TEOL	**Teolo**	2.15	76	⇑*i*Pg	Pg	10 12 47.7	-3.9
LMR	**La Mourre**	2.21	227	*e*Pn	Pn	10 12 45.6	-0.3
LMR				*e*Sn	Sn	10 13 12.7	-0.7
	26nm,0.3s						
TAVF	**Tavernes**	2.29	238	Pn	Pn	10 12 48.1	+1.2
PGF	**Pioggiola**	2.34	175	*e*Pn	Pn	10 12 45.9	-1.8
PGF				*e*Sn	Sn	10 13 14.7	-1.9
	8.8nm,0.4s						
VILF	**Villemus**	2.38	246	Pn	Pn	10 12 50.0	+1.7
SMRF	**Simiane la Rot**	2.42	249	*e*Pn	Pn	10 12 50.4	+1.5
SMRF				*e*Sn	Sn	10 13 18.6	-0.1
	26nm,0.2s						
CABF	**La Chapelle**	2.53	314	*e*Pn	Pn	10 12 51.4	+1.0
CABF				*e*Pg	Pg	10 12 58.4	-0.9
CABF				*e*Sn	Sn	10 13 20.0	-1.5
	6.6nm,0.3s						
DAVA	**Damuels**	2.54	18	⇑*i*PN	Pn	10 12 51.8	+1.1
DAVA				*i* SN	Sn	10 13 25.0	+3.1
PUYF	**Puyloubier**	2.55	239	Pn	Pn	10 12 51.6	+0.9
VIVF	**Saint-Julien-l**	2.87	271	*e*Pn	Pn	10 12 56.2	+0.9
VIVF				*e*Sn	Sn	10 13 28.5	-1.7
	9.2nm,0.2s						
SQTA	**Sankt Quirin**	2.92	36	⇑*i*PN	Pn	10 12 57.6	+1.6
SQTA				*i* SN	Sn	10 13 35.0	+3.6
MOTA	**Moosalm**	2.98	33	⇑*i*PN	Pn	10 12 58.3	+1.5
MOTA				*i* SN	Sn	10 13 35.4	+2.6
WTTA	**Wattenberg**	3.14	39	⇑*i*PN	Pn	10 13 01.1	+2.0
WTTA				*i* SN	Sn	10 13 39.8	+2.9
WATA	**Walderalm**	3.17	38	⇑*i*PN	Pn	10 13 00.6	+1.1
WATA				*i* SN	Sn	10 13 40.5	+2.9
MOF	**Molkenrain**	3.17	340	Pn	Pn	10 12 59.6	0.0
HINF	**Hinteralfeld**	3.21	337	*e*Pn	Pn	10 12 59.9	-0.2
HINF				*e*Sn	Sn	10 13 36.1	-2.7
	7.4nm,0.2s						
ECH	**Echery**	3.51	343	Pn	Pn	10 13 03.8	-0.6
HAU	**Haudompre**	3.53	333	*e*Pn	Pn	10 13 04.7	0.0
HAU				*e*Sn	Sn	10 13 44.2	-2.7
	10nm,0.2s						
LASF	**Ste Croix**	3.57	259	*e*Pn	Pn	10 13 05.2	0.0
LASF				*e*Sn	Sn	10 13 45.0	-2.7
	6.4nm,0.2s						
WLS	**Welschbruch**	3.66	346	Pn	Pn	10 13 06.2	-0.3
CDF	**Champ du Feu**	3.67	345	*e*Pn	Pn	10 13 05.8	-0.9
CDF				*e*Sn	Sn	10 13 47.2	-3.3
	4.0nm,0.3s						
SMF	**Signal de Mont**	3.84	299	*e*Pn	Pn	10 13 09.1	0.0
SMF				*e*Sn	Sn	10 13 51.7	-3.0
	5.7nm,0.3s						
THEF	**They Montfort**	3.84	332	Pn	Pn	10 13 09.2	+0.1
LOR	**Lormes**	4.14	307	*e*Pn	Pn	10 13 12.6	-0.7
	baz=124						
LOR				*e*Pg	Pg	10 13 28.4	-3.0
LOR				*e*Sn	Sn	10 13 59.7	-2.6
	8.5nm,0.3s						
SFTF	**Sexfontaines**	4.19	324	*e*Pn	Pn	10 13 13.7	-0.3
	baz=145						
AVF	**Avril sur Loir**	4.21	299	*e*Pn	Pn	10 13 14.1	-0.2
AVF				*e*Sn	Sn	10 14 00.1	-3.9
	1.9nm,0.2s						
SSF	**Saint Saulge**	4.24	303	*e*Pn	Pn	10 13 14.3	-0.4
SSF				*e*Sn	Sn	10 14 01.0	-3.8
	1.2nm,0.2s						
RFYF	**Reffroy**	4.37	330	*e*Pn	Pn	10 13 16.1	-0.4
	baz=143						
MEZF	**Maizieres J'vi**	4.42	327	*e*Pn	Pn	10 13 16.5	-0.8
	baz=145						
BGF	**Bois d'Agland**	4.44	294	*e*Pn	Pn	10 13 17.6	0.0
BGF				*e*Sn	Sn	10 14 05.4	-4.5
	14nm,0.4s						
TCF	**Toulx Ste Croi**	4.78	289	*e*Pn	Pn	10 13 22.0	-0.4
TCF				*e*Sn	Sn	10 14 13.9	-4.5
	4.2nm,0.2s						
MTLF	**Montolieu**	4.92	254	*e*Pn	Pn	10 13 24.2	-0.2
MTLF				*e*Sn	Sn	10 14 17.1	-5.0
	4.5nm,0.3s						
RJF	**Les Rejaudoux**	5.12	277	*e*Pn	Pn	10 13 26.2	-0.9
BAIF	**Baives**	6.02	331	*e*Pn	Pn	10 13 37.9	-2.0
FLN	**La Foliniere**	7.41	305	*e*Pn	Pn	10 13 57.7	-1.7
	baz=128						

IDC 02 10:14:54.4±6.4, 2.61N×84.10W, h70km±58km, mb3.3/4, mb1 3.8/5, mb1mx3.5/20, mbtmp3.7/5, ML4.3/1, MS3.6/9, Ms1 3.6/9, ms1mx3.5/13, Error ellipse: s-maj=98.6km s-min=21.8km az=60.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	7.68	354	P	P	10 16 44.3	-1.4
	4.7nm,0.3s,baz=95,slow=20,SNR=23						
JTS				S	S	10 18 09.1	-2.9
	1.7nm,0.3s,baz=315,slow=21,SNR=7.0						
JTS				LR	LR	10 19 15.9	
	comp=Z,252nm,21.6s,baz=173,slow=34						
SJG	**San Juan**	23.39	48	LR	LR	10 28 45.5	
	comp=Z,105nm,18.7s,baz=251,slow=36						
LPAZ	**La Paz**	24.52	140	P	P	10 20 08.1	-0.8
	1.3nm,0.8s,baz=309,slow=9.3,SNR=5.7						
LPAZ				LR	LR	10 30 28.1	
	comp=Z,158nm,18.6s,baz=288,slow=38						
LVC	**Limon Verde**	29.12	150	LR	LR	10 31 40.5	
	comp=Z,147nm,21.3s,baz=330,slow=34						
TXAR	**Lajitas Array**	32.44	327	P	P	10 21 18.2	-2.0
	0.4nm,0.8s,baz=142,slow=10,SNR=4.7						
TXAR				LR	LR	10 33 25.9	
	comp=Z,79nm,20.0s,baz=150,slow=34						
CPUP	**Villa Florida**	38.69	140	LR	LR	10 38 46.3	
	comp=Z,85nm,20.6s,baz=359,slow=37						
BDFB	**Brasilia**	40.03	118	LR	LR	10 39 14.0	
	comp=Z,154nm,19.1s,baz=296,slow=36						
PDAR	**Pinedale Array**	45.99	334	LR	LR	10 43 08.1	
	comp=Z,82nm,19.5s,baz=156,slow=37						
NVAR	**Mina Array Bea**	47.40	323	P	P	10 23 21.6	-2.2
	0.8nm,0.9s,baz=149,slow=5.3,SNR=4.5						
NVAR				LR	LR	10 41 36.5	
	comp=Z,63nm,21.4s,baz=180,slow=34						
YKA	**Yellowknife Ar**	63.92	345	P	P	10 25 20.0	-2.0
	0.3nm,0.4s,baz=142,slow=6.6,SNR=6.9						

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*BGR **02** 10:17:53.8±0.4, 49.36N×6.90E, h1km, ML2.2/4, Error ellipse: s-maj=6.7km s-min=3.3km az=39.0*
*LDG **02** 10:17:54.3±0.1, 49.37N×6.92E, h1km, Md2.8/1, Ml2.9/11, Error ellipse: s-maj=1.9km s-min=1.7km az=49.0, Suspected Mining induced.*
*NEIC **02** 10:17:54.6, 49.33N×6.90E, h1km, ML2.9(LDG), ML2.4(STR), After STR.*
*CSEM **02** 10:17:54.1±0.1, 49.37N×6.92E, h2km, ML2.9/8, Error ellipse: s-maj=1.3km s-min=1.2km az=164.0*
ISC 02 10:17:52.4±0.3, 49.36N±0.02×6.88E±0.03, n25, σ0ˢ90/48, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLF	**Walferdange**	0.56	303	*e*Pg	Pg	10 18 05.4	+1.8
	SNR=4.2						
WLF				*e*Sg	Sg	10 18 11.3	+0.3
	SNR=3.5						
WLF	**Walferdange**	0.56	303	*e*Pg	Pg	10 18 05.2	+1.6
LANF	**Langenberg**	0.72	121	Pg	Pg	10 18 07.4	+0.7
LANF				Sg	Sg	10 18 17.0	+0.7
KTD	**Kalmit**	0.79	92	Pg	Pg	10 18 09.7	+1.6
CDF	**Champ du Feu**	0.98	164	*e*Pg	Pg	10 18 12.9	+0.9
CDF				*e*Pn	Pn	10 18 13.5	+0.3
CDF				*e*Sg	Sg	10 18 25.1	0.0
	29nm,0.2s						
WLS	**Welschbruch**	1.00	161	Pg	Pg	10 18 13.5	+1.2
ECH	**Echery**	1.16	171	Pg	Pg	10 18 16.0	+0.5
ECH				Sg	Sg	10 18 31.6	+0.6
RFYF	**Reffroy**	1.18	232	*e*Pg	Pg	10 18 17.4	+1.5
	baz=50						
RFYF				*e*Sg	Sg	10 18 32.3	+0.8
	39nm,0.3s,baz=55						
THEF	**They Montfort**	1.28	208	Pg	Pg	10 18 18.4	+0.6
THEF				Sg	Sg	10 18 34.9	0.0
TOD	**Tromm**	1.28	78	Pg	Pg	10 18 18.0	+0.1
TNS	**Taunus Mts**	1.34	49	*e*Pg	Pg	10 18 18.9	-0.1
	SNR=3.2						
TNS				*e*Sg	Sg	10 18 36.0	-0.9
	SNR=2.1						
HAU	**Haudompre**	1.40	195	*e*Pg	Pg	10 18 20.9	+0.6
HAU				*e*Sg	Sg	10 18 38.6	-0.3
	26nm,0.3s						
BFO	**Black Forest**	1.41	136	*e*Pg	Pg	10 18 20.5	0.0
	SNR=4.5						
BFO				*e*Sg	Sg	10 18 38.1	-1.2
	SNR=6.3						
MEZF	**Maizieres J'vi**	1.48	235	*e*Pg	Pg	10 18 23.0	+1.2
	baz=54						
MEZF				*e*Sg	Sg	10 18 42.0	+0.5
	18nm,0.3s,baz=49						
MOF	**Molkenrain**	1.52	173	Pg	Pg	10 18 22.7	0.0
MOF				Sg	Sg	10 18 43.4	+0.5
GIVF	**Givet**	1.52	300	*e*Pg	Pg	10 18 23.1	+0.3
GIVF				*e*Sg	Sg	10 18 42.4	-0.7
	20nm,0.4s						
HGN	**Heimansgroeve**	1.53	337	*e*Pg	Pg	10 18 23.3	+0.3
	SNR=2.0						
HGN				*e*Sg	Sg	10 18 42.5	-0.9
	SNR=2.3						
HINF	**Hinteralfeld**	1.54	181	*e*Pg	Pg	10 18 23.0	-0.2
HINF				*e*Sg	Sg	10 18 43.0	-0.8
	42nm,0.2s						
STU	**Stuttgart**	1.64	110	*e*Sg	Sg	10 18 44.7	-2.0
	SNR=5.1						
FELD	**Feldberg**	1.66	153	Pg	Pg	10 18 25.0	-0.5
FELD				Sg	Sg	10 18 47.2	-0.5
SFTF	**Sexfontaines**	1.68	227	*e*Pn	Pn	10 18 23.8	+0.7
	baz=56						
SFTF				*e*Sg	Sg	10 18 46.9	-1.3
	17nm,0.4s,baz=42						
BAIF	**Baives**	1.87	293	*e*Pn	Pn	10 18 26.5	+0.6
BAIF				*e*Pg	Pg	10 18 29.2	-0.5
BAIF				*e*Sg	Sg	10 18 54.1	-0.5
	9.3nm,0.5s						
LOR	**Lormes**	2.90	225	*e*Pn	Pn	10 18 39.7	-1.0
	baz=41						
LOR				*e*Sn	Sn	10 19 13.9	-2.9
	baz=45						
LOR				*e*Sg	Sg	10 19 23.7	-5.3
	5.4nm,0.2s,baz=44						
SSF	**Saint Saulge**	3.22	226	*e*Pn	Pn	10 18 44.0	-1.2
SSF				*e*Sn	Sn	10 19 23.1	-1.7
SSF				*e*Sg	Sg	10 19 33.0	-6.5
	3.8nm,0.6s						
SMF	**Signal de Mont**	3.40	218	*e*Pn	Pn	10 18 46.8	-0.9

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*NEIC **02** 10:21:06.7, 37.98N×21.05E, h13km, MD3.4(ATH), After ATH.*
*CSEM **02** 10:21:06.7, 37.98N×21.05E, h13km, MD3.4/5, After ATH*
ATH 02 10:21:06.8, 37.98N×21.07E, h13km±7km, MD3.4/5, 1D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	0.32	76	*e*PG	Pg	10 21 12.6	-1.1
VLS	**Valsamata**	0.43	298	⇓*i*PB	Pb	10 21 15.2	-0.5
VLS				*e*SB	Sb	10 21 22.0	+0.3
LKD	**Levkas**	0.80	336	*e*P	Pb	10 21 30.7	+8.7
ITM	**Ithomi**	1.05	139	*e*PN	Pn	10 21 26.9	-0.2
EVR	**Evrytania**	1.10	32	*e*PN	Pn	10 21 28.2	+0.3
AGG	**Agios Georgios**	1.44	43	*e*P	Pn	10 21 37.6	+5.0
IGT	**Igoumenitsa**	1.65	340	*e*P	Pn	10 21 43.4	+7.6
LKR	**Lokris**	1.66	66	*e*PG	Pg	10 21 37.5	-2.5
MEV	**Metsovon**	1.81	4	*e*P	Pn	10 21 43.4	+5.5
XOR	**Xorichti**	2.16	50	*e*P	Pn	10 21 48.2	+5.2
GRG	**Griva**	3.15	19	*e*P	Pn	10 22 01.2	+4.1

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*MOS **02** 10:55:52.2±0.9, 24.07S×66.97W, h119km, mb6.0/71, MS5.1/14, Error ellipse: s-maj=8.2km s-min=5.2km az=79.4*
*GUC **02** 10:55:58.6±0.6, 24.35S×67.22W, h170km, ML6.2*
*BJI **02** 10:56:00.8, 24.02S×67.80W, h195km, mB5.8*
*IDC **02** 10:56:00.5±0.4, 24.06S×66.88W, h186km±3km, mb5.3/29, mb1 5.3/34, mb1mx5.3/34, mbtmp5.8/34, MS5.1/3, Ms1 5.0/3, ms1mx4.4/31, Error ellipse: s-maj=9.0km s-min=6.2km az=57.0*
*BGS **02** 10:56:01.0, 24.22S×67.00W, h196km, mb5.7*
*NEIC **02** 10:56:01.6±0.1, 24.22S×67.00W, mb5.7/182, ME5.5, MW6.1, Error ellipse: s-maj=4.3km s-min=3.0km az=215.0 Broadband fault plane solution: P waves. NP1:ϕ_s175°, δ35°, λ-100°. NP2:ϕ_s7°, δ56°, λ-83°. Principal axes: T Plg10°, Azm92°; N Plg0°, Azm0°; P Plg78°, Azm302°; Moment Tensor Solution. s56 Moment tensor: Scale 10^{18} Nm; M_{rr}-1.38; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$1.51; $M_{r\theta}$-0.08; $M_{\theta\phi}$0.03; $M_{\phi r}$-0.93; Best double couple: $M_0$1.7×10^{18} NP1: ϕ_s178°, δ29°, λ-94°. NP2:ϕ_s3°, δ61°, λ-88°. Principal axes: T 1.78, Plg16°, Azm92°; N -.14, Plg2°, Azm182°; P -1.65, Plg74°, Azm279°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [III] at Antofagasta, Calama, Copiapo, Taltal and Tocopilla; [II] at Chanaral, El Salvador and Tierra Amarilla, Chile.
*HRVD **02** 10:56:01.6±0.1, 24.35S×67.21W, h193km, MW6.0/72, Centroid moment Tensor Solution. LP body waves: s69,c166;Mantle waves: s72,c266; Half duration: 2ˢ5 Moment tensor: Scale 10^{18}Nm; M_{rr}-1.07±.01; $M_{\theta\theta}$-0.18±.01; $M_{\phi\phi}$1.25±.01; $M_{r\theta}$-0.13±.01; $M_{\theta\phi}$0.15±.01; $M_{\phi r}$-0.70±.01; Best double couple: $M_0$1.369×10^{18} NP1: ϕ_s183°, δ29°, λ-95°. NP2:ϕ_s9°, δ61°, λ-87°. Principal axes: T 1.466, Plg16°, Azm97°; N -.189, Plg3°, Azm187°; P -1.272, Plg74°, Azm287°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*LDG **02** 10:56:01.0±0.6, 23.94S×67.07W, h194km, Mb5.7/32, Ms5.0/8 Error ellipse: s-maj=40.2km s-min=22.6km az=61.0*
ISC 02 10:56:00.5±0.1, 24.13S±0.03×67.01W±0.03, h195km, h195km±.7km:pP-P, n830, σ1ˢ04/595, mb5.5/205, 38C-60D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	2.31	311	⇑*i*P	P	10 56 40.3	-2.1
LVC				*i* S	S	10 57 11.7	-3.1
LVC				AMP		10 57 16.4	
	comp=E,136µm,0.5s						
LVC	**Limon Verde**	2.31	311	P	P	10 56 41.1	-1.3
	comp=E,4µm,0.3s,baz=142,slow=6.6						
LVC				S	S	10 57 11.4	-3.4
	comp=E,3µm,0.3s,baz=139,slow=7.6,SNR=6.5						
LVC	**Limon Verde**	2.31	311	⇑*i*Pn	P	10 56 40.4	-2.1
LVC				*e*Sn	S	10 57 11.9	-2.9
CPN1	**Cerro Paranal**	3.13	260	⇑*i*P	P	10 56 47.6	-4.5
CPN1				*i* S	S	10 57 25.2	-6.6
ANCH	**Antofagasta**	3.14	278	⇑*i*P	P	10 56 48.2	-4.0
ANCH				*i* S	S	10 57 25.9	-6.2
ANCH				AMP		10 57 28.9	
	comp=N,24µm,0.6s						
CRCH	**Chaqaral**	3.94	235	*e*P	P	10 56 55.8	-6.3
CRCH				*i* S	S	10 57 40.0	-10
CPCH	**Copiapo**	4.40	222	*e*P	P	10 56 60.0	-7.9
CPCH				*i* S	S	10 57 48.8	-11
LCO	**Las Campanas**	5.88	213	*e*P	P	10 57 20.2	-6.7
LCO				*i* S	S	10 58 24.8	-9.1
TLL	**Tololo Astrono**	6.89	209	*e*P	P	10 57 33.1	-7.0
ZON	**Zonda**	7.53	191	*e*P	P	10 57 42.5	-6.0
ZON				*e*S	S	10 59 06.5	-6.2
LPAZ	**La Paz**	7.88	352	P	P	10 57 52.9	-0.1
LPAZ				S	S	10 59 21.1	+0.2
LPAZ				pmax	pmax		
	comp=Z,110nm,0.3s						
LPAZ				smax			
	comp=N,36nm,0.3s						
LPAZ	**La Paz**	7.88	352	P	P	10 57 52.9	-0.1
	comp=N,110nm,0.3s,baz=153,slow=8.6,SNR=1361						
LPAZ				S	S	10 59 21.1	+0.2
	comp=N,36nm,0.3s,baz=328,slow=25,SNR=3.9						
LPAZ	**La Paz**	7.88	352	⇓*i*Pn	P	10 57 52.7	-0.3
	comp=N,4.3nm,1.3s						
ARE	**Arequipa**	8.71	330	*e*P	P	10 58 00.0	-3.9
ARE				*e*S	S	10 59 33.0	-7.4
CPUP	**Villa Florida**	9.03	106	⇑*i*P	P	10 58 04.0	-4.1
CPUP				pmax	pmax		
	comp=Z,11nm,1.7s						
CPUP	**Villa Florida**	9.03	106	P	P	10 58 04.7	-3.5
	comp=Z,6.7nm,0.3s,baz=305,slow=12,SNR=178						
CPUP	**Villa Florida**	9.03	106	⇑*i*Pn	P	10 58 04.0	-4.1
	comp=Z,11nm,1.7s						
SIV	**San Ignacio**	9.83	36	P	P	10 58 16.0	-2.6
	comp=Z,76nm,0.3s,baz=227,slow=11,SNR=731						
SIV				S	S	10 59 56.5	-10
	comp=Z,12nm,0.3s,baz=227,slow=16,SNR=3.3						
LPA	**La Plata**	13.32	146	*ce*P	P	10 59 01.0	-2.1
TRQA	**Tornquist**	14.53	164	*e*P	P	10 59 11.9	-6.3
	comp=Z,2µm,1.3s						
TRQA				*e*S	S	11 01 58.6	+4.3
NNA	**Nana**	15.26	321	*e*P	P	10 59 27.1	-0.3
	comp=Z,751nm,1.4s						
SAML	**Samuel**	15.54	14	*e*P	P	10 59 28.7	-2.1
	comp=Z,25nm,1.4s						
SAML				*e*S	S	11 02 19.2	+2.0
JATB	**Jatai**	15.76	70	*c i*P	P	10 59 33.5	0.0
JATB				*e*		10 59 36.0	
JATB				*i*		10 59 37.2	
JATB				*i*		11 00 27.8	
JATB				*e*		11 00 35.5	
JATB				*i*		11 00 49.1	
PLCA	**Paso Flores**	16.82	189	P	P	10 59 42.3	-3.8
PLCA				S	S	11 02 46.6	+1.0
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PLCA				smax			
	comp=N,1.0nm,0.3s						
PLCA	**Paso Flores**	16.82	189	P	P	10 59 42.3	-3.8
	comp=N,4.3nm,0.3s,baz=10,slow=13,SNR=111						
PLCA				S	S	11 02 46.6	+1.0
	comp=N,0.6nm,0.3s,baz=232,slow=13,SNR=1.4						
PLCA				ScP		11 07 40.0	
	comp=N,0.3nm,0.3s,baz=2.2,slow=5.2,SNR=4.1						
PLCA	**Paso Flores**	16.82	189	*e*P	P	10 59 41.8	-4.3
	comp=N,267nm,0.8s						
PLCA				*e*S	Sx	11 02 59.6	
PLCA				*e*ScP		11 07 38.8	
BDFB	**Brasilia**	19.74	68	P	P	11 00 15.4	-1.8
	comp=N,82nm,0.3s,baz=247,slow=10,SNR=575						
OTAV	**Otavalo**	26.65	334	*e*P	P	11 01 22.6	-0.8
	comp=N,303nm,1.5s,mb5.7						
OTAV				*e*PcP	PcP	11 04 43.2	+0.9
OTAV				*e*ScP		11 08 06.0	
ROSC	**El Rosal**	29.68	345	P	P	11 01 50.2	-0.4
	comp=N,30nm,0.6s,mb5.1,baz=122,slow=5.4,SNR=13						
ROSC				LR	LR	11 13 31.6	
	comp=N,5µm,19.8s,baz=295,slow=36						
USHA	**Ushuaia**	30.68	182	P	P	11 01 55.4	-3.5
	comp=N,27nm,0.5s,mb5.2,baz=346,slow=7.4,SNR=50						
PAYG	**Puerto Ayora**	32.44	313	*e*P	P	11 02 15.1	+0.5
	comp=N,192nm,1.3s,mb5.5						
PAYG				*e*PcP	PcP	11 04 55.7	-1.4
CS6B	**Jaguaretama**	32.95	60	*c i*P	P	11 02 16.1	-2.8
CS6B				*e*		11 02 19.9	
CS6B				*i*		11 02 33.9	
CS6B				*e*	pP	11 02 57.2	-2.4
CS6B				*e*		11 03 20.2	
CS6B				*e*		11 03 39.9	
CS6B				*e*		11 07 48.0	
CS6B				*i*		11 08 25.5	
CS6B				*e*		11 08 37.7	
SDV	**Santo Domingo**	33.01	353	P	P	11 02 17.3	-2.1
	comp=N,106nm,1.0s,mb5.3,baz=207,slow=7.3,SNR=62						
SDV	**Santo Domingo**	33.01	353	*e*P	P	11 02 16.7	-2.7
	comp=N,126nm,0.8s,mb5.5						
CAUB	**Caruaru**	33.62	67	*c i*P	P	11 02 21.8	-2.8
CAUB				*e*	pP	11 03 04.8	-0.6
CAUB				*i*		11 07 24.2	
CAUB				*e*		11 08 42.7	
CAUB				*e*		11 09 24.6	
RCBR	**Riachuelo**	34.99	64	⇑*i*P	P	11 02 34.5	-1.8
	comp=N,436nm,1.1s,mb5.9						
UPA	**Univ. de Panam**	35.11	338	*e*P	P	11 02 38.2	+0.9
PTP1	**Petroterminal**	35.49	333	*e*P	P	11 02 42.5	+2.0
ACR	**Cerro Adams**	36.20	332	*e*P	P	11 02 48.0	+1.5
ACR	**Cerro Adams**	36.20	332	*e*P	P	11 02 47.7	+1.2
SVTC	**San Vito de Co**	36.23	333	*e*P	P	11 02 48.6	+1.8
BUS	**Buena Vista**	37.27	332	*e*P	P	11 02 57.1	+1.7
LIO	**Limon**	37.37	333	*e*P	P	11 02 58.0	+1.8
SVT	**Saint Vincent**	37.50	9	*e*P	P	11 02 48.7	-8.6
LCR2	**La Lucha 2**	37.54	332	*e*P	P	11 02 59.3	+1.6
LCR2	**La Lucha 2**	37.54	332	*e*P	P	11 02 59.3	+1.7
LAJ	**Bijagual**	37.70	332	*e*P	P	11 03 01.1	+2.1
LAJ	**Bijagual**	37.70	332	*e*P	P	11 03 00.9	+1.9
SJS	**Escuela Geolog**	37.74	332	*e*P	P	11 03 01.6	+2.3
PRS1	**Puriscal**	37.89	332	*e*P	P	11 03 01.9	+1.3
PRS1	**Puriscal**	37.89	332	*e*P	P	11 03 04.0	+3.5
CGA2	**Cerro Gallo 2**	37.98	331	*e*P	P	11 03 03.7	+2.3
CGA2	**Cerro Gallo 2**	37.98	331	*e*P	P	11 03 03.6	+2.3
VPS2	**Volcan Poas 2**	38.04	332	*e*P	P	11 03 05.8	+4.0
VPS2	**Volcan Poas 2**	38.04	332	*e*P	P	11 03 05.7	+3.9
RPN	**Rapa Nui**	38.15	256	P	P	11 03 02.4	-0.2
	comp=N,47nm,0.4s,mb5.3,baz=91,slow=12,SNR=4.2						
TRTC	**Tortuguero**	38.16	333	*e*P	P	11 03 04.3	+1.5
TRTC	**Tortuguero**	38.16	333	*e*P	P	11 03 04.3	+1.5
SLB	**Belfond**	38.18	9	*e*P	P	11 03 02.6	-0.3
JTS	**JuntasAbangare**	38.44	331	*e*P	P	11 03 05.1	-0.1
JTS				*e*		11 08 45.2	
JTS				pmax	pmax		
	comp=Z,581nm,1.4s						
JTS	**JuntasAbangare**	38.44	331	P	P	11 03 06.5	+1.3
	comp=Z,114nm,0.8s,mb5.4,baz=149,slow=3.5,SNR=71						
JTS				S	S	11 08 43.0	-2.3
	comp=Z,9.4nm,0.8s,baz=61,slow=2.1,SNR=4.2						
JTS	**JuntasAbangare**	38.44	331	*e*P	P	11 03 05.1	-0.1
	comp=Z,581nm,1.4s,mb5.9						
JTS				*e*ScP		11 08 45.2	
FORC	**Fortuna**	38.48	331	*e*P	P	11 03 07.5	+2.0
FORC	**Fortuna**	38.48	331	*e*P	P	11 03 06.7	+1.2
VCR	**Vista de Mar**	38.60	330	*e*P	P	11 03 07.7	+1.1
VCR	**Vista de Mar**	38.60	330	*e*P	P	11 03 08.1	+1.5
BIM	**Bigot**	38.85	9	*e*P	P	11 03 06.7	-1.8
MVM	**Montagne Vaucl**	38.91	9	*e*P	P	11 03 07.5	-1.5
FDF	**Fort de France**	39.05	9	*e*P	P	11 03 07.3	-2.8
CRM	**Caravelle**	39.10	9	*e*P	P	11 03 09.0	-1.7
PMSA	**Palmer Station**	40.68	178	*e*P	P	11 03 20.8	-2.3
	comp=Z,211nm,1.1s,mb5.5						
SJG	**San Juan**	42.00	1	⇓*i*P	P	11 03 31.3	-3.0
SJG				*e*		11 05 14.9	
SJG				*e*S	S	11 09 34.9	-3.0
SJG				pmax	pmax		
	comp=Z,605nm,1.3s						
SJG	**San Juan**	42.00	1	P	P	11 03 31.5	-2.8
	comp=Z,405nm,1.1s,mb5.8,baz=177,slow=3.7,SNR=45						
SJG				S	S	11 09 32.8	-5.1
	comp=Z,34nm,0.9s,baz=353,slow=18,SNR=14						
SJG	**San Juan**	42.00	1	⇓*i*P	P	11 03 31.3	-3.1
	comp=Z,605nm,1.3s,mb5.9						
SJG				⇑*e*pP	pP	11 04 10.1	-6.3
SJG				*e*sP	sP	11 04 32.9	-6.2
SJG				*e*PP	PP	11 05 14.9	-1.9
SJG				*e*S	S	11 09 34.9	-3.0
LCBS	**La Ceiba**	43.26	328	⇓*e*P	P	11 03 44.9	+0.3
LBRS	**Las Brisas**	43.36	328	*e*P	P	11 03 46.0	+0.6
BOQS	**Boqueron**	43.47	328	*e*P	P	11 03 47.1	+0.8
SBLS	**San Blas**	43.73	327	*e*P	P	11 03 49.0	+0.6
SNJE	**San Jose**	43.75	327	⇓*e*P	P	11 03 49.2	+0.7
RTR	**El Retiro**	43.79	327	*e*P	P	11 03 49.3	+0.4
RBDL	**Robledal**	44.00	327	⇑*e*P	P	11 03 50.7	+0.2
MTO2	**Montecristo 2**	44.09	328	*e*P	P	11 03 51.3	+0.1
CCIG	**Comitan**	47.07	326	⇓*i*P	P	11 04 14.3	-0.3
HUIG	**Huatulco**	48.79	322	⇓*i*P	P	11 04 27.9	0.0
CMIG	**Matias Romero**	49.18	324	⇓*i*P	P	11 04 30.3	-0.6
TUIG	**Tuzandepetl**	49.72	325	*e*P	P	11 04 34.2	-0.8
VHO	**Vista Hermosa**	50.19	322	⇓*i*P	P	11 04 39.2	+0.7
OXX	**Oaxaca**	50.19	322	⇑*i*P	P	11 04 39.0	+0.4
EVV	**El Vigia**	50.55	324	*e*P	P	11 04 42.0	+0.7
ACX	**Acapulco**	51.89	319	⇓*e*P	P	11 04 51.0	-0.3
LVIG	**Laguna Verde**	52.16	324	⇓*i*P	P	11 04 51.9	-1.4
CAIG	**El Cayaco**	52.24	318	⇓*i*P	P	11 04 53.9	0.0
PLIG	**Platanillo**	52.83	320	⇓*i*P	P	11 04 58.8	+0.5
PPM	**Popocatepetl**	52.85	322	⇑*i*P	P	11 04 59.5	+1.1
PPM				⇓*i*P		11 04 59.8	

YAIG	**Yautepec**	**52.94**	**321**	⇓*i*P	**P**	**11 04 59.5**	**+0.5**
UNM	**Universidad Na**	**53.38**	**321**	*e*P	**P**	**11 05 04.0**	**+1.7**
DWPF	**Disney**	**53.77**	**344**	*e*P	**P**	**11 05 04.2**	**-0.8**
	comp=Z,414nm,1.3s,mb5.8						
COLM	**Colima**	**55.96**	**317**	⇑*i*P	**P**	**11 05 21.3**	**+0.4**
BBSR	**BB Station**	**56.23**	**2**	⇓*i*P	**P**	**11 05 20.6**	**-2.0**
	comp=Z,109nm,1.0s,mb5.3						
SFJM	**Santa Fe**	**56.55**	**319**	⇓*i*P	**P**	**11 05 25.0**	**0.0**
VNA3	**Neumayer Olymp**	**57.03**	**161**	*e*	**P**	**11 05 27.9**	**+0.1**
VNA3	**Neumayer Olymp**	**57.03**	**161**	*e*	pP	11 06 10.8	-1.5
VNA3	**Neumayer Olymp**	**57.03**	**161**	*e*	PcP	11 06 18.6	-1.8
VNA3	**Neumayer Olymp**	**57.03**	**161**	*e*	sP	11 06 24.9	-8.7
VNA3	**Neumayer Olymp**	**57.03**	**161**	⇓*i*P	**P**	**11 05 25.9**	**-1.9**
VNA3				*e*		11 05 27.9	
VNA3				*e*	pP	11 06 10.8	-1.5
VNA3				*e*		11 06 18.6	
VNA3				*e*		11 06 24.9	
VNA3				*e*		11 07 30.6	
CJM	**Chamela**	**57.05**	**316**	⇓*i*P	**P**	**11 05 28.4**	**-0.1**
VNA1	**Neumayer--Stat**	**57.23**	**160**	*e*	**P**	**11 05 29.7**	**+0.5**
VNA1	**Neumayer--Stat**	**57.23**	**160**	*e*	pP	11 06 12.5	-1.2
VNA1	**Neumayer--Stat**	**57.23**	**160**	*e*	PcP	11 06 20.5	-0.7
VNA1	**Neumayer--Stat**	**57.23**	**160**	*e*	sP	11 06 26.6	-8.4
VNA1	**Neumayer--Stat**	**57.23**	**160**	⇓*i*P	**P**	**11 05 27.8**	**-1.4**
VNA1				*e*		11 05 29.7	
VNA1				*e*	pP	11 06 12.5	-1.2
VNA1				*e*		11 06 20.5	
VNA1				*e*		11 06 26.6	
VNA1				*e*		11 07 42.0	
VNA2	**Neumayer--Watz**	**57.60**	**160**	*e*	**P**	**11 05 31.9**	**+0.1**
VNA2	**Neumayer--Watz**	**57.60**	**160**	*e*	pP	11 06 13.6	-2.7
VNA2	**Neumayer--Watz**	**57.60**	**160**	*e*	PcP	11 06 22.7	0.0
VNA2	**Neumayer--Watz**	**57.60**	**160**	*e*	sP	11 06 30.0	-7.6
VNA2	**Neumayer--Watz**	**57.60**	**160**	⇓*i*P	**P**	**11 05 29.9**	**-1.9**
VNA2				*e*		11 05 31.9	
VNA2				*e*	pP	11 06 13.6	-2.7
VNA2				*e*		11 06 22.7	
VNA2				*e*		11 06 30.0	
VNA2				*e*		11 07 43.7	
ZAIG	**Zacatecas**	**58.02**	**321**	⇓*i*P	**P**	**11 05 35.9**	**+0.6**
CSU	**Charleston Sou**	**58.15**	**347**	*e*P	**P**	**11 05 35.7**	**-0.4**
CSU				*e*pP	pP	11 06 21.3	+0.5
HBF	**Harts Bluff**	**58.16**	**347**	*e*P	**P**	**11 05 35.7**	**-0.5**
HBF				*e*		11 06 26.8	
NHSC	**New Hope**	**58.29**	**347**	*e*P	**P**	**11 05 36.4**	**-0.7**
	comp=Z,3µm,1.3s						
COW	**Cow Castle Cre**	**58.66**	**347**	*e*P	**P**	**11 05 38.8**	**-0.9**
SNAA	**Sanae**	**59.23**	**161**	*e*	**P**	**11 05 42.8**	**-0.3**
SNAA	**Sanae**	**59.23**	**161**	*e*	pP	11 06 26.0	-1.9
SNAA	**Sanae**	**59.23**	**161**	*e*	PcP	11 06 30.6	+1.5
SNAA	**Sanae**	**59.23**	**161**	*e*	sP	11 06 36.9	-12
SNAA	**Sanae**	**59.23**	**161**	*e*S	**S**	**11 13 34.5**	**+0.8**
SNAA	**Sanae**	**59.23**	**161**	⇓*i*P	**P**	**11 05 40.8**	**-2.3**
SNAA				*e*	pP	11 06 26.0	-1.9
SNAA				*e*	pP	11 06 30.6	+2.7
SNAA				*e*S	**S**	**11 13 34.5**	**+0.8**
SNAA	**Sanae**	**59.23**	**161**	P	**P**	**11 05 40.9**	**-2.2**
	comp=Z,38nm,0.8s,mb5.0,baz=289,slow=6.4,SNR=378						
SNAA				pP	pP	11 06 26.1	-1.8
	comp=Z,46nm,1.2s,baz=288,slow=5.1,SNR=3.1						
SNAA				S	**S**	**11 13 32.3**	**-1.5**
	comp=Z,2.4nm,1.1s,baz=167,slow=20,SNR=9.0						
SNAA	**Sanae**	**59.23**	**161**	⇓*i*P	**P**	**11 05 40.8**	**-2.3**
SNAA				*e*		11 05 42.8	
SNAA				*e*	pP	11 06 26.0	-1.9
SNAA				*e*	pP	11 06 30.6	+2.7
SNAA				*e*		11 06 36.9	
SNAA				*e*		11 07 46.1	
SNAA				*e*S	**S**	**11 13 34.5**	**+0.8**
SNAA				*e*		11 13 44.8	
SNAA				*e*		11 35 03.1	
SNAA				*e*		11 35 19.0	
SNAA				*e*		11 36 10.0	
GOGA	**Godfrey**	**59.33**	**344**	*e*P	**P**	**11 05 42.4**	**-1.9**
GOGA				*e**PP	pP	11 06 27.2	-2.0
GOGA				pmax	pmax		
	comp=Z,118nm,0.9s,mb5.5						
GOGA	**Godfrey**	**59.33**	**344**	*e*P	**P**	**11 05 42.4**	**-1.9**
	comp=Z,118nm,0.9s,mb5.5						
GOGA				*e*pP	pP	11 06 27.2	-2.0
JSC	**Jenkinsville**	**59.65**	**346**	*e*P	**P**	**11 05 44.9**	**-1.5**
JSC				*e*	pP	11 06 31.1	-0.3
LRAL	**Lakeview Retre**	**59.96**	**341**	*e*P	**P**	**11 05 46.0**	**-2.5**
	comp=Z,320nm,1.2s,mb5.8						
LRAL				*e*PcP	PcP	11 06 31.9	-0.7
MAIG	**Mazatlaan**	**60.64**	**318**	⇓*i*P	**P**	**11 05 53.4**	**+0.1**
CPCT	**Cooper Cave**	**61.53**	**344**	*e*P	**P**	**11 05 57.1**	**-2.0**
CPCT				*e*PcP	PcP	11 06 36.7	-2.1
RKT	**Rikitea**	**61.69**	**256**	*e*P	**P**	**11 06 08.9**	**+8.6**
	comp=Z,848nm,33.0s						
RKT				*e*S	**S**	**11 14 10.0**	**+4.5**
	comp=Z,4µm,28.5s						
RKT				*e*LQ		11 21 47.1	
	comp=Z,4µm,32.5s						
RKT				*e*LR	LR	11 24 23.1	
	comp=Z,1µm,25.2s,baz=106						
SWET	**Sewanee**	**61.69**	**342**	*e*P	**P**	**11 05 58.4**	**-1.8**
SWET				*e*pP	pP	11 06 44.6	-0.9
OXF	**Oxford**	**62.08**	**339**	*e*P	**P**	**11 06 00.2**	**-2.6**
OXF				pmax	pmax		
	comp=Z,517nm,1.1s,mb6.1						
OXF	**Oxford**	**62.08**	**339**	*e*P	**P**	**11 06 00.1**	**-2.6**
	comp=Z,517nm,1.1s,mb6.1						
PLAL	**Pickwick Lake**	**62.09**	**340**	*e*P	**P**	**11 06 00.1**	**-2.7**
	comp=Z,391nm,1.3s,mb5.9						
PLAL				*e*pP	pP	11 06 45.4	-2.8
BLA	**Blacksburg**	**62.31**	**348**	*e*P	**P**	**11 06 03.2**	**-1.1**
BLA				pmax	pmax		
	comp=Z,559nm,1.4s,mb6.0						
BLA	**Blacksburg**	**62.31**	**348**	*e*P	**P**	**11 06 03.2**	**-1.1**
	comp=Z,560nm,1.4s,mb6.0						
TZTN	**Tazewell**	**62.34**	**345**	*e*P	**P**	**11 06 02.2**	**-2.2**
TZTN				*e*PcP	PcP	11 06 40.5	-1.6
JCT	**Junction City**	**62.75**	**328**	*e*P	**P**	**11 06 06.3**	**-1.0**
JCT				pmax	pmax		
	comp=Z,300nm,0.8s,mb6.0						
JCT	**Junction City**	**62.75**	**328**	*e*P	**P**	**11 06 06.0**	**-1.3**
	comp=Z,298nm,0.8s,mb6.0						
MET	**Memphis--Engin**	**62.81**	**339**	*e*P	**P**	**11 06 05.4**	**-2.2**
WVT	**Waverly**	**63.08**	**341**	P	**P**	**11 06 06.9**	**-2.5**
WVT				pmax	pmax		
	comp=Z,820nm,1.2s,mb6.2						
WVT	**Waverly**	**63.08**	**341**	*e*P	**P**	**11 06 06.8**	**-2.6**
	comp=Z,822nm,1.3s,mb6.2						
WVT	**Waverly**	**63.08**	**341**	P	**P**	**11 06 07.2**	**-2.2**
WVT				S	**S**	**11 14 21.7**	**-1.2**
WVT				SKSac		11 15 41.1	
UALR	**University of**	**63.33**	**337**	*e*P	**P**	**11 06 08.9**	**-2.1**
	comp=Z,325nm,1.4s,mb5.8						
HALT	**Halls**	**63.34**	**340**	*e*P	**P**	**11 06 19.1**	**+8.0**
HBAR	**Harrisburg**	**63.45**	**339**	*e*P	**P**	**11 06 10.4**	**-1.3**
HBAR				*e*PcP	PcP	11 06 46.2	-0.4
UTMT	**University of**	**63.59**	**340**	*e*P	**P**	**11 06 11.2**	**-1.6**
	comp=Z,2µm,1.4s						
GNAR	**Gosnell**	**63.61**	**339**	*e*P	**P**	**11 06 11.2**	**-1.7**
GLAT	**Glass**	**63.66**	**340**	*e*P	**P**	**11 06 11.4**	**-1.7**
MAIT	**Maitri**	**63.73**	**159**	*e*P	**P**	**11 06 11.6**	**-1.4**
MAIT				*e*S	**S**	**11 14 24.6**	**-5.6**
LPIG	**La Paz**	**63.73**	**316**	⇓*i*P	**P**	**11 06 13.6**	**-0.2**
NVL	**N'lazarevskaya**	**63.76**	**159**	⇑*i*P	**P**	**11 06 09.5**	**-3.7**
NVL				*i*	pP	11 06 53.2	-5.6
NVL				*i* S	**S**	**11 14 27.3**	**-3.3**
NVL				*i* S	**S**	**11 14 28.4**	**-2.2**
NVL				*e*		11 15 53.2	
NVL				*e*SS	SS	11 18 47.7	+3.8
NVL				*e*SSS	SSS	11 21 44.8	+8.6
NVL				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.9						
TXAR	**Lajitas Array**	**63.78**	**324**	P	**P**	**11 06 13.2**	**-0.9**
	comp=Z,28nm,0.8s,mb5.0,baz=152,slow=8.6,SNR=250						
LTX	**Lajitas**	**63.78**	**324**	P	**P**	**11 06 13.4**	**-0.7**
LTX				pmax	pmax		
	comp=Z,160nm,1.3s,mb5.5						
LTX	**Lajitas**	**63.78**	**324**	*e*P	**P**	**11 06 13.1**	**-0.9**
	comp=Z,156nm,1.3s,mb5.5						
SDMD	**Soldier's Deli**	**63.88**	**352**	*e*P	**P**	**11 06 13.5**	**-1.0**
SDMD				*e*PcP	PcP	11 06 47.8	-0.6
PVMO	**Portageville**	**63.92**	**340**	*e*P	**P**	**11 06 13.7**	**-1.1**
PARMO	**Parma**	**64.16**	**340**	*e*P	**P**	**11 06 15.0**	**-1.5**
MVL	**Millersville**	**64.39**	**352**	*e*P	**P**	**11 06 16.5**	**-1.3**
MVL				*e*PcP	PcP	11 06 49.2	-1.3
MCWV	**Mont Chateau**	**64.58**	**349**	*e*P	**P**	**11 06 17.9**	**-1.1**
	comp=Z,208nm,0.9s,mb5.8						
BRNJ	**Basking Ridge**	**64.86**	**354**	*e*P	**P**	**11 06 20.9**	**+0.1**
CPNY	**Central Park**	**64.91**	**354**	*e*P	**P**	**11 06 19.3**	**-1.8**
PAL	**Palisades**	**65.12**	**354**	*e*P	**P**	**11 06 21.3**	**-1.2**
PAL				*e**PP	pP	11 07 07.6	-0.6
PAL				pmax	pmax		
	comp=Z,158nm,1.4s,mb5.5						
PAL	**Palisades**	**65.12**	**354**	*e*P	**P**	**11 06 21.3**	**-1.2**
	comp=Z,158nm,1.4s,mb5.5						
PAL				*e*pP	pP	11 07 07.6	-0.7
BLO	**Bloomington**	**65.57**	**343**	P	**P**	**11 06 23.3**	**-2.1**
BLO				pmax	pmax		
	comp=Z,160nm,0.7s,mb5.8						
BLO	**Bloomington**	**65.57**	**343**	*e*P	**P**	**11 06 22.9**	**-2.5**
	comp=Z,158nm,0.6s,mb5.8						
FVM	**French Village**	**65.59**	**340**	*e*P	**P**	**11 06 23.5**	**-2.0**
FVM				*e**PP	pP	11 07 08.1	-3.2
FVM				pmax	pmax		
	comp=Z,915nm,1.4s,mb6.2						
FVM	**French Village**	**65.59**	**340**	*e*P	**P**	**11 06 23.5**	**-2.0**
	comp=Z,915nm,1.4s,mb6.2						
FVM				*e*pP	pP	11 07 08.1	-3.3
ACSO	**Alum Creek Sta**	**65.74**	**347**	*e*P	**P**	**11 06 24.4**	**-2.0**
	comp=Z,640nm,1.3s,mb6.1						
BRYW	**Bryant College**	**65.85**	**356**	⇓*e*P	**P**	**11 06 26.3**	**-0.9**
	comp=Z,735nm,1.3s,mb6.2						
BRYW				*e*pP	pP	11 07 13.3	+0.3
WMOK	**Wichita Mounta**	**65.85**	**332**	*e*P	**P**	**11 06 25.2**	**-2.1**
WMOK				*e*		11 06 56.1	
WMOK				pmax	pmax		
	comp=Z,178nm,1.3s,mb5.5						
WMOK	**Wichita Mounta**	**65.85**	**332**	*e*P	**P**	**11 06 25.1**	**-2.1**
	comp=Z,178nm,1.3s,mb5.5						
WMOK				*e*PcP	PcP	11 06 56.0	-0.5
QSPA	**South Pole Qui**	**66.07**	**180**	⇓*i*P	**P**	**11 06 26.8**	**-1.2**
	comp=Z,177nm,0.6s,mb5.9						
SLM	**Saint Louis**	**66.13**	**340**	P	**P**	**11 06 26.9**	**-2.1**
SLM				pmax	pmax		
	comp=Z,55nm,0.4s,mb5.5						
SLM	**Saint Louis**	**66.13**	**340**	*e*P	**P**	**11 06 26.6**	**-2.3**
	comp=Z,55nm,0.4s,mb5.5						
QUA2	**Belchertown**	**66.26**	**356**	*e*P	**P**	**11 06 27.7**	**-2.1**
	comp=Z,201nm,1.4s,mb5.6						
WES	**Weston**	**66.30**	**357**	P	**P**	**11 06 29.5**	**-0.5**
WES				pmax	pmax		
	comp=Z,220nm,1.4s,mb5.6						
WES	**Weston**	**66.30**	**357**	*e*P	**P**	**11 06 28.3**	**-1.7**
	comp=Z,219nm,1.4s,mb5.6						
GDL2	**Guadalupe Moun**	**66.42**	**326**	*e*P	**P**	**11 06 30.1**	**-0.8**
HRV	**Harvard--Oak R**	**66.44**	**356**	P	**P**	**11 06 30.2**	**-0.6**
HRV				S	S	11 15 06.8	+3.0
HRV	**Harvard--Oak R**	**66.44**	**356**	*e*P	**P**	**11 06 29.7**	**-1.2**
HRV				*e**PP	pP	11 07 16.6	-0.2
HRV				pmax	pmax		
	comp=Z,293nm,1.4s,mb5.7						
HRV	**Harvard--Oak R**	**66.44**	**356**	*e*P	**P**	**11 06 29.7**	**-1.2**
	comp=Z,293nm,1.4s,mb5.7						
HRV				*e*pP	pP	11 07 16.6	-0.2
BINY	**Binghamton**	**66.52**	**353**	*e*P	**P**	**11 06 30.8**	**-0.6**
	comp=Z,596nm,1.4s,mb6.0						
BINY				*e*pP	pP	11 07 16.3	-1.0
MNTX	**Cornudas Mount**	**66.55**	**325**	*e*P	**P**	**11 06 29.8**	**-2.0**
	comp=Z,574nm,1.4s,mb6.0						
MNTX				*e*pP	pP	11 07 16.2	-1.5
ALLY	**Alegheny Colle**	**66.57**	**349**	*e*P	**P**	**11 06 30.5**	**-1.2**
CPRX	**Cap Rock**	**66.83**	**327**	*e*P	**P**	**11 06 32.4**	**-1.1**
AMTX	**Amarillo**	**67.28**	**330**	⇓*i*P	**P**	**11 06 34.9**	**-1.4**
	comp=Z,338nm,1.4s,mb5.8						
AMTX				*e*sP	sP	11 07 39.6	-3.5
GENY	**Geneseo**	**67.31**	**351**	*e*P	**P**	**11 06 35.3**	**-1.0**
GENY				*e*PcP	PcP	11 07 02.4	-0.1
FFD	**Franklin Falls**	**67.40**	**356**	*e*P	**P**	**11 06 31.9**	**-5.0**
	comp=Z,290nm,1.4s,mb5.7						
ACCN	**Adirondack Com**	**67.46**	**355**	*e*P	**P**	**11 06 36.1**	**-1.1**
ACCN				*e*pP	pP	11 07 20.3	-2.9
HNH	**Hanover**	**67.68**	**356**	*e*P	**P**	**11 06 38.1**	**-0.5**
	comp=Z,31nm,1.4s,mb4.7						
HNH				*e*pP	pP	11 07 25.6	+0.9
DBIC	**Dimbokro**	**67.85**	**71**	⇑*i*P	**P**	**11 06 37.9**	**-2.3**
DBIC				*e*S	S	11 15 19.9	-1.3
DBIC				pmax	pmax		
	comp=Z,35nm,0.6s						
DBIC	**Dimbokro**	**67.85**	**71**	P	**P**	**11 06 38.3**	**-1.9**
	comp=Z,45nm,0.7s,mb5.2,baz=215,slow=6.7,SNR=64						
DBIC				pP	pP	11 07 23.7	-2.5
	comp=Z,74nm,1.1s,baz=212,slow=4.0,SNR=3.4						
DBIC				S	S	11 15 18.8	-2.4
	comp=Z,6.4nm,0.6s,baz=90,slow=22,SNR=11						
DBIC	**Dimbokro**	**67.85**	**71**	⇑*i*P	**P**	**11 06 37.9**	**-2.2**
	comp=Z,35nm,0.6s,mb5.2						
DBIC				⇑*i*pP	pP	11 07 22.9	-3.3
DBIC				*e*sP	sP	11 07 47.9	+0.9
DBIC				*e*S	S	11 15 19.9	-1.3
NCB	**Newcomb**	**68.09**	**354**	*e*P	**P**	**11 06 40.0**	**-1.1**
	comp=Z,137nm,1.3s,mb5.4						
MIV	**Mineville/With**	**68.14**	**355**	*e*P	**P**	**11 06 40.3**	**-1.1**
MIV				*e*pP	pP	11 07 26.6	-0.9
WVL	**Waterville**	**68.40**	**358**	*e*P	**P**	**11 06 42.1**	**-0.9**
	comp=Z,554nm,1.4s,mb6.0						
WVL				*e*pP	pP	11 07 29.4	+0.2
EMMW	**East Machias**	**68.51**	**360**	*e*P	**P**	**11 06 42.6**	**-1.1**
	comp=Z,744nm,1.4s,mb6.1						
EMMW				*e*PcP	PcP	11 07 06.5	-1.1
EMMW				*e*pP	pP	11 07 28.9	-0.9
KSU1	**Kansas State U**	**68.73**	**336**	*e*P	**P**	**11 06 43.6**	**-1.5**
FRNY	**Flat Rock**	**68.89**	**355**	*e*P	**P**	**11 06 44.9**	**-1.1**
FRNY				*e*pP	pP	11 07 31.8	-0.5
BNM	**Barren Site**	**69.12**	**326**	*e*P	**P**	**11 06 47.9**	**+0.3**
BNM				*e*PcP	PcP	11 07 10.9	+0.6
BNM				*e*pP	pP	11 07 31.8	-2.0
MSNY	**Massena**	**69.17**	**354**	*e*P	**P**	**11 06 47.0**	**-0.6**
MSNY				*e*pP	pP	11 07 31.3	-2.6
LENM	**Lemitar**	**69.31**	**325**	*e*P	**P**	**11 06 48.7**	**0.0**
SADO	**Sadowa**	**69.46**	**351**	P	**P**	**11 06 48.3**	**-1.2**
	comp=Z,48nm,0.5s,mb5.3,baz=187,slow=5.7,SNR=64						
SADO				LR	LR	11 39 15.5	
	comp=Z,1µm,21.4s,baz=178,slow=37						
LAZ	**Ladron**	**69.58**	**325**	*e*P	**P**	**11 06 50.6**	**+0.3**
ANMO	**Albuquerque**	**69.66**	**326**	P	**P**	**11 06 51.2**	**+0.4**
ANMO				S	S	11 15 48.8	+6.8
ANMO				pmax	pmax		
	comp=Z,140nm,0.8s						
ANMO	**Albuquerque**	**69.66**	**326**	P	**P**	**11 06 51.2**	**+0.4**
	comp=Z,140nm,0.8s,mb5.6,baz=146,slow=7.3,SNR=335						
ANMO				S	S	11 15 48.8	+6.8
	comp=Z,0.2nm,0.3s,baz=19,slow=19,SNR=3.3						
ANMO	**Albuquerque**	**69.66**	**326**	*e*P	**P**	**11 06 50.9**	**+0.1**
	comp=Z,269nm,1.1s,mb5.8						
ANMO				*e*pP	pP	11 07 35.9	-1.3
CBKS	**Cedar Bluff**	**69.72**	**333**	P	**P**	**11 06 50.8**	**-0.3**
CBKS				pmax	pmax		
	comp=Z,640nm,1.1s,mb6.2						
CBKS	**Cedar Bluff**	**69.72**	**333**	*e*P	**P**	**11 06 50.6**	**-0.5**
	comp=Z,643nm,1.1s,mb6.2						
CHIE	**El Hierro**	**69.96**	**45**	P	**P**	**11 06 52.4**	**-0.4**
	comp=Z,22nm,0.8s,mb4.8						
TUC	**Tucson**	**69.98**	**321**	*e*P	**P**	**11 06 52.9**	**+0.1**
TUC				*e**PP	pP	11 07 38.9	-0.3
TUC				pmax	pmax		
	comp=Z,295nm,1.4s,mb5.7						
TUC	**Tucson**	**69.98**	**321**	*e*P	**P**	**11 06 52.9**	**+0.1**
	comp=Z,295nm,1.4s,mb5.7						
TUC				*e*pP	pP	11 07 38.9	-0.3
EGOM	**La Gomera**	**70.74**	**46**	P	**P**	**11 06 57.0**	**-0.5**
	comp=Z,168nm,0.9s,mb5.7						
TAOE	**Nuku Hiva Isla**	**71.09**	**269**	*e*S	S	11 16 10.4	+12
CCAN	**Las Canadas**	**71.18**	**46**	P	**P**	**11 07 01.9**	**+1.8**
	comp=Z,45nm,0.9s,mb5.1						
SDCO	**Great Sand Dun**	**71.39**	**329**	*e*P	**P**	**11 07 01.6**	**+0.3**
	comp=Z,580nm,1.4s,mb6.0						
SDCO				*e*pP	pP	11 07 48.6	+0.9
SDCO				*e*sP	sP	11 08 10.1	+1.6
EOSO	**Osorio**	**71.78**	**47**	P	**P**	**11 07 03.9**	**+0.2**
	comp=Z,150nm,1.3s,mb5.5						
WUAZ	**Wupatki**	**72.68**	**323**	*e*P	**P**	**11 07 09.2**	**+0.3**
	comp=Z,323nm,1.0s,mb5.9						
WUAZ				*e*pP	pP	11 07 55.6	0.0
ADH	**Angra Heroismo**	**72.73**	**32**	*e*LR	LR	11 31 00.0	
CFTV	**Fuerteventura**	**72.98**	**47**	P	**P**	**11 07 11.0**	**+0.1**
	comp=Z,162nm,1.4s,mb5.5						
ISCO	**Idaho Springs**	**73.09**	**330**	*e*P	**P**	**11 07 11.6**	**+0.3**
ISCO				*e**PP	pP	11 07 57.4	-0.6
ISCO				pmax	pmax		
	comp=Z,312nm,1.3s,mb5.8						
ISCO	**Idaho Springs**	**73.09**	**330**	*e*P	**P**	**11 07 11.6**	**+0.3**
	comp=Z,312nm,1.3s,mb5.8						
ISCO				*e*pP	pP	11 07 57.4	-0.6
ISCO				*e*PP	Px	11 09 46.3	
PV01	**Paradox Valley**	**73.20**	**327**	*e*P	**P**	**11 07 12.2**	**+0.3**
PV01				*e*pP	pP	11 07 58.9	+0.3
PV01				*e*sP	sP	11 08 21.4	+2.1
SYO	**Syowa Base**	**73.43**	**159**	⇑P	**P**	**11 07 10.2**	**-2.4**
SBA	**Scott Base**	**73.56**	**190**	P	**P**	**11 07 13.2**	**-0.1**
SBA				pmax	pmax		
	comp=Z,87nm,1.1s,mb5.3						
SBA	**Scott Base**	**73.56**	**190**	*e*P	**P**	**11 07 13.0**	**-0.3**
	comp=Z,87nm,1.1s,mb5.3						
PV10	**Paradox Valley**	**73.62**	**327**	*e*P	**P**	**11 07 14.2**	**-0.2**
BAR	**Barrett**	**73.72**	**318**	*e*P	**P**	**11 07 15.2**	**+0.1**
EFAM	**Famara**	**73.81**	**47**	P	**P**	**11 07 17.3**	**+1.7**
	comp=Z,244nm,1.3s,mb5.7						
PHWY	**Pilot Hill**	**74.23**	**331**	⇓*e*P	**P**	**11 07 17.9**	**+0.1**
PHWY				*e*pP	pP	11 08 04.1	-0.5
PFO	**Pinyon Flat Ob**	**74.23**	**319**	*e*P	**P**	**11 07 18.2**	**+0.2**
PFO				pmax	pmax		
	comp=Z,188nm,1.3s,mb5.6						
PFO	**Pinyon Flat Ob**	**74.23**	**319**	*e*P	**P**	**11 07 18.2**	**+0.2**
	comp=Z,188nm,1.3s,mb5.6						
TBI	**Tubuai**	**74.30**	**251**	*e*P	**P**	**11 07 26.6**	**+8.0**
	comp=Z,680nm,30.5s						
TBI				*e*S	S	11 16 36.8	+1.9
	comp=Z,2µm,31.2s						
TBI				*e*LQ		11 27 06.5	
	comp=Z,1µm,28.0s						
TBI				*e*LR	LR	11 30 25.9	
	comp=Z,675nm,23.5s,baz=106						
LDFC	**Landfair**	**74.46**	**321**	*e*P	**P**	**11 07 20.3**	**+1.0**
VNDA	**Vanda**	**74.57**	**190**	P	**P**	**11 07 18.8**	**-0.3**
VNDA				pmax	pmax		
	comp=Z,46nm,0.9s						
VNDA	**Vanda**	**74.57**	**190**	P	**P**	**11 07 18.8**	**-0.3**
	comp=Z,46nm,0.9s,mb5.1,baz=140,slow=5.0,SNR=90						
VNDA	**Vanda**	**74.57**	**190**	*e*P	**P**	**11 07 18.5**	**-0.6**
	comp=Z,66nm,1.0s,mb5.2						
NEN	**Nelson**	**74.72**	**321**	*e*P	**P**	**11 07 20.8**	**+0.1**
NEN				*e*pP	pP	11 08 08.0	+0.4
NEN				*e*sP	sP	11 08 27.6	-0.7
EYMN	**Ely**	**75.05**	**343**	*e*P	**P**	**11 07 20.7**	**-1.6**
	comp=Z,441nm,1.3s,mb5.9						
RWWY	**Rawlins**	**75.33**	**330**	*e*P	**P**	**11 07 24.5**	**+0.4**
	comp=Z,288nm,1.1s,mb5.8						
RWWY				*e*pP	pP	11 08 10.5	-0.4
MSU	**Marysvale**	**75.33**	**325**	*e*P	**P**	**11 07 24.8**	**+0.7**
MSU				*e**PP	pP	11 08 11.6	+0.6
MVU	**Marysvale**	**75.34**	**325**	*e*P	**P**	**11 07 25.0**	**+0.8**
	comp=Z,334nm,1.0s,mb5.9						
ARUT	**Antelope Range**	**75.47**	**324**	*e*P	**P**	**11 07 25.9**	**+1.0**
ARUT				*e*pP	pP	11 08 14.5	+2.6
MWC	**Mount Wilson**	**75.62**	**318**	*e*P	**P**	**11 07 26.3**	**+0.5**
PAS	**Pasadena**	**75.64**	**318**	P	**P**	**11 07 26.4**	**+0.5**
SUR	**Sutherland**	**75.75**	**119**	P	**P**	**11 07 26.6**	**0.0**
	comp=Z,43nm,0.7s,mb5.2,baz=240,slow=7.3,SNR=41						
SUR	**Sutherland**	**75.75**	**119**	*e*P	**P**	**11 07 26.7**	**+0.1**
	comp=Z,228nm,1.5s,mb5.6						
RSSD	**Black Hills**	**75.92**	**333**	*e*P	**P**	**11 07 27.3**	**0.0**
RSSD				pmax	pmax		
	comp=Z,172nm,0.9s,mb5.7						
RSSD	**Black Hills**	**75.92**	**333**	*e*P	**P**	**11 07 27.3**	**0.0**
	comp=Z,172nm,0.9s,mb5.7						
RSSD				*e*pP	pP	11 08 15.5	+1.2
MPU	**Maple Canyon**	**76.17**	**326**	*e*P	**P**	**11 07 29.0**	**+0.2**
DAU	**Daniels Canyon**	**76.28**	**327**	*e*P	**P**	**11 07 30.1**	**+0.7**
DAU				*e**PP	pP	11 08 16.7	+0.3
NLU	**North Lily Min**	**76.35**	**326**	*e*P	**P**	**11 07 30.5**	**+0.7**
NLU				*e*pP	pP	11 08 18.1	+1.3
PPT	**Papeete**	**76.42**	**257**	*e*P	**P**	**11 07 40.4**	**+10**
	comp=Z,1µm,29.2s						
PPT				*e*S	S	11 17 03.2	+5.0
	comp=Z,13µm,26.5s						
PPT				*e*LQ		11 28 00.2	
	comp=Z,3µm,25.8s						
PPT				*e*LR	LR	11 31 12.0	
	comp=Z,2µm,26.2s,baz=106						
PPT	**Papeete**	**76.42**	**257**	P	**P**	**11 07 31.4**	**+0.8**
	comp=Z,162nm,1.0s,mb5.6,baz=108,slow=6.2,SNR=14						
JLU	**Jordanelle**	**76.52**	**327**	*e*P	**P**	**11 07 31.3**	**+0.6**
JLU				*e*pP	pP	11 08 20.1	+2.3
CTU	**Camp Tracy**	**76.74**	**327**	*e*P	**P**	**11 07 31.9**	**0.0**
DAC	**Darwin (Calif)**	**76.75**	**320**	*e*P	**P**	**11 07 32.5**	**+0.5**
DAC				*e**PP	pP	11 08 20.1	+1.0
DAC				pmax	pmax		
	comp=Z,355nm,1.4s,mb5.8						
DAC	**Darwin (Calif)**	**76.75**	**320**	*e*P	**P**	**11 07 32.5**	**+0.5**
	comp=Z,355nm,1.4s,mb5.8						
DAC				*e*pP	pP	11 08 20.1	+1.0
TCUT	**Toone Canyon**	**76.89**	**327**	*e*P	**P**	**11 07 33.3**	**+0.6**
NOQ	**North Oquirrh**	**76.89**	**326**	*e*P	**P**	**11 07 33.3**	**+0.5**
DUG	**Dugway**	**76.91**	**326**	P	**P**	**11 07 33.6**	**+0.7**
DUG				pmax	pmax		
	comp=Z,260nm,1.2s,mb5.7						
DUG	**Dugway**	**76.91**	**326**	*e*P	**P**	**11 07 33.4**	**+0.5**
	comp=Z,259nm,1.3s,mb5.7						
TRCR	**Troy Canyon**	**77.05**	**323**	*e*P	**P**	**11 07 34.7**	**+1.0**
BW06	**Boulder Array**	**77.26**	**329**	*e*P	**P**	**11 07 34.6**	**-0.1**
	comp=Z,19nm,0.7s,mb4.8						
PDAR	**Pinedale Array**	**77.26**	**329**	P	**P**	**11 07 34.8**	**0.0**
	comp=Z,43nm,0.8s,mb5.1,baz=143,slow=7.4,SNR=120						
PDAR				pP	pP	11 08 18.8	-3.0
	comp=Z,8.5nm,0.9s,baz=148,slow=5.0,SNR=1.2						
PDAR				LR	LR	11 40 29.6	
	comp=Z,716nm,21.7s,baz=291,slow=34						
HWUT	**Hardware Ranch**	**77.33**	**327**	*e*P	**P**	**11 07 35.2**	**+0.1**
	comp=Z,165nm,0.8s,mb5.7						
SPUT	**South Promonto**	**77.55**	**327**	*e*P	**P**	**11 07 36.9**	**+0.5**
SPUT				*e*pP	pP	11 08 24.5	+0.9
BGU	**Big Grassy Mou**	**77.56**	**326**	*e*P	**P**	**11 07 36.7**	**+0.3**
BGU				*e*pP	pP	11 08 23.1	-0.5
TSUM	**Tsumeb**	**77.63**	**106**	P	**P**	**11 07 36.5**	**-0.7**
	comp=Z,30nm,0.7s,mb5.0,baz=230,slow=6.2,SNR=56						
TSUM				pP	pP	11 08 21.0	-3.4
	comp=Z,10nm,0.8s,baz=234,slow=7.3,SNR=1.2						
TSUM	**Tsumeb**	**77.63**	**106**	*e*P	**P**	**11 07 35.8**	**-1.4**
	comp=Z,38nm,0.8s,mb5.1						
TPH	**Tonopah**	**77.78**	**322**	*e*P	**P**	**11 07 38.3**	**+0.6**
TPH				*e**PP	pP	11 08 26.0	+1.1
TPH				pmax	pmax		
	comp=Z,336nm,1.4s,mb5.8						
TPH	**Tonopah**	**77.78**	**322**	*e*P	**P**	**11 07 38.2**	**+0.6**
	comp=Z,336nm,1.4s,mb5.8						
TPH				*e*pP	pP	11 08 26.0	+1.1
AHID	**Auburn Hatcher**	**77.98**	**328**	*e*P	**P**	**11 07 39.0**	**+0.3**
	comp=Z,746nm,1.4s,mb6.1						
AHID				*e*pP	pP	11 08 26.9	+0.9
AHID				*e*sP	sP	11 08 49.4	+2.8
MTUM	**Tungsten Hills**	**78.05**	**320**	*e*P	**P**	**11 07 39.6**	**+0.5**
HVU	**Hansel Valley**	**78.06**	**327**	*e*P	**P**	**11 07 39.3**	**+0.1**
HVU				*e*pP	pP	11 08 27.3	+0.9
HVU				*e*sP	sP	11 08 47.9	+0.8
ULM	**Lac du Bonnet**	**78.35**	**342**	P	**P**	**11 07 39.7**	**-0.8**
	comp=Z,138nm,0.9s,mb5.6,baz=152,slow=5.6,SNR=101						
ULM				pP	pP	11 08 24.9	-3.0
	comp=Z,17nm,0.7s,baz=92,slow=11,SNR=1.4						
SNOW	**Snow King Moun**	**78.35**	**329**	*e*P	**P**	**11 07 41.2**	**+0.5**
	comp=Z,225nm,1.1s,mb5.7						
WUWY	**Wally Ulrich**	**78.40**	**329**	*e*P	**P**	**11 07 41.3**	**+0.3**
WUWY				*e*pP	pP	11 08 30.3	+2.0
TPAW	**Teton Pass**	**78.46**	**329**	*e*P	**P**	**11 07 41.8**	**+0.5**
	comp=Z,416nm,1.1s,mb6.0						
TPAW				*e*pP	pP	11 08 29.9	+1.3
OMM	**Old Mammoth Mi**	**78.48**	**320**	*e*P	**P**	**11 07 42.2**	**+0.7**
OMM				*e*pP	pP	11 08 31.0	+2.2
OMM				*e*sP	sP	11 08 52.1	+2.6
RRI2	**Red Ridge**	**78.53**	**329**	*e*P	**P**	**11 07 42.2**	**+0.5**
	comp=Z,491nm,1.2s,mb6.0						
RRI2				*e*pP	pP	11 08 29.3	+0.4
MNV	**Mina**	**78.55**	**321**	P	**P**	**11 07 42.4**	**+0.5**
MNV				pmax	pmax		
	comp=Z,77nm,1.0s,mb5.3						
MNV	**Mina**	**78.55**	**321**	*e*P	**P**	**11 07 42.1**	**+0.2**
	comp=Z,77nm,1.0s,mb5.3						
MOOW	**Moose Ponds**	**78.56**	**329**	*e*P	**P**	**11 07 42.1**	**+0.3**
	comp=Z,286nm,1.4s,mb5.7						
ELK	**Elko**	**78.58**	**325**	P	**P**	**11 07 42.0**	**0.0**
ELK				*PP	pP	11 08 28.0	-1.3
ELK				pmax	pmax		
	comp=Z,68nm,0.9s						
ELK				pmax	pmax		
	comp=Z,25nm,1.0s						
ELK	**Elko**	**78.58**	**325**	P	**P**	**11 07 42.0**	**+0.1**
	comp=Z,68nm,0.9s,mb5.3,baz=208,slow=18,SNR=3.3						

ELK				pP	pP	11 08 28.0	-1.3
	comp=Z,25nm,1.0s,baz=123,slow=1.0,SNR=1.4						
ELK	**Elko**	78.58	325	*e*P	P	11 07 42.2	+0.2
	comp=Z,378nm,1.4s,mb5.8						
NVAR	**Mina Array Bea**	78.64	321	P	P	11 07 43.0	+0.7
	comp=Z,41nm,0.7s,mb5.2,baz=140,slow=6.9,SNR=150						
SCHQ	**Schefferville**	78.64	0	P	P	11 07 41.4	-0.7
	comp=Z,23nm,0.5s,mb5.1,baz=180,slow=4.8,SNR=74						
SCHQ				pP	pP	11 08 27.5	-1.8
	comp=Z,11nm,0.7s,baz=164,slow=5.5,SNR=1.6						
LRV	**Little Rabbit**	78.89	318	*e*P	P	11 07 45.1	+1.4
LAO	**LASA Array**	78.91	334	*e*P	P	11 07 43.5	-0.1
	comp=Z,477nm,1.3s,mb6.0						
LKWY	**Lake**	79.03	330	*e*P	P	11 07 46.3	+2.0
LKWY				pmax	pmax		
	comp=Z,423nm,1.5s,mb5.8						
LKWY	**Lake**	79.03	330	*e*P	P	11 07 46.3	+2.0
	comp=Z,423nm,1.5s,mb5.8						
YFT	**Old Faithful**	79.14	330	*e*P	P	11 07 46.5	+1.6
YNR	**Norris Junctio**	79.28	330	*e*P	P	11 07 47.0	+1.3
YMR	**Madison River**	79.37	330	*e*P	P	11 07 47.3	+1.1
YMR				*e*pP	pP	11 08 35.4	+1.8
SAO	**San Andreas Ge**	79.37	318	P	P	11 07 47.2	+0.9
SAO				pmax	pmax		
	comp=Z,74nm,1.0s,mb5.3						
SAO	**San Andreas Ge**	79.37	318	*e*P	P	11 07 46.4	+0.1
	comp=Z,74nm,1.1s,mb5.2						
BMN	**Battle Mountai**	79.42	323	P	P	11 07 46.4	-0.1
BMN				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.4						
BMN	**Battle Mountai**	79.42	323	*e*P	P	11 07 46.2	-0.3
	comp=Z,106nm,1.2s,mb5.3						
CMB	**Columbia Colle**	79.58	320	P	P	11 07 47.3	-0.1
CMB				pmax	pmax		
	comp=Z,77nm,1.1s,mb5.2						
CMB	**Columbia Colle**	79.58	320	*e*P	P	11 07 47.0	-0.4
	comp=Z,77nm,1.1s,mb5.2						
GCMT	**Greycliff**	79.65	331	*e*P	P	11 07 47.7	0.0
QLMT	**Earthquake Lak**	79.71	330	*e*P	P	11 07 49.2	+1.3
WCN	**Washoe City**	80.06	321	P	P	11 07 51.1	+1.2
WCN				pmax	pmax		
	comp=Z,98nm,1.2s,mb5.3						
WCN	**Washoe City**	80.06	321	*e*P	P	11 07 50.8	+0.9
	comp=Z,98nm,1.2s,mb5.3						
PAHR	**Pah Rah Range**	80.12	322	*e*P	P	11 07 51.3	+1.0
	comp=Z,496nm,1.4s,mb6.0						
HLID	**Hailey**	80.19	327	*e*P	P	11 07 51.5	+1.0
	comp=Z,943nm,1.4s,mb6.2						
HLID				*e*pP	pP	11 08 39.6	+1.5
MCMT	**McKenzie Canyo**	80.37	329	*e*P	P	11 07 52.6	+1.1
BOZ	**Bozeman (W)**	80.42	330	⇓*i*P	P	11 07 51.9	+0.2
BOZ				pmax	pmax		
	comp=Z,134nm,1.3s,mb5.4						
BOZ	**Bozeman (W)**	80.42	330	⇓*i*P	P	11 07 51.9	+0.2
	comp=Z,134nm,1.3s,mb5.4						
SAC	**San Andreas**	80.49	318	P	P	11 07 53.8	+1.5
SAC	**San Andreas**	80.49	318	*e*P	P	11 07 52.9	+0.6
BOSA	**Boshof**	80.68	117	P	P	11 07 53.0	-0.5
BOSA				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.5						
BOSA	**Boshof**	80.68	117	P	P	11 07 52.9	-0.6
	comp=Z,85nm,0.8s,mb5.4,baz=256,slow=4.3,SNR=49						
BOSA	**Boshof**	80.68	117	*e*P	P	11 07 52.6	-0.9
	comp=Z,124nm,0.9s,mb5.5						
NSHM	**Saint Helena R**	81.21	319	*e*P	P	11 07 56.6	+0.6
MAW	**Mawson**	81.31	163	⇓*i*P	P	11 07 55.3	-0.7
MAW				*i* PP	pP	11 08 40.7	-2.9
MAW				*i* S	S	11 17 50.2	+1.6
MAW	**Mawson**	81.31	163	P	P	11 07 55.4	-0.6
	comp=Z,100nm,0.9s,mb5.5,baz=218,slow=6.4,SNR=163						
MAW				pP	pP	11 08 41.7	-2.0
	comp=Z,16nm,0.8s,baz=232,slow=9.2,SNR=1.4						
HRY	**Holter Researc**	81.32	331	*e*P	P	11 07 56.9	+0.5
HRY				*e*pP	pP	11 08 45.4	+1.3
WVOR	**Wild Horse Val**	81.57	324	P	P	11 07 58.0	+0.2
WVOR				pmax	pmax		
	comp=Z,130nm,1.3s,mb5.4						
WVOR	**Wild Horse Val**	81.57	324	*e*P	P	11 07 57.8	0.0
	comp=Z,132nm,1.4s,mb5.4						
CHMT	**Chamberlain Mo**	82.11	330	*e*P	P	11 08 00.9	+0.4
MOD	**Modoc**	82.12	323	*e*P	P	11 08 01.1	+0.5
	comp=Z,220nm,1.2s,mb5.7						
PTEO	**Sao Teotonio**	82.24	43	*e*P	P	11 08 01.9	+0.6
	comp=Z,156nm,1.5s,mb5.4						
PTEO				*e*pP	pP	11 08 50.0	+0.9
LBTB	**Lobatse**	82.34	114	*e*P	P	11 08 01.5	-0.6
LBTB				pmax	pmax		
	comp=Z,45nm,0.6s,mb5.3						
LBTB	**Lobatse**	82.34	114	*e*P	P	11 08 01.3	-0.8
	comp=Z,45nm,0.6s,mb5.3						
MSO	**Missoula**	82.37	330	*e*P	P	11 08 02.3	+0.6
	comp=Z,149nm,1.4s,mb5.4						
MSO				*e*pP	pP	11 08 50.6	+1.0
WDC	**Whiskeytown Da**	82.51	321	P	P	11 08 01.6	-1.0
WDC				pmax	pmax		
	comp=Z,58nm,0.7s,mb5.4						
WDC	**Whiskeytown Da**	82.51	321	*e*P	P	11 08 01.4	-1.2
	comp=Z,58nm,0.7s,mb5.4						
BMO	**Blue Mountains**	82.57	327	*e*P	P	11 08 03.0	+0.1
	comp=Z,300nm,1.3s,mb5.9						
BMO				*e*pP	pP	11 08 51.9	+1.2
PALC	**Alcoutim**	82.97	44	*e*P	P	11 08 06.0	+0.9
	comp=Z,108nm,1.0s,mb5.5						
EGRO	**El Granado**	83.01	44	P	P	11 08 06.3	+1.0
	comp=Z,47nm,1.1s,mb5.1						
PBEJ	**Beja**	83.07	43	*e*P	P	11 08 06.3	+0.7
	comp=Z,59nm,1.1s,mb5.2						
YBH	**Yreka Blue Hor**	83.35	322	P	P	11 08 06.3	-0.7
YBH				pmax	pmax		
	comp=Z,39nm,0.9s						
YBH	**Yreka Blue Hor**	83.35	322	P	P	11 08 06.2	-0.8
	comp=Z,36nm,0.9s,mb5.1,baz=74,slow=5.5,SNR=25						
YBH	**Yreka Blue Hor**	83.35	322	*e*P	P	11 08 06.0	-0.9
	comp=Z,39nm,0.9s,mb5.1						
KHMM	**Horse Mountain**	83.39	320	*e*P	P	11 08 07.6	+0.5
ESPR	**Espera**	83.65	45	P	P	11 08 08.8	+0.3
	comp=Z,24nm,0.7s,mb5.0						
EMIN	**Mina Concepcio**	83.66	44	P	P	11 08 09.2	+0.6
	comp=Z,186nm,1.5s,mb5.6						
PTOM	**Tomar**	83.72	42	*e*P	P	11 08 09.4	+0.6
	comp=Z,264nm,1.4s,mb5.8						
PTOM				*e*pP	pP	11 08 58.3	+1.6
RAR	**Rarotonga**	83.96	250	P	P	11 08 10.8	+0.4
	comp=Z,69nm,1.1s,mb5.3,baz=202,slow=5.3,SNR=5.8						
VIPM	**Ingram Point**	84.04	325	P	P	11 08 11.4	+1.1
EBAD	**Badajoz**	84.05	43	P	P	11 08 11.3	+0.8
	comp=Z,55nm,1.3s,mb5.1						
HUMO	**Hull Mountain**	84.06	322	*e*P	P	11 08 08.9	-1.6
	comp=Z,117nm,1.3s,mb5.5						
FFC	**Flin Flon**	84.08	340	P	P	11 08 10.0	-0.3
FFC				pmax	pmax		
	comp=Z,200nm,1.4s,mb5.7						
FFC	**Flin Flon**	84.08	340	*e*P	P	11 08 09.8	-0.5
	comp=Z,203nm,1.4s,mb5.7						
FFC				*e*pP	pP	11 09 00.8	+2.6
EMIJ	**Mijas**	84.18	46	P	P	11 08 11.3	+0.1
	comp=Z,87nm,1.5s,mb5.3						
PCBR	**Castelo Branco**	84.42	42	*e*P	P	11 08 13.0	+0.7
	comp=Z,136nm,1.2s,mb5.5						
PCBR				*e*pP	pP	11 09 00.5	+0.2
HBO	**Huckleberry Mo**	84.52	323	P	P	11 08 13.0	+0.3
KBO	**Bosley Butte**	84.53	321	*e*P	P	11 08 14.0	+1.2
CROR	**Criterion Ridg**	84.56	325	P	P	11 08 13.9	+1.0
IRO	**Indian Ridge**	84.58	323	P	P	11 08 13.4	+0.3
FRIS	**Frissel Point**	84.64	324	P	P	11 08 13.8	+0.5
ECAB	**El Cabril**	84.64	44	P	P	11 08 13.7	+0.2
	comp=Z,46nm,1.5s,mb5.0						
PVIS	**Viseu**	84.70	41	*e*P	P	11 08 14.2	+0.5
	comp=Z,142nm,1.4s,mb5.5						
PVIS				*e*pP	pP	11 09 02.3	+0.6
MTE	**Manteigas**	84.72	41	*e*P	P	11 08 14.3	+0.5
	comp=Z,201nm,1.3s,mb5.7						
MTE				*e*pP	pP	11 09 02.0	+0.2
MTE				*e*S	S	11 18 27.1	+3.9
MTE	**Manteigas**	84.72	41	*e*P	P	11 08 13.9	+0.1
	comp=Z,111nm,0.6s,mb5.8						
MTE				*e*pP	pP	11 09 03.2	+1.4
HAWA	**Hanford**	84.76	327	*e*P	P	11 08 14.0	+0.1
	comp=Z,34nm,1.4s,mb4.9						
HAWA				*e*pP	pP	11 09 00.9	-1.0
NEW	**Newport**	84.89	329	P	P	11 08 14.0	-0.5
NEW				pmax	pmax		
	comp=Z,60nm,1.1s						
NEW	**Newport**	84.89	329	P	P	11 08 14.0	-0.5
	comp=Z,60nm,1.1s,mb5.2,baz=132,slow=5.1,SNR=51						
NEW	**Newport**	84.89	329	*e*P	P	11 08 13.7	-0.8
	comp=Z,51nm,0.8s,mb5.3						
ELOJ	**Sierra Loja**	84.92	46	P	P	11 08 15.7	+0.8
ELOJ				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.1						
ELOJ	**Sierra Loja**	84.92	46	P	P	11 08 15.7	+0.8
	comp=Z,32nm,0.8s,mb5.1						
EALB	**Alboran**	84.97	47	P	P	11 08 15.1	-0.1
	comp=Z,124nm,1.4s,mb5.5						
KEBM	**Edson Butte**	85.01	322	*e*P	P	11 08 15.5	+0.3
OD2	**Odessa Site #2**	85.04	328	P	P	11 08 15.6	+0.4
ELUQ	**Luque**	85.08	45	P	P	11 08 16.7	+1.0
ELUQ				pmax	pmax		
	comp=Z,111nm,1.0s,mb5.5						
ELUQ	**Luque**	85.08	45	P	P	11 08 16.7	+1.0
	comp=Z,110nm,1.0s,mb5.5						
EZAM	**Zamans**	85.12	39	P	P	11 08 16.4	+0.6
EZAM				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.0						
EZAM	**Zamans**	85.12	39	P	P	11 08 16.4	+0.6
	comp=Z,24nm,0.8s,mb5.0						
PVRL	**Vila Real**	85.16	41	*e*P	P	11 08 16.4	+0.4
	comp=Z,268nm,1.5s,mb5.8						
PVRL				*e*pP	pP	11 09 05.2	+1.2
EADA	**Adamuz**	85.23	45	P	P	11 08 16.7	+0.3
	comp=Z,49nm,1.0s,mb5.2						
ELOB	**Lobios**	85.32	40	P	P	11 08 16.8	+0.1
	comp=Z,64nm,1.0s,mb5.3						
EMAZ	**Mazaricos**	85.46	39	P	P	11 08 17.0	-0.4
	comp=Z,47nm,1.2s,mb5.1						
COR	**Corvallis**	85.53	323	*e*P	P	11 08 18.1	+0.4
COR				pmax	pmax		
	comp=Z,246nm,0.9s,mb5.9						
COR	**Corvallis**	85.53	323	*e*P	P	11 08 18.1	+0.4
	comp=Z,246nm,0.9s,mb5.9						
EBER	**Berja**	85.61	46	P	P	11 08 18.5	+0.2
	comp=Z,62nm,1.4s,mb5.1						
STS	**Santiago**	85.67	39	P	P	11 08 19.4	+1.0
STS				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.9						
STS	**Santiago**	85.67	39	P	P	11 08 19.4	+1.0
	comp=Z,27nm,1.0s,mb4.9						
EBAN	**Banos Encina**	85.74	45	P	P	11 08 19.7	+0.8
EBAN				pmax	pmax		
	comp=Z,67nm,0.8s,mb5.4						
EBAN	**Banos Encina**	85.74	45	P	P	11 08 19.7	+0.7
	comp=Z,67nm,0.8s,mb5.4						
TBM	**Table Mountain**	85.83	327	P	P	11 08 19.7	+0.6
EQES	**Quesada**	86.00	46	P	P	11 08 19.9	-0.3
	comp=Z,43nm,0.8s,mb5.2						
ECAL	**Calabor**	86.14	40	P	P	11 08 21.3	+0.5
	comp=Z,73nm,1.2s,mb5.3						
ERUA	**La Rua**	86.18	40	P	P	11 08 21.8	+0.9
ERUA				pmax	pmax		
	comp=Z,129nm,1.6s,mb5.4						
ERUA	**La Rua**	86.18	40	P	P	11 08 21.8	+0.9
	comp=Z,129nm,1.6s,mb5.4						
PAB	**San Pablo**	86.18	44	P	P	11 08 21.7	+0.6
PAB				pP	pP	11 09 08.2	-0.9
PAB				pP	pP	11 09 10.6	+1.4
ESDC	**Sonseca Array**	86.50	44	P	P	11 08 23.2	+0.7
	comp=Z,16nm,0.8s,mb4.8,baz=230,slow=4.9,SNR=64						
ESDC				pP	pP	11 09 09.9	-0.8
	comp=Z,41nm,1.1s,baz=225,slow=5.1,SNR=4.4						
ESDC	**Sonseca Array**	86.50	44	P	P	11 08 23.0	+0.4
	comp=Z,52nm,1.4s,mb5.1						
EPON	**Pontenova**	86.75	39	P	P	11 08 24.1	+0.5
	comp=Z,62nm,1.3s,mb5.2						
EVIA	**Vianos**	86.84	45	P	P	11 08 24.3	+0.1
EVIA				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.0						
EVIA	**Vianos**	86.84	45	P	P	11 08 24.3	+0.1
	comp=Z,24nm,0.7s,mb5.0						
JCW	**Jim Creek**	87.18	327	P	P	11 08 25.2	-0.4
DRV	**Dumont d'Urvil**	87.21	190	P	P	11 08 27.0	+1.7
DRV	**Dumont d'Urvil**	87.21	190	S	S	11 18 42.0	-4.2
DRV				SS	SS	11 24 44.0	+5.8
CART	**Cartagena**	87.24	47	*e*P	P	11 08 24.9	-1.3
	comp=Z,22nm,0.8s,mb4.9						
ETOB	**Tobarra**	87.46	45	P	P	11 08 27.7	+0.6
	comp=Z,39nm,1.2s,mb5.0						
ETRT	**Tiaret**	87.62	49	P	P	11 08 29.0	+1.0
EANR	**'Ain N'Sour**	87.78	49	P	P	11 08 27.2	-1.5
EARI	**Arriondas**	87.86	40	P	P	11 08 29.6	+0.6
	comp=Z,12nm,0.9s,mb4.7						
OCWA	**Octopus Mounta**	88.04	325	*e*P	P	11 08 29.8	+0.1
	comp=Z,457nm,1.4s,mb6.1						
ECHF	**Ech Chlef**	88.05	49	P	P	11 08 31.9	+1.9
ECHA	**Ech Chlef**	88.07	49	P	P	11 08 31.9	+1.8
EBNR	**Beni Rached**	88.25	49	P	P	11 08 32.0	+1.0
MIR	**Mirnyy**	88.34	172	*d* *i*P	P	11 08 29.0	-1.6
MIR				*e*S	S	11 18 56.0	-0.8
MIR				*e*S	S	11 18 56.0	-0.8
MIR				*e**SS		11 20 20.0	
MIR				pmax	pmax		
	comp=Z,135nm,2.0s,mb5.4						
MIR				pmax	pmax		
	comp=Z,800nm,6.0s						
MIR				smax			
	comp=N,776nm,12.0s						
MIR				smax			
	comp=E,1µm,12.4s						
MIR				MLR	MLR		
	comp=N,550nm,20.0s						
MIR				MLR	MLR		
	comp=E,440nm,20.0s						
MIR				MLR	MLR		
	comp=Z,2µm,20.0s						
EBEN	**Beniarda**	88.36	46	P	P	11 08 34.2	+2.8
	comp=Z,39nm,1.2s,mb5.1						
ECHE	**Chera**	88.36	45	P	P	11 08 32.0	+0.6
ECHE				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
ECHE	**Chera**	88.36	45	P	P	11 08 32.0	+0.7
	comp=Z,13nm,0.7s,mb4.9						
LSZ	**Lusaka**	88.48	106	*e*P	P	11 08 34.2	+1.8
LSZ				*e**PP	pP	11 09 20.3	-0.4
LSZ				*e*		11 11 56.6	
LSZ				pmax	pmax		
	comp=Z,193nm,1.4s,mb5.7						
LSZ	**Lusaka**	88.48	106	*e*P	P	11 08 34.1	+1.7
	comp=Z,193nm,1.4s,mb5.7						
LSZ				*e*pP	pP	11 09 20.3	-0.5
LSZ				*e*PP	PP	11 11 56.6	-8.6
ECRI	**Cripan**	89.08	42	P	P	11 08 35.7	+1.0
ECRI				pmax	pmax		
	comp=Z,31nm,0.6s,mb5.3						
ECRI	**Cripan**	89.08	42	P	P	11 08 35.7	+1.0
	comp=Z,31nm,0.6s,mb5.3						
EMOS	**Mosqueruela**	89.10	45	P	P	11 08 34.6	-0.2
	comp=Z,8.0nm,0.8s,mb4.6						
EMHD	**Djebel Mahouad**	89.19	49	P	P	11 08 33.0	-2.4
ESAC	**San Caprasio**	89.84	43	P	P	11 08 38.9	+0.6
	comp=Z,57nm,1.0s,mb5.4						
ERTA	**Horta de San J**	89.94	44	P	P	11 08 38.7	0.0
	comp=Z,46nm,1.5s,mb5.1						
EALK	**Alkurruntz**	90.03	42	P	P	11 08 39.1	0.0
	comp=Z,30nm,1.4s,mb4.9						
SJPF	**Ste Jean**	90.14	42	*e*P	P	11 08 40.2	+0.6
	comp=Z,235nm,1.3s,mb5.5						
SJPF				*e*pP	pP	11 09 28.9	+0.8
SJPF	**Ste Jean**	90.14	42	*e*P	P	11 08 40.2	+0.6
SJPF				*e**PP	pP	11 09 28.9	+0.8
SJPF				pmax	pmax		
	comp=Z,118nm,1.3s,mb5.6						
OSSF	**Osses**	90.20	42	*e*P	P	11 08 39.7	-0.2
LARF	**Larrau**	90.24	42	*e*P	P	11 08 40.7	+0.6
ETSF	**Etsaut**	90.43	42	*e*P	P	11 08 41.6	+0.6
EGRA	**Graus**	90.59	43	P	P	11 08 42.5	+0.8
	comp=Z,18nm,0.7s,mb5.1						
EPOB	**Poblet**	90.63	44	P	P	11 08 41.7	-0.2
	comp=Z,15nm,1.2s,mb4.8						
REYF	**Montagne du Re**	90.63	42	*e*P	P	11 08 42.3	+0.4
REYF	**Montagne du Re**	90.63	42	*e*P	P	11 08 42.4	+0.5
EBIE	**Bielsa**	90.75	43	P	P	11 08 42.7	+0.2
	comp=Z,31nm,1.1s,mb5.2						
VIEF	**Viey**	90.78	43	*e*P	P	11 08 43.1	+0.5
CKHR	**Kef el Ahmar**	90.89	51	P	P	11 08 47.0	+3.7
SET	**Setif**	90.90	50	P	P	11 08 44.0	+0.7
RESF	**Ens**	90.94	43	*e*P	P	11 08 43.9	+0.6
CMER	**Merouana**	90.97	51	P	P	11 08 46.0	+2.3
EPF	**Esparros**	91.06	43	*e*P	P	11 08 44.3	+0.4
EMIR	**Miracle**	91.21	44	P	P	11 08 45.0	+0.4
	comp=Z,24nm,1.2s,mb5.0						
MELF	**Melles**	91.23	43	*e*P	P	11 08 46.1	+1.4
DFRA	**Djebel Bou Aff**	91.41	50	P	P	11 08 48.0	+2.3
SALF	**Salau**	91.44	43	*e*P	P	11 08 46.8	+1.1
MLS	**Moulis**	91.49	43	*e*P	P	11 08 46.8	+0.9
CTEI	**Djebel Teioual**	91.55	51	P	P	11 08 48.0	+1.6
SFJD	**Kangerlussuaq**	91.68	6	*i* P	P	11 08 46.1	-0.1
SFJD				*i*	pP	11 09 32.3	-2.4
SFJD				*i* S	S	11 19 06.8	-20
SFJD				*i*		11 19 29.1	
SFJD				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
SFJD				MLR	MLR		
	comp=Z,470nm,23.0s						
SFJD	**Kangerlussuaq**	91.68	6	*i* P	P	11 08 46.1	-0.1
	comp=Z,30nm,1.1s,mb5.1						
SFJD				*i*	pP	11 09 32.3	-2.4
SFJD				*i* S	S	11 19 06.8	-20
SFJD				*i*		11 19 29.1	
SFJD				*e*		11 20 32.0	
	comp=Z,460nm,23.0s						
CASM	**Ain Smara**	91.70	51	P	P	11 08 49.0	+1.9
QUIF	**Quistinic**	91.71	37	*e*P	P	11 08 46.2	-0.6
	comp=Z,198nm,1.5s,mb5.5						
QUIF				*e*pP	pP	11 09 34.6	-0.7
QUIF	**Quistinic**	91.71	37	*e*P	P	11 08 46.2	-0.6
QUIF				*e**PP	pP	11 09 34.6	-0.7
QUIF				pmax	pmax		
	comp=Z,99nm,1.5s,mb5.5						
VALF	**Valcebollere**	91.77	44	*e*P	P	11 08 47.5	+0.3
VALF	**Valcebollere**	91.77	44	*e*P	P	11 08 47.6	+0.4
LRYF	**La Roche-sur-Y**	91.87	39	*e*P	P	11 08 47.0	-0.6
ROSF	**Rostrenen**	91.89	37	*e*P	P	11 08 47.1	-0.6
	comp=Z,275nm,1.4s,mb5.7						
ROSF	**Rostrenen**	91.89	37	*e*P	P	11 08 47.1	-0.6
ROSF				pmax	pmax		
	comp=Z,137nm,1.4s,mb5.7						
CKFL	**Kef-Lekhel**	91.93	51	P	P	11 08 49.5	+1.4
LPEF	**Le Peyrat**	91.99	43	*e*P	P	11 08 48.8	+0.6
FILF	**Fillols**	92.20	44	*e*P	P	11 08 49.7	+0.5
CAEH	**'Ain El Ouahch**	92.20	51	P	P	11 08 51.5	+2.1
SGMF	**Saint Gilles**	92.24	37	*e*P	P	11 08 48.5	-0.8
	comp=Z,135nm,1.4s,mb5.4						
SGMF	**Saint Gilles**	92.24	37	*e*P	P	11 08 48.5	-0.8
SGMF				pmax	pmax		
	comp=Z,68nm,1.4s,mb5.4						
LFF	**La Frestale**	92.32	41	*e*P	P	11 08 49.6	-0.1
	comp=Z,249nm,1.4s,mb5.7						
LFF	**La Frestale**	92.32	41	*e*P	P	11 08 49.6	-0.1
LFF				pmax	pmax		
	comp=Z,125nm,1.4s,mb5.7						
LRDF	**Laroque-de-Fa**	92.38	44	*e*P	P	11 08 49.3	-0.7
MTLF	**Montolieu**	92.39	43	*e*P	P	11 08 49.7	-0.4
	comp=Z,193nm,1.5s,mb5.5						
MTLF				*e*pP	pP	11 09 38.3	-0.3
MTLF	**Montolieu**	92.39	43	*e*P	P	11 08 49.7	-0.4
MTLF				*e**PP	pP	11 09 38.3	-0.3
MTLF				pmax	pmax		
	comp=Z,96nm,1.5s,mb5.5						
ABSA	**Djebel Ababsia**	92.41	51	P	P	11 08 52.0	+1.6
CMAH	**Djebel Manchou**	92.53	51	P	P	11 08 51.5	+0.6
MFF	**Saint Martin d**	92.69	39	*e*P	P	11 08 51.1	-0.3
	comp=Z,235nm,1.3s,mb5.7						
MFF				*e*pP	pP	11 09 39.6	-0.3
MFF	**Saint Martin d**	92.69	39	*e*P	P	11 08 51.1	-0.3
MFF				*e**PP	pP	11 09 39.6	-0.3
MFF				pmax	pmax		
	comp=Z,117nm,1.3s,mb5.8						
BBB	**Bella Bella**	92.78	327	P	P	11 08 52.2	+0.5
	comp=Z,62nm,1.0s,mb5.6,baz=127,slow=4.3,SNR=9.8						
DCN	**Croghan**	92.82	31	⇑*i*P	P	11 08 51.3	-0.5
RJF	**Les Rejaudoux**	92.98	41	*e*P	P	11 08 52.3	-0.4
	comp=Z,219nm,1.5s,mb5.7						
RJF				*e*R			
	comp=Z,1µm,21.8s						
RJF	**Les Rejaudoux**	92.98	41	*e*P	P	11 08 52.3	-0.4
RJF				pmax	pmax		
	comp=Z,110nm,1.5s,mb5.7						
RJF				MLR	MLR		
	comp=Z,1µm,21.8s						
CAF	**Calviac**	93.11	42	*e*P	P	11 08 53.4	0.0
	comp=Z,108nm,1.5s,mb5.3						
CAF	**Calviac**	93.11	42	*e*P	P	11 08 53.4	0.0
CAF				pmax	pmax		
	comp=Z,54nm,1.5s,mb5.4						
DLF	**Lyons Farm**	93.15	32	⇑*i*P	P	11 08 51.5	-1.8
HEX	**Exmoor**	93.19	34	*e*P	P	11 08 53.1	-0.5
HEX				AMb	AMB	11 08 55.7	
	comp=Z,109nm,1.6s,mb5.6						
GRR	**Gorron**	93.26	38	*e*P	P	11 08 53.1	-0.8
	comp=Z,96nm,1.1s,mb5.4						
GRR				*e*pP	pP	11 09 41.6	-0.9
GRR	**Gorron**	93.26	38	*e*P	P	11 08 53.1	-0.8
GRR				*e**PP	pP	11 09 41.6	-0.9
GRR				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.4						
HSA	**Swansea**	93.40	34	*e*P	P	11 08 54.0	-0.5
HSA				AMb	AMB	11 08 56.5	
	comp=Z,150nm,1.6s,mb5.8						
URZ	**Urewera**	93.62	225	P	P	11 08 56.5	+0.6
	comp=Z,22nm,0.7s,mb5.3,baz=58,slow=4.0,SNR=8.2						
FLN	**La Foliniere**	93.67	37	*e*P	P	11 08 55.2	-0.6
	comp=Z,222nm,1.5s,mb5.7,baz=224						
FLN				*e*R			
	comp=Z,1µm,21.5s						
FLN	**La Foliniere**	93.67	37	*e*P	P	11 08 55.2	-0.6
FLN				pmax	pmax		
	comp=Z,111nm,1.5s,mb5.7						
FLN				MLR	MLR		
	comp=Z,1µm,21.5s						
LASF	**Ste Croix**	93.78	43	*e*P	P	11 08 56.6	+0.2
	comp=Z,79nm,1.5s,mb5.2						
TCF	**Toulx Ste Croi**	93.91	41	*e*P	P	11 08 56.4	-0.5
	comp=Z,51nm,1.1s,mb5.2						
TCF				*e*pP	pP	11 09 45.1	-0.3
TCF	**Toulx Ste Croi**	93.91	41	*e*P	P	11 08 56.4	-0.5
TCF				*e**PP	pP	11 09 45.1	-0.3
TCF				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
RPZ	**Rata Peaks**	94.04	218	P	P	11 08 58.2	+0.6
	comp=Z,48nm,1.1s,mb5.4,baz=138,slow=2.0,SNR=3.5						
YKA	**Yellowknife Ar**	94.25	340	P	P	11 08 57.9	-0.1
	comp=Z,44nm,0.7s,mb5.6,baz=131,slow=4.5,SNR=277						
YKA				pP	pP	11 09 45.7	-0.8
	comp=Z,22nm,1.0s,baz=133,slow=4.5,SNR=2.7						
YKA				ScS	ScS	11 19 50.9	+1.0
	comp=Z,1.6nm,1.0s,baz=118,slow=10,SNR=7.3						
YKA	**Yellowknife Ar**	94.25	340	P	P	11 08 57.9	-0.1
YKA				pP	pP	11 09 45.7	-0.8
YKA				ScS	ScS	11 19 50.9	+1.0
BGF	**Bois d'Agland**	94.42	41	*e*P	P	11 08 59.0	-0.2
	comp=Z,212nm,1.5s,mb5.7						
BGF	**Bois d'Agland**	94.42	41	*e*P	P	11 08 59.0	-0.2
BGF				pmax	pmax		
	comp=Z,106nm,1.5s,mb5.7						
GELF	**Grande-Etoile**	94.43	44	*e*P	P	11 09 00.8	+1.4
PRAF	**Pradon**	94.47	44	*e*P	P	11 09 01.0	+1.5
BERF	**Bertagne**	94.57	44	*e*P	P	11 09 00.1	+0.1
PUYF	**Puyloubier**	94.68	44	*e*P	P	11 09 01.7	+1.2
VIVF	**Saint-Julien-l**	94.68	43	*e*P	P	11 09 00.9	+0.4
	comp=Z,133nm,1.5s,mb5.5						
VIVF	**Saint-Julien-l**	94.68	43	*e*P	P	11 09 00.9	+0.4
VIVF				pmax	pmax		
	comp=Z,66nm,1.5s,mb5.5						
SMRF	**Simiane la Rot**	94.81	44	*e*P	P	11 09 02.0	+0.9
	comp=Z,148nm,1.4s,mb5.6						
VILF	**Villemus**	94.84	44	*e*P	P	11 09 02.6	+1.4
AVF	**Avril sur Loir**	94.84	41	*e*P	P	11 09 00.6	-0.6
	comp=Z,148nm,1.5s,mb5.6						
AVF	**Avril sur Loir**	94.84	41	*e*P	P	11 09 00.6	-0.6
AVF				pmax	pmax		
	comp=Z,74nm,1.5s,mb5.6						
OCF	**Saint Nazaire**	94.93	43	*e*P	P	11 09 03.2	+1.6
OG26	**St.-Nazaire-De**	94.93	43	*e*P	P	11 09 03.2	+1.6
TAVF	**Tavernes**	94.95	44	*e*P	P	11 09 01.0	-0.7
STOF	**St-Etienne Org**	95.03	44	*e*P	P	11 09 03.4	+1.3
SMF	**Signal de Mont**	95.06	41	*e*P	P	11 09 02.1	-0.1
	comp=Z,273nm,1.5s,mb5.8						
SMF				*e*pP	pP	11 09 50.7	0.0
SMF	**Signal de Mont**	95.06	41	*e*P	P	11 09 02.1	-0.1
SMF				*e**PP	pP	11 09 50.7	0.0
SMF				pmax	pmax		
	comp=Z,136nm,1.5s,mb5.9						
SSF	**Saint Saulge**	95.07	40	*e*P	P	11 09 01.3	-0.9
SSF				pmax	pmax		
	comp=Z,64nm,1.5s,mb5.5						
SSF	**Saint Saulge**	95.07	40	*e*P	P	11 09 01.3	-0.9
	comp=Z,64nm,1.5s,mb5.5						

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LMR   La Mourre          95.10  45  eP       P        11 09 02.7 +0.3
            comp=Z,185nm,1.4s,mb5.7
LMR   La Mourre          95.10  45  eP       P        11 09 02.7 +0.3
LMR                                  pmax    pmax
            comp=Z,93nm,1.4s,mb5.7
VSL   Villasalto         95.23  49  eP       P        11 09 03.1  -0.1
            comp=Z,70nm,1.5s,mb5.6
VSL                                 epP      pP       11 09 51.8 +0.1
KWE   Weaver Farm        95.29  33  eP       P        11 09 02.8  -0.2
KWE                                  AMb     AMB      11 09 06.4
            comp=Z,67nm,1.5s,mb5.5
FRF   La Foret Royal     95.30  44  eP       P        11 09 03.5 +0.2
OG25  Le Caire           95.32  44  eP       P        11 09 04.6 +1.2
LOR   Lormes             95.38  40  eP       P        11 09 03.0  -0.6
            comp=Z,128nm,1.5s,mb5.5,baz=243
LOR                                 epP      pP       11 09 51.6  -0.6
LOR                                 eR
            comp=Z,806nm,20.5s
LOR   Lormes             95.38  40  eP       P        11 09 03.0  -0.6
LOR                                 e*PP     pP       11 09 51.6  -0.6
LOR                                  pmax    pmax
            comp=Z,64nm,1.5s,mb5.5
LOR                                  MLR     MLR
            comp=Z,810nm,20.5s
ORIF  Oris-en-Rattie     95.46  43  eP       P        11 09 04.8 +0.8
            comp=Z,154nm,1.3s,mb5.7
ORIF                                epP      pP       11 09 53.4 +0.8
ORIF                                eR
            comp=Z,2µm,20.8s
GRN   Grenoble           95.53  43  eP       P        11 09 04.9 +0.6
CALN  Calern             95.54  44  eP       P        11 09 04.9 +0.5
LHO   Holmfirth          95.58  33  eP       P        11 09 03.7  -0.6
LHO                                  AMb     AMB      11 09 07.6
            comp=Z,73nm,1.3s,mb5.8
KBI1  Birley Grange      95.58  33  eP       P        11 09 04.1  -0.2
KBI1                                 AMb     AMB      11 09 06.1
            comp=Z,87nm,1.4s,mb5.8
MVIF  Mont Vial          95.78  44  eP       P        11 09 06.0 +0.5
SURF  Saint Ours         95.84  44  eP       P        11 09 06.5 +0.8
REVF  Revere             95.84  45  eP       P        11 09 06.8 +1.0
ECK   Cauldkaine Hil     95.88  31  eP       P        11 09 04.9  -0.7
ECK                                  AMb     AMB      11 09 06.3
            comp=Z,69nm,1.6s,mb5.6
TOUF  Mont Tournerai     95.89  44  eP       P        11 09 06.7 +0.7
ESK   Eskdalemuir        95.92  31  eP       P        11 09 04.6  -1.2
ESK                                  pmax    pmax
            comp=Z,63nm,1.4s,mb5.7
ESK   Eskdalemuir        95.92  31  eP       P        11 09 04.6  -1.2
            comp=Z,63nm,1.4s,mb5.7
ESK   Eskdalemuir        95.92  31  eP       P        11 09 04.9  -0.9
ESK                                  AMb     AMB      11 09 07.2
            comp=Z,60nm,1.6s,mb5.6
HPK   Haverah Park       95.92  33  eP       P        11 09 05.0  -0.9
HPK                                  AMb     AMB      11 09 09.2
            comp=Z,229nm,1.4s,mb6.2
MBDF  Montbardon         95.93  43  eP       P        11 09 06.8 +0.7
            comp=Z,122nm,1.4s,mb5.6
MBDF  Montbardon         95.93  43  eP       P        11 09 06.8 +0.7
MBDF                                 pmax    pmax
            comp=Z,61nm,1.4s,mb5.6
SBF   Sospel             95.94  44  eP       P        11 09 06.6 +0.4
            comp=Z,268nm,1.4s,mb6.0
SBF                                 epP      pP       11 09 55.4 +0.6
SBF   Sospel             95.94  44  eP       P        11 09 06.6 +0.4
SBF                                 e*PP     pP       11 09 55.4 +0.6
SBF                                  pmax    pmax
            comp=Z,134nm,1.4s,mb6.0
AUTN  L'Aution           96.00  44  eP       P        11 09 07.6 +1.1
BNI   Bardonecchia       96.02  43  eP       P        11 09 06.8 +0.3
BNI                                  pmax    pmax
            comp=Z,46nm,1.4s,mb5.5
BNI   Bardonecchia       96.02  43  eP       P        11 09 06.8 +0.3
            comp=Z,46nm,1.4s,mb5.5
BNI                                 epP      pP       11 09 56.9 +1.8
SAOF  Saorge             96.08  44  eP       P        11 09 07.9 +1.1
LPL   La Plagne          96.27  43  eP       P        11 09 08.5 +0.8
            comp=Z,110nm,1.3s,mb5.6
LPL   La Plagne          96.27  43  eP       P        11 09 08.5 +0.8
LPL                                  pmax    pmax
            comp=Z,55nm,1.3s,mb5.6
LPG   La Plagne          96.28  43  eP       P        11 09 08.7 +1.0
            comp=Z,164nm,1.4s,mb5.8
LPG   La Plagne          96.28  43  eP       P        11 09 08.7 +1.0
LPG                                  pmax    pmax
            comp=Z,82nm,1.4s,mb5.8
PGF   Pioggiola          96.36  46  eP       P        11 09 08.4 +0.3
            comp=Z,137nm,1.5s,mb5.7
PGF   Pioggiola          96.36  46  eP       P        11 09 08.4 +0.3
PGF                                  pmax    pmax
            comp=Z,69nm,1.5s,mb5.7
CABF  La Chapelle        96.40  42  eP       P        11 09 08.2   0.0
            comp=Z,126nm,1.6s,mb5.6
CABF  La Chapelle        96.40  42  eP       P        11 09 08.2   0.0
CABF                                 pmax    pmax
            comp=Z,63nm,1.6s,mb5.6
POHA  Pohakuloa          96.57 289  eP       P        11 09 14.7 +5.0
            comp=Z,768nm,1.0s
MEZF  Maizieres J'vi     96.69  40  eP       P        11 09 09.1  -0.4
MEZF                                epP      pP       11 09 57.8  -0.3
BAIF  Baives             96.97  38  eP       P        11 09 10.2  -0.5
THEF  They Montfort      97.10  40  eP       P        11 09 11.8 +0.4
LOMF  Lomont             97.19  41  eP       P        11 09 11.6  -0.2
HAU   Haudompre          97.21  40  eP       P        11 09 11.2  -0.7
HAU                                 eR
            comp=Z,625nm,19.8s
GIVF  Givet              97.33  38  eP       P        11 09 11.9  -0.5
DLBC  Dease Lake         97.34 332   P       P        11 09 12.8 +0.5
            comp=Z,26nm,0.7s,mb5.5,baz=126,slow=4.8,SNR=40
DLBC                                 PP      PP       11 13 11.8  -1.9
            comp=Z,8.0nm,1.0s,baz=127,slow=9.3,SNR=3.7
DLBC  Dease Lake         97.34 332   P       P        11 09 12.8 +0.5
DLBC                                 PP      PP       11 13 11.8  -1.9
HINF  Hinteralfeld       97.42  41  eP       P        11 09 12.3  -0.6
MOF   Molkenrain         97.61  41  eP       P        11 09 13.7   0.0
BBS   Basel-Blauen       97.65  41  eP       P        11 09 14.6 +0.7
ECH   Echery             97.79  40  eP       P        11 09 14.7 +0.2
WLF   Walferdange        97.88  39  eP       P        11 09 14.9   0.0
WLF                                  pmax    pmax
            comp=Z,111nm,1.4s,mb6.0
WLF   Walferdange        97.88  39  eP       P        11 09 14.9 +0.1
            comp=Z,111nm,1.4s,mb6.0
WLF                                 epP      pP       11 10 04.7 +1.2
CDF   Champ du Feu       97.95  40  eP       P        11 09 14.6  -0.6
CDF                                 epP      pP       11 10 03.5  -0.3
WLS   Welschbruch        98.00  40  eP       P        11 09 14.9  -0.5
FELD  Feldberg           98.14  41  eP       P        11 09 15.4  -0.7
HGN   Heimansgroeve      98.27  38  eP       P        11 09 16.8 +0.2
            comp=Z,31nm,1.9s,mb5.3
HGN                                 ex       x        11 10 05.5
            comp=Z,5.9nm,0.2s
LANF  Langenberg         98.52  40  eP       P        11 09 18.2 +0.4
BFO   Black Forest       98.54  41  ePdif    P        11 09 17.7  -0.2
BFO                                 eSKSac            11 19 41.2
BFO                                 eSP      SP       11 21 53.1  -4.1
SPAK  Spaichingen        98.71  41  eP       P        11 09 19.3 +0.6
ABH   Alteburg           98.78  39  eP       P        11 09 17.7  -1.3
DAVOX Davos              98.80  43   pP      pP       11 10 08.7 +1.0
KTD   Kalmit             98.84  40  eP       P        11 09 19.3   0.0
DAVA  Damuels            99.02  42⇓iP       P        11 09 20.7 +0.5
            comp=Z,57nm,1.5s,mb5.7
WTSB  Winterswijk        99.31  37  eP       P        11 09 21.5 +0.1
            comp=Z,48nm,1.4s,mb5.6
WTSB                                ex       x        11 10 10.1
TNS   Taunus Mts         99.45  39  ePdif    P        11 09 21.4  -0.7
TNS                                 eSKSac            11 19 46.9
TNS                                 eSP      SP       11 22 04.4  -2.3
MOTA  Moosalm            99.79  42⇑iP       P        11 09 24.1 +0.4
            comp=Z,74nm,1.5s,mb5.9
MOTA  Moosalm            99.79  42⇑iP       P        11 09 24.1 +0.4
MOTA                                 pmax    pmax
            comp=Z,74nm,1.5s,mb5.9
SQTA  Sankt Quirin       99.81  43⇑iP       P        11 09 24.4 +0.7
            comp=Z,68nm,1.4s,mb5.9
SQTA  Sankt Quirin       99.81  43⇑iP       P        11 09 24.4 +0.7
SQTA                                 pmax    pmax
            comp=Z,68nm,1.4s,mb5.9
WATA  Walderalm         100.08  43⇑iP       P        11 09 25.7 +0.8
            comp=Z,73nm,1.5s
WATA  Walderalm         100.08  43⇑iP       P        11 09 25.7 +0.8
WATA                                 pmax    pmax
            comp=Z,73nm,1.5s
WTTA  Wattenberg        100.09  43⇓iP       P        11 09 25.3 +0.3
            comp=Z,87nm,1.5s
WTTA  Wattenberg        100.09  43⇓iP       P        11 09 25.3 +0.3
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WTTA                                 pmax    pmax
            comp=Z,87nm,1.5s
FUR   Furstenfeldbru    100.24  42  ePdif    P        11 09 26.1 +0.4
FUR                                 eSKSac            11 19 49.7
FUR                                 eSP      SP       11 22 11.6  -3.3
GRA1  Grafenberg Arr    100.84  40  ePdif    P        11 09 28.8 +0.5
GRA1                                eSKSac            11 19 54.2
GRA1                                eSdif             11 20 52.5
GRA1                                eSP      SP       11 22 18.3  -3.1
GRA1                                eSS      SS       11 27 50.4  -0.7
GRF   Grafenberg Arr    100.84  40  eP       P        11 09 28.8 +0.5
GRF                                  S       S        11 20 52.5 +7.5
GRF                                 eSS      SS       11 27 50.4  -0.7
GRF   Grafenberg Arr    100.84  40  eP       P        11 09 28.8 +0.5
GRF                                 eS       S        11 20 52.5 +7.5
GRF                                 eSS      SS       11 27 50.4  -0.7
GRF   Grafenberg Arr    100.84  40  ePdif    P        11 09 28.8 +0.5
GRF                                 eSKS     SKS      11 19 54.2 +7.2
GRF                                  Sdif             11 20 52.5
GRF                                 eSP      SP       11 22 18.3  -3.1
GRF                                 eSS      SS       11 27 50.4  -0.7
KBA   Koelnbreinsper    101.08  43⇑iP       P        11 09 29.0  -0.4
            comp=Z,14nm,1.1s
KBA   Koelnbreinsper    101.08  43⇑iP       P        11 09 29.0  -0.4
KBA                                  pmax    pmax
            comp=Z,14nm,1.1s
CEY   Cerknica          101.24  45  epPdiff           11 10 17.7
CLZ   Clausthal         101.25  38  ePdif    P        11 09 30.3 +0.2
CLZ                                 eSKSac            11 19 56.3
CLZ                                 eSP      SP       11 22 23.0  -2.5
LJU   Ljubljana         101.42  45  ePdiff   P        11 09 22.2  -8.8
LJU                                 epPdiff           11 10 18.6
LJU                                 eSKSac            11 19 53.9
LJU                                 eSdiff            11 20 57.0
MOX   Moxa              101.47  40  eP       P        11 09 32.0 +0.9
MOX                                  MLR     MLR
            comp=Z,400nm,19.0s
MOX   Moxa              101.47  40  eP       P        11 09 32.0 +0.9
            comp=Z,44nm,2.0s
MOX                                 ePP               11 10 20.5
MOX                                 eSKS     SKS      11 20 00.0  +10
MOX                                 eS       S        11 21 00.0  +10
MOX                                 ePS      SP       11 22 23.0  -4.7
MOX                                 eSS      SS       11 28 00.0 +0.2
MOX                                  LR      LR
            comp=Z,400nm,19.0s
MOX   Moxa              101.47  40  i P      P        11 09 32.0 +0.9
MOX                                  pP               11 10 20.0
MOX                                  SKS     SKS      11 20 00.0  +10
MOX                                  S       S        11 21 00.0  +10
MOX                                  PS      SP       11 22 23.0  -4.7
MOX                                  SS      SS       11 28 00.0 +0.2
MOX                                  L                11 59 47.0
OBKA  Obir              101.62  44⇓iP       P        11 09 32.4 +0.6
            comp=Z,16nm,1.3s
BOJS  Bojanci           101.69  45  epPdiff           11 10 19.2
BOJS                                esPdiff           11 10 36.2
BOJS                                eSKSac            11 19 55.5
BOJS                                eSdiff            11 20 59.7
NKC   Novy Kostel       101.79  40  ePDIF    P        11 09 32.9 +0.4
NKC                                 epP               11 10 22.9
NKC                                 eSKS     SKS      11 19 57.3 +5.8
NKC                                 eSDIF             11 21 02.3
NKC                                 ex       SP       11 22 27.8  -3.1
NKC                                 ePKKP    PKKP     11 25 36.5  +17
MOA   Molln             101.96  43⇑iP       P        11 09 33.7 +0.4
            comp=Z,17nm,1.1s
GEC2  GERESS Array S    101.99  42  ePdif             11 09 33.3
GEC2                                eSKSac            11 19 57.1
GEC2                                eSP      SP       11 22 29.5  -3.5
GERES GERESS Array B    101.99  42   P                11 09 33.5
            comp=Z,0.3nm,0.3s,baz=243,slow=3.0,SNR=11
GERES                                pP               11 10 21.8
            comp=Z,0.4nm,0.4s,baz=270,slow=5.3,SNR=3.1
GERES                                PKiKP            11 13 54.7
            comp=Z,1.7nm,0.7s,baz=225,slow=1.9,SNR=6.1
GERES                                PKKPbc           11 25 37.0
            comp=Z,1.9nm,0.7s,baz=90,slow=1.3,SNR=7.9
PERS  Pernice           102.03  44  epPdiff           11 10 21.1
KHC   Kasperske Hory    102.03  41  ePDIF    Pdif     11 09 33.1  -0.5
KHC                                 epP               11 10 21.0
KHC                                 eSKS     SKS      11 19 55.8 +3.1
KHC                                 ex       x        11 21 02.6
BSEG  Bad Segeberg      102.08  36  ePdif    Pdif     11 09 34.3 +0.6
BSEG                                eSKSac   SKS      11 19 58.8 +5.9
BSEG                                eSP      SP       11 22 31.1  -2.8
BER   Bergen            102.43  29  i        Pdif     11 09 37.4 +2.3
BER                                 e                 11 21 34.5
ARSA  Arzberg           102.52  44⇑iP       Pdif     11 09 36.1 +0.3
            comp=Z,4.1nm,0.9s
MUD   Monsted U'grnd    102.53  34  i P      Pdif     11 09 36.9 +1.3
MUD                                 i S      SKS      11 20 03.6 +8.7
MUD                                 i                 11 22 42.6
MUD                                  MLR     MLR
            comp=Z,560nm,19.0s
MUD   Monsted U'grnd    102.53  34  i P      Pdif     11 09 36.9 +1.3
MUD                                 i                 11 10 23.8
MUD                                 i S      SKS      11 20 03.6 +8.7
MUD                                 i                 11 22 42.6
            comp=Z,560nm,19.0s
CLL   Collm             102.53  39⇓iP       Pdif     11 09 35.8   0.0
CLL                                 e                 11 20 01.0
CLL                                 eS       S        11 21 04.0 +5.0
CLL                                  pmax    pmax
            comp=Z,10.0nm,1.1s
CLL                                  pmax    pmax
            comp=Z,17nm,1.6s
CLL   Collm             102.53  39⇓iP       Pdif     11 09 35.8   0.0
            comp=Z,10.0nm,1.1s
CLL                                 i pP              11 10 20.7
CLL                                 eSKS     SKS      11 20 01.0 +6.0
CLL                                 eS       S        11 21 04.0 +5.0
CLL                                 i PKKP   PKKP     11 25 56.6  +39
CLL   Collm             102.53  39⇓iPDIF    Pdif     11 09 35.8   0.0
CLL                                 i                 11 10 20.7
CLL                                 ePP      PP       11 13 48.0  -5.2
CLL                                 e*PPP             11 14 42.0
CLL                                 e                 11 20 01.0
CLL                                 e                 11 20 40.0
CLL                                 e                 11 21 04.0
CLL                                 e                 11 21 30.0
CLL                                 eSP      SP       11 22 33.0  -5.8
CLL                                 ePKKP    PKKP     11 25 35.0  +17
CLL                                 i                 11 25 56.6
CLL                                 eSS      SS       11 28 13.0  -1.6
CLL                                 e*SSS             11 29 42.0
CLL                                 e                 11 33 42.0
KOGS  Kog               102.68  45  epPdiff           11 10 24.3
BRG   Berggiesshubel    102.92  40  eP       Pdif     11 09 38.4 +1.0
BRG                                 i                 11 20 04.0
BRG                                 i S      S        11 21 06.0 +3.8
BRG                                  pmax    pmax
            comp=Z,12nm,1.1s
BRG                                  MLR     MLR
            comp=N,1µm,28.7s
BRG                                  MLR     MLR
            comp=E,640nm,28.7s
BRG                                  MLR     MLR
            comp=Z,510nm,28.7s
BRG   Berggiesshubel    102.92  40  eP       Pdif     11 09 38.4 +1.0
            comp=Z,12nm,1.1s
BRG                                 i pP              11 09 59.0
BRG                                 e                 11 10 27.9
BRG                                 ePP      PP       11 13 38.0  -18
BRG                                 i SKS    SKS      11 20 04.0 +7.2
BRG                                 i S      S        11 21 06.0 +3.8
BRG                                 i SP     SP       11 22 29.0  -14
BRG                                 i SS     SS       11 28 08.0  -12
BRG                                  LR      LR
            comp=Z,510nm,28.7s
PRU   Pruhonice         102.94  41  ePDIF    Pdif     11 09 37.7 +0.1
PRU                                 eSKS     SKS      11 20 01.4 +4.5
PRU                                 eSDIF             11 21 09.3
PRU                                 eSP      SP       11 22 40.7  -2.6
PVCC  Panska Ves        103.16  40  ePDIF    Pdif     11 09 38.6 +0.1
COP   Copenhagen        103.90  35  i P               11 10 29.7
COP                                 i S      SKS      11 20 10.5 +9.3
COP                                 i                 11 22 58.0
            comp=Z,200nm,18.0s
UPC   Upice             104.01  41  ePDIF    Pdif     11 09 43.2 +1.0
UPC                                 epP               11 10 32.8
INK   Inuvik            104.01 339   Pdiff   Pdif     11 09 41.6  -0.3
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            comp=Z,8.3nm,0.8s,baz=76,slow=5.1,SNR=12
INK                                  PKiKP            11 13 57.6
            comp=Z,12nm,1.1s,baz=121,slow=5.6,SNR=3.6
DPC   Dobruska-Polom    104.14  41  ePDIF    Pdif     11 09 43.5 +0.7
DPC                                 epP               11 10 33.0
DPC                                 eSKS     tx       11 19 23.0
KSP   Ksiaz             104.29  41  eP       Pdif     11 09 44.4 +0.9
KSP                                 e                 11 20 09.0
KSP                                 eS       S        11 21 22.0 +8.4
KSP   Ksiaz             104.29  41  ePdif    Pdif     11 09 44.4 +0.9
KSP                                 e                 11 10 32.0
KSP                                 e                 11 14 37.0
KSP                                 eSKS     SKS      11 20 09.0 +6.0
KSP                                 eSdif             11 21 22.0
KSP                                 eSP      SP       11 22 54.0  -2.7
KSP                                 eSS      SS       11 28 32.0  -6.2
VYHS  Vyhne             105.04  43  e                 11 14 00.6
OKC   Ostrava-Krasne    105.06  42  eSKS     SKS      11 20 11.9 +5.4
OKC                                 eSDIF             11 21 30.0
OKC                                 eSP      SP       11 23 05.7 +1.3
NB2   NORSAR Subarra105.33  30   PKKPdf           11 25 43.4
            comp=Z,1.2nm,0.8s,baz=68,slow=1.9
NOA   NORSAR Array B 105.33  30   Pdiff   Pdif     11 09 48.6 +0.8
            comp=Z,0.6nm,0.9s,baz=262,slow=22,SNR=2.5
NOA                                  PP      PP       11 14 09.5  -4.4
            comp=Z,0.6nm,0.7s,baz=42,slow=3.6,SNR=3.3
EYAK  Cordova Ski Ar    105.38 330  ePdif    Pdif     11 09 45.0  -3.0
DIV   Divide            105.61 330  ePdif    Pdif     11 09 48.5  -0.5
            comp=Z,34nm,1.0s
SML   Sawmill           107.00 331  eP       Pdif     11 09 55.3 +0.2
SML   Sawmill           107.00 331  ePdif    Pdif     11 09 55.0  -0.1
KOLS  Kolonicke sedl    107.34  44  e                 11 14 05.5
ILAR  Eielson Array     107.37 334   P       Pdif     11 09 55.7  -1.0
ILAR                                                  11 14 21.6
ILAR  Eielson Array     107.37 334   Pdiff   Pdif     11 09 55.6  -1.1
            comp=Z,2.0nm,0.7s,baz=141,slow=2.3,SNR=20
ILAR                                 PKiKP            11 14 03.9
            comp=Z,2.6nm,1.0s,baz=45,slow=1.3,SNR=7.5
ILAR                                 PP      PP       11 14 21.6  -7.4
            comp=Z,4.2nm,1.0s,baz=108,slow=4.3,SNR=7.6
COLA  College           107.79 334   P       Pdif     11 09 58.9 +0.3
COLA                                e                 11 14 33.5
COLA                                 pmax    pmax
            comp=Z,24nm,1.3s
COLA  College           107.79 334  eP       Pdif     11 09 58.8 +0.2
COLA                                 LR      LR
            comp=Z,500nm,20.0s
MCK   McKinley          107.88 332   P       Pdif     11 09 59.3 +0.3
MCK                                  pmax    pmax
            comp=Z,4.0nm,0.9s
MCK   McKinley          107.88 332  ePdif    Pdif     11 09 58.9  -0.1
            comp=Z,4.2nm,0.9s
SPU   Mount Spurr       108.51 329  ePdif    Pdif     11 10 02.2 +0.5
IMA   Indian Mountai    110.46 334  eP       Pdif     11 10 10.6 +0.3
TRO   Tromso            110.99  22  i        Pdif     11 10 17.3 +4.8
TRO                                 e                 11 24 05.7
BDAS  Al Bad'           111.19  67   P       PKKP     11 25 19.8  +17
JMOS  Jabal al Moall    111.40  67   P       PKKP     11 25 19.8  +17
KBS   Kingsbay          111.41  12  i        Pdif     11 10 22.1 +7.8
KBS                                 e                 11 23 30.8
AKASG Malin Array Be    112.14  43   PKiKP            11 14 12.6
            comp=Z,3.4nm,0.4s,baz=264,slow=2.8,SNR=37
UMJS  Umm Lajj          112.15  71   P       PKKP     11 25 26.6  +26
VSU   Vasula            112.16  34⇑iPKIKP   PKPdf    11 14 13.2 +1.0
FINES FINESS Array B    112.35  31   PKiKP            11 14 12.3
            comp=Z,0.9nm,0.4s,slow=1.9,SNR=8.4
FINES                                PP      PP       11 14 59.4  -5.6
            comp=Z,4.1nm,1.0s,baz=214,slow=6.9,SNR=6.8
FINES                                PKKPbc           11 25 03.0
            comp=Z,0.9nm,0.4s,baz=78,slow=3.5,SNR=9.2
FINES                                PKKPab           11 25 12.3
            comp=Z,2.8nm,0.8s,baz=90,slow=5.7,SNR=6.9
FINES FINESS Array B    112.35  31   PKPdf   PKPdf    11 14 12.3  -0.2
FINES                                PP      PP       11 14 59.4  -5.6
FINES                                PKKPbc           11 25 03.0
FINES                                PKKPab           11 25 12.3
KAF   Kangasniemi       112.56  31  epkp     PKPdf    11 14 12.4  -0.5
BRTR  Keskin Array B    112.89  55   PKiKP            11 14 14.6
            comp=Z,6.5nm,0.8s,baz=198,slow=3.9,SNR=12
BRTR                                 PP      PP       11 15 06.3  -3.7
            comp=Z,1.1nm,0.7s,baz=135,slow=7.0,SNR=2.9
BRTR                                 PKKPab           11 25 11.2
            comp=Z,5.9nm,0.7s,baz=112,slow=4.2,SNR=17
ARCES ARCESS Array B    113.25  22   PKKPbc           11 25 00.3
            comp=Z,2.2nm,0.5s,baz=80,slow=3.7,SNR=19
ARCES                                PKKPab           11 25 07.8
            comp=Z,5.3nm,0.8s,baz=90,slow=4.9,SNR=7.8
SIM   Simferopol'       114.30  50  i PKIKP  PKPdf    11 14 18.3 +1.5
SIM                                 e                 11 20 49.0
SIM                                 eSS      SS       11 31 06.0  +13
SIM                                  pmax    pmax
            comp=Z,50nm,8.7s
APA   Apatity           116.03  25⇓ePKIKP   PKPdf    11 14 20.4 +0.8
APA                                 e*PP              11 15 08.0
APA                                 i                 11 15 29.0
APA                                 e                 11 20 53.0
APA                                  pmax    pmax
            comp=Z,9.0nm,0.9s
APA                                  MLR     MLR
            comp=Z,800nm,20.0s
MALT  Malatya           116.25  58  ePKPdf   PKPdf    11 14 22.1 +1.3
MALT                                epPKPdf           11 15 13.4
LVZ   Lovozero          116.50  24  eP       Pdif     11 10 32.8  -4.0
LVZ                                 i                 11 14 20.6
ANN   Anapa             116.60  50  i PKIKP  PKPdf    11 14 29.3 +8.0
ANN                                 i *PP             11 15 14.3
ANN                                 e                 11 21 14.5
ANN                                 ePS      PS       11 24 58.2  -19
ANN                                  pmax    pmax
            comp=Z,77nm,1.2s
HILS  Ha'il             116.61  70   P       PKKP     11 24 52.3   0.0
KAMS  Al Khamasin       117.12  79   P       PKKP     11 24 49.8  -1.8
OBN   Obninsk           117.13  39⇓iPKIKP   PKPdf    11 14 22.4 +0.4
OBN                                 i PS     PS       11 25 11.8  -10
OBN                                  pmax    pmax
            comp=Z,111nm,1.2s
OBN                                  MLR     MLR
            comp=Z,500nm,19.0s
OBN   Obninsk           117.13  39  ePKPdf   PKPdf    11 14 22.4 +0.4
MOS   Moscow            117.77  38  ePKIKP   PKPdf    11 14 23.6 +0.4
MOS                                 e                 11 15 37.9
MOS                                  pmax    pmax
            comp=Z,79nm,0.8s
MOS                                  MLR     MLR
            comp=Z,1µm,25.6s
STKA  Stephens Creek    117.95 207   PKP     PKPdf    11 14 24.5 +0.4
            comp=Z,5.4nm,0.7s,baz=29,slow=1.1,SNR=11
STKA  Stephens Creek    117.95 207  ePKP     PKPdf    11 14 20.6  -3.6
STKA                                 PKP     PKPdf    11 14 24.5 +0.4
SOC   Sochi             118.06  52  i PKIKP  PKPdf    11 14 24.5 +0.4
SOC                                 e                 11 15 40.1
SOC                                 ePPP     PPP      11 18 12.8  -5.0
SOC                                 ePS      PS       11 25 08.4  -22
SOC                                 eSS      SS       11 31 44.6 +3.2
SOC                                 eSSS     SSS      11 36 07.5  -0.5
SOC                                  pmax    pmax
            comp=Z,52nm,0.7s
SOC                                  pmax    pmax
            comp=N,36nm,0.8s
SOC                                  pmax    pmax
            comp=E,13nm,0.7s
MZLS  Mizel             118.72  75   P       PKKP     11 24 44.7  -3.9
MSL   Mosul             119.56  61  e        PKPdf    11 14 39.0  +12
KIV   Kislovodsk        120.24  52  i PKIKP  PKPdf    11 14 27.8  -0.5
KIV                                 e                 11 21 08.1
KIV                                  pmax    pmax
            comp=E,17nm,0.7s
KIV                                  pmax    pmax
            comp=Z,36nm,0.7s
KIV   Kislovodsk        120.24  52  ePKPdf   PKPdf    11 14 29.4 +1.1
GOF   Gofitskoye        120.58  51  ePKIKP   PKPdf    11 14 29.0   0.0
ONI   Oni               120.66  54   P       PKPdf    11 14 30.2 +1.0
ZEI   Tsey              121.01  53  ePKIKP   PKPdf    11 14 29.9   0.0
ZEI                                 i                 11 16 03.7
GNI   Garni             121.38  56d iPKIKP   PKPdf    11 14 32.1 +1.4
GNI   Garni             121.38  56  ePKPdf   PKPdf    11 14 32.2 +1.6
TI2   Plekhanov         121.54  55  i PKIKP  PKPdf    11 14 34.0 +3.1
FORT  Forrest           123.52 196  ePKP     PKPdf    11 14 35.1 +0.1
MUN   Mundaring         124.12 183  ePKP     PKPdf    11 14 37.1 +0.9
KLBR  Kellerberrin      124.40 185  ePKP     PKPdf    11 14 36.5  -0.2
CTA   Charters Tower    125.39 219  ePKP     PKPdf    11 14 39.9 +1.0
CTA   Charters Tower    125.39 219   PKP     PKPdf    11 14 39.6 +0.7
            comp=Z,31nm,0.8s,baz=148,slow=1.3,SNR=16
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CTAO  Charters Tower    125.39 219   PKIKP    PKPdf   11 14 39.4 +0.5
CTAO  Charters Tower    125.39 219  ePKPdf    PKPdf   11 14 39.3 +0.4
BILL  Bilibino          125.60 338⇓iPKIKP    PKPdf   11 14 38.8 +0.8
BILL                               i                  11 16 31.0
BILL                                 pmax     pmax
      comp=Z,53nm,1.0s
BILL                                 MLR      MLR
      comp=Z,400nm,19.0s
BILL  Bilibino          125.60 338  ePKPdf    PKPdf   11 14 38.3 +0.2
BILL                                epPKPdf           11 15 29.2
BILL                                ePP       PP      11 16 30.4  -5.8
SOKR  Solikamsk         127.49  32⇑iPKIKP    PKPdf   11 14 40.0  -1.9
SOKR                                 pmax     pmax
      comp=Z,170nm,4.0s
SOKR                                 MLR      MLR
      comp=Z,530nm,20.0s
ASAR  Alice Springs     128.33 205   PKhKP            11 14 26.1
      comp=Z,0.7nm,0.6s,baz=133,slow=2.3,SNR=8.2
ASAR                                 PKP      PKPdf   11 14 44.6 +0.1
      comp=Z,37nm,0.8s,baz=139,slow=1.6,SNR=9.5
ASAR                                 pPKP             11 15 35.1
      comp=Z,24nm,1.0s,baz=153,slow=2.4,SNR=4.5
ASPA  Alice Springs     128.33 205  i PKP     PKPdf   11 14 44.6 +0.1
ASPA                                epPKP             11 15 35.0
ASPA                                ePKS      PKS     11 18 03.5   -16
ASHO  Ashiyiah          128.49  77 ⇑P        PKPdf   11 14 44.4  -0.4
      SNR=7.0
ARQ   Araqi             128.61  79   P        PKPdf   11 14 45.9 +0.8
      SNR=16
BSY   Bisya             129.09  80   P        PKPdf   11 14 46.6 +0.7
      SNR=11
ARU   Arti              129.30  36  i PKIKP   PKPdf   11 14 46.6 +1.2
ARU                                 e                 11 16 57.1
ARU                                 e                 11 21 36.3
ARU                                 ePS       PS      11 26 54.5   -14
ARU   Arti              129.30  36  ePKPdf    PKPdf   11 14 46.9 +1.5
ARU                                 epPKPdf           11 15 38.0
ARU                                 eSKP              11 17 52.0
SMDO  Samad             129.92  79   P        PKPdf   11 14 48.4 +0.9
      SNR=21
SVE   Sverdlovsk        130.27  35⇓iPKIKP    PKPdf   11 14 48.6 +1.3
SVE                                 e                 11 17 09.5
SVE                                 e                 11 21 48.0
SVE                                 e                 11 27 20.0
SVE                                  pmax     pmax
      comp=Z,140nm,1.8s
WBK   Wadi Bani Khal    130.65  80   P        PKPdf   11 14 50.3 +1.3
      SNR=12
WB2   Warramunga Arr    131.50 207  ePKP      PKPdf   11 14 50.8 +0.2
WB2                                 epPKP             11 15 39.3
WB2                                 eSKP              11 17 58.9
WB2                                 ePKS      PKS     11 18 15.1   -10
WB2                                 esPKS             11 19 04.0
WRA   Warramunga Arr    131.50 207   PKhKP            11 14 31.4
      comp=Z,1.4nm,0.9s,baz=160,slow=2.1,SNR=24
WRA                                  PKP      PKPdf   11 14 50.8 +0.2
      comp=Z,19nm,0.5s,baz=163,slow=1.7,SNR=63
WRA                                  pPKP             11 15 40.2
      comp=Z,33nm,1.0s,baz=167,slow=1.5,SNR=5.9
WRA                                  SKPbc            11 17 59.0
      comp=Z,41nm,0.9s,baz=152,slow=3.5,SNR=23
WRAB  Tennant Creek     131.51 207  ePKPpre           11 14 39.5
WRAB                                ePKPdf    PKPdf   11 14 51.2 +0.5
WRAB                                epPKPdf           11 15 39.9
WRAB                                eSKP              11 17 59.1
TIXI  Tiksi             131.60 353⇓iPKIKP    PKPdf   11 14 49.5  0.0
AB31  Akbulak array     131.84  45  i PKIKP   PKPdf   11 14 51.4 +0.9
AB31                                 pmax     pmax
      comp=Z,426nm,1.8s
PMG   Port Moresby      132.83 229   PKIKP    PKPdf   11 14 54.3 +1.0
PMG                                                   11 15 43.2
PMG                                  pmax     pmax
      comp=Z,26nm,0.8s
PMG                                  pmax     pmax
      comp=Z,30nm,1.1s
PMG                                  pmax     pmax
      comp=N,29nm,0.9s
PMG   Port Moresby      132.83 229   PKP      PKPdf   11 14 54.3 +1.0
      comp=N,26nm,0.8s,baz=57,slow=3.4,SNR=8.1
PMG                                  pPKP             11 15 43.2
      comp=N,30nm,1.1s,baz=174,slow=9.9,SNR=2.6
PMG                                  SKPbc            11 18 06.0
      comp=N,29nm,0.9s,baz=132,slow=4.5,SNR=4.7
PMG   Port Moresby      132.83 229  ePKPdf    PKPdf   11 14 54.8 +1.4
PMG                                 eSKP              11 18 04.7
SEY   Seymchan          133.20 337  ePKHKP            11 14 43.7
SEY                                 e                 11 14 53.9
SEY                                 e                 11 17 19.8
SEY                                 e                 11 29 12.4
SEY                                 e                 11 34 58.4
MBWA  Marble Bar        134.51 189  ePKPdf    PKPdf   11 14 55.8  -0.4
MBWA                                eSKP              11 18 09.8
PET   Petropavlovsk     135.21 322d iPKIKP    PKPdf   11 14 57.2 +0.6
PET   Petropavlovsk     135.21 322  ePKPdf    PKPdf   11 14 57.5 +0.9
MA2   Magadan           135.85 333  ePKHKP            11 14 51.6
MA2                                 e                 11 14 59.2
MA2                                 e                 11 15 41.7
MA2                                 e                 11 27 57.9
MA2                                 i                 11 35 25.9
MA2                                  pmax     pmax
      comp=Z,10.0nm,0.9s
MA2                                  pmax     pmax
      comp=Z,30nm,1.6s
MA2   Magadan           135.85 333  ePKPpre           11 14 50.9
MA2                                 i PKPr            11 14 58.2
MA2                                 ePKPdf    PKPdf   11 14 59.0 +1.4
CHKZ  Chkalovo          136.75  36  i PKIKP   PKPdf   11 15 00.3 +0.9
CHKZ                                 pmax     pmax
      comp=Z,37nm,1.2s
CHKZ  Chkalovo          136.75  36  ePKPdf    PKPdf   11 15 00.7 +1.3
BVA0  Borovoye Array    136.91  37  i PKIKP   PKPdf   11 15 00.6 +0.9
BVA0                                 pmax     pmax
      comp=Z,9.0nm,1.2s
BVAR  Borovoye Array    136.91  37   PKP      PKPdf   11 15 00.8 +1.1
      comp=Z,14nm,0.8s,baz=297,slow=3.3,SNR=8.0
BVAR                                 SKPbc            11 18 17.4
      comp=Z,4.8nm,0.7s,baz=303,slow=2.2,SNR=5.4
SKR   Severo-Kuril's    137.55 320  ePKIKP    PKPdf   11 14 59.6  -1.4
SKR                                 e                 11 15 35.0
KAKA  Kakadu            138.74 210  ePKP      PKPdf   11 14 55.3  -8.8
KAKA                                ePKS      PKS     11 18 22.5   -16
KKAR  Karatay Array     140.38  51  i PKIKP   PKPdf   11 15 02.9  -3.4
KKAR                                 pmax     pmax
      comp=Z,19nm,0.9s
BHJ   Bhuj              140.42  82  eP        PKPdf   11 15 05.3  -1.7
YAK   Yakutsk           140.46 348  ePKHKP            11 14 59.5
YAK                                 e                 11 18 16.2
YAK                                  pmax     pmax
      comp=Z,24nm,0.9s
YAK                                  pmax     pmax
      comp=N,7.0nm,1.1s
YAK                                  pmax     pmax
      comp=E,2.0nm,0.9s
YAK                                  pmax     pmax
      comp=Z,30nm,1.0s
YAK                                  pmax     pmax
      comp=N,20nm,1.1s
YAK                                  pmax     pmax
      comp=E,7.0nm,1.0s
YAK   Yakutsk           140.46 348  ePKPpre           11 14 59.3
JASL  Jaisalmer         142.04  77  ex        PKPdf   11 15 06.4  -3.3
NVS   Novosibirsk       142.23  28  ePKIKP    PKPdf   11 15 06.6  -2.5
NVS                                 e                 11 15 49.9
NVS                                 e                 11 18 27.3
NVS                                  pmax     pmax
      comp=Z,306nm,1.5s
NVS                                  pmax     pmax
      comp=N,24nm,1.7s
NVS                                  pmax     pmax
      comp=E,117nm,1.5s
BOM   Bombay            142.35  90  ex        x       11 14 52.4
EKS2  Erkin-Say         142.81  50   P        PKPdf   11 15 08.2  -2.3
      SNR=22
AML   Almayashu         142.91  51   P        PKPdf   11 15 08.6  -2.1
      SNR=29
USP   Ospenovka         143.13  49   P        PKPbc   11 15 09.7 +0.3
      SNR=28
KAD   Karad             143.16  93  i P       PKPbc   11 15 09.5  -0.6
KAD                                  AMb      AMB     11 15 15.7
      comp=Z,55nm,1.2s
KAD                                  AMS      AMS     11 31 33.2
      comp=Z,328nm,17.8s
POO   Poona             143.20  91  eP        PKPbc   11 15 13.8 +3.6
POO                                  AMS      AMS     11 31 33.2
      comp=Z,251nm,18.1s
AAK   Ala-Archa         143.33  50   P        PKPbc   11 15 11.3 +1.3
      SNR=18
AAK   Ala-Archa         143.33  50d iPKIKP    PKPdf   11 15 10.3  -1.1
AAK   Ala-Archa         143.33  50  ePKPpre           11 15 10.2
FRU   Bishkek           143.35  50⇓ePKIKP    PKPdf   11 15 11.5   0.0
FRU                                  pmax     pmax
      comp=Z,220nm,2.1s
CHMS  Chumysh           143.39  50   P        PKPbc   11 15 10.9 +0.8
      SNR=17
UCH   Uchtor            143.46  51   P        PKPbc   11 15 12.4 +2.0
      SNR=41
ZAL   Zalesovo          143.51  28   PKP      PKPdf   11 15 10.7  -0.7
      comp=Z,67nm,0.8s,baz=167,slow=3.6,SNR=213
KBK   Karagaybulak      143.64  50   P        PKPbc   11 15 12.3 +1.4
      SNR=29
TKM2  Tokmak 2          144.00  49   P        PKPbc   11 15 12.8 +0.9
      SNR=54
KZA   Kyzart            144.03  51   P        PKPbc   11 15 13.5 +1.4
      SNR=102
ULHL  Ulahol            144.68  50   P        PKPdf   11 15 15.8 +2.1
      SNR=70
PALK  Pallekele         144.82 113  ePKPdf    PKPdf   11 15 15.4 +0.5
KSH   Kashi             145.28  55  i PKP     PKPdf   11 15 17.1 +2.2
KSH                                 ePKS      PKS     11 18 51.0 +1.9
KSH                                 eSKS      SKS     11 22 00.6  -2.2
KSH                                 eSKKS             11 25 09.6
KSH                                  PP       PP
      comp=Z,1µm,9.6s
AJM   Ajmer             145.34  78  i P       PKPdf   11 15 16.0 +0.6
LATR  Latur             145.65  92  eP        PKPdf   11 15 16.5 +0.4
CLNS  Chul'man          146.20 348  ePKIKP    PKPdf   11 15 17.7 +1.8
CLNS                                 pmax     pmax
      comp=Z,337nm,1.1s
CLNS                                 pmax     pmax
      comp=N,102nm,1.2s
CLNS                                 pmax     pmax
      comp=E,81nm,1.2s
THN   Thein Dam         146.28  67  eP        PKPdf   11 15 17.8 +1.0
      comp=E,64nm,0.8s
BOD   Bodaibo           146.34 359  ePKIKP    PKPdf   11 15 16.7 +0.6
BOD                                  pmax     pmax
      comp=Z,214nm,1.2s
KHET  Khetri            146.46  75  i P       PKPdf   11 15 18.0 +0.7
KHET                                ex        x       11 15 18.6
PONG  Pong              146.52  68  eP        PKPdf   11 15 20.0 +2.8
YUK   Yuzh-Kuril'sk     146.62 315  ePKIKP    PKPdf   11 15 18.0 +1.0
YUK                                 i                 11 16 06.0
YUK                                  pmax     pmax
      comp=Z,5µm,8.0s
YUK                                  pmax     pmax
      comp=Z,2µm,1.2s
YUK                                  pmax     pmax
      comp=N,2µm,1.3s
YUK                                  pmax     pmax
      comp=E,220nm,0.7s
AKL   Akola             146.63  89  eP        PKPdf   11 15 20.9 +3.3
AKL                                 i x       x       11 16 12.9
MKAR  Makanchi Array    146.63  40   PKPbc    PKPbc   11 15 18.6   0.0
      comp=E,123nm,0.9s,baz=315,slow=1.7,SNR=155
MKAR                                 pPKPbc           11 16 11.3
      comp=E,71nm,1.1s,baz=297,slow=2.7,SNR=2.0
BHK   Bhakra            146.95  69  ex        PKPab   11 15 23.7  -0.8
RTK   Rohtak            147.02  73  eP        PKPdf   11 15 18.9 +0.8
YSS   Yuzh-Sakhalins    147.09 321κ iPKIKP    PKPdf   11 15 19.0 +1.3
YSS                                 e                 11 18 48.0
YSS                                 e                 11 38 23.0
YSS                                  pmax     pmax
      comp=Z,260nm,1.2s
YSS                                  pmax     pmax
      comp=E,60nm,1.0s
YSS                                  pmax     pmax
      comp=E,170nm,0.8s
YSS   Yuzh-Sakhalins    147.09 321  ePKPdf    PKPdf   11 15 19.5 +1.9
YSS                                 epPKPdf           11 16 10.0
MDRS  Chennai           147.16 104  eP        PKPdf   11 15 20.0 +1.3
MDRS                                ex        x       11 16 06.0
MDRS                                ex        x       11 24 14.0
MDRS                                ex        x       11 28 52.0
HYB   Hyderabad         147.18  95⇓eP        PKPdf   11 15 20.0 +1.3
HYB                                 e                 11 16 11.0
HYB                                 eS                11 25 20.0
HYB   Hyderabad         147.18  95⇓iPKP      PKPdf   11 15 19.0 +0.3
      comp=E,290nm,1.0s
HYB                                 epPKP             11 16 11.0
HYB                                 eSKKS             11 25 20.0
KKR   Kurukshetra       147.36  72  eP        PKPdf   11 15 21.0 +2.3
SDNR  Sundarnagar       147.42  69  eP        PKPdf   11 15 20.2 +1.5
BHPL  Bhopal            147.47  84  eP        PKPdf   11 15 20.3 +1.3
BHPL                                 AMS      AMS     11 32 12.5
      comp=Z,452nm,22.0s
BHGR  Bahadurgarh       147.47  74  eP        PKPdf   11 15 19.7 +0.8
SONA  Sohna             147.59  75  eP        PKPdf   11 15 19.3 +0.2
AYAN  Aya Nagar         147.64  74  eP        PKPdf   11 15 19.5 +0.3
NDI   New Delhi         147.72  74  eP        PKPdf   11 15 21.0 +1.7
NDI                                 ex                11 25 21.0
GUMO  Guam              148.13 257   PKIKP    PKPdf   11 15 23.5 +3.2
GUMO  Guam              148.13 257  ePKPbc    PKPdf   11 15 24.4 +4.1
ASOR  Ausora            148.21  74  eP        PKPdf   11 15 20.8 +0.7
KLP   Kalpa             148.50  69  eP        PKPdf   11 15 22.8 +2.3
NGP   Nagpur            148.58  89  ex        PKPdf   11 15 15.2  -5.6
ASAJ  Asahikawa         148.67 317   PKIKP    PKPdf   11 15 22.3 +1.9
ASAJ                                                  11 15 26.6
ASAJ                                 pmax     pmax
      comp=Z,82nm,0.7s
ASAJ                                 pmax     pmax
      comp=Z,96nm,0.7s
ASAJ  Asahikawa         148.67 317   PKP      PKPdf   11 15 22.3 +1.9
      comp=Z,82nm,0.7s,baz=248,slow=4.3,SNR=12
ASAJ                                 PKPbc    PKPdf   11 15 26.6 +6.2
      comp=Z,96nm,0.7s,baz=114,slow=4.4,SNR=32
LGTI  Lohaghat          150.36  73  eP        PKPdf   11 15 25.3 +1.8
LGTI                                ex        x       11 16 21.3
KLR   Kul'dur           150.94 334  ePKIKP    PKPdf   11 15 21.8  -1.9
KLR                                 e                 11 19 05.5
KLR                                  pmax     pmax
      comp=N,120nm,1.4s
KLR                                  pmax     pmax
      comp=E,98nm,1.4s
KLR                                  pmax     pmax
      comp=Z,200nm,1.4s
MOY   Mondy             151.01  15  ePKIKP    PKPdf   11 15 27.1 +3.4
MOY                                  pmax     pmax
      comp=Z,488nm,1.6s
IRK   Irkutsk           151.15  11  ePKIKP    PKPdf   11 15 25.3 +1.4
IRK                                 e                 11 16 05.4
IRK                                  pmax     pmax
      comp=Z,301nm,1.6s
WMQ   Urumqi            151.45  40   PKP      PKPdf   11 15 26.5 +1.9
WMQ                                  PKP2     PKPab   11 15 43.9 +1.4
WMQ                                  APKP             11 16 15.5
WMQ                                  XPKP             11 16 36.5
WMQ                                  PP       PP      11 19 15.9 +0.9
WMQ                                  PP       PP
      comp=Z,850nm,10.0s
WMQ                                  LR       LR
      comp=N,630nm,22.8s
WMQ                                  LR       LR
      comp=E,380nm,23.0s
WMQ                                  LR       LR
      comp=Z,550nm,21.6s
TLY   Talaya            151.57  12d iPKIKP    PKPdf   11 15 26.7 +2.1
TLY                                 e                 11 16 14.0
TLY                                  pmax     pmax
      comp=Z,181nm,1.6s
TLY   Talaya            151.57  12  ePKPdf    PKPdf   11 15 26.3 +1.7
TLY                                 ePKPbc    PKPdf   11 15 33.3 +8.7
TLY                                 ePKPab    PKPab   11 15 42.9 +0.2
VIS   Vishakhapatnam    151.61  97  i P       PKPdf   11 15 28.2 +2.6
VIS                                  AMS      AMS     11 40 57.4
      comp=Z,448nm,18.0s
CIT   Chita             152.15 359⇓iPKIKP    PKPdf   11 15 27.9 +2.5
CIT                                 e                 11 19 14.8
CIT                                  pmax     pmax
      comp=Z,125nm,1.5s
ZAK   Zakamensk         152.73  14⇑iPKIKP    PKPdf   11 15 28.2 +1.9
ZAK                                 e                 11 19 20.3
ZAK                                  pmax     pmax
      comp=Z,24nm,1.4s
ZAK                                  pmax     pmax
      comp=Z,13nm,1.4s
KOLN  Koldanda          153.36  76  eP        PKPdf   11 15 29.3 +1.4
      comp=Z,157nm,1.4s
GKN   Gorkha            154.27  75  eP        PKPdf   11 15 30.5 +1.5
      comp=Z,39nm,0.4s
HIA   Hailar            154.36 350  ePKIKP    PKPdf   11 15 29.6 +1.1
HIA                                 e                 11 19 26.7
HIA   Hailar            154.36 350  ePKPdf    PKPdf   11 15 29.6 +1.1
HIA                                 ePKPbc    PKPdf   11 15 37.5 +9.1
HIA                                 ePP       PP      11 19 26.7  -4.6
BWNR  Bhubaneshwar      154.56  93  ex        x       11 16 23.2
DMN   Daman             154.69  76  eP        PKPdf   11 15 31.3 +1.7
      comp=Z,139nm,1.0s
KKN   Kakani            154.84  76  eP        PKPdf   11 15 31.2 +1.4
      comp=Z,76nm,1.1s
PKI   Pulchoki          154.97  76  eP        PKPdf   11 15 31.3 +1.3
      comp=Z,219nm,1.5s
MJAR  Matsushiro Arr    155.05 306   PKP      PKPdf   11 15 30.8 +1.0
      comp=Z,12nm,1.1s,baz=294,slow=0.6,SNR=22
MJAR                                 PKPab    PKPab   11 15 57.6  -0.2
      comp=Z,87nm,0.9s,baz=80,slow=2.6,SNR=24
MJAR                                 PP       PP      11 19 31.5  -3.8
      comp=Z,24nm,1.3s,baz=71,slow=3.1,SNR=6.0
MAJO  Matsushiro        155.05 306  ePKIKP    PKPdf   11 15 30.8 +1.0
MAJO                                e                 11 15 40.3
MAJO                                e                 11 15 57.2
MAJO                                e                 11 19 32.2
MAT   Matsushiro        155.05 306  ePKP      PKPdf   11 15 31.0 +1.2
MAT                                  LR       LR
      comp=Z,710nm,20.0s
MAT   Matsushiro        155.05 306   PKP      PKPdf   11 15 30.8 +1.0
GUN   Gumba             155.37  75  eP        PKPdf   11 15 32.1 +1.6
      comp=Z,209nm,1.1s
MDJ   Mudanjiang        155.49 331   PKP      PKPdf   11 15 31.0 +0.9
MDJ                                  PKP2     PKPab   11 16 01.9 +2.5
MDJ                                  APKP             11 16 21.8
MDJ                                  XPKP             11 16 40.2
MDJ                                  PKS      PKS     11 19 03.0  -0.1
MDJ                                  PP       PP      11 19 35.8  -1.8
MDJ                                  SS       SS      11 38 59.4  -5.1
MDJ                                  PP       PP
      comp=Z,670nm,7.5s
MDJ                                  LR       LR
      comp=N,540nm,23.7s
MDJ                                  LR       LR
      comp=Z,370nm,25.6s
MDJ   Mudanjiang        155.49 331  ePKPdf    PKPdf   11 15 31.7 +1.6
MDJ                                 epPKPdf           11 16 23.0
SONM  Songino Array     155.77  11   PKP      PKPdf   11 15 32.9 +2.4
      comp=Z,18nm,1.0s,baz=300,slow=1.2,SNR=30
SONM                                 PKPab    PKPab   11 16 00.1  -0.4
      comp=Z,21nm,0.8s,baz=318,slow=3.4,SNR=9.3
SONM                                 pPKP             11 16 23.9
      comp=Z,4.8nm,0.6s,baz=270,slow=1.2,SNR=1.5
SONM                                 pPKPab           11 16 48.6
      comp=Z,15nm,1.0s,baz=342,slow=3.9,SNR=4.6
SONM                                 PP       PP      11 19 36.6  -2.6
      comp=Z,4.9nm,0.8s,baz=270,slow=1.4,SNR=3.7
ULN   Ulaanbaatar       155.85  10   PKPdf    PKPdf   11 15 32.8 +2.3
ULN                                  pPKPdf           11 16 23.0
ULN                                  pPKPab           11 16 50.2
KSM   Kuching           157.32 173  ePKPdf    PKPdf   11 15 34.5 +0.9
KSM                                 ePKPab    PKPab   11 16 06.4  -1.8
KULM  Kulim             157.82 146  ePKPdf    PKPdf   11 15 34.5 +0.4
KULM                                ePKPab    PKPab   11 16 08.2  -2.2
KULM                                epPKPdf           11 16 26.7
CN2   Changchun         157.88 335   PKP      PKPdf   11 15 34.2 +0.9
CN2                                  PKP2     PKPab   11 16 08.5  -1.2
CN2                                  PKS      PKS     11 19 06.0 +0.2
CN2                                  PP       PP      11 19 45.8  -5.2
CN2                                  SKS      SKS     11 22 21.1 +3.3
CN2                                  PP       PP
      comp=Z,270nm,8.0s
CN2                                  LR       LR
      comp=N,300nm,23.0s
CN2                                  LR       LR
      comp=E,300nm,23.0s
CN2                                  LR       LR
      comp=Z,600nm,23.0s
LSA   Lhasa             159.76  69   PKP      PKPdf   11 15 39.0 +3.0
LSA   Lhasa             159.76  69  ePKPdf    PKPdf   11 15 38.9 +2.9
LSA                                 ePKPab    PKPab   11 16 18.4 +0.1
SNY   Shenyang          160.27 336 ⇓PKP      PKPdf   11 15 37.4 +1.2
SNY                                  PKP2     PKPab   11 16 18.6  -1.5
SNY                                  SS       SS      11 39 53.0  -1.7
SNY                                  PP       PP
      comp=Z,890nm,14.1s
SNY                                  LR       LR
      comp=N,280nm,29.4s
SNY                                  LR       LR
      comp=E,420nm,19.8s
SNY                                  LR       LR
      comp=Z,380nm,24.0s
SHL   Shillong          160.79  81  eP        PKPdf   11 15 39.0 +1.8
SHL                                 ex        x       11 26 36.0
GTA   Gaotai            161.13  33   PKP      PKPdf   11 15 39.3 +2.2
GTA                                  PKP2     PKPab   11 16 23.9   0.0
GTA                                  PKS      PKS     11 19 12.1 +2.9
GTA                                  PP       PP      11 20 05.7  -2.7
GTA                                  SKS      SKS     11 22 26.4 +5.3
GTA                                  PPP      PPP     11 23 50.4  -5.4
GTA                                  SKKS             11 26 35.0
GTA                                  SS       SS      11 40 07.2 +3.8
GTA                                  PP       PP
      comp=Z,290nm,11.8s
GTA                                  LR       LR
      comp=N,280nm,25.9s
GTA                                  LR       LR
      comp=E,440nm,20.9s
GTA                                  LR       LR
      comp=Z,510nm,39.2s
KKM   Kota Kinabalu     161.75 190  ePKPdf    PKPdf   11 15 37.8  -0.6
KKM                                 ePKPab    PKPab   11 16 26.0  -1.4
JNU   Nakatsue          161.94 304   PKPab    PKPab   11 16 27.2  -0.4
      comp=Z,33nm,0.9s,baz=53,slow=13,SNR=6.5
HHC   Hu-ho-hao-te      163.29   4  ePKP      PKPdf   11 15 41.7 +2.5
HHC                                  PP       PP      11 20 14.7  -4.7
HHC                                  SS       SS      11 40 21.5  -4.5
HHC                                  PP       PP
      comp=Z,1µm,10.8s
HHC                                  LR       LR
      comp=N,480nm,16.7s
HHC                                  LR       LR
      comp=E,360nm,15.7s
HHC                                  LR       LR
      comp=Z,610nm,23.0s
BTO   Baotou            163.39   8  ePKP      PKPdf   11 15 42.3 +3.0
DL2   Dalian            163.55 336   PKP      PKPdf   11 15 38.7  -0.8
DL2                                  PKP2     PKPab   11 16 29.4  -5.0
DL2                                  PP       PP      11 20 18.2  -2.8
DL2                                  PP       PP
      comp=Z,450nm,8.0s
LZH   Lanzhou           165.71  31 ⇓PKP      PKPdf   11 15 43.5 +1.9
LZH                                 ePP       PP      11 20 32.0  -0.2
LZH                                  SKKS             11 27 01.2
LZH                                  PP       PP
      comp=Z,780nm,9.1s
LZH                                  LR       LR
      comp=N,1µm,18.0s
LZH                                  LR       LR
      comp=Z,2µm,20.0s
CMAR  Chiang Mai Arr    165.75 111   PKIKP    PKPdf   11 15 43.6 +1.5
CMAR                                                  11 16 42.9
CMAR  Chiang Mai Arr    165.75 111   PKP      PKPdf   11 15 43.5 +1.4
      comp=Z,29nm,1.3s,baz=259,slow=1.2,SNR=32
CMAR                                 pPKP             11 16 34.0
      comp=Z,17nm,1.2s,baz=266,slow=2.1,SNR=3.9
CMAR                                 PKPab    PKPab   11 16 42.9  -1.7
      comp=Z,6.4nm,0.7s,baz=245,slow=5.5,SNR=10
CHG   Chiang Mai        165.90 109 ⇓P        PKPdf   11 15 43.5 +1.2
      comp=Z,38nm,1.6s
TIY   Taiyuan           166.46   2   PKPR             11 15 42.0
TIY                                  APKP             11 16 34.0
TIY                                  LR       LR
      comp=N,470nm,12.0s
NANT  Nan               167.39 113   P        PKPdf   11 15 45.0 +1.7
      comp=N,125nm,0.9s
TIA   Tai'an            167.44 344 ⇓PKP      PKPdf   11 15 44.2 +1.4
CD2   Chengdu           169.39  48   PKP      PKPdf   11 15 46.2 +2.0
CD2                                  PKS      PKS     11 19 18.5 +2.9
CD2                                  LR       LR
      comp=N,510nm,23.4s
CD2                                  LR       LR
      comp=Z,670nm,33.6s
XAN   Xi'an             169.51  19   PKP      PKPdf   11 15 43.3  -0.8
XAN                                  XPKP             11 16 55.2
XAN                                  SKS      SKS     11 22 21.6  -5.2
XAN                                  LR       LR
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	comp=N,210nm,18.9s						
XAN				LR	LR		
	comp=E,140nm,18.9s						
XAN				LR	LR		
	comp=Z,410nm,22.5s						
SSE	**Sheshan**	**169.96**	**315**	PKP	PKPdf	11 15 42.4	-2.1
SSE				PP	PP	11 20 51.3	-2.1
SSE				LR	LR		
	comp=N,580nm,28.4s						
SSE				LR	LR		
	comp=E,1μm,28.3s						
SSE				LR	LR		
	comp=Z,700nm,21.8s						
NJ2	**Nanjing**	**170.57**	**328**	ePKP	PKPdf	11 15 46.6	+1.8
NJ2				PKP2	PKPab	11 17 08.1	+2.7
NJ2				PKS	PKS	11 19 17.0	+0.7
NJ2				PP	PP	11 20 59.0	+2.6
NJ2				PP	PP		
	comp=Z,470nm,10.3s						
NJ2				LR	LR		
	comp=N,3μm,22.3s						
NJ2				LR	LR		
	comp=E,4μm,31.0s						
NJ2				LR	LR		
	comp=Z,3μm,20.0s						
KMI	**Kunming**	**170.62**	**82**	PKP	PKPdf	11 15 45.8	+0.7
KMI				APKP		11 16 35.6	
ENH	**Enshi**	**173.14**	**26**	ePKPdf	PKPdf	11 15 47.2	+0.9
ENH				epPKPdf		11 16 37.7	
ENH				ePKPab	PKPab	11 17 15.5	-1.3
ENH				ePP	PP	11 21 10.7	+1.4
WHN	**Wuhan**	**173.50**	**350**	PKP	PKPdf	11 15 48.0	+1.6
WHN				PKP2	PKPab	11 17 17.2	-1.2
WHN				PP	PP	11 21 07.5	-3.6
WHN				LR	LR		
	comp=Z,1μm,19.8s						
GYA	**Guiyang**	**173.82**	**67**	⇑iPKP	PKPdf	11 15 47.4	+0.8
GYA				PP	PP	11 21 13.4	+0.6
GYA				SKKS		11 27 40.4	
GYA				PP	PP		
	comp=Z,680nm,11.1s						
QIZ	**Qiongzhong**	**174.14**	**149**	PKP	PKPdf	11 15 48.9	+2.0
QIZ				APKP		11 16 39.1	
QIZ				XPKP		11 16 58.8	
QIZ				PKP2	PKPab	11 17 20.7	-0.9
QIZ				PP	PP	11 21 11.2	-3.4
QIZ				SKKS		11 27 40.5	
QIZ				SS	SS	11 42 13.2	-0.3
QIZ				PP	PP		
	comp=Z,760nm,7.0s						

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*IDC **02** 11:10:21.3±1.1, 24.23S×66.99W, h172^{km}±11^{km}, mb3.7/8, mb1 3.8/13, mb1mx3.7/22, mbtmp4.1/13, Error ellipse: s-maj=19.4km s-min=13.7km az=35.0*

*NEIC **02** 11:10:22.4±0.8, 24.13S×66.93W, h184^{km}±7^{km}, mb4.1/8, Error ellipse: s-maj=11.7km s-min=7.8km az=71.0*

ISC 02 11:10:21.4±0.8**, 24.18S**±0.06×**66.97W**±0.09**, h187**^{km}±7^{km}**, n33, σ1^{s}12**/33**, mb4.1**/14**, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.37**	**311**	P	**P**	**11 11 04.0**	**+0.5**
	25nm,0.3s,baz=133,slow=7.5,SNR=18						
LVC				S	**S**	**11 11 34.7**	**-1.1**
	47nm,0.3s,baz=3.3,slow=20,SNR=42						
LVC	**Limon Verde**	**2.37**	**311**	ePn	**P**	**11 11 03.6**	**+0.1**
LVC				eSn	**S**	**11 11 29.4**	**-6.5**
LVC				S	**S**	**11 11 34.7**	**-1.1**
LPAZ	**La Paz**	**7.92**	**352**	P	**P**	**11 12 15.8**	**+1.3**
	0.8nm,0.3s,baz=143,slow=11,SNR=10						
LPAZ				S	**S**	**11 13 44.1**	**+1.3**
	0.2nm,0.3s,baz=17,slow=19,SNR=2.3						
LPAZ	**La Paz**	**7.92**	**352**	ePn	**P**	**11 12 16.1**	**+1.5**
LPAZ				S	**S**	**11 13 44.1**	**+1.3**
CPUP	**Villa Florida**	**8.99**	**106**	P	**P**	**11 12 27.6**	**-0.8**
	0.2nm,0.3s,baz=302,slow=13,SNR=3.3						
SIV	**San Ignacio**	**9.85**	**35**	P	**P**	**11 12 39.1**	**-0.6**
	1.6nm,0.3s,baz=252,slow=12,SNR=16						
TRQA	**Tornquist**	**14.47**	**164**	eP	**P**	**11 13 40.0**	**+1.3**
	3.4nm,0.6s						
SAML	**Samuel**	**15.57**	**14**	eP	**P**	**11 13 50.4**	**-2.0**
	7.7nm,1.1s						
PLCA	**Paso Flores**	**16.78**	**189**	P	**P**	**11 14 11.4**	**+4.5**
	0.3nm,0.3s,baz=19,slow=11,SNR=5.4						
PLCA	**Paso Flores**	**16.78**	**189**	eP	**P**	**11 14 08.0**	**+1.1**
	3.9nm,0.7s						
BDFB	**Brasilia**	**19.73**	**68**	P	**P**	**11 14 38.7**	**+0.2**
	1.8nm,0.3s,baz=216,slow=6.0,SNR=7.6						
PMSA	**Palmer Station**	**40.64**	**178**	eP	**P**	**11 17 42.6**	**-1.7**
	107nm,1.3s,mb5.3						
SNAA	**Sanae**	**59.17**	**161**	P	**P**	**11 20 03.1**	**-1.3**
	0.7nm,0.6s,mb3.6,baz=292,slow=11,SNR=5.6						
OXF	**Oxford**	**62.13**	**339**	P	**P**	**11 20 21.7**	**-3.2**
	25nm,1.0s,mb5.0						
WVT	**Waverly**	**63.14**	**341**	eP	**P**	**11 20 29.8**	**-1.6**
	5.3nm,0.8s,mb4.4						
TXAR	**Lajitas Array**	**63.84**	**324**	P	**P**	**11 20 35.9**	**-0.3**
	0.3nm,0.6s,mb3.3,baz=154,slow=6.9,SNR=3.8						
QSPA	**South Pole Qui**	**66.03**	**180**	eP	**P**	**11 20 49.1**	**-0.3**
	3.8nm,0.6s,mb4.4						
GDL2	**Guadalupe Moun**	**66.47**	**326**	P	**P**	**11 20 52.9**	**-0.1**
ANMO	**Albuquerque**	**69.71**	**326**	P	**P**	**11 21 13.1**	**+0.2**
	1.3nm,0.8s,mb3.7,baz=139,slow=7.2,SNR=5.7						
HLID	**Hailey**	**80.25**	**327**	eP	**P**	**11 22 14.2**	**+1.6**
	2.8nm,0.8s,mb3.9						
BOSA	**Boshof**	**80.63**	**117**	P	**P**	**11 22 15.0**	**+0.1**
	1.3nm,0.4s,mb4.0,baz=215,slow=7.0,SNR=7.8						
MAW	**Mawson**	**81.26**	**163**	P	**P**	**11 22 17.8**	**+0.4**
	1.3nm,0.5s,mb3.8,baz=246,slow=6.6,SNR=7.3						
LBTB	**Lobatse**	**82.29**	**114**	P	**P**	**11 22 24.2**	**+0.6**
	2.0nm,0.5s,mb4.0,baz=228,slow=7.5,SNR=5.4						
LBTB	**Lobatse**	**82.29**	**114**	P	**P**	**11 22 24.2**	**+0.6**
MATP	**Matopo**	**86.58**	**111**	P	**P**	**11 22 45.5**	**+0.4**
	1.9nm,0.5s,mb4.2,baz=240,slow=7.4,SNR=5.5						
MATP	**Matopo**	**86.58**	**111**	P	**P**	**11 22 45.5**	**+0.4**
LSZ	**Lusaka**	**88.43**	**106**	P	**P**	**11 22 56.2**	**+2.2**
	2.0nm,0.8s,mb4.0						
YKA	**Yellowknife Ar**	**94.30**	**340**	P	**P**	**11 23 20.0**	**0.0**
	0.5nm,0.4s,mb4.0,baz=128,slow=4.6,SNR=6.7						
ASAR	**Alice Springs**	**128.31**	**205**	PKP	PKPdf	11 29 07.3	+1.0
	1.0nm,0.7s,baz=137,slow=1.4,SNR=6.7						
WRA	**Warramunga Arr**	**131.48**	**207**	PKP	PKPdf	11 29 13.2	+0.9
	0.6nm,0.5s,baz=162,slow=1.7,SNR=17						
ZAL	**Zalesovo**	**143.54**	**28**	PKP	PKPdf	11 29 33.6	+0.4
	2.0nm,0.3s,baz=107,slow=4.4,SNR=4.4						
MKAR	**Makanchi Array**	**146.64**	**40**	PKPbc	PKPbc	11 29 43.0	+2.6
	2.5nm,0.6s,baz=298,slow=3.7,SNR=13						
MKAR	**Makanchi Array**	**146.64**	**40**	PKPbc	PKPbc	11 29 43.0	+2.6

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*NEIC **02** 11:15:41.6±0.8, 24.28S×67.02W, h172^{km}±7^{km}, mb4.1/11, Error ellipse: s-maj=11.9km s-min=7.5km az=71.0*

*IDC **02** 11:15:41.8±1.3, 24.23S×67.03W, h171^{km}±10^{km}, mb3.5/6, mb1 3.7/11, mb1mx3.6/20, mbtmp3.9/11, Error ellipse: s-maj=21.1km s-min=13.9km az=38.0*

ISC 02 11:15:40.5±0.7**, 24.29S**±0.06×**67.04W**±0.09**, h176**^{km}±7^{km}**, n31, σ1^{s}09**/33**, mb3.9**/14**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.39**	**314**	P	**P**	**11 16 23.9**	**+1.8**
	120nm,0.3s,baz=140,slow=5.7,SNR=174						
LVC				S	**S**	**11 16 54.5**	**+0.3**
	55nm,0.3s,baz=284,slow=23,SNR=16						
LVC	**Limon Verde**	**2.39**	**314**	ePn	**P**	**11 16 23.5**	**+1.4**
LVC				eSn	**S**	**11 16 51.9**	**-2.3**
LPAZ	**La Paz**	**8.03**	**353**	P	**P**	**11 17 36.0**	**+1.1**
	1.9nm,0.3s,baz=145,slow=7.5,SNR=47						
LPAZ				S	**S**	**11 19 04.6**	**+0.2**
	0.5nm,0.3s,baz=314,slow=21,SNR=6.5						
LPAZ	**La Paz**	**8.03**	**353**	ePn	**P**	**11 17 35.7**	**+0.7**
LPAZ				eSn	**S**	**11 19 02.8**	**-1.6**
CPUP	**Villa Florida**	**9.02**	**105**	P	**P**	**11 17 48.5**	**+0.4**
	0.2nm,0.3s,baz=293,slow=14,SNR=4.4						
CPUP	**Villa Florida**	**9.02**	**105**	ePn	**P**	**11 17 49.3**	**+1.2**
SIV	**San Ignacio**	**9.98**	**35**	P	**P**	**11 18 00.4**	**-0.2**
	0.7nm,0.3s,baz=223,slow=9.3,SNR=9.7						
TRQA	**Tornquist**	**14.39**	**164**	eP	**P**	**11 18 56.2**	**-0.8**
	12nm,0.6s						
SAML	**Samuel**	**15.70**	**14**	eP	**P**	**11 19 12.9**	**-0.6**
	2.2nm,0.6s						
PLCA	**Paso Flores**	**16.66**	**189**	eP	**P**	**11 19 24.2**	**-0.9**
BDFB	**Brasilia**	**19.83**	**68**	P	**P**	**11 19 59.9**	**+0.4**
	0.7nm,0.3s,baz=249,slow=13,SNR=4.1						
OTAV	**Otavalo**	**26.77**	**334**	eP	**P**	**11 21 07.8**	**+1.7**
	1.5nm,0.7s,mb3.7						
JTS	**JuntasAbangare**	**38.56**	**331**	P	**P**	**11 22 46.1**	**-1.8**
	8.1nm,1.1s,mb4.3						
SJG	**San Juan**	**42.15**	**1**	eP	**P**	**11 23 15.4**	**-1.9**
	38nm,1.1s,mb4.9						
SNAA	**Sanae**	**59.09**	**161**	P	**P**	**11 25 23.8**	**-0.3**
	0.3nm,0.6s,mb3.3,baz=252,slow=11,SNR=7.9						
SNAA	**Sanae**	**59.09**	**161**	eP	**P**	**11 25 23.5**	**-0.6**
	0.9nm,0.6s,mb3.8						
WVT	**Waverly**	**63.22**	**341**	eP	**P**	**11 25 50.7**	**-1.6**
	6.0nm,0.9s,mb4.4						
TXAR	**Lajitas Array**	**63.89**	**325**	P	**P**	**11 25 56.2**	**-0.5**
	0.3nm,0.7s,mb3.2,baz=150,slow=7.8,SNR=5.6						
TXAR	**Lajitas Array**	**63.89**	**325**	P	**P**	**11 25 56.2**	**-0.6**
QSPA	**South Pole Qui**	**65.92**	**180**	P	**P**	**11 26 09.6**	**+0.6**
	1.6nm,0.7s,mb4.0						
ANMO	**Albuquerque**	**69.77**	**326**	P	**P**	**11 26 33.9**	**+0.3**
	1.0nm,0.6s,mb3.8,baz=154,slow=5.3,SNR=6.2						
SDCO	**Great Sand Dun**	**71.51**	**329**	eP	**P**	**11 26 44.5**	**+0.5**
	1.5nm,0.7s,mb3.8						
PDAR	**Pinedale Array**	**77.37**	**329**	P	**P**	**11 27 18.6**	**+1.2**
	0.4nm,0.5s,mb3.3,baz=141,slow=5.8,SNR=3.1						
HWUT	**Hardware Ranch**	**77.45**	**327**	eP	**P**	**11 27 18.7**	**+0.9**
	2.0nm,0.6s,mb3.9						
ULM	**Lac du Bonnet**	**78.49**	**342**	P	**P**	**11 27 22.5**	**-0.8**
	2.6nm,0.7s,mb4.0,baz=139,slow=4.0,SNR=2.6						
ULM	**Lac du Bonnet**	**78.49**	**342**	P	**P**	**11 27 22.5**	**-0.8**
HLID	**Hailey**	**80.31**	**327**	eP	**P**	**11 27 35.0**	**+1.8**
	3.8nm,0.9s,mb4.0						
YKA	**Yellowknife Ar**	**94.38**	**340**	P	**P**	**11 28 41.2**	**+0.5**
	0.5nm,0.3s,mb4.0,baz=134,slow=5.0,SNR=6.0						
YKA	**Yellowknife Ar**	**94.38**	**340**	P	**P**	**11 28 41.2**	**+0.5**
WRA	**Warramunga Arr**	**131.35**	**207**	PKP	PKPdf	11 34 34.3	+1.7
	0.4nm,1.0s,baz=161,slow=1.7,SNR=5.2						
MKAR	**Makanchi Array**	**146.77**	**40**	PKPbc	PKPbc	11 35 02.4	+1.3
	1.7nm,0.6s,baz=316,slow=2.9,SNR=11						

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*IDC **02** 11:35:08.4±0.7, 36.08N×89.25W, mb3.8/11, mb1 4.0/15, mb1mx3.9/30, mbtmp3.9/15, ML3.9/4, Error ellipse: s-maj=14.9km s-min=12.5km az=126.0*

*NEIC **02** 11:35:11.0, 36.15N×89.47W, h15^{km}, mb3.7/3, MW3.9(SLM), After CERI.*

NEIC Felt [IV] at Dyersburg, Finley, Newbern, Obion, Tiptonville and Ridgely; [III] at Alamo, Atoka, Brighton, Brownsville, Burilson, Covington, Drummonds, Dyer, Friendship, Halls, Hornbeak, Jackson, Martin, Memphis, Munford, Paris, Ripley, Trenton and Troy. Also felt [IV] at Caruthersville, Portageville and Steele, Missouri. Felt [III] at Blytheville, Arkansas; Paducah, Kentucky and Hayti, Missouri. Felt in parts of Arkansas, Illinois, Kentucky, Mississippi, Missouri and Tennessee.

ISC 02 11:35:10.2±0.5**, 36.14N**±0.04×**89.50W**±0.03**, h28**^{km}±4^{km}**, n69, σ1^{s}53**/69**, mb3.9**/11**, 1C, New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLAT	**Glass**	**0.21**	**54**	eP	**Pb**	**11 35 15.7**	**-0.6**
HALT	**Halls**	**0.27**	**150**	⇑iP	**Pb**	**11 35 27.2**	**+10**
PVMO	**Portageville**	**0.32**	**329**	eP	**Pb**	**11 35 18.0**	**+0.3**
GNAR	**Gosnell**	**0.46**	**247**	eP	**Pb**	**11 35 20.8**	**+1.0**
UTMT	**University of**	**0.55**	**69**	eP	**Pb**	**11 35 20.9**	**-0.4**
UTMT				eS	**Sb**	**11 35 28.6**	**-0.3**
PARMO	**Parma**	**0.56**	**339**	eP	**Pb**	**11 35 22.0**	**+0.6**
PARMO				eS	**Sb**	**11 35 29.8**	**+0.7**
MET	**Memphis--Engin**	**1.08**	**199**	eP	**Pn**	**11 35 30.8**	**+1.2**
HBAR	**Harrisburg**	**1.11**	**238**	eP	**Pn**	**11 35 31.9**	**+2.0**
WVT	**Waverly**	**1.35**	**90**	ePn	**Pn**	**11 35 34.1**	**+0.6**
OXF	**Oxford**	**1.63**	**177**	ePn	**Pn**	**11 35 39.1**	**+1.6**
PLAL	**Pickwick Lake**	**1.64**	**134**	ePn	**Pn**	**11 35 38.5**	**+0.9**
FVM	**French Village**	**1.98**	**338**	ePn	**Pn**	**11 35 44.1**	**+1.6**
SLM	**Saint Louis**	**2.56**	**347**	ePn	**Pn**	**11 35 52.2**	**+1.5**
UALR	**University of**	**2.69**	**240**	ePn	**Pn**	**11 35 54.0**	**+1.3**
SWET	**Sewanee**	**3.05**	**107**	ePn	**Pn**	**11 35 58.7**	**+1.0**
LRAL	**Lakeview Retre**	**3.72**	**146**	ePn	**Pn**	**11 36 07.3**	**0.0**
BLO	**Bloomington**	**3.84**	**37**	ePn	**Pn**	**11 36 08.6**	**-0.3**
CPCT	**Cooper Cave**	**4.11**	**98**	ePn	**Pn**	**11 36 13.5**	**+0.7**
CPCT				eSg	**Sn**	**11 37 17.0**	**+16**
TZTN	**Tazewell**	**4.82**	**83**	ePn	**Pn**	**11 36 23.7**	**+0.8**
GOGA	**Godfrey**	**5.66**	**117**	Pn	**Pn**	**11 36 35.0**	**+0.2**
NATX	**Nacogdoches**	**6.12**	**226**	ePn	**Pn**	**11 36 40.4**	**-0.8**
KSU1	**Kansas State U**	**6.37**	**300**	ePn	**Pn**	**11 36 42.7**	**-2.0**
ACSO	**Alum Creek Sta**	**6.56**	**50**	ePn	**Pn**	**11 36 46.7**	**-0.7**
JSC	**Jenkinsville**	**7.00**	**103**	ePn	**Pn**	**11 36 50.9**	**-2.7**
BLA	**Blacksburg**	**7.37**	**79**	ePn	**Pn**	**11 36 57.2**	**-1.6**
WMOK	**Wichita Mounta**	**7.70**	**262**	ePn	**Pn**	**11 37 00.8**	**-2.6**
NHSC	**New Hope**	**8.26**	**109**	eLg		11 39 20.5	
MCWV	**Mont Chateau**	**8.40**	**62**	ePn	**P**	**11 37 11.0**	**-2.1**
CBKS	**Cedar Bluff**	**8.56**	**291**	ePn	**P**	**11 37 12.1**	**-3.3**
ALLY	**Alegheny Colle**	**9.13**	**50**	Pn	**P**	**11 37 20.5**	**-2.7**
AMTX	**Amarillo**	**10.01**	**266**	ePn	**P**	**11 37 32.0**	**-3.3**
JCT	**Junction City**	**10.30**	**240**	ePn	**P**	**11 37 36.1**	**-3.2**
SDMD	**Soldier's Deli**	**10.54**	**68**	Pn	**P**	**11 37 44.8**	**+2.2**
SDMD				eSn	**S**	**11 39 45.5**	**+4.8**
MVL	**Millersville**	**11.06**	**66**	Pn	**P**	**11 37 44.8**	**-4.8**
GENY	**Geneseo**	**11.19**	**50**	Pn	**P**	**11 37 51.1**	**-0.3**
SADO	**Sadowa**	**11.68**	**39**	Pn	**P**	**11 37 53.1**	**-4.9**
	1.4nm,0.3s,baz=245,slow=12,SNR=7.5						
SADO				Lg		11 41 07.0	
	4.8nm,0.3s,baz=319,slow=19,SNR=4.6						
EYMN	**Ely**	**11.89**	**353**	ePn	**P**	**11 37 56.1**	**-4.8**
BINY	**Binghamton**	**12.10**	**56**	eP	**P**	**11 37 58.0**	**-5.7**
BINY				eLg		11 41 20.1	
CPRX	**Cap Rock**	**12.24**	**259**	ePn	**P**	**11 38 02.0**	**-3.6**
BRNJ	**Basking Ridge**	**12.56**	**64**	eLg		11 41 34.0	
SDCO	**Great Sand Dun**	**12.90**	**282**	ePn	**P**	**11 38 12.3**	**-2.2**
GDL2	**Guadalupe Moun**	**12.92**	**257**	ePn	**P**	**11 38 10.9**	**-3.8**
ISCO	**Idaho Springs**	**13.23**	**291**	ePn	**P**	**11 38 15.1**	**-3.6**
RSSD	**Black Hills**	**13.67**	**310**	Pn	**P**	**11 38 20.1**	**-4.4**
TXAR	**Lajitas Array**	**13.71**	**244**	Pn	**P**	**11 38 21.9**	**-3.3**
	0.9nm,0.3s,baz=65,slow=12,SNR=39						
ANMO	**Albuquerque**	**13.86**	**270**	Pn	**P**	**11 38 25.9**	**-1.2**
	baz=51,slow=13,SNR=2.3						
ANMO				Lg		11 42 27.1	
	baz=355,slow=22,SNR=4.4						
ANMO	**Albuquerque**	**13.86**	**270**	Pn	**P**	**11 38 25.9**	**-1.2**
ANMO				eLg		11 42 29.2	
MNTX	**Cornudas Mount**	**13.91**	**256**	ePn	**P**	**11 38 24.6**	**-3.2**
MIV	**Mineville/With**	**14.55**	**52**	ePn	**P**	**11 38 33.3**	**-2.7**
ULM	**Lac du Bonnet**	**14.84**	**344**	Pn	**P**	**11 38 36.8**	**-2.9**
	0.5nm,0.3s,baz=148,slow=12,SNR=4.0						
ULM				Lg		11 42 47.0	
	0.5nm,0.3s,baz=69,slow=21,SNR=3.5						
BW06	**Boulder Array**	**16.83**	**299**	ePn	**P**	**11 39 08.5**	**+3.2**
PDAR	**Pinedale Array**	**16.83**	**299**	P	**P**	**11 39 08.3**	**+3.0**
	0.2nm,0.3s,baz=108,slow=14,SNR=6.4						
PDAR				Lg		11 43 56.0	
	0.2nm,0.3s,baz=101,slow=30,SNR=7.6						
WUAZ	**Wupatki**	**17.75**	**274**	Pn	**P**	**11 39 17.6**	**+0.7**
	3.2nm,0.6s						
WUAZ				eLg		11 44 29.3	
IMW	**Indian Meadow**	**18.12**	**302**	P	**P**	**11 39 25.4**	**+3.8**
	2.8nm,0.6s						
ELK	**Elko**	**20.65**	**291**	P	**P**	**11 39 52.6**	**+2.5**
	0.5nm,0.6s,baz=92,slow=15,SNR=4.0						
FCC	**Fort Churchill**	**22.83**	**354**	eP	**P**	**11 40 12.3**	**+0.5**
	6.0nm,0.7s,mb4.1						
NVAR	**Mina Array Bea**	**22.99**	**284**	P	**P**	**11 40 19.2**	**+5.6**
	0.8nm,0.8s,mb3.2,baz=105,slow=7.9,SNR=4.1						
EDM	**Edmonton**	**23.89**	**323**	eP	**P**	**11 40 24.3**	**+2.2**
SCHQ	**Schefferville**	**24.34**	**33**	P	**P**	**11 40 27.5**	**+1.0**
	2.7nm,0.8s,mb3.7,baz=226,slow=7.7,SNR=6.1						
SDV	**Santo Domingo**	**32.11**	**143**	P	**P**	**11 41 37.5**	**+0.1**
	2.2nm,0.6s,mb4.2,baz=356,slow=13,SNR=2.9						
ILAR	**Eielson Array**	**44.15**	**329**	P	**P**	**11 43 19.2**	**+1.6**
	0.5nm,0.8s,mb3.3,baz=111,slow=6.6,SNR=9.4						
LPAZ	**La Paz**	**55.93**	**155**	P	**P**	**11 44 47.9**	**-0.3**
	1.2nm,1.0s,mb3.9,baz=344,slow=8.0,SNR=3.8						
SIV	**San Ignacio**	**58.41**	**147**	P	**P**	**11 45 04.8**	**-1.0**
	1.4nm,0.6s,mb4.2,baz=338,slow=5.5,SNR=7.2						
ARCES	**ARCESS Array B**	**64.58**	**21**	P	**P**	**11 45 46.3**	**-0.2**
	1.4nm,0.7s,mb4.1,baz=304,slow=4.4,SNR=7.7						
FINES	**FINESS Array B**	**69.69**	**28**	P	**P**	**11 46 19.1**	**+0.2**
	1.1nm,0.5s,mb4.1,baz=318,slow=7.5,SNR=8.1						
AKASG	**Malin Array Be**	**78.12**	**35**	P	**P**	**11 47 08.1**	**+0.2**
	1.3nm,0.6s,mb4.0,baz=304,slow=4.5,SNR=7.7						
BVAR	**Borovoye Array**	**89.50**	**12**	P	**P**	**11 48 07.8**	**+2.2**
	0.6nm,0.6s,mb4.1,baz=135,slow=2.1,SNR=5.6						
WRA	**Warramunga Arr**	**138.45**	**281**	PKP	PKPdf	11 54 37.1	-1.5
	0.3nm,0.8s,baz=49,slow=2.5,SNR=4.7						
MAW	**Mawson**	**144.80**	**162**	PKP	PKPdf	11 54 44.6	-3.7
	4.0nm,0.8s,baz=217,slow=4.0,SNR=12						

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*NEIC **02** 11:36:48.9±0.6, 24.20S×67.07W, h178^{km}±8^{km}, mb4.2/3, Error ellipse: s-maj=11.8km s-min=9.5km az=113.0*

*GUC **02** 11:36:49.9±0.8, 24.30S×67.53W, h200^{km}, ML4.0*

*IDC **02** 11:36:49.5±1.4, 24.12S×67.08W, h185^{km}±17^{km}, mb3.8/4, mb1 3.7/9, mb1mx3.5/19, mbtmp4.2/9, Error ellipse: s-maj=24.5km s-min=17.3km az=110.0*

ISC 02 11:36:47.8±0.6**, 24.26S**±0.05×**67.16W**±0.08**, h185**^{km}±10^{km}**, n23, σ1^{s}24**/32**, mb4.0**/5**, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.30**	**315**	⇑iP	**P**	**11 37 31.0**	**+2.0**
LVC				i S	**S**	**11 38 02.6**	**+2.0**
LVC				AMP		11 38 04.2	
	comp=E,295nm,0.3s						
LVC	**Limon Verde**	**2.30**	**315**	P	**P**	**11 37 31.0**	**+2.0**
	comp=E,99nm,0.3s,baz=139,slow=5.4,SNR=238						
LVC				S	**S**	**11 38 01.6**	**+0.9**
	comp=E,34nm,0.3s,baz=55,slow=23,SNR=19						
LVC	**Limon Verde**	**2.30**	**315**	P	**P**	**11 37 31.0**	**+2.1**
LVC				S	**S**	**11 38 01.6**	**+0.9**
LVC				eSn	**S**	**11 38 01.8**	**+1.2**
CPN1	**Cerro Paranal**	**2.98**	**262**	eP	**P**	**11 37 37.9**	**+0.8**
CPN1				i S	**S**	**11 38 14.2**	**-0.8**
CPN1				AMP		11 38 19.1	
	comp=E,605nm,0.3s						
ANCH	**Antofagasta**	**3.03**	**280**	⇓iP	**P**	**11 37 39.1**	**+1.5**
ANCH				i S	**S**	**11 38 14.7**	**-1.3**
CRCH	**Chaqaral**	**3.77**	**236**	⇑iP	**P**	**11 37 46.8**	**0.0**
CRCH				i S	**S**	**11 38 30.0**	**-2.3**
CRCH	**Chaqaral**	**3.77**	**236**	⇑iP	**P**	**11 37 46.8**	**0.0**
CRCH				i S	**S**	**11 38 29.6**	**-2.7**
LPAZ	**La Paz**	**7.98**	**353**	P	**P**	**11 38 42.7**	**+1.0**
	comp=E,0.9nm,0.3s,baz=117,slow=4.7,SNR=20						
LPAZ				S	**S**	**11 40 10.3**	**-0.3**
	comp=E,0.4nm,0.3s,baz=330,slow=22,SNR=8.8						
LPAZ	**La Paz**	**7.98**	**353**	ePn	**P**	**11 38 42.2**	**+0.6**
LPAZ				eSn	**S**	**11 40 09.8**	**-0.8**
LPAZ				S	**S**	**11 40 10.3**	**-0.3**
CPUP	**Villa Florida**	**9.13**	**105**	ePn	**P**	**11 38 57.0**	**+0.3**
SIV	**San Ignacio**	**10.01**	**36**	P	**P**	**11 39 06.5**	**-1.8**
	comp=E,1.4nm,0.3s,baz=220,slow=14,SNR=38						
TRQA	**Tornquist**	**14.45**	**163**	eP	**P**	**11 40 04.1**	**-0.7**
	comp=E,9.9nm,0.7s						
SAML	**Samuel**	**15.69**	**15**	eP	**P**	**11 40 19.3**	**-1.1**
	comp=E,3.3nm,0.8s						
PLCA	**Paso Flores**	**16.68**	**189**	P	**P**	**11 40 31.9**	**-0.3**
	comp=E,0.1nm,0.3s,baz=353,slow=8.1,SNR=2.1						
PLCA	**Paso Flores**	**16.68**	**189**	eP	**P**	**11 40 39.6**	**+7.4**
BDFB	**Brasilia**	**19.91**	**68**	P	**P**	**11 41 06.4**	**-0.6**
	comp=E,0.3nm,0.3s,baz=229,slow=11,SNR=3.1						
SNAA	**Sanae**	**59.16**	**161**	P	**P**	**11 46 30.3**	**-0.6**
	comp=E,0.6nm,0.7s,mb3.5,baz=298,slow=8.9,SNR=11						
QSPA	**South Pole Qui**	**65.95**	**180**	eP	**P**	**11 47 17.1**	**+1.6**
	comp=E,2.1nm,0.5s,mb4.2						
SCHQ	**Schefferville**	**78.76**	**0**	P	**P**	**11 48 29.1**	**-1.9**
	comp=E,19nm,1.0s,mb4.7,baz=152,slow=17,SNR=4.3						
BOSA	**Boshof**	**80.74**	**117**	P	**P**	**11 48 43.1**	**+1.0**
	comp=E,1.0nm,0.5s,mb3.8,baz=274,slow=13,SNR=5.9						
MAW	**Mawson**	**81.24**	**163**	P	**P**	**11 48 45.9**	**+1.9**
	comp=E,1.0nm,0.7s,mb3.6,baz=246,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**128.17**	**205**	PKP	PKPdf	11 55 34.6	+2.0
	comp=E,0.2nm,0.5s,baz=136,slow=1.8,SNR=4.2						
WRA	**Warramunga Arr**	**131.34**	**207**	PKP	PKPdf	11 55 41.7	+2.9
	comp=E,0.2nm,0.4s,baz=157,slow=1.8,SNR=9.9						

IDC 02 11:41:11.0±2.2**, 5.56N**×**94.65E, mb3.7**/4**, mb1 3.8**/5**, mb1mx3.5**/22**, mbtmp3.6**/5**, ML4.1**/1**, Error ellipse: s-maj=92.4km s-min=22.5km az=59.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.49**	**18**	Pn	P	11 44 24.3	-2.0
	0.3nm,0.3s,baz=210,slow=14,SNR=3.1						
MKAR	**Makanchi Array**	**42.45**	**347**	P	P	11 49 07.7	-1.6
	1.2nm,0.6s,baz=169,slow=7.7,SNR=10						
WRA	**Warramunga Arr**	**46.53**	**124**	P	P	11 49 39.8	-2.7
	0.6nm,0.6s,baz=304,slow=9.2,SNR=8.3						
ASAR	**Alice Springs**	**48.06**	**129**	P	P	11 49 53.4	-1.2
	0.3nm,0.5s,baz=299,slow=7.9,SNR=5.9						
BVAR	**Borovoye Array**	**51.33**	**341**	P	P	11 50 16.5	-2.6
	0.6nm,0.6s,baz=158,slow=8.0,SNR=4.4						
TXAR	**Lajitas Array**	**141.10**	**26**	PKP	PKPdf	12 00 46.3	+0.2
	0.1nm,0.4s,baz=324,slow=3.3,SNR=3.5						

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*NEIC **02** 12:04:29.0, 31.51S×117.21E, ML3.0(AUST), After AUST.*

AUST 02 12:04:29.6, 31.51S×117.21E, ML3.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLBR	**Kellerberrin**	**0.47**	**100**	eP	Pg	12 04 38.0	-1.1
KLBR				eS	Sg	12 04 44.2	-1.2
MUN	**Mundaring**	**0.97**	**241**	eP	Pg	12 04 47.0	-2.0
MUN				eS	Sg	12 04 59.0	-2.9
BLDU	**Ballidu**	**0.99**	**334**	eP	Pb	12 04 47.5	-1.8
BLDU				eS	Sg	12 04 59.8	-2.8
NWAO	**Narrogin (SRO)**	**1.41**	**179**	eP	Pb	12 04 55.2	-1.3
NWAO				eS	Sb	12 05 12.4	-2.6
NWAO	**Narrogin (SRO)**	**1.41**	**179**	eP	Pb	12 04 55.2	-1.3
NWAO				eSn	Sn	12 05 12.1	-4.1
NWAO				eS	Sb	12 05 12.4	-2.6
MORW	**Morawa**	**2.63**	**337**	eP	Pn	12 05 12.5	-1.6
MORW				eS	Sn	12 05 42.5	-4.7
RKGY	**Rocky Gully**	**3.10**	**184**	eP	Pn	12 05 18.8	-1.9
RKGY				eS	Sn	12 05 58.7	-0.3
KMBL	**Kambalda**	**4.00**	**89**	eP	Pn	12 05 28.5	-5.0
KMBL				eS	Sn	12 06 14.2	-7.5
MEEK	**Meekatharra**	**5.01**	**15**	eP	Pn	12 05 45.3	-2.5
MEEK				eS	Sn	12 06 36.1	-11
MBWA	**Marble Bar**	**10.55**	**13**	P	P	12 07 00.4	-4.9

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*IDC **02** 12:05:10.8±3.4, 17.47S×179.12W, h544^{km}±41^{km}, mb3.2/8, mb1 3.5/8, mb1mx3.4/16, mbtmp4.1/8, Error ellipse: s-maj=45.4km s-min=13.4km az=152.0*

ISC 02 12:05:09.8±4.1**, 17.3S**±0.4×**179.2W**±0.2**, h541**^{km}±51^{km}**, n9, σ0^{s}37**/9**, mb3.6**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.23**	**240**	P	**P**	**12 11 44.9**	**+0.2**
	1.3nm,0.4s,mb3.8,baz=92,slow=13,SNR=7.3						
WRA	**Warramunga Arr**	**43.98**	**259**	P	**P**	**12 12 30.1**	**-0.6**
	0.7nm,0.8s,mb3.3,baz=95,slow=7.7,SNR=9.5						
ASAR	**Alice Springs**	**44.21**	**254**	P	**P**	**12 12 32.6**	**+0.2**
	4.0nm,0.6s,mb4.2,baz=87,slow=8.1,SNR=60						
ASAR				S	**S**	**12 18 27.0**	**0.0**
	1.7nm,1.0s,baz=84,slow=17,SNR=5.0						
MJAR	**Matsushiro Arr**	**67.00**	**324**	P	**P**	**12 15 11.1**	**+0.5**
	2.0nm,0.6s,mb3.8,baz=152,slow=6.4,SNR=6.5						
NVAR	**Mina Array Bea**	**79.56**	**44**	P	**P**	**12 16 21.7**	**0.0**
	1.3nm,0.7s,mb3.4,baz=234,slow=11,SNR=8.9						
ILAR	**Eielson Array**	**85.52**	**13**	P	**P**	**12 16 50.4**	**-0.6**
	0.2nm,0.4s,mb3.1,baz=224,slow=5.0,SNR=3.4						
TXAR	**Lajitas Array**	**86.35**	**58**	P	**P**	**12 16 56.1**	**+0.3**
	1.4nm,0.8s,mb3.6,baz=217,slow=6.8,SNR=20						
PDAR	**Pinedale Array**	**87.47**	**44**	P	**P**	**12 17 00.7**	**-0.1**
	0.8nm,0.6s,mb3.5,baz=243,slow=3.6,SNR=6.4						
GERES	**GERESS Array B**	**146.87**	**344**	PKPbc	PKPbc	12 23 53.5	+3.2
	0.3nm,0.3s,slow=4.0,SNR=4.4						

DJA 02 12:22:52.8±0.9**, 9.61S**×**113.83E, h87**^{km}±15^{km}**, MD5.1**/3**, ML4.4**/4**, 1C-7D, Error ellipse: s-maj=31.2km s-min=11.8km az=17.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	**Scrawed**	**1.17**	**15**	⇓iPn	P	12 23 13.8	-0.8
	684nm,0.2s						
SRDI	**Scrawed**	**1.17**	**15**	⇓iP	P	12 23 14.4	-0.2
SRDI				⇑iSn	S	12 23 28.8	-2.1
KELI	**Kelakatan**	**1.53**	**25**	⇓iPn	P	12 23 19.6	+0.3
	408nm,0.2s						
KELI				⇓iSn	S	12 23 39.4	+0.5
RATI	**Rata**	**1.90**	**62**	⇓iPn	P	12 23 23.5	-0.6
	588nm,0.2s						

RATI	**Rata**	1.90	62	*e*P	P	12 23 24.0	-0.1
RATI				⇓*i*Sn	S	12 23 44.3	-2.9
KEDI	**Kedomdong**	2.52	64	*e*Pn	P	12 23 32.3	-0.4
	61nm,0.2s						
KEDI				⇓*i*Sn	S	12 24 00.3	-2.1

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*BJI **02** 12:45:34.7,22.80S×67.90W,h111^{km},mB4.8*

*NEIC **02** 12:45:34.8±0.8,22.84S×67.89W,h111^{km}±7^{km},mb4.4/10, Error ellipse: s-maj=11.8km s-min=9.3km az=54.0*

*IDC **02** 12:45:34.2±0.9,23.01S×67.92W,h109^{km}±11^{km},mb3.8/6, mb1 3.9/9,mb1mx3.8/18,mbtmp4.2/9,Error ellipse: s-maj=21.1km s-min=16.1km az=144.0*

ISC 02 12:45:33.6±0.7**,22.90S**±0.06×**67.87W**±0.07**,h115**^{km}±6^{km}**, n39,**σ1^{s}**07**/36**,mb4.3**/12**,4C-1D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	1.00	286	P	P	12 45 56.3	+0.6
	201nm,0.3s,baz=122,slow=9.2,SNR=4062						
LVC				S	S	12 46 11.9	-0.1
	508nm,0.3s,baz=286,slow=20,SNR=127						
LVC	**Limon Verde**	1.00	286	*e*Pn	P	12 45 55.8	+0.1
LVC				*e*Sn	S	12 46 11.2	-0.8
LPAZ	**La Paz**	6.58	358	P	P	12 47 12.3	+3.0
	1.8nm,0.3s,baz=172,slow=5.9,SNR=51						
LPAZ	**La Paz**	6.58	358	*e*Pn	P	12 47 12.3	+3.0
	10nm,0.6s						
ZON	**Zonda**	8.64	185	⇓*i*P	P	12 47 43.5	+6.4
ZON				*e*S	rx	12 47 56.5	
SIV	**San Ignacio**	9.40	44	P	P	12 47 47.6	+0.3
	16nm,0.3s,baz=234,slow=11,SNR=291						
SIV				S	S	12 49 31.2	-0.5
	1.5nm,0.3s,baz=135,slow=23,SNR=3.9						
CPUP	**Villa Florida**	10.18	112	P	P	12 47 57.8	+0.1
	0.1nm,0.3s,baz=310,slow=16,SNR=3.6						
CPUP	**Villa Florida**	10.18	112	*e*Pn	P	12 47 58.5	+0.7
SAML	**Samuel**	14.58	19	*e*P	P	12 48 54.5	-1.0
TRQA	**Tornquist**	15.93	163	*e*P	P	12 49 08.0	-4.3
	7.8nm,0.8s						
TRQA				*e*		12 49 12.7	
TRQA				*e*		12 49 53.3	
BDFB	**Brasilia**	20.07	72	P	P	12 50 00.4	+0.3
	3.4nm,0.4s,baz=237,slow=5.6,SNR=6.4						
SJG	**San Juan**	40.80	3	P	P	12 53 03.1	-2.2
	28nm,1.2s,mb5.0						
VNA3	**Neumayer Olymp**	58.44	161	⇑	P	12 55 19.4	+0.1
VNA1	**Neumayer--Stat**	58.65	160	⇑*i*	P	12 55 20.9	+0.2
VNA2	**Neumayer--Watz**	59.01	161	⇑*i*	P	12 55 23.4	+0.2
SNAA	**Sanae**	60.65	161	⇑*i*	P	12 55 33.0	-1.4
SNAA	**Sanae**	60.65	161	P	P	12 55 32.4	-1.9
	1.2nm,0.5s,mb4.2,baz=291,slow=6.3,SNR=27						
WVT	**Waverly**	61.67	342	*e*P	P	12 55 39.6	-2.2
	2.8nm,0.8s,mb4.3						
MAIT	**Maitri**	65.15	159	*e*P	P	12 56 03.3	-0.7
ANMO	**Albuquerque**	68.20	327	*e*P	P	12 56 23.2	-0.6
	3.7nm,1.0s,mb4.2						
DBIC	**Dimbokro**	68.22	72	P	P	12 56 24.4	+0.1
	2.7nm,0.5s,mb4.3,baz=210,slow=11,SNR=7.9						
DBIC	**Dimbokro**	68.22	72	*e*P	P	12 56 24.1	-0.2
	3.7nm,0.6s,mb4.4						
SDCO	**Great Sand Dun**	69.94	329	*e*P	P	12 56 34.8	+0.4
	12nm,1.4s,mb4.5						
PV01	**Paradox Valley**	71.74	327	P	P	12 56 46.7	+1.5
MSU	**Marysvale**	73.88	325	*e*P	P	12 56 58.5	+0.7
TSUM	**Tsumeb**	78.72	106	*e*P	P	12 57 26.0	+0.8
	13nm,1.4s,mb4.6						
HLID	**Hailey**	78.74	327	*e*P	P	12 57 26.3	+1.4
	6.8nm,1.3s,mb4.3						
MCMT	**McKenzie Canyo**	78.91	329	*e*P	P	12 57 26.6	+0.8
MAW	**Mawson**	82.72	163	P	P	12 57 45.2	-0.1
	1.9nm,0.5s,mb4.2,baz=219,slow=6.6,SNR=16						
FCC	**Fort Churchill**	84.21	347	P	P	12 57 50.9	-2.0
	3.2nm,1.0s,mb4.1						
ESDC	**Sonseca Array**	86.16	44	P	P	12 58 04.6	+1.6
	0.1nm,0.3s,mb3.2,baz=243,slow=6.6,SNR=4.7						
YKA	**Yellowknife Ar**	92.82	340	P	P	12 58 34.0	+0.1
	0.6nm,0.4s,mb4.2,baz=140,slow=4.7,SNR=7.6						
YKA	**Yellowknife Ar**	92.82	340	P	P	12 58 34.0	+0.1
WRA	**Warramunga Arr**	132.22	209	PKP	PKPdf	13 04 35.4	+0.6
	0.8nm,0.5s,baz=153,slow=1.6,SNR=27						
ZAL	**Zalesovo**	142.79	27	PKP	PKPdf	13 04 55.0	+2.0
	1.3nm,0.4s,baz=222,slow=3.5,SNR=3.5						
MKAR	**Makanchi Array**	146.17	38	PKPbc	PKPbc	13 05 00.7	+0.4
	1.3nm,0.6s,slow=1.2,SNR=7.1						
WMQ	**Urumqi**	151.00	38	*e*PKP	PKPdf	13 05 09.6	+2.8
WMQ				PP	PP		
	comp=Z,90nm,10.0s						
CN2	**Changchun**	156.43	335	*e*PKP	PKPdf	13 05 17.0	+2.7
LZH	**Lanzhou**	165.02	27	*e*PKP	PKPdf	13 05 24.5	+0.5
LZH				APKP		13 05 55.6	
LZH				XPKP		13 06 07.5	

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*NEIC **02** 12:48:40.5,17.42N×62.03W,h16^{km},MD3.1(TRN),After TRN.*

TRN 02 12:48:40.5,17.42N×62.03W,h16^{km},MD3.1,1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPB	**Codrington**	0.30	41	⇑*i*P	Pb	12 48 48.9	+1.9
CPB				*e*S	Sb	12 48 53.7	+2.4
BPA	**Boggy Peak**	0.40	156	*e*P	Pb	12 48 51.2	+2.4
BPA				*e*S	Sb	12 48 57.5	+3.1
SKI	**Saint Kitts**	0.68	263	*e*P	Pb	12 48 56.6	+3.0
SKI				*e*S	Sb	12 49 07.2	+4.8

NEIC 02 13:01:46.6,57.78N×156.33W,h115^{km},MG2.7(AEIC)**, After AEIC.,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANCK	**Angle Creek**	0.61	46	P	P	13 02 04.3	-0.6
ANCK				S	S	13 02 17.9	-0.9
CAHL	**Cahill**	0.61	63	P	P	13 02 04.2	-0.8
ACHA	**Angle Creek He**	0.69	51	P	P	13 02 04.8	-0.7
ACHA				S	S	13 02 19.1	-0.8
KAHC	**Katmai Hardscr**	1.12	38	P	P	13 02 08.7	-1.1
KDAK	**Kodiak Island**	2.01	88	P	P	13 02 18.9	-1.5
KDAK				S	S	13 02 43.7	-2.1
ILIM	**Iliamna**	2.89	36	P	P	13 02 30.9	-1.4
CNPM	**China Poot**	3.19	55	P	P	13 02 34.9	-1.4
NCT	**North Crescent**	3.29	31	P	P	13 02 36.0	-1.7
SEW	**Seward**	4.26	54	P	P	13 02 48.5	-2.2
MPA	**Moose Pass**	4.50	50	P	P	13 02 51.8	-2.2
RC01	**Rabbit Creek A**	4.72	43	P	P	13 02 54.3	-2.7
RC01				S	S	13 03 44.1	-7.0
PMR	**Palmer**	5.28	41	P	P	13 03 02.4	-2.1
HIN	**Hinchinbrook I**	5.70	59	P	P	13 03 07.6	-2.6
SML	**Sawmill**	5.71	42	P	P	13 03 06.0	-4.3
SCM	**Sheep Creek Mo**	6.09	44	P	P	13 03 12.1	-3.4
VLZ	**Valdez**	6.10	52	P	P	13 03 12.9	-2.8
EYAK	**Cordova Ski Ar**	6.11	59	P	P	13 03 12.2	-3.5
KTH	**Kantishna Hill**	6.37	22	P	P	13 03 14.7	-4.7
KTH				S	S	13 04 26.0	-5.2
TRF	**Thorofare Moun**	6.42	25	P	P	13 03 17.2	-2.7
TRF				S	S	13 04 25.7	-6.6
RAGM	**Ragged Mountai**	6.55	62	P	P	13 03 19.2	-2.6
MCK	**McKinley**	6.98	28	P	P	13 03 23.7	-4.0
PAX	**Paxson**	7.48	41	P	P	13 03 30.3	-4.2
COLA	**College**	8.19	26	P	P	13 03 38.8	-5.3
IL1	**Eielson Array**	8.35	29	P	P	13 03 40.5	-5.7
BESE	**Bessie Mountai**	11.36	77	P	P	13 04 25.3	-0.9

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*IDC **02** 13:28:17.5±5.5,5.79S×147.34E,h80^{km}±51^{km},mb3.8/3, mb1 4.2/5,mb1mx3.7/15,mbtmp4.3/5,ML4.0/2,MS3.1/2, Ms1 3.1/2,ms1mx2.9/17,Error ellipse: s-maj=61.0km s-min=30.7km az=120.0*

ISC 02 13:28:15.2±4.3**,5.7S**±0.2×**147.2E**±0.3**,h71**^{km}±39^{km}**,n7,** σ**0**^{s}**68**/7**,mb3.9**/3**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	3.66	180	P	P	13 29 10.5	-0.2
	24nm,0.3s,baz=9.5,slow=6.1,SNR=127						
PMG				S	S	13 29 53.2	+0.3
	38nm,0.3s,baz=177,slow=17,SNR=12						
HNR	**Honiara**	13.19	107	LR	LR	13 35 39.2	
	comp=Z,40nm,19.4s,baz=270,slow=34						
WB2	**Warramunga Arr**	18.84	220	*e*P	P	13 32 31.9	-0.2
WRA	**Warramunga Arr**	18.85	220	P	P	13 32 32.0	-0.2
	1.2nm,0.3s,baz=41,slow=12,SNR=72						
ASAR	**Alice Springs**	21.94	214	P	P	13 33 05.1	+0.9
	5.1nm,0.4s,mb4.2,baz=51,slow=9.2,SNR=83						
ASAR				LR	LR	13 42 14.7	
	comp=Z,77nm,19.0s,baz=262,slow=38						
STKA	**Stephens Creek**	26.53	191	P	P	13 33 47.5	-0.8
	1.9nm,0.6s,mb3.8,baz=354,slow=8.3,SNR=8.8						
ILAR	**Eielson Array**	85.17	23	P	P	13 40 44.8	+0.2
	1.2nm,0.8s,mb3.9,baz=255,slow=5.0,SNR=12						

SKHL 02 13:39:00.7±0.1**,52.77N**×**142.62E,h10**^{km}**,mb3.9**/2**, Sakhalin Island**

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*NEIC **02** 13:42:31.6,15.62N×94.19W,h20^{km},MD4.0(MEX),After MEX.*

MEX 02 13:42:31.6±0.9**,15.62N**×**94.19W,h20**^{km}±43^{km}**,MD4.0, 1C-1D,Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	1.61	336	⇑*i*P	Pn	13 42 56.0	-3.3
CMIG				*i* S	Sn	13 43 14.8	-4.8
HUIG	**Huatulco**	1.85	275	⇓*i*P	Pn	13 42 59.6	-3.2
HUIG				*i* S	Sn	13 43 20.2	-5.6
SCX	**San Cristobal**	1.86	53	*i* P	Pn	13 43 00.0	-2.9
SCX				*i* S	Sn	13 43 22.0	-4.1
CCIG	**Comitan**	2.08	71	*i* P	Pn	13 43 02.8	-3.2
CCIG				*i* S	Sn	13 43 26.0	-5.6
OXX	**Oaxaca**	2.83	301	*e*P	Pn	13 43 15.0	-1.8
OXX				*i* S	Sn	13 43 45.0	-5.7
VHO	**Vista Hermosa**	2.84	301	*i* P	Pn	13 43 14.7	-2.1
VHO				*i* S	Sn	13 43 46.4	-4.4
EVV	**El Vigia**	3.03	339	*i* P	Pn	13 43 12.0	-7.6
EVV				*i* S	Sn	13 43 51.0	-4.7
PPM	**Popocatepetl**	5.45	310	*e*P	Pn	13 43 55.0	+1.1
PPM				*i* S	Sn	13 44 51.3	-5.5
PPM	**Popocatepetl**	5.45	310	*e*P	Pn	13 43 48.6	-5.2
PPM				*e*P		13 43 55.0	
PPM				*i* S	Sn	13 44 51.3	-5.5
ACX	**Acapulco**	5.64	283	*e*P	Pn	13 43 51.0	-5.5

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*NEIC **02** 14:03:32.2±1.0,24.18S×67.42W,h202^{km}±12^{km},mb3.6/3, Error ellipse: s-maj=24.8km s-min=14.0km az=68.0*

*IDC **02** 14:03:32.5±1.2,24.19S×67.47W,h200^{km}±14^{km},mb2.7/1, mb1 3.2/4,mb1mx3.0/18,mbtmp3.5/4,MS2.8/1,Ms1 2.9/1, ms1mx2.2/6,Error ellipse: s-maj=29.7km s-min=20.4km az=63.0*

ISC 02 14:03:31.0±0.9**,24.27S**±0.08×**67.5W**±0.2**,h202**^{km}**,n12,** σ**1**^{s}**23**/13**,mb2.9**/1**,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	2.12	321	P	P	14 04 12.7	+1.5
	29nm,0.3s,baz=142,slow=5.4,SNR=307						
LVC				S	S	14 04 42.9	+0.7
	8.6nm,0.3s,baz=142,slow=4.4,SNR=4.5						
LVC	**Limon Verde**	2.12	321	*e*Pn	P	14 04 12.4	+1.3
LVC				*e*Sn	S	14 04 37.8	-4.4
LPAZ	**La Paz**	7.97	355	P	P	14 05 24.4	-0.2
	0.4nm,0.3s,baz=125,slow=7.7,SNR=13						
LPAZ				S	S	14 06 53.0	-0.4
	0.1nm,0.3s,baz=248,slow=19,SNR=3.9						
LPAZ				LR	LR	14 08 21.7	
	comp=Z,69nm,21.9s,baz=87,slow=37						
LPAZ	**La Paz**	7.97	355	*e*Pn	P	14 05 24.5	-0.1
LPAZ				S	S	14 06 53.0	-0.4
CPUP	**Villa Florida**	9.40	105	P	P	14 05 45.5	+2.2
	0.4nm,0.3s,baz=292,slow=16,SNR=5.1						
CPUP	**Villa Florida**	9.40	105	*e*P	P	14 05 44.8	+1.5
	2.0nm,0.6s						
TRQA	**Tornquist**	14.52	162	*e*P	P	14 06 47.6	-0.6
	4.5nm,0.8s						
SAML	**Samuel**	15.78	16	*e*P	P	14 07 00.7	-3.2
	1.3nm,0.9s						
SNAA	**Sanae**	59.24	161	P	P	14 13 11.8	-1.0
	0.2nm,0.7s,mb2.9,baz=270,slow=11,SNR=3.7						
ASAR	**Alice Springs**	128.03	205	PKP	PKPdf	14 22 15.7	+2.1
	0.4nm,0.6s,baz=182,slow=1.3,SNR=4.8						
WRA	**Warramunga Arr**	131.19	208	PKP	PKPdf	14 22 22.2	+2.6
	0.2nm,0.6s,baz=152,slow=1.6,SNR=5.7						
MKAR	**Makanchi Array**	147.01	39	PKPbc	PKPdf	14 22 51.2	+4.1
	0.8nm,0.6s,baz=304,slow=3.4,SNR=9.6						

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*NEIC **02** 14:06:29.0,36.48S×73.21W,h37^{km},MD3.8(GUC),After GUC.*

GUC 02 14:06:29.0±0.9**,36.48S**×**73.21W,h37**^{km}±14^{km}**,MD3.8, ML3.6,3C-1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCHI	**Chillan**	0.92	98	⇑*i*P	P	14 06 45.4	-0.1
CCHI				*i* S	S	14 06 58.3	+0.6
LNCH	**Linares**	1.45	65	⇓*i*P	P	14 06 54.4	+1.3
LNCH				*i* S	S	14 07 13.0	+1.9
LNCH				AMP		14 07 20.2	
	comp=N,1µm,0.6s						
TALC	**Talca**	1.67	50	⇑*i*P	P	14 06 57.5	+1.1
TALC				*i* S	S	14 07 17.9	+1.2
TALC				AMP		14 07 25.7	
	comp=E,2µm,0.4s						
SFDO	**San Fernando**	2.58	45	*i* P	P	14 07 09.7	+0.4
LNV	**Longovilo**	2.92	31	⇑*i*P	P	14 07 13.8	-0.3
CHCH	**Chadas Angostu**	3.29	40	*e*P	P	14 07 19.4	0.0
RCDM	**Rinconada Maip**	3.58	34	*i* S	S	14 08 04.0	-1.1
LMEL	**Las Melosas**	3.60	44	*e*P	P	14 07 24.2	+0.4
LMEL				AMP		14 08 26.1	
	comp=N,71nm,0.3s						
FCH	**Farellones**	3.95	38	*e*P	P	14 07 28.4	-0.4
FCH				*i* S	S	14 08 14.6	-0.1

NEIC 02 14:18:05.9,35.67N×121.09W,h5^{km},ML3.5(NCEDC)**, After NCEDC.,Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LRV	**Little Rabbit**	0.76	4	*e*P	Pg	14 18 20.2	-0.8
SAO	**San Andreas Ge**	1.13	345	*e*P	Pb	14 18 26.4	-1.1
SAC	**San Andreas**	2.19	331	Pn	Pn	14 18 40.9	-2.5
CMB	**Columbia Colle**	2.43	13	*e*Pn	Pn	14 18 44.9	-2.0
OMM	**Old Mammoth Mi**	2.58	40	*e*Pn	Pn	14 18 48.0	-1.0
MTUM	**Tungsten Hills**	2.64	50	*e*Pn	Pn	14 18 49.4	-0.5
MWC	**Mount Wilson**	2.88	119	*e*Pn	Pn	14 18 50.5	-2.7
DAC	**Darwin (Calif)**	2.90	77	*e*Pn	Pn	14 18 51.1	-2.4
MNV	**Mina**	3.62	40	Pn	Pn	14 19 00.7	-3.1
WCN	**Washoe City**	3.78	16	Pn	Pn	14 19 04.0	-2.0
TPH	**Tonopah**	3.92	51	Pn	Pn	14 19 07.0	-1.0
PFO	**Pinyon Flat Ob**	4.34	117	*e*Pn	Pn	14 19 09.2	-4.8
LDFC	**Landfair**	4.92	95	Pn	Pn	14 19 20.5	-1.8

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*MDD **02** 14:35:42.2±1.4,35.73N×6.37W,h112^{km}±10^{km},mb1.6/7, Error ellipse: s-maj=15.4km s-min=8.7km az=24.0, PRXIMO*

*SFS **02** 14:35:42.0,35.30N×6.30W*

*INMG **02** 14:35:44.7±1.0,35.91N×6.37W,h10^{km},ML2.1,Error ellipse: s-maj=6.4km s-min=3.9km az=20.0*

*CSEM **02** 14:35:47.1±0.3,36.02N×6.27W,h40^{km},mb3.8/2,Error ellipse: s-maj=6.3km s-min=3.6km az=8.0*

ISC 02 14:35:43.5±1.0**,35.94N**±0.06×**6.34W**±0.05**,h112**^{km}±6^{km}**, n44,**σ**1**^{s}**00**/71**,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNIL	**Conil**	0.48	29	Pn	P	14 35 57.0	-3.5
CNIL				Sn	S	14 36 14.1	+0.7
CNIL	**Conil**	0.48	29	*e*P	P	14 35 57.0	-3.5
CNIL				*e*S	S	14 36 14.1	+0.7
SFS	**San Fernando**	0.53	12	Pn	P	14 36 01.9	+1.0
SFS				Sn	S	14 36 16.2	+2.2
SFS	**San Fernando**	0.53	12	*e*P	P	14 36 01.9	+1.0
SFS				*e*S	S	14 36 16.2	+2.2
MOMI	**Momias**	0.63	52	Pn	P	14 35 59.9	-1.7
MOMI	**Momias**	0.63	52	*e*P	P	14 35 59.9	-1.7
SCRT	**Cerro San Cris**	0.70	11	Pn	P	14 36 01.6	-0.5
SCRT	**Cerro San Cris**	0.70	11	*e*P	P	14 36 01.6	-0.5
GIBL	**Gibalbin**	0.94	19	Pn	P	14 36 03.7	-0.7
GIBL	**Gibalbin**	0.94	19	*e*P	P	14 36 03.7	-0.7
ESPR	**Espera**	1.00	23	Pn	P	14 36 03.6	-1.5
	2.5nm,0.2s,SNR=7.9						
ESPR				Sn	S	14 36 22.8	+1.5
	22nm,0.3s,SNR=4.0						
ESPR	**Espera**	1.00	23	P	P	14 36 03.6	-1.5
	2.5nm,0.2s,SNR=7.9						
REAL	**Reales**	1.06	59	Pn	P	14 36 05.7	0.0
REAL	**Reales**	1.06	59	*e*P	P	14 36 05.7	-0.1
LIJA	**Lijar**	1.22	38	Pn	P	14 36 07.3	-0.3
LIJA	**Lijar**	1.22	38	*e*P	P	14 36 07.3	-0.3
EMIJ	**Mijas**	1.41	64	Pn	P	14 36 09.0	-0.8
	4.2nm,0.3s,SNR=4.0						
EMIJ				Sn	S	14 36 29.2	-0.4
	5.3nm,0.3s,SNR=4.0						
EMIJ	**Mijas**	1.41	64	P	P	14 36 09.0	-0.8
	4.2nm,0.3s,SNR=4.0						
EMIJ				S	S	14 36 27.9	-1.7
	5.3nm,0.3s,SNR=4.0						
PALC	**Alcoutim**	1.77	329	*e*Pn	P	14 36 14.1	0.0
PALC				*e*Sn	S	14 36 35.9	-1.2
EGRO	**El Granado**	1.83	330	Pn	P	14 36 13.5	-1.4
	5.1nm,0.3s,SNR=7.9						
EGRO				Sn	S	14 36 38.2	-0.2
	8.7nm,0.2s,SNR=4.9						
EGRO	**El Granado**	1.83	330	P	P	14 36 13.5	-1.4
	5.1nm,0.3s,SNR=7.9						
EGRO				S	S	14 36 38.2	-0.2
	8.7nm,0.2s,SNR=4.9						
EMIN	**Mina Concepcio**	1.84	352	Pn	P	14 36 14.5	-0.5
	1.8nm,0.2s,SNR=19						
EMIN				Sn	S	14 36 38.7	+0.1
	2.0nm,0.2s,SNR=21						
EMIN	**Mina Concepcio**	1.84	352	P	P	14 36 14.5	-0.5
	1.8nm,0.2s,SNR=19						
EMIN				S	S	14 36 37.3	-1.3
	2.0nm,0.2s,SNR=21						
ECAB	**El Cabril**	2.25	19	Pn	P	14 36 20.6	+0.2
	1.9nm,0.5s,SNR=7.9						
ECAB				Sn	S	14 36 47.9	-0.2
	3.6nm,0.4s,SNR=7.9						
ECAB	**El Cabril**	2.25	19	P	P	14 36 20.6	+0.2
	1.9nm,0.5s,SNR=7.9						
ECAB				S	S	14 36 47.9	-0.2
	3.6nm,0.4s,SNR=7.9						
PBEJ	**Beja**	2.41	330	*e*Sn	S	14 36 51.6	-0.3
	4.3nm,0.1s						
PBEJ	**Beja**	2.41	330	*e*Sn	S	14 36 51.6	-0.3
	4.3nm,0.1s						
PTEO	**Sao Teotonio**	2.49	311	*e*Pn	P	14 36 23.8	+0.2
PTEO				*e*Sn	S	14 36 55.0	+1.2
	8.7nm,0.5s						
PTEO	**Sao Teotonio**	2.49	311	*e*Pn	P	14 36 23.8	+0.2
PTEO				*e*Sn	S	14 36 55.0	+1.2
	8.7nm,0.5s						
EADA	**Adamuz**	2.63	32	Pn	P	14 36 24.7	-0.8
	0.8nm,0.1s,SNR=4.8						
EADA				Sn	S	14 36 57.9	+0.7
	1.6nm,0.2s						
EADA	**Adamuz**	2.63	32	P	P	14 36 24.7	-0.8
	0.8nm,0.1s,SNR=4.8						
EADA				S	S	14 36 57.0	-0.1
	1.6nm,0.2s						
EBAD	**Badajoz**	2.86	349	Pn	P	14 36 28.5	-0.1
	1.5nm,0.2s,SNR=4.7						
EBAD				Sn	S	14 37 02.2	-0.3
	2.9nm,0.2s						
EBAD	**Badajoz**	2.86	349	P	P	14 36 28.5	0.0
	1.5nm,0.2s,SNR=4.7						
EBAD				S	S	14 37 03.0	+0.4
	2.9nm,0.2s						
MOE	**Montemor**	3.03	329	*e*Sn	S	14 37 07.5	+0.7
EQES	**Quesada**	3.21	54	Pn	P	14 36 35.0	+1.7
	0.6nm,0.2s,SNR=7.9						
EQES				Sn	S	14 37 12.8	+1.7
	2.5nm,0.4s,SNR=7.9						
EQES	**Quesada**	3.21	54	P	P	14 36 35.0	+1.7
	0.6nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	3.99	347	*e*Pn	P	14 36 44.4	+0.5
PCBR				*e*Sn	S	14 37 28.8	-1.2
	3.6nm,0.3s						
PCBR	**Castelo Branco**	3.99	347	*e*Pn	P	14 36 44.4	+0.5
PCBR				*e*Sn	S	14 37 28.8	-1.2
	3.6nm,0.3s						
PTOM	**Tomar**	4.02	337	*e*Pn	P	14 36 45.5	+1.3
MTE	**Manteigas**	4.55	348	*e*Pn	P	14 36 52.8	+1.4
ETOB	**Tobarra**	4.68	53	Pn	P	14 36 53.8	+0.6
	1.1nm,0.1s,SNR=7.5						
ETOB				Sn	S	14 37 45.2	-1.5
	2.1nm,0.2s						
ETOB	**Tobarra**	4.68	53	P	P	14 36 53.8	+0.6
	1.1nm,0.1s,SNR=7.5						
ETOB				S	S	14 37 46.3	-0.4
	2.1nm,0.2s						
ELOB	**Lobios**	6.07	348	Pn	P	14 37 12.5	+0.6
	0.5nm,0.1s,SNR=4.0						
ELOB				Sn	S	14 38 19.8	-0.8
	1.1nm,0.2s,SNR=4.0						
ELOB	**Lobios**	6.07	348	P	P	14 37 12.5	+0.5
	0.5nm,0.1s,SNR=4.0						
ELOB				S	S	14 38 19.8	-0.8
	1.1nm,0.2s,SNR=4.0						

IDC 02 14:38:13.3±2.7**,2.03N**×**96.91E,h25**^{km}±6^{km}**,mb3.6**/4**, mb1 3.8**/5**,mb1mx3.5**/20**,mbtmp3.7**/5**,ML3.7**/1**,Error ellipse: s-maj=118.7km s-min=17.9km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	16.44	7	Pn	P	14 42 03.7	-0.6
	0.1nm,0.3s,baz=199,slow=11,SNR=15						
WRA	**Warramunga Arr**	42.73	123	P	P	14 46 09.3	-1.4
	0.7nm,0.6s,baz=301,slow=9.2,SNR=6.5						
WRA				pP	pP	14 46 16.1	-1.9
	0.4nm,0.3s,baz=305,slow=8.8,SNR=3.3						
ASAR	**Alice Springs**	44.13	128	P	P	14 46 19.3	-2.7
	0.4nm,0.7s,baz=300,slow=8.0,SNR=5.0						
ASAR				pP	pP	14 46 27.9	-1.4
	0.3nm,0.6s,baz=297,slow=7.3,SNR=2.8						
MKAR	**Makanchi Array**	46.37	346	P	P	14 46 37.2	-2.2
	0.7nm,0.4s,baz=166,slow=9.2,SNR=12						
MKAR				pP	pP	14 46 44.9	-2.0
	0.9nm,0.7s,baz=153,slow=8.1,SNR=4.5						
ZAL	**Zalesovo**	52.69	351	P	P	14 47 25.6	-2.3
	1.5nm,0.6s,baz=303,slow=5.9,SNR=6.7						

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*NEIC **02** 14:44:58.6±0.6,24.16S×66.99W,h181^{km}±7^{km},mb4.1/4, Error ellipse: s-maj=9.7km s-min=8.6km az=119.0*

*IDC **02** 14:44:58.3±1.3,24.15S×67.01W,h175^{km}±13^{km},mb3.3/2, mb1 3.4/7,mb1mx3.3/19,mbtmp3.7/7,Error ellipse: s-maj=20.6km s-min=17.3km az=19.0*

*GUC **02** 14:44:59.5±0.3,24.29S×67.39W,h185^{km}±22^{km},ML4.2*

ISC 02 14:44:56.9±0.7**,24.24S**±0.06×**67.12W**±0.08**, h180**^{km}±12^{km}**,n22,**σ**1**^{s}**41**/26**,mb3.7**/2**,3C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	2.31	314	⇑*i*P	P	14 45 40.1	+2.2
LVC				*i* S	S	14 46 10.8	+1.4
LVC				AMP		14 46 13.3	
	comp=E,360nm,0.4s						
LVC	**Limon Verde**	2.31	314	P	P	14 45 40.1	+2.2
	comp=E,32nm,0.3s,baz=148,slow=5.1,SNR=186						
LVC				S	S	14 46 10.6	+1.2
	comp=E,29nm,0.3s,baz=68,slow=24,SNR=39						
LVC	**Limon Verde**	2.31	314	*e*Pn	P	14 45 39.7	+1.8
LVC				*e*Sn	S	14 46 06.4	-3.0
CPN1	**Cerro Paranal**	3.02	262	⇑*i*P	P	14 45 47.1	+0.8
CPN1				*i* S	S	14 46 23.1	-1.4
CPN1				AMP		14 46 25.1	
	comp=E,538nm,0.4s						
ANCH	**Antofagasta**	3.06	280	⇑*i*P	P	14 45 48.0	+1.1
ANCH				*i* S	S	14 46 24.2	-1.2
ANCH				AMP		14 46 27.3	
	comp=N,809nm,0.1s						
CRCH	**Chaqaral**	3.80	236	P	P	14 46 00.0	+3.8
CRCH				*i* S	S	14 46 39.4	-2.6
LPAZ	**La Paz**	7.97	353	P	P	14 46 52.2	+1.6
	comp=N,0.5nm,0.3s,baz=156,slow=9.2,SNR=13						
LPAZ				S	S	14 48 18.3	-1.0
	comp=N,0.1nm,0.3s,baz=148,slow=19,SNR=3.0						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.97**	**353**	ePn	**P**	**14 46 52.4**	**+1.8**
LPAZ				S	**S**	**14 48 18.3**	**-1.0**
CPUP	**Villa Florida**	**9.10**	**105**	P	**P**	**14 47 04.5**	**-1.0**
	comp=N,0.1nm,0.3s,baz=293,slow=17,SNR=3.3						
SIV	**San Ignacio**	**9.97**	**36**	P	**P**	**14 47 15.9**	**-1.0**
	comp=N,0.4nm,0.3s,baz=222,slow=14,SNR=9.8						
TRQA	**Tornquist**	**14.46**	**164**	eP	**P**	**14 48 16.0**	**+1.8**
	comp=N,10nm,1.3s						
SAML	**Samuel**	**15.66**	**15**	P	**P**	**14 48 28.4**	**-0.9**
	comp=N,6.9nm,1.6s						
PLCA	**Paso Flores**	**16.70**	**189**	P	**P**	**14 48 38.0**	**-3.8**
	comp=N,16nm,1.5s						
BDFB	**Brasilia**	**19.87**	**68**	P	**P**	**14 49 15.7**	**-0.4**
	comp=N,0.6nm,0.3s,baz=274,slow=8.8,SNR=5.2						
SNAA	**Sanae**	**59.16**	**161**	P	**P**	**14 54 40.6**	**0.0**
	comp=N,0.2nm,0.5s,mb3.2,baz=212,slow=14,SNR=4.3						
SNAA	**Sanae**	**59.16**	**161**	P	**P**	**14 54 37.6**	**-2.9**
	comp=N,6.5nm,1.4s,mb4.3						
YKA	**Yellowknife Ar**	**94.31**	**340**	P	**P**	**14 57 57.2**	**+0.9**
	comp=N,0.4nm,0.6s,mb3.7,baz=132,slow=4.3,SNR=3.6						
YKA	**Yellowknife Ar**	**94.31**	**340**	P	**P**	**14 57 57.2**	**+0.9**
ASAR	**Alice Springs**	**128.20**	**205**	PKP	PKPdf	15 03 44.2	+1.8
	comp=N,0.5nm,0.7s,baz=108,slow=1.3,SNR=7.0						
WRA	**Warramunga Arr**	**131.37**	**207**	PKP	PKPdf	15 03 50.4	+1.9
	comp=N,0.4nm,0.8s,baz=160,slow=1.9,SNR=5.1						
ZAL	**Zalesovo**	**143.65**	**28**	PKP	PKPdf	15 04 10.7	+0.9
	comp=N,0.9nm,0.4s,baz=47,slow=17,SNR=3.5						
MKAR	**Makanchi Array**	**146.78**	**40**	PKPbc	PKPbc	15 04 18.7	+1.7
	comp=N,0.9nm,0.5s,baz=313,slow=3.1,SNR=10.0						

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*CSEM **02** 15:07:29.1±0.1, 59.03N×18.26E, h2^{km}, ML2.9, Error ellipse: s-maj=2.4km s-min=1.7km az=148.0, Mining explosion.*

*UPP **02** 15:07:29.6, 59.00N×18.20E, h0^{km}, ML2.9, Mining explosion.*

*HEL **02** 15:07:30.2±0.1, 59.00N×18.22E, ML2.2, ML2.9(UPP), ML2.2(NAO), Explosion*

*NAO **02** 15:07:32.7±2.2, 59.25N×18.12E, ML2.2*

*BER **02** 15:07:32.8±2.9, 59.12N×18.11E, ML2.2(NAO), Suspected explosion*

*IDC **02** 15:07:32.4±1.9, 59.13N×18.19E, mb1 3.1/4, mb1mx3.0/23, mbtmp3.0/4, ML2.8/4, Error ellipse: s-maj=25.5km s-min=7.7km az=175.0*

ISC 02 15:07:28.6±0.4**, 59.01N**±0.03×**18.35E**±0.05**, n55, σ1^{s}09**/80**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NYNU	**Nynaeshamn**	**0.18**	**268**	i P	**Pg**	**15 07 31.7**	**-0.4**
NRTU	**Norrtaelje**	**0.68**	**12**	i P	**Pg**	**15 07 43.1**	**+0.9**
UPP	**Uppsala**	**0.93**	**337**	eP	**Pg**	**15 07 46.7**	**-0.3**
VIKU	**Vikbolandet**	**1.00**	**240**	eP	**Pb**	**15 07 46.8**	**-1.6**
ESKU	**Eskilstuna**	**1.03**	**283**	eP	**Pb**	**15 07 47.3**	**-1.7**
BACU	**Backbrunna**	**1.06**	**324**	eP	**Pb**	**15 07 48.7**	**-0.8**
FLYU	**Flymyra**	**1.15**	**348**	eP	**Pb**	**15 07 51.0**	**+0.1**
GOTU	**Gotland**	**1.33**	**175**	eP	**Pb**	**15 07 53.7**	**-0.5**
OSTU	**Oestervaala**	**1.37**	**334**	eP	**Pb**	**15 07 54.6**	**-0.1**
FORU	**Forsmark**	**1.38**	**356**	eP	**Pb**	**15 07 55.5**	**+0.5**
FORU	**Forsmark**	**1.38**	**356**	P	**Pb**	**15 07 55.4**	**+0.4**
AAL	**Aland**	**1.44**	**35**	eP	**Pn**	**15 07 57.1**	**+1.2**
VSTU	**Vaestervik**	**1.66**	**216**	eP	**Pn**	**15 07 59.0**	**-0.1**
LNKU	**Linkoeping**	**1.69**	**243**	eP	**Pn**	**15 07 59.0**	**-0.5**
NRAU	**Nora**	**1.79**	**290**	eP	**Pn**	**15 08 01.0**	**+0.1**
ASKU	**Askersund**	**1.83**	**268**	eP	**Pn**	**15 08 01.3**	**-0.2**
ASPU	**Aespoe**	**1.85**	**211**	eP	**Pn**	**15 08 02.3**	**+0.5**
IGGU	**Iggoen**	**1.94**	**345**	eP	**Pn**	**15 08 03.9**	**+0.8**
IGGU				eS	**Sn**	**15 08 30.0**	**+1.5**
IGGU	**Iggoen**	**1.94**	**345**	P	**Pn**	**15 08 03.8**	**+0.7**
IGGU				S	**Sn**	**15 08 30.0**	**+1.5**
FALU	**Falun**	**1.96**	**320**	eP	**Pn**	**15 08 04.0**	**+0.6**
FALU	**Falun**	**1.96**	**320**	P	**Pn**	**15 08 03.9**	**+0.5**
EKSU	**Eksjoe**	**2.16**	**229**	eP	**Pn**	**15 08 07.2**	**+0.9**
EKSU	**Eksjoe**	**2.16**	**229**	P	**Pn**	**15 08 07.1**	**+0.8**
OSKU	**Oskarshamn**	**2.18**	**214**	eP	**Pn**	**15 08 07.8**	**+1.3**
OSKU	**Oskarshamn**	**2.18**	**214**	P	**Pn**	**15 08 07.7**	**+1.2**
HFS	**Hagfors**	**2.62**	**297**	eP	**Pn**	**15 08 13.7**	**+0.8**
HFS				eSB	**Sb**	**15 08 47.7**	**-1.4**
HFS	**Hagfors**	**2.62**	**297**	Pn	**Pn**	**15 08 13.5**	**+0.6**
	0.3nm,0.3s,baz=113,slow=17,SNR=38						
HFS				Sn	**Sn**	**15 08 46.3**	**+0.4**
	1.6nm,0.3s,baz=112,slow=26,SNR=38						
HFS	**Hagfors**	**2.62**	**297**	Pn	**Pn**	**15 08 13.7**	**+0.8**
	baz=119,slow=16						
HFS				Lg		15 08 47.7	
	baz=118,slow=28						
HFS	**Hagfors**	**2.62**	**297**	P	**Pn**	**15 08 13.6**	**+0.7**
HFS				Sb	**Sb**	**15 08 47.6**	**-1.5**
ARNU	**Arnoeviken**	**2.73**	**350**	eP	**Pn**	**15 08 14.6**	**+0.2**
HASU	**Hassela**	**3.27**	**346**	eP	**Pn**	**15 08 22.0**	**-0.1**
PVF	**Pernaja**	**4.10**	**65**	eP	**Pn**	**15 08 35.1**	**+1.3**
PVF				eS	**Sn**	**15 09 22.1**	**-1.1**
PVF				MSG		15 09 41.7	
	comp=Z,5.8nm,0.2s						
PVF	**Pernaja**	**4.10**	**65**	P	**Pn**	**15 08 35.0**	**+1.2**
PVF				S	**Sn**	**15 09 22.1**	**-1.1**
	comp=Z,5.8nm,0.2s						
NB2	**NORSAR Subarra**	**4.12**	**303**	eP	**Pn**	**15 08 33.4**	**-0.8**
NB2				ePG	**Pg**	**15 08 42.2**	**-8.6**
NB2				eSG	**Sg**	**15 09 35.7**	**-10**
NB2	**NORSAR Subarra**	**4.12**	**303**	Pn	**Pn**	**15 08 33.4**	**-0.8**
	baz=123,slow=14						
NB2				Pg	**Pg**	**15 08 42.2**	**-8.6**
NB2				Lg		15 09 35.7	
	baz=122,slow=28						
NB2	**NORSAR Subarra**	**4.12**	**303**	P	**Pn**	**15 08 33.3**	**-0.8**
NB2	**NORSAR Subarra**	**4.12**	**303**	Pg	**Pg**	**15 08 42.2**	**-8.6**
NB2				Sg	**Sg**	**15 09 35.7**	**-10**
NOA	**NORSAR Array B**	**4.12**	**303**	Pn	**Pn**	**15 08 32.8**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=112,slow=12,SNR=2.4						
NOA				Lg		15 09 36.1	
	comp=Z,1.5nm,0.3s,baz=118,slow=25,SNR=7.4						
KEF	**Keuruu**	**4.51**	**43**	eP	**Pn**	**15 08 40.1**	**+0.4**
KEF				eS	**Sn**	**15 09 32.4**	**-1.4**
KEF				MSG		15 09 55.1	
	comp=Z,3.3nm,0.2s						
KEF	**Keuruu**	**4.51**	**43**	P	**Pn**	**15 08 40.1**	**+0.4**
KEF				S	**Sn**	**15 09 32.3**	**-1.4**
	comp=Z,3.3nm,0.2s						
VAF	**Ylistaro**	**4.56**	**26**	eP	**Pn**	**15 08 42.4**	**+2.0**
VAF				MSG		15 09 58.3	
	comp=Z,4.5nm,0.2s						
VAF	**Ylistaro**	**4.56**	**26**	P	**Pn**	**15 08 42.3**	**+1.9**
	comp=Z,4.5nm,0.2s						
FIA0	**FINESS Array S**	**4.56**	**54**	Pn	**Pn**	**15 08 42.0**	**+1.6**
	baz=244,slow=12						
FIA0				Pg	**Pg**	**15 08 52.7**	**-6.9**
	baz=245,slow=16						
FIA0				Sn	**Sn**	**15 09 35.4**	**+0.5**
	baz=250,slow=22						
FIA0				Lg		15 09 53.5	
	baz=243,slow=22						
FIA0	**FINESS Array S**	**4.56**	**54**	eP	**Pn**	**15 08 41.6**	**+1.2**
FIA0				eS	**Sn**	**15 09 33.6**	**-1.3**
FIA0				MSG		15 09 57.2	
	comp=Z,4.4nm,0.2s						
FIA0	**FINESS Array S**	**4.56**	**54**	Pn	**Pn**	**15 08 42.0**	**+1.6**
	SNR=8.5						
FIA0	**FINESS Array S**	**4.56**	**54**	Pg	**Pg**	**15 08 52.7**	**-6.9**
	SNR=4.0						
FIA0				S	**Sn**	**15 09 33.5**	**-1.4**
	comp=Z,4.4nm,0.2s						
FINES	**FINESS Array B**	**4.56**	**54**	Pn	**Pn**	**15 08 42.2**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=247,slow=13,SNR=28						
FINES				Sn	**Sn**	**15 09 35.5**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=247,slow=22,SNR=11						
FINES				Lg		15 09 54.0	
	comp=Z,1.8nm,0.3s,baz=243,slow=28,SNR=12						
VJF	**Virojoki**	**4.90**	**68**	eP	**Pn**	**15 08 45.9**	**+0.7**
VJF				eS	**Sn**	**15 09 41.2**	**-2.3**
VJF	**Virojoki**	**4.90**	**68**	P	**Pn**	**15 08 45.9**	**+0.7**
VJF				S	**Sn**	**15 09 41.1**	**-2.4**
KAF	**Kangasniemi**	**5.01**	**48**	eP	**Pn**	**15 08 47.6**	**+0.8**
KAF				eS	**Sn**	**15 09 43.2**	**-3.1**
KAF				MSG		15 10 10.9	
	comp=Z,1.8nm,0.2s						
KAF	**Kangasniemi**	**5.01**	**48**	P	**Pn**	**15 08 47.5**	**+0.7**
KAF				S	**Sn**	**15 09 43.1**	**-3.1**
	comp=Z,1.8nm,0.2s						
SUF	**Sumiainen**	**5.32**	**42**	eP	**Pn**	**15 08 52.1**	**+0.9**
SUF				eS	**Sn**	**15 09 51.1**	**-3.1**
SUF				MSG		15 10 23.5	
	comp=Z,1.5nm,0.2s						
ARCES	**ARCESS Array B**	**11.00**	**13**	Pn	**P**	**15 10 06.0**	**-4.1**
	comp=Z,0.2nm,0.3s,baz=197,slow=12,SNR=11						
ARA0	**ARCESS Array S**	**11.00**	**13**	Pn	**P**	**15 10 05.8**	**-4.3**
	baz=196,slow=14						
ARA0				Sn	**S**	**15 12 03.5**	**-12**
	baz=202,slow=28						
ARA0	**ARCESS Array S**	**11.00**	**13**	eP	**P**	**15 10 05.8**	**-4.3**
ARA0				eS	**S**	**15 12 03.5**	**-12**

IDC 02 15:11:42.6±47.0**, 17.66S**×**173.23W, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.8**/18**, mbtmp4.0**/3**, Error ellipse: s-maj=896.4km s-min=181.3km az=81.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.09**	**242**	P	P	15 19 44.8	-1.5
	0.3nm,0.3s,baz=112,slow=9.6,SNR=3.1						
WRA	**Warramunga Arr**	**49.53**	**259**	P	P	15 20 35.1	-2.3
	0.7nm,0.3s,baz=97,slow=7.2,SNR=20						
ASAR	**Alice Springs**	**49.60**	**254**	P	P	15 20 36.1	-1.7
	0.8nm,0.5s,baz=89,slow=8.1,SNR=34						

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*BJI **02** 15:14:01.5, 18.21S×177.74W, h520^{km}, mB4.6, mb4.4*

*MOS **02** 15:14:08.2±0.8, 17.64S×178.45W, h552^{km}, mb4.3/12, Error ellipse: s-maj=19.2km s-min=10.3km az=153.4*

*NEIC **02** 15:14:09.1±0.7, 17.61S×178.43W, h552^{km}±8^{km}, mb4.3/24, Error ellipse: s-maj=10.0km s-min=4.4km az=152.0*

*IDC **02** 15:14:09.4±1.4, 17.62S×178.37W, h552^{km}±14^{km}, mb3.9/15, mb1 4.1/16, mb1mx4.0/19, mbtmp4.8/16, Error ellipse: s-maj=20.9km s-min=10.7km az=158.0*

ISC 02 15:14:08.2±1.1**, 17.64S**±0.09×**178.44W**±0.07**, h550^{km}**±14^{km}**, n86, σ0^{s}84**/81**, mb4.3**/39**, 11D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.41**	**61**	ePn	**P**	**15 16 00.4**	**-0.5**
	231nm,0.9s						
DZM	**Mont Dzumac**	**14.88**	**250**	P	**P**	**15 17 18.1**	**+1.9**
	1.4nm,0.3s,baz=84,slow=19,SNR=12						
PPT	**Papeete**	**27.51**	**94**	P	**P**	**15 19 11.6**	**-1.0**
	19nm,0.6s,mb4.9,baz=210,slow=4.9,SNR=4.8						
ARMA	**Armidale**	**30.05**	**239**	⇓iP	**P**	**15 19 35.3**	**+0.9**
CTA	**Charters Tower**	**33.46**	**260**	eP	**P**	**15 20 03.6**	**+0.2**
CTA	**Charters Tower**	**33.46**	**260**	P	**P**	**15 20 03.8**	**+0.4**
	18nm,0.6s,mb4.8,baz=98,slow=11,SNR=20						
CTAO	**Charters Tower**	**33.46**	**260**	eP	**P**	**15 20 03.4**	**0.0**
CTAO				pmax	pmax		
	comp=Z,33nm,0.8s,mb4.9						
CTAO	**Charters Tower**	**33.46**	**260**	eP	**P**	**15 20 03.4**	**0.0**
	comp=Z,33nm,0.8s,mb4.9						
CNB	**Canberra Magne**	**33.56**	**232**	⇓iP	**P**	**15 20 05.0**	**+0.9**
PMG	**Port Moresby**	**34.38**	**279**	eP	**P**	**15 20 12.3**	**+1.2**
PMG				pmax	pmax		
	comp=Z,123nm,0.9s						
PMG	**Port Moresby**	**34.38**	**279**	P	**P**	**15 20 12.9**	**+1.8**
	comp=Z,100nm,0.8s,mb5.4,baz=85,slow=6.6,SNR=22						
PMG	**Port Moresby**	**34.38**	**279**	eP	**P**	**15 20 12.3**	**+1.2**
	comp=Z,123nm,0.9s,mb5.4						
TOO	**Toolangi**	**37.31**	**231**	⇓iP	**P**	**15 20 35.7**	**+0.6**
TAU	**Tasmania Unive**	**38.41**	**222**	P	**P**	**15 20 43.7**	**-0.3**
TAU				pmax	pmax		
	comp=Z,391nm,2.2s,mb5.5						
TAU	**Tasmania Unive**	**38.41**	**222**	P	**P**	**15 20 43.7**	**-0.2**
	comp=Z,391nm,2.2s,mb5.5						
STKA	**Stephens Creek**	**38.73**	**241**	⇓iP	**P**	**15 20 47.6**	**+1.0**
STKA	**Stephens Creek**	**38.73**	**241**	P	**P**	**15 20 47.6**	**+1.0**
	comp=Z,28nm,0.6s,mb5.0,baz=89,slow=9.2,SNR=117						
STKA				ScP		15 25 40.4	
	comp=Z,2.7nm,0.8s,baz=27,slow=6.8,SNR=4.2						
RKT	**Rikitea**	**41.00**	**105**	eLR	LR	15 33 03.9	
	comp=Z,315nm,34.5s						
WB2	**Warramunga Arr**	**44.64**	**259**	⇓iP	**P**	**15 21 32.9**	**-0.8**
WRAB	**Tennant Creek**	**44.64**	**259**	eP	**P**	**15 21 33.0**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,33nm,0.5s,mb5.1						
WRAB	**Tennant Creek**	**44.64**	**259**	eP	**P**	**15 21 33.0**	**-0.8**
	comp=Z,33nm,0.5s,mb5.1						
WRA	**Warramunga Arr**	**44.65**	**259**	P	**P**	**15 21 32.9**	**-0.9**
	comp=Z,26nm,0.5s,mb5.0,baz=93,slow=6.9,SNR=373						
WRA				ScP		15 26 04.0	
	comp=Z,2.0nm,0.7s,baz=91,slow=4.1,SNR=6.8						
ASAR	**Alice Springs**	**44.83**	**254**	P	**P**	**15 21 35.1**	**-0.1**
	comp=Z,215nm,0.6s,baz=88,slow=8.3,SNR=2664						
ASAR				ScP		15 26 04.6	
	comp=Z,1.1nm,0.5s,baz=107,slow=3.6,SNR=5.6						
ASPA	**Alice Springs**	**44.83**	**254**	⇓iP	**P**	**15 21 35.1**	**-0.1**
KAKA	**Kakadu**	**47.55**	**269**	⇓iP	**P**	**15 21 55.3**	**-0.8**
FORT	**Forrest**	**50.09**	**244**	⇓iP	**P**	**15 22 13.5**	**-1.3**
MBWA	**Marble Bar**	**58.11**	**256**	eP	**P**	**15 23 09.8**	**-1.6**
	comp=Z,50nm,1.3s,mb4.6						
KLBR	**Kellerberrin**	**58.92**	**243**	eP	**P**	**15 23 15.0**	**-1.7**
NWAO	**Narrogin (SRO)**	**59.31**	**242**	eP	**P**	**15 23 18.1**	**-1.1**
NWAO				pmax	pmax		
	comp=Z,33nm,1.2s						
NWAO	**Narrogin (SRO)**	**59.31**	**242**	P	**P**	**15 23 18.6**	**-0.6**
	comp=Z,7.0nm,0.5s,mb4.1,baz=64,slow=5.4,SNR=11						
NWAO	**Narrogin (SRO)**	**59.31**	**242**	eP	**P**	**15 23 18.1**	**-1.1**
	comp=Z,33nm,1.2s,mb4.4						
MJAR	**Matsushiro Arr**	**67.67**	**323**	P	**P**	**15 24 11.5**	**-1.0**
	comp=Z,4.3nm,0.6s,mb4.1,baz=159,slow=6.2,SNR=12						
MAJO	**Matsushiro**	**67.67**	**323**	eP	**P**	**15 24 10.9**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.2						
MAJO	**Matsushiro**	**67.67**	**323**	eP	**P**	**15 24 10.9**	**-1.5**
	comp=Z,3.8nm,0.5s,mb4.2						
KSM	**Kuching**	**72.62**	**277**	eP	**P**	**15 24 42.1**	**0.0**
CMB	**Columbia Colle**	**77.67**	**43**	eP	**P**	**15 25 09.2**	**-0.2**
CMB				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.0						
CMB	**Columbia Colle**	**77.67**	**43**	eP	**P**	**15 25 09.2**	**-0.2**
	comp=Z,8.0nm,0.9s,mb4.0						
MDJ	**Mudanjiang**	**77.95**	**325**	P	**P**	**15 25 11.8**	**+1.0**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
NVAR	**Mina Array Bea**	**79.25**	**44**	P	**P**	**15 25 18.1**	**+0.3**
	comp=Z,5.6nm,0.7s,mb4.0,baz=217,slow=6.9,SNR=29						
MNV	**Mina**	**79.36**	**44**	eP	**P**	**15 25 18.5**	**+0.1**
MNV				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.0						
MNV	**Mina**	**79.36**	**44**	eP	**P**	**15 25 18.5**	**+0.1**
	comp=Z,9.9nm,1.2s,mb4.0						
TPH	**Tonopah**	**79.79**	**45**	eP	**P**	**15 25 20.9**	**+0.3**
TPH				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.1						
TPH	**Tonopah**	**79.79**	**45**	eP	**P**	**15 25 20.9**	**+0.3**
	comp=Z,10.0nm,1.1s,mb4.1						
CN2	**Changchun**	**79.79**	**322**	eP	**P**	**15 25 22.0**	**+1.5**
MOD	**Modoc**	**79.90**	**40**	eP	**P**	**15 25 21.3**	**+0.1**
	comp=Z,4.7nm,0.6s,mb4.0						
WVOR	**Wild Horse Val**	**81.23**	**40**	eP	**P**	**15 25 28.0**	**+0.1**
WVOR				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.2						
WVOR	**Wild Horse Val**	**81.23**	**40**	eP	**P**	**15 25 28.0**	**0.0**
	comp=Z,11nm,1.0s,mb4.2						
TUC	**Tucson**	**81.56**	**52**	eP	**P**	**15 25 30.9**	**+1.0**
TUC				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb3.9						
TUC	**Tucson**	**81.56**	**52**	eP	**P**	**15 25 30.9**	**+1.0**
	comp=Z,7.4nm,1.3s,mb4.0						
ARUT	**Antelope Range**	**82.22**	**46**	eP	**P**	**15 25 33.1**	**+0.1**
ELK	**Elko**	**82.48**	**43**	eP	**P**	**15 25 34.4**	**+0.1**
ELK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ELK	**Elko**	**82.48**	**43**	eP	**P**	**15 25 34.4**	**+0.1**
	comp=Z,6.3nm,1.0s,mb4.0						
MSU	**Marysvale**	**83.44**	**46**	eP	**P**	**15 25 39.6**	**+0.5**
ENH	**Enshi**	**84.09**	**304**	eP	**P**	**15 25 43.0**	**+0.4**
	comp=Z,58nm,1.5s,mb4.9						
MAW	**Mawson**	**84.10**	**200**	P	**P**	**15 25 41.8**	**+0.1**
	comp=Z,3.2nm,0.7s,mb4.0,baz=97,slow=4.3,SNR=7.5						
HLID	**Hailey**	**84.45**	**41**	eP	**P**	**15 25 44.4**	**+0.4**
	comp=Z,4.0nm,0.9s,mb4.0						
NEW	**Newport**	**85.31**	**36**	P	**P**	**15 25 47.1**	**-1.0**
NEW				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NEW	**Newport**	**85.31**	**36**	P	**P**	**15 25 47.1**	**-1.0**
	comp=Z,4.9nm,0.8s,mb4.1						
HWUT	**Hardware Ranch**	**85.32**	**44**	P	**P**	**15 25 47.7**	**-0.6**
	comp=Z,1.6nm,0.5s,mb3.8						
ILAR	**Eielson Array**	**85.64**	**13**	P	**P**	**15 25 47.6**	**-1.6**
	comp=Z,0.8nm,0.4s,mb3.7,baz=224,slow=5.6,SNR=9.1						
PV01	**Paradox Valley**	**85.78**	**48**	P	**P**	**15 25 49.4**	**-1.2**
LTX	**Lajitas**	**85.88**	**58**	eP	**P**	**15 25 51.9**	**+0.6**
LTX				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.5						
LTX	**Lajitas**	**85.88**	**58**	eP	**P**	**15 25 51.9**	**+0.6**
	comp=Z,18nm,1.3s,mb4.5						
TXAR	**Lajitas Array**	**85.88**	**58**	P	**P**	**15 25 52.3**	**+1.0**
	comp=Z,5.7nm,0.7s,mb4.3,baz=219,slow=5.9,SNR=54						
ANMO	**Albuquerque**	**85.96**	**52**	eP	**P**	**15 25 51.8**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ANMO	**Albuquerque**	**85.96**	**52**	eP	**P**	**15 25 51.8**	**+0.3**
	comp=Z,6.1nm,1.2s,mb4.1						
MCMT	**McKenzie Canyo**	**86.06**	**41**	eP	**P**	**15 25 52.1**	**+0.4**
RRI2	**Red Ridge**	**86.31**	**42**	eP	**P**	**15 25 53.2**	**+0.3**
	comp=Z,11nm,0.8s,mb4.5						
IMW	**Indian Meadow**	**86.81**	**42**	eP	**P**	**15 25 55.7**	**+0.4**
	comp=Z,13nm,1.1s,mb4.5						
MOOW	**Moose Ponds**	**86.86**	**42**	eP	**P**	**15 25 55.6**	**0.0**
	comp=Z,2.4nm,0.9s,mb3.8						
QLMT	**Earthquake Lak**	**86.94**	**41**	eP	**P**	**15 25 57.1**	**+1.2**
PDAR	**Pinedale Array**	**87.18**	**43**	P	**P**	**15 25 56.8**	**-0.3**
	comp=Z,2.7nm,0.5s,mb4.1,baz=218,slow=3.1,SNR=26						
SDCO	**Great Sand Dun**	**87.81**	**49**	P	**P**	**15 26 00.3**	**+0.1**
	comp=Z,3.3nm,1.1s,mb4.0						
CMAR	**Chiang Mai Arr**	**88.76**	**290**	P	**P**	**15 26 06.0**	**+0.9**
	comp=Z,3.7nm,0.9s,mb4.2,baz=111,slow=2.9,SNR=17						
LZH	**Lanzhou**	**90.70**	**308**	⇓P	**P**	**15 26 14.5**	**+0.9**
LZH				AP	pP	15 28 14.5	-0.7
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.8						
SNAA	**Sanae**	**90.86**	**179**		**P**	**15 26 12.1**	**-1.4**
VNA3	**Neumayer Olymp**	**91.01**	**176**	⇓i	**P**	**15 26 14.8**	**+0.6**
RSSD	**Black Hills**	**91.40**	**44**	eP	**P**	**15 26 16.1**	**-0.5**
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
RSSD	**Black Hills**	**91.40**	**44**	eP	**P**	**15 26 16.1**	**-0.5**
	comp=Z,2.3nm,0.6s,mb4.3						
VNA2	**Neumayer--Watz**	**91.45**	**177**	⇓i	**P**	**15 26 17.3**	**+1.1**
PLCA	**Paso Flores**	**91.54**	**134**	P	**P**	**15 26 17.5**	**+0.1**
	comp=Z,4.5nm,1.0s,mb4.4,baz=184,slow=7.3,SNR=3.4						
YKA	**Yellowknife Ar**	**94.10**	**25**	P	**P**	**15 26 27.9**	**-0.7**
	comp=Z,0.5nm,0.5s,mb3.9,baz=246,slow=4.4,SNR=5.6						
KSH	**Kashi**	**112.89**	**306**	ePKP	PKPdf	15 31 41.7	-1.0
FINES	**FINESS Array B**	**132.92**	**344**	SKPbc		15 34 57.1	
	comp=Z,1.2nm,0.5s,baz=66,slow=2.9,SNR=9.2						
BRTR	**Keskin Array B**	**144.57**	**315**	PKP	PKPdf	15 32 43.1	+1.0
	comp=Z,3.7nm,0.8s,baz=138,slow=2.7,SNR=11						
GERES	**GERESS Array B**	**147.35**	**345**	PKPbc	PKPdf	15 32 50.2	+3.8
	comp=Z,1.0nm,0.6s,slow=1.3,SNR=7.4						

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*IDC **02** 15:25:16.1±0.7, 1.07S×127.00E, mb4.2/12, mb1 4.3/12, mb1mx4.2/21, mbtmp4.3/12, MS3.6/2, Ms1 3.6/2, ms1mx3.1/25, Error ellipse: s-maj=28.3km s-min=14.4km az=80.0*

*MOS **02** 15:25:18.4±1.1, 1.05S×127.13E, h33^{km}, mb4.8/11, Error ellipse: s-maj=21.3km s-min=9.6km az=117.3*

*BJI **02** 15:25:19.8, 1.42S×127.18E, h62^{km}, mB4.8, mb4.6, Ms4.7, Msz4.3*

*NEIC **02** 15:25:21.6±1.3, 1.09S×127.15E, h45^{km}±13^{km}, mb4.7/17, Error ellipse: s-maj=12.1km s-min=5.9km az=60.0*

ISC 02 15:25:16.5±3.7**, 1.13S**±0.05×**127.09E**±0.07**, h17^{km}**±27^{km}**, h41^{km}**±2.3^{km}**:pP-P, n62, σ1^{s}07**/61**, mb4.7**/33**, MS3.8**/4**, 2C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.67**	**155**	eP	**P**	**15 28 19.1**	**+0.2**
KKM	**Kota Kinabalu**	**12.99**	**303**	eP	**P**	**15 28 24.5**	**+1.4**
KSM	**Kuching**	**16.98**	**279**	eP	**P**	**15 29 12.4**	**-2.6**
WRAB	**Tennant Creek**	**19.99**	**160**	eP	**P**	**15 29 50.4**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	**19.99**	**160**	eP	**P**	**15 29 50.4**	**-0.9**
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**20.00**	**160**	P	**P**	**15 29 50.7**	**-0.7**
	comp=Z,3.1nm,0.3s,baz=340,slow=11,SNR=58						
WB2	**Warramunga Arr**	**20.00**	**160**	eP	**P**	**15 29 50.6**	**-0.8**
MBWA	**Marble Bar**	**21.16**	**199**	eP	**P**	**15 30 01.8**	**-1.6**
	comp=Z,32nm,1.3s,mb4.5						
PMG	**Port Moresby**	**21.60**	**113**	P	**P**	**15 30 07.7**	**-0.1**
PMG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PMG	**Port Moresby**	**21.60**	**113**	P	**P**	**15 30 07.7**	**-0.1**
	comp=Z,9.9nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**23.35**	**164**	P	**P**	**15 30 26.4**	**+1.2**
	comp=Z,5.2nm,0.8s,mb4.0,baz=342,slow=10,SNR=29						
ASPA	**Alice Springs**	**23.35**	**164**	eP	**P**	**15 30 26.5**	**+1.3**
KULM	**Kulim**	**27.16**	**284**	P	**P**	**15 31 00.9**	**-0.5**
JOW	**Kunigami**	**27.83**	**2**	P	**P**	**15 31 06.0**	**-1.2**
	comp=Z,15nm,0.3s,mb5.0,baz=165,slow=16,SNR=3.9						
CBIJ	**Chichi jima**	**31.61**	**26**	P	**P**	**15 31 40.6**	**-0.3**
	comp=Z,40nm,0.6s,mb5.4,baz=277,slow=19,SNR=5.2						
STKA	**Stephens Creek**	**33.51**	**157**	P	**P**	**15 31 59.0**	**+1.6**
	comp=Z,5.3nm,1.0s,mb4.4,baz=324,slow=7.7,SNR=6.7						
CMAR	**Chiang Mai Arr**	**33.84**	**306**	P	**P**	**15 31 59.6**	**-0.7**
	comp=Z,1.3nm,0.9s,mb3.9,baz=136,slow=7.9,SNR=6.2						
CMAR				PcP	PcP	15 34 40.2	+0.9
	comp=Z,1.9nm,0.8s,baz=166,slow=2.6,SNR=10						
NJ2	**Nanjing**	**33.91**	**347**	eP	**P**	**15 32 02.0**	**+1.1**
NJ2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
JNU	**Nakatsue**	**34.26**	**6**	LR	LR	15 44 46.8	
	comp=Z,60nm,20.2s,MS3.3,baz=202,slow=34						
ENH	**Enshi**	**35.45**	**333**	eP	**P**	**15 32 14.4**	**+0.2**
	comp=Z,23nm,1.1s,mb5.0						
MAJO	**Matsushiro**	**38.88**	**14**	eP	**P**	**15 32 40.7**	**-2.3**
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
MAJO	**Matsushiro**	**38.88**	**14**	eP	**P**	**15 32 40.7**	**-2.2**
	comp=Z,9.3nm,1.0s,mb4.5						
MJAR	**Matsushiro Arr**	**38.88**	**14**	P	**P**	**15 32 42.4**	**-0.5**
	comp=Z,1.0nm,0.4s,mb3.9,baz=183,slow=10,SNR=4.9						
MJAR				LR	LR	15 48 03.4	
	comp=Z,118nm,19.9s,MS3.7,baz=175,slow=35						
XAN	**Xi’an**	**38.93**	**336**	P	**P**	**15 32 43.4**	**0.0**
LZH	**Lanzhou**	**42.89**	**332**	⇑P	**P**	**15 33 18.0**	**+2.0**
LZH				AP	pP	15 33 31.3	+10
LZH				XP	sP	15 33 37.2	+14
LZH				PP	PP	15 35 01.3	+3.2
LZH				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,70nm,5.4s						
LZH				LR	LR		
	comp=N,260nm,15.3s						
LZH				LR	LR		
	comp=Z,340nm,17.9s,MS4.3						
MDJ	**Mudanjiang**	**45.60**	**3**	P	**P**	**15 33 38.7**	**+1.0**
LSA	**Lhasa**	**46.00**	**315**	eP	**P**	**15 33 42.8**	**+1.7**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
LSA	**Lhasa**	**46.00**	**315**	eP	**P**	**15 33 42.8**	**+1.7**
	comp=Z,5.3nm,0.6s,mb4.7						
ASAJ	**Asahikawa**	**47.13**	**15**	P	**P**	**15 33 51.1**	**+1.3**
	comp=Z,5.3nm,0.8s,mb4.5,baz=236,slow=3.6,SNR=3.1						
GTA	**Gaotai**	**47.47**	**331**	P	**P**	**15 33 53.5**	**+1.0**
GTA				AP	pP	15 34 04.7	+7.1
GUN	**Gumba**	**48.96**	**309**	eP	**P**	**15 34 05.3**	**+1.0**
PKI	**Pulchoki**	**49.17**	**309**	eP	**P**	**15 34 06.2**	**+0.3**
KKN	**Kakani**	**49.37**	**309**	eP	**P**	**15 34 07.9**	**+0.5**
	comp=Z,17nm,0.8s,mb5.1						
KKN	**Kakani**	**49.37**	**309**	eP	**P**	**15 34 07.9**	**+0.5**
KKN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
DMN	**Daman**	**49.42**	**309**	eP	**P**	**15 34 08.1**	**+0.3**
	comp=Z,31nm,1.0s,mb5.3						
GKN	**Gorkha**	**49.97**	**309**	eP	**P**	**15 34 12.2**	**+0.2**
	comp=Z,32nm,0.9s,mb5.3						
KOLN	**Koldanda**	**50.68**	**308**	eP	**P**	**15 34 18.2**	**+0.8**
	comp=Z,110nm,1.1s,mb5.7						
HYB	**Hyderabad**	**51.23**	**293**	eP	**P**	**15 34 20.5**	**-1.2**
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4						
HYB	**Hyderabad**	**51.23**	**293**	eP	**P**	**15 34 20.5**	**-1.2**
	comp=Z,50nm,1.0s,mb5.4						
HYB	**Hyderabad**	**51.23**	**293**	i P	**P**	**15 34 20.5**	**-1.2**
	comp=Z,50nm,1.0s,mb5.4						
SONM	**Songino Array**	**52.00**	**342**	P	**P**	**15 34 27.1**	**-0.1**
	comp=Z,2.7nm,0.7s,mb4.3,baz=162,slow=9.1,SNR=4.6						
ZAK	**Zakamensk**	**55.21**	**342**	eP	**P**	**15 34 50.3**	**-0.6**
ZAK				e		15 35 49.8	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.7						
ZAK				pmax	pmax		

	comp=Z,1.0nm,1.0s,mb3.8						
WMQ	Urumqi	56.92	327	eP	P	15 35 03.8	+0.5
WMQ				AP	pP	15 35 16.5	+8.0
WMQ				XP	sP	15 35 21.8	+11
WMQ				LR	LR		
	comp=Z,60nm,17.0s,MS3.8						
MKAR	Makanchi Array	61.76	327	P	P	15 35 36.0	-0.6
	comp=Z,2.5nm,0.4s,mb4.7,baz=117,slow=7.8,SNR=45						
YAK	Yakutsk	63.03	1	eP	P	15 35 44.3	-0.5
YAK				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.4						
YAK	Yakutsk	63.03	1	eP	P	15 35 44.3	-0.5
	comp=Z,28nm,0.8s,mb5.5						
MA2	Magadan	63.31	13	P	P	15 35 47.6	+0.9
MA2				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
MA2	Magadan	63.31	13	P	P	15 35 47.6	+0.9
	comp=Z,9.3nm,1.0s,mb4.9						
AAK	Ala-Archa	64.22	319	eP	P	15 35 51.5	-1.4
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
AAK	Ala-Archa	64.22	319	eP	P	15 35 51.5	-1.5
	comp=Z,5.7nm,0.9s,mb4.6						
ZAL	Zalesovo	65.07	334	P	P	15 35 56.3	-2.0
	comp=Z,0.7nm,0.3s,mb4.1,baz=343,slow=18,SNR=4.1						
BVAR	Borovoye Array	71.58	328	P	P	15 36 38.4	-0.4
	comp=Z,2.9nm,0.9s,mb4.2,baz=135,slow=6.3,SNR=11						
CHKZ	Chkalovo	71.77	329	eP	P	15 36 38.8	-1.1
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CHKZ	Chkalovo	71.77	329	eP	P	15 36 38.8	-1.2
	comp=Z,3.5nm,0.9s,mb4.3						
TIXI	Tiksi	72.67	1	eP	P	15 36 40.5	-4.4
TIXI				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
ARU	Arti	79.22	328	eP	P	15 37 19.3	-2.9
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ARU	Arti	79.22	328	eP	P	15 37 19.3	-2.9
	comp=Z,3.6nm,0.8s,mb4.3						
MAW	Mawson	79.35	201	P	P	15 37 23.7	+1.0
	comp=Z,2.1nm,0.9s,mb4.0,baz=210,slow=4.2,SNR=3.7						
OPO	Ambohidratompo	80.06	251	P	P	15 37 28.6	+1.1
	comp=Z,3.0nm,0.5s,mb4.5,baz=121,slow=5.9,SNR=7.4						
SYO	Syowa Base	88.05	201	⇑P	P	15 38 06.5	-0.3
MALT	Malatya	89.64	308	eP	P	15 38 15.1	-0.1
MALT				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
MALT	Malatya	89.64	308	eP	P	15 38 15.1	-0.1
	comp=Z,2.5nm,0.7s,mb4.7						

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*BJI **02** 15:26:52.0, 19.37S×177.50W, h496^{km}, mB4.9, mb4.4*
*NEIC **02** 15:26:57.6±0.9, 18.66S×178.03W, h497^{km}±9^{km}, mb4.5/40, Error ellipse: s-maj=9.1km s-min=5.3km az=137.0*
*MOS **02** 15:26:59.6±0.9, 18.63S×178.09W, h527^{km}, mb4.5/20, Error ellipse: s-maj=15.2km s-min=10.8km az=135.1*
*IDC **02** 15:27:02.0±1.6, 18.85S×177.94W, h551^{km}±18^{km}, mb3.8/13, mb1 4.0/16, mb1mx4.0/20, mbtmp4.7/16, Error ellipse: s-maj=16.3km s-min=11.0km az=147.0*
ISC 02 15:26:55.4±0.9**, 18.64S**±0.06×**178.08W**±0.07**, h481**^{km}±10^{km}**, h501**^{km}±3.3^{km}**:pP-P, n152,** σ**0**^{s}**83**/118**, mb4.4**/54**, 6C-4D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.67	53	ePn	P	15 28 50.0	+0.9
	26nm,0.6s						
AFI				eSn	S	15 30 18.1	-1.1
DZM	Mont Dzumac	14.91	254	P	P	15 30 11.4	+5.8
	0.5nm,0.3s,baz=90,slow=17,SNR=5.1						
RAR	Rarotonga	17.41	101	P	P	15 30 32.7	+2.0
RAR				pmax	pmax		
	comp=Z,17nm,0.7s						
RAR	Rarotonga	17.41	101	P	P	15 30 31.0	+0.4
	comp=Z,0.9nm,0.3s,baz=264,slow=9.2,SNR=3.0						
RAR	Rarotonga	17.41	101	P	P	15 30 32.7	+2.0
	comp=Z,17nm,0.7s						
URZ	Urewera	19.99	191	P	P	15 30 54.3	-1.2
	comp=Z,10nm,0.3s,baz=324,slow=14,SNR=45						
SNZO	South Karori	23.42	194	eP	P	15 31 25.3	-1.9
	comp=Z,50nm,0.9s,mb5.0						
RPZ	Rata Peaks	26.62	198	P	P	15 31 54.5	-1.3
	comp=Z,26nm,1.0s,mb4.6,baz=340,slow=4.6,SNR=5.3						
CTAO	Charters Tower	33.64	262	eP	P	15 32 58.2	+1.9
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
CTAO	Charters Tower	33.64	262	eP	P	15 32 58.2	+1.9
	comp=Z,6.9nm,0.9s,mb4.1						
STKA	Stephens Creek	38.55	242	P	P	15 33 39.0	+2.1
	comp=Z,2.3nm,0.5s,mb3.9,baz=83,slow=10,SNR=10						
WRAB	Tennant Creek	44.80	260	eP	P	15 34 27.4	+0.4
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.0						
WRAB	Tennant Creek	44.80	260	eP	P	15 34 27.4	+0.4
	comp=Z,3.8nm,0.7s,mb3.9						
WRA	Warramunga Arr	44.81	260	P	P	15 34 27.7	+0.6
	comp=Z,1.2nm,0.4s,mb3.7,baz=98,slow=6.8,SNR=14						
ASAR	Alice Springs	44.90	255	P	P	15 34 28.8	+1.0
	comp=Z,7.3nm,0.6s,mb4.3,baz=90,slow=8.4,SNR=75						
ASAR				S	S	15 40 26.9	-3.0
	comp=Z,0.5nm,0.8s,baz=93,slow=15,SNR=4.4						
ASPA	Alice Springs	44.90	255	⇓iP	P	15 34 28.5	+0.7
MBWA	Marble Bar	58.20	256	eP	P	15 36 04.0	-0.6
	comp=Z,22nm,1.3s,mb4.3						
SBA	Scott Base	59.71	184	eP	P	15 36 14.2	+0.2
SBA				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.4						
SBA	Scott Base	59.71	184	eP	P	15 36 14.2	+0.2
	comp=Z,14nm,0.9s,mb4.4						
VNDA	Vanda	59.74	185	eP	P	15 36 13.8	-0.4
VNDA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VNDA	Vanda	59.74	185	P	P	15 36 14.1	-0.2
	comp=Z,3.7nm,1.0s,mb3.8,baz=351,slow=6.9,SNR=7.3						
VNDA	Vanda	59.74	185	eP	P	15 36 13.8	-0.4
	comp=Z,9.6nm,1.2s,mb4.1						
MJAR	Matsushiro Arr	68.68	323	P	P	15 37 11.3	-0.2
	comp=Z,5.0nm,0.7s,mb4.2,baz=158,slow=6.3,SNR=12						
MAJO	Matsushiro	68.68	323	eP	P	15 37 10.8	-0.7
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
MAJO	Matsushiro	68.68	323	eP	P	15 37 10.8	-0.7
	comp=Z,6.9nm,0.6s,mb4.4						
NIKO	Nikolski	71.76	6	eP	P	15 37 27.8	-1.7
CMB	Columbia Colle	78.16	43	eP	P	15 38 05.2	-0.2
CMB				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
CMB	Columbia Colle	78.16	43	eP	P	15 38 05.2	-0.2
	comp=Z,5.6nm,0.7s,mb4.1						
NJ2	Nanjing	78.64	309	eP	P	15 38 08.2	+0.1
NJ2				AP	pP	15 39 57.5	+3.6
NJ2				XP	sP	15 40 50.3	+7.3
NJ2				PP	PP	15 41 16.4	+1.6
NJ2				S	S	15 47 22.0	-2.8
NJ2				XS		15 50 35.0	
NJ2				AMB	AMB		
	comp=Z,450nm,5.8s						
YBH	Yreka Blue Hor	78.90	39	eP	P	15 38 09.5	+0.3
YBH				pmax	pmax		
	comp=Z,12nm,0.9s						
YBH	Yreka Blue Hor	78.90	39	eP	P	15 38 09.4	+0.2
	comp=Z,12nm,0.9s,mb4.4						
MDJ	Mudanjiang	78.96	325	P	P	15 38 10.6	+1.1
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
KDAK	Kodiak Island	79.04	14	eP	P	15 38 09.0	-0.7
	comp=Z,32nm,0.9s,mb4.8						
LBCM	Butte Creek Ri	79.18	40	P	P	15 38 11.0	+0.2
NVAR	Mina Array Bea	79.74	44	P	P	15 38 14.0	+0.3
	comp=Z,10.0nm,0.7s,mb4.5,baz=216,slow=7.1,SNR=60						
MNV	Mina	79.84	44	eP	P	15 38 14.1	-0.1
MNV				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.5						
MNV	Mina	79.84	44	eP	P	15 38 14.1	-0.2
	comp=Z,16nm,1.1s,mb4.5						
TPH	Tonopah	80.25	44	eP	P	15 38 16.6	+0.2
TPH				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
TPH	Tonopah	80.25	44	eP	P	15 38 16.6	+0.2
	comp=Z,6.4nm,0.8s,mb4.2						
MOD	Modoc	80.44	40	eP	P	15 38 17.1	-0.2
	comp=Z,16nm,0.8s,mb4.6						
CN2	Changchun	80.79	322	eP	P	15 38 19.1	+0.1
CN2				eAP	pP	15 40 10.6	+5.1
CN2				eS	S	15 47 45.8	-0.7
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
TRCR	Troy Canyon	81.49	45	eP	P	15 38 22.9	+0.2
BMN	Battle Mountai	81.54	42	eP	P	15 38 23.5	+0.5
BMN				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
BMN	Battle Mountai	81.54	42	eP	P	15 38 23.4	+0.5
	comp=Z,16nm,0.9s,mb4.6						
TDH	Tom, Dick, Har	81.58	36	P	P	15 38 23.4	+0.3
WVOR	Wild Horse Val	81.76	40	eP	P	15 38 24.2	+0.1
WVOR				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.7						
WVOR	Wild Horse Val	81.76	40	eP	P	15 38 24.2	+0.2
	comp=Z,24nm,1.0s,mb4.7						
VFP	Flag Point	81.78	37	P	P	15 38 24.5	+0.4
OOW	Octopus West	81.79	33	P	P	15 38 25.2	+1.1
TUC	Tucson	81.90	52	eP	P	15 38 25.8	+0.8
TUC				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
TUC	Tucson	81.90	52	eP	P	15 38 25.8	+0.8
	comp=Z,14nm,1.0s,mb4.5						
MA2	Magadan	81.98	345	eP	P	15 38 23.0	-1.8
MA2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
MA2	Magadan	81.98	345	eP	P	15 38 22.9	-1.9
	comp=Z,5.5nm,0.8s,mb4.1						
TDL	Tradedollar La	81.99	35	P	P	15 38 25.8	+0.7
SLKM	Skilak Lake	82.03	14	eP	P	15 38 24.3	-0.7
PGC	Sidney	82.75	33	eP	P	15 38 28.9	-0.1
	comp=Z,51nm,0.8s,mb5.1						
ELK	Elko	82.98	43	eP	P	15 38 30.2	0.0
ELK				pmax	pmax		
	comp=Z,16nm,1.0s						
ELK	Elko	82.98	43	eP	P	15 38 30.2	0.0
	comp=Z,16nm,1.0s,mb4.5						
WUAZ	Wupatki	82.99	49	eP	P	15 38 31.0	+0.6
	comp=Z,15nm,1.0s,mb4.5						
MAW	Mawson	83.28	200	P	P	15 38 30.7	-0.5
	comp=Z,1.6nm,0.7s,mb3.7,baz=152,slow=3.5,SNR=4.9						
HAWA	Hanford	83.51	36	eP	P	15 38 32.7	0.0
	comp=Z,1.8nm,0.2s,mb4.2						
DIV	Divide	83.62	15	eP	P	15 38 32.2	-0.7
	comp=Z,98nm,0.7s,mb5.5						
MVU	Marysvale	83.85	46	eP	P	15 38 35.3	+0.6
	comp=Z,13nm,1.3s,mb4.3						
MSU	Marysvale	83.88	46	eP	P	15 38 35.3	+0.5
BMO	Blue Mountains	83.92	39	eP	P	15 38 34.5	-0.3
BMO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
BMO	Blue Mountains	83.92	39	eP	P	15 38 34.5	-0.4
	comp=Z,4.0nm,0.7s,mb4.1						
WTV	Waterville	84.03	35	P	P	15 38 35.3	0.0
HLID	Hailey	84.98	41	eP	P	15 38 40.1	+0.1
	comp=Z,9.1nm,0.7s,mb4.5						
PNT	Penticton	85.17	34	P	P	15 38 40.8	0.0
MCK	McKinley	85.19	13	eP	P	15 38 39.5	-1.1
MCK				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.8						
MCK	McKinley	85.19	13	eP	P	15 38 39.5	-1.1
	comp=Z,29nm,1.1s,mb4.8						
LAZ	Ladron	85.57	52	eP	P	15 38 43.2	+0.1
TCUT	Toone Canyon	85.67	44	eP	P	15 38 43.8	+0.4
MNTX	Cornudas Mount	85.75	55	eP	P	15 38 44.4	+0.3
	comp=Z,9.3nm,1.0s,mb4.4						
NEW	Newport	85.92	36	eP	P	15 38 43.8	-0.7
NEW				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NEW	Newport	85.92	36	eP	P	15 38 43.8	-0.7
	comp=Z,4.1nm,0.6s,mb4.2						
PV10	Paradox Valley	85.98	47	eP	P	15 38 44.9	-0.2
LTX	Lajitas	86.12	57	eP	P	15 38 46.8	+0.9
LTX				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7						
LTX	Lajitas	86.12	57	eP	P	15 38 46.8	+0.8
	comp=Z,15nm,0.8s,mb4.7						
TXAR	Lajitas Array	86.12	57	P	P	15 38 46.8	+0.9
	comp=Z,14nm,0.7s,mb4.7,baz=219,slow=6.3,SNR=105						
PV01	Paradox Valley	86.20	48	eP	P	15 38 45.8	-0.2
ANMO	Albuquerque	86.31	51	eP	P	15 38 46.4	-0.3
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ANMO	Albuquerque	86.31	51	eP	P	15 38 46.4	-0.3
	comp=Z,9.3nm,1.0s,mb4.4						
COLA	College	86.42	12	eP	P	15 38 45.5	-0.9
COLA				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.7						
COLA	College	86.42	12	eP	P	15 38 45.5	-0.9
	comp=Z,16nm,0.9s,mb4.7						
ILAR	Eielson Array	86.53	13	P	P	15 38 45.8	-1.2
	comp=Z,6.2nm,0.5s,mb4.6,baz=235,slow=5.4,SNR=13						
MCMT	McKenzie Canyo	86.59	40	eP	P	15 38 48.2	+0.4
GDL2	Guadalupe Moun	86.74	55	eP	P	15 38 49.1	+0.3
RRI2	Red Ridge	86.81	42	eP	P	15 38 49.4	+0.6
	comp=Z,21nm,0.9s,mb4.9						
TPAW	Teton Pass	87.12	42	eP	P	15 38 50.7	+0.4
	comp=Z,4.9nm,0.7s,mb4.3						
BILL	Bilibino	87.19	354	P	P	15 38 50.0	-0.1
BILL				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.4						
BILL	Bilibino	87.19	354	P	P	15 38 50.0	-0.1
	comp=Z,3.0nm,0.4s,mb4.4						
SNOW	Snow King Moun	87.23	42	eP	P	15 38 51.4	+0.6
	comp=Z,7.2nm,0.4s,mb4.8						
IMW	Indian Meadow	87.32	42	eP	P	15 38 51.5	+0.3
	comp=Z,19nm,1.0s,mb4.8						
MOOW	Moose Ponds	87.37	42	eP	P	15 38 51.5	0.0
	comp=Z,4.3nm,0.8s,mb4.2						
CHMT	Chamberlain Mo	87.41	38	eP	P	15 38 51.0	-0.7
QLMT	Earthquake Lak	87.47	41	eP	P	15 38 53.0	+1.0
PDAR	Pinedale Array	87.67	43	P	P	15 38 52.9	-0.1
	comp=Z,7.5nm,0.8s,mb4.5,baz=221,slow=2.3,SNR=44						
HRY	Holter Researc	88.15	39	eP	P	15 38 54.5	-0.6
SDCO	Great Sand Dun	88.20	49	eP	P	15 38 55.6	+0.1
KMI	Kunming	88.44	297	P	P	15 38 57.6	+0.6
SYO	Syowa Base	88.51	193	⇓P	P	15 38 53.4	-2.9
CMAR	Chiang Mai Arr	89.42	290	P	P	15 39 03.2	+1.5
	comp=Z,1.8nm,0.9s,mb3.9,baz=108,slow=2.8,SNR=7.9						
SNAA	Sanae	89.86	178	P	P	15 39 01.1	-1.4
SNAA	Sanae	89.86	178		P	15 39 02.3	-0.2
VNA3	Neumayer Olymp	89.99	176	⇑iP	P	15 39 03.1	0.0
VNA3	Neumayer Olymp	89.99	176	⇑i	P	15 39 04.2	+1.1
VNA2	Neumayer--Watz	90.43	177	⇑iP	P	15 39 05.9	+0.8
VNA2	Neumayer--Watz	90.43	177	⇑i	P	15 39 07.1	+2.0
PLCA	Paso Flores	90.60	134	P	P	15 39 06.5	-0.1
LZH	Lanzhou	91.58	308	⇓P	P	15 39 09.5	-1.7
LZH				AP	pP	15 41 01.2	+1.0
LZH				XP	sP	15 41 50.6	+2.1
LZH				PP	PP	15 42 59.0	0.0
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.8						
RSSD	Black Hills	91.88	44	eP	P	15 39 12.0	-0.4
RSSD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
RSSD	Black Hills	91.88	44	eP	P	15 39 12.0	-0.4
	comp=Z,9.3nm,0.9s,mb4.7						
INK	Inuvik	92.51	15	eP	P	15 39 13.5	-1.2
INK				pmax	pmax		
	comp=Z,14nm,1.0s						
INK	Inuvik	92.51	15	eP	P	15 39 13.5	-1.2
	comp=Z,14nm,1.0s,mb5.0						
YKA	Yellowknife Ar	94.87	25	P	P	15 39 24.7	-0.8
	comp=Z,3.6nm,0.6s,mb4.6,baz=242,slow=4.4,SNR=29						
MKAR	Makanchi Array	109.86	314	PKiKP		15 44 30.2	
	comp=Z,0.6nm,0.5s,baz=194,slow=1.1,SNR=11						
BVAR	Borovoye Array	117.61	321	PKiKP		15 44 45.2	
	comp=Z,0.9nm,0.5s,slow=1.4,SNR=5.4						
ARU	Arti	123.63	326	ePKIKP	PKPdf	15 44 56.3	-1.0
ARU	Arti	123.63	326	ePKPdf	PKPdf	15 44 56.3	-1.0
KEV	Kevo	126.64	349	epkp	PKPdf	15 45 01.6	-1.1
ARCES	ARCESS Array B	127.09	350	PKP	PKPdf	15 45 03.5	0.0
	comp=Z,1.8nm,0.4s,baz=22,slow=1.0,SNR=31						
KAF	Kangasniemi	133.35	345	epkp	PKPdf	15 45 15.6	0.0
FINES	FINESS Array B	133.98	344	PKIKP	PKPdf	15 45 10.5	-6.3
FINES						15 47 57.7	
FINES	FINESS Array B	133.98	344	PKhKP		15 45 10.5	
	comp=Z,0.4nm,0.4s,SNR=5.1						
FINES				PKP	PKPdf	15 45 15.9	-0.9
	comp=Z,0.9nm,0.5s,baz=108,slow=4.4,SNR=7.8						
FINES				SKP		15 47 57.7	
	comp=Z,1.0nm,0.7s,baz=112,slow=10,SNR=4.6						
FINES	FINESS Array B	133.98	344	PKP	PKPdf	15 45 10.5	-6.3
FINES				PKP	PKPdf	15 45 15.9	-0.9
FINES				SKP		15 47 57.7	
AKASG	Malin Array Be	141.35	332	PKhKP		15 45 25.0	
	comp=Z,2.2nm,0.5s,baz=40,slow=4.1,SNR=22						
BRTR	Keskin Array B	145.52	314	PKPbc	PKPbc	15 45 39.7	+0.6
	comp=Z,2.3nm,0.6s,baz=135,slow=3.5,SNR=8.7						
KOLS	Kolonicke sedl	145.60	336	i P	PKPdf	15 45 40.4	+2.6
KSP	Ksiaz	145.90	344	ePKP2	PKPbc	15 45 41.1	+1.4
CLL	Collm	146.24	347	⇓iPKP2	PKPbc	15 45 41.3	+0.8
CLL				pmax	pmax		
	comp=Z,18nm,0.6s						
BRG	Berggiesshubel	146.45	346	ePKP2	PKPbc	15 45 42.5	+1.5
BRG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KECS	Kecovo	146.64	337	eP	PKPbc	15 45 51.3	+10
PRU	Pruhonice	147.13	345	⇑ePKPB	PKPdf	15 45 44.4	+4.2
MOX	Moxa	147.15	349	eP	PKPdf	15 45 44.0	+3.7
VYHS	Vyhne	147.21	339	eP	PKPdf	15 45 44.0	+3.6
GRF	Grafenberg Arr	148.13	349	ePKP2	PKPab	15 45 46.8	-5.9
KHC	Kasperske Hory	148.16	345	⇑ePKPB	PKPdf	15 45 46.0	+4.1
KHC				ePKPAB	PKPab	15 45 51.0	-1.9
GERES	GERESS Array B	148.40	345	PKPbc	PKPdf	15 45 47.2	+4.9
	comp=Z,2.6nm,0.6s,baz=27,slow=3.0,SNR=23						
GIVF	Givet	148.53	356	ePKP1	PKPdf	15 45 47.8	+5.3
BAIF	Baives	148.60	357	ePKP1	PKPdf	15 45 47.9	+5.3
FLN	La Foliniere	149.89	3	ePKP1	PKPdf	15 45 50.1	+5.4
	comp=Z,14nm,0.7s						
CDF	Champ du Feu	149.99	353	ePKP1	PKPdf	15 45 50.8	+5.9
	comp=Z,3.5nm,0.4s						
SGMF	Saint Gilles	150.24	6	ePKP1	PKPdf	15 45 50.8	+5.5
HAU	Haudompre	150.49	354	ePKP1	PKPdf	15 45 51.8	+6.1
	comp=Z,9.1nm,0.5s						
HINF	Hinteralfeld	150.62	353	ePKP1	PKPdf	15 45 52.0	+6.1
	comp=Z,5.7nm,0.6s						
LOR	Lormes	151.41	357	ePKP1	PKPdf	15 45 54.0	+7.0
	comp=Z,10nm,0.5s						
CABF	La Chapelle	151.90	354	ePKP1	PKPdf	15 45 55.6	+7.9
	comp=Z,9.9nm,0.8s						
MFF	Saint Martin d	152.06	3	ePKP1	PKPdf	15 45 55.2	+7.3
	comp=Z,5.7nm,0.5s						
TCF	Toulx Ste Croi	152.43	360	ePKP1	PKPdf	15 45 55.9	+7.4
ORIF	Oris-en-Rattie	153.59	354	ePKP1	PKPdf	15 45 59.7	+10
MBDF	Montbardon	153.68	352	ePKP1	PKPdf	15 45 59.9	+10

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*NIED **02** 15:29:00, 24.80N×124.30E, h56^{km}, Mw3.8 Best double couple: M$_0$5.7×10^{14} NP1:φ$_s$280°, δ76°, λ40°. NP2:φ$_s$179°, δ52°, λ162°.*
*IDC **02** 15:29:28.2±12.0, 24.34N×124.59E, mb3.8/3, mb1 4.0/4, mb1mx3.6/21, mbtmp4.0/4, Error ellipse: s-maj=349.7km s-min=36.3km az=121.0*
*JMA **02** 15:29:33.4±0.1, 24.76N×124.27E, h73^{km}±2^{km}, M3.7*
ISC 02 15:29:31.7±0.6**, 24.85N**±0.08×**124.25E**±0.06**, h81**^{km}±5^{km}**, n18,** σ**0**^{s}**82**/26**, mb3.9**/3**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTJ	Tarama	0.46	117	P	P	15 29 45.8	+0.5
JTJ				S	S	15 29 55.1	-0.4
JIJ	Ishigaki jima	0.50	191	P	P	15 29 45.5	-0.1
JIJ				eS	S	15 29 54.4	-1.6
JKRS	Kuro-shima	0.65	200	P	P	15 29 47.4	+0.3
JKRS				eS	S	15 29 58.0	-0.5
IRIF	Iriomote-Funau	0.70	223	P	P	15 29 47.9	+0.3
IRIF				eS	S	15 29 59.2	-0.2
HATJ	Hateruma jima	0.89	207	P	P	15 29 50.1	+0.4
HATJ				S	S	15 30 03.0	-0.2
JMJ	Miyako jima 2	0.95	92	P	P	15 29 51.3	+0.9
JMJ				S	S	15 30 04.5	0.0
JOGS	Gusukube	1.06	95	P	P	15 29 52.8	+1.1
JOGS				S	S	15 30 07.6	+0.9
YOJ	Yonaguni jima	1.19	251	P	P	15 29 54.5	+1.1
YOJ				S	S	15 30 10.1	+0.4
JKE	Kume jima 2	2.72	57	P	P	15 30 14.7	+0.4
JAGN	Aguni-jima	3.21	57	P	P	15 30 21.3	+0.3
JIH	Iheya	3.99	56	P	P	15 30 31.9	0.0
JOW	Kunigami	4.13	61	Pn	P	15 30 33.0	-0.9
	baz=199,slow=12						
JOW	Kunigami	4.13	61	P	P	15 30 34.3	+0.5
JTK	Tokunoshima	5.13	54	P	P	15 30 46.2	-1.5
JAM	Amami Oshima	5.96	52	P	P	15 30 57.0	-2.0
WRA	Warramunga Arr	45.59	167	P	P	15 37 45.3	-0.5
	0.8nm,0.3s,mb3.9,baz=348,slow=8.8,SNR=9.0						
ASAR	Alice Springs	49.13	168	P	P	15 38 14.7	+1.3
	0.6nm,0.6s,mb3.7,baz=356,slow=15,SNR=7.9						
STKA	Stephens Creek	58.80	163	P	P	15 39 23.0	-1.0
	1.7nm,0.7s,mb4.2,baz=344,slow=9.8,SNR=4.1						

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*NEIC **02** 15:43:09.1±0.8, 51.64N×6.95E, h8^{km}±7^{km}, ML2.9(LDG), Error ellipse: s-maj=8.5km s-min=6.6km az=134.0*
*LDG **02** 15:43:10.1±0.2, 51.66N×6.94E, h1^{km}, Ml2.9/4, Error ellipse: s-maj=2.9km s-min=2.1km az=16.0, Suspected Mining induced.*
*BUG **02** 15:43:10.4, 51.60N×7.04E, h1^{km}, ML1.5*
*CSEM **02** 15:43:10.1±0.1, 51.65N×6.97E, h2^{km}, ML2.9/4, Error ellipse: s-maj=1.2km s-min=1.0km az=117.0, Suspected Mining induced.*
*BNS **02** 15:43:10.2±0.7, 51.65N×6.97E, h1^{km}, ML2.1*
*BGR **02** 15:43:10.7±0.3, 51.63N×7.01E, h1^{km}, ML2.1/4, Error ellipse: s-maj=3.3km s-min=3.3km az=101.0*
ISC 02 15:43:08.5±0.4**, 51.61N**±0.02×**6.91E**±0.04**, n28,** σ**1**^{s}**54**/52**, 3D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUG	Bochum--Univer	0.28	126	⇓iPg	Pg	15 43 15.5	+1.4
BUG				Sg	Sg	15 43 19.3	+1.5
BUG	Bochum--Univer	0.28	126	ePg	Pg	15 43 15.5	+1.4
BUG				eSg	Sg	15 43 18.7	+0.9
WTSB	Winterswijk	0.37	349	ePg	Pg	15 43 17.2	+1.4
WTSB				i Sg	Sg	15 43 22.1	+1.4
WTSB	Winterswijk	0.37	349	ePg	Pg	15 43 17.7	+1.8
	SNR=7.3						
WTSB				eSg	Sg	15 43 22.3	+1.6
	SNR=5.6						
BNS	Bensberg	0.67	165	ePg	Pg	15 43 23.7	+1.9
BNS				eSg	Sg	15 43 33.6	+2.9
IBBN	Ibbenburen	0.88	36	ePg	Pg	15 43 25.5	-0.5
	SNR=3.8						
IBBN				eSg	Sg	15 43 38.0	+0.3
	SNR=3.4						
STB	Steinbach	1.01	182	ePg	Pg	15 43 30.3	+1.6
STB				eSg	Sg	15 43 45.1	+2.8
	41nm,0.4s						
KLL	Kalltalsperre	1.03	202	ePg	Pg	15 43 30.4	+1.3
KLL				eSg	Sg	15 43 45.2	+2.4
HGN	Heimansgroeve	1.04	216	⇓iPg	Pg	15 43 30.8	+1.5
HGN				i x	x	15 43 31.4	
HGN				eSg	Sg	15 43 46.3	+3.0
HGN	Heimansgroeve	1.04	216	ePg	Pg	15 43 30.9	+1.5
	SNR=18						
HGN				eSg	Sg	15 43 46.3	+3.1
	SNR=3.9						
HGN	Heimansgroeve	1.04	216	⇓iPg	Pg	15 43 30.8	+1.5
HGN				eSg	Sg	15 43 46.3	+3.1
MEM	Membach	1.15	210	P	Pb	15 43 31.8	+0.9
MEM				S	Sb	15 43 48.8	+2.5
BGG	Burgeitz	1.43	169	ePg	Pg	15 43 36.5	-0.5
BGG				eSg	Sg	15 43 55.0	-1.0
	31nm,0.7s						
TNS	Taunus Mts	1.69	144	ePn	Pn	15 43 40.9	+1.3
	SNR=3.6						
TNS				eSg	Sg	15 44 04.4	-0.5
	SNR=3.8						
WLF	Walferdange	2.00	194	ePg	Pg	15 43 49.3	+0.8
	SNR=1.7						
WLF				eSg	Sg	15 44 14.7	-0.5
	SNR=4.3						
GIVF	Givet	2.00	222	ePn	Pn	15 43 44.2	+0.2
GIVF				eP		15 43 46.5	
GIVF				ePg	Pg	15 43 48.5	0.0
GIVF				eSg	Sg	15 44 14.3	-0.9
	20nm,0.3s						
DOU	Dourbes	2.11	225	P	Pn	15 43 46.3	+0.9
DOU				S	Sn	15 44 14.4	+1.7
CLZ	Clausthal	2.17	82	ePg	Pg	15 43 49.4	-2.3
	SNR=2.8						
CLZ				eSg	Sg	15 44 17.1	-3.6
	SNR=2.5						
BAIF	Baives	2.31	229	ePg	Pg	15 43 53.9	-0.7
BAIF				eSn	Sn	15 44 15.8	-2.1
BAIF				eSg	Sg	15 44 24.4	-1.0
	9.9nm,0.4s						
RFYF	Reffroy	3.12	198	ePn	Pn	15 43 59.3	-0.6

RFYF				*e*Pg	**Pg**	**15 44 09.0**	**-1.8**
RFYF				*e*Sg	**Sg**	**15 44 49.7**	**-2.7**
	8.9nm,0.3s						
CDF	**Champ du Feu**	**3.21**	**176**	*e*Pn	**Pn**	**15 44 00.5**	**-0.6**
SFTF	**Sexfontaines**	**3.61**	**200**	*e*Pn	**Pn**	**15 44 06.5**	**-0.4**
SFTF				*e*Sg	**Sg**	**15 45 05.0**	**-3.8**
	7.7nm,0.3s						
LOR	**Lormes**	**4.78**	**206**	*e*Pn	**Pn**	**15 44 21.9**	**-1.5**
CABF	**La Chapelle**	**5.03**	**186**	*e*Pn	**Pn**	**15 44 25.4**	**-1.6**
AVF	**Avril sur Loir**	**5.35**	**207**	*e*Pn	**Pn**	**15 44 28.9**	**-2.7**
SMF	**Signal de Mont**	**5.36**	**203**	*e*Pn	**Pn**	**15 44 29.4**	**-2.2**
FLN	**La Foliniere**	**5.54**	**242**	*e*Pn	**Pn**	**15 44 32.0**	**-2.1**
BGF	**Bois d'Agland**	**5.71**	**209**	*e*Pn	**Pn**	**15 44 34.8**	**-1.9**

NNC 02 16:01:50.9±3.3, 39.72N×71.28E, mpv3.2, 5C, Error ellipse: s-maj=34.2km s-min=22.5km az=8.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.03**	**36**	P	Pn	16 02 41.6	+0.6
	SNR=11						
KK31	**Karatay Array**	**3.43**	**351**	⇑Pn	Pn	16 02 48.4	+1.7
	1.8nm,0.3s,baz=176,slow=13,SNR=35						
KK31				⇑Lg		16 03 39.5	
	2.0nm,0.3s,baz=159,slow=26,SNR=6.4						
UCH	**Uchtor**	**3.50**	**43**	P	Pn	16 02 48.0	+0.2
	SNR=9.2						
AAK	**Ala-Archa**	**3.79**	**39**	P	Pn	16 02 52.4	+0.5
	SNR=5.7						
AAK	**Ala-Archa**	**3.79**	**39**	Pn	Pn	16 02 51.1	-0.7
	3.9nm,0.5s						
AAK				⇑Lg		16 03 49.8	
	6.9nm,0.6s						
KZA	**Kyzart**	**3.82**	**51**	P	Pn	16 02 51.7	-0.6
	SNR=6.0						
CHMS	**Chumysh**	**4.19**	**37**	P	Pn	16 02 57.4	-0.1
	SNR=6.7						
AB31	**Akbulak array**	**12.49**	**323**	⇑Pn	P	16 04 48.4	-4.4
	0.3nm,0.5s						
AB31				⇑Sn	S	16 07 11.0	-2.8
	1.0nm,0.8s						

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*NDI **02** 16:27:16.5±3.6, 34.92N×74.43E, h210^{km}±52^{km}, ML3.0*

*NNC **02** 16:27:52.3±0.6, 37.28N×72.18E, mpv2.9, Error ellipse: s-maj=31.1km s-min=7.6km az=78.0*

ISC 02 16:27:18.9±1.9**, 34.5N**±0.1×**74.2E**±0.2**, h33^{km}, n8, σ1^{s}50**/14**, 1C-1D, Southwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**2.40**	**147**	*e*P	**P**	**16 28 02.6**	**+6.0**
THN				*e*S	**S**	**16 28 38.1**	**+13**
	37nm,0.5s						
SDNR	**Sundarnagar**	**3.77**	**141**	*e*P	**P**	**16 28 19.0**	**+2.8**
SMLA	**Simla**	**4.17**	**142**	*i* P	**P**	**16 28 20.9**	**-1.0**
SMLA				*i* S	**S**	**16 29 10.4**	**+0.2**
KLP	**Kalpa**	**4.50**	**129**	*e*P	**P**	**16 28 28.5**	**+1.9**
KLP				*e*S	**S**	**16 29 17.4**	**-1.2**
KLP				AML	AML	16 29 31.6	
	comp=N,58nm,0.6s						
KLP				AML	AML	16 29 37.0	
	comp=E,60nm,0.7s						
KHET	**Khetri**	**6.51**	**167**	*e*P	**P**	**16 28 54.5**	**-0.4**
KHET				*e*S	**S**	**16 30 09.1**	**+0.1**
KHET				AML	AML	16 30 13.9	
	comp=E,8.9nm,0.2s						
KHET				AML	AML	16 30 15.2	
	comp=N,7.1nm,0.2s						
KUDL	**Kundal**	**6.60**	**162**	*e*P	**P**	**16 28 56.4**	**+0.3**
KUDL				*e*S	**S**	**16 30 09.7**	**-1.3**
SONA	**Sohna**	**6.67**	**157**	*e*P	**P**	**16 28 59.5**	**+2.4**
SONA				*e*S	**S**	**16 30 12.6**	**-0.2**
SONA				AML	AML	16 30 17.9	
	comp=E,20nm,0.3s						
SONA				AML	AML	16 30 19.3	
	comp=N,9.9nm,0.4s						
KK31	**Karatay Array**	**9.09**	**343**	⇓Pn	**P**	**16 29 24.4**	**-6.4**
	comp=N,0.4nm,0.3s,baz=167,slow=13,SNR=6.1						
KK31				⇑Lg		16 30 59.0	
	comp=N,0.6nm,0.3s,baz=167,slow=25,SNR=3.6						

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*TAP **02** 16:27:50.2, 24.32N×122.03E, h24^{km}, ML2.9*

JMA 02 16:27:50.1±0.2**, 24.97N×122.08E, h45^{km}, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.99**	**121**	P	P	16 28 07.7	0.0
YOJ				*e*S	S	16 28 20.7	0.0
IRIF	**Iriomote-Funau**	**1.63**	**112**	P	P	16 28 17.0	+0.1
IRIF				*e*S	S	16 28 36.7	-0.1
JKRS	**Kuro-shima**	**1.90**	**112**	P	P	16 28 21.0	+0.3
JKRS				*e*S	S	16 28 43.4	-0.1
JIJ	**Ishigaki jima**	**1.97**	**107**	P	P	16 28 22.1	+0.4
JIJ				*e*S	S	16 28 44.8	-0.5

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*NIED **02** 16:32:00, 41.50N×142.00E, h50^{km}, Mw4.4 Best double couple: M$_0$4.77×10^{15} NP1:ϕ_s24°, δ69°, λ96°. NP2:ϕ_s186°, δ22°, λ74°.*

*MOS **02** 16:32:05.9±0.9, 41.52N×142.01E, h38^{km}, mb5.0/56, Error ellipse: s-maj=9.9km s-min=5.2km az=106.3*

*BJI **02** 16:32:09.4, 41.46N×142.09E, h88^{km}, mB5.1, mb4.9, Ms3.9, Msz4.0*

*JMA **02** 16:32:09.8±0.1, 41.49N×142.00E, h63^{km}±2^{km}, M4.3 Broadband fault plane solution: P waves. NP1:ϕ_s188°, δ13°, λ82°. NP2:ϕ_s17°, δ77°, λ92°. Principal axes: T Plg58°, Azm289°; N Plg2°, Azm196°; P Plg32°, Azm105°;*

JMA Felt III J1.

*IDC **02** 16:32:11.0±1.6, 41.48N×141.97E, h69^{km}±13^{km}, mb4.2/22, mb1 4.4/25, mb1mx4.4/26, mbtmp4.5/25, MS3.4/13, Ms1 3.5/13, ms1mx3.4/23 Error ellipse: s-maj=14.9km s-min=9.7km az=116.0*

*NEIC **02** 16:32:11.6±0.6, 41.50N×141.98E, h76^{km}±5^{km}, mb4.8/64, MW4.4(NIED), Error ellipse: s-maj=5.2km s-min=4.0km az=118.0*

NEIC Felt at Misawa, Honshu. Recorded [3 JMA] in Aomori Prefecture, Honshu. Recorded [1 JMA] in the Chitose, Muroran and Shizunai areas, Hokkaido.

ISC 02 16:32:09.2±0.3**, 41.48N**±0.02×**142.02E**±0.03**, h68^{km}**±2^{km}**, h74^{km}**±1.5^{km}**:pP-P, n266, σ1^{s}00**/276**, mb4.6**/98**, 60C-15D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.73**	**262**	⇓P	**P**	**16 32 24.7**	**+0.2**
JOT				S	**S**	**16 32 35.8**	**-0.1**
JKB	**Kayabe**	**0.84**	**299**	⇓P	**P**	**16 32 25.6**	**-0.2**
JKB				*e*S	**S**	**16 32 37.8**	**-0.3**
JNBK	**Urakawa-nobuka**	**0.97**	**34**	⇑P	**P**	**16 32 27.1**	**-0.3**
JNBK				*e*S	**S**	**16 32 41.1**	**+0.1**
JTM	**Tenmabayashi**	**1.00**	**226**	⇓P	**P**	**16 32 28.4**	**+0.5**
JTM				S	**S**	**16 32 41.5**	**-0.2**
JEM	**Erimo**	**1.00**	**58**	⇑P	**P**	**16 32 28.1**	**+0.2**
JEM				*e*S	**S**	**16 32 42.3**	**+0.5**
JANG	**Nango**	**1.17**	**199**	⇓P	**P**	**16 32 30.3**	**+0.2**
JANG				S	**S**	**16 32 45.2**	**-0.5**
JSR	**Shiriuchi**	**1.20**	**273**	⇓P	**P**	**16 32 30.8**	**+0.3**
JSR				*e*S	**S**	**16 32 46.8**	**+0.4**
JNB	**Noboribetsu**	**1.23**	**324**	⇓P	**P**	**16 32 30.4**	**-0.5**
JNB				*e*S	**S**	**16 32 45.8**	**-1.1**
JBT2	**Biratori 2**	**1.32**	**11**	⇓P	**P**	**16 32 32.6**	**+0.3**
JBT2				*e*S	**S**	**16 32 49.5**	**+0.2**
JYM2	**Yakumo 2**	**1.38**	**298**	⇓P	**P**	**16 32 33.6**	**+0.5**
JYM2				*e*S	**S**	**16 32 51.5**	**+0.7**
JEW	**Eniwo**	**1.42**	**343**	⇓P	**P**	**16 32 33.8**	**+0.2**
JEW				*e*S	**S**	**16 32 51.6**	**0.0**
JCH	**Churui**	**1.51**	**41**	P	**P**	**16 32 35.4**	**+0.6**
JCH				*e*S	**S**	**16 32 54.1**	**+0.4**
JFR	**Furan**	**1.73**	**14**	⇓P	**P**	**16 32 37.9**	**+0.1**
JFR				*e*S	**S**	**16 32 59.1**	**+0.2**
JOSM	**Okushiri--Mats**	**1.99**	**288**	⇓P	**P**	**16 32 40.9**	**-0.4**
ASAJ	**Asahikawa**	**2.67**	**9**	P	**P**	**16 32 51.5**	**+0.6**
ASAJ				S	**S**	**16 33 23.4**	**+1.4**
ASAJ				pmax	pmax		
	comp=Z,97nm,0.3s						
ASAJ				smax			
	comp=N,42nm,0.3s						
ASAJ	**Asahikawa**	**2.67**	**9**	P	**P**	**16 32 51.5**	**+0.6**
	comp=N,97nm,0.3s,baz=228,slow=8.9,SNR=400						
ASAJ				S	**S**	**16 33 23.4**	**+1.3**
	comp=N,42nm,0.3s,baz=37,slow=32,SNR=6.4						
YUK	**Yuzh-Kuril'sk**	**3.81**	**47**	⇑*i*P	**P**	**16 33 04.7**	**-2.2**
YUK				*i* S	**S**	**16 33 45.6**	**-5.1**
YUK				pmax	pmax		
	comp=Z,1μm,0.6s						
YUK				pmax	pmax		
	comp=N,350nm,0.4s						
YUK				pmax	pmax		
	comp=Z,810nm,0.4s						
YUK				pmax	pmax		
	comp=E,380nm,0.6s						
YUK				smax			
	comp=E,4μm,0.5s						
YUK				smax			
	comp=N,3μm,0.6s						
YUK				smax			
	comp=N,3μm,0.6s						
YUK				smax			
	comp=E,8μm,0.6s						
YSS	**Yuzh-Sakhalins**	**5.49**	**5**	⇑*e*P	**P**	**16 33 30.0**	**-0.3**
YSS				*e*S	**S**	**16 34 30.0**	**-2.9**
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				smax			
	comp=N,60nm,1.0s						
YSS				smax			
	comp=E,40nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,18.0s						
YSS	**Yuzh-Sakhalins**	**5.49**	**5**	*e*P	**P**	**16 33 30.4**	**+0.1**
	comp=Z,25nm,0.4s						
KUR	**Kuril'sk**	**5.68**	**47**	*e*P	**P**	**16 33 29.5**	**-3.3**
KUR				*e*S	**S**	**16 34 32.5**	**-4.9**
KUR				pmax	pmax		
	comp=Z,90nm,0.5s						
KUR				smax			
	comp=N,70nm,0.6s						
KUR				smax			
	comp=E,150nm,0.6s						
MAJO	**Matsushiro**	**5.76**	**212**	*e*P	**P**	**16 33 35.6**	**+1.7**
MAJO				pmax	pmax		
	comp=Z,40nm,0.5s						
MAJO	**Matsushiro**	**5.76**	**212**	*e*P	**P**	**16 33 35.6**	**+1.7**
	comp=Z,40nm,0.5s						
MAT	**Matsushiro**	**5.76**	**212**	*e*P	**P**	**16 33 36.0**	**+2.1**
MAT				*e*S	**S**	**16 34 44.0**	**+4.6**
MAT				pmax	pmax		
	comp=Z,34nm,0.7s						
MAT	**Matsushiro**	**5.76**	**212**	*e*P	**P**	**16 33 36.0**	**+2.1**
	comp=Z,34nm,0.7s						
MAT				*e*S	**S**	**16 34 44.0**	**+4.6**
MAT	**Matsushiro**	**5.76**	**212**	P	**P**	**16 33 35.5**	**+1.6**
MAT				*e*S	**S**	**16 34 37.1**	**-2.3**
MJAR	**Matsushiro Arr**	**5.76**	**212**	P	**P**	**16 33 35.3**	**+1.4**
	comp=Z,5.4nm,0.3s,baz=26,slow=14,SNR=34						
MJAR				LR	LR	16 36 10.5	
	comp=Z,147nm,20.8s,baz=35,slow=42						
MDJ	**Mudanjiang**	**9.62**	**293**	P	**P**	**16 34 28.5**	**+1.4**
MDJ				XP		16 34 56.1	
MDJ				S	**S**	**16 36 15.9**	**+1.4**
MDJ				AMB	AMB		
	comp=Z,40nm,0.7s						
MDJ				LR	LR		
	comp=N,50nm,26.4s						
MDJ				LR	LR		
	comp=E,160nm,24.0s						
MDJ				LR	LR		
	comp=Z,210nm,24.8s						
MDJ	**Mudanjiang**	**9.62**	**293**	*e*P	**P**	**16 34 27.5**	**+0.4**
	comp=Z,39nm,0.9s						
KLR	**Kul'dur**	**10.58**	**320**	*e*P	**P**	**16 34 37.8**	**-2.4**
KS15	**Wonju Array Si**	**11.64**	**254**	*e*P	**P**	**16 34 57.5**	**+3.0**
JNU	**Nakatsue**	**12.17**	**230**	P	**P**	**16 35 00.2**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=67,slow=6.6,SNR=7.6						
JNU				LR	LR	16 39 30.8	
	comp=Z,94nm,22.0s,baz=21,slow=36						
CN2	**Changchun**	**12.42**	**286**	*e*P	**P**	**16 35 06.2**	**+1.3**
CN2				*e*S	**S**	**16 37 22.4**	**+0.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=N,140nm,16.0s						
CN2				LR	LR		
	comp=E,240nm,16.0s						
CN2				LR	LR		
	comp=Z,270nm,16.0s						
SNY	**Shenyang**	**13.79**	**278**	⇑P	**P**	**16 35 25.3**	**+2.5**
SNY				LR	LR		
	comp=E,170nm,23.4s						
SNY				LR	LR		
	comp=Z,180nm,25.8s						
PET	**Petropavlovsk**	**16.10**	**39**	*e*P	**P**	**16 35 57.9**	**+5.5**
PET				*e*S	**S**	**16 38 53.0**	**+4.5**
PET				smax			
	comp=E,100nm,24.4s						
PET				MLR	MLR		
	comp=Z,100nm,19.0s						
HIA	**Hailar**	**17.43**	**304**	*e*P	**P**	**16 36 07.2**	**-1.9**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HIA	**Hailar**	**17.43**	**304**	*e*P	**P**	**16 36 07.2**	**-1.9**
	comp=Z,8.3nm,0.6s						
JOW	**Kunigami**	**18.48**	**222**	LR	LR	16 43 39.8	
	comp=Z,98nm,21.2s,baz=168,slow=37						
MA2	**Magadan**	**18.92**	**14**	P	**P**	**16 36 23.4**	**-3.4**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MA2	**Magadan**	**18.92**	**14**	*e*P	**P**	**16 36 25.1**	**-1.7**
	comp=Z,17nm,0.9s						
CLNS	**Chul'man**	**18.93**	**330**	*e*P	**P**	**16 36 25.4**	**-1.5**
CLNS				pmax	pmax		
	comp=Z,29nm,0.6s						
CLNS				pmax	pmax		
	comp=N,15nm,0.7s						
CLNS				pmax	pmax		
	comp=E,11nm,0.9s						
TIA	**Tai'an**	**20.06**	**263**	*e*P	**P**	**16 36 36.6**	**-2.7**
NJ2	**Nanjing**	**20.76**	**250**	*e*P	**P**	**16 36 45.9**	**-0.6**
NJ2				PP	PP	16 37 10.9	+0.8
NJ2				XS		16 40 58.0	
NJ2				AMB	AMB		
	comp=Z,320nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,520nm,5.1s						
NJ2				LR	LR		
	comp=N,250nm,23.4s						
NJ2				LR	LR		
	comp=E,2μm,26.0s						
NJ2				LR	LR		
	comp=Z,1μm,20.1s						
YAK	**Yakutsk**	**21.87**	**344**	*e*P	**P**	**16 36 53.4**	**-4.1**
YAK				pmax	pmax		
	comp=Z,58nm,1.0s,mb4.9						
YAK	**Yakutsk**	**21.87**	**344**	*e*P	**P**	**16 36 53.0**	**-4.5**
	comp=Z,51nm,0.6s,mb5.0						
SEY	**Seymchan**	**22.34**	**13**	*e*P	**P**	**16 36 59.7**	**-2.4**
SEY				*e*		16 37 26.9	
SEY				*e*PPP	PPP	16 37 37.0	-5.0
SEY				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.1						
SEY				pmax	pmax		
	comp=E,2.0nm,0.6s						
TATO	**Taipei**	**23.70**	**232**	*e*P	**P**	**16 37 15.0**	**-0.5**
	comp=E,28nm,0.6s,mb4.8						
BOD	**Bodaibo**	**24.16**	**322**	*e*P	**P**	**16 37 19.5**	**-0.1**
BOD				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.4						
SONM	**Songino Array**	**25.95**	**296**	P	**P**	**16 37 37.1**	**+0.3**
	comp=Z,11nm,0.7s,mb4.4,baz=90,slow=8.6,SNR=17						
SONM				LR	LR	16 48 24.5	
	comp=Z,117nm,21.8s,baz=264,slow=38						
XAN	**Xi'an**	**27.08**	**265**	P	**P**	**16 37 45.2**	**-2.1**
GUMO	**Guam**	**27.90**	**174**	P	**P**	**16 37 54.1**	**-0.9**
GUMO				pmax	pmax		
	comp=Z,370nm,1.4s,mb5.7						
GUMO	**Guam**	**27.90**	**174**	P	**P**	**16 37 54.1**	**-0.9**
	comp=Z,370nm,1.4s,mb5.7						
TLY	**Talaya**	**27.98**	**305**	*e*P	**P**	**16 37 54.4**	**-0.9**
TLY				*e*		16 38 51.2	
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
TLY				MLR	MLR		
	comp=Z,78nm,18.0s						
TLY	**Talaya**	**27.98**	**305**	*e*P	**P**	**16 37 54.6**	**-0.7**
	comp=Z,8.3nm,1.0s,mb4.2						
ZAK	**Zakamensk**	**28.10**	**302**	⇑*i*P	**P**	**16 37 55.6**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.9						
ENH	**Enshi**	**28.48**	**257**	*e*P	**P**	**16 37 57.7**	**-2.3**
	comp=Z,10nm,0.4s,mb4.7						
BILL	**Bilibino**	**29.64**	**18**	*ce*P	**P**	**16 38 08.4**	**-1.6**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
BILL	**Bilibino**	**29.64**	**18**	*e*P	**P**	**16 38 07.8**	**-2.2**
	comp=Z,4.4nm,0.7s,mb4.2						
LZH	**Lanzhou**	**30.07**	**272**	*e*P	**P**	**16 38 13.0**	**-1.1**
LZH				AP	pP	16 38 31.5	+1.0
LZH				PP	PP	16 39 13.2	-1.2
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.6						
LZH				AMB	AMB		
	comp=Z,90nm,4.8s						
LZH				LR	LR		
	comp=E,390nm,12.2s						
LZH				LR	LR		
	comp=Z,830nm,15.3s						
TIXI	**Tiksi**	**30.94**	**352**	⇓*i*P	**P**	**16 38 17.6**	**-3.8**
GTA	**Gaotai**	**31.96**	**280**	P	**P**	**16 38 29.9**	**-0.7**
GTA				AP	pP	16 38 47.0	-0.2
GTA				PP	PP	16 39 39.8	+1.5
GTA				PCP	PcP	16 41 20.0	+0.5
GTA				S	**S**	**16 43 36.4**	**+0.5**
GTA				XS		16 44 07.2	
GTA				SCP		16 44 52.8	
GTA				PCS		16 45 04.2	
GTA				SS	SS	16 45 33.9	+2.1
GTA				SCS	ScS	16 48 53.5	+0.7
GTA				AMB	AMB		
	comp=Z,60nm,10.6s						
GTA				LR	LR		
	comp=N,130nm,17.5s						
GTA				LR	LR		
	comp=E,150nm,17.9s						
GTA				LR	LR		
	comp=Z,160nm,18.6s						
GYA	**Guiyang**	**32.67**	**254**	P	**P**	**16 38 35.6**	**-1.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
KMI	**Kunming**	**36.31**	**256**	P	**P**	**16 39 07.6**	**-0.5**
ZAL	**Zalesovo**	**39.40**	**308**	P	**P**	**16 39 33.6**	**+0.1**
	comp=Z,12nm,0.7s,mb4.9,baz=22,slow=8.2,SNR=56						
ZAL				PcP	PcP	16 41 40.9	-0.4
	comp=Z,3.0nm,0.6s,baz=24,slow=1.8,SNR=3.8						
ZAL				LR	LR	16 57 20.9	
	comp=Z,89nm,21.1s,baz=41,slow=38						
WMQ	**Urumqi**	**39.42**	**292**	P	**P**	**16 39 34.2**	**+0.4**
WMQ				AP	pP	16 39 52.5	+1.7
WMQ				XP	sP	16 40 01.5	+2.6
WMQ				PP	PP	16 41 10.1	+1.0
WMQ				PPP	PPP	16 41 35.6	+1.2
WMQ				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.4						
WMQ				LR	LR		
	comp=Z,610nm,17.0s						
NVS	**Novosibirsk**	**40.22**	**310**	*e*P	**P**	**16 39 39.9**	**-0.4**
NVS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
NVS				pmax	pmax		
	comp=E,5.0nm,0.8s						
MKAR	**Makanchi Array**	**42.29**	**298**	P	**P**	**16 39 57.3**	**-0.1**
	comp=E,10nm,0.6s,mb4.8,baz=82,slow=12,SNR=62						
MKAR				PcP	PcP	16 41 50.1	-0.6
	comp=E,1.3nm,0.3s,baz=60,slow=3.8,SNR=4.2						
MKAR				LR	LR	16 58 39.6	
	comp=E,47nm,19.3s,baz=139,slow=38						
LSA	**Lhasa**	**42.45**	**271**	P	**P**	**16 40 01.0**	**+2.1**
LSA	**Lhasa**	**42.45**	**271**	*e*P	**P**	**16 40 00.2**	**+1.3**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**42.45**	**271**	*e*P	**P**	**16 40 00.2**	**+1.3**
	comp=Z,8.4nm,0.8s,mb4.5						
IMA	**Indian Mountai**	**42.66**	**33**	*e*P	**P**	**16 40 00.5**	**+0.4**
IMA				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.1						
IMA	**Indian Mountai**	**42.66**	**33**	*e*P	**P**	**16 40 00.5**	**+0.3**
	comp=Z,27nm,0.7s,mb5.1						
CHG	**Chiang Mai**	**42.99**	**252**	⇓P	**P**	**16 40 06.8**	**+3.3**
	comp=Z,12nm,0.6s,mb4.8						
CMAR	**Chiang Mai Arr**	**43.23**	**251**	P	**P**	**16 40 06.0**	**+0.6**
	comp=Z,1.8nm,0.6s,mb4.0,baz=43,slow=7.3,SNR=14						
CMAR				LR	LR	16 57 34.5	
	comp=Z,49nm,21.1s,baz=65,slow=35						
SPU	**Mount Spurr**	**43.47**	**40**	P	**P**	**16 40 06.2**	**-0.6**
SHL	**Shillong**	**44.09**	**265**	*e*x	x	16 40 13.0	
MCK	**McKinley**	**44.72**	**36**	P	**P**	**16 40 15.6**	**-1.3**
MCK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
MCK	**McKinley**	**44.72**	**36**	P	**P**	**16 40 15.6**	**-1.3**
	comp=Z,1.9nm,0.4s,mb4.2						
COLA	**College**	**45.11**	**35**	*e*P	**P**	**16 40 20.8**	**+0.9**
COLA				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
COLA	**College**	**45.11**	**35**	*e*P	**P**	**16 40 20.8**	**+0.8**
	comp=Z,15nm,0.8s,mb4.8						
SML	**Sawmill**	**45.19**	**39**	*e*P	**P**	**16 40 20.0**	**-0.6**
ILAR	**Eielson Array**	**45.53**	**35**	P	**P**	**16 40 23.6**	**+0.3**
	comp=Z,11nm,0.9s,mb4.6,baz=281,slow=8.1,SNR=53						
GUN	**Gumba**	**47.33**	**272**	*e*P	**P**	**16 40 37.0**	**-1.0**
	comp=Z,126nm,0.5s						
CHKZ	**Chkalovo**	**47.70**	**310**	*i* P	**P**	**16 40 39.8**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
CHKZ	**Chkalovo**	**47.70**	**310**	*e*P	**P**	**16 40 39.4**	**-1.1**
	comp=Z,97nm,0.6s						
KKN	**Kakani**	**47.84**	**272**	*e*P	**P**	**16 40 42.0**	**0.0**
	comp=Z,81nm,0.8s,mb5.6						
KKN	**Kakani**	**47.84**	**272**	*e*P	**P**	**16 40 42.0**	**0.0**
KKN				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.3						
PKI	**Pulchoki**	**47.86**	**272**	*e*P	**P**	**16 40 43.1**	**+0.9**
	comp=Z,25nm,0.5s,mb5.3						
PKI	**Pulchoki**	**47.86**	**272**	*e*P	**P**	**16 40 43.1**	**+0.9**
PKI				pmax	pmax		
	comp=Z,13nm,0.5s,mb5.0						
BVA0	**Borovoye Array**	**48.01**	**310**	*i* P	**P**	**16 40 42.6**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
TKM2	**Tokmak 2**	**48.05**	**295**	P	**P**	**16 40 43.9**	**+0.5**
	SNR=28						
DMN	**Daman**	**48.07**	**272**	*e*P	**P**	**16 40 43.7**	**-0.1**
	comp=Z,33nm,0.7s,mb5.3						
GKN	**Gorkha**	**48.21**	**273**	*e*P	**P**	**16 40 44.5**	**-0.4**
	comp=Z,50nm,0.6s,mb5.5						
KBK	**Karagaybulak**	**48.59**	**295**	P	**P**	**16 40 47.9**	**+0.3**
	SNR=5.4						
KZA	**Kyzart**	**48.61**	**294**	P	**P**	**16 40 48.8**	**+1.2**
	SNR=13						
USP	**Ospenovka**	**48.66**	**296**	P	**P**	**16 40 48.0**	**-0.1**
	SNR=8.8						
AAK	**Ala-Archa**	**48.91**	**295**	P	**P**	**16 40 50.0**	**0.0**
	SNR=6.4						
AAK	**Ala-Archa**	**48.91**	**295**	*i* P	**P**	**16 40 49.8**	**-0.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.7						
AAK	**Ala-Archa**	**48.91**	**295**	*e*P	**P**	**16 40 48.7**	**-1.3**
	comp=Z,6.7nm,0.4s,mb4.9						
KOLN	**Koldanda**	**49.12**	**273**	*e*P	**P**	**16 40 51.7**	**-0.1**
	comp=Z,27nm,0.5s,mb5.5						
EKS2	**Erkin-Say**	**49.38**	**296**	P	**P**	**16 40 53.5**	**-0.1**
	SNR=13						
AML	**Almayashu**	**49.65**	**295**	P	**P**	**16 40 56.4**	**+0.6**
	SNR=13						
INK	**Inuvik**	**50.24**	**29**	P	**P**	**16 41 00.1**	**+0.2**
INK				pmax	pmax		
	comp=Z,19nm,0.5s						
INK	**Inuvik**	**50.24**	**29**	P	**P**	**16 41 00.1**	**+0.2**
	comp=Z,19nm,0.5s,mb5.3,baz=302,slow=7.0,SNR=72						
INK	**Inuvik**	**50.24**	**29**	*e*P	**P**	**16 40 59.7**	**-0.2**
	comp=Z,20nm,0.5s,mb5.3						
LGTI	**Lohaghat**	**50.75**	**277**	*e*P	**P**	**16 41 05.0**	**+0.7**
PMG	**Port Moresby**	**50.86**	**173**	P	**P**	**16 41 06.4**	**+1.1**
PMG				pmax	pmax		
	comp=Z,27nm,1.1s						
PMG	**Port Moresby**	**50.86**	**173**	P	**P**	**16 41 06.4**	**+1.1**
	comp=Z,27nm,1.1s,mb5.2						
KLP	**Kalpa**	**51.17**	**280**	*e*P	**P**	**16 41 07.9**	**+0.4**
KLP				AML	AML	16 41 16.3	
	comp=E,154nm,1.0s						
KLP				AML	AML	16 41 19.2	
	comp=N,107nm,0.6s						

KKAR	Karatay Array	51.40	297	iP	P	16 41 08.1	-0.9
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
SMLA	Simla	52.17	281	iP	P	16 41 10.6	-4.4
SVE	Sverdlovsk	52.18	317	eP	P	16 41 14.9	+0.2
ARU	Arti	53.40	317	eP	P	16 41 22.8	-1.0
ARU				e		16 42 29.4	
ARU				pmax	pmax		
	comp=Z,7.0nm,0.3s,mb5.2						
ARU	Arti	53.40	317	eP	P	16 41 22.8	-0.9
	comp=Z,6.9nm,0.3s,mb5.2						
ARU				ePcP	PcP	16 42 29.4	-0.7
NDI	New Delhi	53.40	278	eP	P	16 41 21.5	-2.7
NDI				ex	x	16 41 23.1	
NDI				ex	x	16 42 18.3	
AYAN	Aya Nagar	53.58	278	eP	P	16 41 24.3	-1.2
SONA	Sohna	53.73	278	iP	P	16 41 25.6	-1.1
SONA				eS	x	16 42 02.2	
SONA				AML	AML	16 42 15.3	
	comp=N,5.3nm,0.1s						
SONA				AML	AML	16 42 16.3	
	comp=E,6.2nm,0.2s						
KUDL	Kundal	54.23	278	ex	P	16 41 28.9	-1.3
DLBC	Dease Lake	54.88	40	P	P	16 41 34.0	-0.6
AB31	Akbulak array	55.50	308	iP	P	16 41 38.4	-0.8
AB31				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
RES	Resolute Bay	58.19	15	eP	P	16 41 56.7	-1.2
RES				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
RES	Resolute Bay	58.19	15	eP	P	16 41 56.6	-1.2
	comp=Z,21nm,0.8s,mb5.2						
KEV	Kevo	59.47	339	ep	P	16 42 04.7	-2.1
	comp=Z,1.6nm,0.3s,mb4.5						
KEV	Kevo	59.47	339	eP	P	16 42 04.7	-2.1
KEV				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.6						
YKA	Yellowknife Ar	59.75	32	P	P	16 42 08.1	-0.7
	comp=Z,1.2nm,0.7s,mb4.1,baz=305,slow=6.3,SNR=12						
YKA				LR	LR	17 09 54.4	
	comp=Z,23nm,19.7s,baz=240,slow=38						
ARCES	ARCESS Array B	60.01	339	P	P	16 42 09.5	-1.1
	comp=Z,1.3nm,0.5s,mb4.2,baz=53,slow=8.3,SNR=14						
CTAO	Charters Tower	61.38	175	P	P	16 42 19.8	-0.7
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
CTAO	Charters Tower	61.38	175	P	P	16 42 19.8	-0.8
	comp=Z,7.2nm,0.5s,mb5.0						
WRAB	Tennant Creek	61.52	188	eP	P	16 42 18.9	-2.5
WRAB				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
WRAB	Tennant Creek	61.52	188	eP	P	16 42 18.9	-2.5
	comp=Z,11nm,1.0s,mb4.8						
WRA	Warramunga Arr	61.52	188	P	P	16 42 19.7	-1.8
	comp=Z,2.2nm,0.5s,mb4.4,baz=5.9,slow=6.3,SNR=54						
MOS	Moscow	63.98	322	eP	P	16 42 33.8	-3.4
MOS				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.5						
KAF	Kangasniemi	64.59	332	ep	P	16 42 38.8	-2.2
	comp=Z,5.6nm,0.6s,mb4.6,baz=46,slow=6.2						
KAF	Kangasniemi	64.59	332	eP	P	16 42 38.8	-2.2
KAF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
OBN	Obninsk	64.84	322	d iP	P	16 42 40.7	-2.0
OBN				i *PP	pP	16 43 13.1	+12
OBN				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
OBN	Obninsk	64.84	322	P	P	16 42 38.9	-3.9
	comp=Z,14nm,0.4s,mb5.1						
FINES	FINESS Array B	65.11	332	P	P	16 42 43.3	-1.1
	comp=Z,8.7nm,0.5s,mb4.9,baz=49,slow=7.5,SNR=92						
FINES				LR	LR	17 13 12.7	
	comp=Z,51nm,19.9s,baz=143,slow=38						
ASAR	Alice Springs	65.25	188	P	P	16 42 44.9	-1.1
	comp=Z,1.5nm,0.8s,mb3.9,baz=6.8,slow=8.2,SNR=16						
MBWA	Marble Bar	65.66	203	P	P	16 42 45.3	-3.3
	comp=Z,12nm,1.1s,mb4.6						
VSU	Vasula	66.88	329	c iP	P	16 42 54.8	-0.8
KIV	Kislovodsk	68.38	310	eP	P	16 43 06.3	+1.0
KIV				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.2						
KIV	Kislovodsk	68.38	310	eP	P	16 43 06.3	+1.0
	comp=Z,39nm,1.1s,mb5.2						
GNI	Garni	69.46	306	c iP	P	16 43 13.9	+1.9
GNI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
FCC	Fort Churchill	69.83	27	eP	P	16 43 13.3	-0.6
FCC				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
FCC	Fort Churchill	69.83	27	eP	P	16 43 13.3	-0.6
	comp=Z,2.5nm,0.5s,mb4.3						
NB2	NORSAR Subarra	70.28	337	P	P	16 43 15.7	-0.9
	comp=Z,4.7nm,0.5s,mb4.6,baz=35,slow=6.2						
NOA	NORSAR Array B	70.28	337	P	P	16 43 15.9	-0.7
	comp=Z,6.1nm,0.7s,mb4.6,baz=37,slow=6.2,SNR=33						
NOA				LR	LR	17 17 15.4	
	comp=Z,23nm,18.9s,baz=5.0,slow=38						
SOC	Sochi	70.31	311	eP	P	16 43 14.0	-3.1
SOC				e		16 43 37.8	
SOC				ePPP	PPP	16 47 33.8	-1.9
SOC				e		16 53 04.0	
SOC				eSSS	SSS	17 00 01.6	0.0
SOC				pmax	pmax		
	comp=N,6.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,10.0nm,0.6s						
SOC				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.0						
HLID	Hailey	71.03	48	P	P	16 43 21.3	-0.2
	comp=Z,0.5nm,0.4s,mb3.7						
AKASG	Malin Array Be	71.08	322	P	P	16 43 21.0	-0.6
	comp=Z,9.1nm,0.4s,mb5.0,baz=43,slow=6.5,SNR=94						
SUW	Suwalki	71.41	327	P	P	16 43 22.4	-1.1
NVAR	Mina Array Bea	71.99	55	P	P	16 43 28.3	+1.0
	comp=Z,0.9nm,0.6s,mb3.8,baz=308,slow=4.5,SNR=5.8						
NVAR	Mina Array Bea	71.99	55	P	P	16 43 28.3	+1.0
STKA	Stephens Creek	73.00	180	P	P	16 43 32.9	-0.4
	comp=Z,2.2nm,0.9s,mb4.0,baz=3.5,slow=11,SNR=3.4						
BW06	Boulder Array	74.24	47	P	P	16 43 40.5	+0.2
	comp=Z,2.0nm,0.8s,mb3.9						
PDAR	Pinedale Array	74.24	47	P	P	16 43 41.0	+0.7
	comp=Z,1.4nm,0.6s,mb3.9,baz=284,slow=3.7,SNR=10.0						
PDAR				LR	LR	17 14 59.7	
	comp=Z,32nm,19.5s,baz=74,slow=35						
MALT	Malatya	74.42	307	eP	P	16 43 42.7	+1.2
MALT				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.6						
MALT	Malatya	74.42	307	eP	P	16 43 42.7	+1.3
	comp=Z,15nm,1.1s,mb4.6						
KWP	Kalwaria	74.80	324	eP	P	16 43 44.3	+0.9
BURAR	Bucovina Array	75.12	321	⇑iP	P	16 43 45.6	+0.4
BURAR	Bucovina Array	75.12	321	⇑iP	P	16 43 45.7	+0.4
CFR	Carcaliu	75.44	318	⇑iP	P	16 43 47.0	-0.2
ULM	Lac du Bonnet	75.55	34	P	P	16 43 48.4	+0.7
	comp=Z,1.4nm,0.4s,mb4.0,slow=1.0,SNR=2.3						
OJC	Ojcow	75.62	326	⇑eP	P	16 43 48.5	+0.5
HARR	Harsova	75.89	318	⇑iP	P	16 43 49.9	+0.2
RSSD	Black Hills	76.22	43	P	P	16 43 51.3	-0.3
RSSD				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
RSSD	Black Hills	76.22	43	P	P	16 43 51.3	-0.3
	comp=Z,1.5nm,0.5s,mb4.0						
BRTR	Keskin Array B	76.27	311	P	P	16 43 52.4	+0.4
	comp=Z,3.7nm,0.6s,mb4.3,baz=77,slow=3.8,SNR=12						
MORC	Moravsky Berou	76.90	327	eP	P	16 43 55.7	+0.4
MORC				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
MORC	Moravsky Berou	76.90	327	eP	P	16 43 55.7	+0.4
	comp=Z,6.0nm,0.8s,mb4.4						
DPC	Dobruska-Polom	76.95	328	eP	P	16 43 56.4	+0.8
UPC	Upice	76.95	328	eP	P	16 43 56.1	+0.5
PSZ	Piszkesteto	77.32	324	eP	P	16 43 58.4	+0.7
PSZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
PSZ	Piszkesteto	77.32	324	eP	P	16 43 58.4	+0.7
	comp=Z,4.2nm,0.6s,mb4.3						
CLL	Collm	77.48	330	⇑iP	P	16 43 58.3	-0.2
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
CLL	Collm	77.48	330	⇑iP	P	16 43 58.3	-0.2
	comp=Z,8.0nm,0.9s,mb4.5						
CLL	Collm	77.48	330	⇑P	P	16 43 58.3	-0.2
	comp=Z,logA/T=0.9,mb4.4						
PVCC	Panska Ves	77.50	329	eP	P	16 43 59.1	+0.5
PV10	Paradox Valley	77.51	50	eP	P	16 44 00.1	+1.2
PRU	Pruhonice	77.94	328	eP	P	16 44 01.4	+0.4
KHC	Kasperske Hory	79.00	328	c iP	P	16 44 07.3	+0.4
KHC	Kasperske Hory	79.00	328	eP	P	16 44 07.3	+0.4
KHC				epP	pP	16 44 27.0	+1.4
GERES	GERESS Array B	79.18	328	P	P	16 44 08.4	+0.5
	comp=Z,1.6nm,0.5s,mb4.1,baz=34,slow=4.8,SNR=18						
GERES				LR	LR	17 22 32.0	
	comp=Z,22nm,20.3s,baz=32,slow=38						
GRA1	Grafenberg Arr	79.46	330	eP	P	16 44 09.9	+0.5
	comp=Z,10.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	79.46	330	eP	P	16 44 09.9	+0.5
GRF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	79.46	330	eP	P	16 44 09.9	+0.5
GRF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	79.46	330	eP	P	16 44 09.9	+0.5
	comp=Z,10.0nm,1.0s,mb4.6						
KBA	Koelnbreinsper	80.74	327	⇑iP	P	16 44 17.3	+1.0
	comp=Z,8.3nm,0.9s,mb4.6						
KBA	Koelnbreinsper	80.74	327	⇑iP	P	16 44 17.3	+1.0
KBA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
SCHQ	Schefferville	80.94	16	P	P	16 44 17.4	+0.3
	comp=Z,5.8nm,0.9s,mb4.4,baz=347,slow=5.3,SNR=7.8						
WATA	Walderalm	81.24	328	⇑iP	P	16 44 19.5	+0.6
	comp=Z,1.7nm,0.7s,mb4.0						
WATA	Walderalm	81.24	328	⇑iP	P	16 44 19.5	+0.6
WATA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
WTTA	Wattenberg	81.28	328	⇑iP	P	16 44 19.8	+0.7
	comp=Z,5.2nm,0.8s,mb4.4						
WTTA	Wattenberg	81.28	328	⇑iP	P	16 44 19.8	+0.7
WTTA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
GIVF	Givet	81.38	334	eP	P	16 44 19.2	-0.4
ANMO	Albuquerque	81.38	51	⇑iP	P	16 44 22.2	+2.3
MOTA	Moosalm	81.42	329	⇑iP	P	16 44 20.4	+0.6
	comp=Z,8.4nm,1.0s,mb4.5						
MOTA	Moosalm	81.42	329	⇑iP	P	16 44 20.4	+0.6
MOTA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
SQTA	Sankt Quirin	81.48	329	⇑iP	P	16 44 20.8	+0.7
	comp=Z,2.9nm,0.9s,mb4.1						
SQTA	Sankt Quirin	81.48	329	⇑iP	P	16 44 20.8	+0.7
SQTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
DAVA	Damuels	81.94	329	⇑iP	P	16 44 23.1	+0.6
	comp=Z,14nm,1.0s,mb4.8						
CDF	Champ du Feu	81.97	331	⇑iP	P	16 44 22.7	+0.1
	comp=Z,5.4nm,0.7s,mb4.2						
CDF	Champ du Feu	81.97	331	⇑iP	P	16 44 22.7	+0.1
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
HAU	Haudompre	82.64	332	eP	P	16 44 26.0	-0.1
HAU				eR			
	comp=Z,41nm,20.4s						
LOR	Lormes	84.14	333	⇑iP	P	16 44 33.8	+0.2
	comp=Z,12nm,0.8s,mb4.5						
LOR				eR			
	comp=Z,32nm,18.2s						
LOR	Lormes	84.14	333	⇑iP	P	16 44 33.8	+0.2
LOR				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
LOR				MLR	MLR		
	comp=Z,30nm,18.3s						
FLN	La Foliniere	84.24	336	eP	P	16 44 34.0	-0.1
FLN				eR			
	comp=Z,46nm,21.2s						
SSF	Saint Saulge	84.44	333	⇑iP	P	16 44 35.4	+0.3
SSF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
SSF	Saint Saulge	84.44	333	⇑iP	P	16 44 35.4	+0.3
	comp=Z,4.6nm,0.8s,mb4.4						
LPL	La Plagne	84.61	330	⇑iP	P	16 44 37.0	+1.0
	comp=Z,20nm,0.9s,mb4.8						
LPL	La Plagne	84.61	330	⇑iP	P	16 44 37.0	+1.0
LPL				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
LPG	La Plagne	84.62	330	⇑iP	P	16 44 37.2	+1.1
	comp=Z,22nm,0.8s,mb4.9						
LPG	La Plagne	84.62	330	⇑iP	P	16 44 37.2	+1.1
LPG				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
GRR	Gorron	84.69	336	eP	P	16 44 36.6	+0.3
	comp=Z,12nm,0.7s,mb4.7						
GRR	Gorron	84.69	336	eP	P	16 44 36.6	+0.3
GRR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
SMF	Signal de Mont	84.69	333	eP	P	16 44 36.8	+0.4
AVF	Avril sur Loir	84.73	333	⇑iP	P	16 44 37.0	+0.4
	comp=Z,16nm,0.6s,mb4.8						
AVF	Avril sur Loir	84.73	333	⇑iP	P	16 44 37.0	+0.4
AVF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
BNI	Bardonecchia	85.03	330	eP	P	16 44 38.5	+0.4
BNI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
BNI	Bardonecchia	85.03	330	eP	P	16 44 38.5	+0.4
	comp=Z,5.5nm,0.9s,mb4.5						
MBDF	Montbardon	85.27	330	⇑iP	P	16 44 39.5	+0.2
	comp=Z,13nm,0.8s,mb4.7						
MBDF	Montbardon	85.27	330	⇑iP	P	16 44 39.5	+0.2
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
SGMF	Saint Gilles	85.31	337	⇑iP	P	16 44 40.0	+0.6
ORIF	Oris-en-Rattie	85.44	330	⇑iP	P	16 44 40.8	+0.7
	comp=Z,14nm,0.7s,mb4.7						
ORIF				eR			
	comp=Z,26nm,21.5s						
ROSF	Rostrenen	85.45	338	⇑iP	P	16 44 40.9	+0.8
	comp=Z,13nm,0.8s,mb4.6						
ROSF	Rostrenen	85.45	338	⇑iP	P	16 44 40.9	+0.8
ROSF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
TIP	Timpagrande	85.52	320	eP	P	16 44 40.7	0.0
TCF	Toulx Ste Croi	85.56	333	⇑iP	P	16 44 41.3	+0.6
	comp=Z,15nm,1.1s,mb4.5						
TCF	Toulx Ste Croi	85.56	333	⇑iP	P	16 44 41.3	+0.6
TCF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
SBF	Sospel	85.75	329	eP	P	16 44 41.4	-0.3
	comp=Z,27nm,0.9s,mb4.9						
SBF	Sospel	85.75	329	eP	P	16 44 41.4	-0.3
SBF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
QUIF	Quistinic	85.80	337	⇑iP	P	16 44 42.3	+0.5
VIVF	Saint-Julien-l	85.94	331	⇑iP	P	16 44 43.3	+0.7
	comp=Z,20nm,1.0s,mb4.7						
VIVF	Saint-Julien-l	85.94	331	⇑iP	P	16 44 43.3	+0.7
VIVF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
MFF	Saint Martin d	86.05	335	eP	P	16 44 44.0	+0.9
PPT	Papeete	86.23	117	eP	P	16 44 51.3	+6.7
	comp=Z,191nm,21.0s						
PPT				eS	S	16 55 23.4	+11
	comp=Z,98nm,20.8s						
PPT				eSS	SS	17 01 00.6	+4.6
	comp=Z,182nm,20.0s						
PPT				eLQ		17 08 57.6	
	comp=Z,150nm,21.8s						
PPT				eLR	LR	17 11 18.6	
	comp=Z,73nm,22.0s						
PPT	Papeete	86.23	117	LR	LR	17 23 49.9	
	comp=Z,107nm,18.2s,baz=350,slow=36						
LMR	La Mourre	86.55	329	eP	P	16 44 45.7	+0.1
	comp=Z,35nm,1.2s,mb4.8						
LMR	La Mourre	86.55	329	eP	P	16 44 45.7	+0.1
LMR				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
RJF	Les Rejaudoux	86.65	333	eP	P	16 44 47.0	+0.9
	comp=Z,12nm,0.8s,mb4.6						
RJF				eR			
	comp=Z,50nm,23.0s						
RJF	Les Rejaudoux	86.65	333	eP	P	16 44 47.0	+0.9
RJF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
RJF				MLR	MLR		
	comp=Z,50nm,23.0s						
CAF	Calviac	86.80	333	⇑iP	P	16 44 48.2	+1.4
	comp=Z,28nm,0.8s,mb5.0						
CAF	Calviac	86.80	333	⇑iP	P	16 44 48.2	+1.4
CAF				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
LASF	Ste Croix	86.91	331	eP	P	16 44 47.5	+0.2
	comp=Z,6.5nm,0.9s,mb4.3						
TXAR	Lajitas Array	87.05	53	P	P	16 44 49.8	+1.4
	comp=Z,0.4nm,0.5s,mb3.6,baz=288,slow=4.0,SNR=4.9						
LFF	La Frestale	87.24	334	⇑iP	P	16 44 50.2	+1.3
	comp=Z,18nm,0.7s,mb4.8						
LFF	La Frestale	87.24	334	⇑iP	P	16 44 50.2	+1.3
LFF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
MTLF	Montolieu	88.13	332	eP	P	16 44 54.2	+1.0
	comp=Z,5.7nm,0.9s,mb4.3						
MTLF	Montolieu	88.13	332	eP	P	16 44 54.2	+1.0
MTLF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
EPF	Esparros	89.06	333	eP	P	16 44 58.1	+0.5
ETSF	Etsaut	89.48	333	⇑iP	P	16 45 01.0	+1.4
	comp=Z,12nm,0.8s,mb4.7						
ETSF	Etsaut	89.48	333	⇑iP	P	16 45 01.0	+1.4
ETSF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
TBI	Tubuai	90.41	121	eS	S	16 55 57.7	+6.4
	comp=Z,94nm,33.2s						
TBI				eLR	LR	17 12 36.2	
	comp=Z,586nm,39.8s,baz=306						
ESDC	Sonseca Array	93.50	334	P	P	16 45 18.8	+0.5
	comp=Z,0.3nm,0.4s,mb4.0,baz=27,slow=6.6,SNR=4.5						
RKT	Rikitea	99.99	112	eP	P	16 45 54.4	+6.2
	comp=Z,76nm,42.5s						
RKT	Rikitea	99.99	112	eP	P	16 45 55.9	+7.7
	comp=Z,111nm,41.8s						
RKT				eLQ		17 14 16.8	
	comp=Z,128nm,34.0s						
RKT				eLR	LR	17 18 27.2	
	comp=Z,130nm,45.2s,baz=338						
JTS	JuntasAbangare	112.80	51	i PKIKP	PKPdf	16 50 42.2	+3.8
MATP	Matopo	120.67	269	PKP	PKPdf	16 50 55.0	+1.4
	comp=Z,1.0nm,0.4s,baz=81,slow=4.0,SNR=7.6						
SNAA	Sanae	145.12	199	⇓iP	PKPdf	16 51 38.9	+1.4
SNAA	Sanae	145.12	199	⇑i	PKPdf	16 51 41.5	+4.0
SNAA	Sanae	145.12	199			16 51 57.1	
VNA2	Neumayer--Watz	146.71	198	P	PKPdf	16 51 44.8	+4.6
VNA2	Neumayer--Watz	146.71	198		PKPdf	16 51 47.5	+7.3
VNA2	Neumayer--Watz	146.71	198			16 52 03.9	
VNA3	Neumayer Olymp	146.97	196	P	PKPdf	16 51 48.1	+7.4
VNA3	Neumayer Olymp	146.97	196		PKPdf	16 51 50.9	+10
VNA3	Neumayer Olymp	146.97	196			16 52 04.0	

IDC 02 17:03:48.5±8.2**, 1.23N**×**123.77E, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/19**, mbtmp3.8**/3**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx2.7**/29**, Error ellipse: s-maj=191.0km s-min=127.7km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.46	154	P	P	17 08 58.2	-2.5
	0.9nm,0.4s,baz=332,slow=10,SNR=17						
ASAR	Alice Springs	26.64	159	P	P	17 09 30.0	-0.9
	1.4nm,0.5s,baz=330,slow=7.3,SNR=28						
CMAR	Chiang Mai Arr	29.77	307	LR	LR	17 22 00.3	
	comp=Z,20nm,18.5s,baz=341,slow=37						
CBIJ	Chichi jima	31.21	33	LR	LR	17 22 14.1	
	comp=Z,296nm,18.5s,baz=129,slow=35						
STKA	Stephens Creek	37.01	154	P	P	17 11 00.5	-1.4
	0.5nm,0.4s,baz=338,slow=11,SNR=4.9						

IDC ***02*** *17:17:39.9±2.0, 28.08N×142.92E, mb3.7/3, mb1 4.0/4, mb1mx3.6/22, mbtmp3.8/4, ML4.1/1, Error ellipse: s-maj=49.4km s-min=21.0km az=93.0*

ISC 02 17:17:39.8±5.8**, 28.19N**±0.09×**143.1E**±0.3**, h20**km±43km**, n6, σ0.63**/8**, mb3.7**/3**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.34	216	Pn	Pn	17 18 04.2	+0.6
	34nm,0.3s,baz=300,slow=18,SNR=30						
CBIJ				Sn	Sn	17 18 20.6	-0.4
	76nm,0.3s,baz=302,slow=21,SNR=12						
MJAR	Matsushiro Arr	9.28	335	Pn	P	17 19 55.3	-0.4
	1.7nm,0.3s,baz=159,slow=11,SNR=16						
MAT	Matsushiro	9.28	335	P	P	17 19 55.6	-0.2
MAT				S	Sn	17 21 18.6	-22
WRA	Warramunga Arr	48.58	191	P	P	17 26 23.9	-0.3
	1.6nm,0.6s,mb4.2,baz=11,slow=8.4,SNR=18						
MKAR	Makanchi Array	50.39	309	P	P	17 26 38.5	+0.8
	0.2nm,0.3s,mb3.6,baz=88,slow=8.2,SNR=5.9						
ASAR	Alice Springs	52.30	191	P	P	17 26 52.5	-0.1
	0.2nm,0.5s,mb3.3,baz=9.6,slow=8.2,SNR=3.8						

NNC ***02*** *17:36:33.8±7.8, 36.75N×69.50E, h182km±107km, mpv3.9, Error ellipse: s-maj=69.6km s-min=40.0km az=26.0*

ISC 02 17:36:25.9±1.9**, 36.07N**±0.07×**69.9E**±0.2**, h149**km±49km**, n12, σ0.95**/16**, 4C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.72	25	P	P	17 38 03.6	+0.4
	SNR=20						
KK31	Karatay Array	7.04	4	⇑P	P	17 38 06.5	-1.0
	4.2nm,0.5s,baz=288,slow=2.4,SNR=28						
KK31				⇓S	S	17 39 19.0	-7.5
	1.2nm,0.3s,baz=192,slow=24,SNR=5.0						
UCH	Uchtor	7.11	29	P	P	17 38 09.1	+0.7
	SNR=21						
EKS2	Erkin-Say	7.23	23	P	P	17 38 10.5	+0.5
	SNR=9.8						
KZA	Kyzart	7.29	33	P	P	17 38 12.3	+1.5
	SNR=6.9						
AAK	Ala-Archa	7.45	27	P	P	17 38 12.6	-0.3
	3.4nm,0.4s						
AAK				⇑S	S	17 39 35.0	-1.3
	18nm,0.7s						
SMLA	Simla	7.79	127	i P	P	17 38 18.0	+0.4
SMLA				i S	S	17 39 42.3	-2.3
CHMS	Chumysh	7.86	27	P	P	17 38 19.0	+0.6
	SNR=5.2						
USP	Ospenovka	8.01	25	P	S	17 39 49.4	-0.3
	SNR=6.1						
TKM2	Tokmak 2	8.12	31	P	P	17 38 21.4	-0.5
	SNR=5.9						
MK31	Makanchi Array	14.15	37	⇑P	P	17 39 41.8	+1.3
	1.1nm,0.6s,baz=211,slow=11,SNR=18						
AB31	Akbulak array	15.07	334	P	P	17 39 51.1	-0.9
	0.7nm,0.4s,baz=145,slow=13,SNR=40						
AB31				⇑S	S	17 42 24.2	-11
	0.5nm,0.5s,baz=156,slow=22,SNR=5.9						

NEIC ***02*** *17:38:56.1, 15.61N×96.34W, h32km, MD3.5(MEX), After MEX.*

MEX 02 17:38:55.7±1.1**, 15.58N**×**96.39W, h27**km±12km**, MD3.7, 1D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.33	54	⇓iP	Pb	17 39 02.3	-1.0
HUIG				i S	Sb	17 39 06.8	-1.7
VHO	Vista Hermosa	1.53	347	i P	Pn	17 39 18.6	-3.0
VHO				i S	Sn	17 39 36.7	-4.0
OXX	Oaxaca	1.53	348	i P	Pn	17 39 20.0	-1.7
OXX				i S	Sn	17 39 38.0	-2.9
CMIG	Matias Romero	2.08	44	i P	Pn	17 39 26.3	-3.3
CMIG	Matias Romero	2.08	44	i P	Pn	17 39 26.3	-3.3
CMIG				i S	Sn	17 39 51.6	-3.3

CSEM ***02*** *17:43:42.9±0.1, 59.03N×18.20E, h2km, ML3.1, Error ellipse: s-maj=2.0km s-min=1.3km az=133.0, Mining explosion.*

HEL ***02*** *17:43:43.9±0.1, 59.00N×18.19E, ML2.3, ML2.9(UPP), ML2.4(NAO), Explosion*

UPP ***02*** *17:43:43.3, 59.00N×18.19E, h0km, ML3.1, Mining explosion.*

IDC ***02*** *17:43:45.4±2.1, 59.03N×18.26E, mb1 3.0/4, mb1mx2.9/23, mbtmp2.9/4, ML2.8/4, Error ellipse: s-maj=29.4km s-min=7.6km az=172.0*

NAO ***02*** *17:43:46.7±2.3, 59.31N×18.08E, ML2.4*

BER ***02*** *17:43:46.8±3.4, 59.19N×18.10E, ML2.4(NAO), Suspected explosion*

ISC 02 17:43:42.1±0.3**, 59.00N**±0.03×**18.35E**±0.04**, n67, σ0.98**/96**, Baltic Sea**

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

NYNU	**Nynaeshamn**	**0.18**	**272**	*i* P	**Pg**	**17 43 45.4**	**-0.3**
NRTU	**Norrtaelje**	**0.69**	**12**	*i* P	**Pg**	**17 43 56.8**	**+0.8**
UPP	**Uppsala**	**0.94**	**337**	*e*P	**Pg**	**17 44 00.4**	**-0.5**
VIKU	**Vikbolandet**	**0.99**	**241**	*e*P	**Pb**	**17 44 00.5**	**-1.4**
ESKU	**Eskilstuna**	**1.03**	**284**	*e*P	**Pb**	**17 44 00.9**	**-1.7**
BACU	**Backbrunna**	**1.07**	**324**	*e*P	**Pb**	**17 44 02.3**	**-0.8**
FLYU	**Flymyra**	**1.16**	**348**	*e*P	**Pb**	**17 44 04.6**	**-0.1**
GOTU	**Gotland**	**1.32**	**175**	*e*P	**Pb**	**17 44 07.3**	**-0.2**
OSTU	**Oestervaala**	**1.38**	**334**	*e*P	**Pb**	**17 44 08.3**	**-0.2**
FORU	**Forsmark**	**1.40**	**357**	*e*P	**Pb**	**17 44 09.1**	**+0.3**
FORU	**Forsmark**	**1.40**	**357**	P	**Pb**	**17 44 09.0**	**+0.2**
AAL	**Aland**	**1.45**	**35**	*e*P	**Pn**	**17 44 10.8**	**+1.1**
VSTU	**Vaestervik**	**1.65**	**216**	*e*P	**Pn**	**17 44 12.6**	**+0.1**
VSTU	**Vaestervik**	**1.65**	**216**	P	**Pn**	**17 44 12.5**	**0.0**
LNKU	**Linkoeping**	**1.68**	**244**	*e*P	**Pn**	**17 44 12.6**	**-0.3**
NRAU	**Nora**	**1.79**	**290**	*e*P	**Pn**	**17 44 14.6**	**+0.1**
ASKU	**Askersund**	**1.83**	**268**	*e*P	**Pn**	**17 44 15.0**	**-0.1**
ASKU	**Askersund**	**1.83**	**268**	P	**Pn**	**17 44 14.9**	**-0.1**
ASPU	**Aespoe**	**1.84**	**211**	*e*P	**Pn**	**17 44 16.0**	**+0.8**
ASPU	**Aespoe**	**1.84**	**211**	P	**Pn**	**17 44 15.9**	**+0.7**
IGGU	**Iggoen**	**1.95**	**345**	*e*P	**Pn**	**17 44 17.5**	**+0.7**
IGGU				*e*S	**Sn**	**17 44 43.6**	**+1.3**
IGGU	**Iggoen**	**1.95**	**345**	P	**Pn**	**17 44 17.4**	**+0.6**
IGGU				S	**Sn**	**17 44 43.6**	**+1.2**
FALU	**Falun**	**1.97**	**321**	*e*P	**Pn**	**17 44 17.6**	**+0.6**
EKSU	**Eksjoe**	**2.15**	**230**	*e*P	**Pn**	**17 44 20.9**	**+1.2**
EKSU	**Eksjoe**	**2.15**	**230**	P	**Pn**	**17 44 20.8**	**+1.1**
OSKU	**Oskarshamn**	**2.17**	**214**	*e*P	**Pn**	**17 44 21.2**	**+1.3**
HFS	**Hagfors**	**2.63**	**298**	*e*P	**Pn**	**17 44 27.0**	**+0.5**
HFS				*e*SB	**Sb**	**17 44 59.8**	**-3.0**
HFS	**Hagfors**	**2.63**	**298**	Pn	**Pn**	**17 44 27.0**	**+0.5**
	0.3nm,0.3s,baz=114,slow=17,SNR=51						
HFS				Sn	**Sn**	**17 45 00.2**	**+0.6**
	1.7nm,0.3s,baz=115,slow=29,SNR=34						
HFS	**Hagfors**	**2.63**	**298**	Pn	**Pn**	**17 44 27.0**	**+0.5**
	baz=113,slow=14						
HFS				Lg		17 44 59.8	
	baz=110,slow=28						
ARNU	**Arnoeviken**	**2.75**	**350**	*e*P	**Pn**	**17 44 28.2**	**0.0**
BLEU	**Blekinge**	**3.03**	**208**	*e*P	**Pn**	**17 44 32.5**	**+0.3**
BLEU	**Blekinge**	**3.03**	**208**	P	**Pn**	**17 44 32.4**	**+0.2**
FINU	**Finntorp**	**3.05**	**280**	*e*P	**Pn**	**17 44 32.1**	**-0.4**
FINU	**Finntorp**	**3.05**	**280**	P	**Pn**	**17 44 32.0**	**-0.5**
HASU	**Hassela**	**3.28**	**346**	*e*P	**Pn**	**17 44 35.6**	**-0.1**
DEL	**Delary**	**3.49**	**225**	*e*P	**Pn**	**17 44 38.5**	**-0.3**
HEMU	**Hemsoen**	**3.69**	**358**	*e*P	**Pn**	**17 44 41.8**	**+0.1**
PVF	**Pernaja**	**4.10**	**65**	*e*P	**Pn**	**17 44 49.1**	**+1.6**
PVF				*e*S	**Sn**	**17 45 36.0**	**-1.0**
PVF				MSG		17 45 56.6	
	comp=Z,5.5nm,0.2s						
PVF	**Pernaja**	**4.10**	**65**	P	**Pn**	**17 44 49.0**	**+1.5**
PVF				S	**Sn**	**17 45 35.9**	**-1.0**
	comp=Z,5.5nm,0.2s						
NB2	**NORSAR Subarra**	**4.12**	**303**	*e*P	**Pn**	**17 44 46.9**	**-0.9**
NB2				*e*PG	**Pg**	**17 44 55.9**	**-8.5**
NB2				*e*SG	**Sg**	**17 45 48.4**	**-11**
NB2	**NORSAR Subarra**	**4.12**	**303**	Pn	**Pn**	**17 44 46.9**	**-0.9**
	baz=124,slow=14						
NB2				Pg	**Pg**	**17 44 55.9**	**-8.5**
NB2				Lg		17 45 48.4	
	baz=122,slow=28						
NB2	**NORSAR Subarra**	**4.12**	**303**	P	**Pn**	**17 44 46.8**	**-1.0**
NB2	**NORSAR Subarra**	**4.12**	**303**	Pg	**Pg**	**17 44 55.9**	**-8.5**
NB2				Sg	**Sg**	**17 45 48.4**	**-11**
NOA	**NORSAR Array B**	**4.12**	**303**	Pn	**Pn**	**17 44 46.8**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=122,slow=13,SNR=2.8						
NOA				Pg	**Pg**	**17 44 55.9**	**-8.5**
	comp=Z,0.6nm,0.3s,baz=110,slow=13,SNR=3.9						
NOA				Lg		17 45 46.3	
	comp=Z,1.6nm,0.3s,baz=91,slow=19,SNR=8.0						
BSD	**Bornholm Skovb**	**4.32**	**207**	*i* P	**Pn**	**17 44 49.3**	**-1.3**
BSD				*e*S	**Sn**	**17 45 53.0**	**+11**
BSD	**Bornholm Skovb**	**4.32**	**207**	*e*P	**Pn**	**17 44 49.3**	**-1.3**
VSU	**Vasula**	**4.41**	**93**	*e*P	**Pn**	**17 44 52.5**	**+0.7**
VSU				*e*S	**Sn**	**17 45 43.1**	**-1.5**
VSU	**Vasula**	**4.41**	**93**	P	**Pn**	**17 44 52.4**	**+0.6**
VSU				S	**Sn**	**17 45 43.0**	**-1.6**
KEF	**Keuruu**	**4.52**	**43**	*e*P	**Pn**	**17 44 55.0**	**+1.5**
KEF				*e*S	**Sn**	**17 45 46.8**	**-0.7**
KEF				MSG		17 46 08.9	
	comp=Z,2.8nm,0.2s						
KEF	**Keuruu**	**4.52**	**43**	P	**Pn**	**17 44 54.9**	**+1.5**
KEF				S	**Sn**	**17 45 46.8**	**-0.7**
	comp=Z,2.8nm,0.2s						
FIA0	**FINESS Array S**	**4.57**	**54**	Pn	**Pn**	**17 44 55.5**	**+1.5**
	baz=241,slow=12						
FIA0				Pg	**Pg**	**17 45 05.7**	**-7.6**
	baz=246,slow=16						
FIA0				Sn	**Sn**	**17 45 49.1**	**+0.4**
	baz=242,slow=22						
FIA0				Lg		17 46 05.5	
	baz=246,slow=37						
FIA0	**FINESS Array S**	**4.57**	**54**	*e*P	**Pn**	**17 44 55.5**	**+1.5**
FIA0				*e*S	**Sn**	**17 45 47.5**	**-1.2**
FIA0				MSG		17 46 11.7	
	comp=Z,4.5nm,0.2s						
FIA0	**FINESS Array S**	**4.57**	**54**	P	**Pn**	**17 44 55.5**	**+1.4**
FIA0				S	**Sn**	**17 45 47.5**	**-1.2**
	comp=Z,4.5nm,0.2s						
FINES	**FINESS Array B**	**4.57**	**54**	Pn	**Pn**	**17 44 55.6**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=247,slow=13,SNR=34						
FINES				Pg	**Pg**	**17 45 06.1**	**-7.2**
	comp=Z,0.8nm,0.3s,baz=238,slow=15,SNR=15						
FINES				Sn	**Sn**	**17 45 49.0**	**+0.2**
	comp=Z,1.6nm,0.3s,baz=244,slow=22,SNR=14						
FINES				Lg		17 46 06.2	
	comp=Z,2.1nm,0.3s,baz=247,slow=29,SNR=13						
VAF	**Ylistaro**	**4.57**	**26**	*e*P	**Pn**	**17 44 56.0**	**+1.9**
VAF				*e*S	**Sn**	**17 45 47.9**	**-0.9**
VAF				MSG		17 46 11.8	
	comp=Z,7.0nm,0.2s						
VAF	**Ylistaro**	**4.57**	**26**	P	**Pn**	**17 44 55.9**	**+1.8**
VAF				S	**Sn**	**17 45 47.8**	**-0.9**
	comp=Z,7.0nm,0.2s						
VJF	**Virojoki**	**4.90**	**68**	*e*P	**Pn**	**17 44 59.7**	**+0.8**
VJF				*e*S	**Sn**	**17 45 55.5**	**-1.7**
VJF	**Virojoki**	**4.90**	**68**	P	**Pn**	**17 44 59.6**	**+0.7**
VJF				S	**Sn**	**17 45 55.4**	**-1.8**
KAF	**Kangasniemi**	**5.02**	**48**	*e*P	**Pn**	**17 45 01.4**	**+1.0**
KAF				*e*S	**Sn**	**17 45 59.3**	**-0.8**
KAF				MSG		17 46 24.4	
	comp=Z,2.4nm,0.2s						
KAF	**Kangasniemi**	**5.02**	**48**	P	**Pn**	**17 45 01.4**	**+1.0**
KAF				S	**Sn**	**17 45 59.2**	**-0.8**
	comp=Z,2.4nm,0.2s						
UMAU	**Umeaa**	**5.03**	**12**	*e*P	**Pn**	**17 45 01.2**	**+0.6**
SUF	**Sumiainen**	**5.33**	**42**	*e*P	**Pn**	**17 45 05.3**	**+0.3**
SUF				*e*S	**Sn**	**17 46 06.4**	**-1.7**
SUF				MSG		17 46 42.1	
	comp=Z,1.6nm,0.2s						
APA0	**Apatity Array**	**10.82**	**31**	Pn	**P**	**17 46 16.9**	**-4.3**
	baz=233,slow=16						
APA0	**Apatity Array**	**10.82**	**31**	*e*P	**P**	**17 46 16.9**	**-4.3**
ARA0	**ARCESS Array S**	**11.01**	**13**	Pn	**P**	**17 46 19.8**	**-4.1**
	baz=194,slow=14						
ARA0	**ARCESS Array S**	**11.01**	**13**	*e*P	**P**	**17 46 19.8**	**-4.1**
ARCES	**ARCESS Array B**	**11.01**	**13**	Pn	**P**	**17 46 19.8**	**-4.0**
	comp=Z,0.3nm,0.3s,baz=200,slow=13,SNR=21						

IDC 02 18:15:46.2±4.9**, 5.06N×94.99E, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/21**, mbtmp3.6**/4**, Error ellipse: s-maj=268.1km s-min=22.5km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**43.00**	**347**	P	P	18 23 47.3	-1.7
	0.5nm,0.4s,baz=158,slow=7.2,SNR=19						
WRA	**Warramunga Arr**	**45.98**	**124**	P	P	18 24 11.0	-2.3
	1.1nm,0.5s,baz=302,slow=9.2,SNR=11						
ASAR	**Alice Springs**	**47.49**	**129**	P	P	18 24 23.9	-1.4
	0.6nm,0.9s,baz=299,slow=7.3,SNR=7.9						
BVAR	**Borovoye Array**	**51.90**	**341**	P	P	18 24 56.3	-2.4
	0.2nm,0.3s,baz=146,slow=5.2,SNR=4.3						

CASC 02 18:19:20.4±2.2**, 10.45N×85.09W, h67**^{km}±7^{km}**, MD3.7, 8C-5D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FORC	**Fortuna**	**0.42**	**87**	⇑*i*P	P	18 19 32.4	+0.2
FORC				*i* S	S	18 19 41.6	+0.6
JCR	**Jicaral**	**0.60**	**182**	⇓*i*P	P	18 19 33.9	-0.2
JCR				*e*S	S	18 19 46.2	+2.1
VCR	**Vista de Mar**	**0.62**	**239**	⇓*i*P	P	18 19 33.6	-0.7
CGA2	**Cerro Gallo 2**	**0.75**	**125**	⇑*i*P	P	18 19 35.8	0.0
CGA2				*e*S	S	18 19 47.4	+0.1
VPS2	**Volcan Poas 2**	**0.88**	**107**	*e*P	P	18 19 37.5	+0.1
PRS1	**Puriscal**	**0.90**	**121**	⇑*e*P	P	18 19 37.7	+0.1
PRS1				*e*S	S	18 19 51.5	+1.1
LAJ	**Bijagual**	**1.12**	**121**	*e*P	P	18 19 37.5	-3.1
LAJ				*e*S	S	18 19 51.7	-3.8
SJS	**Escuela Geolog**	**1.14**	**116**	*e*P	P	18 19 41.2	+0.3
SJS				*e*S	S	18 19 57.2	+1.1
CONN	**Concepcion**	**1.22**	**335**	⇓*e*P	P	18 19 41.2	-0.8
CONN				*e*S	S	18 19 58.3	+0.3
LCR2	**La Lucha 2**	**1.28**	**123**	⇑*e*P	P	18 19 42.4	-0.4
LCR2				*e*S	S	18 19 58.7	-0.7
TRTC	**Tortuguero**	**1.36**	**85**	⇑*i*P	P	18 19 43.0	-0.9
TRTC				*e*S	S	18 20 01.2	-0.2
BUS	**Buena Vista**	**1.59**	**124**	⇓*e*P	P	18 19 47.7	+0.8
BUS				*e*S	S	18 20 09.3	+2.7
APON	**Apoyo**	**1.74**	**327**	⇑*e*P	P	18 19 50.0	+0.9
APON				*e*S	S	18 20 09.5	-0.7
CRUN	**El Crucero**	**1.93**	**322**	*e*P	P	18 19 51.6	-0.1
TICN	**Ticuantepe**	**1.93**	**325**	*e*P	P	18 19 51.8	+0.1
WILN	**Americas 2**	**2.01**	**328**	*e*S	S	18 20 17.3	+0.7
APYN	**Apoyeque**	**2.16**	**325**	*e*P	P	18 19 54.7	-0.2
MOMJ	**Momotombo**	**2.41**	**324**	*e*P	P	18 19 59.0	+0.6
MIRN	**Miramar**	**2.54**	**321**	*e*P	P	18 20 00.3	+0.1
MIRN				*e*S	S	18 20 29.6	-0.4
CNGN	**Cerro Negro**	**2.57**	**322**	*e*P	P	18 20 00.4	-0.4
CNGN				*e*S	S	18 20 32.0	+1.1
ACR	**Cerro Adams**	**2.61**	**133**	⇑*e*P	P	18 20 00.9	-0.3
ACR				*e*S	S	18 20 29.1	-2.6
LEON	**Leon**	**2.63**	**318**	*e*P	P	18 20 01.0	-0.6
CRIN	**San Cristobal**	**2.95**	**320**	*e*P	P	18 20 04.7	-1.3
SBLS	**San Blas**	**5.56**	**308**	⇑*e*P	P	18 20 42.4	0.0
RBDL	**Robledal**	**5.78**	**309**	⇓*i*P	P	18 20 43.8	-1.6

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*CSEM **02** 18:33:35.9±0.4, 35.92N×13.02E, h9^{km}, ML3.6/3, Error ellipse: s-maj=9.6km s-min=4.3km az=7.0, After ROM*

ROM 02 18:33:35.9±0.7**, 35.92N×13.02E, h9**^{km}**, Md2.9**/5**, Ml2.7**/3**, Error ellipse: s-maj=11.8km s-min=4.3km az=22.0, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTS	**Pantelleria**	**1.22**	**318**	Pg	Pg	18 33 59.4	-0.8
	44nm,0.4s						
WDD	**Wield Dalam**	**1.23**	**92**	Pg	Pg	18 34 01.0	+0.6
WDD				Sg	Sg	18 34 17.6	+0.8
	99nm,0.4s						
FAVR	**Favara**	**1.45**	**21**	Pg	Pn	18 34 04.5	+2.1
	18nm,0.3s						
PZI	**Palazzolo**	**1.93**	**53**	Pg	Pn	18 34 10.4	+1.1
HAVL	**Avola**	**2.00**	**58**	Pn	Pn	18 34 11.0	+0.8
	42nm,0.2s						
SSY	**Sortino**	**2.07**	**53**	Pg	Pn	18 34 12.1	+0.8
SSY				Sg	Sn	18 34 41.0	+3.6
	79nm,0.6s						
GIB	**Gibilmanna**	**2.22**	**21**	Pn	Pn	18 34 15.8	+2.3
GIB				Sn	Sn	18 34 45.6	+4.2
	28nm,0.4s						

IDC 02 18:37:52.8±3.5**, 30.14S×179.25W, mb4.2**/3**, mb1 4.4**/4**, mb1mx4.0**/15**, mbtmp4.2**/4**, ML4.0**/1**, 3C, Error ellipse: s-maj=68.0km s-min=49.2km az=85.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.64**	**199**	Pn	P	18 39 59.4	-2.7
	1.9nm,0.3s,baz=200,slow=15,SNR=17						
STKA	**Stephens Creek**	**33.48**	**257**	P	P	18 44 33.6	-2.3
	2.2nm,0.9s,baz=99,slow=14,SNR=3.9						
ASAR	**Alice Springs**	**42.04**	**267**	P	P	18 45 45.9	-2.0
	1.9nm,0.5s,baz=106,slow=7.3,SNR=60						
WRA	**Warramunga Arr**	**43.00**	**273**	P	P	18 45 54.6	-1.2
	2.6nm,0.4s,baz=113,slow=8.0,SNR=74						
SNAA	**Sanae**	**78.44**	**179**	⇑*i*	P	18 49 47.2	-9.2
VNA3	**Neumayer Olymp**	**78.64**	**177**	⇑*i*	P	18 49 50.3	-7.2
VNA2	**Neumayer--Watz**	**79.06**	**177**	⇑*i*	P	18 49 52.6	-7.2
KAF	**Kangasniemi**	**143.93**	**340**	*e*pkp	PKPdf	18 57 27.6	-3.6
FINES	**FINESS Array B**	**144.52**	**339**	PKP	PKPdf	18 57 29.7	-2.5
	2.0nm,0.6s,baz=45,slow=3.4,SNR=23						

OTT 02 18:41:06.6±0.2**, 53.00N×66.99W, MN2.9**/8**, Blast. Labrador City, Nl Mining explosion., Labrador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**1.83**	**3**	PN	Pn	18 41 38.7	-1.0
SCHQ				SG	Sg	18 42 04.2	-3.5
SCHQ				Trac		18 42 09.2	
	comp=Z,17nm,0.1s						
MNQ	**Manicouagan**	**2.71**	**205**	PN	Pn	18 41 51.5	-0.7
MNQ				SN	Sn	18 42 24.3	-1.8
MNQ				Trac		18 42 33.7	
	comp=Z,7.6nm,0.1s						
SMQ	**Clarke City**	**2.79**	**176**	PN	Pn	18 41 51.9	-1.4
SMQ				SN	Sn	18 42 28.9	+0.7
SMQ				Trac		18 42 33.0	
	comp=Z,9.2nm,0.1s						
ICQ	**Pointe Anglais**	**3.49**	**183**	PN	Pn	18 42 01.1	-2.3
ICQ				SN	Sn	18 42 46.0	0.0
ICQ				Trac		18 43 00.8	
	comp=Z,3.9nm,0.1s						
CNQ	**Baie Comeau**	**3.77**	**191**	PN	Pn	18 42 06.0	-1.3
CNQ				SN	Sn	18 42 52.5	-0.4
CNQ				SG	Sg	18 43 03.9	-8.1
CNQ				Trac		18 43 12.2	
	comp=Z,3.6nm,0.1s						
GSQ	**Grosses Roches**	**4.10**	**181**	PN	Pn	18 42 08.9	-3.0
GSQ				SN	Sn	18 43 02.0	+0.6
GSQ				SG	Sg	18 43 15.2	-8.0
GSQ				Trac		18 43 19.0	
	comp=Z,2.1nm,0.1s						
LG4Q	**La Grande 4**	**4.31**	**281**	PN	Pn	18 42 12.3	-2.6
LG4Q				PG	Pg	18 42 22.1	-11
LG4Q				SN	Sn	18 43 04.8	-1.8
LG4Q				LG		18 43 23.1	
LG4Q				Trac		18 43 32.7	
	comp=Z,5.9nm,0.3s						
LMQ	**La Malbaie**	**5.86**	**203**	PN	Pn	18 42 34.2	-2.7
LMQ				SN	Sn	18 43 42.4	-3.5
LMQ				Trac		18 44 22.9	
	comp=Z,20nm,0.7s						
DRLN	**Deer Lake**	**7.05**	**118**	PN	Pn	18 42 50.0	-3.7
DRLN				SN	Sn	18 44 05.5	-10
DRLN				LG		18 44 45.8	
LMN	**Caledonia Moun**	**7.30**	**168**	PN	Pn	18 42 52.4	-4.7
MALO	**McAlpine Lake**	**8.51**	**255**	PN	P	18 43 11.9	-2.1
VIMO	**Victor Mine**	**10.12**	**276**	PN	P	18 43 30.8	-5.4
SILO	**Sutton Inlier**	**10.72**	**285**	PN	P	18 43 39.1	-5.3

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*NIED **02** 19:16:00, 32.50N×130.50E, h8^{km}, Mw4.6 Best double couple: M$_0$8.12×10^{15} NP1:ϕ_s211°, δ86°, λ-173°. NP2: ϕ_s121°, δ83°, λ-4°.*

*IDC **02** 19:16:40.6±0.6, 32.49N×130.50E, mb4.2/19, mb1 4.4/22, mb1mx4.3/27, mbtmp4.3/22, ML4.1/3, MS3.8/13, Ms1 3.8/13, ms1mx3.6/30, Error ellipse: s-maj=15.0km s-min=8.4km az=123.0*

*BJI **02** 19:16:41.8, 32.51N×130.77E, h19^{km}, mB4.7, mb4.5, Ms4.6, Msz4.1*

*JMA **02** 19:16:41.8, 32.50N×130.55E, h11^{km}±1^{km}, M4.8 Broadband fault plane solution: P waves. NP1:ϕ_s220°, δ63°, λ-170°. NP2:ϕ_s126°, δ81°, λ-27°. Principal axes: T Plg12°, Azm176°; N Plg62°, Azm289°; P Plg25°, Azm80°;*

*NEIC **02** 19:16:41.8, 32.50N×130.55E, h10^{km}, mb4.6/27, MW4.5(NIED), After JMA.*

NEIC Felt at Fukuoka and Isahaya. Recorded [1 JMA] in Yamaguchi Prefecture, Honshu.

*MOS **02** 19:16:44.1±1.5, 32.46N×130.69E, h37^{km}, mb4.8/23, MS4.0/7, Error ellipse: s-maj=9.5km s-min=6.4km az=91.9*

ISC 02 19:16:42.1±0.4**, 32.54N**±0.03×**130.62E**±0.03**, h17**^{km}±3^{km}**, n138,** σ1^{s}**31**/153**, mb4.5**/60**, MS4.1**/25**, 8C-5D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIU2	**Izumi 2**	**0.17**	**89**	⇓P	**Pb**	**19 16 46.4**	**-0.2**
JIU2				S	**Sb**	**19 16 50.2**	**+0.6**
JZO	**Okuchi**	**0.40**	**182**	⇑P	**Pb**	**19 16 48.9**	**-1.5**
JZO				S	**Sb**	**19 16 54.3**	**-1.7**
JHD	**Hondo**	**0.41**	**259**	⇓P	**Pb**	**19 16 48.7**	**-1.8**
JHD				S	**Sb**	**19 16 53.8**	**-2.5**
JTA	**Tamana**	**0.43**	**351**	⇑P	**Pb**	**19 16 51.0**	**+0.2**
JTA				S	**Sb**	**19 16 57.7**	**+1.0**
JNU	**Nakatsue**	**0.62**	**21**	Pg	**Pb**	**19 16 54.5**	**+0.4**
	baz=215,slow=12						
JNU				Lg		19 17 03.9	
	baz=275,slow=19						
JTZ	**Takazaki**	**0.75**	**148**	⇑P	**Pb**	**19 16 56.6**	**+0.2**
JTZ				S	**Sb**	**19 17 06.6**	**+0.4**
KS15	**Wonju Array Si**	**5.38**	**336**	*e*Pn	**Pn**	**19 18 02.2**	**-1.4**
INCN	**Inchon**	**5.91**	**328**	*e*Pn	**Pn**	**19 18 09.6**	**-1.6**
	91nm,0.4s						
JOW	**Kunigami**	**6.04**	**200**	Pn	**Pn**	**19 18 13.7**	**+0.7**
	14nm,0.3s,baz=18,slow=9.7,SNR=35						
MAJO	**Matsushiro**	**7.42**	**55**	*e*P	**Pn**	**19 18 32.9**	**+0.5**
MAJO				pmax	pmax		
	comp=Z,24nm,0.6s						
MAJO	**Matsushiro**	**7.42**	**55**	*e*Pn	**Pn**	**19 18 32.9**	**+0.5**
	comp=Z,24nm,0.6s						
MAT	**Matsushiro**	**7.42**	**55**	*e*P	**Pn**	**19 18 33.0**	**+0.6**
MAT				*e*S	**Sn**	**19 19 58.0**	**+1.0**
MAT				pmax	pmax		
	comp=Z,21nm,1.0s						
MAT	**Matsushiro**	**7.42**	**55**	*e*P	**Pn**	**19 18 33.0**	**+0.6**
	comp=Z,21nm,1.0s						
MAT				*e*S	**Sn**	**19 19 58.0**	**+1.0**
MAT	**Matsushiro**	**7.42**	**55**	P	**Pn**	**19 18 32.6**	**+0.2**
MAT				S	**Sn**	**19 19 57.9**	**+0.9**
MJAR	**Matsushiro Arr**	**7.43**	**55**	Pn	**Pn**	**19 18 32.9**	**+0.4**
	comp=Z,4.1nm,0.3s,baz=243,slow=14,SNR=32						
MJAR				Lg		19 20 41.0	
	baz=232,slow=29,SNR=5.0						
JHJ	**Hachijo jima 2**	**7.74**	**83**	Pn	**Pn**	**19 18 36.7**	**-0.1**
	comp=Z,26nm,0.3s,baz=248,slow=22,SNR=6.2						
SSE	**Sheshan**	**8.15**	**262**	P	**P**	**19 18 46.7**	**+4.1**
SSE				S	**Sn**	**19 20 17.2**	**+2.0**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.6s						
SSE				LR	LR		
	comp=N,1µm,11.2s						
SSE				LR	LR		
	comp=E,710nm,11.2s						
SSE				LR	LR		
	comp=Z,960nm,10.1s						
NJ2	**Nanjing**	**9.97**	**270**	*e*P	**P**	**19 19 07.8**	**+0.1**
NJ2				AP		19 19 15.6	
NJ2				XP		19 19 18.6	
NJ2				S	**Sn**	**19 20 58.0**	**-2.2**
NJ2				XS		19 21 08.7	
NJ2				AMB	AMB		
	comp=Z,30nm,1.2s						
NJ2				AMB	AMB		
	comp=Z,90nm,3.6s						
NJ2				LR	LR		
	comp=N,2µm,10.5s						
NJ2				LR	LR		
	comp=E,1µm,8.8s						
NJ2				LR	LR		
	comp=Z,890nm,9.6s						
YHNB	**Yeheng**	**11.28**	**228**	*e*P	**P**	**19 19 30.5**	**+4.8**
CBIJ	**Chichi jima**	**11.41**	**115**	LR	LR	19 23 12.0	
	comp=Z,294nm,21.3s,baz=107,slow=34						
TIA	**Tai’an**	**11.73**	**292**	P	**P**	**19 19 33.0**	**+1.3**
TIA				LR	LR		
	comp=N,610nm,9.6s						
TIA				LR	LR		
	comp=E,1µm,11.2s						
CN2	**Changchun**	**11.95**	**342**	*e*P	**P**	**19 19 35.9**	**+1.2**
CN2				*e*S	**S**	**19 21 45.0**	**-3.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
CN2				LR	LR		
	comp=N,1µm,12.0s						
CN2				LR	LR		
	comp=E,2µm,12.0s						
CN2				LR	LR		
	comp=Z,950nm,14.0s						
MDJ	**Mudanjiang**	**12.08**	**357**	P	**P**	**19 19 35.0**	**-1.4**
MDJ				AP		19 19 44.8	
MDJ				S	**S**	**19 21 48.7**	**-3.1**
MDJ				SS	SS	19 22 02.0	-4.4
MDJ				LR	LR		
	comp=Z,300nm,21.5s						
ASAJ	**Asahikawa**	**14.88**	**36**	P	**P**	**19 20 13.0**	**-0.3**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,306nm,19.6s						
ASAJ	**Asahikawa**	**14.88**	**36**	Pn	**P**	**19 20 13.0**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=190,slow=14,SNR=5.6						
ASAJ				LR	LR	19 25 28.4	
	comp=Z,306nm,19.6s,baz=190,slow=35						
KLR	**Kul’dur**	**16.69**	**3**	*e*P	**P**	**19 20 36.2**	**-0.5**
KLR				MLR	MLR		
	comp=Z,600nm,13.0s						
YSS	**Yuzh-Sakhalins**	**17.12**	**29**	*e*P	**P**	**19 20 41.0**	**-1.1**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=E,900nm,15.0s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS	**Yuzh-Sakhalins**	**17.12**	**29**	*e*P	**P**	**19 20 41.5**	**-0.6**
	comp=Z,29nm,1.0s						
ENH	**Enshi**	**18.18**	**268**	*e*P	**P**	**19 20 57.1**	**+1.7**
	comp=Z,28nm,1.0s						
XAN	**Xi’an**	**18.20**	**281**	P	**P**	**19 21 00.5**	**+4.9**
XAN				S	**S**	**19 24 15.3**	**0.0**
XAN				LR	LR		
	comp=E,670nm,14.5s						
XAN				LR	LR		
	comp=Z,550nm,14.5s						
BTO	**Baotou**	**18.37**	**302**	*e*P	**P**	**19 21 03.3**	**+5.6**
BTO				S	**S**	**19 24 23.1**	**+4.1**
HIA	**Hailar**	**18.59**	**337**	*e*P	**P**	**19 21 01.8**	**+1.5**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HIA	**Hailar**	**18.59**	**337**	*e*P	**P**	**19 21 01.8**	**+1.5**
	comp=Z,10nm,0.7s						
GYA	**Guiyang**	**21.69**	**260**	P	**P**	**19 21 35.2**	**+1.1**
GYA				S	**S**	**19 25 34.7**	**+6.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
GYA				LR	LR		
	comp=N,600nm,12.6s,MS4.3						
GYA				LR	LR		
	comp=E,410nm,12.9s,MS4.3						
GYA				LR	LR		
	comp=Z,470nm,14.1s,MS4.0						
LZH	**Lanzhou**	**22.37**	**287**	*e*P	**P**	**19 21 40.8**	**0.0**
LZH				PP	PP	19 22 09.7	+1.6
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.4						
LZH				AMB	AMB		
	comp=Z,80nm,4.5s						
LZH				LR	LR		
	comp=E,470nm,11.2s						
LZH				LR	LR		
	comp=Z,750nm,14.3s,MS4.3						
CD2	**Chengdu**	**22.89**	**273**	⇑*i*P	**P**	**19 21 47.1**	**+1.2**
CD2				S	**S**	**19 25 48.5**	**-1.7**
CD2				AMB	AMB		
	comp=Z,50nm,0.6s,mb5.1						
CD2				LR	LR		
	comp=N,3µm,12.2s						
CD2				LR	LR		
	comp=Z,1µm,10.8s,MS4.6						
QIZ	**Qiongzhong**	**22.99**	**239**	P	**P**	**19 21 51.3**	**+4.3**
QIZ				*e*S	**S**	**19 25 58.9**	**+6.8**
QIZ				LR	LR		
	comp=N,630nm,13.1s						
QIZ				LR	LR		
	comp=Z,600nm,12.0s,MS4.3						
QIZ	**Qiongzhong**	**22.99**	**239**	*e*P	**P**	**19 21 50.7**	**+3.7**
	comp=Z,16nm,1.0s,mb4.4						
CIT	**Chita**	**23.09**	**332**	*e*P	**P**	**19 21 48.6**	**+0.9**
CIT				pmax	pmax		
	comp=Z,39nm,2.1s,mb4.5						

SONM	**Songino Array**	23.85	317	P	P	19 21 55.9	+0.7
	comp=Z,5.9nm,0.7s,mb4.1,baz=133,slow=9.0,SNR=40						
SONM				LR	LR	19 32 18.5	
	comp=Z,256nm,19.1s,MS3.7,baz=304,slow=39						
KMI	**Kunming**	25.47	260	⇑P	P	19 22 13.0	+2.1
KMI				PP	PP	19 22 52.4	+2.2
KMI				S	S	19 26 33.2	-1.3
KMI				SS	SS	19 27 38.4	+1.2
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
KMI				AMB	AMB		
	comp=Z,100nm,4.6s						
KMI				LR	LR		
	comp=N,440nm,13.8s,MS4.3						
KMI				LR	LR		
	comp=E,430nm,14.5s,MS4.3						
KMI				LR	LR		
	comp=Z,360nm,15.6s,MS4.0						
GTA	**Gaotai**	25.77	294	P	P	19 22 13.1	-0.5
GTA				PP	PP	19 22 54.9	+0.9
GTA				PPP	PPP	19 23 06.7	+1.0
GTA				PCP	PcP	19 25 42.3	-1.6
GTA				S	S	19 26 37.3	-2.1
GTA				SS	SS	19 27 42.7	-1.7
GTA				SCS	ScS	19 33 05.6	-3.7
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
GTA				AMB	AMB		
	comp=Z,40nm,7.2s						
GTA				LR	LR		
	comp=N,2µm,17.1s,MS4.6						
GTA				LR	LR		
	comp=E,420nm,15.6s,MS4.6						
GTA				LR	LR		
	comp=Z,550nm,12.9s,MS4.3						
ZAK	**Zakamensk**	26.92	320	⇑eP	P	19 22 23.2	-0.9
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
IRK	**Irkutsk**	27.43	324	eP	P	19 22 31.4	+2.7
IRK				e		19 23 12.0	
IRK				pmax	pmax		
	comp=Z,24nm,1.6s,mb4.5						
TLY	**Talaya**	27.43	322	eP	P	19 22 28.6	-0.1
TLY				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.2						
YAK	**Yakutsk**	29.51	359	eP	P	19 22 48.5	+1.1
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,94nm,10.0s,MS3.7						
YAK				MLR	MLR		
	comp=N,61nm,9.0s						
YAK	**Yakutsk**	29.51	359	eP	P	19 22 48.4	+1.0
	comp=N,12nm,0.8s,mb4.7						
NANT	**Nan**	30.12	250	P	P	19 22 55.0	+1.8
	comp=N,88nm,0.6s						
CHG	**Chiang Mai**	31.51	252	⇓P	P	19 23 07.3	+1.8
	comp=N,12nm,0.9s,mb4.7						
CM31	**Chiang Mai Arr**	31.70	252	eP	P	19 23 08.6	+1.4
	comp=N,5.4nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	31.70	252	P	P	19 23 05.8	-1.3
	comp=N,5.0nm,1.0s,mb4.3,baz=50,slow=6.4,SNR=18						
CMAR				LR	LR	19 37 11.9	
	comp=N,231nm,18.9s,MS3.9,baz=65,slow=39						
LSA	**Lhasa**	33.77	276	eP	P	19 23 30.5	+5.4
LSA				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
LSA	**Lhasa**	33.77	276	eP	P	19 23 30.5	+5.4
	comp=Z,8.6nm,1.3s,mb4.5						
WMQ	**Urumqi**	35.21	301	eP	P	19 23 39.1	+1.8
WMQ				PP	PP	19 24 58.1	+1.7
WMQ				PPP	PPP	19 25 16.6	+1.8
WMQ				eS	S	19 29 06.6	-2.3
WMQ				SS	SS	19 31 23.8	-1.8
WMQ				AMB	AMB		
	comp=Z,80nm,4.8s						
WMQ				LR	LR		
	comp=N,470nm,15.4s,MS4.4						
WMQ				LR	LR		
	comp=E,390nm,17.8s,MS4.4						
WMQ				LR	LR		
	comp=Z,480nm,18.8s,MS4.3						
FX1	**Attu Island--F**	36.59	43	P	P	19 23 50.5	+1.7
FX1				pmax	pmax		
	comp=Z,41nm,0.8s						
FX1	**Attu Island--F**	36.59	43	P	P	19 23 50.5	+1.7
	comp=Z,41nm,0.8s,mb5.3,baz=314,slow=3.0,SNR=16						
GUN	**Gumba**	38.72	275	eP	P	19 24 09.5	+2.5
	comp=Z,67nm,0.9s,mb5.4						
ZAL	**Zalesovo**	38.76	317	P	P	19 24 06.4	-0.7
	comp=Z,1.4nm,0.9s,mb3.7,baz=329,slow=7.7,SNR=5.0						
ZAL				LR	LR	19 42 01.6	
	comp=Z,112nm,19.8s,MS3.7,baz=176,slow=39						
MKAR	**Makanchi Array**	39.21	306	P	P	19 24 10.3	-0.6
	comp=Z,0.7nm,0.5s,mb3.6,baz=100,slow=8.8,SNR=5.8						
KKN	**Kakani**	39.26	275	eP	P	19 24 13.3	+1.8
	comp=Z,30nm,1.0s,mb5.0						
KKN	**Kakani**	39.26	275	eP	P	19 24 13.3	+1.8
KKN				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
DMN	**Daman**	39.46	275	eP	P	19 24 14.9	+1.7
	comp=Z,18nm,1.1s,mb4.7						
GKN	**Gorkha**	39.73	276	eP	P	19 24 16.0	+0.6
NVS	**Novosibirsk**	39.87	318	eP	P	19 24 14.9	-1.4
NVS				e		19 33 46.6	
KOLN	**Koldanda**	40.68	276	eP	P	19 24 24.1	+0.9
	comp=Z,15nm,1.0s,mb4.6						
BILL	**Bilibino**	41.05	20	⇓iP	P	19 24 25.7	-0.1
BILL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4						
BILL				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.8						
BILL	**Bilibino**	41.05	20	eP	P	19 24 26.2	+0.4
	comp=Z,16nm,1.1s,mb4.6						
PMG	**Port Moresby**	44.60	156	LR	LR	19 41 08.2	
	comp=Z,125nm,18.3s,MS3.9,baz=136,slow=33						
AAK	**Ala-Archa**	44.87	300	eP	P	19 25 08.3	+11
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
AAK				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.4						
CHKZ	**Chkalovo**	47.04	315	i P	P	19 25 13.0	-1.2
CHKZ				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.7						
CHKZ	**Chkalovo**	47.04	315	eP	P	19 25 12.4	-1.7
	comp=Z,21nm,1.1s,mb5.0						
BVA0	**Borovoye Array**	47.16	314	i P	P	19 25 14.5	-0.7
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
BVAR	**Borovoye Array**	47.16	314	P	P	19 25 14.9	-0.3
	comp=Z,4.2nm,0.8s,mb4.5,baz=99,slow=8.8,SNR=17						
KKAR	**Karatay Array**	47.71	301	i P	P	19 25 18.7	-1.0
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	52.30	176	eP	P	19 25 51.8	-3.3
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
WRAB	**Tennant Creek**	52.30	176	eP	P	19 25 51.8	-3.3
	comp=Z,8.1nm,0.9s,mb4.7						
WRA	**Warramunga Arr**	52.31	176	P	P	19 25 52.5	-2.6
	comp=Z,0.8nm,0.5s,mb3.9,baz=355,slow=8.0,SNR=9.8						
SVE	**Sverdlovsk**	52.69	320	eP	P	19 26 00.0	+2.5
SVE				e		19 26 14.0	
SVE				MLR	MLR		
	comp=N,100nm,11.0s,MS4.5						
SVE				MLR	MLR		
	comp=E,200nm,11.0s,MS4.5						
SVE				MLR	MLR		
	comp=Z,300nm,11.0s,MS4.6						
ARU	**Arti**	53.86	319	⇓iP	P	19 26 06.4	+0.3
ARU				e		19 27 13.5	
ARU				e		19 28 03.0	
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
ARU	**Arti**	53.86	319	eP	P	19 26 04.1	-2.0
	comp=Z,11nm,1.1s,mb4.7						
AB31	**Akbulak array**	54.01	310	i P	P	19 26 05.9	-1.4
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
CTA	**Charters Tower**	54.43	162	LR	LR	19 47 30.4	
	comp=Z,85nm,19.6s,MS3.8,baz=135,slow=34						
IMA	**Indian Mountai**	54.98	29	eP	P	19 26 13.3	-1.0
IMA				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
IMA	**Indian Mountai**	54.98	29	eP	P	19 26 13.3	-1.0
	comp=Z,21nm,1.0s,mb5.1						
ASAR	**Alice Springs**	55.98	176	P	P	19 26 20.9	-1.1
	comp=Z,2.2nm,0.6s,mb4.3,baz=5.2,slow=10.0,SNR=24						
MCK	**McKinley**	57.20	31	eP	P	19 26 29.1	-1.1
MCK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
MCK	**McKinley**	57.20	31	eP	P	19 26 29.1	-1.1
	comp=Z,3.6nm,0.9s,mb4.4						
COLA	**College**	57.51	30	eP	P	19 26 31.0	-1.4
SML	**Sawmill**	57.76	34	eP	P	19 26 32.7	-1.4
ILAR	**Eielson Array**	57.93	30	P	P	19 26 34.0	-1.2
	comp=Z,2.2nm,0.9s,mb4.2,baz=272,slow=6.8,SNR=18						
ILAR				LR	LR	19 51 41.3	
	comp=Z,53nm,18.9s,MS3.7,baz=328,slow=36						
DIV	**Divide**	59.09	34	eP	P	19 26 42.8	-0.7
	comp=Z,28nm,0.9s,mb5.3						
INK	**Inuvik**	62.30	25	eP	P	19 27 01.2	-4.0
INK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK	**Inuvik**	62.30	25	P	P	19 27 04.5	-0.7
	comp=Z,3.0nm,0.8s,mb4.5,baz=284,slow=5.1,SNR=4.8						
INK	**Inuvik**	62.30	25	eP	P	19 27 01.2	-4.0
	comp=Z,4.7nm,0.9s,mb4.6						
KEV	**Kevo**	64.36	338	ep	P	19 27 16.4	-2.3
STKA	**Stephens Creek**	64.91	170	P	P	19 27 22.2	-0.6
	comp=Z,1.2nm,0.6s,mb4.1,baz=334,slow=6.6,SNR=4.3						
ARCES	**ARCESS Array B**	64.93	338	P	P	19 27 29.8	+7.5
	comp=Z,1.7nm,0.7s,mb4.2,baz=59,slow=7.1,SNR=4.2						
OBN	**Obninsk**	66.18	321	⇑eP	P	19 27 29.8	-0.7
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.1						
VRSR	**Storozhevoye**	66.24	317	eP	P	19 27 31.4	+0.4
VRSR				pmax	pmax		
	comp=N,3.0nm,0.6s						
VRSR				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
VRSR				pmax	pmax		
	comp=E,3.0nm,0.8s						
KIV	**Kislovodsk**	66.90	308	c iP	P	19 27 38.1	+2.7
KIV				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.9						
KIV				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.4						
KIV	**Kislovodsk**	66.90	308	eP	P	19 27 36.2	+0.8
	comp=Z,22nm,1.1s,mb5.1						
GNI	**Garni**	67.02	304	eP	P	19 27 42.6	+6.4
GNI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KAF	**Kangasniemi**	68.02	331	ep	P	19 27 39.8	-2.3
FINES	**FINESS Array B**	68.43	330	P	P	19 27 43.1	-1.6
	comp=Z,2.8nm,0.5s,mb4.5,baz=71,slow=5.9,SNR=50						
RES	**Resolute Bay**	68.97	12	eP	P	19 27 45.9	-2.0
RES				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
RES	**Resolute Bay**	68.97	12	eP	P	19 27 45.9	-2.0
	comp=Z,4.3nm,0.7s,mb4.5						
SOC	**Sochi**	69.02	309	eP	P	19 27 51.0	+2.4
SOC				e		19 28 18.6	
SOC				e		19 30 23.7	
SOC				ePPP	PPP	19 32 04.7	+3.2
SOC				e		19 37 13.0	
SOC				pmax	pmax		
	comp=N,16nm,0.8s						
SOC				pmax	pmax		
	comp=E,53nm,0.8s						
SOC				pmax	pmax		
	comp=Z,51nm,0.8s,mb5.5						
ANN	**Anapa**	69.97	311	eP	P	19 27 36.0	-18
ANN				pmax	pmax		
	comp=Z,60nm,1.5s,mb5.3						
YKA	**Yellowknife Ar**	71.95	26	P	P	19 28 06.1	0.0
	comp=Z,0.9nm,0.7s,mb3.8,baz=305,slow=6.1,SNR=8.9						
YKA				LR	LR	20 05 15.0	
	comp=Z,52nm,18.4s,MS3.8,baz=265,slow=40						
AKASG	**Malin Array Be**	72.12	319	P	P	19 28 06.0	-1.3
	comp=Z,4.0nm,0.5s,mb4.6,baz=54,slow=6.5,SNR=17						
AKASG	**Malin Array Be**	72.12	319	P	P	19 28 06.0	-1.3
NB2	**NORSAR Subarra**	74.58	334	P	P	19 28 19.7	-1.7
	comp=Z,1.6nm,0.7s,mb4.1,baz=48,slow=5.8						
NOA	**NORSAR Array B**	74.58	334	P	P	19 28 20.0	-1.4
	comp=Z,4.0nm,0.9s,mb4.3,baz=50,slow=5.8,SNR=5.9						
NOA				LR	LR	20 07 34.2	
	comp=Z,60nm,19.8s,MS3.9,baz=75,slow=41						
NOA	**NORSAR Array B**	74.58	334	P	P	19 28 20.0	-1.4
NOA				LR	LR	20 07 34.2	
BRTR	**Keskin Array B**	74.83	308	P	P	19 28 23.2	-0.1
	comp=Z,3.7nm,0.8s,mb4.4,baz=91,slow=6.6,SNR=9.9						
BRTR	**Keskin Array B**	74.83	308	P	P	19 28 23.2	-0.1
LVV	**L'vov**	75.42	320	eP	P	19 28 07.4	-19
LVV				e		19 33 00.6	
LVV				MLR	MLR		
	comp=Z,80nm,17.0s,MS4.1						
LVV				MLR	MLR		
	comp=N,40nm,16.0s,MS4.2						
LVV				MLR	MLR		
	comp=E,80nm,17.0s,MS4.2						
OJC	**Ojcow**	77.44	322	eP	P	19 28 39.1	+1.4
CLL	**Collm**	80.15	326	P	P	19 28 52.0	-0.5
KHC	**Kasperske Hory**	81.29	324	eP	P	19 29 02.6	+4.1
GERES	**GERESS Array B**	81.41	323	P	P	19 29 00.8	+1.6
	comp=E,0.2nm,0.3s,mb3.5,baz=45,slow=7.5,SNR=4.2						
FCC	**Fort Churchill**	81.72	22	eP	P	19 29 00.0	-0.6
FCC				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
FCC	**Fort Churchill**	81.72	22	eP	P	19 29 00.0	-0.5
	comp=Z,9.3nm,0.9s,mb4.7						
GRA1	**Grafenberg Arr**	82.08	325	eP	P	19 29 04.7	+2.1
	comp=Z,6.0nm,1.5s,mb4.3						
GRF	**Grafenberg Arr**	82.08	325	eP	P	19 29 04.7	+2.1
GRF				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
GRF	**Grafenberg Arr**	82.08	325	eP	P	19 29 04.7	+2.1
GRF				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
GRF	**Grafenberg Arr**	82.08	325	eP	P	19 29 04.7	+2.1
	comp=Z,6.0nm,1.5s,mb4.3						
CMB	**Columbia Colle**	83.61	49	eP	P	19 29 10.4	-0.4
CMB				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.8						
CMB	**Columbia Colle**	83.61	49	eP	P	19 29 10.4	-0.4
	comp=Z,8.9nm,1.2s,mb4.8						
NVAR	**Mina Array Bea**	84.68	47	P	P	19 29 17.5	+1.4
	comp=Z,1.2nm,0.7s,mb4.2,baz=285,slow=4.4,SNR=4.7						
HWUT	**Hardware Ranch**	86.64	42	eP	P	19 29 26.9	+1.1
	comp=Z,3.9nm,0.8s,mb4.7						
PDAR	**Pinedale Array**	86.97	40	P	P	19 29 27.9	+0.5
	comp=Z,1.8nm,1.0s,mb4.3,baz=335,slow=2.0,SNR=9.7						
PDAR				LR	LR	20 09 55.0	
	comp=Z,42nm,19.9s,MS3.9,baz=233,slow=37						
ULM	**Lac du Bonnet**	87.87	28	P	P	19 29 31.9	+0.3
	comp=Z,6.5nm,0.9s,mb4.8,baz=344,slow=5.3,SNR=3.9						
MSU	**Marysvale**	88.34	44	eP	P	19 29 35.5	+1.4
RSSD	**Black Hills**	88.89	36	eP	P	19 29 36.8	+0.3
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7						
RSSD	**Black Hills**	88.89	36	eP	P	19 29 36.8	+0.2
	comp=Z,3.3nm,0.8s,mb4.7						
SCHQ	**Schefferville**	91.69	10	LR	LR	20 16 27.7	
	comp=Z,49nm,18.2s,MS4.0,baz=24,slow=39						
SADO	**Sadowa**	98.43	21	LR	LR	20 17 12.5	
	comp=Z,60nm,19.4s,MS4.1,baz=305,slow=37						

*NIED **02** 19:23:00, 33.80N×130.10E, h8^{km}, Mw3.7 Best double couple: M$_0$4.48×10^{14} NP1:ϕ_s52°, δ87°, λ145°. NP2:ϕ_s144°, δ55°, λ4°.*

*JMA **02** 19:23:09.9, 33.77N×130.09E, h15^{km}, M4.1 Broadband fault plane solution: P waves. NP1:ϕ_s47°, δ67°, λ176°. NP2:ϕ_s138°, δ86°, λ23°. Principal axes: T Plg19°, Azm5°; N Plg67°, Azm148°; P Plg13°, Azm270°;*

JMA Felt II J1.

ISC 02 19:23:09.8±0.8**, 33.77N**±0.04×**130.09E**±0.05**, h14^{km}**±7^{km}**, n6, σ0^{s}14**/12**, 3C-2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JII	**Iki**	0.30	276	⇓P	Pg	19 23 16.2	0.0
JII				S	Sg	19 23 20.5	0.0
JFI	**Itaya**	0.42	143	P	Pb	19 23 18.4	-0.1
JFI				S	Sg	19 23 24.5	+0.1
JFA	**Akaike**	0.59	95	⇓P	Pb	19 23 21.1	-0.3
JFA				S	Sb	19 23 29.5	+0.2
JUR	**Ureshino**	0.68	190	⇑P	Pb	19 23 22.9	0.0
JUR				S	Sb	19 23 31.9	0.0
JTA	**Tamana**	0.88	155	⇑P	Pb	19 23 26.4	0.0
JTA				S	Sb	19 23 37.9	+0.1
JTU	**Tsushima**	0.95	323	⇑P	Pb	19 23 27.3	-0.2
JTU				i S	Sb	19 23 39.9	+0.2

*NEIC **02** 19:52:27.0, 36.68N×11.19W, MG3.9(MDD), After MDD.*

*INMG **02** 19:52:28.3±0.8, 36.57N×11.22W, h10^{km}, ML2.1, Error ellipse: s-maj=6.2km s-min=4.7km az=84.0*

*CSEM **02** 19:52:28.6±0.6, 36.51N×10.99W, h2^{km}, ML3.3/9, Error ellipse: s-maj=12.9km s-min=10.5km az=148.0*

MDD 02 19:52:27.7±2.3**, 36.65N×11.13W, mb3.8**/4**, Error ellipse: s-maj=19.2km s-min=17.7km az=78.0, PRXIMO, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	2.12	64	ePn	Pn	19 53 04.2	-0.6
PTEO				eSn	Sn	19 53 29.6	-2.7
MOE	**Montemor**	2.89	49	ePn	Pn	19 53 14.0	-1.9
MOE				eSn	Sn	19 53 47.8	-4.1
PBEJ	**Beja**	2.94	61	ePn	Pn	19 53 14.7	-1.9
PBEJ				eSn	Sn	19 53 49.0	-4.1
	3.2nm,0.1s						
PBEJ	**Beja**	2.94	61	ePn	Pn	19 53 14.7	-1.9
PBEJ				eSn	Sn	19 53 49.0	-4.1
	3.2nm,0.1s						
PALC	**Alcoutim**	3.03	73	ePn	Pn	19 53 15.5	-2.4
PALC				eSn	Sn	19 53 50.8	-4.6
	8.6nm,0.2s						
PALC	**Alcoutim**	3.03	73	ePn	Pn	19 53 15.5	-2.4
PALC				eSn	Sn	19 53 50.8	-4.6
	8.6nm,0.2s						
EGRO	**El Granado**	3.04	72	Pn	Pn	19 53 15.6	-2.5
	1.3nm,0.1s,SNR=6.6						
EGRO				Sn	Sn	19 53 51.2	-4.5
	3.0nm,0.1s,SNR=8.3						
EGRO	**El Granado**	3.04	72	Pn	Pn	19 53 15.6	-2.5
	1.3nm,0.1s,SNR=6.6						
EGRO				Sn	Sn	19 53 51.2	-4.6
	3.0nm,0.1s,SNR=8.3						
PTOM	**Tomar**	3.66	35	eSn	Sn	19 54 06.8	-4.4
	3.5nm,0.2s						
PTOM	**Tomar**	3.66	35	eSn	Sn	19 54 06.8	-4.4
	3.5nm,0.2s						
EMIN	**Mina Concepcio**	3.73	71	Pn	Pn	19 53 25.1	-2.6
	2.1nm,0.2s,SNR=8.8						
EMIN				Sn	Sn	19 54 07.9	-5.2
	3.9nm,0.2s,SNR=12						
EMIN	**Mina Concepcio**	3.73	71	Pn	Pn	19 53 25.1	-2.7
	2.1nm,0.2s,SNR=8.8						
EMIN				Sn	Sn	19 54 07.9	-5.1
	3.9nm,0.2s,SNR=12						
EBAD	**Badajoz**	3.88	56	Pn	Pn	19 53 27.5	-2.5
	1.8nm,0.1s,SNR=8.3						
EBAD				Sn	Sn	19 54 11.3	-5.6
	7.3nm,0.3s,SNR=7.1						
EBAD	**Badajoz**	3.88	56	Pn	Pn	19 53 27.5	-2.4
	1.8nm,0.1s,SNR=8.3						
EBAD				Sn	Sn	19 54 11.3	-5.6
	7.3nm,0.3s,SNR=7.1						
ESPR	**Espera**	4.24	86	Pn	Pn	19 53 31.2	-3.8
	5.2nm,0.3s,SNR=7.9						
ESPR				Sn	Sn	19 54 19.9	-6.1
	13nm,0.2s,SNR=7.9						
ESPR	**Espera**	4.24	86	Pn	Pn	19 53 31.2	-3.8
	5.2nm,0.3s,SNR=7.9						
ESPR				Sn	Sn	19 54 19.9	-6.1
	13nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	4.29	41	eSn	Sn	19 54 21.4	-5.8
PVIS	**Viseu**	4.78	31	eSn	Sn	19 54 33.1	-6.6
EADA	**Adamuz**	5.43	72	Pn	Pn	19 53 48.7	-3.2
	0.6nm,0.1s,SNR=7.9						
EADA				Sn	Sn	19 54 49.0	-7.1
	4.8nm,0.2s,SNR=8.5						
EADA	**Adamuz**	5.43	72	Pn	Pn	19 53 48.7	-3.2
	0.6nm,0.1s,SNR=7.9						
EADA				Sn	Sn	19 54 49.0	-7.0
	4.8nm,0.2s,SNR=8.5						
ELOB	**Lobios**	5.72	24	Pn	Pn	19 53 52.3	-3.7
	0.7nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	19 54 53.8	-10
	1.0nm,0.2s,SNR=7.9						
ECAL	**Calabor**	6.28	31	Sn	Sn	19 55 07.4	-10
	2.5nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	6.40	60	Sn	Sn	19 55 11.9	-8.5
	baz=246,slow=22,SNR=4.0						
ESDC	**Sonseca Array**	6.40	60	Sn	Sn	19 55 11.9	-8.4
	SNR=4.0						
EQES	**Quesada**	6.53	77	Sn	Sn	19 55 14.6	-9.0
	1.0nm,0.2s,SNR=4.0						
EQES	**Quesada**	6.53	77	Sn	Sn	19 55 14.6	-9.0
	1.0nm,0.2s,SNR=4.0						

*IDC **02** 19:58:04.5±1.3, 7.43N×93.69E, mb3.6/7, mb1 3.8/8, mb1mx3.7/21, mbtmp3.6/8, ML3.4/1, Error ellipse: s-maj=50.5km s-min=20.4km az=58.0*

*NEIC **02** 19:58:07.5±0.6, 7.31N×93.48E, h30^{km}, mb4.2/6, Error ellipse: s-maj=11.0km s-min=8.7km az=218.0*

ISC 02 19:58:05.3±0.6**, 7.31N**±0.08×**93.52E**±0.08**, h30^{km}, n20, σ1^{s}14**/20**, mb4.0**/13**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	7.37	105	eP	Pn	19 59 53.9	+0.3
CM31	**Chiang Mai Arr**	12.28	25	P	P	20 01 01.0	-0.2
	1.9nm,0.7s						
CMAR	**Chiang Mai Arr**	12.28	25	Pn	P	20 01 00.2	-0.9
	0.1nm,0.3s,baz=211,slow=14,SNR=6.9						
PALK	**Pallekele**	12.71	271	eP	P	20 01 06.4	-0.6
	23nm,1.0s						
DMN	**Daman**	21.71	339	eP	P	20 02 56.5	+0.5
	15nm,0.7s,mb4.5						
GUN	**Gumba**	21.73	341	eP	P	20 02 55.4	-0.8
KKN	**Kakani**	21.82	340	eP	P	20 02 56.8	-0.3
GKN	**Gorkha**	22.24	339	eP	P	20 03 02.2	+1.0
	7.1nm,0.5s,mb4.3						
LSA	**Lhasa**	22.39	355	eP	P	20 03 00.8	-1.9
	3.4nm,0.6s,mb4.0						
KOLN	**Koldanda**	22.42	336	eP	P	20 03 04.8	+1.8
	17nm,1.1s,mb4.4						
NACB	**Ninganchiao**	31.70	55	P	P	20 04 27.3	-1.5
MKAR	**Makanchi Array**	40.51	348	P	P	20 05 44.0	+0.7
	0.6nm,0.7s,mb3.3,baz=188,slow=8.6,SNR=4.9						
SONM	**Songino Array**	41.85	13	P	P	20 05 55.1	+0.9
	0.4nm,0.8s,mb3.1,baz=202,slow=6.7,SNR=5.5						
ZAL	**Zalesovo**	47.03	353	P	P	20 06 36.1	+0.3
	0.9nm,0.4s,mb4.1,baz=290,slow=7.1,SNR=5.5						
WRA	**Warramunga Arr**	48.44	125	P	P	20 06 48.1	+0.8
	0.6nm,0.5s,mb3.9,baz=307,slow=8.4,SNR=8.9						
WRAB	**Tennant Creek**	48.45	125	eP	P	20 06 44.3	-3.0
	17nm,1.3s,mb4.9						
ASAR	**Alice Springs**	50.03	129	P	P	20 07 00.9	+1.4
	0.4nm,0.6s,mb3.7,baz=299,slow=7.2,SNR=8.1						
FINES	**FINESS Array B**	72.92	332	P	P	20 09 34.5	+1.1
	1.2nm,0.8s,mb3.9,baz=112,slow=10,SNR=5.7						
LBTB	**Lobatse**	73.43	241	P	P	20 09 35.4	-1.8
	8.4nm,1.3s,mb4.5						
GERES	**GERESS Array B**	77.84	318	P	P	20 10 05.9	+4.3
	0.2nm,0.3s,mb3.5,baz=90,slow=2.7,SNR=4.1						

*NEIC **02** 20:18:52.0, 62.27N×147.91W, h1^{km}, ML3.7(PMR), ML3.5(AEIC), After AEIC.*

*IDC **02** 20:18:53.0±1.6, 62.37N×147.84W, mb3.7/4, mb1 3.7/7, mb1mx3.6/23, mbtmp3.6/7, ML3.6/3, MS2.9/1, Ms1 2.9/1, ms1mx2.1/31, Error ellipse: s-maj=25.1km s-min=19.4km az=130.0*

ISC 02 20:18:50.0±0.8**, 62.26N**±0.02×**147.87W**±0.04**, h4^{km}**±6^{km}**, n77, σ1^{s}16**/91**, mb3.8**/4**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCM	**Sheep Creek Mo**	0.50	149	P	Pg	20 19 03.6	+3.7
SML	**Sawmill**	0.50	206	P	Pg	20 19 03.6	+3.6
SML				S	Sg	20 19 12.1	+5.4
GHO	**Glory Hole Cre**	0.70	226	P	Pg	20 19 06.0	+2.1
DHY	**Denali Highway**	0.85	15	P	Pg	20 19 08.9	+1.9
PMR	**Palmer**	0.90	222	P	Pb	20 19 08.6	+0.8

PMR				S	Sg	20 19 21.0	+1.1
HUR	Hurricane	1.09	312	P	Pb	20 19 11.7	+0.6
HUR				S	Sb	20 19 26.7	+1.3
PWA	Palmer West	1.13	238	P	Pb	20 19 12.7	+1.0
CUT	Chulitna	1.13	279	P	Pb	20 19 12.3	+0.6
TZL	Tazlina	1.17	100	P	Pb	20 19 13.7	+1.4
RND	Reindeer	1.24	339	P	Pb	20 19 14.2	+0.6
PAX	Paxson	1.32	56	P	Pb	20 19 15.6	+0.7
PAX				S	Sb	20 19 33.7	+1.7
VLZ	Valdez	1.35	146	P	Pb	20 19 14.6	-0.8
RC01	Rabbit Creek A	1.47	218	P	Pn	20 19 17.6	+0.2
RC01				S	Sb	20 19 37.6	+1.0
DIV	Divide	1.51	138	P	Pn	20 19 17.0	-0.9
THY	Trims Highway	1.51	39	P	Pn	20 19 19.0	+1.0
THY				S	Sb	20 19 39.0	+1.3
FIB	Fire Island	1.55	226	P	Pn	20 19 19.5	+1.0
FIB				S	Sb	20 19 41.7	+2.9
MCK	McKinley	1.56	342	P	Pn	20 19 19.3	+0.7
MCK				S	Sb	20 19 39.4	+0.4
TRF	Thorofare Moun	1.63	318	P	Pn	20 19 19.6	0.0
WACK	Wrangell Chich	1.69	98	P	Pn	20 19 21.4	+1.0
WACK				S	Sb	20 19 45.0	+2.3
VOGL	Vogel Lake	1.76	225	P	Pn	20 19 22.9	+1.4
VOGL				S	Sn	20 19 48.1	+3.5
KTH	Kantishna Hill	1.91	314	P	Pn	20 19 23.7	0.0
KTH				S	Sn	20 19 50.0	+1.7
MPA	Moose Pass	1.92	203	P	Pn	20 19 23.2	-0.5
HIN	Hinchinbrook I	1.98	160	P	Pn	20 19 24.2	-0.4
EYAK	Cordova Ski Ar	2.00	148	P	Pn	20 19 24.6	-0.2
EYAK				S	Sn	20 19 52.8	+2.3
MENT	Mentasta	2.04	69	*e*P	Pn	20 19 25.7	+0.3
GLB	Gilahina Butte	2.09	111	P	Pn	20 19 26.2	0.0
SLKM	Skilak Lake	2.09	214	P	Pn	20 19 26.1	-0.1
HDA	Harding Lake	2.19	10	P	Pn	20 19 28.7	+1.0
WRH	Wood River Hil	2.22	357	P	Pn	20 19 27.9	-0.3
SPU	Mount Spurr	2.27	243	*e*P	Pn	20 19 28.6	-0.2
SEW	Seward	2.29	200	P	Pn	20 19 29.4	+0.3
SEW				S	Sn	20 19 59.6	+1.4
CKN	Chakachatna No	2.30	245	P	Pn	20 19 29.8	+0.6
CKL	Chakachamna La	2.38	245	P	Pn	20 19 30.3	-0.1
CCB	Clear Creek Bu	2.40	1	P	Pn	20 19 30.2	-0.4
RAGM	Ragged Mountai	2.43	139	P	Pn	20 19 30.6	-0.4
ILAR	Eielson Array	2.56	9	Pn	Pn	20 19 33.0	0.0
	9.7nm,0.3s,baz=196,slow=15,SNR=215						
ILAR				Sn	Sn	20 20 02.5	-2.4
	54nm,0.3s,baz=191,slow=24,SNR=42						
IL1	Eielson Array	2.56	9	P	Pn	20 19 33.0	+0.1
COLA	College	2.63	0	P	Pn	20 19 33.5	-0.4
MDM	Murphy Dome	2.72	357	P	Pn	20 19 34.8	-0.4
DFR	Drift River	2.86	236	P	Pn	20 19 36.9	-0.3
KAIM	Kayak Island	2.88	143	P	Pn	20 19 36.2	-1.3
BALM	Baldy	2.91	113	P	Pn	20 19 36.8	-1.1
BCA3	Beaver Creek A	2.92	71	P	Pn	20 19 37.9	-0.2
RDN	Redoubt North	2.94	236	P	Pn	20 19 37.9	-0.4
MID	Middleton Isla	2.94	165	P	Pn	20 19 38.0	-0.3
NCT	North Crescent	2.97	237	P	Pn	20 19 38.6	-0.2
MLY	Manley	3.06	337	P	Pn	20 19 39.6	-0.6
CNPM	China Poot	3.20	212	P	Pn	20 19 41.1	-0.9
ILIM	Iliamna	3.30	231	P	Pn	20 19 42.8	-0.6
INE	Iliamna NE	3.35	231	P	Pn	20 19 43.6	-0.5
ILW	Iliamna West	3.37	232	P	Pn	20 19 43.9	-0.6
CTGM	Chitina Glacie	3.38	110	P	Pn	20 19 44.0	-0.6
OPT	Oil Point	3.70	227	P	Pn	20 19 48.5	-0.6
TTA	Tatalina	3.83	284	*e*P	Pn	20 19 49.4	-1.6
TT01	Tatalina	3.83	283	P	Pn	20 19 49.4	-1.6
SVW2	Sparrevohn	3.86	256	P	Pn	20 19 49.5	-1.9
AUW	Augustine West	3.99	226	P	Pn	20 19 52.4	-0.9
AUI	Augustine Isla	4.00	225	P	Pn	20 19 52.5	-1.0
IM3	Indian Mountai	4.54	328	P	Pn	20 19 59.6	-1.5
IMA	Indian Mountai	4.59	329	*e*P	Pn	20 20 00.6	-1.2
PNL	Peninsula	4.88	118	P	Pn	20 20 03.6	-2.3
KDAK	Kodiak Island	5.07	210	P	Pn	20 20 05.4	-3.3
COLD	Coldfoot	5.09	350	P	Pn	20 20 07.7	-1.2
BM3	Burnt Mountain	5.37	14	P	Pn	20 20 11.4	-1.3
ANCK	Angle Creek	5.57	226	P	Pn	20 20 13.2	-2.4
CAHL	Cahill	5.62	225	P	Pn	20 20 13.7	-2.6
WHY	Whitehorse	6.43	99	P	Pn	20 20 25.0	-2.8
INK	Inuvik	8.52	38	Pn	P	20 20 55.4	-1.6
	0.7nm,0.3s,baz=219,slow=14,SNR=9.3						
INK				Sn	Sn	20 22 29.1	-5.7
	0.7nm,0.3s,baz=229,slow=11,SNR=4.5						
INK	Inuvik	8.52	38	*e*P	P	20 20 53.6	-3.4
DLBC	Dease Lake	9.62	105	LR	LR	20 25 04.6	
	comp=Z,60nm,18.5s,baz=235,slow=38						
DLBC	Dease Lake	9.62	105	P	P	20 21 11.2	-1.0
YKA	Yellowknife Ar	15.33	74	Pn	P	20 22 28.9	+0.4
	0.1nm,0.3s,baz=288,slow=11,SNR=2.2						
ARCES	ARCESS Array B	48.41	3	P	P	20 27 34.3	+0.1
	1.3nm,0.9s,mb4.0,baz=11,slow=9.2,SNR=3.4						
ARCES	ARCESS Array B	48.41	3	P	P	20 27 34.3	+0.1
SONM	Songino Array	55.42	308	P	P	20 28 28.5	+1.3
	0.4nm,0.6s,mb3.6,baz=20,slow=6.6,SNR=4.5						
FINES	FINESS Array B	56.53	3	P	P	20 28 37.2	+2.2
	1.1nm,1.0s,mb3.9,baz=18,slow=8.8,SNR=2.3						
MKAR	Makanchi Array	64.14	324	P	P	20 29 27.1	0.0
	0.3nm,0.4s,mb3.7,baz=43,slow=6.7,SNR=5.6						

IDC 02 20:51:25.9±1.5**, 7.65S**×**127.34E, mb3.7**/3**, mb1 3.7**/3**, mb1mx3.6**/13**, mbtmp3.7**/3**, Error ellipse: s-maj=264.9km s-min=29.7km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.98	152	Pn	P	20 54 39.3	-8.5
	0.5nm,0.3s,baz=321,slow=13,SNR=21						
WRA				Sn	S	20 57 09.2	-16
	0.5nm,0.3s,baz=334,slow=22,SNR=6.2						
ASAR	Alice Springs	17.13	159	Pn	P	20 55 22.6	-5.9
	0.2nm,0.3s,baz=333,slow=9.6,SNR=14						
ASAR				Sn	S	20 58 26.4	-12
	0.2nm,0.3s,baz=325,slow=23,SNR=5.0						
STKA	Stephens Creek	27.53	153	P	P	20 57 14.4	-2.0
	1.3nm,0.8s,baz=326,slow=7.3,SNR=4.2						
SONM	Songino Array	58.26	344	P	P	21 01 22.4	-2.3
	0.3nm,0.6s,baz=158,slow=6.7,SNR=4.2						
MKAR	Makanchi Array	67.35	328	P	P	21 02 22.9	-2.1
	0.4nm,0.6s,baz=112,slow=6.5,SNR=5.1						

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*MOS **02** 21:00:56.4±2.0, 34.59N×69.98E, h33^{km}, mb4.0/4, Error ellipse: s-maj=14.0km s-min=9.3km az=97.9*

*NEIC **02** 21:00:56.8±0.6, 34.66N×70.05E, h20^{km}, mb4.1/7, Error ellipse: s-maj=12.4km s-min=6.6km az=217.0*

*IDC **02** 21:00:56.8±1.8, 34.92N×70.14E, mb3.7/6, mb1 3.8/8, mb1mx3.6/24, mbtmp3.8/8, ML3.6/2, MS2.6/1, Ms1 2.6/1, ms1mx2.4/19, Error ellipse: s-maj=27.0km s-min=20.4km az=105.0*

*BJI **02** 21:01:02.7, 34.64N×70.74E, h20^{km}, mb4.2, ML4.3*

*NNC **02** 21:01:03.6±5.2, 35.11N×69.20E, h24^{km}±89^{km}, mpv4.4, Error ellipse: s-maj=73.2km s-min=26.0km az=176.0*

ISC 02 21:00:59.8±0.8**, 34.79N**±0.03×**69.90E**±0.06**, h52**^{km}±10^{km}**, n60,** σ1^{s}**49**/72**, mb3.7**/10**, 6C-1D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	1.92	120	⇑P	P	21 01 32.6	+1.8
CEP				S	S	21 02 01.0	+7.2
SBDP	Sheikh Budin	2.60	163	P	P	21 01 40.5	+0.1
CHCP	Chirah Chowk	3.01	111	P	P	21 01 47.1	+0.9
DRP	Derazinda	3.05	175	P	P	21 01 46.9	+0.1
SARP	Sargodha	3.69	140	P	P	21 01 55.0	-0.7
THN	Thein Dam	5.39	114	*e*P	P	21 02 19.5	-0.2
THN				*e*S	S	21 03 21.7	+0.4
	100nm,0.4s						
PONG	Pong	5.80	118	*e*PG	Px	21 02 52.0	
PONG				*e*S	S	21 03 32.0	+0.6
KSH	Kashi	6.76	44	*e*P	P	21 02 40.9	+2.0
KSH				S	S	21 03 59.3	+3.9
KSH				Smax			
	comp=N,420nm,1.5s						
KSH				Smax			
	comp=E,200nm,1.2s						
SDNR	Sundarnagar	6.78	117	*e*P	P	21 02 37.6	-1.5
SDNR				*e*S	S	21 03 54.4	-1.3
SMLA	Simla	7.12	119	*i* P	P	21 02 37.8	-6.0
SMLA				*i* S	S	21 03 57.8	-6.3
KLP	Kalpa	7.72	113	*e*P	P	21 02 52.2	+0.1
KLP				*e*S	S	21 04 17.5	-1.5
KLP				AML	AML	21 04 25.9	
	comp=N,146nm,0.8s						
KLP				AML	AML	21 04 26.4	
	comp=E,251nm,0.6s						
AML	Almayashu	7.91	21	P	P	21 02 54.8	0.0
	SNR=16						
UCH	Uchtor	8.26	25	P	P	21 03 01.2	+1.7
	SNR=16						
KK31	Karatay Array	8.31	3	P	P	21 02 59.1	-1.2
	comp=E,7.6nm,0.5s,baz=186,slow=12,SNR=114						
KK31				⇓S	S	21 04 31.0	-2.8
	comp=E,6.9nm,0.5s,baz=195,slow=22,SNR=4.9						
KKAR	Karatay Array	8.31	3	P	P	21 02 59.1	-1.2
KKAR				S	S	21 04 31.0	-2.8
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KZA	Kyzart	8.40	28	P	P	21 03 01.5	0.0
	SNR=9.2						
EKS2	Erkin-Say	8.42	20	P	P	21 03 07.7	+5.9
	SNR=12						
AAK	Ala-Archa	8.61	23	⇑P	P	21 03 05.7	+1.3
	comp=Z,12nm,0.6s						
AAK				⇑S	S	21 04 42.1	+0.9
	comp=Z,22nm,0.7s						
AAK	Ala-Archa	8.61	23	P	P	21 03 05.8	+1.4
AAK				S	S	21 04 42.5	+1.3
AAK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AAK	Ala-Archa	8.61	23	*e*Pn	P	21 03 02.2	-2.2
	comp=Z,15nm,0.6s						
CHMS	Chumysh	9.02	23	P	P	21 03 10.8	+0.7
	SNR=17						
USP	Ospenovka	9.19	22	P	P	21 03 13.2	+0.8
	SNR=5.3						
TKM2	Tokmak 2	9.25	27	P	P	21 03 13.6	+0.4
	SNR=13						
KOLN	Koldanda	13.64	117	*e*P	P	21 04 08.3	-4.0
	comp=Z,3.2nm,0.3s						
GKN	Gorkha	14.28	114	*e*P	P	21 04 15.7	-5.0
	comp=Z,4.5nm,0.2s						
DMN	Daman	14.84	115	*e*P	P	21 04 23.1	-4.9
	comp=Z,17nm,0.7s						
KKN	Kakani	14.88	114	*e*P	P	21 04 23.8	-4.7
	comp=Z,15nm,0.5s						
KKN	Kakani	14.88	114	*e*P	P	21 04 23.8	-4.7
KKN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PKI	Pulchoki	15.09	114	*e*P	P	21 04 26.5	-4.7
MK31	Makanchi Array	15.20	34	⇑P	P	21 04 35.0	+2.5
	comp=Z,2.2nm,0.7s,baz=212,slow=13,SNR=22						
MKAR	Makanchi Array	15.20	34	P	P	21 04 31.1	-1.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	15.20	34	Pn	P	21 04 31.2	-1.3
	comp=Z,0.3nm,0.3s,baz=206,slow=10,SNR=16						
GUN	Gumba	15.27	112	*e*P	P	21 04 27.9	-5.6
	comp=Z,8.5nm,0.4s						
AB31	Akbulak array	16.21	336	⇑P	P	21 04 42.0	-3.3
	comp=Z,1.7nm,0.5s,baz=150,slow=12,SNR=63						
AB31				⇑S	S	21 07 34.9	-8.2
	comp=Z,1.7nm,0.6s,baz=155,slow=22,SNR=3.6						
AB31	Akbulak array	16.21	336	*e*P	P	21 04 42.2	-3.2
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVA0	Borovoye Array	18.23	1	P	P	21 05 10.3	-0.3
	comp=Z,1.2nm,1.1s,baz=177,slow=13,SNR=29						
BVAR	Borovoye Array	18.23	1	P	P	21 05 08.3	-2.3
	comp=Z,0.2nm,0.3s,baz=180,slow=13,SNR=15						
BVAR				S	S	21 08 33.4	+4.5
	comp=Z,0.1nm,0.3s,baz=194,slow=24,SNR=3.4						
LSA	Lhasa	18.67	100	P	P	21 05 13.2	-2.8
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSA	Lhasa	18.67	100	P	P	21 05 13.2	-2.8
	comp=Z,3.7nm,0.8s						
CHKZ	Chkalovo	18.89	1	P	P	21 05 20.2	+1.8
CHKZ	Chkalovo	18.89	1	*e*P	P	21 05 16.1	-2.3
CHKZ				pmax	pmax		
	comp=Z,77nm,0.9s						
CHKZ	Chkalovo	18.89	1	*e*P	P	21 05 16.1	-2.2
	comp=Z,77nm,0.9s						
GNI	Garni	20.64	292	P	P	21 05 36.0	-1.3
GNI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GNI	Garni	20.64	292	P	P	21 05 40.9	+3.6
	comp=Z,1.0nm,0.3s,baz=346,slow=17,SNR=3.5						
GNI				LR	LR	21 15 15.9	
	comp=Z,16nm,20.6s,baz=12,slow=41						
GNI	Garni	20.64	292	P	P	21 05 36.0	-1.3
	comp=Z,6.8nm,1.0s						
GNI				LR	LR	21 15 15.9	
SHL	Shillong	21.08	110	*i* P	P	21 05 44.0	+2.1
ZAL	Zalesovo	21.82	24	P	P	21 05 46.9	-2.2
	comp=Z,1.5nm,0.3s,mb3.9,baz=279,slow=6.6,SNR=9.3						
ZAL	Zalesovo	21.82	24	P	P	21 05 46.9	-2.2
NVS	Novosibirsk	22.09	21	*e*P	P	21 05 53.7	+1.9
NVS				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
NVS				pmax	pmax		
	comp=N,4.0nm,0.8s						
ARU	Arti	22.99	344	*e*P	P	21 06 04.9	+4.4
ARU				*e*S	Sx	21 09 52.2	
ARU				*e*SS	Sx	21 10 15.7	
ARU	Arti	22.99	344	*e*P	P	21 06 02.7	+2.2
	comp=N,4.6nm,0.7s,mb4.0						
GTA	Gaotai	24.24	70	P	P	21 06 15.1	+2.3
GTA				AP		21 06 23.8	
GTA				XP		21 06 27.5	
MALT	Malatya	25.46	287	P	P	21 06 24.6	+0.1
MALT				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.7						
MALT	Malatya	25.46	287	P	P	21 06 24.6	+0.1
	comp=Z,2.8nm,1.1s,mb3.7						
ZAK	Zakamensk	28.80	47	*e*P	P	21 06 52.3	-2.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.9s,mb3.2						
EIL	Elat	29.90	270	P	P	21 07 04.9	0.0
	comp=Z,6.0nm,1.0s,mb4.3						
SONM	Songino Array	30.06	53	P	P	21 07 06.1	0.0
	comp=Z,0.9nm,0.6s,mb3.6,baz=262,slow=9.6,SNR=13						
FINES	FINESS Array B	38.42	328	P	P	21 08 19.8	+2.2
	comp=Z,0.8nm,0.7s,mb3.6,baz=162,slow=6.0,SNR=5.5						
ARCES	ARCESS Array B	42.39	339	P	P	21 08 52.8	+2.5
	comp=Z,1.1nm,0.7s,mb3.6,baz=101,slow=6.2,SNR=4.7						
NOA	NORSAR Array B	45.22	324	P	P	21 09 13.7	+0.4
	comp=Z,0.4nm,0.5s,mb3.5,baz=98,slow=8.0,SNR=3.4						

MAN 02 21:16:24.9, 9.67N×121.90E, h23^{km}, mb4.0, ML2.8, MS2.4, 1C, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	1.16	35	*e*P	Pn	21 16 44.9	-1.1
GUIM				*e*S	Sb	21 17 01.2	+0.3
SNPH	Sibulan	1.35	104	⇑*i*P	Pn	21 16 48.2	-0.5
SNPH				*i* S	Sn	21 17 06.7	+0.5
CUYO	Cuyo Island	1.46	323	*e*P	Pn	21 16 50.3	+0.1
IPIL	Ipil	1.98	161	*e*P	Pn	21 16 56.9	-0.8
BUSP	Coron	2.86	324	*e*P	Pn	21 17 09.7	-0.5
ENPP	El Nido	2.88	302	*e*P	Pn	21 17 10.2	-0.2

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*TAP **02** 21:20:29.6, 24.46N×121.86E, h8^{km}, ML3.8*

TAP Felt IV J at Nanau, I J at Ilan, I J at Nioudou, II J at Nanshan, I J at Tachien.

*JMA **02** 21:20:29.6±0.2, 24.71N×121.84E, h40^{km}, M3.3*

ISC 02 21:20:29.7±0.2**, 24.46N**±0.01×**121.95E**±0.02**, h8**^{km}**, n57,** σ1^{s}**24**/96**, 10C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.17	329	⇓*i*P	Pg	21 20 33.1	-0.3
ENA	Nanau	0.19	260	⇑*i*P	Pg	21 20 32.5	-1.3
ENA				S	Sg	21 20 35.4	-1.1
EHP	Heping Village	0.24	231	P	Pg	21 20 33.7	-1.1
EHP				S	Sg	21 20 36.8	-1.4
ILA	Ilan	0.35	329	*e*P	Pg	21 20 36.6	-0.3
ILA				S	Sg	21 20 43.2	+1.5
ENTT	Nioudou	0.39	297	*e*P	Pg	21 20 36.6	-1.0
ENTT				S	Sg	21 20 40.7	-2.2
TWD	Chiawan	0.50	220	⇑*i*P	Pg	21 20 38.5	-1.2
TWD				S	Sg	21 20 45.0	-1.5
NNS	Nan Shan	0.52	268	⇑*i*P	Pg	21 20 38.7	-1.6
NNS				S	Sg	21 20 44.7	-2.6
TWB1	Santiao Chiao	0.55	4	⇑P	Pg	21 20 40.6	-0.1
TWB1				S	Sg	21 20 48.5	+0.4
HWA	Hwalien	0.57	213	P	Pg	21 20 40.5	-0.7
HWA				S	Sg	21 20 48.7	-0.3
NSK	Sanguang	0.58	292	*e*P	Pg	21 20 40.1	-1.2
NSK				S	Sg	21 20 46.4	-2.7
TWA	Mucha	0.61	327	*e*P	Pg	21 20 41.8	-0.2
NWF	Wu-fen Shan	0.62	346	*e*P	Pg	21 20 42.2	-0.1
NWF				S	Sg	21 20 50.7	0.0
TAP1	Taipei	0.69	326	*e*P	Pb	21 20 42.8	-0.7
TAP	Taipei	0.70	325	*e*P	Pb	21 20 43.3	-0.4
TAP				S	Sg	21 20 52.7	-0.5
ESF	Shoufeng Towns	0.71	214	*e*P	Pb	21 20 42.6	-1.2
TWT	Tachien	0.73	254	*e*P	Pb	21 20 42.8	-1.4
TWT				S	Sb	21 20 52.0	-2.2
ESL	Shilin	0.80	216	⇑*i*P	Pb	21 20 43.8	-1.6
ESL				S	Sb	21 20 54.7	-1.3
TWS1	Kuangyinshan	0.80	323	P	Pb	21 20 45.7	+0.4
TWS1				S	Sb	21 20 58.4	+2.3
NCU	National Centr	0.86	306	*e*P	Pb	21 20 47.8	+1.4
NCU				S	Sb	21 21 00.5	+2.8
TWY	Chenhua	0.87	339	*e*P	Pb	21 20 46.3	-0.3
TWY				S	Sb	21 20 59.5	+1.4
NSTT	Nanjuang	0.88	281	⇑*i*P	Pb	21 20 46.1	-0.6
NSTT				S	Sb	21 20 56.2	-2.1
HSN	Hsinchu	0.95	291	*e*P	Pb	21 20 48.3	+0.4
HSN				S	Sb	21 21 00.3	-0.2
YOJ	Yonaguni jima	0.97	90	P	Pb	21 20 48.8	+0.5
YOJ				S	Sb	21 21 02.7	+1.7
TWQ1	Liyutan	1.08	264	⇑*i*P	Pb	21 20 50.0	-0.1
NSY	Sanyi	1.08	268	*e*P	Pb	21 20 50.1	-0.1
NSY				S	Sb	21 21 04.8	+0.6
EHY	Hungye	1.11	211	*e*P	Pb	21 20 49.8	-0.9
SMLT	Sun Moon Lake	1.12	239	⇑*i*P	Pb	21 20 50.0	-0.7
SMLT				S	Sb	21 21 04.3	-1.0
TYC	Yuchr	1.14	241	⇑*i*P	Pb	21 20 50.4	-0.8
TYC				S	Sb	21 21 04.5	-1.5
PCYT	Pengchaiyu	1.17	5	*e*P	Pb	21 20 51.3	-0.4
TCU	Taichung	1.20	255	P	Pb	21 20 53.2	+1.0
TCU				S	Sb	21 21 08.8	+1.1
TWF1	Yuli	1.25	208	*e*P	Pb	21 20 51.4	-1.7
TWF1				S	Sb	21 21 09.9	+0.6
WNT	Mingjian	1.29	244	P	Pb	21 20 54.6	+0.8
WNT				S	Sb	21 21 12.1	+1.8
CHN5	Tsauling	1.45	234	⇑*i*P	Pn	21 20 56.9	+0.7
CHN5				S	Sb	21 21 16.9	+2.1
CHKT	Chengkung	1.46	202	*e*P	Pn	21 20 54.9	-1.5
WGK	Gukeng	1.48	239	*e*P	Pn	21 20 57.8	+1.0
WGK				S	Sb	21 21 18.0	+2.1
ELDTW	Lidau	1.53	214	*e*P	Pn	21 20 56.2	-1.1
IRIF	Iriomote-Funau	1.63	94	P	Pn	21 20 58.4	-0.5
IRIF				*e*S	Sn	21 21 20.2	0.0
CHN2	Minshiung	1.63	236	*e*P	Pn	21 21 00.0	+1.1
CHN2				S	Sn	21 21 22.5	+2.3
WTCT	Ta-ch’eng	1.63	249	*e*P	Pn	21 20 59.3	+0.4
CHN4	Tsaushan	1.66	229	⇓P	Pn	21 21 00.8	+1.5
CHN4				S	Sn	21 21 24.7	+3.8
CHY	Chiayi	1.69	236	*e*P	Pn	21 21 00.9	+1.2
CHY				S	Sn	21 21 23.8	+2.0
WTP	Ta-pu	1.72	226	*e*P	Pn	21 21 01.3	+1.2
WTP				S	Sn	21 21 27.6	+5.2
HATJ	Hateruma jima	1.74	103	P	Pn	21 21 00.7	+0.2
CHN1	Nanshi	1.82	226	*e*P	Pn	21 21 03.1	+1.5
CHN1				S	Sn	21 21 27.9	+3.0
TWG	Pinlang	1.82	206	*e*P	Pn	21 21 01.2	-0.4
SGST	Jiashian	1.86	223	*e*P	Pn	21 21 03.4	+1.3
SGST				S	Sn	21 21 29.3	+3.4
JKRS	Kuro-shima	1.89	96	P	Pn	21 21 02.5	-0.1
JKRS				S	Sn	21 21 26.6	-0.3
CHN8	Yiju	1.94	235	*e*P	Pn	21 21 04.7	+1.4
CHN8				S	Sn	21 21 30.8	+2.8
CHN3	Shinhua	2.00	227	*e*P	Pn	21 21 06.7	+2.6
JIJ	Ishigaki jima	2.00	92	P	Pn	21 21 03.3	-0.9
JIJ				S	Sn	21 21 28.3	-1.4
SCLT	Jiali	2.05	232	*e*P	Pn	21 21 05.5	+0.6
ECL	Taimali	2.07	206	*e*P	Pn	21 21 04.6	-0.5
SSD	Sandimen	2.09	216	*e*P	Pn	21 21 06.2	+0.7
PNG	Penghu	2.36	248	*e*P	Pn	21 21 09.1	-0.2
SCZT	Fangliau	2.41	211	*e*P	Pn	21 21 11.4	+1.3
WDGT	Dungji	2.41	241	*e*P	Pn	21 21 10.0	-0.1
WDGT				S	Sn	21 21 41.9	+1.9
JTJ	Tarama	2.52	85	P	Pn	21 21 11.4	-0.1
JTJ				*e*S	Sn	21 21 41.4	-1.2

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*MOS **02** 21:48:05.7±1.8, 35.24N×31.25E, h33^{km}, mb4.3/1, Error ellipse: s-maj=33.4km s-min=14.1km az=79.3*

*HLW **02** 21:48:08.9, 35.97N×31.41E, h33^{km}, Mb3.9*

*NIC **02** 21:48:09.5±0.2, 36.12N×31.53E, h25^{km}, mb4.2, ML3.9, MW3.2*

*ISK **02** 21:48:10.2, 35.55N×31.50E, h66^{km}, MD3.8*

*GRAL **02** 21:48:10.8±2.7, 35.80N×31.37E, h25^{km}±22^{km}, MD3.9*

*CSEM **02** 21:48:11.0±0.1, 35.72N×31.44E, h60^{km}, Mw3.2, Error ellipse: s-maj=1.9km s-min=1.0km az=61.0*

*NEIC **02** 21:48:12.7±0.5, 35.62N×31.48E, h52^{km}±10^{km}, mb3.9/1, Error ellipse: s-maj=9.9km s-min=6.8km az=211.0*

*IDC **02** 21:48:12.8±1.3, 35.62N×31.40E, h56^{km}±18^{km}, mb3.4/4, mb1 3.4/9, mb1mx3.3/24, mbtmp3.5/9, ML3.4/5, Error ellipse: s-maj=13.5km s-min=11.2km az=46.0*

ISC 02 21:48:11.6±0.2**, 35.61N**±0.02×**31.49E**±0.02**, h70**^{km}±6^{km}**, n90,** σ1^{s}**15**/120**, mb3.6**/5**, 5C-7D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMC	Akamas	0.90	130	*e*P	P	21 48 29.9	+0.8
PPCY	Paphos	1.01	136	*e*P	P	21 48 32.1	+1.6
ALFC	Alevga	1.01	116	⇑*e*P	P	21 48 30.1	-0.4
	32nm,0.2s						
ALFC				S	S	21 48 47.0	+2.4
LEF	Lefka	1.25	113	PN	P	21 48 32.8	-0.8
LEF				SN	S	21 48 47.6	-2.4
SZAC	Souni-Zanaja	1.43	126	P	P	21 48 37.1	+1.0
SZAC				S	S	21 48 58.0	+3.8
SZAC	Souni-Zanaja	1.43	126	*e*P	P	21 48 37.1	+1.0
ANTB	Antalya	1.45	333	*e*PN	P	21 48 35.6	-0.9
MAMC	Mammari	1.48	107	*e*P	P	21 48 35.9	-0.9
HDMB	Hadim	1.57	31	*e*PN	P	21 48 37.0	-1.1
CSS	Prodhromos	1.64	113	⇑*e*P	P	21 48 38.2	-0.8
	4.3nm,0.4s						
CSS				S	S	21 49 01.1	+1.9
AKAS	Kas	1.65	293	*i* P	P	21 48 39.2	+0.1
ELL	Elmali	1.71	312	*e*PN	P	21 48 39.7	-0.2
IKL	Isikli	1.89	70	*e*PN	P	21 48 41.6	-0.7
PHNC	Paralimni	2.17	106	P	P	21 48 46.0	-0.2
PHNC				S	S	21 49 18.4	+6.5
PHNC	Paralimni	2.17	106	*e*P	P	21 48 46.0	-0.2
FETY	Fethiye	2.20	298	*e*PN	P	21 48 47.1	+0.4
GOLH	Golhisar	2.25	317	*i* P	P	21 48 53.4	+6.1
GOLH				*i* S	S	21 49 15.7	+1.8
MEST	Erdemli	2.36	65	*i* P	P	21 48 49.5	+0.5
ISP	Isparta	2.36	341	*e*PN	P	21 48 48.8	-0.2
ISP	Isparta	2.36	341	*e*Pn	P	21 48 47.8	-1.2
KONT	Konya--Tatoy	2.43	16	PN	P	21 48 50.4	+0.4
DALT	Dalyan (Mudla)	2.58	297	PN	P	21 48 51.5	-0.6
TKTP	Tekketepe	2.60	339	*i* P	P	21 48 53.0	+0.7
TKTP				*i* S	S	21 49 23.6	+0.8
DNZL	Cakiroluk	2.86	317	*i* P	P	21 49 01.2	+5.2
DNZL				*i* S	S	21 49 29.0	-0.2
DENT	Denizli	2.91	318	*e*PN	P	21 48 56.5	-0.2
KDHN	Kadinhani	2.95	10	*i* P	P	21 48 57.8	+0.6
KDHN				*i* S	S	21 49 25.2	-6.3
KIZT	Kizilcal	3.28	5	*e*PN	P	21 49 01.4	-0.4
BDRM	Kayabasi	3.57	295	*i* P	P	21 49 06.5	+0.5
BDRM				*i* S	S	21 49 43.7	-3.5
BODT	Bodrum	3.67	294	*e*PN	P	21 49 06.4	-0.9
MANT	Manisa	3.71	322	*i* P	P	21 49 11.9	+4.0
MANT				*i* S	S	21 49 25.2	-25
CEYT	Ceyhan	3.71	67	*e*PN	P	21 49 07.8	-0.1
HTY	Hatay	3.81	81	*e*PN	P	21 49 08.6	-0.7
BHL	Bhannes	3.83	115	*e*Pn	P	21 49 10.8	+1.2
BHL				Sn	S	21 49 52.7	-0.9
HWQ	Hawqa	3.90	109	*e*Pn	P	21 49 12.6	+2.1
HWQ				Sn	S	21 49 54.7	-0.6
ESKT	Eskisehir	3.93	353	*e*PN	P	21 49 10.4	-0.6
HNTI	Hanita	3.96	129	Sn	S	21 49 55.7	-1.1
COBT	Iskenderun	3.97	75	*i* P	P	21 49 11.8	+0.3
COBT				*i* S	S	21 49 53.4	-3.6
HAF	Haifa	4.07	133	Sn	S	21 49 58.6	-1.0
KAMT	Kaman	4.15	25	*e*PN	P	21 49 14.3	+0.3

OFRI	‘Ofer	4.16	135	Sn	S	21 50 01.5	-0.4
KSDI	Kefar Szold	4.21	124	Pn	P	21 49 16.1	+1.3
KSDI				Sn	S	21 50 01.9	-1.2
FKH	Fakeheh	4.26	107	Sn	S	21 50 04.8	+0.3
IZM	Izmir	4.38	311	*e*PN	P	21 49 16.6	-0.6
KDAG	Bornova	4.38	311	*i* P	P	21 49 16.1	-1.1
KDAG				*i* S	rx	21 49 29.0	
KSHT	Keshet	4.44	125	Sn	S	21 50 09.0	+0.2
BRTR	Keskin Array B	4.45	22	P	P	21 49 17.8	-0.4
	0.9nm,0.3s,baz=179,slow=17,SNR=26						
BRTR				S	S	21 50 09.4	+0.4
	0.6nm,0.3s,baz=15,slow=25,SNR=4.9						
BR131	Keskin Array S	4.45	22	*e*Pn	P	21 49 18.1	0.0
BR131	Keskin Array S	4.45	22	*e*Pn	P	21 49 18.1	-0.1
SLTI	Sal’it	4.47	138	Sn	S	21 50 08.0	-1.8
MMLI	Mount Malkishu	4.55	133	Pn	P	21 49 20.5	+0.9
MMLI				Sn	S	21 50 10.6	-1.0
KAHT	Ahir Dag	4.78	63	*i* P	P	21 49 23.0	+0.2
KAHT				*i* S	rx	21 49 43.7	
GAZ	Gaziantep	4.87	70	*e*PN	P	21 49 22.9	-1.2
AMAG	Maghara	5.16	163	⇓P	P	21 49 29.2	+1.2
GZT	Gaziantep	5.20	69	*i* P	P	21 49 27.3	-1.2
HBRG	Burj al ‘Arab	5.21	196	P	P	21 49 29.6	+0.8
HBRG	Burj al ‘Arab	5.21	196	P	P	21 49 29.5	+0.8
KZIT	Kziot	5.29	152	Pn	P	21 49 31.1	+1.3
KZIT				Sn	S	21 50 28.1	-1.9
MZDA	Masada	5.38	142	Pn	P	21 49 32.6	+1.6
MZDA				Sn	S	21 50 30.7	-1.5
IDI	Anoyia	5.40	268	P	P	21 49 30.9	-0.4
	2.0nm,0.3s,baz=73,slow=16,SNR=24						
IDI				S	S	21 50 29.7	-3.0
	1.2nm,0.3s,baz=300,slow=22,SNR=4.3						
ASF	Jabal al Asfar	5.66	126	P	P	21 49 36.5	+1.7
	0.2nm,0.3s,baz=205,slow=9.5,SNR=3.2						
ASF				S	S	21 50 38.5	-0.7
	0.7nm,0.3s,baz=50,slow=20,SNR=2.4						
KOT	Kottamia	5.67	177	⇓P	P	21 49 36.6	+1.5
HMAT	Matruh	5.81	220	P	P	21 49 36.7	-0.3
HMAT				S	S	21 50 40.6	-2.6
SUZ		5.87	168	⇓P	P	21 49 39.1	+1.4
FYM	Al Fayyum	5.91	184	P	P	21 49 39.5	+1.1
HSAF	As Saff	5.98	179	⇑P	P	21 49 40.7	+1.4
PRNI	Paran	6.02	150	Pn	P	21 49 41.3	+1.4
PRNI				Sn	S	21 50 46.4	-1.8
GLL	Jalalah	6.02	178	⇓P	P	21 49 41.1	+1.2
HNKL	Nakhl	6.04	159	⇑P	P	21 49 41.2	+1.0
GVD	Gavdhos	6.11	265	*e*Pn	P	21 49 40.0	-1.1
GVD				*e*Sn	S	21 50 49.7	-0.7
GVD	Gavdhos	6.11	265	*e*Pn	P	21 49 40.0	-1.1
MALT	Malatya	6.17	62	*e*P	P	21 49 41.7	-0.4
MALT				*e*		21 50 50.0	
MALT				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MALT	Malatya	6.17	62	*e*Pn	P	21 49 41.7	-0.4
	comp=Z,3.1nm,0.4s						
MALT				*e*Sn	S	21 50 50.0	-2.1
MALT	Malatya	6.17	62	*e*Pn	P	21 49 41.7	-0.4
	comp=Z,3.1nm,0.4s						
MALT				*e*Sn	S	21 50 50.0	-2.1
EIL	Elat	6.61	153	P	P	21 49 49.5	+1.3
	comp=Z,1.3nm,0.3s,baz=70,slow=9.9,SNR=25						
EIL				S	S	21 51 02.1	-0.5
	comp=Z,1.7nm,0.3s,baz=43,slow=28,SNR=4.8						
EIL	Elat	6.61	153	Pn	P	21 49 38.6	-9.5
EIL				*e*Sn	S	21 50 57.2	-5.4
EIL				S	S	21 51 02.1	-0.5
EIL	Elat	6.61	153	Pn	P	21 49 49.5	+1.4
EIL				Sn	S	21 51 00.8	-1.9
SLUM		6.66	234	P	P	21 49 46.5	-2.4
HKAT	Jabal Katrina	7.38	163	⇓P	P	21 49 59.4	+0.5
SWA1		7.99	219	⇓P	P	21 50 07.0	-0.3
SWA1				S	S	21 51 32.5	-4.5
SWA2		8.14	220	⇓P	P	21 50 08.7	-0.6
HFRF	Wahat Farafira	8.86	199	⇑P	P	21 50 19.7	+0.6
HDK1	Dakhla	10.20	191	P	P	21 50 38.4	+1.1
AKASG	Malin Array Be	15.17	354	P	P	21 51 45.2	+2.3
	comp=Z,0.6nm,0.3s,baz=179,slow=10,SNR=7.5						
FINES	FINESS Array B	26.08	354	P	P	21 53 39.7	-0.4
	comp=Z,0.5nm,0.4s,mb3.3,baz=159,slow=10,SNR=8.6						
ARU	Arti	27.74	33	P	P	21 53 54.4	-0.9
ARU				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
ARU	Arti	27.74	33	P	P	21 53 54.4	-0.9
	comp=Z,3.2nm,1.0s,mb3.8						
ARCES	ARCESS Array B	34.14	356	P	P	21 54 51.4	0.0
	comp=Z,0.9nm,0.9s,mb3.6,baz=170,slow=7.4,SNR=4.8						
ARCES	ARCESS Array B	34.14	356	P	P	21 54 51.4	0.0
MKAR	Makanchi Array	39.19	57	P	P	21 55 36.1	+2.0
	comp=Z,0.7nm,0.5s,mb3.7,baz=267,slow=8.9,SNR=11						
SONM	Songino Array	55.16	52	P	P	21 57 40.3	+1.3
	comp=Z,0.1nm,0.2s,mb3.4,baz=281,slow=7.5,SNR=4.6						

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*PRU **02** 21:53:07.7, 47.28N×11.85E*
*CSEM **02** 21:53:07.2±0.1, 47.22N×11.82E, h12^{km}, ML2.0, Error ellipse: s-maj=1.7km s-min=1.5km az=38.0*
*ROM **02** 21:53:08.4±0.7, 47.14N×11.86E, h7^{km}, Md2.6/6, Ml1.7/3, Error ellipse: s-maj=7.1km s-min=3.5km az=169.0*
*BGR **02** 21:53:08.1±0.3, 47.23N×11.86E, h10^{km}, ML2.0/7, Error ellipse: s-maj=3.3km s-min=2.2km az=17.0*
ISC 02 21:53:06.2±0.3, **47.29N**±0.01×**11.87E**±0.02, **h10^{km}, n35, σ1^{s}15**/63, **6C-3D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WTTA	Wattenberg	0.16	261	⇑*i*PG	Pg	21 53 10.8	+1.0
WTTA				*i* SG	Sg	21 53 12.9	+0.6
	178nm,0.2s						
WTTA	Wattenberg	0.16	261	*e*Pg	Pg	21 53 10.7	+0.8
	SNR=267						
WTTA				*e*Sg	Sg	21 53 13.0	+0.7
	SNR=5.3						
WATA	Walderalm	0.20	284	⇑*i*PG	Pg	21 53 11.7	+1.1
WATA				*i* SG	Sg	21 53 14.5	+0.9
	148nm,0.1s						
SCE	Schlegeis	0.27	203	⇓*i*Pg	Pg	21 53 12.1	+0.2
SCE				*i* Sg	Sg	21 53 15.3	-0.4
SQTA	Sankt Quirin	0.45	262	⇑*i*PG	Pg	21 53 15.5	+0.1
SQTA				*i* SG	Sg	21 53 20.7	-0.9
	34nm,0.2s						
MOTA	Moosalm	0.52	277	⇑*i*PG	Pg	21 53 16.7	-0.1
MOTA				*i* SG	Sg	21 53 22.7	-1.1
	11nm,0.1s						
SEST	Monte Rota	0.59	156	Pg	Pg	21 53 18.8	+0.7
SEST				Sg	Sg	21 53 26.4	+0.4
	58nm,0.9s						
BRES	Bressanone	0.60	189	Pg	Pg	21 53 18.5	+0.3
BRES				Sg	Sg	21 53 26.0	-0.3
	30nm,0.2s						
APPI	Appiano	0.92	209	Pg	Pg	21 53 24.2	-0.4
APPI				Sg	Sg	21 53 35.2	-1.8
	37nm,0.3s						
FVI	Forni Avoltri	0.93	138	Pg	Pg	21 53 25.1	+0.2
FVI				Sg	Sg	21 53 37.1	-0.3
	14nm,0.2s						
CSMI	Casera Mimoias	0.94	145	*i* Pg	Pg	21 53 25.3	+0.2
CSMI				*i* Sg	Sg	21 53 37.5	-0.3
FUR	Furstenfeldbru	0.96	336	*e*Pg	Pg	21 53 27.7	+2.1
	SNR=9.2						
FUR				*e*Sg	Sg	21 53 41.1	+2.6
	SNR=6.7						
KBA	Koelnbreinsper	1.03	101	⇓*i*PG	Pg	21 53 27.4	+0.6
KBA				*i* SG	Sg	21 53 40.7	+0.1
	6.2nm,0.2s						
KBA	Koelnbreinsper	1.03	101	*e*Pg	Pg	21 53 27.3	+0.5
	SNR=4.3						
KBA				*e*Sg	Sg	21 53 40.6	0.0
	SNR=3.5						
CTI	Castel Tesino	1.25	187	Pg	Pg	21 53 30.5	-0.7
	9.0nm,0.2s						
PTCC	Patocco-Chiusa	1.35	130	Pg	Pg	21 53 33.0	-0.2
	3.0nm,0.2s						
DAVA	Damuels	1.35	271	⇑*i*PG	Pg	21 53 34.0	+0.7
DAVA				*i* SG	Sg	21 53 52.1	+0.8
	9.9nm,0.2s						
DAVA	Damuels	1.35	271	*e*Pg	Pg	21 53 34.1	+0.8
	SNR=8.0						
DAVA				*e*Sg	Sg	21 53 51.8	+0.4
	SNR=4.8						
MOA	Molln	1.72	70	⇓*i*PG	Pg	21 53 40.5	0.0
MOA				*i* SG	Sg	21 54 05.1	+1.6
	4.6nm,0.2s						
MOA	Molln	1.72	70	*e*Pg	Pg	21 53 40.5	-0.1
	SNR=2.9						
MOA				*e*Sg	Sg	21 54 05.0	+1.6
	SNR=5.5						
GEC2	GERESS Array S	1.98	38	*e*Pn	Pn	21 53 42.2	+2.0
	SNR=1.8						
GEC2				*e*(Sn)	Sn	21 54 07.9	+2.6
GEC2				*e*Sg	Sg	21 54 12.1	-0.3
	SNR=1.5						
GEC2	GERESS Array S	1.98	38	Pn	Pn	21 53 42.2	+2.0
	SNR=1.8						
GEC2				Sg	Sg	21 54 12.1	-0.2
	SNR=1.5						
OBKA	Obir	2.00	112	⇑*i*PG	Pg	21 53 44.8	-1.3
OBKA				*i* SG	Sg	21 54 11.0	-1.7
	3.0nm,0.3s						
OBKA	Obir	2.00	112	*e*Pg	Pg	21 53 45.3	-0.7
	SNR=2.0						
OBKA				*e*Sg	Sg	21 54 11.1	-1.6
	SNR=2.3						
KHC	Kasperske Hory	2.17	31	*e*PN	Pn	21 53 44.9	+2.0
KHC				*e*PG	Pg	21 53 48.2	-1.3
KHC				*e*SN	Sn	21 54 12.0	+1.9
KHC				*e*SG	Sg	21 54 17.7	-0.8
GRA1	Grafenberg Arr	2.44	350	Sg	Sg	21 54 28.4	+0.8
GRF	Grafenberg Arr	2.44	350	*e*Sg	Sg	21 54 28.4	+0.8
BFO	Black Forest	2.60	295	*e*Pn	Pn	21 53 50.1	+1.1
	SNR=1.9						
BFO				*e*Sg	Sg	21 54 30.8	-2.1
	SNR=2.5						
NKC	Novy Kostel	2.97	7	*e*SG	Sg	21 54 43.7	-1.5
GUNZ	Gunzen	3.09	6	*e*Sg	Sg	21 54 48.7	-0.6
	SNR=2.6						
TANN	Tannenbergstha	3.15	7	*e*Sg	Sg	21 54 50.4	-0.8
	SNR=2.1						
WERD	Werda	3.18	5	*e*Sg	Sg	21 54 50.8	-1.2
	SNR=2.0						
PRU	Pruhonice	3.23	32	*e*SG	Sg	21 54 50.6	-3.2
MOX	Moxa	3.36	357	*e*Sn	Sn	21 54 39.1	-1.2
MOX				*e*Sg	Sg	21 54 55.8	-2.4
	SNR=2.5						
DPC	Dobruska-Polom	4.25	42	*e*SG	Sg	21 55 21.7	-6.0

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*NNC **02** 21:58:57.7±5.1, 43.29N×77.16E, mpv2.8, Error ellipse: s-maj=190.6km s-min=18.3km az=150.0*
*KNET **02** 21:58:58.2±0.7, 42.88N×77.20E, h19^{km}±3^{km}, ml2.5, Error ellipse: s-maj=4.3km s-min=3.2km az=105.0*
ISC 02 21:58:57.2±1.1, **42.85N**±0.08×**77.41E**±0.08, **h10^{km}, n10, σ0^{s}99**/17, **11C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	Ulahol	1.05	235	⇑P	Pb	21 59 16.0	-1.1
	12nm,0.1s,SNR=110						
ULHL				⇑S	Sb	21 59 29.5	-1.2
	65nm,0.2s						
TKM2	Tokmak 2	1.33	274	⇓P	Pb	21 59 20.0	-1.9
	11nm,0.1s,SNR=46						
TKM2				⇑S	Sb	21 59 36.9	-1.9
	99nm,0.1s						
KZA	Kyzart	1.77	245	⇑P	Pn	21 59 28.6	+0.4
	6.6nm,0.1s,SNR=26						
KZA				⇓S	Sn	21 59 52.3	+1.2
	20nm,0.2s						
KBK	Karagaybulak	1.82	265	⇓P	Pn	21 59 29.1	+0.2
	16nm,0.2s,SNR=18						
KBK				⇑S	Sn	21 59 52.9	+0.6
	85nm,0.2s						
CHMS	Chumysh	1.96	275	⇓P	Pn	21 59 30.6	-0.2
	16nm,0.3s,SNR=11						
CHMS				⇑S	Sn	21 59 55.4	-0.2
	36nm,0.2s						
AAK	Ala-Archa	2.16	265	⇑P	Pn	21 59 34.4	+0.7
	19nm,0.3s,SNR=15						
AAK				⇑S	Sn	22 00 01.9	+1.1
	15nm,0.2s						
AAK	Ala-Archa	2.16	265	⇑Pn	Pn	21 59 34.2	+0.5
	9.3nm,0.3s						
AAK				⇑Lg		22 00 01.9	
	14nm,0.4s						
USP	Ospenovka	2.17	282	⇓P	Pn	21 59 34.2	+0.3
	6.1nm,0.1s,SNR=8.9						
USP				⇓S	Sn	22 00 01.8	+0.6
	52nm,0.2s						
UCH	Uchtor	2.23	255	⇑P	Pn	21 59 36.1	+1.4
	10nm,0.4s,SNR=12						
MK31	Makanchi Array	5.25	40	⇓Pn	Pn	22 00 17.4	-0.3
	0.1nm,0.2s,baz=217,slow=16,SNR=7.1						
MK31				⇓Lg		22 01 34.1	
	0.7nm,0.5s,baz=218,slow=28,SNR=4.9						

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*LDG **02** 22:31:44.2±0.3, 17.15S×170.36E, h10^{km}, Mb4.1/1, Error ellipse: s-maj=38.2km s-min=7.9km az=116.0*
*MOS **02** 22:32:07.2±1.0, 19.52S×168.92E, h183^{km}, mb4.9/7, Error ellipse: s-maj=18.9km s-min=13.1km az=3.1*
*BJI **02** 22:32:10.6, 18.59S×169.41E, h255^{km}, mB5.0, mb4.6*
*NEIC **02** 22:32:11.8±0.9, 18.88S×169.31E, h260^{km}±8^{km}, mb4.7/10, Error ellipse: s-maj=10.6km s-min=8.0km az=156.0*
*IDC **02** 22:32:11.4±1.6, 18.89S×169.34E, h254^{km}±13^{km}, mb4.2/9, mb1 4.4/11, mb1mx4.2/15, mbtmp4.8/11, Error ellipse: s-maj=19.0km s-min=15.1km az=157.0*
ISC 02 22:32:11.9±1.1, **18.93S**±0.09×**169.24E**±0.08, **h271^{km}**±9^{km}, **n87, σ0^{s}82**/54, **mb4.4**/20, **5D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	4.08	220	*e*P	P	22 33 17.5	-0.6
DZM	Mont Dzumac	4.08	220	P	P	22 33 17.2	-1.0
	14nm,0.3s,baz=54,slow=17,SNR=83						
DZM				S	S	22 34 10.6	+0.9
	2.4nm,0.3s,baz=46,slow=21,SNR=1.5						
NOUC	Port Laguerre	4.19	221	*e*P	P	22 33 18.9	-0.4
NOUC	Port Laguerre	4.19	221	*e*P	P	22 33 18.9	-0.4
HNR	Honiara	13.04	315	*e*P	P	22 35 09.1	+0.2
HNR				pmax	pmax		
	comp=Z,156nm,0.8s						
HNR	Honiara	13.04	315	P	P	22 35 08.8	-0.2
	comp=Z,11nm,0.3s,baz=189,slow=1.0,SNR=13						
HNR	Honiara	13.04	315	*e*P	P	22 35 09.1	+0.1
	comp=Z,156nm,0.8s						
CTA	Charters Tower	21.70	263	*e*P	P	22 36 44.2	+2.1
CTA	Charters Tower	21.70	263	P	P	22 36 43.7	+1.6
	comp=Z,14nm,0.4s,mb4.6,baz=87,slow=12,SNR=34						
CTAO	Charters Tower	21.70	263	*e*P	P	22 36 42.5	+0.4
CTAO				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.6						
CTAO	Charters Tower	21.70	263	*e*P	P	22 36 42.5	+0.4
	comp=Z,24nm,0.8s,mb4.6						
PMG	Port Moresby	23.39	291	*e*P	P	22 36 59.1	+0.8
PMG				pmax	pmax		
	comp=Z,51nm,0.8s						
PMG	Port Moresby	23.39	291	P	P	22 36 59.3	+1.0
	comp=Z,56nm,0.7s,mb5.0,baz=97,slow=5.5,SNR=18						
PMG	Port Moresby	23.39	291	*e*P	P	22 36 59.1	+0.8
	comp=Z,50nm,0.8s,mb4.9						
CNB	Canberra Magne	24.00	223	⇓*i*P	P	22 37 05.2	+1.4
STKA	Stephens Creek	28.02	237	⇓*i*P	P	22 37 40.6	+0.2
STKA	Stephens Creek	28.02	237	P	P	22 37 40.8	+0.4
	comp=Z,18nm,0.6s,mb4.7,baz=63,slow=8.4,SNR=70						
WB2	Warramunga Arr	32.89	262	⇓*i*P	P	22 38 21.9	-1.0
WRAB	Tennant Creek	32.89	262	*e*P	P	22 38 21.7	-1.2
WRAB				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.8						
WRAB	Tennant Creek	32.89	262	*e*P	P	22 38 21.7	-1.2
	comp=Z,27nm,0.8s,mb4.8						
WRA	Warramunga Arr	32.90	262	P	P	22 38 21.8	-1.2
	comp=Z,8.1nm,0.3s,mb4.7,baz=83,slow=6.6,SNR=161						
ASAR	Alice Springs	33.21	256	P	P	22 38 25.4	-0.2
	comp=Z,120nm,0.4s,baz=82,slow=8.9,SNR=1890						
ASPA	Alice Springs	33.21	256	⇓*i*P	P	22 38 25.5	-0.1
KAKA	Kakadu	35.90	274	⇓*i*P	P	22 38 48.1	-0.3
FORT	Forrest	38.99	244	*e*P	P	22 39 14.1	+0.2
MBWA	Marble Bar	46.42	259	*e*P	P	22 40 14.0	+0.2
	comp=Z,68nm,0.8s,mb5.0						
KLBR	Kellerberrin	47.85	244	*e*P	P	22 40 23.9	-0.8
NWAO	Narrogin (SRO)	48.36	242	*e*P	P	22 40 27.8	-0.8
NWAO				pmax	pmax		
	comp=Z,15nm,0.9s						
NWAO	Narrogin (SRO)	48.36	242	*e*P	P	22 40 27.8	-0.7
	comp=Z,15nm,0.9s,mb4.3						
MUN	Mundaring	49.18	244	*e*P	P	22 40 35.0	+0.2
VNDA	Vanda	58.74	182	P	P	22 41 42.5	-0.7
	comp=Z,0.3nm,0.5s,baz=2.4,slow=6.9,SNR=6.5						
VNDA	Vanda	58.74	182	*e*P	P	22 41 42.3	-0.9
	comp=Z,0.4nm,0.5s						
SBA	Scott Base	58.98	181	*e*P	P	22 41 45.2	+0.4
SBA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
SBA	Scott Base	58.98	181	*e*P	P	22 41 45.2	+0.4
	comp=Z,1.5nm,0.8s,mb3.5						
KSM	Kuching	61.31	283	*e*P	P	22 42 01.0	-0.4
NJ2	Nanjing	69.99	316	*e*P	P	22 42 55.1	-1.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
KMI	Kunming	78.11	302	P	P	22 43 44.6	+1.6
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
CMAR	Chiang Mai Arr	78.38	294	P	P	22 43 45.0	+0.5
	comp=Z,2.9nm,0.8s,mb4.0,baz=130,slow=4.4,SNR=15						
LZH	Lanzhou	82.52	312	*e*P	P	22 44 06.5	+0.6
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.7						
CMB	Columbia Colle	86.94	48	*e*P	P	22 44 27.6	-0.2
CMB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
CMB	Columbia Colle	86.94	48	*e*P	P	22 44 27.6	-0.2
	comp=Z,8.4nm,0.8s,mb4.6						
SONM	Songino Array	86.97	323	P	P	22 44 28.6	+1.0
	comp=Z,0.4nm,0.5s,mb3.5,baz=164,slow=9.0,SNR=3.9						
NVAR	Mina Array Bea	88.59	49	P	P	22 44 35.7	+0.2
	comp=Z,2.3nm,0.6s,mb4.2,baz=222,slow=7.2,SNR=9.2						
NVAR	Mina Array Bea	88.59	49	P	P	22 44 35.7	+0.2
ILAR	Eielson Array	89.93	17	P	P	22 44 39.2	-1.9
	comp=Z,1.7nm,0.8s,mb3.9,baz=243,slow=4.6,SNR=6.6						
WVOR	Wild Horse Val	90.09	45	*e*P	P	22 44 42.1	-0.3
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
WVOR	Wild Horse Val	90.09	45	*e*P	P	22 44 42.0	-0.4
	comp=Z,6.5nm,0.8s,mb4.5						
TUC	Tucson	91.83	57	*e*P	P	22 44 50.2	-0.5
TUC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
TUC	Tucson	91.83	57	*e*P	P	22 44 50.2	-0.6
	comp=Z,3.1nm,0.8s,mb4.3						
PV01	Paradox Valley	95.55	52	*e*P	P	22 45 07.2	-0.4
PDAR	Pinedale Array	96.40	47	P	P	22 45 12.1	+0.8
	comp=Z,0.5nm,0.6s,mb3.8,baz=180,slow=1.5,SNR=4.0						
TXAR	Lajitas Array	96.61	61	P	P	22 45 14.1	+1.5
	comp=Z,0.4nm,0.3s,mb4.2,baz=203,slow=6.9,SNR=4.3						
WMQ	Urumqi	96.99	314	*e*P	P	22 45 14.4	+0.4
WMQ				AP	pP	22 46 19.9	+0.3
WMQ				XP	sP	22 46 47.4	+0.4
YKA	Yellowknife Ar	100.39	27	P	P	22 45 29.2	+0.2
	comp=Z,0.9nm,0.6s,baz=251,slow=4.8,SNR=8.4						
YKA	Yellowknife Ar	100.39	27	P	P	22 45 29.2	+0.2
SCHQ	Schefferville	124.65	36	PKP	PKPdf	22 50 39.4	+0.2
	comp=Z,1.7nm,0.8s,baz=87,slow=3.1,SNR=3.6						
ARCES	ARCESS Array B	124.77	345	PKP	PKPdf	22 50 39.1	+0.2
	comp=Z,0.6nm,0.3s,baz=47,slow=1.7,SNR=20						
FINES	FINESS Array B	130.30	338	PKP	PKPdf	22 50 50.7	+0.9
	comp=Z,0.5nm,0.9s,slow=1.9,SNR=3.6						
FINES				SKPbc		22 53 49.3	
	comp=Z,1.3nm,0.6s,baz=45,slow=2.7,SNR=13						
FINES	FINESS Array B	130.30	338	PKP	PKPdf	22 50 50.7	+0.9
FINES				SKPbc		22 53 49.3	
AKASG	Malin Array Be	135.24	325	SKPbc		22 54 07.1	
	comp=Z,0.8nm,0.4s,baz=43,slow=3.8,SNR=6.8						
GERES	GERESS Array B	144.22	332	PKP	PKPdf	22 51 15.4	+0.1
	comp=Z,0.7nm,0.6s,baz=39,slow=2.6,SNR=9.7						
BAIF	Baives	146.71	342	*e*PKP1	PKPbc	22 51 22.9	+1.6
CDF	Champ du Feu	147.15	338	*e*PKP1	PKPdf	22 51 24.1	+3.6
	comp=Z,4.8nm,0.7s						
HAU	Haudompre	147.83	338	*e*PKP1	PKPdf	22 51 25.7	+4.3
MEZF	Maizieres J’vi	147.84	340	*e*PKP1	PKPdf	22 51 26.2	+4.8
FLN	La Foliniere	149.10	347	*e*PKP1	PKPdf	22 51 28.6	+5.2
CABF	La Chapelle	149.11	337	*e*PKP1	PKPdf	22 51 29.5	+6.0
	comp=Z,7.5nm,0.6s						
LOR	Lormes	149.30	340	*e*PKP1	PKPdf	22 51 29.5	+5.7
	comp=Z,4.7nm,0.6s						
GRR	Gorron	149.53	347	*e*PKP1	PKPdf	22 51 29.7	+5.6
SSF	Saint Saulge	149.60	341	*e*PKP1	PKPdf	22 51 29.8	+5.6
	comp=Z,1.8nm,0.4s						
LPL	La Plagne	149.78	335	*e*PKP1	PKPdf	22 51 31.3	+6.8
LPG	La Plagne	149.78	335	*e*PKP1	PKPdf	22 51 31.3	+6.8
	comp=Z,5.5nm,0.8s						
SGMF	Saint Gilles	150.00	349	*e*PKP1	PKPdf	22 51 30.7	+5.9
ROSF	Rostrenen	150.04	350	*e*PKP1	PKPdf	22 51 30.8	+6.0
BGF	Bois d’Agland	150.25	341	*e*PKP1	PKPdf	22 51 31.7	+6.5
ORIF	Oris-en-Rattie	150.61	336	*e*PKP1	PKPdf	22 51 32.8	+7.0
	comp=Z,5.0nm,0.6s						
TCF	Toulx Ste Croi	150.69	341	*e*PKP1	PKPdf	22 51 32.7	+6.8
	comp=Z,3.5nm,0.7s						
SBF	Sospel	150.82	332	*e*PKP1	PKPdf	22 51 32.7	+6.6
MFF	Saint Martin d	151.05	345	*e*PKP1	PKPdf	22 51 33.4	+7.0
	comp=Z,2.7nm,0.6s						
PGF	Pioggiola	151.11	329	*e*PKP1	PKPdf	22 51 33.9	+7.3
	comp=Z,6.4nm,0.5s						
VIVF	Saint-Julien-l	151.12	337	*e*PKP1	PKPdf	22 51 33.9	+7.3
FRF	La Foret Royal	151.41	333	*e*PKP1	PKPdf	22 51 34.2	+7.2
SMRF	Simiane la Rot	151.51	335	*e*PKP1	PKPdf	22 51 35.1	+7.9
	comp=Z,3.9nm,0.8s						
LMR	La Mourre	151.65	333	*e*PKP1	PKPdf	22 51 34.7	+7.3
	comp=Z,3.4nm,0.7s						
RJF	Les Rejaudoux	151.79	341	*e*PKP1	PKPdf	22 51 35.1	+7.6
	comp=Z,3.4nm,0.7s						
LASF	Ste Croix	152.09	337	*e*PKP1	PKPdf	22 51 36.1	+8.1
LFF	La Frestale	152.35	342	*e*PKP1	PKPdf	22 51 36.5	+8.1

JMA 02 22:52:40.8±0.3, **43.95N**×**147.81E, M4.1, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	1.61	249	P	Pn	22 53 10.6	0.0
NEM2				*e*S	Sb	22 53 32.4	+0.5
JRA	Rausu	1.94	271	P	Pn	22 53 15.5	+0.1
JRA				*e*S	Sn	22 53 41.2	+0.4
JNK	Nakash	2.27	262	P	Pn	22 53 20.3	+0.2
JNK				*e*S	Sn	22 53 48.7	-0.4
JAK	Akkeshi	2.46	248	P	Pn	22 53 22.8	0.0
JAK				*e*S	Sn	22 53 53.6	-0.4
JTKR	Abashiri--Toko	2.82	272	P	Pn	22 53 29.3	+1.4
JAR	Ashorobuto	3.01	259	P	Pn	22 53 31.1	+0.5
JAR				*e*S	Sn	22 54 08.7	+0.9
JOB	Onbets	3.08	252	P	Pn	22 53 32.0	+0.4
JOB				*e*S	Sn	22 54 09.8	+0.1
JCH	Churui	3.51	249	P	Pn	22 53 37.4	-0.4
JNBK	Urakawa-nobuka	4.06	247	P	Pn	22 53 46.1	+0.5

IDC 02 22:53:34.7±3.6, **1.23S**×**101.09E, mb3.7**/5, **mb1 3.8**/5, **mb1mx3.5**/17, **mbtmp3.7**/5, **Error ellipse: s-maj=160.1km s-min=21.8km az=56.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	37.45	122	P	P	23 00 50.4	-1.5
	0.4nm,0.4s,baz=305,slow=9.0,SNR=2.6						
ASAR	Alice Springs	38.83	128	P	P	23 01 01.2	-2.2
	0.3nm,0.5s,baz=304,slow=7.2,SNR=5.1						
SONM	Songino Array	49.09	5	P	P	23 02 25.5	-0.3
	0.3nm,0.4s,baz=188,slow=8.5,SNR=3.7						
MKAR	Makanchi Array	50.60	343	P	P	23 02 34.8	-2.6
	0.7nm,0.4s,baz=151,slow=8.4,SNR=13						
ZAL	Zalesovo	56.62	349	P	P	23 03 18.7	-3.1
	0.9nm,0.4s,baz=345,slow=5.8,SNR=4.2						

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*NEIC **02** 23:16:35.7±0.7, 7.31N×93.30E, h30^{km}, mb4.3/5, Error ellipse: s-maj=23.2km s-min=9.6km az=58.0*
*IDC **02** 23:16:44.9±6.8, 7.59N×93.74E, h105^{km}±61^{km}, mb3.7/10, mb1 3.9/11, mb1mx3.6/22, mbtmp4.0/11, Error ellipse: s-maj=43.9km s-min=13.8km az=61.0*
ISC 02 23:16:34.2±0.7, **7.31N**±0.10×**93.3E**±0.1, **h33^{km}, n22, σ1^{s}06**/24, **mb4.2**/15, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	7.54	105	*e*Pn	Pn	23 18 25.3	+0.7
KULM				*e*Sn	Sn	23 19 39.5	-10
CMAR	Chiang Mai Arr	12.35	26	P	P	23 19 32.1	+1.6
	0.4nm,0.3s,baz=215,slow=14,SNR=20						
VIS	Vishakhapatnam	14.22	318	*i* P	P	23 19 54.1	-1.4
VIS				*i* S	S	23 22 21.5	-12
DMN	Daman	21.64	340	*e*P	P	23 21 28.2	+4.5
	7.9nm,0.3s,mb4.6						
GUN	Gumba	21.67	342	*e*P	P	23 21 24.3	+0.3
	14nm,0.6s,mb4.6						

GKN	**Gorkha**	22.17	339	eP	P	23 21 28.7	-0.2
	7.4nm,0.4s,mb4.5						
KOLN	**Koldanda**	22.34	337	eP	P	23 21 32.2	+1.5
	3.6nm,0.3s,mb4.2						
MKAR	**Makanchi Array**	40.47	348	P	P	23 24 10.8	-0.6
	0.4nm,0.5s,mb3.5,baz=170,slow=8.6,SNR=6.0						
SONM	**Songino Array**	41.88	13	P	P	23 24 21.4	-1.6
	0.8nm,0.3s,mb3.8,baz=200,slow=8.6,SNR=5.9						
NWAO	**Narrogin (SRO)**	46.02	152	P	P	23 24 59.4	+2.8
	7.2nm,0.8s,mb4.7,baz=318,slow=14,SNR=5.8						
NWAO	**Narrogin (SRO)**	46.02	152	P	P	23 24 59.4	+2.8
ZAL	**Zalesovo**	47.00	353	P	P	23 25 03.5	-0.5
	2.9nm,0.3s,mb4.6						
ZAL	**Zalesovo**	47.00	353	P	P	23 25 03.5	-0.5
WRA	**Warramunga Arr**	48.59	125	P	P	23 25 16.0	-0.9
	2.4nm,0.5s,mb4.5,baz=305,slow=8.6,SNR=18						
WRAB	**Tennant Creek**	48.59	125	eP	P	23 25 16.2	-0.7
	3.5nm,0.4s,mb4.7						
WB2	**Warramunga Arr**	48.60	125	eP	P	23 25 16.4	-0.5
MJAR	**Matsushiro Arr**	50.12	48	P	P	23 25 27.7	-0.8
	0.7nm,0.6s,mb3.9,baz=234,slow=7.2,SNR=4.4						
ASPA	**Alice Springs**	50.17	129	eP	P	23 25 28.8	-0.2
ASAR	**Alice Springs**	50.17	129	P	P	23 25 28.8	-0.2
	1.3nm,0.4s,mb4.3,baz=304,slow=7.8,SNR=18						
STKA	**Stephens Creek**	60.30	133	P	P	23 26 42.1	-0.2
	1.2nm,0.7s,mb4.0,baz=326,slow=12,SNR=3.1						
FINES	**FINESS Array B**	72.84	332	P	P	23 28 01.4	+0.2
	0.5nm,0.5s,mb3.7,baz=112,slow=10,SNR=5.9						
GERES	**GERESS Array B**	77.72	318	P	P	23 28 31.3	+1.9
	0.1nm,0.4s,mb3.1,baz=108,slow=3.1,SNR=2.5						

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*NEIC **03** 00:32:32.9, 8.36N×82.93W, MD4.1(CASC), After CASC.*

CASC 03 00:32:33.7±2.6**, 8.36N×82.87W, h5^{km}, MD4.4, MW4.8, 7C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	0.42	315	⇑eP	Pg	00 32 41.3	-0.8
ACR				eP		00 32 41.3	
ACR				eS	Sg	00 32 48.4	+0.8
SVTC	**San Vito de Co**	0.43	348	⇑eP	Pg	00 32 42.8	+0.4
PTP1	**Petroterminal**	0.46	109	⇑iP	Pg	00 32 38.0	-4.9
BRU2	**Volcan**	0.47	22	⇓iP	Pg	00 32 44.1	+1.0
BRU2				eS	Sg	00 32 52.1	+2.8
CNI	**Changuinola**	1.11	18	⇑eP	Pb	00 32 55.2	+0.2
CNI				eS	Sb	00 33 09.9	+0.4
BUS	**Buena Vista**	1.48	324	⇑eP	Pn	00 32 59.1	-1.9
BUS				eS	Sb	00 33 20.6	+0.3
LCR2	**La Lucha 2**	1.77	321	eP	Pn	00 33 03.4	-1.9
LCR2				eS	Sn	00 33 29.2	+0.7
LCR2	**La Lucha 2**	1.77	321	eP	Pn	00 33 03.5	-1.8
LCR2				eS	Sn	00 33 30.1	+1.6
LAJ	**Bijagual**	1.94	321	eP	Pn	00 33 08.7	+1.0
LAJ				eS	Sn	00 33 37.1	+4.4
LAJ	**Bijagual**	1.94	321	eP	Pn	00 33 08.6	+0.9
SJS	**Escuela Geolog**	1.96	323	eP	Pn	00 33 08.1	+0.2
SJS				eS	Sn	00 33 34.4	+1.2
SJS	**Escuela Geolog**	1.96	323	eP	Pn	00 33 08.1	+0.2
SJS				eS	Sn	00 33 35.1	+1.9
PRS1	**Puriscal**	2.15	319	eP	Pn	00 33 08.9	-1.8
PRS1				eS	Sn	00 33 38.0	-0.2
PRS1	**Puriscal**	2.15	319	eP	Pn	00 33 08.9	-1.8
PRS1				eS	Sn	00 33 38.9	+0.7
VPS2	**Volcan Poas 2**	2.27	324	eP	Pn	00 33 13.5	+1.1
CGA2	**Cerro Gallo 2**	2.28	316	eP	Pn	00 33 12.5	0.0
CGA2				eS	Sn	00 33 43.0	+1.6
CGA2	**Cerro Gallo 2**	2.28	316	eP	Pn	00 33 12.4	-0.1
CGA2				eS	Sn	00 33 43.6	+2.2
TRTC	**Tortuguero**	2.35	339	eP	Pn	00 33 12.4	-1.3
TRTC	**Tortuguero**	2.35	339	⇑eP	Pn	00 33 12.5	-1.1
FORC	**Fortuna**	2.75	320	eP	Pn	00 33 19.7	+0.4
FORC	**Fortuna**	2.75	320	eP	Pn	00 33 19.8	+0.5
FORC				eS	Sn	00 33 54.3	+1.0
JTS	**JuntasAbangare**	2.81	313	ePn	Pn	00 33 18.6	-1.6
JTS				eSn	Sn	00 33 52.7	-2.2
JTS				eSg	Sg	00 34 01.1	-6.3
VCR	**Vista de Mar**	3.24	303	eP	Pn	00 33 23.9	-2.4
VCR	**Vista de Mar**	3.24	303	eP	Pn	00 33 24.3	-2.0
UPA	**Univ. de Panam**	3.35	79	⇑eP	Pn	00 33 27.4	-0.5

CASC 03 00:38:41.6±2.5**, 8.40N×82.88W, MD3.6, 1C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	0.38	311	eS	Sg	00 38 56.3	+2.1
BRU2	**Volcan**	0.43	25	⇓eP	Pg	00 38 52.2	+2.1
BRU2				eS	Sg	00 39 01.0	+5.1
PTP1	**Petroterminal**	0.49	114	⇑iP	Pg	00 38 46.3	-5.0
PTP1				eS	Sg	00 38 50.9	-6.9
BUS	**Buena Vista**	1.44	323	eP	Pn	00 39 08.8	-0.2
BUS				eS	Sb	00 39 28.7	+1.0
LCR2	**La Lucha 2**	1.73	320	eP	Pn	00 39 13.2	0.0
LCR2				eS	Sb	00 39 38.1	+1.8
PRS1	**Puriscal**	2.11	318	eP	Pn	00 39 18.1	-0.5
PRS1				eS	Sn	00 39 47.2	+1.2

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*DJA **03** 00:41:59.8±1.2, 1.15N×97.15E, h33^{km}, mb5.6/6, Error ellipse: s-maj=37.8km s-min=15.6km az=94.0*

*BJI **03** 00:42:00.2, 1.28N×97.21E, h34^{km}, mB6.0, mb5.5, Ms6.1, Msz6.1*

*MOS **03** 00:42:01.6±0.9, 1.52N×97.20E, h33^{km}, mb5.6/100, MS5.6/63, Error ellipse: s-maj=7.7km s-min=3.9km az=119.9*

*NEIC **03** 00:42:01.9±0.1, 1.46N×97.15E, mb5.4/111, ME5.3, MS5.7/135, MW5.8, Error ellipse: s-maj=4.4km s-min=3.2km az=35.0 Broadband fault plane solution: P waves. NP1:ϕ_s130°,δ80°,λ90°. NP2:ϕ_s310°,δ10°,λ90°. Principal axes: T Plg55°, Azm40°; N Plg0°, Azm0°; P Plg35°, Azm220°; Moment Tensor Solution. s23 Moment tensor: Scale 10^{17} Nm; M_{rr}2.35; $M_{\theta\theta}$-1.20; $M_{\phi\phi}$-1.15; $M_{r\theta}$4.03; $M_{\theta\phi}$1.05; $M_{\phi r}$-3.68; Best double couple: $M_0$5.9×10^{17} NP1:ϕ_s316°,δ11°,λ93°. NP2:ϕ_s133°, δ79°,λ89°. Principal axes: T 5.98, Plg56°, Azm42°; N -.13, Plg1°, Azm133°; P -5.85, Plg34°, Azm223°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Gunungsitoli.

*HRVD **03** 00:42:01.9±0.2, 1.21N×96.96E, h12^{km}, MW5.8/65, Centroid moment Tensor Solution. LP body waves: s64,c135;Mantle waves: s65,c184; Half duration: 2^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}2.01±.04; $M_{\theta\theta}$-0.50±.04; $M_{\phi\phi}$-1.51±.04; $M_{r\theta}$4.23±.11; $M_{\theta\phi}$1.36±.03; $M_{\phi r}$-4.34±.11; Best double couple: $M_0$6.462×10^{17} NP1: ϕ_s338°,δ11°,λ112°. NP2:ϕ_s136°,δ80°,λ86°. Principal axes: T 6.273, Plg55°, Azm41°; N .375, Plg4°, Azm137°; P -6.651, Plg35°, Azm230°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*BGS **03** 00:42:02.0, 1.46N×97.15E, h25^{km}, mb5.6*

*IDC **03** 00:42:03.3±1.5, 1.41N×97.25E, h36^{km}±10^{km}, mb4.9/28, mb1 4.9/29, mb1mx4.9/29, mbtmp5.1/29, ML4.8/1, MS5.6/26, Ms1 5.6/26, ms1mx5.5/38, Error ellipse: s-maj=12.7km s-min=7.7km az=58.0*

ISC 03 00:42:00.2±0.1**, 1.43N**±0.02×**97.21E**±0.02**, h26^{km}, h26^{km}**±.7^{km}**:pP-P, n713,** σ1^{s}**04**/608**, mb5.4**/189**, MS5.7**/190**, 101C-24D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRPI	**Mariponipon**	2.12	85	eP	Pn	00 42 35.0	+0.3
IPM	**Ipoh**	4.93	51	P	Pn	00 43 16.5	+1.8
KULM	**Kulim**	5.15	42	⇑iP	Pn	00 43 19.0	+1.2
KGM	**Kluang**	6.14	84	P	Pn	00 43 33.6	+1.9
SNG	**Songkhla**	6.65	31	P	Pn	00 43 39.0	+0.1
	2μm,1.0s						
PENI	**Pendagan**	10.56	131	⇓iP	P	00 44 30.1	-3.2
	680nm,0.7s						
NNT	**Nongplab**	11.37	13	⇓P	P	00 44 44.0	-0.3
	1μm,1.0s						
PULI	**Pulasari**	11.68	131	⇑iP	P	00 44 45.5	-2.9
	182nm,0.4s						
KSM	**Kuching**	13.10	90	⇑eP	P	00 45 09.0	+1.5
NST	**Nakhon Sawan**	14.45	11	P	P	00 45 23.0	-2.3
	100nm,1.1s						
UBT	**Ubonrachathani**	15.75	29	P	P	00 45 45.5	+3.3
KKTK	**Khon Kaen**	15.81	20	P	P	00 45 47.0	+3.9
	3μm,0.6s						
CM31	**Chiang Mai Arr**	17.01	6	eP	P	00 45 57.8	-0.4
	172nm,0.9s						
CMAR	**Chiang Mai Arr**	17.01	6	P	P	00 45 57.4	-0.9
	1.3nm,0.3s,baz=195,slow=13,SNR=66						
CMAR				LR	LR	00 53 34.5	
	comp=Z,25μm,19.4s,baz=190,slow=41						
CHG	**Chiang Mai**	17.36	6	⇑P	P	00 46 01.8	-0.8
	68nm,1.0s						
CHTO	**Chiang Mai**	17.36	6	Pn	P	00 46 01.8	-0.8
PALK	**Pallekele**	17.44	290	eP	P	00 46 02.9	-0.8
	163nm,1.1s						
NANT	**Nan**	17.60	11	⇑P	P	00 46 04.0	-1.6
	2μm,1.0s						
KKM	**Kota Kinabalu**	19.51	76	⇑iP	P	00 46 28.7	-0.1
KKM	**Kota Kinabalu**	19.51	76	P	P	00 46 28.8	+0.1
SRDI	**Scrawed**	19.54	121	⇓iP	P	00 46 30.7	+1.6
	256nm,1.2s						
KELI	**Kelakatan**	19.72	119	⇑eP	P	00 46 39.7	+8.6
MDRS	**Chennai**	20.39	305	eP	P	00 46 39.6	+1.5
MDRS				AMb	AMB	00 46 47.0	
	comp=Z,114nm,1.4s						
MDRS				eS	S	00 50 23.3	+3.2
TSM	**Tawau**	20.84	82	P	P	00 46 42.5	-0.2
VIS	**Vishakhapatnam**	21.17	321	eP	P	00 46 47.5	+1.4
VIS				AMb	AMB	00 46 49.5	
	comp=Z,151nm,1.3s,mb5.2						
VIS				eS	S	00 50 33.7	-1.5
KEDI	**Kedomdong**	21.27	118	⇓iP	P	00 46 43.8	-3.3
	comp=Z,184nm,0.9s,mb5.1						
TRD	**Trivandrum**	21.35	290	ex	x	00 47 01.5	
TRD				i x	x	00 50 53.5	
QIZ	**Qiongzhong**	21.43	35	P	P	00 46 49.0	+0.3
QIZ				XP		00 46 59.8	
QIZ				S	S	00 50 42.3	+2.1
QIZ				AMB	AMB		
	comp=Z,100nm,1.3s,mb5.0						
QIZ				LR	LR		
	comp=N,21μm,15.0s,MS5.8						
QIZ				LR	LR		
	comp=E,16μm,13.6s,MS5.8						
QIZ				LR	LR		
	comp=Z,21μm,15.6s,MS5.6						
QIZ	**Qiongzhong**	21.43	35	P	P	00 46 48.3	-0.5
QIZ				S	S	00 50 54.2	+14
QIZ	**Qiongzhong**	21.43	35	⇑iP	P	00 46 47.9	-0.8
	comp=Z,158nm,0.8s,mb5.4						
CAL	**Calcutta**	22.69	338	eP	P	00 46 59.6	-1.7
CAL				ex	x	00 51 17.3	
KMI	**Kunming**	24.15	12	⇑P	P	00 47 17.8	+2.2
KMI				AP		00 47 21.8	
KMI				XP		00 47 25.9	
KMI				PP	PP	00 47 53.8	+3.4
KMI				PPP	PPP	00 48 03.7	+3.1
KMI				S	S	00 51 33.9	+5.0
KMI				SS	SS	00 52 24.9	+3.2
KMI				AMB	AMB		
	comp=Z,380nm,1.4s,mb5.6						
KMI				AMB	AMB		
	comp=Z,3μm,3.9s						
KMI				LR	LR		
	comp=N,61μm,16.7s,MS6.2						
KMI				LR	LR		
	comp=E,35μm,15.1s,MS6.2						
KMI				LR	LR		
	comp=Z,70μm,14.5s,MS6.3						
KMI	**Kunming**	24.15	12	P	P	00 47 17.6	+2.0
KMI				S	S	00 51 36.5	+7.6
HYB	**Hyderabad**	24.26	312	eP	P	00 47 18.0	+1.3
HYB				eS	S	00 51 36.0	+5.2
HYB				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.2						
HYB	**Hyderabad**	24.26	312	eP	P	00 47 18.0	+1.3
	comp=Z,100nm,1.0s,mb5.2						
HYB				eS	S	00 51 36.0	+5.2
HYB	**Hyderabad**	24.26	312	i P	P	00 47 17.5	+0.8
	comp=Z,100nm,1.0s,mb5.2						
HYB				eS	S	00 51 36.0	+5.2
SHL	**Shillong**	24.54	348	eP	P	00 47 20.0	+0.7
SHL				eS	S	00 51 40.0	+4.5
MNGI	**Mangalore**	24.95	298	i P	P	00 47 24.7	+1.5
MNGI				i x	x	00 51 40.2	
BLSP	**Bilaspur**	25.27	326	eP	P	00 47 27.1	+0.8
BLSP				AMb	AMB	00 47 29.4	
	comp=Z,141nm,1.2s,mb5.4						
BLSP				eS	S	00 51 48.5	+0.7
DGAR	**Diego Garcia**	26.21	250	PFAKE		00 47 50.0	+15
DGAR				LR	LR		
	comp=Z,3μm,19.0s,MS4.8						
LATR	**Latur**	26.37	311	eP	P	00 47 37.5	+1.0
GYA	**Guiyang**	26.50	19	⇑iP	P	00 47 37.4	-0.2
GYA				S	S	00 52 10.0	+1.9
GYA				AMB	AMB		
	comp=Z,100nm,1.4s,mb5.2						
GYA				LR	LR		
	comp=N,32μm,17.1s,MS6.0						
GYA				LR	LR		
	comp=E,21μm,15.9s,MS6.0						
GYA				LR	LR		
	comp=Z,61μm,16.5s,MS6.2						
SLGI	**Shiliguri**	26.51	342	ex	P	00 47 40.6	+2.9
HKC	**Hong Kong**	26.51	37	⇑iP	P	00 47 36.0	-1.8
HKC				S	tx	00 52 50.0	
GZH	**Guangzhou**	26.62	35	P	P	00 47 40.5	+1.6
GZH				LR	LR		
	comp=N,11μm,15.5s,MS5.9						
GZH				LR	LR		
	comp=E,21μm,13.1s,MS5.9						
GZH				LR	LR		
	comp=Z,41μm,14.0s,MS6.1						
SNPH	**Sibulan**	27.06	72	eP	P	00 47 43.7	+0.8
AKL	**Akola**	27.49	316	i x	pP	00 47 54.0	-0.2
AKL				i S	S	00 52 25.2	+1.0
	comp=Z,129nm,1.8s						
KAD	**Karad**	27.59	306	eP	P	00 47 49.2	+1.4
KAD				ex	x	00 52 22.8	
PKI	**Pulchoki**	28.34	338	eP	P	00 47 54.9	+0.5
	comp=Z,735nm,1.3s,mb6.2						
PKI	**Pulchoki**	28.34	338	eP	P	00 47 54.9	+0.5
PKI				pmax	pmax		
	comp=Z,368nm,1.3s,mb5.8						
GUN	**Gumba**	28.48	339	eP	P	00 47 56.6	+1.0
	comp=Z,641nm,0.8s,mb6.3						
DMN	**Daman**	28.50	337	eP	P	00 47 56.6	+0.8
	comp=Z,404nm,1.0s,mb6.0						
POO	**Poona**	28.52	308	eP	P	00 47 54.4	-1.7
POO				AMb	AMB	00 48 01.3	
	comp=Z,26nm,0.5s,mb5.2						
POO				eS	S	00 52 42.0	+1.0
KKN	**Kakani**	28.59	338	eP	P	00 47 57.2	+0.5
	comp=Z,538nm,1.0s,mb6.2						
KKN	**Kakani**	28.59	338	eP	P	00 47 57.2	+0.5
KKN				pmax	pmax		
	comp=Z,269nm,1.0s,mb5.9						
LSA	**Lhasa**	28.70	349	P	P	00 47 59.0	+1.4
LSA				AP	pP	00 48 08.5	+3.4
LSA				XP	sP	00 48 12.5	+4.1
LSA				PP	PP	00 48 54.8	+4.3
LSA				S	S	00 52 48.6	+4.9
LSA				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.2						
LSA				AMB	AMB		
	comp=Z,2μm,10.2s						
LSA				LR	LR		
	comp=N,6μm,26.6s						
LSA				LR	LR		
	comp=E,11μm,36.3s						
LSA				LR	LR		
	comp=Z,11μm,24.2s,MS5.4						
LSA	**Lhasa**	28.70	349	⇑iP	P	00 47 58.3	+0.7
LSA				pmax	pmax		
	comp=Z,115nm,0.8s,mb5.7						
LSA	**Lhasa**	28.70	349	⇑iP	P	00 47 58.3	+0.7
	comp=Z,115nm,0.8s,mb5.7						
DAV	**Davao City (W)**	28.83	78	eP	P	00 48 00.0	+1.0
BHPL	**Bhopal**	28.96	320	eP	P	00 48 01.2	+1.2
BHPL				AMb	AMB	00 48 02.2	
	comp=Z,19nm,0.7s,mb4.9						
BHPL				eS	S	00 52 48.5	+0.6
GKN	**Gorkha**	29.03	337	eP	P	00 48 01.1	+0.5
	comp=Z,521nm,0.9s,mb6.3						
CVP	**Callao Caves**	29.09	55	eP	P	00 48 00.0	-1.3
KOLN	**Koldanda**	29.25	335	eP	P	00 48 03.4	+0.8
	comp=Z,261nm,0.7s,mb6.1						
BOM	**Bombay**	29.54	308	ex	x	00 48 23.1	
BOM				ex	x	00 52 54.2	
CD2	**Chengdu**	29.97	11	P	P	00 48 08.2	-0.8
CD2				PP	PP	00 49 10.1	+3.1
CD2				S	S	00 53 03.3	-0.6
CD2				SS	SS	00 54 44.6	+3.5
CD2				AMB	AMB		
	comp=Z,250nm,0.9s,mb5.9						
CD2				LR	LR		
	comp=N,34μm,18.0s						
CD2				LR	LR		
	comp=Z,44μm,15.6s,MS6.2						
ENH	**Enshi**	30.96	21	P	P	00 48 16.3	-1.5
ENH				S	S	00 53 29.7	+10
ENH	**Enshi**	30.96	21	⇑iP	P	00 48 16.2	-1.5
	comp=Z,474nm,0.9s,mb6.3						
QZH	**Quanzhou**	31.19	40	⇑iP	P	00 48 19.8	0.0
QZH				S	S	00 53 25.0	+1.8
QZH				AMB	AMB		
	comp=Z,190nm,1.1s,mb5.8						
QZH				AMB	AMB		
	comp=Z,2μm,5.8s						
QZH				LR	LR		
	comp=N,39μm,13.0s,MS6.3						
QZH				LR	LR		
	comp=E,30μm,13.7s,MS6.3						
QZH				LR	LR		
	comp=Z,56μm,14.1s,MS6.4						
MBWA	**Marble Bar**	31.46	137	⇑eP	P	00 48 22.4	+0.2
	comp=Z,54nm,0.9s,mb5.4						
MBWA				epP	pP	00 48 29.0	-0.8
MBWA				LR	LR		
	comp=Z,15μm,21.0s,MS5.6						
LGTI	**Lohaghat**	32.21	331	⇓iP	P	00 48 29.5	+0.8
PTH	**Pithoragarh**	32.30	332	eP	P	00 48 30.0	+0.5
PTH				ex	x	00 53 49.4	
NACB	**Ninganchiao**	32.68	44	⇑eP	P	00 48 32.3	-0.6
YHNB	**Yeheng**	32.85	43	⇑eP	P	00 48 34.6	+0.3
AJM	**Ajmer**	33.03	321	eP	P	00 48 33.0	-2.8
TATO	**Taipei**	33.13	43	eP	P	00 48 37.0	+0.2
	comp=Z,196nm,1.3s,mb5.9						
TATO				LR	LR		
	comp=Z,9μm,19.0s,MS5.5						
NDI	**New Delhi**	33.15	327	eP	P	00 48 35.5	-1.4
NDI				ex	x	00 53 33.0	
WHN	**Wuhan**	33.21	28	⇑P	P	00 48 37.3	-0.1
WHN				S	S	00 53 58.0	+3.4
WHN				LR	LR		
	comp=Z,51μm,14.7s,MS6.4						
XAN	**Xi’an**	34.24	17	P	P	00 48 45.3	-1.0
XAN				AP	pP	00 48 53.3	-0.6
XAN				S	S	00 54 05.5	-5.1
XAN				AMB	AMB		
	comp=Z,190nm,1.0s,mb6.0						
XAN				LR	LR		
	comp=N,19μm,14.1s,MS6.1						
XAN				LR	LR		
	comp=E,18μm,15.8s,MS6.1						
XAN				LR	LR		
	comp=Z,38μm,15.0s,MS6.2						
LZH	**Lanzhou**	35.03	9	⇑P	P	00 48 52.9	-0.1
LZH				PP	PP	00 50 11.8	+0.1
LZH				S	S	00 54 23.0	+0.3
LZH				SS	SS	00 56 38.3	-0.1
LZH				AMB	AMB		
	comp=Z,330nm,1.5s,mb6.0						
LZH				AMB	AMB		
	comp=Z,1μm,5.1s						
LZH				LR	LR		
	comp=N,11μm,13.2s						
LZH				LR	LR		
	comp=Z,27μm,16.7s,MS6.1						
SMLA	**Simla**	35.10	329	i x	x	00 54 29.3	
SDNR	**Sundarnagar**	35.50	329	eP	P	00 48 57.4	+0.3
PONG	**Pong**	36.38	329	ex	pP	00 49 10.0	-2.2
NJ2	**Nanjing**	36.67	32	eP	P	00 49 06.8	-0.1
NJ2				AP	pP	00 49 14.4	-0.1
NJ2				XP	sP	00 49 19.4	+1.6
NJ2				PP	PP	00 50 34.0	+2.0
NJ2				S	S	00 54 50.0	+2.0
NJ2				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,1μm,11.6s						
NJ2				LR	LR		
	comp=N,37μm,14.3s,MS6.4						
NJ2				LR	LR		
	comp=E,27μm,14.3s,MS6.4						
NJ2				LR	LR		
	comp=Z,23μm,14.7s,MS6.1						
THN	**Thein Dam**	36.88	329	eP	P	00 49 07.5	-1.2
	comp=Z,42nm,0.8s,mb5.3						
SSE	**Sheshan**	37.22	35	P	P	00 49 12.6	+1.0
SSE				XP	sP	00 49 20.5	-1.9
SSE				PP	PP	00 50 37.2	-1.8
SSE				S	S	00 55 00.2	+3.7
SSE				XS		00 55 11.5	
SSE				SCS	ScS	00 59 24.4	+2.3
SSE				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.4						
SSE				AMB	AMB		
	comp=Z,1μm,11.6s						
SSE				LR	LR		
	comp=N,15μm,17.2s,MS5.9						
SSE				LR	LR		
	comp=E,5μm,17.2s,MS5.9						
SSE				LR	LR		
	comp=Z,21μm,16.2s,MS6.0						
KAKA	**Kakadu**	37.69	113	⇓iP	P	00 49 14.2	-1.4
MUN	**Mundaring**	37.79	153	eP	P	00 49 26.0	+10
GTA	**Gaotai**	37.88	3	⇑P	P	00 49 17.1	+0.1
GTA				PP	PP	00 50 46.4	-0.4
GTA				S	S	00 55 05.7	-0.7
GTA				SCS	ScS	00 59 28.2	+2.6
GTA				AMB	AMB		
	comp=Z,110nm,0.9s,mb5.6						
GTA				AMB	AMB		
	comp=Z,1μm,11.0s						
GTA				LR	LR		
	comp=N,16μm,13.7s,MS6.1						
GTA				LR	LR		
	comp=E,12μm,13.7s,MS6.1						
GTA				LR	LR		
	comp=Z,16μm,13.3s,MS6.0						
KLBR	**Kellerberrin**	38.20	151	⇓iP	P	00 49 29.2	+9.4
TIY	**Taiyuan**	38.73	19	⇑P	P	00 49 24.8	+0.6
TIY				LR	LR		
	comp=N,38μm,14.0s						
NWAO	**Narrogin (SRO)**	39.06	153	P	P	00 49 29.0	+2.0
NWAO				e	pP	00 49 36.8	+2.2
NWAO				pmax	pmax		
	comp=Z,140nm,1.4s						
NWAO				MLR	MLR		
	comp=Z,8μm,20.0s						
NWAO	**Narrogin (SRO)**	39.06	153	P	P	00 49 27.7	+0.7
	comp=Z,17nm,0.9s,mb4.8,baz=326,slow=6.5,SNR=4.9						
NWAO	**Narrogin (SRO)**	39.06	153	P	P	00 49 29.0	+2.0
	comp=Z,140nm,1.4s,mb5.5						
NWAO				e	pP	00 49 36.8	+2.2
NWAO				LR	LR		
	comp=Z,8μm,20.0s,MS5.6						
JOW	**Kunigami**	39.08	47	P	P	00 49 27.9	+0.6
	comp=Z,181nm,0.7s,mb5.9,baz=239,slow=8.4,SNR=32						
JOW				LR	LR	01 05 39.3	
	comp=Z,4μm,20.7s,MS5.3,baz=269,slow=36						
TIA	**Tai’an**	39.22	26	⇑P	P	00 49 26.4	-1.9
TIA				LR	LR		
	comp=N,13μm,13.0s,MS6.1						
TIA				LR	LR		
	comp=E,14μm,13.0s,MS6.1						
BTO	**Baotou**	40.69	15	eP	P	00 49 40.2	-0.2
BTO				S	S	00 55 51.8	+3.0
BTO				AMB	AMB		
	comp=Z,70nm,1.3s,mb5.1						
HHC	**Hu-ho-hao-te**	41.34	17	eP	P	00 49 47.2	+1.5
HHC				AP	pP	00 49 51.9	-1.4
HHC				PP	PP	00 51 24.6	+0.4
HHC				PCP	PcP	00 51 43.4	-1.1
HHC				SCP		00 55 33.9	
HHC				S	S	00 55 59.4	+1.0
HHC				SS	SS	00 59 02.5	+4.8
HHC				AMB	AMB		
	comp=Z,100nm,1.5s,mb5.2						
HHC				AMB	AMB		

	comp=Z,2µm,7.2s						
HHC				LR	LR		
	comp=N,27µm,15.5s,MS6.3						
HHC				LR	LR		
	comp=E,18µm,15.7s,MS6.3						
HHC				LR	LR		
	comp=Z,26µm,15.5s,MS6.2						
WRA	**Warramunga Arr**	**42.15**	**122**	P	**P**	**00 49 51.9**	**-0.8**
WRA				S	**S**	**00 56 07.1**	**-3.6**
WRA	**Warramunga Arr**	**42.15**	**122**	P	**P**	**00 49 51.9**	**-0.8**
	comp=Z,31nm,0.8s,mb5.0,baz=301,slow=9.3,SNR=56						
WRA				ScP		00 55 35.1	
	comp=Z,4.0nm,1.2s,baz=297,slow=3.7,SNR=4.2						
WRA				S	**S**	**00 56 07.1**	**-3.6**
	comp=Z,9.2nm,1.1s,baz=295,slow=15,SNR=10.0						
WRAB	**Tennant Creek**	**42.16**	**122**	⇑*i*P	**P**	**00 49 51.9**	**-0.8**
WRAB				*e**PP	pP	00 49 59.4	-1.0
WRAB				pmax	pmax		
	comp=Z,121nm,0.9s,mb5.5						
WRAB				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.2						
WRAB	**Tennant Creek**	**42.16**	**122**	⇑*i*P	**P**	**00 49 51.9**	**-0.8**
	comp=Z,121nm,0.9s,mb5.5						
WRAB				*e*pP	pP	00 49 59.4	-1.0
WRAB				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
WB2	**Warramunga Arr**	**42.16**	**122**	⇑*i*P	**P**	**00 49 51.6**	**-1.2**
WB2				*e*S	**S**	**00 56 07.7**	**-3.1**
KSH	**Kashi**	**42.56**	**336**	⇑*i*P	**P**	**00 49 56.5**	**+0.7**
KSH				*e*AP	pP	00 50 03.6	+0.1
KSH				*e*XP	sP	00 50 07.2	+0.5
KSH				*e*PP	PP	00 51 35.7	-1.5
KSH				S	**S**	**00 56 15.0**	**-1.5**
KSH				AMB	AMB		
	comp=Z,1µm,3.7s						
KSH				LR	LR		
	comp=N,6µm,15.4s,MS5.8						
KSH				LR	LR		
	comp=E,8µm,14.4s,MS5.8						
WBK	**Wadi Bani Khal**	**42.69**	**302**	⇓P	**P**	**00 49 59.1**	**+2.1**
WMQ	**Urumqi**	**43.05**	**350**	P	**P**	**00 50 00.7**	**+1.0**
WMQ				AP	pP	00 50 08.2	+0.8
WMQ				XP	sP	00 50 11.5	+1.0
WMQ				PP	PP	00 51 43.2	+1.2
WMQ				PCP	PcP	00 51 51.3	+1.2
WMQ				S	**S**	**00 56 24.3**	**+0.8**
WMQ				SS	SS	00 59 30.2	+0.5
WMQ				AMB	AMB		
	comp=Z,110nm,1.2s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,2µm,5.0s						
WMQ				LR	LR		
	comp=N,5µm,24.0s,MS5.6						
WMQ				LR	LR		
	comp=E,9µm,22.8s,MS5.6						
WMQ				LR	LR		
	comp=Z,5µm,24.0s,MS5.3						
JMDO	**Jabal Madar**	**43.32**	**302**	⇑P	**P**	**00 50 04.8**	**+2.6**
MENI	**Mendum Tagoi**	**43.38**	**95**	⇑*i*P	**P**	**00 50 01.8**	**-1.0**
	comp=Z,124nm,1.1s,mb5.2						
FORT	**Forrest**	**43.45**	**140**	*e*P	**P**	**00 50 04.6**	**+1.5**
DL2	**Dalian**	**43.47**	**28**	⇑*i*P	**P**	**00 50 04.0**	**+0.8**
DL2				AP	pP	00 50 15.2	+4.3
DL2				XP	sP	00 50 19.5	+5.5
DL2				SCP		00 55 41.9	
DL2				S	**S**	**00 56 33.5**	**+3.8**
DL2				AMB	AMB		
	comp=Z,100nm,0.7s,mb5.7						
DL2				AMB	AMB		
	comp=Z,820nm,5.9s						
DL2				LR	LR		
	comp=N,5µm,18.0s,MS5.6						
DL2				LR	LR		
	comp=E,4µm,15.5s,MS5.6						
DL2				LR	LR		
	comp=Z,6µm,15.3s,MS5.6						
ASPA	**Alice Springs**	**43.53**	**127**	*e*P	**P**	**00 50 03.8**	**0.0**
ASPA				*e*S	**S**	**00 56 27.1**	**-3.6**
ASPA				*e*SCS	ScS	01 00 01.3	+1.9
ASAR	**Alice Springs**	**43.53**	**127**	P	**P**	**00 50 03.5**	**-0.3**
ASAR						00 51 50.5	
ASAR				S	**S**	**00 56 28.4**	**-2.3**
ASAR	**Alice Springs**	**43.53**	**127**	P	**P**	**00 50 03.5**	**-0.4**
	comp=Z,23nm,0.9s,mb4.9,baz=302,slow=6.8,SNR=80						
ASAR				PcP	PcP	00 51 50.5	-1.6
	comp=Z,7.0nm,0.8s,baz=322,slow=3.9,SNR=3.1						
ASAR				ScP		00 55 41.5	
	comp=Z,3.9nm,1.1s,baz=326,slow=3.3,SNR=4.9						
ASAR				S	**S**	**00 56 28.4**	**-2.4**
	comp=Z,8.6nm,1.0s,baz=299,slow=14,SNR=7.5						
YOMI	**Yo Moklole**	**43.53**	**95**	⇑*i*P	**P**	**00 50 01.7**	**-2.3**
	comp=Z,174nm,1.3s,mb5.3						
SMDO	**Samad**	**43.64**	**303**	P	**P**	**00 50 06.4**	**+1.6**
	SNR=8.2						
BIDO	**Bidbid**	**43.77**	**303**	P	**P**	**00 50 07.9**	**+2.1**
	SNR=6.3						
BSY	**Bisya**	**44.24**	**302**	⇑P	**P**	**00 50 11.9**	**+2.2**
JNU	**Nakatsue**	**44.63**	**41**	P	**P**	**00 50 12.8**	**+0.1**
	comp=Z,92nm,0.8s,mb5.7,baz=214,slow=2.8,SNR=56						
JNU				LR	LR	01 09 29.7	
	comp=Z,9µm,20.4s,MS5.7,baz=46,slow=37						
ULHL	**Ulahol**	**44.78**	**338**	P	**P**	**00 50 15.2**	**+1.4**
	SNR=13						
INCN	**Inchon**	**44.95**	**34**	⇑*e*P	**P**	**00 50 14.3**	**-0.9**
	comp=Z,116nm,1.2s,mb5.6						
INCN				LR	LR		
	comp=Z,11µm,21.0s,MS5.8						
KZA	**Kyzart**	**45.02**	**337**	P	**P**	**00 50 16.9**	**+1.2**
	SNR=11						
AAA	**Alma-Ata**	**45.42**	**339**	*e*P	**P**	**00 50 18.0**	**-0.8**
AAA				*i* S	**S**	**00 56 59.0**	**+1.2**
AAA				smax			
	comp=E,4µm,8.0s						
AAA				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.3						
UCH	**Uchtor**	**45.44**	**336**	P	**P**	**00 50 20.3**	**+1.3**
	SNR=52						
TKM2	**Tokmak 2**	**45.61**	**338**	P	**P**	**00 50 21.1**	**+0.9**
	SNR=31						
KS15	**Wonju Array Si**	**45.63**	**35**	*e*P	**P**	**00 50 20.8**	**+0.3**
KBK	**Karagaybulak**	**45.63**	**337**	P	**P**	**00 50 22.0**	**+1.5**
	SNR=43						
WHFO	**Wadi Hawf**	**45.67**	**294**	P	**P**	**00 50 21.8**	**+0.7**
	SNR=8.2						
AML	**Almayashu**	**45.70**	**336**	P	**P**	**00 50 22.2**	**+1.2**
	SNR=27						
AAK	**Ala-Archa**	**45.79**	**337**	⇑*i*P	**P**	**00 50 21.7**	**0.0**
AAK				*PP	pP	00 50 29.0	-0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
AAK				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.0						
AAK	**Ala-Archa**	**45.79**	**337**	⇑*i*P	**P**	**00 50 21.6**	**-0.1**
	comp=Z,3.2nm,0.4s,mb4.6						
AAK				pP	pP	00 50 28.9	-0.5
AAK				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
FRU	**Bishkek**	**45.91**	**337**	α*e*P	**P**	**00 50 24.0**	**+1.3**
FRU				*e*S	**S**	**00 57 08.5**	**+3.7**
FRU				pmax	pmax		
	comp=Z,1µm,2.8s,mb6.2						
FRU				pmax	pmax		
	comp=Z,450nm,2.1s,mb6.0						
FRU				smax			
	comp=E,2µm,10.0s						
FRU				MLR	MLR		
	comp=Z,7µm,19.0s,MS5.6						
CHMS	**Chumysh**	**46.00**	**337**	P	**P**	**00 50 23.9**	**+0.5**
	SNR=11						
EKS2	**Erkin-Say**	**46.10**	**336**	P	**P**	**00 50 25.4**	**+1.2**
	SNR=18						
USP	**Ospenovka**	**46.33**	**337**	P	**P**	**00 50 27.2**	**+1.2**
	SNR=46						
SNY	**Shenyang**	**46.70**	**27**	⇑P	**P**	**00 50 28.5**	**-0.4**
SNY				XP	sP	00 50 39.9	+0.1
SNY				PP	PP	00 52 18.2	-0.3
SNY				S	**S**	**00 57 14.6**	**-1.5**
SNY				XS		00 57 28.4	
SNY				AMB	AMB		
	comp=Z,100nm,1.5s,mb5.5						
SNY				LR	LR		
	comp=N,9µm,15.6s,MS6.1						
SNY				LR	LR		
	comp=E,14µm,15.6s,MS6.1						
SNY				LR	LR		
	comp=Z,19µm,15.3s,MS6.2						
SONM	**Songino Array**	**46.91**	**8**	P	**P**	**00 50 30.8**	**+0.3**
	comp=Z,97nm,0.9s,mb5.8,baz=193,slow=5.9,SNR=295						
SONM				LR	LR	01 12 45.3	
	comp=Z,16µm,18.7s,MS6.0,baz=189,slow=39						
MKAR	**Makanchi Array**	**47.02**	**346**	*i* P	**P**	**00 50 31.4**	**0.0**
MKAR				pmax	pmax		
	comp=Z,88nm,0.7s						
MKAR	**Makanchi Array**	**47.02**	**346**	P	**P**	**00 50 31.6**	**+0.1**
	comp=Z,62nm,0.8s,mb5.6,baz=162,slow=7.7,SNR=170						
MKAR				S	**S**	**00 57 22.1**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=166,slow=12,SNR=2.1						
MKAR				LR	LR	01 14 07.7	
	comp=Z,5µm,21.3s,MS5.5,baz=110,slow=41						
KKAR	**Karatay Array**	**47.85**	**334**	*i* P	**P**	**00 50 37.5**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,84nm,1.2s,mb5.7						
GUMO	**Guam**	**48.67**	**73**	PFAKE		00 51 00.0	+15
GUMO				LR	LR		
	comp=Z,3µm,19.0s,MS5.2						
ZAK	**Zakamensk**	**49.05**	**5**	⇑*i*P	**P**	**00 50 47.5**	**+0.4**
ZAK				*e*		00 52 45.8	
ZAK				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.3						
ZAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
CN2	**Changchun**	**49.10**	**27**	*e*P	**P**	**00 50 47.1**	**-0.5**
CN2				PCP	PcP	00 52 10.5	-0.8
CN2				PP	PP	00 52 41.1	-0.4
CN2				*e*S	**S**	**00 57 48.7**	**-1.2**
CN2				SCS	ScS	01 00 35.8	+0.7
CN2				SS	SS	01 01 19.1	+2.3
CN2				AMB	AMB		
	comp=Z,120nm,1.0s,mb5.9						
CN2				AMB	AMB		
	comp=Z,1µm,4.0s						
CN2				LR	LR		
	comp=N,13µm,16.0s,MS6.2						
CN2				LR	LR		
	comp=E,15µm,16.0s,MS6.2						
CN2				LR	LR		
	comp=Z,16µm,16.0s,MS6.1						
CBIJ	**Chichi jima**	**50.09**	**55**	P	**P**	**00 50 54.7**	**-0.7**
	comp=Z,76nm,0.6s,mb5.9,baz=266,slow=16,SNR=5.2						
CBIJ				LR	LR	01 10 13.1	
	comp=Z,2µm,21.6s,MS5.1,baz=212,slow=34						
MOY	**Mondy**	**50.16**	**3**	*e*P	**P**	**00 50 56.0**	**+0.3**
MOY				pmax	pmax		
	comp=Z,83nm,1.8s,mb5.5						
TLY	**Talaya**	**50.37**	**5**	*e*P	**P**	**00 50 57.5**	**+0.3**
TLY				*e*		00 52 54.9	
TLY				*e*PPP	PPP	00 53 42.8	-8.1
TLY				*e*S	**S**	**00 58 09.9**	**+2.5**
TLY				*e*		01 00 45.3	
TLY				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.5						
TLY				MLR	MLR		
	comp=Z,14µm,16.0s,MS6.1						
TLY	**Talaya**	**50.37**	**5**	⇑*i*P	**P**	**00 50 57.6**	**+0.4**
	comp=Z,42nm,0.8s,mb5.5						
TLY				LR	LR		
	comp=Z,3µm,22.0s,MS5.2						
PMG	**Port Moresby**	**50.90**	**103**	*e*P	**P**	**00 51 01.8**	**0.0**
PMG				pmax	pmax		
	comp=Z,39nm,0.8s						
PMG				MLR	MLR		
	comp=Z,7µm,21.0s						
PMG	**Port Moresby**	**50.90**	**103**	*e*P	**P**	**00 51 01.8**	**0.0**
	comp=Z,39nm,0.8s,mb5.4						
PMG				LR	LR		
	comp=Z,7µm,21.0s,MS5.7						
IRK	**Irkutsk**	**50.98**	**6**	*e*P	**P**	**00 51 01.9**	**0.0**
IRK				*e*		00 53 01.7	
IRK				pmax	pmax		
	comp=Z,171nm,2.0s,mb5.6						
VAN	**Vannovskaya**	**51.06**	**320**	P	**P**	**00 51 02.0**	**-0.7**
VAN				S	**S**	**00 58 16.8**	**-0.3**
HIA	**Hailar**	**51.42**	**19**	⇑*e*P	**P**	**00 51 05.2**	**-0.1**
HIA				pmax	pmax		
	comp=Z,87nm,0.9s						
HIA	**Hailar**	**51.42**	**19**	⇑*e*P	**P**	**00 51 05.2**	**-0.1**
	comp=Z,87nm,0.9s,mb5.7						
MAJO	**Matsushiro**	**51.52**	**42**	*e*P	**P**	**00 51 05.4**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.2						
MAJO				MLR	MLR		
	comp=Z,6µm,21.0s,MS5.6						
MAJO	**Matsushiro**	**51.52**	**42**	*e*P	**P**	**00 51 05.4**	**-0.8**
	comp=Z,20nm,0.6s,mb5.2						
MAJO				LR	LR		
	comp=Z,6µm,21.0s,MS5.6						
MAT	**Matsushiro**	**51.52**	**42**	*e*P	**P**	**00 51 05.0**	**-1.2**
MAT				*e*S	**S**	**00 58 30.0**	**+6.5**
MAT				pmax	pmax		
	comp=Z,247nm,2.1s,mb5.8						
MAT				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.6						
MAT	**Matsushiro**	**51.52**	**42**	*e*P	**P**	**00 51 05.0**	**-1.2**
	comp=Z,247nm,2.1s,mb5.8						
MAT				*e*S	**S**	**00 58 30.0**	**+6.5**
MAT				LR	LR		
	comp=Z,5µm,20.0s,MS5.6						
MAT	**Matsushiro**	**51.52**	**42**	P	**P**	**00 51 05.3**	**-0.9**
MAT				S	**S**	**00 58 29.0**	**+5.5**
HASS	**Wahat al Ahsa’**	**51.52**	**301**	P	**P**	**00 51 06.5**	**+0.1**
MJAR	**Matsushiro Arr**	**51.52**	**42**	P	**P**	**00 51 05.4**	**-0.8**
	comp=Z,16nm,0.8s,mb5.0,baz=222,slow=6.8,SNR=34						
MJAR				LR	LR	01 13 22.8	
	comp=Z,5µm,21.4s,MS5.5,baz=250,slow=36						
MDJ	**Mudanjiang**	**51.67**	**29**	P	**P**	**00 51 07.7**	**+0.5**
MDJ				AP	pP	00 51 14.0	-1.0
MDJ				XP	sP	00 51 16.7	-1.3
MDJ				PCP	PcP	00 52 20.6	-0.1
MDJ				PP	PP	00 53 04.2	-1.3
MDJ				SCP		00 56 16.3	
MDJ				PCS		00 56 18.7	
MDJ				S	**S**	**00 58 28.8**	**+3.4**
MDJ				XS		00 58 39.6	
MDJ				AMB	AMB		
	comp=Z,90nm,1.5s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,1µm,7.9s						
MDJ				LR	LR		
	comp=N,10µm,16.8s,MS6.0						
MDJ				LR	LR		
	comp=E,8µm,16.1s,MS6.0						
MDJ				LR	LR		
	comp=Z,15µm,16.1s,MS6.1						
MDJ	**Mudanjiang**	**51.67**	**29**	P	**P**	**00 51 07.8**	**+0.6**
MDJ	**Mudanjiang**	**51.67**	**29**	⇑*e*P	**P**	**00 51 07.4**	**+0.2**
	comp=Z,74nm,0.8s,mb5.7						
CIT	**Chita**	**52.25**	**13**	⇑*i*P	**P**	**00 51 12.1**	**+0.6**
CIT				*e*	pP	00 51 21.3	+2.0
CIT				*e*		00 58 40.2	
CIT				pmax	pmax		
	comp=Z,333nm,1.7s,mb6.0						
CTA	**Charters Tower**	**52.60**	**117**	⇓*i*P	**P**	**00 51 14.7**	**+0.2**
CTA				*i* S	**S**	**00 58 38.9**	**+0.4**
CTA	**Charters Tower**	**52.60**	**117**	LR	LR	01 17 44.9	
	comp=Z,7µm,19.4s,MS5.7,baz=31,slow=41						
CTAO	**Charters Tower**	**52.60**	**117**	⇑*i*P	**P**	**00 51 13.9**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.5						
CTAO				MLR	MLR		
	comp=Z,7µm,19.0s,MS5.7						
CTAO	**Charters Tower**	**52.60**	**117**	⇑*i*P	**P**	**00 51 13.9**	**-0.7**
	comp=Z,58nm,1.0s,mb5.5						
CTAO				LR	LR		
	comp=Z,7µm,19.0s,MS5.7						
ADE	**Adelaide**	**53.08**	**137**	*e*P	**P**	**00 51 19.2**	**+1.3**
ZAL	**Zalesovo**	**53.33**	**351**	P	**P**	**00 51 19.2**	**-0.3**
	comp=Z,41nm,0.7s,mb5.5,baz=306,slow=5.3,SNR=163						
ZAL				S	**S**	**00 58 49.6**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=179,slow=22,SNR=6.5						
ZAL				LR	LR	01 20 11.5	
	comp=Z,5µm,18.6s,MS5.6,baz=298,slow=43						
STKA	**Stephens Creek**	**53.51**	**132**	*e*P	**P**	**00 51 20.8**	**-0.3**
STKA				*i* S	**S**	**00 58 51.4**	**+0.8**
STKA	**Stephens Creek**	**53.51**	**132**	P	**P**	**00 51 21.5**	**+0.4**
	comp=Z,41nm,1.0s,mb5.3,baz=308,slow=7.3,SNR=46						
STKA				LR	LR	01 15 57.5	
	comp=Z,10µm,21.4s,MS5.8,baz=283,slow=38						
KAMS	**Al Khamasin**	**54.68**	**294**	P	**P**	**00 51 29.9**	**0.0**
TATS	**Tathlith**	**55.53**	**293**	P	**P**	**00 51 36.7**	**+0.7**
BVA0	**Borovoye Array**	**56.04**	**341**	*i* P	**P**	**00 51 38.0**	**-1.2**
BVA0				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
BVAR	**Borovoye Array**	**56.04**	**341**	S	**S**	**00 59 24.7**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=135,slow=14,SNR=2.7						
KLR	**Kul’dur**	**56.05**	**27**	κ *i*P	**P**	**00 51 36.8**	**-2.6**
KLR				*e*PPP	PPP	00 55 04.0	+2.2
KLR				*e*S	**S**	**00 59 23.0**	**-1.5**
KLR				*e*SS	SS	01 03 11.0	+0.1
KLR				pmax	pmax		
	comp=N,700nm,6.0s						
KLR				pmax	pmax		
	comp=E,600nm,6.0s						
KLR				pmax	pmax		
	comp=Z,2µm,6.0s						
KLR				pmax	pmax		
	comp=N,130nm,2.0s						
KLR				pmax	pmax		
	comp=E,200nm,2.0s						
KLR				pmax	pmax		
	comp=Z,260nm,2.0s,mb5.9						
KLR				smax			
	comp=N,2µm,7.0s						
KLR				smax			
	comp=E,1µm,7.0s						
KLR				MLR	MLR		
	comp=N,10µm,13.0s,MS6.1						
KLR				MLR	MLR		
	comp=E,5µm,13.0s,MS6.1						
KLR				MLR	MLR		
	comp=Z,17µm,13.0s,MS6.3						
CHKZ	**Chkalovo**	**56.51**	**341**	*i* P	**P**	**00 51 41.8**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,89nm,0.8s,mb5.8						
AB31	**Akbulak array**	**57.31**	**332**	*i* P	**P**	**00 51 47.2**	**-1.2**
AB31				pmax	pmax		
	comp=Z,43nm,0.8s,mb5.5						
BLJS	**Baljurashi**	**57.33**	**293**	P	**P**	**00 51 50.1**	**+1.2**
BOD	**Bodaibo**	**57.78**	**11**	*e*P	**P**	**00 51 50.8**	**-0.8**
BOD				pmax	pmax		
	comp=Z,95nm,1.1s,mb5.7						
ASAJ	**Asahikawa**	**58.48**	**37**	P	**P**	**00 51 56.1**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ASAJ	**Asahikawa**	**58.48**	**37**	P	**P**	**00 51 56.0**	**-0.6**
	comp=Z,5.5nm,0.3s,mb5.1,baz=249,slow=7.7,SNR=4.7						
BHD	**Baghdad**	**58.69**	**309**	*e*P	**P**	**00 52 03.0**	**+4.7**
BHD				*e*S	**S**	**01 00 04.5**	**+4.9**
HILS	**Ha’il**	**58.94**	**301**	P	**P**	**00 52 00.2**	**+0.1**
TOO	**Toolangi**	**59.10**	**136**	*e*P	**P**	**00 52 02.6**	**+1.5**
CLNS	**Chul’man**	**59.52**	**17**	*e*P	**P**	**00 52 03.5**	**-0.2**
CLNS				*e*		00 52 51.1	
CLNS				*e*		00 54 11.9	
CLNS				*e*S	**S**	**01 00 06.9**	**-3.1**
CLNS				*e*		01 01 45.4	
CLNS				pmax	pmax		
	comp=Z,106nm,0.8s,mb5.9						
CLNS				pmax	pmax		
	comp=N,47nm,1.0s						
CLNS				pmax	pmax		
	comp=E,49nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
CLNS				pmax	pmax		
	comp=N,31nm,0.9s						
CLNS				pmax	pmax		
	comp=E,15nm,0.7s						
CLNS				smax			
	comp=N,965nm,11.5s						
CLNS				smax			
	comp=Z,576nm,12.3s						
CLNS				smax			
	comp=E,41nm,11.4s						
CLNS				MLR	MLR		
	comp=Z,20µm,15.0s,MS6.4						
CLNS				MLR	MLR		
	comp=N,14µm,16.0s,MS6.2						
CLNS				MLR	MLR		
	comp=E,3µm,16.0s,MS6.2						
CLNS	**Chul’man**	**59.52**	**17**	*e*P	**P**	**00 52 03.6**	**-0.1**
KMBO	**Kilima Mbogo**	**60.00**	**268**	P	**P**	**00 52 07.8**	**+0.2**
	comp=E,3.4nm,0.8s,mb4.4,baz=72,slow=9.1,SNR=8.0						
KMBO				LR	LR	01 17 09.7	
	comp=E,4µm,18.1s,MS5.6,baz=88,slow=35						
YSS	**Yuzh-Sakhalins**	**60.16**	**34**	*c* *i*P	**P**	**00 52 08.1**	**-0.1**
YSS				pmax	pmax		
	comp=Z,211nm,1.0s,mb6.1						
YSS				MLR	MLR		
	comp=Z,6µm,15.0s,MS5.9						
YSS	**Yuzh-Sakhalins**	**60.16**	**34**	*e*P	**P**	**00 52 08.0**	**-0.2**
	comp=Z,221nm,1.1s,mb6.1						
YSS				LR	LR		
	comp=Z,3µm,19.0s,MS5.4						
YUK	**Yuzh-Kuril’sk**	**60.43**	**39**	*e*P	**P**	**00 52 08.0**	**-2.1**
YUK				pmax	pmax		
	comp=Z,2µm,4.7s						
YUK				MLR	MLR		
	comp=E,9µm,15.0s						
YUK				MLR	MLR		
	comp=Z,8µm,15.0s,MS6.0						
ARMA	**Armidale**	**60.66**	**126**	*e*P	**P**	**00 52 13.9**	**+2.0**
ARMA				*e*S	**S**	**01 00 32.6**	**+7.6**
CNB	**Canberra Magne**	**60.84**	**132**	*e*P	**P**	**00 52 13.7**	**+0.7**
GNI	**Garni**	**61.13**	**316**	*e*P	**P**	**00 52 13.0**	**-1.9**
GNI	**Garni**	**61.13**	**316**	*c* *i*P	**P**	**00 52 13.3**	**-1.6**
GNI				pmax	pmax		
	comp=Z,35nm,1.7s						
GNI				MLR	MLR		
	comp=Z,2µm,20.0s						
GNI	**Garni**	**61.13**	**316**	LR	LR	01 23 57.9	
	comp=Z,2µm,18.1s,MS5.3,baz=307,slow=41						
GNI	**Garni**	**61.13**	**316**	*e*P	**P**	**00 52 14.0**	**-0.9**
GNI				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
DGRG	**David-gareji**	**61.27**	**318**	P	**P**	**00 52 15.5**	**-0.3**
DGRG				S	**S**	**01 00 31.9**	**-0.6**
CLDR	**Caldiran**	**61.30**	**315**	*e*P	**P**	**00 52 15.8**	**-0.2**
VANB	**Van**	**61.45**	**314**	*e*P	**P**	**00 52 24.1**	**+7.0**
TI2	**Plekhanov**	**61.81**	**318**	⇑*i*P	**P**	**00 52 19.2**	**-0.3**
TI2				*e*S	**S**	**01 00 39.2**	**-0.2**
TBLG	**Delisi**	**61.82**	**318**	P	**P**	**00 52 19.0**	**-0.5**
SVE	**Sverdlovsk**	**62.48**	**338**	⇑*i*P	**P**	**00 52 23.0**	**-0.7**
SVE				*e*		00 53 07.0	
SVE				*e*		00 54 42.0	
SVE				*e*PPP	PPP	00 56 06.0	-7.1
SVE				*e*S	**S**	**01 00 48.0**	**+0.4**
SVE				*e*		01 02 11.0	
SVE				pmax	pmax		
	comp=Z,104nm,1.2s,mb5.8						
SVE				MLR	MLR		
	comp=N,2µm,17.0s,MS5.5						
SVE				MLR	MLR		
	comp=E,2µm,17.0s,MS5.5						
SVE				MLR	MLR		
	comp=Z,6µm,17.0s,MS5.8						
BTMT	**Batman**	**62.68**	**313**	*e*P	**P**	**00 52 24.8**	**-0.5**
BEST	**Besiri**	**62.73**	**312**	*i* P	**P**	**00 52 23.4**	**-2.3**
ZEI	**Tsey**	**62.83**	**318**	*e*P	**P**	**00 52 20.3**	**-5.9**
ZEI				*i* *PP	pP	00 52 28.8	-5.4
ZEI				*i*		00 54 40.9	
ZEI				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
ARU	**Arti**	**62.98**	**337**	⇑*i*P	**P**	**00 52 25.3**	**-1.7**
ARU				*e*		00 52 59.9	
ARU				*e*		00 54 43.5	
ARU				*e*PPP	PPP	00 56 13.9	-4.2
ARU				*e*S	**S**	**01 00 54.6**	**+0.7**
ARU				*i*		01 02 13.7	
ARU				*e*SSS	SSS	01 07 48.2	+1.9
ARU				pmax	pmax		
	comp=Z,67nm,1.3s,mb5.6						
ARU				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.6						
ARU				MLR	MLR		
	comp=N,700nm,19.0s,MS5.6						
ARU				MLR	MLR		
	comp=E,3µm,17.0s,MS5.6						
ARU	**Arti**	**62.98**	**337**	⇑*i*P	**P**	**00 52 25.0**	**-2.0**
	comp=E,63nm,0.9s,mb5.8						
ARU				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
TAU	**Tasmania Unive**	**62.99**	**141**	*e*P	**P**	**00 52 27.8**	**+0.5**
TAU				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.5						
TAU				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.3						
TAU	**Tasmania Unive**	**62.99**	**141**	*e*P	**P**	**00 52 27.8**	**+0.5**

	comp=Z,33nm,0.8s,mb5.5						
TAU				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
ONI	Oni	63.05	318	P	P	00 52 27.0	-0.7
HNR	Honiara	63.40	101	eP	P	00 52 29.8	-0.6
HNR				pmax	pmax		
	comp=Z,456nm,1.0s						
HNR				MLR	MLR		
	comp=Z,3µm,20.0s						
HNR	Honiara	63.40	101	eP	P	00 52 29.8	-0.6
	comp=Z,456nm,1.0s						
HNR				LR	LR		
	comp=Z,3µm,20.0s						
ERZM	Erzurum	63.41	315	iP	P	00 52 27.0	-3.1
EZM	Erzurum	63.41	315	eP	P	00 52 29.4	-0.7
TBKS	Tabuk	63.64	301	P	P	00 52 32.6	+0.7
QURS	Qurayyt al Mil	63.78	304	P	P	00 52 32.9	+0.2
KIV	Kislovodsk	64.14	319α	iP	P	00 52 33.7	-1.2
KIV				e	pP	00 52 42.4	-0.5
KIV				e		00 53 15.4	
KIV				iS	S	01 01 07.3	-1.3
KIV				iPS	PS	01 01 21.3	-10
KIV				eSS	SS	01 05 16.0	-3.4
KIV				pmax	pmax		
	comp=Z,100nm,1.4s,mb5.7						
KIV				pmax	pmax		
	comp=Z,49nm,0.9s,mb5.5						
KIV	Kislovodsk	64.14	319	eP	P	00 52 33.6	-1.3
	comp=Z,96nm,1.0s,mb5.8						
KIV				LR	LR		
	comp=Z,520nm,19.0s,MS4.7						
ASF	Jabal al Asfar	64.34	305	LR	LR	01 22 15.0	
	comp=Z,4µm,18.1s,MS5.7,baz=334,slow=38						
JMQS	Jabal Moqyreh	64.37	301	P	P	00 52 36.9	+0.2
GOF	Gofitskoye	64.39	320⇑	iP	P	00 52 35.5	-1.0
GOF				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.5						
URFA	Urfa	64.40	311	eP	P	00 52 35.9	-0.8
ELZG	Elazig	64.63	312	iP	P	00 52 37.5	-0.7
MALT	Malatya	64.98	312	eP	P	00 52 34.6	-5.8
MALT	Malatya	64.98	312	eP	P	00 52 39.7	-0.7
MALT				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.3						
MALT	Malatya	64.98	312	eP	P	00 52 39.7	-0.7
	comp=Z,32nm,0.9s,mb5.3						
MYA	Malataya	64.98	312	eP	P	00 52 38.5	-1.9
JMOS	Jabal al Moall	65.09	302	P	P	00 52 41.3	0.0
YAK	Yakutsk	65.20	16c	iP	P	00 52 40.2	-1.2
YAK				pmax	pmax		
	comp=Z,426nm,1.0s,mb6.4						
YAK				MLR	MLR		
	comp=Z,11µm,15.0s,MS6.2						
YAK	Yakutsk	65.20	16⇑	eP	P	00 52 40.3	-1.2
	comp=Z,399nm,1.0s,mb6.4						
YAK				epP	pP	00 52 48.2	-1.2
YAK				LR	LR		
	comp=Z,13µm,19.0s,MS6.2						
GZT	Gaziantep	65.32	311	iP	P	00 52 41.5	-1.1
EIL	Elat	65.34	302⇑	eP	P	00 52 42.2	-0.7
	comp=Z,40nm,1.1s,mb5.4						
EIL				epP	pP	00 52 51.0	+0.1
GAZ	Gaziantep	65.53	311	eP	P	00 52 43.8	-0.2
SOKR	Solikamsk	65.87	339c	iP	P	00 52 44.6	-1.2
SOKR				iS	S	01 01 19.2	-10
SOKR				pmax	pmax		
	comp=Z,290nm,3.1s						
SOKR				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.7						
KAHT	Ahir Dag	65.92	311	iP	P	00 52 45.4	-1.1
SOC	Sochi	65.95	318c	iP	P	00 52 42.8	-3.8
SOC				e		00 53 11.0	
SOC				e		00 55 11.7	
SOC				eS	S	01 01 28.8	-2.1
SOC				eSS	SS	01 05 43.0	-4.5
SOC				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.7						
SOC				pmax	pmax		
	comp=N,33nm,1.1s						
SOC				pmax	pmax		
	comp=E,11nm,0.8s						
SOC				MLR	MLR		
	comp=N,1µm,19.0s,MS5.2						
SOC				MLR	MLR		
	comp=E,651nm,19.0s,MS5.2						
SOC				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
COBT	Iskenderun	66.06	310	iP	P	00 52 47.5	+0.1
MBAR	Mbarara	66.49	269	eP	P	00 52 50.1	-0.4
MBAR				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.1						
MBAR				MLR	MLR		
	comp=Z,537nm,20.0s,MS4.8						
MBAR	Mbarara	66.49	269	eP	P	00 52 50.1	-0.4
	comp=Z,22nm,1.2s,mb5.1						
MBAR				LR	LR		
	comp=Z,537nm,20.0s,MS4.8						
BNN	Bunyan	67.07	312	eP	P	00 52 51.0	-2.8
MEST	Erdemli	67.71	309	iP	P	00 52 55.5	-2.4
MIR	Mirnyy	67.90	182	eP	P	00 52 58.0	-0.5
MIR				pmax	pmax		
	comp=Z,70nm,1.8s,mb5.4						
ANN	Anapa	67.93	318	eP	P	00 52 53.8	-5.3
ANN				e		00 53 21.7	
ANN				ePPP	PPP	00 57 14.3	+6.4
ANN				eS	S	01 01 48.5	-6.2
ANN				pmax	pmax		
	comp=Z,449nm,10.3s						
ANN				MLR	MLR		
	comp=N,2µm,21.0s,MS5.5						
ANN				MLR	MLR		
	comp=E,1µm,21.0s,MS5.5						
ANN				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.3						
CSS	Prodhromos	67.93	307	eP	P	00 52 58.5	-0.8
	comp=Z,24nm,0.8s,mb5.3						
CTKT	Corum	68.38	313	iP	P	00 52 58.4	-3.6
BYBT	Boyabat	68.66	314	eP	P	00 53 08.0	+4.4
KAMT	Kaman	68.81	312	eP	P	00 53 00.8	-3.8
BR131	Keskin Array S	68.96	312	eP	P	00 53 04.3	-1.3
	comp=Z,15nm,0.8s,mb5.0						
BRTR	Keskin Array B	68.96	312	P	P	00 53 04.3	-1.2
	comp=Z,8.1nm,0.7s,mb4.8,baz=131,slow=6.6,SNR=33						
CANT	Cankiri	69.23	313	eP	P	00 53 06.0	-1.1
ELDT	Eldivan	69.33	313	iP	P	00 53 08.5	+0.6
VRSR	Storozhevoye	69.37	325	eP	P	00 53 06.3	-1.6
VRSR				e*PP	pP	00 53 16.5	+0.6
VRSR				e*SP	sP	00 53 20.1	+1.4
VRSR				e		00 53 30.9	
VRSR				eS	S	01 02 08.0	-3.7
VRSR				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
VRSR				pmax	pmax		
	comp=N,4.0nm,0.4s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.4s						
VRSR				smax			
	comp=Z,6.0nm,1.4s						
VRSR				smax			
	comp=N,30nm,1.5s						
VRSR				smax			
	comp=E,20nm,1.7s						
VOR	Voronezh	69.58	326	eP	P	00 53 07.8	-1.4
VOR				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.5						
ANTO	Ankara	69.63	312	⇑P	P	00 53 09.4	-0.2
KIZT	Kizilcal	70.05	311	eP	P	00 53 08.0	-4.2
SAFT	Safranbolu	70.08	314	eP	P	00 53 11.3	-1.1
LSZ	Lusaka	70.18	253	eP	P	00 53 12.7	-0.7
LSZ				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
LSZ				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.8						
LSZ	Lusaka	70.18	253	eP	P	00 53 12.7	-0.7
	comp=Z,11nm,0.9s,mb4.8						
LSZ				LR	LR		
	comp=Z,5µm,19.0s,MS5.8						
SIM	Simferopol’	70.20	318⇑	eP	P	00 53 13.0	0.0
SIM				eS	S	01 02 19.0	-2.6
SIM				pmax	pmax		
	comp=Z,67nm,0.8s,mb5.6						
SGKT	Sivrigoynuk	70.36	313	iP	P	00 53 21.9	+7.8
KWAJ	Kwajalein Atol	70.42	81	PFAKE		00 53 30.0	+15
KWAJ				LR	LR		
	comp=Z,698nm,19.0s,MS4.9						
ISP	Isparta	70.84	310	eP	P	00 53 15.2	-1.8
ISP	Isparta	70.84	310	eP	P	00 53 15.9	-1.2
ISP				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.3						
ISP	Isparta	70.84	310	eP	P	00 53 15.9	-1.2
	comp=Z,37nm,1.0s,mb5.3						
MDU	Mudurnu	70.95	312	eP	P	00 53 21.1	+3.4
ESKT	Eskisehir	70.98	311	eP	P	00 53 15.2	-2.7
ESKT	Eskisehir	70.98	311	iP	P	00 53 13.6	-4.3
TKTP	Tekketepe	71.03	310	iP	P	00 53 15.5	-2.7
ELL	Elmali	71.06	308	eP	P	00 53 16.5	-1.9
MA2	Magadan	71.12	26c	iP	P	00 53 18.4	0.0
MA2				e		00 55 56.4	
MA2				ePPP	PPP	00 57 40.3	+0.9
MA2				iS	S	01 02 33.5	+1.4
MA2				pmax	pmax		
	comp=Z,300nm,2.1s,mb5.8						
MA2				MLR	MLR		
	comp=Z,10µm,20.0s,MS6.1						
MA2	Magadan	71.12	26⇑	eP	P	00 53 18.1	-0.3
	comp=Z,78nm,0.8s,mb5.7						
MA2				LR	LR		
	comp=Z,5µm,19.0s,MS5.8						
HENT	Hendek	71.28	313	iP	P	00 53 16.1	-3.6
DZM	Mont Dzumac	71.37	114	P	P	00 53 20.1	-0.4
	comp=Z,22nm,1.0s,mb5.0,baz=357,slow=7.5,SNR=7.3						
ALT	Altintas	71.43	311	eP	P	00 53 19.2	-1.4
GOLH	Golhisar	71.43	309	iP	P	00 53 17.3	-3.3
FETY	Fethiye	71.68	308	eP	P	00 53 19.2	-3.0
PET	Petropavlovsk	72.04	34c	iP	P	00 53 23.7	-0.3
PET				pmax	pmax		
	comp=Z,105nm,1.0s,mb5.7						
PET				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.7						
PET	Petropavlovsk	72.04	34	eP	P	00 53 22.9	-1.0
	comp=Z,70nm,0.8s,mb5.6						
PET				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
DALT	Dalyan (Mudla)	72.06	308	eP	P	00 53 23.1	-1.3
MOS	Moscow	72.14	329	eP	P	00 53 24.1	-0.4
MOS				e		00 53 29.8	
MOS				e		00 53 41.1	
MOS				e		00 56 06.9	
MOS				ePPP	PPP	00 57 47.2	-1.5
MOS				eS	S	01 02 42.7	-1.1
MOS				e		01 03 21.0	
MOS				pmax	pmax		
	comp=Z,68nm,0.8s,mb5.6						
MOS				pmax	pmax		
	comp=Z,200nm,2.1s,mb5.7						
MOS				MLR	MLR		
	comp=Z,4µm,22.4s,MS5.6						
YLV	Yalova	72.34	312	eP	P	00 53 23.1	-2.9
ULDT	Uludag	72.41	312	iP	P	00 53 24.9	-1.5
OBN	Obninsk	72.43	328α	iP	P	00 53 24.9	-1.3
OBN				e	pP	00 53 33.1	-1.2
OBN				i		00 53 42.6	
OBN				iS	S	01 02 43.2	-3.9
OBN				i		01 03 33.3	
OBN				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.3						
OBN				pmax	pmax		
	comp=Z,200nm,1.8s,mb5.8						
OBN	Obninsk	72.43	328⇑	eP	P	00 53 24.9	-1.3
	comp=Z,60nm,0.9s,mb5.5						
OBN				LR	LR		
	comp=Z,671nm,20.0s,MS4.9						
MAW	Mawson	72.94	193	eP	P	00 53 29.6	+0.6
MAW				iS	S	01 02 54.1	+1.5
MAW	Mawson	72.94	193	P	P	00 53 29.0	0.0
	comp=Z,4.5nm,0.7s,mb4.5,baz=38,slow=4.4,SNR=10						
MAW				LR	LR	01 21 56.6	
	comp=Z,3µm,18.8s,MS5.6,baz=57,slow=33						
TIXI	Tiksi	72.96	10c	iP	P	00 53 27.6	-1.5
TIXI				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.4						
TIXI				MLR	MLR		
	comp=Z,10µm,14.0s,MS6.2						
TIXI	Tiksi	72.96	10⇑	iP	P	00 53 27.7	-1.4
TIXI				LR	LR		
	comp=Z,5µm,19.0s,MS5.8						
BTOK	Tokmak	73.16	311	iP	P	00 53 29.7	-1.2
KDAG	Bornova	73.45	310	iP	P	00 53 28.6	-4.0
IZM	Izmir	73.46	310	eP	P	00 53 31.6	-1.0
SEY	Seymchan	73.55	23	iP	P	00 53 32.6	-0.1
SEY						00 56 19.2	
SEY				ePPP	PPP	00 57 59.2	-3.5
SEY				eS	S	01 03 00.0	+0.4
SEY						01 03 48.1	
SEY				eSS	SS	01 07 46.7	+1.6
SEY				pmax	pmax		
	comp=Z,90nm,0.9s,mb5.7						
SEY				pmax	pmax		
	comp=N,40nm,0.7s						
SEY				smax			
	comp=N,3µm,20.5s						
SEY				smax			
	comp=E,1µm,19.3s						
LBTB	Lobatse	73.99	244	eP	P	00 53 36.3	+0.3
LBTB				pmax	pmax		
	comp=Z,132nm,1.7s,mb5.6						
LBTB				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.6						
LBTB	Lobatse	73.99	244	eP	P	00 53 36.3	+0.3
	comp=Z,132nm,1.7s,mb5.6						
LBTB				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
CFR	Carcaliu	74.33	317	⇑P	P	00 53 37.5	0.0
CFR	Carcaliu	74.33	317⇓	iP	P	00 53 36.9	-0.7
CFR	Carcaliu	74.33	317⇓	iP	P	00 53 36.9	-0.6
KIS	Kishinev	74.33	319	eP	P	00 53 35.0	-2.5
KIS				e		00 53 48.0	
KIS				e		00 56 22.0	
KIS				eS	S	01 03 04.0	-4.7
KIS				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.4						
KIS				MLR	MLR		
	comp=N,1µm,21.0s,MS5.5						
KIS				MLR	MLR		
	comp=E,2µm,19.0s,MS5.5						
KIS				MLR	MLR		
	comp=Z,2µm,20.0s						
HARR	Harsova	74.35	316⇓	iP	P	00 53 37.2	-0.5
DRV	Dumont d’Urvil	74.37	164	P	P	00 53 48.0	+11
DRV				S	S	01 03 12.0	+3.3
DRV				SS	SS	01 07 46.0	-11
DRV				L		01 12 00.0	
IDI	Anoyia	74.77	306	LR	LR	01 27 16.6	
	comp=Z,2µm,21.2s,MS5.4,baz=94,slow=36						
BOSA	Boshof	74.90	240	eP	P	00 53 40.2	-1.0
BOSA				pmax	pmax		
	comp=Z,72nm,1.5s,mb5.4						
BOSA				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.7						
BOSA	Boshof	74.90	240	P	P	00 53 40.2	-1.0
	comp=Z,12nm,1.0s,mb4.8,baz=90,slow=4.7,SNR=10.0						
BOSA				LR	LR	01 25 01.0	
	comp=Z,3µm,18.1s,MS5.6,baz=65,slow=34						
BOSA	Boshof	74.90	240	eP	P	00 53 40.2	-1.0
	comp=Z,72nm,1.5s,mb5.4						
BOSA				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
AKASG	Malin Array Be	75.08	322	P	P	00 53 40.0	-1.8
	comp=Z,13nm,0.7s,mb5.0,baz=89,slow=4.6,SNR=66						
IAS	Iasi	75.21	319	⇓P	P	00 53 41.9	-0.7
ISR	Istrita	75.41	316	⇑P	P	00 53 45.1	+1.3
VRI	Vrincioaia	75.45	317⇑	iP	P	00 53 43.9	-0.1
MLR	Muntele Rosu	75.91	317	P	P	00 53 46.1	-0.4
	comp=Z,11nm,0.8s,mb4.8,baz=204,slow=5.0						
MLR				LR	LR	01 34 30.4	
	comp=Z,2µm,19.5s,MS5.5,baz=249,slow=41						
MLR	Muntele Rosu	75.91	317⇑	iP	P	00 53 46.4	-0.2
MLR	Muntele Rosu	75.91	317⇑	iP	P	00 53 46.4	-0.2
ZIMR		75.92	315	⇓P	P	00 53 47.2	+0.5
VOIR		76.51	316	⇓P	P	00 53 49.6	-0.4
MNK	Minsk	76.96	326	eP	P	00 53 51.0	-1.3
VTS	Vitosha	77.28	313	⇑P	P	00 53 54.1	-0.2
PUL	Pulkovo	77.29	332	eP	P	00 53 52.9	-1.1
PUL				i		00 56 53.0	
PUL				iS	S	01 03 39.6	-1.4
PUL				pmax	pmax		
	comp=Z,68nm,0.8s,mb5.6						
PUL				smax			
	comp=N,1µm,17.0s						
PUL				MLR	MLR		
	comp=Z,4µm,21.0s,MS5.7						
PUL	Pulkovo	77.29	332	eP	P	00 53 52.8	-1.2
LVV	L’vov	78.09	321	eP	P	00 53 58.3	-0.3
LVV				e		00 54 08.5	
LVV				e		00 56 55.3	
LVV				eS	S	01 03 45.7	-4.1
LVV				e		01 04 34.1	
SKO	Skopje	78.47	312	iP	P	00 54 01.2	+0.3
LVZ	Lovozero	78.62	340	eP	P	00 54 00.8	-0.4
LVZ				eS	S	01 03 52.2	-2.9
LVZ				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
LVZ				pmax	pmax		
	comp=N,3.0nm,0.6s						
LVZ				pmax	pmax		
	comp=E,3.0nm,0.9s						
LVZ				pmax	pmax		
	comp=Z,310nm,3.5s						
LVZ				pmax	pmax		
	comp=N,130nm,4.4s						
LVZ				pmax	pmax		
	comp=E,70nm,3.3s						
LVZ				smax			
	comp=Z,190nm,5.4s						
LVZ				smax			
	comp=N,710nm,6.7s						
LVZ				smax			
	comp=E,260nm,3.8s						
LVZ				MLR	MLR		
	comp=N,2µm,20.0s,MS5.7						
LVZ				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.8						
LVZ				MLR	MLR		
	comp=E,3µm,19.0s,MS5.7						
VSU	Vasula	78.65	330⇑	iP	P	00 54 00.9	-0.6
KWP	Kalwaria	78.90	320	P	P	00 54 02.1	-0.9
KWP				pmax	pmax		
	comp=Z,67nm,1.1s,mb5.5						
KWP	Kalwaria	78.90	320	eP	P	00 54 03.1	+0.1
KWP	Kalwaria	78.90	320	eP	P	00 54 03.1	+0.1
BZS	Buzias	78.91	316	⇑P	P	00 54 00.8	-2.4
APA	Apatity	78.92	339⇑	iP	P	00 54 02.8	0.0
APA				i	pP	00 54 10.2	-0.7
APA				e		00 57 00.0	
APA				iS	S	01 03 57.0	-1.2
APA				e		01 04 13.0	
APA				ePS	PS	01 04 51.0	+6.2
APA				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.2						
KOLS	Kolonicke sedl	79.05	320	eP	P	00 54 04.6	+0.7
KOLS				eS	S	01 04 02.6	+2.6
GRUS	Gruza	79.28	314⇑	iP	P	00 54 04.9	-0.4
SUR	Sutherland	79.29	237	LR	LR	01 23 57.6	
	comp=Z,4µm,19.1s,MS5.7,baz=90,slow=32						
SUR	Sutherland	79.29	237	P	P	00 54 05.8	+0.2
SUR				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
RPZ	Rata Peaks	79.36	135	P	P	00 54 05.5	-0.2
	comp=Z,20nm,0.8s,mb5.1,baz=232,slow=5.7,SNR=2.1						
RPZ				LR	LR	01 28 44.5	
	comp=Z,8µm,21.4s,MS6.0,baz=287,slow=35						
SUW	Suwalki	79.49	325	P	P	00 54 05.5	-0.7
SUW				pmax	pmax		
	comp=Z,250nm,0.9s,mb6.1						
SUW	Suwalki	79.49	325	eP	P	00 54 05.2	-1.0
SUW	Suwalki	79.49	325	eP	P	00 54 05.2	-1.0
FINES	FINESS Array B	79.80	332	P	P	00 54 06.5	-1.2
	comp=Z,10.0nm,0.7s,mb4.9,baz=108,slow=6.0,SNR=64						
FINES				LR	LR	01 32 45.9	
	comp=Z,1µm,20.9s,MS5.3,baz=289,slow=38						
DIVS	Divcibare	79.83	314⇓	iP	P	00 54 07.2	-1.0
KAF	Kangasniemi	79.88	333	ep	P	00 54 07.1	-1.0
	comp=Z,16nm,0.8s,mb5.0,baz=103,slow=5.0						
KAF	Kangasniemi	79.88	333	eP	P	00 54 07.1	-1.0
KAF				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
KECS	Kecovo	80.14	319	eP	P	00 54 10.4	+0.7
BBLS	Bajina Basta -	80.21	314⇓	iP	P	00 54 09.1	-1.1
SYO	Syowa Base	80.22	198	⇑P	P	00 54 09.0	-0.8
SYO	Syowa Base	80.22	198	⇑PcP	PcP	00 54 15.7	-1.7
NIE	Niedzica	80.40	320	eP	P	00 54 11.7	+0.6
PSZ	Piszkesteto	80.44	318⇑	eP	P	00 54 10.9	-0.5
PSZ				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2						
PSZ	Piszkesteto	80.44	318⇑	eP	P	00 54 10.9	-0.5
	comp=Z,33nm,1.1s,mb5.2						
TSUM	Tsumeb	80.67	250	eP	P	00 54 13.8	+0.7
	comp=Z,28nm,1.1s,mb5.1						
TSUM				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
OJC	Ojcow	80.85	321	eP	P	00 54 13.3	-0.2
OJC				e	pP	00 54 21.4	-0.2
OJC				eS	S	01 04 17.7	-1.1
OJC				MLR	MLR		
	comp=Z,2µm,21.7s,MS5.4						
OJC	Ojcow	80.85	321	eP	P	00 54 13.3	-0.2
OJC				ePcP	PcP	00 54 21.4	+0.9
OJC				eS	S	01 04 17.7	-1.1
OJC				e		01 04 17.7	
OJC				MLR	MLR	01 36 25.2	
	comp=Z,2µm,21.7s,MS5.4						
SMY	Shemya	80.94	37	P	P	00 54 14.0	+0.1
SMY				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
BILL	Bilibino	80.95	21c	iP	P	00 54 13.0	-0.7
BILL				pmax	pmax		
	comp=Z,42nm,1.7s,mb5.1						
BILL				MLR	MLR		
	comp=Z,9µm,18.0s,MS6.2						
BILL	Bilibino	80.95	21	eP	P	00 54 12.7	-1.0
	comp=Z,12nm,0.7s,mb4.9						
BILL				LR	LR		
	comp=Z,7µm,19.0s,MS6.0						
VYHS	Vyhne	81.22	319	eP	P	00 54 15.8	+0.3
VYHS				ipP	pP	00 54 23.1	-0.5
VYHS				iS	S	01 04 21.4	-1.3
VYHS				e		01 09 51.5	
TIP	Timpagrande	81.69	309	eP	P	00 54 18.1	0.0
OKC	Ostrava-Krasne	81.85	320	eP	P	00 54 19.3	+0.6
OKC				epP	pP	00 54 26.3	-0.6
OKC				eS	S	01 04 28.8	-0.3
OKC				AMS	AMS	01 40 30.0	
	comp=Z,1µm,17.4s						
RAC	Raciborz	81.85	320	eP	P	00 54 19.3	+0.6
RAC				MLR	MLR	01 41 39.5	
	comp=Z,2µm,20.5s,MS5.5						
KEV	Kevo	81.89	341	ep	P	00 54 17.8	-0.7
	comp=Z,17nm,0.9s,mb5.0						
KEV	Kevo	81.89	341	eP	P	00 54 17.8	-0.7
KEV				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
SMOL	Smolenice	82.16	319	eP	P	00 54 19.8	-0.5
ARCES	ARCESS Array B	82.32	340	P	P	00 54 20.9	+0.1
	comp=Z,14nm,0.8s,mb5.0,baz=98,slow=5.0,SNR=44						
ZST	Bratislava	82.33	318	eP	P	00 54 22.3	+1.0
ZST				iS	S	01 04 33.9	-0.2
KOGS	Kog	82.73	316	eP	P	00 54 22.8	-0.6
GKP	Gorka Klasztor	82.85	323	eP	P	00 54 24.2	+0.4
VKA	Vienna	82.86	318⇓	iP	P	00 54 24.7	+0.7
URZ	Urewera	82.95	129	P	P	00 54 24.8	+0.1
	comp=Z,31nm,1.1s,mb5.3,baz=228,slow=8.2,SNR=3.6						
URZ				LR	LR	01 32 35.7	
	comp=Z,7µm,19.3s,MS6.0,baz=95,slow=37						
DPC	Dobruska-Polom	83.08	320	eP	P	00 54 25.6	+0.5
DPC				eSKS	SKS	01 04 39.4	-9.5
DPC				AMS	AMS	01 37 00.0	
	comp=Z,2µm,19.6s						
KSP	Ksiaz	83.15	321	eP	P	00 54 25.6	+0.2
KSP				eS	S	01 04 41.5	-0.8
KSP				MLR	MLR		
	comp=Z,4µm,21.4s,MS5.7						
KSP	Ksiaz	83.15	321	eP	P	00 54 25.7	+0.3
UPC	Upice	83.29	321	eP	P	00 54 26.1	-0.1
ARSA	Arzberg	83.30	317⇑	iP	P	00 54 26.6	+0.3
	comp=Z,35nm,1.1s,mb5.3						
BOJS	Bojanci	83.34	315	eP	P	00 54 25.9	-0.6
PERS	Pernice	83.53	317	iP	P	00 54 27.7	+0.2
CII	Carovilli	83.75	312	P	P	00 54 29.6	+0.9
	comp=Z,36nm,1.2s,mb5.4						
LJU	Ljubljana	83.89	316	eP	P	00 54 29.5	+0.2
OBKA	Obir	83.91	316⇑	iP	P	00 54 29.9	+0.5
	comp=Z,32nm,1.4s,mb5.3						
PRU	Pruhonice	84.19	320	eP	P	00 54 30.8	+0.1
PRU				epP	pP	00 54 38.3	-0.6

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PRU                                eSKS     SKS      01 04 50.7  -5.7
PRU                                 AMS     AMS      01 38 10.0
      comp=Z,2µm,20.5s
MOA   Molln            84.20 318⇑iP       P        00 54 30.8   0.0
      comp=Z,14nm,1.0s,mb5.1
PVCC  Panska Ves       84.21 320  eP      P        00 54 31.6  +0.8
PVCC                              epP     pP       00 54 38.0  -1.0
PVCC                              eSKS    SKS      01 04 51.6  -5.0
PVCC                               AMS    AMS      01 37 50.0
      comp=Z,2µm,20.4s
VOY   Vojsko           84.33 316  eP      P        00 54 31.3  -0.2
VOY                               e                00 54 41.5
VOY                               e                00 54 57.6
VOY                               e                00 55 25.3
AQU   L'Aquila         84.45 312⇑eP       P        00 54 32.2  -0.1
AQU                                pmax   pmax
      comp=Z,58nm,1.0s,mb5.7
AQU   L'Aquila         84.45 312⇑eP       P        00 54 32.1  -0.1
      comp=Z,58nm,1.0s,mb5.7
TRO   Tromso           84.59 340  eP      P        00 54 30.6  -1.7
TRO                                pmax   pmax
      comp=Z,62nm,1.4s
TRO                                MLR    MLR
      comp=Z,2961µm,19.0s
TRO   Tromso           84.59 340  eP      P        00 54 30.6  -1.7
      comp=Z,62nm,1.4s
TRO                                LR     LR
      comp=Z,2961µm,19.0s
TRO   Tromso           84.59 340  eP      P        00 54 30.6  -1.7
TRO                                AMb    AMB      00 54 51.1
      comp=Z,62nm,1.4s,mb5.5
TRO                               eSKSa            01 04 54.9
TRO                               eSS     SS       01 10 28.5  -2.0
TRO                                AMS    AMS      01 36 45.2
      comp=Z,3µm,19.0s,MS5.7
ROBS  Robic            84.61 316  eP      P        00 54 32.2  -0.7
BRG   Berggiesshubel   84.64 321  i P     P        00 54 33.9  +1.0
BRG                               i       pP       00 54 41.2  +0.1
BRG                               i S     S        01 04 58.0  +0.9
BRG                                pmax   pmax
      comp=Z,25nm,1.6s,mb5.1
BRG                                MLR    MLR
      comp=N,2µm,20.4s,MS5.5
BRG                                MLR    MLR
      comp=E,2µm,20.4s,MS5.5
BRG                                MLR    MLR
      comp=Z,2µm,20.4s,MS5.5
BRG   Berggiesshubel   84.64 321  i P     P        00 54 33.9  +1.0
      comp=Z,25nm,1.6s,mb5.1
BRG                               i       pP       00 54 41.2  +0.1
BRG                               i                00 55 11.0
BRG                               i S     S        01 04 58.0  +0.9
BRG                               i SP    SP       01 06 04.0   +12
BRG                               i SS    SS       01 10 22.0   -10
BRG                                LR     LR
      comp=Z,2µm,20.4s,MS5.5
GEC2  GERESS Array S   84.64 319  eP      P        00 54 33.3  +0.3
GEC2                              eS      S        01 05 01.1  +3.9
GEC2                               pmax   pmax
      comp=Z,14nm,0.9s,mb5.1
GEC2  GERESS Array S   84.64 319  eP      P        00 54 33.3  +0.3
      comp=Z,14nm,0.9s,mb5.1
GEC2                              eS      S        01 05 01.1  +3.9
GERES GERESS Array B   84.64 319   P      P        00 54 33.1  +0.1
      comp=Z,11nm,1.0s,mb5.0,baz=104,slow=5.5,SNR=42
KHC   Kasperske Hory   84.75 319  eP      P        00 54 32.3  -1.2
KHC   Kasperske Hory   84.75 319  eP      P        00 54 33.7  +0.2
KHC                                pP     pP       00 54 42.5  +0.8
KHC                               eSKS    SKS      01 04 58.7  -1.5
KHC                                AMS    AMS      01 38 40.0
      comp=Z,2µm,19.3s
KBA   Koelnbreinsper   84.77 317⇑iP       P        00 54 33.2  -0.5
      comp=Z,17nm,1.6s,mb4.9
KBA   Koelnbreinsper   84.77 317⇑iP       P        00 54 33.2  -0.5
KBA                                pmax   pmax
      comp=Z,17nm,1.6s,mb4.9
RUE   Ruedersdorf      84.86 322  eP      P        00 54 34.5  +0.5
      comp=Z,38nm,0.8s,mb5.6
CLL   Collm            85.26 321  i P     P        00 54 35.9  -0.1
CLL                               e       pP       00 54 43.0  -1.2
CLL                               eS      S        01 05 03.0  -0.2
CLL                                pmax   pmax
      comp=Z,11nm,1.0s,mb4.9
CLL                                MLR    MLR
      comp=Z,1µm,21.8s,MS5.3
CLL   Collm            85.26 321  i P     P        00 54 35.9  -0.1
      comp=Z,11nm,1.0s,mb4.9
CLL                               e       pP       00 54 43.0  -1.2
CLL                               eS      S        01 05 03.0  -0.2
CLL                                LR     LR
      comp=Z,1µm,21.8s,MS5.3
CLL   Collm            85.26 321   P      P        00 54 35.9  -0.1
      comp=Z,logA/T=1.0,mb4.9
CLL                               e*PP    pP       00 54 43.0  -1.2
CLL                               e                00 55 02.0
CLL                               e                00 55 35.0
CLL                               eS      S        01 05 03.0  -0.2
CLL                               e                01 05 27.0
CLL                               e                01 06 14.0
CLL                               e                01 07 10.0
CLL                               eSSS    SSS      01 14 21.0   +12
CLL                               e                01 17 07.0
HFS   Hagfors          85.53 330   LR     LR       01 38 27.2
      comp=Z,2µm,19.0s,MS5.6,baz=90,slow=40
NKC   Novy Kostel      85.55 320  eP      P        00 54 37.6  +0.1
NKC                               epP     pP       00 54 46.2  +0.5
NKC                               eSKS    SKS      01 05 03.3  -2.2
NKC                                AMS    AMS      01 39 00.0
      comp=Z,2µm,19.3s
COP   Copenhagen       85.87 326  i P     P        00 54 40.9  +1.9
COP                               i S     S        01 05 10.1  +1.1
COP                                pmax   pmax
      comp=Z,22nm,0.9s,mb5.4
COP                                MLR    MLR
      comp=Z,930nm,20.0s,MS5.2
COP   Copenhagen       85.87 326  i P     P        00 54 40.9  +1.9
      comp=Z,22nm,0.9s,mb5.4
COP                               i S     S        01 05 10.1  +1.1
COP                               i                01 05 30.5
COP                                LR     LR
      comp=Z,930nm,20.0s,MS5.2
COP   Copenhagen       85.87 326  i S     S        01 05 10.1  +1.1
COP                               i                01 05 30.5
      comp=Z,930nm,20.0s
WTTA  Wattenberg       85.94 317⇑iP       P        00 54 39.0  -0.6
      comp=Z,33nm,1.5s,mb5.3
WTTA  Wattenberg       85.94 317⇑iP       P        00 54 39.0  -0.6
WTTA                               pmax   pmax
      comp=Z,33nm,1.5s,mb5.3
WATA  Walderalm        85.99 317⇑iP       P        00 54 39.1  -0.7
      comp=Z,21nm,1.2s,mb5.2
WATA  Walderalm        85.99 317⇑iP       P        00 54 39.1  -0.7
WATA                               pmax   pmax
      comp=Z,21nm,1.2s,mb5.2
VNDA  Vanda            86.05 169   P      P        00 54 40.1  +0.7
      comp=Z,3.8nm,0.9s,mb4.6,baz=298,slow=5.6,SNR=13
VNDA                               LR     LR       01 30 40.4
      comp=Z,5µm,18.3s,MS5.9,baz=311,slow=34
VNDA  Vanda            86.05 169  eP      P        00 54 39.8  +0.4
      comp=Z,23nm,1.2s,mb5.3
VNDA                               LR     LR
      comp=Z,4µm,19.0s,MS5.8
MOX   Moxa             86.10 320  eP      P        00 54 40.8  +0.6
MOX                                pmax   pmax
      comp=Z,24nm,1.6s,mb5.2
MOX                                MLR    MLR
      comp=Z,1µm,19.0s,MS5.2
MOX   Moxa             86.10 320  eP      P        00 54 40.8  +0.6
      comp=Z,24nm,1.6s,mb5.2
MOX                               eS      S        01 05 15.0  +3.7
MOX                                LR     LR
      comp=Z,1µm,19.0s,MS5.2
MOX   Moxa             86.10 320  i P     P        00 54 40.8  +0.6
      comp=Z,logA/T=1.2,mb5.2
MOX                                S      S        01 05 15.0  +3.7
MOX                                L               01 49 07.0
KIWB  Kanaga Island    86.19  38  eP      P        00 54 41.0  +0.3
RAO   Raoul Island     86.22 119   LR     LR       01 30 02.4
      comp=Z,3µm,20.4s,MS5.7,baz=310,slow=33
RAO   Raoul Island     86.22 119   PFAKE           00 54 50.0  +8.6
RAO                                LR     LR
      comp=Z,4µm,20.0s,MS5.8
FUR   Furstenfeldbru   86.22 318  eP      P        00 54 40.5  -0.4
FUR                               eS      S        01 05 11.8  -0.8
FUR                                pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.9
FUR   Furstenfeldbru   86.22 318  eP      P        00 54 40.5  -0.4
      comp=Z,7.0nm,0.8s,mb4.9
FUR                               eS      S        01 05 11.8  -0.8
SQTA  Sankt Quirin     86.23 317⇓iP       P        00 54 40.8  -0.2
      comp=Z,12nm,1.0s,mb5.1
SQTA  Sankt Quirin     86.23 317⇓iP       P        00 54 40.8  -0.2
SQTA                               pmax   pmax
      comp=Z,12nm,1.0s,mb5.1
MOTA  Moosalm          86.31 317⇑iP       P        00 54 41.0  -0.4
      comp=Z,20nm,1.1s,mb5.3
MOTA  Moosalm          86.31 317⇑iP       P        00 54 41.0  -0.4
MOTA                               pmax   pmax
      comp=Z,20nm,1.1s,mb5.3
GRA1  Grafenberg Arr   86.31 320  eP      P        00 54 41.7  +0.4
      comp=Z,15nm,0.9s,mb5.2
GRA1                              eS      S        01 05 16.8  +3.4
GRA1                               LR     LR
      comp=Z,2µm,21.6s,MS5.5
GRF   Grafenberg Arr   86.31 320  eP      P        00 54 41.7  +0.4
GRF                               eS      S        01 05 16.8  +3.4
GRF                                pmax   pmax
      comp=Z,15nm,0.9s,mb5.2
GRF                                MLR    MLR
      comp=Z,2µm,21.6s,MS5.5
GRF   Grafenberg Arr   86.31 320  eP      P        00 54 41.7  +0.4
      comp=Z,15nm,0.9s,mb5.2
GRF                               eS      S        01 05 16.8  +3.4
GRF                                LR     LR
      comp=Z,2µm,21.6s,MS5.5
LOF   Lofoten          86.31 338  eP      P        00 54 42.9  +2.0
      comp=Z,51nm,1.9s,mb5.4
LOF   Lofoten          86.31 338  eP      P        00 54 42.9  +2.0
LOF                                AMb    AMB      00 55 09.5
      comp=Z,51nm,1.9s,mb5.4
NSS   Namsos           86.66 334  eP      P        00 54 42.0  -0.7
      comp=Z,44nm,1.2s,mb5.6
NSS   Namsos           86.66 334  eP      P        00 54 42.0  -0.7
NSS                                AMb    AMB      00 54 59.3
      comp=Z,44nm,1.2s,mb5.6
NSS                               eSKSa            01 05 06.2
NSS                                AMS    AMS      01 40 08.6
      comp=Z,2µm,19.4s,MS5.6
NB2   NORSAR Subarra   86.81 331   P      P        00 54 43.1  -0.4
      comp=Z,10.0nm,0.8s,mb5.1,baz=95,slow=4.8
NB2   NORSAR Subarra   86.81 331   P      P        00 54 43.1  -0.4
      baz=95,slow=4.8
NOA   NORSAR Array B   86.81 331   P      P        00 54 43.0  -0.5
      comp=Z,9.5nm,0.8s,mb5.1,baz=95,slow=4.9,SNR=32
NOA                                PP     PP       00 58 07.0  -1.4
      comp=Z,1.6nm,0.8s,baz=117,slow=8.5,SNR=4.0
NOA                                LR     LR       01 39 31.0
      comp=Z,2µm,20.7s,MS5.5,baz=40,slow=40
CLZ   Clausthal        86.92 322  eP      P        00 54 44.4  +0.2
CLZ                               eS      S        01 05 21.4  +2.2
CLZ                                pmax   pmax
      comp=Z,9.0nm,0.9s,mb5.0
CLZ   Clausthal        86.92 322  eP      P        00 54 44.4  +0.2
      comp=Z,9.0nm,0.9s,mb5.0
CLZ                               eS      S        01 05 21.4  +2.2
NAO01 NORSAR Array S   86.96 331  eP      P        00 54 44.1  -0.1
      comp=Z,10nm,0.8s,mb5.1
BSEG  Bad Segeberg     87.02 324  eP      P        00 54 45.2  +0.6
BSEG                              eS      S        01 05 20.2  +0.2
BSEG                               pmax   pmax
      comp=Z,31nm,1.3s,mb5.4
BSEG  Bad Segeberg     87.02 324  eP      P        00 54 45.2  +0.6
BSEG                              eS      S        01 05 20.2  +0.2
DAVA  Damuels          87.14 317⇓iP       P        00 54 45.8  +0.4
      comp=Z,39nm,1.4s,mb5.5
SBA   Scott Base       87.15 169  eP      P        00 54 46.7  +1.9
SBA                               e*PP    pP       00 54 53.6  +0.6
SBA                                pmax   pmax
      comp=Z,45nm,1.4s,mb5.5
SBA                                MLR    MLR
      comp=Z,4µm,20.0s,MS5.8
SBA   Scott Base       87.15 169  eP      P        00 54 46.6  +1.8
      comp=Z,45nm,1.4s,mb5.5
SBA                               epP     pP       00 54 53.6  +0.6
SBA                                LR     LR
      comp=Z,4µm,20.0s,MS5.8
KONO  Kongsberg        87.56 329  eP      P        00 54 47.4  +0.2
KONO                               LR     LR
      comp=Z,2µm,19.0s,MS5.6
KBS   Kingsbay         87.69 349  eP      P        00 54 47.8  +0.3
KBS                                LR     LR
      comp=Z,3µm,20.0s,MS5.7
KBS   Kingsbay         87.69 349  eP      P        00 54 47.6  +0.2
KBS                               ePP     PP       00 58 12.8  -2.6
KBS                               eSKSa            01 05 11.0
KBS                                AMS    AMS      01 42 50.7
      comp=Z,2µm,18.5s,MS5.6
PGF   Pioggiola        87.72 312  eP      P        00 54 48.1  -0.2
      comp=Z,34nm,1.1s,mb5.2
PGF   Pioggiola        87.72 312  eP      P        00 54 48.1  -0.2
PGF                                pmax   pmax
      comp=Z,17nm,1.1s,mb5.2
MUD   Monsted U'grnd   87.73 326  i P     P        00 54 49.5  +1.5
MUD                               i       pP       00 54 57.5  +1.3
MUD                               i S     S        01 05 30.7  +4.0
MUD                                pmax   pmax
      comp=Z,28nm,1.0s,mb5.5
MUD                                MLR    MLR
      comp=Z,1µm,17.0s,MS5.4
MUD   Monsted U'grnd   87.73 326  i P     P        00 54 49.5  +1.5
      comp=Z,28nm,1.0s,mb5.4
MUD                               i       pP       00 54 57.5  +1.3
MUD                               i S     S        01 05 30.7  +4.0
MUD   Monsted U'grnd   87.73 326  i P     P        00 54 49.5  +1.5
      comp=Z,28nm,1.0s,mb5.4
MUD                               i       pP       00 54 57.5  +1.3
MUD   Monsted U'grnd   87.73 326  i S     S        01 05 30.7  +4.0
      comp=Z,1µm,17.0s
TNS   Taunus Mts       88.11 320  eP      P        00 54 50.4  +0.4
BFO   Black Forest     88.19 318  eP      P        00 54 50.1  -0.3
BFO                               e                00 58 13.4
BFO                               eS      S        01 05 32.7  +1.5
BFO                                pmax   pmax
      comp=Z,5.0nm,0.8s,mb4.8
BFO   Black Forest     88.19 318  eP      P        00 54 50.1  -0.3
      comp=Z,5.0nm,0.8s,mb4.8
BFO                               ePP     PP       00 58 13.4  -6.6
BFO                               eS      S        01 05 32.7  +1.5
FELD  Feldberg         88.41 318  eP      P        00 54 53.9  +2.4
LANF  Langenberg       88.54 319  eP      P        00 54 52.7  +0.6
BBS   Basel-Blauen     88.75 317  eP      P        00 54 55.7  +2.6
SAOF  Saorge           88.77 314  eP      P        00 54 54.0  +0.7
WLS   Welschbruch      88.84 318  eP      P        00 54 54.4  +0.8
SBF   Sospel           88.85 314  eP      P        00 54 53.4  -0.3
      comp=Z,50nm,1.0s,mb5.5
SBF   Sospel           88.85 314  eP      P        00 54 53.4  -0.3
SBF                                pmax   pmax
      comp=Z,25nm,1.0s,mb5.5
AUTN  L'Aution         88.86 314  eP      P        00 54 54.6  +0.9
CDF   Champ du Feu     88.89 318  eP      P        00 54 53.3  -0.5
      comp=Z,9.8nm,0.9s,mb4.8
CDF   Champ du Feu     88.89 318  eP      P        00 54 53.3  -0.5
CDF                                pmax   pmax
      comp=Z,5.0nm,0.9s,mb4.8
ECH   Echery           88.98 318  eP      P        00 54 54.9  +0.7
TOUF  Mont Tournerai   88.99 314  eP      P        00 54 54.1  -0.3
MVIF  Mont Vial        89.06 314  eP      P        00 54 56.0  +1.3
LOMF  Lomont           89.22 317  eP      P        00 54 55.3  -0.1
CALN  Calern           89.25 314  eP      P        00 54 56.0  +0.4
LPG   La Plagne        89.31 315  eP      P        00 54 56.0  +0.2
      comp=Z,38nm,1.1s,mb5.3
LPG   La Plagne        89.31 315  eP      P        00 54 56.0  +0.2
LPG                                pmax   pmax
      comp=Z,19nm,1.1s,mb5.3
LPL   La Plagne        89.32 315  eP      P        00 54 56.0  +0.1
      comp=Z,46nm,1.0s,mb5.5
LPL   La Plagne        89.32 315  eP      P        00 54 56.0  +0.1
LPL                                pmax   pmax
      comp=Z,23nm,1.0s,mb5.5
BNI   Bardonecchia     89.37 315  eP      P        00 54 56.0  -0.1
BNI                               e*PP    pP       00 55 04.7  +0.3
BNI                                pmax   pmax
      comp=Z,12nm,1.0s,mb5.2
BNI   Bardonecchia     89.37 315  eP      P        00 54 56.0  -0.2
      comp=Z,12nm,1.0s,mb5.2
BNI                               epP     pP       00 55 04.7  +0.3
FRF   La Foret Royal   89.43 313  eP      P        00 54 56.3  -0.2
      comp=Z,38nm,1.0s,mb5.4
FRF   La Foret Royal   89.43 313  eP      P        00 54 56.3  -0.2
FRF                                pmax   pmax
      comp=Z,19nm,1.0s,mb5.4
HAU   Haudompre        89.52 318  eP      P        00 54 56.4  -0.4
HAU                               eR
      comp=Z,2µm,20.6s
LMR   La Mourre        89.54 313  eP      P        00 54 56.7  -0.3
      comp=Z,40nm,1.3s,mb5.3
LMR   La Mourre        89.54 313  eP      P        00 54 56.7  -0.3
LMR                                pmax   pmax
      comp=Z,20nm,1.3s,mb5.3
WLF   Walferdange      89.61 319  eP      P        00 54 58.3  +1.2
WLF                               e*PP    pP       00 55 06.0  +0.7
WLF                                pmax   pmax
      comp=Z,42nm,1.6s,mb5.5
WLF   Walferdange      89.61 319  eP      P        00 54 58.3  +1.1
      comp=Z,42nm,1.6s,mb5.5
WLF                               epP     pP       00 55 06.0  +0.7
BER   Bergen           89.70 330  eP      P        00 54 58.8  +1.5
BER                               ePP     PP       00 58 29.4  -2.4
BER                               eSKSa            01 05 25.5
BER                               e                01 05 45.8
BER                               eSS     SS       01 11 46.9  +1.6
BER                                AMS    AMS      01 41 00.1
      comp=Z,1µm,18.4s,MS5.4
CABF  La Chapelle      89.74 316  eP      P        00 54 58.0  +0.2
      comp=Z,38nm,1.0s,mb5.4
CABF  La Chapelle      89.74 316  eP      P        00 54 58.0  +0.2
CABF                               pmax   pmax
      comp=Z,19nm,1.0s,mb5.4
THEF  They Montfort    89.76 318  eP      P        00 54 57.2  -0.7
NVL   N'lazarevskaya   89.81 199⇓iP       P        00 54 59.4  +1.8
NVL                               i                00 55 11.0
NVL                               i *PP   pP       00 55 11.6  +5.8
NVL                               i                00 58 26.8
NVL                               i S     S        01 05 21.9   -24
NVL                               e                01 05 46.4
NVL                               eSS     SS       01 11 42.0  -4.8
NVL                               eSSS    SSS      01 15 16.4  -5.2
NVL                                pmax   pmax
      comp=Z,8.0nm,1.0s,mb5.0
NVL                                MLR    MLR
      comp=Z,260nm,16.0s,MS4.8
MAIT  Maitri           89.84 199  eP      P        00 55 00.1  +2.3
MAIT                              ePP     PP       00 58 32.4  -0.3
MAIT                              eSKSac           01 05 34.3
TAVF  Tavernes         89.86 313  eP      P        00 54 57.7  -0.8
ORIF  Oris-en-Rattie   89.94 315  eP      P        00 54 59.0  +0.2
      comp=Z,40nm,1.2s,mb5.3
ORIF                              eR
      comp=Z,2µm,19.5s
STOF  St-Etienne Org   89.95 314  eP      P        00 54 59.8  +0.9
VILF  Villemus         90.10 314  eP      P        00 54 57.7  -1.9
PUYF  Puyloubier       90.12 313  eP      P        00 55 00.1  +0.4
SMRF  Simiane la Rot   90.19 314  eP      P        00 55 00.4  +0.4
      comp=Z,62nm,1.5s,mb5.4
GELF  Grande-Etoile    90.32 313  eP      P        00 55 01.2  +0.6
TREF  Trevaresse       90.35 313  eP      P        00 55 01.5  +0.8
MEZF  Maizieres J'vi   90.37 318  eP      P        00 55 00.7   0.0
      comp=Z,60nm,1.4s,mb5.4
GIVF  Givet            90.45 320  eP      P        00 55 01.1  +0.1
PRAF  Pradon           90.49 314  eP      P        00 55 01.7  +0.3
TNA   Tin City         90.73  24   PFAKE           00 55 10.0  +8.0
TNA                                LR     LR
      comp=Z,3µm,19.0s,MS5.7
VIVF  Saint-Julien-l   90.80 315  eP      P        00 55 02.8   0.0
      comp=Z,25nm,1.1s,mb5.2
VIVF  Saint-Julien-l   90.80 315  eP      P        00 55 02.8   0.0
VIVF                               pmax   pmax
      comp=Z,12nm,1.1s,mb5.1
BAIF  Baives           90.84 320  eP      P        00 55 03.2  +0.4
      comp=Z,71nm,1.1s,mb5.6
BAIF  Baives           90.84 320  eP      P        00 55 03.2  +0.4
BAIF                               pmax   pmax
      comp=Z,35nm,1.1s,mb5.6
LOR   Lormes           91.24 317  eP      P        00 55 04.7   0.0
      comp=Z,69nm,1.0s,mb5.6
LOR                               eR
      comp=Z,2µm,19.5s
LOR   Lormes           91.24 317  eP      P        00 55 04.7   0.0
LOR                                pmax   pmax
      comp=Z,35nm,1.0s,mb5.6
LOR                                MLR    MLR
      comp=Z,2µm,19.5s,MS5.6
SMF   Signal de Mont   91.29 317  eP      P        00 55 04.8  -0.2
      comp=Z,53nm,1.1s,mb5.5
SMF   Signal de Mont   91.29 317  eP      P        00 55 04.8  -0.2
SMF                                pmax   pmax
      comp=Z,26nm,1.1s,mb5.5
QSPA  South Pole Qui   91.37 180  eP      P        00 55 06.9  +2.3
      comp=Z,27nm,1.3s,mb5.4
QSPA                               LR     LR
      comp=Z,3µm,19.0s,MS5.7
LASF  Ste Croix        91.43 314  eP      P        00 55 06.0  +0.3
      comp=Z,36nm,1.2s,mb5.3
SSF   Saint Saulge     91.49 317  eP      P        00 55 05.9   0.0
SSF                                pmax   pmax
      comp=Z,23nm,1.2s,mb5.4
SSF   Saint Saulge     91.49 317  eP      P        00 55 05.9   0.0
      comp=Z,23nm,1.2s,mb5.4
AVF   Avril sur Loir   91.61 317  eP      P        00 55 06.4  -0.1
      comp=Z,49nm,1.1s,mb5.5
AVF   Avril sur Loir   91.61 317  eP      P        00 55 06.4  -0.1
AVF                                pmax   pmax
      comp=Z,25nm,1.1s,mb5.5
BGF   Bois d'Agland    91.98 316  eP      P        00 55 08.4  +0.3
      comp=Z,72nm,1.1s,mb5.6
BGF   Bois d'Agland    91.98 316  eP      P        00 55 08.4  +0.3
BGF                                pmax   pmax
      comp=Z,36nm,1.1s,mb5.6
HYF   Humbligny        92.07 317  eP      P        00 55 09.2  +0.7
EJON  La Jonquera      92.24 312   P      P        00 55 10.7  +1.2
      comp=Z,3.8nm,0.7s,mb4.8
SJAF  Saint Jean de    92.24 312  eP      P        00 55 09.4   0.0
TCF   Toulx Ste Croi   92.44 316  eP      P        00 55 10.5  +0.2
      comp=Z,32nm,1.2s,mb5.2
TCF   Toulx Ste Croi   92.44 316  eP      P        00 55 10.5  +0.2
TCF                                pmax   pmax
      comp=Z,16nm,1.2s,mb5.2
UNV   Unalaska Valle   92.58  36   PFAKE           00 55 20.0  +9.3
UNV                                LR     LR
      comp=Z,6µm,20.0s,MS6.1
CAF   Calviac          92.65 315  eP      P        00 55 11.7  +0.4
      comp=Z,37nm,1.2s,mb5.4
CAF   Calviac          92.65 315  eP      P        00 55 11.7  +0.4
CAF                                pmax   pmax
      comp=Z,18nm,1.2s,mb5.4
MTLF  Montolieu        92.66 313  eP      P        00 55 11.7  +0.3
      comp=Z,31nm,1.0s,mb5.4
MTLF  Montolieu        92.66 313  eP      P        00 55 11.7  +0.3
MTLF                               pmax   pmax
      comp=Z,16nm,1.0s,mb5.4
VALF  Valcebollere     92.88 312  eP      P        00 55 14.1  +1.7
RJF   Les Rejaudoux    93.00 315  eP      P        00 55 13.4  +0.5
      comp=Z,44nm,1.2s,mb5.5
RJF                               eR
      comp=Z,1µm,20.2s
RJF   Les Rejaudoux    93.00 315  eP      P        00 55 13.4  +0.5
RJF                                pmax   pmax
      comp=Z,22nm,1.2s,mb5.5
RJF                                MLR    MLR
      comp=Z,1µm,20.3s,MS5.4
EMIR  Miracle          93.29 312   P      P        00 55 17.1  +2.8
LFF   La Frestale      93.58 315  eP      P        00 55 16.1  +0.5
      comp=Z,50nm,1.3s,mb5.5
LFF   La Frestale      93.58 315  eP      P        00 55 16.1  +0.5
LFF                                pmax   pmax
      comp=Z,25nm,1.3s,mb5.5
EPOB  Poblet           93.67 311   P      P        00 55 22.1  +6.0
JMIC  Jan Mayen        93.75 342  ePP     PP       00 59 00.6  -3.4
JMIC                              eSS     SS       01 12 47.7  +4.6
JMIC                               AMS    AMS      01 43 28.4
      comp=Z,1µm,20.6s,MS5.4
LCP   Cassop           93.86 325  eP      P        00 55 17.2  +0.6
LCP                                AMb    AMB      00 55 19.8
      comp=Z,91nm,1.4s,mb6.0
FLN   La Foliniere     94.01 319  eP      P        00 55 17.2  -0.2
      comp=Z,22nm,0.9s,mb5.3
FLN                               eR
      comp=Z,2µm,21.8s
FLN   La Foliniere     94.01 319  eP      P        00 55 17.2  -0.2
FLN                                pmax   pmax
      comp=Z,11nm,0.9s,mb5.3
FLN                                MLR    MLR
      comp=Z,2µm,21.8s,MS5.6
MFF   Saint Martin d   94.03 317  eP      P        00 55 17.5  -0.1
      comp=Z,55nm,1.4s,mb5.5
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MFF   Saint Martin d    94.03 317  eP       P        00 55 17.5  -0.1
MFF                                 pmax     pmax
      comp=Z,27nm,1.4s,mb5.5
EPF   Esparros          94.06 313  eP       P        00 55 17.3  -0.5
KBI1  Birley Grange     94.09 323  eP       P        00 55 18.3  +0.6
KBI1                                AMb      AMB      00 55 18.9
      comp=Z,42nm,1.4s,mb5.7
EGRA  Graus             94.16 312   P       P        00 55 21.9  +3.6
EBIE  Bielsa            94.24 313   P       P        00 55 21.2  +2.5
      comp=Z,2.8nm,0.8s,mb4.7
LHO   Holmfirth         94.25 324  eP       P        00 55 19.1  +0.7
LHO                                 AMb      AMB      00 55 25.9
      comp=Z,30nm,1.8s,mb5.4
GRR   Gorron            94.30 319  eP       P        00 55 18.9  +0.1
      comp=Z,67nm,1.4s,mb5.6
GRR   Gorron            94.30 319  eP       P        00 55 18.9  +0.1
GRR                                 pmax     pmax
      comp=Z,34nm,1.4s,mb5.6
KWE   Weaver Farm       94.32 323   AMb      AMB      00 55 19.0
      comp=Z,34nm,1.7s,mb5.5
KWE   Weaver Farm       94.32 323   P       P        00 55 19.1  +0.3
KWE   Weaver Farm       94.32 323   AMb      AMB      00 55 19.0
      comp=Z,34nm,1.7s,mb5.5
KWE                                eP                 00 55 19.1
DAG   Danmarks Havn     94.38 348⇑iP       P        00 55 18.2  -0.3
DAG                                 pmax     pmax
      comp=Z,9.0nm,0.9s,mb5.2
DAG   Danmarks Havn     94.38 348⇑iP       P        00 55 18.2  -0.3
      comp=Z,9.2nm,0.9s,mb5.2
SNAA  Sanae             94.51 198  e        P        00 55 25.7  +6.5
SNAA  Sanae             94.51 198  e        P        00 55 27.4  +8.2
SNAA  Sanae             94.51 198⇑iP       P        00 55 18.3  -0.9
SNAA                               e        pP       00 55 27.4   0.0
SNAA  Sanae             94.51 198⇑iP       P        00 55 18.3  -0.9
SNAA                               e        pP       00 55 25.7  -1.7
SNAA                               e        pP       00 55 27.4   0.0
ETSF  Etsaut            94.73 313  eP       P        00 55 21.3  +0.4
      comp=Z,11nm,0.7s,mb5.1
ETSF  Etsaut            94.73 313  eP       P        00 55 21.3  +0.4
ETSF                                pmax     pmax
      comp=Z,6.0nm,0.7s,mb5.1
ESK   Eskdalemuir       94.76 326   PFAKE             00 55 30.0  +9.3
ESK                                 LR       LR
      comp=Z,516nm,20.0s,MS5.0
EMOS  Mosqueruela       94.94 311   P       pP       00 55 33.8  +3.7
SJPF  Ste Jean          95.19 313  eP       P        00 55 22.5  -0.5
      comp=Z,34nm,1.2s,mb5.3
SJPF  Ste Jean          95.19 313  eP       P        00 55 22.5  -0.5
SJPF                                pmax     pmax
      comp=Z,17nm,1.2s,mb5.3
VNA2  Neumayer--Watz    96.10 199  e        P        00 55 33.2  +6.7
VNA2  Neumayer--Watz    96.10 199  e        P        00 55 35.0  +8.5
VNA2  Neumayer--Watz    96.10 199⇑iP       P        00 55 26.2  -0.3
VNA2                               e        pP       00 55 33.2  -1.6
VNA2                               e        pP       00 55 35.0  +0.2
TTA   Tatalina          96.32  26  eP       P        00 55 29.3  +1.6
IMA   Indian Mountai    96.37  23  eP       P        00 55 29.0  +1.2
IMA                                e        pP       00 55 38.0  +1.9
IMA                                 pmax     pmax
      comp=Z,54nm,0.7s,mb6.1
IMA   Indian Mountai    96.37  23  eP       P        00 55 28.6  +0.8
VNA1  Neumayer--Stat    96.44 199⇑iP       P        00 55 24.6  -3.5
VNA1  Neumayer--Stat    96.44 199  e        P        00 55 31.1  +3.0
VNA1  Neumayer--Stat    96.44 199  e        P        00 55 32.8  +4.7
SVW2  Sparrevohn        97.01  28  eP       P        00 55 32.6  +1.8
ESDC  Sonseca Array     97.68 310   P       P        00 55 34.3  -0.1
      comp=Z,0.5nm,0.6s,baz=53,slow=4.2,SNR=5.7
SPU   Mount Spurr       98.62  27  eP       P        00 55 38.2  +0.2
COLA  College           99.07  23  i P      P        00 55 38.8  -1.2
COLA  College           99.07  23   PFAKE             00 55 50.0   +10
COLA                                LR       LR
      comp=Z,3µm,22.0s,MS5.7
MCK   McKinley          99.08  24   P       P        00 55 41.1  +1.0
MCK                                 pmax     pmax
      comp=Z,9.0nm,1.0s,mb5.2
MCK   McKinley          99.08  24  ePdif    P        00 55 40.4  +0.3
      comp=Z,9.2nm,1.1s,mb5.2
MCK                                 LR       LR
      comp=Z,2µm,19.0s,MS5.6
KDAK  Kodiak Island     99.44  31  ePdif    P        00 55 42.2  +0.3
KDAK                                LR       LR
      comp=Z,593nm,20.0s,MS5.1
FIB   Fire Island       99.48  27   PFAKE             00 55 50.0  +8.0
FIB                                 LR       LR
      comp=Z,1µm,20.0s,MS5.3
ILAR  Eielson Array     99.49  23   P       P        00 55 40.8  -1.1
      comp=Z,0.8nm,0.8s,mb4.3,baz=284,slow=5.1,SNR=7.4
ILAR                                PP       PP       00 59 40.5  -7.5
      comp=Z,2.9nm,0.9s,baz=299,slow=7.8,SNR=6.9
ILAR                                PKKPbc            01 12 05.2
      comp=Z,0.3nm,0.8s,baz=90,slow=1.8,SNR=3.5
ILAR                                LR       LR       01 47 40.4
      comp=Z,4µm,18.2s,MS5.9,baz=80,slow=40
SLKM  Skilak Lake       99.69  28  eP       P        00 55 43.1  +0.1
SML   Sawmill          100.07  26  eP       P        00 55 45.5  +0.8
DIV   Divide           101.47  26   PFAKE             00 56 00.0  +9.0
DIV                                 LR       LR
      comp=Z,9µm,20.0s,MS6.3
DBIC  Dimbokro         101.81 277   PFAKE             00 56 00.0  +6.4
DBIC                                LR       LR
      comp=Z,1µm,19.0s,MS5.5
INK   Inuvik           102.26  17   P       Pdif     00 55 53.6  -0.7
INK                                                   01 00 06.1
INK                                 pmax     pmax
      comp=Z,4.0nm,0.8s
INK                                 pmax     pmax
      comp=Z,6.0nm,1.1s
INK   Inuvik           102.26  17   P       Pdif     00 55 53.6  -0.7
      comp=Z,3.6nm,0.8s,baz=91,slow=2.6,SNR=4.0
INK                                 PP       PP       01 00 06.1  -3.0
      comp=Z,5.8nm,1.1s,baz=266,slow=8.0,SNR=2.5
INK   Inuvik           102.26  17  ePdif    Pdif     00 55 54.6  +0.2
      comp=Z,6.8nm,1.1s
SFJD  Kangerlussuaq    108.05 347  eP       Pdif     00 56 28.6  +8.8
SFJD                               i                  01 00 53.1
SFJD                               i                  01 10 16.0
SFJD                               i                  01 16 04.0
SFJD                                MLR      MLR
      comp=Z,2µm,19.0s,MS5.8
SFJD  Kangerlussuaq    108.05 347  eP       Pdif     00 56 28.6  +8.8
SFJD                               i                  01 00 53.1
SFJD                               i S                01 08 26.9
SFJD                               i                  01 10 16.0
SFJD                               i                  01 16 04.0
SFJD                                LR       LR
      comp=Z,2µm,19.0s,MS5.8
SFJD  Kangerlussuaq    108.05 347  i P      Pdif     00 56 28.6  +8.8
SFJD                               i                  01 00 53.1
SFJD                               i S                01 08 26.9
SFJD                               i                  01 10 16.0
SFJD                               i                  01 16 04.0
      comp=Z,2µm,19.0s
DLBC  Dease Lake       109.63  24   PP       PP       01 01 00.5  -4.1
      comp=Z,2.7nm,1.0s,baz=276,slow=6.0,SNR=4.4
YKA   Yellowknife Ar   111.87  15   PKiKP             01 00 34.3
      comp=Z,0.9nm,0.9s,baz=320,slow=2.8,SNR=5.3
YKA                                 PP       PP       01 01 15.2  -5.0
      comp=Z,2.6nm,0.7s,baz=329,slow=7.1,SNR=13
YKA   Yellowknife Ar   111.87  15   PKPdf    PKPdf    01 00 34.3  -3.0
YKA                                 PP       PP       01 01 15.2  -5.0
FRB   Frobisher Bay    114.13 353   PP       PP       01 01 31.9  -5.0
      comp=Z,4.3nm,1.0s,baz=69,slow=8.2,SNR=3.5
CMLA  Cha da Macela    114.41 313   PFAKE             01 00 50.0  +7.0
CMLA                                LR       LR
      comp=Z,323nm,19.0s,MS5.0
PMSA  Palmer Station   115.34 189   PFAKE             01 00 50.0  +5.9
PMSA                                LR       LR
      comp=Z,4µm,21.0s,MS6.0
OCWA  Octopus Mounta   119.20  31   PFAKE             01 01 00.0  +8.0
OCWA                                LR       LR
      comp=Z,2µm,19.0s,MS5.7
COR   Corvallis        121.72  33   PFAKE             01 01 10.0   +13
COR                                 LR       LR
      comp=Z,436nm,19.0s,MS5.1
FFC   Flin Flon        121.84  13  ePKIKP   PKPdf    01 00 54.0  -3.0
FFC                                 MLR      MLR
      comp=Z,577nm,20.0s,MS5.2
NEW   Newport          122.22  26   PKP      PKPdf    01 00 55.1  -2.7
      comp=Z,3.5nm,0.7s,baz=299,slow=3.1,SNR=6.4
NEW   Newport          122.22  26  ePKPdf   PKPdf    01 00 55.2  -2.7
NEW                                 LR       LR
      comp=Z,4µm,20.0s,MS6.0
SCHQ  Schefferville    122.40 349   PKP      PKPdf    01 00 54.3  -3.7
      comp=Z,1.6nm,0.5s,baz=83,slow=4.2,SNR=7.0
SCHQ                                PP       PP       01 02 28.3  -5.9
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      comp=Z,5.5nm,1.0s,baz=3.7,slow=9.7,SNR=3.8
SCHQ  Schefferville    122.40 349   PKP      PKPdf    01 00 54.3  -3.7
SCHQ                                PP       PP       01 02 28.3  -5.9
HUMO  Hull Mountain    123.19  35   PFAKE             01 01 10.0   +10
HUMO                                LR       LR
      comp=Z,1µm,22.0s,MS5.5
YBH   Yreka Blue Hor   123.88  35   PFAKE             01 01 10.0  +8.7
YBH                                 LR       LR
      comp=Z,2µm,19.0s,MS5.8
BMO   Blue Mountains   124.65  29  ePKIKP   PKPdf    01 01 00.9  -1.8
BMO                                 MLR      MLR
      comp=Z,2µm,20.0s,MS5.8
WDC   Whiskeytown Da   124.71  36   PFAKE             01 01 10.0  +7.1
WDC                                 LR       LR
      comp=Z,2µm,19.0s,MS5.8
MSO   Missoula         124.71  26  ePKPdf   PKPdf    01 00 59.1  -3.6
MSO                                 LR       LR
      comp=Z,2µm,20.0s,MS5.8
MOD   Modoc            125.14  34  ePKPdf   PKPdf    01 01 01.2  -2.5
MOD                                 LR       LR
      comp=Z,1µm,19.0s,MS5.7
HOPS  Hopland          125.37  38   PFAKE             01 01 10.0  +5.8
HOPS                                LR       LR
      comp=Z,2µm,19.0s,MS5.8
WVOR  Wild Horse Val   125.68  32  ePKIKP   PKPdf    01 01 02.4  -2.3
WVOR                                MLR      MLR
      comp=Z,2µm,19.0s,MS5.9
BOZ   Bozeman (W)      126.63  25  ePKIKP   PKPdf    01 01 03.5  -2.9
BOZ                                 MLR      MLR
      comp=Z,3µm,20.0s,MS5.9
HLID  Hailey           127.00  29  ePKPdf   PKPdf    01 01 04.6  -2.5
HLID                                LR       LR
      comp=Z,3µm,20.0s,MS6.0
ULM   Lac du Bonnet    127.31  11   PKP      PKPdf    01 01 03.5  -4.2
      comp=Z,3.1nm,0.6s,baz=3.6,slow=2.0,SNR=5.1
ULM   Lac du Bonnet    127.31  11  ePKPdf   PKPdf    01 01 03.0  -4.6
QLMT  Earthquake Lak   127.37  25  ePKPdf   PKPdf    01 01 05.8  -2.1
CMB   Columbia Colle   127.61  37  ePKIKP   PKPdf    01 01 06.1  -2.5
CMB                                 MLR      MLR
      comp=Z,1µm,19.0s,MS5.7
SAO   San Andreas Ge   127.75  39   PFAKE             01 01 20.0   +11
SAO                                 LR       LR
      comp=Z,2µm,21.0s,MS5.8
BMN   Battle Mountai   127.84  33   PFAKE             01 01 20.0   +11
BMN                                 LR       LR
      comp=Z,2µm,19.0s,MS5.7
LAO   LASA Array       127.84  20  ePKPdf   PKPdf    01 01 06.7  -2.1
LAO                                 LR       LR
      comp=Z,2µm,20.0s,MS5.7
LKWY  Lake             128.02  25   PFAKE             01 01 20.0   +11
LKWY                                LR       LR
      comp=Z,4µm,19.0s,MS6.1
MOOW  Moose Ponds      128.53  26  ePKPdf   PKPdf    01 01 07.7  -2.5
NVAR  Mina Array Bea   128.59  36   PKP      PKPdf    01 01 07.9  -2.5
      comp=Z,6.0nm,0.9s,baz=276,slow=0.7,SNR=11
RRI2  Red Ridge        128.59  26  ePKPdf   PKPdf    01 01 08.1  -2.3
TPAW  Teton Pass       128.65  26  ePKPdf   PKPdf    01 01 08.5  -1.9
ELK   Elko             128.68  31   PKP      PKPdf    01 01 08.5  -2.1
      comp=Z,2.4nm,0.8s,baz=325,slow=1.2,SNR=9.7
ELK   Elko             128.68  31  ePKPdf   PKPdf    01 01 08.5  -2.1
ELK                                 LR       LR
      comp=Z,2µm,21.0s,MS5.7
MNV   Mina             128.68  36   PKIKP    PKPdf    01 01 09.2  -1.4
MNV   Mina             128.68  36  ePKPdf   PKPdf    01 01 08.3  -2.4
MNV                                 LR       LR
      comp=Z,2µm,20.0s,MS5.8
PTCN  Pitcairn Islan   128.70 121   PFAKE             01 01 20.0  +9.0
PTCN                                LR       LR
      comp=Z,3µm,21.0s,MS6.0
SNOW  Snow King Moun   128.75  26  ePKPdf   PKPdf    01 01 08.5  -2.1
AHID  Auburn Hatcher   129.15  27   PFAKE             01 01 20.0  +8.6
AHID                                LR       LR
      comp=Z,4µm,19.0s,MS6.1
TPH   Tonopah          129.46  35   PFAKE             01 01 20.0  +7.9
TPH                                 LR       LR
      comp=Z,2µm,19.0s,MS5.7
BW06  Boulder Array    129.83  26  ePKPdf   PKPdf    01 01 09.7  -3.0
BW06                                LR       LR
      comp=Z,2µm,20.0s,MS5.7
PDAR  Pinedale Array   129.83  26   PKP      PKPdf    01 01 09.4  -3.3
      comp=Z,2.3nm,1.0s,slow=1.5,SNR=14
PDAR                                PP       PP       01 03 22.1  -1.6
      comp=Z,4.5nm,1.1s,baz=270,slow=3.0,SNR=7.3
HWUT  Hardware Ranch   129.85  28  ePKPdf   PKPdf    01 01 09.3  -3.5
HWUT                                LR       LR
      comp=Z,2µm,20.0s,MS5.9
TRCR  Troy Canyon      130.20  34  ePKPdf   PKPdf    01 01 11.6  -1.9
EYMN  Ely              130.24   8   PFAKE             01 01 20.0  +6.7
EYMN                                LR       LR
      comp=Z,3µm,20.0s,MS6.0
DUG   Dugway           130.32  30  ePKIKP   PKPdf    01 01 11.8  -1.9
DUG                                 MLR      MLR
      comp=Z,2µm,20.0s,MS5.8
PQI   Presque Isle     130.37 347   PFAKE             01 01 20.0  +6.4
PQI                                 LR       LR
      comp=Z,8µm,21.0s,MS6.4
DAC   Darwin (Calif)   130.45  37  ePKIKP   PKPdf    01 01 11.9  -2.2
DAC                                 MLR      MLR
      comp=Z,1µm,21.0s,MS5.6
RSSD  Black Hills      130.84  20  ePKIKP   PKPdf    01 01 08.9  -5.7
RSSD                                MLR      MLR
      comp=Z,513nm,19.0s,MS5.2
MWC   Mount Wilson     131.49  40  ePKIKP   PKPdf    01 01 14.3  -1.8
ARUT  Antelope Range   131.78  33   P        Pdif     00 58 10.9  +5.9
MVU   Marysvale        131.90  31  ePKPdf   PKPdf    01 01 15.7  -1.0
MVU                                 LR       LR
      comp=Z,2µm,19.0s,MS5.8
MSU   Marysvale        131.91  31  ePKIKP   PKPdf    01 01 15.5  -1.3
EMMW  East Machias     132.07 345   PFAKE             01 01 30.0   +13
EMMW                                LR       LR
      comp=Z,11µm,20.0s,MS6.5
NEN   Nelson           132.51  36  ePKPdf   PKPdf    01 01 16.6  -1.4
WVL   Waterville       132.73 347   PFAKE             01 01 30.0   +12
WVL                                 LR       LR
      comp=Z,10µm,22.0s,MS6.5
PFO   Pinyon Flat Ob   132.90  39  ePKIKP   PKPdf    01 01 16.8  -2.0
PFO                                 MLR      MLR
      comp=Z,497nm,19.0s,MS5.2
RCBR  Riachuelo        133.01 263   PFAKE             01 01 30.0   +10
RCBR                                LR       LR
      comp=Z,2µm,19.0s,MS5.8
BAR   Barrett          133.37  40  ePKPdf   PKPdf    01 01 17.4  -2.3
PV10  Paradox Valley   133.59  29  ePKPdf   PKPdf    01 01 18.4  -1.4
SADO  Sadowa           133.89 356   PKP      PKPdf    01 01 16.9  -3.3
      comp=Z,2.0nm,0.6s,baz=327,slow=4.4,SNR=3.2
SADO  Sadowa           133.89 356   PKP      PKPdf    01 01 16.9  -3.3
ISCO  Idaho Springs    133.96  25   PFAKE             01 01 30.0   +10
ISCO                                LR       LR
      comp=Z,3µm,20.0s,MS6.0
PV01  Paradox Valley   134.00  28  ePKPdf   PKPdf    01 01 18.0  -2.6
NCB   Newcomb          134.16 351   PFAKE             01 01 30.0  +9.2
NCB                                 LR       LR
      comp=Z,2µm,20.0s,MS5.9
WUAZ  Wupatki          134.58  33  ePKPdf   PKPdf    01 01 21.1  -0.8
WUAZ                                LR       LR
      comp=Z,2µm,20.0s,MS5.9
HRV   Harvard--Oak R   135.10 348   PFAKE             01 01 30.0  +7.4
HRV                                 LR       LR
      comp=Z,2µm,20.0s,MS5.9
WES   Weston           135.17 348   PFAKE             01 01 30.0  +7.3
WES                                 LR       LR
      comp=Z,3µm,22.0s,MS6.0
SDCO  Great Sand Dun   135.72  26   PKPdf    PKPdf    01 01 22.2  -1.7
SDCO                                LR       LR
      comp=Z,4µm,20.0s,MS6.1
BINY  Binghamton       136.14 353  ePKPdf   PKPdf    01 01 22.2  -2.2
BINY                                LR       LR
      comp=Z,3µm,20.0s,MS5.9
AAM   Ann Arbor        136.47   1   PFAKE             01 01 30.0  +5.0
AAM                                 LR       LR
      comp=Z,2µm,19.0s,MS5.9
CBKS  Cedar Bluff      137.03  20   PFAKE             01 01 40.0   +14
CBKS                                LR       LR
      comp=Z,3µm,20.0s,MS6.0
TUC   Tucson           137.25  36  ePKIKP   PKPdf    01 01 23.7  -3.1
TUC                                 MLR      MLR
      comp=Z,1µm,19.0s,MS5.7
ANMO  Albuquerque      137.56  29  ePKHKP             01 01 16.5
ANMO                                                  01 01 24.3
ANMO                                MLR      MLR
      comp=Z,2µm,19.0s
ANMO  Albuquerque      137.56  29   PKhKP             01 01 16.0
      comp=Z,1.5nm,0.8s,baz=69,slow=11,SNR=3.2
ANMO                                PKP      PKPdf    01 01 24.2  -3.1
      comp=Z,3.3nm,0.9s,baz=264,slow=2.5,SNR=7.6
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ANMO  Albuquerque      137.56  29  ePKPpre            01 01 16.5
ANMO                                PKP      PKPdf    01 01 24.2  -3.1
ANMO                               ePKPdf   PKPdf    01 01 24.9  -2.4
ANMO                                LR       LR
      comp=Z,2µm,19.0s,MS5.9
SSPA  Standing Stone   137.90 354  ePKPdf   PKPdf    01 01 25.3  -2.5
MVL   Millersville     138.35 353   PKPdf    PKPdf    01 01 26.7  -1.9
ACSO  Alum Creek Sta   138.54   0  ePKPdf   PKPdf    01 01 25.4  -3.6
TRQA  Tornquist        138.84 205   PFAKE             01 01 40.0   +10
TRQA                                LR       LR
      comp=Z,2µm,19.0s,MS6.0
MCWV  Mont Chateau     139.02 357   PFAKE             01 01 40.0   +10
MCWV                                LR       LR
      comp=Z,4µm,22.0s,MS6.1
PLCA  Paso Flores      139.33 194   PFAKE             01 01 40.0   +10
PLCA                                LR       LR
      comp=Z,2µm,20.0s,MS5.9
AMTX  Amarillo         139.78  24   PFAKE             01 01 40.0  +8.7
AMTX                                LR       LR
      comp=Z,2µm,19.0s,MS5.9
CBN   Corbin           140.25 353   PFAKE             01 01 40.0  +7.9
CBN                                 LR       LR
      comp=Z,3µm,21.0s,MS6.0
MNTX  Cornudas Mount   140.70  31  ePKPpre            01 01 24.0
MNTX                               ePKPdf   PKPdf    01 01 30.1  -3.1
MNTX                                LR       LR
      comp=Z,3µm,19.0s,MS6.1
WMOK  Wichita Mounta   141.03  21  ePKHKP             01 01 24.1
WMOK                                MLR      MLR
      comp=Z,2µm,21.0s,MS5.9
BLA   Blacksburg       141.49 357   PFAKE             01 01 40.0  +5.6
BLA                                 LR       LR
      comp=Z,3µm,19.0s,MS6.0
TZTN  Tazewell         142.22   1  ePKPdf   PKPdf    01 01 33.2  -2.4
BBSR  BB Station       142.27 335   PFAKE             01 01 40.0  +4.1
BBSR                                LR       LR
      comp=Z,1µm,20.0s,MS5.7
WVT   Waverly          142.34   7  ePKIKP   PKPdf    01 01 28.4  -7.5
WVT                                e                  01 01 32.9
WVT                                 MLR      MLR
      comp=Z,3µm,21.0s,MS6.1
BDFB  Brasilia         142.91 246   PKP      PKPdf    01 01 31.5  -5.8
      comp=Z,1.0nm,0.4s,baz=180,slow=8.9,SNR=3.1
PLAL  Pickwick Lake    143.44   7  ePKPpre            01 01 30.5
PLAL                                LR       LR
      comp=Z,4µm,20.0s,MS6.2
LTX   Lajitas          143.47  32  ePKIKP   PKPdf    01 01 32.6  -5.4
LTX                                 MLR      MLR
      comp=Z,2µm,20.0s,MS5.9
TXAR  Lajitas Array    143.47  32   PKP      PKPdf    01 01 32.6  -5.3
      comp=Z,2.3nm,0.6s,baz=304,slow=0.1,SNR=32
TXAR                                SKPbc             01 05 12.7
      comp=Z,1.5nm,0.9s,baz=297,slow=2.8,SNR=4.5
OXF   Oxford           143.71   9  ePKIKP   PKPdf    01 01 34.8  -3.4
OXF                                 MLR      MLR
      comp=Z,3µm,20.0s,MS6.0
JCT   Junction City    144.37  26  ePKIKP   PKPdf    01 01 34.4  -5.1
JCT                                 MLR      MLR
      comp=Z,2µm,19.0s,MS5.8
NATX  Nacogdoches      145.13  18  ePKPdf   PKPdf    01 01 37.7  -3.2
NATX                                LR       LR
      comp=Z,3µm,19.0s,MS6.0
CPUP  Villa Florida    145.18 223  ePKIKP   PKPdf    01 01 37.8  -3.3
CPUP                                MLR      MLR
      comp=Z,2µm,20.0s
CPUP  Villa Florida    145.18 223   PKPbc    PKPbc    01 01 38.2  +1.5
      comp=Z,23nm,0.9s,baz=137,slow=4.6,SNR=40
JATB  Jatai            145.18 240  eP       PKPbc    01 01 38.9  +2.0
JATB                               i                  01 01 47.0
JATB                               e                  01 01 55.1
JATB                               i                  01 02 00.4
COW   Cow Castle Cre   145.32 357  ePKPdf   PKPdf    01 01 37.9  -3.2
GOGA  Godfrey          145.34   1  ePKIKP   PKPdf    01 01 37.7  -3.4
GOGA                                MLR      MLR
      comp=Z,1µm,21.0s,MS5.7
LRAL  Lakeview Retre   145.49   6  ePKPdf   PKPdf    01 01 37.8  -3.6
LRAL                                LR       LR
      comp=Z,3µm,19.0s,MS6.1
TWB   Tillmans-White   145.55 356  ePKPbc   PKPbc    01 01 38.9  +1.5
NHSC  New Hope         145.56 356  ePKPdf   PKPdf    01 01 38.4  -3.1
NHSC                                LR       LR
      comp=Z,3µm,21.0s,MS6.0
FCH   Farellones       146.17 199  i P      PKPbc    01 01 42.9  +3.9
ZAIG  Zacatecas        149.18  38  eP       PKPdf    01 01 39.7  -8.1
SFJM  Santa Fe         150.54  41  i P      PKPdf    01 01 52.0  +2.1
DWPF  Disney           150.60 358   PFAKE             01 02 00.0   +10
DWPF                                LR       LR
      comp=Z,448nm,20.0s,MS5.3
COLM  Colima           151.00  44  eP       PKPdf    01 01 55.7  +5.0
SIV   San Ignacio      154.16 235   PKP      PKPdf    01 01 52.3  -2.9
      comp=Z,0.6nm,0.7s,baz=31,slow=16,SNR=4.5
SIV                                 PKPab    PKPab    01 02 13.9  -1.0
      comp=Z,3.9nm,1.0s,baz=116,slow=5.8,SNR=6.5
PPM   Popocatepetl     154.37  37  ePKIKP   PKPdf    01 01 53.7  -1.7
SJG   San Juan         154.59 321   PFAKE             01 02 00.0  +4.3
SJG                                 LR       LR
      comp=Z,1µm,21.0s,MS5.8
LVC   Limon Verde      154.99 212   PKPab    PKPab    01 02 18.6  +0.4
      comp=Z,4.7nm,0.8s,baz=41,slow=4.2,SNR=6.9
LVC   Limon Verde      154.99 212   PKPab    PKPab    01 02 18.6  +0.4
LVC                                 LR       LR
      comp=Z,2µm,21.0s,MS5.9
SAML  Samuel           159.10 248  ePKPdf   PKPdf    01 01 58.4  -3.4
SAML                               ePKPab   PKPab    01 02 35.8  -0.3
SAML                                LR       LR
      comp=Z,2µm,19.0s,MS6.0
LPAZ  La Paz           159.34 224   PKP      PKPdf    01 02 00.3  -1.6
      comp=Z,1.2nm,0.8s,baz=6.2,slow=1.9,SNR=8.5
LPAZ  La Paz           159.34 224  ePKPdf   PKPdf    01 02 00.3  -1.6
LPAZ                                LR       LR
      comp=Z,1µm,20.0s,MS5.8
SDV   Santo Domingo    164.13 310   PKPab    PKPab    01 02 57.8  -0.2
      comp=Z,3.5nm,0.5s,baz=66,slow=2.5,SNR=4.4
SDV   Santo Domingo    164.13 310  ePKPab   PKPab    01 02 57.6  -0.4
SDV                                 LR       LR
      comp=Z,2µm,21.0s
JTS   JuntasAbangare   168.16  10   PFAKE             01 02 20.0   +10
JTS                                 LR       LR
      comp=Z,451nm,19.0s
ROSC  El Rosal         169.49 306   PKP      PKPdf    01 02 08.5  -2.3
      comp=Z,2.6nm,0.3s,baz=93,slow=23,SNR=4.5
PAYG  Puerto Ayora     172.47  84   PFAKE             01 02 20.0  +7.4
PAYG                                LR       LR
      comp=Z,2µm,20.0s
OTAV  Otavalo          175.35 291  ePKPdf   PKPdf    01 02 11.2  -2.3
OTAV                                LR       LR
      comp=Z,2µm,19.0s
```

HRVD ***03*** *00:53:41.2±0.2, 18.37S×172.48W, h12^{km}, MW5.5/70, Centroid moment Tensor Solution. LP body waves: s52,c85;Mantle waves: s70,c144; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.66±.03; $M_{\theta\theta}$0.06±.03; $M_{\phi\phi}$-1.72±.03; $M_{r\theta}$0.48±.10; $M_{\theta\phi}$-0.34±.03; $M_{\phi r}$0.69±.09; Best double couple: $M_0$1.918×10^{17} NP1:ϕ_s179°,δ34°,λ72°. NP2:ϕ_s21°,δ58°,λ102°. Principal axes: T 1.887, Plg74°, Azm324°; N .06, Plg10°, Azm195°; P -1.949, Plg12°, Azm103°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***03*** *00:53:41.2±0.2, 18.26S×173.20W, h10^{km}, mb5.4/39, MS5.4/127 Error ellipse: s-maj=9.0km s-min=5.0km az=140.0*

BJI ***03*** *00:53:44.6, 17.65S×173.64W, h10^{km}, mB6.0, mb5.2, Ms5.8, Msz5.4*

IDC ***03*** *00:53:45.1±2.6, 18.29S×173.16W, h38^{km}±21^{km}, mb4.4/25, mb1 4.5/26, mb1mx4.5/29, mbtmp4.6/26, ML4.0/1, MS5.2/8, Ms1 5.2/8, ms1mx4.9/31, Error ellipse: s-maj=20.0km s-min=10.3km az=144.0*

MOS ***03*** *00:53:50.7±1.9, 16.63S×172.94W, h33^{km}, mb5.6/23, MS5.3/34, Error ellipse: s-maj=13.1km s-min=9.2km az=80.7*

CSEM ***03*** *00:53:52.1, 16.70S×173.10W, h33^{km}, mb5.6*

ISC 03 00:53:40.6±0.2**, 18.32S**±0.05×**173.18W**±0.05**, h15**^{km}**, h15**^{km}±1.2^{km}**:pP-P, n452,** σ1^{s}**16**/174**, mb5.0**/69**, MS5.4**/136**, 42C-9D, Tonga Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID            Time       Res
                                    Op       ISC       h  m  s      ISC
AFI   Afiamalu          4.59  17   P        Pn       00 54 44.9  -6.2
AFI   Afiamalu          4.59  17   Pn       Pn       00 54 43.7  -7.5
      42nm,0.3s,baz=97,slow=14,SNR=19
```

AFI				Sn	**Sn**	**00 55 34.1**	**-11**
	85nm,0.3s,baz=110,slow=23,SNR=9.6						
AFI	**Afiamalu**	**4.59**	**17**	*e*Pn	**Pn**	**00 54 43.8**	**-7.4**
RAR	**Rarotonga**	**12.95**	**105**	Pn	**P**	**00 56 34.5**	**-12**
	11nm,0.3s,baz=238,slow=6.3,SNR=8.1						
RAR				LR	LR	01 00 02.9	
	comp=Z,12µm,20.7s,baz=326,slow=29						
RAR	**Rarotonga**	**12.95**	**105**	*e*P	**P**	**00 56 34.1**	**-13**
DZM	**Mont Dzumac**	**19.48**	**256**	*e*P	**P**	**00 58 10.1**	**+0.3**
DZM	**Mont Dzumac**	**19.48**	**256**	P	**P**	**00 58 10.4**	**+0.6**
	0.5nm,0.3s,baz=98,slow=19,SNR=8.8						
DZM				LR	LR	01 02 43.6	
	comp=Z,3µm,20.4s,baz=88,slow=28						
URZ	**Urewera**	**21.60**	**201**	P	**P**	**00 58 30.7**	**-1.2**
	34nm,0.6s,mb4.9,baz=36,slow=6.2,SNR=12						
PPT	**Papeete**	**22.47**	**92**	*e*P	**P**	**00 58 40.4**	**-0.3**
	1µm,27.5s						
PPT				*e*LQ		01 03 05.3	
	2µm,25.8s						
PPT				*e*LR	LR	01 04 01.4	
	5µm,21.5s,baz=261						
PPT	**Papeete**	**22.47**	**92**	P	**P**	**00 58 46.2**	**+5.4**
	12nm,0.2s,mb4.9,baz=292,slow=5.4,SNR=2.3						
PPT				LR	LR	01 05 46.4	
	comp=Z,7µm,20.0s,MS5.1,baz=228,slow=32						
TBI	**Tubuai**	**22.72**	**107**	*e*P	**P**	**00 58 43.6**	**+0.4**
	905nm,31.5s						
TBI				*e*LQ		01 03 12.6	
	4µm,30.8s						
TBI				*e*LR	LR	01 04 11.0	
	6µm,23.5s,baz=279						
HNR	**Honiara**	**27.51**	**285**	LR	LR	01 08 47.7	
	comp=Z,3µm,19.2s,MS4.9,baz=349,slow=33						
HNR	**Honiara**	**27.51**	**285**	PFAKE		00 59 40.0	+11
HNR				LR	LR		
	comp=Z,3µm,20.0s,MS4.9						
RPZ	**Rata Peaks**	**28.59**	**204**	P	**P**	**00 59 43.7**	**+5.5**
	comp=Z,27nm,0.6s,mb5.2,baz=21,slow=7.1,SNR=14						
KWAJ	**Kwajalein Atol**	**32.95**	**323**	PFAKE		01 00 30.0	+13
KWAJ				LR	LR		
	comp=Z,1µm,19.0s,MS4.6						
RKT	**Rikitea**	**35.98**	**104**	*e*P	**P**	**01 00 43.3**	**+0.3**
	comp=Z,389nm,25.8s						
RKT				*e*LQ		01 08 48.3	
	comp=Z,1µm,26.0s						
RKT				*e*LR	LR	01 10 18.8	
	comp=Z,3µm,20.2s,baz=273						
CNB	**Canberra Magne**	**37.20**	**235**	*e*P	**P**	**01 00 52.7**	**-0.4**
CTA	**Charters Tower**	**38.28**	**261**	*e*P	**P**	**01 00 58.8**	**-3.5**
CTA	**Charters Tower**	**38.28**	**261**	P	**P**	**01 01 00.3**	**-2.0**
	comp=Z,14nm,0.6s,mb4.8,baz=97,slow=12,SNR=12						
CTAO	**Charters Tower**	**38.28**	**261**	*e*P	**P**	**01 01 00.2**	**-2.1**
CTAO				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.0						
CTAO				MLR	MLR		
	comp=Z,7µm,19.0s,MS5.5						
CTAO	**Charters Tower**	**38.28**	**261**	*e*P	**P**	**01 01 00.2**	**-2.1**
	comp=Z,18nm,0.6s,mb5.0						
CTAO				LR	LR		
	comp=Z,7µm,19.0s,MS5.5						
PMG	**Port Moresby**	**39.44**	**278**	P	**P**	**01 01 20.0**	**+8.0**
PMG				MLR	MLR		
	comp=Z,7µm,21.0s						
PMG	**Port Moresby**	**39.44**	**278**	PFAKE		01 01 20.0	+8.0
PMG				LR	LR		
	comp=Z,7µm,21.0s,MS5.5						
TOO	**Toolangi**	**40.84**	**233**	*e*P	**P**	**01 01 23.4**	**0.0**
TAU	**Tasmania Unive**	**41.37**	**225**	P	**P**	**01 01 40.0**	**+12**
TAU				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.0						
TAU	**Tasmania Unive**	**41.37**	**225**	PFAKE		01 01 40.0	+12
TAU				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
POHA	**Pohakuloa**	**41.62**	**25**	PFAKE		01 01 40.0	+10
POHA				LR	LR		
	comp=Z,26µm,19.0s,MS6.1						
KIP	**Kipapa**	**42.20**	**21**	PFAKE		01 01 50.0	+15
KIP				LR	LR		
	comp=Z,3µm,21.0s,MS5.1						
STKA	**Stephens Creek**	**42.83**	**243**	⇓*i*P	**P**	**01 01 39.6**	**-0.2**
STKA	**Stephens Creek**	**42.83**	**243**	P	**P**	**01 01 39.0**	**-0.8**
	comp=Z,13nm,1.1s,mb4.6,baz=83,slow=8.7,SNR=12						
WB2	**Warramunga Arr**	**49.43**	**259**	*e*P	**P**	**01 02 30.3**	**-1.9**
WRAB	**Tennant Creek**	**49.43**	**259**	*c* *i*P	**P**	**01 02 28.2**	**-4.0**
WRAB	**Tennant Creek**	**49.43**	**259**	*e*P	**P**	**01 02 30.1**	**-2.2**
	comp=Z,20nm,0.6s,mb5.3						
WRAB				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
WRA	**Warramunga Arr**	**49.44**	**259**	P	**P**	**01 02 30.4**	**-2.0**
	comp=Z,8.9nm,0.5s,mb5.0,baz=97,slow=8.0,SNR=31						
WRA				S	**S**	**01 09 36.3**	**-1.4**
	comp=Z,1.2nm,0.9s,baz=97,slow=13,SNR=2.9						
ASAR	**Alice Springs**	**49.46**	**254**	P	**P**	**01 02 30.9**	**-1.6**
	comp=Z,9.4nm,0.5s,mb5.1,baz=90,slow=7.5,SNR=83						
ASAR				PcP	PcP	01 03 54.9	0.0
	comp=Z,8.0nm,1.0s,baz=101,slow=4.6,SNR=2.7						
ASAR				S	**S**	**01 09 37.0**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=92,slow=17,SNR=8.8						
ASPA	**Alice Springs**	**49.47**	**254**	*e*P	**P**	**01 02 31.7**	**-0.8**
KAKA	**Kakadu**	**52.54**	**268**	*e*P	**P**	**01 02 53.7**	**-2.2**
FORT	**Forrest**	**54.33**	**245**	*e*P	**P**	**01 03 08.5**	**-0.4**
DRV	**Dumont d’Urvil**	**56.94**	**200**	P	Px	01 03 13.0	
DRV				S	**S**	**01 11 24.0**	**+5.3**
DRV				L		01 17 00.0	
RPN	**Rapa Nui**	**59.01**	**111**	PFAKE		01 03 50.0	+7.6
RPN				LR	LR		
	comp=Z,742nm,19.0s,MS4.8						
SBA	**Scott Base**	**60.37**	**185**	*e*P	**P**	**01 03 51.6**	**+0.5**
SBA				pmax	pmax		
	comp=Z,130nm,1.8s,mb5.7						
SBA				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.5						
SBA	**Scott Base**	**60.37**	**185**	*e*P	**P**	**01 03 51.6**	**+0.6**
	comp=Z,130nm,1.8s,mb5.7						
SBA				LR	LR		
	comp=Z,4µm,20.0s,MS5.5						
VNDA	**Vanda**	**60.51**	**186**	*e*P	**P**	**01 03 52.0**	**0.0**
VNDA				pmax	pmax		
	comp=Z,23nm,1.4s						
VNDA				MLR	MLR		
	comp=Z,4µm,19.0s						
VNDA	**Vanda**	**60.51**	**186**	P	**P**	**01 03 51.9**	**-0.1**
	comp=Z,6.4nm,0.9s,mb4.7,baz=13,slow=7.5,SNR=27						
VNDA	**Vanda**	**60.51**	**186**	*e*P	**P**	**01 03 52.0**	**0.0**
	comp=Z,23nm,1.4s,mb5.1						
VNDA				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
CBIJ	**Chichi jima**	**62.54**	**315**	LR	LR	01 29 39.8	
	comp=Z,3µm,19.1s,MS5.5,baz=141,slow=34						
MBWA	**Marble Bar**	**62.78**	**255**	*e*P	**P**	**01 04 07.6**	**-0.4**
	comp=Z,73nm,1.7s,mb5.5						
MBWA				LR	LR		
	comp=Z,4µm,19.0s,MS5.7						
KLBR	**Kellerberrin**	**63.09**	**243**	*e*P	**P**	**01 04 09.2**	**-0.7**
NWAO	**Narrogin (SRO)**	**63.40**	**242**	P	**P**	**01 04 12.9**	**+0.9**
	comp=Z,18nm,1.0s,mb5.2,baz=97,slow=8.4,SNR=3.9						
NWAO	**Narrogin (SRO)**	**63.40**	**242**	P	**P**	**01 04 12.9**	**+0.9**
NWAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
MJAR	**Matsushiro Arr**	**71.30**	**320**	P	**P**	**01 05 01.7**	**0.0**
	comp=Z,6.6nm,1.0s,mb4.5,baz=155,slow=6.0,SNR=10						
MAJO	**Matsushiro**	**71.30**	**320**	*e*P	**P**	**01 05 00.9**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,53nm,1.5s,mb5.2						
MAJO				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.3						
MAJO	**Matsushiro**	**71.30**	**320**	*e*P	**P**	**01 05 00.9**	**-0.7**
	comp=Z,53nm,1.5s,mb5.2						
MAJO				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
MAT	**Matsushiro**	**71.30**	**320**	*e*P	**P**	**01 05 01.0**	**-0.7**
MAT				pmax	pmax		
	comp=Z,65nm,1.7s,mb5.3						
MAT	**Matsushiro**	**71.30**	**320**	*e*P	**P**	**01 05 01.0**	**-0.7**
	comp=Z,65nm,1.7s,mb5.3						
MAT	**Matsushiro**	**71.30**	**320**	P	**P**	**01 05 00.9**	**-0.8**
SMY	**Shemya**	**71.61**	**352**	PFAKE		01 05 10.0	+6.8
SMY				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
QSPA	**South Pole Qui**	**71.74**	**180**	*e*P	**P**	**01 05 03.5**	**-0.1**
	comp=Z,97nm,1.6s,mb5.5						
QSPA				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
UNV	**Unalaska Valle**	**72.10**	**4**	PFAKE		01 05 20.0	+14
UNV				LR	LR		
	comp=Z,6µm,20.0s,MS5.9						
SAO	**San Andreas Ge**	**73.37**	**41**	PFAKE		01 05 30.0	+16
SAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
KKM	**Kota Kinabalu**	**73.68**	**282**	*e*P	**P**	**01 05 17.5**	**+1.3**
HOPS	**Hopland**	**73.80**	**39**	PFAKE		01 05 30.0	+14
HOPS				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
JNU	**Nakatsue**	**73.94**	**314**	LR	LR	01 35 20.5	
	comp=Z,1µm,19.0s,MS5.2,baz=167,slow=34						
ASAJ	**Asahikawa**	**74.12**	**329**	P	**P**	**01 05 18.9**	**+0.8**
	comp=Z,7.2nm,0.7s,mb4.7,baz=124,slow=7.8,SNR=2.4						
PFO	**Pinyon Flat Ob**	**74.76**	**46**	PFAKE		01 05 30.0	+7.9
PFO				LR	LR		
	comp=Z,461nm,19.0s,MS4.8						
CMB	**Columbia Colle**	**74.82**	**41**	PFAKE		01 05 30.0	+7.7
CMB				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
MIR	**Mirnyy**	**74.86**	**204**	*e*P	**P**	**01 05 22.0**	**0.0**
MIR				*i*		01 05 46.0	
MIR				pmax	pmax		
	comp=Z,900nm,6.0s						
PET	**Petropavlovsk**	**75.11**	**343**	*e*P	**P**	**01 05 23.0**	**-0.7**
PET				pmax	pmax		
	comp=Z,58nm,1.1s,mb5.4						
PET				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.5						
PET				MLR	MLR		
	comp=Z,2µm,18.0s						
PET	**Petropavlovsk**	**75.11**	**343**	*e*P	**P**	**01 05 23.6**	**0.0**
	comp=Z,61nm,1.1s,mb5.5						
PET				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
WDC	**Whiskeytown Da**	**75.14**	**38**	*e*P	**P**	**01 05 23.1**	**-1.0**
WDC				pmax	pmax		
	comp=Z,57nm,2.0s,mb5.2						
WDC				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
WDC	**Whiskeytown Da**	**75.14**	**38**	*e*P	**P**	**01 05 23.1**	**-1.0**
	comp=Z,57nm,2.0s,mb5.2						
WDC				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
DAC	**Darwin (Calif)**	**75.54**	**44**	*e*P	**P**	**01 05 26.5**	**0.0**
DAC				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.4						
YBH	**Yreka Blue Hor**	**75.80**	**37**	P	**P**	**01 05 26.0**	**-1.8**
	comp=Z,3.0nm,0.7s,mb4.3,baz=239,slow=17,SNR=4.1						
YBH	**Yreka Blue Hor**	**75.80**	**37**	P	**P**	**01 05 26.0**	**-1.8**
YBH				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
YSS	**Yuzh-Sakhalins**	**76.11**	**331**	*c* *i*P	**P**	**01 05 29.7**	**+0.2**
YSS				pmax	pmax		
	comp=Z,52nm,1.3s,mb5.3						
YSS				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.3						
YSS	**Yuzh-Sakhalins**	**76.11**	**331**	*e*P	**P**	**01 05 30.2**	**+0.7**
	comp=Z,24nm,0.9s,mb5.1						
YSS				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
HUMO	**Hull Mountain**	**76.23**	**36**	PFAKE		01 05 40.0	+10
HUMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
NVAR	**Mina Array Bea**	**76.36**	**41**	P	**P**	**01 05 28.9**	**-2.2**
	comp=Z,2.4nm,0.7s,mb4.2,baz=229,slow=8.3,SNR=3.8						
NVAR				LR	LR	01 34 05.3	
	comp=Z,2µm,18.9s,MS5.4,baz=345,slow=32						
MNV	**Mina**	**76.45**	**41**	*e*P	**P**	**01 05 32.4**	**+0.8**
MNV				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.7						
MNV				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.4						
MNV	**Mina**	**76.45**	**41**	*e*P	**P**	**01 05 32.4**	**+0.8**
	comp=Z,15nm,1.6s,mb4.7						
MNV				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
TATO	**Taipei**	**76.78**	**302**	PFAKE		01 05 40.0	+6.3
TATO				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
TPH	**Tonopah**	**76.83**	**42**	*e*P	**P**	**01 05 34.4**	**+0.7**
TPH				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.3						
MOD	**Modoc**	**77.29**	**38**	*e*P	**P**	**01 05 36.1**	**0.0**
MOD				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
COR	**Corvallis**	**77.36**	**34**	PFAKE		01 05 50.0	+14
COR				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
KSM	**Kuching**	**77.67**	**276**	*e*P	**P**	**01 05 40.0**	**+1.1**
KDAK	**Kodiak Island**	**77.73**	**11**	*e*P	**P**	**01 05 36.1**	**-2.1**
KDAK				LR	LR		
	comp=Z,593nm,20.0s,MS4.9						
TUC	**Tucson**	**78.08**	**50**	P	**P**	**01 05 41.7**	**+1.0**
TUC				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
TUC				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.3						
TUC	**Tucson**	**78.08**	**50**	P	**P**	**01 05 41.7**	**+1.0**
	comp=Z,11nm,1.1s,mb4.7						
TUC				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
BMN	**Battle Mountai**	**78.22**	**40**	*e*P	**P**	**01 05 41.1**	**-0.2**
BMN				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
BMN				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.3						
BMN	**Battle Mountai**	**78.22**	**40**	*e*P	**P**	**01 05 41.0**	**-0.3**
	comp=Z,11nm,1.1s,mb4.7						
BMN				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
WVOR	**Wild Horse Val**	**78.59**	**38**	*e*P	**P**	**01 05 43.7**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,36nm,1.5s,mb5.1						
WVOR				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.5						
WVOR	**Wild Horse Val**	**78.59**	**38**	*e*P	**P**	**01 05 43.7**	**+0.4**
	comp=Z,36nm,1.5s,mb5.1						
WVOR				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
OCWA	**Octopus Mounta**	**79.05**	**31**	PFAKE		01 06 00.0	+14
OCWA				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
INCN	**Inchon**	**79.26**	**315**	PFAKE		01 06 00.0	+13
INCN				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
WUAZ	**Wupatki**	**79.31**	**47**	*e*P	**P**	**01 05 48.7**	**+1.3**
	comp=Z,260nm,1.2s,mb6.0						
WUAZ				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
ELK	**Elko**	**79.63**	**41**	P	**P**	**01 05 47.5**	**-1.5**
	comp=Z,1.0nm,0.8s,baz=186,slow=3.8,SNR=4.5						
ELK	**Elko**	**79.63**	**41**	P	**P**	**01 05 47.5**	**-1.5**
ELK				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
SSE	**Sheshan**	**79.88**	**307**	P	**P**	**01 05 50.5**	**-0.1**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,12µm,11.8s						
MVU	**Marysvale**	**80.33**	**44**	*e*P	**P**	**01 05 53.9**	**+1.1**
MVU				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
HAWA	**Hanford**	**80.55**	**34**	PFAKE		01 06 00.0	+6.2
HAWA				LR	LR		
	comp=Z,292nm,19.0s,MS4.7						
SLKM	**Skilak Lake**	**80.72**	**11**	*e*P	**P**	**01 05 54.8**	**+0.4**
BMO	**Blue Mountains**	**80.83**	**37**	*e*P	**P**	**01 05 53.8**	**-1.5**
BMO				pmax	pmax		
	comp=Z,15nm,1.8s,mb4.6						
BMO				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
BMO	**Blue Mountains**	**80.83**	**37**	*e*P	**P**	**01 05 53.8**	**-1.4**
	comp=Z,15nm,1.8s,mb4.6						
BMO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
DUG	**Dugway**	**80.86**	**42**	*e*P	**P**	**01 05 54.4**	**-1.1**
DUG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
DUG				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.2						
DUG	**Dugway**	**80.86**	**42**	*e*P	**P**	**01 05 54.4**	**-1.2**
	comp=Z,5.5nm,1.0s,mb4.4						
DUG				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
SPU	**Mount Spurr**	**81.02**	**10**	*e*P	**P**	**01 05 55.0**	**-0.9**
FIB	**Fire Island**	**81.34**	**11**	PFAKE		01 06 10.0	+12
FIB				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
PMSA	**Palmer Station**	**81.44**	**156**	PFAKE		01 06 10.0	+12
PMSA				LR	LR		
	comp=Z,4µm,21.0s,MS5.8						
MDJ	**Mudanjiang**	**81.46**	**323**	P	**P**	**01 05 59.9**	**+1.3**
MDJ				AP	pP	01 06 03.1	-0.3
MDJ				XP	sP	01 06 04.6	-0.4
MDJ				PP	PP	01 09 06.5	-0.5
MDJ				S	S	01 16 13.4	+5.4
MDJ				XS		01 16 19.1	
MDJ				AMB	AMB		
	comp=Z,20nm,1.9s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,560nm,5.6s						
MDJ				LR	LR		
	comp=N,10µm,16.5s,MS6.4						
MDJ				LR	LR		
	comp=E,8µm,15.8s,MS6.4						
MDJ				LR	LR		
	comp=Z,15µm,17.1s,MS6.4						
MDJ	**Mudanjiang**	**81.46**	**323**	PFAKE		01 06 10.0	+11
MDJ				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
HLID	**Hailey**	**81.75**	**39**	*e*P	**P**	**01 05 59.4**	**-0.7**
	comp=Z,38nm,1.7s,mb5.0						
HLID				LR	LR		
	comp=Z,895nm,20.0s,MS5.1						
MNTX	**Cornudas Mount**	**81.80**	**53**	*e*P	**P**	**01 06 01.7**	**+1.1**
	comp=Z,44nm,1.9s,mb5.1						
TXAR	**Lajitas Array**	**82.07**	**56**	P	**P**	**01 06 00.9**	**-1.1**
	comp=Z,4.3nm,1.1s,mb4.3,baz=236,slow=4.5,SNR=5.0						
LTX	**Lajitas**	**82.07**	**56**	*e*P	**P**	**01 06 02.9**	**+0.8**
LTX				pmax	pmax		
	comp=Z,57nm,1.9s,mb5.2						
LTX				MLR	MLR		
	comp=Z,870nm,19.0s,MS5.1						
LTX	**Lajitas**	**82.07**	**56**	*e*P	**P**	**01 06 02.9**	**+0.8**
	comp=Z,57nm,1.9s,mb5.2						
LTX				LR	LR		
	comp=Z,870nm,19.0s,MS5.1						
NJ2	**Nanjing**	**82.09**	**307**	*e*P	**P**	**01 06 02.2**	**+0.1**
NJ2				AP	pP	01 06 07.4	+0.5
NJ2				XP	sP	01 06 09.6	+1.1
NJ2				S	S	01 16 15.0	+0.3
NJ2				SKS	SKS	01 16 20.0	-3.6
NJ2				XS		01 16 23.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,5µm,8.0s						
NJ2				LR	LR		
	comp=N,2µm,26.4s						
NJ2				LR	LR		
	comp=E,2µm,18.8s						
NJ2				LR	LR		
	comp=Z,950nm,18.5s						
TTA	**Tatalina**	**82.10**	**8**	*e*P	**P**	**01 06 00.9**	**-0.6**
DIV	**Divide**	**82.18**	**13**	*e*P	**P**	**01 06 01.8**	**-0.1**
	comp=Z,33nm,0.9s,mb5.3						
DIV				LR	LR		
	comp=Z,9µm,20.0s,MS6.1						
SML	**Sawmill**	**82.28**	**12**	*e*P	**P**	**01 06 01.5**	**-1.0**
HWUT	**Hardware Ranch**	**82.42**	**42**	*e*P	**P**	**01 06 03.6**	**-0.1**
HWUT				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
ANMO	**Albuquerque**	**82.52**	**50**	*e*P	**P**	**01 06 04.0**	**-0.3**
ANMO	**Albuquerque**	**82.52**	**50**	P	**P**	**01 06 04.1**	**-0.2**
	comp=Z,2.4nm,0.9s,mb4.2,baz=214,slow=6.8,SNR=3.6						
ANMO	**Albuquerque**	**82.52**	**50**	P	**P**	**01 06 04.1**	**-0.2**
ANMO				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
GDL2	**Guadalupe Moun**	**82.80**	**53**	*e*P	**P**	**01 06 06.1**	**+0.3**
NEW	**Newport**	**83.00**	**34**	P	**P**	**01 06 05.2**	**-1.3**
	comp=Z,1.6nm,0.8s,mb4.1,baz=299,slow=10,SNR=4.0						
NEW	**Newport**	**83.00**	**34**	*e*P	**P**	**01 06 06.3**	**-0.2**
NEW				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
MA2	**Magadan**	**83.00**	**342**	⇓*i*P	**P**	**01 06 05.0**	**-1.2**
MA2				pmax	pmax		
	comp=Z,48nm,2.5s,mb5.1						
MA2				MLR	MLR		
	comp=Z,1µm,16.0s,MS5.4						
MA2	**Magadan**	**83.00**	**342**	P	**P**	**01 06 05.4**	**-0.9**
MA2				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
PAYG	**Puerto Ayora**	**83.04**	**88**	PFAKE		01 06 20.0	+13
PAYG				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
KLR	**Kul’dur**	**83.07**	**327**	*e*P	**P**	**01 06 05.0**	**-1.8**
AHID	**Auburn Hatcher**	**83.33**	**41**	PFAKE		01 06 20.0	+12
AHID				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
DL2	**Dalian**	**83.36**	**315**	P	**P**	**01 06 11.7**	**+3.1**
DL2				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
CN2	**Changchun**	**83.45**	**320**	*e*P	**P**	**01 06 10.5**	**+1.6**
CN2				*e*XP	sP	01 06 17.5	+2.2
CN2				*e*S	S	01 16 30.8	+2.5
CN2				AMB	AMB		
	comp=Z,40nm,1.5s,mb5.2						
CN2				AMB	AMB		
	comp=Z,1µm,4.0s						
CN2				LR	LR		
	comp=N,1µm,19.0s,MS5.4						
CN2				LR	LR		
	comp=E,1µm,19.0s,MS5.4						
CN2				LR	LR		
	comp=Z,1µm,18.0s,MS5.3						
RRI2	**Red Ridge**	**83.50**	**40**	P	**P**	**01 06 10.5**	**+1.3**
	comp=Z,62nm,1.5s,mb5.5						
SNY	**Shenyang**	**83.56**	**318**	⇑P	**P**	**01 06 11.7**	**+2.1**
SNY				AMB	AMB		
	comp=Z,40nm,2.2s,mb5.2						
TNA	**Tin City**	**83.72**	**2**	*e*P	**P**	**01 06 09.6**	**-0.1**
	comp=Z,38nm,1.4s,mb5.3						
TNA				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
TPAW	**Teton Pass**	**83.81**	**40**	*e*P	**P**	**01 06 10.3**	**-0.5**
	comp=Z,45nm,1.8s,mb5.3						
MSO	**Missoula**	**83.89**	**36**	*e*P	**P**	**01 06 09.8**	**-1.3**
	comp=Z,22nm,1.9s,mb5.0						
MSO				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
SNOW	**Snow King Moun**	**83.92**	**40**	*e*P	**P**	**01 06 13.2**	**+1.9**
	comp=Z,27nm,1.2s,mb5.3						
MCK	**McKinley**	**83.94**	**11**	*e*P	**P**	**01 06 10.9**	**0.0**
MCK				pmax	pmax		
	comp=Z,53nm,1.8s,mb5.4						
MCK				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
MCK	**McKinley**	**83.94**	**11**	*e*P	**P**	**01 06 10.9**	**-0.1**
	comp=Z,53nm,1.8s,mb5.4						
MCK				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
IMW	**Indian Meadow**	**84.03**	**40**	*e*P	**P**	**01 06 11.3**	**-0.5**
MOOW	**Moose Ponds**	**84.07**	**40**	*e*P	**P**	**01 06 12.4**	**+0.4**
	comp=Z,7.9nm,1.1s,mb4.8						
QIZ	**Qiongzhong**	**84.19**	**292**	PFAKE		01 06 20.0	+6.8
QIZ				LR	LR		
	comp=Z,975nm,21.0s,MS5.2						
BW06	**Boulder Array**	**84.30**	**42**	*e*P	**P**	**01 06 11.8**	**-1.4**
	comp=Z,18nm,1.3s,mb5.0						
BW06				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
PDAR	**Pinedale Array**	**84.30**	**42**	P	**P**	**01 06 12.2**	**-1.1**
	comp=Z,2.7nm,0.8s,mb4.4,baz=230,slow=2.2,SNR=8.7						
DLBC	**Dease Lake**	**84.33**	**21**	P	**P**	**01 06 11.0**	**-2.0**
	comp=Z,1.6nm,0.9s,mb4.1,baz=252,slow=7.1,SNR=2.7						
YMR	**Madison River**	**84.43**	**39**	*e*P	**P**	**01 06 14.9**	**+1.0**
SDCO	**Great Sand Dun**	**84.52**	**47**	PFAKE		01 06 30.0	+16
SDCO				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
BOZ	**Bozeman (W)**	**84.56**	**38**	*e*P	**P**	**01 06 13.5**	**-1.0**
BOZ				pmax	pmax		
	comp=Z,53nm,1.6s,mb5.4						
BOZ				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.5						
BOZ	**Bozeman (W)**	**84.56**	**38**	*e*P	**P**	**01 06 13.5**	**-1.0**
	comp=Z,53nm,1.6s,mb5.4						
BOZ				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
LKWY	**Lake**	**84.72**	**40**	PFAKE		01 06 30.0	+15
LKWY				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
WHN	**Wuhan**	**84.90**	**304**	P	**P**	**01 06 19.0**	**+2.4**
MAW	**Mawson**	**85.11**	**199**	⇓*i*P	**P**	**01 06 17.9**	**+1.2**
MAW	**Mawson**	**85.11**	**199**	P	**P**	**01 06 16.7**	**0.0**

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      comp=Z,11nm,1.1s,mb4.9,baz=121,slow=6.7,SNR=9.9
COLA  College           85.18  11⇑iP       P       01 06 16.4 -0.7
COLA  College           85.18  11 eP       P       01 06 16.6 -0.5
TIA   Tai’an            85.25 310  P       P       01 06 20.5 +2.3
ILAR  Eielson Array     85.26  11  P       P       01 06 16.6 -0.9
      comp=Z,2.8nm,0.8s,mb4.5,baz=222,slow=5.2,SNR=16
ISCO  Idaho Springs     85.41  46  PFAKE           01 06 30.0  +11
ISCO                               LR      LR
      comp=Z,1µm,20.0s,MS5.3
IMA   Indian Mountai    85.41   8 eP       P       01 06 18.4 +0.2
IMA                                pmax    pmax
      comp=Z,370nm,2.0s
IMA   Indian Mountai    85.41   8 eP       P       01 06 18.4 +0.2
      comp=Z,370nm,2.0s
JCT   Junction City     85.59  56 eP       P       01 06 20.4 +0.4
JCT                                MLR     MLR
      comp=Z,875nm,19.0s,MS5.2
AMTX  Amarillo          85.99  51 eP       P       01 06 20.7 -1.2
      comp=Z,60nm,1.7s,mb5.5
AMTX                               LR      LR
      comp=Z,2µm,20.0s,MS5.5
PLCA  Paso Flores       87.41 132 eP       P       01 06 30.1 +1.4
PLCA                               pmax    pmax
      comp=Z,153nm,2.3s
PLCA                               MLR     MLR
      comp=Z,2µm,20.0s
PLCA  Paso Flores       87.41 132  P       P       01 06 29.1 +0.4
      comp=Z,3.3nm,0.8s,mb4.6,baz=294,slow=7.0,SNR=3.4
PLCA  Paso Flores       87.41 132 eP       P       01 06 30.1 +1.5
      comp=Z,153nm,2.3s,mb5.8
PLCA                               LR      LR
      comp=Z,2µm,20.0s,MS5.6
BILL  Bilibino          87.42 352c iP      P       01 06 28.5 +0.5
BILL                               pmax    pmax
      comp=Z,42nm,1.7s,mb5.4
BILL  Bilibino          87.42 352 eP       P       01 06 27.8 -0.3
      comp=Z,11nm,0.9s,mb5.1
BILL                               LR      LR
      comp=Z,7µm,19.0s,MS6.1
LAO   LASA Array        88.32  39  PFAKE           01 06 40.0 +7.1
LAO                                LR      LR
      comp=Z,2µm,20.0s,MS5.5
RSSD  Black Hills       88.46  42  PFAKE           01 06 50.0  +16
RSSD                               LR      LR
      comp=Z,2µm,19.0s,MS5.5
ENH   Enshi             88.65 302 eP       P       01 06 36.6 +1.8
      comp=Z,284nm,2.0s
ENH                                LR      LR
      comp=Z,743nm,20.0s
CBKS  Cedar Bluff       89.06  48  PFAKE           01 06 50.0  +13
CBKS                               LR      LR
      comp=Z,1µm,20.0s,MS5.4
GYA   Guiyang           89.59 298⇑iP       P       01 06 42.4 +3.0
GYA                                AMB     AMB
      comp=Z,30nm,1.8s,mb5.3
HIA   Hailar            89.64 323 eP       P       01 06 40.6 +1.5
HIA                                pmax    pmax
      comp=Z,48nm,1.6s
HIA                                MLR     MLR
      comp=Z,2µm,19.0s
HIA   Hailar            89.64 323 eP       P       01 06 40.6 +1.5
      comp=Z,48nm,1.6s,mb5.6
HIA                                LR      LR
      comp=Z,2µm,19.0s,MS5.5
SYO   Syowa Base        89.79 191 ⇑P       P       01 06 38.8 -0.5
SYO   Syowa Base        89.79 191 ⇓PcP     PcP     01 06 40.3 -0.7
VNA3  Neumayer Olymp    89.94 175 e        P       01 06 45.5 +5.5
VNA3  Neumayer Olymp    89.94 175 e        pP      01 06 47.0 +2.1
VNA3  Neumayer Olymp    89.94 175 e        sP      01 06 56.7  +10
VNA3  Neumayer Olymp    89.94 175⇑iP       P       01 06 42.3 +2.3
VNA3                              e                01 06 56.7
VNA3                              e                01 07 05.1
SNAA  Sanae             90.00 177 e        P       01 06 41.1 +0.9
SNAA  Sanae             90.00 177 e        P       01 06 43.0 +2.8
SNAA  Sanae             90.00 177 e        pP      01 06 44.4 -0.7
SNAA  Sanae             90.00 177 e        sP      01 06 51.3 +4.7
SNAA  Sanae             90.00 177  P       P       01 06 39.0 -1.2
SNAA                              e        pP      01 06 44.4 -0.7
SNAA                              e                01 06 51.3
SNAA                              e                01 07 05.2
NATX  Nacogdoches       90.15  57  PFAKE           01 06 50.0 +8.1
NATX                               LR      LR
      comp=Z,2µm,20.0s,MS5.4
VNA2  Neumayer--Watz    90.44 175 e        P       01 06 42.9 +0.6
VNA2  Neumayer--Watz    90.44 175 e        P       01 06 45.1 +2.8
VNA2  Neumayer--Watz    90.44 175 e        pP      01 06 46.9 -0.3
VNA2  Neumayer--Watz    90.44 175 e        sP      01 06 57.9 +9.2
VNA2  Neumayer--Watz    90.44 175⇑iP       P       01 06 42.0 -0.3
VNA2                              e        pP      01 06 46.9 -0.3
VNA2                              e                01 06 57.9
VNA2                              e                01 07 07.6
VNA1  Neumayer--Stat    90.64 175 e        P       01 06 45.7 +2.5
VNA1  Neumayer--Stat    90.64 175 e        P       01 06 48.5 +5.3
VNA1  Neumayer--Stat    90.64 175 e        pP      01 06 49.8 +1.7
VNA1  Neumayer--Stat    90.64 175 e        sP      01 06 58.9 +9.3
VNA1  Neumayer--Stat    90.64 175⇑iP       P       01 06 44.8 +1.6
VNA1                              e        pP      01 06 49.8 +1.7
VNA1                              e                01 06 58.9
VNA1                              e                01 07 09.1
CLNS  Chul’man          90.88 331 eP       P       01 06 45.8 +1.2
CLNS                               pmax    pmax
      comp=Z,45nm,1.3s,mb5.6
CLNS                               pmax    pmax
      comp=N,34nm,1.6s
CLNS                               pmax    pmax
      comp=E,12nm,1.0s
INK   Inuvik            91.04  14 eP       P       01 06 45.2 +0.1
INK                                pmax    pmax
      comp=Z,49nm,1.8s
INK   Inuvik            91.04  14  P       P       01 06 43.6 -1.5
      comp=Z,3.3nm,1.0s,mb4.6,baz=181,slow=3.4,SNR=7.4
INK   Inuvik            91.04  14 eP       P       01 06 45.2 +0.1
      comp=Z,49nm,1.8s,mb5.5
HHC   Hu-ho-hao-te      91.15 313 eP       P       01 06 48.9 +2.6
HHC                                AP      pP      01 06 54.3 +3.2
HHC                                XP      sP      01 06 58.6 +5.9
HHC                                AMB     AMB
      comp=Z,20nm,1.3s,mb5.3
JTS   JuntasAbangare    91.52  80 eP       P       01 06 49.8 +1.2
JTS                                pmax    pmax
      comp=Z,116nm,1.8s
JTS                                MLR     MLR
      comp=Z,567nm,19.0s
JTS   JuntasAbangare    91.52  80  P       P       01 06 48.3 -0.3
      comp=Z,8.5nm,1.0s,mb5.0,baz=332,slow=6.5,SNR=6.5
JTS   JuntasAbangare    91.52  80 eP       P       01 06 49.8 +1.2
      comp=Z,116nm,1.8s,mb5.9
JTS                                LR      LR
      comp=Z,567nm,19.0s,MS5.0
YAK   Yakutsk           91.86 337 eP       P       01 06 47.7 -1.3
YAK                                MLR     MLR
      comp=Z,1µm,20.0s,MS5.4
KMI   Kunming           92.47 296 ⇑P       P       01 06 55.8 +3.1
KMI                                S       S       01 17 54.4 +1.2
KMI                                AMB     AMB
      comp=Z,10.0nm,1.7s,mb4.9
KMI                                AMB     AMB
      comp=Z,2µm,10.1s
KMI                                LR      LR
      comp=N,950nm,15.0s,MS5.4
KMI                                LR      LR
      comp=E,790nm,19.6s,MS5.4
KMI                                LR      LR
      comp=Z,780nm,21.1s,MS5.1
YKA   Yellowknife Ar    92.68  23  P       P       01 06 52.1 -0.6
      comp=Z,0.7nm,0.7s,mb4.2,baz=244,slow=4.1,SNR=6.2
YKA                                PKiKP           01 11 40.5
      comp=Z,0.3nm,0.4s,baz=131,slow=4.4,SNR=3.6
CMAR  Chiang Mai Arr    93.72 288  P       P       01 06 59.0 +0.4
      comp=Z,0.8nm,0.4s,mb4.5,baz=92,slow=3.0,SNR=8.2
CIT   Chita             94.39 324 eP       P       01 07 02.7 +1.8
FFC   Flin Flon         94.41  33  PFAKE           01 07 10.0 +9.1
FFC                                LR      LR
      comp=Z,577nm,20.0s,MS5.0
TRQA  Tornquist         94.56 132  PFAKE           01 07 10.0 +8.0
TRQA                               LR      LR
      comp=Z,2µm,19.0s,MS5.7
OTAV  Otavalo           94.57  91  PFAKE           01 07 10.0 +7.4
OTAV                               LR      LR
      comp=Z,1µm,21.0s,MS5.3
LZH   Lanzhou           95.11 306 ⇑P       P       01 07 06.5 +1.9
LZH                                AP      pP      01 07 09.7 +0.2
LZH                                XP      sP      01 07 11.2 +0.2
LZH                                PP      PP      01 10 58.5 +2.0
LZH                                SKS     SKS     01 17 40.5 -3.8
LZH                               eS       S       01 18 18.6 +2.9
LZH                                XS              01 18 25.7
LZH                                AMB     AMB
      comp=Z,30nm,1.5s,mb5.5
LZH                                AMB     AMB
      comp=Z,120nm,6.4s
LZH                                LR      LR
      comp=E,610nm,15.2s
LZH                                LR      LR
      comp=Z,880nm,18.1s,MS5.3
OXF   Oxford            95.23  56  PFAKE           01 07 20.0  +15
OXF                                LR      LR
      comp=Z,1µm,19.0s,MS5.5
LVC   Limon Verde       95.56 116  PFAKE           01 07 20.0  +13
LVC                                LR      LR
      comp=Z,2µm,22.0s,MS5.6
PLAL  Pickwick Lake     96.42  55  PFAKE           01 07 20.0 +9.4
PLAL                               LR      LR
      comp=Z,1µm,20.0s,MS5.5
LRAL  Lakeview Retre    96.69  58  PFAKE           01 07 20.0 +8.1
LRAL                               LR      LR
      comp=Z,1µm,21.0s,MS5.3
WVT   Waverly           96.95  54  PFAKE           01 07 20.0 +7.0
WVT                                LR      LR
      comp=Z,1µm,19.0s,MS5.4
SONM  Songino Array     97.15 318  P       P       01 07 14.3 +0.8
      comp=Z,0.2nm,0.7s,baz=72,slow=4.6,SNR=2.2
TIXI  Tiksi             97.86 344⇑iP       P       01 07 16.8 +0.6
TIXI                               MLR     MLR
      comp=Z,2µm,20.0s,MS5.6
EYMN  Ely               97.99  42  PFAKE           01 07 30.0  +13
EYMN                               LR      LR
      comp=Z,3µm,20.0s,MS5.8
LPAZ  La Paz            98.62 110  LR      LR      01 43 30.2
      comp=Z,1µm,18.0s,MS5.4,baz=184,slow=30
LPAZ  La Paz            98.62 110  PFAKE           01 07 30.0 +9.1
LPAZ                               LR      LR
      comp=Z,1µm,20.0s,MS5.5
GTA   Gaotai            99.15 308 eP       P       01 07 24.0 +1.2
GTA                                AP      pP      01 07 30.3 +2.6
GTA                                XP      sP      01 07 33.9 +4.7
GTA                                S       S       01 18 50.4 +0.7
GTA                                LR      LR
      comp=N,590nm,18.2s,MS5.3
GTA                                LR      LR
      comp=E,730nm,18.6s,MS5.3
GTA                                LR      LR
      comp=Z,1µm,19.4s,MS5.3
GOGA  Godfrey           99.63  58  PFAKE           01 07 40.0  +15
GOGA                               LR      LR
      comp=Z,962nm,21.0s,MS5.3
DWPF  Disney            99.91  64  PFAKE           01 07 40.0  +13
DWPF                               LR      LR
      comp=Z,975nm,21.0s,MS5.3
TLY   Talaya           100.03 321  PFAKE           01 07 40.0  +13
TLY                                LR      LR
      comp=Z,297nm,19.0s,MS4.8
AAM   Ann Arbor        101.75  49  PFAKE           01 07 50.0  +15
AAM                                LR      LR
      comp=Z,2µm,20.0s,MS5.6
NHSC  New Hope         102.22  59  PFAKE           01 07 50.0  +13
NHSC                               LR      LR
      comp=Z,2µm,21.0s,MS5.7
BLA   Blacksburg       102.98  55  PFAKE           01 07 50.0  +10
BLA                                LR      LR
      comp=Z,3µm,19.0s,MS5.8
CPUP  Villa Florida    103.53 124  PFAKE           01 07 50.0 +7.2
CPUP                               LR      LR
      comp=Z,2µm,20.0s,MS5.6
LSA   Lhasa            103.63 297  PFAKE           01 07 50.0 +6.8
LSA                                LR      LR
      comp=Z,749nm,20.0s,MS5.2
MCWV  Mont Chateau     103.96  53  PFAKE           01 08 00.0  +16
MCWV                               LR      LR
      comp=Z,4µm,22.0s,MS5.8
SDV   Santo Domingo    104.59  85  PFAKE           01 08 00.0  +12
SDV                                LR      LR
      comp=Z,1µm,22.0s,MS5.4
CBN   Corbin           105.56  54  PFAKE           01 12 20.0
CBN                                LR      LR
      comp=Z,3µm,22.0s,MS5.8
SSPA  Standing Stone   105.63  52  PFAKE           01 12 20.0
SSPA                               LR      LR
      comp=Z,2µm,19.0s,MS5.7
SAML  Samuel           105.82 105  PFAKE           01 12 20.0
SAML                               LR      LR
      comp=Z,2µm,19.0s,MS5.7
BINY  Binghamton       107.31  51  PFAKE           01 12 20.0
BINY                               LR      LR
      comp=Z,3µm,20.0s,MS5.8
PALK  Pallekele        107.51 272  PFAKE           01 12 20.0
PALK                               LR      LR
      comp=Z,291nm,20.0s,MS4.8
NCB   Newcomb          108.84  49  PFAKE           01 12 20.0
NCB                                LR      LR
      comp=Z,2µm,20.0s,MS5.7
HRV   Harvard--Oak R   110.60  51  PFAKE           01 12 30.0  +14
HRV                                LR      LR
      comp=Z,2µm,20.0s,MS5.8
WES   Weston           110.76  51  PFAKE           01 12 30.0  +13
WES                                LR      LR
      comp=Z,3µm,22.0s,MS5.8
SJG   San Juan         111.17  77  PFAKE           01 12 30.0  +12
SJG                                LR      LR
      comp=Z,1µm,20.0s,MS5.5
WVL   Waterville       112.17  49  PFAKE           01 12 30.0  +11
WVL                                LR      LR
      comp=Z,10µm,22.0s,MS6.4
MKAR  Makanchi Array   113.00 314  PKiKP           01 12 18.7
      comp=Z,1.0nm,0.8s,baz=90,slow=1.2,SNR=5.7
PQI   Presque Isle     113.43  46  PFAKE           01 12 30.0 +8.3
PQI                                LR      LR
      comp=Z,8µm,21.0s,MS6.3
EMMW  East Machias     113.74  49  PFAKE           01 12 30.0 +7.7
EMMW                               LR      LR
      comp=Z,11µm,20.0s,MS6.5
BBSR  BB Station       114.92  62  PFAKE           01 12 30.0 +5.2
BBSR                               LR      LR
      comp=Z,1µm,20.0s,MS5.5
AAK   Ala-Archa        118.50 309⇑iPKIKP   PKPdf   01 12 28.2 -3.4
AAK                                MLR     MLR
      comp=Z,221nm,19.0s,MS4.8
KBS   Kingsbay         119.31 359  PFAKE           01 12 40.0 +7.6
KBS                                LR      LR
      comp=Z,1µm,19.0s,MS5.5
CHKZ  Chkalovo         120.05 322 ePKIKP   PKPdf   01 12 31.7 -2.5
BVAR  Borovoye Array   120.29 321  PKP     PKPdf   01 12 31.6 -3.2
      comp=Z,2.8nm,0.7s,baz=90,slow=1.5,SNR=14
BRVK  Borovoye         120.35 321  PKIKP   PKPdf   01 12 31.7 -3.2
SVE   Sverdlovsk       124.70 327 ePKIKP   PKPdf   01 12 42.0 -1.2
SVE                               e                01 14 27.6
SVE                                MLR     MLR
      comp=N,400nm,16.0s,MS5.4
SVE                                MLR     MLR
      comp=E,500nm,16.0s,MS5.4
SVE                                MLR     MLR
      comp=Z,1µm,16.0s,MS5.6
SOKR  Solikamsk        125.44 331⇑iPKIKP   PKPdf   01 12 40.0 -4.6
SOKR                               pmax    pmax
      comp=Z,10.0nm,0.9s
ARU   Arti             125.91 327 i PKIKP  PKPdf   01 12 43.5 -2.0
ARU                               e                01 14 35.4
ARU                               e                01 19 52.0
ARU                               eSS      SS      01 31 31.8 -4.9
ARU                                MLR     MLR
      comp=Z,900nm,19.0s,MS5.5
ARU                                MLR     MLR
      comp=N,400nm,18.0s,MS5.3
ARU                                MLR     MLR
      comp=E,500nm,19.0s,MS5.3
ARU   Arti             125.91 327 ePKPdf   PKPdf   01 12 43.4 -2.2
ARU                                LR      LR
      comp=Z,240nm,20.0s,MS4.9
KEV   Kevo             127.10 351  PFAKE           01 13 00.0  +13
KEV                                LR      LR
      comp=Z,781nm,19.0s,MS5.4
ARCES ARCESS Array B   127.52 352  PKP     PKPdf   01 12 45.9 -2.4
      comp=Z,2.0nm,0.7s,baz=90,slow=1.2,SNR=7.1
BOSA  Boshof           130.05 201  PFAKE           01 13 00.0 +5.7
BOSA                               LR      LR
      comp=Z,729nm,19.0s,MS5.4
RCBR  Riachuelo        131.52 116  PFAKE           01 13 10.0  +13
RCBR                               LR      LR
      comp=Z,2µm,19.0s,MS5.8
LBTB  Lobatse          133.21 204  PFAKE           01 13 10.0  +10
LBTB                               LR      LR
      comp=Z,1µm,19.0s,MS5.6
FINES FINESS Array B   134.82 347  PKP     PKPdf   01 13 00.0 -2.3
      comp=Z,0.6nm,0.7s,baz=127,slow=6.9,SNR=4.2
MOS   Moscow           135.98 335 ePKIKP   PKPdf   01 13 02.6 -2.0
MOS                               e                01 15 38.2
OBN   Obninsk          136.85 335 i PKIKP  PKPdf   01 13 04.5 -1.6
OBN                                pmax    pmax
      comp=Z,26nm,1.7s
OBN   Obninsk          136.85 335 ePKPdf   PKPdf   01 13 03.9 -2.2
OBN                                LR      LR
      comp=Z,147nm,20.0s,MS4.7
VSU   Vasula           137.33 345 ePKIKP   PKPdf   01 13 04.8 -2.2
KONO  Kongsberg        138.68 358  PFAKE           01 13 20.0  +11
KONO                               LR      LR
      comp=Z,854nm,19.0s,MS5.5
LSZ   Lusaka           140.53 214  PFAKE           01 13 20.0 +5.9
LSZ                                LR      LR
      comp=Z,948nm,20.0s,MS5.5
KIV   Kislovodsk       140.54 318 i PKIKP  PKPdf   01 13 11.2 -2.1
KIV   Kislovodsk       140.54 318 ePKP     PKPdf   01 13 11.3 -2.0
KIV                                LR      LR
      comp=Z,187nm,19.0s,MS4.9
GNI   Garni            140.81 312⇑iPKHKP   PKPdf   01 13 11.3 -2.6
GNI   Garni            140.81 312  PKP     PKPdf   01 13 11.5 -2.3
      comp=Z,0.9nm,0.3s,baz=8.4,slow=21,SNR=4.3
GNI   Garni            140.81 312 ePKPdf   PKPdf   01 13 11.6 -2.3
GNI                                LR      LR
      comp=Z,512nm,19.0s,MS5.3
TSUM  Tsumeb           141.24 196  PFAKE           01 13 20.0 +4.8
TSUM                               LR      LR
      comp=Z,1µm,20.0s,MS5.6
SUW   Suwalki          142.20 344 ePKP     PKPdf   01 13 10.2 -5.6
ESK   Eskdalemuir      142.29   9  PFAKE           01 13 30.0  +14
ESK                                LR      LR
      comp=Z,291nm,19.0s,MS5.1
SOC   Sochi            142.58 319 i PKIKP  PKPdf   01 13 14.9 -1.9
SOC                               e                01 16 17.7
SOC                               ePPP     PPP     01 19 26.7 -8.4
SOC                               eSSS     SSS     01 40 13.0 -6.3
SOC                                pmax    pmax
      comp=Z,65nm,1.4s
SOC                                pmax    pmax
      comp=N,32nm,1.0s
SOC                                pmax    pmax
      comp=E,51nm,1.3s
AKASG Malin Array Be   143.09 336  PKP     PKPdf   01 13 11.9 -5.5
      comp=E,0.3nm,0.3s,baz=38,slow=2.7,SNR=9.0
ANN   Anapa            143.27 323 i PKHKP          01 13 11.3
ANN                                pmax    pmax
      comp=Z,51nm,1.2s
BEST  Besiri           144.18 310 i P      PKPbc   01 13 17.8 +2.3
GKP   Gorka Klasztor   144.19 349 ePKP     PKPdf   01 13 15.9 -3.3
BSEG  Bad Segeberg     144.35 356 ePKHKP   PKPbc   01 13 16.0 +0.5
BSEG  Bad Segeberg     144.35 356 ePKPbc   PKPbc   01 13 16.0 +0.5
KMBO  Kilima Mbogo     144.37 240  PKP     PKPdf   01 13 19.1 -1.7
      comp=Z,26nm,1.1s,baz=94,slow=4.4,SNR=32
SIM   Simferopol’      145.03 325⇓iPKIKP   PKPdf   01 13 20.2 -0.8
SIM                                pmax    pmax
      comp=Z,35nm,0.9s
ELZG  Elazig           145.55 312 i P      PKPbc   01 13 22.6 +3.4
WIT   Witteveen        145.58   0⇑iPKP     PKPdf   01 13 20.9 -0.7
      comp=Z,269nm,0.9s
WIT   Witteveen        145.58   0⇑iPKP     PKPdf   01 13 20.9 -0.7
      comp=Z,269nm,0.9s
CMLA  Cha da Macela    145.75  49  PFAKE           01 13 30.0  +10
CMLA                               LR      LR
      comp=Z,255nm,22.0s,MS5.0
MALT  Malatya          146.03 312 ePKP2    PKPab   01 13 24.1 +1.3
KIS   Kishinev         146.16 333 ePKHKP           01 13 21.0
KWP   Kalwaria         146.25 341 ePKP     PKPdf   01 13 22.8 -0.2
WTSB  Winterswijk      146.43   0⇑iPKP     PKPdf   01 13 22.7 -0.5
      comp=Z,88nm,2.2s
WTSB  Winterswijk      146.43   0⇑iPKP     PKPdf   01 13 22.7 -0.5
      comp=Z,88nm,2.2s
CLZ   Clausthal        146.44 356 ePKPbc   PKPbc   01 13 23.2 +2.3
CLZ                               ePP              01 16 48.9
OJC   Ojcow            146.52 345 ePKP     PKPdf   01 13 23.6 +0.2
IAS   Iasi             146.55 334  PKP2    PKPab   01 13 23.2 -1.4
KSP   Ksiaz            146.69 349 ePKP     PKPdf   01 13 23.1 -0.5
KSP                               e                01 13 24.2
KSP                               e                01 13 44.6
KSP   Ksiaz            146.69 349 ePKP     PKPdf   01 13 23.6 -0.1
CLL   Collm            146.72 353⇑iPKP2    PKPab   01 13 23.9 -1.2
CLL                               i                01 13 26.5
CLL                                pmax    pmax
      comp=Z,77nm,1.2s
CLL   Collm            146.72 353⇑iPKP1    PKPbc   01 13 23.9 +2.4
CLL                               i *PPKP          01 13 26.5
CLL                               i                01 13 34.4
CLL                               i                01 13 44.0
CLL                               e                01 15 23.0
BOYT  Boyabat          146.74 320 i P      PKPbc   01 13 23.8 +1.9
KOLS  Kolonicke sedl   147.00 341 ePKP     PKPdf   01 13 26.3 +2.1
RAC   Raciborz         147.03 346 ePKPdf   PKPdf   01 13 24.6 +0.4
RAC                                MLR     MLR     02 25 42.1
      comp=Z,800nm,19.9s,MS5.5
BRG   Berggiesshubel   147.03 352 ePKP2    PKPab   01 13 24.5 -1.8
BRG                                pmax    pmax
      comp=Z,22nm,1.3s
BRG   Berggiesshubel   147.03 352 ePKP     PKPdf   01 13 24.5 +0.3
BRG                               i                01 13 46.2
BRG                               i                01 14 02.7
UPC   Upice            147.06 349 ePKP     PKPdf   01 13 23.3 -1.0
GZT   Gaziantep        147.07 311 i P      PKPdf   01 13 26.6 +1.9
NIE   Niedzica         147.12 344 ePKP     PKPdf   01 13 25.5 +1.1
DPC   Dobruska-Polom   147.15 349 ePKP     PKPdf   01 13 23.5 -0.9
DPC                                AMS     AMS     02 19 10.0
      comp=Z,1µm,19.9s
OKC   Ostrava-Krasne   147.27 346 ePKP     PKPdf   01 13 24.6  0.0
OKC                                AMS     AMS     02 31 00.0
      comp=Z,500nm,16.2s
CTKT  Corum            147.27 319 i P      PKPdf   01 13 17.5 -7.4
PVCC  Panska Ves       147.28 351 ePKP     PKPdf   01 13 22.9 -1.7
PVCC                               AMS     AMS     02 20 50.0
      comp=Z,800nm,18.0s
KAHT  Ahir Dag         147.43 312 i P      PKPdf   01 13 27.4 +2.1
MORC  Moravsky Berou   147.46 347 ePKHKP           01 13 24.0
MORC                              e                01 13 26.3
MOX   Moxa             147.53 354 ePKIKP   PKPdf   01 13 24.7 -0.3
MOX                                pmax    pmax
      comp=Z,127nm,2.0s
HGN   Heimansgroeve    147.62   1 ePKP     PKPdf   01 13 26.2 +1.0
      comp=Z,46nm,1.6s
HGN   Heimansgroeve    147.62   1 ePKP     PKPdf   01 13 26.2 +1.0
      comp=Z,46nm,1.6s
PRU   Pruhonice        147.81 351 ePKP     PKPdf   01 13 26.7 +1.2
PRU                                AMS     AMS     02 19 40.0
      comp=Z,700nm,20.1s
NKC   Novy Kostel      147.84 353 ePKP     PKPdf   01 13 27.3 +1.8
NKC                                AMS     AMS     02 27 00.0
      comp=Z,800nm,19.3s
CFR   Carcaliu         147.86 331 ⇑P       PKPdf   01 13 29.6 +3.9
KECS  Kecovo           147.93 343 ePKP     PKPdf   01 13 28.1 +2.4
VRI   Vrincioaia       147.95 333  PKIKP   PKPdf   01 13 28.1 +2.2
VRI   Vrincioaia       147.95 333⇑iP       PKPdf   01 13 27.8 +1.9
VRI   Vrincioaia       147.95 333⇑iP       PKPdf   01 13 27.8 +1.9
BRD   Bordesti         148.07 333 ⇓P       PKPdf   01 13 30.4 +4.3
CDAG  Cicekdag         148.10 317 i P      PKPdf   01 13 22.2 -4.1
VRAC  Vranov           148.10 348  PKP2    PKPab   01 13 28.8 -1.7
TNS   Taunus Mts       148.15 358 ePKIKP   PKPdf   01 13 27.9 +1.9
TNS   Taunus Mts       148.15 358 ePKPbc           01 13 27.9
ELDT  Eldivan          148.19 320 i P      PKPdf   01 13 29.1 +2.6
AVNT  Avonos           148.24 316 i P      PKPdf   01 13 25.1 -1.4
GIVF  Givet            148.25   2 ePKP1    PKPdf   01 13 27.4 +1.2
BAIF  Baives           148.27   3 ePKP1    PKPdf   01 13 27.5 +1.3
      comp=Z,244nm,1.8s
HARR  Harsova          148.33 331 ⇑P       PKPdf   01 13 30.3 +3.8
VYHS  Vyhne            148.36 345 i PKP    PKPdf   01 13 29.1 +2.7
COBT  Iskenderun       148.38 311 i P      PKPdf   01 13 29.6 +2.8
GRA1  Grafenberg Arr   148.50 355 ePKPbc   PKPdf   01 13 29.1 +2.5
GRA1                              ePP              01 17 01.1
GRF   Grafenberg Arr   148.50 355 ePKP2    PKPab   01 13 29.1 -3.1
GRF                               e                01 17 01.1
BRTR  Keskin Array B   148.51 318  PKP     PKPdf   01 13 25.5 -1.4
      comp=Z,8.0nm,0.8s,baz=63,slow=2.8,SNR=22
MLR   Muntele Rosu     148.58 334  PKP     PKPdf   01 13 25.3 -1.6
      comp=Z,18nm,1.3s,baz=57,slow=4.7,SNR=4.0
MLR                                PKPbc   PKPdf   01 13 29.4 +2.5
      comp=Z,13nm,1.0s,baz=341,slow=3.4,SNR=21
MLR   Muntele Rosu     148.58 334⇑iP       PKPdf   01 13 29.6 +2.7
PSZ   Piszkesteto      148.61 343  PKP2    PKPdf   01 13 29.8 +3.0
PSZ   Piszkesteto      148.61 343 ePKPbc   PKPdf   01 13 28.7 +1.9
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ISR	Istrita	148.62	333	⇑P	PKPdf	01 13 30.0	+3.0
SMOL	Smolenice	148.67	346	ePKP	PKPdf	01 13 30.1	+3.2
WLF	Walferdange	148.73	1	ePKIKP	PKPdf	01 13 28.9	+1.9
TOD	Tromm	148.75	358	PKHKP		01 13 25.5	
KHC	Kasperske Hory	148.78	351	d iPKIKP	PKPdf	01 13 29.2	+2.1
KHC	Kasperske Hory	148.78	351	ePKP	PKPdf	01 13 25.8	-1.3
KHC				ex	x	01 13 50.5	
KHC				AMS	AMS	02 19 10.0	
	comp=Z,700nm,18.1s						
SNX	Sinaia	148.87	334	PKP2	PKPab	01 13 31.2	-2.6
ANTO	Ankara	148.95	319	PKP2	PKPab	01 13 32.1	-2.3
ROSF	Rostrenen	148.96	13	ePKP1	PKPdf	01 13 29.1	+1.7
SGKT	Sivrigoynuk	148.98	321	i P	PKPdf	01 13 29.6	+2.0
VOIR		149.00	335	⇓P	PKPdf	01 13 31.4	+3.9
GEC2	GERESS Array S	149.04	351	ePKIKP	PKPdf	01 13 30.4	+2.9
GEC2	GERESS Array S	149.04	351	ePKPbc	PKPdf	01 13 30.4	+2.9
GERES	GERESS Array B	149.04	351	PKP	PKPdf	01 13 26.3	-1.2
	comp=Z,3.7nm,0.9s,baz=135,slow=2.8,SNR=7.6						
GERES				PKPbc	PKPdf	01 13 29.1	+1.6
	comp=Z,5.0nm,0.9s,slow=1.3,SNR=28						
ZST	Bratislava	149.04	347	i PKP	PKPdf	01 13 30.8	+3.3
KTD	Kalmit	149.06	358	PKHKP		01 13 26.7	
FLN	La Foliniere	149.06	9	ePKP1	PKPdf	01 13 29.0	+1.5
	comp=Z,33nm,0.9s						
BSTP	Nigde	149.17	315	i P	PKPdf	01 13 31.9	+3.8
SGMF	Saint Gilles	149.18	12	ePKP1	PKPdf	01 13 29.0	+1.3
GRR	Gorron	149.37	10	ePKP1	PKPdf	01 13 29.8	+1.8
	comp=Z,26nm,0.8s						
QUIF	Quistinic	149.38	13	ePKP1	PKPdf	01 13 30.2	+2.1
LANF	Langenberg	149.41	359	PKP	PKPdf	01 13 27.3	-0.8
HENT	Hendek	149.50	322	i P	PKPdf	01 13 31.8	+3.2
ASF	Jabal al Asfar	149.62	303	PKPbc	PKPdf	01 13 31.2	+2.2
	comp=Z,7.7nm,1.0s,baz=164,slow=1.7,SNR=15						
STR	Strasbourg	149.80	359	PKP	PKPdf	01 13 28.7	0.0
MEST	Erdemli	149.84	313	i P	PKPdf	01 13 32.2	+3.0
MEZF	Maizieres J'vi	149.86	2	ePKP1	PKPdf	01 13 31.7	+2.9
	comp=Z,276nm,1.9s						
MBAR	Mbarara	149.89	234	ePKIKP	PKPdf	01 13 27.6	-2.3
MBAR				e		01 13 33.1	
MBAR				e		01 13 39.0	
MBAR				MLR	MLR		
	comp=Z,196nm,20.0s,MS4.9						
MOA	Molln	149.93	350	⇑iP	PKPdf	01 13 28.1	-0.8
MOA				i		01 13 33.0	
WLS	Welschbruch	149.98	359	PKP	PKPdf	01 13 28.5	-0.5
CDF	Champ du Feu	149.98	359	ePKP1	PKPdf	01 13 31.9	+2.9
	comp=Z,193nm,1.8s						
FUR	Furstenfeldbru	150.01	354	ePKIKP	PKPdf	01 13 32.4	+3.3
FUR	Furstenfeldbru	150.01	354	ePKPbc	PKPdf	01 13 32.4	+3.3
BFO	Black Forest	150.04	358	ePKIKP	PKPdf	01 13 32.4	+3.3
BFO	Black Forest	150.04	358	ePKPbc		01 13 32.4	
BZS	Buzias	150.13	339	⇓PKIKP	PKPdf	01 13 33.2	+3.9
BZS	Buzias	150.13	339	PKIKP	PKPdf	01 13 33.6	+4.3
BZS	Buzias	150.13	339	⇑iP	PKPdf	01 13 33.0	+3.6
BZS	Buzias	150.13	339	⇑iP	PKPdf	01 13 33.0	+3.7
THEF	They Montfort	150.16	1	PKP	PKPdf	01 13 29.7	+0.4
KDHN	Kadinhani	150.17	318	i P	PKPdf	01 13 28.1	-1.5
ECH	Echery	150.18	360	PKP	PKPdf	01 13 29.3	0.0
ARSA	Arzberg	150.28	348	⇑iP	PKPdf	01 13 28.8	-0.7
ESKT	Eskisehir	150.36	320	i P	PKPdf	01 13 34.3	+4.4
HAU	Haudompre	150.39	1	ePKP1	PKPdf	01 13 32.7	+3.0
FELD	Feldberg	150.51	358	PKP	PKPdf	01 13 28.7	-1.1
MOF	Molkenrain	150.55	360	PKP	PKPdf	01 13 30.0	+0.1
HINF	Hinteralfeld	150.58	360	ePKP1	PKPdf	01 13 33.1	+3.2
KBA	Koelnbreinsper	150.82	351	⇑iP	PKPdf	01 13 29.3	-1.0
KBA				i		01 13 34.0	
MOTA	Moosalm	150.84	354	⇑iP	PKPdf	01 13 31.0	+0.7
MOTA				i		01 13 34.5	
WTTA	Wattenberg	150.87	353	⇑iP	PKPdf	01 13 29.7	-0.7
WTTA				i		01 13 34.8	
HYF	Humbligny	150.93	6	ePKP1	PKPdf	01 13 34.4	+3.9
BBS	Basel-Blauen	150.93	359	PKIKP	PKPdf	01 13 29.9	-0.6
PERS	Pernice	150.94	348	ePKPbc	PKPdf	01 13 34.4	+3.9
SQTA	Sankt Quirin	150.95	354	⇑iP	PKPdf	01 13 30.0	-0.5
SQTA				i		01 13 34.9	
ULDT	Uludag	150.96	323	i P	PKPdf	01 13 36.2	+5.4
DAVA	Damuels	151.00	356	⇑iP	PKPdf	01 13 30.8	+0.2
DAVA				i		01 13 35.3	
LOR	Lormes	151.03	4	ePKP1	PKPdf	01 13 34.2	+3.6
	comp=Z,222nm,1.8s						
LOMF	Lomont	151.05	360	PKP	PKPdf	01 13 30.4	-0.3
SSF	Saint Saulge	151.21	5	ePKP1	PKPdf	01 13 34.8	+3.9
	comp=Z,49nm,1.0s						
CSS	Prodhromos	151.21	310	ePKPbc	PKPdf	01 13 36.9	+5.5
MFF	Saint Martin d	151.22	10	ePKP1	PKPdf	01 13 34.3	+3.4
BEO	Belgrade	151.22	340	⇑iPKP	PKPdf	01 13 33.3	+2.3
AVF	Avril sur Loir	151.47	5	ePKP1	PKPdf	01 13 34.8	+3.5
	comp=Z,19nm,0.9s						
BOLS	Boljevac	151.55	337	⇑iPKP	PKPdf	01 13 29.4	-2.1
ISP	Isparta	151.59	318	c iPKIKP	PKPdf	01 13 35.7	+3.9
ISP	Isparta	151.59	318	ePKPbc	PKPdf	01 13 36.2	+4.5
TKTP	Tekketepe	151.59	319	i P	PKPdf	01 13 37.2	+5.4
LJU	Ljubljana	151.63	349	ePKPbc	PKPdf	01 13 36.5	+4.9
LJU	Ljubljana	151.63	349	ePKPdf	PKPdf	01 13 30.5	-1.1
LJU				ePKPbc	PKPdf	01 13 36.5	+4.9
SMF	Signal de Mont	151.65	4	ePKP1	PKPdf	01 13 35.3	+3.7
BGF	Bois d'Agland	151.65	6	ePKP1	PKPdf	01 13 35.6	+4.0
	comp=Z,21nm,0.8s						
VOY	Vojsko	151.75	350	ePKPdf	PKPdf	01 13 29.2	-2.6
CABF	La Chapelle	151.78	1	ePKP1	PKPdf	01 13 36.6	+4.8
SISC	Sisak	151.78	346	i PKP	PKPdf	01 13 27.9	-4.0
BTOK	Tokmak	151.84	324	i P	PKPdf	01 13 35.4	+3.3
TCF	Toulx Ste Croi	151.85	7	ePKP1	PKPdf	01 13 35.7	+3.8
	comp=Z,15nm,0.8s						
EIL	Elat	152.00	299	PKP	PKPdf	01 13 30.0	-2.6
	comp=Z,2.2nm,0.9s,baz=120,slow=4.7,SNR=3.1						
EIL				PKPbc	PKPdf	01 13 38.1	+5.4
	comp=Z,7.9nm,0.9s,baz=32,slow=3.9,SNR=8.5						
EIL	Elat	152.00	299	PKP	PKPdf	01 13 30.0	-2.6
EIL				ePKPbc	PKPdf	01 13 37.8	+5.1
EIL				PKPbc	PKPdf	01 13 38.1	+5.4
BOJS	Bojanci	152.00	347	ePKPdf	PKPdf	01 13 30.7	-1.5
BOJS				ePKPbc	PKPdf	01 13 37.8	+5.6
DIVS	Divcibare	152.02	340	⇑iPKP	PKPdf	01 13 31.0	-1.2
VTS	Vitosha	152.09	334	⇑PKIKP	PKPdf	01 13 38.5	+6.1
VTS	Vitosha	152.09	334	P	PKPdf	01 13 38.0	+5.6
AGO	Saint Agoulin	152.18	6	PKP	PKPdf	01 13 35.1	+2.7
PLDF	La Plantade	152.30	5	PKP	PKPdf	01 13 35.1	+2.5
PYM	Petit Puy Mans	152.47	6	PKP	PKPdf	01 13 35.0	+2.2
RJF	Les Rejaudoux	152.73	8	ePKP1	PKPdf	01 13 37.7	+4.5
	comp=Z,21nm,1.1s						
LPL	La Plagne	152.88	0	ePKP1	PKPdf	01 13 39.4	+6.0
LPG	La Plagne	152.90	0	ePKP1	PKPdf	01 13 39.6	+6.2
LFF	La Frestale	152.98	10	ePKP1	PKPdf	01 13 38.3	+4.8
NVLJ	Novalja	152.98	347	i Pn	PKPdf	01 13 35.8	+2.2
LBL	Lubilhac	153.00	6	PKP	PKPdf	01 13 35.8	+2.2
CAF	Calviac	153.18	7	ePKP1	PKPdf	01 13 39.0	+5.2
SKO	Skopje	153.33	335	ePKP	PKPdf	01 13 32.0	-2.1
SKO				i		01 13 52.0	
BNI	Bardonecchia	153.35	0	ePKIKP	PKPab	01 13 52.6	+0.1
ORIF	Oris-en-Rattie	153.47	1	ePKP1	PKPdf	01 13 40.2	+6.0
VIVF	Saint-Julien-l	153.48	3	ePKP1	PKPdf	01 13 40.0	+5.8
MBDF	Montbardon	153.67	0	ePKP1	PKPdf	01 13 40.0	+5.5
PRAF	Pradon	154.56	3	PKP	PKPdf	01 13 36.7	+1.0
TREF	Trevaresse	154.75	2	PKP	PKPdf	01 13 36.4	+0.4
TAVF	Tavernes	154.77	1	PKP	PKPdf	01 13 37.7	+1.7
FRF	La Foret Royal	154.84	0	ePKP1	PKPdf	01 13 40.5	+4.4
GELF	Grande-Etoile	154.99	2	PKP	PKPdf	01 13 37.7	+1.4
TIP	Timpagrande	157.50	339	ePKPdf	PKPdf	01 13 38.1	-1.7
TIP				ePKPab	PKPab	01 14 10.4	0.0
DBIC	Dimbokro	163.76	134	PFAKE		01 14 00.0	+13
DBIC				LR	LR		
	comp=Z,911nm,19.0s						

IDC 03 00:56:48.2±34.0, 0.76N×97.08E, mb3.9/4, mb1 4.0/4, mb1mx3.6/19, mbtmp3.9/4, Error ellipse: s-maj=675.9km s-min=126.3km az=169.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	47.59	8	P	P	01 05 25.8	-1.9
	0.8nm,0.7s,baz=188,slow=8.1,SNR=7.9						
MKAR	Makanchi Array	47.64	346	P	P	01 05 26.1	-2.0
	0.6nm,0.5s,baz=162,slow=9.0,SNR=7.6						
ZAL	Zalesovo	53.97	351	P	P	01 06 13.6	-2.4
	0.7nm,0.3s,baz=313,slow=7.7,SNR=3.9						
BVAR	Borovoye Array	56.63	341	P	P	01 06 32.9	-2.5
	0.4nm,0.4s,baz=135,slow=8.4,SNR=4.0						

IDC 03 01:04:15.5±61.0, 0.12S×98.31E, mb4.0/3, mb1 4.1/3, mb1mx3.6/18, mbtmp4.0/3, Error ellipse: s-maj=1194.0km s-min=155.1km az=173.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	48.28	7	P	P	01 12 58.5	-1.9
	0.3nm,0.4s,baz=191,slow=9.3,SNR=3.5						
MKAR	Makanchi Array	48.79	345	P	P	01 13 02.3	-2.0
	1.2nm,0.5s,baz=163,slow=8.2,SNR=8.4						
ZAL	Zalesovo	55.03	350	P	P	01 13 48.6	-2.5
	1.6nm,0.4s,baz=211,slow=1.7,SNR=5.1						

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*OMAN **03** 01:05:03.8, 32.93N×57.52E, Error ellipse: s-maj=698.8km s-min=15.0km az=357.0*

*THR **03** 01:05:58.3±0.5, 28.91N×57.36E, h14^{km}±6^{km}, ML3.7*

*CSEM **03** 01:05:59.4±0.1, 28.90N×57.37E, h20^{km}, ML3.7, Error ellipse: s-maj=3.6km s-min=2.1km az=72.0*

*TEH **03** 01:06:01.4, 28.91N×57.36E, h10^{km}, Mn3.7*

ISC 03 01:05:58.7±0.6, 28.92N±0.04×57.42E±0.08, h14^{km}, n24, σ0^{s}96/24, mb3.3/1, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	1.20	332	ePG	Pn	01 06 20.4	-0.7
KRBR				eSG	Sn	01 06 37.1	0.0
BNDS	Bandar-Abbas	1.87	216	ePG	Pn	01 06 31.9	+1.2
BNDS				AML	AML	01 07 04.6	
	comp=E,834nm,0.4s						
ZHSF	Zahedan	3.01	76	ePN	Pn	01 06 48.5	+1.5
IBAF	Bafgh	3.10	329	Pn	Pn	01 06 49.7	+1.5
BANOM	Banah	3.15	199	P	Pn	01 06 48.7	-0.2
	SNR=9.2						
IMEH	Mehriz	3.46	316	Pn	Pn	01 06 54.6	+1.4
IPAR	Pars	3.92	285	Pn	Pn	01 07 00.3	+0.5
GHIR	Ghir-Karzin	3.95	262	ePN	Pn	01 06 59.9	-0.3
GHIR				AML	AML	01 08 08.2	
	comp=N,93nm,0.4s						
IMOK	Mook	4.12	273	Pn	Pn	01 07 03.3	+0.6
ICHK	Chekchek	4.21	323	Pn	Pn	01 07 04.7	+0.8
ASHO	Ashiyiah	4.39	196	P	Pn	01 07 07.0	+0.4
	SNR=34						
HOQ	Hoqain	5.32	181	P	Pn	01 07 18.4	-1.2
	SNR=9.7						
IGAR	Garneh	5.59	308	Pn	Pn	01 07 23.8	+0.4
ARQ	Araqi	5.62	188	P	Pn	01 07 23.8	-0.1
	SNR=10						
IZEF	Zefreh	5.90	313	Pn	Pn	01 07 23.8	-4.0
BSY	Bisya	6.16	182	P	Pn	01 07 31.8	+0.4
	SNR=12						
BSYO	Bisya	6.17	182	P	Pn	01 07 31.8	+0.2
	SNR=12						
WBK	Wadi Bani Khal	6.44	167	P	Pn	01 07 34.2	-1.2
	SNR=10						
IKLH	Kalahroud	6.65	313	Pn	Pn	01 07 37.7	-0.7
IVRN	Varamin	7.75	323	Pn	Pn	01 07 53.0	-0.8
IFIR	Firoozkooh	7.78	331	Lg		01 10 03.2	
IFIR	Firoozkooh	7.78	331	Pn	Pn	01 07 53.1	-1.1
IDMV	Damavand	8.05	327	Pn	P	01 07 57.1	-0.9
NB2	NORSAR Subarra	44.31	330	P	P	01 14 06.6	-2.9
	comp=N,0.4nm,0.6s,mb3.3,baz=114,slow=7.4						

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*ATH **03** 01:19:06.7, 39.01N×21.63E, h16^{km}±2^{km}, MD3.7/14, ML3.5*

*MOS **03** 01:19:06.3±1.2, 38.99N×21.58E, h10^{km}, mb3.8/1, Error ellipse: s-maj=14.7km s-min=9.0km az=85.5*

*NEIC **03** 01:19:06.7, 39.01N×21.63E, h16^{km}, ML3.6(ATH), After ATH.*

*IDC **03** 01:19:10.8±3.2, 38.96N×21.42E, h36^{km}±24^{km}, mb3.5/7, mb1 3.6/11, mb1mx3.4/28, mbtmp3.6/11, ML3.3/4, MS3.5/1, Ms1 3.5/1, ms1mx3.2/25, Error ellipse: s-maj=36.7km s-min=18.1km az=48.0*

*CSEM **03** 01:19:10.9±0.1, 39.04N×21.67E, h42^{km}±1^{km}, ML3.6, Error ellipse: s-maj=2.2km s-min=1.7km az=34.0*

*THE **03** 01:19:11.4, 39.04N×21.72E, h20^{km}, ML3.6*

ISC 03 01:19:07.0±0.3, 39.01N±0.03×21.62E±0.03, h10^{km}, n57, σ1^{s}20/67, mb3.6/7, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.17	121	⇑iPB	Pb	01 19 10.8	-1.0
EVR				eSB	Sb	01 19 13.9	-1.1
AGG	Agios Georgios	0.56	88	ePg	Pg	01 19 21.5	+3.3
AGG				eSg	Sg	01 19 27.9	+2.1
LKD	Levkas	0.81	249	ePg	Pg	01 19 27.6	+4.2
MEV	Metsovon	0.83	339	ePg	Pg	01 19 26.7	+3.0
JAN	Janina	0.88	318	ePB	Pb	01 19 23.2	-0.7
JAN				eSN	Sn	01 19 36.4	-1.7
RLS	Riolos of Patr	0.95	187	ePN	Pn	01 19 25.1	-1.2
IGT	Igoumenitsa	1.13	298	ePg	Pg	01 19 31.4	+1.9
LKR	Lokris	1.14	108	ePN	Pn	01 19 27.7	-1.2
VLS	Valsamata	1.16	224	ePB	Pb	01 19 28.0	-0.6
VLS				eSN	Sn	01 19 45.9	+0.8
VLS	Valsamata	1.16	224	eP	Pb	01 19 27.6	-1.0
VLS				eSn	Sn	01 19 45.9	+0.8
XOR	Xorichti	1.27	73	ePg	Pg	01 19 31.4	-1.1
LIT	Litokhoron	1.28	31	ePg	Pg	01 19 32.1	-0.6
NEO	Neokhori	1.28	76	ePN	Pn	01 19 31.2	+0.2
NEO				eSN	Sn	01 19 48.8	+0.4
KZN	Kozani	1.30	5	ePN	Pn	01 19 30.7	-0.6
LSK	Leskovik	1.39	326	ePn	Pn	01 19 33.3	+0.8
LSK				i Sn	Sn	01 19 56.8	+5.8
SRN	Sarande	1.52	305	ePn	Pn	01 19 36.8	+2.3
SRN				i Sn	Sn	01 19 58.2	+3.7
MGER	Gerania Oros	1.64	128	ePN	Pn	01 19 37.2	+1.0
AOS	Alonnisos	1.77	84	ePb	Pb	01 19 38.5	-0.7
FNA	Florina	1.78	354	ePb	Pb	01 19 39.5	+0.1
NSAL	Nisos Salamina	1.82	127	ePN	Pn	01 19 40.0	+1.3
ITM	Ithomi	1.84	172	ePN	Pn	01 19 40.2	+1.2
PAIG	Paliouri	1.84	59	ePb	Pb	01 19 39.8	-0.6
MPAR	Parnis Oros	1.87	117	ePN	Pn	01 19 40.5	+1.1
NAIG	Nisos Aigina	1.93	130	ePN	Pn	01 19 41.5	+1.2
ATH	Athens Observa	1.94	121	ePB	Pb	01 19 40.4	-1.7
PLG	Polygyros	1.96	45	ePB	Pb	01 19 40.0	-2.4
PTL	Penteli	2.01	118	ePN	Pn	01 19 42.5	+1.1
GRG	Griva	2.04	17	ePn	Pn	01 19 43.0	+1.1
OHR	Ohrid	2.19	344	i Sn	Sn	01 20 18.4	+6.9
SOH	Sokhos	2.25	36	ePn	Pn	01 19 45.3	+0.4
OUR	Ouranopolis	2.25	53	ePn	Pn	01 19 45.9	+1.0
VLI	Veliai	2.51	155	ePN	Pn	01 19 49.3	+0.7
QSH	Qafa e Shtames	2.83	333	ePn	Pn	01 19 57.2	+4.0
QSH				i Sn	Sn	01 20 33.3	+5.6
QSH	Qafa e Shtames	2.83	333	i Pn	Pn	01 19 57.3	+4.1
SKO	Skopje	2.96	357	i Pn	Pn	01 19 58.5	+3.4
TIP	Timpagrande	3.79	274	ePn	Pn	01 20 06.3	-0.4
TIP	Timpagrande	3.79	274	ePn	Pn	01 20 06.3	-0.4
ALN	Alexandroupoli	3.89	60	ePn	Pn	01 20 08.3	+0.1
SG1	Sgolgore (BA)	4.21	297	ePn	Pn	01 20 12.5	-0.3
IDI	Anoyia	4.54	144	Pn	Pn	01 20 18.3	+0.9
	0.4nm,0.3s,baz=319,slow=11,SNR=4.3						
IDI				Sn	Sn	01 21 09.3	-1.7
	0.6nm,0.3s,baz=327,slow=17,SNR=2.1						
CDT	Castel del Mon	4.59	298	ePn	Pn	01 20 16.8	-1.4
MS1	Monte Sant'Ang	5.10	304	ePn	Pn	01 20 24.6	-0.8
BBLS	Bajina Basta -	5.13	342	⇑iP/Pn	Pn	01 20 25.7	-0.1
VAE	Valguarnera	5.87	257	Sn	Sn	01 21 48.8	+4.3
	0.6nm,0.3s,baz=113,slow=15,SNR=3.6						
VAE				LR	LR	01 23 09.8	
	comp=Z,467nm,20.5s,baz=271,slow=42						
CII	Carovilli	6.21	298	ePn	Pn	01 20 41.3	+0.3
	16nm,0.5s						
CII	Carovilli	6.21	298	ePn	Pn	01 20 41.3	+0.3
	16nm,0.5s						
MLR	Muntele Rosu	7.23	25	Pn	Pn	01 20 57.0	+1.6
	0.5nm,0.3s,baz=279,slow=6.5,SNR=11						
BRTR	Keskin Array B	9.34	82	Pn	P	01 21 24.2	-0.5
	0.2nm,0.3s,baz=265,slow=12,SNR=7.7						
GERES	GERESS Array B	11.36	332	Pn	P	01 21 51.5	-0.9
	0.1nm,0.3s,baz=155,slow=14,SNR=2.2						
HFS	Hagfors	21.73	349	P	P	01 23 58.6	-1.5
	1.5nm,0.5s,mb3.7,baz=164,slow=11,SNR=9.7						
FINES	FINESS Array B	22.63	6	P	P	01 24 09.4	+0.4
	0.6nm,0.8s,mb3.1,baz=180,slow=9.7,SNR=3.3						
NOA	NORSAR Array B	22.99	347	P	P	01 24 12.2	-0.4
	1.5nm,0.7s,mb3.5,baz=157,slow=9.1,SNR=8.2						
ARCES	ARCESS Array B	30.66	3	P	P	01 25 21.3	-2.1
	1.0nm,0.8s,mb3.7,baz=201,slow=10,SNR=5.8						
BVAR	Borovoye Array	35.93	51	P	P	01 26 08.7	-0.5
	0.4nm,0.5s,mb3.6,baz=34,slow=5.3,SNR=3.7						
MKAR	Makanchi Array	44.14	59	P	P	01 27 17.2	+0.1
	0.8nm,0.5s,mb3.7,baz=274,slow=8.3,SNR=5.5						
MKAR	Makanchi Array	44.14	59	P	P	01 27 17.2	0.0
ZAL	Zalesovo	44.49	49	P	P	01 27 19.3	-0.6
	2.9nm,0.5s,mb4.3,baz=202,slow=7.3,SNR=10						

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*NEIC **03** 01:29:59.2, 32.54S×71.72W, h25^{km}, ML2.7(GUC), After GUC.*

GUC 03 01:29:59.2±0.9, 32.54S×71.72W, h25^{km}±6^{km}, MD3.6, ML2.7, 4C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	Papudo	0.24	90	⇓iP	Pb	01 30 06.0	+0.7
PACH				i S	Sb	01 30 10.0	+0.5
ROCH	El Roble	0.74	126	⇑iP	Pb	01 30 13.1	-0.2
ROCH				i S	Sb	01 30 23.5	+0.6
LCCH	Las Cruces	0.94	172	eP	Pb	01 30 16.2	-0.6
LCCH				i S	Sb	01 30 28.1	-0.7
JACH	Jahuel	0.96	99	⇑iP	Pb	01 30 16.6	-0.5
JACH				i S	Sb	01 30 29.6	+0.2
PEL	Peldehue	1.06	125	i S	Sb	01 30 32.7	+0.4
PEL				AMP		01 30 34.1	
	comp=N,374nm,0.3s						
RCDM	Rinconada Maip	1.22	141	⇓iP	Pn	01 30 20.7	-0.2
RCDM				i S	Sn	01 30 36.2	-0.5
RCDM				AMP		01 30 37.2	
	comp=E,324nm,0.1s						
TACH	Talagante	1.29	150	eP	Pn	01 30 21.9	0.0
TACH				i S	Sn	01 30 38.0	-0.5
CLCH	Cerro Calan	1.31	131	eP	Pn	01 30 22.5	+0.3
CLCH				i S	Sn	01 30 39.6	+0.6
CLCH				AMP		01 30 43.6	
	comp=E,134nm,0.5s						
ANTU	Antumapu	1.37	139	i S	Sn	01 30 41.3	+0.7
ANTU				AMP		01 30 45.9	
	comp=N,195nm,0.4s						
FCH	Farellones	1.44	124	⇑iP	Pn	01 30 24.2	+0.2
FCH				i S	Sn	01 30 43.4	+1.2
FCH				AMP		01 30 43.9	
	comp=E,169nm,0.2s						
LNV	Longovilo	1.44	170	i S	Sn	01 30 42.0	-0.2
PCH	Pirque	1.48	137	i P	Pn	01 30 24.9	+0.3
PCH				i S	Sn	01 30 43.9	+0.6
CMCH	Combarbala	1.49	24	⇑iP	Pn	01 30 24.6	-0.2
CMCH				i S	Sn	01 30 44.1	+0.5
CMCH				AMP		01 30 48.4	
	comp=E,535nm,0.5s						
CHCH	Chadas Angostu	1.65	148	eP	Pn	01 30 27.1	-0.1
CHCH				i S	Sn	01 30 49.1	+1.4
LMEL	Las Melosas	1.82	136	⇓iP	Pn	01 30 30.3	+0.8
LMEL				i S	Sn	01 30 54.8	+2.8
LMEL				AMP		01 30 56.5	
	comp=N,141nm,0.2s						
CACH	El Canelo	1.83	150	eP	Pn	01 30 31.0	+1.3
CICH	Cipreses	2.08	149	eP	Pn	01 30 34.2	+0.9

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*JMA **03** 01:48:47.1, 34.18N×135.13E, h6^{km}±1^{km}, M3.5 Broadband fault plane solution: P waves. NP1:φs202°, δ41°, λ110°. NP2:φs356°, δ52°, λ74°. Principal axes: T Plg76°, Azm211°; N Plg13°, Azm7°; P Plg6°, Azm98°;*

JMA Felt II J1.

*NEIC **03** 01:48:50.9±1.1, 34.07N×135.16E, h39^{km}±13^{km} Error ellipse: s-maj=18.0km s-min=10.5km az=147.0*

*IDC **03** 01:48:50.8±3.1, 34.08N×135.17E, h38^{km}±30^{km}, mb3.2/4, mb1 3.5/7, mb1mx3.3/26, mbtmp3.6/7, ML3.3/3, Error ellipse: s-maj=28.2km s-min=22.1km az=66.0*

ISC 03 01:48:46.8±0.6, 34.16N±0.03×135.12E±0.04, h12^{km}±4^{km}, n16, σ0^{s}76/26, mb3.4/4, 5D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAJ2	Tsuna	0.33	323	⇓P	Pg	01 48 53.5	-0.2
JAJ2				S	Sg	01 48 58.1	-0.2
JWM	Minabe	0.36	148	⇓P	Pg	01 48 54.7	+0.3
JWM				S	Sg	01 48 59.8	+0.4
JWY	Kouya	0.39	81	⇓P	Pg	01 48 54.3	-0.7
JWY				S	Sg	01 49 00.1	-0.3
JAI	Aioi	0.67	237	⇓P	Pb	01 48 59.9	0.0
JAI				S	Sb	01 49 09.4	+0.5
JHE	Heguri	0.68	43	⇓P	Pb	01 48 59.8	-0.4
JHE				S	Sb	01 49 08.7	-0.5
JKS	Kasai	0.85	344	P	Pb	01 49 03.4	+0.2
JKS				S	Sb	01 49 14.2	-0.2
MAJO	Matsushiro	3.47	46	ePn	Pn	01 49 43.0	+1.2
MAT	Matsushiro	3.47	46	P	Pn	01 49 43.0	+1.2
MAT				eS	Sn	01 50 24.0	+0.7
MAT	Matsushiro	3.47	46	P	Pn	01 49 42.6	+0.8
MAT				S	Sn	01 50 24.0	+0.7
MJAR	Matsushiro Arr	3.47	46	Pn	Pn	01 49 43.0	+1.1
	2.4nm,0.3s,baz=249,slow=17,SNR=11						
MJAR				Sn	Sn	01 50 31.5	+8.2
	1.1nm,0.3s,baz=188,slow=20,SNR=4.1						
JNU	Nakatsue	3.69	255	Pn	Pn	01 49 45.5	+0.5
	2.6nm,0.3s,baz=46,slow=9.6,SNR=11						
JNU				Sn	Sn	01 50 42.4	+14
	baz=227,slow=41,SNR=1.8						
JHJ	Hachijo jima 2	4.02	104	Pn	Pn	01 49 49.2	-0.5
	12nm,0.3s,baz=31,slow=24,SNR=4.8						
SONM	Songino Array	25.45	311	P	P	01 54 16.4	+0.3
	0.5nm,0.7s,mb3.2,baz=132,slow=9.3,SNR=3.8						
WRA	Warramunga Arr	53.80	181	P	P	01 58 10.2	-1.6
	0.8nm,0.7s,mb3.7,baz=355,slow=7.5,SNR=5.3						
ASAR	Alice Springs	57.51	181	P	P	01 58 34.8	-3.7
	0.2nm,0.5s,mb3.4,baz=10,slow=12,SNR=2.5						
FINES	FINESS Array B	68.89	331	P	P	01 59 51.6	-1.5
	0.3nm,0.6s,mb3.4,baz=76,slow=5.7,SNR=2.9						

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*SOF **03** 01:51:54.0, 40.39N×26.05E, h2^{km}, MD3.7*

*ATH **03** 01:51:57.0, 40.41N×26.01E, h30^{km}±1^{km}, MD3.8/10, ML3.9*

*ISK **03** 01:51:57.9, 40.40N×26.13E, h18^{km}, MD3.6*

*CSEM **03** 01:51:57.3±0.1, 40.40N×26.05E, h20^{km}, MD3.6, Error ellipse: s-maj=1.6km s-min=1.3km az=20.0*

*NEIC **03** 01:51:57.0, 40.41N×26.01E, h30^{km}, ML3.9(ATH), After ATH.*

*THE **03** 01:51:58.0, 40.37N×26.07E, h20^{km}, ML3.9*

ISC 03 01:51:56.4±0.5, 40.41N±0.02×26.00E±0.02, h11^{km}±4^{km}, n110, σ0^{s}88/127, 22C-8D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALN	Alexandroupoli	0.49	4	ePg	Pg	01 52 07.7	+1.3
BOZC	Bozcaada	0.57	176	i P	Pb	01 52 08.7	+0.8
BOZC				i S	Sb	01 52 16.5	+0.9
LPK	Lapseki	0.58	93	i PG	Pg	01 52 08.7	+0.5
LPK				i SG	Sg	01 52 14.6	-1.5
EZN	Ezine	0.63	157	i PG	Pg	01 52 09.5	+0.3
LIA	Limnos Island	0.81	231	⇑iPN	Pn	01 52 13.2	-0.3
LIA				eSN	Sn	01 52 24.8	-0.6
RDO	Rodhopi	0.82	335	⇓iPN	Pn	01 52 13.6	0.0
RDO				eSN	Sn	01 52 24.6	-1.1
LOS	Limnos	0.85	236	ePg	Pg	01 52 14.1	+0.6
MFT	Murefte	1.05	68	i PG	Pg	01 52 16.6	-0.8
MFT				i SG	Sg	01 52 31.1	-0.3
PRK	Paraskevi	1.18	170	⇑iPN	Pn	01 52 19.3	+0.5
PRK				eSN	Sn	01 52 35.0	+0.1
AYVA	Ayvalik	1.22	154	i P	Pb	01 52 20.2	+1.2
AYVA				i S	Sb	01 52 35.9	+1.3
MRMT	Marmara Adasi	1.23	80	i PN	Pn	01 52 18.5	-1.1
MRMT				i SN	Sn	01 52 34.3	-2.0
KDZ	Kurdzhali	1.32	341	i P	Pb	01 52 21.5	+0.8
EDC	Edincik	1.43	92	i PN	Pn	01 52 22.9	+0.6
BNT	Bandirma	1.47	91	PN	Pn	01 52 23.3	+0.4
OUR	Ouranopolis	1.54	268	ePg	Pg	01 52 24.0	-3.3
EDRB	Edirne	1.54	21	PN	Pn	01 52 24.5	+0.5
RZN	Rozhen	1.61	323	i P	Pn	01 52 25.7	+0.8
BALB	Balikesir	1.64	117	PN	Pn	01 52 25.8	+0.5
DIM	Dimitrovgrad	1.68	348	i P	Pn	01 52 27.3	+1.3
BTOK	Tokmak	1.69	112	i P	Pn	01 52 26.1	0.0
KCT	Karacabey	1.81	94	PN	Pn	01 52 28.2	+0.4
PAIG	Paliouri	1.84	256	ePb	Pb	01 52 28.0	-1.7
PAIG				eSb	Sb	01 52 50.9	-1.8
NVR	Nevrokopi	1.88	301	⇓iPB	Pb	01 52 29.3	-0.9
PLG	Polygyros	1.95	270	⇓iPN	Pn	01 52 29.8	-0.1
PLD	Plovdiv	1.96	330	i P	Pn	01 52 31.0	+1.0

CTT	Catalca	1.99	67	PN	Pn	01 52 29.7	-0.7
AOS	Alonnisos	2.05	234	*e*Pn	Pn	01 52 30.6	-0.7
SOH	Sokhos	2.06	282	*e*Pn	Pn	01 52 31.5	+0.2
MMB	Musomiste	2.09	305	*i* P	Pn	01 52 32.0	+0.2
URLA	Izmir	2.10	167	*i* P	Pn	01 52 32.1	+0.2
URLA	Izmir	2.10	167	*i* P	Pn	01 52 32.1	+0.2
URLA				*i* S	Sn	01 52 56.8	-1.4
JMB	Yambol	2.10	12	*i* P	Pn	01 52 32.5	+0.4
DST	Dursunbey	2.17	111	PN	Pn	01 52 33.6	+0.6
BLCB	Balcova	2.17	158	*e*PN	Pn	01 52 33.2	+0.1
KDAG	Bornova	2.23	153	*i* P	Pn	01 52 34.9	+1.0
IZM	Izmir	2.23	154	PN	Pn	01 52 34.0	+0.1
ORLT	Orhaneli	2.25	98	PN	Pn	01 52 34.5	+0.4
THE	Thessaloniki	2.32	277	*e*Pn	Pn	01 52 35.1	-0.1
XOR	Xorichti	2.40	245	*e*Pn	Pn	01 52 35.2	-1.1
ISK	Istanbul-Kandi	2.42	73	PN	Pn	01 52 35.6	-0.9
PGB	Panagyurishte	2.55	328	*i* P	Pn	01 52 40.0	+1.6
YLV	Yalova	2.58	85	*e*PN	Pn	01 52 37.9	-0.9
KKB	Krupnik	2.64	304	*i* P	Pn	01 52 40.0	+0.3
LIT	Litokhoron	2.70	265	*e*Pn	Pn	01 52 40.1	-0.5
MANT	Manisa	2.75	133	*i* P	Pn	01 52 41.9	+0.5
VAY	Valandovo	2.76	290	*e*Pn	Pn	01 52 42.2	+0.8
VAY				⇑*i*		01 52 49.2	
VAY				*e*Sn	Sn	01 53 18.8	+3.8
VAY				*i*		01 53 26.9	
VAY	Valandovo	2.76	290	*e*Pn	Pn	01 52 42.2	+0.8
VAY				*e*Sn	Sn	01 53 18.8	+3.8
SMG	Samos	2.77	166	*e*PN	Pn	01 52 41.7	+0.1
GRG	Griva	2.79	283	*e*Pn	Pn	01 52 41.9	+0.1
HRT	Hereke	2.82	80	*e*PN	Pn	01 52 41.2	-1.1
PVL	Pavlikeni	2.85	350	*i* P	Pn	01 52 42.0	-0.7
SZH	Strazhica	2.86	359	*i* P	Pn	01 52 43.5	+0.7
LKR	Lokris	2.91	234	*e*PN	Pn	01 52 42.9	-0.7
PRD	Provadia	2.98	20	P	Pn	01 52 43.5	-1.1
GDZ	Gediz	2.99	115	*i* P	Pn	01 52 45.5	+0.8
ATH	Athens Observa	3.01	217	*e*PN	Pn	01 52 45.5	+0.5
VTS	Vitosha	3.03	317	⇓P	Pn	01 52 46.1	+0.9
VTS	Vitosha	3.03	317	⇓P	Pn	01 52 46.1	+0.9
AYDN	Tasoluk	3.11	151	*i* P	Pn	01 52 46.3	-0.1
AGG	Agios Georgios	3.15	245	*e*Pn	Pn	01 52 46.6	-0.3
KZN	Kozani	3.23	270	*e*PN	Pn	01 52 48.6	+0.4
GPA	Golpazari	3.30	91	*e*PN	Pn	01 52 49.3	+0.3
KHL	Karahalli	3.43	126	*e*PN	Pn	01 52 51.2	+0.2
ALT	Altintas	3.44	112	PN	Pn	01 52 51.5	+0.3
BODT	Bodrum	3.49	163	*e*PN	Pn	01 52 52.2	+0.3
BDRM	Kayabasi	3.52	161	*i* P	Pn	01 52 51.5	-0.7
FNA	Florina	3.54	278	*e*Pn	Pn	01 52 52.7	+0.2
DENT	Denizli	3.55	137	*e*PN	Pn	01 52 52.4	-0.2
DNZL	Cakiroluk	3.60	138	*i* P	Pn	01 52 53.1	-0.3
PSN	Preselentsi	3.65	26	P	Pn	01 52 53.0	-1.1
HENT	Hendek	3.75	82	*i* P	Pn	01 52 54.4	-1.1
SKO	Skopje	3.78	296	*e*Pn	Pn	01 53 02.0	+6.1
SKO	Skopje	3.78	296	*e*Pg	Pn	01 53 01.5	+5.6
SKO				*i* Sg	Pg	01 53 11.6	-0.3
ESKT	Eskisehir	3.83	102	PN	Pn	01 52 57.2	+0.6
ESKT	Eskisehir	3.83	102	*i* P	Pn	01 52 57.0	+0.4
ZAPS	Zavoj/Pirot	3.84	320	⇑*i*Pn	Pn	01 52 57.1	+0.4
ZAPS				Sn	Sn	01 53 43.0	+0.8
BARS	Barje	3.95	309	⇑*i*Pn	Pg	01 53 13.1	-2.2
BARS				Sn	Sn	01 53 46.5	+1.3
MDU	Mudurnu	3.98	87	*e*PN	Pn	01 52 58.5	-0.3
TKTP	Tekketepe	4.10	124	*i* P	Pn	01 53 00.6	+0.1
ISP	Isparta	4.34	125	*e*Pn	Pn	01 53 03.8	-0.1
FETY	Fethiye	4.47	146	*e*PN	Pn	01 53 05.8	0.0
ARG	Arkhangelos	4.51	158	*e*PN	Pn	01 53 06.5	+0.3
HARR	Harsova	4.51	18	⇑*i*P	Pn	01 53 06.0	-0.3
HARR	Harsova	4.51	18	⇑*i*P	Pn	01 53 06.1	-0.2
BOLS	Boljevac	4.55	320	⇓*i*Pn	Pn	01 53 06.9	0.0
BOLS				Sn	Sn	01 53 59.8	-0.7
SGKT	Sivrigoynuk	4.62	86	*i* P	Pn	01 53 07.2	-0.7
ISR	Istrita	4.73	5	⇓P	Pn	01 53 12.4	+3.0
KIZT	Kizilcal	4.79	107	*e*PN	Pn	01 53 10.7	+0.5
SNX	Sinaia	4.96	356	⇑P	Pn	01 53 14.4	+1.7
SNX	Sinaia	4.96	356	⇑P	Pn	01 53 14.4	+1.8
CFR	Carcaliu	5.02	18	⇑*i*P	Pn	01 53 12.7	-0.8
CFR	Carcaliu	5.02	18	⇑*i*P	Pn	01 53 12.7	-0.8
VOIR		5.08	352	⇑P	Pn	01 53 15.0	+0.7
VOIR		5.08	352	⇑P	Pn	01 53 15.0	+0.7
MLR	Muntele Rosu	5.08	360	⇑*i*P	Pn	01 53 16.8	+2.4
KDHN	Kadinhani	5.09	110	*i* P	Pn	01 53 14.7	+0.1
BRD	Bordesti	5.20	8	⇓P	Pn	01 53 17.9	+1.9
TLCR		5.21	23	*i* P	Pn	01 53 14.6	-1.5
TLCR		5.21	23	⇑*i*P	Pn	01 53 14.6	-1.5
GRUS	Gruza	5.25	313	⇑*i*Pn	Pn	01 53 16.0	-0.8
GRUS				Sn	Sn	01 54 16.7	-1.2
VRI	Vrincioaia	5.48	5	⇑*i*P	Pn	01 53 21.2	+1.2
VRI	Vrincioaia	5.48	5	⇑*i*P	Pn	01 53 21.3	+1.3
VRI	Vrincioaia	5.48	5	⇑*i*P	Pn	01 53 21.2	+1.2
KONT	Konya--Tatoy	5.52	114	*e*PN	Pn	01 53 20.4	-0.2
DIVS	Divcibare	5.79	312	*i*	Sg	01 55 04.5	-4.5
BBLS	Bajina Basta -	6.00	307	⇑*i*Pn	Pn	01 53 27.1	-0.2
BBLS	Bajina Basta -	6.00	307	Pn	Pn	01 53 27.0	-0.3
KAMT	Kaman	6.02	97	*e*PN	Pn	01 53 26.9	-0.8
BZS	Buzias	6.12	330	⇑*i*P	Pn	01 53 27.5	-1.5
BZS	Buzias	6.12	330	⇑*i*P	Pn	01 53 27.5	-1.5

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*CSEM **03** 01:56:34.2±0.9, 38.63N×28.54W, h0^{km}±9^{km}, ML1.7, Error ellipse: s-maj=3.8km s-min=2.6km az=36.0, After PDA*

*PDA **03** 01:56:34.2±0.9, 38.63N×28.54W, h0^{km}±9^{km}, MD2.9, ML1.7, Error ellipse: s-maj=3.8km s-min=2.6km az=36.0*

SVSA 03 01:56:34.2±0.9**, 38.63N×28.54W, h0**^{km}±9^{km}**, MD2.9, ML1.7, Error ellipse: s-maj=3.8km s-min=2.6km az=36.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	Cedros	0.12	267	*i* P	Pg	01 56 36.5	-0.2
PCED				*e*S	Sg	01 56 38.8	+0.5
	40nm,0.2s						
PCED	Cedros	0.12	267	*e*S	Sg	01 56 38.8	+0.5
	40nm,0.2s						
HOR	Horta	0.13	212	*e*P	Pg	01 56 36.4	-0.3
HOR				*e*S	Sg	01 56 38.5	+0.1
CALA	Caldeira	0.13	247	*e*P	Pg	01 56 37.0	+0.1
CALA				*e*S	Sg	01 56 39.3	+0.6
PICO	Pico	0.16	145	*i* P	Pg	01 56 37.4	0.0
PICO				*e*S	Sg	01 56 40.1	+0.5
PICO	Pico	0.16	145	*e*S	Sg	01 56 40.1	+0.5
PMAN	Manadas	0.36	90	*e*P	Pg	01 56 40.7	-0.6
PMAN				*e*S	Sg	01 56 46.2	+0.1
	34nm,0.1s						

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*IDC **03** 02:08:28.5±1.2, 1.31N×97.15E, mb3.8/7, mb1 4.0/8, mb1mx3.7/21, mbtmp3.8/8, ML4.1/1, Error ellipse: s-maj=61.9km s-min=21.9km az=69.0*

*NEIC **03** 02:08:32.5±1.0, 1.27N×97.12E, h30^{km}, mb4.2/1, Error ellipse: s-maj=21.3km s-min=16.9km az=57.0*

ISC 03 02:08:31.7±0.9**, 1.4N**±0.1×**97.1E**±0.2**, h33**^{km}**, n12, σ0**^{s}**72**/12**, mb3.9**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.25	42	*e*Pn	Pn	02 09 50.4	+0.3
CMAR	Chiang Mai Arr	17.08	6	P	P	02 12 29.4	-0.3
	0.3nm,0.3s,baz=184,slow=12,SNR=4.0						
WRA	Warramunga Arr	42.18	122	P	P	02 16 22.4	-1.1
	1.0nm,0.7s,mb3.5,baz=302,slow=9.2,SNR=4.7						
SONM	Songino Array	46.98	9	P	P	02 17 02.2	+0.7
	1.5nm,0.7s,mb4.0,baz=191,slow=9.7,SNR=12						
MKAR	Makanchi Array	47.06	346	P	P	02 17 02.9	+0.8
	0.8nm,0.5s,mb3.9,baz=160,slow=9.1,SNR=10						
MKAR	Makanchi Array	47.06	346	P	P	02 17 02.9	+0.8
ZAL	Zalesovo	53.38	351	P	P	02 17 50.5	+0.3
	1.8nm,0.5s,mb4.3,baz=330,slow=9.3,SNR=6.2						
BVAR	Borovoye Array	56.07	341	P	P	02 18 09.1	-0.7
	1.2nm,0.7s,mb4.0,baz=149,slow=8.6,SNR=9.6						
CHKZ	Chkalovo	56.55	341	*e*P	P	02 18 12.4	-0.9
	1.6nm,0.6s,mb4.2						
ARCES	ARCESS Array B	82.36	340	P	P	02 20 51.2	-0.2
	0.7nm,0.9s,mb3.6,baz=135,slow=1.7,SNR=4.3						
ARCES	ARCESS Array B	82.36	340	P	P	02 20 51.2	-0.2
VNDA	Vanda	86.00	169	P	P	02 21 10.7	+1.1
	0.2nm,0.6s,mb3.5,baz=287,slow=5.6,SNR=3.5						

IDC 03 02:09:20.4±2.2**, 3.91S×129.52E, mb3.9**/2**, mb1 4.2**/4**, mb1mx3.8**/17**, mbtmp4.0**/4**, ML3.7**/2**, Error ellipse: s-maj=86.9km s-min=26.6km az=63.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.61	195	Pn	P	02 12 48.0	-2.6
	0.5nm,0.3s,baz=4.8,slow=6.0,SNR=6.0						
WRA	Warramunga Arr	16.62	164	Pn	P	02 13 13.6	-3.0
	0.2nm,0.3s,baz=345,slow=13,SNR=3.8						
ASAR	Alice Springs	20.10	168	P	P	02 13 57.1	-1.5
	1.7nm,0.6s,baz=350,slow=10,SNR=16						
ASAR				PcP	PcP	02 18 10.6	-3.2
	0.5nm,0.4s,baz=4.8,slow=1.7,SNR=5.4						
CMAR	Chiang Mai Arr	37.44	307	P	P	02 16 36.0	-1.5
	3.1nm,0.6s,baz=128,slow=6.9,SNR=8.6						

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*LDG **03** 02:09:45.6±0.1, 44.49N×7.00E, h2^{km}, Md2.7/1, Ml2.3/11, Error ellipse: s-maj=2.3km s-min=1.4km az=61.0*

*STR **03** 02:09:45.4±0.2, 44.50N×7.00E, h5^{km}±1^{km}, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 03 02:09:44.5±0.4**, 44.49N**±0.02×**6.98E**±0.03**, h14**^{km}±3^{km}**, n24, σ0**^{s}**89**/49**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SURF	Saint Ours	0.12	268	Pg	Pg	02 09 47.9	0.0
SURF				Sg	Sg	02 09 50.4	+0.2
MBDF	Montbardon	0.28	329	*e*Pg	Pg	02 09 51.2	+0.5
MBDF				*e*Sg	Sg	02 09 55.7	+0.9
	59nm,0.2s						
TOUF	Mont Tournerai	0.51	158	Pg	Pg	02 09 55.3	+0.3
AUTN	L'Aution	0.59	146	Pg	Pg	02 09 56.8	+0.3
AUTN				Sg	Sg	02 10 04.8	+0.3
MVIF	Mont Vial	0.60	168	Pg	Pg	02 09 56.8	0.0
MVIF				Sg	Sg	02 10 04.8	-0.2
SAOF	Saorge	0.65	140	Pg	Pg	02 09 57.9	+0.2
SAOF				Sg	Sg	02 10 06.4	-0.1
SBF	Sospel	0.70	152	*e*Pg	Pg	02 09 58.8	0.0
SBF				*e*Sg	Sg	02 10 07.6	-0.7
	18nm,0.2s						
CALN	Calern	0.74	185	Pg	Pg	02 09 59.3	-0.1
REVF	Revere	0.80	159	Pg	Pg	02 10 00.8	+0.2
REVF				Sg	Sg	02 10 11.9	+0.5
ORIF	Oris-en-Rattie	0.89	299	*e*Pg	Pg	02 10 02.2	-0.4
ORIF				*e*Sg	Sg	02 10 13.2	-1.4
	12nm,0.3s						
STOF	St-Etienne Org	0.91	238	Pg	Pg	02 10 04.1	+1.2
STOF				Sg	Sg	02 10 17.4	+2.3
FRF	La Foret Royal	0.95	195	*e*Pg	Pg	02 10 02.8	-1.0
FRF				*e*Pn	Pn	02 10 04.1	+0.6
FRF				*e*Sg	Sg	02 10 14.9	-1.7
	28nm,0.3s						
LPG	La Plagne	1.02	351	*e*Pg	Pg	02 10 05.2	+0.1
LPG				*e*Pn	Pn	02 10 06.0	+1.5
LPG				*e*Sg	Sg	02 10 18.8	-0.1
	8.4nm,0.3s						
LPL	La Plagne	1.04	350	*e*Pg	Pg	02 10 05.6	+0.1
LPL				*e*Sg	Sg	02 10 18.3	-1.3
	6.9nm,0.3s						
TAVF	Tavernes	1.09	218	Pg	Pg	02 10 06.7	+0.2
TAVF				Sg	Sg	02 10 22.0	+0.8
VILF	Villemus	1.11	236	Pg	Pg	02 10 07.1	+0.3
VILF				Sg	Sg	02 10 22.1	+0.5
SMRF	Simiane la Rot	1.13	244	*e*Pn	Pn	02 10 06.9	+0.9
SMRF				*e*Pg	Pg	02 10 07.7	+0.5
SMRF				*e*Sg	Sg	02 10 22.1	-0.3
	14nm,0.4s						
LMR	La Mourre	1.20	197	*e*Pn	Pn	02 10 07.1	+0.1
LMR				*e*Pg	Pg	02 10 07.7	-0.9
LMR				*e*Sg	Sg	02 10 22.5	-2.2
	15nm,0.2s						
PUYF	Puyloubier	1.33	224	Pg	Pg	02 10 10.4	-0.7
PUYF				Sg	Sg	02 10 29.2	+0.3
VIVF	Saint-Julien-l	1.69	283	*e*Pn	Pn	02 10 15.5	+1.6
VIVF				*e*Pg	Pg	02 10 17.3	-1.0
VIVF				*e*Sn	Sn	02 10 35.9	+0.5
	1.3nm,0.2s						
LASF	Ste Croix	2.28	261	*e*Pn	Pn	02 10 23.1	+0.7
LASF				*e*Sn	Sn	02 10 48.9	-1.6
	1.0nm,0.3s						
PGF	Pioggiola	2.43	142	*e*Pn	Pn	02 10 25.0	+0.4
PGF				*e*Sn	Sn	02 10 54.1	-0.3
	1.8nm,0.2s						
SMF	Signal de Mont	3.08	316	*e*Sg	Sg	02 11 23.6	-3.7
	2.3nm,0.6s						
AVF	Avril sur Loir	3.43	313	*e*Sn	Sn	02 11 17.1	-2.6
	1.2nm,0.4s						

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*BJI **03** 02:11:17.4, 0.87N×96.97E, h45^{km}, mB5.1, mb4.7, Ms4.5, Msz4.4*

*NEIC **03** 02:11:19.6±0.4, 1.30N×97.04E, mb4.6/7, Error ellipse: s-maj=11.7km s-min=7.0km az=56.0*

*IDC **03** 02:11:20.1±0.7, 1.40N×97.13E, h21^{km}±4^{km}, mb4.1/14, mb1 4.3/15, mb1mx4.1/22, mbtmp4.2/15, ML4.4/1, MS3.9/2, Ms1 3.9/2, ms1mx3.5/32, Error ellipse: s-maj=37.3km s-min=11.9km az=52.0*

ISC 03 02:11:17.7±0.5**, 1.28N**±0.07×**97.05E**±0.09**, h23**^{km}**, h23**^{km}±1.2^{km}**:pP-P, n38, σ1**^{s}**01**/35**, mb4.4**/24**, MS4.1**/4**, 1C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.37	42	*e*Pn	Pn	02 12 38.6	+0.1
CM31	Chiang Mai Arr	17.17	6	P	P	02 15 19.4	+1.3
	13nm,0.8s						
CMAR	Chiang Mai Arr	17.17	6	P	P	02 15 16.6	-1.5
	0.4nm,0.3s,baz=202,slow=10,SNR=17						
KKM	Kota Kinabalu	19.70	76	*e*P	P	02 15 48.2	-0.4
KMI	Kunming	24.34	13	P	P	02 16 36.9	+1.7
KMI				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.6						
KMI				LR	LR		
	comp=N,650nm,13.4s,MS4.3						
KMI				LR	LR		
	comp=E,300nm,13.7s,MS4.3						
KMI				LR	LR		
	comp=Z,650nm,13.9s,MS4.3						
SHL	Shillong	24.66	349	*e*P	P	02 16 39.0	+0.7
GYA	Guiyang	26.69	19	⇓*i*P	P	02 16 57.2	-0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.2						
GYA				LR	LR		
	comp=N,850nm,15.0s,MS4.5						
GYA				LR	LR		
	comp=E,330nm,15.2s,MS4.5						
GYA				LR	LR		
	comp=Z,680nm,13.7s,MS4.4						
LSA	Lhasa	28.82	349	*e*P	P	02 17 17.3	+0.8
	comp=Z,6.5nm,0.6s,mb4.5						
ENH	Enshi	31.16	21	*e*P	P	02 17 35.6	-1.8
	comp=Z,19nm,0.8s,mb5.0						
ENH				*e*pP	pP	02 17 42.8	-1.3
FITZ	Fitzroy Crossi	34.09	126	P	P	02 18 02.5	-0.5
	comp=Z,4.4nm,0.6s,mb4.6,baz=310,slow=5.0,SNR=5.3						
FITZ				LR	LR	02 33 09.4	
	comp=Z,157nm,19.8s,MS3.7,baz=270,slow=38						
XAN	Xi'an	34.44	18	P	P	02 18 04.5	-1.3
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
LZH	Lanzhou	35.20	10	*e*P	P	02 18 11.7	-0.7
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
GTA	Gaotai	38.04	3	P	P	02 18 36.8	+0.6
GTA				AP	pP	02 18 43.9	+0.8
HHC	Hu-ho-hao-te	41.53	17	*e*P	P	02 19 08.2	+3.1
HHC				AP	pP	02 19 16.1	+4.1
HHC				XP	sP	02 19 20.3	+5.4
WRA	Warramunga Arr	42.20	122	P	P	02 19 11.1	+0.1
	comp=Z,3.0nm,0.6s,mb4.1,baz=301,slow=9.1,SNR=15						
WRAB	Tennant Creek	42.21	122	*e*P	P	02 19 11.2	+0.3
	comp=Z,3.9nm,0.6s,mb4.2						
WRAB				*e*pP	pP	02 19 16.5	-1.4
WMQ	Urumqi	43.17	350	*e*P	P	02 19 16.5	-2.0
WMQ				AP	pP	02 19 26.5	+1.1
ASAR	Alice Springs	43.56	127	P	P	02 19 22.6	+0.7
	comp=Z,2.6nm,0.8s,mb4.0,baz=299,slow=7.8,SNR=12						
ASAR				pP	pP	02 19 29.4	+0.5
	comp=Z,1.3nm,0.6s,baz=303,slow=8.1,SNR=5.1						
ASAR				LR	LR	02 38 52.6	
	comp=Z,140nm,19.4s,MS3.9,baz=123,slow=38						
SONM	Songino Array	47.08	9	P	P	02 19 50.1	+0.5
	comp=Z,6.2nm,0.8s,mb4.6,baz=189,slow=9.4,SNR=34						
MKAR	Makanchi Array	47.13	346	P	P	02 19 50.7	+0.5
	comp=Z,5.0nm,0.7s,mb4.6,baz=159,slow=9.0,SNR=23						
MKAR	Makanchi Array	47.13	346	P	P	02 19 50.7	+0.5
ZAL	Zalesovo	53.45	351	P	P	02 20 38.1	-0.1
	comp=Z,7.6nm,0.5s,mb4.9,baz=302,slow=6.5						
STKA	Stephens Creek	53.52	132	P	P	02 20 40.0	+1.0
	comp=Z,2.1nm,0.6s,mb4.3,baz=295,slow=9.2,SNR=6.1						
STKA				pP	pP	02 20 47.1	+1.0
	comp=Z,4.2nm,0.7s,baz=331,slow=4.7,SNR=6.0						
BVAR	Borovoye Array	56.13	341	P	P	02 20 56.8	-1.0
	comp=Z,4.4nm,0.7s,mb4.6,baz=149,slow=8.6,SNR=29						
CHKZ	Chkalovo	56.61	342	*e*P	P	02 21 00.3	-0.8
	comp=Z,6.8nm,0.6s,mb4.8						
CHKZ				*e*pP	pP	02 21 06.2	-2.0
YAK	Yakutsk	65.39	16	P	P	02 21 59.8	-0.7
	comp=Z,24nm,0.6s,mb5.4						
BRTR	Keskin Array B	68.95	312	pP	pP	02 22 30.6	0.0
	comp=Z,1.1nm,0.7s,baz=125,slow=6.7,SNR=5.5						
AKASG	Malin Array Be	75.11	322	P	P	02 22 59.4	-0.4
	comp=Z,0.9nm,0.6s,mb3.9,baz=82,slow=5.1,SNR=4.8						
AKASG				pP	pP	02 23 06.7	-0.4
	comp=Z,1.3nm,0.6s,baz=89,slow=4.5,SNR=4.9						
MLR	Muntele Rosu	75.91	317	P	P	02 23 05.0	+0.5
	comp=Z,1.0nm,0.5s,mb4.0,baz=113,slow=13,SNR=3.1						
FINES	FINESS Array B	79.86	333	P	P	02 23 26.1	+0.2
	comp=Z,1.1nm,0.7s,mb3.9,baz=102,slow=6.5,SNR=8.6						
KAF	Kangasniemi	79.95	333	*e*p	P	02 23 26.0	-0.3
	comp=Z,1.3nm,0.5s,mb4.1,baz=103,slow=5.0						
SYO	Syowa Base	80.03	198	⇑P	P	02 23 24.2	-2.4
ARCES	ARCESS Array B	82.41	340	P	P	02 23 40.1	+1.0
	comp=Z,1.2nm,0.6s,mb4.0,baz=108,slow=3.8,SNR=10						
ARCES				pP	pP	02 23 46.3	-0.2
	comp=Z,1.3nm,0.7s,baz=90,slow=3.6,SNR=2.7						
GERES	GERESS Array B	84.66	319	P	P	02 23 52.3	+1.4
	comp=Z,0.5nm,0.7s,mb3.7,baz=108,slow=4.2,SNR=5.3						
GERES				pP	pP	02 23 59.7	+1.3
	comp=Z,1.0nm,0.8s,baz=104,slow=5.5,SNR=5.2						
NB2	NORSAR Subarra	86.87	331	P	P	02 24 02.0	+0.4
	comp=Z,0.7nm,0.8s,mb3.9,baz=98,slow=4.6						
NOA	NORSAR Array B	86.87	331	P	P	02 24 02.1	+0.5
	comp=Z,0.9nm,0.8s,mb4.1,baz=94,slow=4.9,SNR=4.3						
TXAR	Lajitas Array	143.68	31	PKhKP		02 30 50.5	
	comp=Z,0.4nm,0.7s,baz=134,slow=0.4,SNR=3.8						
CPUP	Villa Florida	144.96	223	PKPbc	PKPbc	02 30 56.9	+2.7
	comp=Z,2.3nm,0.9s,baz=89,slow=2.4,SNR=4.2						

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*IDC **03** 02:31:19.4±10.0, 35.94N×72.05E, mb3.8/4, mb1 3.9/5, mb1mx3.5/23, mbtmp3.8/5, ML3.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.7/33, Error ellipse: s-maj=185.1km s-min=54.6km az=152.0*

*NEIC **03** 02:31:48.0±7.5, 37.27N×71.95E, h180^{km}±36^{km}, Error ellipse: s-maj=92.1km s-min=37.9km az=167.0*

*NNC **03** 02:31:56.4±6.1, 37.94N×71.83E, h235^{km}±82^{km}, mpv3.9, Error ellipse: s-maj=69.8km s-min=40.3km az=26.0*

ISC 03 02:31:48.1±1.0**, 37.25N**±0.06×**72.2E**±0.2**, h205**^{km}±15^{km}**, n23, σ0**^{s}**90**/27**, mb3.3**/3**, 4C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.02	13	P	P	02 33 03.6	+0.1
	SNR=198						
UCH	Uchtor	5.29	19	P	P	02 33 07.5	+0.5
	SNR=35						
KZA	Kyzart	5.38	25	P	P	02 33 08.2	+0.1
	SNR=23						
EKS2	Erkin-Say	5.55	12	P	P	02 33 11.2	+0.9
	SNR=9.5						
THN	Thein Dam	5.62	148	*e*P	P	02 33 12.1	+0.9
THN				*e*S	S	02 34 16.0	+0.1
AAK	Ala-Archa	5.67	18	P	P	02 33 12.5	+0.7
	SNR=18						
AAK	Ala-Archa	5.67	18	⇑P	P	02 33 12.4	+0.6
	14nm,0.4s						
AAK				⇑S	S	02 34 15.2	-1.9
	12nm,0.6s						
AAK	Ala-Archa	5.67	18	*e*Pn	P	02 33 11.3	-0.6
	26nm,0.5s						
KBK	Karagaybulak	5.81	21	P	P	02 33 15.0	+1.3
	SNR=6.3						
ULHL	Ulahol	5.90	31	P	P	02 33 14.0	-0.8
	SNR=9.5						
KK31	Karatay Array	5.99	348	⇓P	P	02 33 14.6	-1.3
	1.9nm,0.2s,baz=161,slow=11,SNR=102						
KK31				⇓S	S	02 34 17.7	-6.6
	9.4nm,0.6s,baz=176,slow=27,SNR=4.6						
CHMS	Chumysh	6.08	18	P	P	02 33 17.9	+0.8
	SNR=6.5						
TKM2	Tokmak 2	6.25	24	P	P	02 33 20.0	+0.7
	SNR=8.8						
SMLA	Simla	7.38	144	*i* P	P	02 33 31.3	-2.7
SMLA				*i* S	S	02 34 50.3	-6.4
KUDL	Kundal	9.78	157	*e*S	S	02 35 45.2	-7.3
AB31	Akbulak array	14.92	327	⇑P	P	02 35 10.2	+0.2
	0.3nm,0.3s						
AB31				⇑S	S	02 37 42.5	-7.4
	0.9nm,0.5s,baz=149,slow=23,SNR=5.9						
BVAR	Borovoye Array	15.83	356	P	P	02 35 20.5	-0.6
	0.1nm,0.3s,baz=180,slow=12,SNR=3.8						
ZAL	Zalesovo	18.84	24	P	P	02 35 54.5	+0.2
	2.8nm,0.4s,baz=248,slow=5.1,SNR=5.2						
ARCES	ARCESS Array B	40.82	337	P	P	02 39 11.0	+0.4
	1.0nm,0.6s,mb3.4,baz=112,slow=9.7,SNR=8.0						
HFS	Hagfors	43.06	321	P	P	02 39 28.7	-0.1
	1.4nm,0.5s,mb3.7,baz=98,slow=10,SNR=9.8						
NB2	NORSAR Subarra	44.35	323	P	P	02 39 38.7	-0.4
	0.6nm,0.5s,mb3.2,baz=94,slow=7.4						
NOA	NORSAR Array B	44.35	323	P	P	02 39 39.0	-0.1
	0.2nm,0.5s,mb2.7,baz=93,slow=7.5,SNR=3.4						
JNU	Nakatsue	47.51	77	LR	LR	03 02 18.5	
	comp=Z,16nm,21.3s,baz=199,slow=39						

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*BJI **03** 02:36:00.4, 0.53N×97.04E, h23^{km}, mB5.3, mb4.7, Ms4.5, Msz4.3*

*NEIC **03** 02:36:10.5±0.4, 1.37N×97.20E, mb4.5/6, Error ellipse: s-maj=11.9km s-min=7.7km az=52.0*

*IDC **03** 02:36:10.1±0.6, 1.40N×97.13E, h22^{km}±3^{km}, mb3.9/14, mb1 4.0/15, mb1mx3.9/23, mbtmp4.0/15, ML4.0/1, MS3.2/2, Ms1 3.3/2, ms1mx3.1/25, Error ellipse: s-maj=28.0km s-min=11.6km az=52.0*

ISC 03 02:36:08.5±0.5**, 1.38N**±0.07×**97.23E**±0.08**, h24**^{km}**, h24**^{km}±1.1^{km}**:pP-P, n39, σ1**^{s}**07**/37**, mb4.2**/24**, MS3.8**/3**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.17	41	*e*Pn	Pn	02 37 27.7	+1.1
CMAR	Chiang Mai Arr	17.05	6	Pn	P	02 40 06.3	-1.0
	0.2nm,0.3s,baz=194,slow=13,SNR=4.4						
CMAR				LR	LR	02 47 01.6	
	comp=Z,160nm,19.3s,baz=210,slow=38						
KKM	Kota Kinabalu	19.50	76	*e*P	P	02 40 37.2	+0.1
KMI	Kunming	24.20	12	P	P	02 41 26.5	+1.9
KMI				AP		02 41 35.5	
KMI				XP		02 41 39.7	
KMI				PP	PP	02 42 01.6	+2.1
KMI				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.3						
KMI				LR	LR		
	comp=N,620nm,14.0s,MS4.3						
KMI				LR	LR		
	comp=E,380nm,13.4s,MS4.3						
KMI				LR	LR		
	comp=Z,430nm,15.1s,MS4.0						
SHL	Shillong	24.59	348	*e*P	P	02 41 29.5	+1.1
GYA	Guiyang	26.54	19	P	P	02 41 46.0	-0.6
GYA				S	S	02 46 26.1	+8.6
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.2						
GYA				LR	LR		
	comp=N,460nm,16.5s,MS4.2						
GYA				LR	LR		
	comp=E,260nm,15.6s,MS4.2						
GYA				LR	LR		
	comp=Z,750nm,16.5s,MS4.3						
PKI	Pulchoki	28.40	338	*e*P	P	02 42 05.3	+1.8
GUN	Gumba	28.53	339	*e*P	P	02 42 05.5	+0.9
	comp=Z,20nm,0.8s,mb4.9						
DMN	Daman	28.55	337	*e*P	P	02 42 06.6	+1.8
KKN	Kakani	28.64	338	*e*P	P	02 42 07.3	+1.6
GKN	Gorkha	29.09	337	*e*P	P	02 42 09.6	-0.1
	comp=Z,21nm,0.9s,mb4.9						
KOLN	Koldanda	29.31	335	*e*P	P	02 42 12.1	+0.4
	comp=Z,12nm,0.8s,mb4.7						
ENH	Enshi	31.00	21	*e*P	P	02 42 25.1	-1.6
	comp=Z,8.4nm,0.7s,mb4.7						

ENH				*e*pP	pP	02 42 32.3	-1.3
FITZ	**Fitzroy Crossi**	**34.01**	**126**	P	**P**	**02 42 52.5**	**-0.5**
	comp=Z,5.2nm,0.7s,mb4.6,baz=350,slow=6.1,SNR=4.4						
XAN	**Xi'an**	**34.28**	**17**	P	**P**	**02 42 54.0**	**-1.2**
XAN				AP	pP	02 42 59.8	-2.5
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
LZH	**Lanzhou**	**35.08**	**9**	*e*P	**P**	**02 42 59.5**	**-2.5**
LZH				AP	pP	02 43 08.5	-0.5
LZH				XP	sP	02 43 12.6	+0.6
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
GTA	**Gaotai**	**37.92**	**3**	P	**P**	**02 43 26.1**	**+0.1**
GTA				AP	pP	02 43 33.3	+0.3
GTA				XP	sP	02 43 36.3	+0.3
WRA	**Warramunga Arr**	**42.11**	**122**	P	**P**	**02 44 01.2**	**+0.3**
	comp=Z,2.1nm,0.4s,mb4.1,baz=302,slow=9.1,SNR=22						
WRAB	**Tennant Creek**	**42.11**	**122**	*e*P	**P**	**02 44 01.1**	**+0.1**
	comp=Z,5.4nm,0.6s,mb4.3						
WRAB				*e*pP	pP	02 44 08.1	0.0
ASAR	**Alice Springs**	**43.48**	**127**	P	**P**	**02 44 12.7**	**+0.6**
	comp=Z,1.4nm,0.5s,mb3.9,baz=297,slow=7.7,SNR=11						
ASAR				pP	pP	02 44 19.7	+0.6
	comp=Z,1.3nm,0.8s,baz=304,slow=7.9,SNR=5.9						
KS15	**Wonju Array Si**	**45.66**	**35**	*e*P	**P**	**02 44 29.4**	**0.0**
SONM	**Songino Array**	**46.95**	**8**	P	**P**	**02 44 39.1**	**-0.3**
	comp=Z,5.1nm,0.9s,mb4.5,baz=188,slow=8.5,SNR=35						
MKAR	**Makanchi Array**	**47.07**	**346**	P	**P**	**02 44 39.9**	**-0.5**
	comp=Z,2.1nm,0.7s,mb4.2,baz=156,slow=7.8,SNR=18						
MKAR				pP	pP	02 44 48.5	+0.9
	comp=Z,1.7nm,0.5s,baz=162,slow=7.7,SNR=13						
MKAR	**Makanchi Array**	**47.07**	**346**	P	**P**	**02 44 39.9**	**-0.5**
MKAR				pP	pP	02 44 48.5	+0.9
ZAL	**Zalesovo**	**53.38**	**351**	P	**P**	**02 45 27.9**	**-0.5**
	comp=Z,2.5nm,0.5s,mb4.4,baz=326,slow=7.7,SNR=8.3						
STKA	**Stephens Creek**	**53.46**	**132**	P	**P**	**02 45 29.9**	**+0.6**
	comp=Z,1.8nm,0.7s,mb4.1,baz=310,slow=11,SNR=5.2						
STKA				pP	pP	02 45 36.8	+0.2
	comp=Z,4.6nm,0.8s,baz=327,slow=7.7,SNR=5.4						
BVAR	**Borovoye Array**	**56.09**	**341**	P	**P**	**02 45 46.9**	**-1.3**
	comp=Z,1.2nm,0.6s,mb4.1,baz=127,slow=7.4,SNR=7.1						
CHKZ	**Chkalovo**	**56.56**	**341**	*e*P	**P**	**02 45 50.4**	**-1.2**
	comp=Z,1.6nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	**69.01**	**312**	P	**P**	**02 47 13.0**	**-1.4**
	comp=Z,0.3nm,0.4s,mb3.6,baz=90,slow=5.8,SNR=2.6						
BRTR				pP	pP	02 47 20.1	-1.7
	comp=Z,0.8nm,0.7s,baz=136,slow=6.8,SNR=3.8						
MATP	**Matopo**	**70.61**	**248**	P	**P**	**02 47 24.0**	**-0.5**
	comp=Z,1.6nm,0.8s,mb4.0,baz=108,slow=3.2,SNR=3.8						
MATP	**Matopo**	**70.61**	**248**	P	**P**	**02 47 24.0**	**-0.5**
AKASG	**Malin Array Be**	**75.13**	**322**	P	**P**	**02 47 50.0**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.6,baz=89,slow=4.6,SNR=3.9						
AKASG				pP	pP	02 47 56.0	-2.1
	comp=Z,0.2nm,0.3s,baz=86,slow=4.7,SNR=2.7						
AKASG	**Malin Array Be**	**75.13**	**322**	P	**P**	**02 47 50.0**	**-0.7**
AKASG				pP	pP	02 47 56.0	-2.1
FINES	**FINESS Array B**	**79.85**	**332**	P	**P**	**02 48 15.7**	**-0.8**
	comp=Z,1.4nm,1.0s,mb3.8,baz=104,slow=7.9,SNR=4.2						
FINES				pP	pP	02 48 23.1	-1.0
	comp=Z,0.5nm,0.4s,baz=100,slow=3.9,SNR=3.1						
FX1	**Attu Island--F**	**80.43**	**37**	LR	LR	03 22 48.4	
	comp=Z,6.8nm,20.3s,MS3.0,baz=232,slow=35						
ARCES	**ARCESS Array B**	**82.38**	**340**	P	**P**	**02 48 29.6**	**0.0**
	comp=Z,1.2nm,0.8s,mb3.9,baz=104,slow=5.0,SNR=7.6						
ARCES				pP	pP	02 48 37.1	-0.1
	comp=Z,0.6nm,0.5s,baz=94,slow=4.9,SNR=2.0						
GERES	**GERESS Array B**	**84.69**	**319**	P	**P**	**02 48 44.1**	**+2.3**
	comp=Z,0.1nm,0.4s,mb3.3,baz=45,slow=1.4,SNR=2.4						
TXAR	**Lajitas Array**	**143.50**	**32**	PKP	PKPdf	02 55 44.8	-1.6
	comp=Z,0.2nm,0.5s,SNR=3.2						
CPUP	**Villa Florida**	**145.15**	**222**	PKPbc	PKPbc	02 55 46.6	+1.3
	comp=Z,2.1nm,1.0s,baz=113,slow=7.7,SNR=3.5						

*IDC **03** 02:51:49.0±0.7,33.15S×178.51W,h62^{km}±4^{km},mb4.4/6, mb1 4.6/6,mb1mx4.3/15,mbtmp4.7/6,MS3.8/5,Ms1 3.8/5, ms1mx3.5/28,Error ellipse: s-maj=24.7km s-min=21.4km az=169.0*

*NEIC **03** 02:51:50.0±3.9,33.52S×178.79W,h59^{km}±27^{km},mb4.8/5, Error ellipse: s-maj=38.8km s-min=14.1km az=55.0*

ISC 03 02:51:48.6±0.8,33.55S±0.05×179.3W±0.1,h33^{km}, (h42^{km}±7.0^{km}:pP-P),n60,σ1§23/50,mb4.7/10,MS3.7/3,4C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.44**	**16**	LR	LR	02 53 35.4	
	comp=Z,487nm,21.5s,baz=247,slow=27						
PUZ	**Puketiti**	**4.94**	**203**	PN	**Pn**	**02 53 11.8**	**+9.2**
PUZ				SN	**Sn**	**02 54 06.2**	**+6.8**
MWZ	**Matawai**	**5.44**	**208**	PN	**Pn**	**02 53 10.9**	**+1.3**
MWZ				SN	**Sn**	**02 54 19.3**	**+7.5**
URZ	**Urewera**	**5.54**	**211**	P	**P**	**02 53 13.5**	**+2.6**
	3.6nm,0.3s,baz=294,slow=12,SNR=9.4						
URZ				S	**S**	**02 54 22.3**	**+7.9**
	14nm,0.3s,baz=126,slow=20,SNR=14						
URZ	**Urewera**	**5.54**	**211**	PN	**Pn**	**02 53 12.5**	**+1.4**
URZ				SN	**Sn**	**02 54 19.6**	**+5.1**
BKZ	**Black Stump Fm**	**6.57**	**210**	SN	**Sn**	**02 54 46.7**	**+6.7**
MRZ	**Mangatainoka R**	**8.20**	**209**	SN	**Sn**	**02 55 21.4**	**+0.4**
KIW	**Kapiti Island**	**8.65**	**211**	SN	**Sn**	**02 55 32.5**	**+0.6**
MRW	**Makara Radio**	**9.04**	**210**	SN	**Sn**	**02 55 41.1**	**-0.6**
TCW	**Tory Channel**	**9.21**	**212**	SN	**Sn**	**02 55 44.8**	**-1.1**
TUWZ	**Tuamarina**	**9.54**	**212**	SN	**Sn**	**02 55 53.7**	**-0.1**
NNZ	**Nelson**	**9.63**	**215**	SN	**Sn**	**02 55 57.0**	**+0.8**
THZ	**Tophouse**	**10.28**	**215**	*e*PN	**P**	**02 54 15.0**	**-1.8**
THZ				SN	**S**	**02 56 11.3**	**-0.7**
LTZ	**Lake Taylor**	**11.37**	**213**	SN	**S**	**02 56 34.1**	**-4.4**
MQZ	**McQueen's Vall**	**11.94**	**209**	SN	**S**	**02 56 44.4**	**-8.1**
RPZ	**Rata Peaks**	**12.65**	**214**	P	**P**	**02 54 47.8**	**-1.2**
	2.0nm,0.3s,baz=27,slow=14,SNR=7.5						
RPZ				S	**S**	**02 57 04.3**	**-5.3**
	1.8nm,0.3s,baz=14,slow=17,SNR=7.7						
DZM	**Mont Dzumac**	**17.02**	**309**	P	**P**	**02 55 50.1**	**+4.4**
	0.8nm,0.3s,baz=115,slow=17,SNR=8.6						
DZM				LR	LR	03 01 01.5	
	comp=Z,387nm,18.7s,baz=28,slow=32						
DZM	**Mont Dzumac**	**17.02**	**309**	P	**P**	**02 55 50.1**	**+4.4**
DZM				LR	LR	03 01 01.5	
RAR	**Rarotonga**	**21.19**	**60**	LR	LR	03 02 29.4	
	comp=Z,218nm,20.6s,MS3.5,baz=345,slow=31						
PPT	**Papeete**	**31.02**	**67**	LR	LR	03 06 30.3	
	comp=Z,188nm,20.3s,MS3.7,baz=327,slow=29						
STKA	**Stephens Creek**	**32.84**	**262**	P	**P**	**02 58 23.1**	**+1.7**
	3.9nm,0.9s,mb4.3,baz=80,slow=8.9,SNR=9.1						
STKA				PcP	PcP	03 01 02.2	-3.7
	2.1nm,0.6s,baz=128,slow=6.0,SNR=3.4						
STKA				LR	LR	03 11 04.1	
	comp=Z,274nm,20.4s,MS4.0,baz=295,slow=34						
CTA	**Charters Tower**	**33.39**	**285**	P	**P**	**02 58 27.6**	**+1.3**
	9.9nm,0.5s,mb5.0,baz=100,slow=9.3,SNR=17						
CTAO	**Charters Tower**	**33.39**	**285**	*e*P	**P**	**02 58 27.0**	**+0.8**
	9.4nm,0.5s,mb5.0						
ASAR	**Alice Springs**	**41.97**	**271**	P	**P**	**02 59 38.6**	**+0.4**
	23nm,0.6s,mb5.0,baz=110,slow=7.4,SNR=146						
ASAR				PcP	PcP	03 01 30.1	-3.7
	3.6nm,0.8s,baz=117,slow=4.0,SNR=8.5						
ASPA	**Alice Springs**	**41.97**	**271**	⇑*i*P	**P**	**02 59 38.5**	**+0.2**
WB2	**Warramunga Arr**	**43.23**	**276**	*e*P	**P**	**02 59 48.3**	**-0.4**
WRAB	**Tennant Creek**	**43.24**	**276**	*e*P	**P**	**02 59 48.3**	**-0.4**
	15nm,0.6s,mb4.9						
WRA	**Warramunga Arr**	**43.24**	**276**	P	**P**	**02 59 48.7**	**0.0**
	9.0nm,0.4s,mb4.8,baz=117,slow=7.6,SNR=58						
WRA				pP	pP	03 00 04.9	+6.3
	5.5nm,0.8s,baz=118,slow=7.6,SNR=5.7						
SBA	**Scott Base**	**44.83**	**184**	*e*P	**P**	**03 00 12.2**	**+11**
VNDA	**Vanda**	**44.87**	**186**	P	**P**	**03 00 01.3**	**+0.2**
	0.5nm,0.8s,baz=27,slow=4.5,SNR=3.1						
FITZ	**Fitzroy Crossi**	**51.35**	**273**	P	**P**	**03 00 51.6**	**-0.7**
	13nm,0.7s,mb5.0,baz=161,slow=7.0,SNR=5.2						
MBWA	**Marble Bar**	**54.87**	**266**	P	**P**	**03 01 16.3**	**-2.0**
	4.9nm,0.8s,mb4.6						
QSPA	**South Pole Qui**	**56.57**	**180**	*e*P	**P**	**03 01 28.3**	**-1.5**
	15nm,0.7s,mb5.1						
MAW	**Mawson**	**68.99**	**201**	P	**P**	**03 02 50.2**	**-1.9**
	1.2nm,0.7s,mb3.9,baz=154,slow=15,SNR=3.8						
SNAA	**Sanae**	**75.05**	**179**	⇑*i*	**P**	**03 03 25.2**	**-2.8**
SNAA	**Sanae**	**75.05**	**179**	*e*	**P**	**03 03 29.9**	**+1.9**
SNAA	**Sanae**	**75.05**	**179**	*e*	**P**	**03 03 35.5**	**+7.5**
SNAA	**Sanae**	**75.05**	**179**	*e*P	**P**	**03 03 25.2**	**-2.8**
	5.8nm,1.2s,mb4.4						
VNA3	**Neumayer Olymp**	**75.24**	**177**	*e*	**P**	**03 03 31.3**	**+2.1**
VNA3	**Neumayer Olymp**	**75.24**	**177**	*e*	**P**	**03 03 37.6**	**+8.4**
VNA3	**Neumayer Olymp**	**75.24**	**177**	⇑*i*P	**P**	**03 03 26.3**	**-2.9**
VNA3				*e*	pP	03 03 37.6	-1.9
VNA2	**Neumayer--Watz**	**75.66**	**177**	*e*	**P**	**03 03 32.9**	**+1.3**
VNA2	**Neumayer--Watz**	**75.66**	**177**	*e*	**P**	**03 03 39.1**	**+7.5**
VNA2	**Neumayer--Watz**	**75.66**	**177**	⇑*i*P	**P**	**03 03 28.1**	**-3.5**
VNA2				*e*	pP	03 03 39.1	-2.8
VNA1	**Neumayer--Stat**	**75.90**	**177**		**P**	**03 03 24.5**	**-8.4**
VNA1	**Neumayer--Stat**	**75.90**	**177**	*e*	**P**	**03 03 29.1**	**-3.8**
VNA1	**Neumayer--Stat**	**75.90**	**177**	*e*	**P**	**03 03 35.3**	**+2.4**
MKAR	**Makanchi Array**	**118.93**	**309**	PKP	PKPdf	03 10 29.5	-4.1
	1.7nm,1.0s,baz=117,slow=0.3,SNR=5.6						
MKAR				pPKP		03 10 47.7	
	0.7nm,0.7s,baz=63,slow=3.2,SNR=3.7						
MKAR	**Makanchi Array**	**118.93**	**309**	PKP	PKPdf	03 10 29.5	-4.1
MKAR				pPKP		03 10 47.7	
BVAR	**Borovoye Array**	**127.85**	**314**	PKP	PKPdf	03 10 47.7	-3.0
	2.2nm,0.4s,baz=135,slow=2.0,SNR=16						
BVAR				pPKP		03 11 05.3	
	0.8nm,0.5s,baz=45,slow=2.0,SNR=3.6						
ARCES	**ARCESS Array B**	**141.40**	**346**	PKhKP		03 11 06.0	
	1.0nm,0.7s,slow=2.4,SNR=7.7						
KAF	**Kangasniemi**	**147.10**	**338**	*e*pkp	PKPdf	03 11 22.7	-2.5
FINES	**FINESS Array B**	**147.67**	**337**	PKPbc	PKPdf	03 11 25.1	-1.1
	6.6nm,0.7s,baz=40,slow=4.9,SNR=42						
FINES				pPKPbc		03 11 43.1	
	6.5nm,0.7s,baz=63,slow=4.3,SNR=8.1						
ASF	**Jabal al Asfar**	**149.68**	**278**	PKPbc	PKPdf	03 11 33.3	+3.0
	7.3nm,0.9s,baz=279,slow=1.5,SNR=11						
NB2	**NORSAR Subarra**	**151.66**	**349**	PKPabc	PKPdf	03 11 34.7	+2.3
	0.3nm,1.2s,baz=15,slow=3.4						
NOA	**NORSAR Array B**	**151.66**	**349**	PKPbc	PKPdf	03 11 35.0	+2.6
	1.4nm,0.8s,baz=15,slow=4.1,SNR=8.2						
NOA				pPKPbc		03 11 53.1	
	1.2nm,0.8s,baz=89,slow=4.3,SNR=4.0						
HFS	**Hagfors**	**152.07**	**346**	PKPbc	PKPdf	03 11 35.7	+2.7
	1.2nm,0.3s,baz=27,slow=3.2,SNR=16						
BRTR	**Keskin Array B**	**152.98**	**293**	PKPbc	PKPdf	03 11 40.0	+5.1
	4.3nm,0.7s,baz=130,slow=3.3,SNR=15						
AKASG	**Malin Array Be**	**153.03**	**318**	PKPbc	PKPdf	03 11 38.5	+3.9
	2.1nm,0.4s,baz=50,slow=2.2,SNR=22						
AKASG				pPKPbc		03 11 56.6	
	1.2nm,0.5s,baz=56,slow=2.4,SNR=4.2						
GERES	**GERESS Array B**	**161.90**	**331**	PKPab	PKPab	03 12 28.5	-5.4
	0.5nm,0.7s,slow=4.0,SNR=5.8						

*THE **03** 02:56:17.1,38.16N×22.05E,h1^{km},ML3.4*

*ATH **03** 02:56:19.2,38.37N×21.99E,h16^{km}±1^{km},MD3.4/16, ML3.3*

*NEIC **03** 02:56:19.2,38.37N×21.98E,h16^{km},ML3.3(ATH),After ATH.*

*CSEM **03** 02:56:19.6±0.1,38.37N×22.05E,h2^{km},ML3.3,Error ellipse: s-maj=2.0km s-min=1.5km az=36.0*

ISC 03 02:56:18.9±0.8,38.37N±0.03×22.03E±0.04,h4^{km}±6^{km}, n33,σ1§04/39,mb3.2/1,2C,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.54**	**235**	⇑*i*PN	**Pg**	**02 56 30.0**	**+0.2**
EVR	**Evrytania**	**0.57**	**342**	⇑*i*PN	**Pg**	**02 56 29.8**	**-0.5**
EVR				*e*SN	**Sg**	**02 56 38.7**	**+0.7**
AGG	**Agios Georgios**	**0.69**	**20**	*e*Pg	**Pg**	**02 56 34.1**	**+1.4**
AGG				*e*Sg	**Sg**	**02 56 46.9**	**+5.0**
LKR	**Lokris**	**0.81**	**69**	*e*PB	**Pb**	**02 56 34.7**	**-0.4**
LKR				*e*SN	**Sn**	**02 56 47.3**	**-2.1**
MGER	**Gerania Oros**	**1.04**	**111**	*e*PN	**Pn**	**02 56 40.6**	**+0.5**
LKD	**Levkas**	**1.14**	**288**	*e*Pg	**Pg**	**02 56 40.4**	**-1.2**
VLS	**Valsamata**	**1.15**	**261**	*e*PN	**Pn**	**02 56 39.9**	**-1.8**
ITM	**Ithomi**	**1.19**	**184**	*e*PN	**Pn**	**02 56 41.5**	**-0.8**
NSAL	**Nisos Salamina**	**1.22**	**112**	*e*PN	**Pn**	**02 56 43.2**	**+0.5**
NAIG	**Nisos Aigina**	**1.30**	**118**	*e*PN	**Pn**	**02 56 44.5**	**+0.6**
NEO	**Neokhori**	**1.32**	**44**	*e*PN	**Pn**	**02 56 44.0**	**-0.1**
XOR	**Xorichti**	**1.34**	**42**	*e*Pg	**Pg**	**02 56 44.7**	**-1.0**
MPAR	**Parnis Oros**	**1.36**	**99**	*e*PN	**Pn**	**02 56 45.5**	**+0.8**
ATH	**Athens Observa**	**1.39**	**106**	*e*PN	**Pn**	**02 56 45.8**	**+0.7**
PTL	**Penteli**	**1.48**	**102**	*e*PN	**Pn**	**02 56 48.0**	**+1.6**
MEV	**Metsovon**	**1.54**	**336**	*e*Pb	**Pb**	**02 56 47.5**	**-0.3**
JAN	**Janina**	**1.58**	**325**	*e*PN	**Pn**	**02 56 49.0**	**+1.1**
JAN				*e*SN	**Sn**	**02 57 09.2**	**+0.2**
AOS	**Alonnisos**	**1.65**	**60**	*e*Pb	**Pb**	**02 56 48.4**	**-1.1**
LIT	**Litokhoron**	**1.76**	**11**	*e*Pb	**Pb**	**02 56 50.3**	**-1.2**
VLI	**Veliai**	**1.80**	**156**	*e*PN	**Pn**	**02 56 51.7**	**+0.7**
KZN	**Kozani**	**1.94**	**354**	*e*PN	**Pn**	**02 56 53.8**	**+0.7**
PAIG	**Paliouri**	**2.01**	**39**	*e*Pn	**Pn**	**02 56 53.2**	**-0.9**
LSK	**Leskovik**	**2.10**	**328**	*e*Pn	**Pn**	**02 56 58.6**	**+3.4**
LSK				*i* Sn	**Sn**	**02 57 28.8**	**+6.7**
KEK	**Kerkira**	**2.20**	**308**	*e*PN	**Pn**	**02 56 57.5**	**+0.8**
PLG	**Polygyros**	**2.28**	**28**	*e*PN	**Pn**	**02 56 58.0**	**+0.1**
FNA	**Florina**	**2.46**	**348**	*e*Pn	**Pn**	**02 57 00.9**	**+0.4**
FNA				*e*Sn	**Sn**	**02 57 35.0**	**+3.6**
OUR	**Ouranopolis**	**2.48**	**37**	*e*Pn	**Pn**	**02 57 00.0**	**-0.7**
GRG	**Griva**	**2.60**	**6**	*e*Pn	**Pn**	**02 57 02.4**	**-0.1**
SOH	**Sokhos**	**2.65**	**22**	*e*Pn	**Pn**	**02 57 03.4**	**+0.2**
SKO	**Skopje**	**3.63**	**353**	*e*Pn	**Pn**	**02 57 20.5**	**+3.5**
TIP	**Timpagrande**	**4.20**	**283**	*e*Pn	**Pn**	**02 57 24.4**	**-0.8**
TIP	**Timpagrande**	**4.20**	**283**	*e*Pn	**Pn**	**02 57 24.4**	**-0.8**
NB2	**NORSAR Subarra**	**23.68**	**347**	P	**P**	**03 01 30.5**	**-1.5**
	0.6nm,0.6s,mb3.2,baz=159,slow=10						

IDC 03 03:05:47.3±2.0,1.18S×127.97E,mb3.7/2,mb1 3.9/3, mb1mx3.6/17,mbtmp3.8/3,ML3.9/1,Error ellipse: s-maj=154.9km s-min=25.2km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**12.28**	**159**	*e*P	P	03 08 46.0	-0.5
WRA	**Warramunga Arr**	**19.66**	**162**	P	P	03 10 18.1	-2.6
	0.4nm,0.3s,baz=341,slow=12,SNR=14						
WB2	**Warramunga Arr**	**19.66**	**162**	*e*P	P	03 10 18.7	-2.1
ASAR	**Alice Springs**	**23.08**	**166**	P	P	03 10 54.8	-1.0
	1.2nm,0.6s,baz=343,slow=10,SNR=8.6						
MKAR	**Makanchi Array**	**62.29**	**326**	P	P	03 16 11.3	-2.3
	0.5nm,0.4s,baz=108,slow=8.3,SNR=8.5						

*IDC **03** 03:18:57.1±0.8,53.18N×159.72E,mb3.7/11,mb1 4.0/12, mb1mx3.8/25,mbtmp3.8/12,ML4.1/1,Error ellipse: s-maj=24.8km s-min=13.9km az=7.0*

*MOS **03** 03:19:01.8±0.9,52.90N×160.15E,h50^{km},mb4.5/10,Error ellipse: s-maj=16.8km s-min=7.5km az=89.0*

*KRSC **03** 03:19:02.8±1.5,52.90N×160.10E,h34^{km}±2^{km},ML4.3*

*NEIC **03** 03:19:05.1±1.3,53.10N×159.73E,h57^{km}±11^{km},mb4.3/10, Error ellipse: s-maj=15.9km s-min=11.7km az=122.0*

ISC 03 03:19:02.1±0.5,52.87N±0.03×160.20E±0.06,h51^{km}±4^{km}, n84,σ1§19/122,mb4.0/21,9C-2D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.26**	**335**	P	**P**	**03 19 10.2**	**-0.7**
SPN				S	**S**	**03 19 14.6**	**-2.6**
SPN	**Mys Shipunski**	**0.26**	**335**	*i* P	**P**	**03 19 10.2**	**-0.7**
SPN				*e*S	**S**	**03 19 14.9**	**-2.3**
NLC	**Nalytchevo**	**0.60**	**301**	P	**P**	**03 19 14.2**	**-0.4**
NLC				S	**S**	**03 19 22.3**	**-1.4**
NLC	**Nalytchevo**	**0.60**	**301**	*i* P	**P**	**03 19 14.2**	**-0.4**
NLC				*e*S	**S**	**03 19 22.6**	**-1.1**
SDLR	**Sedlovina**	**0.89**	**298**	*e*P	**P**	**03 19 18.7**	**+0.2**
UGLR	**Uglovaya**	**0.90**	**293**	*i* P	**P**	**03 19 18.8**	**+0.2**
UGLR				*e*S	**S**	**03 19 29.9**	**-0.9**
SMAR	**Somma**	**0.93**	**296**	*i* P	**P**	**03 19 19.0**	**0.0**
PET	**Petropavlovsk**	**0.95**	**280**	P	**P**	**03 19 19.3**	**0.0**
PET				S	**S**	**03 19 30.1**	**-1.9**
PET	**Petropavlovsk**	**0.95**	**280**	⇓*i*PN	**P**	**03 19 19.2**	**-0.1**
PET				*e*S	**S**	**03 19 30.1**	**-1.9**
PET				pmax	pmax		
	comp=Z,749nm,0.4s						
PET				smax			
	comp=N,1µm,0.5s						
PET				smax			
	comp=E,2µm,0.6s						
PET	**Petropavlovsk**	**0.95**	**280**	⇓*i*Pn	**P**	**03 19 19.0**	**-0.3**
PET				*e*Sn	**S**	**03 19 28.5**	**-3.6**
PET	**Petropavlovsk**	**0.95**	**280**	*i* P	**P**	**03 19 19.3**	**0.0**
PET				*e*S	**S**	**03 19 30.0**	**-2.0**
AVH	**Avacha**	**0.97**	**295**	*i* P	**P**	**03 19 19.9**	**+0.4**
AVH				*e*S	**S**	**03 19 31.5**	**-1.0**
KOK	**Koryaka**	**1.03**	**295**	*i* P	**P**	**03 19 20.6**	**+0.1**
RUS	**Russkaya**	**1.11**	**248**	P	**P**	**03 19 22.0**	**+0.4**
RUS				S	**S**	**03 19 35.2**	**-0.9**
RUS	**Russkaya**	**1.11**	**248**	*i* P	**P**	**03 19 21.9**	**+0.3**
RUS				*e*S	**S**	**03 19 35.8**	**-0.3**
KII	**Karymskiy**	**1.25**	**339**	P	**P**	**03 19 23.6**	**0.0**
KII				S	**S**	**03 19 37.7**	**-1.9**
KII	**Karymskiy**	**1.25**	**339**	*i* P	**P**	**03 19 23.5**	**-0.1**
KII				*e*S	**S**	**03 19 37.8**	**-1.8**
KRMR	**Karymshinskiy**	**1.25**	**269**	*i* P	**P**	**03 19 23.8**	**+0.2**
KRMR				*e*S	**S**	**03 19 39.0**	**-0.6**
GRL	**Gorelyy**	**1.33**	**257**	*i* P	**P**	**03 19 25.7**	**+0.9**
GRL				*e*S	**S**	**03 19 41.7**	**+0.1**
GNL	**Ganaly**	**1.59**	**302**	*i* P	**P**	**03 19 29.1**	**+0.8**
GNL				*e*S	**S**	**03 19 49.3**	**+1.5**
APC	**Apacha**	**1.84**	**273**	*i* P	**P**	**03 19 33.5**	**+1.6**
APC				*i* S	**S**	**03 19 57.0**	**+3.0**
APC				Smax			
	comp=E,560nm,1.1s						
MKZ	**Mys Kozlova**	**1.92**	**28**	P	**P**	**03 19 31.8**	**-1.2**
MKZ				S	**S**	**03 19 53.1**	**-2.9**
MKZ	**Mys Kozlova**	**1.92**	**28**	*e*P	**P**	**03 19 31.7**	**-1.3**
MKZ				*e*S	**S**	**03 19 53.8**	**-2.2**
TUMR	**Tumrok**	**2.42**	**359**	*i* P	**P**	**03 19 40.9**	**+0.8**
TUMR				*e*S	**S**	**03 20 09.2**	**+0.6**
PAU	**Pauzhetka**	**2.51**	**237**	*e*P	**P**	**03 19 43.2**	**+1.8**
PAU				*e*S	**S**	**03 20 11.3**	**+0.3**
PAU				Smax			
	comp=E,310nm,0.5s						
KMNR	**Kamenistaya**	**2.90**	**0**	*e*P	**P**	**03 19 47.5**	**+0.6**
KMNR				*e*S	**S**	**03 20 19.5**	**-1.1**
KPT	**Kopyto**	**3.11**	**0**	*e*P	**P**	**03 19 50.7**	**+0.9**
ZLN	**Zelenaya**	**3.18**	**6**	*e*P	**P**	**03 19 52.8**	**+2.0**
ZLN				*e*S	**S**	**03 20 29.0**	**+1.2**
ESO	**Esso**	**3.19**	**345**	*i* P	**P**	**03 19 51.2**	**+0.2**
ESO				*e*S	**S**	**03 20 29.9**	**+1.9**
ESO				Smax			
	comp=E,60nm,1.1s						
KOZ	**Kozyrevsk**	**3.20**	**357**	P	**P**	**03 19 51.8**	**+0.6**
KOZ				S	**S**	**03 20 27.5**	**-1.0**
KOZ	**Kozyrevsk**	**3.20**	**357**	*e*P	**P**	**03 19 51.8**	**+0.6**
KOZ				*e*S	**S**	**03 20 28.0**	**-0.5**
KOZR	**Kozyr**	**3.21**	**357**	PN	**P**	**03 19 51.8**	**+0.5**
KOZR				S	**S**	**03 20 27.5**	**-1.1**
LGNR	**Loginova**	**3.24**	**5**	*e*P	**P**	**03 19 53.7**	**+2.0**
LGNR				*e*S	**S**	**03 20 31.5**	**+2.2**
CIRR	**Tsirk**	**3.27**	**5**	P	**P**	**03 19 55.4**	**+3.2**
CIRR				*e*S	**S**	**03 20 32.2**	**+2.0**
SKR	**Severo-Kuril's**	**3.35**	**231**	*e*PN	**P**	**03 20 05.5**	**+12**
SKR				*e*S	**S**	**03 20 30.2**	**-1.9**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=N,130nm,0.6s						
SKR				smax			
	comp=E,140nm,0.6s						
SKR				smax			
	comp=Z,100nm,0.8s						
KRSR	**Krestovskiy**	**3.36**	**3**	*e*P	**P**	**03 19 54.5**	**+1.0**
KRSR				*e*S	**S**	**03 20 31.3**	**-1.2**
KLY	**Klyuchi**	**3.46**	**4**	P	**P**	**03 19 56.9**	**+2.0**
KLY				S	**S**	**03 20 35.9**	**+0.9**
KLY	**Klyuchi**	**3.46**	**4**	*e*P	**P**	**03 19 57.0**	**+2.1**
KLY				*e*S	**S**	**03 20 36.0**	**+1.0**
SRDR	**Sredinnyy**	**3.47**	**356**	*i* P	**P**	**03 19 54.9**	**-0.1**
ALID	**Alaid**	**3.51**	**237**	*e*P	**P**	**03 19 56.5**	**+1.0**
KBTR	**Krutoberegovo**	**3.68**	**23**	P	**P**	**03 19 58.3**	**+0.4**
KBTR				S	**S**	**03 20 38.7**	**-1.8**
KBTR	**Krutoberegovo**	**3.68**	**23**	*e*P	**P**	**03 19 57.6**	**-0.3**
KBTR				*e*S	**S**	**03 20 38.8**	**-1.7**
BKI	**Bering**	**4.13**	**53**	*e*P	**P**	**03 20 03.5**	**-0.8**
BKI				*e*S	**S**	**03 20 45.5**	**-6.4**
BKI				Smax			
	comp=Z,60nm,0.2s						
FX1	**Attu Island--F**	**7.85**	**85**	Pn	**P**	**03 20 55.2**	**-1.0**
	comp=Z,8.9nm,0.3s,baz=182,slow=7.0,SNR=88						
FX1				Sn	**S**	**03 22 17.0**	**-7.5**
	comp=Z,6.9nm,0.3s,baz=282,slow=18,SNR=13						
MAJO	**Matsushiro**	**22.46**	**232**	*e*P	**P**	**03 23 58.5**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
MAJO	**Matsushiro**	**22.46**	**232**	*e*P	**P**	**03 23 58.5**	**+0.8**
	comp=Z,3.9nm,0.6s,mb4.0						
MJAR	**Matsushiro Arr**	**22.46**	**232**	P	**P**	**03 23 58.2**	**+0.5**
	comp=Z,1.3nm,0.5s,mb3.6,baz=15,slow=14,SNR=6.5						
MKAR	**Makanchi Array**	**48.31**	**296**	P	**P**	**03 27 36.5**	**-3.3**
	comp=Z,0.3nm,0.5s,mb3.6,baz=52,slow=7.7,SNR=5.4						
CHKZ	**Chkalovo**	**50.07**	**309**	*e*P	**P**	**03 27 49.4**	**-3.9**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
CHKZ	**Chkalovo**	**50.07**	**309**	*e*P	**P**	**03 27 49.4**	**-3.8**
	comp=Z,0.9nm,0.4s,mb4.2						
ARCES	**ARCESS Array B**	**53.52**	**342**	P	**P**	**03 28 15.2**	**-3.8**
	comp=Z,0.7nm,0.7s,mb3.7,baz=24,slow=8.9,SNR=3.3						
FCC	**Fort Churchill**	**53.62**	**39**	*e*P	**P**	**03 28 19.0**	**-0.9**
FCC				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
FCC	**Fort Churchill**	**53.62**	**39**	*e*P	**P**	**03 28 19.0**	**-0.9**
	comp=Z,1.4nm,0.7s,mb4.0						
PDAR	**Pinedale Array**	**57.58**	**61**	P	**P**	**03 28 49.8**	**+1.2**
	comp=Z,0.3nm,0.4s,mb3.7,baz=321,slow=5.8,SNR=3.6						
KAF	**Kangasniemi**	**59.72**	**337**	*e*p	**P**	**03 29 00.0**	**-3.2**
FINES	**FINESS Array B**	**60.35**	**337**	P	**P**	**03 29 04.7**	**-2.9**
	comp=Z,0.6nm,0.5s,mb3.9,baz=35,slow=8.6,SNR=8.9						
NB2	**NORSAR Subarra**	**63.78**	**344**	P	**P**	**03 29 28.1**	**-2.2**
	comp=Z,0.4nm,0.4s,mb3.8,baz=24,slow=6.5						
NOA	**NORSAR Array B**	**63.78**	**344**	P	**P**	**03 29 27.9**	**-2.3**
	comp=Z,0.5nm,0.4s,mb3.9,baz=22,slow=6.7,SNR=5.4						
AKASG	**Malin Array Be**	**68.84**	**329**	P	**P**	**03 30 00.1**	**-2.5**
	comp=Z,0.7nm,0.5s,mb3.9,baz=29,slow=5.8,SNR=4.4						
TXAR	**Lajitas Array**	**70.67**	**67**	P	**P**	**03 30 15.0**	**+0.9**
	comp=Z,0.4nm,0.6s,mb3.6,baz=290,slow=5.2,SNR=8.3						
MLR	**Muntele Rosu**	**74.47**	**328**	P	**P**	**03 30 34.7**	**-1.4**
	comp=Z,0.4nm,0.4s,mb3.7,baz=339,slow=1.6,SNR=6.5						
MLR	**Muntele Rosu**	**74.47**	**328**	P	**P**	**03 30 34.7**	**-1.4**
GERES	**GERESS Array B**	**74.75**	**338**	P	**P**	**03 30 37.3**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.7,baz=27,slow=6.0,SNR=8.3						
CDF	**Champ du Feu**	**76.50**	**342**	*e*P	**P**	**03 30 47.3**	**-0.4**
	comp=Z,4.7nm,0.8s,mb4.2						
CDF	**Champ du Feu**	**76.50**	**342**	*e*P	**P**	**03 30 47.3**	**-0.4**
CDF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
HAU	**Haudompre**	**77.07**	**342**	*e*P	**P**	**03 30 50.3**	**-0.6**
	comp=Z,3.3nm,0.4s,mb4.3						
HAU	**Haudompre**	**77.07**	**342**	*e*P	**P**	**03 30 50.3**	**-0.6**
HAU				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
FLN	**La Foliniere**	**77.43**	**347**	*e*P	**P**	**03 30 52.0**	**-0.8**
LOR	**Lormes**	**78.22**	**344**	⇑*i*P	**P**	**03 30 56.8**	**-0.4**
	comp=Z,5.8nm,0.7s,mb4.3						
LOR	**Lormes**	**78.22**	**344**	⇑*i*P	**P**	**03 30 56.8**	**-0.4**
LOR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
CABF	**La Chapelle**	**78.46**	**342**	*e*P	**P**	**03 30 58.5**	**0.0**
AVF	**Avril sur Loir**	**78.77**	**344**	*e*P	**P**	**03 30 59.9**	**-0.3**
	comp=Z,10nm,1.0s,mb4.4						
AVF	**Avril sur Loir**	**78.77**	**344**	*e*P	**P**	**03 30 59.9**	**-0.3**
AVF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
SMF	**Signal de Mont**	**78.83**	**344**	*e*P	**P**	**03 31 00.4**	**-0.2**
BGF	**Bois d'Agland**	**79.08**	**344**	*e*P	**P**	**03 31 01.9**	**-0.1**
LPL	**La Plagne**	**79.39**	**341**	⇑*i*P	**P**	**03 31 04.5**	**+0.8**
	comp=Z,9.9nm,0.8s,mb4.5						
LPL	**La Plagne**	**79.39**	**341**	⇑*i*P	**P**	**03 31 04.5**	**+0.8**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LPG	**La Plagne**	**79.40**	**341**	⇑*i*P	**P**	**03 31 04.8**	**+1.1**
	comp=Z,7.0nm,0.7s,mb4.4						
LPG	**La Plagne**	**79.40**	**341**	⇑*i*P	**P**	**03 31 04.8**	**+1.1**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
TCF	**Toulx Ste Croi**	**79.44**	**345**	⇑*i*P	**P**	**03 31 03.8**	**-0.1**
MFF	**Saint Martin d**	**79.49**	**346**	*e*P	**P**	**03 31 04.1**	**-0.1**
ASAR	**Alice Springs**	**79.58**	**204**	P	**P**	**03 31 06.0**	**+0.9**
	comp=Z,0.5nm,0.7s,mb3.6,baz=11,slow=4.8,SNR=4.3						
ORIF	**Oris-en-Rattie**	**80.13**	**342**	⇑*i*P	**P**	**03 31 08.4**	**+0.7**
	comp=Z,6.1nm,0.8s,mb4.3						
ORIF	**Oris-en-Rattie**	**80.13**	**342**	⇑*i*P	**P**	**03 31 08.4**	**+0.7**
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						

*LDG **03** 03:27:27.3±0.1,42.69N×0.55E,h5^{km},Md2.5/1,Ml2.2/7, Error ellipse: s-maj=1.6km s-min=1.1km az=17.0*

*STR **03** 03:27:27.0±0.2,42.69N×0.55E,h5^{km}±1^{km},Ml2.2,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

MDD 03 03:27:27.5±0.3,42.70N×0.55E,h8^{km}±4^{km},mbLg1.4/21, Error ellipse: s-maj=1.8km s-min=1.4km az=17.0,

PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RESF	Ens	0.19	307	Pg	Pg	03 27 31.2	-0.4
RESF				Sg	Sg	03 27 34.0	-0.3
RESF	Ens	0.19	307	Pg	Pg	03 27 31.2	-0.3
RESF				Lg		03 27 34.0	
MELF	Melles	0.24	41	Pg	Pg	03 27 32.2	-0.3
MELF				Sg	Sg	03 27 35.6	-0.2
MELF	Melles	0.24	41	Pg	Pg	03 27 32.3	-0.2
MELF				Lg		03 27 35.7	
EBIE	Bielsa	0.30	268	Pg	Pg	03 27 33.0	-0.6
	1.1nm,0.1s,SNR=7.9						
EBIE				Lg		03 27 36.9	
	7.2nm,0.1s,SNR=7.9						
EPF	Esparros	0.37	336	ePg	Pg	03 27 34.7	-0.3
EPF				eSg	Sg	03 27 39.4	-0.6
	15nm,0.2s						
VIEF	Viey	0.43	296	Pg	Pg	03 27 35.5	-0.7
VIEF				Lg		03 27 41.2	
SALF	Salau	0.48	82	Pg	Pg	03 27 36.0	-1.2
SALF	Salau	0.48	82	Pg	Pg	03 27 36.1	-1.1
SALF				Lg		03 27 42.4	
MLS	Moulis	0.48	57	Pg	Pg	03 27 36.4	-0.9
MLS	Moulis	0.48	57	Pg	Pg	03 27 36.5	-0.8
MLS				Lg		03 27 43.0	
LABF	Labassere	0.49	316	Pg	Pg	03 27 36.8	-0.7
LABF				Sg	Sg	03 27 43.7	-0.5
LABF	Labassere	0.49	316	Pg	Pg	03 27 36.9	-0.6
LABF				Lg		03 27 43.2	
EGRA	Graus	0.53	199	Pg	Pg	03 27 37.2	-1.0
	4.7nm,0.1s,SNR=7.9						
EGRA				Lg		03 27 44.4	
	1.6nm,0.1s,SNR=7.9						
CSOR	Sort	0.54	126	Pg	Pg	03 27 37.2	-1.2
CSOR				Lg		03 27 44.6	
	1.3nm,0.1s						
CORG	Organya	0.74	129	Pg	Pg	03 27 41.1	-1.2
CAVN	Les Avellanes	0.83	169	Pg	Pg	03 27 43.0	-1.1
CAVN				Lg		03 27 53.7	
	2.7nm,0.1s						
ETSF	Etsaut	0.84	284	ePg	Pg	03 27 43.5	-0.8
ETSF				eSg	Sg	03 27 54.1	-1.4
	3.5nm,0.2s						
EMIR	Miracle	1.07	137	Pg	Pg	03 27 48.1	-0.8
	1.3nm,0.2s,SNR=7.9						
EMIR				Lg		03 28 02.3	
	2.3nm,0.1s,SNR=7.9						
CLLI	Llivia	1.08	101	Pg	Pg	03 27 47.5	-1.6
CLLI				Lg		03 28 01.5	
	0.3nm,0.0s						
ESAC	San Caprasio	1.23	218	Pg	Pg	03 27 49.9	-2.3
	1.0nm,0.1s,SNR=7.9						
ESAC				Lg		03 28 07.8	
	9.4nm,0.1s,SNR=7.9						
SJPF	Ste Jean	1.37	288	ePg	Pg	03 27 53.6	-1.3
SJPF				eSg	Sg	03 28 11.1	-2.0
	3.0nm,0.3s						
MTLF	Montolieu	1.39	62	ePn	Pn	03 27 51.6	-1.6
MTLF				ePg	Pg	03 27 53.6	-1.6
MTLF				eSg	Sg	03 28 11.8	-1.9
	6.3nm,0.2s						
EPOB	Poblet	1.40	163	Pg	Pg	03 27 53.3	-2.2
	0.8nm,0.1s,SNR=7.9						
EPOB				Lg		03 28 11.5	
	3.3nm,0.3s,SNR=7.9						
ELIZ	Elizondo	1.59	288	Pg	Pg	03 27 57.1	-2.3
	0.1nm,0.1s,SNR=4.0						
ELIZ				Lg		03 28 20.3	
	0.7nm,0.2s,SNR=7.9						
EALK	Alkurruntz	1.60	290	Pg	Pg	03 27 57.8	-1.6
	0.1nm,0.1s,SNR=6.8						
EALK				Lg		03 28 18.8	
	1.1nm,0.2s,SNR=7.9						
CFON	Fontmartina	1.69	123	Lg		03 28 21.0	
	5.1nm,0.2s						
ERTA	Horta de San J	1.74	185	Pn	Pn	03 27 58.6	+0.2
	0.6nm,0.1s,SNR=9.3						
ERTA				Pg	Pg	03 27 59.9	-2.5
	0.6nm,0.1s,SNR=7.9						
ERTA				Lg		03 28 22.9	
	0.4nm,0.2s,SNR=7.9						
EJON	La Jonquera	1.75	97	Lg		03 28 24.3	
	0.7nm,0.2s,SNR=7.9						
LFF	La Frestale	2.25	4	ePn	Pn	03 28 03.2	-2.4
LFF				ePg	Pg	03 28 08.6	-3.8
LFF				eSg	Sg	03 28 37.2	-5.2
	4.3nm,0.3s						
CAF	Calviac	2.49	26	ePn	Pn	03 28 06.5	-2.5
CAF				ePg	Pg	03 28 13.3	-3.9
CAF				eSn	Sn	03 28 35.5	-4.3
CAF				eSg	Sg	03 28 45.8	-4.5
	1.6nm,0.2s						
RJF	Les Rejaudoux	2.70	15	ePg	Pg	03 28 17.3	-4.2
RJF				eSg	Sg	03 28 51.6	-5.9
	1.9nm,0.3s						
LASF	Ste Croix	2.78	59	ePn	Pn	03 28 10.8	-2.4
LASF				ePg	Pg	03 28 19.3	-3.8
LASF				eSg	Sg	03 28 54.8	-5.3
	1.5nm,0.2s						
VIVF	Saint-Julien-l	3.69	53	eSg	Sg	03 29 23.0	-7.3
	1.3nm,0.4s						

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*BJI **03** 03:38:27.5, 1.24N×97.17E, h27^{km}, mB5.0, mb4.8, Ms4.8, Msz4.7*

*MOS **03** 03:38:29.4±1.0, 1.45N×97.21E, h33^{km}, mb4.9/17, MS4.7/4, Error ellipse: s-maj=16.4km s-min=7.5km az=103.3*

*NEIC **03** 03:38:29.8±0.3, 1.33N×97.13E, mb4.8/17, Error ellipse: s-maj=9.5km s-min=6.2km az=46.0*

*IDC **03** 03:38:29.7±0.6, 1.40N×97.10E, h22^{km}±3^{km}, mb4.2/18, mb1 4.3/19, mb1mx4.2/24, mbtmp4.3/19, ML4.6/1, MS4.1/11, Ms1 4.2/11, ms1mx4.0/20, Error ellipse: s-maj=23.5km s-min=12.1km az=48.0*

ISC 03 03:38:28.0±0.5**, 1.37N**±0.07×**97.16E**±0.07**, h25^{km}, h25^{km}±.9^{km}:pP-P, n92,** $\sigma 0\overset{s}{.}$**90**/88**, mb4.6**/47**, MS4.4**/22**, 2C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.22	42	ePn	Pn	03 39 47.5	+1.0
KULM				epPn		03 39 54.8	
CMAR	Chiang Mai Arr	17.07	6	Pn	P	03 42 25.9	-0.9
	0.8nm,0.3s,baz=193,slow=11,SNR=14						
CMAR				LR	LR	03 50 01.3	
	comp=Z,1µm,19.1s,baz=188,slow=41						
KKM	Kota Kinabalu	19.56	76	eP	P	03 42 56.8	-0.4
QIZ	Qiongzhong	21.50	35	P	P	03 43 16.7	-0.6
QIZ				S	S	03 47 04.6	-4.8
QIZ				LR	LR		
	comp=N,880nm,14.9s,MS4.4						
QIZ				LR	LR		
	comp=E,790nm,14.4s,MS4.4						
QIZ				LR	LR		
	comp=Z,710nm,15.2s,MS4.2						
KMI	Kunming	24.22	12	P	P	03 43 45.5	+1.4
KMI				AP		03 43 54.4	
KMI				XP		03 43 58.0	
KMI				PP	PP	03 44 22.7	+3.6
KMI				PPP	PPP	03 44 35.2	+5.9
KMI				S	S	03 48 03.5	+5.5
KMI				XS		03 48 14.7	
KMI				AMB	AMB		
	comp=Z,50nm,1.4s,mb4.8						
KMI				AMB	AMB		
	comp=Z,250nm,3.5s						
KMI				LR	LR		
	comp=N,2µm,15.3s,MS4.8						
KMI				LR	LR		
	comp=E,1µm,15.3s,MS4.8						
KMI				LR	LR		
	comp=Z,2µm,12.0s,MS4.9						
HYB	Hyderabad	24.27	312	eP	P	03 43 53.0	+8.4
HYB	Hyderabad	24.27	312	i P	P	03 43 53.0	+8.4
GYA	Guiyang	26.56	19	⇑iP	P	03 44 06.2	+0.1
GYA				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.5						
GYA				LR	LR		
	comp=N,2µm,15.3s,MS4.8						
GYA				LR	LR		
	comp=E,630nm,12.7s,MS4.8						
GYA				LR	LR		
	comp=Z,3µm,14.2s,MS4.9						
GZH	Guangzhou	26.69	35	P	P	03 44 12.6	+5.2
PKI	Pulchoki	28.38	338	eP	P	03 44 23.3	+0.7
	comp=Z,49nm,1.2s,mb5.0						
PKI	Pulchoki	28.38	338	eP	P	03 44 23.3	+0.7
PKI				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.7						
GUN	Gumba	28.51	339	eP	P	03 44 24.8	+1.0
	comp=Z,62nm,0.7s,mb5.5						
DMN	Daman	28.53	337	eP	P	03 44 24.8	+0.8
KKN	Kakani	28.63	338	eP	P	03 44 25.6	+0.8
	comp=Z,68nm,1.0s,mb5.3						
KKN	Kakani	28.63	338	eP	P	03 44 25.6	+0.8
KKN				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.0						
LSA	Lhasa	28.75	349	eP	P	03 44 27.0	+1.1
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
LSA	Lhasa	28.75	349	eP	P	03 44 27.0	+1.1
	comp=Z,8.7nm,0.6s,mb4.7						
GKN	Gorkha	29.07	337	eP	P	03 44 29.5	+0.7
	comp=Z,45nm,0.9s,mb5.2						
KOLN	Koldanda	29.29	335	eP	P	03 44 31.7	+0.9
	comp=Z,44nm,0.6s,mb5.3						
CD2	Chengdu	30.03	11	P	P	03 44 36.4	-1.0
ENH	Enshi	31.03	21	eP	P	03 44 45.3	-0.9
	comp=Z,43nm,0.8s,mb5.3						
FITZ	Fitzroy Crossi	34.06	126	P	P	03 45 12.1	-0.7
	comp=Z,4.0nm,0.6s,mb4.5,baz=321,slow=7.4,SNR=3.6						
FITZ				LR	LR	03 58 33.1	
	comp=Z,437nm,21.9s,MS4.1,baz=281,slow=35						
XAN	Xi'an	34.31	17	P	P	03 45 13.6	-1.2
XAN				AP	pP	03 45 21.1	-1.0
XAN				PP	PP	03 46 30.0	-0.2
XAN				S	S	03 50 44.9	+5.4
XAN				SS	SS	03 52 47.6	-2.2
XAN				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
XAN				LR	LR		
	comp=N,850nm,14.8s,MS4.7						
XAN				LR	LR		
	comp=E,640nm,15.6s,MS4.7						
XAN				LR	LR		
	comp=Z,2µm,14.8s,MS4.9						
LZH	Lanzhou	35.09	9	⇑P	P	03 45 21.3	-0.1
LZH				AP	pP	03 45 29.0	+0.2
LZH				XP	sP	03 45 32.5	+0.6
LZH				AMB	AMB		
	comp=Z,40nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,80nm,5.4s						
LZH				LR	LR		
	comp=N,530nm,11.6s						
LZH				LR	LR		
	comp=Z,780nm,15.0s,MS4.6						
GTA	Gaotai	37.93	3	P	P	03 45 45.5	+0.1
GTA				AP	pP	03 45 53.6	+0.8
GTA				XP	sP	03 45 57.1	+1.2
GTA				SCS	ScS	03 55 57.3	+3.4
GTA				AMB	AMB		
	comp=Z,10.0nm,1.8s,mb4.2						
GTA				AMB	AMB		
	comp=Z,220nm,11.8s						
GTA				LR	LR		
	comp=N,610nm,14.1s,MS4.7						
GTA				LR	LR		
	comp=E,480nm,14.5s,MS4.7						
GTA				LR	LR		
	comp=Z,620nm,13.3s,MS4.6						
NWAO	Narrogin (SRO)	39.03	153	LR	LR	03 59 08.7	
	comp=Z,253nm,21.5s,MS4.0,baz=337,slow=32						
JOW	Kunigami	39.15	47	P	P	03 45 55.2	-0.5
	comp=Z,16nm,0.6s,mb4.9,baz=251,slow=13,SNR=9.4						
HHC	Hu-ho-hao-te	41.40	17	eP	P	03 46 15.4	+1.3
HHC				AP	pP	03 46 21.0	-0.5
HHC				XP	sP	03 46 24.7	+0.1
HHC				PP	PP	03 47 52.0	-0.8
HHC				S	S	03 52 21.4	-5.9
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
HHC				AMB	AMB		
	comp=Z,160nm,7.1s						
HHC				LR	LR		
	comp=N,1µm,15.2s,MS4.9						
HHC				LR	LR		
	comp=E,820nm,16.7s,MS4.9						
HHC				LR	LR		
	comp=Z,990nm,15.7s,MS4.8						
WRA	Warramunga Arr	42.16	122	P	P	03 46 20.7	+0.1
	comp=Z,2.2nm,0.7s,mb3.9,baz=301,slow=9.1,SNR=8.8						
WRAB	Tennant Creek	42.16	122	eP	P	03 46 20.8	+0.2
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
WRAB	Tennant Creek	42.16	122	eP	P	03 46 20.8	+0.2
	comp=Z,4.6nm,0.8s,mb4.2						
WMQ	Urumqi	43.10	350	eP	P	03 46 28.0	0.0
WMQ				AP	pP	03 46 38.0	+2.6
WMQ				XP	sP	03 46 42.0	+3.5
ASAR	Alice Springs	43.53	127	P	P	03 46 32.3	+0.6
	comp=Z,2.9nm,1.1s,mb3.9,baz=309,slow=7.3,SNR=7.7						
ASAR				pP	pP	03 46 39.9	+0.7
	comp=Z,1.6nm,0.7s,baz=300,slow=7.4,SNR=8.3						
ASAR				LR	LR	04 07 20.1	
	comp=Z,149nm,18.6s,MS3.9,baz=284,slow=40						
JNU	Nakatsue	44.70	41	P	P	03 46 42.0	+0.9
	comp=Z,12nm,0.8s,mb4.8,baz=329,slow=8.5,SNR=9.8						
KS15	Wonju Array Si	45.70	35	eP	P	03 46 49.4	+0.5
KS15				epP	pP	03 46 56.8	+0.4
AAK	Ala-Archa	45.83	337	eP	P	03 46 51.0	+1.1
AAK				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
AAK	Ala-Archa	45.83	337	eP	P	03 46 51.0	+1.1
	comp=Z,14nm,1.3s,mb4.7						
SONM	Songino Array	46.97	9	P	P	03 46 59.4	+0.6
	comp=Z,8.6nm,0.7s,mb4.8,baz=191,slow=8.5,SNR=63						
MKAR	Makanchi Array	47.06	346	i P	P	03 46 59.6	0.0
MKAR				pmax	pmax		
	comp=Z,16nm,1.0s						
MKAR	Makanchi Array	47.06	346	P	P	03 46 59.8	+0.2
	comp=Z,8.6nm,0.8s,mb4.8,baz=159,slow=7.2,SNR=68						
MKAR				LR	LR	04 10 33.3	
	comp=Z,213nm,21.2s,MS4.1,baz=170,slow=41						
ZAK	Zakamensk	49.10	5	eP	P	03 47 15.0	-0.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
CN2	Changchun	49.16	27	eP	P	03 47 16.3	+0.3
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
TLY	Talaya	50.42	5	eP	P	03 47 26.7	+1.2
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
TLY				MLR	MLR		
	comp=Z,540nm,16.0s,MS4.7						
TLY	Talaya	50.42	5	eP	P	03 47 26.3	+0.8
	comp=Z,3.5nm,0.8s,mb4.4						
HIA	Hailar	51.49	19	eP	P	03 47 33.9	+0.3
HIA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HIA	Hailar	51.49	19	eP	P	03 47 33.9	+0.2
	comp=Z,3.2nm,0.5s,mb4.5						
MJAR	Matsushiro Arr	51.59	42	P	P	03 47 35.5	+0.9
	comp=Z,1.3nm,0.6s,mb4.0,baz=213,slow=6.5,SNR=5.7						
MJAR	Matsushiro Arr	51.59	42	P	P	03 47 35.5	+0.9
CIT	Chita	52.31	13	eP	P	03 47 41.2	+1.4
ZAL	Zalesovo	53.37	351	P	P	03 47 47.5	-0.2
	comp=Z,8.7nm,0.3s,mb5.1,baz=304,slow=5.3,SNR=19						
STKA	Stephens Creek	53.50	132	P	P	03 47 49.7	+0.7
	comp=Z,1.6nm,0.5s,mb4.2,baz=294,slow=9.5,SNR=5.6						
STKA	Stephens Creek	53.50	132	P	P	03 47 49.7	+0.7
NVS	Novosibirsk	54.50	350	eP	P	03 47 53.9	-2.0
BVA0	Borovoye Array	56.07	341	i P	P	03 48 06.0	-1.4
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
BVAR	Borovoye Array	56.07	341	P	P	03 48 06.0	-1.4
	comp=Z,4.2nm,0.6s,mb4.6,baz=140,slow=8.5,SNR=31						
KLR	Kul'dur	56.11	27	eP	P	03 48 05.0	-2.7
KLR				MLR	MLR		
	comp=E,700nm,13.0s						
KLR				MLR	MLR		
	comp=Z,900nm,13.0s,MS5.0						
CHKZ	Chkalovo	56.55	341	eP	P	03 48 09.9	-0.9
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
CHKZ	Chkalovo	56.55	341	eP	P	03 48 09.9	-0.9
	comp=Z,7.9nm,0.6s,mb4.9						
AB31	Akbulak array	57.34	332	i P	P	03 48 15.4	-1.1
AB31				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
KMBO	Kilima Mbogo	59.96	268	LR	LR	04 13 35.9	
	comp=Z,175nm,18.1s,MS4.2,baz=62,slow=35						
YSS	Yuzh-Sakhalins	60.23	34	eP	P	03 48 35.0	-1.5
SVE	Sverdlovsk	62.51	338	eP	P	03 48 51.9	0.0
SVE				MLR	MLR		
	comp=N,100nm,16.0s,MS4.2						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.2						
SVE				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.5						
ARU	Arti	63.01	337	eP	P	03 48 53.2	-1.9
KIV	Kislovodsk	64.15	319	P	P	03 49 03.0	+0.1
KIV				e		03 49 16.1	
YAK	Yakutsk	65.26	16	eP	P	03 49 09.7	0.0
YAK				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.6						
YAK	Yakutsk	65.26	16	eP	P	03 49 09.7	-0.1
	comp=Z,49nm,0.8s,mb5.6						
BRTR	Keskin Array B	68.97	312	P	P	03 49 32.9	-0.7
	comp=Z,1.1nm,0.8s,mb3.8,baz=130,slow=6.8,SNR=5.1						
BRTR				pP	pP	03 49 40.3	-0.9
	comp=Z,1.0nm,0.6s,baz=127,slow=6.5,SNR=4.4						
MA2	Magadan	71.19	26	eP	P	03 49 46.8	+0.1
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
MA2	Magadan	71.19	26	eP	P	03 49 46.8	+0.1
	comp=Z,9.5nm,0.8s,mb4.8						
OBN	Obninsk	72.45	328	eP	P	03 50 02.5	+8.2
OBN				e		03 50 16.9	
OBN				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.2						
MAW	Mawson	72.87	193	LR	LR	04 18 34.7	
	comp=Z,117nm,19.3s,MS4.2,baz=246,slow=33						
TIXI	Tiksi	73.02	10	eP	P	03 49 54.8	-2.5
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,491nm,16.0s,MS4.9						
BOSA	Boshof	74.83	240	LR	LR	04 21 28.6	
	comp=Z,207nm,18.7s,MS4.5,baz=159,slow=34						
AKASG	Malin Array Be	75.10	322	P	P	03 50 09.1	-0.7
	comp=Z,0.7nm,0.4s,mb3.9,baz=89,slow=4.3,SNR=6.0						
AKASG				pP	pP	03 50 16.4	-1.2
	comp=Z,1.6nm,0.6s,baz=91,slow=4.0,SNR=3.4						
MLR	Muntele Rosu	75.92	317	P	P	03 50 15.0	+0.5
	comp=Z,1.9nm,0.7s,mb4.1,baz=117,slow=5.0,SNR=4.5						
FINES	FINESS Array B	79.83	332	P	P	03 50 35.6	-0.1
	comp=Z,1.6nm,0.7s,mb4.1,baz=108,slow=6.0,SNR=11						
FINES				pP	pP	03 50 43.2	-0.3
	comp=Z,1.8nm,0.6s,baz=96,slow=5.0,SNR=6.6						
FINES				sP	sP	03 50 45.8	-0.4
	comp=Z,1.8nm,0.6s,baz=90,slow=5.6,SNR=6.7						
FINES				LR	LR	04 29 11.2	
	comp=Z,65nm,20.1s,MS4.0,baz=109,slow=38						
FINES	FINESS Array B	79.83	332	P	P	03 50 35.6	-0.1
FINES				pP	pP	03 50 43.2	-0.3
FINES				sP	sP	03 50 45.8	-0.4
FINES				LR	LR	04 29 11.2	
KAF	Kangasniemi	79.91	333	ep	P	03 50 35.9	-0.3
	comp=Z,2.5nm,0.6s,mb4.3,baz=103,slow=5.1						
KAF	Kangasniemi	79.91	333	eP	P	03 50 35.9	-0.3
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
PSZ	Piszkesteto	80.45	318	P	P	03 50 40.2	+0.9
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
PSZ	Piszkesteto	80.45	318	P	P	03 50 40.2	+0.8
	comp=Z,3.3nm,0.7s,mb4.4						
BILL	Bilibino	81.02	21	P	P	03 50 43.0	+1.1
KEV	Kevo	81.93	341	ep	P	03 50 46.1	-0.5
	comp=Z,3.3nm,1.0s,mb4.2						
KEV	Kevo	81.93	341	eP	P	03 50 46.1	-0.5
KEV				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
ARCES	ARCESS Array B	82.36	340	P	P	03 50 49.1	+0.3
	comp=Z,1.6nm,0.6s,mb4.1,baz=93,slow=5.0,SNR=15						
ARCES				pP	pP	03 50 56.5	-0.3
	comp=Z,1.2nm,0.5s,baz=90,slow=3.6,SNR=3.9						
GERES	GERESS Array B	84.66	319	P	P	03 51 01.9	+0.9
	comp=Z,1.0nm,0.8s,mb4.0,baz=101,slow=6.8,SNR=8.4						
GERES				pP	pP	03 51 09.6	+0.7
	comp=Z,0.7nm,0.7s,baz=90,slow=6.7,SNR=4.5						
HFS	Hagfors	85.55	330	pP	pP	03 51 13.1	0.0
	comp=Z,1.0nm,0.6s,baz=104,slow=6.1,SNR=2.4						
VNDA	Vanda	86.00	169	pP	pP	03 51 15.6	+0.6
	comp=Z,0.6nm,0.8s,baz=306,slow=7.4,SNR=3.7						
VNDA				LR	LR	04 27 19.3	
	comp=Z,147nm,19.1s,MS4.4,baz=310,slow=34						
NB2	NORSAR Subarra	86.84	331	P	P	03 51 11.7	+0.2
	comp=Z,0.2nm,0.7s,mb3.5,baz=92,slow=5.6						
NOA	NORSAR Array B	86.84	331	P	P	03 51 11.8	+0.3
	comp=Z,1.0nm,0.7s,mb4.1,baz=95,slow=4.9,SNR=9.2						
NOA				pP	pP	03 51 19.7	+0.3
	comp=Z,0.9nm,0.7s,baz=94,slow=4.9,SNR=4.1						
NOA				LR	LR	04 35 46.1	
	comp=Z,79nm,19.6s,MS4.1,baz=90,slow=40						
TXAR	Lajitas Array	143.54	32	PKP	PKPdf	03 58 00.7	-5.2
	comp=Z,0.5nm,0.7s,baz=312,slow=2.3,SNR=4.1						
CPUP	Villa Florida	145.11	222	PKPbc	PKPbc	03 58 06.0	+1.5
	comp=Z,1.8nm,0.9s,baz=161,slow=0.6,SNR=4.8						

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*IDC **03** 03:42:16.7±1.2, 0.81N×97.25E, h20^{km}±4^{km}, mb4.0/10, mb1 4.1/11, mb1mx3.9/20, mbtmp4.1/11, ML4.3/1, Error ellipse: s-maj=60.9km s-min=14.7km az=55.0*

*NEIC **03** 03:42:17.1±0.5, 0.88N×97.33E, mb4.2/2, Error ellipse: s-maj=14.1km s-min=9.1km az=54.0*

ISC 03 03:42:15.3±0.8**, 0.9N**±0.1×**97.4E**±0.1**, h22^{km}, h22^{km}±.8^{km}:pP-P, n19,** $\sigma 0\overset{s}{.}$**50**/18**, mb4.1**/12**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.45	37	ePn	Pn	03 43 37.8	+0.4
CMAR	Chiang Mai Arr	17.51	5	Pn	P	03 46 19.4	-0.6
	0.4nm,0.3s,baz=190,slow=12,SNR=6.3						
KKM	Kota Kinabalu	19.49	74	eP	P	03 46 43.6	-0.3
WRA	Warramunga Arr	41.74	122	P	P	03 50 04.3	-0.5
	1.3nm,0.7s,mb3.7,baz=300,slow=9.1,SNR=4.7						
WRA				pP	pP	03 50 10.9	-0.7
	0.6nm,0.5s,baz=304,slow=8.9,SNR=3.5						
ASAR	Alice Springs	43.08	127	P	P	03 50 16.0	+0.2
	1.2nm,0.8s,mb3.7,baz=297,slow=8.0,SNR=6.3						
ASAR				pP	pP	03 50 23.3	+0.8
	0.5nm,0.5s,baz=297,slow=7.6,SNR=3.7						
SONM	Songino Array	47.40	8	P	P	03 50 50.5	+0.5
	1.4nm,0.6s,mb4.1,baz=190,slow=10,SNR=6.3						
MKAR	Makanchi Array	47.57	346	P	P	03 50 51.9	+0.6
	4.4nm,0.5s,mb4.8,baz=160,slow=8.8,SNR=40						
MKAR	Makanchi Array	47.57	346	P	P	03 50 51.9	+0.6
STKA	Stephens Creek	53.03	132	P	P	03 51 33.4	+0.2
	1.3nm,0.7s,mb4.0,baz=317,slow=16,SNR=2.7						
STKA				sP	sP	03 51 41.3	-1.4
	1.2nm,0.5s,baz=275,slow=11,SNR=2.5						
STKA	Stephens Creek	53.03	132	P	P	03 51 33.4	+0.2
STKA				sP	sP	03 51 41.3	-1.4
ZAL	Zalesovo	53.87	351	P	P	03 51 39.1	+0.2
	3.5nm,0.4s,mb4.7,baz=280,slow=3.6,SNR=6.8						
BVAR	Borovoye Array	56.58	341	P	P	03 51 58.2	-0.6
	1.7nm,0.7s,mb4.2,baz=153,slow=9.9,SNR=7.5						
BVAR				pP	pP	03 52 04.7	-0.9
	0.8nm,0.5s,baz=139,slow=11,SNR=4.3						
CHKZ	Chkalovo	57.06	341	eP	P	03 52 01.1	-1.0
	3.2nm,0.8s,mb4.4						
FINES	FINESS Array B	80.34	333	P	P	03 54 26.2	+0.1
	0.6nm,0.5s,mb3.8,baz=124,slow=6.9,SNR=5.1						
KAF	Kangasniemi	80.42	333	ep	P	03 54 26.9	+0.3
	1.1nm,0.6s,mb4.0,baz=100,slow=5.0						
ARCES	ARCESS Array B	82.87	340	P	P	03 54 40.0	+0.8
	1.0nm,0.8s,mb3.9,baz=90,slow=4.9,SNR=5.0						
ARCES	ARCESS Array B	82.87	340	P	P	03 54 40.0	+0.8
GERES	GERESS Array B	85.15	319	P	P	03 54 50.7	-0.4
	0.3nm,0.5s,mb3.7,baz=72,slow=4.2,SNR=4.1						
CPUP	Villa Florida	144.90	222	pPKP		04 02 00.9	
	2.7nm,0.9s,baz=156,slow=6.2,SNR=4.7						

MAN 03 03:43:00.7, 10.36N×125.08E, h19^{km}, mb4.1, ML2.9, MS2.7, Leyte

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

MSLP	**Maasin**	0.31	225	eP	Pb	03 43 08.8	+1.4
SCPH	**Surigao**	0.70	145	eP	Pb	03 43 14.1	+0.1
SCPH				eS	Sb	03 43 26.8	+3.7
PLP	**Palo**	0.81	353	i P	Pb	03 43 16.6	+0.6
PLP				i S	Sb	03 43 29.2	+2.8

*IDC **03** 04:03:42.7±2.5, 13.29N×88.29W, h71^{km}±24^{km}, mb3.7/9, mb1 4.0/11, mb1mx3.7/22, mbtmp4.1/11, MS3.6/2, Ms1 3.6/2, ms1mx2.9/31, Error ellipse: s-maj=27.3km s-min=12.7km az=57.0*
*NEIC **03** 04:03:43.1±1.2, 13.27N×88.27W, h74^{km}±12^{km}, mb4.1/15, MD4.2(SNET), Error ellipse: s-maj=15.2km s-min=5.5km az=52.0*
NEIC Felt [III] at San Salvador.
*CASC **03** 04:03:43.0±1.9, 12.86N×88.64W, h31^{km}±19^{km}, MD4.4, ML4.0, mb4.1(NEIC)*
ISC 03 04:03:42.8±0.8, **13.08N**±0.09×**88.51W**±0.10, **h93**^{km}±7^{km}, **n60**, σ**0^{s}95**/64, **mb4.0**/23, **5C-2D**, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLLM	**Bellamira**	0.45	36	⇓eP	P	04 03 56.4	-1.3
CNCH	**Conchagua**	0.69	73	⇑eP	P	04 03 59.5	-0.2
CAHU	**Cacacuatique**	0.74	23	⇑eP	P	04 04 01.0	+0.7
CRIN	**San Cristobal**	1.47	105	⇑eP	P	04 04 09.9	+1.1
TEL3	**Telica 3**	1.70	107	eP	P	04 04 11.9	+0.2
TEL3				eS	S	04 04 34.0	+1.0
TELN	**Telica**	1.70	106	eS	S	04 04 33.4	+0.3
LEON	**Leon**	1.71	113	eP	P	04 04 11.1	-0.7
LEON				eS	S	04 04 29.9	-3.3
CNGN	**Cerro Negro**	1.86	108	eP	P	04 04 13.8	+0.1
MIRN	**Miramar**	1.86	110	⇓eP	P	04 04 13.8	0.0
APYN	**Apoyeque**	2.27	112	eP	P	04 04 19.2	-0.1
XAVN	**Gruta Xavier**	2.32	113	eP	P	04 04 19.8	-0.2
XAVN				eS	S	04 04 49.8	+2.0
MGAN	**Managua**	2.39	113	eP	P	04 04 20.3	-0.8
MGAN				eS	S	04 04 49.9	+0.3
MGAN				i		04 04 55.1	
	comp=N,1µm,0.3s						
CRUN	**El Crucero**	2.42	117	eP	P	04 04 21.1	-0.3
WILN	**Americas 2**	2.44	112	eP	P	04 04 21.3	-0.5
WILN				eS	S	04 04 52.4	+1.7
PYTN	**Playitas**	2.45	102	eP	P	04 04 22.6	+0.7
TICN	**Ticuantepe**	2.45	115	eP	P	04 04 21.0	-0.9
APON	**Apoyo**	2.65	116	eP	P	04 04 26.6	+2.0
APON				eS	S	04 04 56.6	+0.8
CONN	**Concepcion**	3.19	118	eP	P	04 04 31.3	-0.8
JTS	**JuntasAbangare**	4.45	128	P	P	04 04 47.5	-1.9
	comp=N,14nm,0.3s,baz=308,slow=22,SNR=44						
JTS				S	S	04 05 37.8	-2.5
	comp=N,11nm,0.3s,baz=280,slow=23,SNR=3.1						
JTS				LR	LR	04 06 58.8	
	comp=N,225nm,21.3s,baz=138,slow=44						
JTS	**JuntasAbangare**	4.45	128	ePn	P	04 04 47.3	-2.1
JTS				Sn	S	04 05 36.7	-3.7
CGA2	**Cerro Gallo 2**	5.00	127	⇑eP	P	04 04 56.6	-0.3
PRS1	**Puriscal**	5.13	126	eP	P	04 04 58.5	-0.2
LAJ	**Bijagual**	5.36	126	eP	P	04 04 57.0	-4.7
LCR2	**La Lucha 2**	5.52	126	eP	P	04 05 03.5	-0.5
BUS	**Buena Vista**	5.83	126	eP	P	04 05 08.4	+0.2
ACR	**Cerro Adams**	6.84	129	⇑eP	P	04 05 21.7	-0.6
SDV	**Santo Domingo**	18.03	102	P	P	04 07 47.4	-1.4
	comp=N,0.6nm,0.3s,baz=224,slow=3.0,SNR=3.1						
JCT	**Junction City**	20.22	331	eP	P	04 08 11.3	-1.3
	comp=N,12nm,0.8s						
TXAR	**Lajitas Array**	21.44	321	P	P	04 08 24.9	0.0
	comp=N,3.1nm,0.7s,mb3.8,baz=143,slow=11,SNR=48						
WMOK	**Wichita Mounta**	23.49	338	eP	P	04 08 45.3	+0.5
	comp=N,9.0nm,1.1s,mb4.0						
AMTX	**Amarillo**	24.77	333	eP	P	04 08 58.1	+0.9
	comp=N,8.7nm,0.9s,mb4.2						
TUC	**Tucson**	27.98	317	P	P	04 09 27.6	+0.7
	comp=N,1.5nm,0.8s,mb3.6						
SDCO	**Great Sand Dun**	28.86	331	eP	P	04 09 35.3	+0.6
	comp=N,1.8nm,0.9s,mb3.7						
ISCO	**Idaho Springs**	30.59	334	eP	P	04 09 50.2	+0.2
	comp=N,2.5nm,0.9s,mb3.9						
PV10	**Paradox Valley**	31.11	328	eP	P	04 09 55.2	+0.6
SAML	**Samuel**	33.34	130	eP	P	04 10 13.1	-1.2
	comp=N,2.8nm,1.0s,mb4.0						
RSSD	**Black Hills**	33.68	340	eP	P	04 10 16.4	-0.5
	comp=N,4.0nm,0.8s,mb4.3						
BW06	**Boulder Array**	34.74	332	eP	P	04 10 26.7	+0.8
	comp=N,0.9nm,0.7s,mb3.7						
PDAR	**Pinedale Array**	34.74	332	P	P	04 10 26.4	+0.6
	comp=N,0.5nm,0.4s,mb3.7,baz=129,slow=9.5,SNR=5.5						
PDAR				PcP	PcP	04 12 57.9	0.0
	comp=N,0.9nm,0.5s,baz=138,slow=5.5,SNR=6.4						
SNOW	**Snow King Moun**	35.83	332	eP	P	04 10 35.3	+0.2
	comp=N,4.6nm,0.6s,mb4.6						
TPAW	**Teton Pass**	35.94	332	P	P	04 10 36.8	+0.8
	comp=N,2.2nm,0.7s,mb4.2						
RRI2	**Red Ridge**	36.00	331	P	P	04 10 36.7	0.0
	comp=N,2.1nm,0.7s,mb4.2						
MOOW	**Moose Ponds**	36.04	332	eP	P	04 10 36.8	-0.2
	comp=N,1.1nm,0.7s,mb3.9						
ELK	**Elko**	36.16	325	eP	P	04 10 38.5	+0.5
	comp=N,1.0nm,0.7s,mb3.9						
NVAR	**Mina Array Bea**	36.55	319	P	P	04 10 42.0	+0.7
	comp=N,1.0nm,0.8s,mb3.8,baz=140,slow=7.0,SNR=4.3						
NVAR				PcP	PcP	04 13 04.4	+1.1
	comp=N,1.1nm,0.8s,baz=126,slow=3.9,SNR=5.1						
LAO	**LASA Array**	36.67	339	eP	P	04 10 42.4	+0.1
	comp=N,3.2nm,0.6s,mb4.4						
ULM	**Lac du Bonnet**	37.55	352	P	P	04 10 48.0	-1.6
	comp=N,3.6nm,0.7s,mb4.3,baz=169,slow=9.3,SNR=4.1						
ULM	**Lac du Bonnet**	37.55	352	P	P	04 10 48.0	-1.6
SIV	**San Ignacio**	39.63	136	P	P	04 11 07.5	+0.4
	comp=N,1.5nm,0.9s,mb3.8,baz=329,slow=9.9,SNR=5.6						
SIV				PcP	PcP	04 13 13.9	+0.8
	comp=N,1.0nm,0.7s,baz=256,slow=5.7,SNR=4.5						
RPN	**Rapa Nui**	44.79	207	P	P	04 11 51.5	+2.3
	comp=N,34nm,0.3s,baz=22,slow=4.5,SNR=2.8						
SCHQ	**Schefferville**	44.98	18	P	P	04 11 49.0	-1.4
	comp=N,1.6nm,0.6s,mb3.9,baz=202,slow=7.0,SNR=5.1						
SCHQ				PcP	PcP	04 13 28.4	-2.0
	comp=N,1.0nm,0.4s,baz=273,slow=7.6,SNR=5.6						
SCHQ	**Schefferville**	44.98	18	P	P	04 11 49.0	-1.4
SCHQ				PcP	PcP	04 13 28.4	-2.0
BDFB	**Brasilia**	49.18	124	P	P	04 12 24.9	+1.1
	comp=N,1.2nm,0.3s,mb4.2,baz=11,slow=15,SNR=3.4						
YKA	**Yellowknife Ar**	52.74	345	P	P	04 12 49.2	-0.8
	comp=N,1.4nm,0.4s,mb4.4,baz=140,slow=7.7,SNR=35						
YKA	**Yellowknife Ar**	52.74	345	P	P	04 12 49.2	-0.9
INK	**Inuvik**	62.30	343	LR	LR	04 43 29.2	
	comp=N,145nm,18.7s,baz=180,slow=38						
ILAR	**Eielson Array**	65.03	336	P	P	04 14 13.8	-1.2
	comp=N,1.8nm,1.0s,mb3.8,baz=126,slow=4.3,SNR=8.9						
MKAR	**Makanchi Array**	119.83	7	PKP	PKPdf	04 22 23.6	+1.3
	comp=N,0.2nm,0.3s,baz=354,slow=3.1,SNR=4.5						
WRA	**Warramunga Arr**	138.45	255	PKP	PKPdf	04 23 03.5	+5.1
	comp=N,0.4nm,0.7s,baz=89,slow=2.7,SNR=8.3						
CMAR	**Chiang Mai Arr**	147.81	347	PKPbc	PKPdf	04 23 19.1	+4.4
	comp=N,1.5nm,0.6s,baz=335,slow=3.0,SNR=6.3						

*SNSN **03** 04:07:37.7, 26.62N×35.13E, Ml2.5*
*CSEM **03** 04:07:40.5±0.1, 26.60N×35.16E, h30^{km}, ML3.0, Error ellipse: s-maj=4.5km s-min=1.9km az=106.0*
*HLW **03** 04:07:42.4, 26.55N×34.99E, h26^{km}, Mb3.0*
ISC 03 04:07:39.7±2.0, **26.60N**±0.04×**35.15E**±0.08, **h23**^{km}±24^{km}, **n15**, σ**0^{s}57**/17, **6C**, **Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HQSR		1.09	219	⇑P	Pn	04 08 00.0	+0.3
HQSR				S	Sb	04 08 13.6	+0.1
HSFG		1.10	269	⇑P	Pn	04 08 00.1	+0.2
HADB		1.33	201	⇑P	Pn	04 08 03.3	+0.1
EMRS	**Mersa Alam**	1.60	190	⇑P	Pn	04 08 06.8	-0.4
BDAS	**Al Bad‘**	1.83	359	P	Pn	04 08 09.6	-0.7
TAYS	**Tayyib Ism**	1.96	353	P	Pn	04 08 11.3	-0.9
TBKS	**Tabuk**	2.04	37	P	Pn	04 08 13.7	+0.3
TBKS				S	Sn	04 08 38.7	+0.3
HKAT	**Jabal Katrina**	2.18	332	⇑P	Pn	04 08 15.9	+0.6
HAGS	**Hagol**	2.21	184	⇑P	Pn	04 08 15.9	0.0
JMQS	**Jabal Moqyreh**	2.37	16	P	Pn	04 08 18.8	+0.7
UMJS	**Umm Lajj**	2.37	124	P	Pn	04 08 16.8	-1.3
HAQS	**Haql**	2.46	355	P	Pn	04 08 18.9	-0.4
JMOS	**Jabal al Moall**	2.56	359	P	Pn	04 08 20.7	-0.1
ALWS	**Ilw as Safayha**	2.70	358	P	Pn	04 08 22.8	-0.1
KBRS	**Khaybar**	3.78	101	P	Pn	04 08 39.2	+1.1

*IDC **03** 04:17:57.3±1.4, 53.91N×164.23W, mb3.8/11, mb1 4.0/12, mb1mx3.8/26, mbtmp3.8/12, ML3.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/29, Error ellipse: s-maj=34.9km s-min=20.5km az=168.0*
*NEIC **03** 04:18:03.3, 53.82N×163.94W, h20^{km}, mb4.3/2, ML3.8(AEIC), After AEIC.*
ISC 03 04:18:03.0±0.6, **53.90N**±0.06×**163.97W**±0.06, **h62**^{km}±5^{km}, **n56**, σ**0^{s}85**/71, **mb3.8**/12, **Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESS	**West Dahl Sout**	0.73	323	P	P	04 18 17.3	-0.5
WESS				S	S	04 18 28.9	+0.1
WESN	**West Dahl Nort**	0.76	332	P	P	04 18 18.2	0.0
WFAR	**Faris Peak**	0.79	324	P	P	04 18 18.4	-0.3
SSLS	**Shishaldin Sou**	0.81	359	P	P	04 18 18.8	-0.1
SSLS				S	S	04 18 30.9	+0.3
WPOG	**Pogromni**	0.83	327	P	P	04 18 19.0	-0.1
WPOG				S	S	04 18 30.5	-0.6
SSLW	**Shishaldin Wes**	0.87	354	P	P	04 18 19.5	-0.2
SSLN	**Shishaldin Nor**	0.91	359	P	P	04 18 20.3	+0.2
WTUG	**Tugumak**	0.98	346	P	P	04 18 21.2	+0.2
WTUG				S	S	04 18 34.3	-0.1
FALS	**False Pass**	1.01	19	P	P	04 18 21.1	-0.4
FALS				S	S	04 18 35.1	-0.1
AKA	**Akutan**	1.08	283	P	P	04 18 22.0	-0.6
AKUT	**Akutan**	1.09	283	P	P	04 18 21.8	-0.8
AKUT				S	S	04 18 37.1	+0.1
AKLV	**Akutan Long Va**	1.20	283	P	P	04 18 23.4	-0.6
AKGG	**Akutan Green G**	1.23	285	P	P	04 18 23.9	-0.5
AKGG				S	S	04 18 41.1	+0.7
LVA	**Lava Point**	1.24	283	P	P	04 18 24.3	-0.4
LVA				S	S	04 18 41.9	+1.1
DRIA	**Deer Island**	1.46	42	P	P	04 18 27.2	-0.6
BALA	**Baldy Mountain**	1.47	28	P	P	04 18 29.0	+1.2
UNV	**Unalaska Valle**	1.50	269	P	P	04 18 27.5	-0.8
UNV				S	S	04 18 46.4	-0.6
DT1	**Dutton Round H**	1.56	39	P	P	04 18 28.8	-0.4
DT1				S	S	04 18 49.1	+0.7
MTBL	**Makushin Table**	1.60	273	P	P	04 18 28.9	-0.7
MTBL				S	S	04 18 50.3	+1.0
DTNA	**Dutton South F**	1.60	38	P	P	04 18 29.4	-0.3
MNAT	**Makushin Natee**	1.60	270	P	P	04 18 28.9	-0.8
MSW	**Makushin Switc**	1.66	272	P	P	04 18 30.4	-0.1
MSW				S	S	04 18 52.1	+1.3
DOL	**Dolgoi Island**	1.75	44	P	P	04 18 31.4	-0.4
DOL				S	S	04 18 53.1	+0.2
HAG	**Hague Volcano**	1.86	40	P	P	04 18 33.7	+0.5
PN7A	**Pavlof North-7**	1.91	36	P	P	04 18 35.1	+1.1
PVV	**Pavlof Volcano**	1.94	40	P	P	04 18 35.0	+0.5
PVV				S	S	04 19 01.0	+3.4
PN6	**Pavlof North-6**	1.96	37	P	P	04 18 36.4	+1.8
BLHA	**Black Hill**	2.11	31	P	P	04 18 37.2	+0.4
OKFG	**Magazine Ridge**	2.40	260	P	P	04 18 41.6	+0.8
SDPT	**Sand Point**	2.50	53	P	P	04 18 42.1	-0.1
SDPT				S	S	04 19 11.5	-0.1
NIKO	**Nikolski**	3.06	254	P	P	04 18 50.4	+0.1
SPIA	**Saint Paul Isl**	4.84	315	P	P	04 19 16.0	+0.8
SVW2	**Sparrevohn**	8.50	29	eP	P	04 20 04.4	-1.5
CNPM	**China Poot**	8.98	46	P	P	04 20 10.3	-2.1
SPU	**Mount Spurr**	9.70	36	P	P	04 20 22.8	+0.7
TT01	**Tatalina**	9.94	22	P	P	04 20 25.3	0.0
TTA	**Tatalina**	9.96	21	eP	P	04 20 26.4	+0.8
ILAR	**Eielson Array**	13.89	32	Pn	P	04 21 15.2	-2.7
	0.1nm,0.3s,baz=225,slow=8.9,SNR=3.6						
BCA3	**Beaver Creek A**	14.71	43	P	P	04 21 27.7	-1.0
INK	**Inuvik**	20.28	33	P	P	04 22 33.1	-2.6
	0.9nm,0.4s,baz=226,slow=9.6,SNR=8.2						
INK				LR	LR	04 31 11.8	
	comp=Z,60nm,19.9s,baz=171,slow=39						
INK	**Inuvik**	20.28	33	eP	P	04 22 34.6	-1.1
YKA	**Yellowknife Ar**	26.76	51	P	P	04 23 39.3	+1.0
	0.2nm,0.4s,mb3.0,baz=278,slow=11,SNR=4.1						
TXAR	**Lajitas Array**	49.55	95	P	P	04 26 51.0	+1.6
	0.1nm,0.5s,mb3.1,baz=322,slow=10,SNR=2.5						
SONM	**Songino Array**	53.26	303	P	P	04 27 16.8	-0.3
	0.1nm,0.3s,mb3.2,baz=44,slow=7.8,SNR=4.1						
KEV	**Kevo**	56.39	355	ep	P	04 27 35.9	-3.7
	3.2nm,1.1s,mb4.3						
ARCES	**ARCESS Array B**	56.68	356	P	P	04 27 40.7	-0.9
	1.3nm,0.8s,mb4.0,slow=7.3,SNR=5.4						
ARCES	**ARCESS Array B**	56.68	356	P	P	04 27 40.7	-1.0
KAF	**Kangasniemi**	64.04	355	ep	P	04 28 31.1	-0.6
	1.0nm,0.4s,mb4.2,baz=3.0,slow=6.2						
BVAR	**Borovoye Array**	64.27	327	P	P	04 28 34.0	+0.6
	2.0nm,0.7s,mb4.3,baz=53,slow=7.2,SNR=8.7						
FINES	**FINESS Array B**	64.72	355	P	P	04 28 35.8	-0.4
	0.9nm,0.5s,mb4.1,baz=21,slow=6.9,SNR=16						
MKAR	**Makanchi Array**	65.03	316	P	P	04 28 38.2	-0.2
	0.2nm,0.3s,mb3.6,baz=48,slow=7.2,SNR=6.6						
NB2	**NORSAR Subarra**	65.34	3	P	P	04 28 39.8	-0.4
	0.5nm,0.8s,mb3.6,baz=357,slow=6.5						
NOA	**NORSAR Array B**	65.34	3	P	P	04 28 40.4	+0.3
	0.9nm,0.7s,mb3.9,baz=359,slow=6.6,SNR=4.7						
NOA	**NORSAR Array B**	65.34	3	P	P	04 28 40.4	+0.3
CMAR	**Chiang Mai Arr**	79.37	287	P	P	04 30 04.3	+0.5
	0.7nm,0.4s,mb4.0,baz=45,slow=6.1,SNR=5.1						
BRTR	**Keskin Array B**	85.52	346	P	P	04 30 37.5	+2.7
	1.8nm,0.8s,mb4.3,baz=24,slow=3.4,SNR=6.9						

IDC 03 04:26:29.8±2.0, **1.75N**×**126.56E**, **mb3.5**/3, **mb1 3.8**/3, **mb1mx3.5**/17, **mbtmp3.5**/3, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx2.8**/17, **Error ellipse: s-maj=160.6km s-min=25.6km az=66.0**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	22.87	161	P	P	04 31 33.8	-2.6
	1.4nm,0.5s,baz=339,slow=11,SNR=21						
WB2	**Warramunga Arr**	22.88	161	eP	P	04 31 33.9	-2.5
PMG	**Port Moresby**	23.33	119	LR	LR	04 41 06.1	
	comp=Z,72nm,19.5s,baz=341,slow=38						
ASAR	**Alice Springs**	26.26	165	P	P	04 32 08.2	-0.5
	0.5nm,0.4s,baz=352,slow=15,SNR=9.5						
ASPA	**Alice Springs**	26.26	165	eP	P	04 32 08.0	-0.7
MKAR	**Makanchi Array**	59.08	326	P	P	04 36 31.9	-2.4
	0.1nm,0.3s,baz=120,slow=8.0,SNR=5.2						

DJA 03 04:27:16.1±0.8, **9.82S**×**116.76E**, **h33**^{km}, **MD4.6**/3, **ML4.0**/4, **6C-3D**, **Error ellipse: s-maj=18.7km s-min=17.3km az=23.0**, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	**Kedomdong**	1.47	334	⇑iPn	Pn	04 27 39.7	-1.0
	193nm,0.2s						
KEDI				⇑iSn	Sn	04 27 56.6	-2.3
RATI	**Rata**	1.63	312	⇑iPn	Pn	04 27 41.2	-1.8
	217nm,0.2s						
RATI				⇑iSn	Sn	04 28 00.3	-2.6
KELI	**Kelakatan**	2.75	305	⇑iPn	Pn	04 27 57.8	-1.2
	34nm,0.2s						
KELI	**Kelakatan**	2.75	305	⇑iP	P	04 27 58.9	+0.1
KELI				⇓iSn	Sn	04 28 28.0	-3.4
SRDI	**Scrawed**	2.91	297	⇓iPn	Pn	04 27 59.6	-1.6
	52nm,0.2s						
SRDI				⇓iSn	Sn	04 28 31.5	-3.9

*NEIC **03** 04:31:50.6, 32.66S×71.69W, h32^{km}, ML3.6(GUC), After GUC.*
GUC 03 04:31:50.6±1.0, **32.66S**×**71.69W**, **h32**^{km}±3^{km}, **MD4.0**, **ML3.6**, **6C-12D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	0.24	60	⇓iP	Pb	04 31 57.7	+0.2
IHA	**Instituto Hidr**	0.37	174	⇑iP	Pb	04 31 58.8	-0.3
IHA				i S	Sb	04 32 04.7	-0.3
ROCH	**El Roble**	0.65	119	⇑iP	Pb	04 32 03.5	0.0
ROCH				i S	Sb	04 32 12.8	+0.4
LCCH	**Las Cruces**	0.82	173	⇓iP	Pn	04 32 05.7	-0.2
LCCH				i S	Sn	04 32 16.7	-0.3
JACH	**Jahuel**	0.92	92	⇑iP	Pn	04 32 07.3	-0.1
JACH				i S	Sn	04 32 20.2	+0.5
PEL	**Peldehue**	0.97	120	⇑iP	Pn	04 32 08.6	+0.5
PEL				i S	Sn	04 32 22.1	+1.2
PEL				AMP		04 32 23.4	
	comp=N,4µm,0.2s						
RCDM	**Rinconada Maip**	1.11	138	eP	Pn	04 32 10.3	+0.2
RCDM				i S	Sn	04 32 25.3	+0.9
RCDM				AMP		04 32 27.5	
	comp=E,2µm,0.1s						
ILCH	**Illapel**	1.11	23	⇓iP	Pn	04 32 10.7	+0.5
ILCH				i S	Sn	04 32 25.8	+1.4
ILCH				AMP		04 32 26.4	
	comp=E,3µm,0.3s						
SAN	**Santiago**	1.17	133	i S	Sn	04 32 27.1	+1.1
SAN				AMP		04 32 33.4	
	comp=E,2µm,0.7s						
STL	**Santa Lucia**	1.17	132	⇓iP	Pn	04 32 11.4	+0.5
STL				i S	Sn	04 32 27.1	+1.1
STL				AMP		04 32 27.8	
	comp=N,793nm,0.3s						
TACH	**Talagante**	1.17	148	⇓iP	Pn	04 32 11.6	+0.6
DSCH	**Colegio Aleman**	1.19	128	⇑iP	Pn	04 32 11.9	+0.6
DSCH				i S	Sn	04 32 27.9	+1.4
DSCH				AMP		04 32 28.5	
	comp=E,3µm,0.4s						
CLCH	**Cerro Calan**	1.21	128	⇓iP	Pn	04 32 12.2	+0.6
CLCH				i S	Sn	04 32 28.4	+1.4
CLCH				AMP		04 32 31.5	
	comp=N,2µm,0.3s						
CLCH				AMP		04 32 32.1	
	comp=N,2µm,0.3s						
ANTU	**Antumapu**	1.27	136	AMP		04 32 35.1	
	comp=N,2µm,0.3s						
LNV	**Longovilo**	1.31	170	⇓iP	Pn	04 32 13.0	0.0
LNV				i S	Sn	04 32 29.9	+0.4
FCH	**Farellones**	1.35	120	⇓iP	Pn	04 32 14.3	+0.8
FCH				i S	Sn	04 32 32.4	+1.9
FCH				AMP		04 32 33.1	
	comp=E,1µm,0.3s						
PCH	**Pirque**	1.37	135	⇑iP	Pn	04 32 14.7	+0.8
PCH				i S	Sn	04 32 32.6	+1.5
SJCH	**San Jose de Ma**	1.49	132	⇓iP	Pn	04 32 16.1	+0.6
SJCH				i S	Sn	04 32 35.5	+1.6
SJCH				AMP		04 32 39.6	
	comp=E,677nm,0.4s						
CHCH	**Chadas Angostu**	1.54	146	i S	Sn	04 32 37.0	+1.7
CMCH	**Combarbala**	1.59	22	⇓iP	Pn	04 32 17.8	+0.7
CMCH				i S	Sn	04 32 38.4	+1.8
CMCH				AMP		04 32 42.9	
	comp=E,7µm,0.7s						
CACH	**El Canelo**	1.71	148	⇓iP	Pn	04 32 20.9	+2.2
CACH				i S	Sn	04 32 44.3	+4.5
LMEL	**Las Melosas**	1.72	134	⇓iP	Pn	04 32 20.0	+1.2
LMEL				i S	Sn	04 32 42.0	+2.2
LMEL				AMP		04 32 47.9	
	comp=N,1µm,0.1s						
CICH	**Cipreses**	1.96	148	eP	Pn	04 32 23.8	+1.5
TLL	**Tololo Astrono**	2.60	17	eP	Pn	04 32 32.2	+0.8
TLL				eS	Sn	04 33 03.2	+1.0
TLL				AMP		04 33 12.5	
	comp=N,816nm,0.7s						
LSCH	**La Serena**	2.77	8	AMP		04 33 19.8	
	comp=E,383nm,0.6s						

IDC 03 04:36:58.7±37.0, **12.13S**×**166.16E**, **mb4.0**/4, **mb1 4.2**/4, **mb1mx3.8**/17, **mbtmp4.0**/4, **Error ellipse: s-maj=646.6km s-min=98.5km az=65.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	29.95	225	P	P	04 43 08.8	-2.2
	1.1nm,0.5s,baz=42,slow=12,SNR=4.4						
WRA	**Warramunga Arr**	31.51	252	P	P	04 43 22.9	-2.0
	0.2nm,0.4s,baz=83,slow=9.0,SNR=9.1						
ASAR	**Alice Springs**	32.69	245	P	P	04 43 33.1	-2.0
	0.8nm,0.6s,baz=72,slow=9.5,SNR=6.5						
FITZ	**Fitzroy Crossi**	39.51	256	P	P	04 44 31.2	-1.9
	5.6nm,0.6s,baz=21,slow=9.0,SNR=10.0						

CASC 03 04:43:22.5±1.6, **12.58N**×**88.15W**, **h64**^{km}±48^{km}, **MD3.8**, **ML3.1**, **1C-4D**, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	0.76	24	⇓eP	P	04 43 38.0	+0.3
CNCH				eS	S	04 43 50.1	+1.0
BLLM	**Bellamira**	0.86	354	eP	P	04 43 39.3	+0.2
BLLM				eS	S	04 43 52.1	+0.6
LEON	**Leon**	1.23	97	eP	P	04 43 43.2	-0.9
LEON				eS	S	04 44 00.0	-0.1
TEL3	**Telica 3**	1.27	90	eP	P	04 43 44.5	-0.2
LCBS	**La Ceiba**	1.34	323	⇓eP	P	04 43 45.1	-0.6
LCBS				eS	S	04 44 02.7	-0.2
LFRS	**El Faro**	1.37	319	eP	P	04 43 45.5	-0.6
LFRS				eS	S	04 44 03.8	+0.3
LBRS	**Las Brisas**	1.45	323	eP	P	04 43 47.1	-0.1
LBRS				eS	S	04 44 05.3	0.0
LFU	**La Fuente**	1.50	321	⇓eP	P	04 43 47.7	-0.1
LFU				eS	S	04 44 06.3	-0.2
MOMJ	**Momotombo**	1.58	96	eP	P	04 43 48.2	-0.6
BOQS	**Boqueron**	1.59	316	eP	P	04 43 48.9	-0.2
BOQS				eS	S	04 44 10.2	+1.4
APYN	**Apoyeque**	1.79	101	⇓eP	P	04 43 51.4	-0.4
APYN				eS	S	04 44 15.1	+1.7
XAVN	**Gruta Xavier**	1.83	103	⇑eP	P	04 43 51.8	-0.5
XAVN				eS	S	04 44 15.6	+1.3
CRUN	**El Crucero**	1.90	108	eP	P	04 43 53.3	+0.1
MGAN	**Managua**	1.90	103	eP	P	04 43 52.9	-0.5
MGAN				eS	S	04 44 14.5	-1.7
MGAN				i		04 44 18.1	
	comp=E,190nm,0.3s						
SBLS	**San Blas**	1.91	311	eP	P	04 43 53.3	-0.1
SBLS				eS	S	04 44 17.2	+1.0
SNJE	**San Jose**	1.92	312	eP	P	04 43 53.8	+0.3
SNJE				eS	S	04 44 17.3	+1.0
TICN	**Ticuantepe**	1.95	106	eP	P	04 43 54.1	+0.1
WILN	**Americas 2**	1.96	102	eP	P	04 43 54.4	+0.3
WILN				eS	S	04 44 16.5	-0.9
RTR	**El Retiro**	1.96	312	eP	P	04 43 54.0	-0.2
RTR				eS	S	04 44 18.9	+1.3
PYTN	**Playitas**	2.04	91	eP	P	04 43 54.9	-0.3
RBDL	**Robledal**	2.14	316	eP	P	04 44 05.6	+9.0

*MOS **03** 05:12:53.3±1.5, 23.44S×179.97E, h510^{km}, mb4.7/14, Error ellipse: s-maj=11.2km s-min=9.4km az=45.4*
*IDC **03** 05:12:55.4±0.6, 23.57S×179.99E, h530^{km}±6^{km}, mb4.2/21, mb1 4.3/23, mb1mx4.3/24, mbtmp5.1/23, Error ellipse: s-maj=10.4km s-min=7.9km az=164.0*
*BJI **03** 05:12:56.0, 23.60S×180.00E, h540^{km}, mB5.1, mb4.7*
*NEIC **03** 05:12:56.1±0.6, 23.61S×179.98E, h541^{km}±6^{km}, mb4.6/33, Error ellipse: s-maj=6.5km s-min=4.7km az=161.0*
ISC 03 05:12:54.4±0.7, **23.63S**±0.05×**179.98E**±0.04, **h529**^{km}±8^{km}, **h541**^{km}±2.9^{km}**:pP-P**, **n312**, σ**0^{s}95**/167, **mb4.6**/60, **49C-26D**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	5.91	162	eP	P	05 14 33.0	+1.0
RAO				pmax	pmax		
	comp=Z,1µm,0.4s						
RAO	**Raoul Island**	5.91	162	P	P	05 14 32.9	+0.9
	comp=Z,465nm,0.3s,baz=104,slow=23,SNR=27						
RAO				S	S	05 15 49.6	+0.2
	comp=Z,191nm,0.3s,baz=107,slow=22,SNR=3.3						
RAO	**Raoul Island**	5.91	162	ePn	P	05 14 33.0	+1.0
	comp=Z,1µm,0.4s						
AFI	**Afiamalu**	12.42	40	eP	P	05 15 33.9	-3.9
AFI				pmax	pmax		
	comp=Z,62nm,0.6s						
AFI	**Afiamalu**	12.42	40	P	P	05 15 34.4	-3.5
	comp=Z,4.9nm,0.3s,baz=42,slow=7.3,SNR=6.8						
AFI				S	S	05 17 42.6	-6.7
	comp=Z,4.7nm,0.3s,baz=43,slow=22,SNR=7.9						
AFI	**Afiamalu**	12.42	40	eP	P	05 15 33.9	-4.0
	comp=Z,62nm,0.6s						
DZM	**Mont Dzumac**	12.58	274	eP	P	05 15 41.1	+1.7
DZM	**Mont Dzumac**	12.58	274	P	P	05 15 40.8	+1.4
	comp=Z,1.6nm,0.3s,baz=92,slow=16,SNR=14						
NOUC	**Port Laguerre**	12.70	274	eP	P	05 15 42.6	+1.8
URZ	**Urewera**	14.79	189	P	P	05 16 00.7	-1.2
	comp=Z,16nm,0.3s,baz=11,slow=1.3,SNR=37						
URZ				S	S	05 18 33.1	-0.1
	comp=Z,5.7nm,0.3s,baz=224,slow=20,SNR=11						
URZ	**Urewera**	14.79	189	PN	P	05 16 00.5	-1.4
URZ				SN	S	05 18 36.0	+2.8

MWZ	**Matawai**	**14.81**	**188**	PN	**P**	**05 16 01.6**	**-0.5**
NGZ	**Ngauruhoe**	**15.94**	**192**	PN	**P**	**05 16 15.9**	**+2.6**
TUVZ	**Tukino**	**16.02**	**192**	PN	**P**	**05 16 14.6**	**+0.5**
MRZ	**Mangatainoka R**	**17.39**	**191**	PN	**P**	**05 16 25.5**	**-1.8**
TUWZ	**Tuamarina**	**18.46**	**194**	PN	**P**	**05 16 37.6**	**-0.1**
RAR	**Rarotonga**	**18.87**	**87**	P	**P**	**05 16 40.6**	**-1.1**
	comp=Z,2.1nm,0.3s,baz=250,slow=4.7,SNR=5.5						
THZ	**Tophouse**	**19.03**	**196**	PN	**P**	**05 16 43.3**	**+0.2**
THZ				SN	**S**	**05 19 46.1**	**-1.2**
LTZ	**Lake Taylor**	**20.15**	**197**	PN	**P**	**05 16 52.7**	**-0.9**
RPZ	**Rata Peaks**	**21.34**	**198**	P	**P**	**05 17 04.1**	**-0.5**
	comp=Z,23nm,0.5s,mb5.0,baz=12,slow=4.3,SNR=12						
CNB	**Canberra Magne**	**28.97**	**239**	*e*P	**P**	**05 18 13.9**	**+1.4**
PAE	**Paea**	**29.06**	**84**	*e*P	**P**	**05 18 12.1**	**-1.4**
PPT	**Papeete**	**29.09**	**84**	*e*P	**P**	**05 18 12.7**	**-1.0**
PPT	**Papeete**	**29.09**	**84**	P	**P**	**05 18 13.0**	**-0.7**
	comp=Z,24nm,0.6s,mb5.0,baz=193,slow=4.3,SNR=4.8						
TVO	**Taravao**	**29.33**	**84**	*e*P	**P**	**05 18 14.3**	**-1.4**
PMOR	**Pomariorio Ree**	**31.45**	**80**	*e*P	**P**	**05 18 32.7**	**-1.2**
CTA	**Charters Tower**	**31.46**	**270**	⇓*i*P	**P**	**05 18 34.8**	**+0.9**
CTA	**Charters Tower**	**31.46**	**270**	P	**P**	**05 18 35.1**	**+1.2**
	comp=Z,126nm,0.4s,baz=92,slow=11,SNR=246						
CTAO	**Charters Tower**	**31.46**	**270**	*e*P	**P**	**05 18 34.8**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,125nm,0.4s						
CTAO	**Charters Tower**	**31.46**	**270**	*e*P	**P**	**05 18 34.8**	**+0.9**
	comp=Z,125nm,0.4s						
VAH	**Vaihoa**	**31.61**	**81**	*e*P	**P**	**05 18 33.9**	**-1.4**
PMG	**Port Moresby**	**34.39**	**289**	*e*P	**P**	**05 18 58.8**	**+0.2**
PMG	**Port Moresby**	**34.39**	**289**	P	**P**	**05 18 59.3**	**+0.7**
	comp=Z,45nm,0.6s,mb5.2,baz=105,slow=5.6,SNR=11						
STKA	**Stephens Creek**	**34.81**	**248**	*e*P	**P**	**05 19 02.7**	**+0.8**
STKA	**Stephens Creek**	**34.81**	**248**	P	**P**	**05 19 02.9**	**+0.9**
	comp=Z,8.9nm,0.4s,mb4.7,baz=91,slow=9.9,SNR=40						
ASAR	**Alice Springs**	**42.06**	**260**	P	**P**	**05 20 01.4**	**+0.4**
ASAR				*PP	pP	05 21 37.8	+0.3
ASAR				S	**S**	**05 25 40.5**	**-2.2**
ASAR	**Alice Springs**	**42.06**	**260**	P	**P**	**05 20 01.4**	**+0.4**
	comp=Z,37nm,0.7s,mb5.0,baz=101,slow=7.0,SNR=193						
ASAR				pP	pP	05 21 37.8	+0.3
	comp=Z,11nm,1.1s,baz=88,slow=8.2,SNR=4.0						
ASAR				ScP		05 24 45.2	
	comp=Z,4.9nm,0.6s,baz=108,slow=4.3,SNR=13						
ASAR				S	**S**	**05 25 40.5**	**-2.3**
	comp=Z,3.0nm,0.8s,baz=95,slow=15,SNR=13						
ASPA	**Alice Springs**	**42.06**	**260**	⇓*i*P	**P**	**05 20 01.2**	**+0.1**
ASPA				*e*S	**S**	**05 25 39.4**	**-3.4**
WB2	**Warramunga Arr**	**42.40**	**266**	⇓*i*P	**P**	**05 20 03.1**	**-0.6**
WB2				*e*S	**S**	**05 25 43.0**	**-4.5**
WRAB	**Tennant Creek**	**42.40**	**266**	⇓*i*P	**P**	**05 20 03.1**	**-0.6**
WRAB	**Tennant Creek**	**42.40**	**266**	*e*P	**P**	**05 20 02.6**	**-1.1**
	comp=Z,51nm,0.5s,mb5.3						
WRA	**Warramunga Arr**	**42.41**	**266**	P	**P**	**05 20 03.2**	**-0.6**
WRA					pP	05 21 44.8	+4.4
WRA				S	**S**	**05 25 43.3**	**-4.4**
WRA	**Warramunga Arr**	**42.41**	**266**	P	**P**	**05 20 03.2**	**-0.6**
	comp=Z,41nm,0.5s,mb5.3,baz=103,slow=8.6,SNR=417						
WRA				PcP	PcP	05 21 44.8	-0.6
	comp=Z,1.6nm,0.5s,baz=103,slow=3.9,SNR=5.3						
WRA				ScP		05 24 47.2	
	comp=Z,4.2nm,1.0s,baz=97,slow=4.3,SNR=5.9						
WRA				S	**S**	**05 25 43.3**	**-4.4**
	comp=Z,8.4nm,0.9s,baz=101,slow=13,SNR=16						
KAKA	**Kakadu**	**46.27**	**275**	⇓*i*P	**P**	**05 20 32.8**	**-1.1**
FORT	**Forrest**	**46.39**	**249**	⇓*i*P	**P**	**05 20 33.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**50.83**	**265**	P	**P**	**05 21 07.6**	**-0.5**
	comp=Z,51nm,0.6s,mb5.1,baz=125,slow=4.9,SNR=93						
SBA	**Scott Base**	**54.65**	**183**	*e*P	**P**	**05 21 35.7**	**+1.1**
SBA				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.2						
SBA	**Scott Base**	**54.65**	**183**	*e*P	**P**	**05 21 35.7**	**+1.0**
	comp=Z,17nm,1.2s,mb4.2						
VNDA	**Vanda**	**54.65**	**185**	*e*P	**P**	**05 21 34.8**	**+0.2**
VNDA				*e*		05 22 28.4	
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VNDA	**Vanda**	**54.65**	**185**	P	**P**	**05 21 35.1**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=354,slow=7.6,SNR=11						
VNDA				PcP	PcP	05 22 28.9	-0.4
	comp=Z,1.3nm,0.6s,baz=347,slow=4.8,SNR=9.6						
VNDA				ScP		05 25 35.0	
	comp=Z,2.1nm,0.7s,baz=343,slow=4.2,SNR=12						
VNDA	**Vanda**	**54.65**	**185**	*e*P	**P**	**05 21 34.8**	**+0.1**
	comp=Z,1.9nm,0.8s						
VNDA				*e*PcP	PcP	05 22 28.4	-1.0
KLBR	**Kellerberrin**	**55.08**	**247**	⇓*i*P	**P**	**05 21 37.2**	**-1.0**
NWAO	**Narrogin (SRO)**	**55.33**	**245**	P	**P**	**05 21 39.0**	**-1.0**
	comp=Z,36nm,1.1s,mb4.5,baz=47,slow=6.7,SNR=7.9						
MBWA	**Marble Bar**	**55.40**	**260**	*e*P	**P**	**05 21 39.2**	**-1.3**
	comp=Z,16nm,0.5s,mb4.5						
MUN	**Mundaring**	**56.32**	**246**	*e*P	**P**	**05 21 46.4**	**-0.4**
CBIJ	**Chichi jima**	**62.25**	**322**	P	**P**	**05 22 24.0**	**-2.4**
	comp=Z,40nm,0.4s,mb5.2						
QSPA	**South Pole Qui**	**66.46**	**180**	⇓*i*P	**P**	**05 22 52.9**	**+0.8**
	comp=Z,20nm,1.1s,mb4.6						
KKM	**Kota Kinabalu**	**68.80**	**287**	*e*P	**P**	**05 23 06.3**	**-1.2**
MJAR	**Matsushiro Arr**	**71.66**	**326**	P	**P**	**05 23 23.2**	**-0.7**
	comp=Z,15nm,0.8s,mb4.5,baz=162,slow=5.9,SNR=29						
MAJO	**Matsushiro**	**71.66**	**326**	*e*P	**P**	**05 23 23.1**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
MAJO	**Matsushiro**	**71.66**	**326**	*e*P	**P**	**05 23 23.1**	**-0.8**
	comp=Z,16nm,0.8s,mb4.5						
MAT	**Matsushiro**	**71.66**	**326**	*e*P	**P**	**05 23 22.0**	**-2.0**
MAT				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.5						
MAT	**Matsushiro**	**71.66**	**326**	*e*P	**P**	**05 23 22.0**	**-2.0**
	comp=Z,22nm,1.0s,mb4.5						
MAT	**Matsushiro**	**71.66**	**326**	P	**P**	**05 23 22.3**	**-1.7**
KSM	**Kuching**	**72.04**	**280**	*e*P	**P**	**05 23 25.8**	**-0.7**
YHNB	**Yeheng**	**74.38**	**306**	*e*P	**P**	**05 23 39.5**	**-0.1**
ASAJ	**Asahikawa**	**75.61**	**333**	P	**P**	**05 23 46.7**	**+0.6**
	comp=Z,26nm,0.8s,mb4.7,baz=91,slow=6.6,SNR=13						
YSS	**Yuzh-Sakhalins**	**77.88**	**335**	⇑*i*P	**P**	**05 23 59.2**	**+0.9**
YSS	**Yuzh-Sakhalins**	**77.88**	**335**	*e*P	**P**	**05 23 58.6**	**+0.3**
	comp=Z,30nm,0.8s,mb4.7						
MAW	**Mawson**	**78.00**	**200**	P	**P**	**05 23 59.3**	**+0.7**
	comp=Z,7.0nm,0.7s,mb4.1,baz=131,slow=6.8,SNR=25						
SSE	**Sheshan**	**78.29**	**311**	P	**P**	**05 24 01.4**	**+0.5**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.7						
SSE				AMB	AMB		
	comp=Z,60nm,3.7s						
NJ2	**Nanjing**	**80.46**	**311**	*e*P	**P**	**05 24 12.3**	**+0.1**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.6						
MDJ	**Mudanjiang**	**82.03**	**326**	P	**P**	**05 24 20.4**	**+0.5**
MDJ				AP	pP	05 26 16.5	+1.2
MDJ				XP	sP	05 27 11.9	+3.5
MDJ				PP	PP	05 27 36.5	-1.6
MDJ				S	S	05 33 51.0	+0.9
MDJ				XS		05 37 19.5	
MDJ				SS	SS	05 39 27.1	-0.7
MDJ				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,80nm,4.6s						
MDJ	**Mudanjiang**	**82.03**	**326**	*e*P	**P**	**05 24 20.3**	**+0.4**
	comp=Z,12nm,0.7s,mb4.4						
WHN	**Wuhan**	**82.82**	**308**	⇓P	**P**	**05 24 24.6**	**+0.4**
CMB	**Columbia Colle**	**83.02**	**43**	*e*P	**P**	**05 24 25.0**	**0.0**
CMB				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.6						
CMB	**Columbia Colle**	**83.02**	**43**	*e*P	**P**	**05 24 25.0**	**0.0**
	comp=Z,19nm,1.0s,mb4.6						
WDC	**Whiskeytown Da**	**83.26**	**40**	*e*P	**P**	**05 24 26.6**	**+0.4**
WDC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.2						
WDC	**Whiskeytown Da**	**83.26**	**40**	*e*P	**P**	**05 24 26.6**	**+0.4**
	comp=Z,7.9nm,1.0s,mb4.2						
SYO	**Syowa Base**	**83.27**	**193**	⇑P	**P**	**05 24 23.5**	**-2.2**
CN2	**Changchun**	**83.66**	**324**	*e*P	**P**	**05 24 28.3**	**+0.2**
CN2				*e*AP	pP	05 26 26.3	+2.3
CN2				*e*S	S	05 34 06.5	+0.5
CN2				AMB	AMB		
	comp=Z,40nm,1.3s,mb4.8						
MTUM	**Tungsten Hills**	**83.77**	**45**	*e*P	**P**	**05 24 29.2**	**+0.4**
YBH	**Yreka Blue Hor**	**83.89**	**39**	P	**P**	**05 24 29.9**	**+0.6**
	comp=Z,6.6nm,0.9s,mb4.2,baz=168,slow=4.6,SNR=6.9						
TIA	**Tai'an**	**84.03**	**314**	⇓P	**P**	**05 24 30.4**	**+0.3**
TIA				AMB	AMB		
	comp=Z,40nm,1.0s,mb4.9						
WCN	**Washoe City**	**84.17**	**43**	*e*P	**P**	**05 24 31.6**	**+0.9**
WCN				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.4						
WCN	**Washoe City**	**84.17**	**43**	*e*P	**P**	**05 24 31.6**	**+0.9**
	comp=Z,14nm,1.1s,mb4.4						
KLR	**Kul'dur**	**84.28**	**331**	*e*P	**P**	**05 24 28.2**	**-2.8**
HUMO	**Hull Mountain**	**84.30**	**39**	*e*P	**P**	**05 24 32.1**	**+0.8**
	comp=Z,19nm,1.1s,mb4.5						
NVAR	**Mina Array Bea**	**84.57**	**44**	P	**P**	**05 24 33.4**	**+0.7**
	comp=Z,6.3nm,1.0s,mb4.1,baz=214,slow=6.0,SNR=22						
MNV	**Mina**	**84.67**	**44**	*e*P	**P**	**05 24 33.2**	**0.0**
MNV				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.4						
MNV	**Mina**	**84.67**	**44**	*e*P	**P**	**05 24 33.2**	**0.0**
	comp=Z,19nm,1.4s,mb4.4						
SNAA	**Sanae**	**84.94**	**179**	*e*	**P**	**05 24 35.8**	**+2.1**
SNAA	**Sanae**	**84.94**	**179**	⇑*i*P	**P**	**05 24 33.8**	**+0.1**
SNAA				*e*	pP	05 26 34.0	+4.0
VNA3	**Neumayer Olymp**	**85.15**	**177**	*e*	**P**	**05 24 36.3**	**+1.5**
VNA3	**Neumayer Olymp**	**85.15**	**177**	⇑*i*P	**P**	**05 24 34.5**	**-0.3**
VNA3				*e*		05 26 36.2	
NEN	**Nelson**	**85.28**	**48**	*e*P	**P**	**05 24 36.7**	**+0.5**
MOD	**Modoc**	**85.41**	**40**	*e*P	**P**	**05 24 37.2**	**+0.5**
	comp=Z,13nm,1.0s,mb4.4						
VNA2	**Neumayer--Watz**	**85.57**	**178**	*e*	**P**	**05 24 38.5**	**+1.7**
VNA2	**Neumayer--Watz**	**85.57**	**178**	⇑*i*P	**P**	**05 24 36.8**	**0.0**
VNA2				*e*		05 26 38.6	
VNA1	**Neumayer--Stat**	**85.81**	**177**	*e*	**P**	**05 24 39.6**	**+1.7**
VNA1	**Neumayer--Stat**	**85.81**	**177**	⇑*i*P	**P**	**05 24 37.3**	**-0.6**
VNA1				*e*		05 26 40.2	
ENH	**Enshi**	**86.27**	**305**	*e*P	**P**	**05 24 41.2**	**+0.1**
	comp=Z,23nm,0.8s,mb4.9						
MA2	**Magadan**	**86.31**	**346**	*e*P	**P**	**05 24 40.0**	**-0.5**
MA2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
MA2	**Magadan**	**86.31**	**346**	*e*P	**P**	**05 24 39.9**	**-0.6**
	comp=Z,25nm,0.8s,mb4.9						
TUC	**Tucson**	**86.37**	**53**	*e*P	**P**	**05 24 42.5**	**+1.0**
TUC				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.5						
TUC	**Tucson**	**86.37**	**53**	*e*P	**P**	**05 24 42.5**	**+1.0**
	comp=Z,14nm,1.1s,mb4.5						
GYA	**Guiyang**	**86.59**	**301**	⇑*i*P	**P**	**05 24 43.0**	**+0.3**
GYA				AP	pP	05 26 41.8	+2.4
GYA				XP	sP	05 27 35.2	+3.2
GYA				PP	PP	05 28 16.9	+1.7
GYA				SKS	SKS	05 34 17.0	-0.6
GYA				S	S	05 34 33.7	-0.4
WVOR	**Wild Horse Val**	**86.72**	**41**	*e*P	**P**	**05 24 43.4**	**+0.5**
WVOR				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.6						
WVOR	**Wild Horse Val**	**86.72**	**41**	*e*P	**P**	**05 24 43.4**	**+0.6**
	comp=Z,18nm,1.3s,mb4.5						
VIPM	**Ingram Point**	**86.81**	**38**	P	**P**	**05 24 44.0**	**+0.7**
TDL	**Tradedollar La**	**87.07**	**36**	P	**P**	**05 24 45.6**	**+1.2**
SLKM	**Skilak Lake**	**87.28**	**14**	*e*P	**P**	**05 24 44.6**	**-0.4**
SPU	**Mount Spurr**	**87.48**	**13**	*e*P	**P**	**05 24 44.4**	**-1.6**
WPW	**White Pass**	**87.65**	**36**	P	**P**	**05 24 47.8**	**+0.7**
FMW	**Mount Fremont**	**87.73**	**36**	P	**P**	**05 24 48.4**	**+0.9**
XAN	**Xi'an**	**88.56**	**308**	P	**P**	**05 24 52.5**	**+0.8**
XAN				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
HAWA	**Hanford**	**88.56**	**37**	*e*P	**P**	**05 24 51.9**	**+0.5**
	comp=Z,2.5nm,1.4s,mb3.9						
MVU	**Marysvale**	**88.58**	**47**	*e*P	**P**	**05 24 52.5**	**+0.8**
	comp=Z,10nm,1.4s,mb4.5						
MSU	**Marysvale**	**88.61**	**47**	*e*P	**P**	**05 24 52.5**	**+0.6**
SML	**Sawmill**	**88.86**	**14**	*e*P	**P**	**05 24 51.4**	**-1.1**
DIV	**Divide**	**88.88**	**16**	*e*P	**P**	**05 24 51.9**	**-0.7**
	comp=Z,61nm,1.1s,mb5.3						
BMO	**Blue Mountains**	**88.91**	**39**	*e*P	**P**	**05 24 53.1**	**0.0**
BMO				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.5						
BMO	**Blue Mountains**	**88.91**	**39**	*e*P	**P**	**05 24 53.1**	**-0.1**
	comp=Z,11nm,1.4s,mb4.5						
SEY	**Seymchan**	**89.00**	**348**	*e*P	**P**	**05 24 53.2**	**+0.1**
SEY				*PP	pP	05 26 51.6	+1.1
SEY						05 28 30.7	
SEY				*e*		05 34 28.2	
SEY				*e*S	S	05 34 53.9	-1.2
SEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
SEY				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
SEY				pmax	pmax		
	comp=E,4.0nm,0.8s						
SEY				smax			
	comp=N,130nm,27.6s						
SEY				smax			
	comp=E,90nm,25.1s						
DUG	**Dugway**	**89.08**	**45**	*e*P	**P**	**05 24 54.1**	**0.0**
DUG				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
DUG	**Dugway**	**89.08**	**45**	*e*P	**P**	**05 24 54.1**	**+0.1**
	comp=Z,3.6nm,1.1s,mb4.1						
KMI	**Kunming**	**89.12**	**298**	P	**P**	**05 24 56.4**	**+1.8**
KMI				AP	pP	05 26 55.8	+3.8
KMI				S	S	05 34 57.1	0.0
KMI				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.4						
KMI				AMB	AMB		
	comp=Z,120nm,3.6s						
CMAR	**Chiang Mai Arr**	**89.41**	**290**	P	**P**	**05 24 57.4**	**+1.3**
	comp=Z,6.8nm,0.8s,mb4.5,baz=132,slow=3.2,SNR=30						
HLID	**Hailey**	**89.90**	**41**	*e*P	**P**	**05 24 58.1**	**+0.4**
	comp=Z,8.4nm,1.0s,mb4.5						
CTU	**Camp Tracy**	**90.03**	**45**	*e*P	**P**	**05 24 58.4**	**0.0**
DAU	**Daniels Canyon**	**90.21**	**45**	*e*P	**P**	**05 24 59.9**	**+0.7**
BNM	**Barren Site**	**90.30**	**53**	*e*P	**P**	**05 25 00.3**	**+0.5**
TXAR	**Lajitas Array**	**90.30**	**58**	P	**P**	**05 25 00.8**	**+0.9**
	comp=Z,3.0nm,0.7s,mb4.2,baz=216,slow=6.3,SNR=32						
TXAR	**Lajitas Array**	**90.30**	**58**	P	**P**	**05 25 00.8**	**+0.9**
TCUT	**Toone Canyon**	**90.48**	**45**	*e*P	**P**	**05 25 00.9**	**+0.5**
HWUT	**Hardware Ranch**	**90.63**	**44**	*e*P	**P**	**05 25 00.9**	**-0.2**
	comp=Z,4.4nm,0.9s,mb4.4						
PV10	**Paradox Valley**	**90.66**	**48**	*e*P	**P**	**05 25 01.1**	**-0.2**
ANMO	**Albuquerque**	**90.80**	**52*c***	*i*P	**P**	**05 25 02.0**	**-0.1**
ANMO	**Albuquerque**	**90.80**	**52**	P	**P**	**05 25 02.3**	**+0.2**
	comp=Z,6.0nm,1.1s,mb4.4,baz=228,slow=4.7,SNR=12						
ANMO	**Albuquerque**	**90.80**	**52**	*e*P	**P**	**05 25 02.1**	**0.0**
	comp=Z,8.8nm,1.2s,mb4.6						
CD2	**Chengdu**	**90.91**	**303**	P	**P**	**05 25 04.0**	**+1.3**
AHID	**Auburn Hatcher**	**91.53**	**43**	*e*P	**P**	**05 25 06.1**	**+0.9**
	comp=Z,6.6nm,0.9s,mb4.7						
IMA	**Indian Mountai**	**91.64**	**10**	*e*P	**P**	**05 25 05.2**	**0.0**
IMA				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.1						
IMA	**Indian Mountai**	**91.64**	**10**	*e*P	**P**	**05 25 05.2**	**0.0**
	comp=Z,29nm,1.4s,mb5.1						
COLA	**College**	**91.65**	**13**	*e*P	**P**	**05 25 03.8**	**-1.5**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
COLA	**College**	**91.65**	**13**	*e*P	**P**	**05 25 03.8**	**-1.5**
	comp=Z,3.2nm,0.7s,mb4.5						
RRI2	**Red Ridge**	**91.69**	**43**	*e*P	**P**	**05 25 06.2**	**+0.2**
	comp=Z,16nm,1.3s,mb4.9						
ILAR	**Eielson Array**	**91.77**	**14**	P	**P**	**05 25 04.2**	**-1.6**
	comp=Z,2.1nm,0.8s,mb4.2,baz=229,slow=5.7,SNR=18						
ILAR				PP	PP	05 28 49.3	-6.2
	comp=Z,0.8nm,0.9s,baz=229,slow=7.5,SNR=5.2						
BILL	**Bilibino**	**91.95**	**355**	*e*P	**P**	**05 25 06.2**	**-0.4**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
BILL	**Bilibino**	**91.95**	**355**	*e*P	**P**	**05 25 06.2**	**-0.4**
	comp=Z,4.6nm,0.5s,mb4.8						
PDAR	**Pinedale Array**	**92.51**	**44**	P	**P**	**05 25 09.6**	**-0.1**
	comp=Z,3.3nm,1.0s,mb4.3,baz=207,slow=3.3,SNR=16						
PDAR				PP	PP	05 28 57.6	-4.2
	comp=Z,0.6nm,0.9s,baz=252,slow=4.7,SNR=4.3						
SDCO	**Great Sand Dun**	**92.80**	**50**	*e*P	**P**	**05 25 11.2**	**0.0**
	comp=Z,5.9nm,1.1s,mb4.5						
LZH	**Lanzhou**	**93.19**	**308**	⇓P	**P**	**05 25 13.9**	**+0.9**
LZH				AP	pP	05 27 14.5	+3.4
LZH				PP	PP	05 29 10.0	+2.7
LZH				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.6						
YAK	**Yakutsk**	**94.31**	**339**	*i* P	**P**	**05 25 16.7**	**-0.8**
YAK				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.3						
SONM	**Songino Array**	**96.88**	**319**	P	**P**	**05 25 29.0**	**-0.5**
	comp=Z,0.7nm,0.5s,mb4.1,baz=132,slow=6.6,SNR=6.6						
SONM				PP	PP	05 29 25.7	-9.2
	comp=Z,0.2nm,0.3s,baz=117,slow=5.5,SNR=3.7						
GTA	**Gaotai**	**97.50**	**310**	P	**P**	**05 25 33.1**	**+0.5**
GTA				AP	pP	05 27 33.1	+2.3
GTA				XP	sP	05 28 26.8	+4.2
YKA	**Yellowknife Ar**	**100.12**	**25**	P	P	05 25 42.3	-1.5
	comp=Z,0.2nm,0.5s,baz=258,slow=4.2,SNR=3.7						
YKA	**Yellowknife Ar**	**100.12**	**25**	P	P	05 25 42.3	-1.5
TIXI	**Tiksi**	**101.28**	**345**	*e*P	P	05 25 48.4	-0.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZAL	**Zalesovo**	**111.74**	**321**	PKiKP		05 30 28.2	
	comp=Z,1.3nm,0.4s,baz=334,slow=2.2,SNR=4.7						
MKAR	**Makanchi Array**	**111.95**	**313**	Pdiff	Pdif	05 26 38.0	+1.8
	comp=Z,0.5nm,0.7s,baz=90,slow=6.1,SNR=4.0						
MKAR				PKiKP		05 30 28.6	
	comp=Z,2.2nm,0.6s,baz=204,slow=0.6,SNR=33						
MKAR				SKP		05 33 14.0	
	comp=Z,0.6nm,0.7s,baz=71,slow=0.7,SNR=5.3						
AAK	**Ala-Archa**	**116.72**	**307**	*i* PKIKP	PKPdf	05 30 37.8	-0.5
CHKZ	**Chkalovo**	**120.08**	**320**	*e*PKIKP	PKPdf	05 30 43.5	-1.0
SUR	**Sutherland**	**120.86**	**201**	PKPdf	PKPdf	05 30 47.4	+0.9
SCHQ	**Schefferville**	**122.27**	**39**	PKP	PKPdf	05 30 47.1	-1.6
	comp=Z,2.5nm,0.9s,baz=315,slow=2.9,SNR=3.7						
BOSA	**Boshof**	**122.64**	**206**	PKP	PKPdf	05 30 50.9	+0.8
	comp=Z,2.5nm,0.7s,baz=269,slow=19,SNR=6.7						
BOSA	**Boshof**	**122.64**	**206**	*e*PKPdf	PKPdf	05 30 51.0	+0.9
SUMG	**Summit**	**126.61**	**13**	*e*PKPdf	PKPdf	05 30 57.2	+0.6
ARU	**Arti**	**126.65**	**324**	*i* PKIKP	PKPdf	05 30 57.2	+0.2
ARU	**Arti**	**126.65**	**324**	*e*PKPdf	PKPdf	05 30 56.8	-0.3
KEV	**Kevo**	**131.14**	**348**	*e*p	PKPdf	05 31 04.1	-1.2
ARCES	**ARCESS Array B**	**131.62**	**348**	PKhKP		05 30 58.0	
	comp=Z,0.5nm,0.5s,baz=72,slow=3.8,SNR=5.9						
ARCES				PKP	PKPdf	05 31 06.0	-0.2
	comp=Z,7.1nm,0.8s,baz=42,slow=1.0,SNR=24						
ARCES				SKPbc		05 33 42.8	
	comp=Z,3.8nm,0.8s,baz=23,slow=3.0,SNR=8.1						
LSZ	**Lusaka**	**132.51**	**218**	*e*PKIKP	PKPdf	05 31 11.0	+1.7
KAF	**Kangasniemi**	**137.58**	**342**	*e*p	PKPdf	05 31 07.4	-10
KAF	**Kangasniemi**	**137.58**	**342**	*e*pkp		05 34 00.7	
	baz=39,slow=2.7						
FINES	**FINESS Array B**	**138.18**	**342**	PKhKP		05 31 07.8	
	comp=Z,1.8nm,0.6s,baz=90,slow=1.9,SNR=9.6						
FINES				PKP	PKPdf	05 31 18.8	+0.3
	comp=Z,2.2nm,0.5s,baz=80,slow=4.2,SNR=11						
FINES				SKP		05 34 03.1	
	comp=Z,3.7nm,0.7s,baz=63,slow=4.3,SNR=13						
OBN	**Obninsk**	**138.53**	**329**	*i* PKIKP	PKPdf	05 31 20.4	+1.1
KAMS	**Al Khamasin**	**138.63**	**274**	P	PKPdf	05 31 21.8	+1.4
BLJS	**Baljurashi**	**141.26**	**273**	P	PKPdf	05 31 27.4	+2.2
MBAR	**Mbarara**	**141.62**	**235**	*e*PKHKP		05 31 23.2	
NB2	**NORSAR Subarra**	**141.81**	**351**	PKPabc	PKPdf	05 31 20.8	-4.0
	comp=Z,11nm,0.8s,baz=17,slow=2.9						
NOA	**NORSAR Array B**	**141.81**	**351**	PKhKP		05 31 21.0	
	comp=Z,8.4nm,0.7s,baz=16,slow=4.6,SNR=39						
NOA				SKPbc		05 34 13.3	
	comp=Z,1.4nm,0.7s,baz=15,slow=4.1,SNR=5.6						
NOA	**NORSAR Array B**	**141.81**	**351**	PKP	PKPdf	05 31 21.0	-3.8
NOA				SKPbc		05 34 13.3	
SOC	**Sochi**	**141.84**	**311**	*i* PKIKP	PKPdf	05 31 29.1	+3.7
SOC				*e*		05 34 37.9	
SOC				*e*PPP	PPP	05 37 50.5	-3.4
SOC				*e*SS	SS	05 52 23.8	-6.0
SOC				pmax	pmax		
	comp=Z,41nm,1.1s						
SOC				pmax	pmax		
	comp=N,29nm,0.9s						
SOC				pmax	pmax		
	comp=E,26nm,0.9s						
ANN	**Anapa**	**142.96**	**314**	*i* PKHKP		05 31 24.5	
ANN				pmax	pmax		
	comp=Z,74nm,0.7s						
KONO	**Kongsberg**	**143.37**	**352**	*e*PKIKP	PKPdf	05 31 26.2	-1.3
MALT	**Malatya**	**144.20**	**303**	*e*PKIKP	PKPdf	05 31 30.8	+1.1
AKASG	**Malin Array Be**	**144.73**	**327**	PKIKP	PKPdf	05 31 30.5	+0.3
AKASG						05 34 20.1	
AKASG	**Malin Array Be**	**144.73**	**327**	PKP	PKPdf	05 31 30.5	+0.3
	comp=Z,35nm,0.7s,baz=42,slow=4.1,SNR=176						
AKASG				pPKP		05 33 36.3	
	comp=Z,0.2nm,0.2s,baz=250,slow=28,SNR=1.6						
AKASG				SKPbc		05 34 20.1	
	comp=Z,4.6nm,0.7s,baz=45,slow=2.4,SNR=11						
AKASG	**Malin Array Be**	**144.73**	**327**	PKP	PKPdf	05 31 30.5	+0.3
AKASG				pPKP		05 33 36.3	
AKASG				SKPbc		05 34 20.1	
SUW	**Suwalki**	**145.01**	**336**	*e*PKP	PKPdf	05 31 31.5	+1.0
SIM	**Simferopol'**	**145.05**	**316**	⇑*e*PKIKP	PKPdf	05 31 33.2	+2.2
SIM				pmax	pmax		
	comp=Z,81nm,1.0s						
GZT	**Gaziantep**	**145.08**	**302**	*i* P	PKPdf	05 31 33.7	+2.4
BOYT	**Boyabat**	**145.91**	**310**	*i* P	PKPdf	05 31 35.9	+3.4
UMJS	**Umm Lajj**	**146.04**	**281**	P	PKPdf	05 31 37.2	+4.0
CTKT	**Corum**	**146.27**	**309**	*i* P	PKPdf	05 31 36.8	+3.7
COBT	**Iskenderun**	**146.28**	**301**	*i* P	PKPdf	05 31 37.1	+3.8
MUD	**Monsted U'grnd**	**146.52**	**351**	⇓*i*PKIKP	PKPdf	05 31 36.0	+3.0
MUD				pmax	pmax		
	comp=Z,24nm,0.7s						
MUD	**Monsted U'grnd**	**146.52**	**351**	⇓*i*P	PKPdf	05 31 36.0	+3.0
	comp=Z,24nm,0.7s						
BSD	**Bornholm Skovb**	**146.65**	**344**	⇓*i*PKIKP	PKPdf	05 31 36.2	+2.9
BSD				pmax	pmax		
	comp=Z,37nm,0.9s						
BSD	**Bornholm Skovb**	**146.65**	**344**	⇓*i*P	PKPdf	05 31 36.2	+2.9
	comp=Z,37nm,0.9s						
COP	**Copenhagen**	**146.68**	**347**	*e*PKIKP	PKPdf	05 31 35.1	+1.8
COP				pmax	pmax		
	comp=Z,29nm,0.7s						
COP	**Copenhagen**	**146.68**	**347**	*i* P	PKPdf	05 31 35.1	+1.8
	comp=Z,29nm,0.7s						
AVNT	**Avonos**	**146.79**	**305**	*i* P	PKPdf	05 31 37.8	+3.7
TBKS	**Tabuk**	**146.87**	**286**	P	PKPdf	05 31 39.3	+4.8
ELDT	**Eldivan**	**147.29**	**309**	*i* P	PKPdf	05 31 38.8	+4.0
BRTR	**Keskin Array B**	**147.40**	**308**	PKPbc	PKPdf	05 31 39.0	+4.0
	comp=Z,6.8nm,0.7s,baz=142,slow=4.9,SNR=24						
BRTR				PKPab	PKPab	05 31 43.9	-0.7
	comp=Z,15nm,0.6s,baz=92,slow=4.1,SNR=34						
JMQS	**Jabal Moqyreh**	**147.46**	**287**	P	PKPdf	05 31 40.6	+5.2
GKP	**Gorka Klasztor**	**147.64**	**341**	*e*PKP	PKPdf	05 31 39.8	+4.9
LVV	**L'vov**	**147.79**	**330**	*i* PKIKP	PKPdf	05 31 39.7	+4.4
MEST	**Erdemli**	**147.92**	**302**	*i* P	PKPdf	05 31 40.9	+5.0
JMOS	**Jabal al Moall**	**148.13**	**288**	P	PKPdf	05 31 42.2	+5.7
BDAS	**Al Bad'**	**148.15**	**286**	P	PKPdf	05 31 42.3	+5.7
ALWS	**Ilw as Safayha**	**148.16**	**288**	P	PKPdf	05 31 42.3	+5.8
SGKT	**Sivrigoynuk**	**148.23**	**310**	*i* P	PKPdf	05 31 40.7	+4.4
HAQS	**Haql**	**148.29**	**287**	P	PKPdf	05 31 42.6	+5.8
TAYS	**Tayyib Ism**	**148.35**	**286**	P	PKPdf	05 31 42.7	+5.9
KWP	**Kalwaria**	**148.52**	**331**	*e*PKP	PKPdf	05 31 41.9	+5.4
CFR	**Carcaliu**	**148.61**	**320**	⇓*i*P	PKPdf	05 31 42.0	+5.3
BURAR	**Bucovina Array**	**148.73**	**326**	⇓*i*P	PKPdf	05 31 43.7	+6.9
BSEG	**Bad Segeberg**	**148.75**	**348**	*e*PKPbc	PKPdf	05 31 42.1	+5.4
BSEG				*e*PKPab	PKPab	05 31 48.2	-1.3
CSS	**Prodhromos**	**148.93**	**299**	*e*PKPbc	PKPdf	05 31 43.1	+5.5
CSS				*e*PKPab	PKPab	05 31 49.7	-1.1
HARR	**Harsova**	**149.00**	**320**	⇓*i*P	PKPdf	05 31 43.2	+5.8
VRI	**Vrincioaia**	**149.02**	**322**	⇓*i*P	PKPdf	05 31 42.9	+5.5
KOLS	**Kolonicke sedl**	**149.22**	**331**	*i* PKP	PKPdf	05 31 44.1	+6.5
KOLS				*i*		05 31 52.0	
OJC	**Ojcow**	**149.28**	**335**	*e*PKP	PKPdf	05 31 43.5	+5.9
MLR	**Muntele Rosu**	**149.69**	**322**	PKPbc	PKPdf	05 31 44.2	+5.8
	comp=Z,14nm,1.0s,baz=350,slow=2.8,SNR=15						
MLR	**Muntele Rosu**	**149.69**	**322**	⇓*i*P	PKPdf	05 31 44.3	+5.8
MLR	**Muntele Rosu**	**149.69**	**322**	⇓*i*P	PKPdf	05 31 44.3	+5.8
NIE	**Niedzica**	**149.70**	**333**	⇓*i*PKP	PKPdf	05 31 45.2	+6.9
KSP	**Ksiaz**	**150.03**	**339**	⇓*i*PKHKP		05 31 45.8	
KSP				*e*		05 31 54.2	
KSP	**Ksiaz**	**150.03**	**339**	*e*PKP	PKPdf	05 31 45.8	+7.0
OKC	**Ostrava-Krasne**	**150.22**	**336**	⇑*e*PKPB	PKPdf	05 31 46.2	+7.1
OKC				*e*PKPAB	PKPab	05 31 54.6	-1.1
KECS	**Kecovo**	**150.35**	**332**	*e*P	PKPdf	05 31 49.3	+10
KECS				*i* pP	PKPab	05 31 55.6	-0.6
KECS	**Kecovo**	**150.35**	**332**	*i* PKP	PKPab	05 31 55.6	-0.6
UPC	**Upice**	**150.41**	**339**	⇑*e*PKPB	PKPdf	05 31 46.6	+7.2
UPC				*e*PKPAB	PKPab	05 31 55.9	-0.5
WIT	**Witteveen**	**150.41**	**352**	*e*PKP	PKPdf	05 31 47.0	+7.7
WIT	**Witteveen**	**150.41**	**352**	*e*PKP	PKPdf	05 31 47.0	+7.7
DPC	**Dobruska-Polom**	**150.44**	**339**	⇑*e*PKPB	PKPdf	05 31 46.8	+7.3
DPC				*e*PKPAB	PKPab	05 31 56.3	-0.3
ULDT	**Uludag**	**150.44**	**311**	*i* P	PKPdf	05 31 46.5	+6.7
MORC	**Moravsky Berou**	**150.49**	**337**	*e*PKIKP	PKPdf	05 31 46.4	+6.8
MORC				*e*		05 31 55.9	
CLL	**Collm**	**150.59**	**343**	⇓*e*PKIKP	PKPdf	05 31 41.0	+1.4
CLL				*i*		05 31 46.4	
CLL				*i*		05 31 55.7	
CLL				pmax	pmax		
	comp=Z,59nm,0.8s						
CLL				pmax	pmax		
	comp=Z,22nm,0.9s						
CLL	**Collm**	**150.59**	**343**	*e*PKP	PKPdf	05 31 41.0	+1.4
CLL				⇓*i*PKP	PKPdf	05 31 46.4	+6.8
CLL				⇑*i*PKP	PKPab	05 31 55.7	-1.5

CLL				*i* pPKP		05 33 56.6	
CLL	Collm	150.59	343	*e*PKIKP	PKPdf	05 31 41.0	+1.4
CLL				*i* PKP1	PKPdf	05 31 46.4	+6.8
CLL				*i* PKP2	PKPab	05 31 55.7	-1.5
CLL				*e*		05 32 07.0	
CLL				*e**PPKP		05 33 50.0	
CLL				*i* *PPKP		05 33 56.6	
CLZ	Clausthal	150.72	347	*e*PKPbc	PKPdf	05 31 47.1	+7.3
CLZ				*e*PKPab	PKPab	05 31 56.7	-1.0
CLZ				*e*pPKPbc		05 33 56.8	
BRG	Berggiesshubel	150.72	342	*i* PKIKP	PKPdf	05 31 46.3	+6.4
BRG				*i*		05 31 56.4	
BRG				pmax	pmax		
	comp=Z,36nm,0.9s						
BRG	Berggiesshubel	150.72	342	*i* PKP	PKPdf	05 31 46.3	+6.4
BRG				*i*		05 31 56.4	
BRG				*e*pPKP		05 33 56.6	
PVCC	Panska Ves	150.84	341	⇑*e*PKPB	PKPdf	05 31 47.5	+7.5
PVCC				*e*PKPAB	PKPab	05 31 57.7	-0.5
VYHS	Vyhne	151.03	334	*i* PKP	PKPdf	05 31 47.2	+6.8
VYHS				*i*		05 31 58.5	
PSZ	Piszkesteto	151.03	332	*e*PKIKP	PKPdf	05 31 47.5	+7.1
PSZ				*e*		05 31 57.8	
WTSB	Winterswijk	151.22	351	*e*PKP	PKPdf	05 31 47.9	+7.3
	comp=Z,45nm,0.8s						
WTSB	Winterswijk	151.22	351	*e*PKP	PKPdf	05 31 47.9	+7.3
	comp=Z,45nm,0.8s						
PRU	Pruhonice	151.32	340	⇑*e*PKPB	PKPdf	05 31 48.3	+7.5
PRU				*e*PKPAB	PKPab	05 31 59.4	-0.9
DNZL	Cakiroluk	151.47	306	*i* P	PKPdf	05 31 49.6	+8.2
AKAS	Kas	151.53	303	*i* P	PKPdf	05 31 48.7	+7.2
MOX	Moxa	151.55	344	*e*PKIKP	PKPdf	05 31 48.8	+7.7
MOX				*e*		05 31 59.8	
MOX				pmax	pmax		
	comp=Z,21nm,1.4s						
MOX	Moxa	151.55	344	*e*PKP	PKPdf	05 31 48.8	+7.7
MOX				*e*PKPab	PKPab	05 31 59.8	-1.4
MOX				*e*pPKP		05 33 59.0	
NKC	Novy Kostel	151.71	343	⇑*e*PKPB	PKPdf	05 31 49.0	+7.7
NKC				*e*PKPAB	PKPab	05 32 00.7	-1.2
BZS	Buzias	151.91	327	⇓*i*P	PKPdf	05 31 49.5	+7.8
ZST	Bratislava	151.96	335	*e*PKP	PKPab	05 32 02.8	-0.2
KHC	Kasperske Hory	152.38	341	⇑*e*PKPB	PKPdf	05 31 50.8	+8.5
KHC				*e*PKPAB	PKPab	05 32 04.0	-0.7
HGN	Heimansgroeve	152.52	352	*e*PKP	PKPab	05 32 03.7	-1.6
	comp=Z,23nm,1.0s						
HGN	Heimansgroeve	152.52	352	*e*PKP	PKPab	05 32 03.7	-1.6
	comp=Z,23nm,1.0s						
GRA1	Grafenberg Arr	152.53	344	*e*PKPbc	PKPdf	05 31 50.8	+8.4
GRA1				*e*PKPab	PKPab	05 32 04.8	-0.6
GRA1				*e*pPKPbc		05 34 00.8	
GRF	Grafenberg Arr	152.53	344	*e*PKP	PKPdf	05 31 50.8	+8.4
GRF				*e*PKP	PKPab	05 32 04.8	-0.6
GRF				pPKPbc		05 34 00.8	
GEC2	GERESS Array S	152.59	340	*e*PKPbc	PKPdf	05 31 51.0	+8.4
GEC2				*e*PKPab	PKPab	05 32 04.6	-1.1
GERES	GERESS Array B	152.59	340	PKP	PKPdf	05 31 43.4	+0.8
	comp=Z,0.3nm,0.3s,baz=180,slow=1.3,SNR=5.6						
GERES				PKPbc	PKPdf	05 31 51.0	+8.4
	comp=Z,4.7nm,0.9s,baz=45,slow=1.9,SNR=25						
GERES				PKPab	PKPab	05 32 04.2	-1.4
	comp=Z,2.5nm,0.7s,baz=34,slow=4.8,SNR=7.8						
GERES				pPKPbc		05 33 53.7	
	comp=Z,0.3nm,0.3s,baz=297,slow=4.4,SNR=1.7						
TNS	Taunus Mts	152.64	348	*e*PKPbc	PKPdf	05 31 51.0	+8.4
TNS				*e*PKPab	PKPab	05 32 04.3	-1.5
MOA	Molln	153.28	338	⇑*i*P	PKPdf	05 31 52.6	+9.1
	comp=Z,2.5nm,0.7s						
MOA				*i*		05 32 08.1	
	comp=Z,13nm,1.2s						
GIVF	Givet	153.30	353	⇑*i*PKP2	PKPab	05 32 06.7	-1.9
BAIF	Baives	153.41	354	⇑*i*PKP2	PKPab	05 32 07.5	-1.5
	comp=Z,19nm,0.9s						
FUR	Furstenfeldbru	153.91	343	*e*PKP2	PKPab	05 32 10.6	-0.6
SKO	Skopje	154.43	321	⇑*i*PKP	PKPab	05 32 13.6	0.0
BFO	Black Forest	154.47	347	*e*PKP2	PKPab	05 32 12.0	-1.6
BFO	Black Forest	154.47	347	*e*PKPbc	PKPdf	05 31 55.1	+10
BFO				*e*PKPab	PKPab	05 32 12.0	-1.6
CDF	Champ du Feu	154.59	349	⇑*i*PKP2	PKPab	05 32 12.6	-1.5
	comp=Z,19nm,0.8s						
WTTA	Wattenberg	154.63	341	⇑*i*P	PKPdf	05 31 55.6	+10
	comp=Z,5.1nm,0.5s						
WTTA				*i*		05 32 13.6	
	comp=Z,14nm,0.6s						
MEZF	Maizieres J'vi	154.85	352	⇑*i*PKP2	PKPab	05 32 13.9	-1.2
FLN	La Foliniere	154.91	1	⇑*i*PKP2	PKPab	05 32 13.2	-2.2
	comp=Z,30nm,0.9s						
DAVA	Damuels	155.09	344	⇑*i*P	PKPdf	05 32 00.9	+15
	comp=Z,2.2nm,0.7s						
DAVA				*i*		05 32 15.6	
	comp=Z,21nm,0.7s						
HAU	Haudompre	155.15	350	⇑*i*PKP2	PKPab	05 32 15.0	-1.4
	comp=Z,31nm,0.8s						
ROSF	Rostrenen	155.20	5	⇑*i*PKP2	PKPab	05 32 14.9	-1.8
	comp=Z,38nm,1.1s						
HINF	Hinteralfeld	155.24	349	⇑*i*PKP2	PKPab	05 32 15.1	-1.8
	comp=Z,16nm,0.9s						
GRR	Gorron	155.28	1	⇑*i*PKP2	PKPab	05 32 15.0	-2.0
	comp=Z,14nm,0.8s						
SGMF	Saint Gilles	155.34	4	⇑*i*PKP2	PKPab	05 32 15.4	-1.8
LOR	Lormes	156.20	353	⇑*i*PKP2	PKPab	05 32 19.5	-1.5
	comp=Z,16nm,0.9s						
SSF	Saint Saulge	156.44	354	⇑*i*PKP2	PKPab	05 32 20.6	-1.4
	comp=Z,32nm,0.8s						
CABF	La Chapelle	156.54	349	⇑*i*PKP2	PKPab	05 32 21.4	-1.1
	comp=Z,24nm,1.0s						
AVF	Avril sur Loir	156.73	354	⇑*i*PKP2	PKPab	05 32 21.7	-1.6
	comp=Z,20nm,0.9s						
SMF	Signal de Mont	156.82	353	⇑*i*PKP2	PKPab	05 32 22.2	-1.5
	comp=Z,54nm,1.0s						
BGF	Bois d'Agland	157.00	355	⇑*i*PKP2	PKPab	05 32 22.9	-1.6
MFF	Saint Martin d	157.07	0	⇑*i*PKP2	PKPab	05 32 22.9	-1.9
	comp=Z,17nm,0.9s						
TCF	Toulx Ste Croi	157.32	356	⇑*i*PKP2	PKPab	05 32 24.2	-1.6
	comp=Z,16nm,1.0s						
LPL	La Plagne	157.48	348	⇑*i*PKP2	PKPab	05 32 26.1	-0.4
LPG	La Plagne	157.50	347	⇑*i*PKP2	PKPab	05 32 26.3	-0.3
	comp=Z,22nm,0.9s						
BNI	Bardonecchia	157.94	347	*e*PKIKP	PKPdf	05 31 50.7	+0.9
BNI				*e*		05 32 27.5	
ORIF	Oris-en-Rattie	158.22	349	⇑*i*PKP2	PKPab	05 32 29.0	-0.7
	comp=Z,20nm,0.7s						
MBDF	Montbardon	158.23	347	⇑*i*PKP2	PKPab	05 32 28.8	-1.0
	comp=Z,13nm,0.8s						
RJF	Les Rejaudoux	158.34	357	⇑*i*PKP2	PKPab	05 32 28.4	-1.8
	comp=Z,18nm,0.9s						
VIVF	Saint-Julien-l	158.48	351	⇑*i*PKP2	PKPab	05 32 29.9	-1.0
	comp=Z,32nm,1.1s						
CAF	Calviac	158.68	356	⇑*i*PKP2	PKPab	05 32 30.5	-1.2
	comp=Z,17nm,1.1s						
LFF	La Frestale	158.73	359	*e*PKP2	PKPab	05 32 30.5	-1.4
SBF	Sospel	158.90	345	⇑*i*PKP2	PKPab	05 32 31.4	-1.3
	comp=Z,65nm,0.8s						
TIP	Timpagrande	158.95	321	PKPdf	PKPdf	05 31 52.4	+1.3
TIP				*e*PKPab	PKPab	05 32 32.6	-0.4
SMRF	Simiane la Rot	159.19	349	⇑*i*PKP2	PKPab	05 32 33.4	-0.5
	comp=Z,17nm,0.9s						
LASF	Ste Croix	159.35	352	*e*PKP2	PKPab	05 32 33.7	-0.9
PGF	Pioggiola	159.69	340	⇑*i*PKP2	PKPab	05 32 35.1	-1.1
	comp=Z,34nm,1.1s						
MTLF	Montolieu	160.25	355	*e*PKP2	PKPab	05 32 37.4	-1.1
SJPF	Ste Jean	160.54	3	*e*PKP2	PKPab	05 32 37.1	-2.7
EPF	Esparros	160.64	359	*e*PKP2	PKPab	05 32 38.5	-1.7
ETSF	Etsaut	160.77	1	*e*PKP2	PKPab	05 32 39.8	-1.0
	comp=Z,9.2nm,0.9s						
DBIC	Dimbokro	162.51	164	PKP	PKPdf	05 31 56.1	+0.6
	comp=Z,7.9nm,1.0s,baz=175,slow=2.5,SNR=3.5						

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*SOF **03** 05:29:17.5, 40.32N×26.19E, MD2.6*
*ATH **03** 05:29:19.9, 40.54N×26.55E, h10^{km}, MD3.2/3*
*ISK **03** 05:29:21.3, 40.42N×26.16E, h11^{km}, MD3.1*
*CSEM **03** 05:29:21.4±0.1, 40.42N×26.17E, h12^{km}, MD3.1, Error ellipse: s-maj=2.6km s-min=2.0km az=34.0*

ISC 03 05:29:21.2±0.6**, 40.46N**±0.03×**26.16E**±0.04**, h3**^{km}±6^{km}**, n28, σ0^{s}97**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALN	Alexandroupoli	0.45	349	*e*P	Pg	05 29 32.5	+2.2
LPK	Lapseki	0.46	100	PG	Pg	05 29 30.7	+0.2
LPK				SG	Sg	05 29 38.0	+1.3
BOZC	Bozcaada	0.62	188	*i* P	Pg	05 29 33.5	0.0
BOZC				*i* S	Sg	05 29 42.0	+0.2
EZN	Ezine	0.64	169	PG	Pg	05 29 33.7	-0.3
EZN				SG	Sg	05 29 42.1	-0.5
CANB	Canakkale	0.81	122	PG	Pg	05 29 37.3	-0.2
RDO	Rodhopi	0.84	326	*e*PG	Pg	05 29 38.2	+0.2
MFT	Murefte	0.91	68	*e*PG	Pg	05 29 39.4	-0.1
LOS	Limnos	0.98	238	*e*P	Pb	05 29 40.9	+0.4
MRMT	Marmara Adasi	1.10	82	*e*PN	Pn	05 29 42.1	-1.3
PRK	Paraskevi	1.21	176	*e*PB	Pb	05 29 44.5	+0.1
AYVA	Ayvalik	1.21	160	*i* P	Pb	05 29 44.1	-0.4
EDC	Edincik	1.30	94	*e*PN	Pn	05 29 46.2	-0.1
KDZ	Kurdzhali	1.32	335	Pg	Pg	05 29 46.5	-1.1
BNT	Bandirma	1.34	94	*e*PN	Pn	05 29 46.3	-0.6
EDRB	Edirne	1.46	17	*e*PN	Pn	05 29 48.8	+0.3
BALB	Balikesir	1.55	121	*e*PN	Pn	05 29 49.7	-0.1
BTOK	Tokmak	1.59	115	*i* P	Pn	05 29 51.4	+1.0
BTOK				*i* S	Sb	05 30 11.3	0.0
RZN	Rozhen	1.65	319	P	Pn	05 29 51.0	-0.3
RZN				Pg	Pg	05 29 52.5	-1.7
OUR	Ouranopolis	1.67	267	*e*P	Pn	05 29 53.2	+1.6
KCT	Karacabey	1.69	96	*e*PN	Pn	05 29 51.4	-0.4
PLD	Plovdiv	1.98	327	*e*P	Pn	05 30 00.0	+4.0
PLG	Polygyros	2.08	269	*e*PN	Pn	05 30 01.1	+3.7
MMB	Musomiste	2.16	302	P	Pn	05 29 57.0	-1.6
ULDT	Uludag	2.29	97	*i* P	Pn	05 30 05.8	+5.3
ULDT				*i* S	Sn	05 30 34.8	+5.2
YLV	Yalova	2.45	86	*e*PN	Pn	05 30 02.8	+0.1
PGB	Panagyurishte	2.58	325	*e*P	Pn	05 30 09.0	+4.5
KKB	Krupnik	2.72	302	*e*P	Pn	05 30 12.0	+5.4
GDZ	Gediz	2.90	117	*i* P	Sg	05 30 53.5	-4.3

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*NEIC **03** 05:31:33.3, 32.66S×71.70W, h31^{km}, ML3.4(GUC), After GUC.*

GUC 03 05:31:33.3±0.9**, 32.66S×71.70W, h31**^{km}±3^{km}**, MD4.1, ML3.4, 7C-9D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	Papudo	0.25	61	⇓*i*P	Pb	05 31 40.5	+0.3
PACH				*i* S	Sb	05 31 45.4	+0.4
IHA	Instituto Hidr	0.37	172	⇓*i*P	Pb	05 31 41.7	0.0
IHA				*i* S	Sb	05 31 47.3	-0.3
ROCH	El Roble	0.66	118	⇑*i*P	Pb	05 31 46.2	-0.1
ROCH				*i* S	Sb	05 31 55.4	+0.2
LCCH	Las Cruces	0.82	172	⇑*i*P	Pn	05 31 48.4	-0.4
LCCH				*i* S	Sb	05 31 59.0	-0.7
JACH	Jahuel	0.93	92	⇑*i*P	Pn	05 31 50.1	-0.3
PEL	Peldehue	0.98	120	⇑*i*P	Pn	05 31 51.4	+0.4
PEL				*i* S	Sn	05 32 04.9	+0.9
PEL				AMP		05 32 06.2	
	comp=N,2μm,0.2s						
RCDM	Rinconada Maip	1.12	138	*e*P	Pn	05 31 53.3	+0.3
RCDM				AMP		05 32 13.9	
	comp=E,1μm,0.1s						
ILCH	Illapel	1.12	24	⇓*i*P	Pn	05 31 53.6	+0.6
ILCH				*i* S	Sn	05 32 08.5	+1.1
ILCH				AMP		05 32 09.5	
	comp=E,2μm,0.2s						
SAN	Santiago	1.18	132	*i* S	Sn	05 32 09.7	+0.8
SAN				AMP		05 32 15.9	
	comp=E,1μm,0.6s						
STL	Santa Lucia	1.18	131	⇑*i*P	Pn	05 31 54.3	+0.4
STL				*i* S	Sn	05 32 09.7	+0.7
STL				AMP		05 32 14.2	
	comp=N,401nm,0.6s						
TACH	Talagante	1.18	147	⇓*i*P	Pn	05 31 54.4	+0.5
TACH				*i* S	Sn	05 32 09.2	+0.3
DSCH	Colegio Aleman	1.20	128	⇑*i*P	Pn	05 31 54.8	+0.5
DSCH				*i* S	Sn	05 32 10.6	+1.0
DSCH				AMP		05 32 11.7	
	comp=N,2μm,0.6s						
CLCH	Cerro Calan	1.22	127	⇓*i*P	Pn	05 31 55.0	+0.5
CLCH				*i* S	Sn	05 32 11.3	+1.2
CLCH				AMP		05 32 12.7	
	comp=N,1μm,0.8s						
CLCH				AMP		05 32 16.6	
	comp=E,1μm,0.6s						
ANTU	Antumapu	1.27	136	AMP		05 32 17.7	
	comp=N,1μm,0.5s						
LNV	Longovilo	1.31	169	⇓*i*P	Pn	05 31 55.8	-0.1
LNV				*i* S	Sn	05 32 13.2	+0.7
FCH	Farellones	1.36	120	⇓*i*P	Pn	05 31 57.1	+0.6
FCH				*i* S	Sn	05 32 15.4	+1.9
FCH				AMP		05 32 17.0	
	comp=N,606nm,0.6s						
PCH	Pirque	1.38	134	*i* P	Pn	05 31 57.5	+0.7
SJCH	San Jose de Ma	1.49	131	*e*P	Pn	05 31 58.8	+0.4
SJCH				*e*S	Sn	05 32 18.5	+1.5
SJCH				AMP		05 32 20.5	
	comp=N,339nm,0.2s						
CHCH	Chadas Angostu	1.54	146	*e*P	Pn	05 31 59.9	+0.8
CHCH				*i* S	Sn	05 32 19.6	+1.3
CMCH	Combarbala	1.60	22	⇓*i*P	Pn	05 32 00.4	+0.5
CMCH				*i* S	Sn	05 32 21.2	+1.5
CMCH				AMP		05 32 26.8	
	comp=N,7μm,0.6s						
CACH	El Canelo	1.72	148	⇓*i*P	Pn	05 32 03.8	+2.1
CACH				*i* S	Sn	05 32 26.7	+3.9
LMEL	Las Melosas	1.72	134	⇑*i*P	Pn	05 32 03.0	+1.3
LMEL				AMP		05 32 29.3	
	comp=N,558nm,0.2s						
CICH	Cipreses	1.97	147	*e*P	Pn	05 32 06.2	+0.9
CICH				*i* S	Sn	05 32 30.4	+1.3
SFDO	San Fernando	2.03	164	*e*P	Pn	05 32 06.9	+0.8
TLL	Tololo Astrono	2.60	17	*e*P	Pn	05 32 15.4	+1.1
TLL				*e*S	Sn	05 32 46.2	+1.1
TLL				AMP		05 32 55.5	
	comp=N,546nm,0.6s						
LSCH	La Serena	2.77	8	AMP		05 33 00.9	
	comp=E,275nm,0.7s						

JMA 03 05:35:41.1±0.2**, 25.56N×123.45E, h195**^{km}**, M3.7, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	1.16	200	P	P	05 36 11.8	0.0
IRIF	Iriomote-Funau	1.25	168	P	P	05 36 11.9	-0.6
IRIF				S	S	05 36 36.8	0.0
JIJ	Ishigaki jima	1.35	152	P	P	05 36 12.8	-0.6
JIJ				S	S	05 36 37.0	-1.3
JKRS	Kuro-shima	1.41	159	P	P	05 36 13.7	-0.2
JKRS				S	S	05 36 38.9	-0.4
JTJ	Tarama	1.46	129	P	P	05 36 14.2	-0.2
JTJ				S	S	05 36 39.9	-0.1
HATJ	Hateruma jima	1.53	168	P	P	05 36 14.9	-0.1
HATJ				*e*S	S	05 36 41.3	+0.1
JMJ	Miyako jima 2	1.83	114	*e*S	S	05 36 45.1	-1.1
JOGS	Gusukube	1.94	114	P	P	05 36 19.0	0.0
JOGS				S	S	05 36 47.7	-0.5

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*NEIC **03** 06:08:33.8, 10.39N×62.27W, h57^{km}, MD3.6(TRN), MW4.0(CAR), After CAR.*
*FUNV **03** 06:08:33.8, 10.39N×62.27W, h57^{km}, MW3.4*
*TRN **03** 06:08:35.9, 10.66N×62.33W, h12^{km}, MD3.6*

ISC 03 06:08:33.2±0.3**, 10.32N**±0.03×**62.51W**±0.02**, h57**^{km}**, n32, σ1^{s}29**/60**, 6C-6D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	Guiria	0.43	41	⇓*e*P	P	06 08 43.8	-0.5
GUIV				*e*S	S	06 08 50.7	-1.7
GUNV	Guanoco	0.45	250	⇑*i*P	P	06 08 48.1	+3.6
GUNV				*e*S	S	06 08 57.8	+5.0
TPP	Pointe-a-Pierr	1.04	90	*e*P	P	06 08 53.7	+1.8
TPP				*e*S	S	06 09 08.2	+2.4
TRN	Trinidad (W)	1.14	73	⇓*i*P	P	06 08 54.0	+0.8
TRN				*e*S	S	06 09 06.2	-1.9
ITEV	Isla Los Testi	1.20	329	⇓*i*P	P	06 08 54.2	+0.2
ITEV				*e*S	S	06 09 09.3	-0.3
TBH	Brigand Hill	1.43	83	*e*P	P	06 08 58.9	+1.5
TBH				*e*S	S	06 09 16.9	+1.6
ORIV	Oritupano	1.52	216	⇑*i*P	P	06 09 01.5	+2.8
ORIV				*e*S	S	06 09 21.4	+3.8
TPR	Prospect	1.91	63	*e*P	P	06 09 04.8	+0.8
TPR				*e*S	S	06 09 25.9	-1.0
BOT	Bacolet	1.95	64	*e*P	P	06 09 04.7	+0.1
BOT				*e*S	S	06 09 26.6	-1.3
PCRV	Puerto La Cruz	2.10	266	*e*P	P	06 09 08.4	+1.8
PCRV				*e*S	S	06 09 34.1	+2.6
IBAV	Isla La Blanqu	2.52	307	*e*P	P	06 09 12.9	+0.3
IBAV				*e*S	S	06 09 43.4	+1.1
GURV	El Guri	2.60	193	⇑*i*P	P	06 09 14.2	+0.3
GURV				*e*S	S	06 09 43.8	-0.6
SVB	Belmont	3.18	23	⇑*e*P	P	06 09 21.8	-0.3
SVB				*e*S	S	06 09 57.7	-1.4
CUPV	Cœpira	3.24	266	*e*P	P	06 09 24.6	+1.8
CUPV				*e*S	S	06 10 02.1	+1.7
MERV	Las Mercedes	3.88	254	⇑*i*P	P	06 09 32.9	+1.1
MERV				*e*S	S	06 10 16.4	-0.2
ORCV	Isla La Orchil	3.91	293	*e*P	P	06 09 32.7	+0.4
FUNV	FUNVISIS	4.23	272	⇓*e*P	P	06 09 38.3	+1.5
FUNV				*e*S	S	06 10 26.0	+0.6
LLAV	El Llanito	4.23	272	⇓*e*P	P	06 09 38.3	+1.5
LLAV				*e*S	S	06 10 26.0	+0.6
LUEV	Luepa	4.57	167	*e*P	P	06 09 39.6	-1.9
LUEV				*e*S	S	06 10 27.7	-6.2
CAOV	Caicara del Or	4.80	232	*e*P	P	06 09 44.6	-0.1
CAOV				*e*S	S	06 10 37.4	-2.2
TURV	Turiamo	5.24	272	*e*P	P	06 09 51.5	+0.6
TURV				*e*S	S	06 10 48.7	-2.1
BAUV	El Baul	5.62	256	⇑*i*P	P	06 09 56.0	-0.1
BAUV				*e*S	S	06 10 57.3	-2.9
TEPV	Terepaima	6.59	268	*e*P	P	06 10 09.1	-0.6
TEPV				*e*S	S	06 11 20.3	-3.9
SANV	Sanarito	6.97	264	*e*P	P	06 10 14.8	-0.3
SANV				*e*S	S	06 11 30.1	-3.6
CURV	Curarigua	7.34	268	*e*P	P	06 10 19.7	-0.4
CURV				*e*S	S	06 11 37.3	-5.5
MONV	Montecano	7.50	283	*e*P	P	06 10 21.9	-0.5
ELOV	Elorza	7.64	245	*e*P	P	06 10 23.4	-0.8
ELOV				*e*S	S	06 11 45.7	-4.6
SDV	Santo Domingo	8.13	261	*e*P	P	06 10 29.5	-1.6
SDV				*e*S	S	06 11 58.2	-4.4
SOCV	Socops	8.48	257	*e*P	P	06 10 34.4	-1.4
SOCV				⇓*e*S	S	06 12 03.7	-7.4
VIGV	El Vigia	8.85	261	*e*P	P	06 10 40.4	-0.6
VIGV				*e*S	S	06 12 14.0	-6.3
VIRV	Villa del Rosa	9.74	272	*e*P	P	06 10 52.2	-1.0
CAPV	Capacho	9.98	257	*e*P	P	06 10 56.0	-0.5

IDC 03 06:12:38.6±29.0**, 14.64S×67.89E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/19**, mbtmp3.6**/3**, MS3.6**/2**, Ms1 3.6**/2**, ms1mx2.9**/27**, Error ellipse: s-maj=964.1km s-min=37.0km az=59.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBO	Kilima Mbogo	33.11	291	LR	LR	06 31 23.4	
	comp=Z,44nm,19.5s,baz=268,slow=34						
FITZ	Fitzroy Crossi	55.33	102	LR	LR	06 39 37.6	
	comp=Z,111nm,21.3s,baz=265,slow=29						
MKAR	Makanchi Array	62.51	11	P	P	06 23 03.9	-2.4
	0.3nm,0.8s,baz=207,slow=6.4,SNR=2.2						
ASAR	Alice Springs	62.55	109	P	P	06 23 04.1	-2.7
	0.5nm,0.7s,baz=275,slow=6.6,SNR=5.6						
WRA	Warramunga Arr	63.32	105	P	P	06 23 10.4	-1.6
	1.2nm,0.8s,baz=270,slow=6.1,SNR=11						

MAN 03 06:34:22.9, 12.94N×121.25E, h14^{km}**, mb3.7, ML2.5, MS2.0, 1C, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJMP	San Jose	0.50	195	*e*P	Pb	06 34 33.0	+0.2
SJMP				*e*S	Sb	06 34 35.9	-3.7
PGP	Puerto Galera	0.62	333	⇑*i*P	Pb	06 34 17.9	-17
PGP				*i* S	Sb	06 34 40.9	-2.4
BOAC	Boac	0.77	49	*e*P	Pb	06 34 37.4	-0.2
LUBP	Lubang	1.25	309	*i* P	Pb	06 34 44.6	-1.2
BUSP	Coron	1.39	228	*e*P	Pn	06 34 47.0	-0.9

IDC 03 06:40:54.9±1.4**, 0.89N×123.04E, mb3.9**/4**, mb1 4.2**/5**, mb1mx3.8**/19**, mbtmp4.0**/5**, ML4.5**/1**, Error ellipse: s-maj=128.3km s-min=20.8km az=64.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.04	172	P	P	06 45 18.5	-2.7
	1.2nm,0.3s,baz=359,slow=11,SNR=11						
WRA	Warramunga Arr	23.48	152	P	P	06 46 06.6	-0.7
	1.6nm,0.5s,baz=329,slow=10,SNR=35						
ASAR	Alice Springs	26.59	157	P	P	06 46 35.2	-1.7
	0.6nm,0.5s,baz=343,slow=14,SNR=12						
STKA	Stephens Creek	37.03	153	P	P	06 48 06.4	-2.0
	1.2nm,0.4s,baz=315,slow=8.6,SNR=5.1						
MKAR	Makanchi Array	57.88	328	P	P	06 50 48.7	-2.3
	1.6nm,0.5s,baz=125,slow=8.7,SNR=19						

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*IDC **03** 06:40:51.8±0.7, 18.22S×173.11W, mb4.1/11, mb1 4.3/11, mb1mx4.2/21, mbtmp4.1/11, MS3.7/6, Ms1 3.8/6, ms1mx3.4/28, Error ellipse: s-maj=33.0km s-min=16.5km az=141.0*
*NEIC **03** 06:40:59.1±0.5, 18.20S×173.20W, h55^{km}, mb4.3/5, Error ellipse: s-maj=17.5km s-min=11.7km az=139.0*
*MOS **03** 06:41:03.8±2.2, 18.26S×173.87W, h72^{km}, mb4.5/5, Error ellipse: s-maj=21.7km s-min=16.3km az=59.4*

ISC 03 06:40:54.0±0.6**, 17.97S**±0.08×**173.2W**±0.1**, h33**^{km}**, n38, σ1^{s}25**/23**, mb4.2**/15**, MS3.7**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.26	19	*e*Pn	Pn	06 41 56.2	-2.2
AFI				Sn	Sn	06 42 46.8	-0.9
RAR	Rarotonga	13.04	106	LR	LR	06 47 15.0	
	comp=Z,429nm,18.9s,baz=284,slow=30						
URZ	Urewera	21.92	201	P	P	06 45 45.1	-1.1
	12nm,0.9s,mb4.3,baz=71,slow=9.6,SNR=4.9						
PPT	Papeete	22.49	93	LR	LR	06 53 17.2	
	comp=Z,261nm,18.8s,MS3.7,baz=313,slow=33						
HNR	Honiara	27.42	284	LR	LR	06 55 50.5	
	comp=Z,98nm,20.5s,MS3.4,baz=156,slow=33						
CTA	Charters Tower	38.34	260	P	P	06 48 14.7	+1.0
	5.3nm,0.7s,mb4.4,baz=115,slow=11,SNR=3.7						
CTA				LR	LR	07 01 22.5	
	comp=Z,105nm,19.8s,MS3.6,baz=239,slow=32						
CTAO	Charters Tower	38.34	260	*e*P	P	06 48 14.9	+1.2
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
CTAO	Charters Tower	38.34	260	*e*P	P	06 48 14.9	+1.2
	comp=Z,7.5nm,0.8s,mb4.5						
STKA	Stephens Creek	42.98	242	P	P	06 48 53.0	+1.0
	comp=Z,2.2nm,0.9s,mb3.9,baz=104,slow=15,SNR=2.1						
WRAB	Tennant Creek	49.49	259	*e*P	P	06 49 42.3	-1.3
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
WRAB	Tennant Creek	49.49	259	*e*P	P	06 49 42.3	-1.3
	comp=Z,2.7nm,0.5s,mb4.5						
WRA	Warramunga Arr	49.50	259	P	P	06 49 43.2	-0.5
	comp=Z,1.6nm,0.5s,mb4.3,baz=97,slow=6.3,SNR=31						
ASAR	Alice Springs	49.55	254	P	P	06 49 43.9	-0.2
	comp=Z,2.0nm,0.5s,mb4.4,baz=92,slow=7.4,SNR=20						
FITZ	Fitzroy Crossi	57.91	260	P	P	06 50 46.1	+0.5
	comp=Z,6.2nm,0.9s,mb4.6,baz=170,slow=19,SNR=6.4						
SBA	Scott Base	60.72	185	*e*P	P	06 51 03.8	-0.5
SBA				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
SBA	Scott Base	60.72	185	*e*P	P	06 51 03.8	-0.5
	comp=Z,1.7nm,0.9s,mb4.2						
VNDA	Vanda	60.85	186	*e*P	P	06 51 04.3	-0.9
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VNDA	Vanda	60.85	186	P	P	06 51 04.1	-1.1
	comp=Z,1.1nm,0.9s,mb4.0,baz=354,slow=7.1,SNR=7.7						
VNDA	Vanda	60.85	186	*e*P	P	06 51 04.3	-0.9
	comp=Z,1.8nm,1.0s,mb4.2						
QSPA	South Pole Qui	72.08	180	*e*P	P	06 52 15.5	-0.8
	comp=Z,4.0nm,1.1s,mb4.3						
NVAR	Mina Array Bea	76.10	41	P	P	06 52 42.3	+1.9
	comp=Z,0.7nm,0.8s,mb3.6,baz=225,slow=5.1,SNR=2.9						
TXAR	Lajitas Array	81.88	56	P	P	06 53 12.2	+0.3
	comp=Z,0.5nm,0.9s,mb3.4,baz=210,slow=7.3,SNR=3.1						
PDAR	Pinedale Array	84.04	42	P	P	06 53 24.5	+1.8
	comp=Z,0.9nm,0.9s,mb3.9,baz=243,slow=3.3,SNR=6.3						
ILAR	Eielson Array	84.92	11	P	P	06 53 29.7	+3.1
	comp=Z,0.7nm,0.9s,mb3.8,baz=218,slow=4.5,SNR=4.8						
BILL	Bilibino	87.07	352	*e*P	P	06 53 41.1	+4.1
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.7						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**93.61**	**288**	LR	LR	07 36 32.0	
	comp=Z,33nm,18.4s,MS3.8,baz=105,slow=36						
LPAZ	**La Paz**	**98.74**	**110**	LR	LR	07 30 40.4	
	comp=Z,39nm,19.9s,MS3.9,baz=21,slow=30						
MKAR	**Makanchi Array**	**112.76**	**314**	PKiKP		06 59 30.8	
	comp=Z,0.2nm,0.6s,baz=72,slow=2.4,SNR=3.7						
BVAR	**Borovoye Array**	**120.02**	**321**	PKP	PKPdf	06 59 44.8	+3.5
	comp=Z,0.5nm,0.4s,SNR=6.4						
KMBO	**Kilima Mbogo**	**144.53**	**241**	PKP	PKPdf	07 00 31.9	+3.8
	comp=Z,1.8nm,0.8s,baz=77,slow=20,SNR=3.7						
KMBO	**Kilima Mbogo**	**144.53**	**241**	PKP	PKPdf	07 00 31.9	+3.8
CLL	**Collm**	**146.38**	**353**	*i* PKIKP	PKPdf	07 00 36.3	+6.2
CLL				*i*		07 00 56.1	
CLL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CLL	**Collm**	**146.38**	**353**	*i* PKP1	PKPbc	07 00 36.3	+5.0
CLL				*i* *PPKP		07 00 46.2	
CLL				*i*		07 00 56.1	
BRG	**Berggiesshubel**	**146.69**	**352**	*e*PKIKP	PKPdf	07 00 35.6	+4.9
BRG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRTR	**Keskin Array B**	**148.25**	**319**	PKPbc	PKPdf	07 00 42.0	+8.5
	comp=Z,2.3nm,0.9s,baz=153,slow=2.8,SNR=8.3						
MLR	**Muntele Rosu**	**148.27**	**334**	PKPbc	PKPdf	07 00 41.0	+7.6
	comp=Z,1.5nm,0.6s,slow=5.1,SNR=2.5						
KHC	**Kasperske Hory**	**148.44**	**351**	*e*PKPAB	PKPab	07 00 41.5	-1.0
KHC				x	x	07 00 47.5	
GERES	**GERESS Array B**	**148.70**	**351**	PKPbc	PKPdf	07 00 43.0	+9.0
	comp=Z,0.4nm,0.5s,slow=1.3,SNR=7.9						

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*IDC **03** 07:00:50.9±2.0, 35.86N×141.28E, mb3.6/4, mb1 3.8/7, mb1mx3.6/25, mbtmp3.8/7, ML3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/23, Error ellipse: s-maj=50.8km s-min=19.5km az=59.0*

*NEIC **03** 07:00:55.9±1.5, 35.95N×141.28E, h35^{km}, Error ellipse: s-maj=38.2km s-min=14.6km az=223.0*

*JMA **03** 07:00:58.9±0.1, 35.70N×140.75E, h47^{km}±1^{km}, M2.9*

ISC 03 07:00:57.9±0.7**, 35.70N**±0.04×**140.84E**±0.08**, h57**^{km}±5^{km}**, n23,** σ**0$\overset{s}{.}$82**/30**, mb3.6**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.02**	**81**	P	**P**	**07 01 06.3**	**0.0**
CHOJ				S	**S**	**07 01 11.9**	**-0.6**
JCN	**Nagara**	**0.59**	**242**	P	**P**	**07 01 11.0**	**+0.3**
JCN				S	**S**	**07 01 20.3**	**+0.2**
JYT	**Yasato**	**0.74**	**315**	P	**P**	**07 01 12.5**	**-0.1**
JYT				S	**S**	**07 01 22.8**	**-0.7**
BSO4	**Boso 4**	**0.82**	**210**	P	**P**	**07 01 14.5**	**+0.9**
JHO	**Hitachi**	**0.94**	**347**	P	**P**	**07 01 16.1**	**+1.0**
BSO3	**Boso 3**	**0.94**	**197**	P	**P**	**07 01 15.8**	**+0.6**
BSO1	**Boso 1**	**1.05**	**174**	P	**P**	**07 01 17.5**	**+0.7**
JAG	**Ashikaga**	**1.34**	**303**	P	**P**	**07 01 20.5**	**-0.4**
JOD2	**Odawara 2**	**1.49**	**254**	P	**P**	**07 01 22.5**	**-0.5**
JIM2	**Oshima 3**	**1.51**	**230**	P	**P**	**07 01 21.8**	**-1.5**
JIM2				S	**S**	**07 01 41.5**	**-0.5**
MJAR	**Matsushiro Arr**	**2.29**	**292**	Pn	**P**	**07 01 34.6**	**+0.5**
	8.6nm,0.3s,baz=98,slow=14,SNR=40						
MJAR				Sn	**S**	**07 02 05.7**	**+4.6**
	5.7nm,0.3s,baz=233,slow=44,SNR=7.9						
MAJO	**Matsushiro**	**2.29**	**292**	*e*Pn	**P**	**07 01 34.4**	**+0.3**
MAT	**Matsushiro**	**2.29**	**292**	*e*P	**P**	**07 01 35.0**	**+0.8**
MAT				S	**S**	**07 02 04.0**	**+2.8**
MAT	**Matsushiro**	**2.29**	**292**	P	**P**	**07 01 34.7**	**+0.5**
MAT				*e*S	**S**	**07 02 00.7**	**-0.5**
JHJ	**Hachijo jima 2**	**2.72**	**199**	Pn	**P**	**07 01 39.1**	**-1.1**
	13nm,0.3s,baz=37,slow=9.9,SNR=8.9						
JHJ				Sn	**S**	**07 02 12.6**	**+0.6**
	28nm,0.3s,baz=231,slow=22,SNR=7.1						
JNU	**Nakatsue**	**8.62**	**256**	LR	LR	07 06 47.6	
	comp=Z,83nm,18.2s,baz=202,slow=40						
CBIJ	**Chichi jima**	**8.65**	**172**	Pn	**P**	**07 02 57.5**	**-5.5**
	2.0nm,0.3s,baz=283,slow=19,SNR=2.7						
ZAL	**Zalesovo**	**42.49**	**313**	P	**P**	**07 08 47.2**	**-1.7**
	1.3nm,0.3s,mb4.0,baz=332,slow=4.8,SNR=3.7						
ZAL	**Zalesovo**	**42.49**	**313**	P	**P**	**07 08 47.2**	**-1.7**
MKAR	**Makanchi Array**	**44.45**	**303**	P	**P**	**07 09 05.7**	**+0.9**
	0.6nm,0.6s,mb3.5,baz=89,slow=9.5,SNR=6.8						
MKAR	**Makanchi Array**	**44.45**	**303**	P	**P**	**07 09 05.7**	**+0.9**
WRA	**Warramunga Arr**	**55.68**	**187**	P	**P**	**07 10 30.0**	**-0.9**
	0.2nm,0.5s,mb3.4,baz=1.7,slow=7.7,SNR=8.1						
ASAR	**Alice Springs**	**59.41**	**187**	P	**P**	**07 10 57.7**	**+0.6**
	0.2nm,0.4s,mb3.5,baz=17,slow=9.4,SNR=2.5						

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*NEIC **03** 07:27:00.6, 32.67S×71.66W, h27^{km}, ML3.4(GUC), After GUC.*

GUC 03 07:27:00.6±0.7**, 32.67S×71.66W, h27**^{km}±2^{km}**, MD3.5, ML3.4, 8C-8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.23**	**54**	⇓ *i*P	Pb	07 27 07.2	+0.4
PACH				*i* S	Sb	07 27 12.1	+1.0
IHA	**Instituto Hidr**	**0.35**	**178**	⇑ *i*P	Pb	07 27 08.2	-0.3
IHA				*i* S	Sb	07 27 13.9	0.0
ROCH	**El Roble**	**0.62**	**119**	⇑ *i*P	Pb	07 27 12.9	+0.1
ROCH				*i* S	Sb	07 27 22.0	+0.9
LCCH	**Las Cruces**	**0.80**	**175**	⇓ *i*P	Pb	07 27 15.2	-0.7
LCCH				*i* S	Sb	07 27 26.5	+0.1
JACH	**Jahuel**	**0.90**	**91**	⇑ *i*P	Pb	07 27 16.8	-0.7
JACH				*i* S	Sb	07 27 29.4	+0.4
PEL	**Peldehue**	**0.94**	**120**	⇑ *i*P	Pn	07 27 17.9	-0.3
PEL				*i* S	Sb	07 27 30.3	0.0
PEL				AMP		07 27 33.3	
	comp=N,3µm,0.5s						
RCDM	**Rinconada Maip**	**1.08**	**139**	⇑ *i*P	Pn	07 27 19.6	-0.5
RCDM				*i* S	Sn	07 27 34.3	-0.1
RCDM				AMP		07 27 38.7	
	comp=E,1µm,0.1s						
ILCH	**Illapel**	**1.11**	**22**	⇓ *i*P	Pn	07 27 20.1	-0.5
ILCH				*i* S	Sn	07 27 35.5	+0.4
ILCH				AMP		07 27 36.1	
	comp=E,1µm,0.3s						
SAN	**Santiago**	**1.14**	**133**	AMP		07 27 38.6	
	comp=N,1µm,0.4s						
STL	**Santa Lucia**	**1.14**	**132**	⇓ *i*P	Pn	07 27 20.9	-0.2
STL				*i* S	Sn	07 27 36.0	+0.1
STL				AMP		07 27 41.5	
	comp=N,470nm,0.5s						
TACH	**Talagante**	**1.15**	**149**	⇑ *i*P	Pn	07 27 20.8	-0.3
TACH				*i* S	Sn	07 27 36.3	+0.3
DSCH	**Colegio Aleman**	**1.17**	**129**	⇑ *i*P	Pn	07 27 21.3	0.0
DSCH				*i* S	Sn	07 27 36.7	+0.3
DSCH				AMP		07 27 42.2	
	comp=N,2µm,0.5s						
CLCH	**Cerro Calan**	**1.19**	**128**	⇓ *i*P	Pn	07 27 21.6	0.0
CLCH				*i* S	Sn	07 27 37.3	+0.3
CLCH				AMP		07 27 44.5	
	comp=E,1µm,0.5s						
CLCH				AMP		07 27 45.5	
	comp=E,1µm,0.8s						
ANTU	**Antumapu**	**1.24**	**136**	AMP		07 27 44.5	
	comp=E,1µm,0.2s						
FCH	**Farellones**	**1.32**	**120**	⇓ *i*P	Pn	07 27 23.8	+0.2
FCH				*i* S	Sn	07 27 41.8	+1.4
FCH				AMP		07 27 43.3	
	comp=E,1µm,0.2s						
PCH	**Pirque**	**1.35**	**135**	*i* P	Pn	07 27 24.1	+0.2
PCH				*i* S	Sn	07 27 42.1	+1.1
SJCH	**San Jose de Ma**	**1.46**	**132**	⇓ *i*P	Pn	07 27 25.5	0.0
SJCH				*i* S	Sn	07 27 45.2	+1.3
SJCH				AMP		07 27 46.9	
	comp=N,498nm,0.3s						
CMCH	**Combarbala**	**1.59**	**21**	*e*P	Pn	07 27 27.0	-0.4
CMCH				*e*S	Sn	07 27 47.6	+0.2
CMCH				AMP		07 27 52.4	
	comp=E,5µm,0.6s						
LMEL	**Las Melosas**	**1.69**	**134**	⇓ *i*P	Pn	07 27 29.8	+1.0
LMEL				*i* S	Sn	07 27 51.8	+2.0
LMEL				AMP		07 27 55.2	
	comp=N,1µm,0.2s						
CACH	**El Canelo**	**1.69**	**149**	*i* P	Pn	07 27 30.4	+1.5
CICH	**Cipreses**	**1.94**	**148**	⇑ *i*P	Pn	07 27 33.3	+0.9
CICH				*i* S	Sn	07 27 58.5	+2.3
SFDO	**San Fernando**	**2.01**	**165**	*e*P	Pn	07 27 34.3	+0.8
SFDO				*i* S	Sn	07 27 59.6	+1.7
TLL	**Tololo Astrono**	**2.60**	**16**	AMP		07 28 22.0	
	comp=N,445nm,0.6s						

WEL 03 07:54:13.7±0.3**, 45.99S×166.93E, h96**^{km}±2^{km}**, ML3.5**/10**, 2C, Error ellipse: s-maj=3.4km s-min=1.3km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**0.72**	**83**	⇑PN	P	07 54 30.6	-0.5
WHZ				SN	S	07 54 43.7	-0.3
MLZ	**Mavora Lakes**	**1.08**	**54**	⇑PN	P	07 54 34.2	-0.8
MLZ				SN	S	07 54 50.2	-0.8
MSZ	**Milford Sound**	**1.49**	**29**	PN	P	07 54 39.5	-0.6
MSZ				SN	S	07 54 58.5	-1.1
EAZ	**Earnscleugh**	**1.83**	**66**	PN	P	07 54 43.6	-0.8
EAZ				SN	S	07 55 06.1	-1.0
WKZ	**Wanaka**	**1.87**	**52**	PN	P	07 54 44.6	-0.3
WKZ				SN	S	07 55 07.5	-0.5
TUZ	**Tuapeka**	**1.89**	**90**	PN	P	07 54 44.5	-0.5
TUZ				SN	S	07 55 06.4	-1.8
JCZ	**Jackson Bay**	**2.31**	**35**	PN	P	07 54 49.7	-1.1
JCZ				SN	S	07 55 18.1	-0.5
ODZ	**Otahua Downs**	**2.78**	**71**	PN	P	07 54 54.7	-2.6
ODZ				SN	S	07 55 26.5	-3.5
LBZ	**Lake Benmore**	**2.81**	**56**	PN	P	07 54 54.8	-2.9
LBZ				SN	S	07 55 26.2	-4.4
FOZ	**Fox Glacier**	**3.12**	**40**	PN	P	07 55 00.2	-1.8
FOZ				SN	S	07 55 36.9	-1.5
RPZ	**Rata Peaks**	**3.71**	**54**	PN	P	07 55 06.1	-4.0
RPZ				SN	S	07 55 47.4	-5.5
LTZ	**Lake Taylor**	**4.99**	**52**	PN	P	07 55 23.2	-4.5
THZ	**Tophouse**	**6.04**	**48**	*e*PN	P	07 55 37.5	-4.4

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*NEIC **03** 08:28:43.3±1.0, 0.92N×97.51E, Error ellipse: s-maj=25.5km s-min=13.0km az=71.0*

*IDC **03** 08:28:43.5±2.2, 0.92N×97.57E, h24^{km}±6^{km}, mb3.7/5, mb1 3.8/6, mb1mx3.6/19, mbtmp3.8/6, ML4.5/1, MS3.2/2, Ms1 3.3/2, ms1mx2.9/24, Error ellipse: s-maj=93.2km s-min=17.5km az=57.0*

ISC 03 08:28:41.6±1.3**, 0.9N**±0.1×**97.5E**±0.2**, h24**^{km}**, h24**^{km}±1.0^{km}**:pP-P, n8,** σ**0$\overset{s}{.}$33**/8**, mb3.8**/5**, MS3.5**/1**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.33**	**36**	*e*Pn	**Pn**	**08 30 02.1**	**+0.3**
CMAR	**Chiang Mai Arr**	**17.47**	**4**	P	**P**	**08 32 44.9**	**-0.6**
	0.6nm,0.3s,baz=194,slow=12,SNR=5.5						
CMAR				LR	LR	08 40 16.9	
	comp=Z,52nm,20.8s,baz=205,slow=40						
WRA	**Warramunga Arr**	**41.62**	**122**	P	**P**	**08 36 29.7**	**-0.2**
	0.7nm,0.8s,mb3.4,baz=305,slow=8.9,SNR=8.0						
WRA				pP	pP	08 36 36.8	-0.4
	0.4nm,0.6s,baz=292,slow=7.8,SNR=2.9						
ASAR	**Alice Springs**	**42.98**	**127**	P	**P**	**08 36 41.0**	**0.0**
	0.4nm,0.6s,mb3.3,baz=300,slow=7.9,SNR=5.4						
ASAR				pP	pP	08 36 48.0	-0.3
	0.2nm,0.4s,baz=295,slow=7.9,SNR=1.9						
SONM	**Songino Array**	**47.34**	**8**	P	**P**	**08 37 15.9**	**+0.4**
	0.6nm,0.4s,mb3.9,baz=187,slow=12,SNR=4.0						
SONM				LR	LR	08 59 15.6	
	comp=Z,52nm,21.4s,MS3.5,baz=83,slow=39						
MKAR	**Makanchi Array**	**47.57**	**346**	P	**P**	**08 37 17.3**	**-0.1**
	1.8nm,0.4s,mb4.4,baz=152,slow=7.1,SNR=16						
MKAR				pP	pP	08 37 25.2	+0.4
	1.5nm,0.6s,baz=162,slow=7.7,SNR=5.2						
MKAR	**Makanchi Array**	**47.57**	**346**	P	**P**	**08 37 17.3**	**-0.1**
MKAR				pP	pP	08 37 25.2	+0.4
ARCES	**ARCESS Array B**	**82.89**	**340**	P	**P**	**08 41 05.7**	**+0.3**
	0.9nm,0.8s,mb3.8,baz=90,slow=4.9,SNR=4.0						

IDC 03 08:41:04.3±3.5**, 49.48S×124.39E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.7**/12**, mbtmp3.6**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.8**/16**, Error ellipse: s-maj=134.1km s-min=27.1km az=98.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**21.80**	**43**	P	P	08 45 57.3	-2.4
	2.1nm,0.9s,baz=227,slow=8.7,SNR=3.1						
ASAR	**Alice Springs**	**26.82**	**20**	P	P	08 46 46.5	-1.5
	1.3nm,0.8s,baz=193,slow=8.1,SNR=5.5						
ASAR				LR	LR	08 55 07.7	
	comp=Z,65nm,18.7s,baz=306,slow=31						
VNDA	**Vanda**	**31.52**	**165**	P	P	08 47 27.5	-2.2
	1.1nm,0.8s,baz=319,slow=5.9,SNR=10						

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*BJI **03** 08:41:22.7, 57.30S×25.20W, h37^{km}, mB4.5, Ms4.8, Msz4.6*

*NEIC **03** 08:41:22.7±1.3, 57.27S×25.25W, h38^{km}±11^{km}, mb4.8/14, Error ellipse: s-maj=9.5km s-min=6.1km az=220.0*

*IDC **03** 08:41:24.7±4.8, 57.33S×25.14W, h51^{km}±42^{km}, mb4.3/10, mb1 4.4/11, mb1mx4.2/17, mbtmp4.5/11, ML4.1/1, MS4.0/14, Ms1 4.0/14, ms1mx3.9/19, Error ellipse: s-maj=21.8km s-min=15.3km az=44.0*

ISC 03 08:41:23.8±4.0**, 57.22S**±0.09×**25.2W**±0.2**, h61**^{km}±38^{km}**, n88,** σ**1$\overset{s}{.}$02**/52**, mb4.6**/19**, 4C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.31**	**158**	*e*	**P**	**08 44 58.6**	**+1.6**
VNA1	**Neumayer--Stat**	**15.31**	**158**	*e*	**P**	**08 45 03.0**	**+6.0**
VNA1	**Neumayer--Stat**	**15.31**	**158**	*e*	**P**	**08 45 04.1**	**+7.1**
VNA1	**Neumayer--Stat**	**15.31**	**158**	*e*	**P**	**08 45 07.5**	**+10**
VNA1	**Neumayer--Stat**	**15.31**	**158**	*e*	**P**	**08 45 13.5**	**+16**
VNA1	**Neumayer--Stat**	**15.31**	**158**	⇑ *i*Pn	**P**	**08 44 55.1**	**-1.9**
VNA1				*e*		08 44 58.6	
VNA1				*e*		08 45 03.0	
VNA1				*e*		08 45 04.1	
VNA1				*e*		08 45 07.5	
VNA1				*e*		08 45 13.5	
VNA3	**Neumayer Olymp**	**15.53**	**161**	*e*	**P**	**08 45 01.0**	**+1.1**
VNA3	**Neumayer Olymp**	**15.53**	**161**	*e*	**P**	**08 45 05.3**	**+5.4**
VNA3	**Neumayer Olymp**	**15.53**	**161**	*e*	**P**	**08 45 06.1**	**+6.2**
VNA3	**Neumayer Olymp**	**15.53**	**161**	*e*	**P**	**08 45 10.3**	**+10**
VNA3	**Neumayer Olymp**	**15.53**	**161**	*e*	**P**	**08 45 16.0**	**+16**
VNA3	**Neumayer Olymp**	**15.53**	**161**	⇑ *i*P	**P**	**08 44 57.0**	**-2.9**
VNA3				*e*		08 45 01.0	
VNA3				*e*		08 45 05.3	
VNA3				*e*		08 45 06.1	
VNA3				*e*		08 45 10.3	
VNA3				*e*		08 45 16.0	
VNA2	**Neumayer--Watz**	**15.70**	**158**	*e*	**P**	**08 45 04.2**	**+2.1**
VNA2	**Neumayer--Watz**	**15.70**	**158**	*e*	**P**	**08 45 07.9**	**+5.8**
VNA2	**Neumayer--Watz**	**15.70**	**158**	*e*	**P**	**08 45 08.8**	**+6.7**
VNA2	**Neumayer--Watz**	**15.70**	**158**	*e*	**P**	**08 45 13.1**	**+11**
VNA2	**Neumayer--Watz**	**15.70**	**158**	*e*	**P**	**08 45 18.6**	**+17**
VNA2	**Neumayer--Watz**	**15.70**	**158**	⇑ *i*Pn	**P**	**08 45 00.3**	**-1.8**
VNA2				*e*		08 45 04.2	
VNA2				*e*		08 45 07.9	
VNA2				*e*		08 45 08.8	
VNA2				*e*		08 45 13.1	
VNA2				*e*		08 45 18.6	
SNAA	**Sanae**	**17.23**	**156**	*e*	**P**	**08 45 21.3**	**0.0**
SNAA	**Sanae**	**17.23**	**156**	*e*	**P**	**08 45 26.6**	**+5.3**
SNAA	**Sanae**	**17.23**	**156**	*e*	**P**	**08 45 27.5**	**+6.2**
SNAA	**Sanae**	**17.23**	**156**	*e*	**P**	**08 45 29.9**	**+8.6**
SNAA	**Sanae**	**17.23**	**156**	*e*	**P**	**08 45 32.4**	**+11**
SNAA	**Sanae**	**17.23**	**156**	*e*	**P**	**08 45 34.8**	**+13**
SNAA	**Sanae**	**17.23**	**156**	P	**P**	**08 45 19.9**	**-1.4**
	0.6nm,0.3s,baz=327,slow=13,SNR=71						
SNAA				LR	LR	08 50 24.6	
	comp=Z,141nm,20.0s,baz=201,slow=32						
SNAA				ScP		08 53 40.6	
	0.2nm,0.3s,baz=255,slow=4.7,SNR=24						
SNAA	**Sanae**	**17.23**	**156**	⇑ *i*Pn	**P**	**08 45 20.0**	**-1.3**
SNAA				*e*		08 45 21.3	
SNAA				*e*		08 45 26.6	
SNAA				*e*		08 45 27.5	
SNAA				*e*		08 45 29.9	
SNAA				*e*		08 45 32.4	
SNAA				*e*		08 45 34.8	
SNAA				*e*		08 53 40.4	
SNAA				*e*		08 53 43.9	
USHA	**Ushuaia**	**23.96**	**257**	LR	LR	08 53 42.2	
	comp=Z,955nm,20.5s,baz=85,slow=31						
TRQA	**Tornquist**	**30.78**	**293**	*e*P	**P**	**08 47 34.3**	**-1.0**
	3.9nm,0.9s,mb4.2						
QSPA	**South Pole Qui**	**33.03**	**180**	*e*P	**P**	**08 47 54.0**	**-0.6**
	15nm,0.6s,mb5.1						
PLCA	**Paso Flores**	**33.27**	**280**	LR	LR	08 59 15.7	
	comp=Z,276nm,21.2s,baz=143,slow=32						
PLCA	**Paso Flores**	**33.27**	**280**	*e*P	**P**	**08 47 55.5**	**-1.6**
	2.7nm,0.9s,mb4.2						
CPUP	**Villa Florida**	**38.40**	**310**	P	**P**	**08 48 41.1**	**+0.5**
	1.8nm,0.6s,mb4.0,baz=182,slow=9.1,SNR=5.8						
CPUP				PcP	PcP	08 50 53.5	-0.1
	0.7nm,0.5s,baz=236,slow=3.6,SNR=3.0						
CPUP				LR	LR	09 03 11.6	
	comp=Z,102nm,18.5s,baz=327,slow=34						
MAW	**Mawson**	**38.56**	**142**	P	**P**	**08 48 40.5**	**-1.0**
	2.9nm,0.6s,mb4.2,baz=226,slow=5.8,SNR=7.1						
MAW				PcP	PcP	08 50 51.5	-2.2
	1.7nm,0.3s,baz=314,slow=17,SNR=11						
MAW				LR	LR	09 02 28.2	
	comp=Z,190nm,19.5s,baz=137,slow=33						
BDFB	**Brasilia**	**44.92**	**328**	P	**P**	**08 49 35.9**	**+1.8**
	3.2nm,0.6s,mb4.3,baz=130,slow=5.7,SNR=6.3						
BDFB				LR	LR	09 05 51.4	
	comp=Z,103nm,22.0s,baz=18,slow=33						
SBA	**Scott Base**	**44.98**	**184**	*e*P	**P**	**08 49 34.1**	**+0.2**
	3.5nm,0.6s,mb4.4						
BOSA	**Boshof**	**45.24**	**73**	P	**P**	**08 49 36.7**	**+0.1**
	8.9nm,1.1s,mb4.5,baz=202,slow=7.3,SNR=7.7						
BOSA				LR	LR	09 04 35.1	
	comp=Z,450nm,19.7s,baz=224,slow=31						
BOSA	**Boshof**	**45.24**	**73**	*e*P	**P**	**08 49 36.5**	**-0.1**
	22nm,1.3s,mb4.8						
VNDA	**Vanda**	**45.45**	**182**	P	**P**	**08 49 37.9**	**+0.3**
	4.3nm,0.8s,mb4.4,baz=188,slow=6.5,SNR=19						
VNDA				LR	LR	09 07 06.4	
	comp=Z,129nm,21.9s,baz=159,slow=34						
VNDA	**Vanda**	**45.45**	**182**	*e*P	**P**	**08 49 37.6**	**0.0**
	4.3nm,0.8s,mb4.3						
LVC	**Limon Verde**	**46.82**	**299**	*e*P	**P**	**08 49 48.5**	**-0.6**
	10nm,0.9s,mb4.8						
LBTB	**Lobatse**	**48.35**	**70**	P	**P**	**08 50 01.0**	**0.0**
	7.5nm,1.1s,mb4.6,baz=226,slow=9.7,SNR=6.9						
LBTB	**Lobatse**	**48.35**	**70**	*e*P	**P**	**08 50 00.8**	**-0.2**
	11nm,1.1s,mb4.8						
TSUM	**Tsumeb**	**49.35**	**58**	P	**P**	**08 50 09.4**	**+0.6**
	4.7nm,0.7s,mb4.6,baz=202,slow=4.7,SNR=6.2						
TSUM	**Tsumeb**	**49.35**	**58**	*e*P	**P**	**08 50 08.5**	**-0.3**
	23nm,1.4s,mb5.0						
LPAZ	**La Paz**	**51.93**	**304**	P	**P**	**08 50 28.9**	**+0.4**
	9.8nm,0.5s,mb5.0,baz=140,slow=4.8,SNR=122						
LPAZ				LR	LR	09 09 55.2	
	comp=Z,58nm,20.8s,baz=207,slow=33						
LPAZ	**La Paz**	**51.93**	**304**	*e*P	**P**	**08 50 28.7**	**+0.3**
	10nm,0.6s,mb4.9						
SAML	**Samuel**	**56.39**	**313**	*e*P	**P**	**08 51 00.2**	**-0.9**
	9.2nm,0.8s,mb4.9						
LSZ	**Lusaka**	**57.82**	**66**	*e*P	**P**	**08 51 10.3**	**-0.9**
	16nm,1.1s,mb5.0						
DBIC	**Dimbokro**	**65.81**	**22**	LR	LR	09 14 09.5	
	comp=Z,108nm,19.6s,baz=90,slow=30						
OTAV	**Otavalo**	**71.20**	**302**	*e*P	**P**	**08 52 39.0**	**+1.0**
	28nm,1.6s,mb4.9						
ROSC	**El Rosal**	**73.48**	**308**	LR	LR	09 26 51.2	
	comp=Z,49nm,18.9s,baz=232,slow=37						
KMBO	**Kilima Mbogo**	**74.47**	**67**	LR	LR	09 21 45.0	
	comp=Z,189nm,21.8s,baz=272,slow=32						
SDV	**Santo Domingo**	**75.60**	**313**	LR	LR	09 24 15.5	
	comp=Z,68nm,20.7s,baz=205,slow=34						
SDV	**Santo Domingo**	**75.60**	**313**	*e*P	**P**	**08 53 03.8**	**+0.1**
	11nm,0.8s,mb4.8						
RKT	**Rikitea**	**80.89**	**241**	*e*PP	PP	08 56 38.7	-0.7
NWAO	**Narrogin (SRO)**	**84.77**	**149**	P	**P**	**08 53 52.0**	**-0.1**
	13nm,1.0s,mb5.0,baz=211,slow=5.9,SNR=3.1						
NWAO	**Narrogin (SRO)**	**84.77**	**149**	P	**P**	**08 53 52.0**	**-0.1**
TBI	**Tubuai**	**87.17**	**230**	*e*PP	PP	08 57 30.0	-0.8
TBI				*e*LR	LR	09 21 51.4	
	188nm,27.8s						
PPT	**Papeete**	**92.35**	**232**	*e*P	**P**	**08 54 31.4**	**+2.9**
PPT				*e*PP	PP	08 58 12.7	+0.4
PPT				*e*S	S	09 05 30.6	+6.5
PPT				*e*LQ		09 20 22.8	
PPT				*e*LR	LR	09 24 15.5	
	321nm,25.8s						
PPT	**Papeete**	**92.35**	**232**	LR	LR	09 25 41.8	
	comp=Z,312nm,19.5s,baz=151,slow=29						
ASAR	**Alice Springs**	**97.54**	**161**	P	**P**	**08 54 52.2**	**+0.2**
	1.4nm,1.0s,mb4.4,baz=182,slow=4.4,SNR=6.9						
WRA	**Warramunga Arr**	**101.25**	**160**	P	P	08 55 06.0	-2.9
	0.3nm,0.8s,baz=199,slow=5.0,SNR=5.0						
HWUT	**Hardware Ranch**	**121.94**	**298**	PKPdf	PKPdf	09 00 11.3	+0.7
CMAR	**Chiang Mai Arr**	**123.65**	**109**	PKP	PKPdf	09 00 15.9	+1.5
	1.9nm,0.6s,baz=239,slow=3.4,SNR=6.6						
FINES	**FINESS Array B**	**124.92**	**27**	PKP	PKPdf	09 00 17.0	+1.3
	2.0nm,0.5s,baz=155,slow=2.3,SNR=25						
FINES	**FINESS Array B**	**124.92**	**27**	PKP	PKPdf	09 00 17.0	+1.3
MSO	**Missoula**	**126.99**	**301**	*e*PKPdf	PKPdf	09 00 21.5	+1.4
KMI	**Kunming**	**131.12**	**108**	PKP	PKPdf	09 00 32.8	+4.2
ARCES	**ARCESS Array B**	**131.63**	**21**	PKP	PKPdf	09 00 29.6	+1.2
	1.1nm,0.6s,baz=180,slow=2.4,SNR=15						
BVAR	**Borovoye Array**	**134.50**	**57**	PKP	PKPdf	09 00 36.3	+2.1
	1.1nm,0.5s,baz=161,slow=2.6,SNR=6.6						
MKAR	**Makanchi Array**	**136.24**	**71**	PKP	PKPdf	09 00 40.2	+2.7
	0.5nm,0.7s,baz=250,slow=2.7,SNR=4.2						
WMQ	**Urumqi**	**137.08**	**78**	*e*PKP	PKPdf	09 00 41.9	+2.8
WMQ				LR	LR		
	comp=Z,20nm,26.0s						
YKA	**Yellowknife Ar**	**137.76**	**316**	PKP	PKPdf	09 00 41.3	+1.5
	comp=Z,2.0nm,0.8s,baz=126,slow=2.2,SNR=11						
YKA				SKPbc		09 04 12.4	
	comp=Z,0.3nm,0.4s,baz=122,slow=2.7,SNR=4.9						
YKA	**Yellowknife Ar**	**137.76**	**316**	PKP	PKPdf	09 00 41.4	+1.5
YKA				SKPbc		09 04 12.4	
RES	**Resolute Bay**	**139.35**	**338**	*e*PKPdf	PKPdf	09 00 40.5	-2.0
LZH	**Lanzhou**	**140.34**	**100**	*e*PKP	PKPdf	09 00 49.5	+4.2
LZH				XPKP		09 01 04.3	
LZH				LR	LR		
	comp=N,170nm,18.2s						
LZH				LR	LR		
	comp=Z,340nm,20.0s						
NJ2	**Nanjing**	**144.81**	**120**	*e*PKP	PKPdf	09 00 55.2	+2.1
INK	**Inuvik**	**147.40**	**319**	PKPbc	PKPdf	09 01 00.9	+4.6
	comp=Z,2.2nm,0.4s,baz=101,slow=4.2,SNR=17						
INK	**Inuvik**	**147.40**	**319**	*e*PKPbc	PKPdf	09 01 00.4	+4.1
INK				*e*PKPab	PKPab	09 01 03.6	+0.5
SONM	**Songino Array**	**149.71**	**87**	PKPbc	PKPdf	09 01 07.6	+6.9
	comp=Z,6.3nm,0.7s,baz=243,slow=2.8,SNR=35						
EYAK	**Cordova Ski Ar**	**149.99**	**302**	*e*PKPbc	PKPdf	09 01 07.6	+6.9
SML	**Sawmill**	**151.58**	**303**	*e*PKPbc	PKPdf	09 01 11.6	+8.5
ILAR	**Eielson Array**	**151.70**	**310**	PKPbc	PKPdf	09 01 11.3	+8.2
	comp=Z,3.6nm,0.8s,baz=131,slow=2.0,SNR=35						
ILAR				PKPab	PKPab	09 01 22.8	+1.9
	comp=Z,6.1nm,0.9s,baz=130,slow=3.1,SNR=14						
COLA	**College**	**152.12**	**310**	*e*PKPab	PKPab	09 01 22.4	-0.2
MCK	**McKinley**	**152.34**	**307**	*e*PKPbc	PKPdf	09 01 13.3	+9.2
IMA	**Indian Mountai**	**154.70**	**312**	*e*PKPab	PKPab	09 01 31.8	-1.6
CN2	**Changchun**	**157.25**	**114**	*e*PKP	PKPdf	09 01 14.2	+2.9
MDJ	**Mudanjiang**	**159.87**	**118**	PKP	PKPdf	09 01 17.2	+2.8
MDJ				PP	PP		
	comp=Z,10.0nm,3.7s						

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*NEIC **03** 08:57:11.9±1.0, 20.19S×178.37W, h568^{km}±12^{km}, mb4.4/7, Error ellipse: s-maj=15.3km s-min=9.9km az=148.0*

*IDC **03** 08:57:14.9±2.6, 20.18S×178.51W, h597^{km}±30^{km}, mb3.2/10, mb1 3.5/11, mb1mx3.4/16, mbtmp4.1/11, Error ellipse: s-maj=25.7km s-min=13.8km az=154.0*

ISC 03 08:57:09.9±1.3**, 20.3S**±0.1×**178.48W**±0.10**, h550**^{km}±18^{km}**, n38,** σ**0$\overset{s}{.}$81**/24**, mb3.8**/16**, 3C-3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.99**	**46**	*e*Pn	**P**	**08 59 18.1**	**-0.3**
	59nm,0.6s						
DZM	**Mont Dzumac**	**14.18**	**260**	P	**P**	**09 00 16.2**	**+5.3**
	0.9nm,0.3s,baz=222,slow=23,SNR=8.7						
URZ	**Urewera**	**18.34**	**191**	P	**P**	**09 00 50.1**	**-1.2**
	3.0nm,0.3s,baz=3.0,slow=3.9,SNR=16						
CTA	**Charters Tower**	**33.07**	**264**	⇓ *i*P	**P**	**09 03 03.0**	**+1.2**
CTAO	**Charters Tower**	**33.07**	**264**	*e*P	**P**	**09 03 02.9**	**+1.1**
	14nm,0.5s,mb4.8						
PMG	**Port Moresby**	**34.85**	**283**	*e*P	**P**	**09 03 16.8**	**+0.1**
	18nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**37.49**	**244**	P	**P**	**09 03 39.9**	**+1.6**
	0.7nm,0.3s,mb3.6,baz=96,slow=9.1,SNR=8.0						
STKA				PcP	PcP	09 05 41.4	-1.2
	0.8nm,0.8s,baz=180,slow=23,SNR=3.2						
ASAR	**Alice Springs**	**44.14**	**257**	P	**P**	**09 04 31.8**	**+0.3**
	7.0nm,0.8s,mb4.2,baz=99,slow=7.7,SNR=69						
ASAR				PcP	PcP	09 06 03.4	-1.5
	1.5nm,0.6s,baz=106,slow=3.7,SNR=9.5						

ASAR				S	S	09 10 23.2	-1.9
	1.2nm,0.9s,baz=90,slow=16,SNR=8.1						
ASPA	Alice Springs	44.14	257	⇓*i*P	P	09 04 31.8	+0.3
WB2	Warramunga Arr	44.18	262	⇑*i*P	P	09 04 31.7	-0.2
WRAB	Tennant Creek	44.18	262	*e*P	P	09 04 31.6	-0.3
	7.3nm,0.5s,mb4.5						
WRA	Warramunga Arr	44.19	262	P	P	09 04 31.6	-0.4
	5.6nm,0.6s,mb4.3,baz=97,slow=8.0,SNR=119						
MBWA	Marble Bar	57.47	257	*e*P	P	09 06 07.5	-1.2
	2.4nm,0.4s,mb3.8						
SBA	Scott Base	58.08	184	*e*P	P	09 06 13.0	+0.8
	1.8nm,0.7s,mb3.4						
VNDA	Vanda	58.11	185	P	P	09 06 12.2	-0.1
	0.4nm,0.4s,mb3.0,baz=2.4,slow=7.2,SNR=6.1						
VNDA	Vanda	58.11	185	*e*P	P	09 06 12.3	0.0
	0.5nm,0.5s,mb3.0						
QSPA	South Pole Qui	69.81	180	*e*P	P	09 07 26.2	0.0
	2.1nm,0.5s,mb3.9						
NVAR	Mina Array Bea	81.16	44	P	P	09 08 29.8	+0.4
	0.4nm,0.6s,mb3.0,baz=217,slow=8.0,SNR=3.6						
MAW	Mawson	81.64	200	P	P	09 08 31.1	-0.1
	1.3nm,0.8s,mb3.4,baz=16,slow=7.4,SNR=2.9						
TXAR	Lajitas Array	87.30	58	P	P	09 09 00.5	+0.8
	0.5nm,0.8s,mb3.2,baz=220,slow=5.8,SNR=6.7						
ILAR	Eielson Array	88.18	13	P	P	09 09 01.4	-1.5
	1.6nm,0.7s,mb3.9,baz=220,slow=5.5,SNR=18						
PDAR	Pinedale Array	89.09	43	P	P	09 09 07.7	-0.1
	0.6nm,0.6s,mb3.6,baz=213,slow=4.7,SNR=5.5						
CMAR	Chiang Mai Arr	89.61	290	P	P	09 09 11.6	+0.9
	1.2nm,0.4s,mb4.1,baz=116,slow=3.4,SNR=6.9						
BVAR	Borovoye Array	118.61	320	PKP	PKPdf	09 14 54.4	-0.7
	2.2nm,0.5s,baz=98,slow=2.1,SNR=10.0						
ARCES	ARCESS Array B	128.60	349	PKP	PKPdf	09 15 13.4	-0.5
	0.9nm,0.6s,baz=90,slow=1.2,SNR=10						
FINES	FINESS Array B	135.42	343	PKP	PKPdf	09 15 27.3	+0.4
	0.6nm,0.6s,baz=63,slow=4.3,SNR=4.4						
FINES	FINESS Array B	135.42	343	PKP	PKPdf	09 15 27.3	+0.4
NB2	NORSAR Subarra	138.69	353	PKPabc	PKPdf	09 15 26.0	-6.9
	0.6nm,0.6s,baz=13,slow=3.3						
AKASG	Malin Array Be	142.59	331	PKP	PKPdf	09 15 36.6	-3.4
	4.2nm,0.5s,baz=41,slow=4.3,SNR=36						
EKA	Eskdalemuir Ar	144.81	5	PKP	PKPdf	09 15 44.1	+0.5
	2.4nm,0.7s,baz=11,slow=4.3,SNR=5.1						
BRTR	Keskin Array B	146.35	312	PKPbc	PKPbc	09 15 49.2	+0.6
	2.7nm,0.7s,baz=137,slow=4.7,SNR=9.1						
CLL	Collm	147.73	346	⇓*i*PKP1	PKPdf	09 15 52.8	+4.2
MLR	Muntele Rosu	147.78	327	PKPbc	PKPdf	09 15 53.8	+4.9
	3.1nm,0.6s,baz=352,slow=7.8,SNR=8.2						
BRG	Berggiesshubel	147.92	345	P	PKPdf	09 15 52.9	+4.0
PRU	Pruhonice	148.58	344	⇑*e*PKPB		09 15 55.3	
KHC	Kasperske Hory	149.62	344	⇑*e*PKPB		09 15 58.0	
KHC				*e*PKPAB	PKPab	09 16 05.5	-1.4
GERES	GERESS Array B	149.85	344	PKPbc	PKPdf	09 15 58.1	+6.0
	1.3nm,0.5s,baz=90,slow=1.3,SNR=9.9						
DAVOX	Davos	152.68	347	PKPbc	PKPdf	09 16 04.3	+8.1
	2.4nm,0.4s,baz=185,slow=12,SNR=3.9						

MAN 03 09:02:24.3, 17.10N×120.18E, h28^{km}, mb3.5, ML2.2, MS1.7, Luzon

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IDC 03 09:41:16.1±41.0**, 15.03S×171.17W, mb4.4**/3**, mb1 4.6**/3**, mb1mx3.9**/18**, mbtmp4.4**/3**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.9**/23**, Error ellipse: s-maj=816.0km s-min=176.7km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	41.06	273	LR	LR	10 02 43.1	
	comp=Z,90nm,19.6s,baz=278,slow=31						
STKA	Stephens Creek	46.08	240	P	P	09 49 42.1	-1.8
	2.7nm,0.7s,baz=97,slow=7.5,SNR=8.3						
WRA	Warramunga Arr	52.02	256	P	P	09 50 27.4	-2.5
	1.1nm,0.5s,baz=93,slow=6.9,SNR=10.0						
ASAR	Alice Springs	52.27	252	P	P	09 50 29.9	-1.8
	10nm,0.6s,baz=89,slow=8.1,SNR=77						

IDC 03 09:50:07.7±1.5**, 8.87S×129.87E, mb3.8**/2**, mb1 3.8**/4**, mb1mx3.6**/13**, mbtmp3.6**/4**, ML3.4**/2**, Error ellipse: s-maj=87.0km s-min=24.0km az=64.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	11.82	159	Pn	P	09 52 55.8	-4.9
	0.3nm,0.3s,baz=338,slow=13,SNR=9.1						
WRA				Sn	S	09 55 05.9	-8.8
	0.5nm,0.3s,baz=338,slow=22,SNR=8.5						
ASAR	Alice Springs	15.21	166	Pn	P	09 53 43.0	-2.7
	0.2nm,0.3s,baz=14,slow=13,SNR=8.7						
ASAR				Sn	S	09 56 29.8	-6.0
	0.1nm,0.3s,baz=354,slow=25,SNR=5.7						
STKA	Stephens Creek	25.35	156	P	P	09 55 37.5	-0.6
	1.9nm,0.7s,baz=323,slow=6.7,SNR=6.9						
MKAR	Makanchi Array	69.72	327	P	P	10 01 19.4	-2.1
	0.2nm,0.2s,baz=138,slow=6.3,SNR=17						

IDC ***03*** *10:52:14.3±3.2, 1.26N×97.32E, mb3.6/5, mb1 3.8/6, mb1mx3.6/20, mbtmp3.6/6, Error ellipse: s-maj=124.9km s-min=21.7km az=60.0*

NEIC ***03*** *10:52:18.2±1.1, 1.22N×97.21E, h30^{km}, Error ellipse: s-maj=27.3km s-min=13.7km az=69.0*

ISC 03 10:52:16.3±1.4**, 1.2N**±0.1×**97.2E**±0.2**, h30^{km}, n7, σ0^{s}43**/7**, mb3.7**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.31	40	*e*Pn	Pn	10 53 36.0	+0.3
CMAR	Chiang Mai Arr	17.21	6	P	P	10 56 15.6	-0.8
	baz=193,slow=12,SNR=2.9						
WRA	Warramunga Arr	42.06	122	P	P	11 00 07.0	-0.4
	0.5nm,0.6s,mb3.3,baz=302,slow=9.2,SNR=9.2						
ASAR	Alice Springs	43.42	127	P	P	11 00 18.6	+0.2
	0.2nm,0.4s,mb3.2,baz=296,slow=7.4,SNR=5.5						
SONM	Songino Array	47.11	8	P	P	11 00 47.9	+0.4
	0.7nm,0.7s,mb3.7,baz=184,slow=11,SNR=5.2						
MKAR	Makanchi Array	47.21	346	P	P	11 00 48.9	+0.5
	0.7nm,0.5s,mb3.9,baz=165,slow=9.1,SNR=5.4						
ZAL	Zalesovo	53.52	351	P	P	11 01 36.1	-0.2
	0.9nm,0.3s,mb4.1,baz=350,slow=9.5,SNR=3.7						

CSEM ***03*** *10:56:44.9±0.2, 35.03N×31.26E, h38^{km}±7^{km}, Mw3.2, Error ellipse: s-maj=6.7km s-min=4.4km az=15.0*

HLW ***03*** *10:56:45.0, 35.17N×31.30E, h33^{km}, Mb3.3*

NEIC ***03*** *10:56:46.6, 35.09N×31.29E, h25^{km}, ML3.4(NIC), After NIC.*

NIC ***03*** *10:56:46.6±0.3, 35.09N×31.29E, h25^{km}, ML3.4, MW3.2*

ISC 03 10:56:45.8±0.8**, 34.94N**±0.06×**31.30E**±0.07**, h33^{km}, n15, σ0^{s}63**/21**, 4C-3D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKMC	Akamas	0.85	84	P	P	10 57 01.7	+0.5
PPCY	Paphos	0.86	94	P	P	10 57 01.8	+0.4
ALFC	Alevga	1.08	78	⇓*i*P	P	10 57 04.4	-0.3
	39nm,0.2s						
ALFC				S	S	10 57 17.8	-0.9
SZAC	Souni-Zanaja	1.31	98	P	P	10 57 07.9	-0.1
SZAC				S	S	10 57 25.1	+0.6
LEF	Lefka	1.31	82	PG	P	10 57 07.1	-0.9
LEF				SG	S	10 57 19.8	-4.7
CSS	Prodhromos	1.67	89	P	P	10 57 12.8	-0.2
	2.4nm,0.5s						
CSS				S	S	10 57 33.8	+0.4
HDMB	Hadim	2.23	25	*e*PN	Pn	10 57 22.1	+0.8
IKL	Isikli	2.33	56	PN	Pn	10 57 22.0	-0.7
HBRG	Burj al ‘Arab	4.53	196	P	P	10 57 54.9	+1.1
AMAG	Maghara	4.58	159	⇓P	P	10 57 54.5	0.0
KOT	Kottamia	5.02	175	⇑P	P	10 58 01.0	+0.2
KOT				S	S	10 58 57.3	-1.1
HMAT	Matruh	5.22	224	⇑P	P	10 58 03.1	-0.4
SUZ		5.25	165	⇑P	P	10 58 04.6	+0.6
HNKL	Nakhl	5.49	155	⇓P	P	10 58 08.0	+0.7
SWA2		7.54	223	⇑P	P	10 58 35.6	-0.5
SWA2				S	S	10 59 56.2	-5.2

IDC 03 10:58:01.0±42.0**, 15.79S×173.10W, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/18**, mbtmp4.1**/3**, Error ellipse: s-maj=812.5km s-min=176.2km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	44.10	240	P	P	11 06 12.1	-0.8
	0.7nm,0.5s,baz=110,slow=15,SNR=4.7						
WB2	Warramunga Arr	50.03	257	*e*P	P	11 06 57.2	-2.5
WRA	Warramunga Arr	50.04	257	P	P	11 06 57.2	-2.6
	0.3nm,0.3s,baz=96,slow=7.3,SNR=17						
ASAR	Alice Springs	50.27	252	P	P	11 06 59.4	-2.1
	4.9nm,0.5s,baz=89,slow=8.1,SNR=109						
ASPA	Alice Springs	50.27	252	*e*P	P	11 06 59.3	-2.2
KAKA	Kakadu	52.76	266	*e*P	P	11 07 20.3	-0.1

IDC ***03*** *11:26:21.7±0.6, 16.99S×172.93W, mb4.3/13, mb1 4.5/13, mb1mx4.4/21, mbtmp4.3/13, MS4.0/11, Ms1 4.0/11, ms1mx3.8/25, Error ellipse: s-maj=33.6km s-min=15.1km az=136.0*

BJI ***03*** *11:26:23.6, 16.90S×173.00W, h15^{km}, mb5.0*

NEIC ***03*** *11:26:23.6±0.5, 16.94S×173.02W, h15^{km}, mb4.6/5, Error ellipse: s-maj=15.6km s-min=12.1km az=133.0*

ISC 03 11:26:24.9±0.3**, 16.98S**±0.10×**173.1W**±0.1**, h33^{km}, n63, σ1^{s}02**/46**, mb4.4**/23**, MS4.0**/9**, 4C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.29	22	*e*Pn	Pn	11 27 08.6	-6.9
RAR	Rarotonga	13.24	111	Pn	P	11 29 18.7	-14
	3.7nm,0.3s,baz=254,slow=5.5,SNR=11						
RAR				LR	LR	11 33 40.7	
	comp=Z,534nm,19.4s,baz=281,slow=34						
RAR	Rarotonga	13.24	111	*e*P	P	11 29 18.8	-14
	44nm,0.6s						
DZM	Mont Dzumac	19.97	252	LR	LR	11 36 51.3	
	comp=Z,273nm,18.5s,baz=218,slow=31						
PPT	Papeete	22.43	95	LR	LR	11 38 48.4	
	comp=Z,424nm,18.5s,MS3.9,baz=296,slow=34						
URZ	Urewera	22.89	200	P	P	11 31 27.5	+0.8
	25nm,0.7s,mb4.8,baz=8.8,slow=4.2,SNR=13						
HNR	Honiara	27.31	283	LR	LR	11 41 25.6	
	comp=Z,524nm,20.5s,MS4.1,baz=128,slow=33						
HNR	Honiara	27.31	283	P	P	11 32 14.3	+5.4
	12nm,0.3s,mb4.9						
CTA	Charters Tower	38.64	259	LR	LR	11 47 13.2	
	comp=Z,149nm,20.0s,MS3.8,baz=81,slow=32						
STKA	Stephens Creek	43.56	241	P	P	11 34 27.7	+0.1
	2.1nm,0.5s,mb4.1,baz=59,slow=5.9,SNR=4.9						
WB2	Warramunga Arr	49.81	258	*e*P	P	11 35 16.2	-0.7
WRAB	Tennant Creek	49.81	258	*e*P	P	11 35 16.0	-0.9
	2.0nm,0.5s,mb4.4						
WRA	Warramunga Arr	49.82	258	P	P	11 35 15.9	-1.1
	2.9nm,0.7s,mb4.5,baz=97,slow=7.0,SNR=22						
ASAR	Alice Springs	49.95	253	P	P	11 35 17.2	-0.7
	12nm,0.6s,mb5.1,baz=89,slow=8.4,SNR=124						
ASAR				PcP	PcP	11 36 39.2	+1.1
	1.7nm,0.8s,baz=108,slow=4.5,SNR=4.3						
ASAR				LR	LR	11 52 49.2	
	comp=Z,100nm,18.4s,MS3.9,baz=277,slow=32						
ASPA	Alice Springs	49.96	253	*e*P	P	11 35 17.6	-0.4
SBA	Scott Base	61.71	185	*e*P	P	11 36 41.7	-0.1
	4.2nm,1.0s,mb4.5						
VNDA	Vanda	61.85	186	P	P	11 36 42.1	-0.7
	0.9nm,0.9s,mb3.9,baz=0.9,slow=6.0,SNR=4.6						
VNDA	Vanda	61.85	186	*e*P	P	11 36 42.7	0.0
	3.6nm,1.2s,mb4.4						
QSPA	South Pole Qui	73.07	180	*e*P	P	11 37 52.5	-0.5
	13nm,1.1s,mb4.8						
YBH	Yreka Blue Hor	74.66	37	P	P	11 38 01.9	-0.9
	3.1nm,0.8s,mb4.3,baz=294,slow=5.6,SNR=4.2						
NVAR	Mina Array Bea	75.28	42	P	P	11 38 06.1	-0.5
	2.1nm,0.9s,mb4.1,baz=224,slow=7.1,SNR=9.4						
NVAR				LR	LR	12 06 45.8	
	comp=Z,88nm,19.3s,MS4.1,baz=280,slow=32						
NVAR	Mina Array Bea	75.28	42	P	P	11 38 06.1	-0.5
NVAR				LR	LR	12 06 45.8	
KSM	Kuching	77.66	275	*e*P	P	11 38 22.9	+2.5
ELK	Elko	78.55	41	*e*P	P	11 38 26.6	+1.8
	1.6nm,0.8s,mb4.0						
MSU	Marysvale	79.32	44	*e*P	P	11 38 30.5	+1.5
MSU				*e*		11 38 44.0	
BMO	Blue Mountains	79.68	37	*e*P	P	11 38 31.5	+0.6
	3.2nm,1.1s,mb4.2						
MDJ	Mudanjiang	80.47	322	P	P	11 38 25.6	-10
HLID	Hailey	80.64	39	*e*P	P	11 38 35.7	-0.3
	3.2nm,0.8s,mb4.3						
TXAR	Lajitas Array	81.22	56	P	P	11 38 39.9	+0.5
	1.5nm,1.0s,mb3.9,baz=236,slow=4.5,SNR=11						
TXAR				LR	LR	12 09 53.4	
	comp=Z,43nm,19.3s,MS3.8,baz=185,slow=32						
PV10	Paradox Valley	81.37	46	*e*P	P	11 38 39.6	-0.4
ANMO	Albuquerque	81.56	50	P	P	11 38 40.9	-0.2
	0.7nm,0.7s,mb3.7,baz=238,slow=11,SNR=3.5						
ANMO	Albuquerque	81.56	50	P	P	11 38 36.8	-4.3
	0.6nm,0.4s,mb3.9						
PV01	Paradox Valley	81.57	46	*e*P	P	11 38 40.6	-0.4
GDL2	Guadalupe Moun	81.90	53	*e*P	P	11 38 41.1	-1.7
CN2	Changchun	82.50	320	*e*P	P	11 38 48.9	+3.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CHMT	Chamberlain Mo	83.19	37	*e*P	P	11 38 49.1	0.0
PDAR	Pinedale Array	83.22	42	P	P	11 38 48.8	-0.5
	comp=Z,1.4nm,0.9s,mb4.0,baz=270,slow=1.5,SNR=9.7						
SDCO	Great Sand Dun	83.53	48	*e*P	P	11 38 51.7	+0.6
	comp=Z,14nm,1.8s,mb4.8						
HRY	Holter Researc	83.89	37	*e*P	P	11 38 52.0	-0.7
ILAR	Eielson Array	83.92	11	P	P	11 38 51.9	-0.6
	comp=Z,0.9nm,0.8s,mb4.0,baz=220,slow=4.2,SNR=9.2						
IMA	Indian Mountai	84.07	8	*e*P	P	11 38 56.2	+3.1
EDM	Edmonton	86.65	31	*e*P	P	11 39 05.1	-1.1
PLCA	Paso Flores	88.21	132	LR	LR	12 11 30.5	
	comp=Z,136nm,21.4s,MS4.3,baz=196,slow=31						
GYA	Guiyang	89.07	298	P	P	11 39 22.7	+4.2
GYA				AP	pP	11 39 32.4	+3.3
GYA				XP	sP	11 39 36.2	+3.7
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb5.1						
VNA3	Neumayer Olymp	91.26	175	⇑*i*	P	11 39 28.6	+0.9
SNAA	Sanae	91.32	177	⇑*i*	P	11 39 33.6	+5.6
YKA	Yellowknife Ar	91.41	23	P	P	11 39 28.1	-0.5
	comp=Z,0.7nm,0.9s,mb4.0,baz=238,slow=4.7,SNR=6.9						
YKA	Yellowknife Ar	91.41	23	P	P	11 39 28.1	-0.5
VNA2	Neumayer--Watz	91.76	175	⇑*i*	P	11 39 30.7	+0.7
VNA1	Neumayer--Stat	91.96	175	⇑*i*	P	11 39 30.6	-0.3
CMAR	Chiang Mai Arr	93.42	288	P	P	11 39 41.2	+2.4
	comp=Z,1.7nm,0.7s,mb4.6,baz=93,slow=2.6,SNR=8.0						
ULM	Lac du Bonnet	94.95	39	LR	LR	12 18 40.8	
	comp=Z,110nm,18.5s,MS4.4,baz=28,slow=33						
LPAZ	La Paz	98.96	110	LR	LR	12 17 07.2	
	comp=Z,35nm,20.2s,MS3.9,baz=10.0,slow=31						
KMBO	Kilima Mbogo	145.12	242	PKPbc	PKPbc	11 46 03.4	+3.1
	comp=Z,5.8nm,0.9s,baz=53,slow=9.5,SNR=7.0						
KSP	Ksiaz	145.40	350	*e*PKP	PKPdf	11 46 02.2	+2.9
CLL	Collm	145.41	353	*e*PKP1	PKPbc	11 46 04.0	+4.1
BRG	Berggiesshubel	145.73	352	*e*P	PKPdf	11 46 05.5	+5.6
MOX	Moxa	146.21	355	*e*P	PKPdf	11 46 08.0	+7.3
VYHS	Vyhne	147.10	345	*e*PKP	PKPdf	11 46 08.2	+5.9
MLR	Muntele Rosu	147.43	335	PKPbc	PKPdf	11 46 08.8	+5.8
	comp=Z,5.5nm,1.1s,baz=26,slow=4.5,SNR=5.8						
BRTR	Keskin Array B	147.58	320	PKPbc	PKPdf	11 46 09.2	+5.8
	comp=Z,2.7nm,0.8s,baz=117,slow=2.8,SNR=12						
GERES	GERESS Array B	147.75	352	PKPbc	PKPdf	11 46 08.6	+5.3
	comp=Z,1.7nm,0.8s,baz=27,slow=3.0,SNR=11						
DAVOX	Davos	150.19	356	PKPbc	PKPdf	11 46 15.9	+8.6
	comp=Z,4.0nm,0.6s,baz=186,slow=4.6,SNR=6.2						
DAVOX				PKPab	PKPab	11 46 22.6	+1.9
	comp=Z,1.2nm,0.3s,baz=162,slow=23,SNR=4.8						

NEIC ***03*** *11:41:38.3±1.5, 5.48S×147.21E, h175^{km}±13^{km}, mb4.3/2, Error ellipse: s-maj=16.0km s-min=11.4km az=101.0*

IDC ***03*** *11:41:41.3±3.3, 5.48S×147.05E, h199^{km}±30^{km}, mb3.6/6, mb1 3.9/7, mb1mx3.7/14, mbtmp4.2/7, Error ellipse: s-maj=28.1km s-min=11.2km az=112.0*

ISC 03 11:41:35.3±1.3**, 5.41S**±0.08×**147.2E**±0.1**, h158^{km}**±13^{km}**, n16, σ0^{s}96**/21**, mb3.8**/7**, 2D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.97	180	*e*Pn	P	11 42 37.9	+1.7
PMG				*e*Sn	S	11 43 22.0	-0.9
KAKA	Kakadu	16.27	243	*e*P	P	11 45 15.6	-0.7
WRAB	Tennant Creek	19.09	220	*e*P	P	11 45 47.6	-0.6
	7.7nm,0.3s						
WRAB				*e*S	S	11 49 11.8	+0.3
WB2	Warramunga Arr	19.10	220	⇓*i*P	P	11 45 47.8	-0.5
WB2				*e*S	S	11 49 11.0	-0.6
WRA	Warramunga Arr	19.10	220	P	P	11 45 48.0	-0.3
	2.5nm,0.3s,baz=40,slow=11,SNR=180						
WRA				S	S	11 49 11.3	-0.5
	0.2nm,0.3s,baz=41,slow=20,SNR=8.8						
ASAR	Alice Springs	22.21	214	P	P	11 46 20.8	+1.4
	11nm,0.8s,mb4.3,baz=34,slow=12,SNR=119						
ASAR				S	S	11 50 11.5	+2.9
	9.0nm,0.8s,baz=32,slow=22,SNR=28						
ASPA	Alice Springs	22.21	214	⇓*i*P	P	11 46 20.8	+1.4
ASPA				*e*S	S	11 50 11.4	+2.8
KLBR	Kellerberrin	37.93	223	*e*P	P	11 48 37.8	-1.3
KLBR				*e*		11 48 44.8	
YHNB	Yeheng	39.06	321	P	P	11 48 50.0	+1.4
SONM	Songino Array	63.99	331	P	P	11 51 54.2	+0.2
	0.9nm,0.5s,mb3.9,baz=145,slow=6.0,SNR=10						
VNDA	Vanda	72.48	177	P	P	11 52 45.6	-0.5
	1.1nm,0.7s,mb3.7,baz=319,slow=7.0,SNR=13						
MKAR	Makanchi Array	77.17	320	P	P	11 53 12.7	-0.5
	0.6nm,0.6s,mb3.4,baz=101,slow=6.2,SNR=4.3						
ZAL	Zalesovo	78.63	328	P	P	11 53 20.5	-0.5
	1.2nm,0.5s,mb3.8,baz=311,slow=9.0,SNR=3.2						
QSPA	South Pole Qui	84.55	180	*e*P	P	11 53 51.0	-0.3
	1.0nm,0.3s,mb4.0						
ILAR	Eielson Array	84.87	23	P	P	11 53 52.9	-0.3
	0.8nm,0.7s,mb3.5,baz=253,slow=5.1,SNR=8.4						
SIV	San Ignacio	144.86	128	PKP	PKPdf	12 00 54.5	+0.1
	0.9nm,0.3s,baz=197,slow=2.5,SNR=9.5						

NEIC ***03*** *11:54:48.1, 40.22S×175.05E, h23^{km}, ML3.9(WEL), After WEL.*

NEIC Felt at Marton.

WEL 03 11:54:47.5±0.1**, 40.20S×174.98E, h12^{km}, ML4.0**/35**, 2C-1D, Error ellipse: s-maj=1.1km s-min=0.5km az=90.0, 5., Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	Wanganui	0.44	0	P	Pg	11 54 57.3	+0.6
WAZ				S	Sg	11 55 05.8	+3.1
WAZ	Wanganui	0.44	0	P*	Pb	11 54 57.1	+0.3
WAZ				*e*S*	Sb	11 55 04.0	+0.9
WAZ				*e*S*	Sb	11 55 04.2	+1.1
MRZ	Mangatainoka R	0.65	136	P	Pb	11 55 00.2	-0.1
MRZ				S	Sb	11 55 08.9	-0.1
MRZ	Mangatainoka R	0.65	136	⇑P*	Pb	11 55 00.2	-0.1
MRZ				S*	Sb	11 55 08.2	-0.8
KIW	Kapiti Island	0.66	185	P	Pb	11 54 59.9	-0.6
KIW	Kapiti Island	0.66	185	⇑P*	Pb	11 54 59.9	-0.6
KIW				S*	Sb	11 55 08.3	-1.1
TSZ	Takapari Road	0.76	80	P	Pb	11 55 01.8	-0.4
TSZ	Takapari Road	0.76	80	⇓P*	Pb	11 55 01.8	-0.4
TSZ				S*	Sb	11 55 11.3	-1.0
MTVZ	Mangateitei	0.90	25	P*	Pb	11 55 03.8	-0.7
MTVZ				S*	Sb	11 55 16.3	+0.1
CAW	Cannon Point	0.91	176	P	Pb	11 55 04.3	-0.5
CAW	Cannon Point	0.91	176	P*	Pb	11 55 04.3	-0.4
CAW				S*	Sb	11 55 16.3	-0.3
MOVZ	Moawhango	0.99	37	P	Pb	11 55 04.8	-1.3
MOVZ	Moawhango	0.99	37	P*	Pb	11 55 04.8	-1.3
MOVZ				S*	Sb	11 55 18.0	-0.9
WNVZ	Wahianoa	0.99	29	P	Pb	11 55 05.4	-0.8
WNVZ	Wahianoa	0.99	29	P*	Pb	11 55 05.4	-0.7
WNVZ				S*	Sb	11 55 19.1	+0.2
DUWZ	D’Urville Isla	1.01	233	P*	Pb	11 55 05.9	-0.6
DUWZ				S*	Sb	11 55 19.5	+0.1
RAEZ	Rainy Point	1.02	333	P	Pb	11 55 07.8	+1.2
RAEZ	Rainy Point	1.02	333	P*	Pb	11 55 07.8	+1.1
DRZ	Dome Shelter	1.03	26	P	Pb	11 55 06.3	-0.5
DRZ	Dome Shelter	1.03	26	P*	Pb	11 55 06.3	-0.5
DRZ				S*	Sb	11 55 20.0	+0.1
MTW	Mount Morrison	1.04	158	P	Pb	11 55 06.8	-0.1
MTW	Mount Morrison	1.04	158	P*	Pb	11 55 06.8	-0.2
MTW				S*	Sb	11 55 20.8	+0.5
FWVZ	Far West T-bar	1.04	25	P	Pb	11 55 06.1	-0.9
FWVZ	Far West T-bar	1.04	25	P*	Pb	11 55 06.1	-0.9
FWVZ				S*	Sb	11 55 19.6	-0.8
MRW	Makara Radio	1.05	192	P*	Pb	11 55 06.5	-0.7
MRW				S*	Sb	11 55 20.0	-0.6
TUVZ	Tukino	1.06	29	P	Pb	11 55 06.7	-0.7
TUVZ	Tukino	1.06	29	P*	Pb	11 55 06.6	-0.8
TUVZ				S*	Sb	11 55 20.7	-0.3
BFZ	Birch Farm	1.08	117	*e*P	Pb	11 55 07.3	-0.3
BFZ	Birch Farm	1.08	117	P*	Pb	11 55 07.3	-0.3
BFZ				S*	Sb	11 55 22.3	+0.9
WPVZ	Whakapapa	1.08	24	P	Pb	11 55 07.0	-0.7
WPVZ	Whakapapa	1.08	24	P*	Pb	11 55 07.0	-0.8
VRZ	Vera Road	1.09	351	P	Pb	11 55 08.0	+0.2
VRZ	Vera Road	1.09	351	P*	Pb	11 55 08.0	+0.2
CNZ	Chateau	1.09	24	P*	Pb	11 55 07.0	-0.9
WEL	Wellington	1.10	189	P	Pb	11 55 07.3	-0.7
WEL	Wellington	1.10	189	P*	Pb	11 55 07.3	-0.6
WEL				S*	Sb	11 55 21.9	-0.1
DFE	Dawson Falls	1.10	322	P	Pb	11 55 09.4	+1.3
NGZ	Ngauruhoe	1.13	25	P	Pb	11 55 07.8	-0.7
NGZ	Ngauruhoe	1.13	25	P*	Pb	11 55 07.8	-0.7
SNZO	South Karori	1.13	191	P	Pb	11 55 08.0	-0.5
SNZO	South Karori	1.13	191	P*	Pb	11 55 08.0	-0.5
TCW	Tory Channel	1.15	208	P	Pb	11 55 07.7	-1.1
TCW	Tory Channel	1.15	208	P*	Pb	11 55 07.7	-1.1
NEZ	North Egmont	1.15	323	P	Pb	11 55 10.5	+1.6
NEZ	North Egmont	1.15	323	P*	Pb	11 55 10.5	+1.6
OTVZ	Oturere	1.16	27	P*	Pb	11 55 08.3	-0.7
WTVZ	West Tongariro	1.18	24	P	Pb	11 55 08.6	-0.8
WTVZ	West Tongariro	1.18	24	P*	Pb	11 55 08.6	-0.8
TWVZ	Taurewa	1.18	17	P	Pb	11 55 08.3	-1.1
TWVZ	Taurewa	1.18	17	P*	Pb	11 55 08.3	-1.1
NRZ	Ngariki Road	1.18	316	P	Pb	11 55 10.4	+1.0
NRZ	Ngariki Road	1.18	316	P*	Pb	11 55 10.4	+0.9
BHW	Baring Head	1.21	184	P	Pb	11 55 09.3	-0.6
BHW	Baring Head	1.21	184	P*	Pb	11 55 09.3	-0.6
PAWZ	Paruwai Farm	1.23	164	P*	Pb	11 55 09.2	-0.9
MSWZ	Moikau Station	1.23	171	P	Pb	11 55 09.5	-0.7
MSWZ	Moikau Station	1.23	171	P*	Pb	11 55 09.5	-0.7
KATZ	Kakaramea	1.34	24	P	Pb	11 55 10.9	-1.2
KATZ	Kakaramea	1.34	24	PN	Pn	11 55 10.9	-1.3
RITZ	Rihia Road	1.40	29	P	Pn	11 55 12.3	-0.6
RITZ	Rihia Road	1.40	29	PN	Pn	11 55 12.3	-0.6
PWZ	Pawanui	1.45	84	*e*P	Pn	11 55 12.5	-1.2
PWZ	Pawanui	1.45	84	PN	Pn	11 55 12.5	-1.2
TUWZ	Tuamarina	1.46	212	PN	Pn	11 55 12.8	-1.1
RATZ	Rangitukua	1.46	25	P	Pn	11 55 13.0	-0.9
RATZ	Rangitukua	1.46	25	PN	Pn	11 55 13.0	-0.9
BKZ	Black Stump Fm	1.56	49	P	Pn	11 55 14.7	-0.5
BKZ	Black Stump Fm	1.56	49	PN	Pn	11 55 14.7	-0.5
HATZ	Hinemaiaia	1.56	34	P	Pn	11 55 14.7	-0.6
HATZ	Hinemaiaia	1.56	34	PN	Pn	11 55 14.7	-0.6
NNZ	Nelson	1.59	230	P	Pn	11 55 15.0	-0.7
NNZ	Nelson	1.59	230	PN	Pn	11 55 15.0	-0.7
WATZ	Wairara	1.60	22	P	Pn	11 55 15.5	-0.3
WATZ	Wairara	1.60	22	PN	Pn	11 55 15.5	-0.3
CMWZ	Cape Campbell	1.65	200	*e*P	Pn	11 55 16.6	0.0
CMWZ	Cape Campbell	1.65	200	PN	Pn	11 55 16.6	-0.1
WHTZ	Whakaora	1.71	27	P	Pn	11 55 19.5	+2.1
WHTZ	Whakaora	1.71	27	PN	Pn	11 55 19.5	+2.2
BSWZ	Blackbirch Sta	1.73	209	P	Pn	11 55 17.4	-0.3
QRZ	Quartz Range	1.97	251	P	Pn	11 55 20.2	-1.0
THZ	Tophouse	2.22	225	*e*P	Pn	11 55 24.4	-0.3
UTU	Utuhina	2.23	25	P	Pn	11 55 26.7	+1.8
TAZ	Tarawera	2.29	32	P	Pn	11 55 25.8	0.0
KHZ	Kahutara	2.47	206	*e*P	Pn	11 55 26.5	-1.8
TOZ	Tahuroa Road	2.50	9	P	Pn	11 55 30.2	+1.5
URZ	Urewera	2.55	41	*e*P	Pn	11 55 27.4	-2.0
MWZ	Matawai	2.71	47	*e*P	Pn	11 55 30.0	-1.8
DSZ	Denniston Nort	2.86	236	P	Pn	11 55 32.8	-1.1
MQZ	McQueen’s Vall	3.91	206	*e*P	Pn	11 55 44.2	-4.6
WVZ	Waitaha Valley	4.29	227	*e*P	Pn	11 55 50.2	-4.0
ODZ	Otahua Downs	5.80	212	*e*P	Pn	11 56 10.4	-5.2

ISC 03 12:00:22.3±1.7**, 46.04N**±0.06×**13.6E**±0.1**, n6, σ0^{s}42**/10**, 1C, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRE	Drenchia	0.15	26	⇑*i*Pg	Pg	12 00 25.1	-0.2
ROBS	Robic	0.21	353	*i* Pg	Pg	12 00 27.2	+0.7
CADS	Cadrg	0.23	34	*i* Pg	Pg	12 00 26.9	-0.1
CADS				*i* Sg	Sg	12 00 30.6	+0.5
	comp=Z,20nm,0.2s						

VOJS	Vojsko	0.23	91	*i* Pg	Pg	12 00 26.8	-0.2
VOJS				*i* Sg	Sg	12 00 30.2	+0.1
JAVS	Javornik	0.39	111	*i* Pg	Pg	12 00 29.8	-0.2
JAVS				*i* Sg	Sg	12 00 35.8	+0.5
	comp=Z,6.0nm,0.2s						
GORS	Gorjuse	0.42	48	*i* Pg	Pg	12 00 30.0	-0.7
GORS				*i* Sg	Sg	12 00 36.0	-0.3
	comp=Z,4.0nm,0.1s						

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*BJI **03** 12:07:34.0, 0.42N×96.99E, h30^{km}, mB4.6, mb4.7, Ms4.2, Msz4.0*

*IDC **03** 12:07:39.4±1.3, 1.27N×97.12E, mb4.2/9, mb1 4.4/10, mb1mx4.1/21, mbtmp4.2/10, ML4.3/1, MS3.6/1, Ms1 3.8/1, ms1mx2.9/23, Error ellipse: s-maj=60.8km s-min=16.1km az=57.0*

*NEIC **03** 12:07:44.2±0.6, 1.30N×97.24E, h30^{km}, mb4.6/8, Error ellipse: s-maj=15.5km s-min=8.5km az=52.0*

ISC 03 12:07:42.8±0.7**, 1.31N**±0.08×**97.21E**±0.08**, h33^{km}, n31, $\sigma 0^{s}.93$**/31**, mb4.5**/19**, MS4.0**/1**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	5.01	49	P	P	12 08 58.3	+0.7
KULM	Kulim	5.24	41	*e*Pn	Pn	12 09 01.0	0.0
KGM	Kluang	6.14	83	P	P	12 09 14.9	+1.3
CMAR	Chiang Mai Arr	17.13	6	P	P	12 11 40.4	-1.0
	0.4nm,0.3s,baz=195,slow=11,SNR=14						
CMAR				LR	LR	12 19 15.1	
	comp=Z,177nm,18.6s,baz=190,slow=40						
CMAR	Chiang Mai Arr	17.13	6	P	P	12 11 40.4	-1.0
CMAR				LR	LR	12 19 15.1	
KKM	Kota Kinabalu	19.53	76	*e*P	P	12 12 10.1	-0.5
KMI	Kunming	24.27	12	P	P	12 13 00.4	+2.1
KMI				AP		12 13 07.3	
KMI				S	S	12 17 15.0	+2.9
KMI				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
KMI				LR	LR		
	comp=N,320nm,14.0s,MS4.0						
KMI				LR	LR		
	comp=E,150nm,12.6s,MS4.0						
KMI				LR	LR		
	comp=Z,310nm,14.9s,MS3.9						
SHL	Shillong	24.66	348	*e*P	P	12 13 02.0	-0.1
GYA	Guiyang	26.61	19	P	P	12 13 19.8	-0.5
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
PKI	Pulchoki	28.46	338	*e*P	P	12 13 38.7	+1.6
	comp=Z,8.6nm,0.6s,mb4.6						
GUN	Gumba	28.59	339	*e*P	P	12 13 38.9	+0.6
	comp=Z,26nm,0.6s,mb5.1						
KKN	Kakani	28.71	338	*e*P	P	12 13 39.8	+0.5
	comp=Z,9.3nm,0.5s,mb4.8						
GKN	Gorkha	29.15	337	*e*P	P	12 13 43.5	+0.3
	comp=Z,29nm,0.9s,mb5.0						
KOLN	Koldanda	29.37	335	*e*P	P	12 13 45.9	+0.7
	comp=Z,26nm,0.7s,mb5.0						
ENH	Enshi	31.08	21	*e*P	P	12 13 58.7	-1.6
	comp=Z,9.9nm,0.5s,mb4.9						
XAN	Xi'an	34.36	17	P	P	12 14 27.3	-1.5
XAN				AP	pP	12 14 33.5	-5.0
GTA	Gaotai	38.00	3	P	P	12 14 58.5	-1.1
GTA				AP	pP	12 15 06.5	-2.8
WRA	Warramunga Arr	42.08	122	P	P	12 15 33.2	-0.5
	comp=Z,2.6nm,0.6s,mb4.0,baz=301,slow=9.2,SNR=32						
WRAB	Tennant Creek	42.09	122	*e*P	P	12 15 33.5	-0.1
	comp=Z,1.5nm,0.4s,mb4.0						
ASAR	Alice Springs	43.45	127	P	P	12 15 44.6	-0.2
	comp=Z,0.8nm,0.3s,mb3.9,baz=299,slow=7.5,SNR=16						
SONM	Songino Array	47.02	8	P	P	12 16 13.2	+0.3
	comp=Z,4.3nm,0.7s,mb4.5,baz=191,slow=9.3,SNR=37						
SONM				PcP	PcP	12 17 45.0	-0.2
	comp=Z,0.8nm,0.4s,baz=192,slow=3.9,SNR=5.5						
MKAR	Makanchi Array	47.14	346	P	P	12 16 13.9	+0.1
	comp=Z,4.2nm,0.6s,mb4.5,baz=163,slow=8.5,SNR=43						
TLY	Talaya	50.49	5	*e*P	P	12 16 39.9	+0.2
	comp=Z,4.5nm,0.7s,mb4.6						
STKA	Stephens Creek	53.42	132	P	P	12 17 02.8	+0.9
	comp=Z,2.5nm,0.7s,mb4.2,baz=320,slow=11,SNR=6.0						
ZAL	Zalesovo	53.45	351	P	P	12 17 01.5	-0.3
	comp=Z,8.6nm,0.4s,mb5.1,baz=316,slow=5.3,SNR=19						
ZAL	Zalesovo	53.45	351	P	P	12 17 01.5	-0.3
BVAR	Borovoye Array	56.15	341	P	P	12 17 20.5	-1.0
	comp=Z,4.1nm,0.7s,mb4.6,baz=149,slow=8.6,SNR=19						
YAK	Yakutsk	65.31	16	*e*P	P	12 18 22.1	-1.5
FINES	FINESS Array B	79.91	332	P	P	12 19 49.2	-0.6
	comp=Z,0.4nm,0.4s,mb3.7,baz=108,slow=6.0,SNR=5.2						
GERES	GERESS Array B	84.74	319	P	P	12 20 15.9	+0.9
	comp=Z,0.2nm,0.4s,mb3.6,baz=124,slow=7.1,SNR=3.5						
TXAR	Lajitas Array	143.57	32	PKP	PKPdf	12 27 14.9	0.0
	comp=Z,0.5nm,0.7s,baz=129,slow=0.5,SNR=6.5						

DJA 03 12:17:16.7±0.9**, 8.62S×116.40E, h136^{km}**±5^{km}**, MD4.6**/3**, ML3.9**/2**, 2C-2D, Error ellipse: s-maj=48.1km s-min=15.5km az=2.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	Kedomdong	0.32	295	⇑*e*Pn	P	12 17 35.4	-0.8
	86nm,0.2s						
KEDI				*e*Sn	S	12 17 49.7	-1.4
RATI	Rata	0.87	263	⇓*e*Pn	P	12 17 39.1	-0.3
	192nm,0.2s						
RATI				*e*Sn	S	12 17 55.2	-1.5
KELI	Kelakatan	1.93	282	⇑*e*Pn	P	12 17 50.6	0.0
KELI				*e*Sn	S	12 18 14.7	-1.8
SRDI	Scrawed	2.24	273	⇓*e*Pn	P	12 17 53.8	-0.7
	82nm,0.2s						
SRDI				*e*Sn	S	12 18 21.4	-1.9

IDC 03 12:24:56.9±51.0**, 17.87S×175.85W, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/16**, mbtmp4.1**/3**, Error ellipse: s-maj=949.3km s-min=161.1km az=80.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.79	242	P	P	12 32 40.6	-1.0
	2.8nm,0.9s,baz=90,slow=12,SNR=6.5						
WRA	Warramunga Arr	47.04	259	P	P	12 33 30.2	-2.0
	1.1nm,0.5s,baz=96,slow=8.2,SNR=48						
ASAR	Alice Springs	47.15	254	P	P	12 33 31.0	-2.1
	2.7nm,0.7s,baz=90,slow=7.6,SNR=58						

IDC 03 12:28:37.6±2.6**, 6.84N×93.18E, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.4**/21**, mbtmp3.4**/4**, ML3.6**/1**, Error ellipse: s-maj=90.1km s-min=26.1km az=64.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.84	25	Pn	P	12 31 42.4	-1.8
	0.1nm,0.3s,baz=213,slow=14,SNR=6.9						
MKAR	Makanchi Array	40.89	349	P	P	12 36 21.2	-1.9
	0.1nm,0.3s,baz=180,slow=10,SNR=3.1						
WRA	Warramunga Arr	48.45	124	P	P	12 37 21.8	-2.4
	0.4nm,0.4s,baz=305,slow=8.5,SNR=14						
ASAR	Alice Springs	50.00	129	P	P	12 37 34.5	-1.4
	0.2nm,0.6s,baz=301,slow=7.6,SNR=4.9						

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*IDC **03** 12:37:48.6±2.4, 1.35N×97.10E, mb3.8/7, mb1 4.0/7, mb1mx3.7/19, mbtmp3.8/7, Error ellipse: s-maj=110.4km s-min=19.1km az=59.0*

*NEIC **03** 12:37:53.1±0.8, 1.36N×97.15E, h30^{km}, mb4.2/2, Error ellipse: s-maj=21.8km s-min=10.7km az=67.0*

ISC 03 12:37:51.2±1.1**, 1.4N**±0.1×**97.2E**±0.2**, h30^{km}, n11, $\sigma 0^{s}.50$**/10**, mb3.9**/9**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.22	42	*e*Pn	Pn	12 39 09.9	+0.5
POO	Poona	28.51	308	*e*x	x	12 44 30.0	
ENH	Enshi	31.03	21	P	P	12 44 07.7	-1.1
	5.4nm,0.5s,mb4.6						
WRA	Warramunga Arr	42.17	122	P	P	12 45 43.0	-0.2
	0.5nm,0.5s,mb3.4,baz=301,slow=9.2,SNR=9.2						
WRAB	Tennant Creek	42.18	122	*e*P	P	12 45 42.9	-0.4
	0.8nm,0.4s,mb3.7						
ASAR	Alice Springs	43.54	127	P	P	12 45 54.4	0.0
	0.3nm,0.7s,mb3.2,baz=301,slow=8.1,SNR=4.7						
SONM	Songino Array	46.96	9	P	P	12 46 21.7	+0.4
	1.2nm,0.6s,mb4.0,baz=187,slow=9.6,SNR=11						
MKAR	Makanchi Array	47.05	346	P	P	12 46 22.3	+0.3
	0.8nm,0.4s,mb4.0,baz=158,slow=8.7,SNR=10						
ZAL	Zalesovo	53.36	351	P	P	12 47 09.8	-0.3
	1.8nm,0.4s,mb4.3,baz=332,slow=3.3,SNR=7.5						
STKA	Stephens Creek	53.51	132	P	P	12 47 12.2	+0.6
	1.6nm,1.0s,mb3.9,baz=315,slow=7.1,SNR=4.2						
ARCES	ARCESS Array B	82.35	340	P	P	12 50 11.6	+0.3
	0.3nm,0.5s,mb3.5,baz=112,slow=6.5,SNR=3.7						

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*NNC **03** 13:03:15.8±1.6, 42.93N×72.94E, mpv2.6, Error ellipse: s-maj=43.3km s-min=9.5km az=10.0*

*KNET **03** 13:03:17.0±0.7, 42.93N×73.01E, h19^{km}±3^{km}, ml2.1, Error ellipse: s-maj=4.7km s-min=2.5km az=104.0*

ISC 03 13:03:18.0±0.7**, 42.97N**±0.06×**72.98E**±0.05**, h19^{km}, n10, $\sigma 0^{s}.82$**/18**, 10C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKS2	Erkin-Say	0.66	117	⇓P	Pb	13 03 29.6	-1.1
	15nm,0.1s,SNR=58						
EKS2				⇑S	Sb	13 03 39.3	-0.1
	39nm,0.1s						
AML	Almayashu	0.99	147	⇓P	Pb	13 03 35.0	-1.2
	11nm,0.1s,SNR=44						
AML				⇓S	Sb	13 03 48.7	-0.1
	11nm,0.1s						
USP	Ospenovka	1.16	74	⇑P	Pb	13 03 38.1	-1.0
	29nm,0.2s,SNR=14						
USP				⇑S	Sb	13 03 53.6	-0.1
	78nm,0.3s						
AAK	Ala-Archa	1.17	106	⇓P	Pb	13 03 38.7	-0.6
	6.2nm,0.1s,SNR=14						
AAK				⇓S	Sb	13 03 54.5	+0.5
	95nm,0.2s						
AAK	Ala-Archa	1.17	106	⇓P	Pb	13 03 38.7	-0.6
	2.7nm,0.2s						
AAK				⇑S	Sb	13 03 54.5	+0.5
	24nm,0.2s						
CHMS	Chumysh	1.30	88	⇑P	Pn	13 03 40.5	-0.9
	5.9nm,0.1s,SNR=9.7						
UCH	Uchtor	1.35	122	⇑P	Pn	13 03 42.0	-0.1
	5.6nm,0.2s,SNR=29						
UCH				⇑S	Sb	13 04 00.7	+1.3
	11nm,0.1s						
KBK	Karagaybulak	1.48	101	⇑P	Pn	13 03 44.1	+0.1
	8.1nm,0.1s,SNR=21						
KBK				⇓S	Sn	13 04 04.4	+1.4
	73nm,0.2s						
KK31	Karatay Array	1.81	275	⇑Pn	Pn	13 03 49.0	+0.3
	1.2nm,0.3s,baz=102,slow=15,SNR=23						
KK31				⇑Sn	Sn	13 04 11.9	+0.6
	4.9nm,0.2s,baz=93,slow=30,SNR=40						
TKM2	Tokmak 2	1.93	90	⇓P	Pn	13 03 51.5	+1.2
	3.7nm,0.1s,SNR=14						

TRN 03 13:20:54.7, 15.38N×60.64W, h49^{km}, MD3.9, M3.2(FDF)**, Md2.6**(FDF)**, 2C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRM	Caravelle	0.68	203	*e*P	P	13 21 09.6	+1.5
CRM				*e*S	S	13 21 20.5	+2.5
FDF	Fort de France	0.81	217	⇑*e*P	P	13 21 10.9	+1.0
FDF				*e*S	S	13 21 22.9	+1.8
BBL	Barber's Block	0.81	281	*e*P	P	13 21 11.7	+1.8
BBL				*e*S	S	13 21 23.8	+2.6
MGG	Marie-Galante	0.84	310	*e*P	P	13 21 11.8	+1.5
MVM	Montagne Vaucl	0.85	197	*e*P	P	13 21 11.9	+1.3
MVM				*e*S	S	13 21 24.3	+1.9
BIM	Bigot	0.95	206	*e*P	P	13 21 13.3	+1.4
BIM				*e*S	S	13 21 26.8	+2.1
DEG	La Desirade	1.01	337	*e*P	P	13 21 14.0	+1.2
DEG				*e*S	S	13 21 28.2	+2.1
DOG	Dongo Capester	1.14	305	*e*P	P	13 21 15.6	+1.0
BCG	Bois Riant Cap	1.17	307	*e*P	P	13 21 15.8	+0.8
SEG	Port Louis	1.31	321	*e*P	P	13 21 18.1	+0.9
SLB	Belfond	1.59	194	⇑*i*P	P	13 21 22.7	+1.7
SLB				*e*S	S	13 21 42.0	+1.5

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*BJI **03** 13:26:16.4, 3.02N×94.56E, h27^{km}, mB5.0, mb4.8, Ms4.7, Msz4.5*

*IDC **03** 13:26:16.3±0.5, 3.24N×94.77E, mb4.5/22, mb1 4.6/23, mb1mx4.5/27, mbtmp4.5/23, ML4.4/1, MS4.0/13, Ms1 4.0/13, ms1mx3.9/25, Error ellipse: s-maj=17.7km s-min=12.7km az=58.0*

*HRVD **03** 13:26:18.6±1.2, 2.83N×95.05E, h18^{km}±3^{km}, MW4.8/37, Centroid moment Tensor Solution. LP body waves: s6,c9; Mantle waves: s37,c54; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.25±.19; $M_{\theta\theta}$-1.44±.17; $M_{\phi\phi}$1.69±.26; $M_{r\theta}$0.58±.32; $M_{\theta\phi}$1.20±.12; $M_{\phi r}$1.21±.46; Best double couple: $M_0$2.285×10^{16} NP1:ϕ_s330°, δ67°, λ168°. NP2: ϕ_s65°, δ79°, λ23°. Principal axes: T 2.701, Plg24°, Azm290°; N -.828, Plg64°, Azm90°; P -1.869, Plg8°, Azm196°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **03** 13:26:18.6±2.7, 3.19N×94.75E, h17^{km}±16^{km}, mb4.9/22 Error ellipse: s-maj=7.1km s-min=4.9km az=218.0*

*MOS **03** 13:26:19.4±1.0, 3.24N×94.76E, h33^{km}, mb5.1/21, MS4.2/6, Error ellipse: s-maj=12.9km s-min=6.8km az=112.1*

ISC 03 13:26:18.8±0.3**, 3.19N**±0.04×**94.76E**±0.03**, h31^{km}, h31^{km}**±.8^{km}**:pP-P, n160, $\sigma 1^{s}.15$**/160**, mb4.8**/65**, MS4.3**/35**, 7C-4D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.23	70	*e*Pn	Pn	13 27 50.7	-0.5
IPM	Ipoh	6.40	77	P	Pn	13 27 52.6	-1.0
SNG	Songkhla	7.05	56	P	Pn	13 28 03.0	+0.3
	270nm,1.0s						
KGM	Kluang	8.63	98	P	P	13 28 23.8	-0.9
NST	Nakhon Sawan	13.49	23	P	P	13 29 41.0	+10
PALK	Pallekele	14.57	287	*e*Pn	P	13 29 42.4	-2.7
	38nm,0.9s						
PALK				*e*		13 29 53.8	
KKTK	Khon Kaen	15.28	31	P	P	13 29 58.8	+4.5
	679nm,1.0s						
KSM	Kuching	15.63	96	*e*P	P	13 30 03.1	+4.3
CM31	Chiang Mai Arr	15.72	15	*e*P	P	13 30 00.0	+0.1
	41nm,0.8s						
CMAR	Chiang Mai Arr	15.72	15	Pn	P	13 29 60.0	0.0
	0.5nm,0.3s,baz=209,slow=12,SNR=69						
CMAR				LR	LR	13 36 28.4	
	comp=Z,629nm,19.6s,baz=200,slow=39						
CHG	Chiang Mai	16.06	14	⇓P	P	13 30 06.1	+1.8
	22nm,0.8s						
NANT	Nan	16.57	20	⇑P	P	13 30 09.0	-1.7
	181nm,1.0s						
MDRS	Chennai	17.39	305	*e*P	P	13 30 19.0	-2.0
MDRS				*e*x	x	13 35 47.0	
VIS	Vishakhapatnam	18.28	323	*i* P	P	13 30 29.8	-2.5
VIS				*i* x	x	13 33 36.7	
TRD	Trivandrum	18.48	287	*i* x	S	13 34 06.5	+10
HYB	Hyderabad	21.28	313	*e*P	P	13 31 05.0	-0.2
HYB	Hyderabad	21.28	313	*i* P	P	13 31 06.0	+0.8
IMP	Imphal	21.48	358	*e*x	P	13 31 17.0	+10
IMP				*i* x	x	13 35 31.0	
KKM	Kota Kinabalu	21.57	82	*e*P	P	13 31 08.8	+0.7
KKM	Kota Kinabalu	21.57	82	P	P	13 31 10.0	+1.9
QIZ	Qiongzhong	21.57	42	P	P	13 31 07.9	-0.2
QIZ				S	S	13 35 01.4	+1.0
QIZ				LR	LR		
	comp=N,1μm,16.5s,MS4.5						
QIZ				LR	LR		
	comp=E,950nm,16.1s,MS4.5						
QIZ				LR	LR		
	comp=Z,590nm,15.1s,MS4.1						
SHL	Shillong	22.42	353	*e*P	P	13 31 14.0	-2.5
SHL				*e*S	S	13 35 23.5	+7.5
TSM	Tawau	23.09	87	P	P	13 31 27.1	+3.8
KMI	Kunming	23.12	19	P	P	13 31 25.9	+2.4
KMI				AP		13 31 34.8	
KMI				XP		13 31 37.2	
KMI				PP	PP	13 31 58.1	+4.0
KMI				PPP	PPP	13 32 07.6	+3.5
KMI				S	S	13 35 33.5	+4.9
KMI				XS		13 35 45.5	
KMI				SS	SS	13 36 20.7	+6.2
KMI				SSS	SSS	13 36 35.8	+5.6
KMI				AMB	AMB		
	comp=Z,30nm,1.5s,mb4.5						
KMI				AMB	AMB		
	comp=Z,280nm,4.2s						
KMI				LR	LR		
	comp=N,1μm,18.1s,MS4.4						
KMI				LR	LR		
	comp=E,970nm,20.8s,MS4.4						
KMI				LR	LR		
	comp=Z,1μm,17.2s,MS4.4						
KAD	Karad	24.59	306	*i* P	P	13 31 39.0	+1.2
POO	Poona	25.52	308	⇓*i*P	P	13 31 47.0	+0.3
	comp=Z,35nm,1.0s,mb4.8						
GYA	Guiyang	25.80	25	⇑*i*P	P	13 31 48.9	-0.3
GYA				AP	pP	13 31 57.8	-0.3
GYA				XP	sP	13 32 01.4	-0.8
GYA				S	S	13 36 09.5	-4.6
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.6						
GYA				AMB	AMB		
	comp=Z,300nm,7.8s						
GYA				LR	LR		
	comp=N,840nm,16.1s,MS4.6						
GYA				LR	LR		
	comp=E,910nm,13.4s,MS4.6						
GYA				LR	LR		
	comp=Z,1μm,19.7s						
PKI	Pulchoki	25.84	341	*e*P	P	13 31 49.1	-0.4
	comp=Z,81nm,1.2s,mb5.1						
PKI	Pulchoki	25.84	341	*e*P	P	13 31 49.1	-0.4
PKI				pmax	pmax		
	comp=Z,41nm,1.2s,mb4.8						
DMN	Daman	25.98	340	*e*P	P	13 31 49.8	-1.0
GUN	Gumba	26.00	342	*e*P	P	13 31 51.0	-0.1
	comp=Z,191nm,1.2s,mb5.5						
KKN	Kakani	26.09	341	*e*P	P	13 31 51.7	-0.1
	comp=Z,46nm,0.8s,mb5.1						
KKN	Kakani	26.09	341	*e*P	P	13 31 51.7	-0.1
KKN				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.8						
GKN	Gorkha	26.50	340	*e*P	P	13 31 55.3	-0.3
	comp=Z,56nm,0.7s,mb5.2						
LSA	Lhasa	26.59	353	P	P	13 31 58.0	+1.6
LSA				AP	pP	13 32 08.1	+2.7
LSA				XP	sP	13 32 12.5	+3.0
LSA				S	S	13 36 30.2	+3.1
LSA				XS		13 36 48.9	
LSA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.8						
LSA				LR	LR		
	comp=N,170nm,21.5s						
LSA				LR	LR		
	comp=E,340nm,15.2s						
LSA				LR	LR		
	comp=Z,370nm,17.7s,MS4.0						
LSA	Lhasa	26.59	353	*e*P	P	13 31 57.7	+1.3
LSA				pmax	pmax		
	comp=Z,163nm,1.3s,mb5.4						
LSA	Lhasa	26.59	353	*e*P	P	13 31 57.7	+1.3
	comp=Z,163nm,1.3s,mb5.4						
CD2	Chengdu	28.85	16	P	P	13 32 15.4	-1.5
ENH	Enshi	30.33	26	*e*P	P	13 32 28.6	-1.5
	comp=Z,24nm,1.1s,mb4.8						
WHN	Wuhan	32.91	32	P	P	13 32 53.0	+0.3
WHN				S	S	13 38 12.0	+4.5
WHN				LR	LR		
	comp=Z,2μm,13.1s,MS4.9						
XAN	Xi'an	33.41	22	P	P	13 32 55.2	-1.9
XAN				S	S	13 38 11.0	-4.2
XAN				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
XAN				LR	LR		
	comp=N,390nm,17.0s,MS4.5						
XAN				LR	LR		
	comp=E,570nm,14.3s,MS4.5						
XAN				LR	LR		
	comp=Z,750nm,16.5s,MS4.5						
LZH	Lanzhou	33.80	13	*e*P	P	13 33 03.5	+3.1
LZH				AP	pP	13 33 12.7	+3.2
LZH				XP	sP	13 33 16.5	+3.1
LZH				*e*PP	PP	13 34 17.6	+3.8
LZH				*e*S	S	13 38 25.5	+4.4
LZH				XS		13 38 40.7	
LZH				SS	SS	13 40 33.5	+5.8
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,90nm,4.9s						
LZH				LR	LR		
	comp=N,510nm,13.3s						
LZH				LR	LR		
	comp=Z,1μm,17.2s,MS4.6						
GTA	Gaotai	36.35	7	P	P	13 33 20.2	-1.9
GTA				AP	pP	13 33 29.0	-2.2
GTA				XP	sP	13 33 32.1	-3.0
GTA				PP	PP	13 34 43.0	-2.8
GTA				S	S	13 38 56.2	-4.3
GTA				XS		13 39 12.9	
GTA				SCS	ScS	13 43 36.5	+2.3
GTA				AMB	AMB		
	comp=Z,90nm,7.2s						
GTA				LR	LR		
	comp=N,230nm,14.1s,MS4.2						
GTA				LR	LR		
	comp=E,210nm,16.3s,MS4.2						
GTA				LR	LR		
	comp=Z,340nm,13.7s,MS4.3						
NJ2	Nanjing	36.56	36	*e*P	P	13 33 25.8	+1.8
NJ2				AP	pP	13 33 34.0	+0.9
NJ2				XP	sP	13 33 37.8	+0.8
NJ2				PP	PP	13 34 50.3	+1.6
NJ2				S	S	13 39 05.0	+1.1
NJ2				XS		13 39 25.0	
NJ2				AMB	AMB		
	comp=Z,50nm,1.4s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,1μm,11.6s						
NJ2				LR	LR		
	comp=N,1μm,12.2s,MS5.0						
NJ2				LR	LR		
	comp=E,1μm,16.3s,MS5.0						
NJ2				LR	LR		
	comp=Z,530nm,13.2s,MS4.5						
SSE	Sheshan	37.30	39	P	P	13 33 30.5	+0.3
SSE				AP	pP	13 33 39.4	0.0
SSE				PP	PP	13 34 54.8	-3.2
SSE				S	S	13 39 16.5	+1.3
SSE				XS		13 39 31.3	
SSE				SCS	ScS	13 43 36.5	-3.2
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,50nm,5.4s						
SSE				LR	LR		
	comp=N,170nm,18.1s,MS4.1						
SSE				LR	LR		
	comp=E,200nm,18.1s,MS4.1						
SSE				LR	LR		
	comp=Z,140nm,16.2s,MS3.9						
WBK	Wadi Bani Khal	39.69	302	⇑P	P	13 33 53.2	+2.9
BTO	Baotou	39.72	18	*e*P	P	13 33 50.7	+0.4
BTO				S	S	13 39 47.4	-4.2
BTO				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
BTO				LR	LR		
	comp=N,420nm,9.8s						
BTO				LR	LR		
	comp=E,480nm,15.3s						
KSH	Kashi	39.98	337	*e*P	P	13 33 49.6	-2.9
KSH				*e*AP	pP	13 33 57.1	-4.6
KSH				*e*XP	sP	13 34 01.0	-4.6
KSH				AMB	AMB		
	comp=Z,270nm,4.2s						
HHC	Hu-ho-hao-te	40.44	20	*e*P	P	13 33 57.9	+1.7
HHC				AP	pP	13 34 07.4	+2.0
HHC				XP	sP	13 34 11.7	+2.4
HHC				PP	PP	13 35 34.4	+1.7
HHC				SCP		13 39 48.5	
HHC				S	S	13 40 01.6	-0.8
HHC				XS		13 40 18.3	
HHC				SS	SS	13 42 59.6	+2.7
HHC				SCS	ScS	13 43 57.7	0.0
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						

HHC				AMB	AMB		
	comp=Z,110nm,3.5s						
HHC				LR	LR		
	comp=N,860nm,15.5s						
HHC				LR	LR		
	comp=E,720nm,21.4s						
HHC				LR	LR		
	comp=Z,730nm,17.8s,MS4.6						
KAKA	**Kakadu**	**40.62**	**114**	*e*P	**P**	**13 33 56.6**	**-1.3**
BIDO	**Bidbid**	**40.77**	**303**	P	**P**	**13 34 02.1**	**+3.0**
	SNR=6.1						
WMQ	**Urumqi**	**40.94**	**352**	*e*P	**P**	**13 34 00.5**	**+0.2**
WMQ				AP	pP	13 34 10.5	+1.0
WMQ				XP	sP	13 34 14.5	+1.1
WMQ				PP	PP	13 35 38.8	+1.1
WMQ				PCP	PcP	13 36 00.8	-0.1
WMQ				PPP	PPP	13 36 08.0	+0.6
WMQ				*e*S	**S**	**13 40 09.6**	**-0.3**
WMQ				SS	SS	13 43 08.6	+0.9
WMQ				AMB	AMB		
	comp=Z,200nm,4.8s						
WMQ				LR	LR		
	comp=N,780nm,18.2s,MS4.7						
WMQ				LR	LR		
	comp=E,690nm,20.3s,MS4.7						
WMQ				LR	LR		
	comp=Z,920nm,21.0s,MS4.6						
BSY	**Bisya**	**41.24**	**301**	P	**P**	**13 34 06.0**	**+3.0**
	SNR=8.2						
NWAO	**Narrogin (SRO)**	**41.75**	**151**	LR	LR	13 52 33.4	
	comp=Z,209nm,18.9s,MS4.0,baz=336,slow=38						
ARQ	**Araqi**	**42.05**	**302**	⇓P	**P**	**13 34 12.9**	**+3.2**
WHFO	**Wadi Hawf**	**42.74**	**293**	P	**P**	**13 34 17.4**	**+2.0**
	SNR=8.9						
DL2	**Dalian**	**43.15**	**31**	P	**P**	**13 34 19.3**	**+0.8**
DL2				S	**S**	**13 40 38.7**	**-3.9**
DL2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
DL2				LR	LR		
	comp=N,240nm,18.6s,MS4.2						
DL2				LR	LR		
	comp=E,130nm,20.4s,MS4.2						
DL2				LR	LR		
	comp=Z,270nm,20.2s,MS4.1						
AAK	**Ala-Archa**	**43.24**	**338**	*i* P	**P**	**13 34 19.7**	**+0.6**
AAK				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.6						
AAK				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.1						
AAK	**Ala-Archa**	**43.24**	**338**	*e*P	**P**	**13 34 19.4**	**+0.3**
	comp=Z,12nm,0.9s,mb4.6						
MKAR	**Makanchi Array**	**44.77**	**348**	P	**P**	**13 34 31.3**	**-0.2**
	comp=Z,6.3nm,0.8s,mb4.5,baz=166,slow=7.8,SNR=18						
MKAR				LR	LR	13 56 48.4	
	comp=Z,134nm,20.7s,MS3.9,baz=170,slow=41						
WRA	**Warramunga Arr**	**45.15**	**122**	P	**P**	**13 34 34.4**	**-0.4**
	comp=Z,22nm,0.9s,mb5.0,baz=300,slow=9.1,SNR=116						
WRAB	**Tennant Creek**	**45.16**	**122**	*e*P	**P**	**13 34 34.3**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,113nm,1.5s,mb5.5						
WRAB	**Tennant Creek**	**45.16**	**122**	*e*P	**P**	**13 34 34.3**	**-0.6**
	comp=Z,113nm,1.5s,mb5.5						
WB2	**Warramunga Arr**	**45.16**	**122**	⇑*i*P	**P**	**13 34 34.4**	**-0.6**
SONM	**Songino Array**	**45.59**	**11**	P	**P**	**13 34 38.4**	**+0.4**
	comp=Z,3.8nm,0.7s,mb4.4,baz=190,slow=8.4,SNR=40						
SONM				PcP	PcP	13 36 15.9	-0.7
	comp=Z,2.0nm,0.7s,baz=211,slow=3.8,SNR=4.0						
ULN	**Ulaanbaatar**	**45.75**	**12**	*i* P	**P**	**13 34 39.0**	**-0.3**
ULN	**Ulaanbaatar**	**45.75**	**12**	*e*P	**P**	**13 34 38.7**	**-0.5**
	comp=Z,4.3nm,0.8s,mb4.4						
SNY	**Shenyang**	**46.33**	**30**	⇓P	**P**	**13 34 43.7**	**-0.2**
SNY				S	**S**	**13 41 28.5**	**+0.2**
SNY				LR	LR		
	comp=N,410nm,17.1s						
SNY				LR	LR		
	comp=Z,330nm,20.4s,MS4.3						
FORT	**Forrest**	**46.36**	**139**	*e*P	**P**	**13 34 44.9**	**+0.6**
ASPA	**Alice Springs**	**46.53**	**127**	⇑*i*P	**P**	**13 34 45.4**	**-0.3**
ASAR	**Alice Springs**	**46.53**	**127**	P	**P**	**13 34 45.4**	**-0.3**
	comp=Z,8.5nm,0.7s,mb4.8,baz=297,slow=8.0,SNR=121						
ASAR				PcP	PcP	13 36 20.1	-0.1
	comp=Z,3.4nm,0.8s,baz=311,slow=3.7,SNR=8.0						
ASAR				LR	LR	13 58 00.6	
	comp=Z,132nm,18.1s,MS3.9,baz=126,slow=41						
ZAK	**Zakamensk**	**47.58**	**7**	*e*P	**P**	**13 34 42.1**	**-12**
ZAK				*e*		13 34 53.6	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.3						
CN2	**Changchun**	**48.71**	**29**	*e*P	**P**	**13 35 04.5**	**+2.0**
CN2				*e*AP	pP	13 35 15.5	+3.6
CN2				*e*S	**S**	**13 42 04.5**	**+2.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				LR	LR		
	comp=N,300nm,16.0s,MS4.5						
CN2				LR	LR		
	comp=E,300nm,16.0s,MS4.5						
CN2				LR	LR		
	comp=Z,330nm,19.0s,MS4.3						
TLY	**Talaya**	**48.90**	**7**	*e*P	**P**	**13 35 05.2**	**+1.4**
TLY				*e*S	**S**	**13 42 06.5**	**+2.1**
TLY				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.7						
TLY				MLR	MLR		
	comp=Z,251nm,28.0s,MS4.1						
TLY	**Talaya**	**48.90**	**7**	*e*P	**P**	**13 35 04.2**	**+0.4**
	comp=Z,7.2nm,1.0s,mb4.7						
HIA	**Hailar**	**50.61**	**21**	*e*P	**P**	**13 35 16.6**	**-0.4**
HIA				pmax	pmax		
	comp=Z,11nm,0.8s						
HIA	**Hailar**	**50.61**	**21**	*e*P	**P**	**13 35 16.6**	**-0.4**
	comp=Z,11nm,0.8s,mb4.8						
ZAL	**Zalesovo**	**51.24**	**352**	P	**P**	**13 35 21.5**	**-0.2**
	comp=Z,3.1nm,0.9s,mb4.2,baz=277,slow=6.7,SNR=15						
MDJ	**Mudanjiang**	**51.39**	**31**	P	**P**	**13 35 23.0**	**0.0**
MDJ				AP	pP	13 35 31.6	-0.8
MDJ				XP	sP	13 35 35.9	-0.1
MDJ				PCP	PcP	13 36 35.7	-1.8
MDJ				PP	PP	13 37 21.3	+0.5
MDJ				SCP		13 40 30.8	
MDJ				PCS		13 40 34.6	
MDJ				S	**S**	**13 42 42.2**	**+3.2**
MDJ				XS		13 42 57.6	
MDJ				SCS	ScS	13 45 10.7	+2.9
MDJ				AMB	AMB		
	comp=Z,50nm,3.9s						
MDJ				LR	LR		
	comp=N,110nm,20.9s,MS4.1						
MDJ				LR	LR		
	comp=E,140nm,20.9s,MS4.1						
MDJ				LR	LR		
	comp=Z,110nm,18.6s,MS3.9						
MDJ	**Mudanjiang**	**51.39**	**31**	*e*P	**P**	**13 35 23.1**	**+0.1**
	comp=Z,46nm,1.5s,mb5.2						
OPO	**Ambohidratompo**	**51.58**	**243**	P	**P**	**13 35 25.5**	**+0.8**
	comp=Z,2.4nm,0.6s,mb4.3,baz=71,slow=12,SNR=6.5						
MAT	**Matsushiro**	**51.94**	**45**	P	**P**	**13 35 26.7**	**-0.6**
MJAR	**Matsushiro Arr**	**51.94**	**45**	P	**P**	**13 35 28.7**	**+1.4**
	comp=Z,1.0nm,0.7s,mb3.9,baz=231,slow=9.1,SNR=4.1						
MJAR				PcP	PcP	13 36 40.5	+0.9
	comp=Z,2.8nm,0.8s,baz=233,slow=3.2,SNR=6.6						
MJAR				LR	LR	13 57 33.0	
	comp=Z,208nm,21.0s,MS4.1,baz=260,slow=36						
NVS	**Novosibirsk**	**52.34**	**352**	*e*P	**P**	**13 35 27.5**	**-2.5**
NVS				*e*S	**S**	**13 42 52.1**	**+0.2**
NVS				*e*		13 45 11.0	
NVS				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
NVS				pmax	pmax		
	comp=N,8.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.9s						
NVS				smax			
	comp=N,9.0nm,1.8s						
NVS				smax			
	comp=E,15nm,1.8s						
BVAR	**Borovoye Array**	**53.60**	**342**	P	**P**	**13 35 38.6**	**-0.7**
	comp=E,4.6nm,0.7s,mb4.5,baz=147,slow=8.5,SNR=30						
CTA	**Charters Tower**	**55.57**	**117**	LR	LR	14 00 50.7	
	comp=E,161nm,19.8s,MS4.1,baz=66,slow=37						
KLR	**Kul'dur**	**55.63**	**29**	*e*P	**P**	**13 35 49.8**	**-4.5**
KLR				*e*S	**S**	**13 43 37.5**	**+1.2**
KLR				MLR	MLR		
	comp=N,500nm,13.0s						
KLR				MLR	MLR		
	comp=Z,700nm,13.0s,MS4.9						
STKA	**Stephens Creek**	**56.49**	**132**	*e*P	**P**	**13 36 00.1**	**-0.6**
STKA	**Stephens Creek**	**56.49**	**132**	P	**P**	**13 36 00.2**	**-0.4**
	comp=Z,11nm,0.8s,mb5.0,baz=309,slow=6.1,SNR=25						
KMBO	**Kilima Mbogo**	**57.64**	**267**	P	**P**	**13 36 10.1**	**+1.0**
	comp=Z,3.2nm,0.8s,mb4.4,baz=47,slow=10,SNR=6.5						
KMBO				LR	LR	13 57 51.2	
	comp=Z,107nm,18.5s,MS4.0,baz=94,slow=33						
GNI	**Garni**	**58.18**	**316**	P	**P**	**13 36 12.9**	**+0.4**
	comp=Z,4.5nm,0.5s,mb4.8,baz=178,slow=16,SNR=3.9						
SVE	**Sverdlovsk**	**59.96**	**339**	⇑*e*P	**P**	**13 36 23.7**	**-0.9**
SVE				*e*		13 37 14.8	
SVE				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.2						
YSS	**Yuzh-Sakhalins**	**60.13**	**36**	*e*P	**P**	**13 36 25.2**	**-0.7**
YSS				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.0						
YSS	**Yuzh-Sakhalins**	**60.13**	**36**	*e*P	**P**	**13 36 25.8**	**-0.1**
	comp=Z,35nm,1.1s,mb5.3						
ARU	**Arti**	**60.42**	**338**	*i* P	**P**	**13 36 25.7**	**-2.1**
ARU				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.9						
KIV	**Kislovodsk**	**61.22**	**319**	*i* P	**P**	**13 36 32.8**	**-0.5**
KIV				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.1						
MALT	**Malatya**	**62.00**	**312**	*e*P	**P**	**13 36 38.4**	**-0.3**
MALT				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
MALT	**Malatya**	**62.00**	**312**	*e*P	**P**	**13 36 38.4**	**-0.3**
	comp=Z,12nm,1.1s,mb4.9						
SOC	**Sochi**	**63.02**	**318**	*e*P	**P**	**13 36 41.3**	**-4.1**
SOC				*e*		13 37 18.0	
SOC				*e*		13 38 57.8	
SOC				*e*PPP	PPP	13 40 36.1	-0.4
SOC				*e*S	**S**	**13 45 10.6**	**-1.4**
SOC				*e*		13 46 31.0	
SOC				*e*SS	SS	13 49 17.1	-2.7
SOC				pmax	pmax		
	comp=N,65nm,1.3s						
SOC				pmax	pmax		
	comp=Z,55nm,1.3s,mb5.5						
SOC				pmax	pmax		
	comp=E,48nm,1.1s						
YAK	**Yakutsk**	**64.23**	**17*c***	*i*P	**P**	**13 36 51.7**	**-1.4**
YAK				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.1						
YAK	**Yakutsk**	**64.23**	**17**	*e*P	**P**	**13 36 51.5**	**-1.6**
	comp=Z,26nm,0.8s,mb5.3						
ANN	**Anapa**	**65.00**	**319**	*e*P	**P**	**13 36 57.1**	**-1.3**
ANN				*e*S	S	13 45 37.1	+0.5
ANN				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.2						
BRTR	**Keskin Array B**	**65.98**	**312**	P	**P**	**13 37 04.1**	**-0.6**
	comp=Z,2.9nm,1.0s,mb4.3,baz=127,slow=6.2,SNR=13						
MOS	**Moscow**	**69.39**	**330**	*e*P	**P**	**13 37 24.7**	**-1.1**
MOS				*e*		13 37 45.9	
MOS				*e*		13 39 58.3	
OBN	**Obninsk**	**69.66**	**329**	*e*P	**P**	**13 37 26.7**	**-0.7**
OBN				*e*		13 37 50.4	
OBN				pmax	pmax		
	comp=Z,28nm,1.6s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
SKR	**Severo-Kuril's**	**69.69**	**37**	*e*P	**P**	**13 37 32.5**	**+4.8**
SKR				*e*S	PcP	13 37 45.8	-4.6
SKR				pmax	pmax		
	comp=Z,80nm,0.5s,mb5.9						
MA2	**Magadan**	**70.63**	**27**	*i* P	**P**	**13 37 32.5**	**-0.8**
MA2				pmax	pmax		
	comp=Z,39nm,2.0s,mb5.0						
TIXI	**Tiksi**	**71.68**	**11**	*e*P	**P**	**13 37 35.5**	**-3.9**
TIXI				*e*S	S	13 46 51.5	-4.2
TIXI				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,230nm,18.0s,MS4.5						
AKASG	**Malin Array Be**	**72.21**	**323**	P	**P**	**13 37 41.6**	**-1.3**
	comp=Z,0.4nm,0.3s,mb3.9,baz=91,slow=4.5,SNR=14						
AKASG				PP	PP	13 40 24.2	-0.9
	comp=Z,0.3nm,0.3s,baz=99,slow=6.7,SNR=4.1						
SEY	**Seymchan**	**72.92**	**24**	*e*P	**P**	**13 37 46.8**	**0.0**
SEY				*e*		13 40 25.7	
SEY				*e*PPP	PPP	13 42 14.5	+0.3
SEY				*e*S	S	13 47 11.1	+1.2
SEY						13 47 50.1	
SEY				SS	SS	13 51 47.7	-5.2
SEY				pmax	pmax		
	comp=E,3.0nm,1.2s						
SEY				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
SEY				smax			
	comp=N,30nm,14.8s						
SEY				smax			
	comp=E,30nm,16.1s						
SEY				MLR	MLR		
	comp=Z,320nm,26.0s,MS4.5						
SEY				MLR	MLR		
	comp=N,270nm,20.0s						
SEY				MLR	MLR		
	comp=E,70nm,18.0s						
MLR	**Muntele Rosu**	**72.96**	**317**	P	**P**	**13 37 48.1**	**+0.7**
	comp=E,5.9nm,1.0s,mb4.5,baz=94,slow=4.7,SNR=9.6						
BOSA	**Boshof**	**73.68**	**239**	P	**P**	**13 37 52.8**	**+0.8**
	comp=E,6.8nm,0.8s,mb4.6,baz=99,slow=7.3,SNR=9.4						
BOSA				LR	LR	14 07 03.5	
	comp=E,129nm,21.0s,MS4.2,baz=302,slow=33						
MAW	**Mawson**	**74.11**	**192**	LR	LR	14 03 36.0	
	comp=E,126nm,19.6s,MS4.2,baz=248,slow=30						
KWP	**Kalwaria**	**75.99**	**320**	*e*P	**P**	**13 38 05.0**	**+0.2**
KWP				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
KWP	**Kalwaria**	**75.99**	**320**	*e*P	**P**	**13 38 05.0**	**+0.2**
	comp=Z,8.8nm,0.8s,mb4.7						
KOLS	**Kolonicke sedl**	**76.13**	**320**	*i* P	**P**	**13 38 06.7**	**+1.1**
KOLS				*e*	pP	13 38 16.1	+0.7
FINES	**FINESS Array B**	**77.12**	**333**	P	**P**	**13 38 10.7**	**-0.2**
	comp=Z,2.9nm,0.7s,mb4.3,baz=104,slow=7.9,SNR=17						
FINES				LR	LR	14 18 50.9	
	comp=Z,54nm,19.2s,MS3.9,baz=119,slow=41						
FINES	**FINESS Array B**	**77.12**	**333**	P	**P**	**13 38 10.7**	**-0.2**
FINES				LR	LR	14 18 50.9	
KAF	**Kangasniemi**	**77.22**	**333**	*e*p	**P**	**13 38 10.5**	**-0.9**
	comp=Z,7.0nm,0.9s,mb4.6,baz=105,slow=5.3						
KAF	**Kangasniemi**	**77.22**	**333**	*e*P	**P**	**13 38 10.5**	**-0.9**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
VYHS	**Vyhne**	**78.30**	**319**	*e*P	**P**	**13 38 17.9**	**+0.3**
VYHS				*e*		13 38 40.4	
MORC	**Moravsky Berou**	**79.32**	**320**	*e*P	**P**	**13 38 23.4**	**+0.2**
MORC				*e*		13 38 39.7	
MORC				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.7						
MORC	**Moravsky Berou**	**79.32**	**320**	*e*P	**P**	**13 38 23.4**	**+0.2**
	comp=Z,15nm,1.5s,mb4.7						
MORC				*e*		13 38 39.7	
ZST	**Bratislava**	**79.41**	**318**	*e*P	**P**	**13 38 24.3**	**+0.6**
ZST				*e*	pP	13 38 34.7	+1.2
ARCES	**ARCESS Array B**	**79.86**	**340**	P	**P**	**13 38 26.3**	**+0.6**
	comp=Z,3.8nm,0.8s,mb4.4,baz=117,slow=5.4,SNR=12						
BILL	**Bilibino**	**80.19**	**21**	*e*P	**P**	**13 38 27.5**	**0.0**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
BILL	**Bilibino**	**80.19**	**21**	*e*P	**P**	**13 38 27.5**	**0.0**
	comp=Z,6.6nm,1.1s,mb4.5						
BOJS	**Bojanci**	**80.38**	**315**	*e*P	**P**	**13 38 29.2**	**+0.3**
VISS	**Visnje**	**80.69**	**316**	*e*P	**P**	**13 38 30.7**	**+0.1**
VISS				*e*		13 38 43.0	
ROBS	**Robic**	**81.65**	**316**	*e*P	**P**	**13 38 35.5**	**-0.1**
GERES	**GERESS Array B**	**81.72**	**319**	P	**P**	**13 38 37.1**	**+1.2**
	comp=Z,4.2nm,0.9s,mb4.4,baz=104,slow=5.5,SNR=30						
GERES				LR	LR	14 20 36.0	
	comp=Z,33nm,20.7s,MS3.7,baz=46,slow=40						
KHC	**Kasperske Hory**	**81.83**	**319**	*i* P	**P**	**13 38 35.1**	**-1.3**
HFS	**Hagfors**	**82.79**	**330**	P	**P**	**13 38 41.6**	**+0.4**
	comp=Z,7.0nm,1.1s,mb4.6,baz=101,slow=7.6,SNR=7.1						
GRA1	**Grafenberg Arr**	**83.40**	**319**	*e*P	**P**	**13 38 45.5**	**+0.9**
	comp=Z,7.0nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**83.40**	**319**	*e*P	**P**	**13 38 45.5**	**+0.9**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**83.40**	**319**	*e*P	**P**	**13 38 45.5**	**+0.9**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**83.40**	**319**	*e*P	**P**	**13 38 45.5**	**+0.9**
	comp=Z,7.0nm,1.0s,mb4.7						
NB2	**NORSAR Subarra**	**84.09**	**331**	P	**P**	**13 38 47.8**	**0.0**
	comp=Z,7.6nm,1.2s,mb4.7,baz=98,slow=5.0						
NOA	**NORSAR Array B**	**84.09**	**331**	P	**P**	**13 38 48.0**	**+0.2**
	comp=Z,2.3nm,0.9s,mb4.3,baz=96,slow=5.2,SNR=5.8						
DAVOX	**Davos**	**84.18**	**317**	P	**P**	**13 38 49.4**	**+0.7**
	comp=Z,8.7nm,0.9s,mb4.9,baz=115,slow=6.6,SNR=8.3						
VNDA	**Vanda**	**88.25**	**168**	P	**P**	**13 39 09.2**	**+1.3**
	comp=Z,1.9nm,1.1s,mb4.2,baz=293,slow=2.6,SNR=6.5						
VNDA				LR	LR	14 16 12.0	
	comp=Z,180nm,18.4s,MS4.5,baz=308,slow=34						
ILAR	**Eielson Array**	**98.82**	**22**	LR	LR	14 30 27.0	
	comp=Z,68nm,19.9s,MS4.1,baz=164,slow=39						
HLID	**Hailey**	**126.57**	**26**	*e*PKPdf	PKPdf	13 45 21.2	-3.4
ELK	**Elko**	**128.40**	**29**	*e*PKIKP	PKPdf	13 45 25.4	-2.9
NVAR	**Mina Array Bea**	**128.54**	**33**	PKP	PKPdf	13 45 27.1	-1.5
	comp=Z,1.7nm,0.7s,baz=324,slow=0.5,SNR=12						
BW06	**Boulder Array**	**129.25**	**23**	*e*PKPdf	PKPdf	13 45 26.4	-3.5
PDAR	**Pinedale Array**	**129.25**	**23**	PKP	PKPdf	13 45 27.2	-2.7
	comp=Z,1.0nm,0.8s,slow=1.5,SNR=8.2						
RSSD	**Black Hills**	**129.97**	**18**	*e*PKIKP	PKPdf	13 45 28.1	-3.1
MSU	**Marysvale**	**131.61**	**28**	*e*PKIKP	PKPdf	13 45 33.0	-1.5
PV10	**Paradox Valley**	**133.15**	**26**	*e*PKPdf	PKPdf	13 45 35.0	-2.5
ANMO	**Albuquerque**	**137.15**	**26**	*e*PKIKP	PKPdf	13 45 42.1	-2.7
MNTX	**Cornudas Mount**	**140.37**	**27**	*e*PKPdf	PKPdf	13 45 47.5	-3.3
LTX	**Lajitas**	**143.15**	**27**	*e*PKIKP	PKPdf	13 45 52.1	-3.6
TXAR	**Lajitas Array**	**143.15**	**27**	PKP	PKPdf	13 45 50.4	-5.4
	comp=Z,1.3nm,0.8s,baz=270,slow=2.5,SNR=8.8						
JCT	**Junction City**	**143.75**	**22**	*e*PKIKP	PKPdf	13 45 51.7	-5.0
CPUP	**Villa Florida**	**144.71**	**227**	PKP	PKPdf	13 45 54.5	-4.1
	comp=Z,23nm,0.8s,baz=135,slow=4.6,SNR=58						
CPUP	**Villa Florida**	**144.71**	**227**	*e*PKPdf	PKPdf	13 45 54.3	-4.2
LVC	**Limon Verde**	**155.03**	**218**	PKPab	PKPab	13 46 37.4	+1.2
	comp=Z,5.9nm,0.9s,baz=28,slow=1.9,SNR=5.9						
LPAZ	**La Paz**	**158.73**	**231**	PKP	PKPdf	13 46 18.2	-1.3
	comp=Z,0.9nm,0.6s,baz=7.7,slow=8.8,SNR=5.0						
LPAZ				PKPab	PKPab	13 46 54.4	+2.1
	comp=Z,3.0nm,0.9s,baz=101,slow=5.3,SNR=9.7						
LPAZ	**La Paz**	**158.73**	**231**	PKP	PKPdf	13 46 18.2	-1.3
LPAZ				PKPab	PKPab	13 46 54.4	+2.1

CASC 03 13:31:22.7±1.6,12.68N×88.64W,h40^{km}±4^{km},MD3.8, 3C-1D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BLLM	**Bellamira**	**0.85**	**27**	⇑*e*P	P	13 31 38.1	-0.2
BLLM				*e*S	S	13 31 49.9	+0.2
CNCH	**Conchagua**	**0.98**	**53**	*e*P	P	13 31 39.8	-0.4
CNCH				*e*S	S	13 31 53.8	+0.8
LCBS	**La Ceiba**	**1.02**	**341**	⇓*e*P	P	13 31 40.5	-0.2
LCBS				*e*S	S	13 31 53.3	-0.8
LFRS	**El Faro**	**1.02**	**336**	*e*P	P	13 31 40.5	-0.3
LFRS				*e*S	S	13 31 53.9	-0.2
LBRS	**Las Brisas**	**1.12**	**339**	*e*P	P	13 31 42.3	+0.2
LBRS				*e*S	S	13 31 56.5	-0.1
LFU	**La Fuente**	**1.16**	**336**	*e*P	P	13 31 42.9	+0.3
CAHU	**Cacacuatique**	**1.16**	**21**	*e*P	P	13 31 43.1	+0.5
CAHU				*e*S	S	13 31 59.8	+2.3
BOQS	**Boqueron**	**1.22**	**329**	*e*P	P	13 31 43.8	+0.3
BOQS				*e*S	S	13 31 59.6	+0.5
SBLS	**San Blas**	**1.50**	**320**	*e*P	P	13 31 47.8	+0.2
SBLS				*e*S	S	13 32 06.4	+0.3
SNJE	**San Jose**	**1.51**	**321**	⇑*e*P	P	13 31 47.9	+0.1
SNJE				*e*S	S	13 32 07.7	+1.3
CRIN	**San Cristobal**	**1.55**	**89**	⇑*e*P	P	13 31 48.6	+0.3
RTR	**El Retiro**	**1.56**	**321**	*e*P	P	13 31 49.8	+1.4
RTR				*e*S	S	13 32 08.7	+1.2
LEON	**Leon**	**1.72**	**99**	*e*P	P	13 31 50.1	-0.7
RBDL	**Robledal**	**1.75**	**324**	*e*P	P	13 31 51.3	+0.2
RBDL				*e*S	S	13 32 12.7	+0.3
TEL3	**Telica 3**	**1.75**	**93**	*e*P	P	13 31 50.8	-0.4
TEL3				*e*S	S	13 32 12.2	-0.3
TELN	**Telica**	**1.76**	**92**	*e*P	P	13 31 51.0	-0.3
TELN				*e*S	S	13 32 13.0	+0.3
APYN	**Apoyeque**	**2.28**	**101**	*e*P	P	13 31 58.1	-0.6

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*IDC **03** 13:34:46.7±1.5,25.27N×96.44E,mb3.3/5,mb1 3.5/5, mb1mx3.4/22,mbtmp3.3/5,Error ellipse: s-maj=77.4km s-min=21.1km az=62.0*

*NEIC **03** 13:34:55.7±2.1,25.20N×96.29E,h78^{km}±24^{km},Error ellipse: s-maj=45.2km s-min=13.3km az=69.0*

ISC 03 13:34:49.6±0.9,25.2N±0.1×96.3E±0.3,h33^{km},n7,σ1^{s}25/7, mb3.4/5,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.14**	**159**	Pn	**Pn**	**13 36 38.1**	**+3.6**
	0.9nm,0.3s,baz=333,slow=14,SNR=6.0						
CMAR				Pg	P	13 37 03.1	+29
	0.3nm,0.3s,baz=338,slow=17,SNR=3.9						
CMAR				Lg		13 38 42.1	
	baz=326,slow=28,SNR=5.9						
KULM	**Kulim**	**20.22**	**167**	*e*P	**P**	**13 39 23.4**	**-1.3**
SONM	**Songino Array**	**23.98**	**17**	P	**P**	**13 40 02.0**	**+0.2**
	0.2nm,0.3s,mb3.0,baz=180,slow=5.8,SNR=2.5						
MKAR	**Makanchi Array**	**24.28**	**336**	P	**P**	**13 40 05.6**	**+0.8**
	0.7nm,0.6s,mb3.3,baz=142,slow=11,SNR=6.6						
BVAR	**Borovoye Array**	**33.94**	**332**	P	**P**	**13 41 31.3**	**-0.4**
	0.4nm,0.6s,mb3.5,baz=135,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**58.15**	**137**	P	**P**	**13 44 42.3**	**-0.5**
	0.4nm,0.7s,mb3.6,baz=328,slow=7.4,SNR=3.3						
ASAR	**Alice Springs**	**60.72**	**140**	P	**P**	**13 44 59.9**	**-0.6**
	0.4nm,1.0s,mb3.5,baz=322,slow=6.7,SNR=5.0						

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*LDG **03** 13:35:29.6±0.0,42.75N×1.77E,h5^{km},Md2.2/1,Ml2.2/5, Error ellipse: s-maj=0.7km s-min=0.6km az=146.0*

*STR **03** 13:35:30.3±0.6,42.79N×1.87E,h10^{km}±1^{km},Ml2.5,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

MDD 03 13:35:29.8±0.2,42.74N×1.76E,h10^{km}±1^{km},mbLg1.7/15, Error ellipse: s-maj=1.6km s-min=1.4km az=5.0, PRXIMO,Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GRBF	**Gourbit**	**0.19**	**302**	Pg	Pg	13 35 33.6	-0.5
GRBF				Lg		13 35 36.7	
LPEF	**Le Peyrat**	**0.23**	**27**	Pg	Pg	13 35 34.8	0.0
LPEF				Lg		13 35 38.6	
CARF	**Carcanieres**	**0.26**	**95**	Pg	Pg	13 35 34.7	-0.5
CARF				Sg	Sg	13 35 38.3	-0.5
CARF	**Carcanieres**	**0.26**	**95**	Pg	Pg	13 35 34.8	-0.4
CARF				Lg		13 35 38.3	
PAND	**Andorre**	**0.27**	**216**	Pg	Pg	13 35 35.0	-0.4
PAND				Lg		13 35 38.8	
CLLI	**Llivia**	**0.30**	**149**	Pg	Pg	13 35 35.5	-0.6
CLLI				Lg		13 35 39.9	
	6.5nm,0.0s						
VALF	**Valcebollere**	**0.39**	**151**	Pg	Pg	13 35 37.1	-0.6
VALF				Lg		13 35 42.4	
SALF	**Salau**	**0.42**	**273**	Pg	Pg	13 35 37.4	-1.0
SALF				Lg		13 35 43.1	
MLS	**Moulis**	**0.54**	**294**	Pg	Pg	13 35 39.6	-1.1
MLS				Lg		13 35 47.0	
CBRU	**Bruguera**	**0.55**	**145**	Pg	Pg	13 35 40.0	-0.9
CBRU				Lg		13 35 47.5	
CSOR	**Sort**	**0.59**	**232**	Pg	Pg	13 35 40.7	-1.0
CSOR				Lg		13 35 48.5	
	6.2nm,0.1s						
CORG	**Organya**	**0.60**	**213**	Pg	Pg	13 35 41.4	-0.6
CORG				Lg		13 35 50.1	
	2.9nm,0.1s						
LRDF	**Laroque-de-Fa**	**0.61**	**71**	Pg	Pg	13 35 41.0	-1.0
LRDF				Lg		13 35 49.2	
FILF	**Fillols**	**0.62**	**107**	Pg	Pg	13 35 39.5	-2.7
FILF				Sg	Sg	13 35 46.4	-4.1
FILF	**Fillols**	**0.62**	**107**	Pg	Pg	13 35 39.5	-2.8
FILF				Lg		13 35 46.5	
MTLF	**Montolieu**	**0.69**	**29**	*e*Pg	Pg	13 35 42.3	-1.3
MTLF				*e*Sg	Sg	13 35 51.9	-1.0
	42nm,0.2s						
MELF	**Melles**	**0.75**	**281**	Pg	Pg	13 35 43.3	-1.5
MELF				Lg		13 35 53.3	
EMIR	**Miracle**	**0.84**	**192**	Pg	Pg	13 35 45.8	-0.9
	4.1nm,0.1s,SNR=7.9						
EMIR				Lg		13 35 57.2	
	6.8nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**0.88**	**109**	Pg	Pg	13 35 46.3	-1.2
	0.6nm,0.1s,SNR=7.9						
EJON				Lg		13 35 57.6	
	1.2nm,0.1s,SNR=7.9						
CFON	**Fontmartina**	**1.10**	**153**	Pg	Pg	13 35 50.2	-1.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFON				Lg		13 36 05.0	
	6.7nm,0.1s						
CAVN	**Les Avellanes**	**1.14**	**221**	Pg	Pg	13 35 51.2	-1.4
CAVN				Lg		13 36 07.2	
	5.1nm,0.2s						
EBIE	**Bielsa**	**1.19**	**268**	Pg	Pg	13 35 51.9	-1.7
	0.1nm,0.1s,SNR=7.9						
EBIE				Lg		13 36 07.0	
	0.9nm,0.2s,SNR=5.8						
EGRA	**Graus**	**1.20**	**244**	Pg	Pg	13 35 52.9	-0.9
	0.4nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**1.48**	**200**	Pg	Pg	13 35 57.1	-2.2
	1.3nm,0.1s,SNR=23						
EPOB				Lg		13 36 16.4	
	3.4nm,0.1s,SNR=10.0						
ETSF	**Etsaut**	**1.71**	**276**	*e*Pn	Pn	13 35 58.6	-1.4
ETSF				*e*Pg	Pg	13 36 01.6	-2.5
ETSF				*e*Sg	Sg	13 36 24.0	-2.9
	1.4nm,0.2s						
ESAC	**San Caprasio**	**1.94**	**239**	Pg	Pg	13 36 06.7	-1.9
	2.5nm,0.2s,SNR=4.0						
ESAC				Lg		13 36 32.0	
	9.3nm,0.3s,SNR=7.9						
LASF	**Ste Croix**	**2.03**	**48**	*e*Pn	Pn	13 36 02.6	-1.9
LASF				*e*Pg	Pg	13 36 07.3	-3.0
LASF				*e*Sn	Sn	13 36 26.7	-3.4
LASF				*e*Sg	Sg	13 36 33.4	-4.0
	3.5nm,0.2s						
ERTA	**Horta de San J**	**2.08**	**211**	Pg	Pg	13 36 07.8	-3.5
	0.5nm,0.1s,SNR=5.0						
ERTA				Lg		13 36 35.4	
	0.9nm,0.1s,SNR=7.9						
CAF	**Calviac**	**2.20**	**6**	*e*Pn	Pn	13 36 04.8	-2.1
CAF				*e*Pg	Pg	13 36 10.3	-3.4
CAF				*e*Sn	Sn	13 36 30.7	-3.7
CAF				*e*Sg	Sg	13 36 38.1	-4.9
	4.5nm,0.4s						
SJPF	**Ste Jean**	**2.22**	**281**	*e*Pg	Pg	13 36 11.1	-3.1
SJPF				*e*Sg	Sg	13 36 39.9	-4.0
	1.3nm,0.2s						
VIVF	**Saint-Julien-l**	**2.99**	**44**	*e*Pn	Pn	13 36 15.6	-2.6
VIVF				*e*Pg	Pg	13 36 24.9	-4.5
VIVF				*e*Sg	Sg	13 37 03.2	-6.1
	1.9nm,0.3s						

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*THE **03** 13:39:38.2, 41.79N×23.05E, h10^{km}, ML3.5*

*CSEM **03** 13:39:38.2, 41.79N×23.05E, h10^{km}, ML3.5, After THE*

ISC 03 13:39:40.1±1.0**, 41.62N**±0.05×**23.19E**±0.08**, h10**^{km}**, n5, σ1^{s}48**/8**, 1C, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOH	**Sokhos**	**0.81**	**171**	*e*Pg	**Pg**	**13 39 56.8**	**+0.3**
SOH				*e*Sg	**Sg**	**13 40 11.4**	**+4.1**
GRG	**Griva**	**0.90**	**222**	*e*Pg	**Pg**	**13 39 56.0**	**-2.1**
GRG				*e*Sg	**Sg**	**13 40 10.9**	**+0.8**
OUR	**Ouranopolis**	**1.42**	**155**	*e*Pg	**Pg**	**13 40 06.9**	**-1.6**
BARS	**Barje**	**1.57**	**320**	⇑*i*Pg	**Pg**	**13 40 14.2**	**+2.7**
BARS				Sg	**Sg**	**13 40 31.8**	**-0.6**
ALN	**Alexandroupoli**	**2.27**	**108**	*e*Pn	**Pn**	**13 40 18.9**	**+0.6**

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*NEIC **03** 13:43:25.1±0.7, 6.14S×131.75E, mb4.3/3, Error ellipse: s-maj=21.6km s-min=11.9km az=47.0*

*IDC **03** 13:43:25.7±0.9, 6.40S×131.35E, h98^{km}±8^{km}, mb3.4/4, mb1 3.6/6, mb1mx3.5/14, mbtmp3.9/6, Error ellipse: s-maj=63.1km s-min=15.0km az=61.0*

ISC 03 13:43:22.3±0.7**, 6.35S**±0.07×**131.7E**±0.1**, h97**^{km}**, h97**^{km}±4.6^{km}**:pP-P, n14, σ1^{s}44**/18**, mb3.6**/4**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**13.75**	**170**	*e*Pn	**P**	**13 46 33.1**	**-1.1**
	11nm,0.6s						
WRAB				*e*Sn	**S**	**13 48 58.1**	**-6.6**
WRA	**Warramunga Arr**	**13.75**	**170**	P	**P**	**13 46 33.0**	**-1.3**
	0.8nm,0.3s,baz=356,slow=13,SNR=55						
WRA				S	**S**	**13 49 01.2**	**-3.8**
	6.7nm,0.3s,baz=347,slow=24,SNR=6.0						
PMG	**Port Moresby**	**15.60**	**102**	P	**P**	**13 46 57.8**	**-0.2**
	2.2nm,0.3s,baz=270,slow=5.1,SNR=10.0						
PMG				S	**S**	**13 49 41.5**	**-6.4**
	0.7nm,0.3s,baz=220,slow=22,SNR=3.6						
ASAR	**Alice Springs**	**17.35**	**173**	P	**P**	**13 47 21.1**	**+1.4**
	0.8nm,0.3s,baz=352,slow=8.0,SNR=59						
ASAR				S	**S**	**13 50 27.2**	**-0.3**
	1.9nm,0.3s,baz=355,slow=30,SNR=8.6						
MBWA	**Marble Bar**	**18.75**	**217**	*e*P	**P**	**13 47 38.6**	**+2.5**
	5.7nm,0.6s						
CTA	**Charters Tower**	**19.64**	**135**	P	**P**	**13 47 49.0**	**+3.1**
	0.6nm,0.3s,baz=318,slow=14,SNR=9.1						
CTA	**Charters Tower**	**19.64**	**135**	P	**P**	**13 47 49.0**	**+3.1**
CTAO	**Charters Tower**	**19.64**	**135**	*e*P	**P**	**13 47 47.9**	**+2.0**
	14nm,0.8s						
KKM	**Kota Kinabalu**	**19.77**	**308**	*e*P	**P**	**13 47 45.1**	**-2.1**
STKA	**Stephens Creek**	**27.03**	**161**	P	**P**	**13 49 00.4**	**+3.0**
	0.8nm,0.6s,mb3.4,baz=324,slow=16,SNR=2.9						
STKA				pP	pP	13 49 19.6	+0.8
	1.3nm,0.4s,baz=321,slow=12,SNR=2.9						
CMAR	**Chiang Mai Arr**	**40.65**	**308**	P	**P**	**13 50 54.6**	**+0.1**
	0.9nm,0.7s,mb3.7,baz=146,slow=8.1,SNR=6.2						
SONM	**Songino Array**	**58.38**	**340**	P	**P**	**13 53 10.2**	**+0.3**
	0.3nm,0.6s,mb3.5,baz=159,slow=8.8,SNR=3.6						
SONM				pP	pP	13 53 35.5	+1.6
	0.5nm,0.7s,baz=153,slow=5.5,SNR=3.6						
MKAR	**Makanchi Array**	**68.63**	**326**	P	**P**	**13 54 16.9**	**-0.1**
	1.1nm,0.6s,mb3.9,baz=125,slow=7.7,SNR=15						
MKAR				pP	pP	13 54 42.2	+0.4
	0.9nm,0.4s,baz=117,slow=8.7,SNR=4.0						
MKAR	**Makanchi Array**	**68.63**	**326**	P	**P**	**13 54 16.9**	**-0.1**
MKAR				pP	pP	13 54 42.2	+0.4

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*ISK **03** 13:48:54.8, 38.68N×25.96E, h35^{km}, MD3.4*

*ATH **03** 13:48:56.8, 38.79N×26.53E, h56^{km}±2^{km}, MD3.5/6*

*NEIC **03** 13:48:56.8, 38.78N×26.54E, h54^{km}, MD3.5(ATH), After ATH.*

*CSEM **03** 13:48:56.2±0.1, 38.65N×26.18E, h30^{km}, MD3.5, Error ellipse: s-maj=3.4km s-min=1.6km az=50.0*

ISC 03 13:48:54.4±0.5**, 38.66N**±0.03×**26.01E**±0.05**, h10**^{km}**, n36, σ1^{s}36**/49**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.55**	**122**	*i* P	**Pg**	**13 49 06.3**	**+0.7**
URLA				*i* S	**Sg**	**13 49 13.5**	**+0.5**
PRK	**Paraskevi**	**0.62**	**19**	*e*P	**Pb**	**13 49 08.9**	**+1.9**
PRK				*e*S	**Sg**	**13 49 18.0**	**+2.5**
AYVA	**Ayvalik**	**0.84**	**39**	*i* P	**Pb**	**13 49 11.2**	**+0.5**
AYVA				*i* S	**Sb**	**13 49 23.6**	**+1.8**
BLCB	**Balcova**	**0.86**	**108**	PG	**Pg**	**13 49 11.2**	**-0.4**
BLCB				SG	**Sg**	**13 49 22.8**	**-0.3**
IZM	**Izmir**	**1.02**	**104**	*i* PG	**Pg**	**13 49 14.8**	**-0.1**
IZM				*i* SG	**Sg**	**13 49 28.5**	**0.0**
KDAG	**Bornova**	**1.02**	**104**	*i* P	**Pb**	**13 49 14.8**	**+1.0**
KDAG				*i* S	**Sb**	**13 49 30.5**	**+3.5**
SMG	**Samos**	**1.15**	**145**	*e*P	**Pb**	**13 49 17.0**	**+1.0**
SMG				*e*S	**Sb**	**13 49 32.0**	**+1.2**
BOZC	**Bozcaada**	**1.19**	**2**	*i* P	**Pb**	**13 49 17.3**	**+0.8**
BOZC				*i* S	**Sb**	**13 49 32.7**	**+0.9**
EZN	**Ezine**	**1.19**	**12**	PN	**Pn**	**13 49 16.2**	**-1.0**
APE	**Apeiranthos**	**1.63**	**193**	PN	**Pn**	**13 49 22.2**	**-1.2**
APE	**Apeiranthos**	**1.63**	**193**	*e*P	**Pn**	**13 49 27.6**	**+4.2**
BALB	**Balikesir**	**1.76**	**55**	PN	**Pn**	**13 49 23.8**	**-1.4**
AYDN	**Tasoluk**	**1.78**	**123**	*i* P	**Pn**	**13 49 25.6**	**+0.1**
AYDN				*i* S	**Sn**	**13 49 52.7**	**+4.3**
LPK	**Lapseki**	**1.81**	**19**	PN	**Pn**	**13 49 23.8**	**-2.2**
BODT	**Bodrum**	**1.90**	**147**	PN	**Pn**	**13 49 26.3**	**-0.9**
MLSB	**Milas**	**1.95**	**134**	*e*PN	**Pn**	**13 49 26.3**	**-1.7**
BDRM	**Kayabasi**	**1.95**	**144**	*i* P	**Pn**	**13 49 31.9**	**+3.9**
BDRM				*i* S	**Sn**	**13 49 58.2**	**+5.3**
MANT	**Manisa**	**2.01**	**94**	*i* P	**Pn**	**13 49 32.3**	**+3.5**
MANT				*i* S	**Sn**	**13 49 59.3**	**+5.1**
NSAL	**Nisos Salamina**	**2.13**	**250**	*e*P	**Pn**	**13 49 37.5**	**+6.8**
NAIG	**Nisos Aigina**	**2.17**	**246**	*e*P	**Pn**	**13 49 38.5**	**+7.3**
BNT	**Bandirma**	**2.25**	**41**	*e*PN	**Pn**	**13 49 30.0**	**-2.3**
MRMT	**Marmara Adasi**	**2.30**	**32**	*e*PN	**Pn**	**13 49 32.1**	**-0.9**
MFT	**Murefte**	**2.34**	**24**	*e*PN	**Pn**	**13 49 31.9**	**-1.7**
KCT	**Karacabey**	**2.43**	**48**	*e*PN	**Pn**	**13 49 33.8**	**-1.0**
RDO	**Rodhopi**	**2.51**	**352**	*e*P	**Pn**	**13 49 36.3**	**+0.2**
DNZL	**Cakiroluk**	**2.58**	**111**	*i* P	**Pn**	**13 49 37.6**	**+0.5**
DNZL				*i* S	**Sn**	**13 50 18.4**	**+10**
ORLT	**Orhaneli**	**2.64**	**57**	*e*PN	**Pn**	**13 49 36.3**	**-1.5**
FETY	**Fethiye**	**3.17**	**129**	*e*PN	**Pn**	**13 49 44.2**	**-1.2**
RZN	**Rozhen**	**3.19**	**342**	P	**Pn**	**13 49 46.0**	**+0.4**
YLV	**Yalova**	**3.23**	**53**	*e*PN	**Pn**	**13 49 44.4**	**-1.8**
EDRB	**Edirne**	**3.24**	**10**	*e*PN	**Pn**	**13 49 44.4**	**-2.0**
MMB	**Musomiste**	**3.41**	**330**	*e*P	**Pn**	**13 49 50.0**	**+1.2**
TKTP	**Tekketepe**	**3.45**	**99**	*i* P	**Pg**	**13 50 01.6**	**-1.7**
TKTP				*i* S	**Sg**	**13 50 50.8**	**+1.6**
KKB	**Krupnik**	**3.91**	**326**	*e*P	**Pn**	**13 49 58.0**	**+2.1**
PGB	**Panagyurishte**	**4.13**	**341**	*e*P	**Pn**	**13 49 59.0**	**-0.1**
VTS	**Vitosha**	**4.47**	**332**	*e*P	**Pn**	**13 50 05.0**	**+1.1**

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*NEIC **03** 13:59:06.5±3.0, 0.08N×123.71E, h170^{km}±32^{km}, mb3.9/2, Error ellipse: s-maj=36.4km s-min=11.2km az=67.0*

*IDC **03** 13:59:06.7±0.9, 0.22N×123.84E, h167^{km}±8^{km}, mb3.4/8, mb1 3.6/8, mb1mx3.5/18, mbtmp3.9/8, Error ellipse: s-maj=40.9km s-min=11.3km az=66.0*

ISC 03 13:59:07.3±2.7**, 0.1N**±0.1×**123.6E**±0.2**, h196**^{km}±29^{km}**, n12, σ0^{s}85**/12**, mb3.7**/10**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	**9.47**	**309**	*e*Pn	**P**	**14 01 20.5**	**-0.1**
MBWA	**Marble Bar**	**21.48**	**190**	P	**P**	**14 03 39.7**	**-1.5**
	2.1nm,0.5s,mb3.9						
WRAB	**Tennant Creek**	**22.51**	**153**	*e*P	**P**	**14 03 51.7**	**+0.4**
	1.6nm,0.3s,mb4.0						
WRA	**Warramunga Arr**	**22.51**	**153**	P	**P**	**14 03 50.9**	**-0.5**
	1.4nm,0.4s,mb3.8,baz=334,slow=10,SNR=55						
WRA				pP		14 04 24.4	
	1.6nm,0.7s,baz=329,slow=11,SNR=3.0						
WRA				PcP	PcP	14 07 40.8	+0.8
	0.3nm,0.4s,baz=326,slow=2.3,SNR=6.7						
ASAR	**Alice Springs**	**25.65**	**158**	P	**P**	**14 04 21.9**	**+1.1**
	0.5nm,0.5s,mb3.5,baz=345,slow=14,SNR=18						
ASAR				pP	pP	14 04 54.9	-4.8
	1.2nm,0.6s,baz=343,slow=15,SNR=6.5						
ASAR				PcP	PcP	14 07 47.6	+1.0
	0.7nm,0.4s,baz=346,slow=2.3,SNR=16						
ASAR				ScP		14 11 13.0	
	0.5nm,0.8s,baz=346,slow=3.0,SNR=6.3						
CMAR	**Chiang Mai Arr**	**30.35**	**308**	P	**P**	**14 05 04.9**	**+1.8**
	0.2nm,0.3s,mb3.2,baz=138,slow=6.1,SNR=4.5						
STKA	**Stephens Creek**	**36.06**	**154**	P	**P**	**14 05 52.4**	**+0.5**
	1.4nm,0.4s,mb3.8,baz=328,slow=13,SNR=7.6						
STKA	**Stephens Creek**	**36.06**	**154**	P	**P**	**14 05 52.4**	**+0.5**
MJAR	**Matsushiro Arr**	**38.69**	**19**	P	**P**	**14 06 13.3**	**-0.4**
	1.8nm,0.6s,mb3.8,baz=193,slow=8.2,SNR=5.1						
SONM	**Songino Array**	**49.85**	**345**	P	**P**	**14 07 42.6**	**+0.2**
	0.5nm,0.5s,mb3.1,baz=160,slow=8.8,SNR=6.9						
MKAR	**Makanchi Array**	**58.86**	**328**	P	**P**	**14 08 46.9**	**-0.8**
	0.5nm,0.3s,mb3.6,baz=127,slow=8.3,SNR=12						
MKAR				sP	sP	14 09 46.2	-7.8
	0.4nm,0.5s,baz=131,slow=7.7,SNR=2.6						
ZAL	**Zalesovo**	**62.48**	**335**	P	**P**	**14 09 11.4**	**-0.6**
	1.1nm,0.4s,mb3.9,baz=33,slow=1.1,SNR=3.8						

IDC 03 14:07:04.5±2.7**, 1.14N**×**97.16E, mb3.5**/4**, mb1 3.6**/5**, mb1mx3.4**/21**, mbtmp3.5**/5**, ML3.6**/1**, Error ellipse: s-maj=98.9km s-min=26.6km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.30**	**6**	P	P	14 11 07.9	-1.2
	0.1nm,0.3s,baz=189,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**42.04**	**122**	P	P	14 14 58.1	-1.7
	0.3nm,0.7s,baz=301,slow=9.1,SNR=4.4						
SONM	**Songino Array**	**47.19**	**8**	P	P	14 15 39.3	-1.5
	0.3nm,0.8s,baz=188,slow=8.7,SNR=5.6						
MKAR	**Makanchi Array**	**47.29**	**346**	P	P	14 15 39.8	-1.8
	0.6nm,0.5s,baz=164,slow=8.1,SNR=9.4						
BVAR	**Borovoye Array**	**56.29**	**341**	P	P	14 16 46.1	-3.1
	0.4nm,0.5s,baz=127,slow=7.4,SNR=4.3						

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*NEIC **03** 14:16:00.8, 39.51S×174.13E, h209^{km}, MG3.8(WEL), After WEL.*

WEL 03 14:16:03.8±0.4**, 39.60S**×**174.20E, h183**^{km}±3^{km}**, ML3.7**/5**, 6C-2D, Error ellipse: s-maj=3.2km s-min=2.3km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	**Wanganui**	**0.63**	**105**	P	P	14 16 30.4	+0.6
WAZ				S	S	14 16 50.8	+1.0
WAZ	**Wanganui**	**0.63**	**105**	PN	P	14 16 30.2	+0.5
WAZ				SN	S	14 16 50.4	+0.6
WAZ				SN	S	14 16 50.7	+0.8
VRZ	**Vera Road**	**0.64**	**43**	PN	P	14 16 28.6	-1.3
VRZ				SN	S	14 16 49.2	-0.7
FWVZ	**Far West T-bar**	**1.10**	**72**	SN	S	14 16 53.9	-1.2
WNVZ	**Wahianoa**	**1.12**	**76**	SN	S	14 16 54.7	-0.7
MOVZ	**Moawhango**	**1.22**	**82**	P	P	14 16 33.1	-0.7
MOVZ	**Moawhango**	**1.22**	**82**	⇓PN	P	14 16 33.1	-0.7
MOVZ				SN	S	14 16 54.4	-2.5
DUWZ	**D'Urville Isla**	**1.22**	**190**	⇑PN	P	14 16 33.6	-0.2
DUWZ				SN	S	14 16 56.3	-0.6
KIW	**Kapiti Island**	**1.38**	**157**	P	P	14 16 34.9	-0.3
KIW	**Kapiti Island**	**1.38**	**157**	⇑PN	P	14 16 34.9	-0.2
KIW				SN	S	14 16 57.4	-2.0
TSZ	**Takapari Road**	**1.44**	**109**	P	P	14 16 35.6	-0.1
TSZ	**Takapari Road**	**1.44**	**109**	PN	P	14 16 35.6	-0.2
TSZ				SN	S	14 16 58.9	-1.4
MRZ	**Mangatainoka R**	**1.50**	**136**	P	P	14 16 36.0	-0.3
MRZ	**Mangatainoka R**	**1.50**	**136**	⇑PN	P	14 16 36.0	-0.4
MRZ				SN	S	14 16 60.0	-1.5
TCW	**Tory Channel**	**1.61**	**178**	P	P	14 16 37.3	-0.1
TCW	**Tory Channel**	**1.61**	**178**	PN	P	14 16 37.3	-0.1
TCW				*e*SN	S	14 17 02.2	-1.2
CAW	**Cannon Point**	**1.65**	**156**	P	P	14 16 37.4	-0.4
CAW	**Cannon Point**	**1.65**	**156**	⇑PN	P	14 16 37.4	-0.3
CAW				SN	S	14 17 02.4	-1.6
MRW	**Makara Radio**	**1.67**	**167**	P	P	14 16 37.7	-0.3
MRW	**Makara Radio**	**1.67**	**167**	⇑PN	P	14 16 37.7	-0.3
MRW				SN	S	14 17 02.8	-1.6
NNZ	**Nelson**	**1.73**	**201**	P	P	14 16 37.8	-0.8
NNZ	**Nelson**	**1.73**	**201**	⇑PN	P	14 16 37.8	-0.8
NNZ				SN	S	14 17 03.6	-1.9
WEL	**Wellington**	**1.74**	**166**	P	P	14 16 38.1	-0.6
WEL	**Wellington**	**1.74**	**166**	PN	P	14 16 38.1	-0.5
QRZ	**Quartz Range**	**1.77**	**226**	*e*P	P	14 16 37.5	-1.5
QRZ	**Quartz Range**	**1.77**	**226**	PN	P	14 16 37.5	-1.5
QRZ				SN	S	14 17 03.6	-2.5
BKZ	**Black Stump Fm**	**1.83**	**77**	P	P	14 16 38.4	-1.2
BKZ	**Black Stump Fm**	**1.83**	**77**	⇓PN	P	14 16 38.4	-1.2
BKZ				SN	S	14 17 04.9	-2.3
TUWZ	**Tuamarina**	**1.84**	**186**	PN	P	14 16 38.9	-0.8
MTW	**Mount Morrison**	**1.85**	**148**	P	P	14 16 39.1	-0.7
MTW	**Mount Morrison**	**1.85**	**148**	PN	P	14 16 39.1	-0.7
MSWZ	**Moikau Station**	**1.98**	**156**	P	P	14 16 40.3	-0.9
MSWZ	**Moikau Station**	**1.98**	**156**	PN	P	14 16 40.3	-0.9
PAWZ	**Paruwai Farm**	**2.01**	**153**	PN	P	14 16 40.7	-0.8
PWZ	**Pawanui**	**2.10**	**103**	*e*P	P	14 16 41.8	-0.7
PWZ	**Pawanui**	**2.10**	**103**	PN	P	14 16 41.8	-0.6
BSWZ	**Blackbirch Sta**	**2.13**	**186**	P	P	14 16 42.3	-0.5
BSWZ	**Blackbirch Sta**	**2.13**	**186**	PN	P	14 16 42.3	-0.5
THZ	**Tophouse**	**2.38**	**204**	*e*P	P	14 16 44.2	-1.5
THZ	**Tophouse**	**2.38**	**204**	PN	P	14 16 44.2	-1.5
THZ				SN	S	14 17 15.4	-2.6
URZ	**Urewera**	**2.64**	**60**	*e*P	P	14 16 45.9	-2.8
URZ	**Urewera**	**2.64**	**60**	PN	P	14 16 45.9	-2.8
KNZ	**Kokohu**	**2.76**	**79**	PN	P	14 16 48.1	-2.1
DSZ	**Denniston Nort**	**2.81**	**220**	*e*P	P	14 16 48.7	-2.2
DSZ	**Denniston Nort**	**2.81**	**220**	PN	P	14 16 48.7	-2.1
KHZ	**Kahutara**	**2.86**	**190**	*e*P	P	14 16 49.9	-1.5
KHZ	**Kahutara**	**2.86**	**190**	PN	P	14 16 49.9	-1.5
KHZ				SN	S	14 17 24.6	-3.5
MWZ	**Matawai**	**2.89**	**65**	*e*P	P	14 16 48.9	-2.8
MWZ	**Matawai**	**2.89**	**65**	PN	P	14 16 48.9	-2.8
LTZ	**Lake Taylor**	**3.50**	**204**	*e*P	P	14 16 56.8	-2.5
MQZ	**McQueen's Vall**	**4.27**	**195**	*e*P	P	14 17 04.8	-4.3
ODZ	**Otahua Downs**	**6.05**	**205**	*e*P	P	14 17 29.0	-3.2

IDC 03 14:17:15.1±26.0**, 14.44S**×**160.90E, mb3.9**/3**, mb1 4.0**/3**, mb1mx3.6**/14**, mbtmp3.9**/3**, Error ellipse: s-maj=437.1km s-min=91.0km az=61.0, South of Solomon Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**24.75**	**222**	P	P	14 22 39.0	-0.8
	1.2nm,0.7s,baz=66,slow=13,SNR=2.9						
WRA	**Warramunga Arr**	**25.94**	**254**	P	P	14 22 49.4	-1.6
	1.2nm,0.5s,baz=84,slow=9.3,SNR=23						
ASAR	**Alice Springs**	**27.08**	**246**	P	P	14 22 59.5	-2.0
	1.5nm,0.7s,baz=72,slow=9.6,SNR=21						

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*IDC **03** 14:18:09.7±1.8, 43.96N×128.33W, mb3.4/5, mb1 3.7/9, mb1mx3.6/26, mbtmp3.4/9, ML3.5/4, MS3.2/5, Ms1 3.2/5, ms1mx2.9/19, Error ellipse: s-maj=41.0km s-min=16.0km az=41.0*

*NEIC **03** 14:18:12.0±1.0, 43.92N×128.23W, h10^{km}, mb3.9/4, Error ellipse: s-maj=15.8km s-min=7.6km az=48.0*

ISC 03 14:18:10.2±6.3**, 43.98N**±0.10×**128.2W**±0.2**, h6**^{km}±39^{km}**, n31, σ1^{s}01**/29**, mb3.5**/6**, MS3.1**/1**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPOR	**Mary's Peak**	**3.41**	**80**	P	**Pn**	**14 19 04.7**	**-0.4**
DBO	**Dodson Butte**	**3.73**	**102**	P	**Pn**	**14 19 08.9**	**-0.7**
KMOR	**Kings Mountain**	**3.76**	**62**	P	**Pn**	**14 19 10.0**	**-0.1**
NLO	**Nicolai Mounta**	**4.00**	**56**	P	**Pn**	**14 19 13.9**	**+0.5**
HUMO	**Hull Mountain**	**4.09**	**108**	*e*P	**Pn**	**14 19 13.0**	**-1.7**
BBOR	**Butler Butte**	**4.19**	**103**	P	**Pn**	**14 19 15.7**	**-0.5**
HBO	**Huckleberry Mo**	**4.28**	**90**	P	**Pn**	**14 19 17.3**	**-0.1**
IRO	**Indian Ridge**	**4.32**	**88**	P	**Pn**	**14 19 17.5**	**-0.4**
FRIS	**Frissel Point**	**4.43**	**85**	P	**Pn**	**14 19 19.6**	**+0.1**
YBH	**Yreka Blue Hor**	**4.64**	**117**	Pn	**Pn**	**14 19 21.8**	**-0.7**
	0.4nm,0.3s,baz=308,slow=15,SNR=6.3						
YBH				LR	LR	14 21 11.3	
	comp=Z,294nm,21.4s,baz=312,slow=39						
WVOR	**Wild Horse Val**	**7.18**	**99**	*e*P	**Pn**	**14 19 56.6**	**-1.8**
BBB	**Bella Bella**	**8.21**	**1**	Pn	**P**	**14 20 13.9**	**+1.2**
	0.3nm,0.3s,baz=196,slow=11,SNR=6.8						
NEW	**Newport**	**8.83**	**57**	LR	LR	14 23 55.5	
	comp=Z,80nm,18.5s,baz=254,slow=39						
NVAR	**Mina Array Bea**	**9.31**	**123**	Pn	**P**	**14 20 28.9**	**+0.9**
	0.1nm,0.3s,baz=296,slow=12,SNR=8.9						
ELK	**Elko**	**10.15**	**104**	Pn	**P**	**14 20 40.0**	**+0.5**
	0.0nm,0.3s,baz=292,slow=10,SNR=7.4						
ELK				LR	LR	14 24 52.6	
	comp=Z,103nm,18.9s,baz=108,slow=40						
MSU	**Marysvale**	**13.26**	**109**	P	**P**	**14 21 23.7**	**+2.2**
PDAR	**Pinedale Array**	**13.65**	**89**	Pn	**P**	**14 21 28.9**	**+2.3**
	0.1nm,0.3s,baz=282,slow=14,SNR=4.2						
PV01	**Paradox Valley**	**15.93**	**105**	P	**P**	**14 21 55.1**	**-1.4**
RW3	**Ridgway**	**16.50**	**103**	*e*P	**P**	**14 22 03.8**	**+0.1**
SDCO	**Great Sand Dun**	**18.26**	**102**	*e*P	**P**	**14 22 26.4**	**+0.6**
	16nm,1.6s						
LAZ	**Ladron**	**18.90**	**113**	*e*P	**P**	**14 22 34.8**	**+1.2**
ANMO	**Albuquerque**	**19.04**	**111**	LR	LR	14 30 24.3	
	comp=Z,104nm,20.4s,slow=38						
FFC	**Flin Flon**	**20.08**	**48**	*e*P	**P**	**14 22 46.4**	**-0.6**
	4.4nm,0.8s						
YKA	**Yellowknife Ar**	**20.18**	**18**	P	**P**	**14 22 46.9**	**-1.1**
	1.6nm,0.8s,baz=207,slow=11,SNR=7.6						
MNTX	**Cornudas Mount**	**21.74**	**117**	P	**P**	**14 23 04.1**	**0.0**
	1.1nm,0.8s,mb3.3						
ULM	**Lac du Bonnet**	**22.78**	**63**	P	**P**	**14 23 14.3**	**+0.1**
	1.3nm,0.5s,mb3.6,baz=197,slow=1.9,SNR=4.4						
ULM	**Lac du Bonnet**	**22.78**	**63**	P	**P**	**14 23 14.3**	**+0.1**
ILAR	**Eielson Array**	**23.31**	**340**	P	**P**	**14 23 19.9**	**+0.6**
	0.3nm,0.6s,mb2.9,baz=139,slow=8.3,SNR=3.2						
TXAR	**Lajitas Array**	**24.42**	**119**	P	**P**	**14 23 30.7**	**+0.3**
	0.8nm,0.7s,mb3.2,baz=302,slow=12,SNR=3.5						
TXAR				LR	LR	14 33 41.6	
	comp=Z,57nm,18.7s,MS3.1,baz=295,slow=38						
WMOK	**Wichita Mounta**	**24.47**	**102**	*e*P	**P**	**14 23 32.2**	**+1.3**
	16nm,0.9s,mb4.5						
SONM	**Songino Array**	**76.72**	**326**	P	**P**	**14 30 01.6**	**-1.8**
	0.6nm,0.9s,mb3.5,baz=27,slow=3.2,SNR=5.2						

IDC 03 14:23:06.4±2.7**, 0.98N**×**98.60E, mb3.6**/4**, mb1 3.7**/5**, mb1mx3.5**/21**, mbtmp3.6**/5**, ML3.4**/1**, MS3.0**/1**, Ms1 3.2**/1**, ms1mx2.5**/25**, Error ellipse: s-maj=106.6km s-min=26.9km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.38**	**1**	P	P	14 27 10.9	-1.2
	0.1nm,0.3s,baz=190,slow=11,SNR=4.0						
CMAR				LR	LR	14 34 51.2	
	comp=Z,43nm,18.4s,baz=190,slow=41						
WRA	**Warramunga Arr**	**40.73**	**123**	P	P	14 30 49.3	-1.6
	0.4nm,0.6s,baz=302,slow=9.2,SNR=6.5						
SONM	**Songino Array**	**47.16**	**7**	P	P	14 31 40.8	-1.7
	0.3nm,0.7s,baz=180,slow=7.2,SNR=3.0						
MKAR	**Makanchi Array**	**47.81**	**345**	P	P	14 31 45.5	-2.2
	0.8nm,0.6s,baz=153,slow=7.4,SNR=10						
BVAR	**Borovoye Array**	**56.93**	**340**	P	P	14 32 53.1	-2.6
	0.6nm,0.6s,baz=150,slow=9.4,SNR=4.8						

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*IDC **03** 14:31:41.7±1.9, 40.93N×49.80E, mb3.8/6, mb1 3.9/9, mb1mx3.7/24, mbtmp3.8/9, ML3.4/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/30, Error ellipse: s-maj=39.2km s-min=16.8km az=157.0*

*CSEM **03** 14:31:43.2±0.2, 40.63N×49.80E, h45^{km}, mb3.9, Error ellipse: s-maj=10.3km s-min=4.2km az=66.0*

*MOS **03** 14:31:45.2±2.4, 40.86N×50.02E, h33^{km}, mb3.9/1, Error ellipse: s-maj=23.0km s-min=11.3km az=44.0*

*NEIC **03** 14:31:50.0±1.7, 40.86N×49.79E, h76^{km}±17^{km}, Error ellipse: s-maj=23.1km s-min=13.4km az=168.0*

*NNC **03** 14:31:50.2±7.0, 40.97N×50.18E, h51^{km}±48^{km}, Error ellipse: s-maj=105.0km s-min=46.9km az=108.0*

*TEH **03** 14:32:06.5, 38.86N×50.02E, h10^{km}, Mn3.1*

ISC 03 14:31:44.4±0.7**, 40.53N**±0.06×**49.93E**±0.07**, h61**^{km}±12^{km}**, n35, σ1^{s}37**/36**, mb3.6**/7**, 2C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAK	**Makhachkala**	**3.03**	**324**	*e*PN	**P**	**14 32 33.0**	**+1.8**
MAK				*e*		14 33 12.0	
MAK				pmax	pmax		
	comp=N,429nm,1.2s						
MAK				pmax	pmax		
	comp=E,825nm,1.2s						
DGRG	**David-gareji**	**3.57**	**286**	P	**P**	**14 32 37.9**	**-0.9**
DGRG				S	**S**	**14 33 20.4**	**+0.4**
GNI	**Garni**	**3.98**	**266**	Pn	**P**	**14 32 47.2**	**+2.6**
	comp=E,2.7nm,0.3s,baz=301,slow=5.2,SNR=7.0						
GNI				LR	LR	14 34 44.6	
	comp=E,122nm,20.6s,baz=321,slow=46						
TI2	**Plekhanov**	**4.09**	**289**	*e*Pn	**P**	**14 32 45.0**	**-1.1**
IGZV	**Gazvin**	**4.15**	**177**	Pn	**P**	**14 32 46.5**	**-0.3**
IPRN	**Paran-Amol**	**4.65**	**156**	Pn	**P**	**14 32 52.1**	**-1.8**
IAFJ	**Afjeh**	**4.87**	**163**	Pn	**P**	**14 32 57.5**	**+0.5**
ZEI	**Tsey**	**5.04**	**298**	*i* PN	**P**	**14 33 04.6**	**+5.3**
IGLO	**Galoogah**	**5.06**	**145**	Pn	**P**	**14 32 58.4**	**-1.2**
IRAZ	**Razeghan**	**5.12**	**180**	Pn	**P**	**14 32 59.8**	**-0.6**
IDMV	**Damavand**	**5.22**	**161**	Pn	**P**	**14 33 02.7**	**+1.0**
IKIA	**Kiasar**	**5.23**	**144**	Pn	**P**	**14 33 00.6**	**-1.3**
ONI	**Oni**	**5.28**	**295**	P	**P**	**14 33 21.8**	**+19**
IFIR	**Firoozkooh**	**5.37**	**155**	Pn	**P**	**14 33 05.7**	**+1.9**
IVRN	**Varamin**	**5.71**	**165**	Pn	**P**	**14 33 08.3**	**-0.2**
IVRN	**Varamin**	**5.71**	**165**	Lg		14 34 13.9	
KIV	**Kislovodsk**	**6.37**	**305**	P	**P**	**14 33 18.8**	**+1.0**
KIV				pmax	pmax		
	comp=Z,14nm,0.7s						
KIV	**Kislovodsk**	**6.37**	**305**	Pn	**P**	**14 33 18.8**	**+0.9**
	comp=Z,14nm,0.7s						
KIV	**Kislovodsk**	**6.37**	**305**	P	**P**	**14 33 18.8**	**+1.0**
	comp=Z,14nm,0.7s						
AB31	**Akbulak array**	**11.24**	**36**	⇓P	**P**	**14 34 21.6**	**-2.9**
	comp=Z,1.2nm,0.4s,baz=213,slow=16,SNR=28						
AB31				⇑S	**S**	**14 36 21.5**	**-7.9**
	comp=Z,4.5nm,0.6s,baz=224,slow=21,SNR=4.5						
KK09	**Karatay Array**	**15.55**	**74**	⇑P	**P**	**14 35 22.3**	**+1.2**
	comp=Z,3.4nm,0.7s						
OBN	**Obninsk**	**17.08**	**333**	*e*P	**P**	**14 35 51.4**	**+11**
OBN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
AKASG	**Malin Array Be**	**17.64**	**312**	P	**P**	**14 35 45.0**	**-2.3**
	comp=Z,2.3nm,0.3s,baz=118,slow=12,SNR=10.0						
BVAR	**Borovoye Array**	**18.69**	**41**	P	**P**	**14 36 00.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=240,slow=12,SNR=7.2						
IDI	**Anoyia**	**20.41**	**263**	P	**P**	**14 36 20.3**	**+1.5**
	comp=Z,3.0nm,0.7s,baz=36,slow=8.7,SNR=3.6						

MK31	**Makanchi Array**	**24.12**	**64**	⇓P	**P**	**14 36 57.8**	**+2.6**
	comp=Z,1.3nm,0.5s,mb3.6,baz=261,slow=9.7,SNR=15						
MKAR	**Makanchi Array**	**24.12**	**64**	P	**P**	**14 36 58.0**	**+2.8**
	comp=Z,1.5nm,0.6s,mb3.6,baz=261,slow=10.0,SNR=14						
MKAR	**Makanchi Array**	**24.12**	**64**	P	**P**	**14 36 58.0**	**+2.8**
FINES	**FINESS Array B**	**25.49**	**333**	P	**P**	**14 37 07.7**	**-0.6**
	comp=Z,2.5nm,0.5s,mb4.0,baz=133,slow=9.2,SNR=20						
KAF	**Kangasniemi**	**25.89**	**334**	*e*p	**P**	**14 37 11.7**	**-0.2**
GERES	**GERESS Array B**	**26.86**	**300**	P	**P**	**14 37 21.8**	**+0.8**
	comp=Z,0.3nm,0.4s,mb3.1,baz=151,slow=37,SNR=3.3						
HFS	**Hagfors**	**29.76**	**323**	P	**P**	**14 37 46.1**	**-0.9**
	comp=Z,1.0nm,0.4s,mb3.9,baz=112,slow=8.0,SNR=8.8						
NB2	**NORSAR Subarra**	**31.25**	**324**	P	**P**	**14 37 59.0**	**-1.1**
	comp=Z,0.4nm,0.5s,mb3.5,baz=112,slow=7.9						
ARCES	**ARCESS Array B**	**31.78**	**344**	P	**P**	**14 38 03.0**	**-1.8**
	comp=Z,0.5nm,0.5s,mb3.6,baz=129,slow=7.8,SNR=6.2						
ARCES	**ARCESS Array B**	**31.78**	**344**	P	**P**	**14 38 03.0**	**-1.8**

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*MOS **03** 14:37:43.0±0.6,52.17N×169.34W,h33^{km},mb4.3/9,Error ellipse: s-maj=27.6km s-min=15.9km az=82.2*

*NEIC **03** 14:37:46.6±0.7,52.22N×169.47W,h45^{km}±5^{km},mb4.3/4, ML3.4(AEIC),Error ellipse: s-maj=12.9km s-min=4.7km az=162.0*

*IDC **03** 14:37:47.8±1.1,52.14N×169.27W,h59^{km}±8^{km},mb3.7/13, mb1 3.8/15,mb1mx3.7/26,mbtmp3.9/15,MS3.6/2, Ms1 3.6/2,ms1mx2.8/35,Error ellipse: s-maj=25.1km s-min=16.4km az=166.0*

ISC 03 14:37:44.9±0.9**,52.11N**±0.08×**169.50W**±0.08**,h48**^{km}±7^{km}**, h60**^{km}±2.8^{km}**:pP-P,n53,**σ**0^s.80**/55**,mb3.9**/18**,MS3.5**/2**,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.95**	**24**	P	**P**	**14 38 00.7**	**-1.3**
NIKO				S	**S**	**14 38 14.4**	**-0.3**
OKFG	**Magazine Ridge**	**1.62**	**36**	P	**P**	**14 38 10.9**	**-0.7**
OKFG				S	**S**	**14 38 31.3**	**-0.1**
MSW	**Makushin Switc**	**2.44**	**41**	P	**P**	**14 38 22.4**	**-0.8**
MSW				S	**S**	**14 38 53.0**	**+1.1**
MNAT	**Makushin Natee**	**2.46**	**43**	P	**P**	**14 38 22.6**	**-0.9**
MNAT				S	**S**	**14 38 53.6**	**+1.1**
MTBL	**Makushin Table**	**2.52**	**41**	P	**P**	**14 38 24.0**	**-0.3**
ATKA	**Atka Island**	**2.90**	**274**	P	**P**	**14 38 29.3**	**-0.3**
LVA	**Lava Point**	**2.93**	**44**	P	**P**	**14 38 30.6**	**+0.5**
AKLV	**Akutan Long Va**	**2.96**	**45**	P	**P**	**14 38 30.8**	**+0.2**
AKLV				S	**S**	**14 39 06.9**	**+1.7**
AKGG	**Akutan Green G**	**2.97**	**44**	P	**P**	**14 38 30.7**	**-0.1**
AKGG				S	**S**	**14 39 06.0**	**+0.6**
AHB	**Akutan Harbor**	**3.00**	**46**	P	**P**	**14 38 31.5**	**+0.4**
AKUT	**Akutan**	**3.03**	**46**	P	**P**	**14 38 30.9**	**-0.6**
ADAG	**Mount Adagdak**	**4.39**	**271**	P	**P**	**14 38 50.6**	**-0.1**
KIMD	**Kanaga Island**	**4.80**	**269**	P	**P**	**14 38 57.6**	**+1.0**
SPIA	**Saint Paul Isl**	**5.10**	**355**	P	**P**	**14 39 01.9**	**+1.1**
FX1	**Attu Island--F**	**10.60**	**281**	P	**P**	**14 40 17.1**	**+0.3**
FX1				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FX1	**Attu Island--F**	**10.60**	**281**	P	**P**	**14 40 17.1**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=60,slow=5.3,SNR=6.8						
ILAR	**Eielson Array**	**17.21**	**34**	P	**P**	**14 41 41.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=237,slow=9.7,SNR=4.1						
BILL	**Bilibino**	**19.80**	**333**	*e*P	**P**	**14 42 18.1**	**+4.5**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,100nm,14.0s						
INK	**Inuvik**	**23.61**	**33**	P	**P**	**14 42 50.4**	**-1.2**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	**Inuvik**	**23.61**	**33**	P	**P**	**14 42 50.4**	**-1.3**
	comp=Z,1.9nm,0.6s,mb3.7,baz=226,slow=6.7,SNR=6.0						
YKA	**Yellowknife Ar**	**30.48**	**48**	P	**P**	**14 43 53.4**	**-1.4**
	comp=Z,0.4nm,0.4s,mb3.5,baz=275,slow=9.5,SNR=8.9						
YKA				pP	pP	14 44 09.4	+2.1
	comp=Z,0.4nm,0.5s,baz=273,slow=9.8,SNR=1.7						
YKA	**Yellowknife Ar**	**30.48**	**48**	P	**P**	**14 43 53.4**	**-1.4**
YKA				pP	pP	14 44 09.4	+2.1
YBH	**Yreka Blue Hor**	**33.06**	**89**	LR	LR	14 56 16.1	
	comp=Z,61nm,18.2s,MS3.3,baz=93,slow=34						
NVAR	**Mina Array Bea**	**37.74**	**91**	pP	pP	14 45 11.6	+1.3
	comp=Z,0.2nm,0.5s,baz=340,slow=31,SNR=3.2						
ELK	**Elko**	**38.23**	**85**	P	**P**	**14 45 03.2**	**+1.7**
BW06	**Boulder Array**	**40.53**	**79**	*e*P	**P**	**14 45 21.0**	**+0.3**
	comp=Z,0.8nm,0.6s,mb3.5						
PDAR	**Pinedale Array**	**40.53**	**79**	P	**P**	**14 45 19.8**	**-0.8**
	comp=Z,0.5nm,0.8s,mb3.2,baz=304,slow=3.3,SNR=2.8						
PDAR				pP	pP	14 45 34.8	+1.3
	comp=Z,1.5nm,0.8s,baz=315,slow=4.2,SNR=7.5						
FCC	**Fort Churchill**	**41.17**	**50**	*e*P	**P**	**14 45 25.7**	**0.0**
	comp=Z,10nm,1.2s,mb4.3						
SDCO	**Great Sand Dun**	**46.04**	**82**	P	**P**	**14 46 06.0**	**+0.7**
ULN	**Ulaanbaatar**	**51.00**	**301**	*e*P	**P**	**14 46 43.3**	**-0.2**
	comp=Z,2.0nm,0.8s,mb4.1						
SONM	**Songino Array**	**51.37**	**301**	P	**P**	**14 46 47.0**	**+0.6**
	comp=Z,2.0nm,1.0s,mb4.0,baz=53,slow=6.2,SNR=12						
SONM				LR	LR	15 10 51.0	
	comp=Z,70nm,18.8s,MS3.7,baz=70,slow=38						
ZAK	**Zakamensk**	**51.40**	**305**	*e*P	**P**	**14 46 46.8**	**+0.2**
ZAK				*e*		14 48 01.3	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.5						
WMOK	**Wichita Mounta**	**52.10**	**80**	P	**P**	**14 46 51.3**	**-0.7**
TXAR	**Lajitas Array**	**52.83**	**89**	pP	pP	14 47 08.1	-2.6
	comp=Z,0.6nm,0.6s,baz=307,slow=6.3,SNR=2.8						
BVAR	**Borovoye Array**	**63.87**	**324**	P	**P**	**14 48 14.4**	**+0.3**
	comp=Z,2.6nm,0.7s,mb4.3,baz=45,slow=6.3,SNR=17						
MKAR	**Makanchi Array**	**63.93**	**313**	P	**P**	**14 48 14.3**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.7,baz=53,slow=6.1,SNR=5.1						
KAF	**Kangasniemi**	**65.44**	**352**	*e*p	**P**	**14 48 23.0**	**-1.1**
	comp=Z,2.9nm,0.7s,mb4.4,baz=7.1,slow=6.1						
KAF	**Kangasniemi**	**65.44**	**352**	*e*P	**P**	**14 48 23.0**	**-1.1**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
FINES	**FINESS Array B**	**66.12**	**352**	P	**P**	**14 48 27.9**	**-0.6**
FINES				*PP	pP	14 48 43.9	+1.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**66.12**	**352**	P	**P**	**14 48 27.9**	**-0.6**
	comp=Z,1.9nm,0.7s,mb4.2,slow=7.6,SNR=11						
FINES				pP	pP	14 48 43.9	+1.7
	comp=Z,1.4nm,0.8s,baz=342,slow=6.0,SNR=3.4						
NB2	**NORSAR Subarra**	**67.20**	**360**	P	**P**	**14 48 35.4**	**+0.1**
	comp=Z,0.8nm,0.7s,mb3.9,baz=358,slow=5.8						
NOA	**NORSAR Array B**	**67.20**	**360**	P	**P**	**14 48 35.2**	**-0.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	**NORSAR Array B**	**67.20**	**360**	P	**P**	**14 48 35.2**	**-0.1**
	comp=Z,1.5nm,0.8s,mb4.1,baz=360,slow=6.2,SNR=5.8						
HFS	**Hagfors**	**68.08**	**358**	P	**P**	**14 48 40.4**	**-0.4**
HFS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HFS	**Hagfors**	**68.08**	**358**	P	**P**	**14 48 40.4**	**-0.4**
	comp=Z,3.7nm,0.8s,mb4.5,baz=27,slow=3.3,SNR=6.9						
AKASG	**Malin Array Be**	**76.35**	**348**	P	**P**	**14 49 30.1**	**+0.2**
	comp=Z,0.2nm,0.2s,mb3.7,baz=11,slow=5.6,SNR=4.3						
CMAR	**Chiang Mai Arr**	**76.60**	**283**	P	**P**	**14 49 33.0**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**76.60**	**283**	P	**P**	**14 49 33.0**	**+1.0**
	comp=Z,1.4nm,0.9s,mb3.9,baz=28,slow=6.1,SNR=5.2						
WRA	**Warramunga Arr**	**86.78**	**232**	P	**P**	**14 50 25.1**	**+0.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**86.78**	**232**	P	**P**	**14 50 25.1**	**+0.1**
	comp=Z,0.7nm,0.9s,mb3.9,baz=36,slow=6.1,SNR=4.9						
ASAR	**Alice Springs**	**90.17**	**230**	P	**P**	**14 50 42.0**	**+0.9**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASAR	**Alice Springs**	**90.17**	**230**	P	**P**	**14 50 42.0**	**+0.9**
	comp=Z,1.6nm,0.9s,mb4.3,baz=29,slow=4.9,SNR=10						
MATP	**Matopo**	**145.41**	**329**	PKPbc	PKPbc	14 57 20.2	+2.4
	comp=Z,2.4nm,0.6s,baz=51,slow=8.8,SNR=5.1						

IDC 03 14:39:45.1±2.2**,12.39N**×**93.02E,mb3.5**/3**,mb1 3.7**/4**, mb1mx3.4**/21**,mbtmp3.4**/4**,ML3.1**/1**,Error ellipse: s-maj=66.7km s-min=27.3km az=68.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**8.31**	**43**	Pn	P	14 41 46.9	-2.7
	0.1nm,0.3s,baz=235,slow=15,SNR=3.7						
MKAR	**Makanchi Array**	**35.47**	**347**	P	P	14 46 43.1	-2.1
	0.4nm,0.7s,baz=166,slow=10.0,SNR=3.9						
WRA	**Warramunga Arr**	**51.83**	**128**	P	P	14 48 55.2	-2.2
	0.5nm,0.5s,baz=306,slow=8.3,SNR=15						
ASAR	**Alice Springs**	**53.69**	**132**	P	P	14 49 09.2	-2.1
	0.5nm,0.6s,baz=312,slow=7.1,SNR=13						

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*NEIC **03** 14:51:21.4±0.7,31.21S×179.87W,h394^{km}±10^{km},Error ellipse: s-maj=29.8km s-min=9.2km az=104.0*

*IDC **03** 14:51:21.4±1.0,31.09S×179.92E,h373^{km}±16^{km},mb3.0/2, mb1 3.4/3,mb1mx3.1/15,mbtmp4.0/3,Error ellipse: s-maj=41.7km s-min=16.6km az=119.0*

ISC 03 14:51:18.9±0.9**,31.28S**±0.09×**179.5W**±0.3**,h419**^{km}±14^{km}**, n47,**σ**1^s.00**/52**,mb3.2**/2**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.42**	**34**	P	**P**	**14 52 20.3**	**+0.6**
	125nm,0.3s,baz=283,slow=22,SNR=7.2						
RAO				S	**S**	**14 53 06.1**	**-1.6**
	96nm,0.3s,baz=95,slow=22,SNR=2.6						
MXZ	**Matakaoa Point**	**6.54**	**196**	P	**P**	**14 53 00.6**	**+1.9**
MXZ				S	**S**	**14 54 17.2**	**-0.2**
MXZ	**Matakaoa Point**	**6.54**	**196**	PN	**P**	**14 53 00.6**	**+1.9**
MXZ				SN	**S**	**14 54 17.2**	**-0.3**
MWZ	**Matawai**	**7.46**	**199**	*e*P	**P**	**14 53 09.5**	**+0.5**
MWZ	**Matawai**	**7.46**	**199**	PN	**P**	**14 53 08.5**	**-0.5**
MWZ				SN	**S**	**14 54 36.6**	**+0.6**
URZ	**Urewera**	**7.51**	**201**	P	**P**	**14 53 10.6**	**+1.0**
	14nm,0.3s,baz=311,slow=2.9,SNR=90						
URZ				S	**S**	**14 54 38.2**	**+1.2**
	6.5nm,0.3s,baz=266,slow=23,SNR=17						
URZ	**Urewera**	**7.51**	**201**	SN	**S**	**14 54 35.5**	**-1.5**
KNZ	**Kokohu**	**8.07**	**196**	*e*P	**P**	**14 53 18.4**	**+2.5**
KNZ	**Kokohu**	**8.07**	**196**	PN	**P**	**14 53 18.4**	**+2.5**
BKZ	**Black Stump Fm**	**8.54**	**202**	*e*P	**P**	**14 53 20.7**	**-0.5**
BKZ	**Black Stump Fm**	**8.54**	**202**	PN	**P**	**14 53 20.7**	**-0.5**
MOVZ	**Moawhango**	**9.00**	**204**	P	**P**	**14 53 26.5**	**+0.1**
MOVZ	**Moawhango**	**9.00**	**204**	PN	**P**	**14 53 26.5**	**+0.1**
TSZ	**Takapari Road**	**9.52**	**202**	*e*P	**P**	**14 53 32.1**	**-0.2**
TSZ	**Takapari Road**	**9.52**	**202**	PN	**P**	**14 53 32.1**	**-0.2**
WAZ	**Wanganui**	**9.59**	**207**	*e*P	**P**	**14 53 34.7**	**+1.6**
WAZ	**Wanganui**	**9.59**	**207**	PN	**P**	**14 53 34.7**	**+1.5**
BFZ	**Birch Farm**	**10.01**	**199**	*e*P	**P**	**14 53 39.0**	**+1.1**
BFZ	**Birch Farm**	**10.01**	**199**	PN	**P**	**14 53 39.0**	**+1.1**
MRZ	**Mangatainoka R**	**10.19**	**202**	*e*P	**P**	**14 53 39.2**	**-0.8**
MRZ	**Mangatainoka R**	**10.19**	**202**	PN	**P**	**14 53 39.2**	**-0.8**
MTW	**Mount Morrison**	**10.66**	**201**	P	**P**	**14 53 46.3**	**+0.8**
MTW	**Mount Morrison**	**10.66**	**201**	PN	**P**	**14 53 46.3**	**+0.8**
CAW	**Cannon Point**	**10.76**	**203**	P	**P**	**14 53 46.0**	**-0.6**
CAW	**Cannon Point**	**10.76**	**203**	PN	**P**	**14 53 46.0**	**-0.5**
DUWZ	**D'Urville Isla**	**10.90**	**208**	PN	**P**	**14 53 47.5**	**-0.7**
MSWZ	**Moikau Station**	**10.97**	**201**	P	**P**	**14 53 48.9**	**-0.1**
MSWZ	**Moikau Station**	**10.97**	**201**	PN	**P**	**14 53 48.9**	**-0.2**
MRW	**Makara Radio**	**10.99**	**204**	P	**P**	**14 53 49.1**	**-0.1**
MRW	**Makara Radio**	**10.99**	**204**	PN	**P**	**14 53 49.1**	**-0.1**
WEL	**Wellington**	**11.02**	**203**	P	**P**	**14 53 49.6**	**+0.1**
WEL	**Wellington**	**11.02**	**203**	PN	**P**	**14 53 49.6**	**+0.1**
TCW	**Tory Channel**	**11.12**	**205**	P	**P**	**14 53 50.1**	**-0.6**
TCW	**Tory Channel**	**11.12**	**205**	PN	**P**	**14 53 50.1**	**-0.6**
TUWZ	**Tuamarina**	**11.44**	**206**	PN	**P**	**14 53 52.8**	**-1.4**
NNZ	**Nelson**	**11.47**	**208**	*e*P	**P**	**14 53 53.4**	**-1.2**
NNZ	**Nelson**	**11.47**	**208**	PN	**P**	**14 53 52.7**	**-1.9**
NNZ				SN	**S**	**14 55 56.2**	**-2.5**
QRZ	**Quartz Range**	**11.52**	**212**	PN	**P**	**14 53 54.8**	**-0.3**
BSWZ	**Blackbirch Sta**	**11.71**	**205**	*e*P	**P**	**14 53 57.2**	**0.0**
BSWZ	**Blackbirch Sta**	**11.71**	**205**	PN	**P**	**14 53 57.2**	**0.0**
THZ	**Tophouse**	**12.12**	**208**	*e*P	**P**	**14 54 01.2**	**-0.7**
THZ	**Tophouse**	**12.12**	**208**	PN	**P**	**14 54 01.2**	**-0.7**
LTZ	**Lake Taylor**	**13.24**	**208**	*e*P	**P**	**14 54 14.6**	**+0.5**
LTZ	**Lake Taylor**	**13.24**	**208**	PN	**P**	**14 54 14.6**	**+0.5**
ASAR	**Alice Springs**	**41.81**	**269**	P	**P**	**14 58 32.2**	**+0.8**
	0.3nm,0.4s,mb2.9,baz=104,slow=7.4,SNR=8.4						
WRA	**Warramunga Arr**	**42.88**	**274**	P	**P**	**14 58 40.4**	**+0.4**
	0.7nm,0.3s,mb3.5,baz=111,slow=8.1,SNR=66						
FINES	**FINESS Array B**	**145.52**	**339**	PKPbc	PKPbc	15 10 13.7	+5.7
	0.7nm,0.5s,baz=45,slow=5.4,SNR=10						

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*BJI **03** 14:57:26.8,31.51N×92.77E,h11^{km},mB4.6,mb4.0,Ms4.0, Msz3.8*

*NEIC **03** 14:57:27.0±0.5,31.70N×92.64E,h10^{km},mb4.3/1,Error ellipse: s-maj=11.0km s-min=6.8km az=134.0*

*MOS **03** 14:57:28.4±1.4,31.75N×92.57E,h33^{km},mb4.0/3,Error ellipse: s-maj=16.8km s-min=11.4km az=86.4*

*IDC **03** 14:57:33.8±5.3,31.67N×92.64E,h67^{km}±50^{km},mb3.5/8, mb1 3.7/11,mb1mx3.5/23,mbtmp3.7/11,ML3.4/3,Error ellipse: s-maj=35.8km s-min=14.9km az=54.0*

ISC 03 14:57:26.1±3.1**,31.64N**±0.08×**92.66E**±0.08**,h20**^{km}±24^{km}**, n27,**σ**1^s.22**/28**,mb3.9**/10**,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**2.33**	**214**	PG	**Pn**	**14 58 07.2**	**+3.1**
LSA	**Lhasa**	**2.33**	**214**	*e*Pn	**Pn**	**14 58 07.3**	**+3.2**
LSA				*e*Sn	**Sn**	**14 58 37.7**	**+5.2**
GUN	**Gumba**	**6.96**	**239**	*e*P	**Pn**	**14 59 10.8**	**+1.0**
	27nm,0.3s						
KKN	**Kakani**	**7.47**	**241**	*e*P	**Pn**	**14 59 16.9**	**0.0**
	45nm,0.4s						
KKN	**Kakani**	**7.47**	**241**	*e*P	**Pn**	**14 59 16.9**	**0.0**
KKN				pmax	pmax		
	comp=Z,22nm,0.4s						
PKI	**Pulchoki**	**7.50**	**239**	*e*P	**Pn**	**14 59 17.2**	**-0.1**
	comp=Z,82nm,0.6s						
PKI	**Pulchoki**	**7.50**	**239**	*e*P	**Pn**	**14 59 17.2**	**-0.1**
PKI				pmax	pmax		
	comp=Z,41nm,0.6s						
DMN	**Daman**	**7.70**	**240**	*e*P	**Pn**	**14 59 19.6**	**-0.5**
	comp=Z,49nm,0.7s						
GKN	**Gorkha**	**7.85**	**245**	*e*P	**Pn**	**14 59 21.1**	**-1.1**
	comp=Z,37nm,0.6s						
KOLN	**Koldanda**	**8.77**	**246**	*e*P	**P**	**14 59 32.8**	**-2.1**
	comp=Z,17nm,0.5s						
GYA	**Guiyang**	**13.29**	**109**	P	**P**	**15 00 35.0**	**-1.4**
CMAR	**Chiang Mai Arr**	**14.30**	**155**	P	**P**	**15 00 54.2**	**+4.4**
	comp=Z,0.1nm,0.3s,baz=331,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**17.11**	**335**	P	**P**	**15 01 28.2**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=166,slow=12,SNR=3.5						
SONM	**Songino Array**	**19.27**	**29**	P	**P**	**15 01 52.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=215,slow=11,SNR=16						
ZAK	**Zakamensk**	**20.33**	**20**	*e*P	**P**	**15 02 04.9**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BVAR	**Borovoye Array**	**26.77**	**329**	P	**P**	**15 03 07.1**	**+0.7**
	comp=Z,0.3nm,0.4s,mb3.1,baz=124,slow=11,SNR=4.0						
TIXI	**Tiksi**	**44.51**	**15**	*e*P	**P**	**15 05 35.3**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
AKASG	**Malin Array Be**	**49.80**	**312**	P	**P**	**15 06 19.1**	**-0.3**
	comp=Z,0.8nm,0.5s,mb4.0,baz=77,slow=6.8,SNR=6.0						
FINES	**FINESS Array B**	**51.63**	**326**	P	**P**	**15 06 31.8**	**-1.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=104,slow=7.9,SNR=6.8						
NOA	**NORSAR Array B**	**58.82**	**326**	P	**P**	**15 07 24.6**	**-0.7**
	comp=Z,0.2nm,0.7s,mb3.3,baz=61,slow=10,SNR=3.0						
GERES	**GERESS Array B**	**60.01**	**312**	P	**P**	**15 07 34.4**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=34,slow=3.5,SNR=3.6						
WRA	**Warramunga Arr**	**65.02**	**136**	P	**P**	**15 08 07.0**	**-0.4**
	comp=Z,3.8nm,0.9s,mb4.4,baz=331,slow=6.5,SNR=23						
WRAB	**Tennant Creek**	**65.02**	**136**	*e*P	**P**	**15 08 08.5**	**+1.1**
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
WRAB	**Tennant Creek**	**65.02**	**136**	*e*P	**P**	**15 08 08.5**	**+1.1**
	comp=Z,1.0nm,0.4s,mb4.2						
ASAR	**Alice Springs**	**67.69**	**139**	P	**P**	**15 08 24.2**	**-0.1**
	comp=Z,4.1nm,0.8s,mb4.5,baz=322,slow=6.3,SNR=44						
ILAR	**Eielson Array**	**73.36**	**23**	P	**P**	**15 08 58.5**	**+0.6**
	comp=Z,0.8nm,0.8s,mb3.7,baz=290,slow=5.5,SNR=8.2						
EBER	**Berja**	**75.76**	**305**	P	**P**	**15 09 13.0**	**+0.6**

SKHL 03 15:01:20.0±0.1**,49.95N**×**135.54E,h10**^{km}**,mb4.5**/6**, msh4.9**/1**,Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRNR	**Gornyy**	**1.00**	**34**	*i* Pg	Pg	15 01 37.3	-2.7
GRNR				AMB	AMB	15 01 38.3	
	870nm,0.5s						
GRNR				AMB	AMB	15 01 38.3	
	850nm,0.5s						
GRNR				AMB	AMB	15 01 38.3	
	540nm,0.5s						
GRNR				*i* Sg	Sg	15 01 50.0	-3.3
GRNR				A		15 01 50.8	
	86nm,0.5s						
KLR	**Kul'dur**	**2.57**	**255**	*e*Pg	Pg	15 02 06.0	-5.3
KLR				*e*Sg	Sg	15 02 38.6	-7.0
EKMR	**Ekimchan**	**3.52**	**334**	*e*Pn	Pn	15 02 16.0	+0.1
EKMR				*e*Pg	Pg	15 02 23.7	-6.6
EKMR				sP		15 02 25.6	
EKMR				AMB	AMB	15 02 28.0	
	110nm,0.3s						
EKMR				AMB	AMB	15 02 28.0	
	60nm,0.3s						
EKMR				AMB	AMB	15 02 28.0	
	130nm,0.3s						
EKMR				*e*Sg	Sg	15 03 10.9	-6.3
EKMR				A		15 03 16.5	
	120nm,0.5s						
EKMR				A		15 03 16.5	
	140nm,0.5s						
UGL	**Uglegorsk**	**4.34**	**99**	*e*rx	rx	15 02 45.0	
UGL				*e*Sg	Sg	15 03 35.0	-10
UGL				A		15 03 42.0	
	150nm,0.5s						
UGL				A		15 03 42.0	
	170nm,0.8s						
UGL				A		15 03 44.0	
	550nm,2.0s						
UGL				A		15 03 44.0	
	500nm,2.0s						
NKL	**Nikolayevsk**	**4.53**	**43**	*i* Pg	Pg	15 02 41.9	-8.6
NKL				AMB	AMB	15 02 44.3	
	35nm,0.5s						
NKL				AMB	AMB	15 02 44.3	
	53nm,0.5s						
NKL				sP		15 02 54.0	
NKL				*e*Sg	Sg	15 03 42.2	-8.8
NKL				A		15 03 48.5	
	110nm,0.6s						
TYV	**Tymovskoe**	**4.64**	**76**	*e*rx	rx	15 02 46.0	
TYV				*e*rx	rx	15 02 53.8	
TYV				*e*Sg	Sg	15 03 45.0	-10
TYV				A		15 03 53.0	
	50nm,1.0s						
TEY	**Ternei**	**4.97**	**171**	*e*Sg	Sg	15 03 55.0	-10
TEY				A		15 03 55.8	
	35nm,0.5s						
YASR	**Yasnyy**	**5.78**	**308**	*e*Pn	Pn	15 02 46.8	-1.1
YASR				*e*Pg	Pg	15 03 04.8	-10
YASR				AMB	AMB	15 03 13.9	
	4.0nm,0.4s						
YASR				AMB	AMB	15 03 13.9	
	6.0nm,0.4s						
YASR				AMB	AMB	15 03 13.9	
	8.0nm,0.4s						
YASR				*e*Sg	Sg	15 04 19.5	-13
YASR				A		15 04 28.7	
	10.0nm,0.6s						
YASR				A		15 04 28.7	
	43nm,0.6s						
BMKR	**Bomnak**	**6.29**	**322**	*e*rx	rx	15 03 02.6	
BMKR				*e*Pg	Pg	15 03 14.1	-11
BMKR				AMB	AMB	15 03 17.3	
	8.0nm,0.4s						
BMKR				AMB	AMB	15 03 17.3	
	5.0nm,0.4s						
BMKR				AMB	AMB	15 03 17.3	
	11nm,0.4s						
BMKR				sP		15 03 20.8	
BMKR				*e*Sg	Sg	15 04 37.0	-12
BMKR				A		15 04 46.5	
	21nm,0.6s						
BMKR				A		15 04 46.5	
	22nm,0.6s						
BMKR				A		15 04 46.5	
	24nm,0.6s						
ZEA	**Zeya**	**6.38**	**310**	*e*Pn	Pn	15 02 53.6	-2.9
ZEA				*e*Pg	Pg	15 03 15.2	-12
ZEA				AMB	AMB	15 03 18.6	
	19nm,0.5s						
ZEA				*e*Sg	Sg	15 04 38.0	-15
ZEA				A		15 04 38.7	
	36nm,1.0s						
KROS	**Kirovskiy**	**6.92**	**314**	*e*Sg	Sg	15 04 55.4	-15
KROS				A		15 05 01.4	
	10.0nm,0.5s						
KROS				A		15 05 01.4	
	23nm,0.5s						

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*NNC **03** 15:42:06.8±10.0,37.40N×77.92E,mpv3.8,Error ellipse: s-maj=125.0km s-min=85.0km az=38.0*

*BJI **03** 15:42:23.5,38.66N×77.49E,h9^{km},ML3.7*

ISC 03 15:42:03.9±2.7**,37.2N**±0.2×**77.9E**±0.2**,h10**^{km}**,n12,** σ**0^s.70**/13**,5C,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.74**	**327**	⇑PG	**Pn**	**15 42 49.8**	**+1.1**
KSH				SG	**Sn**	**15 43 13.5**	**-8.7**
KSH				Smax			
	comp=N,2µm,0.4s						
KSH				Smax			
	comp=E,2µm,0.4s						
ULHL	**Ulahol**	**5.17**	**346**	P	**Pn**	**15 43 27.9**	**+4.6**
	SNR=17						
KZA	**Kyzart**	**5.25**	**338**	P	**Pn**	**15 43 24.3**	**-0.1**
	SNR=10						
UCH	**Uchtor**	**5.63**	**334**	P	**Pn**	**15 43 29.9**	**+0.2**
	SNR=9.6						
AML	**Almayashu**	**5.87**	**328**	P	**Pn**	**15 43 33.3**	**+0.2**
	SNR=8.9						
KBK	**Karagaybulak**	**5.87**	**338**	P	**Pn**	**15 43 40.8**	**+7.6**
	SNR=6.3						
TKM2	**Tokmak 2**	**5.95**	**344**	P	**Pn**	**15 43 41.8**	**+7.6**
	SNR=12						
AAK	**Ala-Archa**	**6.00**	**335**	⇑P	**Pn**	**15 43 34.8**	**-0.1**
	comp=E,12nm,0.5s						
AAK				⇑S	**Sn**	**15 44 44.2**	**-0.2**
	comp=E,40nm,0.8s						
SMLA	**Simla**	**6.11**	**186**	*i* P	Px	15 44 06.7	
SMLA				*i* S	Sx	15 45 26.7	
EKS2	**Erkin-Say**	**6.28**	**331**	P	**Pn**	**15 43 39.6**	**+0.7**
	SNR=7.0						
KK09	**Karatay Array**	**8.16**	**318**	⇑P	**P**	**15 44 03.7**	**-1.6**
	comp=E,0.9nm,0.4s,baz=125,slow=13						
MK31	**Makanchi Array**	**10.10**	**17**	⇑P	**P**	**15 44 31.8**	**-0.3**
	comp=E,0.3nm,0.3s,baz=200,slow=13,SNR=14						

IDC 03 16:07:39.0±1.5**,2.11N**×**128.31E,mb3.4**/4**,mb1 3.5**/4**, mb1mx3.4**/17**,mbtmp3.4**/4**,Error ellipse: s-maj=164.1km s-min=23.8km az=73.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.70**	**165**	P	P	16 12 42.3	-1.5
	0.5nm,0.9s,baz=344,slow=10,SNR=4.7						
ASAR	**Alice Springs**	**26.19**	**168**	P	P	16 13 15.8	-1.5
	0.2nm,0.6s,baz=355,slow=8.9,SNR=6.8						
STKA	**Stephens Creek**	**36.07**	**161**	P	P	16 14 42.0	-2.5
	0.8nm,0.5s,baz=341,slow=12,SNR=4.2						
SONM	**Songino Array**	**49.34**	**341**	P	P	16 16 30.4	-1.7
	0.5nm,0.8s,baz=153,slow=6.4,SNR=3.1						

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*JMA **03** 16:15:40.9±0.2,43.50N×147.61E,h19^{km},M3.6*

*IDC **03** 16:15:42.6±13.0,45.25N×146.93E,mb3.7/5,mb1 3.8/5, mb1mx3.5/24,mbtmp3.7/5,Error ellipse: s-maj=331.5km s-min=42.2km az=166.0*

ISC 03 16:15:41.1±1.6**,43.5N**±0.1×**147.7E**±0.1**,h87**^{km}±12^{km}**,n15,** σ**0^s.62**/22**,mb3.5**/5**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.41**	**265**	P	**P**	**16 16 05.3**	**-0.7**
NEM2				*e*S	**S**	**16 16 23.0**	**-1.5**
JRA	**Rausu**	**1.90**	**284**	P	**P**	**16 16 12.2**	**-0.1**
JRA				*e*S	**S**	**16 16 35.4**	**0.0**
JNK	**Nakash**	**2.15**	**273**	P	**P**	**16 16 16.0**	**+0.2**
JNK				*e*S	**S**	**16 16 41.4**	**0.0**

JAK	**Akkeshi**	**2.23**	**258**	P	**P**	**16 16 17.2**	**+0.3**
JAK				*e*S	**S**	**16 16 43.4**	**-0.1**
JAR	**Ashorobuto**	**2.85**	**267**	P	**P**	**16 16 26.2**	**+0.6**
JAR				*e*S	**S**	**16 16 59.3**	**+0.4**
JOB	**Onbets**	**2.87**	**259**	P	**P**	**16 16 26.4**	**+0.6**
JOB				*e*S	**S**	**16 16 59.7**	**+0.4**
JMP	**Maruseppu**	**3.16**	**281**	P	**P**	**16 16 30.8**	**+0.9**
JCH	**Churui**	**3.28**	**256**	*e*S	**S**	**16 17 09.0**	**-0.5**
JFR	**Furan**	**3.72**	**266**	*e*S	**S**	**16 17 20.8**	**+0.4**
JNBK	**Urakawa-nobuka**	**3.81**	**253**	P	**P**	**16 16 39.0**	**+0.1**
JNBK				*e*S	**S**	**16 17 22.6**	**-0.2**
MKAR	**Makanchi Array**	**45.03**	**298**	P	**P**	**16 23 50.1**	**+0.7**
	0.2nm,0.5s,mb3.1,baz=83,slow=9.2,SNR=3.7						
INK	**Inuvik**	**46.42**	**30**	P	**P**	**16 24 00.9**	**+0.8**
	0.7nm,0.5s,mb3.7,baz=288,slow=7.6,SNR=4.2						
FINES	**FINESS Array B**	**65.26**	**333**	P	**P**	**16 26 13.8**	**-1.3**
	0.4nm,0.5s,mb3.5,baz=56,slow=6.9,SNR=6.3						
NOA	**NORSAR Array B**	**69.97**	**339**	P	**P**	**16 26 44.1**	**-0.2**
	0.2nm,0.3s,mb3.4,baz=40,slow=5.1,SNR=3.3						
HFS	**Hagfors**	**70.06**	**337**	P	**P**	**16 26 44.2**	**-0.8**
	1.6nm,0.9s,mb3.8,baz=22,slow=7.8,SNR=6.2						

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*NEIC **03** 16:24:39.8,16.92N×100.15W,h14^{km},MD3.7(MEX),After MEX.*

MEX 03 16:24:39.8±1.0**,16.92N×100.15W,h14^{km}±5^{km},MD3.7,2C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.17**	**317**	⇑*i*P	Pg	16 24 43.4	-0.6
CAIG				*i* S	Sg	16 24 45.9	-0.8
ACX	**Acapulco**	**0.23**	**104**	⇑*i*P	Pg	16 24 44.0	-1.0
ACX				*i* S	Sg	16 24 48.0	-0.4
ZIIG	**Zihuatanejo**	**1.43**	**299**	*e*P	Pn	16 25 01.6	-3.9
ZIIG				*i* S	Sb	16 25 18.8	-4.9
PLIG	**Platanillo**	**1.58**	**23**	*e*P	Pn	16 25 04.4	-3.3
PLIG				*i* S	Sn	16 25 20.3	-7.8
PPM	**Popocatepetl**	**2.58**	**34**	*e*P	Pn	16 25 20.2	-1.7
PPM				*i* S	Sn	16 25 50.0	-3.3
PPM	**Popocatepetl**	**2.58**	**34**	*e*P	Pn	16 25 20.0	-1.9
PPM				*e*P		16 25 20.2	
PPM				*i* S	Sn	16 25 48.1	-5.2
PPM				*i* S	Sn	16 25 50.0	-3.3
VHO	**Vista Hermosa**	**3.27**	**87**	*e*P	Pn	16 25 27.8	-4.0
VHO				*i* S	Sn	16 26 09.0	-1.8

IDC 03 16:33:11.3±3.3**,1.18N×96.88E,mb3.6**/4**,mb1 3.7**/5**, mb1mx3.5**/20**,mbtmp3.5**/5**,ML3.5**/1**,MS2.7**/1**,Ms1 2.9**/1**, ms1mx2.5**/21**,Error ellipse: s-maj=117.3km s-min=27.2km az=59.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.29**	**7**	P	P	16 37 15.2	-0.7
	0.1nm,0.3s,baz=199,slow=12,SNR=5.0						
CMAR				LR	LR	16 44 29.7	
	comp=Z,24nm,19.1s,baz=50,slow=39						
WRA	**Warramunga Arr**	**42.30**	**122**	P	P	16 41 07.0	-1.7
	0.3nm,0.6s,baz=304,slow=9.2,SNR=3.9						
MKAR	**Makanchi Array**	**47.19**	**346**	P	P	16 41 45.6	-2.0
	0.3nm,0.5s,baz=164,slow=9.1,SNR=6.5						
SONM	**Songino Array**	**47.20**	**9**	P	P	16 41 45.8	-1.8
	0.4nm,0.4s,baz=200,slow=7.6,SNR=4.8						
ZAL	**Zalesovo**	**53.52**	**351**	P	P	16 42 33.2	-2.6
	0.7nm,0.3s,baz=34,slow=3.6,SNR=3.1						

IDC 03 16:38:13.4±1.9**,28.55S×178.41W,mb4.0**/3**,mb1 4.2**/3**, mb1mx3.9**/14**,mbtmp4.0**/3**,Error ellipse: s-maj=53.0km s-min=16.3km az=42.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.82**	**149**	Pn	Pn	16 38 32.4	+0.4
	52nm,0.3s,baz=270,slow=20,SNR=2.8						
RAO				Sn	Sn	16 38 46.1	+1.2
	357nm,0.3s,baz=67,slow=22,SNR=9.6						
STKA	**Stephens Creek**	**34.59**	**254**	P	P	16 45 03.4	-2.7
	3.0nm,0.8s,baz=95,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**42.88**	**265**	P	P	16 46 13.5	-1.9
	0.4nm,0.4s,baz=106,slow=7.5,SNR=8.5						
WRA	**Warramunga Arr**	**43.70**	**270**	P	P	16 46 21.3	-0.8
	1.1nm,0.3s,baz=110,slow=8.1,SNR=45						
FINES	**FINESS Array B**	**143.29**	**341**	PKP	PKPdf	16 57 47.4	-3.3
	1.0nm,0.5s,baz=62,slow=4.6,SNR=13						
AKASG	**Malin Array Be**	**149.61**	**324**	PKPbc	PKPdf	16 58 03.9	+2.2
	0.9nm,0.6s,baz=43,slow=2.5,SNR=4.1						

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*NNC **03** 16:46:59.3±8.4,40.25N×71.29E,h6^{km}±38^{km},mpv3.3, Error ellipse: s-maj=64.6km s-min=27.4km az=0.0*

ISC 03 16:46:56.3±3.6**,40.2N**±0.3×**70.8E**±0.2**,h10^{km},n9, σ1^{s}04**/10**,3C-2D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**2.88**	**48**	P	**Pn**	**16 47 42.8**	**-0.4**
	SNR=21						
KK09	**Karatay Array**	**2.91**	**355**	⇓Pn	**Pn**	**16 47 47.1**	**+3.5**
	0.8nm,0.3s,baz=170,slow=12						
KK09				⇑Pg	**Pg**	**16 47 53.4**	**-1.0**
	18nm,0.3s,baz=162,slow=15						
KK09				⇑Lg		16 48 32.0	
	16nm,0.3s,baz=170,slow=29						
EKS2	**Erkin-Say**	**3.30**	**41**	P	**Pn**	**16 47 51.5**	**+2.5**
	SNR=8.6						
UCH	**Uchtor**	**3.43**	**53**	P	**Pn**	**16 47 50.4**	**-0.5**
	SNR=11						
AAK	**Ala-Archa**	**3.66**	**48**	⇑Pg	**Pb**	**16 48 01.2**	**+0.4**
	6.1nm,0.4s						
AAK				⇓Lg		16 48 44.6	
	25nm,0.6s						
KZA	**Kyzart**	**3.82**	**59**	P	**Pn**	**16 47 55.9**	**-0.6**
	SNR=7.3						
KBK	**Karagaybulak**	**3.94**	**50**	P	**Pn**	**16 47 58.4**	**+0.3**
	SNR=18						
TKM2	**Tokmak 2**	**4.48**	**51**	P	**Pn**	**16 48 05.1**	**-0.8**
	SNR=7.4						
AB31	**Akbulak array**	**11.88**	**323**	P	**P**	**16 49 48.8**	**0.0**
	0.2nm,0.3s,baz=129,slow=14,SNR=12						

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*IDC **03** 16:47:22.0±2.9,2.43N×95.56E,mb3.6/5,mb1 3.8/6, mb1mx3.6/20,mbtmp3.6/6,ML3.6/1,Error ellipse: s-maj=113.3km s-min=21.7km az=61.0*

*NEIC **03** 16:47:26.8±1.0,2.46N×95.67E,h30^{km},Error ellipse: s-maj=22.5km s-min=13.1km az=63.0*

ISC 03 16:47:24.9±1.4**,2.5N**±0.1×**95.7E**±0.2**,h30^{km},n7,σ0^{s}45**/7**, mb3.6**/5**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.70**	**60**	*e*Pn	**Pn**	**16 48 49.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**16.20**	**11**	Pn	**P**	**16 51 13.2**	**+0.9**
	0.1nm,0.3s,baz=198,slow=12,SNR=9.2						
WRA	**Warramunga Arr**	**44.00**	**122**	P	**P**	**16 55 32.0**	**+0.2**
	0.4nm,0.6s,mb3.3,baz=297,slow=9.6,SNR=5.8						
ASAR	**Alice Springs**	**45.38**	**127**	P	**P**	**16 55 43.0**	**+0.2**
	0.2nm,0.7s,mb3.0,baz=312,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**45.66**	**347**	P	**P**	**16 55 44.4**	**-0.3**
	1.1nm,0.5s,mb4.1,baz=160,slow=8.8,SNR=19						
SONM	**Songino Array**	**46.13**	**10**	P	**P**	**16 55 47.9**	**-0.5**
	0.4nm,0.6s,mb3.6,baz=192,slow=8.8,SNR=4.0						
ZAL	**Zalesovo**	**52.07**	**352**	P	**P**	**16 56 34.0**	**-0.2**
	0.8nm,0.3s,mb4.1,baz=330,slow=5.5,SNR=4.4						

IDC 03 16:57:26.7±6.5**,62.04S×156.52E,mb3.9**/2**,mb1 4.1**/3**, mb1mx3.9**/12**,mbtmp3.8**/3**,ML3.6**/1**,MS3.9**/10**,Ms1 3.9**/10**, ms1mx3.7**/18**,Error ellipse: s-maj=372.7km s-min=41.4km az=75.0,Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**15.65**	**176**	Pn	P	17 01 08.2	-1.6
	0.2nm,0.3s,baz=344,slow=14,SNR=13						
VNDA				LR	LR	17 06 43.6	
	comp=Z,522nm,18.5s,baz=356,slow=36						
RPZ	**Rata Peaks**	**20.25**	**32**	LR	LR	17 07 56.0	
	comp=Z,501nm,21.5s,baz=192,slow=31						
URZ	**Urewera**	**26.98**	**38**	LR	LR	17 11 25.3	
	comp=Z,202nm,21.9s,baz=206,slow=31						
MAW	**Mawson**	**36.57**	**220**	LR	LR	17 19 27.3	
	comp=Z,236nm,19.3s,baz=311,slow=36						
NWAO	**Narrogin (SRO)**	**38.38**	**301**	LR	LR	17 16 23.6	
	comp=Z,184nm,18.7s,baz=73,slow=30						
DZM	**Mont Dzumac**	**40.52**	**14**	LR	LR	17 16 25.6	
	comp=Z,196nm,19.6s,baz=225,slow=28						
ASAR	**Alice Springs**	**41.33**	**328**	P	P	17 05 14.1	-1.4
	1.5nm,0.9s,baz=170,slow=8.6,SNR=5.9						
ASAR				LR	LR	17 20 39.5	
	comp=Z,58nm,21.0s,baz=274,slow=34						
CTA	**Charters Tower**	**42.52**	**346**	LR	LR	17 21 28.6	
	comp=Z,106nm,20.1s,baz=313,slow=34						
WRA	**Warramunga Arr**	**44.79**	**330**	P	P	17 05 41.7	-2.1
	0.7nm,0.7s,baz=162,slow=7.2,SNR=5.2						
HNR	**Honiara**	**52.57**	**4**	LR	LR	17 23 40.3	
	comp=Z,152nm,20.5s,baz=206,slow=30						
BOSA	**Boshof**	**81.55**	**222**	LR	LR	17 41 38.5	
	comp=Z,59nm,20.4s,baz=34,slow=32						

IDC 03 16:58:24.4±2.9**,8.91N×92.46E,mb3.4**/4**,mb1 3.5**/4**, mb1mx3.4**/20**,mbtmp3.4**/4**,Error ellipse: s-maj=116.2km s-min=23.4km az=66.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**38.74**	**349**	P	P	17 05 49.6	-2.4
	0.3nm,0.4s,baz=158,slow=8.1,SNR=5.6						
SONM	**Songino Array**	**40.55**	**14**	P	P	17 06 05.6	-1.4
	0.3nm,0.6s,baz=206,slow=7.6,SNR=3.2						
WRA	**Warramunga Arr**	**50.21**	**125**	P	P	17 07 22.2	-2.2
	0.2nm,0.3s,baz=300,slow=9.8,SNR=13						
ASAR	**Alice Springs**	**51.85**	**129**	P	P	17 07 34.5	-2.3
	0.2nm,0.3s,baz=307,slow=7.5,SNR=11						
ASAR				PcP	PcP	17 08 48.5	-1.4
	0.2nm,0.5s,baz=307,slow=3.1,SNR=4.7						

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*NEIC **03** 16:59:22.3,34.50N×26.68E,h21^{km},MD3.5(ATH),After ATH.*

*CSEM **03** 16:59:22.3,34.50N×26.68E,h21^{km},MD3.5/4,After ATH*

ATH 03 16:59:22.3,34.50N×26.68E,h21^{km},MD3.5/4**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	**Khrisi**	**0.89**	**295**	*e*PB	Pb	16 59 39.0	0.0
KARP	**Karpathos**	**1.12**	**21**	*e*PN	Pn	16 59 43.5	+0.6
NPS	**Neapolis**	**1.16**	**311**	*e*PN	Pn	16 59 45.0	+1.5
GVD	**Gavdhos**	**2.16**	**280**	*e*Pn	Pn	16 59 58.1	+0.3
VAM	**Vamos**	**2.23**	**295**	*e*PN	Pn	17 00 00.5	+1.7

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*MOS **03** 17:02:56.3±1.7,46.11N×154.18E,h15^{km},mb4.8/32,Error ellipse: s-maj=8.3km s-min=7.0km az=96.3*

*BJI **03** 17:02:59.7,46.00N×154.20E,h26^{km},mB4.6,mb4.8, Ms3.6,Msz3.4*

*SKHL **03** 17:02:59.6±0.8,46.16N×154.43E,h76^{km}±24^{km},mb5.5/1, Ms3.9/3*

*IDC **03** 17:02:59.8±0.7,46.08N×154.27E,h27^{km}±5^{km},mb4.1/14, mb1 4.3/17,mb1mx4.2/22,mbtmp4.3/17,ML4.0/3,MS3.5/9, Ms1 3.5/9,ms1mx3.2/27,Error ellipse: s-maj=17.2km s-min=14.9km az=137.0*

*NEIC **03** 17:02:59.7±0.4,46.05N×154.16E,mb4.7/39,Error ellipse: s-maj=10.9km s-min=6.8km az=141.0*

*NIED **03** 17:03:00,46.30N×153.90E,h35^{km},Mw4.3 Best double couple: $M_0$3.12×10^{15} NP1:ϕ_s315°,δ86°,λ7°. NP2:ϕ_s225°, δ83°,λ176°.*

ISC 03 17:02:57.9±0.4**,46.08N**±0.05×**154.26E**±0.06**,h27^{km}, h27^{km}**±1.6^{km}**:pP-P,n167,σ1^{s}32**/172**,mb4.6**/63**,MS3.6**/13**, 6C-6D,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.56**	**262**	⇓*i*PN	**Pn**	**17 04 05.2**	**-1.8**
KUR				pmax	pmax		
	comp=Z,4µm,1.2s						
KUR				pmax	pmax		
	comp=N,150nm,0.7s						
KUR				pmax	pmax		
	comp=E,170nm,0.7s						
KUR				pmax	pmax		
	comp=Z,580nm,0.7s						
KUR	**Kuril'sk**	**4.56**	**262**	*i* P	**Pn**	**17 04 05.2**	**-1.8**
KUR				AMB	AMB	17 04 06.0	
	comp=Z,4µm,1.2s						
KUR				AMB	AMB	17 04 06.2	
	comp=Z,150nm,0.7s						
KUR				AMB	AMB	17 04 06.2	
	comp=Z,170nm,0.7s						
KUR				AMB	AMB	17 04 06.2	
	comp=Z,580nm,0.7s						
KUR				*i* S	**Sn**	**17 04 55.0**	**-4.8**
KUR				A		17 04 57.0	
	comp=Z,4µm,1.2s						
KUR				A		17 04 57.0	
	comp=Z,4µm,1.2s						
KUR				A		17 04 57.7	
	comp=Z,830nm,0.8s						
KUR				A		17 04 57.7	
	comp=Z,650nm,0.8s						
SKR	**Severo-Kuril's**	**4.77**	**14**	*e*PN	**Pn**	**17 04 05.5**	**-4.4**
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				MLR	MLR		
	comp=E,3µm,16.0s						
SKR				MLR	MLR		
	comp=Z,3µm,16.0s						
SKR	**Severo-Kuril's**	**4.77**	**14**	*e*P	**Pn**	**17 04 05.5**	**-4.4**
SKR				AMB	AMB	17 04 09.0	
	comp=Z,50nm,0.5s						
SKR				AMB	AMB	17 04 09.0	
	comp=Z,80nm,0.5s						
SKR				*e*S	**Sn**	**17 04 58.0**	**-7.0**
SKR				A		17 05 04.5	
	comp=Z,150nm,0.5s						
SKR				A		17 05 04.5	
	comp=Z,390nm,0.5s						
SKR				A		17 05 04.5	
	comp=Z,90nm,0.5s						
SKR				AMS	AMS	17 07 12.0	
	comp=Z,2µm,16.0s						
PAU	**Pauzhetka**	**5.64**	**16**	*e*P	**Pn**	**17 04 20.6**	**-1.7**
PAU				*i* S	**Sn**	**17 05 21.8**	**-5.3**
YUK	**Yuzh-Kuril'sk**	**6.29**	**254**	*e*P	**Pn**	**17 04 30.2**	**-1.2**
YUK				AMB	AMB	17 04 31.6	
	comp=Z,420nm,0.3s						
YUK				*e*S	**Sn**	**17 05 37.6**	**-5.6**
YUK				A		17 05 43.2	
	comp=Z,2µm,0.6s						
YUK				A		17 05 44.9	
	comp=Z,390nm,0.5s						
PET	**Petropavlovsk**	**7.51**	**21**	*e*PN	**Pn**	**17 04 46.0**	**-2.5**
PET				MLR	MLR		
	comp=Z,200nm,16.0s						
PET	**Petropavlovsk**	**7.51**	**21**	*e*P	**Pn**	**17 04 46.0**	**-2.5**
PET				*e*S	**Sn**	**17 06 04.9**	**-8.8**
PET				A		17 06 07.7	
	comp=Z,150nm,0.6s						
PET				A		17 06 07.7	
	comp=Z,110nm,0.6s						
PET				AMS	AMS	17 07 29.5	
	comp=Z,200nm,16.0s						
YSS	**Yuzh-Sakhalins**	**7.98**	**280**	⇓*i*PN	**Pn**	**17 04 57.0**	**+1.9**
YSS				pmax	pmax		
	comp=Z,250nm,1.0s						
YSS				pmax	pmax		
	comp=N,90nm,0.8s						
YSS				pmax	pmax		
	comp=E,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS	**Yuzh-Sakhalins**	**7.98**	**280**	*e*P	**Pn**	**17 04 57.1**	**+2.0**
	comp=Z,193nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.98**	**280**	⇓*i*P	**Pn**	**17 04 57.0**	**+1.9**
YSS				AMB	AMB	17 04 58.1	
	comp=Z,90nm,0.8s						
YSS				AMB	AMB	17 04 58.1	
	comp=Z,28nm,1.0s						
YSS				AMB	AMB	17 04 58.1	
	comp=Z,250nm,1.0s						
YSS				*e*S	**Sn**	**17 06 25.0**	**-0.5**
YSS				AMS	AMS	17 08 06.0	
	comp=Z,200nm,15.0s						
ASAJ	**Asahikawa**	**8.48**	**261**	PN	**P**	**17 05 02.5**	**+0.4**
ASAJ						17 06 49.0	
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,164nm,19.0s						
ASAJ	**Asahikawa**	**8.48**	**261**	Pn	**P**	**17 05 02.5**	**+0.4**
	comp=Z,7.4nm,0.3s,baz=92,slow=17,SNR=53						
ASAJ				Sn	**Sn**	**17 06 49.0**	**+11**
	comp=Z,0.3nm,0.3s,baz=9.3,slow=19,SNR=2.1						
ASAJ				LR	LR	17 08 44.6	
	comp=Z,164nm,19.0s,baz=73,slow=41						
UGL	**Uglegorsk**	**8.77**	**294**	*e*PN	**P**	**17 05 08.5**	**+2.5**
UGL				*e*S	**Sn**	**17 06 47.0**	**+2.0**
UGL				pmax	pmax		
	comp=Z,66nm,0.8s						
UGL				smax			
	comp=N,42nm,0.4s						
UGL				smax			
	comp=E,53nm,0.4s						
UGL				MLR	MLR		
	comp=E,400nm,19.0s						
UGL				MLR	MLR		
	comp=Z,350nm,19.0s						
UGL	**Uglegorsk**	**8.77**	**294**	*e*P	**P**	**17 05 08.5**	**+2.5**
UGL				AMB	AMB	17 05 10.0	
	comp=Z,66nm,0.8s						
UGL				AMB	AMB	17 05 10.0	
	comp=Z,300nm,2.0s						
UGL				*e*S	**Sn**	**17 06 47.0**	**+2.0**
UGL				A		17 06 48.0	
	comp=Z,42nm,0.4s						
UGL				A		17 06 48.0	
	comp=Z,53nm,0.4s						
UGL				AMS	AMS	17 08 16.0	
	comp=Z,400nm,19.0s						
UGL				AMS	AMS	17 08 16.0	
	comp=Z,350nm,19.0s						
TYV	**Tymovskoe**	**9.07**	**306**	*e*P	**P**	**17 05 08.4**	**-1.7**
TYV				AMB	AMB	17 05 10.2	
	comp=Z,42nm,1.0s						
TYV				*e*S	**Sn**	**17 06 45.5**	**-6.9**
TYV				A		17 06 52.2	
	comp=Z,28nm,0.9s						
TYV				AMS	AMS	17 08 12.0	
	comp=Z,400nm,20.0s						
TYV				AMS	AMS	17 08 12.0	
	comp=Z,550nm,20.0s						
TEY	**Ternei**	**12.42**	**272**	*e*P	**P**	**17 05 53.5**	**-2.3**
FX1	**Attu Island--F**	**14.02**	**54**	Pn	**P**	**17 06 15.1**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=276,slow=9.2,SNR=4.9						
FX1				Sn	**S**	**17 08 36.7**	**-16**
	comp=Z,3.1nm,0.3s,baz=228,slow=22,SNR=11						
MJAR	**Matsushiro Arr**	**15.35**	**237**	Pn	**P**	**17 06 32.6**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=29,slow=13,SNR=11						
MAJO	**Matsushiro**	**15.35**	**237**	*e*P	**P**	**17 06 32.1**	**-2.2**
MAJO				pmax	pmax		
	comp=Z,19nm,1.0s						
MAJO	**Matsushiro**	**15.35**	**237**	*e*P	**P**	**17 06 32.1**	**-2.2**
	comp=Z,18nm,1.0s						
MAT	**Matsushiro**	**15.35**	**237**	*e*P	**P**	**17 06 32.0**	**-2.3**
MAT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAT	**Matsushiro**	**15.35**	**237**	*e*P	**P**	**17 06 32.0**	**-2.3**
	comp=Z,8.4nm,0.9s						
MAT	**Matsushiro**	**15.35**	**237**	P	**P**	**17 06 32.2**	**-2.1**
MAT				S	**S**	**17 09 24.6**	**+0.7**
KLR	**Kul'dur**	**15.48**	**290**	*e*P	**P**	**17 06 35.2**	**-0.7**
MDJ	**Mudanjiang**	**17.39**	**274**	P	**P**	**17 06 59.6**	**-0.5**
MDJ				AMB	AMB		
	comp=Z,40nm,1.1s						
MDJ				LR	LR		
	comp=N,60nm,31.7s						
MDJ				LR	LR		
	comp=E,90nm,29.3s						
MDJ				LR	LR		
	comp=Z,100nm,27.6s						
MDJ	**Mudanjiang**	**17.39**	**274**	*e*P	**P**	**17 07 00.6**	**+0.5**
	comp=Z,28nm,0.8s						
ZEA	**Zeya**	**18.92**	**304**	*e*P	**P**	**17 07 14.7**	**-4.2**
ZEA				AMB	AMB	17 07 17.5	
	comp=Z,26nm,0.8s						
CN2	**Changchun**	**20.47**	**274**	*e*P	**P**	**17 07 33.2**	**-2.9**
CN2				AMB	AMB		
	comp=Z,20nm,0.7s						
CLNS	**Chul'man**	**21.05**	**311**	*e*P	**P**	**17 07 38.2**	**-3.8**
CLNS				*e**PP		17 07 44.1	
CLNS				*e*PPP	PP	17 08 00.4	-4.7
CLNS				*e*		17 11 47.7	
CLNS				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.5						
CLNS				pmax	pmax		
	comp=N,10.0nm,1.2s						
CLNS				pmax	pmax		
	comp=E,18nm,1.0s						
CLNS				pmax	pmax		
	comp=N,17nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.5						
CLNS				pmax	pmax		
	comp=E,13nm,0.7s						
CLNS				MLR	MLR		
	comp=N,100nm,15.0s,MS3.4						
CLNS				MLR	MLR		
	comp=Z,200nm,15.0s,MS3.6						
CLNS				MLR	MLR		
	comp=E,50nm,14.0s,MS3.4						
YAK	**Yakutsk**	**21.31**	**327**	*e*P	**P**	**17 07 41.8**	**-2.7**
YAK				*e*S	**S**	**17 11 33.4**	**-1.4**
YAK				*e*		17 11 43.0	
YAK				*e**SS		17 12 05.9	
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.1						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
YAK				smax			
	comp=N,3.0nm,1.1s						
YAK	**Yakutsk**	**21.31**	**327**	*e*P	**P**	**17 07 41.5**	**-3.0**
	comp=N,15nm,0.5s,mb4.6						
KS15	**Wonju Array Si**	**21.41**	**256**	*e*P	**P**	**17 07 44.3**	**-1.3**
SNY	**Shenyang**	**22.42**	**270**	⇓P	**P**	**17 07 56.3**	**+0.6**
SNY				S	**S**	**17 12 03.9**	**+8.4**
SNY				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.0						
SNY				LR	LR		
	comp=N,120nm,14.7s						
SNY				LR	LR		
	comp=Z,120nm,21.6s						
BILL	**Bilibino**	**22.87**	**12**	*i* P	**P**	**17 08 01.5**	**+1.6**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
BILL	**Bilibino**	**22.87**	**12**	*e*P	**P**	**17 08 01.1**	**+1.2**
	comp=Z,4.1nm,0.4s,mb4.2						
HIA	**Hailar**	**23.34**	**290**	*e*P	**P**	**17 08 03.2**	**-1.3**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HIA	**Hailar**	**23.34**	**290**	*e*P	**P**	**17 08 03.2**	**-1.4**
	comp=Z,8.6nm,0.8s,mb4.2						
JOW	**Kunigami**	**28.18**	**236**	LR	LR	17 20 17.7	
	comp=Z,54nm,18.1s,MS3.2,baz=311,slow=37						
TIXI	**Tiksi**	**28.33**	**343**	*i* P	**P**	**17 08 49.7**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,8.0nm,2.0s,mb4.0						
SSE	**Sheshan**	**29.62**	**251**	P	**P**	**17 09 04.4**	**+1.3**
SSE				S	**S**	**17 13 53.4**	**-2.0**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
SSE				AMB	AMB		
	comp=Z,50nm,5.7s						
SSE				LR	LR		
	comp=N,20nm,25.0s,MS2.9						
SSE				LR	LR		
	comp=E,30nm,25.1s,MS2.9						
SSE				LR	LR		
	comp=Z,50nm,30.7s						
NJ2	**Nanjing**	**30.58**	**255**	*e*P	**P**	**17 09 15.3**	**+3.8**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
ULN	**Ulaanbaatar**	**31.87**	**291**	*c* *i*P	**P**	**17 09 22.2**	**-0.5**
ULN	**Ulaanbaatar**	**31.87**	**291**	*e*P	**P**	**17 09 21.7**	**-1.0**

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      comp=Z,5.0nm,0.9s,mb4.3
SONM  Songino Array      32.30 291  P        P         17 09 25.9 -0.7
      comp=Z,1.1nm,0.6s,mb3.9,baz=71,slow=8.4,SNR=7.2
SONM                                LR       LR        17 23 16.7
      comp=Z,107nm,20.0s,MS3.5,baz=255,slow=38
TLY   Talaya             33.19 298 i P       P         17 09 32.9 -1.3
TLY                                 pmax     pmax
      comp=Z,4.0nm,0.6s,mb4.5
TLY                                 MLR      MLR
      comp=Z,100nm,17.0s,MS3.6
ZAK   Zakamensk          33.68 296 eP        P         17 09 37.4 -1.1
ZAK                                 pmax     pmax
      comp=Z,3.0nm,1.1s,mb4.1
IMA   Indian Mountai     33.89  35  P        P         17 09 40.7 +0.6
IMA                                e*PP      pP        17 09 48.1 +0.1
IMA                                 pmax     pmax
      comp=Z,30nm,0.9s,mb5.2
IMA   Indian Mountai     33.89  35  P        P         17 09 40.7 +0.6
      comp=Z,30nm,0.9s,mb5.2
IMA                                epP       pP        17 09 48.1 +0.1
SML   Sawmill            35.91  43 eP        P         17 09 50.7 -6.7
COLA  College            36.17  38 eP        P         17 10 07.5 +7.9
COLA                                pmax     pmax
      comp=Z,9.0nm,0.7s,mb4.8
COLA  College            36.17  38 eP        P         17 10 07.5 +7.9
      comp=Z,8.9nm,0.7s,mb4.8
XAN   Xi’an              36.26 267  P        P         17 10 03.1 +2.4
XAN                                 AP       pP        17 10 10.4 +1.8
ILAR  Eielson Array      36.58  38  pP       pP        17 10 10.8 -0.2
      comp=Z,2.0nm,0.6s,baz=255,slow=9.3,SNR=15
ILAR                                LR       LR        17 24 24.2
      comp=Z,33nm,18.8s,MS3.1,baz=2.7,slow=35
LZH   Lanzhou            38.71 273 ⇑P        P         17 10 23.5 +2.3
LZH                                 AP       pP        17 10 33.5 +4.3
LZH                                 XP       sP        17 10 37.6 +5.1
LZH                                 AMB      AMB
      comp=Z,20nm,1.3s,mb4.7
LZH                                 LR       LR
      comp=N,190nm,13.0s
LZH                                 LR       LR
      comp=Z,340nm,17.3s,MS4.2
GTA   Gaotai             39.86 280  P        P         17 10 32.6 +1.8
GTA                                 AP       pP        17 10 43.1 +4.3
GTA                                 XP       sP        17 10 47.6 +5.5
GTA                                 AMB      AMB
      comp=Z,10.0nm,1.0s,mb4.5
INK   Inuvik             41.79  32  P        P         17 10 50.9 +4.7
INK                                e*PP      pP        17 10 55.1 +1.0
INK                                 pmax     pmax
      comp=Z,6.0nm,0.7s
INK   Inuvik             41.79  32  pP       pP        17 10 55.4 +1.2
      comp=Z,5.8nm,0.6s,baz=303,slow=6.2,SNR=10
INK   Inuvik             41.79  32  P        P         17 10 50.9 +4.7
      comp=Z,5.7nm,0.7s,mb4.3
INK                                epP       pP        17 10 55.1 +0.9
GYA   Guiyang            42.35 259  P        P         17 10 51.9 +0.6
GYA                                 AMB      AMB
      comp=Z,10.0nm,0.8s,mb4.5
ZAL   Zalesovo           43.66 307  P        P         17 11 01.4 -0.2
      comp=Z,2.1nm,0.4s,mb4.2,baz=40,slow=5.6,SNR=12
ZAL                                 LR       LR        17 30 56.9
      comp=Z,159nm,18.7s,MS4.0,baz=22,slow=38
DLBC  Dease Lake         45.49  46  pP       pP        17 11 26.6 +2.4
      comp=Z,3.2nm,0.9s,baz=288,slow=11,SNR=5.4
MKAR  Makanchi Array     47.95 298  P        P         17 11 35.8 -0.1
      comp=Z,2.8nm,0.4s,mb4.6,baz=71,slow=7.4,SNR=45
MKAR                                pPcP               17 13 11.7
      comp=Z,1.1nm,0.7s,baz=63,slow=2.7,SNR=3.8
MKAR                                LR       LR        17 32 50.6
      comp=Z,104nm,19.4s,MS3.8,baz=80,slow=37
MKAR  Makanchi Array     47.95 298  P        P         17 11 35.8 -0.1
MKAR                                pPcP               17 13 11.7
MKAR                                LR       LR        17 32 50.6
YKA   Yellowknife Ar     50.99  37 i P       P         17 12 01.6 +2.8
YKA   Yellowknife Ar     50.99  37  pP       pP        17 12 07.3 +0.4
      comp=Z,2.0nm,0.7s,baz=298,slow=7.3,SNR=8.6
LSA   Lhasa              51.11 274  P        P         17 12 06.0 +5.8
LSA   Lhasa              51.11 274 eP        P         17 11 59.7 -0.5
LSA                                e*PP      pP        17 12 07.0 -1.4
LSA                                 pmax     pmax
      comp=Z,10.0nm,0.6s,mb4.9
LSA   Lhasa              51.11 274 eP        P         17 11 59.7 -0.6
      comp=Z,10.0nm,0.6s,mb4.9
LSA                                epP       pP        17 12 07.0 -1.4
BVAR  Borovoye Array     51.89 310  P        P         17 12 05.7 -0.2
      comp=Z,2.8nm,0.4s,mb4.5,baz=59,slow=8.6,SNR=26
BVAR                                pPcP               17 13 26.3
      comp=Z,1.0nm,0.5s,baz=63,slow=3.3,SNR=3.9
CMAR  Chiang Mai Arr     52.99 258 i P       P         17 12 23.1 +8.5
CMAR                                pmax     pmax
      comp=Z,1.0nm,0.7s
CMAR  Chiang Mai Arr     52.99 258  pP       pP        17 12 23.1 +0.3
      comp=Z,1.1nm,0.7s,baz=38,slow=7.3,SNR=5.7
ULHL  Ulahol             53.97 296  P        P         17 12 22.4 +1.0
      SNR=14
USP   Ospenovka          54.49 298  P        P         17 12 26.1 +0.8
      SNR=6.9
KBK   Karagaybulak       54.55 297  P        P         17 12 26.5 +0.8
      SNR=6.0
KZA   Kyzart             54.68 296  P        P         17 12 28.5 +1.9
      SNR=10
AAK   Ala-Archa          54.84 297d iP       P         17 12 27.5 -0.3
AAK                                 pmax     pmax
      comp=Z,9.0nm,1.1s,mb4.7
AAK   Ala-Archa          54.84 297 eP        P         17 12 26.4 -1.5
      comp=Z,6.1nm,0.8s,mb4.7
EKS2  Erkin-Say          55.27 298  P        P         17 12 31.8 +0.8
      SNR=10
AML   Almayashu          55.61 297  P        P         17 12 35.2 +1.7
      SNR=6.6
GUN   Gumba              55.85 276 eP        P         17 12 37.0 +1.7
      comp=Z,33nm,0.9s,mb5.4
ARU   Arti               56.04 318d iP       P         17 12 35.2 -1.0
ARU                                 pmax     pmax
      comp=Z,25nm,0.6s,mb5.4
ARU   Arti               56.04 318 eP        P         17 12 35.3 -0.9
      comp=Z,25nm,0.6s,mb5.4
KKN   Kakani             56.34 277 eP        P         17 12 39.9 +1.0
      comp=Z,27nm,1.0s,mb5.2
KKN   Kakani             56.34 277 eP        P         17 12 39.9 +1.0
KKN                                 pmax     pmax
      comp=Z,14nm,1.0s,mb5.0
PKI   Pulchoki           56.39 276 eP        P         17 12 38.7 -0.5
DMN   Daman              56.58 276 eP        P         17 12 40.2 -0.3
      comp=Z,82nm,1.2s,mb5.6
GKN   Gorkha             56.66 277 eP        P         17 12 42.0 +0.9
      comp=Z,23nm,0.6s,mb5.4
KOLN  Koldanda           57.52 278 eP        P         17 12 46.8 -0.4
      comp=Z,22nm,0.9s,mb5.2
ARCES ARCESS Array B     58.74 341  P        P         17 12 55.7 +0.5
      comp=Z,3.0nm,0.9s,mb4.3,baz=18,slow=7.7,SNR=14
ARCES ARCESS Array B     58.74 341  P        P         17 12 55.7 +0.5
SUMG  Summit             61.31   4 eP        P         17 13 12.9 +0.1
      comp=Z,4.6nm,0.9s,mb4.6
FCC   Fort Churchill     61.38  33 eP        P         17 13 12.7 -0.7
FCC                                e*PP      pP        17 13 21.0 -0.7
FCC                                 pmax     pmax
      comp=Z,6.0nm,1.0s,mb4.7
FCC   Fort Churchill     61.38  33 eP        P         17 13 12.7 -0.7
      comp=Z,6.0nm,1.0s,mb4.7
FCC                                epP       pP        17 13 21.0 -0.7
BOZ   Bozeman (W)        61.53  53 eP        P         17 13 14.6  0.0
BOZ                                e*PP      pP        17 13 23.1 +0.2
BOZ                                 pmax     pmax
      comp=Z,3.0nm,1.0s,mb4.4
BOZ   Bozeman (W)        61.53  53 eP        P         17 13 14.6  0.0
      comp=Z,3.1nm,1.0s,mb4.4
BOZ                                epP       pP        17 13 23.1 +0.2
KAF   Kangasniemi        64.38 336 ep        P         17 13 31.5 -1.6
PDAR  Pinedale Array     64.50  54  P        P         17 13 34.5 +0.4
      comp=Z,0.9nm,1.0s,mb3.8,slow=3.0,SNR=5.3
FINES FINESS Array B     64.98 335  P        P         17 13 36.5 -0.5
      comp=Z,6.5nm,0.8s,mb4.7,baz=34,slow=6.9,SNR=17
FINES                               LR       LR        17 43 03.9
      comp=Z,54nm,21.3s,MS3.7,baz=179,slow=37
FRB   Frobisher Bay      65.42  19  pP       pP        17 13 46.9 -1.2
      comp=Z,5.1nm,0.6s,baz=341,slow=7.4,SNR=6.9
OBN   Obninsk            66.31 326 eP        P         17 13 46.1 +0.5
OBN                                e         pP        17 13 55.9 +2.0
OBN                                 pmax     pmax
      comp=Z,15nm,1.4s,mb4.8
VRSR  Storozhevoye       68.11 322 eP        P         17 13 58.1 +1.0
VRSR                                pmax     pmax
      comp=Z,9.0nm,0.7s,mb4.9
VRSR                                pmax     pmax
      comp=N,10.0nm,1.0s
VRSR                                pmax     pmax
      comp=E,10.0nm,1.2s
WRAB  Tennant Creek      68.14 200 eP        P         17 13 56.6 -1.2
WRAB                                pmax     pmax
      comp=Z,9.0nm,1.0s,mb4.8
WRAB  Tennant Creek      68.14 200 eP        P         17 13 56.6 -1.1
      comp=Z,8.6nm,1.0s,mb4.7
WRA   Warramunga Arr     68.15 200  P        P         17 13 56.9 -1.0
      comp=Z,3.5nm,0.9s,mb4.4,baz=17,slow=6.6,SNR=14
WRA                                 pP       pP        17 14 05.1 -1.0
      comp=Z,1.4nm,0.8s,baz=15,slow=6.5,SNR=5.8
NB2   NORSAR Subarra     69.11 342  P        P         17 14 02.7 -0.4
      comp=Z,2.5nm,0.6s,mb4.3,baz=30,slow=6.5
NOA   NORSAR Array B     69.11 342  P        P         17 14 02.6 -0.5
      comp=Z,1.6nm,0.5s,mb4.2,baz=28,slow=6.3,SNR=10.0
NOA                                 LR       LR        17 48 19.8
      comp=Z,26nm,19.6s,MS3.5,slow=39
GOF   Gofitskoye         70.86 316⇑iP        P         17 14 15.4 +1.4
GOF                                i                   17 14 25.9
GOF                                eS        S         17 23 18.6 -7.5
GOF                                i                   17 24 05.4
GOF                                 pmax     pmax
      comp=Z,44nm,1.0s,mb5.3
GOF                                 smax
      comp=N,10.0nm,1.0s
KIV   Kislovodsk         71.83 315 i P       P         17 14 21.8 +1.9
KIV                                 pmax     pmax
      comp=Z,19nm,1.1s,mb4.9
KIV   Kislovodsk         71.83 315 eP        P         17 14 21.6 +1.8
      comp=Z,15nm,0.8s,mb5.0
ASAR  Alice Springs      71.84 200  P        P         17 14 20.2  0.0
      comp=Z,3.8nm,1.0s,mb4.3,baz=16,slow=6.3,SNR=24
ASAR                                pP       pP        17 14 29.6 +1.0
      comp=Z,1.5nm,0.7s,baz=15,slow=4.4,SNR=8.2
AKASG Malin Array Be     72.54 327  P        P         17 14 23.4 -0.4
      comp=Z,2.1nm,0.4s,mb4.4,baz=34,slow=6.2,SNR=12
SOC   Sochi              73.55 316 eP        P         17 14 29.1 -0.8
SOC                                e                   17 14 47.2
SOC                                e                   17 17 11.9
SOC                                ePPP      PPP       17 18 55.5 -4.4
SOC                                eS        S         17 23 48.3 -8.5
SOC                                e                   17 24 32.1
SOC                                eSSS      SSS       17 31 53.2 -0.1
SOC                                 pmax     pmax
      comp=Z,28nm,0.9s,mb5.2
SOC                                 pmax     pmax
      comp=N,32nm,1.0s
SOC                                 pmax     pmax
      comp=E,8.0nm,0.9s
SCHQ  Schefferville      73.61  23  pP       pP        17 14 37.9 -0.5
      comp=E,2.7nm,0.9s,baz=300,slow=8.1,SNR=3.2
KWP   Kalwaria           75.80 330 eP        P         17 14 43.6 +0.9
TXAR  Lajitas Array      77.13  61  P        P         17 14 50.8 +0.2
      comp=E,2.2nm,0.8s,mb4.1,baz=299,slow=4.1,SNR=16
TXAR                                pP       pP        17 14 59.5 +0.5
      comp=E,1.1nm,0.7s,baz=314,slow=4.7,SNR=7.6
DPC   Dobruska-Polom     77.27 334 eP        P         17 14 57.7 +6.8
CLL   Collm              77.40 336⇑iP        P         17 14 57.6 +6.0
CLL                                i         pP        17 15 05.7 +5.7
CLL                                 pmax     pmax
      comp=Z,8.0nm,0.9s,mb4.7
CLL   Collm              77.40 336⇑iP        P         17 14 57.6 +6.0
      comp=Z,8.0nm,0.9s,mb4.7
CLL                                i         pP        17 15 05.7 +5.7
CLL                                e                   17 15 16.0
CLL   Collm              77.40 336 ⇑P        P         17 14 57.6 +6.0
      comp=Z,logA/T=0.9,mb4.6
CLL                                i         pP        17 15 05.7 +5.7
CLL                                e                   17 15 16.0
BRG   Berggiesshubel     77.52 336 i P       P         17 15 01.9  +10
BRG                                 pmax     pmax
      comp=Z,3.0nm,0.8s,mb4.3
BRG   Berggiesshubel     77.52 336 i P       P         17 15 01.9  +10
      comp=Z,3.0nm,0.8s,mb4.3
KHC   Kasperske Hory     79.18 335 i P       P         17 15 02.4 +1.0
KHC   Kasperske Hory     79.18 335 eP        P         17 15 01.9 +0.5
KHC                                epP       pP        17 15 08.0 -1.9
KHC                                 sP       sP        17 15 13.0 +0.3
GRA1  Grafenberg Arr     79.35 337 eP        P         17 15 09.5 +7.2
      comp=Z,4.0nm,0.9s,mb4.3
GRF   Grafenberg Arr     79.35 337 eP        P         17 15 09.5 +7.2
GRF                                 pmax     pmax
      comp=Z,4.0nm,0.9s,mb4.3
GRF   Grafenberg Arr     79.35 337 eP        P         17 15 09.5 +7.2
GRF                                 pmax     pmax
      comp=Z,4.0nm,0.9s,mb4.3
GRF   Grafenberg Arr     79.35 337 eP        P         17 15 09.5 +7.2
      comp=Z,4.0nm,0.9s,mb4.3
GERES GERESS Array B     79.40 335  P        P         17 15 03.4 +0.8
      comp=Z,0.4nm,0.6s,mb3.5,baz=27,slow=6.0,SNR=4.9
GERES                               LR       LR        17 52 05.3
      comp=Z,29nm,19.4s,MS3.6,baz=194,slow=37
BRTR  Keskin Array B     79.42 318  P        P         17 15 04.2 +1.3
      comp=Z,1.2nm,0.5s,mb4.1,baz=63,slow=2.8,SNR=6.6
CDF   Champ du Feu       81.57 338 eP        P         17 15 21.6 +7.5
      comp=Z,11nm,1.0s,mb4.5
CDF   Champ du Feu       81.57 338 eP        P         17 15 21.6 +7.5
CDF                                 pmax     pmax
      comp=Z,5.0nm,1.0s,mb4.4
MEZF  Maizieres J’vi     82.04 340 eP        P         17 15 24.4 +7.9
HAU   Haudompre          82.18 339 eP        P         17 15 23.9 +6.6
HAU                                eR
      comp=Z,32nm,17.6s
GRR   Gorron             83.43 344 eP        P         17 15 30.9 +7.1
LOR   Lormes             83.47 340 eP        P         17 15 30.7 +6.7
      comp=Z,12nm,0.8s,mb4.7
LOR                                eR
      comp=Z,40nm,21.5s
LOR   Lormes             83.47 340 eP        P         17 15 30.7 +6.7
LOR                                 pmax     pmax
      comp=Z,6.0nm,0.8s,mb4.7
LOR                                 MLR      MLR
      comp=Z,40nm,21.5s,MS3.8
SSF   Saint Saulge       83.75 340 eP        P         17 15 32.3 +7.0
SSF                                 pmax     pmax
      comp=Z,4.0nm,0.7s,mb4.7
SSF   Saint Saulge       83.75 340 eP        P         17 15 32.3 +7.0
      comp=Z,4.0nm,0.7s,mb4.7
SGMF  Saint Gilles       83.89 345 eP        P         17 15 33.5 +7.5
      comp=Z,19nm,0.8s,mb5.0
SGMF  Saint Gilles       83.89 345 eP        P         17 15 33.5 +7.5
SGMF                                pmax     pmax
      comp=Z,10.0nm,0.8s,mb5.0
ROSF  Rostrenen          83.94 345 eP        P         17 15 32.8 +6.6
AVF   Avril sur Loir     84.04 340 eP        P         17 15 34.0 +7.2
      comp=Z,11nm,0.8s,mb4.8
AVF   Avril sur Loir     84.04 340 eP        P         17 15 34.0 +7.2
AVF                                 pmax     pmax
      comp=Z,6.0nm,0.8s,mb4.8
SMF   Signal de Mont     84.06 340 eP        P         17 15 34.1 +7.2
      comp=Z,11nm,0.9s,mb4.7
SMF   Signal de Mont     84.06 340 eP        P         17 15 34.1 +7.2
SMF                                 pmax     pmax
      comp=Z,5.0nm,0.9s,mb4.6
TCF   Toulx Ste Croi     84.78 341 eP        P         17 15 38.0 +7.5
      comp=Z,8.9nm,0.9s,mb4.6
TCF   Toulx Ste Croi     84.78 341 eP        P         17 15 38.0 +7.5
TCF                                 pmax     pmax
      comp=Z,4.0nm,0.9s,mb4.5
MFF   Saint Martin d     85.00 343 eP        P         17 15 39.3 +7.7
      comp=Z,9.9nm,0.7s,mb4.7
MFF   Saint Martin d     85.00 343 eP        P         17 15 39.3 +7.7
MFF                                 pmax     pmax
      comp=Z,5.0nm,0.7s,mb4.8
MBDF  Montbardon         85.11 337 eP        P         17 15 40.6 +8.4
      comp=Z,6.1nm,0.7s,mb4.5
MBDF  Montbardon         85.11 337 eP        P         17 15 40.6 +8.4
MBDF                                pmax     pmax
      comp=Z,3.0nm,0.7s,mb4.5
ORIF  Oris-en-Rattie     85.17 338 eP        P         17 15 40.4 +7.9
      comp=Z,6.5nm,0.6s,mb4.6
ORIF                               eR
      comp=Z,25nm,22.1s
VIVF  Saint-Julien-l     85.54 339 eP        P         17 15 42.2 +7.9
      comp=Z,10nm,1.1s,mb4.7
VIVF  Saint-Julien-l     85.54 339 eP        P         17 15 42.2 +7.9
VIVF                                pmax     pmax
      comp=Z,5.0nm,1.1s,mb4.7
SBF   Sospel             85.73 337 eP        P         17 15 43.9 +8.6
      comp=Z,44nm,0.9s,mb5.4
SBF   Sospel             85.73 337 eP        P         17 15 43.9 +8.6
SBF                                 pmax     pmax
      comp=Z,22nm,0.9s,mb5.4
CAF   Calviac            86.10 341 eP        P         17 15 45.3 +8.2
SMRF  Simiane la Rot     86.13 338 eP        P         17 15 45.8 +8.5
FRF   La Foret Royal     86.23 337 eP        P         17 15 46.5 +8.7
LFF   La Frestale        86.39 341 eP        P         17 15 46.7 +8.2
LMR   La Mourre          86.48 337 eP        P         17 15 47.7 +8.7
PGF   Pioggiola          86.50 335 eP        P         17 15 47.7 +8.6
MTLF  Montolieu          87.56 340 eP        P         17 15 52.6 +8.3
EPF   Esparros           88.29 341 eP        P         17 15 55.9 +8.1
PLCA  Paso Flores       147.35  97  PKPbc    PKPdf     17 22 40.4 -0.5
      comp=Z,3.8nm,0.9s,baz=269,slow=9.1,SNR=5.4
PLCA  Paso Flores       147.35  97  PKPbc    PKPdf     17 22 40.4 -0.5
```

IDC 03 17:16:04.0±25.0,18.87N×144.20E,mb3.9/4,mb1 4.0/4,mb1mx3.6/22,mbtmp3.9/4,Error ellipse: s-maj=769.6km s-min=112.4km az=3.0,Mariana Islands

```
Code  Station Name         Δ°  AZ°   Phase ID            Time     Res
                                    Op       ISC        h  m  s   ISC
MKAR  Makanchi Array     57.32 314  P        P         17 25 54.1 -2.0
      0.2nm,0.3s,baz=86,slow=8.6,SNR=6.3
BVAR  Borovoye Array     65.44 320  P        P         17 26 48.4 -2.4
      1.4nm,0.3s,baz=97,slow=7.7,SNR=13
ARCES ARCESS Array B     81.89 342  P        P         17 28 25.4 -0.8
      0.8nm,0.5s,baz=66,slow=8.9,SNR=6.2
FINES FINESS Array B     86.13 335  P        P         17 28 46.5 -1.4
      0.4nm,0.5s,baz=51,slow=6.7,SNR=6.4
```

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*IDC **03** 17:17:55.3±1.7,6.14N×126.20E,mb4.0/5,mb1 4.1/5,mb1mx3.8/21,mbtmp4.0/5,Error ellipse: s-maj=84.8km s-min=23.5km az=67.0*

*MAN **03** 17:18:01.8,6.32N×126.20E,h12^{km},mb4.5,ML3.3,MS3.2*

ISC 03 17:18:00.8±1.0,6.24N±0.09×126.38E±0.10,h63^{km}±13^{km},n12,σ0$\overset{s}{.}$98/15,mb4.0/5,Mindanao

```
Code  Station Name         Δ°  AZ°   Phase ID            Time     Res
                                    Op       ISC        h  m  s   ISC
MATI  Mati                0.71 350 eP        P         17 18 14.4 -1.1
MATI                               eS        S         17 18 26.5  0.0
KCP   Kidapawan           1.49 301 i S       S         17 18 44.1 -0.5
BUKP  Musuan              2.09 321 eP        P         17 18 35.4 +1.1
BUKP                               eS        S         17 18 59.1 +0.2
BUTP  Butuan              2.81 345 eP        P         17 18 47.0 +2.5
PAGZ  Pagadian            3.38 298 eP        P         17 18 53.1 +0.6
SCPH  Surigao             3.63 346 eP        P         17 18 56.8 +0.9
SCPH                               eS        S         17 19 35.9 -1.9
IPIL  Ipil                4.08 292 eP        P         17 19 01.6 -0.7
WRA   Warramunga Arr     27.17 163  P        P         17 23 39.7 -0.9
      1.4nm,0.4s,mb3.8,baz=342,slow=10,SNR=22
ASAR  Alice Springs      30.62 166  P        P         17 24 10.8 -0.7
      0.5nm,0.4s,mb3.7,baz=345,slow=6.9,SNR=12
NWAO  Narrogin (SRO)     39.91 192  P        P         17 25 30.5 +0.1
      12nm,1.1s,mb4.5,baz=42,slow=8.2,SNR=4.6
STKA  Stephens Creek     40.59 160  P        P         17 25 36.8 +0.8
      1.9nm,0.5s,mb4.0,baz=323,slow=8.4,SNR=6.1
MKAR  Makanchi Array     55.31 324  P        P         17 27 30.5 +0.1
      0.5nm,0.5s,mb3.8,baz=125,slow=7.8,SNR=8.2
```

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*TAP **03** 17:20:13.3,24.05N×122.44E,h32^{km}±1^{km},ML2.8*

JMA 03 17:20:13.8,24.01N×122.45E,h22^{km}±3^{km},M2.0,Taiwan region

```
Code  Station Name         Δ°  AZ°   Phase ID            Time     Res
                                    Op       ISC        h  m  s   ISC
YOJ   Yonaguni jima       0.68  49  P        Pb        17 20 26.8 -0.1
YOJ                                eS        Sb        17 20 36.0 +0.1
IRIF  Iriomote-Funau      1.21  74  P        Pn        17 20 35.5 -0.2
IRIF                               eS        Sb        17 20 51.2  0.0
HATJ  Hateruma jima       1.24  88  P        Pn        17 20 35.9 -0.1
HATJ                               eS        Sb        17 20 51.6 -0.4
JKRS  Kuro-shima          1.44  81  P        Pn        17 20 39.1 +0.2
JKRS                               eS        Sn        17 20 57.6 +0.3
JIJ   Ishigaki jima       1.58  77  P        Pn        17 20 41.1 +0.1
JIJ                                eS        Sn        17 21 00.8 -0.2
```

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*NIED **03** 17:38:00,38.60N×142.90E,h8^{km},Mw3.4 Best double couple: M$_0$1.58×10^{14} NP1:φ$_s$180°,δ80°,λ-14°. NP2: φ$_s$272°,δ77°,λ-169°.*

*JMA **03** 17:38:06.3±0.2,38.58N×142.85E,h16^{km}±3^{km},M3.7*

ISC 03 17:38:06.6±2.2,38.56N±0.06×142.9E±0.1,h17^{km}±12^{km},n9,σ0$\overset{s}{.}$62/15,Near east coast of eastern Honshu

```
Code  Station Name         Δ°  AZ°   Phase ID            Time     Res
                                    Op       ISC        h  m  s   ISC
OFUJ  Ofunato             1.06 300  P        Pb        17 38 26.0 -0.1
OFUJ                                S        Sb        17 38 40.1 +0.5
JIO   Ouri                1.19 265  P        Pb        17 38 27.9 -0.3
JIO                                eS        Sb        17 38 42.9 -0.3
JMK   Ichinoseki          1.34 288  P        Pn        17 38 30.3 -0.3
JMK                                 S        Sb        17 38 47.7 +0.2
JOM   Ohasama             1.52 307  P        Pn        17 38 33.2 -0.1
JOM                                eS        Sn        17 38 52.8  0.0
JTH   Tanohata            1.58 331  P        Pn        17 38 34.1  0.0
JTH                                eS        Sn        17 38 54.1 -0.1
JOU   Okura               1.73 264  P        Pn        17 38 36.5 +0.2
JMM   Marumori            1.77 248  P        Pn        17 38 35.7 -1.1
JKZ   Kuzumaki            1.85 321  P        Pn        17 38 37.9 -0.1
MAT   Matsushiro          4.21 243  P        Pn        17 39 13.8 +2.3
MAT                                eS        Sn        17 40 00.6 -0.2
```

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*JMA **03** 17:53:07.6±0.2,21.99N×121.39E,h74^{km},M3.5*

TAP 03 17:53:06.3,21.99N×121.30E,h29^{km}±1^{km},ML3.4,Taiwan region

```
Code  Station Name         Δ°  AZ°   Phase ID            Time     Res
                                    Op       ISC        h  m  s   ISC
YOJ   Yonaguni jima       2.92  32  P        Pn        17 53 52.2 +0.2
HATJ  Hateruma jima       3.09  48  P        Pn        17 53 54.2 -0.2
HATJ                               eS        Sn        17 54 29.6 -1.3
IRIF  Iriomote-Funau      3.23  43  P        Pn        17 53 56.2 -0.2
IRIF                               eS        Sn        17 54 33.6 -0.8
JKRS  Kuro-shima          3.35  48  P        Pn        17 53 58.1  0.0
JKRS                               eS        Sn        17 54 36.3 -1.1
JIJ   Ishigaki jima       3.52  47  P        Pn        17 54 00.3 -0.3
JIJ                                eS        Sn        17 54 39.5 -2.3
JTJ   Tarama              4.09  49  P        Pn        17 54 08.1 -0.6
JTJ                                eS        Sn        17 54 54.6 -1.6
```

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*CSEM **03** 17:59:51.9±0.1,29.14N×56.40E,h18^{km},ML4.8/2,Error ellipse: s-maj=2.7km s-min=1.4km az=113.0,After THR*

THR 03 17:59:51.9±0.3,29.14N×56.40E,h18^{km}±3^{km},ML3.3,Southern Iran

```
Code  Station Name         Δ°  AZ°   Phase ID            Time     Res
                                    Op       ISC        h  m  s   ISC
KRBR  Kerman              0.89  21 i PG      Pb        18 00 09.0 +0.4
KRBR                               eSG       Sb        18 00 21.6 +1.6
KRBR                                AML      AML       18 00 22.2
      comp=N,1μm,0.1s
KRBR  Kerman              0.89  21 i Pg      Pb        18 00 09.0 +0.4
      SNR=94
KRBR                               eSg       Sb        18 00 21.6 +1.6
      comp=N,1μm,0.1s,SNR=94
BNDS  Bandar-Abbas        1.75 187 ePG       Pn        18 00 23.9 +2.2
BNDS                               eSG       Sn        18 00 47.5 +3.8
BNDS                                AML      AML       18 00 51.4
      comp=N,306nm,0.3s
BNDS  Bandar-Abbas        1.75 187 ePg       Pn        18 00 23.9 +2.1
      SNR=91
BNDS                               eSg       Sn        18 00 47.5 +3.8
      comp=N,306nm,0.3s,SNR=91
GHIR  Ghir-Karzin         3.12 255 ePN       Pn        18 00 42.4 +1.1
GHIR                                AML      AML       18 01 31.8
      comp=N,46nm,0.3s
ZHSF  Zahedan             3.85  82 ePN       Pn        18 00 52.5 +0.8
```

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*LDG **03** 18:02:49.8±0.3,44.51N×10.72E,h10^{km},Ml2.8/6,Error ellipse: s-maj=6.8km s-min=2.9km az=95.0*

*ROM **03** 18:02:50.9±0.2,44.55N×10.36E,h23^{km}±3^{km},Md2.8/6,Ml2.2/5,Error ellipse: s-maj=5.2km s-min=3.4km az=142.0*

*NEIC **03** 18:02:50.8±0.7,44.53N×10.40E,h10^{km},ML2.8(LDG),Error ellipse: s-maj=12.4km s-min=7.4km az=116.0*

*CSEM **03** 18:02:50.9±0.1,44.59N×10.37E,h12^{km},ML2.6/5,Error ellipse: s-maj=1.3km s-min=1.0km az=88.0*

*GEN **03** 18:02:51.5,44.58N×10.46E,h14^{km},ML2.3*

ISC 03 18:02:52.1±0.3,44.54N±0.03×10.33E±0.04,h22^{km}±4^{km},n36,σ1$\overset{s}{.}$06/50,5C,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRAM		0.19	256	P	Pb	18 02 57.4	+0.1
VALM		0.20	197	P	Pb	18 02 57.1	-0.3
GSCL	Gusciola	0.27	135	⇑iPg	Pb	18 02 57.3	-1.1
GSCL				Sg	Sb	18 03 02.2	-0.4
	169nm,0.5s						
BACM		0.32	215	P	Pb	18 02 59.4	+0.3
SARO	Sassorosso	0.36	171	P	Pb	18 02 59.3	-0.5
CODM		0.37	247	P	Pb	18 03 00.6	+0.6
CODM				S	Sb	18 03 06.7	+1.3
VLC	Villacollemand	0.38	173	ePg	Pb	18 02 59.6	-0.6
VLC	Villacollemand	0.38	173	⇑iPg	Pb	18 03 00.1	-0.1
VLC				Sg	Sb	18 03 05.8	+0.2
	100nm,0.7s						
VINC	Vinca	0.41	197	P	Pb	18 03 00.8	+0.1
ZCCA	Zocca	0.50	111	Pg	Pb	18 03 02.1	-0.1
	71nm,0.3s						
BDI	Bagni Di Lucca	0.51	158	Pg	Pb	18 03 01.5	-0.8
	32nm,0.3s						
MAIM		0.63	169	P	Pb	18 03 03.9	-0.5
BOB	Bobbio (Coli)	0.67	290	Pg	Pb	18 03 06.0	+1.1
FNVD	Fontana Vidola	0.68	123	Pg	Pb	18 03 04.8	-0.4
	74nm,0.4s						
PII	Pisa	0.83	170	Pg	Pb	18 03 07.5	-0.2
	158nm,0.7s						
SEI	Scarperia	0.88	123	Pg	Pb	18 03 09.6	+1.0
	142nm,0.4s						
VMG	Vicchio	1.05	123	Pg	Pb	18 03 12.4	+1.0
	54nm,0.4s						
SAL	Salo	1.08	8	Pg	Pb	18 03 11.2	-0.8
	382nm,0.5s						
PGD	Poggio Sodo	1.20	123	Pg	Pn	18 03 14.4	+0.6
PGD				Sg	Sb	18 03 31.9	+2.7
	13nm,0.4s						
SFI	Santa Sofia	1.26	119	Pg	Pn	18 03 15.5	+0.8
	33nm,0.5s						
CSNT	Castellina Chi	1.27	146	Pg	Pn	18 03 14.6	-0.2
MDI	Monti di Nese	1.31	341	Pg	Pn	18 03 15.8	+0.4
	61nm,0.4s						
MABI	Malga Bissina	1.52	5	Pg	Pn	18 03 17.1	-1.3
	49nm,0.3s						
SBF	Sospel	2.19	253	ePn	Pn	18 03 27.7	-0.2
SBF				eSn	Sn	18 03 56.6	+2.1
	23nm,0.5s						
PGF	Pioggiola	2.21	206	ePn	Pn	18 03 26.7	-1.5
PGF				eSn	Sn	18 03 54.0	-1.1
	2.9nm,0.3s						
SQTA	Sankt Quirin	2.75	13	⇑iPN	Pn	18 03 35.5	-0.5
SQTA				i SN	Sn	18 04 10.5	+1.5
FRF	La Foret Royal	2.83	251	ePn	Pn	18 03 36.7	-0.3
FRF				eSn	Sn	18 04 11.8	+1.0
	15nm,0.6s						
MOTA	Moosalm	2.86	11	⇑iPN	Pn	18 03 37.3	-0.2
MOTA				i SN	Sn	18 04 12.8	+1.1
WTTA	Wattenberg	2.88	18	⇑iPN	Pn	18 03 38.2	+0.4
WTTA				i SN	Sn	18 04 13.9	+1.8
VOY	Vojsko	2.93	58	ePn	Pn	18 03 34.8	-3.7
VOY				eSn	Sn	18 04 08.2	-5.2
LMR	La Mourre	3.01	248	ePn	Pn	18 03 38.9	-0.7
LMR				eSn	Sn	18 04 16.0	+0.6
	12nm,0.5s						
CABF	La Chapelle	3.63	306	ePn	Pn	18 03 48.0	-0.4
HINF	Hinteralfeld	4.07	325	ePn	Pn	18 03 52.8	-1.9
HINF				eSn	Sn	18 04 38.2	-4.1
CDF	Champ du Feu	4.41	333	eSn	Sn	18 04 47.0	-3.9
	5.9nm,0.5s						
HAU	Haudompre	4.43	323	eSn	Sn	18 04 48.1	-3.3
	4.5nm,0.3s						
KHC	Kasperske Hory	5.11	25	ePN	Pn	18 04 04.5	-4.9
KHC				eSN	Sn	18 05 00.8	-7.7
KHC				ex	x	18 05 31.0	

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*PRU **03** 18:05:27.6, 44.35N×10.62E*

*ROM **03** 18:05:29.6±0.1, 44.57N×10.38E, h23^{km}±2^{km}, Md2.9/16, Ml2.6/7, Error ellipse: s-maj=3.6km s-min=2.9km az=28.0*

*CSEM **03** 18:05:29.7±0.1, 44.58N×10.41E, h12^{km}, ML3.0/7, Error ellipse: s-maj=1.3km s-min=1.2km az=105.0*

*LDG **03** 18:05:31.9±0.1, 44.58N×10.44E, h10^{km}, Ml2.9/11, Error ellipse: s-maj=4.4km s-min=3.4km az=30.0*

*GEN **03** 18:05:31.2, 44.53N×10.43E, h15^{km}, ML2.7*

*NEIC **03** 18:05:31.9, 44.58N×10.44E, h10^{km}, ML3.1(STR), ML2.9(LDG), After LDG.*

*STR **03** 18:05:32.3±0.6, 44.04N×10.37E, h10^{km}±1^{km}, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 03 18:05:30.7±0.3, **44.55N**±0.02×**10.46E**±0.03, **h28**^{km}±4^{km}, **n76**, σ**1.^{s}30**/115, **7C, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSCL	Gusciola	0.22	155	⇑ePg	Pb	18 05 36.2	-0.6
GSCL				Sg	Sb	18 05 41.2	+0.2
VLC	Villacollemand	0.39	188	ePg	Pb	18 05 38.4	-0.9
VLC				eSg	Sb	18 05 44.6	-0.5
VLC	Villacollemand	0.39	188	Pg	Pb	18 05 38.6	-0.7
VLC				Sg	Sb	18 05 45.0	-0.1
	189nm,0.7s						
VLC	Villacollemand	0.39	188	Pg	Pb	18 05 38.6	-0.7
VLC				eSg	Sb	18 05 44.6	-0.5
ZCCA	Zocca	0.42	118	Pg	Pb	18 05 40.9	+1.2
	109nm,0.3s						
BDI	Bagni Di Lucca	0.49	169	Pg	Pb	18 05 40.5	-0.4
	92nm,0.4s						
FNVD	Fontana Vidola	0.61	128	Pg	Pb	18 05 43.1	+0.4
	153nm,0.4s						
MAIM		0.63	178	P	Pb	18 05 42.9	-0.2
BOB	Bobbio (Coli)	0.76	287	Pg	Pb	18 05 44.8	-0.4
SEI	Scarperia	0.81	127	Pg	Pb	18 05 48.8	+2.7
	694nm,0.7s						
PII	Pisa	0.83	177	Pg	Pb	18 05 46.4	0.0
	152nm,0.3s						
VMG	Vicchio	0.97	127	Pg	Pn	18 05 51.3	+2.7
	82nm,0.4s						
SAL	Salo	1.06	2	Pg	Pn	18 05 50.2	+0.3
SAL				Sg	Sn	18 06 06.3	+2.5
	638nm,0.5s						
GENL	Genova Univers	1.08	263	P	Pn	18 05 49.1	-1.0
PGD	Poggio Sodo	1.13	126	Pg	Pn	18 05 52.8	+1.9
	24nm,0.4s						
SFI	Santa Sofia	1.19	122	Pg	Pn	18 05 54.1	+2.4
	38nm,0.4s						
MDI	Monti di Nese	1.34	337	Pg	Pn	18 05 54.7	+0.8
	91nm,0.3s						
PCP	Pian Castagno	1.37	270	P	Pn	18 05 54.3	0.0
GRFL	Gerfalco	1.45	165	Pg	Pn	18 05 56.4	+1.0
	6.0nm,0.4s						
MABI	Malga Bissina	1.51	1	Pg	Pn	18 05 56.0	-0.3
MABI				Sg	Sn	18 06 17.1	+1.9
	94nm,0.7s						
FIN	Finale Ligure	1.65	259	Pg	Pn	18 05 58.3	0.0
	20nm,0.2s						
FIN	Finale Ligure	1.65	259	P	Pn	18 05 57.2	-1.1
FIN	Finale Ligure	1.65	259	Pg	Pn	18 05 58.3	0.0
	20nm,0.2s						
CTI	Castel Tesino	1.72	29	Pg	Pn	18 05 58.8	-0.5
ROB	Roburent	1.87	263	P	Pn	18 06 01.1	-0.4
BRMO	Bormio	1.93	358	Pg	Pn	18 06 03.1	+0.8
	26nm,0.6s						
IMI	Imperia	1.96	252	Pg	Pn	18 06 02.6	-0.1
	59nm,0.6s						
IMI	Imperia	1.96	252	P	Pn	18 06 01.5	-1.2
IMI	Imperia	1.96	252	Pg	Pn	18 06 02.6	-0.1
	59nm,0.6s						
MURB	Monte Urbino	1.97	130	Pg	Pn	18 06 04.2	+1.3
	76nm,0.3s						
MONE	Monesi	2.00	257	P	Pn	18 06 02.9	-0.4
APPI	Appiano	2.00	15	Pg	Pn	18 06 03.3	-0.1
ORX	Oropa	2.06	303	P	Pn	18 06 04.1	-0.2
NEGI	Negi	2.10	252	P	Pn	18 06 03.5	-1.3
TRAV		2.15	298	P	Pn	18 06 05.4	-0.1
SAOF	Saorge	2.16	256	P	Pn	18 06 06.0	+0.3
SAOF				S	Sn	18 06 33.8	+2.0
ENR	Entracque	2.20	263	P	Pn	18 06 06.0	-0.3
AUTN	L’Aution	2.25	257	P	Pn	18 06 07.5	+0.6
AUTN				S	Sn	18 06 36.0	+2.0
PGF	Pioggiola	2.26	209	ePn	Pn	18 06 06.5	-0.6
PGF				eSn	Sn	18 06 34.1	-0.3
	8.4nm,0.3s						
STV2	Anna di Valdie	2.27	263	P	Pn	18 06 06.6	-0.6
DAVOX	Davos	2.27	350	Pg	Pn	18 06 08.0	+0.8
SBF	Sospel	2.28	254	ePn	Pn	18 06 07.1	-0.3
SBF				eSn	Sn	18 06 34.7	-0.2
	27nm,0.4s						
BRES	Bressanone	2.33	22	Pg	Pn	18 06 08.2	+0.1
	52nm,0.3s						
RSP	Reno Superiore	2.36	286	P	Pn	18 06 07.9	-0.6
TOUF	Mont Tournerai	2.37	258	P	Pn	18 06 09.3	+0.7
TOUF				S	Sn	18 06 40.1	+3.0
PZZ	Prazzo	2.40	270	P	Pn	18 06 08.7	-0.4
MVIF	Mont Vial	2.47	256	P	Pn	18 06 10.7	+0.7
MVIF				S	Sn	18 06 42.8	+3.2
MBDF	Montbardon	2.64	275	ePn	Pn	18 06 14.5	+2.0
MBDF				eSn	Sn	18 06 42.6	-1.4
	5.5nm,0.3s						
CALN	Calern	2.69	254	P	Pn	18 06 13.6	+0.4
CALN				S	Sn	18 06 46.6	+1.3
SQTA	Sankt Quirin	2.72	11	⇑iPN	Pn	18 06 14.3	+0.6
SQTA				i SN	Sn	18 06 49.6	+3.5
DAVA	Damuels	2.77	352	⇑iPN	Pn	18 06 15.2	+0.9
DAVA				i SN	Sn	18 06 50.0	+2.8
LPL	La Plagne	2.82	291	ePn	Pn	18 06 15.1	+0.1
MOTA	Moosalm	2.83	9	⇑iPN	Pn	18 06 16.1	+0.9
MOTA				i SN	Sn	18 06 51.9	+3.1
VOJS	Vojsko	2.83	57	ePn	Pn	18 06 13.9	-1.4
VOJS				eSn	Sn	18 06 47.2	-1.7
WTTA	Wattenberg	2.84	16	⇑iPN	Pn	18 06 16.5	+1.2
WTTA				i SN	Sn	18 06 52.6	+3.6
CADS	Cadrg	2.85	53	i Pn	Pn	18 06 14.8	-0.7
CADS				i Sn	Sn	18 06 47.6	-1.7
	comp=Z,12nm,0.2s						
CADS	Cadrg	2.85	53	i Pn	Pn	18 06 14.8	-0.7
CADS				i Sn	Sn	18 06 47.7	-1.7
	comp=Z,12nm,0.2s						
JAVS	Javornik	2.88	61	i Pn	Pn	18 06 14.3	-1.6
JAVS				eSn	Sn	18 06 47.7	-2.3
	comp=Z,8.0nm,0.2s						
JAVS	Javornik	2.88	61	i Pn	Pn	18 06 14.3	-1.6
JAVS				eSn	Sn	18 06 47.7	-2.3
	comp=Z,8.0nm,0.2s						
WATA	Walderalm	2.90	15	⇑iPN	Pn	18 06 16.6	+0.5
WATA				i SN	Sn	18 06 53.6	+3.2
FRF	La Foret Royal	2.92	252	ePn	Pn	18 06 15.6	-0.9
FRF				eSn	Sn	18 06 50.5	-0.6
	comp=Z,15nm,0.3s						
LMR	La Mourre	3.10	248	ePn	Pn	18 06 17.9	-1.1
LMR				eSn	Sn	18 06 52.8	-2.8
	comp=Z,27nm,0.4s						
NVLJ	Novalja	3.15	88	i Pn	Pn	18 06 18.6	-1.2
NVLJ				i Sn	Sn	18 06 54.6	-2.3
NVLJ	Novalja	3.15	88	i Pn	Pn	18 06 18.5	-1.2
NVLJ				i Sn	Sn	18 06 54.6	-2.3
KBA	Koelnbreinsper	3.24	38	⇑iPN	Pn	18 06 21.2	+0.3
KBA				i SN	Sn	18 07 01.0	+2.0
ORIF	Oris-en-Rattie	3.29	278	ePn	Pn	18 06 23.9	+2.2
TAVF	Tavernes	3.31	255	P	Pn	18 06 23.0	+1.0
TAVF				S	Sn	18 07 01.9	+1.1
SMRF	Simiane la Rot	3.56	262	ePn	Pn	18 06 25.7	+0.2
SMRF				eSn	Sn	18 07 05.1	-2.0
	comp=Z,7.1nm,0.6s						
CABF	La Chapelle	3.70	305	ePn	Pn	18 06 27.1	-0.4
CABF				eSn	Sn	18 07 07.9	-2.9
	comp=Z,1.6nm,0.3s						
HINF	Hinteralfeld	4.12	324	ePn	Pn	18 06 32.7	-0.8
HINF				eSn	Sn	18 07 17.3	-4.1
	comp=Z,4.7nm,0.3s						
CDF	Champ du Feu	4.45	331	ePn	Pn	18 06 35.7	-2.5
CDF				eSn	Sn	18 07 25.6	-4.1
	comp=Z,7.0nm,0.5s						
HAU	Haudompre	4.48	322	ePn	Pn	18 06 37.1	-1.6
HAU				eSn	Sn	18 07 26.4	-4.2
	comp=Z,7.0nm,0.3s						
GEC2	GERESS Array S	4.84	26	ePn	Pn	18 06 41.3	-2.4
GEC2				eSn	Sn	18 07 34.2	-5.4
KHC	Kasperske Hory	5.06	24	ePN	Pn	18 06 44.5	-2.3
KHC				ePG	Pn	18 07 11.5	+25
KHC				eSN	Sn	18 07 39.4	-5.7
KHC				ex	x	18 07 58.0	
KHC				ex	x	18 08 13.5	
KHC	Kasperske Hory	5.06	24	Pn	Pn	18 06 44.5	-2.3
KHC				Sn	Sn	18 07 39.4	-5.7
LOR	Lormes	5.35	303	ePn	Pn	18 06 49.4	-1.5
LOR				eSn	Sn	18 07 47.5	-4.9
	comp=Z,8.4nm,0.4s						

IDC 03 18:06:51.3±6.1, **6.20S**×**130.12E**, **mb3.9**/1, **mb1 4.2**/3, **mb1mx3.7**/15, **mbtmp4.0**/3, **ML3.9**/2, **Error ellipse: s-maj=580.0km s-min=30.0km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.26	164	Pn	P	18 10 14.5	-2.4
	0.7nm,0.3s,baz=325,slow=13,SNR=29						
WRA				Sn	S	18 12 42.2	-15
	1.5nm,0.3s,baz=332,slow=22,SNR=13						
ASAR	Alice Springs	17.75	169	P	P	18 11 00.0	-1.6
	0.7nm,0.3s,baz=345,slow=11,SNR=72						
ASAR				S	S	18 14 05.4	-13
	0.3nm,0.3s,baz=358,slow=28,SNR=6.4						
MKAR	Makanchi Array	67.62	327	P	P	18 17 50.1	-2.1
	0.6nm,0.4s,baz=124,slow=7.9,SNR=16						

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*PRU **03** 18:08:08.4, 44.33N×10.63E*

*ROM **03** 18:08:11.0±0.1, 44.56N×10.35E, h24^{km}±2^{km}, Md2.9/22, Ml2.7/7, Error ellipse: s-maj=2.3km s-min=2.2km az=61.0*

*NEIC **03** 18:08:11.0±0.5, 44.56N×10.44E, h10^{km}, ML3.0(LDG), ML2.9(STR), Error ellipse: s-maj=8.7km s-min=4.6km az=126.0*

*CSEM **03** 18:08:11.2±0.1, 44.54N×10.46E, h20^{km}, ML3.1/8, Error ellipse: s-maj=1.7km s-min=1.0km az=106.0*

*LDG **03** 18:08:12.9±0.1, 44.57N×10.37E, h10^{km}, Ml3.0/8, Error ellipse: s-maj=3.4km s-min=2.5km az=54.0*

*GEN **03** 18:08:12.2, 44.58N×10.44E, h5^{km}, ML2.4*

*STR **03** 18:08:20.3±0.8, 43.59N×9.76E, h10^{km}±1^{km}, Ml2.7, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 03 18:08:12.4±0.3, **44.53N**±0.02×**10.37E**±0.03, **h22**^{km}±3^{km}, **n69**, σ**1.^{s}12**/107, **4C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VALM		0.20	206	P	Pb	18 08 17.5	-0.3
GRAM		0.22	259	P	Pb	18 08 17.7	-0.3
GSCL	Gusciola	0.24	140	Pg	Pb	18 08 17.4	-0.8
GSCL				Sg	Sb	18 08 22.5	+0.3
BACM		0.33	220	P	Pb	18 08 19.7	0.0
SARO	Sassorosso	0.35	176	P	Pb	18 08 19.8	-0.2
SARO				S	Sb	18 08 25.0	-0.1
VLC	Villacollemand	0.37	178	ePg	Pb	18 08 19.6	-0.7
VLC				eSg	Sb	18 08 25.2	-0.5
VLC	Villacollemand	0.37	178	Pg	Pb	18 08 19.8	-0.5
VLC				Sg	Sb	18 08 26.2	+0.4
	180nm,0.7s						
VLC	Villacollemand	0.37	178	Pg	Pb	18 08 19.8	-0.5
VLC				eSg	Sb	18 08 25.2	-0.6
CODM		0.40	249	P	Pb	18 08 21.0	+0.3
VINC	Vinca	0.42	202	P	Pb	18 08 21.5	+0.4
VINC				S	Sb	18 08 27.5	+0.4
ZCCA	Zocca	0.47	113	Pg	Pb	18 08 22.4	+0.5
BDI	Bagni Di Lucca	0.50	161	Pg	Pb	18 08 21.8	-0.6
	78nm,0.4s						
RAVA	Ravarino	0.58	67	Pg	Pb	18 08 23.8	+0.1
RAVA				Sg	Sb	18 08 33.1	+1.6
	1μm,0.8s						
MAIM		0.63	172	P	Pb	18 08 24.2	-0.3
MAIM				S	Sb	18 08 32.6	-0.2
FNVD	Fontana Vidola	0.65	124	Pg	Pb	18 08 24.7	-0.3
	160nm,0.4s						
BOB	Bobbio (Coli)	0.70	290	Pg	Pb	18 08 26.0	+0.2
PII	Pisa	0.82	172	Pg	Pb	18 08 27.8	0.0
	114nm,0.2s						
SEI	Scarperia	0.85	124	Pg	Pb	18 08 29.7	+1.3
	694nm,0.7s						
GENL	Genova Univers	1.01	263	P	Pb	18 08 31.4	+0.3
VMG	Vicchio	1.02	124	Pg	Pb	18 08 32.4	+1.2
	101nm,0.4s						
SAL	Salo	1.08	6	Pg	Pb	18 08 31.8	-0.4
SAL				Sg	Sb	18 08 47.4	+1.5
	701nm,0.5s						
PGD	Poggio Sodo	1.17	124	Pg	Pn	18 08 34.2	+0.5
	27nm,0.4s						
SFI	Santa Sofia	1.23	120	Pg	Pn	18 08 35.7	+1.1
	32nm,0.4s						
PCP	Pian Castagno	1.31	271	P	Pn	18 08 36.7	+1.1
PCP				S	Sb	18 08 53.2	+0.7
MDI	Monti di Nese	1.33	340	Pg	Pn	18 08 35.9	0.0
MDI				Sg	Sn	18 08 54.4	+1.3
	102nm,0.4s						
CRE	Caprese Michel	1.46	128	Pg	Pn	18 08 38.0	+0.2
CRE				Sg	Sn	18 08 59.0	+2.6
MABI	Malga Bissina	1.52	4	Pg	Pn	18 08 37.4	-1.3
MABI				Sg	Sn	18 08 58.5	+0.4
	74nm,0.3s						
FIN	Finale Ligure	1.58	259	Pg	Pn	18 08 39.6	0.0
	52nm,0.6s						
FIN	Finale Ligure	1.58	259	P	Pn	18 08 39.6	0.0
FIN				S	Sn	18 08 58.3	-1.3
CTI	Castel Tesino	1.76	30	Pg	Pn	18 08 40.1	-2.0
	58nm,0.2s						
ROB	Roburent	1.81	263	P	Pn	18 08 42.7	-0.1
IMI	Imperia	1.89	252	Pg	Pn	18 08 43.8	-0.2
IMI				Sg	Sn	18 09 09.2	+1.9
	42nm,0.5s						
MONE	Monesi	1.93	257	P	Pn	18 08 44.8	+0.2
MURB	Monte Urbino	2.01	128	Pg	Pn	18 08 46.1	+0.4
	78nm,0.3s						
ORX	Oropa	2.02	304	P	Pn	18 08 46.4	+0.6
APPI	Appiano	2.04	17	Pg	Pn	18 08 44.6	-1.5
	107nm,0.4s						
NEGI	Negi	2.04	251	P	Pn	18 08 46.0	-0.1
SAOF	Saorge	2.10	256	Pn	Pn	18 08 47.2	+0.3
SAOF				Sg	Sn	18 09 14.8	+2.2
ENR	Entracque	2.14	263	P	Pn	18 08 47.8	+0.3
AUTN	L’Aution	2.18	257	Pn	Pn	18 08 48.7	+0.5
AUTN				Sg	Sn	18 09 18.5	+3.7
AUTN	L’Aution	2.18	257	P	Pn	18 08 49.6	+1.4
SBF	Sospel	2.22	253	ePn	Pn	18 08 48.4	-0.2
SBF				eSn	Sn	18 09 14.6	-1.0
	25nm,0.3s						
PGF	Pioggiola	2.22	207	ePn	Pn	18 08 47.6	-1.1
PGF				eSn	Sn	18 09 14.9	-0.9
	8.1nm,0.3s						
SNTG	Esanatoglia	2.25	124	Pg	Pn	18 08 50.1	+0.9
	7.0nm,0.4s						
DAVOX	Davos	2.27	351	Pg	Pn	18 08 49.2	-0.3
RSP	Reno Superiore	2.30	287	P	Pn	18 08 49.9	+0.1
TOUF	Mont Tournerai	2.30	258	Pn	Pn	18 08 50.6	+0.7
TOUF				Sg	Sn	18 09 20.4	+2.6
PZZ	Prazzo	2.34	270	P	Pn	18 08 50.2	-0.2
BRES	Bressanone	2.37	23	Pg	Pn	18 08 49.5	-1.3
MVIF	Mont Vial	2.40	256	Pn	Pn	18 08 52.6	+1.3
NRCA	Norcia	2.62	130	Pg	Pn	18 08 54.6	+0.2
	1.0nm,0.3s						
CALN	Calern	2.63	254	Pn	Pn	18 08 54.8	+0.3
CALN				Sg	Sn	18 09 28.4	+2.4
SQTA	Sankt Quirin	2.75	12	⇑iPN	Pn	18 08 55.6	-0.7
SQTA				i SN	Sn	18 09 30.5	+1.3
DAVA	Damuels	2.77	353	⇓iPN	Pn	18 08 56.6	0.0
DAVA				i SN	Sn	18 09 31.3	+1.5
FRF	La Foret Royal	2.86	251	ePn	Pn	18 08 57.0	-0.8
FRF				eSn	Sn	18 09 29.8	-2.1
	14nm,0.3s						
MOTA	Moosalm	2.86	10	⇑iPN	Pn	18 08 57.2	-0.6
MOTA				i SN	Sn	18 09 33.2	+1.3
WTTA	Wattenberg	2.87	17	⇑iPN	Pn	18 08 57.5	-0.5
WTTA				i SN	Sn	18 09 33.5	+1.3
VOY	Vojsko	2.90	58	ePn	Pn	18 08 55.4	-3.0
VOY				eSn	Sn	18 09 27.7	-5.3
WATA	Walderalm	2.93	16	⇓iPN	Pn	18 08 57.7	-1.1
WATA				i SN	Sn	18 09 34.9	+1.3
LMR	La Mourre	3.04	248	ePn	Pn	18 08 58.9	-1.4
LMR				eSn	Sn	18 09 34.1	-2.3
	22nm,0.4s						
NVLJ	Novalja	3.22	88	i Pn	Pn	18 08 59.7	-3.2
NVLJ				i Sn	Sn	18 09 35.8	-5.2
NVLJ	Novalja	3.22	88	i Pn	Pn	18 08 59.7	-3.2
NVLJ				i Sn	Sn	18 09 35.7	-5.3
KBA	Koelnbreinsper	3.29	38	⇑iPN	Pn	18 09 02.2	-1.7
KBA				i SN	Sn	18 09 42.2	-0.5
CABF	La Chapelle	3.66	306	ePn	Pn	18 09 08.1	-1.0
CABF				eSn	Sn	18 09 47.4	-4.7
	3.3nm,0.3s						
HINF	Hinteralfeld	4.09	325	ePn	Pn	18 09 12.9	-2.4
HINF				eSn	Sn	18 09 57.7	-5.5
	4.9nm,0.2s						
CDF	Champ du Feu	4.43	332	ePn	Pn	18 09 17.2	-2.9
CDF				eSn	Sn	18 10 05.4	-6.3
	6.3nm,0.4s						
HAU	Haudompre	4.45	323	ePn	Pn	18 09 18.0	-2.5
HAU				eSn	Sn	18 10 06.2	-6.1
	8.9nm,0.3s						
GEC2	GERESS Array S	4.88	27	ePn	Pn	18 09 22.6	-3.9
GEC2				eSn	Sn	18 10 15.7	-7.4
KHC	Kasperske Hory	5.10	24	ePN	Pn	18 09 24.9	-4.7
KHC				eSN	Sn	18 10 20.8	-7.7
KHC				ex	x	18 10 35.5	
KHC				eSG	Sn	18 10 54.5	+26

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*IDC **03** 18:44:49.5±1.5, 6.56S×127.12E, mb3.8/1, mb1 4.7/3, mb1mx4.0/14, mbtmp4.4/3, ML4.5/2, Error ellipse: s-maj=187.3km s-min=27.6km az=67.0*

*NEIC **03** 18:45:05.0±0.9, 7.08S×126.86E, h150^{km}, mb4.5/1, Error ellipse: s-maj=63.5km s-min=11.7km az=62.0*

ISC 03 18:45:04.8±3.4, **7.1S**±0.3×**126.9E**±0.6, **h171**^{km}±36^{km}, **n8**, σ**0.^{s}42**/11, **mb3.4**/2, **1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	7.80	136	eP	P	18 46 57.0	+0.6
KAKA				eS	S	18 48 15.3	-8.1
WRAB	Tennant Creek	14.67	151	eP	P	18 48 25.3	-0.1
	7.2nm,0.3s						
WRA	Warramunga Arr	14.68	151	Pn	P	18 48 24.9	-0.5
	2.3nm,0.3s,baz=332,slow=12,SNR=85						
WRA				Sn	S	18 51 03.5	-0.2
	0.2nm,0.3s,baz=336,slow=21,SNR=5.3						
WB2	Warramunga Arr	14.68	151	eP	P	18 48 25.1	-0.4
ASPA	Alice Springs	17.81	159	⇑iP	P	18 49 03.3	+0.1
ASAR	Alice Springs	17.81	159	P	P	18 49 03.3	+0.1
	3.5nm,0.3s,baz=343,slow=11,SNR=338						
ASAR				S	S	18 52 13.7	+0.3
	0.1nm,0.3s,baz=335,slow=17,SNR=5.6						
SONM	Songino Array	57.60	344	P	P	18 54 38.4	-0.6
	0.2nm,0.6s,mb3.1,baz=158,slow=7.8,SNR=2.5						
MKAR	Makanchi Array	66.65	328	P	P	18 55 39.9	+0.7
	0.4nm,0.4s,mb3.6,baz=125,slow=7.7,SNR=9.7						

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*DJA **03** 18:53:14.9±0.9, 10.22S×119.94E, h240^{km}, MD4.5/3, ML4.7/3, Error ellipse: s-maj=78.7km s-min=21.4km az=18.0*

ISC 03 18:53:19.4±2.9, **8.0S**±0.5×**119.8E**±0.2, **h287**^{km}±42^{km}, **n8**, σ**1.^{s}23**/11, **2C-7D, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	Kedomdong	3.65	262	⇓ePn	P	18 54 20.8	-0.8
	236nm,0.2s						
KEDI	Kedomdong	3.65	262	⇓iP	P	18 54 21.5	-0.1
KEDI				⇓iSn	S	18 55 11.4	+1.4
RATI	Rata	4.25	260	⇑ePn	P	18 54 27.8	-0.5
	125nm,0.2s						
RATI				⇓iSn	S	18 55 21.0	-1.1
KELI	Kelakatan	5.22	267	⇓ePn	P	18 54 43.0	+3.4
SRDI	Scrawed	5.58	264	⇑ePn	P	18 54 43.1	-0.8
	46nm,0.2s						
SRDI	Scrawed	5.58	264	⇓iP	P	18 54 44.4	+0.5
SRDI				⇓iSn	S	18 55 49.9	-0.3
WB2	Warramunga Arr	18.47	132	eP	P	18 57 15.1	-1.6
ASPA	Alice Springs	20.67	141	eP	P	18 57 40.1	+1.7

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*ISK **03** 18:54:24.7, 34.79N×25.20E, h5^{km}, ML3.4*

*HLW **03** 18:54:29.1, 35.45N×25.51E, h33^{km}, Mb3.4*

*IDC **03** 18:54:30.3±3.5, 34.58N×25.51E, mb3.9/1, mb1 3.6/5, mb1mx3.4/25, mbtmp3.6/5, ML3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx2.3/28, Error ellipse: s-maj=62.9km s-min=12.4km az=39.0*

*CSEM **03** 18:54:31.7±0.1, 34.89N×25.88E, h2^{km}, MD3.8, Error ellipse: s-maj=2.1km s-min=1.6km az=66.0*

*ATH **03** 18:54:32.8, 34.88N×25.75E, h10^{km}±1^{km}, MD3.8/12*

*NEIC **03** 18:54:32.8, 34.89N×25.76E, h10^{km}, MD3.8(ATH), After ATH.*

ISC 03 18:54:32.7±0.7, **34.90N**±0.03×**25.74E**±0.05, **h7**^{km}±6^{km},

n38,σ1^{s}27/44,mb3.7/1,5C-2D,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.04	237	ePG	Pg	18 54 34.5	+0.3
NPS	Neapolis	0.38	345	⇑ePB	Pb	18 54 40.2	-1.1
NPS				eSB	Sb	18 54 45.9	-1.1
IDI	Anoyia	0.80	300	Pg	Pg	18 54 47.2	-1.5
	33nm,0.3s,baz=131,slow=15,SNR=130						
IDI				Lg		18 54 59.0	
	138nm,0.3s,baz=200,slow=20,SNR=26						
KARP	Karpathos	1.34	61	ePB	Pb	18 54 57.8	+0.1
GVD	Gavdhos	1.36	268	ePb	Pb	18 55 00.0	+2.0
GVD	Gavdhos	1.36	268	ePB	Pb	18 54 59.0	+1.0
VAM	Vamos	1.36	292	ePB	Pb	18 54 58.8	+0.8
SANT	Santorini	1.49	351	ePn	Pn	18 55 00.8	+0.9
SANT				eSn	Sn	18 55 19.5	-0.2
SANT	Santorini	1.49	351	ePn	Pn	18 55 00.8	+0.8
SANT				eSn	Sn	18 55 19.5	-0.3
APE	Apeiranthos	2.17	356	ePN	Pn	18 55 04.9	-4.9
APE				eSN	Sn	18 55 34.6	-2.6
APE	Apeiranthos	2.17	356	ePn	Pn	18 55 10.9	+1.1
APE				eSn	Sn	18 55 34.6	-2.6
ARG	Arkhangelos	2.35	55	ePN	Pn	18 55 14.5	+2.2
ARG	Arkhangelos	2.35	55	ePN	Pn	18 55 14.2	+1.9
BODT	Bodrum	2.51	30	ePN	Pn	18 55 12.7	-1.9
BDRM	Kayabasi	2.57	32	i P	Pn	18 55 16.5	+1.0
KYTH	Kithira	2.60	303	ePB	Pb	18 55 17.0	-2.2
VLI	Veliai	2.91	309	ePN	Pn	18 55 21.5	+1.2
SMG	Samos	2.94	17	ePN	Pn	18 55 21.5	+0.7
DALT	Dalyan (Mudla)	3.01	51	ePN	Pn	18 55 21.7	0.0
FETY	Fethiye	3.23	57	ePN	Pn	18 55 25.0	+0.2
AKAS	Kas	3.43	66	i P	Pn	18 55 26.8	-0.8
ITM	Ithomi	3.84	308	ePN	Pn	18 55 35.5	+2.1
ELL	Elmali	3.86	60	ePN	Pn	18 55 32.7	-1.1
DNZL	Cakiroluk	3.86	43	i P	Pn	18 55 35.4	+1.6
GOLH	Golhisar	3.88	52	i P	Pn	18 55 35.5	+1.4
HMAT	Matruh	3.96	163	⇑P	Pn	18 55 35.6	+0.4
HMAT				S	Sn	18 56 24.2	+1.8
SWA1		5.62	180	⇓P	Pn	18 55 58.1	-0.5
SWA1				S	Sn	18 57 03.5	-0.7
SWA2		5.64	182	⇑P	Pn	18 55 58.6	-0.4
AMAG	Maghara	7.59	122	⇑P	Pn	18 56 24.3	-2.1
SUZ		7.84	128	⇓P	Pn	18 56 28.5	-1.4
BRTR	Keskin Array B	7.93	50	Pn	Pn	18 56 31.0	-0.1
	0.1nm,0.3s,baz=222,slow=14,SNR=5.7						
HFRF	Wahat Farafira	8.03	163	⇑P	P	18 56 31.9	-0.7
TIP	Timpagrande	8.35	303	ePn	P	18 56 34.1	-2.9
EIL	Elat	9.38	121	Pn	P	18 56 46.9	-4.4
	0.6nm,0.3s,baz=279,slow=26,SNR=5.8						
GNI	Garni	15.96	65	LR	LR	19 05 49.3	
	comp=Z,56nm,21.5s,baz=349,slow=42						
AKASG	Malin Array Be	16.00	8	Pn	P	18 58 21.8	+2.2
	1.1nm,0.3s,baz=197,slow=11,SNR=17						
GERES	GERESS Array B	16.54	331	Pn	P	18 58 27.3	+0.8
	0.1nm,0.3s,baz=144,slow=13,SNR=2.8						
MKAR	Makanchi Array	43.53	56	P	P	19 02 37.8	-0.6
	1.1nm,0.6s,mb3.7,baz=280,slow=6.7,SNR=15						

MAN 03 19:00:49.0,17.02N×120.33E,h11^{km},mb4.1,ML2.9, MS2.7,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCPH	Baguio City Da	0.68	159	⇓eP	Pb	19 01 01.4	-1.0
BCPH				eS	Sb	19 01 10.8	-0.7
ABRA	Dolores	0.73	30	eP	Pb	19 01 02.9	-0.3
BOLP	Bolinao	0.75	212	eP	Pb	19 01 03.9	+0.3
APYP	Conner	1.21	46	eP	Pb	19 01 09.9	-1.6
APYP				eS	Sb	19 01 25.8	-1.2
SCZP	Santa Cruz	1.30	198	eP	Pb	19 01 12.2	-0.8
CAUP	Cauayan	1.43	93	eP	Pn	19 01 15.8	+0.8
CVP	Callao Caves	1.58	64	eP	Pn	19 01 16.0	-1.2
BALP	Baler	1.75	136	eP	Pn	19 01 18.6	-0.9
ENPP	El Nido	5.84	189	eP	Pn	19 02 15.8	-1.9

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*NNC **03** 19:11:20.8±5.9,41.95N×85.93E,mpv4.1,Error ellipse: s-maj=88.4km s-min=39.9km az=89.0*
*BJI **03** 19:11:23.2,41.89N×85.90E,h22^{km},mB4.6,mb4.2,ML4.5, Ms3.7,Msz3.4*
*MOS **03** 19:11:23.1±1.1,42.03N×85.87E,h33^{km},mb4.3/3,Error ellipse: s-maj=19.5km s-min=9.4km az=107.8*
*NEIC **03** 19:11:24.0±0.4,41.98N×85.77E,mb4.1/6,Error ellipse: s-maj=10.6km s-min=5.6km az=70.0*
*IDC **03** 19:11:23.9±0.6,42.11N×86.11E,h22^{km}±3^{km},mb3.7/10, mb1 3.9/13,mb1mx3.8/24,mbtmp3.8/13,ML3.8/3,MS3.2/2, Ms1 3.2/2,ms1mx2.8/23,Error ellipse: s-maj=24.3km s-min=9.9km az=57.0*
ISC 03 19:11:22.5±0.3,**41.92N**±0.03×**85.73E**±0.05,**h23^{km}, h23^{km}**±.7^{km}**:pP-P,n64,σ1^{s}29**/70,**mb3.9**/16,**MS3.1**/1,**1C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	2.39	36	⇓iP	Pn	19 12 02.5	+1.4
WMQ				SG	Sn	19 12 32.5	+2.5
WMQ				Smax			
	comp=N,4µm,1.0s						
WMQ				Smax			
	comp=E,2µm,1.0s						
MK31	Makanchi Array	5.47	334	⇑Pn	Pn	19 12 44.6	-0.2
	comp=E,3.1nm,0.2s,baz=150,slow=14,SNR=405						
MK31				Pg	Pn	19 13 01.7	+17
	comp=E,44nm,0.8s,baz=147,slow=17,SNR=11						
MK31				⇓Lg		19 14 14.0	
	comp=E,57nm,0.5s,baz=142,slow=30,SNR=4.9						
MKAR	Makanchi Array	5.47	334	P	Pn	19 12 44.3	-0.4
MKAR						19 13 46.8	
MKAR	Makanchi Array	5.47	334	Pn	Pn	19 12 44.3	-0.4
	comp=E,7.3nm,0.3s,baz=149,slow=14,SNR=202						
MKAR				Pg	Pn	19 13 01.3	+17
	comp=E,6.3nm,0.3s,baz=147,slow=16,SNR=12						
MKAR				Sn	Sn	19 13 46.8	-0.9
	comp=E,12nm,0.3s,baz=149,slow=26,SNR=5.6						
MKAR				Lg		19 14 14.3	
	comp=E,27nm,0.3s,baz=162,slow=27,SNR=5.8						
MKAR	Makanchi Array	5.47	334	Pn	Pn	19 12 44.3	-0.4
MKAR				Pg	Pn	19 13 01.3	+17
MKAR				Sn	Sn	19 13 46.8	-0.9
MKAR				Lg		19 14 14.3	
ULHL	Ulahol	7.07	276	P	Pn	19 13 08.8	+1.4
	SNR=15						
TKM2	Tokmak 2	7.57	281	P	Pn	19 13 16.1	+1.8
	SNR=35						
KSH	Kashi	7.79	255	eP	Pn	19 13 19.9	+2.5
KSH				eS	Sn	19 14 45.6	-0.2
KZA	Kyzart	7.81	275	P	Pn	19 13 19.2	+1.5
	SNR=24						
KBK	Karagaybulak	8.03	279	P	P	19 13 22.0	+1.2
	SNR=12						
AAK	Ala-Archa	8.37	279	eP	P	19 13 24.4	-1.0
USP	Ospenovka	8.40	283	P	P	19 13 26.8	+0.9
	SNR=6.7						
GTA	Gaotai	10.99	99	P	P	19 13 57.5	-3.9
GTA				AP		19 14 06.6	
GTA				AMB	AMB		
	comp=Z,70nm,5.4s						
GTA				LR	LR		
	comp=N,130nm,8.4s						
GTA				LR	LR		
	comp=E,160nm,8.0s						
GTA				LR	LR		
	comp=Z,70nm,8.8s						
ZAL	Zalesovo	12.04	357	Pn	P	19 14 10.7	-5.0
	comp=Z,1.1nm,0.3s,baz=304,slow=9.7,SNR=11						
ZAL				Sn	S	19 16 19.8	-11
	comp=Z,1.3nm,0.3s,baz=94,slow=19,SNR=6.4						
CHCP	Chirah Chowk	12.84	234	P	P	19 14 25.2	-1.3
LSA	Lhasa	12.95	159	eP	P	19 14 29.4	+1.4
LSA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
LSA	Lhasa	12.95	159	ePn	P	19 14 29.4	+1.5
	comp=Z,8.5nm,1.5s						
NVS	Novosibirsk	13.04	354	eP	P	19 14 24.0	-5.0
CEP	Cherat	13.57	238	P	P	19 14 35.3	-0.8
GKN	Gorkha	13.91	184	eP	P	19 14 40.5	-0.1
GUN	Gumba	13.97	179	eP	P	19 14 42.1	+0.7
	comp=Z,35nm,0.6s						
KKN	Kakani	14.10	182	eP	P	19 14 43.0	0.0
	comp=Z,7.5nm,0.5s						
KKN	Kakani	14.10	182	eP	P	19 14 43.0	0.0
KKN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KOLN	Koldanda	14.22	188	eP	P	19 14 43.7	-0.9
	comp=Z,31nm,0.9s						
DMN	Daman	14.28	182	eP	P	19 14 45.0	-0.5
PKI	Pulchoki	14.31	181	eP	P	19 14 45.4	-0.5
	comp=Z,15nm,0.8s						
PKI	Pulchoki	14.31	181	eP	P	19 14 45.4	-0.5
PKI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
THW	Thamme Wali	14.36	235	P	P	19 14 44.3	-2.2
ZAK	Zakamensk	14.79	49	eP	P	19 14 48.5	-3.4
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s						
NDI	New Delhi	14.91	210	eP	P	19 14 50.5	-3.1
BVAR	Borovoye Array	15.17	322	Pn	P	19 14 54.9	-1.9
	comp=Z,0.4nm,0.3s,baz=126,slow=12,SNR=8.3						
BVAR				Sn	S	19 17 39.9	-4.8
	comp=Z,0.2nm,0.3s,baz=124,slow=26,SNR=3.1						
BVAR				Lg		19 19 23.0	
	comp=Z,0.1nm,0.3s,baz=129,slow=20,SNR=3.0						
SBDP	Sheikh Budin	15.28	236	P	P	19 14 54.6	-3.8
SONM	Songino Array	15.78	61	Pn	P	19 15 08.1	+3.3
	comp=Z,0.3nm,0.3s,baz=250,slow=13,SNR=29						
SONM				Lg		19 19 36.5	
	comp=Z,0.1nm,0.3s,baz=259,slow=25,SNR=4.2						
SONM				LR	LR	19 21 27.6	
	comp=Z,102nm,19.8s,baz=78,slow=39						
DRP	Derazinda	16.03	236	P	P	19 15 10.7	+2.6
ULN	Ulaanbaatar	16.21	61	eP	P	19 15 11.9	+1.5
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ULN	Ulaanbaatar	16.21	61	ePn	P	19 15 11.9	+1.5
	comp=Z,6.7nm,1.1s						
SHL	Shillong	17.08	161	eP	P	19 15 21.8	+0.3
AB31	Akbulak array	19.42	301	P	P	19 15 49.2	-0.7
	comp=Z,0.9nm,0.5s,baz=98,slow=12,SNR=19						
KMI	Kunming	21.88	135	P	P	19 16 15.9	+0.3
KMI				AP		19 16 24.9	
ENH	Enshi	22.36	114	eP	P	19 16 20.2	-0.2
	comp=Z,6.7nm,0.7s,mb4.2						
ARU	Arti	22.74	319	eP	P	19 16 23.7	-0.1
ARU				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.1						
ARU	Arti	22.74	319	eP	P	19 16 23.7	-0.1
	comp=Z,4.2nm,0.5s,mb4.1						
GYA	Guiyang	23.09	125	P	P	19 16 26.4	-1.2
GYA				AP		19 16 37.6	
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
CM31	Chiang Mai Arr	25.95	150	eP	P	19 16 55.2	+0.2
	comp=Z,6.4nm,0.8s,mb4.2						
CMAR	Chiang Mai Arr	25.95	150	P	P	19 16 55.6	+0.6
	comp=Z,5.7nm,0.6s,mb4.3,baz=330,slow=9.0,SNR=44						
BRTR	Keskin Array B	38.99	285	P	P	19 18 50.5	+1.8
	comp=Z,0.6nm,0.5s,mb3.6,baz=122,slow=9.3,SNR=4.3						
AKASG	Malin Array Be	39.15	303	P	P	19 18 50.2	+0.4
	comp=Z,0.2nm,0.3s,mb3.3,baz=72,slow=7.0,SNR=4.0						
ASF	Jabal al Asfar	39.71	272	P	P	19 18 57.1	+2.3
	comp=Z,0.7nm,0.4s,mb3.8,baz=36,slow=8.7,SNR=4.3						
KAF	Kangasniemi	40.02	321	ep	P	19 18 56.3	-0.7
	comp=Z,1.0nm,0.6s,mb3.7,baz=91,slow=8.2						
KAF	Kangasniemi	40.02	321	eP	P	19 18 56.3	-0.7
KAF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
FINES	FINESS Array B	40.11	320	P	P	19 18 56.9	-0.8
	comp=Z,0.5nm,0.6s,mb3.5,baz=100,slow=11,SNR=6.7						
FINES	FINESS Array B	40.11	320	P	P	19 18 56.9	-0.8
KEV	Kevo	40.64	333	ep	P	19 19 00.6	-1.4
	comp=Z,5.8nm,1.0s,mb4.2						
KEV	Kevo	40.64	333	eP	P	19 19 00.6	-1.4
KEV				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
ASAJ	Asahikawa	40.93	67	LR	LR	19 37 01.3	
	comp=Z,26nm,20.0s,MS3.1,baz=163,slow=38						
ARCES	ARCESS Array B	41.12	332	P	P	19 19 05.1	-0.9
	comp=Z,1.2nm,0.8s,mb3.6,baz=90,slow=7.8,SNR=6.4						
ARCES				pP	pP	19 19 12.6	-0.3
	comp=Z,2.2nm,0.8s,baz=90,slow=7.3,SNR=8.1						
ARCES	ARCESS Array B	41.12	332	P	P	19 19 05.1	-0.9
ARCES				pP	pP	19 19 12.6	-0.3
HFS	Hagfors	46.26	319	pP	pP	19 19 52.8	-1.6
	comp=Z,0.4nm,0.5s,baz=90,slow=4.3,SNR=4.1						
NB2	NORSAR Subarra	47.28	320	P	P	19 19 54.5	-1.1
	comp=Z,0.2nm,0.4s,mb3.4,baz=78,slow=7.9						
NOA	NORSAR Array B	47.28	320	P	P	19 19 54.6	-0.9
	comp=Z,0.4nm,0.8s,mb3.4,baz=80,slow=6.8,SNR=2.7						
NOA				pP	pP	19 20 01.3	-1.2
	comp=Z,0.8nm,0.7s,baz=78,slow=7.8,SNR=4.0						
ILAR	Eielson Array	65.98	22	P	P	19 22 06.3	-2.2
	comp=Z,0.3nm,0.7s,mb3.5,baz=292,slow=4.9,SNR=3.9						
ILAR				pP	pP	19 22 13.0	-2.7
	comp=Z,0.6nm,0.7s,baz=318,slow=5.3,SNR=5.9						
YKA	Yellowknife Ar	74.66	10	pP	pP	19 23 06.1	-2.4
	comp=Z,0.5nm,0.5s,baz=308,slow=8.9,SNR=4.6						
WRA	Warramunga Arr	76.19	133	P	P	19 23 09.9	-0.9
	comp=Z,1.8nm,0.6s,mb4.2,baz=323,slow=4.8,SNR=39						
WRA				pP	pP	19 23 17.4	-0.7
	comp=Z,2.0nm,0.6s,baz=332,slow=5.4,SNR=18						
ASAR	Alice Springs	79.00	136	P	P	19 23 25.6	-0.7
	comp=Z,0.8nm,0.7s,mb3.8,baz=328,slow=5.4,SNR=16						
ASAR				pP	pP	19 23 33.0	-0.6
	comp=Z,0.7nm,0.6s,baz=328,slow=5.6,SNR=10						

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*MOS **03** 19:19:07.1±1.3,2.93N×125.21E,h33^{km},mb4.7/5,Error ellipse: s-maj=29.0km s-min=11.3km az=114.9*
*IDC **03** 19:19:15.8±6.9,2.79N×125.05E,h95^{km}±63^{km},mb4.0/13, mb1 4.1/13,mb1mx3.9/21,mbtmp4.3/13,Error ellipse: s-maj=40.6km s-min=12.1km az=73.0*
*NEIC **03** 19:19:29.0±2.0,2.78N×125.41E,h228^{km}±21^{km},mb4.2/11, Error ellipse: s-maj=11.6km s-min=5.4km az=56.0*
ISC 03 19:19:22.6±1.9,**2.88N**±0.06×**125.50E**±0.10,**h178^{km}**±18^{km}**, n44,σ0^{s}96**/48,**mb4.4**/24,**2C,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSM	Kuching	15.24	265	ePn	P	19 22 52.4	+2.4
KAKA	Kakadu	16.96	156	eP	P	19 23 06.7	-4.2
JOW	Kunigami	23.96	6	P	P	19 24 24.5	+2.5
	9.7nm,0.7s,mb4.5,baz=181,slow=5.9,SNR=5.6						
WRAB	Tennant Creek	24.28	159	eP	P	19 24 24.1	-0.9
WRAB				pmax	pmax		
	comp=Z,120nm,0.8s,mb5.5						
WRAB	Tennant Creek	24.28	159	eP	P	19 24 24.1	-0.9
	comp=Z,120nm,0.8s,mb5.5						
WRA	Warramunga Arr	24.29	159	P	P	19 24 24.8	-0.2
	comp=Z,43nm,0.4s,mb5.3,baz=335,slow=10,SNR=240						
WRA				S	S	19 28 29.5	+1.4
	comp=Z,1.9nm,0.8s,baz=336,slow=16,SNR=4.7						
WB2	Warramunga Arr	24.29	159	⇑iP	P	19 24 24.5	-0.6
WB2				eS	S	19 28 29.6	+1.4
MBWA	Marble Bar	24.55	193	eP	P	19 24 27.2	-0.3
	comp=Z,5.9nm,0.8s,mb4.2						
PMG	Port Moresby	24.80	120	eP	P	19 24 31.1	+1.2
PMG				pmax	pmax		
	comp=Z,17nm,0.8s						
PMG	Port Moresby	24.80	120	P	P	19 24 31.5	+1.6
	comp=Z,17nm,0.7s,mb4.7,baz=314,slow=4.6,SNR=7.0						
PMG	Port Moresby	24.80	120	eP	P	19 24 31.1	+1.1
	comp=Z,17nm,0.8s,mb4.6						
KULM	Kulim	24.90	276	eP	P	19 24 32.1	+1.2
ASAR	Alice Springs	27.63	163	P	P	19 24 54.8	-1.0
	comp=Z,3.2nm,0.5s,mb4.3,baz=337,slow=7.3,SNR=54						
ASAR				S	S	19 29 23.1	+0.3
	comp=Z,0.9nm,0.8s,baz=354,slow=17,SNR=3.4						
ASAR	Alice Springs	27.63	163	P	P	19 24 54.8	-1.0
ASAR				S	S	19 29 23.1	+0.3
ASPA	Alice Springs	27.63	163	eP	P	19 24 54.5	-1.3
ASPA				eS	S	19 29 23.0	+0.2
CTA	Charters Tower	30.60	139	eP	P	19 25 22.9	+0.7
CTA	Charters Tower	30.60	139	P	P	19 25 23.1	+0.9
	comp=Z,9.6nm,0.8s,mb4.6,baz=304,slow=7.4,SNR=8.0						
FORT	Forrest	33.56	176	eP	P	19 25 46.5	-1.2
MJAR	Matsushiro Arr	35.49	18	P	P	19 26 04.7	+0.7
	comp=Z,2.6nm,0.8s,mb3.9,baz=196,slow=8.3,SNR=6.8						
STKA	Stephens Creek	37.80	157	⇑iP	P	19 26 23.8	+0.4
STKA	Stephens Creek	37.80	157	P	P	19 26 23.9	+0.5
	comp=Z,6.5nm,0.6s,mb4.5,baz=335,slow=7.9,SNR=25						
LSA	Lhasa	42.09	313	eP	P	19 26 59.8	+1.0
LSA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
LSA	Lhasa	42.09	313	eP	P	19 26 59.8	+1.0
	comp=Z,2.7nm,0.8s,mb3.9						
GUN	Gumba	45.24	307	eP	P	19 27 24.3	+0.2
	comp=Z,21nm,0.7s,mb4.9						
PKI	Pulchoki	45.47	307	eP	P	19 27 25.2	-0.7
	comp=Z,19nm,1.2s,mb4.6						
PKI	Pulchoki	45.47	307	eP	P	19 27 25.2	-0.7
PKI				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.3						
KKN	Kakani	45.67	307	eP	P	19 27 27.3	-0.2
	comp=Z,7.3nm,0.7s,mb4.4						
KKN	Kakani	45.67	307	eP	P	19 27 27.3	-0.2
KKN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
DMN	Daman	45.73	307	eP	P	19 27 27.6	-0.3
	comp=Z,24nm,1.1s,mb4.8						
GKN	Gorkha	46.27	307	eP	P	19 27 31.9	-0.3
	comp=Z,27nm,1.3s,mb4.7						
KLR	Kul'dur	46.48	6	eP	P	19 27 31.8	-1.7
KOLN	Koldanda	47.01	306	eP	P	19 27 37.6	-0.3
	comp=Z,18nm,0.6s,mb4.9						
SONM	Songino Array	47.72	343	P	P	19 27 42.6	-0.6
	comp=Z,0.6nm,0.5s,mb3.5,baz=157,slow=9.4,SNR=5.0						
SONM				PcP	PcP	19 29 11.0	+1.1
	comp=Z,0.6nm,0.5s,baz=153,slow=2.8,SNR=3.7						
MKAR	Makanchi Array	57.56	326	P	P	19 28 54.9	-0.9
	comp=Z,1.2nm,0.4s,mb4.0,baz=121,slow=8.0,SNR=35						
MKAR				PcP	PcP	19 29 47.0	+0.1
	comp=Z,3.4nm,0.7s,baz=120,slow=4.7,SNR=17						
YAK	Yakutsk	59.09	2	eP	P	19 29 06.7	+0.5
YAK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
YAK	Yakutsk	59.09	2	eP	P	19 29 06.7	+0.4
	comp=Z,13nm,0.8s,mb4.8						
BVAR	Borovoye Array	67.36	328	P	P	19 29 59.6	-0.9
	comp=Z,0.4nm,0.5s,mb3.5,baz=146,slow=11,SNR=6.0						
BVAR				PcP	PcP	19 30 26.2	-0.5
	comp=Z,1.0nm,0.7s,baz=124,slow=5.3,SNR=5.7						
VNDA	Vanda	82.75	173	P	P	19 31 28.7	+1.3
	comp=Z,0.4nm,0.3s,mb3.6,baz=9.6,slow=6.6,SNR=6.6						
VNDA	Vanda	82.75	173	eP	P	19 31 27.9	+0.6
	comp=Z,0.5nm,0.6s,mb3.4						
ARCES	ARCESS Array B	90.81	340	P	P	19 32 07.0	+0.6
	comp=Z,1.4nm,0.6s,mb4.2,baz=91,slow=5.5,SNR=8.5						
KAF	Kangasniemi	91.77	332	ep	P	19 32 09.9	-1.1
FINES	FINESS Array B	91.99	332	P	P	19 32 11.9	-0.1
	comp=Z,0.9nm,0.6s,mb4.0,baz=72,slow=6.0,SNR=10.0						
NOA	NORSAR Array B	98.99	333	P	P	19 32 44.1	+0.2
	comp=Z,0.2nm,0.5s,mb3.8,baz=353,slow=13,SNR=3.2						
CFAA	Coronel Fontan	148.63	157	PKPbc	PKPdf	19 38 54.0	+8.9
	comp=Z,0.2nm,0.4s,baz=208,slow=7.2,SNR=3.6						

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*LDG **03** 19:24:45.0±0.3,16.16S×70.81W,h104^{km},Mb5.1/33, Ms2.6/1,Error ellipse: s-maj=16.5km s-min=7.3km az=47.0*
*MOS **03** 19:24:45.8±1.0,16.42S×70.81W,h119^{km},mb5.3/58, Error ellipse: s-maj=9.7km s-min=6.1km az=85.0*
*IDC **03** 19:24:48.1±0.5,16.47S×70.71W,h126^{km}±4^{km},mb4.7/18, mb1 4.9/20,mb1mx4.8/22,mbtmp5.1/20,MS3.5/6, Ms1 3.5/6,ms1mx3.2/26,Error ellipse: s-maj=14.1km s-min=9.7km az=77.0*
*HRVD **03** 19:24:49.0±0.4,16.73S×70.88W,h149^{km}±4^{km},MW5.0/51, Centroid moment Tensor Solution. LP body waves: s13,c16;Mantle waves: s51,c78; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.10±.20; $M_{\theta\theta}$-0.29±.23; $M_{\phi\phi}$0.38±.27; $M_{r\theta}$2.58±.12; $M_{\theta\phi}$-2.80±.20; $M_{\phi r}$-0.35±.15; Best double couple: $M_0$3.834×10^{16} NP1:ϕ_s184°,δ47°,λ0°. NP2:ϕ_s274°,δ90°,λ-137°. Principal axes: T 3.948, Plg28°, Azm41°; N -.227, Plg47°, Azm275°; P -3.721, Plg29°, Azm148°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **03** 19:24:49.0±0.1,16.48S×70.73W,mb5.0/137 Error ellipse: s-maj=4.7km s-min=3.3km az=49.0*
NEIC Felt [III] at Arequipa.
*BJI **03** 19:24:51.0,16.50S×70.70W,h134^{km},mB5.1*
ISC 03 19:24:47.3±0.2,**16.48S**±0.04×**70.84W**±0.04,**h134^{km}, h134^{km}**±1.2^{km}**:pP-P,n384,σ0^{s}94**/338,**mb4.8**/155, **127C-17D,Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	0.63	272	⇓iP	P	19 25 06.9	-0.8
ARE				i S	S	19 25 21.4	-1.9
LPAZ	La Paz	2.60	86	P	P	19 25 33.8	+4.1
LPAZ				S	S	19 26 06.0	+4.1
LPAZ				pmax	pmax		
	comp=Z,140nm,0.3s						
LPAZ				smax			
	comp=E,48nm,0.3s						
LPAZ				MLR	MLR		
	comp=Z,597nm,18.2s						
LPAZ	La Paz	2.60	86	P	P	19 25 33.8	+4.1
	comp=Z,140nm,0.3s,baz=269,slow=11,SNR=1174						
LPAZ				S	S	19 26 06.0	+4.0
	comp=Z,48nm,0.3s,baz=140,slow=25,SNR=11						
LPAZ				LR	LR	19 26 24.8	
	comp=Z,596nm,18.2s,baz=275,slow=39						
LPAZ	La Paz	2.60	86	⇑iPn	P	19 25 33.7	+4.0
LPAZ				eSn	S	19 26 06.4	+4.5
LVC	Limon Verde	6.36	164	⇓iP	P	19 26 17.4	-2.4
LVC				i S	S	19 27 23.3	-8.3
LVC	Limon Verde	6.36	164	P	P	19 26 17.5	-2.3
	comp=Z,463nm,0.3s,baz=332,slow=9.0,SNR=3474						
LVC				S	S	19 27 23.1	-8.4
	comp=Z,166nm,0.3s,baz=195,slow=21,SNR=16						
LVC				LR	LR	19 28 09.4	
	comp=Z,211nm,20.6s,baz=156,slow=32						
LVC	Limon Verde	6.36	164	⇓iPn	P	19 26 17.1	-2.6
	comp=Z,2µm,0.5s						
LVC				eSn	S	19 27 26.4	-5.2
ANCH	Antofagasta	7.17	177	i P	P	19 26 25.9	-4.8
ANCH				i S	S	19 27 38.9	-12
CPN1	Cerro Paranal	8.11	177	⇓iP	P	19 26 38.9	-4.4
CPN1				i S	S	19 28 02.1	-12
SIV	San Ignacio	9.39	88	P	P	19 26 58.4	-2.0
	comp=Z,8.5nm,0.3s,baz=276,slow=13,SNR=53						
SIV				S	S	19 28 41.5	-3.0
	comp=Z,4.4nm,0.3s,baz=159,slow=16,SNR=6.3						
CRCH	Chaqaral	9.81	179	i S	S	19 28 41.6	-13
SAML	Samuel	10.57	46	⇑ePn	P	19 27 14.6	-1.6
	comp=Z,11nm,1.2s						
TLL	Tololo Astrono	13.62	180	⇓iP	P	19 27 54.4	-1.5
TLL				eS	S	19 30 14.9	-9.4
CFAA	Coronel Fontan	15.24	172	P	P	19 28 14.1	-2.4
	comp=Z,1.0nm,0.3s,baz=339,slow=14,SNR=42						
CFAA				S	S	19 30 51.3	-10
	comp=Z,0.4nm,0.3s,baz=60,slow=7.5,SNR=5.2						
CPUP	Villa Florida	15.93	130	P	P	19 28 21.8	-3.4
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CPUP	Villa Florida	15.93	130	P	P	19 28 21.8	-3.4
	comp=Z,2.0nm,0.3s,baz=327,slow=16,SNR=28						
CPUP	Villa Florida	15.93	130	ePn	P	19 28 21.3	-3.9
	comp=Z,99nm,1.5s						
OTAV	Otavalo	18.23	335	eP	P	19 28 53.1	+0.2
	comp=Z,76nm,0.8s						
JATB	Jatai	18.54	97	eP	P	19 28 55.6	-0.5
JATB				e		19 28 59.7	
ROSC	El Rosal	21.48	350	P	P	19 29 26.5	+0.1
	comp=Z,17nm,0.4s,mb4.7,baz=110,slow=3.2,SNR=10						
ROSC				LR	LR	19 38 50.3	
	comp=Z,139nm,20.5s,baz=171,slow=39						
BDFB	Brasilia	21.95	91	P	P	19 29 30.6	-0.3
	comp=Z,33nm,0.6s,mb5.0,baz=264,slow=9.3,SNR=37						
BDFB				LR	LR	19 38 37.1	
	comp=Z,104nm,20.8s,baz=77,slow=38						
BAO	Brasilia Array	21.97	91	P	P	19 29 31.0	-0.1
TRQA	Tornquist	22.86	162	eP	P	19 29 39.0	-0.7
	comp=Z,131nm,1.1s,mb5.3						
PLCA	Paso Flores	24.16	179	⇓eP	P	19 29 51.8	-0.4
PLCA				pmax	pmax		
	comp=Z,141nm,0.9s						
PLCA	Paso Flores	24.16	179	P	P	19 29 51.9	-0.3
	comp=Z,124nm,0.9s,mb5.4,baz=358,slow=11,SNR=95						
PLCA	Paso Flores	24.16	179	⇓eP	P	19 29 51.8	-0.4
	comp=Z,141nm,0.9s,mb5.5						
SDV	Santo Domingo	25.21	0	P	P	19 30 00.8	-1.5
	comp=Z,19nm,0.5s,mb4.9,baz=210,slow=5.5,SNR=29						
SDV	Santo Domingo	25.21	0	eP	P	19 30 00.2	-2.1
	comp=Z,20nm,0.4s,mb5.0						
PCRV	Puerto La Cruz	27.19	13	P	P	19 30 20.2	-0.3
	comp=Z,6.6nm,0.4s,mb4.6,baz=306,slow=5.7,SNR=5.4						
JTS	JuntasAbangare	30.05	331	i P	P	19 30 47.9	+1.8
JTS	JuntasAbangare	30.05	331	eP	P	19 30 47.6	+1.5
	comp=Z,19nm,1.0s,mb4.8						
SJG	San Juan	34.69	8	eP	P	19 31 24.2	-2.0

SJG				pmax	pmax		
	comp=Z,65nm,0.9s						
SJG	San Juan	34.69	8	eP	P	19 31 24.1	-2.0
	comp=Z,65nm,0.9s,mb5.3						
RCBR	Riachuelo	35.81	77	eP	P	19 31 34.6	-1.1
	comp=Z,57nm,0.7s,mb5.3						
USHA	Ushuaia	38.32	178	P	P	19 31 56.4	0.0
	comp=Z,58nm,0.7s,mb5.3,baz=351,slow=6.9,SNR=43						
DWPF	Disney	45.50	347	eP	P	19 32 55.0	-0.2
	comp=Z,89nm,0.8s,mb5.5						
CSU	Charleston Sou	49.98	350	eP	P	19 33 29.3	-0.5
TWB	Tillmans-White	50.11	350	eP	P	19 33 30.4	-0.5
NHSC	New Hope	50.11	350	eP	P	19 33 30.6	-0.3
	comp=Z,104nm,0.5s,mb5.7						
COW	Cow Castle Cre	50.47	349	eP	P	19 33 33.1	-0.4
COW				esP	sP	19 34 19.6	+0.2
GOGA	Godfrey	51.06	346	eP	P	19 33 37.0	-1.0
GOGA				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.1						
GOGA	Godfrey	51.06	346	eP	P	19 33 37.0	-1.0
	comp=Z,37nm,0.8s,mb5.1						
JSC	Jenkinsville	51.45	349	eP	P	19 33 40.3	-0.7
LRAL	Lakeview Retre	51.60	343	eP	P	19 33 40.9	-1.3
	comp=Z,10nm,0.5s,mb4.7						
NATX	Nacogdoches	53.13	335	eP	P	19 33 53.2	-0.4
	comp=Z,62nm,0.8s,mb5.4						
CPCT	Cooper Cave	53.25	346	⇑iP	P	19 33 53.3	-1.1
SWET	Sewanee	53.37	345	eP	P	19 33 53.6	-1.7
OXF	Oxford	53.70	341	eP	P	19 33 55.5	-2.2
OXF				pmax	pmax		
	comp=Z,73nm,1.1s,mb5.3						
OXF	Oxford	53.70	341	eP	P	19 33 55.5	-2.2
	comp=Z,73nm,1.1s,mb5.3						
TZTN	Tazewell	54.09	347	⇑iP	P	19 33 59.2	-1.3
BLA	Blacksburg	54.16	351	⇑iP	P	19 34 00.5	-0.5
BLA				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.0						
BLA	Blacksburg	54.16	351	⇑iP	P	19 34 00.5	-0.5
	comp=Z,24nm,0.7s,mb5.0						
ELN	Prospectdale	54.23	350	eP	P	19 34 01.1	-0.4
JCT	Junction City	54.38	329	⇑eP	P	19 34 02.1	-0.6
JCT				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.0						
JCT	Junction City	54.38	329	⇑eP	P	19 34 02.1	-0.6
	comp=Z,22nm,0.7s,mb5.0						
PWV	Princeton	54.39	350	eP	P	19 34 01.9	-0.7
FWV	Forest Hill	54.59	350	eP	P	19 34 03.5	-0.6
WVT	Waverly	54.74	343	⇑iP	P	19 34 03.0	-2.2
WVT				pmax	pmax		
	comp=Z,91nm,1.6s,mb5.2						
WVT	Waverly	54.74	343	⇑iP	P	19 34 03.0	-2.3
	comp=Z,91nm,1.6s,mb5.2						
UALR	University of	54.92	338	⇑iP	P	19 34 05.1	-1.5
	comp=Z,45nm,1.1s,mb5.1						
HBAR	Harrisburg	55.06	340	P	P	19 34 07.0	-0.6
TXAR	Lajitas Array	55.49	325	P	P	19 34 10.3	-0.4
	comp=Z,7.3nm,0.7s,mb4.5,baz=151,slow=9.2,SNR=33						
PARMO	Parma	55.80	342	eP	P	19 34 11.4	-1.5
WCI	Wyandotte Cave	56.32	345	⇑iP	P	19 34 14.8	-1.8
WCI				pmax	pmax		
	comp=Z,45nm,0.5s,mb5.5						
WCI	Wyandotte Cave	56.32	345	⇑iP	P	19 34 14.8	-1.8
	comp=Z,46nm,0.5s,mb5.6						
MVL	Millersville	56.42	355	⇑iP	P	19 34 15.8	-1.4
MCWV	Mont Chateau	56.48	352	⇑iP	P	19 34 16.9	-0.7
	comp=Z,66nm,1.0s,mb5.4						
MCWV				epP	pP	19 34 50.8	+1.4
MCWV				e		19 35 06.1	
FVM	French Village	57.22	342	⇑eP	P	19 34 21.3	-1.6
FVM				pmax	pmax		
	comp=Z,79nm,0.8s,mb5.6						
FVM	French Village	57.22	342	⇑eP	P	19 34 21.3	-1.5
	comp=Z,79nm,0.8s,mb5.6						
BLO	Bloomington	57.27	346	eP	P	19 34 21.6	-1.6
WMOK	Wichita Mounta	57.45	333	eP	P	19 34 22.7	-1.8
WMOK				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.9						
WMOK	Wichita Mounta	57.45	333	eP	P	19 34 22.7	-1.8
	comp=Z,13nm,0.6s,mb4.9						
BRYW	Bryant College	58.11	359	⇑iP	P	19 34 27.4	-1.6
	comp=Z,110nm,0.9s,mb5.7						
BRYW				epP	pP	19 34 59.9	-1.0
MNTX	Cornudas Mount	58.25	325	eP	P	19 34 28.9	-1.3
	comp=Z,17nm,1.0s,mb4.8						
MNTX				epP	pP	19 35 02.5	+0.4
MNTX				esP	sP	19 35 15.9	-1.0
ALLY	Alegheny Colle	58.48	352	⇑iP	P	19 34 30.6	-1.0
ALLY				ePcP	PcP	19 35 19.5	-0.9
BINY	Binghamton	58.58	356	⇑iP	P	19 34 31.1	-1.2
	comp=Z,51nm,0.6s,mb5.5						
HRV	Harvard--Oak R	58.70	359	⇑iP	P	19 34 31.7	-1.4
HRV				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.2						
HRV	Harvard--Oak R	58.70	359	⇑iP	P	19 34 31.7	-1.4
	comp=Z,44nm,1.0s,mb5.2						
AMTX	Amarillo	58.89	331	⇑eP	P	19 34 33.3	-1.3
	comp=Z,8.8nm,0.6s,mb4.8						
GENY	Geneseo	59.30	354	eP	P	19 34 36.1	-1.2
ACCN	Adirondack Com	59.63	358	eP	P	19 34 37.8	-1.7
ACCN				ePcP	PcP	19 35 23.8	-1.1
FFD	Franklin Falls	59.66	359	eP	P	19 34 34.1	-5.7
	comp=Z,25nm,0.6s,mb5.2						
HNH	Hanover	59.91	359	eP	P	19 34 39.7	-1.7
NCB	Newcomb	60.24	357	⇑iP	P	19 34 42.3	-1.4
	comp=Z,12nm,0.5s,mb5.0						
MIV	Mineville/With	60.31	358	eP	P	19 34 42.7	-1.5
KSU1	Kansas State U	60.32	337	⇑iP	P	19 34 43.0	-1.3
FRNY	Flat Rock	61.07	358	⇑iP	P	19 34 47.9	-1.4
MSNY	Massena	61.29	357	eP	P	19 34 49.6	-1.2
ANMO	Albuquerque	61.33	327	⇑iP	P	19 34 50.9	-0.3
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ANMO	Albuquerque	61.33	327	⇑iP	P	19 34 50.9	-0.3
	comp=Z,5.2nm,0.6s,mb4.5						
SDCO	Great Sand Dun	63.02	330	⇑iP	P	19 35 02.7	+0.3
	comp=Z,35nm,0.8s,mb5.2						
SDCO				epP	pP	19 35 35.5	+0.7
SDCO				esP	sP	19 35 50.2	+0.7
WUAZ	Wupatki	64.42	324	⇓iP	P	19 35 12.7	+1.1
	comp=Z,16nm,1.0s,mb4.8						
WUAZ				esP	sP	19 35 59.0	+0.2
ISCO	Idaho Springs	64.70	331	⇑iP	P	19 35 13.6	+0.2
ISCO				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
ISCO	Idaho Springs	64.70	331	⇑iP	P	19 35 13.6	+0.3
	comp=Z,15nm,0.9s,mb4.8						
PV01	Paradox Valley	64.85	328	eP	P	19 35 14.9	+0.6
VNA3	Neumayer Olymp	65.39	162	⇑i	PcP	19 35 47.1	-0.8
VNA3	Neumayer Olymp	65.39	162	⇑i	sP	19 35 50.1	-14
VNA3	Neumayer Olymp	65.39	162	⇓iP	P	19 35 17.0	-0.3
VNA3				⇑iP	pP	19 35 47.1	-2.7
VNA1	Neumayer--Stat	65.60	161	⇓iP	P	19 35 18.9	+0.3
BAR	Barrett	65.66	318	⇑eP	P	19 35 20.0	+0.3
BAR				esP	sP	19 36 06.6	-0.3
PHWY	Pilot Hill	65.83	332	eP	P	19 35 20.8	+0.2
VNA2	Neumayer--Watz	65.96	161	⇓iP	P	19 35 20.6	-0.3
VNA2	Neumayer--Watz	65.96	161	⇑i	PcP	19 35 49.1	-1.2
VNA2	Neumayer--Watz	65.96	161	⇑i	sP	19 35 53.1	-15
NEN	Nelson	66.52	322	eP	P	19 35 25.6	+0.5
NEN				esP	sP	19 36 12.1	-0.3
EYMN	Ely	66.75	345	⇑iP	P	19 35 24.6	-1.6
	comp=Z,38nm,0.8s,mb5.3						
RWWY	Rawlins	66.94	331	⇑eP	P	19 35 27.8	+0.2
	comp=Z,38nm,1.4s,mb5.0						
MSU	Marysvale	67.03	326	eP	P	19 35 28.9	+0.7
MSU				epP	pP	19 36 02.1	+1.1
MSU				esP	sP	19 36 16.4	+0.9
MVU	Marysvale	67.04	326	⇑eP	P	19 35 29.2	+0.9
	comp=Z,28nm,1.2s,mb5.0						
MVU				epP	pP	19 36 01.5	+0.5
MVU				esP	sP	19 36 16.2	+0.5
ARUT	Antelope Range	67.20	324	eP	P	19 35 30.3	+1.0
ARUT				e*PP	pP	19 36 03.8	+1.8
ARUT				e*SP	sP	19 36 17.0	+0.3
RSSD	Black Hills	67.51	335	⇑eP	P	19 35 31.3	+0.2
RSSD				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
RSSD	Black Hills	67.51	335	⇑eP	P	19 35 31.3	+0.3
	comp=Z,18nm,0.8s,mb4.8						
SNAA	Sanae	67.59	161	⇑i	PcP	19 36 00.9	+3.7
SNAA	Sanae	67.59	161	⇑i	sP	19 36 04.6	-14
SNAA	Sanae	67.59	161	⇓iP	P	19 35 30.5	-0.6
SNAA				⇑iP	pP	19 36 00.9	-3.0
MPU	Maple Canyon	67.84	327	eP	P	19 35 34.1	+0.9
DAU	Daniels Canyon	67.94	328	P	P	19 35 34.4	+0.6
JLU	Jordanelle	68.18	328	⇑eP	P	19 35 36.0	+0.7
DUG	Dugway	68.59	327	⇑iP	P	19 35 38.7	+0.9
DUG				e*PP	pP	19 36 12.2	+1.6
DUG				e*SP	sP	19 36 25.3	0.0
DUG				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.7						
DUG	Dugway	68.59	327	⇑iP	P	19 35 38.7	+0.9
	comp=Z,19nm,1.2s,mb4.7						
DUG				epP	pP	19 36 12.2	+1.6
DUG				esP	sP	19 36 25.3	+0.1
DAC	Darwin (Calif)	68.59	321	eP	P	19 35 39.0	+1.1
DAC				e*PP	pP	19 36 11.7	+1.0
DAC				e*SP	sP	19 36 25.3	-0.1
DAC				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
DAC	Darwin (Calif)	68.59	321	eP	P	19 35 39.0	+1.1
	comp=Z,15nm,1.0s,mb4.7						
DAC				epP	pP	19 36 11.7	+1.0
DAC				esP	sP	19 36 25.3	-0.1
PDAR	Pinedale Array	68.87	330	P	P	19 35 39.2	-0.2
	comp=Z,3.5nm,0.5s,mb4.4,baz=124,slow=7.1,SNR=32						
BW06	Boulder Array	68.87	330	eP	P	19 35 39.4	-0.1
	comp=Z,3.9nm,0.4s,mb4.5						
HWUT	Hardware Ranch	68.98	328	eP	P	19 35 40.3	+0.1
	comp=Z,11nm,0.7s,mb4.7						
DBIC	Dimbokro	69.18	76	P	P	19 35 40.8	-1.1
DBIC				*PP	pP	19 36 12.7	-2.1
DBIC				pmax	pmax		
	comp=Z,42nm,0.8s						
DBIC				pmax	pmax		
	comp=Z,17nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,43nm,19.9s						
DBIC	Dimbokro	69.18	76	P	P	19 35 40.8	-1.1
	comp=Z,42nm,0.8s,mb5.2,baz=226,slow=6.1,SNR=39						
DBIC				pP	pP	19 36 12.7	-2.0
	comp=Z,17nm,0.8s,baz=207,slow=14,SNR=2.4						
DBIC				LR	LR	20 05 50.2	
	comp=Z,43nm,19.9s,baz=223,slow=36						
DBIC	Dimbokro	69.18	76	⇑iP	P	19 35 40.5	-1.4
	comp=Z,22nm,0.6s,mb5.1						
DBIC				epP	pP	19 36 12.4	-2.3
BGU	Big Grassy Mou	69.23	327	⇑eP	P	19 35 41.9	+0.2
BGU				epP	pP	19 36 15.6	+1.0
BGU				esP	sP	19 36 29.9	+0.7
AHID	Auburn Hatcher	69.61	329	eP	P	19 35 44.1	0.0
	comp=Z,8.8nm,0.6s,mb4.7						
HVU	Hansel Valley	69.72	328	⇑eP	P	19 35 44.8	+0.1
ULM	Lac du Bonnet	70.01	343	P	P	19 35 45.3	-1.0
	comp=Z,41nm,0.4s,mb5.5,baz=155,slow=6.1,SNR=50						
ULM				pP	pP	19 36 18.1	-1.1
	comp=Z,8.9nm,0.7s,baz=183,slow=5.9,SNR=2.0						
TPAW	Teton Pass	70.08	330	⇑iP	P	19 35 47.4	+0.5
	comp=Z,8.9nm,0.6s,mb4.7						
RRI2	Red Ridge	70.16	330	⇑iP	P	19 35 47.8	+0.5
	comp=Z,47nm,1.0s,mb5.2						
RRI2				epP	pP	19 36 21.9	+1.6
RRI2				esP	sP	19 36 35.5	+0.6
OMM	Old Mammoth Mi	70.31	321	⇑iP	P	19 35 49.5	+1.1
OMM				epP	pP	19 36 23.7	+2.4
OMM				esP	sP	19 36 36.7	+0.7
MNV	Mina	70.35	322	eP	P	19 35 49.4	+0.8
MNV				e*PP	pP	19 36 22.8	+1.2
MNV				e*SP	sP	19 36 36.7	+0.5
MNV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
MNV	Mina	70.35	322	eP	P	19 35 49.4	+0.8
	comp=Z,4.4nm,1.0s,mb4.1						
MNV				epP	pP	19 36 22.8	+1.2
MNV				esP	sP	19 36 36.7	+0.5
IMW	Indian Meadow	70.39	330	⇑iP	P	19 35 49.3	+0.6
	comp=Z,11nm,0.6s,mb4.8						
NVAR	Mina Array Bea	70.44	322	P	P	19 35 50.2	+1.2
	comp=Z,6.3nm,0.8s,mb4.4,baz=140,slow=7.0,SNR=30						
YNR	Norris Junctio	70.88	331	eP	P	19 35 52.8	+1.1
SCHQ	Schefferville	71.11	2	P	P	19 35 51.8	-1.0
	comp=Z,12nm,0.6s,mb4.8,baz=188,slow=4.8,SNR=23						
HLID	Hailey	71.84	328	⇑iP	P	19 35 58.5	+1.2
	comp=Z,11nm,0.9s,mb4.6						
HLID				epP	pP	19 36 31.9	+1.4
HLID				esP	sP	19 36 46.3	+1.2
NVL	N'lazarevskaya	72.14	160	⇓iP	P	19 35 58.1	-0.6
NVL				i *PP	pP	19 36 45.1	+13
NVL				eSS		19 45 48.1	
NVL				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
NVL				MLR	MLR		
	comp=Z,20nm,15.9s						
WVOR	Wild Horse Val	73.29	325	eP	P	19 36 06.1	+0.2
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
WVOR	Wild Horse Val	73.29	325	eP	P	19 36 06.0	+0.2
	comp=Z,2.1nm,0.8s,mb3.9						
QSPA	South Pole Qui	73.68	180	⇓iP	P	19 36 08.1	+0.6
	comp=Z,27nm,1.0s,mb4.9						
MOD	Modoc	73.87	324	⇑iP	P	19 36 10.4	+1.1
	comp=Z,6.7nm,0.6s,mb4.5						
MOD				epP	pP	19 36 43.8	+1.2
MOD				esP	sP	19 36 58.3	+1.1
MSO	Missoula	73.98	331	⇑iP	P	19 36 10.7	+0.9
	comp=Z,17nm,1.5s,mb4.6						
BMO	Blue Mountains	74.23	328	⇑iP	P	19 36 11.6	+0.3
BMO				e*PP	pP	19 36 45.8	+1.1
BMO				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
BMO	Blue Mountains	74.23	328	⇑iP	P	19 36 11.6	+0.3
	comp=Z,10.0nm,0.6s,mb4.7						
BMO				epP	pP	19 36 45.8	+1.1
BMO				esP	sP	19 36 59.5	+0.3
YBH	Yreka Blue Hor	75.15	322	⇑eP	P	19 36 16.4	-0.2
YBH				pmax	pmax		
	comp=Z,11nm,1.1s						
YBH	Yreka Blue Hor	75.15	322	⇑eP	P	19 36 16.4	-0.2
	comp=Z,11nm,1.1s,mb4.4						
FFC	Flin Flon	75.72	342	eP	P	19 36 18.9	-0.6
FFC				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
FFC	Flin Flon	75.72	342	eP	P	19 36 18.9	-0.6
	comp=Z,5.1nm,0.8s,mb4.2						
VIPM	Ingram Point	75.74	326	P	P	19 36 21.7	+1.8
HUMO	Hull Mountain	75.83	323	⇑eP	P	19 36 20.2	-0.2
	comp=Z,3.0nm,0.5s,mb4.2						
BBOR	Butler Butte	75.85	323	P	P	19 36 20.8	+0.3
HBO	Huckleberry Mo	76.25	324	P	P	19 36 23.8	+1.0
CROR	Criterion Ridg	76.25	326	P	P	19 36 24.8	+2.0
FRIS	Frissel Point	76.36	325	P	P	19 36 24.8	+1.5
HAWA	Hanford	76.42	328	eP	P	19 36 24.9	+1.3
	comp=Z,0.6nm,0.2s,mb3.9						
FCC	Fort Churchill	77.36	348	⇑iP	P	19 36 28.7	+0.1
FCC				e*PP	pP	19 37 01.5	-0.8
FCC				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.0						
FCC	Fort Churchill	77.36	348	⇑iP	P	19 36 28.7	0.0
	comp=Z,30nm,0.7s,mb5.0						
FCC				epP	pP	19 37 01.5	-0.8
WPW	White Pass	77.67	327	P	P	19 36 32.2	+1.6
EDM	Edmonton	78.47	335	⇑iP	P	19 36 34.4	-0.4
RPW	Rockport	78.79	328	P	P	19 36 37.2	+0.6
JCW	Jim Creek	78.84	328	P	P	19 36 37.4	+0.5
OBC	Olympics--Boni	79.84	327	P	P	19 36 44.7	+2.4
PALC	Alcoutim	80.13	46	eP	P	19 36 44.4	+0.3
	comp=Z,52nm,1.1s,mb5.1						
PBEJ	Beja	80.13	46	eP	P	19 36 44.9	+0.8
	comp=Z,13nm,0.7s,mb4.7						
EGRO	El Granado	80.16	46	P	P	19 36 45.4	+1.1
	comp=Z,15nm,1.0s,mb4.6						
EVO	Evora	80.29	45	⇑iP	P	19 36 45.3	+0.4
	comp=Z,35nm,0.8s,mb4.7						
SBA	Scott Base	80.41	190	eP	P	19 36 45.6	+0.8
SBA				e*PP	pP	19 37 17.8	-0.8
SBA				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.3						
SBA	Scott Base	80.41	190	eP	P	19 36 45.6	+0.8
	comp=Z,8.0nm,1.1s,mb4.3						
SBA				epP	pP	19 37 17.8	-0.8
PTOM	Tomar	80.56	44	eP	P	19 36 47.0	+0.6
	comp=Z,37nm,1.1s,mb4.9						
EMIN	Mina Concepcio	80.83	46	P	P	19 36 48.7	+0.9
	comp=Z,10nm,0.9s,mb4.5						
ESPR	Espera	80.97	47	P	P	19 36 49.3	+0.7
	comp=Z,5.5nm,0.7s,mb4.3						
EBAD	Badajoz	81.08	45	P	P	19 36 50.1	+1.0
	comp=Z,13nm,0.8s,mb4.6						
PCBR	Castelo Branco	81.30	44	eP	P	19 36 50.8	+0.6
	comp=Z,19nm,1.2s,mb4.6						
VNDA	Vanda	81.45	190	P	P	19 36 51.5	+1.2
VNDA				*PP	pP	19 37 22.6	-1.6
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VNDA	Vanda	81.45	190	P	P	19 36 51.5	+1.2
	comp=Z,5.7nm,0.7s,mb4.3,baz=131,slow=4.8,SNR=49						
VNDA				pP	pP	19 37 22.6	-1.6
	comp=Z,3.6nm,1.0s,baz=107,slow=2.7,SNR=3.2						
VNDA	Vanda	81.45	190	eP	P	19 36 51.4	+1.1
	comp=Z,6.5nm,0.8s,mb4.3						
VNDA				epP	pP	19 37 23.6	-0.6
PVIS	Viseu	81.46	43	eP	P	19 36 51.5	+0.4
MTE	Manteigas	81.53	44	eP	P	19 36 51.9	+0.5
MTE	Manteigas	81.53	44	eP	P	19 36 51.0	-0.4
	comp=Z,15nm,0.9s,mb4.6						
EMIJ	Mijas	81.60	48	P	P	19 36 52.5	+0.7
	comp=Z,8.4nm,0.8s,mb4.4						
SYO	Syowa Base	81.81	160	⇑P	P	19 36 51.8	-0.5
SYO	Syowa Base	81.81	160	⇓PcP	PcP	19 36 54.9	-3.1
SYO	Syowa Base	81.81	160	⇑pP	pP	19 37 24.5	-1.8
ECAB	El Cabril	81.85	46	P	P	19 36 53.8	+0.6
	comp=Z,5.1nm,0.7s,mb4.3						
PVRL	Vila Real	81.86	43	eP	P	19 36 53.5	+0.4
	comp=Z,15nm,1.1s,mb4.5						
ELOB	Lobios	81.93	42	P	P	19 36 54.0	+0.5
	comp=Z,6.7nm,0.5s,mb4.5						
STS	Santiago	82.14	41	P	P	19 36 54.8	+0.3
STS				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.4						
STS	Santiago	82.14	41	P	P	19 36 54.8	+0.3
	comp=Z,3.7nm,0.4s,mb4.4						
ELOJ	Sierra Loja	82.31	48	P	P	19 36 56.8	+1.3
ELOJ				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.8						
ELOJ	Sierra Loja	82.31	48	P	P	19 36 56.8	+1.3
	comp=Z,17nm,0.7s,mb4.8						
ELUQ	Luque	82.42	47	P	P	19 36 57.5	+1.4
ELUQ				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
ELUQ	Luque	82.42	47	P	P	19 36 57.5	+1.4
	comp=Z,18nm,0.8s,mb4.8						
EADA	Adamuz	82.48	47	P	P	19 36 57.1	+0.7
	comp=Z,8.8nm,0.7s,mb4.5						
ERON	Agron	82.50	48	P	P	19 36 57.5	+1.0
	comp=Z,8.9nm,0.6s,mb4.6						
EALB	Alboran	82.57	49	P	P	19 36 56.9	+0.1
	comp=Z,12nm,0.5s,mb4.9						
ERUA	La Rua	82.79	42	P	P	19 36 58.9	+1.1
ERUA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
ERUA	La Rua	82.79	42	P	P	19 36 58.9	+1.0
	comp=Z,20nm,0.8s,mb4.9						
ECAL	Calabor	82.83	43	P	P	19 36 59.2	+1.2
	comp=Z,22nm,0.6s,mb5.1						
EBAN	Banos Encina	83.03	47	P	P	19 36 59.2	0.0
EBAN				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.6						
EBAN	Banos Encina	83.03	47	P	P	19 36 59.2	0.0
	comp=Z,3.8nm,0.3s,mb4.6						
EBER	Berja	83.10	48	P	P	19 36 58.9	-0.6
	comp=Z,15nm,0.9s,mb4.7						
EPON	Pontenova	83.25	41	P	P	19 37 00.6	+0.4
	comp=Z,14nm,0.5s,mb5.0						
TSUM	Tsumeb	83.27	108	eP	P	19 37 01.2	+0.5
	comp=Z,7.1nm,0.6s,mb4.6						
TSUM				epP	pP	19 37 34.8	0.0
EQES	Quesada	83.37	48	P	P	19 37 01.3	+0.4
	comp=Z,15nm,0.8s,mb4.8						
ESLA	Sonseca Array	83.60	46	eP	P	19 37 02.6	+0.6
	comp=Z,4.5nm,0.8s,mb4.2						
ESDC	Sonseca Array	83.60	46	P	P	19 37 02.7	+0.7
	comp=Z,21nm,0.8s,mb4.9,baz=254,slow=5.0,SNR=86						
ESDC				pP	pP	19 37 37.8	+1.7
	comp=Z,2.3nm,0.7s,baz=245,slow=4.4,SNR=2.5						
ESDC	Sonseca Array	83.60	46	P	P	19 37 03.0	+1.0
	comp=Z,27nm,0.8s,mb5.0						
ENIJ	Nijar	83.62	49	P	P	19 37 02.2	0.0
ENIJ				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
ENIJ	Nijar	83.62	49	P	P	19 37 02.2	+0.1
	comp=Z,11nm,0.7s,mb4.7						
GUD	Guadarrama	83.92	45	P	P	19 37 05.0	+1.4
GUD				pmax	pmax		
	comp=Z,15nm,0.5s,mb5.0						
GUD	Guadarrama	83.92	45	P	P	19 37 05.0	+1.4
	comp=Z,14nm,0.5s,mb5.0						
EVIA	Vianos	84.14	47	P	P	19 37 06.1	+1.3
EVIA				pmax	pmax		
	comp=Z,45nm,0.7s,mb5.3						
EVIA	Vianos	84.14	47	P	P	19 37 06.1	+1.3
	comp=Z,45nm,0.7s,mb5.3						
EARI	Arriondas	84.47	42	P	P	19 37 05.7	-0.5
	comp=Z,8.9nm,0.6s,mb4.7						
SFJD	Kangerlussuaq	84.57	8	i P	P	19 37 05.9	-0.3
SFJD				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.8						
SFJD	Kangerlussuaq	84.57	8	i P	P	19 37 05.9	-0.3
	comp=Z,14nm,0.7s,mb4.8						
EMUR	La Murta	84.69	48	P	P	19 37 07.0	-0.5
	comp=Z,9.6nm,0.8s,mb4.6						
ETOB	Tobarra	84.82	47	P	P	19 37 08.7	+0.6
	comp=Z,46nm,0.8s,mb5.3						
ELAN	Lanestosa	85.58	43	P	P	19 37 13.1	+1.3
	comp=Z,7.3nm,0.7s,mb4.5						
ECHE	Chera	85.63	47	P	P	19 37 13.4	+1.3
ECHE				pmax	pmax		
	comp=Z,17nm,0.5s,mb5.0						
ECHE	Chera	85.63	47	P	P	19 37 13.4	+1.3
	comp=Z,16nm,0.5s,mb5.0						
YKA	Yellowknife Ar	85.88	341	P	P	19 37 13.3	+0.6
	comp=Z,9.5nm,0.6s,mb4.7,baz=135,slow=5.1,SNR=97						
YKA				pP	pP	19 37 48.4	+1.4
	comp=Z,3.6nm,0.8s,baz=135,slow=5.0,SNR=2.3						
YKW3	Yellowknife Ar	85.93	341	⇑iP	P	19 37 13.3	+0.3
EMOS	Mosqueruela	86.31	46	P	P	19 37 16.1	+0.7
	comp=Z,5.9nm,0.5s,mb4.6						
EALK	Alkurruntz	86.84	43	P	P	19 37 18.9	+1.1
	comp=Z,6.7nm,0.7s,mb4.6						
ESAC	San Caprasio	86.89	45	P	P	19 37 19.1	+1.0
	comp=Z,18nm,0.6s,mb5.1						
SJPF	Ste Jean	86.98	43	⇑iP	P	19 37 19.2	+0.7
	comp=Z,23nm,0.8s,mb4.8						
SJPF	Ste Jean	86.98	43	⇑iP	P	19 37 19.2	+0.7
SJPF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
ERTA	Horta de San J	87.11	46	P	P	19 37 20.1	+0.9
	comp=Z,7.6nm,0.6s,mb4.7						
ETSF	Etsaut	87.33	44	⇑iP	P	19 37 21.1	+0.9
	comp=Z,27nm,0.7s,mb4.9						
ETSF	Etsaut	87.33	44	⇑iP	P	19 37 21.1	+0.9
ETSF				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
BOSA	Boshof	87.43	119	LR	LR	20 11 21.3	
	comp=Z,59nm,19.4s,baz=66,slow=32						
EGRA	Graus	87.61	45	P	P	19 37 22.6	+1.0
	comp=Z,16nm,0.9s,mb4.8						
EBIE	Bielsa	87.70	44	P	P	19 37 23.1	+1.1
	comp=Z,22nm,0.7s,mb5.1						
LABF	Labassere	87.81	44	eP	P	19 37 23.2	+0.7
QUIF	Quistinic	87.91	39	eP	P	19 37 22.3	-0.6
	comp=Z,27nm,0.9s,mb4.8						
QUIF	Quistinic	87.91	39	eP	P	19 37 22.3	-0.6
QUIF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
EPF	Esparros	87.98	44	⇑iP	P	19 37 23.9	+0.5
	comp=Z,18nm,0.7s,mb4.7						
EPF	Esparros	87.98	44	⇑iP	P	19 37 23.9	+0.5
EPF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7						
ROSF	Rostrenen	88.03	38	⇑iP	P	19 37 23.1	-0.4
	comp=Z,18nm,0.7s,mb4.7						
ROSF	Rostrenen	88.03	38	⇑iP	P	19 37 23.1	-0.4
ROSF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7						
MELF	Melles	88.19	44	eP	P	19 37 25.5	+1.1
EMIR	Miracle	88.32	45	P	P	19 37 25.6	+0.6
	comp=Z,2.2nm,0.3s,mb4.5						
ETOS	Mallorca	88.37	48	P	P	19 37 25.1	-0.1
	comp=Z,6.4nm,0.7s,mb4.6						
SGMF	Saint Gilles	88.42	38	eP	P	19 37 24.0	-1.3
	comp=Z,4.1nm,0.5s,mb4.2						
SGMF	Saint Gilles	88.42	38	eP	P	19 37 24.0	-1.3
SGMF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						

SALF	Salau	88.44	44	*e*P	P	19 37 26.5	+1.0
MLS	Moulis	88.45	44	*e*P	P	19 37 26.0	+0.4
DLBC	Dease Lake	88.93	333	⇑*i*P	P	19 37 28.9	+1.5
DLBC				*e*pP	pP	19 38 02.5	+0.5
LFF	La Frestale	89.04	42	⇑*i*P	P	19 37 28.2	-0.1
	comp=Z,67nm,0.9s,mb5.3						
LFF	La Frestale	89.04	42	⇑*i*P	P	19 37 28.2	-0.1
LFF				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.3						
MFF	Saint Martin d	89.17	41	⇑*i*P	P	19 37 28.6	-0.3
	comp=Z,23nm,0.7s,mb4.9						
MFF	Saint Martin d	89.17	41	⇑*i*P	P	19 37 28.6	-0.3
MFF				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
FILF	Fillols	89.28	45	*e*P	P	19 37 29.8	+0.3
MTLF	Montolieu	89.36	44	⇑*i*P	P	19 37 29.8	0.0
	comp=Z,32nm,0.9s,mb5.0						
MTLF	Montolieu	89.36	44	⇑*i*P	P	19 37 29.8	0.0
MTLF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
EJON	La Jonquera	89.46	45	P	P	19 37 30.4	0.0
	comp=Z,7.1nm,0.9s,mb4.6						
GRR	Gorron	89.50	39	⇑*i*P	P	19 37 29.8	-0.6
	comp=Z,53nm,0.7s,mb5.3						
GRR	Gorron	89.50	39	⇑*i*P	P	19 37 29.8	-0.6
GRR				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.3						
MAW	Mawson	89.63	164	P	P	19 37 31.0	+0.5
	comp=Z,13nm,0.9s,mb4.8,baz=226,slow=7.0,SNR=11						
MAW				pP	pP	19 38 04.4	-0.7
	comp=Z,6.6nm,0.7s,baz=214,slow=8.3,SNR=3.9						
RJF	Les Rejaudoux	89.69	42	⇑*i*P	P	19 37 31.0	-0.3
	comp=Z,24nm,0.9s,mb4.8						
RJF	Les Rejaudoux	89.69	42	⇑*i*P	P	19 37 31.0	-0.3
RJF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
FLN	La Foliniere	89.89	39	⇑*i*P	P	19 37 31.7	-0.5
	comp=Z,26nm,0.7s,mb5.0						
FLN	La Foliniere	89.89	39	⇑*i*P	P	19 37 31.7	-0.5
FLN				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
CAF	Calviac	89.89	43	⇑*i*P	P	19 37 32.3	0.0
	comp=Z,19nm,0.7s,mb4.8						
CAF	Calviac	89.89	43	⇑*i*P	P	19 37 32.3	0.0
CAF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
TCF	Toulx Ste Croi	90.53	42	⇑*i*P	P	19 37 34.6	-0.7
	comp=Z,14nm,0.7s,mb4.8						
TCF	Toulx Ste Croi	90.53	42	⇑*i*P	P	19 37 34.6	-0.7
TCF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
LASF	Ste Croix	90.74	44	⇑*i*P	P	19 37 36.6	+0.3
	comp=Z,15nm,1.0s,mb4.7						
LBL	Lubilhac	90.78	43	*e*P	P	19 37 37.0	+0.5
PYM	Petit Puy Mans	90.83	42	*e*P	P	19 37 36.8	+0.1
BGF	Bois d’Agland	91.04	41	⇑*i*P	P	19 37 37.3	-0.4
	comp=Z,43nm,0.8s,mb5.3						
BGF	Bois d’Agland	91.04	41	⇑*i*P	P	19 37 37.3	-0.4
BGF				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2						
PLDF	La Plantade	91.31	42	*e*P	P	19 37 38.8	-0.1
SUMG	Summit	91.42	9	⇑*i*P	P	19 37 40.4	+1.5
	comp=Z,44nm,0.8s,mb5.5						
SUMG				*e*pP	pP	19 38 15.7	+2.2
AVF	Avril sur Loir	91.45	41	⇑*i*P	P	19 37 38.8	-0.7
	comp=Z,14nm,0.8s,mb4.8						
AVF	Avril sur Loir	91.45	41	⇑*i*P	P	19 37 38.8	-0.7
AVF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
PRAF	Pradon	91.52	45	*e*P	P	19 37 41.5	+1.5
VIVF	Saint-Julien-l	91.58	44	⇑*i*P	P	19 37 40.5	+0.3
	comp=Z,35nm,1.3s,mb5.0						
VIVF	Saint-Julien-l	91.58	44	⇑*i*P	P	19 37 40.5	+0.3
VIVF				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.9						
TREF	Trevaresse	91.60	45	*e*P	P	19 37 41.5	+1.2
SSF	Saint Saulge	91.65	41	⇑*i*P	P	19 37 39.5	-1.0
SSF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
SSF	Saint Saulge	91.65	41	⇑*i*P	P	19 37 39.5	-1.0
	comp=Z,8.3nm,1.0s,mb4.7						
SMF	Signal de Mont	91.70	42	⇑*i*P	P	19 37 40.3	-0.4
	comp=Z,35nm,0.9s,mb5.1						
SMF	Signal de Mont	91.70	42	⇑*i*P	P	19 37 40.3	-0.4
SMF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
SMRF	Simiane la Rot	91.86	45	⇑*i*P	P	19 37 42.1	+0.6
	comp=Z,15nm,0.9s,mb4.7						
VILF	Villemus	91.91	45	*e*P	P	19 37 42.9	+1.2
LOR	Lormes	91.95	41	⇑*i*P	P	19 37 41.0	-0.8
	comp=Z,7.7nm,0.6s,mb4.6						
LOR	Lormes	91.95	41	⇑*i*P	P	19 37 41.0	-0.8
LOR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
LMR	La Mourre	92.26	45	⇑*i*P	P	19 37 43.5	+0.1
	comp=Z,29nm,1.1s,mb4.9						
LMR	La Mourre	92.26	45	⇑*i*P	P	19 37 43.5	+0.1
LMR				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
ORIF	Oris-en-Rattie	92.40	44	⇑*i*P	P	19 37 44.7	+0.8
	comp=Z,21nm,0.7s,mb5.0						
ORIF	Oris-en-Rattie	92.40	44	⇑*i*P	P	19 37 44.7	+0.8
ORIF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
FRF	La Foret Royal	92.44	45	⇑*i*P	P	19 37 44.3	+0.2
	comp=Z,25nm,1.1s,mb4.9						
FRF	La Foret Royal	92.44	45	⇑*i*P	P	19 37 44.3	+0.2
FRF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
SBF	Sospel	93.08	45	*e*P	P	19 37 47.2	+0.1
CABF	La Chapelle	93.13	42	⇑*i*P	P	19 37 47.2	-0.1
MEZF	Maizieres J’vi	93.15	40	⇑*i*P	P	19 37 47.0	-0.3
LPL	La Plagne	93.17	43	⇑*i*P	P	19 37 48.4	+0.9
	comp=Z,15nm,0.8s,mb4.9						
LPL	La Plagne	93.17	43	⇑*i*P	P	19 37 48.4	+0.9
LPL				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
LPG	La Plagne	93.18	43	⇑*i*P	P	19 37 48.5	+1.0
	comp=Z,20nm,1.0s,mb4.9						
LPG	La Plagne	93.18	43	⇑*i*P	P	19 37 48.5	+1.0
LPG				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
BAIF	Baives	93.21	39	⇑*i*P	P	19 37 47.0	-0.5
GIVF	Givet	93.60	39	*e*P	P	19 37 49.1	-0.2
HAU	Haudompre	93.79	41	*e*P	P	19 37 49.5	-0.7
HINF	Hinteralfeld	94.04	41	⇑*i*P	P	19 37 50.7	-0.6
	comp=Z,6.9nm,0.7s,mb4.6						
HINF	Hinteralfeld	94.04	41	⇑*i*P	P	19 37 50.7	-0.6
HINF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
CDF	Champ du Feu	94.51	41	⇑*i*P	P	19 37 53.2	-0.2
	comp=Z,12nm,0.9s,mb4.8						
CDF	Champ du Feu	94.51	41	⇑*i*P	P	19 37 53.2	-0.2
CDF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.8						
TNS	Taunus Mts	95.83	39	*e*P	P	19 37 59.6	+0.2
TNS				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.0						
TNS	Taunus Mts	95.83	39	*e*P	P	19 37 59.6	+0.2
	comp=Z,8.0nm,1.0s,mb5.0						
AQU	L’Aquila	96.77	48	*e*P	P	19 38 03.1	-0.8
DIV	Divide	97.21	332	*e*P	P	19 38 05.6	+0.1
	comp=Z,16nm,0.7s,mb5.5						
GRA1	Grafenberg Arr	97.37	40	*e*P	P	19 38 06.2	-0.3
	comp=Z,10.0nm,1.1s,mb5.1						
GRF	Grafenberg Arr	97.37	40	*e*P	P	19 38 06.2	-0.3
GRF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.1						
GRF	Grafenberg Arr	97.37	40	*e*P	P	19 38 06.2	-0.3
GRF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.1						
GRF	Grafenberg Arr	97.37	40	*e*P	P	19 38 06.2	-0.3
	comp=Z,10.0nm,1.1s,mb5.1						
CLZ	Clausthal	97.48	38	*e*P	P	19 38 07.2	+0.3
CLZ				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.1						
CLZ	Clausthal	97.48	38	*e*P	P	19 38 07.2	+0.3
	comp=Z,12nm,1.1s,mb5.1						
BSEG	Bad Segeberg	98.06	36	*e*P	P	19 38 10.1	+0.7
BSEG				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.3						
TIP	Timpagrande	98.40	52	P	P	19 38 11.0	-0.4
GEC2	GERESS Array S	98.71	42	*e*P	P	19 38 12.4	-0.2
GEC2				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
GEC2	GERESS Array S	98.71	42	*e*P	P	19 38 12.4	-0.2
	comp=Z,4.0nm,0.9s,mb4.8						
GERES	GERESS Array B	98.71	42	P	P	19 38 12.7	+0.1
	comp=Z,1.5nm,0.8s,mb4.5,baz=243,slow=3.0,SNR=14						
CLL	Collm	98.91	39	*i* P	P	19 38 13.8	+0.4
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb5.0						
CLL	Collm	98.91	39	*i* P	P	19 38 13.8	+0.4
	comp=Z,4.0nm,0.7s,mb5.0						
CLL	Collm	98.91	39	P	P	19 38 13.8	+0.4
	comp=Z,logA/T=0.8,mb5.0						
ILAR	Eielson Array	98.95	335	P	P	19 38 13.4	+0.1
	comp=Z,0.9nm,0.7s,mb4.3,baz=153,slow=2.5,SNR=8.3						
COLA	College	99.38	335	*i* P	P	19 38 16.2	+1.0
NOA	NORSAR Array B	100.47	29	P	P	19 38 21.0	+0.8
	comp=Z,0.3nm,0.6s,baz=254,slow=4.5,SNR=2.7						
NOA	NORSAR Array B	100.47	29	P	P	19 38 21.0	+0.8
ARCES	ARCESS Array B	107.53	22	PKKPbc		19 54 13.8	
	comp=Z,0.6nm,0.6s,baz=90,slow=0.9,SNR=6.4						
MALT	Malatya	115.03	55	*e*PKIKP	PKPdf	19 43 15.0	+2.3
SOC	Sochi	116.01	49	*i* PKIKP	PKPdf	19 43 13.3	-1.1
SOC				*e*SS	SS	20 00 06.5	-6.3
SOC				pmax	pmax		
	comp=N,32nm,1.2s						
SOC				pmax	pmax		
	comp=E,31nm,1.2s						
SOC				pmax	pmax		
	comp=Z,38nm,1.2s						
STKA	Stephens Creek	122.73	213	PKP	PKPdf	19 43 29.2	+1.5
	comp=Z,1.0nm,0.8s,baz=191,slow=5.2,SNR=3.3						
STKA				pPKP		19 44 03.2	
	comp=Z,1.2nm,0.6s,baz=74,slow=7.4,SNR=2.1						
STKA	Stephens Creek	122.73	213	PKP	PKPdf	19 43 29.2	+1.5
STKA				pPKP		19 44 03.2	
ARU	Arti	124.94	32	*i* PKIKP	PKPdf	19 43 29.5	-1.9
ARU				*e*		19 50 27.6	
ARU	Arti	124.94	32	*e*PKPdf	PKPdf	19 43 33.3	+1.9
ASAR	Alice Springs	133.34	212	PKhKP		19 43 34.1	
	comp=Z,0.3nm,0.8s,baz=156,slow=2.8,SNR=4.6						
ASAR				PKP	PKPdf	19 43 49.5	+1.2
	comp=Z,1.3nm,0.7s,baz=137,slow=1.8,SNR=16						
ASAR				pPKP		19 44 22.6	
	comp=Z,1.4nm,0.7s,baz=144,slow=2.1,SNR=4.7						
ASAR				SKPbc		19 47 05.4	
	comp=Z,2.7nm,0.9s,baz=142,slow=3.8,SNR=10						
WRA	Warramunga Arr	136.16	215	PKhKP		19 43 40.4	
	comp=Z,0.2nm,0.5s,baz=166,slow=2.5,SNR=7.3						
WRA				PKP	PKPdf	19 43 55.3	+1.7
	comp=Z,9.6nm,1.3s,baz=138,slow=1.6,SNR=23						
WRA				pPKP		19 44 28.1	
	comp=Z,3.8nm,0.8s,baz=155,slow=1.6,SNR=6.4						
WRA				SKPbc		19 47 14.5	
	comp=Z,6.1nm,0.9s,baz=140,slow=2.7,SNR=17						
WRAB	Tennant Creek	136.16	215	*e*PKIKP	PKPdf	19 43 54.5	+1.0
NVS	Novosibirsk	136.81	22	*e*PKIKP	PKPdf	19 43 52.7	-1.1
NVS				*e*		19 44 29.2	
NVS				pmax	pmax		
	comp=N,1.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,1.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZAL	Zalesovo	138.09	21	PKP	PKPdf	19 43 57.1	+0.9
	comp=Z,7.8nm,0.8s,baz=168,slow=2.7						
AAK	Ala-Archa	140.59	41	*i* PKIKP	PKPdf	19 43 58.6	-2.5
MKAR	Makanchi Array	142.46	31	PKhKP		19 44 01.9	
	comp=Z,2.6nm,0.6s,baz=333,slow=3.5,SNR=25						
MKAR				pPKP		19 44 38.3	
	comp=Z,1.0nm,0.6s,baz=306,slow=4.4,SNR=1.9						
MKAR				SKPbc		19 47 32.7	
	comp=Z,2.7nm,0.8s,baz=315,slow=3.4,SNR=7.9						
MKAR	Makanchi Array	142.46	31	PKP	PKPdf	19 44 01.9	-2.2
MKAR				pPKP		19 44 38.3	
MKAR				SKPbc		19 47 32.7	
IRK	Irkutsk	144.11	5	*e*PKIKP	PKPdf	19 44 07.7	+0.9
IRK				*e*		19 44 42.0	
IRK				pmax	pmax		
	comp=Z,25nm,0.7s						
MOY	Mondy	144.30	9	*e*PKIKP	PKPdf	19 44 08.4	+1.3
MOY				pmax	pmax		
	comp=Z,34nm,1.5s						
TLY	Talaya	144.61	6	*e*PKIKP	PKPdf	19 44 09.8	+2.1
TLY				*e*		19 44 45.4	
TLY				pmax	pmax		
	comp=Z,40nm,0.8s						
TLY	Talaya	144.61	6	*e*PKPdf	PKPdf	19 44 09.6	+1.9
THN	Thein Dam	145.84	56	*e*P	PKPdf	19 44 12.9	+2.4
	comp=Z,25nm,0.6s						
ZAK	Zakamensk	145.86	7	⇓*i*PKP2	PKPab	19 44 13.2	-0.4
ZAK				pmax	pmax		
	comp=Z,13nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
POO	Poona	146.29	81	*e*x	PKPdf	19 44 10.0	-1.6
MDJ	Mudanjiang	147.09	333	PKP	PKPdf	19 44 12.1	0.0
MDJ				PP	PP		
	comp=Z,30nm,4.4s						
WMQ	Urumqi	147.23	29	*e*PKP	PKPdf	19 44 15.8	+3.4
WMQ				LR	LR		
	comp=Z,10.0nm,20.0s						
MJAR	Matsushiro Arr	147.42	313	PKPbc	PKPdf	19 44 18.0	+5.0
	comp=Z,24nm,0.7s,baz=80,slow=2.5,SNR=65						
MJAR				pPKPbc		19 44 51.6	
	comp=Z,17nm,1.0s,baz=62,slow=0.3,SNR=5.1						
MAJO	Matsushiro	147.42	313	*e*PKPbc	PKPdf	19 44 18.0	+5.0
MAJO				*e*pPKPdf		19 44 51.8	
MAT	Matsushiro	147.42	313	*e*PKP2	PKPab	19 44 17.0	-3.1
MAT	Matsushiro	147.42	313	PKP	PKPdf	19 44 17.1	+4.2
SMLA	Simla	147.44	58	*i* P	PKPdf	19 44 19.7	+6.6
NDI	New Delhi	148.21	62	*e*P	PKPdf	19 44 19.0	+4.5
SONM	Songino Array	148.65	4	PKP	PKPdf	19 44 18.2	+3.6
	comp=Z,19nm,0.6s,baz=326,slow=1.9,SNR=50						
SONM				PKPbc	PKPdf	19 44 21.4	+6.8
	comp=Z,19nm,0.6s,baz=328,slow=1.8,SNR=52						
ULN	Ulaanbaatar	148.66	3	*e*PKPdf	PKPdf	19 44 17.3	+2.7
ULN				*e*PKPbc	PKPdf	19 44 21.4	+6.8
ULN				*e*PKPab	PKPab	19 44 25.5	+0.8
CN2	Changchun	149.46	336	*e*PKP	PKPdf	19 44 21.4	+5.4
LGTI	Lohaghat	150.51	59	⇓*i*P	PKPdf	19 44 25.7	+7.7
HYB	Hyderabad	150.72	84	*e*P	PKPdf	19 44 21.0	+2.4
HYB	Hyderabad	150.72	84	*i* PKP	PKPdf	19 44 19.0	+0.4
KOLN	Koldanda	153.85	60	*e*P	PKPdf	19 44 31.8	+8.9
	comp=Z,4.3nm,0.4s						
GKN	Gorkha	154.62	59	*e*P	PKPdf	19 44 34.3	+10
DMN	Daman	155.15	59	*e*P	PKPdf	19 44 38.4	+14
	comp=Z,19nm,0.6s						
KKN	Kakani	155.23	59	*e*P	PKPdf	19 44 38.8	+14
	comp=Z,28nm,0.6s						
GUN	Gumba	155.68	58	*e*P	PKPdf	19 44 41.2	+16
	comp=Z,62nm,1.1s						
GTA	Gaotai	155.74	18	PKP	PKPdf	19 44 31.7	+6.7
GTA				PKS	PKS	19 48 04.0	+5.8
GTA				PP	PP		
	comp=Z,40nm,11.7s						
GTA				LR	LR		
	comp=N,80nm,29.3s						
GTA				LR	LR		
	comp=E,80nm,26.2s						
GTA				LR	LR		
	comp=Z,90nm,36.9s						
LSA	Lhasa	158.88	48	*e*PKIKP	PKPdf	19 44 32.5	+3.1
LSA				*e*		19 45 07.4	
SSE	Sheshan	161.78	325	PKP	PKPdf	19 44 36.2	+3.8
NJ2	Nanjing	162.18	332	*e*PKP	PKPdf	19 44 30.5	-2.2
NJ2				APKP		19 45 12.4	
NJ2				PKP2	PKPab	19 45 21.2	-1.5
NJ2				PP	PP		
	comp=Z,100nm,6.0s						
NJ2				LR	LR		
	comp=N,300nm,24.2s						
NJ2				LR	LR		
	comp=E,90nm,12.3s						
NJ2				LR	LR		
	comp=Z,90nm,23.4s						
KMI	Kunming	169.52	34	PKP	PKPdf	19 44 40.2	+1.3
GYA	Guiyang	169.81	13	*e*PKP	PKPdf	19 44 36.7	-2.3
GYA				APKP		19 45 16.5	
GYA				XPKP		19 45 35.8	
GYA				PKP2	PKPab	19 45 56.5	+0.4
GYA				PP	PP	19 49 52.0	+5.1
GYA				PP	PP		
	comp=Z,130nm,8.9s						

IDC 03 19:48:11.9±3.1**,0.65N**×**98.01E,mb3.4**/3**,mb1 3.6**/4**,
mb1mx3.4**/20**,mbtmp3.4**/4**,ML3.5**/1**,Error ellipse:
s-maj=123.1km s-min=25.0km az=59.0,Northern
Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	17.72	3	P	P	19 52 21.1	-0.9
	0.1nm,0.3s,baz=190,slow=11,SNR=5.9						
WRA	Warramunga Arr	41.06	122	P	P	19 55 57.5	-1.6
	0.3nm,0.5s,baz=300,slow=9.1,SNR=3.8						
ASAR	Alice Springs	42.42	127	P	P	19 56 08.8	-1.5
	0.2nm,0.3s,baz=298,slow=7.9,SNR=7.3						
MKAR	Makanchi Array	47.97	345	P	P	19 56 52.0	-2.5
	0.6nm,0.6s,baz=158,slow=7.6,SNR=6.3						

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*IDC **03** 19:55:11.1±0.9, 32.66S×71.72W, mb4.1/4, mb1 4.1/9,
mb1mx3.9/19, mbtmp3.9/9, ML4.3/4, MS3.3/3, Ms1 3.3/3,
ms1mx2.9/18, Error ellipse: s-maj=40.8km s-min=19.4km
az=92.0*

*NEIC **03** 19:55:16.0, 32.68S×71.67W, h30^{km}, mb3.8/3,
MD4.3(GUC), After GUC.*

*GUC **03** 19:55:16.0±0.6, 32.68S×71.67W, h30^{km}±7^{km}, MD4.3,
ML4.3*

ISC 03 19:55:15.2±0.7**,32.65S**±0.04×**71.76W**±0.07**,h40**^{km}±7^{km}**,
n40,**σ**0^{s}87**/48**,mb4.0**/5**,MS3.4**/1**,12C-3D,Near coast of
central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PACH	Papudo	0.29	69	⇑*i*P	P	19 55 22.9	-0.5
IHA	Instituto Hidr	0.39	165	⇑*i*P	P	19 55 23.7	-0.8
ROCH	El Roble	0.71	118	⇑*i*P	P	19 55 28.4	-0.4
LCCH	Las Cruces	0.84	169	⇑*i*P	P	19 55 30.4	-0.3
JACH	Jahuel	0.99	92	⇑*i*P	P	19 55 32.3	-0.3
PEL	Peldehue	1.03	119	⇑*i*P	P	19 55 33.4	+0.1
PEL				*i* S	S	19 55 46.0	-0.8
PEL				AMP		19 55 48.6	
	comp=N,22µm,0.1s						
RCDM	Rinconada Maip	1.16	137	*e*P	P	19 55 35.0	-0.2
RCDM				*i* S	S	19 55 49.3	-0.8
RCDM				AMP		19 55 53.7	
	comp=E,9µm,0.1s						
TACH	Talagante	1.22	146	⇑*i*P	P	19 55 36.2	+0.2
DSCH	Colegio Aleman	1.25	127	⇑*i*P	P	19 55 36.8	+0.3
DSCH				*i* S	S	19 55 52.2	-0.2
DSCH				AMP		19 55 53.5	
	comp=N,21µm,0.6s						
CLCH	Cerro Calan	1.27	126	⇓*i*P	P	19 55 37.1	+0.3
CLCH				*i* S	S	19 55 52.7	-0.2
CLCH				AMP		19 55 54.3	
	comp=N,14µm,0.4s						
ANTU	Antumapu	1.32	135	*e*P	P	19 55 37.9	+0.4
ANTU				*i* S	S	19 55 54.2	0.0
ANTU				AMP		19 56 01.0	
	comp=N,12µm,0.3s						
LNV	Longovilo	1.34	167	⇑*i*P	P	19 55 37.5	-0.3
LNV				*i* S	S	19 55 54.6	-0.1
FCH	Farellones	1.41	119	⇓*i*P	P	19 55 39.2	+0.4
FCH				*i* S	S	19 55 56.7	+0.3
FCH				AMP		19 55 58.8	
	comp=E,8µm,0.2s						
PCH	Pirque	1.43	133	⇑*i*P	P	19 55 39.5	+0.4
PCH				*i* S	S	19 55 57.1	+0.2
CHCH	Chadas Angostu	1.58	144	⇑*i*P	P	19 55 42.1	+0.8
CHCH				*i* S	S	19 56 02.0	+1.3
LMEL	Las Melosas	1.77	133	⇓*i*P	P	19 55 44.9	+1.0
LMEL				*i* S	S	19 56 07.2	+1.8
LMEL				AMP		19 56 12.9	
	comp=N,7µm,0.5s						
TLL	Tololo Astrono	2.60	19	⇑*i*P	P	19 55 57.1	+1.4
CFAA	Coronel Fontan	3.16	72	Pn	P	19 56 07.3	+3.5
	comp=N,3.1nm,0.3s,baz=239,slow=12,SNR=84						
CFAA				Lg		19 56 50.5	
	comp=N,11nm,0.3s,baz=330,slow=23,SNR=11						
PLCA	Paso Flores	8.13	173	Pn	P	19 57 11.9	-1.5
	comp=N,1.9nm,0.3s,baz=335,slow=11,SNR=24						
PLCA				LR	LR	20 00 16.3	
	comp=N,127nm,19.2s,baz=184,slow=38						
PLCA	Paso Flores	8.13	173	*e*Pn	P	19 57 11.3	-2.2
TRQA	Tornquist	9.64	127	*e*Pn	P	19 57 32.8	-1.5
	comp=N,22nm,1.0s						
LVC	Limon Verde	10.31	15	Pn	P	19 57 39.0	-4.5
	comp=N,0.2nm,0.3s,baz=207,slow=15,SNR=5.5						
LVC				Sn	S	19 59 48.2	+9.3
	comp=N,0.5nm,0.3s,baz=254,slow=9.5,SNR=3.7						
LVC	Limon Verde	10.31	15	Pn	P	19 57 39.0	-4.5
LVC				Sn	S	19 59 48.2	+9.3
CPUP	Villa Florida	14.05	67	Pn	P	19 58 31.9	-1.7
	comp=N,0.2nm,0.3s,baz=265,slow=13,SNR=3.7						
CPUP				Sn	S	20 01 01.9	-7.2
	comp=N,0.2nm,0.3s,baz=253,slow=14,SNR=3.0						
CPUP				LR	LR	20 04 19.5	
	comp=N,122nm,19.1s,baz=16,slow=39						
LPAZ	La Paz	16.61	12	Pn	P	19 59 06.4	-0.3
	comp=N,0.2nm,0.3s,baz=180,slow=7.9,SNR=8.7						
LPAZ	La Paz	16.61	12	*e*P	P	19 59 07.2	+0.4
	comp=N,2.8nm,0.9s						
SIV	San Ignacio	19.21	33	P	P	19 59 37.0	-1.5
	comp=N,0.1nm,0.3s,baz=235,slow=10,SNR=9.5						
SAML	Samuel	24.88	21	*e*P	P	20 00 36.0	+0.3
	comp=N,2.1nm,0.8s,mb3.7						
BDFB	Brasilia	27.39	57	LR	LR	20 13 21.8	
	comp=N,91nm,18.9s,MS3.4,baz=249,slow=40						
SNAA	Sanae	52.75	158	P	P	20 04 27.4	-0.4
	comp=N,1.2nm,0.8s,mb3.9,baz=290,slow=4.1,SNR=7.2						
SNAA	Sanae	52.75	158	*e*P	P	20 04 27.0	-0.8
	comp=N,3.8nm,0.8s,mb4.4						
MAW	Mawson	74.41	164	P	P	20 06 50.4	+0.3
	comp=N,1.0nm,0.4s,mb4.1,baz=207,slow=9.8,SNR=8.9						
BOSA	Boshof	80.49	118	P	P	20 07 24.7	-0.1
	comp=N,2.9nm,0.8s,mb4.2,baz=203,slow=4.2,SNR=6.3						
BOSA	Boshof	80.49	118	P	P	20 07 24.7	-0.1
NVAR	Mina Array Bea	82.91	325	P	P	20 07 39.2	+2.1
	comp=N,0.7nm,0.7s,mb3.8,baz=145,slow=6.2,SNR=4.4						
NVAR	Mina Array Bea	82.91	325	P	P	20 07 39.2	+2.1
WRA	Warramunga Arr	122.06	209	PKP	PKPdf	20 14 06.0	0.0
	comp=N,0.3nm,0.6s,baz=153,slow=1.5,SNR=6.0						
BVAR	Borovoye Array	146.12	42	PKPbc	PKPbc	20 14 52.6	+2.0
	comp=N,1.9nm,0.5s,baz=290,slow=3.2,SNR=6.0						
ZAL	Zalesovo	152.95	31	PKPbc	PKPdf	20 15 09.6	+9.5
	comp=N,2.5nm,0.6s,baz=185,slow=2.2,SNR=15						
MKAR	Makanchi Array	155.69	47	PKPab	PKPab	20 15 32.6	-0.3
	comp=N,1.0nm,0.6s,baz=295,slow=4.1,SNR=8.3						

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*NAO **03** 20:14:38.7±1.2, 63.31N×21.01E, ML2.0*

*BER **03** 20:14:40.8±3.9, 63.37N×21.02E, ML2.0(NAO)*

*IDC **03** 20:14:40.6±0.7, 63.23N×21.72E, mb1 2.7/4,
mb1mx2.6/23, mbtmp2.6/4, ML2.4/4, Error ellipse:
s-maj=8.0km s-min=6.6km az=19.0*

HEL 03 20:14:40.2±0.2**,63.25N**×**21.32E,h5**^{km}±1^{km}**,ML1.9,
ML1.8**(UPP)**,ML2.0**(NAO)**,2C-1D,Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VAF	Ylistaro	0.65	108	*i* P	Pg	20 14 51.4	-1.7
VAF				*i* S	Sg	20 15 00.1	-1.7
UMAU	Umeaa	0.70	336	⇑*i*P	Pg	20 14 53.1	-1.1
UMAU				*i* S	Sg	20 15 02.2	-1.4
BURU	Burvik	1.34	1	⇑*e*P	Pb	20 15 04.6	-0.9
BURU				*e*S	Sb	20 15 22.2	-0.7
BREU	Bredtraesk	1.39	299	⇓*e*P	Pb	20 15 04.6	-1.6
BREU				*e*S	Sb	20 15 22.4	-1.7
SVAU	Svanoeiden	1.47	329	*e*P	Pn	20 15 06.2	-1.3
SVAU				*e*S	Sb	20 15 25.4	-1.2
HEMU	Hemsoen	1.61	251	*e*P	Pn	20 15 06.4	-3.0
HEMU				*e*S	Sb	20 15 27.4	-3.1
KEF	Keuruu	1.96	122	*e*P	Pn	20 15 14.1	-0.4
KEF				*e*S	Sn	20 15 39.6	-0.2
KEF				*e*SG	Sg	20 15 40.5	-5.1
KEF				MSG		20 15 40.6	
	comp=Z,8.4nm,0.1s						
LILU	Lilltraesk	2.15	343	*e*P	Pn	20 15 16.5	-0.6
SUF	Sumiainen	2.27	101	*e*P	Pn	20 15 18.2	-0.7
SUF				*e*SG	Sg	20 15 50.5	-5.2
SUF				MSG		20 15 50.7	
	comp=Z,5.3nm,0.1s						
SJUU	Sjulsmark	2.27	3	*e*P	Pn	20 15 18.8	-0.2
ARNU	Arnoeviken	2.41	231	*e*P	Pn	20 15 20.3	-0.5
HASU	Hassela	2.43	245	*e*P	Pn	20 15 20.5	-0.7
KAF	Kangasniemi	2.57	114	*e*P	Pn	20 15 23.7	+0.5
KAF				*e*SG	Sg	20 15 58.6	-7.0
KAF				MSG		20 15 59.2	
OUL	Oulu	2.73	45	*e*P	Pn	20 15 23.9	-1.5

OUL				eSG	Sg	20 16 04.3	-6.7
OUL				MSG		20 16 08.2	
	comp=Z,6.3nm,0.2s						
FIA0	**FINESS Array S**	**2.86**	**127**	Pn	Pn	20 15 27.3	-0.1
	baz=309,slow=14						
FIA0				Sn	Sn	20 16 03.9	+1.2
	baz=313,slow=28						
FIA0	**FINESS Array S**	**2.86**	**127**	eP	Pn	20 15 27.5	+0.1
FIA0				eSB	Sb	20 16 06.3	-0.7
FINES	**FINESS Array B**	**2.86**	**127**	Pn	Pn	20 15 27.3	-0.1
	comp=Z,0.3nm,0.3s,baz=311,slow=14,SNR=19						
FINES				Pg	Pg	20 15 30.3	-7.1
	comp=Z,0.5nm,0.3s,baz=315,slow=16,SNR=19						
FINES				Sn	Sn	20 15 57.4	-5.3
	comp=Z,0.3nm,0.3s,baz=314,slow=16,SNR=4.4						
FINES				Lg		20 16 03.5	
	comp=Z,3.4nm,0.3s,baz=318,slow=21,SNR=47						
NOD	**Norderasen**	**2.92**	**277**	eP	Pn	20 15 26.6	-1.6
KJN	**Kajaani**	**2.97**	**71**	eP	Pn	20 15 27.3	-1.7
KJN				eSG	Sg	20 16 12.9	-6.2
KJN				MSG		20 16 13.3	
	comp=Z,5.2nm,0.1s						
IGGU	**Iggoen**	**3.04**	**220**	eP	Pn	20 15 30.2	+0.3
GRAU	**Graesoe**	**3.21**	**206**	eP	Pn	20 15 30.7	-1.5
ERTU	**Ertsjaerv**	**3.34**	**6**	eP	Pn	20 15 33.1	-1.1
PVF	**Pernaja**	**3.46**	**140**	eSB	Sb	20 16 23.1	-1.2
OSTU	**Oestervaala**	**3.62**	**215**	eP	Pn	20 15 38.1	-0.1
PAJU	**Pajala**	**3.87**	**10**	eP	Pn	20 15 40.0	-1.6
MSF	**Maaselka**	**4.27**	**48**	eP	Pn	20 15 45.0	-2.4
MSF				eS	Sn	20 16 34.5	-3.7
MSF				eSG	Sg	20 16 50.7	-12
MSF				MSG		20 16 52.4	
	comp=Z,1.0nm,0.1s						
KU4	**Liikasenvaara**	**4.72**	**45**	eP	Pn	20 15 51.4	-2.3
KU4				eSG	Sg	20 17 07.4	-10
SGF	**Sodankyl**	**4.74**	**25**	eS	Sn	20 16 45.6	-4.6
SGF				eSG	Sg	20 17 06.2	-12
SGF				MSG		20 17 09.1	
	comp=Z,0.8nm,0.3s						
HFS	**Hagfors**	**4.79**	**233**	eS	Sn	20 16 47.4	-4.0
HFS				eSG	Sg	20 17 04.8	-15
HFS	**Hagfors**	**4.79**	**233**	Pn	Pn	20 15 53.4	-1.3
	comp=Z,0.0nm,0.3s,baz=178,slow=40,SNR=2.9						
HFS				Pg	Pg	20 16 05.0	-11
	comp=Z,0.1nm,0.3s,baz=56,slow=16,SNR=7.4						
HFS				Sn	Sn	20 16 50.3	-1.1
	comp=Z,0.1nm,0.3s,baz=48,slow=24,SNR=5.7						
HFS				Lg		20 17 05.8	
	comp=Z,0.3nm,0.3s,baz=49,slow=29,SNR=15						
HFS	**Hagfors**	**4.79**	**233**	Sn	Sn	20 16 47.4	-4.0
	baz=42,slow=22						
HFS				Lg		20 17 04.8	
	baz=42,slow=37						
NB2	**NORSAR Subarra**	**5.23**	**250**	Lg		20 17 19.9	
	baz=53,slow=37						
NB2	**NORSAR Subarra**	**5.23**	**250**	eSG	Sg	20 17 19.9	-14
NB2	**NORSAR Subarra**	**5.23**	**250**	Lg		20 17 19.9	
	baz=53,slow=37						
NOA	**NORSAR Array B**	**5.23**	**250**	Pn	Pn	20 16 02.5	+1.5
	comp=Z,0.1nm,0.3s,baz=190,slow=14,SNR=2.4						
NOA				Sn	Sn	20 16 58.8	-3.8
	comp=Z,0.1nm,0.3s,baz=252,slow=3.9,SNR=2.9						
NOA				Lg		20 17 19.3	
	comp=Z,0.4nm,0.3s,baz=125,slow=19,SNR=4.9						
KIF	**Kilpisjarvi**	**5.79**	**358**	eP	Pn	20 16 06.9	-1.9
ARA0	**ARCESS Array S**	**6.54**	**13**	Pn	Pn	20 16 15.4	-3.9
	baz=195,slow=16						
ARA0				Sn	Sn	20 17 26.6	-8.7
	baz=189,slow=22						
ARA0				Lg		20 17 57.8	
	baz=188,slow=28						
ARA0	**ARCESS Array S**	**6.54**	**13**	eP	Pn	20 16 15.4	-3.9
ARA0				eS	Sn	20 17 26.6	-8.7
ARA0				eSG	Sg	20 17 57.8	-20
ARCES	**ARCESS Array B**	**6.54**	**13**	Pn	Pn	20 16 15.5	-3.9
	comp=Z,0.3nm,0.3s,baz=192,slow=14,SNR=12						
ARCES				Sn	Sn	20 17 28.4	-6.8
	comp=Z,0.1nm,0.3s,baz=196,slow=23,SNR=3.1						
ARCES				Lg		20 18 02.9	
	comp=Z,0.1nm,0.3s,baz=190,slow=32,SNR=3.7						

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*NEIC **03** 20:33:00.7, 16.26N×98.24W, h8^{km}, MD3.8(MEX), After MEX.*

MEX 03 20:33:00.7±1.0**, 16.26N×98.24W, h8^{km}±6^{km}, MD3.8, 1C-1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.17**	**40**	⇓iP	Pg	20 33 03.5	-0.8
PNIG				i S	Sg	20 33 06.8	0.0
VHO	**Vista Hermosa**	**1.65**	**61**	⇑iP	Pn	20 33 27.2	-3.1
VHO				i S	Sn	20 33 47.0	-4.8
OXX	**Oaxaca**	**1.67**	**60**	eP	Pn	20 33 27.0	-3.4
OXX				eS	Sn	20 33 46.0	-6.2
ACX	**Acapulco**	**1.72**	**291**	eP	Pn	20 33 27.0	-4.2
ACX				eS	Sn	20 33 49.0	-4.5
CAIG	**El Cayaco**	**2.10**	**292**	eP	Pn	20 33 34.1	-2.4
CAIG				eS	Sn	20 33 57.8	-5.3
PLIG	**Platanillo**	**2.44**	**331**	eP	Pn	20 33 37.7	-3.7
PLIG				i S	Sn	20 34 04.3	-7.4
PPM	**Popocatepetl**	**2.81**	**353**	eP	Pn	20 33 46.5	-0.3
PPM				eS	Sn	20 34 17.7	-3.6
PPM	**Popocatepetl**	**2.81**	**353**	eP	Pn	20 33 46.5	-0.3
PPM				eP		20 33 50.0	
PPM				eS	Sn	20 34 17.7	-3.6
PPM				eS	Sn	20 34 22.0	+0.7
IISM	**Ciudad Serdan**	**2.83**	**17**	eP	Pn	20 33 52.0	+4.9
IISM				eS	Sn	20 34 22.0	+0.2

WEL 03 20:53:35.3±0.4**, 38.24S×175.79E, h188^{km}±5^{km}, ML3.6**/12**, 1C-1D, Error ellipse: s-maj=8.3km s-min=5.3km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.04**	**92**	PN	P	20 54 04.0	-0.3
URZ				SN	S	20 54 26.0	-0.7
URZ				SN	S	20 54 26.2	-0.5
BKZ	**Black Stump Fm**	**1.08**	**150**	⇑PN	P	20 54 04.7	+0.1
BKZ				SN	S	20 54 26.8	-0.5
BKZ				SN	S	20 54 26.9	-0.4
MOVZ	**Moawhango**	**1.17**	**181**	ePN	P	20 54 05.1	-0.2
MWZ	**Matawai**	**1.37**	**95**	PN	P	20 54 07.0	-0.1
MWZ				SN	S	20 54 31.0	-0.8
TSZ	**Takapari Road**	**1.82**	**176**	PN	P	20 54 10.7	-0.8
TSZ				SN	S	20 54 37.4	-2.0
MRZ	**Mangatainoka R**	**2.43**	**184**	PN	P	20 54 16.2	-1.9
MRZ				SN	S	20 54 47.9	-3.3
KIW	**Kapiti Island**	**2.71**	**194**	⇓PN	P	20 54 18.9	-2.5
KIW				eSN	S	20 54 52.6	-4.3
CAW	**Cannon Point**	**2.92**	**191**	PN	P	20 54 21.3	-2.6
MTW	**Mount Morrison**	**2.93**	**184**	PN	P	20 54 21.2	-2.8
DUWZ	**D'Urville Isla**	**2.94**	**209**	PN	P	20 54 21.4	-2.8
MRW	**Makara Radio**	**3.10**	**195**	PN	P	20 54 23.3	-2.9
MRW				SN	S	20 55 01.7	-3.7
TCW	**Tory Channel**	**3.19**	**201**	PN	P	20 54 24.4	-2.9
TCW				SN	S	20 55 02.5	-4.8
MSWZ	**Moikau Station**	**3.20**	**187**	PN	P	20 54 24.1	-3.3
TUWZ	**Tuamarina**	**3.49**	**203**	PN	P	20 54 27.6	-3.4
TUWZ				SN	S	20 55 08.9	-5.0
NNZ	**Nelson**	**3.51**	**211**	PN	P	20 54 27.6	-3.6
NNZ				SN	S	20 55 09.7	-4.7

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*IDC **03** 21:07:14.6±1.6, 17.26S×172.99W, mb4.1/7, mb1 4.3/7, mb1mx4.2/18, mbtmp4.0/7, MS3.8/12, Ms1 3.9/12, ms1mx3.6/28, Error ellipse: s-maj=91.9km s-min=23.4km az=147.0*

*NEIC **03** 21:07:16.8±0.8, 17.34S×172.99W, h15^{km}, mb4.2/2, Error ellipse: s-maj=38.3km s-min=16.8km az=148.0*

ISC 03 21:07:17.4±0.9**, 16.8S**±0.1×**173.2W**±0.2**, h33^{km}, n34,** σ**1^{s}18**/14**, mb4.1**/9**, MS3.8**/11**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.15**	**26**	Pn	**Pn**	**21 08 01.7**	**-4.3**
	6.9nm,0.3s,baz=80,slow=3.1,SNR=9.4						
AFI				Sn	**Sn**	**21 08 42.0**	**-0.9**
	43nm,0.3s,baz=70,slow=20,SNR=11						
AFI	**Afiamalu**	**3.15**	**26**	ePn	**Pn**	**21 08 01.3**	**-4.6**
RAR	**Rarotonga**	**13.47**	**111**	LR	LR	21 14 42.8	

	comp=Z,690nm,18.8s,baz=285,slow=34						
PPT	**Papeete**	**22.60**	**96**	LR	LR	21 19 16.4	
	comp=Z,488nm,19.8s,MS3.9,baz=290,slow=32						
HNR	**Honiara**	**27.11**	**282**	LR	LR	21 22 18.5	
	comp=Z,484nm,20.9s,MS4.0,baz=288,slow=33						
CTA	**Charters Tower**	**38.53**	**259**	LR	LR	21 28 30.4	
	comp=Z,118nm,21.2s,MS3.7,baz=90,slow=33						
STKA	**Stephens Creek**	**43.53**	**241**	P	**P**	**21 15 19.9**	**0.0**
	1.4nm,0.8s,mb3.8,baz=153,slow=9.3,SNR=3.1						
WRAB	**Tennant Creek**	**49.71**	**258**	eP	**P**	**21 16 07.8**	**-0.9**
	1.7nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**49.72**	**258**	P	**P**	**21 16 08.5**	**-0.2**
	1.2nm,0.4s,mb4.3,baz=96,slow=7.5,SNR=40						
ASAR	**Alice Springs**	**49.87**	**253**	P	**P**	**21 16 09.8**	**0.0**
	6.6nm,0.8s,mb4.7,baz=87,slow=9.0,SNR=57						
ASAR				LR	LR	21 35 34.8	
	comp=Z,62nm,18.3s,MS3.6,baz=92,slow=34						
ASPA	**Alice Springs**	**49.87**	**253**	eP	**P**	**21 16 09.6**	**-0.3**
MJAR	**Matsushiro Arr**	**70.08**	**320**	LR	LR	21 45 34.3	
	comp=Z,33nm,18.8s,MS3.6,baz=125,slow=33						
JOW	**Kunigami**	**71.42**	**307**	LR	LR	21 44 34.7	
	comp=Z,39nm,20.2s,MS3.7,baz=339,slow=31						
NVAR	**Mina Array Bea**	**75.22**	**42**	LR	LR	21 49 38.6	
	comp=Z,40nm,18.2s,MS3.8,baz=40,slow=34						
KSM	**Kuching**	**77.48**	**275**	eP	**P**	**21 19 15.5**	**+3.4**
TXAR	**Lajitas Array**	**81.22**	**56**	P	**P**	**21 19 32.4**	**+0.5**
	0.2nm,0.4s,mb3.4,baz=243,slow=5.6,SNR=4.2						
TXAR				LR	LR	21 51 59.1	
	comp=Z,49nm,18.4s,MS3.9,baz=230,slow=33						
PDAR	**Pinedale Array**	**83.16**	**42**	LR	LR	21 55 27.6	
	comp=Z,82nm,18.0s,MS4.1,baz=68,slow=35						
ILAR	**Eielson Array**	**83.73**	**11**	P	**P**	**21 19 46.1**	**+2.2**
	1.1nm,0.9s,mb4.0,baz=216,slow=5.7,SNR=5.8						
YKA	**Yellowknife Ar**	**91.27**	**23**	P	**P**	**21 20 23.8**	**+3.4**
	0.4nm,0.5s,mb4.0,baz=230,slow=3.7,SNR=2.9						
SNAA	**Sanae**	**91.55**	**177**	eP	**P**	**21 20 20.1**	**-1.4**
	0.9nm,0.7s,mb4.2						
CMAR	**Chiang Mai Arr**	**93.20**	**288**	P	**P**	**21 20 35.0**	**+4.6**
	1.2nm,0.8s,mb4.3,baz=100,slow=2.4,SNR=6.9						
CMAR				LR	LR	21 57 46.7	
	comp=Z,38nm,18.6s,MS3.9,baz=154,slow=32						
LPAZ	**La Paz**	**99.19**	**110**	LR	LR	21 54 21.2	
	comp=Z,52nm,21.7s,MS4.0,baz=23,slow=29						
KMBO	**Kilima Mbogo**	**145.08**	**242**	PKPbc	PKPbc	21 26 55.2	+2.5
	2.9nm,0.9s,baz=55,slow=2.8,SNR=5.9						
KMBO	**Kilima Mbogo**	**145.08**	**242**	PKPbc	PKPbc	21 26 55.2	+2.5
BRG	**Berggiesshubel**	**145.48**	**352**	eP	PKPdf	21 26 58.9	+6.9
BRG				e		21 27 07.4	
UPC	**Upice**	**145.52**	**350**	ePKP	PKPdf	21 26 55.8	+3.8
UPC				ex	x	21 27 05.6	
DPC	**Dobruska-Polom**	**145.62**	**349**	ePKP	PKPdf	21 26 56.2	+4.0
PVCC	**Panska Ves**	**145.73**	**351**	ePKP	PKPdf	21 26 56.6	+4.2
OKC	**Ostrava-Krasne**	**145.74**	**347**	ePKP	PKPdf	21 26 58.4	+6.0
PRU	**Pruhonice**	**146.26**	**351**	ePKP	PKPdf	21 26 59.2	+5.9
PRU				ex	x	21 27 08.0	
VYHS	**Vyhne**	**146.84**	**345**	ePKP	PKPdf	21 27 00.1	+5.7
VYHS				e		21 27 13.6	
VYHS				e		21 27 26.5	
KHC	**Kasperske Hory**	**147.24**	**352**	ePKP	PKPdf	21 27 01.7	+6.7
KHC				x	x	21 27 16.5	
BRTR	**Keskin Array B**	**147.31**	**320**	PKPbc	PKPdf	21 27 01.9	+6.5
	1.3nm,0.7s,baz=90,slow=1.2,SNR=9.1						
GERES	**GERESS Array B**	**147.50**	**351**	PKPbc	PKPdf	21 27 02.6	+7.2
	0.6nm,0.7s,slow=6.7,SNR=5.6						

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*NEIC **03** 21:14:28.4, 14.46N×94.63W, h18^{km}, MD3.8(MEX), After MEX.*

MEX 03 21:14:28.4±0.5**, 14.46N×94.63W, h18^{km}±30^{km}, MD3.8, 1C-1D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.94**	**313**	⇑eP	Pn	21 14 57.6	-3.3
HUIG				eS	Sn	21 15 19.5	-5.5
CMIG	**Matias Romero**	**2.63**	**355**	⇓iP	Pn	21 15 07.7	-3.2
CMIG				i S	Sn	21 15 37.9	-4.8
CCIG	**Comitan**	**3.01**	**53**	eP	Pn	21 15 12.6	-3.7
CCIG				eS	Sn	21 15 47.4	-4.9
VHO	**Vista Hermosa**	**3.30**	**322**	eP	Pn	21 15 17.4	-2.9
VHO				eS	Sn	21 15 55.3	-4.2
OXX	**Oaxaca**	**3.30**	**323**	eP	Pn	21 15 19.5	-0.9
OXX				eS	Sn	21 15 58.0	-1.5

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*IDC **03** 21:15:46.0±2.6, 4.49S×130.83E, mb3.8/1, mb1 4.3/3, mb1mx3.8/15, mbtmp4.1/3, ML3.8/1, Error ellipse: s-maj=144.9km s-min=17.0km az=75.0*

ISC 03 21:15:43.6±1.5**, 3.92S**±0.10×**133.1E**±0.5**, h33^{km}, n6,** σ**0^{s}87**/10**, mb3.8**/1**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.76**	**184**	eP	**P**	**21 17 49.7**	**-1.2**
KAKA				eS	**S**	**21 19 29.9**	**+0.3**
WRA	**Warramunga Arr**	**15.97**	**176**	Pn	**P**	**21 19 27.2**	**-0.5**
	0.4nm,0.3s,baz=352,slow=10,SNR=28						
WRA				Sn	**S**	**21 22 24.2**	**+0.7**
	0.8nm,0.3s,baz=346,slow=23,SNR=7.1						
WB2	**Warramunga Arr**	**15.98**	**176**	eP	**P**	**21 19 26.2**	**-1.4**
WB2				eS	**S**	**21 22 23.3**	**-0.2**
ASAR	**Alice Springs**	**19.65**	**178**	P	**P**	**21 20 13.6**	**+1.0**
	5.3nm,0.3s,baz=349,slow=11,SNR=370						
ASAR				S	**S**	**21 23 51.7**	**+4.7**
	0.2nm,0.3s,baz=348,slow=26,SNR=4.2						
ASPA	**Alice Springs**	**19.65**	**178**	eP	**P**	**21 20 13.7**	**+1.1**
MKAR	**Makanchi Array**	**67.42**	**325**	P	**P**	**21 26 38.2**	**+0.2**
	0.6nm,0.6s,mb3.8,baz=130,slow=7.4,SNR=4.0						

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*HEL **03** 22:06:49.7±0.2, 60.11N×25.24E, ML2.2, ML1.9(UPP), Explosion*

*IDC **03** 22:06:49.9±1.8, 60.18N×25.27E, mb1 2.8/2, mb1mx2.7/21, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=18.4km s-min=8.9km az=146.0*

ISC 03 22:06:48.1±0.7**, 60.09N**±0.05×**25.26E**±0.08**, n24,** σ**0^{s}95**/33**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVF	**Pernaja**	**0.55**	**33**	eP	**Pg**	**22 06 58.8**	**-0.2**
PVF				eS	**Sg**	**22 07 05.6**	**-0.7**
VJF	**Virojoki**	**1.23**	**67**	eP	**Pb**	**22 07 11.5**	**-0.4**
VJF				eS	**Sb**	**22 07 27.9**	**-0.2**
FIA0	**FINESS Array S**	**1.42**	**16**	eP	**Pb**	**22 07 14.4**	**-0.6**
FIA0				eSN	**Sn**	**22 07 36.8**	**+2.0**
FINES	**FINESS Array B**	**1.42**	**16**	Pg	**Pg**	**22 07 14.3**	**-2.1**
	4.5nm,0.3s,baz=196,slow=17,SNR=211						
FINES				Pn	**Pn**	**22 07 16.7**	**+1.5**
	4.5nm,0.3s,baz=194,slow=13,SNR=210						
FINES				Lg		22 07 31.8	
	1.3nm,0.3s,baz=199,slow=29,SNR=8.9						
FINES				Sn	**Sn**	**22 07 36.5**	**+1.8**
	6.9nm,0.3s,baz=198,slow=24,SNR=17						
FINES				Rg		22 07 39.0	
	21nm,0.9s,baz=191,slow=28,SNR=31						
KEF	**Keuruu**	**2.10**	**355**	eP	**Pn**	**22 07 26.2**	**+1.4**
KEF				eS	**Sn**	**22 07 52.7**	**+0.7**
KEF				MSG		22 07 55.6	
	comp=Z,12nm,0.2s						
AAL	**Aland**	**2.64**	**274**	eP	**Pn**	**22 07 33.2**	**+0.6**
AAL				eS	**Sn**	**22 08 06.8**	**+1.0**
GRAU	**Graesoe**	**3.36**	**277**	eP	**Pn**	**22 07 41.6**	**-1.3**
GRAU				eS	**Sn**	**22 08 21.8**	**-2.3**
NRTU	**Norrtaelje**	**3.37**	**266**	eP	**Pn**	**22 07 43.6**	**+0.6**
FORU	**Forsmark**	**3.54**	**278**	eS	**Sn**	**22 08 28.7**	**0.0**
FLYU	**Flymyra**	**3.69**	**274**	eP	**Pn**	**22 07 47.3**	**-0.3**
NYNU	**Nynaeshamn**	**3.85**	**257**	eP	**Pn**	**22 07 50.5**	**+0.7**
IGGU	**Iggoen**	**4.01**	**285**	eP	**Pn**	**22 07 51.5**	**-0.6**
OSTU	**Oestervaala**	**4.06**	**276**	eP	**Pn**	**22 07 52.6**	**-0.2**
BACU	**Backbrunna**	**4.11**	**270**	eP	**Pn**	**22 07 53.6**	**+0.1**
ARNU	**Arnoeviken**	**4.17**	**296**	eP	**Pn**	**22 07 54.1**	**-0.3**
GOTU	**Gotland**	**4.22**	**238**	eP	**Pn**	**22 07 55.9**	**+0.7**
HEMU	**Hemsoen**	**4.34**	**310**	eP	**Pn**	**22 07 57.3**	**+0.5**
ESKU	**Eskilstuna**	**4.58**	**263**	eP	**Pn**	**22 08 00.5**	**+0.3**
VIKU	**Vikbolandet**	**4.67**	**254**	eP	**Pn**	**22 08 02.1**	**+0.7**
HASU	**Hassela**	**4.68**	**300**	eP	**Pn**	**22 08 01.0**	**-0.6**
FALU	**Falun**	**4.71**	**279**	eP	**Pn**	**22 08 01.7**	**-0.4**
BREU	**Bredtraesk**	**4.95**	**323**	eP	**Pn**	**22 08 05.3**	**-0.1**
NOA	**NORSAR Array B**	**6.99**	**284**	Pn	**Pn**	**22 08 30.8**	**-3.4**
	comp=Z,0.1nm,0.3s,baz=149,slow=3.2,SNR=2.4						
NOA				Sn	**Sn**	**22 09 47.3**	**-8.1**
	comp=Z,0.2nm,0.3s,baz=315,slow=20,SNR=2.3						
ARCES	**ARCESS Array B**	**9.49**	**1**	Pn	**P**	**22 09 05.0**	**-4.0**
	comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=8.2						

MAN 03 22:22:13.8, 10.11N×125.07E, h11^{km}, mb4.3, ML3.1, MS2.9, 2C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.20**	**276**	eP	Pg	22 22 19.3	+0.9
MSLP				eS	Sg	22 22 24.2	+2.8
SCPH	**Surigao**	**0.53**	**128**	eP	Pg	22 22 24.3	-0.3
SCPH				eS	Sg	22 22 32.2	+0.4
PLP	**Palo**	**1.05**	**355**	eP	Pb	22 22 31.5	-2.0
PLP				i S	Sb	22 22 45.4	-1.6
LLP	**Lapu-Lapu**	**1.10**	**281**	⇑eP	Pb	22 22 33.2	-1.3
LLP				eS	Sb	22 22 46.0	-2.5
TBP	**Tagbilaran**	**1.26**	**251**	eP	Pb	22 22 36.6	-0.5
TBP				eS	Sb	22 22 53.7	+0.6
BESP	**Borongan**	**1.52**	**14**	eP	Pn	22 22 41.2	0.0
BESP				eS	Sb	22 23 00.7	-0.1
CGP	**Cagayan de Oro**	**1.69**	**193**	⇑eP	Pn	22 22 41.2	-2.3
CGP				eS	Sn	22 23 02.8	-2.5
SNPH	**Sibulan**	**1.96**	**247**	⇓iP	Pn	22 22 48.3	+0.9
SNPH				i S	Sn	22 23 15.4	+3.2
BUKP	**Musuan**	**2.22**	**180**	eP	Pn	22 22 50.8	-0.4
CNP	**Catarman**	**2.41**	**351**	eP	Pn	22 22 54.1	+0.2
GUIM	**Jordan**	**2.49**	**282**	eP	Pn	22 22 54.8	-0.2
PAGZ	**Pagadian**	**2.80**	**217**	eP	Pn	22 22 59.8	+0.4
IPIL	**Ipil**	**3.38**	**227**	eP	Pn	22 23 08.0	+0.3

PGC 03 22:48:01.3, 58.24N×133.60W, h1^{km}, ML3.5/6**, Near Mt. Ogden, British Columbia - Alaska border., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLBC	**Dease Lake**	**1.90**	**83**	Pn	Pn	22 48 33.7	-1.3
DLBC				Pg	Pg	22 48 35.3	-3.8
DLBC				Sn	Sn	22 48 58.9	-1.0
DLBC				Sg	Sg	22 49 00.6	-3.7
DLBC				Trac		22 49 05.3	
	comp=Z,362nm,0.8s						
WHY	**Whitehorse**	**2.51**	**345**	Pn	Pn	22 48 42.2	-1.6
WHY				Pg	Pg	22 48 46.8	-4.5
WHY				Sn	Sn	22 49 10.6	-5.0
WHY				Sg	Sg	22 49 17.7	-7.1
WHY				Trac		22 49 26.9	
	comp=Z,100nm,0.7s						
HYT	**Haines Junctio**	**3.26**	**324**	Pn	Pn	22 48 54.7	+0.1
HYT				Pg	Pg	22 48 58.7	-7.7
HYT				Sg	Sg	22 49 42.7	-7.2
HYT				Trac		22 49 47.0	
	comp=Z,107nm,0.9s						
NDB	**Naden**	**4.32**	**175**	Sg	Sg	22 50 14.7	-10
NDB				Trac		22 50 36.5	
	comp=Z,38nm,0.9s						
RUBB	**Prince Rupert**	**4.35**	**153**	Sg	Sg	22 50 20.4	-5.6
VIB	**Van Inlet**	**5.04**	**173**	Sg	Sg	22 50 41.7	-7.3

IDC 03 23:01:38.4±0.8**, 6.84N×73.05W, h159^{km}±13^{km}, mb3.4**/1**, mb1 3.6**/3**, mb1mx3.1**/22**, mbtmp3.9**/3**, Error ellipse: s-maj=54.3km s-min=7.6km az=131.0, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.35**	**213**	P	P	23 02 19.7	+1.0
	22nm,0.3s,baz=106,slow=20,SNR=38						
ROSC				S	S	23 02 49.9	+0.3
	43nm,0.3s,baz=93,slow=18,SNR=12						
SDV	**Santo Domingo**	**3.14**	**50**	P	P	23 02 29.0	+0.5
	17nm,0.3s,baz=235,slow=2.9,SNR=26						
SDV				S	S	23 03 06.6	-0.4
	26nm,0.3s,baz=86,slow=24,SNR=39						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	P	23 11 49.8	-2.4
	0.7nm,0.6s,baz=133,slow=6.7,SNR=8.6						
ASAR	**Alice Springs**	**149.18**	**234**	PKPbc	PKPdf	23 21 08.2	+3.9
	0.3nm,0.4s,baz=112,slow=3.4,SNR=5.7						
WRA	**Warramunga Arr**	**150.41**	**241**	PKPbc	PKPdf	23 21 11.9	+5.6
	0.3nm,0.3s,baz=107,slow=2.4,SNR=16						

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*CSEM **03** 23:26:59.7±0.1, 39.66N×15.32E, h308^{km}±1^{km}, ML4.0/5, Error ellipse: s-maj=4.0km s-min=3.1km az=101.0*

*ROM **03** 23:27:01.2±0.6, 39.64N×15.31E, h292^{km}±9^{km}, Md3.0/2, Ml3.1/6, Error ellipse: s-maj=8.1km s-min=7.1km az=86.0*

*NEIC **03** 23:27:01.2, 39.64N×15.31E, h292^{km}, MD3.0(ROM), After ROM.*

*IDC **03** 23:27:01.8±1.3, 39.73N×15.00E, h310^{km}±20^{km}, mb3.1/3, mb1 3.1/11, mb1mx2.9/31, mbtmp3.7/11, Error ellipse: s-maj=27.8km s-min=18.4km az=27.0*

ISC 03 23:27:01.1±0.5**, 39.72N**±0.06×**15.21E**±0.08**, h301^{km}**±5^{km}**, n32,** σ**1^{s}09**/38**, mb3.3**/3**, 2C-10D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGR	**Morigerati**	**0.50**	**32**	⇓iPg	**P**	**23 27 40.3**	**+0.3**
	14nm,0.2s						
SLCN	**Sala Consilina**	**0.75**	**26**	⇓iPg	**P**	**23 27 41.2**	**+0.5**
	16nm,0.2s						
SGO	**Sicignano**	**0.85**	**5**	⇓iPg	**P**	**23 27 41.6**	**+0.5**
	25nm,0.5s						
ORI	**Oriolo Calabro**	**1.01**	**70**	⇓ePg	**P**	**23 27 42.3**	**+0.5**
	48nm,0.4s						
MRLC	**Muro Lucano**	**1.06**	**12**	⇓ePg	**P**	**23 27 42.5**	**+0.4**
	9.0nm,0.4s						
CSSN	**Cassano Irpino**	**1.15**	**353**	⇓iPg	**P**	**23 27 43.1**	**+0.6**
	11nm,0.4s						
GRI	**Girifalco**	**1.30**	**133**	Pg	**P**	**23 27 43.5**	**+0.1**
GRI				Sg	**S**	**23 28 16.3**	**-0.1**
	29µm,19.0s						
TIP	**Timpagrande**	**1.31**	**114**	⇓iPg	**P**	**23 27 43.7**	**+0.2**
TIP				Sg	**S**	**23 28 16.1**	**-0.5**
	48nm,0.4s						
VPL	**Vulcano Piano**	**1.35**	**188**	⇑iPg	**P**	**23 27 44.6**	**+0.9**
	73nm,0.6s						
MSRU	**Castanea**	**1.47**	**171**	⇓ePg	**P**	**23 27 43.4**	**-1.0**
MSRU				Sg	**S**	**23 28 16.6**	**-1.7**
	120nm,0.5s						
LTRZ	**Laterza**	**1.52**	**54**	⇓iPg	**P**	**23 27 44.1**	**-0.7**
LTRZ				Sg	**S**	**23 28 17.3**	**-1.6**
	33µm,30.0s						
GMB	**Gambarie**	**1.62**	**162**	Pg	**P**	**23 27 45.7**	**+0.3**
	31nm,0.4s						
MTTG	**Motta San Giov**	**1.75**	**167**	Pg	**P**	**23 27 46.2**	**-0.1**
	63nm,0.6s						
SOI	**Samo**	**1.77**	**158**	⇓iPg	**P**	**23 27 45.8**	**-0.7**
SOI				Sg	**S**	**23 28 20.1**	**-1.8**
GIB	**Gibilmanna**	**1.96**	**209**	⇑ePg	**P**	**23 27 47.6**	**-0.2**
GIB				Sg	**S**	**23 28 25.6**	**+1.3**
	6µm,10.0s						
LCI	**Lecce**	**2.31**	**74**	Pg	**P**	**23 27 50.8**	**-0.1**
	21nm,0.2s						
VAE	**Valguarnera**	**2.32**	**196**	P	**P**	**23 27 52.0**	**+1.0**
	2.0nm,0.3s,baz=110,slow=6.6,SNR=5.2						
FAVR	**Favara**	**2.73**	**207**	Pg	**P**	**23 27 55.6**	**+0.9**
	22nm,0.4s						
KEK	**Kerkira**	**3.54**	**89**	Pg	**P**	**23 28 03.2**	**+0.3**
	38nm,1.2s						
BNI	**Bardonecchia**	**8.26**	**313**	ePn	**P**	**23 29 00.4**	**+1.8**
BNI	**Bardonecchia**	**8.26**	**313**	ePn	**P**	**23 29 00.4**	**+1.8**
IDI	**Anoyia**	**8.87**	**117**	P	**P**	**23 29 07.7**	**+1.6**
	0.8nm,0.3s,baz=348,slow=10,SNR=7.7						
VRAC	**Vranov**	**9.64**	**5**	P	**P**	**23 29 15.1**	**-0.4**
	0.2nm,0.3s,baz=192,slow=15,SNR=3.2						
MLR	**Muntele Rosu**	**9.79**	**50**	P	**P**	**23 29 19.9**	**+2.6**
	1.3nm,0.3s,baz=308,slow=4.7,SNR=3.9						
MORC	**Moravsky Berou**	**10.20**	**9**	Pn	**P**	**23 29 24.1**	**+1.7**
BRTR	**Keskin Array B**	**14.19**	**84**	P	**P**	**23 30 12.6**	**+1.5**
	0.1nm,0.3s,baz=276,slow=9.9,SNR=4.6						
AKASG	**Malin Array Be**	**14.74**	**37**	P	**P**	**23 30 15.6**	**-1.9**
	2.0nm,0.3s,baz=230,slow=10,SNR=14						
ESDC	**Sonseca Array**	**14.77**	**276**	P	**P**	**23 30 15.0**	**-2.7**
	0.2nm,0.3s,baz=77,slow=11,SNR=5.4						
EKA	**Eskdalemuir Ar**	**19.85**	**328**	P	**P**	**23 31 09.3**	**-1.3**
	0.2nm,0.3s,baz=142,slow=10,SNR=5.4						
FINES	**FINESS Array B**	**22.76**	**14**	P	**P**	**23 31 37.4**	**-1.3**
	1.0nm,0.3s,mb3.6,baz=187,slow=8.6,SNR=29						
BVAR	**Borovoye Array**	**39.35**	**51**	P	**P**	**23 34 02.6**	**-0.3**
	0.3nm,0.4s,mb3.1,baz=278,slow=7.4,SNR=5.1						
MKAR	**Makanchi Array**	**48.02**	**58**	P	**P**	**23 35 11.2**	**-0.8**
	0.5nm,0.4s,mb3.2,baz=281,slow=6.8,SNR=16						

IDC 03 23:36:42.9±1.2**, 6.90S×155.50E, mb4.0**/6**, mb1 4.2**/6**, mb1mx4.0**/16**, mbtmp3.9**/6**, Error ellipse: s-maj=45.1km s-min=27.9km az=134.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.28	236	P	P	23 42 02.8	-0.3
	1.1nm,0.4s,baz=59,slow=9.6,SNR=3.4						
ASAR	Alice Springs	26.61	229	P	P	23 42 22.4	-2.5
	0.4nm,0.5s,baz=62,slow=9.3,SNR=8.4						
ASAR				PcP	PcP	23 45 47.7	-2.1
	0.2nm,0.5s,baz=50,slow=2.1,SNR=4.5						
CMAR	Chiang Mai Arr	61.19	295	P	P	23 47 00.7	-1.5
	2.6nm,0.7s,baz=122,slow=5.6,SNR=9.5						
MKAR	Makanchi Array	83.66	319	P	P	23 49 12.0	-2.8
	0.3nm,0.7s,baz=106,slow=5.6,SNR=2.9						
INK	Inuvik	89.46	21	P	P	23 49 41.7	-1.0
	1.8nm,1.0s,baz=269,slow=3.6,SNR=4.1						
YKA	Yellowknife Ar	96.02	28	P	P	23 50 11.4	-1.6
	0.2nm,0.4s,baz=269,slow=4.3,SNR=6.2						
BDFB	Brasilia	147.69	134	PKPbc	PKPdf	23 56 30.2	+0.7
	1.8nm,0.5s,baz=221,slow=1.7,SNR=4.4						

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*NEIC **04** 00:02:34.4, 36.39S×177.81E, h33^{km}, ML3.9(WEL), After WEL.*

WEL 04 00:02:38.3±0.2**, 36.87S×177.95E, h122**^{km}±2^{km}**, ML3.8**/4**, Error ellipse: s-maj=2.8km s-min=2.1km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.74	158	P	P	00 02 54.4	-3.9
MXZ	Matakaoa Point	0.74	158	*e*PN	P	00 02 58.1	-0.2
MXZ				SN	S	00 03 13.3	-0.2
MWZ	Matawai	1.50	193	P	P	00 03 06.1	-0.1
MWZ				S	S	00 03 26.9	-0.5
MWZ	Matawai	1.50	193	PN	P	00 03 06.1	-0.1
MWZ				SN	S	00 03 26.9	-0.6
URZ	Urewera	1.54	206	P	P	00 03 06.3	-0.4
URZ	Urewera	1.54	206	PN	P	00 03 06.3	-0.4
URZ				SN	S	00 03 27.7	-0.5
KNZ	Kokohu	2.16	186	*e*P	P	00 03 13.7	-0.6
KNZ	Kokohu	2.16	186	PN	P	00 03 13.5	-0.8
KNZ				SN	S	00 03 40.2	-1.4
BKZ	Black Stump Fm	2.56	206	*e*P	P	00 03 19.1	-0.6
BKZ	Black Stump Fm	2.56	206	PN	P	00 03 19.2	-0.6
NGZ	Ngauruhoe	2.96	218	PN	P	00 03 24.8	-0.2
MOVZ	Moawhango	3.07	214	P	P	00 03 25.2	-1.2

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*NEIC **04** 00:05:49.5, 33.61S×73.13W, h32^{km}, ML3.1(GUC), After GUC.*

GUC 04 00:05:49.5±0.5**, 33.61S×73.13W, h32**^{km}±2^{km}**, MD3.2, ML3.1, 9C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCH	Las Cruces	1.31	84	⇑*i*P	Pn	00 06 12.2	+0.3
LCCH				*i* S	Sn	00 06 29.6	+1.2
LNV	Longovilo	1.47	104	⇑*i*P	Pn	00 06 14.6	+0.3
LNV				*i* S	Sn	00 06 33.8	+1.2
PACH	Papudo	1.78	53	⇑*i*P	Pn	00 06 19.5	+0.8
PACH				*i* S	Sn	00 06 42.2	+1.8
TACH	Talagante	1.83	92	⇑*i*P	Pn	00 06 19.7	+0.4
TACH				*i* S	Sn	00 06 43.2	+1.6
ROCH	El Roble	1.89	71	*i* P	Pn	00 06 21.4	+1.3
ROCH				*i* S	Sn	00 06 45.6	+2.6
RCDM	Rinconada Maip	1.94	87	⇑*i*P	Pn	00 06 21.6	+0.7
RCDM				*i* S	Sn	00 06 45.9	+1.4
RCDM				AMP		00 06 48.3	
	comp=N,295nm,0.2s						
SFDO	San Fernando	2.02	120	⇑*i*P	Pn	00 06 22.7	+0.6
SFDO				*i* S	Sn	00 06 48.1	+1.6
ANTU	Antumapu	2.08	90	AMP		00 06 51.8	
	comp=N,143nm,0.5s						
CHCH	Chadas Angostu	2.09	100	⇑*i*P	Pn	00 06 23.7	+0.6
CHCH				*i* S	Sn	00 06 50.1	+1.9
CACH	El Canelo	2.17	104	⇓*i*P	Pn	00 06 25.8	+1.7
CACH				*i* S	Sn	00 06 52.7	+2.5
CLCH	Cerro Calan	2.18	85	*i* P	Pn	00 06 26.6	+2.2
CLCH				*i* S	Sn	00 06 53.8	+3.3
CLCH				AMP		00 06 57.2	
	comp=E,95nm,0.8s						
PCH	Pirque	2.18	91	*i* P	Pn	00 06 25.2	+0.8
PCH				*i* S	Sn	00 06 52.4	+1.7
JACH	Jahuel	2.32	67	⇑*i*P	Pn	00 06 27.1	+0.7
JACH				*i* S	Sn	00 06 55.6	+1.4
CICH	Cipreses	2.36	108	*i* P	Pn	00 06 27.6	+0.7
CICH				*i* S	Sn	00 06 56.6	+1.5
FCH	Farellones	2.39	84	*i* P	Pn	00 06 28.9	+1.5
FCH				*i* S	Sn	00 06 58.4	+2.5
FCH				AMP		00 06 59.8	
	comp=N,198nm,0.1s						
LMEL	Las Melosas	2.45	96	⇑*i*P	Pn	00 06 29.1	+0.9
LMEL				*i* S	Sn	00 06 59.0	+1.6
LMEL				AMP		00 07 03.2	
	comp=N,218nm,0.2s						

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*MOS **04** 00:06:45.6±1.0, 37.27N×71.64E, h33^{km}, mb4.6/12, Error ellipse: s-maj=13.8km s-min=7.0km az=131.8*

*NEIC **04** 00:06:53.6±1.0, 37.14N×71.88E, h108^{km}±12^{km}, mb4.5/20, Error ellipse: s-maj=9.4km s-min=5.2km az=54.0*

*BJI **04** 00:06:54.2, 37.29N×71.71E, h130^{km}, mB4.9, mb4.7*

*IDC **04** 00:06:58.0±3.8, 37.32N×72.00E, h144^{km}±34^{km}, mb3.6/10, mb1 3.8/13, mb1mx3.6/23, mbtmp4.1/13, Error ellipse: s-maj=30.6km s-min=13.7km az=135.0*

*NNC **04** 00:07:05.6±4.5, 38.09N×71.71E, h231^{km}±43^{km}, mpv4.4, Error ellipse: s-maj=55.0km s-min=26.9km az=20.0*

ISC 04 00:06:55.2±0.4**, 37.19N**±0.02×**71.98E**±0.05**, h143**^{km}±5^{km}**, n115, σ1^{s}02**/127**, mb4.0**/24**, 4C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.36	181	P	P	00 07 48.4	+0.7
CEP				S	S	00 08 29.0	+1.2
CHCP	Chirah Chowk	3.68	163	P	P	00 07 53.8	+2.0
KSH	Kashi	3.91	52	P	P	00 07 58.9	+4.0
KSH				S	S	00 08 46.8	+6.1
SBDP	Sheikh Budin	4.97	192	P	P	00 08 08.3	-0.7
AML	Almayashu	5.11	14	P	P	00 08 11.4	+0.6
	SNR=126						
UCH	Uchtor	5.40	20	P	P	00 08 15.6	+1.0
	SNR=67						
KZA	Kyzart	5.50	26	P	P	00 08 16.7	+0.7
	SNR=34						
DRP	Derazinda	5.63	196	⇑P	P	00 08 17.4	-0.3
DRP				S	S	00 09 16.0	-5.7
EKS2	Erkin-Say	5.64	14	P	P	00 08 18.4	+0.6
	SNR=42						
THN	Thein Dam	5.65	146	*e*P	P	00 08 18.8	+0.7
	195nm,0.3s						
THN				*e*x	x	00 09 22.1	
AAK	Ala-Archa	5.77	19	P	P	00 08 20.7	+1.1
	SNR=36						
AAK	Ala-Archa	5.77	19	⇑P	P	00 08 20.7	+1.0
	24nm,0.4s						
AAK				⇓S	S	00 09 23.8	-1.4
	120nm,0.8s						
AAK	Ala-Archa	5.77	19	*e*PN	P	00 08 19.4	-0.2
AAK				pmax	pmax		
	comp=Z,39nm,0.4s						
AAK	Ala-Archa	5.77	19	*e*P	P	00 08 19.4	-0.3
	comp=Z,39nm,0.4s						
KBK	Karagaybulak	5.92	22	P	P	00 08 22.6	+1.0
	SNR=18						
KK02	Karatay Array	6.01	350	⇓P	P	00 08 21.9	-1.0
	comp=Z,32nm,0.5s,baz=182,slow=14						
KK02				⇑S	S	00 09 23.8	-7.2
	comp=Z,37nm,0.5s,baz=175,slow=24						
ULHL	Ulahol	6.03	32	P	P	00 08 23.3	+0.2
	SNR=29						
CHMS	Chumysh	6.18	19	P	P	00 08 25.6	+0.5
	SNR=38						
TKM2	Tokmak 2	6.36	25	P	P	00 08 28.4	+0.8
	SNR=60						
USP	Ospenovka	6.37	17	P	P	00 08 27.6	-0.2
	SNR=11						
BHK	Bhakra	6.83	146	*e*S	S	00 09 46.1	-4.6
SDNR	Sundarnagar	7.02	143	*e*P	P	00 08 36.4	-0.1
SDNR				*e*S	S	00 09 49.6	-5.6
SMLA	Simla	7.42	143	*i* P	P	00 08 38.8	-3.1
SMLA				*i* S	S	00 09 56.7	-8.2
NDI	New Delhi	9.55	151	*e*P	P	00 09 09.0	-1.2
NDI				*e*S	S	00 10 44.0	-12
NDI				*e*x	x	00 10 55.0	
PTH	Pithoragarh	10.27	136	*e*x	x	00 08 27.0	
PTH				*e*x	x	00 09 33.0	
LGTI	Lohaghat	10.36	136	*e*P	P	00 09 20.0	-0.9
LGTI				*e*x	x	00 11 11.3	
AJM	Ajmer	10.91	167	*e*P	P	00 09 27.0	-1.2
AJM				*e*S	S	00 11 20.6	-7.6
AJM				AML	AML	00 11 23.2	
	comp=E,49nm,0.4s						
AJM				AML	AML	00 11 24.0	
	comp=N,42nm,0.4s						
MK31	Makanchi Array	12.28	35	⇑P	P	00 09 46.1	+0.2
	comp=N,1.1nm,0.3s,baz=210,slow=11,SNR=28						
MKAR	Makanchi Array	12.28	35	P	P	00 09 45.6	-0.3
	comp=N,0.3nm,0.3s,baz=218,slow=13,SNR=27						
KOLN	Koldanda	13.57	130	*e*P	P	00 10 02.1	-0.6
	comp=N,31nm,0.4s						
GKN	Gorkha	14.05	127	*e*P	P	00 10 07.8	-1.0
	comp=N,32nm,0.3s						
KKN	Kakani	14.61	126	*e*P	P	00 10 15.0	-0.9
	comp=N,24nm,0.4s						
KKN	Kakani	14.61	126	*e*P	P	00 10 15.0	-0.9
KKN				pmax	pmax		
	comp=Z,12nm,0.4s						
DMN	Daman	14.62	127	*e*P	P	00 10 16.1	0.0
	comp=Z,23nm,0.3s						
BHPL	Bhopal	14.67	160	*e*P	P	00 10 18.3	+1.5
BHPL				AMb	AMB	00 10 22.3	
	comp=Z,11nm,0.3s						
BHPL				*e*x	x	00 12 42.3	
PKI	Pulchoki	14.84	126	*e*P	P	00 10 18.1	-0.8
	comp=Z,17nm,0.2s						
PKI	Pulchoki	14.84	126	*e*P	P	00 10 18.1	-0.8
PKI				pmax	pmax		
	comp=Z,9.0nm,0.2s						
AB31	Akbulak array	14.89	328	⇓P	P	00 10 17.0	-2.4
	comp=Z,2.0nm,0.5s,baz=133,slow=14,SNR=62						
AB31				⇓S	S	00 12 48.3	-12
	comp=Z,17nm,0.9s,baz=153,slow=22,SNR=17						
GUN	Gumba	14.92	124	*e*P	P	00 10 18.7	-1.1
	comp=Z,34nm,0.3s						
BVAR	Borovoye Array	15.88	356	P	P	00 10 30.3	-1.3
	comp=Z,1.0nm,0.3s,baz=158,slow=9.7,SNR=16						
BVAR				S	S	00 13 21.6	-1.3
	comp=Z,0.2nm,0.3s,baz=173,slow=24,SNR=5.7						
BLSP	Bilaspur	17.39	147	*e*P	P	00 10 49.9	-0.6
BLSP				AMb	AMB	00 10 51.1	
	comp=Z,18nm,1.9s						
BLSP				*e*x	x	00 13 55.5	
LSA	Lhasa	17.64	109	P	P	00 10 57.0	+3.7
LSA	Lhasa	17.64	109	*e*P	P	00 10 55.4	+2.1
LSA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
LSA	Lhasa	17.64	109	*e*P	P	00 10 55.4	+2.0
	comp=Z,6.1nm,0.5s						
BOK	Bokaro	17.91	134	*e*P	P	00 10 56.1	-0.4
BOK				AMb	AMB	00 10 59.8	
	comp=Z,14nm,0.6s						
BOK				*e*x	x	00 14 04.1	
ZAL	Zalesovo	18.95	24	P	P	00 11 07.2	-0.3
	comp=Z,3.2nm,0.3s,baz=258,slow=8.1,SNR=20						
ZAL				S	S	00 14 32.0	+1.9
	comp=Z,0.3nm,0.3s,baz=209,slow=19,SNR=2.9						
NVS	Novosibirsk	19.26	20	*e*P	P	00 11 09.6	-1.1
NVS				pmax	pmax		
	comp=N,4.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HYB	Hyderabad	20.53	162	*e*P	P	00 11 27.0	+3.1
HYB	Hyderabad	20.53	162	*i* P	P	00 11 25.0	+1.1
HYB				*e*S	S	00 15 03.0	+2.6
ARU	Arti	21.25	339	*e*P	P	00 11 29.5	-1.3
ARU				*e*		00 11 50.9	
ARU				*e*S	S	00 15 26.5	+13
ARU				*e*SS	SS	00 15 48.0	-12
GNI	Garni	21.44	286	P	P	00 11 35.0	+2.2
GNI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GNI	Garni	21.44	286	P	P	00 11 35.0	+2.2
	comp=Z,1.7nm,0.5s,mb3.6,baz=169,slow=7.2,SNR=3.4						
GNI	Garni	21.44	286	*e*P	P	00 11 33.0	+0.3
	comp=Z,13nm,1.1s,mb4.2						
GTA	Gaotai	21.93	76	P	P	00 11 42.9	+5.3
GTA				XP		00 12 24.1	
GTA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
ZEI	Tsey	22.17	293	*e*P	P	00 11 42.3	+2.4
HASS	Wahat al Ahsa’	22.45	244	P	P	00 11 44.6	+1.9
KIV	Kislovodsk	23.18	296	P	P	00 11 51.2	+1.6
KIV	Kislovodsk	23.18	296	P	P	00 11 51.2	+1.6
ZAK	Zakamensk	25.95	49	*e*P	P	00 12 17.4	+1.7
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
TLY	Talaya	26.60	47	*e*P	P	00 12 21.2	-0.5
ARSS	Ar Rass	26.87	253	P	P	00 12 23.8	-0.6
KAMS	Al Khamasin	29.17	242	P	P	00 12 44.0	-1.2
BRTR	Keskin Array B	29.98	287	P	P	00 12 52.6	+0.5
	comp=Z,1.9nm,0.7s,mb4.0,baz=104,slow=8.9,SNR=12						
KBRS	Khaybar	29.98	257	P	P	00 12 53.3	+0.9
TATS	Tathlith	30.46	243	P	P	00 12 55.8	-0.8
BLJS	Baljurashi	31.59	245	P	P	00 13 06.5	0.0
AKASG	Malin Array Be	33.13	308	P	P	00 13 19.3	-0.2
	comp=Z,1.9nm,0.4s,mb4.2,baz=84,slow=7.5,SNR=13						
FINES	FINESS Array B	37.36	325	P	P	00 13 55.6	+0.5
	comp=Z,1.3nm,0.4s,mb3.9,baz=118,slow=9.5,SNR=37						
KAF	Kangasniemi	37.48	326	*e*p	P	00 13 48.5	-7.6
ARCES	ARCESS Array B	40.81	337	P	P	00 14 24.6	+0.9
	comp=Z,0.8nm,0.4s,mb3.8,baz=114,slow=8.8,SNR=17						
BRG	Berggiesshubel	42.82	308	*i* P	P	00 14 41.6	+1.5
BRG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
BRG	Berggiesshubel	42.82	308	*i* P	P	00 14 41.6	+1.5
	comp=Z,4.9nm,0.6s,mb4.3						
GERES	GERESS Array B	43.18	305	P	P	00 14 44.0	+0.9
	comp=Z,0.4nm,0.5s,mb3.3,baz=80,slow=8.1,SNR=4.3						
KHC	Kasperske Hory	43.23	305	*e*P	P	00 14 44.5	+1.1
NB2	NORSAR Subarra	44.31	323	P	P	00 14 51.8	-0.1
	comp=Z,1.2nm,0.6s,mb3.7,baz=93,slow=7.4						
NOA	NORSAR Array B	44.31	323	P	P	00 14 52.0	0.0
	comp=Z,2.1nm,0.8s,mb3.8,baz=95,slow=7.7,SNR=9.9						
CDF	Champ du Feu	47.45	305	*e*P	P	00 15 16.6	-0.3
PGF	Pioggiola	47.65	297	*e*P	P	00 15 18.1	-0.5
HAU	Haudompre	48.15	305	*e*P	P	00 15 22.3	0.0
SBF	Sospel	48.40	299	*e*P	P	00 15 24.3	-0.1
	comp=Z,12nm,0.7s,mb4.3						
SBF	Sospel	48.40	299	*e*P	P	00 15 24.3	-0.1
SBF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
LPG	La Plagne	48.46	301	*e*P	P	00 15 24.8	+0.1
LPL	La Plagne	48.46	301	*e*P	P	00 15 25.0	+0.2
CABF	La Chapelle	48.63	303	*e*P	P	00 15 26.6	+0.5
	comp=Z,5.6nm,0.6s,mb4.1						
CABF	La Chapelle	48.63	303	*e*P	P	00 15 26.6	+0.5
CABF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
MBDF	Montbardon	48.64	300	*e*P	P	00 15 25.8	-0.4
FRF	La Foret Royal	49.04	299	*e*P	P	00 15 29.1	-0.1
	comp=Z,12nm,0.8s,mb4.3						
FRF	La Foret Royal	49.04	299	*e*P	P	00 15 29.1	-0.1
FRF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
BAIF	Baives	49.09	308	*e*P	P	00 15 29.5	0.0
	comp=Z,15nm,1.0s,mb4.3						
BAIF	Baives	49.09	308	*e*P	P	00 15 29.5	0.0
BAIF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3						
SMRF	Simiane la Rot	49.67	300	*e*P	P	00 15 33.9	-0.1
KMBO	Kilima Mbogo	49.87	228	P	P	00 15 37.2	+1.2
	comp=Z,2.6nm,0.6s,mb4.0,baz=31,slow=14,SNR=7.0						
LOR	Lormes	49.95	304	*e*P	P	00 15 35.7	-0.5
VIVF	Saint-Julien-l	50.04	301	*e*P	P	00 15 36.8	-0.1
	comp=Z,12nm,1.0s,mb4.2						
VIVF	Saint-Julien-l	50.04	301	*e*P	P	00 15 36.8	-0.1
VIVF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
SMF	Signal de Mont	50.12	304	*e*P	P	00 15 37.2	-0.3
	comp=Z,8.5nm,0.8s,mb4.1						
SMF	Signal de Mont	50.12	304	*e*P	P	00 15 37.2	-0.3
SMF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
SSF	Saint Saulge	50.24	304	*e*P	P	00 15 38.0	-0.4
AVF	Avril sur Loir	50.41	304	*e*P	P	00 15 39.4	-0.3
	comp=Z,8.0nm,0.7s,mb4.1						
AVF	Avril sur Loir	50.41	304	*e*P	P	00 15 39.4	-0.3
AVF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
BGF	Bois d’Agland	50.81	304	*e*P	P	00 15 42.2	-0.5
	comp=Z,5.3nm,0.7s,mb4.0						
BGF	Bois d’Agland	50.81	304	*e*P	P	00 15 42.2	-0.5
BGF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
LASF	Ste Croix	50.83	300	*e*P	P	00 15 42.3	-0.6
	comp=Z,8.2nm,0.8s,mb4.1						
TCF	Toulx Ste Croi	51.31	304	*e*P	P	00 15 46.4	-0.1
	comp=Z,6.9nm,0.8s,mb4.0						
TCF	Toulx Ste Croi	51.31	304	*e*P	P	00 15 46.4	-0.1
TCF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
CAF	Calviac	51.80	302	*e*P	P	00 15 49.0	-1.2
MTLF	Montolieu	52.18	300	*e*P	P	00 15 52.0	-1.1
MBAR	Mbarara	53.54	235	*e*P	P	00 16 02.0	-1.5
EPF	Esparros	53.58	300	*e*P	P	00 16 02.2	-1.2
ETSF	Etsaut	54.25	300	*e*P	P	00 16 07.3	-0.9
ESDC	Sonseca Array	57.83	298	P	P	00 16 33.6	-0.2
	comp=Z,1.1nm,0.4s,mb4.0,baz=59,slow=7.3,SNR=13						
ILAR	Eielson Array	73.90	16	pP	pP	00 18 51.0	+0.1
	comp=Z,0.5nm,0.8s,baz=324,slow=5.1,SNR=4.4						
YKA	Yellowknife Ar	80.52	3	P	P	00 18 53.6	+1.4
	comp=Z,0.8nm,0.4s,mb3.7,baz=351,slow=5.5,SNR=24						
YKA				pP	pP	00 19 29.3	+1.4
	comp=Z,0.5nm,0.7s,baz=346,slow=5.6,SNR=5.1						
WRAB	Tennant Creek	81.69	123	P	P	00 19 02.6	+3.4
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
WRAB	Tennant Creek	81.69	123	P	P	00 19 02.6	+3.4
	comp=Z,3.1nm,0.9s,mb3.9						

IDC 04 00:18:40.1±2.5**, 5.62S×130.68E, mb3.5**/1**, mb1 3.8**/3**, mb1mx3.6**/14**, mbtmp3.6**/3**, ML3.6**/2**, Error ellipse: s-maj=148.6km s-min=31.5km az=71.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.67	166	Pn	P	00 22 07.1	-4.0
	0.3nm,0.3s,baz=349,slow=13,SNR=7.0						
WRA				Sn	S	00 24 38.0	-17
	0.5nm,0.3s,baz=330,slow=22,SNR=7.7						
ASAR	Alice Springs	18.20	170	P	P	00 22 55.4	-0.8
	0.4nm,0.3s,baz=351,slow=10,SNR=30						
ASAR				S	S	00 26 09.8	-7.6
	0.1nm,0.3s,baz=351,slow=27,SNR=5.0						
MKAR	Makanchi Array	67.46	326	P	P	00 29 37.9	-2.1
	0.3nm,0.5s,baz=110,slow=9.7,SNR=4.9						

NEIC 04 00:29:33.5, 51.17N×177.76W, h25^{km}**, ML3.7**(AEIC)**, After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	0.68	29	P	Pb	00 29 45.5	-1.2
KIWB	Kanaga Island	0.79	29	P	Pb	00 29 47.0	-1.4
KIWB				S	Sb	00 29 57.5	-1.2
KIKV	Kanaga Island	0.80	27	P	Pb	00 29 47.3	-1.5
KIRH	Kanaga Island	0.84	29	P	Pb	00 29 48.2	-1.3
KINC	Kanaga Island	0.86	27	P	Pb	00 29 48.2	-1.5
ADAG	Mount Adagdak	1.09	41	P	Pn	00 29 51.5	-1.9
ADAG				S	Sb	00 30 07.2	-0.2
GSTD	Great Sitkin T	1.34	48	P	Pn	00 29 55.6	-1.4
GSTD				S	Sn	00 30 12.7	-1.5
GSSP	Great Sitkin S	1.36	46	P	Pn	00 29 55.9	-1.2
GSMY	Great Sitkin M	1.38	50	P	Pn	00 29 55.9	-1.6
GSMY				S	Sn	00 30 14.2	-0.9
GSIG	Igitkin Island	1.41	54	P	Pn	00 29 56.1	-1.8
GSIG				S	Sn	00 30 14.1	-1.8
GSTR	Great Sitkin T	1.41	48	P	Pn	00 29 56.5	-1.4
ATKA	Atka Island	2.45	64	P	Pn	00 30 10.6	-2.2
ATKA				S	Sn	00 30 39.6	-2.7

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*NIED **04** 00:40:00, 34.20N×135.20E, h5^{km}, Mw3.4 Best double couple: M$_0$1.48×10^{14} NP1:φ$_s$2°,δ54°,λ60°. NP2:φ$_s$227°, δ45°,λ125°.*

*JMA **04** 00:40:32.5, 34.21N×135.20E, h5^{km}±1^{km}, M3.3 Broadband fault plane solution: P waves. NP1:φ$_s$203°, δ40°,λ92°. NP2:φ$_s$21°,δ50°,λ88°. Principal axes: T Plg85°, Azm277°; N Plg1°, Azm22°; P Plg5°, Azm112°;*

JMA Felt III J1.

ISC 04 00:40:32.3±0.7**, 34.20N**±0.04×**135.20E**±0.05**, h5**^{km}**, n7, σ0^{s}38**/11**, 5D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWY	Kouya	0.33	87	⇓P	Pg	00 40 38.7	-0.2
JWY				S	Sg	00 40 43.5	+0.2
JAJ2	Tsuna	0.34	310	⇓P	Pg	00 40 39.3	+0.1
JAJ2				S	Sg	00 40 44.4	+0.6
JWM	Minabe	0.37	160	⇓P	Pg	00 40 40.1	+0.3
JWM				S	Sg	00 40 45.2	+0.4
JHE	Heguri	0.60	41	P	Pg	00 40 44.3	-0.1
JMIK	Miki	0.62	349	⇓P	Pg	00 40 44.6	-0.1
JAI	Aioi	0.74	237	⇓P	Pg	00 40 46.4	-0.8
MAT	Matsushiro	3.39	46	P	Pn	00 41 26.7	-0.3
MAT				*e*S	Sn	00 42 13.5	+5.3

CASC 04 00:55:37.4±2.9**, 9.58N×82.68W, h13**^{km}±17^{km}**, MD3.8, 1C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNI	Changuinola	0.23	136	⇑*e*P	Pg	00 55 43.9	+1.4
CNI				*e*S	Sg	00 55 45.8	-0.1
SVTC	San Vito de Co	0.84	200	*e*P	Pb	00 55 53.6	+0.3
ACR	Cerro Adams	1.04	208	⇓*e*P	Pb	00 55 56.5	-0.3
ACR				*e*S	Sb	00 56 10.7	+0.6
BUS	Buena Vista	1.07	269	*e*P	Pb	00 55 57.0	-0.3
DVD	David	1.16	169	*e*P	Pb	00 55 59.2	+0.5
LCR2	La Lucha 2	1.32	277	*e*P	Pb	00 56 00.8	-0.7
LCR2				*e*S	Sb	00 56 18.1	-0.1
PTP1	Petroterminal	1.39	170	*e*P	Pn	00 56 03.2	+0.7
PTP1				*e*S	Sb	00 56 21.9	+1.7
SJS	Escuela Geolog	1.41	285	*e*P	Pn	00 56 02.7	-0.2
SJS				*e*S	Sb	00 56 21.1	+0.4
TRTC	Tortuguero	1.42	314	*e*P	Pn	00 56 00.4	-2.7
LAJ	Bijagual	1.45	281	*e*P	Pn	00 56 09.8	+6.3
PRS1	Puriscal	1.66	284	*e*P	Pn	00 56 06.9	+0.4
PRS1				*e*S	Sn	00 56 29.5	+1.7
CGA2	Cerro Gallo 2	1.82	284	*e*P	Pn	00 56 08.5	-0.2

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*NEIC **04** 01:09:47.0, 42.95N×13.91W, MG3.4(MDD), After MDD.*

*CSEM **04** 01:09:48.3±0.3, 43.09N×13.88W, h10^{km}, ML3.3/7, Error ellipse: s-maj=6.6km s-min=4.6km az=126.0*

*INMG **04** 01:09:49.7±1.1, 43.03N×14.25W, h10^{km}, ML2.2, Error ellipse: s-maj=13.7km s-min=7.8km az=114.0*

MDD 04 01:09:51.6±4.1**, 42.71N×13.37W, mb3.3**/3**, Error ellipse: s-maj=36.7km s-min=26.9km az=111.0, PRXIMO, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMAZ	Mazaricos	3.24	84	Pn	Pn	01 10 43.0	-1.8
	0.4nm,0.1s,SNR=5.9						
EMAZ				Sn	Sn	01 11 23.3	-1.3
	3.2nm,0.1s,SNR=5.0						
EMAZ	Mazaricos	3.24	84	Pn	Pn	01 10 43.0	-1.8
	0.4nm,0.1s,SNR=5.9						
EMAZ				Sn	Sn	01 11 23.3	-1.4
	3.2nm,0.1s,SNR=5.0						
STS	Santiago	3.55	86	Sn	Sn	01 11 31.1	-1.4
	3.2nm,0.1s,SNR=7.9						
ELOB	Lobios	4.03	100	Pn	Pn	01 10 55.1	-0.9
ELOB				Sn	Sn	01 11 46.1	+1.6
ELOB	Lobios	4.03	100	Pn	Pn	01 10 55.1	-0.9
	0.6nm,0.1s,SNR=8.7						
ELOB				Sn	Sn	01 11 45.1	+0.5
	1.2nm,0.1s,SNR=5.8						
ELOB	Lobios	4.03	100	Pn	Pn	01 10 55.1	-0.8

	0.6nm,0.1s,SNR=8.7						
ELOB				Sn	Sn	01 11 46.1	+1.5
	1.2nm,0.1s,SNR=5.8						
PVIS	**Viseu**	**4.56**	**114**	*e*Pn	Pn	01 11 02.1	-1.4
PVIS				*e*Sn	Sn	01 11 59.1	+1.1
EPON	**Pontenova**	**4.61**	**80**	Pn	Pn	01 11 01.8	-2.3
	0.3nm,0.2s,SNR=4.0						
EPON				Sn	Sn	01 11 54.6	-4.5
	2.3nm,0.2s,SNR=13						
EPON	**Pontenova**	**4.61**	**80**	Pn	Pn	01 11 01.8	-2.3
	0.3nm,0.2s,SNR=4.0						
EPON				Sn	Sn	01 11 54.6	-4.5
	2.3nm,0.2s,SNR=13						
ERUA	**La Rua**	**4.61**	**92**	Sn	Sn	01 11 58.5	-0.9
	5.7nm,1.3s,SNR=7.9						
PTOM	**Tomar**	**4.85**	**128**	*e*Pn	Pn	01 11 05.8	-1.8
PTOM				*e*Sn	Sn	01 12 04.4	-1.0
MTE	**Manteigas**	**4.94**	**116**	*e*Pn	Pn	01 11 07.1	-1.8
MTE				*e*Sn	Sn	01 12 08.1	+0.4
	2.9nm,0.4s						
MTE	**Manteigas**	**4.94**	**116**	*e*Pn	Pn	01 11 07.1	-1.8
MTE				*e*Sn	Sn	01 12 08.1	+0.4
	2.9nm,0.4s						
ECAL	**Calabor**	**4.98**	**97**	Sn	Sn	01 12 08.7	+0.1
	6.6nm,0.4s,SNR=4.6						
ECAL	**Calabor**	**4.98**	**97**	Sn	Sn	01 12 08.7	+0.1
	6.6nm,0.4s,SNR=4.6						
PCBR	**Castelo Branco**	**5.29**	**121**	*e*Pn	Pn	01 11 12.0	-1.7
PCBR				*e*Sn	Sn	01 12 15.3	-1.0
EARI	**Arriondas**	**6.01**	**82**	Sn	Sn	01 12 31.4	-3.2
	0.5nm,0.1s,SNR=6.4						
EARI	**Arriondas**	**6.01**	**82**	Sn	Sn	01 12 31.4	-3.2
	0.5nm,0.1s,SNR=6.4						
EBAD	**Badajoz**	**6.24**	**127**	Pn	Pn	01 11 24.7	-2.4
	0.2nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	01 12 36.9	-3.3
	0.2nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**6.24**	**127**	Pn	Pn	01 11 24.7	-2.5
	0.2nm,0.1s,SNR=7.9						
PTEO	**Sao Teotonio**	**6.27**	**144**	*e*Pn	Pn	01 11 25.7	-1.9
PTEO				*e*Sn	Sn	01 12 37.6	-3.3
PBEJ	**Beja**	**6.29**	**136**	*e*Sn	Sn	01 12 38.4	-3.0
EGRO	**El Granado**	**6.86**	**137**	Sn	Sn	01 12 52.5	-3.2
	0.9nm,0.2s,SNR=7.9						
PALC	**Alcoutim**	**6.92**	**137**	*e*Pn	Pn	01 11 34.2	-2.5
PALC				*e*Sn	Sn	01 12 53.2	-3.9
	2.5nm,0.7s						
PALC	**Alcoutim**	**6.92**	**137**	Pn	Pn	01 11 34.2	-2.5
PALC				Sn	Sn	01 12 53.2	-3.9
	1.2nm,0.7s						
EMIN	**Mina Concepcio**	**7.11**	**132**	Pn	Pn	01 11 37.5	-2.0
	0.2nm,0.1s,SNR=6.9						
EMIN				Sn	Sn	01 12 59.9	-2.1
	0.2nm,0.2s,SNR=5.0						
EMIN	**Mina Concepcio**	**7.11**	**132**	Pn	Pn	01 11 37.5	-2.0
	0.2nm,0.1s,SNR=6.9						
ESDC	**Sonseca Array**	**7.72**	**110**	Pn	Pn	01 11 45.9	-2.0
	1.3nm,0.1s,baz=295,slow=13,SNR=10.0						
ESDC	**Sonseca Array**	**7.72**	**110**	Pn	Pn	01 11 45.9	-2.0
	1.3nm,0.1s,SNR=10.0						

IDC 04 01:12:08.7±5.1**,31.18N**×**141.88E,mb3.5**/2**,mb1 3.6**/4**, mb1mx3.4**/23**,mbtmp3.4**/4**,ML2.9**/2**,Error ellipse: s-maj=194.4km s-min=25.1km az=69.0,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.62**	**318**	Pn	Pn	01 12 52.3	-0.7
	1.5nm,0.3s,baz=71,slow=20,SNR=2.5						
MJAR	**Matsushiro Arr**	**6.15**	**331**	Pn	Pn	01 13 40.0	-3.0
	0.9nm,0.3s,baz=152,slow=11,SNR=6.0						
WRA	**Warramunga Arr**	**51.34**	**189**	P	P	01 21 15.1	-2.0
	0.2nm,0.3s,baz=6.9,slow=7.7,SNR=5.6						
ASAR	**Alice Springs**	**55.07**	**189**	P	P	01 21 42.1	-2.7
	0.2nm,0.4s,baz=12,slow=7.1,SNR=5.4						

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*IDC **04** 01:33:13.9±1.5, 4.95N×125.88E, mb4.0/5, mb1 4.2/5, mb1mx3.8/20, mbtmp4.0/5, Error ellipse: s-maj=98.9km s-min=23.5km az=69.0*

ISC 04 01:33:21.8±2.3**,4.9N**±0.3×**125.8E**±0.8**,h77**^{km}±30^{km}**,n6, σ0^{s}96**/6**,mb3.8**/5**,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**2.22**	**342**	*e*P	**P**	**01 33 57.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**22.84**	**180**	P	**P**	**01 38 19.4**	**+0.1**
	13nm,0.5s,mb4.5,baz=359,slow=9.0,SNR=19						
WRA	**Warramunga Arr**	**26.06**	**161**	P	**P**	**01 38 50.2**	**+0.1**
	2.3nm,0.6s,mb3.8,baz=342,slow=10,SNR=18						
ASAR	**Alice Springs**	**29.46**	**165**	P	**P**	**01 39 19.9**	**-0.9**
	0.4nm,0.5s,mb3.3,baz=343,slow=7.6,SNR=7.4						
ASAR				PcP	PcP	01 42 25.6	+0.7
	0.3nm,0.5s,baz=348,slow=2.4,SNR=3.7						
MKAR	**Makanchi Array**	**56.08**	**325**	P	**P**	**01 42 55.0**	**-0.4**
	0.6nm,0.4s,mb4.0,baz=124,slow=7.8,SNR=7.7						
VNDA	**Vanda**	**84.68**	**173**	P	**P**	**01 45 48.8**	**+0.9**
	0.9nm,0.9s,mb3.7,baz=320,slow=7.6,SNR=5.3						

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*NEIC **04** 01:46:21.7±3.2, 25.46S×178.82W, h441^{km}±29^{km}, mb4.6/1, Error ellipse: s-maj=38.8km s-min=21.9km az=222.0*

*IDC **04** 01:46:21.5±6.4, 25.43S×178.89W, h428^{km}±61^{km}, mb3.9/5, mb1 3.9/7, mb1mx3.6/18, mbtmp4.7/7, Error ellipse: s-maj=47.3km s-min=34.3km az=38.0*

ISC 04 01:46:15.2±5.7**,25.2S**±0.2×**178.3W**±0.6**,h421**^{km}±57^{km}**, n14,σ0^{s}52**/10**,mb4.2**/6**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.54**	**195**	P	**P**	**01 49 13.7**	**0.0**
	1.4nm,0.3s,baz=147,slow=11,SNR=10						
URZ				S	**S**	**01 51 36.4**	**-0.1**
	2.8nm,0.3s,baz=174,slow=17,SNR=20						
DZM	**Mont Dzumac**	**14.30**	**280**	P	**P**	**01 49 21.8**	**+0.1**
	0.6nm,0.3s,baz=89,slow=17,SNR=5.2						
CTA	**Charters Tower**	**33.01**	**272**	P	**P**	**01 52 15.1**	**+0.2**
	8.5nm,0.3s,mb4.5,baz=93,slow=10,SNR=15						
CTA	**Charters Tower**	**33.01**	**272**	P	**P**	**01 52 15.1**	**+0.2**
STKA	**Stephens Creek**	**35.66**	**250**	P	**P**	**01 52 38.0**	**+0.9**
	4.0nm,0.6s,mb3.9,baz=88,slow=9.0,SNR=14						
ASAR	**Alice Springs**	**43.32**	**262**	P	**P**	**01 53 39.3**	**-0.3**
	3.2nm,0.5s,mb3.9,baz=89,slow=5.8,SNR=61						
WRAB	**Tennant Creek**	**43.83**	**267**	*e*P	**P**	**01 53 42.9**	**-0.8**
	9.7nm,0.4s,mb4.5						
WRA	**Warramunga Arr**	**43.84**	**267**	P	**P**	**01 53 43.1**	**-0.6**
	5.0nm,0.4s,mb4.2,baz=100,slow=7.1,SNR=103						
FITZ	**Fitzroy Crossi**	**52.24**	**266**	P	**P**	**01 54 48.3**	**+0.6**
	11nm,0.5s,mb4.4,baz=125,slow=3.6,SNR=33						
FINES	**FINESS Array B**	**140.19**	**342**	PKhKP		02 04 53.6	
	0.2nm,0.4s,baz=63,slow=4.3,SNR=3.7						
NB2	**NORSAR Subarra**	**143.62**	**352**	PKPabc	PKPdf	02 05 04.3	+4.3
	0.1nm,0.7s,baz=18,slow=4.0						
NOA	**NORSAR Array B**	**143.62**	**352**	PKP	PKPdf	02 05 03.9	+3.9
	0.9nm,0.7s,baz=11,slow=2.3,SNR=5.3						
AKASG	**Malin Array Be**	**146.91**	**327**	PKPbc	PKPbc	02 05 13.8	+5.9
	1.3nm,0.6s,baz=41,slow=4.1,SNR=11						
BRTR	**Keskin Array B**	**149.59**	**306**	PKPbc	PKPdf	02 05 21.1	+11
	0.4nm,0.4s,baz=137,slow=6.4,SNR=3.5						

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*ATH **04** 01:51:52.7, 34.71N×26.09E, h7^{km}±2^{km}, MD3.8/6*

*NEIC **04** 01:51:52.7, 34.73N×26.10E, h5^{km}, MD3.8(ATH), After ATH.*

*CSEM **04** 01:51:53.0±0.2, 34.80N×26.15E, h12^{km}, MD3.8, Error ellipse: s-maj=4.9km s-min=2.1km az=177.0*

*ISK **04** 01:51:56.0, 35.00N×26.22E, h16^{km}, ML3.3*

ISC 04 01:51:52.9±1.1**,34.80N**±0.08×**26.05E**±0.05**,h7**^{km}**,n25, σ1^{s}46**/32**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.58**	**322**	*e*PB	**Pb**	**01 52 05.1**	**+0.1**
NPS				*e*SB	**Sb**	**01 52 14.3**	**+1.0**
KARP	**Karpathos**	**1.18**	**50**	*e*Pg	**Pn**	**01 52 15.1**	**-0.6**
KARP				Sb	**Sb**	**01 52 32.3**	**+1.9**
KARP	**Karpathos**	**1.18**	**50**	*e*PN	**Pn**	**01 52 15.1**	**-0.6**
KARP				*e*SB	**Sb**	**01 52 32.4**	**+2.0**
GVD	**Gavdhos**	**1.61**	**272**	P	**Pn**	**01 52 22.9**	**+0.9**
GVD	**Gavdhos**	**1.61**	**272**	P	**Pn**	**01 52 22.9**	**+0.9**
VAM	**Vamos**	**1.63**	**292**	*e*Pg	**Pg**	**01 52 24.5**	**-1.0**
VAM				*e*Sn	**Sn**	**01 52 50.3**	**+6.6**
VAM	**Vamos**	**1.63**	**292**	*e*PG	**Pg**	**01 52 24.5**	**-1.0**
VAM				*e*SN	**Sn**	**01 52 48.0**	**+4.3**
SANT	**Santorini**	**1.64**	**343**	*e*P	**Pn**	**01 52 22.4**	**+0.1**
SANT	**Santorini**	**1.64**	**343**	*e*P	**Pn**	**01 52 22.5**	**+0.1**
ARG	**Arkhangelos**	**2.21**	**50**	*e*Pn	**Pn**	**01 52 33.5**	**+3.0**
ARG	**Arkhangelos**	**2.21**	**50**	*e*PN	**Pn**	**01 52 33.0**	**+2.5**
ARG				*e*SN	**Sn**	**01 53 01.0**	**+2.7**
APE	**Apeiranthos**	**2.30**	**350**	PN	**Pn**	**01 52 32.1**	**+0.2**
APE				SN	**Sn**	**01 52 58.5**	**-2.3**
APE	**Apeiranthos**	**2.30**	**350**	*e*Pg	**Pg**	**01 52 36.5**	**-2.4**
APE	**Apeiranthos**	**2.30**	**350**	*e*PN	**Pn**	**01 52 35.5**	**+3.6**
BODT	**Bodrum**	**2.48**	**24**	PN	**Pn**	**01 52 33.6**	**-0.8**
BDRM	**Kayabasi**	**2.53**	**26**	*i* P	**Pn**	**01 52 36.2**	**+1.2**
MLSB	**Milas**	**2.86**	**29**	PN	**Pn**	**01 52 38.7**	**-1.1**
DALT	**Dalyan (Mudla)**	**2.88**	**46**	PN	**Pn**	**01 52 39.4**	**-0.7**
FETY	**Fethiye**	**3.07**	**53**	PN	**Pn**	**01 52 42.0**	**-0.8**
VLI	**Veliai**	**3.17**	**308**	*e*PN	**Pn**	**01 52 47.0**	**+2.7**
AKAS	**Kas**	**3.23**	**63**	*i* P	**Pn**	**01 52 43.9**	**-1.2**
ELL	**Elmali**	**3.69**	**57**	PN	**Pn**	**01 52 50.9**	**-0.7**
GOLH	**Golhisar**	**3.74**	**48**	*i* P	**Pn**	**01 52 47.2**	**-5.2**
DNZL	**Cakiroluk**	**3.77**	**39**	*i* P	**Pn**	**01 52 54.3**	**+1.6**
MANT	**Manisa**	**4.20**	**28**	*i* P	**Pn**	**01 52 56.9**	**-2.0**

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*IDC **04** 02:00:59.7±3.9, 6.01S×145.06E, h101^{km}±34^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.7/15, mbtmp4.0/7, Error ellipse: s-maj=33.7km s-min=27.7km az=40.0*

*NEIC **04** 02:01:00.7±2.3, 6.05S×144.99E, h108^{km}±21^{km}, mb3.9/1, Error ellipse: s-maj=23.8km s-min=19.5km az=148.0*

ISC 04 02:00:59.7±3.3**,6.1S**±0.2×**145.0E**±0.2**,h114**^{km}±29^{km}**,n9, σ0^{s}68**/10**,mb3.7**/4**,New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.91**	**148**	P	**P**	**02 01 59.7**	**+0.6**
	14nm,0.3s,baz=322,slow=12,SNR=27						
PMG				S	**S**	**02 02 44.1**	**-0.3**
	44nm,0.3s,baz=310,slow=24,SNR=15						
WRAB	**Tennant Creek**	**17.24**	**216**	*e*P	**P**	**02 04 54.7**	**-0.3**
	4.3nm,0.5s						
WRA	**Warramunga Arr**	**17.26**	**216**	P	**P**	**02 04 54.4**	**-0.8**
	0.3nm,0.3s,baz=40,slow=11,SNR=24						
ASAR	**Alice Springs**	**20.50**	**210**	P	**P**	**02 05 30.4**	**-0.4**
	7.6nm,0.8s,baz=36,slow=12,SNR=25						
FITZ	**Fitzroy Crossi**	**22.38**	**236**	P	**P**	**02 05 51.0**	**+1.6**
	5.3nm,0.5s,mb4.1,baz=70,slow=4.5,SNR=4.3						
STKA	**Stephens Creek**	**25.86**	**187**	P	**P**	**02 06 22.9**	**+0.3**
	2.0nm,0.7s,mb3.7,baz=357,slow=13,SNR=7.4						
VNDA	**Vanda**	**71.95**	**176**	P	**P**	**02 12 12.3**	**0.0**
	0.7nm,0.6s,mb3.7,baz=331,slow=6.4,SNR=9.6						
VNDA	**Vanda**	**71.95**	**176**	P	**P**	**02 12 12.3**	**0.0**
MKAR	**Makanchi Array**	**76.33**	**321**	P	**P**	**02 12 37.3**	**-0.6**
	0.2nm,0.4s,mb3.2,baz=127,slow=6.1,SNR=3.8						

CASC 04 02:12:13.0±2.4**,12.66N**×**90.24W,h31**^{km}±60^{km}**,MD4.0, 4C-4D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	**San Blas**	**1.32**	**27**	⇑*e*P	Pn	02 12 36.0	+0.3
SBLS				*e*S	Sn	02 12 53.9	+1.5
SNJE	**San Jose**	**1.35**	**27**	*e*P	Pn	02 12 36.4	+0.2
RTR	**El Retiro**	**1.36**	**25**	*e*P	Pn	02 12 36.1	-0.2
BOQS	**Boqueron**	**1.42**	**41**	⇑*e*P	Pn	02 12 36.8	-0.4
BOQS				*e*S	Sn	02 12 56.4	+1.4
LFRS	**El Faro**	**1.50**	**50**	⇓*e*P	Pn	02 12 37.9	-0.3
IXG	**Ixpaco**	**1.52**	**352**	⇓*e*P	Pn	02 12 39.3	+0.7
IXG				*e*S	Sn	02 12 58.9	+1.3
LFU	**La Fuente**	**1.54**	**45**	⇑*e*P	Pn	02 12 38.9	+0.1
RBDL	**Robledal**	**1.55**	**20**	⇓*e*P	Pn	02 12 36.3	-2.6
LCBS	**La Ceiba**	**1.58**	**51**	⇑*e*P	Pn	02 12 38.6	-0.7
LBRS	**Las Brisas**	**1.59**	**47**	⇓*e*P	Pn	02 12 39.3	-0.1
BLLM	**Bellamira**	**2.10**	**68**	*e*P	Pn	02 12 46.5	-0.3
TP2	**Tecpan 2**	**2.25**	**340**	*e*P	Pn	02 12 50.6	+1.7
TP2				*e*S	Sn	02 13 15.4	-0.5
CNCH	**Conchagua**	**2.43**	**75**	*e*P	Pn	02 12 50.6	-0.8

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*NNC **04** 02:29:22.5±0.6, 45.50N×83.01E, mpv4.0, Error ellipse: s-maj=12.3km s-min=4.2km az=69.0*

BJI 04 02:29:21.7,45.36N×83.03E,h13^{km},ML3.6,1C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**1.52**	**341**	⇑P	Pn	02 29 48.2	-0.6
	46nm,0.3s,baz=158,slow=15,SNR=5.4						
MK31				⇓S	Sb	02 30 07.3	-1.2
	1µm,0.8s,baz=159,slow=33,SNR=45						
WMQ	**Urumqi**	**3.67**	**113**	*e*P	Pn	02 30 20.2	+0.8
WMQ				SG	Sg	02 31 13.3	-11
WMQ				Smax			
	comp=N,50nm,0.7s						
WMQ				Smax			
	comp=E,50nm,0.6s						

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*IDC **04** 02:30:35.6±1.5, 36.08N×69.81E, mb3.6/7, mb1 3.8/8, mb1mx3.6/21, mbtmp3.7/8, MS3.4/2, Ms1 3.4/2, ms1mx2.7/25, Error ellipse: s-maj=34.5km s-min=23.2km az=8.0*

*MOS **04** 02:30:36.8±1.3, 35.90N×69.87E, h33^{km}, mb4.2/2, Error ellipse: s-maj=16.0km s-min=9.4km az=95.1*

*NEIC **04** 02:30:36.1±0.6, 35.95N×69.91E, h10^{km}, mb4.5/4, Error ellipse: s-maj=12.7km s-min=6.8km az=50.0*

*BJI **04** 02:30:39.6, 36.26N×70.22E, h10^{km}, mb4.3, Ms4.0*

*NNC **04** 02:30:53.9±6.4, 37.01N×69.59E, h70^{km}±113^{km}, mpv4.6, Error ellipse: s-maj=61.7km s-min=35.7km az=25.0*

ISC 04 02:30:43.0±0.7**,36.02N**±0.03×**70.33E**±0.07**,h100**^{km}±9^{km}**, n70,σ1^{s}27**/79**,mb3.6**/9**,9C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.55**	**149**	⇑P	**P**	**02 31 26.4**	**+2.8**
CHCP	**Chirah Chowk**	**3.37**	**134**	⇓P	**P**	**02 31 38.1**	**+3.2**
THW	**Thamme Wali**	**3.42**	**160**	⇑P	**P**	**02 31 36.7**	**+1.1**
SBDP	**Sheikh Budin**	**3.73**	**174**	P	**P**	**02 31 40.4**	**+0.6**
DRP	**Derazinda**	**4.27**	**181**	P	**P**	**02 31 48.3**	**+1.2**
SARP	**Sargodha**	**4.53**	**154**	P	**P**	**02 31 51.0**	**+0.3**
THN	**Thein Dam**	**5.72**	**127**	*e*P	**P**	**02 32 08.5**	**+1.6**
THN				*e*x	x	02 33 14.6	
AML	**Almayashu**	**6.64**	**22**	P	**P**	**02 32 19.8**	**+0.2**
	SNR=118						
BHK	**Bhakra**	**6.84**	**130**	*e*S	**S**	**02 33 38.4**	**-0.9**
BHK				*e*x	x	02 34 02.4	
UCH	**Uchtor**	**7.00**	**26**	P	**P**	**02 32 25.0**	**+0.5**
	SNR=28						
KK02	**Karatay Array**	**7.07**	**1**	⇑Pn	**P**	**02 32 23.7**	**-1.9**
	36nm,0.7s,baz=191,slow=12						
KK02				⇑Sn	**S**	**02 33 32.8**	**-12**
	43nm,0.7s,baz=189,slow=20						
SDNR	**Sundarnagar**	**7.13**	**127**	*e*P	**P**	**02 32 27.0**	**+0.6**
SDNR				*e*S	**S**	**02 33 46.0**	**-0.5**
EKS2	**Erkin-Say**	**7.15**	**21**	P	**P**	**02 32 26.8**	**+0.2**
	SNR=12						
KZA	**Kyzart**	**7.16**	**31**	P	**P**	**02 32 27.2**	**+0.5**
	SNR=20						
AAK	**Ala-Archa**	**7.35**	**25**	P	**P**	**02 32 29.6**	**+0.3**
	SNR=23						
AAK	**Ala-Archa**	**7.35**	**25**	⇑Pn	**P**	**02 32 29.3**	**0.0**
	25nm,0.6s						
AAK				⇑Sn	**S**	**02 33 48.5**	**-3.2**
	135nm,0.8s						
AAK	**Ala-Archa**	**7.35**	**25**	P	**P**	**02 32 29.3**	**0.0**
AAK						02 33 48.2	
AAK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
AAK	**Ala-Archa**	**7.35**	**25**	*e*P	**P**	**02 32 27.5**	**-1.8**
	comp=Z,32nm,0.5s						
SMLA	**Simla**	**7.51**	**129**	*i* P	**P**	**02 32 29.5**	**-2.0**
SMLA				*i* S	**S**	**02 33 51.4**	**-4.1**
KBK	**Karagaybulak**	**7.53**	**27**	P	**P**	**02 32 32.6**	**+0.8**
	SNR=9.0						
FRU	**Bishkek**	**7.57**	**25**	P	**P**	**02 32 33.0**	**+0.7**
FRU				*i* S	**S**	**02 33 55.0**	**-2.0**
FRU				smax			
	comp=E,300nm,1.2s						
CHMS	**Chumysh**	**7.76**	**25**	P	**P**	**02 32 35.1**	**+0.2**
	SNR=22						
USP	**Ospenovka**	**7.92**	**23**	P	**P**	**02 32 37.5**	**+0.5**
	SNR=15						
KLP	**Kalpa**	**7.97**	**122**	*e*x	x	02 33 56.8	
KLP				AML	AML	02 34 14.1	
	comp=E,215nm,0.4s						
KLP				AML	AML	02 34 15.0	
	comp=N,190nm,0.8s						
RTK	**Rohtak**	**8.65**	**142**	*e*P	**P**	**02 32 47.1**	**+0.1**
KHET	**Khetri**	**9.18**	**148**	*e*P	**P**	**02 32 51.4**	**-2.7**
KHET				*e*S	**S**	**02 34 28.9**	**-7.6**
BHGR	**Bahadurgarh**	**9.20**	**141**	*e*P	**P**	**02 32 54.8**	**+0.5**
NDI	**New Delhi**	**9.35**	**140**	*e*P	**P**	**02 32 54.0**	**-2.4**
NDI				*e*S	**S**	**02 34 37.0**	**-3.4**
KUDL	**Kundal**	**9.43**	**145**	*e*P	**P**	**02 32 56.4**	**-1.1**
KUDL				*e*S	**S**	**02 34 37.9**	**-4.5**
AYAN	**Aya Nagar**	**9.46**	**141**	*e*P	**P**	**02 32 58.6**	**+0.7**
AYAN				*e*S	**S**	**02 34 40.0**	**-3.2**
SONA	**Sohna**	**9.63**	**142**	*e*P	**P**	**02 33 00.0**	**-0.2**
SONA				*e*S	**S**	**02 34 41.7**	**-5.6**
SONA				AML	AML	02 34 46.5	
	comp=E,46nm,0.4s						
SONA				AML	AML	02 34 46.8	
	comp=N,33nm,0.3s						
AJM	**Ajmer**	**10.20**	**158**	*e*S	**S**	**02 34 53.3**	**-7.7**
PTH	**Pithoragarh**	**10.53**	**125**	*e*x	x	02 33 24.0	
LGTI	**Lohaghat**	**10.61**	**125**	*e*P	**P**	**02 33 12.7**	**-0.6**
LGTI				*e*x	x	02 35 08.0	
AGRA	**Agra**	**10.90**	**141**	*e*P	**P**	**02 33 16.3**	**-0.9**
AGRA				*e*S	**S**	**02 35 10.0**	**-7.7**
AGRA				AML	AML	02 35 22.0	
	comp=E,50nm,0.3s						
AGRA				AML	AML	02 35 22.1	
	comp=N,54nm,0.4s						
KOLN	**Koldanda**	**13.95**	**122**	*e*P	**P**	**02 33 57.3**	**+0.1**
	comp=N,10nm,0.3s						
MK31	**Makanchi Array**	**13.99**	**36**	⇑P	**P**	**02 34 04.5**	**+6.8**
	comp=N,8.1nm,0.8s,baz=192,slow=8.3,SNR=10						
MKAR	**Makanchi Array**	**13.99**	**36**	Pn	**P**	**02 33 58.1**	**+0.4**
	baz=214,slow=10,SNR=2.6						
BHPL	**Bhopal**	**14.14**	**152**	*e*P	**P**	**02 33 59.4**	**-0.5**
BHPL				*e*x	x	02 36 27.4	
GKN	**Gorkha**	**14.52**	**119**	*e*P	**P**	**02 34 06.0**	**+1.3**
	comp=N,24nm,0.3s						
DMN	**Daman**	**15.09**	**120**	*e*P	**P**	**02 34 11.9**	**-0.1**
	comp=N,31nm,0.5s						
KKN	**Kakani**	**15.11**	**119**	*e*P	**P**	**02 34 13.1**	**+0.9**
	comp=N,23nm,0.5s						
KKN	**Kakani**	**15.11**	**119**	*e*P	**P**	**02 34 13.1**	**+0.9**
KKN				pmax	pmax		
	comp=Z,12nm,0.5s						
AB31	**Akbulak array**	**15.25**	**333**	⇑Pn	**P**	**02 34 10.3**	**-3.6**
	comp=Z,35nm,0.7s,baz=149,slow=12,SNR=293						
AB31				⇑Sn	**S**	**02 36 44.5**	**-16**
	comp=Z,3.8nm,0.5s,baz=6.9,slow=30,SNR=4.7						
AB31	**Akbulak array**	**15.25**	**333**	*e*P	**P**	**02 34 10.0**	**-3.9**
AB31				pmax	pmax		
	comp=Z,6.0nm,0.4s						
PKI	**Pulchoki**	**15.33**	**119**	*e*P	**P**	**02 34 15.0**	**0.0**
	comp=Z,26nm,0.5s						
PKI	**Pulchoki**	**15.33**	**119**	*e*P	**P**	**02 34 15.0**	**0.0**
PKI				pmax	pmax		
	comp=Z,13nm,0.5s						
WMQ	**Urumqi**	**15.41**	**54**	*e*P	**P**	**02 34 20.0**	**+4.1**
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.1s						
GUN	**Gumba**	**15.46**	**117**	*e*P	**P**	**02 34 17.4**	**+0.7**
	comp=Z,22nm,0.4s						
BVAR	**Borovoye Array**	**17.00**	**0**	Pn	**P**	**02 34 33.8**	**-1.9**
	comp=Z,1.1nm,0.3s,baz=170,slow=9.7,SNR=17						
HYB	**Hyderabad**	**19.92**	**156**	*e*P	**P**	**02 35 10.0**	**+0.9**
HYB	**Hyderabad**	**19.92**	**156**	*i* P	**P**	**02 35 10.5**	**+1.4**
ZAL	**Zalesovo**	**20.56**	**25**	P	**P**	**02 35 16.9**	**+1.4**
	comp=Z,17nm,0.4s,baz=246,slow=8.1,SNR=12						
NVS	**Novosibirsk**	**20.82**	**21**	*e*P	**P**	**02 35 18.3**	**+0.2**
SHL	**Shillong**	**21.20**	**113**	*e*P	**P**	**02 35 25.0**	**+2.9**
ARU	**Arti**	**21.91**	**342**	*e*P	**P**	**02 35 28.9**	**0.0**
ARU				*e*		02 35 49.2	
ARU				*e*S	**S**	**02 39 25.8**	**+6.3**
ARU	**Arti**	**21.91**	**342**	*e*P	**P**	**02 35 29.3**	**+0.4**
	comp=Z,3.7nm,0.6s,mb3.9						
GTA	**Gaotai**	**23.52**	**73**	P	**P**	**02 35 48.0**	**+3.4**
GTA				XP		02 35 59.6	
SONM	**Songino Array**	**29.05**	**55**	P	**P**	**02 36 40.5**	**+4.8**
	comp=Z,0.9nm,0.7s,mb3.5,baz=262,slow=10,SNR=3.5						
BRTR	**Keskin Array B**	**29.07**	**288**	P	**P**	**02 36 34.7**	**-1.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**29.07**	**288**	P	**P**	**02 36 34.7**	**-1.2**
	comp=Z,0.5nm,0.5s,mb3.5,baz=85,slow=8.3,SNR=3.2						
AKASG	**Malin Array Be**	**32.83**	**310**	P	**P**	**02 37 06.7**	**-2.2**
	comp=Z,0.3nm,0.4s,mb3.5,baz=81,slow=6.7,SNR=3.5						
FINES	**FINESS Array B**	**37.58**	**327**	P	**P**	**02 37 49.5**	**+0.5**
	comp=Z,0.3nm,0.4s,mb3.5,baz=112,slow=10,SNR=6.4						
ARCES	**ARCESS Array B**	**41.38**	**338**	P	**P**	**02 38 22.1**	**+1.7**
	comp=Z,0.6nm,0.5s,mb3.7,baz=108,slow=7.7,SNR=5.5						
NB2	**NORSAR Subarra**	**44.44**	**323**	P	**P**	**02 38 44.0**	**-1.2**
	comp=Z,0.3nm,0.5s,mb3.3,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.44**	**323**	P	**P**	**02 38 44.0**	**-1.2**
	comp=Z,0.4nm,0.5s,mb3.4,baz=98,slow=8.0,SNR=3.5						
TIXI	**Tiksi**	**46.42**	**22**	*e*P	**P**	**02 39 01.7**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
JNU	**Nakatsue**	**49.24**	**75**	LR	LR	03 02 19.1	
	comp=Z,22nm,21.6s,baz=338,slow=38						
JOW	**Kunigami**	**49.66**	**84**	LR	LR	03 02 18.5	
	comp=Z,65nm,21.1s,baz=289,slow=38						
WRA	**Warramunga Arr**	**82.20**	**121**	P	**P**	**02 43 00.8**	**+6.2**
	comp=Z,0.3nm,0.9s,mb3.1,baz=323,slow=5.1,SNR=5.2						

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*CSEM **04** 02:51:19.0±0.5, 34.07N×8.36W, h30^{km}, MD3.6, Error ellipse: s-maj=10.2km s-min=4.4km az=163.0, After CNRM*

CNRM 04 02:51:19.0,34.07N×8.36W,h30^{km},MD3.6,West of Gibraltar

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CASC 04 03:03:15.9±2.1**,9.01N**×**84.15W,h5**^{km}**,MD3.9,MW4.6, 3C-3D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUS	**Buena Vista**	**0.67**	**35**	⇓*e*P	Pg	03 03 28.9	-0.4
BUS				*e*S	Sg	03 03 39.3	+1.1
LCR2	**La Lucha 2**	**0.75**	**11**	*e*P	Pg	03 03 30.2	-0.7
SJS	**Escuela Geolog**	**0.93**	**6**	⇑*e*P	Pb	03 03 33.3	-0.8
SJS				*e*S	Sb	03 03 48.0	+1.4
PRS1	**Puriscal**	**0.99**	**351**	⇓*e*P	Pb	03 03 32.7	-2.4
ACR	**Cerro Adams**	**1.03**	**110**	*e*P	Pb	03 03 34.3	-1.5
ACR				*e*S	Sb	03 03 49.3	-0.2
CGA2	**Cerro Gallo 2**	**1.05**	**343**	*e*P	Pb	03 03 35.4	-0.9
CGA2				*e*S	Sb	03 03 50.5	+0.4
VPS2	**Volcan Poas 2**	**1.18**	**356**	*e*P	Pb	03 03 37.9	-0.5
SVTC	**San Vito de Co**	**1.20**	**100**	*i* P	Pb	03 03 37.8	-0.9
JCR	**Jicaral**	**1.27**	**312**	⇑*e*P	Pb	03 03 37.2	-2.7
BRU2	**Volcan**	**1.46**	**98**	*e*P	Pn	03 03 45.7	+2.8
BRU2				*e*S	Sb	03 04 03.1	+1.3
LIO	**Limon**	**1.48**	**48**	⇑*e*P	Pn	03 03 42.4	-0.9
LIO				*e*S	Sb	03 04 02.5	0.0
FORC	**Fortuna**	**1.54**	**341**	*i* P	Pn	03 03 43.4	-0.9
FORC				*e*S	Sb	03 04 06.3	+1.8
TRTC	**Tortuguero**	**1.62**	**15**	⇓*e*P	Pn	03 03 44.8	-0.5
CNI	**Changuinola**	**1.66**	**76**	*e*P	Pn	03 03 44.8	-1.1
DVD	**David**	**1.77**	**108**	*e*P	Pn	03 03 50.1	+2.7
DVD				*e*S	Sn	03 04 12.3	+1.7
VCR	**Vista de Mar**	**1.84**	**307**	*e*P	Pn	03 03 49.4	+0.9
PTP1	**Petroterminal**	**1.88**	**115**	*e*P	Pn	03 03 43.3	-5.7

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*MOS **04** 03:22:58.9±1.7, 55.44N×166.45E, h20^{km}, mb4.4/5, Error ellipse: s-maj=12.2km s-min=9.1km az=51.3*

*IDC **04** 03:22:59.9±0.7, 55.53N×166.36E, mb4.0/9, mb1 4.3/11, mb1mx3.9/26, mbtmp4.0/11, ML3.4/2, MS3.2/3, Ms1 3.2/3, ms1mx2.6/33, Error ellipse: s-maj=20.0km s-min=11.0km az=19.0*

*KRSC **04** 03:23:00.2±1.3, 55.47N×166.41E, h21^{km}±2^{km}, ML4.5*

*BJI **04** 03:23:01.4, 55.01N×167.02E, h46^{km}, mB4.5, mb4.5, Ms3.7, Msz3.5*

*NEIC **04** 03:23:03.8±0.5, 55.48N×166.39E, h30^{km}, mb4.3/5, Error ellipse: s-maj=16.0km s-min=7.8km az=163.0*

ISC 04 03:23:01.3±0.7**,55.39N**±0.04×**166.33E**±0.04**,h28**^{km}±5^{km}**, n80,σ1^{s}26**/115**,mb4.1**/17**,MS3.2**/3**,Komandorsky Islands region**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BKI	**Bering**	**0.28**	**228**	*i* P	**Pb**	**03 23 08.1**	**-0.2**
BKI				*i* S	**Sb**	**03 23 12.9**	**-0.1**
BKI				Smax			
	18µm,0.4s						
KBTR	**Krutoberegovo**	**2.15**	**294**	P	**Pn**	**03 23 33.5**	**-2.5**
KBTR				S	**Sn**	**03 23 59.1**	**-2.9**
KBTR	**Krutoberegovo**	**2.15**	**294**	*e*P	**Pn**	**03 23 33.3**	**-2.7**
KBTR				*e*S	**Sn**	**03 23 59.1**	**-2.9**
MKZ	**Mys Kozlova**	**2.78**	**254**	P	**Pn**	**03 23 44.9**	**-0.2**
MKZ				S	**Sn**	**03 24 17.9**	**-0.2**
MKZ	**Mys Kozlova**	**2.78**	**254**	*e*P	**Pn**	**03 23 45.0**	**-0.1**
MKZ				*e*S	**Sn**	**03 24 17.7**	**-0.4**
ZLN	**Zelenaya**	**3.19**	**284**	*e*P	**Pn**	**03 23 51.2**	**+0.3**
ZLN				*e*S	**Sn**	**03 24 29.9**	**+1.4**
CIRR	**Tsirk**	**3.24**	**285**	*e*P	**Pn**	**03 23 53.1**	**+1.5**
CIRR				*e*S	**Sn**	**03 24 30.3**	**+0.6**
LGNR	**Loginova**	**3.27**	**285**	*e*P	**Pn**	**03 23 52.2**	**+0.2**
LGNR				*e*S	**Sn**	**03 24 30.7**	**+0.4**
KLY	**Klyuchi**	**3.33**	**288**	P	**Pn**	**03 23 50.9**	**-2.0**
KLY				S	**Sn**	**03 24 28.6**	**-3.5**
KLY	**Klyuchi**	**3.33**	**288**	*e*P	**Pn**	**03 23 50.9**	**-2.0**
KLY				*e*S	**Sn**	**03 24 28.8**	**-3.3**
KRSR	**Krestovskiy**	**3.36**	**287**	*i* P	**Pn**	**03 23 52.7**	**-0.6**
KRSR				*e*S	**Sn**	**03 24 32.2**	**-0.5**
KMNR	**Kamenistaya**	**3.48**	**279**	*e*P	**Pn**	**03 23 55.2**	**+0.2**
KMNR				*e*S	**Sn**	**03 24 36.7**	**+0.9**
KPT	**Kopyto**	**3.51**	**282**	*e*P	**Pn**	**03 23 55.5**	**+0.1**
KPT				*e*S	**Sn**	**03 24 36.6**	**+0.1**
TUMR	**Tumrok**	**3.54**	**271**	*e*P	**Pn**	**03 23 56.4**	**+0.6**
TUMR				*e*S	**Sn**	**03 24 37.5**	**+0.3**
KOZR	**Kozyr**	**3.70**	**283**	PN	**Pn**	**03 23 58.9**	**+0.7**
KOZR				S	**Sn**	**03 24 43.0**	**+1.6**
KOZ	**Kozyrevsk**	**3.71**	**283**	P	**Pn**	**03 23 58.9**	**+0.6**
KOZ				S	**Sn**	**03 24 43.0**	**+1.3**
KOZ	**Kozyrevsk**	**3.71**	**283**	*e*P	**Pn**	**03 23 58.9**	**+0.6**
KOZ				*e*S	**Sn**	**03 24 42.7**	**+1.0**
SRDR	**Sredinnyy**	**3.84**	**287**	*e*P	**Pn**	**03 23 59.6**	**-0.6**
SRDR				*e*S	**Sn**	**03 24 42.2**	**-2.8**
KII	**Karymskiy**	**4.22**	**254**	P	**Pn**	**03 24 06.5**	**+1.0**
KII				S	**Sn**	**03 24 56.0**	**+1.6**
KII	**Karymskiy**	**4.22**	**254**	*e*P	**Pn**	**03 24 06.4**	**+0.9**
KII				*e*S	**Sn**	**03 24 56.0**	**+1.6**
OSSR	**Ossora**	**4.26**	**337**	*e*P	**Pn**	**03 24 02.7**	**-3.4**
OSSR				Smax			
	100nm,0.8s						
SPN	**Mys Shipunski**	**4.35**	**241**	P	**Pn**	**03 24 06.6**	**-0.8**
SPN				S	**Sn**	**03 24 55.5**	**-2.4**
SPN	**Mys Shipunski**	**4.35**	**241**	*e*P	**Pn**	**03 24 06.8**	**-0.6**
SPN				*i* S	**Sn**	**03 24 55.1**	**-2.8**
ESO	**Esso**	**4.36**	**280**	*e*P	**Pn**	**03 24 07.3**	**-0.2**
ESO				*e*S	**Sn**	**03 24 58.1**	**+0.1**
ESO				Smax			
	60nm,1.0s						
NLC	**Nalytchevo**	**4.66**	**244**	P	**Pn**	**03 24 11.6**	**-0.1**
NLC				S	**Sn**	**03 25 03.6**	**-2.0**
NLC	**Nalytchevo**	**4.66**	**244**	*e*P	**Pn**	**03 24 11.6**	**-0.1**
NLC				*e*S	**Sn**	**03 25 02.8**	**-2.8**
FX1	**Attu Island--F**	**4.74**	**119**	Pn	**Pn**	**03 24 11.0**	**-1.8**
	3.9nm,0.3s,baz=343,slow=4.2,SNR=16						
FX1				Sn	**Sn**	**03 25 04.5**	**-3.0**
	4.3nm,0.3s,baz=25,slow=22,SNR=7.9						
FX1	**Attu Island--F**	**4.74**	**119**	*e*P	**Pn**	**03 24 10.4**	**-2.5**
UGLR	**Uglovaya**	**4.91**	**247**	*e*P	**Pn**	**03 24 15.9**	**+0.6**
UGLR				*e*S	**Sn**	**03 25 09.5**	**-2.4**
AVH	**Avacha**	**4.93**	**248**	*e*P	**Pn**	**03 24 16.4**	**+0.8**
AVH				*e*S	**Sn**	**03 25 11.4**	**-1.0**
KOK	**Koryaka**	**4.97**	**248**	*e*P	**Pn**	**03 24 16.8**	**+0.7**
KOK				*e*S	**Sn**	**03 25 11.3**	**-2.1**
PET	**Petropavlovsk**	**5.09**	**245**	P	**Pn**	**03 24 18.3**	**+0.4**
PET				S	**Sn**	**03 25 15.9**	**-0.6**
PET	**Petropavlovsk**	**5.09**	**245**	*e*PN	**Pn**	**03 24 19.0**	**+1.1**
PET				pmax	pmax		
	comp=Z,57nm,0.5s						
PET				MLR	MLR		
	comp=Z,200nm,22.0s						
PET				MLR	MLR		
	comp=N,300nm,22.0s						
PET	**Petropavlovsk**	**5.09**	**245**	*e*P	**Pn**	**03 24 17.0**	**-0.9**
PET	**Petropavlovsk**	**5.09**	**245**	*e*P	**Pn**	**03 24 18.5**	**+0.6**
PET				*e*S	**Sn**	**03 25 14.9**	**-1.6**
GNL	**Ganaly**	**5.17**	**254**	*e*P	**Pn**	**03 24 19.7**	**+0.7**
GNL				*e*S	**Sn**	**03 25 18.1**	**-0.4**
KRMR	**Karymshinskiy**	**5.46**	**245**	*e*P	**Pn**	**03 24 23.8**	**+0.7**
KRMR				*e*S	**Sn**	**03 25 23.8**	**-2.0**
RUS	**Russkaya**	**5.49**	**241**	P	**Pn**	**03 24 22.8**	**-0.6**
RUS				S	**Sn**	**03 25 23.1**	**-3.3**
RUS	**Russkaya**	**5.49**	**241**	*e*P	**Pn**	**03 24 23.4**	**0.0**
RUS				*e*S	**Sn**	**03 25 23.1**	**-3.3**
GRL	**Gorelyy**	**5.64**	**243**	*e*P	**Pn**	**03 24 26.7**	**+1.1**
GRL				*e*S	**Sn**	**03 25 30.2**	**-0.1**
APC	**Apacha**	**5.93**	**249**	*e*P	**Pn**	**03 24 30.7**	**+1.1**
APC				*e*S	**Sn**	**03 25 36.4**	**-1.0**
APC				Smax			
	comp=N,40nm,0.8s						
PAU	**Pauzhetka**	**6.91**	**239**	P	**Pn**	**03 24 44.3**	**+0.8**
KAMR	**Kamenskoye**	**7.09**	**360**	*i* P	**Pn**	**03 24 43.0**	**-3.0**
ALID	**Alaid**	**7.91**	**240**	*e*P	**Pn**	**03 24 58.7**	**+1.3**
BILL	**Bilibino**	**12.70**	**360**	*i* PN	**P**	**03 26 10.6**	**+7.9**
UNV	**Unalaska Valle**	**15.78**	**84**	P	**P**	**03 26 42.5**	**-0.4**
YSS	**Yuzh-Sakhalins**	**16.96**	**250**	P	**P**	**03 26 59.1**	**+1.1**
ASAJ	**Asahikawa**	**18.93**	**243**	P	**P**	**03 27 23.3**	**+0.9**
	comp=N,0.4nm,0.3s,baz=40,slow=4.2,SNR=5.2						
YAK	**Yakutsk**	**19.94**	**304**	*e*P	**P**	**03 27 31.1**	**-2.6**
IMA	**Indian Mountai**	**21.86**	**45**	*e*P	**P**	**03 27 51.6**	**-1.6**
IMA				pmax	pmax		
	comp=Z,26nm,1.1s,mb4.6						
IMA	**Indian Mountai**	**21.86**	**45**	*e*P	**P**	**03 27 51.6**	**-1.6**
	comp=Z,26nm,1.1s,mb4.6						
SPU	**Mount Spurr**	**22.32**	**58**	P	**P**	**03 27 58.0**	**+0.2**
TIXI	**Tiksi**	**22.72**	**330**	*i* P	**P**	**03 28 01.6**	**0.0**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
COLA	**College**	**24.16**	**48**	*i* P	**P**	**03 28 14.0**	**-1.6**
ILAR	**Eielson Array**	**24.57**	**49**	P	**P**	**03 28 19.9**	**+0.3**
	comp=Z,9.2nm,1.1s,mb4.2,baz=262,slow=8.6,SNR=43						
MAJO	**Matsushiro**	**26.86**	**237**	*e*P	**P**	**03 28 43.6**	**+2.3**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
MAJO	**Matsushiro**	**26.86**	**237**	*e*P	**P**	**03 28 43.6**	**+2.3**
	comp=Z,5.7nm,0.9s,mb4.1						
MAT	**Matsushiro**	**26.86**	**237**	P	**P**	**03 28 43.0**	**+1.7**
MAT				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.2						
MAT	**Matsushiro**	**26.86**	**237**	P	**P**	**03 28 43.0**	**+1.7**
	comp=Z,8.0nm,1.0s,mb4.2						
MAT	**Matsushiro**	**26.86**	**237**	P	**P**	**03 28 43.4**	**+2.1**
MJAR	**Matsushiro Arr**	**26.86**	**237**	P	**P**	**03 28 43.4**	**+2.1**
	comp=Z,2.4nm,0.9s,mb3.8,baz=27,slow=7.8,SNR=6.1						
ULN	**Ulaanbaatar**	**36.54**	**284**	*i* P	**P**	**03 30 07.1**	**+1.0**
SONM	**Songino Array**	**36.92**	**284**	P	**P**	**03 30 10.6**	**+1.4**
	comp=Z,3.5nm,0.8s,mb4.2,baz=51,slow=8.8,SNR=14						
SONM				LR	LR	03 45 39.1	
	comp=Z,25nm,21.0s,MS3.0,baz=216,slow=37						
YKA	**Yellowknife Ar**	**38.96**	**46**	P	**P**	**03 30 26.7**	**+0.5**
	comp=Z,0.9nm,0.7s,mb3.6,baz=301,slow=8.1,SNR=6.7						
YKA	**Yellowknife Ar**	**38.96**	**46**	P	**P**	**03 30 26.7**	**+0.5**
SSE	**Sheshan**	**39.89**	**251**	*e*P	**P**	**03 30 33.1**	**-1.2**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,40nm,5.1s						
NJ2	**Nanjing**	**40.43**	**255**	*e*P	**P**	**03 30 38.6**	**-0.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NEW	**Newport**	**45.60**	**65**	LR	LR	03 50 27.9	
	comp=Z,36nm,18.6s,MS3.3,baz=82,slow=36						
GTA	**Gaotai**	**45.94**	**279**	P	**P**	**03 31 25.6**	**+2.4**
GTA				AP	pP	03 31 33.2	+1.6
FCC	**Fort Churchill**	**49.35**	**43**	*e*P	**P**	**03 31 49.4**	**-0.2**
FCC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
FCC	**Fort Churchill**	**49.35**	**43**	*e*P	**P**	**03 31 49.4**	**-0.2**
	comp=Z,2.1nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**50.40**	**298**	*i* P	**P**	**03 31 57.9**	**+0.1**
MKAR	**Makanchi Array**	**50.40**	**298**	P	**P**	**03 31 56.5**	**-1.3**
	comp=Z,0.4nm,0.6s,mb3.6,baz=53,slow=6.1,SNR=5.2						
BVAR	**Borovoye Array**	**51.77**	**310**	P	**P**	**03 32 07.0**	**-1.1**
	comp=Z,1.2nm,0.7s,mb3.9,baz=68,slow=8.0,SNR=7.5						
BW06	**Boulder Array**	**53.22**	**66**	P	**P**	**03 32 19.1**	**0.0**
PDAR	**Pinedale Array**	**53.22**	**66**	P	**P**	**03 32 20.1**	**+1.1**
	comp=Z,0.7nm,0.7s,mb3.7,baz=315,slow=4.2,SNR=5.2						
FINES	**FINESS Array B**	**59.38**	**339**	LR	LR	03 58 56.2	
	comp=Z,20nm,21.2s,MS3.2,baz=33,slow=36						
MNTX	**Cornudas Mount**	**63.64**	**72**	*e*P	**P**	**03 33 32.0**	**+0.1**
	comp=Z,2.8nm,0.9s,mb4.3						
TXAR	**Lajitas Array**	**66.41**	**72**	P	**P**	**03 33 50.9**	**+1.1**
	comp=Z,1.8nm,0.6s,mb4.3,baz=281,slow=6.4,SNR=12						
ASAR	**Alice Springs**	**83.47**	**210**	P	**P**	**03 35 30.4**	**+3.0**
	comp=Z,0.6nm,0.9s,mb3.6,baz=14,slow=5.3,SNR=5.3						

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*CSEM **04** 03:25:58.9±0.1, 62.20N×26.51W, h2^{km}, mb4.1/2, Error ellipse: s-maj=8.9km s-min=3.7km az=40.0*

*IDC **04** 03:26:01.1±1.2, 62.09N×26.56W, mb3.7/9, mb1 3.9/9, mb1mx3.7/26, mbtmp3.7/9, MS3.2/6, Ms1 3.2/6, ms1mx2.9/32, Error ellipse: s-maj=35.9km s-min=19.8km az=23.0*

*NEIC **04** 03:26:02.5±0.6, 62.10N×26.68W, h10^{km}, mb4.5/4, Error ellipse: s-maj=20.2km s-min=8.8km az=213.0*

ISC 04 03:26:00.9±0.7**, 62.2N**±0.1×**26.7W**±0.2**, h10^{km}, n25, σ0^{s}88**/21**, mb3.8**/12**, MS3.1**/3**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUMG	**Summit**	**11.38**	**342**	P	**P**	**03 28 45.7**	**-0.6**
SUMG	**Summit**	**11.38**	**342**	P	**P**	**03 28 45.7**	**-0.6**
NOA	**NORSAR Array B**	**17.90**	**77**	LR	LR	03 36 21.5	
	comp=Z,46nm,18.7s,baz=295,slow=35						
FRB	**Frobisher Bay**	**18.86**	**293**	LR	LR	03 37 00.0	
	comp=Z,106nm,18.2s,baz=105,slow=35						
HFS	**Hagfors**	**19.37**	**78**	LR	LR	03 37 16.7	
	comp=Z,56nm,18.6s,baz=89,slow=35						
MOX	**Moxa**	**23.73**	**101**	*i* P	**P**	**03 31 12.6**	**-0.8**
	logA/T=1.1,mb4.3						
MOX	**Moxa**	**23.73**	**101**	*e*P	**P**	**03 31 12.6**	**-0.8**
	23nm,1.9s,mb4.3						
GRA1	**Grafenberg Arr**	**24.22**	**103**	*e*P	**P**	**03 31 20.3**	**+2.1**
	41nm,2.6s,mb4.4						
GRF	**Grafenberg Arr**	**24.22**	**103**	*e*P	**P**	**03 31 20.3**	**+2.1**
	41nm,2.6s,mb4.4						
GERES	**GERESS Array B**	**25.96**	**102**	P	**P**	**03 31 33.9**	**-0.8**
	0.1nm,0.3s,mb2.8,baz=333,slow=4.4,SNR=4.0						
GERES				LR	LR	03 41 57.0	
	comp=Z,41nm,19.3s,MS3.0,baz=340,slow=37						
ESDC	**Sonseca Array**	**26.40**	**138**	P	**P**	**03 31 38.4**	**-0.5**
	1.5nm,1.0s,mb3.5,baz=342,slow=9.4,SNR=4.9						
FCC	**Fort Churchill**	**32.06**	**295**	P	**P**	**03 32 28.0**	**-1.4**
FCC	**Fort Churchill**	**32.06**	**295**	P	**P**	**03 32 28.0**	**-1.4**
SADO	**Sadowa**	**34.57**	**265**	LR	LR	03 45 11.1	
	comp=Z,48nm,19.4s,MS3.2,baz=190,slow=33						
YKA	**Yellowknife Ar**	**37.83**	**311**	P	**P**	**03 33 20.0**	**+1.2**
	0.4nm,0.5s,mb3.4,baz=49,slow=9.2,SNR=8.3						
YKA				LR	LR	03 46 58.6	
	comp=Z,28nm,20.6s,MS3.0,slow=33						
INK	**Inuvik**	**39.74**	**326**	*e*P	**P**	**03 33 35.0**	**+0.3**
	1.3nm,0.6s,mb3.8						
INK	**Inuvik**	**39.74**	**326**	*e*P	**P**	**03 33 35.0**	**+0.4**
	1.3nm,0.6s,mb3.8						
ILAR	**Eielson Array**	**45.86**	**329**	P	**P**	**03 34 23.9**	**-0.3**
	0.3nm,0.6s,mb3.4,baz=27,slow=6.0,SNR=4.3						
BVAR	**Borovoye Array**	**48.03**	**54**	P	**P**	**03 34 41.7**	**+0.2**
	2.1nm,1.0s,mb4.1,baz=315,slow=6.3,SNR=7.7						
PDAR	**Pinedale Array**	**50.20**	**288**	P	**P**	**03 34 58.9**	**+0.6**
	0.4nm,0.4s,mb3.8,baz=45,slow=6.3,SNR=5.3						
MKAR	**Makanchi Array**	**57.55**	**50**	P	**P**	**03 35 51.7**	**-0.7**
	2.0nm,1.1s,mb4.1,baz=329,slow=7.1,SNR=6.7						
MKAR	**Makanchi Array**	**57.55**	**50**	P	**P**	**03 35 51.7**	**-0.7**
SONM	**Songino Array**	**64.13**	**33**	P	**P**	**03 36 37.3**	**+0.3**
	0.8nm,0.6s,mb3.9,baz=321,slow=7.9,SNR=4.5						
CMAR	**Chiang Mai Arr**	**88.96**	**51**	P	**P**	**03 38 57.4**	**+0.6**
	0.7nm,0.5s,mb4.3,baz=329,slow=5.8,SNR=4.3						
CMAR	**Chiang Mai Arr**	**88.96**	**51**	P	**P**	**03 38 57.3**	**+0.6**

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*ISK **04** 03:33:04.1, 38.21N×25.89E, h26^{km}, MD3.0*

*ATH **04** 03:33:05.7, 38.39N×25.87E, h10^{km}, MD3.0/3*

*NEIC **04** 03:33:05.7, 38.39N×25.87E, h10^{km}, MD3.0(ATH), After ATH.*

ISC 04 03:33:05.2±1.3**, 38.43N**±0.04×**25.95E**±0.07**, h10^{km}**±8^{km}**, n12, σ0^{s}91**/17**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.51**	**97**	*i* P	**Pg**	**03 33 15.7**	**+0.2**
URLA				*i* S	**Sg**	**03 33 22.1**	**-0.4**
PRK	**Paraskevi**	**0.86**	**17**	*e*PB	**Pb**	**03 33 23.0**	**+1.3**
SMG	**Samos**	**1.00**	**135**	*e*PB	**Pb**	**03 33 25.1**	**+0.9**
IZM	**Izmir**	**1.03**	**91**	PN	**Pn**	**03 33 24.5**	**-1.1**
IZM				SN	**Sn**	**03 33 38.8**	**-1.4**
KDAG	**Bornova**	**1.03**	**91**	*i* P	**Pb**	**03 33 24.9**	**+0.2**
KDAG				*i* S	**Sb**	**03 33 39.0**	**+0.8**
AYVA	**Ayvalik**	**1.05**	**33**	*i* P	**Pb**	**03 33 24.5**	**-0.6**
AYVA				*i* S	**Sb**	**03 33 38.5**	**-0.2**
APE	**Apeiranthos**	**1.39**	**194**	*e*PB	**Pb**	**03 33 31.2**	**+0.3**
BOZC	**Bozcaada**	**1.42**	**3**	*i* S	**Sb**	**03 33 47.7**	**-1.6**
CANB	**Canakkale**	**1.81**	**28**	*e*PN	**Pn**	**03 33 36.5**	**-0.2**
CANB				*e*SN	**Sn**	**03 34 02.1**	**+2.2**
BALB	**Balikesir**	**1.93**	**51**	*e*PN	**Pn**	**03 33 38.3**	**-0.2**
SANT	**Santorini**	**2.09**	**191**	P	**Pn**	**03 33 40.1**	**-0.6**
KCT	**Karacabey**	**2.62**	**45**	*e*PN	**Pn**	**03 33 48.9**	**+0.6**

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*NEIC **04** 03:37:27.3, 37.14N×21.01E, h5^{km}, MD3.5(ATH), After ATH.*

*CSEM **04** 03:37:27.3±0.7, 37.14N×21.01E, h5^{km}, MD3.5, Error ellipse: s-maj=15.2km s-min=5.6km az=43.0, After ATH*

ATH 04 03:37:27.3, 37.14N×21.01E, h5^{km}±3^{km}**, MD3.5**/6**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.73**	**87**	*e*PG	Pg	03 37 41.0	-1.0
ITM				*e*SB	Sb	03 37 52.2	-0.1
RLS	**Riolos of Patr**	**0.98**	**21**	*e*PG	Pg	03 37 45.9	-1.1
VLS	**Valsamata**	**1.09**	**342**	*e*PN	Pn	03 37 48.0	-1.1
VLS				*e*SB	Sb	03 38 03.6	+1.1
VLI	**Veliai**	**1.60**	**105**	*e*PG	Pg	03 37 57.1	-2.2
EVR	**Evrytania**	**1.88**	**19**	*e*PG	Pg	03 38 02.9	-2.0
LKR	**Lokris**	**2.18**	**46**	*e*PN	Pn	03 38 06.1	+1.4

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*INMG **04** 04:25:14.0±0.8, 36.84N×9.40W, h18^{km}±3^{km}, ML1.6, Error ellipse: s-maj=6.6km s-min=3.1km az=75.0*

MDD 04 04:25:14.8±3.6**, 36.92N×9.30W, h67^{km}**±36^{km}**, mb2.9**/5**, 1C, Error ellipse: s-maj=34.2km s-min=25.1km az=57.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	**0.78**	**37**	*e*P	P	04 25 30.1	-0.4
PTEO				*e*S	S	04 25 42.1	-0.1
	11nm,0.1s						
PTEO	**Sao Teotonio**	**0.78**	**37**	Pn	P	04 25 30.1	-0.4
PTEO				Sn	S	04 25 42.1	-0.1
	5.4nm,0.1s						
PALC	**Alcoutim**	**1.56**	**69**	*e*P	P	04 25 40.7	-0.2
PALC				*e*S	S	04 26 00.5	+0.2
	4.1nm,0.2s						
PALC	**Alcoutim**	**1.56**	**69**	Pn	P	04 25 40.7	-0.2
PALC				Sn	S	04 26 00.5	+0.2
	2.0nm,0.2s						
EGRO	**El Granado**	**1.58**	**67**	Pn	P	04 25 39.5	-1.7
	0.8nm,0.1s,SNR=6.7						
EGRO				Sn	S	04 26 01.4	+0.6
	5.5nm,0.2s,SNR=7.9						
PBEJ	**Beja**	**1.59**	**46**	*e*Pn	P	04 25 41.0	-0.4
PBEJ				*e*Sn	S	04 26 01.7	+0.7
	2.1nm,0.1s						
PBEJ	**Beja**	**1.59**	**46**	Pn	P	04 25 41.0	-0.4
PBEJ				Sn	S	04 26 01.7	+0.7
	1.1nm,0.1s						
EMIN	**Mina Concepcio**	**2.26**	**67**	Pn	P	04 25 49.8	-0.8
	0.8nm,0.1s,SNR=11						
EMIN				Sn	S	04 26 17.3	-0.1
	1.3nm,0.2s,SNR=7.8						
EBAD	**Badajoz**	**2.58**	**44**	Pn	P	04 25 53.9	-1.3
	0.1nm,0.1s,SNR=8.0						
EBAD				Sn	S	04 26 25.2	-0.1
	0.6nm,0.1s,SNR=7.9						
ESPR	**Espera**	**2.77**	**90**	⇑Pn	P	04 25 56.6	-1.2
	4.1nm,0.1s,SNR=18						
ESPR				Sn	S	04 26 28.8	-1.3
	20nm,0.4s,SNR=7.9						
PTOM	**Tomar**	**2.78**	**14**	*e*Sn	S	04 26 29.9	-0.6
PCBR	**Castelo Branco**	**3.25**	**26**	*e*Pn	P	04 26 04.5	-0.1
PCBR				*e*Sn	S	04 26 40.5	-1.7
PVIS	**Viseu**	**3.94**	**16**	*e*Sn	S	04 26 57.2	-2.5
	1.7nm,0.1s						
PVIS	**Viseu**	**3.94**	**16**	Sn	S	04 26 57.2	-2.5
	0.9nm,0.1s						
EADA	**Adamuz**	**3.96**	**70**	Pn	P	04 26 13.7	-0.8
	0.8nm,0.2s,SNR=6.7						
EADA				Sn	S	04 26 57.7	-2.3
	1.1nm,0.1s,SNR=5.0						
PVRL	**Vila Real**	**4.52**	**15**	*e*Sn	S	04 27 11.3	-2.8
	2.2nm,0.1s						
PVRL	**Vila Real**	**4.52**	**15**	Sn	S	04 27 11.3	-2.8
	1.1nm,0.1s						

MDD 04 04:39:23.3±7.7**, 35.82N×0.07E, mb3.5**/3**, Error ellipse: s-maj=70.8km s-min=61.7km az=148.0, PRXIMO SIN SOLUCIN, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBER	**Berja**	**2.62**	**295**	Pn	Pn	04 40 06.4	-1.1
	2.5nm,0.1s,SNR=7.9						
EBER				Sn	Sn	04 40 40.7	+0.2
	0.5nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.10**	**336**	Pn	Pn	04 40 13.4	-1.0
	0.9nm,0.1s,SNR=6.6						
ETOB				Sn	Sn	04 40 51.9	-0.8
	0.3nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.20**	**309**	Pn	Pn	04 40 15.9	+0.1
	0.9nm,0.1s,SNR=8.9						
EQES				Sn	Sn	04 40 55.0	-0.2
	0.3nm,0.2s,SNR=7.9						

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*BJI **04** 05:57:46.4, 15.31N×94.08E, h10^{km}, mB4.3, mb4.5, Ms4.2, Msz4.1*

*IDC **04** 05:57:52.7±4.8, 15.98N×94.01E, mb3.8/6, mb1 4.0/7, mb1mx3.8/20, mbtmp3.9/7, ML4.4/1, MS3.6/7, Ms1 3.6/7, ms1mx3.4/28, Error ellipse: s-maj=100.9km s-min=38.7km az=172.0*

*NEIC **04** 05:57:54.5±1.2, 16.03N×94.02E, h10^{km}, mb4.2/2, Error ellipse: s-maj=20.2km s-min=6.8km az=193.0*

ISC 04 05:57:53.5±0.8**, 16.15N**±0.08×**94.04E**±0.04**, h10^{km}, n34, σ0^{s}89**/35**, mb3.9**/8**, MS3.8**/8**, 1C, Near south coast of Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**5.21**	**63**	*e*P	**Pn**	**05 59 13.3**	**-0.2**
	23nm,0.3s						
CMAR	**Chiang Mai Arr**	**5.21**	**63**	Pn	**Pn**	**05 59 13.5**	**0.0**
	3.4nm,0.3s,baz=248,slow=15,SNR=86						
CMAR				Sn	**Sn**	**06 00 07.9**	**-6.5**
	4.3nm,0.3s,baz=240,slow=20,SNR=4.9						
CMAR				LR	LR	06 01 29.9	
	comp=Z,224nm,19.6s,baz=240,slow=41						
CHG	**Chiang Mai**	**5.38**	**60**	PN	**Pn**	**05 59 15.6**	**-0.2**
CHG				SG	**Sn**	**06 00 17.6**	**-0.9**
NST	**Nakhon Sawan**	**5.88**	**94**	PN	**Pn**	**05 59 18.5**	**-4.4**
NST				PG	**Pb**	**05 59 33.0**	**-2.9**
NST				SG	Sn	06 00 08.0	-23
NNT	**Nongplab**	**6.55**	**122**	P	**Sn**	**06 00 49.0**	**+1.1**
NANT	**Nan**	**6.88**	**66**	PG	**Pn**	**05 59 37.0**	**0.0**
NANT				SG	**Sn**	**06 00 57.0**	**+0.9**
KKTK	**Khon Kaen**	**8.44**	**88**	P	**P**	**06 00 04.0**	**+5.3**
SHL	**Shillong**	**9.59**	**348**	*e*P	**P**	**06 00 10.5**	**-4.2**
SHL				*e*S	**Sn**	**06 01 55.0**	**-8.6**
LSA	**Lhasa**	**13.75**	**349**	P	**P**	**06 01 11.4**	**+0.4**
	4.8nm,0.4s						
PKI	**Pulchoki**	**13.90**	**326**	*e*P	**P**	**06 01 13.1**	**+0.1**
	34nm,0.4s						
GUN	**Gumba**	**13.93**	**329**	*e*P	**P**	**06 01 14.3**	**+0.8**
	56nm,0.9s						
DMN	**Daman**	**14.09**	**326**	*e*P	**P**	**06 01 16.2**	**+0.6**
	125nm,0.8s						
KKN	**Kakani**	**14.14**	**326**	*e*P	**P**	**06 01 16.1**	**-0.1**
	10.0nm,0.2s						
GKN	**Gorkha**	**14.66**	**325**	*e*P	**P**	**06 01 22.7**	**-0.3**
	27nm,0.3s						
KOLN	**Koldanda**	**15.07**	**322**	*e*P	**P**	**06 01 27.9**	**-0.5**
	36nm,0.3s						
GYA	**Guiyang**	**15.59**	**47**	P	**P**	**06 01 38.4**	**+3.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CD2	**Chengdu**	**17.17**	**29**	*e*P	**P**	**06 01 56.4**	**+1.2**
ENH	**Enshi**	**19.94**	**42**	P	**P**	**06 02 28.5**	**-0.1**
	comp=Z,7.3nm,0.7s						
LZH	**Lanzhou**	**21.69**	**22**	⇑P	**P**	**06 02 46.0**	**-0.6**
LZH				AP		06 02 57.5	
LZH				PP	PP	06 03 09.2	-2.2
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb4.5						
LZH				LR	LR		
	comp=N,390nm,12.3s						
LZH				LR	LR		
	comp=Z,780nm,15.0s,MS4.2						
XAN	**Xi'an**	**22.29**	**34**	P	**P**	**06 02 50.0**	**-2.6**
XAN				AP		06 03 01.0	
GTA	**Gaotai**	**23.72**	**11**	P	**P**	**06 03 07.8**	**+1.2**
GTA				AP		06 03 18.2	
GTA				XP		06 03 21.8	
GTA				AMB	AMB		
	comp=Z,70nm,11.5s						
GTA				LR	LR		
	comp=N,240nm,18.6s,MS3.8						
GTA				LR	LR		
	comp=E,140nm,16.7s,MS3.8						
GTA				LR	LR		
	comp=Z,240nm,16.0s,MS3.8						
MKAR	**Makanchi Array**	**32.08**	**345**	P	**P**	**06 04 23.0**	**+0.1**
	comp=Z,1.4nm,0.6s,mb4.0,baz=157,slow=9.6,SNR=14						
SONM	**Songino Array**	**33.20**	**15**	P	**P**	**06 04 32.6**	**+0.1**
	comp=Z,0.7nm,0.4s,mb4.0,baz=202,slow=7.8,SNR=3.0						
JNU	**Nakatsue**	**37.27**	**56**	LR	LR	06 23 48.4	
	comp=Z,55nm,19.5s,MS3.4,baz=274,slow=42						
BVAR	**Borovoye Array**	**41.23**	**338**	P	**P**	**06 05 40.2**	**0.0**
	comp=Z,0.3nm,0.4s,mb3.2,baz=135,slow=8.4,SNR=4.0						
CHKZ	**Chkalovo**	**41.69**	**339**	*e*P	**P**	**06 05 44.0**	**+0.2**
	comp=Z,6.3nm,1.0s,mb4.2						
MJAR	**Matsushiro Arr**	**44.02**	**54**	LR	LR	06 26 43.3	
	comp=Z,84nm,19.8s,MS3.6,baz=230,slow=39						
KMBO	**Kilima Mbogo**	**58.61**	**259**	LR	LR	06 32 19.0	
	comp=Z,42nm,18.5s,MS3.6,baz=98,slow=35						
FINES	**FINESS Array B**	**65.44**	**331**	P	**P**	**06 08 37.4**	**-1.2**
	comp=Z,0.6nm,0.7s,mb3.7,baz=124,slow=6.9,SNR=3.8						
FINES				LR	LR	06 39 48.5	
	comp=Z,51nm,20.2s,MS3.7,baz=140,slow=38						
ARCES	**ARCESS Array B**	**67.52**	**339**	P	**P**	**06 08 51.7**	**0.0**
	comp=Z,2.0nm,0.9s,mb4.2,baz=79,slow=6.2,SNR=6.8						
ARCES	**ARCESS Array B**	**67.52**	**339**	P	**P**	**06 08 51.7**	**0.0**
GERES	**GERESS Array B**	**71.70**	**317**	P	**P**	**06 09 17.5**	**-0.1**
	comp=Z,0.5nm,0.6s,mb3.6,baz=76,slow=5.5,SNR=3.7						
GERES				LR	LR	06 41 59.3	
	comp=Z,32nm,20.9s,MS3.6,baz=1.7,slow=37						
GERES	**GERESS Array B**	**71.70**	**317**	P	**P**	**06 09 17.5**	**-0.1**
GERES				LR	LR	06 41 59.3	
BOSA	**Boshof**	**79.98**	**236**	LR	LR	06 45 30.8	
	comp=Z,77nm,18.9s,MS4.1,baz=307,slow=36						

IDC 04 06:02:36.6±1.3**, 3.67S×134.97E, mb3.9**/3**, mb1 4.3**/5**, mb1mx4.1**/12**, mbtmp4.1**/5**, ML4.1**/2**, Error ellipse: s-maj=63.1km s-min=25.7km az=87.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.19**	**182**	Pn	P	06 06 21.0	-6.2
	0.2nm,0.3s,baz=358,slow=13,SNR=12						
WRA				Sn	S	06 09 19.2	-8.4
	0.3nm,0.3s,baz=13,slow=23,SNR=4.9						
FITZ	**Fitzroy Crossi**	**17.01**	**212**	Pn	P	06 06 36.2	-1.4
	0.4nm,0.3s,baz=24,slow=9.8,SNR=8.0						
FITZ				Sn	S	06 09 38.9	-7.6
	0.7nm,0.3s,baz=177,slow=12,SNR=6.2						
ASAR	**Alice Springs**	**19.91**	**183**	P	P	06 07 09.9	-2.8
	1.2nm,0.3s,baz=8.8,slow=9.7,SNR=69						
ASAR				S	S	06 10 47.1	-4.8
	0.0nm,0.3s,baz=1.8,slow=28,SNR=4.0						
MKAR	**Makanchi Array**	**68.31**	**324**	P	P	06 13 39.7	-2.1
	0.9nm,0.5s,baz=109,slow=8.1,SNR=13						
VNDA	**Vanda**	**75.19**	**174**	P	P	06 14 20.5	-1.8
	0.9nm,1.0s,baz=321,slow=6.5,SNR=4.1						
ILAR	**Eielson Array**	**88.26**	**25**	P	P	06 15 29.8	-1.0
	0.6nm,0.6s,baz=260,slow=5.8,SNR=5.1						

*BJI **04** 06:02:58.8, 32.55N×87.15E, h10^{km}, mb4.2*
*IDC **04** 06:03:05.2±1.1, 33.35N×87.92E, mb3.8/8, mb1 4.1/10, mb1mx4.0/21, mbtmp3.9/10, ML3.6/2, MS3.2/1, Ms1 3.4/1, ms1mx2.4/26, Error ellipse: s-maj=37.3km s-min=20.5km az=49.0*
*NEIC **04** 06:03:06.8±0.5, 33.35N×87.82E, h10^{km}, mb4.1/1, Error ellipse: s-maj=17.7km s-min=8.9km az=60.0*
*MOS **04** 06:03:07.8±1.2, 33.32N×87.79E, h33^{km}, mb4.2/3, Error ellipse: s-maj=24.2km s-min=12.3km az=95.0*
ISC 04 06:03:08.1±0.5**, 33.32N**±0.07×**88.07E**±0.09**, h33^{km}, n27, σ1^{s}12**/22**, mb3.9**/7**, 2C-2D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	4.46	143	eP	P	06 04 19.5	+4.3
LGTI	Lohaghat	7.72	242	eP	P	06 05 03.0	+2.1
SHL	Shillong	8.41	156	eP	P	06 05 08.5	-1.9
CAL	Calcutta	10.74	179	ex	x	06 06 39.7	
CAL				ex	x	06 11 47.2	
MKAR	Makanchi Array	14.16	344	Pn	P	06 06 25.9	-2.4
	0.1nm,0.3s,baz=155,slow=14,SNR=5.9						
GYA	Guiyang	17.50	108	P	P	06 07 10.1	-1.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s						
CMAR	Chiang Mai Arr	17.72	144	P	P	06 07 13.8	0.0
	comp=Z,0.2nm,0.3s,baz=326,slow=12,SNR=9.3						
CMAR				LR	LR	06 14 49.6	
	comp=Z,67nm,18.2s,baz=350,slow=40						
SONM	Songino Array	20.03	38	P	P	06 07 41.2	+0.4
	comp=Z,3.8nm,0.8s,baz=229,slow=13,SNR=9.4						
ULN	Ulaanbaatar	20.39	39	d iP	P	06 07 44.8	+0.2
ULN	Ulaanbaatar	20.39	39	eP	P	06 07 44.9	+0.3
	comp=Z,9.6nm,0.9s						
ZAK	Zakamensk	20.40	29	⇓eP	P	06 07 45.0	+0.3
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MOY	Mondy	20.61	23	eP	P	06 07 47.7	+0.9
MOY				pmax	pmax		
	comp=Z,21nm,2.6s						
TLY	Talaya	21.56	27	i P	P	06 07 57.6	+1.1
BVAR	Borovoye Array	23.43	333	P	P	06 08 15.5	+0.6
	comp=Z,1.6nm,0.7s,mb3.6,baz=140,slow=12,SNR=7.5						
CHKZ	Chkalovo	23.85	334	eP	P	06 08 18.7	-0.2
AKASG	Malin Array Be	45.78	311	P	P	06 11 26.9	-1.2
	comp=Z,1.5nm,0.8s,mb4.0,baz=80,slow=6.8,SNR=6.9						
NB2	NORSAR Subarra	55.23	325	P	P	06 12 38.2	-1.6
	comp=Z,1.4nm,0.7s,mb4.1,baz=84,slow=7.4						
NOA	NORSAR Array B	55.23	325	P	P	06 12 38.5	-1.3
	comp=Z,1.8nm,0.7s,mb4.2,baz=84,slow=7.3,SNR=9.3						
GERES	GERESS Array B	55.98	310	P	P	06 12 45.2	-0.2
	comp=Z,0.5nm,0.6s,mb3.7,baz=98,slow=6.9,SNR=4.0						
WRA	Warramunga Arr	68.95	133	P	P	06 14 13.9	+1.8
	comp=Z,1.3nm,0.8s,mb3.9,baz=325,slow=6.7,SNR=5.8						
ILAR	Eielson Array	73.27	21	P	P	06 14 37.4	+0.1
	comp=Z,0.9nm,0.8s,mb3.7,baz=297,slow=4.5,SNR=6.3						
YKA	Yellowknife Ar	82.79	10	P	P	06 15 30.0	+0.3
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	82.79	10	P	P	06 15 30.0	+0.4
	comp=Z,1.5nm,0.8s,mb4.1,baz=336,slow=5.1,SNR=14						
VNA2	Neumayer--Watz	122.86	203	e	PKPdf	06 22 04.4	+4.2
VNA2	Neumayer--Watz	122.86	203	⇑iP	PKPdf	06 22 01.3	+1.1
VNA2				e		06 22 04.4	
VNA3	Neumayer Olymp	123.63	203	e	PKPdf	06 22 06.2	+4.5
VNA3	Neumayer Olymp	123.63	203	⇑iP	PKPdf	06 22 02.4	+0.7
VNA3				e		06 22 06.2	

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*NNC **04** 06:04:19.4±4.9, 36.77N×69.54E, h34^{km}±90^{km}, mpv3.9, Error ellipse: s-maj=95.0km s-min=40.5km az=167.0*
ISC 04 06:04:18.1±2.0**, 36.50N**±0.09×**70.1E**±0.2**, h184^{km}**±50^{km}**, n13, σ0^{s}67**/16**, 4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.29	25	P	P	06 05 49.5	-0.2
	SNR=93						
KK31	Karatay Array	6.60	3	⇑Pn	P	06 05 53.4	-0.4
	1.2nm,0.3s,baz=195,slow=13,SNR=46						
KK31				⇑Sn	S	06 07 08.0	-0.4
	3.4nm,0.4s,baz=183,slow=22,SNR=5.7						
UCH	Uchtor	6.67	30	P	P	06 05 54.7	0.0
	SNR=19						
EKS2	Erkin-Say	6.79	24	P	P	06 05 56.8	+0.6
	SNR=13						
KZA	Kyzart	6.87	34	P	P	06 05 56.5	-0.7
	SNR=14						
AAK	Ala-Archa	7.01	28	P	P	06 05 59.4	+0.1
	SNR=12						
AAK	Ala-Archa	7.01	28	⇓Pn	P	06 05 59.2	0.0
	8.3nm,0.5s						
AAK				⇑Sn	S	06 07 18.4	+0.4
	23nm,0.5s						
CHMS	Chumysh	7.42	28	P	P	06 06 04.6	-0.1
	SNR=13						
ULHL	Ulahol	7.47	38	P	P	06 06 04.8	-0.4
	SNR=6.2						
USP	Ospenovka	7.57	25	P	P	06 06 07.7	+1.2
	SNR=11						
TKM2	Tokmak 2	7.70	32	P	P	06 06 08.0	-0.3
	SNR=16						
NDI	New Delhi	9.85	140	ex	P	06 06 36.0	-0.4
AB31	Akbulak array	14.73	333	⇓Pn	P	06 07 40.2	+1.7
	2.4nm,0.4s,baz=150,slow=12,SNR=80						
AB31				⇑Sn	S	06 10 16.1	-1.0
	1.1nm,0.6s,baz=150,slow=23,SNR=4.6						

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*NIED **04** 06:07:00, 24.00N×122.60E, h41^{km}, Mw4.1 Best double couple: $M_0$1.35×10^{15} NP1:ϕ_s59°, δ87°, λ70°. NP2:ϕ_s322°, δ20°, λ172°.*
*TAP **04** 06:07:45.1, 23.85N×122.58E, h10^{km}±1^{km}, ML4.1*
*JMA **04** 06:07:46.3±0.4, 23.99N×122.64E, h31^{km}, M3.6*
*NEIC **04** 06:07:47.4±1.0, 24.05N×122.65E, h45^{km}±10^{km}, mb4.2/1, Error ellipse: s-maj=13.5km s-min=11.0km az=211.0*
*IDC **04** 06:07:48.4±5.8, 24.12N×122.72E, h54^{km}±55^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.6/20, mbtmp3.9/8, ML3.4/1, MS4.2/2, Ms1 4.2/2, ms1mx3.0/27, Error ellipse: s-maj=51.1km s-min=18.5km az=73.0*
ISC 04 06:07:46.5±0.8**, 24.08N**±0.09×**122.62E**±0.05**, h52^{km}**±8^{km}**, n23, σ0^{s}81**/26**, mb3.9**/8**, MS4.2**/2**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.52	44	P	P	06 07 57.8	-0.3
YOJ				eS	S	06 08 05.4	-1.2
NACB	Ninganchiao	0.94	276	eP	P	06 08 03.5	-0.1
IRIF	Iriomote-Funau	1.05	76	P	P	06 08 05.0	-0.1
IRIF				eS	S	06 08 19.8	+0.9
HATJ	Hateruma jima	1.09	91	P	P	06 08 04.8	-0.9
HATJ				eS	S	06 08 20.5	+0.6
JKRS	Kuro-shima	1.28	83	P	P	06 08 08.8	+0.4
JKRS				eS	S	06 08 26.1	+1.3
TATO	Taipei	1.36	311	eP	P	06 08 11.8	+2.2
JIJ	Ishigaki jima	1.42	78	P	P	06 08 10.1	-0.4
JIJ				eS	S	06 08 28.4	+0.2
JTJ	Tarama	1.98	73	P	P	06 08 18.9	+0.6
JOGS	Gusukube	2.63	75	P	P	06 08 27.5	0.0
JKE	Kume jima 2	4.39	59	P	P	06 08 51.5	-0.8
JOW	Kunigami	5.80	61	P	P	06 09 10.6	-1.5
	2.4nm,0.3s,baz=180,slow=9.8,SNR=4.8						
ENH	Enshi	13.21	301	eP	P	06 10 49.2	-4.1
	39nm,0.3s						
MKAR	Makanchi Array	39.32	315	P	P	06 15 13.1	+1.0
	0.8nm,0.5s,mb3.7,baz=96,slow=11,SNR=5.1						
WRAB	Tennant Creek	45.22	164	eP	P	06 16 00.0	-0.5
	3.9nm,1.0s,mb4.2						
WRA	Warramunga Arr	45.22	164	P	P	06 15 60.0	-0.6
	0.7nm,0.6s,mb3.7,baz=347,slow=8.9,SNR=12						
ASAR	Alice Springs	48.71	166	P	P	06 16 28.1	+0.2
	0.4nm,0.4s,mb3.8,baz=346,slow=7.5,SNR=12						
HNR	Honiara	49.38	128	LR	LR	06 34 25.6	
	comp=Z,137nm,18.9s,MS4.0,baz=351,slow=32						
DZM	Mont Dzumac	62.61	134	LR	LR	06 42 51.9	
	comp=Z,305nm,18.8s,MS4.5,baz=24,slow=34						
ARCES	ARCESS Array B	70.12	338	P	P	06 18 54.2	-0.7
	2.6nm,0.8s,mb4.2,baz=39,slow=7.8,SNR=3.7						
FINES	FINESS Array B	72.19	330	P	P	06 19 07.4	0.0
	0.9nm,0.6s,mb3.9,baz=27,slow=4.3,SNR=7.2						
NB2	NORSAR Subarra	78.92	332	P	P	06 19 45.5	-0.2
	0.5nm,0.6s,mb3.6,baz=61,slow=5.0						
NOA	NORSAR Array B	78.92	332	P	P	06 19 45.9	+0.1
	0.6nm,0.7s,mb3.7,baz=56,slow=5.6,SNR=4.4						
YKA	Yellowknife Ar	82.55	23	P	P	06 20 05.4	+0.6
	0.4nm,0.5s,mb3.7,baz=313,slow=4.9,SNR=4.3						

IDC 04 06:12:02.8±2.6**, 2.52N**×**124.80E, h281^{km}**±24^{km}**, mb3.5**/7**, mb1 3.7**/7**, mb1mx3.4**/18**, mbtmp4.2**/7**, Error ellipse: s-maj=54.0km s-min=10.2km az=70.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.50	178	P	P	06 16 20.1	-0.5
	15nm,0.3s,baz=0.5,slow=14,SNR=98						
WRA	Warramunga Arr	24.20	158	P	P	06 16 53.7	-2.2
	5.5nm,0.6s,baz=337,slow=10,SNR=41						
WRA				S	S	06 20 52.2	+0.5
	1.2nm,0.6s,baz=335,slow=16,SNR=5.2						
ASAR	Alice Springs	27.49	162	P	P	06 17 24.3	-1.6
	0.9nm,0.5s,baz=338,slow=7.8,SNR=10						
ASAR				PcP	PcP	06 20 35.6	-0.8
	0.4nm,0.6s,baz=356,slow=1.5,SNR=3.7						
ASAR				S	S	06 21 44.5	-0.2
	0.7nm,1.1s,baz=330,slow=12,SNR=3.3						
STKA	Stephens Creek	37.74	156	P	P	06 18 52.8	-1.0
	1.7nm,0.5s,baz=318,slow=8.1,SNR=5.6						
MKAR	Makanchi Array	57.47	327	P	P	06 21 22.6	-2.0
	1.0nm,0.3s,baz=121,slow=7.9,SNR=30						
MKAR				PcP	PcP	06 22 13.4	-1.8
	1.3nm,0.7s,baz=130,slow=3.7,SNR=10						
ILAR	Eielson Array	87.02	25	P	P	06 24 16.1	-1.2
	0.2nm,0.4s,baz=256,slow=4.2,SNR=6.1						
FINES	FINESS Array B	91.98	332	P	P	06 24 38.5	-2.1
	1.2nm,1.1s,baz=54,slow=12,SNR=4.1						

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*IDC **04** 06:20:08.7±0.8, 2.73S×139.12E, mb4.3/9, mb1 4.6/10, mb1mx4.5/14, mbtmp4.4/10, ML4.5/1, MS4.0/10, Ms1 4.0/10, ms1mx3.8/17, Error ellipse: s-maj=35.1km s-min=16.8km az=83.0*
*BJI **04** 06:20:11.3, 3.02S×139.16E, h45^{km}, mB5.1, mb4.9, Ms4.1, Msz4.2*
*NEIC **04** 06:20:13.2±0.3, 2.82S×139.07E, h30^{km}, mb4.4/5, Error ellipse: s-maj=15.1km s-min=6.3km az=100.0*
ISC 04 06:20:13.1±2.3**, 2.87S**±0.07×**138.9E**±0.1**, h44^{km}**±21^{km}**, n29, σ0^{s}60**/27**, mb4.4**/11**, MS4.0**/10**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	11.67	213	eP	P	06 23 00.5	+0.5
KAKA				eS	S	06 25 09.0	-1.0
WRAB	Tennant Creek	17.53	194	eP	P	06 24 15.3	-0.8
	31nm,0.6s						
WRA	Warramunga Arr	17.54	194	P	P	06 24 16.0	-0.2
	1.6nm,0.3s,baz=18,slow=12,SNR=47						
WRA				S	S	06 27 23.0	-4.8
	0.2nm,0.3s,baz=14,slow=22,SNR=3.3						
CTA	Charters Tower	18.57	158	P	P	06 24 34.2	+5.3
	0.5nm,0.3s,baz=353,slow=9.2,SNR=7.6						
CTA				LR	LR	06 32 16.8	
	comp=Z,950nm,18.2s,baz=124,slow=39						
CTAO	Charters Tower	18.57	158	eP	P	06 24 33.9	+4.9
	54nm,1.3s						
FITZ	Fitzroy Crossi	19.94	220	P	P	06 24 45.1	+0.7
	10.0nm,0.4s,baz=21,slow=10,SNR=23						
FITZ				S	S	06 28 21.1	-0.2
	26nm,1.0s,baz=60,slow=6.0,SNR=3.5						
ASAR	Alice Springs	21.23	193	P	P	06 24 58.2	+0.6
	6.8nm,0.6s,mb4.2,baz=21,slow=10,SNR=40						
STKA	Stephens Creek	28.97	175	P	P	06 26 11.8	+0.9
	1.6nm,0.4s,mb4.1,baz=348,slow=11,SNR=3.8						
STKA				LR	LR	06 39 01.2	
	comp=Z,583nm,19.6s,MS4.2,baz=24,slow=39						
STKA	Stephens Creek	28.97	175	P	P	06 26 11.8	+0.9
STKA				LR	LR	06 39 01.2	
JOW	Kunigami	31.25	342	LR	LR	06 36 51.0	
	comp=Z,182nm,18.4s,MS3.8,baz=42,slow=32						
NWAO	Narrogin (SRO)	36.13	212	LR	LR	06 43 17.1	
	comp=Z,568nm,20.1s,MS4.3,baz=320,slow=38						
MJAR	Matsushiro Arr	39.21	359	LR	LR	06 41 44.8	
	comp=Z,88nm,20.0s,MS3.6,baz=140,slow=33						
CMAR	Chiang Mai Arr	44.66	300	P	P	06 28 24.6	+0.8
	1.1nm,0.7s,mb3.8,baz=117,slow=6.4,SNR=4.2						
CMAR				PcP	PcP	06 30 07.8	+1.4
	0.6nm,0.2s,baz=135,slow=2.0,SNR=4.5						
CMAR				LR	LR	06 45 21.0	
	comp=Z,53nm,21.5s,MS3.4,baz=145,slow=34						
CN2	Changchun	48.00	347	eP	P	06 28 49.1	-0.8
CN2				LR	LR		
	comp=Z,200nm,19.0s,MS4.1						
HIA	Hailar	54.51	345	eP	P	06 29 38.6	-0.3
GTA	Gaotai	55.30	324	P	P	06 29 45.5	+0.7
ULN	Ulaanbaatar	57.68	335	eP	P	06 30 01.4	-0.3
	comp=Z,1.1nm,0.4s,mb4.2						
SONM	Songino Array	57.93	335	P	P	06 30 03.2	-0.2
	comp=Z,0.7nm,0.4s,mb4.1,baz=158,slow=6.7,SNR=3.7						
SONM				LR	LR	06 53 10.5	
	comp=Z,141nm,21.8s,MS4.0,baz=254,slow=34						
MKAR	Makanchi Array	70.02	322	P	P	06 31 22.7	+0.3
	comp=Z,5.0nm,0.4s,mb4.8,baz=104,slow=8.4,SNR=54						
MKAR				LR	LR	07 03 57.9	
	comp=Z,27nm,21.2s,MS3.5,baz=283,slow=38						
VNDA	Vanda	75.61	175	P	P	06 31 55.5	+0.6
	comp=Z,2.0nm,0.7s,mb4.1,baz=327,slow=6.5,SNR=14						
VNDA				LR	LR	07 05 28.3	
	comp=Z,186nm,20.0s,MS4.4,baz=348,slow=36						
VNDA	Vanda	75.61	175	eP	P	06 31 55.2	+0.3
	comp=Z,1.5nm,0.6s,mb4.1						
BVAR	Borovoye Array	79.54	325	P	P	06 32 17.3	+0.2
	comp=Z,3.3nm,0.6s,mb4.5,baz=118,slow=7.3,SNR=19						
MAW	Mawson	82.04	202	LR	LR	07 07 12.4	
	comp=Z,106nm,19.5s,MS4.2,baz=232,slow=34						
SML	Sawmill	84.45	27	eP	P	06 32 41.9	-0.4
MCK	McKinley	84.75	25	P	P	06 32 43.6	-0.1
DIV	Divide	85.46	28	eP	P	06 32 47.9	+0.6
	comp=Z,18nm,0.6s,mb5.4						
COLA	College	85.54	24	eP	P	06 32 47.0	-0.5
	comp=Z,1.8nm,0.7s,mb4.4						
ILAR	Eielson Array	85.90	24	P	P	06 32 48.5	-0.9
	comp=Z,3.8nm,0.6s,mb4.8,baz=265,slow=4.4,SNR=56						
LPAZ	La Paz	147.21	126	PKPbc	PKPdf	06 39 55.6	+5.2
	comp=Z,2.9nm,0.9s,baz=178,slow=3.1,SNR=12						

IGQ 04 06:31:57.3, 0.79N×**78.07W, h139^{km}**±3^{km}**, mb4.0, 11C-3D, Error ellipse: s-maj=3.4km s-min=3.0km az=169.7, Colombia-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECEN	Cerro Negro	0.10	72	⇓P	P	06 32 16.7	+0.3
COTA	Cotacachi	0.53	211	⇑P	P	06 32 18.2	+0.1
COTA				S	S	06 32 35.1	+1.0
CAYA	Cayambe	0.72	174	⇑P	P	06 32 19.5	+0.3
CAYA				S	S	06 32 34.7	-1.3
CAYR	Refugio Cayamb	0.77	175	⇑P	P	06 32 20.4	+0.8
LORE	San Lorenzo	0.92	303	P	P	06 32 20.8	+0.1
CONE	Cono NE Rev Vo	0.96	154	⇓P	P	06 32 21.5	+0.6
JOR1	San Jorge 1	0.97	216	⇑P	P	06 32 23.4	+2.4
JOR1				S	S	06 32 42.3	+3.1
LAV3	Lava3-Reventad	0.98	154	⇑P	P	06 32 21.6	+0.5
LAV3				S	S	06 32 37.9	-1.5
YANA	Yana	1.03	209	⇑P	P	06 32 21.9	+0.3
GGP	Refugio Guagua	1.09	209	⇑P	P	06 32 22.8	+0.7
TERV	Terraza Guagua	1.10	209	⇑P	P	06 32 22.8	+0.6
TERV				S	S	06 32 41.4	+0.1
JUA2	San Juan 2	1.13	208	⇑P	P	06 32 22.9	+0.3
ANTI	Antisana	1.24	184	⇑P	P	06 32 24.7	+1.1
ANTI				S	S	06 32 43.1	-0.8
VC1	Cotopaxi 1	1.46	193	P	P	06 32 27.2	+1.2
NAS1	Nasa	1.47	196	P	P	06 32 27.3	+1.1
TAMB	Tambo	1.51	191	P	P	06 32 27.6	+1.1
CAMI	Rancho Maria	1.52	197	⇓P	P	06 32 28.3	+1.6
PISA	Pisayambo	1.86	190	P	P	06 32 31.6	+1.0
ARRY	Arrayan	2.31	190	P	P	06 32 37.6	+1.5
HOJA	Cerro de Hojas	3.08	234	⇑P	P	06 32 44.7	-1.3

IDC 04 06:34:36.3±1.3**, 5.08N**×**94.85E, mb4.0**/8**, mb1 4.1**/8**, mb1mx3.9**/19**, mbtmp4.0**/8**, Error ellipse: s-maj=68.7km s-min=18.9km az=53.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.88	16	Pn	P	06 38 02.6	+5.7
	0.3nm,0.3s,baz=212,slow=14,SNR=15						
MKAR	Makanchi Array	42.95	347	P	P	06 42 37.1	-1.6
	1.7nm,0.4s,baz=165,slow=8.1,SNR=26						
SONM	Songino Array	43.73	11	P	P	06 42 43.1	-2.0
	1.2nm,0.6s,baz=203,slow=9.4,SNR=3.9						
WRA	Warramunga Arr	46.11	124	P	P	06 43 02.7	-1.7
	2.5nm,0.7s,baz=303,slow=9.2,SNR=23						
ASAR	Alice Springs	47.62	129	P	P	06 43 14.3	-2.0
	0.9nm,0.5s,baz=299,slow=7.9,SNR=15						
BVAR	Borovoye Array	51.84	341	P	P	06 43 46.1	-2.2
	1.6nm,0.7s,baz=149,slow=8.6,SNR=7.2						
FINES	FINESS Array B	75.49	332	P	P	06 46 22.1	-1.9
	0.4nm,0.5s,baz=90,slow=3.8,SNR=6.0						
ARCES	ARCESS Array B	78.11	340	P	P	06 46 37.3	-1.1
	0.8nm,0.6s,baz=101,slow=6.2,SNR=5.6						
GERES	GERESS Array B	80.36	319	P	P	06 46 49.7	-1.4
	1.2nm,0.7s,baz=104,slow=5.5,SNR=8.4						

CASC 04 06:54:15.3±0.8**, 13.90N**×**91.25W, h23^{km}**±3^{km}**, MD3.7, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.82	70	eP	Pb	06 54 30.7	+0.1
IXG				eS	Sb	06 54 42.6	+1.3
RBDL	Robledal	1.53	82	⇓eP	Pn	06 54 41.2	-0.4
RBDL				eS	Sn	06 55 01.2	+0.3
RTR	El Retiro	1.55	90	eP	Pn	06 54 42.0	0.0
RTR				eS	Sn	06 55 02.9	+1.3
SBLS	San Blas	1.58	92	eP	Pn	06 54 42.0	-0.2
SBLS				eS	Sn	06 55 02.9	+0.8
SNJE	San Jose	1.59	91	eP	Pn	06 54 42.1	-0.4
SNJE				eS	Sn	06 55 03.6	+1.1
MRL	Marmol	1.90	52	eP	Pn	06 54 46.3	-0.6
BOQS	Boqueron	1.92	95	eP	Pn	06 54 46.8	-0.4
BOQS				eS	Sn	06 55 11.8	+1.0
LFRS	El Faro	2.14	97	eP	Pn	06 54 49.6	-0.7
LFRS				eS	Sn	06 55 17.1	+0.7
LCBS	La Ceiba	2.22	96	eP	Pn	06 54 51.2	-0.2
LCBS				eS	Sn	06 55 18.1	-0.3

IDC 04 06:56:52.0±6.5**, 10.30N**×**91.33E, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/19**, mbtmp3.8**/3**, Error ellipse: s-maj=324.4km s-min=27.7km az=60.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	37.17	350	P	P	07 04 04.7	-1.9
	0.3nm,0.6s,baz=171,slow=7.8,SNR=6.2						
WRA	Warramunga Arr	51.92	125	P	P	07 06 02.7	-2.4
	1.5nm,0.4s,baz=300,slow=10,SNR=45						
ASAR	Alice Springs	53.59	130	P	P	07 06 15.5	-2.0
	0.9nm,0.7s,baz=307,slow=7.2,SNR=15						

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*BJI **04** 07:02:12.4, 54.30N×35.10W, h10^{km}, mB5.1, mb4.7, Ms4.5, Msz4.3*
*MOS **04** 07:02:12.8±0.8, 54.22N×35.06W, h11^{km}, mb4.9/58, MS4.0/12, Error ellipse: s-maj=8.5km s-min=5.9km az=168.8*
*IDC **04** 07:02:12.9±0.4, 54.21N×35.11W, mb4.4/27, mb1 4.5/29, mb1mx4.5/35, mbtmp4.4/29, ML3.6/2, MS4.2/18, Ms1 4.1/18, ms1mx4.0/27, Error ellipse: s-maj=14.4km s-min=9.0km az=165.0*
*CSEM **04** 07:02:12.2±0.0, 54.30N×35.07W, h10^{km}, mb4.7/78, Error ellipse: s-maj=2.9km s-min=1.0km az=3.0*
*NEIC **04** 07:02:14.5±0.1, 54.26N×35.08W, h10^{km}, mb4.7/83, Error ellipse: s-maj=5.0km s-min=2.0km az=186.0*
*ZUR_RM **04** 07:02:14, 54.26N×35.08W, h12^{km}, Mw4.9/7, Moment Tensor Solution. s7 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.94; $M_{\theta\theta}$0.73; $M_{\phi\phi}$2.21; $M_{r\theta}$0.27; $M_{\theta\phi}$0.23; $M_{\phi r}$-0.33; Best double couple: $M_0$2.62×10^{16} NP1:ϕ_s3°, δ48°, λ-96°. NP2:ϕ_s193°, δ42°, λ-83°. Principal axes: T 2.261, Plg3°, Azm98°; N .723, Plg5°, Azm8°; P -2.984, Plg84°, Azm222°;*
ISC 04 07:02:13.2±2.1**, 54.29N**±0.04×**35.08W**±0.03**, h13^{km}**±13^{km}**, h18^{km}**±1.6^{km}**:pP-P, n380, σ0^{s}91**/348**, mb4.6**/129**, MS4.1**/29**, 13C-5D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	14.78	336	ePn	P	07 05 41.4	-2.1
SFJD				i P		07 05 49.7	
SFJD				i		07 05 50.1	
SFJD	Kangerlussuaq	14.78	336	i P	P	07 05 49.7	+6.2
	23nm,0.8s						
	comp=Z,590nm,17.0s						
DCN	Croghan	16.41	82	eP	P	07 06 03.0	-1.6
DLF	Lyons Farm	16.85	82	eP	P	07 06 06.0	-4.2
ESK	Eskdalemuir	18.32	74	eP	P	07 06 29.1	+0.5
ESK				pmax	pmax		
	comp=Z,44nm,1.1s						
ESK	Eskdalemuir	18.32	74	eP	P	07 06 29.1	+0.5
	comp=Z,44nm,1.1s						
ESK	Eskdalemuir	18.32	74	eP	P	07 06 29.1	+0.5
	comp=Z,44nm,1.1s						
SCHQ	Schefferville	18.34	285	P	P	07 06 27.9	-1.0
	comp=Z,0.7nm,0.3s,baz=73,slow=12,SNR=12						
SCHQ				LR	LR	07 12 20.4	
	comp=Z,406nm,20.1s,baz=307,slow=33						
SCHQ	Schefferville	18.34	285	P	P	07 06 27.9	-1.0
SCHQ				eP		07 06 28.1	
SCHQ				LR	LR	07 12 20.4	
SCHQ	Schefferville	18.34	285	eP	P	07 06 28.0	-0.9
EKA	Eskdalemuir Ar	18.35	74	P	P	07 06 29.6	+0.7
	comp=Z,0.4nm,0.3s,baz=278,slow=10,SNR=38						
SUMG	Summit	18.42	357	eP	P	07 06 29.4	-0.3
	comp=Z,144nm,1.8s						
SUMG	Summit	18.42	357	eP	P	07 06 29.4	-0.3
	comp=Z,144nm,1.8s						
FRB	Frobisher Bay	19.42	312	LR	LR	07 12 17.4	
	comp=Z,498nm,20.4s,baz=72,slow=31						
EMAZ	Mazaricos	20.52	113	P	P	07 06 52.2	-1.5
	comp=Z,40nm,1.0s						
EMAZ	Mazaricos	20.52	113	P	P	07 06 52.2	-1.5
	comp=Z,40nm,1.0s						
ROSF	Rostrenen	20.64	94	eP	P	07 06 53.9	-0.9
	comp=Z,29nm,0.8s						
ROSF	Rostrenen	20.64	94	eP	P	07 06 53.9	-0.9
ROSF				pmax	pmax		
	comp=Z,14nm,0.8s						
STS	Santiago	20.79	112	P	P	07 06 55.5	-1.0
STS				pmax	pmax		
	comp=Z,49nm,0.8s						
STS	Santiago	20.79	112	P	P	07 06 55.5	-1.1
	comp=Z,49nm,0.8s						
STS	Santiago	20.79	112	P	P	07 06 55.5	-1.0
	comp=Z,49nm,0.8s						
QUIF	Quistinic	20.90	95	eP	P	07 06 55.4	-2.2
	comp=Z,98nm,1.0s						
QUIF	Quistinic	20.90	95	eP	P	07 06 55.4	-2.2
QUIF				pmax	pmax		
	comp=Z,49nm,1.0s						
SGMF	Saint Gilles	21.09	93	eP	P	07 06 58.9	-0.7
	comp=Z,104nm,1.1s,mb4.8						
SGMF	Saint Gilles	21.09	93	eP	P	07 06 58.9	-0.7
SGMF				pmax	pmax		
	comp=Z,52nm,1.1s,mb4.8						
EZAM	Zamans	21.22	114	P	P	07 06 59.6	-1.3
EZAM				pmax	pmax		
	comp=Z,21nm,0.6s,mb4.6						
EZAM	Zamans	21.22	114	P	P	07 06 59.6	-1.3
	comp=Z,21nm,0.6s,mb4.6						
EZAM	Zamans	21.22	114	P	P	07 06 59.6	-1.3
	comp=Z,21nm,0.6s,mb4.6						
EPON	Pontenova	21.27	110	P	P	07 06 58.9	-2.4
	comp=Z,20nm,0.9s,mb4.4						
EPON	Pontenova	21.27	110	P	P	07 06 58.9	-2.5
	comp=Z,20nm,0.9s,mb4.4						
ELOB	Lobios	21.76	114	P	P	07 07 05.6	-0.7
	comp=Z,17nm,0.9s,mb4.5						
ELOB	Lobios	21.76	114	P	P	07 07 05.6	-0.7
	comp=Z,17nm,0.9s,mb4.5						
ERUA	La Rua	21.89	111	P	P	07 07 06.1	-1.6
ERUA				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.6						
ERUA	La Rua	21.89	111	P	P	07 07 06.1	-1.5
	comp=Z,23nm,1.0s,mb4.6						
ERUA	La Rua	21.89	111	P	P	07 07 06.1	-1.6
	comp=Z,23nm,1.0s,mb4.6						
GRR	Gorron	22.02	91	eP	P	07 07 08.4	-0.5
	comp=Z,169nm,1.4s,mb5.0						

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GRR   Gorron            22.02  91  eP     P      07 07 08.4 -0.5
GRR                                 pmax  pmax
      comp=Z,85nm,1.4s,mb5.0
FLN   La Foliniere      22.07  90  eP     P      07 07 09.3 -0.1
      comp=Z,200nm,1.3s,mb5.1
FLN                                eR
      comp=Z,952nm,22.8s
FLN   La Foliniere      22.07  90  eP     P      07 07 09.3 -0.1
FLN                                 pmax  pmax
      comp=Z,100nm,1.3s,mb5.1
FLN                                 MLR   MLR
      comp=Z,950nm,22.8s,MS4.2
PVRL  Vila Real         22.36 114  eP     P      07 07 14.4 +2.1
      comp=Z,43nm,1.9s,mb4.5
EARI  Arriondas         22.36 107   P     P      07 07 11.2 -1.1
      comp=Z,24nm,0.8s,mb4.7
EARI  Arriondas         22.36 107   P     P      07 07 11.2 -1.2
      comp=Z,24nm,0.8s,mb4.7
ECAL  Calabor           22.42 112   P     P      07 07 12.1 -0.8
      comp=Z,15nm,0.8s,mb4.5
ECAL  Calabor           22.42 112   P     P      07 07 12.1 -0.8
      comp=Z,15nm,0.8s,mb4.5
PVIS  Viseu             22.66 116  eP     P      07 07 15.0 -0.2
      comp=Z,67nm,1.7s,mb4.8
EMMW  East Machias      22.92 259   P     P      07 07 19.1 +1.3
      comp=Z,486nm,1.5s,mb5.7
EMMW  East Machias      22.92 259   P     P      07 07 19.0 +1.3
      comp=Z,486nm,1.5s,mb5.7
MTE   Manteigas         23.07 116  eP     P      07 07 20.2 +1.0
      comp=Z,51nm,1.3s,mb4.8
MTE                                i -           07 07 25.4
MTE                                eS     S      07 11 36.8  +11
MTE                                eLR    LR     07 12 58.6
      comp=Z,566nm,21.7s
MTE   Manteigas         23.07 116  eP     P      07 07 20.1 +0.8
      comp=Z,100nm,1.5s,mb5.0
MTE   Manteigas         23.07 116  eP     P      07 07 20.1 +0.9
      comp=Z,100nm,1.5s,mb5.0
PTOM  Tomar             23.19 118  eP     P      07 07 21.3 +0.9
      comp=Z,91nm,1.5s,mb5.0
MFF   Saint Martin d    23.34  95  eP     P      07 07 21.5 -0.3
      comp=Z,26nm,0.8s,mb4.4
MFF   Saint Martin d    23.34  95  eP     P      07 07 21.5 -0.3
MFF                                 pmax  pmax
      comp=Z,13nm,0.8s,mb4.4
PLOU  Loures            23.36 121  eP     P      07 07 24.1 +2.0
      comp=Z,96nm,1.2s,mb5.1
ELAN  Lanestosa         23.41 105   P     P      07 07 22.5  0.0
      comp=Z,16nm,1.0s,mb4.4
ELAN  Lanestosa         23.41 105   P     P      07 07 22.5  0.0
      comp=Z,16nm,1.0s,mb4.4
PCBR  Castelo Branco    23.51 117  eP     P      07 07 24.4 +0.9
      comp=Z,114nm,1.5s,mb5.1
EVO   Evora             24.21 120  eP     P      07 07 29.0 -1.3
      comp=Z,30nm,1.0s,mb4.4
EVO                                eR
      comp=Z,816nm,20.5s
BAIF  Baives            24.24  84  eP     P      07 07 30.8 +0.3
ECRI  Cripan            24.33 105   P     P      07 07 32.0 +0.6
ECRI                                pmax  pmax
      comp=Z,6.0nm,0.5s,mb4.3
ECRI  Cripan            24.33 105   P     P      07 07 32.0 +0.6
      comp=Z,5.8nm,0.5s,mb4.3
ECRI  Cripan            24.33 105   P     P      07 07 32.0 +0.6
      comp=Z,5.8nm,0.5s,mb4.3
EALK  Alkurruntz        24.51 103   P     P      07 07 34.1 +0.9
      comp=Z,12nm,0.8s,mb4.5
EALK  Alkurruntz        24.51 103   P     P      07 07 34.1 +0.9
      comp=Z,12nm,0.8s,mb4.5
KONO  Kongsberg         24.55  59⇑eP     P      07 07 34.8 +1.4
EBAD  Badajoz           24.56 118   P     P      07 07 34.8 +1.1
      comp=Z,13nm,0.9s,mb4.5
EBAD  Badajoz           24.56 118   P     P      07 07 34.8 +1.1
      comp=Z,13nm,0.9s,mb4.5
GIVF  Givet             24.58  83  eP     P      07 07 33.1 -0.7
PTEO  Sao Teotonio      24.61 122  eP     P      07 07 34.5 +0.3
      comp=Z,76nm,1.3s,mb5.1
HYF   Humbligny         24.63  91  eP     P      07 07 34.0 -0.3
PBEJ  Beja              24.67 120  eP     P      07 07 34.8  0.0
      comp=Z,35nm,1.4s,mb4.7
SJPF  Ste Jean          24.74 103  eP     P      07 07 34.3 -1.1
LFF   La Frestale       24.78  97  eP     P      07 07 34.7 -1.1
TCF   Toulx Ste Croi    24.89  93  eP     P      07 07 36.7 -0.1
      comp=Z,70nm,1.1s,mb4.8
TCF   Toulx Ste Croi    24.89  93  eP     P      07 07 36.7 -0.1
TCF                                 pmax  pmax
      comp=Z,35nm,1.1s,mb4.8
HGN   Heimansgroeve     24.94  81  eP     P      07 07 35.2 -2.0
      comp=Z,12nm,1.2s,mb4.3
WTSB  Winterswijk       24.97  78  eP     P      07 07 38.4 +0.8
      comp=Z,48nm,1.8s,mb4.7
RJF   Les Rejaudoux     25.02  96  eP     P      07 07 37.8 -0.3
      comp=Z,42nm,1.1s,mb4.6
RJF                                eR
      comp=Z,996nm,22.2s
RJF   Les Rejaudoux     25.02  96  eP     P      07 07 37.8 -0.3
RJF                                 pmax  pmax
      comp=Z,21nm,1.1s,mb4.6
RJF                                 MLR   MLR
      comp=Z,1μm,22.3s,MS4.3
PMPS  Porto Santo       25.03 140  eP     P      07 07 38.0 -0.3
      comp=Z,204nm,1.5s,mb5.4
NAO01 NORSAR Array S    25.06  56  eP     P      07 07 38.7 +0.5
      comp=Z,8.7nm,0.9s,mb4.3
NAO01 NORSAR Array S    25.06  56  eP     P      07 07 38.7 +0.4
      comp=Z,8.7nm,0.9s,mb4.3
BGF   Bois d'Agland     25.12  92  eP     P      07 07 39.1 +0.1
      comp=Z,95nm,0.8s,mb5.1
BGF   Bois d'Agland     25.12  92  eP     P      07 07 39.1 +0.1
BGF                                 pmax  pmax
      comp=Z,48nm,0.8s,mb5.1
NB2   NORSAR Subarra    25.20  56   P     P      07 07 39.8 +0.2
      comp=Z,0.5nm,0.7s,mb3.1,baz=276,slow=9.3
NOA   NORSAR Array B    25.20  56   P     P      07 07 40.1 +0.5
      comp=Z,7.5nm,1.0s,mb4.2,baz=276,slow=9.7,SNR=9.1
NOA                                 LR    LR     07 15 51.3
      comp=Z,219nm,21.6s,MS3.6,baz=270,slow=32
SSF   Saint Saulge      25.24  91  eP     P      07 07 39.9 -0.2
SSF                                 pmax  pmax
      comp=Z,43nm,1.0s,mb4.9
SSF   Saint Saulge      25.24  91  eP     P      07 07 39.9 -0.2
      comp=Z,43nm,1.0s,mb4.9
ETSF  Etsaut            25.26 103  eP     P      07 07 40.4 +0.1
      comp=Z,33nm,1.1s,mb4.5
ETSF  Etsaut            25.26 103  eP     P      07 07 40.4 +0.1
ETSF                                pmax  pmax
      comp=Z,17nm,1.1s,mb4.5
AVF   Avril sur Loir    25.29  91  eP     P      07 07 40.2 -0.4
      comp=Z,100nm,1.3s,mb4.9
AVF   Avril sur Loir    25.29  91  eP     P      07 07 40.2 -0.4
AVF                                 pmax  pmax
      comp=Z,50nm,1.3s,mb4.9
PALC  Alcoutim          25.30 120  eP     P      07 07 41.1 +0.3
      comp=Z,34nm,1.8s,mb4.6
LOR   Lormes            25.34  90  eP     P      07 07 40.8 -0.3
      comp=Z,119nm,1.2s,mb5.0
LOR                                eR
      comp=Z,426nm,20.5s
LOR   Lormes            25.34  90  eP     P      07 07 40.8 -0.3
LOR                                 pmax  pmax
      comp=Z,59nm,1.2s,mb5.0
LOR                                 MLR   MLR
      comp=Z,430nm,20.5s,MS4.0
MEZF  Maizieres J'vi    25.43  87  eP     P      07 07 41.8 -0.1
      comp=Z,190nm,1.2s,mb5.2
EMIN  Mina Concepcio    25.48 119   P     P      07 07 45.0 +2.5
      comp=Z,10nm,0.9s,mb4.4
ESDC  Sonseca Array     25.51 112   P     P      07 07 42.3 -0.4
      comp=Z,9.5nm,0.7s,mb4.4,baz=314,slow=9.0,SNR=42
ESDC  Sonseca Array     25.51 112   P     P      07 07 43.2 +0.5
      comp=Z,7.9nm,0.7s,mb4.3
ESDC  Sonseca Array     25.51 112   P     P      07 07 43.2 +0.5
      comp=Z,7.9nm,0.7s,mb4.3
ESLA  Sonseca Array     25.51 112  eP     P      07 07 42.2 -0.5
      comp=Z,2.5nm,0.8s,mb3.8
ESLA  Sonseca Array     25.51 112  eP     P      07 07 42.2 -0.5
      comp=Z,2.5nm,0.8s,mb3.8
AGO   Saint Agoulin     25.55  93  eP     P      07 07 44.0 +0.9
CAF   Calviac           25.56  96  eP     P      07 07 42.8 -0.3
      comp=Z,94nm,1.6s,mb4.8
CAF   Calviac           25.56  96  eP     P      07 07 42.8 -0.3
CAF                                 pmax  pmax
      comp=Z,47nm,1.6s,mb4.8
VIEF  Viey              25.60 102  eP     P      07 07 44.5 +1.0
PYM   Petit Puy Mans    25.65  94  eP     P      07 07 46.0 +2.0
SMF   Signal de Mont    25.65  91  eP     P      07 07 43.4 -0.6
EPF   Esparros          25.69 101  eP     P      07 07 44.1 -0.3
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EBIE  Bielsa            25.79 102   P     P      07 07 47.4 +2.0
      comp=Z,24nm,0.7s,mb4.8
EBIE  Bielsa            25.79 102   P     P      07 07 47.3 +2.0
      comp=Z,24nm,0.7s,mb4.8
RESF  Ens               25.83 102  eP     P      07 07 46.9 +1.2
PLDF  La Plantade       25.89  93  eP     P      07 07 47.2 +1.0
THEF  They Montfort     26.11  86  eP     P      07 07 49.0 +0.7
EGRA  Graus             26.20 103   P     P      07 07 49.5 +0.4
      comp=Z,7.7nm,0.7s,mb4.3
EGRA  Graus             26.20 103   P     P      07 07 49.5 +0.4
      comp=Z,7.7nm,0.7s,mb4.3
ABH   Alteburg          26.26  82  eP     P      07 07 49.8 +0.2
EADA  Adamuz            26.27 115   P     P      07 07 50.5 +0.7
      comp=Z,15nm,0.8s,mb4.6
EADA  Adamuz            26.27 115   P     P      07 07 50.5 +0.7
      comp=Z,15nm,0.8s,mb4.6
FRNY  Flat Rock         26.41 265  eP     P      07 07 50.9 -0.1
FRNY  Flat Rock         26.41 265  eP     P      07 07 50.8 -0.2
HAU   Haudompre         26.43  87  eP     P      07 07 51.1 -0.1
HAU                                eR
      comp=Z,757nm,17.8s
HFS   Hagfors           26.53  57   P     P      07 07 52.5 +0.5
      comp=Z,6.1nm,0.8s,mb4.2,baz=262,slow=10,SNR=9.0
HFS                                 LR    LR     07 17 02.5
      comp=Z,370nm,19.5s,MS3.9,baz=297,slow=34
MTLF  Montolieu         26.58  99  eP     P      07 07 53.2 +0.6
      comp=Z,61nm,1.1s,mb4.8
MTLF  Montolieu         26.58  99  eP     P      07 07 53.2 +0.6
MTLF                                pmax  pmax
      comp=Z,31nm,1.1s,mb4.8
ESPR  Espera            26.58 119   P     P      07 07 53.8 +1.0
      comp=Z,16nm,1.0s,mb4.5
ESPR  Espera            26.58 119   P     P      07 07 53.8 +1.1
      comp=Z,16nm,1.0s,mb4.5
TNS   Taunus Mts        26.63  81  eP     P      07 07 53.8 +0.8
TNS                                 pmax  pmax
      comp=Z,18nm,1.0s,mb4.6
TNS   Taunus Mts        26.63  81  eP     P      07 07 53.8 +0.8
      comp=Z,18nm,1.0s,mb4.6
EBAN  Banos Encina      26.70 114   P     P      07 07 56.1 +2.4
EBAN                                pmax  pmax
      comp=Z,11nm,1.0s,mb4.3
EBAN  Banos Encina      26.70 114   P     P      07 07 56.1 +2.3
      comp=Z,11nm,1.0s,mb4.3
CDF   Champ du Feu      26.78  85  eP     P      07 07 54.5 +0.1
ECH   Echery            26.80  86  eP     P      07 07 55.3 +0.7
HINF  Hinteralfeld      26.82  87  eP     P      07 07 54.5 -0.3
WLS   Welschbruch       26.82  85  eP     P      07 07 54.6 -0.2
EMOS  Mosqueruela       26.96 107   P     P      07 07 58.0 +1.9
      comp=Z,13nm,3.6s
EMOS  Mosqueruela       26.96 107   P     P      07 07 58.0 +1.9
      comp=Z,13nm,3.6s
MOF   Molkenrain        26.97  86  eP     P      07 07 55.8 -0.3
CABF  La Chapelle       26.99  89  eP     P      07 07 56.2 -0.1
      comp=Z,69nm,1.5s,mb4.7
CABF  La Chapelle       26.99  89  eP     P      07 07 56.2 -0.1
CABF                                pmax  pmax
      comp=Z,35nm,1.5s,mb4.7
ERTA  Horta de San J    27.02 105   P     P      07 07 58.4 +1.8
      comp=Z,13nm,3.2s
ERTA  Horta de San J    27.02 105   P     P      07 07 58.4 +1.7
      comp=Z,13nm,3.2s
LOMF  Lomont            27.04  87  eP     P      07 07 57.9 +1.1
CLZ   Clausthal         27.06  76  eP     P      07 07 57.5 +0.5
CLZ                                 pmax  pmax
      comp=Z,19nm,1.2s,mb4.5
CLZ   Clausthal         27.06  76  eP     P      07 07 57.5 +0.5
      comp=Z,19nm,1.2s,mb4.5
LASF  Ste Croix         27.10  96  eP     P      07 07 57.3  0.0
VIVF  Saint-Julien-l    27.12  94  eP     P      07 07 57.4 -0.2
EQES  Quesada           27.34 114   P     P      07 07 59.6 -0.1
      comp=Z,24nm,2.1s,mb4.3
EQES  Quesada           27.34 114   P     P      07 07 59.6 -0.1
      comp=Z,24nm,2.1s,mb4.3
EMIJ  Mijas             27.38 118   P     P      07 07 58.9 -1.1
      comp=Z,14nm,1.1s,mb4.4
BFO   Black Forest      27.43  85  eP     P      07 08 00.2 -0.2
BFO                                 pmax  pmax
      comp=Z,13nm,1.1s,mb4.4
BFO   Black Forest      27.43  85  eP     P      07 08 00.2 -0.2
      comp=Z,13nm,1.1s,mb4.4
FELD  Feldberg          27.46  86  eP     P      07 08 01.2 +0.5
ORIF  Oris-en-Rattie    27.79  93  eP     P      07 08 03.3 -0.4
ORIF                               eR
      comp=Z,1μm,22.0s
LPL   La Plagne         27.96  91  eP     P      07 08 05.4 +0.2
LPG   La Plagne         27.98  91  eP     P      07 08 05.4 +0.1
EBER  Berja             28.11 115   P     P      07 08 10.4 +3.8
      comp=Z,18nm,1.1s,mb4.6
SMRF  Simiane la Rot    28.16  95  eP     P      07 08 06.4 -0.6
MOX   Moxa              28.27  78  eP     P      07 08 07.6 -0.3
MOX                                 MLR   MLR
      comp=Z,300nm,17.0s,MS4.0
MOX   Moxa              28.27  78  i P    P      07 08 07.6 -0.3
MOX                                 L            07 19 34.0
MBDF  Montbardon        28.42  92  eP     P      07 08 09.2 -0.2
GRA1  Grafenberg Arr    28.47  80  eP     P      07 08 09.6 -0.1
      comp=Z,48nm,1.8s,mb4.8
GRA1                                LR    LR
      comp=Z,300nm,20.8s,MS3.9
GRF   Grafenberg Arr    28.47  80  eP     P      07 08 09.6 -0.1
GRF                                 pmax  pmax
      comp=Z,48nm,1.8s,mb4.8
GRF                                 MLR   MLR
      comp=Z,300nm,20.8s,MS3.9
GRF   Grafenberg Arr    28.47  80  eP     P      07 08 09.6 -0.1
GRF                                 pmax  pmax
      comp=Z,48nm,1.8s,mb4.8
GRF                                 MLR   MLR
      comp=Z,300nm,20.8s,MS3.9
GRF   Grafenberg Arr    28.47  80  eP     P      07 08 09.6 -0.1
      comp=Z,48nm,1.8s,mb4.8
GRF                                 LR    LR
      comp=Z,300nm,20.8s,MS3.9
GRF   Grafenberg Arr    28.47  80  eP     P      07 08 09.6 -0.1
      comp=Z,48nm,1.8s,mb4.8
CLL   Collm             28.78  76⇑iP     P      07 08 11.8 -0.7
CLL                                i      pP     07 08 17.0 +0.8
CLL                                 pmax  pmax
      comp=Z,19nm,1.1s,mb4.7
CLL   Collm             28.78  76⇑iP     P      07 08 11.8 -0.7
      comp=Z,19nm,1.1s,mb4.7
CLL                                i      pP     07 08 17.0 +0.8
CLL   Collm             28.78  76 ⇑P     P      07 08 11.8 -0.7
      comp=Z,logA/T=1.2,mb4.7
CLL                                i *PP  pP     07 08 17.0 +0.8
NKC   Novy Kostel       28.93  78  eP     P      07 08 13.6 -0.3
NKC                                 AMS   AMS    07 18 40.0
      comp=Z,400nm,16.5s
FRF   La Foret Royal    29.03  94  eP     P      07 08 14.2 -0.6
LMR   La Mourre         29.08  95  eP     P      07 08 14.6 -0.7
      comp=Z,15nm,1.0s,mb4.4
LMR   La Mourre         29.08  95  eP     P      07 08 14.6 -0.7
LMR                                 pmax  pmax
      comp=Z,8.0nm,1.0s,mb4.4
DAVOX Davos             29.12  86   P     P      07 08 16.5 +0.8
      comp=Z,4.2nm,0.7s,mb4.3,baz=284,slow=13,SNR=5.5
DAVOX                               LR    LR     07 19 16.7
      comp=Z,721nm,19.3s,MS4.3,baz=281,slow=35
BRG   Berggiesshubel    29.50  76  eP     P      07 08 19.1 +0.1
BRG                                e      pP     07 08 23.5 +0.8
BRG                                 pmax  pmax
      comp=Z,7.0nm,1.0s,mb4.3
BRG                                 MLR   MLR
      comp=N,310nm,14.8s,MS4.2
BRG                                 MLR   MLR
      comp=E,320nm,14.8s,MS4.2
BRG                                 MLR   MLR
      comp=Z,470nm,14.8s,MS4.2
BRG   Berggiesshubel    29.50  76  eP     P      07 08 19.1 +0.1
      comp=Z,7.3nm,1.0s,mb4.4
BRG                                e      pP     07 08 23.5 +0.8
BRG                                 LR    LR
      comp=Z,470nm,14.8s,MS4.2
SADO  Sadowa            29.70 270   P     P      07 08 20.4 -0.4
      comp=Z,4.0nm,0.5s,mb4.4,baz=54,slow=6.3,SNR=8.7
SADO                                LR    LR     07 19 20.1
      comp=Z,1μm,18.0s,MS4.5,baz=81,slow=35
PVCC  Panska Ves        30.01  77   AMS   AMS    07 20 00.0
      comp=Z,400nm,17.7s
KHC   Kasperske Hory    30.09  80⇓eP     P      07 08 24.5 +0.2
KHC   Kasperske Hory    30.09  80  eP     P      07 08 24.2 -0.1
KHC                                 AMS   AMS    07 19 30.0
      comp=Z,400nm,21.1s
PRU   Pruhonice         30.24  77  eP     P      07 08 25.3 -0.3
PRU                                 AMS   AMS    07 19 50.0
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      comp=Z,300nm,15.5s
GEC2  GERESS Array S    30.30  80  eP     P      07 08 25.9 -0.2
GEC2                                pmax  pmax
      comp=Z,11nm,1.3s,mb4.4
GEC2  GERESS Array S    30.30  80  eP     P      07 08 25.9 -0.2
      comp=Z,11nm,1.3s,mb4.4
GERES GERESS Array B    30.30  80   P     P      07 08 25.9 -0.2
      comp=Z,2.4nm,0.8s,mb4.0,baz=301,slow=7.8,SNR=13
GERES                               LR    LR     07 20 22.5
      comp=Z,330nm,18.3s,MS4.0,baz=358,slow=36
ARCES ARCESS Array B    30.73  37   P     P      07 08 29.6  0.0
      comp=Z,3.2nm,0.8s,mb4.2,baz=262,slow=8.6,SNR=7.9
ARCES ARCESS Array B    30.73  37   P     P      07 08 29.6 -0.1
UPC   Upice             30.84  76  eP     P      07 08 30.5 -0.4
MVL   Millersville      31.00 260  eP     P      07 08 31.1 -1.3
MVL   Millersville      31.00 260  eP     P      07 08 31.1 -1.3
DPC   Dobruska-Polom    31.09  76  eP     P      07 08 32.7 -0.4
DPC                                 AMS   AMS    07 21 30.0
      comp=Z,500nm,16.3s
KEV   Kevo              31.25  36  ep     P      07 08 33.9 -0.3
      comp=Z,3.8nm,0.8s,mb4.3
KEV   Kevo              31.25  36  eP     P      07 08 33.9 -0.3
KEV                                 pmax  pmax
      comp=Z,4.0nm,0.8s,mb4.3
MORC  Moravsky Berou    32.06  76  eP     P      07 08 41.2 -0.4
MORC                                pmax  pmax
      comp=Z,12nm,1.3s,mb4.6
MORC  Moravsky Berou    32.06  76  eP     P      07 08 41.1 -0.4
      comp=Z,12nm,1.3s,mb4.6
MORC  Moravsky Berou    32.06  76  eP     P      07 08 41.2 -0.4
      comp=Z,12nm,1.3s,mb4.6
KAF   Kangasniemi       32.12  51  ep     P      07 08 40.6 -1.4
      comp=Z,7.2nm,0.9s,mb4.5,baz=282,slow=9.3
KAF   Kangasniemi       32.12  51  eP     P      07 08 40.6 -1.4
KAF                                 pmax  pmax
      comp=Z,7.0nm,0.9s,mb4.5
FINES FINESS Array B    32.18  52   P     P      07 08 42.2 -0.3
      comp=Z,6.4nm,0.9s,mb4.5,baz=315,slow=8.1,SNR=15
FINES                               LR    LR     07 20 11.0
      comp=Z,176nm,20.5s,MS3.7,baz=353,slow=33
OKC   Ostrava-Krasne    32.37  76   AMS   AMS    07 22 10.0
      comp=Z,400nm,14.3s
OJC   Ojcow             33.12  74  eP     P      07 08 50.1 -0.7
VYHS  Vyhne             33.43  77  eP     P      07 08 53.0 -0.5
NIE   Niedzica          33.80  75  eP     P      07 08 57.2 +0.4
APA   Apatity           33.84  40⇓iP     P      07 09 03.0 +6.1
APA                                 pmax  pmax
      comp=Z,220nm,2.5s,mb5.6
PSZ   Piszkesteto       34.33  78  eP     P      07 09 01.3 -0.1
PSZ                                 pmax  pmax
      comp=Z,7.0nm,0.9s,mb4.6
PSZ   Piszkesteto       34.33  78  eP     P      07 09 01.3  0.0
      comp=Z,7.0nm,0.9s,mb4.6
PSZ   Piszkesteto       34.33  78  eP     P      07 09 01.3 -0.1
      comp=Z,7.0nm,0.9s,mb4.6
ACSO  Alum Creek Sta    34.71 266  eP     P      07 09 04.0 -0.6
      comp=Z,4.9nm,0.6s,mb4.6
ACSO  Alum Creek Sta    34.71 266  eP     P      07 09 04.0 -0.6
      comp=Z,4.9nm,0.6s,mb4.6
EYMN  Ely               35.14 283  eP     P      07 09 08.0 -0.3
      comp=Z,13nm,1.0s,mb4.8
EYMN  Ely               35.14 283  eP     P      07 09 08.0 -0.3
      comp=Z,13nm,1.0s,mb4.8
KOLS  Kolonicke sedl    35.16  75  eP     P      07 09 05.6 -2.8
KOLS                               ePP    PP     07 10 26.3 -1.0
FWV   Forest Hill       35.20 261  eP     P      07 09 08.9 -0.1
FWV   Forest Hill       35.20 261  eP     P      07 09 08.9  0.0
BBLS  Bajina Basta -    36.32  84⇓iP     P      07 09 18.3  0.0
ULM   Lac du Bonnet     36.41 289   P     P      07 09 19.9 +0.9
      comp=Z,3.4nm,0.7s,mb4.4,baz=57,slow=8.0,SNR=4.1
ULM                                 LR    LR     07 22 52.8
      comp=Z,476nm,19.2s,MS4.3,baz=93,slow=34
TZTN  Tazewell          37.50 262  eP     P      07 09 28.0 -0.4
TZTN  Tazewell          37.50 262  eP     P      07 09 28.0 -0.3
WCI   Wyandotte Cave    37.96 266  eP     P      07 09 32.3 +0.2
WCI                                 pmax  pmax
      comp=Z,8.0nm,0.8s,mb4.5
WCI   Wyandotte Cave    37.96 266  eP     P      07 09 32.3 +0.2
      comp=Z,7.9nm,0.8s,mb4.5
AKASG Malin Array Be    38.11  68   P     P      07 09 32.6 -0.7
      comp=Z,5.3nm,0.8s,mb4.3,baz=302,slow=8.3,SNR=20
CPCT  Cooper Cave       38.83 262  eP     P      07 09 40.1 +0.7
CPCT  Cooper Cave       38.83 262  eP     P      07 09 40.1 +0.6
OBN   Obninsk           39.73  59  i P    P      07 09 46.8 +0.1
OBN                                 pmax  pmax
      comp=Z,14nm,0.7s,mb4.8
SWET  Sewanee           39.81 263  eP     P      07 09 47.8 +0.1
SWET  Sewanee           39.81 263  eP     P      07 09 47.8 +0.1
YKA   Yellowknife Ar    39.92 315   P     P      07 09 47.8 -0.4
      comp=Z,2.9nm,0.7s,mb4.1,baz=63,slow=8.9,SNR=22
YKA                                 PcP   PcP    07 11 52.7 -1.6
      comp=Z,3.7nm,0.8s,baz=61,slow=3.6,SNR=28
YKA                                 LR    LR     07 24 45.7
      comp=Z,245nm,21.2s,MS4.0,baz=85,slow=34
YKA   Yellowknife Ar    39.92 315   P     P      07 09 47.8 -0.4
YKA                                 PcP   PcP    07 11 52.7 -1.6
YKA                                 LR    LR     07 24 45.7
YKA   Yellowknife Ar    39.92 315   PcP   PcP    07 11 52.7 -1.7
WVT   Waverly           40.28 265  eP     P      07 09 51.6 +0.1
WVT                                 pmax  pmax
      comp=Z,11nm,0.9s,mb4.6
WVT   Waverly           40.28 265  eP     P      07 09 51.6 +0.1
      comp=Z,11nm,0.9s,mb4.6
WVT   Waverly           40.28 265  eP     P      07 09 51.6 +0.1
      comp=Z,11nm,0.9s,mb4.6
FVM   French Village    40.54 270  eP     P      07 09 53.7 +0.1
FVM                                 pmax  pmax
      comp=Z,7.0nm,0.9s,mb4.3
FVM   French Village    40.54 270  eP     P      07 09 53.7 +0.1
      comp=Z,7.1nm,0.9s,mb4.3
PLAL  Pickwick Lake     41.23 264  eP     P      07 09 58.9 -0.3
      comp=Z,9.7nm,1.1s,mb4.3
PLAL  Pickwick Lake     41.23 264  eP     P      07 09 58.9 -0.4
      comp=Z,9.7nm,1.1s,mb4.3
LRAL  Lakeview Retre    41.99 261  eP     P      07 10 05.3 -0.1
      comp=Z,8.1nm,0.9s,mb4.3
LRAL  Lakeview Retre    41.99 261  eP     P      07 10 05.3 -0.1
      comp=Z,8.1nm,0.9s,mb4.3
OXF   Oxford            42.34 265  eP     P      07 10 07.6 -0.7
OXF                                 pmax  pmax
      comp=Z,40nm,1.0s,mb5.0
OXF   Oxford            42.34 265  eP     P      07 10 07.5 -0.8
      comp=Z,40nm,1.0s,mb5.0
OXF   Oxford            42.34 265  eP     P      07 10 07.6 -0.7
      comp=Z,40nm,1.0s,mb5.0
VRSR  Storozhevoye      43.13  62  eP     P      07 10 14.9 +0.3
VRSR                                pmax  pmax
      comp=Z,8.0nm,1.0s,mb4.4
VRSR                                pmax  pmax
      comp=N,4.0nm,0.8s
VRSR                                pmax  pmax
      comp=E,9.0nm,1.2s
KSU1  Kansas State U    43.42 276  eP     P      07 10 16.9 -0.2
KSU1  Kansas State U    43.42 276  eP     P      07 10 16.9 -0.2
LAO   LASA Array        44.11 291  eP     P      07 10 24.2 +1.7
      comp=E,18nm,1.3s,mb4.6
LAO   LASA Array        44.11 291  eP     P      07 10 24.2 +1.7
      comp=E,18nm,1.3s,mb4.6
MIAR  Mount Ida         44.75 268  eP     P      07 10 28.0 +0.1
MIAR                                pmax  pmax
      comp=Z,10.0nm,0.9s,mb4.7
MIAR  Mount Ida         44.75 268  eP     P      07 10 28.0 +0.1
      comp=Z,10.0nm,0.9s,mb4.7
ANN   Anapa             46.03  71  eP     P      07 10 44.9 +7.0
ANN                                eS     S      07 17 32.2  +10
ANN                                 pmax  pmax
      comp=Z,37nm,1.4s,mb5.1
ANN                                 MLR   MLR
      comp=N,140nm,16.0s,MS4.3
ANN                                 MLR   MLR
      comp=E,274nm,16.0s,MS4.3
ANN                                 MLR   MLR
      comp=Z,406nm,16.0s,MS4.5
HRY   Holter Researc    47.14 294  eP     P      07 10 47.3 +0.7
HRY   Holter Researc    47.14 294  eP     P      07 10 47.3 +0.7
BRTR  Keskin Array B    47.17  78   P     P      07 10 48.1 +1.1
      comp=Z,7.2nm,1.0s,mb4.6,baz=307,slow=6.2,SNR=24
WMOK  Wichita Mounta    47.67 273  eP     P      07 10 50.7 -0.3
WMOK                                pmax  pmax
      comp=Z,11nm,1.1s,mb4.8
WMOK  Wichita Mounta    47.67 273  eP     P      07 10 50.7 -0.3
      comp=Z,11nm,1.1s,mb4.8
WMOK  Wichita Mounta    47.67 273  eP     P      07 10 50.7 -0.3
      comp=Z,11nm,1.1s,mb4.8
SOC   Sochi             48.07  70  eP     P      07 10 53.0 -1.0
SOC                                e             07 12 19.7
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SOC                                  e               07 12 49.9
SOC                                  ePPP    PPP     07 13 40.4 +4.2
SOC                                  eS      S       07 17 50.6 -0.4
SOC                                  e               07 20 45.2
SOC                                  eSS     SS      07 21 21.5 +6.5
SOC                                  eSSS    SSS     07 22 30.1 -1.1
SOC                                   pmax   pmax
      comp=Z,5.0nm,0.6s,mb4.7
SOC                                   pmax   pmax
      comp=N,5.0nm,0.4s
SOC                                   pmax   pmax
      comp=E,6.0nm,0.4s
ISCO  Idaho Springs        48.16 283 eP      P       07 10 55.9 +1.1
ISCO                                  pmax   pmax
      comp=Z,6.0nm,0.7s,mb4.7
ISCO  Idaho Springs        48.16 283 eP      P       07 10 55.9 +1.1
      comp=Z,6.0nm,0.7s,mb4.7
ISCO  Idaho Springs        48.16 283 eP      P       07 10 55.9 +1.1
      comp=Z,6.0nm,0.7s,mb4.7
PDAR  Pinedale Array       48.42 288  P      P       07 10 56.5 -0.3
      comp=Z,1.7nm,0.7s,mb4.2,baz=58,slow=8.2,SNR=15
PDAR                                  PcP    PcP     07 12 22.1 -1.3
      comp=Z,1.4nm,0.9s,baz=90,slow=4.4,SNR=4.2
PDAR                                  LR     LR      07 30 17.5
      comp=Z,476nm,18.7s,MS4.5,baz=43,slow=35
PDAR  Pinedale Array       48.42 288  PcP    PcP     07 12 22.1 -1.4
WUWY  Wally Ulrich         48.58 290 eP      P       07 10 58.0  0.0
WUWY  Wally Ulrich         48.58 290 eP      P       07 10 58.0 +0.1
TPAW  Teton Pass           48.72 290 eP      P       07 10 59.6 +0.6
      comp=Z,5.6nm,1.0s,mb4.5
TPAW  Teton Pass           48.72 290 eP      P       07 10 59.7 +0.7
      comp=Z,5.6nm,1.0s,mb4.5
GOF   Gofitskoye           48.92  67 eP      P       07 10 58.5 -2.1
GOF                                   pmax   pmax
      comp=Z,30nm,1.1s,mb5.2
ARU   Arti                 49.24  47⇓iP      P       07 11 02.0 -0.9
ARU                                  e               07 12 24.1
ARU                                  e               07 12 53.2
ARU                                  eS      S       07 18 05.7 -1.6
ARU                                  eSS     SS      07 21 37.2 +2.5
ARU                                   pmax   pmax
      comp=Z,31nm,1.4s,mb5.2
AMTX  Amarillo             49.26 275 eP      P       07 11 03.6 +0.3
      comp=Z,30nm,0.9s,mb5.3
AMTX  Amarillo             49.26 275 eP      P       07 11 03.6 +0.3
      comp=Z,30nm,0.9s,mb5.3
KIV   Kislovodsk           49.46  68 eP      P       07 11 07.8 +3.1
KIV                                   pmax   pmax
      comp=Z,10.0nm,1.1s,mb4.8
KIV                                   MLR    MLR
      comp=Z,100nm,15.0s,MS3.9
HWUT  Hardware Ranch       50.31 289 eP      P       07 11 11.0 -0.2
      comp=Z,11nm,1.0s,mb4.8
HWUT  Hardware Ranch       50.31 289 eP      P       07 11 11.0 -0.3
      comp=Z,11nm,1.0s,mb4.8
ILAR  Eielson Array        50.32 329  P      P       07 11 11.3 +0.3
      comp=Z,4.5nm,0.9s,mb4.5,baz=40,slow=5.7,SNR=47
ILAR                                  PcP    PcP     07 12 29.1 -1.0
      comp=Z,3.4nm,0.9s,baz=6.0,slow=3.3,SNR=11
ILAR                                  LR     LR      07 32 22.7
      comp=Z,167nm,18.6s,MS4.1,baz=6.1,slow=36
ILAR  Eielson Array        50.32 329  PcP    PcP     07 12 29.0 -1.0
COLA  College              50.53 329 i P     P       07 11 13.7 +1.1
TCUT  Toone Canyon         50.55 288 eP      P       07 11 13.4 +0.3
TCUT  Toone Canyon         50.55 288 eP      P       07 11 13.4 +0.3
HLID  Hailey               50.57 292 eP      P       07 11 14.2 +1.0
      comp=Z,2.1nm,0.9s,mb4.1
HLID  Hailey               50.57 292 eP      P       07 11 14.2 +1.0
      comp=Z,2.1nm,0.9s,mb4.1
MALT  Malatya              50.87  77 eP      P       07 11 16.3 +0.7
MALT                                  pmax   pmax
      comp=Z,13nm,1.2s,mb4.7
MALT  Malatya              50.87  77 eP      P       07 11 16.3 +0.7
      comp=Z,13nm,1.2s,mb4.7
MALT  Malatya              50.87  77 eP      P       07 11 16.3 +0.7
      comp=Z,13nm,1.2s,mb4.7
ZEI   Tsey                 50.90  69 eP      P       07 11 11.4 -4.4
ZEI                                  i *PP   pP      07 11 18.7 -0.9
ZEI                                   pmax   pmax
      comp=Z,6.0nm,0.9s,mb4.5
SPUT  South Promonto       51.00 289 eP      P       07 11 16.6 +0.1
SPUT  South Promonto       51.00 289 eP      P       07 11 16.6 +0.1
PV10  Paradox Valley       51.09 284 eP      P       07 11 18.4 +1.3
PV10                                 ePcP    PcP     07 12 32.6 -0.6
PV10  Paradox Valley       51.09 284 eP      P       07 11 18.5 +1.3
PV10  Paradox Valley       51.09 284 ePcP    PcP     07 12 32.6 -0.6
BMO   Blue Mountains       51.26 295 eP      P       07 11 17.6 -0.8
      comp=Z,5.2nm,1.1s,mb4.4
BMO   Blue Mountains       51.26 295 eP      P       07 11 17.6 -0.8
      comp=Z,5.2nm,1.1s,mb4.4
IMA   Indian Mountai       51.31 333 eP      P       07 11 19.7 +1.2
IMA                                   pmax   pmax
      comp=Z,126nm,1.4s,mb5.7
IMA   Indian Mountai       51.31 333 eP      P       07 11 19.7 +1.2
      comp=Z,126nm,1.4s,mb5.7
IMA   Indian Mountai       51.31 333 eP      P       07 11 19.7 +1.2
      comp=Z,126nm,1.4s,mb5.7
JCT   Junction City        51.32 270 eP      P       07 11 18.2 -0.9
JCT                                   pmax   pmax
      comp=Z,19nm,1.0s,mb5.0
JCT   Junction City        51.32 270 eP      P       07 11 18.2 -0.9
      comp=Z,19nm,1.0s,mb5.0
JCT   Junction City        51.32 270 eP      P       07 11 18.2 -0.9
      comp=Z,19nm,1.0s,mb5.0
MCK   McKinley             51.69 329 eP      P       07 11 21.8 +0.4
MCK                                   pmax   pmax
      comp=Z,10.0nm,1.1s,mb4.7
MCK   McKinley             51.69 329 eP      P       07 11 21.8 +0.4
      comp=Z,10nm,1.1s,mb4.7
MCK   McKinley             51.69 329 eP      P       07 11 21.8 +0.4
      comp=Z,10nm,1.1s,mb4.7
CPRX  Cap Rock             51.85 275 eP      P       07 11 22.8 -0.3
CPRX  Cap Rock             51.85 275 eP      P       07 11 22.8 -0.3
DUG   Dugway               51.96 288 eP      P       07 11 24.9 +1.1
DUG                                   pmax   pmax
      comp=Z,5.0nm,1.0s,mb4.4
DUG   Dugway               51.96 288 eP      P       07 11 24.9 +1.1
      comp=Z,4.5nm,1.0s,mb4.3
DUG   Dugway               51.96 288 eP      P       07 11 24.9 +1.1
      comp=Z,4.5nm,1.0s,mb4.3
ANMO  Albuquerque          51.99 279c iP     P       07 11 25.6 +1.4
ANMO  Albuquerque          51.99 279  P      P       07 11 25.0 +0.8
      comp=Z,3.7nm,1.0s,mb4.3,baz=59,slow=7.4,SNR=10
GDL2  Guadalupe Moun       52.74 275 eP      P       07 11 29.7 -0.1
GDL2  Guadalupe Moun       52.74 275 eP      P       07 11 29.7 -0.1
MSU   Marysvale            52.77 286 eP      P       07 11 29.8 -0.1
MSU                                  e               07 12 38.9
MSU   Marysvale            52.77 286 ePcP    PcP     07 12 38.9 -0.5
SML   Sawmill              52.92 327 eP      P       07 11 31.3 +0.6
SML                                  e               07 12 38.6
SML   Sawmill              52.92 327 eP      P       07 11 31.2 +0.5
SML   Sawmill              52.92 327 ePcP    PcP     07 12 38.6 -1.1
GNI   Garni                53.15  71⇓eP      P       07 11 34.1 +1.3
GNI                                   pmax   pmax
      comp=Z,12nm,1.0s
GNI                                   MLR    MLR
      comp=Z,100nm,21.0s
DBIC  Dimbokro             53.37 141  P      P       07 11 33.0 -1.7
      comp=Z,5.1nm,0.7s,mb4.6,baz=5.9,slow=9.0,SNR=7.1
DBIC                                  LR     LR      07 31 54.2
      comp=Z,351nm,18.8s,MS4.4,baz=314,slow=33
SDV   Santo Domingo        53.44 226  P      P       07 11 34.1 -1.1
      comp=Z,3.3nm,0.6s,mb4.4,baz=71,slow=3.7,SNR=8.2
SDV                                   PcP    PcP     07 12 40.4 -1.9
      comp=Z,5.3nm,0.8s,baz=23,slow=6.0,SNR=4.7
SDV   Santo Domingo        53.44 226 eP      P       07 11 33.9 -1.3
      comp=Z,16nm,1.4s,mb4.8
SDV                                  ePcP    PcP     07 12 40.9 -1.4
SDV   Santo Domingo        53.44 226 ePcP    PcP     07 12 40.9 -1.4
MNTX  Cornudas Mount       53.70 275 eP      P       07 11 35.9 -1.0
      comp=Z,3.5nm,0.8s,mb4.3
MNTX                                 ePcP    PcP     07 12 41.8 -1.3
MNTX  Cornudas Mount       53.70 275 eP      P       07 11 35.8 -1.0
      comp=Z,3.5nm,0.8s,mb4.3
MNTX  Cornudas Mount       53.70 275 ePcP    PcP     07 12 41.8 -1.3
TIXI  Tiksi                53.85   6⇑iP      P       07 11 36.1 -1.3
TIXI                                  pmax   pmax
      comp=Z,15nm,0.9s,mb4.9
ASF   Jabal al Asfar       54.33  83  P      P       07 11 42.1 +0.6
      comp=Z,6.4nm,0.9s,mb4.5,baz=148,slow=4.5,SNR=7.1
TXAR  Lajitas Array        54.43 272  P      P       07 11 41.6 -0.6
      comp=Z,2.5nm,0.8s,mb4.2,baz=57,slow=6.3,SNR=26
TXAR                                  PcP    PcP     07 12 45.2 -0.6
      comp=Z,2.1nm,0.8s,baz=57,slow=3.3,SNR=6.6
TXAR                                  LR     LR      07 34 22.4
      comp=Z,437nm,19.2s,MS4.5,baz=345,slow=36
TXAR  Lajitas Array        54.43 272  PcP    PcP     07 12 45.2 -0.7
SPU   Mount Spurr          54.56 328 eP      P       07 11 41.8 -1.0
SPU   Mount Spurr          54.56 328 eP      P       07 11 41.8 -1.0
MNV   Mina                 56.15 290 eP      P       07 11 54.6  0.0
MNV                                   pmax   pmax
      comp=Z,5.0nm,1.1s,mb4.5
MNV   Mina                 56.15 290 eP      P       07 11 54.6 -0.1
      comp=Z,4.8nm,1.1s,mb4.4
MNV   Mina                 56.15 290 eP      P       07 11 54.6  0.0
      comp=Z,4.8nm,1.1s,mb4.4
NVAR  Mina Array Bea       56.24 290  P      P       07 11 54.4 -0.8
      comp=Z,0.6nm,0.8s,mb3.7,baz=72,slow=4.6,SNR=6.2
NVAR                                  PcP    PcP     07 12 52.5 -0.2
      comp=Z,1.3nm,1.0s,baz=32,slow=5.6,SNR=4.6
NVAR  Mina Array Bea       56.24 290  PcP    PcP     07 12 52.5 -0.2
BVAR  Borovoye Array       56.56  44  P      P       07 11 57.8 +0.5
      comp=Z,4.3nm,0.9s,mb4.5,baz=297,slow=3.3,SNR=24
BVAR                                  PcP    PcP     07 12 53.7  0.0
      comp=Z,1.7nm,0.8s,baz=333,slow=6.6,SNR=3.5
BVAR  Borovoye Array       56.56  44  PcP    PcP     07 12 53.7 -0.1
BILL  Bilibino             56.96 351 eP      P       07 11 59.4 -0.7
BILL                                 e               07 12 07.8
BILL                                  pmax   pmax
      comp=Z,2.0nm,0.8s,mb4.2
BILL  Bilibino             56.96 351 eP      P       07 11 59.4 -0.7
      comp=Z,2.3nm,0.8s,mb4.3
BILL                                 e               07 12 07.8
ROSC  El Rosal             58.63 228  P      P       07 12 13.2 +0.8
      comp=Z,38nm,0.8s,mb5.5,baz=96,slow=6.2,SNR=27
NVS   Novosibirsk          60.01  36 eP      P       07 12 19.1 -2.3
YAK   Yakutsk              63.41   8 i P     P       07 12 43.1 -1.0
MKAR  Makanchi Array       66.21  42  P      P       07 13 02.2 -0.2
      comp=Z,1.4nm,0.7s,mb4.1,baz=338,slow=6.5,SNR=12
AAK   Ala-Archa            66.32  49⇑eP      P       07 13 05.2 +2.0
AAK                                   pmax   pmax
      comp=Z,6.0nm,1.3s,mb4.5
MA2   Magadan              66.39 357 i P     P       07 13 03.2 -0.2
MA2                                   pmax   pmax
      comp=Z,25nm,1.8s,mb4.9
TLY   Talaya               68.93  26 i P     P       07 13 20.9 +1.5
TLY                                   pmax   pmax
      comp=Z,4.0nm,1.4s,mb4.2
ZAK   Zakamensk            70.02  27 eP      P       07 13 26.2 +0.1
ZAK                                   pmax   pmax
      comp=Z,2.0nm,1.3s,mb3.9
BDFB  Brasilia             70.52 193  P      P       07 13 28.4 -1.3
      comp=Z,2.5nm,0.8s,mb4.2,baz=0.5,slow=14,SNR=8.1
BDFB                                  LR     LR      07 41 58.2
      comp=Z,81nm,19.6s,MS4.0,baz=204,slow=34
WMQ   Urumqi               70.78  40 eP      P       07 13 31.9 +1.0
WMQ                                   AP     pP      07 13 36.9 +2.1
WMQ                                   XP     sP      07 13 38.9 +2.7
WMQ                                   PCP    PcP     07 13 52.7 +0.9
WMQ                                   LR     LR
      comp=N,60nm,22.0s
WMQ                                   LR     LR
      comp=Z,50nm,24.0s,MS3.7
PET   Petropavlovsk        72.45 351 eP      P       07 13 25.4  -15
PET                                   MLR    MLR
      comp=Z,100nm,18.0s,MS4.1
SONM  Songino Array        73.17  26  P      P       07 13 45.3 +0.4
      comp=Z,1.8nm,0.6s,mb4.2,baz=315,slow=7.0,SNR=7.2
ULN   Ulaanbaatar          73.31  26⇑eP      P       07 13 47.1 +1.4
ULN   Ulaanbaatar          73.31  26 eP      P       07 13 47.1 +1.4
SIV   San Ignacio          73.44 206  P      P       07 13 46.4 -0.6
      comp=Z,5.2nm,1.1s,mb4.4,baz=33,slow=8.2,SNR=12
LPAZ  La Paz               75.75 213  P      P       07 13 60.0 -0.4
      comp=Z,2.6nm,1.0s,mb4.1,baz=13,slow=13,SNR=6.5
LPAZ  La Paz               75.75 213  P      P       07 13 60.0 -0.4
KLR   Kul'dur              76.26   9 eP      P       07 13 55.7 -6.9
GTA   Gaotai               78.95  34  P      P       07 14 18.7 +1.0
GTA                                   AP     pP      07 14 24.0 +2.3
GTA                                   XP     sP      07 14 26.9 +3.8
GTA                                   PP     PP      07 17 21.2 +2.7
GTA                                   PPP    PPP     07 19 11.5 +3.1
GTA                                   S      S       07 24 19.0 +4.3
GTA                                   SKS    SKS     07 24 30.4 -3.0
GTA                                   AMB    AMB
      comp=Z,80nm,10.3s
GTA                                   LR     LR
      comp=N,80nm,21.7s,MS4.2
GTA                                   LR     LR
      comp=E,120nm,25.1s,MS4.2
GTA                                   LR     LR
      comp=Z,90nm,18.3s
KMBO  Kilima Mbogo         80.67 105  LR     LR      07 52 52.9
      comp=Z,62nm,18.2s,MS4.0,baz=94,slow=38
CN2   Changchun            80.88  14 eP      P       07 14 27.0 -1.0
LVC   Limon Verde          81.93 211  P      P       07 14 33.9 +0.1
      comp=Z,3.7nm,0.9s,mb4.3,baz=52,slow=11,SNR=4.3
CPUP  Villa Florida        82.55 200  LR     LR      07 47 09.2
      comp=Z,87nm,18.3s,MS4.2,baz=104,slow=33
NJ2   Nanjing              91.11  22 eP      P       07 15 21.3 +2.7
NJ2                                   PP     PP      07 19 00.9 +3.1
NJ2                                   S      S       07 26 16.0 +2.4
NJ2                                   XS             07 26 31.0
NJ2                                   AMB    AMB
      comp=Z,10.0nm,0.7s,mb5.2
NJ2                                   LR     LR
      comp=N,150nm,14.0s
NJ2                                   LR     LR
      comp=E,320nm,20.6s
NJ2                                   LR     LR
      comp=Z,340nm,18.8s,MS4.8
SSE   Sheshan              92.53  20 eP      P       07 15 23.9 -1.2
SSE                                   S      S       07 26 28.5 +2.4
SSE                                   AMB    AMB
      comp=Z,50nm,4.8s
SSE                                   LR     LR
      comp=N,30nm,34.5s,MS3.6
SSE                                   LR     LR
      comp=E,30nm,34.4s,MS3.6
SSE                                   LR     LR
      comp=Z,30nm,31.6s,MS3.5
BOSA  Boshof               97.52 130  LR     LR      07 56 13.4
      comp=Z,127nm,18.6s,MS4.4,baz=206,slow=33
VNA1  Neumayer--Stat      126.11 169 e       PKPdf   07 21 14.3 -3.1
VNA1  Neumayer--Stat      126.11 169 e       PKPdf   07 21 15.8 -1.6
VNA1  Neumayer--Stat      126.11 169 e       PKPdf   07 21 17.3 -0.1
VNA1  Neumayer--Stat      126.11 169⇑iPKPdf  PKPdf   07 21 13.4 -4.0
VNA1                                 e               07 21 14.3
VNA1                                 e               07 21 15.8
VNA1                                 e               07 21 17.3
VNA2  Neumayer--Watz      126.47 169 e       PKPdf   07 21 18.6 +0.6
VNA2  Neumayer--Watz      126.47 169 e       PKPdf   07 21 20.7 +2.7
VNA2  Neumayer--Watz      126.47 169⇑iPKPdf  PKPdf   07 21 15.3 -2.7
VNA2                                 e               07 21 18.6
VNA2                                 e               07 21 20.7
VNA3  Neumayer Olymp      126.53 170 e       PKPdf   07 21 16.6 -1.5
VNA3  Neumayer Olymp      126.53 170 e       PKPdf   07 21 17.7 -0.4
VNA3  Neumayer Olymp      126.53 170 e       PKPdf   07 21 19.9 +1.8
VNA3  Neumayer Olymp      126.53 170⇑iPKPdf  PKPdf   07 21 15.3 -2.8
VNA3                                 e               07 21 16.6
VNA3                                 e               07 21 17.7
VNA3                                 e               07 21 19.9
SNAA  Sanae               127.70 168 e       PKPdf   07 21 19.0 -1.5
SNAA  Sanae               127.70 168 e       PKPdf   07 21 20.4 -0.1
SNAA  Sanae               127.70 168 e       PKPdf   07 21 22.8 +2.3
SNAA  Sanae               127.70 168⇑iPKIKP  PKPdf   07 21 17.6 -2.9
SNAA                                 e               07 21 20.4
SNAA                                 e               07 21 22.8
SNAA  Sanae               127.70 168⇑iPKPdf  PKPdf   07 21 17.6 -2.9
SNAA                                 e               07 21 19.0
SNAA                                 e               07 21 20.4
SNAA                                 e               07 21 22.8
WRA   Warramunga Arr      144.77  17  PKP    PKPdf   07 21 50.1 -2.9
      comp=Z,3.0nm,0.9s,baz=338,slow=3.1,SNR=16
CTA   Charters Tower      145.84 358  PKPbc  PKPbc   07 21 53.3 +0.8
      comp=Z,16nm,1.1s,baz=346,slow=5.8,SNR=4.3
ASAR  Alice Springs       148.32  19  PKPbc  PKPdf   07 22 00.5 +1.6
      comp=Z,15nm,0.7s,baz=351,slow=2.2,SNR=127
```

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*IDC **04** 07:05:56.1±3.8, 6.38S×146.99E, h48^{km}±35^{km}, mb4.0/6, mb1 4.3/9, mb1mx4.0/16, mbtmp4.3/9, ML3.6/3, MS3.3/3, Ms1 3.3/3, ms1mx3.0/19, Error ellipse: s-maj=31.7km s-min=26.3km az=80.0*

*NEIC **04** 07:05:57.1±2.5, 6.41S×146.86E, h57^{km}±22^{km}, mb4.2/1, Error ellipse: s-maj=22.9km s-min=19.2km az=193.0*

ISC 04 07:05:55.7±3.0**, 6.4S**±0.2×**146.9E**±0.1**, h58**^{km}±26^{km}**, n16, σ0^{s}82**/16**, mb4.2**/6**, MS3.2**/2**, Eastern New Guinea region**

```
Code  Station Name          Δ°   AZ°   Phase ID              Time      Res
                                      Op     ISC           h  m  s    ISC
PMG   Port Moresby          2.97 174  P      P       07 06 41.7 +0.2
      11nm,0.3s,baz=34,slow=5.1,SNR=31
PMG                                   S      S       07 07 24.5 +8.4
      48nm,0.3s,baz=104,slow=5.2,SNR=6.5
HNR   Honiara              13.30 104  LR     LR      07 13 33.2
      comp=Z,70nm,21.9s,baz=313,slow=35
CTA   Charters Tower       13.59 182  P      P       07 09 08.3 +1.0
      0.3nm,0.3s,baz=4.5,slow=15,SNR=4.2
CTA   Charters Tower       13.59 182  P      P       07 09 08.3 +1.0
CTAO  Charters Tower       13.59 182  P      P       07 09 07.7 +0.4
KAKA  Kakadu               15.52 245 eP      P       07 09 32.6 +0.1
WRAB  Tennant Creek        18.10 221 eP      P       07 10 03.4 -1.4
      15nm,0.8s
WRA   Warramunga Arr       18.11 221  P      P       07 10 04.4 -0.6
      0.5nm,0.3s,baz=46,slow=12,SNR=72
ASAR  Alice Springs        21.18 215  P      P       07 10 38.7 +0.3
      2.2nm,0.4s,mb3.8,baz=54,slow=8.7,SNR=31
ASAR                                  LR     LR      07 18 36.2
      comp=Z,69nm,18.3s,MS3.1,baz=240,slow=36
FITZ  Fitzroy Crossi       23.72 239  P      P       07 11 03.9 +0.5
      15nm,0.7s,mb4.5,baz=80,slow=5.2,SNR=12
FITZ                                  LR     LR      07 22 24.8
      comp=Z,127nm,18.5s,MS3.4,baz=100,slow=41
STKA  Stephens Creek       25.79 190  P      P       07 11 22.7 -0.5
      2.1nm,0.5s,mb3.9,baz=4.8,slow=10,SNR=7.4
STKA  Stephens Creek       25.79 190  P      P       07 11 22.7 -0.5
STKA                                 eP              07 11 23.9
CMAR  Chiang Mai Arr       53.33 299  P      P       07 15 13.0 +1.3
      2.5nm,0.4s,mb4.5,baz=122,slow=6.1,SNR=9.8
VNDA  Vanda                71.49 177  P      P       07 17 12.5 +0.7
      1.6nm,0.6s,mb4.1,baz=332,slow=6.8,SNR=19
VNDA  Vanda                71.49 177  P      P       07 17 12.5 +0.7
ILAR  Eielson Array        85.93  23  P      P       07 18 29.1 -1.3
      1.2nm,0.8s,mb4.2,baz=254,slow=4.7,SNR=15
```

IDC 04 07:24:00.8±6.7**, 7.20S**×**111.60E, mb3.2**/2**, mb1 3.5**/2**, mb1mx3.2**/16**, mbtmp3.2**/2**, Error ellipse: s-maj=213.1km s-min=101.3km az=51.0, Jawa**

```
Code  Station Name          Δ°   AZ°   Phase ID              Time      Res
                                      Op     ISC           h  m  s    ISC
WRA   Warramunga Arr       25.43 122  P      P       07 29 30.9 -1.2
      0.2nm,0.5s,baz=300,slow=10.0,SNR=4.5
ASAR  Alice Springs        26.95 130  P      P       07 29 44.0 -2.1
      0.4nm,0.7s,baz=309,slow=6.9,SNR=5.8
TXAR  Lajitas Array       140.18  52  PKP    PKPdf   07 43 31.9 -2.1
      0.2nm,0.9s,baz=333,slow=2.0,SNR=3.9
```

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*IDC **04** 07:38:13.4±4.5, 6.30S×146.85E, h46^{km}±40^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.7/14, mbtmp3.9/6, ML3.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/17, Error ellipse: s-maj=54.5km s-min=30.1km az=119.0*

ISC 04 07:38:12.6±3.6**, 6.3S**±0.2×**146.9E**±0.2**, h53**^{km}±29^{km}**, n8, σ0^{s}63**/8**, mb3.7**/4**, Eastern New Guinea region**

```
Code  Station Name          Δ°   AZ°   Phase ID              Time      Res
                                      Op     ISC           h  m  s    ISC
PMG   Port Moresby          3.06 175  P      P       07 38 59.7 +0.1
      8.7nm,0.3s,slow=8.1,SNR=10
PMG                                   S      S       07 39 42.6 +7.3
      16nm,0.3s,baz=57,slow=23,SNR=4.0
CTA   Charters Tower       13.68 183  LR     LR      07 45 28.9
      comp=Z,74nm,19.4s,baz=310,slow=32
KAKA  Kakadu               15.58 245 eP      P       07 41 50.8 +0.4
WRA   Warramunga Arr       18.20 221  P      P       07 42 22.5 -0.7
      0.3nm,0.3s,baz=46,slow=12,SNR=27
ASAR  Alice Springs        21.27 215  P      P       07 42 57.0 +0.3
      1.0nm,0.4s,mb3.5,baz=51,slow=8.8,SNR=19
STKA  Stephens Creek       25.88 190  P      P       07 43 40.9 -0.5
      1.6nm,0.6s,mb3.8,baz=5.8,slow=8.6,SNR=4.7
VNDA  Vanda                71.58 177  P      P       07 49 30.3 +0.6
      0.6nm,0.5s,mb3.8,baz=327,slow=9.4,SNR=8.6
ILAR  Eielson Array        85.84  23  P      P       07 50 47.1 -0.2
      0.4nm,0.6s,mb3.9,baz=255,slow=5.4,SNR=6.5
```

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*BJI **04** 07:47:04.9, 35.91N×67.79E, h7^{km}, mB4.8, mb4.7, Ms4.5, Msz4.0*

*IDC **04** 07:47:04.8±0.8, 35.78N×67.72E, mb4.3/16, mb1 4.4/18, mb1mx4.3/23, mbtmp4.3/18, ML3.9/1, MS3.7/11, Ms1 3.8/11, ms1mx3.7/18, Error ellipse: s-maj=23.9km s-min=13.9km az=19.0*

*NEIC **04** 07:47:06.0±0.4, 35.76N×67.77E, h10^{km}, mb4.6/23, Error ellipse: s-maj=10.4km s-min=5.5km az=201.0*

*MOS **04** 07:47:08.8±1.1, 35.96N×67.67E, h33^{km}, mb4.7/25, Error ellipse: s-maj=8.0km s-min=6.1km az=107.6*

*NNC **04** 07:47:11.9±4.6, 36.52N×67.26E, mpv5.0, Error ellipse: s-maj=39.8km s-min=29.5km az=176.0*

ISC 04 07:47:03.5±1.2**, 35.77N**±0.03×**67.67E**±0.03**, h2**^{km}±7^{km}**, h13**^{km}±3.0^{km}**:pP-P, n141, σ1^{s}26**/156**, mb4.4**/46**, MS3.8**/20**, 8C-7D, Hindu Kush region**

```
Code  Station Name          Δ°   AZ°   Phase ID              Time      Res
                                      Op     ISC           h  m  s    ISC
CEP   Cherat                4.00 118  P      Pn      07 48 10.3 +3.2
SBDP  Sheikh Budin          4.34 142  P      Pn      07 48 14.4 +2.4
THW   Thamme Wali           4.50 130  P      Pn      07 48 14.8 +0.5
DRP   Derazinda             4.54 152  P      Pn      07 48 16.2 +1.3
CHCP  Chirah Chowk          5.07 113  P      Pn      07 48 23.6 +1.2
THN   Thein Dam             7.46 114 eP      Pn      07 48 55.6 -0.5
      15nm,0.6s
KK31  Karatay Array         7.64  16  Pn     Pn      07 48 58.1 -0.5
      20nm,0.4s,baz=206,slow=14,SNR=363
KK31                                 ⇑Sn     Sn      07 50 20.4 -6.4
      43nm,0.6s,baz=203,slow=22,SNR=6.5
KKAR  Karatay Array         7.64  16 i P     Pn      07 48 58.0 -0.6
KKAR                                  pmax   pmax
      comp=Z,20nm,0.3s
AML   Almayashu             7.89  35  P      Pn      07 49 03.0 +0.9
      SNR=23
VAN   Vannovskaya           7.96 289  P      Pn      07 49 00.4 -2.6
VAN                                   S      Sn      07 50 29.5 -5.3
EKS2  Erkin-Say             8.35  33  P      P       07 49 09.1 +0.6
      SNR=43
UCH   Uchtor                8.36  38  P      P       07 49 10.6 +2.0
      SNR=108
KZA   Kyzart                8.63  41  P      P       07 49 13.6 +1.3
      SNR=293
AAK   Ala-Archa             8.66  36  P      P       07 49 14.3 +1.5
      SNR=13
AAK   Ala-Archa             8.66  36 ⇑Pn     P       07 49 13.4 +0.7
      comp=Z,83nm,0.6s
AAK                                  ⇑Sn     Sn      07 50 53.5 +1.4
      comp=Z,120nm,1.1s
AAK   Ala-Archa             8.66  36 ePn     P       07 49 12.1 -0.6
AAK                                  eS      Sn      07 50 53.9 +1.7
SDNR  Sundarnagar           8.85 116 eP      P       07 49 14.0 -1.4
FRU   Bishkek               8.87  35 eP      P       07 49 16.0 +0.3
FRU                                  i S     Sn      07 50 59.0 +1.6
FRU                                   pmax   pmax
      comp=Z,220nm,1.6s
FRU                                   smax
      comp=E,520nm,1.8s
KBK   Karagaybulak          8.89  37  P      P       07 49 16.3 +0.3
      SNR=37
CHMS  Chumysh               9.06  35  P      P       07 49 18.5 +0.2
      SNR=41
USP   Ospenovka             9.15  33  P      P       07 49 19.5 -0.1
      SNR=40
ULHL  Ulahol                9.29  43  P      P       07 49 22.7 +1.3
      SNR=18
TKM2  Tokmak 2              9.41  38  P      P       07 49 24.6 +1.4
      SNR=14
LGTI  Lohaghat             12.34 117 eP      P       07 50 01.7 -1.4
LGTI                                 ex      x       07 50 22.5
AB31  Akbulak array        14.61 340 ⇓Pn     P       07 50 30.6 -2.5
      comp=E,4.7nm,0.5s,baz=160,slow=13,SNR=176
AB31                                 ⇓Sn     S       07 53 05.4  -11
      comp=E,16nm,0.8s,baz=156,slow=23,SNR=7.0
MK31  Makanchi Array       15.53  40 ⇓P      P       07 50 43.5 -1.6
      comp=E,15nm,0.7s
MKAR  Makanchi Array       15.53  40 i P     P       07 50 43.5 -1.6
MKAR                                  pmax   pmax
      comp=Z,27nm,0.8s
MKAR  Makanchi Array       15.53  40  Pn     P       07 50 43.3 -1.8
      comp=Z,0.5nm,0.3s,baz=228,slow=12,SNR=65
KOLN  Koldanda             15.71 116 eP      P       07 50 45.5 -2.1
      comp=Z,18nm,0.4s
GKN   Gorkha               16.35 114 eP      P       07 50 52.0 -3.8
      comp=Z,166nm,0.8s
```

DMN	**Daman**	**16.91**	**114**	*e*P	**P**	**07 51 00.5**	**-2.4**
KKN	**Kakani**	**16.95**	**113**	*e*P	**P**	**07 51 00.8**	**-2.5**
	comp=Z,78nm,0.6s						
KKN	**Kakani**	**16.95**	**113**	*e*P	**P**	**07 51 00.8**	**-2.5**
KKN				pmax	pmax		
	comp=Z,39nm,0.6s						
PKI	**Pulchoki**	**17.16**	**114**	*e*P	**P**	**07 51 04.1**	**-1.9**
	comp=Z,103nm,0.9s						
PKI	**Pulchoki**	**17.16**	**114**	*e*P	**P**	**07 51 04.1**	**-1.9**
PKI				pmax	pmax		
	comp=Z,52nm,0.9s						
GUN	**Gumba**	**17.33**	**112**	*e*P	**P**	**07 51 09.0**	**+0.8**
	comp=Z,129nm,0.7s						
WMQ	**Urumqi**	**17.34**	**56**	*e*P	**P**	**07 51 08.3**	**+0.2**
WMQ				AP		07 51 11.8	
WMQ				XP		07 51 15.3	
WMQ				PP	PP	07 51 22.8	+0.2
WMQ				PPP	PPP	07 51 31.3	+0.4
WMQ				*e*S	**S**	**07 54 19.2**	**-1.0**
WMQ				SS	SS	07 54 41.3	-0.2
WMQ				AMB	AMB		
	comp=Z,20nm,0.8s						
WMQ				AMB	AMB		
	comp=Z,100nm,4.6s						
WMQ				LR	LR		
	comp=N,740nm,10.0s						
WMQ				LR	LR		
	comp=E,740nm,10.6s						
WMQ				LR	LR		
	comp=Z,710nm,13.0s						
BVA0	**Borovoye Array**	**17.36**	**6**	⇑P	**P**	**07 51 05.9**	**-2.4**
	comp=Z,4.5nm,1.1s						
BVA0				⇓S	**S**	**07 54 11.2**	**-9.4**
	comp=Z,3.4nm,0.9s,baz=182,slow=24,SNR=3.9						
BVA0	**Borovoye Array**	**17.36**	**6**	P	**P**	**07 51 05.6**	**-2.7**
BVA0				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BVAR	**Borovoye Array**	**17.36**	**6**	P	**P**	**07 51 05.8**	**-2.5**
	comp=Z,2.6nm,0.3s,baz=166,slow=11,SNR=20						
BVAR				S	**S**	**07 54 13.6**	**-6.9**
	comp=Z,1.3nm,0.3s,baz=188,slow=22,SNR=6.0						
CHKZ	**Chkalovo**	**18.02**	**6**	⇓P	**P**	**07 51 15.4**	**-1.1**
	comp=Z,14nm,1.0s						
CHKZ				⇑S	**S**	**07 54 28.3**	**-7.4**
	comp=Z,25nm,1.1s						
CHKZ	**Chkalovo**	**18.02**	**6**	*i* P	**P**	**07 51 15.0**	**-1.6**
CHKZ				pmax	pmax		
	comp=Z,14nm,1.0s						
GNI	**Garni**	**18.58**	**290**	*i* P	**P**	**07 51 25.6**	**+2.0**
GNI				pmax	pmax		
	comp=Z,44nm,1.8s						
GNI				MLR	MLR		
	comp=Z,100nm,15.0s						
GNI	**Garni**	**18.58**	**290**	P	**P**	**07 51 23.8**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=214,slow=22,SNR=6.0						
GNI				LR	LR	08 00 44.3	
	comp=Z,127nm,19.3s,baz=261,slow=44						
GNI	**Garni**	**18.58**	**290**	*e*P	**P**	**07 51 23.8**	**+0.2**
	comp=Z,18nm,0.8s						
TI2	**Plekhanov**	**18.81**	**295**	*e*P	**P**	**07 51 25.8**	**-0.6**
ZEI	**Tsey**	**19.64**	**298**	*e*P	**P**	**07 51 34.5**	**-1.7**
ONI	**Oni**	**19.93**	**297**	P	**P**	**07 51 42.4**	**+3.0**
LSA	**Lhasa**	**20.64**	**100**	P	**P**	**07 51 49.0**	**+2.0**
LSA	**Lhasa**	**20.64**	**100**	*e*P	**P**	**07 51 48.9**	**+1.9**
LSA				pmax	pmax		
	comp=Z,23nm,0.8s						
LSA	**Lhasa**	**20.64**	**100**	*e*P	**P**	**07 51 48.9**	**+1.9**
	comp=Z,23nm,0.8s						
HYB	**Hyderabad**	**20.69**	**149**	*i* P	**P**	**07 51 47.0**	**-0.5**
KIV	**Kislovodsk**	**20.79**	**301**	*i* P	**P**	**07 51 48.6**	**+0.3**
KIV				pmax	pmax		
	comp=Z,17nm,0.9s						
KIV				MLR	MLR		
	comp=Z,300nm,16.0s,MS3.8						
KIV	**Kislovodsk**	**20.79**	**301**	*e*P	**P**	**07 51 45.9**	**-2.5**
	comp=Z,15nm,0.6s						
GOF	**Gofitskoye**	**20.85**	**304**	⇓*i*P	**P**	**07 51 47.6**	**-1.4**
GOF				*e*S	**S**	**07 55 37.1**	**-0.4**
GOF				pmax	pmax		
	comp=Z,20nm,1.0s						
GOF				smax			
	comp=E,40nm,1.3s						
ARU	**Arti**	**21.57**	**346**	*e*P	**P**	**07 51 56.2**	**0.0**
ARU				*e*		07 52 17.6	
ARU				*e*S	**S**	**07 55 54.8**	**+3.8**
ARU				*e*SS	SS	07 56 21.5	-4.6
ARU	**Arti**	**21.57**	**346**	*e*P	**P**	**07 51 56.0**	**-0.2**
	comp=E,18nm,0.9s,mb4.5						
SVE	**Sverdlovsk**	**21.59**	**349**	*e*P	**P**	**07 51 56.9**	**+0.5**
SVE				*e*		07 52 24.0	
SVE				MLR	MLR		
	comp=N,200nm,16.0s,MS3.8						
SVE				MLR	MLR		
	comp=E,200nm,16.0s,MS3.8						
SVE				MLR	MLR		
	comp=Z,300nm,16.0s,MS3.8						
NVS	**Novosibirsk**	**21.89**	**25**	*e*P	**P**	**07 51 57.9**	**-1.6**
NVS				*e*S	**S**	**07 55 59.4**	**+2.3**
NVS				pmax	pmax		
	comp=N,15nm,0.8s						
NVS				pmax	pmax		
	comp=E,11nm,0.8s						
NVS				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.7						
NVS				smax			
	comp=N,29nm,1.8s						
NVS				smax			
	comp=E,5.0nm,1.1s						
SOC	**Sochi**	**22.80**	**299**	*e*P	**P**	**07 52 12.0**	**+3.4**
SOC				*e*		07 52 33.7	
SOC				*e*PPP	PPP	07 52 44.6	-2.8
SOC				*e*SS	SS	07 56 45.9	-10
SOC				*e*SSS	SSS	07 57 02.5	-8.7
SOC				pmax	pmax		
	comp=N,11nm,0.7s						
SOC				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.6						
SOC				pmax	pmax		
	comp=E,7.0nm,0.4s						
SOC				MLR	MLR		
	comp=Z,103nm,16.0s,MS3.4						
SOC				MLR	MLR		
	comp=N,66nm,11.0s,MS3.5						
SOC				MLR	MLR		
	comp=E,90nm,16.0s,MS3.5						
SHL	**Shillong**	**23.13**	**109**	*e*x	**P**	**07 52 12.0**	**+0.1**
SHL				*e*S	**S**	**07 56 25.0**	**+5.2**
MALT	**Malatya**	**23.43**	**285**	*e*P	**P**	**07 52 18.8**	**+4.0**
MALT				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
MALT	**Malatya**	**23.43**	**285**	*e*P	**P**	**07 52 18.8**	**+4.1**
	comp=Z,4.2nm,0.8s,mb3.9						
ANN	**Anapa**	**24.64**	**301**	*e*P	**P**	**07 52 29.3**	**+2.8**
ANN				*e*S	**S**	**07 56 50.8**	**+5.0**
ANN				pmax	pmax		
	comp=Z,55nm,1.5s,mb4.9						
VRSR	**Storozhevoye**	**25.57**	**316**	*e*P	**P**	**07 52 36.3**	**+1.1**
VRSR				pmax	pmax		
	comp=N,8.0nm,0.5s						
VRSR				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.5						
VRSR				pmax	pmax		
	comp=E,9.0nm,0.6s						
GTA	**Gaotai**	**25.66**	**72**	P	**P**	**07 52 37.0**	**+0.8**
GTA				AP	pP	07 52 40.8	+4.1
GTA				XP	sP	07 52 44.0	+7.1
GTA				PP	PP	07 53 18.0	+2.2
GTA				PPP	PPP	07 53 30.4	+3.0
GTA				PCP	PcP	07 56 05.7	-1.9
GTA				S	**S**	**07 57 05.7**	**+2.8**
GTA				XS		07 57 12.2	
GTA				SCP		07 59 42.8	
GTA				AMB	AMB		
	comp=Z,60nm,11.0s						
GTA				LR	LR		
	comp=N,340nm,18.6s,MS4.0						
GTA				LR	LR		
	comp=E,240nm,13.7s,MS4.0						
GTA				LR	LR		
	comp=Z,210nm,12.9s,MS3.9						
ASF	**Jabal al Asfar**	**25.71**	**271**	P	**P**	**07 52 38.0**	**+1.2**
	comp=Z,2.4nm,0.6s,mb3.9,baz=323,slow=5.7,SNR=4.3						
ASF				LR	LR	08 04 05.7	
	comp=Z,144nm,19.5s,MS3.5,baz=111,slow=40						
SIM	**Simferopol’**	**27.00**	**300**	P	**P**	**07 52 52.8**	**+4.3**
BRTR	**Keskin Array B**	**27.09**	**289**	P	**P**	**07 52 50.2**	**+0.8**
	comp=Z,3.9nm,0.9s,mb4.0,baz=98,slow=8.7,SNR=17						
MOY	**Mondy**	**28.54**	**46**	*e*P	**P**	**07 53 03.8**	**+1.4**
OBN	**Obninsk**	**28.79**	**322**	*e*P	**P**	**07 53 10.5**	**+5.9**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS3.8						
LZH	**Lanzhou**	**29.19**	**79**	*e*P	**P**	**07 53 08.5**	**0.0**
LZH				AP	pP	07 53 11.7	+2.7
LZH				XP	sP	07 53 13.2	+4.0
LZH				PP	PP	07 54 03.6	+0.8
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,70nm,4.6s						
LZH				LR	LR		
	comp=E,390nm,12.2s						
LZH				LR	LR		
	comp=Z,580nm,15.3s,MS4.3						
ZAK	**Zakamensk**	**29.50**	**49**	*e*P	**P**	**07 53 11.4**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.9						
SONM	**Songino Array**	**30.96**	**55**	P	**P**	**07 53 24.8**	**+0.7**
	comp=Z,4.7nm,0.9s,mb4.3,baz=263,slow=10.0,SNR=19						
SONM				LR	LR	08 07 04.6	
	comp=Z,389nm,20.9s,MS4.0,baz=252,slow=39						
AKASG	**Malin Array Be**	**31.33**	**311**	P	**P**	**07 53 26.5**	**-0.7**
	comp=Z,1.9nm,0.5s,mb4.2,baz=91,slow=6.7,SNR=6.9						
ULN	**Ulaanbaatar**	**31.41**	**55***c*	*i*P	**P**	**07 53 28.2**	**+0.2**
ULN	**Ulaanbaatar**	**31.41**	**55**	*e*P	**P**	**07 53 28.5**	**+0.5**
	comp=Z,4.2nm,0.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**32.56**	**114**	*i* P	**P**	**07 53 40.0**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**32.56**	**114**	P	**P**	**07 53 38.5**	**+0.2**
	comp=Z,1.5nm,0.5s,mb4.2,baz=299,slow=8.5,SNR=7.4						
CMAR				LR	LR	08 06 43.9	
	comp=Z,48nm,20.0s,MS3.2,baz=160,slow=36						
GYA	**Guiyang**	**34.47**	**95**	P	**P**	**07 53 54.3**	**-0.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CIT	**Chita**	**36.16**	**49**	*e*P	**P**	**07 54 09.5**	**+0.5**
FINES	**FINESS Array B**	**36.62**	**328**	P	**P**	**07 54 12.1**	**-0.6**
	comp=Z,3.0nm,0.6s,mb4.3,baz=121,slow=9.8,SNR=21						
FINES				LR	LR	08 10 47.7	
	comp=Z,119nm,18.6s,MS3.7,baz=161,slow=39						
KAF	**Kangasniemi**	**36.81**	**329**	*e*p	**P**	**07 54 13.8**	**-0.5**
	comp=Z,3.5nm,0.5s,mb4.5,baz=115,slow=8.6						
KAF	**Kangasniemi**	**36.81**	**329**	*e*P	**P**	**07 54 13.8**	**-0.5**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.5						
OJC	**Ojcow**	**37.20**	**308**	*e*P	**P**	**07 54 19.6**	**+1.9**
APA	**Apatity**	**37.31**	**339**	⇓*e*P	**P**	**07 54 18.4**	**-0.1**
APA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
ARCES	**ARCESS Array B**	**40.81**	**339**	P	**P**	**07 54 47.9**	**+0.3**
	comp=Z,4.5nm,0.7s,mb4.2,baz=121,slow=7.1,SNR=18						
ARCES	**ARCESS Array B**	**40.81**	**339**	P	**P**	**07 54 47.9**	**+0.3**
GERES	**GERESS Array B**	**41.15**	**306**	P	**P**	**07 54 51.6**	**+1.0**
	comp=Z,0.5nm,0.5s,mb3.4,baz=117,slow=6.0,SNR=5.1						
GERES				LR	LR	08 14 37.3	
	comp=Z,114nm,18.9s,MS3.8,baz=41,slow=40						
CLL	**Collm**	**41.56**	**309**	*i* P	**P**	**07 55 00.0**	**+6.2**
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
CLL	**Collm**	**41.56**	**309**	*i* *SP	sP	07 55 00.0	+5.4
CLL				*i* PP	PP	07 56 34.5	+1.4
NJ2	**Nanjing**	**42.26**	**80**	*e*P	**P**	**07 55 00.3**	**+0.5**
NJ2				AP	pP	07 55 10.1	+10
NJ2				PP	PP	07 56 41.5	+0.7
NJ2				S	**S**	**08 01 18.0**	**-3.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
NJ2				LR	LR		
	comp=N,390nm,15.8s,MS4.5						
NJ2				LR	LR		
	comp=E,150nm,13.3s,MS4.5						
NJ2				LR	LR		
	comp=Z,120nm,13.9s,MS3.9						
GRA1	**Grafenberg Arr**	**42.74**	**307**	*e*P	**P**	**07 55 06.4**	**+2.9**
	comp=Z,14nm,1.9s,mb4.4						
GRF	**Grafenberg Arr**	**42.74**	**307**	*e*P	**P**	**07 55 06.4**	**+2.9**
GRF				pmax	pmax		
	comp=Z,14nm,1.9s,mb4.4						
GRF	**Grafenberg Arr**	**42.74**	**307**	*e*P	**P**	**07 55 06.4**	**+2.9**
GRF				pmax	pmax		
	comp=Z,14nm,1.9s,mb4.4						
GRF	**Grafenberg Arr**	**42.74**	**307**	*e*P	**P**	**07 55 06.4**	**+2.9**
	comp=Z,14nm,1.9s,mb4.4						
NB2	**NORSAR Subarra**	**43.35**	**324**	P	**P**	**07 55 07.3**	**-1.1**
	comp=Z,1.2nm,0.6s,mb3.8,baz=100,slow=7.9						
NOA	**NORSAR Array B**	**43.35**	**324**	P	**P**	**07 55 07.5**	**-0.9**
	comp=Z,1.4nm,0.7s,mb3.8,baz=101,slow=8.1,SNR=9.9						
NOA				LR	LR	08 16 23.5	
	comp=Z,154nm,18.4s,MS3.9,baz=95,slow=40						
NOA	**NORSAR Array B**	**43.35**	**324**	P	**P**	**07 55 07.5**	**-0.9**
NOA				LR	LR	08 16 23.5	
CN2	**Changchun**	**44.33**	**61**	*e*P	**P**	**07 55 16.0**	**-0.6**
SSE	**Sheshan**	**44.45**	**80**	*e*P	**P**	**07 55 16.3**	**-1.4**
SSE				AP	pP	07 55 19.5	+1.2
SSE				S	**S**	**08 01 52.0**	**-1.0**
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
SSE				LR	LR		
	comp=N,120nm,22.4s,MS3.8						
SSE				LR	LR		
	comp=E,50nm,22.3s,MS3.8						
SSE				LR	LR		
	comp=Z,40nm,20.3s,MS3.3						
PGF	**Pioggiola**	**45.20**	**297**	*e*P	**P**	**07 55 22.9**	**-0.7**
	comp=Z,36nm,1.3s,mb4.7						
PGF	**Pioggiola**	**45.20**	**297**	*e*P	**P**	**07 55 22.9**	**-0.7**
PGF				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.7						
YAK	**Yakutsk**	**46.12**	**35**	*i* P	**P**	**07 55 28.3**	**-2.3**
YAK				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
YAK				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.1						
YAK	**Yakutsk**	**46.12**	**35**	P	**P**	**07 55 28.8**	**-1.8**
LPG	**La Plagne**	**46.23**	**302**	*e*P	**P**	**07 55 31.5**	**-0.2**
	comp=Z,2.6nm,0.6s,mb4.1						
LPG	**La Plagne**	**46.23**	**302**	*e*P	**P**	**07 55 31.5**	**-0.2**
LPG				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
LPL	**La Plagne**	**46.24**	**302**	*e*P	**P**	**07 55 32.2**	**+0.5**
KMBO	**Kilima Mbogo**	**46.39**	**224**	LR	LR	08 15 48.4	
	comp=Z,78nm,20.6s,MS3.6,baz=92,slow=37						
CABF	**La Chapelle**	**46.49**	**303**	*e*P	**P**	**07 55 34.0**	**+0.3**
	comp=Z,25nm,1.2s,mb4.7						
CABF	**La Chapelle**	**46.49**	**303**	*e*P	**P**	**07 55 34.0**	**+0.3**
CABF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
TIXI	**Tiksi**	**47.46**	**22**	⇑*i*P	**P**	**07 55 39.5**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
VIVF	**Saint-Julien-l**	**47.80**	**301**	*e*P	**P**	**07 55 44.0**	**-0.1**
SMF	**Signal de Mont**	**48.01**	**304**	*e*P	**P**	**07 55 45.7**	**0.0**
	comp=Z,12nm,0.8s,mb4.7						
SMF	**Signal de Mont**	**48.01**	**304**	*e*P	**P**	**07 55 45.7**	**0.0**
SMF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
SSF	**Saint Saulge**	**48.16**	**304**	*e*P	**P**	**07 55 46.7**	**-0.1**
SSF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
SSF	**Saint Saulge**	**48.16**	**304**	*e*P	**P**	**07 55 46.7**	**-0.1**
	comp=Z,8.7nm,1.1s,mb4.7						
EPF	**Esparros**	**51.27**	**300**	*e*P	**P**	**07 56 10.1**	**-0.7**
ETSF	**Etsaut**	**51.95**	**300**	*e*P	**P**	**07 56 15.3**	**-0.6**
	comp=Z,10nm,0.9s,mb4.5						
ETSF	**Etsaut**	**51.95**	**300**	*e*P	**P**	**07 56 15.3**	**-0.6**
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MJAR	**Matsushiro Arr**	**55.73**	**67**	P	**P**	**07 56 42.3**	**-1.5**
	comp=Z,1.0nm,0.5s,mb4.1,baz=304,slow=9.0,SNR=5.5						
MJAR	**Matsushiro Arr**	**55.73**	**67**	P	**P**	**07 56 42.3**	**-1.5**
BILL	**Bilibino**	**60.43**	**25**	*i* P	**P**	**07 57 16.4**	**0.0**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.4						
BILL				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.0						
DBIC	**Dimbokro**	**71.95**	**265**	P	**P**	**07 58 33.5**	**+2.8**
	comp=Z,3.3nm,0.7s,mb4.4,baz=42,slow=7.2,SNR=4.0						
IMA	**Indian Mountai**	**73.60**	**16**	*e*P	**P**	**07 58 39.4**	**0.0**
IMA				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
IMA	**Indian Mountai**	**73.60**	**16**	*e*P	**P**	**07 58 39.4**	**0.0**
	comp=Z,12nm,0.8s,mb4.9						
INK	**Inuvik**	**75.03**	**8**	P	**P**	**07 58 48.0**	**+0.3**
	comp=Z,5.1nm,0.7s,mb4.6,baz=9.9,slow=7.4,SNR=15						
INK	**Inuvik**	**75.03**	**8**	P	**P**	**07 58 48.0**	**+0.3**
COLA	**College**	**75.90**	**15***c*	*i*P	**P**	**07 58 52.6**	**-0.1**
COLA	**College**	**75.90**	**15**	*e*P	**P**	**07 58 53.1**	**+0.4**
	comp=Z,8.2nm,0.9s,mb4.7						
ILAR	**Eielson Array**	**76.19**	**14**	P	**P**	**07 58 53.9**	**-0.4**
	comp=Z,2.6nm,0.8s,mb4.2,baz=326,slow=5.7,SNR=24						
SML	**Sawmill**	**78.48**	**17**	*e*P	**P**	**07 59 07.3**	**+0.3**
SCHQ	**Schefferville**	**81.67**	**335**	P	**P**	**07 59 25.6**	**+1.4**
	comp=Z,2.9nm,0.9s,mb4.2,baz=42,slow=8.6,SNR=4.4						
SCHQ				LR	LR	08 34 16.1	
	comp=Z,62nm,19.1s,MS4.0,baz=108,slow=35						
YKA	**Yellowknife Ar**	**82.06**	**1**	P	**P**	**07 59 26.4**	**+0.4**
	comp=Z,1.9nm,0.6s,mb4.2,baz=351,slow=5.4,SNR=17						
YKA				LR	LR	08 39 49.9	
	comp=Z,52nm,19.1s,MS3.9,baz=5.0,slow=39						
YKA	**Yellowknife Ar**	**82.06**	**1**	P	**P**	**07 59 26.4**	**+0.4**
YKA				LR	LR	08 39 49.9	
WRA	**Warramunga Arr**	**83.94**	**120**	*i* P	**P**	**07 59 37.4**	**+0.7**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**83.94**	**120**	P	**P**	**07 59 35.8**	**-0.9**
	comp=Z,1.8nm,0.6s,mb4.4,baz=322,slow=4.8,SNR=25						
WRAB	**Tennant Creek**	**83.94**	**120**	*e*P	**P**	**07 59 35.4**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	**83.94**	**120**	*e*P	**P**	**07 59 35.4**	**-1.3**
	comp=Z,4.6nm,0.6s,mb4.8						
ASAR	**Alice Springs**	**86.09**	**123**	P	**P**	**07 59 47.5**	**+0.2**
	comp=Z,3.2nm,0.9s,mb4.6,baz=314,slow=4.9,SNR=22						
ULM	**Lac du Bonnet**	**93.12**	**350**	LR	LR	08 48 59.5	
	comp=Z,45nm,18.0s,MS4.0,baz=322,slow=40						

DJA 04 07:53:20.0±1.1, 9.98S×116.88E, h15km, MD4.6/2, ML4.3/2, 7C-1D, Error ellipse: s-maj=25.0km s-min=20.6km az=124.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	**Kedomdong**	**1.66**	**333**	⇑*e*Pn	Pn	07 53 46.0	-2.9
	206nm,0.2s						
KEDI				⇑*e*Sn	Sn	07 54 05.8	-4.2
RATI	**Rata**	**1.82**	**313**	⇑*e*Pn	Pn	07 53 50.4	-0.7
	171nm,0.2s						
RATI	**Rata**	**1.82**	**313**	⇑*e*P	Pn	07 53 50.7	-0.4
KELI	**Kelakatan**	**2.94**	**306**	⇑*e*Pn	Pn	07 54 05.6	-1.5
KELI	**Kelakatan**	**2.94**	**306**	⇑*e*P	Pn	07 54 07.7	+0.6
SRDI	**Scrawed**	**3.08**	**299**	⇑*e*Pn	Pn	07 54 04.9	-4.3
SRDI				⇓*e*Sn	Sn	07 54 40.4	-5.7

IDC 04 08:11:37.7±1.9, 8.88S×130.36E, mb3.8/1, mb1 3.8/3, mb1mx3.6/13, mbtmp3.6/3, ML3.2/2, Error ellipse: s-maj=70.2km s-min=26.0km az=69.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**11.65**	**161**	Pn	P	08 14 26.5	-1.9
	0.2nm,0.3s,baz=339,slow=13,SNR=19						
WRA				Sn	S	08 16 35.8	-4.5
	0.4nm,0.3s,baz=339,slow=22,SNR=9.3						
ASAR	**Alice Springs**	**15.09**	**167**	Pn	P	08 15 12.6	-1.5
	0.1nm,0.3s,baz=358,slow=15,SNR=11						
ASAR				Sn	S	08 17 59.8	-3.1
	0.1nm,0.3s,baz=350,slow=25,SNR=4.4						
MKAR	**Makanchi Array**	**69.99**	**327**	P	P	08 22 51.1	-2.1
	0.6nm,0.7s,baz=121,slow=7.1,SNR=5.1						

IDC 04 08:55:16.0±2.8, 7.63N×91.63E, mb3.7/2, mb1 3.9/3, mb1mx3.5/20, mbtmp3.7/3, ML4.2/1, Error ellipse: s-maj=86.5km s-min=32.3km az=63.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.90**	**33**	Pn	P	08 58 20.1	-3.4
	0.4nm,0.3s,baz=233,slow=15,SNR=5.7						
MKAR	**Makanchi Array**	**39.83**	**350**	P	P	09 02 51.3	-1.5
	0.9nm,0.7s,baz=168,slow=8.4,SNR=8.3						
WRA	**Warramunga Arr**	**50.17**	**124**	P	P	09 04 13.5	-2.2
	0.7nm,0.8s,baz=303,slow=8.6,SNR=5.3						

PGC 04 09:17:16.1, 48.95N×128.69W, h10km, Mw3.5, 3C-2D, West of Vancouver Island, British Columbia, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BPBC	**Brooks Peninsu**	**1.35**	**26**	Pn	Pn	09 17 38.9	-2.1
BPBC				Sn	Sn	09 17 53.9	-5.1
	comp=Z,43nm,0.2s						
BPBC				Trac		09 17 57.7	
	comp=Z,43nm,0.2s						
EDB	**Eliza Dome**	**1.38**	**47**	⇑Pn	Pn	09 17 39.1	-2.4
EDB				Sn	Sn	09 17 54.9	-5.0
EDB				Trac		09 17 55.8	
	comp=Z,31nm,0.2s						
ETB	**Estevan Point**	**1.48**	**72**	⇑Pn	Pn	09 17 40.9	-2.0
ETB				Sn	Sn	09 17 58.8	-3.5
	comp=Z,17nm,0.2s						
ETB				Trac		09 17 59.3	
	comp=Z,17nm,0.2s						
HOLB	**Holberg**	**1.73**	**12**	Pn	Pn	09 17 44.0	-2.5
HOLB				Sn	Sn	09 18 06.1	-2.6
	comp=Z,30nm,0.1s						
HOLB				Trac		09 18 07.9	
	comp=Z,30nm,0.1s						
MAYB	**Maynard**	**1.76**	**34**	Pn	Pn	09 17 44.7	-2.1
MAYB				Sn	Sn	09 18 05.1	-4.4
	comp=Z,17nm,0.2s						
MAYB				Trac		09 18 06.5	
	comp=Z,17nm,0.2s						
WOSB	**Woss**	**1.84**	**48**	⇑Pn	Pn	09 17 46.2	-1.8
WOSB				Sn	Sn	09 18 09.1	-2.4
	comp=Z,6.0nm,0.1s						
WOSB				Trac		09 18 09.9	
	comp=Z,6.0nm,0.1s						
GDR	**Gold River**	**1.93**	**63**	⇑Pn	Pn	09 17 46.9	-2.4
GDR				Sn	Sn	09 18 09.8	-4.0
	comp=Z,9.0nm,0.2s						
GDR				Trac		09 18 11.2	
	comp=Z,9.0nm,0.2s						
PHC	**Port Hardy**	**1.94**	**24**	⇓Pn	Pn	09 17 47.2	-2.2
PHC				Sn	Sn	09 18 09.5	-4.6
PHC				Trac		09 18 10.2	
	comp=Z,14nm,0.3s						
OZB	**Mount Ozzard**	**2.11**	**89**	Pn	Pn	09 17 49.1	-2.8
OZB				Sn	Sn	09 18 12.9	-5.4
OZB				Trac		09 18 15.8	
	comp=Z,10.0nm,0.2s						
BTB	**Buttle Lake**	**2.14**	**75**	Pn	Pn	09 17 50.4	-2.0
BTB				Sn	Sn	09 18 14.8	-4.5
	comp=Z,20nm,0.2s						
BTB				Trac		09 18 16.3	
	comp=Z,20nm,0.2s						
NCRB	**Newcastle Ridg**	**2.25**	**49**	⇑Pn	Pn	09 17 52.4	-1.5
NCRB				Sn	Sn	09 18 19.3	-2.6
	comp=Z,23nm,0.3s						
NCRB				Trac		09 18 22.0	
	comp=Z,23nm,0.3s						
CBB	**Campbell River**	**2.42**	**62**	Pn	Pn	09 17 54.6	-1.8
CBB				Sn	Sn	09 18 23.2	-3.2
CBB				Trac		09 18 24.6	
	comp=Z,10.0nm,0.2s						
ALB	**Alberni**	**2.56**	**81**	Pn	Pn	09 17 56.3	-2.0
ALB				Sn	Sn	09 18 24.9	-4.9
	comp=Z,3.0nm,0.3s						
ALB				Trac		09 18 27.4	
	comp=Z,3.0nm,0.3s						
MGB	**Mount Grey**	**2.63**	**87**	Pn	Pn	09 17 56.9	-2.6
MGB				Sn	Sn	09 18 27.1	-4.7
	comp=Z,4.0nm,0.2s						
MGB				Trac		09 18 30.2	
	comp=Z,4.0nm,0.2s						
PFB	**Port Renfrew**	**2.84**	**96**	Trac		09 18 35.2	
	comp=Z,1.0nm,0.2s						
PFB	**Port Renfrew**	**2.84**	**96**	Pn	Pn	09 17 59.8	-2.6
PFB				Sn	Sn	09 18 30.6	-6.3

TXB	Texada	2.88	73	⇓Pn	Pn	09 18 01.1	-1.9
TXB				Sn	Sn	09 18 34.8	-3.3
	comp=Z,3.0nm,0.1s						
TXB				Trac		09 18 35.9	
	comp=Z,3.0nm,0.1s						
NLLB	Nanaimo Lost L	3.10	83	Pn	Pn	09 18 04.8	-1.3
NLLB				Sn	Sn	09 18 40.0	-3.6
NLLB				Trac		09 18 42.8	
	comp=Z,3.0nm,0.2s						
SHB	Sechelt	3.22	77	Pn	Pn	09 18 06.2	-1.5
SHB				Trac		09 18 50.4	
	comp=Z,8.0nm,0.2s						
LZB	Mount Lazard	3.24	94	Pn	Pn	09 18 06.1	-1.9
LZB				Trac		09 18 44.2	
	comp=Z,1.0nm,0.3s						
BBB	Bella Bella	3.26	6	Pn	Pn	09 18 06.3	-2.0
BBB				Sn	Sn	09 18 42.2	-5.4
BBB				Trac		09 18 46.0	
	comp=Z,13nm,0.1s						
GOBB	Galiano Island	3.41	88	Pn	Pn	09 18 09.7	-0.8
BIB	Bowen Island	3.56	81	Pn	Pn	09 18 10.8	-1.8
WPB	Watts Point	3.66	77	Pn	Pn	09 18 11.9	-2.0
VDB	Vedder Mountai	4.34	87	Pn	Pn	09 18 21.8	-1.8

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*NEIC **04** 09:19:05.0, 19.08N×67.76W, h5^{km}, MD3.6(RSPR), After RSPR.*

RSPR 04 09:19:09.3, 19.08N×67.76W, h5^{km}±22^{km}, MD3.6/12, **MD3.6**/12, **9C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.87	135	⇑eP	Pb	09 19 24.1	-2.3
AGPR				eS	Sb	09 19 36.4	-1.8
LRS	Lares	1.17	132	⇓eP	Pb	09 19 28.5	-3.1
LRS				eS	Sb	09 19 44.2	-2.7
AOPR	Arecibo Observ	1.21	127	⇑eP	Pb	09 19 29.1	-3.1
CRPR	Cabo Rojo, PR	1.24	150	⇑eP	Pb	09 19 30.1	-2.6
CRPR				eS	Sb	09 19 47.1	-1.7
MGP	Maguayo	1.25	149	⇑eP	Pb	09 19 30.1	-2.8
MGP				eS	Sb	09 19 47.2	-1.9
PORP	Portuguez	1.48	134	⇓eP	Pn	09 19 33.3	-3.4
PORP				eS	Sb	09 19 51.7	-4.1
SJG	San Juan	1.81	122	⇓eP	Pn	09 19 38.1	-3.2
SJG				eS	Sn	09 19 59.8	-5.1
SJG	San Juan	1.81	122	⇑eP	Pn	09 19 38.5	-2.8
SJG				eS	Sn	09 20 01.0	-3.9
CBYP	Canovanas	1.98	114	⇑eP	Pn	09 19 41.3	-2.5
CPD	Cerro la Pandu	2.04	120	⇑eP	Pn	09 19 41.5	-3.1
CPD				eS	Sn	09 20 05.8	-4.9
HUMP	Col San Antoni	2.04	117	⇑eP	Pn	09 19 41.8	-2.9
HUMP				eS	Sn	09 20 07.0	-3.8
MTP	Monte Pirata	2.31	115	⇑eP	Pn	09 19 45.3	-3.2
MTP				eS	Sn	09 20 13.7	-4.0

WEL 04 09:27:32.9±0.6, **36.86S×177.31E, h170^{km}±8^{km}, ML3.6**/11, **1C, Error ellipse: s-maj=8.4km s-min=7.4km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.06	132	PN	P	09 27 59.6	-0.7
MXZ				SN	S	09 28 21.5	+0.1
MXZ				SN	S	09 28 21.7	+0.2
URZ	Urewera	1.41	187	⇑PN	P	09 28 03.7	+0.2
URZ				SN	S	09 28 26.1	-1.1
URZ				SN	S	09 28 26.2	-0.9
PUZ	Puketiti	1.42	148	SN	S	09 28 26.2	-1.3
PUZ				SN	S	09 28 26.3	-1.2
MWZ	Matawai	1.48	173	PN	P	09 28 04.1	-0.2
MWZ				SN	S	09 28 27.8	-0.7
BKZ	Black Stump Fm	2.39	195	PN	P	09 28 13.3	-1.0
BKZ				SN	S	09 28 43.2	-2.9
TSZ	Takapari Road	3.37	198	PN	P	09 28 24.0	-2.3
TSZ				eSN	S	09 29 03.3	-4.2
MRZ	Mangatainoka R	4.03	199	PN	P	09 28 31.4	-3.5
MRZ				eSN	S	09 29 15.9	-6.7
CAW	Cannon Point	4.59	202	PN	P	09 28 37.7	-4.4
NNZ	Nelson	5.32	214	PN	P	09 28 47.3	-4.4
THZ	Tophouse	5.97	214	ePN	P	09 28 55.7	-4.5

IDC 04 09:40:48.2±2.0, **46.80N×153.17E, mb3.7**/5, **mb1 3.9**/6, **mb1mx3.7**/22, **mbtmp3.7**/6, **ML3.5**/1, **Error ellipse: s-maj=62.6km s-min=25.7km az=0.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	7.91	254	Pn	Pn	09 42 44.6	-2.6
	0.7nm,0.3s,baz=85,slow=17,SNR=4.6						
MKAR	Makanchi Array	46.95	297	P	P	09 49 19.8	-2.4
	0.1nm,0.3s,baz=58,slow=8.5,SNR=3.5						
NVAR	Mina Array Bea	62.37	62	P	P	09 51 12.3	-2.5
	0.5nm,0.7s,baz=310,slow=7.3,SNR=5.1						
FINES	FINESS Array B	64.01	335	P	P	09 51 23.8	-1.3
	0.7nm,0.5s,baz=34,slow=6.9,SNR=8.7						
NOA	NORSAR Array B	68.19	341	P	P	09 51 49.5	-2.3
	0.3nm,0.6s,baz=21,slow=4.5,SNR=2.9						
TXAR	Lajitas Array	77.43	61	P	P	09 52 45.8	-1.0
	0.4nm,0.5s,baz=297,slow=4.9,SNR=18						

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*TAP **04** 09:48:01.1, 24.66N×122.04E, h57^{km}±1^{km}, ML3.4*

JMA 04 09:48:00.1±0.2, **24.88N×122.11E, h66^{km}±3^{km}, M2.5, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.92	117	P	P	09 48 17.5	-0.1
YOJ				eS	S	09 48 30.3	-0.3
IRIF	Iriomote-Funau	1.57	110	P	P	09 48 26.3	-0.1
IRIF				S	S	09 48 45.4	-0.5
HATJ	Hateruma jima	1.75	118	P	P	09 48 28.7	-0.1
HATJ				eS	S	09 48 50.3	+0.2
JKRS	Kuro-shima	1.84	110	P	P	09 48 30.3	+0.1
JKRS				eS	S	09 48 52.0	-0.3
JIJ	Ishigaki jima	1.92	105	P	P	09 48 31.2	0.0
JIJ				eS	S	09 48 53.7	-0.5
JTJ	Tarama	2.37	95	eS	S	09 49 07.2	+1.8

IDC 04 09:56:03.7±2.1, **4.27N×93.75E, mb3.6**/3, **mb1 3.8**/4, **mb1mx3.5**/20, **mbtmp3.7**/4, **ML4.1**/1, **MS2.7**/1, **Ms1 2.9**/1, **ms1mx2.5**/19, **Error ellipse: s-maj=90.0km s-min=31.7km az=58.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.99	19	Pn	P	09 59 39.1	+0.3
	0.2nm,0.3s,baz=210,slow=12,SNR=8.7						
CMAR				LR	LR	10 06 43.4	
	comp=Z,24nm,18.4s,baz=80,slow=43						
MKAR	Makanchi Array	43.51	349	P	P	10 04 07.2	-3.5
	0.4nm,0.4s,baz=153,slow=8.1,SNR=4.1						
ASAR	Alice Springs	47.98	127	P	P	10 04 44.5	-2.1
	0.2nm,0.4s,baz=295,slow=7.9,SNR=4.4						
FINES	FINESS Array B	75.71	333	P	P	10 07 52.2	-0.4
	0.8nm,0.8s,baz=100,slow=8.5,SNR=3.3						

IDC 04 10:01:29.2±1.9, **8.84S×130.14E, mb4.2**/1, **mb1 3.8**/3, **mb1mx3.6**/13, **mbtmp3.7**/3, **ML3.3**/2, **Error ellipse: s-maj=101.0km s-min=30.8km az=68.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	11.77	160	Pn	P	10 04 18.1	-3.4
	0.2nm,0.3s,baz=339,slow=10,SNR=21						
WRA				Sn	S	10 06 26.2	-8.6
	0.4nm,0.3s,baz=342,slow=22,SNR=6.0						
ASAR	Alice Springs	15.18	167	Pn	P	10 05 05.8	-1.1
	0.2nm,0.3s,baz=346,slow=14,SNR=10						
ASAR				Sn	S	10 07 49.8	-6.9
	0.1nm,0.3s,baz=348,slow=27,SNR=3.1						
MKAR	Makanchi Array	69.83	327	P	P	10 12 41.8	-2.0
	1.4nm,0.6s,baz=126,slow=7.7,SNR=12						

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*PRU **04** 10:16:08.2, 44.39N×10.48E*

*CSEM **04** 10:16:09.9±0.1, 44.59N×10.41E, h10^{km}, ML3.1/18, Error ellipse: s-maj=1.5km s-min=1.2km az=101.0*

*ROM **04** 10:16:10.1±0.2, 44.56N×10.36E, h25^{km}±3^{km}, Md2.9/16, Ml2.7/8, Error ellipse: s-maj=3.7km s-min=3.2km az=52.0*

*NEIC **04** 10:16:10.3±0.7, 44.57N×10.42E, h10^{km}, ML3.1(LDG), ML3.0(STR), Error ellipse: s-maj=10.3km s-min=4.7km az=140.0*

*GEN **04** 10:16:11.3, 44.55N×10.46E, h13^{km}, ML2.7*

*LDG **04** 10:16:12.0±0.1, 44.58N×10.37E, h10^{km}, Ml3.1/17, Error ellipse: s-maj=3.3km s-min=2.7km az=10.0*

*STR **04** 10:16:12.6±0.7, 44.73N×10.25E, h10^{km}±1^{km}, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 04 10:16:11.4±0.3, **44.53N**±0.02×**10.34E**±0.03, **h25^{km}**±3^{km}, **n84, σ1^{s}17**/123, **6C-1D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VALM		0.19	199	P	Pb	10 16 16.6	-0.3
GRAM		0.20	259	P	Pb	10 16 17.2	+0.2
GSCL	Gusciola	0.25	135	Pg	Pb	10 16 16.5	-1.2
GSCL				Sg	Sb	10 16 21.4	-0.6
BACM		0.31	217	P	Pb	10 16 18.8	+0.2
SARO	Sassorosso	0.35	172	P	Pb	10 16 18.4	-0.7
VLC	Villacollemand	0.37	174	Pg	Pb	10 16 19.4	-0.1
VLC				Sg	Sb	10 16 25.3	+0.3
	274nm,0.8s						
CODM		0.37	248	P	Pb	10 16 20.1	+0.6
VINC	Vinca	0.41	199	P	Pb	10 16 20.4	+0.3
ZCCA	Zocca	0.49	111	Pg	Pb	10 16 21.5	+0.1
BDI	Bagni Di Lucca	0.50	158	Pg	Pb	10 16 20.4	-1.2
RAVA	Ravarino	0.60	68	Pg	Pb	10 16 22.7	-0.5
RAVA				Sg	Sb	10 16 32.0	+0.7
	1µm,0.9s						
MAIM		0.62	170	P	Pb	10 16 23.0	-0.6
FNVD	Fontana Vidola	0.67	122	Pg	Pb	10 16 24.7	+0.4
	147nm,0.7s						
BOB	Bobbio (Coli)	0.68	291	Pg	Pb	10 16 25.2	+0.7
	248nm,0.6s						
PII	Pisa	0.82	170	Pg	Pb	10 16 26.8	0.0
SEI	Scarperia	0.87	123	Pg	Pb	10 16 28.5	+0.8
	226nm,0.3s						
GENL	Genova Univers	0.99	263	P	Pb	10 16 29.7	0.0
VMG	Vicchio	1.04	123	Pg	Pn	10 16 31.6	+1.2
	228nm,0.7s						
SAL	Salo	1.09	7	Pg	Pn	10 16 30.5	-0.7
SAL				Sg	Sb	10 16 46.4	+1.2
	665nm,0.4s						
PGD	Poggio Sodo	1.19	123	Pg	Pn	10 16 33.7	+1.0
	37nm,0.7s						
SFI	Santa Sofia	1.25	119	Pg	Pn	10 16 34.8	+1.3
	42nm,0.7s						
CSNT	Castellina Chi	1.26	147	Pn	Pn	10 16 33.5	-0.2
PCP	Pian Castagno	1.28	271	P	Pn	10 16 35.0	+1.1
PCP				S	Sn	10 16 51.1	+0.7
MDI	Monti di Nese	1.32	341	Pn	Pn	10 16 34.7	+0.2
MDI				Sn	Sn	10 16 53.8	+2.3
	155nm,0.4s						
CRE	Caprese Michel	1.48	127	Pn	Pn	10 16 36.1	-0.6
MABI	Malga Bissina	1.53	5	Pn	Pn	10 16 36.4	-1.1
	73nm,0.3s						
FIN	Finale Ligure	1.56	259	Pn	Pn	10 16 38.6	+0.7
	62nm,0.4s						
FIN	Finale Ligure	1.56	259	P	Pn	10 16 38.0	+0.1
FIN	Finale Ligure	1.56	259	Pn	Pn	10 16 38.6	+0.7
	62nm,0.4s						
VAI	Varese	1.74	321	Pn	Pn	10 16 40.0	-0.5
	52nm,0.4s						
CTI	Castel Tesino	1.78	31	Pn	Pn	10 16 39.1	-2.0
ROB	Roburent	1.78	263	P	Pn	10 16 41.5	+0.4
IMI	Imperia	1.86	251	Pn	Pn	10 16 43.0	+0.7
	111nm,0.7s						
IMI	Imperia	1.86	251	P	Pn	10 16 42.3	0.0
IMI	Imperia	1.86	251	Pn	Pn	10 16 43.0	+0.7
	111nm,0.7s						
MONE	Monesi	1.91	257	P	Pn	10 16 43.6	+0.7
BRMO	Bormio	1.95	1	Pn	Pn	10 16 44.3	+0.8
ORX	Oropa	2.00	304	P	Pn	10 16 44.6	+0.4
NEGI	Negi	2.01	251	P	Pn	10 16 44.1	-0.3
APPI	Appiano	2.05	18	Pn	Pn	10 16 43.7	-1.2
	106nm,0.3s						
SAOF	Saorge	2.07	256	P	Pn	10 16 46.4	+1.2
SAOF				S	Sn	10 17 14.1	+3.6
TRAV		2.08	299	P	Pn	10 16 46.0	+0.6
ENR	Entracque	2.11	263	P	Pn	10 16 46.3	+0.5
AUTN	L'Aution	2.16	257	P	Pn	10 16 47.8	+1.3
AUTN				S	Sn	10 17 15.8	+3.1
STV2	Anna di Valdie	2.18	264	P	Pn	10 16 47.5	+0.7
SBF	Sospel	2.19	253	ePn	Pn	10 16 47.8	+0.9
SBF				eSn	Sn	10 17 13.0	-0.5
	41nm,0.3s						
PGF	Pioggiola	2.21	207	ePn	Pn	10 16 47.1	-0.1
PGF				eSn	Sn	10 17 13.5	-0.4
	6.5nm,0.2s						
RSP	Reno Superiore	2.28	287	P	Pn	10 16 48.6	+0.4
TOUF	Mont Tournerai	2.28	258	P	Pn	10 16 49.7	+1.5
TOUF				S	Sn	10 17 20.4	+4.7
PZZ	Prazzo	2.31	271	P	Pn	10 16 49.2	+0.5
MVIF	Mont Vial	2.38	256	P	Pn	10 16 51.9	+2.3
MVIF				S	Sn	10 17 23.2	+5.0
LSD	Ceresole Reale	2.44	293	P	Pn	10 16 53.2	+2.7
MBDF	Montbardon	2.55	276	ePn	Pn	10 16 53.9	+1.8
MBDF				eSn	Sn	10 17 21.6	-1.1
	22nm,0.5s						
RRL	Cesana Torines	2.56	280	P	Pn	10 16 54.3	+2.0
SEST	Monte Rota	2.58	30	Pn	Pn	10 16 51.5	-1.1
	58nm,0.9s						
CALN	Calern	2.60	254	P	Pn	10 16 54.7	+1.9
CALN				S	Sn	10 17 28.3	+4.4
LPG	La Plagne	2.72	292	ePn	Pn	10 16 53.9	-0.6
LPG				eSn	Sn	10 17 25.5	-1.5
	8.3nm,0.5s						
LPL	La Plagne	2.74	292	ePn	Pn	10 16 54.9	+0.1
LPL				eSn	Sn	10 17 25.5	-2.0
LPL				eSg	Sn	10 17 38.9	+11
	9.2nm,0.3s						
SQTA	Sankt Quirin	2.76	12	⇑iPN	Pn	10 16 55.1	0.0
SQTA				i SN	Sn	10 17 29.8	+1.8
DAVA	Damuels	2.78	354	⇑iPN	Pn	10 16 55.5	+0.2
DAVA				i SN	Sn	10 17 30.1	+1.7
FRF	La Foret Royal	2.83	251	ePn	Pn	10 16 55.9	-0.2
FRF				eSn	Sn	10 17 28.8	-1.0
	34nm,0.2s						
MOTA	Moosalm	2.87	10	⇑iPN	Pn	10 16 56.2	-0.4
MOTA				i SN	Sn	10 17 31.9	+1.2
WTTA	Wattenberg	2.88	18	⇑iPN	Pn	10 16 56.7	-0.1
WTTA				i SN	Sn	10 17 32.7	+1.6
VOY	Vojsko	2.93	58	ePn	Pn	10 16 54.0	-3.5
VOY				eSn	Sn	10 17 27.3	-4.9
WATA	Walderalm	2.94	17	⇓iPN	Pn	10 16 57.4	-0.2
WATA				i SN	Sn	10 17 33.4	+0.9
LMR	La Mourre	3.01	248	ePn	Pn	10 16 58.9	+0.3
LMR				eSn	Sn	10 17 33.0	-1.3
	48nm,0.5s						
ORIF	Oris-en-Rattie	3.20	279	eP	Pn	10 17 04.1	+2.8
ORIF				eSn	Sn	10 17 37.5	-1.6
	20nm,0.6s						
KBA	Koelnbreinsper	3.31	38	⇑iPN	Pn	10 17 02.3	-0.5
KBA				i SN	Sn	10 17 41.6	-0.2
SMRF	Simiane la Rot	3.46	262	ePn	Pn	10 17 05.1	0.0
SMRF				eSg	Sn	10 18 02.0	+16
	5.1nm,0.4s						
CABF	La Chapelle	3.64	306	ePn	Pn	10 17 07.9	+0.4
CABF				eSn	Sn	10 17 47.4	-2.8
	11nm,0.6s						
VIVF	Saint-Julien-l	4.05	277	ePn	Pn	10 17 12.8	-0.6
VIVF				eSn	Sn	10 17 58.1	-2.6
	2.2nm,0.2s						
HINF	Hinteralfeld	4.08	325	ePn	Pn	10 17 12.5	-1.4
HINF				eSn	Sn	10 17 56.2	-5.2
	12nm,0.3s						
MOA	Molln	4.30	38	⇑iPN	Pn	10 17 15.1	-1.8
MOA				i SN	Sn	10 18 06.3	-0.6
CDF	Champ du Feu	4.42	333	ePn	Pn	10 17 16.3	-2.4
CDF				eSn	Sn	10 18 04.6	-5.4
	13nm,0.4s						
HAU	Haudompre	4.44	323	ePn	Pn	10 17 17.5	-1.5
HAU				eSn	Sn	10 18 05.8	-4.8
	29nm,0.5s						
LASF	Ste Croix	4.67	267	ePn	Pn	10 17 20.5	-1.7
GEC2	GERESS Array S	4.90	27	ePn	Pn	10 17 21.7	-3.7
GEC2				eSn	Sn	10 18 14.3	-7.8
SMF	Signal de Mont	5.03	297	ePn	Pn	10 17 25.5	-1.7
SMF				eSn	Sn	10 18 20.6	-4.6
	8.3nm,0.4s						
KHC	Kasperske Hory	5.11	25	ePN	Pn	10 17 24.8	-3.6
KHC				ePG	Pn	10 17 44.5	+16
KHC				eSN	Sn	10 18 20.3	-7.1
KHC				ex	x	10 18 35.6	
KHC				ex	x	10 18 49.0	
LOR	Lormes	5.29	303	ePn	Pn	10 17 29.1	-1.8
LOR				eSn	Sn	10 18 26.5	-5.3
	20nm,0.4s						
MEZF	Maizieres J'vi	5.39	319	ePn	Pn	10 17 28.5	-3.9
SSF	Saint Saulge	5.41	300	eSn	Sn	10 18 29.2	-5.6
	1.4nm,0.3s						
BGF	Bois d'Agland	5.64	294	ePn	Pn	10 17 34.1	-1.8
MTLF	Montolieu	5.98	261	ePn	Pn	10 17 39.1	-1.6

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*IDC **04** 10:22:05.0±3.4, 40.34S×176.54E, mb3.8/3, mb1 3.9/5, mb1mx3.8/14, mbtmp3.7/5, ML3.0/1, Error ellipse: s-maj=72.2km s-min=23.4km az=126.0*

*WEL **04** 10:22:08.0±0.3, 40.39S×176.71E, h16^{km}±1^{km}, ML3.7/21, Error ellipse: s-maj=2.7km s-min=1.4km az=90.0*

WEL Felt in the Hawke's Bay region, maximum reported intensity MM 4.

*NEIC **04** 10:22:08.4, 40.38S×176.72E, h18^{km}, ML3.7(WEL), After WEL.*

NEIC Felt at Porangahau.

ISC 04 10:22:06.2±0.9, **40.49S**±0.03×**176.93E**±0.08, **h31^{km}**±4^{km}, **n65, σ1^{s}08**/75, **mb3.6**/3, **4C-1D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PWZ	Pawanui	0.46	354	P	Pb	10 22 16.0	0.0
PWZ				S	Sb	10 22 22.0	-0.8
PWZ	Pawanui	0.46	354	⇑P*	Pb	10 22 16.0	0.0
PWZ				S*	Sb	10 22 21.6	-1.2
BFZ	Birch Farm	0.55	249	P	Pb	10 22 19.5	+2.1
BFZ	Birch Farm	0.55	249	⇑P*	Pb	10 22 19.6	+2.1
BFZ				eS*	Sb	10 22 28.1	+2.9
TSZ	Takapari Road	0.85	300	P	Pn	10 22 20.1	-2.0
TSZ	Takapari Road	0.85	300	⇓P*	Pb	10 22 20.1	-2.3
TSZ				S*	Sb	10 22 28.6	-5.0
MRZ	Mangatainoka R	1.04	260	P	Pn	10 22 25.5	+0.7
MRZ	Mangatainoka R	1.04	260	⇑P*	Pb	10 22 25.5	0.0
MRZ				S*	Sb	10 22 38.1	-0.8
MTW	Mount Morrison	1.27	238	P	Pn	10 22 29.3	+1.2
MTW	Mount Morrison	1.27	238	⇑P*	Pb	10 22 29.3	-0.1
MTW				eS*	Sb	10 22 46.0	+0.6
BKZ	Black Stump Fm	1.36	346	eP	Pn	10 22 29.3	-0.1
BKZ	Black Stump Fm	1.36	346	PN	Pn	10 22 29.8	+0.4
BKZ				eSN	Sn	10 22 45.7	-0.9
MOVZ	Moawhango	1.41	320	PN	Pn	10 22 30.0	0.0
MOVZ				SN	Sn	10 22 45.6	-2.1
PAWZ	Paruwai Farm	1.45	231	P*	Pb	10 22 31.9	-0.4
CAW	Cannon Point	1.54	246	P	Pn	10 22 32.8	+0.9
CAW	Cannon Point	1.54	246	P*	Pb	10 22 32.8	-1.1
WNVZ	Wahianoa	1.54	318	P	Pn	10 22 32.7	+0.7
WNVZ	Wahianoa	1.54	318	PN	Pn	10 22 32.7	+0.7
TUVZ	Tukino	1.56	321	PN	Pn	10 22 33.2	+0.9
MSWZ	Moikau Station	1.57	233	P	Pn	10 22 33.4	+1.0
MSWZ	Moikau Station	1.57	233	PN	Pn	10 22 33.2	+0.8
MTVZ	Mangateitei	1.57	314	PN	Pn	10 22 33.1	+0.8
KIW	Kapiti Island	1.58	256	P	Pn	10 22 33.2	+0.7
KIW	Kapiti Island	1.58	256	P*	Pb	10 22 33.1	-1.5
FWVZ	Far West T-bar	1.62	319	P	Pn	10 22 34.2	+1.1
FWVZ	Far West T-bar	1.62	319	PN	Pn	10 22 33.9	+0.8
OTVZ	Oturere	1.64	323	PN	Pn	10 22 34.0	+0.6
OTVZ				SN	Sn	10 22 53.3	-0.3
WAZ	Wanganui	1.66	296	P	Pn	10 22 34.6	+1.0
WAZ	Wanganui	1.66	296	PN	Pn	10 22 34.2	+0.6
NGZ	Ngauruhoe	1.66	322	P	Pn	10 22 34.8	+1.1
NGZ	Ngauruhoe	1.66	322	PN	Pn	10 22 34.5	+0.8
CNZ	Chateau	1.67	320	P	Pn	10 22 34.8	+1.0
CNZ	Chateau	1.67	320	PN	Pn	10 22 34.6	+0.8
WTVZ	West Tongariro	1.71	323	P	Pn	10 22 35.5	+1.1
WTVZ	West Tongariro	1.71	323	PN	Pn	10 22 35.4	+0.9
KATZ	Kakaramea	1.79	327	P	Pn	10 22 37.4	+2.0
KATZ	Kakaramea	1.79	327	PN	Pn	10 22 37.1	+1.6
WEL	Wellington	1.82	243	P	Pn	10 22 36.6	+0.7
WEL	Wellington	1.82	243	PN	Pn	10 22 36.6	+0.7
TWVZ	Taurewa	1.82	320	P	Pn	10 22 36.8	+0.8
TWVZ	Taurewa	1.82	320	PN	Pn	10 22 37.5	+1.6
MRW	Makara Radio	1.84	246	P	Pn	10 22 36.6	+0.3
MRW	Makara Radio	1.84	246	PN	Pn	10 22 36.6	+0.3
TCW	Tory Channel	2.14	249	P	Pn	10 22 40.4	-0.1
TCW	Tory Channel	2.14	249	PN	Pn	10 22 40.4	-0.1
VRZ	Vera Road	2.15	309	eP	Pn	10 22 41.9	+1.2
VRZ	Vera Road	2.15	309	PN	Pn	10 22 43.4	+2.7
MWZ	Matawai	2.20	12	eP	Pn	10 22 41.5	+0.1
MWZ	Matawai	2.20	12	PN	Pn	10 22 41.5	+0.1
URZ	Urewera	2.23	4	Pn	Pn	10 22 41.5	-0.4
	11nm,0.3s,baz=239,slow=8.0,SNR=28						
URZ				Sn	Sn	10 23 08.1	-0.6
	8.2nm,0.3s,baz=98,slow=15,SNR=6.0						
URZ	Urewera	2.23	4	eP	Pn	10 22 41.7	-0.1
URZ	Urewera	2.23	4	PN	Pn	10 22 41.7	-0.2
DUWZ	D'Urville Isla	2.31	261	PN	Pn	10 22 43.8	+0.8
TUWZ	Tuamarina	2.45	246	PN	Pn	10 22 44.1	-0.9
BSWZ	Blackbirch Sta	2.61	241	P	Pn	10 22 46.7	-0.5
NWEZ	Newall Road	2.65	296	P	Sn	10 23 14.1	-5.1
NNZ	Nelson	2.79	254	eP	Pn	10 22 49.6	-0.2
THZ	Tophouse	3.29	246	eP	Pn	10 22 55.5	-1.5
LTZ	Lake Taylor	4.17	235	eP	Pn	10 23 08.1	-1.4
MQZ	McQueen's Vall	4.52	223	eP	Pn	10 23 13.2	-1.2
RPZ	Rata Peaks	5.43	232	Pn	Pn	10 23 25.5	-1.7
	0.6nm,0.3s,baz=76,slow=19,SNR=4.1						
RPZ				Sn	Sn	10 24 23.5	-5.9
	1.2nm,0.3s,baz=36,slow=16,SNR=12						
STKA	Stephens Creek	29.63	276	P	P	10 28 08.0	-3.0
	0.5nm,0.3s,mb3.7,baz=140,slow=7.9,SNR=3.7						
ASAR	Alice Springs	39.70	282	P	P	10 29 36.5	-0.9
	0.5nm,0.5s,mb3.5,baz=134,slow=7.7,SNR=17						
WRA	Warramunga Arr	41.62	287	P	P	10 29 52.8	-0.4
	1.1nm,0.5s,mb3.7,baz=126,slow=8.3,SNR=36						
ARCES	ARCESS Array B	147.25	342	PKPbc	PKPdf	10 41 48.1	0.0
	1.5nm,0.8s,baz=59,slow=5.3,SNR=3.6						

CASC 04 10:32:28.3±2.1, **8.82N×84.15W, h9^{km}**±15^{km}, **MD3.8, 3C-3D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUS	Buena Vista	0.82	28	⇑eP	Pb	10 32 43.2	-1.2
BUS				eS	Sb	10 32 55.9	+0.5
LCR2	La Lucha 2	0.93	9	⇓eP	Pb	10 32 45.1	-0.9
LCR2				eS	Sb	10 32 59.4	+1.2
ACR	Cerro Adams	0.99	100	eP	Pb	10 32 45.8	-1.4
ACR				eS	Sb	10 32 59.6	-0.5
LAJ	Bijagual	1.03	2	⇓eP	Pb	10 32 45.8	-2.2
SJS	Escuela Geolog	1.11	5	eP	Pb	10 32 48.4	-0.8
SJS				eS	Sb	10 33 04.7	+1.0
PRS1	Puriscal	1.16	352	⇑eP	Pb	10 32 47.6	-2.6
SVTC	San Vito de Co	1.18	92	⇓eP	Pb	10 32 49.8	-0.6
CGA2	Cerro Gallo 2	1.23	345	eP	Pb	10 32 50.4	-0.8
VPS2	Volcan Poas 2	1.36	357	eP	Pb	10 32 53.1	-0.4
LIO	Limon	1.61	43	eP	Pn	10 32 56.2	-0.9
LIO				eS	Sb	10 33 18.5	+0.3
DVD	David	1.73	103	⇑eP	Pn	10 32 57.5	-1.2
TRTC	Tortuguero	1.79	14	eP	Pn	10 32 59.2	-0.5
TRTC				eS	Sn	10 33 23.6	+0.8
PTP1	Petroterminal	1.81	110	eP	Pn	10 32 55.0	-5.0
PTP1				eS	Sn	10 33 12.7	-11

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*IDC **04** 10:33:54.3±0.9, 2.19N×96.65E, mb4.2/14, mb1 4.4/15, mb1mx4.2/22, mbtmp4.3/15, ML4.5/1, MS3.5/2, Ms1 3.6/2, ms1mx2.9/23, Error ellipse: s-maj=37.5km s-min=14.3km az=48.0*

*BJI **04** 10:33:56.2, 2.06N×96.88E, h29^{km}, mB5.1, mb5.1, Ms4.5, Msz3.8*

*NEIC **04** 10:33:58.8±0.3, 2.13N×96.65E, h30^{km}, mb4.6/8, Error ellipse: s-maj=10.2km s-min=4.9km az=50.0*

ISC 04 10:33:59.9±3.6, **2.2N**±0.1×**96.8E**±0.2, **h53^{km}**±29^{km}, **n33, σ0^{s}47**/32, **mb4.4**/22, **MS3.5**/1, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	4.92	52	eP	P	10 35 13.0	-0.2
KSM	Kuching	13.54	93	eP	P	10 37 11.2	-0.1
CM31	Chiang Mai Arr	16.27	7	eP	P	10 37 47.8	+1.3

	18nm,0.8s						
CMAR	Chiang Mai Arr	16.27	7	Pn	P	10 37 45.6	-0.9
	0.6nm,0.3s,baz=197,slow=11,SNR=64						
CMAR				LR	LR	10 44 25.0	
	comp=Z,149nm,18.1s,baz=190,slow=39						
PKI	Pulchoki	27.45	338	eP	P	10 39 43.5	+0.3
	12nm,0.6s,mb4.6						
DMN	Daman	27.60	337	eP	P	10 39 43.8	-0.8
	9.6nm,0.3s,mb4.9						
KKN	Kakani	27.70	338	eP	P	10 39 45.9	+0.5
	25nm,1.0s,mb4.8						
LSA	Lhasa	27.84	349	eP	P	10 39 46.9	+0.2
GKN	Gorkha	28.14	337	eP	P	10 39 49.4	0.0
	15nm,0.6s,mb4.8						
KOLN	Koldanda	28.36	335	eP	P	10 39 51.8	+0.5
	14nm,0.7s,mb4.7						
GTA	Gaotai	37.12	4	P	P	10 41 07.4	+0.2
GTA				AP	pP	10 41 13.1	-7.9
GTA				XP	sP	10 41 16.6	-11
GTA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
KAKA	Kakadu	38.39	114	eP	P	10 41 17.7	-0.4
WRA	Warramunga Arr	42.94	123	P	P	10 41 55.8	+0.1
	comp=Z,3.3nm,0.6s,mb4.3,baz=301,slow=9.2,SNR=42						
WRAB	Tennant Creek	42.94	123	eP	P	10 41 55.3	-0.4
WB2	Warramunga Arr	42.95	123	eP	P	10 41 55.7	0.0
ASPA	Alice Springs	44.35	128	eP	P	10 42 07.5	+0.5
ASAR	Alice Springs	44.35	128	P	P	10 42 07.4	+0.4
	comp=Z,2.3nm,0.8s,mb4.0,baz=301,slow=8.1,SNR=32						
MKAR	Makanchi Array	46.15	346	P	P	10 42 21.1	0.0
	comp=Z,11nm,0.7s,mb4.9,baz=162,slow=8.0,SNR=86						
SONM	Songino Array	46.19	9	P	P	10 42 21.7	+0.3
	comp=Z,6.8nm,0.8s,mb4.6,baz=190,slow=8.5,SNR=29						
ULN	Ulaanbaatar	46.32	10	eP	P	10 42 22.5	0.0
	comp=Z,6.9nm,1.0s,mb4.5						
HIA	Hailar	50.81	19	eP	P	10 42 57.4	+0.2
MJAR	Matsushiro Arr	51.23	43	P	P	10 43 00.1	-0.4
	comp=Z,2.2nm,0.8s,mb4.2,baz=209,slow=7.5,SNR=5.2						
MJAR				LR	LR	11 04 03.8	
	comp=Z,48nm,20.3s,MS3.5,baz=180,slow=35						
PMG	Port Moresby	51.50	104	P	P	10 43 02.5	-0.4
	comp=Z,12nm,0.8s,mb4.9,baz=220,slow=6.7,SNR=4.0						
CTA	Charters Tower	53.34	117	P	P	10 43 16.8	+0.3
	comp=Z,7.1nm,0.8s,mb4.6,baz=341,slow=11,SNR=3.6						
STKA	Stephens Creek	54.35	132	P	P	10 43 24.1	+0.3
	comp=Z,4.6nm,1.3s,mb4.3,baz=286,slow=11,SNR=3.9						
BVAR	Borovoye Array	55.15	341	P	P	10 43 28.3	-1.0
	comp=Z,3.5nm,0.6s,mb4.6,baz=145,slow=8.9,SNR=24						
CHKZ	Chkalovo	55.63	341	eP	P	10 43 32.3	-0.4
	comp=Z,4.2nm,0.6s,mb4.7						
BRTR	Keskin Array B	68.11	312	P	P	10 44 55.8	-0.7
	comp=Z,0.3nm,0.4s,mb3.7,baz=117,slow=3.2,SNR=2.2						
AKASG	Malin Array Be	74.19	322	P	P	10 45 32.6	-0.2
	comp=Z,0.3nm,0.3s,mb3.7,baz=89,slow=5.0,SNR=4.9						
FINES	FINESS Array B	78.90	332	P	P	10 45 59.1	+0.1
	comp=Z,1.0nm,0.7s,mb3.9,baz=112,slow=10,SNR=6.0						
ARCES	ARCESS Array B	81.43	340	P	P	10 46 12.7	+0.2
	comp=Z,1.8nm,1.1s,mb3.9,baz=97,slow=7.3,SNR=3.4						
GERES	GERESS Array B	83.77	319	P	P	10 46 25.4	+0.6
	comp=Z,0.6nm,0.7s,mb3.9,baz=72,slow=4.2,SNR=4.0						
TXAR	Lajitas Array	143.01	30	PKP	PKPdf	10 53 28.8	+0.2
	comp=Z,0.2nm,0.6s,baz=267,slow=1.1,SNR=4.1						

IDC 04 10:39:57.6±8.0**, 8.74N×94.93E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/19**, mbtmp3.6**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/22**, Error ellipse: s-maj=445.0km s-min=27.2km az=58.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	39.43	346	P	P	10 47 29.3	-1.8
	1.0nm,0.7s,baz=164,slow=8.8,SNR=6.8						
MKAR				LR	LR	11 05 46.3	
	comp=Z,42nm,18.2s,baz=184,slow=39						
WRA	Warramunga Arr	48.14	127	P	P	10 48 39.8	-1.9
	0.3nm,0.3s,baz=307,slow=8.6,SNR=16						
ASAR	Alice Springs	49.88	131	P	P	10 48 53.0	-2.1
	0.3nm,0.5s,baz=306,slow=7.2,SNR=8.7						

WEL 04 10:46:44.1±0.3**, 36.72S×177.82E, h240**^{km}±2^{km}**, ML3.6**/8**, Error ellipse: s-maj=11.1km s-min=6.4km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWZ	Matawai	1.63	188	PN	P	10 47 22.8	-0.1
MWZ				SN	S	10 47 52.4	-0.5
URZ	Urewera	1.63	200	PN	P	10 47 22.7	-0.2
URZ				SN	S	10 47 52.7	-0.3
BKZ	Black Stump Fm	2.66	203	PN	P	10 47 33.4	+0.6
TSZ	Takapari Road	3.64	203	PN	P	10 47 44.6	+0.8
MRZ	Mangatainoka R	4.30	203	PN	P	10 47 51.7	0.0
KIW	Kapiti Island	4.71	208	PN	P	10 47 57.0	+0.3
CAW	Cannon Point	4.88	205	PN	P	10 47 58.8	+0.1
TUWZ	Tuamarina	5.58	211	PN	P	10 48 07.4	-0.1
LTZ	Lake Taylor	7.41	214	PN	P	10 48 30.5	-0.1

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*MOS **04** 10:55:03.2±0.8, 36.39N×21.28E, h10^{km}, mb3.9/1, Error ellipse: s-maj=19.7km s-min=6.6km az=95.6*

*NEIC **04** 10:55:09.9, 36.65N×21.38E, h32^{km}, MD3.8(ATH), After ATH.*

*ATH **04** 10:55:10.1, 36.66N×21.39E, h33^{km}±7^{km}, MD3.8/14, ML3.8*

*IDC **04** 10:55:11.0±4.1, 36.61N×21.39E, h50^{km}±39^{km}, mb3.5/5, mb1 3.5/8, mb1mx3.3/27, mbtmp3.6/8, ML3.9/2, Error ellipse: s-maj=69.1km s-min=27.1km az=35.0*

*CSEM **04** 10:55:10.0±0.1, 36.52N×21.44E, h65^{km}±1^{km}, ML3.8, Error ellipse: s-maj=3.5km s-min=1.8km az=50.0*

*HLW **04** 10:55:12.8, 36.50N×21.66E, h25^{km}, Mb3.4*

*PDG **04** 10:55:13.8±0.4, 37.07N×21.08E, h11^{km}±9^{km}*

ISC 04 10:55:08.0±0.5**, 36.55N**±0.04×**21.22E**±0.05**, h33**^{km}**, n51,** σ**1**^{s}.**15**/67**, mb3.6**/5**, 1C-10D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	0.85	42	ePN	Pn	10 55 23.9	+0.2
ITM				eSN	Sn	10 55 34.2	-0.9
VLI	Veliai	1.39	82	ePN	Pn	10 55 33.0	+1.5
VLI				eSN	Sn	10 55 50.6	+1.7
KYTH	Kithira	1.49	100	ePN	Pn	10 55 35.5	+2.6
RLS	Riolos of Patr	1.52	7	ePN	Pn	10 55 36.3	+3.0
VLS	Valsamata	1.70	343	ePB	Pb	10 55 38.3	-0.3
NAIG	Nisos Aigina	2.18	56	ePN	Pn	10 55 42.9	+0.1
NSAL	Nisos Salamina	2.25	52	ePN	Pn	10 55 43.9	+0.1
EVR	Evrytania	2.41	11	ePB	Pb	10 55 48.5	-2.1
ATH	Athens Observa	2.45	54	ePN	Pn	10 55 46.5	-0.1
LKR	Lokris	2.53	33	ePN	Pn	10 55 48.7	+0.9
MPAR	Parnis Oros	2.57	51	ePN	Pn	10 55 49.0	+0.7
PTL	Penteli	2.59	54	ePN	Pn	10 55 48.5	-0.1
JAN	Janina	3.12	355	ePN	Pn	10 55 58.8	+2.7
IDI	Anoyia	3.23	112	P	P	10 55 57.8	+0.1
	0.3nm,0.3s,baz=317,slow=18,SNR=2.1						
KEK	Kerkira	3.35	341	ePN	Pn	10 56 01.5	+2.0
TIP	Timpagrande	4.40	308	eP	P	10 56 16.6	+2.4
TIP	Timpagrande	4.40	308	eP	P	10 56 16.6	+2.4
PE1	Pezze di Greco	5.18	326	ePn	Pn	10 56 26.6	+1.2
SKO	Skopje	5.42	2	ePn	Pn	10 56 26.0	-2.7
SG1	Sgolgore (BA)	5.56	322	ePn	Pn	10 56 32.0	+1.2
ULC	Ulcinj	5.62	345	⇓iPn	Pn	10 56 31.0	-0.6
ULC				eSn	Sn	10 57 30.1	-5.7
CDT	Castel del Mon	5.95	321	ePn	Pn	10 56 37.3	+1.1
BUM	Brajici-Budva	6.02	343	⇓iPn	Pn	10 56 36.5	-0.8
BUM				eSn	Sn	10 57 39.8	-5.9
SLUM		6.04	146	P	P	10 56 36.0	-1.2
TTG	Podgorica	6.07	346	ePn	Pn	10 56 37.6	-0.3
TTG				eSn	Sn	10 57 41.1	-5.8
PVY	Plav	6.12	351	⇓iPn	Pn	10 56 38.9	+0.3
PVY				eSn	Sn	10 57 42.2	-5.9
PVY	Plav	6.12	351	⇓iPn	Pn	10 56 38.9	+0.3
PVY				eSn	Sn	10 57 42.2	-5.9
HCY	Herceg Novi	6.26	341	⇓iPn	Pn	10 56 39.0	-1.5
HCY				eSn	Sn	10 57 45.4	-6.2
HCY	Herceg Novi	6.26	341	⇓iPn	Pn	10 56 39.0	-1.5
HCY				eSn	Sn	10 57 45.4	-6.2
IVA	Berane	6.40	351	⇓iPn	Pn	10 56 42.7	+0.1
IVA				eSn	Sn	10 57 49.3	-5.9
NKY	Niksic	6.49	345	ePn	Pn	10 56 43.4	-0.4
NKY				eSn	Sn	10 57 50.9	-6.5
BRY	Bratogost	6.67	343	⇓iPn	Pn	10 56 45.7	-0.7
BRY				eSn	Sn	10 57 55.4	-6.6
UPM	Unac-Piva	6.88	346	⇓iPn	Pn	10 56 49.0	-0.3
UPM				eSn	Sn	10 58 00.3	-7.0
PLE	Pljevlja	6.92	349	ePn	Pn	10 56 49.6	-0.3
PLE				eSn	Sn	10 58 01.2	-7.0
HMAT	Matruh	7.31	136	P	P	10 56 54.3	-0.9
HMAT				S	S	10 58 07.8	-10
CII	Carovilli	7.45	316	P	P	10 57 06.1	+9.0
	8.6nm,0.6s						
SWA2		8.11	153	⇓P	P	10 57 06.0	-0.2
SWA1		8.19	151	⇑P	P	10 57 07.0	-0.3
SWA1				S	S	10 58 30.7	-9.0
BRTR	Keskin Array B	10.29	68	P	P	10 57 41.5	+5.2
	0.1nm,0.3s,baz=264,slow=11,SNR=4.9						
GERES	GERESS Array B	13.47	338	P	P	10 58 18.9	-0.2
	0.2nm,0.3s,baz=168,slow=14,SNR=3.6						
KHC	Kasperske Hory	13.76	338	eP	P	10 58 32.5	+10
AKASG	Malin Array Be	15.28	20	P	P	10 58 42.9	+0.2
	0.9nm,0.3s,baz=213,slow=10,SNR=6.1						
ZEI	Tsey	18.51	63	eP	P	10 59 20.6	-3.0
HFS	Hagfors	24.09	351	P	P	11 00 20.9	-0.3
	2.1nm,0.5s,mb3.9,baz=159,slow=13,SNR=14						
EKA	Eskdalemuir Ar	25.08	326	P	P	11 00 31.1	+0.3
	0.9nm,0.7s,mb3.4,baz=135,slow=8.3,SNR=3.8						
EKA	Eskdalemuir Ar	25.08	326	P	P	11 00 31.0	+0.2
FINES	FINESS Array B	25.11	6	P	P	11 00 30.0	-1.0
	1.0nm,0.5s,mb3.6,baz=166,slow=10,SNR=12						
NB2	NORSAR Subarra	25.32	349	P	P	11 00 32.6	-0.4
	1.1nm,0.6s,mb3.6,baz=156,slow=9.3						
NOA	NORSAR Array B	25.32	349	P	P	11 00 32.5	-0.4
	1.2nm,0.6s,mb3.6,baz=158,slow=9.2,SNR=7.6						
NOA	NORSAR Array B	25.32	349	P	P	11 00 32.5	-0.5
MKAR	Makanchi Array	45.70	57	P	P	11 03 25.6	-1.9
	0.4nm,0.6s,mb3.6,baz=280,slow=6.1,SNR=4.2						

IDC 04 10:57:36.2±5.7**, 4.81S×151.76E, h113**^{km}±47^{km}**, mb3.0**/3**, mb1 3.3**/4**, mb1mx3.1**/15**, mbtmp3.5**/4**, Error ellipse: s-maj=151.7km s-min=31.1km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.46	225	P	P	10 59 09.9	-0.2
	1.1nm,0.3s,baz=47,slow=7.9,SNR=3.6						
PMG				S	S	11 00 20.4	-2.5
	2.4nm,0.3s,baz=157,slow=15,SNR=5.5						
WRA	Warramunga Arr	22.67	227	P	P	11 02 28.7	-0.1
	0.3nm,0.4s,baz=53,slow=9.9,SNR=8.6						
ASAR	Alice Springs	25.45	221	P	P	11 02 54.0	-1.4
	0.2nm,0.4s,baz=52,slow=9.6,SNR=3.2						
ILAR	Eielson Array	82.56	22	P	P	11 09 46.0	-1.7
	0.6nm,0.7s,baz=247,slow=5.4,SNR=5.5						

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*NEIC **04** 11:10:15.2, 19.31N×66.74W, h25^{km}, MD3.5(RSPR), After RSPR.*

RSPR 04 11:10:15.2, 19.31N×66.74W, h25^{km}±26^{km}**, MD3.5**/12**, MD3.5**/12**, 9C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.91	203	⇑eP	Pb	11 10 30.3	-1.9
AGPR				eS	Sb	11 10 41.6	-2.4
AOPR	Arecibo Observ	0.96	181	⇑eP	Pb	11 10 30.8	-2.3
AOPR				eS	Sb	11 10 43.1	-2.2
LRS	Lares	1.02	186	⇑eP	Pn	11 10 31.5	-2.5
LRS				eS	Sb	11 10 44.8	-2.3
PORP	Portuguez	1.25	176	⇓eP	Pn	11 10 35.1	-2.3
PORP				eS	Sn	11 10 50.1	-3.5
SJG	San Juan	1.32	155	⇑eP	Pn	11 10 36.1	-2.2
SJG				eS	Sn	11 10 52.1	-3.1
SJG	San Juan	1.32	155	⇑eP	Pn	11 10 36.1	-2.1
SJG				eS	Sn	11 10 52.1	-3.0
MGP	Maguayo	1.34	194	⇓eP	Pn	11 10 36.6	-2.0
MGP				eS	Sn	11 10 53.2	-2.6
CRPR	Cabo Rojo, PR	1.35	195	⇑eP	Pn	11 10 36.5	-2.2
CRPR				eS	Sn	11 10 52.1	-3.8
ICM	Isla Caja Muer	1.43	172	⇑eP	Pn	11 10 38.1	-1.7
ICM				eS	Sn	11 10 54.9	-3.1
HUMP	Col San Antoni	1.44	144	⇓eP	Pn	11 10 37.4	-2.6
HUMP				eS	Sn	11 10 54.4	-3.7
CPD	Cerro la Pandu	1.49	148	⇑eP	Pn	11 10 38.0	-2.7
CPD				eS	Sn	11 10 56.5	-2.9
MTP	Monte Pirata	1.65	137	⇑eP	Pn	11 10 40.1	-2.9
MTP				eS	Sn	11 11 01.1	-2.5

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*HEL **04** 12:01:04.4±0.1, 67.08N×20.93E, ML2.1(UPP), ML1.7(BER), Explosion*

*IDC **04** 12:01:04.2±0.9, 67.10N×21.14E, mb1 2.8/4, mb1mx2.7/22, mbtmp2.7/4, ML2.6/4, Error ellipse: s-maj=19.0km s-min=6.8km az=114.0*

*BER **04** 12:01:05.9±2.0, 67.06N×20.81E, ML1.7, Suspected explosion*

ISC 04 12:01:02.7±0.3**, 67.09N**±0.02×**21.03E**±0.08**, n30,** σ**1**^{s}.**08**/40**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.18	280	i P	Pg	12 01 07.0	+0.7
ERTU	Ertsjaerv	0.71	139	i P	Pg	12 01 17.3	+0.4
PAJU	Pajala	0.82	94	i P	Pg	12 01 19.6	+0.5
KUA	Kurravaara	0.91	343	eP	Pg	12 01 20.4	-0.4
SALU	Saltoluokta	1.02	288	eP	Pb	12 01 22.3	-0.7
LANU	Lannavaara	1.03	20	eP	Pb	12 01 23.1	-0.1
NIKU	Nikkaluokta	1.09	316	eP	Pb	12 01 23.6	-0.6
SJUU	Sjulsmark	1.61	171	eP	Pn	12 01 33.1	+0.6
LILU	Lilltraesk	1.87	195	eP	Pn	12 01 37.0	+0.7
KIF	Kilpisjarvi	1.93	358	eP	Pn	12 01 39.2	+2.1
KIF				eSG	Sg	12 02 05.8	-1.1
KTK1	Kautokeino	2.10	22	eP	Pn	12 01 41.6	+2.0
KTK1				eS	Sn	12 02 06.4	-0.5
KTK1				AML	AML	12 02 16.2	
	comp=Z,10nm,0.2s						
SGF	Sodankyl	2.17	78	ePB	Pb	12 01 42.8	+0.3
SGF				eSG	Sg	12 02 12.8	-2.0
BURU	Burvik	2.52	177	eP	Pn	12 01 46.8	+1.2
TRO	Tromso	2.67	344	eP	Pn	12 01 47.9	+0.1
TRO				eS	Sn	12 02 20.8	-0.4
TRO				AML	AML	12 02 29.8	
	comp=Z,7.9nm,0.3s						
SVAU	Svanoeiden	2.67	194	eP	Pn	12 01 48.4	+0.6
MOR8	Moi Rana	2.78	254	eSG	Sg	12 02 25.6	-10
MOR8				AML	AML	12 02 29.6	
	comp=Z,7.4nm,0.4s						
OUL	Oulu	2.83	133	eP	Pn	12 01 51.4	+1.5
OUL				eS	Sn	12 02 24.5	-0.7
ARCES	ARCESS Array B	2.97	32	Pn	Pn	12 01 51.7	-0.3
	comp=Z,0.5nm,0.3s,baz=209,slow=14,SNR=19						
ARCES				Sn	Sn	12 02 29.6	+0.8
	comp=Z,1.1nm,0.3s,baz=211,slow=23,SNR=10						
ARCES				Lg		12 02 36.7	
	comp=Z,2.5nm,0.3s,baz=220,slow=32,SNR=11						
LOF	Lofoten	3.05	293	eSG	Sg	12 02 38.0	-6.2
LOF				AML	AML	12 02 51.1	
	comp=Z,4.9nm,0.4s						
UMAU	Umeaa	3.22	183	eP	Pn	12 01 56.0	+0.4
BREU	Bredtraesk	3.37	199	eP	Pn	12 01 57.6	-0.1
KEV	Kevo	3.47	37	eP	Pn	12 01 59.4	+0.2
KEV				eS	Sn	12 02 40.9	-0.6
KU4	Liikasenvaara	3.47	98	eP	Pn	12 02 00.8	+1.7
KJN	Kajaani	4.10	134	eP	Pn	12 02 08.5	+0.5
KJN				eS	Sn	12 02 55.2	-2.2
NSS	Namsos	4.53	240	eSG	Sg	12 03 24.0	-9.4
NSS				AML	AML	12 03 30.8	
	comp=Z,2.4nm,0.4s						
SUF	Sumiainen	4.90	151	eP	Pn	12 02 19.5	+0.1
KEF	Keuruu	5.21	160	eP	Pn	12 02 23.7	-0.1
FINES	FINESS Array B	6.08	156	Pn	Pn	12 02 35.8	-0.2
	comp=Z,0.2nm,0.3s,baz=348,slow=12,SNR=7.6						
FINES				Sn	Sn	12 03 44.1	-3.2
	comp=Z,0.4nm,0.3s,baz=343,slow=23,SNR=6.0						
NOA	NORSAR Array B	7.43	220	Pn	Pn	12 02 52.7	-2.4
	comp=Z,0.2nm,0.3s,baz=149,slow=14,SNR=2.3						
HFS	Hagfors	7.70	208	Pn	Pn	12 02 56.0	-2.8
	comp=Z,0.0nm,0.3s,baz=26,slow=12,SNR=6.6						
HFS				Sn	Sn	12 04 21.3	-6.5
	comp=Z,0.0nm,0.3s,baz=27,slow=24,SNR=2.3						

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*LDG **04** 13:02:22.4±0.3, 51.66N×7.05E, h1^{km}, Ml2.6/3, Error ellipse: s-maj=5.4km s-min=3.6km az=37.0, Suspected Mining induced.*

*BUG **04** 13:02:22.7, 51.61N×7.05E, h1^{km}, ML1.3*

*BGR **04** 13:02:22.2±1.1, 51.60N×6.89E, h1^{km}, ML2.0/4, Error ellipse: s-maj=13.3km s-min=4.4km az=89.0*

*BNS **04** 13:02:23.1±0.5, 51.63N×7.05E, h1^{km}, ML1.9*

*NEIC **04** 13:02:24.2±3.2, 51.48N×6.94E, h10^{km}, ML2.6(LDG), Error ellipse: s-maj=33.6km s-min=16.2km az=194.0*

ISC 04 13:02:21.2±0.4**, 51.60N**±0.02×**6.95E**±0.04**, n20,** σ**1**^{s}.**36**/37**, 1D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUG	Bochum--Univer	0.26	129	⇓iPg	Pg	13 02 27.9	+1.6
BUG				Sg	Sg	13 02 31.7	+2.0
WTSB	Winterswijk	0.38	346	ePg	Pg	13 02 29.9	+1.3
	16nm,0.4s						
WTSB				i Sg	Sg	13 02 34.6	+0.9
BNS	Bensberg	0.65	167	ePg	Pg	13 02 36.1	+1.9
BNS				eSg	Sg	13 02 45.5	+2.6
IBBN	Ibbenburen	0.87	35	ePg	Pg	13 02 39.5	+1.1
	SNR=1.8						
IBBN				eSg	Sg	13 02 49.6	-0.4
STB	Steinbach	1.01	184	ePg	Pg	13 02 42.9	+1.6
STB				eSg	Sg	13 02 57.3	+2.5
	30nm,0.3s						
KLL	Kalltalsperre	1.04	203	ePg	Pg	13 02 43.1	+1.3
KLL				eSg	Sg	13 02 58.8	+3.1
HGN	Heimansgroeve	1.05	218	ePn	Pn	13 02 43.1	+0.1
	5.7nm,0.3s,baz=35						
HGN				ePg	Pg	13 02 43.9	+1.7
	15nm,0.2s						
HGN				eSn	Sn	13 02 58.7	+0.1
HGN				eSg	Sg	13 03 00.1	+3.9
BGG	Burgeitz	1.42	170	ePg	Pg	13 02 48.9	-0.5
BGG				eSg	Sg	13 03 07.4	-0.9
	23nm,0.6s						
TNS	Taunus Mts	1.68	145	ePn	Pn	13 02 52.6	+0.6
TNS				ePg	Pg	13 02 53.4	-1.2
	SNR=2.1						
TNS				eSg	Sg	13 03 15.7	-1.2
GIVF	Givet	2.02	223	ePn	Pn	13 02 57.1	+0.3
GIVF				ePg	Pg	13 03 01.6	+0.2
GIVF				eSg	Sg	13 03 28.5	+0.2
	13nm,0.3s						
CLZ	Clausthal	2.14	82	ePg	Pg	13 03 02.7	-1.2
	SNR=1.4						
CLZ				eSn	Sn	13 03 25.3	-1.0
BAIF	Baives	2.32	229	ePg	Pg	13 03 07.3	-0.2
BAIF				eSg	Sg	13 03 37.8	-0.7
	4.2nm,0.3s						
RFYF	Reffroy	3.12	198	ePg	Pg	13 03 21.6	-1.9
CDF	Champ du Feu	3.20	176	ePn	Pn	13 03 13.1	-0.6
CDF				eSg	Sg	13 04 04.3	-3.4
	3.6nm,0.5s						
MEZF	Maizieres J'vi	3.33	202	ePn	Pn	13 03 14.9	-0.7
SFTF	Sexfontaines	3.62	201	ePn	Pn	13 03 19.0	-0.6
LOR	Lormes	4.78	206	ePn	Pn	13 03 34.4	-1.8
	baz=32						
SSF	Saint Saulge	5.07	208	ePn	Pn	13 03 38.2	-2.0
AVF	Avril sur Loir	5.36	207	ePn	Pn	13 03 42.5	-1.8
BGF	Bois d'Agland	5.72	210	ePn	Pn	13 03 47.1	-2.3

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*NEIC **04** 13:17:25.9, 16.81N×94.07W, h153^{km}, MD3.8(MEX), After MEX.*

MEX 04 13:17:25.9±0.9**, 16.81N×94.07W, h153**^{km}±13^{km}**, MD3.8, 3C, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.83	290	⇑iP	P	13 17 48.0	-1.8
CMIG				eS	S	13 18 05.6	-2.7
CCIG	Comitan	1.93	106	eP	P	13 17 59.6	-1.0
CCIG				i S	S	13 18 25.0	-2.3
HUIG	Huatulco	2.22	242	⇑iP	P	13 18 01.3	-2.8
HUIG				i S	S	13 18 31.7	-1.9
OXX	Oaxaca	2.56	276	eP	P	13 18 07.5	-0.9
OXX				eS	S	13 18 40.0	-1.0
VHO	Vista Hermosa	2.56	276	⇑eP	P	13 18 07.5	-1.1
VHO				i S	S	13 18 39.3	-1.8

IDC 04 13:43:57.6±1.5**, 11.53N×92.09E, mb3.7**/6**, mb1 3.9**/7**, mb1mx3.7**/22**, mbtmp3.7**/7**, ML3.5**/1**, MS2.6**/1**, Ms1 2.8**/1**, ms1mx2.5**/23**, Error ellipse: s-maj=46.0km s-min=20.7km az=67.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.55	43	Pn	P	13 46 16.9	-2.5
	0.1nm,0.3s,baz=238,slow=14,SNR=4.7						
CMAR				Sn	Sn	13 48 06.3	-2.5
	0.1nm,0.3s,baz=210,slow=27,SNR=2.5						
CMAR				LR	LR	13 49 28.9	
	comp=Z,37nm,19.9s,baz=220,slow=35						
MKAR	Makanchi Array	36.11	349	P	P	13 51 01.6	-1.6
	1.0nm,0.7s,baz=164,slow=8.4,SNR=11						
SONM	Songino Array	38.13	16	P	P	13 51 18.2	-1.9
	0.6nm,0.6s,baz=198,slow=7.8,SNR=4.8						
BVAR	Borovoye Array	44.90	342	P	P	13 52 14.1	-1.6
	0.2nm,0.3s,baz=124,slow=10,SNR=2.7						
WRA	Warramunga Arr	52.03	127	P	P	13 53 09.4	-2.1
	1.0nm,0.4s,baz=300,slow=10.0,SNR=25						
ASAR	Alice Springs	53.81	131	P	P	13 53 22.6	-2.1
	0.4nm,0.5s,baz=309,slow=7.2,SNR=9.9						
ILAR	Eielson Array	92.12	22	P	P	13 57 07.7	-2.1
	0.3nm,0.7s,baz=302,slow=3.7,SNR=4.7						

NNC 04 13:49:17.8±5.3**, 38.61N×72.39E, h245**^{km}±54^{km}**, mpv3.3, 4C-1D, Error ellipse: s-maj=57.1km s-min=37.4km az=18.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.33	21	P	P	13 50 24.2	-1.6
	6.5nm,0.8s						
AAK				⇑S	S	13 51 20.0	+1.2
	9.1nm,0.6s						
KK31	Karatay Array	4.71	343	⇑P	P	13 50 30.1	-0.4
	1.2nm,0.3s,baz=150,slow=11,SNR=9.0						
KK31				⇓S	S	13 51 27.3	+0.1
	1.9nm,0.3s,baz=148,slow=23,SNR=11						
AB31	Akbulak array	13.90	324	⇑P	P	13 52 24.6	-1.2
	0.9nm,0.7s,baz=134,slow=12,SNR=9.4						
AB31				⇑S	S	13 54 59.3	+4.7
	0.3nm,0.3s,baz=158,slow=24,SNR=4.5						

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*IDC **04** 13:55:10.7±1.0, 11.65N×92.27E, mb3.9/12, mb1 4.1/13, mb1mx3.9/22, mbtmp3.9/13, ML4.0/1, MS2.7/1, Ms1 2.9/1, ms1mx2.7/25, Error ellipse: s-maj=41.0km s-min=15.9km az=58.0*

*BJI **04** 13:55:14.6, 11.36N×92.58E, h46^{km}, mb4.2, Ms4.5, Msz4.3*

*NEIC **04** 13:55:15.6±0.5, 11.68N×92.32E, h30^{km}, mb4.4/3, Error ellipse: s-maj=12.2km s-min=9.3km az=62.0*

ISC 04 13:55:11.5±1.4**, 11.58N**±0.06×**92.07E**±0.06**, h23**^{km}±9^{km}**, n34,** σ**1**^{s}.**11**/35**, mb4.0**/16**, MS4.3**/1**, 2C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	0.66	83	⇑iP	Pb	13 55 25.3	+1.0
PBA				eS	Sb	13 55 33.2	+0.2
PBA				AML	AML	13 55 34.4	
	comp=N,27μm,0.2s						
PBA				AML	AML	13 55 34.5	
	comp=E,24μm,0.3s						
CM31	Chiang Mai Arr	9.53	43	P	P	13 57 29.8	-0.8
	comp=E,7.5nm,0.6s						
CMAR	Chiang Mai Arr	9.53	43	Pn	P	13 57 27.7	-2.9
	comp=E,0.4nm,0.3s,baz=236,slow=15,SNR=6.5						
CMAR				Sn	Sn	13 59 18.8	+0.7
	comp=E,0.1nm,0.3s,baz=211,slow=23,SNR=2.8						
CMAR				LR	LR	14 01 45.8	
	comp=E,44nm,18.4s,baz=225,slow=42						
VIS	Vishakhapatnam	10.43	307	eP	P	13 57 41.7	-1.3
VIS				eS	S	13 59 29.0	-11
VIS				AML	AML	13 59 34.3	
	comp=N,23nm,0.2s						
VIS				AML	AML	13 59 47.7	
	comp=E,33nm,0.7s						
KULM	Kulim	10.53	126	P	P	13 57 45.8	+1.4

BWNR	Bhubaneshwar	10.56	326	eP	P	13 57 42.6	-2.1
BWNR				eS	S	13 59 32.3	-11
BWNR				AML	AML	13 59 53.7	
	comp=E,75nm,0.4s						
MDRS	Chennai	11.65	279	ex	x	13 58 06.2	
PALK	Pallekele	12.01	250	P	P	13 58 10.2	+5.8
BLSP	Bilaspur	14.16	319	eP	P	13 58 32.7	-0.3
LSA	Lhasa	18.05	357	P	P	13 59 24.6	+1.9
BHPL	Bhopal	18.14	312	ex	x	13 59 45.7	
POO	Poona	18.90	294	ex	x	14 02 13.0	
ENH	Enshi	24.65	38	eP	P	14 00 30.3	-1.6
	comp=E,4.5nm,0.4s,mb4.3						
XAN	Xi'an	27.14	32	P	P	14 00 53.5	-1.5
GTA	Gaotai	28.56	13	P	P	14 01 08.0	+0.2
MKAR	Makanchi Array	36.06	349	P	P	14 02 14.0	+0.7
	comp=E,1.4nm,0.7s,mb4.0,baz=168,slow=8.7,SNR=17						
SONM	Songino Array	38.09	16	P	P	14 02 30.5	+0.2
	comp=E,0.9nm,0.5s,mb3.7,baz=216,slow=7.3,SNR=5.2						
MBWA	Marble Bar	42.39	140	P	P	14 03 05.7	-0.5
ZAL	Zalesovo	42.65	354	P	P	14 03 07.4	-0.5
	comp=E,0.8nm,0.4s,mb3.9,baz=29,slow=7.7,SNR=4.2						
CN2	Changchun	43.11	36	eP	P	14 03 11.0	-0.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
CN2				LR	LR		
	comp=N,200nm,16.0s,MS4.4						
CN2				LR	LR		
	comp=E,300nm,16.0s,MS4.4						
CN2				LR	LR		
	comp=Z,300nm,16.0s,MS4.3						
BVAR	Borovoye Array	44.85	342	P	P	14 03 26.5	+0.8
	comp=Z,0.3nm,0.5s,mb3.4,baz=146,slow=10,SNR=2.7						
CHKZ	Chkalovo	45.34	342	eP	P	14 03 30.6	+1.0
	comp=Z,1.9nm,0.6s,mb4.1						
WRA	Warramunga Arr	52.08	127	P	P	14 04 21.5	-0.7
	comp=Z,2.4nm,0.4s,mb4.5,baz=300,slow=10,SNR=72						
WRAB	Tennant Creek	52.08	127	eP	P	14 04 20.8	-1.4
	comp=Z,4.4nm,0.5s,mb4.6						
WB2	Warramunga Arr	52.08	127	⇑iP	P	14 04 21.5	-0.8
ASAR	Alice Springs	53.85	131	P	P	14 04 34.8	-0.5
	comp=Z,0.7nm,0.4s,mb3.9,baz=308,slow=6.8,SNR=14						
STKA	Stephens Creek	64.12	134	P	P	14 05 47.4	+0.8
	comp=Z,1.4nm,0.6s,mb4.1,baz=314,slow=9.0,SNR=7.0						
STKA	Stephens Creek	64.12	134	P	P	14 05 47.4	+0.8
FINES	FINESS Array B	68.51	332	P	P	14 06 15.5	+1.6
	comp=Z,1.5nm,0.8s,mb4.0,baz=135,slow=5.4,SNR=4.9						
ARCES	ARCESS Array B	71.11	340	P	P	14 06 30.9	+1.2
	comp=Z,1.7nm,0.9s,mb4.0,baz=117,slow=6.0,SNR=3.6						
GERES	GERESS Array B	73.73	318	P	P	14 06 47.1	+1.6
	comp=Z,0.5nm,0.8s,mb3.5,baz=63,slow=6.0,SNR=4.4						
NB2	NORSAR Subarra	75.53	330	P	P	14 06 56.5	+0.8
	comp=Z,0.5nm,0.6s,mb3.6,baz=92,slow=5.6						
NOA	NORSAR Array B	75.53	330	P	P	14 06 56.7	+1.1
	comp=Z,0.4nm,0.8s,mb3.4,baz=103,slow=7.4,SNR=3.2						
ILAR	Eielson Array	92.09	22	P	P	14 08 19.6	-0.1
	comp=Z,0.5nm,0.7s,mb3.9,baz=313,slow=5.4,SNR=7.0						

*IDC **04** 14:09:53.1±2.5, 8.23S×115.43E, mb3.6/4, mb1 3.9/4, mb1mx3.6/16, mbtmp3.7/4, Error ellipse: s-maj=188.0km s-min=24.1km az=51.0*

*DJA **04** 14:10:24.2±1.0, 8.49S×116.49E, h288^{km}±8^{km}, ML4.5/3, Error ellipse: s-maj=85.4km s-min=17.3km az=4.0*

ISC 04 14:10:23.6±1.1**, 8.0S**±0.3×**116.4E**±0.2**, h290**^{km}±13^{km}**, n9, σ1$\overset{s}{.}$11**/12**, mb3.5**/4**, 4C-4D, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEDI	Kedomdong	0.56	209	⇑ePg	P	14 11 01.1	-0.4
KEDI	Kedomdong	0.56	209	⇑ePn	P	14 11 01.4	-0.1
RATI	Rata	1.11	229	⇓ePn	P	14 11 04.0	+0.3
	700nm,0.2s						
RATI				⇓eSn	S	14 11 32.3	-2.8
KELI	Kelakatan	1.89	263	⇓ePn	P	14 11 10.8	+1.9
	472nm,0.2s						
KELI				⇑eSn	S	14 11 45.0	+0.8
SRDI	Scrawed	2.27	258	⇓ePn	P	14 11 13.2	+1.1
	198nm,0.2s						
SRDI				⇑eSn	S	14 11 48.8	-1.1
WRA	Warramunga Arr	21.06	126	P	P	14 14 45.9	-0.2
	1.8nm,0.6s,mb3.6,baz=301,slow=12,SNR=22						
ASAR	Alice Springs	22.91	135	P	P	14 15 04.4	+0.4
	1.6nm,0.5s,mb3.6,baz=309,slow=8.9,SNR=20						
STKA	Stephens Creek	33.39	139	P	P	14 16 37.1	+0.1
	0.4nm,0.3s,mb3.4,baz=307,slow=10.0,SNR=6.5						
MKAR	Makanchi Array	62.41	334	P	P	14 20 16.7	-1.2
	0.3nm,0.4s,mb3.3,baz=152,slow=6.3,SNR=5.7						

*NEIC **04** 14:21:59.1, 35.43S×72.98W, h1^{km}, ML4.2(GUC), After GUC.*

GUC 04 14:21:59.1±0.7**, 35.43S×72.98W, h1**^{km}±2^{km}**, MD4.1, ML4.2, 5C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCO	Chanco	0.47	130	i P	Pg	14 22 08.8	+0.3
CNCO				i S	Sg	14 22 15.8	+0.9
CNCO				AMP		14 22 24.1	
	comp=N,7μm,0.7s						
TALC	Talca	1.10	89	⇓iP	Pb	14 22 19.7	-0.9
TALC				i S	Sb	14 22 35.7	+0.4
TALC				AMP		14 22 38.0	
	comp=N,2μm,0.3s						
LNCH	Linares	1.20	111	⇑iP	Pb	14 22 21.5	-0.8
LNCH				i S	Sb	14 22 38.4	+0.3
LNCH				AMP		14 22 45.7	
	comp=N,9μm,0.6s						
CCHI	Chillan	1.38	148	⇓iP	Pb	14 22 23.9	-1.4
CCHI				i S	Sb	14 22 43.6	+0.2
CCHI				AMP		14 22 48.1	
	comp=N,3μm,0.3s						
NICH	Los Niches	1.50	74	⇑iP	Pn	14 22 26.6	-0.6
NICH				i S	Sb	14 22 47.0	+0.2
SFDO	San Fernando	1.81	64	⇑iP	Pn	14 22 31.1	-0.6
SFDO				i S	Sn	14 22 55.6	+0.1
LNV	Longovilo	1.96	42	i P	Pn	14 22 33.5	-0.3
LNV				i S	Sn	14 22 59.5	+0.2
CACH	El Canelo	2.36	57	⇑iP	Pn	14 22 40.5	+1.0
CACH				i S	Sn	14 23 11.8	+2.4
CICH	Cipreses	2.38	63	eP	Pn	14 22 40.6	+0.8
CICH				i S	Sn	14 23 11.8	+1.8
CHCH	Chadas Angostu	2.43	53	eP	Pn	14 22 41.5	+0.9
CHCH				i S	Sn	14 23 13.0	+1.7
TACH	Talagante	2.45	44	eP	Pn	14 22 41.2	+0.4
TACH				i S	Sn	14 23 13.1	+1.4
ANTU	Antumapu	2.68	47	AMP		14 23 29.4	
	comp=N,2μm,0.5s						
PCH	Pirque	2.72	49	eP	Pn	14 22 44.9	+0.2
PCH				i S	Sn	14 23 19.8	+1.1
SAN	Santiago	2.75	45	⇑iP	Pn	14 22 45.3	+0.2
SAN				i S	Sn	14 23 20.8	+1.4
SAN				AMP		14 23 33.5	
	comp=E,2μm,0.5s						
LMEL	Las Melosas	2.78	56	eP	Pn	14 22 46.4	+0.9
LMEL				i S	Sn	14 23 22.2	+2.0
LMEL				AMP		14 23 34.2	
	comp=N,2μm,0.6s						
DSCH	Colegio Aleman	2.84	45	AMP		14 23 34.7	
	comp=N,2μm,0.5s						
CLCH	Cerro Calan	2.86	46	AMP		14 23 38.6	
	comp=N,3μm,0.6s						
TRQA	Tornquist	9.21	110	eP	P	14 24 12.1	-4.0
	comp=N,6.1nm,0.6s						

*IDC **04** 14:22:22.1±1.4, 35.98N×80.97E, mb3.6/4, mb1 3.9/6, mb1mx3.6/22, mbtmp3.7/6, ML4.1/2, Error ellipse: s-maj=59.8km s-min=18.7km az=62.0*

*MOS **04** 14:22:24.8±1.9, 36.14N×80.92E, h33^{km}, mb3.5/4, Error ellipse: s-maj=31.9km s-min=12.5km az=107.6*

*NNC **04** 14:22:30.0±3.5, 36.36N×80.53E, h22^{km}±16^{km}, mpv4.2, Error ellipse: s-maj=23.5km s-min=12.7km az=146.0*

ISC 04 14:22:24.1±0.6**, 36.08N**±0.05×**81.1E**±0.1**, h33**^{km}**, n26, σ1$\overset{s}{.}$39**/28**, mb3.4**/5**, 4C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.33	324	⇓Pg	Px	14 24 52.7	
	10nm,0.7s						
AAK				⇓Lg		14 26 38.6	
	40nm,0.9s						
FRU	Bishkek	8.42	325	eP	P	14 24 26.0	-0.7
GKN	Gorkha	8.58	159	eP	P	14 24 26.2	-2.7
	7.2nm,0.4s						
KKN	Kakani	8.98	156	eP	P	14 24 33.1	-1.3
	9.2nm,0.5s						
GUN	Gumba	9.08	152	eP	P	14 24 35.4	-0.4
	12nm,0.4s						
PKI	Pulchoki	9.22	156	eP	P	14 24 36.1	-1.7
	10nm,0.5s						
MK31	Makanchi Array	10.74	4	⇑P	P	14 24 59.0	+0.3
	1.2nm,0.4s,baz=181,slow=13,SNR=44						
MK31				⇓S	S	14 26 57.2	-1.6
	7.0nm,0.8s,baz=175,slow=15,SNR=4.1						
MKAR	Makanchi Array	10.74	4	P	P	14 24 58.2	-0.5
MKAR				eS	S	14 26 57.3	-1.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	10.74	4	Pn	P	14 24 59.0	+0.3
	comp=Z,0.9nm,0.3s,baz=183,slow=13,SNR=37						
MKAR				Sn	S	14 26 58.5	-0.3
	comp=Z,1.0nm,0.3s,baz=188,slow=27,SNR=6.3						
KK31	Karatay Array	10.79	314	⇑P	P	14 24 55.2	-4.2
	comp=Z,0.8nm,0.5s,baz=122,slow=12,SNR=6.8						
KKAR	Karatay Array	10.79	314	i P	P	14 24 54.2	-5.1
BVA0	Borovoye Array	18.56	339	⇑P	P	14 26 40.9	+0.6
	comp=Z,1.0nm,1.2s,baz=146,slow=12,SNR=12						
BVA0	Borovoye Array	18.56	339	eP	P	14 26 42.0	+1.7
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.3s						
BVAR	Borovoye Array	18.56	339	P	P	14 26 42.0	+1.7
	comp=Z,0.9nm,0.3s,baz=143,slow=11,SNR=11						
NVS	Novosibirsk	18.82	4	eP	P	14 26 43.9	+0.5
AB31	Akbulak array	20.32	317	⇑P	P	14 26 58.9	-1.0
	comp=Z,2.8nm,0.8s						
AB31	Akbulak array	20.32	317	P	P	14 26 58.8	-1.1
AB31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZAK	Zakamensk	21.44	41	eP	P	14 27 11.0	-0.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s,mb2.9						
CMAR	Chiang Mai Arr	23.56	133	P	P	14 27 35.3	+2.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	Chiang Mai Arr	23.56	133	P	P	14 27 35.3	+2.8
	comp=Z,0.8nm,0.9s,mb3.1,baz=323,slow=9.0,SNR=3.8						
FINES	FINESS Array B	42.52	324	P	P	14 30 18.5	+0.8
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	42.52	324	P	P	14 30 18.5	+0.8
	comp=Z,1.2nm,0.6s,mb3.8,baz=104,slow=7.9,SNR=8.2						
TSM	Tawau	46.28	124	P	P	14 30 51.9	+3.3
WRA	Warramunga Arr	75.06	129	P	P	14 34 06.0	+1.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	75.06	129	P	P	14 34 06.0	+1.5
	comp=Z,0.5nm,0.8s,mb3.5,baz=324,slow=5.3,SNR=6.5						
ASAR	Alice Springs	77.56	132	P	P	14 34 20.1	+1.4
	comp=Z,0.4nm,0.6s,mb3.5,baz=316,slow=5.9,SNR=8.3						

*MAN **04** 14:28:31.9, 13.54N×120.66E, h12^{km}, mb5.5, ML4.4, MS4.7*

MAN Pto Galera Oriental Mindoro - Intensity IV.

*MOS **04** 14:28:33.5±1.8, 13.43N×120.52E, h33^{km}, mb4.7/20, MS4.3/5, Error ellipse: s-maj=17.8km s-min=8.3km az=117.6*

*BJI **04** 14:28:37.8, 13.48N×120.62E, h63^{km}, mB4.4, mb4.4, Ms4.3, Msz4.0*

*HRVD **04** 14:28:37.5±0.7, 13.46N×120.59E, h15^{km}±2^{km}, MW4.8/29, Centroid moment Tensor Solution. LP body waves: s6,c6; Mantle waves: s29,c51; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.22±.19; M$_{\theta\theta}$0.40±.11; M$_{\phi\phi}$-0.17±.14; M$_{r\theta}$1.14±.46; M$_{\theta\phi}$1.67±.09; M$_{\phi r}$-0.14±.39; Best double couple: M$_0$2.055×10^{16} NP1:φ$_s$6°,δ56°,λ-175°. NP2: φ$_s$273°,δ85°,λ-35°. Principal axes: T 2.094, Plg20°, Azm325°; N -.079, Plg55°, Azm86°; P -2.016, Plg27°, Azm224°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **04** 14:28:37.5±1.8, 13.48N×120.58E, h62^{km}±17^{km}, mb4.9/15 Error ellipse: s-maj=14.6km s-min=6.8km az=64.0*

*IDC **04** 14:28:47.1±5.7, 13.51N×120.51E, h151^{km}±55^{km}, mb3.7/14, mb1 3.8/14, mb1mx3.8/20, mbtmp4.1/14, MS3.7/2, Ms1 3.7/2, ms1mx3.4/41, Error ellipse: s-maj=25.6km s-min=10.8km az=66.0*

ISC 04 14:28:32.6±0.6**, 13.52N**±0.02×**120.63E**±0.03**, h28**^{km}±4^{km}**, n113, σ1$\overset{s}{.}$30**/121**, mb4.6**/42**, MS4.2**/10**, 6C-5D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.42	300	eP	Pb	14 28 41.0	-0.7
LUBP				i S	Sb	14 28 48.3	+0.4
LBPH	Los Banos	0.83	41	⇓eP	Pb	14 28 47.1	-1.1
ARP	Angono	1.13	27	⇑eP	Pn	14 28 51.5	-1.2
SJMP	San Jose	1.16	155	eP	Pn	14 28 54.0	+0.8
SJMP				eS	Sn	14 29 10.8	+2.6
BOAC	Boac	1.19	93	eP	Pn	14 28 52.1	-1.4
BOAC				i S	Sn	14 29 09.9	+1.1
NBP	Mount Natib	1.23	351	eP	Pn	14 28 53.2	-0.9
NZB	Bigte	1.41	19	⇓eP	Pn	14 28 56.7	0.0
BUSP	Coron	1.57	195	eP	Pn	14 28 59.7	+0.7
BUSP				i S	Sn	14 29 20.6	+2.1
POLP	Polilio Island	1.75	47	eP	Pn	14 29 01.5	-0.1
OTRP	Odiongan	1.79	130	eP	Pn	14 29 00.5	-1.6
AUQP	San Andres	2.00	95	eP	Pn	14 29 06.3	+1.1
SCZP	Santa Cruz	2.34	343	i P	Pn	14 29 11.4	+1.3
BALP	Baler	2.39	23	i P	Pn	14 29 12.4	+1.7
CUYO	Cuyo Island	2.69	172	eP	Pn	14 29 14.7	-0.3
RCP	Roxas	2.84	133	⇓eP	Pn	14 29 15.2	-2.1
BOLP	Bolinao	2.92	346	eP	Pn	14 29 19.6	+1.3
AAP	Anini-y	3.34	157	eP	Pn	14 29 24.4	+0.1
PVCP	Virac	3.43	88	i P	Pn	14 29 24.7	-0.9
GUIM	Jordan	3.46	146	eP	Pn	14 29 26.6	+0.6
CAUP	Cauayan	3.59	19	eP	Pn	14 29 30.4	+2.6
CNP	Catarman	4.06	104	eP	Pn	14 29 38.3	+3.8
ABRA	Dolores	4.10	1	eP	Pn	14 29 34.2	-0.9
PPR	Puerto Princes	4.16	207	⇑iP	Pn	14 29 36.6	+0.7
APYP	Conner	4.35	8	eP	Pn	14 29 34.2	-4.5
LLP	Lapu-Lapu	4.57	134	⇓eP	Pn	14 29 42.6	+1.0
BESP	Borongan	5.07	112	eP	Pn	14 29 47.4	-1.4
MSLP	Maasin	5.34	129	eP	Pn	14 29 54.0	+1.5
BATP	Bataraza	5.45	211	eP	Pn	14 29 52.6	-1.6
IPIL	Ipil	6.01	161	i P	Pn	14 30 01.2	-0.9
BUKP	Musuan	7.10	142	eP	Pn	14 30 18.9	+1.4
KKM	Kota Kinabalu	8.61	211	eP	P	14 30 37.8	-0.6
KKM	Kota Kinabalu	8.61	211	P	P	14 30 48.8	+10
QIZ	Qiongzhong	11.71	299	P	P	14 31 20.7	-0.3
QIZ				LR	LR		
	comp=N,440nm,11.7s						
QIZ				LR	LR		
	comp=Z,320nm,13.4s						
QIZ	Qiongzhong	11.71	299	eP	P	14 31 20.7	-0.3
	comp=Z,34nm,1.0s						
JOW	Kunigami	15.05	27	LR	LR	14 37 57.5	
	comp=Z,228nm,18.3s,baz=305,slow=36						
KSM	Kuching	15.73	221	eP	P	14 32 14.9	+0.7
KKTK	Khon Kaen	17.43	281	P	P	14 32 39.0	+3.5
SSE	Sheshan	17.50	2	eP	P	14 32 39.8	+3.5
SSE				AP		14 32 49.4	
SSE				S	S	14 35 58.6	+10
SSE				AMB	AMB		
	comp=Z,30nm,0.8s						
SSE				AMB	AMB		
	comp=Z,10.0nm,3.7s						
SSE				LR	LR		
	comp=N,250nm,17.2s						
SSE				LR	LR		
	comp=E,430nm,17.2s						
SSE				LR	LR		
	comp=Z,290nm,17.9s						
NJ2	Nanjing	18.51	355	eP	P	14 32 50.3	+1.4
NJ2				PP	PP	14 33 06.6	+2.1
NJ2				S	S	14 36 16.0	+4.9
NJ2				XS		14 36 28.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,550nm,3.6s						
NJ2				LR	LR		
	comp=N,4μm,23.1s						
NJ2				LR	LR		
	comp=E,2μm,18.9s						
NJ2				LR	LR		
	comp=Z,1μm,21.8s						
ENH	Enshi	19.59	330	P	P	14 33 00.8	-0.7
	comp=Z,19nm,1.0s						
NANT	Nan	19.84	288	⇑P	P	14 33 05.0	+0.7
	comp=Z,350nm,0.5s						
NST	Nakhon Sawan	19.95	279	P	P	14 33 04.0	-1.5
KMI	Kunming	20.42	307	P	P	14 33 17.3	+7.0
KMI				AMB	AMB		
	comp=Z,10.0nm,1.5s						
KMI				LR	LR		
	comp=N,180nm,14.9s,MS3.8						
KMI				LR	LR		
	comp=E,230nm,14.0s,MS3.8						
KMI				LR	LR		
	comp=Z,330nm,14.5s,MS3.8						
IPM	Ipoh	21.28	247	P	P	14 33 22.8	+3.6
KULM	Kulim	21.32	249	P	P	14 33 18.5	-1.1
CMAR	Chiang Mai Arr	21.41	286	P	P	14 33 22.7	+2.2
	comp=Z,11nm,0.8s,mb4.2,baz=97,slow=8.3,SNR=53						
CHG	Chiang Mai	21.47	287	⇑P	P	14 33 40.2	+19
	comp=Z,24nm,1.3s,mb4.4						
JNU	Nakatsue	21.63	24	LR	LR	14 43 03.9	
	comp=Z,179nm,19.4s,MS3.5,baz=204,slow=40						
TIA	Tai'an	22.81	353	eP	P	14 33 41.3	+6.9
XAN	Xi'an	23.02	334	P	P	14 33 35.7	-0.8
XAN				S	S	14 37 40.5	-0.5
XAN				LR	LR		
	comp=N,460nm,18.6s,MS4.1						
XAN				LR	LR		
	comp=E,370nm,17.7s,MS4.1						
XAN				LR	LR		
	comp=Z,390nm,16.7s,MS3.9						
CD2	Chengdu	23.25	321	P	P	14 33 40.8	+2.1
CD2				AMB	AMB		
	comp=Z,40nm,0.9s,mb4.8						
LZH	Lanzhou	27.06	329	eP	P	14 34 18.5	+3.8
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.4						
LZH				LR	LR		
	comp=N,380nm,12.9s						
LZH				LR	LR		
	comp=Z,630nm,17.2s,MS4.2						
MJAR	Matsushiro Arr	27.82	31	P	P	14 34 23.9	+2.4
	comp=Z,1.1nm,0.7s,mb3.6,baz=193,slow=8.1,SNR=3.4						
KAKA	Kakadu	28.58	155	eP	P	14 34 27.4	-1.2
SHL	Shillong	29.54	298	eP	P	14 34 37.0	-0.2
GTA	Gaotai	31.65	328	eP	P	14 34 55.9	+0.2
GTA				S	S	14 40 08.4	+6.5
GTA				AMB	AMB		
	comp=Z,60nm,8.0s						
GTA				LR	LR		
	comp=N,320nm,16.4s,MS4.3						
GTA				LR	LR		
	comp=E,450nm,20.5s,MS4.3						
GTA				LR	LR		
	comp=Z,600nm,20.9s,MS4.2						
LSA	Lhasa	31.65	305	P	P	14 34 57.0	+1.2
LSA	Lhasa	31.65	305	eP	P	14 34 57.1	+1.3
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
LSA	Lhasa	31.65	305	eP	P	14 34 57.1	+1.3
	comp=Z,7.8nm,0.8s,mb4.6						
MBWA	Marble Bar	34.48	181	eP	P	14 35 18.3	-2.1
	comp=Z,8.9nm,0.7s,mb4.8						
GUN	Gumba	35.37	299	eP	P	14 35 28.4	+0.4
	comp=Z,40nm,0.5s,mb5.6						
PKI	Pulchoki	35.67	299	eP	P	14 35 30.4	-0.2
	comp=Z,38nm,0.9s,mb5.3						
PKI	Pulchoki	35.67	299	eP	P	14 35 30.4	-0.2
PKI				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
KKN	Kakani	35.84	299	eP	P	14 35 31.9	-0.1
	comp=Z,34nm,0.8s,mb5.3						
KKN	Kakani	35.84	299	eP	P	14 35 31.9	-0.1
KKN				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
WRAB	Tennant Creek	35.88	158	c iP	P	14 35 32.2	-0.2
WRAB	Tennant Creek	35.88	158	eP	P	14 35 30.9	-1.5
	comp=Z,46nm,0.6s,mb5.6						
WRA	Warramunga Arr	35.89	158	P	P	14 35 31.9	-0.5
	comp=Z,29nm,0.6s,mb5.4,baz=336,slow=9.5,SNR=79						
WB2	Warramunga Arr	35.90	158	eP	P	14 35 29.9	-2.6
DMN	Daman	35.94	299	eP	P	14 35 32.9	+0.1
	comp=Z,50nm,0.9s,mb5.4						
ULN	Ulaanbaatar	36.06	344	d iP	P	14 35 33.0	-0.6
ULN	Ulaanbaatar	36.06	344	eP	P	14 35 32.4	-1.2
	comp=Z,6.9nm,1.0s,mb4.5						
SONM	Songino Array	36.20	344	P	P	14 35 34.2	-0.6
	comp=Z,4.8nm,0.7s,mb4.5,baz=164,slow=10.0,SNR=13						
GKN	Gorkha	36.45	299	eP	P	14 35 36.7	-0.4
	comp=Z,23nm,0.9s,mb5.1						
KOLN	Koldanda	37.27	298	eP	P	14 35 44.3	+0.3
	comp=Z,24nm,0.8s,mb5.1						
ASAR	Alice Springs	39.18	161	P	P	14 36 00.5	+0.4
	comp=Z,14nm,0.6s,mb4.9,baz=338,slow=6.9,SNR=93						
ASPA	Alice Springs	39.18	161	eP	P	14 36 00.2	+0.2
ZAK	Zakamensk	39.39	342	eP	P	14 35 59.5	-2.0
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
TLY	Talaya	40.45	344	eP	P	14 36 10.3	+0.1
TLY				eS	S	14 42 19.4	+2.7
TLY				eSSS	SSS	14 45 49.7	+1.6
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TLY				MLR	MLR		
	comp=Z,185nm,21.0s,MS3.9						
MKAR	Makanchi Array	46.13	324	i P	P	14 36 57.2	+0.9
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	46.13	324	P	P	14 36 56.0	-0.3
	comp=Z,3.3nm,0.9s,mb4.3,baz=135,slow=8.6,SNR=14						
NWAO	Narrogin (SRO)	46.30	184	eP	P	14 36 57.2	-0.7
NWAO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NWAO	Narrogin (SRO)	46.30	184	P	P	14 36 57.5	-0.3
	comp=Z,19nm,0.6s,mb5.2,baz=357,slow=9.3,SNR=10						
NWAO	Narrogin (SRO)	46.30	184	eP	P	14 36 57.2	-0.6
	comp=Z,9.7nm,0.6s,mb4.9						
AAK	Ala-Archa	49.14	315	i P	P	14 37 22.3	+2.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
AAK				MLR	MLR		
	comp=Z,300nm,22.0s,MS4.2						
STKA	Stephens Creek	49.42	156	eP	P	14 37 23.1	+0.9
STKA	Stephens Creek	49.42	156	P	P	14 37 23.2	+1.0
	comp=Z,4.2nm,0.8s,mb4.5,baz=332,slow=6.1,SNR=7.7						
NVS	Novosibirsk	50.46	333	eP	P	14 37 31.6	+1.7
NVS				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
NVS				pmax	pmax		
	comp=N,6.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.4s						
BVAR	Borovoye Array	55.88	326	P	P	14 38 09.0	-1.0
	comp=E,5.5nm,0.9s,mb4.6,baz=98,slow=10,SNR=10						
CHKZ	Chkalovo	56.04	327	eP	P	14 38 09.7	-1.5
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
CHKZ	Chkalovo	56.04	327	eP	P	14 38 09.7	-1.5
	comp=Z,4.0nm,0.6s,mb4.6						
TIXI	Tiksi	58.31	3	i P	P	14 38 31.0	+4.0
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.2						
BILL	Bilibino	61.90	18	i P	P	14 38 55.3	+3.6
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.5						
BILL				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.6						
SVE	Sverdlovsk	62.51	328	eP	P	14 38 55.0	-0.9
SVE				e		14 39 06.0	
ARU	Arti	63.49	327	⇑iP	P	14 39 03.9	+1.6
ARU				e		14 41 24.8	
ARU				ePPP	PPP	14 42 53.0	-2.1
ARU				eS	S	14 47 36.5	+4.5
ARU				eSS	SS	14 51 44.2	+3.2
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
ARU	Arti	63.49	327	P	P	14 38 59.9	-2.5
	comp=Z,4.5nm,0.8s,mb4.7						
ZEI	Tsey	71.24	311	eP	P	14 39 49.9	-1.4
ZEI				i *PP	pP	14 39 58.2	-1.9
ZEI				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
KIV	Kislovodsk	72.09	312	i P	P	14 39 55.8	-0.6
KIV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
KIV				MLR	MLR		

	comp=Z,300nm,18.0s,MS4.6						
SOC	**Sochi**	**74.26**	**312**	*e*P	**P**	**14 40 07.1**	**-2.0**
SOC				*e*		14 40 23.6	
SOC				*e*		14 42 51.7	
SOC				*e*PPP	PPP	14 44 35.5	-6.3
SOC				*e*S	S	14 49 38.3	-1.3
SOC				*e*		14 50 14.8	
SOC				*e*SS	SS	14 54 20.1	-7.7
SOC				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
SOC				pmax	pmax		
	comp=N,26nm,1.0s						
SOC				pmax	pmax		
	comp=E,10.0nm,0.8s						
SOC				MLR	MLR		
	comp=Z,286nm,17.0s,MS4.6						
SOC				MLR	MLR		
	comp=N,56nm,11.0s						
SOC				MLR	MLR		
	comp=E,133nm,15.0s						
OBN	**Obninsk**	**75.64**	**324**	*e*P	**P**	**14 40 20.4**	**+3.7**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
ANN	**Anapa**	**75.80**	**313**	*e*P	**P**	**14 40 09.7**	**-8.2**
ANN				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
IMA	**Indian Mountai**	**76.00**	**25**	*e*P	**P**	**14 40 19.0**	**+0.4**
IMA				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
IMA	**Indian Mountai**	**76.00**	**25**	*e*P	**P**	**14 40 18.9**	**+0.4**
	comp=Z,17nm,1.0s,mb4.9						
SIM	**Simferopol'**	**78.13**	**314**	P	**P**	**14 40 38.6**	**+7.8**
SIM				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
ILAR	**Eielson Array**	**78.94**	**26**	P	**P**	**14 40 33.8**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=239,slow=5.3,SNR=4.0						
BRTR	**Keskin Array B**	**79.20**	**308**	P	**P**	**14 40 35.6**	**-1.2**
	comp=Z,0.5nm,0.4s,mb3.8,baz=90,slow=7.4,SNR=3.8						
ARCES	**ARCESS Array B**	**79.22**	**339**	P	**P**	**14 40 34.0**	**-2.3**
	comp=Z,1.7nm,0.7s,mb4.1,baz=73,slow=9.4,SNR=3.6						
FINES	**FINESS Array B**	**80.40**	**331**	*i* P	**P**	**14 40 44.8**	**+2.0**
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FINES	**FINESS Array B**	**80.40**	**331**	P	**P**	**14 40 41.8**	**-1.0**
	comp=Z,2.4nm,1.0s,mb4.1,baz=90,slow=3.8,SNR=3.9						
AKASG	**Malin Array Be**	**80.55**	**320**	P	**P**	**14 40 40.5**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=45,slow=2.6,SNR=3.0						
NB2	**NORSAR Subarra**	**87.38**	**333**	P	**P**	**14 41 22.5**	**+4.4**
	comp=Z,2.0nm,0.8s,mb4.4,baz=63,slow=5.3						
NOA	**NORSAR Array B**	**87.38**	**333**	P	**P**	**14 41 18.3**	**+0.1**
	comp=Z,0.6nm,0.8s,mb3.9,baz=215,slow=18,SNR=2.5						
YKA	**Yellowknife Ar**	**92.97**	**22**	P	**P**	**14 41 44.4**	**+0.2**
	comp=Z,0.3nm,0.6s,mb3.9,baz=297,slow=4.1,SNR=2.5						

CRAAG ***04*** *14:50:43.8, 5.91S×146.98E, Mb6.0*

MOS ***04*** *14:50:46.6±1.0, 6.34S×146.80E, h33*^{km}*, mb6.0/51, MS5.9/55, Error ellipse: s-maj=7.9km s-min=5.0km az=88.4*

NEIC ***04*** *14:50:46.6±0.1, 6.32S×146.85E, h26*^{km}*, mb5.9/96, ME6.1, MS6.0/135, MW6.1, Error ellipse: s-maj=3.7km s-min=3.1km az=74.0 Broadband fault plane solution: P waves. NP1:*ϕ_s*330°,δ85°,λ-95°. NP2:*ϕ_s*195°,δ7°,λ-45°. Principal axes: T Plg40°, Azm65°; N Plg0°, Azm0°; P Plg50°, Azm235°; Moment Tensor Solution. s26 Moment tensor: Scale 10*^{18} *Nm;* M_{rr}*0.01;* $M_{\theta\theta}$*0.18;* $M_{\phi\phi}$*-0.19;* $M_{r\theta}$*0.70;* $M_{\theta\phi}$*-0.70;* $M_{\phi r}$*-1.39; Best double couple:* M_0*1.7×10*^{18} *NP1:*ϕ_s*75°,δ23°,λ-175°. NP2:*ϕ_s*340°, δ88°,λ-67°. Principal axes: T 1.87, Plg39°, Azm50°; N -.39, Plg23°, Azm159°; P -1.48, Plg42°, Azm272°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC One person killed, several injured and many houses damaged or destroyed in the Lae area.

BJI ***04*** *14:50:47.0, 6.47S×147.13E, h62*^{km}*, mB6.1, mb5.6, Ms5.9, Msz5.7*

HRVD ***04*** *14:50:48.8±0.1, 6.45S×146.96E, h28*^{km}*, MW6.1/71, Centroid moment Tensor Solution. LP body waves: s69,c157;Mantle waves: s71,c214; Half duration:* $3^{s}1$ *Moment tensor: Scale 10*^{18}*Nm;* M_{rr}*-0.31±.01;* $M_{\theta\theta}$*-0.12±.01;* $M_{\phi\phi}$*0.43±.01;* $M_{r\theta}$*1.03±.02;* $M_{\theta\phi}$*-0.21±.01;* $M_{\phi r}$*-1.39±.02; Best double couple:* M_0*1.782×10*^{18} *NP1:* ϕ_s*191°,δ9°,λ-43°. NP2:*ϕ_s*323°,δ84°,λ-97°. Principal axes: T 1.848, Plg39°, Azm59°; N -.132, Plg7°, Azm324°; P -1.716, Plg51°, Azm226°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

IDC ***04*** *14:50:48.7±1.2, 6.37S×146.85E, h39*^{km}*±9*^{km}*, mb5.4/22, mb1 5.5/26, mb1mx5.5/26, mbtmp5.7/26, ML5.0/4, MS5.8/30, Ms1 5.8/30, ms1mx5.8/33 Error ellipse: s-maj=10.1km s-min=7.0km az=84.0*

ISC 04 14:50:45.3±0.1**,6.31S**±0.02×**146.83E**±0.03**,h26**^{km}**, (h33**^{km}±2.1^{km}**:pP-P),n783,**σ**$0^{s}94$**/444,**mb5.8**/120, **MS5.9**/187**,52C-42D,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.09**	**174**	Pn	**Pn**	**14 51 34.0**	**+0.4**
	175nm,0.3s,baz=358,slow=5.9,SNR=504						
PMG				Lg		14 52 24.6	
	1µm,0.3s,baz=301,slow=22,SNR=8.3						
PMG				LR	LR	14 53 04.9	
	comp=Z,395µm,18.1s,baz=327,slow=45						
PMG	**Port Moresby**	**3.09**	**174**	⇓*i*Pn	**Pn**	**14 51 33.9**	**+0.3**
HNR	**Honiara**	**13.36**	**104**	⇑*i*P	**P**	**14 53 56.7**	**+0.7**
HNR				*e*S	**S**	**14 56 28.5**	**+3.9**
HNR				pmax	pmax		
	comp=Z,4µm,1.3s						
HNR	**Honiara**	**13.36**	**104**	Pn	**P**	**14 53 56.7**	**+0.7**
	comp=Z,20nm,0.3s,baz=191,slow=4.7,SNR=72						
HNR				Sn	**S**	**14 56 29.5**	**+5.0**
	baz=55,slow=18,SNR=1.1						
HNR				LR	LR	14 58 39.6	
	comp=Z,34µm,21.9s,baz=275,slow=35						
HNR	**Honiara**	**13.36**	**104**	⇑*i*P	**P**	**14 53 56.7**	**+0.7**
	comp=Z,4µm,1.3s						
HNR				*e*S	**S**	**14 56 28.5**	**+3.9**
CTA	**Charters Tower**	**13.70**	**182**	Pn	**P**	**14 54 00.2**	**-0.3**
	comp=Z,7.4nm,0.3s,baz=357,slow=14,SNR=68						
CTA				Sn	**S**	**14 56 38.6**	**+5.7**
	comp=Z,2.1nm,0.3s,baz=329,slow=19,SNR=2.5						
CTAO	**Charters Tower**	**13.70**	**182**	⇓*e*P	**P**	**14 54 01.1**	**+0.5**
CTAO				*e*S	**S**	**14 56 34.9**	**+2.0**
CTAO				pmax	pmax		
	comp=Z,1µm,1.5s						
CTAO	**Charters Tower**	**13.70**	**182**	⇓*e*P	**P**	**14 54 01.1**	**+0.6**
	comp=Z,1µm,1.5s						
CTAO				*e*S	**S**	**14 56 34.9**	**+2.0**
KAKA	**Kakadu**	**15.54**	**245**	⇑*i*P	**P**	**14 54 24.8**	**+0.1**
KAKA				*e*S	**S**	**14 57 07.0**	**-9.4**
WRAB	**Tennant Creek**	**18.17**	**221**	⇓*i*P	**P**	**14 54 55.6**	**-2.2**
WRAB				pmax	pmax		
	comp=Z,1µm,1.0s						
WRAB	**Tennant Creek**	**18.17**	**221**	⇓*i*P	**P**	**14 54 55.6**	**-2.2**
	comp=Z,1µm,1.0s						
WB2	**Warramunga Arr**	**18.18**	**221**	*e*P	**P**	**14 54 56.7**	**-1.2**
WB2				*i* S	**S**	**14 58 23.0**	**+6.2**
WRA	**Warramunga Arr**	**18.19**	**221**	P	**P**	**14 54 57.1**	**-0.9**
	comp=Z,9.6nm,0.3s,baz=46,slow=11,SNR=155						
WRA				S	**S**	**14 58 20.6**	**+3.7**
	comp=Z,1.5nm,0.3s,baz=45,slow=22,SNR=3.3						
WRA				P3KP		15 30 17.3	
	comp=Z,0.1nm,0.3s,baz=223,slow=1.6,SNR=6.7						
GUMO	**Guam**	**19.87**	**354**	P	**P**	**14 55 19.8**	**+2.1**
GUMO				pmax	pmax		
	comp=Z,1µm,1.0s						
GUMO	**Guam**	**19.87**	**354**	P	**P**	**14 55 19.3**	**+1.5**
	comp=Z,1µm,0.9s						
ASAR	**Alice Springs**	**21.26**	**214**	P	**P**	**14 55 31.5**	**-0.5**
	comp=Z,142nm,0.9s,mb5.3,baz=52,slow=9.0,SNR=233						
ASAR				S	**S**	**14 59 27.5**	**+5.4**
	comp=Z,13nm,0.9s,baz=29,slow=17,SNR=3.2						
ASAR				LR	LR	15 04 28.3	
	comp=Z,33µm,20.6s,MS5.7,baz=39,slow=39						
ASAR	**Alice Springs**	**21.26**	**214**	P	**P**	**14 55 31.5**	**-0.5**
ASAR				S	**S**	**14 59 27.5**	**+5.4**
ASAR				LR	LR	15 04 28.3	
ASPA	**Alice Springs**	**21.27**	**214**	⇑*i*P	**P**	**14 55 30.6**	**-1.5**
ASPA				*e*S	**S**	**14 59 28.7**	**+6.6**
NOUC	**Port Laguerre**	**24.50**	**132**	*e*P	**P**	**14 56 03.6**	**-0.4**
NOUC	**Port Laguerre**	**24.50**	**132**	*e*P	**P**	**14 56 03.6**	**-0.4**
DZM	**Mont Dzumac**	**24.59**	**132**	*e*P	**P**	**14 56 04.0**	**-0.8**
DZM	**Mont Dzumac**	**24.59**	**132**	P	**P**	**14 56 03.7**	**-1.1**
	comp=Z,172nm,0.9s,mb5.6,baz=319,slow=6.6,SNR=35						
DZM				S	**S**	**15 00 24.5**	**+3.2**
	comp=Z,12nm,1.0s,baz=17,slow=17,SNR=1.7						
DZM				LR	LR	15 02 48.3	
	comp=Z,9µm,19.8s,MS5.3,baz=313,slow=29						
DZM	**Mont Dzumac**	**24.59**	**132**	*e*P	**P**	**14 56 04.0**	**-0.8**
DAV	**Davao City (W)**	**25.02**	**302**	*e*P	**P**	**14 56 11.5**	**+2.4**
KCP	**Kidapawan**	**25.41**	**301**	⇑*e*P	**P**	**14 56 13.0**	**+0.3**
	comp=Z,4µm,0.8s,mb6.7						
KWAJ	**Kwajalein Atol**	**25.59**	**54**	⇑*e*P	**P**	**14 56 13.1**	**-1.3**
	comp=Z,2µm,1.5s,mb6.4						
KWAJ				S	**S**	**15 00 43.4**	**+5.2**
KWAJ				LR	LR		
	comp=Z,9µm,19.0s,MS5.3						
STKA	**Stephens Creek**	**25.90**	**190**	⇓*i*P	**P**	**14 56 15.2**	**-1.9**
STKA	**Stephens Creek**	**25.90**	**190**	P	**P**	**14 56 15.4**	**-1.7**
	comp=Z,181nm,0.8s,mb5.7,baz=359,slow=9.6,SNR=153						
STKA				S	**S**	**15 00 42.8**	**-0.4**
	comp=Z,23nm,1.0s,baz=348,slow=19,SNR=2.1						
STKA				LR	LR	15 07 15.8	
	comp=Z,72µm,19.7s,MS6.2,baz=12,slow=38						
STKA				P3KP		15 30 09.3	
	comp=Z,2.6nm,1.0s,baz=304,slow=5.3,SNR=3.8						
SCPH	**Surigao**	**26.60**	**307**	*e*P	**P**	**14 56 18.2**	**-5.5**
RIV	**Riverview**	**27.67**	**172**	*e*P	**P**	**14 56 33.3**	**0.0**
CNB	**Canberra Magne**	**28.95**	**176**	*e*P	**P**	**14 56 43.6**	**-1.3**
ADE	**Adelaide**	**29.48**	**194**	P	**P**	**14 56 47.6**	**-2.0**
RCP	**Roxas**	**29.82**	**306**	⇑*e*P	**P**	**14 56 52.9**	**0.0**
MBWA	**Marble Bar**	**30.10**	**238**	⇓*e*P	**P**	**14 56 52.7**	**-2.6**
	comp=Z,1µm,1.4s,mb6.5						
MBWA				LR	LR		
	comp=Z,36µm,19.0s,MS6.0						
TSM	**Tawau**	**30.77**	**289**	P	**P**	**14 57 01.7**	**+0.4**
AUQP	**San Andres**	**30.92**	**309**	*e*P	**P**	**14 57 13.8**	**+11**
TOO	**Toolangi**	**31.14**	**182**	⇑*i*P	**P**	**14 57 03.9**	**-0.4**
TOO				*e*S	**S**	**15 02 09.5**	**+2.3**
TOO				*e*SCP		15 03 47.6	
WAKE	**Wake Island**	**32.07**	**37**	PFAKE		14 57 20.0	+7.4
WAKE				LR	LR		
	comp=Z,10µm,21.0s,MS5.5						
BUSP	**Coron**	**32.13**	**304**	*e*P	**P**	**14 57 11.9**	**-1.3**
PPR	**Puerto Princes**	**32.23**	**300**	⇑*i*P	**P**	**14 57 14.1**	**0.0**
ENPP	**El Nido**	**32.35**	**302**	*e*P	**P**	**14 57 14.7**	**-0.4**
BATP	**Bataraza**	**32.60**	**297**	*e*P	**P**	**14 57 17.3**	**+0.1**
KKM	**Kota Kinabalu**	**32.93**	**291**	⇓*i*P	**P**	**14 57 19.3**	**-0.8**
KKM	**Kota Kinabalu**	**32.93**	**291**	P	**P**	**14 57 19.7**	**-0.4**
LUBP	**Lubang**	**33.06**	**307**	*e*P	**P**	**14 57 19.7**	**-1.5**
BALP	**Baler**	**33.25**	**311**	*e*P	**P**	**14 57 22.0**	**-0.9**
CBIJ	**Chichi jima**	**33.51**	**352**	P	**P**	**14 57 24.9**	**-0.2**
	comp=Z,336nm,1.1s,mb6.2,baz=114,slow=13,SNR=9.5						
CBIJ				S	**S**	**15 02 41.7**	**-2.6**
	comp=Z,47nm,0.6s,baz=232,slow=19,SNR=1.8						
CBIJ				LR	LR	15 09 18.5	
	comp=Z,14µm,21.5s,MS5.6,baz=329,slow=33						
APYP	**Conner**	**34.86**	**314**	*e*P	**P**	**14 57 36.0**	**-0.8**
ABRA	**Dolores**	**35.10**	**313**	*e*P	**P**	**14 57 36.4**	**-2.4**
BBP	**Basco**	**36.11**	**318**	*e*P	**P**	**14 57 46.0**	**-1.4**
TAU	**Tasmania Unive**	**36.45**	**179**	*e*P	**P**	**14 57 50.2**	**+0.2**
TAU				pmax	pmax		
	comp=Z,406nm,1.5s,mb6.1						
TAU				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.1						
TAU	**Tasmania Unive**	**36.45**	**179**	*e*P	**P**	**14 57 50.2**	**+0.2**
	comp=Z,406nm,1.5s,mb6.1						
TAU				LR	LR		
	comp=Z,3µm,19.0s,MS5.1						
KLBR	**Kellerberrin**	**37.03**	**224**	*e*P	**P**	**14 57 52.8**	**-2.2**
KLBR				*e*SCP		15 04 05.3	
KSM	**Kuching**	**37.27**	**281**	⇓*i*P	**P**	**14 57 57.3**	**+0.2**
JOW	**Kunigami**	**37.53**	**332**	P	**P**	**14 58 00.1**	**+0.8**
	baz=154,slow=9.2,SNR=37						
JOW				S	**S**	**15 03 42.0**	**-4.4**
	comp=Z,9.3nm,0.8s,baz=172,slow=17,SNR=1.9						
JOW				LR	LR	15 13 36.0	
	comp=Z,8µm,18.9s,MS5.5,baz=156,slow=36						
OUZ	**Omahuta**	**37.87**	**143**	*e*P	**P**	**14 58 02.1**	**0.0**
OUZ	**Omahuta**	**37.87**	**143**	PN	**P**	**14 58 02.8**	**+0.8**
NWAO	**Narrogin (SRO)**	**38.18**	**222**	⇓*i*P	**P**	**14 58 02.9**	**-1.8**
NWAO				pmax	pmax		
	comp=Z,189nm,1.4s						
NWAO				MLR	MLR		
	comp=Z,62µm,19.0s						
NWAO	**Narrogin (SRO)**	**38.18**	**222**	P	**P**	**14 58 03.5**	**-1.2**
	comp=Z,66nm,0.9s,mb5.3,baz=52,slow=7.7,SNR=28						
NWAO				LR	LR	15 15 09.9	
	comp=Z,79µm,19.4s,MS6.5,baz=44,slow=38						
NWAO	**Narrogin (SRO)**	**38.18**	**222**	⇓*i*P	**P**	**14 58 02.9**	**-1.8**
	comp=Z,189nm,1.4s,mb5.6						
NWAO				LR	LR		
	comp=Z,62µm,19.0s,MS6.4						
MUN	**Mundaring**	**38.32**	**224**	⇑*i*P	**P**	**14 58 05.0**	**-0.9**
MUN				*e*		14 59 38.1	
NACB	**Ninganchiao**	**39.04**	**322**	*e*P	**P**	**14 58 12.0**	**+0.1**
YHNB	**Yeheng**	**39.53**	**322**	*e*P	**P**	**14 58 16.3**	**+0.3**
TATO	**Taipei**	**39.69**	**323**	*e*P	**P**	**14 58 18.0**	**+0.6**
	comp=Z,929nm,1.2s,mb6.4						
TATO				LR	LR		
	comp=Z,16µm,20.0s,MS5.8						
JHJ	**Hachijo jima 2**	**39.78**	**351**	P	**P**	**14 58 18.1**	**+0.1**
	comp=Z,122nm,0.7s,mb5.8,baz=98,slow=21,SNR=6.9						
JHJ				LR	LR	15 13 47.2	
	comp=Z,8µm,18.4s,MS5.6,baz=302,slow=35						
RAO	**Raoul Island**	**40.32**	**129**	LR	LR	15 12 16.1	
	comp=Z,8µm,21.5s,MS5.5,baz=206,slow=32						
RAO	**Raoul Island**	**40.32**	**129**	PFAKE		14 58 30.0	+7.5
RAO				LR	LR		
	comp=Z,8µm,20.0s,MS5.5						
QRZ	**Quartz Range**	**41.34**	**150**	*e*P	**P**	**14 58 32.2**	**+1.5**
AFI	**Afiamalu**	**41.39**	**104**	*e*P	**P**	**14 58 31.5**	**+0.1**
AFI				pmax	pmax		
	comp=Z,416nm,1.3s,mb5.9						
AFI				MLR	MLR		
	comp=Z,15µm,22.0s,MS5.8						
AFI	**Afiamalu**	**41.39**	**104**	P	**P**	**14 58 31.6**	**+0.2**
	comp=Z,174nm,1.1s,mb5.6,baz=301,slow=1.0,SNR=21						
AFI				LR	LR	15 13 17.8	
	comp=Z,14µm,21.2s,MS5.8,baz=276,slow=33						
AFI	**Afiamalu**	**41.39**	**104**	*e*P	**P**	**14 58 31.5**	**+0.1**
	comp=Z,416nm,1.3s,mb5.9						
AFI				LR	LR		
	comp=Z,15µm,22.0s,MS5.8						
QZH	**Quanzhou**	**41.48**	**320**	*i* PR		14 58 32.6	
QZH				S	**S**	**15 04 46.0**	**+0.4**
QZH				LR	LR		
	comp=N,9µm,17.4s,MS5.8						
QZH				LR	LR		
	comp=E,8µm,19.0s,MS5.8						
QZH				LR	LR		
	comp=Z,17µm,25.8s						
QZH	**Quanzhou**	**41.48**	**320**	⇓*i*P	**P**	**14 58 32.6**	**+0.6**
QZH				S	**S**	**15 04 46.0**	**+0.4**
QZH				LR	LR		
	comp=Z,17µm,25.8s,MS5.8						
NGZ	**Ngauruhoe**	**41.76**	**146**	P	**P**	**14 58 35.8**	**+1.6**
URZ	**Urewera**	**42.00**	**144**	P	**P**	**14 58 35.8**	**-0.5**
	comp=Z,40nm,1.0s,mb5.0,baz=15,slow=5.7,SNR=16						
URZ				LR	LR	15 15 15.5	
	comp=Z,8µm,18.3s,MS5.6,baz=324,slow=35						
JNU	**Nakatsue**	**42.04**	**340**	P	**P**	**14 58 37.5**	**+0.8**
	comp=Z,178nm,0.8s,mb5.8,baz=130,slow=9.5						
JNU				S	**S**	**15 04 51.6**	**-2.3**
	comp=Z,10nm,1.0s,baz=20,slow=13,SNR=1.7						
THZ	**Tophouse**	**42.23**	**151**	*e*P	**P**	**14 58 38.2**	**+0.1**
THZ	**Tophouse**	**42.23**	**151**	PN	**P**	**14 58 38.6**	**+0.6**
JCZ	**Jackson Bay**	**42.24**	**156**	*e*P	**P**	**14 58 39.2**	**+1.1**
JCZ	**Jackson Bay**	**42.24**	**156**	PN	**P**	**14 58 39.2**	**+1.1**
BKZ	**Black Stump Fm**	**42.25**	**145**	PN	**P**	**14 58 39.3**	**+1.0**
MSZ	**Milford Sound**	**42.42**	**158**	PN	**P**	**14 58 40.8**	**+1.2**
TSZ	**Takapari Road**	**42.57**	**146**	PN	**P**	**14 58 41.2**	**+0.3**
LTZ	**Lake Taylor**	**42.71**	**152**	*e*P	**P**	**14 58 41.7**	**-0.3**
LTZ	**Lake Taylor**	**42.71**	**152**	PN	**P**	**14 58 42.5**	**+0.5**
MRZ	**Mangatainoka R**	**42.79**	**147**	PN	**P**	**14 58 42.6**	**-0.1**
HKC	**Hong Kong**	**42.79**	**313**	P	**P**	**14 58 46.0**	**+3.1**
HKC				S	**S**	**15 05 10.0**	**+4.9**
RPZ	**Rata Peaks**	**42.90**	**154**	P	**P**	**14 58 43.4**	**-0.1**
	comp=Z,138nm,0.8s,mb5.7,baz=352,slow=1.6,SNR=40						
RPZ	**Rata Peaks**	**42.90**	**154**	*e*P	**P**	**14 58 43.7**	**+0.2**
RPZ	**Rata Peaks**	**42.90**	**154**	PN	**P**	**14 58 43.8**	**+0.3**
KHZ	**Kahutara**	**43.03**	**151**	PN	**P**	**14 58 45.0**	**+0.4**
LBZ	**Lake Benmore**	**43.08**	**155**	*e*P	**P**	**14 58 44.4**	**-0.5**
LBZ	**Lake Benmore**	**43.08**	**155**	PN	**P**	**14 58 44.7**	**-0.3**
MLZ	**Mavora Lakes**	**43.09**	**158**	*e*P	**P**	**14 58 45.4**	**+0.4**
MLZ	**Mavora Lakes**	**43.09**	**158**	PN	**P**	**14 58 45.9**	**+0.9**
MTW	**Mount Morrison**	**43.10**	**148**	P	**P**	**14 58 44.6**	**-0.6**
MTW	**Mount Morrison**	**43.10**	**148**	PN	**P**	**14 58 44.6**	**-0.6**
BFZ	**Birch Farm**	**43.16**	**147**	PN	**P**	**14 58 45.6**	**-0.1**
PAWZ	**Paruwai Farm**	**43.22**	**148**	PN	**P**	**14 58 46.1**	**-0.1**
MJAR	**Matsushiro Arr**	**43.39**	**350**	P	**P**	**14 58 48.1**	**+0.5**
MJAR						15 00 36.0	
MJAR				S	**S**	**15 05 11.3**	**-2.2**
MJAR	**Matsushiro Arr**	**43.39**	**350**	P	**P**	**14 58 48.1**	**+0.6**
	comp=Z,47nm,1.0s,mb5.2,baz=183,slow=9.7,SNR=40						
MJAR				PcP	PcP	15 00 36.0	-0.4
	comp=Z,7.1nm,0.6s,baz=174,slow=5.3,SNR=5.3						
MJAR				ScP		15 04 24.2	
	comp=Z,11nm,1.0s,baz=177,slow=5.2,SNR=6.8						
MJAR				S	**S**	**15 05 11.3**	**-2.2**
	comp=Z,3.4nm,1.1s,baz=263,slow=23,SNR=2.3						
MJAR				LR	LR	15 16 20.4	
	comp=Z,6µm,19.3s,MS5.5,baz=180,slow=35						
MAJO	**Matsushiro**	**43.39**	**350**	*e*P	**P**	**14 58 47.2**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,466nm,1.6s,mb6.0						
MAJO				MLR	MLR		
	comp=Z,7µm,19.0s,MS5.5						
MAJO	**Matsushiro**	**43.39**	**350**	*e*P	**P**	**14 58 47.2**	**-0.3**
	comp=Z,466nm,1.6s,mb6.0						
MAJO				LR	LR		
	comp=Z,7µm,19.0s,MS5.5						
MAT	**Matsushiro**	**43.39**	**350**	*e*P	**P**	**14 58 46.0**	**-1.6**
MAT				*e*S	**S**	**15 05 08.0**	**-5.5**
MAT				pmax	pmax		
	comp=Z,668nm,1.9s,mb6.0						
MAT				MLR	MLR		
	comp=Z,6µm,19.0s,MS5.5						
MAT	**Matsushiro**	**43.39**	**350**	*e*P	**P**	**14 58 46.0**	**-1.6**
	comp=Z,668nm,1.9s,mb6.0						
MAT				*e*S	**S**	**15 05 08.0**	**-5.5**
MAT				LR	LR		
	comp=Z,6µm,19.0s,MS5.5						
MAT	**Matsushiro**	**43.39**	**350**	P	**P**	**14 58 46.2**	**-1.4**
MAT				S	**S**	**15 05 11.0**	**-2.5**
GZH	**Guangzhou**	**43.88**	**313**	P	**P**	**14 58 53.6**	**+1.9**
GZH				S	**S**	**15 05 25.3**	**+4.5**
GZH				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.5						
GZH				LR	LR		
	comp=N,4µm,21.1s,MS5.6						
GZH				LR	LR		
	comp=E,6µm,18.0s,MS5.6						
GZH				LR	LR		
	comp=Z,8µm,21.1s,MS5.6						
GZH	**Guangzhou**	**43.88**	**313**	P	**P**	**14 58 53.6**	**+1.9**
	comp=Z,100nm,1.0s,mb5.5						
GZH				S	**S**	**15 05 25.3**	**+4.5**
GZH				LR	LR		
	comp=Z,8µm,21.1s,MS5.6						
TUZ	**Tuapeka**	**44.15**	**157**	*e*P	**P**	**14 58 53.2**	**-0.4**
TUZ	**Tuapeka**	**44.15**	**157**	PN	**P**	**14 58 54.1**	**+0.5**
KGM	**Kluang**	**44.22**	**279**	P	**P**	**14 58 55.7**	**+1.1**
QIZ	**Qiongzhong**	**44.30**	**305**	P	**P**	**14 58 55.2**	**0.0**
QIZ				S	**S**	**15 05 25.4**	**-1.5**
QIZ				SS	SS	15 08 39.1	+1.8
QIZ				AMB	AMB		
	comp=Z,100nm,1.3s,mb5.4						
QIZ				AMB	AMB		
	comp=Z,890nm,6.5s						
QIZ				LR	LR		
	comp=N,4µm,18.5s,MS5.6						
QIZ				LR	LR		
	comp=E,6µm,20.2s,MS5.6						
QIZ				LR	LR		
	comp=Z,11µm,24.6s,MS5.7						
QIZ	**Qiongzhong**	**44.30**	**305**	P	**P**	**14 58 55.8**	**+0.7**
QIZ				S	**S**	**15 05 29.0**	**+2.0**
QIZ	**Qiongzhong**	**44.30**	**305**	P	**P**	**14 58 55.2**	**0.0**
	comp=Z,110nm,1.3s,mb5.4						
QIZ				S	**S**	**15 05 25.4**	**-1.5**
QIZ				SS	SS	15 08 39.1	+1.8
QIZ				LR	LR		
	comp=Z,11µm,24.6s,MS5.7						
SSE	**Sheshan**	**44.55**	**328**	⇓P	**P**	**14 58 57.1**	**0.0**
SSE				PP	PP	15 00 40.7	-1.5
SSE				S	**S**	**15 05 30.2**	**-0.3**
SSE				AMB	AMB		
	comp=Z,160nm,1.1s,mb5.8						
SSE				AMB	AMB		
	comp=Z,310nm,4.9s						
SSE				LR	LR		
	comp=N,3µm,21.5s,MS5.6						
SSE				LR	LR		
	comp=E,8µm,21.8s,MS5.6						
SSE				LR	LR		
	comp=Z,9µm,21.2s,MS5.6						
SSE	**Sheshan**	**44.55**	**328**	⇓P	**P**	**14 58 57.1**	**0.0**
	comp=Z,160nm,1.1s,mb5.8						
SSE				PP	PP	15 00 40.7	-1.5
SSE				S	**S**	**15 05 30.2**	**-0.3**
SSE				LR	LR		
	comp=Z,9µm,21.2s,MS5.6						
NJ2	**Nanjing**	**46.55**	**327**	⇑*i*P	**P**	**14 59 14.1**	**+1.2**
NJ2				AP	pP	14 59 24.0	+3.3
NJ2				PP	PP	15 01 02.8	+0.7
NJ2				S	**S**	**15 05 59.0**	**-0.1**
NJ2				XS		15 06 21.0	
NJ2				AMB	AMB		
	comp=Z,120nm,0.8s,mb5.9						
NJ2				AMB	AMB		
	comp=Z,1µm,7.2s						
NJ2				LR	LR		
	comp=N,16µm,17.4s,MS6.1						
NJ2				LR	LR		
	comp=E,9µm,20.1s,MS6.1						
NJ2				LR	LR		
	comp=Z,10µm,20.0s,MS5.8						
NJ2	**Nanjing**	**46.55**	**327**	⇑*i*P	**P**	**14 59 14.1**	**+1.2**
	comp=Z,120nm,0.8s,mb5.9						
NJ2				pP	pP	14 59 24.0	+3.3
NJ2				PP	PP	15 01 02.8	+0.7
NJ2				S	**S**	**15 05 59.0**	**-0.1**
NJ2				sS		15 06 21.0	
NJ2				LR	LR		
	comp=Z,10µm,20.0s,MS5.8						
IPM	**Ipoh**	**46.99**	**282**	P	**P**	**14 59 17.2**	**+0.6**
INCN	**Inchon**	**47.47**	**338**	*e*P	**P**	**14 59 20.4**	**+0.2**
	comp=Z,252nm,0.9s,mb6.2						
INCN				LR	LR		
	comp=Z,5µm,19.0s,MS5.5						
KULM	**Kulim**	**47.52**	**283**	*e*P	**P**	**14 59 20.3**	**-0.5**
SNG	**Songkhla**	**48.01**	**285**	P	**P**	**14 59 25.0**	**+0.3**
	comp=Z,640nm,1.0s,mb6.6						
MIDW	**Midway**	**48.70**	**43**	*e*P	**P**	**14 59 29.3**	**-0.5**
	comp=Z,195nm,1.0s,mb6.1						
MIDW				LR	LR		
	comp=Z,8µm,20.0s,MS5.7						
KKTK	**Khon Kaen**	**49.01**	**298**	PG	**P**	**14 59 33.0**	**+0.7**
KKTK				SG	Px	14 59 41.0	
MCQ	**Macquarie Isla**	**49.03**	**171**	⇑*i*P	**P**	**14 59 31.8**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**50.12**	**359**	*e*P	**P**	**14 59 43.0**	**+2.5**
YUK				*e*SS	ScS	15 09 24.0	-2.9
YUK				pmax	pmax		
	comp=Z,520nm,0.9s,mb6.6						
YUK				pmax	pmax		
	comp=Z,8µm,6.0s						
YUK				pmax	pmax		
	comp=N,8µm,5.0s						
YUK				pmax	pmax		
	comp=E,2µm,3.0s						
YUK	**Yuzh-Kuril'sk**	**50.12**	**359**	*e*P	**P**	**14 59 43.0**	**+2.5**
	comp=E,520nm,0.9s,mb6.6						
YUK				*e*SS	ScS	15 09 24.0	-2.9
ASAJ	**Asahikawa**	**50.34**	**356**	P	**P**	**14 59 42.2**	**0.0**
ASAJ				S	**S**	**15 06 53.6**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,49nm,0.8s						
ASAJ				smax			
	comp=E,2.0nm,0.6s						
ASAJ	**Asahikawa**	**50.34**	**356**	P	**P**	**14 59 42.2**	**0.0**
	comp=E,48nm,0.8s,mb5.6,baz=222,slow=14,SNR=27						
ASAJ				S	**S**	**15 06 53.6**	**+1.5**
	comp=E,1.9nm,0.6s,baz=230,slow=17,SNR=1.7						
ASAJ				LR	LR	15 18 19.3	
	comp=E,7µm,21.7s,MS5.6,baz=195,slow=33						
NNT	**Nongplab**	**50.43**	**292**	⇑P	**P**	**14 59 44.7**	**+1.5**
	comp=E,2µm,1.0s						
PKT	**Phuket**	**50.57**	**286**	P	**P**	**14 59 44.5**	**+0.2**
TIA	**Tai'an**	**50.65**	**329**	P	**P**	**14 59 43.5**	**-1.2**

TIA				S	**S**	**15 06 55.1**	**-1.4**
TIA				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
TIA				LR	LR		
	comp=N,3µm,16.0s,MS5.8						
TIA				LR	LR		
	comp=E,6µm,16.0s,MS5.8						
TIA	**Tai'an**	**50.65**	**329**	P	**P**	**14 59 43.5**	**-1.2**
	comp=E,68nm,1.0s,mb5.5						
TIA				S	**S**	**15 06 55.1**	**-1.4**
DL2	**Dalian**	**50.70**	**335**	P	**P**	**14 59 44.7**	**-0.2**
DL2				S	**S**	**15 06 58.0**	**+0.9**
DL2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
DL2				AMB	AMB		
	comp=Z,700nm,3.9s						
DL2				LR	LR		
	comp=N,3µm,22.8s,MS5.3						
DL2				LR	LR		
	comp=E,2µm,21.4s,MS5.3						
DL2				LR	LR		
	comp=Z,5µm,24.5s,MS5.4						
DL2	**Dalian**	**50.70**	**335**	P	**P**	**14 59 44.7**	**-0.2**
	comp=Z,30nm,0.8s,mb5.3						
DL2				S	**S**	**15 06 58.0**	**+0.9**
DL2				LR	LR		
	comp=Z,5µm,24.5s,MS5.4						
GYA	**Guiyang**	**50.76**	**312**	⇓*i*P	**P**	**14 59 45.3**	**-0.3**
GYA				AP	pP	14 59 57.8	+4.2
GYA				XP	sP	15 00 03.2	+6.6
GYA				PP	PP	15 01 42.9	+0.3
GYA				SCP		15 04 51.6	
GYA				S	**S**	**15 06 57.8**	**-0.4**
GYA				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
GYA				AMB	AMB		
	comp=Z,610nm,6.6s						
GYA				LR	LR		
	comp=N,5µm,21.5s,MS5.7						
GYA				LR	LR		
	comp=E,5µm,22.7s,MS5.7						
GYA				LR	LR		
	comp=Z,4µm,24.5s,MS5.4						
GYA	**Guiyang**	**50.76**	**312**	⇓*i*P	**P**	**14 59 45.3**	**-0.3**
	comp=Z,60nm,1.0s,mb5.5						
GYA				pP	pP	14 59 57.8	+4.2
GYA				sP	sP	15 00 03.2	+6.6
GYA				PP	PP	15 01 42.9	+0.3
GYA				ScP		15 04 51.6	
GYA				S	**S**	**15 06 57.8**	**-0.4**
GYA				LR	LR		
	comp=Z,4µm,24.5s,MS5.4						
ENH	**Enshi**	**51.03**	**318**	*e*P	**P**	**14 59 47.3**	**-0.3**
	comp=Z,306nm,1.5s,mb6.0						
NST	**Nakhon Sawan**	**51.14**	**296**	⇑P	**P**	**14 59 49.5**	**+0.9**
	comp=Z,463nm,1.0s,mb6.4						
SNY	**Shenyang**	**52.41**	**338**	⇓P	**P**	**14 59 57.4**	**-0.5**
SNY				AP	pP	15 00 14.2	+8.4
SNY				XP	sP	15 00 21.7	+13
SNY				S	**S**	**15 07 09.3**	**-11**
SNY				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.6						
SNY				AMB	AMB		
	comp=Z,2µm,5.3s						
SNY				LR	LR		
	comp=N,6µm,21.3s,MS5.9						
SNY				LR	LR		
	comp=E,9µm,20.4s,MS5.9						
SNY				LR	LR		
	comp=Z,10µm,24.5s,MS5.8						
SNY	**Shenyang**	**52.41**	**338**	⇓P	**P**	**14 59 57.4**	**-0.5**
	comp=Z,60nm,0.8s,mb5.6						
SNY				pP	pP	15 00 14.2	+8.4
SNY				sP	sP	15 00 21.7	+13
SNY				S	**S**	**15 07 09.3**	**-11**
SNY				LR	LR		
	comp=Z,10µm,24.5s,MS5.8						
MDJ	**Mudanjiang**	**53.02**	**345**	P	**P**	**15 00 02.4**	**0.0**
MDJ				AP	pP	15 00 13.8	+3.5
MDJ				XP	sP	15 00 18.9	+5.5
MDJ				PP	PP	15 01 58.9	-4.8
MDJ				S	**S**	**15 07 26.6**	**-2.2**
MDJ				SCS	ScS	15 09 45.5	-1.3
MDJ				SS	SS	15 11 10.1	+2.7
MDJ				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,1µm,6.2s						
MDJ				LR	LR		
	comp=N,3µm,24.1s,MS5.5						
MDJ				LR	LR		
	comp=E,5µm,25.4s,MS5.5						
MDJ				LR	LR		
	comp=Z,5µm,32.3s						
MDJ	**Mudanjiang**	**53.02**	**345**	P	**P**	**15 00 02.4**	**0.0**
	comp=Z,61nm,0.9s,mb5.5						
MDJ				pP	pP	15 00 13.8	+3.5
MDJ				sP	sP	15 00 18.9	+5.5
MDJ				PP	PP	15 01 58.9	-4.8
MDJ				S	**S**	**15 07 26.6**	**-2.2**
MDJ				ScS	ScS	15 09 45.5	-1.3
MDJ				SS	SS	15 11 10.1	+2.7
MDJ				LR	LR		
	comp=Z,5µm,32.3s,MS5.4						
KMI	**Kunming**	**53.05**	**308**	P	**P**	**15 00 04.0**	**+1.1**
KMI				PCP	PcP	15 01 12.3	+1.2
KMI				PP	PP	15 02 05.4	+1.2
KMI				PCS		15 05 09.5	
KMI				S	**S**	**15 07 31.4**	**+1.9**
KMI				SS	SS	15 11 09.9	+1.7
KMI				AMB	AMB		
	comp=Z,110nm,1.5s,mb5.6						
KMI				AMB	AMB		
	comp=Z,830nm,6.4s						
KMI				LR	LR		
	comp=N,5µm,23.0s						
KMI				LR	LR		
	comp=E,3µm,28.2s						
KMI				LR	LR		
	comp=Z,9µm,25.1s,MS5.7						
KMI	**Kunming**	**53.05**	**308**	P	**P**	**15 00 04.0**	**+1.1**
	comp=Z,110nm,1.5s,mb5.6						
KMI				PcP	PcP	15 01 12.3	+1.2
KMI				PP	PP	15 02 05.4	+1.2
KMI				PcS		15 05 09.5	
KMI				S	**S**	**15 07 31.4**	**+1.9**
KMI				SS	SS	15 11 09.9	+1.7
KMI				LR	LR		
	comp=Z,9µm,25.1s,MS5.7						
YSS	**Yuzh-Sakhalins**	**53.16**	**357**	*c i*P	**P**	**15 00 03.4**	**+0.1**
YSS				pmax	pmax		
	comp=Z,149nm,1.5s,mb5.7						
YSS				MLR	MLR		
	comp=Z,2µm,13.0s,MS5.4						
YSS	**Yuzh-Sakhalins**	**53.16**	**357**	⇑*i*P	**P**	**15 00 03.4**	**+0.1**
	comp=Z,149nm,1.5s,mb5.7						
YSS				LR	LR		
	comp=Z,2µm,13.0s,MS5.4						
CMAR	**Chiang Mai Arr**	**53.25**	**299**	P	**P**	**15 00 05.2**	**+0.8**
	comp=Z,98nm,0.9s,mb5.7,baz=119,slow=5.6,SNR=340						
CMAR				S	**S**	**15 07 34.7**	**+2.5**
	comp=Z,1.4nm,1.1s,baz=188,slow=29,SNR=3.2						
CMAR				LR	LR	15 21 23.0	
	comp=Z,4µm,21.9s,MS5.4,baz=120,slow=34						
CMAR				PKPPKP		15 30 22.4	
	comp=Z,7.3nm,1.2s,baz=282,slow=3.6,SNR=13						
CHG	**Chiang Mai**	**53.39**	**299**	⇓P	**P**	**15 00 05.3**	**-0.1**
	comp=Z,139nm,1.3s,mb5.7						
CHG				S	**S**	**15 07 39.6**	**+5.5**
CN2	**Changchun**	**53.50**	**341**	*e*P	**P**	**15 00 05.7**	**-0.2**
CN2				PCP	PcP	15 01 11.4	-1.2
CN2				PP	PP	15 02 04.1	-3.9
CN2				*e*S	**S**	**15 07 32.7**	**-2.6**
CN2				SCS	ScS	15 09 49.4	-0.8
CN2				*e*SS	SS	15 11 15.0	-0.1
CN2				AMB	AMB		
	comp=Z,90nm,0.9s,mb5.7						
CN2				AMB	AMB		
	comp=Z,2µm,5.0s						
CN2				LR	LR		
	comp=N,6µm,19.0s,MS5.8						
CN2				LR	LR		
	comp=E,6µm,19.0s,MS5.8						
CN2				LR	LR		
	comp=Z,7µm,21.0s,MS5.7						
CN2	**Changchun**	**53.50**	**341**	*e*P	**P**	**15 00 05.7**	**-0.2**
	comp=Z,90nm,0.9s,mb5.7						
CN2				PcP	PcP	15 01 11.4	-1.2
CN2				PP	PP	15 02 04.1	-3.9
CN2				*e*S	**S**	**15 07 32.7**	**-2.6**
CN2				ScS	ScS	15 09 49.4	-0.8
CN2				*e*SS	SS	15 11 15.0	-0.1
CN2				LR	LR		
	comp=Z,7µm,21.0s,MS5.7						
RAR	**Rarotonga**	**53.68**	**112**	*e*P	**P**	**15 00 07.4**	**-0.1**
RAR				pmax	pmax		
	comp=Z,261nm,1.4s						
RAR				MLR	MLR		
	comp=Z,2µm,19.0s						
RAR	**Rarotonga**	**53.68**	**112**	LR	LR	15 20 12.7	
	comp=Z,1µm,19.6s,MS5.0,baz=104,slow=33						
RAR	**Rarotonga**	**53.68**	**112**	*e*P	**P**	**15 00 07.4**	**-0.1**
	comp=Z,261nm,1.4s,mb6.0						
RAR				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
XAN	**Xi'an**	**53.81**	**321**	P	**P**	**15 00 07.3**	**-1.0**
XAN				S	**S**	**15 07 33.1**	**-6.7**
XAN				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.7						
XAN				LR	LR		
	comp=N,4µm,20.6s,MS5.7						
XAN				LR	LR		
	comp=E,5µm,21.2s,MS5.7						
XAN				LR	LR		
	comp=Z,7µm,24.0s,MS5.6						
XAN	**Xi'an**	**53.81**	**321**	P	**P**	**15 00 07.3**	**-1.0**
	comp=Z,110nm,1.0s,mb5.7						
XAN				S	**S**	**15 07 33.1**	**-6.7**
XAN				LR	LR		
	comp=Z,7µm,24.0s,MS5.6						
CD2	**Chengdu**	**55.37**	**314**	P	**P**	**15 00 19.7**	**-0.1**
CD2				PP	PP	15 02 23.7	-1.3
CD2				S	**S**	**15 08 01.6**	**+0.9**
CD2				SS	SS	15 11 42.3	-2.9
CD2				AMB	AMB		
	comp=Z,180nm,0.5s,mb6.4						
CD2				AMB	AMB		
	comp=Z,800nm,4.3s						
CD2				LR	LR		
	comp=E,9µm,17.6s						
CD2				LR	LR		
	comp=Z,10µm,16.7s,MS6.0						
CD2	**Chengdu**	**55.37**	**314**	P	**P**	**15 00 19.7**	**-0.1**
	comp=Z,180nm,0.5s,mb6.4						
CD2				PP	PP	15 02 23.7	-1.3
CD2				S	**S**	**15 08 01.6**	**+0.9**
CD2				SS	SS	15 11 42.3	-2.9
CD2				LR	LR		
	comp=Z,10µm,16.7s,MS6.0						
KLR	**Kul'dur**	**56.86**	**348**	*e*P	**P**	**15 00 27.6**	**-2.6**
KLR				*e*S	**S**	**15 08 15.0**	**-5.2**
KLR				pmax	pmax		
	comp=N,100nm,1.8s						
KLR				pmax	pmax		
	comp=E,85nm,1.8s						
KLR				pmax	pmax		
	comp=Z,220nm,1.8s,mb5.9						
KLR				pmax	pmax		
	comp=N,2µm,7.5s						
KLR				pmax	pmax		
	comp=E,500nm,7.5s						
KLR				pmax	pmax		
	comp=Z,3µm,7.5s						
KLR				smax			
	comp=N,2µm,14.0s						
KLR				smax			
	comp=E,3µm,14.0s						
KLR				MLR	MLR		
	comp=E,3µm,16.0s						
KLR				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.6						
HHC	**Hu-ho-hao-te**	**57.01**	**329**	*e*P	**P**	**15 00 31.3**	**-0.1**
HHC				AP	pP	15 00 42.3	+2.9
HHC				PP	PP	15 02 37.4	-2.2
HHC				S	**S**	**15 08 24.8**	**+2.5**
HHC				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.6						
HHC				AMB	AMB		
	comp=Z,1µm,6.1s						
HHC				LR	LR		
	comp=N,5µm,21.4s,MS5.7						
HHC				LR	LR		
	comp=E,3µm,21.4s,MS5.7						
HHC				LR	LR		
	comp=Z,7µm,22.6s,MS5.7						
HHC	**Hu-ho-hao-te**	**57.01**	**329**	*e*P	**P**	**15 00 31.3**	**-0.1**
	comp=Z,56nm,0.8s,mb5.7						
HHC				pP	pP	15 00 42.3	+2.9
HHC				PP	PP	15 02 37.4	-2.2
HHC				S	**S**	**15 08 24.8**	**+2.5**
HHC				LR	LR		
	comp=Z,7µm,22.6s,MS5.7						
SKR	**Severo-Kuril's**	**57.33**	**7**	*e*P	**P**	**15 00 30.0**	**-3.5**
SKR				*e*		15 02 41.0	
SKR				*e*PPP	PPP	15 04 04.4	+1.2
SKR				*e*S	**S**	**15 08 25.0**	**-1.4**
SKR				pmax	pmax		
	comp=N,180nm,1.0s						
SKR				pmax	pmax		
	comp=E,90nm,1.0s						
SKR				pmax	pmax		
	comp=Z,450nm,1.0s,mb6.5						
SKR				pmax	pmax		
	comp=N,2µm,4.0s						
SKR				pmax	pmax		
	comp=E,3µm,4.0s						
SKR				pmax	pmax		
	comp=Z,5µm,4.0s						
SKR				pmax	pmax		
	comp=Z,2µm,6.0s						
SKR				smax			
	comp=N,6µm,20.0s						
SKR				smax			
	comp=E,6µm,18.0s						
SKR				MLR	MLR		
	comp=N,8µm,18.0s,MS5.9						
SKR				MLR	MLR		
	comp=E,4µm,18.0s,MS5.9						
SKR				MLR	MLR		
	comp=Z,7µm,18.0s,MS5.8						
SKR	**Severo-Kuril's**	**57.33**	**7**	*e*P	**P**	**15 00 30.0**	**-3.5**
	comp=Z,450nm,1.0s,mb6.5						
SKR				*e*		15 02 41.0	
SKR				*e*PPP	PPP	15 04 04.4	+1.2
SKR				*e*S	**S**	**15 08 25.0**	**-1.4**
SKR				LR	LR		
	comp=Z,7µm,18.0s,MS5.8						
BTO	**Baotou**	**57.65**	**327**	*e*P	**P**	**15 00 35.9**	**0.0**
BTO				S	**S**	**15 08 32.5**	**+1.8**
BTO				AMB	AMB		
	comp=Z,80nm,0.8s,mb5.8						
BTO	**Baotou**	**57.65**	**327**	*e*P	**P**	**15 00 35.9**	**0.0**
	comp=Z,88nm,0.8s,mb5.8						
BTO				S	**S**	**15 08 32.5**	**+1.8**
LZH	**Lanzhou**	**58.34**	**320**	⇓P	**P**	**15 00 41.0**	**+0.2**
LZH				PP	PP	15 02 52.2	+0.6
LZH				S	**S**	**15 08 40.5**	**+0.7**
LZH				SS	SS	15 12 34.2	+0.6
LZH				AMB	AMB		
	comp=Z,160nm,1.5s,mb5.8						
LZH				AMB	AMB		
	comp=Z,1µm,6.1s						
LZH				LR	LR		
	comp=N,3µm,15.0s						
LZH				LR	LR		
	comp=Z,9µm,18.2s,MS5.9						
LZH	**Lanzhou**	**58.34**	**320**	⇓P	**P**	**15 00 41.0**	**+0.2**
	comp=Z,170nm,1.5s,mb5.8						
LZH				PP	PP	15 02 52.2	+0.6
LZH				S	**S**	**15 08 40.5**	**+0.7**
LZH				SS	SS	15 12 34.2	+0.6
LZH				LR	LR		
	comp=Z,9µm,18.2s,MS5.9						
PET	**Petropavlovsk**	**59.96**	**8**	*c i*P	**P**	**15 00 50.8**	**-1.0**
PET				pmax	pmax		
	comp=Z,260nm,1.5s,mb6.0						
PET	**Petropavlovsk**	**59.96**	**8**	⇑*i*P	**P**	**15 00 50.8**	**-1.0**
	comp=Z,260nm,1.5s,mb6.0						
IMP	**Imphal**	**60.03**	**303**	*e*x	**P**	**15 00 55.0**	**+2.3**
HIA	**Hailar**	**60.19**	**340**	*e*P	**P**	**15 00 52.8**	**-0.6**
HIA				pmax	pmax		
	comp=Z,310nm,1.2s						
HIA	**Hailar**	**60.19**	**340**	*e*P	**P**	**15 00 52.8**	**-0.5**
	comp=Z,310nm,1.2s,mb6.2						
DRV	**Dumont d'Urvil**	**60.44**	**183**	P	**P**	**15 00 57.0**	**+2.1**
DRV				S	**S**	**15 09 13.0**	**+6.4**
KIP	**Kipapa**	**60.70**	**61**	P	**P**	**15 00 56.3**	**-0.9**
KIP				pmax	pmax		
	comp=Z,220nm,1.4s,mb6.1						
KIP	**Kipapa**	**60.70**	**61**	*e*P	**P**	**15 00 55.8**	**-1.4**
	comp=Z,224nm,1.4s,mb6.1						
KIP				LR	LR		
	comp=Z,13µm,19.0s,MS6.1						
SHL	**Shillong**	**62.04**	**303**	*i* P	**P**	**15 01 06.1**	**-0.2**
SHL				*i* x	x	15 09 25.0	
POHA	**Pohakuloa**	**62.33**	**64**	PFAKE		15 01 20.0	+12
POHA				LR	LR		
	comp=Z,15µm,20.0s,MS6.2						
GTA	**Gaotai**	**62.87**	**320**	P	**P**	**15 01 11.6**	**0.0**
GTA				PCP	PcP	15 01 49.2	-0.3
GTA				PP	PP	15 03 31.4	-0.1
GTA				PCS		15 05 52.4	
GTA				S	**S**	**15 09 40.1**	**+2.3**
GTA				SS	SS	15 13 48.8	+3.6
GTA				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.6						
GTA				AMB	AMB		
	comp=Z,950nm,10.3s						
GTA				LR	LR		
	comp=N,4µm,16.7s,MS5.7						
GTA				LR	LR		
	comp=E,3µm,20.9s,MS5.7						
GTA				LR	LR		
	comp=Z,4µm,25.9s,MS5.5						
GTA	**Gaotai**	**62.87**	**320**	P	**P**	**15 01 11.6**	**0.0**
	comp=Z,43nm,0.8s,mb5.6						
GTA				PcP	PcP	15 01 49.2	-0.3
GTA				PP	PP	15 03 31.4	-0.1
GTA				PcS		15 05 52.4	
GTA				S	**S**	**15 09 40.1**	**+2.3**
GTA				SS	SS	15 13 48.8	+3.6
GTA				LR	LR		
	comp=Z,4µm,25.9s,MS5.5						
PPT	**Papeete**	**62.97**	**106**	*e*P	**P**	**15 01 13.2**	**+0.7**
PPT				*e*S	**S**	**15 09 38.5**	**-0.8**
PPT				*e*LQ		15 17 01.0	
PPT				*e*LR	LR	15 19 54.1	
	comp=Z,10µm,26.5s,baz=256						
PPT	**Papeete**	**62.97**	**106**	P	**P**	**15 01 13.1**	**+0.6**
	comp=Z,25nm,0.6s,mb5.5,baz=170,slow=6.0,SNR=4.8						
PPT				LR	LR	15 25 46.1	
	comp=Z,3µm,19.2s,MS5.5,baz=268,slow=33						
SMY	**Shemya**	**63.22**	**18**	*e*P	**P**	**15 01 14.5**	**+0.8**
SMY				MLR	MLR		
	comp=Z,9µm,20.0s,MS5.9						
TBI	**Tubuai**	**63.41**	**113**	*e*P	**P**	**15 01 16.3**	**+1.0**
TBI				*e*S	**S**	**15 09 43.9**	**-0.8**
TBI				*e*SS	SS	15 13 48.9	-4.6
TBI				*e*LQ		15 17 15.9	
TBI				*e*LR	LR	15 20 11.9	
	comp=Z,7µm,36.2s						
CAL	**Calcutta**	**63.99**	**299**	*e*P	**P**	**15 01 20.8**	**+1.5**
CAL				*e*x	x	15 06 01.9	
CAL				*e*x	x	15 09 59.0	
LSA	**Lhasa**	**64.29**	**307**	P	**P**	**15 01 22.7**	**+1.6**
LSA				PCP	PcP	15 01 52.2	-3.4
LSA				PP	PP	15 03 46.6	+2.2
LSA				S	**S**	**15 09 56.0**	**+0.3**
LSA				XS		15 10 22.0	
LSA				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.5						
LSA				AMB	AMB		
	comp=Z,640nm,5.2s						
LSA				LR	LR		
	comp=N,2µm,26.4s,MS5.5						
LSA				LR	LR		
	comp=E,4µm,25.3s,MS5.5						
LSA				LR	LR		
	comp=Z,6µm,22.2s,MS5.7						
LSA	**Lhasa**	**64.29**	**307**	P	**P**	**15 01 22.1**	**+1.0**
LSA				S	**S**	**15 09 59.6**	**+3.9**
LSA	**Lhasa**	**64.29**	**307**	*e*P	**P**	**15 01 21.9**	**+0.8**
LSA				pmax	pmax		
	comp=Z,135nm,0.9s,mb6.0						
LSA	**Lhasa**	**64.29**	**307**	P	**P**	**15 01 22.7**	**+1.6**
	comp=Z,50nm,0.9s,mb5.5						
LSA				PcP	PcP	15 01 52.2	-3.4
LSA				PP	PP	15 03 46.6	+2.2
LSA				S	**S**	**15 09 56.0**	**+0.3**
LSA				sS		15 10 22.0	
LSA				LR	LR		
	comp=Z,6µm,22.2s,MS5.7						
ULN	**Ulaanbaatar**	**64.30**	**331**	⇓*e*P	**P**	**15 01 20.6**	**-0.3**
ULN				*e*S	**S**	**15 09 53.2**	**-2.3**
ULN				pmax	pmax		
	comp=Z,58nm,0.8s,mb5.7						
ULN				MLR	MLR		
	comp=Z,6µm,21.0s,MS5.8						
ULN	**Ulaanbaatar**	**64.30**	**331**	⇓*e*P	**P**	**15 01 20.6**	**-0.3**
	comp=Z,58nm,0.8s,mb5.7						
ULN				*e*S	**S**	**15 09 53.2**	**-2.3**
ULN				LR	LR		
	comp=Z,6µm,21.0s,MS5.8						
SONM	**Songino Array**	**64.59**	**331**	P	**P**	**15 01 22.7**	**-0.1**
	comp=Z,38nm,1.1s,mb5.3,baz=149,slow=7.2,SNR=48						
SONM				S	**S**	**15 10 01.1**	**+2.0**
	comp=Z,0.7nm,0.4s,baz=96,slow=14,SNR=2.3						
SONM				LR	LR	15 29 58.6	
	comp=Z,8µm,21.8s,MS5.8,baz=136,slow=36						
SONM				PKPPKP		15 30 07.8	
	comp=Z,0.9nm,0.4s,baz=90,slow=1.2,SNR=3.9						
SONM				PKP2ab		15 30 19.9	
	comp=Z,4.9nm,0.8s,baz=284,slow=5.1,SNR=7.2						
CIT	**Chita**	**64.68**	**338**	⇓*i*P	**P**	**15 01 23.5**	**+0.2**
CIT				*e*		15 01 37.1	
CIT				*e*		15 01 53.8	
CIT				*e*S	**S**	**15 10 02.0**	**+1.9**
CIT				pmax	pmax		
	comp=Z,572nm,2.6s,mb6.1						
CIT	**Chita**	**64.68**	**338**	⇓*i*P	**P**	**15 01 23.5**	**+0.2**
	comp=Z,572nm,2.6s,mb6.1						
CIT				*e*		15 01 37.1	
CIT				*e*		15 01 53.8	
CIT				*e*S	**S**	**15 10 02.0**	**+1.9**
CLNS	**Chul'man**	**65.45**	**347**	*e*P	**P**	**15 01 28.6**	**+0.5**
CLNS				*e**PP	pP	15 01 35.6	-0.6
CLNS				*e*		15 02 01.2	
CLNS				*e*S	S	15 10 09.9	+0.4
CLNS				pmax	pmax		
	comp=Z,122nm,1.0s,mb5.9						
CLNS				pmax	pmax		
	comp=N,50nm,0.8s						
CLNS				pmax	pmax		
	comp=E,17nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,43nm,1.5s,mb5.3						
CLNS				pmax	pmax		
	comp=N,39nm,1.2s						
CLNS				pmax	pmax		
	comp=E,41nm,1.2s						
CLNS				smax			
	comp=N,803nm,12.7s						
CLNS				smax			
	comp=Z,613nm,14.4s						
CLNS				smax			
	comp=E,426nm,11.1s						
CLNS				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.5						
CLNS				MLR	MLR		
	comp=N,2µm,20.0s,MS5.4						
CLNS				MLR	MLR		
	comp=E,500nm,17.0s,MS5.4						
KIWB	**Kanaga Island**	**65.61**	**24**	*e*P	**P**	**15 01 28.7**	**-0.5**
MA2	**Magadan**	**65.75**	**2**	*c i*P	**P**	**15 01 30.1**	**+0.1**
MA2				pmax	pmax		
	comp=Z,379nm,1.4s,mb6.2						
MA2				MLR	MLR		
	comp=Z,5µm,17.0s,MS5.8						
MA2	**Magadan**	**65.75**	**2**	⇑*i*P	**P**	**15 01 30.1**	**+0.1**
	comp=Z,379nm,1.4s,mb6.2						
MA2				LR	LR		
	comp=Z,5µm,17.0s,MS5.8						
BOK	**Bokaro**	**66.52**	**299**	*i* x	**P**	**15 01 35.5**	**-0.1**
VIS	**Vishakhapatnam**	**67.06**	**292**	*e*P	**P**	**15 01 40.4**	**+1.3**
VIS				AMb	AMB	15 01 45.2	
	comp=Z,378nm,1.7s,mb6.2						

VIS				*e*S	S	15 10 30.0	+0.2
PALK	**Pallekele**	**67.33**	**281**	⇓*e*P	**P**	**15 01 41.0**	**+0.1**
	comp=Z,133nm,1.3s,mb5.8						
PALK				LR	LR		
	comp=Z,741nm,21.0s,MS4.9						
ZAK	**Zakamensk**	**67.83**	**332**	⇓*i*P	**P**	**15 01 42.9**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,67nm,1.1s,mb5.6						
ZAK	**Zakamensk**	**67.83**	**332**	⇓*i*P	**P**	**15 01 42.9**	**-0.5**
	comp=Z,67nm,1.1s,mb5.6						
GUN	**Gumba**	**67.89**	**303**	*e*P	**P**	**15 01 44.9**	**+0.7**
	comp=Z,670nm,1.1s,mb6.6						
PKI	**Pulchoki**	**68.17**	**303**	*e*P	**P**	**15 01 46.2**	**+0.3**
	comp=Z,334nm,1.2s,mb6.2						
PKI	**Pulchoki**	**68.17**	**303**	*e*P	**P**	**15 01 46.2**	**+0.3**
PKI				pmax	pmax		
	comp=Z,167nm,1.2s,mb5.9						
KKN	**Kakani**	**68.35**	**303**	*e*P	**P**	**15 01 47.2**	**+0.2**
	comp=Z,349nm,1.1s,mb6.3						
KKN	**Kakani**	**68.35**	**303**	*e*P	**P**	**15 01 47.2**	**+0.2**
KKN				pmax	pmax		
	comp=Z,174nm,1.1s,mb6.0						
DMN	**Daman**	**68.44**	**303**	*e*P	**P**	**15 01 48.0**	**+0.4**
	comp=Z,814nm,1.1s,mb6.7						
TLY	**Talaya**	**68.54**	**333**	*d i*P	**P**	**15 01 47.3**	**-0.5**
TLY				*e*S	S	15 10 44.1	-2.8
TLY				*e*		15 11 43.2	
TLY				*e*SS	SS	15 15 05.0	-7.7
TLY				pmax	pmax		
	comp=Z,56nm,1.4s,mb5.3						
TLY	**Talaya**	**68.54**	**333**	*i* Pr	**P**	**15 01 47.3**	**-0.5**
TLY				*e*S	S	15 10 44.1	-2.8
TLY				*e*		15 11 43.2	
TLY				*e*SS	SS	15 15 05.0	-7.7
IRK	**Irkutsk**	**68.65**	**333**	*e*P	**P**	**15 01 47.6**	**-0.8**
IRK				*e*S	S	15 10 50.0	+1.9
IRK				pmax	pmax		
	comp=Z,141nm,4.9s						
IRK	**Irkutsk**	**68.65**	**333**	*e*P	**P**	**15 01 47.6**	**-0.8**
	comp=Z,141nm,4.9s						
IRK				*e*S	S	15 10 50.0	+1.9
MDRS	**Chennai**	**68.87**	**287**	*e*P	**P**	**15 01 49.0**	**-1.4**
MDRS				*e*x	x	15 04 19.0	
MDRS				*e*x	x	15 10 55.0	
GKN	**Gorkha**	**68.96**	**303**	*e*P	**P**	**15 01 50.7**	**-0.1**
	comp=Z,252nm,0.9s,mb6.2						
SEY	**Seymchan**	**69.18**	**3**	*i* P	**P**	**15 01 51.3**	**-0.2**
SEY				*e*		15 04 24.9	
SEY				*e*PPP	PPP	15 06 08.6	+3.6
SEY				*e*S	S	15 10 53.3	-0.9
SEY						15 11 49.3	
SEY				SS	SS	15 15 17.1	-5.4
SEY				*e*SSS	SSS	15 18 25.9	+0.8
SEY				pmax	pmax		
	comp=N,100nm,1.3s						
SEY				pmax	pmax		
	comp=Z,200nm,1.3s,mb5.9						
SEY				pmax	pmax		
	comp=E,30nm,1.0s						
SEY				smax			
	comp=N,4µm,11.1s						
SEY				smax			
	comp=E,2µm,11.1s						
SEY				MLR	MLR		
	comp=N,9µm,18.0s,MS6.1						
SEY				MLR	MLR		
	comp=Z,14µm,18.0s,MS6.2						
SEY				MLR	MLR		
	comp=E,4µm,17.0s,MS6.1						
SEY	**Seymchan**	**69.18**	**3**	*i* P	**P**	**15 01 51.3**	**-0.2**
	comp=E,0.2nm,1.3s						
SEY				*e*		15 04 24.9	
SEY				*e*PPP	PPP	15 06 08.6	+3.6
SEY				*e*S	S	15 10 53.3	-0.9
SEY				*e*		15 11 49.3	
SEY				SS	SS	15 15 17.1	-5.4
SEY				*e*SSS	SSS	15 18 25.9	+0.8
SEY				LR	LR		
	comp=Z,14µm,18.0s,MS6.2						
BOD	**Bodaibo**	**69.22**	**342**	*e*P	**P**	**15 01 51.3**	**-0.6**
BOD				pmax	pmax		
	comp=Z,98nm,1.5s,mb5.5						
BOD	**Bodaibo**	**69.22**	**342**	*e*P	**P**	**15 01 51.3**	**-0.6**
	comp=Z,98nm,1.5s,mb5.5						
BLSP	**Bilaspur**	**69.33**	**296**	*e*P	**P**	**15 01 53.2**	**+0.1**
BLSP				AMb	AMB	15 02 04.6	
	comp=Z,291nm,1.5s,mb6.0						
YAK	**Yakutsk**	**69.42**	**351**	*ce*P	**P**	**15 01 52.8**	**-0.2**
YAK				*i*		15 02 14.4	
YAK				*e*		15 04 23.3	
YAK				*i* PPP	PPP	15 06 06.7	-0.7
YAK				*i* S	S	15 10 57.7	+0.6
YAK				*i*		15 11 55.6	
YAK				pmax	pmax		
	comp=Z,73nm,1.1s,mb5.5						
YAK				pmax	pmax		
	comp=N,37nm,1.2s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
YAK				pmax	pmax		
	comp=N,8.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
YAK				smax			
	comp=E,21nm,1.4s						
YAK				smax			
	comp=N,15nm,1.3s						
YAK	**Yakutsk**	**69.42**	**351**	⇑*e*P	**P**	**15 01 52.8**	**-0.2**
	comp=N,73nm,1.1s,mb5.5						
YAK				*i*		15 02 14.4	
YAK				*e*		15 04 23.3	
YAK				*i* PPP	PPP	15 06 06.7	-0.7
YAK				*i* S	S	15 10 57.7	+0.6
YAK				*i*		15 11 55.6	
KOLN	**Koldanda**	**69.75**	**303**	*e*P	**P**	**15 01 55.9**	**+0.3**
	comp=N,466nm,1.0s,mb6.4						
MOY	**Mondy**	**69.77**	**332**	*e*P	**P**	**15 01 55.6**	**+0.3**
MOY				pmax	pmax		
	comp=Z,25nm,2.6s,mb4.7						
MOY	**Mondy**	**69.77**	**332**	*e*P	**P**	**15 01 55.6**	**+0.3**
	comp=Z,25nm,2.6s,mb4.7						
MIR	**Mirnyy**	**70.43**	**200**	*c i*P	**P**	**15 01 58.2**	**-0.9**
MIR				pmax	pmax		
	comp=Z,374nm,1.4s,mb6.1						
MIR				pmax	pmax		
	comp=Z,2µm,6.0s						
MIR				MLR	MLR		
	comp=N,6µm,18.0s,MS6.0						
MIR				MLR	MLR		
	comp=E,5µm,18.0s,MS6.0						
MIR				MLR	MLR		
	comp=Z,14µm,18.0s,MS6.3						
HYB	**Hyderabad**	**71.41**	**291**	*e*P	**P**	**15 02 05.5**	**-0.3**
HYB				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.0						
HYB	**Hyderabad**	**71.41**	**291**	*i* P	**P**	**15 02 06.5**	**+0.7**
	comp=Z,200nm,1.0s,mb6.0						
HYB				*e*sP	sP	15 02 17.5	+0.6
HYB				*e*S	S	15 11 22.0	+0.9
UNV	**Unalaska Valle**	**71.57**	**27**	*e*P	**P**	**15 02 04.8**	**-1.4**
	comp=Z,556nm,1.6s,mb6.2						
UNV				LR	LR		
	comp=Z,19µm,20.0s,MS6.4						
VNDA	**Vanda**	**71.61**	**177**	P	**P**	**15 02 05.0**	**-1.1**
VNDA				S	S	15 11 23.0	+0.6
VNDA				pmax	pmax		
	comp=Z,98nm,1.0s						
VNDA				smax			
	comp=E,1.0nm,1.1s						
VNDA				MLR	MLR		
	comp=Z,4µm,18.0s						
VNDA	**Vanda**	**71.61**	**177**	P	**P**	**15 02 05.0**	**-1.1**
	comp=Z,98nm,0.9s,mb5.7,baz=331,slow=6.7,SNR=181						
VNDA				S	S	15 11 23.0	+0.6
	comp=Z,1.2nm,1.1s,baz=49,slow=11,SNR=3.0						
VNDA				LR	LR	15 33 24.9	
	comp=Z,4µm,18.0s,MS5.8,baz=352,slow=36						
VNDA	**Vanda**	**71.61**	**177**	*e*P	**P**	**15 02 04.8**	**-1.3**
	comp=Z,5µm,0.3s						
VNDA				LR	LR		
	comp=Z,5µm,20.0s,MS5.8						
AKUT	**Akutan**	**72.08**	**27**	*e*P	**P**	**15 02 08.8**	**-0.5**
AKUT				LR	LR		
	comp=Z,6µm,19.0s,MS5.9						
SBA	**Scott Base**	**72.26**	**176**	P	**P**	**15 02 10.4**	**+0.4**
SBA				pmax	pmax		
	comp=Z,160nm,1.3s,mb5.8						
SBA	**Scott Base**	**72.26**	**176**	*e*P	**P**	**15 02 10.2**	**+0.2**
	comp=Z,156nm,1.4s,mb5.8						
SBA				LR	LR		
	comp=Z,5µm,19.0s,MS5.8						
WMQ	**Urumqi**	**72.92**	**319**	P	**P**	**15 02 14.9**	**+0.5**
WMQ				AP	pP	15 02 25.2	+2.7
WMQ				PCP	PcP	15 02 32.1	+0.6
WMQ				PP	PP	15 04 59.1	+0.3
WMQ				PPP	PPP	15 06 42.5	+0.8
WMQ				S	S	15 11 37.7	-0.2
WMQ				SCS	ScS	15 12 16.3	-0.5
WMQ				SS	SS	15 16 19.7	-1.2
WMQ				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,1µm,4.4s						
WMQ				LR	LR		
	comp=N,3µm,21.2s,MS5.6						
WMQ				LR	LR		
	comp=E,2µm,20.6s,MS5.6						
WMQ				LR	LR		
	comp=Z,3µm,20.6s,MS5.5						
WMQ	**Urumqi**	**72.92**	**319**	P	**P**	**15 02 14.9**	**+0.5**
	comp=Z,42nm,1.1s,mb5.3						
WMQ				pP	pP	15 02 25.2	+2.7
WMQ				PcP	PcP	15 02 32.1	+0.6
WMQ				PP	PP	15 04 59.1	+0.3
WMQ				S	S	15 11 37.7	-0.2
WMQ				ScS	ScS	15 12 16.3	-0.5
WMQ				SS	SS	15 16 19.7	-1.2
WMQ				LR	LR		
	comp=Z,3µm,20.6s,MS5.5						
LGTI	**Lohaghat**	**73.07**	**303**	*e*x	**P**	**15 02 16.3**	**+0.7**
PTH	**Pithoragarh**	**73.13**	**303**	*e*P	**P**	**15 02 15.4**	**-0.5**
LATR	**Latur**	**73.48**	**291**	*e*P	**P**	**15 02 17.5**	**-0.7**
DGAR	**Diego Garcia**	**73.77**	**264**	*i* P	**P**	**15 02 23.5**	**+3.6**
DGAR	**Diego Garcia**	**73.77**	**264**	PFAKE		15 02 30.0	+10
DGAR				LR	LR		
	comp=Z,2µm,22.0s,MS5.2						
BHPL	**Bhopal**	**73.81**	**296**	*e*P	**P**	**15 02 20.4**	**+0.4**
BHPL				AMb	AMB	15 02 31.3	
	comp=Z,217nm,1.1s,mb6.0						
MNGI	**Mangalore**	**74.03**	**285**	*i* P	**P**	**15 02 21.6**	**+0.2**
MNGI				*i* x	x	15 11 55.5	
SDPT	**Sand Point**	**75.26**	**28**	*e*P	**P**	**15 02 27.1**	**-0.6**
SDPT				LR	LR		
	comp=Z,6µm,22.0s,MS5.9						
NDI	**New Delhi**	**75.40**	**302**	*e*P	**P**	**15 02 27.0**	**-2.1**
NDI				*e*x	x	15 12 03.5	
BILL	**Bilibino**	**75.44**	**7**	*c i*P	**P**	**15 02 28.2**	**-0.3**
BILL				pmax	pmax		
	comp=Z,227nm,1.5s,mb5.9						
BILL	**Bilibino**	**75.44**	**7**	⇑*i*P	**P**	**15 02 28.2**	**-0.3**
	comp=Z,227nm,1.5s,mb5.9						
KAD	**Karad**	**75.47**	**290**	*e*P	**P**	**15 02 28.6**	**-1.0**
KAD				AMb	AMB	15 02 34.8	
	comp=Z,497nm,1.4s,mb6.2						
KAD				*e*x	x	15 12 04.6	
POO	**Poona**	**76.02**	**291**	*e*P	**P**	**15 02 32.8**	**0.0**
POO				AMb	AMB	15 02 37.9	
	comp=Z,438nm,1.4s,mb6.2						
SDNR	**Sundarnagar**	**76.37**	**304**	*e*P	**P**	**15 02 34.2**	**-0.3**
RKT	**Rikitea**	**76.71**	**112**	*e*P	**P**	**15 02 37.7**	**+1.1**
RKT				*e*S	S	15 12 19.4	-1.0
RKT				*e*SS	SS	15 17 16.8	-2.6
RKT				*e*LQ		15 23 08.9	
RKT				*e*LR	LR	15 26 22.5	
	comp=Z,8µm,23.5s,baz=275						
BHK	**Bhakra**	**76.81**	**304**	*e*x	pP	15 02 42.0	-3.2
AJM	**Ajmer**	**77.05**	**299**	*e*P	**P**	**15 02 37.1**	**-1.3**
AJM				AMb	AMB	15 02 49.8	
	comp=Z,336nm,1.3s,mb6.1						
AJM				*e*x	x	15 12 17.3	
MKAR	**Makanchi Array**	**77.63**	**321**	P	**P**	**15 02 40.8**	**-0.3**
	comp=Z,21nm,0.7s,mb5.2,baz=101,slow=7.3,SNR=163						
MKAR				S	S	15 12 29.9	0.0
	comp=Z,1.7nm,1.0s,baz=103,slow=13,SNR=4.3						
MKAR				PKKPbc		15 21 46.0	
	comp=Z,0.7nm,0.7s,baz=308,slow=2.2,SNR=4.7						
MKAR				PKPPKP		15 29 48.7	
	comp=Z,0.8nm,0.8s,baz=270,slow=2.9,SNR=5.3						
MKAR	**Makanchi Array**	**77.63**	**321**	P	**P**	**15 02 40.8**	**-0.4**
MKAR				S	S	15 12 29.9	+0.1
TIXI	**Tiksi**	**78.70**	**354**	*e*P	**P**	**15 02 42.9**	**-3.7**
TIXI				*e*S	S	15 12 34.1	-6.8
TIXI				*e*SSS	SSS	15 21 09.1	+2.2
TIXI				pmax	pmax		
	comp=Z,75nm,1.0s,mb5.6						
TIXI				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.5						
TIXI	**Tiksi**	**78.70**	**354**	*e*P	**P**	**15 02 42.9**	**-3.7**
	comp=Z,75nm,1.0s,mb5.6						
TIXI				*e*S	S	15 12 34.1	-6.8
TIXI				*e*SSS	SSS	15 21 09.1	+2.2
TIXI				LR	LR		
	comp=Z,2µm,17.0s,MS5.5						
TNA	**Tin City**	**78.94**	**18**	*e*P	**P**	**15 02 47.6**	**-0.4**
	comp=Z,69nm,1.3s,mb5.4						
TNA				LR	LR		
	comp=Z,5µm,20.0s,MS5.8						
ZAL	**Zalesovo**	**79.19**	**328**	P	**P**	**15 02 48.3**	**-1.3**
	comp=Z,24nm,0.7s,mb5.2,baz=359,slow=5.9,SNR=88						
ZAL				S	S	15 12 43.6	-2.8
	comp=Z,1.6nm,0.9s,baz=197,slow=18,SNR=12						
ZAL				LR	LR	15 38 48.9	
	comp=Z,29µm,19.7s,MS6.6,baz=358,slow=36						
ZAL	**Zalesovo**	**79.19**	**328**	P	**P**	**15 02 48.3**	**-1.3**
ZAL				S	S	15 12 43.6	-2.7
KSH	**Kashi**	**79.46**	**312**	P	**P**	**15 02 52.1**	**+0.8**
KSH				PCP	PcP	15 03 01.0	+1.3
KSH				AP	pP	15 03 02.6	+3.0
KSH				*e*PP	PP	15 05 52.3	-1.0
KSH				S	S	15 12 48.2	-1.3
KSH				SKS	SKS	15 13 00.7	-8.0
KSH				SCS	ScS	15 13 08.3	-1.3
KSH				SS	SS	15 17 56.0	-4.2
KSH				AMB	AMB		
	comp=Z,920nm,5.0s						
KSH				LR	LR		
	comp=N,9µm,21.9s,MS6.1						
KSH				LR	LR		
	comp=E,5µm,21.3s,MS6.1						
AAA	**Alma-Ata**	**79.91**	**316**	*e*P	**P**	**15 02 56.0**	**+2.3**
AAA				*e*S	S	15 12 56.0	+1.8
AAA				pmax	pmax		
	comp=Z,800nm,6.0s						
AAA				smax			
	comp=N,3µm,11.0s						
AAA				smax			
	comp=E,500nm,11.0s						
ULHL	**Ulahol**	**80.09**	**315**	P	**P**	**15 02 54.9**	**+0.2**
	SNR=10						
KDAK	**Kodiak Island**	**80.26**	**28**	*e*P	**P**	**15 02 55.1**	**-0.1**
	comp=E,337nm,1.8s,mb6.0						
KDAK				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
NVS	**Novosibirsk**	**80.41**	**328**	*i* P	**P**	**15 02 54.6**	**-1.5**
NVS				*i* S	S	15 12 56.1	-3.0
NVS				pmax	pmax		
	comp=Z,212nm,2.2s,mb5.7						
NVS				pmax	pmax		
	comp=N,68nm,1.9s						
NVS				pmax	pmax		
	comp=E,92nm,1.7s						
NVS				smax			
	comp=N,85nm,1.9s						
NVS				smax			
	comp=E,99nm,1.9s						
NVS	**Novosibirsk**	**80.41**	**328**	*i* P	**P**	**15 02 54.6**	**-1.5**
	comp=E,212nm,2.2s,mb5.7						
NVS				*i* S	S	15 12 56.1	-3.0
SVW2	**Sparrevohn**	**80.60**	**25**	*e*P	**P**	**15 02 57.4**	**+0.4**
KZA	**Kyzart**	**80.74**	**314**	P	**P**	**15 02 59.5**	**+1.3**
	SNR=74						
TKM2	**Tokmak 2**	**80.75**	**315**	P	**P**	**15 02 58.6**	**+0.5**
	SNR=33						
BHJ	**Bhuj**	**80.79**	**295**	*e*x	x	15 03 11.3	
BHJ				*e*x	x	15 13 18.7	
PTCN	**Pitcairn Islan**	**81.10**	**114**	PFAKE		15 03 10.0	+10
PTCN				LR	LR		
	comp=Z,4µm,22.0s,MS5.7						
KBK	**Karagaybulak**	**81.12**	**315**	P	**P**	**15 03 00.3**	**+0.2**
	SNR=9.1						
UCH	**Uchtor**	**81.31**	**314**	P	**P**	**15 03 02.9**	**+1.8**
	SNR=34						
CHMS	**Chumysh**	**81.36**	**315**	P	**P**	**15 03 01.9**	**+0.6**
	SNR=14						
TTA	**Tatalina**	**81.40**	**23**	*e*P	**P**	**15 03 01.8**	**+0.7**
FRU	**Bishkek**	**81.41**	**315**	*e*P	**P**	**15 03 02.0**	**+0.4**
FRU				*e*	pP	15 03 12.0	+2.1
FRU				*e*		15 13 13.0	
FRU				pmax	pmax		
	comp=Z,100nm,2.0s,mb5.4						
FRU	**Bishkek**	**81.41**	**315**	*e*P	**P**	**15 03 02.0**	**+0.4**
	comp=Z,100nm,2.0s,mb5.4						
FRU				*e*	pP	15 03 12.0	+2.1
FRU				*e*		15 13 13.0	
AAK	**Ala-Archa**	**81.44**	**315**	P	**P**	**15 03 02.8**	**+1.1**
	SNR=13						
AAK	**Ala-Archa**	**81.44**	**315**	*d i*P	**P**	**15 03 00.9**	**-0.8**
AAK				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.2						
AAK	**Ala-Archa**	**81.44**	**315**	*i* Pr	**P**	**15 03 00.9**	**-0.8**
	comp=Z,35nm,1.1s,mb5.2						
USP	**Ospenovka**	**81.62**	**315**	P	**P**	**15 03 02.8**	**+0.2**
	SNR=36						
AML	**Almayashu**	**81.86**	**314**	P	**P**	**15 03 05.2**	**+1.3**
	SNR=42						
MAW	**Mawson**	**81.89**	**203**	⇑*i*P	**P**	**15 03 03.7**	**+0.1**
MAW	**Mawson**	**81.89**	**203**	P	**P**	**15 03 02.8**	**-0.8**
	comp=Z,75nm,1.0s,mb5.6,baz=88,slow=6.4,SNR=34						
MAW				LR	LR	15 39 00.7	
	comp=Z,8µm,18.6s,MS6.1,baz=79,slow=35						
EKS2	**Erkin-Say**	**81.95**	**315**	P	**P**	**15 03 05.0**	**+0.6**
	SNR=24						
SLKM	**Skilak Lake**	**82.60**	**26**	P	**P**	**15 03 07.3**	**-0.1**
SLKM	**Skilak Lake**	**82.60**	**26**	*e*P	**P**	**15 03 07.0**	**-0.4**
FIB	**Fire Island**	**82.92**	**26**	P	**P**	**15 03 08.6**	**-0.4**
FIB				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.6						
PMR	**Palmer**	**83.56**	**26**	*e*P	**P**	**15 03 11.7**	**-0.6**
PMR				MLR	MLR		
	comp=Z,5µm,23.0s,MS5.8						
QSPA	**South Pole Qui**	**83.66**	**180**	*e*P	**P**	**15 03 12.0**	**-0.4**
	comp=Z,168nm,0.8s,mb6.2						
IMA	**Indian Mountai**	**83.91**	**21**	P	**P**	**15 03 14.4**	**+0.4**
IMA				pmax	pmax		
	comp=Z,750nm,1.4s,mb6.6						
IMA	**Indian Mountai**	**83.91**	**21**	*e*P	**P**	**15 03 13.8**	**-0.2**
SML	**Sawmill**	**84.00**	**26**	*e*P	**P**	**15 03 14.0**	**-0.5**
SML				*e*S	S	15 13 40.0	+4.5
KKAR	**Karatay Array**	**84.39**	**314**	*i* P	**P**	**15 03 16.6**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,115nm,1.3s,mb5.8						
KKAR	**Karatay Array**	**84.39**	**314**	*i* P	**P**	**15 03 16.6**	**-0.3**
	comp=Z,115nm,1.3s,mb5.8						
MCK	**McKinley**	**84.58**	**24**	*e*P	**P**	**15 03 16.3**	**-1.1**
MCK				*e*S	S	15 13 35.0	-6.2
MCK				pmax	pmax		
	comp=Z,114nm,1.2s,mb5.9						
MCK				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.6						
MCK	**McKinley**	**84.58**	**24**	*e*P	**P**	**15 03 16.3**	**-1.1**
	comp=Z,114nm,1.2s,mb5.9						
MCK				*e*S	S	15 13 35.0	-6.3
MCK				LR	LR		
	comp=Z,3µm,21.0s,MS5.6						
EYAK	**Cordova Ski Ar**	**84.63**	**27**	*e*P	**P**	**15 03 17.6**	**-0.1**
DIV	**Divide**	**84.84**	**27**	*e*P	**P**	**15 03 19.1**	**+0.4**
	comp=Z,520nm,1.3s,mb6.5						
DIV				LR	LR		
	comp=Z,9µm,22.0s,MS6.1						
COLA	**College**	**85.50**	**23**	*c i*P	**P**	**15 03 20.5**	**-1.5**
COLA	**College**	**85.50**	**23**	*e*P	**P**	**15 03 21.0**	**-1.0**
COLA				LR	LR		
	comp=Z,5µm,20.0s,MS5.9						
THY	**Trims Highway**	**85.75**	**25**	*e*P	**P**	**15 03 23.6**	**+0.4**
ILAR	**Eielson Array**	**85.83**	**23**	P	**P**	**15 03 21.7**	**-1.9**
	comp=Z,51nm,0.7s,mb5.9,baz=254,slow=5.1,SNR=429						
ILAR				S	S	15 13 45.3	-8.2
	comp=Z,0.5nm,0.9s,baz=270,slow=5.4,SNR=3.1						
ILAR				PKKPbc		15 21 27.4	
	comp=Z,0.5nm,0.7s,baz=26,slow=1.2,SNR=5.4						
ILAR				LR	LR	15 38 12.8	
	comp=Z,5µm,20.6s,MS5.9,baz=262,slow=33						
MENT	**Mentasta**	**86.42**	**25**	*e*P	**P**	**15 03 26.7**	**+0.2**
BVAR	**Borovoye Array**	**86.92**	**324**	P	**P**	**15 03 28.3**	**-1.0**
	comp=Z,18nm,0.7s,mb5.4,baz=104,slow=6.1,SNR=57						
BVAR				PKKPbc		15 21 23.4	
	comp=Z,0.2nm,0.3s,baz=232,slow=24,SNR=3.6						
BVAR				PKPPKP		15 29 31.8	
	comp=Z,0.6nm,0.8s,baz=254,slow=3.6,SNR=4.6						
CHKZ	**Chkalovo**	**86.95**	**325**	*e*P	**P**	**15 03 28.2**	**-1.2**
SIT	**Sitka**	**88.69**	**32**	*e*P	**P**	**15 03 37.8**	**+0.2**
SIT				pmax	pmax		
	comp=Z,157nm,1.5s,mb6.1						
SIT				MLR	MLR		
	comp=Z,8µm,20.0s,MS6.1						
SIT	**Sitka**	**88.69**	**32**	*e*P	**P**	**15 03 37.8**	**+0.2**
	comp=Z,157nm,1.5s,mb6.1						
SIT				LR	LR		
	comp=Z,8µm,20.0s,MS6.1						
SYO	**Syowa Base**	**90.24**	**200**	⇓P	**P**	**15 03 43.1**	**-1.6**
SYO	**Syowa Base**	**90.24**	**200**	⇑PcP	PcP	15 03 44.5	-1.6
WBK	**Wadi Bani Khal**	**90.42**	**293**	⇑P	**P**	**15 03 46.6**	**0.0**
	SNR=11						
JMDO	**Jabal Madar**	**91.19**	**292**	P	**P**	**15 03 50.5**	**+0.3**
	SNR=5.2						
BIDO	**Bidbid**	**91.30**	**293**	⇑P	**P**	**15 03 51.0**	**+0.5**
	SNR=14						
SMDO	**Samad**	**91.32**	**293**	⇓P	**P**	**15 03 51.2**	**+0.5**
	SNR=5.5						
DLBC	**Dease Lake**	**91.75**	**31**	LR	LR	15 37 01.9	
	comp=Z,5µm,21.5s,MS5.9,baz=250,slow=30						
DLBC	**Dease Lake**	**91.75**	**31**	*e*P	**P**	**15 03 52.1**	**+0.4**
BBB	**Bella Bella**	**91.91**	**38**	LR	LR	15 37 31.0	
	comp=Z,7µm,21.2s,MS6.0,baz=213,slow=30						
INK	**Inuvik**	**92.01**	**21**	P	**P**	**15 03 52.5**	**-0.3**
INK				pmax	pmax		
	comp=Z,57nm,1.0s						
INK	**Inuvik**	**92.01**	**21**	PKKPbc		15 21 08.1	
	comp=Z,2.5nm,0.8s,baz=99,slow=6.9,SNR=4.5						
INK				LR	LR	15 41 32.6	
	comp=Z,4µm,21.1s,MS5.9,baz=245,slow=33						
INK	**Inuvik**	**92.01**	**21**	*e*P	**P**	**15 03 51.8**	**-1.0**
	comp=Z,57nm,1.0s,mb5.9						
HOQ	**Hoqain**	**92.05**	**293**	P	**P**	**15 03 54.6**	**+0.5**
	SNR=9.0						
AB31	**Akbulak array**	**92.70**	**319**	P	**P**	**15 03 55.0**	**-1.4**
AB31				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.6						
AB31	**Akbulak array**	**92.70**	**319**	P	**P**	**15 03 55.0**	**-1.4**
	comp=Z,23nm,0.9s,mb5.6						
ARQ	**Araqi**	**92.75**	**293**	P	**P**	**15 03 57.7**	**+0.5**
	SNR=11						
SVE	**Sverdlovsk**	**93.15**	**327**	*e*P	**P**	**15 03 59.0**	**+0.7**
SVE				*e*		15 07 45.0	
SVE				*e*PPP	PPP	15 09 46.0	-0.6
SVE				*e*		15 14 28.0	
SVE				*e*S	S	15 15 04.0	+3.6
SVE				*e*PS	PS	15 16 12.0	-10
SVE				pmax	pmax		
	comp=Z,76nm,2.0s,mb5.8						
SVE				MLR	MLR		
	comp=N,1µm,18.0s,MS5.8						
SVE				MLR	MLR		
	comp=E,3µm,18.0s,MS5.8						
SVE				MLR	MLR		
	comp=Z,5µm,18.0s,MS6.0						
SVE	**Sverdlovsk**	**93.15**	**327**	*e*P	**P**	**15 03 59.0**	**+0.7**
	comp=Z,76nm,2.0s,mb5.8						
SVE				*e*		15 07 45.0	
SVE				*e*PPP	PPP	15 09 46.0	-0.6
SVE				*e*		15 14 28.0	
SVE				*e*S	S	15 15 04.0	+3.6
SVE				*e*PS	PS	15 16 12.0	-10
SVE				LR	LR		
	comp=Z,5µm,18.0s,MS6.0						
BANOM	**Banah**	**93.20**	**296**	P	**P**	**15 04 00.2**	**+1.0**
	SNR=15						
ASHO	**Ashiyiah**	**93.30**	**294**	P	**P**	**15 04 00.2**	**+0.4**
	SNR=13						
KHMM	**Horse Mountain**	**93.66**	**49**	*e*P	**P**	**15 04 00.8**	**-0.2**
OCWA	**Octopus Mounta**	**93.95**	**43**	*e*P	**P**	**15 04 03.7**	**+1.5**
	comp=Z,160nm,1.6s,mb6.2						
OCWA				LR	LR		
	comp=Z,7µm,20.0s,MS6.1						

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HOPS  Hopland           94.00  51  PFAKE              15 04 10.0 +7.3
HOPS                               LR       LR
      comp=Z,10µm,22.0s,MS6.2
ARU   Arti              94.25 326 ePP       P         15 04 00.8 -2.6
ARU                               e                   15 07 47.3
ARU                               eS                  15 14 32.8
ARU                               eSP      SP         15 16 23.8 -6.1
ARU                               ePS      PS         15 16 34.9 +1.1
ARU                               eSS      SS         15 21 29.8 -5.6
ARU                                MLR      MLR
      comp=Z,4µm,22.0s,MS5.8
ARU                                MLR      MLR
      comp=N,700nm,17.0s,MS5.8
ARU                                MLR      MLR
      comp=E,3µm,22.0s,MS5.8
COR   Corvallis         94.29  46  PFAKE              15 04 10.0 +6.2
COR                                LR       LR
      comp=Z,2µm,22.0s,MS5.6
RBK   Rabkut            94.36 287  P        P         15 04 05.6 +0.8
      SNR=7.1
HUMO  Hull Mountain     94.38  48 eP        P         15 04 04.2 -0.1
      comp=Z,77nm,1.4s,mb5.9
HUMO                               LR       LR
      comp=Z,8µm,20.0s,MS6.2
YBH   Yreka Blue Hor    94.50  49  P        P         15 04 05.4 +0.5
YBH                                pmax     pmax
      comp=Z,84nm,1.4s
YBH   Yreka Blue Hor    94.50  49  LR       LR        15 38 44.9
      comp=Z,16µm,22.0s,MS6.5,baz=354,slow=30
YBH   Yreka Blue Hor    94.50  49 eP        P         15 04 05.3 +0.4
      comp=Z,84nm,1.4s,mb6.0
YBH                                LR       LR
      comp=Z,15µm,22.0s,MS6.4
PGC   Sidney            94.51  42 eP        P         15 04 05.5 +0.7
      comp=Z,192nm,1.4s,mb6.3
WDC   Whiskeytown Da    94.54  50  P        P         15 04 05.3 +0.2
WDC                                pmax     pmax
      comp=Z,100nm,1.4s,mb6.0
WDC   Whiskeytown Da    94.54  50 eP        P         15 04 05.0 -0.1
      comp=Z,103nm,1.5s,mb6.0
WDC                                LR       LR
      comp=Z,12µm,21.0s,MS6.3
WHFO  Wadi Hawf         94.81 287  P        P         15 04 07.1 +0.3
      SNR=8.8
SAO   San Andreas Ge    95.11  54  PFAKE              15 04 20.0  +12
SAO                                LR       LR
      comp=Z,8µm,19.0s,MS6.2
FRIS  Frissel Point     95.12  46  P        P         15 04 08.6 +0.9
ABTO  Aybut             95.21 287  P        P         15 04 09.5 +0.8
      SNR=7.2
LASM  Arnica Sink       95.34  49  P        P         15 04 09.1 +0.4
SOKR  Solikamsk         95.41 329⇑iP        P         15 04 07.9 -0.7
SOKR                               pmax     pmax
      comp=Z,10.0nm,0.9s,mb5.2
SOKR                               MLR      MLR
      comp=Z,6µm,21.0s,MS6.0
SOKR  Solikamsk         95.41 329⇑iP        P         15 04 07.9 -0.7
      comp=Z,10.0nm,0.9s,mb5.2
SOKR                               LR       LR
      comp=Z,6µm,21.0s,MS6.0
LBCM  Butte Creek Ri    95.46  50  P        P         15 04 09.4 +0.1
GSM   Grass Mountain    95.52  43  P        P         15 04 09.7 +0.3
HTW   Haystack Looko    95.57  43  P        P         15 04 09.7  0.0
VFP   Flag Point        95.64  45  P        P         15 04 10.3 +0.3
WPW   White Pass        95.66  44  P        P         15 04 10.2 +0.1
CMB   Columbia Colle    96.04  52  P        P         15 04 12.5 +0.5
CMB                               e                   15 04 23.2
CMB                                pmax     pmax
      comp=Z,38nm,1.4s,mb5.6
CMB   Columbia Colle    96.04  52 eP        P         15 04 12.4 +0.3
      comp=Z,38nm,1.4s,mb5.6
CMB                                LR       LR
      comp=Z,9µm,21.0s,MS6.2
MOD   Modoc             96.31  49 eP        P         15 04 12.8 -0.3
      comp=Z,62nm,1.5s,mb5.8
MOD                                LR       LR
      comp=Z,14µm,22.0s,MS6.4
WCN   Washoe City       96.60  51  P        P         15 04 15.8 +1.3
WCN                                pmax     pmax
      comp=Z,20nm,1.1s,mb5.5
WCN   Washoe City       96.60  51 eP        P         15 04 15.4 +0.9
      comp=Z,20nm,1.1s,mb5.5
HAWA  Hanford           97.04  44 eP        P         15 04 16.2 -0.2
      comp=Z,3.5nm,1.3s
HAWA                               LR       LR
      comp=Z,422nm,20.0s,MS4.9
GBL   Gable Mountain    97.09  44  P        P         15 04 16.7 +0.1
OMM   Old Mammoth Mi    97.12  53 eP        P         15 04 17.1 +0.2
MTUM  Tungsten Hills    97.45  53 eP        P         15 04 19.3 +0.9
ISA   Isabella          97.45  55  PFAKE              15 04 30.0  +12
ISA                                LR       LR
      comp=Z,176nm,22.0s
NVL   N'lazarevskaya    97.46 194⇑iP        P         15 04 17.8 +0.1
NVL                               i *PP     pP        15 04 28.0 +1.9
NVL                               i *SP     sP        15 04 31.2 +2.5
NVL                                pmax     pmax
      comp=Z,4.0nm,1.2s,mb4.7
WVOR  Wild Horse Val    97.56  48  P        P         15 04 19.0 +0.2
WVOR                               pmax     pmax
      comp=Z,46nm,1.5s,mb5.8
WVOR  Wild Horse Val    97.56  48 eP        P         15 04 18.8  0.0
      comp=Z,46nm,1.6s,mb5.8
WVOR                               LR       LR
      comp=Z,18µm,22.0s,MS6.5
OD2   Odessa Site #2    97.62  43  P        P         15 04 18.9  0.0
NVAR  Mina Array Bea    97.69  52  P        P         15 04 19.6 +0.1
      comp=Z,5.7nm,0.8s,mb5.2,baz=252,slow=4.6,SNR=29
NVAR                               PP       PP        15 08 17.9 -2.4
      comp=Z,2.2nm,0.9s,baz=259,slow=7.2,SNR=3.6
NVAR                               LR       LR        15 46 34.9
      comp=Z,7µm,18.1s,MS6.2,baz=285,slow=34
MWC   Mount Wilson      97.73  56 eP        P         15 04 20.7 +0.9
MWC   Mount Wilson      97.73  56 eP        P         15 04 20.1 +0.3
MNV   Mina              97.81  52 eP        P         15 04 19.7 -0.3
MNV                                pmax     pmax
      comp=Z,20nm,1.2s,mb5.5
MNV                                MLR      MLR
      comp=Z,7µm,21.0s,MS6.1
MNV   Mina              97.81  52 eP        P         15 04 19.7 -0.4
      comp=Z,20nm,1.2s,mb5.5
MNV                                LR       LR
      comp=Z,7µm,21.0s,MS6.1
BMO   Blue Mountains    98.57  46 eP        P         15 04 22.9 -0.4
BMO                                pmax     pmax
      comp=Z,21nm,1.2s,mb5.5
BMO                                MLR      MLR
      comp=Z,7µm,22.0s,MS6.1
BMO   Blue Mountains    98.57  46 eP        P         15 04 22.9 -0.3
      comp=Z,21nm,1.2s,mb5.5
BMO                                LR       LR
      comp=Z,7µm,22.0s,MS6.1
NEW   Newport           98.70  42 eP        P         15 04 23.5 -0.3
NEW                                pmax     pmax
      comp=Z,24nm,1.0s
NEW                                MLR      MLR
      comp=Z,6µm,19.0s
NEW   Newport           98.70  42  LR       LR        15 47 05.8
      comp=Z,7µm,18.4s,MS6.2,baz=261,slow=34
NEW   Newport           98.70  42 eP        P         15 04 23.5 -0.2
      comp=Z,24nm,1.0s,mb5.7
NEW                                LR       LR
      comp=Z,6µm,19.0s,MS6.1
PFO   Pinyon Flat Ob    99.05  57  PFAKE              15 04 40.0  +14
PFO                                LR       LR
      comp=Z,2µm,19.0s,MS5.6
RPN   Rapa Nui          99.34 119  PFAKE              15 04 40.0  +13
RPN                                LR       LR
      comp=Z,1µm,22.0s,MS5.3
YKW3  Yellowknife Ar    99.52  28 eP        P         15 04 26.3 -0.8
YKA   Yellowknife Ar    99.53  28  P        P         15 04 26.5 -0.7
      comp=Z,12nm,1.0s,mb5.2,baz=276,slow=4.5,SNR=51
YKA                                PP       PP        15 08 29.0 -4.4
      comp=Z,2.9nm,0.9s,baz=276,slow=7.2,SNR=5.9
YKA                                PKKPbc             15 20 50.6
      comp=Z,1.3nm,0.6s,baz=91,slow=2.9,SNR=11
YKA                                LR       LR        15 48 33.4
      comp=Z,3µm,20.0s,MS5.8,baz=285,slow=35
YKA   Yellowknife Ar    99.53  28  P        P         15 04 26.5 -0.7
YKA                                PP       PP        15 08 29.0 -4.4
YKA                                PKKPbc             15 20 50.6
YKA                                LR       LR        15 48 33.4
SNAA  Sanae             99.66 189⇑iP        P         15 04 27.1 -0.5
SNAA  Sanae             99.66 189           P         15 04 38.1  +10
SNAA  Sanae             99.66 189c iP       P         15 04 27.2 -0.4
SNAA  Sanae             99.66 189  PKKPbc             15 20 50.5
      comp=Z,0.6nm,0.6s,baz=0.6,slow=4.0,SNR=5.5
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SNAA                               LR       LR        15 49 40.1
      comp=Z,5µm,19.6s,MS6.1,baz=147,slow=36
TRCR  Troy Canyon       99.83  52 eP        P         15 04 30.0 +0.9
ELK   Elko             100.09  50 eP        P         15 04 29.7 -0.6
ELK                               e                   15 08 33.2
ELK                                pmax     pmax
      comp=Z,20nm,1.4s
ELK                                MLR      MLR
      comp=Z,8µm,21.0s
ELK   Elko             100.09  50 eP        P         15 04 29.7 -0.7
      comp=Z,20nm,1.4s
ELK                               ePP       PP        15 08 33.2 -5.3
ELK                                LR       LR
      comp=Z,8µm,21.0s,MS6.2
LDFC  Landfair         100.19  56 eP        P         15 04 31.1 +0.2
NEN   Nelson           100.41  55 ePdif     P         15 04 32.2 +0.3
NEN                               ePP       PP        15 08 36.9 -4.2
HLID  Hailey           100.66  47 eP        P         15 04 32.9 +0.1
      comp=Z,8.6nm,0.1s
HLID                               LR       LR
      comp=Z,12µm,21.0s,MS6.4
MSO   Missoula         100.89  44  PFAKE              15 04 40.0 +6.3
MSO                                LR       LR
      comp=Z,3µm,21.0s,MS5.8
EDM   Edmonton         100.91  37 ePdif     P         15 04 33.9 +0.2
EDM                               e                   15 21 08.3
VNA2  Neumayer--Watz   101.02 188⇑iP        P         15 04 35.5 +1.7
VNA2  Neumayer--Watz   101.02 188                     15 04 45.7
VNA2  Neumayer--Watz   101.02 188⇑i                   15 04 48.8
VNA3  Neumayer Olymp   101.04 188⇑iP        P         15 04 35.2 +1.3
VNA3  Neumayer Olymp   101.04 188                     15 04 45.4
VNA3  Neumayer Olymp   101.04 188⇑i                   15 04 48.4
CHMT  Chamberlain Mo   101.36  44 ePdif     P         15 04 34.9 -0.9
VNA1  Neumayer--Stat   101.39 188⇑iP        P         15 04 37.8 +2.3
VNA1  Neumayer--Stat   101.39 188⇑i                   15 04 46.3
VNA1  Neumayer--Stat   101.39 188                     15 04 52.2
MCMT  McKenzie Canyo   101.74  46 ePdif     P         15 04 37.7 +0.1
MCMT                              e                   15 21 07.8
BGU   Big Grassy Mou   101.77  50 eP        P         15 04 38.3 +0.5
HVU   Hansel Valley    101.93  49 ePdif     P         15 04 38.6  0.0
      comp=Z,22nm,1.2s
DUG   Dugway           101.95  50 eP        P         15 04 37.4 -1.3
DUG                                pmax     pmax
      comp=Z,15nm,1.4s
DUG                                MLR      MLR
      comp=Z,7µm,21.0s,MS6.2
DUG   Dugway           101.95  50 eP        P         15 04 37.4 -1.3
      comp=Z,15nm,1.4s
DUG                               ePP       PP        15 08 44.6 -7.8
DUG                                LR       LR
      comp=Z,7µm,21.0s,MS6.2
HRY   Holter Researc   102.34  44 ePdif     Pdif      15 04 38.5 -1.8
MSU   Marysvale        102.50  52 ePdif     Pdif      15 04 41.9 +0.8
MSU                               ePP       PP        15 08 46.8  -10
BOZ   Bozeman (W)      102.56  45  PFAKE              15 04 50.0 +8.8
BOZ                                LR       LR
      comp=Z,5µm,20.0s,MS6.0
QLMT  Earthquake Lak   102.75  46 ePdif     Pdif      15 04 42.7 +0.7
HWUT  Hardware Ranch   102.84  49 ePP       PP        15 08 52.7 -6.7
      comp=Z,51nm,1.6s
HWUT                               LR       LR
      comp=Z,7µm,20.0s,MS6.2
RRI2  Red Ridge        102.92  47 eP        Pdif      15 04 42.8  0.0
      comp=Z,38nm,1.6s
RRI2                              ePKKPbc             15 20 42.7
JLU   Jordanelle       102.98  50 ePdif     Pdif      15 04 44.0 +0.8
TCUT  Toone Canyon     102.98  49 ePdif     Pdif      15 04 43.5 +0.3
AHID  Auburn Hatcher   103.12  48  PFAKE              15 04 50.0 +6.3
AHID                               LR       LR
      comp=Z,13µm,22.0s,MS6.4
DAU   Daniels Canyon   103.14  50 eP        Pdif      15 04 44.2 +0.3
DAU                               e                   15 09 03.8
IMW   Indian Meadow    103.16  47 ePdif     Pdif      15 04 43.2 -0.7
      comp=Z,10nm,1.2s
TPAW  Teton Pass       103.18  47 ePP       PP        15 09 00.9 -1.0
      comp=Z,19nm,1.2s
WUAZ  Wupatki          103.24  55  PFAKE              15 04 50.0 +5.6
WUAZ                               LR       LR
      comp=Z,7µm,19.0s,MS6.2
GNI   Garni            103.28 310  PFAKE              15 04 50.0 +5.5
GNI                                LR       LR
      comp=Z,1µm,20.0s,MS5.4
YNR   Norris Junctio   103.29  46 eP        Pdif      15 04 47.0 +2.5
RES   Resolute Bay     103.32  14 eP        Pdif      15 04 42.7 -1.2
RES                                pmax     pmax
      comp=Z,10.0nm,1.0s
RES   Resolute Bay     103.32  14 ePdif     Pdif      15 04 42.7 -1.2
      comp=Z,10nm,1.0s
SNOW  Snow King Moun   103.33  47 ePP       PP        15 09 01.5 -1.4
      comp=Z,24nm,1.2s
SNOW                               SP       SP        15 18 10.2 +3.4
LKWY  Lake             103.50  46  PFAKE              15 05 00.0  +15
LKWY                               LR       LR
      comp=Z,10µm,21.0s,MS6.3
ZEI   Tsey             103.75 312 i P       Pdif      15 04 41.6 -4.9
ZEI                               i                   15 08 58.8
TUC   Tucson           103.81  58  PFAKE              15 05 00.0  +13
TUC                                LR       LR
      comp=Z,8µm,20.0s,MS6.3
KBS   Kingsbay         104.05 352  PFAKE              15 05 00.0  +13
KBS                                LR       LR
      comp=Z,2µm,21.0s,MS5.6
KBS   Kingsbay         104.05 352 ePP       PP        15 09 07.1 -0.2
KBS                               e                   15 15 21.4
KBS                               eSS       SS        15 23 55.6 +4.3
KBS                                AMS      AMS       15 49 45.0
      comp=Z,912nm,21.2s,MS5.3
BW06  Boulder Array    104.25  48  PFAKE              15 05 00.0  +11
BW06                               LR       LR
      comp=Z,11µm,21.0s,MS6.4
PDAR  Pinedale Array   104.25  48  Pdiff    Pdif      15 04 47.4 -1.4
      comp=Z,3.0nm,0.7s,baz=297,slow=3.3,SNR=15
PDAR                               PKiKP              15 09 06.0
      comp=Z,5.5nm,1.1s,baz=297,slow=3.3,SNR=7.2
PDAR                               PKKP     PKKP      15 20 45.9 +7.0
      comp=Z,0.7nm,0.6s,baz=117,slow=3.3,SNR=4.5
PDAR                               PKPPKP             15 29 03.8
      comp=Z,2.2nm,1.1s,baz=90,slow=3.0,SNR=8.7
KIV   Kislovodsk       104.53 314 eP        Pdif      15 04 54.3 +4.4
KIV                               i                   15 16 36.1
KIV                               eSS       SS        15 23 52.8 -5.9
KIV                                LR       LR
      comp=Z,523nm,21.0s,MS5.0
APA   Apatity          104.63 339⇓iP        Pdif      15 04 48.5 -1.3
APA                               e                   15 09 08.0
APA                               i                   15 15 27.0
APA                               e                   15 16 32.0
APA                               i PS      PS        15 18 29.0 +6.7
APA                                pmax     pmax
      comp=Z,18nm,1.2s
APA   Apatity          104.63 339⇓iP        Pdif      15 04 48.5 -1.3
      comp=Z,18nm,1.2s
APA                               e                   15 09 08.0
APA                               i                   15 15 27.0
APA                               e                   15 16 32.0
APA                               i PS      PS        15 18 29.0 +6.7
PV10  Paradox Valley   104.97  52 ePdif     Pdif      15 04 52.6 +0.6
PV10                              ePKKPbc             15 20 35.9
PV01  Paradox Valley   105.36  52 ePdif     Pdif      15 04 52.7 -1.0
PV01                              ePKPdf              15 09 09.6
PMSA  Palmer Station   105.48 167  PFAKE              15 09 20.0
PMSA                               LR       LR
      comp=Z,3µm,19.0s,MS5.8
KEV   Kevo             105.93 342 eP        Pdif      15 04 53.7 -1.8
KEV                                LR       LR
      comp=Z,3µm,20.0s,MS5.8
RW3   Ridgway          106.04  52 eP        Pdif      15 04 58.0 +1.3
RWWY  Rawlins          106.09  49 ePdif     Pdif      15 04 57.2 +0.4
      comp=Z,38nm,1.5s
RWWY                              ePKiKP              15 09 10.1
LAO   LASA Array       106.18  43 ePdif     Pdif      15 04 57.7 +0.6
      comp=Z,20nm,1.2s
LAO                               ePP       PP        15 09 20.2 -3.8
LAO                               ePKKPbc             15 20 32.3
LAO                               ePKKPab             15 20 46.6
LAO                                LR       LR
      comp=Z,6µm,20.0s,MS6.1
ARCES ARCESS Array B   106.50 342  Pdiff    Pdif      15 04 57.2 -0.8
      comp=Z,6.3nm,0.7s,baz=68,slow=8.6,SNR=24
ARCES                              PKiKP              15 09 09.2
      comp=Z,2.9nm,0.8s,baz=92,slow=1.7,SNR=11
ARCES                              PKKPbc             15 20 28.9
      comp=Z,1.4nm,0.6s,baz=262,slow=3.5,SNR=6.9
ARCES ARCESS Array B   106.50 342  Pdif     Pdif      15 04 57.2 -0.8
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ARCES                              PKPdf              15 09 09.2
ARCES                              PKKPbc             15 20 28.9
OBN   Obninsk          106.69 326 eP        Pdif      15 05 09.9  +11
OBN                               eSS       SS        15 24 31.7 +3.8
OBN                                MLR      MLR
      comp=Z,4µm,22.0s,MS5.9
LAZ   Ladron           106.77  56 ePKKPab             15 20 45.1
LENM  Lemitar          106.92  56 ePKKPab             15 20 44.6
BNM   Barren Site      107.20  56 ePKKPdf             15 20 43.4
ANMO  Albuquerque      107.28  55 ePKPdf              15 09 11.0
ANMO                              ePKKPab             15 20 42.8
ANMO                               LR       LR
      comp=Z,3µm,19.0s,MS5.9
ISCO  Idaho Springs    107.50  50  PFAKE              15 09 20.0
ISCO                               LR       LR
      comp=Z,14µm,22.0s,MS6.5
SDCO  Great Sand Dun   107.81  52 ePKKPab             15 20 38.5
SDCO                               LR       LR
      comp=Z,7µm,21.0s,MS6.2
RSSD  Black Hills      108.09  46  PFAKE              15 09 20.0
RSSD                               LR       LR
      comp=Z,2µm,21.0s,MS5.7
MNTX  Cornudas Mount   108.42  59 ePKPdf              15 09 13.6
TRO   Tromso           108.43 343 ePP       PP        15 09 41.1 +0.6
TRO                               eSS       SS        15 24 44.1 -7.1
TRO                                AMS      AMS       15 55 14.3
      comp=Z,5µm,22.7s,MS6.0
DAG   Danmarks Havn    109.14 356⇓eP                  15 09 05.2
DAG                                LR       LR
      comp=Z,2µm,20.0s,MS5.8
DAG   Danmarks Havn    109.14 356⇓iP                  15 09 05.2
      comp=Z,2.7nm,0.7s
      comp=Z,2µm,20.0s
GDL2  Guadalupe Moun   109.25  58 ePKKPab             15 20 33.8
KMBO  Kilima Mbogo     109.32 267  Pdiff    Pdif      15 05 11.8 +0.1
      comp=Z,0.3nm,0.3s,baz=84,slow=10,SNR=1.9
KMBO                               PKiKP              15 09 16.9
      comp=Z,3.1nm,1.0s,baz=20,slow=13,SNR=3.6
KMBO                               PKKP     PKKP      15 20 36.5 +6.1
      comp=Z,3.5nm,1.0s,baz=293,slow=4.2,SNR=5.3
KMBO  Kilima Mbogo     109.32 267  Pdif     Pdif      15 05 11.8 +0.1
KMBO                               PKPdf              15 09 16.9
KMBO                               PKKP     PKKP      15 20 36.5 +6.1
KAF   Kangasniemi      109.50 335 epkp                15 09 22.1
FINES FINESS Array B   109.88 334  P        Pdif      15 05 11.9 -1.1
FINES                                                 15 20 20.1
FINES FINESS Array B   109.88 334  Pdiff    Pdif      15 05 11.9 -1.1
      comp=Z,1.4nm,0.5s,baz=66,slow=5.2,SNR=11
FINES                              PKiKP              15 09 15.5
      comp=Z,1.6nm,0.7s,baz=82,slow=3.9,SNR=7.2
FINES                              PKKPbc             15 20 20.1
      comp=Z,1.7nm,0.9s,SNR=3.9
LTX   Lajitas          110.06  61 ePKKPab             15 20 28.4
LTX                                LR       LR
      comp=Z,7µm,20.0s,MS6.2
TXAR  Lajitas Array    110.06  61  PKiKP              15 09 17.5
      comp=Z,0.5nm,0.4s,baz=270,slow=2.5,SNR=5.5
TXAR                               PKKPab             15 20 28.5
      comp=Z,5.8nm,0.8s,baz=117,slow=5.6,SNR=15
TXAR  Lajitas Array    110.06  61  PKPdf    PKPdf     15 09 17.5 -2.2
TXAR                               PKKPab             15 20 28.5
FCC   Fort Churchill   110.19  29  PKIKP    PKPdf     15 09 14.9 -4.3
FCC                               e                   15 20 28.0
ASF   Jabal al Asfar   110.20 302  PKKPab             15 20 24.1
      comp=Z,1.7nm,0.3s,baz=64,slow=2.7,SNR=3.9
SIM   Simferopol'      110.45 316 i PKIKP   PKPdf     15 09 34.6  +15
SIM                               eSS       SS        15 25 26.0 +6.9
SIM                                pmax     pmax
      comp=Z,7.0nm,0.7s
SIM                                pmax     pmax
      comp=Z,200nm,12.0s
SIM                                MLR      MLR
      comp=Z,2µm,20.0s,MS5.7
AMTX  Amarillo         111.20  55  PFAKE              15 09 30.0 +8.2
AMTX                               LR       LR
      comp=Z,5µm,19.0s,MS6.1
BRTR  Keskin Array B   111.80 310  PKiKP              15 09 19.9
      comp=Z,1.1nm,0.7s,baz=108,slow=3.9,SNR=3.7
BRTR                               PKKPbc             15 20 13.3
      comp=Z,0.5nm,0.5s,baz=243,slow=3.2,SNR=3.3
ULM   Lac du Bonnet    112.11  38  PKiKP              15 09 18.6
      comp=Z,4.1nm,0.8s,baz=317,slow=1.9,SNR=4.5
ULM                                PP       PP        15 10 05.3 -2.1
      comp=Z,2.9nm,0.7s,baz=285,slow=7.5,SNR=3.6
ULM                                PKKPbc             15 20 11.8
      comp=Z,1.2nm,0.4s,baz=158,slow=7.1,SNR=3.4
ULM                                PKKPab             15 20 19.1
      comp=Z,5.9nm,0.7s,baz=76,slow=3.8,SNR=6.7
ULM   Lac du Bonnet    112.11  38  PKPdf    PKPdf     15 09 18.6 -4.5
ULM                                PP       PP        15 10 05.3 -2.1
ULM                                PKKPbc             15 20 11.8
ULM                                PKKPab             15 20 19.1
CBKS  Cedar Bluff      112.15  51  PFAKE              15 09 30.0 +6.5
CBKS                               LR       LR
      comp=Z,8µm,22.0s,MS6.2
AKASG Malin Array Be   112.16 323  PKiKP              15 09 19.5
      comp=Z,1.0nm,0.4s,baz=63,slow=2.0,SNR=8.6
AKASG                              PP       PP        15 10 01.4 -6.3
      comp=Z,3.3nm,0.8s,baz=59,slow=5.1,SNR=6.4
AKASG                              PKKPbc             15 20 11.5
      comp=Z,0.8nm,0.6s,baz=260,slow=4.3,SNR=5.9
AKASG Malin Array Be   112.16 323  PKPdf    PKPdf     15 09 19.5 -3.7
AKASG                             e                   15 10 01.5
JCT   Junction City    113.30  60 ePKIKP    PKPdf     15 09 23.2 -2.8
JCT                                MLR      MLR
      comp=Z,10µm,20.0s,MS6.4
JCT   Junction City    113.30  60 ePKPdf    PKPdf     15 09 23.1 -2.9
JCT                               ePKKPab             15 20 14.8
JCT                               ePKKPdf             15 20 25.8
JCT                                LR       LR
      comp=Z,10µm,20.0s,MS6.4
JMIC  Jan Mayen        113.53 351 ePP       PP        15 10 05.3  -12
JMIC                              eSS       SS        15 25 59.1 -0.5
JMIC                               AMS      AMS       15 55 18.1
      comp=Z,1µm,21.7s,MS5.5
WMOK  Wichita Mounta   113.58  55 ePKIKP    PKPdf     15 09 22.7 -3.8
WMOK                               MLR      MLR
      comp=Z,5µm,21.0s,MS6.1
WMOK  Wichita Mounta   113.58  55 ePKPdf    PKPdf     15 09 22.7 -3.8
WMOK                              ePKKPbc             15 20 08.4
WMOK                              ePKKPab             15 20 14.2
WMOK                               LR       LR
      comp=Z,5µm,21.0s,MS6.1
NSS   Namsos           113.68 340 e         PP        15 10 28.4  +10
NSS                                AMS      AMS       16 00 41.1
      comp=Z,3µm,20.8s,MS5.8
SUMG  Summit           113.73   2 ePKKPbc             15 20 04.9
BOSA  Boshof           113.92 235 i PKIKP   PKPdf     15 09 24.9 -2.4
BOSA                               pmax     pmax
      comp=Z,5.0nm,0.9s
BOSA  Boshof           113.92 235  PKiKP              15 09 24.9
      comp=Z,5.3nm,0.9s,baz=214,slow=2.5,SNR=9.4
BOSA  Boshof           113.92 235 ePKPdf    PKPdf     15 09 24.8 -2.5
BOSA                               LR       LR
      comp=Z,5µm,20.0s,MS6.1
SUW   Suwalki          114.41 327  PKIKP    PKPdf     15 09 22.8 -4.8
SUW                               e                   15 09 32.4
SUW                               e                   15 16 24.7
SUW   Suwalki          114.41 327 ePKP      PKPdf     15 09 32.4 +4.8
SUW                               eSKS      SKS       15 16 24.7 +9.0
SUW                                MLR      MLR       15 57 04.9
      comp=Z,4µm,22.8s,MS6.0
LSZ   Lusaka           115.54 250 ePKIKP    PKPdf     15 09 27.9 -2.8
LSZ                                MLR      MLR
      comp=Z,7µm,20.0s,MS6.2
EYMN  Ely              115.58  39 ePKPdf    PKPdf     15 09 25.2 -4.8
EYMN                               LR       LR
      comp=Z,4µm,19.0s,MS6.0
LVV   L'vov            115.59 323 e         PKPdf     15 09 18.8  -11
LVV                                MLR      MLR
      comp=Z,500nm,21.0s,MS5.1
LVV                                MLR      MLR
      comp=N,200nm,20.0s,MS5.3
LVV                                MLR      MLR
      comp=E,700nm,21.0s,MS5.3
HFS   Hagfors          115.77 336  PKKPbc             15 19 59.6
      comp=E,3.0nm,0.9s,baz=198,slow=4.7,SNR=5.0
MBAR  Mbarara          115.85 266 ePKIKP    PKPdf     15 09 28.4 -3.0
MBAR                               MLR      MLR
      comp=Z,1µm,20.0s,MS5.5
SUR   Sutherland       115.87 230  PFAKE              15 09 40.0 +9.0
SUR                                LR       LR
      comp=Z,2µm,21.0s,MS5.7
MLR   Muntele Rosu     115.88 318  PKP      PKPdf     15 09 27.6 -3.1
      comp=Z,3.5nm,0.4s,baz=90,slow=1.0,SNR=7.4
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MLR				PKKPab		15 20 04.0	
	comp=Z,1.8nm,0.5s,baz=161,slow=5.5,SNR=5.0						
NB2	**NORSAR Subarra**	**116.18**	**338**	PKPdf	PKPdf	15 09 27.2	-3.7
	comp=Z,0.8nm,0.8s,baz=45,slow=1.9						
NB2	**NORSAR Subarra**	**116.18**	**338**	⇓PKIKP	PKPdf	15 09 27.2	-3.7
NB2	**NORSAR Subarra**	**116.18**	**338**	PKPd		15 09 27.2	
	baz=44,slow=1.9						
NOA	**NORSAR Array B**	**116.18**	**338**	PKP	PKPdf	15 09 26.3	-4.6
	comp=Z,0.5nm,0.8s,baz=68,slow=3.0,SNR=4.6						
NOA				PKKPbc		15 19 58.0	
	comp=Z,2.6nm,0.9s,baz=232,slow=3.7,SNR=9.1						
NOA	**NORSAR Array B**	**116.18**	**338**	PKP	PKPdf	15 09 26.3	-4.6
NOA				PKKPbc		15 19 58.0	
KWP	**Kalwaria**	**116.46**	**323**	*e*PKP	PKPdf	15 09 28.9	-2.8
KWP				MLR	MLR	16 00 38.4	
	comp=Z,4µm,21.9s,MS6.0						
KOLS	**Kolonicke sedl**	**117.00**	**322**	*e*PKIKP	PKPdf	15 09 30.3	-2.5
KOLS	**Kolonicke sedl**	**117.00**	**322**	*e*	PKPdf	15 09 30.3	-2.5
NATX	**Nacogdoches**	**117.48**	**58**	PFAKE		15 09 40.0	+5.9
NATX				LR	LR		
	comp=Z,5µm,19.0s,MS6.2						
KONO	**Kongsberg**	**117.69**	**337**	PFAKE		15 09 40.0	+6.2
KONO				LR	LR		
	comp=Z,6µm,21.0s,MS6.2						
MIAR	**Mount Ida**	**117.84**	**54**	*e*PKIKP	PKPdf	15 09 31.2	-3.5
MIAR				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.8						
OJC	**Ojcow**	**117.92**	**325**	*e*PKP	PKPdf	15 09 30.2	-4.3
OJC				*e*PP	PP	15 10 45.6	-3.3
OJC				*e*SS	SS	15 26 59.5	+2.4
OJC				MLR	MLR	16 03 42.7	
	comp=Z,4µm,22.2s,MS6.0						
NIE	**Niedzica**	**117.97**	**324**	*e*PKP	PKPdf	15 09 32.3	-2.3
BER	**Bergen**	**118.76**	**339**	*e*PP	PP	15 10 46.9	-7.7
BER				AMS	AMS	16 03 04.1	
	comp=Z,3µm,20.9s,MS5.8						
UALR	**University of**	**118.78**	**54**	*e*PKPdf	PKPdf	15 09 33.2	-3.3
PSZ	**Piszkesteto**	**118.86**	**322**	PKIKP	PKPdf	15 09 33.5	-2.9
PSZ	**Piszkesteto**	**118.86**	**322**	*e*P	PKPdf	15 09 33.4	-3.0
PSZ	**Piszkesteto**	**118.86**	**322**	*e*PKP/D	PKPdf	15 09 33.4	-3.0
OKC	**Ostrava-Krasne**	**119.05**	**325**	*e*PKPdf	PKPdf	15 09 34.3	-2.4
OKC				AMS	AMS	16 08 10.0	
	comp=Z,3µm,18.3s						
VYHS	**Vyhne**	**119.25**	**323**	*e*PKP	PKPdf	15 09 34.0	-3.1
MORC	**Moravsky Berou**	**119.42**	**325**	*e*PKIKP	PKPdf	15 09 34.3	-3.1
FVM	**French Village**	**119.46**	**50**	*e*PKIKP	PKPdf	15 09 33.0	-4.8
KSP	**Ksiaz**	**119.61**	**326**	*e*PKIKP	PKPdf	15 09 42.4	+4.7
KSP				*e*		15 10 54.0	
KSP				*e*SP	SP	15 20 36.0	-5.8
KSP				*e*SS	SS	15 27 14.0	-5.0
KSP				MLR	MLR		
	comp=Z,6µm,27.9s,MS6.1						
KSP	**Ksiaz**	**119.61**	**326**	*e*PKP	PKPdf	15 09 42.4	+4.7
KSP				*e*PP	PP	15 10 54.0	-6.1
KSP				*e*Sdif		15 18 42.0	
KSP				*e*SP	SP	15 20 36.0	-5.8
KSP				*e*SS	SS	15 27 14.0	-5.0
KSP				LR	LR		
	comp=Z,6µm,27.9s,MS6.1						
KSP	**Ksiaz**	**119.61**	**326**	*e*PKP	PKPdf	15 09 42.5	+4.8
KSP				MLR	MLR	15 58 52.6	
	comp=Z,5µm,27.9s,MS6.0						
DPC	**Dobruska-Polom**	**119.83**	**326**	AMS	AMS	16 03 20.0	
	comp=Z,3µm,20.1s						
UPC	**Upice**	**119.93**	**326**	*e*PKPdf	PKPdf	15 09 35.2	-3.2
UPC				*e*x	x	15 09 41.5	
SRO1	**Iza**	**119.93**	**323**	*e*PKP	PKPdf	15 09 33.2	-5.2
GRUS	**Gruza**	**119.94**	**318**	⇑*i*PKP	PKPdf	15 09 35.2	-3.3
SKO	**Skopje**	**120.14**	**315**	*e*PKP	PKPdf	15 09 35.0	-4.0
VRAC	**Vranov**	**120.19**	**325**	*e*PKP	PKPdf	15 09 36.2	-2.7
GNAR	**Gosnell**	**120.32**	**52**	PKPdf	PKPdf	15 09 36.5	-3.0
DIVS	**Divcibare**	**120.34**	**318**	⇓*i*PKP	PKPdf	15 09 36.1	-3.2
ZST	**Bratislava**	**120.41**	**323**	*e*	PKPdf	15 09 38.9	-0.5
PVCC	**Panska Ves**	**120.71**	**327**	*e*PKPdf	PKPdf	15 09 36.8	-3.2
PVCC				*e*x	x	15 09 42.7	
RHK1	**Bakonya**	**120.76**	**321**	*e*P	PKPdf	15 09 36.9	-3.3
BBLS	**Bajina Basta -**	**120.82**	**318**	⇑*i*PKP	PKPdf	15 09 37.0	-3.4
BRG	**Berggiesshubel**	**120.87**	**327**	*e*PKIKP	PKPdf	15 09 37.3	-3.0
BRG				*i*		15 09 43.1	
BRG				*e*		15 11 12.0	
BRG				*i*		15 16 35.0	
BRG				*i* SP	SP	15 21 02.0	+8.9
BRG				*i* SS	SS	15 27 41.0	+5.6
BRG				pmax	pmax		
	comp=Z,12nm,0.9s						
BRG				MLR	MLR		
	comp=N,3µm,24.1s,MS6.0						
BRG				MLR	MLR		
	comp=E,3µm,24.1s,MS6.0						
BRG				MLR	MLR		
	comp=Z,6µm,24.1s,MS6.1						
BRG	**Berggiesshubel**	**120.87**	**327**	*e*PKP	PKPdf	15 09 37.3	-3.0
BRG				*i*		15 09 43.1	
BRG				*e*PP	PP	15 11 12.0	+3.5
BRG				*e*		15 13 11.0	
BRG				*i* SKS	SKS	15 16 35.0	-4.0
BRG				*i* S		15 18 59.0	
BRG				*e*		15 19 45.6	
BRG				*i* SP	SP	15 21 02.0	+8.9
BRG				*i* SS	SS	15 27 41.0	+5.6
BRG				LR	LR		
	comp=Z,6µm,24.1s,MS6.1						
BSEG	**Bad Segeberg**	**120.97**	**332**	*e*PKP	PKPdf	15 09 35.5	-4.9
BSEG				*e*PP	PP	15 11 16.7	+7.6
BSEG				*e*SP	SP	15 21 05.2	+11
PRU	**Pruhonice**	**121.01**	**326**	*e*PKPdf	PKPdf	15 09 36.9	-3.6
PRU				*e*x	x	15 09 42.6	
PRU				AMS	AMS	16 03 20.0	
	comp=Z,2µm,20.0s						
CLL	**Collm**	**121.14**	**328**	⇑*i*PKIKP	PKPdf	15 09 37.5	-3.3
CLL				*i*		15 09 43.1	
CLL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CLL				pmax	pmax		
	comp=Z,16nm,1.3s						
CLL				MLR	MLR		
	comp=Z,5µm,18.2s,MS6.2						
CLL	**Collm**	**121.14**	**328**	⇑*i*PKP	PKPdf	15 09 37.5	-3.3
CLL				*i*		15 09 43.1	
CLL				*e*PKKP	PKKP	15 19 47.0	-20
CLL				LR	LR		
	comp=Z,5µm,18.2s,MS6.2						
CLL	**Collm**	**121.14**	**328**	⇑*i*PKIKP	PKPdf	15 09 37.5	-3.3
	comp=Z,logA/T=1.1						
CLL				*i* *PPKP		15 09 43.1	
CLL				*e*PP	PP	15 11 15.0	+4.6
CLL				*e*		15 19 01.0	
CLL				*e*PKKP	PKKP	15 19 47.0	-20
CLL				*e*PS	PS	15 21 04.0	+5.3
CLL				*e*PPS	PPS	15 22 18.0	-6.5
CLL				*e*SS	SS	15 27 41.0	+2.1
CLL				*e*		15 35 28.0	
OXF	**Oxford**	**121.19**	**53**	*e*PKIKP	PKPdf	15 09 36.6	-4.7
OXF				MLR	MLR		
	comp=Z,5µm,19.0s,MS6.2						
ARSA	**Arzberg**	**121.80**	**323**	⇑*i*P	PKPdf	15 09 38.9	-3.2
PLCA	**Paso Flores**	**121.95**	**147**	PKP	PKPdf	15 09 39.9	-2.7
	comp=Z,9.8nm,0.9s,baz=239,slow=1.7,SNR=15						
PLCA	**Paso Flores**	**121.95**	**147**	*e*PKPdf	PKPdf	15 09 39.8	-2.8
PLCA				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
WVT	**Waverly**	**121.98**	**51**	*e*PKIKP	PKPdf	15 09 37.9	-4.9
WVT				MLR	MLR		
	comp=Z,5µm,20.0s,MS6.1						
KHC	**Kasperske Hory**	**121.99**	**326**	*d i*PKIKP	PKPdf	15 09 39.0	-3.4
KHC	**Kasperske Hory**	**121.99**	**326**	*e*PKPdf	PKPdf	15 09 39.2	-3.2
KHC				*e*x	x	15 09 44.5	
KHC				x	x	15 09 58.5	
KHC				AMS	AMS	16 06 40.0	
	comp=Z,4µm,21.4s						
BLO	**Bloomington**	**122.00**	**47**	*e*PKIKP	PKPdf	15 09 38.6	-4.1
NKC	**Novy Kostel**	**122.02**	**327**	*e*PKPdf	PKPdf	15 09 39.8	-2.7
NKC				*e*x	x	15 09 45.1	
NKC				AMS	AMS	16 01 20.0	
	comp=Z,5µm,21.9s						
GEC2	**GERESS Array S**	**122.07**	**325**	*e*PKP	PKPdf	15 09 39.5	-3.1
GEC2				*e*PP	PP	15 11 21.7	+4.7
GEC2				*e*SP	SP	15 21 15.4	+11
GERES	**GERESS Array B**	**122.07**	**325**	PKP	PKPdf	15 09 39.3	-3.3
	comp=Z,5.8nm,0.7s,baz=69,slow=1.1,SNR=40						
GERES				PKKPbc		15 19 35.5	
	comp=Z,0.7nm,0.7s,baz=252,slow=3.1,SNR=3.7						
SISC	**Sisak**	**122.11**	**321**	*i* P	PKPdf	15 09 43.6	+0.9
PLAL	**Pickwick Lake**	**122.12**	**52**	*e*PKPdf	PKPdf	15 09 36.6	-6.5
PLAL				LR	LR		
	comp=Z,8µm,21.0s,MS6.3						
CLZ	**Clausthal**	**122.19**	**330**	*e*PKIKP	PKPdf	15 09 40.1	-2.6
CLZ				*e*		15 11 24.8	
CLZ				*e*SP	SP	15 21 15.4	+10
MOX	**Moxa**	**122.24**	**328**	*e*PKIKP	PKPdf	15 09 39.5	-3.3
MOX				pmax	pmax		
	comp=Z,17nm,1.2s						
MOX				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.9						
MOX	**Moxa**	**122.24**	**328**	*e*PKP	PKPdf	15 09 39.5	-3.3
MOX				*e*PP	PP	15 11 25.0	+6.9
MOX				*e*SKSP		15 21 17.0	
MOX				*e*SS	SS	15 28 02.0	+8.9
MOX				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
MOX	**Moxa**	**122.24**	**328**	*i* P	PKPdf	15 09 39.5	-3.3
	comp=Z,logA/T=1.1						
MOX				PP	PP	15 11 25.0	+6.9
MOX				*e*		15 21 17.0	
MOX				SS	SS	15 28 02.0	+8.9
MOX				L		16 09 11.0	
PERS	**Pernice**	**122.34**	**322**	*e*PKPdf	PKPdf	15 09 39.4	-3.7
WCI	**Wyandotte Cave**	**122.49**	**48**	*e*PKIKP	PKPdf	15 09 39.6	-4.0
WCI				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.5						
PAYG	**Puerto Ayora**	**122.58**	**95**	PFAKE		15 09 50.0	+5.6
PAYG				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
BOJS	**Bojanci**	**122.79**	**321**	*e*PKPdf	PKPdf	15 09 41.0	-3.0
BOJS				*e*		15 09 47.1	
GRA1	**Grafenberg Arr**	**122.98**	**327**	*e*PKP	PKPdf	15 09 41.2	-3.1
GRA1				*e*PP	PP	15 11 28.5	+5.2
GRA1				*e*Sdif		15 19 25.1	
GRA1				*e*SP	SP	15 21 24.4	+12
GRA1				*e*SS	SS	15 28 23.5	+21
GRA1				LR	LR		
	comp=Z,5µm,19.5s,MS6.2						
GRF	**Grafenberg Arr**	**122.98**	**327**	*e*PKIKP	PKPdf	15 09 41.2	-3.1
GRF				*e*		15 11 28.5	
GRF				*e*SS	SS	15 28 23.5	+21
GRF				MLR	MLR		
	comp=Z,5µm,19.5s,MS6.2						
GRF	**Grafenberg Arr**	**122.98**	**327**	*e*PKP	PKPdf	15 09 41.2	-3.1
GRF				*e*PP	PP	15 11 28.5	+5.2
GRF				Sdif		15 19 25.1	
GRF				*e*SP	SP	15 21 24.4	+12
GRF				*e*SS	SS	15 28 23.5	+21
GRF				LR	LR		
	comp=Z,5µm,19.5s,MS6.2						
LJU	**Ljubljana**	**122.98**	**322**	*e*PKPdf	PKPdf	15 09 41.0	-3.4
LJU				*e*pPKPdf		15 09 52.0	
KBA	**Koelnbreinsper**	**123.18**	**324**	⇓*i*P	PKPdf	15 09 39.4	-5.4
CEY	**Cerknica**	**123.19**	**322**	*e*PKPdf	PKPdf	15 09 41.4	-3.4
LRAL	**Lakeview Retre**	**123.51**	**54**	*e*PKPdf	PKPdf	15 09 41.3	-4.5
LRAL				LR	LR		
	comp=Z,5µm,20.0s,MS6.2						
PTCC	**Patocco-Chiusa**	**123.51**	**323**	PKP	PKPdf	15 09 42.6	-2.9
GMNA	**Gemona**	**123.65**	**323**	PKP	PKPdf	15 09 42.3	-3.4
SWET	**Sewanee**	**123.73**	**52**	*e*PKPdf	PKPdf	15 09 41.5	-4.7
FUR	**Furstenfeldbru**	**123.79**	**326**	*e*PKP	PKPdf	15 09 43.7	-2.3
FUR				*e*PP	PP	15 11 33.0	+3.9
FUR				*e*SP	SP	15 21 31.2	+12
TSUM	**Tsumeb**	**123.96**	**242**	*e*PKPdf	PKPdf	15 09 44.0	-3.0
TSUM				LR	LR		
	comp=Z,6µm,22.0s,MS6.2						
WATA	**Walderalm**	**124.07**	**325**	⇓*i*P	PKPdf	15 09 43.1	-3.4
WTTA	**Wattenberg**	**124.08**	**325**	⇓*i*P	PKPdf	15 09 43.4	-3.2
TNS	**Taunus Mts**	**124.13**	**329**	*e*PKP	PKPdf	15 09 43.0	-3.6
TNS				*e*PP	PP	15 11 35.9	+4.7
TNS				*e*SP	SP	15 21 34.1	+13
ACSO	**Alum Creek Sta**	**124.15**	**45**	*e*PKPdf	PKPdf	15 09 42.7	-4.2
ACSO				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
RGNG	**Rignano Grg**	**124.28**	**317**	PKP	PKPdf	15 09 44.0	-3.1
SQTA	**Sankt Quirin**	**124.35**	**325**	⇑*i*P	PKPdf	15 09 43.9	-3.2
TIP	**Timpagrande**	**124.48**	**314**	PKP	PKPdf	15 09 44.1	-3.4
SCHQ	**Schefferville**	**124.60**	**23**	PKP	PKPdf	15 09 42.6	-4.7
	comp=Z,4.1nm,0.7s,baz=312,slow=3.8,SNR=6.2						
STU	**Stuttgart**	**124.60**	**327**	*e*PKIKP	PKPdf	15 09 43.1	-4.4
CTI	**Castel Tesino**	**124.71**	**323**	PKP	PKPdf	15 09 46.9	-0.9
CPCT	**Cooper Cave**	**124.75**	**51**	*e*PKPdf	PKPdf	15 09 43.7	-4.5
SGO	**Sicignano**	**124.94**	**316**	PKP	PKPdf	15 09 46.0	-2.4
CSSN	**Cassano Irpino**	**125.01**	**316**	PKP	PKPdf	15 09 44.6	-3.9
DAVA	**Damuels**	**125.07**	**325**	⇑*i*P	PKPdf	15 09 45.6	-2.9
CING	**Cingoli**	**125.09**	**320**	PKP	PKPdf	15 09 45.8	-2.8
TZTN	**Tazewell**	**125.12**	**49**	*e*PKPdf	PKPdf	15 09 44.9	-4.0
CII	**Carovilli**	**125.12**	**318**	PKPdf	PKPdf	15 09 48.7	0.0
ARV	**Arcevia**	**125.20**	**320**	PKP	PKPdf	15 09 46.2	-2.6
FUORN	**Ofenpass**	**125.22**	**325**	PKP	PKPdf	15 09 49.8	+1.0
RNI2	**Rionero Sannit**	**125.24**	**318**	PKP	PKPdf	15 09 50.4	+1.5
INTR	**Introdacqua**	**125.26**	**318**	PKP	PKPdf	15 09 45.9	-3.1
SNTG	**Esanatoglia**	**125.31**	**320**	PKP	PKPdf	15 09 46.0	-3.0
DAVOX	**Davos**	**125.35**	**325**	PKP	PKPdf	15 09 45.9	-3.1
NRCA	**Norcia**	**125.40**	**319**	PKP	PKPdf	15 09 46.3	-2.9
SOI	**Samo**	**125.41**	**313**	PKP	PKPdf	15 09 52.2	+2.8
AQU	**L'Aquila**	**125.44**	**319**	PKIKP	PKPdf	15 09 47.5	-1.8
ALLY	**Alegheny Colle**	**125.50**	**42**	PKPdf	PKPdf	15 09 44.8	-4.6
ESK	**Eskdalemuir**	**125.58**	**339**	PFAKE		15 10 00.0	+11
ESK				LR	LR		
	comp=Z,706nm,20.0s,MS5.3						
PTQR	**Pietraquaria**	**125.59**	**318**	PKP	PKPdf	15 09 46.9	-2.7
WLF	**Walferdange**	**125.64**	**330**	*e*PKIKP	PKPdf	15 09 47.7	-1.8
FIAM	**Fiamignano**	**125.67**	**319**	PKP	PKPdf	15 09 46.2	-3.5
MTTG	**Motta San Giov**	**125.70**	**313**	PKP	PKPdf	15 09 46.9	-3.0
FELD	**Feldberg**	**125.77**	**327**	PKP	PKPdf	15 09 46.5	-3.3
FELD	**Feldberg**	**125.77**	**327**	*e*P	PKPdf	15 09 46.5	-3.3
CDF	**Champ du Feu**	**125.83**	**328**	*e*PKIKP	PKPdf	15 09 45.4	-4.5
VMG	**Vicchio**	**125.85**	**321**	PKP	PKPdf	15 09 53.2	+3.2
MNS	**Montasola**	**125.90**	**319**	PKP	PKPdf	15 09 47.0	-3.2
CERT	**Cerreto**	**125.90**	**318**	PKP	PKPdf	15 09 45.6	-4.6
ZCCA	**Zocca**	**126.00**	**322**	PKP	PKPdf	15 09 48.7	-1.6
ECH	**Echery**	**126.02**	**328**	PKP	PKPdf	15 09 52.6	+2.4
ECH	**Echery**	**126.02**	**328**	*e*P	PKPdf	15 09 52.6	+2.4
GIVF	**Givet**	**126.02**	**331**	*e*PKIKP	PKPdf	15 09 45.5	-4.7
	comp=Z,46nm,1.0s						
GOGA	**Godfrey**	**126.23**	**53**	*e*PKIKP	PKPdf	15 09 46.8	-4.3
GOGA				MLR	MLR		
	comp=Z,3µm,20.0s,MS6.0						
GSCL	**Gusciola**	**126.24**	**322**	PKP	PKPdf	15 09 53.5	+2.7
MOF	**Molkenrain**	**126.25**	**327**	PKP	PKPdf	15 09 47.5	-3.2
MOF	**Molkenrain**	**126.25**	**327**	*e*P	PKPdf	15 09 47.5	-3.2
BBS	**Basel-Blauen**	**126.28**	**327**	*e*PKIKP	PKPdf	15 09 52.6	+1.9
BAIF	**Baives**	**126.34**	**331**	*e*PKIKP	PKPdf	15 09 46.2	-4.6
	comp=Z,29nm,1.1s						
BDI	**Bagni Di Lucca**	**126.38**	**322**	PKP	PKPdf	15 09 46.8	-4.2
HINF	**Hinteralfeld**	**126.42**	**327**	*e*PKIKP	PKPdf	15 09 46.6	-4.4
	comp=Z,15nm,0.7s						
GENY	**Geneseo**	**126.49**	**40**	*e*PKPdf	PKPdf	15 09 46.6	-4.6
VAI	**Varese**	**126.50**	**324**	PKP	PKPdf	15 09 47.5	-3.7
HAU	**Haudompre**	**126.58**	**328**	*e*PKIKP	PKPdf	15 09 47.0	-4.3
	comp=Z,20nm,0.7s						
HAU				*e*R			
	comp=Z,8µm,22.7s						
MCWV	**Mont Chateau**	**126.58**	**44**	PKPdf	PKPdf	15 09 50.9	-0.6
MCWV				LR	LR		
	comp=Z,370nm,19.0s,MS5.1						
LOMF	**Lomont**	**126.72**	**327**	PKP	PKPdf	15 09 48.5	-3.1
LOMF	**Lomont**	**126.72**	**327**	*e*P	PKPdf	15 09 48.5	-3.1
FWV	**Forest Hill**	**126.76**	**47**	*e*PKPdf	PKPdf	15 09 47.6	-4.3
MCGN	**Macugnaga**	**126.89**	**325**	PKP	PKPdf	15 09 49.7	-2.2
MEZF	**Maizieres J'vi**	**126.94**	**329**	*e*PKIKP	PKPdf	15 09 47.2	-4.8
ELN	**Prospectdale**	**126.94**	**47**	*e*PKPdf	PKPdf	15 09 48.4	-3.9
BLA	**Blacksburg**	**127.19**	**47**	*e*PKIKP	PKPdf	15 09 48.6	-4.2
BLA				MLR	MLR		
	comp=Z,7µm,19.0s,MS6.4						
CABF	**La Chapelle**	**127.57**	**327**	*e*PKIKP	PKPdf	15 09 49.4	-3.9
	comp=Z,20nm,0.9s						
JSC	**Jenkinsville**	**127.67**	**51**	*e*PKIKP	PKPdf	15 09 50.6	-3.3
LPG	**La Plagne**	**127.87**	**325**	*e*PKIKP	PKPdf	15 09 49.5	-4.4
	comp=Z,36nm,0.9s						
LPL	**La Plagne**	**127.87**	**325**	*e*PKIKP	PKPdf	15 09 49.5	-4.4
	comp=Z,42nm,1.0s						
BINY	**Binghamton**	**127.95**	**40**	*e*PKPdf	PKPdf	15 09 50.5	-3.7
BINY				*e*SKP		15 13 09.0	
BINY				LR	LR		
	comp=Z,7µm,20.0s,MS6.3						
FRNY	**Flat Rock**	**127.97**	**36**	*e*PKPdf	PKPdf	15 09 49.9	-4.2
NCB	**Newcomb**	**128.08**	**37**	*e*PKPdf	PKPdf	15 09 51.0	-3.4
NCB				*e*SKPdf		15 13 06.7	
NCB				LR	LR		
	comp=Z,5µm,20.0s,MS6.2						
BNI	**Bardonecchia**	**128.17**	**325**	*e*PKIKP	PKPdf	15 09 51.8	-2.7
PGF	**Pioggiola**	**128.17**	**321**	*e*PKIKP	PKPdf	15 09 49.9	-4.7
	comp=Z,70nm,1.3s						
SAOF	**Saorge**	**128.27**	**323**	PKP	PKPdf	15 09 51.9	-2.8
SAOF	**Saorge**	**128.27**	**323**	*e*P	PKPdf	15 09 51.9	-2.8
MBDF	**Montbardon**	**128.31**	**324**	*e*PKIKP	PKPdf	15 09 50.6	-4.2
	comp=Z,6.3nm,0.7s						
MDZ	**Mendoza**	**128.34**	**141**	*e*P	PKPdf	15 10 00.2	+5.0
LOR	**Lormes**	**128.35**	**328**	*e*PKIKP	PKPdf	15 09 50.7	-4.1
LOR				*e*R			
	comp=Z,6µm,22.8s						
TRQA	**Tornquist**	**128.35**	**151**	*e*PKPdf	PKPdf	15 09 50.5	-4.5
TRQA				*e*SKPdf		15 13 16.9	
TRQA				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
SBF	**Sospel**	**128.41**	**323**	*e*PKIKP	PKPdf	15 09 49.6	-5.4
COW	**Cow Castle Cre**	**128.42**	**52**	*e*PKPdf	PKPdf	15 09 51.9	-3.5
SURF	**Saint Ours**	**128.43**	**324**	PKP	PKPdf	15 09 53.1	-1.9
SURF	**Saint Ours**	**128.43**	**324**	*e*P	PKPdf	15 09 53.1	-1.9
TOUF	**Mont Tournerai**	**128.44**	**323**	PKP	PKPdf	15 09 56.8	+1.7
TOUF	**Mont Tournerai**	**128.44**	**323**	*e*P	PKPdf	15 09 56.8	+1.7
MIV	**Mineville/With**	**128.44**	**37**	*e*PKPdf	PKPdf	15 09 51.2	-3.9
MIV				*e*SKP		15 13 10.2	
JTS	**JuntasAbangare**	**128.65**	**82**	*e*PKIKP	PKPdf	15 09 53.3	-2.9
JTS				MLR	MLR		
	comp=Z,2µm,22.0s						
JTS	**JuntasAbangare**	**128.65**	**82**	SKPbc		15 13 14.3	
	comp=Z,8.5nm,0.7s,baz=268,slow=23,SNR=7.6						
JTS	**JuntasAbangare**	**128.65**	**82**	*e*PKPdf	PKPdf	15 09 53.3	-3.0
JTS				*e*SKPdf		15 13 14.2	
JTS				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
SSF	**Saint Saulge**	**128.66**	**328**	*e*PKIKP	PKPdf	15 09 51.4	-4.0
	comp=Z,39nm,1.1s						
ORIF	**Oris-en-Rattie**	**128.71**	**325**	*e*PKIKP	PKPdf	15 09 50.9	-4.6
ORIF				*e*R			
	comp=Z,6µm,23.0s						
ACCN	**Adirondack Com**	**128.75**	**37**	*e*PKPdf	PKPdf	15 09 51.9	-3.8
SMF	**Signal de Mont**	**128.76**	**328**	*e*PKIKP	PKPdf	15 09 51.4	-4.2
SDMD	**Soldier's Deli**	**128.76**	**43**	*e*PKPdf	PKPdf	15 09 52.4	-3.5
MVL	**Millersville**	**128.81**	**42**	*e*PKPdf	PKPdf	15 09 52.5	-3.4
AVF	**Avril sur Loir**	**128.92**	**328**	*e*PKIKP	PKPdf	15 09 51.5	-4.4
NHSC	**New Hope**	**128.93**	**52**	PFAKE		15 10 00.0	+3.7
NHSC				LR	LR		
	comp=Z,8µm,21.0s,MS6.4						
CBN	**Corbin**	**128.95**	**45**	PFAKE		15 10 00.0	+3.8
CBN				LR	LR		
	comp=Z,6µm,19.0s,MS6.3						
FRF	**La Foret Royal**	**129.05**	**323**	*e*PKIKP	PKPdf	15 09 51.5	-4.7
	comp=Z,114nm,1.4s						
LMR	**La Mourre**	**129.26**	**323**	*e*PKIKP	PKPdf	15 09 52.0	-4.7
	comp=Z,76nm,1.2s						
PLDF	**La Plantade**	**129.31**	**327**	PKP	PKPdf	15 09 54.8	-1.9
PLDF	**La Plantade**	**129.31**	**327**	*e*P	PKPdf	15 09 54.8	-1.9
BGF	**Bois d'Agland**	**129.34**	**328**	*e*PKIKP	PKPdf	15 09 52.8	-3.9
HNH	**Hanover**	**129.39**	**36**	*e*PKPdf	PKPdf	15 09 53.5	-3.3
HNH				*e*SKPdf		15 13 14.8	
VIVF	**Saint-Julien-l**	**129.43**	**326**	*e*PKIKP	PKPdf	15 09 52.7	-4.2
SMRF	**Simiane la Rot**	**129.44**	**324**	*e*PKIKP	PKPdf	15 09 52.3	-4.7
	comp=Z,48nm,1.0s						
FLN	**La Foliniere**	**129.45**	**332**	*e*PKIKP	PKPdf	15 09 52.4	-4.4
FLN				*e*R			
	comp=Z,4µm,22.8s						
DWPF	**Disney**	**129.48**	**59**	PFAKE		15 10 00.0	+2.5
DWPF				LR	LR		
	comp=Z,860nm,20.0s,MS5.4						
VSL	**Villasalto**	**129.48**	**317**	*e*PKPdf	PKPdf	15 09 54.8	-2.3
CFAA	**Coronel Fontan**	**129.59**	**140**	SKP		15 13 20.6	
	comp=Z,1.8nm,1.0s,baz=195,slow=14,SNR=4.9						
TCF	**Toulx Ste Croi**	**129.84**	**328**	*e*PKIKP	PKPdf	15 09 53.8	-3.9
	comp=Z,11nm,0.7s						
PQI	**Presque Isle**	**129.87**	**31**	PFAKE		15 10 00.0	+2.3
PQI				LR	LR		
	comp=Z,21µm,20.0s,MS6.8						
GRR	**Gorron**	**129.90**	**332**	*e*PKIKP	PKPdf	15 09 53.1	-4.6
	comp=Z,44nm,1.0s						
PAL	**Palisades**	**129.90**	**40**	PKIKP	PKPdf	15 09 58.7	+0.8
LBL	**Lubilhac**	**129.98**	**327**	PKP	PKPdf	15 09 58.4	+0.4
LBL	**Lubilhac**	**129.98**	**327**	*e*P	PKPdf	15 09 58.4	+0.4
QUA2	**Belchertown**	**130.17**	**38**	*e*PKPdf	PKPdf	15 09 55.3	-3.1
LASF	**Ste Croix**	**130.37**	**325**	*e*PKIKP	PKPdf	15 09 53.8	-4.9
	comp=Z,13nm,0.9s						
WVL	**Waterville**	**130.37**	**34**	*e*SKPbc		15 13 14.0	
WVL				LR	LR		
	comp=Z,21µm,22.0s,MS6.8						
HRV	**Harvard--Oak R**	**130.52**	**37**	*e*PKIKP	PKPdf	15 09 56.0	-3.1
HRV				MLR	MLR		
	comp=Z,4µm,19.0s,MS6.1						
HRV	**Harvard--Oak R**	**130.52**	**37**	*e*PKPdf	PKPdf	15 09 56.0	-3.1
HRV				*i* SKPbc		15 13 16.3	
HRV				LR	LR		
	comp=Z,4µm,19.0s,MS6.1						
WES	**Weston**	**130.73**	**37**	*e*PKIKP	PKPdf	15 09 58.2	-1.3
WES				MLR	MLR		
	comp=Z,4µm,19.0s,MS6.2						
WES	**Weston**	**130.73**	**37**	*e*PKPdf	PKPdf	15 09 58.2	-1.3
WES				*e*SKPbc		15 13 17.4	
WES				LR	LR		
	comp=Z,4µm,19.0s,MS6.2						
SGMF	**Saint Gilles**	**130.77**	**333**	*e*PKIKP	PKPdf	15 09 54.6	-4.8
CAF	**Calviac**	**130.82**	**327**	*e*PKIKP	PKPdf	15 09 56.2	-3.4
MFF	**Saint Martin d**	**130.82**	**330**	*e*PKIKP	PKPdf	15 09 54.9	-4.6
BRYW	**Bryant College**	**130.87**	**38**	*e*SKPbc		15 13 17.9	
ROSF	**Rostrenen**	**131.02**	**334**	*e*PKIKP	PKPdf	15 09 55.0	-4.8
QUIF	**Quistinic**	**131.29**	**333**	*e*PKIKP	PKPdf	15 09 55.7	-4.7
	comp=Z,112nm,1.4s						
EMMW	**East Machias**	**131.47**	**32**	*e*SKPbc		15 13 19.9	
EMMW				LR	LR		
	comp=Z,16µm,20.0s,MS6.7						
MTLF	**Montolieu**	**131.75**	**326**	*e*PKIKP	PKPdf	15 09 56.5	-4.9
CMAH	**Djebel Manchou**	**132.23**	**315**	P	PKPdf	15 10 04.5	+2.0
ABSA	**Djebel Ababsia**	**132.36**	**315**	P	PKPdf	15 10 02.5	-0.3
TRIS	**Tristan da Cun**	**132.64**	**203**	PFAKE		15 10 10.0	+6.7
TRIS				LR	LR		
	comp=Z,5µm,19.0s,MS6.2						
CKFL	**Kef-Lekhel**	**132.83**	**315**	P	PKPdf	15 10 05.0	+1.4
NNA	**Nana**	**132.92**	**113**	*e*PKPdf	PKPdf	15 10 00.2	-4.1
NNA				LR	LR		
	comp=Z,527nm,19.0s,MS5.3						
EPF	**Esparros**	**133.00**	**326**	*e*PKIKP	PKPdf	15 09 59.3	-4.5
EMIR	**Miracle**	**133.05**	**324**	PKP	PKPdf	15 10 01.7	-2.2
CTEI	**Djebel Teioual**	**133.22**	**315**	P	PKPdf	15 10 06.0	+1.7
EBIE	**Bielsa**	**133.34**	**326**	PKP	PKPdf	15 10 04.2	-0.2
DFRA	**Djebel Bou Aff**	**133.35**	**316**	P	PKPdf	15 10 05.0	+0.5
ETSF	**Etsaut**	**133.58**	**327**	*e*PKIKP	PKPdf	15 10 00.2	-4.6
	comp=Z,55nm,1.1s						
EPOB	**Poblet**	**133.67**	**324**	PKP	PKPdf	15 10 03.5	-1.4
SJPF	**Ste Jean**	**133.79**	**328**	*e*PKIKP	PKPdf	15 10 00.4	-4.8
	comp=Z,17nm,0.9s						
EALK	**Alkurruntz**	**133.87**	**328**	PKP	PKPdf	15 10 04.0	-1.3
ERTA	**Horta de San J**	**134.35**	**324**	PKP	PKPdf	15 10 01.8	-4.5
OTAV	**Otavalo**	**134.42**	**96**	*e*PKPpre		15 09 54.7	
OTAV				*e*PKPdf	PKPdf	15 10 05.7	-1.4
OTAV				*e*SKPbc		15 13 31.7	
OTAV				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
LVC	**Limon Verde**	**134.73**	**131**	*e*PKPdf	PKPdf	15 10 06.7	-0.8
LVC				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
ELAN	**Lanestosa**	**134.86**	**329**	PKP	PKPdf	15 10 04.0	-3.2
ABA	**Alger-Bouzarea**	**135.15**	**318**	P	PKPdf	15 10 10.5	+2.6
EMOS	**Mosqueruela**	**135.20**	**324**	PKP	PKPdf	15 10 05.5	-2.4
EMHD	**Djebel Mahouad**	**135.53**	**317**	P	PKPdf	15 10 12.0	+3.4
ARE	**Arequipa**	**135.85**	**121**	*e*PKIKP	PKPdf	15 10 06.0	-3.7
ECHE	**Chera**	**135.99**	**324**	PKIKP	PKPdf	15 10 07.1	-2.2
EBEN	**Beniarda**	**136.11**	**322**	PKP	PKPdf	15 10 06.9	-2.7
EPON	**Pontenova**	**136.60**	**332**	PKP	PKPdf	15 10 06.0	-4.3
EANR	**'Ain N'Sour**	**136.92**	**318**	P	PKPdf	15 10 08.0	-3.1
ETOB	**Tobarra**	**136.95**	**323**	PKP	PKPdf	15 10 07.4	-3.6
ETRT	**Tiaret**	**137.10**	**317**	P	PKPdf	15 10 06.0	-5.5
ECAL	**Calabor**	**137.46**	**331**	PKP	PKPdf	15 10 07.1	-4.9
EVIA	**Vianos**	**137.52**	**324**	PKIKP	PKPdf	15 10 07.7	-4.5
ESDC	**Sonseca Array**	**137.65**	**326**	PKP	PKPdf	15 10 10.1	-2.3
	comp=Z,2.0nm,0.8s,baz=4.3,slow=2.4,SNR=4.3						
ESDC				PP	PP	15 12 58.5	+0.1
	comp=Z,4.4nm,1.0s,baz=29,slow=5.7,SNR=6.4						
ESDC				SKP		15 13 39.5	
	comp=Z,2.1nm,0.8s,baz=24,slow=3.1,SNR=4.1						
ESDC	**Sonseca Array**	**137.65**	**326**	PKP	PKPdf	15 10 08.4	-4.0
EQES	**Quesada**	**138.41**	**323**	PKP	PKPdf	15 10 07.0	-6.9
PVRL	**Vila Real**	**138.44**	**331**	*e*PKPdf	PKPdf	15 10 12.8	-1.0
LPAZ	**La Paz**	**138.76**	**123**	*e*PKHKP		15 10 04.3	

LPAZ						15 10 10.3	
LPAZ				*e*		15 10 15.1	
LPAZ				MLR	MLR		
	comp=Z,2μm,20.0s						
LPAZ	**La Paz**	**138.76**	**123**	PKP	PKPdf	15 10 10.2	-4.7
	comp=Z,8.2nm,0.7s,baz=129,slow=5.1,SNR=17						
LPAZ				SKP		15 13 49.0	
	comp=Z,20nm,1.0s,baz=266,slow=5.3,SNR=8.1						
LPAZ	**La Paz**	**138.76**	**123**	*e*PKPpre		15 10 04.3	
LPAZ				PKP	PKPdf	15 10 10.2	-4.7
LPAZ				*e*PKPdf	PKPdf	15 10 15.1	+0.1
LPAZ				SKP		15 13 49.0	
LPAZ				*e*SKPbc		15 13 50.0	
LPAZ				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
EBER	**Berja**	**138.89**	**322**	PKP	PKPdf	15 10 12.5	-2.2
PVIS	**Viseu**	**138.96**	**330**	*e*PKPdf	PKPdf	15 10 14.3	-0.4
PVIS	**Viseu**	**138.96**	**330**	*e*PP	PP	15 13 05.0	-1.5
ROSC	**El Rosal**	**139.02**	**90**	PKhKP		15 10 05.3	
	comp=Z,11nm,0.5s,baz=96,slow=22,SNR=5.5						
ROSC				PKP	PKPdf	15 10 13.0	-2.6
	comp=Z,29nm,0.8s,baz=97,slow=23,SNR=5.6						
ROSC				SKP		15 13 47.7	
	comp=Z,11nm,0.5s,baz=79,slow=21,SNR=3.7						
MTE	**Manteigas**	**139.02**	**330**	*e*PKPdf	PKPdf	15 10 14.3	-0.6
EADA	**Adamuz**	**139.04**	**325**	PKP	PKPdf	15 10 10.5	-4.5
ERON	**Agron**	**139.36**	**323**	PKP	PKPdf	15 10 08.0	-7.6
PCBR	**Castelo Branco**	**139.41**	**329**	*e*PKPdf	PKPdf	15 10 12.0	-3.6
ELOJ	**Sierra Loja**	**139.48**	**323**	PKHKP		15 10 03.3	
CPUP	**Villa Florida**	**139.97**	**145**	*e*PKHKP		15 10 06.6	
CPUP						15 10 13.5	
CPUP				MLR	MLR		
	comp=Z,3μm,20.0s						
CPUP	**Villa Florida**	**139.97**	**145**	PKhKP		15 10 08.0	
	comp=Z,5.7nm,1.0s,baz=241,slow=2.3,SNR=9.6						
CPUP				PKP	PKPdf	15 10 13.5	-3.4
	comp=Z,12nm,0.8s,baz=274,slow=2.4,SNR=19						
CPUP				SKPab		15 13 51.9	
	comp=Z,15nm,1.0s,baz=172,slow=3.1,SNR=6.4						
CPUP	**Villa Florida**	**139.97**	**145**	*e*PKPpre		15 10 06.6	
CPUP				PKP	PKPdf	15 10 13.5	-3.5
CPUP				SKPab		15 13 51.9	
CPUP				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
PTOM	**Tomar**	**140.05**	**330**	*e*PKPdf	PKPdf	15 10 15.6	-1.1
EMIJ	**Mijas**	**140.24**	**323**	PKP	PKPdf	15 10 09.7	-7.5
EMIN	**Mina Concepcio**	**140.50**	**326**	PKP	PKPdf	15 10 07.0	-11
EVO	**Evora**	**140.66**	**328**	*e*PKIKP	PKPdf	15 10 11.6	-6.4
	comp=Z,64nm,1.3s						
EVO				*e*R			
	comp=Z,2μm,22.0s						
ESPR	**Espera**	**140.67**	**325**	PKP	PKPdf	15 10 09.1	-9.0
BBSR	**BB Station**	**140.83**	**44**	PFAKE		15 10 20.0	+1.6
BBSR				LR	LR		
	comp=Z,6μm,22.0s,MS6.3						
PBEJ	**Beja**	**140.96**	**328**	*e*PKPdf	PKPdf	15 10 15.3	-3.2
EGRO	**El Granado**	**141.11**	**327**	PKP	PKPdf	15 10 06.5	-12
PALC	**Alcoutim**	**141.16**	**327**	*e*PKPdf	PKPdf	15 10 17.8	-1.1
SDV	**Santo Domingo**	**142.79**	**84**	PKhKP		15 10 14.7	
	comp=Z,65nm,0.7s,baz=306,slow=3.9,SNR=63						
SDV				SKPbc		15 13 55.5	
	comp=Z,31nm,0.9s,baz=30,slow=14,SNR=7.6						
SDV	**Santo Domingo**	**142.79**	**84**	*e*PKPpre		15 10 15.0	
SDV				LR	LR		
	comp=Z,3μm,21.0s,MS6.0						
SIV	**San Ignacio**	**144.59**	**129**	PKP	PKPdf	15 10 20.5	-4.8
	comp=Z,62nm,0.7s,baz=245,slow=4.9,SNR=3.4						
SIV				SKPbc		15 13 58.3	
	comp=Z,5.4nm,0.9s,baz=222,slow=8.5,SNR=2.4						
SJG	**San Juan**	**145.77**	**67**	⇑*i*PKIKP	PKPdf	15 10 22.8	-4.5
SJG				MLR	MLR		
	comp=Z,3μm,21.0s						
SJG	**San Juan**	**145.77**	**67**	PKPbc	PKPbc	15 10 23.1	-0.3
	comp=Z,248nm,0.9s,baz=326,slow=2.4,SNR=53						
SAML	**Samuel**	**146.46**	**117**	*e*PKPdf	PKPdf	15 10 25.9	-2.8
SAML				LR	LR		
	comp=Z,3μm,22.0s,MS6.0						
CMLA	**Cha da Macela**	**147.93**	**349**	PFAKE		15 10 40.0	+10
CMLA				LR	LR		
	comp=Z,731nm,22.0s,MS5.4						
PDA	**Ponta Delgada**	**147.97**	**349**	*e*PKP	PKPdf	15 10 43.0	+13
PCRV	**Puerto La Cruz**	**148.64**	**81**	PKP	PKPdf	15 10 27.7	-4.4
	comp=Z,46nm,0.8s,baz=336,slow=4.0,SNR=3.1						
PCRV				PKPbc	PKPdf	15 10 31.6	-0.6
	comp=Z,65nm,0.6s,baz=344,slow=4.1,SNR=16						
PMPS	**Porto Santo**	**149.12**	**332**	*e*PKPbc	PKPdf	15 10 34.4	+2.0
JATB	**Jatai**	**149.91**	**143**	*e*P	PKPdf	15 10 33.1	-1.0
JATB				*e*		15 10 36.8	
JATB				*e*		15 10 38.1	
JATB				*i*		15 10 42.2	
JATB				*i*		15 10 43.6	
JATB				*i*		15 10 45.7	
BBL	**Barber's Block**	**150.78**	**69**	*e*P	PKPdf	15 10 38.0	+2.6
MGG	**Marie-Galante**	**150.82**	**69**	*e*P	PKPdf	15 10 43.9	+8.4
DEG	**La Desirade**	**150.94**	**68**	*e*P	PKPdf	15 10 37.6	+1.9
FDF	**Fort de France**	**151.28**	**71**	*e*P	PKPdf	15 10 34.0	-2.2
BIM	**Bigot**	**151.40**	**71**	*e*P	PKPdf	15 10 33.1	-3.3
CRM	**Caravelle**	**151.49**	**71**	*e*P	PKPdf	15 10 36.5	0.0
MVM	**Montagne Vaucl**	**151.56**	**71**	*e*P	PKPdf	15 10 38.3	+1.7
DBIC	**Dimbokro**	**151.87**	**272**	PKP	PKPdf	15 10 33.5	-3.7
	comp=Z,16nm,1.1s,baz=74,slow=7.7,SNR=4.4						
DBIC				PKPbc	PKPdf	15 10 41.1	+4.0
	comp=Z,145nm,1.0s,baz=70,slow=2.0,SNR=30						
DBIC	**Dimbokro**	**151.87**	**272**	PKP	PKPdf	15 10 33.5	-3.7
DBIC				*e*PKPbc	PKPdf	15 10 41.2	+4.0
DBIC				LR	LR		
	comp=Z,5μm,22.0s,MS6.3						
BDFB	**Brasilia**	**153.69**	**146**	PKP	PKPdf	15 10 36.6	-3.0
	comp=Z,35nm,1.1s,baz=199,slow=1.7,SNR=20						
BDFB				PKPbc	PKPdf	15 10 44.2	+4.5
	comp=Z,63nm,1.0s,baz=284,slow=3.3,SNR=22						
BAO	**Brasilia Array**	**153.71**	**146**	PKPdf	PKPdf	15 10 37.5	-2.2
CS6B	**Jaguaretama**	**167.05**	**155**	c*e*P	PKPab	15 11 55.8	+0.1
CS6B				*e*		15 12 00.7	
RCBR	**Riachuelo**	**167.64**	**167**	PFAKE		15 11 00.0	+5.2
RCBR				LR	LR		
	comp=Z,8μm,21.0s						

MAN 04 15:04:43.5, 8.17N×124.05E, h35$^{\text{km}}$, mb4.2, ML3.0, MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**1.04**	**106**	*e*P	P	15 05 01.7	-0.1
BUKP				*e*S	S	15 05 26.8	+11
IPIL	**Ipil**	**1.51**	**256**	*e*P	P	15 05 09.2	+0.7
IPIL				*e*S	S	15 05 38.5	+11

IDC 04 15:16:47.0±2.8, 1.25N×96.98E, mb3.9/4, mb1 4.0/5, mb1mx3.6/21, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=116.8km s-min=27.3km az=56.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.21**	**6**	P	P	15 20 49.4	-1.1
	0.1nm,0.3s,baz=198,slow=9.9,SNR=8.2						
WRA	**Warramunga Arr**	**42.25**	**122**	P	P	15 24 42.3	-1.7
	0.4nm,0.6s,baz=301,slow=9.2,SNR=5.6						
MKAR	**Makanchi Array**	**47.14**	**346**	P	P	15 25 21.4	-1.5
	1.3nm,0.5s,baz=158,slow=9.5,SNR=20						
ZAL	**Zalesovo**	**53.46**	**351**	P	P	15 26 08.2	-2.8
	1.3nm,0.5s,baz=316,slow=9.9,SNR=4.0						
BVAR	**Borovoye Array**	**56.13**	**341**	P	P	15 26 27.8	-2.7
	0.7nm,0.6s,baz=149,slow=8.6,SNR=5.0						

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*IDC **04** 15:32:44.2±0.7, 6.16S×146.93E, mb4.2/6, mb1 4.5/9, mb1mx4.3/16, mbtmp4.3/9, ML4.0/3, Error ellipse: s-maj=26.9km s-min=11.7km az=99.0*

*MOS **04** 15:32:48.2±1.0, 6.29S×146.80E, h33$^{\text{km}}$, mb4.8/12, Error ellipse: s-maj=18.0km s-min=8.1km az=83.5*

*BJI **04** 15:32:52.1, 6.40S×146.80E, h56$^{\text{km}}$, mB5.6, mb4.4, Ms5.1, Msz4.8*

*NEIC **04** 15:32:52.2±1.2, 6.39S×146.82E, h56$^{\text{km}}$±11$^{\text{km}}$, mb4.7/16, Error ellipse: s-maj=11.6km s-min=7.7km az=98.0*

ISC 04 15:32:51.1±1.8, 6.40S±0.07×146.78E±0.09, h62$^{\text{km}}$±18$^{\text{km}}$, n65, σ1$^{\text{s}}$06/64, mb4.5/23, 1D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.02**	**173**	Pn	**P**	**15 33 36.8**	**-0.7**
	43nm,0.3s,baz=21,slow=5.4,SNR=74						
PMG				Pg	**P**	**15 33 43.5**	**+6.0**
	86nm,0.3s,baz=3.7,slow=11,SNR=49						
PMG				Sn	**S**	**15 34 17.6**	**+4.9**
	51nm,0.3s,baz=35,slow=12,SNR=6.3						
PMG				Lg		15 34 27.6	
	118nm,0.3s,baz=334,slow=22,SNR=8.9						
PMG	**Port Moresby**	**3.02**	**173**	*e*Pn	**P**	**15 33 37.0**	**-0.6**
PMG				*e*Sn	**S**	**15 34 17.3**	**+4.6**
HNR	**Honiara**	**13.38**	**104**	*e*P	**P**	**15 36 03.2**	**+3.4**
	190nm,1.2s						
CTA	**Charters Tower**	**13.62**	**182**	Pn	**P**	**15 36 03.8**	**+0.8**
	1.0nm,0.3s,baz=350,slow=14,SNR=13						
CTAO	**Charters Tower**	**13.62**	**182**	*e*P	**P**	**15 36 03.2**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,19nm,0.9s						
CTAO	**Charters Tower**	**13.62**	**182**	*e*P	**P**	**15 36 03.2**	**+0.2**
	comp=Z,19nm,0.9s						
KAKA	**Kakadu**	**15.47**	**245**	*e*P	**P**	**15 36 27.2**	**+0.2**
WRAB	**Tennant Creek**	**18.08**	**221**	*e*P	**P**	**15 36 58.9**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,40nm,0.9s						
WRAB	**Tennant Creek**	**18.08**	**221**	*e*P	**P**	**15 36 58.9**	**-0.8**
	comp=Z,40nm,0.9s						
WB2	**Warramunga Arr**	**18.09**	**221**	*e*P	**P**	**15 36 59.5**	**-0.3**
WRA	**Warramunga Arr**	**18.10**	**221**	P	**P**	**15 36 58.5**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=46,slow=11,SNR=22						
GUMO	**Guam**	**19.94**	**355**	P	**P**	**15 37 19.8**	**-1.0**
GUMO				pmax	pmax		
	comp=Z,122nm,1.1s						
GUMO	**Guam**	**19.94**	**355**	P	**P**	**15 37 19.8**	**-1.0**
	comp=Z,122nm,1.1s						
ASAR	**Alice Springs**	**21.17**	**214**	P	**P**	**15 37 34.0**	**+0.7**
	comp=Z,4.9nm,0.7s,mb3.9,baz=51,slow=9.0,SNR=33						
ASAR				S	**S**	**15 41 34.9**	**+15**
	comp=Z,2.3nm,0.9s,baz=34,slow=20,SNR=5.2						
ASPA	**Alice Springs**	**21.18**	**214**	*e*P	**P**	**15 37 34.2**	**+0.8**
ASPA				*e*S	**S**	**15 41 33.7**	**+13**
STKA	**Stephens Creek**	**25.81**	**190**	*e*P	**P**	**15 38 18.1**	**-0.3**
STKA	**Stephens Creek**	**25.81**	**190**	P	**P**	**15 38 18.1**	**-0.3**
	comp=Z,4.4nm,0.8s,mb4.0,baz=354,slow=9.6,SNR=22						
STKA	**Stephens Creek**	**25.81**	**190**	*e*P	**P**	**15 38 17.3**	**-1.0**
MBWA	**Marble Bar**	**30.02**	**238**	*e*P	**P**	**15 38 55.9**	**-0.6**
	comp=Z,28nm,1.5s,mb4.8						
TAU	**Tasmania Unive**	**36.37**	**179**	P	**P**	**15 39 49.2**	**-2.0**
KSM	**Kuching**	**37.24**	**281**	P	**P**	**15 40 00.6**	**+1.8**
MAJO	**Matsushiro**	**43.46**	**350**	P	**P**	**15 40 50.2**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
MAJO	**Matsushiro**	**43.46**	**350**	P	**P**	**15 40 50.1**	**+0.2**
	comp=Z,7.3nm,1.1s,mb4.3						
KULM	**Kulim**	**47.49**	**283**	P	**P**	**15 41 16.9**	**-5.3**
ENH	**Enshi**	**51.06**	**318**	P	**P**	**15 41 43.2**	**-6.3**
	comp=Z,20nm,1.4s,mb4.9						
KMI	**Kunming**	**53.07**	**308**	P	**P**	**15 42 07.4**	**+2.8**
KMI				LR	LR		
	comp=Z,510nm,19.5s						
YSS	**Yuzh-Sakhalins**	**53.23**	**357**	P	**P**	**15 42 05.2**	**-0.4**
YSS				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
YSS	**Yuzh-Sakhalins**	**53.23**	**357**	P	**P**	**15 42 05.2**	**-0.4**
	comp=Z,5.3nm,0.8s,mb4.5						
CMAR	**Chiang Mai Arr**	**53.25**	**299**	P	**P**	**15 42 08.4**	**+2.4**
	comp=Z,1.3nm,0.6s,mb4.0,baz=128,slow=3.4,SNR=6.3						
CN2	**Changchun**	**53.56**	**341**	*e*P	**P**	**15 42 12.5**	**+4.5**
HHC	**Hu-ho-hao-te**	**57.05**	**329**	*e*P	**P**	**15 42 34.7**	**+1.4**
HHC				XP	sP	15 42 58.9	+2.1
HHC				S	**S**	**15 50 30.3**	**+8.8**
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
HHC				LR	LR		
	comp=N,550nm,16.5s						
HHC				LR	LR		
	comp=E,630nm,19.2s						
HHC				LR	LR		
	comp=Z,1μm,18.1s						
HIA	**Hailar**	**60.25**	**340**	*e*P	**P**	**15 42 55.0**	**-0.3**
HIA				pmax	pmax		
	comp=Z,11nm,1.1s						
HIA	**Hailar**	**60.25**	**340**	*e*P	**P**	**15 42 55.0**	**-0.3**
	comp=Z,11nm,1.1s,mb4.8						
FX1	**Attu Island--F**	**63.15**	**18**	*e*P	**P**	**15 43 15.6**	**+0.7**
LSA	**Lhasa**	**64.31**	**307**	P	**P**	**15 43 22.0**	**-0.7**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
LSA	**Lhasa**	**64.31**	**307**	P	**P**	**15 43 22.0**	**-0.7**
	comp=Z,3.3nm,0.5s,mb4.6						
ULN	**Ulaanbaatar**	**64.35**	**331**	*e*P	**P**	**15 43 22.5**	**-0.2**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**64.35**	**331**	*e*P	**P**	**15 43 22.5**	**-0.2**
	comp=Z,2.5nm,0.8s,mb4.3						
MA2	**Magadan**	**65.83**	**2**	*e*P	**P**	**15 43 31.8**	**-0.2**
MA2				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
MA2	**Magadan**	**65.83**	**2**	*e*P	**P**	**15 43 31.8**	**-0.2**
	comp=Z,15nm,0.9s,mb5.0						
ZAK	**Zakamensk**	**67.88**	**332**	*e*P	**P**	**15 43 44.3**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
YAK	**Yakutsk**	**69.50**	**351**	P	**P**	**15 43 49.6**	**-5.2**
YAK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
YAK	**Yakutsk**	**69.50**	**351**	P	**P**	**15 43 49.6**	**-5.2**
	comp=Z,14nm,0.8s,mb4.9						
VNDA	**Vanda**	**71.53**	**177**	*e*P	**P**	**15 44 07.5**	**+0.6**
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VNDA	**Vanda**	**71.53**	**177**	P	**P**	**15 44 07.7**	**+0.7**
	comp=Z,2.2nm,0.7s,mb4.2,baz=327,slow=6.2,SNR=21						
VNDA	**Vanda**	**71.53**	**177**	*e*P	**P**	**15 44 07.5**	**+0.6**
	comp=Z,1.5nm,0.7s,mb4.0						
BILL	**Bilibino**	**75.53**	**7**	*e*P	**P**	**15 44 30.5**	**+0.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
BILL	**Bilibino**	**75.53**	**7**	*e*P	**P**	**15 44 30.4**	**+0.2**
	comp=Z,3.9nm,0.9s,mb4.3						
MKAR	**Makanchi Array**	**77.66**	**321**	P	**P**	**15 44 42.7**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.7,baz=96,slow=9.3,SNR=12						
TIXI	**Tiksi**	**78.78**	**354**	*e*P	**P**	**15 44 46.6**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
QSPA	**South Pole Qui**	**83.58**	**180**	⇓*i*P	**P**	**15 45 14.7**	**+1.4**
	comp=Z,6.1nm,0.6s,mb4.9						
IMA	**Indian Mountai**	**84.00**	**21**	P	**P**	**15 45 15.7**	**0.0**
IMA				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
IMA	**Indian Mountai**	**84.00**	**21**	P	**P**	**15 45 15.7**	**0.0**
	comp=Z,13nm,1.0s,mb5.0						
MCK	**McKinley**	**84.67**	**24**	*e*P	**P**	**15 45 18.5**	**-0.6**
MCK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
MCK	**McKinley**	**84.67**	**24**	*e*P	**P**	**15 45 18.5**	**-0.6**
	comp=Z,2.8nm,0.7s,mb4.5						
COLA	**College**	**85.59**	**23**	*e*P	**P**	**15 45 23.3**	**-0.3**
ILAR	**Eielson Array**	**85.93**	**23**	P	**P**	**15 45 23.9**	**-1.3**
	comp=Z,2.5nm,0.7s,mb4.6,baz=261,slow=4.3,SNR=18						
BVAR	**Borovoye Array**	**86.96**	**324**	P	**P**	**15 45 30.7**	**+0.2**
	comp=Z,0.7nm,0.5s,mb4.2,baz=100,slow=6.3,SNR=8.1						
GERES	**GERESS Array B**	**122.11**	**325**	PKP	PKPdf	15 51 40.4	+1.4
	comp=Z,0.1nm,0.3s,baz=90,slow=4.0,SNR=4.2						
SDV	**Santo Domingo**	**142.84**	**84**	PKP	PKPdf	15 52 20.1	+1.5
	comp=Z,3.2nm,0.4s,baz=84,slow=2.7,SNR=8.0						
SIV	**San Ignacio**	**144.57**	**129**	PKP	PKPdf	15 52 23.2	+1.6
	comp=Z,3.5nm,0.5s,baz=246,slow=4.6,SNR=17						
SAML	**Samuel**	**146.47**	**117**	*e*P	PKPdf	15 52 28.0	+3.0
PCRV	**Puerto La Cruz**	**148.69**	**81**	PKPbc	PKPdf	15 52 34.1	+5.5
	comp=Z,5.2nm,0.5s,slow=3.0,SNR=4.2						
DBIC	**Dimbokro**	**151.82**	**272**	PKPbc	PKPdf	15 52 43.8	+10
	comp=Z,2.9nm,0.6s,baz=110,slow=8.0,SNR=5.2						
BDFB	**Brasilia**	**153.65**	**146**	PKPbc	PKPdf	15 52 47.6	+12
	comp=Z,1.3nm,0.4s,baz=101,slow=9.0,SNR=3.5						

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*NEIC **04** 15:53:51.7, 15.97N×97.63W, h16$^{\text{km}}$, MD3.6(MEX), After MEX.*

MEX 04 15:53:51.7±0.8, 15.97N×97.63W, h16$^{\text{km}}$±14$^{\text{km}}$, MD3.6, 2C, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.64**	**311**	⇑*i*P	Pb	15 54 02.0	-2.0
PNIG				*e*S	Sb	15 54 10.0	-2.5
VHO	**Vista Hermosa**	**1.39**	**38**	⇑*i*P	Pn	15 54 12.8	-3.8
VHO				*e*S	Sb	15 54 28.8	-5.4
OXX	**Oaxaca**	**1.41**	**38**	*e*P	Pn	15 54 13.0	-3.8
OXX				*e*S	Sb	15 54 30.5	-4.1
HUIG	**Huatulco**	**1.47**	**98**	*e*P	Pn	15 54 15.6	-2.2
HUIG				*e*S	Sb	15 54 30.1	-6.4
ACX	**Acapulco**	**2.37**	**292**	*e*P	Pn	15 54 31.0	+0.3
ACX				*e*S	Sn	15 54 58.0	-1.7
CAIG	**El Cayaco**	**2.75**	**293**	*e*P	Pn	15 54 33.0	-3.1
CAIG				*i* S	Sn	15 55 04.7	-4.6

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*IDC **04** 15:58:00.1±1.0, 6.24S×147.09E, mb3.8/6, mb1 4.1/8, mb1mx4.0/15, mbtmp3.9/8, ML3.3/2, Error ellipse: s-maj=32.8km s-min=15.4km az=110.0*

*NEIC **04** 15:58:01.7±0.8, 6.37S×147.05E, h10$^{\text{km}}$, mb4.0/1, Error ellipse: s-maj=19.2km s-min=12.0km az=112.0*

ISC 04 15:58:03.7±1.0, 6.35S±0.09×146.9E±0.1, h33$^{\text{km}}$, n16, σ1$^{\text{s}}$21/17, mb3.7/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.04**	**176**	Pn	**Pn**	**15 58 52.8**	**+2.1**
	12nm,0.3s,baz=329,slow=5.6,SNR=24						
PMG	**Port Moresby**	**3.04**	**176**	*e*Pn	**Pn**	**15 58 52.5**	**+1.8**
PMG				Pn	**Pn**	**15 58 52.8**	**+2.1**
CTAO	**Charters Tower**	**13.67**	**183**	P	**P**	**16 01 15.1**	**-2.5**
KAKA	**Kakadu**	**15.63**	**245**	*e*P	**P**	**16 01 43.7**	**+0.4**
WRAB	**Tennant Creek**	**18.21**	**221**	*e*P	**P**	**16 02 15.2**	**-0.7**
	12nm,1.1s						
WRAB				*e*		16 02 23.3	
WB2	**Warramunga Arr**	**18.22**	**221**	*e*P	**P**	**16 02 15.3**	**-0.6**
WRA	**Warramunga Arr**	**18.23**	**221**	P	**P**	**16 02 15.2**	**-0.8**
	0.2nm,0.3s,baz=44,slow=11,SNR=20						
ASAR	**Alice Springs**	**21.30**	**215**	P	**P**	**16 02 50.0**	**+0.3**
	1.0nm,0.5s,mb3.4,baz=51,slow=9.3,SNR=30						
ASAR				S	**S**	**16 06 50.8**	**+11**
	0.5nm,0.9s,baz=35,slow=19,SNR=3.5						
ASPA	**Alice Springs**	**21.30**	**215**	*e*P	**P**	**16 02 53.2**	**+3.4**
STKA	**Stephens Creek**	**25.88**	**190**	P	**P**	**16 03 34.5**	**+0.1**
	1.3nm,0.6s,mb3.6,baz=331,slow=10,SNR=6.2						
STKA	**Stephens Creek**	**25.88**	**190**	*e*P	**P**	**16 03 30.7**	**-3.7**
STKA				P		16 03 34.5	
CMAR	**Chiang Mai Arr**	**53.36**	**298**	P	**P**	**16 07 23.9**	**+1.3**
	1.7nm,0.8s,mb4.0,baz=117,slow=5.6,SNR=4.2						
VNDA	**Vanda**	**71.56**	**177**	P	**P**	**16 09 23.7**	**+0.7**
	0.9nm,0.8s,mb3.8,baz=322,slow=7.7,SNR=8.8						
MKAR	**Makanchi Array**	**77.73**	**321**	P	**P**	**16 09 58.8**	**-0.3**
	0.2nm,0.4s,mb3.4,baz=93,slow=8.6,SNR=4.5						
ILAR	**Eielson Array**	**85.83**	**23**	P	**P**	**16 10 39.6**	**-1.2**
	0.9nm,0.7s,mb4.1,baz=258,slow=5.4,SNR=9.3						
SIV	**San Ignacio**	**144.48**	**129**	PKP	PKPdf	16 17 40.1	+2.4
	1.4nm,0.8s,baz=242,slow=7.6,SNR=7.4						

IDC 04 16:03:36.5±1.5, 6.14S×146.85E, mb3.8/3, mb1 4.0/5, mb1mx3.8/15, mbtmp3.8/5, ML3.1/2, Error ellipse: s-maj=46.0km s-min=17.7km az=93.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.26**	**175**	Pn	Pn	16 04 29.4	-0.4
	10nm,0.3s,baz=38,slow=3.7,SNR=17						
PMG				Pg	Pg	16 04 37.5	-4.0
	19nm,0.3s,baz=348,slow=12,SNR=31						
PMG				Sn	Sn	16 05 10.8	+1.0
	16nm,0.3s,baz=204,slow=20,SNR=3.8						
PMG				Lg		16 05 18.0	
	14nm,0.3s,baz=202,slow=17,SNR=5.5						
WRA	**Warramunga Arr**	**18.33**	**220**	P	P	16 07 52.0	-2.0
	0.1nm,0.3s,baz=46,slow=12,SNR=16						
ASAR	**Alice Springs**	**21.42**	**214**	P	P	16 08 26.6	-1.7
	1.2nm,0.6s,baz=30,slow=14,SNR=7.9						
STKA	**Stephens Creek**	**26.07**	**190**	P	P	16 09 11.3	-2.2
	1.1nm,0.6s,baz=351,slow=11,SNR=4.9						
ILAR	**Eielson Array**	**85.67**	**23**	P	P	16 16 16.8	-1.3
	0.7nm,0.6s,baz=253,slow=5.0,SNR=10						

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*NEIC **04** 16:28:46.1, 34.80S×72.19W, h12$^{\text{km}}$, ML3.4(GUC), After GUC.*

GUC 04 16:28:46.2±0.5, 34.78S×72.20W, h13$^{\text{km}}$±2$^{\text{km}}$, MD3.8, ML3.4, 11C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TALC	**Talca**	**0.77**	**143**	*e*P	Pb	16 29 00.2	-0.8
TALC				*i* S	Sb	16 29 10.3	-0.9
TALC				AMP		16 29 10.9	
	comp=N,4μm,0.4s						
TALC	**Talca**	**0.77**	**143**	*i* P	Pb	16 28 56.7	-4.3
TALC				*i* S	Sb	16 29 10.1	-1.0
NICH	**Los Niches**	**0.83**	**106**	*i* P	Pb	16 29 01.6	-0.4
NICH				*i* S	Sb	16 29 13.2	+0.4
SFDO	**San Fernando**	**0.99**	**81**	⇓*i*P	Pb	16 29 04.2	-0.6
SFDO				*i* S	Sb	16 29 17.4	-0.1
SFDO	**San Fernando**	**0.99**	**81**	⇓*i*P	Pb	16 29 04.2	-0.6
SFDO				*i* S	Sb	16 29 17.4	-0.1
LNV	**Longovilo**	**1.05**	**39**	*i* P	Pb	16 29 04.8	-1.0
LNV				*i* S	Sb	16 29 19.0	-0.2
LNCH	**Linares**	**1.17**	**155**	⇑*i*P	Pb	16 29 06.6	-1.2
LNCH				*i* S	Sb	16 29 22.4	-0.4
LNCH				AMP		16 29 23.0	
	comp=E,2μm,0.4s						
LNCH	**Linares**	**1.17**	**155**	*i* P	Pb	16 29 06.5	-1.4
LNCH				*i* S	Sb	16 29 22.1	-0.7
LCCH	**Las Cruces**	**1.40**	**22**	⇑*i*P	Pn	16 29 10.4	-1.2
LCCH				*i* S	Sb	16 29 29.1	-0.4
LCCH	**Las Cruces**	**1.40**	**22**	⇑*i*P	Pn	16 29 10.4	-1.2
LCCH				*i* S	Sb	16 29 29.1	-0.4
CACH	**El Canelo**	**1.48**	**64**	*i* P	Pn	16 29 12.6	-0.1
CACH				*i* S	Sb	16 29 32.2	+0.5
CACH	**El Canelo**	**1.48**	**64**	*i* P	Pn	16 29 12.6	-0.1
CACH				*i* S	Sb	16 29 32.4	+0.6
CHCH	**Chadas Angostu**	**1.54**	**57**	⇑*i*P	Pn	16 29 13.0	-0.5
CHCH				*i* S	Sb	16 29 32.8	-0.5
CHCH	**Chadas Angostu**	**1.54**	**57**	⇑*i*P	Pn	16 29 13.2	-0.3
CHCH				*i* S	Sb	16 29 32.8	-0.5
TACH	**Talagante**	**1.54**	**43**	*i* P	Pn	16 29 12.9	-0.7
TACH				*i* S	Sb	16 29 33.1	-0.3
CICH	**Cipreses**	**1.54**	**73**	*i* P	Pn	16 29 13.1	-0.5
CICH				*i* S	Sb	16 29 33.2	-0.3
SCR	**San Cristobal**	**1.62**	**38**	*e*P	Pn	16 29 18.1	+3.4
ANTU	**Antumapu**	**1.77**	**48**	*i* S	Sn	16 29 39.7	+0.2
ANTU				AMP		16 29 44.0	
	comp=N,552nm,0.4s						
PCH	**Pirque**	**1.81**	**51**	⇑*i*P	Pn	16 29 17.4	-0.1
PCH				*i* S	Sn	16 29 40.8	+0.2
PCH	**Pirque**	**1.81**	**51**	*i* P	Pn	16 29 17.5	0.0
PCH				*i* S	Sn	16 29 40.8	+0.2
CCHI	**Chillan**	**1.82**	**177**	⇑*i*P	Pn	16 29 17.2	-0.4
CCHI				*i* S	Sn	16 29 41.0	+0.3
CCHI				AMP		16 29 45.9	
	comp=N,481nm,0.3s						
CCHI				AMP		16 29 46.2	
	comp=N,888nm,0.3s						
CCHI	**Chillan**	**1.82**	**177**	⇑*i*P	Pn	16 29 17.5	-0.1
CCHI				*i* S	Sn	16 29 41.0	+0.3
LMEL	**Las Melosas**	**1.90**	**61**	⇑*i*P	Pn	16 29 18.9	+0.2
LMEL				*i* S	Sn	16 29 43.5	+0.9
LMEL				AMP		16 29 45.5	
	comp=N,474nm,0.3s						
LMEL	**Las Melosas**	**1.90**	**61**	⇑*i*P	Pn	16 29 19.0	+0.3
LMEL				*i* S	Sn	16 29 43.6	+1.0
CLCH	**Cerro Calan**	**1.95**	**45**	*i* P	Pn	16 29 19.3	-0.2
CLCH				*i* S	Sn	16 29 44.6	+0.6
CLCH				AMP		16 29 52.0	
	comp=N,472nm,0.7s						
ROCH	**El Roble**	**2.06**	**29**	*i* P	Pn	16 29 21.4	+0.4
ROCH				*i* S	Sn	16 29 48.1	+1.4
ROCH	**El Roble**	**2.06**	**29**	*i* P	Pn	16 29 21.3	+0.3
ROCH				*i* S	Sn	16 29 48.1	+1.4
PEL	**Peldehue**	**2.06**	**38**	*i* P	Pn	16 29 21.3	+0.2
PEL				*i* S	Sn	16 29 47.6	+0.8
PEL				AMP		16 29 58.5	
	comp=N,300nm,0.5s						
PACH	**Papudo**	**2.33**	**16**	*i* P	Pn	16 29 25.2	+0.4
PACH				*i* S	Sn	16 29 55.2	+1.7
PACH	**Papudo**	**2.33**	**16**	⇑*i*P	Pn	16 29 25.7	+0.8
PACH				*i* S	Sn	16 29 55.4	+1.9
JACH	**Jahuel**	**2.48**	**33**	*i* P	Pn	16 29 27.2	+0.1
JACH				*i* S	Sn	16 29 58.8	+1.2
JACH	**Jahuel**	**2.48**	**33**	*i* P	Pn	16 29 27.5	+0.4
JACH				*i* S	Sn	16 29 58.8	+1.2

*IDC **04** 16:30:15.2±1.2,6.20S×146.97E,mb3.7/5,mb1 4.0/8, mb1mx3.9/16,mbtmp3.8/8,ML3.5/3,Error ellipse: s-maj=45.9km s-min=15.7km az=91.0*

*NEIC **04** 16:30:22.6±2.0,6.38S×147.01E,h54^{km}±19^{km},mb4.4/4, Error ellipse: s-maj=16.7km s-min=15.1km az=126.0*

ISC 04 16:30:19.8±2.9,**6.4S**±0.1×**147.0E**±0.1,**h41**^{km}±26^{km}**,n23, σ0^{s}93**/24**,mb4.0**/8**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.04**	**176**	Pn	**P**	**16 31 07.6**	**+1.0**
	14nm,0.3s,baz=12,slow=4.8,SNR=42						
PMG				Pg	**P**	**16 31 14.3**	**+7.7**
	60nm,0.3s,baz=342,slow=18,SNR=45						
PMG				Sn	**S**	**16 31 48.9**	**+6.8**
	50nm,0.3s,baz=219,slow=15,SNR=4.0						
PMG				Lg		16 31 55.9	
	62nm,0.3s,baz=109,slow=7.4,SNR=6.3						
PMG	**Port Moresby**	**3.04**	**176**	*e*Pn	**P**	**16 31 07.7**	**+1.1**
CTA	**Charters Tower**	**13.67**	**183**	Pn	**P**	**16 33 34.4**	**+0.9**
	0.2nm,0.3s,baz=4.6,slow=15,SNR=4.1						
CTAO	**Charters Tower**	**13.67**	**183**	*e*P	**P**	**16 33 34.4**	**+0.9**
KAKA	**Kakadu**	**15.65**	**245**	*e*P	**P**	**16 33 59.4**	**+0.1**
WRAB	**Tennant Creek**	**18.23**	**221**	*e*P	**P**	**16 34 30.2**	**-1.5**
WB2	**Warramunga Arr**	**18.24**	**221**	*e*P	**P**	**16 34 30.4**	**-1.4**
WRA	**Warramunga Arr**	**18.25**	**221**	P	**P**	**16 34 30.7**	**-1.2**
	0.2nm,0.3s,baz=42,slow=12,SNR=26						
ASAR	**Alice Springs**	**21.31**	**215**	P	**P**	**16 35 05.0**	**-0.4**
	1.0nm,0.5s,mb3.4,baz=34,slow=13,SNR=18						
ASPA	**Alice Springs**	**21.31**	**215**	*e*P	**P**	**16 35 05.4**	**0.0**
STKA	**Stephens Creek**	**25.89**	**191**	P	**P**	**16 35 49.7**	**-0.2**
	2.2nm,0.8s,mb3.7,baz=345,slow=12,SNR=4.6						
STKA	**Stephens Creek**	**25.89**	**191**	P	**P**	**16 35 49.7**	**-0.2**
MBWA	**Marble Bar**	**30.19**	**238**	P	**P**	**16 36 29.9**	**+1.1**
KSM	**Kuching**	**37.41**	**281**	P	**P**	**16 37 33.2**	**+2.1**
NWAO	**Narrogin (SRO)**	**38.25**	**222**	P	**P**	**16 37 38.9**	**+1.0**
	33nm,1.3s,mb4.9						
KULM	**Kulim**	**47.66**	**283**	P	**P**	**16 38 55.0**	**+0.4**
ULN	**Ulaanbaatar**	**64.40**	**331**	*e*P	**P**	**16 40 54.4**	**+0.3**
	1.3nm,0.8s,mb4.0						
MA2	**Magadan**	**65.79**	**2**	P	**P**	**16 41 01.6**	**-1.2**
	7.3nm,1.0s,mb4.7						
VNDA	**Vanda**	**71.56**	**177**	P	**P**	**16 41 38.5**	**+0.2**
	0.4nm,0.7s,mb3.5,baz=320,slow=8.2,SNR=3.4						
VNDA	**Vanda**	**71.56**	**177**	P	**P**	**16 41 38.5**	**+0.2**
	2.8nm,1.2s,mb4.1						
MKAR	**Makanchi Array**	**77.75**	**321**	P	**P**	**16 42 14.2**	**-0.2**
	0.3nm,0.6s,mb3.4,baz=117,slow=5.4,SNR=4.4						
ILAR	**Eielson Array**	**85.82**	**23**	P	**P**	**16 42 55.2**	**-0.7**
	1.5nm,0.7s,mb4.3,baz=250,slow=4.8,SNR=14						
SDV	**Santo Domingo**	**142.66**	**84**	*e*PKPdf	PKPdf	16 49 49.4	-0.4

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*IDC **04** 16:55:28.4±3.0,9.76N×85.11W,h82^{km}±12^{km},mb3.8/4, mb1 3.9/4,mb1mx3.5/19,mbtmp4.1/4,Error ellipse: s-maj=56.4km s-min=43.8km az=54.0*

*NEIC **04** 16:55:29.1,9.75N×84.36W,h41^{km},mb4.5/1, MD4.0(CASC),After CASC.*

NEIC Felt at Santa Cruz.

*CASC **04** 16:55:29.3±1.6,9.74N×84.37W,h38^{km}±9^{km},MD4.2, MW4.8,mb4.5(NEIC)*

ISC 04 16:55:28.7±0.5,**9.69N**±0.04×**84.41W**±0.04,**h38**^{km}**,n34, σ0^{s}89**/41**,mb4.1**/5**,10C-5D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRS1	**Puriscal**	**0.31**	**19**	⇓*i*P	**P**	**16 55 36.3**	**-0.6**
CGA2	**Cerro Gallo 2**	**0.33**	**351**	⇓*i*P	**P**	**16 55 37.6**	**+0.5**
LAJ	**Bijagual**	**0.34**	**59**	⇑*i*P	**P**	**16 55 36.9**	**-0.3**
LCR2	**La Lucha 2**	**0.41**	**83**	*i* P	**P**	**16 55 37.9**	**-0.2**
SJS	**Escuela Geolog**	**0.43**	**55**	⇑*i*P	**P**	**16 55 38.2**	**-0.2**
SJS				*e*S	**S**	**16 55 46.2**	**+1.0**
SJS				*e*S	**S**	**16 55 47.1**	**+1.9**
VPS2	**Volcan Poas 2**	**0.53**	**19**	⇑*i*P	**P**	**16 55 39.5**	**-0.1**
VPS2				*e*S	**S**	**16 55 47.9**	**+0.4**
BUS	**Buena Vista**	**0.66**	**102**	⇑*i*P	**P**	**16 55 41.6**	**0.0**
JCR	**Jicaral**	**0.71**	**283**	⇓*i*P	**P**	**16 55 42.9**	**+0.7**
JCR				*e*S	**S**	**16 55 58.6**	**+6.5**
JTS	**JuntasAbangare**	**0.80**	**318**	P	**P**	**16 55 43.7**	**+0.2**
	2µm,0.3s,baz=168,slow=4.5,SNR=4510						
JTS				S	**S**	**16 55 55.4**	**+1.0**
	2µm,0.3s,baz=316,slow=22,SNR=25						
FORC	**Fortuna**	**0.81**	**342**	⇑*i*P	**P**	**16 55 43.9**	**+0.2**
FORC	**Fortuna**	**0.81**	**342**	*i* P	**P**	**16 55 43.8**	**0.0**
FORC				⇑*i*P		16 55 43.9	
FORC				*i* S	**S**	**16 55 56.1**	**+1.3**
TRTC	**Tortuguero**	**1.12**	**38**	⇑*i*P	**P**	**16 55 47.4**	**-0.6**
VCR	**Vista de Mar**	**1.27**	**290**	⇑*e*P	**P**	**16 55 49.9**	**-0.4**
LIO	**Limon**	**1.39**	**77**	*e*P	**P**	**16 55 51.3**	**-0.8**
ACR	**Cerro Adams**	**1.60**	**130**	⇓*e*P	**P**	**16 55 54.3**	**-0.7**
ACR				*e*S	**S**	**16 56 16.2**	**+1.4**
SVTC	**San Vito de Co**	**1.69**	**122**	*e*P	**P**	**16 55 55.9**	**-0.4**
BRU2	**Volcan**	**1.92**	**118**	⇑*e*P	**P**	**16 55 59.9**	**+0.4**
BRU2				*e*S	**S**	**16 56 23.3**	**+0.6**
DVD	**David**	**2.31**	**123**	⇓*e*P	**P**	**16 56 05.9**	**+0.9**
DVD				*e*S	**S**	**16 56 33.2**	**+0.8**
UPA	**Univ. de Panam**	**4.87**	**98**	*e*P	**P**	**16 56 39.7**	**-1.7**
LCBS	**La Ceiba**	**5.96**	**312**	*e*P	**P**	**16 56 56.6**	**0.0**
LFRS	**El Faro**	**6.00**	**311**	*e*P	**P**	**16 56 57.4**	**+0.1**
SBLS	**San Blas**	**6.56**	**309**	⇑*e*P	**P**	**16 57 05.0**	**-0.1**
SNJE	**San Jose**	**6.56**	**310**	*e*P	**P**	**16 57 05.0**	**-0.2**
SDV	**Santo Domingo**	**13.62**	**92**	P	**P**	**16 58 40.4**	**-1.4**
	0.3nm,0.3s,baz=275,slow=12,SNR=5.0						
SDV	**Santo Domingo**	**13.62**	**92**	*e*P	**P**	**16 58 34.3**	**-7.6**
	5.1nm,0.7s						
OXF	**Oxford**	**25.12**	**350**	P	**P**	**17 00 49.2**	**-2.6**
	12nm,0.9s,mb4.4						
SWET	**Sewanee**	**25.45**	**357**	P	**P**	**17 00 51.4**	**-3.4**
ULM	**Lac du Bonnet**	**41.53**	**349**	P	**P**	**17 03 04.8**	**-9.2**
	2.7nm,0.6s,mb4.0,baz=175,slow=7.2,SNR=4.3						
ULM	**Lac du Bonnet**	**41.53**	**349**	P	**P**	**17 03 04.8**	**-9.2**
YKA	**Yellowknife Ar**	**57.06**	**344**	P	**P**	**17 05 04.9**	**-8.3**
	0.4nm,0.5s,mb3.7,baz=133,slow=7.7,SNR=4.9						
ESDC	**Sonseca Array**	**76.55**	**51**	P	**P**	**17 07 13.0**	**-4.0**
	1.6nm,0.6s,mb4.1,baz=281,slow=5.5,SNR=10						
FINES	**FINESS Array B**	**91.10**	**27**	P	**P**	**17 08 24.8**	**-5.6**
	1.0nm,0.8s,mb4.2,baz=292,slow=10,SNR=4.8						
ASAR	**Alice Springs**	**140.90**	**244**	PKP	PKPdf	17 14 47.5	-8.2
	0.5nm,0.9s,baz=125,slow=3.5,SNR=4.0						
WRA	**Warramunga Arr**	**141.26**	**250**	PKP	PKPdf	17 14 48.6	-7.8
	0.4nm,0.7s,baz=103,slow=3.1,SNR=10						

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*IDC **04** 17:19:56.7±1.0,6.22S×147.13E,mb4.0/7,mb1 4.3/10, mb1mx4.2/16,mbtmp4.1/10,ML3.6/3,MS3.7/1,Ms1 3.7/1, ms1mx3.3/21,Error ellipse: s-maj=39.0km s-min=13.3km az=87.0*

*NEIC **04** 17:20:03.8±1.9,6.41S×146.91E,h48^{km}±18^{km},mb4.2/4, Error ellipse: s-maj=15.9km s-min=14.7km az=123.0*

ISC 04 17:20:02.3±3.3,**6.4S**±0.1×**146.9E**±0.1,**h49**^{km}±29^{km}**,n23, σ0^{s}71**/27**,mb3.9**/9**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.97**	**175**	Pn	**P**	**17 20 48.8**	**+0.6**
	14nm,0.3s,baz=45,slow=5.3,SNR=37						
PMG				Pg	**P**	**17 20 55.8**	**+7.6**
	40nm,0.3s,baz=0.5,slow=6.4,SNR=40						
PMG				Sn	**S**	**17 21 29.0**	**+6.2**
	31nm,0.3s,baz=13,slow=7.2,SNR=5.1						
PMG				Lg		17 21 38.9	
	58nm,0.3s,baz=342,slow=23,SNR=6.3						
PMG	**Port Moresby**	**2.97**	**175**	*e*Pn	**P**	**17 20 48.3**	**+0.1**
PMG				Pg	**P**	**17 20 55.8**	**+7.6**
PMG				Sn	**S**	**17 21 29.0**	**+6.2**
PMG				Lg		17 21 39.0	
CTA	**Charters Tower**	**13.59**	**183**	Pn	**P**	**17 23 14.5**	**0.0**
	0.2nm,0.3s,baz=351,slow=16,SNR=4.7						
CTA				LR	LR	17 27 45.8	
	comp=Z,291nm,18.1s,baz=333,slow=34						
CTA	**Charters Tower**	**13.59**	**183**	Pn	**P**	**17 23 14.5**	**0.0**
CTA				LR	LR	17 27 45.8	
CTAO	**Charters Tower**	**13.59**	**183**	*e*P	**P**	**17 23 15.2**	**+0.7**
	29nm,1.2s						
KAKA	**Kakadu**	**15.54**	**245**	*e*P	**P**	**17 23 40.2**	**+0.3**
WRAB	**Tennant Creek**	**18.12**	**221**	*e*P	**P**	**17 24 11.7**	**-0.6**
	26nm,1.1s						
WB2	**Warramunga Arr**	**18.13**	**221**	*e*P	**P**	**17 24 11.6**	**-0.8**
WRA	**Warramunga Arr**	**18.13**	**221**	P	**P**	**17 24 12.1**	**-0.4**
	0.4nm,0.3s,baz=45,slow=9,SNR=75						
ASAR	**Alice Springs**	**21.20**	**215**	P	**P**	**17 24 47.2**	**+1.2**
	4.1nm,0.6s,mb3.9,baz=29,slow=13,SNR=36						
ASPA	**Alice Springs**	**21.20**	**215**	*e*P	**P**	**17 24 46.7**	**+0.6**
STKA	**Stephens Creek**	**25.79**	**190**	*e*P	**P**	**17 25 30.6**	**-0.1**
STKA	**Stephens Creek**	**25.79**	**190**	P	**P**	**17 25 30.6**	**-0.1**
	2.4nm,0.6s,mb3.9,baz=2.2,slow=9.3,SNR=8.9						
STKA	**Stephens Creek**	**25.79**	**190**	*e*P	**P**	**17 25 30.1**	**-0.6**
MBWA	**Marble Bar**	**30.08**	**238**	*e*P	**P**	**17 26 08.6**	**-1.0**
	6.7nm,1.0s,mb4.3						
CMAR	**Chiang Mai Arr**	**53.35**	**299**	P	**P**	**17 29 20.0**	**+0.6**
	0.8nm,0.6s,mb3.9,baz=121,slow=5.7,SNR=6.8						
VNDA	**Vanda**	**71.49**	**177**	P	**P**	**17 31 19.5**	**+0.1**
	0.8nm,1.0s,mb3.6,baz=324,slow=7.1,SNR=7.5						
VNDA	**Vanda**	**71.49**	**177**	P	**P**	**17 31 19.5**	**+0.1**
	1.0nm,0.8s,mb3.8						
MKAR	**Makanchi Array**	**77.75**	**321**	P	**P**	**17 31 56.3**	**+0.3**
	0.6nm,0.8s,mb3.6,baz=117,slow=5.4,SNR=6.2						
ZAL	**Zalesovo**	**79.32**	**328**	P	**P**	**17 32 03.7**	**-0.7**
	0.9nm,0.3s,mb4.2,baz=195,slow=3.4,SNR=4.3						
ZAL	**Zalesovo**	**79.32**	**328**	P	**P**	**17 32 03.7**	**-0.7**
ILAR	**Eielson Array**	**85.92**	**23**	P	**P**	**17 32 37.0**	**-1.1**
	1.3nm,0.7s,mb4.3,baz=253,slow=5.3,SNR=12						
BRVK	**Borovoye**	**87.12**	**324**	P	**P**	**17 32 45.4**	**+1.2**
	0.4nm,0.9s,mb3.6						

MAN 04 17:27:34.9,11.80N×125.22E,h29^{km},mb4.1,ML2.9, MS2.5,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.29**	**132**	*e*P	Pb	17 27 43.6	+1.4
BESP				*e*S	Sb	17 27 50.5	+3.3
PLP	**Palo**	**0.67**	**200**	*i* P	Pb	17 27 48.8	+0.7
PLP				*i* S	Sb	17 27 59.0	+1.9
CNP	**Catarman**	**0.89**	**323**	*e*P	Pn	17 27 51.1	-0.4
CNP				*e*S	Sb	17 28 04.0	+0.8

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*IDC **04** 17:33:49.3±0.7,12.70N×123.19E,mb4.1/10,mb1 4.2/10, mb1mx4.0/21,mbtmp4.1/10,MS3.6/1,Ms1 3.8/1, ms1mx3.3/25,Error ellipse: s-maj=52.7km s-min=16.4km az=68.0*

*MAN **04** 17:33:51.3,13.13N×124.03E,h14^{km},mb5.3,ML4.3, MS4.5*

MAN Cabid-an Sorsogon- Intensity III Legaspi City Intensity II.

*BJI **04** 17:33:51.1,12.35N×124.43E,h80^{km},mB4.5,mb4.1, Ms3.8,Msz3.7*

*MOS **04** 17:33:51.9±1.0,13.11N×123.90E,h33^{km},mb4.9/10,Error ellipse: s-maj=23.1km s-min=11.6km az=107.7*

*NEIC **04** 17:33:58.5±2.7,13.00N×124.00E,h80^{km}±26^{km},mb4.6/11, Error ellipse: s-maj=11.7km s-min=7.9km az=77.0*

NEIC Felt at Legaspi and Sorsogon.

ISC 04 17:33:51.8±0.6,**13.16N**±0.02×**124.07E**±0.04,**h30**^{km}±4^{km}**, n77,σ1^{s}05**/86**,mb4.4**/23**,MS3.5**/1**,2C-6D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.44**	**11**	*e*P	**Pb**	**17 34 00.1**	**-1.2**
PVCP				*e*S	**Sb**	**17 34 06.8**	**-0.9**
CNP	**Catarman**	**0.87**	**138**	*e*P	**Pn**	**17 34 07.3**	**-0.8**
CNP				*e*S	**Sb**	**17 34 19.8**	**+0.4**
MMPH	**Masbate**	**0.91**	**209**	⇑*i*P	**Pn**	**17 34 09.2**	**+0.6**
MMPH				*i* S	**Sb**	**17 34 21.0**	**+0.4**
BESP	**Borongan**	**2.05**	**139**	*e*P	**Pn**	**17 34 24.7**	**-0.3**
RCP	**Roxas**	**2.05**	**219**	⇓*e*P	**Pn**	**17 34 24.7**	**-0.3**
RCP				*e*S	**Sn**	**17 34 55.0**	**+5.1**
OTRP	**Odiongan**	**2.15**	**249**	*e*P	**Pn**	**17 34 26.2**	**-0.2**
PLP	**Palo**	**2.17**	**156**	*i* P	**Pn**	**17 34 27.1**	**+0.3**
PLP				*i* S	**Sn**	**17 34 54.0**	**+1.1**
BOAC	**Boac**	**2.19**	**278**	*e*P	**Pn**	**17 34 27.6**	**+0.6**
POLP	**Polilio Island**	**2.59**	**307**	*e*P	**Pn**	**17 34 36.4**	**+3.6**
POLP				*e*S	**Sn**	**17 35 12.2**	**+8.7**
LLP	**Lapu-Lapu**	**2.83**	**182**	⇓*e*P	**Pn**	**17 34 35.5**	**-0.6**
LLP				*e*S	**Sn**	**17 35 10.4**	**+0.8**
GUIM	**Jordan**	**2.91**	**210**	*e*P	**Pn**	**17 34 37.4**	**+0.2**
SJMP	**San Jose**	**2.96**	**257**	*e*P	**Pn**	**17 34 38.9**	**+0.9**
MSLP	**Maasin**	**3.10**	**165**	*e*P	**Pn**	**17 34 43.9**	**+3.9**
TBP	**Tagbilaran**	**3.45**	**183**	*e*P	**Pn**	**17 34 44.4**	**-0.6**
TBP				*e*S	**Sn**	**17 35 23.8**	**-1.6**
BALP	**Baler**	**3.52**	**317**	*e*P	**Pn**	**17 34 46.3**	**+0.4**
SCPH	**Surigao**	**3.63**	**157**	*e*P	**Pn**	**17 34 48.6**	**+1.1**
SCPH				*e*S	**Sn**	**17 35 38.3**	**+8.4**
LUBP	**Lubang**	**3.76**	**279**	*e*P	**Pn**	**17 34 50.1**	**+0.7**
CUYO	**Cuyo Island**	**3.77**	**233**	*e*P	**Pn**	**17 34 48.6**	**-0.8**
SNPH	**Sibulan**	**3.88**	**192**	*e*P	**Pn**	**17 34 51.0**	**0.0**
	5µm,0.8s						
BUSP	**Coron**	**3.95**	**254**	*e*P	**Pn**	**17 34 51.8**	**-0.2**
CAUP	**Cauayan**	**4.34**	**330**	*e*P	**Pn**	**17 34 58.3**	**+0.6**
BUTP	**Butuan**	**4.43**	**160**	*e*P	**Pn**	**17 35 02.0**	**+3.1**
ENPP	**El Nido**	**4.94**	**247**	*e*P	**Pn**	**17 35 05.3**	**-0.8**
PAGZ	**Pagadian**	**5.32**	**187**	*e*P	**Pn**	**17 35 10.5**	**-0.9**
BUKP	**Musuan**	**5.34**	**169**	*e*P	**Pn**	**17 35 12.7**	**+1.0**
APYP	**Conner**	**5.41**	**330**	*e*P	**Pn**	**17 35 13.0**	**+0.3**
ABRA	**Dolores**	**5.51**	**324**	*e*P	**Pn**	**17 35 15.5**	**+1.3**
IPIL	**Ipil**	**5.54**	**196**	*e*P	**Pn**	**17 35 14.3**	**-0.2**
KCP	**Kidapawan**	**6.19**	**171**	⇓*e*P	**Pn**	**17 35 28.0**	**+4.2**
KSM	**Kuching**	**17.90**	**231**	P	**P**	**17 38 01.0**	**+0.5**
SSE	**Sheshan**	**18.05**	**352**	*e*P	**P**	**17 38 05.4**	**+3.1**
SSE				S	**S**	**17 41 25.2**	**+5.5**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s						
SSE				AMB	AMB		
	comp=Z,90nm,8.9s						
SSE				LR	LR		
	comp=N,90nm,18.8s						
SSE				LR	LR		
	comp=E,310nm,18.8s						
SSE				LR	LR		
	comp=Z,300nm,20.3s						
NJ2	**Nanjing**	**19.40**	**347**	*e*P	**P**	**17 38 22.1**	**+3.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
GUMO	**Guam**	**20.24**	**86**	P	**P**	**17 38 27.8**	**+0.1**
ENH	**Enshi**	**21.72**	**324**	P	**P**	**17 38 44.4**	**+1.8**
	comp=Z,5.1nm,0.8s,mb4.0						
KS15	**Wonju Array Si**	**24.42**	**7**	*e*P	**P**	**17 39 12.5**	**+3.3**
CMAR	**Chiang Mai Arr**	**24.73**	**286**	*i* P	**P**	**17 39 17.8**	**+5.5**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**24.73**	**286**	LR	LR	17 50 12.3	
	comp=Z,126nm,18.3s,MS3.5,baz=95,slow=41						
XAN	**Xi’an**	**24.93**	**329**	P	**P**	**17 39 12.9**	**-1.2**
MDJ	**Mudanjiang**	**31.70**	**8**	*e*P	**P**	**17 40 16.0**	**+0.8**
	comp=Z,7.8nm,0.9s,mb4.5						
MBWA	**Marble Bar**	**34.37**	**187**	P	**P**	**17 40 36.1**	**-2.5**
WRAB	**Tennant Creek**	**34.41**	**163**	*e*P	**P**	**17 40 40.7**	**+1.8**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
WRAB	**Tennant Creek**	**34.41**	**163**	*e*P	**P**	**17 40 40.6**	**+1.8**
	comp=Z,9.0nm,1.0s,mb4.7						
WRA	**Warramunga Arr**	**34.41**	**163**	*i* P	**P**	**17 40 37.4**	**-1.5**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**34.41**	**163**	P	**P**	**17 40 36.2**	**-2.7**
	comp=Z,2.4nm,0.7s,mb4.2,baz=342,slow=9.4,SNR=6.7						
ULN	**Ulaanbaatar**	**37.40**	**341**	⇓*e*P	**P**	**17 41 04.6**	**+0.7**
ULN	**Ulaanbaatar**	**37.40**	**341**	*e*P	**P**	**17 41 03.6**	**-0.3**
	comp=Z,2.9nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**37.84**	**165**	P	**P**	**17 41 06.5**	**-1.4**
	comp=Z,1.1nm,0.5s,mb3.8,baz=340,slow=6.7,SNR=20						
STKA	**Stephens Creek**	**47.83**	**160**	P	**P**	**17 42 28.4**	**-0.5**
	comp=Z,1.5nm,0.4s,mb4.4,baz=347,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**48.44**	**322**	P	**P**	**17 42 33.5**	**+0.1**
	comp=Z,6.6nm,1.1s,mb4.6,baz=120,slow=8.6,SNR=32						
YAK	**Yakutsk**	**48.96**	**4**	⇑*e*P	**P**	**17 42 37.4**	**+0.1**
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
YAK	**Yakutsk**	**48.96**	**4**	*e*P	**P**	**17 42 36.7**	**-0.6**
	comp=Z,14nm,1.0s,mb4.9						
ZAL	**Zalesovo**	**51.08**	**331**	P	**P**	**17 42 53.0**	**-0.6**
	comp=Z,0.7nm,0.5s,mb3.9,baz=101,slow=2.3,SNR=4.4						
NVS	**Novosibirsk**	**52.35**	**331**	*e*P	**P**	**17 43 01.4**	**-1.8**
BVAR	**Borovoye Array**	**58.08**	**325**	P	**P**	**17 43 44.1**	**-0.6**
	comp=Z,2.3nm,0.9s,mb4.2,baz=117,slow=9.9,SNR=13						
CHKZ	**Chkalovo**	**58.20**	**326**	*e*P	**P**	**17 43 44.8**	**-0.8**
TIXI	**Tiksi**	**58.53**	**2**	⇓*e*P	**P**	**17 43 46.2**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BILL	**Bilibino**	**61.25**	**17**	*e*P	**P**	**17 44 07.9**	**+1.6**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
BILL	**Bilibino**	**61.25**	**17**	*e*P	**P**	**17 44 06.2**	**-0.2**
SVE	**Sverdlovsk**	**64.63**	**327**	*e*P	**P**	**17 44 28.0**	**-0.8**
SVE				*e*		17 44 34.3	
ARU	**Arti**	**65.64**	**326**	⇓*i*P	**P**	**17 44 33.9**	**-1.4**
ARU				*e*		17 45 03.0	
ARU				*e*		17 46 58.4	
ARU				*e*PPP	PPP	17 48 38.0	+1.3
ARU				*e*S	S	17 53 08.3	-9.2
ARU				*e*SS	SS	17 57 29.3	-3.9
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
ARU	**Arti**	**65.64**	**326**	*e*P	**P**	**17 44 33.5**	**-1.8**
	comp=Z,4.5nm,0.6s,mb4.7						
KIV	**Kislovodsk**	**74.82**	**312**	*i* P	**P**	**17 45 31.2**	**-0.2**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
KIV	**Kislovodsk**	**74.82**	**312**	P	**P**	**17 45 31.1**	**-0.3**
	comp=Z,6.5nm,0.8s,mb4.6						
IMA	**Indian Mountai**	**74.92**	**25**	*e*P	**P**	**17 45 33.5**	**+2.0**
IMA				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
IMA	**Indian Mountai**	**74.92**	**25**	*e*P	**P**	**17 45 33.5**	**+2.0**
	comp=Z,18nm,0.8s,mb5.0						
MCK	**McKinley**	**76.98**	**27**	*e*P	**P**	**17 45 43.5**	**+0.3**
MCK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
MCK	**McKinley**	**76.98**	**27**	*e*P	**P**	**17 45 43.5**	**+0.3**
	comp=Z,6.9nm,0.9s,mb4.6						
ILAR	**Eielson Array**	**77.80**	**26**	P	**P**	**17 45 52.6**	**+5.0**
	comp=Z,1.4nm,0.9s,mb3.9,baz=262,slow=5.3,SNR=7.7						
ARCES	**ARCESS Array B**	**80.75**	**339**	P	**P**	**17 46 03.7**	**+0.1**
	comp=Z,2.1nm,0.8s,mb4.1,baz=68,slow=6.5,SNR=8.1						
ARCES	**ARCESS Array B**	**80.75**	**339**	P	**P**	**17 46 03.7**	**+0.1**
FINES	**FINESS Array B**	**82.34**	**331**	P	**P**	**17 46 11.4**	**-0.6**
	comp=Z,0.8nm,0.4s,mb4.0,baz=60,slow=5.1,SNR=9.2						
INK	**Inuvik**	**82.41**	**21**	*e*P	**P**	**17 46 12.3**	**+0.1**
INK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
INK	**Inuvik**	**82.41**	**21**	*e*P	**P**	**17 46 12.3**	**+0.1**
	comp=Z,10nm,1.1s,mb4.7						
RES	**Resolute Bay**	**89.04**	**10**	*e*P	**P**	**17 46 45.0**	**+0.1**
RES				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb5.0						
RES	**Resolute Bay**	**89.04**	**10**	*e*P	**P**	**17 46 45.0**	**+0.1**
	comp=Z,9.6nm,1.4s,mb4.9						
YKA	**Yellowknife Ar**	**91.99**	**23**	P	**P**	**17 47 04.5**	**+5.7**
	comp=Z,0.7nm,0.7s,mb4.1,baz=306,slow=4.6,SNR=6.9						
YKA	**Yellowknife Ar**	**91.99**	**23**	P	**P**	**17 47 04.5**	**+5.7**

IDC 04 17:35:49.9±2.9**,13.77N×93.90E,mb3.8**/3**,mb1 3.9**/4**, mb1mx3.6**/21**,mbtmp3.7**/4**,ML3.5**/1**,Error ellipse: s-maj=59.9km s-min=32.8km az=162.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.72**	**45**	Pn	Pn	17 37 31.6	-0.7
	0.2nm,0.3s,baz=235,slow=15,SNR=12						
CMAR				Sn	Sn	17 38 45.9	-4.6
	0.1nm,0.3s,baz=242,slow=27,SNR=2.3						
ZAL	**Zalesovo**	**40.71**	**352**	P	P	17 43 31.6	-2.2
	1.0nm,0.5s,baz=330,slow=13,SNR=3.6						
BRTR	**Keskin Array B**	**58.51**	**308**	P	P	17 45 48.6	-1.9
	1.0nm,0.9s,baz=143,slow=6.2,SNR=6.0						
GERES	**GERESS Array B**	**73.33**	**317**	P	P	17 47 23.5	-1.8
	0.2nm,0.3s,baz=90,slow=6.7,SNR=5.6						

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*IDC **04** 17:38:36.3±1.0,6.22S×147.00E,mb4.0/8,mb1 4.3/10, mb1mx4.2/16,mbtmp4.1/10,ML3.5/2,MS3.5/1,Ms1 3.5/1, ms1mx3.2/20,Error ellipse: s-maj=38.3km s-min=13.2km az=85.0*

*NEIC **04** 17:38:43.4±1.6,6.40S×146.92E,h51^{km}±15^{km},mb4.2/8, Error ellipse: s-maj=13.6km s-min=11.2km az=100.0*

ISC 04 17:38:42.7±2.4,**6.37S**±0.09×**146.8E**±0.1,**h59**^{km}±22^{km}**, n27,σ0^{s}93**/29**,mb4.2**/15**,1C,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.03**	**174**	Pn	**P**	**17 39 28.9**	**-0.6**
	8.8nm,0.3s,baz=342,slow=8.3,SNR=22						
PMG				Pg	**P**	**17 39 35.0**	**+5.6**
	25nm,0.3s,baz=0.5,slow=11,SNR=39						
PMG				Sn	**S**	**17 40 06.8**	**+2.2**
	16nm,0.3s,baz=355,slow=14,SNR=5.4						
PMG				Lg		17 40 18.1	
	18nm,0.3s,baz=160,slow=22,SNR=5.4						
PMG				LR	LR	17 40 56.7	
	comp=Z,726nm,18.8s,baz=256,slow=44						
PMG	**Port Moresby**	**3.03**	**174**	*e*Pn	**P**	**17 39 28.1**	**-1.3**
CTA	**Charters Tower**	**13.64**	**182**	Pn	**P**	**17 41 55.8**	**+0.7**
	0.3nm,0.3s,baz=348,slow=15,SNR=3.4						
CTAO	**Charters Tower**	**13.64**	**182**	P	**P**	**17 41 53.0**	**-2.1**
	18nm,1.1s						
KAKA	**Kakadu**	**15.53**	**245**	*e*P	**P**	**17 42 20.0**	**+0.5**
WRAB	**Tennant Creek**	**18.13**	**221**	*e*P	**P**	**17 42 50.7**	**-1.4**
	20nm,0.9s						
WB2	**Warramunga Arr**	**18.14**	**221**	*e*P	**P**	**17 42 51.8**	**-0.4**
WRA	**Warramunga Arr**	**18.15**	**221**	P	**P**	**17 42 51.8**	**-0.5**
	0.4nm,0.3s,baz=45,slow=12,SNR=40						
ASAR	**Alice Springs**	**21.22**	**215**	P	**P**	**17 43 25.9**	**+0.2**
	2.7nm,0.7s,mb3.7,baz=55,slow=8.8,SNR=14						
ASPA	**Alice Springs**	**21.22**	**215**	*e*P	**P**	**17 43 26.2**	**+0.5**
STKA	**Stephens Creek**	**25.84**	**190**	P	**P**	**17 44 10.8**	**+0.2**
	2.6nm,0.6s,mb3.9,baz=357,slow=9.8,SNR=3.8						
MBWA	**Marble Bar**	**30.07**	**238**	*e*P	**P**	**17 44 48.1**	**-0.8**
	4.7nm,0.9s,mb4.2						
TAU	**Tasmania Unive**	**36.39**	**179**	P	**P**	**17 45 41.6**	**-1.6**
	65nm,1.4s,mb5.4						
MAJO	**Matsushiro**	**43.45**	**350**	P	**P**	**17 46 47.3**	**+5.5**
	3.8nm,0.9s,mb4.1						
KULM	**Kulim**	**47.54**	**283**	*e*P	**P**	**17 47 14.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**53.28**	**299**	P	**P**	**17 47 58.1**	**-0.1**
	1.0nm,0.6s,mb3.9,baz=123,slow=5.6,SNR=6.1						
LSA	**Lhasa**	**64.33**	**307**	P	**P**	**17 49 16.8**	**+1.9**
	2.9nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**64.36**	**331**	*e*P	**P**	**17 49 15.4**	**+0.8**
	1.0nm,0.6s,mb4.0						
MA2	**Magadan**	**65.81**	**2**	*e*P	**P**	**17 49 22.7**	**-1.1**
	6.2nm,0.7s,mb4.8						
YAK	**Yakutsk**	**69.48**	**351**	P	**P**	**17 49 46.2**	**-0.5**
	5.5nm,0.6s,mb4.7						
VNDA	**Vanda**	**71.55**	**177**	P	**P**	**17 49 59.4**	**+0.4**
	1.1nm,0.7s,mb3.9,baz=324,slow=6.8,SNR=10						
VNDA	**Vanda**	**71.55**	**177**	*e*P	**P**	**17 49 59.1**	**+0.1**
	1.4nm,0.8s,mb3.9						
MKAR	**Makanchi Array**	**77.68**	**321**	P	**P**	**17 50 35.8**	**+1.1**
	0.5nm,0.6s,mb3.6,baz=101,slow=6.2,SNR=7.9						
ZAL	**Zalesovo**	**79.25**	**328**	P	**P**	**17 50 42.8**	**-0.4**
	0.8nm,0.3s,mb4.2,baz=308,slow=8.6,SNR=4.7						
ILAR	**Eielson Array**	**85.89**	**23**	P	**P**	**17 51 16.6**	**-0.4**
	1.8nm,0.7s,mb4.4,baz=254,slow=5.2,SNR=16						
BVAR	**Borovoye Array**	**86.97**	**324**	P	**P**	**17 51 23.2**	**+0.6**
	0.4nm,0.6s,mb3.8,baz=111,slow=6.4,SNR=3.9						
SYO	**Syowa Base**	**90.19**	**200**	⇑P	**P**	**17 51 37.9**	**+0.4**

NEIC 04 17:40:08.3,55.55N×158.74W,h34^{km},ML3.5(AEIC)**, After AEIC.,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**1.01**	**259**	P	P	17 40 24.9	-1.1
SDPT				S	S	17 40 38.4	-0.8
ANPB	**Aniakchak Plen**	**1.28**	**11**	P	P	17 40 28.8	-1.2
PVV	**Pavlof Volcano**	**1.74**	**266**	P	P	17 40 35.1	-1.5
PN6	**Pavlof North-6**	**1.81**	**268**	P	P	17 40 36.8	-0.8
PN6				S	S	17 41 01.2	+1.7
HAG	**Hague Volcano**	**1.82**	**264**	P	P	17 40 36.3	-1.3
DOL	**Dolgoi Island**	**1.83**	**259**	P	P	17 40 36.1	-1.7
PN7A	**Pavlof North-7**	**1.86**	**268**	P	P	17 40 37.2	-1.0
BLHA	**Black Hill**	**1.89**	**276**	P	P	17 40 36.9	-1.8
DTNA	**Dutton South F**	**2.04**	**260**	P	P	17 40 39.5	-1.4
DTNA				S	S	17 41 04.8	-0.6
DT1	**Dutton Round H**	**2.07**	**259**	P	P	17 40 39.5	-1.8
DRIA	**Deer Island**	**2.10**	**255**	P	P	17 40 40.4	-1.3
BALA	**Baldy Mountain**	**2.33**	**263**	P	P	17 40 44.2	-0.8
FALS	**False Pass**	**2.77**	**257**	P	P	17 40 50.5	-0.8
FALS				S	S	17 41 22.5	-1.3
KJL	**Kejulik**	**3.06**	**33**	P	P	17 40 53.6	-1.8
KJL				S	S	17 41 28.9	-2.3
SSLN	**Shishaldin Nor**	**3.10**	**258**	P	P	17 40 54.9	-1.1
CNTC	**Contact Creek**	**3.14**	**29**	P	P	17 40 54.7	-1.9
ACHA	**Angle Creek He**	**3.26**	**34**	P	P	17 40 57.3	-1.0
MGLS	**Mageik LS**	**3.26**	**34**	P	P	17 40 56.9	-1.4
MGLS				S	S	17 41 34.2	-2.2

WTUG	Tugumak	3.31	260	P	P	17 40 57.6	-1.3
WESN	West Dahl Nort	3.50	256	P	P	17 41 00.9	-0.7
WPOG	Pogromni	3.58	257	P	P	17 41 01.7	-1.1
KAHC	Katmai Hardscr	3.72	32	P	P	17 41 02.9	-1.9
KDAK	Kodiak Island	4.07	54	P	P	17 41 06.2	-3.6
ILW	Iliamna West	5.43	31	P	P	17 41 27.1	-1.8
CNPM	China Poot	5.68	42	P	P	17 41 30.4	-2.0
NCT	North Crescent	5.90	29	P	P	17 41 33.6	-1.9
BCA3	Beaver Creek A	11.45	42	P	P	17 42 47.3	-4.9

IDC 04 17:54:16.7±3.2**,1.07N**×**96.99E,mb3.5**/3**,mb1 3.7**/4**, mb1mx3.4**/20**,mbtmp3.5**/4**,ML3.6**/1**,Error ellipse: s-maj=137.5km s-min=27.6km az=60.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	17.39	6	P	P	17 58 20.9	-1.6
	0.1nm,0.3s,baz=197,slow=12,SNR=5.8						
ASAR	Alice Springs	43.48	127	P	P	18 02 22.0	-1.7
	0.1nm,0.4s,baz=299,slow=7.5,SNR=6.7						
MKAR	Makanchi Array	47.32	346	P	P	18 02 52.1	-1.9
	0.5nm,0.5s,baz=164,slow=8.4,SNR=10						
ZAL	Zalesovo	53.65	351	P	P	18 03 39.6	-2.5
	0.6nm,0.3s,baz=336,slow=6.9,SNR=4.2						

NEIC 04 17:56:28.1,61.32N×**150.34W,h43^{km},ML3.5**(PMR)**, ML3.3**(AEIC)**,1C,After AEIC.,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FIB	Fire Island	0.17	152	P	P	17 56 36.0	+0.6
FIB				S	S	17 56 43.2	+2.6
VOGL	Vogel Lake	0.33	188	P	P	17 56 37.4	+0.5
VOGL				S	S	17 56 46.0	+2.9
RC01	Rabbit Creek A	0.37	128	P	P	17 56 36.7	-0.7
RC01				S	S	17 56 44.4	+0.4
PWA	Palmer West	0.40	34	P	P	17 56 36.7	-1.1
PMR	Palmer	0.64	64	P	P	17 56 39.6	-1.3
PMR				S	S	17 56 49.3	-0.9
NKA	Nikishka	0.72	217	P	P	17 56 42.7	+0.7
SLKM	Skilak Lake	0.82	176	P	P	17 56 42.1	-1.2
SLKM				S	S	17 56 53.7	-0.7
GHO	Glory Hole Cre	0.82	56	P	P	17 56 42.2	-1.1
GHO				S	S	17 56 54.4	0.0
SPU	Mount Spurr	0.84	261	⇑iP	P	17 56 42.5	-1.1
SPU				eS	S	17 56 54.4	-0.6
CKN	Chakachatna No	0.89	265	P	P	17 56 43.5	-0.8
KNK	Knik Glacier	0.91	83	P	P	17 56 44.0	-0.7
MPA	Moose Pass	0.96	150	P	P	17 56 44.4	-0.9
MPA				S	S	17 56 59.0	+0.9
CKL	Chakachamna La	0.97	264	P	P	17 56 44.4	-1.1
CKL				S	S	17 56 58.3	-0.1
SML	Sawmill	1.08	62	P	P	17 56 45.7	-1.2
SML				S	S	17 57 01.1	+0.1
CUT	Chulitna	1.09	2	P	P	17 56 45.9	-1.3
SEW	Seward	1.30	160	P	P	17 56 48.8	-1.3
SEW				S	S	17 57 06.3	-0.3
NNL	Ninilchik	1.36	201	P	P	17 56 51.2	+0.1
RDN	Redoubt North	1.43	237	P	P	17 56 50.7	-1.4
RDN				S	S	17 57 09.6	-0.3
RSO	Redoubt South	1.46	235	P	P	17 56 51.4	-1.1
RSO				S	S	17 57 09.7	-0.9
NCT	North Crescent	1.47	240	P	P	17 56 51.6	-1.1
NCT				S	S	17 57 10.5	-0.5
SCM	Sheep Creek Mo	1.53	69	P	P	17 56 52.3	-1.2
SCM				S	S	17 57 12.4	0.0
ILIM	Iliamna	1.79	227	P	P	17 56 56.3	-0.9
ILIM				S	S	17 57 19.2	+0.5
INE	Iliamna NE	1.84	228	P	P	17 56 56.9	-0.9
CNPM	China Poot	1.85	194	P	P	17 56 56.7	-1.3
ILW	Iliamna West	1.87	229	P	P	17 56 57.6	-0.7
ILW				S	S	17 57 21.7	+1.0
VLZ	Valdez	1.95	94	P	P	17 56 57.6	-1.8
VLZ				S	S	17 57 21.4	-1.3
HIN	Hinchinbrook I	2.10	115	P	P	17 56 59.6	-1.9
TRF	Thorofare Moun	2.14	1	P	P	17 57 01.4	-0.7
OPT	Oil Point	2.20	222	P	P	17 57 02.5	-0.5
DIV	Divide	2.22	93	P	P	17 57 01.2	-2.1
DIV				S	S	17 57 27.8	-1.8
DHY	Denali Highway	2.25	37	P	P	17 57 03.1	-0.5
KTH	Kantishna Hill	2.26	353	P	P	17 57 03.2	-0.6
KTH				S	S	17 57 30.5	-0.1
EYAK	Cordova Ski Ar	2.37	107	P	P	17 57 03.1	-2.3
CVA	Cordova	2.37	107	P	P	17 57 02.8	-2.6
TZL	Tazlina	2.46	71	P	P	17 57 05.5	-1.1
MCK	McKinley	2.51	14	P	P	17 57 07.7	+0.3
MCK				S	S	17 57 37.2	+0.2
AUI	Augustine Isla	2.51	219	P	P	17 57 08.0	+0.5
SVW2	Sparrevohn	2.54	267	P	P	17 57 05.9	-2.0
PAX	Paxson	2.83	52	P	P	17 57 10.9	-0.9
RAGM	Ragged Mountai	2.93	106	P	P	17 57 10.2	-3.1
THY	Trims Highway	3.00	43	eP	P	17 57 12.6	-1.8
TT01	Tatalina	3.11	303	P	P	17 57 13.8	-2.1
TTA	Tatalina	3.12	304	P	P	17 57 13.9	-2.2
GLB	Gilahina Butte	3.15	85	P	P	17 57 13.8	-2.7
KAIM	Kayak Island	3.24	113	P	P	17 57 14.3	-3.4
WRH	Wood River Hil	3.33	17	P	P	17 57 18.5	-0.5
HDA	Harding Lake	3.46	25	P	P	17 57 20.3	-0.6
MENT	Mentasta	3.51	60	P	P	17 57 20.3	-1.3
CCB	Clear Creek Bu	3.54	18	P	P	17 57 20.5	-1.4
KDAK	Kodiak Island	3.73	199	P	P	17 57 21.7	-2.9
MLY	Manley	3.73	357	P	P	17 57 23.1	-1.6
DOT	Dot Lake	3.74	49	P	P	17 57 24.6	-0.2
COLA	College	3.74	17	P	P	17 57 24.4	-0.4
MDM	Murphy Dome	3.78	14	P	P	17 57 24.5	-0.9
IL1	Eielson Array	3.81	23	P	P	17 57 24.4	-1.4
BALM	Baldy	3.88	91	P	P	17 57 23.7	-3.2
YAH	Yahtse	4.32	99	P	P	17 57 30.9	-2.1
BCA3	Beaver Creek A	4.38	63	P	P	17 57 31.4	-2.4
CTGM	Chitina Glacie	4.38	91	P	P	17 57 31.4	-2.6
IM3	Indian Mountai	4.92	344	P	P	17 57 38.9	-2.7
IMA	Indian Mountai	4.99	344	eP	P	17 57 40.4	-2.1
PNL	Peninsula	5.66	102	P	P	17 57 48.5	-3.3
COLD	Coldfoot	5.93	1	P	P	17 57 54.1	-1.5
BM3	Burnt Mountain	6.61	20	P	P	17 58 03.0	-2.2

*DJA **04** 18:14:09.7±0.9,10.21S×118.32E,h33^{km},ML5.0/4,Error ellipse: s-maj=45.5km s-min=17.9km az=28.0*
*IDC **04** 18:14:20.3±4.8,9.28S×118.31E,h141^{km}±48^{km},mb2.8/2, mb1 3.0/3,mb1mx2.9/17,mbtmp3.3/3,Error ellipse: s-maj=112.2km s-min=13.7km az=47.0*
ISC 04 18:14:14.3±2.1**,9.1S**±0.2×**118.3E**±0.2**,h99^{km}**±26^{km}**,n9, σ0^{s}85**/15**,mb3.1**/1**,6C-2D,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	Kedomdong	2.24	285	⇑ePn	P	18 14 51.6	+1.0
	724nm,0.2s						
KEDI				⇑eSn	S	18 15 22.7	+5.1
RATI	Rata	2.76	277	⇓ePn	P	18 14 57.4	-0.3
	2μm,0.2s						
RATI				⇓eSn	S	18 15 31.2	+0.9
KELI	Kelakatan	3.86	282	⇑ePn	P	18 15 12.2	-0.6
	80nm,0.2s						
KELI				⇑eSn	S	18 15 58.2	+0.8
SRDI	Scrawed	4.16	278	⇑ePn	P	18 15 15.2	-1.6
	180nm,0.2s						
SRDI				⇑eSn	S	18 16 03.8	-0.7
WRA	Warramunga Arr	18.89	127	P	P	18 18 28.2	-1.4
	0.1nm,0.3s,baz=295,slow=14,SNR=17						
WRA				S	S	18 21 54.1	+0.7
	0.1nm,0.3s,baz=352,slow=4.8,SNR=5.1						
WB2	Warramunga Arr	18.90	127	eP	P	18 18 30.2	+0.5
ASPA	Alice Springs	20.81	136	eP	P	18 18 50.0	+0.4
ASAR	Alice Springs	20.81	136	P	P	18 18 49.5	-0.2
	0.6nm,0.5s,baz=306,slow=9.7,SNR=28						
ASAR				S	S	18 22 34.9	+3.8
	0.7nm,0.7s,baz=312,slow=25,SNR=5.0						
MKAR	Makanchi Array	64.21	333	P	P	18 24 41.2	+0.3
	0.2nm,0.6s,mb3.1,baz=159,slow=6.1,SNR=3.7						

*NIED **04** 18:23:00,33.20N×137.80E,h340^{km},Mw4.8 Best double couple: $M_0$1.86×10^{16} NP1:ϕ_s185°,δ90°,λ81°. NP2:ϕ_s94°, δ9°,λ179°.*
*MOS **04** 18:23:31.6±0.8,33.09N×137.54E,h289^{km},mb4.8/60, Error ellipse: s-maj=8.5km s-min=5.0km az=102.0*
*BJI **04** 18:23:35.7,33.20N×137.64E,h333^{km},mB4.6,mb5.0*
*JMA **04** 18:23:36.4±0.3,33.19N×137.81E,h355^{km}±3^{km},M5.0*
*NEIC **04** 18:23:37.9±0.1,33.12N×137.59E,mb4.7/80, MW4.8(NIED),Error ellipse: s-maj=4.4km s-min=3.2km az=151.0*
*IDC **04** 18:23:37.8±0.4,33.15N×137.65E,h338^{km}±4^{km},mb4.2/24, mb1 4.3/28,mb1mx4.3/33,mbtmp4.9/28,Error ellipse: s-maj=8.3km s-min=7.6km az=74.0*
ISC 04 18:23:37.7±0.2**,33.23N**±0.03×**137.67E**±0.02**,h346^{km}**±1^{km}**, h337^{km}**±2.0^{km}**:pP-P,n423,σ1^{s}08**/450**,mb4.6**/128**,61C-54D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TK01	Tokai 1	0.54	352	P	P	18 24 21.6	-0.1
TK02	Tokai 2	0.72	5	⇑P	P	18 24 22.4	+0.2
TK02				S	S	18 24 58.1	+1.1
TK03	Tokai 3	0.96	15	P	P	18 24 23.5	+0.5
TK03				S	S	18 24 59.6	+1.1
TK04	Tokai 4	1.16	8	⇑P	P	18 24 24.4	+0.5
TK04				S	S	18 25 01.9	+1.8
JIE	Ise	1.41	325	⇑P	P	18 24 25.4	+0.2
JIE				S	S	18 25 02.5	+0.1
OMA	Omae zaki	1.44	18	S	S	18 25 04.1	+1.4
JAA	Atsumi	1.47	343	⇑P	P	18 24 25.8	+0.3
JKN2	Miekihoku	1.54	311	P	P	18 24 26.0	+0.1
JKO	Kozu shima	1.55	52	⇓P	P	18 24 25.6	-0.4
HMMJ	Hamamatsu 2	1.62	1	⇑P	P	18 24 26.4	0.0
JWZ	Kozaga	1.67	281	⇑P	P	18 24 26.5	-0.2
JHJ	Hachijo jima 2	1.77	93	P	P	18 24 25.9	-1.5
	124nm,0.3s,baz=216,slow=9.0,SNR=78						
JHJ				S	S	18 25 06.2	-0.1
	83nm,0.3s,baz=78,slow=22,SNR=3.2						
NJJJ	Nii jima 2	1.78	48	⇓P	P	18 24 27.0	-0.4
JIZS	Izushimoda	1.79	34	⇓P	P	18 24 27.1	-0.3
JHJ2	Mitsune	1.80	93	⇓P	P	18 24 25.8	-1.7
TSUJ	Tsu 2	1.81	325	⇑P	P	18 24 28.0	+0.4
SHZ3	Shizuoka 3	1.88	13	⇓P	P	18 24 28.3	+0.2
JWY	Kouya	1.99	300	⇑P	P	18 24 29.4	+0.6
JWY				S	S	18 25 09.2	+0.3
JWM	Minabe	2.03	288	⇑P	P	18 24 29.1	0.0
JIM2	Oshima 3	2.08	44	⇓P	P	18 24 28.2	-1.3
JEG	Eigenji	2.18	331	⇑P	P	18 24 30.9	+0.7
JHE	Heguri	2.18	311	⇑P	P	18 24 30.6	+0.4
JOD2	Odawara 2	2.34	30	⇓P	P	18 24 30.8	-0.7
JOD2				S	S	18 25 12.1	-1.5
JYN	Shimob	2.37	17	⇓P	P	18 24 31.6	-0.1
JGF	Kuroka	2.38	354	⇑P	P	18 24 31.8	0.0
JGM	Miyama	2.58	342	⇑P	P	18 24 33.9	+0.4
JGM				S	S	18 25 18.2	+1.0
JAJ2	Tsuna	2.61	298	⇑P	P	18 24 33.8	+0.2
JNT	Takato	2.66	8	⇓P	P	18 24 34.4	+0.3
JFM	Mihama	2.68	329	⇑P	P	18 24 34.8	+0.5
JMIK	Miki	2.68	307	⇑P	P	18 24 34.6	+0.3
JAI	Aioi	2.75	283	⇑P	P	18 24 35.1	+0.2
JWT	Wachi	2.78	318	⇑P	P	18 24 35.6	+0.5
JWT				S	S	18 25 20.6	+0.5
BSO3	Boso 3	2.83	56	⇓P	P	18 24 32.6	-2.9
JKS	Kasai	2.93	307	⇑P	P	18 24 36.7	+0.3
JRY	Ryogami san	2.96	20	⇓P	P	18 24 36.5	-0.2
JRY				S	S	18 25 23.7	+0.8
MRT2	Murotomisaki 2	2.96	274	⇑P	P	18 24 36.8	+0.1
JGN	Niukaw	3.00	354	⇑P	P	18 24 37.2	+0.2
BSO1	Boso 1	3.09	62	P	P	18 24 34.2	-3.7
BSO1				S	S	18 25 19.7	-5.4
JNG	Nsakai	3.19	6	⇓P	P	18 24 38.7	-0.1
JKY	Yasaka	3.20	319	⇑P	P	18 24 39.2	+0.3
JMN	Monobe	3.21	280	⇑P	P	18 24 39.6	+0.6
JMN				S	S	18 25 27.5	+0.4
JKG	Kaga	3.23	340	⇑P	P	18 24 39.4	+0.2
JJS	Sakaide	3.32	291	⇑P	P	18 24 40.4	+0.3
MJAR	Matsushiro Arr	3.33	7	P	P	18 24 39.6	-0.6
	28nm,0.3s,baz=183,slow=10,SNR=989						
MJAR				S	S	18 25 27.5	-1.7
	2.6nm,0.3s,baz=178,slow=16,SNR=9.6						
MAJO	Matsushiro	3.33	7	⇓iP	P	18 24 39.8	-0.4
MAJO				eS	S	18 25 27.7	-1.5
MAT	Matsushiro	3.33	7	eP	P	18 24 40.0	-0.2
MAT				eS	S	18 25 28.0	-1.2
MAT	Matsushiro	3.33	7	P	P	18 24 39.7	-0.5
MAT				S	S	18 25 27.7	-1.5
MAT	Matsushiro	3.33	7	P	P	18 24 39.7	-0.5
MAT				S	S	18 25 28.0	-1.2
JAD	Aida	3.37	301	⇑P	P	18 24 40.8	+0.2
JTT	Ttatey	3.38	355	P	P	18 24 41.3	+0.7
JGK	Kuni	3.42	13	P	P	18 24 40.4	-0.6
JKSM	Kasumi	3.42	314	⇑P	P	18 24 41.4	+0.3
JAG	Ashikaga	3.51	24	⇓P	P	18 24 39.7	-2.2
JKR	Kurayoshi	3.84	305	⇑P	P	18 24 45.7	+0.5
JKU	Kubokawa	3.86	272	⇑P	P	18 24 46.0	+0.6
JET	Tanbara	3.90	279	⇑P	P	18 24 46.5	+0.7
JJG	Jouge	4.01	292	⇑P	P	18 24 47.6	+0.7
JTO	Tosashimizu	4.11	266	⇑P	P	18 24 48.4	+0.4
JTO				S	S	18 25 44.5	+1.4
JHO	Hitachi	4.12	34	⇓P	P	18 24 45.3	-2.8
JSB	Shiboa	4.16	26	⇓P	P	18 24 46.6	-1.9
JHS	Saijyo	4.17	296	⇑P	P	18 24 49.4	+0.8
JHS				S	S	18 25 46.5	+2.2
UWA2	Uwa jima 2	4.23	271	⇑P	P	18 24 49.9	+0.6
JNA	Nagahama	4.36	276	⇑P	P	18 24 51.5	+0.9
JHM	Kurahashi	4.38	283	⇑P	P	18 24 51.5	+0.6
JNM	Ikuma	4.46	302	⇑P	P	18 24 52.4	+0.8
JHT	Toyohira	4.59	290	⇑P	P	18 24 53.6	+0.5
ONAJ	Iwakimizuishiy	4.63	33	P	P	18 24 51.0	-2.5
JFT	Otama	4.80	26	⇓P	P	18 24 53.3	-2.0
JFK	Kawauchi	4.88	31	⇓P	P	18 24 53.8	-2.5
JKD	Kudamatsu	4.91	281	⇑P	P	18 24 57.3	+0.8
JHIK	Hikimi	4.95	287	⇑P	P	18 24 57.6	+0.6
JKI	Kunimi	5.12	276	⇑P	P	18 24 59.9	+1.0
JKIT	Kitakata	5.27	265	⇑P	P	18 25 01.8	+1.2
JMM	Marumori	5.28	28	⇓P	P	18 24 58.4	-2.3
JTSN	Tsuno	5.29	261	⇑P	P	18 25 01.7	+0.9
JYS	Shirataka	5.34	21	⇓P	P	18 24 59.9	-1.5
JYA	Atsumi	5.60	17	⇓P	P	18 25 03.0	-1.3
JTY	Toyota	5.60	282	P	P	18 25 05.1	+0.7
JOU	Okura	5.67	25	⇓P	P	18 25 03.4	-1.7
JNAR	Kushima--Naru	5.68	254	⇑P	P	18 25 06.6	+1.4
JNU	Nakatsue	5.70	271	P	P	18 25 05.8	+0.4
	12nm,0.3s,baz=85,slow=12,SNR=130						
JNU				S	S	18 26 16.9	+2.5
	baz=178,slow=16,SNR=5.7						
JNU	Nakatsue	5.70	271	⇑P	P	18 25 06.2	+0.7
JTZ	Takazaki	5.72	258	⇑P	P	18 25 06.6	+0.9
JFA	Akaike	5.77	277	⇑P	P	18 25 06.8	+0.5
JIU2	Izumi 2	5.81	265	⇑P	P	18 25 07.7	+0.9
JTA	Tamana	6.00	269	⇑P	P	18 25 09.7	+0.8
JIO	Ouri	6.00	29	⇓P	P	18 25 06.1	-2.9
JZO	Okuchi	6.06	262	⇑P	P	18 25 10.3	+0.6
JTSR	Tashiro 2	6.08	252	P	P	18 25 10.9	+1.0
JTN	Tanegashima 3	6.24	247	⇑P	P	18 25 12.7	+0.9
JSU	Suzuyama	6.35	256	⇑P	P	18 25 13.5	+0.5
JOM	Ohasama	6.88	24	⇓P	P	18 25 17.0	-2.2
CBIJ	Chichi jima	7.25	146	P	P	18 25 16.9	-6.7
	112nm,0.3s,baz=330,slow=6.1,SNR=64						
CBIJ				S	S	18 26 36.6	-10
	426nm,0.3s,baz=284,slow=22,SNR=24						
JANG	Nango	7.76	22	P	P	18 25 27.5	-2.2
JTM	Tenmabayashi	8.01	19	P	P	18 25 31.2	-1.5
JOT	Ohata	8.57	17	P	P	18 25 38.2	-1.1
INCN	Inchon	9.96	298	⇓iPn	P	18 25 57.2	+1.1
	386nm,0.6s						
INCN				eS	S	18 27 52.5	+7.0
JOW	Kunigami	10.34	234	P	P	18 25 59.8	-0.9
	4.7nm,0.3s,baz=38,slow=9.1,SNR=9.9						
JIH	Iheya	10.43	236	P	P	18 26 03.9	+2.3
JAGN	Aguni-jima	11.21	237	P	P	18 26 12.2	+1.2
ASAJ	Asahikawa	11.53	18	P	P	18 26 13.0	-1.8
ASAJ				S	S	18 28 15.0	-4.2
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ASAJ				smax			
	comp=E,2.0nm,0.3s						
ASAJ	Asahikawa	11.53	18	P	P	18 26 12.9	-1.9
	comp=E,8.3nm,0.3s,baz=242,slow=14,SNR=30						
ASAJ				S	S	18 28 14.9	-4.3
	comp=E,1.6nm,0.3s,baz=358,slow=19,SNR=3.8						
JKE	Kume jima 2	11.69	237	P	P	18 26 17.8	+0.9
YUK	Yuzh-Kuril'sk	12.53	28	P	P	18 26 14.0	-13
YUK				eS	S	18 28 40.0	-1.1
YUK				pmax	pmax		
	comp=Z,210nm,0.5s						
YUK				smax			
	comp=N,460nm,0.5s						
YUK				smax			
	comp=E,390nm,0.5s						
YUK				smax			
	comp=N,2μm,1.5s						
YUK				smax			
	comp=E,1μm,0.8s						
MDJ	Mudanjiang	12.98	333	P	P	18 26 31.4	-0.8
MDJ				AMB	AMB		
	comp=Z,50nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,60nm,3.7s						
MDJ	Mudanjiang	12.98	333	⇓eP	P	18 26 31.0	-1.2
	comp=Z,36nm,0.7s						
MDJ				eS	S	18 28 52.6	+1.8
SNY	Shenyang	14.08	312	⇓P	P	18 26 43.7	-1.3
SNY				AMB	AMB		
	comp=Z,40nm,1.2s						
SSE	Sheshan	14.13	266	eP	P	18 26 42.6	-3.0
SSE				AMB	AMB		
	comp=Z,40nm,0.8s						
SSE				AMB	AMB		
	comp=Z,130nm,7.2s						
DL2	Dalian	14.15	298	P	P	18 26 44.0	-1.8
DL2				eXP		18 28 04.5	
DL2				S	S	18 29 19.5	+3.4
DL2				AMB	AMB		
	comp=Z,30nm,0.8s						
CN2	Changchun	14.23	321	eP	P	18 26 44.9	-1.6
CN2				eXP		18 28 06.3	
CN2				eS	S	18 29 15.0	-2.6
CN2				AMB	AMB		
	comp=Z,30nm,1.0s						
YSS	Yuzh-Sakhalins	14.24	14	⇑iP	P	18 26 46.0	-0.6
YSS				eS	S	18 29 17.7	-0.1
YSS				pmax	pmax		
	comp=Z,130nm,0.9s						
YSS	Yuzh-Sakhalins	14.24	14	eP	P	18 26 46.1	-0.6
	comp=Z,122nm,0.8s						
YSS				eS	S	18 29 14.9	-2.9
JIJ	Ishigaki jima	14.78	237	P	P	18 26 49.9	-2.7
IRIF	Iriomote-Funau	15.09	238	P	P	18 26 53.0	-2.9
NJ2	Nanjing	15.90	271	eP	P	18 27 03.6	-0.9
NJ2				XP		18 28 29.3	
NJ2				S	S	18 29 49.0	-1.7
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,270nm,4.2s						
NJ2				LR	LR		
	comp=N,360nm,24.0s						
NJ2				LR	LR		
	comp=E,330nm,20.6s						
NJ2				LR	LR		
	comp=Z,250nm,23.2s						
TATO	Taipei	16.35	244	P	P	18 27 06.0	-3.3
	comp=Z,45nm,1.0s						
KLR	Kul'dur	16.58	346	eP	P	18 27 07.2	-4.3
KLR				e		18 30 00.0	
YHNB	Yeheng	16.61	243	eP	P	18 27 09.2	-2.7
NACB	Ninganchiao	16.73	241	eP	P	18 27 09.2	-4.1
TIA	Tai'an	17.15	286	⇓P	P	18 27 16.2	-1.3
TIA				AMB	AMB		
	comp=Z,100nm,1.2s						
WHN	Wuhan	19.98	269	P	P	18 27 45.5	-0.2
WHN				AMB	AMB		
	comp=Z,190nm,0.6s						
GUMO	Guam	20.62	160	eP	P	18 27 49.6	-2.4
GUMO				pmax	pmax		
	comp=Z,171nm,1.2s						
GUMO	Guam	20.62	160	eP	P	18 27 49.6	-2.4
	comp=Z,171nm,1.2s						
HIA	Hailar	20.85	325	eP	P	18 27 53.6	-0.5
HIA				pmax	pmax		
	comp=Z,70nm,0.7s						
HIA	Hailar	20.85	325	eP	P	18 27 53.6	-0.4
	comp=Z,70nm,0.7s						
HHC	Hu-ho-hao-te	22.13	298	eP	P	18 28 06.3	-0.1
HHC				AP		18 28 10.7	
HHC				AMB	AMB		
	comp=Z,80nm,1.5s,mb4.7						
HHC				LR	LR		
	comp=N,90nm,20.2s						
HHC				LR	LR		
	comp=E,170nm,22.6s						
HHC				LR	LR		
	comp=Z,100nm,14.3s						
BTO	Baotou	23.24	296	eP	P	18 28 16.8	+0.1
BTO				AMB	AMB		
	comp=Z,130nm,0.7s,mb5.3						
XAN	Xi'an	23.92	280	P	P	18 28 22.3	-0.7
XAN				AMB	AMB		
	comp=Z,190nm,0.8s,mb5.4						
ENH	Enshi	24.12	271	eP	P	18 28 23.9	-0.9
	comp=Z,342nm,1.0s,mb5.5						
PET	Petropavlovsk	24.85	31	eP	P	18 28 31.2	+0.1
PET				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.5						
PET	Petropavlovsk	24.85	31	eP	P	18 28 30.7	-0.4
	comp=Z,16nm,0.7s,mb4.4						
CIT	Chita	25.64	324	eP	P	18 28 38.6	+0.3
CIT				e		18 31 55.9	
CIT				pmax	pmax		
	comp=Z,80nm,1.1s,mb4.9						
ULN	Ulaanbaatar	27.26	312	d iP	P	18 28 53.5	+0.5
ULN	Ulaanbaatar	27.26	312	⇓iP	P	18 28 53.8	+0.7
	comp=Z,54nm,0.8s,mb4.8						
GYA	Guiyang	27.66	264	⇓iP	P	18 28 55.2	-1.6
GYA				AP		18 29 58.9	
GYA				XP	sP	18 30 35.2	-5.6
GYA				S	S	18 33 09.5	-3.1
GYA				AMB	AMB		
	comp=Z,40nm,1.0s,mb4.6						
GYA				LR	LR		
	comp=N,430nm,15.2s						
GYA				LR	LR		
	comp=E,380nm,15.0s						
GYA				LR	LR		
	comp=Z,510nm,15.4s						
SONM	Songino Array	27.66	311	P	P	18 28 56.5	-0.1
	comp=Z,52nm,0.8s,mb4.8,baz=118,slow=10.0,SNR=27						
MA2	Magadan	27.75	14	c iP	P	18 28 57.2	0.0
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MA2				pmax	pmax		
	comp=E,5.0nm,0.8s						
MA2				pmax	pmax		
	comp=N,4.0nm,0.5s						
MA2	Magadan	27.75	14	eP	P	18 28 57.2	-0.1
	comp=N,18nm,0.6s,mb4.5						
LZH	Lanzhou	27.89	285	⇓P	P	18 28 57.5	-1.3
LZH				AP		18 30 00.5	
LZH				PP	PP	18 30 12.0	+7.2
LZH				XP	sP	18 30 39.2	-3.6
LZH				S	S	18 33 14.5	-1.6
LZH				XS		18 35 06.7	
LZH				SCS	ScS	18 39 03.4	+0.6
LZH				AMB	AMB		
	comp=Z,60nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,320nm,4.7s						
CD2	Chengdu	28.76	275	⇓iP	P	18 29 05.0	-1.5
CD2				AMB	AMB		
	comp=Z,410nm,0.8s,mb5.7						
YAK	Yakutsk	29.27	352	d iP	P	18 29 09.5	-1.1
YAK				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.3						
YAK	Yakutsk	29.27	352	eP	P	18 29 09.2	-1.4
	comp=Z,21nm,0.9s,mb4.4						
ZAK	Zakamensk	30.48	315	⇓iP	P	18 29 20.2	-1.0
ZAK				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TLY	Talaya	30.76	317	⇓iP	P	18 29 24.2	+0.6
TLY				eS	S	18 34 07.6	+6.7
TLY				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.3						
TLY				MLR	MLR		
	comp=Z,82nm,16.0s						
TLY	Talaya	30.76	317	eP	P	18 29 24.3	+0.7
	comp=Z,10nm,0.7s,mb4.2						
GTA	Gaotai	30.96	292	⇓iP	P	18 29 24.7	-0.7
GTA				AP	pP	18 30 26.5	-4.6

GTA				PP	PP	18 30 45.6	+2.3
GTA				XP	sP	18 31 09.2	-1.6
GTA				PCP	PcP	18 32 12.6	+0.1
GTA				S	**S**	**18 34 04.0**	**-0.1**
GTA				SCP		18 35 21.7	
GTA				PCS		18 35 56.6	
GTA				XS		18 36 02.7	
GTA				SS	SS	18 36 24.3	+0.5
GTA				SCS	ScS	18 39 17.3	-0.1
GTA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.3						
GTA				AMB	AMB		
	comp=Z,150nm,8.0s						
GTA				LR	LR		
	comp=N,70nm,12.6s						
GTA				LR	LR		
	comp=E,80nm,14.8s						
GTA				LR	LR		
	comp=Z,120nm,15.2s						
KMI	**Kunming**	**31.44**	**264**	P	**P**	**18 29 28.9**	**-0.8**
KMI				AMB	AMB		
	comp=Z,40nm,0.7s,mb4.8						
KMI				LR	LR		
	comp=N,110nm,8.6s						
KMI				LR	LR		
	comp=E,110nm,16.0s						
KMI				LR	LR		
	comp=Z,140nm,14.6s						
FX1	**Attu Island--F**	**32.06**	**42**	P	**P**	**18 29 35.8**	**+1.0**
FX1				pmax	pmax		
	comp=Z,34nm,0.4s						
FX1	**Attu Island--F**	**32.06**	**42**	P	**P**	**18 29 35.8**	**+1.1**
	comp=Z,34nm,0.4s,mb5.0,baz=270,slow=1.0,SNR=12						
MOY	**Mondy**	**32.29**	**316**	*e*P	**P**	**18 29 37.1**	**+0.4**
MOY				pmax	pmax		
	comp=Z,125nm,1.5s,mb4.9						
CMAR	**Chiang Mai Arr**	**37.60**	**257**	P	**P**	**18 30 20.4**	**-1.3**
	comp=Z,14nm,0.6s,mb4.4,baz=50,slow=7.7,SNR=91						
CMAR				ScP		18 35 47.0	
	comp=Z,2.2nm,0.9s,baz=32,slow=3.4,SNR=10						
BILL	**Bilibino**	**38.54**	**17**	*d i*P	**P**	**18 30 30.1**	**+1.2**
BILL				pmax	pmax		
	comp=Z,25nm,0.5s,mb4.7						
BILL	**Bilibino**	**38.54**	**17**	*e*P	**P**	**18 30 29.4**	**+0.5**
	comp=Z,24nm,0.6s,mb4.6						
TIXI	**Tiksi**	**38.77**	**356**	⇓*e*P	**P**	**18 30 30.3**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb3.9						
LSA	**Lhasa**	**39.59**	**278**	P	**P**	**18 30 39.4**	**+1.5**
LSA	**Lhasa**	**39.59**	**278**	*e*P	**P**	**18 30 38.9**	**+1.0**
LSA				*e*		18 32 16.3	
LSA				pmax	pmax		
	comp=Z,38nm,0.7s,mb4.7						
LSA	**Lhasa**	**39.59**	**278**	*e*P	**P**	**18 30 38.9**	**+0.9**
	comp=Z,38nm,0.7s,mb4.7						
LSA				*e*		18 32 16.3	
WMQ	**Urumqi**	**39.96**	**300**	P	**P**	**18 30 41.3**	**+0.5**
WMQ				AP	pP	18 31 45.2	-4.3
WMQ				XP	sP	18 32 20.9	-6.8
WMQ				PP	PP	18 32 23.1	+1.6
WMQ				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.5						
SHL	**Shillong**	**40.36**	**271**	*e*P	**P**	**18 30 43.5**	**-0.8**
KSM	**Kuching**	**40.71**	**225**	*e*P	**P**	**18 30 47.0**	**-0.2**
ZAL	**Zalesovo**	**42.35**	**316**	P	**P**	**18 30 59.7**	**-0.3**
	comp=Z,8.3nm,0.8s,mb3.9,baz=5.6,slow=7.5,SNR=52						
ZAL				PcP	PcP	18 32 45.5	-1.5
	comp=Z,1.0nm,0.7s,baz=28,slow=6.3,SNR=3.2						
ZAL				ScP		18 36 02.5	
	comp=Z,2.0nm,0.7s,baz=2.2,slow=5.3,SNR=7.1						
ZAL	**Zalesovo**	**42.35**	**316**	P	**P**	**18 30 59.7**	**-0.3**
ZAL				PcP	PcP	18 32 45.5	-1.5
ZAL				ScP		18 36 02.5	
PMG	**Port Moresby**	**43.35**	**166**	*e*P	**P**	**18 31 06.7**	**-1.8**
PMG				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PMG	**Port Moresby**	**43.35**	**166**	P	**P**	**18 31 07.0**	**-1.5**
	comp=Z,8.1nm,0.6s,mb4.0,baz=30,slow=9.4,SNR=7.8						
PMG	**Port Moresby**	**43.35**	**166**	*e*P	**P**	**18 31 06.7**	**-1.8**
	comp=Z,6.7nm,0.5s,mb4.0						
NVS	**Novosibirsk**	**43.37**	**317**	⇓*i*P	**P**	**18 31 07.3**	**-0.9**
NVS				*i* S	**S**	**18 37 08.5**	**-1.2**
NVS				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.4						
NVS				pmax	pmax		
	comp=N,8.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,29nm,1.0s						
NVS				smax			
	comp=N,14nm,1.8s						
NVS				smax			
	comp=E,20nm,1.8s						
MKAR	**Makanchi Array**	**43.66**	**305**	P	**P**	**18 31 10.6**	**+0.1**
	comp=E,9.0nm,0.4s,mb4.3,baz=86,slow=9.5,SNR=216						
MKAR				pP	pP	18 32 17.9	-2.2
	comp=E,5.5nm,0.9s,baz=76,slow=12,SNR=2.4						
MKAR				ScP		18 36 08.2	
	comp=E,2.4nm,0.7s,baz=86,slow=4.6,SNR=8.2						
GUN	**Gumba**	**44.54**	**278**	*e*P	**P**	**18 31 18.1**	**+0.2**
	comp=E,170nm,0.7s,mb5.3						
PKI	**Pulchoki**	**45.05**	**277**	*e*P	**P**	**18 31 21.3**	**-0.6**
	comp=E,115nm,0.8s,mb5.1						
PKI	**Pulchoki**	**45.05**	**277**	*e*P	**P**	**18 31 21.3**	**-0.6**
PKI				pmax	pmax		
	comp=Z,58nm,0.8s,mb4.8						
KKN	**Kakani**	**45.08**	**278**	*e*P	**P**	**18 31 21.8**	**-0.3**
	comp=Z,185nm,0.8s,mb5.2						
KKN	**Kakani**	**45.08**	**278**	*e*P	**P**	**18 31 21.8**	**-0.3**
KKN				pmax	pmax		
	comp=Z,93nm,0.8s,mb5.0						
DMN	**Daman**	**45.29**	**277**	*e*P	**P**	**18 31 23.5**	**-0.2**
	comp=Z,112nm,0.9s,mb5.0						
GKN	**Gorkha**	**45.54**	**278**	*e*P	**P**	**18 31 25.3**	**-0.4**
	comp=Z,181nm,0.8s,mb5.3						
TNA	**Tin City**	**45.66**	**28**	*e*P	**P**	**18 31 27.1**	**+1.0**
	comp=Z,18nm,0.9s,mb4.2						
PBA	**Port Blair**	**46.31**	**253**	*e*P	**P**	**18 31 31.0**	**-0.7**
KOLN	**Koldanda**	**46.48**	**278**	*e*P	**P**	**18 31 32.7**	**-0.3**
	comp=Z,191nm,1.2s,mb5.1						
SDPT	**Sand Point**	**47.66**	**43**	*e*P	**P**	**18 31 40.1**	**-1.5**
LGTI	**Lohaghat**	**48.67**	**282**	*e*x	x	18 31 50.5	
TKM2	**Tokmak 2**	**48.82**	**300**	P	**P**	**18 31 51.1**	**+0.4**
	SNR=16						
KZA	**Kyzart**	**49.23**	**299**	P	**P**	**18 31 55.0**	**+1.2**
	SNR=11						
KBK	**Karagaybulak**	**49.34**	**300**	P	**P**	**18 31 54.9**	**+0.2**
	SNR=19						
CHMS	**Chumysh**	**49.42**	**301**	P	**P**	**18 31 55.0**	**-0.2**
	SNR=6.1						
FRU	**Bishkek**	**49.55**	**300**	*e*P	**P**	**18 31 56.0**	**-0.2**
FRU				*e*	pP	18 33 07.0	-0.7
FRU				pmax	pmax		
	comp=Z,40nm,1.4s,mb4.5						
USP	**Ospenovka**	**49.55**	**301**	P	**P**	**18 31 55.8**	**-0.4**
	SNR=17						
KLP	**Kalpa**	**49.62**	**285**	*e*P	**P**	**18 31 56.1**	**-0.7**
KLP				AMb	AMB	18 31 58.4	
	comp=Z,30nm,1.2s,mb4.4						
AAK	**Ala-Archa**	**49.67**	**300**	*e*P	**P**	**18 31 55.7**	**-1.4**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb3.9						
AAK	**Ala-Archa**	**49.67**	**300**	*e*P	**P**	**18 31 55.6**	**-1.5**
	comp=Z,6.4nm,0.8s,mb3.9						
UCH	**Uchtor**	**49.74**	**300**	P	**P**	**18 31 58.4**	**+0.8**
	SNR=12						
TTA	**Tatalina**	**50.28**	**33**	*e*P	**P**	**18 32 02.3**	**+1.0**
AML	**Almayashu**	**50.35**	**300**	P	**P**	**18 32 03.0**	**+0.8**
	SNR=8.6						
SDNR	**Sundarnagar**	**50.66**	**286**	*e*P	**P**	**18 32 04.0**	**-0.6**
CHKZ	**Chkalovo**	**50.74**	**315**	*e*P	**P**	**18 32 03.6**	**-1.3**
CHKZ				*e**PP	pP	18 33 14.8	-2.0
CHKZ				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.4						
CHKZ	**Chkalovo**	**50.74**	**315**	*e*P	**P**	**18 32 03.6**	**-1.4**
	comp=Z,24nm,0.9s,mb4.4						
CHKZ				*e*pP	pP	18 33 14.8	-2.0
BVA0	**Borovoye Array**	**50.94**	**314**	P	**P**	**18 32 05.7**	**-0.6**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	**Borovoye Array**	**50.94**	**314**	P	**P**	**18 32 05.7**	**-0.6**
	comp=Z,9.7nm,0.5s,mb4.3,baz=98,slow=7.8,SNR=101						
BVAR				PcP	PcP	18 33 16.1	-1.4
	comp=Z,3.5nm,0.6s,baz=105,slow=5.4,SNR=5.4						
BVAR				ScP		18 36 38.7	
	comp=Z,2.3nm,0.6s,baz=98,slow=4.9,SNR=10						
NDI	**New Delhi**	**51.42**	**282**	*i* P	**P**	**18 32 08.0**	**-2.3**
IMA	**Indian Mountai**	**51.50**	**29**	*e*P	**P**	**18 32 10.9**	**+0.6**
AYAN	**Aya Nagar**	**51.57**	**282**	*e*P	**P**	**18 32 10.0**	**-1.3**
AYAN				AMb	AMB	18 32 11.9	
	comp=Z,15nm,1.1s,mb4.3						
SONA	**Sohna**	**51.69**	**282**	*e*P	**P**	**18 32 11.1**	**-1.2**
SONA				AMb	AMB	18 32 12.1	
	comp=Z,64nm,0.7s,mb5.1						
RTK	**Rohtak**	**51.96**	**283**	*e*P	**P**	**18 32 13.3**	**-0.9**
KDAK	**Kodiak Island**	**51.97**	**40**	*e*P	**P**	**18 32 13.5**	**-0.4**
	comp=Z,26nm,0.6s,mb4.7						
SPU	**Mount Spurr**	**52.10**	**35**	*e*P	**P**	**18 32 15.1**	**+0.3**
KUDL	**Kundal**	**52.22**	**282**	*e*P	**P**	**18 32 14.3**	**-1.8**
KUDL				AMb	AMB	18 32 16.6	
	comp=Z,40nm,0.6s,mb4.9						
KKAR	**Karatay Array**	**52.44**	**302**	*i* P	**P**	**18 32 16.9**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,16nm,0.5s,mb4.6						
KHET	**Khetri**	**52.80**	**282**	*e*P	**P**	**18 32 19.6**	**-0.8**
KHET				AMb	AMB	18 32 20.7	
	comp=Z,77nm,0.7s,mb5.1						
WRAB	**Tennant Creek**	**52.96**	**184**	*e*P	**P**	**18 32 19.1**	**-2.6**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
WRAB	**Tennant Creek**	**52.96**	**184**	*e*P	**P**	**18 32 19.1**	**-2.6**
	comp=Z,10nm,0.8s,mb4.2						
WRAB				*e*pP	pP	18 33 34.5	+0.2
WB2	**Warramunga Arr**	**52.97**	**184**	⇑*i*P	**P**	**18 32 19.7**	**-2.0**
WRA	**Warramunga Arr**	**52.97**	**184**	P	**P**	**18 32 19.7**	**-2.0**
	comp=Z,4.3nm,0.3s,mb4.3,baz=0.2,slow=7.7,SNR=95						
WRA				PcP	PcP	18 33 23.6	-1.9
	comp=Z,2.0nm,0.8s,baz=357,slow=4.0,SNR=6.2						
WRA				ScP		18 36 48.1	
	comp=Z,1.0nm,0.7s,baz=358,slow=5.3,SNR=6.2						
BHPL	**Bhopal**	**53.38**	**276**	*e*P	**P**	**18 32 23.0**	**-1.7**
BHPL				AMb	AMB	18 32 24.9	
	comp=Z,36nm,0.9s,mb4.7						
MCK	**McKinley**	**53.48**	**32**	*e*P	**P**	**18 32 24.6**	**-0.2**
MCK				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.5						
MCK	**McKinley**	**53.48**	**32**	*e*P	**P**	**18 32 24.6**	**-0.2**
	comp=Z,27nm,1.1s,mb4.5						
PMR	**Palmer**	**53.49**	**35**	*e*P	**P**	**18 32 24.4**	**-0.6**
CTAO	**Charters Tower**	**53.65**	**170**	P	**P**	**18 32 24.0**	**-2.6**
CTAO				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.4						
CTAO	**Charters Tower**	**53.65**	**170**	P	**P**	**18 32 24.0**	**-2.6**
	comp=Z,25nm,1.3s,mb4.4						
COLA	**College**	**53.91**	**31**	*c i*P	**P**	**18 32 28.8**	**+0.9**
COLA	**College**	**53.91**	**31**	*e*P	**P**	**18 32 28.9**	**+1.0**
ILAR	**Eielson Array**	**54.33**	**31**	P	**P**	**18 32 30.2**	**-0.7**
	comp=Z,12nm,0.8s,mb4.3,baz=282,slow=5.6,SNR=95						
AKL	**Akola**	**54.82**	**273**	*e*P	**P**	**18 32 36.2**	**+1.2**
AKL				AMb	AMB	18 32 36.8	
	comp=Z,44nm,0.7s,mb4.9						
HYB	**Hyderabad**	**55.04**	**269**	*e*P	**P**	**18 32 35.0**	**-1.6**
HYB				pmax	pmax		
	comp=Z,36nm,0.5s,mb5.0						
HYB	**Hyderabad**	**55.04**	**269**	*e*P	**P**	**18 32 35.0**	**-1.6**
	comp=Z,36nm,0.5s,mb5.0						
HYB	**Hyderabad**	**55.04**	**269**	*i* P	**P**	**18 32 36.5**	**-0.1**
DIV	**Divide**	**55.15**	**35**	*e*P	**P**	**18 32 37.1**	**+0.3**
	comp=Z,169nm,1.3s,mb5.2						
MENT	**Mentasta**	**55.89**	**33**	*e*P	**P**	**18 32 42.7**	**+0.7**
SVE	**Sverdlovsk**	**56.02**	**320**	⇓*e*P	**P**	**18 32 42.8**	**-0.2**
SVE				*e*		18 34 49.8	
SVE				pmax	pmax		
	comp=Z,40nm,1.9s,mb4.4						
ASAR	**Alice Springs**	**56.69**	**184**	P	**P**	**18 32 46.4**	**-1.7**
	comp=Z,1.5nm,0.3s,mb3.8,baz=1.5,slow=3.9,SNR=36						
ASAR				PcP	PcP	18 33 39.8	-0.1
	comp=Z,1.0nm,0.6s,baz=3.7,slow=4.7,SNR=4.9						
ASAR				ScP		18 37 04.7	
	comp=Z,0.7nm,0.6s,baz=2.9,slow=4.6,SNR=4.5						
ASPA	**Alice Springs**	**56.69**	**184**	*e*P	**P**	**18 32 47.3**	**-0.8**
MBWA	**Marble Bar**	**56.73**	**200**	*e*P	**P**	**18 32 46.0**	**-2.4**
	comp=Z,8.1nm,0.6s,mb4.2						
ARU	**Arti**	**57.22**	**320**	⇓*i*P	**P**	**18 32 50.4**	**-0.9**
ARU				*e*		18 35 00.0	
ARU				*e*PPP	PPP	18 36 23.9	-6.1
ARU				*e*S	**S**	**18 40 18.9**	**+0.3**
ARU				*e*SS	SS	18 44 17.1	+0.9
ARU				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.5						
ARU	**Arti**	**57.22**	**320**	*e*pP	pP	18 33 59.5	-6.0
AB31	**Akbulak array**	**58.08**	**311**	P	**P**	**18 32 56.4**	**-0.9**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.0						
POO	**Poona**	**58.46**	**272**	*e*P	**P**	**18 32 58.5**	**-1.8**
POO				AMb	AMB	18 33 00.0	
	comp=Z,50nm,0.9s,mb4.8						
PALK	**Pallekele**	**58.55**	**257**	*e*P	**P**	**18 32 59.3**	**-1.7**
	comp=Z,27nm,1.1s,mb4.6						
INK	**Inuvik**	**59.15**	**26**	*e*P	**P**	**18 33 04.3**	**-0.1**
INK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
INK	**Inuvik**	**59.15**	**26**	P	**P**	**18 33 04.5**	**0.0**
	comp=Z,8.0nm,0.5s,mb4.4,baz=302,slow=6.7,SNR=42						
INK	**Inuvik**	**59.15**	**26**	*e*P	**P**	**18 33 04.3**	**-0.1**
	comp=Z,5.4nm,0.5s,mb4.2						
DLBC	**Dease Lake**	**63.50**	**36**	*e*P	**P**	**18 33 34.4**	**+1.2**
STKA	**Stephens Creek**	**64.86**	**176**	*e*P	**P**	**18 33 41.4**	**-0.9**
STKA	**Stephens Creek**	**64.86**	**176**	P	**P**	**18 33 41.0**	**-1.3**
	comp=Z,5.2nm,0.7s,mb4.3,baz=335,slow=7.0,SNR=13						
APA	**Apatity**	**64.89**	**336**	⇑*i*P	**P**	**18 33 41.8**	**0.0**
APA				*i*		18 34 19.5	
APA				pmax	pmax		
	comp=Z,29nm,1.0s,mb4.9						
KEV	**Kevo**	**65.90**	**339**	*e*p	**P**	**18 33 47.4**	**-0.8**
	comp=Z,5.5nm,0.7s,mb4.4						
KEV	**Kevo**	**65.90**	**339**	*e*P	**P**	**18 33 47.4**	**-0.8**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
ARCES	**ARCESS Array B**	**66.46**	**339**	P	**P**	**18 33 52.0**	**+0.2**
	comp=Z,10nm,0.5s,mb4.8,baz=67,slow=8.8,SNR=84						
ARCES	**ARCESS Array B**	**66.46**	**339**	P	**P**	**18 33 52.0**	**+0.2**
RES	**Resolute Bay**	**67.02**	**13**	*e*P	**P**	**18 33 55.4**	**+0.2**
RES				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
RES	**Resolute Bay**	**67.02**	**13**	*e*P	**P**	**18 33 55.4**	**+0.3**
	comp=Z,15nm,0.8s,mb4.8						
RES				*e*pP	pP	18 35 10.6	-1.8
MOS	**Moscow**	**68.46**	**323**	*e*P	**P**	**18 34 03.2**	**-1.1**
MOS				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.3						
NWAO	**Narrogin (SRO)**	**68.56**	**198**	*e*P	**P**	**18 34 04.1**	**-1.2**
NWAO				pmax	pmax		
	comp=Z,24nm,1.2s						
NWAO	**Narrogin (SRO)**	**68.56**	**198**	P	**P**	**18 34 04.1**	**-1.2**
	comp=Z,4.1nm,0.4s,mb4.5,baz=38,slow=6.7,SNR=6.1						
NWAO	**Narrogin (SRO)**	**68.56**	**198**	*e*P	**P**	**18 34 04.1**	**-1.2**
	comp=Z,24nm,1.2s,mb4.8						
YKW3	**Yellowknife Ar**	**68.58**	**28**	*e*P	**P**	**18 34 04.8**	**0.0**
YKA	**Yellowknife Ar**	**68.61**	**28**	P	**P**	**18 34 05.1**	**+0.1**
	comp=Z,4.8nm,0.6s,mb4.4,baz=294,slow=5.9,SNR=42						
YKA	**Yellowknife Ar**	**68.61**	**28**	P	**P**	**18 34 05.1**	**+0.1**
BIDO	**Bidbid**	**69.14**	**285**	P	**P**	**18 34 09.8**	**+0.8**
	SNR=7.8						
OBN	**Obninsk**	**69.29**	**323**	*i* P	**P**	**18 34 08.7**	**-0.6**
OBN				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.9						
OBN	**Obninsk**	**69.29**	**323**	P	**P**	**18 34 06.3**	**-3.0**
	comp=Z,16nm,0.6s,mb4.9						
BANOM	**Banah**	**69.49**	**288**	P	**P**	**18 34 11.7**	**+0.6**
	SNR=7.3						
VRSR	**Storozhevoye**	**69.74**	**318**	⇓*i*P	**P**	**18 34 11.8**	**-0.3**
VRSR				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.2						
VRSR				pmax	pmax		
	comp=N,10.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,8.0nm,0.7s						
HOQ	**Hoqain**	**69.78**	**285**	P	**P**	**18 34 13.2**	**+0.3**
	SNR=6.2						
KAF	**Kangasniemi**	**70.26**	**332**	*e*p	**P**	**18 34 13.7**	**-1.4**
	comp=E,11nm,0.5s,mb4.8,baz=54,slow=5.7						
KAF	**Kangasniemi**	**70.26**	**332**	*e*P	**P**	**18 34 13.7**	**-1.4**
KAF				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.8						
ASHO	**Ashiyiah**	**70.26**	**287**	P	**P**	**18 34 15.9**	**+0.2**
	SNR=8.5						
GOF	**Gofitskoye**	**70.32**	**311**	*e*P	**P**	**18 34 14.9**	**-0.9**
ARQ	**Araqi**	**70.53**	**286**	P	**P**	**18 34 17.7**	**+0.3**
	SNR=15						
FINES	**FINESS Array B**	**70.72**	**332**	P	**P**	**18 34 17.6**	**-0.3**
	comp=Z,9.5nm,0.5s,mb4.8,baz=65,slow=5.6,SNR=127						
ZEI	**Tsey**	**70.83**	**309**	*e*P	**P**	**18 34 17.6**	**-1.3**
ZEI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
OTR	**Olympics--Tyee**	**70.94**	**45**	P	**P**	**18 34 21.6**	**+2.1**
KIV	**Kislovodsk**	**71.06**	**310**	*d i*P	**P**	**18 34 20.3**	**+0.1**
KIV				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.1						
KIV	**Kislovodsk**	**71.06**	**310**	*e*P	**P**	**18 34 20.8**	**+0.6**
	comp=Z,28nm,0.7s,mb5.1						
OBC	**Olympics--Boni**	**71.12**	**45**	P	**P**	**18 34 22.2**	**+1.7**
PGC	**Sidney**	**71.19**	**44**	*e*P	**P**	**18 34 21.8**	**+0.9**
	comp=Z,67nm,0.8s,mb5.4						
OSD	**Olympics--Snow**	**71.44**	**45**	P	**P**	**18 34 24.2**	**+1.8**
GNI	**Garni**	**71.49**	**306**	*d i*P	**P**	**18 34 24.1**	**+1.3**
GNI				pmax	pmax		
	comp=Z,23nm,0.9s						
GNI	**Garni**	**71.49**	**306**	*e*P	**P**	**18 34 23.6**	**+0.8**
	comp=Z,24nm,1.0s,mb4.9						
VSU	**Vasula**	**72.15**	**329**	*c i*P	**P**	**18 34 26.5**	**+0.1**
SOC	**Sochi**	**73.12**	**311**	*e*P	**P**	**18 34 30.6**	**-1.7**
SOC				*e*		18 34 47.8	
SOC				*e*		18 37 19.9	
SOC				*e*S	S	18 43 28.1	-2.5
SOC				*e*		18 44 10.7	
SOC				*e*SS	SS	18 48 30.9	+8.3
SOC				*e*SSS	SSS	18 51 36.5	-1.4
SOC				pmax	pmax		
	comp=N,18nm,0.7s						
SOC				pmax	pmax		
	comp=E,10.0nm,0.7s						
SOC				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.0						
COR	**Corvallis**	**73.28**	**47**	*e*P	**P**	**18 34 34.7**	**+1.4**
COR				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.1						
COR	**Corvallis**	**73.28**	**47**	*e*P	**P**	**18 34 34.7**	**+1.4**
	comp=Z,45nm,1.1s,mb5.1						
KEBM	**Edson Butte**	**73.50**	**49**	*e*P	**P**	**18 34 36.0**	**+1.4**
TBM	**Table Mountain**	**73.59**	**44**	P	**P**	**18 34 35.9**	**+0.9**
EBG	**Ellensburg**	**73.74**	**44**	P	**P**	**18 34 37.0**	**+1.1**
ANN	**Anapa**	**73.92**	**313**	*e*P	**P**	**18 34 36.5**	**-0.5**
ANN				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.0						
EDM	**Edmonton**	**74.22**	**36**	*e*P	**P**	**18 34 39.0**	**+0.5**
SUMG	**Summit**	**74.44**	**359**	P	**P**	**18 34 41.5**	**+2.0**
	comp=Z,7.1nm,0.9s,mb4.4						
WIFE	**Three Sisters-**	**74.47**	**47**	P	**P**	**18 34 41.5**	**+1.4**
HUMO	**Hull Mountain**	**74.50**	**49**	*e*P	**P**	**18 34 41.1**	**+0.8**
	comp=Z,6.3nm,0.9s,mb4.3						
NEW	**Newport**	**74.99**	**42**	*e*P	**P**	**18 34 43.4**	**+0.4**
NEW				pmax	pmax		
	comp=Z,16nm,1.1s						
NEW	**Newport**	**74.99**	**42**	*e*P	**P**	**18 34 43.4**	**+0.4**
	comp=Z,16nm,1.1s,mb4.7						
YBH	**Yreka Blue Hor**	**75.11**	**50**	*e*P	**P**	**18 34 44.9**	**+1.1**
YBH				pmax	pmax		
	comp=Z,12nm,1.0s						
YBH	**Yreka Blue Hor**	**75.11**	**50**	*e*P	**P**	**18 34 44.9**	**+1.1**
	comp=Z,12nm,1.0s,mb4.6						
BUOR	**Burton Butte**	**75.12**	**49**	P	**P**	**18 34 45.2**	**+1.3**
RBK	**Rabkut**	**75.29**	**281**	P	**P**	**18 34 44.7**	**-0.6**
	SNR=8.8						
AKASG	**Malin Array Be**	**75.39**	**321**	P	**P**	**18 34 44.6**	**-0.6**
	comp=Z,10nm,0.5s,mb4.8,baz=50,slow=6.3,SNR=47						
AKASG				pP	pP	18 36 01.7	-2.2
	comp=Z,0.6nm,0.5s,baz=49,slow=6.2,SNR=2.3						
AKASG	**Malin Array Be**	**75.39**	**321**	P	**P**	**18 34 44.6**	**-0.6**
AKASG				pP	pP	18 36 01.7	-2.2
WHFO	**Wadi Hawf**	**75.43**	**282**	P	**P**	**18 34 45.1**	**-1.0**
	SNR=16						
WDC	**Whiskeytown Da**	**75.82**	**51**	*e*P	**P**	**18 34 47.8**	**0.0**
WDC				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.8						
WDC	**Whiskeytown Da**	**75.82**	**51**	*e*P	**P**	**18 34 47.8**	**-0.1**
	comp=Z,24nm,1.2s,mb4.8						
ABTO	**Aybut**	**76.11**	**282**	P	**P**	**18 34 49.3**	**-0.5**
	SNR=7.8						
LTIM	**Timbered Crate**	**76.19**	**50**	P	**P**	**18 34 50.9**	**+1.1**
SUW	**Suwalki**	**76.39**	**326**	*e*P	**P**	**18 34 50.9**	**+0.2**
LBCM	**Butte Creek Ri**	**76.45**	**50**	P	**P**	**18 34 52.2**	**+0.9**
NB2	**NORSAR Subarra**	**76.46**	**336**	P	**P**	**18 34 50.3**	**-0.6**
	comp=Z,13nm,1.0s,mb4.6,baz=44,slow=5.3						
NOA	**NORSAR Array B**	**76.46**	**336**	P	**P**	**18 34 50.2**	**-0.7**
NOA						18 37 45.9	
NOA	**NORSAR Array B**	**76.46**	**336**	P	**P**	**18 34 50.1**	**-0.8**
	comp=Z,6.8nm,0.8s,mb4.5,baz=44,slow=5.6,SNR=24						
NOA				pP	pP	18 36 08.0	-1.9
	comp=Z,1.8nm,0.8s,baz=45,slow=5.7,SNR=2.9						
NOA				PP	PP	18 37 45.9	-2.7
	comp=Z,1.1nm,0.7s,baz=46,slow=8.5,SNR=3.7						
MOD	**Modoc**	**76.55**	**49**	*e*P	**P**	**18 34 52.5**	**+0.6**
	comp=Z,14nm,1.0s,mb4.6						
BMO	**Blue Mountains**	**76.77**	**45**	*e*P	**P**	**18 34 53.7**	**+0.7**
BMO				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
BMO	**Blue Mountains**	**76.77**	**45**	*e*P	**P**	**18 34 53.7**	**+0.8**
	comp=Z,12nm,0.9s,mb4.6						
WVOR	**Wild Horse Val**	**77.30**	**48**	*e*P	**P**	**18 34 56.9**	**+1.0**
WVOR				pmax	pmax		
	comp=Z,26nm,1.5s,mb4.7						
WVOR	**Wild Horse Val**	**77.30**	**48**	*e*P	**P**	**18 34 56.9**	**+1.0**
	comp=Z,26nm,1.5s,mb4.7						
KIS	**Kishinev**	**77.75**	**318**	*e*P	**P**	**18 35 07.0**	**+8.8**
FFC	**Flin Flon**	**78.54**	**31**	*e*P	**P**	**18 35 02.4**	**+0.1**
FFC				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.6						
FFC	**Flin Flon**	**78.54**	**31**	*e*P	**P**	**18 35 02.4**	**+0.1**
	comp=Z,14nm,1.2s,mb4.6						
CMB	**Columbia Colle**	**78.59**	**52**	*e*P	**P**	**18 35 03.6**	**+0.7**
CMB				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
CMB	**Columbia Colle**	**78.59**	**52**	*e*P	**P**	**18 35 03.6**	**+0.6**
	comp=Z,6.7nm,0.6s,mb4.5						
FCC	**Fort Churchill**	**78.75**	**25**	*e*P	**P**	**18 35 03.2**	**-0.1**
FCC				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
FCC	**Fort Churchill**	**78.75**	**25**	*e*P	**P**	**18 35 03.2**	**-0.1**
	comp=Z,7.0nm,0.8s,mb4.4						
BRTR	**Keskin Array B**	**79.02**	**310**	P	**P**	**18 35 05.2**	**+0.1**
	comp=Z,12nm,0.7s,mb4.7,baz=105,slow=4.4,SNR=63						
BRTR				pP	pP	18 36 23.0	-1.7
	comp=Z,3.2nm,0.9s,baz=124,slow=4.5,SNR=4.6						
CFR	**Carcaliu**	**79.20**	**317**	⇑*i*P	**P**	**18 35 06.1**	**+0.1**
HLID	**Hailey**	**79.21**	**45**	*e*P	**P**	**18 35 07.5**	**+1.4**
	comp=Z,27nm,1.8s,mb4.7						
BURAR	**Bucovina Array**	**79.34**	**320**	⇓*i*P	**P**	**18 35 07.2**	**+0.5**
BURAR	**Bucovina Array**	**79.34**	**320**	⇓*i*P	**P**	**18 35 07.2**	**+0.5**
KWP	**Kalwaria**	**79.38**	**323**	*e*P	**P**	**18 35 07.6**	**+0.8**
VRI	**Vrincioaia**	**79.58**	**318**	⇑*i*P	**P**	**18 35 09.5**	**+1.5**
NVAR	**Mina Array Bea**	**79.74**	**51**	P	**P**	**18 35 09.9**	**+0.9**
	comp=Z,5.9nm,0.7s,mb4.4,baz=311,slow=3.5,SNR=32						
MNV	**Mina**	**79.84**	**51**	*e*P	**P**	**18 35 10.4**	**+0.9**
MNV				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.4						
MNV	**Mina**	**79.84**	**51**	*e*P	**P**	**18 35 10.4**	**+0.9**
	comp=Z,11nm,1.4s,mb4.4						
MTUM	**Tungsten Hills**	**80.17**	**52**	*e*P	**P**	**18 35 12.1**	**+0.8**
QLMT	**Earthquake Lak**	**80.18**	**42**	*e*P	**P**	**18 35 12.6**	**+1.4**
MLR	**Muntele Rosu**	**80.25**	**318**	⇑*i*P	**P**	**18 35 12.9**	**+1.4**
ELK	**Elko**	**80.36**	**47**	*e*P	**P**	**18 35 13.3**	**+1.1**
ELK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ELK	**Elko**	**80.36**	**47**	*e*P	**P**	**18 35 13.3**	**+1.1**
	comp=Z,7.7nm,1.0s,mb4.4						
OJC	**Ojcow**	**80.43**	**325**	⇓*e*P	**P**	**18 35 12.8**	**+0.4**
NIE	**Niedzica**	**80.71**	**324**	*e*P	**P**	**18 35 14.7**	**+0.9**
LKWY	**Lake**	**80.92**	**42**	*e*P	**P**	**18 35 17.9**	**+2.8**
LKWY				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
LKWY	**Lake**	**80.92**	**42**	*e*P	**P**	**18 35 17.9**	**+2.8**
	comp=Z,8.7nm,0.9s,mb4.5						
ASF	**Jabal al Asfar**	**81.02**	**302**	P	**P**	**18 35 16.5**	**+0.7**
	comp=Z,11nm,0.7s,mb4.7,baz=295,slow=4.4,SNR=23						
IMW	**Indian Meadow**	**81.03**	**43**	*e*P	**P**	**18 35 17.6**	**+2.0**
	comp=Z,10nm,0.9s,mb4.6						
RRI2	**Red Ridge**	**81.15**	**44**	*e*P	**P**	**18 35 17.9**	**+1.7**
	comp=Z,4.7nm,0.8s,mb4.3						
MOOW	**Moose Ponds**	**81.23**	**43**	*e*P	**P**	**18 35 18.1**	**+1.4**
	comp=Z,1.5nm,0.6s,mb3.9						
HVU	**Hansel Valley**	**81.24**	**45**	*e*P	**P**	**18 35 18.2**	**+1.4**
TPAW	**Teton Pass**	**81.27**	**43**	*e*P	**P**	**18 35 18.6**	**+1.7**
	comp=Z,3.7nm,0.6s,mb4.3						
OKC	**Ostrava-Krasne**	**81.48**	**325**	*e*P	**P**	**18 35 18.2**	**+0.4**
TRCR	**Troy Canyon**	**81.53**	**50**	*e*P	**P**	**18 35 19.4**	**+1.1**
KSP	**Ksiaz**	**81.66**	**327**	⇓*e*P	**P**	**18 35 19.4**	**+0.7**
KSP	**Ksiaz**	**81.66**	**327**	*e*P	**P**	**18 35 19.6**	**+0.9**

MORC	**Moravsky Berou**	**81.81**	**325**	*e*P	**P**	**18 35 19.0**	**-0.5**
MORC				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
MORC	**Moravsky Berou**	**81.81**	**325**	*e*P	**P**	**18 35 19.0**	**-0.5**
	comp=Z,7.9nm,1.1s,mb4.5						
MORC				*e*pP	pP	18 36 38.5	-1.1
DPC	**Dobruska-Polom**	**81.98**	**326**	*e*P	**P**	**18 35 21.2**	**+0.8**
BSEG	**Bad Segeberg**	**82.00**	**332**	*e*P	**P**	**18 35 21.0**	**+0.6**
BSEG				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.7						
UPC	**Upice**	**82.02**	**327**	*e*P	**P**	**18 35 21.0**	**+0.4**
VYHS	**Vyhne**	**82.05**	**324**	*e*P	**P**	**18 35 21.5**	**+0.7**
HWUT	**Hardware Ranch**	**82.07**	**45**	*e*P	**P**	**18 35 22.4**	**+1.4**
	comp=Z,16nm,1.0s,mb4.8						
DUG	**Dugway**	**82.17**	**47**	*e*P	**P**	**18 35 22.9**	**+1.3**
DUG				*e*pP	pP	18 36 41.6	-0.1
NOQ	**North Oquirrh**	**82.32**	**46**	*e*P	**P**	**18 35 23.9**	**+1.5**
CTU	**Camp Tracy**	**82.52**	**46**	*e*P	**P**	**18 35 24.7**	**+1.4**
PDAR	**Pinedale Array**	**82.52**	**43**	P	**P**	**18 35 23.9**	**+0.6**
	comp=Z,4.0nm,0.7s,mb4.4,baz=305,slow=3.2,SNR=26						
PVCC	**Panska Ves**	**82.66**	**327**	*e*P	**P**	**18 35 24.5**	**+0.7**
BRG	**Berggiesshubel**	**82.70**	**328**	*i* P	**P**	**18 35 25.8**	**+1.8**
BRG				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
BRG	**Berggiesshubel**	**82.70**	**328**	*i* P	**P**	**18 35 25.8**	**+1.8**
	comp=Z,9.2nm,0.8s,mb4.7						
SMOL	**Smolenice**	**82.72**	**325**	*e*P	**P**	**18 35 25.5**	**+1.3**
CLL	**Collm**	**82.80**	**329**	⇓*i*P	**P**	**18 35 24.7**	**+0.2**
CLL				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.9						
CLL	**Collm**	**82.80**	**329**	⇓*i*P	**P**	**18 35 24.7**	**+0.2**
	comp=Z,21nm,1.0s,mb4.9						
CLL				*e*pP	pP	18 36 43.0	-1.8
CLL	**Collm**	**82.80**	**329**	⇓P	**P**	**18 35 24.7**	**+0.2**
	comp=Z,logA/T=1.3,mb4.9						
CLL				*e**PP	pP	18 36 43.0	-1.8
DAU	**Daniels Canyon**	**82.98**	**46**	*e*P	**P**	**18 35 27.3**	**+1.6**
PRU	**Pruhonice**	**83.06**	**327**	*e*P	**P**	**18 35 26.3**	**+0.5**
CLZ	**Clausthal**	**83.53**	**330**	*e*P	**P**	**18 35 28.8**	**+0.7**
CLZ				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
CLZ	**Clausthal**	**83.53**	**330**	*e*P	**P**	**18 35 28.8**	**+0.7**
	comp=Z,14nm,1.0s,mb4.8						
MSU	**Marysvale**	**83.58**	**48**	*e*P	**P**	**18 35 30.5**	**+1.8**
PFO	**Pinyon Flat Ob**	**83.73**	**54**	*e*P	**P**	**18 35 29.2**	**-0.4**
PFO				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
PFO	**Pinyon Flat Ob**	**83.73**	**54**	*e*P	**P**	**18 35 29.2**	**-0.4**
	comp=Z,14nm,0.8s,mb4.8						
EIL	**Elat**	**83.80**	**301**	*e*P	**P**	**18 35 29.8**	**-0.2**
	comp=Z,32nm,1.1s,mb5.1						
MOX	**Moxa**	**83.89**	**329**	*e*P	**P**	**18 35 30.3**	**+0.3**
MOX	**Moxa**	**83.89**	**329**	*i* P	**P**	**18 35 30.3**	**+0.3**
KHC	**Kasperske Hory**	**84.11**	**327**	*d* *i*P	**P**	**18 35 31.4**	**+0.3**
KHC	**Kasperske Hory**	**84.11**	**327**	*e*P	**P**	**18 35 31.2**	**+0.1**
GEC2	**GERESS Array S**	**84.26**	**327**	*e*P	**P**	**18 35 32.2**	**+0.3**
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
GEC2	**GERESS Array S**	**84.26**	**327**	*e*P	**P**	**18 35 32.2**	**+0.3**
	comp=Z,6.0nm,0.9s,mb4.4						
GERES	**GERESS Array B**	**84.26**	**327**	P	**P**	**18 35 31.6**	**-0.2**
	comp=Z,3.3nm,0.7s,mb4.3,baz=34,slow=4.8,SNR=24						
GERES				pP	pP	18 36 50.7	-1.6
	comp=Z,0.3nm,0.5s,baz=14,slow=4.0,SNR=2.4						
RWWY	**Rawlins**	**84.55**	**43**	*e*P	**P**	**18 35 34.0**	**+0.5**
	comp=Z,5.2nm,0.8s,mb4.4						
RSSD	**Black Hills**	**84.70**	**40**	*e*P	**P**	**18 35 34.4**	**+0.2**
RSSD				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
RSSD	**Black Hills**	**84.70**	**40**	*e*P	**P**	**18 35 34.4**	**+0.2**
	comp=Z,6.8nm,1.0s,mb4.4						
GRA1	**Grafenberg Arr**	**84.76**	**328**	*e*P	**P**	**18 35 34.9**	**+0.6**
	comp=Z,9.0nm,0.6s,mb4.8						
GRF	**Grafenberg Arr**	**84.76**	**328**	*e*P	**P**	**18 35 34.9**	**+0.6**
GRF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
GRF	**Grafenberg Arr**	**84.76**	**328**	*e*P	**P**	**18 35 34.9**	**+0.6**
GRF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
GRF	**Grafenberg Arr**	**84.76**	**328**	*e*P	**P**	**18 35 34.9**	**+0.6**
	comp=Z,9.0nm,0.6s,mb4.8						
PV10	**Paradox Valley**	**85.60**	**46**	*e*P	**P**	**18 35 40.4**	**+1.7**
PV10				*e*pP	pP	18 36 59.5	+0.1
PV01	**Paradox Valley**	**86.03**	**46**	*e*P	**P**	**18 35 41.9**	**+1.1**
PV01				*e*pP	pP	18 36 56.1	-5.4
RW3	**Ridgway**	**86.49**	**46**	*e*P	**P**	**18 35 44.8**	**+1.8**
RW3				*e*pP	pP	18 37 04.9	+1.0
ISCO	**Idaho Springs**	**86.70**	**44**	*e*P	**P**	**18 35 45.3**	**+1.4**
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
ISCO	**Idaho Springs**	**86.70**	**44**	*e*P	**P**	**18 35 45.3**	**+1.4**
	comp=Z,2.8nm,0.7s,mb4.2						
ISCO				*e*pP	pP	18 37 04.3	-0.5
BFO	**Black Forest**	**87.04**	**329**	*e*P	**P**	**18 35 45.2**	**-0.1**
CDF	**Champ du Feu**	**87.43**	**329**	*e*P	**P**	**18 35 46.5**	**-0.7**
CABF	**La Chapelle**	**89.34**	**329**	*e*P	**P**	**18 35 54.6**	**-1.5**
ANMO	**Albuquerque**	**89.39**	**48**	⇓*e*P	**P**	**18 35 58.4**	**+1.7**
ANMO	**Albuquerque**	**89.39**	**48**	*e*P	**P**	**18 35 58.3**	**+1.6**
	comp=Z,1.4nm,0.8s,mb3.8						
LOR	**Lormes**	**89.76**	**331**	*e*P	**P**	**18 35 57.9**	**-0.2**
LPL	**La Plagne**	**89.90**	**328**	*e*P	**P**	**18 35 58.6**	**-0.2**
LPG	**La Plagne**	**89.91**	**328**	*e*P	**P**	**18 35 58.7**	**-0.2**
	comp=Z,7.8nm,0.7s,mb4.4						
LPG	**La Plagne**	**89.91**	**328**	*e*P	**P**	**18 35 58.7**	**-0.2**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
AVF	**Avril sur Loir**	**90.35**	**331**	*e*P	**P**	**18 36 00.0**	**-0.9**
	comp=Z,12nm,1.0s,mb4.5						
AVF	**Avril sur Loir**	**90.35**	**331**	*e*P	**P**	**18 36 00.0**	**-0.9**
AVF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
GRR	**Gorron**	**90.69**	**334**	*e*P	**P**	**18 36 01.9**	**-0.5**
SBF	**Sospel**	**90.86**	**326**	*e*P	**P**	**18 36 03.1**	**-0.2**
VIVF	**Saint-Julien-l**	**91.33**	**329**	*e*P	**P**	**18 36 04.7**	**-0.7**
	comp=Z,8.5nm,0.8s,mb4.4						
VIVF	**Saint-Julien-l**	**91.33**	**329**	*e*P	**P**	**18 36 04.7**	**-0.7**
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
FRF	**La Foret Royal**	**91.46**	**327**	*e*P	**P**	**18 36 05.6**	**-0.5**
	comp=Z,54nm,1.4s,mb5.0						
FRF	**La Foret Royal**	**91.46**	**327**	*e*P	**P**	**18 36 05.6**	**-0.5**
FRF				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.0						
MFF	**Saint Martin d**	**91.90**	**332**	*e*P	**P**	**18 36 07.3**	**-0.8**
	comp=Z,18nm,1.0s,mb4.7						
MFF	**Saint Martin d**	**91.90**	**332**	*e*P	**P**	**18 36 07.3**	**-0.8**
MFF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
RJF	**Les Rejaudoux**	**92.30**	**331**	*e*P	**P**	**18 36 09.5**	**-0.5**
GDL2	**Guadalupe Moun**	**92.52**	**49**	*e*P	**P**	**18 36 12.0**	**+0.7**
LFF	**La Frestale**	**92.92**	**331**	*e*P	**P**	**18 36 12.2**	**-0.6**
	comp=Z,12nm,0.6s,mb4.8						
LFF	**La Frestale**	**92.92**	**331**	*e*P	**P**	**18 36 12.2**	**-0.6**
LFF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
TXAR	**Lajitas Array**	**94.89**	**50**	P	**P**	**18 36 22.9**	**+0.7**
	comp=Z,1.7nm,0.5s,mb4.3,baz=288,slow=4.0,SNR=23						
TXAR				PP	PP	18 40 22.0	+4.1
	comp=Z,0.9nm,0.8s,baz=304,slow=4.5,SNR=4.8						
SNAA	**Sanae**	**136.23**	**197**		PKPdf	18 42 21.0	+3.6
VNA2	**Neumayer--Watz**	**137.82**	**196**		PKPdf	18 42 23.5	+3.2
SAML	**Samuel**	**149.10**	**43**	*e*PKPdf	PKPdf	18 42 42.2	+1.1
SAML				*e*PKPbc	PKPdf	18 42 46.5	+5.3
LPAZ	**La Paz**	**151.25**	**60**	*e*PKIKP	PKPdf	18 42 46.9	+2.5
LPAZ				*e*		18 43 01.0	
LPAZ	**La Paz**	**151.25**	**60**	PKPbc	PKPdf	18 42 53.1	+8.7
	comp=Z,6.1nm,0.9s,baz=359,slow=5.3,SNR=30						
LPAZ				pPKPbc		18 44 15.4	
	comp=Z,2.0nm,0.9s,baz=38,slow=1.6,SNR=2.3						
LPAZ	**La Paz**	**151.25**	**60**	*e*PKPdf	PKPdf	18 42 46.9	+2.6
LPAZ				*e*PKPbc	PKPdf	18 42 52.9	+8.5
LPAZ				PKPbc	PKPdf	18 42 53.1	+8.7
LPAZ				*e*PKPab	PKPab	18 43 01.0	-1.4
LPAZ				pPKPbc		18 44 15.4	
PLCA	**Paso Flores**	**156.31**	**117**	PKP2	PKPab	18 43 23.7	+0.5
PLCA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PLCA	**Paso Flores**	**156.31**	**117**	PKPab	PKPab	18 43 23.7	+0.5
	comp=Z,2.5nm,1.0s,baz=234,slow=11,SNR=3.7						

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*BJI **04** 18:40:26.2, 11.87N×40.06E, $h10^{km}$, mB5.1, mb4.3, Ms4.8, Msz4.4*
*DHMR **04** 18:40:28.9±2.7, 12.65N×40.52E, $h10^{km}$±166^{km}, ML4.1*
*IDC **04** 18:40:31.8±2.9, 12.43N×40.61E, mb4.2/10, mb1 4.3/11, mb1mx4.1/20, mbtmp4.1/11, MS3.6/5, Ms1 3.6/5, ms1mx3.2/24, Error ellipse: s-maj=65.2km s-min=23.7km az=21.0*
*CSEM **04** 18:40:33.1±0.2, 12.74N×40.65E, $h10^{km}$, mb4.5/20, Error ellipse: s-maj=11.2km s-min=1.6km az=9.0*
*MOS **04** 18:40:35.8±0.7, 12.59N×40.61E, $h33^{km}$, mb4.7/17, Error ellipse: s-maj=16.7km s-min=6.6km az=116.4*
*NEIC **04** 18:40:35.1±0.5, 12.75N×40.69E, $h10^{km}$, mb4.5/25, Error ellipse: s-maj=10.9km s-min=4.9km az=190.0*
ISC 04 18:40:31.6±0.9**, 12.4N**±0.1×**40.61E**±0.03**, $h10^{km}$, n107, σ0^{s}87**/115**, mb4.4**/32**, MS3.6**/4**, 4C-11D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**3.51**	**77**	⇓*e*P	**Pn**	**18 41 25.8**	**-1.7**
TRBA				*i* S	**Sn**	**18 42 19.8**	**+10**
TRBA	**At Turbah**	**3.51**	**77**	⇓*e*P	**Pn**	**18 41 28.1**	**+0.7**
TRBA				*i* S	**Sn**	**18 42 13.3**	**+3.8**
TRBA				AML	AML	18 42 39.5	
	comp=N,943nm,0.7s						
TRBA	**At Turbah**	**3.51**	**77**	⇓*e*P	**Pn**	**18 41 28.1**	**+0.7**
	comp=N,346nm,0.6s						
UDYN	**Al ‘Udayn**	**3.61**	**65**	*e*P	**Pn**	**18 41 29.0**	**+0.2**
UDYN				*i* S	**Sn**	**18 42 25.5**	**+14**
UDYN	**Al ‘Udayn**	**3.61**	**65**	⇓*e*P	**Pn**	**18 41 29.0**	**+0.2**
UDYN				*i* S	**Sn**	**18 42 14.9**	**+3.0**
UDYN				AML	AML	18 42 40.4	
	comp=N,693nm,0.6s						
DHBB	**Dhamar BB**	**4.24**	**60**	⇓*e*P	**Pn**	**18 41 38.2**	**+0.3**
DHBB				*i* S	**Sn**	**18 42 41.3**	**+13**
DHBB	**Dhamar BB**	**4.24**	**60**	⇓*e*P	**Pn**	**18 41 37.1**	**-0.7**
DHBB				*i* S	**Sn**	**18 42 29.4**	**+1.3**
LBOS		**4.74**	**72**	⇓*i*P	**Pn**	**18 41 43.2**	**-1.7**
LBOS				*i* S	**Sn**	**18 42 51.2**	**+11**
LBOS		**4.74**	**72**	⇓*e*P	**Pn**	**18 41 42.3**	**-2.6**
LBOS				*i* S	**Sn**	**18 42 38.6**	**-1.9**
BDHA	**Al Bayda’**	**5.06**	**72**	⇑*i*P	**Pn**	**18 41 47.9**	**-1.6**
BDHA				*i* S	**Sn**	**18 42 59.5**	**+11**
BDHA	**Al Bayda’**	**5.06**	**72**	⇓*e*P	**Pn**	**18 41 46.6**	**-2.9**
BDHA				*i* S	**Sn**	**18 42 46.5**	**-2.3**
BDHA	**Al Bayda’**	**5.06**	**72**	⇑*i*P	**Pn**	**18 41 47.9**	**-1.6**
BDHA				*i* S	**Sn**	**18 42 46.5**	**-2.3**
MUKL	**Al Mukalla**	**8.44**	**75**	⇓*e*P	**P**	**18 42 32.9**	**-4.1**
KMBO	**Kilima Mbogo**	**13.88**	**194**	LR	LR	18 48 38.5	
	comp=N,96nm,19.6s,baz=71,slow=35						
MBAR	**Mbarara**	**16.24**	**218**	*e*P	**P**	**18 44 28.9**	**+7.1**
MBAR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MBAR	**Mbarara**	**16.24**	**218**	*e*P	**P**	**18 44 28.9**	**+7.1**
	comp=Z,9.4nm,1.4s						
MBAR	**Mbarara**	**16.24**	**218**	*e*P	**P**	**18 44 28.9**	**+7.1**
	comp=Z,9.4nm,1.4s						
EIL	**Elat**	**17.93**	**344**	*e*P	**P**	**18 44 43.6**	**+0.7**
	comp=Z,8.4nm,1.0s						
EIL	**Elat**	**17.93**	**344**	*e*P	**P**	**18 44 43.6**	**+0.7**
	comp=Z,8.4nm,1.0s						
BSY	**Bisya**	**18.83**	**55**	⇓P	**P**	**18 44 54.2**	**+0.3**
	SNR=9.7						
BSYO	**Bisya**	**18.85**	**55**	P	**P**	**18 44 54.2**	**0.0**
	SNR=9.7						
ASHO	**Ashiyiah**	**19.02**	**48**	⇑P	**P**	**18 44 55.9**	**-0.4**
	SNR=8.3						
JMDO	**Jabal Madar**	**19.38**	**57**	⇑P	**P**	**18 45 00.8**	**+0.3**
	SNR=6.5						
SMDO	**Samad**	**19.66**	**55**	P	**P**	**18 45 04.6**	**+0.9**
	SNR=7.1						
ASF	**Jabal al Asfar**	**19.93**	**351**	P	**P**	**18 45 07.3**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=36,slow=1.8,SNR=4.5						
BIDO	**Bidbid**	**19.95**	**54**	P	**P**	**18 45 07.9**	**+0.9**
	SNR=5.8						
WBK	**Wadi Bani Khal**	**20.20**	**57**	P	**P**	**18 45 10.1**	**+0.6**
	SNR=6.2						
IDI	**Anoyia**	**26.83**	**331**	LR	LR	18 58 35.0	
	comp=Z,120nm,18.2s,MS3.5,baz=277,slow=40						
BRTR	**Keskin Array B**	**27.87**	**348**	P	**P**	**18 46 24.9**	**+1.3**
	comp=Z,3.2nm,0.9s,mb3.9,baz=173,slow=10.0,SNR=12						
LSZ	**Lusaka**	**30.16**	**204**	*e*P	**P**	**18 46 40.3**	**-4.1**
LSZ				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.1						
LSZ	**Lusaka**	**30.16**	**204**	*e*P	**P**	**18 46 40.3**	**-4.0**
	comp=Z,4.8nm,1.3s,mb4.1						
KIV	**Kislovodsk**	**31.45**	**3**	P	**P**	**18 46 53.6**	**-1.9**
KIV				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.8						
KIV	**Kislovodsk**	**31.45**	**3**	P	**P**	**18 46 53.5**	**-2.0**
	comp=Z,19nm,1.3s,mb4.8						
KIV	**Kislovodsk**	**31.45**	**3**	P	**P**	**18 46 53.5**	**-2.0**
	comp=Z,19nm,1.3s,mb4.8						
CII	**Carovilli**	**37.11**	**327**	P	**P**	**18 47 46.6**	**+2.4**
	comp=Z,5.1nm,0.7s,mb4.5						
AKASG	**Malin Array Be**	**39.27**	**349**	P	**P**	**18 48 01.5**	**-0.7**
	comp=Z,3.4nm,0.8s,mb4.1,baz=180,slow=7.6,SNR=14						
PSZ	**Piszkesteto**	**39.38**	**338**	*e*P	**P**	**18 48 02.6**	**-0.5**
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
PSZ	**Piszkesteto**	**39.38**	**338**	*e*P	**P**	**18 48 02.6**	**-0.5**
	comp=Z,7.0nm,0.9s,mb4.4						
KWP	**Kalwaria**	**39.91**	**342**	*e*P	**P**	**18 48 08.1**	**+0.6**
KWP				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
KWP	**Kalwaria**	**39.91**	**342**	*e*P	**P**	**18 48 08.1**	**+0.6**
	comp=Z,17nm,1.0s,mb4.7						
KWP	**Kalwaria**	**39.91**	**342**	*e*P	**P**	**18 48 08.1**	**+0.6**
	comp=Z,17nm,1.0s,mb4.7						
VYHS	**Vyhne**	**40.25**	**338**	*e*P	**P**	**18 48 11.4**	**+1.1**
PGF	**Pioggiola**	**40.63**	**324**	*e*P	**P**	**18 48 13.5**	**0.0**
MORC	**Moravsky Berou**	**41.79**	**338**	*e*P	**P**	**18 48 21.7**	**-1.2**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
MORC	**Moravsky Berou**	**41.79**	**338**	*e*P	**P**	**18 48 21.7**	**-1.2**
	comp=Z,3.3nm,0.9s,mb4.0						
MORC	**Moravsky Berou**	**41.79**	**338**	*e*P	**P**	**18 48 21.7**	**-1.2**
	comp=Z,3.3nm,0.9s,mb4.0						
GERES	**GERESS Array B**	**42.60**	**334**	P	**P**	**18 48 29.3**	**-0.2**
	comp=Z,3.3nm,0.8s,mb4.1,baz=143,slow=6.7,SNR=26						
FRF	**La Foret Royal**	**42.61**	**323**	*e*P	**P**	**18 48 29.8**	**0.0**
KHC	**Kasperske Hory**	**42.87**	**334**	*e*P	**P**	**18 48 31.0**	**-0.8**
KOLN	**Koldanda**	**42.92**	**63**	*e*P	**P**	**18 48 33.9**	**+1.4**
	comp=Z,16nm,1.0s,mb4.7						
MBDF	**Montbardon**	**43.24**	**325**	*e*P	**P**	**18 48 35.0**	**+0.1**
	comp=Z,22nm,0.9s,mb4.6						
MBDF	**Montbardon**	**43.24**	**325**	*e*P	**P**	**18 48 35.0**	**+0.1**
MBDF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
SUW	**Suwalki**	**43.71**	**345**	*e*P	**P**	**18 48 38.5**	**0.0**
SUW				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
SUW	**Suwalki**	**43.71**	**345**	*e*P	**P**	**18 48 38.5**	**0.0**
	comp=Z,30nm,0.9s,mb5.0						
SUW	**Suwalki**	**43.71**	**345**	*e*P	**P**	**18 48 38.5**	**0.0**
	comp=Z,30nm,0.9s,mb5.0						
LPG	**La Plagne**	**43.72**	**325**	*e*P	**P**	**18 48 38.9**	**+0.1**
LPL	**La Plagne**	**43.75**	**325**	*e*P	**P**	**18 48 39.0**	**+0.1**
ORIF	**Oris-en-Rattie**	**43.86**	**324**	*e*P	**P**	**18 48 40.0**	**+0.1**
GKN	**Gorkha**	**43.86**	**62**	*e*P	**P**	**18 48 40.3**	**+0.2**
	comp=Z,18nm,1.1s,mb4.7						
BRG	**Berggiesshubel**	**44.05**	**336**	*e*P	**P**	**18 48 41.8**	**+0.4**
BRG				*e*		18 48 50.5	
BRG				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
BRG	**Berggiesshubel**	**44.05**	**336**	*e*P	**P**	**18 48 41.8**	**+0.4**
	comp=Z,3.3nm,1.1s,mb4.0						
BRG				*e*		18 48 50.5	
DMN	**Daman**	**44.20**	**63**	*e*P	**P**	**18 48 43.0**	**+0.2**
	comp=Z,31nm,1.3s,mb4.9						
GRA1	**Grafenberg Arr**	**44.31**	**333**	*e*P	**P**	**18 48 43.1**	**-0.4**
	comp=Z,6.0nm,0.9s,mb4.3						
GRF	**Grafenberg Arr**	**44.31**	**333**	*e*P	**P**	**18 48 43.1**	**-0.4**
GRF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
GRF	**Grafenberg Arr**	**44.31**	**333**	*e*P	**P**	**18 48 43.1**	**-0.4**
GRF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
GRF	**Grafenberg Arr**	**44.31**	**333**	*e*P	**P**	**18 48 43.1**	**-0.4**
	comp=Z,6.0nm,0.9s,mb4.3						
KKN	**Kakani**	**44.38**	**63**	*e*P	**P**	**18 48 45.3**	**+0.9**
	comp=Z,21nm,1.1s,mb4.8						
KKN	**Kakani**	**44.38**	**63**	*e*P	**P**	**18 48 45.3**	**+0.9**
KKN				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
PKI	**Pulchoki**	**44.45**	**63**	*e*P	**P**	**18 48 46.2**	**+1.3**
VIVF	**Saint-Julien-l**	**44.52**	**323**	*e*P	**P**	**18 48 45.4**	**+0.1**
LASF	**Ste Croix**	**44.56**	**322**	*e*P	**P**	**18 48 45.5**	**-0.1**
CLL	**Collm**	**44.77**	**336**	P	**P**	**18 48 47.0**	**-0.1**
CABF	**La Chapelle**	**44.77**	**326**	*e*P	**P**	**18 48 46.9**	**-0.4**
	comp=Z,23nm,1.0s,mb4.7						
CABF	**La Chapelle**	**44.77**	**326**	*e*P	**P**	**18 48 46.9**	**-0.4**
CABF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
HINF	**Hinteralfeld**	**45.13**	**328**	*e*P	**P**	**18 48 49.7**	**-0.4**
	comp=Z,15nm,1.1s,mb4.4						
HINF	**Hinteralfeld**	**45.13**	**328**	*e*P	**P**	**18 48 49.7**	**-0.4**
HINF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
DBIC	**Dimbokro**	**45.15**	**267**	LR	LR	19 07 52.2	
	comp=Z,72nm,19.4s,MS3.6,baz=145,slow=36						
CDF	**Champ du Feu**	**45.30**	**329**	*e*P	**P**	**18 48 51.3**	**-0.1**
	comp=Z,8.3nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**45.30**	**329**	*e*P	**P**	**18 48 51.3**	**-0.1**
CDF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
ARU	**Arti**	**46.04**	**14**	*e*P	**P**	**18 48 51.6**	**-5.5**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
ARU	**Arti**	**46.04**	**14**	*e*P	**P**	**18 48 51.6**	**-5.5**
	comp=Z,6.1nm,0.9s,mb4.5						
EPF	**Esparros**	**46.21**	**319**	*e*P	**P**	**18 48 58.7**	**+0.1**
LOR	**Lormes**	**46.39**	**326**	*e*P	**P**	**18 48 59.7**	**-0.3**
	comp=Z,15nm,1.1s,mb4.5						
LOR	**Lormes**	**46.39**	**326**	*e*P	**P**	**18 48 59.7**	**-0.3**
LOR				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
AVF	**Avril sur Loir**	**46.39**	**325**	*e*P	**P**	**18 48 59.6**	**-0.5**
SSF	**Saint Saulge**	**46.46**	**325**	*e*P	**P**	**18 49 00.3**	**-0.3**
MEZF	**Maizieres J’vi**	**46.50**	**328**	*e*P	**P**	**18 49 00.7**	**-0.2**
	comp=Z,14nm,0.8s,mb4.7						
BGF	**Bois d’Agland**	**46.54**	**324**	*e*P	**P**	**18 49 00.9**	**-0.4**
ETSF	**Etsaut**	**46.72**	**318**	*e*P	**P**	**18 49 03.5**	**+0.8**
	comp=Z,24nm,1.1s,mb4.7						
ETSF	**Etsaut**	**46.72**	**318**	*e*P	**P**	**18 49 03.5**	**+0.8**
ETSF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
TCF	**Toulx Ste Croi**	**46.76**	**324**	*e*P	**P**	**18 49 03.0**	**0.0**
SJPF	**Ste Jean**	**47.26**	**318**	*e*P	**P**	**18 49 06.7**	**-0.3**
	comp=Z,20nm,1.0s,mb4.7						
SJPF	**Ste Jean**	**47.26**	**318**	*e*P	**P**	**18 49 06.7**	**-0.3**
SJPF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
ESDC	**Sonseca Array**	**47.69**	**313**	P	**P**	**18 49 11.0**	**+0.6**
	comp=Z,1.7nm,0.8s,mb4.1,baz=116,slow=7.6,SNR=7.9						
MKAR	**Makanchi Array**	**48.95**	**37**	P	**P**	**18 49 18.8**	**-1.2**
	comp=Z,3.1nm,0.9s,mb4.3,baz=236,slow=5.1,SNR=19						
MKAR				LR	LR	19 13 56.4	
	comp=Z,125nm,21.1s,MS3.9,baz=195,slow=41						
FLN	**La Foliniere**	**49.64**	**325**	*e*P	**P**	**18 49 25.0**	**-0.3**
FINES	**FINESS Array B**	**50.05**	**351**	P	**P**	**18 49 27.1**	**-1.2**
	comp=Z,3.2nm,1.0s,mb4.3,baz=207,slow=4.3,SNR=7.2						
FINES	**FINESS Array B**	**50.05**	**351**	P	**P**	**18 49 27.1**	**-1.3**
NB2	**NORSAR Subarra**	**53.04**	**343**	P	**P**	**18 49 49.1**	**-1.9**
	comp=Z,1.2nm,0.8s,mb3.9,baz=139,slow=7.4						
NOA	**NORSAR Array B**	**53.04**	**343**	P	**P**	**18 49 49.0**	**-1.9**
	comp=Z,2.3nm,0.9s,mb4.1,baz=140,slow=7.4,SNR=4.6						
ZAL	**Zalesovo**	**54.07**	**31**	P	**P**	**18 49 58.4**	**-0.2**
	comp=Z,1.1nm,0.8s,mb3.8,baz=262,slow=7.8,SNR=9.0						
ZAL	**Zalesovo**	**54.07**	**31**	P	**P**	**18 49 58.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**56.35**	**76**	P	**P**	**18 50 15.2**	**-0.4**
	comp=Z,3.2nm,1.1s,mb4.3,baz=281,slow=7.3,SNR=9.9						
CMAR				LR	LR	19 15 48.2	
	comp=Z,44nm,18.0s,MS3.6,baz=255,slow=38						
GTA	**Gaotai**	**58.48**	**51**	P	**P**	**18 50 31.4**	**+1.0**
SONM	**Songino Array**	**64.65**	**43**	P	**P**	**18 51 12.7**	**+0.8**
	comp=Z,2.8nm,0.7s,mb4.4,baz=238,slow=12,SNR=5.5						
SONM	**Songino Array**	**64.65**	**43**	P	**P**	**18 51 12.7**	**+0.8**
CN2	**Changchun**	**77.81**	**48**	*e*P	**P**	**18 52 31.2**	**+0.3**

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*GUC **04** 18:46:30.0±0.7, 20.86S×70.24W, $h70^{km}$, MD3.9, ML4.3*
*IDC **04** 18:46:48.9±7.2, 18.75S×69.36W, $h226^{km}$±52^{km}, mb3.4/1, mb1 3.6/2, mb1mx3.1/17, mbtmp3.7/2, Error ellipse: s-maj=121.3km s-min=90.1km az=79.0*
ISC 04 18:46:27.0±1.3**, 20.71S**±0.08×**70.2W**±0.1**, $h107^{km}$**±21^{km}**, n8, σ0^{s}86**/12**, mb3.8**/1**, 3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.25**	**148**	⇓*e*P	**P**	**18 47 04.7**	**+0.9**
LVC				*i* S	**S**	**18 47 31.4**	**+0.2**
LVC				AMP		18 47 33.5	
	comp=N,3μm,0.3s						
SPCH	**San Pedro de A**	**2.88**	**140**	⇓*i*P	**P**	**18 47 12.5**	**+0.2**
SPCH				*i* S	**S**	**18 47 46.0**	**-0.4**
ANCH	**Antofagasta**	**2.96**	**183**	*e*P	**P**	**18 47 14.4**	**+1.0**
ANCH				*i* S	**S**	**18 47 47.1**	**-1.3**
ANCH				AMP		18 47 54.0	
	comp=N,801nm,0.1s						
CPN1	**Cerro Paranal**	**3.90**	**182**	⇓*i*P	**P**	**18 47 27.6**	**+1.5**
CPN1				*i* S	**S**	**18 48 11.3**	**+0.1**
CPN1				AMP		18 48 39.7	
	comp=E,335nm,0.4s						
LPAZ	**La Paz**	**4.82**	**25**	P	**P**	**18 47 37.5**	**-1.1**
	comp=E,3.4nm,0.3s,baz=211,slow=7.4,SNR=80						
LPAZ				S	**S**	**18 48 15.8**	**-18**
	comp=E,1.7nm,0.3s,baz=214,slow=12,SNR=4.3						
CRCH	**Chaqaral**	**5.62**	**184**	*i* S	**S**	**18 48 52.4**	**-1.0**
YKA	**Yellowknife Ar**	**90.04**	**341**	P	**P**	**18 59 15.4**	**0.0**
	comp=E,0.6nm,0.7s,mb3.8,baz=138,slow=4.6,SNR=5.5						
MKAR	**Makanchi Array**	**145.69**	**34**	PKP	PKPdf	19 05 55.6	+2.9
	comp=E,0.1nm,0.5s,baz=306,slow=1.7,SNR=3.9						

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*BJI **04** 18:46:44.0, 0.35N×97.69E, $h30^{km}$, mB4.9, mb4.6, Ms4.0, Msz3.9*
*IDC **04** 18:46:50.9±1.6, 1.79N×98.32E, mb3.8/6, mb1 4.0/6, mb1mx3.7/19, mbtmp3.8/6, MS3.1/2, Ms1 3.2/2, ms1mx2.9/25, Error ellipse: s-maj=92.2km s-min=18.8km az=53.0*
*NEIC **04** 18:46:52.7±0.7, 1.22N×97.42E, $h30^{km}$, mb4.3/9, Error ellipse: s-maj=21.1km s-min=9.3km az=61.0*
ISC 04 18:46:51.3±0.7**, 1.24N**±0.09×**97.4E**±0.1**, $h33^{km}$, n27, σ1^{s}12**/24**, mb4.2**/16**, MS3.1**/1**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.15**	**38**	*e*Pn	**Pn**	**18 48 10.3**	**+2.2**
KSM	**Kuching**	**12.87**	**89**	*e*P	**P**	**18 50 08.3**	**+14**
CMAR	**Chiang Mai Arr**	**17.18**	**5**	Pn	**P**	**18 50 48.9**	**-1.6**
	0.3nm,0.3s,baz=196,slow=11,SNR=9.6						
CMAR				LR	LR	18 58 21.3	
	comp=Z,65nm,18.2s,baz=342,slow=42						
KMI	**Kunming**	**24.29**	**12**	P	**P**	**18 52 09.5**	**+2.5**
KMI				AP		18 52 15.8	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
PKI	**Pulchoki**	**28.61**	**337**	*e*P	**P**	**18 52 48.6**	**+1.7**
GUN	**Gumba**	**28.74**	**338**	*e*P	**P**	**18 52 49.0**	**+0.9**
DMN	**Daman**	**28.76**	**337**	*e*P	**P**	**18 52 49.2**	**+0.9**
KKN	**Kakani**	**28.86**	**337**	*e*P	**P**	**18 52 49.6**	**+0.5**
	comp=Z,15nm,1.0s,mb4.7						
LSA	**Lhasa**	**28.93**	**349**	*e*P	**P**	**18 52 50.3**	**+0.5**
	comp=Z,2.9nm,0.8s,mb4.1						
GKN	**Gorkha**	**29.30**	**336**	*e*P	**P**	**18 52 51.8**	**-1.3**
	comp=Z,11nm,0.9s,mb4.6						
KOLN	**Koldanda**	**29.52**	**335**	*e*P	**P**	**18 52 54.8**	**-0.3**
	comp=Z,10nm,0.7s,mb4.6						
ENH	**Enshi**	**31.06**	**20**	P	**P**	**18 53 07.3**	**-1.4**
	comp=Z,10nm,0.8s,mb4.7						
XAN	**Xi’an**	**34.36**	**17**	P	**P**	**18 53 36.2**	**-1.1**
XAN				AP	pP	18 53 41.1	-5.9
GTA	**Gaotai**	**38.05**	**3**	P	**P**	**18 54 09.1**	**+0.6**
GTA				AP	pP	18 54 15.6	-2.7
NWAO	**Narrogin (SRO)**	**38.78**	**153**	*e*P	**P**	**18 54 15.9**	**+1.3**
	comp=Z,37nm,1.3s,mb5.0						
WRA	**Warramunga Arr**	**41.85**	**122**	P	**P**	**18 54 39.5**	**-0.8**
	comp=Z,1.4nm,0.7s,mb3.7,baz=300,slow=9.1,SNR=16						
WRAB	**Tennant Creek**	**41.86**	**122**	*e*P	**P**	**18 54 40.0**	**-0.3**
	comp=Z,5.9nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**43.23**	**127**	P	**P**	**18 54 51.5**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.5,baz=301,slow=7.9,SNR=7.3						
ULN	**Ulaanbaatar**	**47.19**	**9**	*e*P	**P**	**18 55 22.5**	**-0.2**
	comp=Z,1.6nm,1.0s,mb3.9						
MKAR	**Makanchi Array**	**47.26**	**346**	P	**P**	**18 55 23.2**	**-0.1**
	comp=Z,1.8nm,0.7s,mb4.1,baz=160,slow=7.6,SNR=25						
JHJ	**Hachijo jima 2**	**50.82**	**47**	LR	LR	19 16 27.9	
	comp=Z,19nm,18.9s,MS3.1,baz=118,slow=36						
STKA	**Stephens Creek**	**53.20**	**132**	P	**P**	**18 56 08.8**	**-0.1**
	comp=Z,0.8nm,0.6s,mb3.9,baz=297,slow=6.6,SNR=4.8						
ZAL	**Zalesovo**	**53.55**	**351**	P	**P**	**18 56 10.4**	**-0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	ISC
	comp=Z,2.1nm,0.9s,mb4.1,baz=302,slow=6.4,SNR=12						
CHKZ	**Chkalovo**	**56.77**	**341**	*e*P	**P**	**18 56 32.5**	**-1.9**
	comp=Z,4.2nm,1.0s,mb4.4						
BRTR	**Keskin Array B**	**69.26**	**312**	P	**P**	**18 58 02.1**	**+4.9**
	comp=Z,0.2nm,0.4s,mb3.4,baz=135,slow=8.2,SNR=3.3						
ACSO	**Alum Creek Sta**	**138.73**	**0**	*e*P	PKPdf	19 06 21.7	+7.2
RPN	**Rapa Nui**	**143.63**	**137**	P	PKPbc	19 06 19.0	-3.3

IDC ***04*** *18:56:36.9±2.0, 30.84N×56.81E, mb3.7/9, mb1 3.9/9, mb1mx3.7/23, mbtmp3.7/9, Error ellipse: s-maj=45.4km s-min=24.7km az=6.0*
THR ***04*** *18:56:36.5±0.8, 30.76N×56.91E, h14^{km}±8^{km}, ML3.7*
CSEM ***04*** *18:56:36.7±0.1, 30.73N×56.88E, h16^{km}, ML4.5/2, Error ellipse: s-maj=2.1km s-min=2.0km az=160.0*
NEIC ***04*** *18:56:38.9±0.9, 30.81N×56.87E, h10^{km}, mb3.8/5, ML4.0(TEH), Error ellipse: s-maj=13.8km s-min=8.3km az=160.0*
TEH ***04*** *18:56:39.2, 30.70N×56.59E, h10^{km}, Mn4.0*
MOS ***04*** *18:56:41.0±1.5, 31.01N×56.87E, h33^{km}, mb3.8/2, Error ellipse: s-maj=23.3km s-min=14.2km az=125.2*
ISC 04 18:56:36.6±0.4, **30.77N**±0.03×**56.85E**±0.05, **h10**^{km}, **n69**, σ**1^{s}23**/72, **mb3.7**/11, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.79**	**186**	*e*PG	**Pg**	**18 56 51.4**	**-1.0**
KRBR				*e*SG	**Sg**	**18 57 02.8**	**-0.2**
KRBR				AML	AML	18 57 10.8	
	comp=N,3µm,0.4s						
KRBR	**Kerman**	**0.79**	**186**	*e*Pg	**Pg**	**18 56 51.4**	**-1.0**
	SNR=90						
KRBR				*e*Sg	**Sg**	**18 57 02.8**	**-0.2**
	comp=N,3µm,0.4s,SNR=90						
IBAF	**Bafgh**	**1.37**	**307**	Pg	**Pg**	**18 57 01.5**	**-2.5**
IMEH	**Mehriz**	**2.02**	**288**	Pn	**Pn**	**18 57 12.3**	**+1.2**
ICHK	**Chekchek**	**2.55**	**306**	Pn	**Pn**	**18 57 19.4**	**+0.6**
ISAD	**Sadrabad**	**2.94**	**294**	Pn	**Pn**	**18 57 25.3**	**+1.0**
BNDS	**Bandar-Abbas**	**3.41**	**190**	*e*PN	**Pn**	**18 57 32.2**	**+1.2**
BNDS				AML	AML	18 58 20.6	
	comp=N,163nm,0.6s						
IPAR	**Pars**	**3.42**	**255**	Pn	**Pn**	**18 57 32.4**	**+1.3**
ZHSF	**Zahedan**	**3.59**	**108**	*e*PN	**Pn**	**18 57 33.3**	**-0.2**
IMOK	**Mook**	**3.98**	**245**	Pn	**Pn**	**18 57 36.7**	**-2.4**
NASN	**Na'in**	**3.99**	**301**	*e*PN	**Pn**	**18 57 40.1**	**+0.8**
NASN				*e*SG	**Sg**	**18 58 42.3**	**-7.3**
NASN				AML	AML	18 58 46.1	
	comp=N,116nm,0.4s						
NASN	**Na'in**	**3.99**	**301**	*e*Pn	**Pn**	**18 57 40.1**	**+0.8**
	SNR=52						
NASN				*e*Sg	**Sg**	**18 58 42.3**	**-7.3**
	comp=N,116nm,0.4s,SNR=90						
GHIR	**Ghir-Karzin**	**4.18**	**235**	*e*PN	**Pn**	**18 57 42.5**	**+0.6**
GHIR				AML	AML	18 59 05.7	
	comp=N,45nm,0.4s						
IGAR	**Garneh**	**4.24**	**291**	Pn	**Pn**	**18 57 41.6**	**-1.2**
IZEF	**Zefreh**	**4.39**	**300**	Pn	**Pn**	**18 57 41.9**	**-3.1**
IKLH	**Kalahroud**	**5.15**	**301**	Pn	**Pn**	**18 57 52.2**	**-3.4**
IANJ	**Anjiloo**	**5.29**	**333**	Pn	**Pn**	**18 57 56.7**	**-1.0**
IPIR	**Pirpir**	**5.42**	**292**	Pn	**Pn**	**18 57 54.8**	**-4.7**
ILAS	**Lasjerd**	**5.64**	**326**	Pn	**Pn**	**18 58 01.3**	**-1.3**
IMOG	**Moghan**	**5.71**	**21**	Pn	**Pn**	**18 58 03.0**	**-0.6**
ISHM	**Shahmirzad**	**5.84**	**330**	Pn	**Pn**	**18 58 05.3**	**-0.1**
IFIR	**Firoozkooh**	**5.95**	**326**	Pn	**Pn**	**18 58 06.9**	**0.0**
IVRN	**Varamin**	**6.03**	**316**	Pn	**Pn**	**18 58 08.5**	**+0.4**
IVRN	**Varamin**	**6.03**	**316**	Pn	**Pn**	**18 58 08.7**	**+0.6**
IVRN	**Varamin**	**6.03**	**316**	Pn	**Pn**	**18 58 08.7**	**+0.6**
IKRD	**Kardeh**	**6.14**	**13**	Pn	**Pn**	**18 58 12.8**	**+3.1**
IMYA	**Miamay**	**6.18**	**25**	Pn	**Pn**	**18 58 09.4**	**-0.8**
IDMV	**Damavand**	**6.27**	**321**	Pn	**Pn**	**18 58 11.3**	**-0.2**
IDMV	**Damavand**	**6.27**	**321**	Pn	**Pn**	**18 58 11.4**	**-0.1**
IDMV	**Damavand**	**6.27**	**321**	Pn	**Pn**	**18 58 11.4**	**-0.1**
ISFR	**Esferayen**	**6.33**	**8**	Pn	**Pn**	**18 58 14.1**	**+1.8**
IQOM	**Qom**	**6.34**	**311**	Lg		18 59 27.0	
DAMV	**Damavand**	**6.34**	**321**	*e*PN	**Pn**	**18 58 12.4**	**-0.1**
IAFJ	**Afjeh**	**6.65**	**321**	Pn	**Pn**	**18 58 15.7**	**-1.1**
IAFJ	**Afjeh**	**6.65**	**321**	Pn	**Pn**	**18 58 17.4**	**+0.6**
IAFJ	**Afjeh**	**6.65**	**321**	Pn	**Pn**	**18 58 17.4**	**+0.6**
ISHV	**Shirvan**	**6.78**	**6**	Pn	**Pn**	**18 58 19.5**	**+0.8**
IEMG	**Emamqoli**	**6.79**	**12**	Pn	**Pn**	**18 58 19.8**	**+1.0**
ASAO	**Ashtian**	**6.88**	**305**	*e*PN	**Pn**	**18 58 19.8**	**-0.2**
IRAZ	**Razeghan**	**7.42**	**310**	Pn	**Pn**	**18 58 34.2**	**+6.5**
IRAZ				Lg		19 00 27.4	
IGZV	**Gazvin**	**7.87**	**317**	Pn	**Pn**	**18 58 35.4**	**+1.4**
RDF	**Al-Radifah**	**8.29**	**260**	*e*P	**P**	**18 58 39.0**	**-0.7**
NAY	**Al-Naaiem**	**8.47**	**262**	*e*P	**P**	**18 58 42.1**	**-0.2**
MALT	**Malatya**	**16.93**	**301**	*e*P	**P**	**19 00 35.5**	**+0.4**
MALT				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MALT	**Malatya**	**16.93**	**301**	*e*P	**P**	**19 00 35.5**	**+0.4**
	comp=Z,2.3nm,0.9s						
MALT	**Malatya**	**16.93**	**301**	*e*P	**P**	**19 00 35.5**	**+0.4**
	comp=Z,2.3nm,0.9s						
ASF	**Jabal al Asfar**	**17.08**	**280**	P	**P**	**19 00 39.7**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=54,slow=4.1,SNR=3.9						
KIV	**Kislovodsk**	**17.29**	**324**	P	**P**	**19 00 39.0**	**-0.6**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIV	**Kislovodsk**	**17.29**	**324**	P	**P**	**19 00 39.0**	**-0.6**
	comp=Z,6.5nm,0.8s						
KIV	**Kislovodsk**	**17.29**	**324**	P	**P**	**19 00 39.0**	**-0.6**
	comp=Z,6.5nm,0.8s						
CSS	**Prodhromos**	**20.18**	**288**	*e*P	**P**	**19 01 15.6**	**+1.5**
	comp=Z,15nm,1.3s						
CSS	**Prodhromos**	**20.18**	**288**	*e*P	**P**	**19 01 15.6**	**+1.5**
	comp=Z,15nm,1.3s						
BRTR	**Keskin Array B**	**20.91**	**302**	P	**P**	**19 01 20.4**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=119,slow=13,SNR=6.8						
ISP	**Isparta**	**22.83**	**295**	P	**P**	**19 01 44.3**	**+3.4**
ISP				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.1						
ISP	**Isparta**	**22.83**	**295**	P	**P**	**19 01 44.3**	**+3.5**
	comp=Z,8.5nm,1.1s,mb4.1						
BRVK	**Borovoye**	**24.33**	**20**	*e*P	**P**	**19 01 53.1**	**-2.2**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.2						
BRVK	**Borovoye**	**24.33**	**20**	*e*P	**P**	**19 01 53.1**	**-2.2**
	comp=Z,0.5nm,0.9s,mb2.9						
BRVK	**Borovoye**	**24.33**	**20**	*e*P	**P**	**19 01 53.1**	**-2.2**
	comp=Z,0.5nm,0.9s,mb2.9						
BVAR	**Borovoye Array**	**24.33**	**20**	P	**P**	**19 01 55.4**	**+0.1**
	comp=Z,1.6nm,0.6s,mb3.6,baz=192,slow=8.2,SNR=19						
MKAR	**Makanchi Array**	**25.32**	**44**	P	**P**	**19 02 04.6**	**-0.3**
	comp=Z,0.7nm,0.7s,mb3.3,baz=227,slow=9.3,SNR=7.3						
AKASG	**Malin Array Be**	**28.62**	**322**	P	**P**	**19 02 34.0**	**-1.1**
	comp=Z,0.9nm,0.7s,mb3.6,baz=136,slow=8.7,SNR=5.3						
ZAL	**Zalesovo**	**30.67**	**33**	P	**P**	**19 02 53.1**	**-0.2**
	comp=Z,1.1nm,0.6s,mb3.9,baz=250,slow=9.6,SNR=5.8						
TIP	**Timpagrande**	**33.69**	**296**	*e*P	**P**	**19 03 15.2**	**-4.6**
FINES	**FINESS Array B**	**36.70**	**336**	P	**P**	**19 03 43.8**	**-1.5**
	comp=Z,1.9nm,0.8s,mb4.0,baz=121,slow=11,SNR=4.9						
GERES	**GERESS Array B**	**37.16**	**312**	P	**P**	**19 03 48.4**	**-0.8**
	comp=Z,0.3nm,0.5s,mb3.4,baz=108,slow=4.2,SNR=4.3						
CART	**Cartagena**	**47.70**	**295**	P	**P**	**19 05 17.9**	**+2.6**
	comp=Z,16nm,1.0s,mb5.0						
YKA	**Yellowknife Ar**	**86.81**	**356**	P	**P**	**19 09 24.3**	**+2.5**
	comp=Z,0.2nm,0.5s,mb3.6,baz=359,slow=6.2,SNR=5.9						
YKA	**Yellowknife Ar**	**86.81**	**356**	P	**P**	**19 09 24.3**	**+2.5**
WRA	**Warramunga Arr**	**89.84**	**113**	P	**P**	**19 09 37.5**	**+0.2**
	comp=Z,0.1nm,0.5s,mb3.4,baz=312,slow=4.0,SNR=2.9						

IDC ***04*** *19:31:13.7±2.0, 8.65S×126.91E, mb3.5/1, mb1 3.7/3, mb1mx3.5/15, mbtmp3.5/3, ML3.1/1, Error ellipse: s-maj=254.7km s-min=29.0km az=62.0*
ISC 04 19:31:16.1±1.4, **8.3S**±0.2×**127.7E**±0.3, **h33**^{km}, **n6**, σ**0^{s}61**/10, **mb3.5**/1, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.39**	**134**	*e*P	**P**	**19 32 50.6**	**+0.2**
WRA	**Warramunga Arr**	**13.24**	**152**	Pn	**P**	**19 34 23.9**	**-0.6**
	0.4nm,0.3s,baz=326,slow=14,SNR=23						
WRA				Sn	**S**	**19 36 43.0**	**-8.6**
	0.8nm,0.3s,baz=331,slow=22,SNR=7.4						
WB2	**Warramunga Arr**	**13.25**	**152**	*e*P	**P**	**19 34 24.4**	**-0.1**
WB2				*e*S	**S**	**19 36 44.4**	**-7.3**
ASPA	**Alice Springs**	**16.41**	**160**	*e*P	**P**	**19 35 10.7**	**+5.1**
ASPA				*e*S	**S**	**19 38 05.0**	**-1.0**
ASAR	**Alice Springs**	**16.41**	**160**	Pn	**P**	**19 35 06.3**	**+0.8**
	0.1nm,0.3s,baz=334,slow=8.9,SNR=12						
ASAR				Sn	**S**	**19 38 06.8**	**+0.8**
	0.2nm,0.3s,baz=318,slow=19,SNR=6.9						
MKAR	**Makanchi Array**	**68.08**	**328**	P	**P**	**19 42 14.6**	**-0.1**
	0.3nm,0.6s,mb3.5,baz=118,slow=8.0,SNR=4.0						

BJI ***04*** *19:45:31.8, 19.70S×177.70W, h537^{km}, mB4.6, mb4.2*
NEIC ***04*** *19:45:31.8±0.8, 19.74S×177.74W, h537^{km}±11^{km}, mb4.1/6, Error ellipse: s-maj=12.0km s-min=9.9km az=117.0*
IDC ***04*** *19:45:31.8±1.6, 19.73S×177.79W, h529^{km}±22^{km}, mb3.6/9, mb1 3.7/12, mb1mx3.5/22, mbtmp4.6/12, Error ellipse: s-maj=17.8km s-min=14.3km az=99.0*
ISC 04 19:45:31.7±0.9, **19.78S**±0.09×**177.7W**±0.1, **h556**^{km}±16^{km}, **n31**, σ**0^{s}80**/30, **mb4.1**/13, **2C**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.16**	**45**	P	**P**	**19 47 32.0**	**0.0**
	4.0nm,0.3s,baz=53,slow=14,SNR=6.8						
AFI				S	**S**	**19 49 07.8**	**-0.1**
	3.5nm,0.3s,baz=184,slow=23,SNR=5.7						
AFI	**Afiamalu**	**8.16**	**45**	*e*Pn	**P**	**19 47 30.7**	**-1.2**
DZM	**Mont Dzumac**	**14.96**	**258**	P	**P**	**19 48 41.8**	**+1.5**
	0.5nm,0.3s,baz=0.9,slow=17,SNR=3.9						
URZ	**Urewera**	**18.95**	**193**	P	**P**	**19 49 17.9**	**-0.8**
	8.5nm,0.3s,baz=287,slow=3.5,SNR=41						
RPZ	**Rata Peaks**	**25.65**	**199**	P	**P**	**19 50 19.2**	**-0.1**
	7.7nm,0.4s,mb4.7,baz=46,slow=0.8,SNR=7.5						
CTA	**Charters Tower**	**33.82**	**263**	P	**P**	**19 51 30.4**	**+0.9**
	14nm,0.4s,mb4.8,baz=88,slow=10,SNR=53						
CTA	**Charters Tower**	**33.82**	**263**	P	**P**	**19 51 30.4**	**+0.9**
CTAO	**Charters Tower**	**33.82**	**263**	*e*P	**P**	**19 51 30.0**	**+0.4**
	15nm,0.4s,mb4.9						
PMG	**Port Moresby**	**35.44**	**282**	P	**P**	**19 51 42.5**	**-0.5**
	15nm,0.7s,mb4.6,baz=141,slow=3.2,SNR=6.3						
PMG	**Port Moresby**	**35.44**	**282**	*e*P	**P**	**19 51 43.1**	**0.0**
STKA	**Stephens Creek**	**38.33**	**243**	P	**P**	**19 52 06.6**	**0.0**
	1.6nm,0.7s,mb3.7,baz=121,slow=17,SNR=5.0						
ASAR	**Alice Springs**	**44.93**	**256**	P	**P**	**19 52 59.2**	**+0.1**
	5.6nm,0.8s,mb4.2,baz=92,slow=7.4,SNR=113						
ASPA	**Alice Springs**	**44.94**	**256**	*e*P	**P**	**19 52 59.2**	**0.0**
ASPA				*e*S	**S**	**19 58 54.9**	**-2.5**
WB2	**Warramunga Arr**	**44.94**	**261**	*e*P	**P**	**19 52 58.8**	**-0.4**
WRAB	**Tennant Creek**	**44.95**	**261**	*e*P	**P**	**19 52 58.5**	**-0.7**
	14nm,1.0s,mb4.4						
WRA	**Warramunga Arr**	**44.95**	**261**	P	**P**	**19 52 59.0**	**-0.3**
	2.8nm,0.4s,mb4.1,baz=97,slow=7.6,SNR=191						
MBWA	**Marble Bar**	**58.26**	**257**	*e*P	**P**	**19 54 34.6**	**-0.9**
	5.8nm,0.7s,mb3.9						
SBA	**Scott Base**	**58.60**	**184**	*e*P	**P**	**19 54 37.3**	**+0.3**
	5.9nm,0.9s,mb3.8						
VNDA	**Vanda**	**58.65**	**185**	P	**P**	**19 54 38.6**	**+1.2**
	1.6nm,0.6s,mb3.4,baz=352,slow=6.7,SNR=16						
VNDA	**Vanda**	**58.65**	**185**	*e*P	**P**	**19 54 38.4**	**+1.0**
	2.3nm,0.8s,mb3.5						
MJAR	**Matsushiro Arr**	**69.78**	**323**	P	**P**	**19 55 48.3**	**+0.2**
	2.6nm,0.5s,mb4.0,baz=160,slow=6.9,SNR=23						
MAJO	**Matsushiro**	**69.78**	**323**	*e*P	**P**	**19 55 47.6**	**-0.5**
	3.4nm,0.6s,mb4.0						
MAT	**Matsushiro**	**69.78**	**323**	*e*P	**P**	**19 55 48.0**	**-0.1**
MAT	**Matsushiro**	**69.78**	**323**	P	**P**	**19 55 47.6**	**-0.5**
CN2	**Changchun**	**81.89**	**322**	*e*P	**P**	**19 56 55.3**	**+1.1**
SYO	**Syowa Base**	**87.48**	**193**	⇑P	**P**	**19 57 20.5**	**-0.4**
SYO	**Syowa Base**	**87.48**	**193**	⇑PcP	PcP	19 57 24.5	+2.0
CMAR	**Chiang Mai Arr**	**90.11**	**289**	P	**P**	**19 57 36.4**	**+2.1**
	1.1nm,0.9s,mb3.7,baz=129,slow=4.3,SNR=5.9						
GTA	**Gaotai**	**96.71**	**309**	P	**P**	**19 58 03.4**	**-0.5**
AKASG	**Malin Array Be**	**142.51**	**332**	PKhKP		20 03 59.4	
	0.1nm,0.3s,baz=37,slow=4.8,SNR=4.1						
GERES	**GERESS Array B**	**149.58**	**345**	PKPbc	PKPdf	20 04 20.3	+7.4
	0.3nm,0.7s,baz=27,slow=3.0,SNR=4.4						

NEIC ***04*** *20:00:09.1±0.6, 23.89S×66.59W, h200^{km}±11^{km}, mb3.7/1, Error ellipse: s-maj=12.2km s-min=9.6km az=102.0*
IDC ***04*** *20:00:09.4±1.2, 23.88S×66.55W, h193^{km}±17^{km}, mb1 3.0/6, mb1mx3.0/19, mbtmp3.4/6, Error ellipse: s-maj=22.1km s-min=16.2km az=78.0*
GUC ***04*** *20:00:11.3±0.8, 24.13S×66.67W, h150^{km}, ML4.0*
ISC 04 20:00:08.1±0.7, **23.95S**±0.06×**66.7W**±0.1, **h218**^{km}±21^{km}, **n13**, σ**1^{s}09**/19, **2C**, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.41**	**303**	⇑*i*P	**P**	**20 00 54.2**	**+1.6**
LVC				*i* S	**S**	**20 01 27.1**	**+0.2**
LVC				AMP		20 01 30.4	
	comp=E,113nm,0.3s						
LVC	**Limon Verde**	**2.41**	**303**	P	**P**	**20 00 54.2**	**+1.7**
	comp=E,8.5nm,0.3s,baz=132,slow=5.9,SNR=190						
LVC				S	**S**	**20 01 27.8**	**+0.8**
	comp=E,13nm,0.3s,baz=272,slow=22,SNR=25						
LVC	**Limon Verde**	**2.41**	**303**	*e*Pn	**P**	**20 00 53.5**	**+1.0**
LVC				*e*Sn	**S**	**20 01 19.2**	**-7.8**
ANCH	**Antofagasta**	**3.38**	**274**	⇑*i*P	**P**	**20 01 04.9**	**+1.3**
ANCH				*i* S	**S**	**20 01 45.7**	**-1.0**
ANCH				AMP		20 01 48.5	
	comp=N,294nm,0.3s						
CPN1	**Cerro Paranal**	**3.42**	**258**	*i* P	**P**	**20 01 05.5**	**+1.4**
CPN1				*i* S	**S**	**20 01 46.6**	**-0.9**
CPN1				AMP		20 01 48.8	
	comp=E,282nm,0.3s						
CRCH	**Chaqaral**	**4.26**	**235**	*i* S	**S**	**20 02 03.9**	**-1.7**
CFAA	**Coronel Fontan**	**7.74**	**190**	P	**P**	**20 01 59.9**	**+1.2**
	comp=E,0.1nm,0.3s,baz=307,slow=3.1,SNR=14						
LPAZ	**La Paz**	**7.74**	**350**	P	**P**	**20 01 59.5**	**+0.7**
	comp=E,0.3nm,0.3s,baz=194,slow=8.7,SNR=11						
LPAZ				S	**S**	**20 03 25.0**	**-0.3**
	comp=E,0.1nm,0.3s,baz=263,slow=22,SNR=2.8						
LPAZ	**La Paz**	**7.74**	**350**	*e*Pn	**P**	**20 01 58.7**	**0.0**
LPAZ				S	**S**	**20 03 25.0**	**-0.3**
CPUP	**Villa Florida**	**8.84**	**107**	P	**P**	**20 02 12.4**	**-0.5**
	comp=E,0.1nm,0.3s,baz=299,slow=17,SNR=3.9						
SIV	**San Ignacio**	**9.54**	**35**	P	**P**	**20 02 20.4**	**-1.7**
	comp=E,0.1nm,0.3s,baz=203,slow=19,SNR=4.1						
PLCA	**Paso Flores**	**17.04**	**190**	P	**P**	**20 03 54.9**	**0.0**
	comp=E,0.1nm,0.3s,baz=6.5,slow=7.0,SNR=3.6						
MKAR	**Makanchi Array**	**146.33**	**40**	PKPbc	PKPbc	20 19 26.4	+3.6
	comp=E,0.3nm,0.5s,baz=315,slow=3.4,SNR=7.0						

IDC 04 20:07:26.3±7.1, **20.80S**×**179.86E**, **mb3.5**/2, **mb1 3.8**/2, **mb1mx3.5**/15, **mbtmp3.5**/2, **Error ellipse: s-maj=254.4km s-min=113.7km az=154.0**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.50**	**257**	P	P	20 15 22.8	-2.5
	0.5nm,0.7s,baz=93,slow=7.4,SNR=8.0						
WRA	**Warramunga Arr**	**42.57**	**263**	P	P	20 15 25.0	-0.9
	0.4nm,0.6s,baz=98,slow=8.3,SNR=10						
AKASG	**Malin Array Be**	**142.27**	**329**	PKP	PKPdf	20 27 00.4	-2.1
	1.0nm,0.7s,baz=43,slow=4.3,SNR=6.8						

NEIC ***04*** *20:17:14.4±0.4, 44.18N×105.40W, ML3.1, Error ellipse: s-maj=6.0km s-min=5.6km az=169.0, Suspected Mining explosion.*
NEIC 15 km [10 miles] SSE of Gillette.
IDC ***04*** *20:17:17.2±2.6, 44.38N×105.82W, h18^{km}±20^{km}, mb3.7/1, mb1 3.6/4, mb1mx3.3/23, mbtmp3.5/4, ML3.2/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/30, Error ellipse: s-maj=27.6km s-min=11.0km az=142.0*
ISC 04 20:17:12.8±0.6, **44.18N**±0.04×**105.42W**±0.06, **n37**, σ**1^{s}24**/39, **mb3.9**/1, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.99**	**93**	*e*P	**Pb**	**20 17 33.0**	**+0.4**
LAO	**LASA Array**	**2.57**	**347**	*e*Pn	**Pn**	**20 17 58.2**	**+1.8**
RWWY	**Rawlins**	**2.82**	**209**	*e*Pn	**Pn**	**20 18 00.9**	**+1.0**
RWWY				*e*S	**Sn**	**20 18 37.3**	**+2.2**
PHWY	**Pilot Hill**	**2.88**	**181**	*e*Pn	**Pn**	**20 18 01.1**	**+0.3**
BW06	**Boulder Array**	**3.33**	**246**	*e*Pn	**Pn**	**20 18 08.1**	**+0.9**
PDAR	**Pinedale Array**	**3.33**	**246**	Pn	**Pn**	**20 18 08.8**	**+1.6**
	2.5nm,0.3s,baz=70,slow=17,SNR=8.0						
PDAR				Lg		20 18 56.1	
	6.8nm,0.3s,baz=55,slow=31,SNR=8.5						
GCMT	**Greycliff**	**3.42**	**300**	*e*P	**Pn**	**20 18 10.0**	**+1.6**
LKWY	**Lake**	**3.59**	**278**	*e*Pg	**Pg**	**20 18 23.0**	**-1.5**
MOOW	**Moose Ponds**	**3.87**	**265**	Pn	**Pn**	**20 18 15.9**	**+1.1**
WUWY	**Wally Ulrich**	**3.91**	**262**	Pn	**Pn**	**20 18 16.9**	**+1.5**
SNOW	**Snow King Moun**	**3.93**	**261**	*e*Pn	**Pn**	**20 18 19.4**	**+3.7**
IMW	**Indian Meadow**	**3.99**	**268**	*e*Pn	**Pn**	**20 18 17.5**	**+0.9**
TPAW	**Teton Pass**	**4.07**	**262**	*e*Pn	**Pn**	**20 18 15.6**	**-2.0**
QLMT	**Earthquake Lak**	**4.35**	**281**	*e*Pg	**Pg**	**20 18 33.9**	**-5.7**
RRI2	**Red Ridge**	**4.36**	**261**	*e*Pn	**Pn**	**20 18 22.1**	**+0.3**
AHID	**Auburn Hatcher**	**4.37**	**253**	*e*Pg	**Pg**	**20 18 33.8**	**-6.2**
ISCO	**Idaho Springs**	**4.38**	**182**	Pn	**Pn**	**20 18 22.7**	**+0.7**
ISCO				*e*Sn	**Sn**	**20 19 12.3**	**-2.3**
BOZ	**Bozeman (W)**	**4.65**	**291**	Pn	**Pn**	**20 18 24.4**	**-1.5**
HRY	**Holter Researc**	**5.17**	**302**	*e*Pn	**Pn**	**20 18 32.6**	**-0.7**
HWUT	**Hardware Ranch**	**5.20**	**242**	*e*Pn	**Pn**	**20 18 33.5**	**-0.2**
	11nm,0.6s						
MCMT	**McKenzie Canyo**	**5.36**	**280**	*e*Pn	**Pn**	**20 18 36.5**	**+0.6**
TCUT	**Toone Canyon**	**5.38**	**237**	*e*Pn	**Pn**	**20 18 36.4**	**+0.2**
TCUT				*e*Pg	**Pg**	**20 18 57.6**	**-2.5**
DAU	**Daniels Canyon**	**5.74**	**231**	*e*Pn	**Pn**	**20 18 40.2**	**-1.1**
HVU	**Hansel Valley**	**5.91**	**249**	*e*Pg	**Pg**	**20 19 02.8**	**-7.9**
SPUT	**South Promonto**	**5.92**	**243**	*e*Pg	**Pg**	**20 19 02.5**	**-8.5**
CHMT	**Chamberlain Mo**	**6.14**	**299**	*e*Pn	**Pn**	**20 18 46.6**	**-0.4**
RW3	**Ridgway**	**6.17**	**197**	*e*Pg	**Pg**	**20 19 09.4**	**-6.5**
PV10	**Paradox Valley**	**6.41**	**206**	*e*Pg	**Pg**	**20 19 12.2**	**-8.5**
PV01	**Paradox Valley**	**6.49**	**203**	*e*Pn	**Pn**	**20 18 52.0**	**+0.1**
BGU	**Big Grassy Mou**	**6.50**	**243**	*e*Pg	**Pg**	**20 19 13.3**	**-9.1**
MSO	**Missoula**	**6.55**	**297**	P	**Pn**	**20 18 51.7**	**-1.0**
	1.6nm,0.7s						
DUG	**Dugway**	**6.79**	**237**	*e*Pn	**Pn**	**20 18 54.8**	**-1.2**
	7.8nm,0.5s						
ULM	**Lac du Bonnet**	**8.88**	**44**	Pn	**P**	**20 19 24.1**	**-1.2**
	0.6nm,0.3s,baz=239,slow=13,SNR=4.2						
ULM				Lg		20 21 50.4	
	0.3nm,0.3s,baz=313,slow=21,SNR=2.5						
NEW	**Newport**	**9.08**	**301**	LR	LR	20 23 13.5	
	comp=Z,66nm,18.8s,baz=316,slow=41						
TXAR	**Lajitas Array**	**14.88**	**174**	Pn	**P**	**20 20 51.0**	**+4.7**
	0.0nm,0.3s,baz=356,slow=12,SNR=6.0						
TXAR				Pg	P	20 21 52.1	+66
	0.0nm,0.3s,baz=355,slow=15,SNR=5.2						
TXAR				Lg		20 25 12.1	
	0.0nm,0.3s,baz=18,slow=24,SNR=7.7						
TXAR	**Lajitas Array**	**14.88**	**174**	Pn	**P**	**20 20 51.0**	**+4.7**
TXAR				Pg	P	20 21 52.1	+66
TXAR				Lg		20 25 12.2	
MKAR	**Makanchi Array**	**89.16**	**355**	P	**P**	**20 30 10.5**	**-0.5**
	0.6nm,0.8s,mb3.9,slow=6.1,SNR=4.3						

IDC 04 20:54:56.9±2.3, **9.32S**×**128.96E**, **mb3.4**/1, **mb1 3.3**/3, **mb1mx3.2**/15, **mbtmp3.1**/3, **ML2.9**/2, **Error ellipse: s-maj=246.0km s-min=32.6km az=64.0**, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**11.77**	**154**	Pn	P	20 57 45.4	-3.8
	0.1nm,0.3s,baz=332,slow=14,SNR=16						
WRA				Sn	S	20 59 54.0	-8.6
	0.2nm,0.3s,baz=342,slow=22,SNR=6.1						
ASAR	**Alice Springs**	**15.03**	**162**	Pn	P	20 58 32.2	-0.3
	0.1nm,0.3s,baz=339,slow=8.9,SNR=3.9						
ASAR				Sn	S	21 01 23.4	+2.7
	0.0nm,0.3s,baz=254,slow=33,SNR=3.6						
MKAR	**Makanchi Array**	**69.61**	**328**	P	P	21 06 08.0	-2.0
	0.4nm,0.8s,baz=129,slow=7.8,SNR=4.1						

PRU ***04*** *21:27:32.9, 44.37N×10.57E*
ROM ***04*** *21:27:35.5±0.1, 44.56N×10.35E, h24^{km}±2^{km}, Md3.5/5, Ml3.1/7, Error ellipse: s-maj=2.4km s-min=2.2km az=139.0*
NEIC ***04*** *21:27:35.8±0.3, 44.61N×10.44E, h10^{km}, ML3.8(STR), ML3.7(VIE), ML3.6(LDG), Error ellipse: s-maj=4.8km s-min=2.9km az=131.0*
CSEM ***04*** *21:27:35.8±0.1, 44.56N×10.47E, h10^{km}, ML3.7/28, Error ellipse: s-maj=1.1km s-min=1.0km az=92.0*
STR ***04*** *21:27:36.1±1.7, 44.59N×10.62E, h10^{km}±1^{km}, Ml3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LDG ***04*** *21:27:37.4±0.1, 44.64N×10.44E, h10^{km}, Ml3.6/28, Error ellipse: s-maj=2.4km s-min=1.8km az=26.0*
GEN ***04*** *21:27:37.5, 44.53N×10.45E, h10^{km}, ML3.2*
ISC 04 21:27:36.4±0.3, **44.59N**±0.02×**10.38E**±0.02, **h25**^{km}±3^{km}, **n154**, σ**1^{s}27**/223, **6C-3D**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRAM		**0.24**	**247**	P	**Pb**	**21 27 42.9**	**+0.2**
VALM		**0.26**	**202**	P	**Pb**	**21 27 42.7**	**-0.2**
GSCL	**Gusciola**	**0.28**	**148**	Pg	**Pb**	**21 27 41.9**	**-1.3**
GSCL				Sg	**Sb**	**21 27 46.5**	**-1.3**
BACM		**0.38**	**215**	P	**Pb**	**21 27 44.5**	**-0.2**
SARO	**Sassorosso**	**0.40**	**178**	P	**Pb**	**21 27 44.1**	**-1.0**
CODM		**0.43**	**243**	P	**Pb**	**21 27 46.2**	**+0.8**
VLC	**Villacollemand**	**0.43**	**179**	*e*Pn	**Pn**	**21 27 43.7**	**-3.1**
VLC	**Villacollemand**	**0.43**	**179**	Pg	**Pb**	**21 27 45.0**	**-0.5**
VLC				Sg	**Sb**	**21 27 50.9**	**-0.7**
	1µm,1.1s						
VLC	**Villacollemand**	**0.43**	**179**	*e*Pn	**Pn**	**21 27 43.7**	**-3.1**
VLC	**Villacollemand**	**0.43**	**179**	Pg	**Pb**	**21 27 45.0**	**-0.5**
VLC				Sg	**Sb**	**21 27 50.9**	**-0.7**
	1µm,1.1s						
VINC	**Vinca**	**0.48**	**200**	P	**Pb**	**21 27 46.1**	**-0.1**
ZCCA	**Zocca**	**0.49**	**119**	Pg	**Pb**	**21 27 46.3**	**-0.1**
	177nm,0.3s						
BDI	**Bagni Di Lucca**	**0.55**	**163**	Pg	**Pb**	**21 27 46.1**	**-1.3**
RAVA	**Ravarino**	**0.55**	**72**	Pg	**Pb**	**21 27 48.1**	**+0.6**
RAVA				Sg	**Sb**	**21 27 57.5**	**+2.5**
	4µm,0.9s						
MAIM		**0.68**	**173**	P	**Pb**	**21 27 49.1**	**-0.5**
BOB	**Bobbio (Coli)**	**0.69**	**285**	Pg	**Pb**	**21 27 50.9**	**+1.2**
	1µm,0.5s						
PII	**Pisa**	**0.87**	**173**	Pg	**Pb**	**21 27 52.3**	**-0.5**
SEI	**Scarperia**	**0.88**	**127**	Pg	**Pb**	**21 27 53.4**	**+0.4**
	2µm,0.7s						
SAL	**Salo**	**1.02**	**6**	Pg	**Pn**	**21 27 55.8**	**+0.5**
SAL				Sg	**Sb**	**21 28 11.9**	**+3.5**
	1µm,0.5s						
GENL	**Genova Univers**	**1.02**	**260**	P	**Pn**	**21 27 56.8**	**+1.5**
VMG	**Vicchio**	**1.05**	**126**	Pg	**Pn**	**21 27 56.6**	**+1.0**
	415nm,0.7s						
PGD	**Poggio Sodo**	**1.20**	**126**	Pg	**Pn**	**21 27 59.2**	**+1.4**
	74nm,0.5s						
SFI	**Santa Sofia**	**1.26**	**122**	Pg	**Pn**	**21 27 59.4**	**+0.8**
SFI				Sg	**Sn**	**21 28 18.4**	**+3.6**
	250nm,0.9s						
MDI	**Monti di Nese**	**1.28**	**339**	Pg	**Pn**	**21 27 59.6**	**+0.6**
MDI				Sg	**Sn**	**21 28 19.0**	**+3.6**
	655nm,0.3s						
PCP	**Pian Castagno**	**1.31**	**269**	P	**Pn**	**21 28 01.7**	**+2.3**
PCP				S	**Sn**	**21 28 17.7**	**+1.5**
MABI	**Malga Bissina**	**1.47**	**4**	Pn	**Pn**	**21 28 02.0**	**+0.3**
	160nm,0.4s						
CRE	**Caprese Michel**	**1.49**	**130**	Pn	**Pn**	**21 28 02.4**	**+0.4**
GRFL	**Gerfalco**	**1.50**	**163**	Pn	**Pn**	**21 28 02.5**	**+0.3**
	20nm,0.4s						
FIN	**Finale Ligure**	**1.60**	**257**	Pn	**Pn**	**21 28 04.3**	**+0.7**
	240nm,0.4s						
MUGIO	**Muggio**	**1.63**	**325**	Pn	**Pn**	**21 28 04.4**	**+0.4**
VAI	**Varese**	**1.71**	**319**	Pn	**Pn**	**21 28 05.7**	**+0.6**
CTI	**Castel Tesino**	**1.71**	**31**	Pn	**Pn**	**21 28 04.7**	**-0.5**
	112nm,0.2s						
ROB	**Roburent**	**1.82**	**262**	P	**Pn**	**21 28 07.5**	**+0.8**
ARCI	**Arcidosso**	**1.91**	**155**	Pn	**Pn**	**21 28 07.7**	**-0.3**
	72nm,1.1s						
IMI	**Imperia**	**1.91**	**250**	Pn	**Pn**	**21 28 08.6**	**+0.6**
IMI				Sn	**Sn**	**21 28 32.2**	**+0.7**
	240nm,0.4s						
FSSB	**Fossombrone**	**1.95**	**117**	Pn	**Pn**	**21 28 10.2**	**+1.7**
MONE	**Monesi**	**1.95**	**256**	P	**Pn**	**21 28 09.5**	**+0.9**
APPI	**Appiano**	**1.98**	**17**	Pn	**Pn**	**21 28 09.1**	**+0.1**
ORO	**Oropa**	**1.99**	**302**	Pn	**Pn**	**21 28 09.3**	**+0.2**
	372nm,0.4s						
ORX	**Oropa**	**1.99**	**302**	P	**Pn**	**21 28 12.1**	**+2.9**
FUORN	**Ofenpass**	**2.03**	**358**	Pn	**Pn**	**21 28 11.1**	**+1.3**
NEGI	**Negi**	**2.06**	**250**	P	**Pn**	**21 28 10.3**	**+0.1**
TRAV		**2.08**	**297**	P	**Pn**	**21 28 12.6**	**+2.2**
SAOF	**Saorge**	**2.12**	**254**	Pn	**Pn**	**21 28 11.9**	**+1.0**
ARV	**Arcevia**	**2.15**	**120**	Pn	**Pn**	**21 28 13.8**	**+2.4**
ENR	**Entracque**	**2.15**	**261**	P	**Pn**	**21 28 12.6**	**+1.2**
AUTN	**L'Aution**	**2.20**	**255**	Pn	**Pn**	**21 28 13.2**	**+1.1**
STV2	**Anna di Valdie**	**2.21**	**262**	P	**Pn**	**21 28 13.6**	**+1.3**
DAVOX	**Davos**	**2.22**	**351**	Pn	**Pn**	**21 28 14.1**	**+1.7**
DAVOX				Sn	**Sn**	**21 28 42.8**	**+3.5**
SBF	**Sospel**	**2.24**	**252**	*e*Pn	**Pn**	**21 28 13.2**	**+0.5**
SBF				*e*Sn	**Sn**	**21 28 40.3**	**+0.6**
	224nm,0.4s						
ASS	**Assisi**	**2.24**	**132**	Pn	**Pn**	**21 28 13.6**	**+0.8**
	20nm,0.6s						
PGF	**Pioggiola**	**2.27**	**207**	*e*Pn	**Pn**	**21 28 12.6**	**-0.6**

PGF				eSn	Sn	21 28 39.7	-1.0
	51nm,0.5s						
SNTG	Esanatoglia	2.28	125	Pn	Pn	21 28 13.8	+0.5
	13nm,0.4s						
RSP	Reno Superiore	2.29	285	P	Pn	21 28 13.5	+0.1
TOUF	Mont Tournerai	2.32	257	Pn	Pn	21 28 15.1	+1.2
REVF	Revere	2.33	250	Pn	Pn	21 28 15.5	+1.5
PZZ	Prazzo	2.34	269	P	Pn	21 28 15.5	+1.3
MVIF	Mont Vial	2.42	255	Pn	Pn	21 28 16.4	+1.1
LSD	Ceresole Reale	2.44	292	P	Pn	21 28 19.4	+3.8
SEST	Monte Rota	2.52	30	Pn	Pn	21 28 17.2	+0.6
MBDF	Montbardon	2.58	274	ePn	Pn	21 28 17.9	+0.4
MBDF				eSn	Sn	21 28 47.4	-1.0
	76nm,0.4s						
RRL	Cesana Torines	2.58	279	P	Pn	21 28 20.7	+3.1
SCE	Schlegeis	2.62	20	ePn	Pn	21 28 18.0	-0.2
FVI	Forni Avoltri	2.62	39	Pn	Pn	21 28 17.1	-1.1
	279nm,1.5s						
CALN	Calern	2.65	253	Pn	Pn	21 28 19.5	+1.0
NRCA	Norcia	2.65	131	Pn	Pn	21 28 18.9	+0.4
	9.0nm,0.6s						
BNI	Bardonecchia	2.67	281	ePn	Pn	21 28 20.2	+1.3
SQTA	Sankt Quirin	2.69	12	⇑iPN	Pn	21 28 20.2	+1.0
SQTA				i SN	Sn	21 28 53.7	+2.3
DAVA	Damuels	2.72	353	⇑iPN	Pn	21 28 21.2	+1.6
DAVA				i SN	Sn	21 28 55.9	+3.9
LPG	La Plagne	2.73	291	ePn	Pn	21 28 19.8	+0.1
LPG				eSn	Sn	21 28 50.9	-1.3
	54nm,0.4s						
LPL	La Plagne	2.75	291	ePn	Pn	21 28 20.3	+0.4
LPL				eSn	Sn	21 28 51.6	-1.1
LPL				eSg	Sn	21 29 05.0	+12
	44nm,0.4s						
MOTA	Moosalm	2.80	10	⇑iPN	Pn	21 28 22.2	+1.5
MOTA				i SN	Sn	21 28 56.9	+2.8
WTTA	Wattenberg	2.82	18	⇓iPN	Pn	21 28 21.6	+0.7
WTTA				i SN	Sn	21 28 56.9	+2.5
VOJS	Vojsko	2.86	58	i Pn	Pn	21 28 19.6	-2.0
VOJS				eSn	Sn	21 28 53.1	-2.6
WATA	Walderalm	2.87	16	⇓iPN	Pn	21 28 22.8	+1.1
WATA				i SN	Sn	21 28 58.4	+2.6
FRF	La Foret Royal	2.88	250	ePn	Pn	21 28 22.0	+0.2
FRF				eSn	Sn	21 28 55.4	-0.6
	151nm,0.4s						
JAVS	Javornik	2.91	62	i Pn	Pn	21 28 20.0	-2.3
JAVS				eSn	Sn	21 28 53.5	-3.3
JAVS	Javornik	2.91	62	i Pn	Pn	21 28 20.0	-2.3
JAVS				eSn	Sn	21 28 53.5	-3.4
LMR	La Mourre	3.06	247	ePn	Pn	21 28 24.1	-0.3
LMR				eSn	Sn	21 29 00.2	-0.5
	134nm,0.4s						
AQU	L'Aquila	3.13	134	eP	Pn	21 28 26.5	+1.1
AQU	L'Aquila	3.13	134	eP	Pn	21 28 26.5	+1.0
NVLJ	Novalja	3.21	89	i Pn	Pn	21 28 24.2	-2.3
NVLJ				i Sn	Sn	21 29 00.0	-4.4
ORIF	Oris-en-Rattie	3.22	277	ePn	Pn	21 28 29.3	+2.6
ORIF				ePg	Pn	21 28 38.1	+11
ORIF				eSn	Sn	21 29 03.3	-1.4
	61nm,0.5s						
KBA	Koelnbreinsper	3.24	39	⇑iPN	Pn	21 28 27.2	+0.3
KBA				i SN	Sn	21 29 06.0	+0.8
KBA				i SG	Sn	21 29 21.8	+17
	30nm,0.4s						
TAVF	Tavernes	3.26	254	Pn	Pn	21 28 28.2	+1.0
PTQR	Pietraquaria	3.38	138	Pn	Pn	21 28 30.3	+1.3
	19nm,1.2s						
BBS	Basel-Blauen	3.50	326	Pn	Pn	21 28 30.6	-0.1
SMRF	Simiane la Rot	3.50	262	ePn	Pn	21 28 32.2	+1.5
SMRF				eSn	Sn	21 29 10.3	-1.5
SMRF				eSg	Sn	21 29 28.7	+17
	24nm,0.4s						
PUYF	Puyloubier	3.53	254	Pn	Pn	21 28 31.8	+0.7
BGLD	Berchtesgaden	3.57	30	⇓iPn	Pn	21 28 31.8	+0.2
CABF	La Chapelle	3.63	305	ePn	Pn	21 28 32.8	+0.3
CABF				eSn	Sn	21 29 12.9	-2.1
	27nm,0.4s						
FELD	Feldberg	3.68	334	Pn	Pn	21 28 32.2	-1.0
LOMF	Lomont	3.71	319	Pn	Pn	21 28 33.3	-0.3
GELF	Grande-Etoile	3.77	253	Pn	Pn	21 28 35.4	+0.9
MOF	Molkenrain	3.96	327	Pn	Pn	21 28 36.5	-0.7
HINF	Hinteralfeld	4.05	324	ePn	Pn	21 28 37.5	-1.0
HINF				eSn	Sn	21 29 22.0	-3.7
	60nm,0.4s						
VIVF	Saint-Julien-l	4.08	276	ePn	Pn	21 28 38.9	+0.1
VIVF				ePg	Pn	21 28 53.9	+15
VIVF				eSn	Sn	21 29 23.5	-2.8
	9.0nm,0.2s						
MOA	Molln	4.23	38	⇑iPN	Pn	21 28 39.8	-1.2
MOA				i SN	Sn	21 29 29.8	-0.5
ECH	Echery	4.26	330	Pn	Pn	21 28 40.3	-1.1
STU	Stuttgart	4.26	349	Pn	Pn	21 28 38.0	-3.5
STU				ePg	Pn	21 28 58.4	+17
STU	Stuttgart	4.26	349	Pn	Pn	21 28 38.0	-3.5
STU	Stuttgart	4.26	349	ePg	Pn	21 28 58.4	+17
WLS	Welschbruch	4.36	332	Pn	Pn	21 28 41.7	-1.1
CDF	Champ du Feu	4.38	332	ePn	Pn	21 28 41.9	-1.3
CDF				eSn	Sn	21 29 29.5	-4.6
	55nm,0.5s						
HAU	Haudompre	4.41	322	ePn	Pn	21 28 42.7	-0.9
HAU				eSn	Sn	21 29 30.6	-4.3
	68nm,0.3s						
ARSA	Arzberg	4.47	52	⇑iPN	Pn	21 28 43.0	-1.4
ARSA				i SN	Sn	21 29 35.1	-1.2
LASF	Ste Croix	4.71	266	ePn	Pn	21 28 47.5	-0.3
LASF				eSn	Sn	21 29 39.3	-3.0
	6.3nm,0.3s						
THEF	They Montfort	4.74	322	Pn	Pn	21 28 47.4	-0.8
GEC2	GERESS Array S	4.83	27	ePn	Pn	21 28 47.2	-2.3
GEC2				eSn	Sn	21 29 40.4	-5.0
SMF	Signal de Mont	5.03	296	ePn	Pn	21 28 51.5	-0.8
SMF				ePg	Pn	21 29 10.5	+18
SMF				eSn	Sn	21 29 46.1	-4.2
	51nm,0.6s						
KHC	Kasperske Hory	5.05	25	ePN	Pn	21 28 50.3	-2.2
KHC				ePG	Pn	21 29 09.4	+17
KHC				eSN	Sn	21 29 46.7	-4.1
KHC				ex	x	21 30 15.2	
KHC				eSG	Sn	21 30 20.5	+30
GRA1	Grafenberg Arr	5.14	6	ePn	Pn	21 28 51.9	-1.9
GRA1				eSn	Sn	21 29 47.8	-5.3
GRF	Grafenberg Arr	5.14	6	ePn	Pn	21 28 51.9	-1.9
GRF				eSn	Sn	21 29 47.8	-5.3
VSL	Villasalto	5.14	189	ePn	Pn	21 28 52.4	-1.5
VSL				eSn	Sn	21 29 52.6	-0.7
VSL	Villasalto	5.14	189	ePn	Pn	21 28 52.4	-1.5
VSL				eSn	Sn	21 29 52.6	-0.6
SFTF	Sexfontaines	5.17	316	ePn	Pn	21 28 53.2	-1.1
	baz=133						
SFTF				eSn	Sn	21 29 48.7	-5.2
	18nm,0.4s						
RFYF	Reffroy	5.27	322	ePn	Pn	21 28 55.0	-0.7
	baz=134						
RFYF				eSn	Sn	21 29 50.8	-5.5
	24nm,0.3s						
LOR	Lormes	5.28	303	ePn	Pn	21 28 55.4	-0.4
	baz=124						
LOR				eSn	Sn	21 29 51.8	-4.8
	96nm,0.5s						
NOTT	Nottersdorf	5.36	12	ePn	Pn	21 28 53.4	-3.6
NOTT				eSn	Sn	21 29 53.0	-5.6
MEZF	Maizieres J'vi	5.37	319	ePn	Pn	21 28 56.4	-0.7
	baz=133						
MEZF	Maizieres J'vi	5.37	319	ePn	Pn	21 28 56.4	-0.7
MEZF				eSn	Sn	21 29 53.7	-5.2
MEZF				eSg	Sn	21 30 25.5	+27
	7.6nm,0.4s						
AVF	Avril sur Loir	5.39	297	ePn	Pn	21 28 56.5	-0.9
AVF				ePg	Pn	21 29 16.0	+19
AVF				eSn	Sn	21 29 54.6	-4.9
	8.1nm,0.5s						
SSF	Saint Saulge	5.40	300	ePn	Pn	21 28 56.4	-1.2
SSF				eSn	Sn	21 29 54.7	-5.0
	10nm,0.5s						
BGF	Bois d'Agland	5.64	293	ePn	Pn	21 28 59.8	-1.2
BGF				eSn	Sn	21 30 01.1	-4.7
	34nm,0.5s						
NKC	Novy Kostel	5.82	13	eSN	Sn	21 30 05.8	-4.4
WLF	Walferdange	5.84	332	P	Pn	21 29 07.4	+3.7
WLF	Walferdange	5.84	332	P	Pn	21 29 07.4	+3.7
EJON	La Jonquera	5.85	251	P	Pn	21 29 03.1	-0.8
EJON				S	Sn	21 30 10.3	-0.7
EJON	La Jonquera	5.85	251	P	Pn	21 29 03.1	-0.8
	1.1nm,0.4s,SNR=7.9						
GUNZ	Gunzen	5.93	12	ePn	Pn	21 29 01.1	-3.9
GUNZ				eSn	Sn	21 30 07.3	-5.6
CAF	Calviac	5.93	276	ePn	Pn	21 29 04.3	-0.7
TCF	Toulx Ste Croi	5.99	289	ePn	Pn	21 29 04.3	-1.6
TCF				eSn	Sn	21 30 09.3	-5.3
	6.6nm,0.3s						
WERD	Werda	6.01	12	ePn	Pn	21 29 03.9	-2.2
MTLF	Montolieu	6.02	261	ePn	Pn	21 29 04.0	-2.3
MTLF				eSn	Sn	21 30 11.0	-4.2
	5.5nm,0.4s						
HYF	Humbligny	6.03	299	eSn	Sn	21 30 10.4	-5.0
PRU	Pruhonice	6.10	26	ePN	Pn	21 29 04.7	-2.7
PRU				eSG	Sn	21 30 48.2	+31
MOX	Moxa	6.12	7	ePn	Pn	21 29 04.4	-3.3
MOX				ePg	Pn	21 29 32.7	+25
MOX				eSn	Sn	21 30 11.6	-6.0
MOX				eSg	Sn	21 30 58.5	+41
MOX	Moxa	6.12	7	i P	Pn	21 29 04.4	-3.3
MOX				Pg	Pn	21 29 33.0	+25
MOX				S	Sn	21 30 11.0	-6.6
MOX				Sg	Sn	21 30 58.0	+40
MOX	Moxa	6.12	7	ePg	Pn	21 29 32.7	+25
MOX				eSn	Sn	21 30 10.8	-6.8
SMOL	Smolenice	6.25	49	ePN	Pn	21 29 04.7	-4.8
BRG	Berggiesshubel	6.73	20	i Pn	Pn	21 29 14.1	-2.2
BRG				i Pg	Pn	21 29 43.1	+27
BRG				i Sg	Sn	21 31 08.7	+36
BRG				e		21 52 42.1	
BRG	Berggiesshubel	6.73	20	ePn	Pn	21 29 13.5	-2.8
BRG	Berggiesshubel	6.73	20	i Pg	Px	21 29 43.1	
CLL	Collm	6.95	14	ePG	Px	21 29 47.0	
CLL				e		21 30 55.0	
CLL				eSG	Sx	21 31 21.0	
CLL				e		21 31 32.0	
EMIR	Miracle	6.99	251	P	Pn	21 29 20.1	+0.1
EMIR				S	Sn	21 30 39.5	0.0
EMIR	Miracle	6.99	251	P	Pn	21 29 20.1	+0.1
	1.2nm,0.2s,SNR=7.9						
DPC	Dobruska-Polom	7.03	33	eSG	Sx	21 31 14.9	
ETOS	Mallorca	7.40	232	P	Pn	21 29 23.9	-1.8
ETOS				S	Sn	21 30 44.3	-5.4
EPOB	Poblet	7.55	248	P	Pn	21 29 27.3	-0.5
EPOB				S	Sn	21 30 50.9	-2.5
EPOB	Poblet	7.55	248	P	Pn	21 29 27.3	-0.5
	0.2nm,0.2s,SNR=7.9						
EBIE	Bielsa	7.67	259	P	Pn	21 29 31.7	+2.3
EBIE				S	Sn	21 30 56.5	+0.2
EBIE	Bielsa	7.67	259	P	Pn	21 29 31.7	+2.3
	0.6nm,0.3s,SNR=7.9						
EGRA	Graus	7.71	255	P	Pn	21 29 30.8	+0.8
EGRA				S	Sn	21 30 57.9	+0.5
EGRA	Graus	7.71	255	P	Pn	21 29 30.8	+0.8
	0.9nm,0.4s,SNR=7.9						

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*NEIC **04** 21:34:41.9,31.54S×69.74W,h151^{km},mb4.5/1, MD3.9(GUC),After GUC.*

GUC 04 21:34:41.9±0.8**,31.54S×69.74W,h151**^{km}±6^{km}**,MD3.5, ML3.8,9C-4D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	Combarbala	1.14	288	⇑iP	P	21 35 08.2	0.0
CMCH				i S	S	21 35 28.4	-0.1
CMCH				AMP		21 35 30.3	
	comp=E,3µm,1.0s						
ILCH	Illapel	1.23	265	⇑iP	P	21 35 09.4	+0.4
ILCH				i S	S	21 35 29.8	-0.1
ILCH				AMP		21 35 30.5	
	comp=N,2µm,0.2s						
JACH	Jahuel	1.35	212	⇑iP	P	21 35 10.2	-0.1
JACH				i S	S	21 35 32.0	-0.2
TLL	Tololo Astrono	1.65	326	⇑iP	P	21 35 14.0	+0.6
TLL				i S	S	21 35 38.6	+0.9
TLL				AMP		21 35 43.3	
	comp=E,992nm,0.5s						
PACH	Papudo	1.75	235	⇑iP	P	21 35 14.7	+0.2
PACH				i S	S	21 35 39.6	-0.1
PEL	Peldehue	1.79	206	i P	P	21 35 14.8	-0.2
PEL				i S	S	21 35 40.1	-0.3
PEL				AMP		21 35 40.9	
	comp=N,924nm,0.5s						
ROCH	El Roble	1.79	217	⇓iP	P	21 35 15.2	+0.3
ROCH				i S	S	21 35 41.0	+0.5
CLCH	Cerro Calan	1.97	200	i P	P	21 35 17.1	0.0
CLCH				i S	S	21 35 44.4	+0.3
CLCH				AMP		21 35 46.1	
	comp=E,638nm,0.3s						
DSCH	Colegio Aleman	1.98	201	⇑iP	P	21 35 17.2	0.0
DSCH				i S	S	21 35 44.2	-0.1
DSCH				AMP		21 35 47.4	
	comp=E,542nm,0.4s						
LSCH	La Serena	2.08	321	⇓iP	P	21 35 18.6	+0.2
LSCH				i S	S	21 35 45.8	-0.6
LSCH				AMP		21 35 48.0	
	comp=E,835nm,0.3s						
ANTU	Antumapu	2.16	200	AMP		21 35 50.7	
	comp=N,303nm,0.4s						
PCH	Pirque	2.18	197	⇑iP	P	21 35 19.6	+0.1
PCH				i S	S	21 35 48.9	+0.5
LMEL	Las Melosas	2.33	190	⇑iP	P	21 35 21.8	+0.2
LMEL				i S	S	21 35 52.6	+0.6
LMEL				AMP		21 36 03.3	
	comp=N,154nm,0.2s						
TACH	Talagante	2.34	205	⇑iP	P	21 35 21.2	-0.4
TACH				i S	S	21 35 51.3	-0.7
LCCH	Las Cruces	2.47	218	⇓iP	P	21 35 23.1	-0.2
LCCH				i S	S	21 35 54.9	-0.1
CHCH	Chadas Angostu	2.51	198	⇓iP	P	21 35 24.0	+0.3
CHCH				i S	S	21 35 55.9	+0.1
CICH	Cipreses	2.83	192	i P	P	21 35 28.5	+0.6
CICH				i S	S	21 36 02.9	-0.1
SFDO	San Fernando	3.25	199	i P	P	21 35 33.3	+0.1
SFDO				i S	S	21 36 11.9	-0.6
TRQA	Tornquist	9.11	138	P	P	21 36 47.4	-3.5
	comp=N,7.7nm,0.6s						

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*CASC **04** 21:35:54.7±1.7,13.07N×88.80W,h55^{km}±13^{km},MD4.3, ML4.3,mb4.1(NEIC)*

*NEIC **04** 21:35:56.1±1.3,13.16N×88.50W,h86^{km}±12^{km},mb4.1/8, MD4.5(SNET),Error ellipse: s-maj=19.2km s-min=6.7km az=56.0*

NEIC Felt [III] at Zacatecoluca.

*IDC **04** 21:35:56.2±2.7,13.27N×88.39W,h80^{km}±25^{km},mb3.7/13, mb1 3.9/15,mb1mx3.7/25,mbtmp4.1/15,MS2.7/1, Ms1 2.7/1,ms1mx2.3/28,Error ellipse: s-maj=33.8km s-min=11.6km az=57.0*

ISC 04 21:35:53.9±0.3**,13.13N**±0.05×**88.74W**±0.04**,h79**^{km}±3^{km}**, n74,**σ1^{s}**12**/83**,mb4.0**/19**,8C-9D,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCBS	La Ceiba	0.57	337	⇓iP	P	21 36 07.6	-0.8
LFRS	El Faro	0.58	328	⇓iP	P	21 36 07.5	-1.0
BLLM	Bellamira	0.58	58	⇓eP	P	21 36 08.4	-0.1
BLLM				eS	S	21 36 18.3	-1.0
LBRS	Las Brisas	0.67	334	eP	P	21 36 09.2	-0.2
LFU	La Fuente	0.71	330	eP	P	21 36 09.5	-0.4
SNET	Serv Nac Est T	0.73	320	eP	P	21 36 09.1	-1.0
SNET				i		21 36 22.4	
	comp=Z,14µm,0.2s						
BOQS	Boqueron	0.80	319	⇓eP	P	21 36 10.2	-0.6
CAHU	Cacacuatique	0.82	39	⇓eP	P	21 36 12.0	+0.9
CAHU				eS	S	21 36 24.2	+0.3
CNCH	Conchagua	0.90	80	⇓eP	P	21 36 11.9	+0.1
CNCH				eS	S	21 36 25.8	+0.4
SBLS	San Blas	1.11	310	⇑eP	P	21 36 14.1	-0.4
SBLS				eS	S	21 36 30.4	+0.5
SNJE	San Jose	1.11	311	⇑eP	P	21 36 14.3	-0.3
RTR	El Retiro	1.16	311	⇓eP	P	21 36 15.1	-0.1
RTR				eS	S	21 36 29.9	-1.3
RBDL	Robledal	1.34	317	⇑eP	P	21 36 17.4	-0.2
RBDL				eS	S	21 36 36.8	+1.6
CRIN	San Cristobal	1.71	104	eS	S	21 36 46.0	+2.7
CHIN	Chinandega	1.74	106	i	P	21 36 21.4	-1.5
	comp=Z,18µm,0.3s						
TEL3	Telica 3	1.93	106	⇑eP	P	21 36 25.7	+0.3
LEON	Leon	1.94	111	eP	P	21 36 25.6	0.0
IXG	Ixpaco	1.96	302	⇑eP	P	21 36 25.1	-0.8
CNGN	Cerro Negro	2.09	107	eP	P	21 36 27.7	+0.1
MIRN	Miramar	2.10	109	⇑eP	P	21 36 27.7	0.0
MIRN				eS	S	21 36 52.8	+0.1
MRL	Marmol	2.13	335	⇓iP	P	21 36 29.6	+1.4
MOMJ	Momotombo	2.27	108	⇓eP	P	21 36 31.2	+1.1
APYN	Apoyeque	2.50	111	⇑eP	P	21 36 33.4	+0.1
APYN				eS	S	21 37 06.3	+3.5
XAVN	Gruta Xavier	2.55	112	eP	P	21 36 35.0	+0.9
MGAN	Managua	2.62	112	eP	P	21 36 35.5	+0.4
MGAN				eS	S	21 37 04.3	-1.6
MGAN				i		21 37 06.8	
	comp=E,919nm,0.3s						
CRUN	El Crucero	2.64	115	eP	P	21 36 36.1	+0.7
WILN	Americas 2	2.67	111	eP	P	21 36 36.9	+1.0
WILN				eS	S	21 37 05.9	-1.3
TICN	Ticuantepe	2.68	114	eP	P	21 36 36.5	+0.6
PYTN	Playitas	2.69	102	eP	P	21 36 35.9	0.0
TP2	Tecpan 2	2.76	307	eP	P	21 36 37.5	+0.6
CONN	Concepcion	3.42	117	eP	P	21 36 46.4	+0.2
VCR	Vista de Mar	4.27	134	eP	P	21 36 57.1	-0.8
JTS	JuntasAbangare	4.66	127	P	P	21 37 02.5	-0.9
	comp=E,5.0nm,0.3s,baz=304,slow=22,SNR=16						
JTS				S	S	21 37 52.2	-4.5
	comp=E,9.3nm,0.3s,baz=322,slow=21,SNR=3.8						
JTS	JuntasAbangare	4.66	127	ePn	P	21 37 02.6	-0.9
JTS				ePg	P	21 37 09.4	+6.0
JTS				eSn	S	21 37 52.7	-4.0
JCR	Jicaral	4.83	132	eP	P	21 37 04.8	-0.8
CGA2	Cerro Gallo 2	5.21	126	eP	P	21 37 12.0	+1.1
PRS1	Puriscal	5.35	125	eP	P	21 37 13.7	+0.9
LAJ	Bijagual	5.57	125	eP	P	21 37 12.7	-3.1
LCR2	La Lucha 2	5.74	125	eP	P	21 37 19.3	+1.1
URSC	Urasca	5.87	123	⇑eP	P	21 37 21.5	+1.6
BUS	Buena Vista	6.04	125	eP	P	21 37 23.4	+1.0
ACR	Cerro Adams	7.05	129	eP	P	21 37 36.5	0.0
TEIG	Tepich	7.07	4	P	P	21 37 34.5	-2.3
	comp=E,0.2nm,0.9s						
ROSC	El Rosal	16.43	119	LR	LR	21 45 46.7	
	comp=E,28nm,21.4s,baz=32,slow=36						
SDV	Santo Domingo	18.27	101	P	P	21 40 02.3	-1.4
	comp=E,1.3nm,0.3s,baz=315,slow=8.4,SNR=7.1						
SDV	Santo Domingo	18.27	101	eP	P	21 40 01.6	-2.0
	comp=E,6.8nm,0.7s						
LTX	Lajitas	21.26	322	P	P	21 40 36.6	+1.2
TXAR	Lajitas Array	21.26	322	P	P	21 40 37.5	+2.1
	comp=E,1.3nm,0.6s,mb3.4,baz=144,slow=11,SNR=20						
MIAR	Mount Ida	21.77	349	P	P	21 40 42.8	+2.3
	comp=E,3.2nm,0.6s,mb3.8						
SWET	Sewanee	22.14	6	P	P	21 40 45.5	+1.4
WMOK	Wichita Mounta	23.36	339	eP	P	21 40 57.3	+1.3
	comp=E,4.7nm,1.1s,mb3.7						
PV10	Paradox Valley	30.94	328	eP	P	21 42 05.2	-0.4
SADO	Sadowa	32.58	13	P	P	21 42 19.0	-0.8
	comp=E,3.5nm,0.5s,mb4.5,baz=205,slow=9.1,SNR=5.2						
SAML	Samuel	33.55	130	eP	P	21 42 26.0	-2.5
	comp=E,3.0nm,0.7s,mb4.2						
PDAR	Pinedale Array	34.59	333	P	P	21 42 39.2	+2.2
	comp=E,0.7nm,0.5s,mb3.7,baz=136,slow=12,SNR=3.8						
HWUT	Hardware Ranch	34.65	329	eP	P	21 42 38.7	+1.1
	comp=E,1.7nm,0.6s,mb4.0						
LPAZ	La Paz	35.63	145	P	P	21 42 46.1	-0.1
	comp=E,0.3nm,0.5s,mb3.5,baz=283,slow=14,SNR=3.4						
LPAZ	La Paz	35.63	145	P	P	21 42 43.3	-3.0
NVAR	Mina Array Bea	36.37	319	P	P	21 42 54.3	+2.0
	comp=E,0.5nm,0.6s,mb3.6,baz=124,slow=9.5,SNR=4.5						
NVAR				PcP	PcP	21 45 16.9	+1.3
	comp=E,0.7nm,0.6s,baz=135,slow=1.3,SNR=4.8						
ULM	Lac du Bonnet	37.48	352	P	P	21 43 01.0	-0.4
	comp=E,1.1nm,0.3s,mb4.2,baz=166,slow=12,SNR=3.1						
HLID	Hailey	37.51	329	eP	P	21 43 02.6	+0.8
	comp=E,0.8nm,0.8s,mb3.6						
SIV	San Ignacio	39.82	136	P	P	21 43 21.4	+0.2
	comp=E,1.6nm,0.6s,mb4.0,baz=323,slow=8.7,SNR=12						
SIV				PcP	PcP	21 45 27.4	+0.9
	comp=E,0.8nm,0.4s,baz=266,slow=16,SNR=5.1						
EDM	Edmonton	44.53	339	eP	P	21 43 59.1	-0.2
SCHQ	Schefferville	45.01	18	P	P	21 44 01.9	-1.2
	comp=E,2.4nm,0.7s,mb4.0,baz=232,slow=15,SNR=3.7						
FCC	Fort Churchill	45.72	356	P	P	21 44 07.8	-0.9
	comp=E,2.0nm,0.5s,mb4.1						
BDFB	Brasilia	49.40	124	P	P	21 44 36.1	-1.8
	comp=E,0.9nm,0.4s,mb4.0,baz=291,slow=8.6,SNR=3.4						
FRB	Frobisher Bay	52.50	11	P	P	21 44 58.6	-2.2
	comp=E,3.5nm,0.5s,mb4.6,baz=212,slow=9.5,SNR=10						
YKA	Yellowknife Ar	52.63	345	P	P	21 45 01.0	-0.8
	comp=E,2.5nm,0.6s,mb4.4,baz=140,slow=7.5,SNR=24						
INK	Inuvik	62.19	343	P	P	21 46 07.7	-1.3
	comp=E,2.7nm,0.7s,mb4.4,baz=144,slow=6.5,SNR=11						
INK	Inuvik	62.19	343	eP	P	21 46 07.5	-1.5
	comp=E,2.9nm,0.6s,mb4.5						
ILAR	Eielson Array	64.89	336	P	P	21 46 25.6	-1.1
	comp=E,0.7nm,0.7s,mb3.6,baz=134,slow=4.8,SNR=4.8						
WRA	Warramunga Arr	138.24	255	PKP	PKPdf	21 55 13.1	+2.3
	comp=E,0.7nm,0.7s,baz=88,slow=2.1,SNR=14						
ASAR	Alice Springs	138.34	249	PKP	PKPdf	21 55 12.8	+1.9
	comp=E,0.3nm,0.7s,baz=99,slow=2.3,SNR=4.2						
CMAR	Chiang Mai Arr	147.71	346	PKPbc	PKPdf	21 55 31.1	+3.7
	comp=E,0.9nm,0.7s,baz=348,slow=3.5,SNR=6.5						

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*IDC **04** 21:36:21.2±1.4,8.74S×130.44E,mb4.0/4,mb1 4.3/6, mb1mx4.0/14,mbtmp4.1/6,MS3.6/7,Ms1 3.6/7, ms1mx3.4/26,Error ellipse: s-maj=58.0km s-min=28.2km az=76.0*

*NEIC **04** 21:36:25.8±0.4,8.77S×130.54E,h35^{km},mb4.4/5,Error ellipse: s-maj=17.5km s-min=6.4km az=74.0*

ISC 04 21:36:23.5±2.5**,8.79S**±0.07×**130.6E**±0.1**,h34**^{km}±25^{km}**, n28,**σ0^{s}**94**/28**,mb4.2**/10**,MS3.6**/5**,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	4.28	156	eP	P	21 37 33.1	+5.1
WRAB	Tennant Creek	11.65	162	ePn	P	21 39 11.0	+0.7
	22nm,0.8s						
WRAB				eSn	S	21 41 16.5	-3.8
WRA	Warramunga Arr	11.65	162	Pn	P	21 39 10.5	+0.1
	1.6nm,0.3s,baz=339,slow=13,SNR=52						
WRA				Sn	S	21 41 16.7	-3.6
	1.5nm,0.3s,baz=339,slow=22,SNR=7.9						
WB2	Warramunga Arr	11.66	162	eP	P	21 39 10.2	-0.3
WB2				eS	S	21 41 20.5	0.0
ASAR	Alice Springs	15.12	168	Pn	P	21 39 56.6	+0.3
	1.1nm,0.3s,baz=332,slow=9.8,SNR=52						
ASAR				Sn	S	21 42 42.8	-0.5
	0.7nm,0.3s,baz=336,slow=14,SNR=6.4						
ASAR				LR	LR	21 46 29.9	
	comp=Z,146nm,18.2s,baz=345,slow=40						
ASPA	Alice Springs	15.12	168	eP	P	21 39 57.6	+1.2
ASPA				eS	S	21 42 43.5	+0.2
MBWA	Marble Bar	16.18	219	eP	P	21 40 09.2	-0.8
CTA	Charters Tower	18.82	128	LR	LR	21 48 59.0	
	comp=Z,126nm,18.1s,baz=48,slow=40						
KSM	Kuching	22.68	296	P	P	21 41 23.4	0.0
STKA	Stephens Creek	25.13	158	eP	P	21 41 52.3	+5.3
STKA	Stephens Creek	25.13	158	P	P	21 41 52.6	+5.7
	5.3nm,0.5s,mb4.3,baz=337,slow=9.5,SNR=23						
STKA				LR	LR	21 53 07.2	
	comp=Z,122nm,21.6s,MS3.4,baz=25,slow=40						
STKA	Stephens Creek	25.13	158	eP	P	21 41 53.0	+6.0
NWAO	Narrogin (SRO)	27.03	205	LR	LR	21 53 58.3	
	comp=Z,112nm,18.9s,MS3.5,baz=230,slow=39						
HNR	Honiara	28.95	94	LR	LR	21 55 14.4	
	comp=Z,71nm,18.9s,MS3.3,baz=276,slow=39						
NACB	Ninganchiao	33.93	345	eP	P	21 43 04.8	-0.9
DZM	Mont Dzumac	36.85	115	LR	LR	21 57 02.5	
	comp=Z,247nm,19.2s,MS4.0,baz=25,slow=34						
CM31	Chiang Mai Arr	41.36	311	P	P	21 44 07.3	-0.8
	5.2nm,1.1s,mb4.1						
MJAR	Matsushiro Arr	45.65	9	P	P	21 44 42.2	-0.6
	2.4nm,0.8s,mb4.2,baz=187,slow=8.6,SNR=8.8						
MJAR	Matsushiro Arr	45.65	9	P	P	21 44 42.2	-0.6
MAJO	Matsushiro	45.65	9	eP	P	21 44 41.5	-1.3
	7.1nm,1.0s,mb4.5						
ULN	Ulaanbaatar	60.15	342	eP	P	21 46 30.2	+0.1
	1.8nm,0.6s,mb4.3						
MKAR	Makanchi Array	70.06	327	P	P	21 47 34.9	+0.9
	2.1nm,0.8s,mb4.1,baz=127,slow=7.7,SNR=20						
VNDA	Vanda	70.61	173	LR	LR	22 18 48.5	
	comp=Z,90nm,20.3s,MS4.0,baz=81,slow=36						
AAK	Ala-Archa	72.30	320	eP	P	21 47 47.8	+0.2
ZAL	Zalesovo	73.45	334	P	P	21 47 54.5	+0.4
	0.7nm,0.5s,mb3.9,baz=341,slow=9.9,SNR=3.8						
BVAR	Borovoye Array	79.90	328	P	P	21 48 31.3	+0.9
	0.6nm,0.5s,mb3.8,baz=116,slow=7.3,SNR=8.2						
BRVK	Borovoye	79.97	328	P	P	21 48 33.1	+2.4

	0.4nm,0.8s,mb3.4						
GNI	Garni	92.48	310	*e*P	P	21 49 29.1	-3.4
	22nm,1.6s,mb5.2						

IDC 04 21:46:26.6±2.6**, 11.43N**×**91.74E, mb3.2**/2**, mb1 3.6**/3**, mb1mx3.3**/21**, mbtmp3.3**/3**, ML3.8**/1**, MS2.6**/1**, Ms1 2.8**/1**, ms1mx2.5**/11**, Error ellipse: s-maj=70.2km s-min=33.1km az=65.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	9.86	44	Pn	P	21 48 48.8	-4.0
	0.2nm,0.3s,baz=233,slow=17,SNR=8.8						
CMAR				LR	LR	21 52 13.4	
	comp=Z,39nm,20.4s,baz=327,slow=35						
MKAR	Makanchi Array	36.15	349	P	P	21 53 30.6	-1.9
	0.2nm,0.6s,baz=173,slow=9.0,SNR=3.7						
WRA	Warramunga Arr	52.25	126	P	P	21 55 40.0	-2.0
	0.2nm,0.4s,baz=300,slow=10.0,SNR=6.9						

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*ROM **04** 21:50:31.5±0.1, 44.56N×10.35E, h23^{km}±2^{km}, Md3.2/20, Ml2.9/7, Error ellipse: s-maj=2.6km s-min=2.3km az=130.0*

*NEIC **04** 21:50:31.7±0.3, 44.57N×10.47E, h10^{km}, ML3.4(STR), ML3.1(LDG), Error ellipse: s-maj=4.4km s-min=3.0km az=131.0*

*CSEM **04** 21:50:31.9±0.1, 44.57N×10.44E, h10^{km}, ML3.2/22, Error ellipse: s-maj=1.8km s-min=1.4km az=122.0*

*STR **04** 21:50:32.1±1.7, 44.57N×10.65E, h10^{km}±1^{km}, Ml3.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*LDG **04** 21:50:33.7±0.1, 44.62N×10.45E, h10^{km}, Ml3.1/22, Error ellipse: s-maj=2.5km s-min=2.0km az=30.0*

*GEN **04** 21:50:33.1, 44.57N×10.45E, h8^{km}, ML2.9*

ISC 04 21:50:32.5±0.3**, 44.58N**±0.02×**10.40E**±0.02**, h26**^{km}±3^{km}**, n122, σ1^{s}18**/172**, 6C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRAM		0.25	249	P	Pb	21 50 39.0	+0.1
VALM		0.25	205	P	Pb	21 50 38.4	-0.5
GSCL	Gusciola	0.27	149	Pg	Pb	21 50 38.1	-1.0
GSCL				Sg	Sb	21 50 43.2	-0.4
BACM		0.38	218	P	Pb	21 50 40.6	-0.2
SARO	Sassorosso	0.40	179	P	Pb	21 50 40.4	-0.6
VLC	Villacollemand	0.42	181	*e*Pg	Pb	21 50 39.9	-1.5
VLC				*e*Sg	Sb	21 50 46.9	-0.6
VLC	Villacollemand	0.42	181	Pg	Pb	21 50 40.2	-1.2
	325nm,0.7s						
VLC				*e*Sg	Sb	21 50 46.9	-0.6
CODM		0.43	244	P	Pb	21 50 41.9	+0.3
VINC	Vinca	0.47	202	P	Pb	21 50 42.2	0.0
VINC				S	Sb	21 50 48.5	-0.4
ZCCA	Zocca	0.48	119	Pg	Pb	21 50 42.3	0.0
BDI	Bagni Di Lucca	0.54	164	Pg	Pb	21 50 41.9	-1.4
	128nm,0.3s						
RAVA	Ravarino	0.55	71	Pg	Pb	21 50 44.7	+1.3
RAVA				Sg	Sb	21 50 53.6	+2.7
	2μm,0.9s						
FNVD	Fontana Vidola	0.67	128	Pg	Pb	21 50 45.1	-0.3
	302nm,0.8s						
MAIM		0.67	174	P	Pb	21 50 45.3	-0.2
MAIM				S	Sb	21 50 53.8	-0.6
BOB	Bobbio (Coli)	0.70	286	Pg	Pb	21 50 47.4	+1.4
	30nm,0.6s						
PII	Pisa	0.86	174	Pg	Pb	21 50 48.3	-0.4
SEI	Scarperia	0.87	127	Pg	Pb	21 50 49.5	+0.7
	349nm,0.2s						
SAL	Salo	1.03	5	Pg	Pn	21 50 52.2	+0.8
SAL				Sg	Sb	21 51 08.8	+4.1
	989nm,0.5s						
VMG	Vicchio	1.03	126	Pg	Pn	21 50 52.6	+1.2
	241nm,0.6s						
GENL	Genova Univers	1.03	261	P	Pn	21 50 52.7	+1.2
PGD	Poggio Sodo	1.19	126	Pg	Pn	21 50 55.3	+1.6
	66nm,0.4s						
SFI	Santa Sofia	1.24	122	Pn	Pn	21 50 55.8	+1.3
SFI				Sn	Sn	21 51 15.2	+4.7
	117nm,0.5s						
MDI	Monti di Nese	1.29	338	Pn	Pn	21 50 55.7	+0.6
MDI				Sn	Sn	21 51 15.8	+4.1
	168nm,0.3s						
PCP	Pian Castagno	1.32	269	P	Pn	21 50 57.8	+2.2
CRE	Caprese Michel	1.48	130	Pn	Pn	21 50 58.6	+0.8
MABI	Malga Bissina	1.48	3	Pn	Pn	21 50 58.1	+0.3
MABI				Sn	Sn	21 51 19.4	+3.0
	109nm,0.2s						
GRFL	Gerfalco	1.49	163	Pn	Pn	21 50 58.7	+0.7
	12nm,0.4s						
FIN	Finale Ligure	1.61	257	Pn	Pn	21 51 00.5	+0.8
	80nm,0.4s						
FIN				S	Sn	21 51 18.5	-1.3
MUGIO	Muggio	1.65	325	Pn	Pn	21 51 00.5	+0.3
CTI	Castel Tesino	1.71	31	Pn	Pn	21 51 00.9	-0.3
	80nm,0.2s						
VAI	Varese	1.73	319	Pn	Pn	21 51 02.0	+0.6
	37nm,0.3s						
ROB	Roburent	1.83	262	P	Pn	21 51 03.5	+0.6
BRMO	Bormio	1.90	360	Pn	Pn	21 51 04.5	+0.7
IMI	Imperia	1.92	250	Pn	Pn	21 51 04.7	+0.5
	97nm,0.5s						
MONE	Monesi	1.96	256	P	Pn	21 51 05.5	+0.8
APPI	Appiano	1.99	17	Pn	Pn	21 51 05.3	+0.2
	217nm,0.6s						
ORX	Oropa	2.01	302	P	Pn	21 51 05.8	+0.4
FUORN	Ofenpass	2.04	357	Pn	Pn	21 51 07.3	+1.4
NEGI	Negi	2.07	250	P	Pn	21 51 06.8	+0.5
TRAV		2.10	297	P	Pn	21 51 07.2	+0.5
SAOF	Saorge	2.12	255	Pn	Pn	21 51 08.0	+0.9
ENR	Entracque	2.16	262	P	Pn	21 51 08.4	+0.8
AUTN	L'Aution	2.21	256	Pn	Pn	21 51 09.8	+1.5
STV2	Anna di Valdie	2.22	262	P	Pn	21 51 09.4	+0.9
DAVOX	Davos	2.23	351	Pn	Pn	21 51 10.2	+1.6
SBF	Sospel	2.25	252	*e*Pn	Pn	21 51 09.2	+0.4
SBF				*e*Sn	Sn	21 51 35.9	-0.1
	47nm,0.3s						
SNTG	Esanatoglia	2.27	125	Pn	Pn	21 51 10.4	+1.3
	9.0nm,0.3s						
PGF	Pioggiola	2.27	207	*e*Pn	Pn	21 51 08.8	-0.4
PGF				*e*Sn	Sn	21 51 36.7	+0.1
	20nm,0.4s						
RSP	Reno Superiore	2.30	285	P	Pn	21 51 09.8	+0.2
TOUF	Mont Tournerai	2.33	257	Pn	Pn	21 51 11.3	+1.3
REVF	Revere	2.33	250	Pn	Pn	21 51 11.3	+1.2
PZZ	Prazzo	2.36	269	P	Pn	21 51 11.5	+1.1
MVIF	Mont Vial	2.43	255	Pn	Pn	21 51 12.9	+1.5
LSD	Ceresole Reale	2.46	292	P	Pn	21 51 15.4	+3.5
SEST	Monte Rota	2.52	30	Pn	Pn	21 51 13.3	+0.6
MBDF	Montbardon	2.59	275	*e*Pn	Pn	21 51 15.0	+1.3
MBDF				*e*Sn	Sn	21 51 44.6	-0.1
MBDF				*e*Sg	Sn	21 51 56.2	+11
	14nm,0.4s						
RRL	Cesana Torines	2.59	279	P	Pn	21 51 15.2	+1.4
FVI	Forni Avoltri	2.62	39	Pn	Pn	21 51 13.4	-0.8
	43nm,0.8s						
SCE	Schlegeis	2.62	20	⇓*i*Pn	Pn	21 51 14.1	-0.1
NRCA	Norcia	2.63	131	Pn	Pn	21 51 15.2	+0.8
	3.0nm,0.2s						
CALN	Calern	2.66	253	Pn	Pn	21 51 15.7	+1.0
SQTA	Sankt Quirin	2.70	12	⇑*i*PN	Pn	21 51 16.5	+1.2
SQTA				*i* SN	Sn	21 51 50.9	+3.4
DAVA	Damuels	2.73	353	⇓*i*PN	Pn	21 51 16.6	+0.9
DAVA				*i* SN	Sn	21 51 52.0	+3.7
LPG	La Plagne	2.74	291	*e*Pn	Pn	21 51 15.8	-0.1
LPG				*e*Sn	Sn	21 51 48.4	-0.1
LPG				*e*Sg	Sn	21 52 00.7	+12
	16nm,0.5s						
MNS	Montasola	2.75	142	Pn	Pn	21 51 16.6	+0.5
	9.0nm,0.4s						
LPL	La Plagne	2.76	291	*e*Pn	Pn	21 51 17.3	+1.1
LPL				*e*Sn	Sn	21 51 48.4	-0.6
	17nm,0.4s						
MOTA	Moosalm	2.81	10	⇑*i*PN	Pn	21 51 18.5	+1.6
MOTA				*i* SN	Sn	21 51 53.6	+3.3
WTTA	Wattenberg	2.82	17	⇑*i*PN	Pn	21 51 18.0	+1.0
WTTA				*i* SN	Sn	21 51 52.1	+1.5
VOY	Vojsko	2.86	58	*e*Pn	Pn	21 51 15.7	-1.9
VOY				*e*Sn	Sn	21 51 49.2	-2.5
WATA	Walderalm	2.88	16	⇑*i*PN	Pn	21 51 18.9	+1.1
WATA				*i* SN	Sn	21 51 54.0	+2.0
FRF	La Foret Royal	2.89	251	*e*Pn	Pn	21 51 18.0	0.0
FRF				*e*Sn	Sn	21 51 51.5	-0.8
	42nm,0.4s						
LMR	La Mourre	3.07	247	*e*Pn	Pn	21 51 20.1	-0.5
LMR				*e*Sn	Sn	21 51 55.5	-1.4
	42nm,0.3s						
AQU	L'Aquila	3.12	134	*e*Pn	Pn	21 51 19.4	-1.9
AQU	L'Aquila	3.12	134	*e*Pn	Pn	21 51 19.4	-1.9
NVLJ	Novalja	3.20	89	*i* Pn	Pn	21 51 20.6	-1.8
NVLJ				*i* Sn	Sn	21 51 56.0	-4.1
ORIF	Oris-en-Rattie	3.23	278	*e*Pn	Pn	21 51 23.8	+0.9
ORIF				*e*Sn	Sn	21 51 59.9	-1.1
	18nm,0.6s						
TAVF	Tavernes	3.27	254	Pn	Pn	21 51 24.7	+1.3
SMRF	Simiane la Rot	3.51	262	*e*Pn	Pn	21 51 28.0	+1.1
SMRF				*e*Sn	Sn	21 52 06.5	-1.6
	9.3nm,0.5s						
PUYF	Puyloubier	3.54	254	Pn	Pn	21 51 27.8	+0.5
BGLD	Berchtesgaden	3.57	30	*e*Pn	Pn	21 51 28.1	+0.4
CABF	La Chapelle	3.64	305	*e*Pn	Pn	21 51 28.9	+0.2
CABF				*e*Pg	Pn	21 51 41.9	+13
CABF				*e*Sn	Sn	21 52 09.2	-2.1
	6.4nm,0.3s						
FELD	Feldberg	3.69	334	Pn	Pn	21 51 28.8	-0.6
LOMF	Lomont	3.72	319	Pn	Pn	21 51 29.6	-0.2
MOF	Molkenrain	3.98	326	Pn	Pn	21 51 32.9	-0.6
HINF	Hinteralfeld	4.07	324	*e*Pn	Pn	21 51 33.5	-1.2
HINF				*e*Sn	Sn	21 52 18.1	-4.0
	11nm,0.3s						
VIVF	Saint-Julien-l	4.09	276	*e*Pn	Pn	21 51 35.4	+0.4
VIVF				*e*Sn	Sn	21 52 20.6	-2.0
	2.7nm,0.3s						
MOA	Molln	4.23	38	⇑*i*PN	Pn	21 51 36.1	-1.0
MOA				*i* SN	Sn	21 52 25.9	-0.4
ECH	Echery	4.27	330	Pn	Pn	21 51 36.4	-1.2
WLS	Welschbruch	4.37	332	Pn	Pn	21 51 38.2	-0.8
CDF	Champ du Feu	4.40	332	*e*Pn	Pn	21 51 37.4	-2.0
CDF				*e*Pg	Pn	21 51 53.5	+14
CDF				*e*Sn	Sn	21 52 26.5	-3.9
	7.5nm,0.3s						
HAU	Haudompre	4.43	322	*e*Pn	Pn	21 51 39.4	-0.4
HAU				*e*Sn	Sn	21 52 27.3	-3.9
	20nm,0.4s						
ARSA	Arzberg	4.46	51	⇑*i*PN	Pn	21 51 39.1	-1.3
ARSA				*i* SN	Sn	21 52 31.4	-0.8
LASF	Ste Croix	4.72	266	*e*Pn	Pn	21 51 43.6	-0.4
THEF	They Montfort	4.75	322	Pn	Pn	21 51 43.7	-0.8
GEC2	GERESS Array S	4.83	27	*e*Pn	Pn	21 51 43.4	-2.2
GEC2				*e*Sn	Sn	21 52 36.6	-4.9
SMF	Signal de Mont	5.04	296	*e*Pn	Pn	21 51 47.5	-1.0
SMF				*e*Sn	Sn	21 52 42.7	-4.0
	8.5nm,0.3s						
KHC	Kasperske Hory	5.05	24	*e*PN	Pn	21 51 46.4	-2.2
KHC				*e*x	x	21 52 09.0	
KHC				*e*SN	Sn	21 52 41.5	-5.4
KHC				*e*x	x	21 53 10.5	
KHC	Kasperske Hory	5.05	24	Pn	Pn	21 51 46.4	-2.2
KHC				Sn	Sn	21 52 41.5	-5.4
VSL	Villasalto	5.14	189	*e*P	Pn	21 51 48.6	-1.3
	8.2nm,0.8s						
VSL	Villasalto	5.14	189	*e*P	Pn	21 51 48.6	-1.3
	8.2nm,0.8s						
GRA1	Grafenberg Arr	5.14	6	*e*Sn	Sn	21 52 44.0	-5.3
GRA1	Grafenberg Arr	5.14	6	*e*Sn	Sn	21 52 44.0	-5.3
GRF	Grafenberg Arr	5.14	6	*e*Sn	Sn	21 52 44.0	-5.3
LOR	Lormes	5.29	303	*e*Pn	Pn	21 51 52.0	-0.1
LOR				*e*Sn	Sn	21 52 48.8	-4.2
	20nm,0.3s						
NOTT	Nottersdorf	5.36	12	*e*Pn	Pn	21 51 49.4	-3.7
NOTT				*e*Sn	Sn	21 52 48.1	-6.7
MEZF	Maizieres J'vi	5.38	319	*e*Pn	Pn	21 51 51.9	-1.4
MEZF				*e*Sn	Sn	21 52 50.2	-5.0
	2.9nm,0.3s						
AVF	Avril sur Loir	5.41	297	*e*Pn	Pn	21 51 52.0	-1.7
AVF				*e*Sn	Sn	21 52 51.8	-4.0
	1.0nm,0.4s						
SSF	Saint Saulge	5.42	300	*e*Pn	Pn	21 51 52.5	-1.3
SSF				*e*Sn	Sn	21 52 50.8	-5.3
	2.3nm,0.5s						
BGF	Bois d'Agland	5.66	293	*e*Pn	Pn	21 51 56.5	-0.7
BGF				*e*Sn	Sn	21 52 57.5	-4.6
	7.4nm,0.4s						
WLF	Walferdange	5.85	332	*e*P	Pn	21 51 54.0	-6.0
GUNZ	Gunzen	5.93	12	*e*Pn	Pn	21 51 57.5	-3.6
GUNZ				*e*Sn	Sn	21 53 02.2	-6.8
TCF	Toulx Ste Croi	6.01	289	*e*Sn	Sn	21 53 06.3	-4.6
	2.3nm,0.3s						
WERD	Werda	6.01	12	*e*Pn	Pn	21 51 59.9	-2.3
WERD				*e*Sn	Sn	21 53 05.1	-5.9
MTLF	Montolieu	6.03	261	*e*Pn	Pn	21 52 02.0	-0.5
PRU	Pruhonice	6.10	26	*e*PN	Pn	21 52 00.5	-3.0
PRU				*e*SN	Sn	21 53 07.4	-5.8
PRU				*e*SG	Sn	21 53 45.2	+32
MOX	Moxa	6.12	7	*e*Pn	Pn	21 52 00.5	-3.3
MOX				*e*Pg	Pn	21 52 27.0	+23
MOX				*e*Sn	Sn	21 53 07.7	-6.1
MOX				*e*Sg	Sn	21 53 54.6	+41
MOX	Moxa	6.12	7	*i* P	Pn	21 52 00.5	-3.3
MOX				Pg	Pn	21 52 27.0	+23
MOX				S	Sn	21 53 07.0	-6.8
MOX				Sg	Sn	21 53 55.0	+41
MOX	Moxa	6.12	7	*e*Pg	Pn	21 52 27.0	+23
MOX				*e*Sn	Sn	21 53 06.1	-7.7
BRG	Berggiesshubel	6.74	20	*e*Pn	Pn	21 52 09.8	-2.6
BRG	Berggiesshubel	6.74	20	*e*Sg	Sx	21 54 09.0	
CLL	Collm	6.96	14	*e*SG	Sx	21 54 18.0	
DPC	Dobruska-Polom	7.03	33	*e*SG	Sx	21 54 12.8	

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*IDC **04** 21:52:59.1±7.6, 15.63N×97.47W, mb3.7/3, mb1 4.0/4, mb1mx3.7/20, mbtmp3.6/4, ML3.5/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/28, Error ellipse: s-maj=180.5km s-min=127.4km az=68.0*

*MEX **04** 21:53:12.0±0.4, 16.30N×98.47W, h27^{km}±7^{km}, MD4.2*

*NEIC **04** 21:53:12.0, 16.30N×98.47W, h27^{km}, MD4.2(MEX), After MEX.*

ISC 04 21:53:10.2±0.7**, 16.35N**±0.05×**98.47W**±0.03**, h33**^{km}**, n21, σ0^{s}95**/37**, mb3.4**/3**, MS3.1**/1**, 4C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.33	83	⇑*i*P	P	21 53 18.6	+0.3
PNIG				*e*S	S	21 53 23.6	-0.4
ACX	Acapulco	1.48	290	⇑*i*P	P	21 53 34.6	-0.2
ACX				*i* S	S	21 53 52.4	-0.8
VHO	Vista Hermosa	1.81	66	⇑*e*P	P	21 53 39.5	0.0
VHO				*e*S	S	21 54 01.5	+0.1
OXX	Oaxaca	1.82	66	*i* P	P	21 53 39.5	-0.1
OXX				*i* S	S	21 54 02.3	+0.6
CAIG	El Cayaco	1.86	292	*i* P	P	21 53 40.1	-0.1
CAIG				*i* S	S	21 53 59.8	-3.0
PLIG	Platanillo	2.26	334	⇑*i*P	P	21 53 46.8	+0.9
PLIG				*e*S	S	21 54 12.6	-0.2
HUIG	Huatulco	2.34	104	*e*P	P	21 53 50.6	+3.6
HUIG				*i* S	S	21 54 13.8	-1.1
YAIG	Yautepec	2.56	347	*e*P	P	21 53 50.7	+0.5
YAIG				*e*S	S	21 54 20.1	-0.4
PPM	Popocatepetl	2.70	357	*e*P	P	21 53 53.4	+1.1
PPM				*i* S	S	21 54 24.0	-0.2
PPM				*i* S	S	21 54 25.4	+1.3
PPM	Popocatepetl	2.70	357	*e*P	P	21 53 53.4	+1.1
PPM				*i* P		21 53 53.4	
PPM				*i* S	S	21 54 24.0	-0.2
PPM				*i* S	S	21 54 25.4	+1.3
IISM	Ciudad Serdan	2.82	21	*i* P	P	21 53 54.6	+0.7
IISM				*i* S	S	21 54 26.2	-0.8
UNM	Universidad Na	3.04	347	*e*P	P	21 53 57.0	0.0
UNM				*e*P		21 53 58.7	
UNM				*e*S	S	21 54 32.1	-0.5
UNM				*e*S	S	21 54 33.0	+0.4
EVV	El Vigia	3.64	54	*e*P	P	21 54 08.6	+3.1
EVV				*i* S	S	21 54 46.3	-1.6
LVIG	Laguna Verde	3.88	30	*i* P	P	21 54 05.2	-3.8
LVIG				*e*S	S	21 54 50.0	-4.0
SFJM	Santa Fe	5.98	314	*e*P	P	21 54 45.0	+6.4
SFJM				*i* S	S	21 55 47.2	+0.3
TXAR	Lajitas Array	13.78	341	Pn	P	21 56 33.5	+8.0
	0.1nm,0.3s,baz=158,slow=15,SNR=4.0						
TXAR				LR	LR	22 02 17.6	
	comp=Z,117nm,18.6s,baz=150,slow=38						
ANMO	Albuquerque	19.86	340	LR	LR	22 05 46.0	
	comp=Z,154nm,18.7s,baz=205,slow=37						
PDAR	Pinedale Array	27.98	342	P	P	21 58 59.7	-0.3
	0.3nm,0.3s,mb3.4,baz=142,slow=10,SNR=3.6						
NVAR	Mina Array Bea	28.06	325	P	P	21 59 02.3	+1.6
	1.3nm,0.9s,mb3.5,baz=137,slow=11,SNR=6.5						
YBH	Yreka Blue Hor	32.78	325	LR	LR	22 16 01.5	
	comp=Z,41nm,19.1s,MS3.1,baz=126,slow=41						
ILAR	Eielson Array	58.27	338	P	P	22 03 03.2	-0.5
	0.2nm,0.6s,mb3.3,baz=146,slow=7.4,SNR=4.1						

IDC 04 21:59:07.4±59.0**, 20.16S**×**177.66W, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/15**, mbtmp3.9**/3**, Error ellipse: s-maj=1088.0km s-min=162.3km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.23	244	P	P	22 06 28.8	-2.1
	1.3nm,0.6s,baz=98,slow=12,SNR=4.3						
ASAR	Alice Springs	44.91	256	P	P	22 07 24.6	-1.3
	1.0nm,0.5s,baz=101,slow=8.2,SNR=14						
WRA	Warramunga Arr	44.97	262	P	P	22 07 24.3	-2.2
	0.4nm,0.3s,baz=97,slow=7.5,SNR=8.4						

ISC 04 22:03:42.3±1.1**, 38.44N**±0.05×**39.19E**±0.07**, h5**^{km}±8^{km}**, n6, σ0^{s}86**/10**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELZG	Elazig	0.17	291	*i* P	Pg	22 03 46.2	+0.5
ELZG				*i* S	Sg	22 03 49.1	+1.0
MYA	Malataya	0.61	260	*i* PG	Pg	22 03 53.4	-1.0
MYA				*i* SG	Sg	22 04 01.6	-1.0
DIY	Diyarbakir	0.98	123	*e*PG	Pg	22 04 02.5	+0.6
URFA	Urfa	1.04	196	PG	Pg	22 04 02.4	-0.5
GZT	Gaziantep	1.68	230	*i* P	Pn	22 04 12.1	-0.4
GZT				*i* S	Sb	22 04 35.9	+1.2
KELT	Kelkit	1.71	2	*i* P	Pn	22 04 09.2	-3.8
KELT				*i* S	Sn	22 04 35.3	-0.2

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*NEIC **04** 22:05:37.0, 35.51S×72.98W, ML3.5(GUC), After GUC.*

GUC 04 22:05:37.0±0.7**, 35.51S**×**72.98W, MD3.5, ML3.5, 9C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TALC	Talca	1.10	85	⇑*i*P	Pb	22 05 57.5	-1.2
TALC				*i* S	Sb	22 06 13.6	+0.2
TALC				AMP		22 06 14.7	
	comp=E,3μm,0.1s						
LNCH	Linares	1.17	107	⇑*i*P	Pb	22 05 59.1	-0.8
LNCH				*i* S	Sb	22 06 15.9	+0.4
LNCH				AMP		22 06 23.3	
	comp=N,1μm,0.4s						
CCHI	Chillan	1.31	146	*i* P	Pb	22 06 01.2	-1.0
CCHI				*i* S	Sb	22 06 19.8	+0.2
CCHI				AMP		22 06 27.5	
	comp=E,888nm,0.5s						
NICH	Los Niches	1.52	71	⇑*i*P	Pn	22 06 04.9	-0.7
NICH				*i* S	Sb	22 06 25.6	+0.1
SFDO	San Fernando	1.84	62	⇓*i*P	Pn	22 06 09.5	-0.7
SFDO				*i* S	Sn	22 06 34.8	+0.2
LNV	Longovilo	2.02	40	*i* P	Pn	22 06 12.5	-0.2
LNV				*i* S	Sn	22 06 39.2	+0.2
LCCH	Las Cruces	2.34	30	⇑*i*P	Pn	22 06 17.6	+0.3
LCCH				*i* S	Sn	22 06 48.2	+1.1
CACH	El Canelo	2.40	55	⇓*i*P	Pn	22 06 19.0	+0.8
CACH				*i* S	Sn	22 06 50.8	+2.1
CICH	Cipreses	2.42	61	⇑*i*P	Pn	22 06 18.9	+0.5
CICH				*i* S	Sn	22 06 51.4	+2.3
CHCH	Chadas Angostu	2.48	51	⇑*i*P	Pn	22 06 19.9	+0.6
CHCH				*i* S	Sn	22 06 52.4	+1.7
TACH	Talagante	2.50	43	⇑*i*P	Pn	22 06 20.5	+0.9
TACH				*i* S	Sn	22 06 53.2	+1.9
PCH	Pirque	2.77	48	⇑*i*P	Pn	22 06 23.9	+0.4
PCH				*i* S	Sn	22 06 59.7	+1.5
LMEL	Las Melosas	2.83	55	⇑*i*P	Pn	22 06 24.6	+0.4
LMEL				*i* S	Sn	22 07 01.4	+1.9
LMEL				AMP		22 07 11.8	
	comp=N,169nm,0.6s						
CLCH	Cerro Calan	2.92	44	*i* P	Pn	22 06 25.8	+0.2
CLCH				*i* S	Sn	22 07 03.4	+1.6
CLCH				AMP		22 07 15.5	
	comp=N,268nm,0.7s						

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*IDC **04** 22:20:09.6±3.3, 2.24N×95.92E, mb3.7/3, mb1 3.9/4, mb1mx3.5/20, mbtmp3.7/4, ML3.7/1, MS2.9/1, Ms1 3.1/1, ms1mx2.7/26, Error ellipse: s-maj=128.5km s-min=27.6km az=58.0*

*NEIC **04** 22:20:14.7±1.1, 2.30N×96.09E, h30^{km}, mb4.1/7, Error ellipse: s-maj=36.2km s-min=15.4km az=55.0*

ISC 04 22:20:12.7±1.4**, 2.3N**±0.2×**96.1E**±0.3**, h30**^{km}**, n12, σ0^{s}88**/12**, mb4.1**/10**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.31	10	Pn	P	22 24 01.7	+0.2
	0.1nm,0.3s,baz=197,slow=11,SNR=7.9						
CMAR				LR	LR	22 31 56.9	
	comp=Z,38nm,18.4s,baz=48,slow=43						
PKI	Pulchoki	27.13	339	*e*P	P	22 25 56.7	+1.3
	8.6nm,0.8s,mb4.3						
DMN	Daman	27.27	338	*e*P	P	22 25 57.9	+1.2
	6.2nm,0.8s,mb4.2						
GUN	Gumba	27.28	340	*e*P	P	22 25 56.4	-0.3
	17nm,0.8s,mb4.6						
KKN	Kakani	27.38	339	*e*P	P	22 25 57.7	+0.1
	1.3nm,0.2s,mb4.1						
GKN	Gorkha	27.80	338	*e*P	P	22 26 00.9	-0.6
	7.0nm,0.8s,mb4.3						
KOLN	Koldanda	28.00	336	*e*P	P	22 26 04.0	+0.7
	6.3nm,0.8s,mb4.3						
WRA	Warramunga Arr	43.57	122	P	P	22 28 16.5	+0.4
	0.4nm,0.7s,mb3.2,baz=300,slow=9.0,SNR=4.1						
MKAR	Makanchi Array	45.92	347	P	P	22 28 34.3	-0.3
	0.9nm,0.4s,mb4.0,baz=158,slow=8.8,SNR=21						
ZAL	Zalesovo	52.31	352	P	P	22 29 22.5	-1.3
	0.9nm,0.4s,mb4.0,baz=308,slow=6.1,SNR=4.6						
ZAL	Zalesovo	52.31	352	P	P	22 29 22.5	-1.3
CHKZ	Chkalovo	55.34	342	*e*P	P	22 29 44.5	-1.6
	1.0nm,0.7s,mb4.0						

IDC 04 22:24:19.1±6.3**, 6.38S**×**154.82E, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.9**/15**, mbtmp4.1**/3**, Error ellipse: s-maj=183.6km s-min=39.5km az=114.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.03	234	P	P	22 29 36.2	-0.6
	3.4nm,0.7s,baz=59,slow=9.7,SNR=7.5						
SONM	Songino Array	68.72	327	P	P	22 35 25.7	-1.1
	2.1nm,0.9s,baz=124,slow=4.5,SNR=3.9						
MKAR	Makanchi Array	82.83	319	P	P	22 36 44.7	-2.0
	1.3nm,0.7s,baz=102,slow=5.4,SNR=10						

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*IDC **04** 22:24:23.7±1.4, 6.23S×146.99E, mb3.8/5, mb1 4.1/7, mb1mx4.0/15, mbtmp3.9/7, ML3.2/2, MS3.3/4, Ms1 3.3/4, ms1mx3.1/24, Error ellipse: s-maj=44.1km s-min=16.6km az=88.0*

*NEIC **04** 22:24:24.8±0.7, 6.42S×147.07E, h10^{km}, mb4.2/3, Error ellipse: s-maj=18.6km s-min=8.4km az=98.0*

ISC 04 22:24:23.8±0.8**, 6.32S**±0.06×**146.9E**±0.1**, h10**^{km}**, n17, σ0^{s}92**/17**, mb3.9**/7**, MS3.3**/2**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.08	175	Pn	Pn	22 25 15.4	+2.0
	5.5nm,0.3s,baz=310,slow=7.0,SNR=10						
PMG				Sn	Sn	22 25 51.6	+1.0
	8.8nm,0.3s,baz=339,slow=22,SNR=7.5						
PMG				Lg		22 26 05.7	
	19nm,0.3s,baz=347,slow=21,SNR=5.5						
PMG				LR	LR	22 26 38.4	
	comp=Z,253nm,20.8s,baz=167,slow=43						
PMG	Port Moresby	3.08	175	*e*Pn	Pn	22 25 12.3	-1.1
PMG				Sn	Sn	22 25 51.6	+1.0
PMG				Lg		22 26 05.7	
PMG				LR	LR	22 26 38.4	
CTA	Charters Tower	13.70	183	LR	LR	22 31 55.2	

	comp=Z,123nm,18.5s,baz=34,slow=33						
WRAB	**Tennant Creek**	**18.21**	**221**	*e*P	**P**	**22 28 37.9**	**-0.7**
	18nm,0.9s						
WB2	**Warramunga Arr**	**18.22**	**221**	*e*P	**P**	**22 28 38.5**	**-0.2**
WRA	**Warramunga Arr**	**18.22**	**221**	P	**P**	**22 28 38.3**	**-0.4**
	0.2nm,0.3s,baz=46,slow=12,SNR=52						
ASAR	**Alice Springs**	**21.30**	**215**	P	**P**	**22 29 12.1**	**-0.9**
	4.7nm,0.8s,mb3.9,baz=42,slow=8.3,SNR=20						
ASAR				LR	LR	22 37 17.5	
	comp=Z,83nm,18.1s,MS3.2,baz=299,slow=36						
ASPA	**Alice Springs**	**21.30**	**215**	*e*P	**P**	**22 29 17.3**	**+4.3**
STKA	**Stephens Creek**	**25.90**	**190**	LR	LR	22 40 49.9	
	comp=Z,113nm,18.9s,MS3.4,baz=205,slow=38						
KS15	**Wonju Array Si**	**47.02**	**339**	P	**P**	**22 32 57.8**	**+0.5**
KULM	**Kulim**	**47.59**	**283**	*e*P	**P**	**22 33 03.8**	**+1.7**
CMAR	**Chiang Mai Arr**	**53.31**	**298**	P	**P**	**22 33 47.0**	**+1.3**
	2.5nm,0.9s,mb4.1,baz=121,slow=5.8,SNR=12						
ULN	**Ulaanbaatar**	**64.34**	**331**	P	**P**	**22 35 02.1**	**0.0**
	1.5nm,0.8s,mb4.1						
VNDA	**Vanda**	**71.60**	**177**	P	**P**	**22 35 46.0**	**-0.9**
	2.4nm,1.3s,mb4.0						
MKAR	**Makanchi Array**	**77.68**	**321**	P	**P**	**22 36 22.1**	**-0.2**
	0.7nm,0.9s,mb3.6,baz=101,slow=6.2,SNR=6.1						
ZAL	**Zalesovo**	**79.23**	**328**	P	**P**	**22 36 29.6**	**-1.2**
	0.7nm,0.6s,mb3.8,baz=351,slow=5.7,SNR=5.4						
ILAR	**Eielson Array**	**85.81**	**23**	P	**P**	**22 37 04.3**	**-0.2**
	0.6nm,0.7s,mb3.9,baz=259,slow=3.8,SNR=4.7						

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*IDC **04** 22:31:22.4±0.7, 17.54S×173.51W, mb4.2/10, mb1 4.4/11, mb1mx4.3/19, mbtmp4.2/11, MS3.7/5, Ms1 3.7/5, ms1mx3.4/28, Error ellipse: s-maj=33.3km s-min=17.1km az=129.0*

*BJI **04** 22:31:23.6, 17.50S×173.50W, h10^{km}, mB5.1, mb4.8, Ms4.8, Msz4.1*

*NEIC **04** 22:31:23.7±0.5, 17.46S×173.46W, h10^{km}, mb4.6/7, Error ellipse: s-maj=25.7km s-min=12.7km az=119.0*

ISC 04 22:31:22.4±0.5**, 17.59S**±0.10×**173.5W**±0.1**, h10^{km}, n35, $\sigma 0\overset{s}{.}82$**/23**, mb4.4**/16**, MS3.7**/5**, 1C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.01**	**25**	Pn	**Pn**	**22 32 23.2**	**-2.2**
	9.8nm,0.3s,baz=141,slow=13,SNR=8.1						
AFI				Sn	**Sn**	**22 33 03.0**	**-10**
	12nm,0.3s,baz=41,slow=23,SNR=4.3						
AFI	**Afiamalu**	**4.01**	**25**	*e*Pn	**Pn**	**22 32 20.1**	**-5.3**
AFI				Sn	**Sn**	**22 33 03.0**	**-10**
RAR	**Rarotonga**	**13.45**	**108**	LR	LR	22 37 41.4	
	comp=Z,234nm,21.9s,baz=108,slow=28						
URZ	**Urewera**	**22.18**	**200**	P	**P**	**22 36 19.7**	**-0.5**
	6.5nm,0.4s,mb4.4,baz=54,slow=16,SNR=10						
HNR	**Honiara**	**27.03**	**284**	LR	LR	22 46 38.9	
	comp=Z,122nm,18.4s,MS3.5,baz=318,slow=34						
CTAO	**Charters Tower**	**38.11**	**260**	*e*P	**P**	**22 38 43.4**	**0.0**
	30nm,1.3s,mb4.9						
STKA	**Stephens Creek**	**42.90**	**242**	LR	LR	22 55 07.0	
	comp=Z,107nm,20.3s,MS3.7,baz=205,slow=33						
WRA	**Warramunga Arr**	**49.28**	**259**	P	**P**	**22 40 12.8**	**-0.9**
	3.1nm,0.7s,mb4.4,baz=97,slow=6.1,SNR=21						
ASAR	**Alice Springs**	**49.37**	**254**	P	**P**	**22 40 13.2**	**-1.1**
	6.0nm,0.7s,mb4.7,baz=90,slow=8.4,SNR=41						
ASAR				PcP	PcP	22 41 37.0	-0.1
	1.8nm,0.6s,baz=98,slow=4.3,SNR=5.6						
ASAR				LR	LR	23 00 51.4	
	comp=Z,82nm,18.7s,MS3.8,baz=38,slow=36						
SBA	**Scott Base**	**61.08**	**185**	*e*P	**P**	**22 41 39.0**	**+0.5**
	3.7nm,1.0s,mb4.5						
VNDA	**Vanda**	**61.20**	**186**	P	**P**	**22 41 39.3**	**0.0**
	0.9nm,0.8s,mb3.9,baz=354,slow=7.5,SNR=5.8						
VNDA	**Vanda**	**61.20**	**186**	*e*P	**P**	**22 41 39.6**	**+0.2**
	1.0nm,0.8s,mb4.0						
NVAR	**Mina Array Bea**	**76.01**	**42**	P	**P**	**22 43 11.9**	**+0.2**
	1.0nm,0.7s,mb3.9,baz=219,slow=6.8,SNR=7.0						
TXAR	**Lajitas Array**	**81.91**	**56**	P	**P**	**22 43 44.8**	**+0.9**
	0.6nm,1.0s,mb3.5,baz=225,slow=5.3,SNR=5.8						
CN2	**Changchun**	**82.69**	**320**	*e*P	**P**	**22 43 48.5**	**+0.8**
MCK	**McKinley**	**83.28**	**11**	P	**P**	**22 43 50.4**	**+0.1**
	3.5nm,0.9s,mb4.4						
PDAR	**Pinedale Array**	**83.95**	**42**	P	**P**	**22 43 53.9**	**-0.3**
	0.7nm,0.5s,mb4.0,baz=243,slow=2.0,SNR=6.5						
COLA	**College**	**84.52**	**11**	*e*P	**P**	**22 43 56.4**	**-0.1**
	9.0nm,0.7s,mb5.0						
ILAR	**Eielson Array**	**84.60**	**11**	P	**P**	**22 43 56.0**	**-0.8**
	1.3nm,0.8s,mb4.1,baz=223,slow=5.7,SNR=8.5						
MAW	**Mawson**	**85.70**	**199**	P	**P**	**22 44 03.0**	**+0.7**
	2.7nm,0.9s,mb4.5,baz=137,slow=11,SNR=3.6						
BILL	**Bilibino**	**86.65**	**353**	*e*P	**P**	**22 44 07.2**	**+0.2**
	5.2nm,0.8s,mb4.8						
SNAA	**Sanae**	**90.74**	**177**	*e*P	**P**	**22 44 25.3**	**-1.0**
	2.0nm,0.8s,mb4.5						
KMI	**Kunming**	**91.88**	**296**	P	**P**	**22 44 33.1**	**+0.4**
KMI				LR	LR		
	comp=Z,20nm,15.8s,MS3.7						
CMAR	**Chiang Mai Arr**	**93.20**	**288**	P	**P**	**22 44 41.0**	**+2.2**
	comp=Z,0.9nm,0.6s,mb4.4,baz=112,slow=3.4,SNR=6.8						
CMAR				LR	LR	23 28 24.8	
	comp=Z,32nm,18.2s,MS3.8,baz=220,slow=37						
KMBO	**Kilima Mbogo**	**144.46**	**242**	PKP	PKPdf	22 51 01.5	-1.5
	comp=Z,2.2nm,0.7s,baz=87,slow=5.8,SNR=8.9						
MALT	**Malatya**	**145.31**	**313**	*e*PKPdf	PKPdf	22 51 03.7	-0.1
CLL	**Collm**	**145.96**	**353**	⇑*i*PKP1	PKPbc	22 51 04.0	+1.6
CLL				*e*		22 51 15.0	
MORC	**Moravsky Berou**	**146.68**	**347**	*e*PKPbc	PKPbc	22 51 05.5	+1.4
MOX	**Moxa**	**146.77**	**354**	*e*P	PKPbc	22 51 06.0	+1.7
KECS	**Kecovo**	**147.14**	**343**	*e*PKP	PKPdf	22 51 10.2	+3.7
VYHS	**Vyhne**	**147.57**	**345**	*e*PKP	PKPdf	22 51 09.0	+1.8
BRTR	**Keskin Array B**	**147.76**	**319**	PKPbc	PKPdf	22 51 09.8	+2.0
	comp=Z,1.6nm,0.8s,baz=128,slow=1.8,SNR=8.7						
KHC	**Kasperske Hory**	**148.02**	**351**	*e*PKPAB	PKPdf	22 51 10.5	+2.6
ZST	**Bratislava**	**148.26**	**346**	*e*PKP	PKPdf	22 51 12.0	+3.6
GERES	**GERESS Array B**	**148.28**	**351**	PKPbc	PKPdf	22 51 10.9	+2.5
	comp=Z,1.1nm,0.8s,baz=27,slow=3.0,SNR=13						

IDC 04 22:34:31.6±2.1**, 8.79S**×**123.97E, mb3.4**/1**, mb1 4.0**/3**, mb1mx3.6**/16**, mbtmp3.7**/3**, ML3.7**/2**, Error ellipse: s-maj=256.3km s-min=32.6km az=57.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.95**	**139**	Pn	P	22 38 03.8	-2.5
	0.5nm,0.3s,baz=316,slow=15,SNR=21						
WRA				Sn	S	22 40 38.0	-16
	1.3nm,0.3s,baz=318,slow=24,SNR=8.0						
ASAR	**Alice Springs**	**17.59**	**148**	P	P	22 38 38.9	-1.1
	0.3nm,0.3s,baz=325,slow=12,SNR=22						
MKAR	**Makanchi Array**	**66.61**	**330**	P	P	22 45 23.9	-2.1
	0.4nm,0.8s,baz=131,slow=6.9,SNR=3.6						

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*CSEM **04** 22:39:24.4±0.1, 32.25N×57.58E, h5^{km}, ML4.1, Error ellipse: s-maj=2.3km s-min=1.5km az=126.0*

*TEH **04** 22:39:26.6, 32.15N×57.67E, h10^{km}, Mn4.1*

*NEIC **04** 22:39:26.6, 32.15N×57.67E, h10^{km}, ML4.1(TEH), After TEH.*

*THR **04** 22:39:26.6±0.6, 32.23N×57.45E, h15^{km}, ML3.6*

ISC 04 22:39:26.3±0.6**, 32.31N**±0.04×**57.51E**±0.06**, h10^{km}, n34, $\sigma 0\overset{s}{.}97$**/37**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBAF	**Bafgh**	**1.80**	**247**	Pn	**Pn**	**22 39 58.7**	**+1.1**
KRBR	**Kerman**	**2.40**	**196**	*e*PN	**Pn**	**22 40 06.8**	**+0.5**
ICHK	**Chekchek**	**2.63**	**270**	Pn	**Pn**	**22 40 10.4**	**+0.9**
IMEH	**Mehriz**	**2.63**	**250**	Pn	**Pn**	**22 40 10.0**	**+0.5**
ISAD	**Sadrabad**	**3.27**	**264**	Pn	**Pn**	**22 40 18.9**	**+0.3**
NASN	**Na'in**	**4.00**	**278**	*e*PN	**Pn**	**22 40 29.2**	**+0.2**
NASN				AML	AML	22 41 43.1	
	comp=E,120nm,0.4s						
IMOG	**Moghan**	**4.09**	**21**	Pn	**Pn**	**22 40 29.4**	**-0.9**
MHI	**Mashhad**	**4.31**	**22**	Pn	**Pn**	**22 40 33.0**	**-0.5**
IANJ	**Anjiloo**	**4.34**	**318**	Pn	**Pn**	**22 40 33.9**	**0.0**
IZEF	**Zefreh**	**4.41**	**279**	Pn	**Pn**	**22 40 34.1**	**-0.8**
IGAR	**Garneh**	**4.50**	**271**	Pn	**Pn**	**22 40 39.8**	**+3.7**
IKRD	**Kardeh**	**4.53**	**10**	Pn	**Pn**	**22 40 39.3**	**+2.7**
IPAR	**Pars**	**4.54**	**238**	Pn	**Pn**	**22 40 41.4**	**+4.6**
IMYA	**Miamay**	**4.56**	**27**	Pn	**Pn**	**22 40 36.0**	**-1.0**
ISFR	**Esferayen**	**4.75**	**5**	Pn	**Pn**	**22 40 39.6**	**0.0**
ILAS	**Lasjerd**	**4.87**	**310**	Pn	**Pn**	**22 40 41.7**	**+0.3**
ISHM	**Shahmirzad**	**4.94**	**316**	Pn	**Pn**	**22 40 42.2**	**-0.2**
BNDS	**Bandar-Abbas**	**5.03**	**194**	*e*PN	**Pn**	**22 40 42.1**	**-1.4**
BNDS				AML	AML	22 42 11.7	
	comp=N,27nm,0.5s						
IKLH	**Kalahroud**	**5.09**	**283**	Pn	**Pn**	**22 40 40.4**	**-4.1**
IFIR	**Firoozkooh**	**5.16**	**311**	Pn	**Pn**	**22 40 46.6**	**+1.1**
IFIR				Sn	**Sn**	**22 41 46.9**	**+1.0**
IFIR				Lg		22 42 15.0	
IEMG	**Emamqoli**	**5.18**	**10**	Pn	**Pn**	**22 40 46.5**	**+0.8**
ISHV	**Shirvan**	**5.22**	**2**	Pn	**Pn**	**22 40 46.0**	**-0.3**
IMOK	**Mook**	**5.25**	**233**	Pn	**Pn**	**22 40 41.9**	**-4.9**
IVRN	**Varamin**	**5.52**	**301**	Pn	**Pn**	**22 40 50.0**	**-0.5**
IVRN				Sn	**Sn**	**22 41 52.9**	**-1.9**
GHIR	**Ghir-Karzin**	**5.60**	**225**	*e*PN	**Pn**	**22 40 50.4**	**-1.3**
GHIR	**Ghir-Karzin**	**5.60**	**225**	*e*Pn	**Pn**	**22 40 50.3**	**-1.3**
	SNR=52						
IDMV	**Damavand**	**5.60**	**307**	Pn	**Pn**	**22 40 51.9**	**+0.2**
DAMV	**Damavand**	**5.67**	**307**	*e*PN	**Pn**	**22 40 52.6**	**-0.1**
IAFJ	**Afjeh**	**5.97**	**308**	Pn	**Pn**	**22 40 57.0**	**+0.1**
IAFJ				Sn	**Sn**	**22 42 04.1**	**-2.1**
THKV	**Tehran--Karaj**	**6.57**	**305**	*e*PN	**Pn**	**22 41 05.5**	**+0.1**
ASAO	**Ashtian**	**6.64**	**292**	*e*PN	**Pn**	**22 41 06.5**	**+0.1**
ASAO	**Ashtian**	**6.64**	**292**	*e*Pn	**Pn**	**22 41 06.4**	**0.0**
	SNR=52						
IRAZ	**Razeghan**	**7.02**	**298**	Pn	Px	22 41 24.8	
IGZV	**Gazvin**	**7.27**	**306**	Pn	**Pn**	**22 41 16.9**	**+1.7**
IGZV				Sn	**Sn**	**22 42 34.5**	**-4.2**
IGZV				Lg		22 43 19.6	

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*TAP **04** 22:49:18.0, 24.58N×122.37E, h6^{km}, ML2.9*

JMA 04 22:49:15.7±0.2**, 24.71N**×**122.41E, h23^{km}, M2.5, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.60**	**114**	P	Pb	22 49 27.4	0.0
YOJ				S	Sb	22 49 35.6	+0.1
IRIF	**Iriomote-Funau**	**1.26**	**107**	P	Pn	22 49 38.0	-0.1
IRIF				*e*S	Sb	22 49 55.2	+0.8
JKRS	**Kuro-shima**	**1.53**	**108**	P	Pn	22 49 42.5	+0.5
JKRS				*e*S	Sn	22 50 00.8	-0.6
JIJ	**Ishigaki jima**	**1.61**	**102**	P	Pn	22 49 43.2	0.0
JIJ				*e*S	Sn	22 50 02.1	-1.4

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*IDC **04** 23:02:36.0±0.7, 52.92S×22.44E, mb4.0/9, mb1 4.1/9, mb1mx4.0/19, mbtmp4.0/9, MS3.7/10, Ms1 3.7/10, ms1mx3.6/25, Error ellipse: s-maj=29.6km s-min=20.3km az=70.0*

*NEIC **04** 23:02:37.4±0.4, 52.86S×22.38E, h10^{km}, mb4.6/8, Error ellipse: s-maj=14.1km s-min=10.4km az=92.0*

ISC 04 23:02:35.8±0.5**, 52.84S**±0.09×**22.3E**±0.2**, h10^{km}, n45, $\sigma 1\overset{s}{.}10$**/30**, mb4.3**/14**, MS3.6**/10**, 9C, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**20.48**	**356**	P	**P**	**23 07 17.7**	**+1.4**
	8.1nm,0.8s,baz=144,slow=6.6,SNR=3.2						
SUR				LR	LR	23 14 13.7	
	comp=Z,221nm,18.2s,MS3.6,baz=155,slow=34						
SNAA	**Sanae**	**21.89**	**201**		**P**	**23 07 30.7**	**+0.3**
SNAA	**Sanae**	**21.89**	**201**		**P**	**23 07 34.5**	**+4.1**
SNAA	**Sanae**	**21.89**	**201**	⇑*i*	**P**	**23 07 37.9**	**+7.5**
SNAA	**Sanae**	**21.89**	**201**	⇑*i*	**P**	**23 07 46.4**	**+16**
SNAA	**Sanae**	**21.89**	**201**	P	**P**	**23 07 30.2**	**-0.2**
	2.3nm,0.8s,mb3.6,baz=27,slow=9.7,SNR=13						
SNAA				LR	LR	23 13 40.3	
	comp=Z,138nm,21.1s,MS3.3,baz=20,slow=30						
SNAA	**Sanae**	**21.89**	**201**	*e*P	**P**	**23 07 29.9**	**-0.5**
	21nm,1.1s,mb4.5						
VNA2	**Neumayer--Watz**	**22.48**	**205**	⇑*i*	**P**	**23 07 38.3**	**+2.1**
VNA2	**Neumayer--Watz**	**22.48**	**205**	⇑*i*	**P**	**23 07 42.7**	**+6.5**
VNA2	**Neumayer--Watz**	**22.48**	**205**	⇑*i*	**P**	**23 07 50.4**	**+14**
VNA1	**Neumayer--Stat**	**22.54**	**206**	⇑*i*	**P**	**23 07 39.1**	**+2.5**
VNA3	**Neumayer Olymp**	**23.26**	**206**	⇑*i*	**P**	**23 07 45.0**	**+1.3**
VNA3	**Neumayer Olymp**	**23.26**	**206**	⇑*i*	**P**	**23 07 54.6**	**+11**
VNA3	**Neumayer Olymp**	**23.26**	**206**	⇑*i*	**P**	**23 07 56.9**	**+13**
BOSA	**Boshof**	**24.30**	**6**	LR	LR	23 15 52.8	
	comp=Z,205nm,19.1s,MS3.6,baz=155,slow=33						
MAW	**Mawson**	**24.36**	**143**	P	**P**	**23 07 54.9**	**+0.5**
	2.5nm,0.9s,mb3.6,baz=292,slow=16,SNR=2.9						
MAW				LR	LR	23 15 58.5	
	comp=Z,82nm,18.5s,MS3.2,baz=55,slow=33						
LBTB	**Lobatse**	**27.90**	**6**	P	**P**	**23 08 27.6**	**-0.2**
	4.1nm,1.1s,mb4.0,baz=241,slow=13,SNR=2.9						
LBTB				LR	LR	23 17 18.1	
	comp=Z,237nm,21.2s,MS3.8,baz=215,slow=32						
TSUM	**Tsumeb**	**33.78**	**352**	LR	LR	23 20 52.9	
	comp=Z,133nm,19.4s,MS3.7,baz=157,slow=32						
VNDA	**Vanda**	**47.50**	**169**	P	**P**	**23 11 11.2**	**-1.0**
	0.6nm,0.7s,mb3.6,baz=260,slow=7.5,SNR=5.9						
VNDA				LR	LR	23 29 10.1	
	comp=Z,163nm,21.6s,MS4.0,baz=230,slow=34						
VNDA	**Vanda**	**47.50**	**169**	*e*P	**P**	**23 11 10.7**	**-1.5**
	5.3nm,1.4s,mb4.3						
VNDA				LR	LR	23 29 10.1	
SBA	**Scott Base**	**47.74**	**170**	*e*P	**P**	**23 11 13.3**	**-0.7**
	13nm,1.6s,mb4.7						
KMBO	**Kilima Mbogo**	**53.02**	**19**	LR	LR	23 33 19.5	
	comp=Z,87nm,18.8s,MS3.8,baz=93,slow=35						
TRQA	**Tornquist**	**57.62**	**248**	*e*P	**P**	**23 12 26.6**	**-1.4**
	6.9nm,1.0s,mb4.6						
CPUP	**Villa Florida**	**63.35**	**261**	LR	LR	23 33 28.6	
	comp=Z,64nm,20.4s,MS3.8,baz=192,slow=29						
DBIC	**Dimbokro**	**63.62**	**330**	LR	LR	23 34 14.4	
	comp=Z,56nm,21.8s,MS3.7,baz=94,slow=30						
NWAO	**Narrogin (SRO)**	**67.27**	**115**	*e*P	**P**	**23 13 32.1**	**-0.3**
	40nm,1.3s,mb5.3						
LVC	**Limon Verde**	**73.03**	**255**	*e*P	**P**	**23 14 06.5**	**-1.1**
	7.5nm,1.1s,mb4.5						
LPAZ	**La Paz**	**77.47**	**260**	P	**P**	**23 14 34.2**	**+1.2**
	0.7nm,0.7s,mb3.7,baz=169,slow=8.5,SNR=2.7						
LPAZ	**La Paz**	**77.47**	**260**	P	**P**	**23 14 34.2**	**+1.2**
SAML	**Samuel**	**80.22**	**268**	*e*P	**P**	**23 14 46.4**	**-1.6**
	1.7nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**80.47**	**131**	P	**P**	**23 14 49.2**	**+0.1**
	2.7nm,0.8s,mb4.2,baz=198,slow=4.7,SNR=5.4						
STKA	**Stephens Creek**	**80.47**	**131**	*e*P	**P**	**23 14 48.8**	**-0.3**
ASAR	**Alice Springs**	**83.53**	**121**	P	**P**	**23 15 05.3**	**+0.2**
	1.3nm,0.8s,mb4.1,baz=202,slow=4.2,SNR=12						
WRA	**Warramunga Arr**	**86.81**	**119**	P	**P**	**23 15 21.5**	**0.0**
	0.6nm,0.8s,mb3.9,baz=207,slow=4.2,SNR=6.5						
WRAB	**Tennant Creek**	**86.82**	**119**	*e*P	**P**	**23 15 21.6**	**0.0**
	19nm,1.4s,mb5.1						
FCC	**Fort Churchill**	**145.00**	**306**	*e*PKPdf	PKPdf	23 22 12.8	-2.2
MSU	**Marysvale**	**145.75**	**264**	*e*PKPdf	PKPdf	23 22 16.4	-0.5
PDAR	**Pinedale Array**	**146.73**	**272**	PKPbc	PKPbc	23 22 18.3	+1.5
	0.8nm,0.7s,baz=135,slow=4.2,SNR=6.9						
HWUT	**Hardware Ranch**	**147.28**	**269**	*e*PKPdf	PKPdf	23 22 20.2	+0.8
ELK	**Elko**	**148.98**	**264**	PKPbc	PKPdf	23 22 23.7	+1.6
	1.6nm,0.8s,baz=167,slow=7.4,SNR=5.2						
NVAR	**Mina Array Bea**	**149.36**	**258**	PKPbc	PKPdf	23 22 27.2	+4.4
	1.9nm,0.9s,baz=124,slow=4.2,SNR=11						
HRY	**Holter Researc**	**150.18**	**277**	*e*PKPbc	PKPdf	23 22 28.1	+4.3
CHMT	**Chamberlain Mo**	**151.14**	**276**	PKPdf	PKPdf	23 22 23.6	-1.7
CHMT				*e*PKPbc	PKPdf	23 22 30.3	+5.0
YKA	**Yellowknife Ar**	**155.49**	**310**	PKPab	PKPab	23 22 56.3	+0.3
	0.5nm,0.7s,baz=89,slow=4.8,SNR=4.7						
YKA	**Yellowknife Ar**	**155.49**	**310**	PKPab	PKPab	23 22 56.3	+0.2

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*BJI **04** 23:12:05.7, 42.08N×125.96W, h14^{km}, mB4.7, mb4.6, Ms4.7, Msz4.3*

*IDC **04** 23:12:06.3±1.1, 42.03N×126.93W, mb3.9/9, mb1 4.0/14, mb1mx3.9/26, mbtmp3.8/14, ML3.2/3, MS3.6/18, Ms1 3.6/18, ms1mx3.5/39, Error ellipse: s-maj=24.9km s-min=12.8km az=33.0*

*NEIC **04** 23:12:08.3±0.5, 41.99N×126.82W, h10^{km}, mb4.4/9, Error ellipse: s-maj=6.9km s-min=4.5km az=63.0*

ISC 04 23:12:07.4±0.6**, 42.03N**±0.04×**126.73W**±0.06**, h10^{km}, n97, $\sigma 1\overset{s}{.}12$**/89**, mb4.0**/15**, MS3.5**/11**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBO	**Bosley Butte**	**1.87**	**83**	*e*P	**Pn**	**23 12 40.0**	**+0.1**
KEBM	**Edson Butte**	**1.96**	**64**	*e*P	**Pn**	**23 12 41.0**	**-0.2**
KSXB	**Camp Six Broad**	**2.14**	**94**	P	**Pn**	**23 12 44.0**	**+0.4**
KRMB	**Red Mountain**	**2.17**	**102**	*e*P	**Pn**	**23 12 44.5**	**+0.4**
KHMM	**Horse Mountain**	**2.53**	**116**	*e*P	**Pn**	**23 12 49.4**	**+0.1**
DBO	**Dodson Butte**	**2.80**	**66**	P	**Pn**	**23 12 53.7**	**+0.6**
HUMO	**Hull Mountain**	**2.86**	**77**	*e*P	**Pn**	**23 12 54.2**	**+0.2**
YBH	**Yreka Blue Hor**	**3.02**	**94**	Pn	**Pn**	**23 12 57.5**	**+1.3**
	6.6nm,0.3s,baz=273,slow=13,SNR=52						
YBH				LR	LR	23 14 22.9	
	comp=Z,2µm,19.6s,baz=200,slow=43						
YBH	**Yreka Blue Hor**	**3.02**	**94**	*e*P	**Pn**	**23 12 57.3**	**+1.0**
HSO	**Harness Mounta**	**3.07**	**60**	P	**Pn**	**23 12 57.4**	**+0.4**
LAMM	**Antelope Mount**	**3.10**	**96**	P	**Pn**	**23 12 58.9**	**+1.5**
BBOR	**Butler Butte**	**3.12**	**73**	P	**Pn**	**23 12 58.7**	**+1.0**
BUOR	**Burton Butte**	**3.34**	**84**	P	**Pn**	**23 13 02.5**	**+1.6**
EUO	**Eugene**	**3.35**	**52**	P	**Pn**	**23 13 01.1**	**+0.2**
LHEM	**Herd Peak**	**3.40**	**95**	P	**Pn**	**23 13 03.1**	**+1.5**
WDC	**Whiskeytown Da**	**3.47**	**113**	*e*P	**Pn**	**23 13 02.8**	**+0.1**
COR	**Corvallis**	**3.58**	**43**	*e*P	**Pn**	**23 13 04.6**	**+0.4**
HBO	**Huckleberry Mo**	**3.71**	**59**	P	**Pn**	**23 13 07.0**	**+0.8**
IRO	**Indian Ridge**	**3.83**	**57**	P	**Pn**	**23 13 08.3**	**+0.5**
BROR	**Big Rock Looko**	**3.85**	**53**	P	**Pn**	**23 13 08.4**	**+0.3**
FRIS	**Frissel Point**	**4.03**	**56**	P	**Pn**	**23 13 11.4**	**+0.8**
SSOR	**Sweet Springs**	**4.20**	**46**	P	**Pn**	**23 13 13.8**	**+0.7**
LBCM	**Butte Creek Ri**	**4.22**	**105**	P	**Pn**	**23 13 14.6**	**+1.3**
KMOR	**Kings Mountain**	**4.30**	**32**	P	**Pn**	**23 13 14.6**	**+0.1**
MOD	**Modoc**	**4.79**	**89**	*e*P	**Pn**	**23 13 20.9**	**-0.6**
TDH	**Tom, Dick, Har**	**4.85**	**46**	P	**Pn**	**23 13 22.9**	**+0.7**
VLMM	**Larch Mountain**	**4.88**	**42**	P	**Pn**	**23 13 23.8**	**+1.0**
ERK	**Elk Rock**	**5.32**	**35**	P	**Pn**	**23 13 29.6**	**+0.7**
TDL	**Tradedollar La**	**5.41**	**35**	P	**Pn**	**23 13 30.7**	**+0.6**
WCN	**Washoe City**	**5.96**	**115**	*e*P	**Pn**	**23 13 36.0**	**-1.9**
WVOR	**Wild Horse Val**	**6.02**	**83**	*e*P	**Pn**	**23 13 37.6**	**-1.2**
GSM	**Grass Mountain**	**6.26**	**33**	P	**Pn**	**23 13 43.0**	**+0.9**
CMB	**Columbia Colle**	**6.29**	**127**	P	**Pn**	**23 13 40.2**	**-2.4**
EBG	**Ellensburg**	**6.58**	**40**	P	**Pn**	**23 13 47.2**	**+0.6**
HAWA	**Hanford**	**6.77**	**47**	*e*P	**Pn**	**23 13 48.1**	**-1.2**
PGC	**Sidney**	**7.01**	**18**	*e*P	**Pn**	**23 13 51.8**	**-1.0**
NVAR	**Mina Array Bea**	**7.38**	**116**	Pn	**Pn**	**23 13 58.0**	**+0.1**
	0.1nm,0.3s,baz=292,slow=15,SNR=5.1						
NVAR				LR	LR	23 17 04.0	
	comp=Z,608nm,18.4s,baz=25,slow=40						
BMO	**Blue Mountains**	**7.42**	**64**	*e*P	**Pn**	**23 13 57.6**	**-0.8**
ELK	**Elko**	**8.73**	**95**	Pn	**P**	**23 14 19.0**	**+2.2**
	0.1nm,0.3s,baz=288,slow=12,SNR=12						
ELK	**Elko**	**8.73**	**95**	*e*P	**P**	**23 14 14.6**	**-2.2**
HLID	**Hailey**	**9.19**	**76**	*e*P	**P**	**23 14 22.9**	**-0.1**
NEW	**Newport**	**9.21**	**44**	Pn	**P**	**23 14 23.8**	**+0.4**
	0.3nm,0.3s,baz=204,slow=12,SNR=2.9						
NEW				LR	LR	23 18 03.6	
	comp=Z,564nm,19.0s,baz=214,slow=38						
NEW	**Newport**	**9.21**	**44**	*e*P	**P**	**23 14 23.3**	**-0.1**
BBB	**Bella Bella**	**10.21**	**355**	LR	LR	23 17 40.2	
	comp=Z,167nm,18.4s,baz=51,slow=33						
MSO	**Missoula**	**10.33**	**58**	*e*P	**P**	**23 14 37.1**	**-1.6**
BGU	**Big Grassy Mou**	**10.34**	**92**	P	**P**	**23 14 38.8**	**-0.1**
MCMT	**McKenzie Canyo**	**10.48**	**70**	*e*P	**P**	**23 14 40.4**	**-0.4**
DUG	**Dugway**	**10.66**	**95**	*e*P	**P**	**23 14 41.2**	**-2.1**
SPUT	**South Promonto**	**10.71**	**89**	P	**P**	**23 14 43.3**	**-0.6**
CHMT	**Chamberlain Mo**	**10.80**	**59**	*e*P	**P**	**23 14 43.2**	**-1.9**
ARUT	**Antelope Range**	**11.05**	**108**	P	**P**	**23 14 48.0**	**-0.6**
HWUT	**Hardware Ranch**	**11.33**	**87**	P	**P**	**23 14 50.4**	**-2.0**
RRI2	**Red Ridge**	**11.42**	**78**	P	**P**	**23 14 53.2**	**-0.5**
HRY	**Holter Researc**	**11.64**	**61**	P	**P**	**23 14 55.0**	**-1.7**
MSU	**Marysvale**	**11.66**	**103**	P	**P**	**23 14 56.0**	**-0.8**
TPAW	**Teton Pass**	**11.70**	**78**	P	**P**	**23 14 55.2**	**-2.2**
IMW	**Indian Meadow**	**11.72**	**76**	P	**P**	**23 14 56.5**	**-1.2**
PDAR	**Pinedale Array**	**12.72**	**81**	Pn	**P**	**23 15 12.4**	**+1.3**
	0.0nm,0.3s,baz=278,slow=10,SNR=8.3						
PDAR				LR	LR	23 20 20.2	
	comp=Z,410nm,20.2s,baz=3.2,slow=38						
PV10	**Paradox Valley**	**14.00**	**99**	P	**P**	**23 15 27.5**	**-0.5**
PV01	**Paradox Valley**	**14.44**	**100**	P	**P**	**23 15 31.9**	**-1.8**
RWWY	**Rawlins**	**14.55**	**85**	*e*P	**P**	**23 15 35.1**	**-0.1**
RW3	**Ridgway**	**15.04**	**98**	P	**P**	**23 15 40.3**	**-1.4**
LAO	**LASA Array**	**15.38**	**65**	P	**P**	**23 15 45.9**	**-0.1**
ISCO	**Idaho Springs**	**16.12**	**91**	*e*P	**P**	**23 15 56.3**	**+0.7**
	6.9nm,1.0s						
DLBC	**Dease Lake**	**16.56**	**354**	LR	LR	23 21 32.2	
	comp=Z,142nm,18.2s,baz=141,slow=34						
SDCO	**Great Sand Dun**	**16.84**	**98**	*e*P	**P**	**23 16 08.1**	**+3.3**
	34nm,1.4s						
ANMO	**Albuquerque**	**17.35**	**107**	P	**P**	**23 16 13.6**	**+2.4**
	baz=318,slow=16,SNR=2.4						
ANMO				LR	LR	23 23 32.0	
	comp=Z,355nm,18.1s,slow=39						
BNM	**Barren Site**	**17.64**	**110**	*e*P	**P**	**23 16 15.2**	**+0.3**
MNTX	**Cornudas Mount**	**19.90**	**114**	P	**P**	**23 16 42.0**	**+0.1**
	28nm,1.7s						
GDL2	**Guadalupe Moun**	**20.30**	**112**	P	**P**	**23 16 45.8**	**-0.4**
FFC	**Flin Flon**	**20.64**	**44**	*e*P	**P**	**23 16 49.1**	**-0.4**
	72nm,0.9s						
AMTX	**Amarillo**	**20.83**	**102**	P	**P**	**23 16 52.2**	**+0.6**
	35nm,1.4s						
YKA	**Yellowknife Ar**	**21.73**	**15**	P	**P**	**23 16 58.8**	**-1.7**
	2.8nm,0.9s,mb3.7,baz=205,slow=11,SNR=11						
YKA				LR	LR	23 26 07.9	
	comp=Z,29nm,19.0s,MS2.7,baz=40,slow=39						
LTX	**Lajitas**	**22.53**	**117**	P	**P**	**23 17 10.5**	**+1.7**
	38nm,1.8s,mb4.5						
TXAR	**Lajitas Array**	**22.53**	**117**	P	**P**	**23 17 12.9**	**+4.2**
	1.6nm,0.8s,mb3.5,baz=301,slow=7.7,SNR=20						
TXAR				LR	LR	23 27 09.7	
	comp=Z,177nm,19.0s,MS3.5,baz=295,slow=40						
ULM	**Lac du Bonnet**	**22.78**	**58**	P	**P**	**23 17 14.8**	**+3.9**
	4.9nm,0.8s,mb4.0,baz=262,slow=7.6,SNR=5.5						
ULM				LR	LR	23 26 22.2	
	comp=Z,117nm,18.0s,MS3.4,baz=258,slow=37						
ULM	**Lac du Bonnet**	**22.78**	**58**	*e*P	**P**	**23 17 12.0**	**+1.0**
	30nm,1.6s,mb4.5						
WMOK	**Wichita Mounta**	**23.02**	**99**	*e*P	**P**	**23 17 15.0**	**+1.6**
	7.7nm,0.9s,mb4.1						
ILAR	**Eielson Array**	**25.53**	**340**	P	**P**	**23 17 36.7**	**-0.6**
	2.5nm,0.9s,mb3.8,baz=153,slow=8.0,SNR=21						
ILAR				LR	LR	23 24 52.2	
	comp=Z,50nm,21.0s,MS3.0,baz=8.6,slow=30						
ILAR	**Eielson Array**	**25.53**	**340**	P	**P**	**23 17 36.7**	**-0.6**
ILAR				LR	LR	23 24 52.2	
INK	**Inuvik**	**26.59**	**354**	LR	LR	23 27 45.6	
	comp=Z,84nm,21.9s,MS3.2,baz=338,slow=35						
SCHQ	**Schefferville**	**40.52**	**50**	LR	LR	23 36 51.8	
	comp=Z,64nm,18.5s,MS3.5,baz=42,slow=37						
CN2	**Changchun**	**72.85**	**314**	*e*P	**P**	**23 23 40.0**	**+2.0**
FINES	**FINESS Array B**	**74.55**	**13**	P	**P**	**23 23 46.6**	**-0.8**
	2.3nm,1.0s,mb4.1,baz=45,slow=2.7,SNR=4.9						
SONM	**Songino Array**	**78.95**	**327**	LR	LR	23 58 39.0	
	comp=Z,58nm,19.9s,MS3.9,baz=257,slow=35						
LPAZ	**La Paz**	**79.23**	**123**	P	**P**	**23 24 14.8**	**+0.3**
	0.5nm,0.7s,mb3.6,baz=347,slow=5.3,SNR=3.0						
LPAZ				LR	LR	00 01 33.3	
	comp=Z,63nm,20.9s,MS3.9,baz=104,slow=37						
ZAL	**Zalesovo**	**80.66**	**342**	P	**P**	**23 24 20.1**	**-1.3**
	0.6nm,0.3s,mb4.0,baz=52,slow=5.0,SNR=3.8						
BRG	**Berggiesshubel**	**81.32**	**24**	P	**P**	**23 24 26.0**	**+1.0**
	3.3nm,1.2s,mb4.1						
GERES	**GERESS Array B**	**83.03**	**25**	LR	LR	00 00 13.2	
	comp=Z,42nm,20.4s,MS3.8,baz=175,slow=35						
ESDC	**Sonseca Array**	**83.52**	**41**	P	**P**	**23 24 38.0**	**+1.4**
	0.1nm,0.4s,mb3.3,baz=293,slow=27,SNR=3.4						
SIV	**San Ignacio**	**83.53**	**118**	P	**P**	**23 24 38.1**	**+1.0**
	0.5nm,0.4s,mb4.0,baz=180,slow=3.0,SNR=4.5						
AKASG	**Malin Array Be**	**85.29**	**15**	P	**P**	**23 24 43.9**	**-1.3**
	1.5nm,1.0s,mb4.1,baz=339,slow=4.5,SNR=6.1						
MKAR	**Makanchi Array**	**87.88**	**341**	P	**P**	**23 24 57.4**	**-0.6**
	0.3nm,0.7s,mb3.6,baz=34,slow=8.7,SNR=3.6						
MKAR				LR	LR	00 06 42.6	
	comp=Z,34nm,19.3s,MS3.8,baz=155,slow=37						
WMQ	**Urumqi**	**89.12**	**336**	*e*P	**P**	**23 25 05.5**	**+1.5**
WMQ				AP	pP	23 25 10.5	+3.3
WMQ				XP	sP	23 25 12.5	+4.3
LZH	**Lanzhou**	**89.55**	**321**	*e*P	**P**	**23 25 03.5**	**-2.7**
LZH				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb5.0						
BDFB	**Brasilia**	**92.19**	**109**	LR	LR	00 11 44.9	
	comp=Z,102nm,18.1s,MS4.3,baz=120,slow=39						
VNDA	**Vanda**	**126.82**	**195**	PKP	PKPdf	23 31 08.9	-4.3
	comp=Z,0.6nm,0.9s,baz=349,slow=2.8,SNR=5.2						

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*NEIC **04** 23:20:49.8, 35.53S×72.95W, ML3.2(GUC), After GUC.*

GUC 04 23:20:49.8±0.7**, 35.53S**×**72.95W, MD3.6, ML3.2, 3C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TALC	**Talca**	**1.08**	**83**	⇑*i*P	Pb	23 21 09.9	-1.1
TALC				*i* S	Sb	23 21 26.0	+0.4
TALC				AMP		23 21 34.6	
	comp=N,988nm,0.3s						
CCHI	**Chillan**	**1.28**	**147**	⇓*i*P	Pb	23 21 13.6	-0.8
CCHI				*i* S	Sb	23 21 31.8	+0.5
CCHI				AMP		23 21 41.7	
	comp=E,644nm,0.3s						
SFDO	**San Fernando**	**1.83**	**60**	⇓*i*P	Pn	23 21 21.9	-0.9
SFDO				*i* S	Sn	23 21 47.3	+0.3
LNV	**Longovilo**	**2.02**	**39**	⇑*i*P	Pn	23 21 25.2	-0.3

LNV				i S	Sn	23 21 52.5	+0.7
LCCH	**Las Cruces**	2.35	29	i P	Pn	23 21 30.3	+0.1
LCCH				i S	Sn	23 22 01.6	+1.5
CACH	**El Canelo**	2.39	54	i P	Pn	23 21 31.9	+1.1
CACH				i S	Sn	23 22 03.7	+2.4
CICH	**Cipreses**	2.40	60	⇑iP	Pn	23 21 31.7	+0.7
CICH				i S	Sn	23 22 03.5	+2.0
TACH	**Talagante**	2.50	42	i P	Pn	23 21 33.0	+0.6
TACH				i S	Sn	23 22 05.8	+1.7
PCH	**Pirque**	2.77	47	i P	Pn	23 21 37.1	+0.9
PCH				i S	Sn	23 22 12.5	+1.7
CLCH	**Cerro Calan**	2.92	44	AMP		23 22 33.5	
	comp=N,150nm,0.6s						

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*TRN **04** 23:31:28.5, 10.33N×62.30W, h15^{km}, MD4.1*
*NEIC **04** 23:31:28.5, 10.30N×62.26W, h0^{km}, mb4.1/3, MD4.1(TRN), MW4.1(CAR), After CAR.*
*IDC **04** 23:31:28.4±3.9, 10.32N×62.20W, h14^{km}±25^{km}, mb3.8/11, mb1 4.0/14, mb1mx3.8/27, mbtmp3.9/14, ML3.2/2, Error ellipse: s-maj=20.2km s-min=16.8km az=20.0*
*FUNV **04** 23:31:28.5, 10.30N×62.26W, MW3.4*
ISC 04 23:31:28.2±0.6, **10.28N**±0.04×**62.34W**±0.03, **h28**^{km}±5^{km}, **n53**, σ**1^{s}29**/70, **mb3.9**/13, **2C-3D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	0.38	18	⇑iP	Pb	23 31 35.2	-1.5
GUIV				eS	Sb	23 31 40.0	-2.5
GUNV	**Guanoco**	0.60	259	eP	Pb	23 31 41.6	+1.4
GUNV				eS	Sb	23 31 52.1	+3.7
TPP	**Pointe-a-Pierr**	0.88	88	eP	Pn	23 31 44.9	+0.2
CRUV	**Carupano**	0.96	294	⇓iP	Pn	23 31 46.5	+0.5
CRUV				eS	Sb	23 31 59.8	+1.3
TRN	**Trinidad (W)**	0.99	68	⇑iP	Pn	23 31 45.3	-1.2
TRN				eS	Sb	23 32 01.6	+2.1
ORIV	**Oritupano**	1.60	221	eP	Pn	23 31 58.0	+2.9
ORIV				eS	Sn	23 32 21.5	+6.6
ORIV	**Oritupano**	1.60	221	eP	Pn	23 31 58.0	+3.0
ORIV				eS	Sn	23 32 21.5	+6.6
TPR	**Prospect**	1.78	60	eP	Pn	23 31 59.1	+1.4
PCRV	**Puerto La Cruz**	2.26	268	Pn	Pn	23 32 06.9	+2.3
	7.6nm,0.3s,baz=70,slow=4.3,SNR=45						
PCRV				Pg	Pn	23 32 11.7	+7.2
	67nm,0.3s,baz=56,slow=9.6,SNR=84						
PCRV				Sn	Sn	23 32 37.9	+6.1
	35nm,0.3s,baz=59,slow=8.6,SNR=5.8						
PCRV				Lg		23 32 43.9	
	25nm,0.3s,baz=254,slow=19,SNR=5.7						
PCRV	**Puerto La Cruz**	2.26	268	eP	Pn	23 32 07.1	+2.6
SVB	**Belmont**	3.16	20	eP	Pn	23 32 17.9	+0.5
CUPV	**Cœpira**	3.40	267	eP	Pn	23 32 23.5	+2.8
BIRV	**Birongo**	3.87	273	eP	Pn	23 32 29.9	+2.5
BIRV				eS	Sn	23 33 14.1	+1.6
SLW	**Petit Monier**	3.96	20	eP	Pn	23 32 29.7	+0.9
SLW				eS	Sn	23 33 17.2	+2.3
BIM	**Bigot**	4.39	16	⇓eP	Pn	23 32 34.1	-0.7
FUNV	**FUNVISIS**	4.40	273	eP	Pn	23 32 35.6	+0.6
LLAV	**El Llanito**	4.40	273	eP	Pn	23 32 35.6	+0.6
MVM	**Montagne Vaucl**	4.48	18	eP	Pn	23 32 35.4	-0.6
FDF	**Fort de France**	4.58	15	⇓eP	Pn	23 32 36.6	-0.9
CRM	**Caravelle**	4.66	17	eP	Pn	23 32 37.8	-0.9
CAOV	**Caicara del Or**	4.91	234	eP	Pn	23 32 42.2	+0.1
CAOV				eS	Sn	23 33 38.3	-0.5
TURV	**Turiamo**	5.41	272	eP	Pn	23 32 49.8	+0.5
TURV				eS	Sn	23 33 50.4	-1.0
BAUV	**El Baul**	5.77	257	eP	Pn	23 32 54.3	-0.1
BAUV				eS	Sn	23 33 58.6	-1.9
DEG	**La Desirade**	6.12	12	eP	Pn	23 32 58.0	-1.4
SEG	**Port Louis**	6.14	8	eP	Pn	23 32 59.7	+0.2
JACV	**Jacura**	6.43	278	eP	Pn	23 33 03.1	-0.4
TEPV	**Terepaima**	6.75	268	eP	Pn	23 33 07.6	-0.6
TEPV				eS	Sn	23 34 21.3	-3.5
SANV	**Sanarito**	7.13	264	eP	Pn	23 33 13.2	-0.2
PAYV	**Puerto Ayacuch**	7.14	228	eP	Pn	23 33 12.4	-1.2
PAYV				eS	Sn	23 34 30.2	-4.5
SIQV	**Siquisique**	7.35	274	eP	Pn	23 33 16.1	-0.4
MONV	**Montecano**	7.67	283	eP	Pn	23 33 19.9	-1.1
MONV				eS	Sn	23 34 42.5	-5.4
QARV	**Quebrada Arrib**	8.05	270	eP	P	23 33 25.8	-0.6
SDV	**Santo Domingo**	8.29	261	Pn	P	23 33 29.2	-0.5
	7.2nm,0.3s,baz=101,slow=7.8,SNR=32						
SDV				Sn	Sn	23 35 01.8	-1.6
	5.6nm,0.3s,baz=27,slow=11,SNR=3.3						
SDV	**Santo Domingo**	8.29	261	ePn	P	23 33 28.0	-1.7
SOCV	**Socops**	8.63	257	eP	P	23 33 33.4	-1.0
VIGV	**El Vigia**	9.01	262	eP	P	23 33 38.4	-1.3
VIRV	**Villa del Rosa**	9.90	272	eP	P	23 33 50.1	-1.9
ROSC	**El Rosal**	13.04	246	Pn	P	23 34 34.8	+0.3
	1.9nm,0.3s,baz=96,slow=22,SNR=6.7						
SAML	**Samuel**	19.12	183	eP	P	23 35 51.2	-0.8
	3.2nm,0.7s						
JTS	**JuntasAbangare**	22.25	272	P	P	23 36 25.9	+1.3
	4.2nm,0.9s,mb3.9,baz=322,slow=18,SNR=2.4						
SIV	**San Ignacio**	26.13	177	P	P	23 37 02.3	+0.3
	1.4nm,0.7s,mb3.6,baz=14,slow=11,SNR=11						
LPAZ	**La Paz**	27.01	192	P	P	23 37 12.4	+2.3
	0.2nm,0.4s,mb3.0,baz=34,slow=11,SNR=2.5						
BDFB	**Brasilia**	29.41	151	P	P	23 37 31.7	-0.1
	1.3nm,0.6s,mb3.8,baz=333,slow=16,SNR=3.2						
WVT	**Waverly**	34.59	322	P	P	23 38 18.5	+1.6
	1.7nm,0.6s,mb4.2						
TXAR	**Lajitas Array**	42.97	302	P	P	23 39 29.8	+2.9
	0.2nm,0.5s,mb3.1,baz=113,slow=6.9,SNR=4.8						
TXAR				PcP	PcP	23 41 18.8	+1.1
	0.3nm,0.7s,baz=124,slow=6.5,SNR=3.7						
PDAR	**Pinedale Array**	52.25	317	P	P	23 40 38.6	-0.7
	0.3nm,0.4s,mb3.6,baz=117,slow=6.6,SNR=3.9						
DBIC	**Dimbokro**	56.91	89	P	P	23 41 12.0	-1.7
	7.1nm,1.0s,mb4.6,baz=198,slow=4.7,SNR=5.3						
DBIC	**Dimbokro**	56.91	89	P	P	23 41 12.0	-1.7
ESDC	**Sonseca Array**	59.27	50	P	P	23 41 30.3	+0.5
	0.5nm,0.6s,mb3.7,baz=253,slow=7.2,SNR=4.9						
ILAR	**Eielson Array**	78.45	334	P	P	23 43 29.1	+1.2
	0.5nm,0.6s,mb3.6,baz=123,slow=2.1,SNR=4.4						
FINES	**FINESS Array B**	80.30	29	P	P	23 43 37.8	-0.2
	1.2nm,0.6s,mb4.0,baz=240,slow=2.3,SNR=12						
TSUM	**Tsumeb**	83.99	111	P	P	23 43 55.8	-2.2
	8.7nm,1.2s,mb4.8						
BRTR	**Keskin Array B**	88.06	50	P	P	23 44 18.1	+0.4
	0.8nm,0.7s,mb4.1,baz=257,slow=4.6,SNR=7.1						

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*ROM **04** 23:41:51.9±0.3, 44.56N×10.31E, h7^{km}±4^{km}, Md2.5/3, Ml1.8/2, Error ellipse: s-maj=3.9km s-min=2.1km az=70.0*
*CSEM **04** 23:41:52.4±0.1, 44.52N×10.34E, h20^{km}, ML2.0, Error ellipse: s-maj=2.2km s-min=2.0km az=76.0*
*GEN **04** 23:41:53.1, 44.50N×10.41E, h24^{km}, ML2.0*
ISC 04 23:41:53.7±0.6, **44.51N**±0.05×**10.34E**±0.06, **h15**^{km}±15^{km}, **n16**, σ**0^{s}57**/19, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VALM		0.18	203	P	Pb	23 41 58.5	+0.3
GRAM		0.20	263	P	Pb	23 41 59.1	+0.6
GSCL	**Gusciola**	0.24	133	Pg	Pb	23 41 58.6	-0.6
GSCL				Sg	Sb	23 42 03.1	+0.2
	24nm,0.5s						
BACM		0.31	220	P	Pb	23 42 00.4	+0.1
SARO	**Sassorosso**	0.33	173	P	Pb	23 42 00.3	-0.5
VLC	**Villacollemand**	0.36	175	Pg	Pb	23 42 01.0	-0.2
	35nm,0.8s						
CODM		0.37	251	P	Pb	23 42 01.9	+0.4
VINC	**Vinca**	0.40	200	P	Pb	23 42 01.6	-0.3
ZCCA	**Zocca**	0.48	110	Pg	Pb	23 42 03.6	+0.3
	13nm,0.3s						
BDI	**Bagni Di Lucca**	0.49	158	Pg	Pb	23 42 03.4	0.0
	7.0nm,0.2s						
RAVA	**Ravarino**	0.60	66	Pg	Pb	23 42 04.9	-0.5
RAVA				Sg	Sb	23 42 13.9	+0.5
	138nm,0.5s						
MAIM		0.61	170	P	Pb	23 42 05.0	-0.5
PII	**Pisa**	0.80	171	Pg	Pb	23 42 08.8	0.0
	20nm,0.2s						
SEI	**Scarperia**	0.86	122	Pg	Pb	23 42 11.2	+1.4
	41nm,0.3s						
SAL	**Salo**	1.10	7	Pg	Pb	23 42 12.8	-1.1
MDI	**Monti di Nese**	1.34	341	Pn	Pn	23 42 17.4	-0.6
MDI				Sn	Sn	23 42 36.2	+0.7

MEX 04 23:42:14.5±0.7, **15.65N**×**91.35W**, **h4**^{km}±832^{km}, **MD4.1**, **1D, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	0.99	310	⇓iP	Pb	23 42 31.2	-2.7
CCIG				i S	Sb	23 42 44.5	-2.5
SCX	**San Cristobal**	1.65	311	i P	Pn	23 42 41.0	-3.4
SCX				i S	Sb	23 43 02.0	-4.1
CMIG	**Matias Romero**	3.69	293	eP	Pn	23 43 10.4	-3.1
CMIG				i S	Sn	23 43 52.0	-6.0

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*NEIC **04** 23:49:49.0±1.2, 4.47S×79.95W, h85^{km}±12^{km}, mb4.4/22, MD4.3(IGQ), Error ellipse: s-maj=15.7km s-min=6.5km az=67.0*
*IDC **04** 23:49:48.7±0.9, 4.38S×79.98W, h76^{km}±6^{km}, mb3.9/13, mb1 4.1/15, mb1mx4.0/24, mbtmp4.2/15, Error ellipse: s-maj=35.4km s-min=13.7km az=46.0*
*IGQ **04** 23:49:50.1, 4.30S×80.18W, h119^{km}±13^{km}, mb4.7, Error ellipse: s-maj=6.0km s-min=3.3km az=111.4*
ISC 04 23:49:47.2±0.9, **4.59S**±0.05×**80.20W**±0.07, **h86**^{km}±8^{km}, **h74**^{km}±2.1^{km}**:pP-P, n82**, σ**0^{s}95**/85, **mb4.3**/30, **9C-5D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALI	**Salinas**	2.51	342	P	P	23 50 27.5	+0.5
IGUA	**Igualata**	3.45	27	P	P	23 50 40.3	+0.3
ARRY	**Arrayan**	3.52	30	P	P	23 50 40.6	-0.4
HOJA	**Cerro de Hojas**	3.53	354	⇑P	P	23 50 39.6	-1.5
HOJA				S	S	23 51 16.0	-5.9
CUSU	**Cusua**	3.57	29	⇓P	P	23 50 41.9	+0.3
CUSU				S	S	23 51 22.5	-0.3
JUIV	**Juive**	3.59	29	⇓P	P	23 50 42.0	+0.1
ULBA	**Ulba**	3.60	30	P	P	23 50 41.8	-0.2
RUN5	**Runtun**	3.62	29	⇓P	P	23 50 42.5	+0.1
PISA	**Pisayambo**	3.95	27	P	P	23 50 47.2	+0.3
CAMI	**Rancho Maria**	4.24	24	P	P	23 50 51.3	+0.4
TAMB	**Tambo**	4.28	25	P	P	23 50 51.4	-0.1
NAS1	**Nasa**	4.29	24	⇑P	P	23 50 51.9	+0.3
VC1	**Cotopaxi 1**	4.31	25	⇓P	P	23 50 52.4	+0.5
ANTI	**Antisana**	4.59	26	⇑P	P	23 50 55.4	-0.4
JUA2	**San Juan 2**	4.63	20	P	P	23 50 56.3	0.0
JUA2				S	S	23 51 49.5	+0.3
TERV	**Terraza Guagua**	4.67	20	P	P	23 50 57.1	+0.3
TERV				S	S	23 51 51.1	+1.0
GGP	**Refugio Guagua**	4.67	20	P	P	23 50 56.7	-0.1
PINO	**Pino**	4.68	20	⇑P	P	23 50 57.2	+0.2
YANA	**Yana**	4.73	20	⇑P	P	23 50 57.4	-0.2
YANA				S	S	23 51 53.2	+1.5
JOR1	**San Jorge 1**	4.82	19	P	P	23 50 55.4	-3.5
JOR1				S	S	23 51 48.5	-5.4
CAYR	**Refugio Cayamb**	5.07	26	P	P	23 51 02.8	+0.4
OTAV	**Otavalo**	5.10	20	ePn	P	23 51 01.7	-1.1
OTAV				eSn	S	23 51 57.1	-3.9
COTA	**Cotacachi**	5.23	21	P	P	23 51 05.1	+0.5
ECEN	**Cerro Negro**	5.82	23	⇓P	P	23 51 12.3	-0.2
NNA	**Nana**	8.07	156	ePn	P	23 51 41.5	-2.1
	21nm,0.6s						
NNA				eSn	S	23 53 03.4	-11
SDV	**Santo Domingo**	16.44	35	P	P	23 53 31.1	-2.9
	0.4nm,0.3s,baz=270,slow=8.1,SNR=2.5						
SDV	**Santo Domingo**	16.44	35	eP	P	23 53 30.9	-3.2
	8.7nm,0.9s						
LPAZ	**La Paz**	16.60	135	P	P	23 53 38.2	+2.2
	0.2nm,0.3s,baz=336,slow=16,SNR=10						
LPAZ	**La Paz**	16.60	135	eP	P	23 53 36.9	+0.8
	2.8nm,0.8s						
SAML	**Samuel**	17.44	105	eP	P	23 53 44.5	-2.2
	6.5nm,1.0s						
LVC	**Limon Verde**	20.98	150	P	P	23 54 27.4	+1.8
	7.1nm,0.8s,baz=312,slow=7.4,SNR=8.1						
LVC	**Limon Verde**	20.98	150	eP	P	23 54 26.9	+1.4
	8.5nm,0.9s						
PCRV	**Puerto La Cruz**	21.34	47	P	P	23 54 30.9	+1.7
	16nm,0.5s,mb4.6,baz=219,slow=5.3,SNR=18						
SIV	**San Ignacio**	21.94	122	P	P	23 54 36.3	+1.2
	4.5nm,0.6s,mb4.0,baz=302,slow=10,SNR=29						
BAO	**Brasilia Array**	33.50	111	P	P	23 56 15.0	-5.8
TRQA	**Tornquist**	37.23	156	P	P	23 56 44.7	-7.5
	8.1nm,1.2s,mb4.5						
SWET	**Sewanee**	39.96	353	eP	P	23 57 13.5	-1.4
CPCT	**Cooper Cave**	40.03	355	eP	P	23 57 14.8	-0.7
TXAR	**Lajitas Array**	40.56	328	P	P	23 57 21.2	+1.3
	0.4nm,0.7s,mb3.4,baz=141,slow=9.8,SNR=6.1						
TXAR				PcP	PcP	23 59 21.6	+0.2
	0.9nm,0.8s,baz=157,slow=6.4,SNR=8.0						
WVT	**Waverly**	41.13	351	eP	P	23 57 22.6	-1.9
	3.2nm,0.6s,mb4.3						
WMOK	**Wichita Mounta**	42.85	337	eP	P	23 57 38.5	-0.3
	7.2nm,1.4s,mb4.2						
CPRX	**Cap Rock**	43.63	331	eP	P	23 57 46.8	+1.7
KSU1	**Kansas State U**	46.04	342	eP	P	23 58 04.0	-0.2
ANMO	**Albuquerque**	46.45	330	eP	P	23 58 08.8	+1.3
	5.4nm,0.9s,mb4.3						
SDCO	**Great Sand Dun**	48.24	333	eP	P	23 58 21.8	+0.3
	2.3nm,0.7s,mb4.1						
WUAZ	**Wupatki**	49.47	326	eP	P	23 58 32.7	+1.7
	4.8nm,0.9s,mb4.4						
ISCO	**Idaho Springs**	49.98	334	P	P	23 58 35.8	+0.9
	1.9nm,0.9s,mb4.0						
PV01	**Paradox Valley**	50.00	331	eP	P	23 58 35.9	+0.9
PV10	**Paradox Valley**	50.42	331	eP	P	23 58 38.6	+0.4
RWWY	**Rawlins**	52.23	335	P	P	23 58 51.4	-0.4
	11nm,1.2s,mb4.8						
PDAR	**Pinedale Array**	54.12	334	P	P	23 59 05.5	-0.3
	1.4nm,0.7s,mb4.1,baz=126,slow=7.8,SNR=12						
PDAR				pP	pP	23 59 25.4	-1.8
	0.8nm,0.5s,baz=143,slow=9.0,SNR=2.5						
HWUT	**Hardware Ranch**	54.14	331	eP	P	23 59 05.7	-0.2
BGU	**Big Grassy Mou**	54.35	330	eP	P	23 59 07.9	+0.4
BGU				e		23 59 15.6	
RRI2	**Red Ridge**	55.38	333	eP	P	23 59 13.9	-1.0
	4.2nm,0.7s,mb4.6						
NVAR	**Mina Array Bea**	55.47	324	P	P	23 59 16.9	+1.3
	2.0nm,0.7s,mb4.3,baz=134,slow=7.4,SNR=7.1						
ULM	**Lac du Bonnet**	56.27	348	P	P	23 59 19.9	-1.3
	8.9nm,0.8s,mb4.8,baz=164,slow=7.5,SNR=7.4						
HLID	**Hailey**	57.00	331	eP	P	23 59 26.4	-0.1
	3.7nm,0.9s,mb4.4						
BOZ	**Bozeman (W)**	57.31	334	eP	P	23 59 28.0	-0.6
	5.2nm,0.9s,mb4.6						
WVOR	**Wild Horse Val**	58.36	327	eP	P	23 59 35.5	-0.4
	4.8nm,1.0s,mb4.5						
NEW	**Newport**	61.75	333	eP	P	23 59 58.0	-1.0
	3.2nm,1.0s,mb4.3						
FCC	**Fort Churchill**	64.12	352	eP	P	00 00 12.9	-1.6
	5.0nm,0.8s,mb4.4						
YKA	**Yellowknife Ar**	71.85	344	P	P	00 01 01.7	-0.8
	1.4nm,0.6s,mb4.0,baz=138,slow=5.9,SNR=13						
DLBC	**Dease Lake**	74.30	335	P	P	00 01 17.9	+1.0
	5.1nm,0.7s,mb4.3,baz=141,slow=5.2,SNR=11						
DLBC				pP	pP	00 01 36.9	-2.6
	1.7nm,0.7s,baz=147,slow=13,SNR=2.3						
DLBC	**Dease Lake**	74.30	335	eP	P	00 01 17.4	+0.5
DBIC	**Dimbokro**	76.04	82	P	P	00 01 27.2	-0.5
	3.8nm,0.6s,mb4.3,baz=329,slow=7.9,SNR=10						
DBIC				pP	pP	00 01 47.5	-2.9
	3.8nm,0.7s,baz=164,slow=8.9,SNR=2.0						
VNA3	**Neumayer Olymp**	79.47	162	⇑i	P	00 01 46.2	+0.6
RES	**Resolute Bay**	79.65	356	P	P	00 01 44.7	-1.7
	3.3nm,1.2s,mb4.0						
VNA1	**Neumayer--Stat**	79.75	161	⇑i	P	00 01 47.9	+0.8
VNA2	**Neumayer--Watz**	80.10	161	⇑i	P	00 01 49.2	+0.3
SUMG	**Summit**	81.47	12	eP	P	00 01 56.0	-0.2
	11nm,1.0s,mb4.6						
INK	**Inuvik**	81.51	342	P	P	00 01 56.3	-0.1
	2.2nm,0.7s,mb4.1,baz=78,slow=4.7,SNR=6.7						
INK	**Inuvik**	81.51	342	eP	P	00 01 56.2	-0.2
	4.2nm,0.9s,mb4.3						
SNAA	**Sanae**	81.70	162	⇑i	P	00 01 57.7	+0.4
SNAA	**Sanae**	81.70	162	P	P	00 01 56.9	-0.4
	4.3nm,0.9s,mb4.3						
ESDC	**Sonseca Array**	82.39	49	P	P	00 02 02.2	+0.7
	0.6nm,0.6s,mb3.6,baz=267,slow=4.8,SNR=5.5						
ILAR	**Eielson Array**	84.42	337	P	P	00 02 11.4	+0.3
	1.6nm,1.0s,mb3.8,baz=137,slow=3.4,SNR=9.3						
EKA	**Eskdalemuir Ar**	86.42	34	P	P	00 02 20.2	-1.0
	1.9nm,0.8s,mb4.0,baz=239,slow=4.9,SNR=4.4						
BVAR	**Borovoye Array**	126.01	22	PKP	PKPdf	00 08 40.8	+1.3
	0.5nm,0.6s,baz=315,slow=4.2,SNR=4.7						
ZAL	**Zalesovo**	129.30	11	PKP	PKPdf	00 08 46.5	+0.7
	1.7nm,0.7s,baz=148,slow=1.7,SNR=12						
ZAL				pPKP		00 09 08.7	
	0.8nm,0.6s,baz=178,slow=3.3,SNR=2.7						
MKAR	**Makanchi Array**	135.31	17	PKP	PKPdf	00 08 57.9	+0.5
	0.4nm,0.6s,baz=358,slow=2.1,SNR=5.7						
MKAR				pPKP		00 09 19.8	
	0.4nm,0.7s,baz=333,slow=2.7,SNR=4.1						
ASAR	**Alice Springs**	136.47	228	PKP	PKPdf	00 09 01.4	+1.3
	0.6nm,0.7s,baz=111,slow=3.7,SNR=4.8						
MBWA	**Marble Bar**	147.80	217	ePKPdf	PKPdf	00 09 21.9	+1.8
MBWA				ePKPbc	PKPdf	00 09 24.4	+4.3

NEIC 04 23:52:36.2, 36.24N×**120.28W, h13**^{km}**, ML3.6**(NCEDC), **After NCEDC., Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LRV	**Little Rabbit**	0.63	287	eP	Pb	23 52 48.8	+0.3
SAO	**San Andreas Ge**	1.08	299	eP	Pb	23 52 55.8	-0.5
OMM	**Old Mammoth Mi**	1.72	36	eP	Pn	23 53 06.1	0.0
MTUM	**Tungsten Hills**	1.77	50	eP	Pn	23 53 07.2	+0.3
CMB	**Columbia Colle**	1.79	357	eP	Pn	23 53 06.7	-0.6
SAC	**San Andreas**	2.18	309	P	Pn	23 53 10.0	-2.8
MWC	**Mount Wilson**	2.71	137	ePn	Pn	23 53 18.6	-1.7
MNV	**Mina**	2.77	37	ePn	Pn	23 53 21.1	0.0
NSHM	**Saint Helena R**	2.94	321	ePn	Pn	23 53 21.6	-2.0
WCN	**Washoe City**	3.08	8	ePn	Pn	23 53 24.9	-0.8
PAHR	**Pah Rah Range**	3.53	11	Pn	Pn	23 53 32.2	+0.2
PFO	**Pinyon Flat Ob**	4.09	129	ePn	Pn	23 53 37.0	-3.0
TRCR	**Troy Canyon**	4.29	59	Pn	Pn	23 53 41.4	-1.4
NEN	**Nelson**	4.45	96	Pn	Pn	23 53 42.8	-2.2
MOD	**Modoc**	5.66	360	Pn	Pn	23 53 57.2	-4.9
ELK	**Elko**	5.99	40	ePn	Pn	23 54 02.1	-4.7
WVOR	**Wild Horse Val**	6.32	11	Pn	Pn	23 54 11.4	0.0
MSU	**Marysvale**	6.84	68	Pn	Pn	23 54 19.5	+0.8
DUG	**Dugway**	7.08	54	Pn	Pn	23 54 21.0	-1.1

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*CSEM **04** 23:54:22.7±0.1, 44.40N×10.42E, h40^{km}, MD2.5/8, Error ellipse: s-maj=4.8km s-min=3.1km az=123.0*
*ROM **04** 23:54:23.5±0.3, 44.51N×10.41E, h35^{km}±5^{km}, Md2.5/8, Ml1.9/3, Error ellipse: s-maj=6.2km s-min=4.6km az=35.0*
*GEN **04** 23:54:24.8, 44.53N×10.41E, h21^{km}, ML2.2*
ISC 04 23:54:24.6±0.4, **44.54N**±0.03×**10.39E**±0.05, **h21**^{km}, **n18**, σ**0^{s}78**/24, **1D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VALM		0.22	209	P	Pb	23 54 30.0	-0.1
VALM				S	Sb	23 54 33.8	0.0
GSCL	**Gusciola**	0.23	144	Pg	Pb	23 54 29.9	-0.4
	21nm,0.4s						
GRAM		0.24	259	P	Pb	23 54 30.6	+0.2
GRAM				S	Sb	23 54 34.7	+0.4
BACM		0.35	222	P	Pb	23 54 31.7	-0.4
BACM				S	Sb	23 54 36.8	-0.4
SARO	**Sassorosso**	0.35	179	P	Pb	23 54 31.8	-0.4
SARO				S	Sb	23 54 37.2	-0.1
VLC	**Villacollemand**	0.38	181	Pg	Pb	23 54 32.3	-0.3
	31nm,0.7s						
CODM		0.42	249	P	Pb	23 54 33.6	+0.4
VINC	**Vinca**	0.43	204	P	Pb	23 54 33.6	+0.1
ZCCA	**Zocca**	0.46	114	Pg	Pb	23 54 35.0	+1.1
	13nm,0.3s						
BDI	**Bagni Di Lucca**	0.50	163	Pg	Pb	23 54 34.4	-0.2
	7.0nm,0.2s						
RAVA	**Ravarino**	0.56	67	Pg	Pb	23 54 36.2	+0.6
RAVA				Sg	Sb	23 54 45.2	+2.0
	138nm,0.5s						
MAIM		0.63	174	P	Pb	23 54 37.0	+0.2
BOB	**Bobbio (Coli)**	0.71	289	Pg	Pb	23 54 39.6	+1.4
PII	**Pisa**	0.82	173	Pg	Pb	23 54 40.1	0.0
	20nm,0.2s						
SAL	**Salo**	1.07	5	Pn	Pn	23 54 44.1	-0.4
TEOL	**Teolo**	1.22	47	⇓iPg	Pn	23 54 44.8	-1.8
TEOL				i Sg	Sb	23 55 01.8	-0.4
MABI	**Malga Bissina**	1.52	3	Pn	Pn	23 54 51.0	+0.1
	14nm,0.2s						
CTI	**Castel Tesino**	1.75	30	Pg	Pn	23 54 52.4	-1.8

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*MOS **05** 00:01:42.6±1.0, 18.85N×145.71E, h134^{km}, mb4.8/20, Error ellipse: s-maj=13.1km s-min=6.5km az=87.8*
*IDC **05** 00:01:43.0±0.6, 18.80N×145.75E, h125^{km}±5^{km}, mb4.2/21, mb1 4.3/23, mb1mx4.3/26, mbtmp4.5/23, MS3.1/3, Ms1 3.1/3, ms1mx2.8/29, Error ellipse: s-maj=14.0km s-min=7.8km az=92.0*
*BJI **05** 00:01:44.1, 18.80N×145.70E, h132^{km}, mB4.7, mb4.7*
*NEIC **05** 00:01:44.1±0.2, 18.80N×145.73E, mb4.8/40, Error ellipse: s-maj=6.2km s-min=4.1km az=102.0*
ISC 05 00:01:43.0±0.6, **18.82N**±0.03×**145.72E**±0.05, **h133**^{km}±6^{km}, **h129**^{km}±2.0^{km}**:pP-P, n165**, σ**0^{s}97**/175, **mb4.5**/70, **5C-2D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARN	**Sarigan**	2.10	179	⇑eP	P	00 02 18.6	-0.3
SARN				eS	S	00 02 45.9	-0.2
GUMO	**Guam**	5.26	189	eP	P	00 03 00.8	+0.2
GUMO				eS	S	00 04 03.3	+2.7
CBIJ	**Chichi jima**	8.86	339	P	P	00 03 48.2	-0.8
	11nm,0.3s,baz=282,slow=23,SNR=8.3						
CBIJ				S	S	00 05 20.1	-7.3
	8.4nm,0.3s,baz=312,slow=22,SNR=3.5						
CBIJ				LR	LR	00 06 07.7	
	comp=Z,36nm,20.4s,baz=164,slow=30						
MJAR	**Matsushiro Arr**	18.86	341	P	P	00 05 54.4	-0.8
	1.4nm,0.3s,baz=164,slow=9.6,SNR=18						
MJAR				S	S	00 09 20.6	+3.3
	baz=156,slow=12,SNR=4.5						
MAJO	**Matsushiro**	18.86	341	eP	P	00 05 54.9	-0.3
MAJO				eS	S	00 09 20.5	+3.1
MAJO				pmax	pmax		
	comp=Z,11nm,0.8s						
MAJO	**Matsushiro**	18.86	341	eP	P	00 05 54.9	-0.3
	comp=Z,11nm,0.8s						
MAJO				eS	S	00 09 20.5	+3.1
MAT	**Matsushiro**	18.86	341	eP	P	00 05 55.0	-0.2
MAT				eS	S	00 09 21.0	+3.6
MAT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MAT	**Matsushiro**	18.86	341	eP	P	00 05 55.0	-0.2
	comp=Z,8.0nm,0.6s						
MAT				eS	S	00 09 21.0	+3.6
MAT	**Matsushiro**	18.86	341	P	P	00 05 54.7	-0.5
MAT				S	S	00 09 20.6	+3.2
SSE	**Sheshan**	25.32	304	eP	P	00 06 58.8	-0.1
SSE				AP	pP	00 07 26.5	-0.2
SSE				S	S	00 11 15.8	+3.1
SSE				XS		00 12 04.4	
SSE				SCS	ScS	00 17 45.1	+3.1
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,30nm,3.5s						
SSE				LR	LR		
	comp=N,30nm,22.5s						
SSE				LR	LR		
	comp=E,50nm,22.5s						
SSE				LR	LR		
	comp=Z,30nm,29.2s						
ASAJ	**Asahikawa**	25.36	355	P	P	00 07 00.2	+1.0
	comp=Z,9.6nm,0.6s,mb4.5,baz=17,slow=30,SNR=13						
ASAJ				LR	LR	00 16 59.9	
	comp=Z,43nm,20.6s,baz=20,slow=36						
NJ2	**Nanjing**	27.52	304	eP	P	00 07 21.5	+2.3
NJ2				AP	pP	00 07 48.3	+1.0
NJ2				XP	sP	00 08 03.5	+0.8
NJ2				PP	PP	00 08 15.5	+3.3
NJ2				S	S	00 11 53.0	+4.3
NJ2				XS		00 12 38.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,120nm,9.6s						
NJ2				LR	LR		
	comp=N,430nm,22.4s						
NJ2				LR	LR		
	comp=E,350nm,18.0s						
NJ2				LR	LR		
	comp=Z,620nm,22.0s						
PMG	**Port Moresby**	28.08	177	P	P	00 07 21.9	-2.5
	comp=Z,9.1nm,0.6s,mb4.7,baz=356,slow=14,SNR=3.6						
MDJ	**Mudanjiang**	29.04	336	P	P	00 07 32.5	-0.1
MDJ				AMB	AMB		

	comp=Z,40nm,5.4s						
CN2	**Changchun**	**30.17**	**330**	*e*P	**P**	**00 07 45.6**	**+2.9**
CN2				*e*S	**S**	**00 12 35.0**	**+4.4**
KLR	**Kul'dur**	**32.36**	**343**	*e*P	**P**	**00 07 58.8**	**-3.0**
CTA	**Charters Tower**	**38.67**	**179**	P	**P**	**00 08 55.3**	**-0.1**
	comp=Z,6.1nm,0.8s,mb4.3,baz=21,slow=5.2,SNR=5.7						
WRAB	**Tennant Creek**	**40.09**	**197**	*e*P	**P**	**00 09 06.6**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,25nm,0.5s,mb5.1						
WRAB	**Tennant Creek**	**40.09**	**197**	*e*P	**P**	**00 09 06.6**	**-0.4**
	comp=Z,25nm,0.5s,mb5.1						
WB2	**Warramunga Arr**	**40.10**	**197**	*e*P	**P**	**00 09 07.3**	**+0.1**
WB2				*e*S	**S**	**00 15 02.8**	**-0.3**
WRA	**Warramunga Arr**	**40.10**	**197**	P	**P**	**00 09 07.4**	**+0.2**
WRA				S	**S**	**00 15 02.8**	**-0.3**
WRA	**Warramunga Arr**	**40.10**	**197**	P	**P**	**00 09 07.4**	**+0.2**
	comp=Z,10nm,0.4s,mb4.8,baz=14,slow=8.6,SNR=62						
WRA				ScP		00 14 44.6	
	comp=Z,2.5nm,0.8s,baz=15,slow=4.2,SNR=9.4						
WRA				S	**S**	**00 15 02.8**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=32,slow=15,SNR=6.3						
LZH	**Lanzhou**	**40.60**	**304**	*e*P	**P**	**00 09 12.5**	**+1.4**
LZH				AP	pP	00 09 41.5	+0.5
LZH				XP	sP	00 09 56.5	-0.2
LZH				PP	PP	00 10 51.7	+2.1
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.5						
LZH				AMB	AMB		
	comp=Z,80nm,5.9s						
MA2	**Magadan**	**40.87**	**4**	*ce*P	**P**	**00 09 14.4**	**+1.3**
MA2				*e*S	**S**	**00 15 14.9**	**+0.8**
MA2				*i* *SS		00 16 04.6	
MA2				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
MA2	**Magadan**	**40.87**	**4**	*e*P	**P**	**00 09 13.8**	**+0.7**
	comp=Z,9.0nm,0.7s,mb4.5						
ULN	**Ulaanbaatar**	**42.69**	**322**	*e*P	**P**	**00 09 28.4**	**+0.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	**42.69**	**322**	*e*P	**P**	**00 09 28.4**	**+0.3**
	comp=Z,3.2nm,0.8s,mb4.0						
SONM	**Songino Array**	**43.06**	**321**	P	**P**	**00 09 31.7**	**+0.6**
	comp=Z,1.8nm,0.5s,mb4.0,baz=137,slow=9.3,SNR=12						
SONM				pP	pP	00 09 59.9	-1.3
	comp=Z,1.7nm,0.7s,baz=124,slow=7.4,SNR=2.9						
SONM				ScP		00 14 55.7	
	comp=Z,1.1nm,1.1s,baz=135,slow=4.1,SNR=4.4						
ASAR	**Alice Springs**	**43.77**	**196**	P	**P**	**00 09 37.5**	**+0.4**
	comp=Z,5.7nm,0.7s,mb4.3,baz=23,slow=7.6,SNR=28						
ASAR				S	**S**	**00 15 55.8**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=16,slow=17,SNR=6.4						
ASPA	**Alice Springs**	**43.77**	**196**	*e*P	**P**	**00 09 38.4**	**+1.3**
ASPA				*e*PCP	PcP	00 11 28.1	+6.1
ASPA				*e*S	**S**	**00 15 55.2**	**-1.7**
CMAR	**Chiang Mai Arr**	**44.22**	**277**	P	**P**	**00 09 40.7**	**-0.1**
	comp=Z,1.2nm,0.9s,mb3.5,baz=72,slow=6.4,SNR=5.6						
CMAR				pP	pP	00 10 09.5	-1.5
	comp=Z,5.4nm,0.9s,baz=71,slow=6.8,SNR=4.0						
SEY	**Seymchan**	**44.32**	**4**	*e*P	**P**	**00 09 41.9**	**+0.9**
SEY				*SP	sP	00 10 27.6	+1.0
SEY				*e*		00 11 22.5	
SEY				*e*S	**S**	**00 15 59.0**	**-5.3**
SEY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
SEY				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK	**Yakutsk**	**44.61**	**349**	*e*P	**P**	**00 09 42.5**	**-0.8**
YAK				*e*S	**S**	**00 16 08.2**	**-0.2**
YAK				pmax	pmax		
	comp=Z,17nm,0.6s,mb4.8						
YAK				pmax	pmax		
	comp=N,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
ZAK	**Zakamensk**	**46.07**	**323**	*e*P	**P**	**00 09 55.9**	**+0.9**
ZAK				*e*	pP	00 10 22.7	-2.7
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.4						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
UNV	**Unalaska Valle**	**50.55**	**35**	*e*P	**P**	**00 10 27.7**	**-1.9**
	comp=Z,21nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**50.56**	**185**	P	**P**	**00 10 28.4**	**-1.6**
	comp=Z,2.0nm,0.4s,mb4.1,baz=1.2,slow=6.3,SNR=15						
STKA	**Stephens Creek**	**50.56**	**185**	P	**P**	**00 10 28.4**	**-1.6**
BILL	**Bilibino**	**50.90**	**10**	*d i*P	**P**	**00 10 32.0**	**-0.1**
BILL				*e*		00 12 33.9	
BILL				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.1						
BILL	**Bilibino**	**50.90**	**10**	*e*P	**P**	**00 10 31.5**	**-0.6**
	comp=Z,42nm,0.9s,mb5.1						
TIXI	**Tiksi**	**53.76**	**353**	*e*P	**P**	**00 10 51.0**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
WMQ	**Urumqi**	**54.25**	**311**	*e*P	**P**	**00 10 58.8**	**+1.5**
WMQ				AP	pP	00 11 28.4	-0.1
WMQ				XP	sP	00 11 42.6	-0.6
TNA	**Tin City**	**55.70**	**21**	*e*P	**P**	**00 11 06.8**	**-0.7**
	comp=Z,7.1nm,0.9s,mb4.5						
ZAL	**Zalesovo**	**57.94**	**322**	P	**P**	**00 11 22.6**	**-0.9**
	comp=Z,0.7nm,0.4s,mb3.8,baz=29,slow=3.2,SNR=3.2						
ZAL				pP	pP	00 11 50.6	-4.5
	comp=Z,1.1nm,0.3s,baz=16,slow=9.6,SNR=2.9						
MKAR	**Makanchi Array**	**58.40**	**314**	P	**P**	**00 11 26.8**	**0.0**
	comp=Z,1.0nm,0.6s,mb3.9,baz=86,slow=8.5,SNR=11						
MKAR				pP	pP	00 11 54.4	-4.0
	comp=Z,1.5nm,0.7s,baz=91,slow=7.9,SNR=5.4						
SVW2	**Sparrevohn**	**58.72**	**29**	*e*P	**P**	**00 11 28.5**	**-0.3**
TTA	**Tatalina**	**59.14**	**27**	*e*P	**P**	**00 11 31.1**	**-0.6**
KDAK	**Kodiak Island**	**59.25**	**33**	*e*P	**P**	**00 11 31.3**	**-1.2**
	comp=Z,26nm,0.8s,mb5.1						
SLKM	**Skilak Lake**	**61.08**	**31**	P	**P**	**00 11 43.3**	**-1.6**
IMA	**Indian Mountai**	**61.16**	**24**	*e*P	**P**	**00 11 45.3**	**-0.1**
PWA	**Palmer West**	**61.51**	**29**	*e*P	**P**	**00 11 46.1**	**-1.7**
PMR	**Palmer**	**61.84**	**29**	*e*P	**P**	**00 11 48.1**	**-1.9**
SML	**Sawmill**	**62.26**	**29**	*e*P	**P**	**00 11 51.5**	**-1.3**
MCK	**McKinley**	**62.42**	**27**	*e*P	**P**	**00 11 52.5**	**-1.4**
MCK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.5						
MCK	**McKinley**	**62.42**	**27**	*e*P	**P**	**00 11 52.5**	**-1.4**
	comp=Z,3.6nm,0.5s,mb4.5						
COLA	**College**	**63.15**	**26**	*e*P	**P**	**00 11 58.2**	**-0.5**
EYAK	**Cordova Ski Ar**	**63.26**	**31**	*e*P	**P**	**00 11 58.2**	**-1.2**
DIV	**Divide**	**63.34**	**30**	*e*P	**P**	**00 11 58.7**	**-1.3**
	comp=Z,55nm,1.0s,mb5.3						
ILAR	**Eielson Array**	**63.53**	**26**	P	**P**	**00 11 58.6**	**-2.5**
	comp=Z,12nm,0.8s,mb4.8,baz=259,slow=5.1,SNR=92						
ILAR				LR	LR	00 39 45.9	
	comp=Z,35nm,18.0s,baz=351,slow=36						
CHKZ	**Chkalovo**	**66.26**	**321**	*e*P	**P**	**00 12 18.1**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
CHKZ	**Chkalovo**	**66.26**	**321**	*e*P	**P**	**00 12 18.1**	**-0.8**
	comp=Z,2.0nm,0.6s,mb4.1						
BVAR	**Borovoye Array**	**66.40**	**320**	P	**P**	**00 12 18.8**	**-0.9**
	comp=Z,5.0nm,0.5s,mb4.6,baz=93,slow=7.6,SNR=48						
BVAR				pP	pP	00 12 48.0	-4.1
	comp=Z,3.2nm,0.6s,baz=86,slow=7.6,SNR=2.8						
KKAR	**Karatay Array**	**66.71**	**310**	*i* P	**P**	**00 12 22.1**	**+0.2**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
INK	**Inuvik**	**69.26**	**23**	*e*P	**P**	**00 12 36.1**	**-1.1**
INK				pmax	pmax		
	comp=Z,24nm,0.8s						
INK	**Inuvik**	**69.26**	**23**	*e*P	**P**	**00 12 36.1**	**-1.1**
	comp=Z,24nm,0.8s,mb5.0						
DLBC	**Dease Lake**	**71.18**	**34**	P	**P**	**00 12 49.2**	**+0.3**
	comp=Z,18nm,0.6s,mb5.0,baz=281,slow=6.6,SNR=44						
DLBC	**Dease Lake**	**71.18**	**34**	*e*P	**P**	**00 12 49.3**	**+0.3**
ARU	**Arti**	**72.98**	**325**	*e*P	**P**	**00 12 58.6**	**-0.9**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
ARU	**Arti**	**72.98**	**325**	*e*P	**P**	**00 12 58.6**	**-0.9**
	comp=Z,4.7nm,0.6s,mb4.4						
AB31	**Akbulak array**	**73.27**	**317**	*i* P	**P**	**00 13 00.9**	**-0.5**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
OOW	**Octopus West**	**76.38**	**44**	P	**P**	**00 13 20.6**	**+1.4**
HDW	**Hoodsport**	**77.15**	**44**	P	**P**	**00 13 24.7**	**+1.3**
GNW	**Green Mountain**	**77.32**	**44**	P	**P**	**00 13 25.2**	**+0.9**
CMW	**Cultus Mountai**	**77.57**	**43**	P	**P**	**00 13 26.8**	**+1.0**
MBW	**Mount Baker**	**77.62**	**43**	P	**P**	**00 13 26.6**	**+0.6**
JCW	**Jim Creek**	**77.75**	**43**	P	**P**	**00 13 27.5**	**+0.8**
YKW3	**Yellowknife Ar**	**77.85**	**28**	*e*P	**P**	**00 13 26.4**	**-0.6**
YKA	**Yellowknife Ar**	**77.88**	**28**	P	**P**	**00 13 26.7**	**-0.4**
	comp=Z,14nm,0.7s,mb4.7,baz=289,slow=5.6,SNR=92						
YKA				pP	pP	00 13 58.4	-2.2
	comp=Z,1.9nm,0.6s,baz=289,slow=5.4,SNR=2.9						
RPW	**Rockport**	**77.95**	**43**	P	**P**	**00 13 28.1**	**+0.2**
FMW	**Mount Fremont**	**78.23**	**44**	P	**P**	**00 13 30.0**	**+0.6**
HUMO	**Hull Mountain**	**78.46**	**49**	*e*P	**P**	**00 13 31.0**	**+0.3**
	comp=Z,6.5nm,0.7s,mb4.4						
HBO	**Huckleberry Mo**	**78.59**	**48**	P	**P**	**00 13 31.8**	**+0.4**
YBH	**Yreka Blue Hor**	**78.86**	**50**	*e*P	**P**	**00 13 33.6**	**+0.7**
YBH				pmax	pmax		
	comp=Z,11nm,1.0s						
YBH	**Yreka Blue Hor**	**78.86**	**50**	*e*P	**P**	**00 13 33.6**	**+0.6**
	comp=Z,11nm,1.0s,mb4.5						
RES	**Resolute Bay**	**79.31**	**14**	*e*P	**P**	**00 13 34.7**	**0.0**
RES				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.5						
RES	**Resolute Bay**	**79.31**	**14**	*e*P	**P**	**00 13 34.7**	**0.0**
	comp=Z,7.7nm,0.7s,mb4.4						
EPH	**Ephrata**	**79.49**	**44**	P	**P**	**00 13 36.4**	**+0.2**
SNIWA	**Snively Ranch**	**79.69**	**44**	P	**P**	**00 13 38.2**	**+0.8**
WRD	**Warden**	**79.94**	**44**	P	**P**	**00 13 38.9**	**+0.3**
OD2	**Odessa Site #2**	**80.05**	**43**	P	**P**	**00 13 39.3**	**0.0**
MOD	**Modoc**	**80.55**	**49**	*e*P	**P**	**00 13 42.2**	**+0.3**
	comp=Z,27nm,1.2s,mb4.8						
NEW	**Newport**	**80.81**	**42**	*e*P	**P**	**00 13 42.9**	**-0.4**
NEW				pmax	pmax		
	comp=Z,23nm,0.7s						
NEW	**Newport**	**80.81**	**42**	*e*P	**P**	**00 13 42.9**	**-0.3**
	comp=Z,23nm,0.7s,mb4.9						
APA	**Apatity**	**80.91**	**339**	⇓*i*P	**P**	**00 13 43.0**	**-0.4**
APA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
EDM	**Edmonton**	**81.48**	**37**	*e*P	**P**	**00 13 46.5**	**-0.1**
WVOR	**Wild Horse Val**	**81.57**	**48**	*e*P	**P**	**00 13 47.5**	**+0.1**
WVOR				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.7						
WVOR	**Wild Horse Val**	**81.57**	**48**	*e*P	**P**	**00 13 47.5**	**+0.2**
	comp=Z,16nm,0.9s,mb4.6						
CMB	**Columbia Colle**	**81.61**	**53**	*e*P	**P**	**00 13 47.5**	**-0.2**
CMB				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.7						
CMB	**Columbia Colle**	**81.61**	**53**	*e*P	**P**	**00 13 47.5**	**-0.1**
	comp=Z,25nm,1.2s,mb4.7						
WCN	**Washoe City**	**81.71**	**51**	*e*P	**P**	**00 13 47.5**	**-0.6**
WCN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.4						
WCN	**Washoe City**	**81.71**	**51**	*e*P	**P**	**00 13 47.5**	**-0.7**
	comp=Z,7.1nm,0.7s,mb4.4						
BMO	**Blue Mountains**	**81.75**	**46**	*e*P	**P**	**00 13 48.3**	**+0.1**
BMO				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.7						
BMO	**Blue Mountains**	**81.75**	**46**	*e*P	**P**	**00 13 48.3**	**0.0**
	comp=Z,22nm,1.0s,mb4.7						
KEV	**Kevo**	**81.83**	**342**	*e*p	**P**	**00 13 47.2**	**-0.9**
	comp=Z,2.6nm,0.5s,mb4.1						
KEV	**Kevo**	**81.83**	**342**	*e*P	**P**	**00 13 47.2**	**-0.9**
KEV				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
ARCES	**ARCESS Array B**	**82.39**	**342**	P	**P**	**00 13 51.0**	**0.0**
	comp=Z,7.3nm,0.5s,mb4.5,baz=69,slow=7.6,SNR=56						
NVAR	**Mina Array Bea**	**83.05**	**52**	P	**P**	**00 13 55.4**	**+0.4**
	comp=Z,25nm,0.7s,mb5.0,baz=267,slow=4.5,SNR=162						
MNV	**Mina**	**83.16**	**52**	*e*P	**P**	**00 13 56.1**	**+0.5**
	comp=Z,22nm,1.0s,mb4.8						
CHMT	**Chamberlain Mo**	**83.73**	**43**	*e*P	**P**	**00 13 58.1**	**-0.1**
HLID	**Hailey**	**84.14**	**46**	*e*P	**P**	**00 14 00.7**	**+0.3**
	comp=Z,14nm,1.4s,mb4.5						
ELK	**Elko**	**84.53**	**49**	*e*P	**P**	**00 14 03.0**	**+0.6**
ELK				*e**PP	pP	00 14 37.9	+1.6
ELK				pmax	pmax		
	comp=Z,21nm,0.8s						
ELK	**Elko**	**84.53**	**49**	*e*P	**P**	**00 14 03.0**	**+0.6**
	comp=Z,21nm,0.8s,mb4.9						
ELK				*e*pP	pP	00 14 37.9	+1.5
HRY	**Holter Researc**	**84.72**	**42**	*e*P	**P**	**00 14 03.8**	**+0.7**
MCMT	**McKenzie Canyo**	**84.74**	**44**	*e*P	**P**	**00 14 03.9**	**+0.6**
TRCR	**Troy Canyon**	**85.10**	**51**	*e*P	**P**	**00 14 05.7**	**+0.4**
QLMT	**Earthquake Lak**	**85.68**	**44**	*e*P	**P**	**00 14 09.3**	**+1.3**
HVU	**Hansel Valley**	**85.90**	**47**	*e*P	**P**	**00 14 09.4**	**+0.3**
BGU	**Big Grassy Mou**	**86.03**	**48**	*e*P	**P**	**00 14 09.9**	**+0.1**
PFO	**Pinyon Flat Ob**	**86.05**	**56**	*e*P	**P**	**00 14 10.1**	**+0.1**
	comp=Z,6.2nm,0.9s,mb4.3						
YMR	**Madison River**	**86.05**	**44**	*e*P	**P**	**00 14 10.7**	**+1.0**
YFT	**Old Faithful**	**86.22**	**44**	*e*P	**P**	**00 14 13.2**	**+2.6**
YNR	**Norris Junctio**	**86.22**	**44**	*e*P	**P**	**00 14 11.8**	**+1.3**
YNR				*e*pP	pP	00 14 47.3	+2.6
RRI2	**Red Ridge**	**86.31**	**45**	*e*P	**P**	**00 14 12.1**	**+1.0**
	comp=Z,20nm,0.8s,mb4.9						
KAF	**Kangasniemi**	**86.32**	**336**	*e*p	**P**	**00 14 08.8**	**-1.8**
	comp=Z,0.4nm,0.4s,mb3.5,baz=54,slow=4.6						
IMW	**Indian Meadow**	**86.36**	**45**	*e*P	**P**	**00 14 12.2**	**+0.9**
	comp=Z,18nm,0.9s,mb4.8						
DUG	**Dugway**	**86.46**	**49**	*e*P	**P**	**00 14 12.1**	**+0.2**
DUG				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
DUG	**Dugway**	**86.46**	**49**	*e*P	**P**	**00 14 12.1**	**+0.2**
	comp=Z,10nm,0.6s,mb4.7						
TPAW	**Teton Pass**	**86.51**	**45**	*e*P	**P**	**00 14 12.9**	**+0.9**
	comp=Z,18nm,1.2s,mb4.8						
MOOW	**Moose Ponds**	**86.55**	**45**	*e*P	**P**	**00 14 12.7**	**+0.5**
	comp=Z,11nm,1.0s,mb4.6						
MOOW				*e*pP	pP	00 14 47.5	+1.2
LDFC	**Landfair**	**86.58**	**54**	*e*P	**P**	**00 14 12.8**	**+0.2**
NEN	**Nelson**	**86.59**	**54**	*e*P	**P**	**00 14 12.2**	**-0.4**
FINES	**FINESS Array B**	**86.79**	**335**	P	**P**	**00 14 11.8**	**-1.1**
	comp=Z,1.8nm,0.3s,mb4.3,baz=62,slow=4.6,SNR=58						
FINES				pP	pP	00 14 44.1	-2.9
	comp=Z,0.8nm,0.3s,baz=79,slow=4.8,SNR=2.0						
FINES	**FINESS Array B**	**86.79**	**335**	P	**P**	**00 14 11.8**	**-1.1**
FINES				pP	pP	00 14 44.1	-2.9
HWUT	**Hardware Ranch**	**86.81**	**47**	*e*P	**P**	**00 14 13.9**	**+0.4**
	comp=Z,24nm,0.9s,mb5.0						
HWUT				*e*pP	pP	00 14 48.8	+1.1
ARUT	**Antelope Range**	**86.88**	**51**	*e*P	**P**	**00 14 14.8**	**+0.8**
CTU	**Camp Tracy**	**87.02**	**48**	*e*P	**P**	**00 14 14.5**	**-0.1**
JLU	**Jordanelle**	**87.27**	**48**	*e*P	**P**	**00 14 16.3**	**+0.5**
JLU				*e*pP	pP	00 14 50.8	+0.8
MPU	**Maple Canyon**	**87.36**	**49**	*e*P	**P**	**00 14 16.2**	**0.0**
DAU	**Daniels Canyon**	**87.48**	**48**	*e*P	**P**	**00 14 17.7**	**+0.9**
MSU	**Marysvale**	**87.54**	**50**	*e*P	**P**	**00 14 18.0**	**+0.9**
PDAR	**Pinedale Array**	**87.73**	**45**	P	**P**	**00 14 17.9**	**0.0**
	comp=Z,1.9nm,0.4s,mb4.3,baz=58,slow=0.3,SNR=21						
FCC	**Fort Churchill**	**88.55**	**27**	*e*pP	pP	00 14 55.7	0.0
	comp=Z,12nm,1.1s						
WUAZ	**Wupatki**	**89.27**	**53**	*e*P	**P**	**00 14 26.4**	**+1.0**
	comp=Z,26nm,0.8s,mb5.2						
WUAZ				*e*pP	pP	00 15 00.9	+1.2
PV10	**Paradox Valley**	**89.86**	**49**	*e*P	**P**	**00 14 28.8**	**+0.7**
PV10				*e*pP	pP	00 15 03.2	+0.8
PV01	**Paradox Valley**	**90.29**	**49**	*e*P	**P**	**00 14 29.3**	**-0.8**
RSSD	**Black Hills**	**90.78**	**43**	*e*P	**P**	**00 14 31.1**	**-1.2**
RSSD				*e**PP	pP	00 15 07.2	+0.5
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
RSSD	**Black Hills**	**90.78**	**43**	*e*P	**P**	**00 14 31.1**	**-1.2**
	comp=Z,2.2nm,0.5s,mb4.4						
RSSD				*e*pP	pP	00 15 07.2	+0.5
RW3	**Ridgway**	**90.88**	**49**	*e*P	**P**	**00 14 33.5**	**+0.7**
ISCO	**Idaho Springs**	**91.67**	**47**	*e*P	**P**	**00 14 37.3**	**+0.8**
	comp=Z,6.5nm,0.9s,mb4.7						
ISCO				*e*pP	pP	00 15 11.9	+0.9
NOA	**NORSAR Array B**	**92.47**	**340**	P	**P**	**00 14 38.6**	**-1.0**
	comp=Z,0.3nm,0.6s,mb3.5,baz=31,slow=3.2,SNR=2.6						
ULM	**Lac du Bonnet**	**92.49**	**34**	P	**P**	**00 14 38.6**	**-1.4**
	comp=Z,5.2nm,0.8s,mb4.6,baz=281,slow=4.7,SNR=6.1						
SDCO	**Great Sand Dun**	**92.66**	**49**	*e*P	**P**	**00 14 40.7**	**-0.4**
	comp=Z,12nm,1.3s,mb4.9						
ANMO	**Albuquerque**	**93.17**	**52**	*e*P	**P**	**00 14 43.9**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ANMO	**Albuquerque**	**93.17**	**52**	*e*P	**P**	**00 14 43.9**	**+0.4**
	comp=Z,8.3nm,1.1s,mb4.8						
BNM	**Barren Site**	**93.39**	**52**	*e*P	**P**	**00 14 44.5**	**0.0**
BRTR	**Keskin Array B**	**94.04**	**314**	P	**P**	**00 14 46.5**	**-0.8**
	comp=Z,0.7nm,0.8s,mb3.8,baz=76,slow=5.1,SNR=4.0						
TXAR	**Lajitas Array**	**97.76**	**56**	P	**P**	**00 15 03.3**	**-1.1**
	comp=Z,1.0nm,0.7s,mb4.3,baz=285,slow=4.9,SNR=6.3						
SNAA	**Sanae**	**124.04**	**191**	⇑*i*P	PKPdf	00 20 25.0	-0.1
VNA2	**Neumayer--Watz**	**125.49**	**191**	⇑*i*P	PKPdf	00 20 29.1	+1.3
VNA3	**Neumayer Olymp**	**125.59**	**190**	⇑*i*P	PKPdf	00 20 28.9	+0.9
LVC	**Limon Verde**	**147.43**	**103**	*e*PKPdf	PKPdf	00 21 11.5	+2.4
LVC				*i* PKPbc	PKPdf	00 21 14.1	+4.9
LPAZ	**La Paz**	**147.66**	**91**	PKPbc	PKPdf	00 21 15.0	+5.4
	comp=Z,9.0nm,0.7s,baz=223,slow=3.5,SNR=4.6						
LPAZ	**La Paz**	**147.66**	**91**	PKPbc	PKPdf	00 21 15.0	+5.4
SAML	**Samuel**	**150.32**	**75**	*e*PKPdf	PKPdf	00 21 14.9	+1.0
SAML				*e*PKPbc	PKPdf	00 21 19.7	+5.8
SAML				*e*PKPab	PKPab	00 21 25.8	-2.5
CPUP	**Villa Florida**	**157.47**	**114**	PKPab	PKPab	00 21 56.9	-1.4
	comp=Z,5.4nm,0.8s,baz=260,slow=4.2,SNR=14						
BDFB	**Brasilia**	**166.51**	**79**	PKPab	PKPab	00 22 37.0	-0.7
	comp=Z,2.0nm,0.7s,baz=302,slow=5.4,SNR=3.6						

*IDC **05** 00:10:26.8±1.9, 9.00N×126.52E, mb3.7/5, mb1 3.8/5, mb1mx3.6/20, mbtmp3.7/5, MS2.8/1, Ms1 2.8/1, ms1mx2.6/26, Error ellipse: s-maj=192.8km s-min=22.4km az=67.0*

*MAN **05** 00:10:35.8, 9.03N×126.21E, h31km, mb4.4, ML3.2, MS3.0*

ISC 05 00:10:34.2±1.0, **8.97N**±0.04×**126.32E**±0.08, **h69**km±9km, **n18**, σ**1ˢ13**/26, **mb3.6**/5, **1C**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.69**	**270**	*i* P	**P**	**00 10 48.4**	**-0.7**
BUTP				*e*S	**S**	**00 10 59.2**	**-1.0**
SCPH	**Surigao**	**1.15**	**315**	*e*S	**S**	**00 11 07.9**	**-2.4**
BUKP	**Musuan**	**1.65**	**229**	*e*P	**P**	**00 11 02.6**	**+0.9**
BUKP				*i* S	**S**	**00 11 23.9**	**+2.0**
CGP	**Cagayan de Oro**	**1.69**	**253**	⇑*e*P	**P**	**00 11 01.7**	**-0.5**
CGP				*e*S	**S**	**00 11 21.5**	**-1.3**
MSLP	**Maasin**	**1.85**	**309**	*e*P	**P**	**00 11 05.5**	**+1.1**
MSLP				*e*S	**S**	**00 11 27.8**	**+1.1**
MATI	**Mati**	**2.01**	**182**	*e*P	**P**	**00 11 07.6**	**+1.0**
MATI				*e*S	**S**	**00 11 34.5**	**+4.0**
TBP	**Tagbilaran**	**2.53**	**287**	*e*P	**P**	**00 11 14.3**	**+0.3**
TBP				*e*S	**S**	**00 11 42.9**	**-0.8**
LLP	**Lapu-Lapu**	**2.68**	**300**	*e*P	**P**	**00 11 16.0**	**-0.1**
LLP				*e*S	**S**	**00 11 47.9**	**+0.4**
BESP	**Borongan**	**2.76**	**342**	*e*P	**P**	**00 11 13.0**	**-4.2**
PAGZ	**Pagadian**	**3.11**	**249**	*e*P	**P**	**00 11 23.2**	**+1.0**
PAGZ				*i* S	**S**	**00 11 54.6**	**-3.7**
CNP	**Catarman**	**3.88**	**335**	*e*P	**P**	**00 11 32.9**	**+0.1**
CNP				*e*S	**S**	**00 12 18.4**	**+0.9**
IPIL	**Ipil**	**3.89**	**253**	*e*P	**P**	**00 11 33.7**	**+0.7**
JNU	**Nakatsue**	**24.40**	**9**	LR	LR	00 24 12.5	
	comp=Z,20nm,18.6s,baz=85,slow=34						
WRA	**Warramunga Arr**	**29.79**	**165**	P	**P**	**00 16 35.3**	**-1.6**
	0.4nm,0.6s,mb3.3,baz=347,slow=9.5,SNR=3.1						
ASAR	**Alice Springs**	**33.27**	**167**	P	**P**	**00 17 05.8**	**-1.6**
	0.2nm,0.3s,mb3.4,baz=347,slow=7.3,SNR=8.0						
STKA	**Stephens Creek**	**43.16**	**161**	P	**P**	**00 18 29.4**	**-0.6**
	0.5nm,0.4s,mb3.6,baz=337,slow=9.0,SNR=4.6						
MKAR	**Makanchi Array**	**53.09**	**323**	P	**P**	**00 19 46.5**	**-0.4**
	0.2nm,0.5s,mb3.4,baz=120,slow=6.4,SNR=4.3						
FINES	**FINESS Array B**	**87.06**	**332**	P	**P**	**00 23 14.6**	**+1.5**
	3.8nm,1.1s,mb4.2,baz=90,slow=4.2,SNR=6.5						

*MEX **05** 00:24:27.3±1.0, 15.84N×91.08W, h20km±202km, MD4.0*

*CASC **05** 00:24:28.5±3.0, 15.62N×91.83W, MD4.3*

ISC 05 00:24:30.9±0.6, **16.14N**±0.05×**91.34W**±0.06, **h33**km, **n12**, σ**1ˢ31**/17, **2C-2D**, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**0.78**	**281**	⇑*i*P	**P**	**00 24 44.5**	**-0.9**
CCIG				*i* S	**S**	**00 24 57.5**	**+1.4**
SCX	**San Cristobal**	**1.38**	**296**	*e*P	**P**	**00 24 54.5**	**+0.5**
SCX				*e*S	**S**	**00 25 16.0**	**+4.8**
IXG	**Ixpaco**	**2.13**	**156**	*e*P	**P**	**00 25 01.7**	**-3.2**
IXG				*e*S	**S**	**00 25 30.4**	**0.0**
RBDL	**Robledal**	**2.57**	**141**	⇑*e*P	**P**	**00 25 10.0**	**-1.1**
RTR	**El Retiro**	**2.77**	**143**	*e*P	**P**	**00 25 12.9**	**-1.0**
SNJE	**San Jose**	**2.81**	**143**	*e*P	**P**	**00 25 14.6**	**+0.1**
SCIG		**2.82**	**3**	⇓*i*P	**P**	**00 25 12.9**	**-1.7**
SCIG				*i* S	**S**	**00 25 48.6**	**+0.8**
SBLS	**San Blas**	**2.83**	**144**	*e*P	**P**	**00 25 13.8**	**-1.0**
BOQS	**Boqueron**	**3.11**	**140**	*e*P	**P**	**00 25 20.3**	**+1.4**
LFRS	**El Faro**	**3.33**	**138**	*e*P	**P**	**00 25 24.0**	**+2.1**
LCBS	**La Ceiba**	**3.36**	**137**	⇓*e*P	**P**	**00 25 24.7**	**+2.3**
LCBS				*e*S	**S**	**00 26 06.5**	**+4.8**
OXX	**Oaxaca**	**5.25**	**281**	*e*P	**P**	**00 25 48.0**	**-1.1**

*TAP **05** 00:33:42.7, 23.95N×121.55E, h1km, ML3.9*

TAP Felt IV J at Hualien, I J at Chiawan, III J at Shilin, I J at Nanau, I J at Nanshan.

*NEIC **05** 00:33:44.6±1.1, 24.07N×121.75E, h5km, ML4.1(TAP), Error ellipse: s-maj=19.8km s-min=11.2km az=44.0*

NEIC Recorded [4 TAP] in Hua-lien and [1 TAP] in I-lan Counties.

*IDC **05** 00:33:44.7±1.3, 24.03N×121.90E, mb3.5/4, mb1 3.6/5, mb1mx3.4/22, mbtmp3.5/5, ML3.2/1, MS3.0/1, Ms1 3.2/1, ms1mx2.5/17, Error ellipse: s-maj=40.3km s-min=26.0km az=63.0*

*JMA **05** 00:33:44.1±0.3, 23.64N×121.68E, h30km*

ISC 05 00:33:42.7±0.2, **23.93N**±0.01×**121.66E**±0.02, **h1**km, **n66**, σ**0ˢ81**/106, **mb3.5**/4, **MS2.8**/1, **8C-6D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.07**	**311**	⇓*i*P	**Pg**	**00 33 44.7**	**+0.6**
ESF	**Shoufeng Towns**	**0.15**	**247**	*e*P	**Pg**	**00 33 45.6**	**-0.2**
ESF				S	**Sg**	**00 33 47.9**	**0.0**
TWD	**Chiawan**	**0.16**	**338**	⇑*i*P	**Pg**	**00 33 46.0**	**+0.1**
TWD				S	**Sg**	**00 33 48.4**	**+0.2**
ESL	**Shilin**	**0.24**	**241**	⇑*i*P	**Pg**	**00 33 47.0**	**-0.5**
ESL				S	**Sg**	**00 33 49.8**	**-1.0**
TEGC	**Jichi Village**	**0.25**	**207**	*e*P	**Pg**	**00 33 49.1**	**+1.4**
TEGC				S	**Sg**	**00 33 54.2**	**+3.2**
NACB	**Ninganchiao**	**0.25**	**346**	*e*Pg	**Pg**	**00 33 47.0**	**-0.7**
NACB				*e*S	**Sg**	**00 33 50.6**	**-0.5**
ENA	**Nanau**	**0.50**	**8**	⇑*i*P	**Pg**	**00 33 52.6**	**-0.2**
ENA				S	**Sg**	**00 34 00.0**	**+0.6**
EHY	**Hungye**	**0.53**	**216**	*i* P	**Pg**	**00 33 52.7**	**-0.5**
EHY				S	**Sg**	**00 33 59.6**	**-0.6**
TWT	**Tachien**	**0.55**	**306**	P	**Pg**	**00 33 53.2**	**-0.5**
TWT				S	**Sg**	**00 34 00.3**	**-0.7**
NNS	**Nan Shan**	**0.57**	**333**	⇑*i*P	**Pg**	**00 33 53.5**	**-0.6**
NNS				S	**Sg**	**00 34 01.0**	**-0.7**
TWF1	**Yuli**	**0.67**	**210**	*e*P	**Pg**	**00 33 55.6**	**-0.5**
TWF1				S	**Sg**	**00 34 03.5**	**-1.4**
TWC	**Suao**	**0.70**	**14**	*i* P	**Pg**	**00 33 56.4**	**-0.3**
TWC				S	**Sg**	**00 34 07.0**	**+1.0**
SMLT	**Sun Moon Lake**	**0.70**	**266**	⇑*i*P	**Pg**	**00 33 55.8**	**-0.9**
SMLT				S	**Sg**	**00 34 04.7**	**-1.3**
ENTT	**Nioudou**	**0.71**	**353**	⇑*i*P	**Pg**	**00 33 56.5**	**-0.5**
ENTT				S	**Sg**	**00 34 06.4**	**-0.1**
TYC	**Yuchr**	**0.74**	**268**	⇑*i*P	**Pg**	**00 33 56.4**	**-1.1**
TYC				S	**Sg**	**00 34 05.5**	**-1.8**
YHNB	**Yeheng**	**0.78**	**340**	⇓*i*Pg	**Pg**	**00 33 57.7**	**-0.6**
YHNB				*e*Sg	**Sg**	**00 34 09.3**	**+0.6**
NSK	**Sanguang**	**0.79**	**340**	⇑*i*P	**Pg**	**00 33 57.9**	**-0.6**
NSK				S	**Sg**	**00 34 08.9**	**-0.2**
CHKT	**Chengkung**	**0.87**	**198**	*e*P	**Pg**	**00 33 59.9**	**-0.2**
ALS	**Alishan**	**0.89**	**242**	⇓*i*P	**Pg**	**00 33 60.0**	**-0.5**
ALS				S	**Sg**	**00 34 11.7**	**-0.7**
WNT	**Mingjian**	**0.90**	**267**	*e*P	**Pg**	**00 34 00.5**	**-0.2**
WNT				S	**Sg**	**00 34 13.4**	**+0.8**
TWQ1	**Liyutan**	**0.91**	**297**	*e*P	**Pg**	**00 34 00.6**	**-0.4**
TWQ1				S	**Sg**	**00 34 13.0**	**-0.1**
NSTT	**Nanjuang**	**0.92**	**319**	*e*P	**Pg**	**00 34 00.3**	**-0.8**
NSTT				S	**Sg**	**00 34 13.5**	**+0.1**
TCU	**Taichung**	**0.93**	**284**	*e*P	**Pg**	**00 34 01.6**	**+0.4**
TCU				S	**Sg**	**00 34 14.1**	**+0.5**
ELDTW	**Lidau**	**0.95**	**219**	*e*P	**Pb**	**00 34 00.1**	**-1.5**
NSY	**Sanyi**	**0.95**	**301**	*e*P	**Pb**	**00 34 01.7**	**0.0**
NSY				S	**Sg**	**00 34 14.7**	**+0.2**
CHN5	**Tsauling**	**0.96**	**250**	⇓*i*P	**Pb**	**00 34 01.8**	**0.0**
CHN5				S	**Sg**	**00 34 15.8**	**+1.0**
WGK	**Gukeng**	**1.04**	**257**	*e*P	**Pb**	**00 34 03.8**	**+0.7**
WGK				S	**Sb**	**00 34 17.8**	**+0.8**
TATO	**Taipei**	**1.05**	**351**	*e*Pg	**Pg**	**00 34 03.2**	**-0.5**
TATO				*e*S	**Sb**	**00 34 18.6**	**+1.2**
HSN	**Hsinchu**	**1.07**	**324**	*e*P	**Pb**	**00 34 04.2**	**+0.4**
TAP1	**Taipei**	**1.11**	**353**	*e*P	**Pb**	**00 34 04.7**	**+0.3**
TAP1				S	**Sb**	**00 34 18.5**	**-0.7**
TAP	**Taipei**	**1.11**	**353**	*e*P	**Pb**	**00 34 04.9**	**+0.4**
TWB1	**Santiao Chiao**	**1.11**	**15**	*e*P	**Pb**	**00 34 03.9**	**-0.5**
CHN4	**Tsaushan**	**1.14**	**240**	⇓*i*P	**Pb**	**00 34 05.2**	**+0.4**
CHN4				S	**Sb**	**00 34 21.0**	**+1.0**
NWF	**Wu-fen Shan**	**1.14**	**5**	*e*P	**Pb**	**00 34 05.0**	**+0.1**
CHN2	**Minshiung**	**1.16**	**250**	*e*P	**Pb**	**00 34 06.0**	**+0.8**
CHN2				S	**Sb**	**00 34 21.8**	**+1.3**

WTP	Ta-pu	1.18	235	⇓iP	Pb	00 34 05.6	0.0
WTP				S	Sb	00 34 21.1	-0.1
TWS1	Kuangyinshan	1.19	349	eP	Pb	00 34 06.1	+0.4
TWS1				S	Sb	00 34 23.5	+2.1
CHY	Chiayi	1.21	249	eP	Pb	00 34 06.5	+0.3
CHY				S	Sb	00 34 22.1	-0.1
TWG	Pinlang	1.23	206	eP	Pb	00 34 04.4	-2.0
TWK	Hsinying	1.26	239	eP	Pb	00 34 07.2	+0.2
TWK				S	Sb	00 34 24.2	+0.6
WTCT	Ta-ch'eng	1.27	267	eP	Pb	00 34 07.0	0.0
CHN1	Nanshi	1.28	235	P	Pb	00 34 07.6	+0.3
CHN1				S	Sb	00 34 24.9	+0.8
SGST	Jiashian	1.30	230	eP	Pb	00 34 08.5	+0.9
SGST				S	Sb	00 34 25.9	+1.2
TWY	Chenhua	1.34	358	eP	Pb	00 34 07.9	-0.4
YOJ	Yonaguni jima	1.34	66	P	Pb	00 34 09.4	+1.1
YOJ				eS	Sb	00 34 27.5	+1.6
CHN8	Yiju	1.45	247	eP	Pn	00 34 09.7	-0.5
CHN8				S	Sb	00 34 30.2	+1.0
CHN3	Shinhua	1.46	235	eP	Pn	00 34 09.7	-0.6
ECL	Taimali	1.48	206	eP	Pn	00 34 09.2	-1.4
SSD	Sandimen	1.51	219	eP	Pn	00 34 11.3	+0.3
SSD				S	Sb	00 34 32.7	+1.8
TWM1	Shoushan	1.58	226	eP	Pn	00 34 12.7	+0.6
SCZT	Fangliau	1.82	212	eP	Pn	00 34 16.1	+0.6
IRIF	Iriomote-Funau	1.93	78	P	Pn	00 34 16.9	-0.1
IRIF				eS	Sn	00 34 41.7	-0.5
WDGT	Dungji	1.96	250	eP	Pn	00 34 16.6	-0.8
WDGT				S	Sn	00 34 43.4	+0.6
HATJ	Hateruma jima	1.96	86	P	Pn	00 34 16.8	-0.7
PNG	Penghu	1.96	260	eP	Pn	00 34 15.9	-1.6
JKRS	Kuro-shima	2.17	81	P	Pn	00 34 20.3	-0.1
JKRS				eS	Sn	00 34 49.6	+1.4
JIJ	Ishigaki jima	2.31	79	P	Pn	00 34 22.5	+0.1
JIJ				eS	Sn	00 34 50.2	-1.6
JTJ	Tarama	2.86	75	eS	Sn	00 35 05.0	-0.9
JOW	Kunigami	6.64	63	Pn	Pn	00 35 19.8	-4.1
	1.2nm,0.3s,baz=133,slow=28,SNR=2.7						
CMAR	Chiang Mai Arr	21.86	260	LR	LR	00 49 11.5	
	comp=Z,34nm,18.6s,MS2.8,baz=60,slow=42						
SONM	Songino Array	26.77	337	P	P	00 39 26.3	+0.5
	0.5nm,0.7s,mb3.4,baz=149,slow=8.4,SNR=2.7						
SONM	Songino Array	26.77	337	P	P	00 39 26.3	+0.5
MKAR	Makanchi Array	38.82	316	P	P	00 41 11.6	+0.7
	0.9nm,0.8s,mb3.4,baz=108,slow=9.5,SNR=6.3						
MKAR	Makanchi Array	38.82	316	P	P	00 41 11.6	+0.7
ASAR	Alice Springs	48.78	165	P	P	00 42 31.8	+0.3
	0.4nm,0.9s,mb3.4,baz=353,slow=7.3,SNR=2.7						
YKA	Yellowknife Ar	83.03	23	P	P	00 46 11.3	+0.6
	0.4nm,0.7s,mb3.8,baz=322,slow=4.9,SNR=3.6						

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*NIED **05** 00:34:00, 23.60N×121.70E, h5^{km}, Mw4.2 Best double couple: $M_0$1.98×10^{15} NP1:ϕ_s23°, δ62°, λ84°. NP2:ϕ_s216°, δ28°, λ102°.*

*NEIC **05** 00:34:42.7±0.8, 23.86N×121.62E, h5^{km}, mb4.2/1, ML4.3(TAP), Error ellipse: s-maj=19.3km s-min=9.9km az=73.0*

NEIC Recorded [4 TAP] in Hua-lien and [2 TAP] in I-lan Counties.

*IDC **05** 00:34:42.1±1.0, 23.87N×121.71E, mb3.8/7, mb1 4.0/7, mb1mx3.7/21, mbtmp3.8/7, MS3.2/5, Ms1 3.2/5, ms1mx2.9/33, Error ellipse: s-maj=35.9km s-min=20.6km az=66.0*

*TAP **05** 00:34:44.4, 23.95N×121.60E, h6^{km}, ML4.2*

TAP Felt II J at Chiawan, II J at Shilin, II J at Nanau, I J at Nanshan, I J at Nioudou.

*JMA **05** 00:34:44.5±0.6, 23.64N×121.68E, h18^{km}, M3.6*

*BJI **05** 00:34:55.1, 24.62N×121.00E, h10^{km}, mB4.6, mb4.1, ML4.0, Ms4.0, Msz3.7*

ISC 05 00:34:44.0±0.4**, 23.95N**±0.01×**121.67E**±0.02**, h2^{km}**±3^{km}**, n78, σ1^{s}09**/113**, mb3.8**/9**, MS3.3**/3**, 12C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.06	294	⇑iP	Pg	00 34 45.9	+0.6
TWD	Chiawan	0.14	332	⇑iP	Pg	00 34 47.5	+0.6
TWD				S	Sg	00 34 49.6	+0.7
ESF	Shoufeng Towns	0.17	242	P	Pg	00 34 47.1	-0.3
ESF				S	Sg	00 34 49.4	-0.3
NACB	Ninganchiao	0.23	343	ePg	Pg	00 34 48.6	-0.1
NACB				eSg	Sg	00 34 51.8	0.0
ESL	Shilin	0.26	238	⇑iP	Pg	00 34 48.5	-0.6
ESL				S	Sg	00 34 51.4	-1.2
TEGC	Jichi Village	0.27	206	eP	Pg	00 34 51.1	+1.7
TEGC				S	Sg	00 34 56.4	+3.4
ENA	Nanau	0.48	8	⇑iP	Pg	00 34 54.1	+0.5
ENA				S	Sg	00 35 00.9	+1.0
TWT	Tachien	0.54	304	P	Pg	00 34 54.7	-0.2
TWT				S	Sg	00 35 01.6	-0.5
EHY	Hungye	0.55	216	eP	Pg	00 34 54.4	-0.6
NNS	Nan Shan	0.56	331	⇑iP	Pg	00 34 55.2	+0.1
NNS				S	Sg	00 35 02.2	-0.4
TWC	Suao	0.68	14	⇑P	Pg	00 34 58.0	+0.5
TWC				S	Sg	00 35 06.8	+0.4
TWF1	Yuli	0.69	210	eP	Pg	00 34 57.4	-0.3
ENTT	Nioudou	0.69	352	⇑iP	Pg	00 34 58.1	+0.3
ENTT				S	Sg	00 35 07.5	+0.5
SMLT	Sun Moon Lake	0.71	265	⇑iP	Pg	00 34 57.4	-0.7
SMLT				S	Sg	00 35 05.6	-1.9
TYC	Yuchr	0.74	267	⇑iP	Pg	00 34 58.1	-0.8
TYC				S	Sg	00 35 06.8	-2.0
YHNB	Yeheng	0.76	340	⇓iPg	Pg	00 34 59.1	-0.1
YHNB				eSg	Sg	00 35 07.8	-1.7
NSK	Sanguang	0.78	339	⇑iP	Pg	00 34 59.4	-0.1
NSK				S	Sg	00 35 09.3	-0.6
ILA	Ilan	0.81	5	eP	Pg	00 34 59.1	-1.2
WNT	Mingjian	0.91	266	eP	Pb	00 35 02.2	+0.1
ALS	Alishan	0.91	241	eP	Pb	00 35 01.2	-0.9
ALS				S	Sg	00 35 13.7	-0.4
TWQ1	Liyutan	0.91	296	eP	Pb	00 35 02.6	+0.4
NSTT	Nanjuang	0.91	318	⇑P	Pb	00 35 02.0	-0.1
NSTT				S	Sg	00 35 14.2	-0.2
TCU	Taichung	0.93	282	eP	Pb	00 35 02.7	+0.3
TCU				S	Sg	00 35 16.7	+1.7
NSY	Sanyi	0.95	299	eP	Pb	00 35 03.1	+0.2
NSY				S	Sg	00 35 17.4	+1.7
ELDTW	Lidau	0.97	218	eP	Pb	00 35 03.1	-0.1
CHN5	Tsauling	0.97	249	eP	Pb	00 35 03.1	-0.2
CHN5				S	Sb	00 35 17.3	+0.9
TATO	Taipei	1.03	351	⇓ePg	Pg	00 35 04.1	-0.5
TATO				eSg	Sg	00 35 17.4	-1.0
WGK	Gukeng	1.05	256	eP	Pb	00 35 04.5	-0.1
HSN	Hsinchu	1.06	323	eP	Pb	00 35 05.2	+0.5
HSN				S	Sb	00 35 21.3	+2.4
TAP1	Taipei	1.09	353	eP	Pb	00 35 05.5	+0.3
TAP1				S	Sb	00 35 18.7	-1.0
TWB1	Santiao Chiao	1.09	15	eP	Pb	00 35 05.9	+0.7
TAP	Taipei	1.09	352	eP	Pb	00 35 05.8	+0.5
TAP				S	Sb	00 35 19.8	-0.1
NCU	National Centr	1.11	337	eP	Pb	00 35 05.7	+0.2
NCU				S	Sb	00 35 22.3	+2.1
NWF	Wu-fen Shan	1.12	5	⇑iP	Pb	00 35 06.2	+0.4
NWF				S	Sb	00 35 20.8	+0.2
CHN4	Tsaushan	1.15	239	eP	Pb	00 35 06.5	+0.1
CHN4				S	Sb	00 35 24.1	+2.5
TWS1	Kuangyinshan	1.17	349	eP	Pb	00 35 07.9	+1.3
TWS1				S	Sb	00 35 25.7	+3.7
CHN2	Minshiung	1.17	249	eP	Pb	00 35 07.6	+0.9
WTP	Ta-pu	1.20	234	eP	Pb	00 35 07.2	+0.2
WTP				S	Sb	00 35 25.7	+2.8
CHY	Chiayi	1.23	249	eP	Pb	00 35 07.9	+0.3
TWG	Pinlang	1.25	206	eP	Pb	00 35 08.3	+0.3
WTCT	Ta-ch'eng	1.27	266	eP	Pb	00 35 09.0	+0.6
TWK	Hsinying	1.28	238	eP	Pb	00 35 08.4	0.0
CHN1	Nanshi	1.30	234	eP	Pb	00 35 09.2	+0.4
CHN1				S	Sb	00 35 27.2	+1.4
SGST	Jiashian	1.32	229	eP	Pb	00 35 09.8	+0.7
TWY	Chenhua	1.32	357	eP	Pb	00 35 10.8	+1.7
YOJ	Yonaguni jima	1.33	67	P	Pb	00 35 10.5	+1.2
YOJ				eS	Sb	00 35 28.1	+1.5
CHN8	Yiju	1.47	246	eP	Pn	00 35 11.9	+0.4
ECL	Taimali	1.50	206	eP	Pn	00 35 11.4	-0.6
SSD	Sandimen	1.53	219	eP	Pn	00 35 12.8	+0.3
TWM1	Shoushan	1.60	226	eP	Pn	00 35 16.8	+3.3
PCYT	Pengchaiyu	1.71	12	eP	Pn	00 35 16.2	+1.2
SCZT	Fangliau	1.84	212	eP	Pn	00 35 18.3	+1.3
IRIF	Iriomote-Funau	1.92	78	P	Pn	00 35 18.0	0.0
IRIF				eS	Sn	00 35 43.4	+0.3
HATJ	Hateruma jima	1.96	86	P	Pn	00 35 17.6	-0.9
HATJ				eS	Sn	00 35 44.0	0.0
WDGT	Dungji	1.97	250	eP	Pn	00 35 17.9	-0.8
WDGT				S	Sn	00 35 43.9	-0.4
PNG	Penghu	1.98	259	eP	Pn	00 35 17.9	-0.9
JKRS	Kuro-shima	2.16	82	P	Pn	00 35 21.6	+0.2
JKRS				eS	Sn	00 35 50.3	+1.2
JIJ	Ishigaki jima	2.30	79	P	Pn	00 35 22.9	-0.5
JIJ				eS	Sn	00 35 51.8	-0.8
JTJ	Tarama	2.85	75	P	Pn	00 35 31.4	+0.1
JTJ				eS	Sn	00 36 06.7	0.0
QZH	Quanzhou	2.97	290	eP	Pn	00 35 30.8	-2.3
QZH				S	Sn	00 36 04.4	-5.4
QZH				Smax			
	comp=N,300nm,0.8s						
QZH				Smax			
	comp=E,180nm,1.0s						
JOW	Kunigami	6.63	63	Pn	Pn	00 36 21.4	-3.5
NJ2	Nanjing	8.44	343	eP	P	00 36 48.0	-2.3
NJ2				AP		00 36 51.2	
NJ2				XP		00 36 54.2	
NJ2				S	Sn	00 38 24.4	-2.9
NJ2				XS		00 38 29.4	
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s						
NJ2				Smax			
	comp=N,200nm,1.0s						
NJ2				Smax			
	comp=E,210nm,0.8s						
JNU	Nakatsue	12.20	39	LR	LR	00 43 19.9	
	comp=E,57nm,18.1s,baz=357,slow=42						
GYA	Guiyang	13.81	284	eP	P	00 38 03.5	+0.2
GYA				LR	LR		
	comp=N,600nm,12.6s						
GYA				LR	LR		
	comp=E,220nm,10.5s						
GYA				LR	LR		
	comp=Z,570nm,8.4s						
XAN	Xi'an	15.00	315	P	P	00 38 22.3	+3.4
XAN				LR	LR		
	comp=N,130nm,4.1s						
XAN				LR	LR		
	comp=E,150nm,4.0s						
XAN				LR	LR		
	comp=Z,100nm,5.3s						
CBIJ	Chichi jima	18.78	76	LR	LR	00 45 26.3	
	comp=Z,61nm,18.8s,baz=175,slow=34						
HHC	Hu-ho-hao-te	18.86	336	eP	P	00 39 07.7	+0.1
HHC				AP		00 39 16.5	
HHC				PP	PP	00 39 26.5	+2.6
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s						
HHC				AMB	AMB		
	comp=Z,110nm,4.5s						
HHC				LR	LR		
	comp=N,220nm,9.4s						
HHC				LR	LR		
	comp=E,170nm,9.8s						
HHC				LR	LR		
	comp=Z,130nm,11.2s						
SONM	Songino Array	26.75	337	P	P	00 40 24.5	-2.3
	comp=Z,0.7nm,0.7s,mb3.3,baz=164,slow=9.0,SNR=3.6						
SONM				LR	LR	00 52 11.5	
	comp=Z,73nm,18.1s,MS3.3,baz=80,slow=39						
MKAR	Makanchi Array	38.81	316	P	P	00 42 09.3	-2.6
	comp=Z,0.5nm,0.7s,mb3.4,baz=108,slow=9.1,SNR=4.2						
ZAL	Zalesovo	40.69	327	P	P	00 42 24.5	-2.8
	comp=Z,0.8nm,0.5s,mb3.6,baz=346,slow=11,SNR=3.5						
ZAL				LR	LR	01 00 17.9	
	comp=Z,33nm,18.5s,MS3.2,baz=163,slow=38						
ZAL	Zalesovo	40.69	327	P	P	00 42 24.5	-2.8
ZAL				LR	LR	01 00 17.9	
WRA	Warramunga Arr	45.34	163	P	P	00 42 59.5	-6.1
	comp=Z,0.4nm,0.6s,mb3.5,baz=344,slow=8.6,SNR=5.6						
CHKZ	Chkalovo	48.19	322	eP	P	00 43 22.2	-5.5
	comp=Z,1.7nm,0.8s,mb4.1						
ASAR	Alice Springs	48.80	165	P	P	00 43 30.4	-2.4
	comp=Z,0.8nm,0.9s,mb3.7,baz=346,slow=7.4,SNR=5.5						
IMA	Indian Mountai	66.21	26	eP	P	00 45 34.0	-1.1
	comp=Z,16nm,1.3s,mb4.9						
NOA	NORSAR Array B	78.64	332	LR	LR	01 24 19.1	
	comp=Z,16nm,19.3s,MS3.4,baz=50,slow=38						
YKA	Yellowknife Ar	83.01	23	P	P	00 47 08.9	-2.9
	comp=Z,1.0nm,0.8s,mb3.9,baz=313,slow=5.1,SNR=7.4						
NVAR	Mina Array Bea	96.30	43	P	P	00 48 13.4	-2.1
	comp=Z,0.3nm,0.5s,mb3.9,baz=304,slow=6.5,SNR=3.2						

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*ATH **05** 00:40:17.8, 38.03N×20.10E, h3^{km}±2^{km}, MD3.4/5*

*NEIC **05** 00:40:18.8, 38.08N×20.16E, h4^{km}, MD3.4(ATH), After ATH.*

*CSEM **05** 00:40:20.2±0.2, 38.09N×20.15E, h2^{km}, MD3.4, Error ellipse: s-maj=6.2km s-min=4.3km az=13.0*

*THE **05** 00:40:24.2, 38.30N×20.07E, h16^{km}*

ISC 05 00:40:18.3±0.9**, 38.05N**±0.06×**20.10E**±0.06**, h3^{km}, n20, σ1^{s}08**/28**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.41	72	ePG	Pg	00 40 26.0	-0.5
VLS				eSG	Sg	00 40 32.0	0.0
VLS	Valsamata	0.41	72	ePg	Pg	00 40 26.0	-0.5
VLS				eSg	Sg	00 40 30.7	-1.3
RLS	Riolos of Patr	1.08	89	ePG	Pg	00 40 38.1	-1.8
IGT	Igoumenitsa	1.49	7	ePg	Pg	00 40 46.1	-1.9
EVR	Evrytania	1.60	57	ePB	Pb	00 40 48.0	-0.1
EVR				eSB	Sb	00 41 10.0	+1.4
KEK	Kerkira	1.67	352	ePB	Pb	00 40 49.5	+0.1
KEK				eSB	Sb	00 41 13.0	+2.2
ITM	Ithomi	1.70	120	ePB	Pb	00 40 49.8	0.0
ITM				eSB	Sb	00 41 12.5	+1.0
ITM	Ithomi	1.70	120	ePb	Pb	00 40 50.1	+0.3
JAN	Janina	1.71	20	ePb	Pb	00 40 50.3	+0.3
SRN	Sarande	1.83	358	i Pn	Pn	00 40 51.3	+0.4
SRN				i Sn	Sn	00 41 10.2	-4.6
AGG	Agios Georgios	2.00	60	ePb	Pb	00 40 55.4	+0.3
LIT	Litokhoron	2.77	42	ePn	Pn	00 41 05.3	+1.0
TIP	Timpagrande	2.84	294	ePn	Pn	00 41 06.8	+1.4
TIP	Timpagrande	2.84	294	ePn	Pn	00 41 06.8	+1.4
FNA	Florina	2.90	20	ePn	Pn	00 41 06.2	-0.1
GRG	Griva	3.41	31	ePn	Pn	00 41 13.5	+0.1
PUK	Puka	3.99	358	i Pn	Pn	00 41 21.3	-0.4
PUK				i Sn	Sn	00 41 58.2	-11
PUK	Puka	3.99	358	ePn	Pn	00 41 21.3	-0.4
KKS	Kukesi	4.03	3	i Pn	Pn	00 41 21.6	-0.6
STON	Ston	5.15	340	i Pn	Pn	00 41 35.7	-2.4
STON				i Sn	Sn	00 42 32.9	-6.0

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*MOS **05** 01:04:40.5±0.9, 57.37S×26.11W, h33^{km}, mb5.4/8, MS4.6/4, Error ellipse: s-maj=27.3km s-min=13.1km az=99.3*

*HRVD **05** 01:04:47.3±0.3, 57.33S×25.82W, h57^{km}±3^{km}, MW5.2/57, Centroid moment Tensor Solution. LP body waves: s39,c57;Mantle waves: s57,c89; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.95±.30; $M_{\theta\theta}$-6.10±.25; $M_{\phi\phi}$4.15±.26; $M_{r\theta}$2.67±.24; $M_{\theta\phi}$-0.48±.21; $M_{\phi r}$-3.86±.20; Best double couple: $M_0$7.159×10^{16} NP1: ϕ_s229°, δ49°, λ17°. NP2:ϕ_s127°, δ77°, λ137°. Principal axes: T 7.368, Plg38°, Azm79°; N -.418, Plg46°, Azm294°; P -6.95, Plg18°, Azm184°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **05** 01:04:47.3±1.8, 57.43S×26.07W, h83^{km}±15^{km}, mb5.1/17 Error ellipse: s-maj=9.7km s-min=7.0km az=200.0*

*IDC **05** 01:04:47.0±1.4, 57.43S×26.07W, h77^{km}±11^{km}, mb4.4/17, mb1 4.5/18, mb1mx4.5/20, mbtmp4.7/18, MS4.5/5, Ms1 4.5/5, ms1mx4.1/20, Error ellipse: s-maj=14.9km s-min=11.1km az=20.0*

*BJI **05** 01:04:49.2, 57.40S×26.10W, h82^{km}, mB5.5, Ms5.1, Msz4.8*

ISC 05 01:04:45.9±2.3**, 57.41S**±0.07×**26.0W**±0.1**, h83^{km}**±22^{km}**, n138, σ1^{s}15**/69**, mb4.8**/25**, 7C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.29	157	⇑iP	P	01 08 17.1	-0.8
VNA1	Neumayer--Stat	15.29	157	e	P	01 08 18.8	+0.9
VNA1	Neumayer--Stat	15.29	157	e	P	01 08 20.1	+2.2
VNA3	Neumayer Olymp	15.49	160	⇑iP	P	01 08 19.3	-1.1
VNA3	Neumayer Olymp	15.49	160	e	P	01 08 21.0	+0.6
VNA3	Neumayer Olymp	15.49	160	e	P	01 08 22.2	+1.8
VNA2	Neumayer--Watz	15.69	157	⇑iP	P	01 08 21.0	-1.9
VNA2	Neumayer--Watz	15.69	157	e	P	01 08 23.0	+0.1
VNA2	Neumayer--Watz	15.69	157	e	P	01 08 23.8	+0.9
SNAA	Sanae	17.24	155	⇑iP	P	01 08 43.2	+1.0
SNAA	Sanae	17.24	155	e	P	01 08 45.1	+2.9
SNAA	Sanae	17.24	155	e	P	01 08 45.9	+3.7
SNAA	Sanae	17.24	155	e	P	01 08 47.6	+5.4
SNAA	Sanae	17.24	155	e	P	01 08 48.8	+6.6
SNAA	Sanae	17.24	155	eP	P	01 08 41.0	-1.2
SNAA				pmax	pmax		
	comp=Z,131nm,1.1s						
SNAA	Sanae	17.24	155	P	P	01 08 41.5	-0.7
	comp=Z,3.2nm,0.3s,baz=326,slow=11,SNR=146						
SNAA				S	S	01 11 38.8	-11
	comp=Z,0.2nm,0.3s,baz=349,slow=18,SNR=3.3						
SNAA				ScP		01 16 47.7	
	comp=Z,0.2nm,0.3s,baz=290,slow=8.8,SNR=7.2						
SNAA	Sanae	17.24	155	eP	P	01 08 41.0	-1.3
	comp=Z,131nm,1.1s						
PMSA	Palmer Station	19.53	232	eP	P	01 09 08.2	-0.6
	comp=Z,47nm,0.8s						
MAIT	Maitri	20.75	145	eP	P	01 09 20.5	-1.0
MAIT	Maitri	20.75	145	eP	P	01 09 32.6	+11
MAIT				eS	S	01 13 00.8	-2.6
USHA	Ushuaia	23.50	258	P	P	01 09 49.8	+1.4
	comp=Z,8.6nm,0.7s,mb4.2,baz=73,slow=7.4,SNR=6.9						
USHA				LR	LR	01 16 54.5	
	comp=Z,1µm,21.2s,baz=84,slow=31						
SYO	Syowa Base	30.13	139	⇓P	P	01 10 48.1	-1.3
PLCA	Paso Flores	32.88	281	eP	P	01 11 11.3	-2.4
PLCA				pmax	pmax		
	comp=Z,11nm,1.1s						
PLCA	Paso Flores	32.88	281	P	P	01 11 11.4	-2.3
	comp=Z,3.8nm,0.7s,mb4.3,baz=118,slow=7.0,SNR=3.0						
PLCA				ScP		01 17 30.5	
	comp=Z,1.3nm,0.7s,baz=349,slow=22,SNR=3.0						
PLCA				LR	LR	01 22 30.4	
	comp=Z,370nm,21.6s,baz=128,slow=32						
PLCA	Paso Flores	32.88	281	eP	P	01 11 11.3	-2.4
	comp=Z,11nm,1.1s,mb4.6						
CPUP	Villa Florida	38.19	311	eP	P	01 11 58.0	-0.8
CPUP				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CPUP				MLR	MLR		
	comp=Z,370nm,20.0s						
CPUP	Villa Florida	38.19	311	P	P	01 11 58.2	-0.6
	comp=Z,4.8nm,0.7s,mb4.5,baz=175,slow=7.4,SNR=17						
CPUP				PcP	PcP	01 14 11.4	-1.0
	comp=Z,1.5nm,0.4s,baz=69,slow=3.5,SNR=5.3						
CPUP	Villa Florida	38.19	311	eP	P	01 11 58.0	-0.8
	comp=Z,6.1nm,0.8s,mb4.5						
CPUP				LR	LR		
	comp=Z,370nm,20.0s						
MAW	Mawson	38.68	142	P	P	01 12 02.0	-0.4
	comp=Z,5.3nm,0.5s,mb4.7,baz=231,slow=7.5,SNR=21						
MAW				PcP	PcP	01 14 12.9	-0.7
	comp=Z,4.9nm,1.0s,baz=160,slow=6.7,SNR=3.1						
CFAA	Coronel Fontan	38.69	293	P	P	01 12 01.9	-1.0
	comp=Z,0.6nm,0.3s,mb3.9,baz=140,slow=9.4,SNR=9.7						
CFAA				PcP	PcP	01 14 15.2	+1.3
	comp=Z,0.3nm,0.3s,baz=159,slow=6.6,SNR=3.9						
CFAA	Coronel Fontan	38.69	293	P	P	01 12 01.9	-1.0
CFAA				PcP	PcP	01 14 15.2	+1.3
SUR	Sutherland	40.41	72	P	P	01 12 18.0	+0.8
	comp=Z,5.5nm,0.6s,mb4.5,baz=228,slow=4.7,SNR=7.3						
SBA	Scott Base	44.77	184	eP	P	01 12 53.1	+1.1
SBA				pmax	pmax		
	comp=Z,27nm,1.3s,mb4.8						
SBA				MLR	MLR		
	comp=Z,1µm,21.0s						
SBA	Scott Base	44.77	184	eP	P	01 12 53.1	+1.1
	comp=Z,27nm,1.3s,mb4.8						
SBA				LR	LR		
	comp=Z,1µm,21.0s						
BDFB	Brasilia	44.86	329	P	P	01 12 54.6	+1.1
	comp=Z,4.3nm,0.3s,mb4.7,baz=102,slow=1.7,SNR=15						
VNDA	Vanda	45.24	182	eP	P	01 12 56.2	+0.4
VNDA				pmax	pmax		
	comp=Z,16nm,0.7s						
VNDA				MLR	MLR		
	comp=Z,1µm,20.0s						
VNDA	Vanda	45.24	182	P	P	01 12 56.4	+0.6
	comp=Z,16nm,0.7s,mb4.9,baz=186,slow=6.9,SNR=102						
VNDA				ScP		01 18 20.2	
	comp=Z,3.0nm,0.8s,baz=197,slow=4.2,SNR=4.8						
VNDA	Vanda	45.24	182	eP	P	01 12 56.2	+0.4
	comp=Z,16nm,0.7s,mb4.9						
VNDA				LR	LR		
	comp=Z,1µm,20.0s						
BOSA	Boshof	45.71	73	eP	P	01 12 59.8	-0.3
BOSA				pmax	pmax		
	comp=Z,100nm,1.3s,mb5.4						
BOSA	Boshof	45.71	73	P	P	01 12 59.8	-0.4
	comp=Z,18nm,0.4s,mb5.1,baz=219,slow=7.9,SNR=90						
BOSA	Boshof	45.71	73	eP	P	01 12 59.8	-0.3
	comp=Z,100nm,1.3s,mb5.4						
LVC	Limon Verde	46.53	300	eP	P	01 13 06.0	-0.7
	comp=Z,8.5nm,0.4s,mb4.8						
MIR	Mirnyy	48.28	152	c iP	P	01 13 20.0	+0.2
MIR				pmax	pmax		
	comp=Z,63nm,2.0s,mb5.1						
LBTB	Lobatse	48.82	71	eP	P	01 13 23.7	-0.8
LBTB				pmax	pmax		
	comp=Z,303nm,1.9s,mb5.9						
LBTB	Lobatse	48.82	71	P	P	01 13 24.0	-0.5
	comp=Z,26nm,0.9s,mb5.2,baz=229,slow=8.5,SNR=55						
LBTB	Lobatse	48.82	71	eP	P	01 13 23.7	-0.8
	comp=Z,303nm,1.9s,mb5.9						
TSUM	Tsumeb	49.81	59	P	P	01 13 31.8	-0.4
	comp=Z,18nm,1.1s,mb4.9,baz=204,slow=8.0,SNR=16						
TSUM	Tsumeb	49.81	59	⇑eP	P	01 13 31.9	-0.3
	comp=Z,132nm,2.0s,mb5.5						
LPAZ	La Paz	51.68	305	eP	P	01 13 46.2	-0.2
LPAZ				pmax	pmax		
	comp=Z,21nm,0.7s						
LPAZ	La Paz	51.68	305	P	P	01 13 46.7	+0.3
	comp=Z,12nm,0.4s,mb5.3,baz=150,slow=6.0,SNR=50						
LPAZ	La Paz	51.68	305	eP	P	01 13 46.2	-0.2
	comp=Z,21nm,0.7s,mb5.3						
SAML	Samuel	56.21	314	eP	P	01 14 18.6	-1.1
	comp=Z,12nm,0.4s,mb5.3						
SAML				LR	LR		
	comp=Z,261nm,20.0s						
LSZ	Lusaka	58.29	67	eP	P	01 14 33.4	-0.8
LSZ				pmax	pmax		
	comp=Z,144nm,1.6s,mb5.8						
LSZ	Lusaka	58.29	67	eP	P	01 14 33.4	-0.8
	comp=Z,144nm,1.6s,mb5.8						
DBIC	Dimbokro	66.15	23	eP	P	01 15 26.1	-0.5
DBIC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
DBIC				MLR	MLR		
	comp=Z,468nm,22.0s						
DBIC	Dimbokro	66.15	23	P	P	01 15 26.2	-0.4
	comp=Z,6.3nm,0.4s,mb4.8,baz=158,slow=4.6,SNR=35						
DBIC	Dimbokro	66.15	23	eP	P	01 15 26.1	-0.6
	comp=Z,7.1nm,0.5s,mb4.8						
DBIC				LR	LR		
	comp=Z,468nm,22.0s						
OTAV	Otavalo	70.94	303	eP	P	01 15 57.0	+0.8
	comp=Z,14nm,1.2s,mb4.7						
MBAR	Mbarara	72.22	61	eP	P	01 16 05.3	+1.5
MBAR				pmax	pmax		
	comp=Z,64nm,1.6s,mb5.2						
MBAR	Mbarara	72.22	61	eP	P	01 16 05.3	+1.5
	comp=Z,64nm,1.6s,mb5.2						
ROSC	El Rosal	73.26	309	P	P	01 16 11.9	+2.1
	comp=Z,2.0nm,0.3s,mb4.4,baz=107,slow=21,SNR=3.1						
KMBO	Kilima Mbogo	74.94	68	P	P	01 16 22.1	+2.5
	comp=Z,4.2nm,1.1s,mb4.1,baz=194,slow=4.3,SNR=7.7						
SDV	Santo Domingo	75.42	314	eP	P	01 16 21.4	-0.8
	comp=Z,22nm,1.3s,mb4.7						
RKT	Rikitea	80.42	242	eS	S	01 26 54.9	+7.4
	comp=Z,116nm,31.5s						
RKT				eLQ		01 38 45.9	
	comp=Z,241nm,30.5s						
RKT				eLR	LR	01 42 05.4	
	comp=Z,414nm,30.0s,baz=149						
TBI	Tubuai	86.72	230	eP	P	01 17 24.4	+3.0
	comp=Z,198nm,40.0s						
TBI				eS	S	01 27 57.6	+7.4
	comp=Z,145nm,35.2s						
TBI				eLQ		01 41 27.1	
	comp=Z,207nm,36.2s						

TBI				*e*LR	LR	01 45 06.4	
	comp=Z,556nm,32.0s,baz=160						
STKA	**Stephens Creek**	**90.45**	**169**	P	**P**	**01 17 39.4**	**+0.4**
	comp=Z,3.1nm,0.8s,mb4.5,baz=141,slow=7.5,SNR=5.4						
STKA				LR	LR	01 55 43.2	
	comp=Z,268nm,19.2s,baz=24,slow=34						
STKA	**Stephens Creek**	**90.45**	**169**	P	**P**	**01 17 39.4**	**+0.4**
STKA				LR	LR	01 55 43.2	
PPT	**Papeete**	**91.90**	**233**	*e*LQ		01 43 36.2	
	comp=Z,203nm,26.2s						
PPT				*e*LR	LR	01 47 26.0	
	comp=Z,1μm,29.0s,baz=145						
PPT	**Papeete**	**91.90**	**233**	LR	LR	01 48 40.2	
	comp=Z,546nm,20.7s,baz=161,slow=29						
ASAR	**Alice Springs**	**97.50**	**161**	P	**P**	**01 18 10.8**	**-0.7**
	comp=Z,1.3nm,0.8s,mb4.4,baz=187,slow=3.7,SNR=12						
ASAR				PP	PP	01 22 09.8	-2.3
	comp=Z,0.9nm,0.7s,baz=195,slow=6.8,SNR=4.0						
ASAR				PKKPbc		01 34 47.5	
	comp=Z,0.4nm,0.4s,baz=19,slow=2.3,SNR=7.6						
ASAR				LR	LR	01 59 05.8	
	comp=Z,147nm,19.9s,baz=194,slow=33						
WRA	**Warramunga Arr**	**101.22**	**161**	PKKPbc		01 34 37.2	
	comp=Z,0.4nm,0.4s,baz=359,slow=2.8,SNR=4.6						
BRTR	**Keskin Array B**	**108.93**	**45**	PP	PP	01 23 31.4	-6.8
	comp=Z,1.3nm,1.1s,baz=194,slow=5.9,SNR=4.1						
SDCO	**Great Sand Dun**	**115.73**	**300**	*e*PKPdf	PKPdf	01 23 18.8	+0.7
DUG	**Dugway**	**121.15**	**297**	*e*PKIKP	PKPdf	01 23 30.1	+1.6
HFS	**Hagfors**	**121.30**	**22**	PKP	PKPdf	01 23 27.8	-0.5
	comp=Z,0.7nm,0.5s,baz=124,slow=5.3,SNR=6.9						
PDAR	**Pinedale Array**	**121.60**	**301**	PKP	PKPdf	01 23 30.1	+0.7
	comp=Z,1.0nm,0.4s,baz=126,slow=5.6,SNR=6.7						
HWUT	**Hardware Ranch**	**121.64**	**299**	*e*PKPdf	PKPdf	01 23 28.8	-0.7
NOA	**NORSAR Array B**	**121.66**	**20**	PKP	PKPdf	01 23 29.5	+0.5
	comp=Z,1.0nm,0.8s,baz=116,slow=21,SNR=2.4						
ULM	**Lac du Bonnet**	**121.67**	**315**	PKP	PKPdf	01 23 30.4	+1.1
	comp=Z,2.9nm,0.6s,baz=133,slow=0.6,SNR=4.8						
NVAR	**Mina Array Bea**	**122.50**	**291**	PKP	PKPdf	01 23 32.9	+1.7
	comp=Z,1.2nm,0.6s,baz=132,slow=3.3,SNR=7.2						
ELK	**Elko**	**122.75**	**295**	PKP	PKPdf	01 23 32.3	+0.7
	comp=Z,0.5nm,0.3s,baz=5.1,slow=5.0,SNR=4.5						
TPAW	**Teton Pass**	**122.81**	**300**	*e*PKPdf	PKPdf	01 23 33.6	+2.0
RRI2	**Red Ridge**	**122.87**	**300**	*e*PKPdf	PKPdf	01 23 33.8	+2.1
IMW	**Indian Meadow**	**123.11**	**301**	*e*PKPdf	PKPdf	01 23 33.7	+1.5
CMAR	**Chiang Mai Arr**	**123.99**	**110**	PKP	PKPdf	01 23 35.5	+1.1
	comp=Z,1.8nm,0.7s,baz=232,slow=3.8,SNR=8.1						
CMAR				PP	PP	01 25 20.6	-3.6
	comp=Z,0.4nm,0.4s,baz=225,slow=7.7,SNR=3.5						
FINES	**FINESS Array B**	**125.29**	**28**	PKP	PKPdf	01 23 36.6	+0.8
	comp=Z,3.1nm,0.6s,baz=214,slow=0.6,SNR=51						
HRY	**Holter Researc**	**125.65**	**302**	*e*PKPdf	PKPdf	01 23 39.1	+2.2
KAF	**Kangasniemi**	**125.92**	**27**	*e*pkp	PKPdf	01 23 37.8	+0.8
CHMT	**Chamberlain Mo**	**126.46**	**302**	*e*PKPdf	PKPdf	01 23 40.4	+2.0
MSO	**Missoula**	**126.71**	**301**	*e*PKPdf	PKPdf	01 23 40.5	+1.6
BMO	**Blue Mountains**	**126.84**	**297**	*e*PKIKP	PKPdf	01 23 39.9	+0.7
YBH	**Yreka Blue Hor**	**127.21**	**291**	PKP	PKPdf	01 23 42.4	+2.3
	comp=Z,0.9nm,0.5s						
FCC	**Fort Churchill**	**127.75**	**322**	*e*PKIKP	PKPdf	01 23 40.6	0.0
FRU	**Bishkek**	**130.03**	**71**	*e*PKIKP	PKPdf	01 23 47.0	+1.6
EDM	**Edmonton**	**131.04**	**307**	*e*PKIKP	PKPdf	01 23 47.6	+0.6
KMI	**Kunming**	**131.47**	**109**	PKP	PKPdf	01 23 47.5	-1.1
KMI				LR	LR		
	comp=Z,40nm,14.7s						
ARCES	**ARCESS Array B**	**131.97**	**22**	PKhKP		01 23 35.4	
	comp=Z,2.1nm,0.9s,baz=207,slow=2.0,SNR=6.8						
ARCES				PKP	PKPdf	01 23 49.5	+1.1
	comp=Z,1.9nm,0.4s,baz=224,slow=2.1,SNR=25						
ARCES				SKPbc		01 27 07.7	
	comp=Z,1.9nm,0.6s,baz=202,slow=4.9,SNR=5.0						
ARCES				SKPab		01 27 10.4	
	comp=Z,1.9nm,0.6s,baz=214,slow=3.3,SNR=5.9						
ARCES	**ARCESS Array B**	**131.97**	**22**	PKP		01 23 35.4	
ARCES				PKP	PKPdf	01 23 49.5	+1.1
ARCES				SKPbc		01 27 07.7	
ARCES				SKPab		01 27 10.4	
ARU	**Arti**	**132.13**	**48**	*e*PKIKP	PKPdf	01 23 49.3	+0.3
ARU	**Arti**	**132.13**	**48**	*e*PKPdf	PKPdf	01 23 49.3	+0.3
SVE	**Sverdlovsk**	**133.24**	**49**	*e*PKHKP		01 23 42.0	
BVAR	**Borovoye Array**	**134.96**	**58**	PKP	PKPdf	01 23 55.1	+0.7
	comp=Z,1.4nm,0.4s,baz=170,slow=2.0,SNR=14						
BVAR				SKPbc		01 27 18.9	
	comp=Z,0.3nm,0.3s,baz=225,slow=4.1,SNR=2.9						
MKAR	**Makanchi Array**	**136.70**	**72**	SKPbc		01 27 24.0	
	comp=Z,0.4nm,0.5s,baz=225,slow=4.1,SNR=5.1						
WMQ	**Urumqi**	**137.54**	**79**	*e*PKP	PKPdf	01 24 01.1	+1.7
WMQ				LR	LR		
	comp=N,90nm,24.0s						
WMQ				LR	LR		
	comp=E,80nm,22.0s						
WMQ				LR	LR		
	comp=Z,100nm,24.0s						
YKA	**Yellowknife Ar**	**137.60**	**316**	PKhKP		01 23 50.7	
	comp=Z,0.3nm,0.3s,baz=126,slow=2.7,SNR=5.7						
YKA				PKP	PKPdf	01 24 00.1	+1.1
	comp=Z,4.5nm,0.5s,baz=128,slow=2.2,SNR=31						
YKA				PP	PP	01 26 47.9	-1.7
	comp=Z,0.2nm,0.6s,baz=119,slow=6.4,SNR=4.1						
YKA				SKPbc		01 27 25.1	
	comp=Z,1.3nm,0.4s,baz=129,slow=3.3,SNR=16						
YKA	**Yellowknife Ar**	**137.60**	**316**	PKP		01 23 50.7	
YKA				PKP	PKPdf	01 24 00.1	+1.1
YKA				PP	PP	01 26 47.9	-1.7
YKA				SKPbc		01 27 25.1	
YKW3	**Yellowknife Ar**	**137.65**	**317**	*e*PKPdf	PKPdf	01 23 60.0	+0.9
RES	**Resolute Bay**	**139.36**	**338**	PKHKP		01 23 54.2	
GTA	**Gaotai**	**141.01**	**94**	PKP	PKPdf	01 24 08.6	+2.9
NVS	**Novosibirsk**	**142.11**	**63**	*i* PKHKP		01 24 03.1	
NVS				pmax	pmax		
	comp=Z,16nm,1.8s						
NVS				pmax	pmax		
	comp=N,7.0nm,1.9s						
NVS				pmax	pmax		
	comp=E,13nm,2.1s						
NVS				pmax	pmax		
	comp=Z,32nm,2.1s						
NVS				pmax	pmax		
	comp=Z,17nm,2.0s						
ZAL	**Zalesovo**	**142.36**	**65**	PKhKP		01 24 04.5	
	comp=Z,2.7nm,0.4s,baz=280,slow=2.5,SNR=7.9						
ZAL	**Zalesovo**	**142.36**	**65**	PKP	PKPdf	01 24 04.5	-3.0
NJ2	**Nanjing**	**145.09**	**121**	*e*PKP	PKPdf	01 24 13.6	+0.6
INK	**Inuvik**	**147.25**	**319**	*e*PKIKP	PKPdf	01 24 15.3	-0.2
INK				*e*		01 24 19.2	
INK	**Inuvik**	**147.25**	**319**	PP	PP	01 27 47.8	+0.3
	comp=Z,1.6nm,0.8s,baz=135,slow=5.4,SNR=3.6						
BTO	**Baotou**	**147.33**	**102**	*e*PKP	PKPdf	01 24 20.5	+4.0
HHC	**Hu-ho-hao-te**	**148.32**	**103**	*e*PKP	PKPdf	01 24 23.5	+5.5
HHC				PP	PP		
	comp=Z,170nm,4.1s						
HHC				LR	LR		
	comp=N,200nm,19.0s						
HHC				LR	LR		
	comp=E,140nm,13.2s						
HHC				LR	LR		
	comp=Z,140nm,18.1s						
MOY	**Mondy**	**149.41**	**78**	*e*PKP2	PKPdf	01 24 26.1	+6.7
MOY				pmax	pmax		
	comp=Z,62nm,2.1s						
EYAK	**Cordova Ski Ar**	**149.72**	**302**	*e*PKPbc	PKPdf	01 24 26.6	+6.9
ZAK	**Zakamensk**	**149.94**	**81**	⇑*e*PKIKP	PKPdf	01 24 21.2	+0.9
ZAK				*i*		01 24 27.0	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,17nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,14nm,1.3s						
DIV	**Divide**	**149.94**	**303**	*e*PKPbc	PKPdf	01 24 26.0	+6.0
SONM	**Songino Array**	**150.15**	**88**	PKPbc	PKPdf	01 24 27.4	+6.7
	comp=Z,7.3nm,0.3s,baz=219,slow=3.5,SNR=69						
SONM				PP	PP	01 28 03.9	-0.6
	comp=Z,0.5nm,0.7s,baz=225,slow=4.1,SNR=3.2						
TLY	**Talaya**	**150.82**	**79**	*i* PKIKP	PKPdf	01 24 28.0	+6.4
TLY				pmax	pmax		
	comp=Z,35nm,1.3s						
TLY	**Talaya**	**150.82**	**79**	*e*PKPbc	PKPdf	01 24 28.9	+7.3
JNU	**Nakatsue**	**151.06**	**137**	PKPbc	PKPdf	01 24 31.4	+8.8
	comp=Z,4.9nm,0.6s,baz=54,slow=17,SNR=4.3						
SML	**Sawmill**	**151.33**	**303**	*e*PKIKP	PKPdf	01 24 30.0	+8.0
IRK	**Irkutsk**	**151.44**	**79**	*e*PKIKP	PKPdf	01 24 29.1	+6.6
IRK				pmax	pmax		
	comp=Z,46nm,2.2s						
ILAR	**Eielson Array**	**151.49**	**310**	PKP	PKPdf	01 24 21.3	-0.9
	comp=Z,0.4nm,0.7s,baz=339,slow=2.1,SNR=5.5						
ILAR				PKPbc	PKPdf	01 24 30.0	+7.8
	comp=Z,10nm,0.6s,baz=141,slow=1.6,SNR=77						
PMR	**Palmer**	**151.62**	**303**	*e*P	PKPdf	01 24 31.5	+9.0
PMR				*e*P		01 24 31.9	
COLA	**College**	**151.91**	**310**	*e*PKIKP	PKPdf	01 24 31.0	+8.2
KDAK	**Kodiak Island**	**151.97**	**294**	*e*PKPbc	PKPdf	01 24 31.5	+8.4
MCK	**McKinley**	**152.11**	**307**	*e*PKIKP	PKPdf	01 24 31.8	+8.6
SPU	**Mount Spurr**	**152.85**	**301**	*e*PKPbc	PKPdf	01 24 33.3	+9.0
SVW2	**Sparrevohn**	**154.48**	**300**	*e*P	PKPdf	01 24 38.3	+12
IMA	**Indian Mountai**	**154.50**	**311**	*e*PKIKP	PKPdf	01 24 38.0	+12
TTA	**Tatalina**	**155.07**	**304**	*e*P	PKPdf	01 24 38.9	+12
TTA				*e*P		01 24 39.3	
CN2	**Changchun**	**157.56**	**115**	*e*PKP	PKPdf	01 24 37.6	+6.5
KLR	**Kul'dur**	**164.46**	**112**	*e*PKIKP	PKPdf	01 24 34.2	-4.0

MAN 05 01:07:32.6, 14.12N×124.87E, h1^{km}, mb4.3, ML3.2, MS3.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.87**	**233**	*e*P	Pg	01 07 49.6	-0.4
PVCP				*e*S	Sg	01 07 53.7	-7.9
CNP	**Catarman**	**1.62**	**187**	*e*P	Pn	01 08 02.3	-0.1
CNP				*e*S	Sb	01 08 16.9	-6.8
AUQP	**San Andres**	**2.28**	**250**	*i* P	Pn	01 08 12.2	+0.3
POLP	**Polilio Island**	**2.90**	**282**	*e*P	Pn	01 08 29.1	+8.4
POLP				*e*S	Sn	01 09 04.8	+8.0
BOAC	**Boac**	**3.01**	**258**	*i* P	Pn	01 08 23.0	+0.6
BOAC				*e*S	Sn	01 08 52.7	-7.0
OTRP	**Odiongan**	**3.28**	**238**	*e*P	Pn	01 08 27.4	+1.3
RCP	**Roxas**	**3.29**	**219**	*e*P	Pn	01 08 24.8	-1.4
BALP	**Baler**	**3.57**	**297**	*e*P	Pn	01 08 30.2	0.0
BALP				*e*S	Sn	01 09 19.5	+5.9

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*IDC **05** 01:09:09.8±0.6, 53.06S×22.29E, mb4.3/13, mb1 4.4/13, mb1mx4.3/20, mbtmp4.3/13, MS4.5/8, Ms1 4.5/8, ms1mx4.2/23, Error ellipse: s-maj=21.3km s-min=18.6km az=41.0*

*BJI **05** 01:09:12.2, 53.10S×22.20E, h10^{km}, mB4.9, Ms5.1, Msz4.7*

*HRVD **05** 01:09:12.2±0.3, 53.14S×22.51E, h12^{km}, MW5.1/63, Centroid moment Tensor Solution. LP body waves: s34,c48;Mantle waves: s63,c106; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.27±.17; $M_{\theta\theta}$4.83±.14; $M_{\phi\phi}$0.44±.17; $M_{r\theta}$0.34±.51; $M_{\theta\phi}$-1.64±.15; $M_{\phi r}$-0.77±.59; Best double couple: $M_0$5.39×10^{16} NP1: ϕ_s102°, δ42°, λ-100°. NP2:ϕ_s295°, δ48°, λ-81°. Principal axes: T 5.406, Plg3°, Azm19°; N -.025, Plg7°, Azm109°; P -5.373, Plg83°, Azm264°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **05** 01:09:12.2±0.3, 53.13S×22.18E, h10^{km}, mb4.9/6, MS4.6/1 Error ellipse: s-maj=15.5km s-min=11.5km az=86.0*

ISC 05 01:09:10.1±0.5, 53.07S±0.08×22.1E±0.2, h10^{km}, n79, σ1^{s}08/37, mb4.4/16, MS4.5/9, 1D, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYO	**Syowa Base**	**17.97**	**159**	⇓Pn	**P**	**01 13 21.0**	**-0.2**
SUR	**Sutherland**	**20.70**	**357**	P	**P**	**01 13 50.9**	**-1.9**
	16nm,1.2s,baz=160,slow=14,SNR=2.3						
SUR	**Sutherland**	**20.70**	**357**	*e*P	**P**	**01 13 51.5**	**-1.4**
SNAA	**Sanae**	**21.64**	**201**	*e*	**P**	**01 14 03.6**	**+1.5**
SNAA	**Sanae**	**21.64**	**201**	*e*	**P**	**01 14 05.5**	**+3.4**
SNAA	**Sanae**	**21.64**	**201**	*e*	**P**	**01 14 08.9**	**+6.8**
SNAA	**Sanae**	**21.64**	**201**	*e*	**P**	**01 14 15.9**	**+14**
SNAA	**Sanae**	**21.64**	**201**	P	**P**	**01 14 03.4**	**+1.3**
	7.0nm,0.7s,mb4.2,baz=52,slow=10,SNR=12						
SNAA				LR	LR	01 20 14.0	
	comp=Z,1μm,21.8s,MS4.2,baz=30,slow=31						
SNAA	**Sanae**	**21.64**	**201**	*e*P	**P**	**01 14 02.5**	**+0.4**
VNA2	**Neumayer--Watz**	**22.22**	**205**	*e*	**P**	**01 14 10.9**	**+3.0**
VNA2	**Neumayer--Watz**	**22.22**	**205**	*e*	**P**	**01 14 14.5**	**+6.6**
VNA2	**Neumayer--Watz**	**22.22**	**205**	*e*	**P**	**01 14 20.4**	**+12**
VNA1	**Neumayer--Stat**	**22.28**	**206**	*e*	**P**	**01 14 12.2**	**+3.7**
VNA1	**Neumayer--Stat**	**22.28**	**206**	*e*	**P**	**01 14 15.8**	**+7.3**
VNA1	**Neumayer--Stat**	**22.28**	**206**	*e*	**P**	**01 14 21.3**	**+13**
VNA3	**Neumayer Olymp**	**23.00**	**206**	*e*	**P**	**01 14 17.7**	**+2.2**
VNA3	**Neumayer Olymp**	**23.00**	**206**	*e*	**P**	**01 14 19.7**	**+4.2**
VNA3	**Neumayer Olymp**	**23.00**	**206**	*e*	**P**	**01 14 23.3**	**+7.8**
VNA3	**Neumayer Olymp**	**23.00**	**206**	*e*	**P**	**01 14 26.9**	**+11**
MAW	**Mawson**	**24.26**	**142**	P	**P**	**01 14 28.1**	**+0.3**
	8.5nm,0.9s,mb4.2,baz=292,slow=10,SNR=4.5						
MAW				LR	LR	01 21 51.7	
	comp=Z,788nm,21.2s,MS4.2,baz=140,slow=32						
LBTB	**Lobatse**	**28.14**	**7**	LR	LR	01 24 25.2	
	comp=Z,1μm,21.1s,MS4.5,baz=214,slow=33						
LBTB	**Lobatse**	**28.14**	**7**	P	**P**	**01 15 05.9**	**+1.6**
	3.4nm,0.7s,mb4.1						
LBTB				LR	LR		
	comp=Z,2μm,21.0s,MS4.6						
QSPA	**South Pole Qui**	**37.16**	**180**	*e*P	**P**	**01 16 22.5**	**+0.3**
	comp=Z,69nm,1.6s,mb5.2						
VNDA	**Vanda**	**47.30**	**169**	P	**P**	**01 17 44.6**	**-0.3**
	comp=Z,1.6nm,0.8s,mb4.0,baz=234,slow=8.4,SNR=3.3						
VNDA				LR	LR	01 37 12.8	
	comp=Z,1μm,19.3s,MS4.8,baz=201,slow=36						
KMBO	**Kilima Mbogo**	**53.28**	**19**	LR	LR	01 40 03.4	
	comp=Z,603nm,19.1s,MS4.7,baz=198,slow=35						
TRQA	**Tornquist**	**57.41**	**249**	*e*P	**P**	**01 18 59.9**	**-1.0**
	comp=Z,30nm,1.4s,mb5.1						
PLCA	**Paso Flores**	**60.19**	**241**	P	**P**	**01 19 18.5**	**-1.7**
	comp=Z,2.5nm,1.1s,mb4.2,baz=158,slow=6.8,SNR=4.6						
PLCA	**Paso Flores**	**60.19**	**241**	*e*P	**P**	**01 19 18.2**	**-1.9**
	comp=Z,0.9nm,0.6s,mb4.0						
CPUP	**Villa Florida**	**63.19**	**261**	P	**P**	**01 19 39.8**	**-0.7**
	comp=Z,2.1nm,0.6s,mb4.4,baz=125,slow=5.8,SNR=5.7						
CPUP	**Villa Florida**	**63.19**	**261**	*e*P	**P**	**01 19 39.4**	**-1.1**
	comp=Z,16nm,1.4s,mb4.9						
DBIC	**Dimbokro**	**63.75**	**330**	LR	LR	01 40 37.9	
	comp=Z,429nm,21.4s,MS4.6,baz=145,slow=30						
CFAA	**Coronel Fontan**	**65.62**	**250**	P	**P**	**01 19 56.7**	**+0.5**
	comp=Z,0.8nm,0.9s,mb3.7,baz=150,slow=4.4,SNR=8.2						
CFAA	**Coronel Fontan**	**65.62**	**250**	P	**P**	**01 19 56.7**	**+0.5**
BDFB	**Brasilia**	**65.71**	**276**	LR	LR	01 42 19.6	
	comp=Z,256nm,21.3s,MS4.4,baz=334,slow=30						
LPAZ	**La Paz**	**77.30**	**260**	P	**P**	**01 21 07.0**	**+0.7**
	comp=Z,0.8nm,0.6s,mb3.8,baz=121,slow=5.9,SNR=4.5						
SAML	**Samuel**	**80.08**	**268**	*e*P	**P**	**01 21 21.6**	**0.0**
	comp=Z,33nm,1.6s,mb5.0						
STKA	**Stephens Creek**	**80.43**	**131**	P	**P**	**01 21 22.2**	**-0.8**
	comp=Z,7.6nm,0.9s,mb4.6,baz=241,slow=3.6,SNR=12						
ASAR	**Alice Springs**	**83.52**	**121**	P	**P**	**01 21 38.8**	**-0.5**
	comp=Z,3.3nm,0.8s,mb4.5,baz=207,slow=5.8,SNR=14						
ASF	**Jabal al Asfar**	**85.86**	**13**	P	**P**	**01 21 51.9**	**+1.1**
	comp=Z,3.3nm,0.7s,mb4.7,baz=233,slow=5.1,SNR=5.1						
WRA	**Warramunga Arr**	**86.82**	**119**	P	**P**	**01 21 54.9**	**-0.9**
	comp=Z,2.7nm,0.9s,mb4.5,baz=208,slow=3.3,SNR=12						
BRTR	**Keskin Array B**	**92.96**	**9**	P	**P**	**01 22 25.1**	**+0.9**
	comp=Z,1.1nm,0.8s,mb4.3,baz=180,slow=3.7,SNR=6.9						
CMAR	**Chiang Mai Arr**	**96.92**	**69**	LR	LR	01 58 34.2	
	comp=Z,82nm,18.4s,MS4.2,baz=255,slow=31						
RKT	**Rikitea**	**101.56**	**201**	*e*SS	SS	01 41 47.6	+1.3
	comp=Z,414nm,30.0s						
RKT				*e*LR	LR	01 55 24.1	
	comp=Z,612nm,34.8s,baz=167						
TBI	**Tubuai**	**103.56**	**188**	*e*SS	SS	01 42 17.3	+3.6
	comp=Z,278nm,28.2s						
TBI				*e*LR	LR	01 57 30.7	
	comp=Z,301nm,36.5s,baz=175						
PPT	**Papeete**	**109.29**	**188**	*e*LR	LR	01 59 46.2	
	comp=Z,532nm,35.2s,baz=172						
NJ2	**Nanjing**	**118.77**	**74**	*e*PKP	PKPdf	01 27 59.1	-2.3
CN2	**Changchun**	**130.60**	**68**	*e*PKP	PKPdf	01 28 27.3	+3.5
CN2				LR	LR		
	comp=N,500nm,19.0s,MS5.3						
CN2				LR	LR		
	comp=E,300nm,19.0s,MS5.3						
CN2				LR	LR		
	comp=Z,140nm,19.0s,MS4.7						
ANMO	**Albuquerque**	**139.80**	**264**	PKP	PKPdf	01 28 37.3	-3.7
	comp=Z,0.7nm,0.7s,baz=156,slow=3.7,SNR=3.0						
PV10	**Paradox Valley**	**143.62**	**266**	*e*PKPpre		01 28 44.0	
RSSD	**Black Hills**	**144.05**	**278**	*e*PKPpre		01 28 44.7	
FCC	**Fort Churchill**	**145.02**	**305**	*e*PKP	PKPdf	01 28 46.7	-2.6
MSU	**Marysvale**	**145.59**	**264**	*e*PKP	PKPdf	01 28 50.2	-0.7
ARUT	**Antelope Range**	**145.87**	**262**	*e*PKP	PKPdf	01 28 51.2	-0.2
MPU	**Maple Canyon**	**146.21**	**266**	*e*PKP	PKPdf	01 28 53.0	+1.0
DAU	**Daniels Canyon**	**146.23**	**267**	*e*PKP	PKPdf	01 28 52.1	+0.2
JLU	**Jordanelle**	**146.46**	**267**	*e*PKP	PKPdf	01 28 52.6	+0.2
PDAR	**Pinedale Array**	**146.60**	**272**	PKPbc	PKPbc	01 28 52.1	+1.3
	comp=Z,2.4nm,0.8s,baz=121,slow=5.9,SNR=11						
CTU	**Camp Tracy**	**146.70**	**267**	*e*PKPdf	PKPdf	01 28 53.2	+0.5
TCUT	**Toone Canyon**	**146.75**	**268**	*e*PKPdf	PKPdf	01 28 53.2	+0.4
DUG	**Dugway**	**147.03**	**265**	*e*PKPdf	PKPdf	01 28 53.9	+0.5
HWUT	**Hardware Ranch**	**147.14**	**269**	*e*PKPdf	PKPdf	01 28 53.2	-0.2
SPUT	**South Promonto**	**147.49**	**267**	*e*PKPdf	PKPdf	01 28 55.3	+1.3
BGU	**Big Grassy Mou**	**147.61**	**266**	*e*PKPdf	PKPdf	01 28 55.8	+1.6
FFC	**Flin Flon**	**147.75**	**296**	*e*PKPbc	PKPdf	01 28 56.4	+2.4
RRI2	**Red Ridge**	**148.00**	**271**	*e*PKPdf	PKPdf	01 28 55.4	+0.6
IMW	**Indian Meadow**	**148.07**	**273**	*e*PKPdf	PKPdf	01 28 56.4	+1.6
YFT	**Old Faithful**	**148.31**	**274**	*e*PKPdf	PKPdf	01 28 54.8	-0.5
ELK	**Elko**	**148.83**	**264**	PKPbc	PKPdf	01 28 59.4	+3.2
	comp=Z,2.3nm,0.7s,baz=134,slow=2.0,SNR=15						
ELK	**Elko**	**148.83**	**264**	*e*PKPdf	PKPdf	01 28 56.4	+0.3
ELK				*e*PKPbc	PKPdf	01 28 59.3	+3.1
QLMT	**Earthquake Lak**	**148.87**	**274**	*e*PKPbc	PKPdf	01 29 01.1	+5.0
MNV	**Mina**	**149.10**	**258**	*e*PKPdf	PKPdf	01 28 58.0	+1.3
MNV				*e*PKPbc	PKPdf	01 29 00.3	+3.6
NVAR	**Mina Array Bea**	**149.18**	**258**	PKPbc	PKPdf	01 29 00.8	+4.0
	comp=Z,4.0nm,0.9s,baz=135,slow=5.1,SNR=14						
BOZ	**Bozeman (W)**	**149.42**	**275**	*e*PKPdf	PKPdf	01 28 55.6	-1.3
HRY	**Holter Researc**	**150.08**	**277**	*e*PKPdf	PKPdf	01 28 57.2	-0.8
HRY				*e*PKPbc	PKPdf	01 29 01.8	+3.9
CHMT	**Chamberlain Mo**	**151.03**	**276**	*e*PKPbc	PKPdf	01 29 04.0	+4.6
BMO	**Blue Mountains**	**152.43**	**269**	*e*PKPbc	PKPdf	01 29 06.5	+5.0
EDM	**Edmonton**	**153.60**	**288**	*e*PKPbc	PKPdf	01 29 08.8	+6.0
YKA	**Yellowknife Ar**	**155.53**	**310**	PKPab	PKPab	01 29 29.9	-0.5
	comp=Z,1.7nm,0.8s,baz=94,slow=4.9,SNR=6.8						
YKA	**Yellowknife Ar**	**155.53**	**310**	PKPab	PKPab	01 29 29.9	-0.6

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*NIED **05** 01:16:00, 23.80N×120.60E, h11^{km}, Mw4.0 Best double couple: $M_0$1.14×10^{15} NP1:ϕ_s225°, δ79°, λ-23°. NP2: ϕ_s320°, δ67°, λ-168°.*

*IDC **05** 01:16:26.0±0.9, 23.49N×120.76E, mb3.8/6, mb1 3.9/8, mb1mx3.8/24, mbtmp3.8/8, ML4.0/2, Error ellipse: s-maj=27.3km s-min=17.4km az=68.0*

*NEIC **05** 01:16:27.5±2.2, 23.48N×120.74E, h12^{km}±13^{km}, mb4.2/3, ML4.8(TAP), Error ellipse: s-maj=14.2km s-min=8.2km az=77.0*

NEIC Recorded [4 TAP] in Yun-lin; [3 TAP] in Chang-hua and Chia-i; [2 TAP] in T'ai-nan; [1 TAP] in Hua-lien, Miao-li, Nan-t'ou, P'eng-hu and T'ai-tung Counties.

*TAP **05** 01:16:28.2, 23.58N×120.64E, h9^{km}, ML4.5*

TAP Felt IV J at Tsauling, IV J at Gukeng, III J at Alishan, III J at Chiayi, II J at Tsaushan, II J at Dapu, I J at Dungshan, I J at Ryuetan, II J at Szhu, I J at Nanshi, III J at Dacheng, I J at Lidau, I J at Shinhua, I J at Taichung, II J at Jiali, I J at Hungye, I J at Liyutan, I J at Tachien, I J at Hualien, I J at Penghu, I J at Yungkang.

*BJI **05** 01:16:30.3, 23.92N×120.53E, h12^{km}, mB4.7, mb4.6, ML4.2, Ms3.9, Msz3.6*

ISC 05 01:16:29.1±0.2, 23.60N±0.01×120.64E±0.01, h9^{km}, n77, σ1^{s}11/124, mb3.9/9, 16C-22D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHN5	**Tsauling**	**0.03**	**92**	⇓*i*P	**Pg**	**01 16 30.4**	**-0.4**
WGK	**Gukeng**	**0.11**	**320**	⇑*i*P	**Pg**	**01 16 32.2**	**+0.4**
WGK				S	**Sg**	**01 16 35.1**	**+1.4**
CHN2	**Minshiung**	**0.17**	**246**	⇑*i*P	**Pg**	**01 16 32.9**	**+0.2**
ALS	**Alishan**	**0.17**	**120**	⇑*i*P	**Pg**	**01 16 32.8**	**-0.1**
ALS				S	**Sg**	**01 16 35.9**	**+0.4**
CHY	**Chiayi**	**0.22**	**243**	⇑*i*P	**Pg**	**01 16 33.9**	**+0.1**
CHN4	**Tsaushan**	**0.25**	**190**	⇓*i*P	**Pg**	**01 16 34.1**	**-0.2**
CHN4				S	**Sg**	**01 16 39.0**	**+1.1**
WNT	**Mingjian**	**0.28**	**8**	⇓*i*P	**Pg**	**01 16 35.6**	**+0.7**
WNT				S	**Sg**	**01 16 40.7**	**+1.9**
WTP	**Ta-pu**	**0.35**	**184**	⇓*i*P	**Pg**	**01 16 35.9**	**-0.4**
WTP				S	**Sg**	**01 16 41.4**	**+0.3**
TWK	**Hsinying**	**0.36**	**203**	⇓*i*P	**Pg**	**01 16 36.2**	**-0.2**
TWK				S	**Sg**	**01 16 42.1**	**+0.7**
TYC	**Yuchr**	**0.36**	**33**	⇓*i*P	**Pg**	**01 16 36.9**	**+0.4**
TYC				S	**Sg**	**01 16 43.0**	**+1.5**
SMLT	**Sun Moon Lake**	**0.37**	**40**	⇓*i*P	**Pg**	**01 16 37.0**	**+0.4**
SMLT				S	**Sg**	**01 16 43.4**	**+1.7**
WSF	**Szhu**	**0.39**	**276**	⇑*i*P	**Pg**	**01 16 37.0**	**0.0**
WSF				S	**Sg**	**01 16 43.4**	**+1.2**
WTCT	**Ta-ch'eng**	**0.42**	**309**	⇑*i*P	**Pg**	**01 16 37.8**	**+0.1**
WTCT				S	**Sg**	**01 16 44.9**	**+1.5**
CHN1	**Nanshi**	**0.42**	**194**	⇓*i*P	**Pg**	**01 16 37.2**	**-0.5**
CHN1				S	**Sg**	**01 16 44.5**	**+1.0**
CHN8	**Yiju**	**0.47**	**238**	⇑*i*P	**Pg**	**01 16 38.4**	**-0.2**
CHN8				S	**Sg**	**01 16 46.2**	**+1.3**
SGST	**Jiashian**	**0.52**	**186**	⇓*i*P	**Pg**	**01 16 39.0**	**-0.5**
SGST				S	**Sg**	**01 16 47.3**	**+0.8**
ELDTW	**Lidau**	**0.54**	**140**	⇑*i*P	**Pg**	**01 16 39.2**	**-0.6**
ELDTW				S	**Sg**	**01 16 46.0**	**-1.0**
TCU	**Taichung**	**0.55**	**3**	S	**Sg**	**01 16 48.7**	**+1.2**
CHN3	**Shinhua**	**0.58**	**206**	*e*P	**Pg**	**01 16 40.9**	**+0.2**
CHN3				S	**Sg**	**01 16 51.3**	**+2.8**
SCLT	**Jiali**	**0.59**	**224**	⇑P	**Pg**	**01 16 40.6**	**-0.3**
SCLT				S	**Sg**	**01 16 50.8**	**+1.9**
EHY	**Hungye**	**0.63**	**98**	⇑*i*P	**Pg**	**01 16 41.3**	**-0.5**
EHY				S	**Sg**	**01 16 50.7**	**+0.4**
TWF1	**Yuli**	**0.65**	**112**	⇑*i*P	**Pb**	**01 16 41.6**	**-0.5**
TWF1				S	**Sg**	**01 16 50.7**	**-0.2**
TWQ1	**Liyutan**	**0.76**	**9**	⇓*i*P	**Pb**	**01 16 44.3**	**+0.3**
TWQ1				S	**Sb**	**01 16 55.6**	**+1.5**
ESL	**Shilin**	**0.76**	**73**	*i* P	**Pb**	**01 16 43.8**	**-0.2**
ESL				S	**Sb**	**01 16 53.7**	**-0.4**
TWM1	**Shoushan**	**0.80**	**195**	⇓*i*P	**Pb**	**01 16 45.6**	**+1.0**
TWT	**Tachien**	**0.81**	**37**	⇓*i*P	**Pb**	**01 16 44.3**	**-0.7**
NSY	**Sanyi**	**0.82**	**8**	⇓*i*P	**Pb**	**01 16 45.7**	**+0.6**
NSY				S	**Sb**	**01 16 58.1**	**+2.1**
CHKT	**Chengkung**	**0.83**	**127**	⇑P	**Pb**	**01 16 45.6**	**+0.3**
CHKT				S	**Sb**	**01 16 58.4**	**+2.2**
ESF	**Shoufeng Towns**	**0.84**	**71**	*e*P	**Pb**	**01 16 44.2**	**-1.2**
ESF				S	**Sb**	**01 16 55.9**	**-0.6**
SSD	**Sandimen**	**0.85**	**181**	*e*P	**Pb**	**01 16 44.7**	**-0.8**
SSD				S	**Sb**	**01 16 56.8**	**0.0**
TWG	**Pinlang**	**0.87**	**153**	⇑*i*P	**Pb**	**01 16 45.5**	**-0.4**
TWG				S	**Sb**	**01 16 57.6**	**+0.3**
SGLT	**Jiouru**	**0.88**	**189**	*e*P	**Pb**	**01 16 46.9**	**+0.8**
SGLT				S	**Sb**	**01 17 01.6**	**+3.9**
HWA	**Hwalien**	**0.96**	**67**	⇓*i*P	**Pb**	**01 16 47.6**	**+0.2**
HWA				S	**Sb**	**01 17 01.0**	**+1.0**
TTN	**Taitung**	**0.96**	**151**	*e*P	**Pb**	**01 16 47.5**	**0.0**
TTN				S	**Sb**	**01 17 03.5**	**+3.4**
WDGT	**Dungji**	**0.96**	**250**	⇑*i*P	**Pb**	**01 16 46.2**	**-1.2**
WDGT				S	**Sb**	**01 16 59.5**	**-0.6**
PNG	**Penghu**	**1.00**	**268**	⇑*i*P	**Pb**	**01 16 46.7**	**-1.3**
PNG				S	**Sb**	**01 17 00.1**	**-0.9**
TWD	**Chiawan**	**1.00**	**61**	⇓P	**Pb**	**01 16 47.8**	**-0.3**
TWD				S	**Sb**	**01 17 00.8**	**-0.3**
ECL	**Taimali**	**1.04**	**164**	P	**Pb**	**01 16 48.4**	**-0.4**
ECL				S	**Sb**	**01 17 02.8**	**+0.5**
NACB	**Ninganchiao**	**1.04**	**57**	*e*Pg	**Pg**	**01 16 47.8**	**-2.2**
NACB				*e*Sg	**Sg**	**01 17 01.7**	**-2.2**
KAU	**Kaohsiung**	**1.07**	**197**	*e*P	**Pb**	**01 16 49.5**	**+0.2**
NNS	**Nan Shan**	**1.07**	**38**	⇓*i*P	**Pb**	**01 16 48.9**	**-0.5**
NNS				S	**Sb**	**01 17 03.8**	**+0.5**
NSTT	**Nanjuang**	**1.08**	**18**	⇓*i*P	**Pb**	**01 16 49.4**	**0.0**
NSTT				S	**Sb**	**01 17 04.6**	**+1.1**
SCZT	**Fangliau**	**1.22**	**181**	⇓*i*P	**Pb**	**01 16 51.5**	**-0.4**
HSN	**Hsinchu**	**1.23**	**14**	*e*P	**Pb**	**01 16 52.1**	**-0.1**
HSN				S	**Sb**	**01 17 11.3**	**+3.3**
NSK	**Sanguang**	**1.26**	**31**	⇓*i*P	**Pb**	**01 16 52.3**	**-0.2**
NSK				S	**Sb**	**01 17 10.1**	**+1.5**
TAW	**Tawu**	**1.26**	**169**	*e*P	**Pb**	**01 16 52.1**	**-0.4**
TAW				S	**Sb**	**01 17 10.8**	**+2.1**
YHNB	**Yeheng**	**1.26**	**32**	*e*P	**Pb**	**01 16 51.9**	**-0.7**
YHNB				*e*S	**Sb**	**01 17 09.1**	**+0.4**
ENA	**Nanau**	**1.30**	**50**	⇓*i*P	**Pb**	**01 16 52.8**	**-0.5**
ENA				S	**Sb**	**01 17 11.3**	**+1.4**
ENTT	**Nioudou**	**1.34**	**39**	*e*P	**Pb**	**01 16 53.3**	**-0.6**
NCU	**National Centr**	**1.45**	**20**	*e*P	**Pn**	**01 16 55.3**	**-0.4**
TWC	**Suao**	**1.49**	**47**	⇑P	**Pn**	**01 16 56.5**	**+0.3**
TWC				S	**Sb**	**01 17 16.5**	**+1.0**
ILA	**Ilan**	**1.54**	**41**	*e*P	**Pn**	**01 16 57.8**	**+0.9**
TATO	**Taipei**	**1.57**	**29**	*e*Pn	**Pn**	**01 16 55.3**	**-2.0**
TATO				*e*P		01 16 57.4	
TATO				*e*S	**Sb**	**01 17 18.2**	**+0.4**
HEN	**Hengchun**	**1.59**	**177**	⇓*i*P	**Pn**	**01 16 56.6**	**-1.0**
HEN				S	**Sb**	**01 17 21.6**	**+3.3**
TAP	**Taipei**	**1.64**	**29**	*e*P	**Pn**	**01 16 59.6**	**+1.3**
TAP1	**Taipei**	**1.65**	**29**	*e*P	**Pn**	**01 16 55.9**	**-2.4**
TWS1	**Kuangyinshan**	**1.66**	**25**	*e*P	**Pn**	**01 16 57.5**	**-1.0**
TSEB	**Hengchuen, Pin**	**1.71**	**172**	*e*P	**Pn**	**01 16 57.5**	**-1.7**

NWF	Wu-fen Shan	1.80	35	eP	Pn	01 17 00.0	-0.5
TWB1	Santiao Chiao	1.87	41	⇓P	Pn	01 17 01.4	-0.1
TWB1				S	Sn	01 17 26.7	+1.3
TWY	Chenhua	1.89	27	eP	Pn	01 17 00.6	-1.3
KNM	Kinmen	2.18	292	eP	Pn	01 17 05.9	-0.1
QZH	Quanzhou	2.30	306	P	Pn	01 17 05.2	-2.5
QZH				S	Sn	01 17 36.0	-0.4
QZH				Smax			
	comp=N,2µm,0.4s						
QZH				Smax			
	comp=E,1µm,0.4s						
PCYT	Pengchaiyu	2.41	32	eP	Pn	01 17 07.9	-1.3
JOW	Kunigami	7.63	63	Pn	Pn	01 18 18.9	-4.1
	comp=E,6.9nm,0.3s,baz=128,slow=23,SNR=17						
JOW				Sn	Sn	01 19 44.5	-6.0
	baz=158,slow=28,SNR=1.7						
NJ2	Nanjing	8.57	350	eP	P	01 18 29.6	-6.6
NJ2				S	Sn	01 20 11.6	-2.4
NJ2				XS		01 20 17.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
NJ2				Smax			
	comp=N,250nm,0.8s						
NJ2				Smax			
	comp=E,250nm,0.8s						
NJ2				LR	LR		
	comp=N,620nm,10.3s						
NJ2				LR	LR		
	comp=E,740nm,9.6s						
NJ2				LR	LR		
	comp=Z,270nm,8.9s						
MJAR	Matsushiro Arr	19.90	46	P	P	01 20 58.9	-4.9
	comp=Z,0.3nm,0.3s,baz=230,slow=8.9,SNR=3.8						
ULN	Ulaanbaatar	26.53	339	eP	P	01 22 06.4	-2.3
	comp=Z,1.4nm,0.7s,mb3.6						
SONM	Songino Array	26.72	338	P	P	01 22 08.1	-2.4
	comp=Z,1.3nm,0.8s,mb3.5,baz=155,slow=10.0,SNR=6.8						
MKAR	Makanchi Array	38.42	317	P	P	01 23 50.3	-2.3
	comp=Z,0.5nm,0.5s,mb3.5,baz=121,slow=8.4,SNR=7.1						
WRAB	Tennant Creek	45.28	162	eP	P	01 24 43.7	-5.5
	comp=Z,1.6nm,0.5s,mb4.1						
WRA	Warramunga Arr	45.29	162	P	P	01 24 43.6	-5.6
	comp=Z,1.3nm,0.5s,mb4.0,baz=344,slow=8.9,SNR=6.3						
BVAR	Borovoye Array	47.81	321	P	P	01 25 06.6	-2.1
	comp=Z,0.8nm,0.6s,mb3.9,baz=112,slow=7.8,SNR=2.5						
CHKZ	Chkalovo	47.89	322	eP	P	01 25 06.4	-2.8
	comp=Z,1.9nm,0.5s,mb4.4						
ASAR	Alice Springs	48.72	164	P	P	01 25 11.2	-4.9
	comp=Z,0.7nm,0.4s,mb4.1,baz=341,slow=7.4,SNR=12						
STKA	Stephens Creek	58.69	159	P	P	01 26 25.2	-4.2
	comp=Z,1.0nm,0.7s,mb4.0,baz=355,slow=8.7,SNR=3.6						
STKA	Stephens Creek	58.69	159	eP	P	01 26 24.2	-5.2

IDC 05 01:25:25.2±3.2**, 1.04N×97.03E, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.5**/20**, mbtmp3.6**/5**, Error ellipse: s-maj=126.8km s-min=26.8km az=55.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	42.10	122	P	P	01 33 19.2	-1.8
	0.3nm,0.4s,baz=302,slow=9.1,SNR=2.7						
SONM	Songino Array	47.31	9	P	P	01 34 00.9	-1.6
	0.3nm,0.4s,baz=188,slow=10,SNR=3.1						
MKAR	Makanchi Array	47.35	346	P	P	01 34 01.5	-1.3
	0.4nm,0.5s,baz=161,slow=8.4,SNR=4.6						
ZAL	Zalesovo	53.68	351	P	P	01 34 48.5	-2.3
	0.8nm,0.3s,baz=303,slow=5.3,SNR=4.3						
BVAR	Borovoye Array	56.34	341	P	P	01 35 07.1	-3.1
	0.2nm,0.4s,baz=127,slow=7.2,SNR=3.0						

*IDC **05** 01:35:23.1±9.6, 0.94N×97.17E, mb4.0/5, mb1 4.1/5, mb1mx3.7/20, mbtmp4.0/5, Error ellipse: s-maj=215.0km s-min=102.0km az=144.0*

NEIC 05 01:35:28.9±6.1**, 1.13N×97.08E, h30**^{km}**, mb4.1**/1**, Error ellipse: s-maj=130.0km s-min=21.8km az=160.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.46	41	eP	Pn	01 36 48.2	-2.2
SONM	Songino Array	47.22	9	P	P	01 43 59.0	-2.0
	0.5nm,0.5s,baz=180,slow=6.2,SNR=5.2						
MKAR	Makanchi Array	47.28	346	P	P	01 43 59.6	-1.9
	0.8nm,0.8s,baz=162,slow=7.7,SNR=4.9						
ZAL	Zalesovo	53.60	351	P	P	01 44 47.6	-1.9
	2.9nm,0.5s,baz=324,slow=7.4,SNR=11						
BVAR	Borovoye Array	56.28	341	P	P	01 45 06.6	-2.4
	0.8nm,0.4s,baz=135,slow=8.4,SNR=6.2						
CHKZ	Chkalovo	56.76	342	eP	P	01 45 08.8	-3.6
	1.4nm,0.6s						
FINES	FINESS Array B	80.01	333	P	P	01 47 35.4	-1.4
	1.2nm,0.8s,baz=90,slow=4.2,SNR=4.3						

*IDC **05** 01:54:03.1±1.2, 35.53S×72.58W, mb4.2/5, mb1 4.1/9, mb1mx4.0/19, mbtmp4.0/9, ML4.1/4, MS3.8/10, Ms1 3.7/10, ms1mx3.6/25, Error ellipse: s-maj=30.6km s-min=14.8km az=92.0*

*NEIC **05** 01:54:04.2±0.7, 35.51S×73.03W, h10^{km}, mb4.6/3, ML4.6(GUC), Error ellipse: s-maj=11.3km s-min=7.8km az=81.0*

*GUC **05** 01:54:04.9±0.6, 35.50S×73.00W, h7^{km}±2^{km}, ML4.6*

ISC 05 01:54:02.4±1.2**, 35.56S**±0.04×**73.19W**±0.05**, h11**^{km}±7^{km}**, n47, σ1**^{s}**11**/51**, mb4.2**/7**, MS4.0**/7**, 6C-5D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCO	Chanco	0.56	108	⇓iP	Pg	01 54 14.4	+0.6
CNCO				i S	Sg	01 54 20.7	-0.7
TALC	Talca	1.28	83	⇓iP	Pb	01 54 25.3	-0.7
TALC				i S	Sb	01 54 40.8	-1.5
LNCH	Linares	1.32	103	⇓iP	Pb	01 54 26.5	-0.3
LNCH				i S	Sb	01 54 43.0	-0.6
LNCH				AMP		01 54 50.9	
	comp=N,14µm,0.4s						
CCHI	Chillan	1.37	139	⇓iP	Pn	01 54 28.5	+0.9
CCHI				i S	Sb	01 54 46.9	+1.9
CCHI				AMP		01 54 54.9	
	comp=E,9µm,0.4s						
NICH	Los Niches	1.70	71	⇑iP	Pn	01 54 32.2	0.0
SFDO	San Fernando	2.02	63	⇓iP	Pn	01 54 36.1	-0.7
LNV	Longovilo	2.17	43	eP	Pn	01 54 39.6	+0.6
LNV				i S	Sn	01 55 06.2	+0.1
CACH	El Canelo	2.57	57	eP	Pn	01 54 46.6	+1.8
CICH	Cipreses	2.59	62	eP	Pn	01 54 46.4	+1.4
CICH				i S	Sn	01 55 18.1	+1.4
CHCH	Chadas Angostu	2.65	53	eP	Pn	01 54 46.5	+0.7
LMEL	Las Melosas	3.00	56	⇑iP	Pn	01 54 51.9	+1.1
LMEL				AMP		01 55 42.5	
	comp=N,3µm,0.8s						
CLCH	Cerro Calan	3.08	46	i S	Sn	01 55 29.4	+0.4
CLCH				AMP		01 55 49.9	
	comp=E,4µm,0.7s						
PLCA	Paso Flores	5.56	159	Pn	Pn	01 55 27.3	+0.1
	comp=E,2.2nm,0.3s,baz=325,slow=12,SNR=28						
PLCA				Pg	Pg	01 55 44.9	-8.6
	comp=E,3.3nm,0.3s,baz=337,slow=16,SNR=10.0						
PLCA				Sn	Sn	01 56 30.5	-1.4
	comp=E,1.5nm,0.3s,baz=87,slow=19,SNR=1.9						
PLCA				Lg		01 56 51.7	
	comp=E,1.4nm,0.3s,baz=272,slow=22,SNR=2.1						
PLCA				LR	LR	01 58 00.4	
	comp=E,305nm,19.4s,baz=349,slow=44						
CFAA	Coronel Fontan	5.71	48	Pn	Pn	01 55 25.1	-4.2
	comp=E,0.1nm,0.3s,baz=210,slow=6.6,SNR=2.6						
CFAA				Lg		01 56 48.5	
	comp=E,1.1nm,0.3s,baz=309,slow=16,SNR=5.7						
CFAA				LR	LR	01 57 52.2	
	comp=E,124nm,18.8s,baz=222,slow=43						
CFAA	Coronel Fontan	5.71	48	Pn	Pn	01 55 25.1	-4.2
CFAA				Lg		01 56 48.5	
CFAA				LR	LR	01 57 52.2	
TRQA	Tornquist	9.33	109	eP	P	01 56 16.8	-3.0
	comp=E,35nm,1.1s						
TRQA				S	Sn	01 58 32.2	+26
LVC	Limon Verde	13.43	17	Pn	P	01 57 13.1	-2.4
	comp=E,0.3nm,0.3s,baz=232,slow=11,SNR=3.0						
LVC				LR	LR	02 02 22.2	
	comp=E,171nm,21.7s,baz=356,slow=38						
CPUP	Villa Florida	16.41	60	Pn	P	01 57 50.6	-3.6
	comp=E,0.1nm,0.3s,baz=285,slow=7.5,SNR=2.6						
LPAZ	La Paz	19.72	15	P	P	01 58 35.0	+0.2
	comp=E,0.2nm,0.3s,baz=164,slow=10.0,SNR=9.0						
LPAZ	La Paz	19.72	15	eP	P	01 58 34.4	-0.5
SIV	San Ignacio	22.30	32	P	P	01 58 59.8	-1.6
	comp=E,16nm,1.1s,mb4.3,baz=222,slow=12,SNR=34						
BDFB	Brasilia	30.00	55	LR	LR	02 13 14.7	
	comp=E,319nm,19.6s,MS4.0,baz=232,slow=39						
RPN	Rapa Nui	31.86	275	LR	LR	02 10 02.3	
	comp=E,197nm,19.2s,MS3.8,baz=360,slow=30						
SDV	Santo Domingo	44.27	4	P	P	02 02 13.1	-0.8
	comp=E,1.1nm,0.4s,mb4.0,baz=207,slow=9.0,SNR=3.0						
VNA3	Neumayer Olymp	48.28	157	⇑i	P	02 02 45.8	+0.9
VNA3	Neumayer Olymp	48.28	157	e	P	02 02 48.6	+3.7
VNA3	Neumayer Olymp	48.28	157	e	P	02 02 53.5	+8.6
VNA3	Neumayer Olymp	48.28	157	e	P	02 02 58.9	+14
VNA1	Neumayer--Stat	48.62	156	⇑i	P	02 02 41.2	-6.4
VNA1	Neumayer--Stat	48.62	156	e	P	02 02 44.4	-3.2
VNA1	Neumayer--Stat	48.62	156	e	P	02 02 53.1	+5.5
VNA2	Neumayer--Watz	48.95	157	⇑i	P	02 02 50.7	+0.6
VNA2	Neumayer--Watz	48.95	157	e	P	02 02 53.5	+3.4
VNA2	Neumayer--Watz	48.95	157	e	P	02 02 58.5	+8.4
VNA2	Neumayer--Watz	48.95	157	e	P	02 03 08.4	+18
SNAA	Sanae	50.51	157	⇑i	P	02 03 02.3	+0.3
SNAA	Sanae	50.51	157	e	P	02 03 08.7	+6.7
SNAA	Sanae	50.51	157	e	P	02 03 20.1	+18
SNAA	Sanae	50.51	157	eP	P	02 03 02.3	+0.2
	comp=E,15nm,1.3s,mb4.8						
PPT	Papeete	69.10	263	LR	LR	02 25 50.0	
	comp=E,87nm,20.8s,MS4.0,baz=124,slow=27						
TXAR	Lajitas Array	70.65	332	P	P	02 05 21.0	+1.0
	comp=E,0.2nm,0.5s,mb3.3,baz=164,slow=8.4,SNR=4.5						
TXAR				LR	LR	02 31 20.6	
	comp=E,89nm,18.2s,MS4.1,baz=95,slow=32						
TXAR	Lajitas Array	70.65	332	P	P	02 05 21.0	+1.0
TXAR				LR	LR	02 31 20.6	
MAW	Mawson	71.95	164	P	P	02 05 27.4	+0.2
	comp=E,6.3nm,1.2s,mb4.4,baz=231,slow=6.5,SNR=4.4						
MAW				LR	LR	02 36 18.6	
	comp=E,122nm,18.4s,MS4.2,baz=64,slow=35						
WVT	Waverly	72.62	348	eP	P	02 05 31.5	-0.3
	comp=E,4.1nm,1.0s,mb4.3						
DBIC	Dimbokro	76.57	72	LR	LR	02 37 03.9	
	comp=E,73nm,19.0s,MS4.0,baz=111,slow=34						
BOSA	Boshof	80.18	118	P	P	02 06 13.8	-0.6
	comp=E,4.8nm,0.9s,mb4.4,baz=265,slow=4.9,SNR=3.8						
BOSA				LR	LR	02 36 50.4	
	comp=E,104nm,19.4s,MS4.2,baz=223,slow=32						
BOSA	Boshof	80.18	118	eP	P	02 06 14.4	0.0
	comp=E,7.2nm,1.0s,mb4.6						
BOSA				LR	LR	02 36 50.4	

GUC 05 02:04:31.6±0.7**, 24.43S×67.30W, h151**^{km}±24^{km}**, ML3.5, 1C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.34	321	⇑iP	P	02 05 12.0	+0.7
LVC				i S	S	02 05 43.6	+1.9
CPN1	Cerro Paranal	2.83	265	eP	P	02 05 18.9	+1.4
CPN1				i S	S	02 05 54.7	+2.1
CPN1				AMP		02 05 56.2	
	comp=E,116nm,0.4s						
ANCH	Antofagasta	2.94	284	eP	P	02 05 19.8	+0.9
ANCH				i S	S	02 05 55.6	+0.5
CRCH	Chaqaral	3.55	237	i S	S	02 06 10.2	+0.9

MAN 05 02:08:30.7, 18.02N×120.74E, h8^{km}**, mb4.4, ML3.2, MS3.0, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	Dolores	0.37	183	eP	Pg	02 08 38.0	-0.2
ABRA				eS	Sg	02 08 44.0	+0.7
APYP	Conner	0.51	108	eP	Pg	02 08 41.3	+0.3
APYP				eS	Sg	02 08 49.4	+1.6
CVP	Callao Caves	1.08	107	⇑iP	Pb	02 08 50.8	-0.4
CVP				i S	Sb	02 09 06.0	+0.7
SGCP	Mt. Cagua	1.27	80	eP	Pb	02 08 54.0	-0.4
SGCP				eS	Sb	02 09 11.8	+1.1
CAUP	Cauayan	1.49	136	eP	Pn	02 08 59.6	+1.6
BOLP	Bolinao	1.81	206	eP	Pn	02 09 01.8	-0.7
BOLP				eS	Sn	02 09 22.6	-3.3
BALP	Baler	2.41	160	eP	Pn	02 09 13.1	+2.0
BBP	Basco	2.67	26	eP	Pn	02 09 14.6	-0.2

*NEIC **05** 02:10:24.3±1.4, 21.46S×170.39E, h157^{km}±10^{km}, mb4.1/1, Error ellipse: s-maj=17.6km s-min=11.6km az=216.0*

*IDC **05** 02:10:25.1±3.4, 21.54S×170.34E, h159^{km}±26^{km}, mb3.6/3, mb1 3.7/5, mb1mx3.5/16, mbtmp4.1/5, MS3.0/1, Ms1 3.0/1, ms1mx2.6/18, Error ellipse: s-maj=34.5km s-min=29.1km az=11.0*

ISC 05 02:10:23.0±3.4**, 21.5S**±0.3×**170.4E**±0.2**, h164**^{km}±18^{km}**, n24, σ0**^{s}**50**/22**, mb3.9**/4**, 2C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.73	261	eP	P	02 11 21.2	+0.3
DZM				eS	S	02 12 05.0	-0.6
DZM	Mont Dzumac	3.73	261	P	P	02 11 21.2	+0.2
	2.3nm,0.3s,baz=84,slow=19,SNR=35						
DZM				S	S	02 12 05.4	-0.2
	12nm,0.3s,baz=145,slow=23,SNR=7.9						
DZM				LR	LR	02 12 34.6	
	comp=Z,242nm,21.2s,baz=214,slow=35						
DZM	Mont Dzumac	3.73	261	eP	P	02 11 21.2	+0.3
DZM				eS	S	02 12 05.0	-0.6
NOUC	Port Laguerre	3.87	261	eP	P	02 11 22.7	0.0
NOUC				eS	S	02 12 09.0	+0.4
NOUC	Port Laguerre	3.87	261	eP	P	02 11 22.7	0.0
NOUC				eS	S	02 12 09.0	+0.4
URZ	Urewera	17.66	162	P	P	02 14 19.7	-0.3
	0.5nm,0.3s,baz=49,slow=8.9,SNR=4.2						
STKA	Stephens Creek	27.66	242	P	P	02 15 58.1	+0.4
	2.1nm,0.6s,mb4.1,baz=61,slow=7.6,SNR=5.6						
STKA	Stephens Creek	27.66	242	eP	P	02 15 57.9	+0.3
ASAR	Alice Springs	33.72	259	P	P	02 16 50.8	0.0
	2.0nm,0.7s,mb3.9,baz=85,slow=8.7,SNR=19						
WB2	Warramunga Arr	33.72	266	eP	P	02 16 50.4	-0.4
WRAB	Tennant Creek	33.73	266	eP	P	02 16 50.1	-0.7
ASPA	Alice Springs	33.73	259	eP	P	02 16 50.9	+0.1
WRA	Warramunga Arr	33.73	266	P	P	02 16 50.1	-0.8
	0.8nm,0.5s,mb3.7,baz=97,slow=8.4,SNR=8.2						
FITZ	Fitzroy Crossi	42.16	266	eP	P	02 18 02.5	+1.3
SBA	Scott Base	56.41	181	eP	P	02 19 49.4	+0.2
	1.8nm,0.8s,mb4.0						
VNA3	Neumayer Olymp	87.49	180	⇑i	P	02 22 52.4	-0.1
VNA2	Neumayer--Watz	87.80	181	⇑i	P	02 22 54.2	+0.2
ARCES	ARCESS Array B	127.54	345	PKP	PKPdf	02 29 09.3	+1.3
	2.1nm,0.9s,baz=45,slow=1.7,SNR=3.7						
VRAC	Vranov	145.35	329	PKPbc	PKPbc	02 29 44.1	+2.5
	1.7nm,0.6s,baz=117,slow=4.5,SNR=3.6						
CLL	Collm	145.44	335	i	PKPdf	02 29 36.9	-4.2
CLL				i PKP1	PKPbc	02 29 44.0	+2.3
EKA	Eskdalemuir Ar	145.89	353	PKPbc	PKPbc	02 29 44.4	+1.6
	0.7nm,0.6s,baz=355,slow=2.3,SNR=4.1						
KHC	Kasperske Hory	146.85	332	ePKP	PKPdf	02 29 48.0	+4.5
GERES	GERESS Array B	147.01	331	PKPbc	PKPdf	02 29 48.8	+5.0
	1.2nm,0.6s,baz=31,slow=2.3,SNR=17						
DAVOX	Davos	150.26	333	PKPbc	PKPdf	02 29 56.9	+7.9
	2.2nm,0.3s,slow=4.0,SNR=7.6						

*NEIC **05** 02:10:58.6, 35.67S×72.84W, h4^{km}, ML3.2(GUC), After GUC.*

GUC 05 02:10:58.6±0.8**, 35.67S×72.84W, h4**^{km}±12^{km}**, MD3.5, ML3.2, 3C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TALC	Talca	1.02	75	⇑iP	Pb	02 11 17.6	-0.9
TALC				i S	Sb	02 11 32.5	+0.4
LNCH	Linares	1.02	101	⇑iP	Pb	02 11 17.7	-0.9
LNCH				i S	Sb	02 11 32.6	+0.4
LNCH				AMP		02 11 34.2	
	comp=N,979nm,0.4s						
NICH	Los Niches	1.48	64	eP	Pn	02 11 25.4	-0.7
NICH				i S	Sb	02 11 45.2	0.0
LNV	Longovilo	2.07	35	⇑iP	Pn	02 11 34.1	-0.5
LNV				i S	Sn	02 12 00.4	-0.8
CICH	Cipreses	2.40	57	eP	Pn	02 11 40.0	+0.7
CICH				i S	Sn	02 12 11.9	+2.4
CACH	El Canelo	2.41	51	eS	Sn	02 12 12.1	+2.4
CHCH	Chadas Angostu	2.50	47	eP	Pn	02 11 41.8	+1.1
LMEL	Las Melosas	2.83	51	eP	Pn	02 11 47.5	+2.1
LMEL				i S	Sn	02 12 22.9	+2.5
LMEL				AMP		02 12 26.8	
	comp=N,104nm,0.4s						
CLCH	Cerro Calan	2.96	41	eP	Pn	02 11 48.7	+1.5
CLCH				i S	Sn	02 12 25.7	+2.1

IDC 05 02:24:49.3±7.4**, 31.68S×179.72E, h540**^{km}±103^{km}**, mb2.6**/2**, mb1 3.0**/3**, mb1mx2.8**/15**, mbtmp3.8**/3**, Error ellipse: s-maj=130.0km s-min=46.8km az=4.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.90	197	P	P	02 26 36.0	-0.8
	5.5nm,0.3s,baz=338,slow=3.3,SNR=26						
URZ				S	S	02 28 03.3	+1.1
	1.4nm,0.3s,baz=185,slow=20,SNR=7.4						
ASAR	Alice Springs	41.11	269	P	P	02 31 46.3	-1.1
	0.2nm,0.5s,baz=112,slow=7.4,SNR=4.1						
WRA	Warramunga Arr	42.22	275	P	P	02 31 55.2	-1.2
	0.7nm,0.5s,baz=112,slow=8.0,SNR=6.3						
FINES	FINESS Array B	145.63	338	PKPbc	PKPbc	02 43 26.0	-0.2
	0.9nm,0.8s,SNR=4.0						

JMA 05 02:29:07.9±0.1**, 43.13N×146.01E, h46**^{km}±1^{km}**, M3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.30	320	P	P	02 29 16.7	-0.1
NEM2				S	S	02 29 22.9	0.0
JAK	Akkeshi	0.97	263	P	P	02 29 25.1	-0.2
JAK				eS	S	02 29 38.0	-0.2
JRA	Rausu	1.03	322	P	P	02 29 26.4	+0.2
JRA				eS	S	02 29 40.0	+0.2
JNK	Nakash	1.05	296	P	P	02 29 26.2	-0.2
JNK				eS	S	02 29 39.6	-0.5
JOB	Onbets	1.61	263	P	P	02 29 34.1	-0.3
JOB				eS	S	02 29 53.8	-0.4
JAR	Ashorobuto	1.65	277	P	P	02 29 34.9	0.0
JAR				eS	S	02 29 55.2	+0.2
JTKR	Abashiri--Toko	1.74	300	P	P	02 29 37.0	+0.7

*NEIC **05** 02:41:22.0, 34.41S×70.36W, h123^{km}, MD3.5(GUC), After GUC.*

GUC 05 02:41:22.0±0.8**, 34.41S×70.36W, h123**^{km}±3^{km}**, MD3.5, ML3.8, 13C-12D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CICH	Cipreses	0.10	333	⇓iP	P	02 41 38.6	-0.3
CICH				i S	S	02 41 52.2	+0.6
CACH	El Canelo	0.35	326	⇑iP	P	02 41 39.8	+0.2
CACH				i S	S	02 41 53.9	+1.0
CHCH	Chadas Angostu	0.54	333	⇓iP	P	02 41 40.6	0.0
CHCH				i S	S	02 41 54.6	-0.1
SFDO	San Fernando	0.57	249	⇓iP	P	02 41 41.1	+0.3
LMEL	Las Melosas	0.58	13	⇓iP	P	02 41 41.0	+0.1
LMEL				i S	S	02 41 55.8	+0.6
LMEL				AMP		02 42 05.8	
	comp=N,2µm,0.1s						
SJCH	San Jose de Ma	0.77	1	⇑iP	P	02 41 42.5	+0.2
SJCH				i S	S	02 41 58.1	+0.4
SJCH				AMP		02 41 58.8	
	comp=N,3µm,0.5s						
PCH	Pirque	0.80	351	⇑iP	P	02 41 42.9	+0.4
PCH				i S	S	02 41 58.3	+0.2
ANTU	Antumapu	0.87	345	⇑iP	P	02 41 43.6	+0.3
ANTU				i S	S	02 41 59.6	+0.3
ANTU				AMP		02 42 00.7	
	comp=E,4µm,0.2s						
TACH	Talagante	0.90	328	⇓iP	P	02 41 43.6	+0.1
TACH				i S	S	02 41 59.6	-0.1
NICH	Los Niches	0.93	230	⇑iP	P	02 41 44.0	+0.1
NICH				i S	S	02 42 00.6	+0.4
FSR	Penalolen	0.94	352	⇑iP	P	02 41 44.2	+0.3
FSR				i S	S	02 42 00.8	+0.4
FSR				AMP		02 42 01.9	
	comp=N,3µm,0.2s						
LNV	Longovilo	0.98	297	⇑iP	P	02 41 44.3	-0.1
LNV				i S	S	02 42 01.0	-0.1
STL	Santa Lucia	1.00	347	⇓iP	P	02 41 44.7	+0.1
STL				i S	S	02 42 01.5	0.0
STL				AMP		02 42 02.7	
	comp=E,1µm,0.2s						
PUEX	Pudahuel	1.02	341	⇓iP	P	02 41 46.0	+1.2
PUEX				i S	S	02 42 03.3	+1.4
PUEX				AMP		02 42 04.7	
	comp=E,5µm,0.5s						
CLCH	Cerro Calan	1.02	352	⇓iP	P	02 41 45.0	+0.2
CLCH				i S	S	02 42 02.5	+0.6
CLCH				AMP		02 42 03.9	
	comp=E,2µm,0.5s						
CLCH				AMP		02 42 04.5	
	comp=E,3µm,0.4s						
DSCH	Colegio Aleman	1.03	350	⇑iP	P	02 41 45.2	+0.4
DSCH				i S	S	02 42 02.2	+0.3
DSCH				AMP		02 42 04.5	
	comp=N,2µm,0.2s						
FCH	Farellones	1.08	3	⇓iP	P	02 41 45.8	+0.4
FCH				i S	S	02 42 04.2	+1.3
PEL	Peldehue	1.29	348	eP	P	02 41 47.7	0.0
PEL				i S	S	02 42 07.0	0.0
LLCH	Llolleo	1.31	307	⇑iP	P	02 41 46.7	-1.2
LLCH				i S	S	02 42 06.1	-1.5
LLCH				AMP		02 42 09.7	
	comp=N,2µm,0.7s						
LCCH	Las Cruces	1.37	313	⇓iP	P	02 41 48.4	-0.2
TALC	Talca	1.43	226	⇓iP	P	02 41 49.0	-0.3
TALC				i S	S	02 42 08.7	-1.3
ROCH	El Roble	1.54	339	⇑iP	P	02 41 50.8	+0.3
ROCH				i S	S	02 42 12.1	+0.1
JACH	Jahuel	1.74	354	⇑iP	P	02 41 53.0	+0.2
JACH				i S	S	02 42 16.5	+0.3
IHA	Instituto Hidr	1.75	322	⇑iP	P	02 41 53.2	+0.3
LNCH	Linares	1.75	215	⇑iP	P	02 41 53.1	+0.1
LNCH				AMP		02 42 19.1	
	comp=N,2µm,0.5s						
PACH	Papudo	2.08	334	eP	P	02 41 56.9	-0.1
PACH				i S	S	02 42 22.9	-0.6
CCHI	Chillan	2.59	212	⇓iP	P	02 42 03.0	-0.9
CCHI				i S	S	02 42 34.5	-1.0
CCHI				AMP		02 42 36.9	
	comp=N,288nm,0.4s						

*NEIC **05** 03:02:37.9±1.3, 6.66S×128.30E, h344^{km}±17^{km}, mb4.2/6, Error ellipse: s-maj=15.7km s-min=7.8km az=224.0*

*IDC **05** 03:02:38.7±2.2, 6.65S×128.37E, h351^{km}±24^{km}, mb3.5/4, mb1 3.7/8, mb1mx3.4/18, mbtmp4.4/8, Error ellipse: s-maj=27.2km s-min=12.6km az=67.0*

ISC 05 03:02:34.5±1.2**, 6.59S**±0.07×**128.3E**±0.1**, h321**^{km}±14^{km}**, n24, σ1**^{s}**25**/30**, mb4.1**/8**, 1C-3D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	7.31	147	⇓iP	P	03 04 21.9	+1.2
KAKA				eS	S	03 05 40.0	-4.1
FITZ	Fitzroy Crossi	11.74	193	P	P	03 05 16.1	+1.3
	0.4nm,0.3s,baz=9.3,slow=8.1,SNR=14						
FITZ				S	S	03 07 30.4	+9.0
	0.8nm,0.3s,baz=181,slow=7.4,SNR=1.9						
WRAB	Tennant Creek	14.49	157	eP	P	03 05 46.1	-1.5
	18nm,0.6s						
WRA	Warramunga Arr	14.50	157	P	P	03 05 46.6	-1.0
	3.2nm,0.3s,baz=338,slow=12,SNR=78						
WRA				S	S	03 08 20.3	-1.3
	0.3nm,0.3s,baz=346,slow=21,SNR=7.2						
WB2	Warramunga Arr	14.50	157	⇓iP	P	03 05 46.5	-1.2
WB2				eS	S	03 08 20.8	-0.8
MBWA	Marble Bar	16.71	209	⇑iP	P	03 06 10.7	-0.8
	11nm,0.6s						
KKM	Kota Kinabalu	17.43	316	P	P	03 06 20.2	+1.2
ASAR	Alice Springs	17.80	163	P	P	03 06 22.9	+0.2
	2.6nm,0.3s,baz=346,slow=12,SNR=229						
ASAR				S	S	03 09 28.2	+1.7

	0.3nm,0.3s,baz=345,slow=19,SNR=6.9						
ASAR				ScP		03 13 44.2	
	0.2nm,0.3s,baz=356,slow=2.0,SNR=9.7						
ASPA	**Alice Springs**	**17.80**	**163**	⇓iP	**P**	**03 06 22.7**	**0.0**
ASPA				eS	**S**	**03 09 28.0**	**+1.5**
PMG	**Port Moresby**	**18.85**	**100**	P	**P**	**03 06 34.9**	**+1.6**
	0.6nm,0.3s,baz=189,slow=8.4,SNR=3.9						
PMG	**Port Moresby**	**18.85**	**100**	eP	**P**	**03 06 35.1**	**+1.8**
	15nm,0.8s						
KSM	**Kuching**	**19.69**	**293**	eP	**P**	**03 06 44.3**	**+2.6**
CTA	**Charters Tower**	**21.97**	**129**	P	**P**	**03 07 05.2**	**+1.4**
	8.5nm,0.7s,mb4.1,baz=300,slow=14,SNR=6.5						
CTAO	**Charters Tower**	**21.97**	**129**	eP	**P**	**03 07 05.1**	**+1.4**
	9.2nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**28.04**	**155**	eP	**P**	**03 07 58.1**	**-1.1**
STKA	**Stephens Creek**	**28.04**	**155**	P	**P**	**03 07 57.8**	**-1.4**
	3.5nm,0.5s,mb3.9,baz=332,slow=7.5,SNR=13						
KULM	**Kulim**	**30.05**	**292**	eP	**P**	**03 08 17.7**	**+0.8**
GUN	**Gumba**	**53.44**	**312**	eP	**P**	**03 11 24.1**	**-0.3**
	12nm,0.4s,mb4.6						
PKI	**Pulchoki**	**53.61**	**311**	eP	**P**	**03 11 24.6**	**-1.0**
	9.0nm,0.5s,mb4.4						
GKN	**Gorkha**	**54.42**	**311**	eP	**P**	**03 11 30.4**	**-1.0**
	12nm,0.4s,mb4.6						
KOLN	**Koldanda**	**55.07**	**310**	eP	**P**	**03 11 33.6**	**-2.4**
	6.0nm,0.5s,mb4.2						
SONM	**Songino Array**	**57.54**	**343**	P	**P**	**03 11 52.6**	**-0.5**
	0.4nm,0.8s,mb2.8,baz=158,slow=7.8,SNR=3.6						
MKAR	**Makanchi Array**	**66.98**	**327**	P	**P**	**03 12 55.0**	**0.0**
	1.6nm,0.6s,mb3.9,baz=125,slow=8.0,SNR=20						
MKAR	**Makanchi Array**	**66.98**	**327**	P	**P**	**03 12 55.0**	**-0.1**

*IDC **05** 03:15:17.4±0.9,6.25N×72.41W,h162^{km}±14^{km},mb3.3/1, mb1 3.5/3,mb1mx3.1/23,mbtmp3.8/3,Error ellipse: s-maj=45.6km s-min=8.0km az=132.0*
*NEIC **05** 03:15:18.2±1.0,6.17N×72.31W,h169^{km}±10^{km},mb3.5/2, Error ellipse: s-maj=25.3km s-min=15.0km az=120.0*
*FUNV **05** 03:15:19.3,6.89N×73.08W,h171^{km},MW3.0*
ISC 05 03:15:17.8±1.2,**6.7N**±0.1×**72.9W**±0.1,**h165**^{km}±14^{km}**,n13, σ1^{s}25**/20**,mb3.5**/2**,2C,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.24**	**25**	⇑iP	**P**	**03 15 47.5**	**+1.2**
CAPV				eS	**S**	**03 16 08.6**	**+0.3**
ROSC	**El Rosal**	**2.38**	**218**	P	**P**	**03 15 59.3**	**+0.6**
	17nm,0.3s,baz=341,slow=3.0,SNR=81						
ROSC				S	**S**	**03 16 29.0**	**-1.2**
	9.4nm,0.3s,baz=84,slow=21,SNR=7.4						
VIGV	**El Vigia**	**2.55**	**35**	eP	**P**	**03 16 01.5**	**+0.7**
VIGV				eS	**S**	**03 16 32.1**	**-1.7**
SDV	**Santo Domingo**	**3.06**	**46**	P	**P**	**03 16 09.3**	**+2.2**
	11nm,0.3s,baz=255,slow=14,SNR=23						
SDV				S	**S**	**03 16 46.0**	**+1.0**
	7.4nm,0.3s,baz=65,slow=24,SNR=20						
SDV	**Santo Domingo**	**3.06**	**46**	eP	**P**	**03 16 08.7**	**+1.5**
SDV				S	**S**	**03 16 46.0**	**+1.0**
VIRV	**Villa del Rosa**	**3.76**	**7**	eP	**P**	**03 16 14.4**	**-1.8**
VIRV				eS	**S**	**03 16 55.0**	**-6.1**
QARV	**Quebrada Arrib**	**4.14**	**34**	eP	**P**	**03 16 21.2**	**+0.2**
QARV				eS	**S**	**03 17 06.5**	**-3.3**
TEPV	**Terepaima**	**4.83**	**48**	i P	**P**	**03 16 31.0**	**+1.0**
BAUV	**El Baul**	**5.24**	**65**	⇑iP	**P**	**03 16 35.5**	**+0.2**
BAUV				eS	**S**	**03 17 33.6**	**-1.9**
LPAZ	**La Paz**	**23.35**	**169**	P	**P**	**03 20 06.7**	**-5.7**
	1.5nm,0.5s,mb3.6,baz=338,slow=5.4,SNR=11						
LPAZ	**La Paz**	**23.35**	**169**	eP	**P**	**03 20 06.5**	**-5.9**
	1.6nm,0.6s,mb3.6						
ANMO	**Albuquerque**	**41.76**	**317**	eP	**P**	**03 22 57.9**	**+5.4**
	0.4nm,0.5s,mb3.3						
WRA	**Warramunga Arr**	**150.53**	**241**	PKPbc	PKPdf	03 34 50.8	+5.8
	0.3nm,0.8s,baz=114,slow=1.8,SNR=5.6						

JMA 05 03:16:35.8,37.55N×138.85E,h18^{km}±1^{km},M0.8,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIZZ	**Izumozaki**	**0.11**	**261**	P	Pb	03 16 39.5	-0.1
JHK	**Hiroka**	**0.33**	**156**	P	Pb	03 16 42.6	-0.3
JHK				S	Sb	03 16 47.6	0.0

*NIED **05** 03:17:00,37.60N×138.90E,h5^{km},Mw3.5 Best double couple: M$_0$2.18×10^{14} NP1:φ$_s$36°,δ49°,λ117°. NP2:φ$_s$177°, δ47°,λ62°.*
*IDC **05** 03:17:32.2±2.5,37.63N×138.75E,mb3.6/2,mb1 3.9/2, mb1mx3.3/23,mbtmp3.6/2,Error ellipse: s-maj=23.1km s-min=20.9km az=147.0*
*JMA **05** 03:17:34.6±0.1,37.57N×138.87E,h17^{km}±1^{km},M3.3 Broadband fault plane solution: P waves. NP1:φ$_s$154°, δ41°,λ12°. NP2:φ$_s$55°,δ82°,λ130°. Principal axes: T Plg39°, Azm1°; N Plg40°, Azm228°; P Plg26°, Azm114°;*
JMA Felt IV J1.
ISC 05 03:17:34.2±0.5**,37.55N**±0.03×**138.84E**±0.05**,h23**^{km}±5^{km}**, n11,**σ**0^{s}58**/19**,mb3.8**/2**,1C-5D,Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIZZ	**Izumozaki**	**0.11**	**259**	⇓P	**Pb**	**03 17 38.3**	**-0.3**
JIZZ				S	**Sb**	**03 17 41.7**	**0.0**
JHK	**Hiroka**	**0.33**	**155**	⇓P	**Pb**	**03 17 41.1**	**-0.5**
JHK				S	**Sb**	**03 17 46.1**	**-0.5**
JNS	**Sasagawa**	**0.46**	**55**	⇓P	**Pb**	**03 17 43.4**	**-0.3**
JNS				S	**Sb**	**03 17 49.9**	**-0.2**
JSD	**Sado**	**0.67**	**317**	⇓P	**Pb**	**03 17 46.7**	**-0.4**
JSD				S	**Sb**	**03 17 55.9**	**0.0**
JFY	**Yanaizu**	**0.70**	**102**	⇓P	**Pb**	**03 17 47.6**	**-0.1**
JFY				S	**Sb**	**03 17 56.8**	**-0.1**
JKT	**Katashina**	**0.85**	**157**	P	**Pb**	**03 17 50.6**	**+0.5**
JKT				S	**Sb**	**03 18 01.8**	**+0.7**
JAW	**Awa shima**	**0.96**	**19**	⇑P	**Pb**	**03 17 51.8**	**-0.2**
JAW				S	**Sb**	**03 18 05.6**	**+1.3**
MAT	**Matsushiro**	**1.13**	**207**	P	**Pn**	**03 17 55.0**	**+0.3**
MAT				S	**Sb**	**03 18 10.1**	**+0.9**
MJAR	**Matsushiro Arr**	**1.13**	**207**	Pg	**Pn**	**03 17 54.0**	**-0.7**
	43nm,0.3s,baz=18,slow=17,SNR=308						
MJAR				Lg		03 18 11.3	
	49nm,0.3s,baz=21,slow=31,SNR=24						
WRA	**Warramunga Arr**	**57.34**	**185**	P	**P**	**03 27 21.9**	**-1.1**
	0.8nm,0.5s,mb4.0,baz=0.6,slow=7.2,SNR=4.8						
ASAR	**Alice Springs**	**61.07**	**185**	P	**P**	**03 27 49.5**	**+0.8**
	0.3nm,0.7s,mb3.5,slow=6.3,SNR=3.2						

*MDD **05** 03:32:08.6±2.7,34.40N×3.94W,h28^{km}±10^{km},mb2.3/3, Error ellipse: s-maj=42.0km s-min=13.9km az=96.0, PRXIMO*
*CNRM **05** 03:32:08.5,34.35N×3.72W,h30^{km},MD3.2*
*CSEM **05** 03:32:10.2±0.9,34.14N×3.92W,h20^{km},MD3.2,Error ellipse: s-maj=18.7km s-min=13.3km az=40.0*
ISC 05 03:32:08.0±1.3**,34.44N**±0.03×**3.9W**±0.1**,h30**^{km}**,n9, **σ**0^{s}91**/18**,Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TZK	**Tazeka**	**0.40**	**210**	i P	**Pb**	**03 32 17.0**	**+0.1**
TZK				i S	**Sb**	**03 32 24.0**	**+1.1**
IFR	**Ifrane**	**1.34**	**227**	P	**Pn**	**03 32 35.0**	**+3.9**
IFR				S	**Sn**	**03 32 55.0**	**+6.9**
MIF	**Mishlifen**	**1.48**	**227**	eP	**Pn**	**03 32 32.0**	**-1.0**
MIF				i S	**Sn**	**03 32 52.0**	**+0.5**
CZD	**Col de Zad**	**1.67**	**214**	eP	**Pn**	**03 32 36.0**	**+0.2**
CZD				eS	**Sn**	**03 32 55.0**	**-1.4**
EMIJ	**Mijas**	**2.23**	**343**	Pn	**Pn**	**03 32 43.1**	**-0.7**
	0.0nm,0.4s,SNR=7.9						
EMIJ				Sn	**Sn**	**03 33 12.1**	**+1.5**
	4.1nm,0.7s,SNR=7.9						
ZFT	**Errachidia**	**2.42**	**188**	eP	**Pn**	**03 32 46.0**	**-0.5**
ZFT				eS	**Sn**	**03 33 10.0**	**-5.4**
KIB	**El Ksiba**	**2.55**	**224**	eP	**Pn**	**03 32 49.0**	**+0.7**
KIB				eS	**Sn**	**03 33 19.0**	**+0.3**
EMIN	**Mina Concepcio**	**3.99**	**327**	Pn	**Pn**	**03 33 08.2**	**-0.7**
	1.8nm,0.5s,SNR=7.9						
EMIN				Sn	**Sn**	**03 33 55.7**	**+0.5**
	1.8nm,0.6s,SNR=7.9						
EGRO	**El Granado**	**4.22**	**318**	Pn	**Pn**	**03 33 12.7**	**+0.6**
	0.1nm,0.4s,SNR=7.9						
EGRO				Sn	**Sn**	**03 33 59.3**	**-1.7**
	1.1nm,0.4s,SNR=7.9						

*TEH **05** 03:44:53.6,38.05N×43.04E,h10^{km},Mn4.0*
*BJI **05** 03:44:57.1,37.50N×43.80E,h10^{km},mB4.7,mb4.7,Ms4.1, Msz4.2*
*IDC **05** 03:44:57.9±0.9,37.69N×43.80E,mb4.0/11,mb1 4.1/17, mb1mx4.0/29,mbtmp4.0/17,ML3.8/5,MS3.7/16,Ms1 3.7/16, ms1mx3.5/34,Error ellipse: s-maj=16.4km s-min=10.8km az=141.0*
*MOS **05** 03:44:58.4±1.4,37.69N×43.87E,h10^{km},mb4.5/23,Error ellipse: s-maj=8.4km s-min=4.4km az=119.3*
*NEIC **05** 03:44:59.1±0.4,37.52N×43.82E,h10^{km},mb4.6/20, MS3.7/1,ML4.7(ISK),Error ellipse: s-maj=8.6km s-min=4.7km az=183.0*
NEIC Felt at Hakkari, Turkey.
*ZUR_RM **05** 03:44:59,37.52N×43.82E,h24^{km},Mw4.7/13,Moment Tensor Solution. s13 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.30; M$_{\theta\theta}$-1.39; M$_{\phi\phi}$1.09; M$_{r\theta}$-0.17; M$_{\theta\phi}$-0.57; M$_{\phi r}$-0.09; Best double couple: M$_0$1.38×10^{16} NP1:φ$_s$33°,δ88°,λ-7°. NP2:φ$_s$123°,δ83°,λ-178°. Principal axes: T 1.216, Plg4°, Azm78°; N .318, Plg83°, Azm200°; P -1.534, Plg6°, Azm348°;*
*CSEM **05** 03:45:15.1,38.08N×42.19E,h33^{km},mb4.5*
*ISK **05** 03:45:54.0,37.53N×43.88E,h5^{km},MD4.6*
ISC 05 03:44:58.0±1.0**,37.54N**±0.02×**43.86E**±0.03**,h13**^{km}±6^{km}**, h15**^{km}±1.3^{km}**:pP-P,n221,**σ**1^{s}34**/215**,mb4.4**/42**,MS3.8**/25**, 22C-12D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANT	**Van**	**0.97**	**338**	PG	Px	03 46 13.6	
VANT				SG	Sx	03 46 30.0	
VANB	**Van**	**1.11**	**341**	Pg	**Pn**	**03 45 11.4**	**-7.9**
MSL	**Mosul**	**1.39**	**206**	ePb	Px	03 45 35.5	
MSL				i Pg	Px	03 45 37.0	
MSL				i Sn	Sx	03 45 55.0	
MSL				i Sg	Sx	03 45 56.8	
CLDR	**Caldiran**	**1.60**	**2**	PN	Px	03 46 24.8	
CLDR				SN	Sx	03 46 47.1	
CLDR	**Caldiran**	**1.60**	**2**	Pg	**Pn**	**03 45 23.9**	**-2.3**
IMRD	**Marand**	**1.87**	**51**	Pn	**Pn**	**03 45 29.9**	**-0.1**
BTMT	**Batman**	**1.98**	**290**	PN	Px	03 46 32.2	
VRNZ	**Vardanashen**	**2.52**	**6**	⇑iP	**Pn**	**03 45 41.6**	**+2.3**
VNNZ	**Vanand**	**2.56**	**359**	⇓eP	**Pn**	**03 45 41.8**	**+1.9**
PAAR	**P’arak’ar**	**2.65**	**9**	⇓eP	**Pn**	**03 45 42.6**	**+1.3**
GNI	**Garni**	**2.69**	**15**	ePN	Px	03 46 40.9	
GNI	**Garni**	**2.69**	**15**	Pn	**Pn**	**03 45 43.1**	**+1.2**
	11nm,0.3s,baz=272,slow=1.8,SNR=29						
GNI				Lg		03 46 18.6	
	22nm,0.3s,baz=2.2,slow=21,SNR=7.0						
GNI	**Garni**	**2.69**	**15**	ePn	**Pn**	**03 45 42.5**	**+0.7**
GNI				eS	**Sn**	**03 46 20.8**	**+6.2**
GNI	**Garni**	**2.69**	**15**	eP	**Pn**	**03 45 42.5**	**+0.7**
ARUZ	**Aruch**	**2.74**	**4**	⇓iP	**Pn**	**03 45 44.0**	**+1.4**
AMBZ	**Amberd**	**2.86**	**6**	⇑iP	**Pn**	**03 45 45.5**	**+1.3**
DIY	**Diyarbakir**	**2.90**	**278**	ePN	Px	03 46 44.1	
DIY	**Diyarbakir**	**2.90**	**278**	Pn	**Pn**	**03 45 44.9**	**+0.1**
DIY	**Diyarbakir**	**2.90**	**278**	Pn	**Pn**	**03 45 44.9**	**+0.1**
BINT	**Bingol**	**2.97**	**298**	ePN	Px	03 46 44.0	
BINT	**Bingol**	**2.97**	**298**	P	**Pn**	**03 45 43.1**	**-2.7**
EZM	**Erzurum**	**3.06**	**321**	ePN	Px	03 46 45.0	
EZM	**Erzurum**	**3.06**	**321**	Pn	**Pn**	**03 45 41.8**	**-5.3**
IDHR	**Dehrash**	**3.50**	**143**	Pn	**Pn**	**03 45 58.3**	**+5.0**
URFA	**Urfa**	**4.01**	**270**	ePN	Px	03 46 59.8	
DGRG	**David-gareji**	**4.08**	**16**	P	**Pn**	**03 46 02.4**	**+0.9**
DGRG				S	**Sg**	**03 47 11.5**	**-2.2**
MTA	**Mtatsminda**	**4.21**	**10**	P	**Pn**	**03 46 04.0**	**+0.6**
MTA				S	**Sg**	**03 47 13.6**	**-4.6**
TBLG	**Delisi**	**4.24**	**9**	P	**Pn**	**03 46 04.6**	**+0.8**
TI2	**Plekhanov**	**4.24**	**9**	eP	**Pn**	**03 46 00.0**	**-3.9**
TI2				pmax	pmax		
	comp=Z,30nm,1.0s						
TI2				pmax	pmax		
	comp=E,550nm,1.5s						
TI2	**Plekhanov**	**4.24**	**9**	eP	**Pn**	**03 46 00.0**	**-3.9**
	comp=E,30nm,1.0s						
BHD	**Baghdad**	**4.28**	**174**	ePn	Px	03 46 07.5	
BHD				ePb	Px	03 46 15.5	
BHD				i Pg	Px	03 46 24.5	
BHD				i Sn	x	03 46 59.0	
BHD				i Lg	x	03 47 14.0	
BHD				i Sg	x	03 47 17.5	
MYA	**Malataya**	**4.37**	**282**	PN	Px	03 47 03.9	
MYA	**Malataya**	**4.37**	**282**	P	**Pn**	**03 46 04.8**	**-0.8**
GUMT	**Gumushane**	**4.49**	**312**	Pn	**Pn**	**03 46 02.6**	**-4.8**
GUMT	**Gumushane**	**4.49**	**312**	Pn	**Pn**	**03 46 02.6**	**-4.7**
ONI	**Oni**	**5.04**	**357**	P	**Pn**	**03 46 20.1**	**+4.9**
ONI				S	**Sg**	**03 47 28.7**	**-17**
IGZV	**Gazvin**	**5.22**	**101**	Pn	**Pn**	**03 46 21.9**	**+4.2**
ZEI	**Tsey**	**5.22**	**0**	eP	**Pn**	**03 46 14.8**	**-2.9**
ZEI				e		03 47 16.2	
ZEI				pmax	pmax		
	comp=Z,13nm,0.1s						
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.1s						
ZEI				smax			
	comp=E,23nm,0.1s						
ZEI	**Tsey**	**5.22**	**0**	eP	**Pn**	**03 46 14.8**	**-2.9**
	comp=E,10.0nm,0.1s						
ZEI				eS	**Sn**	**03 47 16.2**	**-2.3**
IRAZ	**Razeghan**	**5.34**	**112**	Pn	**Pn**	**03 46 27.4**	**+8.1**
KIV	**Kislovodsk**	**6.47**	**352**	eP	**Pn**	**03 46 34.5**	**-0.8**
KIV				pmax	pmax		
	comp=Z,53nm,1.1s						
KIV	**Kislovodsk**	**6.47**	**352**	ePn	**Pn**	**03 46 34.5**	**-0.8**
	comp=Z,53nm,1.1s						
KIV	**Kislovodsk**	**6.47**	**352**	eP	**Pn**	**03 46 34.5**	**-0.8**
	comp=Z,53nm,1.1s						
SOC	**Sochi**	**6.81**	**334**	c iP	**Pn**	**03 46 40.2**	**+0.1**
SOC				e		03 47 53.2	
SOC				pmax	pmax		
	comp=Z,36nm,0.9s						
SOC				pmax	pmax		
	comp=N,91nm,1.4s						
SOC				pmax	pmax		
	comp=E,22nm,0.8s						
SOC				MLR	MLR		
	comp=N,759nm,14.0s						
SOC				MLR	MLR		
	comp=E,355nm,14.0s						
SOC				MLR	MLR		
	comp=Z,432nm,14.0s						
SOC	**Sochi**	**6.81**	**334**	i P	**Pn**	**03 46 40.2**	**+0.1**
	comp=Z,91nm,1.4s						
IVRN	**Varamin**	**6.84**	**109**	Pn	**Pn**	**03 46 43.8**	**+3.2**
IVRN	**Varamin**	**6.84**	**109**	Lg		03 48 51.2	
IDMV	**Damavand**	**6.86**	**104**	Pn	**Pn**	**03 46 43.8**	**+2.9**
IFIR	**Firoozkooh**	**7.40**	**102**	Pn	**Pn**	**03 46 53.3**	**+4.9**
GOF	**Gofitskoye**	**7.54**	**356**	⇓iP	**Pn**	**03 46 52.5**	**+2.2**
GOF				pmax	pmax		
	comp=Z,70nm,1.3s						
GOF	**Gofitskoye**	**7.54**	**356**	i P	**Pn**	**03 46 52.5**	**+2.2**
	comp=Z,70nm,1.3s						
ASF	**Jabal al Asfar**	**7.84**	**229**	Pn	**Pn**	**03 46 55.6**	**+1.1**
	comp=Z,2.2nm,0.3s,baz=239,slow=3.7,SNR=12						
ASF				Pg	**Pg**	**03 47 20.4**	**-14**
	comp=Z,1.5nm,0.3s,baz=281,slow=14,SNR=5.2						
ASF				Lg		03 49 05.5	
	comp=Z,1.2nm,0.3s,baz=50,slow=14,SNR=3.1						
BRTR	**Keskin Array B**	**8.29**	**288**	Pn	**P**	**03 46 59.9**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=110,slow=12,SNR=15						
BRTR				Pg	P	03 47 38.0	+37
	comp=Z,0.2nm,0.3s,baz=114,slow=15,SNR=10.0						
BRTR				Lg		03 49 19.5	
	comp=Z,0.0nm,0.3s,baz=133,slow=22,SNR=2.1						
BRTR	**Keskin Array B**	**8.29**	**288**	Pn	**P**	**03 46 59.8**	**-1.0**
UMR	**Umm Al-Rimmam**	**8.59**	**157**	eP	**P**	**03 47 05.4**	**+0.4**
ANN	**Anapa**	**8.72**	**328**	eP	**P**	**03 47 04.4**	**-2.4**
ANN				eS	**Sn**	**03 48 41.2**	**-4.7**
ANN				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ANN				MLR	MLR		
	comp=N,218nm,12.0s						
ANN				MLR	MLR		
	comp=E,335nm,12.0s						
ANN				MLR	MLR		
	comp=Z,263nm,12.0s						
ANN	**Anapa**	**8.72**	**328**	eP	**P**	**03 47 04.4**	**-2.4**
	comp=Z,8.0nm,0.3s						
NAY	**Al-Naaiem**	**8.74**	**160**	eP	**P**	**03 47 06.3**	**-0.8**
KBD	**Kabd**	**8.94**	**158**	eP	**P**	**03 47 10.3**	**+0.5**
KBD				eS	**Sn**	**03 48 50.5**	**-0.8**
RDF	**Al-Radifah**	**9.13**	**159**	eP	**P**	**03 47 12.9**	**+0.4**
RDF				eS	**Sn**	**03 48 55.1**	**-1.0**
HILS	**Ha’il**	**10.28**	**190**	P	**P**	**03 47 26.8**	**-1.5**
EIL	**Elat**	**10.80**	**226**	Pn	**P**	**03 47 36.7**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=115,slow=26,SNR=2.0						
EIL				Pg	P	03 48 16.8	+41
	comp=Z,0.7nm,0.3s,baz=29,slow=24,SNR=5.0						
EIL				Lg		03 50 41.1	
	comp=Z,0.6nm,0.3s,baz=80,slow=36,SNR=3.3						
EIL	**Elat**	**10.80**	**226**	Pn	**P**	**03 47 36.7**	**+1.3**
EIL				Pg	P	03 48 16.8	+41
EIL				Lg		03 50 41.1	
MANT	**Manisa**	**12.11**	**279**	i P	Px	03 48 14.3	
MANT				i S	Sx	03 48 33.7	
KBRS	**Khaybar**	**12.35**	**200**	P	**P**	**03 47 58.5**	**+2.0**
HASS	**Wahat al Ahsa’**	**13.28**	**156**	P	**P**	**03 48 07.8**	**-1.0**
MZLS	**Mizel**	**13.52**	**175**	P	**P**	**03 48 08.8**	**-3.2**
AFFS	**‘Afif**	**13.59**	**183**	P	**P**	**03 48 10.1**	**-2.9**
CFR	**Carcaliu**	**14.04**	**308**	⇑iP	**P**	**03 48 25.6**	**+6.8**
CFR	**Carcaliu**	**14.04**	**308**	⇑iP	**P**	**03 48 25.5**	**+6.7**
VRSR	**Storozhevoye**	**14.07**	**348**	eP	**P**	**03 48 17.7**	**-1.3**
VRSR				pmax	pmax		
	comp=Z,20nm,1.6s						
VRSR				pmax	pmax		
	comp=N,40nm,1.4s						
VRSR				pmax	pmax		
	comp=E,20nm,0.9s						
VRSR	**Storozhevoye**	**14.07**	**348**	eP	**P**	**03 48 17.7**	**-1.3**
	comp=E,40nm,1.4s						
VOR	**Voronezh**	**14.56**	**348**	eP	**P**	**03 48 25.0**	**-0.6**
VOR				pmax	pmax		
	comp=N,100nm,1.3s						
VOR				pmax	pmax		
	comp=Z,40nm,1.3s						
VOR				pmax	pmax		
	comp=E,100nm,1.2s						
KIS	**Kishinev**	**14.58**	**315**	eP	**P**	**03 48 30.0**	**+4.2**
KIS				MLR	MLR		
	comp=Z,400nm,13.0s						
KIS				MLR	MLR		
	comp=Z,500nm,12.0s						
VRI	**Vrincioaia**	**15.24**	**308**	⇑iP	**P**	**03 48 39.5**	**+5.1**
IDI	**Anoyia**	**15.44**	**267**	Pn	**P**	**03 48 41.0**	**+3.9**
	comp=Z,0.8nm,0.3s,baz=48,slow=13,SNR=8.0						
MLR	**Muntele Rosu**	**15.57**	**306**	Pn	**P**	**03 48 39.5**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=166,slow=6.2,SNR=3.8						
MLR				LR	LR	03 55 15.6	
	comp=Z,261nm,21.0s,baz=300,slow=40						
MLR	**Muntele Rosu**	**15.57**	**306**	Pn	**P**	**03 48 39.5**	**+0.7**
MLR				⇑iP		03 48 45.8	
MLR				LR	LR	03 55 15.6	
MLR	**Muntele Rosu**	**15.57**	**306**	⇑iP	**P**	**03 48 45.8**	**+7.1**
BANOM	**Banah**	**15.67**	**134**	P	**P**	**03 48 38.7**	**-1.4**
	SNR=9.8						
VOIR		**16.13**	**305**	⇑iP	**P**	**03 48 51.1**	**+5.2**
ASHO	**Ashiyiah**	**16.51**	**137**	P	**P**	**03 48 49.5**	**-1.5**
	SNR=23						
AKASG	**Malin Array Be**	**16.79**	**326**	Pn	**P**	**03 48 52.2**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=135,slow=12,SNR=14						
SKO	**Skopje**	**17.78**	**291**	eP	**P**	**03 49 08.5**	**+1.7**
TATS	**Tathlith**	**17.94**	**181**	P	**P**	**03 49 11.8**	**+3.0**
OBN	**Obninsk**	**18.26**	**347**	⇓iP	**P**	**03 49 10.4**	**-2.3**
OBN				eS	**S**	**03 52 35.9**	**+2.6**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,400nm,21.0s						
OBN	**Obninsk**	**18.26**	**347**	i P	**P**	**03 49 10.5**	**-2.2**
OBN	**Obninsk**	**18.26**	**347**	i P	**P**	**03 49 10.4**	**-2.3**
	comp=Z,7.0nm,0.5s						
BIDO	**Bidbid**	**18.58**	**135**	P	**P**	**03 49 17.2**	**+0.5**
	SNR=8.4						
BSY	**Bisya**	**18.69**	**138**	P	**P**	**03 49 17.9**	**-0.3**
	SNR=16						
BSYO	**Bisya**	**18.73**	**138**	P	**P**	**03 49 17.9**	**-0.6**
	SNR=16						
LVV	**L’vov**	**18.80**	**317**	eP	**P**	**03 49 22.9**	**+3.6**
SMDO	**Samad**	**18.90**	**136**	P	**P**	**03 49 20.2**	**-0.4**
	SNR=17						
DIVS	**Divcibare**	**19.18**	**297**	⇓iP	**P**	**03 49 23.8**	**0.0**
KOLS	**Kolonicke sedl**	**19.34**	**313**	eP	**P**	**03 49 26.6**	**+0.9**
KOLS				e		03 49 53.0	
KWP	**Kalwaria**	**19.43**	**315**	eP	**P**	**03 49 26.5**	**-0.2**
JMDO	**Jabal Madar**	**19.48**	**137**	P	**P**	**03 49 28.0**	**+0.5**
	SNR=7.6						
KECS	**Kecovo**	**20.21**	**310**	ePN	**P**	**03 49 37.7**	**+2.5**
KECS				e		03 49 51.8	
PSZ	**Piszkesteto**	**20.35**	**308**	P	**P**	**03 49 36.4**	**-0.3**
PSZ				pmax	pmax		
	comp=Z,1.0nm,1.3s						
PSZ	**Piszkesteto**	**20.35**	**308**	P	**P**	**03 49 36.4**	**-0.3**
	comp=Z,0.8nm,1.3s						
PKSM	**Moragy**	**20.61**	**303**	P	**P**	**03 49 38.7**	**-0.7**
NIE	**Niedzica**	**20.71**	**312**	eP	**P**	**03 49 39.9**	**-0.5**
VYHS	**Vyhne**	**21.22**	**309**	eP	**P**	**03 49 45.4**	**-0.3**
SRO2	**Moca**	**21.24**	**307**	eP	**P**	**03 49 47.9**	**+2.0**
TIP	**Timpagrande**	**21.29**	**283**	eP	**P**	**03 49 44.8**	**-1.6**
TIP	**Timpagrande**	**21.29**	**283**	eP	**P**	**03 49 44.8**	**-1.6**
ARU	**Arti**	**21.31**	**23**	eP	**P**	**03 49 45.4**	**-1.1**
ARU				e		03 50 06.6	
ARU				eS	**S**	**03 53 39.1**	**+1.3**
ARU				MLR	MLR		
	comp=Z,200nm,16.0s,MS3.6						
ARU				MLR	MLR		
	comp=N,30nm,18.0s,MS3.6						
ARU				MLR	MLR		
	comp=E,200nm,16.0s,MS3.6						
ARU	**Arti**	**21.31**	**23**	eP	**P**	**03 49 44.7**	**-1.8**
	comp=E,13nm,0.7s,mb4.4						
ARU				eS	**S**	**03 53 39.1**	**+1.3**
	comp=E,30nm,18.0s						
OJC	**Ojcow**	**21.37**	**314**	eP	**P**	**03 49 45.5**	**-1.6**
WHFO	**Wadi Hawf**	**21.40**	**153**	P	**P**	**03 49 47.6**	**-0.1**
	SNR=26						
ABTO	**Aybut**	**21.76**	**155**	P	**P**	**03 49 52.3**	**+1.0**
	SNR=13						
SUW	**Suwalki**	**21.76**	**326**	eP	**P**	**03 49 50.3**	**-0.8**
RBK	**Rabkut**	**21.94**	**153**	P	**P**	**03 49 54.0**	**+0.9**
	SNR=19						
SMOL	**Smolenice**	**22.11**	**308**	eP	**P**	**03 49 54.7**	**+0.2**
OKC	**Ostrava-Krasne**	**22.16**	**312**	eP	**P**	**03 49 54.7**	**-0.4**
OKC				AMS	AMS	04 00 40.0	
	comp=E,200nm,17.5s						
ZST	**Bratislava**	**22.20**	**307**	eP	**P**	**03 49 57.5**	**+2.0**
KOGS	**Kog**	**22.27**	**302**	eP	**P**	**03 49 57.1**	**+0.9**
SVE	**Sverdlovsk**	**22.30**	**25**	eP	**P**	**03 50 00.0**	**+3.6**
SVE				eS	**S**	**03 54 03.0**	**+6.8**
SVE				eSS	SS	03 54 38.0	+1.4
SVE				pmax	pmax		
	comp=Z,40nm,2.0s,mb4.5						
SVE				MLR	MLR		
	comp=N,100nm,12.0s,MS3.6						
SVE				MLR	MLR		
	comp=E,100nm,12.0s,MS3.6						
SVE				MLR	MLR		
	comp=Z,200nm,12.0s,MS3.8						
MORC	**Moravsky Berou**	**22.50**	**311**	eP	**P**	**03 49 57.2**	**-1.2**
MORC				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.2						
MORC	**Moravsky Berou**	**22.50**	**311**	eP	**P**	**03 49 57.2**	**-1.2**
	comp=Z,17nm,1.5s,mb4.2						
MORC	**Moravsky Berou**	**22.50**	**311**	eP	**P**	**03 49 57.2**	**-1.2**
	comp=Z,17nm,1.5s,mb4.2						
BOJS	**Bojanci**	**22.76**	**299**	eP	**P**	**03 49 59.9**	**-1.1**
VRAC	**Vranov**	**22.90**	**310**	P	**P**	**03 50 02.0**	**-0.3**
VRAC				pmax	pmax		
	comp=Z,3.0nm,0.3s						
VRAC	**Vranov**	**22.90**	**310**	P	**P**	**03 50 02.0**	**-0.3**
	comp=Z,2.5nm,0.3s,mb4.1,baz=117,slow=11,SNR=5.7						
KRUC	**Moravsky**	**22.93**	**309**	P	**P**	**03 50 03.8**	**+1.1**
ARSA	**Arzberg**	**22.95**	**304**	⇑iP	**P**	**03 50 04.4**	**+1.5**
	comp=Z,6.5nm,0.9s,mb4.1						
CII	**Carovilli**	**23.09**	**290**	eP	**P**	**03 50 03.0**	**-1.2**
	comp=Z,34nm,1.4s,mb4.6						
CII	**Carovilli**	**23.09**	**290**	eP	**P**	**03 50 03.0**	**-1.2**
	comp=Z,34nm,1.4s,mb4.6						
VISS	**Visnje**	**23.10**	**300**	eP	**P**	**03 50 05.2**	**+0.9**
VAE	**Valguarnera**	**23.32**	**279**	P	**P**	**03 50 07.9**	**+1.4**
	comp=Z,1.7nm,0.3s,mb4.0,baz=92,slow=9.1,SNR=3.2						
VAE				LR	LR	03 59 39.3	
	comp=Z,163nm,19.7s,MS3.5,baz=349,slow=38						
LJU	**Ljubljana**	**23.36**	**301**	eP	**P**	**03 50 09.1**	**+2.3**
DPC	**Dobruska-Polom**	**23.45**	**312**	P	**P**	**03 50 09.1**	**+1.5**

DPC	Dobruska-Polom	23.45	312	eP	P	03 50 07.8	+0.2
DPC				AMS	AMS	04 01 30.0	
	comp=Z,300nm,13.2s						
SOKR	Solikamsk	23.56	17	eP	P	03 50 07.4	-1.2
SOKR				i S	S	03 53 53.4	-25
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
SOKR				MLR	MLR		
	comp=Z,150nm,19.0s,MS3.5						
SOKR	Solikamsk	23.56	17	eP	P	03 50 07.4	-1.2
	comp=Z,10.0nm,0.9s,mb4.2						
SOKR	Solikamsk	23.56	17	i PcP	PcP	03 53 53.4	-2.2
	comp=Z,150nm,19.0s						
KSP	Ksiaz	23.66	313	eP	P	03 50 09.1	-0.5
UPC	Upice	23.69	312	eP	P	03 50 11.1	+1.1
VSU	Vasula	23.73	337	i P	P	03 50 10.1	-0.2
AAK	Ala-Archa	23.91	68	eP	P	03 50 13.3	+1.1
AAK				pmax	pmax		
	comp=Z,23nm,1.7s,mb4.3						
AAK	Ala-Archa	23.91	68	eP	P	03 50 13.3	+1.1
	comp=Z,23nm,1.7s,mb4.3						
AAK	Ala-Archa	23.91	68	eP	P	03 50 13.3	+1.1
	comp=Z,23nm,1.7s,mb4.3						
MOA	Molln	23.93	305	⇓iP	P	03 50 12.7	+0.4
	comp=Z,23nm,1.5s,mb4.4						
FRU	Bishkek	24.01	68	eP	P	03 50 16.0	+2.9
BVAR	Borovoye Array	24.06	41	P	P	03 50 15.1	+1.5
	comp=Z,2.2nm,0.6s,mb3.8,baz=260,slow=9.0,SNR=9.1						
GKP	Gorka Klasztor	24.23	319	eP	P	03 50 17.6	+2.4
KBA	Koelnbreinsper	24.36	303	⇑iP	P	03 50 18.0	+1.4
	comp=Z,14nm,0.8s,mb4.4						
KBA	Koelnbreinsper	24.36	303	⇑iP	P	03 50 18.0	+1.4
KBA				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
PRU	Pruhonice	24.38	310	eP	P	03 50 18.1	+1.3
PRU				AMS	AMS	04 01 30.0	
	comp=Z,200nm,17.1s						
CHKZ	Chkalovo	24.50	40	eP	P	03 50 17.6	-0.2
CHKZ				pmax	pmax		
	comp=Z,41nm,0.6s,mb5.0						
CHKZ	Chkalovo	24.50	40	eP	P	03 50 17.6	-0.2
	comp=Z,42nm,0.6s,mb5.0						
CHKZ	Chkalovo	24.50	40	eP	P	03 50 17.6	-0.2
	comp=Z,42nm,0.6s,mb5.0						
PVCC	Panska Ves	24.55	311	eP	P	03 50 19.3	+0.9
PVCC				AMS	AMS	04 02 00.0	
	comp=Z,300nm,13.2s						
GERES	GERESS Array B	24.56	307	P	P	03 50 17.7	-0.7
GERES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GERES				MLR	MLR		
	comp=Z,162nm,19.2s						
GERES	GERESS Array B	24.56	307	P	P	03 50 17.7	-0.8
	comp=Z,5.1nm,0.9s,mb4.0,baz=108,slow=8.2,SNR=25						
GERES				LR	LR	04 01 16.0	
	comp=Z,162nm,19.2s,MS3.5,baz=277,slow=40						
KHC	Kasperske Hory	24.71	308	⇓eP	P	03 50 20.8	+0.8
KHC	Kasperske Hory	24.71	308	P	P	03 50 21.2	+1.2
KHC	Kasperske Hory	24.71	308	eP	P	03 50 20.5	+0.5
KHC				AMS	AMS	04 00 50.0	
	comp=Z,200nm,17.6s						
BRG	Berggiesshubel	25.05	312	eP	P	03 50 22.7	-0.4
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.1						
BRG	Berggiesshubel	25.05	312	eP	P	03 50 22.7	-0.4
KSH	Kashi	25.13	76	eP	P	03 50 26.3	+2.2
KSH				eAP	pP	03 50 30.1	+2.2
KSH				eXP	sP	03 50 33.1	+3.4
KSH				ePP	PP	03 51 05.1	+3.0
KSH				ePCP	PcP	03 53 57.2	-1.9
KSH				eS	S	03 54 50.7	+5.1
KSH				eXS		03 54 58.6	
WTTA	Wattenberg	25.54	303	⇑iP	P	03 50 27.1	-0.7
	comp=Z,19nm,1.3s,mb4.5						
WTTA	Wattenberg	25.54	303	⇑iP	P	03 50 27.1	-0.7
WTTA				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.5						
WATA	Walderalm	25.59	303	⇑iP	P	03 50 27.7	-0.6
	comp=Z,16nm,1.2s,mb4.4						
WATA	Walderalm	25.59	303	⇑iP	P	03 50 27.7	-0.6
WATA				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.4						
NKC	Novy Kostel	25.74	310	eP	P	03 50 26.5	-3.1
NKC				AMS	AMS	04 02 20.0	
	comp=Z,300nm,14.4s						
NKC	Novy Kostel	25.74	310	P	P	03 50 31.6	+2.0
CLL	Collm	25.75	312	⇑iP	P	03 50 29.0	-0.8
CLL				e	pP	03 50 34.0	+0.4
CLL				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.1						
CLL	Collm	25.75	312	⇑iP	P	03 50 29.0	-0.8
	comp=Z,7.0nm,1.2s,mb4.1						
CLL				e	pP	03 50 34.0	+0.4
CLL	Collm	25.75	312	⇑P	P	03 50 29.0	-0.8
	comp=Z,logA/T=0.8,mb4.1						
CLL				e*SP	sP	03 50 34.0	-1.4
CLL				e		03 51 23.0	
SQTA	Sankt Quirin	25.82	302	⇑iP	P	03 50 29.7	-0.7
	comp=Z,20nm,1.4s,mb4.5						
SQTA	Sankt Quirin	25.82	302	⇑iP	P	03 50 29.7	-0.7
SQTA				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.5						
MOTA	Moosalm	25.91	303	⇓iP	P	03 50 30.9	-0.4
	comp=Z,21nm,1.3s,mb4.5						
MOTA	Moosalm	25.91	303	⇓iP	P	03 50 30.9	-0.4
MOTA				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.5						
FUR	Furstenfeldbru	25.96	305	P	P	03 50 33.6	+1.9
GRA1	Grafenberg Arr	26.35	308	eP	P	03 50 33.9	-1.4
	comp=Z,21nm,1.4s,mb4.5						
GRF	Grafenberg Arr	26.35	308	eP	P	03 50 33.9	-1.4
GRF				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.5						
MOX	Moxa	26.37	310	eP	P	03 50 39.7	+4.2
MOX				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.2						
MOX				MLR	MLR		
	comp=Z,200nm,20.0s,MS3.7						
MOX	Moxa	26.37	310	eP	P	03 50 39.7	+4.2
	comp=Z,14nm,1.6s,mb4.2						
MOX				LR	LR		
	comp=Z,200nm,20.0s,MS3.7						
MOX	Moxa	26.37	310	i P	P	03 50 39.7	+4.2
	comp=Z,logA/T=0.9,mb4.2						
MOX				L		04 02 50.0	
FINES	FINESS Array B	26.39	341	P	P	03 50 33.8	-1.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,134nm,20.9s						
FINES	FINESS Array B	26.39	341	P	P	03 50 33.8	-1.7
	comp=Z,1.7nm,0.7s,mb3.7,baz=158,slow=9.8,SNR=6.5						
FINES				LR	LR	04 01 52.8	
	comp=Z,134nm,20.9s,MS3.5,baz=360,slow=39						
DAVOX	Davos	26.65	301	P	P	03 50 37.1	-0.9
	comp=Z,2.7nm,0.6s,mb4.0,baz=107,slow=6.0,SNR=5.3						
DAVOX				LR	LR	04 03 14.2	
	comp=Z,122nm,18.8s,MS3.5,baz=266,slow=41						
DAVA	Damuels	26.72	302	⇓iP	P	03 50 38.4	-0.4
	comp=Z,19nm,1.4s,mb4.4						
HFS	Hagfors	29.63	329	P	P	03 51 02.8	-2.1
HFS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HFS				MLR	MLR		
	comp=Z,82nm,21.7s						
HFS	Hagfors	29.63	329	P	P	03 51 02.8	-2.1
	comp=Z,3.1nm,0.8s,mb4.1,baz=130,slow=11,SNR=5.8						
HFS				LR	LR	04 03 29.9	
	comp=Z,82nm,21.7s,MS3.3,baz=315,slow=38						
MKAR	Makanchi Array	29.69	60	P	P	03 51 05.8	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	29.69	60	P	P	03 51 05.8	+0.2
	comp=Z,0.9nm,0.6s,mb3.7,baz=265,slow=6.4,SNR=10.0						
MKAR	Makanchi Array	29.69	60	P	P	03 51 05.8	+0.2
NOA	NORSAR Array B	31.15	330	LR	LR	04 06 30.1	
	comp=Z,56nm,19.0s,MS3.2,baz=125,slow=42						
NVS	Novosibirsk	31.75	44	eP	P	03 51 22.8	-0.9
NVS				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.2						
NVS				pmax	pmax		
	comp=E,5.0nm,1.2s						
NVS	Novosibirsk	31.75	44	eP	P	03 51 22.8	-0.9
	comp=E,7.0nm,1.6s,mb4.2						
WMQ	Urumqi	33.52	65	eP	P	03 51 37.9	-1.3
WMQ				AP	pP	03 51 42.9	-0.3
WMQ				XP	sP	03 51 44.9	0.0
WMQ				PP	PP	03 52 50.4	-1.2
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
WMQ				LR	LR		
	comp=N,70nm,24.0s						
WMQ				LR	LR		
	comp=Z,40nm,21.6s,MS3.1						
KOLN	Koldanda	34.63	95	eP	P	03 51 49.1	+0.1
	comp=Z,18nm,1.2s,mb4.9						
GKN	Gorkha	35.35	93	eP	P	03 51 55.9	+0.8
	comp=Z,21nm,0.9s,mb5.1						
DMN	Daman	35.90	94	eP	P	03 52 00.8	+1.0
PKI	Pulchoki	36.16	94	eP	P	03 52 03.2	+1.3
	comp=Z,14nm,0.6s,mb5.1						
PKI	Pulchoki	36.16	94	eP	P	03 52 03.2	+1.3
PKI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
GUN	Gumba	36.38	93	eP	P	03 52 04.9	+1.1
	comp=Z,26nm,0.7s,mb5.3						
ESDC	Sonseca Array	37.09	288	P	P	03 52 08.7	-1.0
	comp=Z,1.4nm,0.8s,mb3.9,baz=69,slow=8.6,SNR=4.2						
ULN	Ulaanbaatar	46.37	56	P	P	03 53 24.3	-1.2
LZH	Lanzhou	47.32	73	eP	P	03 53 33.5	+0.3
LZH				AP	pP	03 53 36.7	-0.5
LZH				PP	PP	03 55 24.5	+0.6
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,70nm,5.6s						
LZH				LR	LR		
	comp=N,380nm,15.2s						
LZH				LR	LR		
	comp=Z,490nm,18.1s,MS4.5						
BOD	Bodaibo	48.92	42	eP	P	03 53 33.6	-12
CMAR	Chiang Mai Arr	51.48	96	P	P	03 54 05.2	-0.2
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR				MLR	MLR		
	comp=Z,63nm,18.6s						
CMAR	Chiang Mai Arr	51.48	96	P	P	03 54 05.2	-0.2
	comp=Z,1.7nm,0.6s,mb4.1,baz=305,slow=9.0,SNR=7.8						
CMAR				LR	LR	04 19 10.4	
	comp=Z,63nm,18.6s,MS3.7,baz=315,slow=40						
TIXI	Tiksi	53.31	23	eP	P	03 54 16.2	-2.2
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
GYA	Guiyang	53.52	83	⇑iP	P	03 54 19.4	-1.1
GYA				AP	pP	03 54 24.2	-0.4
GYA				XP	sP	03 54 26.8	+0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				LR	LR		
	comp=Z,410nm,18.0s,MS4.5						
CN2	Changchun	59.82	56	eP	P	03 55 03.0	-2.2
CN2				eS	S	04 03 12.0	-2.5
CN2				LR	LR		
	comp=Z,160nm,21.0s,MS4.1						
NJ2	Nanjing	60.32	71	eP	P	03 55 08.1	-0.7
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
SSE	Sheshan	62.52	71	eP	P	03 55 20.2	-3.5
SSE				S	S	04 03 47.8	-1.3
SSE				SCS	ScS	04 05 13.6	+1.5
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,10.0nm,3.5s						
SSE				LR	LR		
	comp=N,60nm,22.7s,MS3.7						
SSE				LR	LR		
	comp=E,20nm,22.7s,MS3.7						
SSE				LR	LR		
	comp=Z,30nm,26.0s,MS3.3						
BILL	Bilibino	66.30	20	⇓eP	P	03 55 49.6	+2.0
BILL				e		03 58 13.0	
BILL				eS	S	04 04 38.5	+3.3
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
BILL				MLR	MLR		
	comp=Z,200nm,22.0s,MS4.3						
BILL	Bilibino	66.30	20	eP	P	03 55 49.6	+2.0
	comp=Z,4.0nm,1.0s,mb4.4						
BOSA	Boshof	68.08	198	LR	LR	04 25 43.4	
	comp=Z,98nm,19.1s,MS4.0,baz=207,slow=36						
INK	Inuvik	74.45	359	LR	LR	04 35 44.8	
	comp=Z,51nm,18.7s,MS3.8,baz=66,slow=41						
ILAR	Eielson Array	77.67	5	LR	LR	04 32 19.6	
	comp=Z,41nm,21.3s,MS3.7,baz=169,slow=37						
YKA	Yellowknife Ar	78.81	350	P	P	03 57 00.4	-1.0
	comp=Z,0.4nm,0.5s,mb3.6,baz=17,slow=6.1,SNR=5.2						
YKA				LR	LR	04 37 41.4	
	comp=Z,49nm,19.0s,MS3.9,baz=225,slow=40						
YKA	Yellowknife Ar	78.81	350	P	P	03 57 00.4	-1.0
YKA				LR	LR	04 37 41.4	
SADO	Sadowa	83.25	323	LR	LR	04 37 30.9	
	comp=Z,48nm,19.1s,MS3.9,baz=138,slow=38						
ULM	Lac du Bonnet	85.65	335	LR	LR	04 38 04.6	
	comp=Z,51nm,21.5s,MS3.9,baz=12,slow=37						
NEW	Newport	92.91	347	LR	LR	04 41 26.5	
	comp=Z,44nm,19.9s,MS3.9,baz=194,slow=36						
PDAR	Pinedale Array	96.49	341	LR	LR	04 40 30.7	
	comp=Z,63nm,19.1s,MS4.1,baz=202,slow=35						

ISC 05 03:47:44.8±1.0, 37.91N±0.03×26.75E±0.08, h10^{km}, n6, σ0^{s}59/12, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.46	345	i P	Pg	03 47 53.8	-0.5
URLA				i S	Sg	03 48 01.5	+1.0
IZM	Izmir	0.63	40	PG	Pg	03 47 57.2	-0.4
IZM				SG	Sg	03 48 05.5	-0.5
KDAG	Bornova	0.64	40	i P	Pb	03 47 57.4	-0.2
KDAG				i S	Sg	03 48 06.2	0.0
AYDN	Tasoluk	0.93	105	i P	Pb	03 48 03.1	+0.6
AYDN				i S	Sb	03 48 15.3	+0.5
BODT	Bodrum	0.96	152	ePG	Pg	03 48 03.1	-0.9
BODT				eSG	Sg	03 48 16.4	-0.5
BDRM	Kayabasi	1.01	147	i P	Pb	03 48 04.0	+0.1
BDRM				i S	Sb	03 48 18.0	+0.9

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*STR **05** 04:18:39.0±1.5, 44.37N×10.45E, h10^{km}±1^{km}, Ml3.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*PRU **05** 04:18:44.5, 44.40N×9.33E*

*ZUR **05** 04:18:44.1, 44.58N×9.36E, ML3.2/5*

*ROM **05** 04:18:46.3±0.3, 44.71N×9.32E, h7^{km}±3^{km}, Md3.5/5, Ml3.6/6, Error ellipse: s-maj=2.4km s-min=2.2km az=138.0*

*CSEM **05** 04:18:46.8±0.0, 44.64N×9.43E, h7^{km}, ML3.6/19, Error ellipse: s-maj=1.2km s-min=0.9km az=168.0*

*NEIC **05** 04:18:47.8±0.3, 44.67N×9.41E, h10^{km}, ML4.0(STR), ML3.8(FUR), ML3.5(LDG), ML3.5(SZGRF), Error ellipse: s-maj=4.7km s-min=2.7km az=134.0*

*ZUR_RM **05** 04:18:47, 44.67N×9.41E, h15^{km}, Mw3.3/21, Moment Tensor Solution. s21 Moment tensor: Scale 10^{13}Nm; M_{rr}-1.99; $M_{\theta\theta}$-0.16; $M_{\phi\phi}$2.15; $M_{r\theta}$-7.03; $M_{\theta\phi}$-5.43; $M_{\phi r}$-0.71; Best double couple: $M_0$9.09×10^{13} NP1:ϕ_s99°, δ81°, λ-129°. NP2:ϕ_s358°, δ40°, λ-14°. Principal axes: T 8.473, Plg26°, Azm218°; N 1.227, Plg39°, Azm106°; P -9.7, Plg40°, Azm333°;*

*GEN **05** 04:18:47.6, 44.68N×9.38E, h0^{km}, ML3.6*

*LDG **05** 04:18:50.3±0.1, 44.78N×9.32E, h10^{km}, Ml3.5/28, Error ellipse: s-maj=3.3km s-min=2.8km az=19.0*

ISC 05 04:18:46.8±0.1, 44.69N±0.01×9.33E±0.01, h7^{km}, n186, σ1^{s}22/257, 12C-9D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOB	Bobbio (Coli)	0.12	48	⇑iPg	Pg	04 18 49.2	-0.2
BOB				Sg	Sg	04 18 50.9	-0.3
	44µm,0.4s						
GENL	Genova Univers	0.38	222	P	Pg	04 18 55.5	+1.0
CODM		0.48	128	P	Pg	04 18 56.2	-0.2
GRAM		0.56	110	P	Pg	04 18 57.6	-0.5
PCP	Pian Castagno	0.58	256	P	Pg	04 18 59.1	+0.7
BACM		0.67	127	P	Pg	04 18 59.6	-0.7
VALM		0.74	117	P	Pb	04 19 00.6	-1.0
VALM				S	Sg	04 19 10.6	-0.9
VINC	Vinca	0.81	133	P	Pb	04 19 02.2	-0.6
VINC				S	Sb	04 19 12.3	-1.3
SARO	Sassorosso	0.92	123	P	Pb	04 19 04.4	-0.3
SARO				S	Sb	04 19 15.7	-1.2
VLC	Villacollemand	0.93	125	eP	Pb	04 19 03.9	-0.9
VLC	Villacollemand	0.93	125	Pg	Pg	04 19 04.3	-1.0
VLC				Sg	Sg	04 19 20.8	+3.1
VLC	Villacollemand	0.93	125	eP	Pb	04 19 03.9	-0.9
VLC	Villacollemand	0.93	125	Pg	Pg	04 19 04.3	-1.0
FIN	Finale Ligure	0.93	240	Pg	Pg	04 19 05.2	-0.3
	274nm,0.4s						
FIN	Finale Ligure	0.93	240	P	Pb	04 19 05.7	+0.7
FIN				S	Sb	04 19 18.9	+1.5
GSCL	Gusciola	0.96	110	Pg	Pg	04 19 05.5	-0.6
GSCL				Sg	Sg	04 19 20.0	+1.1
	199nm,0.5s						
MONC	Moncucco Torin	1.07	292	Pg	Pg	04 19 10.1	+1.9
BDI	Bagni Di Lucca	1.10	124	Pg	Pg	04 19 07.7	-1.2
ROB	Roburent	1.11	250	P	Pb	04 19 08.8	+0.8
ROB				S	Sb	04 19 23.3	+0.7
MDI	Monti di Nese	1.12	14	Pg	Pg	04 19 08.3	-0.9
MDI				Sg	Sg	04 19 25.4	+1.2
	1µm,0.3s						
MAIM		1.14	132	P	Pb	04 19 07.9	-0.6
MAIM				S	Sb	04 19 22.3	-1.0
ZCCA	Zocca	1.23	105	Pn	Pn	04 19 11.7	+1.3
	147nm,0.4s						
VAI	Varese	1.24	342	Pg	Pg	04 19 10.6	-1.1
VAI				Sg	Sg	04 19 29.7	+1.5
MUGIO	Muggio	1.25	351	Pg	Pg	04 19 10.6	-1.2
MUGIO				Sg	Sg	04 19 28.7	+0.2
MUGIO	Muggio	1.25	351	⇓iP*	Pb	04 19 10.3	-0.1
MUGIO	Muggio	1.25	351	Pg	Pg	04 19 10.6	-1.2
SAL	Salo	1.25	42	Pg	Pg	04 19 10.9	-0.9
SAL				Sg	Sg	04 19 28.6	+0.1
	991nm,0.7s						
RAVA	Ravarino	1.28	86	Pn	Pn	04 19 13.5	+2.3
	1µm,0.7s						
MONE	Monesi	1.28	242	P	Pb	04 19 11.1	+0.2
MONE				S	Sb	04 19 27.9	+0.5
IMI	Imperia	1.29	233	Pg	Pg	04 19 10.8	-1.9
	112nm,0.2s						
IMI	Imperia	1.29	233	P	Pb	04 19 11.1	0.0
IMI				S	Sb	04 19 27.1	-0.7
PII	Pisa	1.29	138	Pg	Pg	04 19 10.9	-1.8
	126nm,0.2s						
ORO	Oropa	1.34	315	Pn	Pn	04 19 12.1	+0.1
	220nm,0.2s						
ORX	Oropa	1.34	315	P	Pb	04 19 12.0	+0.1
ORX				S	Sb	04 19 29.4	+0.2
FNVD	Fontana Vidola	1.39	111	Pn	Pn	04 19 13.6	+0.9
TRAV		1.39	307	P	Pb	04 19 13.2	+0.4
TRAV				S	Sb	04 19 30.9	+0.3
NEGI	Negi	1.44	235	P	Pn	04 19 13.0	-0.4
NEGI				S	Sb	04 19 30.5	-1.5
ENR	Entracque	1.44	252	P	Pn	04 19 14.1	+0.6
ENR				S	Sb	04 19 31.9	-0.2
SAOF	Saorge	1.45	242	Pn	Pn	04 19 13.6	0.0
DOI	San Damiano	1.50	264	Pn	Pn	04 19 15.8	+1.5
	603nm,0.4s						
STV2	Anna di Valdie	1.50	254	P	Pn	04 19 14.5	+0.2
AUTN	L'Aution	1.53	244	Pn	Pn	04 19 15.1	+0.4
RSP	Reno Superiore	1.54	288	P	Pn	04 19 15.3	+0.4
RSP				S	Sb	04 19 34.1	-0.9
MCGN	Macugnaga	1.58	324	Pn	Pn	04 19 16.2	+0.7
SEI	Scarperia	1.59	113	Pn	Pn	04 19 16.5	+0.9
	372nm,0.4s						
SBF	Sospel	1.59	239	ePn	Pn	04 19 15.4	-0.2
SBF				eSn	Sn	04 19 37.5	+0.9
	191nm,0.3s						
PZZ	Prazzo	1.60	264	P	Pn	04 19 16.6	+0.8
MABI	Malga Bissina	1.60	31	Pn	Pn	04 19 15.5	-0.3
TOUF	Mont Tournerai	1.64	246	Pn	Pn	04 19 16.8	+0.5
MMK	Mattmark	1.67	325	eP*	Pb	04 19 17.0	-0.5
MMK	Mattmark	1.67	325	Pn	Pn	04 19 17.1	+0.4
REVF	Revere	1.70	237	Pn	Pn	04 19 17.8	+0.6
LSD	Ceresole Reale	1.72	297	P	Pn	04 19 19.0	+1.5
VMG	Vicchio	1.75	114	Pn	Pn	04 19 20.9	+3.0
	168nm,0.6s						
MVIF	Mont Vial	1.75	244	Pn	Pn	04 19 18.5	+0.6
BERNI	Berninapass	1.79	16	eP*	Pb	04 19 18.7	-1.0
VDL	Val di Lei	1.80	3	⇑iPn	Pn	04 19 19.4	+0.8
MBDF	Montbardon	1.82	272	ePn	Pn	04 19 20.1	+1.2
MBDF				eSn	Sn	04 19 42.2	-0.3
	111nm,0.4s						
RRL	Cesana Torines	1.82	278	P	Pn	04 19 20.7	+1.7
FUSIO	Fusio	1.83	345	⇓iPn	Pn	04 19 18.8	-0.2
PGD	Poggio Sodo	1.90	114	Pn	Pn	04 19 23.3	+3.2
	34nm,0.4s						
BNI	Bardonecchia	1.92	282	eP	Pn	04 19 21.9	+1.6
BNI	Bardonecchia	1.92	282	Pn	Pn	04 19 22.1	+1.8
BRMO	Bormio	1.93	22	Pn	Pn	04 19 20.9	+0.4
DIX	Grande Dixence	1.94	317	⇓iPn	Pn	04 19 21.3	+0.7
DIX	Grande Dixence	1.94	317	Pn	Pn	04 19 21.4	+0.8
GRFL	Gerfalco	1.95	142	Pn	Pn	04 19 22.7	+2.0
	17nm,0.6s						
SFI	Santa Sofia	1.97	113	Pn	Pn	04 19 23.6	+2.5
	28nm,0.3s						
CALN	Calern	1.99	243	Pn	Pn	04 19 21.7	+0.4
LPG	La Plagne	2.00	295	ePn	Pn	04 19 22.1	+0.7
LPG				eSn	Sn	04 19 45.6	-1.3
	57nm,0.3s						
LPL	La Plagne	2.02	295	ePn	Pn	04 19 22.6	+0.9
LPL				eSn	Sn	04 19 45.6	-1.8
	49nm,0.3s						
FUORN	Ofenpass	2.04	18	⇑ePn	Pn	04 19 22.9	+0.8
FUORN	Ofenpass	2.04	18	Pn	Pn	04 19 23.0	+0.9
LKBD	Leukerbad	2.08	325	⇓iPn	Pn	04 19 23.6	+1.0
CTI	Castel Tesino	2.13	49	Pn	Pn	04 19 22.5	-0.8
	59nm,0.3s						
DAVOX	Davos	2.13	10	Pn	Pn	04 19 24.4	+1.1
DAVOX	Davos	2.13	10	⇑iPn	Pn	04 19 24.5	+1.2
PGF	Pioggiola	2.15	186	ePn	Pn	04 19 22.5	-1.2
PGF				eSn	Sn	04 19 47.9	-3.0
	32nm,0.4s						
CRE	Caprese Michel	2.17	119	Pn	Pn	04 19 25.2	+1.3
EMV	Vieux Emosson	2.19	310	Pn	Pn	04 19 27.6	+3.3
GRYON	Gryon	2.21	316	⇑iPn	Pn	04 19 26.7	+2.3
APPI	Appiano	2.23	36	Pn	Pn	04 19 25.3	+0.5
	267nm,0.5s						
FRF	La Foret Royal	2.24	241	ePn	Pn	04 19 24.1	-0.8
FRF				eSn	Sn	04 19 52.2	-0.8
	80nm,0.4s						
MUO	Muotathal	2.33	348	ePn	Pn	04 19 27.9	+1.7
OG25	Le Caire	2.35	263	Pn	Pn	04 19 29.8	+3.3
PLONS	Plons	2.36	1	ePn	Pn	04 19 27.4	+0.7
LMR	La Mourre	2.44	237	ePn	Pn	04 19 26.1	-1.7
LMR				eSn	Sn	04 19 57.4	-0.9
	32nm,0.2s						
ORIF	Oris-en-Rattie	2.46	277	ePn	Pn	04 19 30.3	+2.2
ORIF				eSn	Sn	04 19 56.9	-2.0
	94nm,0.5s						
STOF	St-Etienne Org	2.55	255	Pn	Pn	04 19 31.7	+2.4
TAVF	Tavernes	2.59	247	Pn	Pn	04 19 30.2	+0.3
LIENZ	Alp Oberkamor	2.61	2	⇓iPn	Pn	04 19 30.7	+0.5
DAVA	Damuels	2.63	8	⇑iPN	Pn	04 19 31.2	+0.8
DAVA				i SN	Sn	04 20 06.3	+3.3
FSSB	Fossombrone	2.67	111	Pn	Pn	04 19 32.6	+1.5
	25nm,0.4s						
VILF	Villemus	2.73	253	Pn	Pn	04 19 33.0	+1.1
SMRF	Simiane la Rot	2.79	256	ePn	Pn	04 19 33.6	+0.9
SMRF				eSn	Sn	04 20 05.9	-1.1
	52nm,0.4s						
SQTA	Sankt Quirin	2.85	27	⇑iPN	Pn	04 19 35.0	+1.3
SQTA				i SN	Sn	04 20 12.1	+3.4
PUYF	Puyloubier	2.86	247	Pn	Pn	04 19 33.9	+0.2
ARV	Arcevia	2.86	113	Pn	Pn	04 19 36.9	+3.1
OCF	Saint Nazaire	2.88	269	Pn	Pn	04 19 36.2	+2.2
OG26	St.-Nazaire-De	2.88	269	Pn	Pn	04 19 36.2	+2.2
BALST	Balsthal	2.88	337	⇑iPn	Pn	04 19 34.5	+0.4
SEST	Monte Rota	2.89	43	Pn	Pn	04 19 34.9	+0.7
	111nm,0.8s						
ASS	Assisi	2.90	123	Pn	Pn	04 19 35.8	+1.4
	9.0nm,0.4s						
MOTA	Moosalm	2.93	24	⇑iPN	Pn	04 19 35.8	+1.0
MOTA				i SN	Sn	04 20 13.1	+2.4
FLACH	Flaach	2.93	350	⇓iP	Pn	04 19 34.4	-0.4
CABF	La Chapelle	2.98	311	ePn	Pn	04 19 36.0	+0.6
CABF				eSn	Sn	04 20 08.6	-3.2
CABF				eSg	Sg	04 20 22.6	-3.3
	57nm,0.6s						
SNTG	Esanatoglia	2.98	118	Pn	Pn	04 19 37.5	+2.1
	16nm,0.6s						
TRULL	Truellikon	3.00	352	⇑iPn	Pn	04 19 34.3	-1.4
TREF	Trevaresse	3.03	251	Pn	Pn	04 19 36.9	+0.7

WTTA	Wattenberg	3.04	31	⇑*i*PN	Pn	04 19 37.4	+1.1
WTTA				*i* SN	Sn	04 20 16.2	+2.8
BBS	Basel-Blauen	3.05	336	Pn	Pn	04 19 35.3	-1.2
WATA	Walderalm	3.08	30	⇓*i*PN	Pn	04 19 37.8	+0.9
WATA				*i* SN	Sn	04 20 15.9	+1.5
GELF	Grande-Etoile	3.10	246	Pn	Pn	04 19 37.1	-0.1
PRAF	Pradon	3.12	255	Pn	Pn	04 19 37.9	+0.5
SLE	Schleitheim	3.13	350	⇓*i*Pn	Pn	04 19 36.6	-1.0
LOMF	Lomont	3.18	328	Pn	Pn	04 19 39.1	+0.8
NRCA	Norcia	3.31	123	Pn	Pn	04 19 40.6	+0.4
	10.0nm,0.8s						
FELD	Feldberg	3.32	344	Pn	Pn	04 19 39.5	-0.8
VIVF	Saint-Julien-l	3.32	275	*e*Pn	Pn	04 19 41.2	+0.9
VIVF				*e*Sn	Sn	04 20 17.6	-2.9
	16nm,0.3s						
MNS	Montasola	3.35	132	Pn	Pn	04 19 42.1	+1.3
	7.0nm,0.4s						
VOY	Vojsko	3.49	66	*e*Pn	Pn	04 19 41.8	-0.9
VOY				*e*Sn	Sn	04 20 20.6	-4.2
MOF	Molkenrain	3.51	335	Pn	Pn	04 19 42.9	-0.1
JAVS	Javornik	3.55	69	*i* Pn	Pn	04 19 42.4	-1.2
HINF	Hinteralfeld	3.57	332	*e*Pn	Pn	04 19 43.4	-0.4
HINF				*e*Sn	Sn	04 20 22.3	-4.5
	25nm,0.2s						
BFO	Black Forest	3.71	350	*e*Pn	Pn	04 19 44.0	-1.8
BFO				*e*Sn	Sn	04 20 26.3	-4.0
FUR	Furstenfeldbru	3.73	20	*e*Pn	Pn	04 19 45.2	-0.9
FUR				*e*Sn	Sn	04 20 28.0	-2.9
HAU	Haudompre	3.91	329	*e*Pn	Pn	04 19 47.7	-0.9
HAU				*e*Sn	Sn	04 20 30.4	-5.0
	83nm,0.2s						
NVLJ	Novalja	3.96	90	*i* Pn	Pn	04 19 48.3	-1.1
NVLJ				*i* Sn	Sn	04 20 32.3	-4.4
LASF	Ste Croix	3.97	263	*e*Pn	Pn	04 19 49.0	-0.5
LASF				*e*Sn	Sn	04 20 34.0	-3.0
	18nm,0.5s						
CDF	Champ du Feu	3.98	340	*e*Pn	Pn	04 19 48.6	-1.1
CDF				*e*Sn	Sn	04 20 31.9	-5.4
	46nm,0.5s						
VISS	Visnje	4.05	72	*i* Pn	Pn	04 19 49.7	-0.9
PLDF	La Plantade	4.22	290	Pn	Pn	04 19 54.6	+1.5
PDKS	Podkum	4.22	69	*i* Pn	Pn	04 19 53.0	-0.2
BOJS	Bojanci	4.27	77	*i* Pn	Pn	04 19 53.1	-0.7
BOJS				*e*Sn	Sn	04 20 40.0	-4.7
SMF	Signal de Mont	4.32	299	*e*Pn	Pn	04 19 54.2	-0.2
SMF				*e*Sn	Sn	04 20 40.9	-4.8
	46nm,0.4s						
LBL	Lubilhac	4.35	279	Pn	Pn	04 19 56.7	+1.8
AGO	Saint Agoulin	4.57	290	Pn	Pn	04 19 59.5	+1.4
PYM	Petit Puy Mans	4.59	286	Pn	Pn	04 20 01.1	+2.7
SFTF	Sexfontaines	4.60	321	*e*Pn	Pn	04 19 58.2	-0.3
	baz=135						
SFTF				*e*Sn	Sn	04 20 46.6	-6.3
	23nm,0.5s						
LOR	Lormes	4.60	306	*e*Pn	Pn	04 19 58.2	-0.3
	baz=131						
LOR				*e*Sn	Sn	04 20 47.8	-5.2
	21nm,0.2s						
MOA	Molln	4.66	46	⇑*i*PN	Pn	04 19 59.0	-0.3
MOA				*i* SN	Sn	04 20 56.0	+1.5
AVF	Avril sur Loir	4.68	299	*e*Pn	Pn	04 19 59.0	-0.6
AVF				*e*Sn	Sn	04 20 49.5	-5.5
	14nm,0.6s						
SSF	Saint Saulge	4.71	302	*e*Pn	Pn	04 19 59.5	-0.5
SSF				*e*Sn	Sn	04 20 49.8	-5.8
	5.2nm,0.4s						
RFYF	Reffroy	4.75	327	*e*Pn	Pn	04 19 59.7	-0.9
	baz=127						
RFYF				*e*Sn	Sn	04 20 50.5	-6.2
	36nm,0.5s						
MEZF	Maizieres J'vi	4.82	324	*e*Pn	Pn	04 20 01.2	-0.4
	baz=141						
MEZF				*e*Sn	Sn	04 20 52.0	-6.5
	23nm,0.5s						
BGF	Bois d'Agland	4.92	295	*e*Pn	Pn	04 20 02.5	-0.5
BGF				*e*Sn	Sn	04 20 55.1	-5.8
	46nm,0.4s						
ARSA	Arzberg	5.02	57	⇓*i*PN	Pn	04 20 02.6	-1.9
ARSA				*i* SN	Sn	04 21 01.2	-2.4
GEC2	GERESS Array S	5.13	34	*e*Pn	Pn	04 20 02.8	-3.2
GEC2				*e*Sn	Sn	04 21 00.4	-5.9
GRA1	Grafenberg Arr	5.17	14	*e*Sn	Sn	04 21 00.8	-6.5
GRA1	Grafenberg Arr	5.17	14	*e*Sn	Sn	04 21 00.8	-6.5
CAF	Calviac	5.17	275	*e*Pn	Pn	04 20 07.3	+0.7
EJON	La Jonquera	5.19	247	P	Pn	04 20 04.6	-2.2
EJON	La Jonquera	5.19	247	P	Pn	04 20 04.6	-2.2
	3.3nm,0.5s,SNR=6.2						
TCF	Toulx Ste Croi	5.25	290	*e*Pn	Pn	04 20 07.4	-0.3
TCF				*e*Sn	Sn	04 21 03.7	-5.7
	14nm,0.4s						
MTLF	Montolieu	5.30	258	*e*Pn	Pn	04 20 07.4	-1.0
MTLF				*e*Sn	Sn	04 21 04.1	-6.5
	7.1nm,0.4s						
KHC	Kasperske Hory	5.31	32	*e*PN	Pn	04 20 06.1	-2.5
KHC				*e*PG	Pg	04 20 28.6	-4.3
KHC				*e*SN	Sn	04 21 04.9	-6.0
KHC				*e*x	x	04 21 37.0	
KHC				*e*SG	Sg	04 21 43.2	-0.5
KHC	Kasperske Hory	5.31	32	Pn	Pn	04 20 06.1	-2.5
KHC				Sn	Sn	04 21 04.9	-6.0
TNS	Taunus Mts	5.57	354	*e*Pn	Pn	04 20 09.7	-2.5
TNS				*e*Sn	Sn	04 21 12.0	-5.3
RJF	Les Rejaudoux	5.57	279	*e*Pn	Pn	04 20 13.2	+0.9
NKC	Novy Kostel	5.94	20	*e*SN	Sn	04 21 20.2	-6.3
LFF	La Frestale	6.11	275	*e*Pn	Pn	04 20 20.9	+1.0
MOX	Moxa	6.16	14	*e*Sn	Sn	04 21 25.2	-6.8
DOU	Dourbes	6.29	331	P	Pn	04 20 23.9	+1.5
EMIR	Miracle	6.33	247	P	Pn	04 20 22.5	-0.4
EMIR				S	Sn	04 21 34.2	-2.1
EMIR	Miracle	6.33	247	P	Pn	04 20 22.5	-0.4
	4.2nm,0.3s,SNR=9.1						
EMIR				S	Sn	04 21 34.2	-2.2
	14nm,1.0s						
MEM	Membach	6.33	340	P	Pn	04 20 22.5	-0.5
PRU	Pruhonice	6.38	32	*e*PN	Pn	04 20 20.6	-3.0
PRU				*e*SN	Sn	04 21 30.2	-7.3
PRU				*e*x	x	04 22 08.7	
BAIF	Baives	6.40	329	*e*Pn	Pn	04 20 22.1	-1.8
EPF	Esparros	6.71	259	*e*Pn	Pn	04 20 27.2	-1.0
ETOS	Mallorca	6.89	227	P	Pn	04 20 29.8	-1.0
ETOS	Mallorca	6.89	227	P	Pn	04 20 29.8	-1.1
	4.8nm,0.4s,SNR=7.8						
MFF	Saint Martin d	6.91	289	*e*Pn	Pn	04 20 30.2	-0.9
BRG	Berggiesshubel	6.92	25	*e*Sg	Sg	04 22 25.5	-12
EBIE	Bielsa	6.95	256	P	Pn	04 20 31.2	-0.4
EBIE				S	Sn	04 21 51.9	0.0
EBIE	Bielsa	6.95	256	P	Pn	04 20 31.2	-0.5
	0.8nm,0.3s,SNR=5.6						
EBIE				S	Sn	04 21 51.9	0.0
	1.7nm,0.7s						
EGRA	Graus	7.02	252	P	Pn	04 20 33.2	+0.6
EGRA	Graus	7.02	252	P	Pn	04 20 33.2	+0.6
	2.8nm,0.6s,SNR=5.5						
CLL	Collm	7.07	19	*e*SN	Sn	04 21 48.0	-6.8
CLL				*e*		04 22 33.0	
CLL				*e*SG	Sg	04 22 40.0	-2.1
CLL	Collm	7.07	19	Sn	Sn	04 21 48.0	-6.8
CLL				*e*Sg	Sg	04 22 48.0	+5.9
ETSF	Etsaut	7.38	259	*e*Pn	Pn	04 20 37.9	+0.3
SJPF	Ste Jean	7.78	262	*e*Pn	Pn	04 20 39.6	-3.7
FLN	La Foliniere	7.87	305	*e*Pn	Pn	04 20 43.7	-0.9
GRR	Gorron	7.94	301	*e*Pn	Pn	04 20 42.9	-2.6
EARI	Arriondas	10.57	268	P	P	04 21 19.6	-2.2
	2.9nm,0.5s						
EARI	Arriondas	10.57	268	P	P	04 21 19.6	-2.2
	2.9nm,0.5s,SNR=8.6						
ESDC	Sonseca Array	11.06	248	P	P	04 21 23.7	-4.8
	0.1nm,0.3s						

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*NEIC **05** 04:20:38.9±1.2, 44.62N×9.56E, h10^{km}, ML2.7(LDG), ML2.5(STR), Error ellipse: s-maj=14.5km s-min=5.8km az=95.0*

*CSEM **05** 04:20:39.8±0.1, 44.62N×9.41E, h10^{km}, ML2.7/12, Error ellipse: s-maj=2.9km s-min=1.3km az=24.0*

*GEN **05** 04:20:40.1, 44.68N×9.37E, h0^{km}, ML2.9*

*LDG **05** 04:20:41.8±0.4, 44.67N×9.43E, h10^{km}, Ml2.7/14, Error ellipse: s-maj=8.2km s-min=4.4km az=91.0*

*STR **05** 04:20:42.0±0.5, 44.58N×9.33E, h10^{km}±1^{km}, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 05 04:20:39.6±0.4**, 44.68N**±0.03×**9.35E**±0.03**, h10^{km}, n39, σ0^{s}97**/57**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CODM		0.46	129	P	Pg	04 20 49.0	0.0
GRAM		0.55	110	P	Pg	04 20 50.4	-0.3
PCP	Pian Castagno	0.59	256	P	Pg	04 20 51.8	+0.3
BACM		0.66	128	P	Pb	04 20 52.4	-0.3
VALM		0.72	117	P	Pb	04 20 53.7	-0.1
VINC	Vinca	0.79	133	P	Pb	04 20 54.9	-0.1
SARO	Sassorosso	0.90	123	P	Pb	04 20 56.8	-0.1
FIN	Finale Ligure	0.94	240	P	Pb	04 20 58.7	+1.1
MAIM		1.12	133	P	Pb	04 21 00.9	+0.2
MAIM				S	Sb	04 21 14.8	-0.4
ROB	Roburent	1.13	250	P	Pb	04 21 01.5	+0.8
ROB				S	Sb	04 21 15.8	+0.6
IMI	Imperia	1.30	234	P	Pb	04 21 03.7	0.0
ORX	Oropa	1.35	315	P	Pb	04 21 04.7	+0.1
ENR	Entracque	1.45	252	P	Pn	04 21 06.2	+0.1
SAOF	Saorge	1.46	242	Pn	Pn	04 21 06.4	+0.2
SAOF				Sg	Sg	04 21 26.2	-2.2
AUTN	L'Aution	1.54	244	Pn	Pn	04 21 08.1	+0.8
RSP	Reno Superiore	1.56	288	P	Pn	04 21 07.9	+0.4
SBF	Sospel	1.60	240	*e*Pn	Pn	04 21 08.2	+0.1
SBF				*e*Sn	Sn	04 21 30.2	+1.2
	18nm,0.3s						
PZZ	Prazzo	1.61	264	P	Pn	04 21 08.4	0.0
TOUF	Mont Tournerai	1.65	247	Pn	Pn	04 21 09.7	+0.9
LSD	Ceresole Reale	1.74	297	P	Pn	04 21 10.2	+0.1
MVIF	Mont Vial	1.76	244	Pn	Pn	04 21 11.8	+1.3
MVIF				Sg	Sg	04 21 34.5	-3.8
MBDF	Montbardon	1.84	272	*e*Pn	Pn	04 21 12.9	+1.4
MBDF				*e*Sn	Sn	04 21 35.0	0.0
	12nm,0.4s						
RRL	Cesana Torines	1.84	278	P	Pn	04 21 12.8	+1.2
LPG	La Plagne	2.01	295	*e*Pn	Pn	04 21 14.9	+0.9
LPG				*e*Sn	Sn	04 21 38.3	-1.2
	11nm,0.5s						
LPL	La Plagne	2.03	295	*e*Pn	Pn	04 21 15.5	+1.2
LPL				*e*Sn	Sn	04 21 38.1	-1.9
	9.2nm,0.4s						
PGF	Pioggiola	2.15	187	*e*Pn	Pn	04 21 15.2	-0.8
PGF				*e*Sn	Sn	04 21 40.6	-2.3
	3.3nm,0.3s						
FRF	La Foret Royal	2.25	241	*e*Pn	Pn	04 21 16.9	-0.5
FRF				*e*Sn	Sn	04 21 44.9	-0.5
	9.0nm,0.4s						
LMR	La Mourre	2.45	238	*e*Pn	Pn	04 21 18.8	-1.6
LMR				*e*Sn	Sn	04 21 50.1	-0.6
	3.8nm,0.3s						
ORIF	Oris-en-Rattie	2.48	277	*e*Pn	Pn	04 21 23.1	+2.4
ORIF				*e*Sn	Sn	04 21 49.6	-1.8
	18nm,0.8s						
SMRF	Simiane la Rot	2.80	257	*e*Pn	Pn	04 21 26.3	+1.0
CABF	La Chapelle	2.99	311	*e*Pn	Pn	04 21 28.9	+0.9
CABF				*e*Sn	Sn	04 22 01.1	-3.2
	10.0nm,0.7s						
VIVF	Saint-Julien-l	3.33	275	*e*Pn	Pn	04 21 34.1	+1.2
HINF	Hinteralfeld	3.58	332	*e*Pn	Pn	04 21 36.2	-0.2
HINF				*e*Sn	Sn	04 22 14.9	-4.3
	3.0nm,0.3s						
HAU	Haudompre	3.92	329	*e*Pn	Pn	04 21 40.7	-0.5
HAU				*e*Sn	Sn	04 22 23.2	-4.6
	11nm,0.3s						
CDF	Champ du Feu	4.00	340	*e*Pn	Pn	04 21 41.4	-0.9
CDF				*e*Sn	Sn	04 22 24.8	-4.9
	4.1nm,0.5s						
SMF	Signal de Mont	4.33	299	*e*Pn	Pn	04 21 47.2	+0.1
SMF				*e*Sn	Sn	04 22 33.8	-4.4
	2.9nm,0.3s						
LOR	Lormes	4.62	306	*e*Pn	Pn	04 21 51.0	-0.1
LOR				*e*Sn	Sn	04 22 40.5	-5.0
	3.1nm,0.3s						
AVF	Avril sur Loir	4.70	299	*e*Pn	Pn	04 21 51.7	-0.6
BGF	Bois d'Agland	4.93	295	*e*Pn	Pn	04 21 55.2	-0.4

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*NEIC **05** 04:28:38.7±1.7, 22.28S×172.59E, h55^{km}±14^{km}, mb4.6/10, Error ellipse: s-maj=13.2km s-min=9.8km az=56.0*

*IDC **05** 04:28:38.7±4.2, 22.32S×172.62E, h57^{km}±37^{km}, mb4.1/14, mb1 4.3/16, mb1mx4.3/20, mbtmp4.4/16, ML4.1/2, MS3.8/15, Ms1 3.8/15, ms1mx3.7/29, Error ellipse: s-maj=21.5km s-min=18.3km az=68.0*

ISC 05 04:28:38.0±2.1**, 22.36S**±0.08×**172.5E**±0.1**, h62^{km}**±18^{km}**, n63, σ1^{s}01**/40**, mb4.5**/23**, 3C-3D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.62	272	P	P	04 30 00.8	-0.2
	3.5nm,0.3s,baz=90,slow=23,SNR=17						
DZM				LR	LR	04 31 07.0	
	comp=Z,277nm,20.2s,baz=270,slow=26						
NOUC	Port Laguerre	5.75	271	*e*P	P	04 30 02.3	-0.5
NOUC	Port Laguerre	5.75	271	*e*P	P	04 30 02.2	-0.5
RAO	Raoul Island	11.02	130	LR	LR	04 34 15.8	
	comp=Z,941nm,21.7s,baz=335,slow=31						
URZ	Urewera	16.34	167	P	P	04 32 25.6	+0.8
	1.1nm,0.3s,baz=342,slow=8.6,SNR=11						
URZ				LR	LR	04 36 57.4	
	comp=Z,394nm,21.9s,baz=2.2,slow=30						
AFI	Afiamalu	17.13	63	LR	LR	04 37 36.4	
	comp=Z,262nm,18.3s,baz=255,slow=32						
RPZ	Rata Peaks	21.34	183	P	P	04 33 21.9	+0.1
	10nm,0.8s,mb4.2,baz=323,slow=6.3,SNR=3.6						
RPZ				LR	LR	04 40 29.9	
	comp=Z,161nm,21.5s,baz=197,slow=33						
CTA	Charters Tower	24.56	270	LR	LR	04 42 45.6	
	comp=Z,268nm,20.0s,baz=53,slow=34						
CTAO	Charters Tower	24.56	270	*e*P	P	04 33 56.8	+3.2
	2.2nm,0.6s,mb3.9						
RAR	Rarotonga	25.76	93	LR	LR	04 41 56.6	
	comp=Z,149nm,21.4s,baz=289,slow=31						
PMG	Port Moresby	27.51	294	P	P	04 34 20.4	-0.6
	12nm,0.8s,mb4.6,baz=111,slow=6.5,SNR=4.1						
PMG				LR	LR	04 43 29.5	
	comp=Z,157nm,18.9s,baz=109,slow=32						
STKA	Stephens Creek	29.02	244	P	P	04 34 35.5	+1.1
	7.0nm,0.7s,mb4.5,baz=96,slow=9.9,SNR=16						
STKA	Stephens Creek	29.02	244	P	P	04 34 35.5	+1.1
ASAR	Alice Springs	35.48	260	P	P	04 35 30.9	+0.2
	5.2nm,0.8s,mb4.5,baz=85,slow=8.8,SNR=49						
ASAR				LR	LR	04 49 37.4	
	comp=Z,127nm,18.2s,baz=93,slow=35						
ASPA	Alice Springs	35.48	260	*e*P	P	04 35 30.9	+0.1
WRAB	Tennant Creek	35.61	267	*e*P	P	04 35 31.1	-0.8
	3.2nm,0.9s,mb4.2						
WRA	Warramunga Arr	35.61	267	P	P	04 35 30.7	-1.3
	0.8nm,0.6s,mb3.9,baz=92,slow=5.7,SNR=17						
PPT	Papeete	35.90	89	LR	LR	04 46 20.7	
	comp=Z,329nm,18.7s,baz=287,slow=30						
FITZ	Fitzroy Crossi	44.05	267	P	P	04 36 41.7	-0.1
	18nm,0.7s,mb4.9,baz=142,slow=5.5,SNR=19						
NWAO	Narrogin (SRO)	49.60	245	P	P	04 37 25.8	+0.5
	baz=96,slow=9.2						
NWAO	Narrogin (SRO)	49.60	245	P	P	04 37 25.8	+0.5
VNDA	Vanda	55.46	183	P	P	04 38 06.7	-1.6
	1.2nm,0.7s,mb4.0,baz=3.7,slow=7.9,SNR=12						
VNDA				LR	LR	04 58 30.4	
	comp=Z,111nm,20.0s,baz=174,slow=32						
VNDA	Vanda	55.46	183	*e*P	P	04 38 07.7	-0.6
	6.3nm,1.4s,mb4.5						
SBA	Scott Base	55.62	181	*e*P	P	04 38 09.9	+0.5
	12nm,1.0s,mb4.9						
MJAR	Matsushiro Arr	66.94	330	P	P	04 39 25.8	-0.5
	1.4nm,0.8s,mb4.0,baz=157,slow=5.3,SNR=4.1						
QSPA	South Pole Qui	67.72	180	⇓*i*P	P	04 39 30.0	-0.4
	6.6nm,0.6s,mb4.8						
RPN	Rapa Nui	70.08	112	LR	LR	05 01 56.8	
	comp=Z,97nm,20.9s,baz=311,slow=28						
ASAJ	Asahikawa	71.60	338	P	P	04 39 55.8	+1.0
	3.6nm,0.4s,mb4.6,baz=24,slow=30,SNR=4.7						
ASAJ				LR	LR	05 06 05.6	
	comp=Z,66nm,21.2s,baz=352,slow=31						
YSS	Yuzh-Sakhalins	74.03	339	*e*P	P	04 40 11.5	+2.5
	13nm,0.8s,mb4.9						
FX1	Attu Island--F	74.92	0	LR	LR	05 06 29.6	
	comp=Z,1.6nm,19.9s,baz=333,slow=30						
MAW	Mawson	76.70	202	P	P	04 40 24.2	+0.5
	3.6nm,0.7s,mb4.4,baz=125,slow=6.4,SNR=4.5						
SNAA	Sanae	86.17	181	⇑*i*	P	04 41 11.4	-1.7
SNAA	Sanae	86.17	181	*e*	P	04 41 16.4	+3.3
SNAA	Sanae	86.17	181	*e*P	P	04 41 11.9	-1.2
	3.1nm,0.9s,mb4.5						
VNA3	Neumayer Olymp	86.64	179	⇑*i*	P	04 41 14.6	-0.8
VNA3	Neumayer Olymp	86.64	179	*e*	P	04 41 20.0	+4.6
VNA2	Neumayer--Watz	86.97	180	⇓*i*	P	04 41 16.2	-0.9
VNA2	Neumayer--Watz	86.97	180	*e*	P	04 41 22.1	+5.0
VNA1	Neumayer--Stat	87.25	180	⇑*i*	P	04 41 15.3	-3.1
VNA1	Neumayer--Stat	87.25	180	*e*	P	04 41 20.1	+1.7
NVAR	Mina Array Bea	88.61	47	P	P	04 41 24.6	-1.0
	1.6nm,0.9s,mb4.4,baz=212,slow=6.2,SNR=9.3						
BILL	Bilibino	90.24	358	*e*P	P	04 41 33.6	+1.0
	11nm,1.3s,mb5.0						
SONM	Songino Array	91.54	322	P	P	04 41 39.4	+0.3
	0.8nm,0.8s,mb4.1,baz=146,slow=4.5,SNR=5.3						
COLA	College	92.16	16	*e*P	P	04 41 40.3	-1.3
	11nm,1.3s,mb5.0						
ILAR	Eielson Array	92.32	16	P	P	04 41 41.2	-1.1
	2.6nm,0.9s,mb4.6,baz=242,slow=6.5,SNR=17						
HLID	Hailey	93.66	44	*e*P	P	04 41 50.3	+1.4
	0.7nm,0.7s,mb4.2						
PLCA	Paso Flores	94.19	137	LR	LR	05 13 36.8	
	comp=Z,179nm,20.3s,baz=217,slow=29						
TXAR	Lajitas Array	95.59	61	P	P	04 41 57.9	-0.2
	0.4nm,0.9s,mb3.9,baz=202,slow=6.7,SNR=4.4						
TXAR				LR	LR	05 15 09.7	
	comp=Z,48nm,20.2s,baz=195,slow=29						
KOLS	Kolonicke sedl	144.51	326	*e*PKP	PKPdf	04 48 07.7	+0.4
KOLS				*e*		04 49 59.0	
KECS	Kecovo	145.71	326	*e*PKP	PKPdf	04 48 12.5	+3.1
OKC	Ostrava-Krasne	145.95	330	*e*PKP	PKPdf	04 48 12.4	+2.7
MORC	Moravsky Berou	146.27	330	*e*PKP	PKPdf	04 48 13.1	+2.8
DPC	Dobruska-Polom	146.40	332	*e*PKP	PKPdf	04 48 13.2	+2.7
UPC	Upice	146.42	333	*e*PKP	PKPdf	04 48 12.9	+2.4
VYHS	Vyhne	146.54	328	*e*PKP	PKPdf	04 48 18.2	+7.4
BRG	Berggiesshubel	146.99	335	*i* P	PKPdf	04 48 15.2	+3.7
CLL	Collm	147.00	336	⇓*i*PKP1		04 48 14.8	
CLL				*i* PKP2	PKPab	04 48 17.0	-0.3
PVCC	Panska Ves	147.00	334	*e*PKP	PKPdf	04 48 15.3	+3.8
PRU	Pruhonice	147.43	333	*e*PKP	PKPdf	04 48 16.0	+3.8
KHC	Kasperske Hory	148.49	333	*e*PKP	PKPdf	04 48 14.3	+0.4
KHC				x	x	04 48 23.0	
GERES	GERESS Array B	148.66	333	PKPbc	PKPdf	04 48 19.0	+4.8
	2.8nm,0.8s,baz=63,slow=3.0,SNR=11						
DAVOX	Davos	151.87	334	PKPbc	PKPdf	04 48 26.9	+7.7
	2.1nm,0.6s,baz=80,slow=4.5,SNR=5.7						
DAVOX	Davos	151.87	334	PKPbc	PKPdf	04 48 26.9	+7.7

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*IDC **05** 04:33:48.0±1.8, 6.08S×146.86E, mb3.7/3, mb1 4.0/5, mb1mx3.7/16, mbtmp3.8/5, ML3.1/2, Error ellipse: s-maj=38.4km s-min=19.2km az=89.0*

*NEIC **05** 04:33:49.7±1.1, 6.08S×146.84E, h10^{km}, mb3.6/1, Error ellipse: s-maj=24.3km s-min=15.7km az=114.0*

ISC 05 04:33:51.8±1.4**, 6.13S**±0.08×**146.8E**±0.2**, h33^{km}, n9, σ0^{s}95**/11**, mb3.6**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.27	174	Pn	Pn	04 34 41.7	-0.4
	4.5nm,0.3s,baz=14,slow=8.3,SNR=12						
PMG				Pg	P	04 34 48.5	+6.6
	14nm,0.3s,baz=349,slow=11,SNR=17						
PMG				Sn	Sn	04 35 22.4	+2.1
	7.6nm,0.3s,baz=169,slow=19,SNR=3.2						
PMG				Lg		04 35 32.6	
	10nm,0.3s,baz=29,slow=21,SNR=3.2						
PMG	Port Moresby	3.27	174	*e*Pn	Pn	04 34 41.7	-0.4
PMG				*e*Pg	P	04 34 48.6	+6.7
PMG				*e*S	S	04 35 18.5	-1.6
PMG				Lg		04 35 32.6	
WRAB	Tennant Creek	18.29	220	*e*P	P	04 38 04.9	0.0
	4.0nm,0.8s						
WRA	Warramunga Arr	18.30	220	P	P	04 38 04.5	-0.5
	0.2nm,0.3s,baz=42,slow=12,SNR=14						
ASAR	Alice Springs	21.39	214	P	P	04 38 38.9	0.0
	0.4nm,0.4s,mb3.1,baz=52,slow=8.5,SNR=10						
FITZ	Fitzroy Crossi	23.83	238	P	P	04 39 03.5	+0.6
	3.7nm,0.8s,mb3.9,baz=77,slow=3.7,SNR=4.3						
PPT	Papeete	63.05	107	*e*LR	LR	04 44 23.1	
	256nm,27.0s,baz=245						
TBI	Tubuai	63.51	113	*e*LR	LR	04 44 13.3	
	239nm,27.0s						
ILAR	Eielson Array	85.68	23	P	P	04 46 28.2	0.0
	0.4nm,0.6s,mb3.8,baz=254,slow=5.4,SNR=4.3						

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*IDC **05** 04:48:59.8±0.6, 1.33N×96.96E, mb4.4/18, mb1 4.5/19, mb1mx4.4/25, mbtmp4.4/19, ML4.7/1, MS3.8/3, Ms1 3.9/3, ms1mx3.4/23, Error ellipse: s-maj=21.8km s-min=13.7km az=49.0*

*BJI **05** 04:49:03.7, 1.09N×97.22E, h44^{km}, mB4.9, mb4.9, Ms4.4, Msz4.1*

*MOS **05** 04:49:03.7±1.2, 1.47N×97.12E, h33^{km}, mb5.0/17, Error ellipse: s-maj=18.3km s-min=8.9km az=104.0*

*NEIC **05** 04:49:07.3±2.3, 1.39N×97.13E, h49^{km}±20^{km}, mb4.7/7, Error ellipse: s-maj=19.0km s-min=8.3km az=52.0*

ISC 05 04:49:02.4±0.4**, 1.28N**±0.05×**96.99E**±0.05**, h29^{km}, h29^{km}**±2.3^{km}**:pP-P, n78, σ1^{s}14**/79**, mb4.7**/45**, MS4.1**/9**, 6C-3D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPM	Ipoh	5.20	51	P	Pn	04 50 20.1	-0.2
KULM	Kulim	5.41	42	⇑*i*P	Pn	04 50 22.3	-1.1
KGM	Kluang	6.37	83	P	Pn	04 50 37.8	+0.8
KSM	Kuching	13.31	89	P	P	04 52 12.9	+0.7
KSM				*e*		04 52 23.5	
CMAR	Chiang Mai Arr	17.18	6	Pn	P	04 52 59.6	-2.7
	1.0nm,0.3s,baz=194,slow=13,SNR=12						
CMAR				LR	LR	04 59 58.5	
	comp=Z,241nm,19.5s,baz=185,slow=38						
KKM	Kota Kinabalu	19.76	76	P	P	04 53 31.3	-2.0
KKM	Kota Kinabalu	19.76	76	P	P	04 53 33.7	+0.3
TSM	Tawau	21.07	81	P	P	04 53 47.8	+0.8
KMI	Kunming	24.35	13	P	P	04 54 21.3	+2.0
KMI				AP		04 54 27.2	
KMI				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.6						
KMI				LR	LR		
	comp=N,660nm,14.8s,MS4.4						
KMI				LR	LR		
	comp=E,470nm,13.4s,MS4.4						
KMI				LR	LR		
	comp=Z,760nm,14.8s,MS4.3						
SHL	Shillong	24.65	349	⇑*i*P	P	04 54 22.2	0.0
GYA	Guiyang	26.71	20	⇓*i*P	P	04 54 41.6	+0.2
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.6						
GYA				AMB	AMB		
	comp=Z,50nm,5.7s						
GYA				LR	LR		
	comp=N,720nm,14.1s,MS4.4						
GYA				LR	LR		
	comp=E,400nm,13.8s,MS4.4						
GYA				LR	LR		
	comp=Z,950nm,15.5s,MS4.5						
PKI	Pulchoki	28.41	338	*e*P	P	04 54 59.7	+2.9
GUN	Gumba	28.54	339	*e*P	P	04 54 59.7	+1.7
	comp=Z,49nm,0.8s,mb5.3						
DMN	Daman	28.55	338	*e*P	P	04 55 00.5	+2.4
	comp=Z,36nm,0.9s,mb5.1						
KKN	Kakani	28.65	338	*e*P	P	04 55 00.4	+1.4
	comp=Z,7.4nm,0.2s,mb5.1						
KKN	Kakani	28.65	338	*e*P	P	04 55 00.4	+1.4
KKN				pmax	pmax		
	comp=Z,4.0nm,0.2s,mb4.8						
KOLN	Koldanda	29.30	335	*e*P	P	04 55 06.6	+1.7
	comp=Z,40nm,0.8s,mb5.2						
MBWA	Marble Bar	31.49	136	*e*P	P	04 55 26.0	+1.7
	comp=Z,2.2nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	34.14	126	P	P	04 55 46.7	-0.8
	comp=Z,5.0nm,0.6s,mb4.6,baz=313,slow=5.9,SNR=7.8						
XAN	Xi'an	34.45	18	P	P	04 55 48.7	-1.3
XAN				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
LZH	Lanzhou	35.22	10	⇑P	P	04 55 56.0	-0.4
LZH				AP	pP	04 56 04.5	-0.5
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
NJ2	Nanjing	36.91	32	*e*P	P	04 56 10.5	-0.3
NJ2				AP	pP	04 56 20.3	+0.9
NJ2				XP	sP	04 56 24.2	+1.2
NJ2				PP	PP	04 57 37.4	+0.4
NJ2				S	S	05 01 54.0	+0.8
NJ2				XS		05 02 11.0	
NJ2				AMB	AMB		

	comp=Z,20nm,1.0s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,120nm,5.8s						
NJ2				LR	LR		
	comp=N,440nm,23.7s						
NJ2				LR	LR		
	comp=E,650nm,18.0s						
NJ2				LR	LR		
	comp=Z,300nm,22.6s,MS4.0						
SSE	Sheshan	37.47	35	eP	P	04 56 14.7	-0.8
SSE				AP	pP	04 56 24.7	+0.6
SSE				XP	sP	04 56 28.4	+0.7
SSE				PP	PP	04 57 40.6	-3.3
SSE				S	S	05 02 04.2	+2.3
SSE				XS		05 02 21.2	
SSE				SCS	ScS	05 06 22.2	-2.6
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,50nm,6.6s						
SSE				LR	LR		
	comp=N,120nm,12.7s,MS4.1						
SSE				LR	LR		
	comp=E,170nm,12.7s,MS4.1						
SSE				LR	LR		
	comp=Z,280nm,16.6s,MS4.1						
KAKA	Kakadu	37.82	113	eP	P	04 56 18.0	-0.6
GTA	Gaotai	38.04	4	P	P	04 56 19.8	-0.4
GTA				AP	pP	04 56 28.5	-0.3
GTA				XP	sP	04 56 32.7	+0.3
GTA				AMB	AMB		
	comp=Z,100nm,8.0s						
GTA				LR	LR		
	comp=N,220nm,15.6s,MS4.2						
GTA				LR	LR		
	comp=E,140nm,14.8s,MS4.2						
GTA				LR	LR		
	comp=Z,190nm,14.1s,MS4.0						
JOW	Kunigami	39.34	47	P	P	04 56 30.9	-0.4
	comp=Z,30nm,0.7s,mb5.1,baz=250,slow=9.7,SNR=8.3						
HHC	Hu-ho-hao-te	41.55	17	eP	P	04 56 52.2	+3.0
HHC				AP	pP	04 56 57.1	-0.8
HHC				XP	sP	04 57 02.6	+1.2
HHC				S	S	05 02 53.5	-9.5
HHC				AMB	AMB		
	comp=Z,60nm,6.3s						
HHC				LR	LR		
	comp=N,100nm,12.7s,MS4.3						
HHC				LR	LR		
	comp=E,260nm,16.5s,MS4.3						
HHC				LR	LR		
	comp=Z,140nm,25.0s						
WRA	Warramunga Arr	42.25	122	P	P	04 56 55.5	+0.2
	comp=Z,3.0nm,0.6s,mb4.1,baz=301,slow=9.1,SNR=40						
WRAB	Tennant Creek	42.26	122	eP	P	04 56 55.9	+0.5
WRAB				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.5						
WRAB	Tennant Creek	42.26	122	eP	P	04 56 55.9	+0.5
	comp=Z,14nm,1.1s,mb4.5						
ASAR	Alice Springs	43.61	127	P	P	04 57 06.9	+0.6
	comp=Z,2.6nm,0.9s,mb4.0,baz=299,slow=7.3,SNR=19						
JNU	Nakatsue	44.89	42	P	P	04 57 15.3	-1.2
	comp=Z,16nm,0.9s,mb4.8,baz=257,slow=13,SNR=5.4						
SONM	Songino Array	47.09	9	P	P	04 57 33.9	+0.2
	comp=Z,9.1nm,0.8s,mb4.8,baz=192,slow=8.5,SNR=50						
MKAR	Makanchi Array	47.12	346	iP	P	04 57 35.0	+1.0
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MKAR	Makanchi Array	47.12	346	P	P	04 57 34.4	+0.4
	comp=Z,6.0nm,0.5s,mb4.8,baz=160,slow=8.6,SNR=61						
MKAR				LR	LR	05 20 46.2	
	comp=Z,48nm,19.8s,MS3.5,baz=175,slow=40						
ULN	Ulaanbaatar	47.22	9	c iP	P	04 57 35.5	+0.7
ULN	Ulaanbaatar	47.22	9	eP	P	04 57 35.2	+0.4
	comp=Z,8.8nm,1.0s,mb4.6						
ZAK	Zakamensk	49.22	5	eP	P	04 57 50.8	+0.6
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
CN2	Changchun	49.33	27	eP	P	04 57 50.9	-0.3
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
TLY	Talaya	50.54	5	eP	P	04 58 00.7	+0.4
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
TLY				MLR	MLR		
	comp=Z,123nm,15.0s,MS4.0						
MJAR	Matsushiro Arr	51.78	42	P	P	04 58 08.3	-1.7
	comp=Z,1.3nm,0.5s,mb4.1,baz=213,slow=6.6,SNR=9.0						
CIT	Chita	52.44	13	eP	P	04 58 14.2	-0.5
CIT				e	pP	04 58 23.0	-0.5
CIT				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.8						
ZAL	Zalesovo	53.44	351	P	P	04 58 22.0	-0.1
	comp=Z,7.6nm,0.6s,mb4.8,baz=314,slow=6.3,SNR=26						
ZAL	Zalesovo	53.44	351	P	P	04 58 22.0	-0.1
STKA	Stephens Creek	53.56	132	P	P	04 58 24.8	+1.5
	comp=Z,3.2nm,0.6s,mb4.4,baz=314,slow=7.8,SNR=8.5						
NVS	Novosibirsk	54.57	350	eP	P	04 58 29.1	-1.2
BVAR	Borovoye Array	56.11	341	P	P	04 58 41.1	-0.4
	comp=Z,3.6nm,0.6s,mb4.5,baz=149,slow=8.6,SNR=23						
KLR	Kul'dur	56.28	27	eP	P	04 58 39.0	-3.8
KLR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
CHKZ	Chkalovo	56.59	342	eP	P	04 58 44.9	-0.1
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
CHKZ	Chkalovo	56.59	342	eP	P	04 58 44.9	-0.1
	comp=Z,7.4nm,0.6s,mb4.9						
CHKZ				e		04 58 49.7	
AB31	Akbulak array	57.35	332	iP	P	04 58 50.4	-0.1
AB31				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
YSS	Yuzh-Sakhalins	60.40	34	eP	P	04 59 11.5	-0.2
YSS				e		04 59 22.5	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
YSS	Yuzh-Sakhalins	60.40	34	eP	P	04 59 11.9	+0.2
	comp=Z,19nm,1.0s,mb5.1						
SVE	Sverdlovsk	62.54	338	⇑eP	P	04 59 26.0	+0.1
SVE				e		04 59 45.0	
SVE				pmax	pmax		
	comp=Z,160nm,1.0s						
ARU	Arti	63.03	337	⇓iP	P	04 59 28.4	-0.8
ARU				e		05 01 50.5	
ARU				ePPP	PPP	05 03 18.5	-1.9
ARU				eS	S	05 07 59.2	+3.1
ARU				eSS	SS	05 11 56.3	-7.6
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
KIV	Kislovodsk	64.11	319	eP	P	04 59 45.3	+8.8
KIV				pmax	pmax		
	comp=N,3.0nm,0.8s						
KIV				pmax	pmax		
	comp=E,2.0nm,0.8s						
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
YAK	Yakutsk	65.41	16	eP	P	04 59 43.2	-1.3
YAK				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.4s						
SOC	Sochi	65.92	318	eP	P	04 59 45.3	-2.9
SOC				e		05 00 15.9	
SOC				e		05 02 11.5	
SOC				eS	S	05 08 31.9	-0.1
SOC				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.2						
SOC				pmax	pmax		
	comp=N,39nm,1.4s						
SOC				pmax	pmax		
	comp=E,33nm,1.4s						
BRTR	Keskin Array B	68.91	312	P	P	05 00 06.5	-0.5
	comp=E,0.7nm,0.6s,mb3.8,baz=135,slow=5.2,SNR=5.4						
MATP	Matopo	70.36	248	P	P	05 00 15.6	-0.6
	comp=E,0.9nm,0.7s,mb3.8,baz=114,slow=10.0,SNR=2.1						
OBN	Obninsk	72.44	328	deP	P	05 00 25.1	-3.0
OBN				eS	S	05 09 40.2	-8.6
OBN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
TIXI	Tiksi	73.15	10	⇑eP	P	05 00 31.3	-0.7
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
AKASG	Malin Array Be	75.07	322	P	P	05 00 43.0	-0.4
	comp=Z,1.0nm,0.5s,mb4.0,baz=90,slow=4.6,SNR=9.2						
FINES	FINESS Array B	79.83	333	iP	P	05 01 10.7	+1.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	79.83	333	P	P	05 01 09.7	0.0
	comp=Z,2.4nm,0.6s,mb4.3,baz=103,slow=4.7,SNR=16						
KAF	Kangasniemi	79.92	333	ep	P	05 01 10.7	+0.6
ARCES	ARCESS Array B	82.39	340	P	P	05 01 21.9	-1.0
	comp=Z,4.9nm,0.9s,mb4.5,baz=99,slow=5.1,SNR=17						
URZ	Urewera	83.03	129	LR	LR	05 34 09.8	
	comp=Z,170nm,21.9s,MS4.4,baz=25,slow=33						
GERES	GERESS Array B	84.62	319	P	P	05 01 35.1	+0.5
	comp=Z,0.9nm,0.9s,mb3.9,baz=104,slow=5.5,SNR=6.0						
NB2	NORSAR Subarra	86.84	331	P	P	05 01 46.8	+1.4
	comp=Z,2.5nm,0.9s,mb4.4,baz=96,slow=4.8						
NOA	NORSAR Array B	86.84	331	P	P	05 01 46.0	+0.7
	comp=Z,1.7nm,0.9s,mb4.3,baz=92,slow=5.0,SNR=4.1						
SNAA	Sanae	94.30	198	e	P	05 02 16.9	-3.1
VNA2	Neumayer--Watz	95.89	199	e	P	05 02 25.6	-1.7
VNA2	Neumayer--Watz	95.89	199	e	P	05 02 27.9	+0.6
VNA3	Neumayer Olymp	96.53	198	e	P	05 02 24.3	-5.9
VNA3	Neumayer Olymp	96.53	198	e	P	05 02 26.8	-3.4
TXAR	Lajitas Array	143.71	31	PKP	PKPdf	05 08 36.0	-4.5
	comp=Z,0.3nm,0.5s,baz=33,slow=0.5,SNR=7.4						
CPUP	Villa Florida	144.92	223	ePKIKP	PKPdf	05 08 41.2	-1.5

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*BJI **05** 04:54:49.1, 19.76S×177.32W, h487^{km}, mB4.9, mb4.7*
*NEIC **05** 04:54:50.4±1.1, 20.49S×177.92W, h496^{km}±12^{km}, mb4.3/13, Error ellipse: s-maj=12.2km s-min=8.0km az=140.0*
*IDC **05** 04:54:54.5±1.9, 20.66S×178.02W, h540^{km}±22^{km}, mb3.8/19, mb1 3.9/20, mb1mx3.9/23, mbtmp4.6/20, Error ellipse: s-maj=15.8km s-min=10.0km az=151.0*
ISC 05 04:54:47.0±1.0**, 20.46S**±0.07×**177.99W**±0.08**, h462^{km}**±12^{km}**, n110, σ0^{s}.87**/64**, mb4.2**/32**, 9C-4D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.81	43	P	P	04 56 53.9	+1.2
	18nm,0.3s,baz=43,slow=3.0,SNR=21						
AFI				S	S	04 58 31.3	-1.1
	16nm,0.3s,baz=14,slow=22,SNR=9.9						
AFI	Afiamalu	8.81	43	⇑iP	P	04 56 54.4	+1.7
	73nm,0.5s						
DZM	Mont Dzumac	14.60	261	P	P	04 57 51.9	-2.9
	1.6nm,0.3s,baz=76,slow=19,SNR=13						
URZ	Urewera	18.24	192	P	P	04 58 31.6	+0.3
	2.8nm,0.3s,baz=39,slow=1.2,SNR=13						
URZ	Urewera	18.24	192	ePN	P	04 58 31.6	+0.3
THZ	Tophouse	22.60	198	PN	P	04 59 12.3	0.0
RPZ	Rata Peaks	24.93	199	P	P	04 59 32.7	-0.7
	5.0nm,0.7s,mb4.0,baz=36,slow=19,SNR=3.1						
CTA	Charters Tower	33.50	264	P	P	05 00 49.3	+1.3
	26nm,0.7s,mb4.8,baz=98,slow=10,SNR=26						
CTAO	Charters Tower	33.50	264	eP	P	05 00 49.5	+1.5
	24nm,0.8s,mb4.7						
PMG	Port Moresby	35.34	283	P	P	05 01 03.4	0.0
	34nm,0.7s,mb4.9,baz=78,slow=6.4,SNR=11						
PMG	Port Moresby	35.34	283	eP	P	05 01 04.8	+1.3
	37nm,0.8s,mb4.9						
STKA	Stephens Creek	37.81	244	eP	P	05 01 25.2	+1.4
STKA	Stephens Creek	37.81	244	P	P	05 01 24.8	+1.0
	8.1nm,0.8s,mb4.2,baz=83,slow=8.9,SNR=9.4						
STKA				PcP	PcP	05 03 27.9	-1.6
	0.9nm,0.5s,baz=21,slow=3.1,SNR=2.9						
ASAR	Alice Springs	44.53	257	P	P	05 02 18.4	+0.5
	46nm,0.8s,mb5.0,baz=98,slow=7.6,SNR=462						
ASAR				PcP	PcP	05 03 50.5	-1.5
	3.2nm,0.6s,baz=105,slow=3.8,SNR=6.4						
ASAR				S	S	05 08 12.9	-6.1
	2.7nm,0.9s,baz=90,slow=14,SNR=8.6						
ASPA	Alice Springs	44.54	257	⇓iP	P	05 02 18.5	+0.6
ASPA				eS	S	05 08 14.1	-5.0
WB2	Warramunga Arr	44.60	262	eP	P	05 02 18.4	-0.1
WRAB	Tennant Creek	44.60	262	⇓eP	P	05 02 18.2	-0.3
	50nm,1.0s,mb4.9						
WRA	Warramunga Arr	44.61	262	P	P	05 02 18.6	0.0
	18nm,0.7s,mb4.7,baz=96,slow=5.9,SNR=257						
WRA				PcP	PcP	05 03 50.9	-1.4
	1.5nm,0.7s,baz=97,slow=3.0,SNR=4.3						
WRA				S	S	05 08 14.7	-5.4
	1.6nm,0.9s,baz=96,slow=13,SNR=5.3						
KAKA	Kakadu	47.98	271	eP	P	05 02 44.3	-0.2
FITZ	Fitzroy Crossi	53.04	262	⇓iP	P	05 03 21.7	-0.2
FITZ	Fitzroy Crossi	53.04	262	P	P	05 03 21.8	-0.1
	16nm,0.6s,mb4.6,baz=144,slow=3.4,SNR=35						
MBWA	Marble Bar	57.87	257	eP	P	05 03 54.5	-1.0
	26nm,1.0s,mb4.5						
SBA	Scott Base	57.91	184	eP	P	05 03 56.3	+1.2
	2.0nm,0.7s,mb3.6						
VNDA	Vanda	57.95	185	P	P	05 03 51.4	-3.9
	0.7nm,0.6s,mb3.2,baz=27,slow=2.3,SNR=4.0						
VNDA	Vanda	57.95	185	eP	P	05 03 51.7	-3.7
	0.8nm,0.7s,mb3.2						
KLBR	Kellerberrin	58.08	245	eP	P	05 03 56.0	-0.8
NWAO	Narrogin (SRO)	58.39	243	P	P	05 03 58.1	-0.8
	11nm,0.7s,mb4.3,baz=145,slow=6.5,SNR=10						
QSPA	South Pole Qui	69.61	180	eP	P	05 05 10.2	+0.6
	3.0nm,0.7s,mb3.9						
MJAR	Matsushiro Arr	70.18	324	P	P	05 05 12.8	-0.9
	3.5nm,0.8s,mb4.0,baz=157,slow=5.5,SNR=15						
MAT	Matsushiro	70.18	324	eP	P	05 05 13.0	-0.7
	5.3nm,0.6s,mb4.2						
MAT	Matsushiro	70.18	324	P	P	05 05 12.6	-1.1
KSM	Kuching	73.41	278	eP	P	05 05 33.1	+0.1
ASAJ	Asahikawa	73.69	332	P	P	05 05 34.8	+0.8
	15nm,0.8s,mb4.6,baz=218,slow=7.6,SNR=13						
YSS	Yuzh-Sakhalins	75.86	333	eP	P	05 05 46.6	+0.5
	17nm,0.8s,mb4.6						
YBH	Yreka Blue Hor	80.25	39	P	P	05 06 09.9	+0.3
	2.7nm,0.7s,mb3.9,baz=221,slow=2.7,SNR=6.6						
NVAR	Mina Array Bea	80.99	43	P	P	05 06 14.1	+0.5
	1.8nm,0.8s,mb3.6,baz=231,slow=12,SNR=9.7						
NVAR	Mina Array Bea	80.99	43	P	P	05 06 14.1	+0.5
MAW	Mawson	81.61	200	P	P	05 06 15.7	-0.4
	2.5nm,0.8s,mb3.8,baz=157,slow=7.7,SNR=3.5						
CN2	Changchun	82.27	322	eP	P	05 06 20.1	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
HLID	Hailey	86.29	41	P	P	05 06 40.3	+0.6
	comp=Z,0.7nm,0.7s,mb3.4						
SYO	Syowa Base	86.77	193	⇑P	P	05 06 39.6	-1.8
MCK	McKinley	86.93	12	eP	P	05 06 41.3	-1.0
	comp=Z,1.6nm,0.7s,mb3.9						
TXAR	Lajitas Array	87.03	57	P	P	05 06 44.5	+0.9
	comp=Z,0.7nm,0.7s,mb3.5,baz=222,slow=6.5,SNR=9.5						
SNAA	Sanae	88.05	178	e	P	05 06 52.6	+5.2
XAN	Xi'an	88.11	307	P	P	05 06 49.3	+0.7
XAN				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
COLA	College	88.16	12	P	P	05 06 47.1	-1.0
	comp=Z,2.6nm,0.6s,mb4.1						
VNA3	Neumayer Olymp	88.19	176	e	P	05 06 47.7	-0.4
VNA3	Neumayer Olymp	88.19	176	e	P	05 07 00.7	+13
VNA3	Neumayer Olymp	88.19	176	e	P	05 07 05.1	+17
ILAR	Eielson Array	88.27	13	P	P	05 06 47.4	-1.2
	comp=Z,0.8nm,0.5s,mb3.7,baz=218,slow=5.3,SNR=9.4						
VNA2	Neumayer--Watz	88.63	177	e	P	05 06 50.1	-0.1
VNA2	Neumayer--Watz	88.63	177	e	P	05 07 04.2	+14
VNA2	Neumayer--Watz	88.63	177	e	P	05 07 07.9	+18
VNA1	Neumayer--Stat	88.85	177	e	P	05 06 58.8	+7.6
VNA1	Neumayer--Stat	88.85	177	e	P	05 07 03.5	+12
BW06	Boulder Array	88.92	43	eP	P	05 06 52.0	-0.2
	comp=Z,0.7nm,0.5s,mb3.8						
PDAR	Pinedale Array	88.92	43	P	P	05 06 52.4	+0.1
	comp=Z,0.8nm,0.6s,mb3.7,baz=222,slow=4.4,SNR=5.6						
HHC	Hu-ho-hao-te	89.33	314	eP	P	05 06 54.9	+0.8
HHC				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.2						
HHC				AMB	AMB		
	comp=Z,130nm,7.1s						
CMAR	Chiang Mai Arr	90.11	290	P	P	05 06 59.5	+1.4
	comp=Z,8.6nm,0.8s,mb4.6,baz=117,slow=2.8,SNR=36						
SONM	Songino Array	95.72	319	P	P	05 07 22.9	-0.4
	comp=Z,0.6nm,0.6s,mb3.9,baz=135,slow=3.5,SNR=5.4						
MKAR	Makanchi Array	111.17	313	PKiKP		05 12 25.3	
	comp=Z,1.0nm,0.6s,baz=93,slow=0.7,SNR=11						
MKAR	Makanchi Array	111.17	313	PKPdf	PKPdf	05 12 25.3	-1.6
CHKZ	Chkalovo	118.86	321	ePKPdf	PKPdf	05 12 40.4	-1.2
ARCES	ARCESS Array B	128.88	350	PKP	PKPdf	05 13 00.3	-0.3
	comp=Z,1.0nm,0.6s,slow=1.2,SNR=7.2						
KAF	Kangasniemi	135.11	344	epkp	PKPdf	05 13 10.9	-1.5
FINES	FINESS Array B	135.73	344	PKhKP		05 13 10.2	
	comp=Z,0.8nm,0.5s,baz=87,slow=1.4,SNR=11						
BLJS	Baljurashi	142.89	276	P	PKPdf	05 13 27.2	-0.3
AKASG	Malin Array Be	142.98	331	PKhKP		05 13 23.4	
	comp=Z,14nm,0.6s,baz=41,slow=4.2,SNR=108						
AKASG	Malin Array Be	142.98	331	PKP	PKPdf	05 13 23.4	-3.3
HILS	Ha'il	143.10	289	P	PKPbc	05 13 26.2	0.0
ELZG	Elazig	143.44	308	iP	PKPbc	05 13 28.0	+1.1
MALT	Malatya	143.91	308	ePKP	PKPdf	05 13 28.6	-0.1
GZT	Gaziantep	144.87	306	iP	PKPdf	05 13 31.9	+1.4
MBAR	Mbarara	144.94	237	ePKPdf	PKPdf	05 13 32.2	+0.9
BOYT	Boyabat	145.20	314	iP	PKPdf	05 13 33.0	+2.1
KBRS	Khaybar	145.41	286	P	PKPdf	05 13 33.3	+1.6
COBT	Iskenderun	146.13	306	iP	PKPdf	05 13 34.9	+2.3
AVNT	Avonos	146.35	310	iP	PKPdf	05 13 35.5	+2.5
QURS	Qurayyt al Mil	146.56	296	P	PKPdf	05 13 38.2	+4.7
YNBS	Yanbu' al Bahr	146.56	283	P	PKPdf	05 13 37.6	+3.9
ELDT	Eldivan	146.62	314	iP	PKPdf	05 13 36.5	+3.2
BRTR	Keskin Array B	146.82	312	PKPbc	PKPbc	05 13 36.4	+0.6
	comp=Z,3.8nm,0.6s,baz=137,slow=4.5,SNR=21						
OJC	Ojcow	147.12	339	ePKP	PKPdf	05 13 36.5	+2.7
UMJS	Umm Lajj	147.18	285	P	PKPdf	05 13 39.3	+4.7
KOLS	Kolonicke sedl	147.28	335	ePKP	PKPdf	05 13 38.3	+4.2
KOLS				e		05 13 41.3	
SGKT	Sivrigoynuk	147.50	315	iP	PKPdf	05 13 38.6	+3.9
NIE	Niedzica	147.62	337	ePKP	PKPdf	05 13 38.9	+4.3
KSP	Ksiaz	147.65	343	ePKP	PKPdf	05 13 38.8	+4.2
TBKS	Tabuk	147.68	291	P	PKPdf	05 13 40.4	+5.0
MEST	Erdemli	147.70	307	iP	PKPdf	05 13 38.8	+3.6
OKC	Ostrava-Krasne	148.00	340	⇑ePKPB	PKPdf	05 13 36.2	+1.0
OKC				ePKPAB	PKPab	05 13 44.9	-0.7
CLL	Collm	148.02	347	⇓iPKP1	PKPdf	05 13 39.5	+4.3
CLL				iPKP2	PKPab	05 13 43.7	-2.0
UPC	Upice	148.03	343	⇑ePKPB	PKPdf	05 13 39.7	+4.5
UPC				ePKPab	PKPab	05 13 44.7	-1.1
DPC	Dobruska-Polom	148.09	343	⇑ePKPB	PKPdf	05 13 40.1	+4.8
DPC				ePKPAB	PKPab	05 13 44.8	-1.2
JMQS	Jabal Moqyreh	148.18	292	P	PKPdf	05 13 41.3	+5.2
BRG	Berggiesshubel	148.22	346	iPKP	PKPdf	05 13 40.6	+5.1
BRG				i		05 13 45.2	
KECS	Kecovo	148.33	336	ePKP	PKPdf	05 13 41.2	+5.4
KECS				e		05 13 46.2	
PVCC	Panska Ves	148.39	345	⇑ePKPB	PKPdf	05 13 40.7	+4.9
AYUS	'Aynunah	148.80	291	P	PKPdf	05 13 45.3	+8.1
JMOS	Jabal al Moall	148.81	293	P	PKPdf	05 13 45.3	+8.1
ALWS	Ilw as Safayha	148.83	293	P	PKPdf	05 13 42.1	+5.0
CSS	Prodhromos	148.88	304	ePKPbc	PKPdf	05 13 41.4	+4.3
PRU	Pruhonice	148.89	344	⇑ePKPB	PKPdf	05 13 41.6	+5.0
PRU				ePKPAB	PKPab	05 13 48.2	-1.1
BDAS	Al Bad'	148.92	291	P	PKPdf	05 13 42.5	+5.1
VYHS	Vyhne	148.92	338	ePKP	PKPdf	05 13 42.3	+5.6
VYHS				e		05 13 48.7	
HAQS	Haql	148.98	293	P	PKPdf	05 13 42.9	+5.5
NKC	Novy Kostel	149.16	347	⇑ePKPB	PKPdf	05 13 42.4	+5.4
NKC				ePKPAB	PKPab	05 13 49.0	-1.4
SMOL	Smolenice	149.38	340	ePKP	PKPdf	05 13 43.8	+6.3
SMOL				e		05 13 49.9	
KHC	Kasperske Hory	149.93	345	⇑ePKPB	PKPdf	05 13 44.4	+6.1
KHC				ePKPAB	PKPab	05 13 52.4	-1.2
GERES	GERESS Array B	150.16	344	PKPbc	PKPdf	05 13 44.1	+5.4
	comp=Z,2.9nm,0.7s,baz=18,slow=4.2,SNR=3.8						
GERES				PKPab	PKPab	05 13 53.2	-1.4
	comp=Z,1.2nm,0.7s,baz=27,slow=3.0,SNR=6.9						

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*NEIC **05** 05:06:21.3±1.8, 20.07S×177.97W, h550^{km}, mb3.9/4, Error ellipse: s-maj=43.7km s-min=16.7km az=223.0*
*IDC **05** 05:06:23.5±3.0, 20.10S×178.24W, h553^{km}±38^{km}, mb3.5/6, mb1 3.6/7, mb1mx3.2/18, mbtmp4.4/7, Error ellipse: s-maj=41.6km s-min=35.3km az=174.0*
ISC 05 05:06:15.3±2.3**, 20.4S**±0.1×**177.9W**±0.2**, h490^{km}**±41^{km}**, n16, σ0^{s}.57**/17**, mb3.9**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.64	43	S	S	05 09 57.8	-0.2
	3.2nm,0.3s,baz=38,slow=19,SNR=5.1						
URZ	Urewera	18.37	193	P	P	05 10 06.2	+6.7
	1.1nm,0.3s,baz=338,slow=2.4,SNR=3.2						
URZ				S	S	05 12 59.6	-0.8
	baz=333,slow=18,SNR=3.2						
CTA	Charters Tower	33.65	264	P	P	05 12 16.4	+0.7
	3.2nm,0.3s,mb4.2,baz=93,slow=11,SNR=11						
CTAO	Charters Tower	33.65	264	eP	P	05 12 16.8	+1.1
	3.1nm,0.4s,mb4.1						
STKA	Stephens Creek	37.98	244	P	P	05 12 52.3	+0.7
	0.9nm,0.4s,mb3.5,baz=90,slow=13,SNR=4.2						
STKA	Stephens Creek	37.98	244	eP	P	05 12 52.5	+1.0
ASAR	Alice Springs	44.69	257	P	P	05 13 45.5	+0.1
	5.5nm,0.5s,mb4.2,baz=96,slow=7.7,SNR=91						
ASAR				PcP	PcP	05 15 16.8	-1.3
	0.6nm,0.5s,baz=106,slow=4.4,SNR=3.9						
ASAR				S	S	05 19 40.9	-4.9
	0.4nm,0.8s,baz=90,slow=15,SNR=2.4						
ASPA	Alice Springs	44.69	257	eP	P	05 13 45.4	0.0
WB2	Warramunga Arr	44.75	262	eP	P	05 13 45.7	-0.2
WRAB	Tennant Creek	44.75	262	eP	P	05 13 45.4	-0.5
	3.4nm,0.4s,mb4.1						
WRA	Warramunga Arr	44.76	262	P	P	05 13 45.2	-0.8
	2.4nm,0.3s,mb4.1,baz=97,slow=7.5,SNR=205						
FITZ	Fitzroy Crossi	53.19	262	P	P	05 14 48.8	-0.2
	3.2nm,0.5s,mb3.9,baz=169,slow=5.3,SNR=10						
SBA	Scott Base	58.03	184	P	P	05 15 22.4	+0.6
	1.2nm,0.5s,mb3.5						
QSPA	South Pole Qui	69.72	180	eP	P	05 16 36.8	+0.7
	1.6nm,0.6s,mb3.7						
CMAR	Chiang Mai Arr	90.20	290	P	P	05 18 23.9	-0.3
	0.9nm,0.5s,mb3.9,baz=123,slow=2.8,SNR=5.1						
AKASG	Malin Array Be	142.95	331	PKhKP		05 24 47.0	
	1.3nm,0.5s,baz=39,slow=4.3,SNR=13						

IDC 05 05:24:34.2±2.8**, 18.76S×176.71W, mb3.8**/3**, mb1 4.2**/3**, mb1mx3.7**/16**, mbtmp3.8**/3**, Error ellipse: s-maj=291.7km s-min=33.3km az=159.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.08	260	P	P	05 32 59.8	-2.2
	0.6nm,0.4s,baz=97,slow=7.0,SNR=21						
ASAR	Alice Springs	46.13	255	P	P	05 33 00.9	-1.4
	1.1nm,0.4s,baz=93,slow=7.7,SNR=14						
TXAR	Lajitas Array	85.09	57	P	P	05 37 12.5	-1.1
	0.4nm,0.8s,baz=217,slow=6.3,SNR=4.3						

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*IDC **05** 05:30:25.6±2.1, 2.47N×96.02E, mb4.0/6, mb1 4.2/7, mb1mx3.8/20, mbtmp4.0/7, ML4.1/1, MS3.2/1, Ms1 3.4/1, ms1mx2.9/23, Error ellipse: s-maj=85.7km s-min=20.6km az=59.0*
*NEIC **05** 05:30:30.8±0.8, 2.47N×96.15E, h30^{km}, mb4.3/6, Error ellipse: s-maj=19.5km s-min=10.1km az=50.0*
ISC 05 05:30:29.0±0.9**, 2.5N**±0.1×**96.2E**±0.1**, h30^{km}, n18, σ0^{s}.92**/18**, mb4.2**/12**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.29	58	eP	Pn	05 31 48.5	+0.5
CMAR	Chiang Mai Arr	16.12	10	Pn	P	05 34 15.7	+0.4
	0.2nm,0.3s,baz=196,slow=11,SNR=13						
CMAR				LR	LR	05 40 48.1	
	comp=Z,83nm,19.1s,baz=187,slow=38						
PKI	Pulchoki	26.99	339	eP	P	05 36 11.7	+1.4
GUN	Gumba	27.13	340	eP	P	05 36 12.3	+0.7
	14nm,0.7s,mb4.6						
DMN	Daman	27.14	338	eP	P	05 36 13.7	+2.0
GKN	Gorkha	27.67	338	eP	P	05 36 16.8	+0.3
	13nm,0.6s,mb4.8						
KOLN	Koldanda	27.87	336	eP	P	05 36 18.7	+0.4
	13nm,0.7s,mb4.7						
WRA	Warramunga Arr	43.59	122	P	P	05 38 32.8	+0.3
	0.5nm,0.4s,mb3.6,baz=301,slow=9.2,SNR=17						
WRAB	Tennant Creek	43.60	122	eP	P	05 38 33.2	+0.5
	1.9nm,0.5s,mb4.1						
ASAR	Alice Springs	44.99	127	P	P	05 38 43.6	-0.2
	0.3nm,0.4s,mb3.5,baz=292,slow=7.5,SNR=3.9						
MKAR	Makanchi Array	45.76	347	P	P	05 38 48.7	-0.9
	3.1nm,0.4s,mb4.6,baz=156,slow=9.1,SNR=57						
MKAR	Makanchi Array	45.76	347	P	P	05 38 48.7	-0.9
SONM	Songino Array	46.04	10	P	P	05 38 50.8	-1.0
	1.4nm,0.5s,mb4.2,baz=189,slow=9.2,SNR=18						
SONM				PcP	PcP	05 40 28.3	-0.1
	0.7nm,0.6s,baz=193,slow=4.2,SNR=5.0						
ULN	Ulaanbaatar	46.19	10	eP	P	05 38 51.7	-1.2

	1.1nm,0.4s,mb4.1						
ZAL	Zalesovo	52.14	352	P	P	05 39 37.4	-1.3
	2.7nm,0.5s,mb4.5,baz=331,slow=5.4,SNR=8.6						
ZAL	Zalesovo	52.14	352	P	P	05 39 37.4	-1.4
CHKZ	Chkalovo	55.19	342	eP	P	05 40 00.0	-1.3
	1.1nm,0.4s,mb4.2						
ARCES	ARCESS Array B	80.99	340	P	P	05 42 41.7	-0.3
	2.6nm,1.1s,mb4.1,baz=90,slow=2.4,SNR=3.9						

*MEX **05** 05:31:05.4±0.3, 14.98N×93.58W, h10^{km}±17^{km}, MD4.1*
*NEIC **05** 05:31:05.4, 14.98N×93.58W, h10^{km}, MD4.1(MEX), After MEX.*
*CASC **05** 05:31:05.6±1.8, 15.15N×93.43W, h11^{km}, MD4.4*
ISC 05 05:31:04.8±2.2**, 15.05N**±0.06×**93.59W**±0.04**, h33^{km}**±21^{km}**, n13, σ0^{s}98**/23**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	1.86	49	eP	Pn	05 31 34.6	-0.4
CCIG				iS	Sn	05 31 57.4	-0.1
SCX	San Cristobal	1.91	29	eP	Pn	05 31 35.5	-0.3
SCX				eS	Sn	05 31 59.5	+0.6
IXG	Ixpaco	3.15	106	eP	Pn	05 31 53.0	-0.5
IXG				eS	Sn	05 32 32.4	+1.9
OXX	Oaxaca	3.63	304	eP	Pn	05 32 02.5	+2.2
OXX				eS	Sn	05 32 42.0	-0.5
VHO	Vista Hermosa	3.63	304	eP	Pn	05 32 00.4	+0.1
VHO				iS	Sn	05 32 42.0	-0.6
MRL	Marmol	3.76	89	eS	Sn	05 32 45.0	-0.8
RBDL	Robledal	3.89	103	eP	Pn	05 32 04.7	+0.7
RTR	El Retiro	3.98	106	eP	Pn	05 32 05.8	+0.5
RTR				eS	Sn	05 32 52.4	+1.0
SBLS	San Blas	4.02	107	eP	Pn	05 32 04.9	-0.9
SBLS				eS	Sn	05 32 54.1	+1.6
SNJE	San Jose	4.03	106	eP	Pn	05 32 05.9	0.0
SNJE				eS	Sn	05 32 53.1	+0.5
BOQS	Boqueron	4.37	107	eP	Pn	05 32 11.2	+0.4
BOQS				eS	Sn	05 32 59.3	-2.0
LFRS	El Faro	4.61	107	eP	Pn	05 32 13.2	-0.9
LFRS				eS	Sn	05 33 05.7	-1.6
LCBS	La Ceiba	4.68	107	eP	Pn	05 32 14.7	-0.4

*INMG **05** 05:50:28.8±0.7, 35.79N×9.96W, h10^{km}, ML1.5, Error ellipse: s-maj=8.6km s-min=4.8km az=103.0*
MDD 05 05:50:30.8±4.8**, 36.01N×9.56W, mb3.8**/1**, Error ellipse: s-maj=50.3km s-min=39.9km az=117.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTEO	Sao Teotonio	1.68	23	ePn	Pn	05 51 01.3	-0.2
PTEO				eSn	Sn	05 51 24.9	+0.9
	2.4nm,0.3s						
PTEO	Sao Teotonio	1.68	23	Pn	Pn	05 51 01.3	-0.2
PTEO				Sn	Sn	05 51 24.9	+0.9
	1.2nm,0.3s						
PALC	Alcoutim	2.22	48	ePn	Pn	05 51 09.2	-0.1
PALC				eSn	Sn	05 51 39.0	+1.2
	1.7nm,0.3s						
PALC	Alcoutim	2.22	48	Pn	Pn	05 51 09.2	-0.1
PALC				Sn	Sn	05 51 39.0	+1.2
	0.9nm,0.3s						
EGRO	El Granado	2.26	47	Pn	Pn	05 51 09.5	-0.4
	1.6nm,0.1s,SNR=15						
EGRO				Sn	Sn	05 51 39.3	+0.5
	2.0nm,0.1s,SNR=6.6						
PBEJ	Beja	2.43	33	eSn	Sn	05 51 43.9	+0.7
EMIN	Mina Concepcio	2.90	52	Pn	Pn	05 51 18.1	-1.0
	0.1nm,0.0s,SNR=7.9						
EMIN				Sn	Sn	05 51 54.7	-0.6
	0.7nm,0.1s,SNR=7.9						
EBAD	Badajoz	3.41	36	Sn	Sn	05 52 07.3	-0.8
	0.6nm,0.1s,SNR=7.9						
ECAB	El Cabril	3.90	57	Pn	Pn	05 51 31.8	-1.5
	0.3nm,0.1s,SNR=7.9						
ECAB				Sn	Sn	05 52 18.9	-1.6
	0.0nm,0.1s,SNR=7.9						
PCBR	Castelo Branco	4.17	23	eSn	Sn	05 52 24.1	-3.1
EADA	Adamuz	4.53	60	Pn	Pn	05 51 40.6	-1.6
	0.2nm,0.1s,SNR=7.9						
EADA				Sn	Sn	05 52 34.2	-2.2
	0.3nm,0.1s,SNR=7.9						

*IDC **05** 05:50:29.9±1.2, 6.12S×146.98E, mb3.7/5, mb1 3.9/7, mb1mx3.7/16, mbtmp3.7/7, ML3.1/2, Error ellipse: s-maj=36.2km s-min=15.5km az=90.0*
*NEIC **05** 05:50:31.7±1.0, 6.21S×146.93E, h10^{km}, mb3.8/1, Error ellipse: s-maj=29.0km s-min=16.4km az=104.0*
ISC 05 05:50:34.1±1.1**, 6.13S**±0.08×**146.5E**±0.2**, h33^{km}, n10, σ1^{s}38**/13**, mb3.6**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.32	169	Pn	Pn	05 51 21.2	-3.9
	6.3nm,0.3s,baz=0.7,slow=6.8,SNR=17						
PMG				Pg	P	05 51 28.0	+3.0
	27nm,0.3s,baz=11,slow=12,SNR=39						
PMG				Sn	Sn	05 52 03.6	-0.2
	15nm,0.3s,baz=181,slow=15,SNR=4.1						
PMG				Lg		05 52 14.3	
	13nm,0.3s,baz=216,slow=21,SNR=3.6						
PMG	Port Moresby	3.32	169	ePn	Pn	05 51 21.1	-4.0
PMG				Pg	P	05 51 28.0	+3.0
PMG				Sn	Sn	05 52 03.6	-0.2
PMG				Lg		05 52 14.3	
WRAB	Tennant Creek	18.10	220	eP	P	05 54 43.2	-1.7
	11nm,1.3s						
WRA	Warramunga Arr	18.11	220	P	P	05 54 44.9	-0.2
	0.1nm,0.3s,baz=43,slow=11,SNR=14						
ASAR	Alice Springs	21.23	214	P	P	05 55 19.7	+0.1
	0.5nm,0.4s,mb3.2,baz=34,slow=12,SNR=8.7						
FITZ	Fitzroy Crossi	23.58	238	P	P	05 55 46.7	+3.8
	3.1nm,0.6s,mb3.9,baz=39,slow=9.5,SNR=10						
STKA	Stephens Creek	26.02	190	P	P	05 56 07.1	+0.9
	1.0nm,0.5s,mb3.6,baz=324,slow=14,SNR=3.2						
MKAR	Makanchi Array	77.28	321	P	P	06 02 28.4	+1.3
	0.2nm,0.4s,mb3.4,baz=104,slow=5.9,SNR=3.6						
ILAR	Eielson Array	85.80	23	P	P	06 03 09.5	-1.6
	0.5nm,0.6s,mb3.9,baz=255,slow=5.1,SNR=5.0						
SIV	San Ignacio	144.95	129	PKP	PKPdf	06 10 10.2	+1.2
	0.6nm,0.5s,baz=227,slow=4.9,SNR=4.7						

*RSPR **05** 05:59:48.2, 19.08N×68.51W, h25^{km}±45^{km}, MD4.0/17, MD4.0/17*
*NEIC **05** 05:59:48.2, 19.08N×68.51W, h25^{km}, MD4.0(RSPR), After RSPR.*
*IDC **05** 05:59:49.5±0.9, 18.95N×68.03W, mb3.8/7, mb1 4.0/9, mb1mx3.8/23, mbtmp3.8/9, ML3.7/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/28, Error ellipse: s-maj=24.0km s-min=16.4km az=43.0*
ISC 05 05:59:47.8±0.7**, 19.04N**±0.07×**68.27W**±0.05**, h10^{km}, n31, σ1^{s}04**/47**, mb3.8**/7**, MS3.3**/1**, 14C-4D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	1.24	117	⇓eP	Pb	06 00 09.8	-1.1
AGPR				eS	Sb	06 00 28.5	+1.7
MPR	Mayaguez	1.35	127	⇓eP	Pb	06 00 11.9	-0.9
MPR				eS	Sb	06 00 31.6	+1.5
LSP	Las Mesas	1.42	127	⇑eP	Pn	06 00 12.6	-1.1
CRPR	Cabo Rojo, PR	1.51	133	⇑iP	Pn	06 00 14.0	-1.0
CRPR				eS	Sb	06 00 35.0	+0.5
MGP	Maguayo	1.52	132	⇓eP	Pn	06 00 14.2	-1.1
LRS	Lares	1.54	118	⇓eP	Pn	06 00 14.3	-1.2
AOPR	Arecibo Observ	1.60	115	⇑eP	Pn	06 00 15.9	-0.4
AOPR				eS	Sb	06 00 37.9	+0.8
PORP	Portuguez	1.84	122	⇑eP	Pn	06 00 19.0	-0.7
ICM	Isla Caja Muer	2.02	124	⇑eP	Pn	06 00 22.8	+0.5
ICM				eS	Sn	06 00 48.4	+0.7
SJG	San Juan	2.22	114	⇑eP	Pn	06 00 25.4	+0.3
SJG				eS	Sn	06 00 52.8	-0.1
SJG	San Juan	2.22	114	Pn	Pn	06 00 24.1	-1.0
	279nm,0.3s,baz=313,slow=12,SNR=340						
SJG				Sn	Sn	06 00 51.8	-1.1
	372nm,0.3s,baz=90,slow=21,SNR=26						
SJG	San Juan	2.22	114	⇑eP	Pn	06 00 25.4	+0.2
SJG				eS	Sn	06 00 52.3	-0.6
CBYP	Canovanas	2.42	108	⇑eP	Pn	06 00 27.8	-0.3
CBYP				eS	Sn	06 00 57.9	0.0
CPD	Cerro la Pandu	2.45	114	⇑eP	Pn	06 00 28.6	+0.1
CPD				eS	Sn	06 00 59.8	+1.1
HUMP	Col San Antoni	2.47	111	⇑eP	Pn	06 00 28.7	-0.1
HUMP				eS	Sn	06 00 58.9	-0.3
MTP	Monte Pirata	2.74	110	⇑eP	Pn	06 00 32.8	+0.1
MTP				eS	Sn	06 01 07.1	+0.9
STVI	Saint Thomas	3.21	102	⇑eP	Pn	06 00 39.8	+0.4
STVI				eS	Sn	06 01 17.2	-0.9
CDVI	St. Croix	3.57	110	⇑eP	Pn	06 00 45.4	+1.0
CDVI				eS	Sn	06 01 27.8	+0.6
DOG	Dongo Capester	7.02	114	eP	Pn	06 01 30.2	-2.9
DEG	La Desirade	7.39	110	⇑eP	Pn	06 01 36.0	-2.4
PCRV	Puerto La Cruz	9.49	158	Pn	P	06 02 07.1	-0.5
	1.6nm,0.3s,baz=322,slow=2.9,SNR=10.0						
PCRV				Sn	Sn	06 03 45.2	-10
	0.6nm,0.3s,baz=228,slow=17,SNR=2.2						
SDV	Santo Domingo	10.35	193	Pn	P	06 02 20.4	+0.9
	0.3nm,0.3s,baz=9.5,slow=12,SNR=7.1						
SDV				Sn	S	06 04 08.1	-8.5
	1.0nm,0.3s,baz=48,slow=14,SNR=2.8						
SDV	Santo Domingo	10.35	193	P	P	06 02 20.5	+1.0
ROSC	El Rosal	15.29	204	Pn	P	06 03 31.3	+5.8
	0.6nm,0.3s,baz=108,slow=22,SNR=10						
TXAR	Lajitas Array	33.76	294	P	P	06 06 34.9	+3.1
	0.8nm,0.8s,mb3.7,baz=111,slow=9.4,SNR=10						
TXAR				LR	LR	06 22 47.3	
	comp=Z,58nm,18.4s,MS3.3,baz=15,slow=40						
LPAZ	La Paz	35.10	180	P	P	06 06 43.9	+0.3
	0.8nm,1.0s,mb3.6,baz=39,slow=6.5,SNR=2.6						
SIV	San Ignacio	35.52	168	P	P	06 06 46.8	-0.3
	0.4nm,0.6s,mb3.5,baz=342,slow=13,SNR=4.4						
NVAR	Mina Array Bea	47.31	305	P	P	06 08 28.4	+4.8
	0.8nm,0.8s,mb3.7,baz=101,slow=9.2,SNR=3.4						
YKA	Yellowknife Ar	53.81	335	P	P	06 09 14.3	+1.7
	0.5nm,0.6s,mb3.6,baz=110,slow=7.2,SNR=3.8						
ESDC	Sonseca Array	58.49	55	P	P	06 09 47.7	+1.1
	0.7nm,0.5s,mb3.9,baz=271,slow=7.9,SNR=6.4						
DBIC	Dimbokro	62.75	92	P	P	06 10 14.3	-1.6
	5.5nm,1.0s,mb4.6,baz=273,slow=7.8,SNR=6.1						

*IDC **05** 06:03:35.1±2.4, 6.15S×130.12E, mb4.2/1, mb1 4.2/4, mb1mx3.8/16, mbtmp4.0/4, ML3.8/3, Error ellipse: s-maj=115.4km s-min=27.0km az=77.0*
ISC 05 06:03:54.1±2.1**, 7.1S**±0.1×**129.7E**±0.1**, h195^{km}**±23^{km}**, n8, σ1^{s}26**/14**, mb3.8**/1**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	6.22	155	eP	P	06 05 25.5	+0.7
KAKA				eS	S	06 06 34.3	-1.2
FITZ	Fitzroy Crossi	11.66	199	eP	P	06 06 36.3	+0.7
FITZ				eS	S	06 08 42.2	-0.3
FITZ	Fitzroy Crossi	11.66	199	Pn	P	06 06 36.3	+0.7
	1.5nm,0.3s,baz=17,slow=12,SNR=26						
FITZ				Sn	S	06 08 41.5	-1.0
	1.2nm,0.3s,baz=176,slow=13,SNR=3.6						
WRA	Warramunga Arr	13.56	161	Pn	P	06 06 58.7	-1.0
	0.3nm,0.3s,baz=337,slow=13,SNR=23						
WRA				Sn	S	06 09 25.4	-0.8
	0.6nm,0.3s,baz=349,slow=19,SNR=7.4						
WB2	Warramunga Arr	13.56	161	eP	P	06 06 59.3	-0.5
WB2				eS	S	06 09 27.0	+0.7
ASPA	Alice Springs	16.98	167	eP	P	06 07 44.5	+2.8
ASAR	Alice Springs	16.99	167	P	P	06 07 44.5	+2.7
	0.5nm,0.3s,baz=346,slow=10,SNR=33						
ASAR				S	S	06 10 57.6	+15
	0.2nm,0.3s,baz=358,slow=25,SNR=5.8						
MKAR	Makanchi Array	68.12	327	P	P	06 14 33.7	-1.3
	0.9nm,0.4s,mb3.8,baz=116,slow=7.9,SNR=12						

IDC 05 06:05:25.3±10.0**, 1.60N×97.06E, mb3.6**/2**, mb1 3.7**/3**, mb1mx3.4**/20**, mbtmp3.6**/3**, Error ellipse: s-maj=199.7km s-min=133.5km az=137.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.85	6	Pn	P	06 09 22.9	-1.6
	baz=204,slow=11,SNR=2.9						
SONM	Songino Array	46.76	9	P	P	06 13 56.4	-1.8
	0.9nm,0.9s,baz=191,slow=7.3,SNR=5.8						
MKAR	Makanchi Array	46.82	346	P	P	06 13 56.8	-1.9
	0.5nm,0.6s,baz=170,slow=7.4,SNR=5.6						

IDC 05 06:10:59.7±1.7**, 8.74S×130.33E, mb3.9**/2**, mb1 4.0**/5**, mb1mx3.8**/15**, mbtmp3.9**/5**, ML3.7**/3**, Error ellipse: s-maj=58.0km s-min=25.6km az=71.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.36	206	Pn	P	06 13 31.3	-1.4
	1.2nm,0.3s,baz=16,slow=10,SNR=11						
FITZ				Sn	S	06 15 24.4	-6.5
	1.9nm,0.3s,baz=180,slow=19,SNR=7.5						
WRA	Warramunga Arr	11.79	161	Pn	P	06 13 48.0	-4.3
	0.5nm,0.3s,baz=339,slow=13,SNR=12						
WRA				Sn	S	06 15 55.8	-10
	0.7nm,0.3s,baz=341,slow=22,SNR=6.6						
ASAR	Alice Springs	15.23	167	Pn	P	06 14 35.7	-2.2
	0.3nm,0.3s,baz=341,slow=9.2,SNR=13						
ASAR				Sn	S	06 17 21.4	-6.8
	0.2nm,0.3s,baz=354,slow=27,SNR=6.1						
STKA	Stephens Creek	25.29	157	P	P	06 16 28.1	-1.4
	1.8nm,0.7s,baz=335,slow=11,SNR=3.6						
MKAR	Makanchi Array	69.85	327	P	P	06 22 12.3	-2.0
	0.6nm,0.7s,baz=110,slow=7.0,SNR=5.9						

*IDC **05** 06:29:35.1±13.0, 17.89S×167.25E, mb3.7/3, mb1 3.9/4, mb1mx3.6/16, mbtmp3.7/4, ML4.0/1, Error ellipse: s-maj=225.4km s-min=38.7km az=70.0*
ISC 05 06:29:35.1±3.1**, 17.82S**±0.09×**167.6E**±0.4**, h33^{km}, n6, σ0^{s}61**/9**, mb3.5**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	4.36	194	eP	P	06 30 40.4	-0.3
DZM				eS	S	06 31 30.9	-0.1
DZM	Mont Dzumac	4.36	194	Pn	Pn	06 30 40.5	-0.3
	8.3nm,0.3s,baz=9.0,slow=19,SNR=99						
DZM				Sn	Sn	06 31 32.2	+1.1
	7.2nm,0.3s,baz=140,slow=22,SNR=14						
NOUC	Port Laguerre	4.42	195	eP	P	06 30 42.0	+0.4
NOUC				eS	S	06 31 31.6	-0.9
STKA	Stephens Creek	27.31	234	P	P	06 35 19.8	+0.9
	0.5nm,0.4s,mb3.4,baz=59,slow=12,SNR=2.9						
WRA	Warramunga Arr	31.47	261	P	P	06 35 55.7	-0.4
	0.2nm,0.4s,mb3.3,baz=92,slow=9.5,SNR=7.6						
ASAR	Alice Springs	31.95	254	P	P	06 36 00.2	-0.1
	0.9nm,0.6s,mb3.8,baz=80,slow=8.8,SNR=11						

PGC 05 06:34:47.2, 49.83N×130.16W, h10^{km}, MLSn2.8/1**, Mw3.5, West of Vancouver Island, British Columbia, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	Holberg	1.54	57	Pn	Pn	06 35 12.5	-2.3
HOLB				Sn	Sn	06 35 30.4	-4.6
	comp=Z,49nm,0.6s						
HOLB				Trac		06 35 40.5	
	comp=Z,49nm,0.6s						
BPBC	Brooks Peninsu	1.58	77	Pn	Pn	06 35 12.7	-2.7
BPBC				Sn	Sn	06 35 31.9	-4.2
	comp=Z,49nm,0.2s						
BPBC				Trac		06 35 32.2	
	comp=Z,49nm,0.2s						
PHC	Port Hardy	1.96	62	Pn	Pn	06 35 18.7	-2.2
PHC				Sn	Sn	06 35 41.9	-3.9
PHC				Trac		06 35 46.3	
	comp=Z,20nm,0.4s						
EDB	Eliza Dome	1.97	88	Pn	Pn	06 35 17.4	-3.6
MAYB	Maynard	2.01	72	Pn	Pn	06 35 18.9	-2.7
MAYB				Sn	Sn	06 35 41.1	-5.9
	comp=Z,20nm,0.7s						
MAYB				Trac		06 35 48.9	
	comp=Z,20nm,0.7s						
WOSB	Woss	2.34	80	Pn	Pn	06 35 24.6	-1.8
WOSB				Sn	Sn	06 35 50.2	-5.2
	comp=Z,12nm,0.5s						
WOSB				Trac		06 35 59.3	
	comp=Z,12nm,0.5s						
GDR	Gold River	2.68	89	Pn	Pn	06 35 28.3	-2.8
GDR				Trac		06 36 03.0	
	comp=Z,5.0nm,0.5s						
BBB	Bella Bella	2.69	28	Pn	Pn	06 35 29.9	-1.5
BBB				Sn	Sn	06 35 59.0	-5.2
BBB				Trac		06 36 02.0	
	comp=Z,24nm,0.4s						
NCRB	Newcastle Ridg	2.71	76	Pn	Pn	06 35 29.9	-1.7
NCRB				Sn	Sn	06 36 01.0	-3.7
	comp=Z,27nm,0.9s						
NCRB				Trac		06 36 04.0	
	comp=Z,27nm,0.9s						
BNB	Barry Inlet	2.93	341	Pn	Pn	06 35 32.1	-2.6
BTB	Buttle Lake	3.04	95	Pn	Pn	06 35 36.4	+0.1
BTB				Sn	Sn	06 36 08.9	-4.2
	comp=Z,7.0nm,0.5s						
BTB				Trac		06 36 15.0	
	comp=Z,7.0nm,0.5s						
CBB	Campbell River	3.11	84	Pn	Pn	06 35 35.6	-1.7
CBB				Sn	Sn	06 36 10.2	-4.7
CBB				Trac		06 36 12.3	
	comp=Z,6.0nm,0.6s						
OZB	Mount Ozzard	3.17	104	Pn	Pn	06 35 37.5	-0.7
MGB	Mount Grey	3.67	101	Pn	Pn	06 35 44.2	-1.0
MGB				Sn	Sn	06 36 24.8	-4.2
	comp=Z,3.0nm,0.5s						
MGB				Trac		06 36 33.9	
	comp=Z,3.0nm,0.5s						
TXB	Texada	3.72	90	Pn	Pn	06 35 45.0	-0.9
TXB				Sn	Sn	06 36 29.9	-0.4
	comp=Z,5.0nm,0.5s						
TXB				Trac		06 36 37.0	
	comp=Z,5.0nm,0.5s						

IDC 05 06:49:15.9±8.9**, 14.08S×167.02E, h141^{km}**±81^{km}**, mb3.1**/3**, mb1 3.3**/4**, mb1mx3.2**/17**, mbtmp3.6**/4**, Error ellipse: s-maj=69.5km s-min=44.4km az=170.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.97	184	P	P	06 51 09.3	-0.8
	0.2nm,0.3s,baz=28,slow=17,SNR=2.3						
DZM				S	S	06 52 38.0	-1.0
	0.2nm,0.3s,baz=270,slow=20,SNR=4.0						
STKA	Stephens Creek	29.24	228	P	P	06 55 04.6	-2.1
	1.4nm,0.5s,baz=54,slow=6.8,SNR=8.2						
WRA	Warramunga Arr	31.75	255	P	P	06 55 27.0	-2.0
	0.1nm,0.4s,baz=84,slow=8.4,SNR=4.3						
ASAR	Alice Springs	32.68	248	P	P	06 55 34.8	-2.2
	0.3nm,0.5s,baz=78,slow=8.9,SNR=5.5						
ARCES	ARCESS Array B	119.56	345	PKP	PKPdf	07 07 48.1	-0.3
	1.6nm,0.9s,baz=90,slow=1.2,SNR=5.6						

*IDC **05** 06:52:34.3±1.1, 6.16S×146.86E, mb3.9/6, mb1 4.1/9, mb1mx4.0/16, mbtmp4.0/9, ML3.6/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/22, Error ellipse: s-maj=36.2km s-min=15.0km az=87.0*
*NEIC **05** 06:52:41.3±1.9, 6.29S×146.81E, h49^{km}±16^{km}, mb4.3/2, Error ellipse: s-maj=16.9km s-min=14.2km az=182.0*
ISC 05 06:52:43.4±3.6**, 6.3S**±0.2×**146.7E**±0.1**, h80^{km}**±30^{km}**, n20, σ0^{s}84**/24**, mb3.7**/8**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.09	171	Pn	P	06 53 27.1	-3.9
	13nm,0.3s,baz=29,slow=5.3,SNR=37						
PMG				Pg	P	06 53 34.2	+3.2
	81nm,0.3s,baz=40,slow=7.0,SNR=31						
PMG				Sn	S	06 54 08.0	+1.1
	25nm,0.3s,baz=185,slow=23,SNR=3.5						
PMG				Lg		06 54 18.1	
	22nm,0.3s,baz=357,slow=23,SNR=6.1						
PMG	Port Moresby	3.09	171	ePn	P	06 53 26.9	-4.2
PMG				ePg	P	06 53 34.1	+3.1
PMG				eS	S	06 54 07.7	+0.7
PMG				Lg		06 54 18.1	
CTA	Charters Tower	13.67	182	Pn	P	06 55 54.2	-1.0
	0.5nm,0.3s,baz=350,slow=14,SNR=5.8						
CTA	Charters Tower	13.67	182	Pn	P	06 55 54.2	-1.0
CTAO	Charters Tower	13.67	182	eP	P	06 55 54.3	-0.9
KAKA	Kakadu	15.38	245	eP	P	06 56 17.9	+0.6
WRAB	Tennant Creek	18.05	220	eP	P	06 56 49.7	-0.7
	29nm,1.6s						
WB2	Warramunga Arr	18.05	220	eP	P	06 56 49.8	-0.7
WRA	Warramunga Arr	18.06	220	P	P	06 56 49.7	-0.9
	0.2nm,0.3s,baz=46,slow=12,SNR=26						
ASAR	Alice Springs	21.15	214	P	P	06 57 24.1	+0.3
	2.1nm,0.6s,mb3.7,baz=49,slow=9.3,SNR=15						
ASAR				LR	LR	07 06 17.7	
	comp=Z,96nm,19.0s,baz=44,slow=38						
FITZ	Fitzroy Crossi	23.61	238	P	P	06 57 49.2	+1.2
	5.7nm,0.8s,mb3.9,baz=40,slow=7.9,SNR=3.8						
STKA	Stephens Creek	25.84	190	P	P	06 58 08.4	-0.8
	1.1nm,0.7s,mb3.4,baz=13,slow=13,SNR=4.6						
STKA				LR	LR	07 09 15.6	
	comp=Z,90nm,19.6s,baz=222,slow=38						
STKA	Stephens Creek	25.84	190	eP	P	06 58 09.2	-0.1
STKA				LR	LR	07 09 15.6	
CMAR	Chiang Mai Arr	53.12	299	P	P	07 02 03.5	+8.1
	0.6nm,0.3s,mb4.2,baz=122,slow=5.7,SNR=6.0						
VNDA	Vanda	71.60	177	P	P	07 03 57.5	-0.1
	0.7nm,0.5s,mb3.8,baz=328,slow=7.6,SNR=12						
VNDA	Vanda	71.60	177	eP	P	07 03 57.8	+0.2
MKAR	Makanchi Array	77.54	321	P	P	07 04 33.1	+0.8
	0.2nm,0.6s,mb3.1,baz=106,slow=7.0,SNR=3.0						
MKAR	Makanchi Array	77.54	321	P	P	07 04 33.1	+0.8
QSPA	South Pole Qui	83.63	180	eP	P	07 05 04.4	+0.6
	3.3nm,0.9s,mb4.2						
ILAR	Eielson Array	85.92	23	P	P	07 05 14.7	-0.8
	0.7nm,0.6s,mb3.7,baz=252,slow=4.8,SNR=10						

IDC 05 06:55:34.6±4.4**, 6.08S×147.02E, mb3.5**/2**, mb1 3.7**/4**, mb1mx3.5**/15**, mbtmp3.5**/4**, ML2.7**/2**, Error ellipse: s-maj=79.7km s-min=29.8km az=72.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.31	178	Pn	Pn	06 56 28.7	+0.1
	3.3nm,0.3s,baz=333,slow=9.0,SNR=5.1						
PMG				Pg	Pg	06 56 35.4	-5.2
	5.3nm,0.3s,baz=2.9,slow=11,SNR=8.2						
PMG				Sn	Sn	06 57 10.4	+1.1
	2.9nm,0.3s,baz=174,slow=18,SNR=2.0						
PMG				Lg		06 57 18.7	
	3.7nm,0.3s,baz=164,slow=18,SNR=3.8						
WRA	Warramunga Arr	18.49	221	P	P	06 59 51.0	-3.1
	0.0nm,0.3s,baz=46,slow=12,SNR=4.2						
ASAR	Alice Springs	21.57	214	P	P	07 00 27.3	-0.6
	0.5nm,0.7s,baz=30,slow=12,SNR=3.3						
STKA	Stephens Creek	26.16	191	P	P	07 01 10.0	-2.5
	4.6nm,1.3s,baz=346,slow=8.3,SNR=2.2						

DJA 05 07:00:13.4±1.2**, 2.71S×118.68E, h33^{km}, MD4.3**/3**, 1C-5D, Error ellipse: s-maj=27.8km s-min=27.1km az=30.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TANI	Tanete Lipujan	1.01	136	⇑ePn	Pn	07 00 27.3	-4.1
TANI				⇓eSn	Sn	07 00 35.0	-10
BUNI	Buntu Taipa	1.89	120	⇓ePn	Pn	07 00 43.8	-0.3
BUNI				⇓eSn	Sn	07 01 04.4	-2.6
NINI	Niniconang	2.02	148	⇓ePn	Pn	07 00 46.2	+0.4
NINI				⇓eSn	Sn	07 01 06.9	-3.2

NNC 05 07:05:55.9±14.0**, 38.50N×72.32E, h220^{km}**±178^{km}**, mpv3.4, 1C, Error ellipse: s-maj=268.4km s-min=84.0km az=38.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	4.45	21	P	P	07 07 03.8	-0.8
KK31	Karatay Array	4.80	344	P	P	07 07 07.9	-1.0
	2.5nm,0.4s,baz=157,slow=12,SNR=68						
KK31				⇑S	S	07 08 06.2	+0.6
	1.2nm,0.3s,baz=172,slow=23,SNR=12						

AB31	Akbulak array	13.95	324	P	P	07 09 07.3	+2.0
	0.7nm,0.4s,baz=133,slow=12,SNR=11						
AB31				S	S	07 11 37.6	+2.4

IDC 05 07:10:11.9±3.7,18.25S×178.30W,h617^{km}±47^{km},mb2.8/5,mb1 3.0/5,mb1mx2.9/16,mbtmp3.8/5,Error ellipse: s-maj=70.9km s-min=19.8km az=144.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.56	242	P	P	07 16 44.0	-1.1
	0.8nm,0.5s,baz=97,slow=8.1,SNR=3.0						
WRA	Warramunga Arr	44.67	260	P	P	07 17 31.3	-2.2
	0.8nm,0.9s,baz=94,slow=7.8,SNR=6.8						
ASAR	Alice Springs	44.80	255	P	P	07 17 33.0	-1.4
	0.7nm,0.7s,baz=91,slow=7.9,SNR=10						
ASAR				S	S	07 23 27.1	-1.5
	0.5nm,0.8s,baz=95,slow=15,SNR=5.6						
MJAR	Matsushiro Arr	68.24	323	P	P	07 20 12.9	-1.3
	1.4nm,0.8s,baz=143,slow=12,SNR=4.9						
ILAR	Eielson Array	86.19	13	P	P	07 21 47.6	-2.3
	0.3nm,0.5s,baz=217,slow=4.7,SNR=4.6						
GERES	GERESS Array B	147.97	345	PKPbc	PKPdf	07 28 49.1	+4.5
	0.7nm,0.8s,baz=315,slow=1.4,SNR=3.2						

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*NEIC **05** 07:36:59.7±2.6,18.77S×176.02E,h69^{km}±23^{km},mb4.4/3,Error ellipse: s-maj=17.4km s-min=14.9km az=100.0*

*IDC **05** 07:37:00.2±5.0,18.84S×176.01E,h71^{km}±44^{km},mb3.8/11,mb1 4.1/13,mb1mx4.1/17,mbtmp4.2/13,ML3.5/2,MS3.7/6,Ms1 3.7/6,ms1mx3.5/28,Error ellipse: s-maj=23.1km s-min=21.7km az=96.0*

ISC 05 07:36:57.8±3.7,18.8S±0.1×176.0E±0.1,h65^{km}±32^{km},n39,σ0^{s}91/25,mb4.1/15,3C-1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.52	249	P	P	07 39 14.3	-0.2
	0.3nm,0.3s,baz=88,slow=15,SNR=6.3						
DZM				LR	LR	07 41 13.1	
	comp=Z,72nm,19.6s,baz=23,slow=27						
AFI	Afiamalu	12.71	69	LR	LR	07 43 50.7	
	comp=Z,416nm,21.0s,baz=252,slow=32						
HNR	Honiara	18.13	299	LR	LR	07 47 04.3	
	comp=Z,229nm,21.5s,baz=124,slow=33						
URZ	Urewera	19.40	177	P	P	07 41 22.1	+0.9
	0.3nm,0.3s,baz=307,slow=2.6,SNR=5.1						
RAR	Rarotonga	22.89	100	LR	LR	07 48 27.2	
	comp=Z,435nm,20.9s,baz=108,slow=30						
CTA	Charters Tower	28.05	262	LR	LR	07 51 57.2	
	comp=Z,265nm,21.8s,baz=160,slow=32						
PMG	Port Moresby	29.44	285	LR	LR	07 52 00.1	
	comp=Z,232nm,21.2s,baz=244,slow=30						
STKA	Stephens Creek	33.54	240	P	P	07 43 33.4	-0.2
	5.4nm,0.8s,mb4.5,baz=86,slow=13,SNR=9.5						
WRAB	Tennant Creek	39.23	261	eP	P	07 44 27.8	+6.2
	1.6nm,0.4s,mb4.1						
WRA	Warramunga Arr	39.23	261	P	P	07 44 21.2	-0.5
	2.5nm,1.0s,mb3.9,baz=91,slow=9.4,SNR=11						
ASAR	Alice Springs	39.42	255	P	P	07 44 23.6	+0.5
	3.3nm,0.8s,mb4.1,baz=85,slow=8.8,SNR=29						
VNDA	Vanda	59.15	184	P	P	07 46 52.3	-1.5
	0.7nm,0.9s,mb3.7,baz=20,slow=8.0,SNR=3.7						
MJAR	Matsushiro Arr	65.62	327	P	P	07 47 37.1	-0.3
	1.6nm,0.9s,mb4.1,baz=156,slow=5.6,SNR=6.1						
QSPA	South Pole Qui	71.24	180	⇓iP	P	07 48 11.4	0.0
	14nm,1.0s,mb4.8						
MAW	Mawson	81.16	201	P	P	07 49 08.5	+1.0
	3.1nm,1.0s,mb4.2,baz=156,slow=12,SNR=3.2						
NVAR	Mina Array Bea	83.82	46	P	P	07 49 21.5	-0.2
	1.5nm,0.9s,mb4.1,baz=212,slow=6.3,SNR=8.9						
CMAR	Chiang Mai Arr	84.22	292	P	P	07 49 26.0	+1.9
	0.6nm,0.3s,mb4.2,baz=101,slow=4.6,SNR=4.4						
ILAR	Eielson Array	88.05	15	P	P	07 49 39.5	-2.3
	0.6nm,0.9s,mb3.8,baz=259,slow=8.4,SNR=4.3						
HLID	Hailey	88.86	43	eP	P	07 49 47.1	+1.0
	1.9nm,0.9s,mb4.4						
SNAA	Sanae	89.74	180	P	P	07 49 48.8	-0.8
	0.3nm,0.8s,mb3.7,baz=248,slow=11,SNR=4.1						
VNA3	Neumayer Olymp	90.09	178	⇑i	P	07 49 50.8	-0.5
VNA3	Neumayer Olymp	90.09	178	e	P	07 49 58.3	+7.0
PV10	Paradox Valley	90.30	49	eP	P	07 49 53.2	+0.2
VNA2	Neumayer--Watz	90.46	179	⇑i	P	07 49 52.9	-0.2
VNA2	Neumayer--Watz	90.46	179	e	P	07 50 00.6	+7.5
VNA1	Neumayer--Stat	90.72	179	⇑i	P	07 49 54.2	-0.1
VNA1	Neumayer--Stat	90.72	179	e	P	07 50 01.9	+7.6
TXAR	Lajitas Array	91.00	59	P	P	07 49 58.0	+1.4
	1.2nm,0.8s,mb4.3,baz=216,slow=5.6,SNR=16						
BW06	Boulder Array	91.72	45	eP	P	07 49 59.1	-0.4
PDAR	Pinedale Array	91.72	45	P	P	07 49 59.2	-0.3
	0.3nm,0.5s,mb3.9,baz=225,slow=2.1,SNR=4.4						
UPC	Upice	144.59	338	ePKPAB	PKPab	07 56 27.6	0.0
DPC	Dobruska-Polom	144.61	337	ePKPAB	PKPab	07 56 27.7	+0.1
CLL	Collm	144.90	341	ePKIKP	PKPdf	07 56 28.0	+0.7
CLL				e		07 56 38.0	
BRG	Berggiesshubel	144.98	340	eP	PKPdf	07 56 28.7	+1.2
BRG				e		07 56 39.3	
PVCC	Panska Ves	145.07	339	ePKPAB	PKPab	07 56 29.5	+0.2
PRU	Pruhonice	145.54	339	ePKPAB	PKPab	07 56 30.2	-0.9
MOX	Moxa	145.90	342	i P	PKPdf	07 56 32.6	+3.6
	logA/T=0.9						
KHC	Kasperske Hory	146.60	339	ePKPAB	PKPab	07 56 34.1	-1.1
GERES	GERESS Array B	146.80	338	PKPbc	PKPbc	07 56 34.4	+2.2
	0.8nm,0.8s,slow=2.7,SNR=4.4						

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*IDC **05** 07:47:24.6±0.8,50.73S×162.32E,mb4.6/8,mb1 4.8/9,mb1mx4.7/14,mbtmp4.6/9,ML3.7/1,MS4.7/18,Ms1 4.7/18,ms1mx4.6/25,Error ellipse: s-maj=33.0km s-min=18.5km az=66.0*

*NEIC **05** 07:47:26.0±0.4,50.61S×162.43E,h10^{km},mb5.1/6,Error ellipse: s-maj=9.8km s-min=6.8km az=147.0*

*HRVD **05** 07:47:26.0±0.3,50.64S×162.12E,h23^{km}±2^{km},MW5.3/54,Centroid moment Tensor Solution. LP body waves: s54,c79;Mantle waves: s50,c86; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.28±.04; $M_{\theta\theta}$0.80±.03; $M_{\phi\phi}$-1.08±.03; $M_{r\theta}$-0.44±.07; $M_{\theta\phi}$0.11±.03; $M_{\phi r}$-0.33±.07; Best double couple: $M_0$1.121×10^{17} NP1:ϕ_s315°,δ58°,λ14°. NP2:ϕ_s218°,δ78°,λ148°. Principal axes: T 1.086, Plg31°, Azm172°; N .072, Plg56°, Azm20°; P -1.157, Plg13°, Azm270°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **05** 07:47:29.0±1.5,50.92S×161.65E,h33^{km},mb5.1/13 Error ellipse: s-maj=27.4km s-min=11.8km az=109.8*

ISC 05 07:47:24.1±0.4,50.56S±0.05×162.51E±0.08,h10^{km},n99,σ1^{s}34/73,mb4.8/16,MS4.6/17,6C-3D,Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUZ	Tuapeka	6.62	49	eP	Pn	07 49 04.2	+0.3
TUZ				S	Sn	07 50 16.7	-3.5
TUZ	Tuapeka	6.62	49	PN	Pn	07 49 04.2	+0.4
TUZ				SN	Sn	07 50 16.0	-4.2
MSZ	Milford Sound	6.94	34	PN	Pn	07 49 09.8	+1.5
EAZ	Earnscleugh	7.02	43	eP	Pn	07 49 09.2	-0.3
EAZ				S	Sn	07 50 27.8	-2.4
EAZ	Earnscleugh	7.02	43	PN	Pn	07 49 09.2	-0.3
EAZ				SN	Sn	07 50 27.8	-2.4
WKZ	Wanaka	7.22	40	eP	Pn	07 49 13.2	+0.9
WKZ				S	Sn	07 50 34.0	-1.3
WKZ	Wanaka	7.22	40	PN	Pn	07 49 13.2	+0.9
JCZ	Jackson Bay	7.75	36	eP	Pn	07 49 21.6	+1.8
JCZ	Jackson Bay	7.75	36	PN	Pn	07 49 21.4	+1.6
JCZ				SN	Sn	07 50 49.2	+0.6
ODZ	Otahua Downs	7.77	48	eP	Pn	07 49 18.8	-1.2
ODZ	Otahua Downs	7.77	48	PN	Pn	07 49 18.8	-1.2
LBZ	Lake Benmore	8.07	43	P	P	07 49 23.9	-0.3
LBZ	Lake Benmore	8.07	43	PN	P	07 49 23.9	-0.3
FOZ	Fox Glacier	8.54	38	P	P	07 49 32.9	+2.2
FOZ	Fox Glacier	8.54	38	ePN	P	07 49 32.6	+1.8
RPZ	Rata Peaks	8.98	44	Pn	P	07 49 33.2	-3.6
	0.3nm,0.3s,baz=183,slow=3.8,SNR=3.1						
RPZ				Sn	Sn	07 51 13.4	-5.8
	3.9nm,0.3s,baz=2.4,slow=23,SNR=6.2						
RPZ				LR	LR	07 52 32.1	
	comp=Z,3μm,19.0s,baz=202,slow=34						
DSZ	Denniston Nort	10.91	40	P	P	07 50 02.8	-0.5
DSZ	Denniston Nort	10.91	40	ePN	P	07 50 02.3	-1.0
TAU	Tasmania Unive	12.91	301	eP	P	07 50 28.3	-2.0
TAU				pmax	pmax		
	comp=Z,46nm,0.6s						
TAU	Tasmania Unive	12.91	301	eP	P	07 50 28.3	-2.0
	comp=Z,46nm,0.6s						
URZ	Urewera	16.09	46	Pn	P	07 51 14.3	+2.5
	comp=Z,0.3nm,0.3s,baz=180,slow=4.0,SNR=2.5						
URZ				LR	LR	07 58 03.9	
	comp=Z,5μm,18.6s,baz=37,slow=39						
TOO	Toolangi	17.78	310	eP	P	07 51 36.2	+3.0
DRV	Dumont d'Urvil	19.75	207	P	P	07 52 03.0	+6.4
DRV				R		07 56 00.0	
STKA	Stephens Creek	24.27	312	eP	P	07 52 43.8	+1.6
STKA	Stephens Creek	24.27	312	P	P	07 52 44.5	+2.3
	comp=Z,7.0nm,0.8s,mb4.1,baz=134,slow=12,SNR=8.5						
STKA				LR	LR	08 01 44.3	
	comp=Z,4μm,18.1s,MS4.9,baz=300,slow=35						
VNDA	Vanda	27.06	180	eP	P	07 53 07.4	-0.6
VNDA				pmax	pmax		
	comp=Z,52nm,1.4s						
VNDA	Vanda	27.06	180	P	P	07 53 07.7	-0.2
	comp=Z,22nm,1.2s,mb4.6,baz=351,slow=9.4,SNR=38						
VNDA				LR	LR	08 01 41.8	
	comp=Z,2μm,19.0s,MS4.8,baz=6.9,slow=32						
VNDA	Vanda	27.06	180	eP	P	07 53 07.4	-0.6
	comp=Z,52nm,1.4s,mb4.9						
SBA	Scott Base	27.44	178	eP	P	07 53 12.0	+0.6
SBA				pmax	pmax		
	comp=Z,127nm,1.8s,mb5.2						
SBA	Scott Base	27.44	178	eP	P	07 53 12.0	+0.6
	comp=Z,127nm,1.8s,mb5.2						
DZM	Mont Dzumac	28.60	8	LR	LR	08 02 29.8	
	comp=Z,2μm,19.5s,MS4.7,baz=15,slow=31						
CTA	Charters Tower	33.02	331	LR	LR	08 05 30.3	
	comp=Z,2μm,20.2s,MS4.8,baz=156,slow=33						
CTAO	Charters Tower	33.02	331	eP	P	07 54 00.9	-0.6
CTAO				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
CTAO	Charters Tower	33.02	331	eP	P	07 54 00.9	-0.6
	comp=Z,20nm,1.1s,mb5.0						
ASAR	Alice Springs	34.84	310	P	P	07 54 17.5	+0.3
ASAR				pmax	pmax		
	comp=Z,13nm,0.8s						
ASAR				MLR	MLR		
	comp=Z,1μm,18.4s						
ASAR	Alice Springs	34.84	310	P	P	07 54 17.4	+0.3
	comp=Z,13nm,0.8s,mb4.9,baz=146,slow=8.3,SNR=173						
ASAR				LR	LR	08 08 41.6	
	comp=Z,1μm,18.4s,MS4.6,baz=152,slow=37						
ASPA	Alice Springs	34.84	310	⇓iP	P	07 54 17.4	+0.2
MIR	Mirnyy	37.32	218	d iP	P	07 54 32.2	-5.5
MIR				pmax	pmax		
	comp=Z,34nm,1.6s,mb4.9						
NWAO	Narrogin (SRO)	37.43	281	eP	P	07 54 38.2	-0.8
NWAO				pmax	pmax		
	comp=Z,49nm,1.4s						
NWAO	Narrogin (SRO)	37.43	281	P	P	07 54 38.5	-0.5
	comp=Z,14nm,0.9s,mb4.8,baz=123,slow=7.5,SNR=3.0						
NWAO				LR	LR	08 06 42.0	
	comp=Z,1μm,20.1s,MS4.7,baz=128,slow=31						
NWAO	Narrogin (SRO)	37.43	281	eP	P	07 54 38.2	-0.7
	comp=Z,49nm,1.4s,mb5.1						
WB2	Warramunga Arr	37.80	314	eP	P	07 54 42.1	-0.2
WRA	Warramunga Arr	37.81	314	P	P	07 54 42.1	-0.2
WRA						07 56 59.1	
WRA				pmax	pmax		
	comp=Z,11nm,0.9s						
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	37.81	314	P	P	07 54 42.1	-0.2
	comp=Z,11nm,0.9s,mb4.6,baz=146,slow=8.1,SNR=58						
WRA				PcP	PcP	07 56 59.1	-0.4
	comp=Z,1.5nm,0.8s,baz=156,slow=2.7,SNR=4.6						
WRAB	Tennant Creek	37.81	314	eP	P	07 54 41.4	-0.9
WRAB				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.0						
WRAB	Tennant Creek	37.81	314	eP	P	07 54 41.4	-1.0
	comp=Z,31nm,1.0s,mb5.0						
QSPA	South Pole Qui	39.56	180	eP	P	07 54 57.0	+0.6
	comp=Z,127nm,1.4s,mb5.5						
HNR	Honiara	41.06	356	LR	LR	08 09 55.1	
	comp=Z,2μm,19.2s,MS5.0,baz=19,slow=33						
RAR	Rarotonga	41.60	59	LR	LR	08 11 02.1	
	comp=Z,362nm,18.8s,MS4.3,baz=167,slow=34						
PMG	Port Moresby	42.95	337	P	P	07 55 23.1	-1.8
	comp=Z,13nm,0.9s,mb4.7,baz=162,slow=6.4,SNR=3.3						
PMG				LR	LR	08 10 07.0	
	comp=Z,2μm,20.7s,MS4.9,baz=172,slow=32						
MBWA	Marble Bar	44.49	295	eP	P	07 55 36.8	-0.6
	comp=Z,27nm,0.9s,mb5.0						
KAKA	Kakadu	45.01	316	eP	P	07 55 41.5	0.0
TBI	Tubuai	45.93	72	eS	Sx	08 02 00.1	
	comp=Z,473nm,30.5s						
TBI				eLQ		08 06 28.8	
	comp=Z,1μm,36.8s						
TBI				eLR	LR	08 08 29.3	
	comp=Z,538nm,22.2s,baz=221						
MAW	Mawson	47.90	211	P	P	07 55 59.0	-4.6
MAW				pmax	pmax		
	comp=Z,12nm,1.1s						
MAW				MLR	MLR		
	comp=Z,421nm,18.8s						
MAW	Mawson	47.90	211	P	P	07 55 59.0	-4.7
	comp=Z,12nm,1.1s,mb4.8,baz=89,slow=18,SNR=2.8						
MAW				LR	LR	08 15 20.4	
	comp=Z,420nm,18.8s,MS4.4,baz=109,slow=35						
PPT	Papeete	50.29	67	eS	Sx	08 03 00.7	
	comp=Z,320nm,30.2s						
PPT				eLQ		08 08 19.6	
	comp=Z,629nm,23.0s						
PPT				eLR	LR	08 10 31.1	
	comp=Z,585nm,23.2s,baz=232						
PPT	Papeete	50.29	67	LR	LR	08 12 01.7	
	comp=Z,423nm,20.4s,MS4.4,baz=332,slow=29						
SYO	Syowa Base	53.59	202	⇓P	P	07 56 44.5	-2.3
SYO	Syowa Base	53.59	202	⇑pP	pP	07 56 47.0	-2.9
SYO	Syowa Base	53.59	202	⇑PcP	PcP	07 57 51.3	-2.1
RKT	Rikitea	55.13	85	eS	Sx	08 04 05.7	
	comp=Z,334nm,32.2s						
RKT				eSS	SS	08 07 53.4	-30
	comp=Z,210nm,25.2s						
RKT				eLQ		08 10 20.5	
	comp=Z,408nm,26.2s						
RKT				eLR	LR	08 12 39.7	
	comp=Z,989nm,23.5s,baz=220						
SNAA	Sanae	57.63	185	⇑i	P	07 57 14.5	-1.5
SNAA	Sanae	57.63	185	e	P	07 57 17.2	+1.2
SNAA	Sanae	57.63	185	eP	P	07 57 14.3	-1.7
SNAA				pmax	pmax		
	comp=Z,78nm,1.4s						
SNAA	Sanae	57.63	185	P	P	07 57 14.1	-1.9
	comp=Z,11nm,1.2s,mb4.8,baz=184,slow=7.7,SNR=29						
SNAA				LR	LR	08 20 30.2	
	comp=Z,382nm,19.2s,MS4.5,baz=208,slow=35						
SNAA	Sanae	57.63	185	eP	P	07 57 14.3	-1.7
	comp=Z,78nm,1.4s,mb5.5						
VNA3	Neumayer Olymp	58.37	183	⇑i	P	07 57 19.9	-1.3
VNA3	Neumayer Olymp	58.37	183	e	P	07 57 22.5	+1.3
VNA2	Neumayer--Watz	58.60	184	⇑i	P	07 57 21.7	-1.1
VNA2	Neumayer--Watz	58.60	184	e	P	07 57 24.4	+1.6
VNA1	Neumayer--Stat	58.91	184	⇑i	P	07 57 24.3	-0.7
VNA1	Neumayer--Stat	58.91	184	e	P	07 57 27.4	+2.4
USHA	Ushuaia	66.69	151	LR	LR	08 20 28.6	
	comp=Z,858nm,20.5s,MS5.0,baz=191,slow=30						
PLCA	Paso Flores	77.91	142	LR	LR	08 27 29.2	
	comp=Z,436nm,19.8s,MS4.8,baz=330,slow=31						
JOW	Kunigami	82.80	330	LR	LR	08 31 10.8	
	comp=Z,262nm,21.7s,MS4.6,baz=121,slow=32						
CFAA	Coronel Fontan	86.71	139	LR	LR	08 30 20.8	
	comp=Z,30nm,21.1s,MS3.7,baz=218,slow=30						
CMAR	Chiang Mai Arr	88.45	302	P	P	08 00 19.0	+1.3
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,319nm,19.2s						
CMAR	Chiang Mai Arr	88.45	302	P	P	08 00 19.0	+1.3
	comp=Z,2.7nm,0.8s,mb4.5,baz=162,slow=3.3,SNR=13						
CMAR				LR	LR	08 40 13.3	
	comp=Z,319nm,19.1s,MS4.8,baz=140,slow=36						
MJAR	Matsushiro Arr	89.34	341	P	P	08 00 24.1	+2.5
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	Matsushiro Arr	89.34	341	P	P	08 00 24.1	+2.5
	comp=Z,1.7nm,0.8s,mb4.5,baz=180,slow=7.3,SNR=2.7						
MKAR	Makanchi Array	119.03	309	PKP	PKPdf	08 06 13.5	-2.0
	comp=Z,0.4nm,0.8s,baz=90,slow=4.3,SNR=4.6						
MKAR	Makanchi Array	119.03	309	PKP	PKPdf	08 06 13.5	-2.0
ILAR	Eielson Array	121.49	23	PKIKP	PKPdf	08 06 18.7	-1.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	121.49	23	PKP	PKPdf	08 06 18.6	-1.3
	comp=Z,0.8nm,0.8s,baz=265,slow=3.6,SNR=7.4						
YKA	Yellowknife Ar	130.20	37	PKP	PKPdf	08 06 36.2	-0.3
	comp=Z,0.1nm,0.3s,baz=256,slow=2.5,SNR=3.3						
YKA	Yellowknife Ar	130.20	37	PKP	PKPdf	08 06 36.2	-0.3
DBIC	Dimbokro	135.00	198	PKIKP	PKPdf	08 06 45.2	-1.7
DBIC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DBIC	Dimbokro	135.00	198	PKP	PKPdf	08 06 45.2	-1.7
	comp=Z,7.4nm,1.1s,baz=90,slow=4.0,SNR=4.1						
DBIC	Dimbokro	135.00	198	PKP	PKPdf	08 06 45.2	-1.7
BRTR	Keskin Array B	143.03	273	PKIKP	PKPdf	08 06 55.8	-4.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	143.03	273	PKhKP		08 06 55.8	
	comp=Z,0.7nm,0.6s,baz=153,slow=5.5,SNR=4.0						
AKASG	Malin Array Be	150.75	289	PKIKP	PKPdf	08 07 11.0	-1.9
AKASG						08 07 16.8	
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	Malin Array Be	150.75	289	PKP	PKPdf	08 07 10.9	-2.0
	comp=Z,0.3nm,0.4s,baz=45,slow=1.3,SNR=3.4						
AKASG				PKPbc	PKPdf	08 07 16.8	+3.8
	comp=Z,3.0nm,0.8s,baz=79,slow=2.2,SNR=16						
ARCES	ARCESS Array B	152.26	329	PKIKP	PKPdf	08 07 20.1	+5.5
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARCES	ARCESS Array B	152.26	329	PKPbc	PKPdf	08 07 20.1	+5.5
	comp=Z,5.2nm,0.8s,baz=63,slow=2.7,SNR=12						
FINES	FINESS Array B	153.84	311	PKIKP	PKPdf	08 07 24.2	+7.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	153.84	311	PKPbc	PKPdf	08 07 24.1	+7.2
	comp=Z,1.7nm,0.7s,baz=135,slow=2.7,SNR=5.5						
GERES	GERESS Array B	159.83	277	PKP2	PKPab	08 08 03.3	-0.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	GERESS Array B	159.83	277	PKPab	PKPab	08 08 03.3	-0.2
	comp=Z,0.6nm,0.8s,baz=158,slow=5.3,SNR=4.4						

IDC 05 08:17:19.3±6.8,6.26S×146.91E,h20^{km}±33^{km},mb3.5/3,mb1 3.7/5,mb1mx3.5/15,mbtmp3.7/5,ML2.9/2,Error ellipse: s-maj=52.1km s-min=39.7km az=76.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.13	176	Pn	Pn	08 18 08.9	+0.2
	5.0nm,0.3s,baz=7.1,slow=8.1,SNR=14						
PMG				Pg	Pn	08 18 15.8	+7.1
	9.9nm,0.3s,baz=17,slow=11,SNR=12						
PMG				Sn	Sn	08 18 46.1	+0.2
	4.9nm,0.3s,baz=234,slow=17,SNR=2.7						
PMG				Lg		08 18 59.8	
	7.3nm,0.3s,baz=40,slow=15,SNR=3.5						
WRA	Warramunga Arr	18.28	221	P	P	08 21 31.6	-2.1
	0.1nm,0.3s,baz=47,slow=12,SNR=14						
ASAR	Alice Springs	21.36	215	P	P	08 22 06.1	-1.6
	0.4nm,0.4s,baz=56,slow=9.8,SNR=6.6						
STKA	Stephens Creek	25.96	190	P	P	08 22 48.9	-3.6
	0.8nm,0.5s,baz=27,slow=11,SNR=2.9						
VNDA	Vanda	71.66	177	P	P	08 28 39.4	-1.8
	0.5nm,0.8s,baz=338,slow=7.3,SNR=3.5						

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*CASC **05** 08:17:57.7±1.6,11.50N×86.04W,h183^{km}±6^{km},MD4.0,mb3.9(NEIC)*

*NEIC **05** 08:17:58.3±1.3,11.45N×85.93W,h192^{km}±14^{km},mb3.9/3,Error ellipse: s-maj=31.0km s-min=14.4km az=224.0*

*IDC **05** 08:18:06.1±5.2,11.73N×85.71W,h268^{km}±59^{km},mb3.5/5,mb1 3.5/7,mb1mx3.2/23,mbtmp4.1/7,Error ellipse: s-maj=34.2km s-min=14.9km az=46.0*

ISC 05 08:17:57.9±0.4,11.59N±0.10×85.94W±0.09,h183^{km}±4^{km},n45,σ0^{s}86/52,mb3.8/6,13C-2D,Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONN	Concepcion	0.31	94	eP	P	08 18 22.5	-0.3
CONN				⇑iP		08 18 22.7	
CONN				eS	S	08 18 42.5	+0.5
APON	Apoyo	0.35	339	⇑eP	P	08 18 22.6	-0.4
MASN	Masaya	0.45	332	eP	P	08 18 22.7	-0.6
MASN				eP		08 18 22.9	
TICN	Ticuantepe	0.53	327	⇑iP	P	08 18 23.4	-0.2
CRUN	El Crucero	0.53	318	⇓iP	P	08 18 23.5	-0.1
WILN	Americas 2	0.62	337	⇑eP	P	08 18 23.9	-0.1
MGAN	Managua	0.63	332	⇑iP	P	08 18 23.6	-0.4
MGAN				eS	S	08 18 43.5	-0.7
XAVN	Gruta Xavier	0.67	326	⇑iP	P	08 18 23.9	-0.3
APYN	Apoyeque	0.76	328	⇓eP	P	08 18 24.4	-0.2
PYTN	Playitas	0.95	353	⇑iP	P	08 18 25.9	+0.1
CNGN	Cerro Negro	1.17	321	⇑iP	P	08 18 27.1	-0.4
LEON	Leon	1.24	312	⇑eP	P	08 18 27.2	-1.0
LEON				eS	S	08 18 51.0	-0.6
TEL3	Telica 3	1.32	318	⇑eP	P	08 18 28.7	-0.2
TELN	Telica	1.33	319	eP	P	08 18 28.5	-0.5
TELN				eS	S	08 18 55.2	+2.2
CRIN	San Cristobal	1.55	316	⇑eP	P	08 18 30.5	-0.6
CRIN				eS	S	08 18 56.8	+0.2
JTS	JuntasAbangare	1.61	143	⇑iPn	P	08 18 31.0	-0.7
JTS				eSn	S	08 18 52.6	-5.0
CGA2	Cerro Gallo 2	2.13	137	eP	P	08 18 37.5	+0.5
CGA2				eS	S	08 19 07.2	0.0
PRS1	Puriscal	2.26	135	eP	P	08 18 40.0	+1.4
TRTC	Tortuguero	2.41	115	eP	P	08 18 41.5	+1.3
LAJ	Bijagual	2.48	134	eP	P	08 18 39.5	-1.5
LAJ				eS	S	08 19 11.7	-2.6
LCR2	La Lucha 2	2.64	134	eP	P	08 18 43.7	+0.7
URSC	Urasca	2.75	129	eP	P	08 18 46.0	+1.8
BUS	Buena Vista	2.95	133	eP	P	08 18 47.8	+1.2
BUS				eS	S	08 19 24.9	+0.8
LCBS	La Ceiba	3.61	305	⇑eP	P	08 18 54.7	-0.2
LFRS	El Faro	3.66	304	eP	P	08 18 55.5	-0.1
LFU	La Fuente	3.77	305	eP	P	08 18 57.4	+0.4
BOQS	Boqueron	3.90	304	eP	P	08 18 59.2	+0.6
SBLS	San Blas	4.23	302	eP	P	08 19 03.2	+0.4
SNJE	San Jose	4.24	303	eP	P	08 19 03.1	+0.3
RTR	El Retiro	4.28	303	eP	P	08 19 04.1	+0.6
RBDL	Robledal	4.43	305	eP	P	08 19 05.8	+0.5
ROSC	El Rosal	13.29	119	P	P	08 21 05.5	+5.0
	0.3nm,0.3s,baz=224,slow=3.2,SNR=10						
OTAV	Otavalo	13.51	146	eP	P	08 21 08.5	+5.1
SDV	Santo Domingo	15.30	99	P	P	08 21 25.5	-0.4
	0.3nm,0.3s,baz=306,slow=8.4,SNR=6.8						
SDV	Santo Domingo	15.30	99	eP	P	08 21 25.1	-0.8
	3.6nm,0.7s						
PCRV	Puerto La Cruz	20.97	92	P	P	08 22 27.8	0.0
	4.2nm,0.4s,baz=31,slow=14,SNR=6.8						
LRAL	Lakeview Retre	21.37	358	eP	P	08 22 32.8	+1.1
	1.5nm,0.3s,mb3.8						
TXAR	Lajitas Array	24.18	320	P	P	08 22 58.4	-0.4
	0.3nm,0.4s,mb3.2,baz=136,slow=10,SNR=9.6						
SAML	Samuel	30.47	131	eP	P	08 23 51.1	-4.8
	1.4nm,0.5s,mb4.0						
SIV	San Ignacio	36.83	138	P	P	08 24 48.3	-2.0
	12nm,0.5s,mb4.8,baz=311,slow=9.3,SNR=195						
NVAR	Mina Array Bea	39.32	318	P	P	08 25 11.0	+0.2
	0.4nm,0.6s,mb3.2,baz=122,slow=7.5,SNR=4.2						
NVAR	Mina Array Bea	39.32	318	P	P	08 25 11.0	+0.2
SCHQ	Schefferville	45.69	15	P	P	08 25 58.6	-3.4
	3.9nm,1.0s,mb4.0,baz=226,slow=14,SNR=6.4						
ASAR	Alice Springs	140.31	247	PKhKP		08 36 59.0	
	0.8nm,0.7s,baz=114,slow=3.2,SNR=4.0						
ASAR				PKP	PKPdf	08 37 05.8	+0.1
	0.9nm,0.7s,baz=104,slow=1.8,SNR=11						
WRA	Warramunga Arr	140.44	253	PKhKP		08 36 59.8	
	0.3nm,0.5s,baz=94,slow=3.3,SNR=12						
WRA				PKP	PKPdf	08 37 06.0	0.0
	1.0nm,0.5s,baz=92,slow=2.4,SNR=29						

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*IDC **05** 08:28:48.6±0.7,23.62N×108.74W,mb4.6/20,mb1 4.7/24,mb1mx4.7/26,mbtmp4.5/24,ML4.0/3,MS5.3/30,Ms1 5.3/30,ms1mx5.3/37,Error ellipse: s-maj=25.1km s-min=12.2km az=58.0*

*MEX **05** 08:28:50.1±2.4,23.68N×108.66W,h7^{km}±17^{km},MD5.5*

*BJI **05** 08:28:50.9,23.70N×108.40W,h10^{km},mB5.6,mb5.2,Ms5.7,Msz5.4*

*MOS **05** 08:28:50.7±1.2,23.78N×108.35W,h16^{km},mb5.2/52,* *MS5.3/34, Error ellipse: s-maj=6.9km s-min=4.0km az=92.5*

HRVD ***05*** *08:28:50.9±0.2, 23.70N×108.51W, h12*^{km}*, MW5.7/68, Centroid moment Tensor Solution. LP body waves: s62,c120; Mantle waves: s68,c146; Half duration: 1*^{s}*7 Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-0.12±.05;* $M_{\theta\theta}$*-3.46±.05;* $M_{\phi\phi}$*3.59±.06;* $M_{r\theta}$*0.00±.13;* $M_{\theta\phi}$*-1.06±.05;* $M_{\phi r}$*0.43±.14; Best double couple:* M_0*3.704×*10^{17} *NP1:* ϕ_s*306°,δ85°,λ176°. NP2:*ϕ_s*37°,δ86°,λ5°. Principal axes: T 3.791, Plg6°, Azm262°; N -.169, Plg84°, Azm72°; P -3.617, Plg1°, Azm172°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***05*** *08:28:50.9±0.3, 23.67N×108.37W, h10*^{km}*, mb5.1/87, MS5.3/104, MW5.6 Error ellipse: s-maj=5.8km s-min=3.3km az=220.0, Moment Tensor Solution. s8 Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*0.62;* $M_{\theta\theta}$*-3.62;* $M_{\phi\phi}$*2.99;* $M_{r\theta}$*-0.98;* $M_{\theta\phi}$*-1.21;* $M_{\phi r}$*-0.25; Best double couple:* M_0*3.6×*10^{17} *NP1:*ϕ_s*126°,δ80°,λ-173°. NP2:*ϕ_s*34°,δ83°,λ-10°. Principal axes: T 3.21, Plg2°, Azm80°; N .84, Plg78°, Azm179°; P -4.05, Plg12°, Azm350°;*

ISC 05 08:28:49.9±0.3**, 23.75N**±0.03×**108.37W**±0.03**, h10**^{km}**, n410,** σ1^{s}**23**/330**, mb5.0**/80**, MS5.3**/139**, 13C-8D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	1.81	282⇑	eP	Pn	08 29 15.0	-6.4
LPIG				eS	Sn	08 29 34.1	-10
MAIG	Mazatlaan	1.87	107	eP	Pn	08 29 22.5	+0.2
MAIG				eS	Sn	08 29 48.0	+1.8
CJM	Chamela	5.24	143	eP	Pn	08 30 08.4	-1.9
CJM				eS	Sn	08 31 09.1	-2.4
ZAIG	Zacatecas	5.43	99⇑	eP	Pn	08 30 13.4	+0.6
ZAIG				eS	Sn	08 31 17.7	+1.6
SFJM	Santa Fe	5.91	122	eP	Pn	08 30 18.5	-1.2
LTX	Lajitas	6.97	36	eP	Pn	08 30 33.2	-1.5
TXAR	Lajitas Array	6.97	36	Pn	Pn	08 30 31.7	-3.0
	1.7nm,0.3s,baz=212,slow=14,SNR=35						
TXAR				Pg	Pg	08 30 49.7	-19
	5.1nm,0.3s,baz=211,slow=14,SNR=14						
TXAR				Lg		08 32 34.1	
	13nm,0.3s,baz=216,slow=16,SNR=5.3						
TXAR				LR	LR	08 33 37.8	
	comp=Z,16µm,18.5s,baz=65,slow=40						
MOIG	Morelia	7.81	120	eP	Pn	08 30 45.5	-0.9
MOIG				eS	Sn	08 32 15.7	0.0
MNTX	Cornudas Mount	8.35	18	ePn	P	08 30 50.7	-3.2
TUC	Tucson	8.79	347	eP	P	08 30 57.4	-2.6
GDL2	Guadalupe Moun	9.13	22	eP	P	08 31 01.7	-3.0
UNM	Universidad Na	9.62	115	eP	P	08 31 11.7	+0.1
UNM				eS	Sn	08 33 04.3	+3.5
UNM	Universidad Na	9.62	115	eP	P	08 31 11.7	+0.1
UNM				eP		08 31 16.0	
UNM				eS	Sn	08 33 04.2	+3.5
PLIG	Platanillo	9.85	121⇑	eP	P	08 31 15.6	+0.9
YAIG	Yautepec	9.94	118⇑	iP	P	08 31 17.6	+1.6
CPRX	Cap Rock	10.06	22	eP	P	08 31 17.3	-0.3
JCT	Junction City	10.15	47	eP	P	08 31 17.3	-1.6
PPM	Popocatepetl	10.20	115	eP	P	08 31 22.2	+2.6
LENM	Lemitar	10.45	6	eP	P	08 31 24.0	+1.1
BNM	Barren Site	10.47	8	ePn	P	08 31 21.6	-1.6
ACX	Acapulco	10.48	129	eP	P	08 31 26.0	+2.7
ANMO	Albuquerque	11.28	8d	iP	P	08 31 34.9	+0.6
ANMO	Albuquerque	11.28	8	Pn	P	08 31 35.0	+0.7
	baz=206,slow=13,SNR=22						
ANMO				Lg		08 34 47.0	
	baz=67,slow=7.7,SNR=3.2						
ANMO				LR	LR	08 36 08.2	
	comp=Z,26µm,20.0s,baz=146,slow=38						
ANMO	Albuquerque	11.28	8	ePn	P	08 31 33.7	-0.6
BAR	Barrett	11.51	322	ePn	P	08 31 35.4	-2.0
WUAZ	Wupatki	12.01	348⇓	ePn	P	08 31 44.5	+0.3
PFO	Pinyon Flat Ob	12.11	326⇓	eP	P	08 31 46.1	+0.6
AMTX	Amarillo	12.53	26	ePn	P	08 31 50.5	-0.7
LDFC	Landfair	12.72	334⇓	eP	P	08 31 55.0	+1.4
OXX	Oaxaca	12.77	119	eP	P	08 31 57.0	+2.6
NEN	Nelson	13.12	336	P	P	08 32 00.1	+1.2
MWC	Mount Wilson	13.44	323	eP	P	08 32 02.8	-0.4
WMOK	Wichita Mounta	13.77	35	eP	P	08 32 05.5	-2.1
HUIG	Huatulco	14.00	122	eP	P	08 32 15.0	+4.2
SDCO	Great Sand Dun	14.16	9⇓	eP	P	08 32 14.4	+1.7
PV01	Paradox Valley	14.34	359	eP	P	08 32 16.0	+1.0
NATX	Nacogdoches	14.51	54⇑	eP	P	08 32 14.4	-3.0
PV10	Paradox Valley	14.59	358	eP	P	08 32 18.4	0.0
ARUT	Antelope Range	14.65	344	eP	P	08 32 21.4	+2.3
MSU	Marysvale	15.07	348	eP	P	08 32 26.0	+1.4
TRCR	Troy Canyon	15.80	339	eP	P	08 32 35.9	+1.8
MTUM	Tungsten Hills	16.14	330	eP	P	08 32 40.0	+1.6
ISCO	Idaho Springs	16.17	8	eP	P	08 32 40.3	+1.5
ISCO				pmax	pmax		
	comp=Z,125nm,1.3s						
ISCO	Idaho Springs	16.17	8	eP	P	08 32 40.3	+1.5
	comp=Z,125nm,1.3s						
MPU	Maple Canyon	16.45	351	eP	P	08 32 44.5	+2.2
OMM	Old Mammoth Mi	16.55	329	eP	P	08 32 45.2	+1.5
LRV	Little Rabbit	16.69	322	eP	P	08 32 45.9	+0.4
SCIG		16.70	103	eP	P	08 32 45.2	-0.4
DAU	Daniels Canyon	16.79	352	eP	P	08 32 48.0	+1.3
MIAR	Mount Ida	16.80	47	eP	P	08 32 46.6	-0.2
MIAR				pmax	pmax		
	comp=Z,33nm,1.1s						
MIAR	Mount Ida	16.80	47	eP	P	08 32 46.6	-0.2
	comp=Z,33nm,1.1s						
DUG	Dugway	16.82	348	eP	P	08 32 48.4	+1.4
DUG				pmax	pmax		
	comp=Z,116nm,1.3s						
DUG	Dugway	16.82	348	eP	P	08 32 48.4	+1.3
	comp=Z,116nm,1.3s						
MNV	Mina	16.84	333	eP	P	08 32 49.3	+1.9
MNV				pmax	pmax		
	comp=Z,301nm,1.5s						
MNV	Mina	16.84	333	eP	P	08 32 49.3	+1.9
	comp=Z,301nm,1.5s						
NVAR	Mina Array Bea	16.91	332	Pn	P	08 32 49.0	+0.8
	comp=Z,0.4nm,0.3s,baz=150,slow=11,SNR=54						
NVAR				Lg		08 37 54.4	
	comp=Z,0.0nm,0.3s,baz=90,slow=23,SNR=2.8						
NVAR				LR	LR	08 38 52.8	
	comp=Z,8µm,19.2s,baz=170,slow=36						
CCIG	Comitan	16.96	113	eP	P	08 32 52.6	+3.6
JLU	Jordanelle	17.00	352	eP	P	08 32 49.9	+0.6
CTU	Camp Tracy	17.13	351	eP	P	08 32 51.7	+0.7
NOQ	North Oquirrh	17.14	350	eP	P	08 32 53.0	+1.8
SAO	San Andreas Ge	17.18	322	eP	P	08 32 50.9	-0.7
SAO				pmax	pmax		
	comp=Z,301nm,1.8s						
SAO	San Andreas Ge	17.18	322	eP	P	08 32 50.9	-0.6
	comp=Z,301nm,1.8s						
TCUT	Toone Canyon	17.50	352	eP	P	08 32 56.9	+1.2
CMB	Columbia Colle	17.55	327	eP	P	08 32 55.8	-0.5
CMB				pmax	pmax		
	comp=Z,86nm,1.3s						
CMB	Columbia Colle	17.55	327	eP	P	08 32 55.8	-0.6
	comp=Z,86nm,1.3s						
BGU	Big Grassy Mou	17.57	348	eP	P	08 32 57.3	+0.9
PHWY	Pilot Hill	17.67	7	eP	P	08 32 59.6	+1.9
UALR	University of	17.76	48	eP	P	08 32 58.6	-0.2
	comp=Z,128nm,1.4s						
SPUT	South Promonto	17.84	350	eP	P	08 33 00.3	+0.5
ELK	Elko	17.90	343	eP	P	08 33 02.1	+1.5
ELK				pmax	pmax		
	comp=Z,69nm,1.2s						
ELK	Elko	17.90	343	P	P	08 33 00.5	-0.1
	comp=Z,0.1nm,0.3s,baz=175,slow=8.1,SNR=31						
ELK				Lg		08 38 24.7	
	comp=Z,0.2nm,0.3s,baz=238,slow=19,SNR=3.1						
ELK				LR	LR	08 39 32.0	
	comp=Z,10µm,18.3s,baz=163,slow=36						
ELK	Elko	17.90	343	eP	P	08 33 02.1	+1.5
	comp=Z,70nm,1.2s						
RWWY	Rawlins	17.91	3	P	P	08 32 58.6	-2.1
	comp=Z,178nm,1.4s						
HWUT	Hardware Ranch	18.00	352	eP	P	08 33 02.8	+0.9
	comp=Z,198nm,1.1s						
WCN	Washoe City	18.26	331	eP	P	08 33 06.4	+1.2
	comp=Z,221nm,1.4s						
KSU1	Kansas State U	18.27	30	eP	P	08 33 05.2	0.0
HVU	Hansel Valley	18.35	349	eP	P	08 33 05.7	-0.5
PAHR	Pah Rah Range	18.43	332	eP	P	08 33 07.9	+0.6
	comp=Z,104nm,1.4s						
BW06	Boulder Array	18.99	357	eP	P	08 33 12.5	-1.5
	comp=Z,61nm,1.1s						
PDAR	Pinedale Array	18.99	357	P	P	08 33 13.1	-0.9
	comp=Z,0.1nm,0.3s,baz=172,slow=10,SNR=39						
PDAR				Lg		08 38 57.6	
	comp=Z,0.1nm,0.3s,baz=129,slow=31,SNR=2.5						
PDAR				LR	LR	08 40 50.2	
	comp=Z,11µm,20.6s,baz=186,slow=38						
NSHM	Saint Helena R	19.07	324	eP	P	08 33 15.7	+0.7
AHID	Auburn Hatcher	19.10	354	eP	P	08 33 13.5	-1.7
	comp=Z,179nm,1.4s						
HBAR	Harrisburg	19.34	49	eP	P	08 33 18.1	0.0
HOPS	Hopland	19.67	324	P	P	08 33 21.4	-0.5
	comp=Z,248nm,1.5s						
RRI2	Red Ridge	19.70	354	eP	P	08 33 20.5	-1.6
	comp=Z,153nm,1.1s						
OXF	Oxford	19.70	53	P	P	08 33 22.3	+0.1
OXF				pmax	pmax		
	comp=Z,105nm,1.3s						
OXF	Oxford	19.70	53	P	P	08 33 22.3	+0.1
	comp=Z,105nm,1.3s						
SNOW	Snow King Moun	19.76	355	eP	P	08 33 21.2	-1.7
	comp=Z,89nm,1.0s						
TPAW	Teton Pass	19.80	354	eP	P	08 33 22.5	-0.8
	comp=Z,227nm,1.4s						
WUWY	Wally Ulrich	19.83	355	eP	P	08 33 21.9	-1.8
GNAR	Gosnell	20.00	48	eP	P	08 33 25.5	0.0
MOOW	Moose Ponds	20.04	355	eP	P	08 33 24.5	-1.4
	comp=Z,176nm,1.3s						
IMW	Indian Meadow	20.20	355	eP	P	08 33 26.6	-1.0
	comp=Z,215nm,1.2s						
HLID	Hailey	20.38	347	eP	P	08 33 28.4	-1.0
	comp=Z,90nm,1.2s						
HLID				LR	LR		
	comp=Z,10µm,19.0s,MS5.2						
WVOR	Wild Horse Val	20.49	338	eP	P	08 33 29.3	-1.3
WVOR				pmax	pmax		
	comp=Z,226nm,1.5s						
WVOR				MLR	MLR		
	comp=Z,8µm,20.0s,MS5.1						
WVOR	Wild Horse Val	20.49	338	eP	P	08 33 29.3	-1.3
	comp=Z,226nm,1.5s						
WVOR				LR	LR		
	comp=Z,8µm,20.0s,MS5.1						
PARMO	Parma	20.56	47	eP	P	08 33 31.3	-0.1
WDC	Whiskeytown Da	20.58	328	eP	P	08 33 30.8	-0.8
WDC				pmax	pmax		
	comp=Z,75nm,1.2s						
WDC				MLR	MLR		
	comp=Z,5µm,22.0s,MS4.8						
WDC	Whiskeytown Da	20.58	328	eP	P	08 33 30.8	-0.7
	comp=Z,75nm,1.2s						
WDC				LR	LR		
	comp=Z,5µm,22.0s,MS4.8						
RSSD	Black Hills	20.63	9	eP	P	08 33 30.7	-1.3
RSSD				pmax	pmax		
	comp=Z,56nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,9µm,19.0s,MS5.2						
RSSD	Black Hills	20.63	9	eP	P	08 33 30.7	-1.3
	comp=Z,56nm,1.1s						
RSSD				LR	LR		
	comp=Z,9µm,19.0s,MS5.2						
MOD	Modoc	20.65	334	eP	P	08 33 31.9	-0.4
	comp=Z,175nm,1.4s						
MOD				LR	LR		
	comp=Z,10µm,19.0s,MS5.2						
GLAT	Glass	20.66	48	eP	P	08 33 35.0	+2.6
YFT	Old Faithful	20.75	355	eP	P	08 33 33.5	+0.2
LKWY	Lake	20.83	356	eP	P	08 33 33.2	-0.9
LKWY				pmax	pmax		
	comp=Z,183nm,1.0s						
LKWY				MLR	MLR		
	comp=Z,20µm,21.0s,MS5.5						
LKWY	Lake	20.83	356	eP	P	08 33 33.2	-0.9
	comp=Z,183nm,1.0s						
LKWY				LR	LR		
	comp=Z,20µm,21.0s,MS5.5						
FVM	French Village	20.89	43	eP	P	08 33 35.1	+0.3
FVM				pmax	pmax		
	comp=Z,115nm,1.4s						
FVM	French Village	20.89	43	eP	P	08 33 35.1	+0.4
	comp=Z,115nm,1.4s						
PLAL	Pickwick Lake	20.89	53	eP	P	08 33 32.9	-1.9
	comp=Z,95nm,1.4s						
PLAL				LR	LR		
	comp=Z,12µm,21.0s,MS5.2						
LRAL	Lakeview Retre	20.92	59	eP	P	08 33 35.0	-0.1
	comp=Z,66nm,1.1s						
LRAL				LR	LR		
	comp=Z,10µm,22.0s,MS5.2						
LASM	Arnica Sink	20.94	331	P	P	08 33 37.3	+2.1
YMR	Madison River	20.97	355	eP	P	08 33 35.5	-0.1
UTMT	University of	20.99	49	eP	P	08 33 34.8	-1.0
	comp=Z,249nm,1.1s						
YNR	Norris Junctio	21.00	355	eP	P	08 33 35.7	-0.1
QLMT	Earthquake Lak	21.18	354	eP	P	08 33 37.4	-0.2
MCMT	McKenzie Canyo	21.34	351	eP	P	08 33 39.8	+0.5
KHMM	Horse Mountain	21.39	327	eP	P	08 33 38.9	-1.0
SLM	Saint Louis	21.41	42	eP	P	08 33 40.4	+0.4
SLM				pmax	pmax		
	comp=Z,136nm,1.4s,mb5.1						
SLM	Saint Louis	21.41	42	eP	P	08 33 40.4	+0.4
	comp=Z,136nm,1.4s,mb5.1						
YBH	Yreka Blue Hor	21.56	330	eP	P	08 33 40.8	-0.7
YBH				pmax	pmax		
	comp=Z,49nm,1.5s						
YBH				MLR	MLR		
	comp=Z,5µm,19.0s						
YBH	Yreka Blue Hor	21.56	330	P	P	08 33 40.7	-0.8
	comp=Z,12nm,1.1s,mb4.2,baz=133,slow=4.1,SNR=12						
YBH				LR	LR	08 42 09.7	
	comp=Z,4µm,19.8s,MS4.8,baz=153,slow=37						
YBH	Yreka Blue Hor	21.56	330	eP	P	08 33 40.8	-0.7
	comp=Z,49nm,1.5s,mb4.7						
YBH				LR	LR		
	comp=Z,5µm,19.0s,MS4.9						
WVT	Waverly	21.60	50	eP	P	08 33 41.4	-0.6
WVT				pmax	pmax		
	comp=Z,86nm,1.1s,mb5.1						
WVT				MLR	MLR		
	comp=Z,16µm,20.0s,MS5.4						
WVT	Waverly	21.60	50	eP	P	08 33 41.4	-0.6
	comp=Z,86nm,1.1s,mb5.1						
WVT				LR	LR		
	comp=Z,16µm,20.0s,MS5.4						
BOZ	Bozeman (W)	22.00	354	eP	P	08 33 46.3	+0.3
BOZ				pmax	pmax		
	comp=Z,118nm,1.3s,mb5.2						
BOZ				MLR	MLR		
	comp=Z,10µm,20.0s,MS5.2						
BOZ	Bozeman (W)	22.00	354	eP	P	08 33 46.3	+0.3
	comp=Z,118nm,1.3s,mb5.2						
BOZ				LR	LR		
	comp=Z,10µm,20.0s,MS5.2						
GCMT	Greycliff	22.01	358	eP	P	08 33 45.7	-0.4
BMO	Blue Mountains	22.28	343	eP	P	08 33 49.1	+0.4
	comp=Z,109nm,1.4s,mb5.1						
BMO				LR	LR		
	comp=Z,5µm,20.0s,MS4.9						
HUMO	Hull Mountain	22.36	331	eP	P	08 33 49.6	+0.1
	comp=Z,29nm,1.5s,mb4.5						
HUMO				LR	LR		
	comp=Z,6µm,19.0s,MS5.0						
SWET	Sewanee	22.57	55	eP	P	08 33 51.5	-0.2
KBO	Bosley Butte	22.64	328	eP	P	08 33 52.4	0.0
LAO	LASA Array	22.95	4	eP	P	08 33 55.6	+0.3
	comp=Z,194nm,1.3s,mb5.4						
LAO				LR	LR		
	comp=Z,13µm,20.0s,MS5.4						
HRY	Holter Researc	23.08	354	eP	P	08 33 57.1	+0.6
KEBM	Edson Butte	23.20	329	eP	P	08 33 59.1	+1.3
CHMT	Chamberlain Mo	23.44	352	eP	P	08 34 00.3	+0.2
MSO	Missoula	23.46	350	eP	P	08 33 59.9	-0.4
	comp=Z,108nm,1.4s,mb5.1						
MSO				LR	LR		
	comp=Z,7µm,21.0s,MS5.1						
WCI	Wyandotte Cave	23.72	47	eP	P	08 34 03.6	+0.7
WCI				pmax	pmax		
	comp=Z,87nm,1.1s,mb5.1						
WCI				MLR	MLR		
	comp=Z,12µm,20.0s,MS5.3						
WCI	Wyandotte Cave	23.72	47	eP	P	08 34 03.6	+0.7
	comp=Z,87nm,1.1s,mb5.1						
WCI				LR	LR		
	comp=Z,12µm,20.0s,MS5.3						
CPCT	Cooper Cave	23.72	55	eP	P	08 34 02.2	-0.8
GOGA	Godfrey	23.84	61	eP	P	08 34 02.6	-1.5
GOGA				pmax	pmax		
	comp=Z,57nm,1.1s,mb4.9						
GOGA				MLR	MLR		
	comp=Z,12µm,20.0s,MS5.4						
GOGA	Godfrey	23.84	61	eP	P	08 34 02.6	-1.5
	comp=Z,57nm,1.1s,mb4.9						
GOGA				LR	LR		
	comp=Z,12µm,20.0s,MS5.4						
SSOR	Sweet Springs	23.99	335	P	P	08 34 06.2	+0.8
BLO	Bloomington	24.07	45	eP	P	08 34 07.8	+1.5
BLO				pmax	pmax		
	comp=Z,176nm,1.4s,mb5.3						
BLO	Bloomington	24.07	45	eP	P	08 34 07.8	+1.6
	comp=Z,176nm,1.4s,mb5.3						
COR	Corvallis	24.10	333	PFAKE		08 34 20.0	+13
COR				LR	LR		
	comp=Z,7µm,19.0s,MS5.2						
VLL	Laurance Lake	24.21	337	P	P	08 34 11.1	+3.5
HAWA	Hanford	24.32	341	eP	P	08 34 08.3	-0.3
	comp=Z,4.2nm,1.2s						
HAWA				LR	LR		
	comp=Z,592nm,20.0s						
VLMM	Larch Mountain	24.40	336	P	P	08 34 12.0	+2.6
DWPF	Disney	24.59	74	eP	P	08 34 12.0	+0.5
	comp=Z,97nm,1.3s,mb5.2						
DWPF				LR	LR		
	comp=Z,5µm,19.0s,MS5.0						
TZTN	Tazewell	24.88	53	eP	P	08 34 16.2	+2.0
TBM	Table Mountain	25.34	340	P	P	08 34 19.9	+1.5
NEW	Newport	25.43	346	eP	P	08 34 17.6	-1.6
NEW				pmax	pmax		
	comp=Z,105nm,1.5s						
NEW				MLR	MLR		
	comp=Z,8µm,22.0s						
NEW	Newport	25.43	346	P	P	08 34 19.9	+0.7
	comp=Z,44nm,1.2s,mb4.9,baz=154,slow=12,SNR=26						
NEW				LR	LR	08 44 04.5	
	comp=Z,6µm,21.9s,MS5.1,baz=169,slow=36						
NEW	Newport	25.43	346	eP	P	08 34 17.6	-1.6
	comp=Z,105nm,1.5s,mb5.2						
NEW				LR	LR		
	comp=Z,8µm,22.0s,MS5.2						
JSC	Jenkinsville	25.85	60	eP	P	08 34 24.1	+0.8
JTS	JuntasAbangare	26.03	117	eP	P	08 34 25.7	+0.5
JTS				pmax	pmax		
	comp=Z,56nm,1.4s						
JTS				MLR	MLR		
	comp=Z,2µm,20.0s						
JTS	JuntasAbangare	26.03	117	P	P	08 34 26.2	+1.0
	comp=Z,3.4nm,0.6s,mb4.1,baz=331,slow=19,SNR=2.6						
JTS				LR	LR	08 44 52.0	
	comp=Z,6µm,21.4s,MS5.1,baz=314,slow=37						
JTS	JuntasAbangare	26.03	117	eP	P	08 34 25.7	+0.5
	comp=Z,56nm,1.4s,mb4.9						
JTS				LR	LR		
	comp=Z,2µm,20.0s,MS4.6						
COW	Cow Castle Cre	26.06	62	P	P	08 34 25.7	+0.4
NHSC	New Hope	26.42	63	P	P	08 34 28.2	-0.3
	comp=Z,222nm,1.4s,mb5.5						
NHSC				LR	LR		
	comp=Z,7µm,19.0s,MS5.2						
ACSO	Alum Creek Sta	26.95	46	eP	P	08 34 35.1	+1.7
	comp=Z,71nm,1.4s,mb5.0						
ACSO				LR	LR		
	comp=Z,6µm,22.0s,MS5.1						
OCWA	Octopus Mounta	27.06	336	eP	P	08 34 35.0	+0.7
	comp=Z,50nm,1.1s,mb5.0						
OCWA				LR	LR		
	comp=Z,8µm,21.0s,MS5.2						
ELN	Prospectdale	27.21	54	eP	P	08 34 37.8	+2.0
FWV	Forest Hill	27.30	53	eP	P	08 34 40.2	+3.5
BLA	Blacksburg	27.45	54	P	P	08 34 38.2	+0.2
BLA				pmax	pmax		
	comp=Z,39nm,1.1s,mb4.8						
BLA				MLR	MLR		
	comp=Z,14µm,21.0s,MS5.5						
BLA	Blacksburg	27.45	54	P	P	08 34 38.2	+0.2
	comp=Z,39nm,1.1s,mb4.8						
BLA				LR	LR		
	comp=Z,14µm,21.0s,MS5.5						
EYMN	Ely	27.63	25	eP	P	08 34 37.8	-1.6
	comp=Z,36nm,0.9s,mb5.0						
EYMN				LR	LR		
	comp=Z,7µm,20.0s,MS5.2						
ULM	Lac du Bonnet	28.19	17	P	P	08 34 43.5	-1.0
	comp=Z,12nm,1.0s,mb4.5,baz=206,slow=9.1,SNR=8.8						
ULM				LR	LR	08 46 38.7	
	comp=Z,7µm,21.9s,MS5.2,baz=202,slow=38						
ALLY	Alegheny Colle	29.52	46	P	P	08 34 56.7	+0.1
EDM	Edmonton	29.67	354	eP	P	08 34 55.5	-2.3
PAYG	Puerto Ayora	29.97	142	PFAKE		08 35 10.0	+9.1
PAYG				LR	LR		
	comp=Z,2µm,19.0s,MS4.7						
CBN	Corbin	30.07	54	eP	P	08 35 01.8	+0.2
	comp=Z,90nm,1.4s,mb5.3						
CBN				LR	LR		
	comp=Z,19µm,20.0s,MS5.7						
SDMD	Soldier's Deli	30.87	52	eP	P	08 35 05.5	-3.2
FFC	Flin Flon	31.30	7	P	P	08 35 06.7	-5.5
FFC				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.9						
FFC				MLR	MLR		
	comp=Z,9µm,19.0s,MS5.4						
FFC	Flin Flon	31.30	7	P	P	08 35 06.7	-5.5
	comp=Z,24nm,1.1s,mb4.9						
FFC				LR	LR		
	comp=Z,9µm,19.0s,MS5.4						
MVL	Millersville	31.44	51	eP	P	08 35 14.0	+0.4
GENY	Geneseo	31.57	46	eP	P	08 35 12.7	-2.0
SADO	Sadowa	31.71	41	LR	LR	08 49 01.6	
	comp=Z,12µm,19.1s,MS5.6,baz=237,slow=38						
BINY	Binghamton	32.54	48	eP	P	08 35 20.6	-2.6
	comp=Z,95nm,1.4s,mb5.5						
BINY				LR	LR		
	comp=Z,18µm,21.0s,MS5.8						
NCB	Newcomb	34.45	46	eP	P	08 35 37.8	-1.9
	comp=Z,27nm,0.9s,mb5.2						
NCB				LR	LR		
	comp=Z,11µm,21.0s,MS5.6						
MIV	Mineville/With	34.95	46	P	P	08 35 39.6	-4.4
QUA2	Belchertown	35.07	49	eP	P	08 35 44.4	-0.7
	comp=Z,29nm,1.0s,mb5.2						
FRNY	Flat Rock	35.23	45	eP	P	08 35 45.6	-0.8
HRV	Harvard--Oak R	35.70	49	eP	P	08 35 50.8	+0.3
HRV				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
HRV				MLR	MLR		
	comp=Z,8µm,21.0s,MS5.5						
HRV	Harvard--Oak R	35.70	49	eP	P	08 35 50.8	+0.3
	comp=Z,30nm,1.1s,mb5.1						
HRV				LR	LR		
	comp=Z,8µm,21.0s,MS5.5						
WES	Weston	35.82	50	PFAKE		08 36 00.0	+8.5
WES				LR	LR		
	comp=Z,8µm,21.0s,MS5.5						
FCC	Fort Churchill	36.43	13	eP	P	08 35 55.9	-0.5
FCC				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
FCC	Fort Churchill	36.43	13	eP	P	08 35 55.9	-0.5
	comp=Z,21nm,0.9s,mb5.1						
OTAV	Otavalo	37.27	125	eP	P	08 36 04.8	+0.8
	comp=Z,29nm,1.1s,mb5.0						
OTAV				LR	LR		
	comp=Z,2µm,21.0s,MS4.8						
WVL	Waterville	37.71	47	PFAKE		08 36 20.0	+13
WVL				LR	LR		
	comp=Z,69µm,21.0s,MS6.4						
ROSC	El Rosal	37.79	114	P	P	08 36 11.0	+2.7
	comp=Z,11nm,1.1s,mb4.5,baz=92,slow=23,SNR=13						
ROSC				LR	LR	08 53 13.3	
	comp=Z,4µm,18.6s,MS5.2,baz=351,slow=38						
DLBC	Dease Lake	37.95	342	eP	P	08 36 09.1	-0.1
SIT	Sitka	38.58	337	PFAKE		08 36 30.0	+15
SIT				LR	LR		
	comp=Z,5µm,20.0s,MS5.4						
YKA	Yellowknife Ar	38.95	355	P	P	08 36 15.2	-2.4
YKA				pmax	pmax		
	comp=Z,11nm,1.0s						
YKA				MLR	MLR		
	comp=Z,7µm,19.4s						
YKA	Yellowknife Ar	38.95	355	P	P	08 36 15.2	-2.4
	comp=Z,11nm,1.0s,mb4.5,baz=170,slow=7.6,SNR=28						
YKA				LR	LR	08 53 04.2	
	comp=Z,7µm,19.4s,MS5.5,baz=160,slow=37						
YKA	Yellowknife Ar	38.95	355	P	P	08 36 15.2	-2.4
YKA				LR	LR	08 53 04.2	
SDV	Santo Domingo	38.97	106	P	P	08 36 18.1	0.0

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      comp=Z,5.5nm,0.6s,mb4.5,baz=244,slow=23,SNR=3.1
SDV   Santo Domingo    38.97 106⇑eP     P      08 36 17.8 -0.4
      comp=Z,83nm,1.4s,mb5.3
SDV                              LR     LR
      comp=Z,3µm,19.0s,MS5.2
YKW3  Yellowknife Ar   39.02 355 eP     P      08 36 16.4 -1.8
BBSR  BB Station       39.27  67  PFAKE        08 36 30.0 +9.5
BBSR                              LR     LR
      comp=Z,3µm,19.0s,MS5.2
PQI   Presque Isle     39.53  44  PFAKE        08 36 30.0 +7.4
PQI                               LR     LR
      comp=Z,36µm,20.0s,MS6.2
SJG   San Juan         39.73  90 eP     P      08 36 27.8 +3.4
SJG                               pmax   pmax
      comp=Z,151nm,1.4s
SJG                               MLR    MLR
      comp=Z,4µm,22.0s
SJG   San Juan         39.73  90  P     P      08 36 27.9 +3.4
      comp=Z,17nm,0.6s,mb5.0,baz=300,slow=6.1,SNR=9.7
SJG   San Juan         39.73  90 eP     P      08 36 27.8 +3.3
      comp=Z,151nm,1.4s,mb5.5
SJG                               LR     LR
      comp=Z,4µm,22.0s,MS5.2
SCHQ  Schefferville    43.66  34  P     P      08 36 55.6 -0.6
      comp=Z,12nm,0.7s,mb4.7,baz=260,slow=5.4,SNR=8.7
SCHQ                              LR     LR    08 55 13.0
      comp=Z,4µm,18.6s,MS5.4,baz=242,slow=36
POHA  Pohakuloa        43.83 274  PFAKE        08 37 10.0  +12
POHA                              LR     LR
      comp=Z,33µm,19.0s,MS6.3
DIV   Divide           45.30 335  PFAKE        08 37 20.0  +11
DIV                               LR     LR
      comp=Z,4µm,19.0s,MS5.3
KIP   Kipapa           45.71 277  PFAKE        08 37 20.0 +6.8
KIP                               LR     LR
      comp=Z,4µm,20.0s,MS5.4
KDAK  Kodiak Island    46.37 329 eP     P      08 37 17.4 -0.5
      comp=Z,36nm,1.2s,mb5.2
KDAK                              LR     LR
      comp=Z,567nm,20.0s,MS4.5
SML   Sawmill          46.69 335  P     P      08 37 18.7 -1.6
SLKM  Skilak Lake      46.70 333 eP     P      08 37 21.2 +0.7
THY   Trims Highway    46.74 338 eP     P      08 37 22.1 +1.4
PMR   Palmer           46.87 335 eP     P      08 37 22.5 +0.7
NNA   Nana             47.03 136  PFAKE        08 37 30.0 +6.3
NNA                               LR     LR
      comp=Z,330nm,19.0s,MS4.3
FIB   Fire Island      47.05 334  PFAKE        08 37 30.0 +6.8
FIB                               LR     LR
      comp=Z,2µm,19.0s,MS5.0
INK   Inuvik           47.14 348 eP     P      08 37 22.7 -1.2
INK                               pmax   pmax
      comp=Z,30nm,1.1s
INK   Inuvik           47.14 348 eP     P      08 37 22.6 -1.2
      comp=Z,30nm,1.1s,mb5.1
SPU   Mount Spurr      47.82 333 eP     P      08 37 28.1 -1.2
ILAR  Eielson Array    48.00 339  P     P      08 37 29.8 -0.9
ILAR                              pmax   pmax
      comp=Z,188nm,0.3s
ILAR  Eielson Array    48.00 339  P     P      08 37 29.8 -0.9
      comp=Z,188nm,0.3s,baz=153,slow=7.6,SNR=8.1
MCK   McKinley         48.06 337 eP     P      08 37 31.7 +0.6
MCK                               pmax   pmax
      comp=Z,22nm,1.3s,mb5.0
MCK                               MLR    MLR
      comp=Z,913nm,20.0s,MS4.8
MCK   McKinley         48.06 337 eP     P      08 37 31.7 +0.6
      comp=Z,22nm,1.3s,mb5.0
MCK                               LR     LR
      comp=Z,913nm,20.0s,MS4.8
COLA  College          48.38 339 i P    P      08 37 34.3 +0.7
COLA  College          48.38 339 eP     P      08 37 35.1 +1.5
COLA                              LR     LR
      comp=Z,3µm,18.0s,MS5.3
SVW2  Sparrevohn       49.27 332 eP     P      08 37 40.5  0.0
TTA   Tatalina         50.31 334 eP     P      08 37 49.1 +0.6
RPN   Rapa Nui         50.59 181  PFAKE        08 38 00.0 +8.9
RPN                               LR     LR
      comp=Z,1µm,21.0s,MS4.8
IMA   Indian Mountai   51.06 338 eP     P      08 37 54.1  0.0
RES   Resolute Bay     51.47   5  P     P      08 37 55.4 -1.7
RES                               pmax   pmax
      comp=Z,17nm,1.1s,mb4.9
RES   Resolute Bay     51.47   5  P     P      08 37 55.4 -1.7
      comp=Z,17nm,1.1s,mb4.9
UNV   Unalaska Valle   52.46 321  PFAKE        08 38 20.0  +15
UNV                               LR     LR
      comp=Z,3µm,22.0s,MS5.3
RKT   Rikitea          53.28 211 eS     S      08 45 30.3  -11
      comp=Z,1µm,28.0s
RKT                              eSS    SS     08 49 10.5  -10
      comp=Z,665nm,39.0s
RKT                              eLQ           08 51 05.7
      comp=Z,1µm,27.8s
RKT                              eLR    LR     08 52 49.8
      comp=Z,3µm,24.8s,baz=27
SAML  Samuel           54.82 121  PFAKE        08 38 30.0 +7.2
SAML                              LR     LR
      comp=Z,1µm,20.0s,MS5.0
SFJD  Kangerlussuaq    55.91  24 eP     P      08 38 35.9 +5.9
SFJD                             i S    S      08 46 19.3 +3.4
SFJD                             i S    S      08 46 21.0 +5.1
SFJD                              pmax   pmax
      comp=Z,22nm,1.3s,mb5.0
SFJD                              MLR    MLR
      comp=Z,3µm,16.0s,MS5.4
SFJD  Kangerlussuaq    55.91  24 eP     P      08 38 35.9 +5.9
      comp=Z,22nm,1.3s,mb5.0
SFJD                             i S    S      08 46 19.3 +3.4
SFJD                             i S    S      08 46 21.0 +5.1
SFJD                              LR     LR
      comp=Z,3µm,16.0s,MS5.4
SFJD  Kangerlussuaq    55.91  24 i P    P      08 38 35.9 +5.9
      comp=Z,22nm,1.3s,mb5.0
SFJD                             i S    S      08 46 19.3 +3.4
SFJD                             i S    S      08 46 21.0 +5.1
      comp=Z,3µm,16.0s
LPAZ  La Paz           55.94 132 eP     P      08 38 29.6 -1.2
LPAZ                              pmax   pmax
      comp=Z,13nm,1.4s
LPAZ                              MLR    MLR
      comp=Z,2µm,22.0s
LPAZ  La Paz           55.94 132  P     P      08 38 30.6 -0.3
      comp=Z,2.1nm,0.8s,mb4.2,baz=3.8,slow=7.3,SNR=7.2
LPAZ                              LR     LR    09 00 22.3
      comp=Z,1µm,20.2s,MS5.1,baz=72,slow=34
LPAZ  La Paz           55.94 132 eP     P      08 38 29.6 -1.2
      comp=Z,13nm,1.4s,mb4.8
LPAZ                              LR     LR
      comp=Z,2µm,22.0s,MS5.1
TNA   Tin City         56.13 334  PFAKE        08 38 40.0 +8.5
TNA                               LR     LR
      comp=Z,860nm,19.0s,MS4.9
PPT   Papeete          57.49 228 eS     S      08 46 29.4 -7.9
      comp=Z,2µm,25.2s
PPT                              eLQ           08 52 57.6
      comp=Z,2µm,27.2s
PPT                              eLR    LR     08 54 52.3
      comp=Z,7µm,27.2s,baz=35
PPT   Papeete          57.49 228  LR    LR     08 56 22.8
      comp=Z,2µm,18.2s,MS5.3,baz=52,slow=29
LVC   Limon Verde      59.96 137  PFAKE        08 39 10.0  +11
LVC                               LR     LR
      comp=Z,491nm,21.0s,MS4.6
MIDW  Midway           61.44 290  PFAKE        08 39 20.0  +11
MIDW                              LR     LR
      comp=Z,2µm,19.0s,MS5.3
TBI   Tubuai           61.52 223 eS     S      08 47 20.9 -8.5
      comp=Z,667nm,24.5s
TBI                              eLQ           08 54 37.8
      comp=Z,3µm,35.2s
TBI                              eLR    LR     08 56 44.3
      comp=Z,3µm,30.2s,baz=36
SUMG  Summit           61.53  19 eP     P      08 39 08.5 -0.6
      comp=Z,26nm,1.1s,mb5.3
SMY   Shemya           64.01 319  PFAKE        08 39 40.0  +14
SMY                               LR     LR
      comp=Z,1µm,20.0s,MS5.1
BILL  Bilibino         66.49 336c iP    P      08 39 41.2 -0.2
BILL                             e             08 42 09.5
BILL                             eS     S      08 48 27.4 -3.0
BILL                              pmax   pmax
      comp=Z,22nm,1.3s,mb5.0
BILL  Bilibino         66.49 336 eP     P      08 39 40.6 -0.8
      comp=Z,24nm,1.3s,mb5.1
BILL                              LR     LR
      comp=Z,1µm,19.0s,MS5.2
SCO   Scoresbysund     66.64  21 eP     P      08 39 42.1 -0.3
SCO   Scoresbysund     66.64  21 i P    P      08 39 42.1 -0.3
DAG   Danmarks Havn    67.00  14⇑iP     P      08 39 44.2 -0.4
DAG                               pmax   pmax
      comp=Z,4.0nm,0.7s,mb4.6
DAG   Danmarks Havn    67.00  14⇑iP     P      08 39 44.2 -0.4
      comp=Z,4.1nm,0.7s,mb4.6
RAR   Rarotonga        67.09 232  LR    LR     09 01 15.0
      comp=Z,1µm,18.7s,MS5.2,baz=86,slow=29
CPUP  Villa Florida    70.10 132 eP     P      08 40 01.3 -3.3
CPUP                              pmax   pmax
      comp=Z,25nm,1.0s
CPUP                              MLR    MLR
      comp=Z,753nm,19.0s
CPUP  Villa Florida    70.10 132  P     P      08 40 01.5 -3.1
      comp=Z,6.0nm,0.9s,mb4.5,baz=5.7,slow=10,SNR=8.6
CPUP                              LR     LR    09 10 23.5
      comp=Z,614nm,18.3s,MS4.9,baz=350,slow=36
CPUP  Villa Florida    70.10 132 eP     P      08 40 01.3 -3.3
      comp=Z,24nm,1.0s,mb5.1
CPUP                              LR     LR
      comp=Z,753nm,19.0s,MS5.0
CMLA  Cha da Macela    70.45  57  PFAKE        08 40 20.0  +13
CMLA                              LR     LR
      comp=Z,484nm,19.0s,MS4.8
BDFB  Brasilia         70.77 118  P     P      08 40 08.2 -0.6
BDFB                              pmax   pmax
      comp=Z,22nm,1.1s
BDFB                              MLR    MLR
      comp=Z,1µm,19.1s
BDFB  Brasilia         70.77 118  P     P      08 40 08.2 -0.7
      comp=Z,22nm,1.1s,mb5.0,baz=305,slow=13,SNR=9.9
BDFB                              LR     LR    09 14 02.8
      comp=Z,1µm,19.1s,MS5.2,baz=154,slow=38
BAO   Brasilia Array   70.79 118  P     P      08 40 08.2 -0.7
JMIC  Jan Mayen        70.91  20 eS     S      08 49 29.5 +6.5
JMIC                              AMS    AMS   09 12 04.8
      comp=Z,2µm,16.7s,MS5.5
KBS   Kingsbay         72.33  10  PFAKE        08 40 30.0  +13
KBS                               LR     LR
      comp=Z,5µm,19.0s,MS5.8
KBS   Kingsbay         72.33  10 eP     P      08 40 19.5 +2.3
KBS                              ePP    PP     08 42 55.0 -4.9
KBS                              eS     S      08 49 42.5 +3.3
KBS                              eSS    SS     08 54 22.2 +2.9
KBS                               AMS    AMS   09 13 42.5
      comp=Z,3µm,17.3s,MS5.7
AFI   Afiamalu         72.38 246  LR    LR     09 06 03.0
      comp=Z,892nm,19.4s,MS5.0,baz=146,slow=31
PET   Petropavlovsk    73.12 321  PFAKE        08 40 30.0 +7.8
PET                               LR     LR
      comp=Z,505nm,21.0s,MS4.8
PLCA  Paso Flores      73.16 151  P     P      08 40 20.6 -2.1
      comp=Z,8.1nm,1.1s,mb4.5,baz=326,slow=10,SNR=5.2
PLCA                              LR     LR    09 07 35.9
      comp=Z,930nm,19.0s,MS5.1,baz=338,slow=32
SEY   Seymchan         73.22 332 eP     P      08 40 23.3 +0.8
SEY                                            08 40 39.2
SEY                              e             08 43 10.9
SEY                              eS     S      08 49 51.3 +2.0
SEY                                            08 50 26.1
SEY                               SS     SS    08 54 32.5 -0.8
SEY                               pmax   pmax
      comp=Z,30nm,1.4s,mb5.0
SEY                               pmax   pmax
      comp=N,80nm,1.3s
SEY                               pmax   pmax
      comp=E,10.0nm,1.3s
SEY                               smax
      comp=N,640nm,10.0s
SEY                               smax
      comp=E,410nm,9.5s
SEY                               MLR    MLR
      comp=Z,3µm,19.0s,MS5.6
SEY                               MLR    MLR
      comp=N,2µm,18.0s,MS5.5
SEY                               MLR    MLR
      comp=E,1µm,17.0s,MS5.5
MA2   Magadan          75.12 329 eP     P      08 40 34.6 +1.0
MA2                              eS     S      08 50 06.7 -3.9
MA2                              eSS    SS     08 55 05.5 +3.5
MA2                               pmax   pmax
      comp=Z,20nm,1.4s,mb4.8
MA2                               MLR    MLR
      comp=Z,3µm,25.9s,MS5.5
MA2   Magadan          75.12 329  PFAKE        08 40 50.0  +16
MA2                               LR     LR
      comp=Z,674nm,19.0s,MS5.0
TRQA  Tornquist        75.34 144  PFAKE        08 40 50.0  +15
TRQA                              LR     LR
      comp=Z,1µm,20.0s,MS5.2
RCBR  Riachuelo        76.45 103  PFAKE        08 40 50.0 +7.8
RCBR                              LR     LR
      comp=Z,2µm,21.0s,MS5.3
TIXI  Tiksi            77.13 344 eP     P      08 40 41.4 -3.3
TIXI                             eSS    SS     08 55 29.7 -3.1
TIXI                              pmax   pmax
      comp=Z,10.0nm,0.9s,mb4.8
TIXI                              MLR    MLR
      comp=Z,1µm,17.0s,MS5.3
TIXI  Tiksi            77.13 344  PFAKE        08 41 00.0  +15
TIXI                              LR     LR
      comp=Z,2µm,22.0s,MS5.5
WAKE  Wake Island      78.04 286  PFAKE        08 41 00.0 +9.2
WAKE                              LR     LR
      comp=Z,2µm,21.0s,MS5.4
ESK   Eskdalemuir      78.95  34  PFAKE        08 41 10.0  +15
ESK                               LR     LR
      comp=Z,445nm,22.0s,MS4.8
EKA   Eskdalemuir Ar   78.97  34  P     P      08 40 56.8 +1.6
EKA                               pmax   pmax
      comp=Z,3.0nm,1.0s
EKA   Eskdalemuir Ar   78.97  34  P     P      08 40 56.8 +1.6
      comp=Z,2.9nm,1.0s,mb4.2,baz=270,slow=3.5,SNR=3.6
TRO   Tromso           79.59  16 eP     P      08 40 57.5 -0.7
TRO                              eS     S      08 51 00.8 +2.0
TRO                              eSS    SS     08 56 08.2 -1.5
TRO                               AMS    AMS   09 16 35.3
      comp=Z,961nm,17.2s,MS5.2
BER   Bergen           80.52  27  AMS    AMS   09 16 50.0
      comp=Z,2µm,18.3s,MS5.5
KWAJ  Kwajalein Atol   81.07 276  PFAKE        08 41 20.0  +13
KWAJ                              LR     LR
      comp=Z,668nm,22.0s,MS5.0
ARCES ARCESS Array B   81.28  15  P     P      08 41 07.1 -0.1
ARCES                             pmax   pmax
      comp=Z,2.0nm,0.6s
ARCES ARCESS Array B   81.28  15  P     P      08 41 07.0 -0.2
      comp=Z,2.1nm,0.6s,mb4.2,baz=333,slow=5.4,SNR=12
KEV   Kevo             81.46  14  PFAKE        08 41 20.0  +12
KEV                               LR     LR
      comp=Z,3µm,21.0s,MS5.7
NB2   NORSAR Subarra   82.55  25  P     P      08 41 15.7 +1.7
      comp=Z,4.7nm,0.9s,mb4.5,baz=311,slow=5.0
NB2   NORSAR Subarra   82.55  25  P     P      08 41 15.7 +1.7
      baz=311,slow=5.1
NOA   NORSAR Array B   82.55  25  P     P      08 41 15.2 +1.2
NOA                               pmax   pmax
      comp=Z,3.0nm,0.8s
NOA   NORSAR Array B   82.55  25  P     P      08 41 15.2 +1.2
      comp=Z,3.3nm,0.8s,mb4.4,baz=308,slow=4.9,SNR=7.1
KONO  Kongsberg        82.72  27  P     P      08 41 13.7 -1.2
KONO                              pmax   pmax
      comp=Z,96nm,1.4s,mb5.6
KONO                              MLR    MLR
      comp=Z,2µm,22.0s,MS5.5
KONO  Kongsberg        82.72  27  P     P      08 41 13.7 -1.1
      comp=Z,96nm,1.4s,mb5.6
KONO                              LR     LR
      comp=Z,2µm,22.0s,MS5.5
YAK   Yakutsk          82.84 336 eP     P      08 41 15.6 +0.1
YAK                              eS     S      08 51 34.9 +2.4
YAK                               pmax   pmax
      comp=Z,21nm,1.0s,mb5.1
YAK                               pmax   pmax
      comp=N,4.0nm,1.3s
YAK                               pmax   pmax
      comp=E,6.0nm,1.3s
YAK                               MLR    MLR
      comp=N,440nm,16.0s,MS5.1
YAK                               MLR    MLR
      comp=Z,341nm,16.0s,MS4.8
YAK                               MLR    MLR
      comp=E,411nm,15.0s,MS5.1
YAK   Yakutsk          82.84 336  PFAKE        08 41 30.0  +15
YAK                               LR     LR
      comp=Z,1µm,19.0s,MS5.4
EVO   Evora            83.15  51 eP     P      08 41 15.9 -1.7
      comp=Z,48nm,1.4s,mb5.0
EVO                              eR
      comp=Z,4µm,18.8s
FLN   La Foliniere     83.45  39 eP     P      08 41 19.9 +1.0
      comp=Z,201nm,1.4s,mb5.7
FLN                              eR
      comp=Z,4µm,19.8s
FLN   La Foliniere     83.45  39 eP     P      08 41 19.9 +1.0
FLN                               pmax   pmax
      comp=Z,100nm,1.4s,mb5.7
FLN                               MLR    MLR
      comp=Z,4µm,19.8s,MS5.8
HFS   Hagfors          84.07  25  P     P      08 41 24.1 +2.4
HFS                               pmax   pmax
      comp=Z,4.0nm,0.8s
HFS   Hagfors          84.07  25  P     P      08 41 24.1 +2.4
      comp=Z,3.8nm,0.8s,mb4.6,baz=135,slow=2.1,SNR=4.3
HFS   Hagfors          84.07  25  P     P      08 41 24.1 +2.4
LVZ   Lovozero         84.62  13 eP     P      08 41 40.2  +16
LVZ                              eS     S      08 51 46.2 -3.9
LVZ                               pmax   pmax
      comp=Z,30nm,1.3s,mb5.3
LVZ                               pmax   pmax
      comp=N,10.0nm,1.1s
LVZ                               pmax   pmax
      comp=E,8.0nm,1.3s
LVZ                               MLR    MLR
      comp=Z,2µm,16.0s,MS5.7
LVZ                               MLR    MLR
      comp=N,2µm,17.0s,MS5.6
LVZ                               MLR    MLR
      comp=E,420nm,14.0s,MS5.6
APA   Apatity          84.63  14⇓iP     P      08 41 25.0 +0.6
APA                              eS     S      08 51 51.0 +0.8
APA                              ePS    PS     08 52 49.0 +2.3
APA                               pmax   pmax
      comp=Z,92nm,1.9s,mb5.6
APA                               MLR    MLR
      comp=Z,4µm,19.0s,MS5.8
YSS   Yuzh-Sakhalins   84.91 319⇓eP     P      08 41 27.0 +0.7
YSS                              eS     S      08 51 52.0 -1.4
YSS                              ePPS   PPS    08 52 54.0  -20
YSS                              eSS    SS     08 57 35.0 +5.9
YSS                               pmax   pmax
      comp=Z,30nm,1.0s,mb5.4
YSS                               smax
      comp=N,500nm,11.0s
YSS                               MLR    MLR
      comp=Z,500nm,17.0s,MS5.0
YSS   Yuzh-Sakhalins   84.91 319 eP     P      08 41 24.7 -1.5
      comp=Z,40nm,1.1s,mb5.5
YSS                               LR     LR
      comp=Z,514nm,21.0s,MS4.9
RAO   Raoul Island     85.12 235  LR    LR     09 10 15.6
      comp=Z,1µm,18.6s,MS5.3,baz=64,slow=29
ESDC  Sonseca Array    85.49  49  P     P      08 41 29.4 +0.1
      comp=Z,0.1nm,0.3s,baz=312,slow=4.8,SNR=7.1
HGN   Heimansgroeve    85.99  35 eP     P      08 41 33.7 +2.2
      comp=Z,17nm,1.6s,mb5.0
LFF   La Frestale      86.05  42 eP     P      08 41 31.9 -0.1
TCF   Toulx Ste Croi   86.26  41 eP     P      08 41 32.6 -0.4
      comp=Z,36nm,1.4s,mb5.1
TCF   Toulx Ste Croi   86.26  41 eP     P      08 41 32.6 -0.4
TCF                               pmax   pmax
      comp=Z,18nm,1.4s,mb5.1
COP   Copenhagen       86.31  29 i S    S      08 52 17.1  +10
      comp=Z,1µm,16.0s
RJF   Les Rejaudoux    86.34  42 eP     P      08 41 33.2 -0.2
      comp=Z,22nm,1.1s,mb5.0
RJF                              eR
      comp=Z,4µm,21.8s
RJF   Les Rejaudoux    86.34  42 eP     P      08 41 33.2 -0.2
RJF                               pmax   pmax
      comp=Z,11nm,1.1s,mb5.0
RJF                               MLR    MLR
      comp=Z,4µm,21.8s,MS5.8
BGF   Bois d’Agland    86.50  40 eP     P      08 41 33.7 -0.5
      comp=Z,15nm,0.8s,mb5.0
BGF   Bois d’Agland    86.50  40 eP     P      08 41 33.7 -0.5
BGF                               pmax   pmax
      comp=Z,8.0nm,0.8s,mb5.0
SSF   Saint Saulge     86.62  39 eP     P      08 41 34.4 -0.4
SSF                               pmax   pmax
      comp=Z,11nm,0.9s,mb5.1
SSF   Saint Saulge     86.62  39 eP     P      08 41 34.4 -0.4
      comp=Z,11nm,0.9s,mb5.1
AVF   Avril sur Loir   86.68  40 eP     P      08 41 34.4 -0.6
      comp=Z,26nm,1.3s,mb5.0
AVF   Avril sur Loir   86.68  40 eP     P      08 41 34.4 -0.6
AVF                               pmax   pmax
      comp=Z,13nm,1.3s,mb5.0
LOR   Lormes           86.72  39 eP     P      08 41 34.9 -0.3
      comp=Z,27nm,1.1s,mb5.1
LOR                              eR
      comp=Z,4µm,18.5s
LOR   Lormes           86.72  39 eP     P      08 41 34.9 -0.3
LOR                               pmax   pmax
      comp=Z,14nm,1.1s,mb5.1
LOR                               MLR    MLR
      comp=Z,4µm,18.5s,MS5.9
EPF   Esparros         86.75  44 eP     P      08 41 35.2 -0.3
      comp=Z,18nm,1.0s,mb4.9
EPF   Esparros         86.75  44 eP     P      08 41 35.2 -0.3
EPF                               pmax   pmax
      comp=Z,9.0nm,1.0s,mb5.0
SMF   Signal de Mont   87.04  40 eP     P      08 41 36.1 -0.7
      comp=Z,22nm,1.1s,mb5.0
SMF   Signal de Mont   87.04  40 eP     P      08 41 36.1 -0.7
SMF                               pmax   pmax
      comp=Z,11nm,1.1s,mb5.0
FINES FINESS Array B   87.54  20  P     P      08 41 39.2 +0.4
FINES                             pmax   pmax
      comp=Z,2.0nm,0.9s
FINES FINESS Array B   87.54  20  P     P      08 41 39.2 +0.3
      comp=Z,2.0nm,0.9s,mb4.4,baz=270,slow=4.2,SNR=5.6
FINES FINESS Array B   87.54  20  P     P      08 41 39.2 +0.3
CABF  La Chapelle      88.36  39 eP     P      08 41 42.9 -0.2
      comp=Z,92nm,1.8s,mb5.4
CABF  La Chapelle      88.36  39 eP     P      08 41 42.9 -0.2
CABF                              pmax   pmax
      comp=Z,46nm,1.8s,mb5.4
MOX   Moxa             89.01  33 eP     P      08 41 47.2 +1.1
MOX                               MLR    MLR
      comp=Z,3µm,20.0s,MS5.7
MOX   Moxa             89.01  33 eP     P      08 41 47.2 +1.1
MOX                              eS     S      08 52 40.0 +7.7
MOX                              e             09 05 22.0
MOX                               LR     LR
      comp=Z,3µm,20.0s,MS5.7
MOX   Moxa             89.01  33 i P    P      08 41 47.2 +1.1
MOX                               S      S     08 52 40.0 +7.7
MOX                               LQ           09 05 22.0
MOX                               L            09 19 23.0
CLL   Collm            89.29  32 eP     P      08 41 48.0 +0.5
CLL                              eS     S      08 52 38.0 +3.1
CLL   Collm            89.29  32  P     P      08 41 48.0 +0.5
CLL                              eS     S      08 52 38.0 +3.1
CLL                              eSS    SS     08 58 19.0  -14
CLL                              e             08 59 46.0
CLL                              e             09 05 27.0
LPL   La Plagne        89.34  40 eP     P      08 41 48.3 +0.5
LPG   La Plagne        89.36  40 eP     P      08 41 48.5 +0.5
      comp=Z,56nm,1.6s,mb5.3
LPG   La Plagne        89.36  40 eP     P      08 41 48.5 +0.5
LPG                               pmax   pmax
      comp=Z,28nm,1.6s,mb5.3
GRA1  Grafenberg Arr   89.39  34 eP     P      08 41 50.2 +2.2
      comp=Z,9.0nm,1.6s,mb4.8
GRA1                              LR     LR
      comp=Z,3µm,20.9s,MS5.7
GRF   Grafenberg Arr   89.39  34 eP     P      08 41 50.2 +2.2
GRF                               pmax   pmax
      comp=Z,9.0nm,1.6s,mb4.8
KLR   Kul’dur          89.82 325 eP     P      08 41 39.0  -11
BRG   Berggiesshubel   90.03  32 eP     P      08 41 57.3 +6.4
BRG                               pmax   pmax
      comp=Z,2.0nm,0.9s,mb4.5
BRG                               MLR    MLR
      comp=N,2µm,16.6s,MS5.7
BRG                               MLR    MLR
      comp=E,2µm,16.6s,MS5.7
BRG                               MLR    MLR
      comp=Z,3µm,16.6s,MS5.8
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BRG	Berggiesshubel	90.03	32	eP	P	08 41 57.3	+6.4
	comp=Z,1.5nm,0.9s,mb4.3						
BRG				iS	S	08 52 54.0	+12
BRG				iSS	SS	08 58 31.0	-13
BRG				LR	LR		
	comp=Z,3µm,16.6s,MS5.8						
DAVOX	Davos	90.41	37	LR	LR	09 22 31.8	
	comp=Z,6µm,18.7s,MS6.0,baz=275,slow=36						
GERES	GERESS Array B	91.19	34	P	P	08 41 56.5	+0.2
	comp=Z,0.4nm,0.7s,mb3.9,baz=243,slow=6.6,SNR=2.9						
GERES				LR	LR	09 22 56.3	
	comp=Z,3µm,18.9s,MS5.7,baz=310,slow=36						
URZ	Urewera	93.12	229	LR	LR	09 14 04.4	
	comp=Z,2µm,21.6s,MS5.5,baz=286,slow=29						
MJAR	Matsushiro Arr	93.20	312	P	P	08 42 03.5	-2.4
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	Matsushiro Arr	93.20	312	P	P	08 42 03.5	-2.4
	comp=Z,2.7nm,0.7s,mb4.8,baz=52,slow=3.1,SNR=13						
MAJO	Matsushiro	93.20	312	eP	P	08 42 04.5	-1.4
MAJO				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.4						
MAJO				MLR	MLR		
	comp=Z,935nm,20.0s,MS5.2						
MAJO	Matsushiro	93.20	312	eP	P	08 42 04.5	-1.4
	comp=Z,24nm,1.4s,mb5.4						
MAJO				LR	LR		
	comp=Z,935nm,20.0s,MS5.2						
MAT	Matsushiro	93.20	312	eP	P	08 42 04.0	-1.9
MAT				eS	S	08 53 15.0	+5.0
MAT				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.3						
MAT				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.3						
MAT	Matsushiro	93.20	312	eP	P	08 42 04.0	-1.9
	comp=Z,15nm,1.1s,mb5.3						
MAT				eS	S	08 53 15.0	+5.0
MAT				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
MAT	Matsushiro	93.20	312	P	P	08 42 04.1	-1.8
MAT				S	S	08 53 15.0	+5.0
MDJ	Mudanjiang	93.83	323	P	P	08 42 06.6	-2.0
MDJ				S	S	08 53 13.3	-1.9
MDJ				SS	SS	08 59 34.9	-3.2
MDJ				AMB	AMB		
	comp=Z,40nm,4.4s						
MDJ				LR	LR		
	comp=N,500nm,22.5s,MS5.1						
MDJ				LR	LR		
	comp=E,390nm,19.3s,MS5.1						
MDJ				LR	LR		
	comp=Z,760nm,16.1s,MS5.2						
DZM	Mont Dzumac	94.49	248	LR	LR	09 15 31.2	
	comp=Z,2µm,21.7s,MS5.5,baz=30,slow=30						
HNR	Honiara	95.26	262	LR	LR	09 17 03.7	
	comp=Z,3µm,20.3s,MS5.7,baz=96,slow=30						
HNR	Honiara	95.26	262	PFAKE		08 42 30.0	+14
HNR				LR	LR		
	comp=Z,3µm,21.0s,MS5.7						
LVV	L'vov	95.46	29	eP	P	08 42 19.5	+3.6
OBN	Obninsk	95.92	19	⇓eP	P	08 42 22.0	+4.1
OBN				e		08 46 18.8	
OBN				eS		08 52 56.2	
OBN				eSS	SS	09 00 06.3	-0.8
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.9						
OBN				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.6						
OBN	Obninsk	95.92	19	PFAKE		08 42 30.0	+12
OBN				LR	LR		
	comp=Z,520nm,19.0s,MS5.0						
CN2	Changchun	96.63	324	eP	P	08 42 20.1	-1.3
CN2				eAP	pP	08 42 27.2	+2.6
CN2				eS	S	08 53 37.8	-1.3
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.4						
CN2				LR	LR		
	comp=N,300nm,18.0s,MS5.3						
CN2				LR	LR		
	comp=E,900nm,18.0s,MS5.3						
CN2				LR	LR		
	comp=Z,900nm,19.0s,MS5.3						
AKASG	Malin Array Be	96.96	26	P	P	08 42 22.2	-0.5
	comp=Z,0.1nm,0.3s,baz=292,slow=4.2,SNR=3.8						
VAE	Valguarnera	98.75	43	LR	LR	09 27 51.9	
	comp=Z,3µm,18.1s,MS5.8,baz=152,slow=36						
ARU	Arti	99.37	7	PFAKE		08 42 50.0	+17
ARU				LR	LR		
	comp=Z,820nm,22.0s,MS5.2						
GUMO	Guam	99.41	289	PFAKE		08 42 50.0	+15
GUMO				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
MLR	Muntele Rosu	99.53	31	LR	LR	09 27 19.1	
	comp=Z,2µm,20.9s,MS5.7,baz=320,slow=35						
DBIC	Dimbokro	99.58	78	LR	LR	09 28 01.4	
	comp=Z,1µm,19.6s,MS5.4,baz=287,slow=36						
DBIC	Dimbokro	99.58	78	PFAKE		08 42 50.0	+15
DBIC				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
RPZ	Rata Peaks	99.61	227	LR	LR	09 19 50.2	
	comp=Z,1µm,19.2s,MS5.5,baz=44,slow=31						
TLY	Talaya	99.81	340	eP	P	08 42 37.3	+1.7
TLY				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb5.0						
TLY				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.3						
TLY	Talaya	99.81	340	PFAKE		08 42 50.0	+14
TLY				LR	LR		
	comp=Z,316nm,22.0s,MS4.8						
INCN	Inchon	100.10	319	PFAKE		08 42 50.0	+13
INCN				LR	LR		
	comp=Z,924nm,19.0s,MS5.3						
ZAK	Zakamensk	101.05	340	eP	P	08 42 42.7	+1.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s						
ULN	Ulaanbaatar	101.93	336	iP	P	08 42 46.5	+1.3
ULN	Ulaanbaatar	101.93	336	PFAKE		08 43 00.0	+15
ULN				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
SONM	Songino Array	102.19	337	P	Pdif	08 42 48.7	+2.3
	comp=Z,1.4nm,1.1s,baz=27,slow=5.5,SNR=7.4						
SONM				PP	PP	08 46 59.7	-1.2
	comp=Z,1.6nm,1.2s,baz=14,slow=5.1,SNR=5.9						
PMG	Port Moresby	106.92	267	PFAKE		08 47 30.0	
PMG				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
KIV	Kislovodsk	107.58	22	PFAKE		08 47 30.0	
KIV				LR	LR		
	comp=Z,419nm,21.0s,MS5.0						
SSE	Sheshan	107.70	317	ePDIF	Pdif	08 43 13.5	+2.4
SSE				S		08 55 15.2	
SSE				SS	SS	09 02 53.9	+3.2
SSE				LR	LR		
	comp=N,190nm,20.2s,MS5.2						
SSE				LR	LR		
	comp=E,590nm,20.1s,MS5.2						
SSE				LR	LR		
	comp=Z,590nm,19.3s,MS5.2						
WMQ	Urumqi	111.16	348	ePDIF	Pdif	08 43 28.3	+2.3
WMQ				PP	PP	08 48 09.8	+2.2
WMQ				PPP	PPP	08 50 31.0	+2.3
WMQ				SKS	SKS	08 54 37.1	+28
WMQ				PS	PS	08 57 36.2	+2.3
WMQ				PP	PP		
	comp=Z,100nm,5.4s						
WMQ				LR	LR		
	comp=N,940nm,20.2s,MS5.5						
WMQ				LR	LR		
	comp=E,990nm,18.0s,MS5.5						
WMQ				LR	LR		
	comp=Z,1µm,20.8s,MS5.5						
CTAO	Charters Tower	111.41	257	PFAKE		08 47 40.0	+12
CTAO				LR	LR		
	comp=Z,964nm,20.0s,MS5.4						
TATO	Taipei	111.59	312	PFAKE		08 47 40.0	+12
TATO				LR	LR		
	comp=Z,808nm,19.0s,MS5.3						
GNI	Garni	111.67	22	PFAKE		08 47 40.0	+12
GNI				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
SBA	Scott Base	111.97	193	PFAKE		08 47 40.0	+13
SBA				LR	LR		
	comp=Z,760nm,20.0s,MS5.3						
VNDA	Vanda	112.96	194	PFAKE		08 47 40.0	+10
VNDA				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
LZH	Lanzhou	113.15	332	ePKP	PKPdf	08 47 32.0	+1.1
LZH				XPKP		08 47 36.5	
LZH				ePP	PP	08 48 25.5	+2.9
LZH				eSS	SS	09 04 07.1	+3.5
LZH				PP	PP		
	comp=Z,100nm,7.8s						
LZH				LR	LR		
	comp=N,210nm,18.0s						
LZH				LR	LR		
	comp=Z,390nm,20.0s,MS5.0						
QSPA	South Pole Qui	113.63	180	PFAKE		08 47 40.0	+9.2
QSPA				LR	LR		
	comp=Z,881nm,22.0s,MS5.3						
AAK	Ala-Archa	113.90	358	PFAKE		08 47 40.0	+7.8
AAK				LR	LR		
	comp=Z,572nm,19.0s,MS5.2						
VNA3	Neumayer Olymp	115.08	159	⇑iP	PKPdf	08 47 34.7	+1.0
VNA2	Neumayer--Watz	115.82	159	⇑iP	PKPdf	08 47 36.4	+1.1
TAU	Tasmania Unive	115.98	232	PFAKE		08 47 50.0	+14
TAU				LR	LR		
	comp=Z,258nm,19.0s,MS4.9						
SNAA	Sanae	117.23	160	⇑iP	PKPdf	08 47 34.9	-3.0
GYA	Guiyang	119.68	324	⇑iPKP	PKPdf	08 47 43.5	-0.2
GYA				SKS	SKS	08 54 54.2	+13
GYA				PP	PP		
	comp=Z,250nm,9.2s						
GYA				LR	LR		
	comp=N,420nm,20.4s,MS5.3						
GYA				LR	LR		
	comp=E,600nm,18.9s,MS5.3						
GYA				LR	LR		
	comp=Z,890nm,19.5s,MS5.4						
WRAB	Tennant Creek	122.06	261	PFAKE		08 48 00.0	+12
WRAB				LR	LR		
	comp=Z,456nm,21.0s,MS5.1						
WRA	Warramunga Arr	122.08	261	PKIKP	PKPdf	08 47 44.5	-4.0
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	122.08	261	PKP	PKPdf	08 47 44.5	-4.0
	comp=Z,0.9nm,0.7s,baz=75,slow=2.1,SNR=8.3						
KMI	Kunming	122.82	326	PKP	PKPdf	08 47 48.4	-1.4
KMI				SKKS		08 56 20.5	
KMI				SS	SS	09 06 07.3	-2.4
KMI				SSS	SSS	09 10 42.5	-0.8
KMI				LR	LR		
	comp=N,570nm,17.5s,MS5.5						
KMI				LR	LR		
	comp=E,610nm,16.2s,MS5.5						
KMI				LR	LR		
	comp=Z,880nm,18.7s,MS5.4						
ASAR	Alice Springs	123.42	256	PKIKP	PKPdf	08 47 47.9	-3.1
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	123.42	256	PKP	PKPdf	08 47 47.9	-3.1
	comp=Z,0.9nm,0.8s,baz=103,slow=2.8,SNR=7.2						
TSUM	Tsumeb	129.74	96	PFAKE		08 48 10.0	+6.6
TSUM				LR	LR		
	comp=Z,735nm,20.0s,MS5.4						
CMAR	Chiang Mai Arr	130.30	325	PKP	PKPdf	08 48 03.1	-1.4
	comp=Z,0.4nm,0.5s,baz=328,slow=4.9,SNR=4.3						
MBAR	Mbarara	134.17	66	PFAKE		08 48 20.0	+8.2
MBAR				LR	LR		
	comp=Z,253nm,20.0s,MS4.9						
SUR	Sutherland	134.69	113	PFAKE		08 48 20.0	+7.6
SUR				LR	LR		
	comp=Z,2631µm,21.0s						
MBWA	Marble Bar	135.63	264	PFAKE		08 48 20.0	+5.6
MBWA				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
MAW	Mawson	135.80	175	PKIKP	PKPdf	08 48 09.5	-4.0
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAW	Mawson	135.80	175	PKP	PKPdf	08 48 09.5	-4.0
	comp=Z,2.8nm,0.9s,baz=292,slow=16,SNR=2.8						
LBTB	Lobatse	138.21	102	PFAKE		08 48 30.0	+11
LBTB				LR	LR		
	comp=Z,650nm,20.0s,MS5.4						
BOSA	Boshof	138.30	107	PFAKE		08 48 30.0	+11
BOSA				LR	LR		
	comp=Z,770nm,19.0s,MS5.5						
LSZ	Lusaka	138.33	86	PFAKE		08 48 30.0	+11
LSZ				LR	LR		
	comp=Z,887nm,20.0s,MS5.5						
NWAO	Narrogin (SRO)	139.10	247	PFAKE		08 48 30.0	+10
NWAO				LR	LR		
	comp=Z,872nm,20.0s,MS5.5						
PALK	Pallekele	147.92	343	PFAKE		08 48 50.0	+14
PALK				LR	LR		
	comp=Z,322nm,19.0s,MS5.1						
DGAR	Diego Garcia	163.73	357	PFAKE		08 49 10.0	+13
DGAR				LR	LR		
	comp=Z,240nm,21.0s						

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*NEIC **05** 08:31:29.0, 32.68S×71.67W, h26^{km}, ML2.8(GUC), After GUC.*

GUC 05 08:31:29.0±0.7**, 32.68S×71.67W, h26**^{km}±4^{km}**, MD3.5, ML2.8, 7C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	Papudo	0.24	55	⇓iP	Pb	08 31 35.7	+0.5
PACH				iS	Sb	08 31 40.1	+0.6
IHA	Instituto Hidr	0.35	177	⇓iP	Pb	08 31 36.7	-0.2
IHA				iS	Sb	08 31 42.2	+0.1
ROCH	El Roble	0.63	118	⇑iP	Pb	08 31 41.1	-0.1
ROCH				iS	Sb	08 31 50.2	+0.5
LCCH	Las Cruces	0.80	174	eP	Pb	08 31 43.4	-0.8
LCCH				iS	Sb	08 31 54.7	0.0
JACH	Jahuel	0.91	91	⇓iP	Pb	08 31 45.2	-0.7
JACH				iS	Sb	08 31 58.3	+0.7
PEL	Peldehue	0.95	120	eP	Pb	08 31 46.5	-0.1
PEL				iS	Sb	08 31 59.4	+0.5
PUEX	Pudahuel	1.08	135	iP	Pn	08 31 49.4	+0.8
PUEX				iS	Sb	08 32 03.8	+1.1
PUEX				AMP		08 32 08.7	
	comp=N,438nm,0.3s						
STL	Santa Lucia	1.15	132	eP	Pn	08 31 49.3	-0.3
STL				iS	Sn	08 32 04.5	-0.1
STL				AMP		08 32 05.5	
	comp=N,119nm,0.2s						
TACH	Talagante	1.15	148	⇑iP	Pn	08 31 49.1	-0.5
TACH				iS	Sn	08 32 02.9	-1.7
DSCH	Colegio Aleman	1.17	128	⇑iP	Pn	08 31 49.6	-0.3
DSCH				iS	Sn	08 32 05.2	+0.1
DSCH				AMP		08 32 06.3	
	comp=N,547nm,0.3s						
CLCH	Cerro Calan	1.19	127	⇓iP	Pn	08 31 49.9	-0.3
CLCH				iS	Sn	08 32 05.8	+0.2
CLCH				AMP		08 32 07.0	
	comp=N,336nm,0.4s						
ANTU	Antumapu	1.24	136	eP	Pn	08 31 51.0	0.0
ANTU				iS	Sn	08 32 07.1	+0.1
ANTU				AMP		08 32 12.7	
	comp=E,209nm,0.3s						
FSR	Penalolen	1.25	130	eP	Pn	08 31 51.2	+0.2
FSR				iS	Sn	08 32 07.5	+0.4
FSR				AMP		08 32 11.3	
	comp=N,204nm,0.4s						
FCH	Farellones	1.33	120	⇑iP	Pn	08 31 52.2	0.0
PCH	Pirque	1.35	135	eP	Pn	08 31 52.6	+0.2
PCH				iS	Sn	08 32 10.2	+0.5
CHCH	Chadas Angostu	1.52	146	⇑iP	Pn	08 31 55.5	+0.7
CMCH	Combarbala	1.60	21	⇑iP	Pn	08 31 56.0	0.0
CMCH				iS	Sn	08 32 17.3	+1.3
CMCH				AMP		08 32 21.3	
	comp=N,719nm,0.7s						
CACH	El Canelo	1.69	148	⇓iP	Pn	08 31 59.0	+1.6
LMEL	Las Melosas	1.69	134	⇓iP	Pn	08 31 58.1	+0.7
LMEL				iS	Sn	08 32 20.1	+1.7
LMEL				AMP		08 32 24.3	
	comp=N,192nm,0.2s						
CICH	Cipreses	1.94	148	⇑iP	Pn	08 32 01.8	+0.8
SFDO	San Fernando	2.01	164	iP	Pn	08 32 02.7	+0.8

ISC 05 08:42:10.7±1.9**, 38.04N**±0.05×**26.2E**±0.1**, h10**^{km}**, n6, σ1§10**/12**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.44	43	iP	Pg	08 42 18.8	-0.8
URLA				iS	Sg	08 42 26.2	+0.7
IZM	Izmir	0.90	66	ePG	Pg	08 42 27.0	-1.7
IZM				eSG	Sg	08 42 39.2	-1.5
KDAG	Bornova	0.90	66	iP	Pb	08 42 27.1	-0.9
KDAG				iS	Sb	08 42 40.3	+0.5
AYDN	Tasoluk	1.37	106	iP	Pn	08 42 36.2	+0.3
AYDN				iS	Sb	08 42 53.6	+0.2
BDRM	Kayabasi	1.38	135	iP	Pn	08 42 36.3	+0.2
BDRM				iS	Sb	08 42 53.1	-0.6
MANT	Manisa	1.90	76	iP	Pn	08 42 45.4	+2.0
MANT				iS	Sn	08 43 09.5	+1.9

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*NEIC **05** 09:06:11.5±2.4, 5.76S×154.74E, h109^{km}±20^{km}, mb4.2/2, Error ellipse: s-maj=19.0km s-min=15.2km az=62.0*

*IDC **05** 09:06:14.7±6.2, 5.70S×154.50E, h133^{km}±51^{km}, mb3.4/7, mb1 3.7/8, mb1mx3.6/16, mbtmp3.9/8, Error ellipse: s-maj=45.7km s-min=23.0km az=97.0*

ISC 05 09:06:12.9±4.7**, 5.7S**±0.1×**154.6E**±0.2**, h131**^{km}±40^{km}**, n13, σ0§54**/14**, mb3.6**/9**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.21	243	P	P	09 08 10.3	-0.1
	12nm,0.3s,baz=46,slow=11,SNR=19						
PMG				S	S	09 09 42.5	+0.5
	0.6nm,0.3s,baz=198,slow=20,SNR=2.3						
WRAB	Tennant Creek	24.21	232	eP	P	09 11 18.7	0.0
	4.8nm,0.6s,mb4.2						
WRA	Warramunga Arr	24.23	232	P	P	09 11 19.0	+0.1
	1.8nm,0.5s,mb3.8,baz=55,slow=9.8,SNR=47						
ASAR	Alice Springs	26.73	226	P	P	09 11 41.4	-0.7
	1.1nm,0.4s,mb3.9,baz=57,slow=9.3,SNR=40						
STKA	Stephens Creek	28.72	203	P	P	09 11 58.9	-1.1
	1.1nm,0.5s,mb3.8,baz=48,slow=12,SNR=3.8						
STKA	Stephens Creek	28.72	203	eP	P	09 11 59.1	-0.9
SONM	Songino Array	68.05	327	P	P	09 16 59.7	-0.6
	0.3nm,0.5s,mb3.3,baz=108,slow=4.6,SNR=3.5						
SONM	Songino Array	68.05	327	P	P	09 16 59.7	-0.6
VNDA	Vanda	71.86	178	P	P	09 17 23.4	+0.5
	0.7nm,0.9s,mb3.4,slow=5.1,SNR=4.3						
VNDA	Vanda	71.86	178	P	P	09 17 23.4	+0.5
MKAR	Makanchi Array	82.18	319	P	P	09 18 20.9	+0.3
	0.2nm,0.4s,mb3.1,baz=124,slow=5.2,SNR=3.4						
ILAR	Eielson Array	82.35	22	P	P	09 18 21.4	+0.2
	0.5nm,0.7s,mb3.2,baz=259,slow=4.6,SNR=5.2						
QSPA	South Pole Qui	84.25	180	eP	P	09 18 31.1	+0.8
	4.3nm,1.2s,mb4.0						

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*IDC **05** 09:07:53.0±3.5, 10.77S×164.61E, h76^{km}±28^{km}, mb3.6/7, mb1 3.9/9, mb1mx3.8/18, mbtmp4.1/9, Error ellipse: s-maj=28.0km s-min=18.5km az=62.0*

*NEIC **05** 09:07:54.9±3.4, 10.72S×164.42E, h87^{km}±27^{km}, mb4.3/4, Error ellipse: s-maj=32.1km s-min=17.1km az=91.0*

ISC 05 09:07:51.5±2.6**, 10.8S**±0.1×**164.6E**±0.1**, h75**^{km}±21^{km}**, n14, σ1§02**/16**, mb3.9**/10**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.77	286	P	P	09 09 02.0	-0.6
	194nm,0.3s,baz=140,slow=7.1,SNR=47						
HNR				S	S	09 09 58.1	+1.1
	24nm,0.3s,baz=270,slow=20,SNR=1.8						
DZM	Mont Dzumac	11.33	171	P	P	09 10 32.3	-0.1
	1.5nm,0.3s,baz=336,slow=19,SNR=11						
DZM				S	S	09 12 33.4	-4.5
	0.5nm,0.3s,baz=96,slow=18,SNR=2.9						
STKA	Stephens Creek	29.84	222	P	P	09 13 54.5	+0.6
	3.5nm,0.9s,mb4.0,baz=38,slow=11,SNR=6.0						
STKA	Stephens Creek	29.84	222	eP	P	09 13 54.7	+0.8
WRA	Warramunga Arr	30.50	249	P	P	09 13 58.0	-1.9
	0.3nm,0.6s,mb3.1,baz=80,slow=9.2,SNR=4.3						
WRA				PcP	PcP	09 16 57.1	-0.3
	0.3nm,0.5s,baz=78,slow=3.6,SNR=5.3						
ASAR	Alice Springs	31.88	242	P	P	09 14 10.1	-1.9
	0.4nm,0.6s,mb3.4,baz=62,slow=10.0,SNR=5.4						
ASAR				PcP	PcP	09 17 00.5	-0.6
	0.4nm,0.5s,baz=87,slow=2.9,SNR=5.6						
VNDA	Vanda	66.70	181	P	P	09 18 36.6	+0.4
	1.5nm,0.9s,mb3.8,baz=348,slow=6.2,SNR=7.5						
VNDA	Vanda	66.70	181	eP	P	09 18 36.7	+0.5
	7.4nm,1.6s,mb4.3						
SBA	Scott Base	67.03	180	eP	P	09 18 39.7	+1.4
	4.3nm,0.9s,mb4.3						
ULN	Ulaanbaatar	77.45	324	eP	P	09 19 40.8	+0.4
	1.3nm,0.5s,mb3.9						
SONM	Songino Array	77.81	324	P	P	09 19 42.8	+0.4
	0.7nm,0.7s,mb3.5,baz=153,slow=8.3,SNR=6.4						
QSPA	South Pole Qui	79.19	180	eP	P	09 19 50.2	+0.9
	2.3nm,0.6s,mb4.2						
ILAR	Eielson Array	83.66	19	P	P	09 20 11.8	-1.1
	1.0nm,0.9s,mb3.7,baz=230,slow=5.9,SNR=6.4						
MKAR	Makanchi Array	92.58	317	P	P	09 20 56.0	0.0
	1.8nm,0.7s,mb4.5,baz=101,slow=5.9,SNR=18						

NNC 05 09:17:06.0±5.0**, 38.00N×71.52E, h222**^{km}±73^{km}**, mpv3.4, 3C-1D, Error ellipse: s-maj=56.6km s-min=37.1km az=28.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.16	352	P	P	09 18 22.4	-1.2
	1.7nm,0.3s,baz=174,slow=12,SNR=42						
KK31				⇑S	S	09 19 24.8	+0.9
	1.7nm,0.3s,baz=173,slow=21,SNR=9.7						
AAK	Ala-Archa	5.16	25	⇓P	P	09 18 22.7	-0.9
	2.2nm,0.3s						
AAK				⇑S	S	09 19 24.8	+0.8
	9.7nm,0.8s						
AB31	Akbulak array	14.01	327	P	P	09 20 17.8	+1.8
	0.6nm,0.6s,baz=284,slow=77,SNR=9.3						
AB31				⇑S	S	09 22 48.7	+2.2
	0.9nm,0.7s,baz=154,slow=22,SNR=5.9						

IDC 05 09:24:59.2±42.0**, 13.91S×176.51W, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/16**, mbtmp3.7**/3**, Error ellipse: s-maj=787.7km s-min=164.0km az=75.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.23	238	P	P	09 32 53.4	-2.5
	0.8nm,0.6s,baz=72,slow=9.6,SNR=5.0						
WRA	Warramunga Arr	47.27	256	P	P	09 33 35.0	-1.5
	0.1nm,0.3s,baz=89,slow=8.1,SNR=13						
ASAR	Alice Springs	47.74	251	P	P	09 33 38.4	-1.7
	1.3nm,0.5s,baz=86,slow=8.0,SNR=41						

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*NEIC **05** 09:36:55.4±6.2, 52.17S×15.54E, h1^{km}±37^{km}, mb4.5/6, Error ellipse: s-maj=10.6km s-min=9.6km az=222.0*

*IDC **05** 09:36:55.2±0.6, 52.12S×15.63E, mb4.4/15, mb1 4.5/15, mb1mx4.4/20, mbtmp4.4/15, Error ellipse: s-maj=19.5km s-min=16.0km az=28.0*

*MOS **05** 09:36:59.3±1.0, 52.27S×15.52E, h33^{km}, mb4.5/11, Error ellipse: s-maj=33.7km s-min=18.0km az=95.0*

ISC 05 09:36:54.3±9.6**, 52.14S**±0.09×**15.5E**±0.1**, h4**^{km}±60^{km}**, n70, σ0§95**/49**, mb4.4**/19**, 6C-2D, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYO	Syowa Base	20.39	155	⇓P	P	09 41 31.5	-2.9
SYO	Syowa Base	20.39	155	⇑pP		09 41 35.4	
SYO	Syowa Base	20.39	155	⇑pP		09 41 41.0	
SNAA	Sanae	21.23	196	⇑i	P	09 41 43.1	0.0
SNAA	Sanae	21.23	196	e	P	09 41 44.6	+1.5
SNAA	Sanae	21.23	196	e	P	09 41 51.6	+8.5
SNAA	Sanae	21.23	196	P	P	09 41 42.9	-0.2
SNAA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SNAA	Sanae	21.23	196	P	P	09 41 42.9	-0.2
	comp=Z,9.2nm,0.9s,mb4.1,baz=38,slow=8.0,SNR=39						
SNAA	Sanae	21.23	196	eP	P	09 41 42.5	-0.6
	comp=Z,30nm,0.9s,mb4.6						
VNA1	Neumayer--Stat	21.49	202	⇑i	P	09 41 47.1	+1.4
VNA1	Neumayer--Stat	21.49	202	e	P	09 41 49.0	+3.3
VNA1	Neumayer--Stat	21.49	202	e	P	09 41 55.9	+10
VNA2	Neumayer--Watz	21.50	200	⇑i	P	09 41 46.9	+1.0
VNA2	Neumayer--Watz	21.50	200	e	P	09 41 48.4	+2.5
VNA2	Neumayer--Watz	21.50	200	e	P	09 41 54.6	+8.7
VNA3	Neumayer Olymp	22.24	201	⇑i	P	09 41 53.3	+0.1
VNA3	Neumayer Olymp	22.24	201	e	P	09 41 54.7	+1.5

VNA3	Neumayer Olymp	22.24	201	e	P	09 42 02.2	+9.0
BOSA	Boshof	24.61	21	P	P	09 42 16.9	+0.3
BOSA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3						
BOSA	Boshof	24.61	21	P	P	09 42 16.9	+0.3
	comp=Z,10nm,0.9s,mb4.4,baz=195,slow=9.6,SNR=8.9						
BOSA	Boshof	24.61	21	eP	P	09 42 16.7	+0.1
	comp=Z,11nm,0.9s,mb4.4						
MAW	Mawson	27.45	142	P	P	09 42 42.3	-0.4
MAW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAW	Mawson	27.45	142	P	P	09 42 42.3	-0.4
	comp=Z,2.4nm,0.8s,mb3.8,baz=306,slow=8.8,SNR=7.4						
TSUM	Tsumeb	32.91	4	P	P	09 43 31.8	+0.1
	comp=Z,5.3nm,0.8s,mb4.5,baz=181,slow=7.4,SNR=6.5						
TSUM	Tsumeb	32.91	4	eP	P	09 43 31.6	-0.1
	comp=Z,5.9nm,0.8s,mb4.6						
QSPA	South Pole Qui	38.09	180	P	P	09 44 15.0	-0.2
	comp=Z,8.7nm,1.0s,mb4.4						
VNDA	Vanda	48.92	171	P	P	09 45 42.3	-0.3
VNDA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
VNDA	Vanda	48.92	171	P	P	09 45 42.3	-0.3
	comp=Z,3.5nm,0.7s,mb4.5,baz=234,slow=7.6,SNR=24						
TRQA	Tornquist	53.92	252	eP	P	09 46 19.9	-0.9
	comp=Z,9.9nm,1.0s,mb4.7						
CPUP	Villa Florida	59.29	266	P	P	09 46 58.5	-0.9
CPUP				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CPUP	Villa Florida	59.29	266	P	P	09 46 58.5	-0.8
	comp=Z,4.0nm,0.7s,mb4.6,baz=155,slow=9.8,SNR=16						
CPUP	Villa Florida	59.29	266	eP	P	09 46 58.5	-0.9
BDFB	Brasilia	61.59	281	P	P	09 47 14.9	-0.3
BDFB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BDFB	Brasilia	61.59	281	P	P	09 47 14.9	-0.3
	comp=Z,3.7nm,0.8s,mb4.6,baz=182,slow=6.7,SNR=4.2						
CFAA	Coronel Fontan	62.09	254	P	P	09 47 18.8	+0.4
	comp=Z,1.1nm,0.7s,mb4.1,baz=142,slow=3.6,SNR=20						
LVC	Limon Verde	69.11	260	P	P	09 48 04.1	+0.5
	comp=Z,7.2nm,1.1s,mb4.5,baz=162,slow=3.2,SNR=3.3						
SIV	San Ignacio	69.32	270	P	P	09 48 04.4	-0.5
	comp=Z,0.9nm,1.0s,mb3.6,baz=69,slow=8.5,SNR=3.3						
NWAO	Narrogin (SRO)	71.30	120	P	P	09 48 15.9	-0.8
NWAO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NWAO	Narrogin (SRO)	71.30	120	P	P	09 48 15.9	-0.8
	comp=Z,5.7nm,0.7s,mb4.6,baz=195,slow=4.8,SNR=3.8						
LPAZ	La Paz	73.43	265	P	P	09 48 30.7	+1.1
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LPAZ	La Paz	73.43	265	P	P	09 48 30.7	+1.1
	comp=Z,1.5nm,0.8s,mb4.0,baz=127,slow=6.1,SNR=5.6						
LPAZ	La Paz	73.43	265	P	P	09 48 30.7	+1.1
SAML	Samuel	76.05	273	P	P	09 48 43.1	-1.6
	comp=Z,3.3nm,1.2s,mb4.1						
STKA	Stephens Creek	83.97	136	P	P	09 49 27.5	+0.8
	comp=Z,6.0nm,0.9s,mb4.7,baz=232,slow=4.8,SNR=9.2						
ASPA	Alice Springs	87.39	126	⇓iP	P	09 49 44.0	+0.3
ASAR	Alice Springs	87.39	126	P	P	09 49 44.2	+0.4
ASAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ASAR	Alice Springs	87.39	126	P	P	09 49 44.2	+0.4
	comp=Z,6.8nm,0.6s,mb5.0,baz=206,slow=4.7,SNR=146						
WRA	Warramunga Arr	90.72	124	P	P	09 49 59.4	-0.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	90.72	124	P	P	09 49 59.4	-0.2
	comp=Z,1.1nm,0.7s,mb4.3,baz=214,slow=4.5,SNR=13						
BRTR	Keskin Array B	92.85	14	P	P	09 50 12.1	+3.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	Keskin Array B	92.85	14	P	P	09 50 12.1	+3.1
	comp=Z,0.5nm,0.4s,mb4.3,baz=165,slow=6.1,SNR=3.4						
SONM	Songino Array	126.05	56	PKP	PKPdf	09 55 57.2	-2.2
	comp=Z,0.2nm,0.4s,baz=180,slow=2.9,SNR=3.1						
TXAR	Lajitas Array	130.25	267	PKIKP	PKPdf	09 56 07.0	-1.0
TXAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TXAR	Lajitas Array	130.25	267	PKP	PKPdf	09 56 07.0	-1.1
	comp=Z,1.1nm,1.0s,baz=146,slow=4.5,SNR=6.6						
TXAR	Lajitas Array	130.25	267	PKP	PKPdf	09 56 07.0	-1.1
PDAR	Pinedale Array	142.51	278	PKhKP		09 56 23.8	
	comp=Z,0.8nm,0.7s,baz=117,slow=3.3,SNR=6.1						
ELK	Elko	144.85	271	ePKIKP	PKPdf	09 56 33.3	-0.8
MNV	Mina	145.25	265	ePKIKP	PKPdf	09 56 34.3	-0.6
BOZ	Bozeman (W)	145.31	281	ePKIKP	PKPdf	09 56 33.3	-1.4
NVAR	Mina Array Bea	145.34	265	PKPbc	PKPbc	09 56 34.6	+1.4
	comp=Z,17nm,0.7s,baz=126,slow=4.9,SNR=121						
TIXI	Tiksi	145.53	31	ePKP2	PKPab	09 56 33.0	-1.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HLID	Hailey	145.92	276	ePKP	PKPdf	09 56 36.8	+0.9
HRY	Holter Researc	145.96	282	ePKP	PKPdf	09 56 36.0	+0.2
CHMT	Chamberlain Mo	146.91	282	ePKP	PKPdf	09 56 38.2	+0.8
MSO	Missoula	147.29	281	ePKPbc	PKPdf	09 56 39.9	+1.8
WVOR	Wild Horse Val	147.90	271	ePKP2	PKPab	09 56 42.4	-2.1
EDM	Edmonton	149.51	293	ePKP2	PKPab	09 56 44.9	-5.8
YKA	Yellowknife Ar	151.87	311	PKIKP	PKPdf	09 56 49.7	+5.0
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	151.87	311	PKPbc	PKPdf	09 56 49.7	+5.1
	comp=Z,1.6nm,0.8s,baz=85,slow=2.6,SNR=10.0						
YKA	Yellowknife Ar	151.87	311	PKPbc	PKPdf	09 56 49.7	+5.1

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*IDC **05** 09:47:37.4±0.9, 54.83S×132.84W, mb3.7/5, mb1 3.9/5, mb1mx3.7/16, mbtmp3.7/5, MS4.0/1, Ms1 4.0/1, ms1mx3.4/18, Error ellipse: s-maj=95.3km s-min=23.4km az=166.0*

*NEIC **05** 09:47:38.7±0.7, 53.93S×133.10W, h10^{km}, mb4.6/1, Error ellipse: s-maj=33.5km s-min=20.9km az=165.0*

ISC 05 09:47:36.8±1.1**, 53.9S**±0.3×**133.2W**±0.3**, h10^{km}, n8, σ1^{s}00**/6**, mb3.8**/6**, MS4.0**/1**, 1C, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	South Pole Qui	36.26	180	⇑iP	P	09 54 41.6	+0.2
	9.2nm,1.0s,mb4.7						
PPT	Papeete	38.45	334	LR	LR	10 06 37.4	
	comp=Z,215nm,19.9s,MS4.0,baz=311,slow=29						
LPAZ	La Paz	62.33	79	P	P	09 58 02.1	+0.5
	0.9nm,0.9s,mb3.9,baz=243,slow=2.3,SNR=2.8						
SIV	San Ignacio	66.70	85	P	P	09 58 29.3	-0.8
	0.3nm,0.4s,mb3.7,baz=174,slow=19,SNR=4.5						
ASAR	Alice Springs	72.89	253	P	P	09 59 07.2	-0.6
	0.4nm,0.7s,mb3.4,baz=136,slow=6.2,SNR=7.4						
WRA	Warramunga Arr	75.57	256	P	P	09 59 23.8	+0.4
	0.5nm,0.7s,mb3.6,baz=147,slow=5.2,SNR=6.8						
TXAR	Lajitas Array	86.76	26	P	P	10 00 26.3	+4.2
	0.4nm,0.9s,mb3.7,baz=180,slow=6.3,SNR=4.0						
MKAR	Makanchi Array	156.47	267	PKPab	PKPab	10 08 03.5	+1.7
	0.5nm,1.0s,baz=117,slow=6.4,SNR=2.6						

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*IDC **05** 09:56:34.7±1.8, 21.67N×143.30E, h283^{km}±17^{km}, mb3.2/10, mb1 3.5/14, mb1mx3.4/27, mbtmp4.1/14, Error ellipse: s-maj=24.8km s-min=11.5km az=88.0*

*NEIC **05** 09:56:35.1±1.1, 21.65N×143.31E, h288^{km}±13^{km}, mb4.0/2, Error ellipse: s-maj=21.5km s-min=7.3km az=79.0*

ISC 05 09:56:34.0±0.9**, 21.67N**±0.06×**143.2E**±0.2**, h293^{km}**±10^{km}**, n21, σ0^{s}84**/22**, mb3.5**/11**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	5.48	350	P	P	09 57 58.0	+0.6
	35nm,0.3s,baz=230,slow=7.1,SNR=18						
CBIJ				S	S	09 59 03.7	+0.9
	15nm,0.3s,baz=281,slow=21,SNR=5.9						
GUMO	Guam	8.19	169	P	P	09 58 30.5	-0.1
JHJ	Hachijo jima 2	11.80	346	P	P	09 59 14.2	-1.1
	8.2nm,0.3s,baz=240,slow=23,SNR=12						
MJAR	Matsushiro Arr	15.45	345	P	P	09 59 57.8	-1.1
	1.2nm,0.3s,baz=226,slow=10,SNR=11						
MAJO	Matsushiro	15.45	345	eP	P	09 59 57.4	-1.5
MAT	Matsushiro	15.45	345	eP	P	09 59 58.0	-0.9
	5.0nm,0.9s						
MAT	Matsushiro	15.45	345	P	P	09 59 57.9	-1.0
JNU	Nakatsue	15.80	319	P	P	10 00 03.9	+1.0
	0.8nm,0.3s,baz=97,slow=28,SNR=5.6						
SONM	Songino Array	39.38	320	P	P	10 03 38.4	+1.4
	0.4nm,0.4s,mb3.2,baz=124,slow=6.5,SNR=4.7						
WRAB	Tennant Creek	42.25	192	eP	P	10 04 00.8	0.0
	3.7nm,0.4s,mb4.0						
WRA	Warramunga Arr	42.26	192	P	P	10 04 01.0	+0.1
	1.4nm,0.5s,mb3.5,baz=16,slow=8.8,SNR=32						
ASAR	Alice Springs	45.97	192	P	P	10 04 30.4	+0.1
	0.4nm,0.5s,mb3.0,baz=16,slow=12,SNR=10						
STKA	Stephens Creek	53.27	182	P	P	10 05 24.4	-0.7
	0.8nm,0.3s,mb3.5,baz=82,slow=14,SNR=7.5						
STKA	Stephens Creek	53.27	182	eP	P	10 05 24.3	-0.7
MKAR	Makanchi Array	54.74	313	P	P	10 05 35.6	+0.2
	0.4nm,0.5s,mb3.1,baz=87,slow=9.9,SNR=6.8						
ILAR	Eielson Array	62.05	27	P	P	10 06 24.8	-0.6
	0.7nm,0.7s,mb3.4,baz=255,slow=5.1,SNR=7.0						
BVAR	Borovoye Array	62.71	320	P	P	10 06 30.0	+0.2
	1.2nm,0.4s,mb3.9,baz=90,slow=7.9,SNR=10						
YKA	Yellowknife Ar	76.46	28	P	P	10 07 53.5	+0.6
	0.5nm,0.4s,mb3.5,baz=289,slow=6.0,SNR=4.6						
YKA	Yellowknife Ar	76.46	28	P	P	10 07 53.5	+0.6
NVAR	Mina Array Bea	83.13	51	P	P	10 08 30.2	+1.6
	0.6nm,0.7s,mb3.5,baz=262,slow=7.2,SNR=4.2						
FINES	FINESS Array B	83.22	334	P	P	10 08 28.1	-0.5
	0.6nm,0.7s,mb3.5,baz=63,slow=4.3,SNR=5.6						

IDC 05 10:01:50.9±7.5**, 2.53S×139.33E, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.3**/13**, mbtmp3.3**/3**, ML3.3**/1**, Error ellipse: s-maj=307.3km s-min=30.6km az=86.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.98	195	P	P	10 06 01.7	-2.5
	0.1nm,0.3s,baz=15,slow=13,SNR=5.4						
ASAR	Alice Springs	21.66	194	P	P	10 06 43.9	-1.4
	0.5nm,0.6s,baz=24,slow=11,SNR=2.9						
MKAR	Makanchi Array	70.03	322	P	P	10 13 04.7	-2.0
	0.3nm,0.5s,baz=104,slow=7.5,SNR=5.4						

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*THR **05** 10:19:18.4±0.7, 33.92N×48.72E, h14^{km}±7^{km}, ML3.2*

*CSEM **05** 10:19:19.6±0.1, 33.84N×48.74E, h18^{km}, ML3.2, Error ellipse: s-maj=3.5km s-min=2.2km az=118.0*

*TEH **05** 10:19:21.9, 33.79N×48.71E, h15^{km}, Mn3.5*

ISC 05 10:19:19.5±0.5**, 33.74N**±0.04×**48.77E**±0.06**, h14^{km}, n20, σ1^{s}20**/25**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAO	Ashtian	1.32	52	ePG	Pn	10 19 41.4	-2.2
ASAO				AML	AML	10 20 03.7	
	comp=N,502nm,0.3s						
SHGO	Shushtar	1.63	179	ePG	Pg	10 19 51.2	-0.8
SHGO	Shushtar	1.63	179	ePg	Pg	10 19 51.2	-0.9
	SNR=90						
SHGR	Shooshtar-Gavs	1.63	179	ePG	Pg	10 19 51.2	-0.8
SHGR				AML	AML	10 20 21.1	
	comp=N,212nm,0.6s						
SHGR	Shooshtar-Gavs	1.63	179	ePg	Pg	10 19 51.2	-0.9
	SNR=90						
IVIS	Veys	1.77	297	Pn	Pn	10 19 50.6	+0.5
SNGE	Sanandaj	1.79	319	ePG	Pn	10 19 48.5	-1.8
SNGE				AML	AML	10 20 18.7	
	comp=N,386nm,0.5s						
IRAZ	Razeghan	1.92	30	Pn	Pg	10 20 05.4	+7.5
IDHR	Dehrash	2.19	297	Pn	Pn	10 19 57.2	+1.1
IKLH	Kalahroud	2.38	99	Pn	Pn	10 19 52.0	-6.9
IMHD	Mahdasht	2.49	38	Pn	Pn	10 20 00.3	-0.1
IMHD				Sn	Sn	10 20 31.0	+0.2
IVRN	Varamin	2.75	62	Pn	Pn	10 20 05.4	+1.3
IVRN				Sn	Sn	10 20 37.9	+0.5
THKV	Tehran--Karaj	2.78	38	ePN	Pn	10 20 02.9	-1.6
IZEF	Zefreh	3.10	105	Pn	Pn	10 20 00.3	-8.7
DAMV	Damavand	3.24	54	ePN	Pn	10 20 10.6	-0.4
DAMV				AML	AML	10 21 10.2	
	comp=N,59nm,0.5s						
IDMV	Damavand	3.26	55	Pn	Pn	10 20 12.2	+1.0
NASN	Na’in	3.51	104	ePN	Pn	10 20 16.0	+1.1
IFIR	Firoozkooh	3.79	59	Pn	Pn	10 20 20.8	+1.9
IFIR				Sn	Sn	10 21 02.1	-1.6
KBD	Kabd	4.64	192	eP	Pn	10 20 32.5	+1.6
KBD				eS	Sn	10 21 25.2	0.0
RDF	Al-Radifah	4.91	193	eP	Pn	10 20 35.9	+1.2
RDF				eS	Sn	10 21 30.6	-1.4

TAP 05 10:19:40.8, 21.31N×121.86E, h166^{km}±1^{km}**, ML3.7, Taiwan region**

PGC 05 10:30:06.7, 58.22N×133.60W, h1^{km}, ML3.3/4**, Near Mt. Ogden, British Columbia - Alaska border., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLBC	Dease Lake	1.90	82	Pn	Pn	10 30 39.0	-1.6
DLBC				Pg	Pg	10 30 41.0	-3.6
DLBC				Sn	Sn	10 31 04.7	-0.8
DLBC				Sg	Sg	10 31 06.2	-3.8
DLBC				Trac		10 31 11.7	
	comp=Z,172nm,0.7s						
WHY	Whitehorse	2.54	346	Pn	Pn	10 30 47.3	-2.4
WHY				Pg	Pg	10 30 52.5	-4.8
WHY				Sg	Sg	10 31 23.6	-7.6
WHY				Trac		10 31 32.6	
	comp=Z,93nm,0.8s						
HYT	Haines Junctio	3.29	324	Pn	Pn	10 30 59.8	-0.6
HYT				Pg	Pg	10 31 06.1	-6.2
HYT				Sg	Sg	10 31 48.8	-7.4
HYT				Trac		10 31 52.7	
	comp=Z,51nm,0.8s						
RUBB	Prince Rupert	4.32	153	Pn	Pn	10 31 15.3	+0.3
RUBB				Sg	Sg	10 32 21.5	-9.1
RUBB				Trac		10 32 29.3	
	comp=Z,50nm,0.7s						
INK	Inuvik	10.13	0	P	P	10 32 32.5	-3.7
INK				Trac		10 35 48.6	
	comp=Z,3.0nm,1.1s						

IDC 05 10:30:39.0±3.6**, 1.42S×99.81E, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.4**/18**, mbtmp3.4**/4**, ML4.2**/1**, Error ellipse: s-maj=151.2km s-min=24.8km az=58.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	19.77	358	P	P	10 35 10.6	-3.2
	0.3nm,0.3s,baz=176,slow=13,SNR=4.8						
WRA	Warramunga Arr	38.45	121	P	P	10 38 03.0	-1.5
	0.7nm,0.5s,baz=297,slow=8.8,SNR=11						
ASAR	Alice Springs	39.74	126	P	P	10 38 13.7	-1.6
	0.1nm,0.6s,baz=297,slow=8.3,SNR=5.3						
MKAR	Makanchi Array	50.43	344	P	P	10 39 38.9	-1.4
	0.2nm,0.5s,baz=158,slow=7.8,SNR=3.5						
TXAR	Lajitas Array	144.36	37	PKP	PKPdf	10 50 15.6	-4.0
	0.0nm,0.3s,baz=270,slow=1.8,SNR=5.3						

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*NEIC **05** 10:36:59.7±1.1, 20.46S×178.78W, h585^{km}±14^{km}, mb4.2/6, Error ellipse: s-maj=14.9km s-min=9.8km az=142.0*

*IDC **05** 10:37:00.7±1.7, 20.53S×178.81W, h596^{km}±22^{km}, mb3.2/10, mb1 3.4/12, mb1mx3.4/19, mbtmp4.2/12, Error ellipse: s-maj=21.3km s-min=12.1km az=150.0*

ISC 05 10:36:59.0±1.3**, 20.5S**±0.1×**178.83W**±0.10**, h590^{km}**±17^{km}**, n32, σ0^{s}84**/27**, mb3.8**/14**, 4C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	9.42	47	P	P	10 39 12.0	-0.1
	1.5nm,0.3s,baz=46,slow=11,SNR=6.1						
AFI	Afiamalu	9.42	47	eP	P	10 39 11.9	-0.2
	13nm,0.6s						
URZ	Urewera	18.01	190	P	P	10 40 34.5	-1.4
	1.8nm,0.3s,baz=325,slow=7.1,SNR=11						
RPZ	Rata Peaks	24.61	198	P	P	10 41 35.2	-0.6
	5.5nm,0.7s,mb4.3,baz=40,slow=7.9,SNR=3.5						
CTA	Charters Tower	32.71	265	P	P	10 42 46.9	+1.2
	4.2nm,0.4s,mb4.4,baz=94,slow=10,SNR=9.0						
CTAO	Charters Tower	32.71	265	eP	P	10 42 46.8	+1.1
	4.0nm,0.4s,mb4.4						
STKA	Stephens Creek	37.07	244	P	P	10 43 22.8	+1.2
	1.7nm,0.6s,mb3.8,baz=93,slow=7.8,SNR=5.8						
ASAR	Alice Springs	43.75	257	P	P	10 44 15.5	+0.4
	4.2nm,0.7s,mb4.1,baz=94,slow=7.6,SNR=80						
ASAR				PcP	PcP	10 45 47.4	-1.5
	0.5nm,0.5s,baz=104,slow=4.2,SNR=5.0						
ASAR				S	S	10 50 02.6	-1.6
	0.3nm,0.7s,baz=92,slow=16,SNR=7.6						
ASPA	Alice Springs	43.76	257	eP	P	10 44 15.6	+0.4
WB2	Warramunga Arr	43.81	262	⇓iP	P	10 44 15.4	-0.2
WRAB	Tennant Creek	43.82	262	eP	P	10 44 15.3	-0.4
	3.7nm,0.3s,mb4.4						
WRA	Warramunga Arr	43.83	262	P	P	10 44 15.6	-0.1
	1.9nm,0.3s,mb4.1,baz=97,slow=7.4,SNR=177						
KAKA	Kakadu	47.20	272	eP	P	10 44 41.5	-0.1
SBA	Scott Base	57.79	184	eP	P	10 45 57.7	+1.4
	7.2nm,1.2s,mb3.7						
VNDA	Vanda	57.81	185	P	P	10 45 57.1	+0.6
	0.3nm,0.4s,mb2.7,baz=349,slow=7.5,SNR=3.7						
VNDA	Vanda	57.81	185	eP	P	10 45 57.2	+0.7
	0.5nm,0.7s,mb2.8						
QSPA	South Pole Qui	69.54	180	eP	P	10 47 10.7	+0.3
	2.3nm,0.6s,mb3.8						
NVAR	Mina Array Bea	81.58	44	P	P	10 48 17.7	+0.5
	1.0nm,0.8s,mb3.4,baz=227,slow=10,SNR=5.3						
TXAR	Lajitas Array	87.73	58	P	P	10 48 49.0	+1.6
	0.4nm,0.8s,mb3.2,baz=217,slow=6.3,SNR=5.6						
TXAR	Lajitas Array	87.73	58	P	P	10 48 49.0	+1.6
VNA3	Neumayer Olymp	88.16	177	⇑i	P	10 48 47.8	-0.6
COLA	College	88.41	13	eP	P	10 48 48.2	-1.4
	1.9nm,0.6s,mb4.0						
ILAR	Eielson Array	88.52	13	P	P	10 48 49.1	-1.1
	1.0nm,0.7s,mb3.7,baz=224,slow=5.2,SNR=7.8						
VNA2	Neumayer--Watz	88.59	177	⇑i	P	10 48 50.1	-0.3
VNA1	Neumayer--Stat	88.82	177	⇑i	P	10 48 51.0	-0.5
PDAR	Pinedale Array	89.52	44	P	P	10 48 55.7	+0.3
	0.5nm,0.6s,mb3.5,baz=198,slow=4.7,SNR=4.2						
ARCES	ARCESS Array B	128.81	349	PKP	PKPdf	10 54 59.6	0.0
	1.1nm,0.6s,baz=45,slow=1.7,SNR=5.2						
FINES	FINESS Array B	135.58	343	PKP	PKPdf	10 55 13.5	+1.1
	1.3nm,0.9s,baz=270,slow=3.8,SNR=4.2						
AKASG	Malin Array Be	142.66	330	PKhKP		10 55 23.1	
	1.7nm,0.4s,baz=37,slow=3.6,SNR=8.7						
BRTR	Keskin Array B	146.28	312	PKPbc	PKPbc	10 55 35.2	+1.5
	1.0nm,0.6s,baz=90,slow=1.4,SNR=4.7						
CLL	Collm	147.91	346	i PKP1	PKPdf	10 55 39.4	+5.2
KHC	Kasperske Hory	149.79	344	ePKPDF	PKPdf	10 55 36.5	-0.6
KHC				⇑ePKPB	PKPdf	10 55 44.0	+6.9

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*IDC **05** 11:11:58.4±1.4, 17.06N×147.18E, mb3.4/5, mb1 3.6/5, mb1mx3.5/21, mbtmp3.4/5, Error ellipse: s-maj=56.1km s-min=21.5km az=81.0*

NEIC 05 11:11:59.8±0.9**, 17.07N×147.20E, h10^{km}, mb3.8**/1**, Error ellipse: s-maj=36.5km s-min=12.1km az=83.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	20.97	339	P	P	11 16 43.0	-2.5
	1.5nm,0.7s,baz=169,slow=11,SNR=6.0						
WRAB	Tennant Creek	38.88	199	P	P	11 19 25.7	-1.6
	1.4nm,0.6s						
WRA	Warramunga Arr	38.89	199	P	P	11 19 25.1	-2.4
	0.2nm,0.3s,baz=24,slow=8.4,SNR=13						
ASAR	Alice Springs	42.52	198	P	P	11 19 56.2	-1.2
	0.2nm,0.7s,baz=14,slow=6.3,SNR=3.9						
SONM	Songino Array	45.30	322	P	P	11 20 18.4	-1.2
	0.4nm,0.6s,baz=129,slow=7.6,SNR=4.5						
MKAR	Makanchi Array	60.62	314	P	P	11 22 10.6	-2.6
	0.2nm,0.4s,baz=94,slow=7.4,SNR=3.3						
LPAZ	La Paz	146.17	94	PKPbc	PKPbc	11 31 41.5	+0.1
	0.5nm,0.6s,baz=303,slow=5.0,SNR=2.5						
LPAZ	La Paz	146.17	94	ePKPbc	PKPbc	11 31 42.1	+0.7

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*NEIC **05** 11:16:42.0, 58.33N×133.54W, h1^{km}, ML3.2(PGC), ML2.7(AEIC), After PGC.*

PGC 05 11:16:40.6, 58.23N×133.57W, h1^{km}, ML3.2/4**, Near Mt. Ogden, British Columbia - Alaska border., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESE	Bessie Mountai	0.76	298	P	Pg	11 16 54.9	-0.9
SIT	Sitka	1.51	220	P	Pn	11 17 09.7	+0.8
DLBC	Dease Lake	1.88	82	P	Pn	11 17 13.3	-0.9
DLBC				S	Sn	11 17 39.0	+0.1
DLBC	Dease Lake	1.88	82	Pn	Pn	11 17 12.7	-1.5
DLBC				Pg	Pg	11 17 15.0	-3.1
DLBC				Sn	Sn	11 17 37.4	-1.5
DLBC				Sg	Sg	11 17 39.8	-3.5
DLBC				Trac		11 17 40.3	
	comp=Z,104nm,0.5s						
WHY	Whitehorse	2.53	345	P	Pn	11 17 20.7	-2.8
WHY				S	Sn	11 17 51.5	-3.9
WHY	Whitehorse	2.53	345	Pn	Pn	11 17 21.8	-1.7
WHY				Sg	Sg	11 17 57.2	-7.7
WHY				Trac		11 18 12.4	
	comp=Z,52nm,0.6s						
CRAG	Craig	2.77	175	P	Pn	11 17 27.7	+0.7
HYT	Haines Junctio	3.29	324	Pn	Pn	11 17 33.5	-0.8
HYT				Pg	Pg	11 17 39.8	-6.4
HYT				Sn	Sn	11 18 13.5	-1.1
HYT				Sg	Sg	11 18 22.8	-7.3
HYT				Trac		11 18 35.2	
	comp=Z,38nm,0.9s						
RUBB	Prince Rupert	4.32	153	Pn	Pn	11 17 48.8	-0.2
RUBB				Sg	Sg	11 18 58.4	-6.2
RUBB				Trac		11 19 12.7	
	comp=Z,66nm,0.9s						
BNB	Barry Inlet	5.76	169	Pn	Pn	11 18 09.2	0.0
INK	Inuvik	10.12	0	P	P	11 19 06.0	-4.0
INK				Sg	S	11 21 54.7	+49
INK				Trac		11 22 10.7	
	comp=Z,3.0nm,0.9s						

IDC 05 11:22:05.8±4.4**, 1.95N×98.35E, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/19**, mbtmp3.5**/4**, Error ellipse: s-maj=239.4km s-min=27.2km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	41.47	123	P	P	11 29 54.2	-2.1
	0.3nm,0.3s,baz=301,slow=9.1,SNR=8.2						
ASAR	Alice Springs	42.94	129	P	P	11 30 07.4	-1.0
	0.1nm,0.5s,baz=300,slow=7.9,SNR=5.7						
MKAR	Makanchi Array	46.81	345	P	P	11 30 37.1	-1.9
	0.2nm,0.4s,baz=156,slow=9.0,SNR=6.0						
STKA	Stephens Creek	53.01	133	P	P	11 31 24.4	-2.4
	1.2nm,0.7s,baz=326,slow=12,SNR=3.6						

IDC 05 11:43:07.1±23.0**, 8.66S×155.43E, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.5**/15**, mbtmp3.5**/3**, Error ellipse: s-maj=382.9km s-min=96.2km az=32.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.28	239	P	P	11 48 17.7	+0.1
	0.6nm,0.8s,baz=64,slow=10,SNR=3.3						
ASAR	Alice Springs	25.44	232	P	P	11 48 35.5	-2.8
	0.4nm,0.6s,baz=67,slow=8.7,SNR=6.1						
STKA	Stephens Creek	26.44	207	P	P	11 48 46.2	-1.4
	2.1nm,0.7s,baz=36,slow=12,SNR=5.9						

NDI 05 11:45:39.1±3.5**, 21.42N×81.16E, h5^{km}, ML2.7, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLSP	Bilaspur	1.14	52	eP	Pb	11 46 01.3	+0.3
BLSP				eS	Sb	11 46 16.7	+0.7
BLSP				AML	AML	11 46 32.7	
	comp=E,203nm,1.5s						
BLSP				AML	AML	11 47 15.8	
	comp=N,33nm,0.5s						
NGP	Nagpur	1.99	263	ex	x	11 46 34.3	
NGP				ex	x	11 47 13.2	
BHPL	Bhopal	3.91	298	eP	Pn	11 46 40.9	-0.2
BHPL				i S	Sn	11 47 24.1	-3.8
BHPL				AML	AML	11 47 42.7	
	comp=E,16nm,0.2s						
BHPL				AML	AML	11 47 43.9	
	comp=N,60nm,0.7s						
AKL	Akola	3.94	260	ex	x	11 46 50.0	
AKL				i SG	Sg	11 47 50.6	+0.4

AKL				AML	AML	11 48 16.5	
	comp=E,20nm,0.3s						
AKL				AML	AML	11 48 16.5	
	comp=N,21nm,0.5s						
VIS	Vishakhapatnam	4.21	151	*i* Sg	Sg	11 47 58.6	-0.7
BWNR	Bhubaneshwar	4.49	104	*e*PG	Pg	11 47 05.3	-3.3
BWNR				*i* Sg	Sg	11 48 09.2	+0.7
AGRA	Agra	6.48	334	*e*P	Pn	11 47 14.7	-2.9
AGRA				*i* x	x	11 48 22.0	
POO	Poona	7.45	249	*e*x	x	11 49 39.0	
SONA	Sohna	7.74	332	*e*x	x	11 46 49.8	
SONA				*e*S	Sn	11 48 56.8	-7.5
KAD	Karad	7.75	239	*e*x	x	11 50 13.0	
AJM	Ajmer	7.80	311	*e*x	x	11 46 54.1	
AYAN	Aya Nagar	7.92	333	*e*x	x	11 49 03.1	
NDI	New Delhi	8.06	334	*e*PG	P	11 48 13.5	+34
NDI				*e*x	x	11 49 06.0	
BHGR	Bahadurgarh	8.18	333	*e*x	x	11 49 12.6	
KHET	Khetri	8.22	325	*e*S	Sn	11 49 03.3	-13
KALG	Kalgarh	8.34	345	*i* x	x	11 48 36.2	
SHL	Shillong	10.67	65	*e*S	S	11 50 03.0	-14
JASL	Jaisalmer	10.85	302	*e*S	S	11 50 07.0	-14

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*IDC **05** 12:04:30.4±0.4, 53.03S×22.25E, mb4.6/21, mb1 4.7/21, mb1mx4.6/25, mbtmp4.6/21, MS4.7/21, Ms1 4.7/21, ms1mx4.6/26, Error ellipse: s-maj=15.7km s-min=13.4km az=99.0*

*BJI **05** 12:04:32.2, 53.00S×22.30E, h10^{km}, mB5.5, Ms5.2, Msz4.9*

*HRVD **05** 12:04:32.3±0.2, 53.12S×22.59E, h12^{km}, MW5.2/63, Centroid moment Tensor Solution. LP body waves: s54,c90;Mantle waves: s63,c127; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.90±.02; M$_{\theta\theta}$0.80±.02; M$_{\phi\phi}$0.10±.02; M$_{r\theta}$0.26±.05; M$_{\theta\phi}$-0.24±.02; M$_{\phi r}$-0.17±.05; Best double couple: M$_0$.933×10^{17} NP1: ϕ_s102°,δ36°,λ-98°. NP2:ϕ_s292°,δ54°,λ-84°. Principal axes: T .917, Plg9°, Azm18°; N .034, Plg5°, Azm109°; P -.95, Plg80°, Azm226°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **05** 12:04:32.3±0.2, 53.00S×22.32E, h10^{km}, mb5.1/13, MS4.7/8 Error ellipse: s-maj=9.0km s-min=7.3km az=97.0*

*MOS **05** 12:04:35.1±1.8, 53.01S×22.40E, h33^{km}, mb5.0/17, MS4.6/8, Error ellipse: s-maj=26.2km s-min=12.7km az=92.6*

ISC 05 12:04:30.6±0.3**, 53.03S**±0.06×**22.2E**±0.1**, h10^{km}, n163, σ0^{s}95**/62**, mb4.8**/26**, MS4.8**/29**, 9C-6D, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SYO	Syowa Base	17.98	160	⇓Pn	P	12 08 38.5	-3.5
SYO	Syowa Base	17.98	160	⇓P	P	12 08 40.3	-1.7
SUR	Sutherland	20.66	357	P	P	12 09 13.2	+0.2
	48nm,1.0s,baz=163,slow=10,SNR=14						
SUR	Sutherland	20.66	357	*e*P	P	12 09 12.8	-0.2
	49nm,1.0s						
SNAA	Sanae	21.70	201	P	P	12 09 25.5	+2.2
SNAA	Sanae	21.70	201		P	12 09 27.2	+3.9
SNAA	Sanae	21.70	201	⇑*i*	P	12 09 28.5	+5.2
SNAA	Sanae	21.70	201	⇑*i*	Px	12 09 44.7	
SNAA	Sanae	21.70	201	⇓*e*P	P	12 09 25.0	+1.7
SNAA				pmax	pmax		
	comp=Z,285nm,1.5s						
SNAA	Sanae	21.70	201	P	P	12 09 24.3	+1.0
	comp=Z,20nm,0.9s,mb4.6,baz=48,slow=10,SNR=76						
SNAA				LR	LR	12 15 55.8	
	comp=Z,2μm,19.8s,MS4.5,baz=37,slow=32						
SNAA	Sanae	21.70	201	⇓*e*P	P	12 09 25.0	+1.8
	comp=Z,285nm,1.5s,mb5.5						
VNA2	Neumayer--Watz	22.28	205	⇑*i*P	P	12 09 33.8	+4.7
VNA2	Neumayer--Watz	22.28	205	⇑*i*	P	12 09 36.8	+7.7
VNA2	Neumayer--Watz	22.28	205		Px	12 09 51.6	
VNA1	Neumayer--Stat	22.34	206	⇑*i*P	P	12 09 34.5	+4.8
VNA1	Neumayer--Stat	22.34	206		P	12 09 35.4	+5.7
VNA1	Neumayer--Stat	22.34	206	⇑*i*	Px	12 09 52.5	
VNA3	Neumayer Olymp	23.07	206	⇑*i*P	P	12 09 40.6	+3.9
VNA3	Neumayer Olymp	23.07	206		P	12 09 42.7	+6.0
VNA3	Neumayer Olymp	23.07	206	⇑*i*	Px	12 10 04.3	
MAW	Mawson	24.26	143	P	P	12 09 48.8	+0.5
MAW				pmax	pmax		
	comp=Z,16nm,1.1s						
MAW				MLR	MLR		
	comp=Z,1μm,21.3s						
MAW	Mawson	24.26	143	P	P	12 09 48.8	+0.5
	comp=Z,16nm,1.1s,mb4.4,baz=288,slow=12,SNR=9.5						
MAW				LR	LR	12 17 12.8	
	comp=Z,1μm,21.3s,MS4.4,baz=296,slow=32						
BOSA	Boshof	24.49	6	*e*P	P	12 09 49.9	-1.1
BOSA				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.4						
BOSA				MLR	MLR		
	comp=Z,3μm,20.0s,MS4.8						
BOSA	Boshof	24.49	6	P	P	12 09 49.5	-1.4
	comp=Z,13nm,0.9s,mb4.4,baz=194,slow=8.3,SNR=9.5						
BOSA				LR	LR	12 18 06.1	
	comp=Z,3μm,18.4s,MS4.8,baz=166,slow=33						
BOSA	Boshof	24.49	6	*e*P	P	12 09 49.9	-1.1
	comp=Z,13nm,0.9s,mb4.4						
BOSA				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
LBTB	Lobatse	28.09	7	*e*P	P	12 10 23.6	-0.8
LBTB				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.8						
LBTB	Lobatse	28.09	7	P	P	12 10 22.6	-1.8
	comp=Z,22nm,1.0s,mb4.8,baz=197,slow=9.1,SNR=15						
LBTB				LR	LR	12 19 46.4	
	comp=Z,3μm,20.9s,MS4.8,baz=195,slow=33						
LBTB	Lobatse	28.09	7	*e*P	P	12 10 23.6	-0.7
	comp=Z,27nm,1.1s,mb4.8						
TSUM	Tsumeb	33.95	352	P	P	12 11 16.0	-0.1
	comp=Z,18nm,1.1s,mb4.9,baz=159,slow=9.0,SNR=10						
TSUM	Tsumeb	33.95	352	*e*P	P	12 11 16.4	+0.3
	comp=Z,24nm,1.2s,mb5.0						
MIR	Mirnyy	35.92	140	*e*P	P	12 11 31.0	-1.5
MIR				pmax	pmax		
	comp=Z,63nm,1.8s,mb5.2						
QSPA	South Pole Qui	37.20	180	*e*P	P	12 11 44.1	+0.9
	comp=Z,285nm,1.6s,mb5.8						
LSZ	Lusaka	37.96	9	*e*P	P	12 11 50.1	0.0
LSZ				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
LSZ	Lusaka	37.96	9	*e*P	P	12 11 50.1	0.0
	comp=Z,13nm,0.9s,mb4.7						
VNDA	Vanda	47.33	169	P	P	12 13 05.3	-0.3
VNDA						12 14 57.7	
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VNDA				pmax	pmax		
	comp=Z,11nm,1.3s						
VNDA				MLR	MLR		
	comp=Z,2μm,19.3s						
VNDA	Vanda	47.33	169	P	P	12 13 05.2	-0.4
	comp=Z,6.9nm,1.0s,mb4.5,baz=235,slow=8.9,SNR=18						
VNDA				PP	PP	12 14 57.7	+1.4
	comp=Z,11nm,1.3s,baz=226,slow=12,SNR=5.5						
VNDA				LR	LR	12 32 33.3	
	comp=Z,2μm,19.3s,MS5.1,baz=205,slow=36						
KMBO	Kilima Mbogo	53.22	19	LR	LR	12 35 24.6	
	comp=Z,1μm,18.8s,MS5.0,baz=241,slow=35						
TRQA	Tornquist	57.49	249	*e*P	P	12 14 21.8	-0.2
	comp=Z,46nm,1.1s,mb5.4						
TRQA				LR	LR		
	comp=Z,441nm,19.0s,MS4.6						
PLCA	Paso Flores	60.27	241	P	P	12 14 39.5	-1.7
	comp=Z,7.9nm,0.9s,mb4.8,baz=144,slow=7.6,SNR=9.9						
PLCA				LR	LR	12 35 48.5	
	comp=Z,246nm,19.2s,MS4.4,baz=140,slow=31						
CPUP	Villa Florida	63.26	261	*e*P	P	12 15 00.4	-1.1
CPUP				pmax	pmax		
	comp=Z,30nm,1.3s						
CPUP				MLR	MLR		
	comp=Z,232nm,19.0s						
CPUP	Villa Florida	63.26	261	P	P	12 14 59.2	-2.3
	comp=Z,12nm,1.1s,mb4.9,baz=148,slow=6.3,SNR=11						
CPUP				LR	LR	12 36 42.1	
	comp=Z,340nm,21.9s,MS4.5,baz=172,slow=30						
CPUP	Villa Florida	63.26	261	*e*P	P	12 15 00.4	-1.1
	comp=Z,30nm,1.3s,mb5.3						
CPUP				LR	LR		
	comp=Z,232nm,19.0s,MS4.4						
DBIC	Dimbokro	63.75	330	LR	LR	12 36 32.7	
	comp=Z,450nm,20.8s,MS4.6,baz=145,slow=30						
CFAA	Coronel Fontan	65.69	249	P	P	12 15 17.2	0.0
	comp=Z,1.6nm,0.9s,mb4.1,baz=151,slow=4.2,SNR=23						
BDFB	Brasilia	65.77	276	P	P	12 15 17.9	0.0
	comp=Z,11nm,1.0s,mb4.8,baz=176,slow=3.2,SNR=6.9						
BDFB				LR	LR	12 37 29.5	
	comp=Z,501nm,22.0s,MS4.7,baz=330,slow=30						
NWAO	Narrogin (SRO)	67.25	115	LR	LR	12 38 08.3	
	comp=Z,311nm,18.2s,MS4.6,baz=233,slow=30						
LVC	Limon Verde	72.92	255	P	P	12 16 02.9	+1.2
	comp=Z,7.8nm,0.8s,mb4.7,baz=178,slow=3.9,SNR=6.0						
LVC	Limon Verde	72.92	255	*e*P	P	12 16 02.8	+1.0
	comp=Z,13nm,1.0s,mb4.8						
SIV	San Ignacio	73.37	265	P	P	12 16 04.6	+0.1
	comp=Z,2.9nm,0.9s,mb4.2,baz=135,slow=6.1,SNR=16						
LPAZ	La Paz	77.37	260	*e*P	P	12 16 28.4	+1.1
LPAZ				pmax	pmax		
	comp=Z,22nm,1.5s						
LPAZ				MLR	MLR		
	comp=Z,403nm,21.0s						
LPAZ	La Paz	77.37	260	P	P	12 16 28.3	+1.0
	comp=Z,3.4nm,0.8s,mb4.3,baz=107,slow=2.8,SNR=14						
LPAZ				LR	LR	12 46 02.5	
	comp=Z,179nm,21.4s,MS4.4,baz=266,slow=32						
LPAZ	La Paz	77.37	260	*e*P	P	12 16 28.4	+1.1
	comp=Z,22nm,1.5s,mb4.9						
LPAZ				LR	LR		
	comp=Z,403nm,21.0s,MS4.7						
RPZ	Rata Peaks	79.98	158	LR	LR	12 50 23.8	
	comp=Z,885nm,18.6s,MS5.1,baz=191,slow=34						
SAML	Samuel	80.15	268	*e*P	P	12 16 43.1	+0.6
	comp=Z,23nm,1.0s,mb5.1						
SAML				LR	LR		
	comp=Z,399nm,21.0s,MS4.7						
STKA	Stephens Creek	80.41	131	*e*P	P	12 16 42.5	-1.0
STKA	Stephens Creek	80.41	131	P	P	12 16 43.5	-0.1
	comp=Z,13nm,1.1s,mb4.8,baz=203,slow=4.6,SNR=16						
EIL	Elat	83.09	11	P	P	12 16 58.5	+1.0
	comp=Z,2.1nm,0.7s,mb4.3,baz=252,slow=7.1,SNR=2.7						
ASPA	Alice Springs	83.49	121	⇓*i*P	P	12 17 00.0	+0.3
ASAR	Alice Springs	83.49	121	P	P	12 17 00.0	+0.3
ASAR						12 20 10.4	
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ASAR	Alice Springs	83.49	121	P	P	12 17 00.0	+0.3
	comp=Z,2.4nm,0.7s,mb4.3,baz=205,slow=4.5,SNR=40						
ASAR				PP	PP	12 20 10.4	-3.4
	comp=Z,1.4nm,1.2s,baz=199,slow=7.8,SNR=4.5						
ASAR				LR	LR	12 46 34.4	
	comp=Z,243nm,20.8s,MS4.6,baz=38,slow=30						
ASF	Jabal al Asfar	85.80	12	P	P	12 17 12.1	+1.0
	comp=Z,6.5nm,0.9s,mb4.9,baz=38,slow=0.3,SNR=9.6						
ASF				LR	LR	12 56 21.3	
	comp=Z,489nm,18.3s,MS4.9,baz=236,slow=36						
WRA	Warramunga Arr	86.78	119	P	P	12 17 16.0	-0.2
WRA						12 20 35.7	
WRA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA				pmax	pmax		
	comp=Z,1.0nm,1.3s						
WRA	Warramunga Arr	86.78	119	P	P	12 17 16.0	-0.2
	comp=Z,4.5nm,0.8s,mb4.7,baz=209,slow=4.0,SNR=36						
WRA				PP	PP	12 20 35.7	-5.3
	comp=Z,1.2nm,1.3s,baz=220,slow=6.5,SNR=2.8						
WB2	Warramunga Arr	86.79	119	⇓*i*P	P	12 17 16.3	+0.1
WRAB	Tennant Creek	86.80	119	*e*P	P	12 17 16.5	+0.2
WRAB				pmax	pmax		
	comp=Z,77nm,1.5s,mb5.7						
WRAB				MLR	MLR		
	comp=Z,140nm,19.0s,MS4.4						
WRAB	Tennant Creek	86.80	119	*e*P	P	12 17 16.5	+0.2
	comp=Z,78nm,1.5s,mb5.7						
WRAB				LR	LR		
	comp=Z,140nm,19.0s,MS4.4						
IDI	Anoyia	87.98	2	LR	LR	13 00 21.4	
	comp=Z,753nm,18.4s,MS5.1,baz=18,slow=38						
VAE	Valguarnera	90.39	354	LR	LR	13 00 20.9	
	comp=Z,813nm,18.1s,MS5.2,baz=301,slow=37						
BRTR	Keskin Array B	92.91	9	P	P	12 17 45.7	+1.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	Keskin Array B	92.91	9	P	P	12 17 45.6	+1.2
	comp=Z,2.4nm,0.9s,mb4.6,baz=190,slow=7.5,SNR=12						
CMAR	Chiang Mai Arr	96.85	69	P	P	12 18 03.8	+0.8
	comp=Z,2.0nm,1.2s,mb4.4,baz=221,slow=3.8,SNR=4.4						
CMAR				LR	LR	12 57 47.4	
	comp=Z,168nm,18.7s,MS4.5,baz=225,slow=33						
ROSC	El Rosal	97.79	268	LR	LR	12 59 49.7	
	comp=Z,321nm,19.7s,MS4.8,baz=190,slow=34						
MLR	Muntele Rosu	98.19	3	LR	LR	13 05 45.5	
	comp=Z,583nm,20.2s,MS5.1,baz=199,slow=37						
SDV	Santo Domingo	98.74	273	*e*S	P	12 18 09.8	-1.8
DAVOX	Davos	99.98	351	LR	LR	13 04 36.7	
	comp=Z,306nm,21.4s,MS4.8,baz=87,slow=36						
RKT	Rikitea	101.62	201	*e*SS	SS	12 37 06.8	-0.9
RKT				*e*LR	LR	12 51 36.4	
	comp=Z,1μm,35.5s						
KHC	Kasperske Hory	102.04	354	AMS	AMS	13 07 20.0	
	comp=Z,400nm,21.8s						
OKC	Ostrava-Krasne	102.55	357	AMS	AMS	13 05 40.0	
	comp=Z,300nm,20.1s						
PRU	Pruhonice	102.84	355	AMS	AMS	13 07 10.0	
	comp=Z,200nm,20.5s						
DPC	Dobruska-Polom	103.12	356	AMS	AMS	13 11 10.0	
	comp=Z,300nm,21.4s						
PVCC	Panska Ves	103.38	355	AMS	AMS	13 11 10.0	
	comp=Z,300nm,15.5s						
TBI	Tubuai	103.61	188	*e*SS	SS	12 37 28.3	-6.6
TBI				*e*LR	LR	12 52 34.8	
	comp=Z,468nm,28.8s						
PPT	Papeete	109.34	188	*e*LQ		12 50 35.4	
PPT				*e*LR	LR	12 55 09.4	
	comp=Z,392nm,23.0s						
WMQ	Urumqi	111.62	45	*e*PDIF	Pdif	12 19 10.0	+1.9
WMQ				PP	PP	12 23 53.1	+2.3
WMQ				PPP	PPP	12 26 14.2	+1.8
WMQ				SKS	SKS	12 30 17.8	+27
WMQ				PP	PP		
	comp=Z,150nm,5.0s						
WMQ				LR	LR		
	comp=Z,720nm,22.6s,MS5.2						
LZH	Lanzhou	113.34	61	*e*PKP	PKPdf	12 23 10.5	-0.8
LZH				XPKP		12 23 15.2	
LZH				*e*PP	PP	12 24 07.6	+3.6
LZH				*e*SS	SS	12 39 47.5	+1.3
LZH				PP	PP		
	comp=Z,110nm,9.6s						
LZH				LR	LR		
	comp=N,250nm,18.0s						
LZH				LR	LR		
	comp=Z,490nm,20.0s,MS5.1						
NJ2	Nanjing	118.70	74	*e*PKP	PKPdf	12 23 16.5	-5.3
NJ2				PP	PP	12 24 40.0	-1.7
NJ2				SKS	SKS	12 30 25.0	+7.2
NJ2				PP	PP		
	comp=Z,160nm,5.4s						
NJ2				LR	LR		
	comp=N,320nm,26.7s,MS5.0						
NJ2				LR	LR		
	comp=E,330nm,27.4s,MS5.0						
NJ2				LR	LR		
	comp=Z,330nm,27.2s,MS4.8						
SSE	Sheshan	119.37	76	*e*PKP	PKPdf	12 23 23.6	+0.6
SSE				PP	PP		
	comp=Z,50nm,4.5s						
APA	Apatity	120.57	5	⇑*i*PKIKP	PKPdf	12 23 25.6	+1.1
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC	Hu-ho-hao-te	120.94	62	*e*PKP	PKPdf	12 23 21.1	-4.8
HHC				PP	PP		
	comp=Z,100nm,6.4s						
HHC				LR	LR		
	comp=N,170nm,20.2s						
HHC				LR	LR		
	comp=E,230nm,12.8s						
HHC				LR	LR		
	comp=Z,60nm,5.3s						
ARCES	ARCESS Array B	122.27	1	PKIKP	PKPdf	12 23 25.1	-2.7
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	122.27	1	PKP	PKPdf	12 23 25.1	-2.7
	comp=Z,2.4nm,0.7s,baz=315,slow=1.7,SNR=6.1						
SONM	Songino Array	123.21	53	PKP	PKPdf	12 23 26.8	-3.2
	comp=Z,0.4nm,0.6s,baz=243,slow=2.8,SNR=5.7						
SONM				PP	PP	12 25 11.5	-0.3
	comp=Z,0.7nm,1.1s,baz=225,slow=5.2,SNR=4.1						
ZAK	Zakamensk	123.52	49	*e*PKIKP	PKPdf	12 23 27.1	-3.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s						
FWV	Forest Hill	126.31	286	*e*PKPdf	PKPdf	12 23 34.3	-1.9
CN2	Changchun	130.53	68	*e*PKP	PKPdf	12 23 45.1	+0.9
CN2				PP	PP	12 26 04.7	+4.6
CN2				PP	PP		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=E,200nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=Z,200nm,19.0s,MS4.8						
TXAR	Lajitas Array	134.23	261	PKIKP	PKPdf	12 23 50.0	-1.5
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	Lajitas Array	134.23	261	PKP	PKPdf	12 23 50.0	-1.5
	comp=Z,1.2nm,0.9s,baz=160,slow=3.1,SNR=10.0						
TXAR	Lajitas Array	134.23	261	PKP	PKPdf	12 23 50.0	-1.5
BNM	Barren Site	139.42	263	PKP	PKPdf	12 24 00.7	-0.3
TUC	Tucson	140.60	257	*e*PKIKP	PKPdf	12 24 02.6	-0.5
SDCO	Great Sand Dun	141.14	268	*e*PKPpre		12 23 58.7	
ISCO	Idaho Springs	142.51	271	*e*PKHKP		12 24 00.0	
WUAZ	Wupatki	143.19	261	*e*PKPpre		12 24 03.6	
PV01	Paradox Valley	143.24	266	*e*PKPpre		12 23 59.8	
PHWY	Pilot Hill	143.33	273	*e*PKPpre		12 24 03.0	
PV10	Paradox Valley	143.68	266	*e*PKPpre		12 24 02.4	
RSSD	Black Hills	144.10	278	*e*PKIKP	PKPdf	12 24 06.1	-2.6
TIXI	Tiksi	144.17	31	*e*PKHKP		12 23 57.5	
TIXI				pmax	pmax		
	comp=Z,23nm,1.1s						
RWWY	Rawlins	144.62	272	*e*PKP	PKPdf	12 24 07.5	-2.1
FCC	Fort Churchill	145.05	305	*e*PKIKP	PKPdf	12 24 08.2	-1.7
NEN	Nelson	145.34	257	*e*PKP	PKPdf	12 24 10.0	-1.1
MSU	Marysvale	145.66	264	*e*PKP2	PKPab	12 24 11.8	+0.6
ARUT	Antelope Range	145.94	261	*e*PKP2	PKPab	12 24 12.9	+0.5
MWC	Mount Wilson	146.21	252	*e*PKP2	PKPab	12 24 13.4	-0.1
MPU	Maple Canyon	146.28	266	*e*PKPdf	PKPdf	12 24 11.6	-1.0
DAU	Daniels Canyon	146.29	267	*e*PKP2	PKPab	12 24 13.6	0.0
JLU	Jordanelle	146.53	267	*e*PKPbc	PKPbc	12 24 14.0	+2.7
PDAR	Pinedale Array	146.66	272	PKPbc	PKPbc	12 24 12.4	+0.8
	comp=Z,6.8nm,0.8s,baz=117,slow=3.3,SNR=37						
CTU	Camp Tracy	146.76	267	*e*PKPdf	PKPdf	12 24 12.3	-1.1
TCUT	Toone Canyon	146.81	268	*e*PKPbc	PKPbc	12 24 14.3	+2.4
NOQ	North Oquirrh	146.96	267	PKPdf	PKPdf	12 24 11.9	-1.9
DUG	Dugway	147.10	265	*e*PKP2	PKPab	12 24 14.8	-2.0
HWUT	Hardware Ranch	147.20	269	*e*PKPdf	PKPdf	12 24 13.2	-0.9
HWUT				*e*PKPbc	PKPdf	12 24 15.4	+1.3
RES	Resolute Bay	147.29	334	PKHKP		12 24 10.1	
TRCR	Troy Canyon	147.59	260	*e*PKPbc	PKPdf	12 24 17.5	+2.7
AHID	Auburn Hatcher	147.59	271	*e*PKPbc	PKPdf	12 24 16.6	+2.0
BGU	Big Grassy Mou	147.68	266	*e*PKPbc	PKPdf	12 24 17.4	+2.5
SNOW	Snow King Moun	147.78	272	*e*PKPbc	PKPdf	12 24 17.3	+2.4
FFC	Flin Flon	147.78	296	*e*PKIKP	PKPdf	12 24 13.2	-1.4
FFC				*e*		12 24 16.2	
WUWY	Wally Ulrich	147.82	272	*e*PKPdf	PKPdf	12 24 14.3	-0.8
TPAW	Teton Pass	147.91	272	*e*PKPbc	PKPdf	12 24 17.5	+2.3
MOOW	Moose Ponds	147.93	272	*e*PKPdf	PKPdf	12 24 14.1	-1.1
HVU	Hansel Valley	148.03	268	*e*PKP2	PKPab	12 24 16.7	-3.7
RRI2	Red Ridge	148.06	271	*e*PKPbc	PKPdf	12 24 17.8	+2.4
IMW	Indian Meadow	148.13	273	*e*PKPdf	PKPdf	12 24 15.3	-0.2
LKWY	Lake	148.17	274	PKHKP		12 24 13.1	
YFT	Old Faithful	148.37	273	*e*PKP	PKPdf	12 24 16.4	+0.5
GCMT	Greycliff	148.38	276	*e*PKPdf	PKPdf	12 24 14.9	-0.9
GCMT				*e*PKPbc	PKPdf	12 24 18.7	+2.9
YMR	Madison River	148.57	274	*e*PKPbc	PKPdf	12 24 20.0	+3.8
MTUM	Tungsten Hills	148.69	256	*e*PKPbc	PKPdf	12 24 20.2	+3.6
ELK	Elko	148.90	264	*e*PKIKP	PKPdf	12 24 16.5	-0.3
ELK				*e*		12 24 20.4	
ELK				MLR	MLR		
	comp=Z,158nm,19.0s						
QLMT	Earthquake Lak	148.93	274	*e*PKPdf	PKPdf	12 24 15.5	-1.3
OMM	Old Mammoth Mi	149.12	256	*e*PKPbc	PKPdf	12 24 21.7	+4.4
MNV	Mina	149.17	258	*e*PKHKP		12 24 16.8	
MNV				*e*		12 24 21.2	
NVAR	Mina Array Bea	149.25	258	PKPbc	PKPdf	12 24 18.5	+1.0
	comp=Z,10nm,0.9s,baz=118,slow=5.1,SNR=42						
BOZ	Bozeman (W)	149.48	275	*e*PKHKP		12 24 16.5	
MCMT	McKenzie Canyo	149.79	273	*e*PKPdf	PKPdf	12 24 17.5	-0.7
HLID	Hailey	150.05	269	*e*PKPdf	PKPdf	12 24 16.6	-2.0
HLID				*e*PKPbc	PKPdf	12 24 23.6	+5.1
HRY	Holter Researc	150.14	277	*e*PKPdf	PKPdf	12 24 18.0	-0.7
HRY				*e*PKPbc	PKPdf	12 24 23.4	+4.8
CMB	Columbia Colle	150.21	255	*e*PKIKP	PKPdf	12 24 23.9	+4.9
CMB				MLR	MLR		
	comp=Z,183nm,19.0s,MS4.9						
WCN	Washoe City	150.68	257	*e*PKIKP	PKPdf	12 24 25.5	+5.8
CHMT	Chamberlain Mo	151.09	276	*e*PKPbc	PKPdf	12 24 25.7	+5.6
MA2	Magadan	151.36	56	*e*PKIKP	PKPdf	12 24 25.0	+5.0
MA2				pmax	pmax		
	comp=Z,20nm,1.6s						
MSO	Missoula	151.46	275	*e*PKPbc	PKPdf	12 24 26.2	+5.6
SEY	Seymchan	152.49	49	*e*PKIKP	PKPdf	12 24 27.9	+6.3
SEY				*e*		12 53 24.1	
SEY				pmax	pmax		
	comp=Z,10.0nm,1.5s						
BMO	Blue Mountains	152.49	269	*e*PKIKP	PKPdf	12 24 21.7	-0.5
BMO				*e*		12 24 28.4	
MOD	Modoc	152.63	261	*e*PKPbc	PKPdf	12 24 29.1	+6.7
EDM	Edmonton	153.65	288	*e*PKIKP	PKPdf	12 24 30.4	+6.9
YKA	Yellowknife Ar	155.55	310	PKIKP	PKPdf	12 24 20.6	-5.1
YKA						12 24 51.3	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	155.55	310	PKP	PKPdf	12 24 20.6	-5.1
	comp=Z,0.8nm,0.8s,baz=70,slow=1.4,SNR=5.6						
YKA				PKPab	PKPab	12 24 51.3	+0.1
	comp=Z,3.2nm,0.9s,baz=91,slow=5.2,SNR=13						
YKA	Yellowknife Ar	155.55	310	PKP	PKPdf	12 24 20.6	-5.1
YKA				PKPab	PKPab	12 24 51.3	+0.1
ILAR	Eielson Array	166.97	339	PKIKP	PKPdf	12 24 35.9	-1.9
ILAR						12 25 41.2	
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ILAR	Eielson Array	166.97	339	PKP	PKPdf	12 24 35.9	-1.9
	comp=Z,1.2nm,1.2s,baz=270,slow=1.8,SNR=4.0						
ILAR				PKPab	PKPab	12 25 41.2	+0.7
	comp=Z,0.4nm,0.7s,baz=63,slow=2.0,SNR=3.4						

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*PRU **05** 12:06:04.8, 50.37N×18.79E*

*IDC **05** 12:06:05.1±0.9, 50.32N×18.78E, mb1 3.1/3, mb1mx2.9/20, mbtmp2.9/3, ML2.5/3, Error ellipse: s-maj=18.4km s-min=7.1km az=152.0*

WAR 05 12:06:04.4, 50.36N×18.87E, h0^{km}, ML2.6, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	Raciborz	0.52	238	*e*PG	Pg	12 06 15.0	+0.3
RAC				*e*SG	Sg	12 06 23.0	+1.3
OJC	Ojcow	0.61	103	*e*PG	Pg	12 06 16.0	-0.6
OJC				*e*SG	Sg	12 06 26.0	+1.3
OKC	Ostrava-Krasne	0.70	222	*e*PG	Pg	12 06 18.1	-0.3
OKC				*e*SG	Sg	12 06 27.9	+0.1
	37nm,0.4s						
NIE	Niedzica	1.33	135	*e*PG	Pg	12 06 29.0	-1.9
NIE				*e*SG	Sg	12 06 48.0	-0.6
DPC	Dobruska-Polom	1.63	271	*e*PG	Pg	12 06 33.6	-3.4
DPC				*e*SG	Sg	12 06 55.7	-3.1
	12nm,0.2s						
KSP	Ksiaz	1.71	287	*e*Pn	Pn	12 06 36.1	+0.4
KSP				*e*Pg	Pg	12 06 38.8	+0.2
KSP				*e*Sn	Sn	12 06 59.1	+0.6
KSP				*e*Sg	Sg	12 07 00.4	-1.0
VRAC	Vranov	1.81	235	Pg	Pg	12 06 36.6	-4.0
	1.4nm,0.3s,baz=52,slow=13,SNR=6.6						
VRAC				Lg		12 07 00.3	
	6.5nm,0.3s,baz=140,slow=22,SNR=10						
UPC	Upice	1.83	276	*e*PG	Pg	12 06 37.3	-3.7
UPC				*e*SG	Sg	12 07 01.1	-4.4
VYHS	Vyhne	1.87	181	*e*PN	Pn	12 06 36.8	-1.1
VYHS				*e*SN	Sn	12 07 00.1	-2.4
ZST	Bratislava	2.46	209	*e*SN	Sn	12 07 15.8	-1.7
KOLS	Kolonicke sedl	2.63	122	*e*PG	Pg	12 06 56.9	-0.1
PRU	Pruhonice	2.81	264	*e*SG	Sg	12 07 32.4	-5.5
KHC	Kasperske Hory	3.65	252	*e*PN	Pn	12 07 00.0	-3.3
KHC				*e*PG	Pg	12 07 10.5	-6.7
KHC				*e*SG	Sg	12 07 58.8	-7.1

GERES	**GERESS Array B**	**3.69**	**248**	Pn	Pn	12 07 03.0	-0.9
	0.2nm,0.3s,baz=71,slow=18,SNR=1.8						
GERES				Pg	Pg	12 07 12.0	-6.1
	0.8nm,0.3s,baz=62,slow=17,SNR=9.5						
GERES				Lg		12 07 59.0	
	1.5nm,0.3s,baz=66,slow=29,SNR=7.6						
CLL	**Collm**	**3.84**	**287**	*i* SG	Sg	12 08 09.1	-3.1
MOA	**Molln**	**3.94**	**232**	*i*	Pn	12 07 12.0	+4.7
MOA	**Molln**	**3.94**	**232**	*i* SG	Sg	12 08 07.3	-8.1
	3.4nm,0.4s						
AKASG	**Malin Array Be**	**6.61**	**83**	Pn	Pn	12 07 42.4	-2.8
	0.3nm,0.3s,baz=275,slow=11,SNR=2.2						
AKASG				Pg	Pg	12 08 01.2	-15
	0.3nm,0.3s,baz=273,slow=13,SNR=3.0						
AKASG				Sn	Sn	12 08 53.6	-8.5
	0.5nm,0.3s,baz=265,slow=26,SNR=5.8						
AKASG				Lg		12 09 35.9	
	0.3nm,0.3s,baz=271,slow=28,SNR=1.4						
FINES	**FINESS Array B**	**11.81**	**17**	Pn	P	12 08 49.2	-7.7
	0.1nm,0.3s,baz=196,slow=10,SNR=2.2						
FINES				Sn	S	12 10 56.0	-15
	0.1nm,0.3s,baz=205,slow=23,SNR=1.7						

IDC 05 12:09:03.2±1.1,29.71N×142.73E,mb3.6/5,mb1 3.9/7, mb1mx3.7/23,mbtmp3.7/7,ML3.4/2,MS2.8/1,Ms1 2.8/1, ms1mx2.3/37,Error ellipse: s-maj=35.0km s-min=22.4km az=60.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.65**	**191**	Sn	Sn	12 10 17.1	-4.1
	baz=288,slow=20						
JHJ	**Hachijo jima 2**	**4.23**	**324**	Pn	Pn	12 10 07.7	-2.8
	3.8nm,0.3s,baz=98,slow=16,SNR=5.8						
JHJ				Sn	Sn	12 10 53.2	-8.1
	7.0nm,0.3s,baz=221,slow=19,SNR=2.8						
MJAR	**Matsushiro Arr**	**7.80**	**332**	Pn	Pn	12 10 57.0	-3.7
	0.8nm,0.3s,baz=152,slow=12,SNR=10						
MJAR				Sn	Sn	12 12 26.5	-4.4
	0.4nm,0.3s,baz=139,slow=24,SNR=4.8						
MAT	**Matsushiro**	**7.80**	**332**	P	Pn	12 10 56.9	-3.9
MAT				S	Sn	12 12 23.3	-7.6
ASAJ	**Asahikawa**	**14.38**	**360**	LR	LR	12 18 13.6	
	comp=Z,40nm,21.6s,baz=162,slow=38						
SONM	**Songino Array**	**33.23**	**313**	P	P	12 15 43.0	-0.9
	0.2nm,0.5s,baz=123,slow=8.5,SNR=3.4						
MKAR	**Makanchi Array**	**49.22**	**308**	P	P	12 17 53.1	-2.1
	0.5nm,0.7s,baz=90,slow=9.2,SNR=3.6						
WRA	**Warramunga Arr**	**50.02**	**190**	P	P	12 17 59.2	-2.5
	0.5nm,0.6s,baz=7.8,slow=8.0,SNR=9.5						
NVAR	**Mina Array Bea**	**78.54**	**52**	P	P	12 21 06.8	-1.3
	0.5nm,0.7s,baz=301,slow=5.3,SNR=3.5						
TXAR	**Lajitas Array**	**93.66**	**53**	P	P	12 22 22.5	-0.5
	0.2nm,0.6s,baz=301,slow=5.3,SNR=4.3						

MOS ***05*** *12:32:26.3±0.8,6.71S×155.29E,h33^{km},mb4.9/32,Error ellipse: s-maj=10.5km s-min=8.4km az=56.8*

IDC ***05*** *12:32:26.9±0.5,6.80S×155.47E,h33^{km}±3^{km},mb4.3/17, mb1 4.5/19,mb1mx4.5/20,mbtmp4.5/19,ML3.7/2,MS4.0/12, Ms1 4.0/12,ms1mx3.8/28,Error ellipse: s-maj=16.8km s-min=11.9km az=112.0*

BJI ***05*** *12:32:27.3,6.70S×155.40E,h34^{km},mB4.8,mb4.9,Ms4.6, Msz4.4*

HRVD ***05*** *12:32:27.4±0.7,6.82S×155.27E,h38^{km}±1^{km},MW5.1/28, Centroid moment Tensor Solution. LP body waves: s21,c22;Mantle waves: s28,c33; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.22±.38; $M_{\theta\theta}$-3.78±.27; $M_{\phi\phi}$-1.44±.24; $M_{r\theta}$0.14±.24; $M_{\theta\phi}$1.02±.15; $M_{\phi r}$-0.96±.18; Best double couple: $M_0$4.771×10^{16} NP1:ϕ_s284°,δ43°,λ79°. NP2:ϕ_s118°,δ48°,λ100°. Principal axes: T 5.355, Plg82°, Azm90°; N -1.169, Plg7°, Azm292°; P -4.186, Plg3°, Azm201°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***05*** *12:32:27.4±0.2,6.73S×155.35E,mb5.0/18,MS4.9/1 Error ellipse: s-maj=7.1km s-min=5.6km az=126.0*

ISC 05 12:32:25.8±0.3**,6.78S**±0.05×**155.40E**±0.05**,h34^{km}, h34^{km}**±1.2^{km}**:pP-P,n139,σ0^{s}89**/98**,mb4.8**/45**,MS4.3**/14**, 5C-4D,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.21**	**121**	P	**P**	**12 33 47.5**	**+4.1**
HNR						12 34 53.0	
HNR				pmax	pmax		
	comp=Z,24nm,0.3s						
HNR				smax			
	comp=N,32nm,0.3s						
HNR	**Honiara**	**5.21**	**121**	Pn	**P**	**12 33 47.5**	**+4.1**
	comp=N,24nm,0.3s,baz=203,slow=1.1,SNR=4.9						
HNR				LR	LR	12 34 50.1	
	comp=N,209nm,18.9s,baz=336,slow=28						
HNR				Sn	**S**	**12 34 53.0**	**+10**
	comp=N,32nm,0.3s,baz=195,slow=23,SNR=4.3						
HNR	**Honiara**	**5.21**	**121**	*e*P	**P**	**12 33 46.2**	**+2.7**
	comp=N,492nm,0.8s						
PMG	**Port Moresby**	**8.57**	**252**	P	**P**	**12 34 31.1**	**+0.8**
PMG						12 36 08.1	
PMG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PMG				smax			
	comp=N,3.0nm,0.3s						
PMG				MLR	MLR		
	comp=Z,764nm,19.9s						
PMG	**Port Moresby**	**8.57**	**252**	Pn	**P**	**12 34 31.1**	**+0.8**
	comp=Z,2.4nm,0.3s,baz=64,slow=13,SNR=7.8						
PMG				Sn	**S**	**12 36 08.1**	**+1.2**
	comp=Z,2.8nm,0.3s,baz=68,slow=20,SNR=8.6						
PMG				LR	LR	12 37 38.8	
	comp=Z,764nm,19.9s,baz=53,slow=36						
PMG	**Port Moresby**	**8.57**	**252**	*e*P	**P**	**12 34 30.6**	**+0.2**
	comp=Z,40nm,0.6s						
CTA	**Charters Tower**	**15.93**	**213**	Pn	**P**	**12 36 09.7**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=25,slow=14,SNR=3.3						
CTA				LR	LR	12 41 32.5	
	comp=Z,406nm,19.7s,baz=47,slow=34						
CTAO	**Charters Tower**	**15.93**	**213**	*e*P	**P**	**12 36 10.0**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,29nm,0.9s						
CTAO	**Charters Tower**	**15.93**	**213**	*e*P	**P**	**12 36 10.0**	**+0.8**
	comp=Z,30nm,0.9s						
CTAO				*e*		12 36 23.8	
DZM	**Mont Dzumac**	**18.57**	**146**	P	**P**	**12 36 43.0**	**+0.8**
	comp=Z,2.0nm,0.3s,baz=334,slow=17,SNR=18						
DZM				LR	LR	12 42 08.3	
	comp=Z,463nm,21.3s,baz=333,slow=31						
WRAB	**Tennant Creek**	**24.26**	**235**	*e*P	**P**	**12 37 41.4**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**24.26**	**235**	*e*P	**P**	**12 37 41.4**	**+0.3**
	comp=Z,49nm,0.8s,mb5.0						
WB2	**Warramunga Arr**	**24.26**	**235**	⇑*i*P	**P**	**12 37 41.7**	**+0.6**
WB2				*e*pP		12 37 50.6	
WB2				*e*PCP	PcP	12 41 21.5	-0.6
WB2				*e*PCS		12 45 01.4	
WRA	**Warramunga Arr**	**24.27**	**235**	P	**P**	**12 37 41.7**	**+0.5**
WRA						12 41 21.4	
WRA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WRA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
WRA	**Warramunga Arr**	**24.27**	**235**	P	**P**	**12 37 41.7**	**+0.5**
	comp=Z,9.7nm,0.7s,mb4.3,baz=60,slow=9.5,SNR=107						
WRA				PcP	PcP	12 41 21.4	-0.7
	comp=Z,1.9nm,0.4s,baz=67,slow=2.6,SNR=10						
ASAR	**Alice Springs**	**26.62**	**229**	P	**P**	**12 38 02.3**	**-1.0**
ASAR				*PP	pP	12 38 12.3	-0.5
ASAR						12 41 26.5	
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ASAR				pmax	pmax		
	comp=Z,14nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**26.62**	**229**	P	**P**	**12 38 02.2**	**-1.0**
	comp=Z,3.7nm,0.5s,mb4.2,baz=63,slow=9.0,SNR=70						
ASAR				pP	pP	12 38 12.2	-0.6
	comp=Z,14nm,0.8s,baz=59,slow=9.6,SNR=28						
ASAR				PcP	PcP	12 41 26.5	-0.8
	comp=Z,2.1nm,0.6s,baz=71,slow=2.3,SNR=8.0						
ASPA	**Alice Springs**	**26.62**	**229**	*e*P	**P**	**12 38 02.4**	**-0.9**
ASPA				*e*pP	pP	12 38 11.3	-1.6
STKA	**Stephens Creek**	**28.10**	**206**	*e*P	**P**	**12 38 17.0**	**+0.3**
STKA				*e*pP	pP	12 38 29.4	+3.0
STKA	**Stephens Creek**	**28.10**	**206**	P	**P**	**12 38 16.0**	**-0.7**
	comp=Z,2.8nm,0.6s,mb4.0,baz=22,slow=13,SNR=7.1						
STKA				PcP	PcP	12 41 29.3	-1.4
	comp=Z,2.8nm,0.6s,baz=48,slow=4.2,SNR=5.6						
STKA				LR	LR	12 48 56.4	
	comp=Z,347nm,18.4s,MS4.0,baz=18,slow=35						
AFI	**Afiamalu**	**33.03**	**105**	*e*P	**P**	**12 39 00.5**	**+0.1**
AFI				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.3						
AFI	**Afiamalu**	**33.03**	**105**	LR	LR	12 49 16.2	
	comp=Z,148nm,18.8s,MS3.7,baz=151,slow=31						
AFI	**Afiamalu**	**33.03**	**105**	*e*P	**P**	**12 39 00.5**	**+0.1**
	comp=Z,50nm,1.3s,mb5.3						
MBWA	**Marble Bar**	**37.33**	**244**	*e*P	**P**	**12 39 36.0**	**-1.1**
	comp=Z,13nm,0.9s,mb4.8						
KLBR	**Kellerberrin**	**42.93**	**230**	*e*P	**P**	**12 40 22.0**	**-1.3**
KLBR				*e*	pP	12 40 32.0	-1.4
NWAO	**Narrogin (SRO)**	**43.94**	**229**	P	**P**	**12 40 30.5**	**-1.0**
NWAO				*PP	pP	12 40 41.7	+0.2
NWAO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NWAO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NWAO				MLR	MLR		
	comp=Z,189nm,19.7s						
NWAO	**Narrogin (SRO)**	**43.94**	**229**	P	**P**	**12 40 30.5**	**-1.0**
	comp=Z,4.2nm,0.6s,mb4.3,baz=107,slow=16,SNR=5.9						
NWAO				pP	pP	12 40 41.6	+0.1
	comp=Z,6.1nm,0.7s,baz=69,slow=8.7,SNR=2.7						
NWAO				LR	LR	12 59 47.9	
	comp=Z,189nm,19.7s,MS4.0,baz=242,slow=37						
NWAO	**Narrogin (SRO)**	**43.94**	**229**	P	**P**	**12 40 30.5**	**-1.0**
NWAO				pP	pP	12 40 41.6	+0.1
NWAO				LR	LR	12 59 47.9	
RAR	**Rarotonga**	**45.62**	**113**	LR	LR	12 55 06.5	
	comp=Z,1µm,19.3s,MS4.8,baz=282,slow=30						
MJAR	**Matsushiro Arr**	**46.01**	**341**	P	**P**	**12 40 47.0**	**-1.0**
MJAR						12 42 24.1	
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**46.01**	**341**	P	**P**	**12 40 47.0**	**-1.0**
	comp=Z,1.7nm,0.8s,mb4.0,baz=164,slow=8.7,SNR=7.1						
MJAR				PcP	PcP	12 42 24.1	-0.6
	comp=Z,2.3nm,0.8s,baz=172,slow=4.0,SNR=6.2						
SSE	**Sheshan**	**49.89**	**321**	*e*P	**P**	**12 41 16.7**	**-1.6**
SSE				AP	pP	12 41 26.7	-1.6
SSE				XP	sP	12 41 30.7	-1.8
SSE				S	**S**	**12 48 27.5**	**+2.7**
SSE				XS		12 48 42.8	
SSE				SCS	ScS	12 51 05.9	+2.0
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.4						
SSE				AMB	AMB		
	comp=Z,40nm,3.5s						
SSE				LR	LR		
	comp=N,60nm,33.4s,MS3.4						
SSE				LR	LR		
	comp=E,30nm,33.2s,MS3.4						
QIZ	**Qiongzhong**	**51.70**	**301**	P	**P**	**12 41 33.1**	**+1.0**
QIZ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
QIZ				LR	LR		
	comp=Z,180nm,26.2s,MS4.0						
ASAJ	**Asahikawa**	**51.96**	**348**	P	**P**	**12 41 33.4**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ASAJ	**Asahikawa**	**51.96**	**348**	P	**P**	**12 41 33.4**	**-0.4**
	comp=Z,5.0nm,0.7s,mb4.5,baz=192,slow=6.7,SNR=5.1						
NJ2	**Nanjing**	**52.01**	**320**	*e*P	**P**	**12 41 34.4**	**+0.1**
NJ2				AP	pP	12 41 44.3	-0.1
NJ2				XP	sP	12 41 48.4	-0.1
NJ2				S	**S**	**12 48 56.0**	**+2.1**
NJ2				XS		12 49 12.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,110nm,6.4s						
NJ2				LR	LR		
	comp=N,230nm,16.4s,MS4.5						
NJ2				LR	LR		
	comp=E,330nm,17.4s,MS4.5						
NJ2				LR	LR		
	comp=Z,260nm,18.2s,MS4.3						
PPT	**Papeete**	**54.67**	**107**	LR	LR	13 00 32.3	
	comp=Z,369nm,18.6s,MS4.5,baz=136,slow=31						
KKTK	**Khon Kaen**	**56.86**	**294**	⇓P	**P**	**12 42 10.0**	**0.0**
	comp=Z,247nm,0.9s,mb6.2						
GYA	**Guiyang**	**57.64**	**307**	⇑*i*P	**P**	**12 42 16.4**	**+1.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
NST	**Nakhon Sawan**	**59.10**	**293**	P	**P**	**12 42 26.1**	**+0.4**
XAN	**Xi'an**	**59.83**	**316**	P	**P**	**12 42 29.5**	**-1.0**
CMAR	**Chiang Mai Arr**	**61.06**	**295**	P	**P**	**12 42 39.1**	**+0.1**
CMAR				*PP	pP	12 42 48.9	-0.4
CMAR				pmax	pmax		
	comp=Z,24nm,0.7s						
CMAR				pmax	pmax		
	comp=Z,16nm,0.8s						
CMAR	**Chiang Mai Arr**	**61.06**	**295**	P	**P**	**12 42 39.1**	**+0.1**
	comp=Z,24nm,0.7s,mb5.4,baz=119,slow=6.5,SNR=71						
CMAR				pP	pP	12 42 48.9	-0.4
	comp=Z,16nm,0.8s,baz=125,slow=5.9,SNR=14						
CHG	**Chiang Mai**	**61.17**	**296**	⇓P	**P**	**12 42 40.3**	**+0.5**
	comp=Z,21nm,0.8s,mb5.3						
LZH	**Lanzhou**	**64.44**	**315**	*e*P	**P**	**12 43 00.0**	**-1.3**
LZH				AP	pP	12 43 09.6	-2.1
LZH				XP	sP	12 43 13.7	-1.8
LZH				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.7						
MA2	**Magadan**	**66.24**	**357**	*e*P	**P**	**12 43 12.0**	**-0.4**
MA2				*e*	pP	12 43 22.1	-0.8
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
MA2				pmax	pmax		
	comp=E,2.0nm,0.8s						
MA2				pmax	pmax		
	comp=N,10.0nm,1.2s						
GTA	**Gaotai**	**68.86**	**317**	P	**P**	**12 43 29.8**	**+0.6**
GTA				AP	pP	12 43 40.1	+0.4
GTA				XP	sP	12 43 44.2	+0.8
GTA				AMB	AMB		
	comp=Z,90nm,11.3s						
GTA				LR	LR		
	comp=N,120nm,20.2s,MS4.2						
GTA				LR	LR		
	comp=E,120nm,22.8s,MS4.2						
GTA				LR	LR		
	comp=Z,250nm,24.3s,MS4.4						
ULN	**Ulaanbaatar**	**69.04**	**327**	*i* P	**P**	**12 43 30.8**	**+0.7**
ULN	**Ulaanbaatar**	**69.04**	**327**	*e*P	**P**	**12 43 30.7**	**+0.6**
	comp=Z,3.9nm,0.8s,mb4.4						
SONM	**Songino Array**	**69.37**	**327**	P	**P**	**12 43 32.0**	**-0.1**
	comp=Z,4.1nm,0.8s,mb4.4,baz=140,slow=6.1,SNR=27						
SONM				pP	pP	12 43 42.2	-0.4
	comp=Z,5.5nm,0.8s,baz=151,slow=5.8,SNR=12						
SONM				LR	LR	13 13 53.6	
	comp=Z,111nm,21.6s,MS4.1,baz=221,slow=36						
SHL	**Shillong**	**69.53**	**300**	*i* P	**P**	**12 43 34.0**	**+0.5**
VNDA	**Vanda**	**70.78**	**179**	P	**P**	**12 43 39.5**	**-0.8**
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VNDA	**Vanda**	**70.78**	**179**	P	**P**	**12 43 39.5**	**-0.9**
	comp=Z,2.7nm,0.8s,mb4.3,baz=326,slow=7.1,SNR=14						
VNDA	**Vanda**	**70.78**	**179**	*e*P	**P**	**12 43 39.5**	**-0.8**
	comp=Z,1.8nm,0.8s,mb4.0						
YAK	**Yakutsk**	**71.43**	**348**	*i* P	**P**	**12 43 44.5**	**+0.1**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
ZAK	**Zakamensk**	**72.53**	**328**	⇑*e*P	**P**	**12 43 51.0**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TLY	**Talaya**	**73.08**	**329**	*i* P	**P**	**12 43 54.2**	**-0.2**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.2						
BILL	**Bilibino**	**75.04**	**4**	*e*P	**P**	**12 44 05.9**	**+0.5**
BILL				*e*S	S	12 53 37.7	-2.0
BILL				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.8						
BILL	**Bilibino**	**75.04**	**4**	*e*P	**P**	**12 44 05.9**	**+0.5**
	comp=Z,13nm,1.0s,mb4.8						
GUN	**Gumba**	**75.35**	**301**	*e*P	**P**	**12 44 09.1**	**+1.1**
	comp=Z,45nm,0.6s,mb5.6						
PKI	**Pulchoki**	**75.66**	**301**	*e*P	**P**	**12 44 10.2**	**+0.4**
	comp=Z,15nm,0.6s,mb5.1						
PKI	**Pulchoki**	**75.66**	**301**	*e*P	**P**	**12 44 10.2**	**+0.4**
PKI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
KKN	**Kakani**	**75.83**	**301**	*e*P	**P**	**12 44 11.4**	**+0.6**
	comp=Z,24nm,0.6s,mb5.3						
KKN	**Kakani**	**75.83**	**301**	*e*P	**P**	**12 44 11.4**	**+0.6**
KKN				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
DMN	**Daman**	**75.93**	**301**	*e*P	**P**	**12 44 11.9**	**+0.6**
	comp=Z,72nm,1.0s,mb5.6						
GKN	**Gorkha**	**76.44**	**301**	*e*P	**P**	**12 44 14.6**	**+0.4**
	comp=Z,80nm,1.1s,mb5.6						
KOLN	**Koldanda**	**77.26**	**300**	*e*P	**P**	**12 44 18.1**	**-0.8**
	comp=Z,27nm,0.9s,mb5.2						
SLKM	**Skilak Lake**	**79.38**	**24**	*e*P	**P**	**12 44 30.5**	**+0.7**
HYB	**Hyderabad**	**79.58**	**289**	*e*P	**P**	**12 44 31.0**	**-0.7**
HYB	**Hyderabad**	**79.58**	**289**	*i* P	**P**	**12 44 32.0**	**+0.3**
TIXI	**Tiksi**	**80.20**	**352**	*i* P	**P**	**12 44 33.7**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.8s,mb4.2						
SML	**Sawmill**	**80.87**	**24**	*e*P	**P**	**12 44 38.5**	**+0.8**
IMA	**Indian Mountai**	**81.47**	**19**	*e*P	**P**	**12 44 41.7**	**+0.9**
IMA				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.4						
IMA	**Indian Mountai**	**81.47**	**19**	*e*P	**P**	**12 44 41.7**	**+0.9**
	comp=Z,41nm,0.8s,mb5.4						
MCK	**McKinley**	**81.71**	**22**	*e*P	**P**	**12 44 41.8**	**-0.3**
MCK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
MCK	**McKinley**	**81.71**	**22**	*e*P	**P**	**12 44 41.8**	**-0.3**
	comp=Z,11nm,0.9s,mb4.8						
COLA	**College**	**82.74**	**21**	*e*P	**P**	**12 44 46.8**	**-0.5**
COLA				*e*	pP	12 44 57.1	-0.8
COLA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
COLA	**College**	**82.74**	**21**	*e*P	**P**	**12 44 46.8**	**-0.5**
	comp=Z,6.4nm,0.6s,mb4.8						
COLA				*e*	pP	12 44 57.1	-0.9
ILAR	**Eielson Array**	**83.03**	**21**	P	**P**	**12 44 48.2**	**-0.6**
ILAR				*PP	pP	12 44 59.4	0.0
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR	**Eielson Array**	**83.03**	**21**	P	**P**	**12 44 48.2**	**-0.6**
	comp=Z,3.7nm,0.8s,mb4.5,baz=263,slow=5.1,SNR=23						
ILAR				pP	pP	12 44 59.4	-0.1
	comp=Z,2.8nm,0.8s,baz=270,slow=4.3,SNR=5.6						
QSPA	**South Pole Qui**	**83.19**	**180**	⇑*i*P	**P**	**12 44 49.9**	**+0.5**
	comp=Z,15nm,0.7s,mb5.1						
MKAR	**Makanchi Array**	**83.51**	**319**	*i* P	**P**	**12 44 51.8**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**83.51**	**319**	P	**P**	**12 44 51.3**	**-0.4**
	comp=Z,3.3nm,0.8s,mb4.5,baz=100,slow=5.5,SNR=31						
KAD	**Karad**	**83.67**	**288**	*e*P	**P**	**12 44 52.2**	**-0.9**
KAD				*e*S	pP	12 45 02.3	-1.5
KAD				AML	AML	12 45 02.8	
	comp=N,1.9nm,0.3s						
KAD				AML	AML	12 45 03.2	
	comp=E,2.7nm,0.4s						
POO	**Poona**	**84.18**	**289**	*e*P	**P**	**12 44 53.0**	**-2.7**
ZAL	**Zalesovo**	**84.24**	**326**	P	**P**	**12 44 54.4**	**-0.8**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZAL	**Zalesovo**	**84.24**	**326**	P	**P**	**12 44 54.4**	**-0.8**
	comp=Z,1.5nm,0.4s,mb4.4,baz=327,slow=9.2,SNR=4.0						
MAW	**Mawson**	**84.75**	**203**	P	**P**	**12 44 57.7**	**+0.3**
MAW				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MAW	**Mawson**	**84.75**	**203**	P	**P**	**12 44 57.7**	**+0.2**
	comp=Z,7.1nm,0.6s,mb5.0,baz=106,slow=6.0,SNR=27						
INK	**Inuvik**	**89.38**	**21**	*e*P	**P**	**12 45 20.5**	**+0.7**
INK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
INK	**Inuvik**	**89.38**	**21**	*e*P	**P**	**12 45 20.5**	**+0.7**
	comp=Z,4.9nm,0.5s,mb5.1						
NVAR	**Mina Array Bea**	**91.27**	**52**	P	**P**	**12 45 31.1**	**+1.6**
	comp=Z,1.4nm,0.7s,mb4.4,baz=254,slow=5.3,SNR=7.6						
BVAR	**Borovoye Array**	**92.37**	**323**	P	**P**	**12 45 32.4**	**-1.7**
	comp=Z,0.5nm,0.5s,mb4.1,baz=104,slow=6.1,SNR=5.0						
SYO	**Syowa Base**	**92.66**	**199**	⇓P	**P**	**12 45 32.0**	**-3.1**
SYO	**Syowa Base**	**92.66**	**199**	⇑PcP	PcP	12 45 34.2	-1.7
YKA	**Yellowknife Ar**	**95.96**	**28**	P	**P**	**12 45 50.8**	**+0.6**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA				MLR	MLR		
	comp=Z,106nm,19.6s						
YKA	**Yellowknife Ar**	**95.96**	**28**	P	**P**	**12 45 50.8**	**+0.6**
	comp=Z,2.2nm,0.5s,mb4.8,baz=266,slow=4.6,SNR=28						
YKA				LR	LR	13 28 19.4	
	comp=Z,106nm,19.6s,MS4.3,baz=105,slow=35						
PDAR	**Pinedale Array**	**98.26**	**48**	P	**P**	**12 46 00.4**	**-0.7**
	comp=Z,1.0nm,0.8s,mb4.4,baz=270,slow=1.5,SNR=6.7						
PDAR				LR	LR	13 26 24.1	
	comp=Z,120nm,20.7s,MS4.4,baz=77,slow=33						
ARCES	**ARCESS Array B**	**109.50**	**343**	PKiKP		12 50 53.2	
	comp=Z,1.3nm,0.5s,baz=63,slow=2.7,SNR=12						
OBN	**Obninsk**	**111.79**	**327**	*i* PKIKP	PKPdf	12 50 52.7	-4.3
OBN				*e*		12 51 46.3	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	**FINESS Array B**	**113.91**	**336**	*i* PKIKP	PKPdf	12 51 01.5	+0.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**113.91**	**336**	PKiKP		12 51 01.4	
	comp=Z,0.6nm,0.5s,baz=45,slow=2.7,SNR=6.5						
PLCA	**Paso Flores**	**116.65**	**142**	PKIKP	PKPdf	12 51 08.4	+1.6
PLCA						12 51 18.1	
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PLCA	**Paso Flores**	**116.65**	**142**	PKP	PKPdf	12 51 08.3	+1.5
	comp=Z,2.2nm,0.5s,baz=2.2,slow=1.2,SNR=8.9						
PLCA				pPKP		12 51 18.1	
	comp=Z,1.4nm,0.6s,baz=136,slow=4.6,SNR=2.0						
AKASG	**Malin Array Be**	**117.60**	**325**	PKIKP	PKPdf	12 51 09.1	+0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**117.60**	**325**	PKP	PKPdf	12 51 09.1	+0.8
	comp=Z,0.6nm,0.5s,baz=67,slow=1.6,SNR=5.1						
NB2	**NORSAR Subarra**	**119.63**	**341**	PKPdf	PKPdf	12 51 11.9	-0.3
	comp=Z,0.8nm,0.7s,baz=45,slow=1.9						
NB2	**NORSAR Subarra**	**119.63**	**341**	⇓PKP	PKPdf	12 51 11.9	-0.3
NOA	**NORSAR Array B**	**119.63**	**341**	PKIKP	PKPdf	12 51 12.8	+0.6
NOA						12 51 22.5	
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**119.63**	**341**	PKP	PKPdf	12 51 12.8	+0.6
	comp=Z,1.6nm,0.7s,baz=46,slow=2.0,SNR=6.4						
NOA				pPKP		12 51 22.4	
	comp=Z,0.7nm,0.6s,baz=46,slow=1.9,SNR=2.5						
BOSA	**Boshof**	**120.47**	**231**	PKIKP	PKPdf	12 51 15.5	+0.9
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOSA	**Boshof**	**120.47**	**231**	PKP	PKPdf	12 51 15.5	+0.9
	comp=Z,3.2nm,0.9s,baz=39,slow=5.5,SNR=3.9						
MATP	**Matopo**	**121.24**	**241**	PKP	PKPdf	12 51 16.9	+0.7
	comp=Z,1.2nm,0.5s,baz=292,slow=0.7,SNR=8.4						
SCHQ	**Schefferville**	**121.40**	**27**	PKP	PKPdf	12 51 15.4	-0.2
	comp=Z,4.4nm,0.9s,baz=288,slow=3.2,SNR=3.6						
SUR	**Sutherland**	**121.83**	**225**	PKP	PKPdf	12 51 18.6	+1.5
	comp=Z,5.7nm,0.8s,baz=187,slow=4.1						
LBTB	**Lobatse**	**121.84**	**235**	PKIKP	PKPdf	12 51 18.4	+1.1
LBTB				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LBTB	**Lobatse**	**121.84**	**235**	PKP	PKPdf	12 51 18.4	+1.1
	comp=Z,2.4nm,0.9s,baz=341,slow=24,SNR=2.4						
BRG	**Berggiesshubel**	**125.65**	**331**	*e*PKIKP	PKPdf	12 51 26.2	+2.2
BRG				*e*		12 51 36.8	
BRG				pmax	pmax		
	comp=Z,15nm,1.7s						
BRG				MLR	MLR		
	comp=N,450nm,34.7s,MS5.0						
BRG				MLR	MLR		
	comp=E,330nm,34.7s,MS5.0						
BRG				MLR	MLR		
	comp=Z,400nm,30.7s,MS4.9						
CLL	**Collm**	**125.81**	**332**	*i* PKIKP	PKPdf	12 51 25.9	+1.6

CLL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CLL	Collm	125.81	332	*i* PKIKP	PKPdf	12 51 25.9	+1.6
	comp=Z,logA/T=0.8						
KHC	Kasperske Hory	126.96	329	*e*PKPDF	PKPdf	12 51 26.0	-0.6
GERES	GERESS Array B	127.08	329	PKIKP	PKPdf	12 51 28.0	+1.1
GERES						12 51 38.2	
GERES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	127.08	329	PKP	PKPdf	12 51 28.0	+1.1
	comp=Z,2.1nm,0.7s,baz=63,slow=3.0,SNR=11						
GERES				pPKP		12 51 38.2	
	comp=Z,1.0nm,0.7s,baz=117,slow=3.0,SNR=3.4						
LVC	Limon Verde	127.72	125	PKP	PKPdf	12 51 30.8	+2.0
	comp=Z,2.7nm,0.8s,baz=294,slow=1.5,SNR=2.3						
GRA1	Grafenberg Arr	127.74	331	*e*PKP	PKPdf	12 51 30.1	+2.0
GRF	Grafenberg Arr	127.74	331	*e*PKIKP	PKPdf	12 51 30.1	+2.0
DAVOX	Davos	130.38	329	PKP	PKPdf	12 51 35.2	+2.0
	comp=Z,1.0nm,0.3s,baz=353,slow=16,SNR=2.5						
LPAZ	La Paz	131.21	118	PKIKP	PKPdf	12 51 37.3	+1.8
LPAZ						12 51 48.6	
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LPAZ	La Paz	131.21	118	PKP	PKPdf	12 51 37.3	+1.8
	comp=Z,1.2nm,0.5s,baz=232,slow=2.2,SNR=13						
LPAZ				pPKP		12 51 48.6	
	comp=Z,1.2nm,0.7s,baz=247,slow=3.7,SNR=3.6						
CPUP	Villa Florida	134.27	137	PKIKP	PKPdf	12 51 42.5	+1.4
CPUP				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CPUP	Villa Florida	134.27	137	PKP	PKPdf	12 51 42.5	+1.3
	comp=Z,3.2nm,0.7s,baz=298,slow=2.1,SNR=13						
CPUP	Villa Florida	134.27	137	PKP	PKPdf	12 51 42.5	+1.3
SDV	Santo Domingo	134.37	84	PFAKE		12 51 50.0	+8.4
SDV				LR	LR		
	comp=Z,210nm,19.0s,MS4.9						
ESDC	Sonseca Array	142.36	334	PKhKP		12 51 53.5	
	comp=Z,0.6nm,0.7s,baz=26,slow=2.0,SNR=3.8						
BDFB	Brasilia	147.84	134	PKIKP	PKPdf	12 52 07.3	+2.0
BDFB						12 52 19.6	
BDFB				pmax	pmax		
	comp=Z,21nm,0.6s						
BDFB				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BDFB	Brasilia	147.84	134	PKPbc	PKPdf	12 52 07.3	+2.0
	comp=Z,21nm,0.6s,baz=258,slow=1.6,SNR=34						
BDFB				pPKPbc		12 52 19.6	
	comp=Z,9.6nm,0.7s,baz=198,slow=11,SNR=4.6						
BAO	Brasilia Array	147.86	134	PKPdf	PKPdf	12 52 06.0	+0.6
DBIC	Dimbokro	160.39	271	PKP2	PKPab	12 53 05.2	-0.8
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DBIC	Dimbokro	160.39	271	PKPab	PKPab	12 53 05.2	-0.8
	comp=Z,5.9nm,0.9s,baz=64,slow=10,SNR=4.7						

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*NEIC **05** 13:06:48.0±1.2, 18.84S×169.23E, h247^{km}±10^{km}, mb4.3/2, Error ellipse: s-maj=14.0km s-min=11.8km az=57.0*

*IDC **05** 13:06:47.2±2.2, 18.82S×169.28E, h240^{km}±19^{km}, mb3.5/8, mb1 3.8/10, mb1mx3.6/16, mbtmp4.2/10, Error ellipse: s-maj=20.4km s-min=16.9km az=32.0*

ISC 05 13:06:48.2±1.3, 18.88S±0.09×169.1E±0.1, h262^{km}±11^{km}, n25, σ0^{s}76/27, mb3.9/10, 2C-2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	4.06	218	*e*P	P	13 07 52.7	-1.0
DZM				*e*S	S	13 08 45.6	+0.8
DZM	Mont Dzumac	4.06	218	P	P	13 07 53.5	-0.2
	8.5nm,0.3s,baz=61,slow=18,SNR=49						
DZM				S	S	13 08 44.4	-0.3
	8.0nm,0.3s,baz=336,slow=22,SNR=5.0						
NOUC	Port Laguerre	4.16	219	*e*P	P	13 07 54.9	-0.1
HNR	Honiara	12.95	315	P	P	13 09 45.0	+0.7
	2.6nm,0.3s,baz=114,slow=0.6,SNR=6.8						
HNR	Honiara	12.95	315	*e*P	P	13 09 44.8	+0.5
URZ	Urewera	20.52	162	P	P	13 11 07.7	+0.3
	1.8nm,0.3s,baz=190,slow=17,SNR=4.0						
STKA	Stephens Creek	27.96	237	*e*P	P	13 12 18.0	+1.1
STKA	Stephens Creek	27.96	237	P	P	13 12 17.7	+0.8
	7.7nm,0.6s,mb4.3,baz=61,slow=8.1,SNR=40						
WB2	Warramunga Arr	32.80	262	⇓*i*P	P	13 12 58.7	-0.5
WRAB	Tennant Creek	32.80	262	*e*P	P	13 12 58.5	-0.8
	2.2nm,0.4s,mb4.0						
WRA	Warramunga Arr	32.81	262	P	P	13 12 59.0	-0.4
	1.5nm,0.3s,mb4.0,baz=82,slow=6.5,SNR=180						
ASAR	Alice Springs	33.13	255	P	P	13 13 02.4	+0.3
	26nm,0.4s,mb5.1,baz=81,slow=8.8,SNR=1635						
ASPA	Alice Springs	33.13	255	⇓*i*P	P	13 13 02.4	+0.4
KLBR	Kellerberrin	47.78	244	*e*P	P	13 15 01.1	-0.2
VNDA	Vanda	58.78	182	P	P	13 16 20.0	-0.7
	0.4nm,0.5s,mb3.1,baz=3.4,slow=7.4,SNR=8.7						
VNDA	Vanda	58.78	182	*e*P	P	13 16 19.8	-0.9
SBA	Scott Base	59.02	181	*e*P	P	13 16 22.6	+0.4
	12nm,1.3s,mb4.2						
SONM	Songino Array	86.88	323	P	P	13 19 05.3	+0.8
	0.3nm,0.5s,mb3.4,baz=143,slow=6.2,SNR=3.7						
NVAR	Mina Array Bea	88.63	49	P	P	13 19 12.7	-0.3
	1.0nm,0.7s,mb3.8,baz=222,slow=5.9,SNR=5.1						
SNAA	Sanae	89.51	183	⇑*i*	P	13 19 15.5	-0.8
ILAR	Eielson Array	89.92	17	P	P	13 19 16.4	-2.0
	0.2nm,0.4s,mb3.3,baz=245,slow=4.7,SNR=6.2						
VNA3	Neumayer Olymp	90.11	180	⇑*i*	P	13 19 19.6	+0.5
VNA2	Neumayer--Watz	90.40	181		P	13 19 21.7	+1.2
VNA2	Neumayer--Watz	90.40	181		P	13 19 40.4	+20
TXAR	Lajitas Array	96.68	61	P	P	13 19 51.4	+1.2
	0.2nm,0.7s,mb3.5,baz=225,slow=7.1,SNR=3.8						

IDC 05 13:18:59.1±3.8, 0.26N×98.51E, mb3.5/4, mb1 3.7/4, mb1mx3.5/17, mbtmp3.5/4, Error ellipse: s-maj=155.7km s-min=23.4km az=59.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	40.42	122	P	P	13 26 39.1	-2.0
	0.4nm,0.5s,baz=303,slow=9.0,SNR=9.2						
ASAR	Alice Springs	41.78	127	P	P	13 26 50.9	-1.4
	0.4nm,0.4s,baz=296,slow=7.7,SNR=13						
SONM	Songino Array	47.88	7	P	P	13 27 39.9	-1.0
	0.4nm,0.5s,baz=186,slow=10,SNR=5.2						
MKAR	Makanchi Array	48.48	345	P	P	13 27 42.9	-2.7
	0.7nm,0.6s,baz=158,slow=7.0,SNR=8.5						

IDC 05 13:32:28.1±2.5, 21.03S×179.51W, mb3.7/4, mb1 4.1/4, mb1mx3.8/15, mbtmp3.7/4, Error ellipse: s-maj=146.7km s-min=30.3km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.02	257	P	P	13 40 29.7	-1.6
	0.8nm,0.6s,baz=91,slow=7.6,SNR=12						
WRA	Warramunga Arr	43.13	263	P	P	13 40 30.4	-1.9
	0.5nm,0.3s,baz=97,slow=7.6,SNR=5.9						
TXAR	Lajitas Array	88.53	58	P	P	13 45 22.5	-1.8
	0.2nm,0.9s,baz=225,slow=8.9,SNR=3.5						
ILAR	Eielson Array	89.15	13	P	P	13 45 25.7	-0.7
	0.2nm,0.4s,baz=215,slow=5.6,SNR=5.2						

ISC 05 13:47:27.3±1.8, 43.07N±0.10×27.9E±0.2, h10^{km}, n11, σ1^{s}04/11, 1C-3D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRD	Provadia	0.35	292	*i* P	Pg	13 47 36.0	+1.5
PSN	Preselentsi	0.66	22	*e*P	Pb	13 47 39.5	-0.9
JMB	Yambol	1.11	238	*i* P	Pb	13 47 48.5	+0.4
SZH	Strazhica	1.41	279	*e*P	Pn	13 47 53.2	+0.1
HARR	Harsova	1.62	2	⇓*i*P	Pb	13 47 57.6	+0.7
CFR	Carcaliu	2.12	6	⇓*i*P	Pb	13 48 06.6	+1.2
RZN	Rozhen	2.70	240	*e*P	Pb	13 48 16.0	+0.7
PGB	Panagyurishte	2.76	260	*e*P	Pn	13 48 11.8	-0.6
MLR	Muntele Rosu	2.78	331	⇓*i*P	Pg	13 48 21.4	-1.4
VRI	Vrincioaia	2.91	344	⇑*i*P	Pg	13 48 25.3	-0.1
VTS	Vitosha	3.44	264	*e*P	Pn	13 48 20.0	-2.1

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*NEIC **05** 14:05:28.4±0.6, 22.07N×121.69E, h10^{km}, mb3.7/1, Error ellipse: s-maj=15.2km s-min=10.2km az=90.0*

*TAP **05** 14:05:29.8, 22.24N×121.43E, h3^{km}, ML4.0*

*JMA **05** 14:05:31.8±0.3, 22.27N×121.94E, M3.8*

*IDC **05** 14:05:35.5±4.1, 22.18N×121.94E, h74^{km}±43^{km}, mb3.3/7, mb1 3.6/8, mb1mx3.4/22, mbtmp3.7/8, MS3.5/3, Ms1 3.5/3, ms1mx3.0/18, Error ellipse: s-maj=25.3km s-min=16.9km az=66.0*

ISC 05 14:05:26.5±0.6, 22.12N±0.05×121.71E±0.05, h3^{km}, n24, σ1^{s}46/32, mb3.6/7, MS3.4/3, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	Ninganchiao	2.05	357	*e*Pn	Pn	14 06 01.9	-0.3
NACB				*e*S	Sn	14 06 26.3	-2.3
YHNB	Yeheng	2.56	353	*e*Pn	Pn	14 06 10.4	+0.9
YHNB				*e*S	Sn	14 06 39.8	-1.8
YOJ	Yonaguni jima	2.62	27	P	Pn	14 06 13.3	+2.9
YOJ				*e*S	Sn	14 06 43.8	+0.6
HATJ	Hateruma jima	2.73	45	*e*S	Sn	14 06 46.0	+0.1
TATO	Taipei	2.85	356	*e*P	Pn	14 06 15.2	+1.5
IRIF	Iriomote-Funau	2.89	40	P	Pn	14 06 16.8	+2.6
IRIF				*e*S	Sn	14 06 49.9	0.0
JKRS	Kuro-shima	2.99	45	P	Pn	14 06 18.2	+2.5
JKRS				*e*S	Sn	14 06 51.9	-0.6
JIJ	Ishigaki jima	3.17	45	P	Pn	14 06 20.3	+2.2
JIJ				*e*S	Sn	14 06 55.5	-1.4
JTJ	Tarama	3.73	47	P	Pn	14 06 29.0	+2.9
JTJ				*e*S	Sn	14 07 10.4	-0.7
JMJ	Miyako jima 2	4.25	50	*e*S	Sn	14 07 23.7	-0.7
JOGS	Gusukube	4.30	52	*e*S	Sn	14 07 25.0	-0.6
JKE	Kume jima 2	6.25	47	P	Pn	14 07 03.9	+2.1
JKE				*e*S	Sn	14 08 10.8	-3.8
JOW	Kunigami	7.61	51	P	Pn	14 07 21.4	+0.5
	baz=144,slow=19						
JOW				S	Sn	14 08 42.4	-6.1
	0.5nm,0.3s,baz=148,slow=27,SNR=2.6						
JOW	Kunigami	7.61	51	P	Pn	14 07 21.5	+0.6
MJAR	Matsushiro Arr	20.29	41	P	P	14 10 05.4	-0.7
	3.3nm,1.0s,baz=230,slow=11,SNR=9.2						
CM31	Chiang Mai Arr	21.65	264	P	P	14 10 21.0	+0.8
	1.2nm,0.4s,mb3.7						
CMAR	Chiang Mai Arr	21.65	264	P	P	14 10 22.8	+2.6
	1.2nm,0.9s,mb3.3,baz=58,slow=9.7,SNR=5.3						
CMAR				LR	LR	14 19 05.1	
	comp=Z,60nm,20.2s,MS3.0,baz=90,slow=37						
SONM	Songino Array	28.45	338	P	P	14 11 22.9	-1.6
	0.6nm,0.6s,mb3.4,baz=154,slow=10.0,SNR=9.2						
SONM				LR	LR	14 24 05.5	
	comp=Z,82nm,18.4s,MS3.4,baz=115,slow=39						
MKAR	Makanchi Array	40.16	317	P	P	14 13 05.2	-0.2
	0.6nm,0.6s,mb3.5,baz=105,slow=9.4,SNR=11						
WRAB	Tennant Creek	43.58	163	*e*P	P	14 13 32.1	-1.6
WRA	Warramunga Arr	43.59	163	P	P	14 13 31.7	-2.0
	0.4nm,0.4s,mb3.5,baz=347,slow=9.0,SNR=16						
ASAR	Alice Springs	47.03	165	P	P	14 13 60.0	-1.2
	0.3nm,0.3s,mb3.6,baz=344,slow=7.0,SNR=19						
CTA	Charters Tower	48.32	148	LR	LR	14 33 35.1	
	comp=Z,82nm,18.8s,MS3.7,baz=228,slow=35						
GERES	GERESS Array B	84.74	321	P	P	14 18 02.2	-0.9
	1.2nm,0.8s,mb4.1,baz=45,slow=5.7,SNR=7.7						

ISC 05 14:17:24.8±1.9, 38.61N±0.09×35.31E±0.10, h10^{km}, n7, σ0^{s}98/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AVNT	Avonos	0.39	295	*i* P	Pg	14 17 31.9	-0.9
AVNT				*i* S	Sg	14 17 37.4	-0.8
YOZ	Yozgat	1.03	1	*e*PG	Pg	14 17 45.2	-0.2
YOZ				*e*SG	Sg	14 17 57.9	-1.2
CDAG	Cicekdag	1.25	324	*i* P	Pb	14 17 46.8	-1.2
CDAG				*i* S	Sb	14 18 05.0	+1.1
KAMT	Kaman	1.45	302	PN	Pn	14 17 51.6	+0.3
CORM	Corum	1.65	342	*e*PN	Pn	14 17 53.5	-0.5
CTKT	Corum	2.05	349	*i* P	Pn	14 18 01.4	+1.7
CTKT				*i* S	Sn	14 18 31.4	+5.9
ELDT	Eldivan	2.37	323	*i* P	Pn	14 18 04.7	+0.3
ELDT				*i* S	Sn	14 18 35.2	+1.4

IDC 05 14:23:12.1±6.2, 16.35S×175.75E, mb3.8/3, mb1 4.0/4, mb1mx3.7/16, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=154.3km s-min=66.2km az=127.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.47	236	Pn	P	14 25 42.1	-4.5
	1.2nm,0.3s,baz=58,slow=20,SNR=9.9						
DZM				Sn	S	14 27 45.0	-0.9
	1.9nm,0.3s,baz=47,slow=21,SNR=13						
STKA	Stephens Creek	34.62	237	P	P	14 30 02.8	-2.4
	1.7nm,0.9s,baz=90,slow=7.1,SNR=4.1						
WRA	Warramunga Arr	39.45	258	P	P	14 30 44.7	-1.3
	0.1nm,0.3s,baz=82,slow=6.0,SNR=14						
ASAR	Alice Springs	39.88	253	P	P	14 30 47.9	-1.6
	1.1nm,0.5s,baz=81,slow=9.0,SNR=69						

IDC 05 14:33:25.2±4.0, 1.39N×97.49E, mb3.3/4, mb1 3.4/4, mb1mx3.3/19, mbtmp3.3/4, Error ellipse: s-maj=161.1km s-min=25.0km az=59.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	41.89	122	P	P	14 41 17.6	-1.6
	0.1nm,0.4s,baz=302,slow=9.1,SNR=6.0						
ASAR	Alice Springs	43.28	127	P	P	14 41 28.8	-1.8
	0.1nm,0.6s,baz=299,slow=8.0,SNR=4.6						
SONM	Songino Array	46.90	8	P	P	14 41 57.8	-1.4
	0.3nm,0.6s,baz=194,slow=10,SNR=4.0						
MKAR	Makanchi Array	47.13	346	P	P	14 41 58.8	-2.2
	0.4nm,0.5s,baz=159,slow=8.6,SNR=8.2						

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*NAO **05** 14:38:47.0±3.5, 77.90N×8.12E, ML2.1*

*BER **05** 14:38:48.6±6.0, 77.76N×8.54E, ML2.1(NAO)*

ISC 05 14:38:46.3±2.5, 77.6N±0.1×8.4E±0.8, h10^{km}, n4, σ1^{s}61/5, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.50	27	Pn	Pn	14 39 12.2	-1.3
KBS				Lg		14 39 28.4	
HSP	Hornsund	1.71	108	*e*P	Pn	14 39 17.3	+1.0
HSP				*e*S	Sn	14 39 37.4	-1.0
SPA0	Spitsbergen Ar	1.78	68	Pn	Pn	14 39 19.1	+1.7
	baz=238,slow=14						
SPA0				Lg		14 39 41.7	
	baz=247,slow=18						
ARA0	ARCESS Array S	9.40	141	Pn	P	14 41 04.4	-0.4
	baz=321,slow=11						

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*NEIC **05** 14:41:23.7, 16.22N×93.71W, h116^{km}, MD3.9(MEX), After MEX.*

MEX 05 14:41:23.7±0.5, 16.22N×93.71W, h116^{km}±26^{km}, MD3.9, 2C, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCX	San Cristobal	1.15	63	*i* P	P	14 41 46.0	-1.3
SCX				*i* S	S	14 42 03.0	-2.0
CMIG	Matias Romero	1.42	308	⇑*i*P	P	14 41 48.8	-1.6
CMIG				*i* S	S	14 42 08.2	-2.3
CCIG	Comitan	1.51	87	⇑*i*P	P	14 41 50.1	-1.3
CCIG				*i* S	S	14 42 10.1	-2.3
OXX	Oaxaca	3.01	287	*e*P	P	14 42 11.0	0.0
OXX				*i* S	S	14 42 45.0	-1.8
VHO	Vista Hermosa	3.02	287	*e*P	P	14 42 08.3	-2.7
VHO				*i* S	S	14 42 43.7	-3.3

WEL 05 14:49:26.6±0.7, 36.18S×179.73W, h33^{km}, ML3.5/5, Error ellipse: s-maj=7.6km s-min=3.8km az=90.0, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.10	228	PN	Pn	14 49 58.8	-1.4
MXZ				SN	Sn	14 50 22.9	-2.5
MWZ	Matawai	3.07	225	PN	Pn	14 50 12.1	-1.9
MWZ				SN	Sn	14 50 46.1	-3.9
URZ	Urewera	3.27	230	PN	Pn	14 50 15.1	-1.8
URZ				SN	Sn	14 50 51.4	-3.7
KUZ	Kuaotunu	3.71	260	PN	Pn	14 50 20.8	-2.4
BKZ	Black Stump Fm	4.23	224	*e*PN	Pn	14 50 27.2	-3.3
BKZ				*e*SN	Sn	14 51 13.5	-5.9

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*NEIC **05** 15:24:41.5, 19.14N×68.48W, h18^{km}, MD3.6(RSPR), After RSPR.*

RSPR 05 15:24:41.5, 19.14N×68.48W, h18^{km}±6^{km}, MD3.6/15, MD3.6/15, 14C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	1.46	117	⇑*e*P	Pn	15 25 02.5	-4.7
AGPR				*e*S	Sn	15 25 21.3	-4.7
LSP	Las Mesas	1.63	126	⇑*e*P	Pn	15 25 06.0	-3.7
LSP				*e*S	Sn	15 25 26.6	-3.8
CRPR	Cabo Rojo, PR	1.72	131	⇑*e*P	Pn	15 25 07.3	-3.6
CRPR				*e*S	Sn	15 25 28.1	-4.5
MGP	Maguayo	1.74	130	⇑*e*P	Pn	15 25 07.0	-4.1
MGP				*e*S	Sn	15 25 29.7	-3.3
LRS	Lares	1.77	118	⇑*e*P	Pn	15 25 09.4	-2.1
LRS				*e*S	Sn	15 25 29.2	-4.5
AOPR	Arecibo Observ	1.82	115	⇑*e*P	Pn	15 25 09.7	-2.7
AOPR				*e*S	Sn	15 25 30.4	-4.7
PORP	Portuguez	2.06	121	⇑*e*P	Pn	15 25 12.9	-2.8
PORP				*e*S	Sn	15 25 37.6	-3.5
ICM	Isla Caja Muer	2.24	123	⇑*e*P	Pn	15 25 14.5	-3.8
ICM				*e*S	Sn	15 25 42.1	-3.6
SJG	San Juan	2.44	114	⇑*e*P	Pn	15 25 18.9	-2.3
SJG				*e*S	Sn	15 25 46.2	-4.6
SJG	San Juan	2.44	114	⇑*e*P	Pn	15 25 18.7	-2.4
SJG				*e*S	Sn	15 25 46.0	-4.8
CPD	Cerro la Pandu	2.67	114	⇑*e*P	Pn	15 25 20.9	-3.6
HUMP	Col San Antoni	2.69	111	⇑*e*P	Pn	15 25 22.3	-2.4
HUMP				*e*S	Sn	15 25 53.3	-3.8
MTP	Monte Pirata	2.96	110	⇑*e*P	Pn	15 25 25.7	-3.0
MTP				*e*S	Sn	15 25 59.6	-4.5
STVI	Saint Thomas	3.43	103	⇑*e*P	Pn	15 25 32.7	-2.5
STVI				*e*S	Sn	15 26 10.9	-4.9

WEL 05 15:47:55.1±0.2, 36.25S×179.69W, h33^{km}, ML3.5/6, Error ellipse: s-maj=4.8km s-min=4.0km az=90.0, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.08	230	PN	Pn	15 48 26.5	-1.9
MXZ				SN	Sn	15 48 50.4	-2.9
MXZ				SN	Sn	15 48 50.7	-2.7
PUZ	Puketiti	2.45	221	PN	Pn	15 48 32.2	-1.5
PUZ				SN	Sn	15 48 59.8	-3.1
PUZ				*e*SN	Sn	15 49 00.6	-2.3
MWZ	Matawai	3.05	226	*e*PN	Pn	15 48 39.8	-2.4
MWZ				SN	Sn	15 49 13.8	-4.1
MWZ				SN	Sn	15 49 14.1	-3.8
URZ	Urewera	3.25	231	PN	Pn	15 48 42.9	-2.1
URZ				SN	Sn	15 49 19.3	-3.8
URZ				SN	Sn	15 49 19.6	-3.5
BKZ	Black Stump Fm	4.20	225	*e*PN	Pn	15 48 52.7	-6.0
MRZ	Mangatainoka R	5.76	219	*e*PN	Pn	15 49 13.3	-7.3

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*NEIC **05** 16:03:24.7, 39.59N×23.79E, h31^{km}, MD3.3(ATH), After ATH.*

*ATH **05** 16:03:25.0, 39.61N×23.82E, h29^{km}±3^{km}, MD3.2/4*

*CSEM **05** 16:03:25.2±0.1, 39.60N×23.85E, h15^{km}, ML2.4, Error ellipse: s-maj=1.7km s-min=1.2km az=152.0*

*THE **05** 16:03:25.1, 39.59N×23.79E, h1^{km}, ML2.4*

ISC 05 16:03:25.1±1.3, 39.60N±0.07×23.85E±0.08, h24^{km}±11^{km}, n8, σ1^{s}13/12, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAIG	Paliouri	0.35	339	*e*Pg	Pb	16 03 32.0	-0.8
NEO	Neokhori	0.56	239	*e*Pn	Pn	16 03 36.5	-1.0
NEO				*e*Sn	Sn	16 03 43.7	-2.4
OUR	Ouranopolis	0.74	8	*e*Pg	Pb	16 03 39.3	0.0
PLG	Polygyros	0.84	338	*e*PB	Pb	16 03 40.1	-0.7
PLG				*e*SN	Sn	16 03 52.3	-0.7
LIA	Limnos Island	1.07	73	*e*PN	Pn	16 03 45.7	+0.9
LIT	Litokhoron	1.16	296	*e*Pg	Pn	16 03 45.8	-0.3
LIT				*e*Sg	Sb	16 04 02.5	+1.5
AGG	Agios Georgios	1.31	245	*e*Pg	Pn	16 03 48.7	+0.5
AGG				*e*Sg	Sn	16 04 07.2	+2.2
NVR	Nevrokopi	1.75	0	*e*PN	Pn	16 03 55.3	+0.8

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*NIED **05** 16:07:00, 31.10N×130.40E, h165^{km}, Mw3.8 Best double couple: $M_0$5.51×10^{14} NP1:ϕ_s15°, δ72°, λ66°. NP2:ϕ_s251°, δ30°, λ142°.*

*IDC **05** 16:07:14.4±0.8, 31.11N×130.17E, h142^{km}±9^{km}, mb3.1/5, mb1 3.4/9, mb1mx3.2/25, mbtmp3.8/9, Error ellipse: s-maj=22.2km s-min=8.9km az=101.0*

*NEIC **05** 16:07:15.3±0.7, 31.11N×130.16E, h149^{km}±8^{km}, Error ellipse: s-maj=16.2km s-min=9.0km az=112.0*

*JMA **05** 16:07:16.1±0.1, 31.14N×130.39E, h148^{km}±1^{km}, M3.7*

ISC 05 16:07:14.3±0.4, 31.11N±0.05×130.31E±0.08, h154^{km}±3^{km}, n21, σ1^{s}01/29, mb3.2/5, 6C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSU	Suzuyama	0.42	17	⇑P	P	16 07 36.7	+0.5
JTSR	Tashiro 2	0.53	83	⇑P	P	16 07 36.9	+0.2
JTSR				S	S	16 07 52.6	-1.3
JKC	Kuchinoerabu	0.65	189	⇑P	P	16 07 38.2	+0.9
JTN	Tanegashima 3	0.73	128	⇑P	P	16 07 38.5	+0.7
JTN				S	S	16 07 55.5	-0.3
JSJ	Shimokoshiki	0.77	318	⇓P	P	16 07 38.9	+0.9
JSJ				S	S	16 07 56.2	0.0
JTZ	Takazaki	1.03	40	⇑P	P	16 07 40.6	+0.7
JTZ				S	S	16 07 58.5	-1.2
JNN	Nakanoshima	1.31	197	P	P	16 07 44.0	+1.4
JIU2	Izumi 2	1.50	17	⇑P	P	16 07 45.3	+0.8
JIU2				S	S	16 08 07.3	-0.5
JNU	Nakatsue	2.07	13	P	P	16 07 51.1	+0.3
JNU				S	S	16 08 17.9	-1.0
	6.6nm,0.3s,baz=29,slow=20,SNR=7.8						
JOW	Kunigami	4.62	203	P	P	16 08 23.4	-0.2
	2.8nm,0.3s,baz=95,slow=26,SNR=16						
JOW				S	S	16 09 14.2	-2.9
	4.1nm,0.3s,baz=63,slow=28,SNR=12						
JHJ	Hachijo jima 2	8.28	73	P	P	16 09 13.2	+0.8
	16nm,0.3s,baz=72,slow=19,SNR=9.8						
MAT	Matsushiro	8.52	48	P	P	16 09 16.6	+1.1
MAT				S	S	16 10 48.4	-1.8
MJAR	Matsushiro Arr	8.52	48	P	P	16 09 17.1	+1.6
	1.0nm,0.3s,baz=240,slow=14,SNR=19						
SONM	Songino Array	24.75	319	P	P	16 12 22.1	-0.6
	0.1nm,0.3s,mb2.8,baz=143,slow=7.1,SNR=4.1						
WRA	Warramunga Arr	50.90	175	P	P	16 16 00.7	-1.1
	0.1nm,0.3s,mb2.9,baz=353,slow=7.8,SNR=7.1						
ASAR	Alice Springs	54.57	176	P	P	16 16 28.1	-0.8
	0.3nm,0.8s,mb3.1,baz=0.1,slow=6.5,SNR=9.3						
FINES	FINESS Array B	69.55	330	P	P	16 18 06.3	-1.6
	1.0nm,0.5s,mb3.8,baz=55,slow=5.4,SNR=13						
FINES	FINESS Array B	69.55	330	P	P	16 18 06.3	-1.6
BRTR	Keskin Array B	75.50	308	P	P	16 18 43.8	+0.6
	1.2nm,0.8s,mb3.6,baz=117,slow=6.4,SNR=5.5						
CLL	Collm	81.19	326	P	P	16 19 14.0	+0.1
PV10	Paradox Valley	91.48	43	*e*P	P	16 20 05.9	+1.5

IDC 05 16:11:43.3±3.7, 24.48S×179.93E, h479^{km}±34^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.2/15, mbtmp4.3/5, 1D, Error ellipse: s-maj=81.6km s-min=29.7km az=162.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	31.42	271	P	P	16 17 25.4	-0.2
	8.1nm,0.4s,baz=98,slow=12,SNR=36						
STKA	Stephens Creek	34.45	249	*e*P	P	16 17 51.0	0.0
STKA	Stephens Creek	34.45	249	P	P	16 17 49.5	-1.5
	2.0nm,0.4s,baz=85,slow=8.6,SNR=20						
ASAR	Alice Springs	41.88	261	P	P	16 18 50.8	-1.3
	1.1nm,0.5s,baz=93,slow=7.0,SNR=54						

WB2	Warramunga Arr	42.30	267	⇓iP	P	16 18 53.5	-1.8
WRA	Warramunga Arr	42.31	267	P	P	16 18 53.7	-1.8
	3.4nm,0.5s,baz=100,slow=8.3,SNR=106						
WRA				ScP		16 23 41.6	
	0.8nm,0.9s,baz=102,slow=3.7,SNR=7.9						
TXAR	Lajitas Array	90.79	58	P	P	16 23 55.0	-0.7
	0.3nm,0.7s,baz=217,slow=6.3,SNR=4.1						
HFS	Hagfors	143.10	349	PKhKP		16 30 17.2	
	1.1nm,0.4s,baz=45,slow=2.1,SNR=15						

BJI ***05*** *16:21:17.1, 0.42N×97.08E, h30^{km}, mb4.5*

IDC ***05*** *16:21:21.3±1.6, 1.19N×97.21E, mb4.0/8, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, ML4.2/1, MS4.0/1, Ms1 4.0/1, ms1mx2.6/27, Error ellipse: s-maj=60.8km s-min=16.7km az=60.0*

NEIC ***05*** *16:21:25.8±0.7, 1.22N×97.22E, h30^{km}, mb4.2/1, Error ellipse: s-maj=17.7km s-min=9.0km az=64.0*

DJA ***05*** *16:21:40.4±0.4, 2.83N×99.01E, h33^{km}, MD4.6/1, Error ellipse: s-maj=17.4km s-min=11.0km az=65.0*

ISC 05 16:21:23.9±0.8**, 1.18N**±0.08×**97.14E**±0.09**, h33^{km}, n25, σ0^{s}79**/24**, mb4.0**/10**, MS4.0**/1**, 3C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEMI	Semponon	1.78	45	⇓ePn	Pn	16 21 53.7	+0.7
SEMI				⇑eSn	Sn	16 22 01.6	-13
MRPI	Mariponipon	2.22	79	⇑ePn	Pn	16 22 00.4	+1.2
SIBI	Sibayak Dolok	2.46	34	⇓ePn	Pn	16 21 50.8	-12
IPM	Ipoh	5.14	49	P	P	16 22 40.5	-0.1
KULM	Kulim	5.38	41	⇑eP	P	16 22 43.1	-0.8
KGM	Kluang	6.23	82	P	P	16 22 55.8	-0.1
CMAR	Chiang Mai Arr	17.26	6	P	P	16 25 23.3	-0.8
	0.3nm,0.3s,baz=193,slow=12,SNR=13						
KKM	Kota Kinabalu	19.63	75	eP	P	16 25 51.9	-0.8
KMI	Kunming	24.41	12	P	P	16 26 42.9	+2.2
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
SHL	Shillong	24.77	349	eP	P	16 26 45.0	+0.8
XAN	Xi'an	34.49	17	P	P	16 28 10.0	-1.1
XAN				AP	pP	16 28 17.9	-2.9
GTA	Gaotai	38.12	3	P	P	16 28 40.6	-1.1
GTA				XP	sP	16 28 55.1	-0.6
NWAO	Narrogin (SRO)	38.87	153	LR	LR	16 41 50.8	
	comp=Z,206nm,20.3s,MS4.0,baz=252,slow=32						
WRA	Warramunga Arr	42.08	122	P	P	16 29 14.3	-0.5
	comp=Z,1.9nm,0.7s,mb3.9,baz=301,slow=9.1,SNR=30						
WRAB	Tennant Creek	42.08	122	eP	P	16 29 14.7	-0.1
ASAR	Alice Springs	43.43	127	P	P	16 29 25.6	-0.2
	comp=Z,0.8nm,0.6s,mb3.6,baz=299,slow=7.9,SNR=15						
SONM	Songino Array	47.16	8	P	P	16 29 55.6	+0.6
	comp=Z,2.7nm,0.8s,mb4.2,baz=191,slow=8.6,SNR=22						
SONM				PcP	PcP	16 31 27.2	+0.4
	comp=Z,0.4nm,0.6s,baz=180,slow=2.9,SNR=3.4						
MKAR	Makanchi Array	47.24	346	P	P	16 29 56.5	+0.7
	comp=Z,1.1nm,0.5s,mb4.1,baz=157,slow=9.2,SNR=9.7						
ULN	Ulaanbaatar	47.28	9	eP	P	16 29 55.4	-0.7
	comp=Z,2.1nm,0.8s,mb4.1						
MJAR	Matsushiro Arr	51.74	42	P	P	16 30 30.4	0.0
	comp=Z,0.8nm,0.6s,mb3.9,baz=210,slow=5.6,SNR=6.3						
STKA	Stephens Creek	53.39	132	P	P	16 30 43.4	+0.6
	comp=Z,1.3nm,0.6s,mb4.1,baz=288,slow=6.8,SNR=6.7						
STKA	Stephens Creek	53.39	132	P	P	16 30 43.4	+0.6
ZAL	Zalesovo	53.56	351	P	P	16 30 44.0	+0.3
	comp=Z,1.8nm,0.4s,mb4.4,baz=292,slow=4.6,SNR=9.3						
BVAR	Borovoye Array	56.24	341	P	P	16 31 03.0	-0.3
	comp=Z,1.7nm,0.8s,mb4.1,baz=141,slow=9.5,SNR=9.8						
TXAR	Lajitas Array	143.71	32	PKP	PKPdf	16 40 56.3	0.0
	comp=Z,0.1nm,0.4s,baz=180,slow=1.8,SNR=2.8						

IDC 05 16:27:33.0±10.0**, 3.72S**×**155.52E, mb3.8**/3**, mb1 4.1**/4**, mb1mx3.6**/16**, mbtmp4.0**/4**, ML3.5**/1**, Error ellipse: s-maj=177.1km s-min=86.0km az=21.0, North of Solomon Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	10.04	235	Pn	P	16 29 59.6	-2.0
	2.2nm,0.3s,baz=48,slow=11,SNR=10						
WRA	Warramunga Arr	26.20	230	P	P	16 33 09.7	-1.7
	1.4nm,0.6s,baz=56,slow=10.0,SNR=23						
ASAR	Alice Springs	28.79	225	P	P	16 33 32.6	-2.3
	0.3nm,0.4s,baz=57,slow=9.4,SNR=6.9						
STKA	Stephens Creek	30.91	203	P	P	16 33 51.5	-2.3
	1.1nm,0.7s,baz=24,slow=10.0,SNR=3.3						

NEIC ***05*** *16:40:39.3, 17.46N×68.24W, h30^{km}, MD3.6(RSPR), After RSPR.*

RSPR 05 16:40:39.3, 17.46N×**68.24W, h30^{km}**±25^{km}**, MD3.6**/11**, MD3.6**/11**, 8C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	1.21	63	⇓eP	Pn	16 40 58.1	-2.2
CRPR				eS	Sn	16 41 13.0	-2.8
MGP	Maguayo	1.23	63	⇑iP	Pn	16 40 58.4	-2.2
LSP	Las Mesas	1.31	57	⇓eP	Pn	16 40 59.9	-2.0
LSP				eS	Sn	16 41 16.3	-2.1
AGPR	Aguadilla, PR	1.47	47	⇓eP	Pn	16 41 01.8	-2.3
AGPR				eS	Sn	16 41 20.2	-2.3
LRS	Lares	1.57	58	⇑eP	Pn	16 41 03.4	-2.1
LRS				eS	Sn	16 41 21.8	-3.1
PORP	Portuguez	1.64	68	⇓iP	Pn	16 41 04.9	-1.6
PORP				eS	Sn	16 41 24.6	-2.1
AOPR	Arecibo Observ	1.67	58	⇑eP	Pn	16 41 04.8	-2.2
AOPR				eS	Sn	16 41 25.7	-1.9
ICM	Isla Caja Muer	1.69	75	eS	Sn	16 41 26.4	-1.7
SJG	San Juan	2.09	72	⇑eP	Pn	16 41 11.1	-2.0
SJG				eS	Sn	16 41 35.9	-2.4
SJG	San Juan	2.09	72	⇑eP	Pn	16 41 10.8	-2.3
SJG	San Juan	2.09	72	⇑eP	Pn	16 41 10.8	-2.3
SJG				eS	Sn	16 41 35.1	-3.2
HUMP	Col San Antoni	2.38	73	⇓eP	Pn	16 41 14.0	-3.1
HUMP				eS	Sn	16 41 42.2	-3.2
CBYP	Canovanas	2.41	70	⇑eP	Pn	16 41 16.1	-1.5
CBYP				eS	Sn	16 41 43.0	-3.3
MTP	Monte Pirata	2.63	76	⇑eP	Pn	16 41 18.8	-2.0
MTP				eS	Sn	16 41 49.0	-3.0
STVI	Saint Thomas	3.24	74	⇑eP	Pn	16 41 28.0	-1.4
STVI				eS	Sn	16 42 03.9	-3.5

NEIC ***05*** *16:42:09.5±3.5, 4.78N×95.68E, h124^{km}±29^{km}, mb4.2/4, Error ellipse: s-maj=41.3km s-min=8.5km az=53.0*

IDC ***05*** *16:42:10.2±8.0, 4.85N×95.70E, h130^{km}±70^{km}, mb3.6/11, mb1 3.7/12, mb1mx3.6/22, mbtmp4.0/12, Error ellipse: s-maj=51.4km s-min=12.5km az=56.0*

ISC 05 16:42:11.5±4.6**, 4.8N**±0.2×**95.8E**±0.3**, h159^{km}**±39^{km}**, n24, σ0^{s}92**/23**, mb4.0**/15**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	4.88	85	eP	P	16 43 20.3	-4.0
CMAR	Chiang Mai Arr	13.88	13	P	P	16 45 23.4	+0.8
	0.3nm,0.3s,baz=202,slow=11,SNR=24						
KSM	Kuching	14.89	103	eP	P	16 45 37.1	+1.7
GUN	Gumba	24.80	339	eP	P	16 47 20.4	0.0
	6.0nm,0.3s,mb4.5						
DMN	Daman	24.82	337	eP	P	16 47 21.5	+0.9
KKN	Kakani	24.91	337	eP	P	16 47 22.3	+0.9
GKN	Gorkha	25.36	337	eP	P	16 47 25.6	0.0
	4.5nm,0.3s,mb4.5						
KOLN	Koldanda	25.58	334	eP	P	16 47 27.8	+0.1
	10nm,0.6s,mb4.7						
MKAR	Makanchi Array	43.39	347	P	P	16 49 58.9	-1.0
	0.9nm,0.5s,mb3.7,baz=169,slow=7.6,SNR=13						
SONM	Songino Array	43.80	10	P	P	16 50 02.9	-0.2
	0.9nm,0.5s,mb3.7,baz=190,slow=9.0,SNR=15						
SONM				PcP	PcP	16 51 48.1	+0.8
	0.8nm,0.5s,baz=198,slow=3.7,SNR=12						
WRA	Warramunga Arr	45.21	124	P	P	16 50 14.9	+0.3
	1.8nm,0.6s,mb3.9,baz=303,slow=9.5,SNR=40						
WRAB	Tennant Creek	45.21	124	eP	P	16 50 14.6	-0.1
	2.9nm,0.5s,mb4.2						
ASAR	Alice Springs	46.75	129	P	P	16 50 27.2	+0.5
	1.5nm,0.4s,mb4.0,baz=299,slow=7.8,SNR=32						
ZAL	Zalesovo	49.76	352	P	P	16 50 48.5	-1.1
	1.8nm,0.4s,mb4.1,baz=285,slow=2.3,SNR=4.7						
BVAR	Borovoye Array	52.37	341	P	P	16 51 08.0	-1.2
	1.1nm,0.6s,mb3.6,baz=141,slow=9.5,SNR=7.8						
STKA	Stephens Creek	56.86	133	P	P	16 51 41.2	-0.8
	5.0nm,1.2s,mb4.2,baz=336,slow=12,SNR=2.8						
BRTR	Keskin Array B	65.63	312	P	P	16 52 41.0	+0.1
	0.8nm,0.6s,mb3.7,baz=153,slow=7.9,SNR=4.5						
AKASG	Malin Array Be	71.53	322	P	P	16 53 16.3	-0.6
	0.3nm,0.4s,mb3.4,baz=82,slow=5.1,SNR=6.7						
AKASG	Malin Array Be	71.53	322	P	P	16 53 16.3	-0.6
FINES	FINESS Array B	76.13	332	P	P	16 53 43.4	+0.2
	0.5nm,0.4s,mb3.5,baz=110,slow=6.5,SNR=10.0						
FINES	FINESS Array B	76.13	332	P	P	16 53 43.4	+0.2
ARCES	ARCESS Array B	78.65	340	P	P	16 53 57.7	+0.8
	0.9nm,0.4s,mb3.7,baz=94,slow=5.7,SNR=11						
ARCES	ARCESS Array B	78.65	340	P	P	16 53 57.7	+0.8
TXAR	Lajitas Array	141.23	28	PKhKP		17 01 22.5	
	0.3nm,0.8s,baz=180,slow=1.8,SNR=3.4						

NEIC ***05*** *16:49:43.1±3.4, 30.43N×83.49E, h6^{km}±22^{km}, mb4.1/3, Error ellipse: s-maj=11.0km s-min=6.6km az=74.0*

NDI ***05*** *16:49:44.4±4.1, 30.34N×83.47E, h5^{km}±15^{km}, ML3.6, mb4.1(NEIC)*

MOS ***05*** *16:49:45.3±1.3, 30.41N×83.46E, h33^{km}, mb4.1/7, Error ellipse: s-maj=23.8km s-min=13.3km az=90.9*

BJI ***05*** *16:49:46.1, 30.48N×84.01E, h14^{km}, mB4.3, mb4.4, Ms3.8, Msz3.5*

IDC ***05*** *16:49:47.5±8.8, 30.47N×83.53E, h33^{km}±66^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.7/24, mbtmp3.9/10, ML3.6/2, MS3.4/4, Ms1 3.4/4, ms1mx3.1/24, Error ellipse: s-maj=37.4km s-min=17.4km az=56.0*

ISC 05 16:49:41.6±0.3**, 30.33N**±0.04×**83.55E**±0.03**, h10^{km}, n51, σ1^{s}25**/55**, mb3.8**/11**, MS3.5**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	Pithoragarh	3.00	256	ePG	Pg	16 50 40.5	-0.9
PTH				eSG	Sg	16 51 22.1	+0.7
LGTI	Lohaghat	3.00	254	i PG	Pg	16 50 44.1	+2.6
LGTI				eSG	Sg	16 51 27.5	+6.0
KLP	Kalpa	4.71	286	i Pg	Pg	16 51 12.0	-3.6
SMLA	Simla	5.55	280	i P	Pn	16 51 08.0	+1.7
SMLA				i S	Sn	16 52 07.1	-3.9
NDI	New Delhi	5.76	255	ex	Pn	16 51 13.0	+3.8
NDI				ex	Pg	16 51 33.5	-3.1
NDI				eSG	Sg	16 52 53.0	-0.3
AGRA	Agra	5.81	239	eP	Pn	16 51 08.5	-1.4
AGRA				ex	Sn	16 52 24.1	+6.7
AGRA				AML	AML	16 53 02.7	
	comp=N,102nm,0.3s						
AGRA				AML	AML	16 53 02.9	
	comp=E,74nm,0.3s						
AYAN	Aya Nagar	5.90	253	ex	Pn	16 51 16.2	+5.0
BHGR	Bahadurgarh	5.99	256	ePG	Pg	16 51 38.8	-2.4
SONA	Sohna	6.01	251	i x	Pn	16 51 16.9	+4.0
SONA				ex	Sn	16 52 28.6	+6.0
BHK	Bhakra	6.23	282	ex	Sn	16 52 31.6	+3.7
KUDL	Kundal	6.54	252	eP	Pn	16 51 21.1	+0.8
KHET	Khetri	7.13	254	ex	Pn	16 51 20.9	-7.7
AJM	Ajmer	8.73	246	eS	Sn	16 53 21.0	-9.4
SHL	Shillong	8.76	121	eP	P	16 51 52.0	+0.6
SHL				ex	Sn	16 53 30.0	-1.2
BHPL	Bhopal	8.93	219	ex	Sn	16 53 34.9	-0.5
BHPL				AML	AML	16 54 35.8	
	comp=E,20nm,0.6s						
BHPL				AML	AML	16 54 35.8	
	comp=N,28nm,0.6s						
CHCP	Chirah Chowk	9.34	293	P	P	16 52 02.2	+2.8
THW	Thamme Wali	10.37	287	P	P	16 52 13.0	-0.5
CEP	Cherat	10.47	292	P	P	16 52 14.8	-0.1
HYB	Hyderabad	13.64	201	eP	P	16 52 58.0	+0.3
HYB	Hyderabad	13.64	201	i P	P	16 52 58.0	+0.3
HYB				eS	S	16 55 29.0	-1.3
POO	Poona	14.69	219	ex	x	16 55 42.0	
GTA	Gaotai	16.11	51	eP	P	16 53 28.9	-0.9
GTA				AP		16 53 32.5	
GTA				XP		16 53 36.9	
GTA				AMB	AMB		
	comp=Z,80nm,9.5s						
GTA				LR	LR		
	comp=N,150nm,16.3s						
GTA				LR	LR		
	comp=E,110nm,16.4s						
GTA				LR	LR		
	comp=Z,140nm,16.4s						
MKAR	Makanchi Array	16.47	357	Pn	P	16 53 33.3	-0.9
	comp=Z,0.2nm,0.3s,baz=174,slow=11,SNR=16						
LZH	Lanzhou	17.92	66	eP	P	16 53 52.5	0.0
LZH				AP		16 54 00.5	
LZH				XP		16 54 04.6	
LZH				AMB	AMB		
	comp=Z,20nm,1.4s						
LZH				LR	LR		
	comp=N,250nm,13.4s						
LZH				LR	LR		
	comp=Z,340nm,17.2s						
CM31	Chiang Mai Arr	18.31	127	P	P	16 53 58.5	+0.9
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	18.31	127	P	P	16 53 59.8	+2.2
	comp=Z,0.1nm,0.3s,baz=312,slow=12,SNR=15						
CMAR				LR	LR	17 02 55.4	
	comp=Z,41nm,20.6s,baz=295,slow=43						
XAN	Xi'an	21.77	74	P	P	16 54 33.6	-1.8
ZAL	Zalesovo	23.61	2	P	P	16 54 53.3	0.0
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAL	Zalesovo	23.61	2	P	P	16 54 53.3	0.0
	comp=Z,2.2nm,0.9s,mb3.6,baz=292,slow=10,SNR=9.0						
BVAR	Borovoye Array	24.64	341	P	P	16 55 03.2	-0.1
	comp=Z,0.5nm,0.4s,mb3.4,baz=154,slow=9.0,SNR=4.8						
SONM	Songino Array	24.75	39	P	P	16 55 05.6	+1.2
	comp=Z,1.6nm,0.7s,mb3.7,baz=228,slow=11,SNR=18						
SONM				PcP	PcP	16 58 42.2	-0.2
	comp=Z,0.2nm,0.5s,baz=216,slow=3.2,SNR=6.0						
SONM				LR	LR	17 05 32.6	
	comp=Z,76nm,19.2s,MS3.2,baz=4.3,slow=38						
SONM	Songino Array	24.75	39	P	P	16 55 05.6	+1.2
SONM				PcP	PcP	16 58 42.2	-0.2
SONM				LR	LR	17 05 32.6	
ZAK	Zakamensk	24.90	31	eP	P	16 55 03.8	-2.1
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.3						
ULN	Ulaanbaatar	25.13	39	eP	P	16 55 08.4	+0.4
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
ULN	Ulaanbaatar	25.13	39	eP	P	16 55 08.4	+0.4
	comp=Z,2.3nm,0.7s,mb3.8						
MJAR	Matsushiro Arr	45.52	67	LR	LR	17 18 09.7	
	comp=Z,70nm,21.9s,MS3.6,baz=205,slow=37						
FINES	FINESS Array B	48.39	327	P	P	16 58 25.1	-0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	48.39	327	P	P	16 58 25.1	-0.2
	comp=Z,0.8nm,0.5s,mb4.0,baz=135,slow=8.1,SNR=13						
WRA	Warramunga Arr	69.89	129	P	P	17 00 56.0	+1.0
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	69.89	129	P	P	17 00 56.0	+1.0
	comp=Z,2.3nm,0.8s,mb4.2,baz=322,slow=6.4,SNR=21						
WRAB	Tennant Creek	69.89	129	eP	P	17 00 55.5	+0.5
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
WRAB	Tennant Creek	69.89	129	eP	P	17 00 55.5	+0.5
	comp=Z,8.5nm,1.0s,mb4.6						
ASAR	Alice Springs	72.23	132	P	P	17 01 10.0	+0.9
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	72.23	132	P	P	17 01 09.9	+0.9
	comp=Z,0.9nm,0.8s,mb3.8,baz=322,slow=5.9,SNR=19						
ILAR	Eielson Array	77.41	20	P	P	17 01 37.5	-0.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	77.41	20	P	P	17 01 37.5	-0.5
	comp=Z,0.5nm,0.6s,mb3.6,baz=294,slow=3.9,SNR=5.8						
BOSA	Boshof	80.78	229	LR	LR	17 35 21.8	
	comp=Z,39nm,19.2s,MS3.8,baz=221,slow=34						
DBIC	Dimbokro	85.30	275	P	P	17 02 21.3	+0.7
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DBIC	Dimbokro	85.30	275	P	P	17 02 21.3	+0.8
	comp=Z,2.7nm,0.9s,mb4.4,baz=25,slow=6.9,SNR=4.9						
TXAR	Lajitas Array	120.27	7	PKP	PKPdf	17 08 35.7	-0.7
	comp=Z,0.1nm,0.6s,baz=359,slow=2.4,SNR=3.4						
TXAR	Lajitas Array	120.27	7	PKP	PKPdf	17 08 35.7	-0.7

IDC ***05*** *16:59:24.4±1.5, 4.07S×137.04E, mb3.7/2, mb1 4.1/5, mb1mx3.7/14, mbtmp4.0/5, ML3.5/3, Error ellipse: s-maj=51.4km s-min=28.3km az=71.0*

NEIC ***05*** *16:59:41.1±4.6, 4.77S×135.74E, h129^{km}±37^{km}, mb3.8/2, Error ellipse: s-maj=47.1km s-min=24.7km az=59.0*

ISC 05 16:59:27.2±4.5**, 4.27S**±0.10×**136.3E**±0.3**, h21^{km}**±34^{km}**, n11, σ1^{s}22**/12**, mb3.6**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	9.21	204	eP	P	17 01 41.4	-0.6
KAKA				eS	Sn	17 03 23.1	-2.9
PMG	Port Moresby	11.96	116	Pn	P	17 02 08.0	-12
	0.4nm,0.3s,baz=350,slow=11,SNR=2.6						
WRAB	Tennant Creek	15.69	187	eP	P	17 03 08.2	-0.7
	5.1nm,0.8s						
WRA	Warramunga Arr	15.70	187	Pn	P	17 03 08.9	-0.2
	0.3nm,0.3s,baz=5.8,slow=13,SNR=25						
WRA				Sn	S	17 06 02.9	+0.2
	0.4nm,0.3s,baz=10,slow=22,SNR=6.5						
ASAR	Alice Springs	19.42	187	P	P	17 03 57.3	+2.1
	0.6nm,0.3s,baz=9.5,slow=12,SNR=68						
ASPA	Alice Springs	19.42	187	eP	P	17 03 56.9	+1.6
ASPA				e		17 04 11.8	
MBWA	Marble Bar	23.24	222	eP	P	17 04 30.2	-4.1
	2.3nm,0.7s,mb3.7						
STKA	Stephens Creek	27.92	170	P	P	17 05 16.4	-1.9
	0.9nm,0.7s,mb3.5,baz=355,slow=7.6,SNR=3.9						
STKA	Stephens Creek	27.92	170	P	P	17 05 16.3	-1.9
MKAR	Makanchi Array	69.56	324	P	P	17 10 37.0	+0.1
	0.4nm,0.5s,mb3.6,baz=107,slow=8.2,SNR=3.6						
LPAZ	La Paz	148.39	131	PKPbc	PKPdf	17 19 13.2	-0.7
	0.4nm,0.6s,baz=301,slow=1.7,SNR=3.6						

IDC ***05*** *17:02:52.0±1.0, 6.24S×147.01E, mb3.8/8, mb1 4.0/11, mb1mx4.0/17, mbtmp3.9/11, ML3.5/3, MS3.5/2, Ms1 3.5/2, ms1mx2.9/22, Error ellipse: s-maj=45.0km s-min=14.0km az=88.0*

NEIC ***05*** *17:02:59.0±2.3, 6.33S×146.87E, h50^{km}±23^{km}, mb3.8/1, Error ellipse: s-maj=30.0km s-min=18.1km az=101.0*

ISC 05 17:02:57.5±3.0**, 6.4S**±0.1×**146.8E**±0.2**, h51^{km}**±28^{km}**, n16, σ0^{s}63**/16**, mb3.7**/8**, MS3.5**/1**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.06	174	Pn	P	17 03 44.6	0.0
	25nm,0.3s,baz=5.5,slow=8.4,SNR=49						
PMG				Lg		17 04 31.5	
	24nm,0.3s,baz=168,slow=22,SNR=3.8						
PMG	Port Moresby	3.06	174	eP	P	17 03 44.5	-0.2
PMG				Lg		17 04 31.5	
CTA	Charters Tower	13.67	182	Pn	P	17 06 10.2	-0.5
	0.2nm,0.3s,baz=2.7,slow=15,SNR=2.9						
CTA				LR	LR	17 10 52.6	
	comp=Z,160nm,21.1s,baz=176,slow=35						
CTAO	Charters Tower	13.67	182	P	P	17 06 11.8	+1.2
WRA	Warramunga Arr	18.16	221	P	P	17 07 07.8	0.0
	0.2nm,0.3s,baz=45,slow=12,SNR=9.1						
ASAR	Alice Springs	21.23	214	P	P	17 07 40.4	-1.0
	0.4nm,0.7s,mb2.9,baz=48,slow=13,SNR=4.5						
STKA	Stephens Creek	25.86	190	P	P	17 08 26.9	+0.5
	1.1nm,0.5s,mb3.7,baz=0.7,slow=9.6,SNR=6.0						
STKA				LR	LR	17 18 09.6	
	comp=Z,141nm,19.0s,MS3.5,baz=92,slow=35						
STKA	Stephens Creek	25.86	190	P	P	17 08 26.6	+0.2
STKA				LR	LR	17 18 09.6	
SONM	Songino Array	64.62	331	P	P	17 13 33.0	+0.9
	0.2nm,0.3s,mb3.6,baz=144,slow=6.1,SNR=8.0						
VNDA	Vanda	71.58	177	P	P	17 14 15.3	+0.4
	0.6nm,0.8s,mb3.5,baz=338,slow=4.8,SNR=4.3						
VNDA	Vanda	71.58	177	eP	P	17 14 15.4	+0.5
	0.9nm,0.8s,mb3.8						
MKAR	Makanchi Array	77.65	321	P	P	17 14 51.0	+0.6
	0.3nm,0.3s,mb3.6,baz=103,slow=7.9,SNR=4.5						
MKAR	Makanchi Array	77.65	321	P	P	17 14 51.0	+0.6
ZAL	Zalesovo	79.22	328	P	P	17 14 58.4	-0.5
	0.8nm,0.3s,mb4.2,baz=4.0,slow=16,SNR=3.3						
ILAR	Eielson Array	85.87	23	P	P	17 15 31.8	-0.9
	1.2nm,0.7s,mb4.2,baz=254,slow=5.4,SNR=16						
BVAR	Borovoye Array	86.94	324	P	P	17 15 38.2	-0.1
	0.3nm,0.4s,mb3.9,baz=103,slow=7.0,SNR=4.3						

IDC 05 17:13:00.2±8.9**, 49.88S**×**120.24E, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.6**/12**, mbtmp3.6**/3**, Error ellipse: s-maj=395.4km s-min=28.2km az=95.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	28.27	27	P	P	17 18 55.0	-2.0
	0.5nm,0.7s,baz=199,slow=8.0,SNR=6.8						
VNDA	Vanda	31.84	164	P	P	17 19 26.2	-2.2
	0.8nm,0.7s,baz=290,slow=9.6,SNR=5.3						
WRA	Warramunga Arr	31.91	26	P	P	17 19 27.4	-2.1
	0.4nm,0.6s,baz=202,slow=8.7,SNR=5.1						

MAN 05 17:39:36.8, 9.98N×**122.63E, h29^{km}, mb4.5, ML3.3, MS3.2, 1C, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.65	356	eP	Pb	17 39 50.1	+0.5
GUIM				eS	Sb	17 40 00.4	+2.1
DCPH	Dipolog City	1.56	153	⇑eP	Pn	17 40 02.4	-0.6
DCPH				eS	Sn	17 40 24.8	+2.5
CUYO	Cuyo Island	1.81	299	eP	Pn	17 40 06.6	0.0
CUYO				eS	Sn	17 40 28.6	-0.3
IPIL	Ipil	2.17	182	eP	Pn	17 40 11.6	-0.2
IPIL				eS	Sn	17 40 37.9	-0.1
PAGZ	Pagadian	2.24	161	eP	Pn	17 40 12.8	0.0
PAGZ				eS	Sn	17 40 42.1	+2.4
BUSP	Coron	3.13	310	eP	Pn	17 40 25.6	+0.2
ENPP	El Nido	3.38	291	eP	Pn	17 40 28.5	-0.5

NNC ***05*** *18:06:47.4±9.2, 41.58N×81.18E, mpv3.3, Error ellipse: s-maj=77.9km s-min=17.0km az=135.0*

BJI 05 18:06:46.2, 41.46N×**80.14E, h15^{km}, ML3.3, 5C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	3.72	240	ePG	Pn	18 07 51.3	+6.8
KSH				Smax			
	comp=N,90nm,0.3s						
KSH				Smax			
	comp=E,140nm,0.5s						
AAK	Ala-Archa	4.36	287	Pn	Pg	18 08 07.4	-6.0
	comp=E,4.9nm,0.7s						
AAK				⇑Sn	Sg	18 09 05.4	-6.2
	comp=E,20nm,0.8s						
MK31	Makanchi Array	5.55	15	⇑Pn	Pn	18 08 07.6	-2.8
	comp=E,0.7nm,0.3s,baz=201,slow=14,SNR=51						
MK31				⇑Sn	Sn	18 09 14.3	-0.3
	comp=E,3.2nm,0.6s,baz=197,slow=24,SNR=7.0						
MK31				⇓Lg		18 09 33.4	
	comp=E,2.3nm,0.4s						
KK31	Karatay Array	7.33	286	⇑Pg	Pg	18 09 11.4	-1.1
	comp=E,0.7nm,0.5s,baz=86,slow=16,SNR=5.9						
KK31				⇑Sn	Sg	18 10 37.6	-13
	comp=E,1.7nm,0.5s,baz=97,slow=27,SNR=4.5						

NEIC ***05*** *18:21:51.8±0.4, 43.77N×105.26W, ML3.1, Error ellipse: s-maj=6.2km s-min=4.5km az=139.0, Suspected Mining explosion.*

NEIC 60 km [35 miles] SSE of Gillette.

IDC ***05*** *18:21:51.8±1.8, 43.86N×105.59W, mb4.2/1, mb1 4.2/3, mb1mx3.5/22, mbtmp4.1/3, ML3.0/1, Error ellipse: s-maj=55.7km s-min=8.9km az=150.0*

ISC 05 18:21:49.9±0.6**, 43.82N**±0.04×**105.30W**±0.07**, n21, σ1^{s}21**/24**, mb4.3**/1**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.96	72	eP	Pb	18 22 10.6	+1.5
PHWY	Pilot Hill	2.52	183	eP	Pn	18 22 33.3	+0.5
PHWY				eS	Sn	18 23 03.3	-1.3
RWWY	Rawlins	2.55	214	eP	Pn	18 22 34.5	+1.3
RWWY				eS	Sn	18 23 06.2	+0.8
LAO	LASA Array	2.94	348	eP	Pn	18 22 40.6	+1.9

LAO				eS	Sn	18 23 13.8	-1.4
PDAR	Pinedale Array	3.28	253	Pn	Pn	18 22 44.9	+1.3
	5.2nm,0.3s,baz=72,slow=16,SNR=57						
PDAR				Lg		18 23 29.2	
	12nm,0.3s,baz=71,slow=31,SNR=13						
BW06	Boulder Array	3.28	253	eP	Pn	18 22 44.5	+0.9
MOOW	Moose Ponds	3.94	271	eP	Pn	18 22 51.8	-1.1
SNOW	Snow King Moun	3.97	267	P	Pn	18 22 52.7	-0.7
ISCO	Idaho Springs	4.03	183	eP	Pn	18 22 54.2	+0.1
IMW	Indian Meadow	4.08	273	ePn	Pn	18 22 52.4	-2.4
TPAW	Teton Pass	4.11	267	eP	Pn	18 22 57.2	+1.8
RRI2	Red Ridge	4.40	266	eP	Pn	18 22 59.6	+0.1
QLMT	Earthquake Lak	4.51	285	ePg	Pg	18 23 12.9	-7.0
BOZ	Bozeman (W)	4.86	294	eP	Pn	18 23 06.6	+0.6
HWUT	Hardware Ranch	5.12	247	eP	Pn	18 23 10.4	+0.8
	7.0nm,0.4s						
CTU	Camp Tracy	5.72	239	eP	Pn	18 23 16.5	-1.6
PV01	Paradox Valley	6.20	205	eP	Pn	18 23 23.7	-1.2
CHMT	Chamberlain Mo	6.40	302	eP	Pn	18 23 28.3	+0.6
DUG	Dugway	6.67	240	eP	Pn	18 23 30.5	-1.0
	2.6nm,0.4s						
ULM	Lac du Bonnet	9.09	42	Pn	P	18 24 03.8	-1.5
	2.6nm,0.3s,baz=230,slow=13,SNR=14						
ARCES	ARCESS Array B	61.34	18	P	P	18 32 08.5	-0.6
	2.5nm,0.9s,mb4.3,baz=326,slow=6.5,SNR=5.9						

*IDC **05** 18:22:38.2±5.0, 32.61N×137.98E, h84^{km}±66^{km}, mb3.1/3, mb1 3.2/4, mb1mx3.0/24, mbtmp3.2/4, ML2.8/1, Error ellipse: s-maj=62.7km s-min=20.8km az=50.0*

*JMA **05** 18:22:43.6±0.5, 33.49N×139.54E, h167^{km}±5^{km}, M3.2*

ISC 05 18:22:40.9±0.7, **33.40N**±0.06×**139.6E**±0.2, **h188**^{km}±6^{km}, **n19**, σ**0**^{s}**72**/23, **mb3.2**/3, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	0.31	156	P	P	18 23 06.0	-0.3
	22nm,0.3s,baz=74,slow=17,SNR=29						
JHJ				S	S	18 23 25.9	+0.1
	51nm,0.3s,baz=91,slow=22,SNR=11						
JHJ2	Mitsune	0.33	152	P	P	18 23 06.9	+0.6
JKO	Kozu shima	0.88	332	P	P	18 23 08.2	-0.6
JIM2	Oshima 3	1.32	353	P	P	18 23 12.2	-0.1
JIZS	Izushimoda	1.45	335	P	P	18 23 13.0	-0.4
BSO3	Boso 3	1.57	27	P	P	18 23 15.1	+0.5
TATJ	Tateyama 2	1.64	7	P	P	18 23 15.8	+0.6
TATJ				S	S	18 23 41.2	-0.4
BSO1	Boso 1	1.68	42	P	P	18 23 15.8	+0.3
BSO4	Boso 4	1.69	20	P	P	18 23 16.5	+0.8
JOD2	Odawara 2	1.91	347	P	P	18 23 18.1	+0.2
SHZ3	Shizuoka 3	2.03	325	P	P	18 23 19.2	0.0
JHU	Hanno	2.46	353	P	P	18 23 23.9	-0.1
JHU				S	S	18 23 54.6	-2.7
JRY	Ryogami san	2.67	347	P	P	18 23 27.1	+0.5
JYT	Yasato	2.85	9	P	P	18 23 27.8	-0.9
MJAR	Matsushiro Arr	3.34	340	P	P	18 23 35.6	+1.0
	0.6nm,0.3s,baz=108,slow=27,SNR=9.7						
MAT	Matsushiro	3.34	340	P	P	18 23 35.1	+0.4
MAT				S	S	18 24 16.2	0.0
MKAR	Makanchi Array	44.91	305	P	P	18 30 39.1	+0.9
	0.2nm,0.8s,mb2.8,baz=94,slow=7.8,SNR=2.9						
WRA	Warramunga Arr	53.28	186	P	P	18 31 41.2	-1.3
	0.4nm,0.4s,mb3.5,baz=0.4,slow=7.6,SNR=29						
ASAR	Alice Springs	57.01	186	P	P	18 32 09.1	-0.2
	0.2nm,0.3s,mb3.4,baz=359,slow=5.8,SNR=16						

OTT 05 18:24:44.4±0.1, **64.65N**×**110.68W**, **MN2.9**/17, **Blast, Ekati Mine, Nt Mining explosion., Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKTN	Ekati Mine	0.05	32	PG	Pg	18 24 45.2	-0.3
LDGN	Lac de Gras No	0.07	69	PG	Pg	18 24 46.3	+0.5
DVKN	Diavik Mine	0.21	132	PG	Pg	18 24 48.5	-0.2
ACKN	Achilles Lake	0.35	346	PG	Pg	18 24 50.9	-0.5
ACKN				SG	Sg	18 24 55.5	-0.6
ACKN				Trac		18 24 56.0	
	comp=Z,68nm,0.1s						
LGSN	Lac de Gras So	0.40	143	PG	Pg	18 24 51.8	-0.5
LGSN				SG	Sg	18 24 57.6	0.0
LGSN				Trac		18 24 58.1	
	comp=Z,48nm,0.1s						
YMBN	Yamba Lake	0.43	302	PG	Pg	18 24 52.3	-0.7
YMBN				SG	Sg	18 24 58.1	-0.6
YMBN				Trac		18 24 58.9	
	comp=Z,29nm,0.1s						
YNEN	Yamba Lake Nor	0.47	340	PG	Pg	18 24 52.9	-0.8
YNEN				SG	Sg	18 24 59.2	-0.7
YNEN				Trac		18 24 59.9	
	comp=Z,56nm,0.1s						
GLWN	Glow Worm Lake	0.58	82	PG	Pg	18 24 55.1	-0.9
GLWN				SG	Sg	18 25 02.8	-1.0
GLWN				Trac		18 25 03.1	
	comp=Z,58nm,0.1s						
COWN	Contwyoto Lake	0.66	341	PG	Pg	18 24 56.5	-1.0
COWN				SG	Sg	18 25 05.2	-1.0
COWN				Trac		18 25 06.6	
	comp=Z,32nm,0.1s						
NODN	Nodinka Narrow	0.71	190	PG	Pg	18 24 57.5	-0.9
NODN				SG	Sg	18 25 06.9	-1.0
NODN				Trac		18 25 07.4	
	comp=Z,26nm,0.1s						
MLON	Marlo Lake	0.77	153	PG	Pg	18 24 58.5	-1.2
MLON				SG	Sg	18 25 09.2	-0.7
MLON				Trac		18 25 09.7	
	comp=Z,23nm,0.1s						
BOXN	Box Lake	0.91	152	PG	Pg	18 25 01.3	-1.2
BOXN				SG	Sg	18 25 13.3	-1.2
BOXN				Trac		18 25 15.1	
	comp=Z,67nm,0.2s						
CAMN	Camsell Lake	0.93	186	PG	Pg	18 25 01.6	-1.3
CAMN				SG	Sg	18 25 13.5	-1.9
CAMN				Trac		18 25 14.3	
	comp=Z,22nm,0.1s						
MGTN	Margaret Lake	1.08	153	PG	Pg	18 25 04.5	-1.5
MGTN				SG	Sg	18 25 18.6	-1.8
MGTN				Trac		18 25 19.8	
	comp=Z,125nm,0.1s						
LUPN	Lupin Mine	1.12	348	PG	Pg	18 25 04.7	-2.0
LUPN				SG	Sg	18 25 19.1	-2.5
LUPN				Trac		18 25 24.0	
	comp=Z,32nm,0.1s						
SNPN	Snap Lake	1.14	185	PG	Pg	18 25 05.6	-1.6
SNPN				SG	Sg	18 25 20.2	-2.2
SNPN				Trac		18 25 25.6	
	comp=Z,371nm,0.1s						
IHLN	Indian Hill La	1.36	184	PG	Pg	18 25 08.9	-2.6
IHLN				SG	Sg	18 25 26.2	-3.4
IHLN				Trac		18 25 27.8	
	comp=Z,32nm,0.1s						
KNDN	Kennady Lake	1.40	152	PG	Pg	18 25 09.8	-2.5
KNDN				SG	Sg	18 25 26.9	-4.0
KNDN				Trac		18 25 30.6	
	comp=Z,23nm,0.1s						
ILKN	Indian Lake	1.98	259	PG	Pg	18 25 18.6	-5.3
ILKN				SN	Sn	18 25 45.0	-0.3
ILKN				Trac		18 25 46.3	
	comp=Z,45nm,0.2s						
DSMN	Discovery Mine	2.05	225	PN	Pn	18 25 18.9	-1.6
DSMN				SN	Sn	18 25 46.6	-0.6
DSMN				Trac		18 25 48.8	
	comp=Z,33nm,0.2s						
CTLN	Castor Lake	2.32	267	PN	Pn	18 25 23.1	-1.2
CTLN				SN	Sn	18 25 55.0	+0.9
CTLN				Trac		18 25 56.6	
	comp=Z,13nm,0.1s						
YKW3	Yellowknife Ar	2.74	222	PN	Pn	18 25 27.8	-2.6
YKW3				SN	Sn	18 26 01.0	-3.7
YKW3				SG	Sg	18 26 09.6	-6.0
YKW3				Trac		18 26 15.6	
	comp=Z,7.2nm,0.1s						
GALN	Gameti Lake	2.93	262	PN	Pn	18 25 31.1	-2.0
GALN				SN	Sn	18 26 05.3	-4.2
GALN				Trac		18 26 13.9	
	comp=Z,11nm,0.1s						
YRTN	Rankin Inlet	8.43	94	PN	P	18 26 45.3	-5.4
YRTN				SN	Sn	18 28 13.8	-14
INK	Inuvik	9.80	302	PN	P	18 27 02.6	-6.8
INK				SN	Sn	18 28 47.2	-14
FCC	Fort Churchill	9.82	119	PN	P	18 27 03.4	-6.4
FCC				SN	Sn	18 28 46.8	-15
QILN	Qililugaq Expl	10.21	68	PN	P	18 27 07.6	-7.4
QILN				SN	S	18 28 55.2	-16
QILN				LG		18 29 50.2	
RES	Resolute Bay	11.41	21	PN	P	18 27 24.2	-7.2
RES				SN	S	18 29 26.6	-14

*IDC **05** 18:44:55.8±7.7, 34.35N×135.48E, mb3.4/2, mb1 3.7/2, mb1mx3.1/23, mbtmp3.4/2, ML2.8/1, Error ellipse: s-maj=310.4km s-min=31.5km az=121.0*

*JMA **05** 18:45:10.4±0.4, 36.16N×137.19E, h260^{km}±4^{km}, M1.9*

ISC 05 18:45:10.2±1.3, **36.1N**±0.2×**137.2E**±0.2, **h261**^{km}±8^{km}, **n10**, σ**0**^{s}**41**/14, **mb3.0**/2, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGM	Miyama	0.55	230	P	P	18 45 45.0	+0.2
JGM				eS	S	18 46 11.3	-0.4
JNG	Nsakai	0.78	63	P	P	18 45 45.7	+0.1
JNG				eS	S	18 46 13.2	0.0
JAO	Obara	0.79	178	P	P	18 45 45.8	+0.2
MAT	Matsushiro	0.93	58	P	P	18 45 45.8	-0.4
MAT				eS	S	18 46 13.3	-1.0
MAT	Matsushiro	0.93	58	P	P	18 45 46.1	-0.1
MJAR	Matsushiro Arr	0.93	58	Pn	P	18 45 46.4	+0.2
	1.2nm,0.3s,baz=242,slow=6.3,SNR=15						
MJAR				Sn	S	18 46 15.1	+0.8
	0.1nm,0.3s,baz=234,slow=18,SNR=4.9						
JHU	Hanno	1.68	96	eS	S	18 46 23.2	+0.1
JWT	Wachi	1.68	243	P	P	18 45 51.5	+0.3
WRA	Warramunga Arr	55.76	183	P	P	18 54 22.0	-0.1
	0.4nm,0.4s,mb3.2,baz=0.1,slow=7.7,SNR=12						
ASAR	Alice Springs	59.48	184	P	P	18 54 47.9	-0.1
	0.3nm,0.9s,mb2.7,baz=0.2,slow=5.9,SNR=11						

*IDC **05** 18:52:37.2±2.0, 21.10S×175.51W, mb4.2/4, mb1 4.4/4, mb1mx3.9/18, mbtmp4.2/4, Error ellipse: s-maj=88.1km s-min=33.1km az=150.0*

NEIC 05 18:52:51.2±1.6, **20.94S**×**175.92W**, **h100**^{km}, **mb4.3**/1, **2C, Error ellipse: s-maj=68.9km s-min=21.4km az=152.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	35.38	265	P	P	18 59 38.9	-0.4
	5.8nm,0.4s,baz=93,slow=11,SNR=14						
ASAR	Alice Springs	46.31	257	P	P	19 01 08.1	-0.8
	3.4nm,0.8s,baz=89,slow=8.3,SNR=40						
ASAR				PcP	PcP	19 02 41.0	-2.0
	0.5nm,0.7s,baz=100,slow=4.2,SNR=5.3						
ASPA	Alice Springs	46.32	257	eP	P	19 01 08.1	-0.9
WB2	Warramunga Arr	46.46	262	eP	P	19 01 08.0	-2.1
WRAB	Tennant Creek	46.46	262	eP	P	19 01 08.0	-2.1
	3.0nm,0.6s						
WRA	Warramunga Arr	46.47	262	P	P	19 01 08.1	-2.1
	2.2nm,0.8s,baz=92,slow=6.4,SNR=72						
KAKA	Kakadu	49.93	271	eP	P	19 01 33.7	-3.4
MJAR	Matsushiro Arr	71.73	323	P	P	19 04 03.0	-1.4
	0.2nm,0.3s,baz=158,slow=6.7,SNR=4.0						
BVAR	Borovoye Array	120.67	320	PKP	PKPdf	19 11 31.9	+0.7
	0.7nm,0.6s,baz=18,slow=4.7,SNR=4.1						
AKASG	Malin Array Be	144.32	332	PKP	PKPdf	19 12 14.0	-1.2
	0.6nm,0.5s,baz=41,slow=4.4,SNR=8.6						
BRTR	Keskin Array B	148.57	313	PKPbc	PKPdf	19 12 26.9	+4.2
	0.7nm,0.5s,baz=135,slow=3.5,SNR=4.3						
CLL	Collm	148.90	349	i PKP1	PKPdf	19 12 29.6	+6.7
PRU	Pruhonice	149.85	347	⇑ePKPB	PKPdf	19 12 32.1	+7.7
KHC	Kasperske Hory	150.87	347	⇑ePKPB	PKPdf	19 12 34.5	+8.5
GERES	GERESS Array B	151.11	347	PKPbc	PKPdf	19 12 33.2	+6.8
	1.1nm,0.7s,baz=45,slow=1.9,SNR=9.8						

*NEIC **05** 19:20:49.6, 19.46N×103.55W, h5^{km}, MD4.2(MEX), After MEX.*

MEX 05 19:20:49.6±1.5, **19.46N**×**103.55W**, **h5**^{km}±19^{km}, **MD4.2, Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COLM	Colima	0.31	207	eP	Pg	19 20 54.4	-1.4
COLM				i S	Sg	19 21 00.6	+0.7
SFJM	Santa Fe	1.13	25	i P	Pb	19 21 09.0	-2.2
SFJM				i S	Sb	19 21 27.0	+0.9
CJM	Chamela	1.41	272	i P	Pn	19 21 13.2	-2.8
CJM				i S	Sb	19 21 28.5	-5.7
MOIG	Morelia	2.23	84	i P	Pn	19 21 24.1	-3.6
MOIG				i S	Sn	19 21 50.9	-5.1
ZIIG	Zihuatanejo	2.70	133	i P	Pn	19 21 31.2	-3.2
ZIIG				i S	Sn	19 22 02.7	-5.1
PPM	Popocatepetl	4.66	94	eP	Pn	19 22 02.0	-0.3

ISC 05 19:28:53.6±0.7, **37.85N**±0.04×**29.49E**±0.05, **h10**^{km}, **n7**, σ**0**^{s}**77**/12, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	Denizli	0.38	255	PG	Pg	19 29 00.6	-0.8
DENT				SG	Sg	19 29 06.9	+0.3
DNZL	Cakiroluk	0.39	245	i P	Pg	19 29 00.8	-0.8
DNZL				i S	Sg	19 29 07.1	+0.1
KHL	Karahalli	0.47	3	PG	Pg	19 29 02.6	-0.6
GOLH	Golhisar	0.62	175	i P	Pb	19 29 05.4	-0.7
GOLH				i S	Sg	19 29 15.4	+0.9
TKTP	Tekketepe	0.68	74	i P	Pb	19 29 08.5	+1.4
TKTP				i S	Sb	19 29 22.0	+5.7
ISP	Isparta	0.80	90	ePG	Pg	19 29 09.0	-0.8
MANT	Manisa	0.97	311	i P	Pb	19 29 12.1	-0.1
MANT				i S	Sb	19 29 25.9	+1.0

CASC 05 19:32:38.0±1.2, **13.01N**×**89.04W**, **h31**^{km}±3^{km}, **MD3.6, ML3.2, 2C-8D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LFRS	El Faro	0.61	358	⇓eP	Pb	19 32 50.5	+0.2
LFRS				eS	Sb	19 32 59.3	+0.6
LCBS	La Ceiba	0.65	5	⇓eP	Pb	19 32 50.8	0.0
LCBS				eS	Sb	19 33 00.5	+0.8
SNET	Serv Nac Est T	0.70	345	eP	Pb	19 32 51.5	-0.2
SNET				eS	Sb	19 33 01.9	+0.8
SNET				i		19 33 02.6	
	comp=Z,764nm,0.2s						
LBRS	Las Brisas	0.73	360	⇓eP	Pb	19 32 52.4	+0.2
LBRS				eS	Sb	19 33 01.9	0.0
LFU	La Fuente	0.74	354	⇓eP	Pn	19 32 52.4	+0.1
BOQS	Boqueron	0.76	342	⇓eP	Pn	19 32 52.7	+0.1
BOQS				eS	Sb	19 33 04.7	+1.9
BLLM	Bellamira	0.89	61	⇓eP	Pn	19 32 54.4	-0.1
BLLM				eS	Sn	19 33 07.6	+1.1
SBLS	San Blas	1.00	326	eP	Pn	19 32 56.1	0.0
SBLS				eS	Sn	19 33 11.1	+1.8
SNJE	San Jose	1.02	327	eP	Pn	19 32 56.4	0.0
SNJE				eS	Sn	19 33 10.0	+0.3
RTR	El Retiro	1.06	326	⇓eP	Pn	19 32 57.2	+0.2
RTR				eS	Sn	19 33 11.7	+0.8
CAHU	Cacacuatique	1.11	47	⇑eP	Pn	19 32 57.8	+0.2
CNCH	Conchagua	1.21	77	eP	Pn	19 32 58.1	-0.9
CNCH				eS	Sn	19 33 14.8	+0.4
RBDL	Robledal	1.27	330	⇑eP	Pn	19 32 59.9	0.0
RBDL				eS	Sn	19 33 18.0	+2.0
IXG	Ixpaco	1.80	310	eP	Pn	19 33 06.8	-0.7
MRL	Marmol	2.14	343	⇓eP	Pn	19 33 12.5	0.0

*ATH **05** 19:51:26.6, 39.29N×23.60E, h30^{km}±4^{km}, MD2.9/4*

*THE **05** 19:51:26.2, 39.25N×23.82E, h13^{km}*

*NEIC **05** 19:51:26.5, 39.30N×23.60E, h27^{km}, MD2.9(ATH), After ATH.*

*CSEM **05** 19:51:27.5±0.1, 39.32N×23.62E, h20^{km}, MD2.9, Error ellipse: s-maj=3.7km s-min=2.0km az=133.0*

ISC 05 19:51:27.4±1.2, **39.28N**±0.06×**23.6E**±0.1, **h26**^{km}±8^{km}, **n9**, σ**0**^{s}**61**/13, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEO	Neokhori	0.30	274	ePb	Pb	19 51 34.1	-0.3
NEO				eSb	Sb	19 51 38.7	-0.5
PAIG	Paliouri	0.65	5	ePg	Pb	19 51 39.3	-0.6
PAIG				eSg	Sb	19 51 49.4	+0.9
LKR	Lokris	0.79	217	ePN	Pn	19 51 43.1	+0.3
LKR				eSN	Sn	19 51 53.6	-0.2
AGG	Agios Georgios	1.02	256	ePg	Pb	19 51 47.4	+1.1
OUR	Ouranopolis	1.09	15	ePg	Pn	19 51 46.4	-0.7
PLG	Polygyros	1.09	354	ePN	Pn	19 51 46.4	-0.8
PLG				eSN	Sn	19 52 01.7	+0.1
LIA	Limnos Island	1.36	63	ePN	Pn	19 51 51.4	+0.3
SOH	Sokhos	1.55	353	ePg	Pn	19 51 53.5	-0.2
GRG	Griva	1.91	331	ePn	Pn	19 51 59.6	+0.8

DJA 05 19:51:28.7±1.3, **9.58S**×**115.28E**, **h9**^{km}±7^{km}, **MD4.6**/3, **ML3.6**/3, **6D, Error ellipse: s-maj=25.6km s-min=12.1km az=2.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	Rata	0.89	17	⇓ePg	Pg	19 51 44.0	-2.5
	252nm,0.2s						
RATI				⇓eSg	Sg	19 51 55.8	-2.6
KEDI	Kedomdong	1.37	37	⇓ePn	Pn	19 51 51.0	-3.0
	37nm,0.1s						
KELI	Kelakatan	1.56	330	⇓ePn	Pn	19 51 54.5	-2.3
SRDI	Scrawed	1.57	314	⇓ePn	Pn	19 51 54.0	-2.9
	51nm,0.2s						
SRDI				⇓eSn	Sn	19 52 11.9	-5.5

*IDC **05** 19:55:49.9±1.8, 14.50N×93.19E, mb3.4/4, mb1 3.5/5, mb1mx3.4/20, mbtmp3.3/5, ML3.7/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/15, Error ellipse: s-maj=43.6km s-min=23.3km az=72.0*

*NEIC **05** 19:55:54.2±0.8, 14.52N×93.22E, h30^{km}, mb3.8/3, Error ellipse: s-maj=18.7km s-min=8.4km az=225.0*

ISC 05 19:55:49.7±5.4, **14.5N**±0.1×**93.3E**±0.1, **h12**^{km}±37^{km}, **n11**, σ**0**^{s}**41**/11, **mb3.4**/4, **MS3.3**/1, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.74	53	Pn	Pn	19 57 30.9	-0.1
	0.4nm,0.3s,baz=243,slow=16,SNR=12						
CMAR				Sn	Sn	19 58 48.5	0.0
	0.5nm,0.3s,baz=240,slow=27,SNR=4.8						
PKI	Pulchoki	14.95	332	eP	P	19 59 22.9	+0.1
	8.5nm,0.3s						
DMN	Daman	15.12	331	eP	P	19 59 24.9	-0.1
KKN	Kakani	15.20	332	eP	P	19 59 26.3	+0.3
	4.4nm,0.5s						
GKN	Gorkha	15.68	331	eP	P	19 59 31.8	-0.4
	6.2nm,0.3s						
KOLN	Koldanda	16.00	327	eP	P	19 59 36.7	+0.3
	3.4nm,0.3s						
MKAR	Makanchi Array	33.51	346	P	P	20 02 31.0	-0.2
	0.3nm,0.5s,mb3.5,baz=160,slow=8.5,SNR=5.5						
SONM	Songino Array	35.01	15	P	P	20 02 44.3	+0.1
	0.5nm,0.7s,mb3.5,baz=192,slow=9.9,SNR=5.8						
JNU	Nakatsue	38.84	55	LR	LR	20 19 13.7	
	comp=Z,39nm,18.3s,MS3.3,baz=193,slow=36						
WRA	Warramunga Arr	52.93	129	P	P	20 05 09.3	+0.9
	0.3nm,0.9s,mb3.2,baz=310,slow=8.6,SNR=3.5						
ASAR	Alice Springs	54.91	133	P	P	20 05 22.1	-0.8
	0.1nm,0.4s,mb3.2,baz=312,slow=7.1,SNR=5.0						

*BJI **05** 20:02:58.3, 36.54S×178.93W, h35^{km}, mb5.3*

*MOS **05** 20:03:00.4±1.3, 36.78S×179.58W, h33^{km}, mb4.9/15, MS4.1/5, Error ellipse: s-maj=15.2km s-min=14.3km az=10.9*

*HRVD **05** 20:03:01.8±0.9, 36.81S×179.28W, h41^{km}±2^{km}, MW4.9/26, Centroid moment Tensor Solution. LP body waves: s26,c36;Mantle waves: s18,c24; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.61±.29; $M_{\theta\theta}$-0.33±.20; $M_{\phi\phi}$-2.28±.19; $M_{r\theta}$0.06±.30; $M_{\theta\phi}$-1.03±.17; $M_{\phi r}$-0.70±.18; Best double couple: $M_0$2.758×10^{16} NP1:ϕ_s31°,δ39°,λ101°. NP2:ϕ_s196°,δ52°,λ81°. Principal axes: T 2.723, Plg80°, Azm65°; N .073, Plg7°, Azm202°; P -2.794, Plg7°, Azm293°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **05** 20:03:01.8, 36.79S×179.23W, h33^{km}, mb5.0/9, ML5.3(WEL), After WEL.*

*WEL **05** 20:03:02.7±0.4, 36.83S×179.31W, h33^{km}, ML5.2/48, Error ellipse: s-maj=3.9km s-min=3.5km az=0.0*

*IDC **05** 20:03:05.6±1.8, 36.83S×179.56W, h72^{km}±14^{km}, mb4.4/10, mb1 4.5/12, mb1mx4.4/16, mbtmp4.7/12, MS4.1/15, Ms1 4.1/15, ms1mx3.9/24, Error ellipse: s-maj=16.9km s-min=11.4km az=176.0*

ISC 05 20:02:58.9±0.4, **36.88S**±0.04×**179.18W**±0.05, **h33**^{km}, **n257**, σ**1**^{s}**41**/164, **mb4.8**/22, **MS4.1**/13, **18C-5D, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.12	250	P	P	20 03 33.9	+1.2
MXZ				S	S	20 03 57.6	-0.5
MXZ	Matakaoa Point	2.12	250	PN	Pn	20 03 33.9	+1.0
MXZ				SN	Sn	20 03 57.6	-0.8
PUZ	Puketiti	2.37	239	P	P	20 03 37.9	+1.7
PUZ				S	S	20 04 05.9	+1.6
PUZ	Puketiti	2.37	239	PN	Pn	20 03 37.9	+1.5
PUZ				SN	Sn	20 04 03.7	-0.8
WIZ	White Island	2.97	256	P	P	20 03 45.8	+0.9
WIZ	White Island	2.97	256	PN	Pn	20 03 45.6	+0.6
MWZ	Matawai	3.00	240	P	P	20 03 46.1	+0.9
MWZ	Matawai	3.00	240	PN	Pn	20 03 46.1	+0.8
MWZ				SN	Sn	20 04 19.4	-1.1
URZ	Urewera	3.26	244	P	P	20 03 49.8	+0.9
	57nm,0.3s,baz=61,slow=4.2,SNR=199						
URZ				S	S	20 04 25.9	-1.1
	851nm,0.3s,baz=143,slow=20,SNR=61						
URZ	Urewera	3.26	244	P	P	20 03 50.3	+1.4
URZ	Urewera	3.26	244	PN	Pn	20 03 50.2	+1.1
URZ				SN	Sn	20 04 25.8	-1.3
KNZ	Kokohu	3.28	228	P	P	20 03 50.4	+1.1
KNZ	Kokohu	3.28	228	PN	Pn	20 03 50.3	+0.9
EDRZ	Edgecumbe	3.47	248	P	P	20 03 53.4	+1.4
EDRZ	Edgecumbe	3.47	248	PN	Pn	20 03 52.9	+0.8
MARZ	Manawahe	3.48	250	P	P	20 03 52.9	+0.8
MARZ	Manawahe	3.48	250	PN	Pn	20 03 52.8	+0.5
MKRZ	Makatiti	3.69	249	P	P	20 03 56.6	+1.6
TAZ	Tarawera	3.69	247	P	P	20 03 57.0	+2.0
TAZ	Tarawera	3.69	247	PN	Pn	20 03 56.3	+1.1
LIRZ	Lichensteins R	3.71	251	P	P	20 03 56.5	+1.2
LIRZ	Lichensteins R	3.71	251	PN	Pn	20 03 56.2	+0.8
TGRZ	Tauranga	3.74	255	P	P	20 03 56.4	+0.7
TGRZ	Tauranga	3.74	255	PN	Pn	20 03 55.7	-0.1
UTU	Utuhina	3.90	249	P	P	20 04 00.6	+2.5
PATZ	Paeroa	3.92	246	P	P	20 04 00.9	+2.6
KUZ	Kuaotunu	4.10	270	eP	P	20 04 00.1	-0.7
KUZ	Kuaotunu	4.10	270	PN	Pn	20 03 59.9	-1.1
KUZ				SN	Sn	20 04 42.3	-6.1
BKZ	Black Stump Fm	4.11	235	P	P	20 04 01.7	+0.6
BKZ	Black Stump Fm	4.11	235	PN	Pn	20 04 01.4	+0.2
BKZ				SN	Sn	20 04 46.6	-2.2
WHTZ	Whakaora	4.25	244	PN	Pn	20 04 05.1	+2.0
TOZ	Tahuroa Road	4.33	257	PN	Pn	20 04 04.1	-0.2
TOZ				SN	Sn	20 04 48.2	-6.0
PWZ	Pawanui	4.42	223	eP	P	20 04 04.7	-0.8
PWZ	Pawanui	4.42	223	PN	Pn	20 04 04.7	-0.9
WATZ	Wairara	4.43	244	P	P	20 04 07.7	+2.2
WATZ	Wairara	4.43	244	PN	Pn	20 04 07.0	+1.3
RITZ	Rihia Road	4.45	240	P	P	20 04 07.2	+1.3
RITZ	Rihia Road	4.45	240	ePN	Pn	20 04 05.7	-0.3
RATZ	Rangitukua	4.46	242	P	P	20 04 07.5	+1.4
RATZ	Rangitukua	4.46	242	PN	Pn	20 04 07.3	+1.2
MKAZ	Moumakai	4.53	265	P	P	20 04 07.0	0.0
MKAZ	Moumakai	4.53	265	PN	Pn	20 04 07.0	-0.1
KATZ	Kakaramea	4.56	241	P	P	20 04 08.6	+1.1
KATZ	Kakaramea	4.56	241	PN	Pn	20 04 08.4	+0.8
OTVZ	Oturere	4.67	239	PN	Pn	20 04 09.1	0.0
WTVZ	West Tongariro	4.70	240	P	P	20 04 10.3	+0.9
WTVZ	West Tongariro	4.70	240	PN	Pn	20 04 10.0	+0.5
NGZ	Ngauruhoe	4.72	239	P	P	20 04 10.1	+0.4
TUVZ	Tukino	4.73	238	P	P	20 04 10.7	+0.9
MOVZ	Moawhango	4.73	236	P	P	20 04 09.6	-0.2
MTAZ	Motutapu	4.74	269	PN	Pn	20 04 10.4	+0.3
CNZ	Chateau	4.77	239	P	P	20 04 10.7	+0.4
WPVZ	Whakapapa	4.77	239	P	P	20 04 11.2	+0.8
TWVZ	Taurewa	4.79	241	P	P	20 04 11.4	+0.8
FWVZ	Far West T-bar	4.79	239	P	P	20 04 10.9	+0.2
WNVZ	Wahianoa	4.79	238	P	P	20 04 10.9	+0.2

KAAZ	Kauri Point	4.91	269	P	P	20 04 13.1	+0.8
TSZ	Takapari Road	4.96	229	P	P	20 04 11.9	-1.2
HIZ	Hauiti	5.01	249	*e*P	P	20 04 14.6	+0.9
WTAZ	Waiatarua	5.01	267	P	P	20 04 14.7	+0.9
BFZ	Birch Farm	5.22	222	PN	Pn	20 04 18.4	+1.6
VRZ	Vera Road	5.29	243	P	P	20 04 19.0	+1.3
WCZ	Waipu Caves	5.31	278	*e*P	P	20 04 17.6	-0.3
WAZ	Wanganui	5.42	236	*e*P	P	20 04 19.7	+0.3
MRZ	Mangatainoka R	5.57	226	P	P	20 04 19.7	-2.0
MTW	Mount Morrison	5.95	222	P	P	20 04 24.1	-2.9
OUZ	Omahuta	6.08	284	*e*P	P	20 04 28.2	-0.6
KIW	Kapiti Island	6.09	227	P	P	20 04 26.9	-2.0
CAW	Cannon Point	6.16	225	P	P	20 04 27.2	-2.7
MSWZ	Moikau Station	6.27	222	P	P	20 04 27.8	-3.6
WEL	Wellington	6.45	225	P	P	20 04 31.8	-2.1
MRW	Makara Radio	6.45	226	P	P	20 04 30.2	-3.8
BHW	Baring Head	6.47	224	P	P	20 04 31.6	-2.7
TCW	Tory Channel	6.69	228	PN	Pn	20 04 36.1	-1.4
BSWZ	Blackbirch Sta	7.23	226	P	P	20 04 42.1	-2.9
NNZ	Nelson	7.23	231	*e*P	P	20 04 41.7	-3.3
QRZ	Quartz Range	7.58	236	*e*P	P	20 04 47.0	-2.8
THZ	Tophouse	7.84	229	*e*P	P	20 04 49.4	-4.0
KHZ	Kahutara	7.88	223	*e*P	P	20 04 51.3	-2.7
DSZ	Denniston Nort	8.51	232	*e*P	P	20 04 58.7	-4.1
LTZ	Lake Taylor	8.83	225	*e*P	P	20 05 02.5	-4.7
CRLZ	Canterbury Las	9.17	221	*e*P	P	20 05 09.8	-2.1
MQZ	McQueen’s Vall	9.24	220	*e*P	P	20 05 10.5	-2.4
WVZ	Waitaha Valley	9.91	228	*e*P	P	20 05 19.7	-2.3
RPZ	Rata Peaks	10.11	224	P	P	20 05 21.6	-3.2
	6.5nm,0.3s,baz=53,slow=4.8,SNR=23						
RPZ				S	S	20 07 06.0	-12
	18nm,0.3s,baz=342,slow=21,SNR=16						
RPZ	Rata Peaks	10.11	224	*e*P	P	20 05 22.2	-2.6
FOZ	Fox Glacier	10.81	228	*e*P	P	20 05 29.9	-4.6
LBZ	Lake Benmore	11.02	224	*e*P	P	20 05 34.6	-2.7
ODZ	Otahua Downs	11.21	220	*e*P	P	20 05 35.9	-3.9
WKZ	Wanaka	11.95	225	*e*P	P	20 05 48.1	-1.7
EAZ	Earnscleugh	12.04	223	*e*P	P	20 05 49.3	-1.7
TUZ	Tuapeka	12.35	219	*e*P	P	20 05 52.1	-3.1
DZM	Mont Dzumac	19.31	316	P	P	20 07 22.7	-1.3
	0.9nm,0.3s,baz=238,slow=18,SNR=8.0						
DZM				LR	LR	20 13 03.2	
	comp=Z,857nm,20.7s,baz=332,slow=31						
RAR	Rarotonga	22.98	53	LR	LR	20 15 11.9	
	comp=Z,339nm,18.1s,MS3.8,baz=111,slow=31						
TAU	Tasmania Unive	26.29	246	*e*P	P	20 08 33.5	+0.4
TAU				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.4						
TAU	Tasmania Unive	26.29	246	*e*P	P	20 08 33.5	+0.4
	comp=Z,6.2nm,0.5s,mb4.4						
TBI	Tubuai	28.89	71	*e*LQ		20 14 29.6	
	comp=Z,325nm,26.0s						
TBI				*e*LR	LR	20 15 35.4	
	baz=230						
PPT	Papeete	32.40	62	*e*LR	LR	20 17 14.7	
	comp=Z,602nm,27.0s,baz=228						
PPT	Papeete	32.40	62	LR	LR	20 18 58.4	
	comp=Z,311nm,19.7s,MS4.0,baz=309,slow=29						
STKA	Stephens Creek	32.60	267	*e*P	P	20 09 28.8	-0.8
STKA	Stephens Creek	32.60	267	P	P	20 09 28.9	-0.7
	comp=Z,7.1nm,0.8s,mb4.6,baz=99,slow=9.3,SNR=12						
STKA				PcP	PcP	20 12 13.5	-1.9
	comp=Z,3.1nm,0.8s,baz=86,slow=2.5,SNR=3.7						
STKA				LR	LR	20 23 02.4	
	comp=Z,214nm,18.4s,MS3.9,baz=31,slow=37						
HNR	Honiara	33.23	320	LR	LR	20 20 16.1	
	comp=Z,165nm,21.8s,MS3.7,baz=137,slow=31						
CTA	Charters Tower	34.45	289	P	P	20 09 45.1	-0.5
CTA				pmax	pmax		
	comp=Z,21nm,0.8s						
CTA				MLR	MLR		
	comp=Z,137nm,19.9s						
CTA	Charters Tower	34.45	289	P	P	20 09 45.1	-0.5
	comp=Z,20nm,0.8s,mb5.1,baz=129,slow=11,SNR=17						
CTA				LR	LR	20 21 43.2	
	comp=Z,137nm,19.9s,MS3.7,baz=319,slow=33						
CTAO	Charters Tower	34.45	289	*e*P	P	20 09 45.2	-0.4
CTAO				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
CTAO	Charters Tower	34.45	289	*e*P	P	20 09 45.2	-0.4
	comp=Z,23nm,0.8s,mb5.2						
RKT	Rikitea	40.32	83	*e*LR	LR	20 21 00.2	
	comp=Z,424nm,27.0s,baz=238						
PMG	Port Moresby	40.93	303	LR	LR	20 24 32.8	
	comp=Z,365nm,20.1s,MS4.2,baz=91,slow=32						
VNDA	Vanda	41.57	186	P	P	20 10 48.1	+3.6
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VNDA	Vanda	41.57	186	P	P	20 10 44.0	-0.5
	comp=Z,0.3nm,0.9s,baz=41,slow=5.2,SNR=2.7						
VNDA				LR	LR	20 24 12.0	
	comp=Z,146nm,21.7s,baz=37,slow=30						
VNDA	Vanda	41.57	186	P	P	20 10 48.1	+3.5
	comp=Z,1.0nm,0.8s,mb3.5						
VNDA				LR	LR	20 24 12.0	
ASAR	Alice Springs	42.21	275	P	P	20 10 49.3	-1.2
ASAR				S	S	20 17 02.9	-5.4
ASAR				pmax	pmax		
	comp=Z,61nm,0.6s						
ASAR				smax			
	comp=N,4.0nm,1.0s						
ASAR				MLR	MLR		
	comp=Z,235nm,19.2s						
ASAR	Alice Springs	42.21	275	P	P	20 10 49.3	-1.2
	comp=Z,61nm,0.6s,mb5.4,baz=118,slow=7.6,SNR=332						
ASAR				S	S	20 17 02.9	-5.4
	comp=Z,4.4nm,1.0s,baz=120,slow=15,SNR=9.0						
ASAR				LR	LR	20 28 57.2	
	comp=Z,234nm,19.2s,MS4.1,baz=126,slow=37						
ASPA	Alice Springs	42.21	275	⇑*i*P	P	20 10 49.3	-1.2
ASPA				*e*		20 10 53.7	
ASPA				*e*S	S	20 17 02.7	-5.6
ASPA	Alice Springs	42.21	275	⇑*i*P	P	20 10 49.3	-1.2
ASPA				*e*S	S	20 17 02.7	-5.6
WB2	Warramunga Arr	43.77	280	⇑*i*P	P	20 11 01.4	-1.8
WB2				*e*		20 11 05.8	
WRAB	Tennant Creek	43.78	280	*e*P	P	20 11 01.3	-2.0
WRAB				pmax	pmax		
	comp=Z,66nm,0.6s,mb5.5						
WRAB	Tennant Creek	43.78	280	*e*P	P	20 11 01.3	-2.0
	comp=Z,66nm,0.6s,mb5.5						
WRA	Warramunga Arr	43.78	280	P	P	20 11 01.5	-1.8
WRA						20 12 49.1	
WRA				S	S	20 17 24.1	-7.1
WRA				pmax	pmax		
	comp=Z,34nm,0.5s						
WRA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WRA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WRA				smax			
	comp=N,1.0nm,0.9s						
WRA	Warramunga Arr	43.78	280	P	P	20 11 01.5	-1.8
	comp=N,34nm,0.5s,mb5.3,baz=120,slow=7.7,SNR=129						
WRA				PcP	PcP	20 12 49.1	-1.1
	comp=N,7.0nm,0.8s,baz=123,slow=3.4,SNR=9.4						
WRA				pPcP		20 12 58.8	
	comp=N,6.8nm,0.7s,baz=124,slow=3.4,SNR=7.4						
WRA				S	S	20 17 24.1	-7.1
	comp=N,1.3nm,0.9s,baz=121,slow=14,SNR=4.9						
WRA				PKiKP		20 19 50.2	
	comp=N,0.2nm,0.5s,baz=143,slow=0.4,SNR=5.1						
WRA	Warramunga Arr	43.78	280	P	P	20 11 01.5	-1.8
WRA				PcP	PcP	20 12 49.1	-1.1
WRA				pPcP		20 12 58.8	
WRA				S	S	20 17 24.1	-7.1
NWAO	Narrogin (SRO)	51.45	254	LR	LR	20 30 13.6	
	comp=N,109nm,20.6s,MS3.9,baz=113,slow=32						
MUN	Mundaring	52.62	255	*e*P	P	20 12 10.1	-1.7
QSPA	South Pole Qui	53.25	180	⇑*i*P	P	20 12 20.4	+4.5
	comp=N,22nm,0.9s,mb5.1						
MBWA	Marble Bar	54.81	269	*e*P	P	20 12 25.0	-3.1
	comp=N,13nm,0.5s,mb5.2						
MIR	Mirnyy	55.95	209	*d i*P	P	20 12 49.0	+13
MIR				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.3						
MAW	Mawson	65.93	202	P	P	20 13 43.5	+0.3
MAW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAW				MLR	MLR		
	comp=Z,192nm,21.7s						
MAW	Mawson	65.93	202	P	P	20 13 43.5	+0.3
	comp=Z,4.2nm,1.0s,mb4.4,baz=105,slow=8.1,SNR=5.5						
MAW				LR	LR	20 40 57.8	
	comp=Z,192nm,21.7s,MS4.3,baz=21,slow=34						
SYO	Syowa Base	70.60	194	⇓P	P	20 14 14.3	+2.1
SYO	Syowa Base	70.60	194	⇓sP	sP	20 14 29.5	+3.3
SNAA	Sanae	71.72	179	⇑*i*	P	20 14 21.0	+2.1
SNAA	Sanae	71.72	179	⇑*i*	sP	20 14 44.1	+11
SNAA	Sanae	71.72	179	*e*P	P	20 14 20.3	+1.4
SNAA				*e*		20 14 43.3	
SNAA				pmax	pmax		
	comp=Z,12nm,1.2s						
SNAA	Sanae	71.72	179	*e*P	P	20 14 20.2	+1.4
	comp=Z,12nm,1.2s,mb4.7						
SNAA				*e*		20 14 43.3	
VNA3	Neumayer Olymp	71.92	176	⇑*i*	P	20 14 23.0	+2.9
VNA3	Neumayer Olymp	71.92	176	⇑*i*	sP	20 14 46.0	+12
VNA2	Neumayer--Watz	72.34	177	⇑*i*	P	20 14 25.8	+3.3
VNA2	Neumayer--Watz	72.34	177	⇑*i*	sP	20 14 47.8	+11
VNA1	Neumayer--Stat	72.58	177	⇑*i*	P	20 14 27.6	+3.8
VNA1	Neumayer--Stat	72.58	177	⇑*i*	sP	20 14 50.9	+13
PLCA	Paso Flores	78.83	133	P	P	20 15 01.5	+1.5
PLCA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PLCA				MLR	MLR		
	comp=Z,163nm,22.0s						
PLCA	Paso Flores	78.83	133	P	P	20 15 01.5	+1.4
	comp=Z,5.0nm,1.0s,mb4.4,baz=208,slow=7.7,SNR=5.1						
PLCA				LR	LR	20 40 27.7	
	comp=Z,163nm,22.0s,MS4.3,baz=188,slow=28						
MJAR	Matsushiro Arr	83.05	327	P	P	20 15 20.9	-1.4
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MJAR	Matsushiro Arr	83.05	327	P	P	20 15 20.9	-1.5
	comp=Z,4.8nm,1.0s,mb4.5,baz=167,slow=5.6,SNR=14						
MAJO	Matsushiro	83.05	327	*e*P	P	20 15 20.9	-1.4
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
MAJO	Matsushiro	83.05	327	*e*P	P	20 15 20.9	-1.4
	comp=Z,2.9nm,0.8s,mb4.4						
MAJO				*e*PcP	PcP	20 15 25.5	-1.9
MAT	Matsushiro	83.05	327	*e*P	P	20 15 20.0	-2.3
MAT				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
MAT	Matsushiro	83.05	327	*e*P	P	20 15 20.0	-2.3
	comp=Z,10nm,1.1s,mb4.8						
MAT	Matsushiro	83.05	327	P	P	20 15 20.4	-1.9
JNU	Nakatsue	83.80	320	P	P	20 15 25.0	-1.2
	comp=Z,7.0nm,0.8s,mb4.8,baz=98,slow=7.1,SNR=3.7						
ASAJ	Asahikawa	87.75	334	P	P	20 15 46.1	+0.7
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ASAJ	Asahikawa	87.75	334	P	P	20 15 46.0	+0.7
	comp=Z,10nm,0.8s,mb5.1,baz=211,slow=8.9,SNR=7.3						
YSS	Yuzh-Sakhalins	90.16	335	⇑*i*P	P	20 15 57.0	+0.2
YSS				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.8						
YSS	Yuzh-Sakhalins	90.16	335	*e*P	P	20 15 57.6	+0.8
	comp=Z,24nm,0.8s,mb5.6						
CMAR	Chiang Mai Arr	94.62	289	P	P	20 16 18.3	+0.4
CMAR				*PP	pP	20 16 27.3	-1.2
CMAR						20 20 07.0	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CMAR				MLR	MLR		
	comp=Z,73nm,18.1s						
CMAR	Chiang Mai Arr	94.62	289	P	P	20 16 18.2	+0.4
	comp=Z,0.7nm,0.6s,mb4.2,baz=151,slow=3.8,SNR=6.3						
CMAR				pP	pP	20 16 27.2	-1.2
	comp=Z,3.2nm,0.6s,baz=145,slow=3.7,SNR=20						
CMAR				PP	PP	20 20 07.0	-1.6
	comp=Z,1.2nm,1.0s,baz=141,slow=9.2,SNR=5.6						
CMAR				LR	LR	21 01 17.1	
	comp=Z,72nm,18.1s,MS4.2,baz=145,slow=37						
CN2	Changchun	94.72	323	*e*P	P	20 16 17.3	-0.5
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.2						
LPAZ	La Paz	96.32	116	P	P	20 16 29.3	+3.7
LPAZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
LPAZ	La Paz	96.32	116	P	P	20 16 29.2	+3.6
	comp=Z,1.3nm,1.0s,mb4.3,baz=153,slow=2.1,SNR=7.9						
TXAR	Lajitas Array	96.66	58	LR	LR	20 54 40.4	
	comp=Z,89nm,18.3s,MS4.3,baz=110,slow=32						
CPUP	Villa Florida	96.67	130	LR	LR	20 52 57.3	
	comp=Z,153nm,21.5s,MS4.5,baz=68,slow=31						
ILAR	Eielson Array	104.44	14	PKiKP		20 21 17.5	
	comp=Z,0.6nm,0.7s,baz=252,slow=2.9,SNR=7.0						
MKAR	Makanchi Array	121.06	308	PKP	PKPdf	20 21 48.1	+0.1
	comp=Z,2.1nm,0.6s,baz=90,slow=2.4,SNR=25						
MKAR				PKKPbc		20 31 54.4	
	comp=Z,0.3nm,0.7s,baz=297,slow=2.7,SNR=4.2						
ZAL	Zalesovo	122.12	316	PKIKP	PKPdf	20 21 49.7	-0.2
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL	Zalesovo	122.12	316	PKP	PKPdf	20 21 49.7	-0.1
	comp=Z,2.2nm,0.3s,baz=65,slow=2.7,SNR=5.6						
ZAL	Zalesovo	122.12	316	PKP	PKPdf	20 21 49.7	-0.1
KZA	Kyzart	124.00	300	P	PKPdf	20 21 55.7	+1.9
	SNR=5.2						
TKM2	Tokmak 2	124.06	301	P	PKPdf	20 21 55.2	+1.3
	SNR=6.2						
UCH	Uchtor	124.56	300	P	PKPdf	20 21 57.4	+2.5
	SNR=5.0						
CHMS	Chumysh	124.67	301	P	PKPdf	20 21 56.5	+1.4
	SNR=6.5						
AML	Almayashu	125.10	300	P	PKPdf	20 21 58.2	+2.3
	SNR=8.0						
KMBO	Kilima Mbogo	129.30	230	PKIKP	PKPdf	20 22 06.7	+2.0
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KMBO	Kilima Mbogo	129.30	230	PKP	PKPdf	20 22 06.7	+1.9
	comp=Z,1.5nm,0.7s,baz=213,slow=23,SNR=4.1						
BVAR	Borovoye Array	130.19	312	PKP	PKPdf	20 22 05.8	+0.5
	comp=Z,2.3nm,0.7s,baz=117,slow=3.3,SNR=18						
ARU	Arti	137.27	316	*e*PKIKP	PKPdf	20 22 19.3	+0.8
ARU	Arti	137.27	316	*e*PKPdf	PKPdf	20 22 17.8	-0.7
ARCES	ARCESS Array B	144.65	345	PKIKP	PKPdf	20 22 31.7	+0.7
ARCES				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ARCES	ARCESS Array B	144.65	345	PKP	PKPdf	20 22 31.6	+0.6
	comp=Z,7.2nm,0.5s,baz=29,slow=2.9,SNR=46						
DGRG	David-gareji	145.45	292	P	PKPdf	20 22 35.5	+2.2
KTK1	Kautokeino	145.53	346	*e*P	PKPdf	20 22 34.0	+1.4
KTK1				AMb	AMB	20 22 36.0	
	comp=Z,55nm,1.1s						
GNI	Garni	145.74	289	*e*PKP2	PKPab	20 22 34.8	-1.8
TRO	Tromso	145.75	349	*e*P	PKPdf	20 22 33.0	+0.1
TRO	Tromso	145.75	349	⇑*i*P	PKPdf	20 22 33.8	+0.9
TRO				AMb	AMB	20 22 37.5	
	comp=Z,56nm,1.7s						
MTA	Mtatsminda	145.91	292	P	PKPdf	20 22 36.0	+1.9
TI2	Plekhanov	145.95	292	*e*PKP2	PKPab	20 22 36.6	-0.8
TBLG	Delisi	145.95	292	P	PKPdf	20 22 36.3	+2.2
ZEI	Tsey	146.68	294	*e*PKIKP	PKPdf	20 22 37.1	+1.8
GOF	Gofitskoye	147.40	298	⇓*i*PKP2	PKPab	20 22 39.3	-3.6
GOF				pmax	pmax		
	comp=Z,60nm,1.3s						
KIV	Kislovodsk	147.63	296	*e*PKIKP	PKPdf	20 22 38.6	+1.8
KIV	Kislovodsk	147.63	296	*e*PKP	PKPdf	20 22 38.6	+1.8
MOS	Moscow	148.86	319	*e*PKIKP	PKPdf	20 22 41.6	+3.2
MOS				*e*		20 22 47.2	
MOS				pmax	pmax		
	comp=Z,85nm,1.1s						
VRSR	Storozhevoye	149.31	310	*e*PKP2	PKPab	20 22 45.0	-5.4
VRSR				pmax	pmax		
	comp=Z,20nm,0.7s						
VRSR				pmax	pmax		
	comp=N,7.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,4.0nm,0.7s						
DBIC	Dimbokro	149.49	169	PKIKP	PKPdf	20 22 41.2	+0.5
DBIC						20 22 48.3	
DBIC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DBIC	Dimbokro	149.49	169	PKP	PKPdf	20 22 41.2	+0.5
	comp=Z,3.9nm,1.0s,baz=18,slow=2.6,SNR=3.4						
DBIC				PKPbc	PKPdf	20 22 48.3	+7.6
	comp=Z,6.0nm,0.8s,baz=109,slow=3.5,SNR=8.4						
MOR8	Moi Rana	149.61	349	*e*P	PKPdf	20 22 45.1	+5.8
OBN	Obninsk	149.65	318	*ce*PKP2	PKPab	20 22 45.8	-5.9
OBN				pmax	pmax		
	comp=Z,60nm,1.3s						
ASF	Jabal al Asfar	150.03	272	PKPbc	PKPdf	20 22 47.9	+6.9
	comp=Z,5.9nm,0.8s,baz=307,slow=5.1,SNR=6.4						
KAF	Kangasniemi	150.19	336	*e*pkp	PKPdf	20 22 45.9	+5.6
EIL	Elat	150.69	266	*e*PKPbc	PKPdf	20 22 49.3	+7.2
EIL				*e*		20 22 56.3	
EIL				*e*		20 23 00.6	
FINES	FINESS Array B	150.75	335	PKIKP	PKPdf	20 22 48.2	+7.0
FINES						20 22 54.3	
FINES				pmax	pmax		
	comp=Z,27nm,0.9s						
FINES				pmax	pmax		
	comp=Z,5.0nm,0.4s						
FINES	FINESS Array B	150.75	335	PKPbc	PKPdf	20 22 48.2	+7.0
	comp=Z,27nm,0.9s,baz=72,slow=4.4,SNR=4.6						
FINES				PKPab	PKPab	20 22 54.3	-1.8
	comp=Z,5.4nm,0.4s,baz=65,slow=4.9,SNR=31						
FINES	FINESS Array B	150.75	335	PKPbc	PKPdf	20 22 48.2	+7.0
FINES				PKPab	PKPab	20 22 54.3	-1.8
CSS	Prodhromos	153.67	276	*e*PKPdf	PKPdf	20 22 49.2	+2.9
BRTR	Keskin Array B	154.17	286	PKIKP	PKPdf	20 22 56.1	+9.3
BRTR						20 23 07.9	
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRTR	Keskin Array B	154.17	286	PKPbc	PKPdf	20 22 56.0	+9.3
	comp=Z,3.0nm,0.8s,baz=146,slow=4.5,SNR=16						
BRTR				PKPab	PKPab	20 23 07.8	-3.3
	comp=Z,6.2nm,0.8s,baz=132,slow=3.9,SNR=18						
NB2	NORSAR Subarra	154.94	348	PKPdf	PKPdf	20 22 57.7	+11
	comp=Z,5.7nm,1.0s,baz=22,slow=1.7						
NB2	NORSAR Subarra	154.94	348	PKPd		20 22 57.7	
	baz=22,slow=1.7						
NOA	NORSAR Array B	154.94	348	PKIKP	PKPdf	20 22 57.5	+10
NOA						20 23 10.6	
NOA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	154.94	348	PKPbc	PKPdf	20 22 57.5	+10
	comp=Z,2.6nm,0.9s,baz=14,slow=3.7,SNR=5.4						
NOA				PKPab	PKPab	20 23 10.6	-3.1
	comp=Z,0.9nm,0.7s,baz=60,slow=2.1,SNR=6.0						
NOA	NORSAR Array B	154.94	348	PKPbc	PKPdf	20 22 57.5	+10
NOA				PKPab	PKPab	20 23 10.6	-3.1
HFS	Hagfors	155.30	345	PKIKP	PKPdf	20 22 58.1	+11
HFS						20 23 13.8	
HFS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HFS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	155.30	345	PKPbc	PKPdf	20 22 58.1	+11
	comp=Z,2.5nm,0.7s,baz=90,slow=1.5,SNR=7.6						
HFS				PKPab	PKPab	20 23 13.8	-1.5
	comp=Z,1.4nm,0.6s,baz=90,slow=1.5,SNR=6.6						
AKASG	Malin Array Be	155.46	313	PKIKP	PKPdf	20 22 51.3	+3.2
AKASG						20 22 58.8	
AKASG						20 23 14.4	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AKASG	Malin Array Be	155.46	313	PKP	PKPdf	20 22 51.3	+3.2
	comp=Z,0.5nm,0.7s,baz=31,slow=0.7,SNR=5.1						
AKASG				PKPbc	PKPdf	20 22 58.8	+11
	comp=Z,1.6nm,0.5s,baz=56,slow=2.1,SNR=16						
AKASG				PKPab	PKPab	20 23 14.3	-1.9
	comp=Z,10nm,0.8s,baz=54,slow=3.2,SNR=11						
SUW	Suwalki	156.93	325	*e*PKPab	PKPab	20 23 20.9	-1.6
OJC	Ojcow	160.92	320	⇓*e*PKP	PKPab	20 23 39.0	-0.7
NIE	Niedzica	161.11	318	*e*PKP	PKPab	20 23 40.2	-0.4
EKA	Eskdalemuir Ar	161.34	7	PKPab	PKPab	20 23 41.1	-0.3
	comp=Z,2.6nm,0.8s,baz=333,slow=3.7,SNR=6.6						
KECS	Kecovo	161.53	315	*e*PKP	PKPab	20 23 42.3	-0.2
OKC	Ostrava-Krasne	161.99	321	*e*PKPAB	PKPab	20 23 43.7	-0.8
VYHS	Vyhne	162.44	317	*e*PKP	PKPab	20 23 46.0	-0.4
DPC	Dobruska-Polom	162.52	325	*e*PKPAB	PKPab	20 23 45.9	-0.8
UPC	Upice	162.55	326	*e*PKPAB	PKPab	20 23 45.8	-1.0
VRAC	Vranov	163.10	322	PKPab	PKPab	20 23 48.7	-0.6
	comp=Z,13nm,0.8s,baz=40,slow=3.4,SNR=13						
BRG	Berggiesshubel	163.15	330	*e*P	PKPab	20 23 48.5	-0.9
PVCC	Panska Ves	163.16	328	*e*PKPAB	PKPab	20 23 48.8	-0.7
CLL	Collm	163.16	333	*i* PKP2	PKPab	20 23 48.3	-1.2
SMOL	Smolenice	163.18	319	*e*PKP	PKPab	20 23 49.8	+0.1
ZST	Bratislava	163.55	319	*e*PKP	PKPab	20 23 50.9	-0.4
PRU	Pruhonice	163.57	327	*e*PKPAB	PKPab	20 23 50.4	-0.9
NKC	Novy Kostel	164.24	332	*e*PKPAB	PKPab	20 23 53.0	-1.2
KHC	Kasperske Hory	164.63	327	*e*PKPAB	PKPab	20 23 54.6	-1.4
GERES	GERESS Array B	164.79	326	PKPab	PKPab	20 23 55.7	-0.9
	comp=Z,7.4nm,0.8s,baz=45,slow=3.8,SNR=67						
ARSA	Arzberg	164.97	318	⇑*i*P	PKPab	20 23 57.4	-0.1
MOA	Molln	165.23	322	⇑*i*P	PKPab	20 23 57.9	-0.7
CDF	Champ du Feu	167.54	340	*e*PKP2	PKPab	20 24 07.4	-1.2
	comp=Z,22nm,1.0s						
DAVA	Damuels	167.62	330	⇑*i*P	PKPab	20 24 08.4	-0.6
MEZF	Maizieres J’vi	167.98	346	*e*PKP2	PKPab	20 24 09.4	-1.1
DAVOX	Davos	168.03	329	PKPab	PKPab	20 24 10.3	-0.5
	comp=Z,10nm,0.7s,baz=63,slow=3.3,SNR=18						
DAVOX	Davos	168.03	329	PKPab	PKPab	20 24 10.3	-0.5
HAU	Haudompre	168.16	342	*e*PKP2	PKPab	20 24 10.0	-1.4
HAU				*e*R			
	comp=Z,80nm,22.9s						
HINF	Hinteralfeld	168.20	340	*e*PKP2	PKPab	20 24 09.9	-1.7
LOR	Lormes	169.38	349	*e*PKP2	PKPab	20 24 15.7	-1.0
LOR				*e*R			
	comp=Z,51nm,18.8s						
CABF	La Chapelle	169.51	340	*e*PKP2	PKPab	20 24 16.3	-1.1
	comp=Z,26nm,1.3s						
SSF	Saint Saulge	169.63	350	*e*PKP2	PKPab	20 24 16.6	-1.3
	comp=Z,14nm,1.1s						
AVF	Avril sur Loir	169.92	350	*e*PKP2	PKPab	20 24 17.9	-1.2
	comp=Z,3.8nm,0.8s						
SMF	Signal de Mont	169.98	348	*e*PKP2	PKPab	20 24 18.2	-1.2
	comp=Z,16nm,1.1s						
BGF	Bois d’Agland	170.21	352	*e*PKP2	PKPab	20 24 19.3	-1.2
LPL	La Plagne	170.29	335	*e*PKP2	PKPab	20 24 20.1	-0.8
	comp=Z,13nm,1.0s						
LPG	La Plagne	170.30	334	*e*PKP2	PKPab	20 24 20.2	-0.7
	comp=Z,8.0nm,0.8s						
TCF	Toulx Ste Croi	170.54	354	*e*PKP2	PKPab	20 24 20.9	-1.1
	comp=Z,12nm,1.1s						
MBDF	Montbardon	170.96	332	*e*PKP2	PKPab	20 24 22.0	-1.9
	comp=Z,10nm,0.8s						
SBF	Sospel	171.39	326	*e*PKP2	PKPab	20 24 23.6	-2.2
	comp=Z,22nm,0.9s						
VIVF	Saint-Julien-l	171.51	341	*e*PKP2	PKPab	20 24 25.4	-0.9
CAF	Calviac	171.91	354	*e*PKP2	PKPab	20 24 27.4	-0.7
	comp=Z,25nm,1.3s						
FRF	La Foret Royal	171.98	328	*e*PKP2	PKPab	20 24 26.5	-1.9
	comp=Z,18nm,1.0s						
LMR	La Mourre	172.22	328	*e*PKP2	PKPab	20 24 27.3	-2.2

DJA 05 20:19:27.2±1.3, 9.59S×115.28E, h10^{km}±7^{km}, MD4.6/3, ML4.0/3, 3C-3D, Error ellipse: s-maj=25.5km s-min=12.1km az=2.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	Rata	0.90	16	⇑*e*Pg	Pg	20 19 42.7	-2.5
	752nm,0.2s						
RATI				⇓*e*Sg	Sg	20 19 54.4	-2.8
KEDI	Kedomdong	1.37	37	⇑*e*Pn	Pn	20 19 49.6	-2.9
	87nm,0.2s						
KELI	Kelakatan	1.57	330	⇑*e*Pn	Pn	20 19 53.1	-2.2
SRDI	Scrawed	1.57	314	⇓*e*Pn	Pn	20 19 52.4	-3.0
	87nm,0.2s						
SRDI				⇓*e*Sn	Sn	20 20 10.7	-5.3

IDC 05 20:22:22.4±1.8, 54.16N×35.13W, mb3.6/7, mb1 3.9/8, mb1mx3.6/28, mbtmp3.7/8, ML3.6/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/31, Error ellipse: s-maj=56.5km s-min=20.8km az=167.0

ISC 05 20:22:21.8±1.5, 54.1N±0.3×35.1W±0.2, h10^{km}, n16, σ0^{s}38/8, mb3.6/7, MS3.4/6, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	18.36	285	LR	LR	20 32 07.5	
	comp=Z,57nm,20.1s,baz=295,slow=32						
EKA	Eskdalemuir Ar	18.42	73	P	P	20 26 38.8	+0.1
	0.1nm,0.3s,baz=286,slow=10,SNR=2.8						

HFS	**Hagfors**	**26.64**	**57**	LR	LR	20 37 20.0	
	comp=Z,43nm,18.7s,MS3.0,baz=347,slow=34						
DAVOX	**Davos**	**29.16**	**86**	LR	LR	20 39 44.4	
	comp=Z,56nm,19.8s,MS3.2,baz=163,slow=36						
SADO	**Sadowa**	**29.67**	**270**	P	**P**	**20 28 29.8**	**+0.2**
	2.5nm,0.8s,mb4.0,baz=338,slow=5.4,SNR=3.0						
GERES	**GERESS Array B**	**30.36**	**80**	LR	LR	20 40 23.1	
	comp=Z,31nm,18.1s,MS3.0,baz=321,slow=36						
ARCES	**ARCESS Array B**	**30.88**	**37**	P	**P**	**20 28 39.4**	**-0.6**
	0.8nm,0.6s,mb3.8,baz=243,slow=8.1,SNR=5.1						
ULM	**Lac du Bonnet**	**36.44**	**289**	LR	LR	20 43 43.9	
	comp=Z,40nm,19.1s,MS3.2,baz=312,slow=35						
YKA	**Yellowknife Ar**	**40.02**	**315**	P	**P**	**20 29 57.9**	**-0.1**
	0.5nm,0.7s,mb3.4,baz=63,slow=8.3,SNR=2.8						
ILAR	**Eielson Array**	**50.45**	**329**	P	**P**	**20 31 21.2**	**+0.3**
	0.6nm,0.9s,mb3.6,baz=37,slow=4.8,SNR=5.7						
TXAR	**Lajitas Array**	**54.41**	**272**	P	**P**	**20 31 50.6**	**-0.4**
	0.6nm,1.0s,mb3.5,baz=68,slow=6.7,SNR=4.1						
MKAR	**Makanchi Array**	**66.36**	**42**	P	**P**	**20 33 12.2**	**-0.1**
	0.5nm,0.7s,mb3.7,baz=323,slow=6.1,SNR=6.0						
BDFB	**Brasilia**	**70.34**	**193**	LR	LR	21 00 01.9	
	comp=Z,146nm,21.6s,MS4.2,baz=32,slow=32						
SONM	**Songino Array**	**73.33**	**26**	P	**P**	**20 33 55.5**	**+0.7**
	0.5nm,0.9s,mb3.4,baz=332,slow=5.2,SNR=3.8						
KMBO	**Kilima Mbogo**	**80.65**	**105**	LR	LR	21 10 19.8	
	comp=Z,52nm,18.1s,MS3.9,baz=90,slow=36						
ASAR	**Alice Springs**	**148.49**	**20**	PKPbc	PKPdf	20 42 10.3	+2.5
	2.1nm,0.6s,baz=354,slow=2.4,SNR=37						

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*IDC **05** 20:26:08.6±1.2,6.24S×147.11E,mb3.6/5,mb1 3.9/7, mb1mx3.7/15,mbtmp3.7/7,ML3.1/2,Error ellipse: s-maj=40.5km s-min=16.5km az=89.0*

*NEIC **05** 20:26:15.9±3.0,6.37S×146.93E,h51^{km}±27^{km},mb3.6/2, Error ellipse: s-maj=28.1km s-min=23.1km az=121.0*

ISC 05 20:26:14.6±3.9,6.4S±0.2×146.9E±0.2,h53^{km}±33^{km},n11, σ0^{s}.69/13,mb3.6/5,1C,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.02**	**174**	Pn	**P**	**20 27 01.5**	**+0.4**
	5.7nm,0.3s,baz=344,slow=7.4,SNR=16						
PMG				Pg	**P**	**20 27 05.7**	**+4.5**
	8.8nm,0.3s,baz=20,slow=12,SNR=17						
PMG				Lg		20 27 49.5	
	14nm,0.3s,baz=141,slow=19,SNR=4.5						
PMG	**Port Moresby**	**3.02**	**174**	⇑*i*P	**P**	**20 27 01.8**	**+0.6**
PMG				Pg	**P**	**20 27 05.7**	**+4.5**
PMG				Lg		20 27 49.5	
WRAB	**Tennant Creek**	**18.14**	**221**	*e*P	**P**	**20 30 23.9**	**-0.6**
	4.6nm,0.8s						
WRA	**Warramunga Arr**	**18.16**	**221**	P	**P**	**20 30 24.1**	**-0.6**
	0.2nm,0.3s,baz=43,slow=12,SNR=16						
ASAR	**Alice Springs**	**21.23**	**215**	P	**P**	**20 30 58.4**	**+0.2**
	0.7nm,0.5s,mb3.2,baz=51,slow=9.1,SNR=12						
STKA	**Stephens Creek**	**25.84**	**190**	P	**P**	**20 31 43.2**	**+0.3**
	0.7nm,0.5s,mb3.5,baz=4.1,slow=12,SNR=3.5						
STKA	**Stephens Creek**	**25.84**	**190**	P	**P**	**20 31 43.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**53.31**	**299**	P	**P**	**20 35 32.0**	**+1.1**
	0.6nm,0.6s,mb3.7,baz=123,slow=6.1,SNR=5.2						
VNDA	**Vanda**	**71.54**	**177**	P	**P**	**20 37 31.9**	**+0.4**
	0.4nm,0.5s,mb3.6,baz=340,slow=8.6,SNR=5.9						
VNDA	**Vanda**	**71.54**	**177**	*e*P	**P**	**20 37 31.9**	**+0.4**
	0.4nm,0.6s,mb3.5						
ILAR	**Eielson Array**	**85.88**	**23**	P	**P**	**20 38 48.5**	**-1.0**
	0.4nm,0.5s,mb3.9,baz=256,slow=5.0,SNR=11						

IDC 05 21:04:23.6±3.1,61.09S×56.76W,mb4.3/1,mb1 4.4/1, mb1mx3.5/15,mbtmp4.0/1,MS3.5/2,Ms1 3.4/2, ms1mx3.1/21,Error ellipse: s-maj=234.6km s-min=88.8km az=125.0,South Shetland Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BDFB	**Brasilia**	**45.82**	**12**	LR	LR	21 31 19.6	
	comp=Z,68nm,18.8s,baz=20,slow=35						
BOSA	**Boshof**	**61.60**	**98**	LR	LR	21 38 55.3	
	comp=Z,28nm,18.0s,baz=210,slow=34						
WRA	**Warramunga Arr**	**98.76**	**191**	P	P	21 18 04.9	-1.1
	0.2nm,0.5s,baz=177,slow=4.0,SNR=10						
ILAR	**Eielson Array**	**142.19**	**316**	PKP	PKPdf	21 23 55.1	-2.8
	0.6nm,0.4s,baz=108,slow=2.9,SNR=20						
BVAR	**Borovoye Array**	**150.90**	**82**	PKPbc	PKPdf	21 24 17.1	+4.3
	0.2nm,0.4s,baz=207,slow=3.2,SNR=4.2						
MKAR	**Makanchi Array**	**152.53**	**103**	PKPbc	PKPdf	21 24 20.1	+4.8
	0.4nm,0.6s,baz=251,slow=3.9,SNR=6.3						

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*NIED **05** 21:10:00,41.30N×142.20E,h47^{km},Mw3.6 Best double couple: $M_0$3.25×10^{14} NP1:ϕ_s313°,δ85°,λ48°. NP2:ϕ_s217°, δ42°,λ172°.*

*NEIC **05** 21:10:10.0±1.0,41.10N×142.77E,h10^{km},Error ellipse: s-maj=30.8km s-min=14.2km az=112.0*

*IDC **05** 21:10:14.6±2.4,41.10N×142.62E,h43^{km}±23^{km},mb3.7/5, mb1 3.9/7,mb1mx3.5/25,mbtmp3.9/7,ML3.7/2,Error ellipse: s-maj=39.1km s-min=14.3km az=98.0*

*JMA **05** 21:10:15.4,41.31N×142.20E,h57^{km}±2^{km},M3.7*

ISC 05 21:10:15.0±0.5,41.25N±0.03×142.22E±0.07,h59^{km}±7^{km}, n22,σ0^{s}.98/29,mb4.0/5,2C-4D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOT	**Ohata**	**0.89**	**279**	⇓P	**P**	**21 10 31.7**	**0.0**
JOT				*e*S	**S**	**21 10 43.2**	**-1.0**
JTM	**Tenmabayashi**	**0.99**	**242**	⇓P	**P**	**21 10 33.6**	**+0.6**
JTM				*e*S	**S**	**21 10 47.0**	**+0.6**
JANG	**Nango**	**1.03**	**211**	⇓P	**P**	**21 10 33.9**	**+0.3**
JANG				*e*S	**S**	**21 10 47.5**	**+0.1**
JEM	**Erimo**	**1.04**	**42**	P	**P**	**21 10 33.4**	**-0.3**
JKB	**Kayabe**	**1.09**	**306**	⇓P	**P**	**21 10 34.1**	**-0.4**
JKB				*e*S	**S**	**21 10 48.0**	**-0.9**
JNBK	**Urakawa-nobuka**	**1.10**	**21**	⇑P	**P**	**21 10 34.3**	**-0.3**
JCH	**Churui**	**1.60**	**32**	P	**P**	**21 10 41.2**	**-0.4**
JEW	**Eniwo**	**1.69**	**340**	P	**P**	**21 10 43.0**	**+0.3**
JEW				*e*S	**S**	**21 11 03.2**	**0.0**
JOM	**Ohasama**	**1.91**	**202**	P	**P**	**21 10 46.5**	**+0.6**
JOM				*e*S	**S**	**21 11 09.7**	**+0.9**
JFR	**Furan**	**1.93**	**8**	⇑P	**P**	**21 10 45.9**	**-0.2**
JOSM	**Okushiri--Mats**	**2.21**	**293**	P	**P**	**21 10 49.5**	**-0.6**
ASAJ	**Asahikawa**	**2.87**	**5**	P	**P**	**21 10 59.6**	**+0.1**
	12nm,0.3s,baz=233,slow=9.1,SNR=56						
ASAJ				S	**S**	**21 11 34.9**	**+1.8**
	6.6nm,0.3s,baz=343,slow=33,SNR=6.9						
MAJO	**Matsushiro**	**5.65**	**215**	*e*P	**P**	**21 11 34.8**	**-3.5**
	6.7nm,0.6s						
MAT	**Matsushiro**	**5.65**	**215**	*e*P	**P**	**21 11 39.0**	**+0.7**
	7.0nm,1.0s						
MAT				*e*S	S	21 13 10.0	+27
MAT	**Matsushiro**	**5.65**	**215**	P	**P**	**21 11 38.9**	**+0.6**
MJAR	**Matsushiro Arr**	**5.65**	**215**	P	**P**	**21 11 37.7**	**-0.5**
	0.7nm,0.3s,baz=26,slow=13,SNR=15						
MJAR	**Matsushiro Arr**	**5.65**	**215**	P	**P**	**21 11 37.7**	**-0.5**
MKAR	**Makanchi Array**	**42.53**	**298**	P	**P**	**21 18 08.5**	**+2.5**
	0.6nm,0.5s,mb3.6,baz=86,slow=9.7,SNR=4.5						
INK	**Inuvik**	**50.37**	**29**	P	**P**	**21 19 06.9**	**-0.7**
	1.1nm,0.4s,mb4.2,baz=269,slow=2.4,SNR=6.8						
WRA	**Warramunga Arr**	**61.32**	**188**	P	**P**	**21 20 24.5**	**-2.3**
	0.9nm,0.4s,mb4.2,baz=5.7,slow=6.9,SNR=47						
ASAR	**Alice Springs**	**65.05**	**188**	P	**P**	**21 20 49.6**	**-1.7**
	0.3nm,0.5s,mb3.6,baz=0.3,slow=6.7,SNR=8.2						
FINES	**FINESS Array B**	**65.39**	**332**	P	**P**	**21 20 54.5**	**+1.6**
	3.9nm,1.2s,mb4.3,baz=37,slow=6.9,SNR=3.6						

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*NEIC **05** 21:12:38.7±1.7,6.94N×76.21W,h68^{km}±15^{km},mb4.0/1, Error ellipse: s-maj=21.0km s-min=13.8km az=115.0*

*IDC **05** 21:12:38.6±3.9,6.96N×76.22W,h63^{km}±34^{km},mb3.5/5, mb1 3.8/7,mb1mx3.5/22,mbtmp3.8/7,ML3.0/2,MS3.2/1, Ms1 3.2/1,ms1mx2.7/20,Error ellipse: s-maj=32.4km s-min=18.3km az=104.0*

ISC 05 21:12:36.6±2.2,7.0N±0.1×76.2W±0.1,h57^{km}±20^{km},n13, σ1^{s}.01/13,mb3.6/5,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**2.86**	**139**	P	**P**	**21 13 22.6**	**+1.7**
	18nm,0.3s,baz=294,slow=6.0,SNR=16						
ROSC				S	**S**	**21 14 01.6**	**+7.3**
	15nm,0.3s,baz=78,slow=22,SNR=8.5						
SDV	**Santo Domingo**	**5.85**	**71**	P	**P**	**21 14 02.3**	**-0.3**
	1.3nm,0.3s,baz=279,slow=15,SNR=8.6						
SDV				S	**S**	**21 15 08.8**	**-0.4**
	1.6nm,0.3s,baz=217,slow=20,SNR=2.1						
SDV				LR	LR	21 16 42.6	
	comp=Z,190nm,18.6s,baz=217,slow=42						
SDV	**Santo Domingo**	**5.85**	**71**	*e*P	**P**	**21 14 02.0**	**-0.7**
SDV				S	**S**	**21 15 08.8**	**-0.4**
SDV				LR	LR	21 16 42.6	
OTAV	**Otavalo**	**7.09**	**198**	*e*P	**P**	**21 14 19.4**	**-0.7**
	5.7nm,0.8s						
SAML	**Samuel**	**20.51**	**140**	*e*P	**P**	**21 17 09.0**	**-3.6**
	9.9nm,1.2s						
LPAZ	**La Paz**	**24.50**	**161**	P	**P**	**21 17 52.3**	**+0.2**
	0.8nm,0.7s,mb3.3,baz=323,slow=5.1,SNR=4.4						
SIV	**San Ignacio**	**27.35**	**147**	P	**P**	**21 18 17.4**	**-1.1**
	0.8nm,0.7s,mb3.4,baz=336,slow=18,SNR=2.2						
YKA	**Yellowknife Ar**	**62.04**	**341**	P	**P**	**21 22 52.8**	**-0.4**
	1.2nm,0.6s,mb4.2,baz=130,slow=6.6,SNR=9.6						
ESDC	**Sonseca Array**	**71.91**	**51**	P	**P**	**21 23 55.9**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=270,slow=4.4,SNR=5.1						
GERES	**GERESS Array B**	**84.73**	**42**	P	**P**	**21 25 07.4**	**+1.7**
	0.5nm,0.8s,mb3.7,baz=248,slow=5.3,SNR=5.1						
ASAR	**Alice Springs**	**146.67**	**237**	PKPbc	PKPbc	21 32 13.6	+1.0
	1.5nm,0.9s,baz=118,slow=3.4,SNR=12						
WRA	**Warramunga Arr**	**147.69**	**244**	PKPbc	PKPdf	21 32 15.2	+2.4
	1.9nm,1.0s,baz=103,slow=2.5,SNR=11						
CMAR	**Chiang Mai Arr**	**154.24**	**11**	PKPab	PKPab	21 32 45.1	-2.3
	0.9nm,0.8s,baz=338,slow=5.0,SNR=5.9						

WEL 05 21:16:49.5±0.3,36.55S×177.30E,h204^{km}±5^{km},ML3.7/14, Error ellipse: s-maj=6.6km s-min=5.7km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.29**	**142**	PN	P	21 17 21.8	-0.3
MXZ				SN	S	21 17 46.3	-1.0
MXZ				SN	S	21 17 47.0	-0.3
PUZ	**Puketiti**	**1.70**	**154**	PN	P	21 17 25.5	-0.2
PUZ				SN	S	21 17 52.1	-1.5
URZ	**Urewera**	**1.71**	**185**	PN	P	21 17 25.7	-0.2
URZ				SN	S	21 17 53.2	-0.6
URZ				SN	S	21 17 53.3	-0.5
MWZ	**Matawai**	**1.79**	**174**	PN	P	21 17 26.6	0.0
MWZ				SN	S	21 17 55.0	-0.1
KNZ	**Kokohu**	**2.48**	**173**	PN	P	21 17 32.8	-1.1
KNZ				SN	S	21 18 06.6	-1.6
BKZ	**Black Stump Fm**	**2.69**	**194**	PN	P	21 17 35.1	-1.1
BKZ				SN	S	21 18 10.0	-2.3
NGZ	**Ngauruhoe**	**2.95**	**207**	*e*PN	P	21 17 39.0	-0.2
FWVZ	**Far West T-bar**	**3.03**	**207**	*e*PN	P	21 17 39.6	-0.6
WNVZ	**Wahianoa**	**3.08**	**205**	PN	P	21 17 40.0	-0.8
TSZ	**Takapari Road**	**3.66**	**196**	*e*PN	P	21 17 45.3	-2.6
WAZ	**Wanganui**	**3.68**	**209**	PN	P	21 17 46.9	-1.3
BFZ	**Birch Farm**	**4.21**	**191**	PN	P	21 17 51.8	-2.8
BFZ				*e*SN	S	21 18 41.7	-3.3
MRZ	**Mangatainoka R**	**4.32**	**198**	PN	P	21 17 52.3	-3.8
MRZ				SN	S	21 18 42.7	-4.9
KIW	**Kapiti Island**	**4.69**	**203**	PN	P	21 17 57.0	-3.8
MTW	**Mount Morrison**	**4.81**	**196**	PN	P	21 17 58.0	-4.2
CAW	**Cannon Point**	**4.87**	**200**	PN	P	21 17 58.9	-4.1
MRW	**Makara Radio**	**5.09**	**203**	*e*PN	P	21 18 01.7	-4.2
TCW	**Tory Channel**	**5.22**	**206**	PN	P	21 18 03.3	-4.2
TUWZ	**Tuamarina**	**5.53**	**207**	PN	P	21 18 07.0	-4.5
KHZ	**Kahutara**	**6.54**	**205**	PN	P	21 18 19.1	-5.4
LTZ	**Lake Taylor**	**7.33**	**210**	PN	P	21 18 29.9	-4.9

IDC 05 21:24:18.2±2.1,1.49N×125.33E,mb3.2/3,mb1 3.5/3, mb1mx3.3/18,mbtmp3.3/3,Error ellipse: s-maj=196.1km s-min=27.1km az=64.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.06**	**158**	P	P	21 29 24.2	-2.4
	0.3nm,0.3s,baz=336,slow=10,SNR=15						
ASAR	**Alice Springs**	**26.36**	**162**	P	P	21 29 57.5	-0.6
	0.3nm,0.7s,baz=346,slow=12,SNR=4.9						
MKAR	**Makanchi Array**	**58.62**	**327**	P	P	21 34 17.3	-2.2
	0.2nm,0.6s,baz=127,slow=6.1,SNR=3.7						

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*NEIC **05** 21:40:26.7±0.9,22.65N×94.39E,h93^{km}±12^{km},Error ellipse: s-maj=23.8km s-min=7.4km az=48.0*

*IDC **05** 21:40:29.2±3.8,22.81N×94.79E,h108^{km}±34^{km},mb3.6/6, mb1 3.8/7,mb1mx3.4/22,mbtmp3.9/7,Error ellipse: s-maj=65.0km s-min=14.0km az=63.0*

ISC 05 21:40:26.1±1.0,22.60N±0.09×94.22E±0.08,h110^{km}±11^{km}, n22,σ1^{s}.24/31,mb4.0/7,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**2.19**	**353**	*i* S	**S**	**21 41 29.0**	**0.0**
AGT	**Agartala**	**3.01**	**296**	*e*PG	**P**	**21 41 23.0**	**+10**
SHL	**Shillong**	**3.64**	**325**	*i* PG	**P**	**21 41 23.0**	**+1.3**
SHL				*e*S	**S**	**21 42 01.5**	**-2.5**
CMAR	**Chiang Mai Arr**	**6.05**	**132**	P	**P**	**21 41 53.1**	**-1.2**
	0.3nm,0.3s,baz=312,slow=13,SNR=14						
GUN	**Gumba**	**9.21**	**307**	*e*Pn	**P**	**21 42 39.6**	**+2.3**
GUN				*e*Sn	**S**	**21 44 19.1**	**-0.6**
	103nm,0.4s						
GUN	**Gumba**	**9.21**	**307**	*e*Pn	**P**	**21 42 39.6**	**+2.3**
	51nm,0.4s						
GUN				*e*Sn	**S**	**21 44 19.1**	**-0.6**
PKI	**Pulchoki**	**9.39**	**304**	*e*Pn	**P**	**21 42 40.0**	**+0.3**
KKN	**Kakani**	**9.60**	**304**	*e*Pn	**P**	**21 42 43.0**	**+0.5**
KKN				*e*Sn	**S**	**21 44 28.2**	**-0.9**
	42nm,0.4s						
KKN	**Kakani**	**9.60**	**304**	*e*Pn	**P**	**21 42 43.0**	**+0.5**
	21nm,0.4s						
KKN				*e*Sn	**S**	**21 44 28.2**	**-0.9**
DMN	**Daman**	**9.64**	**303**	*e*Pn	**P**	**21 42 44.4**	**+1.3**
DMN				*e*Sn	**S**	**21 44 28.3**	**-1.9**
	42nm,0.5s						
DMN	**Daman**	**9.64**	**303**	*e*Pn	**P**	**21 42 44.4**	**+1.3**
	21nm,0.5s						
DMN				*e*Sn	**S**	**21 44 28.3**	**-1.9**
GKN	**Gorkha**	**10.20**	**304**	*e*Pn	**P**	**21 42 51.8**	**+1.3**
KOLN	**Koldanda**	**10.90**	**300**	*e*Pn	**P**	**21 43 00.5**	**+0.6**
KOLN				*e*Sn	**S**	**21 44 57.1**	**-3.2**
	78nm,0.5s						
KOLN	**Koldanda**	**10.90**	**300**	*e*Pn	**P**	**21 43 00.5**	**+0.6**
	39nm,0.5s						
KOLN				*e*Sn	**S**	**21 44 57.1**	**-3.2**
MKAR	**Makanchi Array**	**25.99**	**341**	P	**P**	**21 45 51.7**	**+1.5**
	1.7nm,0.4s,mb3.8,baz=146,slow=11,SNR=36						
SONM	**Songino Array**	**27.00**	**18**	P	**P**	**21 45 57.6**	**-1.9**
	0.1nm,0.3s,mb2.8,baz=187,slow=12,SNR=3.6						
ZAL	**Zalesovo**	**32.09**	**350**	P	**P**	**21 46 45.1**	**+0.6**
	1.3nm,0.3s,mb4.1,baz=314,slow=6.5,SNR=5.6						
BVAR	**Borovoye Array**	**35.40**	**335**	P	**P**	**21 47 14.2**	**+1.3**
	0.6nm,0.5s,mb3.7,baz=145,slow=9.9,SNR=6.9						
MBWA	**Marble Bar**	**50.11**	**148**	*e*P	**P**	**21 49 12.4**	**+0.2**
WRA	**Warramunga Arr**	**57.64**	**134**	P	**P**	**21 50 06.5**	**-0.8**
	2.2nm,0.5s,mb4.5,baz=321,slow=7.4,SNR=82						
WRAB	**Tennant Creek**	**57.64**	**134**	*e*P	**P**	**21 50 06.6**	**-0.7**
	4.6nm,0.6s,mb4.7						
ASAR	**Alice Springs**	**60.03**	**137**	P	**P**	**21 50 23.6**	**-0.3**
	1.6nm,0.4s,mb4.4,baz=322,slow=7.0,SNR=39						

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*NEIC **05** 21:44:25.7,29.41S×68.02W,h145^{km},mb4.1/2,After GUC.*

GUC 05 21:44:25.7±0.7,29.41S×68.02W,h145^{km},ML4.7,6C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**2.21**	**195**	⇑*i*P	P	21 45 03.5	+0.1
ZON				*e*S	S	21 45 33.5	+1.2
LCO	**Las Campanas**	**2.38**	**279**	*e*P	P	21 45 06.6	+1.0
LCO				*i* S	S	21 45 36.6	+0.5
LCO				AMP		21 45 37.9	
	comp=E,3μm,0.4s						
TLL	**Tololo Astrono**	**2.54**	**252**	⇑*i*P	P	21 45 09.3	+1.7
TLL				*i* S	S	21 45 41.5	+1.8
TLL				AMP		21 45 46.3	
	comp=N,3μm,0.7s						
VACH	**Vallenar**	**2.54**	**288**	*e*P	P	21 45 08.1	+0.4
VACH				*i* S	S	21 45 39.4	-0.3
LSCH	**La Serena**	**2.85**	**259**	*i* S	S	21 45 45.7	-1.0
LSCH				AMP		21 45 52.3	
	comp=E,750nm,0.4s						
LSCH	**La Serena**	**2.85**	**259**	*i* S	S	21 45 45.7	-1.0
CPCH	**Copiapo**	**2.90**	**314**	⇑*i*P	P	21 45 12.3	0.0
CPCH				*i* S	S	21 45 47.3	-0.5
CMCH	**Combarbala**	**3.12**	**235**	⇓*i*P	P	21 45 15.0	-0.2
CMCH				*i* S	S	21 45 53.1	+0.1
CMCH				AMP		21 45 55.1	
	comp=N,4μm,1.0s						
ILCH	**Illapel**	**3.51**	**230**	*i* S	S	21 46 01.6	-0.4
JACH	**Jahuel**	**3.94**	**213**	⇓*i*P	P	21 45 26.4	+0.4
PCH	**Pirque**	**4.71**	**206**	*e*P	P	21 45 36.6	+0.5
CHCH	**Chadas Angostu**	**5.04**	**206**	⇑*i*P	P	21 45 40.3	-0.1
CACH	**El Canelo**	**5.18**	**204**	⇑*i*P	P	21 45 42.7	+0.3
CICH	**Cipreses**	**5.31**	**202**	⇑*i*P	P	21 45 44.3	+0.3
LVC	**Limon Verde**	**6.81**	**353**	*e*P	P	21 46 02.8	-1.5
	comp=N,5.3nm,0.5s						
TRQA	**Tornquist**	**9.98**	**151**	*e*P	P	21 46 44.9	-1.5
	comp=N,3.0nm,0.6s						

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*NNC **05** 21:48:14.2±13.0,41.71N×49.67E,h33^{km}±249^{km},Error ellipse: s-maj=224.8km s-min=110.1km az=88.0*

*IDC **05** 21:48:14.1±5.7,42.53N×49.63E,mb3.3/2,mb1 3.3/4, mb1mx3.1/22,mbtmp3.3/4,ML3.8/2,Error ellipse: s-maj=110.7km s-min=25.0km az=8.0*

ISC 05 21:48:09.4±3.0,42.0N±0.1×49.27E±0.07,h13^{km}±17^{km},n9, σ0^{s}.85/13,mb3.2/2,3C-1D,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGRG	**David-gareji**	**2.97**	**260**	P	**Pn**	**21 48 52.2**	**-5.1**
DGRG				S	**Sn**	**21 49 28.5**	**-4.7**
MTA	**Mtatsminda**	**3.36**	**266**	P	**Pn**	**21 49 02.7**	**-0.1**
MTA				S	**Sn**	**21 49 43.8**	**+0.8**
TBLG	**Delisi**	**3.40**	**267**	S	**Sn**	**21 49 43.0**	**-0.9**
AB31	**Akbulak array**	**10.39**	**42**	⇓Pn	**P**	**21 50 40.2**	**-0.9**
	0.2nm,0.2s,baz=222,slow=12						
AB31				⇑Sn	**S**	**21 52 38.9**	**+0.4**
	0.5nm,0.3s,baz=228,slow=36						
KK31	**Karatay Array**	**15.69**	**79**	⇑Pn	**P**	**21 51 51.8**	**+0.1**
	0.3nm,0.5s						
KK31				⇑Sn	**S**	**21 54 44.7**	**-0.9**
	0.8nm,0.6s,baz=285,slow=23,SNR=4.8						
AKASG	**Malin Array Be**	**16.30**	**309**	Pn	**P**	**21 51 58.6**	**-0.8**
	0.7nm,0.3s,baz=115,slow=11,SNR=4.0						
BVAR	**Borovoye Array**	**17.94**	**45**	Pn	**P**	**21 52 14.7**	**-5.3**
	0.2nm,0.3s,baz=243,slow=9.7,SNR=3.4						
FINES	**FINESS Array B**	**23.94**	**332**	P	**P**	**21 53 24.5**	**+0.8**
	0.5nm,0.4s,mb3.3,baz=150,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**23.96**	**67**	P	**P**	**21 53 25.6**	**+1.7**
	0.4nm,0.6s,mb3.0,baz=274,slow=8.0,SNR=7.4						

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*BJI **05** 21:52:48.0,7.47S×126.31E,h481^{km},mB4.7,mb4.6*

*MOS **05** 21:52:52.2±0.9,6.99S×125.91E,h483^{km},mb4.3/10,Error ellipse: s-maj=17.0km s-min=7.8km az=117.3*

*DJA **05** 21:52:53.5±0.3,7.48S×125.82E,h553^{km}±21^{km},mb5.2/3, Error ellipse: s-maj=135.6km s-min=7.1km az=171.0*

*NEIC **05** 21:52:53.2±0.2,7.03S×125.94E,mb4.7/17,Error ellipse: s-maj=8.0km s-min=3.9km az=54.0*

*IDC **05** 21:52:54.1±0.6,7.05S×125.96E,h491^{km}±5^{km},mb4.2/21, mb1 4.2/22,mb1mx4.2/23,mbtmp5.0/22,Error ellipse: s-maj=12.3km s-min=6.7km az=58.0*

ISC 05 21:52:53.7±0.5,7.15S±0.03×125.90E±0.04,h501^{km}±7^{km}, h481^{km}±3.9^{km}:pP-P,n150,σ1^{s}.06/140,mb4.5/38,10C-14D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**8.49**	**131**	⇓*i*P	**P**	**21 54 55.7**	**-0.7**
KAKA				*e*S	**S**	**21 56 32.0**	**-1.9**
KEDI	**Kedomdong**	**9.78**	**262**	⇓*e*P	**P**	**21 55 08.9**	**-1.2**
RATI	**Rata**	**10.38**	**261**	*e*P	**P**	**21 55 14.5**	**-1.9**
	1μm,0.2s						
KELI	**Kelakatan**	**11.35**	**264**	*e*P	**P**	**21 55 25.8**	**-0.7**
MATI	**Mati**	**14.00**	**1**	*e*P	**P**	**21 55 54.6**	**+0.4**
BUKP	**Musuan**	**14.95**	**357**	*e*P	**P**	**21 56 04.1**	**+0.4**
BUKP				*e*S	**S**	**21 58 41.7**	**+4.7**
PAGZ	**Pagadian**	**15.10**	**350**	*e*P	**P**	**21 56 06.0**	**+0.8**
WRAB	**Tennant Creek**	**15.13**	**148**	⇓*i*P	**P**	**21 56 05.3**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,489nm,0.6s						
WRAB	**Tennant Creek**	**15.13**	**148**	⇓*i*P	**P**	**21 56 05.3**	**-0.2**
	comp=Z,488nm,0.6s						
WRA	**Warramunga Arr**	**15.13**	**148**	P	**P**	**21 56 05.4**	**-0.1**
	comp=Z,13nm,0.3s,baz=338,slow=9.4,SNR=635						
WRA				S	**S**	**21 58 41.1**	**+0.8**
	baz=335,slow=17,SNR=5.8						
WB2	**Warramunga Arr**	**15.14**	**148**	⇓*i*P	**P**	**21 56 05.4**	**-0.2**
WB2				*e*S	**S**	**21 58 39.5**	**-1.0**
MBWA	**Marble Bar**	**15.15**	**203**	⇑*i*P	**P**	**21 56 06.5**	**+0.8**
	comp=Z,53nm,0.8s						
MENI	**Mendum Tagoi**	**15.18**	**73**	*e*P	**P**	**21 56 05.9**	**-0.1**
YOMI	**Yo Moklole**	**15.28**	**74**	⇑*e*P	**P**	**21 56 06.7**	**-0.3**
	comp=Z,242nm,0.7s						
KKM	**Kota Kinabalu**	**16.28**	**323**	P	**P**	**21 56 16.6**	**-0.4**
TBP	**Tagbilaran**	**16.85**	**353**	*e*P	**P**	**21 56 24.2**	**+1.6**
KSM	**Kuching**	**17.75**	**298**	*e*P	**P**	**21 56 32.8**	**+1.2**
BATP	**Bataraza**	**17.77**	**333**	*e*P	**P**	**21 56 35.2**	**+3.5**
GUIM	**Jordan**	**17.96**	**349**	*e*P	**P**	**21 56 33.6**	**+0.1**
ASPA	**Alice Springs**	**18.14**	**156**	⇓*i*P	**P**	**21 56 36.5**	**+1.3**
ASPA				*e*S	**S**	**21 59 38.1**	**+4.3**
ASAR	**Alice Springs**	**18.14**	**156**	P	**P**	**21 56 36.5**	**+1.3**
	comp=Z,58nm,0.3s,baz=347,slow=14,SNR=936						
ASAR				ScP		22 03 29.9	
	comp=Z,1.4nm,0.3s,baz=346,slow=1.8,SNR=7.7						
CUYO	**Cuyo Island**	**18.52**	**345**	*e*P	**P**	**21 56 41.3**	**+2.3**
BESP	**Borongan**	**18.63**	**359**	*e*P	**P**	**21 56 41.5**	**+1.5**
ENPP	**El Nido**	**19.33**	**340**	*e*P	**P**	**21 56 47.9**	**+1.2**
OTRP	**Odiongan**	**19.76**	**349**	*e*P	**P**	**21 56 52.4**	**+1.6**
PULI	**Pulasari**	**19.80**	**271**	⇓*e*P	**P**	**21 56 49.0**	**-2.1**
BUSP	**Coron**	**19.85**	**343**	*e*P	**P**	**21 56 53.0**	**+1.4**
SJMP	**San Jose**	**20.05**	**346**	*e*P	**P**	**21 56 55.6**	**+2.1**
PENI	**Pendagan**	**20.66**	**273**	⇑*e*P	**P**	**21 56 54.7**	**-4.4**
	comp=Z,75nm,0.3s						
PMG	**Port Moresby**	**21.16**	**98**	*e*P	**P**	**21 57 03.2**	**-0.6**
PMG				pmax	pmax		
	comp=Z,50nm,0.6s						
PMG	**Port Moresby**	**21.16**	**98**	P	**P**	**21 57 03.3**	**-0.5**
	comp=Z,49nm,0.5s,mb5.3,baz=228,slow=1.4,SNR=29						
PMG	**Port Moresby**	**21.16**	**98**	*e*P	**P**	**21 57 03.1**	**-0.7**
	comp=Z,50nm,0.6s,mb5.2						
BALP	**Baler**	**23.14**	**349**	*e*P	**P**	**21 57 21.5**	**-0.5**
CTA	**Charters Tower**	**23.56**	**125**	P	**P**	**21 57 25.8**	**0.0**
	comp=Z,45nm,0.5s,mb5.1,baz=304,slow=11,SNR=45						
CTA	**Charters Tower**	**23.56**	**125**	P	**P**	**21 57 25.8**	**0.0**
CTAO	**Charters Tower**	**23.56**	**125**	*e*P	**P**	**21 57 25.2**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,97nm,0.9s,mb5.2						
CTAO	**Charters Tower**	**23.56**	**125**	*e*P	**P**	**21 57 25.2**	**-0.5**
	comp=Z,97nm,0.9s,mb5.2						
KGM	**Kluang**	**24.30**	**291**	P	**P**	**21 57 33.7**	**+1.2**
BLDU	**Ballidu**	**24.88**	**199**	*e*P	**P**	**21 57 37.7**	**+0.1**
MUN	**Mundaring**	**26.31**	**199**	⇑*i*P	**P**	**21 57 49.9**	**-0.3**
NWAO	**Narrogin (SRO)**	**26.89**	**196**	*e*P	**P**	**21 57 55.2**	**-0.1**
NWAO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NWAO	**Narrogin (SRO)**	**26.89**	**196**	P	**P**	**21 57 55.5**	**+0.3**
	comp=Z,18nm,0.5s,mb4.8,baz=25,slow=8.1,SNR=52						
NWAO	**Narrogin (SRO)**	**26.89**	**196**	*e*P	**P**	**21 57 55.2**	**-0.1**
	comp=Z,10nm,0.6s,mb4.4						
IPM	**Ipoh**	**27.42**	**294**	P	**P**	**21 58 00.0**	**-0.1**
MRPI	**Mariponipon**	**27.91**	**287**	⇑*e*P	**P**	**21 58 01.5**	**-3.0**
KULM	**Kulim**	**28.06**	**295**	*e*P	**P**	**21 58 05.0**	**-0.7**
STKA	**Stephens Creek**	**28.63**	**151**	⇓*i*P	**P**	**21 58 10.7**	**+0.1**
STKA				*e*S	**S**	**22 02 22.7**	**-1.2**
STKA	**Stephens Creek**	**28.63**	**151**	P	**P**	**21 58 10.8**	**+0.2**
	comp=Z,191nm,0.5s,baz=324,slow=8.7,SNR=428						
ADE	**Adelaide**	**30.09**	**159**	*e*P	**P**	**21 58 24.0**	**+0.8**
ARMA	**Armidale**	**33.44**	**137**	⇓*i*P	**P**	**21 58 53.0**	**+1.4**
ARMA				*e*		22 00 21.2	
HNR	**Honiara**	**33.76**	**96**	P	**P**	**21 58 54.1**	**-0.3**
	comp=Z,178nm,0.6s,baz=309,slow=6.0,SNR=7.3						
HNR	**Honiara**	**33.76**	**96**	*e*P	**P**	**21 58 53.6**	**-0.9**
	comp=Z,107nm,0.7s,mb5.4						
TOO	**Toolangi**	**35.13**	**152**	⇓*i*P	**P**	**21 59 07.5**	**+1.9**
TOO				*e*	pP	22 00 37.5	+2.2
RIV	**Riverview**	**35.36**	**142**	⇑*i*P	**P**	**21 59 09.8**	**+2.2**
CMAR	**Chiang Mai Arr**	**36.80**	**314**	P	**P**	**21 59 20.2**	**+0.6**
	comp=Z,10nm,0.6s,mb4.4,baz=144,slow=6.7,SNR=70						
CMAR				PcP	PcP	22 01 30.1	+0.9
	comp=Z,5.0nm,0.7s,baz=166,slow=2.8,SNR=13						
CMAR				ScP		22 04 28.2	
	comp=Z,3.8nm,0.8s,baz=164,slow=3.2,SNR=14						
CBIJ	**Chichi jima**	**37.52**	**24**	P	**P**	**21 59 24.9**	**-0.5**
	comp=Z,20nm,0.4s,mb4.9,baz=280,slow=21,SNR=5.4						

WHN	Wuhan	39.08	344	⇓P	P	21 59 38.8	+0.7
KMI	Kunming	39.20	326	P	P	21 59 39.2	0.0
NOUC	Port Laguerre	41.67	115	*e*P	P	21 59 58.7	-0.5
NOUC	Port Laguerre	41.67	115	*e*P	P	21 59 58.7	-0.5
DZM	Mont Dzumac	41.79	115	*e*P	P	21 59 58.9	-1.2
DZM	Mont Dzumac	41.79	115	P	P	22 00 00.1	0.0
	comp=Z,25nm,0.7s,mb4.8,baz=288,slow=7.8,SNR=15						
DZM	Mont Dzumac	41.79	115	*e*P	P	21 59 58.9	-1.2
XAN	Xi’an	44.00	340	P	P	22 00 15.9	-1.6
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
MJAR	Matsushiro Arr	44.97	14	P	P	22 00 23.6	-1.3
	comp=Z,1.9nm,0.5s,mb3.8,baz=189,slow=8.8,SNR=11						
MJAR				PP	PP	22 02 13.7	-3.7
	comp=Z,3.9nm,0.9s,baz=190,slow=9.1,SNR=6.3						
MJAR				ScP		22 04 59.3	
	comp=Z,1.6nm,0.7s,baz=176,slow=3.9,SNR=5.0						
SHL	Shillong	46.38	316	*e*P	P	22 00 35.5	-0.4
LZH	Lanzhou	47.74	336	⇑P	P	22 00 45.8	-0.4
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.5						
LZH				AMB	AMB		
	comp=Z,70nm,5.4s						
LSA	Lhasa	49.57	319	P	P	22 01 01.0	+1.0
GUN	Gumba	52.05	314	*e*P	P	22 01 17.9	-0.4
	comp=Z,81nm,0.7s,mb5.2						
PKI	Pulchoki	52.19	313	*e*P	P	22 01 18.6	-0.7
	comp=Z,55nm,0.8s,mb5.0						
PKI	Pulchoki	52.19	313	*e*P	P	22 01 18.6	-0.7
PKI				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.6						
GTA	Gaotai	52.24	334	P	P	22 01 19.4	-0.1
GTA				PCP	PcP	22 02 23.5	+0.8
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
KKN	Kakani	52.41	313	*e*P	P	22 01 20.4	-0.5
	comp=Z,35nm,0.6s,mb4.8						
KKN	Kakani	52.41	313	*e*P	P	22 01 20.4	-0.5
KKN				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.6						
DMN	Daman	52.43	313	*e*P	P	22 01 20.6	-0.4
	comp=Z,39nm,0.7s,mb4.8						
HYB	Hyderabad	52.76	298	*i* P	P	22 01 23.5	0.0
GKN	Gorkha	52.99	313	*e*P	P	22 01 24.5	-0.5
	comp=Z,70nm,0.6s,mb5.2						
KOLN	Koldanda	53.62	312	*e*P	P	22 01 29.0	-0.5
	comp=Z,72nm,0.8s,mb5.1						
RPZ	Rata Peaks	53.67	140	P	P	22 01 29.6	0.0
	comp=Z,179nm,0.7s,mb5.5,baz=290,slow=2.0,SNR=40						
URZ	Urewera	55.56	132	P	P	22 01 41.8	-1.2
	comp=Z,30nm,0.5s,mb4.9,baz=263,slow=4.7,SNR=38						
ULN	Ulaanbaatar	57.25	345	*e*P	P	22 01 54.0	-0.4
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
ULN	Ulaanbaatar	57.25	345	*e*P	P	22 01 54.0	-0.5
	comp=Z,9.4nm,0.8s,mb4.2						
SONM	Songino Array	57.39	345	P	P	22 01 54.9	-0.5
	comp=Z,5.0nm,0.6s,mb4.0,baz=159,slow=7.1,SNR=51						
SONM				PcP	PcP	22 02 42.0	-0.6
	comp=Z,1.3nm,0.8s,baz=154,slow=3.5,SNR=4.4						
SONM				pP	pP	22 03 32.5	-3.6
	comp=Z,4.6nm,1.1s,baz=164,slow=9.0,SNR=8.1						
SONM				ScP		22 05 53.2	
	comp=Z,1.4nm,0.7s,baz=167,slow=5.6,SNR=3.8						
NDI	New Delhi	58.89	310	*e*P	P	22 02 02.8	-3.0
ZAK	Zakamensk	60.56	344	⇑*i*P	P	22 02 16.1	-0.5
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.5						
TLY	Talaya	61.63	344	*e*P	P	22 02 23.3	-0.3
TLY				*e*	pP	22 04 01.7	-4.9
TLY				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.9						
THN	Thein Dam	61.87	313	*e*P	P	22 02 23.2	-2.3
	comp=Z,17nm,0.8s,mb4.5						
MOY	Mondy	62.36	343	*e*P	P	22 02 27.7	-0.7
MKAR	Makanchi Array	66.18	329	P	P	22 02 52.4	-0.2
	comp=Z,12nm,0.7s,mb4.7,baz=126,slow=7.6,SNR=125						
MKAR				pP	pP	22 04 32.7	-4.8
	comp=Z,3.3nm,0.9s,baz=141,slow=7.8,SNR=4.8						
MKAR	Makanchi Array	66.18	329	P	P	22 02 52.4	-0.2
MKAR				pP	pP	22 04 32.7	-4.9
KZA	Kyzart	67.30	321	P	P	22 02 57.0	-2.6
	SNR=5.3						
TKM2	Tokmak 2	67.56	322	P	P	22 03 01.6	+0.4
	SNR=8.0						
KBK	Karagaybulak	67.80	322	P	P	22 03 03.4	+0.7
	SNR=5.1						
UCH	Uchtor	67.84	321	P	P	22 03 03.6	+0.7
	SNR=7.2						
AAK	Ala-Archa	68.07	322	P	P	22 03 05.0	+0.7
	SNR=5.5						
AAK	Ala-Archa	68.07	322	*e*P	P	22 03 03.8	-0.5
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
AAK	Ala-Archa	68.07	322	*e*P	P	22 03 03.8	-0.5
	comp=Z,6.2nm,0.8s,mb4.3						
AML	Almayashu	68.30	321	P	P	22 03 06.2	+0.5
	SNR=11						
USP	Ospenovka	68.42	322	P	P	22 03 06.5	+0.1
	SNR=12						
EKS2	Erkin-Say	68.53	321	P	P	22 03 07.5	+0.4
	SNR=8.4						
ZAL	Zalesovo	69.97	336	P	P	22 03 14.3	-1.1
	comp=Z,26nm,0.4s,mb5.1,baz=348,slow=4.6,SNR=85						
ZAL				pP	pP	22 04 57.3	-4.6
	comp=Z,6.5nm,1.1s,baz=349,slow=6.6,SNR=3.8						
NVS	Novosibirsk	71.26	336	*i* P	P	22 03 21.3	-1.7
NVS				*i*		22 05 02.5	
NVS				pmax	pmax		
	comp=N,9.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,13nm,1.0s						
SMDO	Samad	72.75	297	P	P	22 03 32.5	+0.2
	SNR=12						
BIDO	Bidbid	72.81	297	P	P	22 03 33.0	+0.4
	SNR=16						
VNDA	Vanda	72.82	172	*e*P	P	22 03 31.8	+0.1
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VNDA	Vanda	72.82	172	P	P	22 03 31.9	+0.2
	comp=Z,2.2nm,0.4s,mb4.0,baz=314,slow=6.5,SNR=26						
VNDA	Vanda	72.82	172	*e*P	P	22 03 31.8	+0.1
	comp=Z,2.1nm,0.6s,mb3.8						
MAW	Mawson	73.34	201	P	P	22 03 35.6	+0.9
	comp=Z,2.5nm,0.6s,mb3.9,baz=48,slow=6.1,SNR=11						
BSY	Bisya	73.42	296	P	P	22 03 36.3	+0.2
	SNR=9.7						
HOQ	Hoqain	73.55	297	P	P	22 03 37.4	+0.6
	SNR=5.7						
SBA	Scott Base	73.75	172	*e*P	P	22 03 37.9	+0.9
SBA				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.2						
SBA	Scott Base	73.75	172	*e*P	P	22 03 37.9	+1.0
	comp=Z,10nm,1.2s,mb4.2						
ASHO	Ashiyiah	74.94	298	P	P	22 03 44.8	+0.1
	SNR=7.6						
BANOM	Banah	75.06	299	P	P	22 03 45.9	+0.7
	SNR=7.9						
WHFO	Wadi Hawf	75.39	291	⇑P	P	22 03 46.2	-1.0
	SNR=14						
BVAR	Borovoye Array	76.06	329	P	P	22 03 50.2	0.0
	comp=Z,12nm,0.6s,mb4.6,baz=124,slow=7.8,SNR=96						
BVAR				pP	pP	22 05 35.9	-2.8
	comp=Z,1.2nm,0.8s,baz=162,slow=4.6,SNR=2.5						
TIXI	Tiksi	78.66	1	*e*P	P	22 04 01.5	-2.4
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
HASS	Wahat al Ahsa’	80.67	297	P	P	22 04 15.3	0.0
SYO	Syowa Base	82.05	201	⇓P	P	22 04 21.5	+0.1
SYO	Syowa Base	82.05	201	⇓PcP	PcP	22 04 29.8	+3.8
SVE	Sverdlovsk	82.81	330	*e*P	P	22 04 25.0	-0.5
QSPA	South Pole Qui	82.83	180	⇓*i*P	P	22 04 26.3	+1.1
	comp=Z,7.9nm,0.6s,mb4.4						
ARU	Arti	83.70	329	⇑*i*P	P	22 04 29.8	-0.1
ARU				*e*S	S	22 14 06.4	-3.6
ARU				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.4						
ARU	Arti	83.70	329	*e*P	P	22 04 29.2	-0.7
	comp=Z,16nm,0.8s,mb4.6						
MZLS	Mizel	84.45	295	P	P	22 04 32.5	-1.9
DJNS	Zahran al Janu	84.92	288	P	P	22 04 39.3	+2.5
TATS	Tathlith	85.27	290	P	P	22 04 40.0	+1.6
ARSS	Ar Rass	86.53	296	P	P	22 04 43.4	-0.9
HILS	Ha’il	88.05	298	P	P	22 04 53.0	+1.5
KMBO	Kilima Mbogo	88.52	269	P	P	22 04 55.3	+1.3
	comp=Z,3.6nm,0.8s,mb4.3,baz=52,slow=7.7,SNR=10						
KBRS	Khaybar	90.05	296	P	P	22 05 03.5	+2.7
ILAR	Eielson Array	95.22	25	P	P	22 05 21.9	-1.6
	comp=Z,0.2nm,0.6s,baz=238,slow=6.3,SNR=4.7						
BOSA	Boshof	95.87	240	P	P	22 05 27.8	+0.4
	comp=Z,3.0nm,0.7s,mb4.5,baz=53,slow=3.2,SNR=7.0						
BRTR	Keskin Array B	96.25	309	P	P	22 05 28.3	-0.5
	comp=Z,1.7nm,0.8s,mb4.3,baz=132,slow=5.3,SNR=11						
AKASG	Malin Array Be	99.71	320	P	P	22 05 43.1	-1.1
	comp=Z,1.1nm,0.8s,mb4.3,baz=73,slow=4.2,SNR=6.7						
ARCES	ARCESS Array B	100.29	339	P	P	22 05 46.1	-0.3
	comp=Z,4.7nm,1.0s,baz=63,slow=2.7,SNR=3.8						
GERES	GERESS Array B	109.90	319	PKiKP		22 10 28.4	
	comp=Z,0.3nm,0.6s,baz=63,slow=3.0,SNR=5.5						
GERES				SKP		22 13 16.1	
	comp=Z,1.2nm,0.7s,baz=90,slow=1.3,SNR=13						
PDAR	Pinedale Array	119.87	44	PKP	PKPdf	22 10 49.5	+2.9
	comp=Z,0.2nm,0.4s,baz=294,slow=8.9,SNR=3.3						
PDAR				SKP		22 13 34.9	
	comp=Z,0.7nm,0.8s,baz=315,slow=2.1,SNR=4.7						
PDAR				PKKPbc		22 21 02.0	
	comp=Z,1.0nm,0.6s,baz=101,slow=6.1,SNR=4.8						
TXAR	Lajitas Array	128.48	58	PKP	PKPdf	22 11 05.8	+2.1
	comp=Z,0.2nm,0.5s,baz=243,slow=2.8,SNR=4.9						
TXAR				SKPbc		22 13 38.5	
	comp=Z,3.3nm,0.8s,baz=270,slow=3.8,SNR=25						
TXAR	Lajitas Array	128.48	58	PKP	PKPdf	22 11 05.8	+2.1
TXAR				SKPbc		22 13 38.5	
PLCA	Paso Flores	130.01	164	PKP	PKPdf	22 11 09.3	+3.0
	comp=Z,0.9nm,0.6s,baz=207,slow=9.0,SNR=2.9						
PLCA				SKPbc		22 13 44.0	
	comp=Z,2.5nm,0.6s,baz=175,slow=5.7,SNR=7.0						
DBIC	Dimbokro	131.13	273	PKP	PKPdf	22 11 10.7	+1.7
	comp=Z,2.0nm,0.5s,baz=177,slow=7.3,SNR=9.2						
DBIC				SKPbc		22 13 48.4	
	comp=Z,6.9nm,0.6s,baz=91,slow=3.7,SNR=20						
SCHQ	Schefferville	131.36	10	PKP	PKPdf	22 11 10.4	+2.0
	comp=Z,1.5nm,0.8s,baz=226,slow=3.6,SNR=2.9						
SCHQ				SKPbc		22 13 47.4	
	comp=Z,13nm,0.8s,baz=18,slow=4.1,SNR=16						
SCHQ	Schefferville	131.36	10	PKP	PKPdf	22 11 10.4	+2.0
SCHQ				SKPbc		22 13 47.4	
CPUP	Villa Florida	146.58	175	PKPbc	PKPbc	22 11 40.8	+2.4
	comp=Z,10nm,0.9s,baz=203,slow=2.4,SNR=21						
CPUP	Villa Florida	146.58	175	*e*PKP	PKPdf	22 11 40.6	+4.2
LVC	Limon Verde	147.06	154	*e*PKPbc	PKPdf	22 11 43.0	+5.8
JTS	JuntasAbangare	149.36	82	*e*PKHKP		22 11 48.1	
LPAZ	La Paz	152.89	149	PKPbc	PKPdf	22 11 56.0	+10
	comp=Z,0.8nm,0.4s,baz=38,slow=3.3,SNR=7.7						
LPAZ				PKPab	PKPab	22 12 10.9	+0.9
	comp=Z,7.3nm,0.5s,baz=192,slow=2.5,SNR=40						
LPAZ				pPKPab		22 14 02.2	
	comp=Z,3.4nm,1.0s,baz=105,slow=1.1,SNR=5.6						
LPAZ	La Paz	152.89	149	*e*PKPbc	PKPdf	22 11 56.1	+10
LPAZ				*e*PKPab	PKPab	22 12 11.0	+1.0

IDC 05 22:08:28.7±1.6**, 17.40S**×**179.44W, h667**^{km}±29^{km}**, mb3.1**/4**, mb1 3.2**/5**, mb1mx2.9**/18**, mbtmp4.3**/5**, Error ellipse: s-maj=91.2km s-min=19.6km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.15	66	P	P	22 10 31.3	-0.4
	1.2nm,0.3s,baz=232,slow=19,SNR=7.2						
AFI				S	S	22 12 13.3	+3.4
	1.5nm,0.3s,baz=341,slow=20,SNR=4.2						
CTA	Charters Tower	32.57	260	P	P	22 14 09.7	-0.7
	2.6nm,0.7s,baz=90,slow=14,SNR=3.0						
STKA	Stephens Creek	38.02	240	P	P	22 14 52.7	-2.3
	1.6nm,0.5s,baz=85,slow=10,SNR=6.0						
WRA	Warramunga Arr	43.76	259	P	P	22 15 39.0	-1.5
	1.0nm,0.5s,baz=90,slow=8.0,SNR=39						
ASAR	Alice Springs	43.99	254	P	P	22 15 40.6	-1.6
	10.0nm,0.6s,baz=88,slow=8.4,SNR=161						
ASAR				PcP	PcP	22 17 10.3	-2.2
	0.3nm,0.5s,baz=98,slow=3.6,SNR=4.1						
GERES	GERESS Array B	146.87	344	PKPbc	PKPbc	22 26 57.8	+0.6
	0.2nm,0.4s,baz=18,slow=3.1,SNR=4.9						

*NEIC **05** 22:19:11.5±0.9, 16.24S×174.27W, h136^{km}±8^{km}, mb4.2/5, Error ellipse: s-maj=19.7km s-min=6.9km az=139.0*

*IDC **05** 22:19:11.4±2.3, 16.26S×174.28W, h134^{km}±21^{km}, mb3.9/10, mb1 4.1/12, mb1mx3.9/20, mbtmp4.3/12, Error ellipse: s-maj=32.7km s-min=12.1km az=140.0*

ISC 05 22:19:10.0±1.5**, 16.2S**±0.2×**174.4W**±0.2**, h132**^{km}±14^{km}**, n22, σ0^{s}54**/21**, mb4.0**/15**, 1C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.35	49	P	P	22 20 02.7	+0.6
	83nm,0.3s,baz=22,slow=1.8,SNR=92						
AFI				S	S	22 20 38.4	-3.5
	371nm,0.3s,baz=35,slow=19,SNR=30						
AFI	Afiamalu	3.35	49	⇑*i*P	P	22 20 02.5	+0.4
AFI				*e*S	S	22 20 37.4	-4.5
DZM	Mont Dzumac	19.06	249	P	P	22 23 25.5	+1.0
	0.4nm,0.3s,baz=84,slow=19,SNR=3.6						
URZ	Urewera	23.27	197	P	P	22 24 06.5	0.0
	12nm,0.3s,mb4.8,baz=140,slow=1.2,SNR=18						
STKA	Stephens Creek	42.86	240	P	P	22 26 56.7	-0.1
	6.6nm,0.8s,mb4.3,baz=66,slow=8.7,SNR=11						
STKA	Stephens Creek	42.86	240	P	P	22 26 56.7	-0.1
WRA	Warramunga Arr	48.77	257	P	P	22 27 43.1	-0.5
	0.5nm,0.5s,mb3.4,baz=91,slow=6.8,SNR=28						
ASAR	Alice Springs	49.00	253	P	P	22 27 44.6	-0.7
	4.0nm,0.6s,mb4.2,baz=89,slow=7.8,SNR=61						
YBH	Yreka Blue Hor	74.75	37	P	P	22 30 37.4	+0.2
	1.8nm,0.7s,mb3.8,baz=144,slow=4.5,SNR=5.9						
NVAR	Mina Array Bea	75.50	42	P	P	22 30 41.6	+0.1
	1.3nm,0.6s,mb3.7,baz=223,slow=8.4,SNR=5.8						
HLID	Hailey	80.79	40	*e*P	P	22 31 10.8	+0.4
	3.3nm,1.1s,mb3.9						
TXAR	Lajitas Array	81.80	56	P	P	22 31 16.4	+0.5
	0.7nm,0.7s,mb3.4,baz=228,slow=8.1,SNR=8.2						
MCK	McKinley	82.03	11	*e*P	P	22 31 16.4	0.0
	1.9nm,0.8s,mb3.8						
COLA	College	83.27	11	*e*P	P	22 31 22.6	0.0
	5.6nm,1.0s,mb4.2						
ILAR	Eielson Array	83.36	11	P	P	22 31 22.9	-0.2
	1.1nm,0.9s,mb3.6,baz=208,slow=5.9,SNR=7.4						
BW06	Boulder Array	83.44	42	*e*P	P	22 31 23.8	-0.1
	3.0nm,0.7s,mb4.1						
PDAR	Pinedale Array	83.44	42	P	P	22 31 23.9	-0.1
	2.9nm,0.8s,mb4.1,baz=229,slow=2.8,SNR=22						
BOZ	Bozeman (W)	83.58	39	*e*P	P	22 31 24.9	+0.2
	6.0nm,1.4s,mb4.1						
MAW	Mawson	86.79	199	P	P	22 31 39.4	-0.6
	1.6nm,0.8s,mb3.9,baz=225,slow=2.9,SNR=3.0						
BRTR	Keskin Array B	146.14	319	PKPbc	PKPbc	22 38 36.6	+1.8
	0.9nm,0.8s,baz=122,slow=2.5,SNR=6.2						
GERES	GERESS Array B	146.73	350	PKPbc	PKPbc	22 38 37.9	+2.0
	0.3nm,0.6s,baz=315,slow=1.9,SNR=3.8						
DAVOX	Davos	149.26	354	PKPbc	PKPdf	22 38 44.6	+6.1
	1.2nm,0.5s,baz=342,slow=19,SNR=3.0						

*NNC **05** 22:20:39.8±4.3, 41.58N×68.53E, mpv3.8, Error ellipse: s-maj=42.1km s-min=29.3km az=158.0*

*IDC **05** 22:20:43.5±1.7, 41.79N×68.59E, mb3.8/2, mb1 3.9/5, mb1mx3.5/25, mbtmp3.8/5, ML3.4/3, Error ellipse: s-maj=23.7km s-min=19.1km az=82.0*

*NEIC **05** 22:20:44.3±0.7, 41.77N×68.64E, h10^{km}, mb3.9/5, Error ellipse: s-maj=11.7km s-min=7.7km az=67.0*

*MOS **05** 22:20:45.6±1.0, 41.83N×68.59E, h33^{km}, mb4.2/3, Error ellipse: s-maj=17.7km s-min=13.4km az=82.4*

ISC 05 22:20:42.1±0.7**, 41.81N**±0.05×**68.80E**±0.07**, h10**^{km}**, n33, σ1^{s}15**/40**, mb4.0**/3**, 9C-2D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	1.81	44	⇑P	Pg	22 21 17.9	-0.4
	15nm,0.2s,baz=225,slow=14,SNR=297						
KK31				⇓S	Sg	22 21 44.0	+1.6
	183nm,0.4s,baz=227,slow=29,SNR=16						
KKAR	Karatay Array	1.81	44	PN	Pg	22 21 17.7	-0.6
KKAR				*e*S	Sg	22 21 43.8	+1.4
KKAR				pmax	pmax		
	comp=Z,13nm,0.2s						
AML	Almayashu	3.67	83	P	Pg	22 21 54.8	-0.5
	SNR=36						
EKS2	Erkin-Say	3.79	75	P	Pg	22 21 55.9	-1.9
	SNR=9.5						
UCH	Uchtor	4.28	83	P	Pg	22 22 06.2	-1.3
	SNR=11						
AAK	Ala-Archa	4.31	77	P	Pg	22 22 05.9	-2.3
	SNR=8.9						
AAK	Ala-Archa	4.31	77	⇑Pg	Pg	22 22 05.3	-2.9
	comp=Z,14nm,0.6s						
AAK				⇑Lg		22 23 01.6	
	comp=Z,28nm,0.5s						
AAK	Ala-Archa	4.31	77	*e*PN	Pn	22 21 53.4	+4.2
AAK				*e*		22 22 04.3	
AAK				*e*		22 22 59.1	
CHMS	Chumysh	4.56	73	P	Pg	22 22 09.3	-3.9
	SNR=8.5						
KZA	Kyzart	4.82	85	P	Pg	22 22 15.4	-2.8
	SNR=14						
AB31	Akbulak array	9.69	323	⇑Pn	P	22 23 03.8	-0.8
	comp=Z,2.3nm,0.5s						
AB31				⇑Sn	Sn	22 24 45.8	-8.8
	comp=Z,2.0nm,0.3s						
AB31	Akbulak array	9.69	323	P	P	22 23 03.7	-0.9
AB31						22 24 45.7	
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AB31	Akbulak array	9.69	323	P	P	22 23 03.7	-0.9
	comp=Z,1.0nm,0.5s						
AB31				*e*		22 24 45.7	
MK31	Makanchi Array	10.87	58	⇑Pn	P	22 23 21.4	+0.6
	comp=Z,0.9nm,0.5s,baz=243,slow=16,SNR=12						
MK31				⇑Sn	S	22 25 35.6	+12
	comp=Z,2.4nm,0.8s						
MK31				⇑Lg		22 26 31.2	
	comp=Z,4.2nm,0.8s						
MKAR	Makanchi Array	10.87	58	Pn	P	22 23 21.1	+0.3
	comp=Z,0.7nm,0.3s,baz=246,slow=17,SNR=18						
MKAR				Lg		22 26 31.6	
	comp=Z,0.5nm,0.3s,baz=249,slow=25,SNR=5.2						
BVA0	Borovoye Array	11.27	5	⇑Pn	P	22 23 25.8	-0.5
	comp=Z,0.2nm,0.6s						
BVA0				⇓Sn	S	22 25 24.7	-8.6
	comp=Z,0.7nm,0.8s						
BVA0	Borovoye Array	11.27	5	P	P	22 23 26.2	0.0
BVA0				*e*		22 25 24.5	
BVAR	Borovoye Array	11.27	5	Pn	P	22 23 25.2	-1.0
	comp=Z,0.7nm,0.3s,baz=183,slow=12,SNR=15						
BVAR				Sn	S	22 25 24.8	-8.5
	comp=Z,1.2nm,0.3s,baz=162,slow=25,SNR=7.0						
ARU	Arti	16.07	339	*e*P	P	22 24 38.6	+9.2
ARU				*e*S	S	22 27 22.0	-5.6
ZAL	Zalesovo	16.15	36	Pn	P	22 24 30.7	+0.1
	comp=Z,0.2nm,0.3s,baz=153,slow=11,SNR=1.9						
ZAL				Lg		22 29 17.6	
	comp=Z,0.1nm,0.3s,baz=138,slow=16,SNR=2.5						
ZAL	Zalesovo	16.15	36	P	P	22 24 30.7	+0.2
KOLN	Koldanda	18.51	135	*e*P	P	22 25 00.1	-0.2
	comp=Z,2.4nm,0.3s						
GKN	Gorkha	18.89	132	*e*P	P	22 25 04.7	-0.2
	comp=Z,9.0nm,0.4s						
KKN	Kakani	19.41	131	*e*P	P	22 25 12.2	+1.1
	comp=Z,7.2nm,0.6s						
KKN	Kakani	19.41	131	*e*P	P	22 25 12.2	+1.1
KKN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PKI	Pulchoki	19.66	131	*e*P	P	22 25 14.8	+0.9
	comp=Z,4.6nm,0.5s						
PKI	Pulchoki	19.66	131	*e*P	P	22 25 14.8	+0.9
PKI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	32.18	322	P	P	22 27 11.9	0.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	32.18	322	P	P	22 27 11.9	+0.1
	comp=Z,0.9nm,0.8s,mb3.6,baz=112,slow=7.5,SNR=2.6						
WRA	Warramunga Arr	86.22	121	P	P	22 33 26.5	+1.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	86.22	121	P	P	22 33 26.5	+1.4
	comp=Z,0.5nm,0.5s,mb4.0,baz=326,slow=4.7,SNR=11						
WRAB	Tennant Creek	86.22	121	*e*P	P	22 33 27.1	+2.0
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.3						
WRAB	Tennant Creek	86.22	121	*e*P	P	22 33 27.1	+2.0
	comp=Z,0.8nm,0.5s,mb4.2						

*IDC **05** 22:32:14.7±0.4, 26.60S×84.75E, mb5.0/21, mb1 5.1/21, mb1mx5.0/24, mbtmp5.0/21, MS4.3/17, Ms1 4.3/17, ms1mx4.3/17, Error ellipse: s-maj=15.2km s-min=13.5km az=20.0*

*BJI **05** 22:32:15.6, 27.10S×84.41E, h30^{km}, mB5.2, mb5.2, Ms5.0, Msz4.6*

*HRVD **05** 22:32:16.3±0.2, 26.65S×84.90E, h12^{km}, MW5.2/57, Centroid moment Tensor Solution. LP body waves: s43,c65;Mantle waves: s57,c110; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.95±.15; M$_{\theta\theta}$-1.36±.14; M$_{\phi\phi}$-0.59±.18; M$_{r\theta}$-1.57±.34; M$_{\theta\phi}$-6.02±.12; M$_{\phi r}$1.42±.41; Best double couple: M$_0$6.568×10^{16} NP1:ϕ_s5°, δ71°, λ19°. NP2:ϕ_s268°, δ72°, λ159°. Principal axes: T 6.121, Plg27°, Azm226°; N .886, Plg63°, Azm49°; P -7.015, Plg1°, Azm317°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **05** 22:32:16.3±0.2, 26.70S×84.75E, h10^{km}, mb5.3/22, MS4.2/6 Error ellipse: s-maj=7.7km s-min=6.9km az=203.0*

*MOS **05** 22:32:18.4±1.2, 26.75S×84.75E, h33^{km}, mb5.4/35, MS4.3/14, Error ellipse: s-maj=12.4km s-min=9.0km az=101.6*

ISC 05 22:32:15.2±0.2**, 26.79S**±0.05×**84.78E**±0.05**, h10**^{km}**, (h17**^{km}±1.3^{km}**:pP-P), n194, σ1^{s}21**/152**, mb5.1**/67**, MS4.4**/36**, 20C-9D, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	28.73	110	LR	LR	22 47 25.3	
	comp=Z,484nm,19.4s,MS4.1,baz=123,slow=32						
MBWA	Marble Bar	32.36	88	P	P	22 38 42.0	-5.1
	16nm,1.1s,mb4.8						
MBWA				LR	LR		
	comp=Z,694nm,19.0s,MS4.4						
KULM	Kulim	35.40	28	*e*P	P	22 39 14.3	+0.9
MAW	Mawson	42.96	192	P	P	22 40 16.3	+0.7
MAW				pmax	pmax		
	comp=Z,11nm,0.7s						
MAW				MLR	MLR		
	comp=Z,575nm,19.7s						
MAW	Mawson	42.96	192	P	P	22 40 16.3	+0.7
	comp=Z,11nm,0.7s,mb4.7,baz=32,slow=9.2,SNR=37						
MAW				LR	LR	22 54 11.0	
	comp=Z,575nm,19.7s,MS4.5,baz=28,slow=30						
ASPA	Alice Springs	44.33	97	*e*P	P	22 40 27.0	-0.4
ASAR	Alice Springs	44.33	97	P	P	22 40 27.1	-0.3
ASAR				pmax	pmax		
	comp=Z,39nm,0.9s						
ASAR				MLR	MLR		
	comp=Z,244nm,18.1s						
ASAR	Alice Springs	44.33	97	P	P	22 40 27.1	-0.3
	comp=Z,39nm,0.9s,mb5.2,baz=259,slow=6.7,SNR=90						
ASAR				LR	LR	22 58 46.2	
	comp=Z,244nm,18.1s,MS4.2,baz=257,slow=36						
WRA	Warramunga Arr	45.77	92	P	P	22 40 38.5	-0.4
WRA						22 42 15.1	
WRA				pmax	pmax		
	comp=Z,28nm,1.0s						
WRA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WRA	Warramunga Arr	45.77	92	P	P	22 40 38.5	-0.4
	comp=Z,28nm,1.0s,mb5.2,baz=256,slow=8.3,SNR=78						
WRA				PcP	PcP	22 42 15.1	-2.0
	comp=Z,7.7nm,1.1s,baz=255,slow=2.5,SNR=6.0						
WB2	Warramunga Arr	45.78	92	*e*P	P	22 40 38.9	-0.1
WRAB	Tennant Creek	45.79	92	*e*P	P	22 40 38.3	-0.7
WRAB				pmax	pmax		
	comp=Z,68nm,1.1s,mb5.5						
WRAB				MLR	MLR		
	comp=Z,242nm,19.0s,MS4.2						
WRAB	Tennant Creek	45.79	92	*e*P	P	22 40 38.3	-0.7
	comp=Z,68nm,1.1s,mb5.5						
WRAB				LR	LR		
	comp=Z,242nm,19.0s,MS4.2						
KAKA	Kakadu	46.72	82	*e*P	P	22 40 46.7	+0.2
CMAR	Chiang Mai Arr	47.03	19	P	P	22 40 48.2	-0.6
CMAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CMAR				MLR	MLR		
	comp=Z,235nm,20.9s						

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CMAR  Chiang Mai Arr   47.03  19   P      P       22 40 48.1  -0.7
      comp=Z,7.9nm,0.9s,mb4.6,baz=206,slow=8.2,SNR=32
CMAR                               LR     LR      22 56 51.7
      comp=Z,235nm,20.9s,MS4.1,baz=205,slow=32
CMAR  Chiang Mai Arr   47.03  19   P      P       22 40 48.1  -0.7
CMAR                               LR     LR      22 56 51.7
STKA  Stephens Creek   49.32 110   eP     P       22 41 05.5  -1.0
STKA  Stephens Creek   49.32 110   P      P       22 41 06.2  -0.3
      comp=Z,16nm,1.0s,mb5.0,baz=273,slow=7.4,SNR=14
STKA                               LR     LR      23 00 05.2
      comp=Z,602nm,18.7s,MS4.6,baz=245,slow=34
SYO   Syowa Base       49.82 200 ⇓P     P       22 41 09.4  -0.5
SYO   Syowa Base       49.82 200 ⇓pP    pP      22 41 12.1  -0.8
MATP  Matopo           51.62 264   LR     LR      22 58 59.6
      comp=Z,288nm,19.4s,MS4.3,baz=105,slow=31
QIZ   Qiongzhong       51.63  31   P      P       22 41 25.3  +1.0
QIZ                                S      S       22 48 48.0  +4.2
QIZ                                LR     LR
      comp=N,410nm,16.1s
QIZ                                LR     LR
      comp=Z,360nm,20.2s,MS4.4
DRV   Dumont d'Urvil   52.10 156   P      P       22 41 38.0  +11
KMBO  Kilima Mbogo     52.25 291   P      P       22 41 28.6  -0.5
KMBO                               pmax   pmax
      comp=Z,2.0nm,0.4s
KMBO                               MLR    MLR
      comp=Z,495nm,20.3s
KMBO  Kilima Mbogo     52.25 291   P      P       22 41 28.6  -0.5
      comp=Z,2.0nm,0.4s,mb4.4,baz=234,slow=23,SNR=6.5
KMBO                               LR     LR      22 58 41.5
      comp=Z,495nm,20.3s,MS4.5,baz=115,slow=30
BOSA  Boshof           52.25 253   eP     P       22 41 27.8  -1.1
BOSA                               pmax   pmax
      comp=Z,72nm,1.4s,mb5.4
BOSA  Boshof           52.25 253   P      P       22 41 28.3  -0.6
      comp=Z,23nm,0.9s,mb5.1,baz=110,slow=7.8,SNR=27
BOSA                               LR     LR      22 59 05.3
      comp=Z,223nm,18.1s,MS4.2,baz=104,slow=31
BOSA  Boshof           52.25 253   eP     P       22 41 27.8  -1.1
      comp=Z,72nm,1.4s,mb5.4
SHL   Shillong         52.50   8   eP     P       22 41 31.0  +0.2
SHL                              ⇑ix     x       22 46 09.0
LBTB  Lobatse          52.84 258   eP     P       22 41 32.5  -0.9
LBTB                               pmax   pmax
      comp=Z,60nm,1.3s,mb5.4
LBTB  Lobatse          52.84 258   P      P       22 41 32.3  -1.1
      comp=Z,25nm,1.0s,mb5.1,baz=139,slow=6.7,SNR=18
LBTB                               LR     LR      22 59 57.7
      comp=Z,195nm,18.4s,MS4.2,baz=119,slow=32
LBTB  Lobatse          52.84 258   eP     P       22 41 32.5  -0.9
      comp=Z,60nm,1.3s,mb5.4
LSZ   Lusaka           53.67 270   eP     P       22 41 38.7  -0.9
LSZ                                pmax   pmax
      comp=Z,13nm,1.0s,mb4.8
LSZ                                MLR    MLR
      comp=Z,381nm,20.0s,MS4.5
LSZ   Lusaka           53.67 270   eP     P       22 41 38.7  -0.9
      comp=Z,13nm,1.0s,mb4.8
LSZ                                LR     LR
      comp=Z,381nm,20.0s,MS4.5
PKI   Pulchoki         54.05   1   eP     P       22 41 40.4  -1.8
      comp=Z,72nm,1.4s,mb5.4
PKI   Pulchoki         54.05   1   eP     P       22 41 40.4  -1.8
PKI                                pmax   pmax
      comp=Z,36nm,1.4s,mb5.1
DMN   Daman            54.08   0   eP     P       22 41 41.2  -1.2
      comp=Z,46nm,1.2s,mb5.3
KOLN  Koldanda         54.26 359   eP     P       22 41 42.2  -1.5
      comp=Z,120nm,1.2s,mb5.7
KKN   Kakani           54.27   1   eP     P       22 41 42.5  -1.2
      comp=Z,60nm,1.3s,mb5.4
KKN   Kakani           54.27   1   eP     P       22 41 42.5  -1.2
KKN                                pmax   pmax
      comp=Z,30nm,1.3s,mb5.1
GUN   Gumba            54.39   1   eP     P       22 41 43.6  -1.1
      comp=Z,254nm,1.5s,mb5.9
KMI   Kunming          54.44  20   P      P       22 41 47.0  +1.9
KMI                                AP     pP      22 41 53.1  +5.0
KMI                                AMB    AMB
      comp=Z,30nm,1.4s,mb5.0
GKN   Gorkha           54.48 360   eP     P       22 41 43.5  -1.8
      comp=Z,96nm,1.1s,mb5.7
CTA   Charters Tower   56.34  97   P      P       22 41 57.3  -1.6
CTA                                pmax   pmax
      comp=Z,14nm,1.0s
CTA   Charters Tower   56.34  97   P      P       22 41 57.3  -1.6
      comp=Z,14nm,1.0s,mb5.0,baz=257,slow=14,SNR=2.9
LSA   Lhasa            56.50   7   P      P       22 42 01.4  +1.5
GYA   Guiyang          56.98  23⇑iP     P       22 42 04.5  +1.1
GYA                                AP     pP      22 42 09.1  +2.6
GYA                                PP     PP      22 44 11.6  -0.1
GYA                                AMB    AMB
      comp=Z,20nm,1.2s,mb5.0
GYA                                AMB    AMB
      comp=Z,290nm,3.6s
MBAR  Mbarara          58.03 287   eP     P       22 42 09.1  -1.8
MBAR                               pmax   pmax
      comp=Z,18nm,1.4s,mb4.9
MBAR                               MLR    MLR
      comp=Z,108nm,19.0s,MS4.0
MBAR  Mbarara          58.03 287   eP     P       22 42 09.1  -1.8
      comp=Z,18nm,1.4s,mb4.9
MBAR                               LR     LR
      comp=Z,108nm,19.0s,MS4.0
ARMA  Armidale         58.03 111   eP     P       22 42 11.8  +1.0
NVL   N'lazarevskaya   59.35 202⇓iP     P       22 42 18.3  -1.1
NVL                                i              22 43 06.7
NVL                                eS     S       22 50 17.7  -8.6
NVL                                eSS    SS      22 54 20.7  -1.9
NVL                                pmax   pmax
      comp=Z,8.0nm,1.3s,mb4.6
NVL                                MLR    MLR
      comp=Z,50nm,14.8s,MS3.8
MAIT  Maitri           59.38 202   eP     P       22 42 20.0  +0.4
CD2   Chengdu          60.17  19⇑iP     P       22 42 25.4  -0.2
CD2                                AMB    AMB
      comp=Z,30nm,1.0s,mb5.3
KAMS  Al Khamasin      60.91 316   P      P       22 42 31.2  +0.5
TATS  Tathlith         61.03 315   P      P       22 42 33.7  +2.1
VNDA  Vanda            61.25 166   P      P       22 42 32.8  +0.5
VNDA                               pmax   pmax
      comp=Z,11nm,1.1s
VNDA                               MLR    MLR
      comp=Z,295nm,19.9s
VNDA  Vanda            61.25 166   P      P       22 42 32.8  +0.5
      comp=Z,11nm,1.1s,mb4.9,baz=276,slow=7.3,SNR=25
VNDA                               LR     LR      23 06 19.0
      comp=Z,295nm,19.9s,MS4.4,baz=279,slow=33
TSUM  Tsumeb           61.71 262   LR     LR      23 04 02.6
      comp=Z,308nm,21.8s,MS4.4,baz=100,slow=31
TSUM  Tsumeb           61.71 262   eP     P       22 42 35.9  -0.3
      comp=Z,37nm,1.2s,mb5.4
TSUM                               LR     LR
      comp=Z,350nm,22.0s,MS4.5
HASS  Wahat al Ahsa'   61.77 324   P      P       22 42 34.1  -2.4
BLJS  Baljurashi       62.49 313   P      P       22 42 42.7  +1.3
RYDS  Riyadh           62.65 321   P      P       22 42 45.6  +3.2
QSPA  South Pole Qui   63.33 180   eP     P       22 42 46.2   0.0
      comp=Z,70nm,0.9s,mb5.8
MZLS  Mizel            63.35 319   P      P       22 42 46.4  -0.7
WHN   Wuhan            63.63  28   P      P       22 42 50.0  +1.1
SNAA  Sanae            64.09 201⇑iP     P       22 42 51.3  +0.1
SNAA  Sanae            64.09 201          P       22 42 56.4  +5.2
SNAA  Sanae            64.09 201          PcP     22 43 21.9  -4.3
SNAA  Sanae            64.09 201⇑iP     P       22 42 51.2   0.0
SNAA                               pmax   pmax
      comp=Z,63nm,1.3s
SNAA  Sanae            64.09 201⇑iP     P       22 42 51.2   0.0
      comp=Z,63nm,1.3s,mb5.5
AFFS  'Afif            64.58 318   P      P       22 42 57.4  +2.2
XAN   Xi'an            64.68  22   P      P       22 42 52.8  -2.9
XAN                                AP     pP      22 43 00.6  +1.8
XAN                                AMB    AMB
      comp=Z,30nm,1.2s,mb5.2
LZH   Lanzhou          65.07  17  ⇑P     P       22 42 58.5  +0.4
LZH                                ePP    PP      22 45 24.5  +1.1
LZH                                eS     S       22 51 41.5  +2.6
LZH                                AMB    AMB
      comp=Z,40nm,1.5s,mb5.2
LZH                                AMB    AMB
      comp=Z,110nm,6.2s
LZH                                LR     LR
      comp=N,890nm,15.0s
LZH                                LR     LR
      comp=Z,1μm,17.8s,MS5.1
VNA2  Neumayer--Watz   65.66 201⇑iP     P       22 43 02.4  +1.1
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VNA2  Neumayer--Watz   65.66 201⇑i      PcP     22 43 32.4  -0.3
ARSS  Ar Rass          65.92 319   P      P       22 43 04.4  +0.7
VNA1  Neumayer--Stat   66.00 201⇑iP     P       22 43 04.8  +1.3
VNA3  Neumayer Olymp   66.31 201⇑iP     P       22 43 06.5  +1.0
VNA3  Neumayer Olymp   66.31 201⇑i      PcP     22 43 34.5  -0.9
NJ2   Nanjing          66.92  31   eP     P       22 43 11.0  +1.0
NJ2                                AP     pP      22 43 15.7  +2.5
NJ2                                PP     PP      22 45 39.9  +0.7
NJ2                                S      S       22 51 59.0  -2.5
NJ2                                AMB    AMB
      comp=Z,40nm,0.9s,mb5.5
NJ2                                AMB    AMB
      comp=Z,250nm,6.0s
NJ2                                LR     LR
      comp=N,560nm,27.8s,MS4.8
NJ2                                LR     LR
      comp=E,420nm,23.0s,MS4.8
NJ2                                LR     LR
      comp=Z,150nm,23.8s,MS4.1
SSE   Sheshan          67.25  34   eP     P       22 43 12.7  +0.6
SSE                                S      S       22 52 08.9  +3.5
SSE                                SS     SS      22 56 25.4  -1.2
SSE                                AMB    AMB
      comp=Z,30nm,1.5s,mb5.1
SSE                                AMB    AMB
      comp=Z,100nm,4.2s
SSE                                LR     LR
      comp=N,120nm,17.3s,MS4.6
SSE                                LR     LR
      comp=E,290nm,17.3s,MS4.6
SSE                                LR     LR
      comp=Z,310nm,17.9s,MS4.6
GTA   Gaotai           67.33  13   P      P       22 43 13.7  +1.2
GTA                                AP     pP      22 43 19.0  +3.4
GTA                                XP     sP      22 43 23.0  +6.2
GTA                                AMB    AMB
      comp=Z,10.0nm,1.1s,mb4.8
GTA                                AMB    AMB
      comp=Z,110nm,11.2s
GTA                                LR     LR
      comp=N,160nm,15.2s
GTA                                LR     LR
      comp=E,150nm,23.2s
GTA                                LR     LR
      comp=Z,180nm,19.0s,MS4.3
HILS  Ha'il            67.89 319   P      P       22 43 17.5  +1.2
YNBS  Yanbu' al Bahr   68.00 314   P      P       22 43 19.2  +2.2
KBRS  Khaybar          68.24 316   P      P       22 43 20.0  +1.6
UMJS  Umm Lajj         69.07 314   P      P       22 43 26.4  +2.8
KZA   Kyzart           69.08 352   P      P       22 43 22.1  -1.3
      SNR=13
ULHL  Ulahol           69.14 353   P      P       22 43 24.6  +0.9
      SNR=7.6
UCH   Uchtor           69.32 352   P      P       22 43 25.7  +0.9
      SNR=10
AML   Almayashu        69.33 351   P      P       22 43 25.3  +0.4
      SNR=17
KBK   Karagaybulak     69.69 352   P      P       22 43 28.0  +1.0
      SNR=9.0
AAK   Ala-Archa        69.72 352   eP     P       22 43 26.7  -0.6
AAK                                pmax   pmax
      comp=Z,6.0nm,0.8s,mb4.6
AAK   Ala-Archa        69.72 352   eP     P       22 43 26.7  -0.6
      comp=Z,6.5nm,0.8s,mb4.6
EKS2  Erkin-Say        69.84 351   P      P       22 43 28.9  +0.9
      SNR=9.5
TKM2  Tokmak 2         69.88 353   P      P       22 43 28.6  +0.5
      SNR=14
FRU   Bishkek          69.90 352⇑eP     P       22 43 29.0  +0.6
FRU                                e              22 43 42.0
FRU                                pmax   pmax
      comp=Z,40nm,2.0s,mb5.0
CHMS  Chumysh          70.05 352   P      P       22 43 29.5  +0.2
      SNR=7.4
WMQ   Urumqi           70.31   2   P      P       22 43 30.5  -0.3
WMQ                                PCP    PcP     22 43 52.5  -0.1
WMQ                                PP     PP      22 46 08.1  -0.3
WMQ                                PPP    PPP     22 47 48.5  -0.2
WMQ                                S      S       22 52 40.8  -0.8
WMQ                                SCS    ScS     22 53 28.9  -1.2
WMQ                                SS     SS      22 57 12.5  -1.2
WMQ                                AMB    AMB
      comp=Z,20nm,1.2s,mb4.9
WMQ                                LR     LR
      comp=N,950nm,21.0s,MS5.2
WMQ                                LR     LR
      comp=E,940nm,19.5s,MS5.2
WMQ                                LR     LR
      comp=Z,920nm,18.8s,MS5.1
USP   Ospenovka        70.35 352   P      P       22 43 31.7  +0.6
      SNR=45
BTO   Baotou           71.03  20   eP     P       22 43 36.4  +1.1
DBAS  Duba             71.31 315   P      P       22 43 39.3  +2.1
HHC   Hu-ho-hao-te     71.74  21⇑iP     P       22 43 41.2  +1.7
HHC                                AP     pP      22 43 45.7  +3.0
HHC                                XP     sP      22 43 49.1  +5.3
HHC                                PP     PP      22 46 20.7  +0.1
HHC                                S      S       22 52 58.7  +0.5
HHC                                SS     SS      22 57 38.2  +2.3
HHC                                AMB    AMB
      comp=Z,30nm,1.3s,mb5.1
HHC                                AMB    AMB
      comp=Z,90nm,4.1s
HHC                                LR     LR
      comp=N,340nm,16.7s,MS4.7
HHC                                LR     LR
      comp=E,280nm,21.4s,MS4.7
HHC                                LR     LR
      comp=Z,290nm,17.5s,MS4.6
MKAR  Makanchi Array   73.27 358  i P     P       22 43 46.3  -2.1
MKAR                               pmax   pmax
      comp=Z,15nm,1.0s
MKAR  Makanchi Array   73.27 358   P      P       22 43 45.6  -2.8
      comp=Z,15nm,1.0s,mb4.9,baz=169,slow=6.2,SNR=50
MKAR                               LR     LR      23 16 05.5
      comp=Z,295nm,19.4s,MS4.6,baz=179,slow=36
EIL   Elat             73.67 316   P      P       22 43 49.0  -2.1
      comp=Z,9.2nm,0.9s,mb4.7,baz=14,slow=0.8,SNR=7.2
EIL   Elat             73.67 316   eP     P       22 43 50.3  -0.8
      comp=Z,14nm,1.0s,mb4.8
JNU   Nakatsue         73.95  39   P      P       22 43 51.8  -0.9
      comp=Z,19nm,0.9s,mb5.0,baz=197,slow=8.0,SNR=7.0
ASF   Jabal al Asfar   74.28 319   P      P       22 43 53.8  -0.8
      comp=Z,9.4nm,1.1s,mb4.6,baz=9.4,slow=3.2,SNR=8.1
INCN  Inchon           75.05  33   eP     P       22 43 59.0  +0.1
      comp=Z,59nm,1.4s,mb5.3
GNI   Garni            76.31 330  i P     P       22 44 05.1  -0.9
GNI                                pmax   pmax
      comp=Z,38nm,1.9s
SONM  Songino Array    76.78  15   P      P       22 44 07.5  -1.0
      comp=Z,9.2nm,0.8s,mb4.8,baz=195,slow=5.7,SNR=51
SONM                               LR     LR      23 20 18.6
      comp=Z,257nm,18.5s,MS4.6,baz=192,slow=38
SONM  Songino Array    76.78  15   P      P       22 44 07.5  -1.0
SONM                               LR     LR      23 20 18.6
ULN   Ulaanbaatar      76.96  15  i P     P       22 44 09.2  -0.3
TI2   Plekhanov        77.58 330   eP     P       22 44 14.4  +1.3
ZAK   Zakamensk        78.56  12   eP     P       22 44 19.0  +0.8
ZAK                                pmax   pmax
      comp=Z,4.0nm,1.5s,mb4.1
ZEI   Tsey             78.79 331   eP     P       22 44 15.8  -3.9
ZEI                               i *PP   pP      22 44 22.0  -0.9
ZEI                               i               22 47 13.7
ZEI                                pmax   pmax
      comp=Z,6.0nm,0.8s,mb4.6
CN2   Changchun        79.53  29   eP     P       22 44 24.3  +0.6
CN2                                eAP    pP      22 44 28.9  +2.1
CN2                                eS     S       22 54 24.6  +0.7
CN2                                AMB    AMB
      comp=Z,10.0nm,0.8s,mb4.8
CN2                                LR     LR
      comp=N,200nm,18.0s,MS4.7
CN2                                LR     LR
      comp=E,200nm,18.0s,MS4.7
CN2                                LR     LR
      comp=Z,300nm,21.0s,MS4.6
TLY   Talaya           79.87  12   eP     P       22 44 27.2  +1.9
TLY                                e              22 54 21.7
TLY                                pmax   pmax
      comp=Z,16nm,1.6s,mb4.7
TLY                                MLR    MLR
      comp=Z,130nm,17.0s,MS4.3
KIV   Kislovodsk       80.27 331   eP     P       22 44 26.6  -1.0
KIV                                e              22 44 33.5
KIV                                eS     S       22 54 31.5  -0.1
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KIV                                eSS    SS      22 59 38.5  -7.3
KIV                                pmax   pmax
      comp=Z,23nm,1.1s,mb5.0
KIV                                pmax   pmax
      comp=N,7.0nm,0.9s
KIV                                pmax   pmax
      comp=E,8.0nm,1.1s
KIV   Kislovodsk       80.27 331   eP     P       22 44 26.6  -1.1
      comp=E,30nm,1.1s,mb5.1
KIV                                LR     LR
      comp=Z,59nm,20.0s,MS3.9
ZAL   Zalesovo         80.39   0   P      P       22 44 26.1  -1.9
ZAL                                pmax   pmax
      comp=Z,11nm,0.7s
ZAL                                MLR    MLR
      comp=Z,339nm,20.3s
ZAL   Zalesovo         80.39   0   P      P       22 44 26.1  -1.9
      comp=Z,11nm,0.7s,mb4.9,baz=285,slow=2.8,SNR=28
ZAL                                LR     LR      23 20 15.9
      comp=Z,339nm,20.3s,MS4.7,baz=285,slow=36
BVAR  Borovoye Array   80.46 351   P      P       22 44 26.2  -2.2
      comp=Z,7.2nm,0.8s,mb4.7,baz=166,slow=6.1,SNR=27
IRK   Irkutsk          80.52  12   eP     P       22 44 29.6  +0.8
IRK                                pmax   pmax
      comp=Z,46nm,1.4s,mb5.2
MAJO  Matsushiro       80.61  41   eP     P       22 44 29.5  -0.1
MAJO                               pmax   pmax
      comp=Z,91nm,1.8s,mb5.4
MAJO  Matsushiro       80.61  41   eP     P       22 44 29.5  -0.1
      comp=Z,91nm,1.8s,mb5.4
MAT   Matsushiro       80.61  41   eP     P       22 44 28.0  -1.6
MAT                                pmax   pmax
      comp=Z,60nm,1.4s,mb5.3
MAT   Matsushiro       80.61  41   eP     P       22 44 28.0  -1.6
      comp=Z,60nm,1.4s,mb5.3
MAT   Matsushiro       80.61  41   P      P       22 44 28.3  -1.3
MJAR  Matsushiro Arr   80.61  41   P      P       22 44 28.7  -0.9
MJAR                               pmax   pmax
      comp=Z,2.0nm,0.4s
MJAR                               MLR    MLR
      comp=Z,86nm,19.3s
MJAR  Matsushiro Arr   80.61  41   P      P       22 44 28.7  -0.9
      comp=Z,1.9nm,0.4s,mb4.4,baz=213,slow=5.8,SNR=19
MJAR                               LR     LR      23 17 01.1
      comp=Z,86nm,19.3s,MS4.1,baz=185,slow=33
GOF   Gofitskoye       81.00 331⇓iP     P       22 44 31.8  +0.3
GOF                                pmax   pmax
      comp=Z,30nm,1.3s,mb5.1
NVS   Novosibirsk      81.30 359  i P     P       22 44 30.4  -2.4
NVS                                pmax   pmax
      comp=N,32nm,1.6s
NVS                                pmax   pmax
      comp=Z,46nm,1.6s,mb5.2
NVS                                pmax   pmax
      comp=E,17nm,1.4s
SOC   Sochi            81.32 329   eP     P       22 44 30.8  -2.4
SOC                                e              22 47 39.1
SOC                                ePPP   PPP     22 49 24.7  -7.8
SOC                                eS     S       22 54 36.5  -6.0
SOC                                eSS    SS      22 59 55.7  -5.9
SOC                                eSSS   SSS     23 03 21.9  -2.0
SOC                                pmax   pmax
      comp=Z,24nm,1.2s,mb5.0
SOC                                pmax   pmax
      comp=N,14nm,1.0s
SOC                                pmax   pmax
      comp=E,4.0nm,0.8s
SOC                                MLR    MLR
      comp=Z,131nm,18.0s,MS4.3
SOC                                MLR    MLR
      comp=N,62nm,16.0s,MS4.3
SOC                                MLR    MLR
      comp=E,94nm,18.0s,MS4.3
BRTR  Keskin Array B   81.54 323   P      P       22 44 32.8  -1.6
BRTR                               pmax   pmax
      comp=Z,13nm,0.8s
BRTR  Keskin Array B   81.54 323   P      P       22 44 32.8  -1.6
      comp=Z,13nm,0.8s,mb4.9,baz=150,slow=6.1,SNR=36
ISP   Isparta          81.99 320  i P     P       22 44 36.0  -0.8
MDJ   Mudanjiang       82.00  31   P      P       22 44 37.7  +1.0
MDJ                                AMB    AMB
      comp=Z,20nm,1.2s,mb4.9
MDJ                                AMB    AMB
      comp=Z,60nm,4.3s
CIT   Chita            82.43  17   eP     P       22 44 40.2  +1.5
CIT                                e              22 44 58.1
CIT                                pmax   pmax
      comp=Z,65nm,1.5s,mb5.3
ANN   Anapa            83.31 328   eP     P       22 44 44.7  +1.2
ANN                                eS     S       22 55 03.8  +1.0
ANN                                pmax   pmax
      comp=Z,87nm,0.9s,mb5.8
SIM   Simferopol'      85.02 327⇑eP     P       22 44 51.8  -0.3
SIM                                eS     S       22 55 18.0  -1.8
SIM                                eSS    SS      23 00 50.0  -6.0
SIM                                pmax   pmax
      comp=Z,19nm,1.0s,mb5.2
SIM                                MLR    MLR
      comp=Z,130nm,18.0s,MS4.4
SVE   Sverdlovsk       85.76 347   eP     P       22 44 55.0  -0.4
SVE                                e              22 55 24.0
SVE                                e              22 56 16.0
SVE                                e              23 01 06.0
SVE                                pmax   pmax
      comp=Z,60nm,1.4s,mb5.6
ARU   Arti             85.83 346⇓iP     P       22 44 56.1  +0.3
ARU                                e              22 48 15.5
ARU                                ePPP   PPP     22 50 07.3  -6.4
ARU                               i S     S       22 55 23.8  -3.5
ARU                                eSS    SS      23 01 06.5  -1.3
ARU                                pmax   pmax
      comp=Z,25nm,1.1s,mb5.4
ARU   Arti             85.83 346   eP     P       22 44 53.2  -2.6
      comp=Z,33nm,1.3s,mb5.4
KLR   Kul'dur          86.48  29   eP     P       22 44 55.2  -4.0
VRSR  Storozhevoye     87.42 333   eP     P       22 45 02.9  -0.8
VRSR                               pmax   pmax
      comp=Z,30nm,1.2s,mb5.4
VRSR                               pmax   pmax
      comp=N,10.0nm,1.8s
VRSR                               pmax   pmax
      comp=E,10.0nm,0.6s
HARR  Harsova          88.02 323⇑iP     P       22 45 08.8  +2.0
CFR   Carcaliu         88.24 324⇓iP     P       22 45 07.2  -0.6
VRI   Vrincioaia       89.44 324⇑iP     P       22 45 13.0  -0.5
MLR   Muntele Rosu     89.61 323   P      P       22 45 14.3   0.0
      comp=E,17nm,1.0s,mb5.3,baz=141,slow=2.7,SNR=16
MLR   Muntele Rosu     89.61 323⇑iP     P       22 45 13.7  -0.6
BURAR Bucovina Array   91.36 324⇑iP     P       22 45 24.9  +2.5
BURAR Bucovina Array   91.36 324⇑iP     P       22 45 24.9  +2.6
AKASG Malin Array Be   91.40 328   P      P       22 45 20.8  -1.6
AKASG                              pmax   pmax
      comp=Z,10.0nm,1.0s
AKASG Malin Array Be   91.40 328   P      P       22 45 20.8  -1.6
      comp=Z,10nm,1.0s,mb5.1,baz=139,slow=3.8,SNR=24
OBN   Obninsk          91.41 335⇓iP     P       22 45 21.0  -1.4
OBN                                eS     S       22 55 54.1   -25
OBN                                pmax   pmax
      comp=Z,19nm,1.2s,mb5.3
OBN                                MLR    MLR
      comp=Z,200nm,20.0s,MS4.6
DBIC  Dimbokro         92.64 276   LR     LR      23 24 02.9
      comp=Z,142nm,19.3s,MS4.4,baz=106,slow=34
OKC   Ostrava-Krasne   96.43 323   AMS    AMS     23 26 40.0
      comp=Z,100nm,22.0s
DPC   Dobruska-Polom   97.70 323   AMS    AMS     23 27 10.0
      comp=Z,200nm,23.2s
GERES GERESS Array B   98.34 321   LR     LR      23 28 18.0
      comp=Z,81nm,18.6s,MS4.2,baz=135,slow=34
PRU   Pruhonice        98.47 322   AMS    AMS     23 28 00.0
      comp=Z,200nm,24.5s
KHC   Kasperske Hory   98.56 321   AMS    AMS     23 27 40.0
      comp=Z,100nm,20.5s
PVCC  Panska Ves       98.74 323   AMS    AMS     23 29 40.0
      comp=Z,100nm,21.6s
NKC   Novy Kostel      99.75 322   AMS    AMS     23 28 20.0
      comp=Z,100nm,21.1s
APA   Apatity         101.53 342⇓eP     P       22 46 13.2  +5.0
APA                                e              22 56 46.0
APA                                pmax   pmax
      comp=Z,15nm,1.1s
APA                                MLR    MLR
      comp=Z,500nm,20.0s,MS5.0
PPT   Papeete         111.25 124   eLR    LR      23 23 43.4
      comp=Z,276nm,24.2s,baz=221
BILL  Bilibino        111.44  24⇓eP     Pdif    22 47 06.8  +15
```

BILL				*e*		22 51 34.3	
BILL				*e*S	SKS	22 57 49.1	+14
BILL				pmax	pmax		
	comp=Z,9.0nm,1.8s						
RKT	**Rikitea**	**117.24**	**139**	*e*S	SKS	22 58 26.0	+28
	comp=Z,141nm,35.5s						
RKT				*e*SS	SS	23 08 13.6	-8.7
	comp=Z,121nm,34.2s						
RKT				*e*LR	LR	23 26 23.6	
	comp=Z,383nm,33.8s,baz=225						
IMA	**Indian Mountai**	**126.87**	**26**	*e*PKIKP	PKPdf	22 51 19.4	-2.3
LPAZ	**La Paz**	**129.74**	**215**	PKP	PKPdf	22 51 27.6	-1.1
	comp=Z,4.7nm,1.1s,baz=69,slow=3.2,SNR=14						
LPAZ	**La Paz**	**129.74**	**215**	*e*P	PKPdf	22 51 27.1	-1.5
ILAR	**Eielson Array**	**129.99**	**26**	PKIKP	PKPdf	22 51 24.8	-3.0
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**129.99**	**26**	PKP	PKPdf	22 51 24.8	-3.0
	comp=Z,0.5nm,0.8s,baz=286,slow=3.3,SNR=5.9						
INK	**Inuvik**	**132.61**	**18**	PKIKP	PKPdf	22 51 29.9	-2.9
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	**Inuvik**	**132.61**	**18**	PKP	PKPdf	22 51 29.9	-2.9
	comp=Z,1.5nm,0.8s,baz=323,slow=1.9,SNR=4.1						
SCHQ	**Schefferville**	**145.15**	**331**	PKP	PKPdf	22 51 53.5	-2.0
	comp=Z,9.6nm,0.9s,baz=49,slow=5.2,SNR=7.7						
OTAV	**Otavalo**	**149.06**	**214**	*e*PKPdf	PKPdf	22 52 02.4	-0.9
OTAV				*e*PKPbc	PKPdf	22 52 07.1	+3.8
ROSC	**El Rosal**	**150.44**	**226**	PKPbc	PKPdf	22 52 08.7	+3.3
	comp=Z,4.6nm,0.4s,baz=81,slow=21,SNR=6.9						
HTW	**Haystack Looko**	**150.48**	**38**	P	PKPdf	22 52 08.0	+3.5
HUMO	**Hull Mountain**	**152.43**	**48**	*e*PKPdf	PKPdf	22 52 05.4	-2.1
HUMO				*e*PKPbc	PKPdf	22 52 13.3	+5.8
HUMO				*e*PKPab	PKPab	22 52 21.9	-2.0
HAWA	**Hanford**	**152.54**	**38**	*e*PKPbc	PKPdf	22 52 12.7	+5.1
NEW	**Newport**	**152.58**	**33**	PKIKP	PKPdf	22 52 13.0	+5.5
KHMM	**Horse Mountain**	**152.61**	**52**	*e*PKPbc	PKPdf	22 52 13.3	+5.5
HLID	**Hailey**	**157.15**	**38**	*e*PKPdf	PKPdf	22 52 12.8	-1.0
NVAR	**Mina Array Bea**	**157.42**	**53**	PKP	PKPdf	22 52 14.7	+0.3
	comp=Z,0.3nm,0.3s,baz=26,slow=1.0,SNR=4.0						
NVAR				PKPab	PKPab	22 52 42.9	-2.4
	comp=Z,2.6nm,0.8s,baz=265,slow=7.9,SNR=7.1						
PDAR	**Pinedale Array**	**160.23**	**33**	PKP	PKPdf	22 52 14.4	-3.1
	comp=Z,0.4nm,0.7s,baz=315,slow=2.1,SNR=4.1						
PDAR				PKPab	PKPab	22 52 55.5	-1.8
	comp=Z,1.7nm,0.9s,slow=1.5,SNR=7.5						
TUC	**Tucson**	**165.38**	**64**	*e*PKIKP	PKPdf	22 52 20.9	-2.1
TUC				*e*		22 53 19.6	
MNTX	**Cornudas Mount**	**169.87**	**59**	*e*PKPdf	PKPdf	22 52 24.4	-1.5
GDL2	**Guadalupe Moun**	**170.38**	**54**	*e*PKPdf	PKPdf	22 52 25.1	-1.1
WMOK	**Wichita Mounta**	**171.50**	**20**	*e*PKIKP	PKPdf	22 52 25.1	-1.7
TXAR	**Lajitas Array**	**172.12**	**69**	PKIKP	PKPdf	22 52 26.2	-1.1
TXAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**172.12**	**69**	PKP	PKPdf	22 52 26.1	-1.2
	comp=Z,1.5nm,1.0s,baz=153,slow=2.8,SNR=9.7						
TXAR				PKPab	PKPab	22 53 51.0	+1.3
	comp=Z,1.2nm,0.9s,baz=252,slow=4.0,SNR=6.8						
JCT	**Junction City**	**174.55**	**47**	*e*PKIKP	PKPdf	22 52 25.5	-2.7

*IDC **05** 22:40:46.1±1.1, 1.28N×97.06E, mb4.1/10, mb1 4.3/11, mb1mx4.1/21, mbtmp4.1/11, ML3.9/1, MS3.9/3, Ms1 3.9/3, ms1mx3.6/19, Error ellipse: s-maj=40.7km s-min=16.3km az=54.0*

*BJI **05** 22:40:49.4, 0.91N×97.45E, h50^{km}, mB4.7, mb4.8, Ms4.1, Msz3.8*

*NEIC **05** 22:40:51.0±0.5, 1.31N×97.18E, h30^{km}, mb4.6/8, Error ellipse: s-maj=13.8km s-min=7.3km az=54.0*

ISC 05 22:40:48.4±7.7**, 1.3N**±0.1×**97.2E**±0.2**, h24**^{km}±53^{km}**, n28, σ0^{s}78**/24**, mb4.4**/20**, MS4.1**/4**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.27**	**41**	*e*P	**Pn**	**22 42 08.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**17.14**	**6**	P	**P**	**22 44 46.7**	**-1.5**
	0.2nm,0.3s,baz=204,slow=12,SNR=11						
KMI	**Kunming**	**24.28**	**12**	P	**P**	**22 46 06.9**	**+1.7**
KMI				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
KMI				LR	LR		
	comp=N,710nm,15.9s,MS4.3						
KMI				LR	LR		
	comp=E,440nm,13.7s,MS4.3						
KMI				LR	LR		
	comp=Z,710nm,15.5s,MS4.3						
GYA	**Guiyang**	**26.63**	**19**	⇑*i*P	**P**	**22 46 27.7**	**+0.5**
PKI	**Pulchoki**	**28.45**	**338**	*e*P	**P**	**22 46 44.0**	**+0.3**
	comp=Z,63nm,1.6s,mb5.0						
GUN	**Gumba**	**28.58**	**339**	*e*P	**P**	**22 46 45.8**	**+0.9**
	comp=Z,36nm,0.9s,mb5.1						
DMN	**Daman**	**28.59**	**337**	*e*P	**P**	**22 46 45.3**	**+0.2**
	comp=Z,21nm,0.9s,mb4.9						
KKN	**Kakani**	**28.69**	**338**	*e*P	**P**	**22 46 46.1**	**+0.2**
	comp=Z,22nm,0.9s,mb4.9						
GKN	**Gorkha**	**29.13**	**337**	*e*P	**P**	**22 46 50.1**	**+0.2**
	comp=Z,30nm,0.9s,mb5.0						
KOLN	**Koldanda**	**29.35**	**335**	*e*P	**P**	**22 46 52.5**	**+0.6**
	comp=Z,26nm,0.9s,mb5.0						
XAN	**Xi’an**	**34.37**	**17**	P	**P**	**22 47 34.1**	**-1.7**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
GTA	**Gaotai**	**38.00**	**3**	P	**P**	**22 48 07.0**	**+0.5**
WRA	**Warramunga Arr**	**42.12**	**122**	P	**P**	**22 48 40.6**	**-0.2**
	comp=Z,1.9nm,0.7s,mb3.9,baz=300,slow=9.1,SNR=18						
WRAB	**Tennant Creek**	**42.12**	**122**	*e*P	**P**	**22 48 40.7**	**-0.1**
	comp=Z,2.7nm,0.7s,mb4.0						
ASAR	**Alice Springs**	**43.48**	**127**	P	**P**	**22 48 52.2**	**+0.4**
	comp=Z,1.3nm,0.8s,mb3.7,baz=302,slow=7.4,SNR=12						
SONM	**Songino Array**	**47.03**	**8**	P	**P**	**22 49 20.2**	**+0.3**
	comp=Z,5.0nm,0.8s,mb4.5,baz=188,slow=8.7,SNR=32						
MKAR	**Makanchi Array**	**47.13**	**346**	P	**P**	**22 49 20.7**	**0.0**
	comp=Z,3.2nm,0.8s,mb4.3,baz=157,slow=8.3,SNR=20						
ULN	**Ulaanbaatar**	**47.16**	**9**	*e*P	**P**	**22 49 21.3**	**+0.4**
	comp=Z,1.8nm,0.8s,mb4.0						
MJAR	**Matsushiro Arr**	**51.64**	**42**	P	**P**	**22 49 55.3**	**-0.2**
	comp=Z,0.8nm,0.4s,mb4.0,baz=228,slow=8.5,SNR=5.3						
ZAL	**Zalesovo**	**53.44**	**351**	P	**P**	**22 50 07.9**	**-0.8**
	comp=Z,4.2nm,0.6s,mb4.5,baz=300,slow=5.9,SNR=20						
STKA	**Stephens Creek**	**53.45**	**132**	P	**P**	**22 50 09.2**	**+0.1**
	comp=Z,1.7nm,0.8s,mb4.0,baz=309,slow=11,SNR=3.5						
BVAR	**Borovoye Array**	**56.14**	**341**	P	**P**	**22 50 26.8**	**-1.6**
	comp=Z,3.5nm,0.7s,mb4.5,baz=143,slow=7.4,SNR=18						
KMBO	**Kilima Mbogo**	**59.96**	**268**	LR	LR	23 12 06.8	
	comp=Z,65nm,18.1s,MS3.8,baz=279,slow=31						
BRTR	**Keskin Array B**	**69.02**	**312**	P	**P**	**22 51 53.2**	**-1.1**
	comp=Z,0.3nm,0.7s,mb3.3,baz=127,slow=7.2,SNR=3.1						
BOSA	**Boshof**	**74.80**	**240**	LR	LR	23 21 20.5	
	comp=Z,66nm,18.2s,MS4.0,baz=194,slow=33						
GERES	**GERESS Array B**	**84.71**	**319**	P	**P**	**22 53 22.4**	**+0.6**
	comp=Z,0.3nm,0.5s,mb3.7,baz=117,slow=6.0,SNR=4.2						
NOA	**NORSAR Array B**	**86.90**	**331**	LR	LR	23 37 34.7	
	comp=Z,80nm,18.8s,MS4.2,baz=100,slow=39						
TXAR	**Lajitas Array**	**143.60**	**32**	PKP	PKPdf	23 00 22.9	-3.6
	comp=Z,0.2nm,0.7s,slow=2.7,SNR=3.1						

*ISK **05** 23:13:40.2, 35.36N×27.05E, h26^{km}, ML3.0*

*ATH **05** 23:13:42.5, 35.56N×27.21E, h18^{km}±2^{km}, MD3.3/5*

*NEIC **05** 23:13:42.5, 35.56N×27.21E, h18^{km}, MD3.3(ATH), After ATH.*

*CSEM **05** 23:13:42.8±0.1, 35.69N×27.20E, h8^{km}, MD3.3, Error ellipse: s-maj=5.3km s-min=2.7km az=143.0*

ISC 05 23:13:43.1±0.6**, 35.62N**±0.07×**27.19E**±0.06**, h13**^{km}±7^{km}**, n14, σ1^{s}00**/21**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.08**	**196**	*e*PB	**Pg**	**23 13 45.0**	**-0.9**
KARP				*e*SB	**Sg**	**23 13 48.3**	**+0.5**
ARG	**Arkhangelos**	**0.96**	**52**	*e*PN	**Pn**	**23 14 01.5**	**-0.7**
NPS	**Neapolis**	**1.34**	**255**	*e*PN	**Pn**	**23 14 07.9**	**+0.4**
XRY	**Khrisi**	**1.43**	**239**	*e*PN	**Pn**	**23 14 09.7**	**+0.8**
BODT	**Bodrum**	**1.44**	**4**	*e*PN	**Pn**	**23 14 09.1**	**+0.1**
BODT				*e*SN	**Sn**	**23 14 30.2**	**+2.4**
BDRM	**Kayabasi**	**1.45**	**8**	*i* P	**Pn**	**23 14 10.0**	**+0.8**
BDRM				*i* S	**Sb**	**23 14 29.3**	**+1.5**
SANT	**Santorini**	**1.59**	**299**	*i* P	**Pn**	**23 14 11.4**	**+0.3**
SANT				*i* S	**Sn**	**23 14 31.5**	**-0.1**
DALT	**Dalyan (Mudla)**	**1.64**	**45**	*e*PN	**Pn**	**23 14 12.0**	**+0.2**
FETY	**Fethiye**	**1.84**	**56**	*e*PN	**Pn**	**23 14 14.4**	**-0.3**
APE	**Apeiranthos**	**1.97**	**318**	*e*PN	**Pn**	**23 14 14.6**	**-1.9**
APE				*e*SN	**Sn**	**23 14 39.8**	**-1.4**
AYDN	**Tasoluk**	**2.11**	**15**	*i* P	**Pn**	**23 14 19.2**	**+0.7**
AYDN				*i* S	**Sn**	**23 14 42.8**	**-2.0**
VAM	**Vamos**	**2.45**	**266**	*e*PN	**Pn**	**23 14 23.6**	**+0.2**
DNZL	**Cakiroluk**	**2.55**	**35**	*i* P	**Pn**	**23 14 24.1**	**-0.8**
DNZL				*i* S	**Sn**	**23 14 48.2**	**-7.7**
VLI	**Veliai**	**3.61**	**289**	*e*PN	**Pn**	**23 14 40.4**	**+0.5**

*THE **05** 23:30:15.3, 38.85N×23.39E, h5^{km}, ML2.7*

*ATH **05** 23:30:16.4, 38.99N×23.23E, h24^{km}, ML2.8*

*NEIC **05** 23:30:16.4, 38.99N×23.23E, h24^{km}, ML2.8(ATH), After ATH.*

*CSEM **05** 23:30:16.5±0.1, 38.96N×23.34E, h8^{km}, ML2.7, Error ellipse: s-maj=4.3km s-min=2.3km az=86.0*

ISC 05 23:30:15.5±1.2**, 38.98N**±0.04×**23.37E**±0.07**, h6**^{km}±9^{km}**, n9, σ0^{s}67**/13**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEO	**Neokhori**	**0.34**	**341**	*e*PB	**Pb**	**23 30 23.6**	**0.0**
NEO				*e*SB	**Sb**	**23 30 28.9**	**-0.1**
LKR	**Lokris**	**0.44**	**221**	*e*PB	**Pb**	**23 30 24.9**	**-0.3**
LKR				*e*SB	**Sb**	**23 30 30.8**	**-1.0**
AGG	**Agios Georgios**	**0.81**	**273**	*e*Pg	**Pg**	**23 30 31.1**	**-0.6**
AGG				*e*Sg	**Sg**	**23 30 43.6**	**+1.1**
PAIG	**Paliouri**	**0.97**	**14**	*e*Pg	**Pg**	**23 30 35.8**	**+0.9**
ATH	**Athens Observa**	**1.04**	**165**	*e*PN	**Pn**	**23 30 37.1**	**+0.5**
ATH				*e*SN	**Sn**	**23 30 52.1**	**+0.5**
PLG	**Polygyros**	**1.39**	**2**	*e*PN	**Pn**	**23 30 41.8**	**+0.3**
OUR	**Ouranopolis**	**1.43**	**19**	*e*Pg	**Pg**	**23 30 42.8**	**-1.2**
SOH	**Sokhos**	**1.84**	**360**	*e*Pb	**Pb**	**23 30 48.7**	**-0.5**
GRG	**Griva**	**2.11**	**340**	*e*Pn	**Pn**	**23 30 52.1**	**+0.4**

*NNC **05** 23:33:18.1±7.1, 40.67N×78.89E, mpv3.1, Error ellipse: s-maj=243.1km s-min=48.3km az=34.0*

BJI 05 23:33:14.2, 39.67N×77.01E, h23^{km}, ML3.4, 3C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.82**	**260**	*e*PG	Pb	23 33 28.6	-1.0
KSH				*e*SG	Sb	23 33 41.4	+1.2
KSH				Smax			
	comp=N,860nm,0.9s						
KSH				Smax			
	comp=E,550nm,0.6s						
AAK	**Ala-Archa**	**3.52**	**328**	⇑Pn	Pn	23 34 17.2	+8.3
	comp=E,5.3nm,0.8s						
AAK				⇑Sn	Sn	23 35 05.9	+16
	comp=E,13nm,0.7s						
AAK				⇓Lg		23 35 17.4	
	comp=E,18nm,0.7s						
KK31	**Karatay Array**	**5.97**	**307**	⇑Pn	Pn	23 35 01.9	+18
	comp=E,1.2nm,0.8s,baz=123,slow=18,SNR=5.0						
KK31				⇓Sn	Sn	23 36 20.9	+29
	comp=E,2.1nm,0.6s,baz=117,slow=28,SNR=5.7						

*NEIC **05** 23:36:06.0±4.1, 21.90S×179.66W, h574^{km}±45^{km}, mb4.0/5, Error ellipse: s-maj=29.7km s-min=14.9km az=47.0*

*IDC **05** 23:36:08.3±3.0, 21.94S×179.73W, h598^{km}±35^{km}, mb3.4/7, mb1 3.6/8, mb1mx3.4/16, mbtmp4.3/8, Error ellipse: s-maj=25.5km s-min=18.5km az=159.0*

ISC 05 23:36:07.2±2.8**, 22.0S**±0.2×**179.7W**±0.2**, h604**^{km}±36^{km}**, n22, σ0^{s}77**/16**, mb3.9**/11**, 1C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**16.44**	**189**	P	**P**	**23 39 29.2**	**+0.3**
	1.1nm,0.3s,baz=91,slow=4.1,SNR=5.8						
CTAO	**Charters Tower**	**31.77**	**267**	*e*P	**P**	**23 41 45.7**	**+0.6**
	7.5nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**35.70**	**246**	*e*P	**P**	**23 42 18.2**	**+0.5**
STKA	**Stephens Creek**	**35.70**	**246**	P	**P**	**23 42 18.5**	**+0.8**
	2.8nm,0.5s,mb4.0,baz=73,slow=8.2,SNR=8.8						
ASAR	**Alice Springs**	**42.62**	**259**	P	**P**	**23 43 13.7**	**+0.1**
	4.6nm,0.6s,mb4.2,baz=93,slow=8.2,SNR=47						
ASAR				PcP	PcP	23 44 52.3	+0.5
	0.6nm,0.5s,baz=103,slow=3.9,SNR=4.5						
ASAR				S	**S**	**23 48 54.8**	**0.0**
	0.4nm,0.9s,baz=100,slow=16,SNR=2.9						
WB2	**Warramunga Arr**	**42.80**	**264**	⇓*i*P	**P**	**23 43 14.6**	**-0.5**
WRAB	**Tennant Creek**	**42.81**	**264**	*e*P	**P**	**23 43 14.2**	**-0.9**
	4.6nm,0.4s,mb4.4						
WRA	**Warramunga Arr**	**42.81**	**264**	P	**P**	**23 43 14.7**	**-0.4**
	2.6nm,0.3s,mb4.2,baz=96,slow=7.9,SNR=72						
MBWA	**Marble Bar**	**55.96**	**259**	*e*P	**P**	**23 44 50.8**	**-1.0**
	7.7nm,0.5s,mb4.2						
SBA	**Scott Base**	**56.29**	**183**	P	**P**	**23 44 52.9**	**-0.3**
	0.9nm,0.5s,mb3.3						
VNDA	**Vanda**	**56.29**	**185**	P	**P**	**23 44 53.6**	**+0.3**
	0.4nm,0.5s,mb2.9,baz=27,slow=5.6,SNR=5.2						
VNDA	**Vanda**	**56.29**	**185**	*e*P	**P**	**23 44 53.2**	**-0.1**
	0.4nm,0.4s,mb3.0						
MJAR	**Matsushiro Arr**	**70.47**	**325**	P	**P**	**23 46 24.1**	**+0.4**
	0.8nm,0.3s,mb3.7,baz=158,slow=6.7,SNR=4.1						
CMAR	**Chiang Mai Arr**	**89.10**	**290**	P	**P**	**23 48 03.1**	**+2.2**
	1.4nm,0.7s,mb3.9,baz=130,slow=3.6,SNR=6.5						
ILAR	**Eielson Array**	**90.12**	**13**	P	**P**	**23 48 03.8**	**-0.8**
	0.3nm,0.5s,mb3.4,baz=220,slow=4.5,SNR=5.9						
FINES	**FINESS Array B**	**136.72**	**342**	PKP	PKPdf	23 54 23.2	+1.9
	1.2nm,1.0s,baz=153,slow=4.3,SNR=5.6						
AKASG	**Malin Array Be**	**143.49**	**329**	PKP	PKPdf	23 54 33.6	+0.1
	1.0nm,0.3s,baz=41,slow=3.6,SNR=18						
BRTR	**Keskin Array B**	**146.59**	**310**	PKPbc	PKPbc	23 54 43.9	+2.6
	0.8nm,0.6s,baz=144,slow=6.0,SNR=4.8						
CLL	**Collm**	**149.10**	**344**	⇓*i*PKP1	PKPdf	23 54 50.0	+7.3
BRG	**Berggiesshubel**	**149.25**	**343**	*i* P	PKPdf	23 54 50.8	+7.8
KHC	**Kasperske Hory**	**150.92**	**342**	⇑*e*PKPB	PKPdf	23 54 54.0	+8.4
KHC				*e*PKPAB	PKPab	23 55 05.5	+0.7
GERES	**GERESS Array B**	**151.14**	**341**	PKPbc	PKPdf	23 54 54.3	+8.3
	0.4nm,0.4s,slow=2.7,SNR=7.0						

*ATH **05** 23:40:12.9, 40.14N×19.40E, h26^{km}±5^{km}, MD3.5/4*

*ROM **05** 23:40:12.4±0.2, 40.18N×19.40E, h12^{km}, Md3.1/8, Ml3.0/2, Error ellipse: s-maj=4.1km s-min=2.2km az=37.0*

*NEIC **05** 23:40:12.9, 40.14N×19.40E, h26^{km}, MD3.5(ATH), After ATH.*

*TIR **05** 23:40:13.5, 40.19N×19.56E, h5^{km}*

*THE **05** 23:40:13.7, 40.23N×19.25E, h20^{km}, ML3.4*

*CSEM **05** 23:40:13.2±0.1, 40.22N×19.45E, h10^{km}, ML3.7/1, Error ellipse: s-maj=2.3km s-min=1.5km az=18.0*

ISC 05 23:40:13.1±0.4**, 40.26N**±0.03×**19.43E**±0.03**, h21**^{km}±4^{km}**, n51, σ1^{s}12**/67**, 1C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.21**	**14**	*i* Pg	**Pb**	**23 40 18.3**	**-0.2**
VLO				*i* Sg	**Sb**	**23 40 22.4**	**+0.3**
TPE	**Tepelena**	**0.45**	**86**	*i* Pg	**Pb**	**23 40 20.7**	**-1.5**
TPE				*i* Sg	**Sb**	**23 40 27.2**	**-1.2**
SRN	**Sarande**	**0.58**	**131**	*i* Pg	**Pb**	**23 40 22.9**	**-1.6**
SRN				*i* Sg	**Sb**	**23 40 32.3**	**0.0**
KEK	**Kerkira**	**0.62**	**153**	*e*PN	**Pn**	**23 40 23.8**	**-2.7**
KEK	**Kerkira**	**0.62**	**153**	Pg	**Pb**	**23 40 24.3**	**-0.8**
KEK				Sg	**Sb**	**23 40 33.3**	**-0.1**
	508nm,1.1s						
LSK	**Leskovik**	**0.90**	**97**	*i* Pg	**Pb**	**23 40 28.6**	**-1.4**
LSK				*i* Sg	**Sb**	**23 40 43.0**	**+1.4**
IGT	**Igoumenitsa**	**1.01**	**136**	*e*Pg	**Pb**	**23 40 31.5**	**-0.2**
IGT				*e*Sg	**Sb**	**23 40 46.2**	**+1.7**
IGT	**Igoumenitsa**	**1.01**	**136**	*e*Pg	**Pb**	**23 40 31.5**	**-0.2**
IGT				*e*Sg	**Sb**	**23 40 46.2**	**+1.7**
LCI	**Lecce**	**1.01**	**274**	⇑Pg	**Pb**	**23 40 32.9**	**+1.2**
LCI				Sg	**Sb**	**23 40 48.3**	**+3.7**
	107nm,0.3s						
TIR	**Tirane**	**1.13**	**17**	*i* Pg	**Pb**	**23 40 37.6**	**+3.8**
TIR	**Tirane**	**1.13**	**17**	Pg	**Pb**	**23 40 36.2**	**+2.4**
	172nm,0.4s						
JAN	**Janina**	**1.25**	**119**	*e*PN	**Pn**	**23 40 36.2**	**+0.6**
JAN				*e*SN	**Sn**	**23 40 52.3**	**+0.4**
QSH	**Qafa e Shtames**	**1.31**	**16**	*i* Pg	**Pn**	**23 40 40.4**	**+4.0**
QSH				*i* Sg	**Sb**	**23 40 56.4**	**+3.2**
FNA	**Florina**	**1.57**	**70**	*e*Pb	**Pb**	**23 40 41.6**	**+0.3**
FNA				*e*Sb	**Sb**	**23 41 02.2**	**+1.3**
PE1	**Pezze di Greco**	**1.62**	**290**	*e*Pn	**Pn**	**23 40 41.0**	**+0.1**
KZN	**Kozani**	**1.79**	**88**	*e*PN	**Pn**	**23 40 44.8**	**+1.5**
LTRZ	**Laterza**	**2.02**	**280**	Pg	**Pn**	**23 40 46.9**	**+0.3**
	120nm,0.4s						
BCI	**Bajram Curri**	**2.15**	**13**	*i* pg?	**Pn**	**23 40 50.0**	**+1.5**
BCI	**Bajram Curri**	**2.15**	**13**	*e*Pg	**Pn**	**23 40 50.0**	**+1.5**
SG1	**Sgolgore (BA)**	**2.17**	**286**	*e*Pn	**Pn**	**23 40 49.0**	**+0.2**
VLS	**Valsamata**	**2.27**	**156**	*e*PN	**Pn**	**23 40 48.9**	**-1.3**
EVR	**Evrytania**	**2.28**	**125**	*e*PB	**Pb**	**23 40 51.5**	**-1.9**
SKO	**Skopje**	**2.29**	**41**	*e*Pn	**Pn**	**23 40 49.0**	**-1.4**
ORI	**Oriolo Calabro**	**2.29**	**266**	Pn	**Pn**	**23 40 50.7**	**+0.2**
TIP	**Timpagrande**	**2.33**	**243**	Pn	**Pn**	**23 40 50.8**	**-0.2**
LIT	**Litokhoron**	**2.35**	**93**	*e*Pn	**Pn**	**23 40 51.9**	**+0.6**
GRG	**Griva**	**2.37**	**72**	*e*Pn	**Pn**	**23 40 52.0**	**+0.5**
AGG	**Agios Georgios**	**2.56**	**118**	*e*Pn	**Pn**	**23 40 55.2**	**+0.8**
AGG				*e*Sn	**Sn**	**23 41 26.1**	**+0.9**
AGG	**Agios Georgios**	**2.56**	**118**	*e*Pn	**Pn**	**23 40 55.2**	**+0.9**
AGG				*e*Sn	**Sn**	**23 41 26.0**	**+0.8**
RLS	**Riolos of Patr**	**2.71**	**144**	*e*PN	**Pn**	**23 40 56.7**	**+0.2**
SLCN	**Sala Consilina**	**2.91**	**274**	Pn	**Pn**	**23 40 59.9**	**+0.7**
	18nm,0.2s						
STON	**Ston**	**2.91**	**334**	*i* Pn	**Pn**	**23 40 57.9**	**-1.4**
STON				*i* Sn	**Sn**	**23 41 32.5**	**-1.5**
MGR	**Morigerati**	**2.97**	**269**	Pn	**Pn**	**23 41 01.2**	**+1.0**
	11nm,0.2s						
SOH	**Sokhos**	**3.04**	**78**	*e*Pn	**Pn**	**23 41 01.1**	**0.0**
SOH	**Sokhos**	**3.04**	**78**	*e*Pn	**Pn**	**23 41 01.1**	**-0.1**
MRLC	**Muro Lucano**	**3.04**	**281**	Pn	**Pn**	**23 41 01.6**	**+0.4**
	11nm,0.3s						
PLG	**Polygyros**	**3.07**	**87**	*e*PN	**Pn**	**23 41 01.6**	**0.0**
SGO	**Sicignano**	**3.16**	**277**	Pn	**Pn**	**23 41 03.2**	**+0.4**
	7.0nm,0.2s						
CSSN	**Cassano Irpino**	**3.41**	**281**	Pn	**Pn**	**23 41 07.8**	**+1.4**
	8.0nm,0.6s						
SOI	**Samo**	**3.42**	**231**	Pn	**Pn**	**23 41 05.6**	**-0.9**
	9.0nm,0.3s						
OUR	**Ouranopolis**	**3.48**	**87**	*e*Pn	**Pn**	**23 41 07.0**	**-0.4**
MRB1	**Monte Rocchett**	**3.50**	**286**	Pn	**Pn**	**23 41 09.1**	**+1.5**
ISOR	**Termini**	**3.90**	**276**	Pn	**Pn**	**23 41 12.6**	**-0.8**
SGG	**Gregorio Mates**	**3.99**	**288**	Pn	**Pn**	**23 41 16.5**	**+1.8**
CII	**Carovilli**	**4.14**	**292**	Pn	**Pn**	**23 41 16.7**	**-0.1**
	5.0nm,0.3s						
SDI	**San Donato**	**4.49**	**291**	Pn	**Pn**	**23 41 22.2**	**+0.5**
	7.0nm,0.2s						
NRCA	**Norcia**	**5.39**	**301**	Pn	**Pn**	**23 41 34.4**	**0.0**
	3.0nm,0.3s						
NVLJ	**Novalja**	**5.46**	**323**	*i* Pn	**Pn**	**23 41 33.8**	**-1.6**
NVLJ				*i* Sn	**Sn**	**23 42 34.3**	**-4.2**
BOJS	**Bojanci**	**6.07**	**331**	*i* Pn	**Pn**	**23 41 42.8**	**-1.2**
BOJS				*e*Sn	**Sn**	**23 42 50.4**	**-3.2**
VISS	**Visnje**	**6.48**	**330**	*e*Pn	**Pn**	**23 41 48.8**	**-1.0**
CEY	**Cerknica**	**6.59**	**328**	*i* Pn	**Pn**	**23 41 49.6**	**-1.7**

*NEIC **05** 23:47:27.9±0.7, 1.71N×97.01E, mb4.0/1, Error ellipse: s-maj=18.1km s-min=11.4km az=62.0*

*IDC **05** 23:47:27.7±1.9, 1.67N×96.93E, h24^{km}±6^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.7/19, mbtmp4.1/7, ML4.2/1, Error ellipse: s-maj=68.8km s-min=19.8km az=57.0*

ISC 05 23:47:26.1±1.1**, 1.7N**±0.1×**97.0E**±0.2**, h25**^{km}**, h25**^{km}±.2^{km}**:pP-P, n11, σ0^{s}44**/11**, mb4.0**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.07**	**46**	*e*P	**Pn**	**23 48 42.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**16.73**	**6**	Pn	**P**	**23 51 21.8**	**+1.0**
	0.3nm,0.3s,baz=198,slow=11,SNR=4.6						
WRA	**Warramunga Arr**	**42.47**	**122**	P	**P**	**23 55 21.4**	**+0.1**
	0.6nm,0.6s,mb3.4,baz=302,slow=9.0,SNR=4.3						
WRA				pP	pP	23 55 28.8	0.0
	0.6nm,0.3s,baz=321,slow=11,SNR=4.9						
WRAB	**Tennant Creek**	**42.48**	**122**	*e*P	**P**	**23 55 21.6**	**+0.2**
WRAB				*e*pP	pP	23 55 28.9	+0.1
SONM	**Songino Array**	**46.64**	**9**	P	**P**	**23 55 54.4**	**0.0**
	0.7nm,0.3s,mb4.0,baz=187,slow=9.3,SNR=15						
SONM				pP	pP	23 56 02.0	+0.1
	0.6nm,0.4s,baz=192,slow=9.5,SNR=4.7						
MKAR	**Makanchi Array**	**46.69**	**346**	P	**P**	**23 55 54.6**	**-0.1**
	1.0nm,0.4s,mb4.1,baz=160,slow=8.8,SNR=30						
MKAR				pP	pP	23 56 02.2	-0.1
	0.6nm,0.6s,baz=159,slow=8.5,SNR=5.1						
ULN	**Ulaanbaatar**	**46.77**	**9**	*e*P	**P**	**23 55 54.9**	**-0.5**
	1.3nm,0.8s,mb3.9						
ZAL	**Zalesovo**	**53.00**	**351**	P	**P**	**23 56 42.6**	**-0.5**
	4.5nm,0.6s,mb4.6,baz=316,slow=4.6,SNR=18						
FINES	**FINESS Array B**	**79.45**	**332**	P	**P**	**23 59 31.6**	**-0.3**
	1.6nm,1.0s,mb3.9,baz=183,slow=32,SNR=4.9						
ARCES	**ARCESS Array B**	**81.98**	**340**	P	**P**	**23 59 45.6**	**+0.5**
	2.1nm,0.8s,mb4.1,baz=90,slow=9.7,SNR=4.1						
VNDA	**Vanda**	**86.38**	**169**	P	**P**	**23 59 58.5**	**-8.6**
	0.3nm,0.8s,mb3.5,baz=295,slow=12,SNR=3.1						

*CASC **06** 00:22:21.6±2.4, 13.53N×90.34W, h33^{km}±6^{km}, MD4.4, ML4.8, mb4.0(NEIC)*

*NEIC **06** 00:22:23.9±0.5, 13.81N×89.94W, mb4.0/8, MD4.4(SNET), Error ellipse: s-maj=14.8km s-min=7.0km az=66.0*

NEIC Felt [II] at Ahuachapan.

*IDC **06** 00:22:25.4±2.7, 14.01N×89.70W, h108^{km}±24^{km}, mb3.6/8, mb1 3.8/11, mb1mx3.6/23, mbtmp4.0/11, MS3.2/3, Ms1 3.2/3, ms1mx2.7/32, Error ellipse: s-maj=29.4km s-min=12.5km az=55.0*

ISC 06 00:22:20.5±0.5**, 13.65N**±0.04×**90.32W**±0.04**, h89**^{km}±3^{km}**, n68, σ1^{s}10**/81**, mb4.0**/13**, 8C-14D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.54**	**346**	⇓*e*P	**P**	**00 22 34.6**	**-1.0**
IXG				*e*S	**S**	**00 22 45.5**	**-1.4**
IXG				AML	AML	00 22 51.3	
	comp=N,269µm,0.4s						
RTR	**El Retiro**	**0.70**	**69**	⇓*i*P	**P**	**00 22 36.7**	**-0.4**
SBLS	**San Blas**	**0.70**	**74**	⇓*i*P	**P**	**00 22 36.4**	**-0.7**
SNJE	**San Jose**	**0.72**	**72**	⇓*i*P	**P**	**00 22 36.9**	**-0.5**
RBDL	**Robledal**	**0.77**	**53**	⇑*i*P	**P**	**00 22 37.5**	**-0.4**
RBDL				*e*S	**S**	**00 22 51.0**	**+0.4**
PCG	**Pacaya**	**0.79**	**339**	⇑*e*P	**P**	**00 22 38.3**	**+0.2**
PCG				*e*S	**S**	**00 22 51.3**	**+0.2**
FUG	**Fuego 3**	**0.94**	**327**	⇓*e*P	**P**	**00 22 39.3**	**-0.4**
BOQS	**Boqueron**	**1.01**	**85**	⇓*e*P	**P**	**00 22 40.1**	**-0.4**
BOQS				*e*S	**S**	**00 22 56.1**	**+0.6**
SNET	**Serv Nac Est T**	**1.05**	**88**	*e*S	**S**	**00 22 56.0**	**-0.4**
SNET				*i*		00 22 59.5	
	comp=Z,7µm,0.2s						
LFU	**La Fuente**	**1.17**	**85**	⇓*e*P	**P**	**00 22 42.3**	**-0.2**
LFU				*e*S	**S**	**00 22 59.3**	**+0.4**
MTO2	**Montecristo 2**	**1.19**	**51**	⇑*e*P	**P**	**00 22 42.7**	**-0.1**
MTO2				*e*S	**S**	**00 22 59.9**	**+0.5**
LFRS	**El Faro**	**1.22**	**91**	⇓*e*P	**P**	**00 22 42.6**	**-0.5**
LBRS	**Las Brisas**	**1.24**	**86**	⇑*i*P	**P**	**00 22 43.1**	**-0.3**
LBRS				*e*S	**S**	**00 23 00.9**	**+0.5**
LCBS	**La Ceiba**	**1.30**	**90**	⇑*e*P	**P**	**00 22 43.6**	**-0.5**
LCBS				*e*S	**S**	**00 23 00.7**	**-1.0**
TP2	**Tecpan 2**	**1.32**	**329**	⇓*e*P	**P**	**00 22 45.3**	**+0.9**
TP2				*e*S	**S**	**00 23 05.1**	**+3.0**
TP2				AML	AML	00 23 07.2	
	comp=E,11µm,0.4s						
MRL	**Marmol**	**1.54**	**23**	⇓*e*P	**P**	**00 22 48.1**	**+1.0**
MRL				*e*S	**S**	**00 23 06.7**	**-0.1**
BLLM	**Bellamira**	**2.03**	**96**	*e*P	**P**	**00 22 54.4**	**+0.7**
BLLM				*e*S	**S**	**00 23 18.7**	**+0.6**
CNCH	**Conchagua**	**2.44**	**98**	⇑*e*P	**P**	**00 22 58.9**	**-0.4**
CNCH				*e*S	**S**	**00 23 30.5**	**+2.2**
TEL3	**Telica 3**	**3.55**	**107**	⇑*e*P	**P**	**00 23 14.6**	**0.0**
LEON	**Leon**	**3.55**	**110**	*e*P	**P**	**00 23 14.0**	**-0.7**
CNGN	**Cerro Negro**	**3.71**	**108**	*e*P	**P**	**00 23 14.8**	**-2.0**
CNGN				*e*S	**S**	**00 23 59.9**	**+0.3**
MIRN	**Miramar**	**3.71**	**108**	⇓*e*P	**P**	**00 23 17.2**	**+0.3**
APYN	**Apoyeque**	**4.11**	**110**	⇑*e*P	**P**	**00 23 22.1**	**-0.4**
XAVN	**Gruta Xavier**	**4.17**	**111**	⇓*e*P	**P**	**00 23 23.5**	**+0.4**
MGAN	**Managua**	**4.24**	**110**	*e*P	**P**	**00 23 24.5**	**+0.4**
CRUN	**El Crucero**	**4.25**	**112**	⇓*e*P	**P**	**00 23 25.0**	**+0.7**
VCR	**Vista de Mar**	**5.77**	**127**	*e*P	**P**	**00 23 45.1**	**0.0**
VCR				*e*S	**S**	**00 24 48.9**	**-1.7**
JTS	**JuntasAbangare**	**6.22**	**122**	P	**P**	**00 23 51.2**	**-0.1**
	comp=E,5.9nm,0.3s,baz=310,slow=20,SNR=36						
JTS				S	**S**	**00 24 57.4**	**-4.3**
	comp=E,3.6nm,0.3s,baz=296,slow=20,SNR=3.4						
JTS	**JuntasAbangare**	**6.22**	**122**	*e*Pn	**P**	**00 23 49.7**	**-1.6**
	comp=E,34nm,0.7s						
JTS				*e*Sn	**S**	**00 24 55.4**	**-6.3**
JCR	**Jicaral**	**6.34**	**126**	*e*P	**P**	**00 23 53.1**	**0.0**
JCR				*e*S	**S**	**00 25 04.4**	**-0.3**

PRS1	Puriscal	6.92	121	eP	P	00 24 02.2	+1.2
LAJ	Bijagual	7.14	121	eP	P	00 24 00.4	-3.7
TRTC	Tortuguero	7.14	115	eP	P	00 24 02.2	-1.9
LCR2	La Lucha 2	7.30	121	eP	P	00 24 06.6	+0.3
ICR	Volcan Irazu	7.32	119	eP	P	00 24 08.2	+1.6
URSC	Urasca	7.44	120	eP	P	00 24 10.1	+1.9
URSC				eS	S	00 25 33.1	+1.5
BUS	Buena Vista	7.60	122	⇓eP	P	00 24 11.7	+1.2
ACR	Cerro Adams	8.59	125	eP	P	00 24 24.3	+0.4
PAYG	Puerto Ayora	14.23	180	eP	P	00 25 44.1	+5.1
OTAV	Otavalo	17.77	138	P	P	00 26 24.2	+0.6
	comp=E,2.0nm,0.6s						
LRAL	Lakeview Retre	19.54	8	eP	P	00 26 41.4	-2.1
	comp=E,11nm,0.6s						
LRAL				e		00 26 47.9	
SDV	Santo Domingo	19.87	102	P	P	00 26 44.2	-2.9
	comp=E,0.7nm,0.3s,baz=320,slow=10,SNR=6.7						
SDV				LR	LR	00 34 47.4	
	comp=E,61nm,18.9s,baz=233,slow=38						
SDV	Santo Domingo	19.87	102	eP	P	00 26 44.1	-3.0
	comp=E,4.4nm,0.6s						
TXAR	Lajitas Array	19.92	324	P	P	00 26 49.2	+1.6
	comp=E,0.2nm,0.3s,baz=153,slow=8.4,SNR=7.3						
TXAR				pP		00 27 08.9	
	comp=E,0.1nm,0.3s,baz=153,slow=12,SNR=2.6						
TXAR				PcP	PcP	00 31 01.8	+0.7
	comp=E,0.1nm,0.3s,baz=171,slow=3.5,SNR=6.5						
TXAR	Lajitas Array	19.92	324	P	P	00 26 49.2	+1.6
TXAR				pP		00 27 08.9	
TXAR				PcP	PcP	00 31 01.8	+0.7
SWET	Sewanee	21.84	10	eP	P	00 27 07.8	+0.9
MYNC	Murphy	22.05	14	eP	P	00 27 09.8	+0.8
	comp=E,8.6nm,0.7s,mb4.2						
CPCT	Cooper Cave	22.33	13	eP	P	00 27 12.4	+0.7
WVT	Waverly	22.50	5	eP	P	00 27 13.5	+0.2
	comp=E,3.1nm,0.8s,mb3.7						
MNTX	Cornudas Mount	22.67	325	eP	P	00 27 17.1	+2.0
	comp=E,4.8nm,1.4s,mb3.6						
SJG	San Juan	23.66	76	LR	LR	00 36 02.0	
	comp=E,50nm,18.6s,baz=242,slow=36						
WCI	Wyandotte Cave	24.74	8	eP	P	00 27 34.8	-0.3
	comp=E,20nm,0.6s,mb4.7						
SADO	Sadowa	32.45	15	P	P	00 28 41.2	-3.1
	comp=E,1.8nm,0.4s,mb4.2,baz=225,slow=9.6,SNR=5.3						
NVAR	Mina Array Bea	34.98	320	P	P	00 29 08.9	+2.8
	comp=E,5.1nm,0.7s,mb4.5,baz=125,slow=9.2,SNR=16						
NVAR				PcP	PcP	00 31 38.4	+1.5
	comp=E,1.2nm,0.6s,baz=137,slow=5.6,SNR=6.5						
SAML	Samuel	35.06	128	eP	P	00 29 04.5	-2.6
	comp=E,6.9nm,0.9s,mb4.5						
ULM	Lac du Bonnet	36.78	354	LR	LR	00 49 03.6	
	comp=E,44nm,18.5s,baz=326,slow=44						
LPAZ	La Paz	36.95	143	P	P	00 29 24.2	+1.3
	comp=E,0.4nm,0.7s,mb3.5,baz=331,slow=10,SNR=2.8						
LPAZ	La Paz	36.95	143	eP	P	00 29 24.0	+1.0
SIV	San Ignacio	41.27	135	P	P	00 29 58.8	+0.1
	comp=E,1.5nm,0.6s,mb4.0,baz=311,slow=8.2,SNR=13						
SIV				PcP	PcP	00 31 56.8	+0.2
	comp=E,1.5nm,0.8s,baz=247,slow=1.0,SNR=6.3						
SCHQ	Schefferville	45.00	19	P	P	00 30 26.6	-2.0
	comp=E,4.7nm,0.4s,mb4.5,baz=214,slow=6.7,SNR=24						
SCHQ				PcP	PcP	00 32 07.9	-0.8
	comp=E,2.0nm,0.7s,baz=180,slow=5.1,SNR=4.4						
YKA	Yellowknife Ar	51.75	346	P	P	00 31 19.9	-0.8
	comp=E,0.5nm,0.5s,mb3.8,baz=139,slow=7.3,SNR=8.1						
YKA				pP	pP	00 31 42.2	-0.4
	comp=E,1.1nm,0.9s,baz=150,slow=7.8,SNR=4.4						
YKA	Yellowknife Ar	51.75	346	P	P	00 31 19.9	-0.8
YKA				pP	pP	00 31 42.2	-0.4
ILAR	Eielson Array	63.81	337	P	P	00 32 43.3	-2.0
	comp=E,0.5nm,0.8s,mb3.4,baz=113,slow=3.4,SNR=4.9						
ESDC	Sonseca Array	78.65	52	P	P	00 34 10.1	-4.4
	comp=E,0.6nm,0.7s,mb3.5,baz=286,slow=4.6,SNR=5.4						
DBIC	Dimbokro	84.06	85	P	P	00 34 42.5	-0.9
WRA	Warramunga Arr	136.89	255	PKP	PKPdf	00 41 37.6	+3.9
	comp=E,1.5nm,0.8s,baz=88,slow=2.0,SNR=4.5						
ASAR	Alice Springs	137.09	250	PKP	PKPdf	00 41 37.9	+3.9
	comp=E,0.6nm,0.7s,baz=90,slow=1.7,SNR=4.6						
CMAR	Chiang Mai Arr	146.82	344	PKPbc	PKPbc	00 41 53.7	+0.8
	comp=E,1.7nm,0.7s,baz=339,slow=4.7,SNR=8.2						

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*IDC **06** 00:31:34.9±6.9, 21.81S×179.51W, h508^{km}±77^{km}, mb3.2/8, mb1 3.5/9, mb1mx3.4/16, mbtmp4.1/9, Error ellipse: s-maj=35.2km s-min=23.9km az=38.0*

*NEIC **06** 00:31:38.4±0.6, 21.90S×179.56W, h550^{km}, mb3.8/4, Error ellipse: s-maj=18.0km s-min=15.8km az=107.0*

ISC 06 00:31:39.8±4.5**, 22.0S**±0.2×**179.6W**±0.2**, h582**^{km}±58^{km}**, n16, σ0^{s}87**/14**, mb3.7**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	16.49	189	P	P	00 35 02.9	+0.4
	0.8nm,0.3s,baz=36,slow=2.6,SNR=5.2						
CTAO	Charters Tower	31.85	267	eP	P	00 37 20.2	+0.6
	13nm,0.9s,mb4.5						
STKA	Stephens Creek	35.79	246	P	P	00 37 52.4	+0.1
	2.6nm,0.8s,mb3.8,baz=82,slow=4.3,SNR=5.7						
STKA	Stephens Creek	35.79	246	eP	P	00 37 52.9	+0.7
ASAR	Alice Springs	42.71	258	P	P	00 38 47.9	-0.3
	4.9nm,0.8s,mb4.1,baz=92,slow=8.2,SNR=45						
WRAB	Tennant Creek	42.90	264	eP	P	00 38 48.8	-0.9
	7.3nm,0.9s,mb4.2						
WRA	Warramunga Arr	42.91	264	P	P	00 38 48.9	-0.9
	1.7nm,0.4s,mb3.9,baz=97,slow=7.7,SNR=27						
SBA	Scott Base	56.33	183	eP	P	00 40 27.4	-0.2
	2.3nm,1.0s,mb3.4						
VNDA	Vanda	56.34	185	P	P	00 40 27.5	-0.2
	0.7nm,0.7s,mb3.0,baz=3.6,slow=5.6,SNR=5.8						
VNDA	Vanda	56.34	185	eP	P	00 40 27.0	-0.7
	0.9nm,0.8s,mb3.0						
MJAR	Matsushiro Arr	70.49	325	P	P	00 41 58.3	+0.2
	0.8nm,0.3s,mb3.6,baz=179,slow=1.5,SNR=4.3						
TXAR	Lajitas Array	89.12	58	P	P	00 43 35.8	+0.6
	0.7nm,0.9s,mb3.5,baz=225,slow=5.3,SNR=4.9						
CMAR	Chiang Mai Arr	89.17	290	P	P	00 43 38.0	+2.4
	1.1nm,0.8s,mb3.8,baz=180,slow=2.9,SNR=5.5						
ILAR	Eielson Array	90.07	13	P	P	00 43 37.4	-1.3
	0.4nm,0.7s,mb3.3,baz=188,slow=10,SNR=4.2						
AKASG	Malin Array Be	143.50	329	PKP	PKPdf	00 50 08.3	+0.1
	1.6nm,0.6s,baz=39,slow=3.6,SNR=16						
BRTR	Keskin Array B	146.63	310	PKPbc	PKPbc	00 50 20.4	+4.4
	0.5nm,0.5s,baz=90,slow=3.7,SNR=3.8						

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*NEIC **06** 00:52:07.8±0.8, 3.94N×76.40W, h135^{km}±7^{km}, mb3.6/4, Error ellipse: s-maj=11.5km s-min=7.6km az=114.0*

NEIC Felt lightly at Cali.

*IDC **06** 00:52:09.9±2.0, 3.97N×76.29W, h152^{km}±16^{km}, mb3.3/8, mb1 3.6/12, mb1mx3.4/25, mbtmp3.9/12, MS3.3/1, Ms1 3.3/1, ms1mx2.5/15, Error ellipse: s-maj=23.6km s-min=15.2km az=80.0*

ISC 06 00:52:07.4±0.8**, 3.95N**±0.07×**76.41W**±0.09**, h148**^{km}±8^{km}**, n23, σ1^{s}07**/24**, mb3.5**/8**, 1D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.26	66	P	P	00 52 46.9	+0.9
	110nm,0.3s,baz=316,slow=3.1,SNR=127						
ROSC				S	S	00 53 16.8	+1.2
	91nm,0.3s,baz=69,slow=22,SNR=38						
OTAV	Otavalo	4.21	209	⇓iPn	P	00 53 10.5	-0.9
OTAV				eSn	S	00 54 00.4	-0.1
SDV	Santo Domingo	7.55	49	P	P	00 53 54.7	-1.1
	8.5nm,0.3s,baz=239,slow=5.0,SNR=36						
SDV				S	S	00 55 16.7	-3.6
	7.1nm,0.3s,baz=281,slow=19,SNR=14						
SDV	Santo Domingo	7.55	49	ePn	P	00 53 54.1	-1.7
SDV				eSn	S	00 55 15.0	-5.2
SDV				S	S	00 55 16.7	-3.6
PCRV	Puerto La Cruz	13.22	61	P	P	00 55 10.2	-0.2
	0.5nm,0.3s,baz=344,slow=5.5,SNR=2.8						
SJG	San Juan	17.29	35	P	P	00 56 00.2	-1.2
	1.4nm,0.3s,baz=216,slow=7.9,SNR=4.0						
SAML	Samuel	18.39	134	eP	P	00 56 12.4	-1.4
	3.3nm,0.7s						
LPAZ	La Paz	21.71	158	P	P	00 56 49.0	+1.4
	0.3nm,0.4s,mb3.1,baz=18,slow=3.2,SNR=2.3						
LPAZ	La Paz	21.71	158	P	P	00 56 49.0	+1.4
	0.4nm,0.6s,mb3.0						
SIV	San Ignacio	24.96	143	P	P	00 57 19.1	+0.2
	0.3nm,0.5s,mb3.1,baz=311,slow=13,SNR=5.0						
LVC	Limon Verde	27.40	165	LR	LR	01 10 20.6	
	comp=Z,58nm,19.2s,baz=217,slow=40						
ANMO	Albuquerque	41.55	322	P	P	00 59 43.6	+1.6
	0.4nm,0.6s,mb3.3,baz=192,slow=2.7,SNR=4.3						
ANMO	Albuquerque	41.55	322	eP	P	00 59 43.4	+1.3
	0.7nm,0.6s,mb3.5						
SCHQ	Schefferville	51.32	7	P	P	01 00 58.5	0.0
	2.4nm,0.5s,mb4.1,baz=193,slow=9.0,SNR=10.0						
SCHQ	Schefferville	51.32	7	P	P	01 00 58.5	0.0
YKA	Yellowknife Ar	64.87	342	P	P	01 02 32.0	-0.8
	0.3nm,0.5s,mb3.4,baz=135,slow=6.4,SNR=4.0						
DBIC	Dimbokro	71.25	84	P	P	01 03 12.4	-0.6
	1.9nm,0.6s,mb4.0,baz=313,slow=22,SNR=4.8						
DBIC	Dimbokro	71.25	84	eP	P	01 03 12.3	-0.7
	9.7nm,1.1s,mb4.5						
ESDC	Sonseca Array	73.99	50	P	P	01 03 29.1	+0.3
	0.7nm,0.5s,mb3.6,baz=273,slow=5.8,SNR=17						
GERES	GERESS Array B	87.13	41	P	P	01 04 39.5	+1.8
	0.3nm,0.7s,mb3.2,baz=236,slow=4.8,SNR=3.6						
ASAR	Alice Springs	144.78	233	PKP	PKPdf	01 11 28.6	+1.1
	0.5nm,0.4s,baz=120,slow=3.8,SNR=8.9						
WRA	Warramunga Arr	146.08	240	PKPbc	PKPbc	01 11 32.8	+1.9
	0.8nm,0.9s,baz=106,slow=3.5,SNR=3.6						
WRA	Warramunga Arr	146.08	240	PKPbc	PKPbc	01 11 32.8	+1.9

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*HEL **06** 00:56:53.9±0.2, 60.11N×25.24E, ML2.3, ML2.1(UPP), ML2.1(NAO), Explosion*

*IDC **06** 00:56:53.9±1.6, 60.14N×25.40E, mb1 3.1/3, mb1mx2.9/22, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=16.2km s-min=7.0km az=146.0*

*NAO **06** 00:56:54.5±2.7, 60.23N×25.09E, ML2.1*

*BER **06** 00:56:54.7±3.4, 60.18N×25.28E, ML2.1(NAO)*

ISC 06 00:56:52.1±0.6**, 60.10N**±0.04×**25.28E**±0.08**, n37, σ1^{s}13**/57**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVF	Pernaja	0.53	33	eP	Pg	00 57 03.2	+0.4
PVF				eS	Sg	00 57 09.2	-0.6
VJF	Virojoki	1.22	68	eP	Pb	00 57 15.9	+0.2
VJF				eS	Sb	00 57 29.9	-1.9
FIA0	FINESS Array S	1.40	16	eP	Pb	00 57 18.8	-0.1
FIA0				eS	Sb	00 57 36.5	-0.8
FIA0	FINESS Array S	1.40	16	Pn	Pn	00 57 18.7	-0.3
	baz=189,slow=18						
FIA0				Lg		00 57 36.0	
	baz=192,slow=28						
FINES	FINESS Array B	1.40	16	Pg	Pg	00 57 18.7	-1.4
	6.5nm,0.3s,baz=192,slow=17,SNR=183						
FINES				Pn	Pn	00 57 21.2	+2.2
	6.5nm,0.3s,baz=197,slow=13,SNR=184						
FINES				Lg		00 57 35.9	
	2.1nm,0.3s,baz=191,slow=30,SNR=6.1						
FINES				Sn	Sn	00 57 41.0	+2.5
	11nm,0.3s,baz=198,slow=22,SNR=33						
FINES				Rg		00 57 44.6	
	24nm,0.8s,baz=192,slow=35,SNR=22						
KAF	Kangasniemi	2.08	13	eP	Pn	00 57 30.0	+1.4
KEF	Keuruu	2.08	355	eP	Pn	00 57 30.6	+1.9
KEF				eS	Sn	00 57 56.9	+1.1
AAL	Aland	2.65	274	eP	Pn	00 57 37.6	+0.8
SUF	Sumiainen	2.66	9	eP	Pn	00 57 38.8	+1.8
SUF				eSB	Sb	00 58 13.5	-0.2
SUF				MSG		00 58 14.4	
	comp=Z,9.5nm,0.3s						
VAF	Ylistaro	3.21	338	eP	Pn	00 57 46.8	+2.1
VAF				eS	Sn	00 58 24.0	-0.2
GRAU	Graesoe	3.37	277	eP	Pn	00 57 46.1	-1.0
GRAU				eS	Sn	00 58 26.1	-2.3
FORU	Forsmark	3.55	278	eP	Pn	00 57 50.0	+0.4
FLYU	Flymyra	3.70	274	eP	Pn	00 57 51.8	0.0
UPP	Uppsala	3.85	270	eP	Pn	00 57 54.5	+0.6
NYNU	Nynaeshamn	3.86	257	eP	Pn	00 57 54.8	+0.8
IGGU	Iggoen	4.02	285	eP	Pn	00 57 55.7	-0.5
OSTU	Oestervaala	4.07	275	eP	Pn	00 57 57.0	0.0
BACU	Backbrunna	4.11	270	eP	Pn	00 57 58.0	+0.4
KJN	Kajaani	4.16	15	eP	Pn	00 57 58.5	+0.2
KJN				eS	Sn	00 58 46.6	-1.7
KJN				eSG	Sg	00 59 01.5	-9.1
KJN				MSG		00 59 05.6	
	comp=Z,5.4nm,0.3s						
ARNU	Arnoeviken	4.18	296	eP	Pn	00 57 58.6	0.0
GOTU	Gotland	4.24	238	eP	Pn	00 58 00.2	+0.8
HEMU	Hemsoen	4.34	310	eP	Pn	00 58 01.4	+0.6
UMAU	Umeaa	4.37	332	eP	Pn	00 58 01.7	+0.4
ESKU	Eskilstuna	4.59	263	eP	Pn	00 58 04.5	+0.1
VIKU	Vikbolandet	4.68	254	eP	Pn	00 58 05.9	+0.2
FALU	Falun	4.72	279	eP	Pn	00 58 05.7	-0.6
ROTU	Roteberg	4.83	290	eP	Pn	00 58 06.7	-1.1
BURU	Burvik	4.85	340	eP	Pn	00 58 08.2	+0.1
HFS	Hagfors	5.79	275	Pn	Pn	00 58 20.3	-1.1
	baz=92,slow=14						
HFS				Sn	Sn	00 59 24.2	-5.3
	baz=84,slow=28						
HFS				Lg		00 59 54.5	
	baz=68,slow=28						
HFS	Hagfors	5.79	275	eP	Pn	00 58 20.3	-1.1
HFS				eS	Sn	00 59 24.2	-5.3
HFS				eSG		00 59 54.5	
HFS	Hagfors	5.79	275	Pn	Pn	00 58 20.0	-1.4
	comp=Z,0.0nm,0.3s,baz=90,slow=13,SNR=5.9						
HFS				Sn	Sn	00 59 25.1	-4.4
	comp=Z,0.1nm,0.3s,baz=80,slow=28,SNR=9.6						
HFS				Lg		00 59 54.9	
	comp=Z,0.1nm,0.3s,baz=80,slow=26,SNR=6.5						
NB2	NORSAR Subarra	7.00	284	Pn	Pn	00 58 35.6	-2.8
	baz=90,slow=14						
NB2				Sn	Sn	00 59 52.0	-7.6
	baz=94,slow=28						
NB2				Lg		01 00 27.5	
NB2	NORSAR Subarra	7.00	284	eP	Pn	00 58 35.6	-2.8
NB2				eS	Sn	00 59 52.0	-7.6
NB2				eSG		01 00 27.5	
NOA	NORSAR Array B	7.00	284	Pn	Pn	00 58 35.0	-3.3
	comp=Z,0.1nm,0.3s,baz=126,slow=15,SNR=2.8						
NOA				Sn	Sn	00 59 54.7	-4.9
	comp=Z,0.2nm,0.3s,baz=120,slow=17,SNR=2.3						
ARA0	ARCESS Array S	9.48	0	Pn	P	00 59 09.0	-3.9
	baz=175,slow=14						
ARA0				Sn	Sn	01 00 50.1	-11
	baz=183,slow=22						
ARA0	ARCESS Array S	9.48	0	eP	P	00 59 09.0	-3.9
ARA0				eS	Sn	01 00 50.1	-11
ARCES	ARCESS Array B	9.48	0	Pn	P	00 59 09.2	-3.7
	comp=Z,0.1nm,0.3s,baz=182,slow=12,SNR=10						
ARCES				Sn	Sn	01 00 50.6	-11
	comp=Z,0.1nm,0.3s,baz=168,slow=25,SNR=3.0						

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*LDG **06** 01:20:02.5±0.1, 15.93N×61.77W, h10^{km}, Mb5.0/30, Ms3.5/7, Error ellipse: s-maj=6.7km s-min=3.8km az=130.0*

*IDC **06** 01:20:03.5±0.4, 15.85N×61.61W, mb4.6/21, mb1 4.7/25, mb1mx4.7/29, mbtmp4.6/25, ML4.4/4, MS3.5/13, Ms1 3.5/13, ms1mx3.3/25, Error ellipse: s-maj=9.5km s-min=7.4km az=121.0*

*BJI **06** 01:20:04.2, 15.80N×61.60W, h14^{km}, mB5.4, Ms4.9, Msz4.4*

*HRVD **06** 01:20:04.2±0.6, 16.16N×61.79W, h28^{km}±1^{km}, MW4.8/33, Centroid moment Tensor Solution. LP body waves: s13,c14;Mantle waves: s33,c41; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.39±.24; M$_{\theta\theta}$0.80±.15; M$_{\phi\phi}$0.59±.19; M$_{r\theta}$0.55±.28; M$_{\theta\phi}$-1.27±.14; M$_{\phi r}$0.50±.33; Best double couple: M$_0$1.901×10^{16} NP1:φ$_s$160°,δ52°, λ-49°. NP2:φ$_s$286°,δ53°,λ-129°. Principal axes: T 1.973, Plg1°, Azm42°; N -.14, Plg31°, Azm312°; P -1.828, Plg59°, Azm134°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **06** 01:20:04.2, 15.77N×61.56W, h14^{km}, mb5.0/116, MD4.6(TRN), After TRN.*

NEIC Felt on Dominica and at Sainte-Anne, Guadeloupe.

*TRN **06** 01:20:04.2, 15.77N×61.52W, h17^{km}, MD4.6*

TRN Felt (V) in Guadeloupe, (III) in Martinique.

*MOS **06** 01:20:07.1±0.8, 15.93N×61.60W, h33^{km}, mb5.1/70, Error ellipse: s-maj=6.2km s-min=4.8km az=55.1*

ISC 06 01:20:05.0±0.3**, 15.76N**±0.02×**61.64W**±0.02**, h25**^{km}±2^{km}**, h23**^{km}±1.0^{km}**:pP-P, n384, σ1^{s}03**/392**, mb4.9**/142**, MS3.6**/13**, 21C-10D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCG	Saint Claude	0.28	352	i P	Pb	01 20 12.0	+0.3
DOG	Dongo Capester	0.28	5	⇑iP	Pb	01 20 11.6	-0.1
BBL	Barber's Block	0.28	144	⇑iP	Pb	01 20 12.4	+0.7
ECG	Echelle	0.28	358	⇑iP	Pb	01 20 12.0	+0.2
TAG	Tarade	0.29	356	eP	Pb	01 20 12.0	+0.2
CRG	Carmichael	0.30	357	i P	Pb	01 20 12.1	+0.1
MLG	Mont-d'or	0.31	348	eP	Pb	01 20 12.6	+0.4
BCG	Bois Riant Cap	0.33	4	i P	Pb	01 20 12.2	-0.2
MGG	Marie-Galante	0.35	63	eP	Pb	01 20 11.3	-1.5
DWS	Wesley	0.37	120	⇑eP	Pb	01 20 13.8	+0.7
DWS				eS	Sb	01 20 17.1	-1.5
SEG	Port Louis	0.66	11	⇑iP	Pb	01 20 17.2	-0.6
DEG	La Desirade	0.79	45	⇑eP	Pb	01 20 17.9	-2.1
FDF	Fort de France	1.12	155	⇑eP	Pn	01 20 25.7	+0.4
FDF				eS	Sb	01 20 42.1	+2.3
CRM	Caravelle	1.22	145	⇓eP	Pn	01 20 26.8	+0.1
CRM				eS	Sn	01 20 42.8	+0.3
BPA	Boggy Peak	1.30	351	eP	Pn	01 20 29.9	+2.0
BPA				eS	Sn	01 20 47.0	+2.4
BIM	Bigot	1.35	156	⇑eP	Pn	01 20 29.3	+0.7
BIM				eS	Sn	01 20 49.8	+3.9
MVM	Montagne Vaucl	1.39	149	eP	Pn	01 20 29.9	+0.7
MVM				eS	Sn	01 20 48.1	+1.1
SLW	Petit Monier	1.85	158	eP	Pn	01 20 36.5	+0.7
CPB	Codrington	1.88	355	eP	Pn	01 20 38.0	+1.8
CPB				eS	Sn	01 20 59.2	-0.2
SKI	Saint Kitts	1.89	326	⇑eP	Pn	01 20 38.9	+2.6
SKI				eS	Sn	01 21 04.5	+4.9
SKDB	Saint Kitts 2	1.98	326	eP	Pn	01 20 40.9	+3.3
SKDB				eS	Sn	01 21 07.2	+5.3
SLB	Belfond	2.00	163	eP	Pn	01 20 40.5	+2.5
STAT	Sint Eustatius	2.15	324	eP	Pn	01 20 39.2	-0.9
STAT				eS	Sn	01 21 12.6	+6.3
SABS	Saba	2.41	321	eP	Pn	01 20 45.4	+1.7
SABS				eS	Sn	01 21 16.2	+3.5
SABT	Saba	2.41	321	eP	Pn	01 20 45.4	+1.7
SABT				eS	Sn	01 21 16.2	+3.5
SVB	Belmont	2.50	171	eP	Pn	01 20 47.7	+2.6
FCV	Fort Charlotte	2.61	171	eP	Pn	01 20 48.4	+1.7
STMA	St. Maarten, A	2.67	329	eP	Pn	01 20 48.5	+0.9
STMA				eS	Sn	01 21 22.2	+2.7
GRHS	Sauteurs	3.51	180	eP	Pn	01 21 02.7	+3.3
GRW	Mount Saint Ca	3.57	180	eP	Pn	01 21 03.2	+2.8
ITEV	Isla Los Testi	4.61	199	eP	Pn	01 21 15.1	+0.1
ITEV				eS	Sn	01 22 08.6	+0.2
IBAV	Isla La Blanqu	4.84	216	eP	Pn	01 21 18.1	-0.2
IBAV				eS	Sn	01 22 13.1	-1.2
SJG	San Juan	4.91	299	P	Pn	01 21 19.9	+0.6
SJG						01 22 13.3	
SJG				pmax	pmax		
	comp=Z,39nm,0.3s						
SJG				smax			
	comp=N,38nm,0.3s						
SJG	San Juan	4.91	299	Pn	Pn	01 21 19.9	+0.6
	comp=N,39nm,0.3s,baz=336,slow=23,SNR=61						
SJG				Sn	Sn	01 22 13.3	-2.8
	comp=N,38nm,0.3s,baz=307,slow=21,SNR=5.8						
SJG	San Juan	4.91	299	ePn	Pn	01 21 19.5	+0.2
GUIV	Guiria	5.11	186	eP	Pn	01 21 22.3	+0.2
GUIV				eS	Sn	01 22 20.5	-0.5
CRUV	Carupano	5.28	197	i P	Pn	01 21 25.9	+1.3
ORCV	Isla La Orchil	5.91	229	eP	Pn	01 21 31.7	-1.7
ORCV				eS	Sn	01 22 36.3	-4.8
PCRV	Puerto La Cruz	6.27	208	Pn	Pn	01 21 38.1	-0.3
	comp=N,3.4nm,0.3s,baz=31,slow=3.4,SNR=36						
PCRV				LR	LR	01 24 31.5	
	comp=N,533nm,19.6s,baz=183,slow=42						
PCRV	Puerto La Cruz	6.27	208	eP	Pn	01 21 38.2	-0.2
ORIV	Oritupano	6.87	195	i P	Pn	01 21 46.9	0.0
BIRV	Birongo	6.92	221	⇑iP	Pn	01 21 45.9	-1.7
CUPV	Cœpira	6.96	216	i P	Pn	01 21 47.7	-0.4
LLAV	El Llanito	7.28	224	eP	Pn	01 21 51.1	-1.5
MERV	Las Mercedes	7.90	216	eP	Pn	01 21 59.5	-1.9
TURV	Turiamo	8.02	230	eP	P	01 21 59.1	-3.8
GURV	El Guri	8.07	190	eP	P	01 22 03.4	-0.3
JACV	Jacura	8.39	237	eP	P	01 22 05.4	-2.8
MONV	Montecano	8.93	246	eP	P	01 22 12.2	-3.4
BAUV	El Baul	9.21	223	eP	P	01 22 17.1	-2.4
SIQV	Siquisique	9.43	238	eP	P	01 22 19.1	-3.5
LUEV	Luepa	9.85	179	eP	P	01 22 27.0	-1.4
SANV	Sanarito	9.90	232	eP	P	01 22 26.6	-2.5
CURV	Curarigua	9.92	236	eP	P	01 22 25.9	-3.5
QARV	Quebrada Arrib	10.26	239	eP	P	01 22 31.2	-2.9
SDV	Santo Domingo	11.12	233	Pn	P	01 22 43.9	-2.0
	comp=N,4.7nm,0.3s,baz=81,slow=8.8,SNR=26						
SDV				LR	LR	01 27 53.7	
	comp=N,199nm,19.0s,baz=358,slow=42						
SDV	Santo Domingo	11.12	233	⇑eP	P	01 22 43.3	-2.6
ELOV	Elorza	11.61	222	eP	P	01 22 49.4	-3.0
SOCV	Socops	11.67	232	eP	P	01 22 50.6	-2.8
CAPV	Capacho	13.06	234	eP	P	01 23 07.5	-4.3
ROSC	El Rosal	16.51	230	Pn	P	01 23 59.2	+2.3
	comp=N,1.5nm,0.3s,baz=67,slow=12,SNR=17						
ROSC				LR	LR	01 31 07.5	
	comp=N,100nm,19.4s,baz=172,slow=40						
BBSR	BB Station	16.77	351	eP	P	01 23 58.3	-1.7
	comp=N,7.5nm,0.5s						
OTAV	Otavalo	22.65	229	eP	P	01 25 08.4	+2.4
	comp=N,22nm,1.3s,mb4.4						
SAML	Samuel	24.59	184	eP	P	01 25 25.9	+1.0
	comp=N,14nm,0.9s,mb4.5						
CBN	Corbin	26.31	331	eP	P	01 25 40.7	-0.1
	comp=N,34nm,1.0s,mb4.8						
BLA	Blacksburg	27.09	326	eP	P	01 25 48.5	+0.6
BLA				pmax	pmax		
	comp=Z,27nm,0.9s,mb4.8						
BLA	Blacksburg	27.09	326	eP	P	01 25 48.5	+0.7
	comp=Z,27nm,0.9s,mb4.8						
ELN	Prospectdale	27.28	325	eP	P	01 25 50.0	+0.4
MVL	Millersville	27.35	335	eP	P	01 25 49.8	-0.5
FWV	Forest Hill	27.57	326	eP	P	01 25 51.9	-0.4
CPCT	Cooper Cave	28.34	318	eP	P	01 25 59.6	+0.3
TZTN	Tazewell	28.43	321	eP	P	01 26 00.1	+0.1
LRAL	Lakeview Retre	28.68	311	eP	P	01 26 02.6	+0.3
	comp=Z,7.1nm,0.8s,mb4.5						
SWET	Sewanee	29.13	316	eP	P	01 26 06.6	+0.2
ALLY	Alegheny Colle	30.35	332	eP	P	01 26 17.4	+0.2
PLAL	Pickwick Lake	30.46	314	eP	P	01 26 18.6	+0.4
	comp=Z,29nm,0.8s,mb5.0						
WVT	Waverly	30.92	316	eP	P	01 26 20.4	-1.8
WVT				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.0						
WVT	Waverly	30.92	316	eP	P	01 26 20.4	-1.8
	comp=Z,26nm,1.0s,mb5.0						
OXF	Oxford	31.16	312	eP	P	01 26 24.0	-0.3
OXF				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.2						
OXF	Oxford	31.16	312	eP	P	01 26 24.0	-0.4
	comp=Z,24nm,0.6s,mb5.2						
WCI	Wyandotte Cave	31.18	321	eP	P	01 26 24.7	+0.2
WCI				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
WCI	Wyandotte Cave	31.18	321	eP	P	01 26 24.7	+0.2
	comp=Z,15nm,0.9s,mb4.8						
SIV	San Ignacio	31.55	179	P	P	01 26 28.7	+0.8
	comp=Z,14nm,1.0s,mb4.7,baz=13,slow=10,SNR=35						
UTMT	University of	31.73	315	eP	P	01 26 29.7	+0.4
	comp=Z,94nm,0.8s,mb5.7						
BLO	Bloomington	31.92	322	eP	P	01 26 31.4	+0.4
BLO				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
BLO	Bloomington	31.92	322	eP	P	01 26 31.4	+0.4
	comp=Z,11nm,0.6s,mb4.8						
LPAZ	La Paz	32.48	192	P	P	01 26 38.5	+2.5
	comp=Z,1.2nm,0.9s,baz=6.3,slow=6.9,SNR=3.6						
LPAZ				PcP	PcP	01 29 23.2	+0.3
	comp=Z,1.3nm,0.7s,baz=11,slow=4.7,SNR=3.9						
LPAZ				LR	LR	01 41 48.3	
	comp=Z,116nm,19.0s,MS3.6,baz=232,slow=40						
SADO	Sadowa	32.48	336	P	P	01 26 35.2	-0.6
	comp=Z,11nm,0.8s,mb4.7,baz=154,slow=9.6,SNR=7.4						
SADO				LR	LR	01 36 06.6	
	comp=Z,6.6nm,20.4s,baz=162,slow=30						
SADO	Sadowa	32.48	336	P	P	01 26 35.2	-0.6
SADO				LR	LR	01 36 06.6	
FVM	French Village	33.67	317	eP	P	01 26 46.1	-0.1
FVM				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
FVM	French Village	33.67	317	eP	P	01 26 46.1	-0.1
	comp=Z,10nm,0.6s,mb4.9						
BDFB	Brasilia	33.97	156	P	P	01 26 50.4	+1.3
	comp=Z,4.7nm,0.9s,mb4.4,baz=309,slow=7.6,SNR=5.0						
BDFB				PcP	PcP	01 29 27.6	+0.5
	comp=Z,2.4nm,1.0s,baz=42,slow=2.9,SNR=4.1						
BDFB				LR	LR	01 40 14.7	

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      comp=Z,75nm,21.7s,MS3.4,baz=84,slow=36
NATX  Nacogdoches        33.99 304 eP     P       01 26 50.3 +1.2
      comp=Z,26nm,0.9s,mb5.2
JCT   Junction City      37.83 300 eP     P       01 27 21.6  0.0
JCT                                pmax   pmax
      comp=Z,33nm,1.0s,mb5.0
JCT   Junction City      37.83 300 eP     P       01 27 21.6  0.0
      comp=Z,33nm,1.0s,mb5.0
WMOK  Wichita Mounta     38.26 307 eP     P       01 27 24.7 -0.5
WMOK                               pmax   pmax
      comp=Z,8.0nm,0.8s,mb4.5
WMOK  Wichita Mounta     38.26 307 eP     P       01 27 24.7 -0.5
      comp=Z,8.2nm,0.8s,mb4.5
KSU1  Kansas State U     38.42 314 eP     P       01 27 25.4 -1.0
SCHQ  Schefferville      39.20 355 P      P       01 27 33.4 +0.5
      comp=Z,3.5nm,0.6s,mb4.3,baz=156,slow=8.9,SNR=15
SCHQ                               LR     LR      01 40 23.1
      comp=Z,55nm,21.8s,MS3.4,baz=129,slow=31
CBKS  Cedar Bluff        40.50 312 eP     P       01 27 44.2 +0.5
CBKS                               pmax   pmax
      comp=Z,26nm,0.8s,mb5.0
CBKS  Cedar Bluff        40.50 312 eP     P       01 27 44.2 +0.5
      comp=Z,26nm,0.8s,mb5.0
AMTX  Amarillo           40.56 306 eP     P       01 27 43.6 -0.6
      comp=Z,8.1nm,0.8s,mb4.4
TXAR  Lajitas Array      40.88 297 P      P       01 27 47.6 +0.7
      comp=Z,1.7nm,0.7s,mb3.8,baz=118,slow=9.3,SNR=18
TXAR                               PcP    PcP     01 29 49.1 +1.1
      comp=Z,2.4nm,0.8s,baz=122,slow=6.5,SNR=9.9
CPRX  Cap Rock           41.81 302 eP     P       01 27 55.7 +1.1
GDL2  Guadalupe Moun     42.03 301 eP     P       01 27 56.7 +0.3
CPUP  Villa Florida      42.04 174 eP     P       01 27 55.6 -1.0
CPUP                               pmax   pmax
      comp=Z,13nm,1.5s
CPUP  Villa Florida      42.04 174 LR     LR      01 46 22.5
      comp=Z,88nm,21.1s,MS3.6,baz=219,slow=38
CPUP  Villa Florida      42.04 174 eP     P       01 27 55.6 -1.0
      comp=Z,13nm,1.5s,mb4.3
MNTX  Cornudas Mount     42.77 300 eP     P       01 28 02.9 +0.4
      comp=Z,6.1nm,0.7s,mb4.4
ULM   Lac du Bonnet      44.11 329 P      P       01 28 12.4 -0.7
      comp=Z,16nm,0.6s,mb5.0,baz=130,slow=8.1,SNR=16
BNM   Barren Site        44.31 303 eP     P       01 28 16.2 +1.2
ANMO  Albuquerque        44.36 304 i P    P       01 28 16.5 +1.1
ANMO  Albuquerque        44.36 304 eP     P       01 28 15.9 +0.6
      comp=Z,6.8nm,1.1s,mb4.3
SDCO  Great Sand Dun     44.37 308 eP     P       01 28 15.8 +0.5
      comp=Z,11nm,1.1s,mb4.5
ISCO  Idaho Springs      45.10 311 eP     P       01 28 22.0 +0.8
ISCO                               pmax   pmax
      comp=Z,7.0nm,0.9s,mb4.5
ISCO  Idaho Springs      45.10 311 eP     P       01 28 22.0 +0.8
      comp=Z,7.0nm,0.9s,mb4.5
PHWY  Pilot Hill         45.50 313 eP     P       01 28 25.1 +0.7
RSSD  Black Hills        45.62 317 eP     P       01 28 25.5 +0.2
RSSD                               pmax   pmax
      comp=Z,6.0nm,0.8s,mb4.6
RSSD  Black Hills        45.62 317 eP     P       01 28 25.5 +0.2
      comp=Z,5.8nm,0.8s,mb4.6
PV01  Paradox Valley     46.80 308 eP     P       01 28 36.0 +1.3
TUC   Tucson             47.40 300 eP     P       01 28 40.7 +1.2
TUC                                pmax   pmax
      comp=Z,4.0nm,0.8s,mb4.4
TUC   Tucson             47.40 300 eP     P       01 28 40.6 +1.2
      comp=Z,3.7nm,0.8s,mb4.4
CFAA  Coronel Fontan     47.51 188 P      P       01 28 44.6 +4.2
      comp=Z,0.2nm,0.5s,slow=5.1,SNR=4.3
LAO   LASA Array         48.10 320 eP     P       01 28 44.3 -0.4
      comp=Z,117nm,1.7s,mb5.6
WUAZ  Wupatki            48.41 304 eP     P       01 28 48.1 +0.8
      comp=Z,12nm,0.8s,mb5.0
PDAR  Pinedale Array     48.87 313 P      P       01 28 51.2 +0.5
      comp=Z,15nm,0.8s,mb5.1,baz=114,slow=9.3,SNR=100
PDAR                               PcP    PcP     01 30 15.2 -0.2
      comp=Z,2.2nm,0.8s,baz=108,slow=5.7,SNR=2.4
FCC   Fort Churchill     49.17 338 eP     P       01 28 50.6 -2.3
FCC                                pmax   pmax
      comp=Z,13nm,1.0s,mb4.9
FCC   Fort Churchill     49.17 338 eP     P       01 28 50.6 -2.3
      comp=Z,13nm,1.0s,mb4.9
JLU   Jordanelle         49.60 310 eP     P       01 28 57.3 +0.9
CTU   Camp Tracy         49.85 310 eP     P       01 28 58.9 +0.6
SNOW  Snow King Moun     49.92 314 eP     P       01 28 58.8  0.0
      comp=Z,11nm,0.9s,mb4.9
WUWY  Wally Ulrich       49.93 314 eP     P       01 28 59.5 +0.6
AHID  Auburn Hatcher     49.95 313 eP     P       01 28 59.4 +0.4
      comp=Z,17nm,0.8s,mb5.1
HWUT  Hardware Ranch     49.95 311 eP     P       01 28 58.7 -0.4
      comp=Z,18nm,1.2s,mb5.0
MOOW  Moose Ponds        50.00 314 eP     P       01 28 59.2 -0.2
      comp=Z,4.4nm,0.7s,mb4.6
RRI2  Red Ridge          50.28 314 eP     P       01 29 02.1 +0.6
      comp=Z,15nm,0.9s,mb5.0
ARUT  Antelope Range     50.47 306 eP     P       01 29 03.9 +0.8
DUG   Dugway             50.51 309 eP     P       01 29 04.0 +0.6
DUG                                pmax   pmax
      comp=Z,17nm,1.4s,mb4.8
DUG   Dugway             50.51 309 eP     P       01 29 04.0 +0.6
      comp=Z,17nm,1.4s,mb4.8
QLMT  Earthquake Lak     50.81 315 eP     P       01 29 07.5 +1.9
BOZ   Bozeman (W)        51.20 316 eP     P       01 29 08.8 +0.3
BOZ                                pmax   pmax
      comp=Z,18nm,1.2s,mb4.9
BOZ   Bozeman (W)        51.20 316 eP     P       01 29 08.8 +0.3
      comp=Z,18nm,1.2s,mb4.9
PTEO  Sao Teotonio       51.30  54 eP     P       01 29 08.4 -1.0
PTOM  Tomar              51.93  52 eP     P       01 29 14.0 -0.2
EVO   Evora              52.03  53 eP     P       01 29 12.4 -2.5
      comp=Z,26nm,1.2s,mb4.7
EVO                                eR
      comp=Z,93nm,18.8s
PBEJ  Beja               52.05  54 eP     P       01 29 14.5 -0.6
EGRO  El Granado         52.27  55 P      P       01 29 16.8  0.0
      comp=Z,72nm,2.0s,mb5.3
ELK   Elko               52.44 310 eP     P       01 29 18.3 +0.3
ELK                                pmax   pmax
      comp=Z,12nm,1.4s
ELK   Elko               52.44 310 eP     P       01 29 18.3 +0.4
      comp=Z,12nm,1.4s,mb4.6
HLID  Hailey             52.50 313 eP     P       01 29 18.5 +0.1
      comp=Z,5.4nm,0.8s,mb4.5
PVIS  Viseu              52.54  51 eP     P       01 29 18.4 -0.4
CHMT  Chamberlain Mo     52.67 317 eP     P       01 29 19.9 +0.3
PCBR  Castelo Branco     52.68  52 eP     P       01 29 17.8 -2.0
EBAD  Badajoz            52.84  53 P      P       01 29 20.8 -0.2
      comp=Z,65nm,2.6s,mb5.1
EMIN  Mina Concepcio     52.94  54 P      P       01 29 21.8  0.0
      comp=Z,122nm,2.8s,mb5.3
ERUA  La Rua             53.45  49 P      P       01 29 25.6 +0.1
ERUA                               pmax   pmax
      comp=Z,7.0nm,0.7s,mb4.7
ERUA  La Rua             53.45  49 P      P       01 29 25.6 +0.2
      comp=Z,7.1nm,0.7s,mb4.7
ESPR  Espera             53.46  56 P      P       01 29 25.3 -0.2
      comp=Z,46nm,1.3s,mb5.2
ECAL  Calabor            53.65  49 P      P       01 29 26.6 -0.3
      comp=Z,22nm,1.1s,mb5.0
MNV   Mina               54.25 306 eP     P       01 29 31.3  0.0
MNV                                pmax   pmax
      comp=Z,10.0nm,1.1s,mb4.7
MNV   Mina               54.25 306 eP     P       01 29 31.3  0.0
      comp=Z,9.6nm,1.1s,mb4.6
EMIJ  Mijas              54.28  56 P      P       01 29 31.9 +0.3
      comp=Z,5.9nm,0.6s,mb4.7
NVAR  Mina Array Bea     54.36 306 P      P       01 29 32.5 +0.4
      comp=Z,4.0nm,0.9s,mb4.4,baz=98,slow=7.2,SNR=15
NVAR                               PcP    PcP     01 30 37.1 +1.3
      comp=Z,3.1nm,0.7s,baz=127,slow=4.5,SNR=7.3
EADA  Adamuz             54.64  54 P      P       01 29 34.1 -0.1
      comp=Z,17nm,1.2s,mb4.9
BMO   Blue Mountains     54.83 314 eP     P       01 29 33.6 -1.9
BMO                                pmax   pmax
      comp=Z,7.0nm,1.2s,mb4.6
BMO   Blue Mountains     54.83 314 eP     P       01 29 33.6 -2.0
      comp=Z,6.6nm,1.2s,mb4.5
ELOJ  Sierra Loja        54.85  56 P      P       01 29 36.9 +1.1
ELOJ                               pmax   pmax
      comp=Z,4.0nm,0.6s,mb4.6
ELOJ  Sierra Loja        54.85  56 P      P       01 29 36.9 +1.1
      comp=Z,3.8nm,0.6s,mb4.6
EDM   Edmonton           54.94 325 eP     P       01 29 35.2 -1.1
EARI  Arriondas          55.03  48 P      P       01 29 37.1  0.0
      comp=Z,23nm,1.0s,mb5.2
ERON  Agron              55.11  56 P      P       01 29 38.7 +1.0
      comp=Z,1.6nm,0.2s,mb4.7
EBAN  Banos Encina       55.26  54 P      P       01 29 39.2 +0.4
EBAN                               pmax   pmax
      comp=Z,2.0nm,0.2s,mb4.8
EBAN  Banos Encina       55.26  54 P      P       01 29 39.2 +0.5
      comp=Z,2.2nm,0.2s,mb4.8
ESDC  Sonseca Array      55.32  52 P      P       01 29 39.0 -0.2
      comp=Z,2.6nm,0.7s,mb4.4,baz=274,slow=7.1,SNR=25
ESDC  Sonseca Array      55.32  52 P      P       01 29 39.3 +0.1
      comp=Z,2.2nm,0.6s,mb4.4
NEW   Newport            55.57 318 eP     P       01 29 40.0 -0.9
NEW                                pmax   pmax
      comp=Z,27nm,1.0s
NEW   Newport            55.57 318 eP     P       01 29 40.0 -0.9
      comp=Z,27nm,1.0s,mb5.2
EQES  Quesada            55.78  55 P      P       01 29 43.2 +0.8
      comp=Z,9.8nm,0.7s,mb5.0
EBER  Berja              55.82  56 P      P       01 29 44.3 +1.5
      comp=Z,11nm,0.7s,mb5.0
DBIC  Dimbokro           56.28  92 eP     P       01 29 45.8 -0.6
DBIC                               pmax   pmax
      comp=Z,24nm,0.9s
DBIC  Dimbokro           56.28  92 P      P       01 29 46.0 -0.4
      comp=Z,18nm,0.8s,mb5.1,baz=275,slow=8.4,SNR=23
DBIC                               LR     LR      01 50 56.4
      comp=Z,45nm,20.1s,MS3.5,baz=264,slow=33
DBIC  Dimbokro           56.28  92 eP     P       01 29 45.8 -0.7
      comp=Z,24nm,0.9s,mb5.2
ELAN  Lanestosa          56.29  48 P      P       01 29 46.2 +0.1
      comp=Z,47nm,1.3s,mb5.4
ENIJ  Nijar              56.38  56 P      P       01 29 47.1 +0.3
ENIJ                               pmax   pmax
      comp=Z,12nm,0.7s,mb5.0
ENIJ  Nijar              56.38  56 P      P       01 29 47.1 +0.3
      comp=Z,12nm,0.7s,mb5.0
PLCA  Paso Flores        56.80 188 P      P       01 29 52.0 +2.2
      comp=Z,1.3nm,0.6s,mb4.1,baz=319,slow=14,SNR=2.9
ETOB  Tobarra            57.06  54 P      P       01 29 52.3 +0.6
      comp=Z,18nm,1.1s,mb5.0
EMUR  La Murta           57.22  55 P      P       01 29 52.1 -0.7
      comp=Z,58nm,2.1s,mb5.2
QUIF  Quistinic          57.43  43 eP     P       01 29 52.9 -1.2
      comp=Z,28nm,1.0s,mb5.0
QUIF  Quistinic          57.43  43 eP     P       01 29 52.9 -1.2
QUIF                               pmax   pmax
      comp=Z,14nm,1.0s,mb5.0
ROSF  Rostrenen          57.46  42 eP     P       01 29 53.9 -0.4
      comp=Z,16nm,0.7s,mb4.8
ROSF  Rostrenen          57.46  42 eP     P       01 29 53.9 -0.4
ROSF                               pmax   pmax
      comp=Z,8.0nm,0.7s,mb4.9
EALK  Alkurruntz         57.68  49 P      P       01 29 55.0 -1.0
      comp=Z,20nm,1.0s,mb5.1
SJPF  Ste Jean           57.87  49 eP     P       01 29 57.6 +0.3
      comp=Z,44nm,0.8s,mb5.3
SJPF  Ste Jean           57.87  49 eP     P       01 29 57.6 +0.3
SJPF                               pmax   pmax
      comp=Z,22nm,0.8s,mb5.2
SGMF  Saint Gilles       57.90  43 eP     P       01 29 56.7 -0.7
      comp=Z,21nm,0.9s,mb4.9
SGMF  Saint Gilles       57.90  43 eP     P       01 29 56.7 -0.7
SGMF                               pmax   pmax
      comp=Z,10.0nm,0.9s,mb4.8
EMOS  Mosqueruela        58.07  52 P      P       01 29 59.0 +0.3
      comp=Z,85nm,1.6s,mb5.5
ESAC  San Caprasio       58.23  50 P      P       01 30 00.4 +0.6
      comp=Z,43nm,1.2s,mb5.3
ETSF  Etsaut             58.32  49 eP     P       01 30 00.1 -0.3
      comp=Z,12nm,0.9s,mb4.6
ETSF  Etsaut             58.32  49 eP     P       01 30 00.1 -0.3
ETSF                               pmax   pmax
      comp=Z,6.0nm,0.9s,mb4.6
SUMG  Summit             58.40   8 eP     P       01 29 59.4 -1.2
      comp=Z,20nm,1.0s,mb5.1
ERTA  Horta de San J     58.74  51 P      P       01 30 04.4 +1.0
      comp=Z,40nm,1.4s,mb5.2
EBIE  Bielsa             58.80  49 P      P       01 30 04.8 +1.0
      comp=Z,26nm,1.1s,mb5.2
EGRA  Graus              58.87  50 P      P       01 30 05.3 +1.0
      comp=Z,8.4nm,0.7s,mb4.9
EPF   Esparros           58.99  49 eP     P       01 30 05.3 +0.2
      comp=Z,51nm,1.2s,mb5.1
EPF   Esparros           58.99  49 eP     P       01 30 05.3 +0.2
EPF                                pmax   pmax
      comp=Z,26nm,1.2s,mb5.1
GRR   Gorron             59.04  43 eP     P       01 30 04.7 -0.7
      comp=Z,39nm,1.0s,mb5.1
GRR   Gorron             59.04  43 eP     P       01 30 04.7 -0.7
GRR                                pmax   pmax
      comp=Z,19nm,1.0s,mb5.1
MFF   Saint Martin d     59.18  45 eP     P       01 30 06.1 -0.3
      comp=Z,16nm,0.8s,mb4.8
MFF   Saint Martin d     59.18  45 eP     P       01 30 06.1 -0.3
MFF                                pmax   pmax
      comp=Z,8.0nm,0.8s,mb4.8
EPOB  Poblet             59.34  51 P      P       01 30 07.7 +0.1
      comp=Z,38nm,1.7s,mb5.2
FLN   La Foliniere       59.36  42 eP     P       01 30 07.0 -0.6
      comp=Z,58nm,1.0s,mb5.2
FLN                                eR
      comp=Z,34nm,17.2s
FLN   La Foliniere       59.36  42 eP     P       01 30 07.0 -0.6
FLN                                pmax   pmax
      comp=Z,29nm,1.0s,mb5.3
FLN                                MLR    MLR
      comp=Z,30nm,17.3s,MS3.5
YKA   Yellowknife Ar     59.45 335 P      P       01 30 06.6 -1.4
      comp=Z,13nm,0.7s,mb5.1,baz=108,slow=7.4,SNR=53
YKA   Yellowknife Ar     59.45 335 P      P       01 30 06.6 -1.4
YKW3  Yellowknife Ar     59.49 335 eP     P       01 30 06.6 -1.6
LFF   La Frestale        59.54  47 eP     P       01 30 08.3 -0.6
      comp=Z,41nm,1.1s,mb5.1
LFF   La Frestale        59.54  47 eP     P       01 30 08.3 -0.6
LFF                                pmax   pmax
      comp=Z,21nm,1.1s,mb5.1
EMIR  Miracle            59.74  50 P      P       01 30 11.0 +0.7
      comp=Z,23nm,1.2s,mb5.1
RJF   Les Rejaudoux      60.13  47 eP     P       01 30 12.3 -0.6
      comp=Z,30nm,1.0s,mb5.0
RJF                                eR
      comp=Z,123nm,18.5s
RJF   Les Rejaudoux      60.13  47 eP     P       01 30 12.3 -0.6
RJF                                pmax   pmax
      comp=Z,15nm,1.0s,mb5.0
RJF                                MLR    MLR
      comp=Z,120nm,18.5s,MS4.1
MTLF  Montolieu          60.39  49 eP     P       01 30 14.6 -0.1
      comp=Z,37nm,1.0s,mb5.0
MTLF  Montolieu          60.39  49 eP     P       01 30 14.6 -0.1
MTLF                               pmax   pmax
      comp=Z,19nm,1.0s,mb5.1
CAF   Calviac            60.47  47 eP     P       01 30 14.7 -0.5
      comp=Z,31nm,1.1s,mb5.0
CAF   Calviac            60.47  47 eP     P       01 30 14.7 -0.5
CAF                                pmax   pmax
      comp=Z,16nm,1.1s,mb5.0
ETOS  Mallorca           60.53  53 P      P       01 30 15.2 -0.6
      comp=Z,9.2nm,0.7s,mb5.0
TCF   Toulx Ste Croi     60.75  46 eP     P       01 30 16.8 -0.3
      comp=Z,20nm,1.0s,mb4.9
TCF   Toulx Ste Croi     60.75  46 eP     P       01 30 16.8 -0.3
TCF                                pmax   pmax
      comp=Z,10.0nm,1.0s,mb4.9
EJON  La Jonquera        60.80  50 P      P       01 30 18.3 +0.8
      comp=Z,43nm,1.1s,mb5.5
HYF   Humbligny          61.17  44 eP     P       01 30 19.8 -0.2
BGF   Bois d'Agland      61.22  45 eP     P       01 30 19.9 -0.4
AVF   Avril sur Loir     61.59  45 eP     P       01 30 22.1 -0.7
      comp=Z,29nm,1.0s,mb5.0
AVF   Avril sur Loir     61.59  45 eP     P       01 30 22.1 -0.7
AVF                                pmax   pmax
      comp=Z,15nm,1.0s,mb5.1
LASF  Ste Croix          61.65  48 eP     P       01 30 22.8 -0.5
      comp=Z,28nm,1.2s,mb5.0
SSF   Saint Saulge       61.73  45 eP     P       01 30 23.0 -0.8
SSF                                pmax   pmax
      comp=Z,22nm,1.3s,mb5.1
SSF   Saint Saulge       61.73  45 eP     P       01 30 23.0 -0.8
      comp=Z,22nm,1.3s,mb5.1
SMF   Signal de Mont     61.91  45 eP     P       01 30 24.3 -0.7
      comp=Z,57nm,1.3s,mb5.2
SMF   Signal de Mont     61.91  45 eP     P       01 30 24.3 -0.7
SMF                                pmax   pmax
      comp=Z,29nm,1.3s,mb5.2
LOR   Lormes             62.00  45 eP     P       01 30 24.7 -0.9
      comp=Z,47nm,1.1s,mb5.2
LOR                                eR
      comp=Z,50nm,19.5s
LOR   Lormes             62.00  45 eP     P       01 30 24.7 -0.9
LOR                                pmax   pmax
      comp=Z,24nm,1.1s,mb5.2
LOR                                MLR    MLR
      comp=Z,50nm,19.5s,MS3.7
VIVF  Saint-Julien-l     62.30  47 eP     P       01 30 27.9 +0.3
      comp=Z,24nm,1.0s,mb5.0
VIVF  Saint-Julien-l     62.30  47 eP     P       01 30 27.9 +0.3
VIVF                               pmax   pmax
      comp=Z,12nm,1.0s,mb5.0
SMRF  Simiane la Rot     62.88  48 eP     P       01 30 30.8 -0.6
MEZF  Maizieres J'vi     62.94  43 eP     P       01 30 31.3 -0.5
      comp=Z,59nm,1.1s,mb5.3
GIVF  Givet              63.00  42 eP     P       01 30 31.2 -0.9
ORIF  Oris-en-Rattie     63.16  47 eP     P       01 30 33.0 -0.3
ORIF                               eR
      comp=Z,78nm,19.2s
CABF  La Chapelle        63.45  45 eP     P       01 30 34.7 -0.4
      comp=Z,14nm,0.9s,mb4.8
CABF  La Chapelle        63.45  45 eP     P       01 30 34.7 -0.4
CABF                               pmax   pmax
      comp=Z,7.0nm,0.9s,mb4.8
LMR   La Mourre          63.51  49 eP     P       01 30 35.1 -0.6
FRF   La Foret Royal     63.62  49 eP     P       01 30 35.8 -0.6
HAU   Haudompre          63.75  44 eP     P       01 30 36.1 -1.0
HAU                                eR
      comp=Z,50nm,18.9s
MBDF  Montbardon         63.78  48 eP     P       01 30 37.1 -0.3
      comp=Z,14nm,0.8s,mb4.8
MBDF  Montbardon         63.78  48 eP     P       01 30 37.1 -0.3
MBDF                               pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.7
HGN   Heimansgroeve      63.79  41 eP     P       01 30 37.3 -0.1
      comp=Z,18nm,1.1s,mb5.0
RRL   Cesana Torines     63.80  47 P      P       01 30 38.9 +1.4
LPL   La Plagne          63.81  47 eP     P       01 30 38.0 +0.4
      comp=Z,20nm,0.9s,mb4.8
LPL   La Plagne          63.81  47 eP     P       01 30 38.0 +0.4
LPL                                pmax   pmax
      comp=Z,10.0nm,0.9s,mb4.8
LPG   La Plagne          63.82  47 eP     P       01 30 38.3 +0.7
PZZ   Prazzo             64.00  48 P      P       01 30 40.0 +1.1
HINF  Hinteralfeld       64.07  44 eP     P       01 30 38.1 -1.2
LSD   Ceresole Reale     64.10  47 P      P       01 30 41.0 +1.5
BHB   Bricherasio        64.14  48 P      P       01 30 40.0 +0.3
STV2  Anna di Valdie     64.15  48 P      P       01 30 41.5 +1.6
RSP   Reno Superiore     64.15  47 P      P       01 30 40.9 +1.1
SBF   Sospel             64.21  49 eP     P       01 30 39.5 -0.7
ENR   Entracque          64.22  48 P      P       01 30 43.4 +3.1
CDF   Champ du Feu       64.41  44 eP     P       01 30 40.6 -0.8
      comp=Z,16nm,0.9s,mb4.7
CDF   Champ du Feu       64.41  44 eP     P       01 30 40.6 -0.8
CDF                                pmax   pmax
      comp=Z,8.0nm,0.9s,mb4.8
WTSB  Winterswijk        64.47  40 eP     P       01 30 40.7 -1.1
      comp=Z,14nm,1.3s,mb4.8
TRAV                     64.52  47 P      P       01 30 42.3 +0.1
IMI   Imperia            64.54  49 P      P       01 30 43.3 +0.9
ROB   Roburent           64.54  48 P      P       01 30 42.6 +0.2
ORX   Oropa              64.69  47 P      P       01 30 43.0 -0.3
FIN   Finale Ligure      64.78  48 P      P       01 30 43.4 -0.5
DAG   Danmarks Havn      64.86  10⇑eP     P       01 30 43.4 -0.6
DAG                                pmax   pmax
      comp=Z,5.0nm,0.9s,mb4.5
DAG   Danmarks Havn      64.86  10⇑eP     P       01 30 43.4 -0.6
      comp=Z,5.0nm,0.9s,mb4.5
DAG   Danmarks Havn      64.86  10⇑iP     P       01 30 43.4 -0.6
      comp=Z,5.0nm,0.9s,mb4.5
PCP   Pian Castagno      65.04  48 P      P       01 30 45.5 -0.1
BFO   Black Forest       65.10  44 eP     P       01 30 45.4 -0.5
BFO                                pmax   pmax
      comp=Z,8.0nm,1.2s,mb4.6
BFO   Black Forest       65.10  44 eP     P       01 30 45.4 -0.5
      comp=Z,8.0nm,1.2s,mb4.6
PGF   Pioggiola          65.31  50 eP     P       01 30 46.6 -0.8
TNS   Taunus Mts         65.33  42 eP     P       01 30 47.3  0.0
TNS                                pmax   pmax
      comp=Z,16nm,1.0s,mb5.0
TNS   Taunus Mts         65.33  42 eP     P       01 30 47.3  0.0
      comp=Z,16nm,1.0s,mb5.0
DLBC  Dease Lake         65.41 327 eP     P       01 30 48.1 +0.4
DAVA  Damuels            66.08  45⇑iP     P       01 30 52.5 +0.3
      comp=Z,20nm,1.0s,mb5.1
BACM                     66.12  48 P      P       01 30 49.8 -2.8
GRAM                     66.12  48 P      P       01 30 49.8 -2.7
VALM                     66.25  48 P      P       01 30 50.6 -2.8
SARO  Sassorosso         66.36  48 P      P       01 30 50.7 -3.4
CLZ   Clausthal          66.67  40 eP     P       01 30 55.9  0.0
CLZ                                pmax   pmax
      comp=Z,26nm,1.5s,mb5.0
CLZ   Clausthal          66.67  40 eP     P       01 30 55.9  0.0
      comp=Z,26nm,1.5s,mb5.0
BSEG  Bad Segeberg       66.80  38 eP     P       01 30 56.1 -0.6
GRA1  Grafenberg Arr     67.08  42 eP     P       01 30 57.9 -0.6
      comp=Z,15nm,1.3s,mb4.9
GRF   Grafenberg Arr     67.08  42 eP     P       01 30 57.9 -0.6
GRF                                pmax   pmax
      comp=Z,15nm,1.3s,mb4.9
WTTA  Wattenberg         67.28  45⇑iP     P       01 31 00.1 +0.3
      comp=Z,8.3nm,1.2s,mb4.6
WTTA  Wattenberg         67.28  45⇑iP     P       01 31 00.1 +0.3
WTTA                               pmax   pmax
      comp=Z,8.0nm,1.2s,mb4.6
MOX   Moxa               67.38  41 eP     P       01 30 57.7 -2.7
MOX   Moxa               67.38  41 i P    P       01 30 57.7 -2.7
NKC   Novy Kostel        67.89  42 eP     P       01 31 03.4 -0.2
NB2   NORSAR Subarra     68.05  30 P      P       01 31 04.7 +0.3
      comp=Z,0.9nm,0.7s,mb3.9,baz=262,slow=6.5
NOA   NORSAR Array B     68.05  30 P      P       01 31 04.3 -0.1
      comp=Z,7.0nm,0.8s,mb4.8,baz=262,slow=6.3,SNR=22
NOA                                LR     LR      01 56 56.7
      comp=Z,35nm,18.8s,MS3.6,baz=270,slow=33
CLL   Collm              68.28  41⇓iP     P       01 31 05.7 -0.3
CLL                                pmax   pmax
      comp=Z,19nm,1.1s,mb5.0
CLL   Collm              68.28  41⇓iP     P       01 31 05.7 -0.3
      comp=Z,19nm,1.1s,mb5.0
CLL   Collm              68.28  41 ⇓P     P       01 31 05.7 -0.3
      comp=Z,logA/T=1.2,mb5.0
CLL                                e*SP   sP      01 31 13.0 -3.5
KBA   Koelnbreinsper     68.44  45⇓iP     P       01 31 06.8 -0.3
      comp=Z,15nm,0.9s,mb5.0
KBA   Koelnbreinsper     68.44  45⇓iP     P       01 31 06.8 -0.3
KBA                                pmax   pmax
      comp=Z,15nm,0.9s,mb5.0
ROBS  Robic              68.56  46 eP     P       01 31 07.5 -0.3
KHC   Kasperske Hory     68.60  43 eP     P       01 31 07.6 -0.5
GEC2  GERESS Array S     68.68  43 eP     P       01 31 08.3 -0.3
GEC2                               pmax   pmax
      comp=Z,11nm,1.4s,mb4.6
GEC2  GERESS Array S     68.68  43 eP     P       01 31 08.3 -0.3
      comp=Z,11nm,1.4s,mb4.6
GERES GERESS Array B     68.68  43 P      P       01 31 08.0 -0.6
      comp=Z,3.1nm,0.7s,mb4.3,baz=284,slow=5.5,SNR=34
INK   Inuvik             68.79 338 eP     P       01 31 07.6 -1.3
INK                                pmax   pmax
      comp=Z,15nm,0.8s
INK   Inuvik             68.79 338 eP     P       01 31 07.6 -1.3
      comp=Z,15nm,0.8s,mb5.0
BRG   Berggiesshubel     68.86  41 i P    P       01 31 09.8 +0.2
BRG                                e      pP      01 31 16.7 -0.6
BRG                                pmax   pmax
      comp=Z,13nm,0.9s,mb4.9
BRG   Berggiesshubel     68.86  41 i P    P       01 31 09.8 +0.2
      comp=Z,13nm,0.9s,mb4.8
BRG                                e      pP      01 31 16.7 -0.6
MOA   Molln              69.06  44⇑iP     P       01 31 10.0 -0.9
      comp=Z,6.4nm,1.2s,mb4.4
PRU   Pruhonice          69.23  42 eP     P       01 31 11.9 -0.1
PVCC  Panska Ves         69.25  42 eP     P       01 31 11.5 -0.6
OBKA  Obir               69.28  46⇓iP     P       01 31 12.0 -0.3
      comp=Z,16nm,0.8s,mb5.0
VISS  Visnje             69.50  47 eP     P       01 31 13.6  0.0
PERS  Pernice            69.66  46 eP     P       01 31 13.9 -0.7
ARSA  Arzberg            69.92  45⇓iP     P       01 31 15.6 -0.6
      comp=Z,8.9nm,0.9s,mb4.7
GOLS  Golise             70.04  46 eP     P       01 31 17.9 +0.9
UPC   Upice              70.18  42 eP     P       01 31 17.6 -0.1
DPC   Dobruska-Polom     70.38  42 eP     P       01 31 18.9  0.0
ZST   Bratislava         70.96  44 eP     P       01 31 22.5  0.0
MORC  Moravsky Berou     71.18  42 eP     P       01 31 23.9 +0.1
MORC                               pmax   pmax
      comp=Z,11nm,1.2s,mb4.7
MORC  Moravsky Berou     71.18  42 eP     P       01 31 23.9 +0.1
      comp=Z,11nm,1.2s,mb4.7
OKC   Ostrava-Krasne     71.57  42 eP     P       01 31 26.1  0.0
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SRO1	Iza	71.74	44	eP	P	01 31 26.3	-0.9
SRO	Srobarova	71.79	44	eP	P	01 31 27.5	0.0
VYHS	Vyhne	72.09	44	eP	P	01 31 29.2	-0.1
OJC	Ojcow	72.61	42	⇓eP	P	01 31 32.7	+0.4
NIE	Niedzica	73.00	43	eP	P	01 31 35.6	+1.0
ILAR	Eielson Array	73.86	334	P	P	01 31 38.8	-0.5
	comp=Z,6.1nm,0.9s,mb4.5,baz=100,slow=4.4,SNR=59						
ILAR				LR	LR	02 02 59.3	
	comp=Z,58nm,19.2s,MS3.9,baz=360,slow=35						
COLA	College	74.27	334	i P	P	01 31 40.4	-1.2
ARCES	ARCESS Array B	74.37	21	P	P	01 31 41.3	-0.8
	comp=Z,4.4nm,0.8s,mb4.4,baz=270,slow=7.3,SNR=11						
SUW	Suwalki	74.39	38	eP	P	01 31 43.1	+0.6
KWP	Kalwaria	74.53	42	eP	P	01 31 45.0	+1.5
SML	Sawmill	74.70	331	eP	P	01 31 41.7	-2.5
MCK	McKinley	74.82	333	eP	P	01 31 44.6	-0.3
MCK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
MCK	McKinley	74.82	333	eP	P	01 31 44.6	-0.3
	comp=Z,2.9nm,0.9s,mb4.2						
FINES	FINESS Array B	75.22	30	P	P	01 31 47.5	+0.3
	comp=Z,5.8nm,0.7s,mb4.6,baz=270,slow=3.8,SNR=21						
FINES				LR	LR	01 59 40.6	
	comp=Z,27nm,19.0s,MS3.6,baz=179,slow=32						
KAF	Kangasniemi	75.26	29	ep	P	01 31 46.5	-0.9
	comp=Z,10.0nm,0.8s,mb4.8,baz=275,slow=5.5						
KAF	Kangasniemi	75.26	29	eP	P	01 31 46.5	-0.9
KAF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
SLKM	Skilak Lake	75.74	329	eP	P	01 31 49.8	-0.4
VSU	Vasula	75.88	33	i P	P	01 31 50.7	-0.3
SPU	Mount Spurr	76.55	330	eP	P	01 31 54.7	0.0
IMA	Indian Mountai	76.56	335	eP	P	01 31 55.0	+0.3
IMA				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
IMA	Indian Mountai	76.56	335	eP	P	01 31 55.0	+0.3
	comp=Z,34nm,1.0s,mb5.2						
AKASG	Malin Array Be	78.52	40	P	P	01 32 05.8	0.0
	comp=Z,3.7nm,0.7s,mb4.4,baz=263,slow=5.5,SNR=22						
OBN	Obninsk	81.84	35	d iP	P	01 32 24.0	+0.6
OBN				e	pP	01 32 31.0	-0.3
OBN				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
OBN	Obninsk	81.84	35	eP	P	01 32 24.2	+0.8
	comp=Z,11nm,0.7s,mb4.9						
ISP	Isparta	82.17	53	i P	P	01 32 26.0	+0.5
MOS	Moscow	82.25	34	eP	P	01 32 31.3	+5.8
BRTR	Keskin Array B	84.06	51	P	P	01 32 35.8	+0.6
	comp=Z,3.2nm,0.8s,mb4.5,baz=262,slow=4.6,SNR=16						
VRSR	Storozhevoye	84.49	38	eP	P	01 32 38.0	+0.9
VRSR				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
VRSR				pmax	pmax		
	comp=N,9.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.7s						
ANN	Anapa	85.33	45	eP	P	01 32 57.4	+16
ANN				i	pP	01 33 05.5	+16
ANN				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.2						
SOC	Sochi	87.27	46	eP	P	01 32 50.5	-0.5
SOC				e		01 36 10.7	
SOC				eS	S	01 43 13.5	-14
SOC				eSSS	SSS	01 52 43.7	-2.9
SOC				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb5.0						
SOC				pmax	pmax		
	comp=N,7.0nm,0.9s						
SOC				pmax	pmax		
	comp=E,4.0nm,0.8s						
ASF	Jabal al Asfar	88.75	57	P	P	01 33 00.3	+1.9
	comp=E,3.3nm,0.9s,mb4.7,baz=165,slow=1.6,SNR=6.4						
KIV	Kislovodsk	89.17	44	i P	P	01 33 01.2	+1.1
KIV				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.2						
BILL	Bilibino	89.58	344	i P	P	01 33 01.8	+0.3
BILL				pmax	pmax		
	comp=Z,13nm,1.5s,mb5.0						
BILL	Bilibino	89.58	344	eP	P	01 33 02.4	+0.9
	comp=Z,3.8nm,0.8s,mb4.8						
GNI	Garni	92.00	47	i P	P	01 33 15.4	+2.1
GNI				pmax	pmax		
	comp=Z,17nm,1.5s						
TIXI	Tiksi	92.52	357	eP	P	01 33 14.4	-0.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
ARU	Arti	92.56	29	i P	P	01 33 16.3	+0.9
ARU				pmax	pmax		
	comp=Z,11nm,2.2s,mb4.9						
VNA3	Neumayer Olymp	93.64	165	e	P	01 33 27.1	+7.0
VNA3	Neumayer Olymp	93.64	165	⇑iP	P	01 33 21.7	+1.6
VNA3				e		01 33 27.1	
VNA2	Neumayer--Watz	94.01	164	e	P	01 33 27.0	+5.2
VNA2	Neumayer--Watz	94.01	164	e	P	01 33 29.0	+7.2
VNA2	Neumayer--Watz	94.01	164	⇑iP	P	01 33 24.0	+2.2
VNA2				e		01 33 27.0	
VNA2				e		01 33 29.0	
MATP	Matopo	95.50	110	LR	LR	02 09 32.0	
	comp=Z,40nm,18.4s,MS3.9,baz=14,slow=31						
SNAA	Sanae	95.63	164	e	P	01 33 34.1	+4.9
SNAA	Sanae	95.63	164	e	P	01 33 35.9	+6.7
SNAA	Sanae	95.63	164	⇑iP	P	01 33 30.4	+1.2
SNAA				e		01 33 34.1	
SNAA				e		01 33 35.9	
MAW	Mawson	117.28	159	PKP	PKPdf	01 38 50.1	-2.5
	comp=Z,2.4nm,0.7s,baz=264,slow=3.8,SNR=6.6						
MDJ	Mudanjiang	119.06	351	PKP	PKPdf	01 38 47.5	-9.1
MDJ				PP	PP		
	comp=Z,70nm,6.8s						
NJ2	Nanjing	132.47	359	ePKP	PKPdf	01 39 20.8	-2.0
NJ2				PP	PP	01 41 43.0	-2.6
NJ2				PKS	PKS	01 42 56.0	+2.6
NJ2				SKS	SKS	01 46 27.0	-5.4
SSE	Sheshan	133.34	357	PKP	PKPdf	01 39 22.6	-1.8
SSE				PP	PP		
	comp=Z,130nm,4.4s						
KMI	Kunming	136.61	21	PKP	PKPdf	01 39 26.4	-4.1
KMI				LR	LR		
	comp=Z,20nm,22.8s,MS3.8						
STKA	Stephens Creek	153.45	229	PKP	PKPdf	01 39 56.6	-2.0
	comp=Z,1.5nm,0.7s,baz=55,slow=20,SNR=4.0						
STKA				PKPbc	PKPdf	01 40 04.6	+6.0
	comp=Z,3.0nm,0.8s,baz=294,slow=3.0,SNR=5.6						
STKA				PKPab	PKPab	01 40 16.6	+0.2
	comp=Z,1.9nm,0.7s,baz=149,slow=6.7,SNR=3.7						
ASAR	Alice Springs	163.39	239	PKP	PKPdf	01 40 07.8	-2.8
	comp=Z,2.3nm,0.8s,baz=122,slow=1.2,SNR=27						
ASAR				PKPab	PKPab	01 40 59.1	-0.2
	comp=Z,3.2nm,0.7s,baz=111,slow=4.1,SNR=27						
WRA	Warramunga Arr	164.23	252	PKP	PKPdf	01 40 08.9	-2.6
	comp=Z,3.2nm,0.8s,baz=29,slow=0.5,SNR=19						
WRA				PKPab	PKPab	01 41 03.1	+0.1
	comp=Z,1.1nm,0.7s,baz=101,slow=4.2,SNR=5.2						

IDC 06 01:58:45.6±3.2**, 5.02S×103.27E, mb3.8**/5**, mb1 3.9**/5**, mb1mx3.6**/18**, mbtmp3.8**/5**, Error ellipse: s-maj=146.7km s-min=22.3km az=57.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	33.67	119	P	P	02 05 28.3	-2.3
	0.3nm,0.3s,baz=307,slow=8.9,SNR=6.3						
ASAR	Alice Springs	34.85	125	P	P	02 05 38.7	-2.1
	0.7nm,0.5s,baz=293,slow=7.5,SNR=8.4						
STKA	Stephens Creek	44.72	131	P	P	02 07 01.2	-1.4
	1.1nm,0.4s,baz=321,slow=7.8,SNR=11						
SONM	Songino Array	52.70	3	P	P	02 08 02.1	-2.1
	0.4nm,0.4s,baz=180,slow=6.2,SNR=4.8						
MKAR	Makanchi Array	54.83	342	P	P	02 08 17.9	-2.0
	0.4nm,0.4s,baz=146,slow=8.7,SNR=4.3						
TXAR	Lajitas Array	144.87	43	PKP	PKPdf	02 18 23.6	-3.6
	0.1nm,0.3s,baz=269,slow=0.8,SNR=6.7						

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*CSEM **06** 02:18:04.6±0.1, 36.51N×27.88E, h80^{km}, Error ellipse: s-maj=3.6km s-min=2.1km az=100.0*

*ATH **06** 02:18:07.3, 36.51N×27.86E, h70^{km}±4^{km}*

*ISK **06** 02:18:08.5, 36.54N×27.92E, h55^{km}, ML3.0*

*HLW **06** 02:18:10.0, 36.21N×27.92E, h30^{km}, Mb3.5*

ISC 06 02:18:06.1±0.5**, 36.46N**±0.03×**27.88E**±0.04**, h82**^{km}±6^{km}**, n27,** σ**1**^{s}**09**/40**, 4C-1D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	Arkhangelos	0.32	141	eP	P	02 18 19.8	+0.9
ARG				eS	S	02 18 28.4	0.0
NISR	Nisiros	0.63	284	eP	P	02 18 22.0	+0.5
DALT	Dalyan (Mudla)	0.68	63	i PG	P	02 18 22.5	+0.5
DALT				i SG	S	02 18 31.7	-2.1
BDRM	Kayabasi	0.70	330	i P	P	02 18 22.3	+0.1
BDRM				i S	S	02 18 32.3	-1.8
BODT	Bodrum	0.75	323	i PG	P	02 18 22.8	0.0
BODT				i SG	S	02 18 34.1	-1.1
MLSB	Milas	0.83	354	i PG	P	02 18 23.9	+0.2
FETY	Fethiye	0.98	80	PG	P	02 18 26.3	+1.0
FETY				SG	S	02 18 38.9	-0.9
KARP	Karpathos	1.08	213	eP	P	02 18 28.2	+1.6
KARP				eS	S	02 18 43.2	+1.2
AYDN	Tasoluk	1.20	360	i P	P	02 18 28.6	+0.6
AYDN				i S	S	02 18 42.8	-1.6
AKAS	Kas	1.41	99	i P	P	02 18 31.6	+0.8
AKAS				i S	S	02 18 47.8	-1.3
SMG	Samos	1.50	326	eP	P	02 18 32.4	+0.4
DNZL	Cakiroluk	1.54	37	i P	P	02 18 33.4	+0.8
DNZL				i S	S	02 18 55.3	+3.3
GOLH	Golhisar	1.55	60	i P	P	02 18 34.2	+1.5
GOLH				i S	S	02 18 53.4	+1.0
DENT	Denizli	1.58	35	ePN	P	02 18 33.6	+0.5
ELL	Elmali	1.65	79	ePN	P	02 18 35.7	+1.6
MANT	Manisa	2.09	15	i P	P	02 18 40.7	+0.7
MANT				i S	S	02 19 03.4	-1.5
NPS	Neapolis	2.20	238	eP	P	02 18 42.8	+1.4
HMAT	Matruh	5.39	187	P	P	02 19 25.3	-0.4
SLUM		5.43	205	⇑P	P	02 19 25.6	-0.5
SLUM				S	S	02 20 19.5	-8.5
SLUM		5.43	205	P	P	02 19 25.6	-0.6
SWA1		7.41	195	⇑P	P	02 19 52.8	-0.8
SWA1				S	S	02 21 08.1	-8.6
SWA2		7.48	197	⇑P	P	02 19 53.6	-1.0
HSAF	As Saff	7.49	155	P	P	02 19 53.7	-0.9
GLL	Jalalah	7.58	154	⇑P	P	02 19 54.8	-1.1
SUZ		7.80	146	⇓P	P	02 19 58.0	-0.8
SUZ		7.80	146	P	P	02 19 58.0	-0.9
HFRF	Wahat Farafira	9.29	178	P	P	02 20 17.9	-1.3

CASC 06 02:39:51.3±1.7**, 13.28N×90.36W, h26**^{km}±5^{km}**, MD3.9, ML3.3, 3C-3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.89	354	⇓eP	Pb	02 40 07.8	-0.3
SBLS	San Blas	0.91	52	⇓eP	Pb	02 40 08.3	0.0
SBLS				eS	Sb	02 40 21.4	+1.4
RTR	El Retiro	0.93	49	eP	Pb	02 40 08.7	0.0
RTR				eS	Sb	02 40 22.1	+1.5
SNJE	San Jose	0.94	52	eP	Pb	02 40 08.8	-0.1
SNJE				eS	Sb	02 40 21.4	+0.4
RBDL	Robledal	1.06	38	⇑eP	Pn	02 40 10.8	+0.2
RBDL				eS	Sb	02 40 27.1	+2.8
BOQS	Boqueron	1.15	67	⇑eP	Pn	02 40 11.5	-0.4
BOQS				eS	Sn	02 40 28.3	+1.5
LFU	La Fuente	1.30	69	eP	Pn	02 40 14.0	-0.1
LFRS	El Faro	1.31	75	⇑eP	Pn	02 40 13.3	-0.9
LFRS				eS	Sn	02 40 30.7	-0.3
LCBS	La Ceiba	1.40	74	eP	Pn	02 40 14.7	-0.7
LCBS				eS	Sn	02 40 33.6	+0.4
TP2	Tecpan 2	1.62	337	⇓eP	Pn	02 40 19.0	+0.3
TP2				eS	Sn	02 40 39.7	+0.8
TP2				AML	AML	02 40 43.5	
	comp=E,412nm,0.4s						

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*IDC **06** 03:10:08.7±1.5, 5.28N×94.57E, mb3.9/6, mb1 4.1/6, mb1mx3.8/20, mbtmp3.9/6, Error ellipse: s-maj=70.0km s-min=21.4km az=54.0*

*NEIC **06** 03:10:12.2±0.9, 4.83N×94.13E, h30^{km}, mb4.6/1, Error ellipse: s-maj=29.4km s-min=12.9km az=62.0*

ISC 06 03:10:10.4±1.1**, 4.9N**±0.1×**94.2E**±0.2**, h30**^{km}**, n9,** σ**1**^{s}**12**/9**, mb3.9**/7**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	14.25	19	Pn	P	03 13 33.9	+1.4
	0.6nm,0.3s,baz=212,slow=11,SNR=8.5						
MKAR	Makanchi Array	42.99	348	P	P	03 18 07.5	-1.3
	0.8nm,0.4s,mb3.8,baz=166,slow=7.8,SNR=14						
SONM	Songino Array	44.04	12	P	P	03 18 14.6	-2.6
	0.4nm,0.5s,mb3.4,baz=189,slow=8.7,SNR=6.7						
WRA	Warramunga Arr	46.54	123	P	P	03 18 37.6	0.0
	2.2nm,0.6s,mb4.3,baz=303,slow=9.2,SNR=17						
WRAB	Tennant Creek	46.55	123	eP	P	03 18 37.5	-0.1
	3.8nm,0.6s,mb4.5						
WB2	Warramunga Arr	46.55	123	eP	P	03 18 37.5	-0.1
ASAR	Alice Springs	48.01	128	P	P	03 18 49.3	+0.2
	0.5nm,0.4s,mb3.9,baz=302,slow=7.9,SNR=5.1						
FINES	FINESS Array B	75.36	333	P	P	03 21 52.5	-0.2
	1.3nm,0.8s,mb3.9,baz=127,slow=9.5,SNR=4.0						
GERES	GERESS Array B	80.07	319	P	P	03 22 20.7	+1.8
	0.3nm,0.4s,mb3.5,baz=124,slow=4.8,SNR=3.8						

CASC 06 03:10:44.0±2.8**, 8.01N×83.61W, h22**^{km}±11^{km}**, MD3.9, MW4.7, 2C-1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	Cerro Adams	0.77	34	⇓eP	Pb	03 10 57.4	-1.2
ACR				eS	Sb	03 11 08.3	-0.4
SVTC	San Vito de Co	1.00	40	eP	Pb	03 11 01.8	-0.8
PTP1	Petroterminal	1.18	81	⇑eP	Pn	03 10 58.8	-6.7
BRU2	Volcan	1.20	49	⇑eP	Pn	03 11 06.4	+0.8
BRU2				eS	Sb	03 11 22.4	+1.5
BUS	Buena Vista	1.54	354	eP	Pn	03 11 08.7	-1.8
SFX2	San Felix	1.74	81	eP	Pn	03 11 35.7	+22
SFX2				eS	Sn	03 11 38.5	+3.3
LCR2	La Lucha 2	1.77	347	eP	Pn	03 11 13.3	-0.5
LCR2				eS	Sn	03 11 38.4	+2.7
URSC	Urasca	1.82	355	eP	Pn	03 11 13.9	-0.6
ICR	Volcan Irazu	1.97	354	eP	Pn	03 11 17.0	+0.3
PRS1	Puriscal	2.08	341	eP	Pn	03 11 18.3	0.0
JCR	Jicaral	2.36	321	eP	Pn	03 11 20.8	-1.4
TRTC	Tortuguero	2.55	358	eP	Pn	03 11 25.0	0.0

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*NEIC **06** 03:20:21.3±1.8, 22.24S×172.75E, h45^{km}±14^{km}, mb4.5/2, Error ellipse: s-maj=17.8km s-min=11.0km az=47.0*

*IDC **06** 03:20:21.1±6.0, 22.22S×172.74E, h38^{km}±48^{km}, mb3.9/8, mb1 4.2/10, mb1mx4.1/17, mbtmp4.2/10, ML4.1/2, MS3.9/14, Ms1 3.9/14, ms1mx3.8/25, Error ellipse: s-maj=28.8km s-min=25.7km az=49.0*

ISC 06 03:20:20.2±2.5**, 22.3S**±0.1×**172.7E**±0.1**, h46**^{km}±20^{km}**, h34**^{km}±1.5^{km}**:pP-P, n35,** σ**0**^{s}**57**/25**, mb4.3**/10**, MS3.9**/11**, 4C-1D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	5.77	271	eP	P	03 21 45.5	+0.1
DZM				eS	S	03 22 51.1	-0.2
DZM	Mont Dzumac	5.77	271	Pn	P	03 21 45.4	0.0
	3.9nm,0.3s,baz=138,slow=20,SNR=44						
DZM				Sn	S	03 22 50.9	-0.4
	4.8nm,0.3s,baz=99,slow=22,SNR=5.5						
DZM	Mont Dzumac	5.77	271	eP	P	03 21 45.5	+0.1
DZM				eS	S	03 22 51.1	-0.2
NOUC	Port Laguerre	5.90	271	eP	P	03 21 46.9	-0.3
RAO	Raoul Island	10.96	131	LR	LR	03 25 33.4	
	comp=Z,464nm,21.6s,baz=314,slow=28						
URZ	Urewera	16.38	168	Pn	P	03 24 08.7	+0.4
	0.8nm,0.3s,baz=359,slow=8.5,SNR=6.8						
AFI	Afiamalu	16.96	63	LR	LR	03 29 34.1	
	comp=Z,293nm,18.1s,baz=96,slow=33						
HNR	Honiara	17.67	314	LR	LR	03 29 59.7	
	comp=Z,376nm,20.3s,baz=320,slow=33						
RPZ	Rata Peaks	21.42	183	LR	LR	03 31 53.2	
	comp=Z,486nm,19.9s,MS3.9,baz=269,slow=32						
RAR	Rarotonga	25.61	93	LR	LR	03 33 01.7	
	comp=Z,482nm,19.9s,MS4.0,baz=280,slow=30						
PMG	Port Moresby	27.62	294	LR	LR	03 35 37.3	
	comp=Z,244nm,20.0s,MS3.8,baz=61,slow=33						
STKA	Stephens Creek	29.18	244	P	P	03 26 19.9	+0.4
	1.6nm,0.6s,mb3.9,baz=91,slow=9.9,SNR=4.8						
STKA				LR	LR	03 37 18.9	
	comp=Z,209nm,18.5s,MS3.8,baz=45,slow=35						
STKA	Stephens Creek	29.18	244	eP	P	03 26 20.3	+0.8
STKA				LR	LR	03 37 18.9	
ASAR	Alice Springs	35.64	260	P	P	03 27 16.4	+0.6
	2.9nm,0.9s,mb4.2,baz=89,slow=6.7,SNR=10						
ASAR				LR	LR	03 41 33.0	
	comp=Z,199nm,18.8s,MS3.9,baz=100,slow=36						
PPT	Papeete	35.74	89	eLR	LR	03 36 28.5	
	514nm,30.5s						
PPT	Papeete	35.74	89	LR	LR	03 39 45.7	
	comp=Z,226nm,19.6s,MS3.9,baz=138,slow=33						
WRAB	Tennant Creek	35.76	267	eP	P	03 27 16.9	0.0
WRA	Warramunga Arr	35.77	266	P	P	03 27 16.3	-0.7
	1.2nm,0.9s,mb3.8,baz=96,slow=8.6,SNR=6.5						
FITZ	Fitzroy Crossi	44.20	267	P	P	03 28 27.5	+0.8
	7.7nm,1.1s,mb4.3,baz=173,slow=3.0,SNR=2.3						
FITZ				LR	LR	03 45 59.9	
	comp=Z,123nm,19.3s,MS3.8,baz=98,slow=35						
RKT	Rikitea	48.09	102	eLR	LR	03 42 13.4	
	257nm,29.8s						
NWAO	Narrogin (SRO)	49.77	245	LR	LR	03 48 56.5	
	comp=Z,106nm,18.4s,MS3.9,baz=106,slow=34						
VNDA	Vanda	55.54	183	P	P	03 29 52.0	-0.7
	1.0nm,0.6s,mb4.0,baz=358,slow=8.5,SNR=11						
VNDA				LR	LR	03 48 36.2	
	comp=Z,155nm,20.9s,MS4.1,baz=347,slow=30						
VNDA	Vanda	55.54	183	eP	P	03 29 51.8	-0.9
	1.3nm,0.6s,mb4.1						
VNDA				LR	LR	03 48 36.1	
SBA	Scott Base	55.70	182	eP	P	03 29 54.5	+0.7
	36nm,1.3s,mb5.2						
QSPA	South Pole Qui	67.79	180	⇓iP	P	03 31 14.2	-0.5
	11nm,1.1s,mb4.8						
MAW	Mawson	76.82	202	P	P	03 32 09.3	+1.0
	3.1nm,0.8s,mb4.3,baz=145,slow=5.0,SNR=8.5						
SNAA	Sanae	86.25	181	⇑iP	P	03 32 56.6	-0.8
SNAA				e	pP	03 33 07.4	-3.8
VNA3	Neumayer Olymp	86.71	179	⇑iP	P	03 32 59.0	-0.7
VNA3				e	pP	03 33 09.2	-4.3
VNA2	Neumayer--Watz	87.05	180	⇑iP	P	03 33 00.9	-0.5
VNA2				e	pP	03 33 11.4	-3.8
VNA1	Neumayer--Stat	87.32	180	⇑iP	P	03 33 02.9	+0.2
VNA1				e	pP	03 33 14.9	-1.6
NVAR	Mina Array Bea	88.45	47	P	P	03 33 09.4	+0.5
	0.4nm,0.3s,mb4.1,baz=146,slow=6.7,SNR=3.7						
ILAR	Eielson Array	92.21	16	P	P	03 33 25.6	-0.2
	1.2nm,0.8s,mb4.2,baz=236,slow=6.1,SNR=12						
ILAR				LR	LR	04 08 46.2	
	comp=Z,57nm,20.4s,MS4.0,baz=181,slow=32						
PDAR	Pinedale Array	96.35	46	LR	LR	04 10 22.6	
	comp=Z,34nm,21.9s,MS3.8,baz=242,slow=31						
BRG	Berggiesshubel	146.98	335	eP	PKPdf	03 39 59.8	+4.3
GERES	GERESS Array B	148.66	333	PKPbc	PKPdf	03 40 03.7	+5.4
	0.6nm,0.6s,baz=56,slow=4.8,SNR=4.7						

KRSC 06 03:21:33.9±1.2**, 53.23N×160.16E, h44**^{km}±2^{km}**, ML3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.16	212	i P	P	03 21 41.7	+0.5
SPN				i S	S	03 21 47.3	+0.9
NLC	Nalytchevo	0.49	263	i P	P	03 21 45.1	+0.4
NLC				i S	S	03 21 53.3	+0.9
SDLR	Sedlovina	0.77	274	i P	P	03 21 48.8	+0.4
UGLR	Uglovaya	0.80	269	i P	P	03 21 49.5	+0.6
UGLR				i S	S	03 22 01.2	+1.3
AVH	Avacha	0.85	273	i P	P	03 21 50.1	+0.5
AVH				eS	S	03 22 01.9	+0.7
KII	Karymskiy	0.91	333	i P	P	03 21 50.9	+0.5
KII				eS	S	03 22 03.4	+0.8
KOK	Koryaka	0.92	274	i P	P	03 21 50.7	+0.2
KOK				eS	S	03 22 03.7	+0.9
PET	Petropavlovsk	0.93	258	eP	P	03 21 50.4	-0.3
PET				i S	S	03 22 02.7	-0.4
KRMR	Karymshinskiy	1.29	253	eP	P	03 21 55.6	-0.2
KRMR				eS	S	03 22 11.9	-0.3
GNL	Ganaly	1.41	290	i P	P	03 21 57.7	+0.2
GNL				eS	S	03 22 15.8	+0.7
GRL	Gorelyy	1.44	243	i P	P	03 21 58.1	+0.2
GRL				i S	S	03 22 16.1	+0.3
MKZ	Mys Kozlova	1.62	34	eP	P	03 21 59.5	-1.1
MKZ				eS	S	03 22 18.6	-1.8
APC	Apacha	1.84	262	i P	P	03 22 04.4	+0.8
APC				i S	S	03 22 27.0	+1.3
APC				Smax			
	120nm,0.8s						
TUMR	Tumrok	2.06	360	i P	P	03 22 07.8	+1.1
TUMR				eS	S	03 22 33.1	+1.8
KMNR	Kamenistaya	2.53	1	eP	P	03 22 14.6	+1.1
KMNR				eS	S	03 22 46.0	+2.7
PAU	Pauzhetka	2.71	231	eP	P	03 22 18.0	+2.0
PAU				eS	S	03 22 49.4	+1.6
PAU				Smax			
	100nm,0.6s						
KPT	Kopyto	2.74	1	eP	P	03 22 17.0	+0.5
ZLN	Zelenaya	2.82	7	eP	P	03 22 18.3	+0.7
ZLN				eS	S	03 22 51.2	+0.6
ESO	Esso	2.83	343	eP	P	03 22 18.0	+0.2
KOZ	Kozyrevsk	2.84	357	P	P	03 22 18.5	+0.6
LGNR	Loginova	2.88	6	P	P	03 22 19.8	+1.4
LGNR				eS	S	03 22 51.8	-0.3
CIRR	Tsirk	2.91	6	eS	S	03 22 51.0	-2.0
KRSR	Krestovskiy	3.00	4	eP	P	03 22 21.0	+0.8
KRSR				eS	S	03 22 56.2	+0.9
KLY	Klyuchi	3.10	5	eS	S	03 22 57.2	-0.6
SRDR	Sredinnyy	3.10	355	eP	P	03 22 21.6	-0.1
KBTR	Krutoberegovo	3.36	26	eP	P	03 22 25.1	-0.2
KBTR				eS	S	03 23 04.0	-0.3
BKI	Bering	3.94	58	eP	P	03 22 32.1	-1.4
BKI				i S	S	03 23 12.7	-6.4
BKI				Smax			
	40nm,0.3s						

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*THE **06** 03:47:43.9, 35.72N×25.39E, h6^{km}*

*CSEM **06** 03:47:43.9±0.1, 35.72N×25.21E, h15^{km}, MD3.3, Error ellipse: s-maj=2.7km s-min=1.8km az=86.0*

*ATH **06** 03:47:44.9, 35.74N×25.23E, h40^{km}±2^{km}, MD3.3/6*

*NEIC **06** 03:47:44.9, 35.74N×25.23E, h40^{km}, MD3.3(ATH), After ATH.*

ISC 06 03:47:44.3±0.9**, 35.77N**±0.04×**25.23E**±0.06**, h7**^{km}±9^{km}**, n13,** σ**0**^{s}**94**/19**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	Neapolis	0.59	148	eP	Pb	03 47 56.2	-0.4
NPS				eS	Sb	03 48 05.8	+0.9
SANT	Santorini	0.63	17	eP	Pb	03 47 56.2	-1.1
SANT				eS	Sb	03 48 06.8	+0.7
SANT	Santorini	0.63	17	eP	Pb	03 47 56.2	-1.1
THR1	Thera Island	0.63	17	ePg	Pg	03 47 56.7	-0.4
THR1				eSg	Sg	03 48 06.1	+0.6
THR3	Thira Island,	0.66	12	ePg	Pg	03 47 57.1	-0.4
THR3				eSg	Sg	03 48 07.6	+1.3
THR5	Thira Island,	0.66	9	ePg	Pg	03 47 57.1	-0.4
VAM	Vamos	0.91	247	eP	Pb	03 48 03.0	+1.0
VAM				eS	Sb	03 48 15.2	+1.1
XRY	Khrisi	0.97	157	eP	Pb	03 48 03.0	0.0
XRY				eS	Sb	03 48 16.3	+0.6
GVD	Gavdhos	1.31	226	eP	Pb	03 48 05.9	-3.0
GVD	Gavdhos	1.31	226	eP	Pb	03 48 05.9	-3.0
APE	Apeiranthos	1.32	11	eP	Pb	03 48 09.0	-0.1
KARP	Karpathos	1.59	97	eP	Pn	03 48 12.0	-1.1
VLI	Veliai	2.08	298	eP	Pn	03 48 19.0	-1.1

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*NEIC **06** 04:06:11.2, 35.83S×70.47W, h193^{km}, MD3.0(GUC), After GUC.*

GUC 06 04:06:11.2±0.7**, 35.83S×70.47W, h193**^{km}±6^{km}**, MD3.0, ML3.5, 9C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNCH	Linares	0.92	269	⇑iP	P	04 06 39.7	-0.2
LNCH				i S	S	04 07 01.8	-0.3
LNCH				AMP		04 07 02.8	
	comp=N,500nm,0.4s						
SFDO	San Fernando	1.29	340	⇓iP	P	04 06 42.9	+0.1
SFDO				i S	S	04 07 06.9	-0.3
CCHI	Chillan	1.51	239	⇑iP	P	04 06 44.5	-0.2
CCHI				i S	S	04 07 09.9	-0.7
CCHI				AMP		04 07 13.0	

	comp=N,151nm,0.2s						
CICH	**Cipreses**	1.51	2	⇑*i*P	P	04 06 44.8	0.0
CACH	**El Canelo**	1.72	356	⇑*i*P	P	04 06 47.2	+0.5
CHCH	**Chadas Angostu**	1.90	355	⇓*i*P	P	04 06 48.8	+0.3
CHCH				*i* S	S	04 07 17.1	-0.1
LMEL	**Las Melosas**	1.99	6	*e*P	P	04 06 50.1	+0.7
LMEL				AMP		04 07 28.6	
	comp=N,220nm,0.2s						
LNV	**Longovilo**	2.03	337	*e*P	P	04 06 50.1	+0.3
LNV				*i* S	S	04 07 19.1	-0.4
PCH	**Pirque**	2.21	359	*e*P	P	04 06 52.4	+0.5
PCH				*i* S	S	04 07 23.1	-0.1
TACH	**Talagante**	2.21	350	⇑*i*P	P	04 06 52.1	+0.3
TACH				*i* S	S	04 07 22.8	-0.4
ANTU	**Antumapu**	2.26	357	*i* S	S	04 07 24.5	+0.3
ANTU				AMP		04 07 26.4	
	comp=E,166nm,0.3s						
ANTU	**Antumapu**	2.26	357	P	P	04 07 00.0	+7.5
ANTU				*i* S	S	04 07 24.5	+0.3
DSCH	**Colegio Aleman**	2.43	358	*i* S	S	04 07 27.7	+0.1
DSCH				AMP		04 07 29.4	
	comp=E,221nm,0.2s						
DSCH	**Colegio Aleman**	2.43	358	P	P	04 07 00.0	+5.7
DSCH				*i* S	S	04 07 27.7	+0.1
CLCH	**Cerro Calan**	2.43	359	⇑*i*P	P	04 06 54.7	+0.3
CLCH				*i* S	S	04 07 27.5	-0.1
CLCH				AMP		04 07 29.2	
	comp=E,139nm,0.3s						
LCCH	**Las Cruces**	2.52	339	⇑*i*P	P	04 06 55.9	+0.6
ROCH	**El Roble**	2.89	351	⇑*i*P	P	04 06 59.9	+0.2
JACH	**Jahuel**	3.15	358	⇑*i*P	P	04 07 03.0	+0.2

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*CSEM **06** 04:22:49.9±0.4,36.56N×15.81E,h28^{km},ML4.0/5,Error ellipse: s-maj=10.0km s-min=4.6km az=119.0,After ROM*

ROM 06 04:22:49.9±0.3**,36.56N×15.81E,h28**^{km}±3^{km}**,Md2.8**/9**, Ml2.8**/8**,Error ellipse: s-maj=3.8km s-min=2.9km az=101.0,Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAVL	**Avola**	0.68	306	Pg	Pb	04 23 04.7	+1.5
HAVL				Sg	Sb	04 23 15.9	+3.6
	336nm,0.4s						
AGST	**Augusta-Monte**	0.84	326	Pg	Pb	04 23 06.3	+0.5
	95nm,0.1s						
SSY	**Sortino**	0.84	315	Pg	Pb	04 23 06.9	+1.1
	298nm,0.3s						
PZI	**Palazzolo**	0.85	306	Pg	Pb	04 23 07.4	+1.4
HMDC	**Modica**	0.92	296	Pg	Pn	04 23 08.1	+1.1
HMDC				Sg	Sb	04 23 22.7	+3.7
	169nm,0.3s						
WDD	**Wield Dalam**	1.25	237	Pg	Pn	04 23 13.3	+1.6
WDD				Sg	Sn	04 23 31.1	+3.4
	391nm,0.3s						
MMME	**Mongiuffi-Meli**	1.44	342	Pg	Pn	04 23 16.2	+1.7
MMME				Sg	Sn	04 23 35.8	+3.1
SOI	**Samo**	1.52	7	Pg	Pn	04 23 17.1	+1.4
	35nm,0.4s						
SCLL	**Scilla**	1.70	357	Pg	Pn	04 23 20.0	+1.9
MSRU	**Castanea**	1.72	352	Pn	Pn	04 23 20.4	+1.9
MSRU				Sg	Sn	04 23 42.6	+2.9
	107nm,0.3s						
VPL	**Vulcano Piano**	1.93	340	Pg	Pn	04 23 22.8	+1.3
VPL				Sg	Sn	04 23 49.3	+4.2
	116nm,0.3s						
GIB	**Gibilmanna**	2.02	316	Pg	Pn	04 23 25.5	+2.8
	71µm,34.0s						

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*NIED **06** 04:28:00,44.40N×142.30E,h250^{km},Mw3.8 Best double couple: M$_0$6.02×10^{14} NP1:ϕ_s70°,δ81°,λ93°. NP2:ϕ_s233°, δ10°,λ73°.*

*BJI **06** 04:28:15.6,44.91N×142.21E,h245^{km},mB4.2,mb4.2*

*MOS **06** 04:28:15.5±0.9,44.55N×142.16E,h247^{km},mb4.0/5,Error ellipse: s-maj=19.9km s-min=10.0km az=91.1*

*IDC **06** 04:28:16.8±0.3,44.48N×142.28E,h248^{km}±3^{km},mb3.6/17, mb1 3.7/18,mb1mx3.6/25,mbtmp4.1/18,Error ellipse: s-maj=13.4km s-min=11.9km az=155.0*

*NEIC **06** 04:28:17.4±0.8,44.52N×142.19E,h253^{km}±8^{km},mb4.1/5, Error ellipse: s-maj=11.0km s-min=8.5km az=132.0*

*JMA **06** 04:28:17.0±0.2,44.39N×142.27E,h252^{km}±2^{km},M3.8*

ISC 06 04:28:15.8±0.2**,44.40N**±0.04×**142.27E**±0.06**,h256**^{km}±2^{km}**, n66,σ0^{s}96**/86**,mb3.8**/24**,12C-1D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSS	**Shosan**	0.30	271	⇑P	**P**	**04 28 49.9**	**+0.8**
JSS				*e*S	**S**	**04 29 15.3**	**+0.2**
ASAJ	**Asahikawa**	0.36	140	PN	**P**	**04 28 50.1**	**+0.8**
ASAJ				S	**S**	**04 29 15.6**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,150nm,0.3s						
ASAJ				smax			
	comp=N,10.0nm,0.3s						
ASAJ	**Asahikawa**	0.36	140	P	**P**	**04 28 50.1**	**+0.8**
	comp=N,150nm,0.3s,baz=240,slow=3.8,SNR=257						
ASAJ				S	**S**	**04 29 15.6**	**+0.2**
	comp=N,9.9nm,0.3s,baz=340,slow=32,SNR=11						
ASAJ	**Asahikawa**	0.36	140	⇑P	**P**	**04 28 50.1**	**+0.8**
ASAJ				*e*S	**S**	**04 29 15.5**	**+0.1**
JYG	**Yagishiri**	0.60	273	P	**P**	**04 28 50.5**	**+0.6**
JYG				*e*S	**S**	**04 29 16.4**	**-0.2**
JSE	**Soyaes**	0.61	22	⇓P	**P**	**04 28 50.4**	**+0.5**
JSE				*e*S	**S**	**04 29 15.6**	**-1.0**
JKK2	**Kamakawa 2**	0.63	146	⇑P	**P**	**04 28 51.0**	**+1.0**
JKK2				*e*S	**S**	**04 29 17.4**	**+0.7**
JHR	**Hokuryu**	0.76	211	P	**P**	**04 28 51.6**	**+1.1**
JMP	**Maruseppu**	0.88	116	⇑P	**P**	**04 28 51.9**	**+0.9**
JMP				*e*S	**S**	**04 29 18.5**	**0.0**
JWK2	**Keihoku**	0.96	344	P	**P**	**04 28 51.7**	**+0.3**
JWK2				*e*S	**S**	**04 29 18.2**	**-1.0**
JFR	**Furan**	1.25	169	P	**P**	**04 28 53.9**	**+0.7**
JTKR	**Abashiri--Toko**	1.25	109	⇑P	**P**	**04 28 54.2**	**+1.0**
JTKR				*e*S	**S**	**04 29 22.9**	**+0.5**
JAR	**Ashorobuto**	1.54	135	⇑P	**P**	**04 28 56.3**	**+1.0**
JAR				*e*S	**S**	**04 29 26.3**	**+0.3**
JSK	**Shakotan**	1.66	232	⇑P	**P**	**04 28 57.0**	**+0.8**
JSK				*e*S	**S**	**04 29 27.1**	**-0.5**
JEW	**Eniwo**	1.66	201	P	**P**	**04 28 57.4**	**+1.2**
JEW				*e*S	**S**	**04 29 27.8**	**+0.2**
JCH	**Churui**	1.95	156	⇑P	**P**	**04 28 58.1**	**-0.5**
JCH				*e*S	**S**	**04 29 29.3**	**-2.5**
JRA	**Rausu**	2.10	102	P	**P**	**04 29 01.1**	**+1.1**
JNBK	**Urakawa-nobuka**	2.14	170	⇑P	**P**	**04 29 00.6**	**+0.3**
JNBK				*e*S	**S**	**04 29 35.0**	**+0.1**
JAK	**Akkeshi**	2.25	128	P	**P**	**04 29 00.3**	**-1.1**
JAK				*e*S	**S**	**04 29 34.7**	**-2.1**
YSS	**Yuzh-Sakhalins**	2.58	7	*e*PN	**P**	**04 29 03.7**	**-1.0**
JKB	**Kayabe**	2.66	200	⇑P	**P**	**04 29 05.6**	**+0.1**
JKB				*e*S	**S**	**04 29 42.9**	**-1.2**
NEM2	**Nemuro 2**	2.71	111	P	**P**	**04 29 05.2**	**-0.8**
NEM2				*e*S	**S**	**04 29 41.9**	**-3.2**
JOSM	**Okushiri--Mats**	3.08	222	⇑P	**P**	**04 29 10.3**	**+0.4**
JOSM				*e*S	**S**	**04 29 50.6**	**-1.4**
JOT	**Ohata**	3.14	197	⇑P	**P**	**04 29 10.4**	**-0.2**
JOT				*e*S	**S**	**04 29 51.7**	**-1.5**
MJAR	**Matsushiro Arr**	8.43	203	P	**P**	**04 30 17.8**	**+2.5**
	comp=N,1.1nm,0.3s,baz=9.5,slow=10,SNR=7.2						
MA2	**Magadan**	16.06	16	*e*P	**P**	**04 31 47.9**	**-1.1**
MA2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MA2	**Magadan**	16.06	16	*e*P	**P**	**04 31 47.9**	**-1.2**
	comp=Z,7.8nm,0.5s						
FX1	**Attu Island--F**	21.97	56	*e*P	**P**	**04 32 52.1**	**+2.9**
HHC	**Hu-ho-hao-te**	22.80	272	*e*P	**P**	**04 33 00.9**	**+3.6**
HHC				AP		04 33 30.7	
HHC				S	**S**	**04 36 52.1**	**+7.7**
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.0						
HHC				AMB	AMB		
	comp=Z,90nm,14.4s						
HHC				LR	LR		
	comp=N,110nm,15.6s						
HHC				LR	LR		
	comp=E,420nm,19.2s						
HHC				LR	LR		
	comp=Z,50nm,19.2s						
ULN	**Ulaanbaatar**	24.52	291	*e*P	**P**	**04 33 13.6**	**+0.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
ULN	**Ulaanbaatar**	24.52	291	*e*P	**P**	**04 33 13.6**	**+0.4**
	comp=Z,1.6nm,0.6s,mb3.6						
SONM	**Songino Array**	24.96	291	P	**P**	**04 33 18.2**	**+0.9**
	comp=Z,5.3nm,0.8s,mb4.0,baz=85,slow=8.5,SNR=33						
ZAL	**Zalesovo**	37.80	306	P	**P**	**04 35 09.1**	**+0.3**
	comp=Z,2.3nm,0.4s,mb3.9,baz=26,slow=9.1,SNR=9.1						
WMQ	**Urumqi**	38.57	289	*e*P	**P**	**04 35 15.6**	**+0.3**
WMQ				AP	pP	04 36 08.0	-0.1
WMQ				XP	sP	04 36 37.0	-0.5
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
IMA	**Indian Mountai**	40.14	35	*e*P	**P**	**04 35 27.7**	**-0.3**
IMA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.2						
IMA	**Indian Mountai**	40.14	35	*e*P	**P**	**04 35 27.7**	**-0.3**
	comp=Z,8.4nm,0.6s,mb4.2						
MKAR	**Makanchi Array**	41.15	295	P	**P**	**04 35 36.9**	**+0.5**
	comp=Z,2.5nm,0.7s,mb3.5,baz=81,slow=9.5,SNR=25						
ILAR	**Eielson Array**	43.05	36	P	**P**	**04 35 51.4**	**-0.1**
	comp=Z,1.1nm,0.8s,mb3.1,baz=277,slow=8.3,SNR=17						
BVA0	**Borovoye Array**	46.35	307	P	**P**	**04 36 17.5**	**-0.1**
BVAR	**Borovoye Array**	46.35	307	P	**P**	**04 36 17.8**	**+0.2**
	comp=Z,3.7nm,0.4s,mb4.0,baz=76,slow=8.8,SNR=27						
INK	**Inuvik**	47.62	30	P	**P**	**04 36 26.5**	**-0.8**
	comp=Z,1.5nm,0.4s,mb3.7,baz=311,slow=7.9,SNR=18						
INK	**Inuvik**	47.62	30	P	**P**	**04 36 26.5**	**-0.8**
ARU	**Arti**	51.44	315	*e*P	**P**	**04 36 55.0**	**-1.2**
AB31	**Akbulak array**	53.88	307	*e*P	**P**	**04 37 14.1**	**-0.1**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.6						
KEV	**Kevo**	56.83	338	*e*p	**P**	**04 37 33.7**	**-1.3**
	comp=Z,7.1nm,0.9s,mb4.1						
KEV	**Kevo**	56.83	338	*e*P	**P**	**04 37 33.7**	**-1.3**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
YKA	**Yellowknife Ar**	57.19	33	P	**P**	**04 37 37.2**	**-0.3**
	comp=Z,1.6nm,0.5s,mb3.7,baz=309,slow=6.4,SNR=8.6						
YKA	**Yellowknife Ar**	57.19	33	P	**P**	**04 37 37.2**	**-0.3**
ARCES	**ARCESS Array B**	57.38	338	P	**P**	**04 37 37.3**	**-1.5**
	comp=Z,5.1nm,0.9s,mb4.0,baz=45,slow=8.6,SNR=7.3						
KAF	**Kangasniemi**	62.11	331	*e*p	**P**	**04 38 07.8**	**-3.2**
	comp=Z,1.3nm,0.6s,mb3.7,baz=46,slow=6.2						
KAF	**Kangasniemi**	62.11	331	*e*P	**P**	**04 38 07.8**	**-3.2**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
FINES	**FINESS Array B**	62.65	331	P	**P**	**04 38 13.5**	**-1.1**
	comp=Z,4.1nm,0.5s,mb4.3,baz=48,slow=7.0,SNR=31						
WRA	**Warramunga Arr**	64.43	188	P	**P**	**04 38 26.4**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.4,slow=6.7,SNR=7.2						
NB2	**NORSAR Subarra**	67.67	337	P	**P**	**04 38 45.2**	**-1.3**
	comp=Z,1.5nm,0.5s,mb4.0,baz=34,slow=6.2						
NOA	**NORSAR Array B**	67.67	337	P	**P**	**04 38 45.7**	**-0.8**
	comp=Z,2.2nm,0.6s,mb4.1,baz=36,slow=6.3,SNR=9.7						
ASAR	**Alice Springs**	68.16	188	P	**P**	**04 38 50.8**	**+0.7**
	comp=Z,0.9nm,0.8s,mb3.5,baz=6.4,slow=5.9,SNR=8.7						
AKASG	**Malin Array Be**	68.92	321	P	**P**	**04 38 53.5**	**-0.8**
	comp=Z,0.9nm,0.3s,mb4.0,baz=40,slow=8.4,SNR=15						
BOZ	**Bozeman (W)**	69.06	46	*e*P	**P**	**04 38 56.3**	**+1.1**
PDAR	**Pinedale Array**	72.12	47	P	**P**	**04 39 14.5**	**+0.8**
	comp=Z,1.5nm,0.6s,mb3.8,baz=305,slow=1.9,SNR=12						
CLL	**Collm**	75.05	330	P	**P**	**04 39 30.0**	**-0.5**
KHC	**Kasperske Hory**	76.62	328	*e*P	**P**	**04 39 39.5**	**+0.2**
GERES	**GERESS Array B**	76.81	328	P	**P**	**04 39 41.0**	**+0.7**
	comp=Z,0.3nm,0.4s,mb3.4,baz=18,slow=6.2,SNR=3.6						
SCHQ	**Schefferville**	78.10	17	P	**P**	**04 39 47.4**	**+0.1**
	comp=Z,2.1nm,1.0s,mb3.8,baz=323,slow=5.1,SNR=6.2						
TXAR	**Lajitas Array**	85.15	53	P	**P**	**04 40 25.5**	**+1.4**
	comp=Z,0.6nm,0.7s,mb3.5,baz=303,slow=4.4,SNR=7.9						
TXAR	**Lajitas Array**	85.15	53	P	**P**	**04 40 25.5**	**+1.4**
MIR	**Mirnyy**	116.85	200	*e*PKIKP	PKPdf	04 46 33.0	+4.3
MIR				pmax	pmax		
	comp=Z,29nm,1.4s						

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*NEIC **06** 04:35:40.5±2.4,6.30S×146.97E,h41^{km}±24^{km},mb3.6/1, Error ellipse: s-maj=21.5km s-min=17.4km az=137.0*

*IDC **06** 04:35:41.1±4.6,6.33S×147.12E,h50^{km}±50^{km},mb3.6/6, mb1 3.8/8,mb1mx3.7/16,mbtmp3.8/8,ML3.3/2,MS3.2/3, Ms1 3.3/3,ms1mx3.0/18,Error ellipse: s-maj=46.5km s-min=28.3km az=119.0*

ISC 06 04:35:39.0±3.2**,6.3S**±0.2×**147.0E**±0.1**,h42**^{km}±30^{km}**,n16, σ0^{s}74**/15**,mb3.8**/6**,MS3.2**/2**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.08	176	P	**P**	**04 36 27.0**	**+0.5**
	9.5nm,0.3s,baz=340,slow=7.5,SNR=15						
PMG				S	**S**	**04 37 12.1**	**+10**
	16nm,0.3s,baz=8.6,slow=21,SNR=3.4						
CTA	**Charters Tower**	13.71	183	LR	LR	04 42 39.2	
	comp=Z,95nm,20.7s,baz=48,slow=30						
CTAO	**Charters Tower**	13.71	183	P	**P**	**04 38 52.9**	**-0.2**
KAKA	**Kakadu**	15.66	245	*e*P	**P**	**04 39 18.5**	**0.0**
WRAB	**Tennant Creek**	18.26	221	*e*P	**P**	**04 39 51.0**	**-0.2**
	2.4nm,0.6s						
WB2	**Warramunga Arr**	18.27	221	*e*P	**P**	**04 39 50.4**	**-0.8**
WRA	**Warramunga Arr**	18.27	221	P	**P**	**04 39 50.1**	**-1.2**
	0.2nm,0.3s,baz=45,slow=12,SNR=6.7						
ASAR	**Alice Springs**	21.34	215	P	**P**	**04 40 26.4**	**+1.7**
	0.9nm,0.4s,mb3.4,baz=50,slow=8.7,SNR=13						
ASAR				LR	LR	04 50 15.8	
	comp=Z,57nm,18.5s,MS3.0,baz=32,slow=41						
FITZ	**Fitzroy Crossi**	23.87	239	*e*P	**P**	**04 40 50.4**	**+0.7**
FITZ	**Fitzroy Crossi**	23.87	239	P	**P**	**04 40 50.5**	**+0.8**
	2.4nm,0.4s,mb4.0,baz=28,slow=4.8,SNR=15						
STKA	**Stephens Creek**	25.93	190	P	**P**	**04 41 09.1**	**-0.1**
	1.3nm,0.6s,mb3.6,baz=318,slow=3.0,SNR=3.9						
STKA	**Stephens Creek**	25.93	190	*e*P	**P**	**04 41 08.8**	**-0.4**
CMAR	**Chiang Mai Arr**	53.36	298	LR	LR	05 08 26.0	
	comp=Z,34nm,19.3s,MS3.4,baz=195,slow=37						
SONM	**Songino Array**	64.65	331	P	**P**	**04 46 15.0**	**+0.3**
	0.3nm,0.3s,mb3.7,baz=145,slow=7.8,SNR=7.4						
MKAR	**Makanchi Array**	77.71	321	P	**P**	**04 47 33.6**	**+0.4**
	0.5nm,0.4s,mb3.8,baz=95,slow=9.0,SNR=5.8						
ILAR	**Eielson Array**	85.78	23	P	**P**	**04 48 13.9**	**-0.9**
	0.6nm,0.7s,mb3.9,baz=255,slow=5.2,SNR=9.4						

DJA 06 04:58:17.2±1.0**,9.25S×116.13E,h15**^{km}**,ML4.1**/2**,1C-2D, Error ellipse: s-maj=22.5km s-min=12.5km az=152.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	**Kedomdong**	0.75	359	⇓*i*Pg	Pg	04 58 31.0	-1.5
RATI	**Rata**	0.79	311	⇓*e*Pg	Pg	04 58 29.8	-3.3
RATI				*e*Sg	Sg	04 58 41.3	-2.5
KELI	**Kelakatan**	1.92	302	*e*Pn	Pn	04 58 48.0	-1.7
	100nm,0.2s						
SRDI	**Scrawed**	2.11	291	⇑*e*Pn	Pn	04 58 49.4	-3.1
	106nm,0.2s						
SRDI				*e*Sn	Sn	04 59 15.0	-3.5

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*NEIC **06** 05:12:52.2,35.53S×72.96W,h4^{km},ML4.1(GUC),After GUC.*

GUC 06 05:12:52.2±0.9**,35.53S×72.96W,h4**^{km}±2^{km}**,MD4.1, ML4.1,5C,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCO	**Chanco**	0.41	121	*i* P	Pg	05 13 00.5	+0.1
CNCO				*i* S	Sg	05 13 06.4	+0.6
CNCO				AMP		05 13 18.6	
	comp=N,4µm,0.5s						
CTCH	**Constitucion**	0.49	67	⇑*i*P	Pg	05 13 02.4	+0.5
CTCH				*i* S	Sg	05 13 09.6	+1.1
CTCH				AMP		05 13 11.3	
	comp=E,50µm,0.6s						
TALC	**Talca**	1.09	84	⇑*i*P	Pb	05 13 11.3	-1.9
TALC				*i* S	Sb	05 13 26.2	-1.4
TALC				AMP		05 13 27.1	
	comp=E,10µm,0.3s						
LNCH	**Linares**	1.15	107	⇑*i*P	Pb	05 13 14.0	-0.3
LNCH				*i* S	Sb	05 13 30.1	+0.7
LNCH				AMP		05 13 31.8	
	comp=N,4µm,0.3s						
CCHI	**Chillan**	1.29	147	⇑*i*P	Pb	05 13 15.2	-1.5
CCHI				*i* S	Sb	05 13 33.5	+0.1
CCHI				AMP		05 13 48.0	
	comp=E,2µm,0.5s						
SFDO	**San Fernando**	1.84	61	⇑*i*P	Pn	05 13 23.1	-1.7
LNV	**Longovilo**	2.02	40	*e*P	Pn	05 13 27.3	-0.1
LNV				*i* S	Sn	05 13 53.9	+0.6
LCCH	**Las Cruces**	2.35	30	*i* P	Pn	05 13 32.2	+0.1
CACH	**El Canelo**	2.40	55	*e*P	Pn	05 13 33.6	+0.8
CACH				*i* S	Sn	05 14 04.9	+1.9
CICH	**Cipreses**	2.41	61	*e*P	Pn	05 13 33.3	+0.3
CHCH	**Chadas Angostu**	2.48	51	*e*P	Pn	05 13 34.3	+0.3
CHCH				*i* S	Sn	05 14 06.7	+1.7
ANTU	**Antumapu**	2.74	45	*i* P	Pn	05 13 40.0	+2.3
ANTU				*i* S	Sn	05 14 12.7	+1.0
ANTU				AMP		05 14 20.8	
	comp=N,1µm,0.5s						
PCH	**Pirque**	2.77	47	*e*P	Pn	05 13 39.0	+0.8
LMEL	**Las Melosas**	2.82	54	*e*P	Pn	05 13 39.2	+0.3
LMEL				*i* S	Sn	05 14 15.5	+1.8
LMEL				AMP		05 14 25.5	
	comp=N,956nm,0.6s						
FSR	**Penalolen**	2.87	45	*e*P	Pn	05 13 40.4	+1.0
FSR				AMP		05 14 28.7	
	comp=E,1µm,0.7s						
DSCH	**Colegio Aleman**	2.90	44	*e*P	Pn	05 13 40.5	+0.6
DSCH				*e*S	Sn	05 14 16.7	+1.0
DSCH				AMP		05 14 24.3	
	comp=N,2µm,0.6s						
CLCH	**Cerro Calan**	2.92	44	*e*P	Pn	05 13 40.7	+0.4
CLCH				AMP		05 14 31.2	
	comp=E,1µm,0.5s						
TRQA	**Tornquist**	9.16	109	*e*P	P	05 15 05.4	-2.7
	comp=E,8.5nm,0.8s						

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*NIED **06** 05:14:00,39.00N×142.50E,h17^{km},Mw3.3 Best double couple: M$_0$9.4×10^{13} NP1:ϕ_s325°,δ61°,λ43°. NP2:ϕ_s211°, δ54°,λ143°.*

JMA 06 05:14:33.8±0.1**,39.04N×142.46E,h29**^{km}±2^{km}**,M3.5, 2C-2D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	0.62	274	⇓P	Pb	05 14 46.0	-0.1
OFUJ				S	Sb	05 14 54.4	-0.1
MIYJ	**Miyakonagasawa**	0.73	317	P	Pb	05 14 47.4	-0.5
MIYJ				*e*S	Sb	05 14 56.9	-0.7
JMK	**Ichinoseki**	0.97	265	⇑P	Pn	05 14 51.5	-0.1
JMK				*e*S	Sb	05 15 04.0	-0.4
JOM	**Ohasama**	1.00	296	⇓P	Pn	05 14 52.1	0.0
JOM				S	Sn	05 15 05.2	-0.1
JTH	**Tanohata**	1.01	333	P	Pn	05 14 52.7	+0.6
JIO	**Ouri**	1.05	236	⇑P	Pn	05 14 51.9	-0.8
JIO				S	Sn	05 15 04.7	-1.7
JKZ	**Kuzumaki**	1.29	318	P	Pn	05 14 56.7	+0.6
JKZ				*e*S	Sn	05 15 12.8	+0.3
JANG	**Nango**	1.52	332	P	Pn	05 14 59.7	+0.3
JOU	**Okura**	1.56	245	P	Pn	05 15 00.6	+0.6
JOU				*e*S	Sn	05 15 19.8	+0.4

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*NEIC **06** 05:16:38.4,16.53N×98.44W,h60^{km},MD4.2(MEX),After MEX.*

MEX 06 05:16:38.4±0.9**,16.53N×98.44W,h60**^{km}±10^{km}**,MD4.2, 4C-1D,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.33	115	⇓*i*P	P	05 16 47.6	-1.2
PNIG				*i* S	S	05 16 54.7	-1.8
ACX	**Acapulco**	1.45	283	⇑*i*P	P	05 17 00.2	-2.8
ACX				*i* S	S	05 17 18.0	-3.1
VHO	**Vista Hermosa**	1.72	72	⇑*i*P	P	05 17 04.9	-1.8
VHO				*e*S	S	05 17 25.1	-2.5
OXX	**Oaxaca**	1.73	71	*i* P	P	05 17 04.6	-2.3
OXX				*i* S	S	05 17 25.3	-2.5
CAIG	**El Cayaco**	1.82	287	⇑*i*P	P	05 17 06.8	-1.2
CAIG				*e*S	S	05 17 26.7	-3.3
PLIG	**Platanillo**	2.11	331	⇑*i*P	P	05 17 11.6	-0.4
PLIG				*e*S	S	05 17 35.0	-2.0
HUIG	**Huatulco**	2.37	108	*e*P	P	05 17 15.3	-0.5
HUIG				*e*S	S	05 17 40.5	-3.2
YAIG	**Yautepec**	2.39	346	*e*P	P	05 17 13.8	-2.2
YAIG				*e*S	S	05 17 40.7	-3.5
PPM	**Popocatepetl**	2.53	356	*e*P	P	05 17 15.8	-2.2
PPM				*i* S	S	05 17 45.5	-2.1
PPM				*i* S	S	05 17 46.0	-1.6
PPM	**Popocatepetl**	2.53	356	*e*P	P	05 17 15.6	-2.4
PPM				*e*P		05 17 15.8	
PPM				*i* S	S	05 17 45.5	-2.1
PPM				*i* S	S	05 17 46.0	-1.6
IISM	**Ciudad Serdan**	2.64	22	*e*P	P	05 17 16.7	-3.0
IISM				*i* S	S	05 17 48.5	-2.1
IIZ	**Mezontepec**	2.75	344	*i* P	P	05 17 19.5	-1.6
UNM	**Universidad Na**	2.87	346	*e*P	P	05 17 25.4	+2.6
UNM				*i* S	S	05 17 54.5	-1.8
UNM	**Universidad Na**	2.87	346	*i* P	P	05 17 27.7	+4.9
UNM				*e*P		05 17 28.2	
UNM				*i* P		05 17 29.0	
UNM				*i* S	S	05 17 52.8	-3.4
UNM				*i* S	S	05 17 54.5	-1.8
PBVM	**Pinon**	2.96	348	*i* P	P	05 17 22.1	-1.9
PBVM				*i* S	S	05 17 53.2	-5.3
CMIG	**Matias Romero**	3.45	80	*i* P	P	05 17 28.2	-2.9
CMIG				*e*S	S	05 18 07.1	-3.9
MOIG	**Morelia**	4.07	321	*e*P	P	05 17 37.8	-2.0
MOIG				*e*S	S	05 18 25.0	-1.6
SFJM	**Santa Fe**	5.87	313	*e*P	P	05 18 04.8	0.0
SFJM				*i* S	S	05 19 08.7	-2.9

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*BJI **06** 05:16:47.1,39.65N×74.40E,h9^{km},ML3.9*

*IDC **06** 05:16:47.5±1.4,39.24N×74.60E,mb4.0/4,mb1 3.9/6, mb1mx3.6/23,mbtmp3.7/6,ML2.8/2,Error ellipse: s-maj=34.7km s-min=23.0km az=59.0*

*NEIC **06** 05:16:49.2±0.8,39.32N×74.51E,h10^{km},mb4.5/1,Error ellipse: s-maj=17.8km s-min=11.6km az=68.0*

*MOS **06** 05:16:50.6±0.8,39.33N×74.46E,h33^{km},mb4.8/1,Error ellipse: s-maj=34.7km s-min=13.5km az=97.4*

*NNC **06** 05:16:52.7±7.4,39.83N×74.42E,h8^{km}±20^{km},mpv3.9, Error ellipse: s-maj=69.9km s-min=32.4km az=15.0*

ISC 06 05:16:47.7±1.8**,39.34N**±0.07×**74.62E**±0.09**,h11**^{km}±12^{km}**, n28,σ1^{s}05**/32**,mb3.9**/5**,5C-3D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	1.06	80	*e*PG	**Pg**	**05 17 08.7**	**-0.3**
KSH				*e*SG	**Sg**	**05 17 21.9**	**-1.4**
KSH				Smax			
	comp=N,4µm,1.0s						
KSH				Smax			
	comp=E,5µm,0.6s						
KZA	**Kyzart**	2.78	10	P	**Pn**	**05 17 33.7**	**+0.7**
	SNR=65						
AML	**Almayashu**	2.88	346	P	**Pn**	**05 17 35.0**	**+0.6**
	SNR=34						
UCH	**Uchtor**	2.89	358	P	**Pn**	**05 17 35.7**	**+1.2**
	SNR=248						
ULHL	**Ulahol**	3.16	22	P	**Pn**	**05 17 39.1**	**+0.8**
	SNR=167						
AAK	**Ala-Archa**	3.30	358	⇓Pn	**Pn**	**05 17 41.5**	**+1.2**
	comp=E,80nm,0.7s						
AAK				⇓Lg		05 18 20.6	
	comp=E,229nm,0.8s						
AAK	**Ala-Archa**	3.30	358	PN	**Pn**	**05 17 41.5**	**+1.2**
AAK						05 18 20.5	
AAK				pmax	pmax		
	comp=Z,52nm,0.7s						
AAK	**Ala-Archa**	3.30	358	*e*P	**Pn**	**05 17 40.8**	**+0.5**
AAK				*e*S	**Sn**	**05 18 18.9**	**-1.0**
KBK	**Karagaybulak**	3.33	4	P	**Pn**	**05 17 41.8**	**+1.0**
	SNR=32						
EKS2	**Erkin-Say**	3.38	349	P	**Pn**	**05 17 42.6**	**+1.1**
	SNR=17						
FRU	**Bishkek**	3.49	360	⇑*e*PN	**Pn**	**05 17 45.3**	**+2.2**
FRU				*i* S	**Sn**	**05 18 33.5**	**+8.6**
FRU				pmax	pmax		
	comp=Z,70nm,1.6s						
FRU				smax			
	comp=E,820nm,1.7s						
TKM2	**Tokmak 2**	3.66	11	P	**Pn**	**05 17 46.1**	**+0.6**
	SNR=45						
CHMS	**Chumysh**	3.66	2	P	**Pn**	**05 17 46.3**	**+0.8**
	SNR=16						
USP	**Ospenovka**	3.93	359	P	**Pn**	**05 17 49.6**	**+0.3**
	SNR=9.9						
KK31	**Karatay Array**	4.87	322	⇓Pn	**Pn**	**05 18 02.1**	**-0.6**
	comp=E,6.1nm,0.6s,baz=120,slow=13,SNR=39						
KK31				⇑Sn	**Sn**	**05 18 57.2**	**-2.7**
	comp=E,8.2nm,0.5s						

KK31				⇑Lg		05 19 12.1	
	comp=E,24nm,0.6s,baz=136,slow=28,SNR=8.2						
KKAR	**Karatay Array**	4.87	322	PN	Pn	05 18 02.1	-0.6
KKAR				*e*		05 19 15.5	
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MK31	**Makanchi Array**	9.33	34	Pn	P	05 19 04.1	-1.0
	comp=Z,2.3nm,0.8s,baz=212,slow=14,SNR=4.0						
MK31				⇑Lg		05 21 36.4	
	comp=Z,1.6nm,0.6s						
MKAR	**Makanchi Array**	9.33	34	*i* P	P	05 19 04.0	-1.1
MKAR	**Makanchi Array**	9.33	34	Pn	P	05 19 04.5	-0.6
	comp=Z,0.1nm,0.3s,baz=213,slow=13,SNR=4.0						
BVA0	**Borovoye Array**	14.00	349	⇑P	P	05 20 04.1	-4.0
	comp=Z,0.2nm,0.7s,baz=164,slow=14,SNR=4.7						
BVAR	**Borovoye Array**	14.00	349	Pn	P	05 20 07.3	-0.8
	comp=Z,0.1nm,0.3s,baz=234,slow=40,SNR=3.7						
BVAR				Lg		05 24 08.9	
	comp=Z,0.2nm,0.3s,baz=164,slow=26,SNR=4.1						
AB31	**Akbulak array**	14.42	318	P	P	05 20 10.8	-2.8
	comp=Z,2.4nm,0.7s,baz=134,slow=17,SNR=33						
FINES	**FINESS Array B**	36.83	323	P	P	05 23 56.8	-0.4
	comp=Z,1.8nm,0.9s,mb3.9,baz=113,slow=11,SNR=5.8						
ARCES	**ARCESS Array B**	39.69	335	P	P	05 24 21.2	+0.1
	comp=Z,3.2nm,0.9s,mb4.0,baz=106,slow=8.8,SNR=7.5						
NOA	**NORSAR Array B**	43.91	321	P	P	05 24 55.5	-0.1
	comp=Z,0.9nm,0.6s,mb3.7,baz=90,slow=7.8,SNR=3.4						
WRA	**Warramunga Arr**	81.15	125	P	P	05 29 05.2	+0.4
	comp=Z,0.7nm,0.6s,mb3.8,baz=326,slow=5.0,SNR=15						
WRAB	**Tennant Creek**	81.15	125	*e*P	P	05 29 05.3	+0.4
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
WRAB	**Tennant Creek**	81.15	125	*e*P	P	05 29 05.3	+0.4
	comp=Z,3.1nm,0.7s,mb4.3						

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*NEIC **06** 05:27:15.6, 16.46N×98.33W, h63^{km}, MD4.0(MEX), After MEX.*

MEX 06 05:27:15.6±1.1**, 16.46N×98.33W, h63^{km}**±12^{km}**, MD4.0, 1C-1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	0.20	110	⇓*i*P	P	05 27 23.9	-1.4
PNIG				*i* S	S	05 27 30.9	-1.7
ACX	**Acapulco**	1.58	285	*i* P	P	05 27 41.0	-0.9
ACX				*i* S	S	05 27 59.9	-1.5
VHO	**Vista Hermosa**	1.64	68	⇑*i*P	P	05 27 41.2	-1.6
VHO				*i* S	S	05 28 00.8	-2.2
OXX	**Oaxaca**	1.66	68	*i* P	P	05 27 41.8	-1.2
CAIG	**El Cayaco**	1.95	288	*i* P	P	05 27 43.2	-3.8
CAIG				*i* S	S	05 28 09.2	-1.1
PLIG	**Platanillo**	2.22	330	*i* P	P	05 27 49.2	-1.8
PLIG				*i* S	S	05 28 14.3	-2.9
PPM	**Popocatepetl**	2.61	354	*e*P	P	05 27 55.0	-1.4
PPM				*i* S	S	05 28 25.2	-1.6
PPM	**Popocatepetl**	2.61	354	*i* P	P	05 27 54.0	-2.4
PPM				*e*P		05 27 55.0	
PPM				*i* S	S	05 28 23.5	-3.4
PPM				*i* S	S	05 28 25.2	-1.6
IISM	**Ciudad Serdan**	2.67	20	*e*P	P	05 27 57.0	-0.3
IISM				*i* S	S	05 28 29.0	+0.5
CMIG	**Matias Romero**	3.36	79	*i* P	P	05 28 04.7	-2.2
CMIG				*i* S	S	05 28 42.2	-3.6
MOIG	**Morelia**	4.20	320	*i* S	S	05 29 03.7	-3.3

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*CASC **06** 06:09:09.1±2.6, 15.27N×93.24W, h35^{km}±999^{km}, MD4.2*

*MEX **06** 06:09:13.2±0.6, 14.92N×93.06W, h27^{km}±65^{km}, MD4.2*

ISC 06 06:09:10.6±2.8**, 15.02N**±0.06×**93.13W**±0.04**, h18^{km}**±26^{km}**, n9,** σ**1^{s}02**/16**, 2D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	1.58	37	*i* P	**Pn**	**06 09 38.2**	**+0.1**
CCIG				*i* S	**Sn**	**06 09 57.0**	**-1.3**
SCX	**San Cristobal**	1.78	16	*e*P	**Pn**	**06 09 41.0**	**+0.1**
SCX				*i* S	**Sn**	**06 10 04.0**	**+0.8**
CMIG	**Matias Romero**	2.67	321	*i* P	**Pn**	**06 09 54.2**	**+0.6**
CMIG				*i* S	**Sn**	**06 10 26.5**	**+0.7**
IXG	**Ixpaco**	2.72	108	⇓*e*P	**Pn**	**06 09 53.4**	**-1.0**
IXG				*e*S	**Sn**	**06 10 26.9**	**-0.3**
MRL	**Marmol**	3.32	89	⇓*e*P	**Pn**	**06 10 00.1**	**-2.9**
MRL				*e*S	**Sn**	**06 10 42.8**	**+0.4**
RTR	**El Retiro**	3.55	108	*e*S	**Sn**	**06 10 50.2**	**+1.9**
SBLS	**San Blas**	3.59	109	*e*S	**Sn**	**06 10 49.1**	**-0.2**
OXX	**Oaxaca**	4.02	301	*e*P	**Pn**	**06 10 14.0**	**+1.1**
OXX				*i* S	**Sn**	**06 10 59.0**	**-1.0**
VHO	**Vista Hermosa**	4.02	301	*e*P	**Pn**	**06 10 13.5**	**+0.6**
VHO				*i* S	**Sn**	**06 10 59.1**	**-1.0**

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*IDC **06** 06:10:47.1±2.0, 32.40S×178.27W, mb4.3/3, mb1 4.5/4, mb1mx4.0/17, mbtmp4.3/4, ML3.9/1, MS3.6/3, Ms1 3.6/3, ms1mx3.1/27, Error ellipse: s-maj=60.7km s-min=35.7km az=142.0*

*NEIC **06** 06:10:56.6±3.9, 33.05S×178.18W, h86^{km}±31^{km}, mb4.5/2, Error ellipse: s-maj=37.0km s-min=19.1km az=209.0*

ISC 06 06:10:47.0±5.4**, 32.7S**±0.2×**177.7W**±0.3**, h39^{km}**±42^{km}**, n13,** σ**0^{s}15**/9**, mb4.3**/5**, MS4.0**/1**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	3.46	357	LR	LR	06 12 38.7	
	comp=Z,275nm,19.7s,baz=246,slow=35						
URZ	**Urewera**	6.95	216	Pn	**P**	**06 12 29.0**	**0.0**
	2.0nm,0.3s,baz=53,slow=6.2,SNR=13						
URZ				Sn	**S**	**06 13 47.7**	**0.0**
	10.0nm,0.3s,baz=171,slow=22,SNR=20						
DZM	**Mont Dzumac**	17.59	303	LR	LR	06 20 13.9	
	comp=Z,235nm,18.4s,baz=183,slow=33						
ASAR	**Alice Springs**	43.27	269	P	**P**	**06 18 47.0**	**+0.4**
	1.7nm,0.6s,mb4.0,baz=108,slow=7.6,SNR=22						
WB2	**Warramunga Arr**	44.46	274	*e*P	**P**	**06 18 56.1**	**-0.1**
WRAB	**Tennant Creek**	44.46	274	*e*P	**P**	**06 18 56.1**	**-0.2**
	5.7nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	44.47	274	P	**P**	**06 18 56.3**	**0.0**
	3.0nm,0.5s,mb4.3,baz=113,slow=8.0,SNR=103						
FORT	**Forrest**	45.73	257	*e*P	**P**	**06 19 06.2**	**-0.1**
FITZ	**Fitzroy Crossi**	52.63	272	P	**P**	**06 19 59.5**	**0.0**
	3.1nm,0.7s,mb4.4,baz=167,slow=7.5,SNR=7.6						
FITZ				LR	LR	06 42 29.1	
	comp=Z,128nm,19.2s,MS4.0,baz=317,slow=36						
QSPA	**South Pole Qui**	57.40	180	P	**P**	**06 20 33.4**	**0.0**
	2.8nm,0.6s,mb4.5						
QSPA				*e*pP	pP	06 20 50.1	+5.2
KAF	**Kangasniemi**	146.80	340	*e*p	PKPdf	06 30 25.9	+3.6
FINES	**FINESS Array B**	147.39	339	PKPbc	PKPdf	06 30 29.4	+6.2
	3.1nm,0.6s,baz=45,slow=3.9,SNR=20						
HFS	**Hagfors**	151.55	348	PKPbc	PKPdf	06 30 41.7	+12
	1.4nm,0.5s,baz=90,slow=1.4,SNR=6.2						

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*BJI **06** 06:37:54.3, 32.70N×102.25E, h15^{km}, ML3.7, Ms4.2, Msz3.5*

*IDC **06** 06:38:00.7±6.3, 32.96N×102.22E, h53^{km}±66^{km}, mb3.4/4, mb1 3.7/6, mb1mx3.4/23, mbtmp3.7/6, ML3.7/2, MS3.3/3, Ms1 3.4/3, ms1mx2.9/14, Error ellipse: s-maj=65.0km s-min=22.7km az=67.0*

ISC 06 06:37:55.0±0.7**, 32.90N**±0.04×**102.13E**±0.10**, h15^{km}, n10,** σ**1^{s}19**/13**, mb3.8**/3**, MS3.1**/1**, 1C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	2.42	145	⇑*i*PG	**Pn**	**06 38 34.7**	**0.0**
CD2				S	**Sn**	**06 39 05.2**	**+0.9**
CD2				Smax			
	comp=N,2μm,0.9s						
CD2				Smax			
	comp=E,2μm,0.8s						
LZH	**Lanzhou**	3.48	24	P	**Pn**	**06 38 53.4**	**+3.6**
LZH				SG	**Sg**	**06 39 51.9**	**+1.0**
LZH				Smax			
	comp=N,1μm,1.5s						
LZH				Smax			
	comp=E,260nm,1.0s						
LZH				LR	LR		
	comp=E,7μm,15.8s						
LZH				LR	LR		
	comp=Z,7μm,17.8s						
XAN	**Xi’an**	5.79	77	P	**Pn**	**06 39 21.6**	**-0.9**
XAN				SG	**Sg**	**06 41 01.0**	**-6.7**
XAN				Smax			
	comp=N,60nm,1.2s						
XAN				Smax			
	comp=E,70nm,1.0s						
XAN				LR	LR		
	comp=N,820nm,11.2s						
XAN				LR	LR		
	comp=E,260nm,9.3s						
XAN				LR	LR		
	comp=Z,350nm,9.0s						
CMAR	**Chiang Mai Arr**	14.66	192	P	**P**	**06 41 26.0**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=7.7,slow=11,SNR=5.4						
CMAR				LR	LR	06 47 04.7	
	comp=Z,123nm,18.6s,baz=10.0,slow=37						
SONM	**Songino Array**	15.26	11	P	**P**	**06 41 32.2**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=191,slow=15,SNR=6.7						
SONM				LR	LR	06 48 20.7	
	comp=Z,94nm,20.2s,baz=338,slow=41						
MKAR	**Makanchi Array**	20.53	318	P	**P**	**06 42 34.7**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=118,slow=12,SNR=10						
CN2	**Changchun**	21.21	52	*e*P	**P**	**06 42 41.1**	**-1.2**
ZAL	**Zalesovo**	24.38	335	P	**P**	**06 43 13.5**	**0.0**
	comp=Z,2.1nm,0.4s,mb3.9,baz=52,slow=2.8,SNR=4.9						
ZAL				LR	LR	06 54 05.1	
	comp=Z,68nm,19.9s,MS3.1,baz=140,slow=40						
WRA	**Warramunga Arr**	60.90	145	P	**P**	**06 48 07.0**	**-2.6**
	comp=Z,0.8nm,0.9s,mb3.9,baz=338,slow=7.1,SNR=6.0						
ASAR	**Alice Springs**	63.90	147	P	**P**	**06 48 29.2**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.5,baz=334,slow=7.2,SNR=5.8						

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*IDC **06** 07:11:11.2±2.2, 2.57N×95.97E, mb3.9/5, mb1 4.0/6, mb1mx3.8/20, mbtmp3.9/6, ML4.2/1, Error ellipse: s-maj=88.2km s-min=22.3km az=60.0*

*NEIC **06** 07:11:15.4±1.0, 2.52N×95.88E, h30^{km}, Error ellipse: s-maj=22.1km s-min=13.9km az=63.0*

ISC 06 07:11:13.7±1.3**, 2.5N**±0.1×**95.9E**±0.2**, h30^{km}, n7,** σ**0^{s}55**/7**, mb3.9**/5**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	5.47	60	*e*P	**Pn**	**07 12 35.7**	**+0.3**
CMAR	**Chiang Mai Arr**	16.10	10	Pn	**P**	**07 14 59.6**	**-0.1**
	0.3nm,0.3s,baz=200,slow=11,SNR=7.8						
WRA	**Warramunga Arr**	43.84	122	P	**P**	**07 19 19.4**	**+0.1**
	0.5nm,0.5s,mb3.5,baz=298,slow=9.5,SNR=5.7						
ASAR	**Alice Springs**	45.23	127	P	**P**	**07 19 29.9**	**-0.5**
	0.3nm,0.6s,mb3.3,baz=305,slow=8.2,SNR=5.5						
MKAR	**Makanchi Array**	45.65	347	P	**P**	**07 19 33.0**	**-0.4**
	1.4nm,0.5s,mb4.2,baz=161,slow=8.0,SNR=13						
SONM	**Songino Array**	46.03	10	P	**P**	**07 19 35.9**	**-0.6**
	1.4nm,0.7s,mb4.0,baz=191,slow=9.0,SNR=17						
ARCES	**ARCESS Array B**	80.85	340	P	**P**	**07 23 27.1**	**+1.1**
	4.0nm,0.9s,mb4.3,baz=98,slow=6.4,SNR=4.1						

NNC 06 07:19:55.6±5.4**, 37.42N×71.13E, h200^{km}**±89^{km}**, mpv3.5, 4C-1D, Error ellipse: s-maj=58.8km s-min=34.8km az=31.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	5.70	355	⇑P	P	07 21 18.6	-1.1
	1.8nm,0.3s,baz=181,slow=13,SNR=18						
KK31				⇓S	S	07 22 25.7	+0.7
	5.0nm,0.6s,baz=185,slow=24,SNR=6.0						
AAK	**Ala-Archa**	5.81	25	P	P	07 21 20.2	-1.0
	2.2nm,0.3s						
AAK				⇑S	S	07 22 28.2	+0.4
	4.1nm,0.5s						
AB31	**Akbulak array**	14.34	329	⇑P	P	07 23 11.4	+0.9
	0.1nm,0.3s,baz=125,slow=11,SNR=8.6						
AB31				⇑S	S	07 25 47.3	+2.6
	0.7nm,0.7s						

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*IDC **06** 07:33:29.2±1.0, 6.21S×147.04E, mb4.0/7, mb1 4.3/10, mb1mx4.2/16, mbtmp4.1/10, ML3.6/2, MS3.8/6, Ms1 3.8/6, ms1mx3.5/23, Error ellipse: s-maj=37.6km s-min=13.1km az=85.0*

*NEIC **06** 07:33:36.1±2.0, 6.36S×146.85E, h48^{km}±18^{km}, mb4.2/1, Error ellipse: s-maj=16.6km s-min=16.1km az=66.0*

ISC 06 07:33:35.0±3.2**, 6.3S**±0.1×**146.8E**±0.1**, h53^{km}**±29^{km}**, n23,** σ**1^{s}00**/24**, mb3.9**/7**, MS3.7**/5**, 1C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	3.08	173	Pn	**P**	**07 34 21.4**	**-1.0**
	16nm,0.3s,baz=355,slow=5.6,SNR=31						
PMG				Pg	**P**	**07 34 28.6**	**+6.2**
	44nm,0.3s,baz=358,slow=12,SNR=43						
PMG				Sn	**S**	**07 35 01.3**	**+3.0**
	23nm,0.3s,baz=150,slow=20,SNR=3.6						
PMG				Lg		07 35 11.0	
	44nm,0.3s,baz=339,slow=23,SNR=5.9						
PMG	**Port Moresby**	3.08	173	*e*Pn	**P**	**07 34 20.8**	**-1.7**
PMG				*e*Pg	**P**	**07 34 29.5**	**+7.1**
PMG				Sn	**S**	**07 35 01.3**	**+3.0**
PMG				*e*Sg	**S**	**07 35 10.2**	**+12**
PMG				Lg		07 35 11.1	
CTA	**Charters Tower**	13.69	182	Pn	**P**	**07 36 48.0**	**-0.2**
	0.6nm,0.3s,slow=16,SNR=5.1						
CTA				LR	LR	07 41 50.4	
	comp=Z,282nm,20.8s,baz=17,slow=36						
CTA	**Charters Tower**	13.69	182	Pn	**P**	**07 36 48.0**	**-0.2**
CTA				LR	LR	07 41 50.4	
CTAO	**Charters Tower**	13.69	182	*e*P	**P**	**07 36 48.2**	**0.0**
KAKA	**Kakadu**	15.47	245	⇑*i*P	**P**	**07 37 12.4**	**+0.9**
WRAB	**Tennant Creek**	18.11	221	*e*P	**P**	**07 37 43.7**	**-0.9**
	19nm,0.9s						
WB2	**Warramunga Arr**	18.12	221	*e*P	**P**	**07 37 43.3**	**-1.4**
WRA	**Warramunga Arr**	18.13	221	P	**P**	**07 37 44.0**	**-0.8**
	0.3nm,0.3s,baz=42,slow=12,SNR=33						
ASAR	**Alice Springs**	21.21	214	P	**P**	**07 38 18.5**	**+0.1**
	6.1nm,0.8s,mb4.0,baz=45,slow=8.5,SNR=24						
ASAR				LR	LR	07 47 23.7	
	comp=Z,148nm,19.3s,MS3.4,baz=37,slow=39						
ASPA	**Alice Springs**	21.21	214	*e*P	**P**	**07 38 19.2**	**+0.7**
DZM	**Mont Dzumac**	24.63	131	LR	LR	07 47 13.0	
	comp=Z,144nm,21.2s,MS3.4,baz=192,slow=34						
STKA	**Stephens Creek**	25.87	190	*e*P	**P**	**07 39 03.2**	**-0.5**
STKA	**Stephens Creek**	25.87	190	P	**P**	**07 39 03.7**	**0.0**
	3.3nm,0.8s,mb3.9,baz=13,slow=12,SNR=8.0						
STKA				LR	LR	07 49 59.0	
	comp=Z,303nm,18.4s,MS3.9,baz=23,slow=38						
NWAO	**Narrogin (SRO)**	38.12	222	LR	LR	07 58 12.7	
	comp=Z,234nm,18.6s,MS4.0,baz=197,slow=39						
URZ	**Urewera**	42.03	144	LR	LR	07 54 59.0	
	comp=Z,116nm,20.6s,MS3.8,baz=52,slow=31						
CMAR	**Chiang Mai Arr**	53.19	299	P	**P**	**07 42 52.4**	**+1.9**
	2.3nm,0.8s,mb4.2,baz=129,slow=6.6,SNR=7.4						
SONM	**Songino Array**	64.57	331	P	**P**	**07 44 09.3**	**+0.3**
	0.6nm,0.5s,mb3.9,baz=135,slow=5.2,SNR=6.3						
VNDA	**Vanda**	71.60	177	P	**P**	**07 44 52.4**	**+0.2**
	1.4nm,0.7s,mb4.0,baz=326,slow=6.8,SNR=13						
VNDA	**Vanda**	71.60	177	P	**P**	**07 44 52.4**	**+0.2**
MKAR	**Makanchi Array**	77.60	321	P	**P**	**07 45 27.1**	**-0.2**
	0.2nm,0.4s,mb3.4,baz=117,slow=5.4,SNR=4.0						
ILAR	**Eielson Array**	85.88	23	P	**P**	**07 46 09.1**	**-0.9**
	1.2nm,0.9s,mb4.1,baz=271,slow=5.3,SNR=8.6						
SIV	**San Ignacio**	144.63	129	PKP	PKPdf	07 53 08.5	+1.7
	3.4nm,1.0s,baz=249,slow=2.1,SNR=12						

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*ISK **06** 07:41:27.0, 39.37N×40.92E, h5^{km}, ML5.7*

*BGS **06** 07:41:28.0, 39.22N×41.08E, h10^{km}, mb5.3*

*BJI **06** 07:41:28.7, 39.20N×41.10E, h10^{km}, mB5.4, mb4.9, Ms5.8, Msz5.4*

*MOS **06** 07:41:28.2±1.3, 39.36N×41.09E, h10^{km}, mb5.1/65, MS5.2/46, Error ellipse: s-maj=4.5km s-min=2.7km az=130.7*

*NEIC **06** 07:41:28.7, 39.22N×41.08E, h10^{km}, mb5.0/100, MS5.4/121, MW5.5, ML5.7(ISK), MW5.6(CSEM), Moment Tensor Solution. s8 Moment tensor: Scale 10^{17}Nm; M_{rr}0.02; $M_{\theta\theta}$-1.66; $M_{\phi\phi}$1.64; $M_{r\theta}$0.23; $M_{\theta\phi}$-1.61; $M_{\phi r}$-0.62; Best double couple: $M_0$2.4×10^{17} NP1:ϕ_s112°, δ79°, λ170°. NP2:ϕ_s204°, δ80°, λ11°. Principal axes: T 2.47, Plg15°, Azm68°; N -.16, Plg75°, Azm246°; P -2.31, Plg0°, Azm338°; After CSEM.*

NEIC Five people seriously injured, at least 49 slightly injured, several buildings collapsed and at least 60 damaged in the Karliova area. Felt in Bingol, Erzurum, Mus and Tunceli.

*ZUR_RM **06** 07:41:28, 39.22N×41.08E, h18^{km}, Mw5.8/20, Moment Tensor Solution. s20 Moment tensor: Scale 10^{17}Nm; M_{rr}0.06; $M_{\theta\theta}$-3.73; $M_{\phi\phi}$3.67; $M_{r\theta}$-0.30; $M_{\theta\phi}$-4.06; $M_{\phi r}$0.44; Best double couple: $M_0$5.52×10^{17} NP1:ϕ_s291°, δ87°, λ175°. NP2:ϕ_s21°, δ85°, λ3°. Principal axes: T 5.513, Plg5°, Azm246°; N .009, Plg84°, Azm77°; P -5.523, Plg1°, Azm336°;*

*CRAAG **06** 07:41:28.7, 39.22N×41.08E, Mb5.5*

*HRVD **06** 07:41:28.7±0.1, 39.44N×40.87E, h15^{km}, MW5.7/68, Centroid moment Tensor Solution. LP body waves: s57,c116;Mantle waves: s68,c156; Half duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.02±.05; $M_{\theta\theta}$-2.22±.06; $M_{\phi\phi}$2.24±.05; $M_{r\theta}$1.35±.17; $M_{\theta\phi}$-2.47±.04; $M_{\phi r}$0.86±.14; Best double couple: $M_0$3.657×10^{17} NP1: ϕ_s293°, δ71°, λ-167°. NP2:ϕ_s199°, δ78°, λ-19°. Principal axes: T 3.357, Plg5°, Azm247°; N .597, Plg67°, Azm348°; P -3.957, Plg22°, Azm155°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*CSEM **06** 07:41:30.2, 39.18N×40.78E, h10^{km}, mb5.0*

*IDC **06** 07:41:32.5±2.7, 39.35N×40.91E, h31^{km}±21^{km}, mb4.3/19, mb1 4.4/25, mb1mx4.4/28, mbtmp4.5/25, ML3.9/6, MS5.2/22, Ms1 5.2/22, ms1mx5.2/26, Error ellipse: s-maj=12.1km s-min=9.4km az=7.0*

*GRAL **06** 07:41:59.8±4.2, 38.10N×38.35E, h15^{km}, MD4.9*

ISC 06 07:41:27.7±0.4**, 39.30N**±0.01×**41.02E**±0.01**, h3^{km}**±2^{km}**, h22^{km}**±4.5^{km}**:pP-P, n851,** σ**1^{s}34**/847**, mb4.9**/160**, MS5.3**/165**, 48C-30D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BINT	**Bingol**	0.59	224	*i* PG	**Pg**	**07 41 39.6**	**0.0**
EZM	**Erzurum**	0.66	23	*i* PG	**Pg**	**07 41 40.4**	**-0.4**
ERZM	**Erzurum**	0.66	24	*i* P	**Pg**	**07 41 40.2**	**-0.6**
ERZM				*i* S	**Sg**	**07 41 51.0**	**+1.4**
ERZM	**Erzurum**	0.66	24	*i* P	**Pg**	**07 41 40.2**	**-0.6**
ERZM				*i* S	**Sg**	**07 41 51.1**	**+1.5**
ERZM	**Erzurum**	0.66	24	*i* P	**Pg**	**07 41 40.2**	**-0.6**
ERZM				*i* S	**Sg**	**07 41 51.0**	**+1.4**
EZC	**Erzincan**	1.03	296	*i* PN	**Pn**	**07 41 51.6**	**+2.7**
BTMT	**Batman**	1.17	162	*i* PN	**Pn**	**07 41 51.8**	**+1.0**
BEST	**Besiri**	1.42	172	*i* P	**Pb**	**07 41 57.3**	**+2.8**
BEST				*i* S	**Sb**	**07 42 18.6**	**+5.6**
DIY	**Diyarbakir**	1.54	204	*i* PN	**Pn**	**07 41 57.9**	**+1.8**
KELT	**Kelkit**	1.60	302	*i* P	**Pn**	**07 41 57.4**	**+0.4**
KELT				*i* S	**Sb**	**07 42 25.2**	**+7.0**
GUMT	**Gumushane**	1.66	315	*i* PN	**Pn**	**07 41 56.8**	**-1.0**
ELZG	**Elazig**	1.78	244	*i* P	**Pn**	**07 41 59.4**	**-0.2**
ELZG				*i* S	**Sn**	**07 42 29.0**	**+5.9**
TVAN	**Van**	2.01	112	*i* P	**Pn**	**07 42 06.5**	**+3.5**
TVAN				*i* S	**Sn**	**07 42 32.0**	**+3.0**
VANT	**Van**	2.04	114	PN	**Pn**	**07 42 04.2**	**+0.9**
KARS	**Kars**	2.06	50	PN	**Pn**	**07 42 04.3**	**+0.7**
MYA	**Malataya**	2.25	245	PN	**Pn**	**07 42 06.4**	**0.0**
MYA	**Malataya**	2.25	245	*e*Pn	**Pn**	**07 42 06.5**	**+0.1**
CLDR	**Caldiran**	2.25	93	PN	**Pn**	**07 42 07.6**	**+1.2**
CLDR	**Caldiran**	2.25	93	Pn	**Pn**	**07 42 07.9**	**+1.5**
VNNZ	**Vanand**	2.30	69	⇑*e*P	**Pn**	**07 42 08.0**	**+0.9**
KBSD	**Kabsdagh**	2.33	189	⇑*i*P	**Pn**	**07 42 08.6**	**+1.1**
KBSD				⇑*i*S	**Sn**	**07 42 38.8**	**+1.8**
VRNZ	**Vardanashen**	2.56	72	⇓*e*P	**Pn**	**07 42 13.9**	**+3.2**
ARUZ	**Aruch**	2.56	67	P	**Pn**	**07 42 10.7**	**-0.1**
LEN	**Leninakan**	2.62	55	⇑*i*P	**Pn**	**07 42 10.0**	**-1.6**
LEN				*e*S	**Sn**	**07 42 44.0**	**-0.3**
AMBZ	**Amberd**	2.72	65	⇑*i*P	**Pn**	**07 42 13.3**	**+0.3**
HKR	**Hakkari**	2.74	128	PN	**Pn**	**07 42 15.6**	**+2.2**
PAAR	**P’arak’ar**	2.76	71	⇓*e*P	**Pn**	**07 42 15.2**	**+1.6**
SFNV	**Sufian**	2.97	194	⇑*i*P	**Pn**	**07 42 17.3**	**+0.7**
SFNV				⇑*i*S	**Sn**	**07 42 54.4**	**+1.2**
GNI	**Garni**	2.99	72	Pn	**Pn**	**07 42 17.6**	**+0.7**
GNI	**Garni**	2.99	72	Pn	**Pn**	**07 42 20.7**	**+3.8**
	24nm,0.3s,baz=289,slow=4.0,SNR=45						
GNI				Lg		07 43 15.8	
	52nm,0.3s,baz=27,slow=16,SNR=3.8						
GNI	**Garni**	2.99	72	Pn	**Pn**	**07 42 20.7**	**+3.8**
GNI				Lg		07 43 15.8	
STE	**Stepanavan**	3.09	56	⇑*i*P	**Pn**	**07 42 17.5**	**-0.9**
STE				*e*S	**Sn**	**07 42 54.0**	**-2.3**
GZT	**Gaziantep**	3.34	236	*i* P	**Pn**	**07 42 21.9**	**0.0**
GZT				*i* S	**Sg**	**07 43 17.7**	**-1.4**
GZT	**Gaziantep**	3.34	236	*i* P	**Pn**	**07 42 21.9**	**0.0**
GZT				*i* S	**Sg**	**07 43 17.7**	**-1.4**
MSL	**Mosul**	3.42	151	*e*Pn	x	07 42 34.5	
MSL				*i* Pb	x	07 42 43.0	
MSL				*i* Pg	x	07 42 52.0	
MSL				*i* Sn	x	07 43 27.0	
MSL				*i* Sb	x	07 43 39.5	
MSL				*i* Sg	x	07 43 51.0	
GOR	**Gori**	3.56	40	P	**Pn**	**07 42 25.2**	**+0.2**
GOR				S	**Sg**	**07 43 22.1**	**-4.2**
TOKT	**Tokat**	3.59	288	*e*PN	**Pn**	**07 42 24.6**	**-0.9**
TOKT	**Tokat**	3.59	288	Pn	**Pn**	**07 42 25.8**	**+0.3**
GAZ	**Gaziantep**	3.68	236	*e*PN	**Pn**	**07 42 26.5**	**-0.2**
GAZ	**Gaziantep**	3.68	236	*e*Pn	**Pn**	**07 42 19.1**	**-7.6**
TBLG	**Delisi**	3.73	48	P	**Pn**	**07 42 27.3**	**-0.1**
TBLG				S	**Sg**	**07 43 32.8**	**+1.0**
MTA	**Mtatsminda**	3.74	49	P	**Pn**	**07 42 27.2**	**-0.3**
TI2	**Plekhanov**	3.74	48	⇑*i*P	**Pn**	**07 42 28.4**	**+0.9**
TI2				pmax	pmax		
	comp=Z,280nm,0.6s						
TI2				pmax	pmax		
	comp=Z,21μm,1.0s						
BSHR	**Al Beshri**	3.75	195	⇑*i*P	**Pn**	**07 42 33.3**	**+5.6**
BSHR				⇑*i*S	**Sn**	**07 43 21.4**	**+8.4**
ONI	**Oni**	3.75	29	P	**Pn**	**07 42 27.8**	**0.0**
ONI				S	**Sg**	**07 43 32.6**	**-0.1**
SLMH	**Al Salmeh**	3.94	219	⇑*i*P	**Pn**	**07 42 30.4**	**0.0**
SLMH				⇑*i*S	**Sn**	**07 43 19.0**	**+1.3**
DGRG	**David-gareji**	3.96	56	P	**Pn**	**07 42 32.9**	**+2.3**
BNN	**Bunyan**	4.05	265	*e*PN	**Pn**	**07 42 31.8**	**-0.2**
BNN	**Bunyan**	4.05	265	Pn	**Pn**	**07 42 32.1**	**+0.1**
ZEI	**Tsey**	4.09	31	*e*P	**Pn**	**07 42 32.7**	**+0.2**
ZEI				*i*		07 43 24.0	
ZEI				pmax	pmax		
	comp=Z,120nm,0.3s						
ZEI				pmax	pmax		
	comp=Z,282nm,0.3s						
ZEI				smax			
	comp=Z,497nm,0.8s						
ZEI				smax			
	comp=Z,5μm,1.7s						
JHLN	**Al Jahlan**	4.17	210	⇑*i*P	**Pn**	**07 42 34.3**	**+0.7**
JHLN				⇑*i*S	**Sn**	**07 43 24.4**	**+0.9**
SOC	**Sochi**	4.39	347	⇓*i*P	**Pn**	**07 42 34.9**	**-1.9**
SOC				*e*		07 43 28.1	
SOC				pmax	pmax		
	comp=Z,390nm,0.8s						
SOC				pmax	pmax		
	comp=E,111nm,0.7s						
SOC				MLR	MLR		
	comp=N,58μm,12.0s						
SOC				MLR	MLR		
	comp=E,70μm,12.0s						
SOC				MLR	MLR		
	comp=Z,22μm,12.0s						
CEYT	**Ceyhan**	4.75	243	*e*PN	**Pn**	**07 42 41.6**	**-0.2**
KIV	**Kislovodsk**	4.81	14	*e*P	**Pn**	**07 42 39.5**	**-3.3**
KIV				*e*S	**Sn**	**07 43 32.8**	**-7.1**
KIV				pmax	pmax		
	comp=Z,72nm,0.9s						
KIV				MLR	MLR		
	comp=N,14μm,15.0s						
KIV				MLR	MLR		
	comp=Z,22μm,15.0s						
KIV	**Kislovodsk**	4.81	14	*e*P	**Pn**	**07 42 42.2**	**-0.5**
KIV	**Kislovodsk**	4.81	14	*e*P	**Pn**	**07 42 42.2**	**-0.6**
CORM	**Corum**	5.00	282	*e*PN	**Pn**	**07 42 45.0**	**-0.5**
HTY	**Hatay**	5.01	232	*e*PN	**Pn**	**07 42 44.8**	**-0.8**
HTY	**Hatay**	5.01	232	*e*Pn	**Pn**	**07 42 41.6**	**-4.0**
NIG	**Nigde**	5.16	259	*e*PN	**Pn**	**07 42 47.4**	**-0.2**
NIG	**Nigde**	5.16	259	*e*Pn	**Pn**	**07 42 45.7**	**-1.9**
BYBT	**Boyabat**	5.24	296	*e*PN	**Pn**	**07 42 48.1**	**-0.8**
BYBT	**Boyabat**	5.24	296	Pn	**Pn**	**07 42 47.7**	**-1.2**
KFRA	**Kufra**	5.29	221	⇑*i*P	**Pn**	**07 42 49.8**	**+0.2**
KFRA				⇑*i*S	**Sn**	**07 43 52.0**	**+0.1**
TOS	**Tosya**	5.63	290	*e*PN	**Pn**	**07 42 53.6**	**-0.8**
TOS	**Tosya**	5.63	290	Pn	**Pn**	**07 42 55.9**	**+1.5**
KAMT	**Kaman**	5.67	273	*e*PN	**Pn**	**07 42 54.6**	**-0.3**
KAMT	**Kaman**	5.67	273	Pn	**Pn**	**07 42 55.9**	**+1.0**
BRTR	**Keskin Array B**	5.73	277	Pn	**Pn**	**07 42 54.4**	**-1.3**

	comp=Z,1.6nm,0.3s,baz=106,slow=14,SNR=80						
BRTR				Lg		07 44 36.3	
	baz=101,slow=27,SNR=2.3						
BRTR	Keskin Array B	5.73	277	Pn	Pn	07 42 54.3	-1.4
CANT	Cankiri	5.84	285	ePN	Pn	07 42 57.4	+0.2
ROOS	tl_alroos	5.94	211	⇑iP	Pn	07 42 58.8	+0.2
ROOS				⇑iS	Sn	07 44 07.4	-0.7
GOF	Gofitskoye	5.94	14	⇓iP	Pn	07 43 00.5	+1.8
GOF				pmax	pmax		
	comp=Z,130nm,1.6s						
MAK	Makhachkala	6.11	51	eP	Pn	07 42 59.9	-1.2
MAK				pmax	pmax		
	comp=Z,400nm,1.5s						
MAK				pmax	pmax		
	comp=N,2µm,8.0s						
MAK				pmax	pmax		
	comp=E,2µm,8.0s						
MAK				pmax	pmax		
	comp=Z,4µm,8.0s						
MAK				MLR	MLR		
	comp=Z,109µm,9.0s						
MAK	Makhachkala	6.11	51	P	Pn	07 43 00.0	-1.1
FKH	Fakeheh	6.27	218	ePn	Pn	07 43 02.7	-0.7
ANTO	Ankara	6.38	278	ePN	Pn	07 43 05.2	+0.3
ANTO	Ankara	6.38	278	⇑P	Pn	07 43 07.4	+2.5
ANTO	Ankara	6.38	278	Pn	Pn	07 43 04.1	-0.8
HWQ	Hawqa	6.46	221	ePn	Pn	07 43 05.2	-0.8
HWQ	Hawqa	6.46	221	ePn	Pn	07 43 05.2	-0.8
IKL	Isikli	6.57	245	ePN	Pn	07 43 06.8	-0.8
IKL	Isikli	6.57	245	ePn	Pn	07 43 04.3	-3.3
BHD	Baghdad	6.60	155	ePn	x	07 43 06.0	
BHD				i Pb	x	07 43 22.0	
BHD				i Sn	x	07 44 32.0	
BHD				i Sb	x	07 44 52.5	
BHD				i Sg	x	07 45 07.0	
BHD				i	x	07 45 38.0	
SAFT	Safranbolu	6.66	290	ePN	Pn	07 43 08.4	-0.5
BHL	Bhannes	6.90	220	ePn	Pn	07 43 10.4	-1.8
BHL	Bhannes	6.90	220	ePn	Pn	07 43 10.4	-1.9
KONT	Konya--Tatoy	6.92	261	ePN	Pn	07 43 12.0	-0.5
TOTH	TOTAH	6.99	213	⇑iP	Pn	07 43 13.6	+0.1
ZALF	Zalf	7.03	206	⇑iP	Pn	07 43 14.5	+0.4
ZALF				⇑iS	Sn	07 44 32.5	-3.0
FEO	Feodosiya	7.08	326	eP	Pn	07 43 17.8	+3.1
FEO				eS	Sn	07 44 41.3	+4.6
HDMB	Hadim	7.12	254	ePN	Pn	07 43 14.8	-0.6
KIZT	Kizilcal	7.12	269	ePN	Pn	07 43 14.4	-1.0
KIZT	Kizilcal	7.12	269	Pn	Pn	07 43 14.3	-1.1
SUDU	Sudak	7.16	323	i P	Pn	07 43 18.0	+2.2
SUDU				eS	Sn	07 44 42.5	+3.9
YAL	Yalta	7.28	318	eP	Pn	07 43 18.3	+0.7
YAL				eS	Sn	07 44 44.6	+2.8
ALU	Alushta	7.29	320	eP	Pn	07 43 18.0	+0.3
MATL	Matirih	7.40	220	ePn	Pn	07 43 13.6	-5.6
SALA	Sala	7.44	209	⇑iP	Pn	07 43 19.7	-0.1
SALA				⇑iS	Sn	07 44 43.5	-2.2
KSDI	Kefar Szold	7.48	217	P	Pn	07 43 20.5	+0.1
SEV	Sevastopol’	7.58	316	eP	Pn	07 43 23.6	+1.8
SEV				eS	Sn	07 44 53.3	+4.1
KSHT	Keshet	7.58	215	P	Pn	07 43 24.7	+2.9
SIM	Simferopol’	7.62	320	d eP	Pn	07 43 23.0	+0.6
SIM				eS	Sn	07 44 58.0	+7.7
SIM				pmax	pmax		
	comp=Z,90nm,0.9s						
ASF	Jabal al Asfar	7.87	206	Pn	Pn	07 43 25.6	-0.2
	comp=Z,1.7nm,0.3s,baz=302,slow=4.6,SNR=23						
ASF				Lg		07 45 46.6	
	comp=Z,7.2nm,0.3s,baz=343,slow=20,SNR=4.5						
ASF				LR	LR	07 46 28.9	
	comp=Z,11µm,18.1s,baz=261,slow=38						
MMLI	Mount Malkishu	8.22	215	P	P	07 43 30.4	-0.3
OFRI	‘Ofer	8.27	218	P	P	07 43 25.9	-5.5
ISP	Isparta	8.36	263	ePN	P	07 43 30.6	-2.1
ISP	Isparta	8.36	263	c iP	P	07 43 33.5	+0.8
ISP	Isparta	8.36	263	eP	P	07 43 31.2	-1.5
	comp=Z,83nm,1.0s						
ISP	Isparta	8.36	263	ePn	P	07 43 28.7	-4.0
ISP	Isparta	8.36	263	eP	P	07 43 31.2	-1.5
	comp=Z,83nm,1.0s						
ANTB	Antalya	8.52	257	ePN	P	07 43 33.5	-1.4
SLTI	Sal’it	8.56	216	P	P	07 43 30.3	-5.1
YLV	Yalova	9.04	282	ePN	P	07 43 40.4	-1.7
ELL	Elmali	9.13	257	ePN	P	07 43 41.6	-1.8
MZDA	Masada	9.22	212	P	P	07 43 44.9	+0.4
AMZI	Amatzia	9.28	214	P	P	07 43 42.7	-2.7
ISK	Istanbul-Kandi	9.32	285	ePN	P	07 43 44.7	-1.3
ISK	Istanbul-Kandi	9.32	285	Pn	P	07 43 47.0	+1.0
FETY	Fethiye	9.80	258	ePN	P	07 43 51.3	-1.2
DALT	Dalyan (Mudla)	10.09	259	ePN	P	07 43 53.7	-2.9
DALT	Dalyan (Mudla)	10.09	259	Pn	P	07 43 55.2	-1.4
BNT	Bandirma	10.13	280	ePN	P	07 43 55.5	-1.7
BALB	Balikesir	10.17	276	ePN	P	07 43 56.2	-1.4
PRNI	Paran	10.20	211	P	P	07 43 55.1	-3.0
MRMT	Marmara Adasi	10.39	281	ePN	P	07 43 58.7	-2.0
HRFI	Mount Harif	10.47	210	P	P	07 44 00.6	-1.2
MLSB	Milas	10.60	263	ePN	P	07 44 02.0	-1.6
MFT	Murefte	10.64	282	ePN	P	07 44 02.3	-1.8
ARG	Arkhangelos	10.66	257	eP	P	07 44 02.6	-1.8
TLCR		10.79	307	⇑iP	P	07 44 06.4	+0.3
EIL	Elat	10.83	209	Pn	P	07 44 09.9	+3.2
	comp=Z,0.4nm,0.3s,baz=20,slow=15,SNR=5.7						
EIL				LR	LR	07 48 06.1	
	comp=Z,5µm,18.1s,baz=165,slow=36						
EIL	Elat	10.83	209	P	P	07 44 05.2	-1.6
BODT	Bodrum	11.02	263	ePN	P	07 44 07.2	-2.1
HARR	Harsova	11.13	303	⇑P	P	07 44 11.6	+0.9
EDRB	Edirne	11.15	288	ePN	P	07 44 09.5	-1.6
CFR	Carcaliu	11.21	306	⇑iP	P	07 44 11.6	-0.2
JMQS	Jabal Moqyreh	11.23	204	P	P	07 44 15.1	+3.0
SMG	Samos	11.23	266	eP	P	07 44 07.8	-4.4
PRK	Paraskevi	11.44	274	eP	P	07 44 14.9	-0.1
KARP	Karpathos	11.64	256	eP	P	07 44 15.8	-1.9
KIS	Kishinev	11.76	315	eP	P	07 44 19.0	-0.4
KIS				eS	S	07 46 24.0	-8.3
KIS				MLR	MLR		
	comp=Z,6µm,16.0s						
KIS				MLR	MLR		
	comp=N,22µm,20.0s						
KIS				MLR	MLR		
	comp=E,7µm,16.0s						
HILS	Ha’il	11.90	177	P	P	07 44 19.0	-2.3
RDO	Rodhopi	11.98	284	eP	P	07 44 23.7	+1.4
RDO	Rodhopi	11.98	284	P	P	07 44 23.3	+1.0
VRSR	Storozhevoye	11.98	354	eP	P	07 44 19.3	-3.0
VRSR				eS	S	07 46 32.6	-5.0
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRSR				pmax	pmax		
	comp=N,30nm,0.7s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.6s						
VRSR				smax			
	comp=Z,10.0nm,0.6s						
VRSR				smax			
	comp=N,100nm,1.0s						
VRSR				smax			
	comp=E,10.0nm,0.8s						
VRSR				MLR	MLR		
	comp=Z,920nm,18.0s						
VRSR				MLR	MLR		
	comp=N,770nm,17.0s						
VRSR				MLR	MLR		
	comp=E,1µm,17.0s						
BRD	Bordesti	12.07	306	⇑P	P	07 44 25.2	+1.6
ISR	Istrita	12.20	303	⇑P	P	07 44 27.5	+2.2
ISR	Istrita	12.20	303	P	P	07 44 26.1	+0.8
ISR	Istrita	12.20	303	P	P	07 44 26.0	+0.7
LIA	Limnos Island	12.24	278	eP	P	07 44 28.2	+2.4
APE	Apeiranthos	12.39	264	d iP	P	07 44 29.4	+1.5
APE	Apeiranthos	12.39	264	eP	P	07 44 25.5	-2.4
VRI	Vrincioaia	12.40	307	⇑iP	P	07 44 26.9	-1.1
VOR	Voronezh	12.49	355	eP	P	07 44 29.0	-0.2
VOR				pmax	pmax		
	comp=N,250nm,1.4s						
VOR				pmax	pmax		
	comp=E,100nm,1.4s						
VOR				pmax	pmax		
	comp=Z,140nm,1.4s						
SANT	Santorini	12.65	261	P	P	07 44 29.4	-1.9
	comp=Z,23nm,0.7s						
SANT	Santorini	12.65	261	P	P	07 44 29.4	-1.9
	comp=Z,23nm,0.7s						
MLR	Muntele Rosu	12.74	304	Pn	P	07 44 32.0	-0.5
	comp=Z,0.5nm,0.3s,baz=111,slow=8.4,SNR=6.8						
MLR				LR	LR	07 50 08.7	
	comp=Z,9µm,21.5s,baz=304,slow=41						
MLR	Muntele Rosu	12.74	304	⇑iP	P	07 44 33.6	+1.2
MLR	Muntele Rosu	12.74	304	⇑iP	P	07 44 33.6	+1.1
DBAS	Duba	12.77	201	P	P	07 44 36.4	+3.4
NPS	Neapolis	12.92	257	eP	P	07 44 18.4	-16
NVR	Nevrokopi	13.26	284	eP	P	07 44 41.4	+2.0
VOIR		13.30	303	⇑P	P	07 44 40.9	+1.0
IDI	Anoyia	13.45	258	Pn	P	07 44 39.4	-2.6
	comp=Z,0.9nm,0.3s,baz=51,slow=12,SNR=7.7						
IDI				LR	LR	07 50 36.7	
	comp=Z,12µm,20.1s,baz=299,slow=41						
PLG	Polygyros	13.55	280	eP	P	07 44 44.8	+1.5
ATH	Athens Observa	13.60	270	eP	P	07 44 44.2	+0.3
ASH	Ashkhabad	13.62	90	eP	P	07 44 40.0	-4.1
NEO	Neokhori	13.79	276	eP	P	07 44 47.6	+1.2
VTS	Vitosha	13.86	289	⇑P	P	07 44 49.7	+2.4
VTS	Vitosha	13.86	289	P	P	07 44 50.0	+2.7
VTS	Vitosha	13.86	289	P	P	07 44 50.0	+2.7
VAM	Vamos	13.93	259	eP	P	07 44 51.0	+2.7
LKR	Lokris	14.04	273	eP	P	07 44 52.0	+2.3
AKASG	Malin Array Be	14.10	328	Pn	P	07 44 47.1	-3.3
	comp=Z,4.0nm,0.3s,baz=135,slow=14,SNR=38						
BURAR	Bucovina Array	14.15	311	⇑iP	P	07 44 53.2	+2.2
BURAR	Bucovina Array	14.15	311	⇑iP	P	07 44 53.3	+2.2
BURAR	Bucovina Array	14.15	311	⇑iP	P	07 44 53.3	+2.2
BURAR	Bucovina Array	14.15	311	⇑iP	P	07 44 53.2	+2.1
VAY	Valandovo	14.23	284	⇓iP	P	07 44 54.5	+2.4
VAY				e		07 49 33.3	
GVD	Gavdhos	14.23	257	eP	P	07 44 50.2	-2.0
	comp=Z,103nm,1.0s						
GVD	Gavdhos	14.23	257	eP	P	07 44 50.2	-2.1
	comp=Z,103nm,1.0s						
UMJS	Umm Lajj	14.37	194	P	P	07 44 55.8	+1.7
ZAPS	Zavoj/Pirot	14.40	292	eP	P	07 44 55.4	+1.1
VLI	Veliai	14.49	265	eP	P	07 44 54.3	-1.3
KZN	Kozani	14.84	280	eP	P	07 45 04.4	+4.3
BOLS	Boljevac	14.96	294	⇑iP	P	07 45 04.7	+3.0
SKO	Skopje	15.11	286	⇓iP	P	07 45 10.3	+6.7
YNBS	Yanbu‘ al Bahr	15.14	191	P	P	07 45 06.4	+2.2
ITM	Ithomi	15.16	268	eP	P	07 45 02.6	-1.7
RLS	Riolos of Patr	15.33	272	eP	P	07 45 05.2	-1.3
OHR	Ohrid	15.56	283	i P	P	07 45 14.7	+5.2
SVIS	Svilajnac	15.58	295	eP	P	07 45 12.5	+2.7
JAN	Janina	15.58	278	eP	P	07 45 13.0	+3.1
MZLS	Mizel	15.64	166	P	P	07 45 10.4	-0.3
HASS	Wahat al Ahsa’	15.86	150	P	P	07 45 12.1	-1.4
GRUS	Gruza	15.86	293	⇓iP	P	07 45 18.4	+5.0
VLS	Valsamata	15.98	272	eP	P	07 45 17.0	+1.9
LVV	L’vov	16.00	317	eP	P	07 45 12.8	-2.4
LVV				eS	S	07 48 09.4	-3.9
LVV				MLR	MLR		
	comp=Z,4µm,14.0s						
LVV				MLR	MLR		
	comp=N,4µm,13.0s						
LVV				MLR	MLR		
	comp=E,5µm,13.0s						
OBN	Obninsk	16.10	351	⇓eP	P	07 45 11.9	-4.5
OBN				i S	S	07 48 13.9	-1.7
OBN				pmax	pmax		
	comp=Z,39nm,0.8s						
OBN				MLR	MLR		
	comp=Z,6µm,13.0s						
OBN	Obninsk	16.10	351	eP	P	07 45 10.8	-5.6
	comp=Z,164nm,1.0s						
OBN	Obninsk	16.10	351	eP	P	07 45 10.8	-5.6
	comp=Z,164nm,1.0s						
BEO	Belgrade	16.22	297	⇑iP	P	07 45 19.7	+1.6
UZH	Uzhgorod	16.36	311	eP	P	07 45 23.0	+3.3
UZH				eS	S	07 48 22.0	+0.4
UZH				MLR	MLR		
	comp=Z,10µm,13.0s						
KEK	Kerkira	16.39	278	eP	P	07 45 23.8	+3.6
KOLS	Kolonicke sedl	16.51	312	eP	P	07 45 21.0	-0.7
MOS	Moscow	16.60	353	α iP	P	07 45 21.3	-1.5
MOS				eS	S	07 48 28.6	+1.5
MOS				pmax	pmax		
	comp=Z,295nm,1.6s						
MOS				pmax	pmax		
	comp=N,265nm,1.4s						
MOS				MLR	MLR		
	comp=Z,9µm,17.6s						
MOS				MLR	MLR		
	comp=E,14µm,14.2s						
KWP	Kalwaria	16.62	314	eP	P	07 45 22.7	-0.3
KWP				epP		07 45 28.7	
KWP				MLR	MLR	07 54 26.8	
	comp=E,6µm,18.1s						
AB31	Akbulak array	16.77	47	i P	P	07 45 21.5	-3.4
AB31				pmax	pmax		
	comp=Z,23nm,0.7s						
BBLS	Bajina Basta -	16.79	293	⇑iP	P	07 45 27.9	+2.6
PECR	Pechory	17.14	6	eP	P	07 45 26.6	-3.0
PECR				eS	S	07 48 35.0	-4.6
PECR				pmax	pmax		
	comp=Z,3µm,2.0s						
PECR				pmax	pmax		
	comp=Z,1µm,2.6s						
PECR				smax			
	comp=N,3µm,4.0s						
PECR				smax			
	comp=E,10µm,4.0s						
PECR				MLR	MLR		
	comp=Z,10µm,15.0s						
PECR				MLR	MLR		
	comp=N,8µm,14.0s						
PECR				MLR	MLR		
	comp=E,11µm,11.0s						
KECS	Kecovo	17.37	309	eP	P	07 45 33.0	+0.5
PSZ	Piszkesteto	17.52	306	eP	P	07 45 33.9	-0.4
PSZ				pmax	pmax		
	comp=Z,330nm,1.9s						
PSZ	Piszkesteto	17.52	306	⇓eP	P	07 45 34.2	-0.1
PSZ	Piszkesteto	17.52	306	eP	P	07 45 33.9	-0.4
	comp=Z,330nm,1.9s						
MNK	Minsk	17.62	334	eP	P	07 45 33.0	-2.7
PKSM	Moragy	17.79	300	P	P	07 45 39.2	+1.4
NIE	Niedzica	17.88	311	eP	P	07 45 40.8	+2.0
BUD	Budapest	17.91	304	eP	P	07 45 45.0	+5.7
STON	Ston	17.93	289	i P	P	07 45 40.6	+1.1
VYHS	Vyhne	18.39	307	eP	P	07 45 42.8	-2.4
VYHS				eS	S	07 49 14.1	+6.1
SRO	Srobarova	18.48	305	eP	P	07 45 49.2	+2.9
OJC	Ojcow	18.54	313	eP	P	07 45 44.4	-2.7
OJC				eS	S	07 49 17.0	+5.6
OJC	Ojcow	18.54	313	eP	P	07 45 44.4	-2.7
OJC				ePP	PP	07 46 00.9	-1.9
OJC				eS	S	07 49 17.0	+5.6
OJC				MLR	MLR	07 55 06.7	
	comp=Z,6µm,19.5s						
KOLL	Kolacno	18.68	307	eP	P	07 45 48.8	-0.1
TIP	Timpagrande	18.79	277	P	P	07 45 50.7	+0.5
	comp=Z,3.3nm,1.6s						
SUW	Suwalki	19.06	326	eP	P	07 45 49.3	-4.0
SUW				pmax	pmax		
	comp=Z,380nm,1.0s						
SUW	Suwalki	19.06	326	eP	P	07 45 50.8	-2.5
SUW				MLR	MLR	07 52 42.0	
	comp=Z,4µm,25.4s						
KAMS	Al Khamasin	19.18	170	P	P	07 45 55.1	+0.1
SISC	Sisak	19.18	297	i P	P	07 45 58.0	+3.1
SMOL	Smolenice	19.27	306	eP	P	07 45 53.3	-2.5
OKC	Ostrava-Krasne	19.33	310	eP	P	07 45 56.6	+0.1
OKC				eS	S	07 49 35.0	+5.7
OKC				AMS	AMS	07 54 50.0	
	comp=Z,6µm,16.5s						
BLJS	Baljurashi	19.36	178	P	P	07 45 57.8	+0.7
RAC	Raciborz	19.40	311	eP	P	07 45 56.0	-1.4
RAC				eS	S	07 49 32.6	+1.6
RAC				MLR	MLR	07 55 10.7	
RAC				LME		07 55 23.2	
RAC				LMN		07 55 33.9	
	comp=Z,19µm,16.0s						
SOP	Sopron	19.57	303	eP	P	07 46 00.0	+0.7
SOP	Sopron	19.57	303	P	P	07 46 01.4	+2.1
MORC	Moravsky Berou	19.66	310	⇑P	P	07 46 01.5	+1.1
MORC	Moravsky Berou	19.66	310	eP	P	07 45 59.8	-0.6
	comp=Z,71nm,1.6s						
MORC	Moravsky Berou	19.66	310	eP	P	07 45 59.8	-0.6
	comp=Z,71nm,1.6s						
TATS	Tathlith	19.81	173	P	P	07 46 02.6	+0.3
VKA	Vienna	19.89	305	i (P)	P	07 46 08.0	+5.1
	comp=Z,560nm,2.5s						
VKA				MLRZ		07 56 00.0	
	comp=Z,5.4nm,12.0s						
BOJS	Bojanci	19.97	296	eP	P	07 46 07.3	+3.5
VRAC	Vranov	20.06	308	P	P	07 46 03.5	-1.2
	comp=Z,0.2nm,0.3s,baz=87,slow=12,SNR=4.9						
VRAC	Vranov	20.06	308	⇓P	P	07 46 05.2	+0.4
VRAC	Vranov	20.06	308	⇓P	P	07 46 05.2	+0.4
KRUC	Moravsky	20.10	307	P	P	07 46 05.0	-0.1
ARSA	Arzberg	20.13	302	⇑iP	P	07 46 05.7	+0.2
	comp=Z,16nm,0.9s						
PERS	Pernice	20.26	300	eP	P	07 46 08.3	+1.4
CII	Carovilli	20.43	285	eP	P	07 46 07.1	-1.6
	comp=Z,222nm,1.1s						
CII	Carovilli	20.43	285	eP	P	07 46 07.1	-1.6
	comp=Z,222nm,1.1s						
LJU	Ljubljana	20.55	298	eP	P	07 46 13.8	+3.9
CEY	Cerknica	20.58	297	eP	P	07 46 11.2	+1.1
CEY	Cerknica	20.58	297	eP	P	07 46 11.2	+1.0
DPC	Dobruska-Polom	20.61	310	eP	P	07 46 08.8	-1.7
DPC				eS	S	07 49 59.5	+3.0
DPC				AMS	AMS	07 56 20.0	
	comp=Z,9µm,15.1s						
ARQ	Araqi	20.66	136	⇓P	P	07 46 12.9	+1.8
	SNR=59						
ARU	Arti	20.68	28	c iP	P	07 46 07.8	-3.4
ARU				pmax	pmax		
	comp=Z,56nm,1.7s						
ARU				MLR	MLR		
	comp=Z,5µm,14.0s,MS5.0						
ARU	Arti	20.68	28	eP	P	07 46 07.7	-3.5
	comp=Z,72nm,0.9s						
ARU				LR	LR		
	comp=Z,2µm,23.5s,MS4.3						
ARU	Arti	20.68	28	eP	P	07 46 07.7	-3.5
	comp=Z,72nm,0.9s						
KSP	Ksiaz	20.82	312	eP	P	07 46 12.5	-0.2
KSP				e*PP		07 46 17.4	
KSP				e		07 46 28.6	
KSP				eS	S	07 50 04.7	+4.0
KSP				MLR	MLR		
	comp=Z,13µm,15.5s,MS5.4						
KSP	Ksiaz	20.82	312	eP	P	07 46 12.9	+0.2
KSP				epP		07 46 17.7	
KSP				MLR	MLR	07 55 10.3	
	comp=Z,9µm,23.1s,MS5.1						
UPC	Upice	20.86	311	eP	P	07 46 15.1	+2.1
HOQ	Hoqain	20.89	134	⇑P	P	07 46 13.7	+0.1
	SNR=23						
VAE	Valguarnera	20.92	273	P	P	07 46 14.4	+0.7
	comp=Z,69nm,1.0s,baz=42,slow=11,SNR=6.2						
VAE				LR	LR	07 54 47.8	
	comp=Z,14µm,18.0s,MS5.4,baz=355,slow=38						
VOY	Vojsko	20.99	298	eP	P	07 46 15.3	+0.9
VOY				e		07 46 30.4	
AQU	L’Aquila	21.09	287	eP	P	07 46 14.7	-0.7
AQU				pmax	pmax		
	comp=Z,234nm,1.0s,mb5.5						
AQU	L’Aquila	21.09	287	eP	P	07 46 14.7	-0.8
	comp=Z,234nm,1.0s,mb5.5						
AQU	L’Aquila	21.09	287	eP	P	07 46 14.7	-0.7
	comp=Z,234nm,1.0s,mb5.5						
MOA	Molln	21.10	303	⇑iP	P	07 46 14.8	-0.8
	comp=Z,49nm,0.9s,mb4.8						
WDD	Wield Dalam	21.25	269	P	P	07 46 18.2	+1.0
VSU	Vasula	21.27	339	d iP	P	07 46 15.3	-1.9
ROBS	Robic	21.29	298	eP	P	07 46 20.3	+2.9
BIDO	Bidbid	21.40	132	⇑P	P	07 46 18.7	-0.1
	SNR=11						
GKP	Gorka Klasztor	21.43	318	eP	P	07 46 22.3	+3.4
GKP				epP		07 46 24.6	
GKP				MLR	MLR	07 57 39.2	
	comp=Z,14µm,15.6s,MS5.5						
BSY	Bisya	21.50	135	⇑P	P	07 46 19.6	-0.1
	SNR=120						
BSYO	Bisya	21.53	135	P	P	07 46 19.6	-0.5
	SNR=120						
KBA	Koelnbreinsper	21.54	300	⇓iP	P	07 46 20.1	0.0
	comp=Z,53nm,0.8s,mb5.0						
KBA	Koelnbreinsper	21.54	300	⇓iP	P	07 46 20.1	0.0
KBA				pmax	pmax		
	comp=Z,53nm,0.8s,mb5.0						
PRU	Pruhonice	21.55	308	eP	P	07 46 19.1	-1.0
PRU				eS	S	07 50 20.0	+5.5
PRU				AMS	AMS	07 57 00.0	
	comp=Z,7µm,14.0s						
PUL	Pulkovo	21.58	345	i P	P	07 46 18.5	-1.8
PUL				i S	S	07 50 20.9	+5.9
PUL				pmax	pmax		
	comp=Z,360nm,0.8s,mb5.8						
PUL				pmax	pmax		
	comp=N,428nm,1.0s						
PUL				pmax	pmax		
	comp=E,143nm,0.8s						
PUL				pmax	pmax		
	comp=Z,206nm,0.4s,mb5.9						
PUL				pmax	pmax		
	comp=N,442nm,1.1s						
PUL				pmax	pmax		
	comp=E,193nm,1.0s						
PUL				MLR	MLR		
	comp=Z,6µm,15.0s,MS5.1						
PUL				MLR	MLR		
	comp=N,3µm,11.0s,MS5.1						
PUL				MLR	MLR		
	comp=E,2µm,11.0s,MS5.1						
TAS	Tashkent	21.62	76	eP	P	07 46 17.0	-3.8
TAS				pmax	pmax		
	comp=Z,720nm,1.5s,mb5.9						
DJNS	Zahran al Janu	21.63	173	P	P	07 46 22.9	+1.8
PRA	Prague	21.64	309	P	P	07 46 20.0	-1.0
PRA				AMS	AMS	07 57 00.0	
PVCC	Panska Ves	21.72	310	eP	P	07 46 19.9	-1.9
PVCC				eS	S	07 50 23.1	+5.4
PVCC				AMS	AMS	07 57 30.0	
	comp=Z,6µm,14.5s						
SMDO	Samad	21.72	133	P	P	07 46 21.7	-0.3
	SNR=62						
GEC2	GERESS Array S	21.72	305	eP	P	07 46 20.4	-1.4
GEC2				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.7						
GEC2	GERESS Array S	21.72	305	eP	P	07 46 20.4	-1.4
	comp=Z,28nm,1.0s,mb4.7						
GERES	GERESS Array B	21.72	305	P	P	07 46 19.7	-2.1
	comp=Z,12nm,0.9s,mb4.3,baz=108,slow=8.4,SNR=20						
GERES				LR	LR	07 55 51.5	
	comp=Z,5µm,19.9s,MS4.9,baz=111,slow=40						
SVE	Sverdlovsk	21.75	30	eP	P	07 46 21.0	-1.1
SVE				e		07 46 48.5	
SVE				eS	S	07 50 19.0	+0.6
SVE				eSS	SS	07 51 05.0	+10
SVE				pmax	pmax		
	comp=Z,575nm,2.6s,mb5.5						
SVE				MLR	MLR		
	comp=N,4µm,12.0s,MS5.3						
SVE				MLR	MLR		
	comp=E,7µm,12.0s,MS5.3						
SVE				MLR	MLR		
	comp=Z,10µm,12.0s,MS5.4						
KHC	Kasperske Hory	21.88	306	eP	P	07 46 21.6	-1.8
KHC				eS	S	07 50 24.9	+4.2
KHC				AMS	AMS	07 56 40.0	
	comp=Z,6µm,14.8s						
BRG	Berggiesshubel	22.21	310	eP	P	07 46 26.6	-0.1
BRG				e		07 46 30.1	
BRG				eS	S	07 50 34.0	+7.1
BRG				pmax	pmax		
	comp=Z,34nm,1.3s,mb4.6						
BRG				MLR	MLR		
	comp=N,12µm,16.5s,MS5.5						
BRG				MLR	MLR		
	comp=E,8µm,16.5s,MS5.5						
BRG				MLR	MLR		
	comp=Z,7µm,13.3s,MS5.2						
BRG	Berggiesshubel	22.21	310	eP	P	07 46 26.6	-0.1
	comp=Z,34nm,1.3s,mb4.6						
BRG				e		07 46 30.1	
BRG				i		07 46 38.8	
BRG				i		07 47 28.1	
BRG				eS	S	07 50 34.0	+7.1
BRG				LR	LR		
	comp=Z,7µm,13.3s,MS5.2						
BRG	Berggiesshubel	22.21	310	eP	P	07 46 26.6	-0.1
BRG				eS	S	07 50 34.0	+7.1
JMDO	Jabal Madar	22.30	134	⇓P	P	07 46 30.4	+2.6

	SNR=33						
KKAR	**Karatay Array**	**22.45**	**71**	*i* P	**P**	**07 46 28.6**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,212nm,1.3s,mb5.4						
WBK	**Wadi Bani Khal**	**22.60**	**132**	⇑P	**P**	**07 46 32.0**	**+1.3**
	SNR=14						
SOKR	**Solikamsk**	**22.62**	**21**	*i* P	**P**	**07 46 29.1**	**-1.5**
SOKR				*i* S	**S**	**07 50 23.6**	**-10**
SOKR				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.1						
SOKR				MLR	MLR		
	comp=Z,5µm,18.0s,MS5.0						
NKC	**Novy Kostel**	**22.90**	**308**	*e*P	**P**	**07 46 32.9**	**-0.6**
NKC				*e*S	**S**	**07 50 46.3**	**+6.9**
NKC				AMS	AMS	08 00 00.0	
	comp=Z,8µm,15.9s						
CLL	**Collm**	**22.92**	**311**	*i* P	**P**	**07 46 34.6**	**+0.9**
CLL				*i*		07 46 41.4	
CLL				*e*S	**S**	**07 50 41.0**	**+1.3**
CLL				pmax	pmax		
	comp=Z,42nm,1.1s,mb4.8						
CLL	**Collm**	**22.92**	**311**	*i* P	**P**	**07 46 34.6**	**+0.9**
	comp=Z,42nm,1.1s,mb4.8						
CLL				*i*		07 46 41.4	
CLL				*e*S	**S**	**07 50 41.0**	**+1.3**
CLL	**Collm**	**22.92**	**311**	P	**P**	**07 46 34.6**	**+0.9**
	comp=Z,logA/T=1.6,mb4.8						
CLL				*i*		07 46 41.4	
CLL				*e*PPP	PPP	07 47 10.0	-3.0
CLL				*e*S	**S**	**07 50 41.0**	**+1.3**
CLL	**Collm**	**22.92**	**311**	*i* P	**P**	**07 46 34.6**	**+0.9**
CLL				*e*S	**S**	**07 50 41.8**	**+2.1**
RUE	**Ruedersdorf**	**22.92**	**314**	*e*P	**P**	**07 46 35.2**	**+1.5**
NOTT	**Nottersdorf**	**22.98**	**307**	*e*P	**P**	**07 46 34.2**	**-0.1**
	comp=Z,34nm,1.2s,mb4.7						
GUNZ	**Gunzen**	**23.01**	**308**	*e*P	**P**	**07 46 34.8**	**+0.2**
	comp=Z,85nm,1.5s,mb5.0						
WERD	**Werda**	**23.05**	**308**	*e*P	**P**	**07 46 35.4**	**+0.4**
	comp=Z,65nm,1.7s,mb4.8						
FUR	**Furstenfeldbru**	**23.13**	**302**	*e*P	**P**	**07 46 36.2**	**+0.5**
FUR				*e*S	**S**	**07 50 47.4**	**+4.0**
FUR				pmax	pmax		
	comp=Z,109nm,1.1s,mb5.2						
FUR	**Furstenfeldbru**	**23.13**	**302**	*e*P	**P**	**07 46 36.2**	**+0.5**
	comp=Z,109nm,1.1s,mb5.2						
FUR				*e*S	**S**	**07 50 47.4**	**+4.0**
MAIM		**23.22**	**291**	P	**P**	**07 46 40.1**	**+3.5**
MAIM		**23.22**	**291**	P	**P**	**07 46 40.2**	**+3.6**
SARO	**Sassorosso**	**23.29**	**292**	P	**P**	**07 46 40.8**	**+3.5**
SARO	**Sassorosso**	**23.29**	**292**	P	**P**	**07 46 40.8**	**+3.5**
VLC	**Villacollemand**	**23.30**	**292**	*e*P	**P**	**07 46 39.5**	**+2.1**
	comp=Z,95nm,1.3s,mb5.1						
VLC	**Villacollemand**	**23.30**	**292**	*e*P	**P**	**07 46 39.5**	**+2.1**
	comp=Z,95nm,1.3s,mb5.1						
VALM		**23.40**	**292**	P	**P**	**07 46 41.8**	**+3.3**
VALM		**23.40**	**292**	P	**P**	**07 46 41.8**	**+3.4**
GRA1	**Grafenberg Arr**	**23.51**	**306**	*e*P	**P**	**07 46 39.8**	**+0.4**
	comp=Z,235nm,1.0s,mb5.6						
GRA1				*e*S	**S**	**07 50 56.0**	**+5.9**
GRA1				LR	LR		
	comp=Z,6µm,18.3s,MS5.1						
GRF	**Grafenberg Arr**	**23.51**	**306**	*e*P	**P**	**07 46 39.8**	**+0.4**
GRF				*e*S	**S**	**07 50 56.0**	**+5.9**
GRF				pmax	pmax		
	comp=Z,235nm,1.0s,mb5.6						
GRF				MLR	MLR		
	comp=Z,6µm,18.3s,MS5.1						
MOX	**Moxa**	**23.53**	**308**	*e*P	**P**	**07 46 40.8**	**+1.2**
MOX				pmax	pmax		
	comp=Z,55nm,2.1s,mb4.6						
MOX				MLR	MLR		
	comp=Z,5µm,17.0s,MS5.1						
MOX	**Moxa**	**23.53**	**308**	*e*P	**P**	**07 46 40.8**	**+1.2**
	comp=Z,55nm,2.1s,mb4.6						
MOX				*e*S	**S**	**07 51 01.0**	**+11**
MOX				*e*SS	SS	07 52 00.0	+22
MOX				*e*LR	LR	07 54 00.0	
MOX	**Moxa**	**23.53**	**308**	*i* P	**P**	**07 46 40.8**	**+1.2**
	comp=Z,logA/T=1.4,mb4.6						
MOX				S	**S**	**07 51 01.0**	**+11**
MOX				SS	SS	07 52 00.0	+22
MOX				LR	LR	07 54 00.0	
MOX				L		07 58 20.0	
GRAM		**23.54**	**293**	P	**P**	**07 46 42.9**	**+3.2**
CODM		**23.69**	**293**	P	**P**	**07 46 44.8**	**+3.7**
CODM		**23.69**	**293**	P	**P**	**07 46 44.8**	**+3.6**
UBR	**Uberruh**	**23.82**	**301**	*e*P	**P**	**07 46 43.1**	**+0.7**
DAVOX	**Davos**	**23.84**	**298**	P	**P**	**07 46 42.4**	**-0.3**
	comp=Z,5.7nm,0.5s,mb4.3,baz=124,slow=6.8,SNR=7.6						
DAVOX				LR	LR	07 57 03.8	
	comp=Z,7µm,19.5s,MS5.2,baz=93,slow=39						
DAVA	**Damuels**	**23.91**	**300**	⇓*i*P	**P**	**07 46 41.7**	**-1.6**
	comp=Z,21nm,0.7s,mb4.7						
HDH	**Heidenheim**	**23.91**	**303**	*e*P	**P**	**07 46 44.0**	**+0.7**
HDH	**Heidenheim**	**23.91**	**303**	P	**P**	**07 46 45.4**	**+2.1**
FINES	**FINESS Array B**	**24.01**	**342**	P	**P**	**07 46 43.5**	**-0.6**
	comp=Z,21nm,0.8s,mb4.7,baz=144,slow=10,SNR=44						
FINES				LR	LR	07 57 56.6	
	comp=Z,5µm,18.6s,MS5.0,baz=143,slow=41						
FINES	**FINESS Array B**	**24.01**	**342**	P	**P**	**07 46 43.5**	**-0.6**
WHFO	**Wadi Hawf**	**24.02**	**149**	⇓P	**P**	**07 46 45.9**	**+1.3**
	SNR=51						
VDL	**Val di Lei**	**24.09**	**298**	⇓P	**P**	**07 46 46.8**	**+1.7**
BVA0	**Borovoye Array**	**24.32**	**46**	*i* P	**P**	**07 46 46.6**	**-0.7**
BVA0				S	**S**	**07 51 06.8**	**+2.7**
BVA0				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.4						
BVAR	**Borovoye Array**	**24.32**	**46**	P	**P**	**07 46 46.0**	**-1.3**
	comp=Z,5.8nm,0.8s,mb4.1,baz=246,slow=8.7,SNR=17						
PGF	**Pioggiola**	**24.34**	**288**	*e*P	**P**	**07 46 46.8**	**-0.7**
	comp=Z,39nm,0.8s,mb4.6						
PGF	**Pioggiola**	**24.34**	**288**	*e*P	**P**	**07 46 46.8**	**-0.7**
PGF				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.6						
ABTO	**Aybut**	**24.34**	**150**	⇑P	**P**	**07 46 49.3**	**+1.5**
	SNR=13						
VSL	**Villasalto**	**24.39**	**281**	*e*P	**P**	**07 46 48.1**	**0.0**
	comp=Z,53nm,1.1s,mb4.9						
VSL	**Villasalto**	**24.39**	**281**	*e*P	**P**	**07 46 48.1**	**0.0**
	comp=Z,53nm,1.1s,mb4.9						
BUCH	**Bad Urach**	**24.44**	**302**	*e*P	**P**	**07 46 49.0**	**+0.5**
BUCH	**Bad Urach**	**24.44**	**302**	P	**P**	**07 46 50.2**	**+1.7**
LLS	**Linth-Limmern**	**24.45**	**298**	⇓P	**P**	**07 46 48.0**	**-0.5**
SIND	**Sindeldorf**	**24.45**	**305**	*e*P	**P**	**07 46 49.5**	**+0.9**
SIND	**Sindeldorf**	**24.45**	**305**	P	**P**	**07 46 50.6**	**+2.0**
GUT	**Gutenstein**	**24.54**	**301**	*e*P	**P**	**07 46 50.3**	**+0.9**
GUT	**Gutenstein**	**24.54**	**301**	P	**P**	**07 46 51.6**	**+2.2**
KAF	**Kangasniemi**	**24.55**	**343**	*e*p	**P**	**07 46 48.1**	**-1.2**
	comp=Z,31nm,0.9s,mb4.8,baz=149,slow=9.7						
KAF	**Kangasniemi**	**24.55**	**343**	*e*P	**P**	**07 46 48.1**	**-1.2**
KAF				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.8						
RBK	**Rabkut**	**24.57**	**148**	⇓P	**P**	**07 46 51.1**	**+1.1**
	SNR=30						
SISB	**Singen-Sch Ber**	**24.58**	**300**	P	**P**	**07 46 50.8**	**+1.0**
WILA	**Wila**	**24.58**	**300**	⇑P	**P**	**07 46 50.0**	**+0.2**
PCP	**Pian Castagno**	**24.62**	**293**	P	**P**	**07 46 50.9**	**+0.6**
CLZ	**Clausthal**	**24.65**	**311**	*e*P	**P**	**07 46 50.7**	**+0.3**
CLZ				*e*S	**S**	**07 51 16.0**	**+6.4**
CLZ				pmax	pmax		
	comp=Z,38nm,1.1s,mb4.8						
CLZ	**Clausthal**	**24.65**	**311**	*e*P	**P**	**07 46 50.7**	**+0.3**
	comp=Z,38nm,1.1s,mb4.8						
CLZ				*e*S	**S**	**07 51 16.0**	**+6.4**
MUO	**Muotathal**	**24.71**	**299**	⇑P	**P**	**07 46 53.3**	**+2.2**
SPAK	**Spaichingen**	**24.76**	**301**	P	**P**	**07 46 53.4**	**+1.8**
SPAK	**Spaichingen**	**24.76**	**301**	*e*P	**P**	**07 46 52.2**	**+0.6**
SPAK	**Spaichingen**	**24.76**	**301**	*e*P	**P**	**07 46 51.9**	**+0.3**
ZUR	**Zurich**	**24.80**	**300**	⇓P	**P**	**07 46 52.3**	**+0.4**
AML	**Almayashu**	**24.84**	**73**	P	**P**	**07 46 53.4**	**+1.0**
	SNR=13						
LBG	**Lerchenberg**	**24.85**	**303**	*e*P	**P**	**07 46 52.3**	**-0.1**
FIN	**Finale Ligure**	**24.86**	**292**	P	**P**	**07 46 53.8**	**+1.2**
EKS2	**Erkin-Say**	**24.87**	**72**	P	**P**	**07 46 55.2**	**+2.6**
	SNR=30						
SLE	**Schleitheim**	**24.91**	**301**	⇓P	**P**	**07 46 53.0**	**0.0**
NRDL	**Niedersach Rie**	**25.01**	**312**	*e*P	**P**	**07 46 54.5**	**+0.6**
	comp=Z,132nm,2.1s,mb5.1						
TOD	**Tromm**	**25.02**	**305**	*e*P	**P**	**07 46 54.4**	**+0.4**
TOD	**Tromm**	**25.02**	**305**	P	**P**	**07 46 54.7**	**+0.7**
ORX	**Oropa**	**25.06**	**295**	P	**P**	**07 46 55.7**	**+1.3**
SWS	**Schriesheim**	**25.06**	**305**	*e*P	**P**	**07 46 53.9**	**-0.5**
SWS	**Schriesheim**	**25.06**	**305**	P	**P**	**07 46 55.2**	**+0.8**
COP	**Copenhagen**	**25.07**	**320**	*e*P	**P**	**07 46 50.4**	**-4.1**
COP				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.0						
COP				MLR	MLR		
	comp=Z,2µm,17.0s,MS4.6						
COP	**Copenhagen**	**25.07**	**320**	*e*P	**P**	**07 46 50.4**	**-4.1**
	comp=Z,33nm,0.7s,mb5.0						
COP				*i* S	**S**	**07 51 26.3**	**+10**
COP				LR	LR		
	comp=Z,2µm,17.0s,MS4.6						
COP	**Copenhagen**	**25.07**	**320**	*i* P	**P**	**07 46 50.4**	**-4.1**
	comp=Z,33nm,0.7s,mb5.0						
COP				*i* S	**S**	**07 51 26.3**	**+10**
	comp=Z,2µm,17.0s						
MMK	**Mattmark**	**25.09**	**296**	⇑P	**P**	**07 46 54.6**	**-0.2**
BFO	**Black Forest**	**25.10**	**302**	*e*P	**P**	**07 46 54.7**	**-0.1**
BFO				*e*S	**S**	**07 51 25.8**	**+8.6**
BFO				pmax	pmax		
	comp=Z,42nm,1.6s,mb4.7						
BFO	**Black Forest**	**25.10**	**302**	*e*P	**P**	**07 46 54.7**	**-0.1**
	comp=Z,42nm,1.6s,mb4.7						
BFO				*e*S	**S**	**07 51 25.8**	**+8.6**
IMI	**Imperia**	**25.10**	**291**	P	**P**	**07 46 54.5**	**-0.4**
IMI	**Imperia**	**25.10**	**291**	P	**P**	**07 46 54.5**	**-0.3**
ROB	**Roburent**	**25.11**	**292**	P	**P**	**07 46 55.3**	**+0.4**
SULZ	**Sulz-Cheisache**	**25.13**	**300**	⇑P	**P**	**07 46 55.4**	**+0.3**
MONE	**Monesi**	**25.19**	**292**	P	**P**	**07 46 54.6**	**-1.1**
MONE	**Monesi**	**25.19**	**292**	P	**P**	**07 46 54.6**	**-1.1**
TRAV		**25.22**	**295**	P	**P**	**07 46 55.7**	**-0.2**
TRAV		**25.22**	**295**	P	**P**	**07 46 55.7**	**-0.3**
NEGI	**Negi**	**25.23**	**291**	P	**P**	**07 46 55.6**	**-0.5**
NEGI	**Negi**	**25.23**	**291**	P	**P**	**07 46 55.6**	**-0.5**
FELD	**Feldberg**	**25.25**	**301**	*e*P	**P**	**07 46 56.5**	**+0.3**
FELD	**Feldberg**	**25.25**	**301**	*e*P	**P**	**07 46 56.7**	**+0.5**
KIZ	**Kirchzarten**	**25.32**	**301**	*e*P	**P**	**07 46 57.2**	**+0.4**
SAOF	**Saorge**	**25.34**	**292**	*e*P	**P**	**07 46 57.2**	**+0.1**
LKBD	**Leukerbad**	**25.35**	**297**	⇓P	**P**	**07 46 57.1**	**-0.1**
TNS	**Taunus Mts**	**25.38**	**306**	*e*P	**P**	**07 46 57.4**	**0.0**
TNS				pmax	pmax		
	comp=Z,329nm,2.5s,mb5.4						
TNS	**Taunus Mts**	**25.38**	**306**	*e*P	**P**	**07 46 57.4**	**0.0**
	comp=Z,329nm,2.5s,mb5.4						
TNS				*e*S	**S**	**07 51 31.4**	**+9.5**
AAK	**Ala-Archa**	**25.40**	**72**	P	**P**	**07 47 00.3**	**+2.6**
	SNR=19						
AAK	**Ala-Archa**	**25.40**	**72**	*i* P	**P**	**07 46 57.9**	**+0.2**
AAK				pmax	pmax		
	comp=Z,275nm,1.8s,mb5.5						
AAK	**Ala-Archa**	**25.40**	**72**	*e*P	**P**	**07 46 56.9**	**-0.7**
	comp=Z,425nm,1.8s,mb5.7						
AAK				LR	LR		
	comp=Z,1µm,20.0s,MS4.5						
AAK	**Ala-Archa**	**25.40**	**72**	*e*P	**P**	**07 46 56.9**	**-0.8**
	comp=Z,425nm,1.8s,mb5.7						
BSEG	**Bad Segeberg**	**25.41**	**315**	*e*P	**P**	**07 46 58.6**	**+0.9**
	comp=Z,51nm,1.2s,mb4.9						
BSEG				*e*S	**S**	**07 51 33.1**	**+11**
KTD	**Kalmit**	**25.43**	**304**	P	**P**	**07 46 59.9**	**+2.0**
KTD	**Kalmit**	**25.43**	**304**	*e*P	**P**	**07 46 58.0**	**+0.1**
KTD	**Kalmit**	**25.43**	**304**	P	**P**	**07 46 59.9**	**+2.0**
SBF	**Sospel**	**25.43**	**291**	*e*P	**P**	**07 46 58.1**	**+0.2**
	comp=Z,158nm,0.9s,mb5.2						
SBF	**Sospel**	**25.43**	**291**	*e*P	**P**	**07 46 58.1**	**+0.2**
SBF				pmax	pmax		
	comp=Z,79nm,0.9s,mb5.2						
AUTN	**L'Aution**	**25.43**	**292**	*e*P	**P**	**07 47 00.1**	**+2.1**
ENR	**Entracque**	**25.43**	**292**	P	**P**	**07 46 58.0**	**0.0**
UCH	**Uchtor**	**25.44**	**73**	P	**P**	**07 46 56.9**	**-1.2**
	SNR=26						
FRU	**Bishkek**	**25.48**	**71**	*e*P	**P**	**07 47 00.0**	**+1.6**
FRU				pmax	pmax		
	comp=Z,1µm,6.0s						
FRU				pmax	pmax		
	comp=Z,620nm,2.5s,mb5.7						
STV2	**Anna di Valdie**	**25.50**	**292**	P	**P**	**07 46 58.1**	**-0.5**
STV2	**Anna di Valdie**	**25.50**	**292**	P	**P**	**07 46 58.1**	**-0.5**
BBS	**Basel-Blauen**	**25.53**	**300**	*e*P	**P**	**07 46 58.9**	**0.0**
BBS	**Basel-Blauen**	**25.53**	**300**	*e*P	**P**	**07 46 58.5**	**-0.4**
BHB	**Bricherasio**	**25.54**	**294**	P	**P**	**07 46 58.5**	**-0.5**
BHB	**Bricherasio**	**25.54**	**294**	P	**P**	**07 46 58.5**	**-0.5**
LANF	**Langenberg**	**25.55**	**303**	*e*P	**P**	**07 46 57.9**	**-1.1**
LANF	**Langenberg**	**25.55**	**303**	P	**P**	**07 47 00.0**	**+1.0**
RSP	**Reno Superiore**	**25.55**	**294**	P	**P**	**07 46 58.8**	**-0.3**
TOUF	**Mont Tournerai**	**25.56**	**292**	*e*P	**P**	**07 46 59.5**	**+0.3**
CHMS	**Chumysh**	**25.56**	**71**	P	**P**	**07 47 05.7**	**+6.4**
	SNR=12						
MVIF	**Mont Vial**	**25.63**	**291**	*e*P	**P**	**07 47 02.1**	**+2.3**
LSD	**Ceresole Reale**	**25.63**	**295**	P	**P**	**07 47 00.3**	**+0.5**
PZZ	**Prazzo**	**25.66**	**293**	P	**P**	**07 46 59.1**	**-1.0**
PZZ	**Prazzo**	**25.66**	**293**	P	**P**	**07 46 59.0**	**-1.1**
FENE	**Fenestrelle**	**25.69**	**294**	P	**P**	**07 46 60.0**	**-0.4**
FENE	**Fenestrelle**	**25.69**	**294**	P	**P**	**07 47 00.0**	**-0.4**
KBK	**Karagaybulak**	**25.73**	**72**	P	**P**	**07 47 02.8**	**+2.0**
	SNR=23						
WLS	**Welschbruch**	**25.75**	**302**	*e*P	**P**	**07 47 01.2**	**+0.3**
CDF	**Champ du Feu**	**25.80**	**302**	*e*P	**P**	**07 47 01.1**	**-0.3**
	comp=Z,36nm,1.1s,mb4.5						
CDF	**Champ du Feu**	**25.80**	**302**	*e*P	**P**	**07 47 01.1**	**-0.3**
CDF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.5						
MOF	**Molkenrain**	**25.83**	**300**	*e*P	**P**	**07 47 02.4**	**+0.8**
EMV	**Vieux Emosson**	**25.84**	**296**	⇑P	**P**	**07 47 01.1**	**-0.7**
ECH	**Echery**	**25.86**	**301**	*e*P	**P**	**07 47 04.3**	**+2.4**
ECH	**Echery**	**25.86**	**301**	P	**P**	**07 47 02.5**	**+0.6**
ABH	**Alteburg**	**25.88**	**305**	*e*P	**P**	**07 47 02.1**	**0.0**
RRL	**Cesana Torines**	**25.88**	**294**	P	**P**	**07 47 01.2**	**-1.0**
MBDF	**Montbardon**	**25.89**	**293**	*e*P	**P**	**07 47 02.2**	**-0.1**
	comp=Z,75nm,0.8s,mb5.0						
MBDF	**Montbardon**	**25.89**	**293**	*e*P	**P**	**07 47 02.2**	**-0.1**
MBDF				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.0						
LPG	**La Plagne**	**25.92**	**295**	*e*P	**P**	**07 47 02.9**	**+0.4**
	comp=Z,120nm,1.1s,mb5.0						
LPG	**La Plagne**	**25.92**	**295**	*e*P	**P**	**07 47 02.9**	**+0.4**
LPG				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.0						
LPL	**La Plagne**	**25.93**	**295**	*e*P	**P**	**07 47 02.5**	**-0.1**
	comp=Z,137nm,1.3s,mb5.0						
LPL	**La Plagne**	**25.93**	**295**	*e*P	**P**	**07 47 02.5**	**-0.1**
LPL				pmax	pmax		
	comp=Z,68nm,1.3s,mb5.0						
BNI	**Bardonecchia**	**25.96**	**294**	*e*P	**P**	**07 47 01.3**	**-1.6**
BNI				pmax	pmax		
	comp=Z,123nm,1.3s,mb5.3						
BNI	**Bardonecchia**	**25.96**	**294**	*e*P	**P**	**07 47 01.3**	**-1.6**
	comp=Z,123nm,1.3s,mb5.3						
BNI	**Bardonecchia**	**25.96**	**294**	*e*P	**P**	**07 47 01.3**	**-1.6**
	comp=Z,123nm,1.3s,mb5.3						
LOMF	**Lomont**	**25.98**	**299**	*e*P	**P**	**07 47 03.6**	**+0.5**
LOMF	**Lomont**	**25.98**	**299**	P	**P**	**07 47 04.1**	**+1.0**
KZA	**Kyzart**	**26.00**	**73**	P	**P**	**07 47 05.5**	**+2.1**
	SNR=22						
FRF	**La Foret Royal**	**26.01**	**291**	*e*P	**P**	**07 47 02.8**	**-0.6**
	comp=Z,62nm,0.9s,mb4.8						
FRF	**La Foret Royal**	**26.01**	**291**	*e*P	**P**	**07 47 02.8**	**-0.6**
FRF				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.8						
HINF	**Hinteralfeld**	**26.01**	**300**	*e*P	**P**	**07 47 03.6**	**+0.3**
LMR	**La Mourre**	**26.12**	**290**	*e*P	**P**	**07 47 03.9**	**-0.5**
TKM2	**Tokmak 2**	**26.19**	**71**	P	**P**	**07 47 08.0**	**+2.9**
	SNR=17						
HAU	**Haudompre**	**26.37**	**301**	*e*P	**P**	**07 47 07.0**	**+0.3**
HAU				*e*R			
	comp=Z,6µm,20.9s						
BUG	**Bochum--Univer**	**26.39**	**309**	*e*P	**P**	**07 47 07.6**	**+0.8**
	comp=Z,16nm,0.7s,mb4.7						
CABF	**La Chapelle**	**26.43**	**298**	*e*P	**P**	**07 47 06.1**	**-1.1**
	comp=Z,263nm,1.2s,mb5.3						
CABF	**La Chapelle**	**26.43**	**298**	*e*P	**P**	**07 47 06.1**	**-1.1**
CABF				pmax	pmax		
	comp=Z,132nm,1.2s,mb5.3						
TAVF	**Tavernes**	**26.43**	**291**	*e*P	**P**	**07 47 06.2**	**-1.1**
ORIF	**Oris-en-Rattie**	**26.53**	**294**	*e*P	**P**	**07 47 09.3**	**+1.2**
	comp=Z,46nm,1.0s,mb4.7						
ORIF				*e*R			
	comp=Z,9µm,22.8s						
CMAH	**Djebel Manchou**	**26.54**	**275**	P	**P**	**07 47 11.0**	**+2.6**
ABSA	**Djebel Ababsia**	**26.60**	**274**	P	**P**	**07 47 12.0**	**+3.1**
VILF	**Villemus**	**26.67**	**291**	*e*P	**P**	**07 47 07.6**	**-1.9**
PUYF	**Puyloubier**	**26.70**	**291**	*e*P	**P**	**07 47 15.6**	**+5.9**
ULHL	**Ulahol**	**26.72**	**72**	P	**P**	**07 47 15.4**	**+5.5**
	SNR=16						
WLF	**Walferdange**	**26.73**	**304**	*e*P	**P**	**07 47 07.0**	**-2.9**
WLF				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.8						
WLF	**Walferdange**	**26.73**	**304**	*e*P	**P**	**07 47 07.0**	**-2.9**
	comp=Z,34nm,1.0s,mb4.8						
WLF	**Walferdange**	**26.73**	**304**	*e*P	**P**	**07 47 07.0**	**-2.9**
	comp=Z,34nm,1.0s,mb4.8						
SMRF	**Simiane la Rot**	**26.77**	**292**	*e*P	**P**	**07 47 09.9**	**-0.5**
WTSB	**Winterswijk**	**26.80**	**309**	⇑*i*P	**P**	**07 47 12.3**	**+1.7**
	comp=Z,59nm,1.2s,mb5.0						
WTSB				*i* x	x	07 47 16.4	
KSH	**Kashi**	**26.91**	**78**	⇑P	**P**	**07 47 16.1**	**+4.4**
KSH				*e*AP	pP	07 47 20.2	+7.6
KSH				PCP	PcP	07 50 33.4	-1.0
KSH				S	**S**	**07 51 55.3**	**+7.9**
KSH				*e*SCP		07 54 12.4	
KSH				*e*PCS		07 54 15.5	
KSH				AMB	AMB		
	comp=Z,770nm,3.4s						
KSH				LR	LR		
	comp=N,22µm,16.5s						
KSH				LR	LR		
	comp=E,10µm,10.8s						
CAEH	**'Ain El Ouahch**	**26.94**	**276**	P	**P**	**07 47 16.0**	**+4.0**
HFS	**Hagfors**	**26.98**	**330**	P	**P**	**07 47 10.4**	**-1.7**
	comp=E,11nm,0.6s,mb4.6,baz=141,slow=9.5,SNR=20						
HFS				LR	LR	07 59 03.5	
	comp=E,4µm,19.3s,MS4.9,baz=131,slow=39						
MUD	**Monsted U'grnd**	**27.05**	**320**	*i* P	**P**	**07 47 22.0**	**+9.2**
	comp=E,47nm,0.9s,mb5.0						
MUD				*i* S	**S**	**07 51 58.8**	**+9.3**
	comp=Z,6µm,16.0s						
HGN	**Heimansgroeve**	**27.06**	**307**	*e*P	**P**	**07 47 14.4**	**+1.4**
	comp=Z,17nm,1.0s,mb4.5						
HGN				*i* x	x	07 47 17.9	
	comp=Z,53nm,1.2s						
HGN				*e*x	x	07 47 24.8	
HGN				*i* S	**S**	**07 52 07.6**	**+18**
PRAF	**Pradon**	**27.07**	**291**	*e*P	**P**	**07 47 18.2**	**+5.1**
CKFL	**Kef-Lekhel**	**27.15**	**275**	P	**P**	**07 47 20.0**	**+6.1**
AAA	**Alma-Ata**	**27.15**	**70**	*e*P	**P**	**07 47 14.0**	**+0.1**
AAA				pmax	pmax		
	comp=Z,900nm,3.0s						
AAA				MLR	MLR		
	comp=Z,7µm,14.0s,MS5.4						
CASM	**Ain Smara**	**27.36**	**275**	P	**P**	**07 47 22.0**	**+6.1**
VIVF	**Saint-Julien-l**	**27.39**	**294**	*e*P	**P**	**07 47 14.8**	**-1.2**
	comp=Z,22nm,0.8s,mb4.5						
VIVF	**Saint-Julien-l**	**27.39**	**294**	*e*P	**P**	**07 47 14.8**	**-1.2**
VIVF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4						
CTEI	**Djebel Teioual**	**27.49**	**274**	P	**P**	**07 47 21.0**	**+4.0**
GIVF	**Givet**	**27.64**	**305**	*e*P	**P**	**07 47 18.2**	**-0.1**
DFRA	**Djebel Bou Aff**	**27.76**	**275**	P	**P**	**07 47 23.0**	**+3.5**
JASL	**Jaisalmer**	**27.77**	**107**	*e*P	**P**	**07 47 19.9**	**+0.2**
SMF	**Signal de Mont**	**27.98**	**297**	*e*P	**P**	**07 47 19.2**	**-2.1**
	comp=Z,36nm,0.9s,mb4.7						
SMF	**Signal de Mont**	**27.98**	**297**	*e*P	**P**	**07 47 19.2**	**-2.1**
SMF				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.7						
LOR	**Lormes**	**27.99**	**299**	*e*P	**P**	**07 47 18.9**	**-2.5**
	comp=Z,29nm,1.1s,mb4.5						
LOR				*e*R			
	comp=Z,8µm,18.5s						
LOR	**Lormes**	**27.99**	**299**	*e*P	**P**	**07 47 18.9**	**-2.5**
LOR				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.5						
LOR				MLR	MLR		
	comp=Z,8µm,18.5s,MS5.3						
LASF	**Ste Croix**	**28.00**	**292**	*e*P	**P**	**07 47 20.7**	**-0.9**
	comp=Z,62nm,1.3s,mb4.8						
BAIF	**Baives**	**28.03**	**305**	*e*P	**P**	**07 47 20.2**	**-1.6**
SSF	**Saint Saulge**	**28.22**	**298**	*e*P	**P**	**07 47 21.4**	**-2.1**
SSF				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.5						
SSF	**Saint Saulge**	**28.22**	**298**	*e*P	**P**	**07 47 21.4**	**-2.1**
	comp=Z,14nm,1.2s,mb4.5						
AVF	**Avril sur Loir**	**28.32**	**298**	*e*P	**P**	**07 47 22.1**	**-2.3**
	comp=Z,43nm,0.9s,mb4.8						
AVF	**Avril sur Loir**	**28.32**	**298**	*e*P	**P**	**07 47 22.1**	**-2.3**
AVF				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.8						
KONO	**Kongsberg**	**28.39**	**326**	⇑*i*P	**P**	**07 47 22.4**	**-2.6**
KONO	**Kongsberg**	**28.39**	**326**	PFAKE		07 47 40.0	+15
KONO				LR	LR		
	comp=Z,4µm,20.0s,MS5.0						
NB2	**NORSAR Subarra**	**28.51**	**330**	P	**P**	**07 47 23.2**	**-2.8**
	comp=Z,1.8nm,0.7s,mb3.9,baz=126,slow=8.6						
NOA	**NORSAR Array B**	**28.51**	**330**	P	**P**	**07 47 23.1**	**-2.9**
	comp=Z,1.7nm,0.5s,mb4.0,baz=126,slow=8.8,SNR=7.7						
NOA				LR	LR	07 59 58.4	
	comp=Z,3µm,19.7s,MS4.9,baz=130,slow=39						
NOA	**NORSAR Array B**	**28.51**	**330**	P	**P**	**07 47 23.0**	**-3.0**
APA	**Apatity**	**28.63**	**354**	⇓*e*P	**P**	**07 47 29.5**	**+2.4**
APA				*e*PPP	PPP	07 48 30.0	-1.8
APA				*i* S	**S**	**07 52 16.0**	**+1.1**
APA				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
APA				MLR	MLR		
	comp=Z,5µm,12.0s,MS5.3						
LVZ	**Lovozero**	**28.86**	**355**	*e*P	**P**	**07 47 30.4**	**+1.3**
LVZ				*e*S	**S**	**07 52 18.9**	**+0.3**
LVZ				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
LVZ				pmax	pmax		
	comp=N,9.0nm,0.9s						
LVZ				pmax	pmax		
	comp=E,5.0nm,1.4s						
LVZ				smax			
	comp=Z,280nm,4.3s						
LVZ				smax			
	comp=N,760nm,4.9s						
LVZ				smax			
	comp=E,530nm,5.8s						
LVZ				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.1						
LVZ				MLR	MLR		
	comp=N,3µm,19.0s						
LVZ				MLR	MLR		
	comp=E,990nm,10.0s						
TCF	**Toulx Ste Croi**	**29.10**	**297**	*e*P	**P**	**07 47 30.9**	**-0.6**
	comp=E,32nm,1.0s,mb4.7						
TCF	**Toulx Ste Croi**	**29.10**	**297**	*e*P	**P**	**07 47 30.9**	**-0.6**
TCF				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
CAF	**Calviac**	**29.24**	**294**	*e*P	**P**	**07 47 32.1**	**-0.6**
MTLF	**Montolieu**	**29.24**	**291**	*e*P	**P**	**07 47 33.3**	**+0.5**
	comp=Z,23nm,1.0s,mb4.5						
MTLF	**Montolieu**	**29.24**	**291**	*e*P	**P**	**07 47 33.3**	**+0.5**
MTLF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
ETOS	**Mallorca**	**29.33**	**283**	P	**P**	**07 47 35.7**	**+2.1**
	comp=Z,53nm,1.4s,mb5.1						
ETOS	**Mallorca**	**29.33**	**283**	P	**P**	**07 47 35.7**	**+2.1**
	comp=Z,53nm,1.4s,mb5.1						
RJF	**Les Rejaudoux**	**29.61**	**295**	*e*P	**P**	**07 47 36.5**	**+0.4**
RJF				*e*R			
	comp=Z,9µm,18.8s						
BHK	**Bhakra**	**29.77**	**94**	*e*P	**P**	**07 47 35.7**	**-2.0**
ABA	**Alger-Bouzarea**	**29.88**	**277**	P	**P**	**07 47 35.5**	**-3.1**
EMHD	**Djebel Mahouad**	**30.11**	**276**	P	**P**	**07 47 37.9**	**-2.8**
LFF	**La Frestale**	**30.18**	**294**	*e*P	**P**	**07 47 40.6**	**-0.5**
NSS	**Namsos**	**30.45**	**336**	*e*S	**S**	**07 52 43.3**	**-0.5**
NSS				AMS	AMS	08 01 57.9	
	comp=Z,5µm,17.6s,MS5.2						
BER	**Bergen**	**30.62**	**325**	*e*P	**P**	**07 47 46.5**	**+1.6**
BER				*e*		07 52 46.2	
BER				AMS	AMS	08 01 28.1	
	comp=Z,3µm,19.1s,MS4.9						
EPF	**Esparros**	**30.64**	**290**	*e*P	**P**	**07 47 44.4**	**-0.8**
MFF	**Saint Martin d**	**30.72**	**297**	*e*P	**P**	**07 47 45.1**	**-0.8**
	comp=Z,35nm,1.1s,mb4.8						
MFF	**Saint Martin d**	**30.72**	**297**	*e*P	**P**	**07 47 45.1**	**-0.8**
MFF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8						
MKAR	**Makanchi Array**	**30.79**	**62**	*i* P	**P**	**07 47 44.9**	**-1.6**
MKAR				pmax	pmax		
	comp=Z,15nm,0.7s						
MKAR	**Makanchi Array**	**30.79**	**62**	P	**P**	**07 47 45.2**	**-1.3**
	comp=Z,4.6nm,0.8s,mb4.4,baz=271,slow=8.2,SNR=32						
MKAR				LR	LR	08 03 10.2	
	comp=Z,4µm,19.6s,MS5.1,baz=65,slow=42						
MKAR	**Makanchi Array**	**30.79**	**62**	P	**P**	**07 47 45.2**	**-1.3**
MKAR				LR	LR	08 03 10.2	
EBIE	**Bielsa**	**30.83**	**290**	P	**P**	**07 47 47.4**	**+0.5**
	comp=Z,32nm,1.4s,mb5.0						
EBIE	**Bielsa**	**30.83**	**290**	P	**P**	**07 47 47.4**	**+0.5**
	comp=Z,32nm,1.4s,mb5.0,SNR=6.4						
RTK	**Rohtak**	**30.85**	**98**	*e*P	**P**	**07 47 47.2**	**-0.1**

KHET	Khetri	30.86	101	eP	P	07 47 47.3	0.0
ERTA	Horta de San J	30.96	286	P	P	07 47 49.5	+1.5
	comp=Z,22nm,1.1s,mb4.9						
ERTA	Horta de San J	30.96	286	P	P	07 47 49.5	+1.4
	comp=Z,22nm,1.1s,mb4.9						
GRR	Gorron	31.20	301	eP	P	07 47 50.1	0.0
	comp=Z,50nm,1.1s,mb5.0						
GRR	Gorron	31.20	301	eP	P	07 47 50.1	0.0
GRR				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.0						
ETSF	Etsaut	31.31	290	eP	P	07 47 50.2	-0.9
	comp=Z,28nm,0.9s,mb4.8						
ETSF	Etsaut	31.31	290	eP	P	07 47 50.2	-0.9
ETSF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
KUDL	Kundal	31.34	100	eP	P	07 47 51.1	-0.5
ARCES	ARCESS Array B	31.41	350	P	P	07 47 49.9	-1.8
	comp=Z,14nm,0.8s,mb4.8,baz=162,slow=7.7,SNR=24						
KEV	Kevo	31.41	351	eP	P	07 47 50.0	-1.8
KEV				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
KEV				MLR	MLR		
	comp=Z,7µm,21.0s,MS5.3						
KEV	Kevo	31.41	351	eP	P	07 47 50.0	-1.8
	comp=Z,11nm,0.7s,mb4.8						
KEV				LR	LR		
	comp=Z,7µm,21.0s,MS5.3						
ESAC	San Caprasio	31.42	288	P	P	07 47 53.6	+1.5
	comp=Z,65nm,1.4s,mb5.3						
ESAC	San Caprasio	31.42	288	P	P	07 47 53.6	+1.5
	comp=Z,65nm,1.4s,mb5.3						
NDI	New Delhi	31.64	98	eP	P	07 47 53.0	-1.2
NDI				eS	S	07 53 02.0	-0.8
AYAN	Aya Nagar	31.66	99	eP	P	07 47 54.4	0.0
AYAN				AMb	AMB	07 47 58.9	
	comp=Z,7.9nm,1.1s,mb4.5						
EMOS	Mosqueruela	31.68	285	P	P	07 47 56.6	+2.2
	comp=Z,35nm,0.8s,mb5.2						
EMOS	Mosqueruela	31.68	285	P	P	07 47 56.6	+2.2
	comp=Z,35nm,0.8s,mb5.2						
SONA	Sohna	31.75	99	eP	P	07 47 54.8	-0.3
SONA				AMb	AMB	07 48 01.8	
	comp=Z,35nm,1.2s,mb5.0						
SJPF	Ste Jean	31.77	291	eP	P	07 47 54.0	-1.1
	comp=Z,42nm,1.3s,mb4.8						
SJPF	Ste Jean	31.77	291	eP	P	07 47 54.0	-1.1
SJPF				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.8						
KBI1	Birley Grange	32.03	310	eP	P	07 47 55.1	-2.2
NVS	Novosibirsk	32.11	47	eP	P	07 47 57.5	-0.5
NVS				i		07 50 46.0	
NVS				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.1						
NVS				pmax	pmax		
	comp=N,19nm,0.8s						
NVS				pmax	pmax		
	comp=E,24nm,1.4s						
KWE	Weaver Farm	32.19	310	eP	P	07 47 56.1	-2.6
HPK	Haverah Park	32.20	311	eP	P	07 47 57.3	-1.5
HPK				AMb	AMB	07 48 03.8	
	comp=Z,131nm,1.3s,mb5.6						
ECHE	Chera	32.22	284	P	P	07 48 00.7	+1.6
ECHE				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
ECHE	Chera	32.22	284	P	P	07 48 00.7	+1.6
	comp=Z,20nm,0.9s,mb5.0						
SGMF	Saint Gilles	32.34	301	eP	P	07 47 59.5	-0.6
	comp=Z,70nm,1.1s,mb5.1						
SGMF	Saint Gilles	32.34	301	eP	P	07 47 59.5	-0.6
SGMF				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.1						
TRO	Tromso	32.58	346	eP	P	07 48 03.4	+1.4
TRO				eS	S	07 53 16.6	-0.5
TRO				AMS	AMS	08 02 23.0	
	comp=Z,4µm,18.2s,MS5.1						
QUIF	Quistinic	32.75	300	eP	P	07 48 03.0	-0.7
	comp=Z,45nm,0.9s,mb5.1						
QUIF	Quistinic	32.75	300	eP	P	07 48 03.0	-0.7
QUIF				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
ZAL	Zalesovo	32.86	49	i P	P	07 48 11.2	+6.7
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZAL	Zalesovo	32.86	49	LR	LR	08 03 29.2	
	comp=Z,5µm,21.5s,MS5.2,baz=209,slow=40						
AGRA	Agra	32.92	100	ex	P	07 48 06.5	+1.2
HEX	Exmoor	33.21	306	eP	P	07 48 05.2	-2.4
ECK	Cauldkaine Hil	33.27	313	eP	P	07 48 06.5	-1.6
ECK				AMb	AMB	07 48 22.1	
	comp=Z,63nm,1.5s,mb5.3						
EKA	Eskdalemuir Ar	33.31	314	P	P	07 48 05.8	-2.7
	comp=Z,15nm,0.9s,mb4.9,baz=105,slow=8.3,SNR=13						
EKA	Eskdalemuir Ar	33.31	314	P	P	07 48 05.8	-2.7
ESK	Eskdalemuir	33.34	313	eP	P	07 48 05.3	-3.4
ESK				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
ESK				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.5						
ESK	Eskdalemuir	33.34	313	eP	P	07 48 05.3	-3.4
	comp=Z,23nm,1.0s,mb5.1						
ESK				LR	LR		
	comp=Z,1µm,20.0s,MS4.5						
ESK	Eskdalemuir	33.34	313	eP	P	07 48 07.1	-1.6
ESK				AMb	AMB	07 48 15.3	
	comp=Z,38nm,1.5s,mb5.1						
ESK	Eskdalemuir	33.34	313	eP	P	07 48 05.3	-3.4
	comp=Z,23nm,1.0s,mb5.1						
ELAN	Lanestosa	33.35	291	P	P	07 48 10.0	+1.1
	comp=Z,21nm,1.2s,mb4.9						
EDI	Edinburgh	33.44	315	eP	P	07 48 07.5	-2.1
EDI				AMb	AMB	07 48 15.3	
	comp=Z,50nm,1.4s,mb5.3						
HSA	Swansea	33.47	307	eP	P	07 48 07.6	-2.3
EVIA	Vianos	33.60	283	P	P	07 48 11.3	+0.1
EVIA				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
EVIA	Vianos	33.60	283	P	P	07 48 11.3	0.0
	comp=Z,16nm,0.7s,mb5.1						
EVIA	Vianos	33.60	283	P	P	07 48 11.3	+0.1
	comp=Z,16nm,0.7s,mb5.1						
EQES	Quesada	34.26	282	P	P	07 48 16.7	-0.2
	comp=Z,49nm,0.9s,mb5.4						
EQES	Quesada	34.26	282	P	P	07 48 16.7	-0.2
	comp=Z,49nm,0.9s,mb5.4						
EBER	Berja	34.39	280	P	P	07 48 17.9	-0.1
	comp=Z,50nm,1.2s,mb5.3						
EBER	Berja	34.39	280	P	P	07 48 17.9	-0.1
	comp=Z,50nm,1.2s,mb5.3						
ESDC	Sonseca Array	34.44	285	P	P	07 48 16.3	-2.2
	comp=Z,9.2nm,0.9s,mb4.7,baz=66,slow=9.0,SNR=14						
ESDC	Sonseca Array	34.44	285	P	P	07 48 19.0	+0.6
	comp=Z,13nm,0.7s,mb5.0						
ESDC	Sonseca Array	34.44	285	P	P	07 48 19.0	+0.5
	comp=Z,13nm,0.7s,mb5.0						
EARI	Arriondas	34.62	292	P	P	07 48 20.5	+0.6
	comp=Z,44nm,1.5s,mb5.2						
EARI	Arriondas	34.62	292	P	P	07 48 20.5	+0.6
	comp=Z,44nm,1.5s,mb5.2						
EBAN	Banos Encina	34.70	283	P	P	07 48 20.2	-0.5
EBAN				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.2						
EBAN	Banos Encina	34.70	283	P	P	07 48 20.2	-0.5
	comp=Z,21nm,0.7s,mb5.2						
EBAN	Banos Encina	34.70	283	P	P	07 48 20.2	-0.5
	comp=Z,21nm,0.7s,mb5.2						
BHPL	Bhopal	34.72	107	eP	P	07 48 20.7	-0.3
BHPL				AMb	AMB	07 48 25.9	
	comp=Z,47nm,1.0s,mb5.4						
BHPL				eS	S	07 53 47.7	-3.1
WMQ	Urumqi	34.85	67	eP	P	07 48 21.2	-0.7
WMQ				PP	PP	07 49 38.6	-0.6
WMQ				PCP	PcP	07 50 54.6	-0.6
WMQ				S	S	07 53 51.2	-1.4
WMQ				SCS	ScS	07 58 40.2	-2.1
WMQ				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,490nm,3.0s						
WMQ				LR	LR		
	comp=N,5µm,17.2s,MS5.4						
WMQ				LR	LR		
	comp=E,4µm,18.5s,MS5.4						
WMQ				LR	LR		
	comp=Z,4µm,16.8s,MS5.2						
POO	Poona	35.13	117	eP	P	07 48 20.8	-3.7
POO				AMb	AMB	07 48 31.6	
	comp=Z,69nm,1.1s,mb5.5						
EADA	Adamuz	35.30	283	P	P	07 48 25.3	-0.5
	comp=Z,10nm,0.7s,mb4.9						
EADA	Adamuz	35.30	283	P	P	07 48 25.3	-0.5
	comp=Z,10nm,0.7s,mb4.9						
EMIJ	Mijas	35.93	280	P	P	07 48 32.0	+0.8
	comp=Z,22nm,0.9s,mb5.1						
EMIJ	Mijas	35.93	280	P	P	07 48 32.0	+0.8
	comp=Z,22nm,0.9s,mb5.1						
AKL	Akola	35.96	110	eP	P	07 48 31.8	+0.3
AKL				AMb	AMB	07 48 40.3	
	comp=Z,86nm,1.3s,mb5.5						
ECAB	El Cabril	35.96	283	P	P	07 48 32.5	+1.0
	comp=Z,7.9nm,0.6s,mb4.8						
ECAB	El Cabril	35.96	283	P	P	07 48 32.5	+1.1
	comp=Z,7.9nm,0.6s,mb4.8						
ECAL	Calabor	35.98	290	P	P	07 48 32.6	+1.1
	comp=Z,32nm,1.3s,mb5.1						
ECAL	Calabor	35.98	290	P	P	07 48 32.6	+1.1
	comp=Z,32nm,1.3s,mb5.1						
MTE	Manteigas	36.93	288	eP	P	07 48 37.5	-2.0
	comp=Z,30nm,1.4s,mb4.9						
MTE				eS	S	07 54 14.3	-10
MTE				eLQ		07 57 06.1	
MTE				eLR	LR	07 59 53.5	
	comp=Z,5µm,15.9s						
KOLN	Koldanda	37.00	95	eP	P	07 48 40.9	+0.7
	comp=Z,369nm,1.9s,mb5.9						
EMIN	Mina Concepcio	37.00	283	P	P	07 48 39.3	-0.9
	comp=Z,23nm,1.4s,mb4.8						
EMIN	Mina Concepcio	37.00	283	P	P	07 48 39.3	-0.9
	comp=Z,23nm,1.4s,mb4.8						
PCBR	Castelo Branco	37.02	287	eP	P	07 48 41.1	+0.8
	comp=Z,21nm,1.0s,mb4.9						
PVIS	Viseu	37.11	288	eP	P	07 48 42.6	+1.6
GKN	Gorkha	37.69	94	eP	P	07 48 45.6	-0.4
	comp=Z,617nm,2.0s,mb6.0						
PALC	Alcoutim	37.70	283	eP	P	07 48 47.0	+1.0
PTOM	Tomar	37.77	287	eP	P	07 48 47.6	+1.0
EVO	Evora	37.78	285	eP	P	07 48 46.9	+0.2
	comp=Z,11nm,0.9s,mb4.3						
EVO				eR			
	comp=Z,5µm,18.5s						
PBEJ	Beja	37.82	284	eP	P	07 48 48.4	+1.3
DMN	Daman	38.24	94	eP	P	07 48 50.8	+0.1
	comp=Z,734nm,1.9s						
KKN	Kakani	38.29	94	eP	P	07 48 51.0	-0.1
	comp=Z,60nm,0.9s,mb5.3						
KKN	Kakani	38.29	94	eP	P	07 48 51.0	-0.1
KKN				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
PKI	Pulchoki	38.49	94	eP	P	07 48 53.4	+0.6
	comp=Z,669nm,2.1s,mb6.0						
PKI	Pulchoki	38.49	94	eP	P	07 48 53.4	+0.6
PKI				pmax	pmax		
	comp=Z,334nm,2.1s,mb5.7						
GUN	Gumba	38.69	93	eP	P	07 48 54.5	0.0
	comp=Z,198nm,1.2s,mb5.7						
BLSP	Bilaspur	38.89	104	i P	P	07 48 56.2	0.0
BLSP				AMb	AMB	07 49 02.7	
	comp=Z,93nm,2.3s,mb5.1						
HYB	Hyderabad	39.18	113	i P	P	07 48 58.0	-0.7
HYB				eS	S	07 54 57.0	-2.2
HYB				eSSS	SSS	07 58 04.0	-14
KMBO	Kilima Mbogo	40.38	186	LR	LR	08 04 50.2	
	comp=Z,6µm,19.3s,MS5.5,baz=354,slow=35						
JMIC	Jan Mayen	40.45	337	eP	P	07 49 08.3	-0.2
JMIC				ePP	PP	07 50 44.4	-0.9
JMIC				eS	S	07 55 15.9	-1.7
JMIC				AMS	AMS	08 06 58.2	
	comp=Z,4µm,19.3s,MS5.2						
BOK	Bokaro	40.81	99	eP	P	07 49 12.2	+0.1
BOK				AMb	AMB	07 49 19.7	
	comp=Z,89nm,1.8s,mb5.1						
MBAR	Mbarara	40.82	196	PFAKE		07 49 20.0	+7.8
MBAR				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
KBS	Kingsbay	41.41	352	eP	P	07 49 15.4	-1.0
KBS				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7						
KBS				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.1						
KBS	Kingsbay	41.41	352	eP	P	07 49 15.4	-1.0
	comp=Z,16nm,0.8s,mb4.7						
KBS				LR	LR		
	comp=Z,3µm,21.0s,MS5.1						
KBS	Kingsbay	41.41	352	eP	P	07 49 15.4	-1.0
	comp=Z,16nm,0.8s,mb4.7						
LSA	Lhasa	41.95	87	P	P	07 49 22.4	+1.1
LSA				PP	PP	07 51 01.2	-0.5
LSA				S	S	07 55 44.2	+3.9
LSA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
LSA				AMB	AMB		
	comp=Z,180nm,4.1s						
LSA				LR	LR		
	comp=N,2µm,19.7s,MS5.2						
LSA				LR	LR		
	comp=E,3µm,21.8s,MS5.2						
LSA				LR	LR		
	comp=Z,4µm,18.9s,MS5.4						
LSA	Lhasa	41.95	87	P	P	07 49 22.6	+1.3
LSA				S	S	07 55 43.0	+2.7
LSA	Lhasa	41.95	87	eP	P	07 49 21.8	+0.5
LSA				pmax	pmax		
	comp=Z,24nm,0.7s,mb4.9						
LSA				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.4						
LSA	Lhasa	41.95	87	eP	P	07 49 21.8	+0.5
	comp=Z,24nm,0.7s,mb4.9						
LSA				LR	LR		
	comp=Z,5µm,20.0s,MS5.4						
LSA	Lhasa	41.95	87	eP	P	07 49 21.8	+0.5
	comp=Z,24nm,0.7s,mb4.9						
VIS	Vishakhapatnam	42.46	108	eP	P	07 49 21.7	-3.9
VIS				AMb	AMB	07 49 32.2	
	comp=Z,107nm,1.9s,mb5.2						
CAL	Calcutta	43.38	98	ex	P	07 49 39.1	+6.0
CAL				ex	x	07 59 42.2	
ZAK	Zakamensk	44.29	54	eP	P	07 49 38.7	-1.4
ZAK				e		07 51 23.8	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.8s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.2						
TLY	Talaya	44.29	52	eP	P	07 49 39.1	-1.0
TLY				e		07 51 25.7	
TLY				eS	S	07 56 11.0	-3.2
TLY				eSS	SS	07 59 19.1	-5.1
TLY				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.6						
TLY				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.3						
TLY	Talaya	44.29	52	P	P	07 49 40.5	+0.4
	comp=Z,17nm,1.3s,mb4.6						
TLY				LR	LR		
	comp=Z,550nm,20.0s,MS4.5						
TLY	Talaya	44.29	52	P	P	07 49 40.5	+0.4
	comp=Z,17nm,1.3s,mb4.6						
IRK	Irkutsk	44.58	51	eP	P	07 49 45.1	+2.7
IRK				pmax	pmax		
	comp=Z,47nm,2.1s,mb5.0						
GTA	Gaotai	44.74	70	eP	P	07 49 44.5	+0.6
GTA				PCP	PcP	07 51 24.9	-1.8
GTA				PP	PP	07 51 31.2	+1.7
GTA				PPP	PPP	07 52 12.2	+3.4
GTA				SCP		07 55 14.8	
GTA				S	S	07 56 23.6	+2.8
GTA				AMB	AMB		
	comp=Z,290nm,6.5s						
GTA				LR	LR		
	comp=N,4µm,15.6s,MS5.6						
GTA				LR	LR		
	comp=E,4µm,14.8s,MS5.6						
GTA				LR	LR		
	comp=Z,4µm,20.5s						
DAG	Danmarks Havn	45.24	344	⇓eP	P	07 49 46.8	-0.6
DAG				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
DAG				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.2						
DAG	Danmarks Havn	45.24	344	⇓eP	P	07 49 46.8	-0.6
	comp=Z,6.7nm,0.8s,mb4.5						
DAG				LR	LR		
	comp=Z,3µm,18.0s,MS5.2						
DAG	Danmarks Havn	45.24	344	⇓iP	P	07 49 46.8	-0.6
	comp=Z,6.7nm,0.8s,mb4.5						
	comp=Z,3µm,18.0s						
SONM	Songino Array	46.84	57	P	P	07 49 59.1	-1.4
	comp=Z,1.4nm,0.6s,mb4.1,baz=278,slow=8.7,SNR=7.8						
SONM				PcP	PcP	07 51 32.0	-1.9
	comp=Z,2.5nm,0.8s,baz=264,slow=3.8,SNR=6.0						
ULN	Ulaanbaatar	47.26	57	PFAKE		07 50 10.0	+6.2
ULN				LR	LR		
	comp=Z,15µm,19.0s,MS6.0						
PALK	Pallekele	47.80	121	PFAKE		07 50 20.0	+12
PALK				LR	LR		
	comp=Z,601nm,20.0s,MS4.6						
SUMG	Summit	49.89	337	eP	P	07 50 23.0	-0.8
	comp=Z,24nm,1.1s,mb5.1						
SUMG	Summit	49.89	337	eP	P	07 50 23.0	-0.8
	comp=Z,24nm,1.1s,mb5.1						
CIT	Chita	50.21	50	eP	P	07 50 26.7	+0.2
CIT				pmax	pmax		
	comp=Z,39nm,3.3s						
CMLA	Cha da Macela	50.99	291	PFAKE		07 50 40.0	+7.4
CMLA				LR	LR		
	comp=Z,667nm,20.0s,MS4.7						
BTO	Baotou	51.63	65	eP	P	07 50 33.8	-3.7
BTO				S	S	07 58 03.4	+5.6
DBIC	Dimbokro	52.46	244	P	P	07 50 40.9	-3.2
DBIC				pmax	pmax		
	comp=Z,13nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,1µm,19.1s						
DBIC	Dimbokro	52.46	244	P	P	07 50 40.9	-3.1
	comp=Z,13nm,0.8s,mb4.9,baz=30,slow=7.7,SNR=13						
DBIC				LR	LR	08 14 49.5	
	comp=Z,1µm,19.1s,MS5.0,baz=247,slow=38						
DBIC	Dimbokro	52.46	244	eP	P	07 50 40.8	-3.3
	comp=Z,33nm,1.2s,mb5.1						
DBIC				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
DBIC	Dimbokro	52.46	244	eP	P	07 50 40.8	-3.3
	comp=Z,33nm,1.2s,mb5.1						
TIXI	Tiksi	52.58	23	eP	P	07 50 42.2	-2.0
TIXI				eS	S	07 58 05.6	-4.8
TIXI				eSS	SS	08 01 50.4	+3.1
TIXI				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.5						
TIXI	Tiksi	52.58	23	PFAKE		07 50 50.0	+5.8
TIXI				LR	LR		
	comp=Z,3µm,19.0s,MS5.4						
HHC	Hu-ho-hao-te	52.62	64	eP	P	07 50 44.4	-0.5
HHC				PCP	PcP	07 51 53.4	-1.7
HHC				PP	PP	07 52 43.8	-1.5
HHC				SCP		07 55 49.6	
HHC				S	S	07 58 11.1	-0.2
HHC				SCS	ScS	08 00 28.9	-3.6
HHC				SS	SS	08 01 45.6	-2.7
HHC				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
HHC				AMB	AMB		
	comp=Z,250nm,14.4s						
HHC				LR	LR		
	comp=N,4µm,14.4s,MS5.7						
HHC				LR	LR		
	comp=E,3µm,16.8s,MS5.7						
HHC				LR	LR		
	comp=Z,2µm,19.2s,MS5.2						
KMI	Kunming	53.16	86	P	P	07 50 47.7	-1.4
KMI				AP	pP	07 50 56.8	+6.7
KMI				XP	sP	07 51 00.6	+10
KMI				PP	PP	07 52 49.0	-1.7
KMI				S	S	07 58 21.8	+2.9
KMI				AMB	AMB		
	comp=Z,30nm,1.8s,mb4.9						
KMI				AMB	AMB		
	comp=Z,380nm,4.0s						
KMI				LR	LR		
	comp=N,2µm,20.1s,MS5.3						
KMI				LR	LR		
	comp=E,2µm,17.9s,MS5.3						
KMI				LR	LR		
	comp=Z,2µm,19.4s,MS5.1						
XAN	Xi’an	53.56	73	P	P	07 50 52.3	+0.3
XAN				AP	pP	07 51 01.6	+8.6
XAN				S	S	07 58 22.3	-2.0
XAN				AMB	AMB		
	comp=Z,130nm,4.4s						
XAN				LR	LR		
	comp=N,2µm,17.6s,MS5.4						
XAN				LR	LR		
	comp=E,2µm,14.6s,MS5.4						
XAN				LR	LR		
	comp=Z,2µm,15.4s,MS5.4						
CHG	Chiang Mai	53.66	95	⇑P	P	07 50 54.7	+1.8
	comp=Z,20nm,0.9s,mb5.1						
CMAR	Chiang Mai Arr	53.87	95	P	P	07 50 52.8	-1.6
	comp=Z,5.1nm,0.9s,mb4.5,baz=300,slow=8.2,SNR=15						
CMAR				LR	LR	08 18 10.2	
	comp=Z,962nm,21.3s,MS4.8,baz=300,slow=41						
TIY	Taiyuan	54.52	67	eP	P	07 50 55.0	-4.0
TIY				S	S	07 58 42.0	+4.9
TIY				LR	LR		
	comp=N,3µm,15.0s						
HIA	Hailar	54.82	52	PFAKE		07 51 10.0	+9.0
HIA				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
DGAR	Diego Garcia	54.85	141	PFAKE		07 51 10.0	+8.3
DGAR				LR	LR		
	comp=Z,674nm,20.0s,MS4.7						
NANT	Nan	55.03	94	P	P	07 51 00.0	-3.0
	comp=Z,175nm,0.9s						
GYA	Guiyang	55.50	82	⇑iP	P	07 51 09.2	+2.9
GYA				AP	pP	07 51 13.4	+6.2
GYA				XP	sP	07 51 16.8	+9.2
GYA				PP	PP	07 53 15.7	+3.9
GYA				S	S	07 58 55.5	+5.1
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.3						
GYA				LR	LR		
	comp=N,2µm,20.7s,MS5.3						
GYA				LR	LR		
	comp=E,2µm,17.8s,MS5.3						
GYA				LR	LR		
	comp=Z,3µm,19.1s,MS5.3						
LSZ	Lusaka	55.60	195	eP	P	07 51 06.0	-1.1
LSZ				pmax	pmax		
	comp=Z,25nm,1.5s,mb5.0						
LSZ				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.3						
LSZ	Lusaka	55.60	195	eP	P	07 51 06.0	-1.1
	comp=Z,25nm,1.5s,mb5.0						
LSZ				LR	LR		
	comp=Z,3µm,19.0s,MS5.3						
LSZ	Lusaka	55.60	195	eP	P	07 51 06.0	-1.1
	comp=Z,25nm,1.5s,mb5.0						
YAK	Yakutsk	55.60	35	eP	P	07 51 08.5	+2.0
YAK				e		07 52 07.3	
YAK				e		07 53 12.4	
YAK				eS	S	07 58 51.4	+0.1
YAK				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.8s						
YAK				smax			
	comp=N,93nm,5.9s						
YAK				smax			
	comp=E,99nm,9.5s						
YAK				MLR	MLR		
	comp=Z,5µm,16.0s,MS5.7						
YAK				MLR	MLR		
	comp=N,2µm,14.0s,MS5.7						
YAK				MLR	MLR		
	comp=E,4µm,15.0s,MS5.7						
YAK	Yakutsk	55.60	35	PFAKE		07 51 20.0	+13
YAK				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
ENH	Enshi	55.75	77	eP	P	07 51 06.5	-1.5
	comp=Z,28nm,1.0s,mb5.2						
ENH				LR	LR		

	comp=Z,3µm,19.0s,MS5.4						
ENH	**Enshi**	**55.75**	**77**	*e*P	**P**	**07 51 06.5**	**-1.5**
	comp=Z,28nm,1.0s,mb5.2						
NST	**Nakhon Sawan**	**56.42**	**97**	P	**P**	**07 51 13.0**	**0.0**
OPO	**Ambohidratompo**	**57.86**	**173**	P	**P**	**07 51 23.4**	**+0.2**
	comp=Z,1.8nm,0.6s,mb4.3,baz=338,slow=5.4,SNR=6.3						
SNY	**Shenyang**	**60.38**	**58**	⇑P	**P**	**07 51 39.4**	**-0.9**
SNY				PP	PP	07 53 56.2	+0.7
SNY				S	**S**	**07 59 50.5**	**-3.6**
SNY				AMB	AMB		
	comp=Z,120nm,14.7s						
SNY				LR	LR		
	comp=N,3µm,12.7s,MS6.1						
SNY				LR	LR		
	comp=E,8µm,14.7s,MS6.1						
SNY				LR	LR		
	comp=Z,9µm,17.5s,MS6.0						
DL2	**Dalian**	**60.44**	**62**	*e*P	**P**	**07 51 41.7**	**+0.9**
DL2				S	**S**	**07 59 59.6**	**+4.7**
DL2				AMB	AMB		
	comp=Z,170nm,2.1s,mb5.7						
DL2				LR	LR		
	comp=N,820nm,14.1s,MS5.3						
DL2				LR	LR		
	comp=E,1µm,13.7s,MS5.3						
DL2				LR	LR		
	comp=Z,2µm,15.7s,MS5.2						
MATP	**Matopo**	**60.56**	**194**	P	**P**	**07 51 39.4**	**-2.4**
	comp=Z,3.7nm,0.7s,mb4.6,baz=29,slow=6.7,SNR=11						
MATP	**Matopo**	**60.56**	**194**	P	**P**	**07 51 39.4**	**-2.4**
CN2	**Changchun**	**60.68**	**56**	*e*P	**P**	**07 51 39.5**	**-2.9**
CN2				*e*S	**S**	**07 59 52.3**	**-5.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,4µm,19.0s,MS5.8						
CN2				LR	LR		
	comp=E,4µm,19.0s,MS5.8						
CN2				LR	LR		
	comp=Z,6µm,21.0s,MS5.7						
NJ2	**Nanjing**	**61.83**	**70**	*e*P	**P**	**07 51 50.1**	**-0.3**
NJ2				AMB	AMB		
	comp=Z,420nm,5.4s						
NJ2				LR	LR		
	comp=N,2µm,18.2s,MS5.5						
NJ2				LR	LR		
	comp=E,2µm,16.4s,MS5.5						
NJ2				LR	LR		
	comp=Z,3µm,19.4s,MS5.5						
KLR	**Kul'dur**	**61.97**	**48**	*e*P	**P**	**07 51 49.4**	**-1.6**
KLR				*e*S	**S**	**08 00 06.5**	**-7.8**
KLR				*e*SS	SS	08 04 09.0	-9.2
KLR				MLR	MLR		
	comp=N,2µm,15.0s,MS5.7						
KLR				MLR	MLR		
	comp=E,3µm,15.0s,MS5.7						
KLR				MLR	MLR		
	comp=Z,4µm,15.0s,MS5.8						
QIZ	**Qiongzhong**	**61.99**	**88**	PFAKE		07 52 00.0	+8.4
QIZ				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
TSUM	**Tsumeb**	**62.19**	**205**	P	**P**	**07 51 50.6**	**-2.3**
	comp=Z,2.8nm,0.8s,mb4.4,baz=6.4,slow=15,SNR=3.3						
TSUM	**Tsumeb**	**62.19**	**205**	P	**P**	**07 51 50.6**	**-2.3**
TSUM				LR	LR		
	comp=Z,5µm,19.0s,MS5.7						
MDJ	**Mudanjiang**	**62.91**	**53**	PFAKE		07 52 10.0	+13
MDJ				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
KULM	**Kulim**	**63.36**	**106**	*e*P	**P**	**07 51 54.6**	**-6.1**
KULM	**Kulim**	**63.36**	**106**	*e*P	**P**	**07 51 54.6**	**-6.1**
SSE	**Sheshan**	**64.03**	**70**	P	**P**	**07 52 00.6**	**-4.3**
SSE				PP	PP	07 54 23.4	-4.1
SSE				S	**S**	**08 00 44.3**	**+3.9**
SSE				SCS	ScS	08 01 55.5	-0.4
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,130nm,3.8s						
SSE				LR	LR		
	comp=N,2µm,23.6s,MS5.3						
SSE				LR	LR		
	comp=E,2µm,23.4s,MS5.3						
SSE				LR	LR		
	comp=Z,1µm,22.6s,MS5.1						
SEY	**Seymchan**	**64.42**	**28**	*e*P	**P**	**07 52 05.1**	**-1.8**
SEY				*e*		07 54 30.2	
SEY				*e*PPP	PPP	07 56 08.2	+4.9
SEY				*e*S	**S**	**08 00 41.2**	**-3.5**
SEY				*e*SSS	SSS	08 07 41.8	-3.7
SEY				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
SEY				pmax	pmax		
	comp=N,10.0nm,1.3s						
SEY				pmax	pmax		
	comp=E,10.0nm,1.3s						
SEY				smax			
	comp=N,1µm,25.6s						
SEY				smax			
	comp=E,1µm,26.5s						
INCN	**Inchon**	**64.56**	**61**	PFAKE		07 52 20.0	+12
INCN				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
BILL	**Bilibino**	**65.41**	**20⇑**	*i*P	**P**	**07 52 12.2**	**-1.0**
BILL				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.7						
BILL				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.4						
BILL	**Bilibino**	**65.41**	**20**	*e*P	**P**	**07 52 09.2**	**-4.0**
	comp=Z,18nm,1.1s,mb5.0						
BILL				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
BILL	**Bilibino**	**65.41**	**20**	*e*P	**P**	**07 52 09.2**	**-4.0**
	comp=Z,18nm,1.1s,mb5.0						
LBTB	**Lobatse**	**65.59**	**195**	P	**P**	**07 52 10.3**	**-4.8**
	comp=Z,3.4nm,0.7s,mb4.5,baz=2.4,slow=8.1,SNR=6.6						
LBTB	**Lobatse**	**65.59**	**195**	P	**P**	**07 52 10.3**	**-4.8**
LBTB				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
MA2	**Magadan**	**65.82**	**32**	*e*P	**P**	**07 52 15.4**	**-0.5**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
MA2				MLR	MLR		
	comp=Z,3µm,14.0s,MS5.7						
MA2	**Magadan**	**65.82**	**32**	PFAKE		07 52 30.0	+14
MA2				LR	LR		
	comp=Z,4µm,21.0s,MS5.6						
TATO	**Taipei**	**67.57**	**76**	PFAKE		07 52 40.0	+12
TATO				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
SCHQ	**Schefferville**	**67.86**	**324**	P	**P**	**07 52 29.9**	**+0.9**
	comp=Z,5.3nm,0.7s,mb4.7,baz=62,slow=5.6,SNR=12						
BOSA	**Boshof**	**69.15**	**195**	P	**P**	**07 52 35.8**	**-1.7**
	comp=Z,4.6nm,0.7s,mb4.5,baz=14,slow=6.7,SNR=7.9						
BOSA	**Boshof**	**69.15**	**195**	P	**P**	**07 52 35.8**	**-1.7**
BOSA				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
YSS	**Yuzh-Sakhalins**	**69.42**	**46**	P	**P**	**07 52 47.0**	**+8.2**
YSS				*e*S	S	08 01 50.0	+4.7
YSS				*e*PPS	PPS	08 02 20.0	-3.9
YSS				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
YSS				MLR	MLR		
	comp=N,3µm,16.0s,MS5.7						
YSS				MLR	MLR		
	comp=E,2µm,16.0s,MS5.7						
YSS	**Yuzh-Sakhalins**	**69.42**	**46**	PFAKE		07 52 50.0	+11
YSS				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
ERM	**Erimo**	**72.59**	**50**	PFAKE		07 53 10.0	+12
ERM				LR	LR		
	comp=Z,4.0nm,21.0s						
MAJO	**Matsushiro**	**72.79**	**57**	PFAKE		07 53 10.0	+11
MAJO				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
MAT	**Matsushiro**	**72.79**	**57**	*e*P	**P**	**07 52 58.0**	**-1.3**
MAT				*e*S	S	08 02 26.0	+1.5
MAT				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
MAT	**Matsushiro**	**72.79**	**57**	P	**P**	**07 52 57.7**	**-1.6**
MAT				S	S	08 02 26.0	+1.5
MAT	**Matsushiro**	**72.79**	**57**	*e*P	**P**	**07 52 58.0**	**-1.3**
MAT				*e*S	S	08 02 26.0	+1.5
MJAR	**Matsushiro Arr**	**72.79**	**57**	P	**P**	**07 53 00.3**	**+1.0**
	comp=Z,1.7nm,0.6s,mb4.2,baz=311,slow=7.2,SNR=6.2						
MJAR				LR	LR	08 27 58.0	
	comp=Z,3µm,20.2s,MS5.6,baz=330,slow=38						
TNA	**Tin City**	**73.07**	**12**	PFAKE		07 53 10.0	+10
TNA				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
PET	**Petropavlovsk**	**73.42**	**34**	*e*P	**P**	**07 52 53.0**	**-10**
PET				*e*PPS	PPS	08 03 01.0	-18
PET				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.3						
PET	**Petropavlovsk**	**73.42**	**34**	PFAKE		07 53 10.0	+7.4
PET				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
PQI	**Presque Isle**	**73.55**	**317**	PFAKE		07 53 10.0	+6.5
PQI				LR	LR		
	comp=Z,5µm,19.0s,MS5.8						
IMA	**Indian Mountai**	**74.35**	**6**	P	**P**	**07 53 04.5**	**-3.2**
IMA				pmax	pmax		
	comp=Z,138nm,1.8s,mb5.6						
IMA	**Indian Mountai**	**74.35**	**6**	P	**P**	**07 53 04.5**	**-3.2**
	comp=Z,138nm,1.8s,mb5.6						
IMA	**Indian Mountai**	**74.35**	**6**	P	**P**	**07 53 04.4**	**-3.3**
	comp=Z,138nm,1.8s,mb5.6						
COLA	**College**	**75.93**	**4**	*e*P	**P**	**07 53 15.3**	**-1.5**
COLA				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
COLA				MLR	MLR		
	comp=Z,906nm,22.0s,MS5.0						
COLA	**College**	**75.93**	**4**	*e*P	**P**	**07 53 15.3**	**-1.5**
	comp=Z,14nm,1.2s,mb4.8						
COLA				LR	LR		
	comp=Z,906nm,22.0s,MS5.0						
COLA	**College**	**75.93**	**4**	*e*P	**P**	**07 53 15.3**	**-1.5**
	comp=Z,14nm,1.2s,mb4.8						
ILAR	**Eielson Array**	**76.08**	**3**	P	**P**	**07 53 20.6**	**+3.0**
	comp=Z,0.5nm,0.5s,baz=339,slow=5.1,SNR=7.0						
ILAR				PP	PP	07 56 12.3	+2.2
	comp=Z,0.6nm,0.8s,baz=348,slow=8.7,SNR=4.7						
ILAR				LR	LR	08 32 34.5	
	comp=Z,996nm,21.3s,MS5.1,baz=209,slow=40						
ILAR	**Eielson Array**	**76.08**	**3**	PP	PP	07 56 12.3	+2.2
YKA	**Yellowknife Ar**	**76.67**	**349**	P	**P**	**07 53 20.2**	**-0.8**
	comp=Z,5.9nm,1.0s,mb4.5,baz=9.6,slow=5.2,SNR=11						
YKA				LR	LR	08 28 30.7	
	comp=Z,1µm,19.3s,MS5.2,baz=305,slow=37						
YKA	**Yellowknife Ar**	**76.67**	**349**	P	**P**	**07 53 20.2**	**-0.8**
YKA				LR	LR	08 28 30.7	
MCK	**McKinley**	**77.00**	**5**	PFAKE		07 53 30.0	+7.2
MCK				LR	LR		
	comp=Z,565nm,20.0s,MS4.9						
THY	**Trims Highway**	**77.48**	**3**	P	**P**	**07 53 25.0**	**-0.4**
THY	**Trims Highway**	**77.48**	**3**	P	**P**	**07 53 25.0**	**-0.5**
FRNY	**Flat Rock**	**77.68**	**319**	P	**P**	**07 53 25.8**	**-1.1**
FRNY	**Flat Rock**	**77.68**	**319**	P	**P**	**07 53 25.8**	**-1.1**
HNH	**Hanover**	**77.78**	**317**	P	**P**	**07 53 27.3**	**-0.2**
	comp=Z,2.3nm,1.3s,mb4.0						
WES	**Weston**	**78.16**	**316**	PFAKE		07 53 40.0	+10
WES				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
MIV	**Mineville/With**	**78.18**	**318**	P	**P**	**07 53 29.2**	**-0.5**
MIV	**Mineville/With**	**78.18**	**318**	P	**P**	**07 53 29.2**	**-0.5**
HRV	**Harvard--Oak R**	**78.21**	**316**	PFAKE		07 53 40.0	+10
HRV				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
NCB	**Newcomb**	**78.61**	**318**	PFAKE		07 53 40.0	+7.9
NCB				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
ACCN	**Adirondack Com**	**78.73**	**318**	*e*P	**P**	**07 53 29.9**	**-2.8**
ACCN	**Adirondack Com**	**78.73**	**318**	*e*P	**P**	**07 53 29.9**	**-2.8**
SML	**Sawmill**	**78.95**	**5**	*e*P	**P**	**07 53 33.2**	**-0.4**
DIV	**Divide**	**79.77**	**3**	PFAKE		07 53 50.0	+12
DIV				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
BINY	**Binghamton**	**80.77**	**318**	*e*P	**P**	**07 53 44.0**	**+0.2**
	comp=Z,16nm,1.1s,mb4.9						
BBSR	**BB Station**	**80.89**	**304**	PFAKE		07 53 50.0	+5.4
BBSR				LR	LR		
	comp=Z,655nm,19.0s,MS5.0						
FFC	**Flin Flon**	**81.12**	**339**	P	**P**	**07 53 38.5**	**-6.8**
FFC				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
FFC				MLR	MLR		
	comp=Z,381nm,21.0s,MS4.7						
FFC	**Flin Flon**	**81.12**	**339**	P	**P**	**07 53 38.5**	**-6.8**
	comp=Z,16nm,1.2s,mb4.8						
FFC				LR	LR		
	comp=Z,381nm,21.0s,MS4.7						
FFC	**Flin Flon**	**81.12**	**339**	P	**P**	**07 53 38.5**	**-6.8**
	comp=Z,16nm,1.2s,mb4.8						
CBIJ	**Chichi jima**	**81.26**	**62**	LR	LR	08 33 30.0	
	comp=Z,1µm,21.7s,MS5.2,baz=180,slow=38						
KDAK	**Kodiak Island**	**82.61**	**7**	PFAKE		07 54 00.0	+7.0
KDAK				LR	LR		
	comp=Z,261nm,19.0s,MS4.6						
ULM	**Lac du Bonnet**	**83.11**	**334**	P	**P**	**07 53 58.0**	**+2.3**
	comp=Z,6.6nm,0.6s,mb4.8,baz=28,slow=4.6,SNR=6.2						
ULM				LR	LR	08 34 35.4	
	comp=Z,927nm,18.9s,MS5.2,baz=45,slow=38						
ULM	**Lac du Bonnet**	**83.11**	**334**	P	**P**	**07 53 58.0**	**+2.3**
ULM				LR	LR	08 34 35.4	
ULM	**Lac du Bonnet**	**83.11**	**334**	P	**P**	**07 53 58.0**	**+2.3**
ALLY	**Alegheny Colle**	**83.30**	**320**	*e*P	**P**	**07 53 58.1**	**+1.2**
ALLY	**Alegheny Colle**	**83.30**	**320**	*e*P	**P**	**07 53 58.1**	**+1.2**
EYMN	**Ely**	**83.43**	**330**	PFAKE		07 54 10.0	+13
EYMN				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
RCBR	**Riachuelo**	**83.63**	**257**	PFAKE		07 54 10.0	+11
RCBR				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
SIT	**Sitka**	**83.96**	**358**	PFAKE		07 54 10.0	+10
SIT				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
CBN	**Corbin**	**84.39**	**316**	P	**P**	**07 54 02.9**	**+0.5**
	comp=Z,14nm,0.7s,mb5.2						
CBN				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
CBN	**Corbin**	**84.39**	**316**	P	**P**	**07 54 02.9**	**+0.4**
	comp=Z,14nm,0.7s,mb5.2						
MCWV	**Mont Chateau**	**84.62**	**318**	*e*P	**P**	**07 54 02.9**	**-0.7**
	comp=Z,26nm,0.8s,mb5.4						
MCWV				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
MCWV	**Mont Chateau**	**84.62**	**318**	*e*P	**P**	**07 54 02.9**	**-0.7**
	comp=Z,26nm,0.8s,mb5.4						
ACSO	**Alum Creek Sta**	**85.78**	**320**	*e*P	**P**	**07 54 08.6**	**-0.7**
	comp=Z,9.2nm,1.0s,mb5.0						
ACSO				LR	LR		
	comp=Z,907nm,21.0s,MS5.1						
ACSO	**Alum Creek Sta**	**85.78**	**320**	*e*P	**P**	**07 54 08.6**	**-0.7**
	comp=Z,9.2nm,1.0s,mb5.0						
BLA	**Blacksburg**	**86.75**	**317**	PFAKE		07 54 20.0	+5.8
BLA				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
TZTN	**Tazewell**	**88.89**	**318**	*e*P	**P**	**07 54 25.2**	**+0.7**
TZTN	**Tazewell**	**88.89**	**318**	*e*P	**P**	**07 54 25.2**	**+0.7**
WCI	**Wyandotte Cave**	**88.95**	**321**	PFAKE		07 54 40.0	+15
WCI				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
LAO	**LASA Array**	**89.52**	**338**	PFAKE		07 54 40.0	+13
LAO				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
NHSC	**New Hope**	**89.68**	**314**	PFAKE		07 54 40.0	+12
NHSC				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
NEW	**Newport**	**90.68**	**346**	*e*P	**P**	**07 54 31.7**	**-0.9**
NEW				pmax	pmax		
	comp=Z,22nm,1.3s						
NEW				MLR	MLR		
	comp=Z,1µm,19.0s						
NEW	**Newport**	**90.68**	**346**	*e*P	**P**	**07 54 31.6**	**-0.9**
	comp=Z,22nm,1.3s,mb5.3						
NEW				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
NEW	**Newport**	**90.68**	**346**	*e*P	**P**	**07 54 31.6**	**-1.0**
	comp=Z,22nm,1.3s,mb5.3						
HRY	**Holter Researc**	**90.99**	**342**	*e*P	**P**	**07 54 34.5**	**+0.4**
CHMT	**Chamberlain Mo**	**91.14**	**343**	*e*P	**P**	**07 54 35.7**	**+1.0**
CHMT	**Chamberlain Mo**	**91.14**	**343**	*e*P	**P**	**07 54 35.7**	**+1.0**
RSSD	**Black Hills**	**91.17**	**336**	P	**P**	**07 54 35.2**	**+0.3**
RSSD				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.9						
RSSD				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.5						
RSSD	**Black Hills**	**91.17**	**336**	P	**P**	**07 54 35.2**	**+0.3**
	comp=Z,7.9nm,1.3s,mb4.9						
RSSD				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
RSSD	**Black Hills**	**91.17**	**336**	P	**P**	**07 54 35.2**	**+0.3**
	comp=Z,7.9nm,1.3s,mb4.9						
GOGA	**Godfrey**	**91.25**	**316**	PFAKE		07 54 50.0	+14
GOGA				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
SJG	**San Juan**	**91.31**	**295**	PFAKE		07 54 50.0	+14
SJG				LR	LR		
	comp=Z,524nm,22.0s,MS4.9						
WVT	**Waverly**	**91.36**	**321**	PFAKE		07 54 50.0	+14
WVT				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
MSO	**Missoula**	**91.38**	**343**	PFAKE		07 54 50.0	+14
MSO				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
GUMO	**Guam**	**91.91**	**71**	PFAKE		07 54 50.0	+11
GUMO				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
BOZ	**Bozeman (W)**	**91.94**	**341**	P	**P**	**07 54 35.3**	**-3.1**
BOZ				pmax	pmax		
	comp=Z,11nm,1.4s,mb5.0						
BOZ				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.4						
BOZ	**Bozeman (W)**	**91.94**	**341**	P	**P**	**07 54 35.3**	**-3.1**
	comp=Z,11nm,1.4s,mb5.0						
BOZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
BOZ	**Bozeman (W)**	**91.94**	**341**	P	**P**	**07 54 35.3**	**-3.1**
	comp=Z,11nm,1.4s,mb5.0						
OCWA	**Octopus Mounta**	**92.33**	**350**	PFAKE		07 54 50.0	+10
OCWA				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
PLAL	**Pickwick Lake**	**92.39**	**320**	*e*P	**P**	**07 54 41.9**	**+1.1**
	comp=Z,8.2nm,1.0s,mb5.0						
PLAL				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
PLAL	**Pickwick Lake**	**92.39**	**320**	*e*P	**P**	**07 54 41.9**	**+1.1**
	comp=Z,8.2nm,1.0s,mb5.0						
LKWY	**Lake**	**92.63**	**340**	PFAKE		07 54 50.0	+8.4
LKWY				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
HAWA	**Hanford**	**92.93**	**347**	PFAKE		07 54 50.0	+7.0
HAWA				LR	LR		
	comp=Z,97nm,19.0s,MS4.3						
LRAL	**Lakeview Retre**	**93.39**	**318**	*e*P	**P**	**07 54 45.8**	**+0.3**
	comp=Z,3.6nm,0.7s,mb4.9						
LRAL				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
LRAL	**Lakeview Retre**	**93.39**	**318**	*e*P	**P**	**07 54 45.8**	**+0.4**
	comp=Z,3.6nm,0.7s,mb4.9						
IMW	**Indian Meadow**	**93.39**	**340**	*e*P	**P**	**07 54 46.7**	**+1.6**
	comp=Z,6.8nm,1.1s,mb5.0						
IMW	**Indian Meadow**	**93.39**	**340**	*e*P	**P**	**07 54 46.7**	**+1.5**
	comp=Z,6.8nm,1.1s,mb5.0						
OXF	**Oxford**	**93.42**	**321**	PFAKE		07 55 00.0	+14
OXF				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
WUWY	**Wally Ulrich**	**93.67**	**340**	P	**P**	**07 54 47.8**	**+1.3**
WUWY	**Wally Ulrich**	**93.67**	**340**	P	**P**	**07 54 47.8**	**+1.3**
BMO	**Blue Mountains**	**93.98**	**345**	PFAKE		07 55 00.0	+12
BMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
RRI2	**Red Ridge**	**94.01**	**340**	P	**P**	**07 54 49.3**	**+1.3**
	comp=Z,12nm,1.4s,mb5.1						
BW06	**Boulder Array**	**94.06**	**339**	PFAKE		07 55 00.0	+12
BW06				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
PDAR	**Pinedale Array**	**94.06**	**339**	P	**P**	**07 54 50.5**	**+2.3**
	comp=Z,1.4nm,1.0s,mb4.3,baz=31,slow=5.3,SNR=7.1						
PDAR				LR	LR	08 38 40.0	
	comp=Z,2µm,20.1s,MS5.6,baz=27,slow=36						
PDAR	**Pinedale Array**	**94.06**	**339**	P	**P**	**07 54 50.5**	**+2.2**
DWPF	**Disney**	**94.14**	**312**	PFAKE		07 55 00.0	+11
DWPF				LR	LR		
	comp=Z,836nm,21.0s,MS5.2						
CBKS	**Cedar Bluff**	**94.34**	**330**	PFAKE		07 55 00.0	+10
CBKS				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
AHID	**Auburn Hatcher**	**94.49**	**340**	PFAKE		07 55 00.0	+10
AHID				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
HLID	**Hailey**	**94.58**	**342**	PFAKE		07 55 00.0	+9.4
HLID				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
COR	**Corvallis**	**95.31**	**349**	PFAKE		07 55 00.0	+6.0
COR				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
MIAR	**Mount Ida**	**95.37**	**324**	PFAKE		07 55 00.0	+5.5
MIAR				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
ISCO	**Idaho Springs**	**95.57**	**335**	PFAKE		07 55 10.0	+15
ISCO				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
HWUT	**Hardware Ranch**	**95.69**	**340**	PFAKE		07 55 10.0	+14
HWUT				LR	LR		
	comp=Z,3µm,22.0s,MS5.7						
WVOR	**Wild Horse Val**	**96.57**	**345**	PFAKE		07 55 10.0	+10
WVOR				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
HUMO	**Hull Mountain**	**97.19**	**348**	PFAKE		07 55 10.0	+7.5
HUMO				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
DUG	**Dugway**	**97.35**	**340**	PFAKE		07 55 10.0	+6.7
DUG				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
SDCO	**Great Sand Dun**	**97.38**	**334**	PFAKE		07 55 10.0	+6.5
SDCO				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
MOD	**Modoc**	**97.41**	**346**	PFAKE		07 55 10.0	+6.4
MOD				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
ELK	**Elko**	**97.44**	**342**	PFAKE		07 55 10.0	+6.3
ELK				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
WMOK	**Wichita Mounta**	**97.48**	**328**	*e*P	**P**	**07 55 03.8**	**-0.3**
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.5						
WMOK				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.4						
WMOK	**Wichita Mounta**	**97.48**	**328**	*e*P	**P**	**07 55 03.8**	**-0.2**
	comp=Z,1.9nm,0.9s,mb4.5						
WMOK				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
YBH	**Yreka Blue Hor**	**98.00**	**348**	PFAKE		07 55 20.0	+14
YBH				LR	LR		
	comp=Z,920nm,20.0s,MS5.3						
NATX	**Nacogdoches**	**98.19**	**323**	PFAKE		07 55 20.0	+13
NATX				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
AMTX	**Amarillo**	**98.53**	**330**	PFAKE		07 55 20.0	+11
AMTX				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
BDFB	**Brasilia**	**99.00**	**257**	LR	LR	08 40 47.7	
	comp=Z,2µm,20.2s,MS5.5,baz=57,slow=36						
WDC	**Whiskeytown Da**	**99.09**	**347**	PFAKE		07 55 20.0	+8.8
WDC				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
ANMO	**Albuquerque**	**100.23**	**333**	PFAKE		07 55 30.0	+13
ANMO				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
MNV	**Mina**	**100.31**	**344**	PFAKE		07 55 30.0	+13
MNV				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
NWAO	**Narrogin (SRO)**	**100.70**	**124**	PFAKE		07 55 30.0	+11
NWAO				LR	LR		
	comp=Z,856nm,20.0s,MS5.3						
SDV	**Santo Domingo**	**100.73**	**291**	PFAKE		07 55 30.0	+11
SDV				LR	LR		
	comp=Z,370nm,19.0s,MS4.9						
HOPS	**Hopland**	**100.73**	**347**	PFAKE		07 55 30.0	+11
HOPS				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
CMB	**Columbia Colle**	**101.17**	**345**	PFAKE		07 55 30.0	+9.3
CMB				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
WUAZ	**Wupatki**	**101.31**	**337**	PFAKE		07 55 30.0	+8.6
WUAZ				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
JCT	**Junction City**	**101.59**	**326**	PFAKE		07 55 30.0	+7.3
JCT				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
SAO	**San Andreas Ge**	**102.60**	**346**	PFAKE		07 55 40.0	+13
SAO				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
TUC	**Tucson**	**104.09**	**336**	PFAKE		07 55 40.0	+6.2
TUC				LR	LR		

```
             comp=Z,2µm,22.0s,MS5.5
LTX    Lajitas           104.20 329  PFAKE                 07 55 40.0 +5.7
LTX                                  LR         LR
             comp=Z,1µm,20.0s,MS5.5
PFO    Pinyon Flat Ob    104.51 341  PFAKE                 07 55 50.0  +14
PFO                                  LR         LR
             comp=Z,333nm,20.0s,MS4.9
WRAB   Tennant Creek     104.84 104  PFAKE                 07 55 50.0  +13
WRAB                                 LR         LR
             comp=Z,233nm,21.0s,MS4.7
SAML   Samuel            106.59 272  PFAKE                 08 00 10.0
SAML                                 LR         LR
             comp=Z,879nm,20.0s,MS5.3
PMG    Port Moresby      108.37  87  PFAKE                 08 00 10.0
PMG                                  LR         LR
             comp=Z,415nm,20.0s,MS5.0
JTS    JuntasAbangare    109.67 302  PFAKE                 08 00 10.0
JTS                                  LR         LR
             comp=Z,217nm,20.0s,MS4.7
KWAJ   Kwajalein Atol    111.18  58  PFAKE                 08 00 10.0 +4.8
KWAJ                                 LR         LR
             comp=Z,330nm,21.0s,MS4.9
OTAV   Otavalo           112.28 290  PFAKE                 08 00 20.0  +13
OTAV                                 LR         LR
             comp=Z,511nm,21.0s,MS5.1
CPUP   Villa Florida     112.30 254  PFAKE                 08 00 20.0  +13
CPUP                                 LR         LR
             comp=Z,1µm,19.0s,MS5.5
CTAO   Charters Tower    114.02  97  PFAKE                 08 00 20.0 +9.3
CTAO                                 LR         LR
             comp=Z,814nm,22.0s,MS5.3
LPAZ   La Paz            114.86 269  PFAKE                 08 00 20.0 +7.7
LPAZ                                 LR         LR
             comp=Z,635nm,20.0s,MS5.2
VNA1   Neumayer--Stat    115.22 196  e          PKPdf      08 00 11.4 -0.4
VNA1   Neumayer--Stat    115.22 196⇑iPKPdf      PKPdf      08 00 09.3 -2.5
VNA1                                 e                     08 00 11.4
VNA2   Neumayer--Watz    115.24 196  e          PKPdf      08 00 13.0 +1.1
VNA2   Neumayer--Watz    115.24 196⇑iPKPdf      PKPdf      08 00 11.0 -0.9
VNA2                                 e                     08 00 13.0
VNA3   Neumayer Olymp    115.97 196  e          PKPdf      08 00 14.0 +0.7
VNA3   Neumayer Olymp    115.97 196⇑iPKPdf      PKPdf      08 00 12.1 -1.2
VNA3                                 e                     08 00 14.0
HNR    Honiara           118.23  79  PFAKE                 08 00 30.0  +11
HNR                                  LR         LR
             comp=Z,889nm,21.0s,MS5.4
NNA    Nana              119.01 278  PFAKE                 08 00 30.0 +9.5
NNA                                  LR         LR
             comp=Z,172nm,20.0s,MS4.7
LVC    Limon Verde       119.05 264  PFAKE                 08 00 30.0  +10
LVC                                  LR         LR
             comp=Z,773nm,19.0s,MS5.4
TRQA   Tornquist         121.67 245  PFAKE                 08 00 30.0 +4.8
TRQA                                 LR         LR
             comp=Z,875nm,19.0s,MS5.4
TAU    Tasmania Unive    126.01 119  PFAKE                 08 00 40.0 +6.7
TAU                                  LR         LR
             comp=Z,232nm,22.0s,MS4.8
QSPA   South Pole Qui    129.13 180  PFAKE                 08 00 50.0  +12
QSPA                                 LR         LR
             comp=Z,1µm,21.0s,MS5.7
PMSA   Palmer Station    131.03 213  PFAKE                 08 00 50.0 +7.6
PMSA                                 LR         LR
             comp=Z,960nm,20.0s,MS5.5
VNDA   Vanda             134.61 165  PFAKE                 08 01 00.0  +11
VNDA                                 LR         LR
             comp=Z,2µm,19.0s,MS5.7
SBA    Scott Base        135.44 166  PFAKE                 08 01 00.0  +10
SBA                                  LR         LR
             comp=Z,877nm,20.0s,MS5.5
```

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*MAN **06** 07:49:17.7, 6.35N×124.80E, h11^{km}, mb5.2, ML4.2, MS4.4*
MAN Banga Marvel City - Intensity IV General Santos City Intensity II.
*BJI **06** 07:49:17.4, 6.40N×125.00E, h20^{km}, mb4.8*
*NEIC **06** 07:49:17.4±0.5, 6.35N×125.00E, h20^{km}, mb4.7/7, Error ellipse: s-maj=18.8km s-min=8.4km az=55.0*
NEIC Felt [IV PIVS] at Banga and Koronadal; [II PIVS] at General Santos.
*IDC **06** 07:49:40.9±6.2, 5.78N×124.20E, h236^{km}±64^{km}, mb3.6/12, mb1 3.8/12, mb1mx3.6/21, mbtmp4.2/12, Error ellipse: s-maj=30.6km s-min=12.2km az=66.0*
ISC 06 07:49:14.7±0.4, **6.14N**±0.04×**124.79E**±0.04, **h10^{km}, n54, σ1ˢ16**/60, **mb4.5**/21, **3C-3D, Mindanao**

```
Code   Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op         ISC        h  m  s   ISC
KCP    Kidapawan          0.92  19⇑iP           Pb         07 49 31.5 -0.7
KCP                                  i S        Sb         07 49 46.7 +2.5
DAV    Davao City (W)     1.21  40   i P        Pb         07 49 37.8 +0.6
MATI   Mati               1.66  61   eP         Pn         07 49 44.7 +0.6
BUKP   Musuan             1.75   9   eP         Pn         07 49 44.6 -0.7
BUKP                                 eS         Sn         07 50 05.3 -2.6
PAGZ   Pagadian           2.20 321   eP         Pn         07 49 51.5 -0.3
PAGZ                                 eS         Sn         07 50 20.0 +0.6
CGP    Cagayan de Oro     2.30 358⇓eP           Pn         07 49 53.3  0.0
IPIL   Ipil               2.75 307   eP         Pn         07 49 59.8 +0.2
IPIL                                 eS         Sn         07 50 32.8 -0.4
ZMPH   Zamboanga City     2.83 287⇓iP           Pn         07 50 00.0 -0.8
SNPH   Sibulan            3.54 334⇑eP           Pn         07 50 14.8 +3.9
SNPH                                 i S        Sn         07 51 01.4 +8.2
TBP    Tagbilaran         3.65 345   eP         Pn         07 50 15.9 +3.5
TBP                                  eS         Sn         07 51 00.2 +4.2
SCPH   Surigao            3.69  11⇓eP           Pn         07 50 20.3 +7.4
MSLP   Maasin             3.97   1   eP         Pg         07 50 32.3 -1.7
GUIM   Jordan             4.96 334   eP         Pn         07 50 32.5 +1.4
CUYO   Cuyo Island        5.99 322   eP         Pn         07 50 47.1 +1.6
PPR    Puerto Princes     7.01 301⇑eP           Pn         07 51 00.9 +1.0
ENPP   El Nido            7.31 314   eP         Pn         07 51 02.9 -1.3
BATP   Bataraza           7.42 291   eP         Pn         07 51 08.0 +2.4
KKM    Kota Kinabalu      8.53 270   eP         P          07 51 25.3 +4.1
KAKA   Kakadu            20.21 158   eP         P          07 53 52.9 +0.2
KKTK   Khon Kaen         23.78 297    P         P          07 54 29.0 +0.4
KULM   Kulim             24.04 269   eP         P          07 54 32.8 +1.7
NANT   Nan               26.63 300    P         P          07 54 55.0 -0.5
WRAB   Tennant Creek     27.56 160   eP         P          07 55 04.0  0.0
       12nm,0.9s,mb4.5
WRA    Warramunga Arr    27.57 160    P         P          07 55 04.1 +0.1
       1.3nm,0.4s,mb3.9,baz=332,slow=11,SNR=43
WB2    Warramunga Arr    27.57 160   eP         P          07 55 04.1  0.0
CMAR   Chiang Mai Arr    28.02 298    P         P          07 55 07.8 -0.4
       1.0nm,0.3s,mb3.9,baz=108,slow=6.7,SNR=4.2
ASAR   Alice Springs     30.93 164    P         P          07 55 34.2 +0.1
       1.1nm,0.7s,mb3.8,baz=347,slow=7.3,SNR=17
MJAR   Matsushiro Arr    32.66  20    P         P          07 55 57.2 +8.0
       0.8nm,0.3s,mb4.1,baz=191,slow=7.1,SNR=4.7
MJAR   Matsushiro Arr    32.66  20    P         P          07 55 57.2 +8.0
LZH    Lanzhou           35.46 330   eP         P          07 56 14.0 +0.6
LZH                                   AP        pP         07 56 19.0 +2.6
LZH                                   XP        sP         07 56 22.0 +4.4
LZH                                   AMB       AMB
       comp=Z,20nm,1.2s,mb4.9
SHL    Shillong          36.91 305   eP         P          07 56 25.0 -0.7
SHL                                  ex         x          07 59 56.0
CAL    Calcutta          38.75 299   i x        P          07 56 32.1 -9.1
LSA    Lhasa             39.41 311    P         P          07 56 48.6 +2.0
LSA    Lhasa             39.41 311   eP         P          07 56 46.6  0.0
       comp=Z,10nm,0.8s,mb4.6
GTA    Gaotai            40.05 329   eP         P          07 56 52.8 +1.0
GTA                                   AP        pP         07 56 59.0 +4.2
GTA                                   XP        sP         07 57 02.7 +6.6
BWNR   Bhubaneshwar      40.35 294   i P        P          07 56 59.3 +4.9
BWNR                                  AMb       AMB        07 57 06.6
       comp=Z,66nm,1.8s,mb5.1
STKA   Stephens Creek    41.06 158    P         P          07 57 02.5 +2.4
       comp=Z,2.6nm,0.4s,mb4.2,baz=5.4,slow=8.3,SNR=8.3
STKA   Stephens Creek    41.06 158   eP         P          07 57 02.3 +2.2
       comp=Z,18nm,1.2s,mb4.6
GUN    Gumba             42.76 305   eP         P          07 57 14.4 +0.1
       comp=Z,58nm,0.8s,mb5.4
PKI    Pulchoki          43.02 304   eP         P          07 57 15.8 -0.5
       comp=Z,19nm,1.0s,mb4.8
KKN    Kakani            43.21 305   eP         P          07 57 17.4 -0.5
       comp=Z,34nm,1.0s,mb5.0
DMN    Daman             43.28 304   eP         P          07 57 18.6 +0.1
GKN    Gorkha            43.81 305   eP         P          07 57 22.5 -0.3
SONM   Songino Array     44.42 342    P         P          07 57 28.8 +1.4
       comp=Z,1.0nm,0.7s,mb3.7,baz=159,slow=8.4,SNR=6.9
KOLN   Koldanda          44.58 304   eP         P          07 57 28.0 -1.0
       comp=Z,22nm,0.8s,mb5.1
AKL    Akola             48.48 292   i x        P          07 58 04.8 +5.0
AKL                                   AMb       AMB        07 58 21.1
       comp=Z,31nm,0.9s,mb5.3
MKAR   Makanchi Array    54.49 325   P          P          07 58 44.6 -0.2
       comp=Z,3.0nm,0.8s,mb4.3,baz=130,slow=8.0,SNR=26
MKAR                                 PcP        PcP        07 59 45.9 -2.3
       comp=Z,2.2nm,0.8s,baz=146,slow=5.2,SNR=3.5
ZAL    Zalesovo          57.58 333   P          P          07 59 05.3 -1.6
       comp=Z,1.5nm,0.4s,mb4.4,baz=352,slow=13,SNR=4.9
BVAR   Borovoye Array    64.26 327   P          P          07 59 50.7 -1.6
       comp=Z,4.3nm,0.8s,mb4.5,baz=135,slow=8.4,SNR=21
ARU    Arti              71.88 328  eP          P          08 00 37.9 -1.9
ILAR   Eielson Array     83.78  26   P          P          08 01 44.8 -0.4
       comp=Z,0.9nm,0.8s,mb3.9,baz=235,slow=5.2,SNR=7.2
FINES  FINESS Array B    88.81 332   P          P          08 02 08.1 -1.8
       comp=Z,1.8nm,0.8s,mb4.5,baz=51,slow=8.9,SNR=4.3
FINES  FINESS Array B    88.81 332   P          P          08 02 08.1 -1.9
AKASG  Malin Array Be    88.82 321   P          P          08 02 08.2 -2.0
       comp=Z,0.2nm,0.2s,mb4.0,baz=66,slow=5.0,SNR=5.0
```

IDC 06 07:56:39.0±1.1, **19.35S**×**177.11W, mb3.7**/5, **mb1 4.1**/6, **mb1mx3.9**/17, **mbtmp3.9**/6, **ML4.4**/1, **Error ellipse: s-maj=49.6km s-min=24.2km az=143.0, Fiji Islands region**

```
Code   Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op         ISC        h  m  s   ISC
URZ    Urewera           19.50 194   P          P          08 01 06.9 -3.6
       1.2nm,0.3s,baz=340,slow=7.6,SNR=7.6
WRA    Warramunga Arr    45.60 261   P          P          08 05 01.4 -1.6
       0.3nm,0.3s,baz=97,slow=7.4,SNR=9.6
ASAR   Alice Springs     45.61 256   P          P          08 05 01.6 -1.5
       0.8nm,0.7s,baz=94,slow=7.8,SNR=8.4
TXAR   Lajitas Array     85.73  57   P          P          08 09 21.5 -0.1
       0.0nm,0.3s,baz=214,slow=6.5,SNR=4.7
ILAR   Eielson Array     87.02  12   P          P          08 09 24.7 -2.4
       0.5nm,0.5s,baz=217,slow=5.9,SNR=7.6
PDAR   Pinedale Array    87.55  43   P          P          08 09 29.3 -0.9
       0.2nm,0.6s,baz=202,slow=4.9,SNR=2.6
```

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*BJI **06** 08:36:15.7, 35.70N×81.50E, h20^{km}, mb4.7, ML4.6*
*NEIC **06** 08:36:15.8±0.7, 35.67N×81.54E, h10^{km}, Error ellipse: s-maj=24.2km s-min=7.4km az=74.0*
*IDC **06** 08:36:15.2±2.9, 35.78N×81.54E, mb3.5/2, mb1 3.9/5, mb1mx3.6/23, mbtmp3.8/5, ML3.8/3, Error ellipse: s-maj=62.1km s-min=23.6km az=69.0*
*NNC **06** 08:36:22.8±20.0, 36.58N×85.81E, Error ellipse: s-maj=176.0km s-min=141.4km az=147.0*
ISC 06 08:36:13.1±0.7, **35.69N**±0.06×**81.6E**±0.2, **h10^{km}, n13, σ1ˢ04**/15, **mb3.6**/2, **1C, Southern Xinjiang**

```
Code   Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op         ISC        h  m  s   ISC
KOLN   Koldanda           8.08 167  eP          P          08 38 12.4 -0.9
       9.0nm,0.4s
GKN    Gorkha             8.09 160  eP          P          08 38 13.0 -0.5
       15nm,0.8s
KKN    Kakani             8.48 157  eP          P          08 38 18.6 -0.3
       12nm,0.5s
GUN    Gumba              8.57 154  eP          P          08 38 20.2  0.0
       9.6nm,0.4s
PKI    Pulchoki           8.72 157  eP          P          08 38 23.0 +0.7
       7.7nm,0.4s
AAK    Ala-Archa          8.85 324   Pn         P          08 38 24.5 +0.4
WMQ    Urumqi             9.39  28  eP          P          08 38 31.5  0.0
WMQ                                  AP                    08 38 36.5
WMQ                                  XP                    08 38 38.5
WMQ                                  AMB        AMB
       comp=Z,10.0nm,0.4s
MK31   Makanchi Array    11.11   3   P          P          08 38 54.3 -0.8
       comp=Z,2.2nm,0.4s,baz=179,slow=13,SNR=57
MK31                                ⇑S          S          08 40 55.0 -5.4
       comp=Z,3.4nm,0.6s,baz=185,slow=24,SNR=3.9
MKAR   Makanchi Array    11.11   3   Pn         P          08 38 54.3 -0.8
       comp=Z,1.9nm,0.3s,baz=180,slow=12,SNR=54
MKAR                                 Sn         S          08 40 53.4 -7.0
       comp=Z,0.9nm,0.3s,baz=185,slow=24,SNR=6.5
ZAL    Zalesovo          18.39   6   P          P          08 40 28.4 -1.3
       comp=Z,0.6nm,0.3s,baz=202,slow=5.4,SNR=2.3
BVAR   Borovoye Array    19.05 339   P          P          08 40 39.2 +1.5
       comp=Z,0.2nm,0.3s,baz=141,slow=9.2,SNR=5.9
SONM   Songino Array     22.03  49   P          P          08 41 11.9 +2.5
       comp=Z,3.7nm,0.9s,mb3.8,baz=241,slow=11,SNR=14
CMAR   Chiang Mai Arr    23.04 134   P          P          08 41 22.6 +3.1
       comp=Z,1.3nm,0.7s,mb3.5,baz=302,slow=12,SNR=3.8
```

IDC 06 09:01:15.8±1.4, **29.31S**×**178.52W, h333^{km}**±13^{km}, **mb3.1**/2, **mb1 3.5**/3, **mb1mx3.1**/15, **mbtmp4.0**/3, **Error ellipse: s-maj=49.4km s-min=26.7km az=108.0, Kermadec Islands**

```
Code   Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op         ISC        h  m  s   ISC
RAO    Raoul Island       0.53  84   P          P          09 01 58.1 -0.4
       44nm,0.3s,baz=253,slow=19,SNR=3.8
RAO                                  S          S          09 02 32.9 +1.1
       129nm,0.3s,baz=28,slow=23,SNR=5.2
URZ    Urewera            9.64 201   P          P          09 03 29.9 -0.3
       3.2nm,0.3s,baz=291,slow=3.7,SNR=20
URZ                                  S          S          09 05 17.0 +0.6
       0.6nm,0.3s,baz=46,slow=15,SNR=5.2
ASAR   Alice Springs     42.72 266   P          P          09 08 41.5 -1.2
       0.8nm,0.5s,baz=99,slow=6.7,SNR=22
WRA    Warramunga Arr    43.61 271   P          P          09 08 48.2 -1.7
       0.7nm,0.4s,baz=109,slow=7.4,SNR=12
FINES  FINESS Array B   143.97 340   PKP        PKPdf      09 20 10.7 -0.3
       1.2nm,0.8s,baz=63,slow=3.1,SNR=6.2
```

IDC 06 09:04:57.5±4.1, **1.16S**×**100.59E, mb3.5**/4, **mb1 3.6**/4, **mb1mx3.5**/17, **mbtmp3.5**/4, **Error ellipse: s-maj=174.5km s-min=23.9km az=57.0, Southern Sumatera**

```
Code   Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op         ISC        h  m  s   ISC
WRA    Warramunga Arr    37.92 122   P          P          09 12 16.7 -2.0
       0.2nm,0.5s,baz=304,slow=9.0,SNR=4.1
ASAR   Alice Springs     39.28 127   P          P          09 12 28.4 -1.5
       0.2nm,0.5s,baz=296,slow=8.1,SNR=2.3
SONM   Songino Array     49.05   5   P          P          09 13 47.1 -1.2
       0.2nm,0.3s,baz=188,slow=8.7,SNR=3.7
MKAR   Makanchi Array    50.38 344   P          P          09 13 56.0 -2.6
       0.8nm,0.5s,baz=166,slow=7.8,SNR=7.7
```

DJA 06 09:05:26.1±1.0, **7.85S**×**114.12E, h15^{km}, MD5.6**/3, **ML3.7**/1, **5C, Error ellipse: s-maj=24.0km s-min=13.6km az=155.0, Bali Sea**

```
Code   Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op         ISC        h  m  s   ISC
KELI   Kelakatan          0.52 135  ePn         Pn         09 05 34.4 -4.3
       854nm,0.3s
KELI                               ⇑iSn         Sn         09 05 43.1 -4.0
SRDI   Scrawed            0.63 178⇑iPn          Pn         09 05 37.9 -2.3
       197nm,0.3s
SRDI                               ⇑iSn         Sn         09 05 45.9 -4.0
RATI   Rata               1.65 122⇑iPn          Pn         09 05 53.0 -1.8
       58nm,0.2s
RATI                               ⇑iSn         Sn         09 06 11.5 -4.2
```

IDC 06 09:05:36.5±2.0, **5.07S**×**152.10E, mb3.7**/4, **mb1 3.9**/4, **mb1mx3.7**/15, **mbtmp3.7**/4, **Error ellipse: s-maj=76.9km s-min=25.4km az=118.0, New Britain region**

```
Code   Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op         ISC        h  m  s   ISC
WRA    Warramunga Arr    22.74 228   P          P          09 10 40.4 -1.4
       1.3nm,0.5s,baz=52,slow=9.6,SNR=13
ASAR   Alice Springs     25.48 222   P          P          09 11 06.7 -1.5
       0.8nm,0.5s,baz=57,slow=8.5,SNR=12
SONM   Songino Array     66.18 328   P          P          09 16 26.3 -1.8
       0.6nm,0.4s,baz=146,slow=4.7,SNR=5.6
ILAR   Eielson Array     82.67  22   P          P          09 18 01.6 -1.4
       0.3nm,0.5s,baz=263,slow=5.0,SNR=6.3
```

MOS 06 09:19:56.9±1.6, **51.71N**×**97.63E, h33^{km}, mb4.2**/1, **1C, Error ellipse: s-maj=51.4km s-min=27.7km az=44.1, Tuva-Buryatia-Mongolia border region**

```
Code   Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op         ISC        h  m  s   ISC
TLY    Talaya             3.74  88  ePN         Pn         09 20 50.7 -3.2
ULN    Ulaanbaatar        7.21 119  eP          P          09 21 47.9 +5.3
ARU    Arti              23.18 297⇑iP           P          09 24 46.3  -15
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*BER **06** 09:24:24.9±2.8, 59.36N×27.25E, ML2.4(NAO), Suspected explosion*
*NAO **06** 09:24:25.9±3.1, 59.38N×26.89E, ML2.4*
*IDC **06** 09:24:26.2±2.1, 59.40N×27.22E, mb1 3.2/4, mb1mx3.0/23, mbtmp3.1/4, ML2.8/4, Error ellipse: s-maj=19.7km s-min=10.7km az=120.0*
HEL 06 09:24:24.8±0.2, **59.31N**×**27.10E, ML2.0, ML2.4**(NAO), **Explosion, Baltic States - Belarus - Northwestern Russia**

```
Code   Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op         ISC        h  m  s   ISC
VSU    Vasula             0.87 193  eP          Pg         09 24 40.4 -1.7
VSU                                 eS          Sg         09 24 51.7 -2.0
VJF    Virojoki           1.26  10  eP          Pb         09 24 46.8 -2.3
VJF                                 eS          Sb         09 25 02.3 -3.4
PVF    Pernaja            1.39 334  eP          Pb         09 24 49.6 -1.8
PVF                                 eS          Sb         09 25 07.2 -2.3
FIA0   FINESS Array S     2.20 347  eP          Pn         09 25 02.3 -0.8
FIA0                                eS          Sn         09 25 31.2 -0.2
FIA0   FINESS Array S     2.20 347   Pn         Pn         09 25 02.5 -0.6
       baz=166,slow=18
FIA0                                 Lg                    09 25 33.0
       baz=163,slow=37
FIA0                                 Rg                    09 25 45.5
       baz=164,slow=37
FINES  FINESS Array B     2.20 347   Pn         Pn         09 25 02.3 -0.8
       2.2nm,0.3s,baz=165,slow=15,SNR=55
FINES                                Pg         Pg         09 25 03.7 -5.1
       2.2nm,0.3s,baz=166,slow=16,SNR=56
FINES                                Sn         Sn         09 25 30.0 -1.5
       3.9nm,0.3s,baz=166,slow=28,SNR=22
FINES                                Lg                    09 25 33.9
       3.9nm,0.3s,baz=161,slow=30,SNR=19
FINES                                Rg                    09 25 45.4
       13nm,0.9s,baz=183,slow=25,SNR=3.9
KAF    Kangasniemi        2.84 352  eP          Pn         09 25 11.5 -0.7
KAF                                 eS          Sn         09 25 46.0 -1.7
KAF                                 eSG         Sg         09 25 53.1 -6.3
KAF                                  MSG                   09 25 55.1
       comp=Z,4.8nm,0.3s
KEF    Keuruu             3.07 340  eP          Pn         09 25 14.1 -1.4
KEF                                 eS          Sn         09 25 50.7 -2.8
SUF    Sumiainen          3.46 353  eP          Pn         09 25 19.2 -1.7
SUF                                 eS          Sn         09 26 00.6 -2.6
SUF                                 eSG         Sg         09 26 11.2 -8.7
SUF                                  MSG                   09 26 11.8
       comp=Z,2.3nm,0.2s
KJN    Kajaani            4.80   3  eP          Pn         09 25 39.0 -1.1
KJN                                 eSG         Sg         09 26 53.1  -12
HFS    Hagfors            6.83 283  eS          Sn         09 27 19.7 -8.5
HFS                                 eSG                    09 27 57.1
HFS    Hagfors            6.83 283   Pn         Pn         09 26 06.8 -1.9
       comp=Z,0.0nm,0.3s,baz=90,slow=13,SNR=3.5
HFS                                  Sn         Sn         09 27 19.9 -8.3
       comp=Z,0.1nm,0.3s,baz=97,slow=25,SNR=5.8
HFS                                  Lg                    09 27 56.4
       comp=Z,0.3nm,0.3s,baz=93,slow=30,SNR=9.9
HFS    Hagfors            6.83 283   Sn         Sn         09 27 19.7 -8.5
       baz=85,slow=22
HFS                                  Lg                    09 27 57.1
       baz=93,slow=37
NB2    NORSAR Subarra     8.11 289  eP          P          09 26 22.1 -4.5
NB2                                 eS          Sn         09 27 51.3 -8.8
NOA    NORSAR Array B     8.11 289   Pn         P          09 26 21.8 -4.8
       comp=Z,0.2nm,0.3s,baz=196,slow=17,SNR=1.3
NOA                                  Sn         Sn         09 27 46.0  -14
       comp=Z,0.2nm,0.3s,baz=330,slow=9.0,SNR=2.8
NOA                                  Lg                    09 28 33.7
       comp=Z,0.4nm,0.3s,baz=139,slow=25,SNR=3.2
ARA0   ARCESS Array S    10.29 357   Pn         P          09 26 51.0 -5.6
       baz=171,slow=16
ARA0                                 Sn         S          09 28 40.8  -13
       baz=173,slow=28
ARA0                                 Lg                    09 29 39.1
       baz=158,slow=37
ARA0   ARCESS Array S    10.29 357  eP          P          09 26 51.0 -5.6
ARA0                                eS          S          09 28 40.8  -13
ARA0                                eSG                    09 29 39.1
ARCES  ARCESS Array B    10.29 357   Pn         P          09 26 51.4 -5.2
       comp=Z,0.1nm,0.3s,baz=174,slow=12,SNR=3.9
ARCES                                Sn         S          09 28 42.0  -12
       comp=Z,0.2nm,0.3s,baz=173,slow=24,SNR=3.0
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*IDC **06** 09:38:34.4±4.0, 24.78N×95.13E, h128^{km}±43^{km}, mb3.0/2, mb1 3.2/3, mb1mx2.9/22, mbtmp3.4/3, MS3.7/1, Ms1 3.7/1, ms1mx2.9/7, Error ellipse: s-maj=134.9km s-min=25.3km az=59.0*
ISC 06 09:38:33.5±1.3, **24.6N**±0.2×**94.9E**±0.2, **h139^{km}**±15^{km}, **n12, σ0ˢ53**/12, **mb3.1**/2, **Myanmar-India border region**

```
Code   Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op         ISC        h  m  s   ISC
IMP    Imphal             0.87 283  eP          P          09 38 56.5  0.0
SHL    Shillong           2.87 290  ePN         P          09 39 20.0 +0.4
SHL                                 eSN         S          09 39 54.0 -0.7
CMAR   Chiang Mai Arr     7.19 147   P          P          09 40 17.4 +0.1
       0.4nm,0.3s,baz=326,slow=14,SNR=6.2
GUN    Gumba              8.72 294  eP          P          09 40 37.9 +0.3
       6.3nm,0.2s
PKI    Pulchoki           9.00 291  eP          P          09 40 41.5 +0.1
       3.7nm,0.2s
KKN    Kakani             9.18 292  eP          P          09 40 43.3 -0.4
       8.2nm,0.2s
DMN    Daman              9.27 291  eP          P          09 40 45.3 +0.3
GKN    Gorkha             9.79 292  eP          P          09 40 51.1 -0.7
       4.9nm,0.2s
KOLN   Koldanda          10.60 290  eP          P          09 41 03.8 +1.2
       3.4nm,0.3s
MKAR   Makanchi Array    24.33 339   P          P          09 43 39.4  0.0
       0.3nm,0.3s,mb3.3,baz=142,slow=11,SNR=4.4
JOW    Kunigami          30.13  79   LR         LR         09 56 31.2
       comp=Z,138nm,18.2s,baz=125,slow=36
WRA    Warramunga Arr    58.62 136   P          P          09 48 17.9 -0.5
       0.1nm,0.4s,mb3.0,baz=324,slow=7.4,SNR=7.0
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*IDC **06** 10:06:09.5±1.2, 30.75S×66.23W, mb3.7/3, mb1 4.1/7, mb1mx3.9/17, mbtmp3.9/7, ML4.6/3, MS3.1/1, Ms1 3.1/1, ms1mx2.7/20, Error ellipse: s-maj=37.0km s-min=12.2km az=147.0*
*GUC **06** 10:06:14.4±0.7, 30.71S×66.29W, h30^{km}±27^{km}, MD4.5*
*BJI **06** 10:06:15.2, 30.70S×66.20W, h49^{km}*
*NEIC **06** 10:06:15.3±0.6, 30.69S×66.20W, h49^{km}±14^{km}, mb4.0/2, Error ellipse: s-maj=8.4km s-min=6.6km az=112.0*
NEIC Felt [III] in La Rioja.
ISC 06 10:06:13.4±0.8, **30.70S**±0.05×**66.20W**±0.05, **h45^{km}**±13^{km}, **n43, σ0ˢ83**/48, **mb3.8**/5, **1C-6D, La Rioja Province**

```
Code   Station Name        Δ°   AZ°    Phase ID             Time     Res
                                     Op         ISC        h  m  s   ISC
CFAA   Coronel Fontan     1.97 242   Pn         P          10 06 45.0  0.0
       15nm,0.3s,baz=65,slow=18,SNR=1626
CFAA                                 Pg         P          10 06 46.1 +1.1
       15nm,0.3s,baz=55,slow=16,SNR=1606
CFAA                                 Lg                    10 07 09.3
       92nm,0.3s,baz=169,slow=22,SNR=39
CFAA   Coronel Fontan     1.97 242   Pn         P          10 06 45.0  0.0
CFAA                                 Pg         P          10 06 46.1 +1.1
CFAA                                 Lg                    10 07 09.3
ZON    Zonda              2.29 248⇓iP           P          10 06 49.0 -0.5
ZON                                 eS          S          10 07 17.0 +0.4
TLL    Tololo Astrono     4.01 276  eP          P          10 07 14.8 +0.9
TLL                                 i S         S          10 08 00.9 +0.6
TLL    Tololo Astrono     4.01 276  eP          P          10 07 14.9 +0.9
CMCH   Combarbala         4.16 262⇓iP           P          10 07 15.5 -0.4
CMCH                                i S         S          10 08 03.0 -0.9
JACH   Jahuel             4.24 241  eP          P          10 07 17.6 +0.5
JACH   Jahuel             4.24 241  eP          P          10 07 17.7 +0.6
LCO    Las Campanas       4.26 292  eP          P          10 07 18.0 +0.5
LCO                                 i S         S          10 08 06.4 -0.1
LCO    Las Campanas       4.26 292⇓iP           P          10 07 18.0 +0.6
LCO                                 i S         S          10 08 05.5 -0.9
VACH   Vallenar           4.50 297  i P         P          10 07 20.9 +0.1
```

VACH				*i*S	**S**	**10 08 11.4**	**-1.2**
VACH	**Vallenar**	**4.50**	**297**	⇓*i*P	**P**	**10 07 21.0**	**+0.2**
VACH				*i*S	**S**	**10 08 11.6**	**-0.9**
CLCH	**Cerro Calan**	**4.56**	**233**	*e*P	**P**	**10 07 22.1**	**+0.3**
CLCH				*i*S	**S**	**10 08 12.8**	**-1.4**
DSCH	**Colegio Aleman**	**4.58**	**233**	*e*P	**P**	**10 07 22.2**	**+0.2**
DSCH	**Colegio Aleman**	**4.58**	**233**	*i*P	**P**	**10 07 22.6**	**+0.5**
LMEL	**Las Melosas**	**4.62**	**226**	*e*P	**P**	**10 07 23.4**	**+0.8**
PCH	**Pirque**	**4.68**	**230**	⇓*i*P	**P**	**10 07 23.7**	**+0.3**
SCR	**San Cristobal**	**4.94**	**234**	⇓*e*P	**P**	**10 07 22.8**	**-4.2**
CHCH	**Chadas Angostu**	**4.96**	**228**	*i*P	**P**	**10 07 27.4**	**0.0**
CHCH	**Chadas Angostu**	**4.96**	**228**	*e*P	**P**	**10 07 27.6**	**+0.2**
CACH	**El Canelo**	**5.05**	**226**	*i*P	**P**	**10 07 28.9**	**+0.4**
CACH	**El Canelo**	**5.05**	**226**	*e*P	**P**	**10 07 29.3**	**+0.8**
SFDO	**San Fernando**	**5.63**	**225**	⇑*i*P	**P**	**10 07 36.3**	**-0.4**
TRQA	**Tornquist**	**8.12**	**156**	*e*Pn	**P**	**10 08 09.3**	**-2.1**
	9.4nm,0.5s						
LVC	**Limon Verde**	**8.41**	**343**	Pn	**P**	**10 08 15.5**	**+0.1**
	6.1nm,0.3s,baz=190,slow=7.6,SNR=67						
LVC	**Limon Verde**	**8.41**	**343**	*e*Pn	**P**	**10 08 15.6**	**+0.1**
	16nm,0.4s						
CPUP	**Villa Florida**	**8.93**	**63**	Pn	**P**	**10 08 21.6**	**-1.1**
	0.8nm,0.3s,baz=266,slow=14,SNR=16						
CPUP				LR	LR	10 12 17.5	
	comp=Z,115nm,18.4s,baz=15,slow=41						
CPUP	**Villa Florida**	**8.93**	**63**	*e*Pn	**P**	**10 08 21.4**	**-1.2**
	21nm,0.6s						
PLCA	**Paso Flores**	**10.62**	**198**	Pn	**P**	**10 08 49.5**	**+3.7**
	0.2nm,0.3s,baz=72,slow=8.4,SNR=3.6						
PLCA	**Paso Flores**	**10.62**	**198**	Pn	**P**	**10 08 46.7**	**+1.0**
LPAZ	**La Paz**	**14.45**	**353**	Pn	**P**	**10 09 36.4**	**-0.5**
	0.5nm,0.3s,baz=144,slow=5.1,SNR=22						
LPAZ	**La Paz**	**14.45**	**353**	*e*Pn	**P**	**10 09 36.6**	**-0.4**
	15nm,0.6s						
LPAZ				*e*		10 09 45.0	
SIV	**San Ignacio**	**15.37**	**19**	Pn	**P**	**10 09 50.1**	**+1.2**
	0.4nm,0.3s,baz=212,slow=12,SNR=15						
SAML	**Samuel**	**21.82**	**8**	*e*P	**P**	**10 11 02.6**	**-1.0**
	1.4nm,0.5s,mb3.6						
BDFB	**Brasilia**	**22.40**	**52**	P	**P**	**10 11 10.3**	**+1.1**
	1.8nm,0.5s,mb3.7,baz=234,slow=5.8,SNR=2.8						
WVT	**Waverly**	**69.51**	**341**	*e*P	**P**	**10 17 18.2**	**-1.0**
	3.1nm,0.7s,mb4.3						
TXAR	**Lajitas Array**	**69.55**	**325**	P	**P**	**10 17 20.1**	**+0.5**
	0.4nm,0.7s,mb3.4,baz=142,slow=6.5,SNR=5.6						
PDAR	**Pinedale Array**	**83.25**	**329**	P	**P**	**10 18 37.2**	**+0.8**
	0.6nm,0.7s,mb3.7,baz=117,slow=6.6,SNR=5.5						
ZAL	**Zalesovo**	**148.77**	**34**	PKPbc	PKPdf	10 25 58.1	+6.7
	1.6nm,0.3s,baz=93,slow=1.1,SNR=4.9						
MKAR	**Makanchi Array**	**150.88**	**48**	PKPbc	PKPdf	10 26 03.4	+8.5
	2.1nm,0.8s,baz=297,slow=2.7,SNR=14						
WMQ	**Urumqi**	**155.56**	**50**	*e*PKP	PKPdf	10 26 01.2	-0.3
MDJ	**Mudanjiang**	**161.36**	**323**	PKP	PKPdf	10 26 09.5	+1.1
CN2	**Changchun**	**163.99**	**328**	*e*PKP	PKPdf	10 26 14.4	+3.3

IDC 06 10:18:24.3±4.4, 15.54S×173.04W, mb3.7/3, mb1 3.8/4, mb1mx3.5/19, mbtmp3.6/4, ML1.1/1, Error ellipse: s-maj=200.3km s-min=21.5km az=137.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.02**	**37**	Pn	Pn	10 19 00.4	+0.3
	3.6nm,0.3s,baz=217,slow=10,SNR=5.8						
AFI				Sn	Sn	10 19 25.3	-1.2
	16nm,0.3s,baz=54,slow=21,SNR=6.2						
STKA	**Stephens Creek**	**44.27**	**240**	P	P	10 26 36.7	-0.9
	1.9nm,0.9s,baz=66,slow=10.0,SNR=3.4						
WRA	**Warramunga Arr**	**50.16**	**257**	P	P	10 27 21.9	-2.0
	0.2nm,0.4s,baz=96,slow=6.8,SNR=11						
ASAR	**Alice Springs**	**50.40**	**252**	P	P	10 27 23.1	-2.6
	1.0nm,0.5s,baz=88,slow=8.5,SNR=24						

IDC 06 11:10:25.2±5.1, 5.89S×128.75E, h266^{km}±55^{km}, mb3.4/2, mb1 3.8/4, mb1mx3.3/15, mbtmp4.4/4, Error ellipse: s-maj=101.5km s-min=14.0km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.99**	**159**	P	P	11 13 42.6	-3.6
	3.4nm,0.3s,baz=343,slow=13,SNR=239						
WRA				S	S	11 16 25.4	-0.1
	1.0nm,0.3s,baz=330,slow=23,SNR=7.5						
ASAR	**Alice Springs**	**18.36**	**165**	P	P	11 14 21.9	-0.8
	1.9nm,0.3s,baz=349,slow=12,SNR=6.8						
ASAR				S	S	11 17 37.6	+3.7
	0.7nm,0.3s,baz=348,slow=20,SNR=15						
STKA	**Stephens Creek**	**28.51**	**157**	P	P	11 15 56.1	-2.4
	0.7nm,0.6s,baz=326,slow=12,SNR=5.0						
MKAR	**Makanchi Array**	**66.62**	**327**	P	P	11 20 47.4	-1.7
	1.2nm,0.4s,baz=115,slow=8.9,SNR=6.5						

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*MOS **06** 11:12:19.3±1.4, 37.61N×72.29E, h167^{km}, mb4.2/14, Error ellipse: s-maj=11.9km s-min=6.1km az=122.2*

*BJI **06** 11:12:21.4, 37.82N×72.28E, h195^{km}, mB4.5, mb4.5*

*NEIC **06** 11:12:21.4±1.0, 37.57N×72.44E, h183^{km}±12^{km}, mb4.6/18, Error ellipse: s-maj=11.3km s-min=6.0km az=54.0*

*IDC **06** 11:12:23.0±0.9, 37.51N×72.46E, h198^{km}±7^{km}, mb3.6/14, mb1 3.8/16, mb1mx3.6/25, mbtmp4.1/16, Error ellipse: s-maj=20.7km s-min=14.1km az=19.0*

*NNC **06** 11:12:28.1±4.0, 38.24N×72.12E, h246^{km}±52^{km}, mpv4.6, Error ellipse: s-maj=47.8km s-min=26.5km az=23.0*

ISC 06 11:12:19.8±0.3, 37.52N±0.02×72.37E±0.05, h181^{km}±4^{km}, h193^{km}±4.8^{km}:pP-P, n122, σ1^{s}10/144, mb4.1/34, 7C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**3.46**	**54**	P	**P**	**11 13 16.5**	**+1.7**
KSH				XP		11 13 53.4	
KSH				S	**S**	**11 13 55.7**	**-1.5**
CEP	**Cherat**	**3.70**	**186**	⇓P	**P**	**11 13 18.3**	**+0.5**
CHCP	**Chirah Chowk**	**3.92**	**169**	⇓P	**P**	**11 13 22.8**	**+2.2**
CHCP				S	**S**	**11 14 06.0**	**-1.5**
AML	**Almayashu**	**4.72**	**12**	P	**P**	**11 13 31.2**	**+0.4**
	SNR=472						
THW	**Thamme Wali**	**4.74**	**186**	⇓P	**P**	**11 13 31.0**	**-0.1**
UCH	**Uchtor**	**4.99**	**19**	P	**P**	**11 13 35.0**	**+0.7**
	SNR=99						
KZA	**Kyzart**	**5.07**	**25**	P	**P**	**11 13 35.5**	**+0.2**
	SNR=18						
JMU	**Jammu**	**5.22**	**156**	*e*x	**S**	**11 14 37.5**	**0.0**
EKS2	**Erkin-Say**	**5.25**	**11**	P	**P**	**11 13 38.2**	**+0.4**
	SNR=30						
SBDP	**Sheikh Budin**	**5.36**	**194**	P	**P**	**11 13 39.6**	**+0.4**
AAK	**Ala-Archa**	**5.37**	**17**	P	**P**	**11 13 40.1**	**+0.9**
	SNR=64						
AAK	**Ala-Archa**	**5.37**	**17**	⇑P	**P**	**11 13 40.1**	**+0.8**
	44nm,0.4s						
AAK				⇑S	**S**	**11 14 39.4**	**-1.5**
	157nm,0.5s						
AAK	**Ala-Archa**	**5.37**	**17**	⇑*i*PN	**P**	**11 13 38.9**	**-0.3**
AAK				*e*		11 14 37.5	
AAK				pmax	pmax		
	comp=Z,76nm,0.4s						
AAK	**Ala-Archa**	**5.37**	**17**	⇑*i*Pn	**P**	**11 13 38.9**	**-0.3**
	comp=Z,76nm,0.4s						
AAK				*e*Sn	**S**	**11 14 37.5**	**-3.4**
KBK	**Karagaybulak**	**5.50**	**20**	P	**P**	**11 13 42.2**	**+1.2**
	SNR=15						
FRU	**Bishkek**	**5.58**	**17**	⇑*i*PN	**P**	**11 13 43.5**	**+1.4**
FRU				*i*S	**S**	**11 14 44.5**	**-1.5**
FRU				pmax	pmax		
	comp=Z,40nm,1.9s						
FRU				smax			
	comp=E,350nm,2.0s						
ULHL	**Ulahol**	**5.58**	**31**	P	**P**	**11 13 42.2**	**+0.1**
	SNR=11						
SARP	**Sargodha**	**5.59**	**177**	P	**P**	**11 13 41.4**	**-0.7**
KK31	**Karatay Array**	**5.76**	**346**	P	**P**	**11 13 43.9**	**-0.5**
	comp=E,33nm,0.3s,baz=162,slow=11,SNR=635						
KK31				S	**S**	**11 14 44.6**	**-5.5**
	comp=E,194nm,0.4s,baz=170,slow=22,SNR=36						
KKAR	**Karatay Array**	**5.76**	**346**	*i*PN	**P**	**11 13 43.9**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,51nm,0.2s						
THN	**Thein Dam**	**5.77**	**151**	*e*P	**P**	**11 13 45.6**	**+1.1**
	comp=Z,90nm,0.4s						
THN				*e*S	**S**	**11 14 48.9**	**-1.4**
CHMS	**Chumysh**	**5.77**	**18**	P	**P**	**11 13 44.9**	**+0.3**
	SNR=19						
TKM2	**Tokmak 2**	**5.94**	**24**	P	**P**	**11 13 47.1**	**+0.4**
	SNR=17						
USP	**Ospenovka**	**5.97**	**15**	P	**P**	**11 13 46.8**	**-0.4**
	SNR=19						
DRP	**Derazinda**	**6.03**	**198**	P	**P**	**11 13 48.8**	**+0.9**
PONG	**Pong**	**6.28**	**151**	*e*P	**P**	**11 13 53.0**	**+1.7**
PONG				*e*S	**S**	**11 14 59.0**	**-3.5**
BHK	**Bhakra**	**6.94**	**150**	*e*x	**S**	**11 15 10.5**	**-7.5**
SDNR	**Sundarnagar**	**7.10**	**146**	*e*P	**P**	**11 14 02.0**	**-0.1**
SDNR				*e*S	**S**	**11 15 17.4**	**-4.4**
SMLA	**Simla**	**7.51**	**147**	*i*P	**P**	**11 14 06.5**	**-0.8**
SMLA				*i*x	**S**	**11 15 23.7**	**-7.7**
KLP	**Kalpa**	**7.69**	**139**	*e*P	**P**	**11 14 10.6**	**+0.8**
KLP				*e*S	**S**	**11 15 33.3**	**-2.5**
KLP				AML	AML	11 15 40.4	
	comp=E,909nm,0.6s						
KLP				AML	AML	11 15 40.8	
	comp=N,1µm,0.5s						
NDI	**New Delhi**	**9.70**	**154**	*e*P	**P**	**11 14 36.5**	**+0.3**
NDI				*e*S	**S**	**11 16 18.5**	**-4.4**
KHET	**Khetri**	**9.85**	**162**	*e*P	**P**	**11 14 37.1**	**-1.0**
KHET				*e*S	**S**	**11 16 19.0**	**-7.3**
KHET				AML	AML	11 16 23.6	
	comp=E,67nm,0.4s						
KHET				AML	AML	11 16 26.8	
	comp=N,62nm,1.0s						
KUDL	**Kundal**	**9.97**	**158**	*e*P	**P**	**11 14 39.1**	**-0.5**
KUDL				*e*S	**S**	**11 16 22.1**	**-7.0**
SONA	**Sohna**	**10.05**	**155**	*e*P	**P**	**11 14 40.7**	**-0.1**
SONA				*e*S	**S**	**11 16 23.8**	**-7.3**
SONA				AML	AML	11 16 30.1	
	comp=N,64nm,0.3s						
SONA				AML	AML	11 16 30.8	
	comp=E,133nm,0.4s						
LGTI	**Lohaghat**	**10.39**	**138**	*i*P	**P**	**11 14 45.5**	**+0.4**
LGTI				*e*S	**S**	**11 16 34.5**	**-4.5**
MKAR	**Makanchi Array**	**11.83**	**35**	*i*P	**P**	**11 15 04.7**	**+1.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**11.83**	**35**	P	**P**	**11 15 04.1**	**+0.4**
	baz=221,slow=13,SNR=5.9						
MKAR	**Makanchi Array**	**11.83**	**35**	P	**P**	**11 15 04.1**	**+0.4**
WMQ	**Urumqi**	**13.22**	**57**	*e*P	**P**	**11 15 21.3**	**-0.1**
WMQ				XP		11 16 09.0	
KOLN	**Koldanda**	**13.55**	**133**	*e*P	**P**	**11 15 25.0**	**-0.6**
	comp=Z,49nm,0.4s						
GKN	**Gorkha**	**14.01**	**129**	*e*P	**P**	**11 15 31.8**	**+0.5**
	comp=Z,224nm,0.5s						
KKN	**Kakani**	**14.56**	**128**	*e*P	**P**	**11 15 39.0**	**+0.8**
	comp=Z,116nm,0.6s						
KKN	**Kakani**	**14.56**	**128**	*e*P	**P**	**11 15 39.0**	**+0.8**
KKN				pmax	pmax		
	comp=Z,58nm,0.6s						
DMN	**Daman**	**14.58**	**129**	*e*P	**P**	**11 15 40.2**	**+1.7**
	comp=Z,135nm,0.7s						
AB31	**Akbulak array**	**14.78**	**326**	⇓P	**P**	**11 15 39.3**	**-1.6**
	comp=Z,13nm,0.6s						
AB31				⇑S	**S**	**11 18 11.3**	**-8.7**
	comp=Z,18nm,0.5s						
AB31	**Akbulak array**	**14.78**	**326**	P	**P**	**11 15 39.2**	**-1.7**
AB31				S	**S**	**11 18 11.3**	**-8.7**
AB31				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PKI	**Pulchoki**	**14.79**	**128**	*e*P	**P**	**11 15 42.2**	**+1.0**
	comp=Z,28nm,0.2s						
PKI	**Pulchoki**	**14.79**	**128**	*e*P	**P**	**11 15 42.2**	**+1.0**
PKI				pmax	pmax		
	comp=Z,14nm,0.2s						
GUN	**Gumba**	**14.86**	**126**	*e*P	**P**	**11 15 42.9**	**+1.0**
	comp=Z,260nm,0.8s						
BHPL	**Bhopal**	**14.88**	**162**	*e*P	**P**	**11 15 42.2**	**-0.1**
BHPL				AMb	AMB	11 15 46.8	
	comp=Z,25nm,0.8s						
BHPL				*e*x	**S**	**11 18 19.2**	**-3.1**
BVAR	**Borovoye Array**	**15.57**	**356**	P	**P**	**11 15 49.2**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=163,slow=12,SNR=27						
BVAR				S	**S**	**11 18 36.9**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=166,slow=24,SNR=6.3						
LSA	**Lhasa**	**17.46**	**111**	P	**P**	**11 16 17.4**	**+4.0**
LSA	**Lhasa**	**17.46**	**111**	*e*P	**P**	**11 16 17.3**	**+3.9**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
LSA	**Lhasa**	**17.46**	**111**	*e*P	**P**	**11 16 17.3**	**+4.0**
	comp=Z,5.2nm,0.4s						
BLSP	**Bilaspur**	**17.50**	**148**	*e*P	**P**	**11 16 11.3**	**-2.6**
BOK	**Bokaro**	**17.93**	**136**	*e*P	**P**	**11 16 19.2**	**+0.7**
BOK				AMb	AMB	11 16 20.3	
	comp=Z,36nm,0.6s						
ZAL	**Zalesovo**	**18.53**	**24**	P	**P**	**11 16 23.9**	**-0.6**
	comp=Z,3.8nm,0.3s,baz=253,slow=7.6,SNR=26						
ZAL	**Zalesovo**	**18.53**	**24**	P	**P**	**11 16 23.9**	**-0.6**
NVS	**Novosibirsk**	**18.85**	**20**	*i*P	**P**	**11 16 26.4**	**-1.5**
NVS				pmax	pmax		
	comp=Z,11nm,0.9s						
NVS				pmax	pmax		
	comp=N,8.0nm,0.8s						
SHL	**Shillong**	**20.41**	**120**	*e*P	**P**	**11 16 45.0**	**+0.9**
SVE	**Sverdlovsk**	**20.84**	**342**	*e*P	**P**	**11 16 49.0**	**+0.8**
SVE				pmax	pmax		
	comp=Z,20nm,1.0s						
ARU	**Arti**	**21.06**	**338**	*e*P	**P**	**11 16 50.6**	**+0.3**
ARU				pmax	pmax		
	comp=Z,32nm,1.1s,mb4.6						
ARU	**Arti**	**21.06**	**338**	*e*P	**P**	**11 16 50.6**	**+0.3**
	comp=Z,32nm,1.1s,mb4.6						
GTA	**Gaotai**	**21.55**	**76**	*e*P	**P**	**11 16 59.2**	**+4.0**
GTA				XP		11 17 56.0	
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
GTA				AMB	AMB		
	comp=Z,90nm,7.2s						
GTA				LR	LR		
	comp=N,100nm,13.3s						
GTA				LR	LR		
	comp=E,150nm,14.5s						
GTA				LR	LR		
	comp=Z,40nm,12.2s						
GNI	**Garni**	**21.65**	**286**	*e*P	**P**	**11 16 59.2**	**+3.1**
GNI				pmax	pmax		
	comp=Z,49nm,1.3s						
GNI	**Garni**	**21.65**	**286**	*e*P	**P**	**11 16 59.2**	**+3.0**
	comp=Z,49nm,1.3s,mb4.8						
ZEI	**Tsey**	**22.33**	**293**	*e*P	**P**	**11 17 07.6**	**+4.8**
ZEI				*i* *PP		11 17 36.9	
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.9						
GOF	**Gofitskoye**	**23.20**	**298**	⇓*i*P	**P**	**11 17 12.7**	**+1.5**
GOF				pmax	pmax		
	comp=Z,50nm,1.7s,mb4.7						
KIV	**Kislovodsk**	**23.31**	**295**	*e*P	**P**	**11 17 13.7**	**+1.5**
KIV	**Kislovodsk**	**23.31**	**295**	*e*P	**P**	**11 17 13.7**	**+1.5**
SOC	**Sochi**	**25.43**	**294**	*e*P	**P**	**11 17 30.7**	**-1.4**
SOC				*e*		11 18 18.9	
SOC				*e*		11 20 59.0	
SOC				*e*S	**S**	**11 21 43.8**	**+0.5**
SOC				pmax	pmax		
	comp=Z,29nm,1.0s,mb4.8						
SOC				pmax	pmax		
	comp=N,6.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,11nm,0.7s						
TLY	**Talaya**	**26.15**	**47**	*e*P	**P**	**11 17 33.0**	**-5.7**
TLY				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.5						
MALT	**Malatya**	**26.70**	**282**	P	**P**	**11 17 45.9**	**+2.0**
MALT				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
MALT	**Malatya**	**26.70**	**282**	P	**P**	**11 17 45.9**	**+2.0**
	comp=Z,3.2nm,0.9s,mb4.0						
SONM	**Songino Array**	**26.86**	**57**	pP	pP	11 18 27.1	+5.2
	comp=Z,0.5nm,0.4s,baz=243,slow=11,SNR=4.7						
VRSR	**Storozhevoye**	**27.12**	**311**	*e*P	**P**	**11 17 47.3**	**-0.2**
VRSR				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
VRSR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,6.0nm,0.6s						
ULN	**Ulaanbaatar**	**27.30**	**57**	*i*P	**P**	**11 17 44.9**	**-4.3**
OBN	**Obninsk**	**29.90**	**318**	*ce*P	**P**	**11 18 11.5**	**-0.8**
OBN				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
BRTR	**Keskin Array B**	**30.18**	**286**	P	**P**	**11 18 15.9**	**+0.9**
	comp=Z,1.0nm,0.5s,mb3.8,baz=113,slow=9.4,SNR=6.1						
HHC	**Hu-ho-hao-te**	**30.39**	**71**	*e*P	**P**	**11 18 13.3**	**-3.5**
HHC				PCP	PcP	11 21 09.4	-2.6
HHC				S	**S**	**11 22 56.1**	**-6.6**
HHC				SCP		11 24 38.0	
HHC				SCS	ScS	11 28 30.6	-0.2
HHC				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
HHC				LR	LR		
	comp=N,100nm,18.0s						
HHC				LR	LR		
	comp=E,400nm,20.4s						
HHC				LR	LR		
	comp=Z,100nm,16.8s						
AKASG	**Malin Array Be**	**33.18**	**307**	*i*P	**P**	**11 18 39.1**	**-1.7**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**33.18**	**307**	P	**P**	**11 18 39.5**	**-1.3**
	comp=Z,1.7nm,0.6s,mb4.0,baz=78,slow=6.3,SNR=7.2						
MLR	**Muntele Rosu**	**35.26**	**298**	P	**P**	**11 19 01.0**	**+2.5**
	comp=Z,4.4nm,0.8s,mb4.2,baz=91,slow=3.6,SNR=9.9						
FINES	**FINESS Array B**	**37.27**	**325**	P	**P**	**11 19 15.6**	**+0.4**
	comp=Z,1.1nm,0.5s,mb3.8,baz=112,slow=11,SNR=9.3						
NJ2	**Nanjing**	**38.27**	**84**	*e*P	**P**	**11 19 25.1**	**+1.2**
NJ2				AP	pP	11 20 02.9	0.0
NJ2				PP	PP	11 21 02.0	+4.9
NJ2				S	**S**	**11 25 06.0**	**+2.2**
NJ2				AMB	AMB		
	comp=Z,620nm,4.8s						
NJ2				LR	LR		
	comp=N,4µm,20.4s						
NJ2				LR	LR		
	comp=E,3µm,19.4s						
NJ2				LR	LR		
	comp=Z,4µm,18.6s						
OJC	**Ojcow**	**39.18**	**306**	*e*P	**P**	**11 19 31.9**	**+0.7**
CN2	**Changchun**	**40.17**	**64**	*e*P	**P**	**11 19 40.0**	**+0.5**
SSE	**Sheshan**	**40.47**	**84**	P	**P**	**11 19 41.2**	**-0.8**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,110nm,4.0s						
ARCES	**ARCESS Array B**	**40.63**	**337**	P	**P**	**11 19 43.5**	**+0.5**
	comp=Z,7.4nm,0.7s,mb4.4,baz=112,slow=8.6,SNR=30						
MORC	**Moravsky Berou**	**40.65**	**306**	P	**P**	**11 19 44.4**	**+1.1**
MORC				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
MORC	**Moravsky Berou**	**40.65**	**306**	P	**P**	**11 19 44.4**	**+1.1**
	comp=Z,1.2nm,0.5s,mb3.8						
HFS	**Hagfors**	**42.95**	**321**	P	**P**	**11 20 02.0**	**+0.1**
	comp=Z,3.9nm,0.5s,mb4.3,baz=98,slow=10,SNR=23						
MDJ	**Mudanjiang**	**42.96**	**62**	P	**P**	**11 20 03.4**	**+1.3**
MDJ				AMB	AMB		
	comp=Z,50nm,4.5s						
GERES	**GERESS Array B**	**43.25**	**305**	P	**P**	**11 20 04.9**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.5,baz=113,slow=7.5,SNR=3.1						
NB2	**NORSAR Subarra**	**44.24**	**322**	P	**P**	**11 20 11.8**	**-0.3**
	comp=Z,2.0nm,0.5s,mb4.0,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**44.24**	**322**	P	**P**	**11 20 12.1**	**0.0**
	comp=Z,2.0nm,0.5s,mb4.0,baz=93,slow=7.7,SNR=8.0						
TIXI	**Tiksi**	**44.42**	**22**	*e*P	**P**	**11 20 12.4**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
LPG	**La Plagne**	**48.55**	**301**	*e*P	**P**	**11 20 45.7**	**-0.4**
LPL	**La Plagne**	**48.56**	**301**	*e*P	**P**	**11 20 45.8**	**-0.4**
MBDF	**Montbardon**	**48.74**	**300**	*e*P	**P**	**11 20 47.4**	**-0.2**
LOR	**Lormes**	**50.03**	**304**	*e*P	**P**	**11 20 55.9**	**-1.4**
SMF	**Signal de Mont**	**50.20**	**303**	*e*P	**P**	**11 20 57.5**	**-1.2**
	comp=Z,6.8nm,0.6s,mb4.2						
SMF	**Signal de Mont**	**50.20**	**303**	*e*P	**P**	**11 20 57.5**	**-1.2**
SMF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
SSF	**Saint Saulge**	**50.31**	**304**	*e*P	**P**	**11 20 58.2**	**-1.3**
AVF	**Avril sur Loir**	**50.49**	**304**	*e*P	**P**	**11 20 59.6**	**-1.2**
	comp=Z,7.7nm,0.6s,mb4.2						
AVF	**Avril sur Loir**	**50.49**	**304**	*e*P	**P**	**11 20 59.6**	**-1.2**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
TCF	**Toulx Ste Croi**	**51.38**	**303**	*e*P	**P**	**11 21 06.7**	**-0.9**
	comp=Z,5.6nm,0.6s,mb4.1						
TCF	**Toulx Ste Croi**	**51.38**	**303**	*e*P	**P**	**11 21 06.7**	**-0.9**
TCF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
CAF	**Calviac**	**51.89**	**302**	*e*P	**P**	**11 21 10.7**	**-0.7**
EKA	**Eskdalemuir Ar**	**52.32**	**316**	P	**P**	**11 21 14.1**	**-0.3**
	comp=Z,1.5nm,0.5s,mb3.8,baz=84,slow=8.4,SNR=6.7						
GRR	**Gorron**	**52.77**	**307**	*e*P	**P**	**11 21 16.1**	**-1.7**
	comp=Z,9.6nm,0.7s,mb4.4						
GRR	**Gorron**	**52.77**	**307**	*e*P	**P**	**11 21 16.1**	**-1.7**
GRR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
ESDC	**Sonseca Array**	**57.95**	**298**	P	**P**	**11 21 54.8**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=53,slow=7.3,SNR=5.1						
SUMG	**Summit**	**60.46**	**341**	*e*P	**P**	**11 22 12.5**	**+0.6**
	comp=Z,4.7nm,0.8s,mb4.4						
INK	**Inuvik**	**72.72**	**10**	P	**P**	**11 23 29.7**	**+0.8**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**72.72**	**10**	P	**P**	**11 23 29.7**	**+0.8**
	comp=Z,1.1nm,0.5s,mb3.8,baz=359,slow=6.8,SNR=7.9						
ILAR	**Eielson Array**	**73.50**	**16**	P	**P**	**11 23 33.7**	**+0.2**
	comp=Z,0.7nm,0.9s,mb3.4,baz=314,slow=6.1,SNR=7.3						
ILAR				pP	pP	11 24 20.5	+3.2
	comp=Z,0.8nm,1.0s,baz=299,slow=4.4,SNR=5.1						
YKA	**Yellowknife Ar**	**80.18**	**3**	P	**P**	**11 24 11.0**	**+0.5**
	comp=Z,0.9nm,0.5s,mb3.7,baz=347,slow=5.6,SNR=5.9						
YKA				pP	pP	11 24 59.7	+4.6
	comp=Z,0.2nm,0.3s,baz=348,slow=5.2,SNR=2.3						
YKA	**Yellowknife Ar**	**80.18**	**3**	P	**P**	**11 24 11.1**	**+0.5**
YKA				pP	pP	11 24 59.7	+4.6
WRA	**Warramunga Arr**	**81.61**	**123**	P	**P**	**11 24 18.5**	**-0.4**
	comp=Z,0.3nm,0.3s,mb3.4,baz=328,slow=5.4,SNR=14						
WRA				pP	pP	11 25 06.0	+2.4
	comp=Z,0.8nm,0.7s,baz=326,slow=5.0,SNR=5.6						
WRAB	**Tennant Creek**	**81.61**	**123**	P	**P**	**11 24 23.3**	**+4.4**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
WRAB	**Tennant Creek**	**81.61**	**123**	P	**P**	**11 24 23.3**	**+4.4**
	comp=Z,2.5nm,0.8s,mb3.9						

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*NEIC **06** 11:37:43.6, 34.15S×68.62W, h18^{km}, ML4.0(GUC), After GUC.*

GUC 06 11:37:43.6±0.7, 34.15S×68.62W, h18^{km}, ML4.0, 3C-3D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMEL	**Las Melosas**	**1.35**	**282**	⇓*i*P	Pn	11 38 07.3	-0.5
LMEL				*i*S	Sb	11 38 25.1	+0.1
LMEL				AMP		11 38 27.2	
	comp=N,4µm,0.2s						
SJCH	**San Jose de Ma**	**1.53**	**289**	⇓*i*P	Pn	11 38 09.6	-0.8
SJCH				*i*S	Sn	11 38 29.3	-0.6
SJCH				AMP		11 38 30.1	
	comp=N,2µm,0.3s						
PCH	**Pirque**	**1.67**	**288**	P	Pn	11 38 12.4	+0.1
FSR	**Penalolen**	**1.73**	**292**	⇑*i*P	Pn	11 38 13.0	-0.2
FSR				*i*S	Sn	11 38 35.2	+0.3
FSR				AMP		11 38 36.2	
	comp=E,4µm,0.4s						
CLCH	**Cerro Calan**	**1.77**	**295**	⇓*i*P	Pn	11 38 13.5	-0.3
CLCH				*i*S	Sn	11 38 36.4	+0.4
CLCH				AMP		11 38 37.7	
	comp=N,4µm,0.7s						
ANTU	**Antumapu**	**1.78**	**289**	*i*P	Pn	11 38 14.2	+0.4
ANTU				*i*S	Sn	11 38 36.9	+0.8
DSCH	**Colegio Aleman**	**1.79**	**294**	⇑*i*P	Pn	11 38 13.9	-0.1
DSCH				*i*S	Sn	11 38 37.2	+0.7
STL	**Santa Lucia**	**1.83**	**292**	*i*P	Pn	11 38 14.7	0.0
STL				*i*S	Sn	11 38 38.0	+0.5
SAN	**Santiago**	**1.84**	**292**	⇑*i*P	Pn	11 38 14.9	+0.2
SAN				*i*S	Sn	11 38 38.3	+0.5
PUEX	**Pudahuel**	**1.92**	**291**	*i*P	Pn	11 38 17.5	+1.6
PUEX				*i*S	Sn	11 38 42.4	+2.7
TACH	**Talagante**	**2.00**	**284**	*e*P	Pn	11 38 12.8	-4.2
TACH				*i*S	Sn	11 38 33.0	-8.7
LNV	**Longovilo**	**2.33**	**274**	*i*P	Pn	11 38 24.1	+2.3
ZON	**Zonda**	**2.60**	**359**	*e*P	Pn	11 38 20.5	-5.1
ZON				*e*S	Sn	11 39 04.5	+7.5
TRQA	**Tornquist**	**6.63**	**128**	*e*Pn	Pn	11 39 21.1	-1.7
	comp=N,12nm,0.6s						
TRQA				*e*Sn	Sn	11 40 34.4	-4.4

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*IDC **06** 11:49:03.0±2.8, 4.80N×96.01E, mb3.9/5, mb1 4.0/6, mb1mx3.7/20, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=106.7km s-min=21.0km az=63.0*

*NEIC **06** 11:49:09.0±1.1,4.98N×96.42E,h30^{km},mb4.2/1,Error ellipse: s-maj=25.4km s-min=11.5km az=60.0*
ISC 06 11:49:07.0±1.1,**5.0N**±0.1×**96.4E**±0.2,**h30**^{km},**n9,σ0^{s}59**/9, **mb3.9**/6,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**4.23**	**86**	*e*Pn	**Pn**	**11 50 10.7**	**-0.6**
CMAR	**Chiang Mai Arr**	**13.60**	**10**	Pn	**P**	**11 52 21.0**	**+0.4**
	0.2nm,0.3s,baz=202,slow=15,SNR=3.9						
MKAR	**Makanchi Array**	**43.39**	**346**	P	**P**	**11 57 08.1**	**-0.5**
	0.6nm,0.7s,mb3.4,baz=170,slow=7.4,SNR=6.0						
SONM	**Songino Array**	**43.53**	**10**	P	**P**	**11 57 10.5**	**+0.8**
	1.6nm,0.8s,mb3.8,baz=190,slow=8.6,SNR=11						
WRA	**Warramunga Arr**	**44.77**	**125**	P	**P**	**11 57 21.1**	**+0.9**
	0.6nm,0.5s,mb3.7,baz=303,slow=9.3,SNR=8.5						
WRAB	**Tennant Creek**	**44.78**	**125**	P	**P**	**11 57 20.5**	**+0.3**
	1.8nm,0.5s,mb4.2						
ASAR	**Alice Springs**	**46.36**	**130**	P	**P**	**11 57 32.0**	**-0.7**
	0.6nm,0.4s,mb3.9,baz=301,slow=7.6,SNR=12						
ZAL	**Zalesovo**	**49.70**	**351**	P	**P**	**11 57 57.7**	**-0.6**
	2.2nm,0.3s,mb4.6,baz=157,slow=7.2,SNR=3.0						
MOX	**Moxa**	**82.86**	**320**	*e*P	**P**	**12 01 30.0**	**-0.1**

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*MOS **06** 11:54:04.9±1.2,28.26N×139.45E,h330^{km},mb4.0/6,Error ellipse: s-maj=34.0km s-min=10.4km az=108.6*
*BJI **06** 11:54:12.1,28.30N×139.90E,h401^{km},mB4.5,mb4.3*
*NEIC **06** 11:54:12.1±0.8,28.27N×139.88E,h401^{km}±9^{km},mb4.2/8, Error ellipse: s-maj=15.8km s-min=6.2km az=75.0*
*IDC **06** 11:54:13.0±0.7,28.25N×139.88E,h410^{km}±9^{km},mb3.5/14, mb1 3.6/17,mb1mx3.5/26,mbtmp4.3/17,Error ellipse: s-maj=25.9km s-min=8.6km az=76.0*
*JMA **06** 11:54:13.4±0.1,28.35N×140.20E,h422^{km},M4.2*
ISC 06 11:54:12.2±0.4,**28.24N**±0.04×**139.94E**±0.09,**h422**^{km}±4^{km}, **n55,σ0^{s}84**/65,**mb3.9**/23,**1D,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.29**	**119**	P	**P**	**11 55 12.6**	**+0.2**
	92nm,0.3s,baz=269,slow=22,SNR=13						
CBIJ				S	**S**	**11 55 59.8**	**-0.1**
	68nm,0.3s,baz=293,slow=22,SNR=5.7						
CBIJ	**Chichi jima**	**2.29**	**119**	P	**P**	**11 55 12.4**	**0.0**
CBIJ				S	**S**	**11 55 59.4**	**-0.4**
JHHJ	**Haha-jima-NKT**	**2.55**	**128**	P	**P**	**11 55 14.8**	**+0.6**
JHHJ				S	**S**	**11 56 02.5**	**-0.5**
JHJ2	**Mitsune**	**4.86**	**359**	P	**P**	**11 55 35.0**	**+0.4**
JHJ	**Hachijo jima 2**	**4.87**	**358**	P	**P**	**11 55 35.0**	**+0.4**
	83nm,0.3s,baz=134,slow=13,SNR=22						
JHJ				S	**S**	**11 56 40.3**	**+1.0**
	20nm,0.3s,baz=70,slow=24,SNR=3.0						
BSO1	**Boso 1**	**6.46**	**8**	P	**P**	**11 55 51.1**	**-0.2**
BSO1				S	**S**	**11 57 08.6**	**-0.8**
JIM2	**Oshima 3**	**6.48**	**356**	P	**P**	**11 55 51.3**	**-0.2**
JIE	**Ise**	**6.73**	**337**	P	**P**	**11 55 56.2**	**+1.9**
JOD2	**Odawara 2**	**7.04**	**354**	P	**P**	**11 55 57.5**	**-0.2**
JOD2				*e*S	**S**	**11 57 19.8**	**-1.2**
JTO	**Tosashimizu**	**7.69**	**309**	P	**P**	**11 56 06.8**	**+1.9**
JRY	**Ryogami san**	**7.81**	**354**	P	**P**	**11 56 05.8**	**-0.5**
JRY				*e*S	**S**	**11 57 36.3**	**0.0**
JMZ	**Minamidaito 2**	**8.14**	**255**	P	**P**	**11 56 08.9**	**-1.1**
MJAR	**Matsushiro Arr**	**8.41**	**350**	P	**P**	**11 56 11.8**	**-1.3**
	1.6nm,0.3s,baz=168,slow=11,SNR=15						
MJAR				S	**S**	**11 57 48.4**	**-0.2**
	0.4nm,0.3s,baz=109,slow=19,SNR=5.0						
MAJO	**Matsushiro**	**8.41**	**350**	*e*P	**P**	**11 56 10.1**	**-3.0**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MAJO	**Matsushiro**	**8.41**	**350**	*e*Pn	**P**	**11 56 10.1**	**-3.0**
	comp=Z,9.6nm,0.4s						
MAT	**Matsushiro**	**8.41**	**350**	*e*P	**P**	**11 56 13.0**	**-0.1**
MAT				*e*S	**S**	**11 57 49.0**	**+0.4**
MAT	**Matsushiro**	**8.41**	**350**	P	**P**	**11 56 12.6**	**-0.5**
MAT				S	**S**	**11 57 48.5**	**-0.1**
JHS	**Saijyo**	**8.90**	**321**	P	**P**	**11 56 20.1**	**+1.4**
JSJ	**Shimokoshiki**	**9.51**	**294**	P	**P**	**11 56 28.7**	**+3.1**
JMK	**Ichinoseki**	**10.74**	**5**	P	**P**	**11 56 40.6**	**+0.9**
JMK				S	**S**	**11 58 37.7**	**+1.0**
KLR	**Kul’dur**	**21.89**	**345**	*e*P	**P**	**11 58 31.4**	**-2.1**
HIA	**Hailar**	**26.10**	**329**	*e*P	**P**	**11 59 11.6**	**0.0**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HIA	**Hailar**	**26.10**	**329**	*e*P	**P**	**11 59 11.6**	**0.0**
	comp=Z,5.5nm,0.6s,mb4.2						
ENH	**Enshi**	**26.61**	**282**	*e*P	**P**	**11 59 15.4**	**-0.9**
	comp=Z,11nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**32.13**	**317**	*e*P	**P**	**12 00 04.3**	**+0.2**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.6						
ULN	**Ulaanbaatar**	**32.13**	**317**	*e*P	**P**	**12 00 04.3**	**+0.3**
	comp=Z,2.7nm,1.0s,mb3.5						
SONM	**Songino Array**	**32.52**	**316**	P	**P**	**12 00 07.7**	**+0.3**
	comp=Z,1.4nm,0.7s,mb3.4,baz=132,slow=8.9,SNR=13						
SONM				PcP	PcP	12 02 43.4	+0.4
	comp=Z,0.1nm,0.4s,baz=128,slow=2.8,SNR=4.2						
SONM				ScP		12 05 46.1	
	comp=Z,0.6nm,0.7s,baz=153,slow=5.5,SNR=5.1						
ZAK	**Zakamensk**	**35.44**	**319**	*e*P	**P**	**12 00 30.5**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.4						
HNR	**Honiara**	**42.15**	**150**	P	**P**	**12 01 28.2**	**+0.9**
	comp=Z,25nm,0.6s,mb4.7						
WMQ	**Urumqi**	**44.29**	**305**	*e*P	**P**	**12 01 44.3**	**+0.3**
WMQ				AP	pP	12 03 00.0	-6.2
WMQ				XP	sP	12 03 42.1	-11
ZAL	**Zalesovo**	**47.33**	**319**	PcP	PcP	12 03 30.1	-0.7
	comp=Z,1.7nm,0.4s,baz=342,slow=4.1,SNR=4.1						
WRAB	**Tennant Creek**	**48.19**	**187**	*e*P	**P**	**12 02 13.9**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.0						
WRAB	**Tennant Creek**	**48.19**	**187**	*e*P	**P**	**12 02 13.9**	**-0.5**
	comp=Z,2.9nm,0.4s,mb4.0						
WB2	**Warramunga Arr**	**48.20**	**187**	⇓*i*P	**P**	**12 02 14.3**	**-0.1**
WRA	**Warramunga Arr**	**48.20**	**187**	P	**P**	**12 02 14.3**	**-0.1**
	comp=Z,1.9nm,0.3s,mb3.9,baz=5.8,slow=7.6,SNR=125						
MKAR	**Makanchi Array**	**48.21**	**309**	P	**P**	**12 02 13.8**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.1,baz=93,slow=9.5,SNR=8.0						
MKAR				PcP	PcP	12 03 34.0	-0.1
	comp=Z,1.2nm,0.6s,baz=77,slow=6.2,SNR=12						
MKAR	**Makanchi Array**	**48.21**	**309**	P	**P**	**12 02 13.8**	**-0.4**
MKAR				PcP	PcP	12 03 34.0	-0.1
ASAR	**Alice Springs**	**51.93**	**187**	P	**P**	**12 02 42.0**	**-0.3**
	comp=Z,1.0nm,0.4s,mb3.4,baz=2.3,slow=5.6,SNR=44						
ASPA	**Alice Springs**	**51.93**	**187**	*e*P	**P**	**12 02 42.5**	**+0.3**
BVAR	**Borovoye Array**	**55.86**	**317**	P	**P**	**12 03 09.5**	**-0.5**
	comp=Z,3.4nm,0.6s,mb3.9,baz=90,slow=7.4,SNR=22						
BVAR				PcP	PcP	12 04 02.5	-0.3
	comp=Z,0.9nm,0.5s,baz=90,slow=3.0,SNR=4.5						
STKA	**Stephens Creek**	**59.80**	**178**	P	**P**	**12 03 37.4**	**+0.4**
	comp=Z,1.5nm,0.5s,mb3.7,baz=348,slow=14,SNR=7.4						
ARU	**Arti**	**62.30**	**322**	*e*P	**P**	**12 03 52.3**	**-0.9**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.4						
ARU	**Arti**	**62.30**	**322**	*e*P	**P**	**12 03 52.3**	**-0.9**
	comp=Z,5.0nm,0.4s,mb4.4						
INK	**Inuvik**	**62.83**	**25**	P	**P**	**12 03 57.0**	**+0.5**
	comp=Z,0.9nm,0.6s,mb3.5,baz=308,slow=8.2,SNR=3.8						
AB31	**Akbulak array**	**62.87**	**314**	*i* P	**P**	**12 03 56.4**	**-0.6**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
ARCES	**ARCESS Array B**	**71.81**	**340**	P	**P**	**12 04 52.3**	**+0.8**
	comp=Z,3.9nm,0.7s,mb4.0,baz=63,slow=8.1,SNR=6.6						
KAF	**Kangasniemi**	**75.58**	**334**	*e*p	**P**	**12 05 13.1**	**+0.1**
	comp=Z,1.5nm,0.5s,mb3.9,baz=55,slow=5.3						
KAF	**Kangasniemi**	**75.58**	**334**	*e*P	**P**	**12 05 13.1**	**+0.1**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
FINES	**FINESS Array B**	**76.04**	**333**	P	**P**	**12 05 16.1**	**+0.5**
	comp=Z,3.2nm,0.5s,mb4.2,baz=72,slow=5.9,SNR=30						
AKASG	**Malin Array Be**	**80.52**	**323**	P	**P**	**12 05 40.0**	**+0.2**
	comp=Z,1.1nm,0.3s,mb4.0,baz=49,slow=5.9,SNR=11						
HFS	**Hagfors**	**81.58**	**336**	P	**P**	**12 05 45.3**	**+0.2**
	comp=Z,2.5nm,0.5s,mb4.2,baz=90,slow=3.0,SNR=18						
NB2	**NORSAR Subarra**	**81.81**	**337**	P	**P**	**12 05 46.4**	**+0.2**
	comp=Z,1.0nm,0.5s,mb3.8,baz=46,slow=5.0						
NOA	**NORSAR Array B**	**81.81**	**337**	P	**P**	**12 05 46.5**	**+0.3**
	comp=Z,1.4nm,0.5s,mb3.9,baz=46,slow=5.0,SNR=5.1						
BRTR	**Keskin Array B**	**83.77**	**312**	P	**P**	**12 05 57.0**	**+0.5**
	comp=Z,1.3nm,0.5s,mb3.9,baz=85,slow=4.1,SNR=6.5						
GERES	**GERESS Array B**	**89.50**	**328**	P	**P**	**12 06 23.8**	**+0.1**
	comp=Z,0.3nm,0.2s,mb3.6,baz=34,slow=4.8,SNR=3.6						

BJI 06 11:57:11.6,34.59N×123.23E,h15^{km},ML3.5,Yellow Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NJ2	**Nanjing**	**4.45**	**237**	*e*PG	Pg	11 58 29.9	-11
NJ2				Smax			
	comp=N,140nm,0.6s						
NJ2				Smax			
	comp=E,150nm,0.7s						
DL2	**Dalian**	**4.50**	**344**	*e*PG	Pg	11 58 29.7	-12
DL2				SG	Sg	11 59 22.7	-19
DL2				Smax			
	comp=N,20nm,0.5s						
DL2				Smax			
	comp=E,20nm,0.5s						
TIA	**Tai’an**	**5.24**	**290**	PG	Pg	11 58 45.4	-11
TIA				SG	Sg	11 59 49.0	-17
TIA				Smax			
	comp=N,60nm,1.0s						
TIA				Smax			
	comp=E,40nm,0.8s						

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*MOS **06** 12:30:32.6±1.2,36.21N×70.05E,h125^{km},mb4.4/6,Error ellipse: s-maj=12.7km s-min=7.5km az=96.1*
*NEIC **06** 12:30:33.2±1.4,36.22N×70.13E,h117^{km}±14^{km},mb4.5/9, Error ellipse: s-maj=14.5km s-min=7.0km az=51.0*
*BJI **06** 12:30:34.5,36.52N×69.86E,h128^{km},mB4.8,mb4.4*
*IDC **06** 12:30:34.9±0.9,36.29N×70.08E,h131^{km}±6^{km},mb3.7/14, mb1 3.9/16,mb1mx3.7/25,mbtmp4.1/16,Error ellipse: s-maj=19.2km s-min=12.2km az=34.0*
*NNC **06** 12:30:37.1±6.8,36.60N×69.44E,h110^{km}±98^{km},mpv4.8, Error ellipse: s-maj=52.1km s-min=42.2km az=20.0*
ISC 06 12:30:33.0±0.5,**36.19N**±0.03×**70.08E**±0.06,**h132**^{km}±6^{km}, **n87,σ1^{s}15**/105,**mb3.9**/19,**5C-7D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.80**	**147**	⇓P	**P**	**12 31 19.3**	**+1.5**
CHCP	**Chirah Chowk**	**3.63**	**133**	⇓P	**P**	**12 31 31.0**	**+2.1**
THW	**Thamme Wali**	**3.65**	**157**	⇓P	**P**	**12 31 29.3**	**+0.1**
SBDP	**Sheikh Budin**	**3.93**	**171**	P	**P**	**12 31 33.3**	**+0.5**
DRP	**Derazinda**	**4.43**	**179**	P	**P**	**12 31 39.8**	**+0.2**
SARP	**Sargodha**	**4.77**	**152**	⇓P	**P**	**12 31 43.4**	**-0.7**
KSH	**Kashi**	**5.72**	**53**	*e*P	**P**	**12 32 00.1**	**+3.3**
KSH				S	**S**	**12 33 06.4**	**+4.5**
THN	**Thein Dam**	**5.98**	**127**	*e*P	**P**	**12 32 01.8**	**+1.5**
	102nm,0.3s						
THN				*e*x	**S**	**12 33 08.8**	**+0.7**
PONG	**Pong**	**6.45**	**129**	*e*P	**P**	**12 32 09.0**	**+2.3**
PONG				*e*x	**S**	**12 33 25.0**	**+5.7**
AML	**Almayashu**	**6.56**	**24**	P	**P**	**12 32 08.2**	**0.0**
	SNR=209						
KK31	**Karatay Array**	**6.91**	**3**	P	**P**	**12 32 11.9**	**-1.1**
	33nm,0.3s,baz=189,slow=13,SNR=558						
KK31				⇑S	**S**	**12 33 26.0**	**-4.6**
	33nm,0.5s,baz=194,slow=24,SNR=10						
KKAR	**Karatay Array**	**6.91**	**3**	*e*PN	**P**	**12 32 11.9**	**-1.1**
KKAR				pmax	pmax		
	comp=Z,20nm,0.3s						
UCH	**Uchtor**	**6.94**	**28**	P	**P**	**12 32 13.3**	**-0.1**
	SNR=166						
EKS2	**Erkin-Say**	**7.07**	**23**	P	**P**	**12 32 15.0**	**-0.1**
	SNR=33						
BHK	**Bhakra**	**7.10**	**130**	*e*x	x	12 32 26.9	
BHK				*e*S	**S**	**12 33 32.5**	**-2.7**
KZA	**Kyzart**	**7.12**	**33**	P	**P**	**12 32 17.3**	**+1.5**
	SNR=35						
AAK	**Ala-Archa**	**7.28**	**27**	P	**P**	**12 32 18.0**	**0.0**
	SNR=26						
AAK	**Ala-Archa**	**7.28**	**27**	⇑P	**P**	**12 32 18.0**	**-0.1**
	comp=Z,23nm,0.6s						
AAK				⇑S	**S**	**12 33 39.1**	**-0.5**
	comp=Z,158nm,0.9s						
AAK	**Ala-Archa**	**7.28**	**27**	*e*PN	**P**	**12 32 16.8**	**-1.2**
AAK				pmax	pmax		
	comp=Z,32nm,0.6s						
AAK	**Ala-Archa**	**7.28**	**27**	*e*Pn	**P**	**12 32 16.8**	**-1.3**
	comp=Z,32nm,0.6s						
AAK				*e*Sn	**S**	**12 33 37.8**	**-1.9**
SDNR	**Sundarnagar**	**7.40**	**127**	*e*P	**P**	**12 32 19.4**	**-0.1**
SDNR				*e*x	**S**	**12 33 39.4**	**-2.9**
KBK	**Karagaybulak**	**7.47**	**29**	P	**P**	**12 32 21.3**	**+0.7**
	SNR=25						
FRU	**Bishkek**	**7.50**	**26**	⇓*e*PN	**P**	**12 32 22.0**	**+1.0**
FRU				pmax	pmax		
	comp=Z,70nm,1.5s						
CHMS	**Chumysh**	**7.70**	**26**	P	**P**	**12 32 23.5**	**0.0**
	SNR=45						
ULHL	**Ulahol**	**7.71**	**36**	P	**P**	**12 32 26.4**	**+2.7**
	SNR=7.8						
SMLA	**Simla**	**7.77**	**128**	*i* x	x	12 32 22.4	
SMLA				*i* S	**S**	**12 33 44.8**	**-6.6**
USP	**Ospenovka**	**7.84**	**24**	P	**P**	**12 32 25.1**	**-0.5**
	SNR=48						
TKM2	**Tokmak 2**	**7.96**	**31**	P	**P**	**12 32 26.9**	**-0.2**
	SNR=43						
KLP	**Kalpa**	**8.23**	**122**	*e*P	**P**	**12 32 31.8**	**+1.2**
KLP				AML	AML	12 34 13.5	
	comp=E,384nm,0.7s						
KLP				AML	AML	12 34 13.9	
	comp=N,205nm,0.6s						
RTK	**Rohtak**	**8.91**	**141**	*e*P	**P**	**12 32 39.5**	**-0.3**
JASL	**Jaisalmer**	**9.26**	**175**	*e*P	**P**	**12 32 43.6**	**-0.8**
KHET	**Khetri**	**9.43**	**147**	*e*P	**P**	**12 32 45.4**	**-1.3**
KHET				*e*S	**S**	**12 34 22.2**	**-9.1**
BHGR	**Bahadurgarh**	**9.46**	**140**	*e*P	**P**	**12 32 47.0**	**0.0**
BHGR				*i* S	**S**	**12 34 24.5**	**-7.4**
NDI	**New Delhi**	**9.61**	**139**	*e*P	**P**	**12 32 48.5**	**-0.6**
NDI				*e*x	**S**	**12 34 29.0**	**-6.5**
KUDL	**Kundal**	**9.68**	**144**	*e*P	**P**	**12 32 48.8**	**-1.3**
KUDL				*e*x	**S**	**12 34 32.0**	**-5.3**
AYAN	**Aya Nagar**	**9.72**	**140**	*e*P	**P**	**12 32 50.4**	**-0.1**
AYAN				*e*S	**S**	**12 34 30.5**	**-7.6**
SONA	**Sohna**	**9.89**	**141**	*e*P	**P**	**12 32 52.3**	**-0.5**
SONA				*e*S	**S**	**12 34 34.9**	**-7.3**
SONA				AML	AML	12 34 41.2	
	comp=N,30nm,0.5s						
SONA				AML	AML	12 34 42.5	
	comp=E,83nm,0.4s						
AGRA	**Agra**	**11.16**	**141**	*e*P	**P**	**12 33 08.5**	**-1.1**
AGRA				AML	AML	12 35 26.0	
	comp=E,76nm,0.3s						
AGRA				AML	AML	12 35 26.1	
	comp=N,61nm,0.5s						
MK31	**Makanchi Array**	**13.98**	**37**	⇓P	**P**	**12 33 51.3**	**+5.2**
	comp=N,26nm,0.8s						
MKAR	**Makanchi Array**	**13.98**	**37**	P	**P**	**12 33 45.3**	**-0.8**
	comp=N,0.2nm,0.3s,baz=231,slow=16,SNR=12						
KOLN	**Koldanda**	**14.21**	**122**	*e*P	**P**	**12 33 48.2**	**-0.9**
	comp=N,16nm,0.4s						
BHPL	**Bhopal**	**14.39**	**152**	*e*P	**P**	**12 33 50.6**	**-0.8**
BHPL				AMb	AMB	12 33 54.7	
	comp=Z,33nm,1.1s						
GKN	**Gorkha**	**14.78**	**119**	*e*P	**P**	**12 33 55.6**	**-0.9**
	comp=Z,22nm,0.3s						
AB31	**Akbulak array**	**15.01**	**334**	P	**P**	**12 33 57.0**	**-2.3**
	comp=Z,12nm,0.6s,baz=147,slow=12,SNR=183						
AB31				⇑S	**S**	**12 36 31.3**	**-11**
	comp=Z,6.0nm,0.6s,baz=160,slow=23,SNR=7.4						
AB31	**Akbulak array**	**15.01**	**334**	*i* P	**P**	**12 33 57.0**	**-2.3**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.3s						
DMN	**Daman**	**15.35**	**120**	*e*P	**P**	**12 34 03.2**	**-0.4**
	comp=Z,31nm,0.6s						
KKN	**Kakani**	**15.36**	**119**	*e*P	**P**	**12 34 03.5**	**-0.3**
	comp=Z,35nm,0.5s						
KKN	**Kakani**	**15.36**	**119**	*e*P	**P**	**12 34 03.5**	**-0.3**
KKN				pmax	pmax		
	comp=Z,18nm,0.5s						
WMQ	**Urumqi**	**15.48**	**55**	*e*P	**P**	**12 34 07.0**	**+1.8**
WMQ				AP		12 34 17.0	
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s						
WMQ				AMB	AMB		
	comp=Z,80nm,3.8s						
WMQ				LR	LR		
	comp=N,50nm,22.0s						
WMQ				LR	LR		
	comp=Z,40nm,21.6s						
PKI	**Pulchoki**	**15.59**	**119**	*e*P	**P**	**12 34 06.6**	**0.0**
	comp=Z,39nm,0.7s						
PKI	**Pulchoki**	**15.59**	**119**	*e*P	**P**	**12 34 06.6**	**0.0**
PKI				pmax	pmax		
	comp=Z,19nm,0.7s						
GUN	**Gumba**	**15.72**	**117**	*e*P	**P**	**12 34 08.7**	**+0.4**
	comp=Z,44nm,0.6s						
BVA0	**Borovoye Array**	**16.84**	**1**	P	**P**	**12 34 20.7**	**-1.2**
	comp=Z,2.1nm,0.7s,baz=178,slow=16,SNR=100						
BVA0	**Borovoye Array**	**16.84**	**1**	*i* P	**P**	**12 34 20.6**	**-1.3**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**16.84**	**1**	P	**P**	**12 34 20.2**	**-1.7**
	comp=Z,2.2nm,0.3s,baz=173,slow=12,SNR=50						
BVAR				S	**S**	**12 37 22.5**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=167,slow=19,SNR=3.3						
BVAR	**Borovoye Array**	**16.84**	**1**	P	**P**	**12 34 20.2**	**-1.7**
BVAR				S	**S**	**12 37 22.5**	**-0.8**
GNI	**Garni**	**20.29**	**289**	*e*P	**P**	**12 35 02.3**	**+2.2**
GNI				pmax	pmax		
	comp=Z,25nm,0.7s						
GNI	**Garni**	**20.29**	**289**	P	**P**	**12 35 01.5**	**+1.4**
	comp=Z,30nm,0.8s,baz=29,slow=2.0,SNR=13						
GNI	**Garni**	**20.29**	**289**	*e*P	**P**	**12 35 02.3**	**+2.3**
	comp=Z,25nm,0.7s						
ZAL	**Zalesovo**	**20.49**	**25**	P	**P**	**12 35 02.1**	**+0.1**
	comp=Z,19nm,0.4s,baz=248,slow=7.9,SNR=41						
NVS	**Novosibirsk**	**20.74**	**22**	⇑*i*P	**P**	**12 35 04.4**	**-0.1**
NVS				*e*S	**S**	**12 38 41.7**	**-1.7**
NVS				pmax	pmax		
	comp=Z,47nm,1.0s						
NVS				pmax	pmax		
	comp=N,39nm,1.0s						
NVS				smax			
	comp=N,12nm,1.6s						
ZEI	**Tsey**	**21.20**	**296**	*e*P	**P**	**12 35 10.7**	**+1.5**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
SHL	**Shillong**	**21.45**	**113**	*e*P	**P**	**12 35 15.0**	**+3.2**
SHL				*e*x	x	12 42 47.0	
SVE	**Sverdlovsk**	**21.60**	**346**	*e*P	**P**	**12 35 14.4**	**+1.3**
SVE				pmax	pmax		
	comp=Z,40nm,2.0s,mb4.5						
ARU	**Arti**	**21.70**	**343**	⇓*i*P	**P**	**12 35 15.1**	**+1.1**
ARU				*e*S	**S**	**12 39 13.2**	**+12**
ARU				pmax	pmax		
	comp=Z,35nm,0.9s,mb4.8						
ARU	**Arti**	**21.70**	**343**	*e*P	**P**	**12 35 14.9**	**+0.9**
	comp=Z,9.2nm,0.6s,mb4.4						
GTA	**Gaotai**	**23.66**	**73**	*e*P	**P**	**12 35 37.9**	**+4.7**
GTA				AP		12 36 03.8	
GTA				XP		12 36 19.3	
GTA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
ZAK	**Zakamensk**	**27.75**	**49**	*e*P	**P**	**12 36 13.1**	**+2.0**
ZAK				*e*		12 39 32.1	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.4						
BRTR	**Keskin Array B**	**28.82**	**288**	P	**P**	**12 36 21.1**	**+0.3**
	comp=Z,1.3nm,0.6s,mb3.8,baz=97,slow=8.3,SNR=6.8						
SONM	**Songino Array**	**29.12**	**55**	P	**P**	**12 36 24.3**	**+0.9**
	comp=Z,1.0nm,0.8s,mb3.6,baz=253,slow=9.9,SNR=9.0						
CMAR	**Chiang Mai Arr**	**30.97**	**117**	P	**P**	**12 36 41.7**	**+1.7**
	comp=Z,0.5nm,0.6s,mb3.4,baz=288,slow=8.6,SNR=4.0						
CMAR				sP	sP	12 37 24.1	+0.4
	comp=Z,1.1nm,0.8s,baz=302,slow=9.5,SNR=3.2						
AKASG	**Malin Array Be**	**32.56**	**309**	P	**P**	**12 36 52.4**	**-1.2**
	comp=Z,0.7nm,0.4s,mb3.8,baz=82,slow=7.5,SNR=6.2						
AKASG				pP	pP	12 37 21.4	-1.0
	comp=Z,2.4nm,0.8s,baz=89,slow=7.4,SNR=2.4						
FINES	**FINESS Array B**	**37.33**	**327**	P	**P**	**12 37 32.2**	**-1.6**
	comp=Z,1.1nm,0.6s,mb3.7,baz=113,slow=14,SNR=5.6						
ARCES	**ARCESS Array B**	**41.15**	**338**	P	**P**	**12 38 05.8**	**+0.5**
	comp=Z,2.7nm,0.6s,mb4.1,baz=108,slow=7.7,SNR=11						
MOX	**Moxa**	**43.72**	**308**	*e*P	**P**	**12 38 30.0**	**+3.6**
NB2	**NORSAR Subarra**	**44.18**	**323**	P	**P**	**12 38 29.4**	**-0.5**
	comp=Z,1.5nm,0.6s,mb3.8,baz=99,slow=7.9						
NOA	**NORSAR Array B**	**44.18**	**323**	P	**P**	**12 38 29.2**	**-0.7**
	comp=Z,1.9nm,0.7s,mb3.9,baz=99,slow=7.9,SNR=6.7						
TIXI	**Tiksi**	**46.34**	**22**	*e*P	**P**	**12 38 42.4**	**-4.5**
TIXI				*e*		12 39 28.2	
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.3						
INK	**Inuvik**	**74.33**	**9**	P	**P**	**12 41 57.8**	**+0.8**
	comp=Z,3.1nm,0.8s,mb4.1,baz=0.1,slow=4.0,SNR=8.2						
COLA	**College**	**74.98**	**16**	*e*P	**P**	**12 42 01.4**	**+0.6**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
COLA	**College**	**74.98**	**16**	*e*P	**P**	**12 42 01.4**	**+0.6**
	comp=Z,2.3nm,0.8s,mb3.9						
ILAR	**Eielson Array**	**75.28**	**15**	P	**P**	**12 42 01.8**	**-0.7**
	comp=Z,1.0nm,0.8s,mb3.5,baz=319,slow=5.1,SNR=11						
YKA	**Yellowknife Ar**	**81.59**	**2**	P	**P**	**12 42 36.8**	**-0.1**
YKA				*SP	sP	12 43 23.7	-1.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**81.59**	**2**	P	**P**	**12 42 36.8**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.6,baz=349,slow=4.9,SNR=8.7						
YKA				sP	sP	12 43 23.7	-1.1
	comp=Z,0.9nm,0.8s,baz=346,slow=5.7,SNR=4.2						
YKA	**Yellowknife Ar**	**81.59**	**2**	P	**P**	**12 42 36.9**	**-0.1**
YKA				sP	sP	12 43 23.7	-1.1
WRA	**Warramunga Arr**	**82.46**	**121**	P	**P**	**12 42 41.7**	**-0.6**
	comp=Z,0.6nm,0.6s,mb3.4,baz=326,slow=5.0,SNR=12						
ASAR	**Alice Springs**	**84.69**	**124**	P	**P**	**12 42 53.4**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.5,baz=308,slow=4.8,SNR=12						

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*IDC **06** 12:37:23.4±0.9,1.16N×96.88E,mb4.2/12,mb1 4.3/13, mb1mx4.2/21,mbtmp4.2/13,ML4.3/1,MS3.6/2,Ms1 3.7/2, ms1mx3.2/21,Error ellipse: s-maj=45.3km s-min=15.6km az=53.0*
*MOS **06** 12:37:27.8±1.4,1.40N×97.20E,h39^{km},mb4.7/9,Error ellipse: s-maj=19.9km s-min=9.2km az=106.7*
*BJI **06** 12:37:27.0,0.69N×97.29E,h60^{km},mB5.0,mb4.8,Ms4.5, Msz4.2*
*NEIC **06** 12:37:28.7±0.5,1.27N×97.09E,mb4.5/12,Error ellipse: s-maj=16.3km s-min=8.0km az=57.0*
ISC 06 12:37:26.8±0.5,**1.27N**±0.07×**97.07E**±0.07,**h31**^{km}, **h31**^{km}±1.2^{km}**:pP-P,n54,σ1^{s}27**/53,**mb4.4**/30,**MS4.2**/3, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.14**	**50**	P	**Pn**	**12 38 44.2**	**+0.5**
KULM	**Kulim**	**5.36**	**42**	*e*Pn	**Pn**	**12 38 47.0**	**+0.1**
KGM	**Kluang**	**6.29**	**83**	P	**Pn**	**12 39 01.3**	**+1.3**
CM31	**Chiang Mai Arr**	**17.18**	**6**	*e*P	**P**	**12 41 25.6**	**-0.7**
	8.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**17.18**	**6**	P	**P**	**12 41 25.1**	**-1.3**
	0.4nm,0.3s,baz=200,slow=10,SNR=20						
CMAR				LR	LR	12 48 13.0	
	comp=Z,125nm,18.6s,baz=180,slow=38						
KMI	**Kunming**	**24.34**	**13**	P	**P**	**12 42 46.0**	**+2.7**
KMI				XS		12 47 30.3	
KMI				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.4						
KMI				AMB	AMB		
	comp=Z,50nm,3.3s						
KMI				LR	LR		
	comp=N,480nm,15.8s,MS4.2						
KMI				LR	LR		
	comp=E,380nm,13.4s,MS4.2						
KMI				LR	LR		
	comp=Z,560nm,13.8s,MS4.2						
PKI	**Pulchoki**	**28.44**	**338**	*e*P	**P**	**12 43 24.9**	**+3.7**
	comp=Z,6.6nm,0.4s,mb4.6						
PKI	**Pulchoki**	**28.44**	**338**	*e*P	**P**	**12 43 24.9**	**+3.7**
PKI				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.3						
GUN	**Gumba**	**28.57**	**339**	*e*P	**P**	**12 43 23.7**	**+1.3**
	comp=Z,87nm,1.3s,mb5.3						
DMN	**Daman**	**28.59**	**337**	*e*P	**P**	**12 43 25.3**	**+2.8**
	comp=Z,13nm,0.6s,mb4.8						
KKN	**Kakani**	**28.68**	**338**	*e*P	**P**	**12 43 25.5**	**+2.1**
	comp=Z,13nm,0.6s,mb4.8						
KKN	**Kakani**	**28.68**	**338**	*e*P	**P**	**12 43 25.5**	**+2.1**
KKN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
LSA	**Lhasa**	**28.83**	**349**	P	**P**	**12 43 26.5**	**+1.8**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
LSA	**Lhasa**	**28.83**	**349**	P	**P**	**12 43 26.5**	**+1.9**
	comp=Z,6.5nm,0.8s,mb4.4						
GKN	**Gorkha**	**29.12**	**337**	*e*P	**P**	**12 43 28.2**	**+0.9**
	comp=Z,24nm,0.9s,mb4.9						

KOLN	Koldanda	29.34	335	eP	P	12 43 30.6	+1.3
	comp=Z,18nm,0.7s,mb4.9						
ENH	Enshi	31.16	21	eP	P	12 43 42.8	-2.7
	comp=Z,16nm,0.8s,mb4.9						
ENH				epP	pP	12 43 51.2	-3.2
XAN	Xi’an	34.44	18	P	P	12 44 12.6	-1.3
GTA	Gaotai	38.04	3	eP	P	12 44 45.2	+0.9
WRA	Warramunga Arr	42.19	122	P	P	12 45 18.9	0.0
	comp=Z,3.4nm,0.7s,mb4.1,baz=301,slow=9.0,SNR=28						
WRAB	Tennant Creek	42.19	122	eP	P	12 45 19.1	+0.2
WRAB				e*PP	pP	12 45 28.1	0.0
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
WRAB	Tennant Creek	42.19	122	eP	P	12 45 19.1	+0.3
	comp=Z,3.5nm,0.6s,mb4.2						
WRAB				epP	pP	12 45 28.1	0.0
WB2	Warramunga Arr	42.20	122	eP	P	12 45 19.2	+0.3
WMQ	Urumqi	43.18	350	eP	P	12 45 29.0	+2.4
WMQ				AP	pP	12 45 39.0	+3.2
WMQ				LR	LR		
	comp=N,550nm,22.0s						
WMQ				LR	LR		
	comp=Z,540nm,21.6s,MS4.4						
ASPA	Alice Springs	43.54	127	eP	P	12 45 30.6	+0.8
ASAR	Alice Springs	43.54	127	P	P	12 45 29.2	-0.6
	comp=Z,2.4nm,0.7s,mb4.0,baz=296,slow=7.8,SNR=21						
SONM	Songino Array	47.08	9	P	P	12 45 57.8	0.0
	comp=Z,5.1nm,0.8s,mb4.5,baz=189,slow=8.6,SNR=29						
MKAR	Makanchi Array	47.14	346	i P	P	12 45 58.8	+0.6
MKAR	Makanchi Array	47.14	346	P	P	12 45 58.9	+0.7
	comp=Z,2.4nm,0.6s,mb4.3,baz=161,slow=8.4,SNR=20						
MKAR	Makanchi Array	47.14	346	P	P	12 45 58.9	+0.7
KKAR	Karatay Array	47.93	334	P	P	12 46 05.3	+0.8
ZAK	Zakamensk	49.22	5	eP	P	12 46 10.9	-3.4
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
CN2	Changchun	49.30	27	eP	P	12 46 15.2	+0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
TLY	Talaya	50.53	5	eP	P	12 46 24.9	+0.5
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
TLY	Talaya	50.53	5	eP	P	12 46 24.9	+0.5
	comp=Z,2.4nm,0.7s,mb4.2						
CTA	Charters Tower	52.65	117	LR	LR	13 10 27.4	
	comp=Z,101nm,20.8s,MS3.9,baz=247,slow=38						
ZAL	Zalesovo	53.46	351	P	P	12 46 46.1	-0.2
	comp=Z,5.5nm,0.5s,mb4.8,baz=315,slow=5.0,SNR=20						
STKA	Stephens Creek	53.50	132	P	P	12 46 47.1	+0.2
	comp=Z,1.7nm,0.8s,mb4.0,baz=311,slow=5.2,SNR=5.0						
NVS	Novosibirsk	54.58	350	eP	P	12 46 53.4	-1.1
NVS				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
NVS				pmax	pmax		
	comp=N,4.0nm,0.9s						
BVA0	Borovoye Array	56.14	341	i P	P	12 47 04.9	-0.9
BVAR	Borovoye Array	56.14	341	P	P	12 47 04.9	-0.9
	comp=N,3.9nm,0.7s,mb4.5,baz=135,slow=8.4,SNR=19						
KLR	Kul’dur	56.25	27	eP	P	12 47 03.2	-3.5
AB31	Akbulak array	57.39	332	i P	P	12 47 13.7	-1.1
AB31				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
YSS	Yuzh-Sakhalins	60.37	34	P	P	12 47 34.4	-1.1
YSS				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
YSS	Yuzh-Sakhalins	60.37	34	P	P	12 47 34.4	-1.1
	comp=Z,3.6nm,0.5s,mb4.7						
ARU	Arti	63.07	337	eP	P	12 47 51.4	-2.0
YAK	Yakutsk	65.39	16	eP	P	12 48 06.9	-1.6
YAK				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
BRTR	Keskin Array B	68.97	312	P	P	12 48 29.8	-1.6
	comp=E,0.4nm,0.4s,mb3.7,baz=98,slow=10,SNR=3.3						
TIXI	Tiksi	73.14	10	eP	P	12 48 54.1	-1.9
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
AKASG	Malin Array Be	75.12	322	P	P	12 49 07.1	-0.7
	comp=Z,0.2nm,0.3s,mb3.5,baz=99,slow=3.6,SNR=5.0						
AKASG	Malin Array Be	75.12	322	P	P	12 49 07.1	-0.7
FINES	FINESS Array B	79.87	333	P	P	12 49 32.8	-1.1
	comp=Z,2.3nm,1.0s,mb4.1,baz=90,slow=13,SNR=4.1						
ARCES	ARCESS Array B	82.42	340	P	P	12 49 47.5	+0.4
	comp=Z,4.1nm,0.9s,mb4.3,baz=90,slow=2.4,SNR=4.6						
GERES	GERESS Array B	84.67	319	P	P	12 50 00.2	+1.2
	comp=Z,0.3nm,0.3s,mb3.9,baz=124,slow=4.8,SNR=3.9						

IDC ***06*** *12:37:32.9±2.4, 21.83S×175.90W, mb4.0/3, mb1 4.2/5, mb1mx3.9/18, mbtmp4.2/5, ML4.3/1, Error ellipse: s-maj=72.0km s-min=29.2km az=128.0*
NEIC ***06*** *12:37:36.5±1.1, 21.98S×175.57W, h35^{km}, mb4.5/2, Error ellipse: s-maj=32.4km s-min=13.5km az=123.0*
ISC 06 12:37:34.0±1.3**, 22.0S**±0.2×**175.5W**±0.2**, h33^{km}, n11, σ0^{s}86**/13**, mb4.2**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.75	25	Pn	P	12 39 41.3	+0.1
	3.8nm,0.3s,baz=16,slow=20,SNR=7.5						
AFI				Sn	Sn	12 41 12.6	-7.4
	1.3nm,0.3s,baz=171,slow=20,SNR=2.6						
AFI	Afiamalu	8.75	25	Pn	P	12 39 41.3	+0.1
AFI				Sn	Sn	12 41 12.6	-7.4
URZ	Urewera	17.45	200	P	P	12 41 36.5	+0.1
	0.9nm,0.3s,baz=56,slow=3.6,SNR=5.6						
URZ				S	S	12 44 35.1	-13
	0.2nm,0.3s,baz=135,slow=23,SNR=3.0						
CTAO	Charters Tower	35.66	266	eP	P	12 44 33.0	+1.8
	5.6nm,0.6s,mb4.7						
STKA	Stephens Creek	39.27	246	P	P	12 45 01.8	+0.4
	0.8nm,0.6s,mb3.6,baz=118,slow=15,SNR=4.7						
STKA	Stephens Creek	39.27	246	P	P	12 45 01.8	+0.4
ASAR	Alice Springs	46.45	258	P	P	12 45 59.5	-0.3
	2.3nm,0.7s,mb4.2,baz=98,slow=7.5,SNR=16						
WRAB	Tennant Creek	46.69	263	eP	P	12 46 01.2	-0.5
	2.3nm,0.6s,mb4.3						
WRA	Warramunga Arr	46.70	263	P	P	12 46 00.5	-1.3
	1.9nm,0.8s,mb4.0,baz=98,slow=8.6,SNR=9.8						
WRA	Warramunga Arr	46.70	263	P	P	12 46 00.5	-1.3
AKASG	Malin Array Be	145.38	332	PKPbc	PKPbc	12 57 10.9	+2.1
	0.2nm,0.3s,baz=38,slow=4.3,SNR=4.7						

NEIC ***06*** *12:57:54.0±2.6, 5.93S×148.76E, h63^{km}±23^{km}, mb3.9/1, Error ellipse: s-maj=46.4km s-min=19.2km az=129.0*
IDC ***06*** *12:57:56.1±2.9, 6.05S×148.56E, h78^{km}±23^{km}, mb3.2/3, mb1 3.6/5, mb1mx3.3/15, mbtmp3.7/5, MS3.8/1, Ms1 3.8/1, ms1mx2.8/10, Error ellipse: s-maj=69.4km s-min=17.9km az=120.0*
ISC 06 12:57:48.4±3.4**, 5.9S**±0.2×**148.7E**±0.3**, h26^{km}**±25^{km}**, n9, σ1^{s}05**/12**, mb3.4**/3**, MS3.7**/1**, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.83	203	P	Pn	12 58 50.0	+2.8
	19nm,0.3s,baz=2.1,slow=6.4,SNR=68						
PMG				S	Sn	12 59 31.3	-0.7
	11nm,0.3s,baz=12,slow=21,SNR=11						
WRAB	Tennant Creek	19.74	224	eP	P	13 02 18.7	-0.8
	2.2nm,0.4s						
WB2	Warramunga Arr	19.75	224	⇑iP	P	13 02 19.0	-0.5
WB2				eS	S	13 06 05.5	+10
WRA	Warramunga Arr	19.76	224	P	P	13 02 18.8	-0.8
	0.6nm,0.3s,baz=52,slow=11,SNR=42						
ASAR	Alice Springs	22.71	217	P	P	13 02 50.6	+0.9
	0.5nm,0.3s,mb3.4,baz=32,slow=12,SNR=33						
ASAR				S	S	13 06 51.3	-0.6
	0.6nm,0.7s,baz=32,slow=21,SNR=6.8						
ASPA	Alice Springs	22.71	217	eP	P	13 02 50.8	+1.1
ASPA				eS	S	13 06 53.8	+1.9
STKA	Stephens Creek	26.72	194	P	P	13 03 27.0	-0.8
	0.4nm,0.4s,mb3.3,baz=82,slow=7.1,SNR=2.1						
URZ	Urewera	41.30	145	LR	LR	13 18 57.4	
	comp=Z,101nm,18.2s,MS3.7,baz=308,slow=31						
ILAR	Eielson Array	84.70	23	P	P	13 10 20.9	-0.2
	0.3nm,0.6s,mb3.6,baz=243,slow=5.1,SNR=4.2						

PRU ***06*** *13:23:39.4, 50.32N×18.79E*
WAR 06 13:23:39.8, 50.26N×18.86E, h0^{km}, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.60	93	ePG	Pg	13 23 52.0	+0.1
OJC				eSG	Sg	13 24 00.0	+0.1
OKC	Ostrava-Krasne	0.62	228	ePG	Pg	13 23 52.0	-0.3
OKC				eSG	Sg	13 24 02.8	+2.2
NIE	Niedzica	1.26	131	ePG	Pg	13 24 04.0	-1.0
NIE				eSG	Sg	13 24 21.0	-0.8
DPC	Dobruska-Polom	1.63	274	ePG	Pg	13 24 08.3	-4.0
DPC				eSG	Sg	13 24 29.8	-4.3
	22nm,0.5s						
KSP	Ksiaz	1.74	291	ePG	Pg	13 24 12.0	-2.5
KSP				eSG	Sg	13 24 35.0	-2.7
VYHS	Vyhne	1.77	181	ePN	Pn	13 24 10.7	-1.1
VYHS				eSN	Sn	13 24 33.0	-2.3
UPC	Upice	1.84	279	eSG	Sg	13 24 36.0	-5.1
PRU	Pruhonice	2.79	266	eSG	Sg	13 25 05.0	-7.8
KHC	Kasperske Hory	3.61	254	ePG	Pg	13 24 47.5	-4.4
KHC				ex	x	13 25 19.0	
KHC				eSG	Sg	13 25 33.5	-6.5
MOA	Molln	3.87	233	i	Pn	13 24 50.2	+8.5
MOA	Molln	3.87	233	i SG	Sg	13 25 43.9	-4.6
	2.3nm,0.4s						

IDC ***06*** *13:27:48.1±0.8, 28.56N×143.24E, mb3.9/9, mb1 4.1/11, mb1mx3.9/23, mbtmp3.9/11, ML3.8/2, Error ellipse: s-maj=25.2km s-min=16.4km az=101.0*
JMA ***06*** *13:27:52.1±0.2, 28.69N×142.88E, h51^{km}, M4.0*
NEIC ***06*** *13:27:54.0±0.5, 28.62N×143.12E, h40^{km}, MG4.0(JMA), Error ellipse: s-maj=17.1km s-min=8.9km az=77.0*
ISC 06 13:27:52.0±1.3**, 28.70N**±0.04×**142.9E**±0.1**, h42^{km}**±13^{km}**, n27, σ1^{s}12**/37**, mb4.0**/10**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.70	201	Pn	P	13 28 19.6	-0.2
	28nm,0.3s,baz=274,slow=21,SNR=6.0						
CBIJ				Sn	S	13 28 38.5	-2.0
	111nm,0.3s,baz=269,slow=22,SNR=14						
CBIJ	Chichi jima	1.70	201	P	P	13 28 20.2	+0.4
CBIJ				S	S	13 28 40.6	+0.1
JHJ2	Mitsune	5.11	330	P	P	13 29 09.0	+0.9
JHJ2				eS	S	13 30 07.0	+0.3
JHJ	Hachijo jima 2	5.13	330	Pn	P	13 29 08.8	+0.4
	8.5nm,0.3s,baz=225,slow=20,SNR=7.7						
JHJ				Sn	S	13 30 06.8	-0.5
	24nm,0.3s,baz=257,slow=22,SNR=4.1						
BSO1	Boso 1	6.15	345	P	P	13 29 21.7	-0.9
BSO3	Boso 3	6.40	342	P	P	13 29 26.1	-0.1
BSO3				eS	S	13 30 38.1	-0.8
JOD2	Odawara 2	7.28	335	P	P	13 29 39.9	+1.4
JHU	Hanno	7.75	338	P	P	13 29 45.2	+0.3
JRY	Ryogami san	8.02	336	P	P	13 29 50.0	+1.2
JRY				S	S	13 31 18.0	-1.2
MJAR	Matsushiro Arr	8.74	335	Pn	P	13 29 59.0	+0.2
	1.1nm,0.3s,baz=185,slow=31,SNR=11						
MAJO	Matsushiro	8.75	335	ePn	P	13 30 00.2	+1.5
MAT	Matsushiro	8.75	335	eP	P	13 30 00.0	+1.2
MAT				eS	S	13 31 36.0	-1.1
MAT	Matsushiro	8.75	335	P	P	13 29 59.5	+0.7
MAT				S	S	13 31 35.6	-1.5
JFK	Kawauchi	8.80	350	P	P	13 29 56.6	-2.9
JFK				eS	S	13 31 29.8	-8.7
JMK	Ichinoseki	10.32	353	P	P	13 30 16.8	-3.6
JMK				S	S	13 32 06.4	-9.3
SONM	Songino Array	34.00	314	P	P	13 34 37.9	+4.2
	0.9nm,0.7s,mb3.8,baz=117,slow=8.3,SNR=6.9						
WRAB	Tennant Creek	49.04	191	eP	P	13 36 37.0	0.0
	3.8nm,0.4s,mb4.8						
WB2	Warramunga Arr	49.05	191	eP	P	13 36 37.1	0.0
WB2				e	pP	13 36 48.4	-0.4
MKAR	Makanchi Array	49.93	309	P	P	13 36 45.6	+2.1
	0.3nm,0.3s,mb3.8,baz=90,slow=11,SNR=6.9						
ASAR	Alice Springs	52.77	190	P	P	13 37 04.8	-0.4
	0.3nm,0.4s,mb3.5,baz=9.7,slow=7.1,SNR=11						
ILAR	Eielson Array	56.03	29	P	P	13 37 27.2	-1.3
	1.1nm,0.8s,mb4.0,baz=257,slow=6.1,SNR=14						
STKA	Stephens Creek	60.25	181	P	P	13 37 56.5	-2.1
	2.2nm,0.8s,mb4.2,baz=343,slow=7.2,SNR=7.5						
STKA	Stephens Creek	60.25	181	P	P	13 37 56.5	-2.1
INK	Inuvik	61.33	25	P	P	13 38 05.0	-0.3
	1.1nm,0.5s,mb4.2,baz=332,slow=5.2,SNR=9.8						
YKA	Yellowknife Ar	70.46	29	P	P	13 39 03.5	0.0
	0.8nm,0.7s,mb3.8,baz=282,slow=6.6,SNR=3.8						
NVAR	Mina Array Bea	79.07	52	P	P	13 39 54.8	+1.2
	1.4nm,1.1s,mb3.8,baz=299,slow=3.9,SNR=4.4						
TXAR	Lajitas Array	94.17	53	P	P	13 41 08.9	+1.1
	0.4nm,0.8s,mb3.9,baz=297,slow=2.8,SNR=6.7						

BJI ***06*** *13:31:48.4, 1.04N×125.99E, h6^{km}, mB4.9, mb4.9*
NEIC ***06*** *13:31:50.4±0.2, 1.04N×126.24E, h10^{km}, mb4.7/15, Error ellipse: s-maj=10.2km s-min=5.3km az=76.0*
MOS ***06*** *13:31:51.3±0.8, 1.08N×126.27E, h30^{km}, mb4.7/14, Error ellipse: s-maj=19.8km s-min=8.6km az=108.7*
IDC ***06*** *13:31:56.7±4.1, 1.04N×126.36E, h60^{km}±35^{km}, mb4.2/15, mb1 4.2/15, mb1mx4.1/22, mbtmp4.5/15, MS3.8/1, Ms1 3.8/1, ms1mx3.0/23, Error ellipse: s-maj=24.5km s-min=11.9km az=72.0*
ISC 06 13:31:50.2±3.1**, 1.06N**±0.05×**126.25E**±0.09**, h21^{km}**±21^{km}**, n67, σ0^{s}86**/67**, mb4.5**/37**, MS3.7**/1**, 2C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB	Tennant Creek	22.32	160	eP	P	13 36 48.3	+0.2
WRAB				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.5						
WRAB	Tennant Creek	22.32	160	eP	P	13 36 48.3	+0.2
	comp=Z,11nm,0.6s,mb4.5						
WB2	Warramunga Arr	22.33	160	eS	S	13 40 48.6	+1.0
MBWA	Marble Bar	22.98	196	eP	P	13 36 54.3	-0.4
	comp=Z,14nm,0.9s,mb4.4						
YHNB	Yeheng	23.94	349	eP	P	13 37 04.7	+0.7
ASPA	Alice Springs	25.67	164	eP	P	13 37 20.9	+0.3
ASPA				eS	S	13 41 45.3	-0.1
ASAR	Alice Springs	25.68	164	P	P	13 37 19.6	-1.0
	comp=Z,7.1nm,0.5s,mb4.5,baz=345,slow=10,SNR=53						
ASAR				PcP	PcP	13 40 50.6	-0.9
	comp=Z,0.7nm,0.6s,baz=348,slow=2.3,SNR=4.4						
ASAR				S	S	13 41 44.8	-0.7
	comp=Z,0.8nm,0.9s,baz=358,slow=21,SNR=3.0						
CBIJ	Chichi jima	30.07	29	LR	LR	13 49 14.0	
	comp=Z,168nm,18.7s,MS3.7,baz=134,slow=34						
FORT	Forrest	31.70	177	eP	P	13 38 14.6	-0.2
JNU	Nakatsue	32.19	7	P	P	13 38 18.5	-0.6
	comp=Z,7.2nm,0.8s,mb4.5,baz=144,slow=18,SNR=4.7						
HNR	Honiara	35.13	108	P	P	13 38 44.3	-0.4
	comp=Z,18nm,0.6s,mb5.2,baz=210,slow=7.1,SNR=4.2						
STKA	Stephens Creek	35.84	157	eP	P	13 38 50.6	+0.1
STKA	Stephens Creek	35.84	157	P	P	13 38 50.1	-0.4
	comp=Z,5.5nm,0.6s,mb4.7,baz=330,slow=8.7,SNR=14						
XAN	Xi’an	36.61	335	P	P	13 38 55.6	-1.3
MJAR	Matsushiro Arr	37.00	16	P	P	13 38 59.3	-0.9
	comp=Z,7.1nm,0.8s,mb4.5,baz=186,slow=8.8,SNR=14						
MAJO	Matsushiro	37.01	16	eP	P	13 39 00.5	+0.2
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
MAJO	Matsushiro	37.01	16	eP	P	13 39 00.5	+0.3
	comp=Z,5.4nm,0.6s,mb4.5						
MAT	Matsushiro	37.01	16	eP	P	13 39 01.0	+0.7
MAT				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
MAT	Matsushiro	37.01	16	eP	P	13 39 01.0	+0.7
	comp=Z,8.2nm,0.7s,mb4.7						
MAT	Matsushiro	37.01	16	P	P	13 39 00.5	+0.2
MDJ	Mudanjiang	43.48	3	P	P	13 39 55.2	+1.5
MDJ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,50nm,4.9s						
MDJ	Mudanjiang	43.48	3	eP	P	13 39 55.5	+1.8
	comp=Z,16nm,0.8s,mb4.8						
ASAJ	Asahikawa	45.27	17	P	P	13 40 09.6	+1.4
	comp=Z,5.8nm,0.7s,mb4.5,baz=229,slow=13,SNR=4.8						
GUN	Gumba	46.95	308	eP	P	13 40 22.2	+0.5
	comp=Z,15nm,0.5s,mb5.2						
PKI	Pulchoki	47.17	308	eP	P	13 40 23.8	+0.4
KKN	Kakani	47.37	308	eP	P	13 40 24.9	-0.1
DMN	Daman	47.42	308	eP	P	13 40 25.5	+0.1
GKN	Gorkha	47.97	308	eP	P	13 40 30.1	+0.4
	comp=Z,4.2nm,0.3s,mb4.9						
KLR	Kul’dur	48.22	5	eP	P	13 40 29.2	-2.1
KOLN	Koldanda	48.69	307	eP	P	13 40 35.7	+0.4
	comp=Z,10nm,0.6s,mb5.0						
ULN	Ulaanbaatar	49.51	343	⇓iP	P	13 40 43.1	+1.8
ULN	Ulaanbaatar	49.51	343	eP	P	13 40 42.3	+1.0
	comp=Z,4.0nm,0.9s,mb4.5						
SONM	Songino Array	49.68	343	P	P	13 40 42.6	0.0
	comp=Z,1.4nm,0.7s,mb4.1,baz=155,slow=9.0,SNR=10						
SONM				PcP	PcP	13 42 03.1	-0.8
	comp=Z,0.4nm,0.5s,baz=146,slow=3.3,SNR=4.6						
CIT	Chita	51.89	350	eP	P	13 41 00.0	+0.6
CIT				e		13 53 31.1	
CIT				pmax	pmax		
	comp=Z,25nm,4.3s						
ZAK	Zakamensk	52.89	342	eP	P	13 41 06.8	-0.1
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.7						
TLY	Talaya	53.91	343	eP	P	13 41 14.7	+0.4
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
MKAR	Makanchi Array	59.48	326	P	P	13 41 53.5	-0.7
	comp=Z,1.6nm,0.3s,mb4.5,baz=121,slow=7.3,SNR=34						
YAK	Yakutsk	60.88	2	eP	P	13 42 03.8	+0.3
YAK				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.4						
YAK	Yakutsk	60.88	2	eP	P	13 42 03.8	+0.3
	comp=Z,24nm,0.8s,mb5.4						
MA2	Magadan	61.40	14	eP	P	13 42 06.3	-0.7
MA2				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
MA2	Magadan	61.40	14	eP	P	13 42 06.3	-0.7
	comp=Z,6.7nm,0.9s,mb4.8						
ZAL	Zalesovo	62.75	334	P	P	13 42 15.8	-0.4
	comp=Z,1.0nm,0.4s,mb4.3,baz=348,slow=9.3,SNR=3.8						
NVS	Novosibirsk	64.04	334	eP	P	13 42 22.9	-1.7
FX1	Attu Island--F	64.63	29	P	P	13 42 28.6	+0.1
	comp=Z,18nm,0.8s,mb5.1,baz=223,slow=18,SNR=3.8						
BVA0	Borovoye Array	69.30	328	i P	P	13 42 59.2	+1.2
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
BVAR	Borovoye Array	69.30	328	P	P	13 42 57.4	-0.6
	comp=Z,1.2nm,0.4s,mb4.2,baz=135,slow=8.4,SNR=11						
TIXI	Tiksi	70.50	1	⇑iP	P	13 43 04.7	-0.4
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
AB31	Akbulak array	73.92	321	P	P	13 43 25.6	-0.1
AB31				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
SVE	Sverdlovsk	75.98	329	eP	P	13 43 37.0	-0.4
ARU	Arti	76.93	328	⇑iP	P	13 43 42.0	-0.7
ARU				e	pP	13 43 50.1	+0.6
ARU				e		13 46 36.0	
ARU				eS	S	13 53 22.2	-5.9
ARU				eSS	SS	13 58 22.6	-5.4
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
ARU	Arti	76.93	328	eP	P	13 43 42.2	-0.5
	comp=Z,4.2nm,0.6s,mb4.5						
OPO	Ambohidratompo	79.97	251	P	P	13 44 02.5	+2.4
	comp=Z,1.9nm,0.8s,mb4.1,baz=132,slow=12,SNR=3.1						
VNDA	Vanda	80.85	173	eP	P	13 44 04.0	+0.4
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
VNDA	Vanda	80.85	173	P	P	13 44 04.5	+0.8
	comp=Z,1.1nm,0.5s,mb4.0,baz=310,slow=8.2,SNR=5.3						
VNDA	Vanda	80.85	173	eP	P	13 44 04.0	+0.4
	comp=Z,0.8nm,0.4s,mb4.0						
SBA	Scott Base	81.77	172	eP	P	13 44 09.2	+0.8
SBA				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
SBA	Scott Base	81.77	172	eP	P	13 44 09.2	+0.8
	comp=Z,3.2nm,1.1s,mb4.2						
GNI	Garni	82.83	310	i P	P	13 44 13.9	-0.7
ZEI	Tsey	83.67	313	eP	P	13 44 19.5	+0.6
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
KIV	Kislovodsk	84.63	314	i P	P	13 44 22.9	-0.8
IMA	Indian Mountai	85.00	24	eP	P	13 44 27.6	+2.6
IMA				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.9						
IMA	Indian Mountai	85.00	24	eP	P	13 44 27.6	+2.5
	comp=Z,7.4nm,0.7s,mb4.9						
SOC	Sochi	86.76	313	eP	P	13 44 33.4	-0.9
SOC				e		13 47 54.2	
SOC				eS	S	13 54 49.3	-20
SOC				e		13 55 12.9	
SOC				pmax	pmax		
	comp=N,43nm,1.1s						
SOC				pmax	pmax		
	comp=E,16nm,1.1s						
SOC				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.4						
ILAR	Eielson Array	87.71	25	P	P	13 44 37.9	-0.5
	comp=Z,0.5nm,0.5s,mb4.0,baz=250,slow=4.1,SNR=4.2						
OBN	Obninsk	88.96	325	eP	P	13 44 43.4	-1.2
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.9						
BRTR	Keskin Array B	91.35	310	P	P	13 44 56.1	+0.1
	comp=Z,0.7nm,0.6s,mb4.2,baz=127,slow=6.2,SNR=4.7						
TXAR	Lajitas Array	123.59	53	PKP	PKPdf	13 50 49.5	-1.7
	comp=Z,0.2nm,0.3s,baz=243,slow=2.8,SNR=3.6						

BJI ***06*** *13:54:44.7, 5.60S×154.60E, h87^{km}, mB4.7, mb4.6, Ms4.6, Msz4.1*
NEIC ***06*** *13:54:44.8±0.7, 5.63S×154.60E, mb4.1/3, Error ellipse: s-maj=16.5km s-min=13.5km az=96.0*
IDC ***06*** *13:54:44.6±0.9, 5.64S×154.59E, h89^{km}±7^{km}, mb3.8/8, mb1 4.0/9, mb1mx3.9/15, mbtmp4.2/9, MS3.2/3, Ms1 3.2/3, ms1mx3.0/19, Error ellipse: s-maj=20.6km s-min=15.6km az=104.0*
ISC 06 13:54:43.6±0.6**, 5.69S**±0.08×**154.61E**±0.08**, h91^{km}, h91^{km}**±2.3^{km}**:pP-P, n20, σ1^{s}01**/21**, mb4.0**/11**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.47	125	LR	LR	13 58 41.3	
	comp=Z,114nm,20.3s,baz=303,slow=36						
PMG	Port Moresby	8.25	243	P	P	13 56 43.6	+1.2
	20nm,0.3s,baz=58,slow=8.2,SNR=65						
PMG				S	S	13 58 15.0	+0.3
	1.9nm,0.3s,baz=230,slow=21,SNR=3.9						
PMG	Port Moresby	8.25	243	ePn	P	13 56 44.7	+2.3
	273nm,0.8s						
DZM	Mont Dzumac	19.91	146	P	P	13 59 11.7	+1.3
	0.8nm,0.3s,baz=285,slow=24,SNR=7.9						
DZM				LR	LR	14 05 00.2	
	comp=Z,91nm,20.0s,baz=41,slow=31						
WRAB	Tennant Creek	24.25	232	eP	P	13 59 53.8	+0.3
	13nm,0.6s,mb4.4						
WB2	Warramunga Arr	24.26	232	eP	P	13 59 54.1	+0.5
ASAR	Alice Springs	26.77	226	P	P	14 00 15.7	-1.4
	3.7nm,0.8s,mb4.0,baz=58,slow=9.3,SNR=47						
ASAR				LR	LR	14 09 47.4	
	comp=Z,64nm,18.9s,baz=280,slow=34						
ASPA	Alice Springs	26.77	226	eP	P	14 00 16.2	-0.9
STKA	Stephens Creek	28.76	203	P	P	14 00 33.6	-1.4
	2.2nm,0.6s,mb3.9,baz=31,slow=14,SNR=9.8						
KSM	Kuching	44.81	278	eP	P	14 02 49.8	-0.9
CMAR	Chiang Mai Arr	59.88	295	P	P	14 04 41.9	-0.7
	1.5nm,0.9s,mb4.0,baz=114,slow=5.1,SNR=8.6						
CMAR				pP	pP	14 05 04.2	-1.3
	1.8nm,1.1s,baz=110,slow=6.2,SNR=3.4						
HHC	Hu-ho-hao-te	60.82	324	eP	P	14 04 51.5	+2.8
HHC				AP	pP	14 05 15.5	+3.8
HHC				XP	sP	14 05 27.5	+5.6
HHC				PCP	PcP	14 05 35.9	+4.6
HHC				PP	PP	14 07 09.4	+3.6
HHC				SCP		14 09 24.9	
HHC				S	S	14 12 57.1	-0.1
HHC				PS	PS	14 13 29.4	+2.9
HHC				SCS	ScS	14 14 27.0	-0.2
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
HHC				AMB	AMB		
	comp=Z,100nm,8.4s						
HHC				LR	LR		
	comp=N,140nm,15.6s						
HHC				LR	LR		
	comp=E,230nm,19.2s						
HHC				LR	LR		
	comp=Z,70nm,14.4s						

ULN	Ulaanbaatar	67.70	328	*e*P	P	14 05 33.6	+0.2
	comp=Z,1.8nm,0.9s,mb3.9						
SONM	Songino Array	68.04	327	P	P	14 05 35.1	-0.4
	comp=Z,1.5nm,0.8s,mb3.9,baz=138,slow=5.5,SNR=8.9						
VNDA	Vanda	71.89	178	P	P	14 05 58.1	-0.2
	comp=Z,1.8nm,0.8s,mb4.0,baz=325,slow=6.5,SNR=10.0						
VNDA	Vanda	71.89	178	*e*P	P	14 05 58.5	+0.1
	comp=Z,1.9nm,0.8s,mb4.0						
WMQ	Urumqi	77.61	317	*e*P	P	14 06 33.1	+1.4
WMQ				AP	pP	14 06 58.3	+2.7
WMQ				XP	sP	14 07 09.1	+3.5
MKAR	Makanchi Array	82.18	319	P	P	14 06 55.0	-1.1
	comp=Z,0.9nm,0.9s,mb3.6,baz=102,slow=7.1,SNR=6.7						
MKAR				pP	pP	14 07 19.1	-1.1
	comp=Z,0.2nm,0.5s,baz=124,slow=5.2,SNR=2.3						
ILAR	Eielson Array	82.31	22	P	P	14 06 56.0	-0.3
	comp=Z,1.1nm,0.8s,mb3.8,baz=251,slow=5.2,SNR=8.6						
ILAR				pP	pP	14 07 18.4	-2.1
	comp=Z,0.4nm,0.9s,baz=259,slow=4.6,SNR=1.7						
MAW	Mawson	85.44	203	P	P	14 07 12.2	+0.2
	comp=Z,2.6nm,0.6s,mb4.3,baz=72,slow=6.6,SNR=12						

IDC 06 14:10:50.8±3.6**, 1.47N**×**97.38E, mb3.4**/3**, mb1 3.5**/4**, mb1mx3.4**/19**, mbtmp3.4**/4**, ML3.1**/1**, Error ellipse: s-maj=138.5km s-min=28.9km az=64.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.95	5	Pn	P	14 14 49.4	-1.7
	0.0nm,0.3s,baz=222,slow=13,SNR=3.1						
ASAR	Alice Springs	43.42	127	P	P	14 18 55.6	-1.7
	0.3nm,0.6s,baz=297,slow=8.3,SNR=5.8						
SONM	Songino Array	46.84	8	P	P	14 19 22.3	-2.0
	0.4nm,0.5s,baz=214,slow=5.2,SNR=4.9						
MKAR	Makanchi Array	47.02	346	P	P	14 19 24.0	-1.7
	0.3nm,0.5s,baz=168,slow=7.8,SNR=4.8						

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*JMA **06** 14:25:38.8±0.6, 32.84N×142.08E, h51^{km}, M3.4*
*IDC **06** 14:25:40.5±2.4, 32.99N×141.68E, mb3.3/3, mb1 3.3/4, mb1mx3.2/21, mbtmp3.2/4, ML3.0/1, Error ellipse: s-maj=60.2km s-min=26.2km az=60.0*
ISC 06 14:25:40.4±3.3**, 32.99N**±0.07×**141.8E**±0.2**, h17**^{km}±25^{km}**, n10, σ0**^{s}**84**/13**, mb3.3**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.69	275	P	Pn	14 26 09.9	+0.4
JHJ	Hachijo jima 2	1.72	275	Pn	Pn	14 26 09.7	-0.2
	25nm,0.3s,baz=73,slow=21,SNR=18						
BSO1	Boso 1	1.81	337	P	Pn	14 26 11.5	+0.3
BSO1				S	Sn	14 26 35.4	+1.6
BSO3	Boso 3	2.12	329	P	Pn	14 26 16.4	+0.8
JAG	Ashikaga	3.95	331	P	Pn	14 26 41.7	0.0
JAG				S	Sn	14 27 26.8	-1.3
MJAR	Matsushiro Arr	4.63	321	Pn	Pn	14 26 50.7	-0.7
	0.7nm,0.3s,baz=155,slow=12,SNR=5.5						
JMM	Marumori	4.94	350	P	Pn	14 26 54.9	-0.9
JMM				S	Sn	14 27 47.2	-6.0
SONM	Songino Array	30.48	310	P	P	14 31 55.3	+0.9
	0.2nm,0.3s,mb3.3,baz=104,slow=5.9,SNR=2.4						
MKAR	Makanchi Array	46.65	305	P	P	14 34 08.3	-1.2
	0.3nm,0.5s,mb3.5,baz=79,slow=8.8,SNR=4.2						
ASAR	Alice Springs	56.84	189	P	P	14 35 26.9	+0.3
	0.1nm,0.5s,mb3.1,baz=1.8,slow=6.5,SNR=8.4						

IDC 06 14:48:37.8±6.2**, 6.24S**×**147.03E, h48**^{km}±62^{km}**, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.3**/14**, mbtmp3.6**/4**, ML2.3**/1**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx3.0**/12**, Error ellipse: s-maj=73.6km s-min=37.5km az=116.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.15	178	P	P	14 49 24.7	-1.5
	3.0nm,0.3s,baz=62,slow=6.7,SNR=22						
PMG				S	S	14 50 02.0	-0.8
	4.7nm,0.3s,baz=89,slow=24,SNR=2.7						
ASAR	Alice Springs	21.44	215	P	P	14 53 21.8	-2.2
	0.4nm,0.4s,baz=51,slow=9.1,SNR=18						
STKA	Stephens Creek	26.01	191	P	P	14 54 06.5	-1.7
	0.9nm,0.8s,baz=357,slow=13,SNR=3.0						
JOW	Kunigami	37.56	332	LR	LR	15 08 26.4	
	comp=Z,262nm,20.4s,baz=191,slow=32						
ILAR	Eielson Array	85.69	23	P	P	15 01 11.2	-1.1
	0.3nm,0.5s,baz=244,slow=5.1,SNR=5.0						

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*IDC **06** 15:00:06.4±2.1, 15.95N×122.93E, mb3.3/3, mb1 3.5/3, mb1mx3.3/19, mbtmp3.3/3, Error ellipse: s-maj=77.9km s-min=26.9km az=54.0*
*MAN **06** 15:00:14.2, 15.42N×121.61E, h13^{km}, mb4.5, ML3.4, MS3.3*
ISC 06 15:00:14.7±0.6**, 15.42N**±0.03×**121.65E**±0.04**, h20**^{km}±6^{km}**, n24, σ0**^{s}**91**/35**, mb3.2**/3**, 2C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	Baler	0.33	348	*e*P	Pb	15 00 22.1	+0.2
BALP				*e*S	Sb	15 00 28.9	+2.2
PCPH	Palayan	0.55	285	⇑ *i*P	Pb	15 00 25.1	-0.5
PCPH				*i* S	Sb	15 00 32.9	0.0
POLP	Polilio Island	0.74	157	*e*P	Pb	15 00 27.9	-0.9
POLP				*e*S	Sb	15 00 37.7	-0.8
BCPH	Baguio City Da	1.40	313	⇑ *i*P	Pn	15 00 39.0	-0.4
BCPH				*i* S	Sb	15 00 57.5	-0.1
TGY	Tagaytay City	1.48	208	⇓ *e*P	Pn	15 00 41.0	+0.4
TGY				*i* S	Sn	15 01 02.9	+3.6
CAUP	Cauayan	1.53	6	*e*P	Pn	15 00 40.1	-1.2
GQP	Guinayangan	1.69	153	⇓ *e*P	Pn	15 00 43.1	-0.5
GQP				*i* S	Sn	15 01 04.8	-0.1
SCZP	Santa Cruz	1.71	282	*e*P	Pn	15 00 42.9	-1.0
SCZP				*e*S	Sn	15 01 04.9	-0.3
BOLP	Bolinao	1.92	300	*e*P	Pn	15 00 46.6	-0.3
BOAC	Boac	1.96	174	*e*P	Pn	15 00 47.4	0.0
BOAC				*e*S	Sn	15 01 12.4	+0.8
PGP	Puerto Galera	2.02	199	*e*P	Pn	15 00 49.0	+0.7
LUBP	Lubang	2.15	219	*e*P	Pn	15 00 49.8	-0.4
LUBP	Lubang	2.15	219	*e*P	Pn	15 00 50.0	-0.2
CVP	Callao Caves	2.28	4	*e*P	Pn	15 00 50.0	-2.0
CVP				*i* S	Sn	15 01 20.5	+0.7
AUQP	San Andres	2.31	154	*e*P	Pn	15 00 52.6	+0.2
ABRA	Dolores	2.39	338	*e*P	Pn	15 00 54.8	+1.1
ABRA				*e*S	Sn	15 01 26.3	+3.6
APYP	Conner	2.46	351	*e*P	Pn	15 00 54.2	-0.4
APYP				*e*S	Sn	15 01 24.2	-0.2
SJMP	San Jose	2.98	190	*e*P	Pn	15 01 04.1	+2.0
PVCP	Virac	3.03	126	*e*P	Pn	15 01 03.4	+0.7
OTRP	Odiongan	3.06	173	*e*P	Pn	15 01 02.9	-0.2
BUSP	Coron	3.67	203	*e*P	Pn	15 01 11.2	-0.6
CMAR	Chiang Mai Arr	21.92	281	P	P	15 05 13.6	+4.7
	0.8nm,0.8s,mb3.2,baz=86,slow=8.2,SNR=5.2						
ASAR	Alice Springs	40.65	163	P	P	15 07 49.7	-5.8
	0.2nm,0.3s,mb3.2,baz=339,slow=7.5,SNR=11						
MKAR	Makanchi Array	45.22	322	P	P	15 08 28.0	-4.4
	0.2nm,0.6s,mb3.1,baz=135,slow=6.1,SNR=3.4						

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*IDC **06** 15:11:37.9±0.8, 1.65S×99.55E, mb4.2/9, mb1 4.3/10, mb1mx4.1/19, mbtmp4.2/10, ML4.0/1, MS3.2/1, Ms1 3.4/1, ms1mx2.9/26, Error ellipse: s-maj=42.1km s-min=17.6km az=55.0*
*BJI **06** 15:11:42.2, 1.70S×99.60E, h35^{km}, mb4.8*
*NEIC **06** 15:11:43.2±2.6, 1.75S×99.58E, h36^{km}±21^{km}, mb4.6/6, Error ellipse: s-maj=28.9km s-min=7.2km az=51.0*
NEIC Felt [II] at Padang, Sumatra.
ISC 06 15:11:41.4±0.7**, 1.7S**±0.1×**99.7E**±0.2**, h33**^{km}**, n23, σ0**^{s}**62**/20**, mb4.4**/15**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.99	8	*e*Pn	Pn	15 13 23.9	-0.3
CMAR	Chiang Mai Arr	20.01	358	P	P	15 16 10.3	-3.9
	0.2nm,0.3s,baz=190,slow=9.7,SNR=13						
CMAR				LR	LR	15 23 33.3	
	comp=Z,75nm,20.7s,baz=180,slow=36						
PKI	Pulchoki	32.14	336	*e*P	P	15 18 08.8	+0.5
LSA	Lhasa	32.23	346	*e*P	P	15 18 09.8	+0.7
	4.9nm,0.6s,mb4.5						
GUN	Gumba	32.25	337	*e*P	P	15 18 09.8	+0.5
	25nm,0.6s,mb5.2						
DMN	Daman	32.30	335	*e*P	P	15 18 10.0	+0.3
KKN	Kakani	32.39	336	*e*P	P	15 18 10.0	-0.4
	12nm,0.8s,mb4.8						
GKN	Gorkha	32.84	335	*e*P	P	15 18 14.6	+0.2
	9.2nm,0.6s,mb4.9						
KOLN	Koldanda	33.09	333	*e*P	P	15 18 16.8	+0.2
	13nm,0.7s,mb5.0						
WRAB	Tennant Creek	38.47	121	*e*P	P	15 19 02.4	+0.2
	3.4nm,0.5s,mb4.3						
ASAR	Alice Springs	39.73	126	P	P	15 19 13.1	+0.4
	1.7nm,0.7s,mb3.9,baz=302,slow=7.6,SNR=18						
ASAR				PcP	PcP	15 21 19.9	+0.5
	0.7nm,0.7s,baz=303,slow=2.6,SNR=5.1						
WMQ	Urumqi	46.54	348	*e*P	P	15 20 08.5	+0.8
WMQ				AP	pP	15 20 18.5	+0.9
WMQ				XP	sP	15 20 22.5	+0.8
STKA	Stephens Creek	49.63	132	P	P	15 20 31.6	-0.4
	1.4nm,0.4s,mb4.3,baz=296,slow=7.2,SNR=6.0						
SONM	Songino Array	49.65	6	P	P	15 20 32.0	0.0
	1.9nm,0.7s,mb4.2,baz=188,slow=8.8,SNR=21						
MKAR	Makanchi Array	50.62	345	P	P	15 20 39.0	-0.3
	3.9nm,0.6s,mb4.5,baz=148,slow=8.1,SNR=36						
ZAL	Zalesovo	56.77	350	P	P	15 21 22.9	-1.7
	4.2nm,0.4s,mb4.8,baz=321,slow=5.0,SNR=16						
BRTR	Keskin Array B	72.84	312	P	P	15 23 08.0	-1.0
	0.5nm,0.5s,mb3.7,baz=90,slow=4.3,SNR=3.1						
IDI	Anoyia	78.56	306	P	P	15 23 41.4	-0.2
	1.2nm,0.2s,mb4.4,baz=136,slow=20,SNR=5.8						
MLR	Muntele Rosu	79.82	317	P	P	15 23 48.3	0.0
	0.7nm,0.4s,mb4.0,baz=118,slow=17,SNR=2.8						
FINES	FINESS Array B	83.66	332	P	P	15 24 08.3	+0.5
	1.1nm,0.9s,mb4.0,baz=90,slow=11,SNR=4.8						
CPUP	Villa Florida	144.37	217	PKP	PKPdf	15 31 15.8	+0.8
	5.0nm,0.8s,baz=138,slow=5.6,SNR=16						
CPUP	Villa Florida	144.37	217	PKP	PKPdf	15 31 15.8	+0.8
TXAR	Lajitas Array	144.65	37	PKP	PKPdf	15 31 17.2	+1.9
	0.6nm,0.3s,baz=306,slow=2.6,SNR=5.2						

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*NEIC **06** 15:50:30.1±1.2, 16.28S×176.24W, h359^{km}±14^{km}, mb3.6/1, Error ellipse: s-maj=50.5km s-min=15.2km az=144.0*
*IDC **06** 15:50:30.0±2.1, 16.18S×176.34W, h350^{km}±24^{km}, mb3.8/4, mb1 3.9/5, mb1mx3.4/16, mbtmp4.5/5, Error ellipse: s-maj=61.8km s-min=17.9km az=141.0*
ISC 06 15:50:29.0±1.8**, 16.1S**±0.5×**176.5W**±0.5**, h348**^{km}±42^{km}**, n19, σ0**^{s}**18**/7**, mb3.8**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.03	65	P	P	15 51 49.3	0.0
	6.8nm,0.3s,baz=10,slow=3.7,SNR=7.4						
AFI	Afiamalu	5.03	65	P	P	15 51 49.3	0.0
STKA	Stephens Creek	41.14	240	P	P	15 57 41.5	-0.2
	1.4nm,0.5s,mb3.4,baz=87,slow=11,SNR=9.9						
WRAB	Tennant Creek	46.80	258	*e*P	P	15 58 26.7	0.0
	3.0nm,0.8s,mb3.6						
ASAR	Alice Springs	47.09	252	P	P	15 58 29.1	+0.2
	4.5nm,0.5s,mb4.0,baz=88,slow=7.6,SNR=207						
MJAR	Matsushiro Arr	67.59	322	P	P	16 00 50.5	-0.1
	0.8nm,0.6s,mb3.7,baz=164,slow=7.7,SNR=4.3						
ILAR	Eielson Array	83.71	12	P	P	16 02 20.1	0.0
	1.8nm,0.6s,mb4.1,baz=218,slow=5.3,SNR=15						
ARCES	ARCESS Array B	124.83	351	PKP	PKPdf	16 08 47.2	-0.1
	3.3nm,0.9s,baz=297,slow=2.7,SNR=3.8						
ARCES	ARCESS Array B	124.83	351	PKP	PKPdf	16 08 47.2	-0.1
FINES	FINESS Array B	131.91	346	PKP	PKPdf	16 08 59.2	-1.7
	2.2nm,1.0s,baz=180,slow=34,SNR=3.8						
CLL	Collm	144.05	350	*i* PKIKP	PKPdf	16 09 23.6	+0.5
	logA/T=0.9						
CLL	Collm	144.05	350	*e*PKIKP	PKPdf	16 09 24.0	+0.9
BRG	Berggiesshubel	144.29	349	*e*P	PKPbc	16 09 24.5	+1.2
BRTR	Keskin Array B	144.74	318	PKP	PKPdf	16 09 26.1	+1.4
	2.6nm,0.7s,baz=100,slow=2.5,SNR=14						
MOX	Moxa	144.91	351	*e*P	PKPdf	16 09 26.0	+1.3
MLR	Muntele Rosu	145.16	332	PKPbc	PKPbc	16 09 26.8	+0.9
	1.8nm,0.5s,baz=42,slow=5.1,SNR=8.8						
KHC	Kasperske Hory	146.03	348	*e*PKP	PKPdf	16 09 30.0	+3.4
GERES	GERESS Array B	146.28	348	PKPbc	PKPbc	16 09 29.8	+1.2
	0.6nm,0.4s,baz=63,slow=3.0,SNR=6.7						
DAVOX	Davos	148.94	352	PKPbc	PKPdf	16 09 37.5	+6.2
	6.2nm,0.6s,baz=149,slow=3.8,SNR=6.8						

OTT 06 16:01:47.4±0.2**, 52.78N**×**67.29W, MN3.0**/8**, Blast, Mount Wright, Qc Mining explosion., Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	2.07	7	PN	Pn	16 02 23.9	+0.1
SCHQ				SG	Sg	16 02 51.5	-4.9
SCHQ				Trac		16 02 54.7	
	comp=Z,32nm,0.1s						
MNQ	Manicouagan	2.43	203	PN	Pn	16 02 28.3	-0.7
MNQ				Trac		16 03 03.0	
	comp=Z,32nm,0.2s						
SMQ	Clarke City	2.59	172	PN	Pn	16 02 29.7	-1.5
SMQ				SN	Sn	16 03 00.9	-2.9
SMQ				Trac		16 03 07.9	
	comp=Z,24nm,0.2s						
ICQ	Pointe Anglais	3.26	180	PN	Pn	16 02 38.8	-2.0
ICQ				SN	Sn	16 03 16.8	-4.1
ICQ				Trac		16 03 26.9	
	comp=Z,14nm,0.2s						
CNQ	Baie Comeau	3.52	188	PN	Pn	16 02 43.7	-0.7
CNQ				Trac		16 03 40.9	
	comp=Z,16nm,0.3s						
GSQ	Grosses Roches	3.88	178	PN	Pn	16 02 48.3	-1.3
GSQ				Trac		16 03 51.5	
	comp=Z,5.8nm,0.1s						
LG4Q	La Grande 4	4.18	284	PN	Pn	16 02 51.3	-2.5
LG4Q				SN	Sn	16 03 39.1	-5.0
LG4Q				LG		16 03 53.4	
LG4Q				Trac		16 03 55.0	
	comp=Z,6.5nm,0.2s						
LMQ	La Malbaie	5.59	202	PN	Pn	16 03 09.8	-3.9
LMQ				SN	Sn	16 04 09.1	-11
LMQ				Trac		16 04 20.4	
	comp=Z,7.2nm,0.2s						
DRLN	Deer Lake	7.11	116	PN	Pn	16 03 31.0	-4.2
DRLN				SN	Sn	16 04 48.4	-9.4
LMN	Caledonia Moun	7.12	166	PN	Pn	16 03 31.3	-4.1
VLDQ	Val d'Or	7.99	238	PN	Pn	16 03 44.5	-3.0
MALO	McAlpine Lake	8.27	255	PN	P	16 03 46.1	-5.3
VIMO	Victor Mine	9.97	277	PN	P	16 04 08.7	-6.0
SILO	Sutton Inlier	10.60	286	PN	P	16 04 17.0	-6.5

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*NEIC **06** 17:09:51.0±0.6, 24.60N×121.82E, h85^{km}±5^{km}, mb3.8/1, Error ellipse: s-maj=14.9km s-min=12.1km az=58.0*
NEIC Felt at Hua-lien and Taipei. Recorded [2 TAP] in I-lan; [1 TAP] in Hua-lien, T'ai-pei and T'ao-yuan Counties.
*JMA **06** 17:09:51.6±0.3, 24.78N×121.79E, h81^{km}, M3.3*
*TAP **06** 17:09:52.3, 24.75N×121.71E, h84^{km}, ML4.3*
TAP Felt I J at Ilan, II J at Nioudou, I J at Suao, II J at Nanau, I J at Sanguang, I J at Santiao Chiao, I J at Nanshan, I J at Kuangyinshan, I J at Jungli (National Central University).
*IDC **06** 17:09:54.1±4.9, 24.69N×122.02E, h115^{km}±48^{km}, mb3.5/6, mb1 3.5/7, mb1mx3.3/22, mbtmp3.9/7, Error ellipse: s-maj=48.8km s-min=16.8km az=63.0*
ISC 06 17:09:51.3±0.3**, 24.75N**±0.02×**121.76E**±0.02**, h87**^{km}±2^{km}**, n73, σ0**^{s}**85**/122**, mb3.7**/7**, 5C-16D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILA	Ilan	0.02	317	⇓ *i*P	P	17 10 04.3	+0.6
ILA				S	S	17 10 13.8	+1.0
TWC	Suao	0.16	151	⇓ *i*P	P	17 10 04.5	+0.7
TWC				S	S	17 10 13.9	+0.7
ENTT	Nioudou	0.21	239	⇓ *i*P	P	17 10 04.4	+0.4
ENTT				S	S	17 10 12.9	-0.6
TWA	Mucha	0.28	325	⇓ *i*P	P	17 10 04.8	+0.5
TWA				S	S	17 10 13.8	-0.4
NWF	Wu-fen Shan	0.32	3	⇓ *i*P	P	17 10 05.2	+0.7
NWF				S	S	17 10 14.8	+0.2
ENA	Nanau	0.32	184	⇓P	P	17 10 04.5	-0.1
ENA				S	S	17 10 15.4	+0.8
TWB1	Santiao Chiao	0.33	38	⇓ *i*P	P	17 10 05.2	+0.6
TWB1				S	S	17 10 14.4	-0.2
TATO	Taipei	0.34	312	⇑ *i*Pn	P	17 10 04.7	+0.1
TATO				*e*Sn	S	17 10 14.2	-0.5
TAP1	Taipei	0.36	323	P	P	17 10 05.0	+0.2
TAP1				S	S	17 10 14.0	-1.0
YHNB	Yeheng	0.36	257	*e*Pn	P	17 10 04.0	-0.8
YHNB				*e*Sn	S	17 10 13.5	-1.5
TAP	Taipei	0.37	321	*e*P	P	17 10 05.0	+0.2
TAP				S	S	17 10 14.2	-0.9
NSK	Sanguang	0.38	259	⇓ *i*P	P	17 10 04.9	0.0
NSK				S	S	17 10 13.6	-1.5
TWS1	Kuangyinshan	0.47	318	⇓ *i*P	P	17 10 06.3	+0.7
TWS1				S	S	17 10 16.5	+0.1
NNS	Nan Shan	0.47	229	⇓ *i*P	P	17 10 06.0	+0.3
NNS				S	S	17 10 15.1	-1.3
TWY	Chenhua	0.54	344	⇓ *i*P	P	17 10 07.0	+0.8
TWY				S	S	17 10 17.8	+0.4
NCU	National Centr	0.57	293	⇓P	P	17 10 07.0	+0.5
NCU				S	S	17 10 17.7	0.0
NACB	Ninganchiao	0.59	195	*e*Pn	P	17 10 05.4	-1.4
NACB				*e*Sn	S	17 10 18.0	-0.1
TWD	Chiawan	0.68	193	*e*P	P	17 10 06.6	-1.0
TWD				S	S	17 10 18.3	-1.5
NSTT	Nanjuang	0.70	260	*i* P	P	17 10 08.0	+0.2
NSTT				S	S	17 10 18.7	-1.4
HSN	Hsinchu	0.72	274	*e*P	P	17 10 08.1	+0.1
HSN				S	S	17 10 19.3	-1.1
TWT	Tachien	0.73	227	⇓ *i*P	P	17 10 09.0	+0.9
TWT				S	S	17 10 20.7	+0.2
HWA	Hwalien	0.78	191	*e*P	P	17 10 07.6	-1.1
PCYT	Pengchaiyu	0.92	18	⇓ *i*P	P	17 10 10.9	+0.8
PCYT				S	S	17 10 25.2	+1.1
NSY	Sanyi	0.97	250	⇑P	P	17 10 11.4	+0.7
NSY				S	S	17 10 25.3	0.0
ESL	Shilin	0.98	198	*e*P	P	17 10 09.0	-1.8
TWQ1	Liyutan	0.99	246	P	P	17 10 11.4	+0.5
TWQ1				S	S	17 10 24.9	-0.6
TCU	Taichung	1.16	239	⇑P	P	17 10 13.5	+0.5
TCU				S	S	17 10 28.5	-0.7
SMLT	Sun Moon Lake	1.17	223	*e*P	P	17 10 13.8	+0.7
SMLT				S	S	17 10 30.0	+0.5
YOJ	Yonaguni jima	1.17	104	P	P	17 10 12.8	-0.4
YOJ				S	S	17 10 28.9	-0.6
TYC	Yuchr	1.18	225	⇓ *i*P	P	17 10 13.7	+0.4
TYC				S	S	17 10 29.4	-0.3
EHY	Hungye	1.30	198	*e*P	P	17 10 13.7	-1.2
WNT	Mingjian	1.31	229	P	P	17 10 15.6	+0.5
WNT				S	S	17 10 32.7	+0.1
TWF1	Yuli	1.46	197	*e*P	P	17 10 15.2	-1.6
ALS	Alishan	1.51	216	P	P	17 10 18.5	+0.9
ALS				S	S	17 10 38.8	+1.9
CHN5	Tsauling	1.52	221	*e*P	P	17 10 18.2	+0.6
CHN5				S	S	17 10 37.2	+0.2
WGK	Gukeng	1.52	226	⇑ *i*P	P	17 10 18.5	+0.8
WGK				S	S	17 10 37.9	+0.6
WTCT	Ta-ch'eng	1.61	237	*e*P	P	17 10 18.9	+0.1
WTCT				S	S	17 10 38.7	-0.5
CHKT	Chengkung	1.68	193	*e*P	P	17 10 18.9	-0.9
CHN2	Minshiung	1.69	224	*e*P	P	17 10 20.8	+0.9
CHN2				S	S	17 10 41.8	+0.9
ELDTW	Lidau	1.70	204	*e*P	P	17 10 20.0	+0.1
CHY	Chiayi	1.75	225	⇓P	P	17 10 21.0	+0.4
CHY				S	S	17 10 42.6	+0.4
CHN4	Tsaushan	1.76	218	*e*P	P	17 10 21.0	+0.3
CHN4				S	S	17 10 44.0	+1.6
WSF	Szhu	1.79	232	*e*P	P	17 10 21.3	+0.1
WSF				S	S	17 10 43.6	+0.4
WTP	Ta-pu	1.83	215	*e*P	P	17 10 22.2	+0.5
IRIF	Iriomote-Funau	1.84	103	P	P	17 10 21.4	-0.4
IRIF				S	S	17 10 43.4	-0.8
TWK	Hsinying	1.88	219	⇑P	P	17 10 23.0	+0.7
TWK				S	S	17 10 47.8	+2.5
CHN1	Nanshi	1.93	216	*e*P	P	17 10 23.4	+0.4
CHN1				S	S	17 10 46.9	+0.6
SGST	Jiashian	1.98	213	*e*P	P	17 10 24.3	+0.6
SGST				S	S	17 10 48.0	+0.4
HATJ	Hateruma jima	1.98	110	P	P	17 10 24.1	+0.4
HATJ				S	S	17 10 48.0	+0.4
CHN8	Yiju	1.99	226	*e*P	P	17 10 24.1	+0.2
CHN8				S	S	17 10 48.5	+0.7
TWG	Pinlang	2.02	198	*e*P	P	17 10 22.4	-1.9
JKRS	Kuro-shima	2.11	104	P	P	17 10 25.3	-0.2
JKRS				S	S	17 10 50.6	-0.1
SCLT	Jiali	2.13	223	*e*P	P	17 10 24.9	-0.8
SCLT				S	S	17 10 51.5	+0.4
JIJ	Ishigaki jima	2.20	100	P	P	17 10 26.1	-0.6
JIJ				S	S	17 10 51.7	-1.3
SSD	Sandimen	2.25	208	*e*P	P	17 10 27.8	+0.4
ECL	Taimali	2.27	199	*e*P	P	17 10 27.2	-0.5
TWM1	Shoushan	2.28	213	*e*P	P	17 10 28.4	+0.5
PNG	Penghu	2.34	240	P	P	17 10 27.6	-1.0
PNG				S	S	17 10 53.4	-3.0
WDGT	Dungji	2.43	233	*e*P	P	17 10 28.4	-1.5
SCZT	Fangliau	2.59	204	*e*P	P	17 10 32.3	+0.1
JTJ	Tarama	2.67	92	P	P	17 10 33.7	+0.3
JTJ				S	S	17 11 05.6	+0.8
KNM	Kinmen	3.05	264	*e*P	P	17 10 38.3	-0.3
JMJ	Miyako jima 2	3.21	88	*e*S	S	17 11 18.8	+0.8
JOGS	Gusukube	3.31	89	P	P	17 10 42.9	+0.7
JOGS				*e*S	S	17 11 21.4	+0.8
JKE	Kume jima 2	4.80	70	*e*S	S	17 11 58.8	+1.3
JOW	Kunigami	6.22	69	P	P	17 11 20.9	-1.4
	2.0nm,0.3s,baz=131,slow=22,SNR=6.7						
ULN	Ulaanbaatar	25.85	337	*e*P	P	17 15 16.6	+0.4
	1.6nm,0.6s,mb3.6						
SONM	Songino Array	26.06	336	P	P	17 15 18.7	+0.5
	0.7nm,0.7s,mb3.2,baz=150,slow=9.6,SNR=7.5						
MKAR	Makanchi Array	38.30	315	P	P	17 17 04.3	-0.5
	0.3nm,0.6s,mb3.3,baz=100,slow=9.1,SNR=6.0						
ASAR	Alice Springs	49.55	165	P	P	17 18 32.9	-2.7
	0.4nm,0.6s,mb3.5,baz=345,slow=6.6,SNR=11						
STKA	Stephens Creek	59.41	160	P	P	17 19 43.2	-3.9
	2.8nm,0.6s,mb4.5,baz=321,slow=11,SNR=11						
FINES	FINESS Array B	71.23	330	P	P	17 21 01.8	-0.7
	1.1nm,0.8s,mb3.7,baz=76,slow=4.9,SNR=4.1						
YBH	Yreka Blue Hor	90.98	42	P	P	17 22 44.6	-2.4
	2.1nm,0.9s,mb4.3,baz=256,slow=12,SNR=3.3						

CASC 06 17:22:20.4±2.4**, 11.42N**×**85.92W, h198**^{km}±10^{km}**, MD3.8, 8C-2D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONN	Concepcion	0.32	63	⇑ *e*P	P	17 22 47.9	+0.9
APON	Apoyo	0.51	343	⇑ *e*P	P	17 22 48.0	+0.4
CRUN	El Crucero	0.67	326	*e*P	P	17 22 49.4	+1.1
TICN	Ticuantepe	0.68	333	*e*P	P	17 22 48.6	+0.3
WILN	Americas 2	0.78	340	⇑ *e*P	P	17 22 49.3	+0.5
MGAN	Managua	0.79	336	⇑ *e*P	P	17 22 49.3	+0.5
XAVN	Gruta Xavier	0.83	331	⇑ *e*P	P	17 22 49.3	+0.2
APYN	Apoyeque	0.91	332	⇓ *e*P	P	17 22 49.9	+0.3
PYTN	Playitas	1.12	353	*e*P	P	17 22 51.2	+0.2
MOMJ	Momotombo	1.16	328	*e*P	P	17 22 51.3	0.0
MOMJ				*e*S	S	17 23 17.3	+2.1
MIRN	Miramar	1.28	323	⇑ *e*P	P	17 22 52.4	+0.1
VCR	Vista de Mar	1.32	168	⇑ *i*P	P	17 22 53.6	+0.9
VCR				*e*S	S	17 23 18.5	+0.9
CNGN	Cerro Negro	1.32	325	*e*P	P	17 22 52.7	0.0
CNGN				*e*S	S	17 23 18.5	+0.9
LEON	Leon	1.38	316	⇓ *e*P	P	17 22 52.9	-0.2
LEON				*e*S	S	17 23 18.2	-0.2
TEL3	Telica 3	1.46	322	⇑ *e*P	P	17 22 54.0	0.0
TEL3				*e*S	S	17 23 20.2	+0.4
CRIN	San Cristobal	1.69	319	*e*P	P	17 22 52.3	-3.7
JCR	Jicaral	1.75	153	*e*P	P	17 22 57.4	+0.8
JCR				*e*S	S	17 23 25.7	+1.2
CGA2	Cerro Gallo 2	2.00	134	*e*P	P	17 23 00.5	+1.5
CGA2				*e*S	S	17 23 28.6	-0.2
PRS1	Puriscal	2.13	132	*e*P	P	17 23 02.3	+1.9
LAJ	Bijagual	2.35	131	*e*P	P	17 23 02.3	-0.6
LCR2	La Lucha 2	2.51	131	*e*P	P	17 23 05.6	+0.9
LCR2				*e*S	S	17 23 39.7	+0.6
BUS	Buena Vista	2.82	131	*e*P	P	17 23 09.8	+1.5
BUS				*e*S	S	17 23 47.2	+1.9

ISC 06 17:29:11.8±0.8**, 39.63N**±0.05×**40.39E**±0.05**, h10**^{km}**, n5, σ0**^{s}**28**/9**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BINT	Bingol	0.76	174	PG	Pg	17 29 27.2	+0.1
BINT				SG	Sg	17 29 37.3	-0.1
EZM	Erzurum	0.80	70	*i* PG	Pg	17 29 28.1	+0.2
EZM				*i* SG	Sg	17 29 38.6	-0.1
ERZM	Erzurum	0.80	70	*i* P	Pb	17 29 27.4	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
ERZM				*i* S	Sb	17 29 38.1	0.0
KELT	**Kelkit**	1.01	301	*i* P	Pb	17 29 30.5	-0.5
KELT				*i* S	Sb	17 29 44.4	+0.3
ELZG	**Elazig**	1.57	224	*i* P	Pn	17 29 44.4	+4.4

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*CSEM **06** 17:37:06.2±0.3, 35.46N×4.18W, h5^{km}, MD2.7, Error ellipse: s-maj=11.3km s-min=4.5km az=24.0*

CNRM 06 17:37:11.8, 35.30N×3.90W, h5^{km}, MD2.7, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPAL	**Palemas**	0.08	205	*i* P	Pg	17 37 13.5	-0.2
TOU	**Touzarine**	0.36	160	*i* P	Pg	17 37 18.0	-1.0
ZAI	**Zaio**	1.00	109	*e*P	Pb	17 37 30.5	-0.7
TZK	**Tazeka**	1.23	191	*e*P	Pb	17 37 34.0	-1.2
TZK				*e*S	Sb	17 37 50.5	-0.7

DJA 06 17:50:05.8±1.0, 9.59S×113.94E, h33^{km}, MD4.7/3, ML3.6/2, 4C-2D, Error ellipse: s-maj=22.5km s-min=12.5km az=45.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRDI	**Scrawed**	1.12	11	⇑*i*Pn	Pn	17 50 23.6	-1.8
	30nm,0.2s						
SRDI				⇓*i*Sn	Sn	17 50 36.8	-2.9
KELI	**Kelakatan**	1.47	22	⇑*i*Pn	Pn	17 50 29.5	-0.9
KELI				⇑*i*Sn	Sn	17 50 46.6	-2.0
RATI	**Rata**	1.79	62	⇑*i*Pn	Pn	17 50 33.9	-1.1
	119nm,0.2s						
RATI	**Rata**	1.79	62	*e*P	P	17 50 34.3	-0.6
RATI				⇓*i*Sn	Sn	17 50 53.3	-3.6

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*NEIC **06** 18:12:39.0, 15.35N×94.83W, h30^{km}, MD3.9(MEX), After MEX.*

MEX 06 18:12:39.0±0.7, 15.35N×94.83W, h30^{km}±54^{km}, MD3.9, 2D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	1.30	289	⇓*i*P	Pn	18 12 59.0	-2.4
HUIG				*i* S	Sn	18 13 14.1	-3.7
OXX	**Oaxaca**	2.50	314	*e*P	Pn	18 13 16.0	-2.6
VHO	**Vista Hermosa**	2.50	313	*e*P	Pn	18 13 16.4	-2.2
VHO				*i* S	Sn	18 13 45.0	-3.4
SCX	**San Cristobal**	2.52	57	*e*P	Pn	18 13 17.0	-1.9
SCX				*i* S	Sn	18 13 47.0	-1.9
CCIG	**Comitan**	2.75	70	⇓*i*P	Pn	18 13 19.6	-2.7
CCIG				*i* S	Sn	18 13 50.2	-4.6

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*TRN **06** 18:20:27.7, 10.18N×60.54W, h75^{km}, MD3.9*

*NEIC **06** 18:20:27.7, 10.18N×60.54W, h75^{km}, MD3.9(TRN), After TRN.*

*FUNV **06** 18:20:28.3, 10.31N×60.46W, h86^{km}, MW3.0*

ISC 06 18:20:27.5±0.9, 10.19N±0.05×60.65W±0.06, h97^{km}±8^{km}, n32, σ0^{s}97/55, 6C, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBH	**Brigand Hill**	0.50	305	*e*P	**P**	**18 20 42.2**	**-0.9**
TPP	**Pointe-a-Pierr**	0.80	279	*e*P	**P**	**18 20 45.4**	**-0.4**
TRN	**Trinidad (W)**	0.87	301	*e*P	**P**	**18 20 46.0**	**-0.5**
TRN				*e*S	**S**	**18 21 00.4**	**-0.2**
BOT	**Bacolet**	0.97	356	*e*P	**P**	**18 20 45.9**	**-1.7**
TPR	**Prospect**	0.99	353	*e*P	**P**	**18 20 46.4**	**-1.5**
GUIV	**Guiria**	1.61	286	⇑*i*P	**P**	**18 20 56.1**	**+0.7**
GUIV				*e*S	**S**	**18 21 16.1**	**+0.1**
GUIV	**Guiria**	1.61	286	⇑*e*P	**P**	**18 20 56.1**	**+0.8**
GUIV				*e*S	**S**	**18 21 16.2**	**+0.2**
GRW	**Mount Saint Ca**	2.19	333	*e*P	**P**	**18 21 03.5**	**+0.4**
GRW				*e*S	**S**	**18 21 29.8**	**+0.4**
GRHS	**Sauteurs**	2.24	334	*e*P	**P**	**18 21 03.7**	**0.0**
GRHS				*e*S	**S**	**18 21 31.4**	**+0.8**
GUNV	**Guanoco**	2.26	269	⇑*i*P	**P**	**18 21 06.3**	**+2.4**
GUNV				*e*S	**S**	**18 21 32.2**	**+1.2**
GUNV	**Guanoco**	2.26	269	*e*P	**P**	**18 21 05.4**	**+1.5**
GUNV				*e*S	**S**	**18 21 32.8**	**+1.8**
GRSS	**Sisters**	2.29	336	*i* P	**P**	**18 21 04.5**	**+0.1**
CRUV	**Carupano**	2.59	281	⇑*i*P	**P**	**18 21 08.5**	**0.0**
CRUV	**Carupano**	2.59	281	⇑*e*P	**P**	**18 21 08.4**	**-0.1**
ITEV	**Isla Los Testi**	2.70	296	*e*P	**P**	**18 21 10.0**	**0.0**
ITEV				*e*S	**S**	**18 21 42.4**	**+0.5**
ITEV	**Isla Los Testi**	2.70	296	*e*P	**P**	**18 21 10.0**	**0.0**
ITEV				*e*S	**S**	**18 21 42.0**	**+0.1**
ORIV	**Oritupano**	2.94	248	*e*P	**P**	**18 21 15.2**	**+1.8**
ORIV				*e*S	**S**	**18 21 48.7**	**+0.9**
ORIV	**Oritupano**	2.94	248	*e*P	**P**	**18 21 14.5**	**+1.2**
ORIV				*e*S	**S**	**18 21 48.7**	**+0.9**
GURV	**El Guri**	3.41	225	*e*P	**P**	**18 21 20.5**	**+0.7**
GURV				*e*S	**S**	**18 21 59.2**	**-0.1**
PCRV	**Puerto La Cruz**	3.92	270	*e*P	**P**	**18 21 27.5**	**+0.7**
PCRV				*e*S	**S**	**18 22 10.4**	**-1.6**
PCRV	**Puerto La Cruz**	3.92	270	*e*P	**P**	**18 21 27.1**	**+0.3**
PCRV				*e*S	**S**	**18 22 10.4**	**-1.6**
CUPV	**Cœpira**	5.06	269	*e*P	**P**	**18 21 43.1**	**+0.8**
CUPV				*e*S	**S**	**18 22 38.9**	**-1.1**
CUPV	**Cœpira**	5.06	269	⇑*e*P	**P**	**18 21 42.9**	**+0.6**
CUPV				*e*S	**S**	**18 22 38.4**	**-1.6**
BIRV	**Birongo**	5.54	273	*e*P	**P**	**18 21 49.8**	**+1.0**
MERV	**Las Mercedes**	5.64	261	*e*P	**P**	**18 21 50.7**	**+0.5**
MERV				*e*S	**S**	**18 22 52.2**	**-2.2**
MERV	**Las Mercedes**	5.64	261	*e*P	**P**	**18 21 50.7**	**+0.5**
MERV				*e*S	**S**	**18 22 51.9**	**-2.5**
CAOV	**Caicara del Or**	6.29	244	*e*P	**P**	**18 21 59.4**	**+0.2**
CAOV				*e*S	**S**	**18 23 06.9**	**-3.3**
TURV	**Turiamo**	7.08	273	*e*P	**P**	**18 22 10.5**	**+0.3**
BAUV	**El Baul**	7.39	261	*e*P	**P**	**18 22 13.9**	**-0.5**
BAUV				*e*S	**S**	**18 23 32.8**	**-4.5**
BAUV	**El Baul**	7.39	261	*e*P	**P**	**18 22 14.2**	**-0.2**
BAUV				*e*S	**S**	**18 23 32.9**	**-4.4**
PAYV	**Puerto Ayacuch**	8.40	236	*e*P	**P**	**18 22 27.8**	**-0.4**
PAYV				*e*S	**S**	**18 23 56.2**	**-5.8**
SDV	**Santo Domingo**	9.93	263	*e*Pn	**P**	**18 22 48.4**	**-0.4**
	9.7nm,0.8s						
SDV				*e*Sn	**S**	**18 24 32.9**	**-6.2**

WEL 06 18:29:59.5±0.3, 40.47S×173.58E, h139^{km}±2^{km}, ML3.5/12, 4C-2D, Error ellipse: s-maj=1.9km s-min=1.7km az=0.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	0.42	142	PN	P	18 30 19.4	-0.4
DUWZ				SN	S	18 30 34.4	-0.8
NNZ	**Nelson**	0.77	191	PN	P	18 30 21.0	-0.6
NNZ				SN	S	18 30 37.5	-1.2
QRZ	**Quartz Range**	0.88	246	⇓PN	P	18 30 21.5	-1.0
TCW	**Tory Channel**	0.91	145	PN	P	18 30 23.0	+0.2
TCW				SN	S	18 30 39.4	-1.2
TUWZ	**Tuamarina**	1.00	164	PN	P	18 30 23.6	+0.2
TUWZ				SN	S	18 30 40.7	-1.0
KIW	**Kapiti Island**	1.08	112	PN	P	18 30 24.0	-0.2
KIW				SN	S	18 30 41.3	-1.9
MRW	**Makara Radio**	1.14	132	⇑PN	P	18 30 24.8	0.0
MRW				SN	S	18 30 42.8	-1.4
BSWZ	**Blackbirch Sta**	1.27	170	PN	P	18 30 26.0	-0.1
BSWZ				SN	S	18 30 45.2	-1.3
WAZ	**Wanganui**	1.29	57	PN	P	18 30 26.1	-0.3
WAZ				SN	S	18 30 46.3	-0.6
CAW	**Cannon Point**	1.30	120	PN	P	18 30 26.1	-0.4
CAW				SN	S	18 30 45.3	-1.8
CMWZ	**Cape Campbell**	1.37	160	SN	S	18 30 48.2	-0.1
THZ	**Tophouse**	1.39	201	PN	P	18 30 26.6	-0.9
THZ				SN	S	18 30 47.1	-1.7
MRZ	**Mangatainoka R**	1.53	98	⇑PN	P	18 30 28.3	-0.7
MSWZ	**Moikau Station**	1.58	127	PN	P	18 30 29.0	-0.5
MSWZ				SN	S	18 30 50.1	-2.3
MTW	**Mount Morrison**	1.61	116	⇑PN	P	18 30 29.3	-0.6
MTW				SN	S	18 30 50.7	-2.5
PAWZ	**Paruwai Farm**	1.67	124	⇑PN	P	18 30 29.9	-0.6
PAWZ				SN	S	18 30 51.9	-2.3
MTVZ	**Mangateitei**	1.81	54	PN	P	18 30 30.9	-1.2
TSZ	**Takapari Road**	1.87	78	PN	P	18 30 31.6	-1.2
TSZ				SN	S	18 30 55.0	-3.2
WNVZ	**Wahianoa**	1.92	54	PN	P	18 30 32.2	-1.2
WNVZ				SN	S	18 30 57.5	-1.9
KHZ	**Kahutara**	1.95	181	⇓PN	P	18 30 32.9	-0.8
WPVZ	**Whakapapa**	1.97	51	PN	P	18 30 32.5	-1.4
CNZ	**Chateau**	1.97	51	PN	P	18 30 32.5	-1.5
TUVZ	**Tukino**	2.00	54	PN	P	18 30 32.9	-1.4
BFZ	**Birch Farm**	2.04	97	PN	P	18 30 33.9	-1.0
BFZ				SN	S	18 30 58.8	-3.1

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*MOS **06** 18:30:34.4±1.3, 8.11N×92.02E, h33^{km}, mb4.4/6, Error ellipse: s-maj=22.6km s-min=10.7km az=103.1*

*BJI **06** 18:30:34.6, 8.01N×91.93E, h43^{km}, mB4.4, mb4.5, Ms4.2, Msz4.0*

*NEIC **06** 18:30:36.7±0.4, 8.12N×91.92E, mb4.4/12, Error ellipse: s-maj=10.6km s-min=5.6km az=52.0*

*IDC **06** 18:30:36.5±0.9, 8.08N×91.79E, h36^{km}±5^{km}, mb3.8/9, mb1 3.9/10, mb1mx3.7/21, mbtmp4.0/10, ML4.4/1, MS3.3/1, Ms1 3.3/1, ms1mx2.8/29, Error ellipse: s-maj=30.7km s-min=15.6km az=55.0*

ISC 06 18:30:34.7±0.6, 8.15N±0.08×91.99E±0.07, h35^{km}, h35^{km}±1.8^{km}:pP-P, n41, σ0^{s}82/42, mb4.1/18, MS3.6/2, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	9.06	108	*e*Pn	**P**	**18 32 45.5**	**-0.5**
CM31	**Chiang Mai Arr**	12.28	33	*e*Pn	**P**	**18 33 30.1**	**+0.1**
	3.1nm,0.4s						
CMAR	**Chiang Mai Arr**	12.28	33	Pn	**P**	**18 33 30.3**	**+0.3**
	0.6nm,0.3s,baz=231,slow=14,SNR=17						
HYB	**Hyderabad**	16.01	306	*e*P	**P**	**18 34 22.0**	**+3.1**
HYB				*e*		18 34 31.0	
HYB	**Hyderabad**	16.01	306	*i* P	**P**	**18 34 22.0**	**+3.1**
HYB				*e*SP		18 34 33.0	
HYB				*e*S	**S**	**18 37 15.0**	**0.0**
KMI	**Kunming**	19.75	30	P	**P**	**18 35 06.2**	**+1.7**
KMI				AMB	AMB		
	comp=Z,60nm,3.9s						
KMI				LR	LR		
	comp=N,100nm,17.2s						
KMI				LR	LR		
	comp=E,70nm,17.2s						
PKI	**Pulchoki**	20.30	343	*e*P	**P**	**18 35 10.2**	**-0.1**
	comp=E,22nm,0.7s						
PKI	**Pulchoki**	20.30	343	*e*P	**P**	**18 35 10.2**	**-0.1**
PKI				pmax	pmax		
	comp=Z,11nm,0.7s						
DMN	**Daman**	20.42	342	*e*P	**P**	**18 35 11.0**	**-0.6**
	comp=Z,25nm,0.6s						
GUN	**Gumba**	20.49	344	*e*P	**P**	**18 35 12.3**	**0.0**
	comp=Z,36nm,0.8s						
KKN	**Kakani**	20.54	343	*e*P	**P**	**18 35 12.7**	**-0.1**
	comp=Z,18nm,0.7s						
KKN	**Kakani**	20.54	343	*e*P	**P**	**18 35 12.7**	**-0.1**
KKN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GKN	**Gorkha**	20.94	342	*e*P	**P**	**18 35 16.4**	**-0.5**
	comp=Z,31nm,0.6s						
KOLN	**Koldanda**	21.07	339	*e*P	**P**	**18 35 18.2**	**0.0**
	comp=Z,30nm,0.7s,mb4.7						
LSA	**Lhasa**	21.45	358	*e*P	**P**	**18 35 22.9**	**+0.8**
LSA	**Lhasa**	21.45	358	*e*P	**P**	**18 35 24.5**	**+2.4**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
LSA	**Lhasa**	21.45	358	*e*P	**P**	**18 35 24.5**	**+2.4**
	comp=Z,9.9nm,0.8s,mb4.2						
GTA	**Gaotai**	31.91	12	P	**P**	**18 36 57.3**	**-1.9**
GTA				AP	pP	18 37 06.3	-3.0
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
WMQ	**Urumqi**	35.73	355	*e*P	**P**	**18 37 33.1**	**+1.0**
WMQ				AP	pP	18 37 42.8	+0.5
WMQ				XP	sP	18 37 46.8	0.0
WMQ				LR	LR		
	comp=Z,280nm,24.0s,MS4.0						
AAK	**Ala-Archa**	37.64	339	*e*P	**P**	**18 37 48.4**	**+0.2**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
AAK	**Ala-Archa**	37.64	339	*e*P	**P**	**18 37 48.4**	**+0.2**
	comp=Z,6.9nm,1.0s,mb4.3						
MKAR	**Makanchi Array**	39.39	349	P	**P**	**18 38 02.4**	**-0.3**
	comp=Z,1.7nm,0.7s,mb3.9,baz=168,slow=8.4,SNR=21						
MKAR				pP	pP	18 38 14.1	+1.2
	comp=Z,0.9nm,0.4s,baz=164,slow=8.5,SNR=9.0						
SONM	**Songino Array**	41.40	15	P	**P**	**18 38 19.8**	**+0.5**
	comp=Z,3.2nm,0.8s,mb4.0,baz=196,slow=8.0,SNR=36						
SONM				pP	pP	18 38 31.5	+1.9
	comp=Z,1.0nm,0.7s,baz=198,slow=7.4,SNR=5.0						
ULN	**Ulaanbaatar**	41.60	15	*e*P	**P**	**18 38 20.1**	**-0.8**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
ULN	**Ulaanbaatar**	41.60	15	*e*P	**P**	**18 38 20.1**	**-0.8**
	comp=Z,1.7nm,0.9s,mb3.7						
ZAK	**Zakamensk**	43.14	11	*e*P	**P**	**18 38 32.3**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.4						
ZAL	**Zalesovo**	46.03	354	P	**P**	**18 38 56.8**	**+0.2**
	comp=Z,0.7nm,0.3s,mb4.0,baz=50,slow=3.9,SNR=4.4						
ZAL				LR	LR	19 01 41.8	
	comp=Z,40nm,20.9s,MS3.3,baz=356,slow=40						
BVAR	**Borovoye Array**	48.07	343	P	**P**	**18 39 12.2**	**-0.5**
	comp=Z,1.1nm,0.8s,mb4.0,baz=149,slow=8.6,SNR=8.0						
BRVK	**Borovoye**	48.13	343	*e*P	**P**	**18 39 13.2**	**+0.1**
	comp=Z,0.3nm,0.6s,mb3.5						
WRAB	**Tennant Creek**	50.17	124	*e*P	**P**	**18 39 29.3**	**0.0**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
WRAB	**Tennant Creek**	50.17	124	*e*P	**P**	**18 39 29.3**	**+0.1**
	comp=Z,2.8nm,0.5s,mb4.5						
WB2	**Warramunga Arr**	50.17	124	*e*P	**P**	**18 39 29.5**	**+0.2**
ASAR	**Alice Springs**	51.74	129	P	**P**	**18 39 41.5**	**+0.4**
	comp=Z,1.1nm,0.5s,mb4.0,baz=303,slow=7.6,SNR=20						
ASAR				pP	pP	18 39 51.9	+0.4
	comp=Z,0.9nm,0.6s,baz=304,slow=7.8,SNR=5.8						
ARU	**Arti**	54.82	338	*e*P	**P**	**18 40 02.8**	**-0.7**
ARU	**Arti**	54.82	338	*e*P	**P**	**18 40 02.4**	**-1.1**
	comp=Z,8.9nm,1.3s,mb4.6						
BRTR	**Keskin Array B**	60.64	311	P	**P**	**18 40 43.4**	**-1.3**
	comp=Z,1.1nm,0.7s,mb4.1,baz=108,slow=7.8,SNR=7.4						
BRTR				pP	pP	18 40 53.2	-2.1
	comp=Z,1.1nm,0.6s,baz=114,slow=8.5,SNR=4.3						
STKA	**Stephens Creek**	61.85	133	P	**P**	**18 40 53.0**	**+0.1**
	comp=Z,2.2nm,1.0s,mb4.2,baz=312,slow=11,SNR=2.9						
FINES	**FINESS Array B**	71.48	332	P	**P**	**18 41 53.1**	**-0.4**
	comp=Z,1.1nm,0.7s,mb3.9,baz=124,slow=6.9,SNR=4.7						
GERES	**GERESS Array B**	76.20	318	P	**P**	**18 42 21.7**	**+0.5**
	comp=Z,0.9nm,0.8s,mb3.8,baz=90,slow=5.3,SNR=7.4						
GERES				pP	pP	18 42 32.2	+0.2
	comp=Z,0.6nm,0.7s,baz=90,slow=6.7,SNR=3.2						
GRA1	**Grafenberg Arr**	77.86	319	*e*P	**P**	**18 42 31.3**	**+0.9**
GRF	**Grafenberg Arr**	77.86	319	*e*P	**P**	**18 42 31.3**	**+0.9**

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*PRU **06** 19:04:51.5, 50.14N×19.04E*

WAR 06 19:04:51.9, 50.08N×19.13E, h0^{km}, ML2.4, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	0.46	72	*e*PG	Pg	19 05 01.0	0.0
OJC				*e*SG	Sg	19 05 07.0	0.0
OKC	**Ostrava-Krasne**	0.68	250	*e*PG	Pg	19 05 04.8	-0.6
OKC				*e*SG	Sg	19 05 13.7	-0.7
	21nm,0.3s						
NIE	**Niedzica**	1.01	130	*e*PG	Pg	19 05 11.0	-1.1
NIE				*e*SG	Sg	19 05 27.0	+1.4
LIKS	**Likavka**	1.03	181	*e*SN	Sn	19 05 28.1	-0.5
VYHS	**Vyhne**	1.60	187	*e*PN	Pn	19 05 19.9	-1.6
VYHS				*e*SN	Sn	19 05 41.4	-1.7
DPC	**Dobruska-Polom**	1.82	280	*e*PG	Pg	19 05 23.3	-5.0
DPC				*e*SG	Sg	19 05 47.4	-5.2
	20nm,0.3s						
KSP	**Ksiaz**	1.97	294	*e*PG	Pg	19 05 28.0	-3.2
KSP				*e*SG	Sg	19 05 54.0	-3.4
UPC	**Upice**	2.04	283	*e*SG	Sg	19 05 53.8	-6.1
PRU	**Pruhonice**	2.96	270	*e*SG	Sg	19 06 23.3	-7.1
KHC	**Kasperske Hory**	3.73	257	*e*PG	Pg	19 06 01.5	-4.9
KHC				*e*x	x	19 06 29.0	
KHC				*e*SG	Sg	19 06 49.4	-6.7
MOA	**Molln**	3.90	237	*i*	Pn	19 05 57.6	+3.2
MOA	**Molln**	3.90	237	*i* SG	Sg	19 06 55.2	-6.6
	2.0nm,0.5s						
CLL	**Collm**	4.08	290	*e*SG	Sg	19 07 02.0	-5.9

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*BJI **06** 19:11:19.9, 30.50S×71.20W, h55^{km}, mB4.9, Ms5.3, Msz4.8*

*NEIC **06** 19:11:19.9±0.3, 30.48S×71.20W, mb4.6/12, Error ellipse: s-maj=9.4km s-min=4.6km az=84.0*

NEIC Felt [III] at Choapa, Coquimbo, La Serena and Limari.

*GUC **06** 19:11:19.4±1.1, 30.51S×71.11W, h60^{km}±5^{km}, ML5.1*

*IDC **06** 19:11:20.2±0.4, 30.53S×71.00W, h56^{km}±3^{km}, mb4.1/12, mb1 4.2/16, mb1mx4.1/21, mbtmp4.3/16, MS3.6/12, Ms1 3.6/12, ms1mx3.4/23, Error ellipse: s-maj=18.3km s-min=10.6km az=81.0*

ISC 06 19:11:18.6±0.3, 30.49S±0.02×71.37W±0.07, h56^{km}, h56^{km}±.9^{km}:pP-P, n101, σ1^{s}16/70, mb4.5/24, MS3.8/9, 16C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OVCH	**Ovalle**	0.19	128	⇑*i*P	**P**	**19 11 29.1**	**+1.7**
OVCH				*i* S	**S**	**19 11 35.6**	**+1.7**
OVCH				AMP		19 11 36.0	
	comp=N,264µm,0.4s						
TLL	**Tololo Astrono**	0.59	57	*e*P	**P**	**19 11 31.9**	**+0.6**
TLL				*i* S	**S**	**19 11 40.8**	**+0.1**
TLL				AMP		19 11 42.2	
	comp=N,228µm,0.4s						
LSCH	**La Serena**	0.59	11	⇑*i*P	**P**	**19 11 33.0**	**+1.7**
LSCH				*i* S	**S**	**19 11 42.8**	**+2.1**
LSCH				AMP		19 11 43.2	
	comp=N,97µm,0.7s						
CMCH	**Combarbala**	0.75	155	⇑*i*P	**P**	**19 11 33.7**	**+0.4**
CMCH				*i* S	**S**	**19 11 44.2**	**0.0**
CMCH				AMP		19 11 46.2	
	comp=E,266µm,0.6s						
ILCH	**Illapel**	1.15	171	*e*P	**P**	**19 11 39.5**	**+0.7**
ILCH				*i* S	**S**	**19 11 54.1**	**+0.3**
ILCH				AMP		19 11 58.8	
	comp=E,27µm,0.4s						
LCO	**Las Campanas**	1.59	22	⇑*i*P	**P**	**19 11 45.7**	**+0.7**
LCO				*i* S	**S**	**19 12 05.2**	**+0.7**
LCO				AMP		19 12 09.3	
	comp=E,13µm,0.7s						
PTCH	**Petorca**	1.81	168	*e*P	**P**	**19 11 48.4**	**+0.4**
PTCH				*i* S	**S**	**19 12 09.2**	**-0.5**
PTCH				AMP		19 12 16.9	
	comp=E,17µm,0.4s						
VACH	**Vallenar**	1.98	16	*e*P	**P**	**19 11 51.0**	**+0.6**
VACH				*i* S	**S**	**19 12 14.4**	**+0.3**
ZON	**Zonda**	2.54	115	⇓*i*P	**P**	**19 11 58.0**	**-0.4**
ZON				*e*S	**S**	**19 12 33.0**	**+4.8**
PEL	**Peldehue**	2.71	168	*e*P	**P**	**19 12 01.2**	**+0.4**
CFAA	**Coronel Fontan**	2.91	113	P	**P**	**19 12 04.8**	**+1.2**
	comp=E,15nm,0.3s,baz=296,slow=12,SNR=897						
CFAA				S	**S**	**19 12 25.5**	**-12**
	comp=E,44nm,0.3s,baz=293,slow=13,SNR=20						
CLCH	**Cerro Calan**	2.98	166	⇓*i*P	**P**	**19 12 05.1**	**+0.4**
CLCH				*i* S	**S**	**19 12 39.6**	**+0.2**
CLCH				AMP		19 12 51.7	
	comp=E,17µm,0.8s						
RCDM	**Rinconada Maip**	3.03	171	*e*P	**P**	**19 12 06.5**	**+1.2**
RCDM				*i* S	**S**	**19 12 41.6**	**+1.1**
RCDM				AMP		19 12 58.6	
	comp=E,9µm,0.6s						
ANTU	**Antumapu**	3.13	169	AMP		19 12 60.0	
	comp=N,7µm,0.4s						
LVC	**Limon Verde**	8.15	16	P	**P**	**19 13 15.2**	**-1.6**
	comp=N,0.8nm,0.3s,baz=192,slow=6.0,SNR=6.0						
LVC				LR	LR	19 16 11.1	
	comp=N,369nm,21.1s,baz=216,slow=36						
LVC	**Limon Verde**	8.15	16	*e*P	**P**	**19 13 14.5**	**-2.3**
	comp=N,55nm,0.6s						
PLCA	**Paso Flores**	10.24	176	P	**P**	**19 13 42.9**	**-2.6**
	comp=N,0.4nm,0.3s,baz=330,slow=14,SNR=10.0						
PLCA				LR	LR	19 18 13.4	
	comp=N,178nm,21.2s,baz=360,slow=41						
PLCA	**Paso Flores**	10.24	176	*e*P	**P**	**19 13 43.1**	**-2.4**
	comp=N,1.7nm,0.4s						
TRQA	**Tornquist**	10.82	137	*e*P	**P**	**19 13 49.0**	**-4.4**
	comp=N,356nm,1.0s						
CPUP	**Villa Florida**	13.04	75	LR	LR	19 19 47.4	
	comp=N,206nm,21.8s,baz=118,slow=40						
CPUP	**Villa Florida**	13.04	75	*e*P	**P**	**19 14 16.2**	**-6.9**
	comp=N,35nm,0.9s						
ARE	**Arequipa**	13.97	360	*e*P	**P**	**19 14 45.0**	**+10**
LPAZ	**La Paz**	14.45	13	P	**P**	**19 14 43.2**	**+1.6**
	comp=N,0.2nm,0.3s,baz=156,slow=8.5,SNR=15						
LPAZ				LR	LR	19 20 36.7	
	comp=N,121nm,21.6s,baz=188,slow=39						
LPAZ	**La Paz**	14.45	13	P	**P**	**19 14 43.2**	**+1.6**
LPAZ				LR	LR	19 20 36.7	
SIV	**San Ignacio**	17.24	35	P	**P**	**19 15 16.9**	**-0.3**
	comp=N,0.2nm,0.3s,baz=219,slow=13,SNR=18						
SAML	**Samuel**	22.76	21	*e*P	**P**	**19 16 14.6**	**-2.6**
	comp=N,23nm,1.3s,mb4.4						
USHA	**Ushuaia**	24.42	176	P	**P**	**19 16 33.2**	**+0.3**
	comp=N,44nm,0.9s,mb4.9,baz=342,slow=4.3,SNR=10						
USHA				pP		19 16 47.2	
	comp=N,16nm,0.7s,baz=314,slow=8.4,SNR=3.5						
USHA				LR	LR	19 27 44.9	
	comp=N,117nm,18.5s,MS3.4,baz=182,slow=40						
BDFB	**Brasilia**	26.01	61	P	**P**	**19 16 46.3**	**-2.1**
	comp=N,7.1nm,0.7s,mb4.3,baz=247,slow=7.3,SNR=9.8						
BDFB				pP	pP	19 17 00.1	-1.9
	comp=N,7.9nm,0.7s,baz=260,slow=8.1,SNR=4.6						
BDFB				LR	LR	19 27 52.8	
	comp=N,226nm,21.5s,MS3.7,baz=70,slow=39						
BAO	**Brasilia Array**	26.03	61	P	**P**	**19 16 45.0**	**-3.5**
ROSC	**El Rosal**	35.26	355	LR	LR	19 32 47.7	
	comp=N,50nm,18.3s,MS3.3,baz=248,slow=36						
SDV	**Santo Domingo**	39.16	1	P	**P**	**19 18 41.6**	**-1.2**
	comp=N,2.0nm,0.3s,mb4.3,baz=128,slow=15,SNR=4.0						
SDV				pP	pP	19 18 58.1	+1.0
	comp=N,4.7nm,0.8s,baz=296,slow=6.1,SNR=3.1						
JTS	**JuntasAbangare**	42.60	340	LR	LR	19 32 28.0	
	comp=N,99nm,20.6s,MS3.7,baz=182,slow=30						
VNA3	**Neumayer Olymp**	52.40	159	⇑*i*P	**P**	**19 20 27.0**	**0.0**
VNA3	**Neumayer Olymp**	52.40	159	⇑*i*	pP	19 20 40.1	-1.8
VNA3	**Neumayer Olymp**	52.40	159	⇑*i*	sP	19 20 48.6	+0.4
VNA1	**Neumayer--Stat**	52.69	158	⇑*i*P	**P**	**19 20 29.4**	**+0.2**
VNA1	**Neumayer--Stat**	52.69	158		sP	19 20 50.4	0.0
VNA2	**Neumayer--Watz**	53.04	158	⇑*i*P	**P**	**19 20 31.6**	**-0.2**
VNA2	**Neumayer--Watz**	53.04	158	⇑*i*	pP	19 20 46.6	-0.1
VNA2	**Neumayer--Watz**	53.04	158	⇑*i*	sP	19 20 53.2	+0.2
SNAA	**Sanae**	54.63	159	⇑*i*P	**P**	**19 20 41.7**	**-1.8**
SNAA	**Sanae**	54.63	159	⇑*i*	pP	19 20 56.6	-1.8
SNAA	**Sanae**	54.63	159	⇑*i*	sP	19 21 03.2	-1.6
SNAA	**Sanae**	54.63	159	P	**P**	**19 20 41.8**	**-1.7**
	comp=N,4.7nm,1.0s,mb4.5,baz=285,slow=6.2,SNR=39						
SNAA				pP	pP	19 20 56.8	-1.6
	comp=N,1.3nm,0.6s,baz=288,slow=6.5,SNR=6.5						
QSPA	**South Pole Qui**	59.73	180	*e*P	**P**	**19 21 19.2**	**-0.3**
	comp=N,38nm,0.9s,mb5.4						
LRAL	**Lakeview Retre**	64.89	346	P	**P**	**19 21 52.8**	**-1.7**
	comp=N,6.6nm,0.7s,mb4.8						
TXAR	**Lajitas Array**	66.98	330	P	**P**	**19 22 08.8**	**+1.1**
	comp=N,0.4nm,0.5s,mb3.7,baz=153,slow=8.4,SNR=4.7						
TXAR				pP	pP	19 22 24.3	+1.1
	comp=N,2.2nm,0.7s,baz=153,slow=8.4,SNR=8.7						
TXAR				PcP	PcP	19 22 37.1	+1.2
	comp=N,1.2nm,0.8s,baz=148,slow=12,SNR=4.2						
TXAR	**Lajitas Array**	66.98	330	P	**P**	**19 22 08.8**	**+1.1**
TXAR				pP	pP	19 22 24.3	+1.0
TXAR				PcP	PcP	19 22 37.1	+1.2
VNDA	**Vanda**	67.64	191	P	**P**	**19 22 11.6**	**+0.4**
	comp=N,2.5nm,0.9s,mb4.2,baz=135,slow=5.0,SNR=13						
WVT	**Waverly**	68.05	346	P	**P**	**19 22 12.5**	**-1.9**
	comp=N,20nm,1.4s,mb4.9						
SYO	**Syowa Base**	68.92	159	⇑P	**P**	**19 22 15.0**	**-4.2**
SYO	**Syowa Base**	68.92	159	⇑PcP	PcP	19 22 39.0	-4.4
MNTX	**Cornudas Mount**	69.76	329	*e*P	**P**	**19 22 24.4**	**-0.6**
	comp=N,2.9nm,1.1s,mb4.1						
MNTX				*e*pP	pP	19 22 38.4	-2.2
FVM	**French Village**	70.41	344	*e*P	**P**	**19 22 27.5**	**-1.3**
	comp=N,17nm,1.1s,mb4.9						
FVM				*e*pP	pP	19 22 43.8	-0.5
DBIC	**Dimbokro**	73.54	72	P	**P**	**19 22 46.2**	**-1.6**
	comp=N,2.0nm,0.5s,mb4.3,baz=216,slow=6.8,SNR=7.8						
DBIC				pP	pP	19 23 01.1	-2.4
	comp=N,3.7nm,0.6s,baz=219,slow=6.6,SNR=4.0						
DBIC				LR	LR	19 52 26.9	
	comp=N,60nm,18.2s,MS3.9,baz=128,slow=34						
DBIC	**Dimbokro**	73.54	72	P	**P**	**19 22 46.2**	**-1.6**
DBIC				pP	pP	19 23 01.1	-2.4
DBIC				LR	LR	19 52 26.9	
MAW	**Mawson**	76.38	164	*e*P	**P**	**19 23 02.4**	**-0.7**

MAW	**Mawson**	**76.38**	**164**	P	**P**	**19 23 02.5**	**-0.6**
	comp=N,8.8nm,0.7s,mb4.8,baz=214,slow=6.6,SNR=18						
MAW				pP	pP	19 23 17.8	-0.9
	comp=N,3.6nm,0.7s,baz=162,slow=3.3,SNR=3.5						
MAW				LR	LR	19 56 11.9	
	comp=N,69nm,20.6s,MS4.0,baz=63,slow=35						
TSUM	**Tsumeb**	**79.64**	**106**	*e*P	**P**	**19 23 20.6**	**-1.5**
	comp=N,8.8nm,1.2s,mb4.6						
TSUM				*e*pP	pP	19 23 35.3	-2.5
RSSD	**Black Hills**	**80.03**	**337**	*e*P	**P**	**19 23 24.2**	**+0.5**
	comp=N,3.3nm,1.0s,mb4.2						
RSSD				*e*pP	pP	19 23 40.4	+0.9
HWUT	**Hardware Ranch**	**80.76**	**331**	*e*P	**P**	**19 23 27.3**	**-0.3**
	comp=N,3.5nm,0.8s,mb4.3						
HWUT				*e*pP	pP	19 23 43.9	+0.5
BW06	**Boulder Array**	**80.91**	**333**	*e*P	**P**	**19 23 28.2**	**-0.2**
	comp=N,2.5nm,1.1s,mb4.1						
BW06				*e*pP	pP	19 23 44.2	+0.1
PDAR	**Pinedale Array**	**80.91**	**333**	P	**P**	**19 23 29.1**	**+0.8**
	comp=N,0.9nm,0.6s,mb3.9,baz=146,slow=5.3,SNR=8.0						
PDAR				pP	pP	19 23 45.6	+1.5
	comp=N,0.8nm,0.7s,baz=135,slow=6.3,SNR=3.1						
PDAR				LR	LR	19 56 14.6	
	comp=N,56nm,18.8s,MS3.9,baz=71,slow=33						
BOSA	**Boshof**	**81.20**	**118**	P	**P**	**19 23 28.6**	**-1.6**
	comp=N,6.1nm,0.9s,mb4.5,baz=193,slow=3.3,SNR=7.4						
BOSA				LR	LR	19 57 56.2	
	comp=N,62nm,18.2s,MS4.0,baz=45,slow=35						
NVAR	**Mina Array Bea**	**81.35**	**325**	P	**P**	**19 23 32.8**	**+2.0**
	comp=N,1.8nm,0.8s,mb4.0,baz=145,slow=6.6,SNR=10.0						
NVAR				pP	pP	19 23 47.9	+1.3
	comp=N,2.0nm,0.9s,baz=137,slow=6.8,SNR=5.9						
ELK	**Elko**	**81.69**	**328**	*e*P	**P**	**19 23 33.4**	**+0.9**
	comp=N,2.1nm,0.9s,mb4.1						
ELK				*e*pP	pP	19 23 49.1	+0.8
LBTB	**Lobatse**	**83.27**	**115**	*e*P	**P**	**19 23 39.3**	**-1.5**
	comp=N,16nm,1.0s,mb5.0						
LBTB				*e*pP	pP	19 23 54.9	-1.8
ULM	**Lac du Bonnet**	**83.27**	**344**	P	**P**	**19 23 40.3**	**0.0**
	comp=N,1.6nm,0.4s,mb4.4,baz=225,slow=1.4,SNR=2.4						
ULM				pP	pP	19 23 55.9	-0.3
	comp=N,4.0nm,0.9s,baz=187,slow=6.2,SNR=2.1						
FFC	**Flin Flon**	**88.87**	**343**	*e*P	**P**	**19 24 07.0**	**-0.7**
BBB	**Bella Bella**	**96.11**	**329**	P	**P**	**19 24 43.5**	**+2.6**
	comp=N,47nm,1.2s,baz=13,slow=4.4,SNR=3.3						
AKASG	**Malin Array Be**	**119.38**	**46**	PKP	PKPdf	19 30 01.2	-0.5
	comp=N,0.2nm,0.3s,baz=258,slow=2.7,SNR=5.4						
AKASG				pPKP		19 30 17.4	
	comp=N,0.8nm,0.6s,baz=270,slow=2.6,SNR=2.7						
AKASG				sPKP		19 30 23.8	
	comp=N,0.4nm,0.5s,baz=270,slow=2.2,SNR=4.1						
AKASG	**Malin Array Be**	**119.38**	**46**	PKP	PKPdf	19 30 01.2	-0.5
AKASG				pPKP		19 30 17.4	
AKASG				sPKP		19 30 23.8	
BRTR	**Keskin Array B**	**119.59**	**59**	pPKP		19 30 19.8	
	comp=N,0.7nm,0.7s,baz=198,slow=3.9,SNR=2.0						
ASAR	**Alice Springs**	**120.94**	**207**	PKP	PKPdf	19 30 05.2	-0.1
	comp=N,0.5nm,0.7s,baz=140,slow=2.8,SNR=4.6						
ASAR				pPKP		19 30 21.4	
	comp=N,0.2nm,0.5s,baz=136,slow=1.9,SNR=1.8						
BVAR	**Borovoye Array**	**144.28**	**40**	PKP	PKPdf	19 30 47.9	+0.1
	comp=N,2.1nm,0.5s,baz=284,slow=2.2,SNR=20						
BVAR				pPKP		19 31 04.5	
	comp=N,1.4nm,0.5s,baz=304,slow=1.7,SNR=6.1						
YAK	**Yakutsk**	**145.59**	**343**	*e*PKP	PKPdf	19 30 51.0	+1.2
YAK				*e*pPKP		19 31 07.1	
EKS2	**Erkin-Say**	**149.70**	**57**	P	PKPdf	19 31 03.8	+6.6
	SNR=12						
AML	**Almayashu**	**149.75**	**58**	P	PKPdf	19 31 04.1	+6.8
	SNR=8.3						
USP	**Ospenovka**	**150.08**	**55**	P	PKPdf	19 31 04.6	+6.8
	SNR=12						
AAK	**Ala-Archa**	**150.23**	**56**	P	PKPdf	19 31 05.2	+7.2
	SNR=8.3						
AAK	**Ala-Archa**	**150.23**	**56**	*e*PKPbc	PKPdf	19 31 03.8	+5.8
CHMS	**Chumysh**	**150.33**	**56**	P	PKPdf	19 31 05.1	+6.9
	SNR=6.7						
UCH	**Uchtor**	**150.33**	**57**	P	PKPdf	19 31 05.8	+7.6
	SNR=18						
KBK	**Karagaybulak**	**150.55**	**56**	P	PKPdf	19 31 06.2	+7.6
	SNR=9.8						
KZA	**Kyzart**	**150.89**	**57**	P	PKPdf	19 31 06.9	+7.9
	SNR=9.4						
ZAL	**Zalesovo**	**150.93**	**29**	PKPbc	PKPdf	19 31 05.7	+6.9
	comp=N,9.4nm,0.7s,baz=206,slow=2.7,SNR=50						
ZAL				pPKPbc		19 31 22.0	
	comp=N,13nm,0.7s,baz=162,slow=2.4,SNR=17						
TKM2	**Tokmak 2**	**150.95**	**56**	P	PKPdf	19 31 06.7	+7.6
	SNR=9.1						
ULHL	**Ulahol**	**151.57**	**57**	P	PKPdf	19 31 08.7	+8.6
	SNR=8.2						
MKAR	**Makanchi Array**	**153.94**	**44**	PKPbc	PKPdf	19 31 12.1	+8.8
	comp=N,1.6nm,0.8s,baz=311,slow=2.0,SNR=14						
MKAR				pPKPbc		19 31 26.4	
	comp=N,3.1nm,0.8s,baz=288,slow=3.8,SNR=12						
MJAR	**Matsushiro Arr**	**154.67**	**292**	PKPab	PKPab	19 31 30.3	-0.2
	comp=N,2.4nm,0.7s,baz=110,slow=2.5,SNR=9.2						
MJAR				pPKPab		19 31 47.2	
	comp=N,1.7nm,0.6s,baz=98,slow=3.0,SNR=4.3						
MAT	**Matsushiro**	**154.67**	**292**	*e*PKP	PKPab	19 31 31.0	+0.4
MAT	**Matsushiro**	**154.67**	**292**	PKP	PKPab	19 31 31.0	+0.4
MDJ	**Mudanjiang**	**158.29**	**316**	PKP	PKPdf	19 31 10.2	+1.2
MDJ				PP	PP		
	comp=Z,50nm,3.2s						
WMQ	**Urumqi**	**158.74**	**45**	*e*PKP	PKPdf	19 31 09.7	+0.1
WMQ				LR	LR		
	comp=Z,80nm,20.0s,MS4.6						
CN2	**Changchun**	**161.17**	**320**	*e*PKP	PKPdf	19 31 15.8	+3.6
SONM	**Songino Array**	**162.60**	**5**	PKPab	PKPab	19 32 04.1	-0.3
	comp=Z,0.4nm,0.6s,baz=315,slow=3.5,SNR=3.5						
SONM				pPKPab		19 32 19.1	
	comp=Z,0.9nm,0.8s,baz=345,slow=2.8,SNR=5.6						
CMAR	**Chiang Mai Arr**	**165.14**	**142**	PKPab	PKPab	19 32 13.8	-2.4
	comp=Z,1.8nm,0.9s,baz=237,slow=5.1,SNR=8.5						
CMAR				pPKPab		19 32 35.5	
	comp=Z,1.0nm,1.0s,baz=260,slow=5.5,SNR=3.6						
SSE	**Sheshan**	**169.18**	**276**	PKP	PKPdf	19 31 14.8	-4.5
SSE				PP	PP		
	comp=Z,100nm,3.8s						
HHC	**Hu-ho-hao-te**	**169.40**	**348**	*e*PKP	PKPdf	19 31 22.4	+3.3
HHC				APKP		19 31 37.5	
HHC				PKS	PKS	19 34 55.8	+5.0
HHC				PP	PP	19 36 26.9	+2.2
HHC				SKS	SKS	19 38 20.8	+5.3
HHC				SKKS		19 43 07.2	
HHC				PP	PP		
	comp=Z,50nm,9.6s						
HHC				LR	LR		
	comp=N,150nm,14.4s						
HHC				LR	LR		
	comp=E,200nm,18.0s						
HHC				LR	LR		
	comp=Z,120nm,12.0s						
NJ2	**Nanjing**	**171.11**	**283**	*e*PKP	PKPdf	19 31 23.5	+3.1
NJ2				APKP		19 31 34.3	
NJ2				PP	PP	19 36 38.0	+4.4
NJ2				SKS	SKS	19 38 22.0	+5.5
NJ2				PP	PP		
	comp=Z,780nm,10.2s						
NJ2				LR	LR		
	comp=N,760nm,18.4s						
NJ2				LR	LR		
	comp=E,1µm,23.4s						
GYA	**Guiyang**	**175.62**	**156**	*e*PKP	PKPdf	19 31 21.4	-1.0
GYA				APKP		19 31 35.8	
GYA				PP	PP		
	comp=Z,100nm,7.6s						

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*BJI **06** 19:17:57.0, 20.26S×176.96W, h533^{km}, mB4.7, mb4.5*

*NEIC **06** 19:18:02.0±0.8, 19.97S×177.94W, h534^{km}±9^{km}, mb4.3/10, Error ellipse: s-maj=9.1km s-min=6.6km az=139.0*

*IDC **06** 19:18:02.7±1.8, 20.00S×177.87W, h540^{km}±20^{km}, mb3.6/15, mb1 3.8/18, mb1mx3.7/22, mbtmp4.5/18, Error ellipse: s-maj=16.7km s-min=12.2km az=127.0*

ISC 06 19:18:00.6±1.0**, 20.00S**±0.08×**178.00W**±0.08**, h523^{km}**±12^{km}**, n75, σ0^{s}69**/45**, mb4.1**/26**, 12C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.49**	**45**	P	**P**	**19 20 03.3**	**-0.3**
	8.0nm,0.3s,baz=61,slow=23,SNR=6.5						
AFI				S	**S**	**19 21 41.7**	**+0.1**
	5.7nm,0.3s,baz=151,slow=19,SNR=4.6						
DZM	**Mont Dzumac**	**14.67**	**259**	P	**P**	**19 21 12.0**	**+4.9**
	0.8nm,0.3s,baz=82,slow=19,SNR=6.9						
URZ	**Urewera**	**18.69**	**192**	P	**P**	**19 21 46.3**	**-0.1**
	5.6nm,0.3s,baz=276,slow=2.9,SNR=14						
RPZ	**Rata Peaks**	**25.36**	**199**	P	**P**	**19 22 47.7**	**+0.3**
	5.3nm,0.5s,mb4.4,baz=16,slow=3.6,SNR=4.4						
CTAO	**Charters Tower**	**33.54**	**264**	*e*P	**P**	**19 23 58.8**	**+0.7**
	16nm,0.6s,mb4.7						
PMG	**Port Moresby**	**35.23**	**282**	P	**P**	**19 24 13.0**	**+0.8**
	21nm,0.7s,mb4.8,baz=203,slow=2.2,SNR=6.0						
PMG	**Port Moresby**	**35.23**	**282**	*e*P	**P**	**19 24 12.5**	**+0.3**
	25nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**38.01**	**244**	P	**P**	**19 24 35.9**	**+1.0**
	2.5nm,0.5s,mb4.0,baz=75,slow=6.2,SNR=7.3						
ASAR	**Alice Springs**	**44.63**	**256**	P	**P**	**19 25 28.1**	**+0.3**
	12nm,0.6s,mb4.6,baz=86,slow=7.5,SNR=228						
ASAR				PcP	PcP	19 26 58.2	-1.6
	1.3nm,0.6s,baz=87,slow=5.2,SNR=4.9						
ASAR				S	**S**	**19 31 23.1**	**-3.0**
	1.2nm,0.9s,baz=87,slow=13,SNR=6.8						
ASPA	**Alice Springs**	**44.64**	**256**	*e*P	**P**	**19 25 27.8**	**-0.1**
WB2	**Warramunga Arr**	**44.66**	**262**	*e*P	**P**	**19 25 27.4**	**-0.7**
WRAB	**Tennant Creek**	**44.66**	**262**	*e*P	**P**	**19 25 27.5**	**-0.6**
	11nm,0.7s,mb4.5						
KAKA	**Kakadu**	**47.96**	**271**	*e*P	**P**	**19 25 52.7**	**-0.8**
MBWA	**Marble Bar**	**57.96**	**257**	*e*P	**P**	**19 27 03.2**	**-1.6**
	7.4nm,0.6s,mb4.1						
SBA	**Scott Base**	**58.37**	**184**	*e*P	**P**	**19 27 06.9**	**+0.1**
	3.0nm,1.0s,mb3.5						
VNDA	**Vanda**	**58.41**	**185**	P	**P**	**19 27 06.6**	**-0.5**
	0.4nm,0.6s,baz=3.8,slow=8.1,SNR=5.5						
NWAO	**Narrogin (SRO)**	**58.59**	**243**	P	**P**	**19 27 08.6**	**-0.3**
	5.4nm,0.8s,mb3.8,baz=162,slow=14,SNR=3.2						
MJAR	**Matsushiro Arr**	**69.81**	**324**	P	**P**	**19 28 18.9**	**-0.9**
	6.3nm,0.6s,mb4.3,baz=157,slow=6.6,SNR=23						
MAT	**Matsushiro**	**69.81**	**324**	*e*P	**P**	**19 28 19.0**	**-0.8**
	9.0nm,0.8s,mb4.3						
MAT	**Matsushiro**	**69.81**	**324**	P	**P**	**19 28 18.9**	**-0.9**
ASAJ	**Asahikawa**	**73.29**	**331**	P	**P**	**19 28 40.6**	**+0.7**
	13nm,0.7s,mb4.5,baz=215,slow=9.5,SNR=11						
KSM	**Kuching**	**73.34**	**278**	*e*P	**P**	**19 28 40.9**	**+0.1**
YSS	**Yuzh-Sakhalins**	**75.45**	**333**	*e*P	**P**	**19 28 51.8**	**-0.1**
	8.7nm,0.8s,mb4.2						
YBH	**Yreka Blue Hor**	**79.90**	**39**	P	**P**	**19 29 15.4**	**-0.4**
	1.0nm,0.4s,mb3.5,baz=38,slow=19,SNR=2.8						
MDJ	**Mudanjiang**	**80.11**	**325**	P	**P**	**19 29 17.1**	**+0.3**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,50nm,7.1s						
MDJ	**Mudanjiang**	**80.11**	**325**	*e*P	**P**	**19 29 17.0**	**+0.2**
	comp=Z,8.2nm,0.8s,mb4.1						
NVAR	**Mina Array Bea**	**80.66**	**43**	P	**P**	**19 29 20.1**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.3,baz=205,slow=9.0,SNR=5.0						
CN2	**Changchun**	**81.90**	**322**	*e*P	**P**	**19 29 26.7**	**+0.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
TUC	**Tucson**	**82.67**	**52**	P	**P**	**19 29 30.5**	**+0.3**
	comp=Z,0.9nm,0.3s,mb3.8						
KULM	**Kulim**	**83.70**	**278**	*e*P	**P**	**19 29 35.9**	**+0.1**
ENH	**Enshi**	**85.76**	**304**	*e*P	**P**	**19 29 45.5**	**+0.1**
	comp=Z,9.4nm,1.1s,mb4.3						
GYA	**Guiyang**	**86.40**	**300**	⇑*i*P	**P**	**19 29 49.4**	**+0.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
TXAR	**Lajitas Array**	**86.79**	**57**	P	**P**	**19 29 50.1**	**-0.2**
	comp=Z,0.8nm,0.5s,mb3.6,baz=217,slow=6.3,SNR=7.2						
ILAR	**Eielson Array**	**87.83**	**13**	P	**P**	**19 29 52.7**	**-1.6**
	comp=Z,1.0nm,0.7s,mb3.7,baz=224,slow=5.7,SNR=7.7						
XAN	**Xi'an**	**87.83**	**307**	P	**P**	**19 29 55.8**	**+0.7**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
PDAR	**Pinedale Array**	**88.60**	**43**	P	**P**	**19 29 58.3**	**-0.2**
	comp=Z,0.5nm,0.4s,mb3.7,baz=152,slow=2.7,SNR=3.5						
VNA3	**Neumayer Olymp**	**88.64**	**176**	⇑*i*	**P**	**19 29 57.7**	**-0.3**
VNA3	**Neumayer Olymp**	**88.64**	**176**	⇑*i*	**P**	**19 29 59.0**	**+1.0**
VNA2	**Neumayer--Watz**	**89.08**	**177**	⇑*i*	**P**	**19 29 59.9**	**-0.2**
VNA2	**Neumayer--Watz**	**89.08**	**177**	⇑*i*	**P**	**19 30 01.0**	**+0.9**
KMI	**Kunming**	**89.12**	**297**	P	**P**	**19 30 02.1**	**+0.7**
CMAR	**Chiang Mai Arr**	**89.95**	**290**	P	**P**	**19 30 06.5**	**+1.2**
	comp=Z,4.7nm,0.9s,mb4.3,baz=108,slow=2.4,SNR=27						
SONM	**Songino Array**	**95.38**	**319**	P	**P**	**19 30 29.8**	**+0.3**
	comp=Z,0.3nm,0.8s,mb3.5,baz=125,slow=5.5,SNR=5.1						
MKAR	**Makanchi Array**	**110.85**	**314**	PKiKP		19 35 33.2	
	comp=Z,0.6nm,0.6s,baz=282,slow=1.0,SNR=4.9						
BVAR	**Borovoye Array**	**118.69**	**320**	PKP	PKPdf	19 35 48.0	-0.6
	comp=Z,0.9nm,0.5s,baz=106,slow=1.7,SNR=8.2						
BVAR				PP	PP	19 37 21.8	+2.6
	comp=Z,0.1nm,0.4s,baz=198,slow=9.4,SNR=3.6						
ARCES	**ARCESS Array B**	**128.43**	**350**	PKP	PKPdf	19 36 06.7	-0.3
	comp=Z,1.1nm,0.5s,baz=18,slow=3.8,SNR=7.2						
FINES	**FINESS Array B**	**135.29**	**344**	PKP	PKPdf	19 36 21.2	+1.1
	comp=Z,0.7nm,0.6s,baz=90,slow=1.4,SNR=4.5						
FINES	**FINESS Array B**	**135.29**	**344**	PKP	PKPdf	19 36 21.2	+1.1
HFS	**Hagfors**	**139.05**	**351**	PKP	PKPdf	19 36 21.0	-6.0
	comp=Z,1.5nm,0.7s,slow=1.5,SNR=4.9						
AKASG	**Malin Array Be**	**142.57**	**331**	PKP	PKPdf	19 36 29.6	-3.7
	comp=Z,2.2nm,0.5s,baz=40,slow=4.2,SNR=13						
EKA	**Eskdalemuir Ar**	**144.51**	**5**	PKP	PKPdf	19 36 36.2	-0.3
	comp=Z,1.1nm,0.6s,baz=336,slow=3.1,SNR=5.2						
BRTR	**Keskin Array B**	**146.50**	**313**	PKPbc	PKPbc	19 36 42.8	+0.4
	comp=Z,2.2nm,0.6s,baz=119,slow=3.3,SNR=14						
KOLS	**Kolonicke sedl**	**146.86**	**335**	*e*PKP	PKPdf	19 36 41.3	+0.6
CLL	**Collm**	**147.58**	**347**	⇑*i*PKP1	PKPdf	19 36 45.9	+4.2
CLL				*i* PKP2	PKPab	19 36 49.7	-2.0
UPC	**Upice**	**147.59**	**343**	*e*P	PKPdf	19 36 45.7	+3.9
UPC	**Upice**	**147.59**	**343**	⇑*e*PKPB	PKPdf	19 36 45.7	+3.9
DPC	**Dobruska-Polom**	**147.65**	**343**	*e*P	PKPdf	19 36 45.8	+3.9
DPC	**Dobruska-Polom**	**147.65**	**343**	⇑*e*PKPB	PKPdf	19 36 45.8	+3.9
BRG	**Berggiesshubel**	**147.78**	**346**	*e*P	PKPdf	19 36 46.6	+4.5
MLR	**Muntele Rosu**	**147.80**	**328**	PKPbc	PKPdf	19 36 47.3	+5.0
	comp=Z,2.1nm,0.5s,baz=331,slow=3.9,SNR=12						
PVCC	**Panska Ves**	**147.95**	**345**	*e*P	PKPdf	19 36 47.3	+4.9
PVCC	**Panska Ves**	**147.95**	**345**	⇑*e*PKPB	PKPdf	19 36 47.3	+4.9
PRU	**Pruhonice**	**148.45**	**344**	*e*P	PKPdf	19 36 47.8	+4.6
PRU	**Pruhonice**	**148.45**	**344**	⇑*e*PKPB	PKPdf	19 36 47.8	+4.6
MOX	**Moxa**	**148.48**	**348**	*e*PKP	PKPdf	19 36 48.2	+5.0
MOX	**Moxa**	**148.48**	**348**	*i* P	PKPdf	19 36 48.2	+5.0
VYHS	**Vyhne**	**148.50**	**338**	*e*PKP	PKPdf	19 36 47.2	+3.9
VRAC	**Vranov**	**148.51**	**342**	PKPbc	PKPdf	19 36 49.1	+5.8
	comp=Z,1.6nm,0.7s,baz=161,slow=16,SNR=3.6						
NKC	**Novy Kostel**	**148.71**	**347**	*e*P	PKPdf	19 36 48.5	+4.9
NKC	**Novy Kostel**	**148.71**	**347**	⇑*e*PKPB	PKPdf	19 36 48.5	+4.9
GRA1	**Grafenberg Arr**	**149.47**	**348**	*e*PKPbc	PKPdf	19 36 50.8	+6.0
KHC	**Kasperske Hory**	**149.48**	**345**	*e*P	PKPdf	19 36 50.5	+5.6
KHC	**Kasperske Hory**	**149.48**	**345**	⇑*e*PKPB	PKPdf	19 36 50.5	+5.6
GEC2	**GERESS Array S**	**149.72**	**345**	*e*PKPbc	PKPdf	19 36 51.0	+5.7
GERES	**GERESS Array B**	**149.72**	**345**	PKPbc	PKPdf	19 36 51.3	+6.0
	comp=Z,3.3nm,0.8s,baz=45,slow=1.9,SNR=25						

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*CSEM **06** 19:33:14.5±0.7, 38.39N×28.61W, h8^{km}, MD2.8, Error ellipse: s-maj=80.6km s-min=15.0km az=13.0, After PDA*

*PDA **06** 19:33:14.5±0.3, 38.39N×28.61W, h8^{km}±1^{km}, MD2.8, Error ellipse: s-maj=3.3km s-min=1.6km az=27.0*

SVSA 06 19:33:14.5±0.3**, 38.39N×28.61W, h8^{km}**±1^{km}**, MD2.8, Error ellipse: s-maj=3.3km s-min=1.6km az=27.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOR	**Horta**	**0.14**	**353**	*e*P	Pg	19 33 17.3	-0.3
HOR				*e*S	Sg	19 33 19.6	-0.1
PICO	**Pico**	**0.18**	**52**	*e*P	Pg	19 33 18.1	-0.3
PICO				*e*S	Sg	19 33 20.7	-0.3
CALA	**Caldeira**	**0.21**	**339**	*e*P	Pg	19 33 18.5	-0.3
CALA				*e*S	Sg	19 33 21.4	-0.3

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*IDC **06** 19:52:37.2±1.5, 40.68N×108.06E, mb3.5/2, mb1 3.5/4, mb1mx3.3/21, mbtmp3.3/4, ML3.1/2, Error ellipse: s-maj=50.0km s-min=19.8km az=79.0*

*BJI **06** 19:52:40.4, 40.61N×107.87E, h21^{km}, ML3.8, Ms3.2, Msz3.1*

ISC 06 19:52:37.0±0.6**, 40.72N**±0.06×**107.98E**±0.05**, h10^{km}, n8, σ1^{s}12**/16**, mb3.4**/2**, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTO	**Baotou**	**1.56**	**94**	*e*PG	**Pg**	**19 53 08.6**	**+0.5**
BTO				SG	**Sg**	**19 53 29.3**	**+0.4**
BTO				Smax			
	comp=N,760nm,0.3s						
BTO				Smax			
	comp=E,350nm,0.3s						
HHC	**Hu-ho-hao-te**	**2.73**	**86**	*e*P	**Pn**	**19 53 24.7**	**+3.1**
HHC				PG	**Pg**	**19 53 30.3**	**-1.1**
HHC				S	**Sn**	**19 53 57.2**	**+2.2**
HHC				SG	**Sg**	**19 54 05.7**	**-2.1**
HHC				Smax			
	comp=N,520nm,0.4s						
HHC				Smax			
	comp=E,510nm,0.3s						
GTA	**Gaotai**	**6.40**	**261**	P	**Pn**	**19 54 13.9**	**+0.2**
GTA				SG	**Sg**	**19 55 59.2**	**-11**
GTA				Smax			
	comp=N,20nm,0.8s						
GTA				Smax			
	comp=E,10.0nm,0.6s						
GTA				LR	LR		
	comp=N,110nm,5.7s						
GTA				LR	LR		
	comp=E,70nm,7.2s						
GTA				LR	LR		
	comp=Z,70nm,4.6s						
XAN	**Xi'an**	**6.71**	**173**	P	**Pn**	**19 54 17.2**	**-0.9**
XAN				PG	**Pg**	**19 54 38.7**	**-12**
XAN				SG	**Sg**	**19 56 05.8**	**-15**
XAN				Smax			
	comp=N,50nm,1.0s						
XAN				Smax			
	comp=E,40nm,0.7s						
SONM	**Songino Array**	**7.20**	**351**	Pn	**Pn**	**19 54 25.4**	**+0.5**
	comp=E,0.5nm,0.3s,baz=172,slow=14,SNR=24						
SONM				Sn	**Sn**	**19 55 47.1**	**-0.5**
	comp=E,1.5nm,0.3s,baz=156,slow=17,SNR=3.9						
SONM				Lg		19 56 27.4	
	comp=E,4.9nm,0.3s,baz=170,slow=29,SNR=12						
MKAR	**Makanchi Array**	**19.48**	**297**	P	**P**	**19 57 06.3**	**-0.3**
	comp=E,0.0nm,0.3s,baz=90,slow=10,SNR=2.6						
CMAR	**Chiang Mai Arr**	**23.51**	**202**	P	**P**	**19 57 48.6**	**+0.7**
	comp=E,0.5nm,0.6s,mb3.1,baz=8.1,slow=8.8,SNR=4.2						
ASAR	**Alice Springs**	**68.45**	**154**	P	**P**	**20 03 40.6**	**-0.7**
	comp=E,0.4nm,0.6s,mb3.6,baz=342,slow=6.1,SNR=6.4						

IDC 06 20:05:52.0±16.0**, 4.00S**×**102.86E, h155^{km}**±157^{km}**, mb3.4**/6**, mb1 3.5**/6**, mb1mx3.3**/18**, mbtmp3.8**/6**, Error ellipse: s-maj=119.3km s-min=20.1km az=58.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.64**	**350**	P	P	20 10 40.1	-0.6
	0.4nm,0.5s,baz=192,slow=9.9,SNR=4.1						
ASAR	**Alice Springs**	**35.77**	**126**	P	P	20 12 36.4	-1.7
	2.0nm,0.4s,baz=299,slow=7.7,SNR=62						
SONM	**Songino Array**	**51.71**	**3**	P	P	20 14 43.2	-2.1
	0.5nm,0.5s,baz=183,slow=8.0,SNR=8.1						
MKAR	**Makanchi Array**	**53.74**	**343**	P	P	20 14 58.5	-1.9
	0.3nm,0.5s,baz=158,slow=8.1,SNR=5.0						
ZAL	**Zalesovo**	**59.67**	**348**	P	P	20 15 39.5	-2.7
	1.0nm,0.4s,baz=302,slow=2.1,SNR=4.7						
BVAR	**Borovoye Array**	**63.05**	**339**	P	P	20 16 02.5	-2.4
	0.5nm,0.4s,baz=141,slow=10,SNR=5.5						

ISC 06 20:37:04.4±0.7**, 40.02N**±0.04×**31.67E**±0.06**, h10^{km}, n6, σ1^{s}31**/10**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDU	**Mudurnu**	**0.56**	**322**	PG	**Pg**	**20 37 14.6**	**-1.2**
MDU				SG	**Sg**	**20 37 23.9**	**+0.5**
SGKT	**Sivrigoynuk**	**0.62**	**28**	*i* P	**Pb**	**20 37 14.6**	**-2.3**
SGKT				*i* S	**Sg**	**20 37 27.5**	**+2.1**
ESKT	**Eskisehir**	**0.81**	**232**	*e*PN	**Pn**	**20 37 20.7**	**-0.9**
ESKT	**Eskisehir**	**0.81**	**232**	*i* P	**Pb**	**20 37 20.3**	**+0.3**
ESKT				*i* S	**Sb**	**20 37 32.4**	**+1.7**
KIZT	**Kizilcal**	**1.15**	**172**	*e*PN	**Pn**	**20 37 26.5**	**0.0**
ELDT	**Eldivan**	**1.42**	**70**	*i* P	**Pn**	**20 37 29.2**	**-1.3**
ELDT				*i* S	**Sb**	**20 37 49.9**	**+1.2**

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*CNRM **06** 20:45:14.9, 38.42N×13.23W, h30^{km}, MD3.9*

*IGIL **06** 20:45:15.9, 38.20N×13.40W, h2^{km}, ML3.3*

*MDD **06** 20:45:17.1±1.5, 38.44N×13.25W, mb4.3/18, Error ellipse: s-maj=14.6km s-min=11.1km az=66.0, PRXIMO*

*NEIC **06** 20:45:19.5, 38.62N×13.07W, MG4.3(MDD), After MDD.*

*INMG **06** 20:45:20.8±1.8, 38.36N×13.53W, h10^{km}, ML3.1, Error ellipse: s-maj=9.0km s-min=7.0km az=89.0*

*CSEM **06** 20:45:20.8±0.4, 38.64N×13.00W, h10^{km}, ML3.9/24, Error ellipse: s-maj=6.7km s-min=3.9km az=66.0*

ISC 06 20:45:12.7±0.7**, 38.20N**±0.04×**13.19W**±0.05**, h10^{km}, n75, σ1^{s}47**/149**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLOU	**Loures**	**3.24**	**77**	*e*Pn	**Pn**	**20 46 09.2**	**+4.6**
PLOU				*e*Sn	**Sn**	**20 46 45.3**	**+1.7**
	50nm,0.1s						
PLOU	**Loures**	**3.24**	**77**	Pn	**Pn**	**20 46 09.2**	**+4.6**
PLOU				Sn	**Sn**	**20 46 45.3**	**+1.7**
	25nm,0.1s						
PTEO	**Sao Teotonio**	**3.59**	**99**	*e*Pn	**Pn**	**20 46 14.2**	**+4.6**
PTEO				*e*Sn	**Sn**	**20 46 53.9**	**+1.3**
	31nm,0.2s						
PTEO	**Sao Teotonio**	**3.59**	**99**	*e*Pn	**Pn**	**20 46 14.2**	**+4.6**
PTEO				*e*Sn	**Sn**	**20 46 53.9**	**+1.3**
	31nm,0.2s						
ALMR	**Almeirim**	**3.73**	**74**	*e*P	**Pn**	**20 46 15.2**	**+3.6**
ALMR				*e*S	**Sn**	**20 46 57.8**	**+1.6**
ALMR				*e*S	**Sn**	**20 46 57.8**	**+1.6**
ALMR				AML	AML	20 47 00.9	
	comp=E,72nm,0.3s						
MOE	**Montemor**	**3.81**	**84**	*e*Pn	**Pn**	**20 46 17.2**	**+4.4**
MOE				*e*Sn	**Sn**	**20 46 59.6**	**+1.4**
PTOM	**Tomar**	**3.98**	**68**	*e*Pn	**Pn**	**20 46 19.1**	**+3.8**
PTOM				*e*Sn	**Sn**	**20 47 02.9**	**+0.3**
	comp=E,43nm,0.2s						
PTOM	**Tomar**	**3.98**	**68**	Pn	**Pn**	**20 46 19.1**	**+3.8**
PTOM				Sn	**Sn**	**20 47 02.9**	**+0.3**
	comp=E,22nm,0.2s						
PBEJ	**Beja**	**4.20**	**91**	*e*Pn	**Pn**	**20 46 23.1**	**+4.8**
PBEJ				*e*Sn	**Sn**	**20 47 08.0**	**0.0**
	comp=E,18nm,0.3s						
PBEJ	**Beja**	**4.20**	**91**	*e*Pn	**Pn**	**20 46 23.1**	**+4.8**
PBEJ				*e*Sn	**Sn**	**20 47 08.0**	**0.0**
	comp=E,18nm,0.3s						
EGRO	**El Granado**	**4.56**	**97**	Pn	**Pn**	**20 46 27.5**	**+4.1**
	comp=E,4.0nm,0.1s,SNR=16						
EGRO				Sn	**Sn**	**20 47 17.7**	**+0.6**
	comp=E,23nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.56**	**97**	Pn	**Pn**	**20 46 27.5**	**+4.1**
	comp=E,4.0nm,0.1s,SNR=16						
EGRO				Sn	**Sn**	**20 47 17.7**	**+0.6**
	comp=E,23nm,0.1s,SNR=7.9						
PALC	**Alcoutim**	**4.58**	**97**	*e*Pn	**Pn**	**20 46 28.3**	**+4.6**
PALC				*e*Sn	**Sn**	**20 47 18.0**	**+0.4**
	comp=E,30nm,0.1s						
PALC	**Alcoutim**	**4.58**	**97**	*e*Pn	**Pn**	**20 46 28.3**	**+4.6**
PALC				*e*Sn	**Sn**	**20 47 18.0**	**+0.4**
	comp=E,30nm,0.1s						
PCBR	**Castelo Branco**	**4.74**	**68**	*e*Pn	**Pn**	**20 46 29.3**	**+3.3**
PCBR				*e*Sn	**Sn**	**20 47 20.1**	**-1.5**
	comp=E,9.2nm,0.3s						
PCBR	**Castelo Branco**	**4.74**	**68**	Pn	**Pn**	**20 46 29.3**	**+3.3**
PCBR				Sn	**Sn**	**20 47 20.1**	**-1.5**
	comp=E,4.6nm,0.3s						
PVIS	**Viseu**	**4.80**	**57**	*e*Pn	**Pn**	**20 46 29.0**	**+2.1**
PVIS				*e*Sn	**Sn**	**20 47 20.6**	**-2.7**
	comp=E,22nm,0.1s						
PVIS	**Viseu**	**4.80**	**57**	Pn	**Pn**	**20 46 29.0**	**+2.1**
PVIS				Sn	**Sn**	**20 47 20.6**	**-2.7**
	comp=E,11nm,0.1s						
EBAD	**Badajoz**	**4.88**	**82**	Pn	**Pn**	**20 46 31.2**	**+3.3**
	comp=E,1.0nm,0.1s,SNR=10						
EBAD				Sn	**Sn**	**20 47 24.5**	**-0.6**
	comp=E,21nm,0.1s,SNR=9.7						
EBAD	**Badajoz**	**4.88**	**82**	Pn	**Pn**	**20 46 31.2**	**+3.3**
	comp=E,1.0nm,0.1s,SNR=10						
EBAD				Sn	**Sn**	**20 47 24.5**	**-0.6**
	comp=E,21nm,0.1s,SNR=9.7						
MTE	**Manteigas**	**4.90**	**62**	*e*Sn	**Sn**	**20 47 23.6**	**-2.0**
	comp=E,18nm,0.4s						
MTE	**Manteigas**	**4.90**	**62**	Sn	**Sn**	**20 47 23.6**	**-2.0**
	comp=E,8.9nm,0.4s						
EMIN	**Mina Concepcio**	**5.16**	**93**	Pn	**Pn**	**20 46 36.2**	**+4.2**
	comp=E,2.0nm,0.1s,SNR=25						
EMIN				Sn	**Sn**	**20 47 30.9**	**-1.4**

	comp=E,8.6nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.16	93	Pn	Pn	20 46 36.2	+4.2
	comp=E,2.0nm,0.1s,SNR=25						
EMIN				Sn	Sn	20 47 30.9	-1.4
	comp=E,8.6nm,0.1s,SNR=7.9						
PVRL	Vila Real	5.22	52	ePn	Pn	20 46 34.2	+1.5
PVRL				eSn	Sn	20 47 29.5	-4.2
	comp=E,19nm,0.2s						
PVRL	Vila Real	5.22	52	Pn	Pn	20 46 34.2	+1.5
PVRL				Sn	Sn	20 47 29.5	-4.2
	comp=E,9.4nm,0.2s						
EZAM	Zamans	5.23	40	Pn	Pn	20 46 32.0	-0.9
	comp=E,2.3nm,0.2s,SNR=5.9						
EZAM				Sn	Sn	20 47 26.1	-8.0
	comp=E,5.1nm,0.1s,SNR=7.8						
ELOB	Lobios	5.38	45	Pn	Pn	20 46 35.2	+0.3
	comp=E,3.5nm,0.1s,SNR=17						
ELOB				Sn	Sn	20 47 30.7	-7.0
	comp=E,17nm,0.1s,SNR=7.9						
ELOB	Lobios	5.38	45	Pn	Pn	20 46 35.2	+0.3
	comp=E,3.5nm,0.1s,SNR=17						
ELOB				Sn	Sn	20 47 30.7	-7.0
	comp=E,17nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	5.73	33	Pn	Pn	20 46 38.4	-1.5
	comp=E,5.9nm,0.1s,SNR=9.7						
EMAZ				Sn	Sn	20 47 35.9	-11
	comp=E,23nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	5.73	33	Pn	Pn	20 46 38.4	-1.5
	comp=E,5.9nm,0.1s,SNR=9.7						
EMAZ				Sn	Sn	20 47 35.9	-11
	comp=E,23nm,0.1s,SNR=7.9						
PMPS	Porto Santo	5.73	207	ePn	Pn	20 46 37.2	-2.8
PMPS				eSn	Sn	20 47 33.5	-13
STS	Santiago	5.86	36	Pn	Pn	20 46 41.2	-0.6
	comp=E,9.1nm,0.1s,SNR=8.8						
STS				Sn	Sn	20 47 40.3	-10
	comp=E,14nm,0.1s,SNR=7.9						
ESPR	Espera	5.97	101	Pn	Pn	20 46 48.0	+4.6
	comp=E,1.8nm,0.1s,SNR=10						
ESPR				Sn	Sn	20 47 52.9	+0.2
	comp=E,15nm,0.2s,SNR=7.9						
ESPR	Espera	5.97	101	Pn	Pn	20 46 48.0	+4.6
	comp=E,1.8nm,0.1s,SNR=10						
ESPR				Sn	Sn	20 47 52.9	+0.2
	comp=E,15nm,0.2s,SNR=7.9						
ECAL	Calabor	6.20	51	Pn	Pn	20 46 47.1	+0.5
	comp=E,3.8nm,0.2s,SNR=8.6						
ECAL				Sn	Sn	20 47 51.7	-6.6
	comp=E,12nm,0.3s,SNR=7.9						
ECAL	Calabor	6.20	51	Pn	Pn	20 46 47.1	+0.5
	comp=E,3.8nm,0.2s,SNR=8.6						
ECAL				Sn	Sn	20 47 51.7	-6.6
	comp=E,12nm,0.3s,SNR=7.9						
ERUA	La Rua	6.24	46	Pn	Pn	20 46 47.3	+0.2
	comp=E,2.6nm,0.1s,SNR=7.9						
ERUA				Sn	Sn	20 47 50.5	-8.7
	comp=E,3.5nm,0.2s,SNR=7.9						
EADA	Adamuz	6.78	88	Pn	Pn	20 46 58.2	+3.4
	comp=E,1.7nm,0.2s,SNR=14						
EADA				Sn	Sn	20 48 10.2	-2.6
	comp=E,7.6nm,0.1s,SNR=7.9						
EADA	Adamuz	6.78	88	Pn	Pn	20 46 58.2	+3.4
	comp=E,1.7nm,0.2s,SNR=14						
EADA				Sn	Sn	20 48 10.2	-2.6
	comp=E,7.6nm,0.1s,SNR=7.9						
EPON	Pontenova	6.87	40	Pn	Pn	20 46 54.9	-1.1
	comp=E,3.0nm,0.2s,SNR=11						
EPON				Sn	Sn	20 48 05.0	-10
	comp=E,4.1nm,0.1s,SNR=7.9						
EPON	Pontenova	6.87	40	Pn	Pn	20 46 54.9	-1.2
	comp=E,3.0nm,0.2s,SNR=11						
EPON				Sn	Sn	20 48 05.0	-10
	comp=E,4.1nm,0.1s,SNR=7.9						
EMIJ	Mijas	6.89	101	Pn	Pn	20 47 00.5	+4.1
	comp=E,2.0nm,0.4s,SNR=7.9						
EMIJ				Sn	Sn	20 48 15.4	-0.2
	comp=E,2.5nm,0.2s,SNR=7.9						
ELUQ	Luque	7.08	92	Pn	Pn	20 47 03.6	+4.6
ELUQ				Sn	Sn	20 48 18.1	-2.3
ELUQ	Luque	7.08	92	Pn	Pn	20 47 00.4	+1.4
	comp=E,0.9nm,0.2s,SNR=7.9						
ELUQ				Sn	Sn	20 48 18.1	-2.3
	comp=E,1.5nm,0.1s,SNR=4.0						
ELUQ	Luque	7.08	92	Pn	Pn	20 47 03.6	+4.6
	comp=E,0.9nm,0.2s,SNR=7.9						
ELUQ				Sn	Sn	20 48 18.1	-2.3
	comp=E,1.5nm,0.1s,SNR=4.0						
ELOJ	Sierra Loja	7.24	96	Pn	Pn	20 47 09.9	+8.7
ELOJ				Sn	Sn	20 48 23.7	-0.6
ELOJ	Sierra Loja	7.24	96	Pn	Pn	20 47 03.2	+2.0
	comp=E,0.8nm,0.2s,SNR=7.9						
ELOJ				Sn	Sn	20 48 23.7	-0.6
	comp=E,1.2nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	7.34	76	Pn	Pn	20 47 04.8	+2.2
	baz=265,slow=13,SNR=7.9						
ESDC				Sn	Sn	20 48 21.6	-5.2
	comp=E,0.5nm,0.3s,baz=265,slow=23,SNR=3.5						
ESDC	Sonseca Array	7.34	76	Pn	Pn	20 47 04.8	+2.2
	SNR=7.9						
ESDC				Sn	Sn	20 48 21.6	-5.2
	comp=E,0.5nm,0.3s,SNR=3.5						
EBAN	Banos Encina	7.40	87	Pn	Pn	20 47 05.7	+2.1
	comp=E,2.4nm,0.2s,SNR=7.9						
EBAN				Sn	Sn	20 48 24.0	-4.4
	comp=E,4.6nm,0.2s,SNR=7.9						
GUD	Guadarrama	7.41	68	Pn	Pn	20 47 04.4	+0.8
	comp=E,0.6nm,0.3s,SNR=4.0						
GUD				Sn	Sn	20 48 24.1	-4.4
	comp=E,2.2nm,0.3s,SNR=7.9						
CIA	Chichaoua	7.55	150	iP	Pn	20 47 05.5	0.0
CIA				iS	Sn	20 48 28.0	-4.1
EARI	Arriondas	7.91	47	Pn	Pn	20 47 10.7	+0.1
EARI				Sn	Sn	20 48 33.7	-7.4
EARI	Arriondas	7.91	47	Pn	Pn	20 47 10.7	+0.1
	comp=E,1.8nm,0.2s,SNR=11						
EARI				Sn	Sn	20 48 33.7	-7.4
	comp=E,1.4nm,0.2s,SNR=7.9						
EARI	Arriondas	7.91	47	Pn	Pn	20 47 10.7	+0.1
	comp=E,1.8nm,0.2s,SNR=11						
EARI				Sn	Sn	20 48 33.7	-7.4
	comp=E,1.4nm,0.2s,SNR=7.9						
EQES	Quesada	8.00	90	Pn	Pn	20 47 14.8	+3.0
	comp=E,1.9nm,0.3s,SNR=7.9						
EQES				Sn	Sn	20 48 39.5	-3.7
	comp=E,0.7nm,0.1s,SNR=7.9						
EQES	Quesada	8.00	90	Pn	Pn	20 47 14.8	+3.0
	comp=E,1.9nm,0.3s,SNR=7.9						
EQES				Sn	Sn	20 48 39.5	-3.7
	comp=E,0.7nm,0.1s,SNR=7.9						
KIB	El Ksiba	8.09	132	eP	P	20 47 13.5	+0.4
KIB				iS	Sn	20 48 40.5	-5.1
OUK	Oukaimeden	8.23	146	iP	P	20 47 15.0	0.0
OUK				iS	Sn	20 48 44.0	-5.1
TZK	Tazeka	8.35	117	eP	P	20 47 15.0	-1.8
TZK				iS	Sn	20 48 45.5	-6.7
CZD	Col de Zad	8.39	125	eP	P	20 47 17.0	-0.3
CZD				iS	Sn	20 48 47.5	-5.7
ELAN	Lanestosa	8.95	53	Pn	P	20 47 24.0	-1.0
	comp=E,0.9nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	20 48 57.3	-10
	comp=E,2.1nm,0.2s,SNR=7.9						
ELAN	Lanestosa	8.95	53	Pn	P	20 47 24.0	-1.0
	comp=E,0.9nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	20 48 57.3	-10
	comp=E,2.1nm,0.2s,SNR=7.9						
ETOB	Tobarra	9.15	84	Pn	P	20 47 29.9	+2.2
	comp=E,1.3nm,0.4s,SNR=7.9						
ETOB				Sn	Sn	20 49 05.2	-6.6
	comp=E,1.1nm,0.3s,SNR=7.9						
ETOB	Tobarra	9.15	84	Pn	P	20 47 29.9	+2.2
	comp=E,1.3nm,0.4s,SNR=7.9						
ETOB				Sn	Sn	20 49 05.2	-6.6
	comp=E,1.1nm,0.3s,SNR=7.9						
ZFT	Errachidia	9.49	128	eP	P	20 47 33.0	+0.5
ZFT				iS	Sn	20 49 13.0	-7.4
CFUE	Fuerteventura	9.55	184	Pn	P	20 47 29.9	-3.4
	SNR=7.9						
CFUE				Sn	Sn	20 49 07.3	-14
	SNR=7.9						
CFTV	Fuerteventura	9.79	185	Pn	P	20 47 33.0	-3.6
	SNR=7.9						
CFTV				Sn	Sn	20 49 10.7	-17
	SNR=7.9						
EMOS	Mosqueruela	10.09	74	Pn	P	20 47 42.7	+1.9
EMOS				Sn	S	20 49 29.9	-5.2
EMOS	Mosqueruela	10.09	74	Pn	P	20 47 41.6	+0.9
	comp=E,3.0nm,0.7s,SNR=7.9						
EMOS				Sn	S	20 49 28.9	-6.2
	comp=E,1.0nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	10.09	74	Pn	P	20 47 42.7	+1.9
EMOS				Sn	S	20 49 29.9	-5.2
EALK	Alkurruntz	10.18	57	Pn	P	20 47 42.1	+0.1
EALK				Sn	S	20 49 27.1	-10
EALK	Alkurruntz	10.18	57	Pn	P	20 47 42.1	+0.1
	comp=E,1.8nm,0.4s,SNR=4.0						
EALK				Sn	S	20 49 29.1	-8.2
	comp=E,2.9nm,0.4s,SNR=4.0						
EBIE	Bielsa	11.10	62	Pn	P	20 47 55.3	+0.8
	comp=E,0.4nm,0.3s,SNR=4.0						
EBIE				Sn	S	20 49 47.4	-12
	comp=E,0.8nm,0.3s,SNR=4.0						

*CSEM **06** 20:58:49.9±0.4, 38.41N×28.55W, MD2.9, Error ellipse: s-maj=2.6km s-min=2.2km az=33.0, After PDA*

*PDA **06** 20:58:49.9±0.4, 38.41N×28.55W, MD2.9, Error ellipse: s-maj=2.6km s-min=2.2km az=33.0*

SVSA 06 20:58:49.9±0.4**, 38.41N×28.55W, MD2.9, Error ellipse: s-maj=2.6km s-min=2.2km az=33.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOR	Horta	0.13	332	eP	Pg	20 58 52.7	+0.2
HOR				eS	Sg	20 58 54.6	+0.3
PICO	Pico	0.13	47	eP	Pg	20 58 52.7	+0.1
PICO				eS	Sg	20 58 54.6	+0.2
CALA	Caldeira	0.21	325	eP	Pg	20 58 54.0	-0.1
CALA				eS	Sg	20 58 57.3	+0.5
PMAN	Manadas	0.42	58	erx		20 59 00.9	

CASC 06 21:04:46.0±3.1**, 8.71N×82.95W, h20^{km}**±10^{km}**, MD3.9, MW4.4, 2C-3D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	Cerro Adams	0.22	257	⇑eP	Pb	21 04 52.0	+0.6
ACR				eS	Sb	21 04 56.6	+1.5
BRU2	Volcan	0.27	71	⇓iP	Pb	21 04 53.6	+1.4
BRU2				eS	Sb	21 04 59.3	+2.9
BUS	Buena Vista	1.16	317	⇑eP	Pb	21 05 06.1	-1.2
BUS				eS	Sb	21 05 22.3	+0.3
LCR2	La Lucha 2	1.47	315	eP	Pn	21 05 10.4	-1.3
LCR2				eS	Sn	21 05 30.0	-0.3
LAJ	Bijagual	1.63	315	eP	Pn	21 05 17.6	+3.5
PRS1	Puriscal	1.85	313	⇓eP	Pn	21 05 15.6	-1.5
CGA2	Cerro Gallo 2	1.98	311	eP	Pn	21 05 19.7	+0.7
CGA2				eS	Sn	21 05 45.3	+1.7
TRTC	Tortuguero	2.01	338	eP	Pn	21 05 18.9	-0.5
VCR	Vista de Mar	3.00	298	⇓eP	Pn	21 05 33.8	+0.3
VCR				eS	Sn	21 06 10.9	+1.5

*IDC **06** 21:28:44.0±1.4, 8.85S×129.67E, mb3.8/3, mb1 3.8/4, mb1mx3.6/13, mbtmp3.7/4, ML2.9/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/19, Error ellipse: s-maj=229.1km s-min=25.2km az=67.0*

NEIC 06 21:28:49.1±0.9**, 8.99S×129.71E, h40^{km}, mb4.2**/1**, Error ellipse: s-maj=158.0km s-min=13.5km az=70.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRAB	Tennant Creek	11.77	158	P	P	21 31 33.2	-4.1
ASAR	Alice Springs	15.13	165	Pn	P	21 32 19.9	-1.9
	0.1nm,0.3s,baz=331,slow=9.6,SNR=7.4						
ASAR				Sn	S	21 35 06.2	-2.5
	0.1nm,0.3s,baz=333,slow=16,SNR=7.1						
CTA	Charters Tower	19.42	126	LR	LR	21 40 23.2	
	comp=Z,78nm,19.1s,baz=224,slow=36						
STKA	Stephens Creek	25.30	156	P	P	21 34 14.1	+0.3
	4.1nm,0.9s,baz=318,slow=9.8,SNR=5.5						
ULN	Ulaanbaatar	60.06	343	eP	P	21 38 52.1	-2.4
	0.9nm,0.5s						
SONM	Songino Array	60.23	342	P	P	21 38 52.5	-3.2
	0.6nm,1.0s,baz=144,slow=5.3,SNR=3.6						
MKAR	Makanchi Array	69.73	327	P	P	21 39 55.4	-1.6
	1.3nm,0.7s,baz=122,slow=8.1,SNR=12						

*NEIC **06** 21:33:53.3, 37.75S×176.56E, h156^{km}, MG4.3(WEL), After WEL.*

WEL 06 21:33:52.5±0.3**, 37.73S×176.55E, h164^{km}**±2^{km}**, ML4.2**/17**, 15C-4D, Error ellipse: s-maj=1.8km s-min=1.4km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGRZ	Tauranga	0.23	270	⇓PN	P	21 34 14.2	-0.7
TGRZ				SN	S	21 34 31.3	-0.7
MARZ	Manawahe	0.27	159	P	P	21 34 14.5	-0.5
MARZ	Manawahe	0.27	159	⇑PN	P	21 34 14.5	-0.5
LIRZ	Lichensteins R	0.30	206	P	P	21 34 14.6	-0.5
LIRZ	Lichensteins R	0.30	206	⇑PN	P	21 34 14.6	-0.6
EDRZ	Edgecumbe	0.41	159	P	P	21 34 15.7	+0.2
EDRZ	Edgecumbe	0.41	159	PN	P	21 34 15.7	+0.2
TAZ	Tarawera	0.50	184	P	P	21 34 15.9	0.0
TAZ	Tarawera	0.50	184	PN	P	21 34 15.8	0.0
MYRZ	Mayor Island	0.51	331	PN	P	21 34 15.5	-0.4
PATZ	Paeroa	0.69	199	P	P	21 34 16.7	-0.1
PATZ	Paeroa	0.69	199	PN	P	21 34 16.7	-0.1
TOZ	Tahuroa Road	0.83	270	P	P	21 34 17.3	-0.3
TOZ	Tahuroa Road	0.83	270	⇑PN	P	21 34 17.3	-0.3
MWZ	Matawai	0.98	128	⇑PN	P	21 34 18.1	-0.5
WATZ	Wairara	1.17	213	P	P	21 34 20.4	+0.1
WATZ	Wairara	1.17	213	PN	P	21 34 20.2	-0.1
KUZ	Kuaotunu	1.18	326	P	P	21 34 19.6	-0.8
KUZ	Kuaotunu	1.18	326	⇓PN	P	21 34 19.6	-0.8
RATZ	Rangitukua	1.29	208	P	P	21 34 21.3	-0.2
RATZ	Rangitukua	1.29	208	⇑PN	P	21 34 21.4	-0.1
RITZ	Rihia Road	1.36	203	P	P	21 34 22.4	+0.3
RITZ	Rihia Road	1.36	203	PN	P	21 34 22.4	+0.2
PUZ	Puketiti	1.39	105	P	P	21 34 22.1	-0.3
PUZ				S	S	21 34 52.7	+7.2
PUZ	Puketiti	1.39	105	PN	P	21 34 22.1	-0.4
PUZ				SN	S	21 34 43.6	-1.9
MXZ	Matakaoa Point	1.40	84	P	P	21 34 22.5	0.0
MXZ	Matakaoa Point	1.40	84	PN	P	21 34 22.5	-0.1
MXZ				SN	S	21 34 45.3	-0.4
KATZ	Kakaramea	1.42	208	ePN	P	21 34 22.7	0.0
BKZ	Black Stump Fm	1.44	182	P	P	21 34 22.2	-0.7
BKZ				S	S	21 34 44.3	-2.0
BKZ	Black Stump Fm	1.44	182	⇑PN	P	21 34 22.2	-0.7
BKZ				SN	S	21 34 45.0	-1.3
KRVZ	Karewarewa	1.54	207	PN	P	21 34 24.2	+0.2
HIZ	Hauiti	1.55	239	P	P	21 34 23.8	-0.2
HIZ	Hauiti	1.55	239	⇓PN	P	21 34 23.8	-0.2
KNZ	Kokohu	1.56	146	P	P	21 34 23.9	-0.2
KNZ	Kokohu	1.56	146	PN	P	21 34 23.8	-0.3
WTVZ	West Tongariro	1.58	208	P	P	21 34 24.6	+0.3
WTVZ	West Tongariro	1.58	208	PN	P	21 34 24.6	+0.3
OTVZ	Oturere	1.59	206	⇑PN	P	21 34 24.7	+0.2
OTVZ				SN	S	21 34 48.0	-1.0
TWVZ	Taurewa	1.60	213	P	P	21 34 24.5	0.0
TWVZ	Taurewa	1.60	213	PN	P	21 34 24.5	-0.1
MTAZ	Motutapu	1.61	305	P	P	21 34 24.3	-0.3
MTAZ	Motutapu	1.61	305	⇓PN	P	21 34 24.3	-0.3
NGZ	Ngauruhoe	1.63	207	P	P	21 34 25.1	+0.3
NGZ	Ngauruhoe	1.63	207	PN	P	21 34 24.8	+0.1
CNZ	Chateau	1.67	208	P	P	21 34 25.4	+0.2
CNZ	Chateau	1.67	208	PN	P	21 34 25.0	-0.2
WPVZ	Whakapapa	1.67	208	P	P	21 34 25.3	0.0
WPVZ	Whakapapa	1.67	208	PN	P	21 34 25.3	0.0
TUVZ	Tukino	1.69	204	P	P	21 34 25.4	-0.1
TUVZ	Tukino	1.69	204	⇑PN	P	21 34 25.4	-0.1
FWVZ	Far West T-bar	1.71	207	P	P	21 34 25.7	0.0
FWVZ	Far West T-bar	1.71	207	PN	P	21 34 25.8	+0.1
WNVZ	Wahianoa	1.76	205	⇑PN	P	21 34 26.0	-0.2
WTAZ	Waiatarua	1.77	296	P	P	21 34 25.7	-0.5
WTAZ	Waiatarua	1.77	296	PN	P	21 34 25.7	-0.6
MOVZ	Moawhango	1.79	200	P	P	21 34 25.6	-0.9
MOVZ	Moawhango	1.79	200	⇑PN	P	21 34 25.6	-0.9
MOVZ				SN	S	21 34 51.6	-1.1
MTVZ	Mangateitei	1.86	207	PN	P	21 34 27.0	-0.3
VRZ	Vera Road	1.98	225	eP	P	21 34 28.4	-0.2
VRZ	Vera Road	1.98	225	PN	P	21 34 28.3	-0.3
RAEZ	Rainy Point	2.30	227	P	P	21 34 32.9	+0.5
RAEZ	Rainy Point	2.30	227	ePN	P	21 34 32.8	+0.4
PWZ	Pawanui	2.31	174	P	P	21 34 31.4	-1.2
PWZ	Pawanui	2.31	174	⇑PN	P	21 34 31.4	-1.1
PWZ				SN	S	21 35 00.7	-2.7
WAZ	Wanganui	2.37	211	P	P	21 34 32.7	-0.5
WAZ	Wanganui	2.37	211	PN	P	21 34 32.5	-0.7
TSZ	Takapari Road	2.37	191	P	P	21 34 31.7	-1.6
TSZ	Takapari Road	2.37	191	PN	P	21 34 31.7	-1.7
TSZ				SN	S	21 35 01.8	-2.8
NEZ	North Egmont	2.46	231	P	P	21 34 34.8	+0.3
BFZ	Birch Farm	2.96	184	eP	P	21 34 38.5	-2.1
BFZ	Birch Farm	2.96	184	PN	P	21 34 38.3	-2.2
MRZ	Mangatainoka R	3.02	194	P	P	21 34 38.9	-2.5
MRZ	Mangatainoka R	3.02	194	PN	P	21 34 38.8	-2.6
MRZ				SN	S	21 35 15.0	-3.9
KIW	Kapiti Island	3.38	202	PN	P	21 34 42.7	-3.2
KIW				SN	S	21 35 22.0	-4.9
MTW	Mount Morrison	3.52	193	P	P	21 34 44.3	-3.4
MTW	Mount Morrison	3.52	193	⇑PN	P	21 34 44.2	-3.5
CAW	Cannon Point	3.56	198	P	P	21 34 45.1	-3.2
CAW	Cannon Point	3.56	198	PN	P	21 34 44.9	-3.4
DUWZ	D’Urville Isla	3.69	213	PN	P	21 34 46.3	-3.6
PAWZ	Paruwai Farm	3.75	193	⇑PN	P	21 34 47.2	-3.5
PAWZ				SN	S	21 35 29.6	-5.8
MRW	Makara Radio	3.78	202	P	P	21 34 47.7	-3.4
MRW	Makara Radio	3.78	202	⇑PN	P	21 34 47.6	-3.4
MRW				SN	S	21 35 30.9	-5.2
WEL	Wellington	3.81	201	P	P	21 34 48.2	-3.3
WEL	Wellington	3.81	201	PN	P	21 34 48.2	-3.3
MSWZ	Moikau Station	3.82	195	P	P	21 34 48.0	-3.6
MSWZ	Moikau Station	3.82	195	PN	P	21 34 47.9	-3.7
MSWZ				SN	S	21 35 30.2	-6.7
SNZO	South Karori	3.85	201	P	P	21 34 48.3	-3.7
SNZO	South Karori	3.85	201	PN	P	21 34 48.2	-3.8
BHW	Baring Head	3.90	199	P	P	21 34 48.7	-3.9
BHW	Baring Head	3.90	199	PN	P	21 34 48.6	-4.0
TCW	Tory Channel	3.90	206	P	P	21 34 49.2	-3.4
TCW	Tory Channel	3.90	206	PN	P	21 34 49.2	-3.5
TUWZ	Tuamarina	4.21	208	PN	P	21 34 52.9	-3.8
NNZ	Nelson	4.26	214	eP	P	21 34 53.5	-3.8
NNZ	Nelson	4.26	214	PN	P	21 34 53.3	-4.0
QRZ	Quartz Range	4.39	224	eP	P	21 34 54.8	-4.3
QRZ	Quartz Range	4.39	224	PN	P	21 34 54.7	-4.4
BSWZ	Blackbirch Sta	4.48	207	P	P	21 34 56.5	-3.7
THZ	Tophouse	4.91	214	eP	P	21 35 01.8	-4.0
THZ	Tophouse	4.91	214	PN	P	21 35 01.5	-4.4
KHZ	Kahutara	5.22	205	eP	P	21 35 05.5	-4.4
KHZ	Kahutara	5.22	205	⇑PN	P	21 35 05.4	-4.5
LTZ	Lake Taylor	6.01	212	eP	P	21 35 15.2	-5.2
LTZ	Lake Taylor	6.01	212	PN	P	21 35 15.2	-5.2
MQZ	McQueen’s Vall	6.66	205	P	P	21 35 22.7	-6.4
MQZ	McQueen’s Vall	6.66	205	PN	P	21 35 22.5	-6.6
ODZ	Otahua Downs	8.55	209	eP	P	21 35 48.4	-5.7
ODZ	Otahua Downs	8.55	209	PN	P	21 35 48.1	-5.9

*ROM **06** 21:35:46.0±0.5, 44.60N×6.86E, h12^{km}, Md2.0/3, Ml1.4/2, Error ellipse: s-maj=7.8km s-min=3.3km az=115.0*

*LDG **06** 21:35:47.6±0.1, 44.65N×6.88E, h2^{km}, Md2.5/1, Ml2.2/8, Error ellipse: s-maj=1.7km s-min=1.0km az=70.0*

*NEIC **06** 21:35:47.4, 44.63N×6.89E, h9^{km}, ML2.5(GEN), ML2.2(LDG), ML2.1(STR), After GEN.*

*STR **06** 21:35:47.1±0.2, 44.65N×6.84E, h5^{km}±1^{km}, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 06 21:35:46.5±0.3**, 44.63N**±0.01×**6.86E**±0.03**, h14^{km}**±2^{km}**, n38,** $\sigma 0^{s}$**59**/68**, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBDF	Montbardon	0.12	327	ePg	Pg	21 35 50.4	+0.4
MBDF				eSg	Sg	21 35 52.3	0.0
	725nm,0.3s						
SURF	Saint Ours	0.15	193	Pg	Pg	21 35 50.9	+0.4
SURF				Sg	Sg	21 35 53.4	+0.3
OG22	Abries	0.20	17	Pg	Pg	21 35 51.5	+0.2
OG22				Sg	Sg	21 35 54.2	-0.3
PZZ	Prazzo	0.21	126	P	Pg	21 35 51.4	0.0
PZZ				S	Sg	21 35 54.8	+0.1
RRL	Cesana Torines	0.30	349	P	Pg	21 35 53.5	+0.6
RRL				S	Sg	21 35 57.8	+0.5
DOI	San Damiano	0.30	114	Pg	Pg	21 35 52.9	-0.2
DOI				Sg	Sg	21 35 56.7	-0.7
	83nm,0.2s						
BHB	Bricherasio	0.36	53	P	Pg	21 35 54.0	-0.1
BHB				S	Sg	21 35 58.6	-0.6
FENE	Fenestrelle	0.43	20	P	Pb	21 35 55.5	+0.2
FENE				S	Sb	21 36 01.0	-0.2
BNI	Bardonecchia	0.44	343	Pg	Pg	21 35 56.0	+0.3
BNI				Sg	Sg	21 36 02.7	+0.8
	9.0nm,0.2s						
STV2	Anna di Valdie	0.51	139	P	Pb	21 35 56.8	+0.1
STV2				S	Sb	21 36 03.3	-0.3
ENR	Entracque	0.57	135	P	Pb	21 35 58.1	+0.4
ENR				S	Sb	21 36 05.3	-0.1
RSP	Reno Superiore	0.59	28	P	Pb	21 35 58.8	+0.6
RSP				S	Sb	21 36 06.3	+0.1
TOUF	Mont Tournerai	0.67	156	Pg	Pg	21 36 00.6	+0.4
TOUF				Sg	Sg	21 36 09.3	-0.1
AUTN	L’Aution	0.75	147	Pg	Pg	21 36 01.8	0.0
AUTN				Sg	Sg	21 36 13.1	+1.2
ORIF	Oris-en-Rattie	0.76	293	ePg	Pg	21 36 02.2	+0.4
ORIF				eSg	Sg	21 36 12.0	-0.1
	9.0nm,0.2s						
MVIF	Mont Vial	0.76	164	Pg	Pg	21 36 02.5	+0.6
ROB	Roburent	0.80	114	P	Pb	21 36 02.1	+0.5
ROB				S	Sb	21 36 11.9	-0.1
SAOF	Saorge	0.81	142	Pg	Pg	21 36 03.0	+0.1
MONE	Monesi	0.84	130	P	Pb	21 36 02.8	+0.4
MONE				S	Sb	21 36 13.2	-0.2
LSD	Ceresole Reale	0.85	14	P	Pb	21 36 03.3	+0.6
LSD				S	Sb	21 36 14.2	+0.5
SBF	Sospel	0.87	151	ePg	Pg	21 36 04.6	+0.5
SBF				eSg	Sg	21 36 15.0	-0.8
	6.7nm,0.2s						
LPG	La Plagne	0.87	355	ePg	Pg	21 36 03.8	-0.3
LPG				eSg	Sg	21 36 14.3	-1.6
	6.7nm,0.2s						
MONC	Moncucco Torin	0.88	59	Pg	Pg	21 36 04.5	+0.2
MONC				Sg	Sg	21 36 17.4	+1.3
LPL	La Plagne	0.89	354	ePg	Pg	21 36 04.2	-0.3
LPL				eSg	Sg	21 36 15.2	-1.4
	6.5nm,0.2s						
NEGI	Negi	0.99	142	P	Pb	21 36 05.0	+0.1
NEGI				S	Sb	21 36 17.0	-0.6
IMI	Imperia	1.03	134	P	Pb	21 36 05.7	0.0
IMI				S	Sb	21 36 18.1	-0.7
FIN	Finale Ligure	1.05	113	P	Pb	21 36 05.8	-0.2
FIN				S	Sb	21 36 18.4	-1.0
FIN	Finale Ligure	1.05	113	Pg	Pg	21 36 06.2	-1.5
	5.0nm,0.2s						
FRF	La Foret Royal	1.08	188	ePg	Pg	21 36 08.1	-0.1
FRF				ePn	Pn	21 36 08.6	+1.4
FRF				eSg	Sg	21 36 22.4	-0.3
	6.5nm,0.2s						
TRAV		1.08	35	P	Pb	21 36 07.0	+0.4
SMRF	Simiane la Rot	1.13	235	ePg	Pg	21 36 09.4	+0.2
SMRF				eSg	Sg	21 36 24.7	+0.3
	3.6nm,0.3s						
PCP	Pian Castagno	1.21	94	P	Pb	21 36 08.8	+0.2
ORX	Oropa	1.28	38	P	Pb	21 36 09.5	-0.4
LMR	La Mourre	1.32	191	ePg	Pg	21 36 12.8	-0.2
LMR				eSg	Sg	21 36 30.0	-0.6
	6.3nm,0.2s						
VIVF	Saint-Julien-l	1.58	279	ePg	Pg	21 36 17.0	-1.1
VIVF				eSg	Sg	21 36 38.1	-1.1
	1.9nm,0.3s						
PGF	Pioggiola	2.59	142	ePn	Pn	21 36 29.2	+0.3
LOR	Lormes	3.37	323	eSg	Sg	21 37 31.3	-7.5
	3.6nm,0.6s						
SSF	Saint Saulge	3.38	317	eSg	Sg	21 37 32.3	-6.8
	1.6nm,0.4s						

*NNC **06** 21:53:03.0±5.5, 38.39N×72.39E, h175^{km}±86^{km}, mpv3.8, Error ellipse: s-maj=64.3km s-min=27.0km az=6.0*

*NDI **06** 21:55:18.4±3.0, 32.28N×75.72E, h33^{km}, ML2.8*

ISC 06 21:52:53.6±1.1**, 37.66N**±0.06×**72.3E**±0.2**, h137^{km}**±22^{km}**, n24,** $\sigma 0^{s}$**90**/28**, 1C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.59	13	P	P	21 54 02.0	-0.3

	SNR=100						
UCH	Uchtor	4.86	20	P	P	21 54 05.8	-0.2
	SNR=30						
KZA	Kyzart	4.95	26	P	P	21 54 06.8	-0.3
	SNR=34						
EKS2	Erkin-Say	5.12	12	P	P	21 54 09.3	0.0
	SNR=13						
AAK	Ala-Archa	5.24	18	P	P	21 54 11.0	+0.1
	SNR=12						
AAK	Ala-Archa	5.24	18	⇓P	P	21 54 10.8	-0.1
	5.6nm,0.3s						
AAK				⇑S	S	21 55 04.7	-6.1
	36nm,0.5s						
KBK	Karagaybulak	5.38	21	P	P	21 54 14.7	+1.9
	SNR=14						
ULHL	Ulahol	5.48	32	P	P	21 54 14.2	+0.1
	SNR=6.1						
KK31	Karatay Array	5.61	346	⇓P	P	21 54 15.7	-0.2
	4.7nm,0.3s,baz=150,slow=10,SNR=351						
KK31				⇓S	S	21 55 13.3	-6.5
	14nm,0.3s,baz=167,slow=23,SNR=39						
CHMS	Chumysh	5.64	18	P	P	21 54 16.2	-0.2
	SNR=8.6						
USP	Ospenovka	5.84	16	P	P	21 54 18.0	-0.9
	SNR=5.2						
THN	Thein Dam	5.91	151	*e*P	P	21 54 24.3	+4.4
THN				*e*S	S	21 55 29.2	+2.3
SDNR	Sundarnagar	7.24	147	*e*P	P	21 54 47.8	+10
SDNR				*e*S	S	21 55 58.0	-1.0
KLP	Kalpa	7.82	140	*e*x	S	21 56 11.3	-1.7
KLP				AML	AML	21 56 19.6	
	comp=N,47nm,0.4s						
KLP				AML	AML	21 56 20.4	
	comp=E,79nm,0.5s						
KHET	Khetri	9.99	162	*e*S	S	21 57 04.1	-0.9
KHET				AML	AML	21 57 06.5	
	comp=N,12nm,0.2s						
KHET				AML	AML	21 57 07.7	
	comp=E,16nm,0.2s						
SONA	Sohna	10.20	156	*e*S	S	21 57 05.5	-4.3
SONA				AML	AML	21 57 14.0	
	comp=N,11nm,0.3s						
SONA				AML	AML	21 57 15.0	
	comp=E,22nm,0.4s						
MK31	Makanchi Array	11.73	36	P	P	21 55 37.0	-0.4
	comp=E,0.7nm,0.6s,baz=207,slow=8.5,SNR=8.8						
KOLN	Koldanda	13.67	133	*e*P	P	21 56 03.7	+1.1
	comp=E,4.6nm,0.3s						
GKN	Gorkha	14.12	129	*e*P	P	21 56 07.8	-0.6
	comp=E,9.0nm,0.3s						
AB31	Akbulak array	14.65	326	P	P	21 56 14.8	-0.1
	comp=E,0.6nm,0.5s,baz=127,slow=14,SNR=25						
KKN	Kakani	14.67	128	*e*P	P	21 56 15.3	-0.1
	comp=E,7.9nm,0.4s						
DMN	Daman	14.69	129	*e*P	P	21 56 15.6	0.0
	comp=E,7.9nm,0.4s						
PKI	Pulchoki	14.91	129	*e*P	P	21 56 19.0	+0.6
	comp=E,4.8nm,0.2s						
GUN	Gumba	14.96	127	*e*P	P	21 56 20.1	+1.0
	comp=E,6.6nm,0.2s						

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*IDC **06** 22:01:35.0±3.1, 9.56N×92.04E, mb3.8/3, mb1 4.0/4, mb1mx3.6/20, mbtmp3.8/4, ML4.0/1, MS2.6/1, Ms1 2.8/1, ms1mx2.6/23, Error ellipse: s-maj=91.2km s-min=27.7km az=80.0*

*NEIC **06** 22:01:44.8±1.0, 9.49N×92.85E, h30^{km}, mb4.5/7, Error ellipse: s-maj=30.7km s-min=10.6km az=54.0*

ISC 06 22:01:42.4±1.0**, 9.6N**±0.1×**92.9E**±0.2**, h30^{km}, n13, σ1^{s}15**/13**, mb4.0**/5**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	8.76	118	P	P	22 03 52.0	+1.8
CMAR	Chiang Mai Arr	10.59	33	Pn	P	22 04 15.4	0.0
	0.3nm,0.3s,baz=228,slow=15,SNR=13						
CMAR				LR	LR	22 08 00.5	
	comp=Z,31nm,19.4s,baz=48,slow=35						
PKI	Pulchoki	19.26	339	*e*P	P	22 06 07.0	-0.5
	33nm,0.6s						
DMN	Daman	19.40	339	*e*P	P	22 06 09.8	+0.7
	55nm,0.8s						
GUN	Gumba	19.42	341	*e*P	P	22 06 08.2	-1.1
KKN	Kakani	19.51	339	*e*P	P	22 06 10.4	+0.1
	19nm,0.7s						
GKN	Gorkha	19.93	338	*e*P	P	22 06 15.5	+0.5
	36nm,0.5s						
KOLN	Koldanda	20.13	335	*e*P	P	22 06 19.5	+2.6
	38nm,0.6s						
AAK	Ala-Archa	36.68	337	P	P	22 08 42.9	-5.6
	1.0nm,0.7s,mb3.8						
SONM	Songino Array	39.81	14	P	P	22 09 11.6	-3.0
	0.1nm,0.3s,mb3.0,baz=211,slow=8.4,SNR=4.3						
WRAB	Tennant Creek	50.23	126	*e*P	P	22 10 37.3	-0.8
	3.0nm,0.4s,mb4.7						
ASAR	Alice Springs	51.92	130	P	P	22 10 50.9	-0.1
	1.4nm,0.5s,mb4.2,baz=304,slow=7.0,SNR=20						
STKA	Stephens Creek	62.14	134	P	P	22 12 02.5	-0.9
	2.9nm,1.0s,mb4.3,baz=310,slow=8.6,SNR=3.5						

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*NEIC **06** 22:03:05.8±0.7, 43.28N×12.89E, h10^{km}, ML2.7(LDG), Error ellipse: s-maj=8.6km s-min=4.8km az=153.0*

*CSEM **06** 22:03:07.2±0.1, 43.29N×12.92E, h60^{km}, ML2.8/11, Error ellipse: s-maj=1.8km s-min=1.4km az=26.0*

*LDG **06** 22:03:08.9±0.4, 43.35N×12.80E, h10^{km}, Ml2.7/9, Error ellipse: s-maj=6.9km s-min=5.0km az=111.0*

ROM 06 22:03:08.3±0.2**, 43.25N×12.85E, h50^{km}**±3^{km}**, Md3.0**/10**, Ml2.6**/11**, 14C-5D, Error ellipse: s-maj=2.6km s-min=2.1km az=119.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNTG	Esanatoglia	0.07	82	Pg	P	22 03 16.6	+0.6
ASS	Assisi	0.23	218	⇓*i*Pg	P	22 03 17.7	+0.8
MURB	Monte Urbino	0.24	274	⇓*e*Pg	P	22 03 18.1	+1.2
MURB				Sg	S	22 03 26.2	+3.1
	2µm,0.5s						
ARV	Arcevia	0.26	15	⇑*i*Pg	P	22 03 17.6	+0.5
ARV				Sg	S	22 03 24.9	+1.5
ARVD	Arcevia	0.26	15	⇑*e*Pg	P	22 03 17.6	+0.5
ARVD				Sg	S	22 03 24.9	+1.5
CING	Cingoli	0.28	63	⇑*i*Pg	P	22 03 18.0	+0.6
CING				Sg	S	22 03 25.7	+1.9
	1µm,0.2s						
FSSB	Fossombrone	0.45	354	⇑*i*Pg	P	22 03 19.8	+0.8
FSSB				Sg	S	22 03 28.8	+2.1
	202nm,0.2s						
NRCA	Norcia	0.46	154	Pg	P	22 03 20.2	+1.1
	52nm,0.2s						
AOI	Ancona	0.63	61	Pg	P	22 03 21.6	+0.4
AOI				Sg	S	22 03 31.7	+1.1
	238nm,0.2s						
RSM	Repubblica di	0.74	337	Pg	P	22 03 24.9	+2.2
	29nm,0.2s						
CRE	Caprese Michel	0.75	300	⇑*e*Pg	P	22 03 23.5	+0.7
CRE				Sg	S	22 03 34.8	+1.3
	123nm,0.3s						
SACS	San Casciano d	0.79	240	⇑*i*Pg	P	22 03 23.9	+0.5
SACS				Sg	S	22 03 35.7	+1.2
	183nm,0.6s						
CAMP	Campotosto	0.82	150	Pg	P	22 03 25.2	+1.5
TERO	Teramo	0.83	138	Pg	P	22 03 24.9	+1.0
	176nm,0.2s						
MNS	Montasola	0.87	188	⇑*e*Pg	P	22 03 25.0	+0.6
	102nm,0.5s						
SFI	Santa Sofia	0.98	313	Pg	P	22 03 27.1	+1.2
	31nm,0.4s						
FIAM	Fiamignano	1.00	168	Pg	P	22 03 26.6	+0.4
	61nm,0.4s						
PGD	Poggio Sodo	1.03	308	Pg	P	22 03 27.9	+1.2
	39nm,0.7s						
ARCI	Arcidosso	1.08	249	⇑*e*Pg	P	22 03 27.8	+0.4
	20nm,0.7s						
FAGN	Fagnano	1.12	151	Pg	P	22 03 29.9	+2.0
	170nm,0.5s						
VCEL	Villa Celiera	1.12	139	⇑*i*Pg	P	22 03 28.9	+1.0
CERT	Cerreto	1.30	176	Pn	P	22 03 30.8	+0.2
CERT				Sn	S	22 03 47.8	+0.7
	52nm,0.4s						
VVLD	Villa Vallelon	1.49	157	Pn	P	22 03 34.4	+1.2
	35nm,0.6s						
NVLJ	Novalja	1.97	47	*i* Pn	P	22 03 38.8	-1.1
NVLJ				*i* Sn	S	22 04 01.1	-2.3
NVLJ	Novalja	1.97	47	*i* Pn	P	22 03 38.7	-1.2
NVLJ				*i* Sn	S	22 04 01.0	-2.4
VBY	Vinica-Bojanci	2.84	37	*e*	P	22 04 04.8	+12
VBY				*e*Sn	S	22 04 22.8	-2.8
VOY	Vojsko	2.88	15	*e*Pn	P	22 03 50.8	-2.1
VOY				*e*Sn	S	22 04 23.3	-3.3
PGF	Pioggiola	2.91	257	*e*Pn	P	22 03 53.1	-0.2
PGF				*e*Sn	S	22 04 25.5	-1.8
	3.4nm,0.3s						
OBKA	Obir	3.48	20	⇑*i*PN	P	22 03 58.6	-2.7
OBKA				*i* SN	S	22 04 38.3	-3.4
STON	Ston	3.58	94	*i* Pn	P	22 04 00.9	-1.8
STON				*i* Sn	S	22 04 39.6	-4.5
KBA	Koelnbreinsper	3.85	5	⇑*i*PN	P	22 04 05.1	-1.4
KBA				*i* SN	S	22 04 47.6	-3.4
SCE	Schlegeis	3.88	348	⇑*i*Pn	P	22 04 06.2	-0.7
SBF	Sospel	3.98	281	*e*Pn	P	22 04 07.9	-0.5
SBF				*e*Sn	S	22 04 51.1	-3.2
	3.6nm,0.3s						
WTTA	Wattenberg	4.11	348	⇓*i*PN	P	22 04 09.1	-1.1
WTTA				*i* SN	S	22 04 55.7	-1.8
SQTA	Sankt Quirin	4.14	344	⇓*i*PN	P	22 04 09.2	-1.4
SQTA				*i* SN	S	22 04 57.4	-0.9
WATA	Walderalm	4.19	348	⇓*i*PN	P	22 04 09.7	-1.6
WATA				*i* SN	S	22 04 58.1	-1.4
MOTA	Moosalm	4.28	344	⇑*i*PN	P	22 04 11.9	-0.7
MOTA				*i* SN	S	22 05 01.4	-0.4
FRF	La Foret Royal	4.53	276	*e*Pn	P	22 04 15.3	-0.8
FRF				*e*Sn	S	22 05 03.2	-4.9
	1.9nm,0.3s						
MBDF	Montbardon	4.63	291	*e*Pn	P	22 04 16.1	-1.4
LMR	La Mourre	4.63	273	*e*Pn	P	22 04 15.9	-1.6
LMR				*e*Sn	S	22 05 06.3	-4.3
MOA	Molln	4.71	12	⇑*i*PN	P	22 04 16.4	-2.3
MOA				*i* SN	S	22 05 09.1	-3.6
LPG	La Plagne	4.92	299	*e*Pn	P	22 04 20.2	-1.4
LPL	La Plagne	4.94	299	*e*Pn	P	22 04 20.2	-1.6
LPL				*e*Sn	S	22 05 13.9	-4.4
	1.1nm,0.2s						
SMRF	Simiane la Rot	5.33	280	*e*Pn	P	22 04 25.9	-1.4
SMRF				*e*Sn	S	22 05 23.3	-4.9
	0.4nm,0.2s						
CABF	La Chapelle	5.86	307	*e*Pn	P	22 04 32.6	-2.1
HINF	Hinteralfeld	6.21	319	*e*Pn	P	22 04 37.6	-2.1
HINF				*e*Sn	S	22 05 42.3	-7.9
	4.6nm,0.4s						
CDF	Champ du Feu	6.47	325	*e*Pn	P	22 04 40.1	-3.1
CDF				*e*Sn	S	22 05 46.7	-10
	1.2nm,0.2s						
LASF	Ste Croix	6.57	280	*e*Pn	P	22 04 42.5	-2.2
HAU	Haudompre	6.59	319	*e*Pn	P	22 04 41.0	-3.9
HAU				*e*Sn	S	22 05 51.1	-8.4
	2.5nm,0.2s						
SMF	Signal de Mont	7.24	301	*e*Pn	P	22 04 51.3	-2.7
SMF				*e*Sn	S	22 06 08.0	-7.6
	0.8nm,0.2s						

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*IDC **06** 22:17:56.7±2.3, 61.78N×26.52W, mb3.8/7, mb1 4.0/7, mb1mx3.7/26, mbtmp3.8/7, MS3.1/5, Ms1 3.1/5, ms1mx3.0/23, Error ellipse: s-maj=85.2km s-min=22.4km az=171.0*

*NEIC **06** 22:17:58.6±0.9, 61.91N×26.58W, h10^{km}, Error ellipse: s-maj=23.8km s-min=15.2km az=181.0*

ISC 06 22:17:57.4±1.2**, 62.0N**±0.2×**26.6W**±0.3**, h10^{km}, n13, σ0^{s}46**/8**, mb3.8**/7**, MS3.1**/3**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	11.47	31	LR	LR	22 24 07.9	
	comp=Z,53nm,18.0s,baz=306,slow=32						
SUMG	Summit	11.50	342	P	P	22 20 44.2	-0.3
NOA	NORSAR Array B	17.90	76	LR	LR	22 28 47.5	
	comp=Z,47nm,20.2s,baz=290,slow=36						
FINES	FINESS Array B	24.41	68	LR	LR	22 31 41.9	
	comp=Z,25nm,18.8s,MS2.7,baz=162,slow=34						
YKA	Yellowknife Ar	37.93	311	P	P	22 25 17.0	+0.9
	0.2nm,0.3s,mb3.4,baz=49,slow=8.7,SNR=5.7						
YKA				LR	LR	22 39 58.0	
	comp=Z,54nm,20.1s,MS3.4,baz=235,slow=35						
ULM	Lac du Bonnet	38.42	285	LR	LR	22 40 34.3	
	comp=Z,35nm,18.2s,MS3.2,baz=36,slow=35						
BVAR	Borovoye Array	48.09	54	P	P	22 26 39.1	+0.6
	0.2nm,0.3s,mb3.7,baz=326,slow=11,SNR=5.2						
PDAR	Pinedale Array	50.25	288	P	P	22 26 54.9	-0.5
	0.5nm,0.3s,mb4.0,baz=45,slow=8.4,SNR=5.3						
MKAR	Makanchi Array	57.61	50	P	P	22 27 48.9	-0.5
	1.0nm,0.9s,mb3.8,baz=333,slow=5.4,SNR=8.2						
TXAR	Lajitas Array	58.52	274	P	P	22 27 55.9	-0.1
	0.3nm,0.3s,mb3.7,baz=90,slow=1.3,SNR=3.4						
SONM	Songino Array	64.22	33	P	P	22 28 33.9	-0.1
	1.3nm,1.0s,mb3.9,baz=323,slow=5.7,SNR=9.0						
CMAR	Chiang Mai Arr	89.02	51	P	P	22 30 53.6	+0.1
	1.4nm,0.9s,mb4.3,baz=321,slow=5.2,SNR=6.2						
STKA	Stephens Creek	148.89	20	PKPbc	PKPdf	22 37 44.6	+1.0
	1.9nm,1.1s,baz=342,slow=1.7,SNR=2.9						

IDC 06 22:26:06.4±6.0**, 61.75N×26.35W, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.3**/25**, mbtmp3.6**/3**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.4**/21**, Error ellipse: s-maj=169.9km s-min=40.1km az=171.0, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAVOX	Davos	25.49	109	LR	LR	22 42 46.9	
	comp=Z,27nm,18.4s,baz=264,slow=39						
YKA	Yellowknife Ar	38.21	311	P	P	22 33 27.2	-1.8
	0.6nm,0.8s,baz=48,slow=9.2,SNR=5.7						
PDAR	Pinedale Array	50.47	289	P	P	22 35 05.8	-1.8
	0.8nm,1.0s,baz=54,slow=7.8,SNR=4.6						
SONM	Songino Array	64.38	33	P	P	22 36 43.8	-1.9
	0.5nm,0.9s,baz=331,slow=7.7,SNR=4.4						

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*ATH **06** 22:27:23.8, 37.99N×23.12E, h15^{km}±4^{km}, MD3.0/8, ML2.7*

*NEIC **06** 22:27:23.9, 37.99N×23.12E, h15^{km}, ML2.7(ATH), After ATH.*

*THE **06** 22:27:24.2, 37.73N×23.28E, h20^{km}, ML2.9*

*CSEM **06** 22:27:24.6±0.1, 37.96N×23.15E, h15^{km}, ML2.7, Error ellipse: s-maj=1.9km s-min=1.7km az=55.0*

ISC 06 22:27:24.1±1.0**, 37.98N**±0.04×**23.20E**±0.05**, h15^{km}**±8^{km}**, n14, σ1^{s}05**/20**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGER	Gerania Oros	0.04	84	*e*PB	Pb	22 27 27.0	+0.7
NSAL	Nisos Salamina	0.22	110	*e*PB	Pb	22 27 30.0	+0.7
NAIG	Nisos Aigina	0.32	135	*e*PB	Pb	22 27 31.3	+0.3
ATH	Athens Observa	0.41	91	*e*PB	Pb	22 27 33.3	+0.8
ATH				*e*SB	Sb	22 27 39.9	+1.8
MPAR	Parnis Oros	0.45	68	*e*PN	Pn	22 27 34.0	-1.7
MPAR				*e*SN	Sn	22 27 41.8	-1.7
PTL	Penteli	0.53	82	*e*PN	Pn	22 27 35.2	-1.6
LKR	Lokris	0.69	347	*e*PN	Pn	22 27 37.4	-1.7
AGG	Agios Georgios	1.25	327	*e*Pg	Pg	22 27 48.1	-1.0
	comp=Z,2.6nm,0.2s						
AGG				*e*Sg	Sg	22 28 07.2	+1.4
VLI	Veliai	1.28	190	*e*PN	Pn	22 27 47.6	+0.1
ITM	Ithomi	1.29	232	*e*PN	Pn	22 27 47.5	-0.2
AOS	Alonnisos	1.30	24	*e*Pg	Pg	22 27 49.8	-0.4
AOS				*e*Sg	Sg	22 28 07.2	-0.4
NEO	Neokhori	1.32	1	*e*PN	Pn	22 27 48.5	+0.3
NEO				*e*SN	Sn	22 28 06.6	+1.0
XOR	Xorichti	1.38	360	*e*Pb	Pb	22 27 50.1	+0.9
XOR				*e*Sb	Sb	22 28 11.2	+4.7
OUR	Ouranopolis	2.43	14	*e*Pn	Pn	22 28 04.2	+0.2

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*BJI **06** 22:37:17.6, 50.54N×157.13E, h55^{km}, mB4.8, mb4.7, Ms4.5, Msz4.2*

*SKHL **06** 22:37:17.3±1.7, 50.56N×157.33E, h35^{km}±13^{km}, mb5.8/2, mbh5.6/1, Ms4.4/4, msh5.2/3*

*MOS **06** 22:37:18.7±0.9, 50.65N×156.98E, h59^{km}, mb5.1/64, MS4.2/23, Error ellipse: s-maj=7.7km s-min=4.1km az=83.5*

MOS Felt (IV) at Severo-Kuril'sk; (II-III) at Petropavlovsk-Kamchatskii.

*KRSC **06** 22:37:18.5±1.0, 50.49N×157.23E, h39^{km}±7^{km}, ML5.4*

*HRVD **06** 22:37:19.4±0.3, 50.55N×157.50E, h52^{km}±1^{km}, MW5.0/57, Centroid moment Tensor Solution. LP body waves: s49,c83;Mantle waves: s57,c103; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.30±.17; M$_{\theta\theta}$-1.66±.13; M$_{\phi\phi}$-2.63±.11; M$_{r\theta}$0.78±.10; M$_{\theta\phi}$-1.93±.09; M$_{\phi r}$1.23±.09; Best double couple: M$_0$4.462×10^{16} NP1: ϕ_s220°, δ36°, λ93°. NP2: ϕ_s36°, δ55°, λ88°. Principal axes: T 4.546, Plg80°, Azm298°; N -.159, Plg2°, Azm37°; P -4.377, Plg9°, Azm128°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **06** 22:37:19.4±0.1, 50.72N×157.01E, mb5.0/87, MS4.3/69 Error ellipse: s-maj=4.5km s-min=2.6km az=163.0*

NEIC Felt [IV] at Severo-Kuril'sk and [III] at Petropavlovsk-Kamchatskiy.

*IDC **06** 22:37:19.9±0.4, 50.82N×156.96E, h49^{km}±4^{km}, mb4.3/21, mb1 4.5/23, mb1mx4.5/24, mbtmp4.6/23, MS4.1/24, Ms1 4.1/24, ms1mx4.0/27, Error ellipse: s-maj=15.3km s-min=9.5km az=145.0*

ISC 06 22:37:17.1±0.2**, 50.47N**±0.02×**157.18E**±0.03**, h48^{km}, h48^{km}**±.7^{km}**:pP-P, n456, σ1^{s}11**/438**, mb4.8**/123**, MS4.3**/105**, 30C-12D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.71	288	⇓*i*PN	P	22 37 31.4	+0.5
SKR				*i* S	S	22 37 42.0	+0.9
SKR				pmax	pmax		
	comp=E,26µm,2.0s						
SKR				pmax	pmax		
	comp=Z,29µm,2.0s						
SKR				pmax	pmax		
	comp=N,8µm,1.0s						
SKR				pmax	pmax		
	comp=N,9µm,0.2s						
SKR				pmax	pmax		
	comp=E,7µm,0.2s						
SKR				pmax	pmax		
	comp=Z,14µm,0.2s						
SKR				smax			
	comp=N,152µm,1.0s						
SKR				smax			
	comp=E,142µm,2.0s						
SKR	Severo-Kuril's	0.71	288	⇓*i*P	P	22 37 31.4	+0.5
SKR				⇓*i*P		22 37 31.4	
SKR				⇓*i*P		22 37 31.4	
SKR				AMB	AMB	22 37 32.0	
	comp=E,8µm,2.0s						
SKR				AMB	AMB	22 37 32.0	
	comp=E,28µm,2.0s						
SKR				AMB	AMB	22 37 32.0	
	comp=E,32µm,2.0s						
SKR				AMB	AMB	22 37 32.0	
	comp=E,8µm,2.0s						
SKR				AMB	AMB	22 37 32.0	
	comp=E,26µm,2.0s						
SKR				AMB	AMB	22 37 32.0	
	comp=E,29µm,2.0s						
SKR				AMB	AMB	22 37 32.5	
	comp=E,9µm,0.2s						
SKR				AMB	AMB	22 37 32.5	
	comp=E,7µm,0.2s						
SKR				AMB	AMB	22 37 32.5	
	comp=E,14µm,0.2s						
SKR				*i* S	S	22 37 42.0	+0.9
SKR				A		22 37 44.0	
	comp=E,170µm,2.0s						
SKR				A		22 37 44.0	
	comp=E,152µm,1.0s						
SKR				A		22 37 44.0	
	comp=E,142µm,2.0s						
SKR				A		22 37 47.5	
	comp=E,136µm,1.0s						
SKR				A		22 37 47.5	
	comp=E,76µm,1.0s						
SKR				A		22 37 47.5	
	comp=E,92µm,1.0s						
SKR	Severo-Kuril's	0.71	288	*i* P	P	22 37 31.4	+0.5
SKR				*i* S	S	22 37 42.0	+0.9
PAU	Pauzhetka	1.02	347	*i* P	P	22 37 37.5	+2.2
PAU				*i* S	S	22 37 50.9	+2.1
PAU	Pauzhetka	1.02	347	*i* P	P	22 37 37.5	+2.2
PAU				*i* S	S	22 37 51.0	+2.2
PAU				Smax			
	comp=E,43µm,0.4s						
ALID	Alaid	1.11	292	*i* P	P	22 37 40.5	+4.0
ALID				*i* S	S	22 37 55.7	+4.8
MIPR	Malaya Ipel'ka	1.83	352	*e*P	P	22 37 49.4	+2.7
MIPR				*e*S	S	22 38 11.7	+3.0
RUS	Russkaya	2.13	23	P	P	22 37 51.3	+0.3
RUS				S	S	22 38 14.2	-2.2
RUS	Russkaya	2.13	23	*i* P	P	22 37 51.3	+0.3
RUS				*i* S	S	22 38 14.9	-1.5
GRL	Gorelyy	2.16	15	*i* P	P	22 37 52.6	+1.2
GRL				*i* S	S	22 38 17.2	+0.2
KRMR	Karymshinskiy	2.44	14	*i* P	P	22 37 56.7	+1.4
KRMR				*e*S	S	22 38 23.9	-0.1
APC	Apacha	2.46	360	*i* P	P	22 37 57.3	+1.7
APC				*e*S	S	22 38 25.9	+1.3
APC				Smax			
	comp=E,4µm,1.1s						
PET	Petropavlovsk	2.72	19	P	P	22 38 00.3	+1.0
PET				S	S	22 38 30.4	-0.8
PET	Petropavlovsk	2.72	19	⇓*i*PN	P	22 38 00.0	+0.7
PET				*e*S	S	22 38 30.9	-0.3
PET				pmax	pmax		
	comp=Z,600nm,0.8s						
PET				pmax	pmax		
	comp=Z,100nm,3.1s						
PET				pmax	pmax		
	comp=Z,364nm,0.8s						
PET				smax			
	comp=E,11µm,2.8s						
PET				smax			
	comp=N,6µm,0.5s						
PET				smax			
	comp=E,3µm,2.3s						
PET				smax			
	comp=E,5µm,0.5s						
PET				MLR	MLR		
	comp=Z,5µm,19.0s						
PET				MLR	MLR		
	comp=Z,7µm,16.0s						
PET	Petropavlovsk	2.72	19	*e*P	P	22 37 59.8	+0.4
PET	Petropavlovsk	2.72	19	⇓*i*P	P	22 38 00.0	+0.7
PET				AMB	AMB	22 38 00.8	
	comp=Z,550nm,0.8s						
PET				AMB	AMB	22 38 01.0	
	comp=Z,360nm,0.8s						
PET				*i* S	S	22 38 30.9	-0.3
PET				*e*S	S	22 38 30.9	-0.3
PET				A		22 38 31.3	
	comp=Z,11µm,2.8s						
PET				A		22 38 31.8	
	comp=Z,6µm,0.5s						
PET				A		22 38 31.9	
	comp=Z,3µm,2.3s						
PET				A		22 38 32.0	
	comp=Z,5µm,0.5s						
PET				AMS	AMS	22 38 50.5	
	comp=Z,5µm,19.0s						
PET				AMS	AMS	22 38 50.5	
	comp=Z,7µm,16.0s						
PET	Petropavlovsk	2.72	19	*e*P	P	22 38 00.0	+0.7
PET				*e*S	S	22 38 30.8	-0.4
UGLR	Uglovaya	2.93	20	*e*P	P	22 38 03.6	+1.3
UGLR				*e*S	S	22 38 37.0	+0.5
AVH	Avacha	2.96	18	*e*P	P	22 38 04.6	+1.8
AVH				*e*S	S	22 38 37.7	+0.3
KOK	Koryaka	2.97	17	*i* P	P	22 38 05.1	+2.2
KOK				*e*S	S	22 38 38.8	+1.3
SMAR	Somma	2.97	19	*e*P	P	22 38 05.6	+2.6
SMAR				*e*S	S	22 38 40.0	+2.4
NLC	Nalytchevo	3.02	26	P	P	22 38 03.0	-0.6
NLC				S	S	22 38 34.8	-4.1
NLC	Nalytchevo	3.02	26	*e*P	P	22 38 02.8	-0.8
NLC				*i* S	S	22 38 35.3	-3.6
SPN	Mys Shipunski	3.17	33	P	P	22 38 06.4	+0.7
SPN				S	S	22 38 40.7	-1.9
SPN	Mys Shipunski	3.17	33	*e*P	P	22 38 06.2	+0.5
SPN				*e*S	S	22 38 41.1	-1.5
GNL	Ganaly	3.26	8	*e*P	P	22 38 08.9	+1.8
GNL				*e*S	S	22 38 44.8	-0.2
KII	Karymskiy	3.83	20	P	P	22 38 17.3	+2.2
KII				S	S	22 39 00.2	+0.8
KII	Karymskiy	3.83	20	*e*P	P	22 38 17.2	+2.1
KII				*e*S	S	22 38 59.5	+0.1

MKZ	**Mys Kozlova**	**4.95**	**32**	P	**P**	**22 38 30.4**	**-0.4**
MKZ				S	**S**	**22 39 22.2**	**-5.2**
MKZ	**Mys Kozlova**	**4.95**	**32**	*e*P	**P**	**22 38 30.4**	**-0.4**
MKZ				*e*S	**S**	**22 39 23.7**	**-3.7**
TUMR	**Tumrok**	**5.14**	**19**	*i* P	**P**	**22 38 35.6**	**+2.0**
ESO	**Esso**	**5.54**	**9**	*e*P	**P**	**22 38 41.0**	**+2.0**
ESO				Smax			
	comp=Z,310nm,1.4s						
KMNR	**Kamenistaya**	**5.61**	**18**	*e*P	**P**	**22 38 41.8**	**+1.8**
KPT	**Kopyto**	**5.80**	**17**	*e*P	**P**	**22 38 43.9**	**+1.2**
KOZ	**Kozyrevsk**	**5.83**	**15**	P	**P**	**22 38 44.5**	**+1.5**
KOZ	**Kozyrevsk**	**5.83**	**15**	*e*P	**P**	**22 38 44.6**	**+1.6**
KOZR	**Kozyr**	**5.84**	**15**	PN	**P**	**22 38 44.5**	**+1.3**
ZLN	**Zelenaya**	**5.97**	**20**	*i* P	**P**	**22 38 47.7**	**+2.7**
LGNR	**Loginova**	**6.00**	**19**	*e*P	**P**	**22 38 47.8**	**+2.3**
CIRR	**Tsirk**	**6.05**	**19**	*e*P	**P**	**22 38 49.0**	**+2.9**
SRDR	**Sredinnyy**	**6.05**	**14**	*e*P	**P**	**22 38 47.4**	**+1.2**
KRSR	**Krestovskiy**	**6.10**	**18**	*e*P	**P**	**22 38 48.1**	**+1.2**
KLY	**Klyuchi**	**6.21**	**18**	P	**P**	**22 38 50.3**	**+1.9**
KLY				S	**S**	**22 39 57.2**	**-1.8**
KLY	**Klyuchi**	**6.21**	**18**	*e*P	**P**	**22 38 50.4**	**+2.0**
KBTR	**Krutoberegovo**	**6.67**	**28**	P	**P**	**22 38 54.3**	**-0.5**
KBTR				S	**S**	**22 40 05.8**	**-4.5**
KBTR	**Krutoberegovo**	**6.67**	**28**	*e*P	**P**	**22 38 54.2**	**-0.6**
KBTR				*e*S	**S**	**22 40 05.9**	**-4.4**
BKI	**Bering**	**7.13**	**45**	*i* P	**P**	**22 38 59.8**	**-1.5**
BKI				*e*S	**S**	**22 40 11.2**	**-11**
BKI				Smax			
	comp=Z,300nm,0.3s						
KUR	**Kuril'sk**	**8.16**	**234**	*e*PN	**P**	**22 39 17.5**	**+1.9**
KUR				*e*S	**S**	**22 40 49.0**	**+1.5**
KUR				pmax	pmax		
	comp=N,110nm,0.8s						
KUR				pmax	pmax		
	comp=Z,160nm,0.8s						
KUR				smax			
	comp=N,110nm,0.8s						
KUR				smax			
	comp=E,160nm,0.8s						
KUR	**Kuril'sk**	**8.16**	**234**	*e*P	**P**	**22 39 17.5**	**+1.9**
KUR				AMB	AMB	22 39 45.0	
	comp=E,110nm,0.8s						
KUR				AMB	AMB	22 39 45.0	
	comp=E,160nm,0.8s						
KUR				*e*S	**S**	**22 40 49.0**	**+1.5**
KUR				A		22 41 05.0	
	comp=E,110nm,0.8s						
KUR				A		22 41 05.0	
	comp=E,160nm,0.8s						
TYV	**Tymovskoe**	**9.23**	**278**	*e*P	**P**	**22 39 30.0**	**-0.4**
TYV				AMB	AMB	22 39 33.0	
	comp=E,245nm,1.6s						
TYV				AMB	AMB	22 39 33.0	
	comp=E,500nm,2.0s						
TYV				AMB	AMB	22 39 33.0	
	comp=E,500nm,2.0s						
TYV				AMB	AMB	22 39 33.0	
	comp=E,50nm,1.2s						
TYV				AMB	AMB	22 39 33.0	
	comp=E,120nm,1.2s						
TYV				A		22 41 23.5	
	comp=E,28nm,1.0s						
TYV				A		22 41 23.5	
	comp=E,22nm,1.0s						
TYV				AMS	AMS	22 43 16.0	
	comp=E,2µm,19.0s						
TYV				AMS	AMS	22 44 03.0	
	comp=E,2µm,15.0s						
TYV				AMS	AMS	22 44 03.0	
	comp=E,2µm,15.0s						
OKH	**Okha**	**9.31**	**295**	AMS	AMS	22 43 48.2	
	comp=E,3µm,16.0s						
MA2	**Magadan**	**9.83**	**341**	*ce*PN	**P**	**22 39 38.2**	**-0.3**
MA2				*e*S	**S**	**22 41 27.8**	**-0.7**
MA2				pmax	pmax		
	comp=Z,30nm,1.1s						
MA2				pmax	pmax		
	comp=N,20nm,1.0s						
MA2				pmax	pmax		
	comp=E,8.0nm,0.7s						
MA2				MLR	MLR		
	comp=Z,400nm,14.0s						
MA2	**Magadan**	**9.83**	**341**	*e*P	**P**	**22 39 37.5**	**-1.0**
	comp=Z,32nm,0.6s						
UGL	**Uglegorsk**	**9.88**	**268**	⇑*i*PN	**P**	**22 39 44.0**	**+4.9**
UGL				pmax	pmax		
	comp=Z,240nm,0.8s						
UGL				pmax	pmax		
	comp=Z,600nm,2.0s						
UGL				MLR	MLR		
	comp=E,1µm,17.0s						
UGL				MLR	MLR		
	comp=Z,1µm,17.0s						
UGL				MLR	MLR		
	comp=N,500nm,15.0s						
UGL	**Uglegorsk**	**9.88**	**268**	*e*P	**P**	**22 39 44.0**	**+4.9**
UGL				*i* P		22 39 44.0	
UGL				AMB	AMB	22 39 44.5	
	comp=N,240nm,0.8s						
UGL				AMB	AMB	22 39 46.0	
	comp=N,600nm,2.0s						
UGL				A		22 41 48.0	
	comp=N,400nm,6.0s						
UGL				A		22 41 48.0	
	comp=N,700nm,6.0s						
UGL				A		22 41 48.0	
	comp=N,800nm,6.0s						
UGL				AMS	AMS	22 44 00.0	
	comp=N,500nm,16.0s						
UGL				AMS	AMS	22 44 00.0	
	comp=N,1µm,16.0s						
UGL				AMS	AMS	22 44 00.0	
	comp=N,1µm,16.0s						
YUK	**Yuzh-Kuril'sk**	**10.03**	**234**	*e*P	**P**	**22 39 43.5**	**+2.3**
YUK				AMB	AMB	22 39 48.0	
	comp=N,210nm,0.4s						
YUK				AMB	AMB	22 39 48.0	
	comp=N,170nm,0.4s						
YUK				AMB	AMB	22 39 48.0	
	comp=N,280nm,0.4s						
YUK				AMB	AMB	22 40 07.0	
	comp=N,2µm,1.3s						
YUK				AMB	AMB	22 40 07.0	
	comp=N,8µm,1.3s						
YUK				AMB	AMB	22 40 07.0	
	comp=N,2µm,1.3s						
YUK				A		22 41 54.5	
	comp=N,2µm,1.4s						
YUK				A		22 41 54.5	
	comp=N,2µm,1.4s						
YUK				A		22 41 55.5	
	comp=N,200nm,0.5s						
YUK				A		22 41 55.5	
	comp=N,210nm,0.5s						
YUK				AMS	AMS	22 43 13.0	
	comp=N,3µm,20.0s						
YSS	**Yuzh-Sakhalins**	**10.16**	**255**	⇑*e*PN	**P**	**22 39 47.0**	**+4.0**
YSS				*e*S	**S**	**22 41 38.0**	**+1.4**
YSS				pmax	pmax		
	comp=Z,80nm,1.1s						
YSS				smax			
	comp=N,50nm,1.0s						
YSS				smax			
	comp=E,60nm,1.0s						
YSS				MLR	MLR		
	comp=E,900nm,18.0s						
YSS				MLR	MLR		
	comp=Z,1µm,18.0s						
YSS	**Yuzh-Sakhalins**	**10.16**	**255**	P	**P**	**22 39 42.0**	**-1.0**
	comp=Z,98nm,1.0s						
YSS	**Yuzh-Sakhalins**	**10.16**	**255**	⇑*e*P	**P**	**22 39 47.0**	**+4.0**
YSS				AMB	AMB	22 39 50.0	
	comp=Z,80nm,1.1s						
YSS				*e*S	**S**	**22 41 38.0**	**+1.4**
YSS				A		22 41 46.0	
	comp=Z,50nm,1.0s						
YSS				A		22 41 46.0	
	comp=Z,60nm,1.0s						
YSS				AMS	AMS	22 43 38.0	
	comp=Z,900nm,18.0s						
YSS				AMS	AMS	22 43 38.0	
	comp=Z,1µm,18.0s						
FX1	**Attu Island--F**	**10.22**	**70**	P	**P**	**22 39 42.6**	**-1.2**
	comp=Z,57nm,0.3s,baz=285,slow=3.1,SNR=368						
FX1				S	**S**	**22 41 26.7**	**-11**
	comp=Z,69nm,0.3s,baz=180,slow=22,SNR=14						
FX1				LR	LR	22 43 24.9	
	comp=Z,33nm,21.8s,baz=272,slow=36						
SMY	**Shemya**	**10.77**	**71**	*e*PN	**P**	**22 39 49.9**	**-1.3**
ASAJ	**Asahikawa**	**11.76**	**243**	P	**P**	**22 40 04.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=58,slow=11,SNR=2.6						
ASAJ				LR	LR	22 44 27.3	
	comp=Z,696nm,19.8s,baz=233,slow=36						
SEY	**Seymchan**	**12.76**	**350**	*e*PN	**P**	**22 40 19.6**	**+1.5**
SEY				*e*S	**S**	**22 42 38.9**	**-0.6**
SEY				pmax	pmax		
	comp=E,6.0nm,1.0s						
SEY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
SEY				MLR	MLR		
	comp=N,1µm,14.0s						
SEY				MLR	MLR		
	comp=Z,2µm,14.0s						
SEY				MLR	MLR		
	comp=E,800nm,16.0s						
KAMR	**Kamenskoye**	**12.99**	**19**	*e*P	**P**	**22 40 20.1**	**-1.0**
GRNR	**Gornyy**	**13.18**	**279**	*e*P	**P**	**22 40 23.0**	**-0.6**
GRNR				AMB	AMB	22 40 24.1	
	comp=E,84nm,1.0s						
TEY	**Ternei**	**14.85**	**256**	*e*P	**P**	**22 40 47.0**	**+1.7**
EKMR	**Ekimchan**	**15.20**	**289**	*e*P	**P**	**22 40 51.1**	**+1.3**
EKMR				AMB	AMB	22 40 57.0	
	comp=E,55nm,1.0s						
BMKR	**Bomnak**	**17.67**	**295**	*e*P	**P**	**22 41 20.4**	**-0.6**
BMKR				AMB	AMB	22 41 23.9	
	comp=E,37nm,0.9s						
BILL	**Bilibino**	**18.19**	**11**	⇑*i*P	**P**	**22 41 27.2**	**-0.1**
BILL				pmax	pmax		
	comp=Z,13nm,0.7s						
BILL				MLR	MLR		
	comp=Z,800nm,17.0s						
BILL	**Bilibino**	**18.19**	**11**	*e*P	**P**	**22 41 26.2**	**-1.1**
	comp=Z,29nm,0.8s						
YASR	**Yasnyy**	**18.19**	**290**	*e*P	**P**	**22 41 25.2**	**-2.2**
YASR				AMB	AMB	22 41 31.3	
	comp=Z,3.0nm,0.5s						
YASR				AMB	AMB	22 41 31.3	
	comp=Z,1.0nm,0.5s						
YASR				AMB	AMB	22 41 31.3	
	comp=Z,10.0nm,0.5s						
ZEA	**Zeya**	**18.60**	**292**	*e*P	**P**	**22 41 29.7**	**-2.8**
ZEA				AMB	AMB	22 41 34.1	
	comp=Z,20nm,0.9s						
ZEA				AMB	AMB	22 41 34.1	
	comp=Z,40nm,0.9s						
ZEA				*e*S	**S**	**22 44 57.0**	**+2.1**
ZEA				A		22 45 07.0	
	comp=Z,300nm,7.0s						
ZEA				A		22 45 07.0	
	comp=Z,500nm,7.0s						
KROS	**Kirovskiy**	**18.75**	**294**	*i* P	**P**	**22 41 32.6**	**-1.7**
KROS				AMB	AMB	22 41 34.7	
	comp=Z,15nm,0.8s						
KROS				AMB	AMB	22 41 34.7	
	comp=Z,27nm,0.8s						
YAK	**Yakutsk**	**18.99**	**318**	*e*P	**P**	**22 41 34.7**	**-2.3**
YAK				pmax	pmax		
	comp=Z,44nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,25nm,1.2s						
YAK				MLR	MLR		
	comp=N,255nm,14.0s						
YAK				MLR	MLR		
	comp=Z,588nm,14.0s						
YAK				MLR	MLR		
	comp=E,452nm,15.0s						
YAK	**Yakutsk**	**18.99**	**318**	*e*P	**P**	**22 41 35.0**	**-2.0**
	comp=E,84nm,0.6s						
MDJ	**Mudanjiang**	**19.46**	**263**	P	**P**	**22 41 41.5**	**-0.7**
MDJ				AP		22 41 51.4	
MDJ				XP		22 41 58.5	
MDJ				S	**S**	**22 45 16.9**	**+3.0**
MDJ				XS		22 45 33.7	
MDJ				PCP	PcP	22 45 57.5	-4.1
MDJ				SCP		22 49 31.2	
MDJ				PCS		22 49 38.6	
MDJ				SCS	ScS	22 53 12.9	+0.1
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,50nm,4.6s						
MDJ				LR	LR		
	comp=N,770nm,23.3s						
MDJ				LR	LR		
	comp=E,310nm,34.1s						
MDJ				LR	LR		
	comp=Z,640nm,23.2s						
MDJ	**Mudanjiang**	**19.46**	**263**	P	**P**	**22 41 41.5**	**-0.8**
	comp=Z,48nm,1.1s						
MJAR	**Matsushiro Arr**	**19.50**	**232**	P	**P**	**22 41 43.6**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=27,slow=11,SNR=50						
MJAR				LR	LR	22 49 32.4	
	comp=Z,514nm,21.4s,baz=45,slow=37						
MAJO	**Matsushiro**	**19.50**	**232**	*e*P	**P**	**22 41 42.9**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,40nm,0.9s						
MAJO	**Matsushiro**	**19.50**	**232**	*e*P	**P**	**22 41 42.9**	**+0.1**
	comp=Z,40nm,0.9s						
MAT	**Matsushiro**	**19.50**	**232**	*e*P	**P**	**22 41 43.0**	**+0.3**
MAT				pmax	pmax		
	comp=Z,54nm,1.1s						
MAT	**Matsushiro**	**19.50**	**232**	*e*P	**P**	**22 41 43.0**	**+0.3**
	comp=Z,54nm,1.1s						
MAT				*e*S	**S**	**22 45 27.0**	**+12**
MAT	**Matsushiro**	**19.50**	**232**	P	**P**	**22 41 43.4**	**+0.7**
MAT				S	**S**	**22 45 27.0**	**+12**
CLNS	**Chul'man**	**20.03**	**301**	*e*P	**P**	**22 41 48.3**	**0.0**
CLNS				*e*S	**S**	**22 45 23.6**	**-2.2**
CLNS				pmax	pmax		
	comp=E,39nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,70nm,1.0s						
CLNS				pmax	pmax		
	comp=N,35nm,0.9s						
CLNS				smax			
	comp=Z,177nm,10.9s						
CLNS				smax			
	comp=N,167nm,13.9s						
CLNS				smax			
	comp=E,55nm,13.2s						
CLNS				MLR	MLR		
	comp=Z,1µm,21.0s,MS4.1						
CLNS				MLR	MLR		
	comp=N,600nm,16.0s,MS4.1						
CLNS				MLR	MLR		
	comp=E,200nm,12.0s,MS4.1						
CN2	**Changchun**	**22.47**	**265**	*e*P	**P**	**22 42 12.4**	**-0.7**
CN2				*e*XP		22 42 30.5	
CN2				*e*S	**S**	**22 46 12.2**	**+0.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,800nm,18.0s,MS4.3						
CN2				LR	LR		
	comp=E,700nm,18.0s,MS4.3						
CN2				LR	LR		
	comp=Z,800nm,21.0s,MS4.1						
HIA	**Hailar**	**24.00**	**282**	PFAKE		22 42 40.0	+12
HIA				LR	LR		
	comp=Z,592nm,21.0s,MS4.0						
SNY	**Shenyang**	**24.65**	**263**	⇑P	**P**	**22 42 32.2**	**-2.1**
SNY				AP		22 42 47.3	
SNY				S	**S**	**22 46 53.2**	**+3.6**
SNY				AMB	AMB		
	comp=Z,10.0nm,2.4s,mb3.9						
SNY				LR	LR		
	comp=N,620nm,22.1s,MS4.1						
SNY				LR	LR		
	comp=E,460nm,25.0s,MS4.1						
SNY				LR	LR		
	comp=Z,520nm,23.5s,MS4.0						
TIXI	**Tiksi**	**24.80**	**339**	*e*P	**P**	**22 42 31.5**	**-3.9**
TIXI				*e*S	**S**	**22 46 42.8**	**-9.0**
TIXI				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,498nm,15.0s,MS4.1						
TIXI	**Tiksi**	**24.80**	**339**	PFAKE		22 42 50.0	+15
TIXI				LR	LR		
	comp=Z,510nm,20.0s,MS4.0						
JNU	**Nakatsue**	**25.96**	**238**	P	**P**	**22 42 48.9**	**+2.2**
	comp=Z,70nm,0.9s,mb5.2,baz=50,slow=15,SNR=27						
JNU				LR	LR	22 54 03.1	
	comp=Z,132nm,19.7s,MS3.5,baz=296,slow=38						
CBIJ	**Chichi jima**	**26.00**	**212**	LR	LR	22 51 05.8	
	comp=Z,348nm,22.0s,MS3.9,baz=144,slow=32						
CIT	**Chita**	**27.05**	**290**	*e*P	**P**	**22 42 56.5**	**0.0**
CIT				*e*	pP	22 43 10.0	+1.1
CIT				pmax	pmax		
	comp=Z,22nm,2.8s,mb4.2						
TTA	**Tatalina**	**27.86**	**46**	*e*P	**P**	**22 43 02.8**	**-1.0**
SVW2	**Sparrevohn**	**27.98**	**49**	*e*P	**P**	**22 43 04.6**	**-0.3**
IMA	**Indian Mountai**	**29.21**	**39**	*e*P	**P**	**22 43 15.0**	**-0.8**
IMA				pmax	pmax		
	comp=Z,430nm,0.9s						
IMA	**Indian Mountai**	**29.21**	**39**	*e*P	**P**	**22 43 14.8**	**-1.0**
SPU	**Mount Spurr**	**29.69**	**49**	*e*P	**P**	**22 43 18.5**	**-1.6**
FIB	**Fire Island**	**30.60**	**49**	PFAKE		22 43 40.0	+12
FIB				LR	LR		
	comp=Z,1µm,20.0s,MS4.6						
MCK	**McKinley**	**31.08**	**44**	*e*P	**P**	**22 43 30.8**	**-1.6**
MCK				*e**PP	pP	22 43 43.4	-1.6
MCK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
MCK	**McKinley**	**31.08**	**44**	*e*P	**P**	**22 43 30.8**	**-1.6**
	comp=Z,1.9nm,0.7s,mb4.0						
MCK				*e*pP	pP	22 43 43.4	-1.7
SML	**Sawmill**	**31.44**	**48**	*e*P	**P**	**22 43 34.1**	**-1.5**
COLA	**College**	**31.55**	**42**	*c* *i*P	**P**	**22 43 35.8**	**-0.7**
COLA				*i* *PP	pP	22 43 48.3	-0.9
COLA	**College**	**31.55**	**42**	*e*P	**P**	**22 43 35.5**	**-1.0**
ILAR	**Eielson Array**	**31.97**	**42**	P	**P**	**22 43 38.8**	**-1.4**
	comp=Z,5.0nm,0.8s,mb4.4,baz=270,slow=7.1,SNR=32						
ILAR				pP	pP	22 43 51.0	-1.8
	comp=Z,15nm,0.8s,baz=268,slow=7.3,SNR=31						
ILAR				LR	LR	22 57 41.4	
	comp=Z,190nm,19.2s,MS3.8,baz=78,slow=38						
ULN	**Ulaanbaatar**	**32.38**	**285**	⇑*i*P	**P**	**22 43 42.6**	**-1.3**
ULN	**Ulaanbaatar**	**32.38**	**285**	PFAKE		22 43 50.0	+6.1
ULN				LR	LR		
	comp=Z,544nm,22.0s,MS4.2						
DIV	**Divide**	**32.73**	**49**	*e*P	**P**	**22 43 45.8**	**-1.1**
	comp=Z,46nm,0.8s,mb5.5						
DIV				LR	LR		
	comp=Z,717nm,19.0s,MS4.4						
SONM	**Songino Array**	**32.80**	**285**	P	**P**	**22 43 48.0**	**+0.4**
	comp=Z,1.0nm,0.5s,mb4.0,baz=60,slow=8.1,SNR=17						
SONM				PcP	PcP	22 46 31.6	-0.3
	comp=Z,2.3nm,0.9s,baz=90,slow=2.5,SNR=7.1						
SONM				LR	LR	22 58 13.2	
	comp=Z,616nm,20.2s,MS4.3,baz=69,slow=38						
HHC	**Hu-ho-hao-te**	**32.83**	**271**	*e*P	**P**	**22 43 52.0**	**+4.0**
HHC				AP	pP	22 44 02.3	+1.6
HHC				XP	sP	22 44 09.5	+2.7
HHC				PP	PP	22 44 58.6	-0.1
HHC				PCP	PcP	22 46 36.9	+4.8
HHC				S	**S**	**22 49 03.2**	**+2.5**
HHC				XS		22 49 22.3	
HHC				SS	SS	22 51 03.0	+1.4
HHC				AMB	AMB		
	comp=Z,90nm,12.0s						
HHC				LR	LR		
	comp=N,280nm,16.8s,MS4.4						
HHC				LR	LR		
	comp=E,530nm,15.6s,MS4.4						
HHC				LR	LR		
	comp=Z,420nm,18.0s,MS4.2						
SSE	**Sheshan**	**32.98**	**248**	P	**P**	**22 43 47.4**	**-2.0**
SSE				PP	PP	22 45 03.2	+2.4
SSE				PCP	PcP	22 46 28.9	-3.7
SSE				S	**S**	**22 49 00.1**	**-3.1**
SSE				SCP		22 50 05.8	
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,130nm,4.6s						
SSE				LR	LR		
	comp=N,60nm,23.5s,MS3.4						
SSE				LR	LR		
	comp=E,70nm,24.1s,MS3.4						
SSE				LR	LR		
	comp=Z,130nm,20.6s,MS3.6						
TLY	**Talaya**	**33.03**	**293**	*c* *i*P	**P**	**22 43 47.0**	**-2.6**
TLY				*i* *PP	pP	22 44 04.8	+2.5
TLY				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
TLY				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.4						
MENT	**Mentasta**	**33.48**	**45**	*e*P	**P**	**22 43 52.9**	**-0.4**
ZAK	**Zakamensk**	**33.70**	**291**	⇑*e*P	**P**	**22 43 55.3**	**0.0**
ZAK				*e*		22 46 33.0	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
NJ2	**Nanjing**	**33.70**	**252**	*e*P	**P**	**22 43 56.6**	**+1.0**
NJ2				AP	pP	22 44 15.1	+6.8
NJ2				PP	PP	22 45 12.2	+2.8
NJ2				S	**S**	**22 49 14.0**	**-0.3**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
NJ2				LR	LR		
	comp=N,340nm,22.4s,MS4.4						
NJ2				LR	LR		
	comp=E,710nm,19.0s,MS4.4						
NJ2				LR	LR		
	comp=Z,3µm,22.1s,MS5.0						
MOY	**Mondy**	**34.59**	**294**	*e*P	**P**	**22 44 03.6**	**+0.7**
INK	**Inuvik**	**37.06**	**35**	P	**P**	**22 44 23.3**	**-0.4**
	comp=Z,7.8nm,0.6s,mb4.7,baz=287,slow=6.8,SNR=21						
SIT	**Sitka**	**38.94**	**53**	PFAKE		22 44 50.0	+11
SIT				LR	LR		
	comp=Z,277nm,19.0s,MS4.1						
LZH	**Lanzhou**	**40.52**	**270**	⇓P	**P**	**22 44 54.4**	**+1.6**
LZH				AP	pP	22 45 07.7	+1.9
LZH				XP	sP	22 45 13.1	+1.5
LZH				PP	PP	22 46 31.0	+1.1
LZH				*e*S	**S**	**22 50 55.0**	**-3.2**
LZH				AMB	AMB		
	comp=Z,80nm,1.4s,mb5.2						
LZH				AMB	AMB		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=N,1µm,19.0s						
LZH				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
ENH	**Enshi**	**40.72**	**259**	*e*P	**P**	**22 44 54.6**	**+0.1**
	comp=Z,7.2nm,0.8s,mb4.3						
ENH				LR	LR		
	comp=Z,333nm,19.0s,MS4.2						
GTA	**Gaotai**	**41.12**	**277**	*e*P	**P**	**22 44 58.1**	**+0.4**
GTA				AP	pP	22 45 09.7	-1.0
GTA				XP	sP	22 45 15.8	-0.7
GTA				PP	PP	22 46 38.0	+2.0
GTA				PCP	PcP	22 46 56.6	-0.6
GTA				PPP	PPP	22 47 07.3	+0.9
GTA				S	**S**	**22 51 08.7**	**+1.6**
GTA				XS		22 51 28.5	
GTA				SS	SS	22 54 07.8	+1.3
GTA				AMB	AMB		
	comp=Z,70nm,8.0s						
GTA				LR	LR		
	comp=N,320nm,18.6s,MS4.4						
GTA				LR	LR		
	comp=E,330nm,17.9s,MS4.4						
GTA				LR	LR		
	comp=Z,330nm,21.3s,MS4.2						
KWAJ	**Kwajalein Atol**	**42.43**	**165**	PFAKE		22 45 20.0	+11
KWAJ				LR	LR		
	comp=Z,337nm,19.0s,MS4.2						
ZAL	**Zalesovo**	**42.72**	**304**	P	**P**	**22 45 08.5**	**-2.0**
	comp=Z,1.2nm,0.5s,mb3.9,baz=48,slow=7.0,SNR=9.5						
ZAL				PcP	PcP	22 47 01.7	-0.5
	comp=Z,2.3nm,0.6s,baz=38,slow=4.4,SNR=7.0						
ZAL				LR	LR	23 04 13.0	
	comp=Z,300nm,20.0s,MS4.2,baz=37,slow=38						
ZAL	**Zalesovo**	**42.72**	**304**	P	**P**	**22 45 08.5**	**-2.1**
ZAL				PcP	PcP	22 47 01.7	-0.5
NVS	**Novosibirsk**	**43.14**	**306**	⇑*i*P	**P**	**22 45 12.3**	**-1.7**
NVS				*e*	pP	22 45 27.8	+0.8
NVS				*e*		22 46 58.7	
NVS				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.9						

NVS				pmax	pmax		
	comp=N,16nm,1.6s						
NVS				pmax	pmax		
	comp=E,19nm,1.3s						
GYA	**Guiyang**	**45.16**	**257**	⇑*i*P	**P**	**22 45 31.8**	**+1.1**
GYA				AP	pP	22 45 44.5	+0.8
GYA				XP	sP	22 45 49.6	+0.2
GYA				PP	PP	22 47 17.8	+0.4
GYA				S	**S**	**22 52 07.8**	**+1.7**
GYA				SS	SS	22 55 22.2	+1.8
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
GYA				AMB	AMB		
	comp=Z,120nm,2.8s,mb5.2						
GYA				LR	LR		
	comp=N,640nm,16.2s,MS4.8						
GYA				LR	LR		
	comp=E,590nm,16.8s,MS4.8						
GYA				LR	LR		
	comp=Z,480nm,17.0s,MS4.5						
WMQ	**Urumqi**	**46.15**	**290**	P	**P**	**22 45 38.7**	**+0.5**
WMQ				AP	pP	22 45 51.1	-0.2
WMQ				XP	sP	22 45 56.4	-0.6
WMQ				PCP	PcP	22 47 15.2	+1.1
WMQ				PP	PP	22 47 27.0	+0.1
WMQ				PPP	PPP	22 48 11.3	-0.4
WMQ				S	**S**	**22 52 19.7**	**-0.2**
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,160nm,4.0s						
WMQ				LR	LR		
	comp=N,350nm,24.0s,MS4.4						
WMQ				LR	LR		
	comp=E,340nm,22.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,420nm,25.0s,MS4.3						
YKA	**Yellowknife Ar**	**46.33**	**40**	P	**P**	**22 45 39.3**	**-0.1**
	comp=Z,7.6nm,0.6s,mb4.8,baz=298,slow=7.8,SNR=56						
YKA				pP	pP	22 45 52.6	+0.1
	comp=Z,11nm,0.9s,baz=298,slow=8.0,SNR=12						
YKA				PcP	PcP	22 47 14.7	+0.2
	comp=Z,2.8nm,0.9s,baz=316,slow=3.5,SNR=5.8						
YKA				pPcP		22 47 29.1	
	comp=Z,4.3nm,0.8s,baz=309,slow=3.1,SNR=8.9						
YKA				LR	LR	23 08 33.6	
	comp=Z,152nm,20.1s,MS3.9,baz=275,slow=41						
YKA	**Yellowknife Ar**	**46.33**	**40**	P	**P**	**22 45 39.3**	**-0.1**
YKA				pP	pP	22 45 52.6	+0.1
YKA				PcP	PcP	22 47 14.7	+0.2
YKA				pPcP		22 47 29.1	
MKAR	**Makanchi Array**	**47.67**	**296**	*i* P	**P**	**22 45 48.7**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MKAR	**Makanchi Array**	**47.67**	**296**	P	**P**	**22 45 48.8**	**-1.4**
	comp=Z,2.2nm,0.4s,mb4.5,baz=54,slow=6.0,SNR=56						
MKAR				LR	LR	23 06 55.7	
	comp=Z,597nm,20.0s,MS4.6,baz=18,slow=38						
KMI	**Kunming**	**48.57**	**260**	P	**P**	**22 45 57.8**	**+0.3**
KMI				AP	pP	22 46 10.0	-0.6
KMI				PP	PP	22 47 47.2	-3.2
KMI				S	**S**	**22 52 53.6**	**-0.9**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.7						
KMI				AMB	AMB		
	comp=Z,30nm,3.9s						
KMI				LR	LR		
	comp=N,210nm,17.0s,MS4.3						
KMI				LR	LR		
	comp=E,170nm,18.9s,MS4.3						
KMI				LR	LR		
	comp=Z,200nm,32.1s						
QIZ	**Qiongzhong**	**48.78**	**248**	P	**P**	**22 46 00.4**	**+1.3**
QIZ				LR	LR		
	comp=N,80nm,21.0s,MS3.9						
QIZ				LR	LR		
	comp=E,90nm,21.2s,MS3.9						
QIZ				LR	LR		
	comp=Z,80nm,20.7s,MS3.7						
BVA0	**Borovoye Array**	**50.61**	**309**	*i* P	**P**	**22 46 10.3**	**-2.4**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.6						
TWW	**Teanaway**	**51.46**	**60**	P	**P**	**22 46 20.5**	**+1.3**
TBM	**Table Mountain**	**51.59**	**60**	P	**P**	**22 46 20.9**	**+0.7**
EPH	**Ephrata**	**52.03**	**59**	P	**P**	**22 46 23.9**	**+0.4**
LSA	**Lhasa**	**52.77**	**273**	*e*P	**P**	**22 46 30.7**	**+1.4**
LSA	**Lhasa**	**52.77**	**273**	PFAKE		22 46 40.0	+11
LSA				LR	LR		
	comp=Z,355nm,20.0s,MS4.4						
NEW	**Newport**	**52.82**	**57**	PFAKE		22 46 40.0	+11
NEW				LR	LR		
	comp=Z,185nm,20.0s,MS4.1						
SVE	**Sverdlovsk**	**52.95**	**317**	*e*P	**P**	**22 46 29.0**	**-1.3**
SVE				MLR	MLR		
	comp=N,100nm,16.0s,MS4.3						
SVE				MLR	MLR		
	comp=E,200nm,16.0s,MS4.3						
SVE				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.7						
HUMO	**Hull Mountain**	**53.00**	**66**	PFAKE		22 46 40.0	+9.2
HUMO				LR	LR		
	comp=Z,388nm,21.0s,MS4.4						
YBH	**Yreka Blue Hor**	**53.69**	**66**	*e*P	**P**	**22 46 37.0**	**+1.1**
YBH				*e**PP	pP	22 46 50.6	+1.4
YBH				pmax	pmax		
	comp=Z,19nm,1.0s						
YBH	**Yreka Blue Hor**	**53.69**	**66**	*e*P	**P**	**22 46 37.0**	**+1.1**
	comp=Z,19nm,1.0s,mb5.0						
YBH				*e*pP	pP	22 46 50.6	+1.4
ARU	**Arti**	**54.10**	**317**	⇑*i*P	**P**	**22 46 35.9**	**-2.8**
ARU				*e*		22 47 38.9	
ARU				*e*		22 48 34.3	
ARU				*e*PPP	PPP	22 49 44.6	-8.2
ARU				*e*S	**S**	**22 54 06.2**	**-3.8**
ARU				*e*		22 56 25.6	
ARU				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
ARU				MLR	MLR		
	comp=N,200nm,19.0s,MS4.4						
ARU				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.5						
ARU				MLR	MLR		
	comp=E,200nm,17.0s,MS4.4						
ARU	**Arti**	**54.10**	**317**	*e*P	**P**	**22 46 35.4**	**-3.3**
	comp=E,9.5nm,0.4s,mb5.1						
ARU				LR	LR		
	comp=Z,115nm,19.0s,MS4.0						
BSMT	**Bassoo Peak**	**54.32**	**56**	P	**P**	**22 46 41.2**	**+0.7**
FRU	**Bishkek**	**54.42**	**296**	*e*P	**P**	**22 46 41.0**	**-0.2**
NANT	**Nan**	**54.50**	**256**	⇑P	**P**	**22 46 42.0**	**-0.2**
	comp=Z,250nm,0.6s						
WDC	**Whiskeytown Da**	**54.51**	**67**	*e*P	**P**	**22 46 42.5**	**+0.5**
WDC				*e**PP	pP	22 46 56.5	+1.2
WDC				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
WDC	**Whiskeytown Da**	**54.51**	**67**	*e*P	**P**	**22 46 42.5**	**+0.6**
	comp=Z,15nm,1.0s,mb5.0						
WDC				*e*pP	pP	22 46 56.5	+1.1
AAK	**Ala-Archa**	**54.61**	**296**	*i* P	**P**	**22 46 41.4**	**-1.3**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
AAK	**Ala-Archa**	**54.61**	**296**	*e*P	**P**	**22 46 40.2**	**-2.5**
	comp=Z,4.1nm,0.8s,mb4.5						
KEV	**Kevo**	**54.72**	**341**	PFAKE		22 46 50.0	+6.9
KEV				LR	LR		
	comp=Z,297nm,19.0s,MS4.4						
BMO	**Blue Mountains**	**54.82**	**60**	PFAKE		22 47 00.0	+16
BMO				LR	LR		
	comp=Z,189nm,20.0s,MS4.2						
MOD	**Modoc**	**54.98**	**65**	*e*P	**P**	**22 46 46.4**	**+1.0**
	comp=Z,15nm,1.1s,mb5.0						
MOD				*e*pP	pP	22 47 00.3	+1.6
MOD				LR	LR		
	comp=Z,297nm,22.0s,MS4.3						
SHL	**Shillong**	**55.16**	**269**	*e*P	**P**	**22 46 48.0**	**+1.1**
HOPS	**Hopland**	**55.20**	**69**	P	**P**	**22 46 54.4**	**+7.3**
HOPS				LR	LR		
	comp=Z,322nm,19.0s,MS4.4						
ARCES	**ARCESS Array B**	**55.21**	**341**	P	**P**	**22 46 43.4**	**-3.3**
	comp=Z,4.9nm,0.9s,mb4.5,baz=41,slow=7.5,SNR=5.2						
MSO	**Missoula**	**55.41**	**57**	*e*P	**P**	**22 46 47.5**	**-0.9**
	comp=Z,12nm,1.2s,mb4.8						
MSO				*e*pP	pP	22 47 01.6	-0.2
CHG	**Chiang Mai**	**55.58**	**257**	⇑P	**P**	**22 46 51.3**	**+1.3**
	comp=Z,59nm,0.9s,mb5.6						
WVOR	**Wild Horse Val**	**55.60**	**63**	*e*P	**P**	**22 46 50.4**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.4						
WVOR				MLR	MLR		
	comp=Z,346nm,21.0s,MS4.4						
WVOR	**Wild Horse Val**	**55.60**	**63**	*e*P	**P**	**22 46 50.4**	**+0.6**
	comp=Z,36nm,1.0s,mb5.3						
WVOR				LR	LR		
	comp=Z,346nm,21.0s,MS4.4						
CHMT	**Chamberlain Mo**	**55.72**	**56**	*e*P	**P**	**22 46 50.5**	**-0.2**
CM31	**Chiang Mai Arr**	**55.85**	**257**	PFAKE		22 47 00.0	+8.1
CM31				LR	LR		
	comp=Z,216nm,21.0s,MS4.2						
CMAR	**Chiang Mai Arr**	**55.85**	**257**	P	**P**	**22 46 53.0**	**+1.1**
	comp=Z,25nm,0.9s,mb5.2,baz=21,slow=7.4,SNR=92						
FFC	**Flin Flon**	**56.16**	**43**	*e*P	**P**	**22 46 53.2**	**-0.5**
FFC				*e**PP	pP	22 47 05.5	-1.7
FFC				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
FFC	**Flin Flon**	**56.16**	**43**	*e*P	**P**	**22 46 53.2**	**-0.5**
	comp=Z,18nm,0.9s,mb5.1						
FFC				*e*pP	pP	22 47 05.5	-1.6
SAC	**San Andreas**	**56.51**	**70**	P	**P**	**22 46 56.4**	**-0.1**
KKAR	**Karatay Array**	**56.57**	**299**	*i* P	**P**	**22 46 54.7**	**-2.1**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
SUMG	**Summit**	**56.77**	**6**	*e*P	**P**	**22 46 57.0**	**-0.9**
	comp=Z,33nm,0.9s,mb5.4						
HLID	**Hailey**	**57.24**	**60**	*e*P	**P**	**22 47 01.8**	**+0.3**
	comp=Z,9.6nm,1.2s,mb4.7						
HLID				*e*pP	pP	22 47 14.9	-0.2
HLID				LR	LR		
	comp=Z,178nm,20.0s,MS4.2						
MCMT	**McKenzie Canyo**	**57.27**	**58**	*e*P	**P**	**22 47 01.8**	**0.0**
GUN	**Gumba**	**57.35**	**275**	*e*P	**P**	**22 47 02.5**	**-0.1**
BOZ	**Bozeman (W)**	**57.39**	**56**	*e*P	**P**	**22 47 03.0**	**+0.4**
BOZ				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.2						
BOZ				MLR	MLR		
	comp=Z,176nm,19.0s,MS4.2						
BOZ	**Bozeman (W)**	**57.39**	**56**	*e*P	**P**	**22 47 03.0**	**+0.4**
	comp=Z,28nm,1.1s,mb5.2						
BOZ				LR	LR		
	comp=Z,176nm,19.0s,MS4.2						
CMB	**Columbia Colle**	**57.43**	**68**	*e*P	**P**	**22 47 03.3**	**+0.3**
CMB				*e**PP	pP	22 47 15.1	-1.3
CMB				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
CMB				MLR	MLR		
	comp=Z,147nm,20.0s,MS4.1						
CMB	**Columbia Colle**	**57.43**	**68**	*e*P	**P**	**22 47 03.3**	**+0.4**
	comp=Z,8.8nm,0.9s,mb4.8						
CMB				*e*pP	pP	22 47 15.1	-1.4
CMB				LR	LR		
	comp=Z,147nm,20.0s,MS4.1						
BMN	**Battle Mountai**	**57.70**	**64**	*e*P	**P**	**22 47 05.6**	**+0.7**
BMN				*e**PP	pP	22 47 18.9	+0.6
BMN				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
BMN				MLR	MLR		
	comp=Z,197nm,21.0s,MS4.2						
BMN	**Battle Mountai**	**57.70**	**64**	*e*P	**P**	**22 47 05.5**	**+0.7**
	comp=Z,13nm,1.1s,mb4.9						
BMN				*e*pP	pP	22 47 18.9	+0.5
BMN				LR	LR		
	comp=Z,197nm,21.0s,MS4.2						
KKN	**Kakani**	**57.82**	**276**	*e*P	**P**	**22 47 05.5**	**-0.3**
	comp=Z,13nm,0.6s,mb5.1						
KKN	**Kakani**	**57.82**	**276**	*e*P	**P**	**22 47 05.5**	**-0.3**
KKN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
PKI	**Pulchoki**	**57.89**	**275**	*e*P	**P**	**22 47 05.8**	**-0.5**
	comp=Z,9.9nm,0.8s,mb4.9						
PKI	**Pulchoki**	**57.89**	**275**	*e*P	**P**	**22 47 05.8**	**-0.5**
PKI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
QLMT	**Earthquake Lak**	**58.03**	**57**	*e*P	**P**	**22 47 08.0**	**+0.9**
QLMT				*e*pP	pP	22 47 21.5	+0.9
DMN	**Daman**	**58.05**	**276**	*e*P	**P**	**22 47 07.3**	**-0.2**
	comp=Z,77nm,1.5s,mb5.5						
GKN	**Gorkha**	**58.08**	**276**	*e*P	**P**	**22 47 07.3**	**-0.3**
	comp=Z,34nm,1.0s,mb5.3						
AB31	**Akbulak array**	**58.11**	**310**	*i* P	**P**	**22 47 04.9**	**-2.6**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
YMR	**Madison River**	**58.39**	**57**	P	**P**	**22 47 10.2**	**+0.6**
NVAR	**Mina Array Bea**	**58.40**	**67**	P	**P**	**22 47 10.4**	**+0.7**
	comp=Z,2.5nm,0.7s,mb4.4,baz=314,slow=5.6,SNR=8.8						
NVAR				pP	pP	22 47 24.6	+1.4
	comp=Z,11nm,0.8s,baz=315,slow=4.9,SNR=18						
NVAR				LR	LR	23 08 04.6	
	comp=Z,55nm,19.5s,MS3.7,slow=32						
MNV	**Mina**	**58.48**	**67**	*e*P	**P**	**22 47 10.8**	**+0.5**
MNV				*e**PP	pP	22 47 24.8	+1.0
MNV				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.7						
MNV				MLR	MLR		
	comp=Z,234nm,21.0s,MS4.3						
MNV	**Mina**	**58.48**	**67**	*e*P	**P**	**22 47 10.8**	**+0.5**
	comp=Z,9.8nm,1.4s,mb4.7						
MNV				*e*pP	pP	22 47 24.8	+1.0
MNV				LR	LR		
	comp=Z,234nm,21.0s,MS4.3						
ELK	**Elko**	**58.63**	**63**	*e*P	**P**	**22 47 12.2**	**+0.9**
ELK				*e**PP	pP	22 47 24.5	-0.3
LKWY	**Lake**	**58.76**	**57**	PFAKE		22 47 20.0	+7.8
LKWY				LR	LR		
	comp=Z,208nm,19.0s,MS4.3						
KOLN	**Koldanda**	**58.90**	**277**	*e*P	**P**	**22 47 13.4**	**+0.1**
	comp=Z,5.2nm,0.4s,mb5.0						
IMW	**Indian Meadow**	**58.92**	**58**	*e*P	**P**	**22 47 14.4**	**+1.2**
	comp=Z,30nm,1.3s,mb5.2						
IMW				*e*pP	pP	22 47 27.7	+1.0
RRI2	**Red Ridge**	**59.08**	**58**	*e*P	**P**	**22 47 15.1**	**+0.8**
	comp=Z,17nm,0.8s,mb5.1						
RRI2				*e*pP	pP	22 47 28.1	+0.3
MOOW	**Moose Ponds**	**59.12**	**58**	*e*P	**P**	**22 47 15.0**	**+0.4**
	comp=Z,10nm,1.0s,mb4.8						
MOOW				*e*pP	pP	22 47 28.4	+0.3
TPAW	**Teton Pass**	**59.18**	**58**	*e*P	**P**	**22 47 16.1**	**+1.1**
	comp=Z,40nm,1.2s,mb5.3						
TPAW				*e*pP	pP	22 47 29.4	+0.8
WUWY	**Wally Ulrich**	**59.26**	**58**	*e*P	**P**	**22 47 16.5**	**+0.9**
TPH	**Tonopah**	**59.27**	**66**	*e*P	**P**	**22 47 16.0**	**+0.3**
TPH				*e**PP	pP	22 47 29.3	+0.1
TPH				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
TPH				MLR	MLR		
	comp=Z,251nm,21.0s,MS4.3						
TPH	**Tonopah**	**59.27**	**66**	*e*P	**P**	**22 47 16.0**	**+0.3**
	comp=Z,5.7nm,0.9s,mb4.6						
TPH				*e*pP	pP	22 47 29.3	+0.1
TPH				LR	LR		
	comp=Z,251nm,21.0s,MS4.3						
SNOW	**Snow King Moun**	**59.31**	**58**	*e*P	**P**	**22 47 16.9**	**+0.9**
	comp=Z,26nm,1.1s,mb5.2						
LAO	**LASA Array**	**59.51**	**53**	*e*P	**P**	**22 47 17.2**	**-0.1**
	comp=Z,30nm,0.9s,mb5.3						
LAO				*e*pP	pP	22 47 30.9	+0.1
LAO				LR	LR		
	comp=Z,317nm,21.0s,MS4.4						
AHID	**Auburn Hatcher**	**59.59**	**59**	PFAKE		22 47 30.0	+12
AHID				LR	LR		
	comp=Z,217nm,22.0s,MS4.2						
HNR	**Honiara**	**59.70**	**177**	PFAKE		22 47 30.0	+11
HNR				LR	LR		
	comp=Z,252nm,21.0s,MS4.3						
HWUT	**Hardware Ranch**	**60.11**	**60**	*e*P	**P**	**22 47 21.4**	**-0.2**
	comp=Z,15nm,1.1s,mb4.9						
HWUT				LR	LR		
	comp=Z,160nm,22.0s,MS4.1						
DAC	**Darwin (Calif)**	**60.26**	**68**	PFAKE		22 47 40.0	+17
DAC				LR	LR		
	comp=Z,274nm,20.0s,MS4.4						
DUG	**Dugway**	**60.37**	**62**	PFAKE		22 47 40.0	+17
DUG				LR	LR		
	comp=Z,234nm,21.0s,MS4.3						
BW06	**Boulder Array**	**60.42**	**58**	*e*P	**P**	**22 47 23.9**	**+0.3**
	comp=Z,18nm,0.9s,mb5.1						
BW06				*e*pP	pP	22 47 37.0	-0.2
BW06				LR	LR		
	comp=Z,173nm,22.0s,MS4.2						
PDAR	**Pinedale Array**	**60.42**	**58**	P	**P**	**22 47 24.4**	**+0.7**
	comp=Z,16nm,0.9s,mb5.1,baz=315,slow=2.1,SNR=84						
PDAR				pP	pP	22 47 38.2	+1.0
	comp=Z,10nm,0.9s,baz=315,slow=2.1,SNR=10.0						
KAF	**Kangasniemi**	**61.17**	**336**	*e*p	**P**	**22 47 26.4**	**-2.0**
ARUT	**Antelope Range**	**61.65**	**64**	*e*P	**P**	**22 47 32.4**	**+0.4**
FINES	**FINESS Array B**	**61.79**	**336**	*i* P	**P**	**22 47 29.4**	**-3.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**61.79**	**336**	P	**P**	**22 47 29.8**	**-2.8**
	comp=Z,1.2nm,0.5s,mb4.3,baz=33,slow=6.3,SNR=22						
FINES				LR	LR	23 17 42.9	
	comp=Z,262nm,20.4s,MS4.4,baz=351,slow=40						
FINES	**FINESS Array B**	**61.79**	**336**	P	**P**	**22 47 29.8**	**-2.8**
MVU	**Marysvale**	**61.87**	**63**	PFAKE		22 47 50.0	+17
MVU				LR	LR		
	comp=Z,262nm,21.0s,MS4.4						
MSU	**Marysvale**	**61.88**	**63**	*e*P	**P**	**22 47 34.3**	**+0.8**
MSU				*e**PP	pP	22 47 47.0	-0.1
ULM	**Lac du Bonnet**	**61.95**	**44**	pP	pP	22 47 46.8	-0.7
	comp=Z,3.3nm,0.6s,baz=267,slow=5.1,SNR=3.2						
ULM				LR	LR	23 18 00.1	
	comp=Z,102nm,18.4s,MS4.0,baz=291,slow=40						
ULM	**Lac du Bonnet**	**61.95**	**44**	PFAKE		22 47 50.0	+16
ULM				LR	LR		
	comp=Z,203nm,21.0s,MS4.3						
RSSD	**Black Hills**	**62.40**	**53**	*e*P	**P**	**22 47 37.0**	**+0.1**
RSSD				*e**PP	pP	22 47 50.2	-0.3
RSSD				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.5						
RSSD	**Black Hills**	**62.40**	**53**	*e*P	**P**	**22 47 37.0**	**+0.1**
	comp=Z,26nm,0.7s,mb5.5						
RSSD				*e*pP	pP	22 47 50.1	-0.3
OBN	**Obninsk**	**63.73**	**327**	⇑*e*P	**P**	**22 47 43.1**	**-2.3**
OBN				*i* *PP	pP	22 48 04.6	+5.5
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
OBN				MLR	MLR		
	comp=Z,300nm,19.0s,MS4.5						
OBN	**Obninsk**	**63.73**	**327**	PFAKE		22 48 00.0	+15
OBN				LR	LR		
	comp=Z,110nm,22.0s,MS4.0						
WUAZ	**Wupatki**	**64.42**	**65**	PFAKE		22 48 00.0	+10
WUAZ				LR	LR		
	comp=Z,285nm,22.0s,MS4.4						
RW3	**Ridgway**	**64.58**	**60**	*e*P	**P**	**22 47 52.5**	**+1.2**
ISCO	**Idaho Springs**	**64.62**	**58**	*e*P	**P**	**22 47 52.3**	**+0.8**
ISCO				*e**PP	pP	22 48 06.3	+1.1
ISCO				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
ISCO				MLR	MLR		
	comp=Z,214nm,21.0s,MS4.3						
ISCO	**Idaho Springs**	**64.62**	**58**	*e*P	**P**	**22 47 52.3**	**+0.8**
	comp=Z,25nm,1.1s,mb5.2						
ISCO				*e*pP	pP	22 48 06.2	+1.1
ISCO				LR	LR		
	comp=Z,214nm,21.0s,MS4.3						
KULM	**Kulim**	**65.08**	**246**	*e*P	**P**	**22 47 55.4**	**+0.5**
KULM				*e*pP	pP	22 48 09.1	+0.6
NB2	**NORSAR Subarra**	**65.53**	**343**	P	**P**	**22 47 54.5**	**-2.5**
	comp=Z,1.9nm,0.7s,mb4.2,baz=25,slow=6.5						
NOA	**NORSAR Array B**	**65.53**	**343**	P	**P**	**22 47 55.2**	**-1.8**
	comp=Z,2.1nm,0.7s,mb4.3,baz=24,slow=6.6,SNR=7.0						
NOA				LR	LR	23 21 30.9	
	comp=Z,143nm,19.6s,MS4.2,baz=25,slow=41						
NOA	**NORSAR Array B**	**65.53**	**343**	P	**P**	**22 47 55.2**	**-1.8**
EYMN	**Ely**	**65.60**	**43**	PFAKE		22 48 10.0	+12
EYMN				LR	LR		
	comp=Z,186nm,20.0s,MS4.3						
VRSR	**Storozhevoye**	**65.83**	**323**	*e*P	**P**	**22 47 56.1**	**-3.0**
VRSR				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
VRSR				pmax	pmax		
	comp=N,9.0nm,1.1s						
VRSR				pmax	pmax		
	comp=E,5.0nm,0.8s						
SDCO	**Great Sand Dun**	**66.15**	**59**	PFAKE		22 48 10.0	+8.7
SDCO				LR	LR		
	comp=Z,193nm,20.0s,MS4.3						
KAKA	**Kakadu**	**66.54**	**206**	*e*P	**P**	**22 48 04.9**	**+0.8**
KAKA				*i*	pP	22 48 19.3	+1.4
ANMO	**Albuquerque**	**67.64**	**62**	*e*P	**P**	**22 48 11.4**	**+0.7**
ANMO				*e**PP	pP	22 48 24.2	-0.3
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANMO				MLR	MLR		
	comp=Z,87nm,20.0s						
ANMO	**Albuquerque**	**67.64**	**62**	*e*P	**P**	**22 48 11.4**	**+0.7**
	comp=Z,4.9nm,1.1s,mb4.5						
ANMO				*e*pP	pP	22 48 24.2	-0.3
ANMO				LR	LR		
	comp=Z,87nm,20.0s,MS4.0						
CBKS	**Cedar Bluff**	**68.46**	**55**	PFAKE		22 48 30.0	+14
CBKS				LR	LR		
	comp=Z,252nm,21.0s,MS4.4						
SCHQ	**Schefferville**	**68.81**	**26**	P	**P**	**22 48 17.6**	**-0.1**
	comp=Z,6.1nm,0.4s,mb4.8,baz=338,slow=6.3,SNR=25						
SCHQ				LR	LR	23 21 07.2	
	comp=Z,89nm,20.5s,MS4.0,baz=30,slow=38						
HYB	**Hyderabad**	**69.56**	**273**	⇑*e*P	**P**	**22 48 22.5**	**-0.4**
HYB				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
HYB	**Hyderabad**	**69.56**	**273**	⇑*e*P	**P**	**22 48 22.5**	**-0.4**
	comp=Z,30nm,1.0s,mb5.2						
HYB	**Hyderabad**	**69.56**	**273**	⇑*i*P	**P**	**22 48 23.5**	**+0.6**
	comp=Z,30nm,1.0s,mb5.2						
KSU1	**Kansas State U**	**69.86**	**53**	*e*P	**P**	**22 48 22.8**	**-1.6**
AKASG	**Malin Array Be**	**69.90**	**328**	P	**P**	**22 48 22.0**	**-2.4**
	comp=Z,1.8nm,0.5s,mb4.3,baz=29,slow=6.4,SNR=9.6						
KIV	**Kislovodsk**	**70.08**	**316**	⇓*i*P	**P**	**22 48 24.9**	**-0.7**
KIV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
KIV				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.4						
AMTX	**Amarillo**	**70.34**	**59**	PFAKE		22 48 40.0	+13
AMTX				LR	LR		
	comp=Z,246nm,19.0s,MS4.5						
MNTX	**Cornudas Mount**	**70.63**	**64**	*e*P	**P**	**22 48 29.3**	**+0.1**
	comp=Z,18nm,1.2s,mb4.9						
MNTX				*e*pP	pP	22 48 43.6	+0.6
POO	**Poona**	**71.74**	**277**	⇓*i*P	**P**	**22 48 34.0**	**-2.0**
WMOK	**Wichita Mounta**	**72.02**	**57**	*e*P	**P**	**22 48 37.4**	**0.0**
WMOK				*e**PP	pP	22 48 51.3	0.0
WMOK				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
WMOK				MLR	MLR		
	comp=Z,154nm,21.0s,MS4.2						
WMOK	**Wichita Mounta**	**72.02**	**57**	*e*P	**P**	**22 48 37.4**	**0.0**
	comp=Z,18nm,1.0s,mb4.9						
WMOK				*e*pP	pP	22 48 51.3	0.0
WMOK				LR	LR		
	comp=Z,154nm,21.0s,MS4.2						
GNI	**Garni**	**72.12**	**312**	*d* *i*P	**P**	**22 48 36.1**	**-1.8**
GNI				pmax	pmax		
	comp=Z,15nm,1.7s						
GNI				MLR	MLR		
	comp=Z,200nm,17.0s						
GNI	**Garni**	**72.12**	**312**	LR	LR	23 26 15.1	
	comp=Z,226nm,19.6s,MS4.5,baz=238,slow=41						
GNI	**Garni**	**72.12**	**312**	PFAKE		22 48 50.0	+12
GNI				LR	LR		
	comp=Z,262nm,20.0s,MS4.5						
KAD	**Karad**	**72.43**	**276**	*i* P	**P**	**22 48 40.0**	**-0.1**
WRAB	**Tennant Creek**	**72.94**	**202**	*e*P	**P**	**22 48 43.5**	**+0.4**
WRAB				*e**PP	pP	22 48 57.8	+0.8
WRAB				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
WRAB	**Tennant Creek**	**72.94**	**202**	*e*P	**P**	**22 48 43.5**	**+0.5**
	comp=Z,34nm,1.0s,mb5.2						
WRAB				*e*pP	pP	22 48 57.8	+0.8
KWP	**Kalwaria**	**72.94**	**331**	*e*P	**P**	**22 48 41.9**	**-0.6**
KWP				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
KWP	**Kalwaria**	**72.94**	**331**	*e*P	**P**	**22 48 41.9**	**-0.7**
	comp=Z,3.7nm,0.6s,mb4.5						
WB2	**Warramunga Arr**	**72.94**	**202**	*e*P	**P**	**22 48 44.1**	**+1.0**
WB2				*i*	pP	22 48 58.7	+1.7
TXAR	**Lajitas Array**	**73.37**	**64**	P	**P**	**22 48 46.7**	**+1.2**
	comp=Z,7.6nm,0.7s,mb4.8,baz=304,slow=4.5,SNR=41						
TXAR				pP	pP	22 49 00.4	+1.0
	comp=Z,16nm,1.0s,baz=288,slow=4.0,SNR=11						
TXAR	**Lajitas Array**	**73.37**	**64**	P	**P**	**22 48 46.7**	**+1.2**
TXAR				pP	pP	22 49 00.4	+1.1
FVM	**French Village**	**73.80**	**50**	*e*P	**P**	**22 48 47.3**	**-0.5**
FVM				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
FVM	**French Village**	**73.80**	**50**	*e*P	**P**	**22 48 47.3**	**-0.5**
	comp=Z,3.9nm,0.6s,mb4.5						
UPC	**Upice**	**74.09**	**335**	*e*P	**P**	**22 48 47.7**	**-1.5**

UPC				epP	pP	22 49 29.0	+26
OKC	Ostrava-Krasne	74.11	334	AMS	AMS	23 24 10.0	
	comp=Z,300nm,20.8s						
CLL	Collm	74.12	338	eP	P	22 48 47.0	-2.4
CLL				i	sP	22 49 07.9	-0.6
CLL				MLR	MLR		
	comp=Z,300nm,17.9s,MS4.6						
CLL	Collm	74.12	338	eP	P	22 48 47.0	-2.4
CLL				e	pP	22 48 56.0	-7.3
CLL				i	sP	22 49 07.9	-0.6
CLL	Collm	74.12	338	P	P	22 48 47.0	-2.4
CLL				i *SP	sP	22 49 07.9	-0.6
CLL				e		22 49 23.0	
DPC	Dobruska-Polom	74.15	335	eP	P	22 48 48.6	-1.0
DPC				epP	pP	22 49 25.0	+22
DPC				AMS	AMS	23 25 50.0	
	comp=Z,300nm,19.1s						
MORC	Moravsky Berou	74.34	334	eP	P	22 48 51.9	+1.3
MORC				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
MORC	Moravsky Berou	74.34	334	eP	P	22 48 49.4	-1.3
	comp=Z,8.7nm,1.4s,mb4.5						
PVCC	Panska Ves	74.45	336	AMS	AMS	23 25 20.0	
	comp=Z,400nm,22.1s						
JCT	Junction City	74.70	61	P	P	22 48 53.8	+0.7
JCT				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
JCT	Junction City	74.70	61	eP	P	22 48 53.2	+0.1
	comp=Z,23nm,1.1s,mb5.0						
JCT				LR	LR		
	comp=Z,135nm,19.0s,MS4.3						
PRU	Pruhonice	74.95	336	eP	P	22 48 53.1	-1.1
PRU				epP	pP	22 49 26.8	+19
PRU				AMS	AMS	23 25 50.0	
	comp=Z,400nm,21.4s						
MOX	Moxa	75.07	338	eP	P	22 49 04.0	+9.1
MOX				S	S	22 58 39.0	+11
MOX				L		23 27 24.0	
NKC	Novy Kostel	75.25	337	AMS	AMS	23 26 30.0	
	comp=Z,300nm,22.1s						
ACSO	Alum Creek Sta	75.44	43	PFAKE		22 49 10.0	+13
ACSO				LR	LR		
	comp=Z,118nm,19.0s,MS4.2						
ALLY	Alegheny Colle	75.48	41	eP	P	22 48 57.1	-0.3
MLR	Muntele Rosu	75.50	327	LR	LR	23 25 30.2	
	comp=Z,304nm,19.7s,MS4.6,baz=36,slow=38						
WCI	Wyandotte Cave	75.57	47	eP	P	22 48 57.5	-0.5
WCI				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
WCI				MLR	MLR		
	comp=Z,167nm,21.0s,MS4.3						
WCI	Wyandotte Cave	75.57	47	eP	P	22 48 57.5	-0.5
	comp=Z,18nm,0.9s,mb5.0						
WCI				LR	LR		
	comp=Z,167nm,21.0s,MS4.3						
PQI	Presque Isle	75.66	30	PFAKE		22 49 10.0	+12
PQI				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
DLF	Lyons Farm	75.70	350	eP	P	22 48 57.8	-0.6
DCN	Croghan	75.73	350	eP	P	22 48 56.1	-2.5
NCB	Newcomb	75.86	36	eP	P	22 48 58.2	-1.3
	comp=Z,12nm,1.0s,mb4.8						
KHC	Kasperske Hory	75.99	336	eP	P	22 49 00.0	-0.1
KHC				ex	x	22 49 19.5	
KHC				ex	x	22 49 39.0	
GRA1	Grafenberg Arr	76.05	338	eP	P	22 48 59.8	-0.7
	comp=Z,8.0nm,0.9s,mb4.7						
GRF	Grafenberg Arr	76.05	338	eP	P	22 48 59.8	-0.7
GRF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
GERES	GERESS Array B	76.22	336	P	P	22 49 01.5	+0.1
	comp=Z,1.0nm,0.5s,mb4.0,baz=32,slow=6.2,SNR=17						
GERES				LR	LR	23 27 17.6	
	comp=Z,378nm,18.1s,MS4.8,baz=22,slow=40						
NATX	Nacogdoches	76.51	56	PFAKE		22 49 20.0	+17
NATX				LR	LR		
	comp=Z,81nm,21.0s,MS4.0						
MALT	Malatya	76.52	315	eP	P	22 49 02.3	-1.1
MALT				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MALT	Malatya	76.52	315	eP	P	22 49 02.3	-1.1
	comp=Z,5.0nm,0.9s,mb4.4						
WVT	Waverly	76.53	49	P	P	22 49 03.5	0.0
WVT				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
WVT	Waverly	76.53	49	eP	P	22 49 03.1	-0.4
	comp=Z,6.0nm,0.9s,mb4.5						
WVT				LR	LR		
	comp=Z,233nm,21.0s,MS4.5						
ACCN	Adirondack Com	76.57	36	eP	P	22 49 02.2	-1.4
ASAR	Alice Springs	76.63	202	P	P	22 49 06.2	+2.0
	comp=Z,6.0nm,0.7s,mb4.6,baz=14,slow=5.2,SNR=54						
ASAR				pP	pP	22 49 21.5	+3.3
	comp=Z,6.0nm,0.8s,baz=13,slow=5.7,SNR=13						
ASAR				LR	LR	23 18 21.0	
	comp=Z,129nm,20.1s,MS4.2,baz=21,slow=32						
ASPA	Alice Springs	76.63	202	⇑iP	P	22 49 06.1	+1.8
ASPA				i	pP	22 49 20.8	+2.6
BANOM	Banah	76.95	295	P	P	22 49 06.3	+0.2
	SNR=7.1						
WVL	Waterville	76.97	32	PFAKE		22 49 20.0	+14
WVL				LR	LR		
	comp=Z,2μm,22.0s,MS5.4						
OXF	Oxford	77.05	51	eP	P	22 49 05.7	-0.7
OXF				e*PP	pP	22 49 20.1	-0.3
OXF				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
OXF				MLR	MLR		
	comp=Z,132nm,21.0s,MS4.2						
OXF	Oxford	77.05	51	eP	P	22 49 05.7	-0.7
	comp=Z,30nm,1.1s,mb5.1						
OXF				epP	pP	22 49 20.1	-0.3
OXF				LR	LR		
	comp=Z,132nm,21.0s,MS4.2						
BAIF	Baives	77.22	343	eP	P	22 49 06.4	-0.7
MCWV	Mont Chateau	77.27	42	PFAKE		22 49 20.0	+12
MCWV				LR	LR		
	comp=Z,319nm,21.0s,MS4.6						
PLAL	Pickwick Lake	77.33	50	eP	P	22 49 07.3	-0.7
	comp=Z,8.1nm,0.9s,mb4.7						
PLAL				LR	LR		
	comp=Z,206nm,22.0s,MS4.4						
BRTR	Keskin Array B	77.45	319	P	P	22 49 08.1	-0.4
	comp=Z,2.6nm,0.9s,mb4.2,baz=63,slow=2.8,SNR=12						
KBA	Koelnbreinsper	77.94	336	⇑iP	P	22 49 11.4	+0.3
	comp=Z,33nm,1.6s,mb5.0						
KBA	Koelnbreinsper	77.94	336	⇑iP	P	22 49 11.4	+0.3
KBA				pmax	pmax		
	comp=Z,33nm,1.6s,mb5.0						
ASHO	Ashiyiah	78.03	294	P	P	22 49 12.6	+0.5
	SNR=6.4						
HOQ	Hoqain	78.14	293	P	P	22 49 12.9	+0.2
	SNR=7.4						
CDF	Champ du Feu	78.16	340	eP	P	22 49 11.3	-0.9
SWET	Sewanee	78.17	48	eP	P	22 49 11.9	-0.7
TZTN	Tazewell	78.21	46	eP	P	22 49 12.2	-0.6
TZTN				epP	pP	22 49 26.7	0.0
WTTA	Wattenberg	78.21	337	⇑iP	P	22 49 12.9	+0.4
	comp=Z,88nm,2.6s,mb5.2						
WTTA	Wattenberg	78.21	337	⇑iP	P	22 49 12.9	+0.4
WTTA				pmax	pmax		
	comp=Z,88nm,2.6s,mb5.2						
MOTA	Moosalm	78.27	337	⇑iP	P	22 49 13.0	+0.1
	comp=Z,12nm,1.2s,mb4.7						
MOTA	Moosalm	78.27	337	⇑iP	P	22 49 13.0	+0.1
MOTA				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
WES	Weston	78.29	35	PFAKE		22 49 20.0	+6.9
WES				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
SQTA	Sankt Quirin	78.36	337	⇑iP	P	22 49 13.7	+0.3
	comp=Z,16nm,1.3s,mb4.8						
SQTA	Sankt Quirin	78.36	337	⇑iP	P	22 49 13.7	+0.3
SQTA				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
MEZF	Maizieres J'vi	78.54	342	eP	P	22 49 14.0	-0.3
JMDO	Jabal Madar	78.59	291	P	P	22 49 15.7	+0.5
	SNR=11						
DAVA	Damuels	78.62	338	⇑iP	P	22 49 14.7	-0.1
	comp=Z,70nm,3.0s						
CPCT	Cooper Cave	78.65	47	eP	P	22 49 14.3	-0.9
CPCT				epP	pP	22 49 28.2	-1.0
HAU	Haudompre	78.74	341	eP	P	22 49 14.6	-0.9
HAU				eR			
	comp=Z,175nm,19.1s						
ARQ	Araqi	78.79	293	P	P	22 49 16.7	+0.4
	SNR=6.6						
HINF	Hinterafeld	78.81	340	eP	P	22 49 14.9	-1.0
BSY	Bisya	78.84	292	P	P	22 49 17.1	+0.6
	SNR=20						
BLA	Blacksburg	79.06	43	eP	P	22 49 16.9	-0.5
BLA				e*PP	pP	22 49 30.9	-0.5
BLA				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
BLA				MLR	MLR		
	comp=Z,89nm,19.0s,MS4.1						
BLA	Blacksburg	79.06	43	eP	P	22 49 16.9	-0.5
	comp=Z,12nm,0.9s,mb4.8						
BLA				epP	pP	22 49 30.9	-0.5
BLA				LR	LR		
	comp=Z,89nm,19.0s,MS4.1						
FLN	La Foliniere	79.30	345	eP	P	22 49 18.0	-0.5
FLN				eR			
	comp=Z,191nm,19.2s						
LDF	La Druitiere	79.41	345	eP	P	22 49 18.2	-0.9
LRAL	Lakeview Retre	79.43	50	eP	P	22 49 18.9	-0.6
	comp=Z,7.2nm,1.0s,mb4.6						
LRAL				LR	LR		
	comp=Z,188nm,21.0s,MS4.4						
CBN	Corbin	79.53	41	PFAKE		22 49 30.0	+10
CBN				LR	LR		
	comp=Z,211nm,22.0s,MS4.4						
GRR	Gorron	79.73	345	eP	P	22 49 20.4	-0.4
	comp=Z,89nm,1.2s,mb5.3						
GRR	Gorron	79.73	345	eP	P	22 49 20.4	-0.4
GRR				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.3						
LOR	Lormes	79.96	342	eP	P	22 49 21.2	-0.9
	comp=Z,41nm,1.2s,mb4.9						
LOR				eR			
	comp=Z,300nm,20.0s						
CABF	La Chapelle	80.12	340	eP	P	22 49 22.4	-0.6
	comp=Z,46nm,1.4s,mb4.9						
CABF	La Chapelle	80.12	340	eP	P	22 49 22.4	-0.6
CABF				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.9						
SGMF	Saint Gilles	80.12	346	eP	P	22 49 22.5	-0.4
	comp=Z,45nm,0.8s,mb5.2						
SGMF	Saint Gilles	80.12	346	eP	P	22 49 22.5	-0.4
SGMF				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
ROSF	Rostrenen	80.15	347	eP	P	22 49 22.7	-0.4
	comp=Z,80nm,1.2s,mb5.2						
ROSF	Rostrenen	80.15	347	eP	P	22 49 22.7	-0.4
ROSF				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.2						
HYF	Humbligny	80.19	343	eP	P	22 49 23.2	-0.1
SSF	Saint Saulge	80.22	342	eP	P	22 49 22.8	-0.7
SSF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
SSF	Saint Saulge	80.22	342	eP	P	22 49 22.8	-0.7
	comp=Z,10.0nm,1.0s,mb4.7						
AVF	Avril sur Loir	80.52	342	eP	P	22 49 24.6	-0.5
	comp=Z,39nm,1.0s,mb5.0						
AVF	Avril sur Loir	80.52	342	eP	P	22 49 24.6	-0.5
AVF				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
QUIF	Quistinic	80.54	347	eP	P	22 49 24.8	-0.4
	comp=Z,185nm,1.6s,mb5.5						
QUIF	Quistinic	80.54	347	eP	P	22 49 24.8	-0.4
QUIF				pmax	pmax		
	comp=Z,93nm,1.6s,mb5.5						
SMF	Signal de Mont	80.56	342	eP	P	22 49 24.8	-0.5
	comp=Z,63nm,1.4s,mb5.0						
SMF	Signal de Mont	80.56	342	eP	P	22 49 24.8	-0.5
SMF				pmax	pmax		
	comp=Z,32nm,1.4s,mb5.1						
GOGA	Godfrey	80.82	48	PFAKE		22 49 40.0	+13
GOGA				LR	LR		
	comp=Z,175nm,21.0s,MS4.4						
BGF	Bois d'Agland	80.84	342	eP	P	22 49 26.4	-0.4
	comp=Z,11nm,0.6s,mb4.7						
BGF	Bois d'Agland	80.84	342	eP	P	22 49 26.4	-0.4
BGF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
LSD	Ceresole Reale	80.98	339	P	P	22 49 28.5	+1.0
LPL	La Plagne	81.02	339	eP	P	22 49 28.2	+0.5
	comp=Z,40nm,1.0s,mb5.0						
LPL	La Plagne	81.02	339	eP	P	22 49 28.2	+0.5
LPL				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
LPG	La Plagne	81.03	339	eP	P	22 49 28.4	+0.6
	comp=Z,37nm,1.0s,mb5.0						
LPG	La Plagne	81.03	339	eP	P	22 49 28.4	+0.6
LPG				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
GRAM		81.19	337	P	P	22 49 29.0	+0.3
TCF	Toulx Ste Croi	81.22	343	eP	P	22 49 28.6	-0.2
	comp=Z,60nm,1.3s,mb5.1						
TCF	Toulx Ste Croi	81.22	343	eP	P	22 49 28.6	-0.2
TCF				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
RSP	Reno Superiore	81.25	339	P	P	22 49 28.5	-0.4
HASS	Wahat al Ahsa'	81.28	299	P	P	22 49 29.2	-0.3
CODM		81.34	337	P	P	22 49 29.7	+0.2
MFF	Saint Martin d	81.34	344	eP	P	22 49 29.4	0.0
	comp=Z,29nm,0.8s,mb5.0						
MFF	Saint Martin d	81.34	344	eP	P	22 49 29.4	0.0
MFF				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
BACM		81.39	337	P	P	22 49 29.7	0.0
SARO	Sassorosso	81.39	337	P	P	22 49 29.6	-0.1
FENE	Fenestrelle	81.41	339	P	P	22 49 30.0	+0.3
BNI	Bardonecchia	81.47	339	eP	P	22 49 30.5	+0.4
BNI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
BNI	Bardonecchia	81.47	339	eP	P	22 49 30.5	+0.4
	comp=Z,4.9nm,0.6s,mb4.6						
PCP	Pian Castagno	81.52	338	P	P	22 49 29.8	-0.6
BHB	Bricherasio	81.54	339	P	P	22 49 30.5	0.0
RRL	Cesana Torines	81.57	339	P	P	22 49 31.2	+0.6
MAIM		81.62	336	P	P	22 49 29.8	-1.2
MBDF	Montbardon	81.76	339	eP	P	22 49 31.4	-0.2
ORIF	Oris-en-Rattie	81.78	340	eP	P	22 49 31.1	-0.6
	comp=Z,21nm,0.9s,mb4.8						
ORIF				eR			
	comp=Z,232nm,21.2s						
PZZ	Prazzo	81.89	339	P	P	22 49 31.3	-1.0
ROB	Roburent	81.91	338	P	P	22 49 31.6	-0.8
FIN	Finale Ligure	81.91	338	P	P	22 49 31.3	-1.1
ENR	Entracque	82.08	339	P	P	22 49 32.0	-1.3
VIVF	Saint-Julien-l	82.10	341	eP	P	22 49 33.5	+0.2
	comp=Z,24nm,1.0s,mb4.8						
VIVF	Saint-Julien-l	82.10	341	eP	P	22 49 33.5	+0.2
VIVF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
MONE	Monesi	82.14	338	P	P	22 49 32.8	-0.8
IMI	Imperia	82.27	338	P	P	22 49 33.9	-0.4
ASF	Jabal al Asfar	82.28	312	LR	LR	23 30 02.6	
	comp=Z,200nm,21.8s,MS4.4,baz=257,slow=39						
RJF	Les Rejaudoux	82.30	343	eP	P	22 49 34.4	0.0
RJF				eR			
	comp=Z,280nm,20.5s						
PPT	Papeete	82.30	130	eS	tx	23 00 25.0	
PPT				eSS	SS	23 04 36.8	-33
PPT				eLR	LR	23 14 49.9	
	comp=Z,112nm,20.5s						
PPT	Papeete	82.30	130	LR	LR	23 23 05.8	
	comp=Z,170nm,19.4s,MS4.4,baz=333,slow=33						
SBF	Sospel	82.42	338	eP	P	22 49 34.3	-0.7
CAF	Calviac	82.56	342	eP	P	22 49 36.2	+0.5
	comp=Z,44nm,1.1s,mb5.1						
CAF	Calviac	82.56	342	eP	P	22 49 36.2	+0.5
CAF				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
NHSC	New Hope	82.60	45	PFAKE		22 49 50.0	+14
NHSC				LR	LR		
	comp=Z,228nm,20.0s,MS4.5						
QURS	Qurayyt al Mil	82.73	312	P	P	22 49 37.6	+0.8
SMRF	Simiane la Rot	82.74	340	eP	P	22 49 35.9	-0.8
	comp=Z,35nm,1.2s,mb5.0						
LFF	La Frestale	82.79	343	eP	P	22 49 36.7	-0.2
	comp=Z,74nm,1.2s,mb5.3						
LFF	La Frestale	82.79	343	eP	P	22 49 36.7	-0.2
LFF				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.3						
FRF	La Foret Royal	82.89	339	eP	P	22 49 36.8	-0.6
	comp=Z,8.2nm,0.7s,mb4.6						
FRF	La Foret Royal	82.89	339	eP	P	22 49 36.8	-0.6
FRF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
LASF	Ste Croix	83.01	341	eP	P	22 49 38.4	+0.4
LMR	La Mourre	83.14	339	eP	P	22 49 38.4	-0.3
	comp=Z,20nm,0.7s,mb4.9						
LMR	La Mourre	83.14	339	eP	P	22 49 38.4	-0.3
LMR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
STKA	Stephens Creek	83.14	193	eP	P	22 49 40.5	+1.6
STKA				i	pP	22 49 55.7	+2.6
STKA	Stephens Creek	83.14	193	P	P	22 49 41.1	+2.2
	comp=Z,5.3nm,1.0s,mb4.5,baz=334,slow=5.3,SNR=7.7						
STKA				pP	pP	22 49 55.3	+2.3
	comp=Z,5.4nm,0.9s,baz=353,slow=9.6,SNR=6.9						
STKA				LR	LR	23 28 09.0	
	comp=Z,118nm,18.6s,MS4.3,baz=25,slow=36						
PGF	Pioggiola	83.28	337	eP	P	22 49 38.9	-0.5
	comp=Z,16nm,0.6s,mb4.9						
PGF	Pioggiola	83.28	337	eP	P	22 49 38.9	-0.5
PGF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
HILS	Ha'il	83.78	306	P	P	22 49 43.1	+0.9
MTLF	Montolieu	84.05	342	eP	P	22 49 43.2	0.0
	comp=Z,37nm,1.4s,mb5.0						
MTLF	Montolieu	84.05	342	eP	P	22 49 43.2	0.0
MTLF				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.0						
MZLS	Mizel	84.67	302	P	P	22 49 47.1	+0.3
EPF	Esparros	84.71	343	eP	P	22 49 46.7	+0.2
	comp=Z,10nm,1.1s,mb4.6						
EPF	Esparros	84.71	343	eP	P	22 49 46.7	+0.2
EPF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
IDI	Anoyia	84.80	323	LR	LR	23 31 06.6	
	comp=Z,100nm,18.7s,MS4.2,baz=175,slow=38						
SJPF	Ste Jean	84.91	344	eP	P	22 49 47.2	-0.3
ETSF	Etsaut	85.00	344	eP	P	22 49 47.9	-0.1
	comp=Z,9.6nm,0.9s,mb4.6						
ETSF	Etsaut	85.00	344	eP	P	22 49 47.9	-0.1
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
EIL	Elat	85.28	312	LR	LR	23 31 49.4	
	comp=Z,208nm,21.8s,MS4.4,baz=115,slow=38						
EIL	Elat	85.28	312	eP	P	22 49 49.2	-0.5
	comp=Z,7.1nm,0.6s,mb5.0						
JMQS	Jabal Moqyreh	85.50	311	P	P	22 49 51.5	+0.8
ALWS	Ilw as Safayha	85.53	312	P	P	22 49 51.7	+0.8
TBKS	Tabuk	85.72	310	P	P	22 49 52.6	+0.7
HAQS	Haql	85.81	312	P	P	22 49 52.9	+0.6
AFFS	'Afif	85.95	303	P	P	22 49 53.4	+0.4
DWPF	Disney	86.19	49	PFAKE		22 50 10.0	+16
DWPF				LR	LR		
	comp=Z,205nm,22.0s,MS4.5						
KBRS	Khaybar	86.38	307	P	P	22 49 55.8	+0.6
TBI	Tubuai	87.28	132	eLQ		23 13 06.4	
TBI				eLR	LR	23 15 42.2	
	comp=Z,416nm,32.8s						
KAMS	Al Khamasin	88.00	300	P	P	22 50 03.2	+0.1
ESDC	Sonseca Array	88.72	346	P	P	22 50 05.6	-0.5
	comp=Z,1.7nm,0.7s,mb4.5,baz=4.0,slow=4.4,SNR=8.6						
ESLA	Sonseca Array	88.72	346	PFAKE		22 50 20.0	+14
ESLA				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
RKT	Rikitea	94.50	121	eLR	LR	23 20 31.5	
	comp=Z,212nm,24.5s,baz=325						
JTS	JuntasAbangare	99.06	62	PFAKE		22 51 10.0	+16
JTS				LR	LR		
	comp=Z,48nm,19.0s,MS4.0						
SJG	San Juan	101.80	42	P	P	22 51 00.3	-6.1
SJG				pmax	pmax		
	comp=Z,54nm,0.3s						
SJG	San Juan	101.80	42	PFAKE		22 51 20.0	+14
SJG				LR	LR		
	comp=Z,169nm,20.0s,MS4.6						
OTAV	Otavalo	110.95	62	PFAKE		22 56 00.0	+15
OTAV				LR	LR		
	comp=Z,103nm,19.0s,MS4.4						
MBAR	Mbarara	112.80	299	PFAKE		22 56 00.0	+11
MBAR				LR	LR		
	comp=Z,36nm,19.0s,MS4.0						
DBIC	Dimbokro	121.00	339	PKP	PKPdf	22 56 06.3	+1.8
	comp=Z,3.0nm,0.8s,baz=90,slow=3.3,SNR=6.1						
DBIC				pPKP		22 56 21.1	
	comp=Z,1.9nm,0.5s,baz=176,slow=15,SNR=2.3						
DBIC	Dimbokro	121.00	339	PKP	PKPdf	22 56 06.3	+1.8
DBIC				pPKP		22 56 21.1	
DBIC				LR	LR		
	comp=Z,120nm,20.0s,MS4.5						
CASY	Casey	121.73	200	PFAKE		22 56 20.0	+15
CASY				LR	LR		
	comp=Z,433nm,20.0s,MS5.1						
SAML	Samuel	126.86	53	PFAKE		22 56 30.0	+14
SAML				LR	LR		
	comp=Z,98nm,21.0s,MS4.5						
VNDA	Vanda	127.75	179	PKP	PKPdf	22 56 18.1	+2.1
	comp=Z,0.8nm,0.9s,baz=335,slow=4.5,SNR=4.0						
VNDA	Vanda	127.75	179	PKP	PKPdf	22 56 18.1	+2.1
VNDA				LR	LR		
	comp=Z,125nm,19.0s,MS4.6						
LPAZ	La Paz	130.24	63	PKP	PKPdf	22 56 24.5	+2.3
	comp=Z,1.5nm,0.7s,baz=16,slow=5.7,SNR=10						
BOSA	Boshof	137.89	283	PKP	PKPdf	22 56 38.0	+1.9
	comp=Z,0.4nm,0.4s,baz=142,slow=12,SNR=2.4						
BOSA				pPKP		22 56 52.1	
	comp=Z,1.3nm,0.7s,baz=63,slow=2.8,SNR=1.6						
CPUP	Villa Florida	144.28	61	ePKIKP	PKPdf	22 56 47.5	+0.1
CPUP	Villa Florida	144.28	61	PKP	PKPdf	22 56 48.1	+0.7
	comp=Z,8.3nm,1.1s,baz=350,slow=5.2,SNR=14						
SYO	Syowa Base	145.50	214	⇓PKPdf	PKPdf	22 56 50.0	+1.7
PLCA	Paso Flores	145.75	92	PKPbc	PKPbc	22 56 52.5	+2.1
	comp=Z,7.3nm,0.8s,baz=291,slow=5.3,SNR=11						
PLCA				pPKPbc		22 57 07.2	
	comp=Z,10nm,1.0s,baz=90,slow=1.2,SNR=6.2						
TRQA	Tornquist	149.69	81	ePKPbc	PKPdf	22 57 02.6	+6.5
SNAA	Sanae	156.88	196	⇑iP	PKPab	22 57 38.1	+0.5
SNAA	Sanae	156.88	196			22 57 57.4	
VNA2	Neumayer--Watz	158.27	194	⇓iP		22 57 36.6	
VNA2	Neumayer--Watz	158.27	194	⇑	PKPab	22 57 42.4	-1.2
VNA3	Neumayer Olymp	158.30	191	P		22 57 37.7	
VNA3	Neumayer Olymp	158.30	191		PKPab	22 57 45.5	+1.7

IDC 06 22:46:48.6±3.5,62.02N×26.65W,mb3.9/6,mb1 4.1/6, mb1mx3.7/26,mbtmp3.9/6,MS3.1/4,Ms1 3.2/4, ms1mx3.0/21,Error ellipse: s-maj=115.7km s-min=24.7km az=177.0,Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOA	NORSAR Array B	17.91	76	LR	LR	22 57 29.9	
	comp=Z,48nm,20.1s,baz=295,slow=36						
SCHQ	Schefferville	21.92	269	LR	LR	22 59 32.2	
	comp=Z,29nm,21.1s,baz=52,slow=35						
GERES	GERESS Array B	25.92	102	LR	LR	23 02 02.4	
	comp=Z,67nm,20.3s,baz=357,slow=35						
YKA	Yellowknife Ar	37.93	311	P	P	22 54 07.5	-1.3
	0.2nm,0.3s,baz=48,slow=9.2,SNR=7.3						
ILAR	Eielson Array	45.98	329	LR	LR	23 18 05.5	
	comp=Z,43nm,19.0s,baz=11,slow=41						
BVAR	Borovoye Array	48.10	54	P	P	22 55 30.2	-1.2
	1.5nm,1.0s,baz=326,slow=5.3,SNR=7.5						
PDAR	Pinedale Array	50.25	288	P	P	22 55 46.1	-2.0
	1.1nm,0.9s,baz=63,slow=6.8,SNR=7.0						
MKAR	Makanchi Array	57.62	50	P	P	22 56 40.3	-2.0
	1.2nm,0.9s,baz=346,slow=5.0,SNR=8.4						
SONM	Songino Array	64.23	33	P	P	22 57 24.2	-2.8
	2.4nm,1.2s,baz=328,slow=6.7,SNR=11						
CMAR	Chiang Mai Arr	89.03	51	P	P	22 59 45.1	-1.3
	2.4nm,1.1s,baz=332,slow=6.4,SNR=5.9						

MOS 06 23:18:46.1±0.8,36.33N×70.71E,h208^{km},mb3.8/1,Error ellipse: s-maj=21.4km s-min=11.3km az=98.1

NEIC 06 23:18:46.2±1.9,36.36N×70.76E,h190^{km}±21^{km},mb4.3/6, Error ellipse: s-maj=22.2km s-min=6.9km az=63.0

IDC 06 23:18:48.1±7.3,36.46N×70.80E,h204^{km}±95^{km},mb3.3/5, mb1 3.3/7,mb1mx3.1/22,mbtmp3.8/7,Error ellipse: s-maj=64.2km s-min=30.6km az=167.0

NNC 06 23:18:51.8±5.0,36.76N×70.60E,h181^{km}±58^{km},mpv4.4, Error ellipse: s-maj=46.4km s-min=31.3km az=11.0

ISC 06 23:18:46.3±0.5,36.35N±0.03×70.78E±0.08,h207^{km}±8^{km}, n45,σ0^{s}95/52,mb3.3/4,7C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.68	160	⇑P	P	23 19 33.8	+0.6

CHCP	Chirah Chowk	3.37	142	P	P	23 19 44.0	+2.8
SBDP	Sheikh Budin	4.04	180	⇑P	P	23 19 50.9	+1.5
DRP	Derazinda	4.62	186	P	P	23 19 56.7	0.0
SARP	Sargodha	4.69	160	P	P	23 19 57.1	-0.5
SARP				S	S	23 20 51.0	-1.8
THN	Thein Dam	5.65	132	*e*P	P	23 20 10.7	+0.8
	10.0nm,0.6s						
THN				*e*x	S	23 21 15.8	+1.0
AML	Almayashu	6.20	20	P	P	23 20 17.1	+0.1
	SNR=454						
UCH	Uchtor	6.54	25	P	P	23 20 21.9	+0.4
	SNR=112						
KZA	Kyzart	6.69	30	P	P	23 20 23.2	-0.1
	SNR=33						
EKS2	Erkin-Say	6.72	19	P	P	23 20 23.7	+0.1
	SNR=45						
KK31	Karatay Array	6.75	358	P	P	23 20 23.5	-0.6
	9.4nm,0.3s,baz=188,slow=13,SNR=519						
KK31				⇑S	S	23 21 35.2	-5.2
	16nm,0.4s						
KKAR	Karatay Array	6.75	358	PN	P	23 20 23.4	-0.7
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.3s						
AAK	Ala-Archa	6.90	23	P	P	23 20 26.4	+0.4
	SNR=25						
AAK	Ala-Archa	6.90	23	⇑P	P	23 20 26.3	+0.2
	comp=Z,29nm,0.8s						
AAK				⇑S	S	23 21 42.6	-1.3
	comp=Z,20nm,0.7s						
AAK	Ala-Archa	6.90	23	PN	P	23 20 26.2	+0.2
AAK				pmax	pmax		
	comp=Z,23nm,0.8s						
AAK	Ala-Archa	6.90	23	*e*P	P	23 20 25.0	-1.0
SDNR	Sundarnagar	7.06	131	*e*x	x	23 21 04.0	
SDNR				*e*S	S	23 21 43.6	-4.0
KBK	Karagaybulak	7.07	26	P	P	23 20 28.8	+0.5
	SNR=31						
ULHL	Ulahol	7.25	34	P	P	23 20 30.5	-0.1
	SNR=8.6						
CHMS	Chumysh	7.31	24	P	P	23 20 31.0	-0.4
	SNR=21						
SMLA	Simla	7.44	133	*i* P	P	23 20 30.0	-3.0
SMLA				*i* S	S	23 21 49.9	-6.6
USP	Ospenovka	7.48	21	P	P	23 20 33.0	-0.6
	SNR=30						
TKM2	Tokmak 2	7.54	28	P	P	23 20 34.6	+0.2
	SNR=63						
NDI	New Delhi	9.38	143	*e*P	P	23 20 57.0	-1.2
NDI				*e*S	S	23 22 36.0	-5.3
MK31	Makanchi Array	13.52	36	⇑P	P	23 21 52.3	+1.5
	comp=Z,2.5nm,0.6s						
MKAR	Makanchi Array	13.52	36	P	P	23 21 49.9	-0.8
	comp=Z,0.3nm,0.3s,baz=218,slow=11,SNR=12						
MKAR	Makanchi Array	13.52	36	P	P	23 21 49.9	-0.8
KOLN	Koldanda	13.82	125	*e*P	P	23 21 54.3	-0.4
	comp=Z,4.6nm,0.4s						
GKN	Gorkha	14.37	121	*e*P	P	23 22 00.6	-0.9
	comp=Z,20nm,0.5s						
DMN	Daman	14.94	122	*e*P	P	23 22 08.9	+0.3
	comp=Z,18nm,0.7s						
KKN	Kakani	14.95	121	*e*P	P	23 22 09.0	+0.3
	comp=Z,15nm,0.6s						
KKN	Kakani	14.95	121	*e*P	P	23 22 09.0	+0.3
KKN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AB31	Akbulak array	15.13	332	⇓P	P	23 22 11.6	+0.9
	comp=Z,1.0nm,0.3s						
PKI	Pulchoki	15.18	121	*e*P	P	23 22 11.8	+0.3
	comp=Z,26nm,0.9s						
PKI	Pulchoki	15.18	121	*e*P	P	23 22 11.8	+0.3
PKI				pmax	pmax		
	comp=Z,13nm,0.9s						
GUN	Gumba	15.30	119	*e*P	P	23 22 14.1	+1.1
	comp=Z,10nm,0.4s						
BVA0	Borovoye Array	16.68	359	⇑P	P	23 22 29.8	+0.4
	comp=Z,0.2nm,0.6s						
BVAR	Borovoye Array	16.68	359	P	P	23 22 28.8	-0.6
	comp=Z,0.6nm,0.3s,baz=160,slow=9.1,SNR=11						
BVAR				S	S	23 25 29.8	+2.7
	comp=Z,0.1nm,0.3s,baz=176,slow=20,SNR=5.0						
ZAL	Zalesovo	20.11	25	P	P	23 23 04.8	-0.6
	comp=Z,2.5nm,0.5s,baz=268,slow=8.6,SNR=7.6						
AKASG	Malin Array Be	32.90	309	P	P	23 25 01.9	-0.8
	comp=Z,0.2nm,0.3s,mb3.2,baz=83,slow=7.2,SNR=5.4						
FINES	FINESS Array B	37.51	326	P	P	23 25 41.4	-0.1
	comp=Z,0.7nm,0.4s,mb3.5,baz=118,slow=9.4,SNR=16						
NB2	NORSAR Subarra	44.40	323	P	P	23 26 36.7	-0.8
	comp=Z,0.7nm,0.6s,mb3.2,baz=97,slow=7.4						
NOA	NORSAR Array B	44.40	323	P	P	23 26 36.9	-0.6
	comp=Z,0.6nm,0.5s,mb3.2,baz=96,slow=7.8,SNR=3.5						
YKA	Yellowknife Ar	81.41	3	P	P	23 30 41.2	+0.5
	comp=Z,0.5nm,0.5s,mb3.4,baz=345,slow=5.5,SNR=6.4						
YKA	Yellowknife Ar	81.41	3	P	P	23 30 41.2	+0.5

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*NEIC **06** 23:41:37.6, 16.05N×93.55W, h116^{km}, MD4.1(MEX), After MEX.*

MEX 06 23:41:37.6±0.7**, 16.05N×93.55W, h116**^{km}±15^{km}**, MD4.1, 2C-1D, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCX	San Cristobal	1.11	52	*i* P	P	23 41 59.3	-1.5
SCX				*i* S	S	23 42 16.7	-1.5
CCIG	Comitan	1.37	80	⇓*i*P	P	23 42 02.5	-1.3
CCIG				*i* S	S	23 42 21.4	-2.2
CMIG	Matias Romero	1.65	309	⇑*i*P	P	23 42 05.2	-1.8
CMIG				*i* S	S	23 42 27.1	-2.1
HUIG	Huatulco	2.48	264	⇑*i*P	P	23 42 15.3	-2.5
HUIG				*i* S	S	23 42 45.7	-2.3
EVV	El Vigia	2.95	325	*e*P	P	23 42 22.5	-1.6
EVV				*i* S	S	23 42 56.0	-3.2
OXX	Oaxaca	3.22	289	*i* P	P	23 42 27.2	-0.4
OXX				*i* S	S	23 43 02.7	-2.9
VHO	Vista Hermosa	3.22	289	*i* P	P	23 42 27.3	-0.4
VHO				*i* S	S	23 43 03.3	-2.4
IISM	Ciudad Serdan	4.68	309	*e*P	P	23 42 50.0	+2.6
IISM				*i* S	S	23 43 35.0	-6.0
PPM	Popocatepetl	5.70	303	*e*P	P	23 43 00.0	-1.1

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*IDC **07** 00:01:25.3±3.5, 16.72S×177.20W, mb4.6/3, mb1 4.8/3, mb1mx4.0/16, mbtmp4.6/3, Error ellipse: s-maj=165.4km s-min=42.6km az=142.0*

NEIC 07 00:02:01.3±0.8**, 16.82S×177.88W, h300**^{km}**, mb4.2**/3**, 5C-1D, Error ellipse: s-maj=26.6km s-min=20.7km az=191.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.60	240	*e*P	P	00 09 05.3	-0.4
STKA	Stephens Creek	39.60	240	P	P	00 09 05.4	-0.3
	2.4nm,0.5s,baz=104,slow=11,SNR=6.0						
WB2	Warramunga Arr	45.32	258	*e*P	P	00 09 49.6	-2.3
WRAB	Tennant Creek	45.33	258	*e*P	P	00 09 49.7	-2.2
	3.8nm,0.7s						
WRA	Warramunga Arr	45.34	258	P	P	00 09 49.8	-2.2
	2.0nm,0.4s,baz=96,slow=7.2,SNR=59						
ASAR	Alice Springs	45.58	253	P	P	00 09 52.2	-1.6
	19nm,0.5s,baz=89,slow=8.0,SNR=241						
ASPA	Alice Springs	45.58	253	⇓*i*P	P	00 09 52.1	-1.8
KAKA	Kakadu	48.12	268	*e*P	P	00 10 12.4	-1.2
NWAO	Narrogin (SRO)	60.17	241	*e*P	P	00 11 40.2	+0.3
	90nm,1.4s						
QSPA	South Pole Qui	73.22	180	⇑*i*P	P	00 13 01.3	+0.4
	3.4nm,0.9s						
SNAA	Sanae	91.66	178	⇑*i*	P	00 14 33.9	-1.3
VNA3	Neumayer Olymp	91.78	176	⇑*i*	P	00 14 35.3	-0.5
VNA2	Neumayer--Watz	92.23	177	⇑*i*	P	00 14 37.3	-0.6
VNA1	Neumayer--Stat	92.45	177	⇑*i*	P	00 14 35.4	-3.6
BRTR	Keskin Array B	144.37	316	PKP	PKPdf	00 21 01.8	-0.1
	0.4nm,0.5s,baz=135,slow=1.7,SNR=3.9						
GERES	GERESS Array B	146.69	346	PKPbc	PKPbc	00 21 09.7	+2.5
	0.5nm,0.6s,baz=27,slow=3.0,SNR=4.9						

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*NEIC **07** 00:13:12.5±2.8, 5.84S×154.42E, h140^{km}±23^{km}, mb4.1/3, Error ellipse: s-maj=23.1km s-min=16.9km az=48.0*

*IDC **07** 00:13:13.1±4.2, 5.76S×154.44E, h147^{km}±35^{km}, mb3.6/7, mb1 3.9/9, mb1mx3.7/17, mbtmp4.2/9, Error ellipse: s-maj=28.8km s-min=20.5km az=55.0*

ISC 07 00:13:09.9±3.5**, 5.8S**±0.2×**154.6E**±0.1**, h137**^{km}±29^{km}**, n15, σ0.^{s}95**/17**, mb3.8**/8**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.20	243	P	P	00 15 07.0	-0.1
	10.0nm,0.3s,baz=52,slow=9.8,SNR=20						
PMG				S	S	00 16 39.7	+1.2
	1.8nm,0.3s,baz=4.5,slow=19,SNR=2.8						
PMG	Port Moresby	8.20	243	*e*Pn	P	00 15 06.7	-0.4
PMG				P		00 15 07.0	
PMG				S	S	00 16 39.7	+1.2
CTAO	Charters Tower	16.38	209	P	P	00 16 51.3	-2.0
	15nm,1.2s						
DZM	Mont Dzumac	19.86	146	P	P	00 17 33.8	+1.3
	2.4nm,0.3s,baz=83,slow=22,SNR=20						
WRAB	Tennant Creek	24.19	233	*e*P	P	00 18 14.7	-0.4
	7.2nm,0.6s,mb4.4						
WB2	Warramunga Arr	24.20	233	*e*P	P	00 18 15.9	+0.8
WRA	Warramunga Arr	24.21	233	P	P	00 18 15.5	+0.3
	2.8nm,0.5s,mb4.0,baz=55,slow=9.8,SNR=43						
ASAR	Alice Springs	26.70	226	P	P	00 18 37.7	-0.7
	1.2nm,0.3s,mb3.9,baz=59,slow=9.0,SNR=14						
STKA	Stephens Creek	28.68	203	P	P	00 18 55.4	-0.8
	1.3nm,0.5s,mb4.0,baz=5.6,slow=11,SNR=4.7						
STKA	Stephens Creek	28.68	203	*e*P	P	00 18 53.6	-2.6
STKA				P		00 18 55.4	
SONM	Songino Array	68.08	327	P	P	00 23 57.1	+0.2
	0.5nm,0.7s,mb3.4,baz=128,slow=5.8,SNR=5.4						
VNDA	Vanda	71.82	178	P	P	00 24 20.1	+1.1
	0.7nm,0.8s,mb3.4,baz=328,slow=6.3,SNR=7.2						
VNDA	Vanda	71.82	178	*e*P	P	00 24 19.7	+0.7
	1.5nm,0.9s,mb3.7						
VNDA				P		00 24 20.1	
MKAR	Makanchi Array	82.21	319	P	P	00 25 16.7	-0.5
	0.2nm,0.5s,mb3.0,baz=109,slow=6.2,SNR=4.0						
MAW	Mawson	85.37	203	P	P	00 25 32.7	+0.2
	1.8nm,0.6s,mb4.0,baz=268,slow=21,SNR=8.8						

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*CSEM **07** 00:42:59.1±0.1, 61.74N×26.57W, h10^{km}, mb4.1/7, Ms3.2, Error ellipse: s-maj=9.6km s-min=3.1km az=42.0*

*IDC **07** 00:43:00.7±1.8, 61.80N×26.68W, mb3.7/7, mb1 4.0/8, mb1mx3.7/26, mbtmp3.7/8, ML3.2/1, MS3.3/11, Ms1 3.3/11, ms1mx3.2/27, Error ellipse: s-maj=64.0km s-min=21.5km az=174.0*

*NEIC **07** 00:43:01.1±0.7, 61.62N×26.63W, h10^{km}, mb4.2/8, Error ellipse: s-maj=20.6km s-min=7.0km az=223.0*

ISC 07 00:42:59.7±0.6**, 61.7N**±0.1×**26.6W**±0.2**, h10**^{km}**, n34, σ0.^{s}70**/25**, mb3.9**/14**, MS3.4**/8**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	11.74	30	LR	LR	00 49 12.9	
	comp=Z,53nm,19.0s,baz=300,slow=32						
SUMG	Summit	11.82	342	*e*P	P	00 45 50.5	-0.7
SUMG	Summit	11.82	342	*e*P	P	00 45 50.5	-0.7
EKA	Eskdalemuir Ar	13.74	107	Pn	P	00 46 15.7	-0.9
	0.1nm,0.3s,baz=297,slow=11,SNR=3.0						
NOA	NORSAR Array B	17.96	75	LR	LR	00 53 25.4	
	comp=Z,26nm,21.8s,baz=290,slow=35						
ROSF	Rostrenen	18.76	125	*e*P	P	00 47 21.4	+0.7
	28nm,1.1s						
HFS	Hagfors	19.42	77	LR	LR	00 53 45.2	
	comp=Z,46nm,19.9s,baz=138,slow=33						
GRR	Gorron	19.68	121	*e*P	P	00 47 30.8	-0.7
BAIF	Baives	20.60	110	*e*P	P	00 47 41.1	-0.1
LOR	Lormes	22.54	116	*e*P	P	00 48 00.1	-0.6
	4.7nm,0.8s,mb3.7						
LOR				*e*R			
	238nm,17.8s						
SSF	Saint Saulge	22.55	117	*e*P	P	00 48 00.8	0.0
	0.9nm,0.5s,mb3.5						
TCF	Toulx Ste Croi	22.62	120	*e*P	P	00 48 01.3	-0.2
	33nm,1.3s,mb4.3						
BGF	Bois d’Agland	22.67	118	*e*P	P	00 48 02.1	+0.1
	19nm,1.1s,mb4.2						
AVF	Avril sur Loir	22.70	117	*e*P	P	00 48 02.2	-0.1
	22nm,1.4s,mb4.1						
SMF	Signal de Mont	23.02	117	*e*P	P	00 48 05.5	+0.1
	33nm,1.3s,mb4.3						
HAU	Haudompre	23.07	111	*e*P	P	00 48 04.6	-1.2
HAU				*e*R			
	82nm,17.5s						
CDF	Champ du Feu	23.18	109	*e*P	P	00 48 06.8	-0.1
HINF	Hinteralfeld	23.43	111	*e*P	P	00 48 09.5	+0.1
VIVF	Saint-Julien-l	24.80	118	*e*P	P	00 48 23.2	+0.5
DAVOX	Davos	25.57	109	LR	LR	00 57 43.9	
	comp=Z,32nm,21.4s,MS2.8,baz=87,slow=34						
MBDF	Montbardon	25.79	116	*e*P	P	00 48 32.5	+0.4
GERES	GERESS Array B	25.82	101	LR	LR	00 59 06.5	
	comp=Z,60nm,18.3s,MS3.2,baz=0.6,slow=37						
SBF	Sospel	26.77	116	*e*P	P	00 48 41.4	+0.3
	27nm,1.1s,mb4.4						
VAE	Valguarnera	35.03	115	LR	LR	01 04 32.6	
	comp=Z,131nm,18.6s,MS3.7,baz=108,slow=37						
YKA	Yellowknife Ar	38.17	311	P	P	00 50 19.1	-1.3
	0.2nm,0.7s,mb2.9,baz=34,slow=6.7,SNR=3.2						
YKA				LR	LR	01 05 30.1	
	comp=Z,90nm,18.1s,MS3.6,baz=225,slow=36						
ULM	Lac du Bonnet	38.54	285	LR	LR	01 05 14.9	
	comp=Z,64nm,18.8s,MS3.5,baz=19,slow=35						
INK	Inuvik	40.14	327	LR	LR	01 05 23.9	
	comp=Z,69nm,21.6s,MS3.5,baz=337,slow=34						
ILAR	Eielson Array	46.28	329	LR	LR	01 10 24.7	
	comp=Z,64nm,18.3s,MS3.6,baz=358,slow=36						
BVAR	Borovoye Array	48.26	53	P	P	00 51 43.6	+1.5
	1.3nm,0.9s,mb3.9,baz=315,slow=6.3,SNR=7.7						
PDAR	Pinedale Array	50.38	288	P	P	00 51 59.0	+0.4
	0.9nm,0.8s,mb3.8,baz=56,slow=5.3,SNR=5.4						
PDAR				LR	LR	01 11 28.9	
	comp=Z,60nm,21.7s,MS3.6,baz=314,slow=34						
MKAR	Makanchi Array	57.80	50	P	P	00 52 52.3	-0.7
	1.1nm,1.0s,mb3.9,baz=297,slow=5.4,SNR=6.6						
TXAR	Lajitas Array	58.57	274	P	P	00 52 59.0	+0.4
	0.4nm,0.8s,mb3.5,baz=63,slow=2.8,SNR=4.3						
SONM	Songino Array	64.48	33	P	P	00 53 38.5	+0.5
	1.3nm,1.0s,mb3.9,baz=326,slow=4.5,SNR=9.3						
CMAR	Chiang Mai Arr	89.21	51	P	P	00 55 58.3	+1.6
	0.7nm,0.4s,mb4.4,baz=322,slow=6.4,SNR=4.3						

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*NEIC **07** 01:08:53.3, 35.49S×72.96W, h5^{km}, ML3.5(GUC), After GUC.*

GUC 07 01:08:53.3±0.8**, 35.49S×72.96W, h5**^{km}±3^{km}**, MD4.0, ML3.5, 8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCO	Chanco	0.43	125	⇓*i*P	Pg	01 09 02.2	+0.3
CNCO				*i* S	Sg	01 09 08.4	+0.8
CNCO				AMP		01 09 20.1	
	comp=N,2μm,0.6s						
TALC	Talca	1.09	86	⇓*i*P	Pb	01 09 13.0	-1.2
TALC				*i* S	Sb	01 09 28.2	-0.4
TALC				AMP		01 09 28.9	
	comp=E,7μm,0.5s						
LNCH	Linares	1.17	108	⇓*i*P	Pb	01 09 14.6	-1.0
LNCH				*i* S	Sb	01 09 31.0	+0.2
LNCH				AMP		01 09 31.7	
	comp=E,3μm,0.6s						
CCHI	Chillan	1.32	147	⇓*i*P	Pb	01 09 17.1	-1.2
CCHI				⇓*i*P		01 09 17.3	
CCHI				*i* S	Sb	01 09 35.0	-0.3
CCHI				*e*S	Sb	01 09 35.6	+0.2
CCHI				AMP		01 09 42.6	
	comp=E,2μm,0.5s						
CCHI				AMP		01 09 42.8	
	comp=E,3μm,0.5s						
CCHI	Chillan	1.32	147	⇓*i*P	Pb	01 09 17.3	-1.0
CCHI				*e*S	Sb	01 09 35.6	+0.2
SFDO	San Fernando	1.82	62	⇓*i*P	Pn	01 09 24.9	-0.6
SFDO				*i* S	Sn	01 09 50.1	+0.8
LNV	Longovilo	1.99	40	*e*P	Pn	01 09 28.3	+0.2
CACH	El Canelo	2.38	56	⇓*i*P	Pn	01 09 34.4	+0.8
CACH				*i* S	Sn	01 10 06.3	+2.9
CICH	Cipreses	2.39	62	*e*P	Pn	01 09 34.2	+0.4
CICH				*i* S	Sn	01 10 05.6	+1.8
TACH	Talagante	2.48	43	*e*P	Pn	01 09 35.5	+0.5
PCH	Pirque	2.75	48	*e*S	Sn	01 10 13.8	+0.9

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*IDC **07** 01:15:28.8±1.5, 62.08N×26.75W, mb3.7/8, mb1 4.0/9, mb1mx3.7/26, mbtmp3.7/9, ML3.3/1, MS3.1/5, Ms1 3.2/5, ms1mx2.8/32, Error ellipse: s-maj=51.3km s-min=19.9km az=173.0*

*NEIC **07** 01:15:30.1±0.6, 62.09N×26.65W, h10^{km}, mb3.4/1, Error ellipse: s-maj=17.0km s-min=10.1km az=206.0*

*CSEM **07** 01:15:30.1±0.2, 62.09N×26.65W, h10^{km}, mb3.4/1, Error ellipse: s-maj=14.0km s-min=8.6km az=25.0, After NEIC*

ISC 07 01:15:28.3±0.7**, 62.1N**±0.1×**26.6W**±0.2**, h10**^{km}**, n17, σ0.^{s}98**/13**, mb3.7**/9**, MS3.1**/4**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	11.39	31	LR	LR	01 21 50.3	
	comp=Z,50nm,18.4s,baz=263,slow=33						
SUMG	Summit	11.41	342	*e*P	P	01 18 12.9	-1.2
EKA	Eskdalemuir Ar	13.90	109	Pn	P	01 18 45.9	-1.4
	0.1nm,0.3s,baz=310,slow=12,SNR=4.7						
SCHQ	Schefferville	21.93	269	P	P	01 20 23.7	+0.4
	1.4nm,0.6s,mb3.6,baz=56,slow=11,SNR=2.6						
BRG	Berggiesshubel	24.62	98	P	P	01 21 06.1	+17
DAVOX	Davos	25.74	110	LR	LR	01 32 18.5	
	comp=Z,27nm,18.7s,MS2.8,baz=268,slow=39						
GERES	GERESS Array B	25.93	102	LR	LR	01 30 50.5	
	comp=Z,49nm,20.1s,MS3.0,baz=309,slow=36						
ESLA	Sonseca Array	26.36	138	P	P	01 21 05.9	-0.1
	0.9nm,1.0s,mb3.2						
YKA	Yellowknife Ar	37.87	311	P	P	01 22 47.5	+1.0
	0.7nm,0.9s,mb3.4,baz=48,slow=9.3,SNR=6.0						
ILAR	Eielson Array	45.90	329	P	P	01 23 50.6	-1.3
	0.2nm,0.7s,mb3.1,baz=39,slow=5.8,SNR=2.8						
ILAR				PcP	PcP	01 25 28.5	-1.0
	0.6nm,0.7s,baz=7.0,slow=4.1,SNR=7.0						
ILAR				LR	LR	01 45 43.2	
	comp=Z,32nm,19.0s,MS3.3,baz=358,slow=40						
PDAR	Pinedale Array	50.22	288	P	P	01 24 25.8	-0.1
	1.0nm,0.8s,mb3.9,baz=45,slow=8.4,SNR=6.5						
MKAR	Makanchi Array	57.55	50	P	P	01 25 20.5	+0.7
	0.9nm,0.8s,mb3.8,slow=7.3,SNR=7.7						
NVAR	Mina Array Bea	57.62	292	LR	LR	01 48 14.5	
	comp=Z,26nm,18.1s,MS3.4,baz=65,slow=34						
TXAR	Lajitas Array	58.51	274	P	P	01 25 26.2	-0.6
	0.7nm,1.1s,mb3.6,baz=76,slow=5.2,SNR=4.1						
TXAR	Lajitas Array	58.51	274	P	P	01 25 26.2	-0.6
SONM	Songino Array	64.14	33	P	P	01 26 05.3	+0.9
	1.8nm,1.0s,mb4.1,baz=338,slow=6.7,SNR=9.8						
CMAR	Chiang Mai Arr	88.96	51	P	P	01 28 25.8	+1.7
	1.9nm,0.8s,mb4.5,baz=328,slow=6.3,SNR=5.0						

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*ISK **07** 01:18:04.5, 39.00N×35.77E, h5^{km}, MD3.8*

*CSEM **07** 01:18:04.5±0.1, 39.00N×35.77E, h5^{km}, MD3.8, Error ellipse: s-maj=2.0km s-min=1.5km az=39.0, After ISK*

ISC 07 01:18:06.0±0.3**, 38.99N**±0.03×**35.75E**±0.03**, h5**^{km}**, n32, σ0.^{s}88**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNN	Bunyan	0.16	151	PG	Pg	01 18 08.0	-1.3
YOZ	Yozgat	0.73	333	PG	Pg	01 18 19.2	-1.3
YOZ				SG	Sg	01 18 30.6	+0.4
AVNT	Avonos	0.73	253	*i* P	Pg	01 18 19.8	-0.8
AVNT				*i* S	Sg	01 18 29.8	-0.5
SVST	Sivas	1.22	50	*i* P	Pb	01 18 27.7	-1.4
SVST				*i* S	Sb	01 18 47.2	+2.2
CDAG	Cicekdag	1.24	301	*i* P	Pb	01 18 28.4	-1.1
CDAG				*i* S	Sb	01 18 45.0	-0.7
NIG	Nigde	1.25	226	PN	Pn	01 18 29.2	-0.9
TOKT	Tokat	1.46	25	PN	Pn	01 18 32.1	-1.0
CORM	Corum	1.47	324	PN	Pn	01 18 33.6	+0.4
CORM				SN	Sn	01 18 53.7	+0.8
KAHT	Ahir Dag	1.62	147	*i* P	Pn	01 18 36.8	+1.4
KAHT				*i* S	Sb	01 18 59.0	+2.2
KAMT	Kaman	1.62	284	PN	Pn	01 18 35.2	-0.3
CEYT	Ceyhan	1.98	180	PN	Pn	01 18 41.0	+0.5
GAZ	Gaziantep	2.15	147	PN	Pn	01 18 43.1	+0.1
MYA	Malataya	2.20	107	PN	Pn	01 18 43.4	-0.3
CANT	Cankiri	2.30	315	PN	Pn	01 18 45.7	+0.6
TOS	Tosya	2.43	328	*e*PN	Pn	01 18 46.9	-0.1
ANTO	Ankara	2.45	292	*e*PN	Pn	01 18 48.1	+0.8
LOD	Lodumlu	2.48	292	*e*PN	Pn	01 18 48.7	+1.0
BYBT	Boyabat	2.58	343	*e*PN	Pn	01 18 49.5	+0.3
KONT	Konya--Tatoy	2.86	250	*e*PN	Pn	01 18 53.5	+0.4
URFA	Urfa	2.87	122	*e*PN	Pn	01 18 52.4	-0.9
HTY	Hatay	2.88	174	*e*PN	Pn	01 18 53.6	+0.1
KIZT	Kizilcal	3.02	269	*e*PN	Pn	01 18 55.0	-0.4
IKL	Isikli	3.20	211	*e*PN	Pn	01 18 58.5	+0.6
GUMT	Gumushane	3.23	62	*e*PN	Pn	01 18 58.6	+0.2
SAFT	Safranbolu	3.25	315	*e*PN	Pn	01 18 59.6	+1.0
HDMB	Hadim	3.28	233	*e*PN	Pn	01 18 59.4	+0.3
DIY	Diyarbakir	3.68	106	*e*PN	Pn	01 19 04.2	-0.6
BINT	Bingol	3.70	90	*e*PN	Pn	01 19 05.1	0.0
MDU	Mudurnu	3.79	294	*e*PN	Pn	01 19 06.6	+0.2
EZM	Erzurum	4.44	76	*e*PN	Pn	01 19 15.3	-0.3
BTMT	Batman	4.57	98	*e*PN	Pn	01 19 15.7	-1.7
YLV	Yalova	5.16	290	*e*PN	Pn	01 19 26.4	+0.7

DJA 07 01:23:40.4±0.9**, 9.77S×115.03E, h33**^{km}±5^{km}**, MD5.5**/3**, ML3.8**/4**, 4C-4D, Error ellipse: s-maj=20.1km s-min=8.6km az=1.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	Rata	1.15	26	⇑*i*Pn	Pn	01 23 58.3	-2.1
	182nm,0.2s						
RATI				⇓*i*Sn	Sn	01 24 11.7	-3.4
SRDI	Scrawed	1.55	325	⇓*i*Pn	Pn	01 24 04.7	-1.5
	120nm,0.2s						
SRDI				⇑*i*Sn	Sn	01 24 21.8	-3.5
KELI	Kelakatan	1.63	341	⇓*i*Pn	Pn	01 24 06.0	-1.3
	59nm,0.2s						
KELI				⇑*i*Sn	Sn	01 24 25.5	-1.8
KEDI	Kedomdong	1.66	40	*e*Pn	Pn	01 24 06.6	-1.1
	48nm,0.2s						
KEDI	Kedomdong	1.66	40	⇑*i*P	Pn	01 24 07.4	-0.3
KEDI				⇓*i*Sn	Sn	01 24 25.7	-2.4

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*IDC **07** 01:29:38.7±0.8, 2.82S×128.59E, mb4.0/8, mb1 4.3/9, mb1mx4.1/19, mbtmp4.1/9, ML4.4/1, MS3.6/1, Ms1 3.6/1, ms1mx2.9/22, Error ellipse: s-maj=90.7km s-min=15.7km az=66.0*

*NEIC **07** 01:29:43.1±0.5, 2.87S×128.61E, h30^{km}, mb4.6/3, Error ellipse: s-maj=36.6km s-min=7.7km az=67.0*

ISC 07 01:29:37.4±2.5**, 2.9S**±0.2×**128.5E**±0.4**, h4**^{km}±16^{km}**, n20, σ0.^{s}67**/25**, mb4.2**/9**, MS3.5**/1**, 1D, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	10.53	158	*e*P	P	01 32 12.3	-0.1
KAKA				*e*S	S	01 34 06.5	-5.5
WRAB	Tennant Creek	17.90	162	*e*P	P	01 33 49.0	-0.1
	19nm,0.7s						
WRA	Warramunga Arr	17.90	162	P	P	01 33 48.7	-0.4
	1.4nm,0.3s,baz=347,slow=12,SNR=31						
WRA				S	S	01 37 05.7	-1.2
	0.3nm,0.3s,baz=343,slow=23,SNR=3.1						
WB2	Warramunga Arr	17.91	162	*e*P	P	01 33 48.7	-0.5
WB2				*e*S	S	01 37 08.0	+1.0
ASPA	Alice Springs	21.32	166	⇓*i*P	P	01 34 27.9	+0.1
ASPA				*e*S	S	01 38 19.9	-0.3
ASAR	Alice Springs	21.32	166	P	P	01 34 27.9	+0.1
	25nm,0.7s,mb4.7,baz=351,slow=12,SNR=183						
ASAR				S	S	01 38 20.1	-0.1
	4.4nm,0.7s,baz=350,slow=22,SNR=6.5						
ASAR	Alice Springs	21.32	166	P	P	01 34 27.9	+0.1
ASAR				S	S	01 38 20.1	-0.1
CTA	Charters Tower	24.37	136	P	P	01 34 57.9	0.0
	2.4nm,0.7s,mb3.7,baz=287,slow=7.9,SNR=4.3						
CTAO	Charters Tower	24.37	136	*e*P	P	01 34 57.9	0.0
	12nm,0.9s,mb4.3						
STKA	Stephens Creek	31.38	158	P	P	01 36 02.5	+0.8
	2.6nm,0.8s,mb4.1,baz=346,slow=11,SNR=5.5						
NWAO	Narrogin (SRO)	31.70	198	LR	LR	01 50 11.1	
	comp=Z,94nm,18.4s,MS3.5,baz=328,slow=39						
SONM	Songino Array	54.08	342	P	P	01 39 05.4	0.0
	0.1nm,0.3s,mb3.2,baz=166,slow=5.9,SNR=3.2						
MKAR	Makanchi Array	63.97	327	P	P	01 40 13.0	-1.2
	0.4nm,0.3s,mb3.9,baz=127,slow=7.2,SNR=3.3						
MKAR	Makanchi Array	63.97	327	P	P	01 40 13.0	-1.2
ZAL	Zalesovo	67.24	334	P	P	01 40 34.4	-0.7
	0.7nm,0.3s,mb4.2,baz=342,slow=16,SNR=2.8						
ZAL	Zalesovo	67.24	334	P	P	01 40 34.4	-0.7
BVAR	Borovoye Array	73.79	328	P	P	01 41 16.0	+1.2
	2.5nm,0.8s,mb4.2,baz=135,slow=8.4,SNR=9.2						
VNDA	Vanda	76.70	173	P	P	01 41 31.2	+0.1
	1.2nm,1.0s,mb3.8,baz=312,slow=11,SNR=3.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNDA	Vanda	76.70	173	P	P	01 41 31.2	+0.1
QSPA	South Pole Qui	87.07	180	*e*P	P	01 42 25.9	+0.9
	48nm,2.3s,mb5.3						

IDC 07 01:59:09.6±1.8**, 8.14S**×**125.18E, mb3.9**/1**, mb1 4.1**/4**, mb1mx3.8**/16**, mbtmp3.9**/4**, ML3.6**/3**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.6**/26**, Error ellipse: s-maj=101.3km s-min=26.7km az=67.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.91	177	Pn	P	02 01 32.4	-4.1
	0.6nm,0.3s,baz=12,slow=11,SNR=15						
FITZ				Sn	Sn	02 03 17.4	-12
	1.1nm,0.3s,baz=177,slow=19,SNR=5.4						
FITZ				LR	LR	02 06 10.6	
	comp=Z,94nm,18.6s,baz=80,slow=42						
WRA	Warramunga Arr	14.71	144	Pn	P	02 02 37.9	-3.1
	0.3nm,0.3s,baz=317,slow=13,SNR=14						
WRA				Sn	S	02 05 14.0	-12
	0.2nm,0.3s,baz=324,slow=25,SNR=5.7						
ASAR	Alice Springs	17.56	153	P	P	02 03 17.4	-0.1
	0.2nm,0.3s,baz=331,slow=11,SNR=11						
ASAR				S	S	02 06 23.7	-8.4
	0.1nm,0.3s,baz=312,slow=21,SNR=6.9						
MKAR	Makanchi Array	66.66	329	P	P	02 10 02.3	-2.1
	1.1nm,0.7s,baz=129,slow=7.8,SNR=6.5						

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*CSEM **07** 02:29:26.2, 34.77N×26.07E, h26^{km}, MD3.5/3, After ATH*

ATH 07 02:29:26.2, 34.77N×26.07E, h26^{km}, MD3.5/3**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.33	289	*e*PB	Pb	02 29 34.0	+0.3
NPS	Neapolis	0.62	323	*e*PN	Pn	02 29 38.3	-0.9
NPS				*e*SN	Sn	02 29 47.4	-0.9
KARP	Karpathos	1.18	49	*e*PN	Pn	02 29 48.7	+1.4

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*IDC **07** 02:41:46.2±1.8, 60.12N×25.39E, mb1 3.1/2, mb1mx2.9/21, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=17.7km s-min=8.8km az=142.0*

*NAO **07** 02:41:47.5±2.4, 60.26N×25.07E, ML2.0*

*HEL **07** 02:41:47.3±0.1, 60.17N×25.18E, ML2.0, ML2.1(UPP), ML2.0(NAO), Explosion*

*BER **07** 02:41:47.9±4.7, 60.24N×25.22E, ML2.0(NAO)*

ISC 07 02:41:46.0±0.5**, 60.23N**±0.04×**25.17E**±0.06**, n33, σ1§26**/50**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVF	Pernaja	0.47	47	*e*P	Pg	02 41 56.2	+0.8
PVF				*e*S	Sg	02 42 02.7	+1.1
VJF	Virojoki	1.22	74	*e*P	Pb	02 42 08.9	-0.8
VJF				*e*S	Sb	02 42 25.4	-0.5
FIA0	FINESS Array S	1.30	20	*e*P	Pb	02 42 11.6	+0.6
FIA0				*e*S	Sb	02 42 29.2	+1.1
FIA0	FINESS Array S	1.30	20	Pn	Pn	02 42 11.6	+0.2
	baz=192,slow=18						
FIA0				Lg		02 42 28.7	
	baz=190,slow=28						
FINES	FINESS Array B	1.30	20	Pg	Pg	02 42 11.5	-0.4
	4.4nm,0.3s,baz=195,slow=16,SNR=178						
FINES				Pn	Pn	02 42 13.6	+2.2
	4.4nm,0.3s,baz=196,slow=17,SNR=176						
FINES				Lg		02 42 28.9	
	1.6nm,0.3s,baz=191,slow=28,SNR=13						
FINES				Sn	Sn	02 42 34.0	+4.3
	8.2nm,0.3s,baz=194,slow=23,SNR=32						
VSU	Vasula	1.94	155	*e*P	Pn	02 42 21.1	+0.4
VSU				*e*SG	Sg	02 42 45.4	-5.4
KEF	Keuruu	1.95	356	*e*PG	Pg	02 42 23.6	-1.3
KEF				*e*SG	Sg	02 42 49.9	-1.1
KEF				MSG		02 42 53.2	
	comp=Z,8.3nm,0.2s						
KAF	Kangasniemi	1.97	16	*e*P	Pn	02 42 23.1	+2.1
KAF				*e*SG	Sg	02 42 49.5	-2.1
KAF				MSG		02 42 51.6	
	comp=Z,4.7nm,0.2s						
SUF	Sumiainen	2.54	10	*e*PB	Pb	02 42 32.5	+0.1
SUF				*e*SB	Sb	02 43 05.7	+1.5
SUF				MSG		02 43 07.4	
	comp=Z,6.7nm,0.2s						
AAL	Aland	2.59	271	*e*P	Pn	02 42 30.3	+0.4
AAL				*e*S	Sn	02 43 03.9	+1.5
VAF	Ylistaro	3.07	338	*e*P	Pn	02 42 39.3	+2.6
GRAU	Graesoe	3.31	275	*e*P	Pn	02 42 39.0	-1.0
FLYU	Flymyra	3.64	272	*e*P	Pn	02 42 44.7	-0.1
NYNU	Nynaeshamn	3.84	254	*e*P	Pn	02 42 47.7	0.0
IGGU	Iggoen	3.93	283	*e*P	Pn	02 42 48.9	-0.1
OSTU	Oestervaala	4.01	274	*e*P	Pn	02 42 50.1	+0.1
BACU	Backbrunna	4.06	268	*e*P	Pn	02 42 51.2	+0.4
ARNU	Arnoeviken	4.07	294	*e*P	Pn	02 42 51.4	+0.5
HEMU	Hemsoen	4.21	309	*e*P	Pn	02 42 54.5	+1.5
GOTU	Gotland	4.26	236	*e*P	Pn	02 42 53.3	-0.4
ESKU	Eskilstuna	4.55	261	*e*P	Pn	02 42 57.6	-0.2
HASU	Hassela	4.57	299	*e*P	Pn	02 42 58.4	+0.4
BURU	Burvik	4.71	340	*e*P	Pn	02 43 01.2	+1.1
HFS	Hagfors	5.73	274	Pn	Pn	02 43 12.8	-1.7
	baz=100,slow=12						
HFS				Sn	Sn	02 44 17.3	-4.6
	baz=87,slow=28						
HFS				Lg		02 44 42.4	
	baz=72,slow=37						
HFS	Hagfors	5.73	274	*e*P	Pn	02 43 12.8	-1.7
HFS				*e*S	Sn	02 44 17.3	-4.6
HFS				*e*SG		02 44 42.4	
NB2	NORSAR Subarra	6.91	283	Pn	Pn	02 43 28.4	-2.7
	baz=93,slow=14						
NB2				Sn	Sn	02 44 45.8	-5.7
	baz=95,slow=22						
NB2	NORSAR Subarra	6.91	283	*e*P	Pn	02 43 28.4	-2.7
NB2				*e*S	Sn	02 44 45.8	-5.7
NOA	NORSAR Array B	6.91	283	Pn	Pn	02 43 27.3	-3.8
	comp=Z,0.1nm,0.3s,baz=280,slow=16,SNR=2.4						
NOA				Sn	Sn	02 44 45.2	-6.3
	comp=Z,0.2nm,0.3s,baz=136,slow=18,SNR=2.5						
APA0	Apatity Array	8.16	22	Pn	P	02 43 45.5	-3.1
	baz=211,slow=16						
APA0	Apatity Array	8.16	22	*e*P	P	02 43 45.5	-3.1
ARA0	ARCESS Array S	9.35	1	Pn	P	02 44 02.1	-2.9
	baz=184,slow=12						
ARA0				Sn	Sn	02 45 43.1	-9.0
	baz=174,slow=28						
ARA0				Lg		02 46 33.6	
	baz=162,slow=37						
ARA0	ARCESS Array S	9.35	1	*e*P	P	02 44 02.1	-2.9
ARA0				*e*S	Sn	02 45 43.1	-9.0
ARA0				*e*SG		02 46 33.6	
ARCES	ARCESS Array B	9.35	1	Pn	P	02 44 02.4	-2.6
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=6.4						

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*CSEM **07** 02:55:30.7±0.2, 62.07N×25.98W, h2^{km}, mb4.0/5, Ms3.3, Error ellipse: s-maj=6.2km s-min=1.7km az=107.0*

*NEIC **07** 02:55:32.5±0.5, 61.95N×26.51W, h10^{km}, mb4.0/5, Error ellipse: s-maj=16.6km s-min=7.2km az=215.0*

*IDC **07** 02:55:32.8±0.8, 62.19N×26.73W, mb3.6/12, mb1 3.9/13, mb1mx3.8/26, mbtmp3.6/13, ML3.6/1, MS3.4/13, Ms1 3.5/13, ms1mx3.3/28, Error ellipse: s-maj=27.8km s-min=14.2km az=9.0*

ISC 07 02:55:30.5±1.3**, 62.15N**±0.04×**26.22W**±0.09**, h4**^{km}±9^{km}**, n62, σ1§07**/67**, mb3.7**/17**, MS3.5**/9**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INYL	Nylenda	2.42	39	P	Pn	02 56 13.0	+1.5
IVOG	Vogar	2.52	42	P	Pn	02 56 14.1	+1.1
IKRI	Krysuvik	2.56	46	P	Pn	02 56 14.1	+0.5
IKRI				S	Sn	02 56 46.1	+0.5
IVOS	Vogsosar	2.68	48	P	Pn	02 56 15.0	-0.2
IVOS				S	Sn	02 56 48.5	0.0
ISAN	Sandskeio	2.85	46	P	Pn	02 56 17.8	+0.1
ISAN				S	Sn	02 56 53.8	+0.9
IBJA	Bjarnastaoir	2.87	49	P	Pn	02 56 17.6	-0.4
IBJA				S	Sn	02 56 53.9	+0.4
IKUD	Kuludalsa	2.93	40	P	Pn	02 56 20.2	+1.3
ISOL	Solvholt	2.99	51	P	Pn	02 56 18.8	-0.9
ISOL				S	Sn	02 56 56.3	-0.2
IVES	Vestmannaeyjar	3.02	62	P	Pn	02 56 19.1	-1.0
IKRO	Krokur	3.03	48	P	Pn	02 56 20.4	+0.2
IKRO				S	Sn	02 56 57.5	0.0
IHEI	Heioarbar	3.06	46	P	Pn	02 56 20.9	+0.3
IASM	Asmuli	3.06	54	P	Pn	02 56 19.8	-0.9
IASM				S	Sn	02 56 57.8	-0.5
ISAU	Saurbar	3.22	53	P	Pn	02 56 22.0	-1.0
ISAU				S	Sn	02 57 01.3	-1.0
IMID	Miomork	3.27	60	P	Pn	02 56 22.4	-1.2
IMID				S	Sn	02 57 02.3	-1.2
IHAU	Haukadalur	3.38	55	P	Pn	02 56 24.2	-1.0
IHAU				S	Sn	02 57 05.9	-0.4
IESK	Eystri-Skogar	3.40	63	P	Pn	02 56 24.3	-1.1
IESK				S	Sn	02 57 03.9	-2.9
IASB	`sbjarnarst	3.41	38	P	Pn	02 56 27.4	+1.8
IGYG	Gygjarholskot	3.46	49	P	Pn	02 56 26.1	-0.2
IGYG				S	Sn	02 57 09.2	+0.9
ISNB	Snabyli	3.81	62	P	Pn	02 56 30.7	-0.7
IVAT	Vatnsfell	3.89	55	P	Pn	02 56 32.0	-0.4
IVAT				S	Sn	02 57 19.1	-0.1
JMIC	Jan Mayen	11.27	31	LR	LR	03 01 44.5	
	comp=Z,118nm,20.0s,baz=268,slow=33						
SUMG	Summit	11.44	341	*e*Pn	P	02 58 16.9	-0.6
	12nm,0.8s						
SUMG	Summit	11.44	341	*e*Pn	P	02 58 16.9	-0.7
	12nm,0.8s						
EKA	Eskdalemuir Ar	13.73	109	Pn	P	02 58 51.1	+3.0
	0.1nm,0.3s,baz=326,slow=13,SNR=3.2						
NOA	NORSAR Array B	17.69	77	LR	LR	03 05 58.2	
	comp=Z,19nm,21.4s,baz=275,slow=35						
ROSF	Rostrenen	18.89	127	*e*P	P	02 59 53.9	-0.1
FRB	Frobisher Bay	19.06	294	LR	LR	03 06 21.6	
	comp=Z,243nm,20.8s,baz=320,slow=34						
HFS	Hagfors	19.16	78	LR	LR	03 05 42.6	
	comp=Z,47nm,19.5s,baz=246,slow=32						
BAIF	Baives	20.61	112	*e*P	P	03 00 13.1	0.0
MFF	Saint Martin d	21.52	124	*e*P	P	03 00 21.6	-0.8
	35nm,1.3s,mb4.3						
ARCES	ARCESS Array B	21.75	48	P	P	03 00 26.0	+1.4
	2.9nm,0.8s,mb3.8,baz=276,slow=8.2,SNR=4.8						
SCHQ	Schefferville	22.13	269	P	P	03 00 26.3	-2.1
	2.5nm,0.7s,mb3.7,baz=69,slow=7.6,SNR=4.6						
SCHQ	Schefferville	22.13	269	P	P	03 00 26.3	-2.1
LOR	Lormes	22.60	117	*e*P	P	03 00 32.7	-0.3
	6.1nm,0.8s,mb3.8						
LOR				*e*R			
	346nm,18.8s						
SSF	Saint Saulge	22.61	118	*e*P	P	03 00 32.8	-0.4
	3.7nm,0.8s,mb3.9						
TCF	Toulx Ste Croi	22.71	121	*e*P	P	03 00 34.6	+0.5
BGF	Bois d'Agland	22.75	120	*e*P	P	03 00 35.0	+0.5
	12nm,0.7s,mb4.1						
AVF	Avril sur Loir	22.77	119	*e*P	P	03 00 34.6	-0.1
	7.8nm,0.8s,mb3.9						
HAU	Haudompre	23.08	113	*e*P	P	03 00 37.2	-0.6
HAU				*e*R			
	117nm,20.4s						
SMF	Signal de Mont	23.09	118	*e*P	P	03 00 37.6	-0.2
CDF	Champ du Feu	23.18	111	*e*P	P	03 00 38.6	-0.1
HINF	Hinteralfeld	23.45	112	*e*P	P	03 00 41.1	-0.2
CAF	Calviac	23.77	123	*e*P	P	03 00 45.6	+1.1
CABF	La Chapelle	24.05	115	*e*P	P	03 00 47.0	-0.2
FINES	FINESS Array B	24.18	68	P	P	03 00 51.0	+2.7
	2.1nm,0.8s,mb3.6,baz=286,slow=10,SNR=6.0						
LPL	La Plagne	25.20	116	*e*P	P	03 00 56.3	-1.9
LPG	La Plagne	25.22	116	*e*P	P	03 00 58.2	-0.3
KHC	Kasperske Hory	25.49	102	*e*P	P	03 01 03.5	+2.6
DAVOX	Davos	25.57	110	LR	LR	03 11 35.1	
	comp=Z,30nm,18.1s,MS2.9,baz=165,slow=37						
GERES	GERESS Array B	25.75	103	P	P	03 01 08.4	+5.0
	0.6nm,0.8s,mb3.2,baz=306,slow=8.4,SNR=3.4						
GERES				LR	LR	03 11 08.0	
	comp=Z,89nm,19.8s,MS3.3,baz=119,slow=36						
ESDC	Sonseca Array	26.26	139	P	P	03 01 11.6	+3.3
	0.1nm,0.3s,mb2.8,baz=352,slow=10,SNR=4.4						
MORC	Moravsky Berou	26.86	97	*e*P	P	03 01 19.3	+5.7
YKA	Yellowknife Ar	37.99	311	P	P	03 02 50.5	-0.2
	0.9nm,0.9s,mb3.5,baz=48,slow=9.0,SNR=7.6						
YKA				LR	LR	03 17 51.9	
	comp=Z,137nm,18.3s,MS3.8,baz=90,slow=35						
ULM	Lac du Bonnet	38.58	285	LR	LR	03 17 25.6	
	comp=Z,70nm,19.7s,MS3.5,baz=12,slow=34						
BRTR	Keskin Array B	41.94	94	P	P	03 03 26.3	+2.8
	0.5nm,0.7s,mb3.2,baz=348,slow=6.5,SNR=3.5						
ILAR	Eielson Array	45.97	329	P	P	03 03 56.6	+0.9
	0.6nm,0.8s,mb3.6,baz=20,slow=6.6,SNR=6.4						
ILAR				PcP	PcP	03 05 32.7	-0.3
	1.0nm,0.7s,baz=2.7,slow=3.8,SNR=12						
ILAR				LR	LR	03 24 34.8	
	comp=Z,53nm,20.4s,MS3.5,baz=5.4,slow=38						
PDAR	Pinedale Array	50.40	288	P	P	03 04 29.4	-1.1
	1.6nm,0.8s,mb4.1,baz=53,slow=7.4,SNR=12						
PDAR				LR	LR	03 23 35.3	
	comp=Z,49nm,20.4s,MS3.5,baz=250,slow=34						
MKAR	Makanchi Array	57.38	51	P	P	03 05 23.9	+2.0
	0.3nm,0.7s,mb3.5,baz=350,slow=4.4,SNR=3.0						
NVAR	Mina Array Bea	57.78	292	LR	LR	03 29 07.2	
	comp=Z,98nm,18.5s,MS4.0,baz=270,slow=35						
TXAR	Lajitas Array	58.70	274	P	P	03 05 29.9	-1.4
	0.6nm,0.7s,mb3.7,baz=60,slow=5.4,SNR=6.6						
TXAR				LR	LR	03 30 19.3	
	comp=Z,73nm,18.7s,MS3.8,baz=330,slow=36						
SONM	Songino Array	64.01	33	P	P	03 06 08.7	+1.9
	0.8nm,0.8s,mb3.8,baz=330,slow=7.8,SNR=5.9						
LPAZ	La Paz	84.86	220	LR	LR	03 44 10.0	
	comp=Z,30nm,20.9s,MS3.7,baz=217,slow=34						

WEL 07 03:01:00.8±0.6**, 36.36S**×**179.76W, h33**^{km}**, ML3.9**/5**, Error ellipse: s-maj=8.7km s-min=8.3km az=0.0, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.96	232	PN	Pn	03 01 30.9	-1.5
MXZ				SN	Sn	03 01 52.0	-4.1
PUZ	Puketiti	2.33	222	PN	Pn	03 01 36.9	-0.8
PUZ				SN	Sn	03 02 02.8	-2.6
MWZ	Matawai	2.92	227	PN	Pn	03 01 44.7	-1.5
MWZ				SN	Sn	03 02 16.9	-3.6
URZ	Urewera	3.13	232	PN	Pn	03 01 47.6	-1.5
URZ				SN	Sn	03 02 22.1	-3.7
KNZ	Kokohu	3.34	217	PN	Pn	03 01 49.8	-2.3
MQZ	McQueen's Vall	9.36	216	SN	Sn	03 04 44.8	-17

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*IDC **07** 03:23:50.5±0.9, 14.82N×119.70E, mb4.2/6, mb1 4.4/6, mb1mx3.9/19, mbtmp4.2/6, Error ellipse: s-maj=99.2km s-min=18.8km az=70.0*

*MAN **07** 03:23:54.6, 14.95N×119.47E, h25^{km}, mb4.7, ML3.6, MS3.5*

*NEIC **07** 03:23:57.3±0.6, 14.74N×119.64E, h50^{km}, mb4.7/1, Error ellipse: s-maj=69.7km s-min=12.4km az=70.0*

ISC 07 03:23:55.7±1.0**, 14.93N**±0.04×**119.6E**±0.1**, h44**^{km}±10^{km}**, n25, σ1§34**/27**, mb4.1**/8**, 3C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.88	19	*e*P	P	03 24 11.0	-0.8
SCZP				*e*S	S	03 24 22.1	-1.6
LUBP	Lubang	1.34	153	*e*P	P	03 24 18.8	+0.4
BOLP	Bolinao	1.47	11	*e*P	P	03 24 19.7	-0.5
TGY	Tagaytay City	1.52	123	⇑*e*P	P	03 24 22.6	+1.7
PCPH	Palayan	1.56	66	⇑*e*P	P	03 24 19.8	-1.7
PCPH				*e*S	S	03 24 37.3	-3.3
BCPH	Baguio City Da	1.71	33	⇑*i*P	P	03 24 22.4	-1.2
BCPH				*i* S	S	03 24 46.2	+1.8
BALP	Baler	2.05	67	*e*P	P	03 24 27.9	-0.6
POLP	Polilio Island	2.25	95	*e*P	P	03 24 32.6	+1.3
BOAC	Boac	2.61	124	*e*P	P	03 24 41.3	+4.9
SJMP	San Jose	2.86	149	*e*P	P	03 24 43.4	+3.4
ABRA	Dolores	2.90	21	*e*P	P	03 24 40.9	+0.4
CAUP	Cauayan	2.91	46	*e*P	P	03 24 41.7	+0.9
APYP	Conner	3.30	28	*e*P	P	03 24 48.8	+2.6
ENPP	El Nido	3.71	183	*e*P	P	03 24 51.5	-0.6
SONM	Songino Array	34.59	344	P	P	03 30 42.6	+0.3
	0.3nm,0.7s,mb3.3,baz=166,slow=5.9,SNR=3.3						
WRAB	Tennant Creek	37.55	157	*e*P	P	03 31 04.6	-3.2
	6.8nm,0.7s,mb4.5						
WRA	Warramunga Arr	37.56	157	P	P	03 31 05.1	-2.7
	2.9nm,0.5s,mb4.2,baz=330,slow=10,SNR=17						
ASAR	Alice Springs	40.83	160	P	P	03 31 33.5	-1.4
	2.4nm,0.5s,mb4.1,baz=337,slow=6.6,SNR=21						
ARCES	ARCESS Array B	77.56	339	P	P	03 35 49.0	+0.6
	5.8nm,1.1s,mb4.4,baz=53,slow=6.1,SNR=4.1						
ARCES	ARCESS Array B	77.56	339	P	P	03 35 49.0	+0.6
FINES	FINESS Array B	78.70	331	P	P	03 35 55.6	+0.8
	0.7nm,0.6s,mb3.8,baz=72,slow=6.0,SNR=6.6						
NB2	NORSAR Subarra	85.69	332	P	P	03 36 32.1	+1.3
	1.1nm,0.7s,mb4.2,baz=66,slow=4.6						
NOA	NORSAR Array B	85.69	332	P	P	03 36 30.9	+0.1
	1.7nm,0.8s,mb4.3,baz=64,slow=5.0,SNR=4.5						
YKA	Yellowknife Ar	92.04	22	P	P	03 37 01.1	+0.1
	0.5nm,0.6s,mb4.0,baz=306,slow=4.4,SNR=7.9						
TXAR	Lajitas Array	119.32	43	PKP	PKPdf	03 42 43.4	+2.5
	0.5nm,0.8s,baz=225,slow=1.8,SNR=4.7						

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*IDC **07** 03:27:02.9±0.4, 12.29N×94.77E, mb4.7/22, mb1 4.8/23, mb1mx4.7/26, mbtmp4.7/23, ML4.6/1, MS3.9/14, Ms1 3.9/14, ms1mx3.8/25, Error ellipse: s-maj=17.3km s-min=11.1km az=54.0*

*BJI **07** 03:27:05.5, 12.03N×94.99E, h46^{km}, mB4.9, mb4.6, Ms4.5, Msz4.3*

*MOS **07** 03:27:06.3±0.8, 12.37N×94.92E, h33^{km}, mb5.2/62, MS4.2/6, Error ellipse: s-maj=10.4km s-min=4.6km az=119.7*

*HRVD **07** 03:27:07.5±0.6, 12.26N×94.90E, h12^{km}, MW4.8/43, Centroid moment Tensor Solution. LP body waves: s19,c20;Mantle waves: s43,c72; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.14±.08; $M_{\theta\theta}$1.76±.07; $M_{\phi\phi}$0.38±.09; $M_{r\theta}$0.07±.29; $M_{\theta\phi}$0.67±.07; $M_{\phi r}$0.58±.40; Best double couple: $M_0$2.158×10^{16} NP1:ϕ_s80°, δ42°, λ-72°. NP2:ϕ_s236°, δ50°, λ-106°. Principal axes: T 2.048, Plg4°, Azm337°; N .222, Plg12°, Azm246°; P -2.268, Plg77°, Azm85°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **07** 03:27:07.5±0.1, 12.32N×94.86E, h30^{km}, mb4.9/59 Error ellipse: s-maj=5.4km s-min=3.0km az=45.0*

ISC 07 03:27:05.1±1.1**, 12.34N**±0.04×**94.93E**±0.03**, h24**^{km}±7^{km}**, h27**^{km}±5.0^{km}**:pP-P, n269, σ1§01**/267**, mb4.9**/96**, MS4.1**/28**, 64C-10D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	2.25	253	*e*P	Pn	03 27 47.1	+5.6
PBA				*e*x	x	03 27 56.8	
NNT	Nongplab	4.70	86	P	Pn	03 28 16.5	+0.1
NST	Nakhon Sawan	6.04	56	P	Pn	03 28 35.0	-0.3
	762nm,0.5s						
CMAR	Chiang Mai Arr	7.21	32	Pn	Pn	03 28 51.3	-0.5
	2.8nm,0.3s,baz=222,slow=15,SNR=79						
CMAR				LR	LR	03 31 43.3	
	comp=Z,303nm,19.8s,baz=225,slow=38						
CHG	Chiang Mai	7.51	30	⇑P	Pn	03 28 56.1	+0.1
	29nm,0.8s						
SNG	Songkhla	7.59	132	P	Pn	03 29 03.0	+5.8
	140nm,1.0s						
NANT	Nan	8.49	40	⇑P	P	03 29 09.0	-0.7
	244nm,0.8s						
KKTK	Khon Kaen	8.62	62	P	P	03 29 12.0	+0.6
	556nm,0.9s						
KULM	Kulim	9.00	141	*e*P	P	03 29 15.5	-1.1
KULM				*e*Sn	Sn	03 30 53.8	-4.4
VIS	Vishakhapatnam	12.42	297	*e*P	P	03 30 00.8	-2.6
VIS				AMb	AMB	03 30 07.8	
	comp=Z,81nm,1.3s						
VIS				*e*S	S	03 32 01.2	-21
SHL	Shillong	13.47	348	*e*P	P	03 30 13.0	-4.3
BOK	Bokaro	14.27	324	*e*P	P	03 30 26.3	-1.6
BOK				AMb	AMB	03 30 29.2	
	comp=Z,6.6nm,0.3s						
KMI	Kunming	14.71	29	P	P	03 30 31.9	-1.7
KMI				PP	PP	03 30 42.7	-2.5
KMI				S	S	03 33 25.2	+8.6
KMI				LR	LR		
	comp=N,1μm,13.2s						
KMI				LR	LR		
	comp=E,690nm,15.2s						
KMI				LR	LR		
	comp=Z,860nm,11.8s						
BLSP	Bilaspur	15.62	310	*e*P	P	03 30 43.9	-1.6
BLSP				AMb	AMB	03 30 50.8	
	comp=Z,37nm,1.1s						
BLSP				*e*x	S	03 33 29.3	-8.8
HYB	Hyderabad	16.61	290	*e*P	P	03 31 02.0	+3.8
HYB	Hyderabad	16.61	290	*i* P	P	03 30 59.0	+0.8
PKI	Pulchoki	17.59	331	*e*P	P	03 31 11.2	+0.8
	comp=Z,118nm,1.0s						
PKI	Pulchoki	17.59	331	*e*P	P	03 31 11.2	+0.8
PKI				pmax	pmax		
	comp=Z,59nm,1.0s						
LSA	Lhasa	17.63	349	P	P	03 31 10.8	-0.1
LSA				AP		03 31 21.3	
LSA				S	S	03 34 23.1	-1.2
LSA				LR	LR		
	comp=N,350nm,25.3s						
LSA				LR	LR		
	comp=E,440nm,21.3s						
LSA				LR	LR		
	comp=Z,700nm,25.3s						
LSA	Lhasa	17.63	349	*e*P	P	03 31 10.7	-0.2
LSA				pmax	pmax		
	comp=Z,53nm,0.8s						
LSA	Lhasa	17.63	349	*e*P	P	03 31 10.7	-0.2
	comp=Z,53nm,0.8s						
GUN	Gumba	17.66	333	*e*P	P	03 31 13.4	+2.1
	comp=Z,156nm,0.9s						
DMN	Daman	17.76	330	*e*P	P	03 31 13.1	+0.5
	comp=Z,137nm,1.1s						
KKN	Kakani	17.83	331	*e*P	P	03 31 14.5	+1.1
	comp=Z,48nm,0.8s						
KKN	Kakani	17.83	331	*e*P	P	03 31 14.5	+1.1
KKN				pmax	pmax		
	comp=Z,24nm,0.8s						
GYA	Guiyang	17.86	36	⇑*i*P	P	03 31 16.2	+2.4
GYA				AP		03 31 20.8	
GYA				AMB	AMB		
	comp=Z,20nm,1.0s						
GYA				AMB	AMB		
	comp=Z,220nm,3.6s						
GYA				LR	LR		
	comp=N,470nm,11.1s						
GYA				LR	LR		
	comp=E,670nm,12.0s						
GYA				LR	LR		
	comp=Z,730nm,10.2s						
GKN	Gorkha	18.32	330	*e*P	P	03 31 20.5	+1.0
	comp=Z,80nm,0.8s						
KOLN	Koldanda	18.66	327	*e*P	P	03 31 23.7	0.0
	comp=Z,174nm,1.3s						
KSM	Kuching	18.68	124	*e*P	P	03 31 25.4	+1.4
BHPL	Bhopal	19.86	305	*e*x	P	03 31 40.0	+2.5
BHPL				AMb	AMB	03 31 42.0	
	comp=Z,37nm,1.7s						
BHPL				*e*x	S	03 35 10.8	-3.5
POO	Poona	21.22	289	*e*P	P	03 31 50.0	-1.6
LGTI	Lohaghat	21.82	324	*e*P	P	03 31 58.5	+0.9
KKM	Kota Kinabalu	21.91	105	*e*P	P	03 31 59.3	+0.7
ENH	Enshi	22.37	35	*e*P	P	03 32 02.7	-0.3
	comp=Z,23nm,0.9s,mb4.6						
SONA	Sohna	22.99	316	*e*P	P	03 32 08.9	-0.3
JOSI	Joshimath	23.05	324	*e*S	S	03 36 18.7	+3.9
AYAN	Aya Nagar	23.11	317	*e*P	P	03 32 12.4	+2.0
NDI	New Delhi	23.18	317	*i* P	P	03 32 11.0	-0.1
NDI				*i* S	S	03 36 20.0	+2.9
KHET	Khetri	23.76	314	*e*P	P	03 32 18.0	+1.3
SMLA	Simla	24.87	322	*i* x	x	03 32 15.5	
SMLA				*i* S	S	03 36 49.9	+3.7
LZH	Lanzhou	24.98	17	⇑P	P	03 32 30.2	+1.8
LZH				AP		03 32 36.3	
LZH				XS		03 37 11.0	
LZH				AMB	AMB		
	comp=Z,130nm,1.2s,mb5.3						
LZH				AMB	AMB		
	comp=Z,500nm,4.4s						
LZH				LR	LR		
	comp=N,2μm,16.0s						
LZH				LR	LR		
	comp=Z,2μm,16.5s,MS4.7						
XAN	Xi'an	25.09	28	P	P	03 32 28.9	-0.6
XAN				AP	pP	03 32 40.0	+3.4
XAN				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.7						
XAN				LR	LR		
	comp=N,640nm,10.0s,MS4.6						
XAN				LR	LR		
	comp=E,590nm,10.0s,MS4.6						

SDNR	**Sundarnagar**	25.25	322	*e*P	P	**03 32 31.0**	**-0.1**
WHN	**Wuhan**	25.52	42	*e*P	P	**03 32 35.0**	**+1.4**
WHN				LR	LR		
	comp=Z,1µm,14.7s,MS4.5						
BHK	**Bhakra**	25.53	321	*e*x	P	**03 32 37.4**	**+3.7**
GTA	**Gaotai**	27.31	8	*e*P	P	**03 32 51.0**	**+1.0**
GTA				PP	PP	03 33 42.3	+5.0
GTA				S	S	**03 37 33.1**	**+6.8**
GTA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.8						
GTA				AMB	AMB		
	comp=Z,170nm,5.3s						
GTA				LR	LR		
	comp=N,300nm,20.1s,MS4.0						
GTA				LR	LR		
	comp=E,260nm,19.0s,MS4.0						
GTA				LR	LR		
	comp=Z,350nm,20.2s,MS3.9						
NJ2	**Nanjing**	29.47	44	*e*P	P	**03 33 06.4**	**-3.1**
NJ2				S	S	**03 37 55.0**	**-6.0**
NJ2				AMB	AMB		
	comp=Z,670nm,4.4s						
NJ2				LR	LR		
	comp=N,800nm,16.7s,MS4.5						
NJ2				LR	LR		
	comp=E,530nm,15.4s,MS4.5						
NJ2				LR	LR		
	comp=Z,670nm,14.9s,MS4.4						
SSE	**Sheshan**	30.58	48	P	P	**03 33 14.7**	**-4.7**
SSE				PCP	PcP	03 36 10.9	-6.9
SSE				S	S	**03 38 16.9**	**-1.8**
SSE				SCP		03 39 51.4	
SSE				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
SSE				AMB	AMB		
	comp=Z,40nm,4.0s						
SSE				LR	LR		
	comp=N,110nm,15.6s,MS3.7						
SSE				LR	LR		
	comp=E,60nm,15.2s,MS3.7						
SSE				LR	LR		
	comp=Z,110nm,14.0s,MS3.7						
HHC	**Hu-ho-hao-te**	31.94	24	*e*P	P	**03 33 31.3**	**+0.1**
HHC				PP	PP	03 34 37.0	-0.5
HHC				PCP	PcP	03 36 21.3	0.0
HHC				S	S	**03 38 41.6**	**+1.8**
HHC				SS	SS	03 40 31.9	-0.4
HHC				AMB	AMB		
	comp=Z,110nm,9.6s						
HHC				LR	LR		
	comp=N,440nm,16.8s,MS4.4						
HHC				LR	LR		
	comp=E,460nm,16.8s,MS4.4						
HHC				LR	LR		
	comp=Z,320nm,19.2s,MS4.0						
WMQ	**Urumqi**	31.99	350	P	P	**03 33 32.0**	**+0.4**
WMQ				PP	PP	03 34 37.8	-0.2
WMQ				*e*S	S	**03 38 41.3**	**+0.8**
WMQ				SS	SS	03 40 32.1	-1.3
WMQ				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,90nm,3.0s						
WMQ				LR	LR		
	comp=N,230nm,22.0s,MS3.9						
WMQ				LR	LR		
	comp=E,120nm,17.6s,MS3.9						
WMQ				LR	LR		
	comp=Z,260nm,26.0s						
AAK	**Ala-Archa**	35.01	333	*e*P	P	**03 33 57.6**	**-0.2**
AAK				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
AAK	**Ala-Archa**	35.01	333	*e*P	P	**03 33 57.6**	**-0.2**
	comp=Z,17nm,1.2s,mb4.9						
FRU	**Bishkek**	35.12	334	*e*P	P	**03 34 01.0**	**+2.2**
MKAR	**Makanchi Array**	35.96	345	*i* P	P	**03 34 05.7**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,21nm,0.9s						
MKAR	**Makanchi Array**	35.96	345	P	P	**03 34 06.1**	**+0.3**
	comp=Z,12nm,0.8s,mb4.9,baz=153,slow=8.1,SNR=82						
MKAR	**Makanchi Array**	35.96	345	P	P	**03 34 06.1**	**+0.3**
JMDO	**Jabal Madar**	36.45	291	⇓P	P	**03 34 12.0**	**+1.8**
SMDO	**Samad**	36.62	292	P	P	**03 34 13.5**	**+1.9**
	SNR=11						
SONM	**Songino Array**	36.67	13	P	P	**03 34 12.3**	**+0.6**
	comp=Z,12nm,0.9s,mb4.8,baz=196,slow=9.0,SNR=79						
SONM				LR	LR	03 51 02.5	
	comp=Z,392nm,19.5s,MS4.2,baz=340,slow=39						
ULN	**Ulaanbaatar**	36.84	14	*d* *i*P	P	**03 34 13.4**	**+0.2**
ULN	**Ulaanbaatar**	36.84	14	*e*P	P	**03 34 13.0**	**-0.2**
	comp=Z,32nm,1.5s,mb4.9						
KKAR	**Karatay Array**	37.23	330	P	P	**03 34 16.1**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
BSY	**Bisya**	37.34	291	P	P	**03 34 19.7**	**+2.0**
	SNR=16						
HOQ	**Hoqain**	37.38	293	P	P	**03 34 19.9**	**+1.9**
	SNR=11						
ARQ	**Araqi**	38.05	292	⇓P	P	**03 34 24.9**	**+1.3**
ZAK	**Zakamensk**	38.55	9	⇓*i*P	P	**03 34 28.4**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.1						
ASHO	**Ashiyiah**	38.72	294	⇑P	P	**03 34 30.9**	**+1.6**
JNU	**Nakatsue**	38.80	52	P	P	**03 34 31.3**	**+1.4**
	comp=Z,7.8nm,0.8s,mb4.5,baz=280,slow=6.1						
TLY	**Talaya**	39.87	8	⇑*i*P	P	**03 34 38.7**	**+0.2**
TLY				*e*		03 36 19.4	
TLY				*e*S	S	**03 40 40.8**	**-0.7**
TLY				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
TLY				MLR	MLR		
	comp=Z,170nm,17.0s,MS4.0						
WHFO	**Wadi Hawf**	40.06	283	P	P	**03 34 41.6**	**+1.2**
	SNR=17						
CN2	**Changchun**	40.89	34	*e*P	P	**03 34 48.6**	**+1.6**
CN2				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.9						
HIA	**Hailar**	42.15	24	*e*P	P	**03 34 54.0**	**-3.2**
HIA				pmax	pmax		
	comp=Z,24nm,1.4s						
HIA	**Hailar**	42.15	24	*e*P	P	**03 34 54.0**	**-3.3**
	comp=Z,24nm,1.4s,mb4.6						
ZAL	**Zalesovo**	42.27	351	P	P	**03 34 58.2**	**0.0**
	comp=Z,9.3nm,0.8s,mb4.5,baz=298,slow=7.4,SNR=44						
CIT	**Chita**	42.34	17	*e*P	P	**03 34 58.9**	**+0.1**
CIT				*e*	pP	03 35 04.3	-1.8
CIT				pmax	pmax		
	comp=Z,43nm,4.0s						
FITZ	**Fitzroy Crossi**	42.81	134	P	P	**03 35 02.8**	**-0.3**
	comp=Z,4.9nm,0.7s,mb4.3,baz=26,slow=4.0,SNR=7.7						
FITZ				PcP	PcP	03 36 55.1	+0.4
	comp=Z,9.0nm,0.9s,baz=232,slow=0.8,SNR=3.8						
FITZ				LR	LR	03 53 32.2	
	comp=Z,222nm,21.3s,MS4.0,baz=285,slow=37						
NVS	**Novosibirsk**	43.39	350	*i* P	P	**03 35 07.3**	**0.0**
NVS				pmax	pmax		
	comp=N,7.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.8						
MDJ	**Mudanjiang**	43.73	36	P	P	**03 35 11.1**	**+0.9**
MDJ				PP	PP	03 36 51.7	-2.1
MDJ				S	S	**03 41 40.8**	**+2.4**
MDJ				AMB	AMB		
	comp=Z,60nm,3.3s						
MDJ				LR	LR		
	comp=N,70nm,16.2s,MS3.8						
MDJ				LR	LR		
	comp=E,50nm,16.2s,MS3.8						
MDJ				LR	LR		
	comp=Z,80nm,15.5s,MS3.7						
BVA0	**Borovoye Array**	45.08	339	*i* P	P	**03 35 20.7**	**-0.3**
BVA0				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.4						
BVAR	**Borovoye Array**	45.08	339	P	P	**03 35 21.0**	**0.0**
	comp=Z,12nm,0.9s,mb4.7,baz=149,slow=8.6,SNR=47						
MAT	**Matsushiro**	45.67	51	*e*P	P	**03 35 26.0**	**+0.1**
MAT				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
MAT	**Matsushiro**	45.67	51	*e*P	P	**03 35 26.0**	**+0.1**
	comp=Z,19nm,1.3s,mb4.9						
MAT	**Matsushiro**	45.67	51	P	P	**03 35 25.1**	**-0.8**
MAT				*e*S	S	**03 42 12.6**	**+6.0**
MJAR	**Matsushiro Arr**	45.67	51	P	P	**03 35 26.2**	**+0.3**
	comp=Z,5.1nm,1.1s,mb4.4,baz=263,slow=8.7,SNR=11						
MJAR				PcP	PcP	03 37 04.3	+0.1
	comp=Z,2.3nm,0.8s,baz=270,slow=4.5,SNR=5.5						
MJAR				LR	LR	03 57 40.6	
	comp=Z,84nm,18.3s,MS3.7,baz=210,slow=40						
AB31	**Akbulak array**	46.77	329	*i* P	P	**03 35 33.9**	**-0.5**
AB31				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0						
NWAO	**Narrogin (SRO)**	49.80	155	LR	LR	03 56 17.4	
	comp=Z,149nm,21.1s,MS4.0,baz=244,slow=35						
CLNS	**Chul'man**	50.01	21	*e*P	P	**03 35 57.7**	**-1.7**
CLNS				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,12nm,0.9s						
CLNS				MLR	MLR		
	comp=Z,300nm,13.0s,MS4.5						
CLNS				MLR	MLR		
	comp=N,200nm,11.0s,MS4.5						
CLNS				MLR	MLR		
	comp=E,200nm,12.0s,MS4.5						
WRA	**Warramunga Arr**	50.33	129	P	P	**03 36 02.6**	**+0.2**
	comp=E,19nm,0.9s,mb5.1,baz=307,slow=8.3,SNR=83						
WRAB	**Tennant Creek**	50.34	129	*e*P	P	**03 36 02.3**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.4						
WRAB	**Tennant Creek**	50.34	129	*e*P	P	**03 36 02.3**	**-0.1**
	comp=Z,29nm,0.7s,mb5.4						
WB2	**Warramunga Arr**	50.34	129	*e*P	P	**03 36 02.4**	**-0.1**
SVE	**Sverdlovsk**	51.60	337	⇓*i*P	P	**03 36 12.2**	**+0.7**
SVE				pmax	pmax		
	comp=Z,120nm,1.4s,mb5.6						
SVE				MLR	MLR		
	comp=N,200nm,19.0s,MS4.3						
SVE				MLR	MLR		
	comp=E,200nm,19.0s,MS4.3						
SVE				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.2						
GNI	**Garni**	51.98	312	*d* *i*P	P	**03 36 15.0**	**+0.3**
GNI				pmax	pmax		
	comp=Z,48nm,1.3s						
GNI	**Garni**	51.98	312	P	P	**03 36 15.3**	**+0.6**
	comp=Z,47nm,1.1s,mb5.3,baz=227,slow=12,SNR=12						
GNI				LR	LR	04 01 35.0	
	comp=Z,155nm,18.9s,MS4.1,baz=280,slow=40						
GNI	**Garni**	51.98	312	*e*P	P	**03 36 12.9**	**-1.8**
	comp=Z,76nm,1.2s,mb5.5						
ARU	**Arti**	52.15	335	*d* *i*P	P	**03 36 15.2**	**-0.5**
ARU				pmax	pmax		
	comp=Z,73nm,1.7s,mb5.3						
ARU	**Arti**	52.15	335	*e*P	P	**03 36 15.1**	**-0.6**
	comp=Z,66nm,1.3s,mb5.4						
ASPA	**Alice Springs**	52.27	133	*e*P	P	**03 36 17.3**	**+0.2**
ASAR	**Alice Springs**	52.28	133	P	P	**03 36 16.9**	**-0.2**
	comp=Z,12nm,0.6s,mb5.0,baz=311,slow=6.6,SNR=112						
ASAR				LR	LR	04 03 10.1	
	comp=Z,86nm,18.0s,MS3.8,baz=301,slow=41						
YSS	**Yuzh-Sakhalins**	52.84	40	*i* P	P	**03 36 17.8**	**-3.2**
ZEI	**Tsey**	53.40	315	*e*P	P	**03 36 22.1**	**-3.1**
ZEI				*i* *PP	pP	03 36 30.2	-2.5
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
KIV	**Kislovodsk**	54.62	316	*d* *i*P	P	**03 36 33.6**	**-0.5**
KIV				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.4						
KIV				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.0						
KIV	**Kislovodsk**	54.62	316	*e*P	P	**03 36 33.8**	**-0.3**
	comp=Z,45nm,1.1s,mb5.4						
SOKR	**Solikamsk**	54.97	337	⇑*i*P	P	**03 36 34.0**	**-2.5**
SOKR				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.5						
SOKR				MLR	MLR		
	comp=Z,240nm,20.0s,MS4.3						
YAK	**Yakutsk**	55.55	19	*e*P	P	**03 36 38.9**	**-1.7**
YAK				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.3						
MALT	**Malatya**	56.27	308	*e*P	P	**03 36 45.0**	**-1.1**
MALT				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
MALT	**Malatya**	56.27	308	*e*P	P	**03 36 45.0**	**-1.1**
	comp=Z,10.0nm,1.1s,mb4.8						
ASF	**Jabal al Asfar**	56.55	300	P	P	**03 36 46.9**	**-1.3**
	comp=Z,1.8nm,0.4s,mb4.5,baz=272,slow=6.4,SNR=3.7						
ASF				LR	LR	04 05 34.1	
	comp=Z,144nm,18.4s,MS4.1,baz=323,slow=41						
SOC	**Sochi**	56.57	314	*e*P	P	**03 36 45.8**	**-2.4**
SOC				*e*		03 37 40.8	
SOC				*e*		03 38 49.2	
SOC				*e*S	S	**03 44 37.4**	**+0.8**
SOC				*e*		03 46 31.3	
SOC				*e*SS	SS	03 48 23.3	-1.6
SOC				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.3						
SOC				pmax	pmax		
	comp=N,14nm,0.7s						
SOC				pmax	pmax		
	comp=E,14nm,1.0s						
EIL	**Elat**	57.99	297	LR	LR	04 06 03.6	
	comp=E,61nm,18.5s,MS3.7,baz=291,slow=40						
KMBO	**Kilima Mbogo**	58.78	261	LR	LR	04 01 07.9	
	comp=E,65nm,18.0s,MS3.8,baz=100,slow=35						
CTA	**Charters Tower**	59.90	122	P	P	**03 37 10.8**	**-1.0**
	comp=E,10nm,1.0s,mb4.8,baz=315,slow=11,SNR=4.6						
BRTR	**Keskin Array B**	60.19	309	P	P	**03 37 11.2**	**-2.3**
	comp=E,6.3nm,0.7s,mb4.7,baz=123,slow=7.4,SNR=36						
MOS	**Moscow**	61.73	327	*e*P	P	**03 37 24.2**	**+0.4**
MOS				*e*		03 37 42.0	
OBN	**Obninsk**	62.08	326	α *i*P	P	**03 37 25.2**	**-0.9**
OBN				*e*		03 37 43.6	
OBN				*e*		03 38 06.9	
OBN						03 39 47.0	
OBN				pmax	pmax		
	comp=Z,38nm,1.7s,mb5.2						
MA2	**Magadan**	62.48	28	*e*P	P	**03 37 29.9**	**+1.2**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
STKA	**Stephens Creek**	62.68	136	P	P	**03 37 30.8**	**+0.3**
	comp=Z,8.6nm,0.9s,mb4.9,baz=308,slow=8.1,SNR=14						
STKA				LR	LR	04 04 18.0	
	comp=Z,378nm,21.6s,MS4.5,baz=121,slow=36						
TIXI	**Tiksi**	62.73	11	*d* *i*P	P	**03 37 28.3**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,18nm,1.3s,mb5.0						
CFR	**Carcaliu**	65.01	314	⇑*i*P	P	**03 37 44.0**	**-1.5**
HARR	**Harsova**	65.09	314	⇑*i*P	P	**03 37 49.1**	**+3.0**
AKASG	**Malin Array Be**	65.20	320	P	P	**03 37 44.3**	**-2.3**
	comp=Z,2.4nm,0.8s,mb4.3,baz=86,slow=4.6,SNR=15						
AKASG	**Malin Array Be**	65.20	320	P	P	**03 37 44.3**	**-2.4**
VRI	**Vrincioaia**	66.08	315	⇑*i*P	P	**03 37 52.0**	**-0.4**
MLR	**Muntele Rosu**	66.58	314	LR	LR	04 11 14.1	
	comp=Z,154nm,19.4s,MS4.2,baz=310,slow=40						
MLR	**Muntele Rosu**	66.58	314	⇑*i*P	P	**03 37 55.3**	**-0.3**
IDI	**Anoyia**	66.73	303	LR	LR	04 13 20.3	
	comp=Z,31nm,19.0s,MS3.5,baz=88,slow=42						
BURAR	**Bucovina Array**	67.32	317	⇑*i*P	P	**03 37 59.5**	**-0.7**
BURAR	**Bucovina Array**	67.32	317	⇑*i*P	P	**03 37 59.5**	**-0.7**
APA	**Apatity**	67.99	339	⇓*i*P	P	**03 38 07.6**	**+3.5**
APA				pmax	pmax		
	comp=Z,54nm,1.6s,mb5.3						
FINES	**FINESS Array B**	69.17	331	P	P	**03 38 10.4**	**-1.1**
	comp=Z,12nm,0.7s,mb5.0,baz=99,slow=6.2,SNR=54						
KWP	**Kalwaria**	69.19	319	*e*P	P	**03 38 11.3**	**-0.5**
KAF	**Kangasniemi**	69.22	332	*e*p	P	**03 38 10.4**	**-1.4**
	comp=Z,14nm,1.0s,mb4.8,baz=102,slow=5.9						
KAF	**Kangasniemi**	69.22	332	*e*P	P	**03 38 10.4**	**-1.4**
KAF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
SUW	**Suwalki**	69.39	323	*e*P	P	**03 38 12.0**	**-0.9**
NIE	**Niedzica**	70.73	318	*e*P	P	**03 38 21.5**	**+0.3**
KEV	**Kevo**	70.92	340	*e*p	P	**03 38 21.5**	**-0.5**
	comp=Z,14nm,1.1s,mb4.8						
KEV	**Kevo**	70.92	340	*e*P	P	**03 38 21.5**	**-0.5**
KEV				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
OJC	**Ojcow**	71.11	319	*e*P	P	**03 38 22.9**	**-0.6**
ARCES	**ARCESS Array B**	71.37	340	P	P	**03 38 25.0**	**+0.3**
	comp=Z,2.2nm,0.8s,mb4.2,baz=117,slow=5.4,SNR=4.1						
ARCES	**ARCESS Array B**	71.37	340	P	P	**03 38 25.0**	**+0.3**
VYHS	**Vyhne**	71.66	317	*e*P	P	**03 38 24.9**	**-1.9**
BILL	**Bilibino**	71.68	22	α *i*P	P	**03 38 26.3**	**-0.3**
BILL				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
BILL				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.5						
BILL	**Bilibino**	71.68	22	*e*P	P	**03 38 25.6**	**-1.0**
	comp=Z,9.5nm,0.8s,mb4.8						
OKC	**Ostrava-Krasne**	72.16	319	*e*P	P	**03 38 29.9**	**+0.2**
MORC	**Moravsky Berou**	72.55	318	*e*P	P	**03 38 31.7**	**-0.4**
MORC				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
MORC	**Moravsky Berou**	72.55	318	*e*P	P	**03 38 31.7**	**-0.4**
	comp=Z,4.7nm,0.8s,mb4.5						
ZST	**Bratislava**	72.81	317	*e*P	P	**03 38 32.6**	**-1.0**
DPC	**Dobruska-Polom**	73.34	319	*e*P	P	**03 38 36.9**	**+0.2**
KSP	**Ksiaz**	73.37	320	*e*P	P	**03 38 37.1**	**+0.3**
UPC	**Upice**	73.54	319	*e*P	P	**03 38 37.7**	**-0.2**
BOJS	**Bojanci**	74.09	314	*i* P	P	**03 38 40.2**	**-1.0**
VISS	**Visnje**	74.38	314	*e*P	P	**03 38 46.8**	**+4.0**
PVCC	**Panska Ves**	74.46	319	*e*P	P	**03 38 43.1**	**-0.1**
PRU	**Pruhonice**	74.49	319	*e*P	P	**03 38 42.8**	**-0.5**
LJU	**Ljubljana**	74.59	315	*e*P	P	**03 38 47.8**	**+3.8**
BRG	**Berggiesshubel**	74.86	320	*e*P	P	**03 38 45.5**	**0.0**
BRG				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
BRG	**Berggiesshubel**	74.86	320	*e*P	P	**03 38 45.5**	**0.0**
	comp=Z,17nm,1.2s,mb4.8						
GEC2	**GERESS Array S**	75.06	317	*e*P	P	**03 38 46.5**	**-0.2**
GEC2				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
GEC2	**GERESS Array S**	75.06	317	*e*P	P	**03 38 46.5**	**-0.2**
	comp=Z,8.0nm,0.7s,mb4.8						
GERES	**GERESS Array B**	75.06	317	P	P	**03 38 46.0**	**-0.7**
	comp=Z,6.2nm,0.7s,mb4.7,baz=87,slow=5.9,SNR=20						
GERES				LR	LR	04 17 56.3	
	comp=Z,85nm,18.0s,MS4.1,baz=21,slow=41						
KHC	**Kasperske Hory**	75.13	318	*e*P	P	**03 38 46.6**	**-0.5**
KHC				*e*		03 38 51.0	
KHC	**Kasperske Hory**	75.13	318	*e*P	P	**03 38 46.6**	**-0.5**
KHC				x	x	03 38 51.0	
CLL	**Collm**	75.44	320	*i* P	P	**03 38 48.1**	**-0.7**
CLL				*i*		03 39 03.8	
CLL				pmax	pmax		
	comp=Z,24nm,1.5s,mb4.9						
CLL	**Collm**	75.44	320	*i* P	P	**03 38 48.1**	**-0.7**
	comp=Z,24nm,1.5s,mb4.9						
CLL				*i*		03 39 03.8	
CLL	**Collm**	75.44	320	P	P	**03 38 48.1**	**-0.7**
	comp=Z,logA/T=1.2,mb4.9						
CLL				*i* *SP	sP	03 39 03.8	+4.6
NB2	**NORSAR Subarra**	76.26	330	P	P	**03 38 52.6**	**-0.6**
	comp=Z,17nm,0.8s,mb5.0,baz=90,slow=5.3						
NB2	**NORSAR Subarra**	76.26	330	P	P	**03 38 52.6**	**-0.6**
	baz=90,slow=5.6						
NOA	**NORSAR Array B**	76.26	330	P	P	**03 38 52.7**	**-0.6**
	comp=Z,10.0nm,0.8s,mb4.8,baz=90,slow=5.7,SNR=22						
NOA	**NORSAR Array B**	76.26	330	P	P	**03 38 52.7**	**-0.6**
MOX	**Moxa**	76.34	319	*e*P	P	**03 38 53.3**	**-0.6**
MOX				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
MOX	**Moxa**	76.34	319	*e*P	P	**03 38 53.3**	**-0.6**
	comp=Z,14nm,1.3s,mb4.7						
MOX	**Moxa**	76.34	319	*i* P	P	**03 38 53.3**	**-0.6**
	comp=Z,logA/T=1.0,mb4.7						
GRA1	**Grafenberg Arr**	76.65	318	*e*P	P	**03 38 55.9**	**+0.3**
	comp=Z,22nm,1.2s,mb5.0						
GRF	**Grafenberg Arr**	76.65	318	*e*P	P	**03 38 55.9**	**+0.3**
GRF				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
GRF	**Grafenberg Arr**	76.65	318	*e*P	P	**03 38 55.9**	**+0.3**
GRF				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
GRF	**Grafenberg Arr**	76.65	318	*e*P	P	**03 38 55.9**	**+0.3**
	comp=Z,22nm,1.2s,mb5.0						
FUR	**Furstenfeldbru**	76.70	317	*e*P	P	**03 38 56.2**	**+0.2**
FUR				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
FUR	**Furstenfeldbru**	76.70	317	*e*P	P	**03 38 56.2**	**+0.2**
	comp=Z,13nm,0.6s,mb5.0						
BSEG	**Bad Segeberg**	76.97	323	*e*P	P	**03 38 57.6**	**+0.2**
BSEG				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.4						
CLZ	**Clausthal**	77.06	321	*e*P	P	**03 38 57.9**	**0.0**
CLZ				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
CLZ	**Clausthal**	77.06	321	*e*P	P	**03 38 57.9**	**0.0**
	comp=Z,23nm,1.0s,mb5.1						
MUD	**Monsted U'grnd**	77.48	325	*i* P	P	**03 39 01.1**	**+1.0**
MUD				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.2						
MUD	**Monsted U'grnd**	77.48	325	*i* P	P	**03 39 01.1**	**+1.0**
	comp=Z,42nm,1.2s,mb5.2						
TNS	**Taunus Mts**	78.39	319	*e*P	P	**03 39 05.2**	**0.0**
TNS				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
TNS	**Taunus Mts**	78.39	319	*e*P	P	**03 39 05.2**	**0.0**
	comp=Z,19nm,1.4s,mb4.8						
BOSA	**Boshof**	78.62	237	P	P	**03 39 06.7**	**-0.2**
	comp=Z,7.2nm,1.1s,mb4.5,baz=357,slow=3.9,SNR=5.1						
BOSA	**Boshof**	78.62	237	P	P	**03 39 06.7**	**-0.2**
CDF	**Champ du Feu**	79.34	317	⇑*i*P	P	**03 39 10.1**	**-0.4**
SBF	**Sospel**	79.78	313	*e*P	P	**03 39 12.7**	**-0.2**
	comp=Z,14nm,0.7s,mb4.7						
SBF	**Sospel**	79.78	313	*e*P	P	**03 39 12.7**	**-0.2**
SBF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
HAU	**Haudompre**	80.01	317	*e*P	P	**03 39 13.4**	**-0.7**
	comp=Z,17nm,0.8s,mb4.7						
HAU	**Haudompre**	80.01	317	*e*P	P	**03 39 13.4**	**-0.7**
HAU				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
LPG	**La Plagne**	80.05	314	*e*P	P	**03 39 14.6**	**+0.2**
	comp=Z,12nm,0.7s,mb4.7						
LPG	**La Plagne**	80.05	314	*e*P	P	**03 39 14.6**	**+0.2**
LPG				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
LPL	**La Plagne**	80.06	314	⇑*i*P	P	**03 39 14.6**	**+0.2**
	comp=Z,28nm,0.9s,mb4.9						
LPL	**La Plagne**	80.06	314	⇑*i*P	P	**03 39 14.6**	**+0.2**
LPL				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
MBDF	**Montbardon**	80.14	314	⇑*i*P	P	**03 39 15.5**	**+0.7**
	comp=Z,20nm,1.2s,mb4.6						
MBDF	**Montbardon**	80.14	314	⇑*i*P	P	**03 39 15.5**	**+0.7**
MBDF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
BNI	**Bardonecchia**	80.16	314	*e*P	P	**03 39 15.3**	**+0.3**
BNI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
BNI	**Bardonecchia**	80.16	314	*e*P	P	**03 39 15.3**	**+0.4**
	comp=Z,9.5nm,1.0s,mb4.7						
CABF	**La Chapelle**	80.36	316	⇑*i*P	P	**03 39 16.1**	**+0.1**
	comp=Z,21nm,1.0s,mb4.7						
CABF	**La Chapelle**	80.36	316	⇑*i*P	P	**03 39 16.1**	**+0.1**
CABF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
FRF	**La Foret Royal**	80.38	313	*e*P	P	**03 39 16.0**	**-0.2**
LMR	**La Mourre**	80.51	312	⇑*i*P	P	**03 39 16.6**	**-0.3**
	comp=Z,15nm,0.7s,mb4.7						
LMR	**La Mourre**	80.51	312	⇑*i*P	P	**03 39 16.6**	**-0.3**
LMR				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
GIVF	**Givet**	80.72	319	⇑*i*P	P	**03 39 17.8**	**0.0**
ORIF	**Oris-en-Rattie**	80.74	314	*e*P	P	**03 39 18.0**	**0.0**
SMRF	**Simiane la Rot**	81.09	313	*e*P	P	**03 39 19.9**	**0.0**
	comp=Z,18nm,0.9s,mb4.7						
BAIF	**Baives**	81.12	319	⇑*i*P	P	**03 39 20.4**	**+0.5**
	comp=Z,30nm,0.8s,mb5.0						
BAIF	**Baives**	81.12	319	⇑*i*P	P	**03 39 20.4**	**+0.5**
BAIF				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
VIVF	**Saint-Julien-l**	81.60	314	⇑*i*P	P	**03 39 22.4**	**-0.1**
	comp=Z,31nm,1.1s,mb4.8						
VIVF	**Saint-Julien-l**	81.60	314	⇑*i*P	P	**03 39 22.4**	**-0.1**
VIVF				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
LOR	**Lormes**	81.78	317	⇑*i*P	P	**03 39 23.0**	**-0.4**
	comp=Z,31nm,1.2s,mb4.8						
LOR	**Lormes**	81.78	317	⇑*i*P	P	**03 39 23.0**	**-0.4**
LOR				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
SMF	**Signal de Mont**	81.89	316	⇑*i*P	P	**03 39 23.8**	**-0.2**
	comp=Z,27nm,1.0s,mb4.8						
SMF	**Signal de Mont**	81.89	316	⇑*i*P	P	**03 39 23.8**	**-0.2**
SMF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
SSF	**Saint Saulge**	82.05	316	⇑*i*P	P	**03 39 24.8**	**0.0**
SSF				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.9						
SSF	**Saint Saulge**	82.05	316	⇑*i*P	P	**03 39 24.8**	**0.0**
	comp=Z,22nm,1.4s,mb4.9						
AVF	**Avril sur Loir**	82.20	316	⇑*i*P	P	**03 39 25.4**	**-0.2**
	comp=Z,20nm,1.1s,mb4.7						

AVF	**Avril sur Loir**	82.20	316	⇑iP	P	03 39 25.4	-0.2
AVF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
LASF	**Ste Croix**	82.30	313	⇑iP	P	03 39 26.4	+0.2
	comp=Z,76nm,1.5s,mb5.1						
BGF	**Bois d'Agland**	82.58	316	eP	P	03 39 27.6	0.0
MAW	**Mawson**	83.03	192	P	P	03 39 29.4	-0.1
	comp=Z,7.5nm,1.0s,mb4.7,baz=25,slow=8.1,SNR=6.8						
TCF	**Toulx Ste Croi**	83.06	316	⇑iP	P	03 39 30.2	+0.1
	comp=Z,34nm,1.2s,mb4.9						
TCF	**Toulx Ste Croi**	83.06	316	⇑iP	P	03 39 30.2	+0.1
TCF				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
CAF	**Calviac**	83.41	314	eP	P	03 39 32.1	+0.2
MTLF	**Montolieu**	83.60	313	⇑iP	P	03 39 32.9	0.0
	comp=Z,36nm,1.3s,mb5.0						
MTLF	**Montolieu**	83.60	313	⇑iP	P	03 39 32.9	0.0
MTLF				pmax	pmax		
	comp=Z,18nm,1.3s,mb5.0						
RJF	**Les Rejaudoux**	83.72	315	⇑iP	P	03 39 34.0	+0.5
	comp=Z,26nm,1.1s,mb5.0						
RJF	**Les Rejaudoux**	83.72	315	⇑iP	P	03 39 34.0	+0.5
RJF				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
LDF	**La Druitiere**	84.17	318	⇑iP	P	03 39 35.8	+0.1
	comp=Z,50nm,1.0s,mb5.3						
LDF	**La Druitiere**	84.17	318	⇑iP	P	03 39 35.8	+0.1
LDF				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.3						
LFF	**La Frestale**	84.33	315	⇑iP	P	03 39 37.1	+0.5
FLN	**La Foliniere**	84.37	319	⇑iP	P	03 39 36.5	-0.1
	comp=Z,104nm,1.4s,mb5.5						
FLN	**La Foliniere**	84.37	319	⇑iP	P	03 39 36.5	-0.1
FLN				pmax	pmax		
	comp=Z,52nm,1.4s,mb5.5						
ESK	**Eskdalemuir**	84.54	325	eP	P	03 39 36.8	-0.6
ESK				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.3						
ESK	**Eskdalemuir**	84.54	325	eP	P	03 39 36.8	-0.5
	comp=Z,22nm,0.8s,mb5.3						
MFF	**Saint Martin d**	84.60	316	⇑iP	P	03 39 38.0	+0.1
	comp=Z,60nm,1.3s,mb5.2						
MFF	**Saint Martin d**	84.60	316	⇑iP	P	03 39 38.0	+0.1
MFF				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.3						
GRR	**Gorron**	84.69	318	⇑iP	P	03 39 38.3	0.0
ETSF	**Etsaut**	85.68	313	⇑iP	P	03 39 44.0	+0.6
	comp=Z,20nm,1.0s,mb5.0						
ETSF	**Etsaut**	85.68	313	⇑iP	P	03 39 44.0	+0.6
ETSF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
SGMF	**Saint Gilles**	85.82	318	⇑iP	P	03 39 44.4	+0.5
	comp=Z,34nm,0.8s,mb5.3						
SGMF	**Saint Gilles**	85.82	318	⇑iP	P	03 39 44.4	+0.5
SGMF				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.3						
SJPF	**Ste Jean**	86.11	313	⇑iP	P	03 39 45.8	+0.3
	comp=Z,27nm,1.2s,mb5.0						
SJPF	**Ste Jean**	86.11	313	⇑iP	P	03 39 45.8	+0.3
SJPF				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.0						
ROSF	**Rostrenen**	86.27	319	⇑iP	P	03 39 46.5	+0.4
	comp=Z,30nm,0.7s,mb5.3						
ROSF	**Rostrenen**	86.27	319	⇑iP	P	03 39 46.5	+0.4
ROSF				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.3						
QUIF	**Quistinic**	86.30	318	⇑iP	P	03 39 46.5	+0.2
IMA	**Indian Mountai**	87.22	22	eP	P	03 39 51.9	+1.5
IMA				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.6						
IMA	**Indian Mountai**	87.22	22	eP	P	03 39 51.9	+1.5
	comp=Z,38nm,0.9s,mb5.6						
ESDC	**Sonseca Array**	88.95	310	P	P	03 39 59.4	+0.2
	comp=Z,1.7nm,0.8s,mb4.5,baz=57,slow=4.3,SNR=6.8						
SYO	**Syowa Base**	89.87	197	⇑P	P	03 40 04.0	+1.1
COLA	**College**	89.94	22	i P	P	03 40 01.8	-1.5
MCK	**McKinley**	90.08	24	eP	P	03 40 04.6	+0.6
MCK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
MCK	**McKinley**	90.08	24	eP	P	03 40 04.6	+0.6
	comp=Z,7.3nm,1.0s,mb5.0						
ILAR	**Eielson Array**	90.34	22	P	P	03 40 04.9	-0.3
	comp=Z,2.2nm,1.1s,mb4.4,baz=305,slow=4.4,SNR=11						
YKA	**Yellowknife Ar**	101.93	14	PP	PP	03 45 05.7	-5.9
	comp=Z,0.2nm,0.4s,baz=328,slow=7.4,SNR=5.7						
NVAR	**Mina Array Bea**	120.70	30	PKP	PKPdf	03 45 57.8	-2.3
	comp=Z,0.5nm,0.6s,baz=288,slow=2.9,SNR=3.0						
PDAR	**Pinedale Array**	120.75	21	PKP	PKPdf	03 45 57.0	-3.1
	comp=Z,0.2nm,0.3s,baz=180,slow=4.4,SNR=3.7						
TXAR	**Lajitas Array**	134.85	23	PKP	PKPdf	03 46 25.0	-2.4
	comp=Z,0.7nm,1.1s,baz=217,slow=4.5,SNR=3.9						
BDFB	**Brasilia**	143.92	260	PKP	PKPdf	03 46 38.9	-5.0
	comp=Z,4.1nm,1.0s,baz=164,slow=9.4,SNR=4.0						
TRQA	**Tornquist**	147.13	215	ePKPdf	PKPdf	03 46 47.7	-1.2
PLCA	**Paso Flores**	148.97	202	PKP2	PKPdf	03 46 53.4	+1.6
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PLCA	**Paso Flores**	148.97	202	PKPbc	PKPdf	03 46 53.4	+1.6
	comp=Z,4.3nm,0.8s,baz=193,slow=6.1,SNR=7.8						
CPUP	**Villa Florida**	150.44	238	PKIKP	PKPdf	03 46 55.9	+1.4
CPUP				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CPUP	**Villa Florida**	150.44	238	PKPbc	PKPdf	03 46 55.9	+1.4
	comp=Z,3.3nm,1.0s,baz=183,slow=3.5,SNR=8.7						
ROSC	**El Rosal**	159.86	327	PKP	PKPdf	03 47 06.0	-1.4
	comp=Z,1.4nm,0.5s,baz=90,slow=20,SNR=2.9						
ROSC				PKPab	PKPab	03 47 44.2	-0.2
	comp=Z,2.8nm,0.7s,baz=111,slow=23,SNR=4.6						
LPAZ	**La Paz**	163.12	255	PKP	PKPdf	03 47 08.6	-2.0
	comp=Z,0.7nm,0.7s,baz=225,slow=7.1,SNR=3.2						
LPAZ				PKPab	PKPab	03 47 57.5	-1.0
	comp=Z,2.9nm,1.1s,baz=75,slow=6.8,SNR=6.7						

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*NEIC **07** 03:30:12.4±1.0, 50.11N×18.38E, h4^{km}±9^{km}, ML3.1(SZGRF), ML2.8(VIE), Error ellipse: s-maj=11.2km s-min=7.3km az=196.0*
*CSEM **07** 03:30:12.6±0.2, 50.12N×18.41E, h2^{km}, ML3.5/3, Error ellipse: s-maj=4.1km s-min=2.5km az=14.0*
*IPEC **07** 03:30:12.6±0.1, 50.06N×18.46E, h3^{km}±1^{km}, ML2.2/4, Error ellipse: s-maj=2.0km s-min=0.7km az=161.0*
*PRU **07** 03:30:13.0, 50.07N×18.43E*
*BGR **07** 03:30:19.2±1.1, 49.89N×18.03E, h1^{km}, ML3.1/9, Error ellipse: s-maj=10.0km s-min=7.8km az=49.0*
WAR 07 03:30:12.5, 50.04N×18.47E, h0^{km}, ML2.6, 1C-1D, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	0.18	283	ePg	Pg	03 30 16.9	+0.8
RAC				eSg	Sg	03 30 20.4	+1.9
OKC	**Ostrava-Krasne**	0.29	225	ePG	Pg	03 30 18.7	+0.4
OKC				eSG	Sg	03 30 23.2	+1.0
	125nm,0.3s						
MORC	**Moravsky Berou**	0.65	246	ePn	Pn	03 30 25.1	-3.5
MORC	**Moravsky Berou**	0.65	246	ePg	Pg	03 30 24.9	-0.7
MORC	**Moravsky Berou**	0.65	246	ePn	Pn	03 30 25.1	-3.5
MORC				eSg	Sg	03 30 33.8	-0.5
	51nm,0.2s						
OJC	**Ojcow**	0.88	78	ePG	Pg	03 30 29.0	-1.0
OJC				eSG	Sg	03 30 42.0	+0.4
OJC	**Ojcow**	0.88	78	ePg	Pg	03 30 29.0	-1.0
OJC				eSg	Sg	03 30 41.6	0.0
NIE	**Niedzica**	1.35	117	⇓ePg	Pg	03 30 37.7	-1.8
NIE				eSg	Sg	03 30 58.8	+1.3
DPC	**Dobruska-Polom**	1.41	283	ePG	Pg	03 30 38.6	-2.1
DPC				eSG	Sg	03 30 56.7	-2.8
	122nm,0.7s						
DPC	**Dobruska-Polom**	1.41	283	ePg	Pg	03 30 38.3	-2.4
DPC				Sg	Sg	03 30 56.7	-2.8
	122nm,0.7s						
VRAC	**Vranov**	1.42	240	ePg	Pg	03 30 38.9	-2.0
VRAC				eSg	Sg	03 30 57.8	-2.0
	37nm,0.2s						
KOLL	**Kolacno**	1.47	182	ePN	Pn	03 30 39.9	-0.3
KOLL				eSN	Sn	03 30 59.9	-0.5
VYHS	**Vyhne**	1.57	171	ePN	Pn	03 30 40.9	-0.8
VYHS				eSN	Sn	03 31 03.3	+0.3
KSP	**Ksiaz**	1.60	301	ePG	Pg	03 30 41.0	-3.5
KSP				eSG	Sg	03 31 04.0	-1.9
KSP	**Ksiaz**	1.60	301	ePg	Pg	03 30 41.1	-3.4
KSP				eSg	Sg	03 31 03.4	-2.5
UPC	**Upice**	1.64	287	ePG	Pg	03 30 42.3	-3.0
UPC				eSG	Sg	03 31 04.7	-2.4
KRUC	**Moravsky**	1.67	235	ePn	Pn	03 30 42.7	-0.4
KRUC				eSg	Sg	03 31 05.0	-3.1
	22nm,0.2s						
KECS	**Kecovo**	2.05	139	ePG	Pg	03 30 53.3	-0.1
KECS				eSN	Sn	03 31 14.7	-0.4
ZST	**Bratislava**	2.06	206	eSN	Sn	03 31 13.6	-1.7
PSZ	**Piszkesteto**	2.33	156	ePn	Pn	03 30 55.4	+2.8
PSZ	**Piszkesteto**	2.33	156	ePn	Pn	03 30 55.4	+2.9
PRU	**Pruhonice**	2.53	270	ePG	Pg	03 30 58.8	-4.2
PRU				eSG	Sg	03 31 30.4	-6.4
KOLS	**Kolonicke sedl**	2.72	113	ePN	Pn	03 30 57.9	-0.2
KOLS				ePG	Pg	03 31 04.5	-2.3
BRG	**Berggiesshubel**	3.01	288	ePg	Pg	03 31 09.0	-3.5
BRG				eSg	Sg	03 31 47.1	-5.5
BRG	**Berggiesshubel**	3.01	288	ePg	Pg	03 31 07.1	-5.4
BRG				eSg	Sg	03 31 46.7	-5.9
BRG	**Berggiesshubel**	3.01	288	Pg	Pg	03 31 09.0	-3.5
BRG				eSg	Sg	03 31 46.7	-5.9
KHC	**Kasperske Hory**	3.31	256	ePN	Pn	03 31 04.0	-2.5
KHC				ePG	Pg	03 31 13.6	-5.0
KHC				eSN	Sn	03 31 42.5	-4.6
KHC				eSG	Sg	03 31 56.7	-6.0
GEC2	**GERESS Array S**	3.33	251	ePg	Pg	03 31 13.4	-5.7
GEC2				eSg	Sg	03 31 54.8	-8.6
GEC2	**GERESS Array S**	3.33	251	ePg	Pg	03 31 13.4	-5.6
GEC2				eSg	Sg	03 31 54.8	-8.6
FBE	**Freiberg**	3.38	287	Sg	Sg	03 31 59.6	-5.5
MOA	**Molln**	3.53	233	⇑iPN	Pn	03 31 07.6	-2.1
MOA				i SG	Sg	03 32 05.1	-5.0
	9.0nm,0.6s						
CLL	**Collm**	3.70	292	eSg	Sg	03 32 11.2	-4.4
CLL	**Collm**	3.70	292	i PG	Pg	03 31 23.3	-3.0
CLL				eSG	Sg	03 32 13.0	-2.6
CLL	**Collm**	3.70	292	i Pg	Pg	03 31 23.3	-3.0
CLL				Sg	Sg	03 32 11.2	-4.4
TANN	**Tannenbergstha**	3.87	278	ePg	Pg	03 31 23.9	-6.0
GUNZ	**Gunzen**	3.95	277	eSg	Sg	03 32 16.1	-8.0
WERD	**Werda**	3.97	278	ePg	Pg	03 31 25.5	-6.3
NOTT	**Nottersdorf**	4.11	269	ePg	Pg	03 31 28.4	-6.0
NOTT				eSg	Sg	03 32 20.1	-9.1
MOX	**Moxa**	4.43	280	eSg	Sg	03 32 32.3	-7.6
GRA1	**Grafenberg Arr**	4.70	268	Sg	Sg	03 32 40.1	-8.8
GRF	**Grafenberg Arr**	4.70	268	eSg	Sg	03 32 40.1	-8.9

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*IDC **07** 03:50:34.3±0.6, 8.36S×108.73E, mb4.6/14, mb1 4.6/15, mb1mx4.5/20, mbtmp4.5/15, ML4.2/1, MS3.9/2, Ms1 3.9/2, ms1mx3.2/26, Error ellipse: s-maj=27.2km s-min=13.1km az=57.0*
*MOS **07** 03:50:37.2±1.2, 8.18S×109.06E, h33^{km}, mb4.7/10, Error ellipse: s-maj=30.4km s-min=15.3km az=112.4*
*DJA **07** 03:50:44.0±0.5, 8.50S×108.90E, h33^{km}, mb6.2/3, MD5.0/3, Error ellipse: s-maj=27.7km s-min=5.2km az=15.0*
*BJI **07** 03:50:46.2, 8.30S×108.90E, h100^{km}, mB5.1, mb4.9*
*NEIC **07** 03:50:46.2±4.3, 8.28S×108.91E, h100^{km}±40^{km}, mb4.4/4, Error ellipse: s-maj=19.0km s-min=10.0km az=63.0*
NEIC Felt [III] at Cilacap.
ISC 07 03:50:45.2±0.9**, 8.33S**±0.08×**108.92E**±0.06**, h105^{km}**±8^{km}**, n54, σ1s14**/50**, mb4.4**/22**, 4C-4D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PULI	**Pulasari**	3.52	304	⇓iP	P	03 51 40.0	+0.9
TRT	**Tretes**	3.73	81	eP	P	03 51 41.0	-1.0
PENI	**Pendagan**	4.62	306	⇓iP	P	03 51 53.4	-0.7
	195nm,0.5s						
SRDI	**Scrawed**	5.17	92	⇑iP	P	03 52 01.6	0.0
	2µm,0.2s						
KELI	**Kelakatan**	5.51	89	⇑iP	P	03 52 07.4	+1.2
	1µm,0.2s						
RATI	**Rata**	6.55	94	⇑iP	P	03 52 20.4	-0.1
KEDI	**Kedomdong**	7.12	92	⇓ipP		03 52 28.1	
KEDI	**Kedomdong**	7.12	92	⇓iP	P	03 52 26.5	-1.8
	714nm,0.2s						
NINI	**Niniconang**	11.45	71	eP	P	03 53 29.0	+2.5
TANI	**Tanete Lipujan**	11.48	66	eP	P	03 53 29.5	+2.4
FITZ	**Fitzroy Crossi**	18.94	123	eP	P	03 55 00.3	-0.3
FITZ				eS	S	03 58 15.7	-8.9
FITZ	**Fitzroy Crossi**	18.94	123	P	P	03 54 59.8	-0.8
	0.6nm,0.3s,baz=307,slow=4.2,SNR=11						
FITZ				S	S	03 58 17.8	-6.8
	2.1nm,0.3s,baz=179,slow=15,SNR=7.7						
WRA	**Warramunga Arr**	27.17	118	P	P	03 56 20.6	-0.4
WRA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WRA	**Warramunga Arr**	27.17	118	P	P	03 56 20.6	-0.5
	comp=Z,4.6nm,0.7s,mb4.2,baz=289,slow=11,SNR=20						
WRAB	**Tennant Creek**	27.18	118	eP	P	03 56 21.4	+0.3
	comp=Z,8.8nm,0.8s,mb4.3						
WB2	**Warramunga Arr**	27.18	118	eP	P	03 56 20.3	-0.8
ASAR	**Alice Springs**	28.38	125	P	P	03 56 31.4	-0.4
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	28.38	125	P	P	03 56 31.4	-0.4
	comp=Z,3.2nm,0.8s,mb3.9,baz=303,slow=8.8,SNR=28						
CMAR	**Chiang Mai Arr**	28.38	340	P	P	03 56 31.1	-0.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR				MLR	MLR		
	comp=Z,33nm,19.9s						
CMAR	**Chiang Mai Arr**	28.38	340	P	P	03 56 31.1	-0.8
	comp=Z,0.9nm,0.5s,mb3.5,baz=180,slow=7.9,SNR=4.8						
CMAR				LR	LR	04 07 44.7	
	comp=Z,33nm,19.9s,baz=351,slow=36						
STKA	**Stephens Creek**	38.35	132	P	P	03 57 58.1	+0.6
	comp=Z,9.2nm,0.5s,mb4.8,baz=308,slow=8.3,SNR=30						
GTA	**Gaotai**	48.24	351	eP	P	03 59 19.7	+2.4
MJAR	**Matsushiro Arr**	52.42	30	P	P	03 59 46.4	-2.8
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR	**Matsushiro Arr**	52.42	30	P	P	03 59 46.4	-2.8
	comp=Z,2.2nm,0.7s,mb4.3,baz=211,slow=7.1,SNR=6.3						
SONM	**Songino Array**	55.96	358	P	P	04 00 14.9	0.0
	comp=Z,5.1nm,0.5s,mb4.8,baz=178,slow=8.3,SNR=58						
SONM				PcP	PcP	04 01 12.5	+0.7
	comp=Z,1.6nm,0.6s,baz=174,slow=4.1,SNR=7.3						
ULN	**Ulaanbaatar**	55.97	358	eP	P	04 00 14.2	-0.8
	comp=Z,4.6nm,0.5s,mb4.8						
ZAK	**Zakamensk**	58.67	356	eP	P	04 00 33.5	-0.3
ZAK				e		04 01 23.2	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
MKAR	**Makanchi Array**	59.78	339	P	P	04 00 40.8	-0.8
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR	**Makanchi Array**	59.78	339	P	P	04 00 40.8	-0.8
	comp=Z,5.1nm,0.7s,mb4.7,baz=145,slow=7.8,SNR=42						
OPO	**Ambohidratompo**	60.65	253	P	P	04 00 45.7	-2.2
	comp=Z,5.0nm,1.1s,mb4.5,baz=148,slow=9.5,SNR=3.7						
KLR	**Kul'dur**	60.71	17	eP	P	04 00 42.6	-5.3
ZAL	**Zalesovo**	65.29	345	P	P	04 01 17.4	-0.6
ZAL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZAL	**Zalesovo**	65.29	345	P	P	04 01 17.4	-0.6
	comp=Z,6.1nm,0.5s,mb4.7,baz=29,slow=2.8						
MAW	**Mawson**	66.67	197	P	P	04 01 26.9	+0.3
MAW				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAW	**Mawson**	66.67	197	P	P	04 01 26.9	+0.3
	comp=Z,3.1nm,0.6s,mb4.3,baz=58,slow=8.1,SNR=7.2						
URZ	**Urewera**	67.78	128	LR	LR	04 29 07.9	
	comp=Z,656nm,21.6s,baz=19,slow=34						
BVAR	**Borovoye Array**	69.33	336	P	P	04 01 43.2	-0.1
	comp=Z,10nm,0.7s,mb4.8,baz=143,slow=8.5,SNR=62						
VNDA	**Vanda**	74.33	170	P	P	04 02 13.0	+0.5
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
VNDA	**Vanda**	74.33	170	P	P	04 02 13.0	+0.5
	comp=Z,1.2nm,0.4s,mb4.0,baz=310,slow=5.7,SNR=11						
VNDA	**Vanda**	74.33	170	P	P	04 02 13.0	+0.5
EIL	**Elat**	80.39	302	eP	P	04 02 46.5	-0.4
	comp=Z,5.1nm,0.9s,mb4.3						
TIXI	**Tiksi**	80.90	6	⇑iP	P	04 02 47.2	-1.6
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
QSPA	**South Pole Qui**	81.67	180	eP	P	04 02 54.0	+1.2
	comp=Z,1.2nm,0.3s,mb4.2						
BRTR	**Keskin Array B**	84.12	311	P	P	04 03 07.1	+1.1
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	84.12	311	P	P	04 03 07.0	+1.1
	comp=Z,2.3nm,0.7s,mb4.1,baz=151,slow=13,SNR=15						
OBN	**Obninsk**	86.87	327	eP	P	04 03 20.2	+1.1
OBN				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
FINES	**FINESS Array B**	93.84	331	P	P	04 03 53.3	+1.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	93.84	331	P	P	04 03 53.3	+1.8
	comp=Z,1.9nm,0.8s,mb4.5,baz=90,slow=7.6,SNR=6.3						
ARCES	**ARCESS Array B**	95.44	339	P	P	04 03 59.5	+0.9
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	95.44	339	P	P	04 03 59.5	+0.9
	comp=Z,3.2nm,0.9s,mb4.8,baz=90,slow=4.9,SNR=4.6						
TXAR	**Lajitas Array**	142.96	51	PKhKP		04 10 05.5	
	comp=Z,0.3nm,0.7s,baz=271,slow=2.5,SNR=4.2						
WMOK	**Wichita Mounta**	143.44	40	ePKPdf	PKPdf	04 10 07.6	-0.2
JCT	**Junction City**	145.27	47	ePKPdf	PKPdf	04 10 13.8	+2.6
ACSO	**Alum Creek Sta**	146.50	17	ePKPdf	PKPdf	04 10 15.7	+2.8

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*CSEM **07** 03:52:01.7±0.1, 37.59N×20.72E, h40^{km}, mb5.1/1, Error ellipse: s-maj=4.2km s-min=2.0km az=85.0*
*ATH **07** 03:52:02.7, 37.83N×21.12E, h9^{km}±1^{km}, MD3.8/8, ML3.5*
*NEIC **07** 03:52:02.7, 37.83N×21.12E, h9^{km}, ML3.5(ATH), After ATH.*
*IDC **07** 03:52:02.9±1.9, 38.16N×21.33E, mb3.7/4, mb1 3.7/7, mb1mx3.5/27, mbtmp3.6/7, ML4.6/1, Error ellipse: s-maj=38.6km s-min=23.1km az=28.0*
*THE **07** 03:52:03.6, 37.67N×20.88E, h20^{km}, ML3.5*
*HLW **07** 03:52:04.7, 37.66N×21.11E, h33^{km}, Mb3.1*
ISC 07 03:51:60.0±0.8**, 37.68N**±0.03×**20.91E**±0.05**, h9^{km}**±6^{km}**, n43, σ1s36**/56**, mb3.8**/5**, 2C-2D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	0.56	333	ePB	Pb	03 52 13.7	+2.2
VLS				eSB	Sb	03 52 21.2	+1.8
RLS	**Riolos of Patr**	0.58	49	ePB	Pb	03 52 10.0	-1.9
RLS				eSB	Sb	03 52 15.9	-4.0
ITM	**Ithomi**	0.95	121	ePB	Pb	03 52 19.9	+1.8
LKD	**Levkas**	1.05	349	ePg	Pg	03 52 20.0	-1.0
LKD				eSg	Sg	03 52 35.0	0.0
EVR	**Evrytania**	1.42	29	ePN	Pn	03 52 24.8	-1.3
AGG	**Agios Georgios**	1.75	39	ePb	Pb	03 52 31.2	-0.6
AGG				eSb	Sb	03 52 53.7	-0.1
VLI	**Veliai**	1.88	120	ePG	Pg	03 52 36.9	-0.6
MGER	**Gerania Oros**	1.88	80	ePN	Pn	03 52 34.5	+1.8
IGT	**Igoumenitsa**	1.91	346	ePb	Pb	03 52 34.5	0.0
IGT				eSb	Sb	03 52 56.8	-1.7
LKR	**Lokris**	1.91	59	ePN	Pn	03 52 34.4	+1.3
JAN	**Janina**	1.98	359	ePG	Pg	03 52 36.8	-2.7
NSAL	**Nisos Salamina**	2.03	83	ePN	Pn	03 52 36.0	+1.1
NAIG	**Nisos Aigina**	2.04	87	ePN	Pn	03 52 37.0	+2.0
KEK	**Kerkira**	2.21	337	ePN	Pn	03 52 40.7	+3.3
ATH	**Athens Observa**	2.24	82	ePN	Pn	03 52 39.7	+1.9
NEO	**Neokhori**	2.44	47	ePN	Pn	03 52 41.3	+0.7
XOR	**Xorichti**	2.46	46	ePn	Pn	03 52 42.5	+1.6
XOR				eSn	Sn	03 53 11.2	-0.2
LIT	**Litokhoron**	2.71	26	ePn	Pn	03 52 45.8	+1.2
LIT				eSn	Sn	03 53 17.2	-0.7
AOS	**Alonnisos**	2.77	56	ePn	Pn	03 52 45.7	+0.3
AOS				eSn	Sn	03 53 18.7	-0.5
FNA	**Florina**	3.12	6	ePn	Pn	03 52 51.2	+0.8
	comp=Z,4.1nm,0.5s						
FNA				eSn	Sn	03 53 28.2	0.0
FNA	**Florina**	3.12	6	ePn	Pn	03 52 51.2	+0.8
	4.1nm,0.5s						
FNA				eSn	Sn	03 53 28.2	-0.1
GRG	**Griva**	3.47	19	ePn	Pn	03 52 55.8	+0.4
OUR	**Ouranopolis**	3.57	41	ePn	Pn	03 52 57.0	+0.2
	comp=Z,1.4nm,0.4s						
SOH	**Sokhos**	3.67	30	ePn	Pn	03 52 58.4	+0.3
GVD	**Gavdhos**	3.82	137	ePn	Pn	03 53 01.5	+1.1
GVD	**Gavdhos**	3.82	137	ePn	Pn	03 53 01.5	+1.2
IDI	**Anoyia**	3.99	125	Pn	Pn	03 53 04.9	+2.1
	0.4nm,0.3s,baz=282,slow=14,SNR=4.6						
IDI				Sn	Sn	03 53 49.8	-0.5
	1.5nm,0.3s,baz=82,slow=23,SNR=6.0						
SKO	**Skopje**	4.31	5	ePn	Pn	03 53 17.0	+10
SLUM		7.12	149	⇑P	Pn	03 53 46.5	-0.4
HMAT	**Matruh**	8.32	140	⇓P	P	03 54 01.9	-1.8
HMAT				S	Sn	03 55 28.0	-11
SWA2		9.23	154	⇑P	P	03 54 14.6	-1.6
SWA1		9.30	153	⇓P	P	03 54 16.0	-1.2
SWA1				S	Sn	03 55 52.2	-11
BRTR	**Keskin Array B**	10.16	74	Pn	P	03 54 26.1	-3.0
	0.1nm,0.3s,baz=271,slow=11,SNR=2.7						
BRTR	**Keskin Array B**	10.16	74	Pn	P	03 54 26.1	-3.0
HFRF	**Wahat Farafira**	12.21	147	P	P	03 54 56.4	-0.7
ESDC	**Sonseca Array**	19.51	284	P	P	03 56 35.5	+5.3
	0.3nm,0.3s,baz=81,slow=12,SNR=4.7						
ESDC	**Sonseca Array**	19.51	284	P	P	03 56 35.5	+5.2
HFS	**Hagfors**	22.94	351	P	P	03 57 03.9	-1.3
	2.2nm,0.9s,mb3.6,baz=173,slow=12,SNR=5.1						
FINES	**FINESS Array B**	24.01	6	P	P	03 57 13.3	-2.2
	0.9nm,0.6s,mb3.4,baz=187,slow=11,SNR=3.6						
EKA	**Eskdalemuir Ar**	24.02	325	P	P	03 57 16.8	+1.1
	1.3nm,0.7s,mb3.5,baz=132,slow=8.5,SNR=3.4						
ARU	**Arti**	31.23	41	eP	P	03 58 18.6	-3.1
	20nm,0.7s,mb5.1						
ARU	**Arti**	31.23	41	eP	P	03 58 18.6	-3.1
	20nm,0.7s,mb5.1						
MKAR	**Makanchi Array**	45.30	58	P	P	04 00 18.2	-1.5
	0.4nm,0.5s,mb3.5,baz=286,slow=6.3,SNR=4.2						

IDC 07 03:57:13.1±1.6**, 8.27S×123.61E, mb3.5**/1**, mb1 3.9**/4**, mb1mx3.6**/17**, mbtmp3.7**/4**, ML3.6**/3**, Error ellipse: s-maj=134.1km s-min=26.2km az=63.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	9.97	169	Pn	P	03 59 38.2	-2.7
	0.6nm,0.3s,baz=0.6,slow=18,SNR=2.2						
FITZ				Sn	Sn	04 01 23.0	-12
	2.5nm,0.3s,baz=177,slow=17,SNR=7.2						
WRA	**Warramunga Arr**	15.58	139	Pn	P	04 00 54.3	-1.6
	0.4nm,0.3s,baz=314,slow=14,SNR=11						
WRA				Sn	S	04 03 33.1	-17
	0.6nm,0.3s,baz=301,slow=22,SNR=9.8						
ASAR	**Alice Springs**	18.21	148	P	P	04 01 27.2	-2.0
	0.1nm,0.3s,baz=329,slow=12,SNR=3.9						
ASAR				S	S	04 04 37.3	-13
	0.2nm,0.3s,baz=323,slow=24,SNR=3.7						
MKAR	**Makanchi Array**	65.99	330	P	P	04 08 01.4	-2.1
	0.2nm,0.4s,baz=138,slow=7.5,SNR=3.4						

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*NEIC **07** 03:59:35.5±0.4, 51.67N×16.09E, h5^{km}, ML3.0(VIE), ML2.9(SZGRF), Error ellipse: s-maj=4.8km s-min=4.5km az=184.0*
*IPEC **07** 03:59:35.0±0.3, 51.68N×16.08E, ML2.3/4, Error ellipse: s-maj=1.9km s-min=1.5km az=49.0*
*BGR **07** 03:59:36.7±0.7, 51.57N×16.02E, h1^{km}, ML3.0/10, Error ellipse: s-maj=6.7km s-min=4.4km az=163.0*
*CSEM **07** 03:59:36.7±0.1, 51.58N×16.00E, h1^{km}, ML3.4/4, Error ellipse: s-maj=2.0km s-min=1.2km az=3.0*
*PRU **07** 03:59:37.2, 51.56N×16.00E*
*IDC **07** 03:59:37.1±0.8, 51.59N×15.95E, mb1 3.2/5, mb1mx3.1/23, mbtmp3.1/5, ML2.8/5, Error ellipse: s-maj=13.9km s-min=7.8km az=110.0*
WAR 07 03:59:37.4, 51.58N×15.99E, h1^{km}, ML3.0, 2C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.76	166	ePg	Pg	03 59 51.4	-1.3
KSP				i Sg	Sg	04 00 01.6	-1.2
KSP				e		04 00 05.1	
KSP	**Ksiaz**	0.76	166	ePG	Pg	03 59 51.0	-1.7
KSP				eSG	Sg	04 00 02.0	-0.8
KSP	**Ksiaz**	0.76	166	ePg	Pg	03 59 51.4	-1.3
KSP				eSg	Sg	04 00 01.5	-1.3
UPC	**Upice**	1.08	179	ePG	Pg	03 59 57.0	-1.9
DPC	**Dobruska-Polom**	1.25	170	ePG	Pg	04 00 00.2	-2.2
DPC				eSG	Sg	04 00 17.1	-1.9
	19nm,0.2s						
DPC	**Dobruska-Polom**	1.25	170	Pg	Pg	04 00 00.2	-2.2
DPC				eSg	Sg	04 00 17.0	-2.0

PVCC	Panska Ves	1.39	221	ePG	Pg	04 00 02.7	-2.4
PVCC	Panska Ves	1.39	221	Pg	Pg	04 00 02.7	-2.4
PVCC				eSg	Sg	04 00 22.1	-1.4
BRG	Berggiesshubel	1.47	242	ePg	Pg	04 00 03.9	-2.9
BRG				eSg	Sg	04 00 24.3	-2.1
BRG	Berggiesshubel	1.47	242	ePn	Pn	04 00 03.6	-1.5
BRG				i Pg	Pg	04 00 04.6	-2.2
BRG				i Sg	Sg	04 00 24.4	-2.0
BRG	Berggiesshubel	1.47	242	i Pg	Pg	04 00 04.6	-2.2
BRG				Sg	Sg	04 00 24.3	-2.1
FBE	Freiberg	1.79	249	Pn	Pn	04 00 08.8	-0.8
FBE				Sg	Sg	04 00 33.8	-3.0
PRU	Pruhonice	1.84	211	ePn	Pn	04 00 08.9	-1.5
PRU				ePg	Pg	04 00 10.7	-3.5
PRU				eSg	Sg	04 00 35.0	-3.7
PRU	Pruhonice	1.84	211	ePg	Pg	04 00 10.7	-3.5
PRU				eSg	Sg	04 00 35.0	-3.7
CLL	Collm	1.89	263	ePn	Pn	04 00 09.1	-2.0
CLL				eSg	Sg	04 00 36.9	-3.4
CLL	Collm	1.89	263	i Pn	Pn	04 00 09.0	-2.1
CLL				i Pg	Pg	04 00 12.1	-3.1
CLL				i Sg	Sg	04 00 37.3	-3.1
CLL	Collm	1.89	263	i PN	Pn	04 00 09.0	-2.1
	logA/T=1.6						
CLL				i PG	Pg	04 00 12.1	-3.1
CLL				i		04 00 16.0	
CLL				i SG	Sg	04 00 37.3	-3.1
CLL	Collm	1.89	263	i Pg	Pg	04 00 12.1	-3.1
CLL				Sg	Sg	04 00 36.9	-3.5
MORC	Moravsky Berou	2.06	151	ePn	Pn	04 00 11.0	-2.5
MORC	Moravsky Berou	2.06	151	ePn	Pn	04 00 11.0	-2.5
MORC				eSg	Sg	04 00 41.6	-4.3
	20nm,0.4s						
OKC	Ostrava-Krasne	2.22	141	ePg	Pg	04 00 18.2	-3.5
OKC				eSg	Sg	04 00 45.8	-5.5
VRAC	Vranov	2.31	170	Pn	Pn	04 00 16.3	-0.8
	1.7nm,0.3s,baz=338,slow=14,SNR=15						
VRAC				Lg		04 00 50.0	
	5.4nm,0.3s,baz=89,slow=18,SNR=9.7						
VRAC	Vranov	2.31	170	ePn	Pn	04 00 15.9	-1.2
VRAC				eSg	Sg	04 00 50.1	-4.2
	13nm,0.3s						
TANN	Tannenbergstha	2.52	244	ePn	Pn	04 00 18.4	-1.7
TANN				eSg	Sg	04 00 56.6	-4.7
KRUC	Moravsky	2.54	174	ePn	Pn	04 00 19.1	-1.3
KRUC				eSg	Sg	04 00 57.2	-4.6
	8.9nm,0.3s						
WERD	Werda	2.59	245	ePn	Pn	04 00 19.4	-1.7
WERD				eSg	Sg	04 00 58.6	-5.0
GUNZ	Gunzen	2.62	244	eSg	Sg	04 00 59.9	-4.6
NKC	Novy Kostel	2.62	240	ePn	Pn	04 00 20.2	-1.4
NKC				ePg	Pg	04 00 26.6	-3.1
NKC				eSg	Sg	04 00 59.4	-5.2
NKC	Novy Kostel	2.62	240	ePN	Pn	04 00 20.2	-1.4
NKC				ePG	Pg	04 00 26.6	-3.1
NKC				eSG	Sg	04 00 59.4	-5.2
	48nm,0.2s						
NEUB	Neuenburg	2.67	264	eSg	Sg	04 01 02.7	-3.6
OJC	Ojcow	2.77	118	ePg	Pg	04 00 28.9	-3.8
OJC				eSg	Sg	04 01 04.2	-5.4
KHC	Kasperske Hory	2.90	213	ePn	Pn	04 00 24.1	-1.5
KHC				ePg	Pg	04 00 29.0	-6.3
KHC				eSn	Sn	04 00 58.5	-3.1
KHC				eSg	Sg	04 01 07.4	-6.6
KHC	Kasperske Hory	2.90	213	ePg	Pg	04 00 29.0	-6.3
KHC				eSn	Sn	04 00 58.5	-3.1
KHC				eSg	Sg	04 01 07.4	-6.6
MOX	Moxa	2.91	253	ePn	Pn	04 00 24.5	-1.2
MOX				eSg	Sg	04 01 09.2	-5.2
MOX	Moxa	2.91	253	ePn	Pn	04 00 23.3	-2.5
MOX				ePg	Pg	04 00 32.1	-3.5
MOX				eSg	Sg	04 01 11.0	-3.4
MOX	Moxa	2.91	253	i P	Pn	04 00 23.3	-2.5
MOX				Pg	Pg	04 00 32.0	-3.6
MOX				Sg	Sg	04 01 11.0	-3.4
MOX	Moxa	2.91	253	ePg	Pg	04 00 32.1	-3.5
MOX				Sg	Sg	04 01 09.2	-5.2
NOTT	Nottersdorf	3.03	236	eSg	Sg	04 01 12.9	-5.5
GEC2	GERESS Array S	3.11	209	ePn	Pn	04 00 27.4	-1.1
GEC2				eSg	Sg	04 01 14.9	-6.0
GEC2	GERESS Array S	3.11	209	ePn	Pn	04 00 27.4	-1.2
GEC2				eSg	Sg	04 01 14.9	-6.0
GERES	GERESS Array B	3.11	209	Pn	Pn	04 00 27.3	-1.2
	0.8nm,0.3s,baz=31,slow=13,SNR=26						
GERES				Pg	Pg	04 00 33.4	-6.1
	2.2nm,0.3s,baz=28,slow=16,SNR=26						
GERES				Sn	Sn	04 01 05.5	-1.4
	1.4nm,0.3s,baz=23,slow=26,SNR=5.2						
GERES				Lg		04 01 15.3	
	1.9nm,0.3s,baz=27,slow=25,SNR=16						
NIE	Niedzica	3.51	126	eP	Pg	04 00 41.9	-5.5
NIE				eS	Sg	04 01 28.6	-5.5
GRA1	Grafenberg Arr	3.58	240	ePn	Pn	04 00 33.5	-1.7
GRA1				eSg	Sg	04 01 31.0	-5.5
GRA1	Grafenberg Arr	3.58	240	Pn	Pn	04 00 33.5	-1.7
GRA1				Sg	Sg	04 01 31.0	-5.5
GRF	Grafenberg Arr	3.58	240	ePn	Pn	04 00 33.5	-1.7
GRF				eSg	Sg	04 01 31.0	-5.6
MOA	Molln	3.90	197	⇑iPN	Pn	04 00 37.8	-2.0
MOA				i SG	Sg	04 01 41.8	-5.5
	11nm,0.6s						
KBA	Koelnbreinsper	4.83	202	⇑iPN	Pn	04 00 51.1	-1.9
KBA				i SG	Sg	04 02 11.4	-6.8
	4.4nm,0.4s						
AKASG	Malin Array Be	8.37	91	Pn	P	04 01 36.6	-6.2
	0.6nm,0.3s,baz=278,slow=12,SNR=5.0						
HFS	Hagfors	8.67	352	Pn	P	04 01 40.9	-6.0
	0.0nm,0.3s,baz=169,slow=15,SNR=4.6						
FINES	FINESS Array B	11.33	25	Pn	P	04 02 15.4	-7.9
	0.1nm,0.3s,baz=219,slow=12,SNR=4.2						

ISC 07 04:01:44.5±0.9**, 39.30N**±0.05×**41.10E**±0.09**, h10**^{km}**, n6, σ0ˢ74**/11**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.64	229	i PG	Pg	04 01 56.4	-0.9
BINT				i SG	Sg	04 02 06.1	+0.2
EZM	Erzurum	0.64	18	i PG	Pg	04 01 57.3	-0.1
ERZM	Erzurum	0.64	19	i P	Pb	04 01 56.5	-0.8
ERZM				i S	Sb	04 02 06.5	+0.5
BEST	Besiri	1.41	175	i P	Pn	04 02 11.5	+1.1
BEST				i S	Sb	04 02 34.0	+5.7
KELT	Kelkit	1.66	301	i P	Pn	04 02 13.0	-0.9
KELT				i S	Sn	04 02 36.4	+1.1
ELZG	Elazig	1.83	245	i P	Pn	04 02 16.2	-0.2
ELZG				i S	Sn	04 02 46.8	+7.0

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*CSEM **07** 04:21:28.4, 29.38S×178.96W, h33^{km}, mb5.7*

*MOS **07** 04:21:58.7±0.9, 29.19S×179.19W, h297^{km}, mb5.5/30, MS4.6/23, Error ellipse: s-maj=10.1km s-min=7.6km az=58.0*

*BJI **07** 04:21:59.4, 29.50S×178.25W, h337^{km}, mB5.0, mb4.9*

*HRVD **07** 04:22:00.8±0.2, 29.20S×178.90W, h326^{km}±1^{km}, MW5.8/66, Centroid moment Tensor Solution. LP body waves: s66,c141; Half duration: 1ˢ8 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.05±.08; $M_{\theta\theta}$-2.44±.13; $M_{\phi\phi}$4.49±.12; $M_{r\theta}$-2.62±.10; $M_{\theta\phi}$2.20±.11; $M_{\phi r}$0.70±.10; Best double couple: $M_0$5.227×10^{17} NP1:ϕ_s159°,δ63°,λ-150°. NP2: ϕ_s54°,δ64°,λ-31°. Principal axes: T 5.13, Plg1°, Azm106°; N .195, Plg50°, Azm197°; P -5.325, Plg40°, Azm16°; nsta1 refers to body waves, cutoff=40s.*

*NEIC **07** 04:22:00.8±0.4, 29.52S×179.12W, h318^{km}±4^{km}, mb5.4/61 Error ellipse: s-maj=6.5km s-min=4.0km az=133.0*

*IDC **07** 04:22:01.7±0.5, 29.26S×179.15W, h320^{km}±4^{km}, mb4.6/18, mb1 4.8/20, mb1mx4.8/20, mbtmp5.3/20, Error ellipse: s-maj=11.2km s-min=7.0km az=171.0*

*BGS **07** 04:22:17.0±41.0, 29.25S×179.29W, h300^{km}*

ISC 07 04:21:59.4±0.1**, 29.67S**±0.02×**179.14W**±0.04**, h318**^{km}**, h318**^{km}±1.8^{km}**: pP-P, n774, σ1ˢ28**/396**, mb5.2**/79**, 50C-40D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.14	69	P	P	04 22 43.2	+0.7
	13μm,0.3s,baz=29,slow=0.9,SNR=345						
RAO				S	S	04 23 05.9	-10
	7μm,0.3s,baz=292,slow=21,SNR=7.1						
RAO	Raoul Island	1.14	69	⇓eP	P	04 22 43.6	+1.1
MXZ	Matakaoa Point	8.15	194	eP	P	04 23 56.0	+0.3
MXZ	Matakaoa Point	8.15	194	PN	P	04 23 54.9	-0.9
MXZ				SN	S	04 25 28.2	+0.9
MXZ				T		04 28 57.4	
WCZ	Waipu Caves	8.32	220	eP	P	04 24 05.9	+8.2
WCZ	Waipu Caves	8.32	220	⇓PN	P	04 24 05.9	+8.2
WIZ	White Island	8.41	200	P	P	04 24 02.2	+3.3
WIZ	White Island	8.41	200	ePN	P	04 24 01.9	+3.0
MYRZ	Mayor Island	8.51	206	ePN	P	04 24 04.0	+3.9
PUZ	Puketiti	8.65	194	P	P	04 24 02.1	+0.3
PUZ	Puketiti	8.65	194	PN	P	04 24 01.7	-0.1
PUZ				SN	S	04 25 38.8	+0.6
MTAZ	Motutapu	8.67	214	eP	P	04 24 09.4	+7.4
MTAZ	Motutapu	8.67	214	PN	P	04 24 09.4	+7.4
KAAZ	Kauri Point	8.80	214	P	P	04 24 11.7	+8.1
KAAZ	Kauri Point	8.80	214	PN	P	04 24 11.3	+7.8
WTAZ	Waiatarua	8.95	214	eP	P	04 24 13.1	+7.7
WTAZ	Waiatarua	8.95	214	PN	P	04 24 13.0	+7.6
MARZ	Manawahe	8.99	202	P	P	04 24 10.6	+4.7
MARZ	Manawahe	8.99	202	ePN	P	04 24 09.1	+3.1
MWZ	Matawai	9.07	197	eP	P	04 24 04.0	-2.9
MWZ	Matawai	9.07	197	PN	P	04 24 06.8	-0.1
EDRZ	Edgecumbe	9.08	201	P	P	04 24 09.7	+2.7
EDRZ	Edgecumbe	9.08	201	ePN	P	04 24 08.3	+1.2
LIRZ	Lichensteins R	9.11	203	P	P	04 24 13.7	+6.4
LIRZ	Lichensteins R	9.11	203	PN	P	04 24 13.1	+5.8
URZ	Urewera	9.12	199	P	P	04 24 07.7	+0.3
	11nm,0.3s,baz=260,slow=2.8,SNR=112						
URZ				S	S	04 25 52.8	+4.4
	220nm,0.3s,baz=290,slow=22,SNR=11						
URZ	Urewera	9.12	199	P	P	04 24 07.0	-0.4
URZ	Urewera	9.12	199	ePN	P	04 24 06.3	-1.1
URZ				SN	S	04 25 45.9	-2.4
TOZ	Tahuroa Road	9.19	208	P	P	04 24 12.8	+4.4
TOZ	Tahuroa Road	9.19	208	PN	P	04 24 12.6	+4.2
MKRZ	Makatiti	9.20	202	P	P	04 24 14.7	+6.2
MKRZ	Makatiti	9.20	202	PN	P	04 24 14.7	+6.2
TAZ	Tarawera	9.27	202	P	P	04 24 13.0	+3.7
TAZ	Tarawera	9.27	202	ePN	P	04 24 11.8	+2.4
UTU	Utuhina	9.33	203	P	P	04 24 16.5	+6.5
UTU	Utuhina	9.33	203	ePN	P	04 24 16.1	+6.1
PATZ	Paeroa	9.49	203	P	P	04 24 13.8	+1.8
PATZ	Paeroa	9.49	203	PN	P	04 24 13.7	+1.7
KNZ	Kokohu	9.69	195	eP	P	04 24 13.4	-1.1
KNZ	Kokohu	9.69	195	PN	P	04 24 13.1	-1.4
WHTZ	Whakaora	9.85	203	P	P	04 24 21.4	+5.0
WHTZ	Whakaora	9.85	203	ePN	P	04 24 20.7	+4.4
WATZ	Wairara	9.96	204	P	P	04 24 22.0	+4.2
WATZ	Wairara	9.96	204	ePN	P	04 24 20.8	+3.0
HATZ	Hinemaiaia	10.01	202	P	P	04 24 21.7	+3.4
HATZ	Hinemaiaia	10.01	202	ePN	P	04 24 21.4	+3.1
RATZ	Rangitukua	10.09	203	P	P	04 24 22.8	+3.4
RATZ	Rangitukua	10.09	203	ePN	P	04 24 22.2	+2.9
HIZ	Hauiti	10.13	208	eP	P	04 24 22.8	+3.0
HIZ	Hauiti	10.13	208	PN	P	04 24 22.7	+3.0
BKZ	Black Stump Fm	10.13	200	eP	P	04 24 19.0	-0.9
BKZ	Black Stump Fm	10.13	200	ePN	P	04 24 18.3	-1.5
BKZ				SN	S	04 26 13.1	+2.2
RITZ	Rihia Road	10.16	203	P	P	04 24 24.0	+3.8
RITZ	Rihia Road	10.16	203	PN	P	04 24 24.0	+3.8
KATZ	Kakaramea	10.21	203	P	P	04 24 23.1	+2.2
KATZ	Kakaramea	10.21	203	ePN	P	04 24 24.7	+3.9
WTVZ	West Tongariro	10.38	203	P	P	04 24 23.5	+0.7
WTVZ	West Tongariro	10.38	203	ePN	P	04 24 23.3	+0.4
TWVZ	Taurewa	10.39	204	P	P	04 24 22.9	-0.1
TWVZ	Taurewa	10.39	204	PN	P	04 24 22.7	-0.3
OTVZ	Oturere	10.39	203	PN	P	04 24 22.8	-0.2
OTVZ				SN	S	04 26 20.4	+3.8
NGZ	Ngauruhoe	10.43	203	P	P	04 24 23.7	+0.3
NGZ				P		04 24 23.9	
NGZ	Ngauruhoe	10.43	203	ePN	P	04 24 23.1	-0.3
CNZ	Chateau	10.47	203	P	P	04 24 25.2	+1.3
CNZ	Chateau	10.47	203	PN	P	04 24 24.9	+1.0
WPVZ	Whakapapa	10.47	203	P	P	04 24 24.9	+0.9
WPVZ	Whakapapa	10.47	203	PN	P	04 24 24.8	+0.9
TUVZ	Tukino	10.49	203	P	P	04 24 27.7	+3.5
TUVZ	Tukino	10.49	203	PN	P	04 24 27.0	+2.7
FWVZ	Far West T-bar	10.52	203	eP	P	04 24 23.6	-0.9
FWVZ	Far West T-bar	10.52	203	PN	P	04 24 23.2	-1.3
DRZ	Dome Shelter	10.53	203	P	P	04 24 27.6	+2.9
DRZ	Dome Shelter	10.53	203	ePN	P	04 24 26.5	+1.8
WNVZ	Wahianoa	10.56	203	P	P	04 24 25.5	+0.4
WNVZ	Wahianoa	10.56	203	ePN	P	04 24 24.7	-0.4
MOVZ	Moawhango	10.59	202	P	P	04 24 23.3	-2.1
MOVZ	Moawhango	10.59	202	PN	P	04 24 23.0	-2.4
MTVZ	Mangateitei	10.66	203	ePN	P	04 24 26.0	-0.3
VRZ	Vera Road	10.69	206	P	P	04 24 30.2	+3.5
VRZ	Vera Road	10.69	206	ePN	P	04 24 28.5	+1.8
PWZ	Pawanui	10.84	197	eP	P	04 24 26.3	-2.2
PWZ	Pawanui	10.84	197	ePN	P	04 24 25.0	-3.5
RAEZ	Rainy Point	10.97	207	P	P	04 24 33.9	+3.8
RAEZ	Rainy Point	10.97	207	PN	P	04 24 33.9	+3.8
NEZ	North Egmont	11.08	208	P	P	04 24 36.5	+5.1
TSZ	Takapari Road	11.12	200	P	P	04 24 29.3	-2.6
TSZ	Takapari Road	11.12	200	ePN	P	04 24 29.2	-2.6
WAZ	Wanganui	11.16	204	P	P	04 24 33.7	+1.3
WAZ	Wanganui	11.16	204	ePN	P	04 24 30.8	-1.6
NRZ	Ngariki Road	11.20	209	P	P	04 24 38.8	+5.9
BFZ	Birch Farm	11.61	198	P	P	04 24 37.3	-0.7
BFZ	Birch Farm	11.61	198	ePN	P	04 24 36.7	-1.3
MRZ	Mangatainoka R	11.78	200	eP	P	04 24 36.9	-3.1
MRZ	Mangatainoka R	11.78	200	PN	P	04 24 36.5	-3.5
KIW	Kapiti Island	12.17	202	P	P	04 24 42.3	-2.5
KIW	Kapiti Island	12.17	202	ePN	P	04 24 41.8	-3.0
MTW	Mount Morrison	12.26	199	P	P	04 24 43.6	-2.3
MTW	Mount Morrison	12.26	199	ePN	P	04 24 42.5	-3.4
CAW	Cannon Point	12.35	201	P	P	04 24 44.4	-2.5
CAW	Cannon Point	12.35	201	ePN	P	04 24 43.3	-3.6
CAW				SN	S	04 26 58.3	-1.2
DUWZ	D’Urville Isla	12.47	205	ePN	P	04 24 45.7	-2.6
PAWZ	Paruwai Farm	12.49	199	ePN	P	04 24 46.4	-2.3
MSWZ	Moikau Station	12.57	200	P	P	04 24 48.1	-1.6
MSWZ	Moikau Station	12.57	200	ePN	P	04 24 46.5	-3.2
MRW	Makara Radio	12.57	202	P	P	04 24 47.6	-2.1
MRW	Makara Radio	12.57	202	ePN	P	04 24 47.4	-2.3
WEL	Wellington	12.60	202	P	P	04 24 48.0	-2.0
WEL	Wellington	12.60	202	ePN	P	04 24 47.8	-2.3
SNZO	South Karori	12.64	202	eP	P	04 24 48.0	-2.5
SNZO	South Karori	12.64	202	ePN	P	04 24 45.9	-4.6
BHW	Baring Head	12.68	201	P	P	04 24 48.8	-2.2
BHW	Baring Head	12.68	201	ePN	P	04 24 48.2	-2.7
BHW				SN	S	04 27 04.9	-2.0
TCW	Tory Channel	12.70	203	P	P	04 24 49.1	-2.1
TCW	Tory Channel	12.70	203	ePN	P	04 24 47.7	-3.5
TUWZ	Tuamarina	13.01	204	ePN	P	04 24 51.3	-3.6
NNZ	Nelson	13.03	206	eP	P	04 24 51.4	-3.8
NNZ	Nelson	13.03	206	ePN	P	04 24 51.1	-4.1
NNZ				SN	S	04 27 14.3	-0.2
QRZ	Quartz Range	13.04	209	eP	P	04 24 53.8	-1.5
QRZ	Quartz Range	13.04	209	ePN	P	04 24 53.8	-1.5
CMWZ	Cape Campbell	13.20	202	P	P	04 24 57.8	+0.6
CMWZ	Cape Campbell	13.20	202	ePN	P	04 24 56.8	-0.4
BSWZ	Blackbirch Sta	13.28	203	P	P	04 24 58.6	+0.4
BSWZ	Blackbirch Sta	13.28	203	ePN	P	04 24 56.8	-1.4
THZ	Tophouse	13.68	206	eP	P	04 25 00.3	-2.7
THZ	Tophouse	13.68	206	ePN	P	04 24 59.4	-3.5
KHZ	Kahutara	14.02	203	eP	P	04 25 03.8	-3.1
KHZ	Kahutara	14.02	203	PN	P	04 25 03.6	-3.4
DSZ	Denniston Nort	14.11	209	eP	P	04 25 07.3	-0.6
DSZ	Denniston Nort	14.11	209	ePN	P	04 25 04.9	-3.0
DSZ				SN	S	04 27 37.0	-1.1
LTZ	Lake Taylor	14.80	206	eP	P	04 25 13.5	-2.2
LTZ	Lake Taylor	14.80	206	ePN	P	04 25 12.9	-2.8
DZM	Mont Dzumac	15.02	297	eP	P	04 25 18.9	+0.6
DZM				eS	S	04 28 04.5	+7.4
DZM	Mont Dzumac	15.02	297	P	P	04 25 19.4	+1.1
	103nm,0.3s,baz=107,slow=12,SNR=212						
DZM				S	S	04 28 00.7	+3.5
	baz=82,slow=21,SNR=1.0						
NOUC	Port Laguerre	15.11	297	eP	P	04 25 20.9	+1.7
CRLZ	Canterbury Las	15.36	203	eP	P	04 25 23.2	+1.3
CRLZ	Canterbury Las	15.36	203	ePN	P	04 25 19.0	-2.9
CRLZ				SN	S	04 28 03.5	-0.6
MQZ	McQueen’s Vall	15.47	203	eP	P	04 25 21.4	-1.6
MQZ	McQueen’s Vall	15.47	203	ePN	P	04 25 20.5	-2.5
MQZ				SN	S	04 28 02.9	-3.3
RPZ	Rata Peaks	16.05	207	P	P	04 25 28.6	-0.8
	15nm,0.3s,baz=10.0,slow=3.0,SNR=28						
RPZ				S	S	04 28 18.3	+0.3
	50nm,0.3s,baz=320,slow=20,SNR=20						
RPZ	Rata Peaks	16.05	207	eP	P	04 25 29.0	-0.4
RPZ	Rata Peaks	16.05	207	ePN	P	04 25 28.2	-1.2
RPZ				SN	S	04 28 18.5	+0.5
FOZ	Fox Glacier	16.49	210	eP	P	04 25 33.0	-1.0
FOZ	Fox Glacier	16.49	210	ePN	P	04 25 32.2	-1.8
FOZ				SN	S	04 28 25.8	-0.6
LBZ	Lake Benmore	16.96	207	eP	P	04 25 41.1	+2.2
LBZ	Lake Benmore	16.96	207	ePN	P	04 25 38.6	-0.3
AFI	Afiamalu	17.10	25	P	P	04 25 35.3	-5.2
AFI				S	S	04 28 26.9	-11
AFI				pmax	pmax		
	comp=Z,56nm,0.3s						
AFI				smax			
	comp=N,46nm,0.3s						
AFI	Afiamalu	17.10	25	P	P	04 25 35.3	-5.3
	comp=N,56nm,0.3s,baz=252,slow=8.7,SNR=37						
AFI				S	S	04 28 26.9	-11
	comp=N,46nm,0.3s,baz=40,slow=20,SNR=7.9						
AFI	Afiamalu	17.10	25	eP	P	04 25 34.9	-5.6
	comp=N,2μm,1.3s						
JCZ	Jackson Bay	17.30	211	eP	P	04 25 42.1	-0.3
JCZ	Jackson Bay	17.30	211	ePN	P	04 25 40.6	-1.8
ODZ	Otahua Downs	17.34	205	P	P	04 25 44.9	+2.1
ODZ	Otahua Downs	17.34	205	ePN	P	04 25 44.8	+2.0
WKZ	Wanaka	17.80	209	eP	P	04 25 46.8	-0.6
WKZ	Wanaka	17.80	209	ePN	P	04 25 46.7	-0.7
EAZ	Earnscleugh	18.01	207	SN	S	04 29 02.4	+7.1
MSZ	Milford Sound	18.14	211	SN	S	04 29 06.0	+8.2
TUZ	Tuapeka	18.49	205	eP	P	04 26 00.7	+6.3
TUZ	Tuapeka	18.49	205	ePN	P	04 25 59.6	+5.2
MLZ	Mavora Lakes	18.57	209	SN	S	04 29 18.5	+13
RAR	Rarotonga	19.39	69	eP	P	04 26 04.4	+0.8
RAR				pmax	pmax		
	comp=Z,115nm,1.0s						
RAR	Rarotonga	19.39	69	P	P	04 26 02.6	-1.0
	comp=Z,3.5nm,0.3s,baz=199,slow=3.2,SNR=6.2						
RAR	Rarotonga	19.39	69	eP	P	04 26 04.4	+0.8
	comp=Z,115nm,1.0s						
TBI	Tubuai	27.25	84	ePP	PP	04 28 15.2	-4.0
	comp=Z,842nm,31.5s						
TBI				eLR	LR	04 33 01.2	
	comp=Z,2μm,28.0s						
TBI				eLQ		04 33 11.0	
	comp=Z,2μm,28.8s						
HNR	Honiara	28.08	312	PFAKE		04 27 40.0	+15
HNR				LR	LR		
	comp=Z,925nm,19.0s						
PPT	Papeete	29.55	73	eP	Px	04 27 59.9	
PPT				eLQ		04 34 10.5	
PPT				eLR	LR	04 34 12.0	
	comp=Z,1μm,28.5s						
PPT	Papeete	29.55	73	P	P	04 27 36.1	-1.4
	comp=Z,44nm,0.6s,mb5.2,baz=213,slow=10,SNR=4.4						
TAU	Tasmania Unive	29.88	235	eP	P	04 27 43.4	+3.2
TAU				e		04 28 55.8	
TAU				pmax	pmax		
	comp=Z,170nm,1.8s,mb5.3						
TAU	Tasmania Unive	29.88	235	eP	P	04 27 43.4	+3.2
	comp=Z,170nm,1.8s,mb5.3						
TAU				ePP	PP	04 28 55.8	+2.9
TOO	Toolangi	30.36	246	eP	P	04 27 47.9	+3.6
TOO				epP	pP	04 28 55.5	+10
TOO				eS	S	04 32 05.4	-15
CTA	Charters Tower	32.71	279	P	P	04 28 06.0	+1.3
	comp=Z,40nm,0.5s,mb5.2,baz=102,slow=11,SNR=59						
CTA				S	S	04 32 56.1	-1.1
	comp=Z,3.5nm,0.8s,baz=91,slow=12,SNR=1.7						
CTA	Charters Tower	32.71	279	P	P	04 28 06.0	+1.3
CTA				S	S	04 32 56.1	-1.1
CTAO	Charters Tower	32.71	279	⇑eP	P	04 28 05.8	+1.1
CTAO				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.1						
CTAO				MLR	MLR		
	comp=Z,2μm,22.0s						
CTAO	Charters Tower	32.71	279	⇑eP	P	04 28 05.8	+1.0
	comp=Z,40nm,0.6s,mb5.1						
CTAO				LR	LR		
	comp=Z,2μm,22.0s						
STKA	Stephens Creek	33.69	256	⇑iP	P	04 28 15.2	+2.3
STKA				i sP	sP	04 29 35.8	-16
STKA				eS	S	04 33 13.9	+1.7
STKA				eSCS	ScS	04 37 59.6	+0.6
STKA	Stephens Creek	33.69	256	P	P	04 28 15.3	+2.4
	comp=Z,56nm,0.6s,mb5.3,baz=94,slow=8.7,SNR=194						
STKA				S	S	04 33 13.4	+1.3
	comp=Z,4.9nm,0.9s,baz=356,slow=24,SNR=2.6						
ADE	Adelaide	35.82	250	eP	P	04 28 33.2	+2.4
PMG	Port Moresby	37.40	296	eP	P	04 28 44.4	+0.2
PMG				e		04 30 23.9	
PMG				pmax	pmax		
	comp=Z,100nm,1.3s						
PMG				MLR	MLR		
	comp=Z,968nm,20.0s						
PMG	Port Moresby	37.40	296	P	P	04 28 44.9	+0.7
	comp=Z,59nm,1.2s,mb4.9,baz=218,slow=9.9,SNR=4.6						
PMG	Port Moresby	37.40	296	eP	P	04 28 44.4	+0.2
	comp=Z,100nm,1.3s,mb5.1						
PMG				e		04 30 23.9	
PMG				LR	LR		
	comp=Z,968nm,20.0s						
RKT	Rikitea	39.91	91	ePP	PP	04 30 20.4	-24
	comp=Z,284nm,31.0s						
RKT				eS	S	04 34 32.4	-14
RKT				eLQ		04 38 00.9	
RKT				eLR	LR	04 39 38.1	
	comp=Z,1μm,27.8s						
ASAR	Alice Springs	42.16	267	P	P	04 29 23.8	+0.7
ASAR				S	S	04 35 17.9	-1.0
ASAR	Alice Springs	42.16	267	P	P	04 29 23.8	+0.7
	comp=Z,60nm,0.5s,mb5.0,baz=98,slow=6.7,SNR=529						
ASAR				ScP		04 34 32.8	
	comp=Z,9.1nm,0.7s,baz=119,slow=4.2,SNR=6.3						
ASAR				S	S	04 35 17.9	-1.0
	comp=Z,5.1nm,1.0s,baz=107,slow=12,SNR=4.7						
ASPA	Alice Springs	42.17	267	⇑iP	P	04 29 23.7	+0.6
ASPA				eS	S	04 35 17.7	-1.3
ASPA				eS	ScS	04 38 48.0	+0.2
WB2	Warramunga Arr	43.08	272	⇑iP	P	04 29 30.7	+0.2
WB2				esP	sP	04 30 54.6	-16
WB2				eS	S	04 35 30.2	-1.9
WB2				eSCS	ScS	04 38 54.3	+0.9
WRAB	Tennant Creek	43.08	272	eP	P	04 29 30.1	-0.4
WRAB				eS	S	04 35 30.8	-1.4
WRAB				pmax	pmax		
	comp=Z,51nm,0.5s,mb5.0						
WRAB				MLR	MLR		
	comp=Z,438nm,19.0s						
WRAB	Tennant Creek	43.08	272	eP	P	04 29 30.1	-0.4
	comp=Z,51nm,0.5s,mb5.0						
WRAB				eS	S	04 35 30.8	-1.4
WRAB				LR	LR		
	comp=Z,438nm,19.0s						
WRA	Warramunga Arr	43.09	272	P	P	04 29 30.6	+0.1
WRA				*PP	pP	04 30 33.9	-1.3
WRA				S	S	04 35 31.0	-1.3
WRA	Warramunga Arr	43.09	272	P	P	04 29 30.6	+0.1
	comp=Z,34nm,0.5s,mb4.8,baz=112,slow=6.9,SNR=455						
WRA				pP	pP	04 30 33.9	-1.2
	comp=Z,9.6nm,0.5s,baz=113,slow=7.9,SNR=1.4						
WRA				ScP		04 34 35.4	
	comp=Z,11nm,0.8s,baz=111,slow=4.0,SNR=5.9						
WRA				S	S	04 35 31.0	-1.3
	comp=Z,24nm,0.7s,baz=108,slow=14,SNR=15						
FORT	Forrest	45.28	255	⇑iP	P	04 29 48.0	+0.1
FORT				epP	pP	04 31 01.5	+8.4
FORT				eS	S	04 36 02.6	-0.9
KAKA	Kakadu	47.84	280	eP	P	04 30 07.6	-0.2
SBA	Scott Base	48.69	184	eP	P	04 30 19.2	+5.7
SBA				e*PP	pP	04 31 22.9	+3.1
SBA				pmax	pmax		
	comp=Z,29nm,0.9s,mb4.6						
SBA				MLR	MLR		
	comp=Z,391nm,20.0s						
SBA	Scott Base	48.69	184	eP	P	04 30 19.2	+5.7
	comp=Z,29nm,0.9s,mb4.6						
SBA				epP	pP	04 31 22.9	+3.1
SBA				LR	LR		
	comp=Z,391nm,20.0s						
VNDA	Vanda	48.72	185	P	P	04 30 18.2	+4.4
VNDA				*PP	pP	04 31 24.3	+4.2
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.0s						

VNDA				pmax	pmax		
	comp=N,3.0nm,0.7s						
VNDA	**Vanda**	**48.72**	**185**	P	**P**	**04 30 18.2**	**+4.4**
	comp=N,2.1nm,0.7s,baz=18,slow=5.4,SNR=15						
VNDA				pP	pP	04 31 24.3	+4.2
	comp=N,7.4nm,1.0s,baz=4.7,slow=6.9,SNR=3.7						
VNDA				ScP		04 34 59.0	
	comp=N,3.1nm,0.7s,baz=338,slow=3.7,SNR=5.1						
VNDA	**Vanda**	**48.72**	**185**	*e*P	**P**	**04 30 17.9**	**+4.2**
WAKE	**Wake Island**	**50.56**	**343**	*e*P	**P**	**04 30 25.7**	**-2.6**
	comp=N,640nm,1.2s,mb5.8						
FITZ	**Fitzroy Crossi**	**51.38**	**270**	⇓*i*P	**P**	**04 30 35.0**	**+0.7**
FITZ				*i* PCP	PcP	04 31 58.0	+14
FITZ				*e*S	**S**	**04 37 28.6**	**+0.6**
FITZ	**Fitzroy Crossi**	**51.38**	**270**	P	**P**	**04 30 35.1**	**+0.8**
	comp=N,162nm,0.9s,mb5.3,baz=147,slow=5.3,SNR=73						
FITZ				pP	pP	04 31 42.6	+1.2
	comp=N,18nm,0.7s,baz=135,slow=5.7,SNR=1.6						
FITZ				S	**S**	**04 37 28.5**	**+0.5**
	comp=N,8.3nm,1.1s,baz=186,slow=23,SNR=10						
NWAO	**Narrogin (SRO)**	**53.73**	**249**	PFAKE		04 31 00.0	+8.7
NWAO				LR	LR		
	comp=Z,927nm,20.0s						
POHA	**Pohakuloa**	**54.15**	**28**	*e*P	**P**	**04 30 52.8**	**-1.7**
KIP	**Kipapa**	**54.72**	**24**	*e*P	**P**	**04 30 56.4**	**-2.1**
KIP				pmax	pmax		
	comp=Z,477nm,1.3s,mb5.8						
KIP	**Kipapa**	**54.72**	**24**	*e*P	**P**	**04 30 56.4**	**-2.2**
	comp=Z,477nm,1.3s,mb5.8						
MUN	**Mundaring**	**54.82**	**250**	*e*P	**P**	**04 30 59.3**	**+0.2**
GUMO	**Guam**	**55.27**	**316**	PFAKE		04 31 10.0	+7.5
GUMO				LR	LR		
	comp=Z,1µm,22.0s						
CASY	**Casey**	**55.32**	**208**	*e*P	**P**	**04 31 03.4**	**+1.2**
CASY				*e*pP	pP	04 32 14.4	+3.7
MBWA	**Marble Bar**	**55.33**	**264**	*e*P	**P**	**04 31 02.6**	**-0.3**
	comp=Z,161nm,0.9s,mb5.5						
MBWA				LR	LR		
	comp=Z,996nm,19.0s						
MIDW	**Midway**	**57.59**	**2**	*e*P	**P**	**04 31 16.3**	**-2.3**
	comp=Z,396nm,1.3s,mb5.7						
QSPA	**South Pole Qui**	**60.44**	**180**	⇓*i*P	**P**	**04 31 41.4**	**+4.0**
	comp=Z,19nm,0.7s,mb4.7						
MIR	**Mirnyy**	**62.33**	**207**	*e*P	**P**	**04 31 52.0**	**+2.0**
MIR				*i*	pP	04 33 02.0	+1.5
MIR				pmax	pmax		
	comp=Z,23nm,1.6s,mb4.6						
KKM	**Kota Kinabalu**	**71.39**	**289**	*e*P	**P**	**04 32 46.8**	**-0.4**
MAW	**Mawson**	**72.64**	**201**	P	**P**	**04 32 56.1**	**+2.4**
	comp=Z,7.7nm,0.7s,mb4.5,baz=120,slow=10,SNR=18						
MAW				pP	pP	04 34 09.2	+2.9
	comp=Z,16nm,1.1s,baz=97,slow=9.0,SNR=2.8						
KSM	**Kuching**	**73.92**	**281**	*e*P	**P**	**04 33 02.1**	**-0.1**
MJAR	**Matsushiro Arr**	**77.08**	**326**	P	**P**	**04 33 18.1**	**-1.4**
	comp=Z,35nm,0.9s,mb5.1,baz=159,slow=5.5,SNR=64						
MAJO	**Matsushiro**	**77.09**	**326**	*e*P	**P**	**04 33 18.3**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.5						
MAJO				MLR	MLR		
	comp=Z,233nm,19.0s						
MAJO	**Matsushiro**	**77.09**	**326**	*e*P	**P**	**04 33 18.2**	**-1.3**
	comp=Z,100nm,1.1s,mb5.5						
MAJO				LR	LR		
	comp=Z,233nm,19.0s						
MAT	**Matsushiro**	**77.09**	**326**	*e*P	**P**	**04 33 17.0**	**-2.5**
MAT				*e*S	S	04 42 37.0	-3.7
MAT				pmax	pmax		
	comp=Z,169nm,1.5s,mb5.5						
MAT	**Matsushiro**	**77.09**	**326**	*e*P	**P**	**04 33 17.0**	**-2.5**
	comp=Z,169nm,1.5s,mb5.5						
MAT				*e*S	S	04 42 37.0	-3.7
MAT	**Matsushiro**	**77.09**	**326**	P	**P**	**04 33 17.7**	**-1.8**
MAT				S	S	04 42 37.0	-3.7
SYO	**Syowa Base**	**77.60**	**193**	⇑P	**P**	**04 33 23.0**	**+1.3**
SNAA	**Sanae**	**78.91**	**179**	*e*	PcP	04 33 37.7	+1.2
SNAA	**Sanae**	**78.91**	**179**	*e*S	S	04 43 04.9	+5.7
SNAA	**Sanae**	**78.91**	**179**	*e*	ScS	04 43 27.0	+9.1
SNAA	**Sanae**	**78.91**	**179**	P	**P**	**04 33 31.3**	**+2.7**
	comp=Z,1.5nm,0.5s,baz=196,slow=4.4,SNR=20						
SNAA				pP	pP	04 34 45.0	+2.7
	comp=Z,21nm,1.1s,baz=183,slow=6.7,SNR=7.0						
SNAA	**Sanae**	**78.91**	**179**	⇓*i*P	**P**	**04 33 31.1**	**+2.5**
SNAA				*e*		04 33 37.7	
SNAA				*e*	pP	04 34 45.1	+2.8
SNAA				*e*		04 35 13.5	
SNAA				*e*		04 36 35.8	
SNAA				*e*S	S	04 43 04.9	+5.7
SNAA				*e*		04 43 27.0	
SNAA				*e*		04 52 07.3	
SNAA				*e*		04 52 17.4	
VNA3	**Neumayer Olymp**	**79.09**	**177**	*e*	PcP	04 33 37.9	+0.6
VNA3	**Neumayer Olymp**	**79.09**	**177**	*e*S	S	04 43 06.1	+5.0
VNA3	**Neumayer Olymp**	**79.09**	**177**	*e*	tx	04 43 20.0	
VNA3	**Neumayer Olymp**	**79.09**	**177**	*e*	ScS	04 43 24.2	+4.8
VNA3	**Neumayer Olymp**	**79.09**	**177**	*e*		04 54 57.1	
VNA3	**Neumayer Olymp**	**79.09**	**177**	⇓*i*P	**P**	**04 33 32.4**	**+2.8**
VNA3				*e*		04 33 37.9	
VNA3				*e*	pP	04 34 47.2	+3.8
VNA3				*e*		04 35 26.9	
VNA3				*e*		04 36 37.5	
VNA3				*e*S	S	04 43 06.1	+5.0
VNA3				*e*		04 43 20.0	
VNA3				*e*		04 43 24.2	
VNA3				*e*		04 51 56.3	
VNA3				*e*		04 52 06.9	
VNA3				*e*		04 54 57.1	
VNA2	**Neumayer--Watz**	**79.52**	**177**	*e*	PcP	04 33 40.4	+1.2
VNA2	**Neumayer--Watz**	**79.52**	**177**	*e*S	S	04 43 11.3	+5.8
VNA2	**Neumayer--Watz**	**79.52**	**177**	*e*	tx	04 43 23.7	
VNA2	**Neumayer--Watz**	**79.52**	**177**	*e*	ScS	04 43 32.6	+10
VNA2	**Neumayer--Watz**	**79.52**	**177**	*e*		04 55 04.1	
VNA2	**Neumayer--Watz**	**79.52**	**177**	⇓*i*P	**P**	**04 33 34.9**	**+3.1**
VNA2				*e*		04 33 40.4	
VNA2				*e*	pP	04 34 48.9	+3.2
VNA2				*e*		04 35 23.5	
VNA2				*e*		04 36 41.0	
VNA2				*e*S	S	04 43 11.3	+5.8
VNA2				*e*		04 43 23.7	
VNA2				*e*		04 43 32.6	
VNA2				*e*		04 52 06.2	
VNA2				*e*		04 52 16.4	
VNA2				*e*		04 55 04.1	
VNA1	**Neumayer--Stat**	**79.75**	**177**	*e*	PcP	04 33 41.8	+1.6
VNA1	**Neumayer--Stat**	**79.75**	**177**	*e*		04 55 00.0	
VNA1	**Neumayer--Stat**	**79.75**	**177**	⇓*i*P	**P**	**04 33 36.4**	**+3.3**
VNA1				*e*		04 33 41.8	
VNA1				*e*	pP	04 34 50.3	+3.3
VNA1				*e*		04 35 16.8	
VNA1				*e*		04 36 42.1	
VNA1				*e*		04 52 04.6	
VNA1				*e*		04 52 16.1	
VNA1				*e*		04 55 00.0	
KIWB	**Kanaga Island**	**81.19**	**1**	*e*P	**P**	**04 33 40.0**	**-1.0**
SMY	**Shemya**	**82.26**	**356**	*e*P	**P**	**04 33 45.4**	**-1.1**
SMY				pmax	pmax		
	comp=Z,768nm,1.4s						
SMY	**Shemya**	**82.26**	**356**	*e*P	**P**	**04 33 45.4**	**-1.1**
	comp=Z,768nm,1.4s						
NIKO	**Nikolski**	**82.78**	**6**	*e*P	**P**	**04 33 47.3**	**-1.8**
SSE	**Sheshan**	**82.89**	**312**	P	**P**	**04 33 51.7**	**+1.6**
SSE				AP	pP	04 35 05.8	+1.3
SSE				XP	sP	04 35 39.9	+2.6
SSE				PP	PP	04 37 06.1	-0.5
SSE				S	S	04 43 41.3	+0.9
SSE				XS		04 45 54.9	
SSE				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
SSE				AMB	AMB		
	comp=Z,130nm,7.0s						
SSE				LR	LR		
	comp=N,170nm,32.4s						
SSE				LR	LR		
	comp=E,230nm,32.8s						
SSE				LR	LR		
	comp=Z,140nm,26.4s						
YSS	**Yuzh-Sakhalins**	**83.67**	**335**	⇓*i*P	**P**	**04 33 54.0**	**+0.3**
YSS				*e*		04 43 44.0	
YSS				*e*S	S	04 43 51.0	+3.3
YSS				*e*PS	PS	04 45 28.0	-0.9
YSS				*e*SS	SS	04 49 19.0	-6.6
YSS				pmax	pmax		
	comp=Z,230nm,1.2s,mb5.9						
YSS				smax			
	comp=N,500nm,10.0s						
YSS				smax			
	comp=E,1µm,10.0s						
YSS	**Yuzh-Sakhalins**	**83.67**	**335**	*e*P	**P**	**04 33 54.3**	**+0.6**
	comp=E,204nm,1.1s,mb5.9						
YSS				LR	LR		
	comp=Z,319nm,21.0s						
PLCA	**Paso Flores**	**83.72**	**134**	P	**P**	**04 33 56.5**	**+2.4**
PLCA				*PP	pP	04 35 09.9	+1.2
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PLCA				pmax	pmax		
	comp=Z,15nm,1.2s						
PLCA	**Paso Flores**	**83.72**	**134**	P	**P**	**04 33 56.5**	**+2.4**
	comp=Z,3.8nm,0.8s,mb4.3,baz=234,slow=5.3,SNR=7.6						
PLCA				pP	pP	04 35 09.8	+1.2
	comp=Z,15nm,1.1s,baz=219,slow=4.6,SNR=4.8						
PLCA	**Paso Flores**	**83.72**	**134**	*e*P	**P**	**04 33 56.8**	**+2.7**
	comp=Z,51nm,1.6s,mb5.1						
UNV	**Unalaska Valle**	**83.89**	**7**	*e*P	**P**	**04 33 52.5**	**-2.1**
	comp=Z,247nm,1.0s,mb6.0						
INCN	**Inchon**	**83.90**	**320**	PFAKE		04 34 10.0	+15
INCN				LR	LR		
	comp=Z,250nm,21.0s						
PET	**Petropavlovsk**	**84.59**	**347**	κ *i*P	**P**	**04 33 57.1**	**-1.1**
PET				*e*		04 37 18.4	
PET				*e*S	S	04 43 50.1	-6.4
PET				*e*SP	SP	04 44 45.6	-9.3
PET				*e*SS	SS	04 49 37.3	-1.6
PET				pmax	pmax		
	comp=Z,104nm,0.7s,mb5.8						
PET				pmax	pmax		
	comp=Z,400nm,11.8s						
PET				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.2						
PET				pmax	pmax		
	comp=Z,300nm,9.7s						
PET				pmax	pmax		
	comp=Z,200nm,14.9s						
PET				smax			
	comp=E,600nm,21.7s						
PET	**Petropavlovsk**	**84.59**	**347**	*e*P	**P**	**04 33 56.9**	**-1.3**
	comp=E,51nm,0.5s,mb5.6						
PET				LR	LR		
	comp=Z,244nm,19.0s						
NJ2	**Nanjing**	**85.02**	**311**	*e*P	**P**	**04 34 02.2**	**+1.4**
NJ2				PP	PP	04 37 26.8	+3.2
NJ2				AMB	AMB		
	comp=Z,450nm,4.7s						
NJ2				LR	LR		
	comp=N,4µm,16.8s						
NJ2				LR	LR		
	comp=E,6µm,15.2s						
NJ2				LR	LR		
	comp=Z,4µm,14.9s						
SAO	**San Andreas Ge**	**85.41**	**43**	*e*P	**P**	**04 34 02.2**	**-0.4**
SAO				pmax	pmax		
	comp=Z,83nm,1.2s,mb5.4						
SAO				MLR	MLR		
	comp=Z,361nm,21.0s						
SAO	**San Andreas Ge**	**85.41**	**43**	*e*P	**P**	**04 34 02.2**	**-0.3**
	comp=Z,83nm,1.2s,mb5.4						
SAO				LR	LR		
	comp=Z,361nm,21.0s						
LRV	**Little Rabbit**	**85.44**	**43**	*e*P	**P**	**04 34 02.4**	**-0.3**
MWC	**Mount Wilson**	**85.81**	**47**	*e*P	**P**	**04 34 05.0**	**+0.4**
SDPT	**Sand Point**	**86.18**	**11**	*e*P	**P**	**04 34 05.3**	**-0.5**
	comp=Z,334nm,0.8s,mb6.2						
PFO	**Pinyon Flat Ob**	**86.45**	**48**	*e*P	**P**	**04 34 08.3**	**+0.7**
PFO				pmax	pmax		
	comp=Z,59nm,1.1s,mb5.3						
PFO	**Pinyon Flat Ob**	**86.45**	**48**	*e*P	**P**	**04 34 08.2**	**+0.6**
	comp=Z,59nm,1.1s,mb5.3						
CMB	**Columbia Colle**	**86.89**	**43**	*e*P	**P**	**04 34 09.5**	**-0.1**
CMB				pmax	pmax		
	comp=Z,23nm,0.6s,mb5.2						
CMB				MLR	MLR		
	comp=Z,170nm,19.0s						
CMB	**Columbia Colle**	**86.89**	**43**	*e*P	**P**	**04 34 09.5**	**-0.2**
	comp=Z,23nm,0.6s,mb5.2						
CMB				LR	LR		
	comp=Z,170nm,19.0s						
KHMM	**Horse Mountain**	**86.92**	**39**	*e*P	**P**	**04 34 10.6**	**+0.8**
WHN	**Wuhan**	**87.12**	**308**	P	**P**	**04 34 12.0**	**+1.1**
WDC	**Whiskeytown Da**	**87.37**	**40**	*e*P	**P**	**04 34 12.1**	**+0.2**
WDC				pmax	pmax		
	comp=Z,57nm,1.1s,mb5.3						
WDC				MLR	MLR		
	comp=Z,199nm,20.0s						
WDC	**Whiskeytown Da**	**87.37**	**40**	*e*P	**P**	**04 34 12.1**	**+0.2**
	comp=Z,58nm,1.1s,mb5.3						
WDC				LR	LR		
	comp=Z,199nm,20.0s						
DAC	**Darwin (Calif)**	**87.42**	**45**	*e*P	**P**	**04 34 12.7**	**+0.5**
DAC				*e*		04 37 46.4	
DAC				pmax	pmax		
	comp=Z,51nm,1.5s,mb5.1						
DAC				MLR	MLR		
	comp=Z,214nm,21.0s						
DAC	**Darwin (Calif)**	**87.42**	**45**	*e*P	**P**	**04 34 12.7**	**+0.5**
	comp=Z,51nm,1.5s,mb5.1						
DAC				*e*PP	PP	04 37 46.4	+2.8
DAC				LR	LR		
	comp=Z,214nm,21.0s						
OMM	**Old Mammoth Mi**	**87.44**	**44**	*e*P	**P**	**04 34 12.8**	**+0.5**
MDJ	**Mudanjiang**	**87.47**	**326**	P	**P**	**04 34 12.8**	**+0.5**
MDJ				AP	pP	04 35 26.8	-0.6
MDJ				PP	PP	04 37 41.8	-1.9
MDJ				S	S	04 44 26.5	+2.5
MDJ				PS	PS	04 46 08.1	-4.9
MDJ				XS		04 46 38.7	
MDJ				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,240nm,3.3s						
MDJ				LR	LR		
	comp=N,730nm,23.5s						
MDJ				LR	LR		
	comp=E,690nm,22.2s						
MDJ				LR	LR		
	comp=Z,200nm,18.9s						
MTUM	**Tungsten Hills**	**87.52**	**44**	*e*P	**P**	**04 34 10.1**	**-2.6**
DL2	**Dalian**	**87.75**	**318**	P	**P**	**04 34 14.8**	**+1.1**
DL2				SKS	SKS	04 44 10.1	+1.0
DL2				S	S	04 44 28.9	+2.2
DL2				XS		04 46 44.1	
DL2				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.0						
DL2				AMB	AMB		
	comp=Z,180nm,5.9s						
YBH	**Yreka Blue Hor**	**88.07**	**39**	P	**P**	**04 34 15.6**	**+0.4**
YBH				pmax	pmax		
	comp=Z,20nm,1.0s						
YBH	**Yreka Blue Hor**	**88.07**	**39**	P	**P**	**04 34 15.6**	**+0.4**
	comp=Z,20nm,0.9s,mb4.9,baz=221,slow=4.9,SNR=23						
YBH	**Yreka Blue Hor**	**88.07**	**39**	*e*P	**P**	**04 34 15.2**	**0.0**
	comp=Z,43nm,1.2s,mb5.2						
WCN	**Washoe City**	**88.09**	**42**	*e*P	**P**	**04 34 15.1**	**-0.3**
WCN				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.3						
WCN	**Washoe City**	**88.09**	**42**	*e*P	**P**	**04 34 15.1**	**-0.3**
	comp=Z,54nm,1.1s,mb5.3						
LDFC	**Landfair**	**88.23**	**48**	*e*P	**P**	**04 34 17.3**	**+1.2**
NVAR	**Mina Array Bea**	**88.38**	**43**	P	**P**	**04 34 17.0**	**+0.3**
	comp=Z,43nm,1.0s,mb5.2,baz=217,slow=7.4,SNR=84						
NVAR	**Mina Array Bea**	**88.38**	**43**	P	**P**	**04 34 17.0**	**+0.3**
MNV	**Mina**	**88.47**	**43**	PFAKE		04 34 30.0	+13
MNV				LR	LR		
	comp=Z,219nm,19.0s						
HUMO	**Hull Mountain**	**88.54**	**38**	*e*P	**P**	**04 34 18.0**	**+0.6**
	comp=Z,68nm,1.1s,mb5.4						
HUMO				*e*PP	PP	04 37 49.3	-3.0
PAHR	**Pah Rah Range**	**88.58**	**42**	*e*P	**P**	**04 34 18.1**	**+0.5**
	comp=Z,38nm,1.2s,mb5.1						
NEN	**Nelson**	**88.76**	**47**	*e*P	**P**	**04 34 18.7**	**+0.2**
NEN				*e*PP	PP	04 37 48.9	-5.2
TPH	**Tonopah**	**88.80**	**44**	*e*P	**P**	**04 34 19.0**	**+0.3**
TPH				pmax	pmax		
	comp=Z,131nm,1.3s,mb5.6						
TPH				MLR	MLR		
	comp=Z,199nm,20.0s						
TPH	**Tonopah**	**88.80**	**44**	*e*P	**P**	**04 34 19.0**	**+0.3**
	comp=Z,131nm,1.3s,mb5.6						
TPH				LR	LR		
	comp=Z,199nm,20.0s						
HOG	**Hogback Mounta**	**88.97**	**39**	P	**P**	**04 34 19.8**	**+0.5**
CN2	**Changchun**	**88.97**	**323**	⇓P	**P**	**04 34 19.6**	**+0.3**
CN2				*e*AP	pP	04 35 37.3	+2.6
CN2				*e*S	S	04 44 38.9	+1.2
CN2				AMB	AMB		
	comp=Z,100nm,1.1s,mb5.6						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
TUC	**Tucson**	**89.43**	**52**	*e*P	**P**	**04 34 23.2**	**+1.5**
TUC				pmax	pmax		
	comp=Z,76nm,1.1s,mb5.4						
TUC				MLR	MLR		
	comp=Z,170nm,19.0s						
TUC	**Tucson**	**89.43**	**52**	*e*P	**P**	**04 34 23.2**	**+1.4**
	comp=Z,76nm,1.1s,mb5.4						
TUC				LR	LR		
	comp=Z,170nm,19.0s						
MOD	**Modoc**	**89.51**	**40**	*e*P	**P**	**04 34 21.8**	**0.0**
	comp=Z,89nm,1.2s,mb5.5						
MOD				*e*PP	PP	04 37 57.2	-2.8
MOD				LR	LR		
	comp=Z,228nm,20.0s						
NST	**Nakhon Sawan**	**89.84**	**288**	P	**P**	**04 34 25.0**	**+1.0**
KLR	**Kul'dur**	**89.91**	**330**	*e*P	**P**	**04 34 21.2**	**-2.4**
KLR				*e*S	S	04 44 43.5	-2.6
KLR				pmax	pmax		
	comp=N,30nm,1.6s						
KLR				pmax	pmax		
	comp=Z,74nm,1.6s,mb5.3						
KLR				smax			
	comp=N,2µm,10.0s						
KLR				smax			
	comp=E,700nm,10.0s						
GYA	**Guiyang**	**90.33**	**300**	⇓*i*P	**P**	**04 34 27.9**	**+1.8**
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
GYA				AMB	AMB		
	comp=Z,170nm,6.3s						
GYA				LR	LR		
	comp=N,480nm,17.9s						
GYA				LR	LR		
	comp=E,510nm,18.2s						
GYA				LR	LR		
	comp=Z,370nm,18.4s						
SSOR	**Sweet Springs**	**90.35**	**36**	P	**P**	**04 34 26.1**	**+0.4**
BKCOR	**Black Crater**	**90.37**	**37**	P	**P**	**04 34 26.5**	**+0.7**
WVOR	**Wild Horse Val**	**90.79**	**40**	*e*P	**P**	**04 34 27.9**	**+0.1**
WVOR				*e*		04 38 06.1	
WVOR				pmax	pmax		
	comp=Z,79nm,1.4s,mb5.3						
WVOR				MLR	MLR		
	comp=Z,712nm,21.0s						
WVOR	**Wild Horse Val**	**90.79**	**40**	*e*P	**P**	**04 34 27.9**	**+0.1**
	comp=Z,79nm,1.4s,mb5.3						
WVOR				*e*PP	PP	04 38 06.1	-4.0
WVOR				LR	LR		
	comp=Z,712nm,21.0s						
WUAZ	**Wupatki**	**90.92**	**49**	*e*P	**P**	**04 34 28.5**	**-0.2**
	comp=Z,32nm,0.9s,mb5.2						
WUAZ				LR	LR		
	comp=Z,282nm,21.0s						
ARUT	**Antelope Range**	**90.96**	**46**	*e*P	**P**	**04 34 28.5**	**-0.2**
ARUT				*e*		04 38 09.4	
NANT	**Nan**	**90.97**	**291**	P	**P**	**04 34 30.0**	**+0.8**
VIPM	**Ingram Point**	**91.08**	**38**	P	**P**	**04 34 29.5**	**+0.4**
CROR	**Criterion Ridg**	**91.20**	**37**	P	**P**	**04 34 29.8**	**+0.2**
OCWA	**Octopus Mounta**	**91.50**	**34**	*e*P	**P**	**04 34 31.7**	**+0.7**
	comp=Z,176nm,1.6s,mb5.7						
OCWA				LR	LR		
	comp=Z,754nm,19.0s						
ELK	**Elko**	**91.68**	**43**	*e*P	**P**	**04 34 31.9**	**-0.1**
ELK				pmax	pmax		
	comp=Z,36nm,1.3s						
ELK				MLR	MLR		
	comp=Z,752nm,19.0s						
ELK	**Elko**	**91.68**	**43**	*e*P	**P**	**04 34 31.9**	**-0.1**
	comp=Z,36nm,1.3s,mb5.1						
ELK				*e*PP	PP	04 38 08.0	-9.2
ELK				LR	LR		
	comp=Z,752nm,19.0s						
MVU	**Marysvale**	**92.16**	**46**	⇓*e*P	**P**	**04 34 35.3**	**+1.0**
	comp=Z,35nm,1.3s,mb5.1						
MVU				LR	LR		
	comp=Z,553nm,20.0s						
MSU	**Marysvale**	**92.19**	**46**	*e*P	**P**	**04 34 35.3**	**+0.8**
CMAR	**Chiang Mai Arr**	**92.23**	**290**	P	**P**	**04 34 36.4**	**+1.3**
	comp=Z,2.7nm,0.7s,mb4.3,baz=146,slow=2.8,SNR=13						
CMAR				pP	pP	04 35 51.2	+0.4
	comp=Z,0.9nm,0.4s,baz=130,slow=3.1,SNR=1.2						
CMAR				PP	PP	04 38 20.9	-1.1
	comp=Z,0.6nm,0.3s,baz=131,slow=6.0,SNR=4.3						
MA2	**Magadan**	**92.33**	**345**	*i* P	**P**	**04 34 33.5**	**-1.1**
MA2				MLR	MLR		
	comp=Z,159nm,21.0s						
MA2	**Magadan**	**92.33**	**345**	*i* Pr		04 34 33.5	
MA2				LR	LR		
	comp=Z,159nm,21.0s						
SVW2	**Sparrevohn**	**92.46**	**11**	*e*P	**P**	**04 34 33.9**	**-1.2**
KMI	**Kunming**	**92.61**	**297**	P	**P**	**04 34 37.0**	**+0.3**
KMI				PP	PP	04 38 23.9	-1.0
KMI				SKS	SKS	04 44 40.0	+2.0
KMI				S	S	04 45 11.9	+1.6
KMI				SS	SS	04 51 36.1	+1.3
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
KMI				AMB	AMB		
	comp=Z,60nm,6.5s						
KMI				LR	LR		
	comp=N,170nm,23.3s						
KMI				LR	LR		
	comp=E,190nm,21.3s						
KMI				LR	LR		
	comp=Z,260nm,27.2s						
TWW	**Teanaway**	**92.72**	**36**	P	**P**	**04 34 37.2**	**+0.6**
DUG	**Dugway**	**92.80**	**45**	*e*P	**P**	**04 34 36.3**	**-0.9**
DUG				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
DUG				MLR	MLR		
	comp=Z,345nm,21.0s						
DUG	**Dugway**	**92.80**	**45**	*e*P	**P**	**04 34 36.3**	**-0.9**
	comp=Z,18nm,1.1s,mb4.9						
DUG				LR	LR		
	comp=Z,345nm,21.0s						
LTX	**Lajitas**	**92.83**	**58**	*e*P	**P**	**04 34 37.9**	**+0.3**
LTX				pmax	pmax		
	comp=Z,33nm,1.5s,mb5.0						
LTX				MLR	MLR		
	comp=Z,160nm,19.0s						
LTX	**Lajitas**	**92.83**	**58**	*e*P	**P**	**04 34 37.9**	**+0.2**
	comp=Z,33nm,1.5s,mb5.0						
LTX				LR	LR		
	comp=Z,160nm,19.0s						
TXAR	**Lajitas Array**	**92.83**	**58**	P	**P**	**04 34 37.9**	**+0.2**
	comp=Z,4.9nm,0.9s,mb4.4,baz=213,slow=6.7,SNR=40						
TXAR				pP	pP	04 35 54.0	+0.7
	comp=Z,3.1nm,1.1s,baz=309,slow=5.8,SNR=2.1						
TXAR				PP	PP	04 38 28.1	+1.6
	comp=Z,3.7nm,1.1s,baz=219,slow=8.0,SNR=4.3						
MNTX	**Cornudas Mount**	**92.86**	**55**	*e*P	**P**	**04 34 37.6**	**-0.1**
	comp=Z,18nm,1.1s,mb4.9						
MNTX				*e*PP	PP	04 38 22.4	-4.4
XAN	**Xi'an**	**92.89**	**308**	P	**P**	**04 34 40.5**	**+2.7**
HAWA	**Hanford**	**92.91**	**37**	*e*P	**P**	**04 34 36.9**	**-0.7**
SLKM	**Skilak Lake**	**92.92**	**14**	*e*P	**P**	**04 34 35.3**	**-2.0**
SLKM				*e*		04 38 20.4	
BMO	**Blue Mountains**	**93.09**	**39**	*e*P	**P**	**04 34 37.9**	**-0.5**
BMO				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.1						
BMO				MLR	MLR		
	comp=Z,698nm,20.0s						
BMO	**Blue Mountains**	**93.09**	**39**	*e*P	**P**	**04 34 37.9**	**-0.6**
	comp=Z,40nm,1.5s,mb5.1						
BMO				*e*PP	PP	04 38 24.2	-4.0
BMO				LR	LR		
	comp=Z,698nm,20.0s						
LENM	**Lemitar**	**93.11**	**52**	*e*P	**P**	**04 34 39.4**	**+0.6**
BGU	**Big Grassy Mou**	**93.11**	**44**	*e*P	**P**	**04 34 38.3**	**-0.3**
NLU	**North Lily Min**	**93.11**	**45**	*e*P	**P**	**04 34 39.6**	**+0.9**
SPU	**Mount Spurr**	**93.17**	**13**	*e*P	**P**	**04 34 34.9**	**-3.5**
BNM	**Barren Site**	**93.34**	**52**	*e*P	**P**	**04 34 40.2**	**+0.3**
MPU	**Maple Canyon**	**93.42**	**45**	*e*P	**P**	**04 34 40.4**	**+0.4**
NOQ	**North Oquirrh**	**93.50**	**45**	*e*P	**P**	**04 34 40.5**	**+0.2**
NOQ				*e*PP	PP	04 38 27.9	-3.7
CTU	**Camp Tracy**	**93.75**	**45**	*e*P	**P**	**04 34 41.6**	**+0.1**
HVU	**Hansel Valley**	**93.78**	**43**	*e*P	**P**	**04 34 41.4**	**-0.2**
JLU	**Jordanelle**	**93.88**	**45**	*e*P	**P**	**04 34 42.4**	**+0.3**

JLU				*e*PP	PP	04 38 30.3	-4.2
DAU	**Daniels Canyon**	**93.89**	**45**	*e*P	**P**	**04 34 43.0**	**+0.9**
ANMO	**Albuquerque**	**93.90**	**52**	*e*P	**P**	**04 34 42.5**	**+0.2**
ANMO				*e*		04 38 32.3	
ANMO				pmax	pmax		
	comp=Z,18nm,1.2s						
ANMO				MLR	MLR		
	comp=Z,470nm,20.0s						
ANMO	**Albuquerque**	**93.90**	**52**	*e*P	**P**	**04 34 42.5**	**+0.1**
	comp=Z,18nm,1.2s,mb5.0						
ANMO				*e*PP	PP	04 38 32.3	-2.6
ANMO				LR	LR		
	comp=Z,470nm,20.0s						
HLID	**Hailey**	**93.90**	**41**	*e*P	**P**	**04 34 42.4**	**+0.3**
	comp=Z,29nm,1.2s,mb5.2						
HLID				*e*PP	PP	04 38 28.1	-6.6
HLID				LR	LR		
	comp=Z,960nm,19.0s						
EYAK	**Cordova Ski Ar**	**93.96**	**16**	*e*P	**P**	**04 34 41.3**	**-0.6**
SIT	**Sitka**	**93.98**	**22**	PFAKE		04 34 50.0	+7.9
SIT				LR	LR		
	comp=Z,479nm,20.0s						
PV10	**Paradox Valley**	**94.11**	**48**	*e*P	**P**	**04 34 42.7**	**-0.5**
TTA	**Tatalina**	**94.11**	**10**	*e*P	**P**	**04 34 42.1**	**-0.5**
PMR	**Palmer**	**94.14**	**14**	*e*P	**P**	**04 34 41.8**	**-0.9**
PMR				pmax	pmax		
	comp=Z,64nm,1.4s,mb5.5						
PMR	**Palmer**	**94.14**	**14**	*e*P	**P**	**04 34 41.8**	**-0.9**
	comp=Z,64nm,1.4s,mb5.5						
TCUT	**Toone Canyon**	**94.21**	**45**	*e*P	**P**	**04 34 43.6**	**0.0**
PV01	**Paradox Valley**	**94.27**	**48**	*e*P	**P**	**04 34 43.5**	**-0.4**
HWUT	**Hardware Ranch**	**94.40**	**44**	*e*P	**P**	**04 34 43.8**	**-0.6**
	comp=Z,32nm,1.5s,mb5.1						
HWUT				LR	LR		
	comp=Z,334nm,21.0s						
DIV	**Divide**	**94.47**	**16**	*e*P	**P**	**04 34 43.5**	**-0.7**
	comp=Z,125nm,1.2s,mb5.8						
DIV				*e*PP	PP	04 38 34.1	-4.1
DIV				LR	LR		
	comp=Z,746nm,19.0s						
CPRX	**Cap Rock**	**94.66**	**55**	*e*P	**P**	**04 34 45.5**	**-0.4**
CPRX				*e*PP	PP	04 38 38.3	-2.0
HHC	**Hu-ho-hao-te**	**95.02**	**315**	*e*P	**P**	**04 34 48.5**	**+1.2**
HHC				AP	pP	04 36 04.0	+1.0
HHC				XP	sP	04 36 37.6	+2.4
HHC				PP	PP	04 38 42.3	-0.3
HHC				SKS	SKS	04 44 53.9	+3.2
HHC				S	S	04 45 33.5	+3.0
HHC				PS	PS	04 47 34.5	-0.6
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.8						
HHC				AMB	AMB		
	comp=Z,100nm,10.8s						
HHC				LR	LR		
	comp=N,240nm,13.2s						
HHC				LR	LR		
	comp=E,380nm,18.0s						
HHC				LR	LR		
	comp=Z,240nm,18.0s						
SEY	**Seymchan**	**95.05**	**347**	*e*P	**P**	**04 34 46.2**	**-0.7**
SEY						04 38 35.8	
SEY						04 44 48.4	
SEY				*e*S	S	04 45 37.8	+7.6
SEY				*SS		04 46 48.4	
SEY				*e*SS	SS	04 51 57.0	-11
SEY				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
SEY				pmax	pmax		
	comp=N,10.0nm,0.6s						
SEY				smax			
	comp=N,300nm,25.7s						
SEY				smax			
	comp=E,800nm,24.3s						
SEY				MLR	MLR		
	comp=Z,200nm,27.0s						
SEY				MLR	MLR		
	comp=N,300nm,26.0s						
SEY				MLR	MLR		
	comp=E,30nm,17.0s						
TNA	**Tin City**	**95.32**	**5**	PFAKE		04 35 00.0	+12
TNA				LR	LR		
	comp=Z,122nm,20.0s						
AHID	**Auburn Hatcher**	**95.36**	**43**	*e*P	**P**	**04 34 48.5**	**-0.3**
	comp=Z,56nm,1.3s,mb5.5						
AHID				LR	LR		
	comp=Z,418nm,22.0s						
NEW	**Newport**	**95.37**	**36**	*e*PP	PP	04 38 41.9	-3.2
	comp=Z,19nm,1.3s						
NEW				LR	LR		
	comp=Z,346nm,20.0s						
MCMT	**McKenzie Canyo**	**95.56**	**41**	*e*P	**P**	**04 34 49.6**	**-0.1**
RRI2	**Red Ridge**	**95.57**	**43**	*e*P	**P**	**04 34 49.9**	**+0.1**
	comp=Z,66nm,1.5s,mb5.5						
TPAW	**Teton Pass**	**95.88**	**43**	*e*P	**P**	**04 34 51.3**	**+0.2**
	comp=Z,33nm,1.3s,mb5.3						
SNOW	**Snow King Moun**	**95.98**	**43**	*e*P	**P**	**04 34 52.0**	**+0.5**
	comp=Z,49nm,1.3s,mb5.5						
WUWY	**Wally Ulrich**	**96.03**	**43**	*e*P	**P**	**04 34 51.8**	**-0.1**
SDCO	**Great Sand Dun**	**96.08**	**50**	*e*P	**P**	**04 34 52.5**	**+0.3**
	comp=Z,17nm,1.4s,mb5.0						
SDCO				LR	LR		
	comp=Z,923nm,19.0s						
MCK	**McKinley**	**96.11**	**13**	*e*P	**P**	**04 34 51.1**	**-0.6**
MCK				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.2						
MCK				MLR	MLR		
	comp=Z,123nm,21.0s						
MCK	**McKinley**	**96.11**	**13**	*e*P	**P**	**04 34 51.1**	**-0.6**
	comp=Z,22nm,1.2s,mb5.2						
MCK				LR	LR		
	comp=Z,123nm,21.0s						
IMW	**Indian Meadow**	**96.12**	**42**	*e*P	**P**	**04 34 52.6**	**+0.3**
	comp=Z,33nm,1.2s,mb5.3						
MOOW	**Moose Ponds**	**96.15**	**43**	*e*P	**P**	**04 34 52.6**	**+0.3**
	comp=Z,24nm,1.6s,mb5.1						
MSO	**Missoula**	**96.16**	**39**	*e*P	**P**	**04 34 51.1**	**-1.2**
	comp=Z,4.1nm,1.3s,mb4.4						
MSO				*e*PP	PP	04 38 45.6	-5.8
MSO				LR	LR		
	comp=Z,405nm,19.0s						
JCT	**Junction City**	**96.29**	**59**	PFAKE		04 35 00.0	+6.7
JCT				LR	LR		
	comp=Z,233nm,20.0s						
BW06	**Boulder Array**	**96.29**	**44**	PFAKE		04 35 00.0	+6.9
BW06				LR	LR		
	comp=Z,420nm,21.0s						
PDAR	**Pinedale Array**	**96.29**	**44**	P	**P**	**04 34 52.5**	**-0.6**
	comp=Z,3.1nm,0.9s,mb4.5,baz=225,slow=2.1,SNR=20						
PDAR				PP	PP	04 38 48.4	-4.2
	comp=Z,6.8nm,1.2s,baz=243,slow=6.6,SNR=6.7						
PDAR				PKKP	PKKP	04 51 39.6	+37
	comp=Z,0.7nm,0.5s,baz=81,slow=3.7,SNR=5.5						
QLMT	**Earthquake Lak**	**96.38**	**41**	*e*P	**P**	**04 34 54.2**	**+0.8**
THY	**Trims Highway**	**96.48**	**14**	*e*P	**P**	**04 34 53.2**	**-0.2**
YFT	**Old Faithful**	**96.50**	**42**	*e*P	**P**	**04 34 55.7**	**+1.7**
MENT	**Mentasta**	**96.52**	**15**	*e*P	**P**	**04 34 53.4**	**-0.2**
YMR	**Madison River**	**96.55**	**42**	*e*P	**P**	**04 34 54.9**	**+0.7**
CHMT	**Chamberlain Mo**	**96.59**	**39**	*e*P	**P**	**04 34 53.1**	**-1.2**
CHMT				*e*PP	PP	04 38 48.3	-6.6
BOZ	**Bozeman (W)**	**96.75**	**41**	*e*P	**P**	**04 34 54.7**	**-0.3**
BOZ				pmax	pmax		
	comp=Z,17nm,1.3s,mb5.1						
BOZ				MLR	MLR		
	comp=Z,960nm,22.0s						
BOZ	**Bozeman (W)**	**96.75**	**41**	*e*P	**P**	**04 34 54.6**	**-0.4**
	comp=Z,17nm,1.3s,mb5.1						
BOZ				LR	LR		
	comp=Z,960nm,22.0s						
LKWY	**Lake**	**96.82**	**42**	PFAKE		04 35 10.0	+15
LKWY				LR	LR		
	comp=Z,763nm,21.0s						
ISCO	**Idaho Springs**	**97.11**	**48**	PFAKE		04 35 10.0	+13
ISCO				LR	LR		
	comp=Z,533nm,19.0s						
AMTX	**Amarillo**	**97.18**	**54**	PFAKE		04 35 10.0	+13
AMTX				LR	LR		
	comp=Z,822nm,21.0s						
HRY	**Holter Researc**	**97.26**	**40**	*e*P	**P**	**04 34 56.5**	**-0.9**
HRY				*e*PP	PP	04 38 55.8	-4.3
COLA	**College**	**97.34**	**13**	*d* *i*P	**P**	**04 34 55.5**	**-1.8**
COLA	**College**	**97.34**	**13**	*e*P	**P**	**04 34 55.8**	**-1.5**
	comp=Z,62nm,1.6s,mb5.6						
IMA	**Indian Mountai**	**97.42**	**10**	*e*P	**P**	**04 34 57.2**	**-0.4**
IMA				pmax	pmax		
	comp=Z,97nm,1.4s,mb5.8						
IMA	**Indian Mountai**	**97.42**	**10**	*e*P	**P**	**04 34 57.2**	**-0.4**
	comp=Z,97nm,1.4s,mb5.8						
ILAR	**Eielson Array**	**97.44**	**13**	P	**P**	**04 34 56.0**	**-1.7**
	comp=Z,12nm,1.1s,mb5.0,baz=222,slow=5.2,SNR=26						
ILAR				PP	PP	04 38 50.4	-11
	comp=Z,7.7nm,1.2s,baz=220,slow=7.0,SNR=5.6						
ILAR				PKiKP		04 39 31.1	
	comp=Z,0.8nm,0.5s,baz=240,slow=4.2,SNR=4.4						
LZH	**Lanzhou**	**97.50**	**307**	*e*P	**P**	**04 34 59.5**	**+0.8**
LZH				AP	pP	04 36 21.5	+7.1
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.3						
BILL	**Bilibino**	**98.02**	**355**	α *i*P	**P**	**04 34 59.7**	**-0.5**
BILL				*i*		04 39 06.0	
BILL				*e*		04 45 04.1	
BILL				*e*		04 46 02.7	
BILL				*e*SS	SS	04 52 53.7	+4.4
BILL				pmax	pmax		
	comp=Z,24nm,1.7s,mb5.2						
BILL	**Bilibino**	**98.02**	**355**	*e*P	**P**	**04 34 59.4**	**-0.8**
	comp=Z,27nm,1.4s,mb5.4						
BILL				LR	LR		
	comp=Z,209nm,22.0s						
WMOK	**Wichita Mounta**	**99.17**	**55**	PFAKE		04 35 20.0	+14
WMOK				LR	LR		
	comp=Z,324nm,20.0s						
LPAZ	**La Paz**	**99.34**	**115**	P	**P**	**04 35 09.9**	**+2.4**
	comp=Z,0.7nm,0.8s,baz=199,slow=3.1,SNR=3.9						
OTAV	**Otavalo**	**99.40**	**95**	PFAKE		04 35 20.0	+12
OTAV				LR	LR		
	comp=Z,150nm,20.0s						
YAK	**Yakutsk**	**100.20**	**338**	*e*P	P	04 35 08.9	-1.4
YAK				pmax	pmax		
	comp=Z,27nm,1.3s						
YAK	**Yakutsk**	**100.20**	**338**	PFAKE		04 35 20.0	+10
YAK				LR	LR		
	comp=Z,209nm,22.0s						
RSSD	**Black Hills**	**100.40**	**45**	*e*P	P	04 35 11.0	-0.6
RSSD				pmax	pmax		
	comp=Z,15nm,1.1s						
RSSD	**Black Hills**	**100.40**	**45**	*e*Pdif	P	04 35 11.0	-0.6
	comp=Z,15nm,1.1s						
LAO	**LASA Array**	**100.44**	**42**	PFAKE		04 35 20.0	+8.3
LAO				LR	LR		
	comp=Z,462nm,19.0s						
CBKS	**Cedar Bluff**	**100.51**	**51**	PFAKE		04 35 20.0	+7.8
CBKS				LR	LR		
	comp=Z,168nm,20.0s						
NATX	**Nacogdoches**	**100.75**	**60**	PFAKE		04 35 20.0	+6.5
NATX				LR	LR		
	comp=Z,219nm,19.0s						
CPUP	**Villa Florida**	**101.21**	**129**	PFAKE		04 35 30.0	+14
CPUP				LR	LR		
	comp=Z,308nm,20.0s						
ULN	**Ulaanbaatar**	**101.58**	**319**	PFAKE		04 35 30.0	+13
ULN				LR	LR		
	comp=Z,190nm,20.0s						
GTA	**Gaotai**	**101.92**	**309**	*e*P	P	04 35 20.0	+1.6
GTA				AP		04 36 35.9	
GTA				XP		04 37 08.5	
GTA				PP	PP	04 39 35.9	+0.6
GTA				PPP	PPP	04 41 48.6	-1.0
GTA				SKS	SKS	04 45 23.5	-1.9
GTA				S	S	04 46 29.6	+1.1
GTA				PS	PS	04 48 45.3	-0.8
GTA				AMB	AMB		
	comp=Z,30nm,5.3s						
GTA				LR	LR		
	comp=N,180nm,22.1s						
GTA				LR	LR		
	comp=E,130nm,22.8s						
GTA				LR	LR		
	comp=Z,280nm,24.3s						
SONM	**Songino Array**	**101.94**	**318**	P	P	04 35 18.6	+0.2
	comp=Z,0.8nm,0.5s,baz=131,slow=3.8,SNR=7.5						
SONM				PP	PP	04 39 29.5	-5.7
	comp=Z,0.5nm,0.6s,baz=135,slow=5.2,SNR=4.4						
SONM				PKiKP		04 39 39.2	
	comp=Z,1.1nm,0.7s,baz=135,slow=5.2,SNR=3.6						
SONM				PKKPbc		04 51 24.0	
	comp=Z,0.6nm,0.5s,baz=292,slow=3.8,SNR=5.2						
MIAR	**Mount Ida**	**102.85**	**58**	PFAKE		04 35 30.0	+7.3
MIAR				LR	LR		
	comp=Z,137nm,20.0s						
ZAK	**Zakamensk**	**104.98**	**320**	*e*P	Pdif	04 35 31.1	-0.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s						
YKA	**Yellowknife Ar**	**105.22**	**26**	Pdiff	Pdif	04 35 31.8	-0.6
	comp=Z,0.5nm,0.8s,baz=240,slow=4.4,SNR=7.5						
YKA				PKiKP		04 39 43.9	
	comp=Z,0.9nm,0.5s,baz=262,slow=1.8,SNR=12						
YKA				PKKPbc		04 51 13.0	
	comp=Z,0.1nm,0.3s,baz=29,slow=2.6,SNR=4.5						
YKA	**Yellowknife Ar**	**105.22**	**26**	Pdif	Pdif	04 35 31.8	-0.6
YKA				PKPdf		04 39 43.9	
YKA				PKKPbc		04 51 13.1	
OXF	**Oxford**	**105.92**	**59**	PFAKE		04 40 00.0	
OXF				LR	LR		
	comp=Z,373nm,20.0s						
FFC	**Flin Flon**	**106.80**	**36**	PFAKE		04 40 00.0	
FFC				LR	LR		
	comp=Z,269nm,20.0s						
PLAL	**Pickwick Lake**	**107.12**	**59**	PFAKE		04 40 00.0	
PLAL				LR	LR		
	comp=Z,472nm,20.0s						
LRAL	**Lakeview Retre**	**107.13**	**61**	PFAKE		04 40 00.0	
LRAL				LR	LR		
	comp=Z,651nm,19.0s						
TIXI	**Tiksi**	**107.30**	**345**	*e*P	Pdif	04 35 38.9	-2.5
TIXI				*e*SS	SS	04 54 47.2	-9.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TIXI	**Tiksi**	**107.30**	**345**	PFAKE		04 40 00.0	
TIXI				LR	LR		
	comp=Z,138nm,22.0s						
SAML	**Samuel**	**107.47**	**111**	PFAKE		04 40 00.0	
SAML				LR	LR		
	comp=Z,301nm,22.0s						
WVT	**Waverly**	**107.77**	**58**	PFAKE		04 40 00.0	
WVT				LR	LR		
	comp=Z,427nm,20.0s						
ULM	**Lac du Bonnet**	**108.18**	**42**	PP	PP	04 40 15.6	-6.2
	comp=Z,7.6nm,1.0s,baz=240,slow=7.9,SNR=6.4						
DWPF	**Disney**	**109.51**	**68**	PFAKE		04 40 10.0	
DWPF				LR	LR		
	comp=Z,239nm,22.0s						
WCI	**Wyandotte Cave**	**109.72**	**57**	PFAKE		04 40 10.0	
WCI				LR	LR		
	comp=Z,400nm,22.0s						
EYMN	**Ely**	**109.91**	**46**	PFAKE		04 40 10.0	
EYMN				LR	LR		
	comp=Z,1µm,20.0s						
GOGA	**Godfrey**	**109.99**	**62**	PFAKE		04 40 10.0	
GOGA				LR	LR		
	comp=Z,262nm,22.0s						
SDV	**Santo Domingo**	**110.40**	**91**	PFAKE		04 40 10.0	+16
SDV				LR	LR		
	comp=Z,133nm,20.0s						
WMQ	**Urumqi**	**112.00**	**309**	*e*PDIF	Pdif	04 36 03.4	+0.7
WMQ				PP	PP	04 40 48.8	-0.4
WMQ				SS	SS	04 55 58.4	-0.9
WMQ				PP	PP		
	comp=Z,80nm,10.0s						
WMQ				LR	LR		
	comp=N,140nm,20.0s						
WMQ				LR	LR		
	comp=Z,160nm,22.0s						
NHSC	**New Hope**	**112.43**	**64**	PFAKE		04 40 10.0	+12
NHSC				LR	LR		
	comp=Z,354nm,21.0s						
ACSO	**Alum Creek Sta**	**112.85**	**56**	PFAKE		04 40 10.0	+12
ACSO				LR	LR		
	comp=Z,176nm,21.0s						
BLA	**Blacksburg**	**113.69**	**60**	PFAKE		04 40 10.0	+10
BLA				LR	LR		
	comp=Z,905nm,19.0s						
MCWV	**Mont Chateau**	**114.93**	**57**	PFAKE		04 40 20.0	+17
MCWV				LR	LR		
	comp=Z,509nm,20.0s						
SUR	**Sutherland**	**115.45**	**199**	PKiKP		04 40 06.4	
	comp=Z,4.2nm,0.6s,baz=130,slow=3.9,SNR=7.1						
CBN	**Corbin**	**116.30**	**59**	PFAKE		04 40 20.0	+15
CBN				LR	LR		
	comp=Z,740nm,22.0s						
MKAR	**Makanchi Array**	**116.55**	**311**	*i* PKIKP	PKPdf	04 40 05.9	+0.4
MKAR						04 50 37.2	
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**116.55**	**311**	PKiKP		04 40 05.8	
	comp=Z,4.8nm,0.6s,baz=214,slow=1.4,SNR=36						
MKAR				pPKiKP		04 41 24.4	
	comp=Z,1.1nm,0.7s,baz=180,slow=1.2,SNR=2.9						
MKAR				PKKPbc		04 50 37.2	
	comp=Z,0.9nm,0.5s,baz=263,slow=4.1,SNR=8.8						
MKAR	**Makanchi Array**	**116.55**	**311**	*i* PKP	PKPdf	04 40 05.6	+0.1
ZAL	**Zalesovo**	**116.84**	**319**	PKiKP		04 40 05.9	
	comp=Z,2.4nm,0.3s,baz=352,slow=0.5,SNR=9.2						
GENY	**Geneseo**	**117.32**	**54**	*e*PKPdf	PKPdf	04 40 07.3	+0.2
BOSA	**Boshof**	**117.53**	**204**	PKP	PKPdf	04 40 10.7	+2.8
	comp=Z,3.7nm,0.5s,baz=176,slow=3.4,SNR=18						
BOSA				PKKPbc		04 50 31.4	
	comp=Z,2.6nm,0.5s,baz=280,slow=2.5,SNR=6.7						
BOSA	**Boshof**	**117.53**	**204**	PKP	PKPdf	04 40 10.7	+2.8
BOSA				PKKPbc		04 50 31.4	
BOSA				LR	LR		
	comp=Z,258nm,19.0s						
NVS	**Novosibirsk**	**117.94**	**320**	*e*PKIKP	PKPdf	04 40 08.0	0.0
NVS				*e*		04 41 30.8	
NVS				*e*		04 46 31.1	
NVS				*e*		04 46 58.3	
NVS				pmax	pmax		
	comp=N,7.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,23nm,1.2s						
SJG	**San Juan**	**118.39**	**84**	PFAKE		04 40 20.0	+10
SJG				LR	LR		
	comp=Z,185nm,20.0s						
ULHL	**Ulahol**	**119.54**	**304**	P	PKPdf	04 40 13.1	+1.7
	SNR=28						
NCB	**Newcomb**	**120.16**	**54**	*e*PKPdf	PKPdf	04 40 12.9	+0.4
KZA	**Kyzart**	**120.21**	**304**	P	PKPdf	04 40 14.5	+1.8
	SNR=27						
LBTB	**Lobatse**	**120.67**	**206**	*e*PKIKP	PKPdf	04 40 15.8	+1.8
MIV	**Mineville/With**	**120.67**	**54**	*e*PKPdf	PKPdf	04 40 13.3	-0.2
UCH	**Uchtor**	**120.78**	**304**	P	PKPdf	04 40 15.8	+2.0
	SNR=25						
CHMS	**Chumysh**	**120.79**	**305**	P	PKPdf	04 40 14.7	+0.9
	SNR=9.9						
FRNY	**Flat Rock**	**120.80**	**53**	*e*PKPdf	PKPdf	04 40 14.1	+0.4
FRU	**Bishkek**	**120.85**	**305**	*e*PKIKP	PKPdf	04 40 15.5	+1.6
AAK	**Ala-Archa**	**120.89**	**304**	*e*PKIKP	PKPdf	04 40 14.4	+0.4
USP	**Ospenovka**	**121.03**	**305**	P	PKPdf	04 40 15.2	+0.9
	SNR=14						
AML	**Almayashu**	**121.35**	**304**	P	PKPdf	04 40 16.7	+1.8
	SNR=37						
EKS2	**Erkin-Say**	**121.41**	**304**	P	PKPdf	04 40 16.4	+1.4
	SNR=12						
HRV	**Harvard--Oak R**	**121.73**	**56**	PFAKE		04 40 30.0	+14
HRV				LR	LR		
	comp=Z,398nm,20.0s						
WES	**Weston**	**121.87**	**56**	PFAKE		04 40 30.0	+14
WES				LR	LR		
	comp=Z,711nm,19.0s						
WVL	**Waterville**	**123.50**	**54**	PFAKE		04 40 30.0	+11
WVL				LR	LR		
	comp=Z,4µm,21.0s						
KKAR	**Karatay Array**	**123.85**	**304**	PKIKP	PKPdf	04 40 20.4	+0.7
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BBSR	**BB Station**	**124.55**	**69**	PFAKE		04 40 30.0	+8.6
BBSR				LR	LR		
	comp=Z,178nm,19.0s						
PQI	**Presque Isle**	**124.97**	**52**	PFAKE		04 40 30.0	+8.2
PQI				LR	LR		
	comp=Z,2µm,22.0s						
EMMW	**East Machias**	**125.07**	**54**	PFAKE		04 40 30.0	+8.0
EMMW				LR	LR		
	comp=Z,2µm,21.0s						
BVA0	**Borovoye Array**	**125.20**	**316**	PKIKP	PKPdf	04 40 22.4	+0.4
BVA0				pmax	pmax		
	comp=Z,21nm,1.6s						
SCHQ	**Schefferville**	**126.36**	**42**	PKP	PKPdf	04 40 23.5	-0.7
	comp=Z,13nm,1.0s,baz=312,slow=2.3,SNR=9.4						
SCHQ	**Schefferville**	**126.36**	**42**	PKP	PKPdf	04 40 23.5	-0.7
LSZ	**Lusaka**	**128.12**	**214**	*e*PKIKP	PKPdf	04 40 29.7	+1.1
LSZ				MLR	MLR		
	comp=Z,350nm,21.0s						
TSUM	**Tsumeb**	**128.81**	**200**	PFAKE		04 40 40.0	+10
TSUM				LR	LR		
	comp=Z,523nm,21.0s						
KBS	**Kingsbay**	**130.42**	**357**	*e*PP	PP	04 42 50.7	-2.2
KBS				*e*SS	SS	04 59 54.8	+1.8
KBS				AMS	AMS	05 11 17.5	
	comp=Z,98nm,14.8s						
SVE	**Sverdlovsk**	**130.71**	**321**	*e*PKIKP	PKPdf	04 40 33.5	+1.0
SVE				pmax	pmax		
	comp=Z,60nm,1.8s						
AB31	**Akbulak array**	**131.69**	**311**	PKIKP	PKPdf	04 40 35.7	+1.2
ARU	**Arti**	**131.90**	**321**	*i* PKIKP	PKPdf	04 40 33.9	-0.8
ARU				*e*		04 42 57.5	
ARU				*e*SS	SS	05 00 35.3	+23
ARU	**Arti**	**131.90**	**321**	*e*PKPdf	PKPdf	04 40 35.5	+0.8
ARU				LR	LR		
	comp=Z,73nm,20.0s						
DAG	**Danmarks Havn**	**131.93**	**6**	⇑*e*PKIKP	PKPdf	04 40 33.9	-0.4
DAG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
DAG	**Danmarks Havn**	**131.93**	**6**	⇑*i*P	PKPdf	04 40 33.9	-0.4
	comp=Z,4.9nm,0.5s						
SOKR	**Solikamsk**	**132.23**	**325**	⇑*i*PKIKP	PKPdf	04 40 35.8	+0.6
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s						
SUMG	**Summit**	**132.26**	**15**	*e*PKPdf	PKPdf	04 40 36.9	+1.9
SUMG				*e*PP	PP	04 42 59.7	-5.0
KMBO	**Kilima Mbogo**	**133.70**	**235**	PKP	PKPdf	04 40 41.9	+2.6
	comp=Z,2.0nm,0.8s,baz=248,slow=5.4,SNR=3.8						
KMBO				SKPbc		04 43 40.8	
	comp=Z,5.8nm,0.8s,baz=89,slow=2.5,SNR=10						
LVZ	**Lovozero**	**136.85**	**342**	*i* PKIKP	PKPdf	04 40 43.2	-0.4
LVZ				pmax	pmax		
	comp=Z,50nm,1.9s						
LVZ				pmax	pmax		
	comp=N,20nm,1.4s						
LVZ				pmax	pmax		
	comp=E,10.0nm,1.6s						
KEV	**Kevo**	**137.19**	**347**	*e*pkp	PKPdf	04 40 46.3	+2.1
APA	**Apatity**	**137.42**	**342**	⇑*e*PKIKP	PKPdf	04 40 47.0	+2.3
APA				pmax	pmax		
	comp=Z,120nm,1.8s						
ARCES	**ARCESS Array B**	**137.67**	**347**	PKHKP		04 40 36.7	
ARCES						04 40 44.4	
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARCES				pmax	pmax		
	comp=Z,15nm,0.7s						
ARCES				pmax	pmax		
	comp=N,8.0nm,0.7s						
ARCES	**ARCESS Array B**	**137.67**	**347**	PKhKP		04 40 36.7	
	comp=N,5.1nm,0.6s,baz=72,slow=2.4,SNR=25						
ARCES				PKP	PKPdf	04 40 44.4	-0.6
	comp=N,15nm,0.7s,SNR=14						
ARCES				SKPbc		04 43 48.4	
	comp=N,8.0nm,0.7s,baz=27,slow=2.7,SNR=5.2						
ARCES	**ARCESS Array B**	**137.67**	**347**	PKP	PKPdf	04 40 44.4	-0.6
ARCES				SKPbc		04 43 48.4	
JMIC	**Jan Mayen**	**138.31**	**5**	*e*P	PKPdf	04 40 44.3	-1.9
JMIC	**Jan Mayen**	**138.31**	**5**	*e*	PKPdf	04 40 44.3	-1.9
JMIC				*e*PP	PP	04 43 39.1	-3.9
JMIC				AMS	AMS	05 06 56.3	
	comp=Z,430nm,18.7s						
TRO	**Tromso**	**138.68**	**351**	*e*PP	PP	04 43 38.8	-6.5
TRO				*e*SS	SS	05 01 29.8	-2.0
TRO				AMS	AMS	05 11 11.4	
	comp=Z,619nm,16.0s						
BLJS	**Baljurashi**	**141.92**	**265**	P	PKPdf	04 40 58.2	+4.2
MOR8	**Moi Rana**	**142.54**	**351**	*e*P	PKPdf	04 40 51.1	-2.5
MOR8	**Moi Rana**	**142.54**	**351**	*e*P	PKPdf	04 40 50.4	-3.2
GNI	**Garni**	**142.86**	**298**	*e*P	PKPdf	04 40 53.6	-1.5
GNI	**Garni**	**142.86**	**298**	*d* *i*PKIKP	PKPdf	04 40 53.7	-1.3
GNI	**Garni**	**142.86**	**298**	*e*PKPdf	PKPdf	04 40 54.3	-0.7
GNI				LR	LR		
	comp=Z,342nm,20.0s						
MOS	**Moscow**	**143.18**	**326**	*e*PKHKP		04 40 53.3	
MOS				pmax	pmax		
	comp=Z,116nm,0.9s						
MOS				pmax	pmax		
	comp=Z,200nm,1.6s						
ZEI	**Tsey**	**143.29**	**303**	*e*P	Pdif	04 38 14.9	-5.5

CLDR	**Caldiran**	**143.53**	**297**	P	PKPbc	04 40 56.8	+1.7
KAF	**Kangasniemi**	**143.53**	**340**	*e*pkp	PKPdf	04 40 52.8	-2.6
ONI	**Oni**	**143.64**	**303**	P	PKPbc	04 40 56.1	+0.8
HKR	**Hakkari**	**143.69**	**294**	P	PKPbc	04 40 57.5	+1.9
PUL	**Pulkovo**	**143.93**	**335**	*i* PKIKP	PKPdf	04 40 55.4	-0.8
PUL				pmax	pmax		
	comp=Z,158nm,0.4s						
TVAN	**Van**	**143.94**	**296**	*i* P	PKPbc	04 40 58.2	+1.9
VANB	**Van**	**143.96**	**296**	*e*P	PKPbc	04 40 56.5	+0.1
KIV	**Kislovodsk**	**144.00**	**305**	*d* *i*PKIKP	PKPdf	04 40 57.1	+0.3
KIV	**Kislovodsk**	**144.00**	**305**	*e*PKPdf	PKPdf	04 40 57.4	+0.6
OBN	**Obninsk**	**144.01**	**325**	*d* *i*PKIKP	PKPdf	04 40 55.9	-0.6
OBN				PPS	PPS	04 56 45.0	-9.3
OBN				*e*SS	SS	05 02 26.4	-7.8
OBN				pmax	pmax		
	comp=Z,204nm,1.4s						
OBN	**Obninsk**	**144.01**	**325**	*e*PKPdf	PKPdf	04 40 56.1	-0.4
VOR	**Voronezh**	**144.12**	**319**	PKIKP	PKPdf	04 40 57.0	+0.2
VOR				pmax	pmax		
	comp=Z,140nm,1.5s						
FINES	**FINESS Array B**	**144.12**	**340**	PKP	PKPdf	04 40 55.7	-0.8
	comp=Z,84nm,0.5s,baz=57,slow=3.6,SNR=496						
FINES	**FINESS Array B**	**144.12**	**340**	PKP	PKPdf	04 40 55.7	-0.8
VRSR	**Storozhevoye**	**144.32**	**318**	⇓*i*PKIKP	PKPdf	04 40 57.3	+0.1
VRSR				pmax	pmax		
	comp=Z,70nm,0.8s						
VRSR				pmax	pmax		
	comp=N,40nm,0.6s						
VRSR				pmax	pmax		
	comp=E,30nm,0.8s						
BTMT	**Batman**	**145.46**	**295**	*e*P	PKPdf	04 41 02.8	+3.2
EZM	**Erzurum**	**145.46**	**298**	*e*P	PKPdf	04 41 02.7	+3.1
BEST	**Besiri**	**145.64**	**295**	*i* P	PKPdf	04 41 03.6	+3.6
VSU	**Vasula**	**146.16**	**336**	*d* *i*PKP2	PKPdf	04 41 02.4	+2.2
SOC	**Sochi**	**146.19**	**305**	*i* PKP2	PKPdf	04 41 03.6	+2.9
SOC				*e*		04 44 30.2	
SOC				pmax	pmax		
	comp=Z,76nm,0.9s						
SOC				pmax	pmax		
	comp=N,5.0nm,0.8s						
SOC				pmax	pmax		
	comp=E,6.0nm,0.4s						
YNBS	**Yanbu‘ al Bahr**	**146.59**	**270**	P	PKPdf	04 41 07.0	+5.0
EZC	**Erzincan**	**146.66**	**298**	*e*P	PKPdf	04 41 05.3	+3.6
MOL	**Molde**	**146.81**	**354**	⇓*i*P	PKPdf	04 41 04.2	+3.0
MOL				AMb	AMB	04 41 08.5	
	comp=Z,290nm,1.6s						
GUMT	**Gumushane**	**146.85**	**299**	*e*P	PKPdf	04 41 06.9	+5.0
DOMB	**Dombas**	**147.18**	**353**	⇓*i*P	PKPdf	04 41 04.7	+3.0
DOMB				AMb	AMB	04 41 11.2	
	comp=Z,190nm,1.8s						
ELZG	**Elazig**	**147.41**	**296**	*i* P	PKPdf	04 41 08.7	+5.9
UMJS	**Umm Lajj**	**147.44**	**271**	P	PKPdf	04 41 09.3	+6.0
ANN	**Anapa**	**147.51**	**308**	*d* *i*PKP2	PKPdf	04 41 07.1	+4.3
ANN				*e*		04 44 42.9	
ANN				pmax	pmax		
	comp=Z,198nm,1.3s						
URFA	**Urfa**	**147.60**	**294**	*e*P	PKPdf	04 41 08.9	+5.7
MALT	**Malatya**	**147.86**	**296**	*e*PKIKP	PKPdf	04 41 05.3	+1.8
MALT				*e*		04 41 09.4	
MYA	**Malataya**	**147.86**	**296**	P	PKPdf	04 41 09.4	+5.9
NB2	**NORSAR Subarra**	**147.88**	**351**	PKPabc	PKPdf	04 41 06.9	+4.1
	comp=Z,48nm,0.7s,baz=15,slow=4.3						
NB2	**NORSAR Subarra**	**147.88**	**351**	PKPa	PKPdf	04 41 06.9	+4.1
	baz=14,slow=4.4						
NOA	**NORSAR Array B**	**147.88**	**351**	PKP	PKPdf	04 41 03.8	+1.0
	comp=Z,52nm,0.7s,baz=15,slow=4.3,SNR=117						
NOA				PKPbc	PKPdf	04 41 06.9	+4.1
	comp=Z,36nm,0.7s,baz=16,slow=4.8,SNR=106						
FOO	**Floro**	**147.95**	**356**	*e*P	PKPdf	04 41 07.1	+4.1
FOO				AMb	AMB	04 41 11.4	
	comp=Z,233nm,1.4s						
MNK	**Minsk**	**148.48**	**330**	*e*PKP2	PKPdf	04 41 09.0	+5.0
SUE	**Sulen**	**148.50**	**356**	⇓*i*P	PKPdf	04 41 08.8	+5.0
SUE				AMb	AMB	04 41 12.9	
	comp=Z,217nm,1.6s						
GZT	**Gaziantep**	**148.60**	**294**	*i* P	PKPdf	04 41 11.4	+6.7
QURS	**Qurayyt al Mil**	**148.63**	**282**	P	PKPdf	04 41 12.8	+7.8
TBKS	**Tabuk**	**148.81**	**276**	P	PKPdf	04 41 12.2	+6.8
ASF	**Jabal al Asfar**	**149.07**	**284**	PKPbc	PKPdf	04 41 13.2	+7.5
	comp=Z,33nm,0.9s,baz=11,slow=3.5,SNR=31						
RUND	**Rundenannen**	**149.11**	**356**	*e*P	PKPdf	04 41 10.7	+5.9
RUND				AMb	AMB	04 41 13.4	
	comp=Z,309nm,1.5s						
KAHT	**Ahir Dag**	**149.13**	**295**	*i* P	PKPdf	04 41 12.3	+6.7
BER	**Bergen**	**149.14**	**356**	*e*	PKPdf	04 41 16.1	+11
BER				AMS	AMS	05 09 50.1	
	comp=Z,1µm,17.4s						
KONO	**Kongsberg**	**149.44**	**351**	*e*P	PKPdf	04 41 13.8	+8.4
JMQS	**Jabal Moqyreh**	**149.52**	**277**	P	PKPdf	04 41 14.1	+7.7
COBT	**Iskenderun**	**149.69**	**292**	*i* P	PKPdf	04 41 14.2	+7.7
SIM	**Simferopol’**	**149.72**	**309**	*d* *e*PKP2	PKPdf	04 41 13.4	+7.1
SIM				pmax	pmax		
	comp=Z,63nm,0.9s						
HTY	**Hatay**	**149.81**	**292**	*e*P	PKPdf	04 41 14.1	+7.4
BNN	**Bunyan**	**149.82**	**297**	*e*P	PKPdf	04 41 14.1	+7.4
AYUS	**‘Aynunah**	**149.91**	**276**	P	PKPdf	04 41 14.9	+7.8
BLS5	**Blasjo**	**150.01**	**354**	*e*P	PKPdf	04 41 13.9	+7.7
CEYT	**Ceyhan**	**150.07**	**293**	P	PKPdf	04 41 15.0	+8.0
BDAS	**Al Bad‘**	**150.10**	**276**	P	PKPdf	04 41 15.4	+8.0
AKASG	**Malin Array Be**	**150.12**	**323**	PKP	PKPdf	04 41 07.5	+0.8
	comp=Z,1.8nm,0.7s,baz=25,slow=1.0,SNR=25						
AKASG				PKPbc	PKPdf	04 41 13.2	+6.5
	comp=Z,48nm,0.6s,baz=43,slow=2.6,SNR=189						
AKASG				pPKPab		04 42 37.0	
	comp=Z,14nm,0.8s,baz=44,slow=2.7,SNR=5.2						
BHL	**Bhannes**	**150.22**	**287**	*e*P	PKPdf	04 41 15.6	+8.2
JMOS	**Jabal al Moall**	**150.23**	**278**	P	PKPdf	04 41 15.5	+7.9
ALWS	**Ilw as Safayha**	**150.29**	**278**	P	PKPdf	04 41 16.0	+8.3
CTKT	**Corum**	**150.35**	**301**	*i* P	PKPdf	04 41 15.0	+7.6
HAQS	**Haql**	**150.36**	**277**	P	PKPdf	04 41 15.9	+8.1
EIL	**Elat**	**150.44**	**279**	*e*PKPbc	PKPdf	04 41 15.7	+7.9
CORM	**Corum**	**150.56**	**300**	P	PKPdf	04 41 16.1	+8.4
AVNT	**Avonos**	**150.60**	**297**	*i* P	PKPdf	04 41 15.1	+7.3
SUW	**Suwalki**	**150.78**	**333**	*e*PKIKP	PKPdf	04 41 08.9	+1.3
SUW				*e*		04 41 22.4	
SUW	**Suwalki**	**150.78**	**333**	*e*PKPdf	PKPdf	04 41 08.8	+1.3
SUW				*e*PKPbc	PKPdf	04 41 14.5	+7.0
SUW				*e*PKPab	PKPab	04 41 22.4	-1.9
SUW	**Suwalki**	**150.78**	**333**	⇓*e*PKP	PKPdf	04 41 14.8	+7.2
TOS	**Tosya**	**150.84**	**302**	P	PKPdf	04 41 16.3	+8.2
CDAG	**Cicekdag**	**150.85**	**299**	*i* P	PKPdf	04 41 15.4	+7.3
SNART	**Snartemo**	**151.01**	**353**	*e*P	PKPdf	04 41 15.2	+7.5
SNART				AMb	AMB	04 41 17.9	
	comp=Z,216nm,1.4s						
MLA1	**Latheron**	**151.22**	**5**	⇑*e*P	PKPdf	04 41 15.3	+7.2
MLA1				AMb	AMB	04 41 18.2	
	comp=Z,257nm,1.4s						
CANT	**Cankiri**	**151.23**	**301**	*e*P	PKPdf	04 41 17.1	+8.4
REB	**Eisghbrachaidh**	**151.24**	**7**	⇑*e*P	PKPdf	04 41 14.5	+6.3
REB				AMb	AMB	04 41 18.0	
	comp=Z,120nm,1.3s						
RRH	**Rhenigidale**	**151.28**	**8**	⇑*e*P	PKPdf	04 41 15.0	+6.8
RRH				AMb	AMB	04 41 17.4	
	comp=Z,123nm,1.4s						
BRTR	**Keskin Array B**	**151.38**	**299**	PKP	PKPdf	04 41 10.1	+1.1
	comp=Z,1.6nm,0.9s,baz=90,slow=2.5,SNR=7.3						
BRTR				PKPbc	PKPdf	04 41 16.9	+8.0
	comp=Z,10nm,0.6s,baz=135,slow=3.5,SNR=54						
BRTR				pPKPbc		04 42 37.5	
	comp=Z,24nm,1.1s,baz=123,slow=3.0,SNR=4.7						
MEST	**Erdemli**	**151.39**	**293**	*i* P	PKPdf	04 41 17.1	+8.1
KAMT	**Kaman**	**151.39**	**299**	P	PKPdf	04 41 16.9	+7.9
ELDT	**Eldivan**	**151.40**	**301**	*i* P	PKPdf	04 41 17.4	+8.4
RRR	**Rubha Reidh**	**151.44**	**7**	⇑*e*P	PKPdf	04 41 14.9	+6.5
RRR				AMb	AMB	04 41 18.4	
	comp=Z,164nm,1.2s						
MVH1	**Achvaich**	**151.54**	**6**	⇑*e*P	PKPdf	04 41 15.5	+6.9
MVH1				AMb	AMB	04 41 18.8	
	comp=Z,193nm,1.3s						
SAFT	**Safranbolu**	**151.78**	**303**	*e*P	PKPdf	04 41 17.9	+8.4
IKL	**Isikli**	**151.78**	**292**	*e*P	PKPdf	04 41 18.0	+8.3
MCD	**Coleburn Disti**	**151.95**	**5**	⇑*e*P	PKPdf	04 41 16.3	+7.1
MCD				AMb	AMB	04 41 18.6	
	comp=Z,135nm,1.5s						
ANTO	**Ankara**	**152.00**	**300**	*e*P	PKPdf	04 41 18.0	+8.1
MDO	**Dochfour**	**152.00**	**6**	⇑*e*P	PKPdf	04 41 16.7	+7.4
MDO				AMb	AMB	04 41 19.7	
	comp=Z,138nm,1.5s						
LOD	**Lodumlu**	**152.02**	**300**	*e*P	PKPdf	04 41 18.7	+8.8
CSS	**Prodhromos**	**152.13**	**289**	⇓P	PKPdf	04 41 19.1	+8.9
	comp=Z,1.2nm,0.5s						
CSS	**Prodhromos**	**152.13**	**289**	⇓*e*P	PKPdf	04 41 19.1	+8.9
MME1	**Meikle Cairn**	**152.24**	**4**	⇑*e*P	PKPdf	04 41 16.6	+7.0
KIS	**Kishinev**	**152.28**	**316**	*e*PKIKP	PKPdf	04 41 19.0	+9.0
SGKT	**Sivrigoynuk**	**152.40**	**302**	*i* P	PKPdf	04 41 18.9	+8.5
LEF	**Lefka**	**152.49**	**290**	*e*P	PKPdf	04 41 19.8	+9.0
MUD	**Monsted U’grnd**	**152.59**	**350**	*i* PKIKP	PKPdf	04 41 18.7	+8.5
MUD				*i*		04 41 30.5	
MUD				pmax	pmax		
	comp=Z,100nm,1.3s						
MUD	**Monsted U’grnd**	**152.59**	**350**	*i* P	PKPdf	04 41 18.7	+8.5
	comp=Z,105nm,1.3s						
MUD				*i*		04 41 30.5	
BSD	**Bornholm Skovb**	**152.65**	**342**	⇓*i*PKIKP	PKPdf	04 41 18.7	+8.4
BSD				*e*		04 41 30.4	
BSD				pmax	pmax		
	comp=Z,99nm,0.7s						
BSD	**Bornholm Skovb**	**152.65**	**342**	⇓*i*P	PKPdf	04 41 18.7	+8.4
	comp=Z,99nm,0.7s						
BSD				*e*		04 41 30.4	
BSD				*i*		04 41 53.5	
COP	**Copenhagen**	**152.72**	**346**	*e*PKIKP	PKPdf	04 41 12.6	+2.2
COP				pmax	pmax		
	comp=Z,46nm,0.8s						
COP	**Copenhagen**	**152.72**	**346**	*e*P	PKPdf	04 41 12.6	+2.2
COP				*i*		04 41 19.2	
COP	**Copenhagen**	**152.72**	**346**	*i* P	PKPdf	04 41 12.6	+2.2
	comp=Z,46nm,0.8s						
COP				*i*		04 41 19.2	
ALFC	**Alevga**	**152.73**	**290**	⇓P	PKPdf	04 41 19.8	+8.7
	comp=Z,0.5nm,0.4s						
KIZT	**Kizilcal**	**152.88**	**298**	*e*P	PKPdf	04 41 20.5	+9.4
HENT	**Hendek**	**153.19**	**303**	*i* P	PKPdf	04 41 20.9	+9.4
LVV	**L’vov**	**153.32**	**325**	*e*PKIKP	PKPab	04 41 32.3	-2.7
ESKT	**Eskisehir**	**153.54**	**300**	*i* P	PKPdf	04 41 21.1	+9.1
CFR	**Carcaliu**	**153.55**	**313**	⇓*i*P	PKPdf	04 41 21.2	+9.4
GKP	**Gorka Klasztor**	**153.55**	**338**	*e*PKP	PKPdf	04 41 21.5	+10
TIRR	**Tirgusor**	**153.68**	**312**	⇓*i*P	PKPdf	04 41 21.9	+10
HARR	**Harsova**	**153.89**	**312**	⇓*i*P	PKPdf	04 41 23.1	+11
BURAR	**Bucovina Array**	**154.04**	**320**	⇓*i*P	PKPdf	04 41 23.8	+11
KWP	**Kalwaria**	**154.09**	**326**	*e*PKIKP	PKPdf	04 41 12.8	+0.4
KWP				*e*		04 41 37.3	
KWP	**Kalwaria**	**154.09**	**326**	*e*PKPdf	PKPdf	04 41 12.8	+0.4
KWP				*e*PKPbc	PKPdf	04 41 22.6	+10
KWP				*e*PKPab	PKPab	04 41 37.3	-0.9
KWP	**Kalwaria**	**154.09**	**326**	*e*PKP	PKPab	04 41 37.5	-0.8
ISP	**Isparta**	**154.12**	**296**	*e*PKIKP	PKPdf	04 41 12.2	-0.6
MLR	**Muntele Rosu**	**154.76**	**316**	⇓*i*P	PKPdf	04 41 24.3	+11
KOLS	**Kolonicke sedl**	**154.76**	**326**	*e*PKIKP	PKPdf	04 41 16.2	+2.9
KOLS				*e*		04 41 40.1	
KOLS	**Kolonicke sedl**	**154.76**	**326**	*e*PKP	PKPdf	04 41 16.2	+2.9
KOLS				*e*		04 41 24.9	
KOLS				*e*		04 41 40.1	
BSEG	**Bad Segeberg**	**154.80**	**347**	*e*PKIKP	PKPdf	04 41 15.0	+1.8
BSEG				*e*		04 41 39.5	
BSEG				*e*		04 45 16.6	
OJC	**Ojcow**	**155.00**	**330**	*e*PKP	PKPdf	04 41 15.1	+1.6
DMUB	**Kingscourt**	**155.14**	**11**	⇑*i*P	PKPab	04 41 40.5	-2.0
NIE	**Niedzica**	**155.35**	**329**	*e*PKP	PKPdf	04 41 16.0	+1.9
DCN	**Croghan**	**155.61**	**12**	⇑*i*P	PKPab	04 41 42.6	-2.0
DLF	**Lyons Farm**	**155.78**	**11**	⇑*i*P	PKPab	04 41 43.4	-1.9
KSP	**Ksiaz**	**155.89**	**336**	*e*PKPdf	PKPdf	04 41 16.8	+2.0
KSP				*e*		04 41 25.8	
KSP				*e*PKPab	PKPab	04 41 44.6	-1.3
KSP				*e*SS	SS	05 04 35.0	-10
KSP	**Ksiaz**	**155.89**	**336**	*e*PKP	PKPab	04 41 44.8	-1.1
KECS	**Kecovo**	**155.94**	**327**	*e*PKP	PKPab	04 41 44.9	-1.3
OKC	**Ostrava-Krasne**	**155.98**	**332**	*e*PKP	PKPdf	04 41 17.8	+2.9
OKC				*e*		04 41 45.0	
UPC	**Upice**	**156.27**	**336**	*e*PKPDF	PKPdf	04 41 17.1	+1.8
UPC				*e*PKPAB	PKPab	04 41 46.3	-1.2
MORC	**Moravsky Berou**	**156.27**	**332**	*e*PKIKP	PKPdf	04 41 17.5	+2.2
MORC				*e*		04 41 44.4	
MORC	**Moravsky Berou**	**156.27**	**332**	*e*PKPdf	PKPdf	04 41 17.5	+2.2
MORC				*e*PKPdif		04 41 27.4	
MORC				*e*PKPab	PKPab	04 41 44.4	-3.1
DPC	**Dobruska-Polom**	**156.28**	**335**	*e*PKPDF	PKPdf	04 41 17.4	+2.1
DPC				*e*PKPAB	PKPab	04 41 46.5	-1.1
DBIC	**Dimbokro**	**156.49**	**166**	PKIKP	PKPdf	04 41 19.3	+2.6
DBIC						04 43 08.8	
DBIC				MLR	MLR		
	comp=Z,300nm,21.0s						
DBIC	**Dimbokro**	**156.49**	**166**	PKP	PKPdf	04 41 19.3	+2.6
	comp=Z,11nm,1.0s,baz=172,slow=5.1,SNR=7.7						
DBIC				PKPab	PKPab	04 41 51.0	+1.4
	comp=Z,6.2nm,0.8s,baz=180,slow=5.4,SNR=4.2						
DBIC				pPKPab		04 43 08.8	
	comp=Z,15nm,1.1s,baz=164,slow=5.7,SNR=4.8						
DBIC	**Dimbokro**	**156.49**	**166**	PKP	PKPdf	04 41 19.3	+2.6
DBIC				PKPab	PKPab	04 41 51.0	+1.4
DBIC				pPKPab		04 43 08.8	
DBIC				LR	LR		
	comp=Z,300nm,21.0s						
CLL	**Collm**	**156.56**	**341**	⇑*i*PKIKP	PKPdf	04 41 17.2	+1.6
CLL				*i*		04 41 47.4	
CLL				pmax	pmax		
	comp=Z,21nm,1.2s						
CLL				pmax	pmax		
	comp=Z,24nm,1.2s						
CLL				pmax	pmax		
	comp=Z,178nm,1.6s						
CLL	**Collm**	**156.56**	**341**	⇑*i*PKIKP	PKPdf	04 41 17.2	+1.6
	comp=Z,logA/T=1.2						
CLL				*i*		04 41 27.4	
CLL				*i* PKP2	PKPab	04 41 47.4	-1.3
CLL				*i*		04 42 07.5	
CLL				*e*		04 43 23.0	
CLL				*e*PP	PP	04 45 22.0	-6.6
SBD1	**Bryn Du**	**156.59**	**6**	⇑*e*P	PKPab	04 41 47.0	-1.8
PSZ	**Piszkesteto**	**156.62**	**326**	⇑*i*PKP/p	PKPab	04 41 48.5	-0.6
BRG	**Berggiesshubel**	**156.66**	**339**	*i* PKIKP	PKPdf	04 41 17.5	+1.7
BRG				*e*		04 49 09.7	
BRG				*e*SS	SS	05 04 46.0	-6.2
BRG				pmax	pmax		
	comp=Z,31nm,1.4s						
BRG	**Berggiesshubel**	**156.66**	**339**	*i* PKP	PKPdf	04 41 17.5	+1.7
BRG				*i*		04 41 28.4	
BRG				*i*		04 41 48.3	
BRG				*i* pPKP		04 42 15.0	
BRG				*e*		04 49 09.7	
BRG				*e*SS	SS	05 04 46.0	-6.2
VYHS	**Vyhne**	**156.70**	**329**	*e*PKP	PKPab	04 41 47.9	-1.5
CLZ	**Clausthal**	**156.75**	**345**	*e*PKIKP	PKPdf	04 41 17.6	+1.7
CLZ				*e*		04 45 27.1	
CLZ	**Clausthal**	**156.75**	**345**	*e*PKPdf	PKPdf	04 41 17.6	+1.7
CLZ				*e*PKPab	PKPab	04 41 48.1	-1.4
CLZ				*e*PP	PP	04 45 27.1	-2.4
PVCC	**Panska Ves**	**156.75**	**337**	*e*PKIKP	PKPdf	04 41 17.6	+1.7
PVCC				*e*		05 05 46.3	
PVCC				MLR	MLR		
	comp=Z,600nm,24.1s						
PVCC	**Panska Ves**	**156.75**	**337**	*e*PKP	PKPdf	04 41 17.6	+1.7
PVCC				*e*		04 41 48.4	
PVCC				*e*		05 05 46.3	
PVCC				LR	LR		
	comp=Z,600nm,24.1s						
HLM1	**Long Mynd**	**157.01**	**6**	⇑*e*P	PKPab	04 41 48.8	-1.8
HLM1				AMb	AMB	04 41 51.8	
	comp=Z,176nm,1.4s						
SSP1	**Stoney Pound**	**157.09**	**6**	⇑*e*P	PKPab	04 41 49.3	-1.7
SSP1				AMb	AMB	04 41 52.2	
	comp=Z,223nm,1.4s						
PRU	**Pruhonice**	**157.22**	**337**	*e*PKPDF	PKPdf	04 41 18.5	+1.9
PRU				*e*PKPAB	PKPab	04 41 50.3	-1.3
WTSB	**Winterswijk**	**157.29**	**350**	*e*PKP	PKPab	04 41 50.1	-1.8
	comp=Z,101nm,1.4s						
SMOL	**Smolenice**	**157.30**	**331**	*e*PKP	PKPab	04 41 51.6	-0.4
HTR	**Trewern Hill**	**157.41**	**7**	⇑*e*P	PKPab	04 41 50.4	-1.9
HTR				AMb	AMB	04 41 52.8	
	comp=Z,179nm,1.4s						
SRO	**Srobarova**	**157.43**	**328**	*e*PKP	PKPab	04 41 50.9	-1.7
SRO1	**Iza**	**157.51**	**328**	*e*PKP	PKPab	04 41 51.9	-1.0
MCH1	**Michaelchurch**	**157.51**	**6**	⇑*e*P	PKPab	04 41 50.9	-2.0
HAE	**Alders End**	**157.51**	**6**	⇑*e*P	PKPab	04 41 51.1	-1.7
HAE				AMb	AMB	04 41 54.2	
	comp=Z,423nm,1.5s						
MOX	**Moxa**	**157.54**	**342**	*e*PKIKP	PKPdf	04 41 18.7	+1.7
MOX				MLR	MLR		
	comp=Z,800nm,17.0s						
MOX	**Moxa**	**157.54**	**342**	*e*PKPdf	PKPdf	04 41 18.7	+1.7
MOX				*e*PKPab	PKPab	04 41 51.6	-1.4
MOX				*e*PP	PP	04 45 20.0	-14
MOX				LR	LR		
	comp=Z,800nm,17.0s						
MOX	**Moxa**	**157.54**	**342**	*i* P	PKPdf	04 41 18.7	+1.7
MOX				PKP2	PKPab	04 41 52.0	-1.0
MOX				PP	PP	04 45 20.0	-14
MOX				L		05 16 15.0	
NKC	**Novy Kostel**	**157.68**	**340**	*e*PKPDF	PKPdf	04 41 19.3	+2.1
NKC				*e*PKPAB	PKPab	04 41 52.3	-1.3
ZST	**Bratislava**	**157.68**	**330**	*e*PKP	PKPdf	04 41 19.5	+2.3
ZST				*e*		04 41 52.3	
HGH	**Gray Hill**	**157.89**	**6**	⇑*e*P	PKPab	04 41 52.6	-1.9
HGH				AMb	AMB	04 41 55.5	
	comp=Z,358nm,1.3s						
BOLS	**Boljevac**	**158.05**	**316**	⇓*i*PKP	PKPab	04 41 54.2	-1.2
KHC	**Kasperske Hory**	**158.28**	**337**	*e*PKIKP	PKPdf	04 41 19.2	+1.3
KHC				*e*		04 41 54.5	
KHC	**Kasperske Hory**	**158.28**	**337**	*e*PKP	PKPdf	04 41 19.2	+1.3
KHC				*e*		04 41 31.5	
KHC				*e*		04 41 54.5	
KHC	**Kasperske Hory**	**158.28**	**337**	*e*PKPDF	PKPdf	04 41 19.2	+1.3
KHC				x	x	04 41 31.5	
KHC				*e*PKPAB	PKPab	04 41 54.5	-1.7
GEC2	**GERESS Array S**	**158.48**	**336**	*e*PKIKP	PKPdf	04 41 20.1	+1.9
GEC2				*e*		04 41 56.0	
GERES	**GERESS Array B**	**158.48**	**336**	PKIKP	PKPdf	04 41 19.7	+1.5
GERES						04 41 56.1	
GERES	**GERESS Array B**	**158.48**	**336**	PKP	PKPdf	04 41 19.7	+1.5
	comp=Z,1.5nm,0.7s,baz=90,slow=1.3,SNR=13						
GERES				PKPbc	PKPdf	04 41 31.6	+13
	comp=Z,0.9nm,0.6s,baz=270,slow=1.3,SNR=4.3						
GERES				PKPab	PKPab	04 41 56.1	-1.0
	comp=Z,5.8nm,0.6s,baz=32,slow=4.4,SNR=20						
GRF	**Grafenberg Arr**	**158.51**	**341**	*e*PKP2	PKPab	04 41 56.5	-0.7
HGN	**Heimansgroeve**	**158.59**	**351**	*e*PKP	PKPab	04 41 55.5	-2.0
	comp=Z,87nm,1.1s						
TNS	**Taunus Mts**	**158.69**	**347**	*e*PKP2	PKPab	04 41 56.3	-1.6
ARSA	**Arzberg**	**159.09**	**331**	⇑*i*P	PKPdf	04 41 19.8	+0.9
ARSA				*i*		04 41 59.3	
MOA	**Molln**	**159.11**	**334**	⇑*i*P	PKPdf	04 41 19.8	+0.9
MOA				*i*		04 41 56.6	
ABH	**Alteburg**	**159.19**	**348**	⇑*e*P	PKPab	04 41 58.6	-1.5
TOD	**Tromm**	**159.20**	**345**	⇑*e*P	PKPab	04 41 58.8	-1.3
SIND	**Sindeldorf**	**159.25**	**344**	⇑*e*P	PKPab	04 41 58.9	-1.5
SWS	**Schriesheim**	**159.33**	**345**	*e*P	PKPab	04 41 59.1	-1.6
SKO	**Skopje**	**159.35**	**312**	*i* PKP	PKPab	04 42 01.5	+0.5
GIVF	**Givet**	**159.38**	**353**	*e*PKIKP	PKPdf	04 41 20.8	+1.7
BAIF	**Baives**	**159.48**	**354**	*e*PKIKP	PKPdf	04 41 20.8	+1.6
KTD	**Kalmit**	**159.62**	**346**	*e*P	PKPab	04 42 00.1	-1.9
HDH	**Heidenheim**	**159.80**	**342**	⇑*e*P	PKPab	04 42 01.8	-1.0
FUR	**Furstenfeldbru**	**159.87**	**339**	*e*PKP2	PKPab	04 42 02.3	-0.8
LANF	**Langenberg**	**160.00**	**347**	PKP	PKPdf	04 41 21.6	+1.8
LBG	**Lerchenberg**	**160.08**	**344**	⇑*e*P	PKPab	04 42 02.6	-1.4
KBA	**Koelnbreinsper**	**160.10**	**334**	⇓*i*P	PKPdf	04 41 20.6	+0.6
KBA				*i*		04 42 03.7	
BUCH	**Bad Urach**	**160.15**	**343**	⇑*e*P	PKPab	04 42 03.5	-0.8
LJU	**Ljubljana**	**160.46**	**331**	*e*PKPdf	PKPdf	04 41 22.7	+2.4
LJU				*e*PKPab	PKPab	04 42 04.1	-1.6
LJU				*e*pPKPdf		04 42 43.8	
BFO	**Black Forest**	**160.50**	**345**	*e*PKP2	PKPab	04 42 04.2	-1.6
BFO				*e*		04 45 46.5	
WATA	**Walderalm**	**160.51**	**338**	⇑*i*P	PKPdf	04 41 20.9	+0.5
WATA				*i*		04 42 05.1	
WTTA	**Wattenberg**	**160.55**	**338**	⇑*i*P	PKPdf	04 41 21.9	+1.5
WTTA				*i*		04 42 05.7	
GUT	**Gutenstein**	**160.56**	**343**	⇑*e*P	PKPab	04 42 05.0	-1.1
BOJS	**Bojanci**	**160.56**	**328**	*e*PKPdf	PKPdf	04 41 21.2	+0.8
BOJS				*e*PKPab	PKPab	04 42 04.9	-1.3
BOJS				*e*pPKPdf		04 42 42.4	
SPAK	**Spaichingen**	**160.61**	**344**	⇑*e*P	PKPab	04 42 05.3	-1.0
WLS	**Welschbruch**	**160.63**	**347**	PKP	PKPdf	04 41 21.8	+1.3
CDF	**Champ du Feu**	**160.65**	**347**	*e*PKIKP	PKPdf	04 41 21.7	+1.2
UBR	**Uberruh**	**160.65**	**341**	*e*P	PKPab	04 42 05.3	-1.2
MOTA	**Moosalm**	**160.65**	**339**	⇓*i*P	PKPdf	04 41 21.5	+1.0
MOTA				*i*		04 42 05.8	
SQTA	**Sankt Quirin**	**160.73**	**338**	⇑*i*P	PKPdf	04 41 22.0	+1.4
SQTA				*i*		04 42 06.2	
LIBD	**Limburg**	**160.83**	**346**	*e*P	PKPab	04 42 05.7	-1.5
ECH	**Echery**	**160.86**	**347**	PKP	PKPdf	04 41 22.9	+2.2
FLN	**La Foliniere**	**160.91**	**3**	*e*PKIKP	PKPdf	04 41 22.4	+1.7
	comp=Z,72nm,1.2s						
MEZF	**Maizieres J’vi**	**160.92**	**351**	*e*PKIKP	PKPdf	04 41 22.1	+1.4
KIZ	**Kirchzarten**	**160.95**	**345**	⇑*e*P	PKPab	04 42 06.2	-1.5
FELD	**Feldberg**	**161.00**	**345**	PKP	PKPdf	04 41 22.2	+1.4
FELD	**Feldberg**	**161.00**	**345**	⇑*e*P	PKPab	04 42 06.6	-1.4
THEF	**They Montfort**	**161.06**	**349**	PKP	PKPdf	04 41 22.4	+1.5
DAVA	**Damuels**	**161.07**	**341**	⇓*i*P	PKPdf	04 41 22.9	+2.0
DAVA				*i*		04 42 07.8	
LDF	**La Druitiere**	**161.09**	**2**	*e*PKIKP	PKPdf	04 41 22.5	+1.6
	comp=Z,60nm,1.3s						
ROSF	**Rostrenen**	**161.09**	**9**	*e*PKIKP	PKPdf	04 41 22.5	+1.6
HAU	**Haudompre**	**161.21**	**349**	*e*PKIKP	PKPdf	04 41 22.9	+1.9
MOF	**Molkenrain**	**161.21**	**347**		PKPdf	04 41 22.7	+1.7
SGMF	**Saint Gilles**	**161.26**	**7**	*e*PKIKP	PKPdf	04 41 22.7	+1.6
	comp=Z,238nm,1.8s						
GRR	**Gorron**	**161.26**	**4**	*e*PKIKP	PKPdf	04 41 22.6	+1.5
HINF	**Hinteralfeld**	**161.30**	**347**	*e*PKIKP	PKPdf	04 41 22.4	+1.3
BBS	**Basel-Blauen**	**161.50**	**346**	⇑*e*P	PKPab	04 42 08.9	-1.3
LOMF	**Lomont**	**161.75**	**347**	PKP	PKPdf	04 41 22.9	+1.3
LOR	**Lormes**	**162.28**	**353**	*e*PKIKP	PKPdf	04 41 24.0	+1.9
	comp=Z,64nm,1.3s						
HYF	**Humbligny**	**162.38**	**356**	*e*PKIKP	PKPdf	04 41 24.2	+2.0
SSF	**Saint Saulge**	**162.52**	**354**	*e*PKIKP	PKPdf	04 41 24.2	+1.8
	comp=Z,61nm,1.4s						
CABF	**La Chapelle**	**162.60**	**348**	*e*PKIKP	PKPdf	04 41 24.6	+2.1
	comp=Z,92nm,1.4s						
AVF	**Avril sur Loir**	**162.80**	**354**	*e*PKIKP	PKPdf	04 41 24.2	+1.5
	comp=Z,58nm,1.5s						
SMF	**Signal de Mont**	**162.90**	**353**	*e*PKIKP	PKPdf	04 41 24.4	+1.6
	comp=Z,61nm,1.4s						
BGF	**Bois d’Agland**	**163.07**	**355**	*e*PKIKP	PKPdf	04 41 24.4	+1.5
	comp=Z,60nm,1.3s						
MFF	**Saint Martin d**	**163.08**	**2**	*e*PKIKP	PKPdf	04 41 24.2	+1.2
TCF	**Toulx Ste Croi**	**163.38**	**357**	*e*PKIKP	PKPdf	04 41 25.1	+1.8
	comp=Z,126nm,1.9s						
LPL	**La Plagne**	**163.52**	**345**	*e*PKIKP	PKPdf	04 41 25.8	+2.4
AGO	**Saint Agoulin**	**163.55**	**354**	PKP	PKPdf	04 41 26.3	+2.9
PLDF	**La Plantade**	**163.59**	**353**	PKP	PKPdf	04 41 26.3	+2.8
PYM	**Petit Puy Mans**	**163.86**	**355**	PKP	PKPdf	04 41 26.6	+2.8
MBDF	**Montbardon**	**164.26**	**344**	*e*PKIKP	PKPdf	04 41 26.0	+1.8
ORIF	**Oris-en-Rattie**	**164.27**	**347**	*e*PKIKP	PKPdf	04 41 25.9	+1.7
LBL	**Lubilhac**	**164.35**	**354**	PKP	PKPdf	04 41 27.7	+3.4
RJF	**Les Rejaudoux**	**164.39**	**358**	*e*PKIKP	PKPdf	04 41 25.8	+1.5
	comp=Z,37nm,1.2s						
VIVF	**Saint-Julien-l**	**164.55**	**350**	*e*PKIKP	PKPdf	04 41 26.1	+1.6
	comp=Z,88nm,1.6s						
CAF	**Calviac**	**164.74**	**357**	*e*PKIKP	PKPdf	04 41 26.6	+1.9
	comp=Z,54nm,1.4s						
LFF	**La Frestale**	**164.76**	**0**	*e*PKIKP	PKPdf	04 41 26.4	+1.7
SBF	**Sospel**	**164.90**	**341**	*e*PKIKP	PKPdf	04 41 26.1	+1.2
	comp=Z,32nm,0.9s						
SMRF	**Simiane la Rot**	**165.24**	**347**	*e*PKIKP	PKPdf	04 41 26.8	+1.6
	comp=Z,65nm,1.4s						
FRF	**La Foret Royal**	**165.39**	**343**	*e*PKIKP	PKPdf	04 41 26.9	+1.6
	comp=Z,58nm,1.4s						
LASF	**Ste Croix**	**165.43**	**351**	*e*PKIKP	PKPdf	04 41 27.2	+1.8
	comp=Z,63nm,1.5s						
PGF	**Pioggiola**	**165.58**	**335**	*e*PKIKP	PKPdf	04 41 26.9	+1.4
	comp=Z,139nm,1.6s						
LMR	**La Mourre**	**165.63**	**343**	*e*PKIKP	PKPdf	04 41 27.0	+1.4
	comp=Z,148nm,1.9s						
ERUA	**La Rua**	**165.76**	**25**	PKIKP	PKPdf	04 41 27.3	+1.6
ERUA						04 42 26.3	
ELOB	**Lobios**	**165.85**	**28**	PKP	PKPdf	04 41 26.7	+0.9
ELAN	**Lanestosa**	**166.04**	**13**	PKP	PKPdf	04 41 27.9	+2.0
ELAN				pPKP		04 42 26.3	
MTLF	**Montolieu**	**166.31**	**356**	*e*PKIKP	PKPdf	04 41 27.5	+1.4
EALK	**Alkurruntz**	**166.35**	**7**	PKP	PKPdf	04 41 27.8	+1.6
EALK				pPKP		04 42 27.9	
SJPF	**Ste Jean**	**166.48**	**7**	*e*PKIKP	PKPdf	04 41 28.0	+1.8
	comp=Z,28nm,1.2s						
PVRL	**Vila Real**	**166.49**	**29**	*e*PKPdf	PKPdf	04 41 28.7	+2.4
PVRL	**Vila Real**	**166.49**	**29**	*e*PKPab	PKPab	04 42 30.8	-1.3
EPF	**Esparros**	**166.66**	**2**	*e*PKIKP	PKPdf	04 41 27.9	+1.5
	comp=Z,40nm,1.2s						
ETSF	**Etsaut**	**166.75**	**5**	*e*PKIKP	PKPdf	04 41 27.8	+1.4
	comp=Z,17nm,1.1s						
PVIS	**Viseu**	**166.87**	**31**	*e*PKPdf	PKPdf	04 41 28.9	+2.3
PVIS	**Viseu**	**166.87**	**31**	*e*PKPab	PKPab	04 42 32.5	-1.2
EBIE	**Bielsa**	**167.00**	**2**	PKP	PKPdf	04 41 28.1	+1.5
EBIE				pPKP		04 42 32.6	
MTE	**Manteigas**	**167.28**	**30**	*e*PKPdf	PKPdf	04 41 29.4	+2.5
MTE	**Manteigas**	**167.28**	**30**	*e*PKPab	PKPab	04 42 34.2	-1.3
PTOM	**Tomar**	**167.49**	**35**	*e*PKPdf	PKPdf	04 41 26.1	-0.9
PTOM	**Tomar**	**167.49**	**35**	*e*PKPab	PKPab	04 42 35.1	-1.4

EGRA	Graus	167.50	2	PKP	PKPdf	04 41 28.9	+1.9
PCBR	Castelo Branco	167.76	32	*e*PKPdf	PKPdf	04 41 29.7	+2.5
PCBR	Castelo Branco	167.76	32	*e*PKPab	PKPab	04 42 35.4	-2.3
ESAC	San Caprasio	167.93	5	PKP	PKPdf	04 41 29.0	+1.8
ESAC				pPKP		04 42 29.1	
GUD	Guadarrama	168.31	19	PKIKP	PKPdf	04 41 30.2	+2.7
EPOB	Poblet	168.34	359	PKP	PKPdf	04 41 28.8	+1.3
ERTA	Horta de San J	168.73	2	PKP	PKPdf	04 41 28.8	+1.1
ERTA				pPKP		04 42 38.6	
PTEO	Sao Teotonio	168.80	43	*e*PKPdf	PKPdf	04 41 30.9	+3.0
EBAD	Badajoz	168.84	34	PKP	PKPdf	04 41 29.4	+1.6
PBEJ	Beja	168.96	39	*e*PKPdf	PKPdf	04 41 31.1	+3.2
ESDC	Sonseca Array	169.26	20	PKP	PKPdf	04 41 30.5	+2.4
	comp=Z,8.8nm,1.1s,baz=351,slow=2.9,SNR=21						
ESDC				PKPab	PKPab	04 42 43.4	-0.8
	comp=Z,18nm,1.1s,baz=335,slow=4.0,SNR=26						
ESDC				PP	PP	04 46 31.6	-3.2
	comp=Z,0.2nm,0.3s,baz=343,slow=4.8,SNR=6.0						
ESDC	Sonseca Array	169.26	20	PKP	PKPdf	04 41 30.4	+2.3
ESDC				pPKP		04 42 43.5	
PALC	Alcoutim	169.57	40	*e*PKPdf	PKPdf	04 41 28.8	+0.5
EMIN	Mina Concepcio	169.78	36	PKP	PKPdf	04 41 30.4	+1.9
EMIN				pPKP		04 42 43.9	
ECHE	Chera	169.99	8	PKIKP	PKPdf	04 41 30.9	+2.4
EADA	Adamuz	170.40	27	PKP	PKPdf	04 41 31.2	+2.3
EADA				pPKP		04 42 46.7	
EVIA	Vianos	170.63	16	PKIKP	PKPdf	04 41 31.4	+2.5
EVIA						04 42 49.8	
EBAN	Banos Encina	170.69	23	PKIKP	PKPdf	04 41 32.1	+3.1
EBAN						04 42 48.3	
ETOB	Tobarra	170.83	12	PKP	PKPdf	04 41 30.9	+1.8
ESPR	Espera	170.88	36	PKP	PKPdf	04 41 31.8	+2.7
ESPR				pPKP		04 42 51.9	
EQES	Quesada	171.25	21	PKP	PKPdf	04 41 30.6	+1.3
EQES				pPKP		04 42 50.7	
ELOJ	Sierra Loja	171.45	28	PKIKP	PKPdf	04 41 31.7	+2.3
ELOJ						04 42 52.1	
EMIJ	Mijas	171.66	33	PKP	PKPdf	04 41 30.3	+0.8
EMIJ				pPKP		04 42 52.5	
ERON	Agron	171.70	27	PKP	PKPdf	04 41 31.1	+1.6
EBER	Berja	172.14	23	PKP	PKPdf	04 41 31.6	+1.8
EBER				pPKP		04 42 55.7	
ENIJ	Nijar	172.28	19	PKIKP	PKPdf	04 41 31.6	+1.8

CASC 07 04:30:01.6±2.2**, 11.99N×86.88W, h61**^{km}±12^{km}**, MD3.8, ML3.2, 4C-8D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	Leon	0.42	358	⇓*i*P	P	04 30 13.0	+0.1
LEON				*e*S	S	04 30 21.4	+0.1
MIRN	Miramar	0.47	20	⇑*e*P	P	04 30 13.5	+0.1
MIRN				*e*S	S	04 30 22.2	+0.1
MOMJ	Momotombo	0.53	39	⇓*e*P	P	04 30 14.2	+0.2
MOMJ				*e*S	S	04 30 23.9	+0.7
CNGN	Cerro Negro	0.53	19	⇓*e*P	P	04 30 14.3	+0.2
CNGN				*e*S	S	04 30 24.2	+1.0
XAVN	Gruta Xavier	0.56	74	⇓*e*P	P	04 30 14.4	0.0
XAVN				*e*S	S	04 30 25.9	+2.1
CRUN	El Crucero	0.56	91	*e*P	P	04 30 14.2	-0.2
CRUN				*e*S	S	04 30 27.4	+3.5
APYN	Apoyeque	0.57	65	⇑*e*P	P	04 30 14.7	+0.2
TEL3	Telica 3	0.57	3	⇓*e*P	P	04 30 14.9	+0.3
TELN	Telica	0.61	4	*e*P	P	04 30 15.3	+0.3
TELN				*e*S	S	04 30 25.9	+1.1
TICN	Ticuantepe	0.63	86	⇓*e*P	P	04 30 15.3	+0.1
TICN				*e*S	S	04 30 25.6	+0.3
MGAN	Managua	0.63	76	⇑*e*P	P	04 30 15.1	-0.1
MGAN				*e*S	S	04 30 25.5	+0.2
MGAN				*i*		04 30 27.7	
	comp=N,793nm,0.4s						
WILN	Americas 2	0.69	76	⇓*e*P	P	04 30 15.8	-0.1
WILN				*e*S	S	04 30 27.3	+0.7
MASN	Masaya	0.71	90	*e*P	P	04 30 16.8	+0.6
MASN				*e*S	S	04 30 25.9	-1.1
CRIN	San Cristobal	0.72	346	*e*P	P	04 30 16.1	-0.1
CRIN				*e*S	S	04 30 27.9	+0.7
APON	Apoyo	0.80	95	*e*P	P	04 30 16.8	-0.4
APON				*e*S	S	04 30 28.5	-0.3
PYTN	Playitas	0.96	56	*e*P	P	04 30 19.5	+0.1
PYTN				*e*S	S	04 30 33.5	+0.8
PYTN				*e*SG	S	04 30 33.5	+0.8
CONN	Concepcion	1.30	109	⇓*e*P	P	04 30 22.9	-1.1
CONN				*e*S	S	04 30 38.9	-1.8
CNCH	Conchagua	1.58	324	⇑*e*P	P	04 30 27.8	-0.2
CNCH				*e*S	S	04 30 47.8	+0.4
VCR	Vista de Mar	2.22	147	*e*P	P	04 30 35.8	-1.1
LCBS	La Ceiba	2.63	309	*e*P	P	04 30 42.4	-0.3
LCBS				*e*S	S	04 31 12.0	-1.6
LFRS	El Faro	2.68	307	*e*P	P	04 30 42.9	-0.4
LFRS				*e*S	S	04 31 14.3	-0.3
JCR	Jicaral	2.75	141	*e*P	P	04 30 43.3	-1.1
CGA2	Cerro Gallo 2	3.08	129	*e*P	P	04 30 49.3	+0.3
PRS1	Puriscal	3.21	128	*e*P	P	04 30 51.9	+1.0
SBLS	San Blas	3.25	305	*e*P	P	04 30 52.8	+1.5
SBLS				*e*S	S	04 31 28.9	-0.1
LAJ	Bijagual	3.44	128	*e*P	P	04 30 51.5	-2.6
LCR2	La Lucha 2	3.60	128	*e*P	P	04 30 57.0	+0.7

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*NEIC **07** 04:32:58.1, 35.48S×72.79W, h3^{km}, ML3.3(GUC), After GUC.*

GUC 07 04:32:58.1±1.0**, 35.48S×72.79W, h3**^{km}±4^{km}**, MD3.8, ML3.3, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCO	Chanco	0.33	141	⇓*i*P	Pg	04 33 04.8	+0.1
CNCO				*i* S	Sg	04 33 10.1	+1.0
CNCO				AMP		04 33 13.3	
	comp=N,574nm,0.5s						
TALC	Talca	0.95	85	⇑*i*P	Pb	04 33 15.6	-1.2
TALC				*i* S	Sb	04 33 29.6	+0.1
TALC				AMP		04 33 31.5	
	comp=E,2μm,0.5s						
LNCH	Linares	1.03	111	⇑*i*P	Pb	04 33 17.5	-0.8
LNCH				*i* S	Sb	04 33 32.6	+0.6
LNCH				AMP		04 33 37.8	
	comp=N,1μm,0.3s						
CCHI	Chillan	1.26	153	*i* S	Sb	04 33 38.7	+0.1
CCHI				AMP		04 33 46.7	
	comp=E,588nm,0.5s						
CCHI				AMP		04 33 47.0	
	comp=E,1μm,0.4s						
SFDO	San Fernando	1.69	60	⇑*i*P	Pn	04 33 27.4	-1.4
SFDO				*i* S	Sb	04 33 50.5	-0.7
CACH	El Canelo	2.26	54	*e*P	Pn	04 33 37.9	+1.1
CACH				*i* S	Sn	04 34 09.1	+3.6
CICH	Cipreses	2.27	60	*e*P	Pn	04 33 38.0	+1.0
CICH				*i* S	Sn	04 34 07.0	+1.2
CHCH	Chadas Angostu	2.34	49	⇓*i*P	Pn	04 33 38.9	+0.8
CHCH				*i* S	Sn	04 34 09.3	+1.6
TACH	Talagante	2.38	40	⇓*i*P	Pn	04 33 38.8	+0.2
TACH				*e*S	Sn	04 34 10.4	+1.8
ANTU	Antumapu	2.61	44	AMP		04 34 24.0	
	comp=E,233nm,0.6s						
LMEL	Las Melosas	2.68	53	*e*P	Pn	04 33 43.2	+0.3
LMEL				*e*S	Sn	04 34 18.4	+2.0
LMEL				AMP		04 34 24.4	
	comp=N,203nm,0.5s						
CLCH	Cerro Calan	2.79	42	AMP		04 34 35.3	
	comp=E,217nm,0.5s						
PEL	Peldehue	2.91	37	AMP		04 34 42.6	
	comp=N,218nm,0.8s						
FCH	Farellones	2.98	45	*e*P	Pn	04 33 46.6	-0.5
FCH				AMP		04 34 37.2	
	comp=N,98nm,0.3s						

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*MAN **07** 04:39:36.8, 13.75N×120.53E, h96^{km}, mb3.7, ML2.4, MS2.0*

*IDC **07** 04:39:41.3±14.0, 13.73N×120.59E, h150^{km}±141^{km}, mb3.6/6, mb1 3.7/6, mb1mx3.4/21, mbtmp4.0/6, Error ellipse: s-maj=105.6km s-min=15.8km az=67.0*

ISC 07 04:39:36.1±0.5**, 13.75N**±0.04×**120.54E**±0.09**, h113**^{km}±5^{km}**, n20,** σ**0**^{s}**59**/25**, mb4.0**/6**, 2C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.28	268	*e*P	P	04 39 52.2	0.0
PGP	Puerto Galera	0.47	121	⇑*i*P	P	04 39 53.0	-0.2
PGP				*i* S	S	04 40 04.5	-1.6
TGY	Tagaytay City	0.52	47	⇑*i*P	P	04 39 54.2	+0.6
TGY				*i* S	S	04 40 06.7	0.0
BOAC	Boac	1.30	103	*e*P	P	04 40 00.8	-0.4
SJMP	San Jose	1.40	156	*e*P	P	04 40 03.2	+0.9
SJMP				*e*S	S	04 40 22.5	+0.4
POLP	Polilio Island	1.67	54	*e*P	P	04 40 06.7	+1.1
BUSP	Coron	1.76	191	*e*P	P	04 40 06.9	+0.2
BUSP				*e*S	S	04 40 29.5	-0.2
PCPH	Palayan	1.88	17	⇓*e*P	P	04 40 07.3	-0.8
PCPH				*e*S	S	04 40 32.9	+0.5
SCZP	Santa Cruz	2.11	343	*e*P	P	04 40 11.3	+0.2
BALP	Baler	2.22	27	*e*P	P	04 40 12.7	+0.1
BOLP	Bolinao	2.69	347	*e*P	P	04 40 18.4	-0.5
ENPP	El Nido	2.75	203	*e*P	P	04 40 20.1	+0.4
CUYO	Cuyo Island	2.92	171	*e*P	P	04 40 22.1	+0.1
CNP	Catarman	4.20	107	*e*P	P	04 40 27.9	-11
SONM	Songino Array	35.97	344	P	P	04 46 27.3	-0.3
	2.5nm,0.6s,mb4.4,baz=164,slow=10.0,SNR=16						
WRA	Warramunga Arr	36.12	158	P	P	04 46 28.4	-0.8
	0.3nm,0.3s,mb3.8,baz=331,slow=10.0,SNR=16						
WRA				pP	pP	04 46 52.4	-2.5
	0.5nm,0.7s,baz=335,slow=9.9,SNR=2.9						
ASAR	Alice Springs	39.41	160	P	P	04 46 56.9	+0.3
	0.3nm,0.5s,mb3.4,baz=341,slow=6.5,SNR=5.3						
MKAR	Makanchi Array	45.90	324	P	P	04 47 49.7	+0.7
	0.7nm,0.3s,mb3.8,baz=113,slow=8.0,SNR=8.5						
BVAR	Borovoye Array	55.65	326	P	P	04 49 02.3	-0.3
	1.8nm,0.6s,mb4.3,baz=105,slow=9.0,SNR=6.0						
ARCES	ARCESS Array B	78.99	339	P	P	04 51 27.9	-0.6
	10.0nm,1.2s,mb4.5,baz=80,slow=7.4,SNR=4.3						

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*BJI **07** 04:51:28.6, 39.31N×110.40E, h12^{km}, mb4.0, ML3.3*

*IDC **07** 04:51:28.0±1.6, 39.34N×110.46E, mb3.9/6, mb1 4.0/7, mb1mx3.7/23, mbtmp3.9/7, ML3.0/1, Error ellipse: s-maj=41.4km s-min=22.0km az=90.0*

*NEIC **07** 04:51:29.6±1.2, 39.40N×109.79E, h5^{km}, Error ellipse: s-maj=28.9km s-min=10.4km az=106.0*

ISC 07 04:51:27.3±1.1**, 39.45N**±0.05×**110.6E**±0.2**, h10**^{km}**, n12,** σ**0**^{s}**82**/13**, mb3.9**/6**, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTO	Baotou	1.24	339	*e*PG	Pg	04 51 50.6	-1.5
XAN	Xi'an	5.56	195	P	Pn	04 52 51.0	-1.1
LZH	Lanzhou	6.32	240	*e*PG	Pb	04 53 18.0	+0.8
LZH				AMB	AMB		
	comp=Z,20nm,1.2s						
LZH	Lanzhou	6.32	240	*e*Pg	Pb	04 53 18.0	+0.8
	comp=Z,20nm,1.2s						
ULN	Ulaanbaatar	8.80	344	*e*Pn	P	04 53 37.1	-0.4
	comp=Z,4.6nm,0.7s						
SONM	Songino Array	8.92	341	Pn	P	04 53 39.0	-0.2
	comp=Z,0.1nm,0.3s,baz=156,slow=13,SNR=28						
SONM				Sn	Sn	04 55 21.1	+0.3
	comp=Z,0.1nm,0.3s,baz=165,slow=19,SNR=4.4						
SONM				Lg		04 56 13.3	
	comp=Z,0.2nm,0.3s,baz=157,slow=26,SNR=5.4						
MKAR	Makanchi Array	21.85	299	P	P	04 56 22.1	+0.4
	comp=Z,4.3nm,0.7s,mb4.0,baz=97,slow=13,SNR=32						
CMAR	Chiang Mai Arr	23.23	209	P	P	04 56 35.1	-0.4
	comp=Z,4.8nm,0.8s,mb4.0,baz=14,slow=9.6,SNR=19						
FINES	FINESS Array B	53.81	324	P	P	05 00 52.7	+0.8
	comp=Z,0.8nm,0.8s,mb3.7,baz=63,slow=3.1,SNR=3.2						
HFS	Hagfors	59.92	325	P	P	05 01 35.5	+0.1
	comp=Z,3.8nm,0.9s,mb4.5,baz=82,slow=10,SNR=3.5						
NOA	NORSAR Array B	60.57	327	P	P	05 01 39.4	-0.4
	comp=Z,0.7nm,0.7s,mb3.9,baz=55,slow=21,SNR=2.9						
YKA	Yellowknife Ar	72.11	20	P	P	05 02 54.8	+1.6
	comp=Z,0.6nm,0.7s,mb3.6,baz=323,slow=6.1,SNR=6.6						

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*CSEM **07** 04:59:32.7±0.1, 61.86N×26.64W, h10^{km}, mb4.4/19, Ms4.1, Error ellipse: s-maj=6.4km s-min=2.0km az=19.0*

*IDC **07** 04:59:33.3±0.5, 61.93N×26.47W, mb3.9/20, mb1 4.0/23, mb1mx4.0/33, mbtmp3.9/23, ML3.3/3, Error ellipse: s-maj=18.1km s-min=10.9km az=7.0*

*BJI **07** 04:59:34.9, 62.00N×26.40W, h10^{km}, mB5.1, mb4.6, Ms5.0, Msz4.4*

*NEIC **07** 04:59:34.9±0.3, 62.00N×26.41W, h10^{km}, mb4.5/23, Error ellipse: s-maj=9.5km s-min=4.8km az=198.0*

*ZUR_RM **07** 04:59:34, 62.00N×26.41W, h12^{km}, Mw4.9/11, Moment Tensor Solution. s11 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.43; M$_{\theta\theta}$0.64; M$_{\phi\phi}$1.79; M$_{r\theta}$-0.06; M$_{\theta\phi}$0.24; M$_{\phi r}$-0.53; Best double couple: M$_0$2.2×10^{16} NP1:φ$_s$11°, δ52°, λ-91°. NP2:φ$_s$192°, δ38°, λ-89°. Principal axes: T 1.904, Plg7°, Azm101°; N .589, Plg1°, Azm11°; P -2.493, Plg83°, Azm275°;*

ISC 07 04:59:33.4±0.3**, 61.92N**±0.07×**26.53W**±0.08**, h10**^{km}**, n88,** σ**1**^{s}**10**/82**, mb4.1**/41**, MS4.9**/2**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	Scoresbysund	8.79	10	*e*P	P	05 01 38.5	-5.1
	3.4nm,0.9s						
SCO				*i* S	rx	05 04 38.8	
SCO	Scoresbysund	8.79	10	*i* P	P	05 01 38.5	-5.1
	3.4nm,0.9s						
SCO				*i* S	rx	05 04 38.8	
SUMG	Summit	11.62	342	*e*P	P	05 02 16.0	-6.2
	96nm,1.9s						
ESK	Eskdalemuir	13.78	108	*e*Pn	P	05 02 56.5	+5.6
EKA	Eskdalemuir Ar	13.79	108	Pn	P	05 02 47.6	-3.4
	0.1nm,0.3s,baz=306,slow=13,SNR=3.0						
DAG	Danmarks Havn	15.15	7	*i* P	P	05 03 11.0	+2.2
	comp=Z,2μm,20.0s						
DAG	Danmarks Havn	15.15	7	*e*P	P	05 03 11.0	+2.2
NOA	NORSAR Array B	17.88	76	P	P	05 03 41.4	-2.1
	comp=Z,0.1nm,0.3s,baz=41,slow=9.7,SNR=3.0						
ROSF	Rostrenen	18.87	125	*e*P	P	05 03 57.2	+1.4
HFS	Hagfors	19.35	77	P	P	05 03 57.7	-3.7
	comp=Z,0.0nm,0.3s,baz=172,slow=10,SNR=3.1						
LDF	La Druitiere	19.92	120	*e*P	P	05 04 07.3	-0.6
	comp=Z,101nm,1.5s						
BAIF	Baives	20.66	111	*e*P	P	05 04 13.9	-1.7
DOU	Dourbes	20.80	110	P	P	05 04 18.9	+1.8
MEM	Membach	21.07	108	P	P	05 04 20.3	+0.5
MFF	Saint Martin d	21.51	123	*e*P	P	05 04 24.2	-0.1
SCHQ	Schefferville	21.98	270	P	P	05 04 28.1	-0.8
	comp=Z,2.0nm,0.7s,mb3.6,baz=135,slow=16,SNR=3.0						
ARCES	ARCESS Array B	22.02	48	P	P	05 04 28.1	-1.2
	comp=Z,7.5nm,1.0s,mb4.1,baz=315,slow=3.4,SNR=5.3						
LOR	Lormes	22.62	116	*e*P	P	05 04 35.2	0.0
	comp=Z,24nm,1.0s,mb4.3						
SSF	Saint Saulge	22.64	117	*e*P	P	05 04 35.0	-0.4
	comp=Z,17nm,1.2s,mb4.3						
TCF	Toulx Ste Croi	22.72	120	*e*P	P	05 04 36.6	+0.4
	comp=Z,20nm,1.0s,mb4.2						
BGF	Bois d'Agland	22.76	119	*e*P	P	05 04 36.7	+0.1
	comp=Z,28nm,0.8s,mb4.4						
AVF	Avril sur Loir	22.79	118	*e*P	P	05 04 37.3	+0.4
	comp=Z,18nm,0.8s,mb4.2						
SMF	Signal de Mont	23.11	117	*e*P	P	05 04 40.1	+0.1
	comp=Z,42nm,1.1s,mb4.5						
HAU	Haudompre	23.13	112	*e*P	P	05 04 39.3	-0.9
	comp=Z,39nm,1.1s,mb4.5						
CDF	Champ du Feu	23.23	110	*e*P	P	05 04 37.9	-3.3
MOX	Moxa	23.62	101	*i* P	P	05 04 44.6	-0.3
	comp=Z,logA/T=1.3,mb4.5						
MOX	Moxa	23.62	101	*e*P	P	05 04 44.6	-0.3
	comp=Z,38nm,1.8s,mb4.5						
CAF	Calviac	23.77	122	*e*P	P	05 04 48.1	+1.6
CLL	Collm	23.82	98	P	P	05 04 48.4	+1.6
	comp=Z,logA/T=1.1,mb4.3						
CLL				*e*		05 05 54.0	
CLL	Collm	23.82	98	*i* P	P	05 04 48.4	+1.6
	comp=Z,18nm,1.5s,mb4.3						
SJPF	Ste Jean	24.05	130	*e*P	P	05 04 50.7	+1.5
	comp=Z,20nm,1.2s,mb4.1						
GRA1	Grafenberg Arr	24.10	103	*e*P	P	05 04 51.2	+1.6
	comp=Z,10.0nm,1.2s,mb4.1						
GRF	Grafenberg Arr	24.10	103	*e*P	P	05 04 51.3	+1.7
	comp=Z,10.0nm,1.2s,mb4.1						
NKC	Novy Kostel	24.29	101	AMS	AMS	05 16 20.0	
	comp=Z,800nm,14.9s						
FINES	FINESS Array B	24.40	68	P	P	05 04 53.0	+0.5
	comp=Z,3.6nm,0.9s,mb3.8,baz=297,slow=8.5,SNR=8.5						
FINES	FINESS Array B	24.40	68	P	P	05 04 53.0	+0.5
BRG	Berggiesshubel	24.55	98	*e*P	P	05 04 58.0	+4.1
	comp=Z,9.5nm,1.0s,mb4.3						
LPL	La Plagne	25.23	115	*e*P	P	05 04 58.2	-2.3
LPG	La Plagne	25.25	115	*e*P	P	05 04 58.5	-2.2
ORIF	Oris-en-Rattie	25.34	117	*e*P	P	05 05 00.1	-1.5
PRU	Pruhonice	25.43	99	*e*P	P	05 05 02.5	+0.1
PRU				*e*x	x	05 05 47.6	
PRU				AMS	AMS	05 17 00.0	
	comp=Z,700nm,15.6s						
KHC	Kasperske Hory	25.58	101	*e*P	P	05 05 04.2	+0.4
KHC				*e*		05 05 51.5	
KHC	Kasperske Hory	25.58	101	*e*P	P	05 05 04.2	+0.4
KHC				x	x	05 05 51.5	
KHC				AMS	AMS	05 16 40.0	
	comp=Z,900nm,15.2s						
DAVOX	Davos	25.62	109	P	P	05 05 04.5	+0.3
	comp=Z,1.5nm,0.6s,mb3.7,baz=147,slow=24,SNR=3.2						
DAVOX	Davos	25.62	109	P	P	05 05 04.5	+0.3
UPC	Upice	25.77	97	*e*P	P	05 05 06.1	+0.6
UPC				*e*x	x	05 05 52.5	
GERES	GERESS Array B	25.84	102	P	P	05 05 05.8	-0.5
	comp=Z,0.8nm,0.5s,mb3.5,baz=315,slow=9.4,SNR=7.2						
MBDF	Montbardon	25.88	116	*e*P	P	05 05 06.5	-0.1
	comp=Z,16nm,0.9s,mb4.3						
DPC	Dobruska-Polom	26.02	97	*e*P	P	05 05 08.6	+0.8
DPC				*e*x	x	05 05 53.7	
DPC				AMS	AMS	05 15 30.0	
	comp=Z,600nm,22.5s						
ESDC	Sonseca Array	26.18	138	P	P	05 05 10.4	+1.0
	comp=Z,0.2nm,0.3s,mb3.2,baz=334,slow=8.5,SNR=5.5						
VRAC	Vranov	26.86	98	P	P	05 05 15.6	-0.1
	comp=Z,1.7nm,0.4s,mb4.0,baz=320,slow=12,SNR=3.1						
MORC	Moravsky Berou	26.98	96	*e*P	P	05 05 16.8	0.0
	comp=Z,6.7nm,1.3s,mb4.0						
MORC	Moravsky Berou	26.98	96	*e*P	P	05 05 16.8	+0.1
	comp=Z,6.7nm,1.3s,mb4.0						
OKC	Ostrava-Krasne	27.23	96	AMS	AMS	05 16 20.0	
	comp=Z,400nm,21.8s						
AKASG	Malin Array Be	31.88	85	P	P	05 05 59.1	-1.3
	comp=Z,0.4nm,0.3s,mb3.7,baz=310,slow=8.6,SNR=11						
YKA	Yellowknife Ar	38.03	311	P	P	05 06 52.8	-0.2
	comp=Z,0.5nm,0.6s,mb3.4,baz=47,slow=8.7,SNR=11						
YKA				PcP	PcP	05 09 07.9	-1.0
	comp=Z,0.7nm,0.7s,baz=45,slow=3.1,SNR=5.9						
YKA	Yellowknife Ar	38.03	311	PcP	PcP	05 09 07.9	-1.1
FFC	Flin Flon	38.13	295	*e*P	P	05 06 54.1	+0.2
	comp=Z,21nm,1.9s,mb4.5						
FFC	Flin Flon	38.13	295	*e*P	P	05 06 54.1	+0.2
	comp=Z,21nm,1.9s,mb4.5						
INK	Inuvik	39.97	326	P	P	05 07 08.2	-0.9
	comp=Z,1.4nm,0.8s,mb3.7,baz=52,slow=9.7,SNR=4.1						
IDI	Anoyia	41.58	105	P	P	05 07 20.6	-2.0
	comp=Z,2.5nm,0.6s,mb4.0,baz=4.4,slow=13,SNR=3.0						
BRTR	Keskin Array B	42.07	93	P	P	05 07 28.0	+1.5
	comp=Z,2.1nm,0.8s,mb3.8,baz=311,slow=5.3,SNR=9.0						
WCI	Wyandotte Cave	43.07	265	*e*P	P	05 07 34.1	-0.6
	comp=Z,6.1nm,0.9s,mb4.3						
WCI	Wyandotte Cave	43.07	265	*e*P	P	05 07 34.1	-0.6
	comp=Z,6.1nm,0.9s,mb4.3						
CPCT	Cooper Cave	44.48	261	*e*P	P	05 07 47.3	+1.0
CPCT	Cooper Cave	44.48	261	*e*P	P	05 07 47.3	+1.1
ILAR	Eielson Array	46.09	329	P	P	05 07 59.1	+0.5
	comp=Z,0.7nm,0.8s,mb3.6,baz=19,slow=6.9,SNR=8.8						
ILAR				PcP	PcP	05 09 34.3	-1.1
	comp=Z,1.3nm,0.8s,baz=358,slow=3.0,SNR=9.2						
ILAR	Eielson Array	46.09	329	PcP	PcP	05 09 34.3	-1.1
PDAR	Pinedale Array	50.33	288	P	P	05 08 31.4	-0.5
	comp=Z,2.3nm,0.8s,mb4.3,baz=53,slow=7.4,SNR=16						
WMOK	Wichita Mounta	51.79	273	*e*P	P	05 08 42.6	-0.5
	comp=Z,8.4nm,1.3s,mb4.5						
WMOK	Wichita Mounta	51.79	273	*e*P	P	05 08 42.6	-0.5
	comp=Z,8.4nm,1.3s,mb4.5						
HWUT	Hardware Ranch	52.16	289	*e*P	P	05 08 45.7	-0.1
	comp=Z,13nm,1.6s,mb4.6						
HWUT	Hardware Ranch	52.16	289	*e*P	P	05 08 45.7	-0.1
	comp=Z,13nm,1.6s,mb4.6						
ELK	Elko	54.49	291	*e*P	P	05 09 03.8	+0.8
	comp=Z,11nm,1.6s,mb4.5						
ELK	Elko	54.49	291	*e*P	P	05 09 03.8	+0.8
	comp=Z,11nm,1.6s,mb4.5						
JCT	Junction City	55.79	271	*e*P	P	05 09 12.4	-0.2
	comp=Z,17nm,1.5s,mb4.8						
GDL2	Guadalupe Moun	56.51	276	*e*P	P	05 09 17.9	+0.1
MKAR	Makanchi Array	57.64	50	P	P	05 09 24.8	-0.8
	comp=Z,1.0nm,0.9s,mb3.9,baz=333,slow=5.4,SNR=9.1						
TXAR	Lajitas Array	58.58	274	P	P	05 09 31.2	-1.1
	comp=Z,0.4nm,0.6s,mb3.6,baz=56,slow=4.5,SNR=7.9						
WMQ	Urumqi	62.14	48	*e*P	P	05 09 58.0	+1.4
WMQ				AP	pP	05 10 02.6	+2.9
WMQ				XP	sP	05 10 05.0	+4.2
WMQ				LR	LR		
	comp=N,2μm,21.0s,MS5.3						
WMQ				LR	LR		
	comp=E,1μm,19.0s,MS5.3						
WMQ				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
SONM	Songino Array	64.29	33	P	P	05 10 10.4	-0.1
	comp=Z,1.7nm,0.9s,mb4.1,baz=329,slow=7.2,SNR=11						
ULN	Ulaanbaatar	64.43	33	*e*P	P	05 10 11.9	+0.5
	comp=Z,21nm,1.7s,mb4.9						
ROSC	El Rosal	66.99	233	P	P	05 10 29.6	+1.1
	comp=Z,1.2nm,0.5s,mb4.2,baz=68,slow=5.7,SNR=4.6						
BDFB	Brasilia	79.15	201	P	P	05 11 38.0	-1.7
	comp=Z,2.2nm,0.6s,mb4.3,baz=51,slow=7.1,SNR=4.6						
NJ2	Nanjing	82.27	29	*e*P	P	05 11 59.2	+3.3
NJ2				AP	pP	05 12 04.1	+5.0
NJ2				XP	sP	05 12 06.8	+6.7
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,110nm,7.9s						
NJ2				LR	LR		
	comp=N,280nm,12.6s,MS4.9						
NJ2				LR	LR		
	comp=E,210nm,16.5s,MS4.9						
NJ2				LR	LR		
	comp=Z,140nm,12.8s,MS4.5						
SIV	San Ignacio	82.32	213	P	P	05 11 57.4	+1.0
	comp=Z,3.8nm,1.1s,mb4.2,baz=38,slow=2.9,SNR=9.4						
MAW	Mawson	144.28	139	PKP	PKPdf	05 19 08.1	-2.7
	comp=Z,2.4nm,0.9s,baz=274,slow=7.4,SNR=3.8						
STKA	Stephens Creek	148.97	20	PKPbc	PKPdf	05 19 20.1	+0.3
	comp=Z,0.9nm,0.6s,baz=329,slow=12,SNR=3.0						

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*CSEM **07** 05:00:17.3±0.1, 62.16N×26.35W, h10^{km}, mb4.5/23, Error ellipse: s-maj=2.6km s-min=1.8km az=157.0*

*MOS **07** 05:00:18.2±1.1, 61.90N×26.60W, h10^{km}, mb4.7/18, Error ellipse: s-maj=15.6km s-min=9.0km az=120.9*

*IDC **07** 05:00:18.5±0.5, 62.01N×26.63W, mb4.1/20, mb1 4.2/22, mb1mx4.2/30, mbtmp4.1/22, ML3.3/2, MS4.0/2, Ms1 4.1/2, ms1mx3.7/14, Error ellipse: s-maj=17.1km s-min=12.1km az=7.0*

*NEIC **07** 05:00:19.9±0.2, 61.95N×26.54W, h10^{km}, mb4.5/23, Error ellipse: s-maj=8.9km s-min=4.2km az=199.0*

*ZUR_RM **07** 05:00:19, 61.95N×26.54W, h12^{km}, Mw5.0/10, Moment Tensor Solution. s10 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.36; M$_{\theta\theta}$0.82; M$_{\phi\phi}$2.54; M$_{r\theta}$0.21; M$_{\theta\phi}$0.32; M$_{\phi r}$0.28; Best double couple: M$_0$3×10^{16} NP1:φ$_s$192°, δ48°, λ-87°. NP2:φ$_s$8°, δ42°, λ-93°. Principal axes: T 2.614, Plg3°, Azm280°; N .765, Plg2°, Azm11°; P -3.379, Plg86°, Azm136°;*

ISC 07 05:00:17.1±1.4**, 62.19N**±0.03×**26.34W**±0.06**, h4**^{km}±9^{km}**, n118,** σ**1**^{s}**19**/124**, mb4.3**/45**, MS3.7**/3**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INYL	Nylenda	2.43	41	P	Pn	05 00 58.8	+0.6
IVOG	Vogar	2.53	43	P	Pn	05 01 00.5	+0.8
IKRI	Krysuvik	2.58	47	P	Pn	05 01 00.2	-0.2
IKRI				S	Sn	05 01 32.6	0.0
IVOS	Vogsosar	2.69	50	P	Pn	05 01 01.8	-0.2
IVOS				S	Sn	05 01 34.6	-0.9
ISAN	Sandskeio	2.86	47	P	Pn	05 01 04.4	0.0
ISAN				S	Sn	05 01 40.8	+1.0
IBJA	Bjarnastaoir	2.89	50	P	Pn	05 01 03.8	-1.0
IBJA				S	Sn	05 01 40.1	-0.4
IKUD	Kuludalsa	2.94	41	P	Pn	05 01 06.6	+1.0
ISOL	Solvholt	3.01	52	P	Pn	05 01 05.2	-1.4
ISOL				S	Sn	05 01 42.9	-0.7
IKRO	Krokur	3.04	49	P	Pn	05 01 06.9	-0.1
IKRO				S	Sn	05 01 45.0	+0.6
IHEI	Heioarbar	3.07	47	P	Pn	05 01 07.3	-0.1
IASM	Asmuli	3.09	55	P	Pn	05 01 06.0	-1.6
IASM				S	Sn	05 01 44.2	-1.3
ISAU	Saurbar	3.24	54	P	Pn	05 01 08.6	-1.2
ISAU				S	Sn	05 01 47.8	-1.6

IMID	Miomork	3.30	61	P	Pn	05 01 09.2	-1.4
IHAU	Haukadalur	3.40	56	P	Pn	05 01 10.7	-1.4
IHAU				S	Sn	05 01 51.8	-1.7
IASB	`sbjarnarst	3.41	39	P	Pn	05 01 14.0	+1.7
IGYG	Gygjarholskot	3.47	50	P	Pn	05 01 12.6	-0.5
IGYG				S	Sn	05 01 55.8	+0.5
IVAT	Vatnsfell	3.91	56	P	Pn	05 01 18.3	-1.1
JMIC	Jan Mayen	11.26	31	LR	LR	05 06 32.4	
	comp=Z,662nm,20.2s,baz=244,slow=33						
EKA	Eskdalemuir Ar	13.79	109	Pn	P	05 03 36.4	+0.9
	0.1nm,0.3s,baz=291,slow=12,SNR=3.4						
NOA	NORSAR Array B	17.73	77	P	P	05 04 29.1	+3.0
	0.1nm,0.3s,baz=195,slow=19,SNR=3.2						
NOA				LR	LR	05 10 19.9	
	comp=Z,642nm,21.8s,baz=295,slow=34						
MUD	Monsted U’grnd	18.82	92	i P	P	05 04 44.0	+4.4
MUD				MLR	MLR		
	comp=Z,350nm,15.0s						
MUD	Monsted U’grnd	18.82	92	i P	P	05 04 44.0	+4.4
MUD				i		05 08 20.5	
	comp=Z,340nm,15.0s						
ROSF	Rostrenen	18.96	126	eP	P	05 04 40.9	-0.4
GRR	Gorron	19.85	122	eP	P	05 04 50.6	-1.0
	comp=Z,28nm,1.0s						
GRR	Gorron	19.85	122	eP	P	05 04 50.6	-1.0
GRR				pmax	pmax		
	comp=Z,14nm,1.0s						
LDF	La Druitiere	19.98	121	eP	P	05 04 51.8	-1.3
COP	Copenhagen	20.77	91	eP	P	05 05 00.5	-0.8
COP				i S	S	05 09 05.7	+17
COP				MLR	MLR		
	comp=Z,84nm,15.0s,MS3.2						
COP	Copenhagen	20.77	91	i P	P	05 05 00.5	-0.8
COP				i S	S	05 09 05.7	+17
	comp=Z,80nm,15.0s						
COP	Copenhagen	20.77	91	i PcP	PcP	05 09 05.7	-4.9
MFF	Saint Martin d	21.59	124	eP	P	05 05 09.2	-0.5
	comp=Z,46nm,1.1s,mb4.5						
MFF	Saint Martin d	21.59	124	eP	P	05 05 09.2	-0.5
MFF				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.5						
ARCES	ARCESS Array B	21.77	48	P	P	05 05 13.3	+1.9
	comp=Z,4.1nm,0.7s,mb4.0,baz=277,slow=9.8,SNR=4.6						
ARCES	ARCESS Array B	21.77	48	P	P	05 05 13.3	+1.9
SCHQ	Schefferville	22.07	269	P	P	05 05 14.7	+0.2
	comp=Z,4.5nm,0.7s,mb4.0,baz=42,slow=8.5,SNR=6.4						
LOR	Lormes	22.66	117	eP	P	05 05 20.1	-0.1
	comp=Z,32nm,1.0s,mb4.4						
LOR	Lormes	22.66	117	eP	P	05 05 20.1	-0.1
LOR				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.4						
SSF	Saint Saulge	22.68	118	eP	P	05 05 19.9	-0.5
SSF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.3						
SSF	Saint Saulge	22.68	118	eP	P	05 05 19.9	-0.5
	comp=Z,15nm,1.1s,mb4.3						
TCF	Toulx Ste Croi	22.77	121	eP	P	05 05 21.6	+0.2
	comp=Z,48nm,1.2s,mb4.5						
TCF	Toulx Ste Croi	22.77	121	eP	P	05 05 21.6	+0.2
TCF				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.5						
BGF	Bois d’Agland	22.81	120	eP	P	05 05 21.9	+0.2
	comp=Z,47nm,0.9s,mb4.6						
BGF	Bois d’Agland	22.81	120	eP	P	05 05 21.9	+0.2
BGF				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.6						
AVF	Avril sur Loir	22.83	119	eP	P	05 05 21.7	-0.2
	comp=Z,29nm,1.0s,mb4.3						
AVF	Avril sur Loir	22.83	119	eP	P	05 05 21.7	-0.2
AVF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.3						
HAU	Haudompre	23.15	113	eP	P	05 05 24.1	-0.9
	comp=Z,38nm,1.0s,mb4.5						
HAU	Haudompre	23.15	113	eP	P	05 05 24.1	-0.9
HAU				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.5						
SMF	Signal de Mont	23.15	118	eP	P	05 05 25.2	+0.2
	comp=Z,35nm,1.0s,mb4.4						
SMF	Signal de Mont	23.15	118	eP	P	05 05 25.2	+0.2
SMF				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.5						
RJF	Les Rejaudoux	23.31	124	eP	P	05 05 27.5	+0.9
MOX	Moxa	23.58	102	i P	P	05 05 31.9	+2.8
CLL	Collm	23.76	99	P	P	05 05 32.0	+1.1
CAF	Calviac	23.84	123	eP	P	05 05 33.3	+1.6
	comp=Z,43nm,1.2s,mb4.5						
CAF	Calviac	23.84	123	eP	P	05 05 33.3	+1.6
CAF				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.4						
SJPF	Ste Jean	24.16	131	eP	P	05 05 35.0	+0.2
	comp=Z,14nm,1.0s,mb4.1						
SJPF	Ste Jean	24.16	131	eP	P	05 05 35.0	+0.2
SJPF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
FINES	FINESS Array B	24.21	68	P	P	05 05 38.5	+3.3
	comp=Z,3.3nm,0.9s,mb3.8,baz=304,slow=10.0,SNR=3.4						
EPF	Esparros	24.79	128	eP	P	05 05 42.5	+1.5
	comp=Z,14nm,0.9s,mb4.2						
EPF	Esparros	24.79	128	eP	P	05 05 42.5	+1.5
EPF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
LPL	La Plagne	25.26	116	eP	P	05 05 43.3	-2.1
	comp=Z,5.6nm,0.7s,mb3.9						
LPL	La Plagne	25.26	116	eP	P	05 05 43.3	-2.1
LPL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
DAVOX	Davos	25.63	110	P	P	05 05 51.0	+2.1
	comp=Z,1.2nm,0.3s,mb3.9,baz=194,slow=9.8,SNR=3.3						
GERES	GERESS Array B	25.81	103	P	P	05 05 53.5	+2.9
	comp=Z,2.3nm,0.9s,mb3.7,baz=321,slow=8.5,SNR=5.8						
MBDF	Montbardon	25.91	117	eP	P	05 05 51.6	0.0
	comp=Z,17nm,0.9s,mb4.3						
ESDC	Sonseca Array	26.32	139	P	P	05 05 54.9	-0.5
	comp=Z,0.8nm,0.5s,mb3.5,baz=336,slow=9.1,SNR=4.6						
AKASG	Malin Array Be	31.76	85	P	P	05 06 43.9	-0.2
	comp=Z,3.0nm,0.7s,mb4.2,baz=312,slow=8.5,SNR=7.1						
AKASG	Malin Array Be	31.76	85	P	P	05 06 43.8	-0.3
OBN	Obninsk	32.26	73	eP	P	05 06 51.4	+3.0
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s,MS3.9						
YKA	Yellowknife Ar	37.93	311	P	P	05 07 37.0	+0.3
	comp=Z,2.0nm,1.0s,mb3.8,baz=48,slow=9.0,SNR=8.7						
YKA				PcP	PcP	05 09 51.3	-2.0
	comp=Z,0.9nm,0.8s,baz=41,slow=3.2,SNR=5.1						
YKA	Yellowknife Ar	37.93	311	P	P	05 07 37.0	+0.3
YKA				PcP	PcP	05 09 51.4	-2.0
YKA	Yellowknife Ar	37.93	311	PcP	PcP	05 09 51.3	-2.0
INK	Inuvik	39.79	326	P	P	05 07 52.6	+0.3
	comp=Z,2.6nm,0.9s,mb4.0,baz=47,slow=6.6,SNR=5.2						
FWV	Forest Hill	41.16	259	eP	P	05 08 03.4	-0.5
ELN	Prospectdale	41.42	259	eP	P	05 08 05.2	-0.8
ELN	Prospectdale	41.42	259	eP	P	05 08 05.2	-0.8
BR131	Keskin Array S	41.99	94	eP	P	05 08 11.6	+1.0
	comp=Z,3.0nm,0.8s,mb4.0						
BRTR	Keskin Array B	41.99	94	P	P	05 08 13.1	+2.5
	comp=Z,2.4nm,0.8s,mb3.9,baz=333,slow=5.8,SNR=7.3						
WCI	Wyandotte Cave	43.18	265	eP	P	05 08 19.6	-0.7
WCI				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
WCI	Wyandotte Cave	43.18	265	eP	P	05 08 19.6	-0.7
	comp=Z,13nm,0.8s,mb4.7						
WCI	Wyandotte Cave	43.18	265	eP	P	05 08 19.6	-0.7
	comp=Z,13nm,0.8s,mb4.7						
FVM	French Village	45.31	269	eP	P	05 08 36.7	-0.8
FVM				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
FVM	French Village	45.31	269	eP	P	05 08 36.7	-0.8
	comp=Z,13nm,1.0s,mb4.7						
ILAR	Eielson Array	45.91	329	P	P	05 08 44.4	+2.5
	comp=Z,1.9nm,1.0s,mb4.0,baz=28,slow=6.2,SNR=8.0						
ILAR				PcP	PcP	05 10 18.6	-0.8
	comp=Z,1.9nm,1.0s,baz=354,slow=3.2,SNR=8.0						
ILAR	Eielson Array	45.91	329	P	P	05 08 44.3	+2.5
ILAR	Eielson Array	45.91	329	PcP	PcP	05 10 18.6	-0.8
IMA	Indian Mountai	46.35	333	eP	P	05 08 48.4	+3.1
IMA				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.0						
IMA	Indian Mountai	46.35	333	eP	P	05 08 48.4	+3.1
	comp=Z,29nm,1.4s,mb5.0						
BILL	Bilibino	49.75	354	eP	P	05 09 15.1	+3.3
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.9						
MCMT	McKenzie Canyo	50.15	292	eP	P	05 09 15.6	+0.5
MCMT	McKenzie Canyo	50.15	292	eP	P	05 09 15.6	+0.4
PDAR	Pinedale Array	50.34	288	P	P	05 09 15.3	-1.3
	comp=Z,3.3nm,0.8s,mb4.4,baz=53,slow=8.1,SNR=9.0						
NVS	Novosibirsk	50.98	45	eP	P	05 09 23.9	+2.6
NVS				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
NVS	Novosibirsk	50.98	45	eP	P	05 09 23.9	+2.6
	comp=Z,12nm,1.2s,mb4.7						
WMOK	Wichita Mounta	51.87	273	eP	P	05 09 26.9	-1.4
	comp=Z,11nm,1.4s,mb4.6						
WMOK	Wichita Mounta	51.87	273	eP	P	05 09 26.9	-1.5
	comp=Z,11nm,1.4s,mb4.6						
ELK	Elko	54.48	291	eP	P	05 09 48.0	+0.4
	comp=Z,3.7nm,0.9s,mb4.3						
ELK	Elko	54.48	291	eP	P	05 09 48.0	+0.4
	comp=Z,3.7nm,0.9s,mb4.3						
JCT	Junction City	55.88	271	eP	P	05 09 55.5	-2.4
	comp=Z,15nm,1.0s,mb5.0						
JCT	Junction City	55.88	271	eP	P	05 09 55.5	-2.5
	comp=Z,15nm,1.0s,mb5.0						
GDL2	Guadalupe Moun	56.58	276	eP	P	05 10 01.9	-1.1
GDL2	Guadalupe Moun	56.58	276	eP	P	05 10 01.9	-1.0
DBIC	Dimbokro	57.63	154	P	P	05 10 08.9	-1.7
	comp=Z,4.4nm,0.8s,mb4.5,baz=340,slow=6.7,SNR=4.5						
AAK	Ala-Archa	57.93	59	eP	P	05 10 13.0	+0.6
AAK				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.7						
AAK	Ala-Archa	57.93	59	eP	P	05 10 13.0	+0.7
	comp=Z,13nm,1.6s,mb4.7						
AAK	Ala-Archa	57.93	59	eP	P	05 10 13.0	+0.6
	comp=Z,13nm,1.6s,mb4.7						
TXAR	Lajitas Array	58.65	274	P	P	05 10 16.2	-1.4
	comp=Z,0.8nm,0.7s,mb3.9,baz=66,slow=4.9,SNR=6.5						
ZAK	Zakamensk	60.86	34	eP	P	05 10 34.0	+1.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.3						
ZAK	Zakamensk	60.86	34	eP	P	05 10 34.0	+1.5
	comp=Z,3.0nm,1.1s,mb4.3						
SONM	Songino Array	64.01	33	P	P	05 10 54.9	+1.5
	comp=Z,4.0nm,1.1s,mb4.4,baz=337,slow=9.4,SNR=8.3						
ULN	Ulaanbaatar	64.15	33	eP	P	05 10 55.5	+1.2
ULN				pmax	pmax		
	comp=Z,25nm,1.5s,mb5.0						
ULN	Ulaanbaatar	64.15	33	eP	P	05 10 55.5	+1.2
	comp=Z,25nm,1.5s,mb5.0						
ULN	Ulaanbaatar	64.15	33	eP	P	05 10 55.5	+1.2
	comp=Z,25nm,1.5s,mb5.0						
ROSC	El Rosal	67.23	233	P	P	05 11 14.9	+0.2
	comp=Z,2.2nm,0.5s,mb4.5,baz=114,slow=17,SNR=4.7						
BDFB	Brasilia	79.44	201	P	P	05 12 25.0	-1.0
	comp=Z,3.1nm,0.7s,mb4.4,baz=3.9,slow=2.3,SNR=5.7						
SIV	San Ignacio	82.59	214	P	P	05 12 41.9	-0.7
	comp=Z,1.7nm,0.7s,mb4.2,baz=44,slow=5.8,SNR=8.7						
LPAZ	La Paz	84.86	220	P	P	05 12 54.0	0.0
	comp=Z,0.7nm,0.8s,mb3.9,baz=285,slow=3.6,SNR=4.3						
CMAR	Chiang Mai Arr	88.81	51	P	P	05 13 14.2	+0.9
	comp=Z,2.4nm,0.9s,mb4.5,baz=323,slow=7.1,SNR=5.7						
MAW	Mawson	144.42	139	PKP	PKPdf	05 19 52.3	-2.8
	comp=Z,3.4nm,0.9s,baz=309,slow=7.1,SNR=4.2						
STKA	Stephens Creek	148.69	20	PKPbc	PKPdf	05 20 06.6	+3.3
	comp=Z,1.6nm,0.8s,baz=334,slow=5.4,SNR=3.1						

*IDC **07** 05:03:14.5±0.6, 12.72N×93.09E, mb4.2/19, mb1 4.4/20, mb1mx4.3/27, mbtmp4.3/20, ML5.3/1, Error ellipse: s-maj=21.2km s-min=14.3km az=59.0*

*MOS **07** 05:03:17.7±1.1, 12.73N×93.25E, h33^{km}, mb4.9/4, Error ellipse: s-maj=17.0km s-min=9.4km az=105.6*

*BJI **07** 05:03:17.3, 12.46N×93.46E, h41^{km}, mB4.8, mb4.8, Ms4.0*

*NEIC **07** 05:03:19.1±0.4, 12.70N×93.16E, h30^{km}, mb4.5/8, Error ellipse: s-maj=9.6km s-min=7.1km az=54.0*

ISC 07 05:03:20.5±1.2**, 12.80N**±0.07×**93.24E**±0.04**, h55**^{km}±9^{km}**, h51**^{km}±5.5^{km}**: pP-P, n65,** σ1^{s}**00**/67**, mb4.3**/27**, MS3.8**/1**, 1C-4D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	1.23	203	ex	x	05 04 07.4	
PBA				AML	AML	05 04 11.4	
	comp=E,5µm,0.3s						
PBA				AML	AML	05 04 11.5	
	comp=N,7µm,0.3s						
NNT	Nongplab	6.34	91	P	P	05 04 55.0	+1.4
NST	Nakhon Sawan	7.27	66	P	P	05 05 06.5	0.0
	comp=N,252nm,0.5s						
CM31	Chiang Mai Arr	7.87	44	ePn	P	05 05 14.1	-0.7
	comp=N,75nm,0.5s						
CMAR	Chiang Mai Arr	7.87	44	Pn	P	05 05 14.0	-0.7
	comp=N,10nm,0.3s,baz=235,slow=15,SNR=79						
CMAR				Sn	S	05 06 39.3	-3.9
	comp=N,0.9nm,0.3s,baz=235,slow=26,SNR=3.8						
NANT	Nan	9.34	49	⇓P	P	05 05 34.0	-1.0
	comp=N,190nm,1.0s						
KKTK	Khon Kaen	9.92	68	P	P	05 05 45.5	+2.4
	comp=N,1µm,0.5s						
BWNR	Bhubaneshwar	10.31	317	eP	P	05 05 47.3	-1.1
BWNR				eS	S	05 07 31.8	-12
BWNR				AML	AML	05 07 38.3	
	comp=E,734nm,0.3s						
BWNR				AML	AML	05 07 38.4	
	comp=N,443nm,0.3s						
VIS	Vishakhapatnam	10.74	298	eP	P	05 05 50.7	-3.5
VIS				eS	S	05 07 39.1	-15
SHL	Shillong	12.77	354	eP	P	05 06 16.0	-5.5
SHL				ex	x	05 08 00.0	
SHL				ex	x	05 08 27.0	
SHL				eS	S	05 08 32.0	-11
BLSP	Bilaspur	14.08	313	eP	P	05 06 37.3	-1.4
BLSP				AMb	AMB	05 06 38.0	
	comp=Z,16nm,0.5s						
BLSP				ex	x	05 08 58.5	
HYB	Hyderabad	14.90	290	i P	P	05 06 49.0	-0.5
HYB				eS	S	05 09 34.0	+0.5
NGP	Nagpur	15.90	303	ex	P	05 07 03.6	+1.4
NGP				ex	x	05 09 44.7	
PKI	Pulchoki	16.43	335	eP	P	05 07 08.8	0.0
	comp=Z,48nm,0.7s						
PKI	Pulchoki	16.43	335	eP	P	05 07 08.8	0.0
PKI				pmax	pmax		
	comp=Z,24nm,0.7s						
GUN	Gumba	16.54	337	eP	P	05 07 10.5	+0.3
	comp=Z,27nm,0.4s						
DMN	Daman	16.59	334	eP	P	05 07 10.8	0.0
	comp=Z,50nm,0.7s						
KKN	Kakani	16.67	335	eP	P	05 07 11.8	-0.1
	comp=Z,31nm,0.7s						
KKN	Kakani	16.67	335	eP	P	05 07 11.8	-0.1
KKN				pmax	pmax		
	comp=Z,16nm,0.7s						
LSA	Lhasa	16.93	354	P	P	05 07 17.2	+2.1
LSA				AMB	AMB		
	comp=Z,30nm,0.8s						
GKN	Gorkha	17.13	333	eP	P	05 07 17.5	-0.2
	comp=Z,24nm,0.3s						
KOLN	Koldanda	17.41	330	eP	P	05 07 22.1	+0.9
	comp=Z,17nm,0.3s						
BHPL	Bhopal	18.26	307	eP	P	05 07 32.7	+1.0
BHPL				AMb	AMB	05 07 34.7	
	comp=Z,22nm,1.1s						
BHPL				ex	S	05 10 45.3	-4.9
GYA	Guiyang	18.54	41	⇓iP	P	05 07 34.9	-0.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
POO	Poona	19.51	289	eP	P	05 07 41.0	-5.1
AJM	Ajmer	22.14	311	eP	P	05 08 12.3	-0.6
AJM				AMb	AMB	05 08 31.0	
	comp=Z,30nm,1.4s,mb4.5						
LZH	Lanzhou	25.08	21	⇑P	P	05 08 41.5	0.0
LZH				AP	pP	05 08 50.0	-5.0
LZH				XP	sP	05 08 55.0	-6.7
LZH				AMB	AMB		
	comp=Z,40nm,1.0s,mb4.9						
XAN	Xi’an	25.51	31	P	P	05 08 44.0	-1.6
XAN				AP	pP	05 08 58.5	-0.6
XAN				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.0						
GTA	Gaotai	27.14	11	eP	P	05 09 01.1	+0.5
GTA				AP	pP	05 09 14.2	0.0
GTA				XP	sP	05 09 21.2	+0.3
GTA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.2						
GTA				AMB	AMB		
	comp=Z,90nm,7.6s						
GTA				LR	LR		
	comp=N,190nm,16.7s,MS3.8						
GTA				LR	LR		
	comp=E,100nm,14.4s,MS3.8						
MKAR	Makanchi Array	35.12	347	P	P	05 10 10.0	-0.6
	comp=E,4.7nm,0.9s,mb4.4,baz=169,slow=7.3,SNR=18						
SONM	Songino Array	36.62	15	P	P	05 10 23.6	+0.3
	comp=E,2.6nm,0.9s,mb4.0,baz=196,slow=9.0,SNR=12						
TLY	Talaya	39.69	10	⇓iP	P	05 10 50.3	+1.5
CN2	Changchun	41.46	36	eP	P	05 11 03.7	+0.2
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
ZAL	Zalesovo	41.58	352	P	P	05 11 04.4	0.0
	comp=Z,2.6nm,0.3s,mb4.3,baz=334,slow=6.8,SNR=6.0						
FITZ	Fitzroy Crossi	44.32	133	P	P	05 11 27.2	+0.1
	comp=Z,3.3nm,0.4s,mb4.4,baz=265,slow=22,SNR=8.2						
WRA	Warramunga Arr	51.91	128	P	P	05 12 25.5	-0.5
	comp=Z,0.8nm,0.8s,mb3.7,baz=305,slow=9.8,SNR=13						
ASAR	Alice Springs	53.80	132	P	P	05 12 39.8	-0.4
	comp=Z,0.7nm,0.5s,mb3.9,baz=310,slow=6.7,SNR=12						
BRTR	Keskin Array B	58.62	309	P	P	05 13 13.6	-0.7
	comp=Z,4.2nm,0.9s,mb4.5,baz=123,slow=7.3,SNR=17						
OBN	Obninsk	60.79	327	P	P	05 13 31.0	+2.0
TIXI	Tiksi	62.62	12	⇓iP	P	05 13 39.8	-1.3
MA2	Magadan	62.87	29	eP	P	05 13 40.5	-2.5
MA2				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.2						
MA2	Magadan	62.87	29	eP	P	05 13 40.5	-2.5
	comp=Z,24nm,1.1s,mb5.2						
AKASG	Malin Array Be	63.79	320	P	P	05 13 46.9	-2.2
	comp=Z,0.3nm,0.3s,mb3.8,baz=84,slow=4.7,SNR=5.4						
FINES	FINESS Array B	67.98	331	P	P	05 14 15.2	-0.4
	comp=Z,1.2nm,0.6s,mb4.1,baz=90,slow=5.7,SNR=7.9						
ARCES	ARCESS Array B	70.37	340	P	P	05 14 30.6	+0.5
	comp=Z,2.4nm,0.8s,mb4.2,baz=79,slow=6.2,SNR=5.6						
MATP	Matopo	71.69	243	P	P	05 14 38.0	-0.9
	comp=Z,3.2nm,0.9s,mb4.2,baz=77,slow=6.6,SNR=5.2						
BILL	Bilibino	71.88	22	i P	P	05 14 38.7	-0.5
BILL				S	S	05 23 58.0	+3.4
BILL				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.5						
GERES	GERESS Array B	73.61	317	P	P	05 14 50.5	+0.7
	comp=Z,2.9nm,0.7s,mb4.3,baz=90,slow=5.3,SNR=23						
KHC	Kasperske Hory	73.69	318	eP	P	05 14 51.0	+0.8
KHC				e	pP	05 15 06.0	+0.3
KHC	Kasperske Hory	73.69	318	eP	P	05 14 51.0	+0.8
KHC				PCP	PcP	05 15 06.0	0.0
HFS	Hagfors	73.79	329	P	P	05 14 50.6	+0.1
	comp=Z,1.5nm,0.5s,mb4.2,baz=127,slow=7.2,SNR=5.3						
NB2	NORSAR Subarra	75.04	330	P	P	05 14 57.0	-0.8
	comp=Z,1.1nm,0.7s,mb3.9,baz=93,slow=5.3						
NOA	NORSAR Array B	75.04	330	P	P	05 14 57.6	-0.2
	comp=Z,1.4nm,0.8s,mb3.9,baz=93,slow=5.5,SNR=4.1						
DAVOX	Davos	76.27	315	P	P	05 15 04.2	-0.9
	comp=Z,1.6nm,0.5s,mb4.2,baz=156,slow=20,SNR=2.3						
BOSA	Boshof	77.48	237	P	P	05 15 12.3	+0.1
	comp=Z,4.3nm,0.7s,mb4.5,baz=85,slow=4.6,SNR=10						
BOSA	Boshof	77.48	237	P	P	05 15 12.3	+0.1
LPG	La Plagne	78.55	314	eP	P	05 15 18.4	+0.6
	comp=Z,15nm,0.7s,mb4.7						
LPG	La Plagne	78.55	314	eP	P	05 15 18.4	+0.6
LPG				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
EKA	Eskdalemuir Ar	83.20	325	P	P	05 15 43.0	+1.1
	comp=Z,1.6nm,0.8s,mb4.1,baz=82,slow=5.9,SNR=4.6						
IMA	Indian Mountai	87.43	22	eP	P	05 16 04.3	+1.6
ILAR	Eielson Array	90.54	22	P	P	05 16 17.2	-0.2
	comp=Z,0.8nm,0.6s,mb4.2,baz=290,slow=5.3,SNR=6.7						
INK	Inuvik	92.53	16	P	P	05 16 27.4	+0.8
	comp=Z,0.7nm,0.4s,mb4.4,baz=267,slow=3.7,SNR=5.7						
NVAR	Mina Array Bea	121.11	29	PKP	PKPdf	05 22 11.1	+3.6
	comp=Z,0.9nm,0.6s,slow=1.8,SNR=4.1						
TXAR	Lajitas Array	135.05	21	PKP	PKPdf	05 22 37.3	+2.9
	comp=Z,0.4nm,0.5s,baz=106,slow=0.1,SNR=7.2						
PLCA	Paso Flores	148.74	204	PKPbc	PKPdf	05 23 02.1	+4.1
	comp=Z,5.7nm,1.2s,baz=90,slow=2.0,SNR=2.3						

*IDC **07** 05:03:31.2±0.9, 13.12N×93.08E, mb4.3/14, mb1 4.5/15, mb1mx4.3/25, mbtmp4.3/15, ML5.3/1, Error ellipse: s-maj=37.4km s-min=18.0km az=47.0*

*MOS **07** 05:03:34.3±1.1, 13.22N×93.31E, h35^{km}, mb4.6/13, Error ellipse: s-maj=23.8km s-min=13.9km az=113.5*

ISC 07 05:03:34.6±0.7**, 13.3N**±0.1×**93.29E**±0.10**, h33**^{km}**, n29,** σ1^{s}**03**/29**, mb4.3**/15**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.50	46	P	P	05 05 24.0	-0.3
CMAR				pmax	pmax		
	comp=Z,11nm,0.3s						
CMAR	Chiang Mai Arr	7.50	46	Pn	Pn	05 05 23.9	-0.6
	comp=Z,11nm,0.3s,baz=237,slow=18,SNR=29						
MKAR	Makanchi Array	34.69	347	P	P	05 10 24.4	+1.2
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	Makanchi Array	34.69	347	P	P	05 10 24.4	+1.2
	comp=Z,5.3nm,0.8s,mb4.5,baz=164,slow=8.8,SNR=11						
ZAL	Zalesovo	41.13	352	P	P	05 11 18.0	+0.9
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZAL	Zalesovo	41.13	352	P	P	05 11 18.0	+0.8
	comp=Z,2.8nm,0.3s,mb4.3,baz=305,slow=6.6,SNR=6.3						
FITZ	Fitzroy Crossi	44.60	134	P	P	05 11 46.3	+0.5
	comp=Z,7.5nm,0.6s,mb4.7,baz=333,slow=3.5,SNR=6.8						
WRA	Warramunga Arr	52.15	129	P	P	05 12 43.8	-0.5
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	52.15	129	P	P	05 12 43.8	-0.5
	comp=Z,1.5nm,0.7s,mb4.1,baz=306,slow=8.2,SNR=9.5						
BRTR	Keskin Array B	58.37	309	P	P	05 13 27.9	-1.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	58.37	309	P	P	05 13 27.9	-1.3
	comp=Z,2.0nm,0.7s,mb4.2,baz=135,slow=7.0,SNR=6.0						
AKASG	Malin Array Be	63.47	320	P	P	05 14 02.9	-0.7
	comp=Z,0.3nm,0.2s,mb4.0,baz=90,slow=4.7,SNR=5.7						
FINES	FINESS Array B	67.60	331	P	P	05 14 29.3	-0.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	67.60	331	P	P	05 14 29.3	-0.5
	comp=Z,1.4nm,0.7s,mb4.1,baz=108,slow=6.0,SNR=7.7						
ARCES	ARCESS Array B	69.95	340	P	P	05 14 42.6	-1.6
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	69.95	340	P	P	05 14 42.6	-1.6
	comp=Z,1.4nm,0.6s,mb4.1,baz=101,slow=6.2,SNR=5.3						
BRG	Berggiesshubel	73.12	319	i P	P	05 15 04.9	+1.4
BRG				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
GERES	GERESS Array B	73.30	317	P	P	05 15 05.4	+0.8
GERES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GERES	GERESS Array B	73.30	317	P	P	05 15 05.4	+0.8
	comp=Z,5.1nm,0.7s,mb4.6,baz=90,slow=5.3,SNR=16						
HFS	Hagfors	73.42	329	P	P	05 15 05.6	+0.5
HFS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HFS	Hagfors	73.42	329	P	P	05 15 05.6	+0.6
	comp=Z,5.4nm,1.0s,mb4.4,baz=124,slow=5.3,SNR=5.8						
NOA	NORSAR Array B	74.67	330	P	P	05 15 11.7	-0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	74.67	330	P	P	05 15 11.7	-0.6
	comp=Z,1.0nm,0.8s,mb3.8,baz=89,slow=6.0,SNR=3.4						
DAVOX	Davos	75.98	315	P	P	05 15 19.2	-0.8
	comp=Z,1.6nm,0.5s,mb4.2,baz=76,slow=4.2,SNR=4.1						
DAVOS	Davos	76.03	315	P	P	05 15 19.2	-1.2
EKA	Eskdalemuir Ar	82.85	325	P	P	05 15 58.2	+1.3
EKA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
EKA	Eskdalemuir Ar	82.85	325	P	P	05 15 58.1	+1.2
	comp=Z,4.2nm,0.7s,mb4.6,baz=91,slow=5.9,SNR=8.4						
ILAR	Eielson Array	90.09	22	P	P	05 16 34.9	+2.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	90.09	22	P	P	05 16 34.9	+2.7
	comp=Z,1.1nm,0.7s,mb4.3,baz=303,slow=5.3,SNR=6.5						

*CSEM **07** 05:06:46.4±0.1, 43.42N×18.78E, h12^{km}, ML2.6, Error ellipse: s-maj=2.5km s-min=1.1km az=118.0*

*BEO **07** 05:06:47.1±0.3, 43.41N×18.82E, h14^{km}±1^{km}*

*NEIC **07** 05:06:47.3, 43.38N×18.82E, h14^{km}, ML2.6(PDG), After PDG.*

*PDG **07** 05:06:47.3±0.2, 43.38N×18.82E, h14^{km}±1^{km}*

ISC 07 05:06:45.9±0.7,**43.43N**±0.03×**18.73E**±0.04,**h3^{km}**±5^{km},**n21**,σ**1^{s}13**/40,**7C-3D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPM	**Unac-Piva**	**0.26**	**150**	⇑*i*Pg	**Pg**	**05 06 51.7**	**+0.5**
UPM				*e*Sg	**Sg**	**05 06 55.0**	**+0.2**
PLE	**Pljevlja**	**0.49**	**102**	⇑*i*Pg	**Pg**	**05 06 55.5**	**-0.3**
PLE				*e*Sg	**Sg**	**05 07 02.1**	**-0.3**
BRY	**Bratogost**	**0.55**	**195**	⇓*i*Pg	**Pg**	**05 06 57.0**	**+0.1**
BRY				*e*Sg	**Sg**	**05 07 05.9**	**+1.6**
NKY	**Niksic**	**0.65**	**162**	*e*Pg	**Pg**	**05 06 58.3**	**-0.6**
NKY				*e*Sg	**Sg**	**05 07 07.5**	**-0.1**
BBLS	**Bajina Basta -**	**0.66**	**48**	⇑*i*Pg	**Pg**	**05 06 59.2**	**+0.1**
BBLS				Sn	**Sn**	**05 07 07.2**	**-5.7**
NVSS	**Nova Varos 2**	**0.71**	**84**	⇓*i*Pg	**Pg**	**05 07 01.4**	**+1.3**
NVSS				Sg	**Sg**	**05 07 10.8**	**+1.2**
TREB	**Trebinje**	**0.77**	**202**	Sn	**Sn**	**05 07 13.8**	**-1.8**
STON	**Ston**	**0.94**	**234**	*i* Pg	**Pg**	**05 07 04.5**	**-0.2**
STON				*i* Sg	**Sg**	**05 07 19.8**	**+2.5**
STON	**Ston**	**0.94**	**234**	*i* Pg	**Pg**	**05 07 04.5**	**-0.2**
STON				*i* Sg	**Sg**	**05 07 19.7**	**+2.5**
HCY	**Herceg Novi**	**1.00**	**190**	*e*Pg	**Pg**	**05 07 05.4**	**-0.5**
HCY				*e*Sg	**Sg**	**05 07 20.5**	**+1.3**
IVA	**Berane**	**1.02**	**123**	⇑*i*Pg	**Pg**	**05 07 04.8**	**-1.5**
IVA				*e*Sg	**Sg**	**05 07 19.3**	**-0.7**
TTG	**Podgorica**	**1.07**	**159**	*e*Pg	**Pg**	**05 07 05.5**	**-1.8**
TTG				*e*Sg	**Sg**	**05 07 21.3**	**-0.4**
DIVS	**Divcibare**	**1.13**	**53**	⇑*i*Pg	**Pg**	**05 07 07.8**	**-0.7**
DIVS				Sg	**Sg**	**05 07 23.9**	**+0.3**
PVY	**Plav**	**1.24**	**132**	⇑*i*Pg	**Pg**	**05 07 08.6**	**-2.0**
PVY				*e*Sg	**Sg**	**05 07 27.0**	**-0.1**
GRUS	**Gruza**	**1.51**	**72**	⇓*i*Pn	**Pn**	**05 07 14.1**	**0.0**
GRUS				Sn	**Sn**	**05 07 34.3**	**-0.2**
ULC	**Ulcinj**	**1.52**	**165**	*e*Pg	**Pg**	**05 07 14.6**	**-1.6**
ULC				*e*Sg	**Sg**	**05 07 35.9**	**-0.6**
PUK	**Puka**	**1.63**	**148**	*i* Pg	**Pg**	**05 07 16.8**	**-1.7**
PUK				*i* Sg	**Sg**	**05 07 42.3**	**+2.1**
PUK	**Puka**	**1.63**	**148**	*e*Pg	**Pg**	**05 07 16.8**	**-1.7**
PUK				*i* Sg	**Sg**	**05 07 42.3**	**+2.1**
SVIS	**Svilajnac**	**2.00**	**64**	*e*Pn	**Pn**	**05 07 21.3**	**+0.3**
SVIS				Sn	**Sn**	**05 07 46.9**	**+0.1**
QSH	**Qafa e Shtames**	**2.10**	**155**	*i* Pg	**Sg**	**05 07 58.0**	**+2.2**
BOLS	**Boljevac**	**2.38**	**79**	⇑*i*Pn	**Pn**	**05 07 26.7**	**+0.2**
BOLS				Sn	**Sn**	**05 07 58.8**	**+2.3**

*IDC **07** 05:07:39.9±1.5,2.14N×95.98E,mb4.2/9,mb1 4.3/10, mb1mx4.0/22,mbtmp4.2/10,ML4.0/1,MS3.8/1,Ms1 4.0/1, ms1mx3.3/21,Error ellipse: s-maj=66.2km s-min=17.7km az=55.0*

*NEIC **07** 05:07:44.4±0.9,2.20N×96.13E,h30^{km},mb4.3/1,Error ellipse: s-maj=23.7km s-min=14.5km az=56.0*

ISC 07 05:07:43.4±0.9,**2.2N**±0.1×**96.2E**±0.1,**h33^{km},n14,** σ**0^{s}83**/13,**mb4.2**/10,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.39**	**56**	*e*Pn	**Pn**	**05 09 02.8**	**-0.8**
CMAR	**Chiang Mai Arr**	**16.34**	**9**	Pn	**P**	**05 11 33.4**	**+1.3**
	0.2nm,0.3s,baz=193,slow=10,SNR=7.3						
CMAR				LR	LR	05 18 35.3	
	comp=Z,308nm,20.2s,baz=188,slow=40						
WRA	**Warramunga Arr**	**43.44**	**122**	P	**P**	**05 15 44.3**	**-1.0**
	1.0nm,0.9s,mb3.5,baz=299,slow=8.8,SNR=3.2						
AAK	**Ala-Archa**	**44.65**	**337**	*e*P	**P**	**05 15 54.2**	**-0.6**
	5.2nm,1.3s,mb4.2						
MKAR	**Makanchi Array**	**46.00**	**347**	P	**P**	**05 16 05.7**	**+0.1**
	6.5nm,0.9s,mb4.5,baz=162,slow=7.7,SNR=25						
SONM	**Songino Array**	**46.27**	**10**	P	**P**	**05 16 07.7**	**+0.1**
	1.3nm,0.5s,mb4.1,baz=190,slow=8.6,SNR=9.5						
ZAL	**Zalesovo**	**52.38**	**352**	P	**P**	**05 16 54.1**	**-0.3**
	2.5nm,0.6s,mb4.3,baz=290,slow=8.2,SNR=12						
CTA	**Charters Tower**	**53.87**	**117**	P	**P**	**05 17 07.7**	**+1.7**
	2.7nm,0.5s,mb4.5,baz=225,slow=5.7,SNR=2.3						
CTA	**Charters Tower**	**53.87**	**117**	P	**P**	**05 17 07.7**	**+1.7**
STKA	**Stephens Creek**	**54.80**	**132**	P	**P**	**05 17 12.6**	**0.0**
	1.7nm,1.0s,mb4.0,baz=333,slow=11,SNR=2.9						
BVAR	**Borovoye Array**	**54.95**	**341**	P	**P**	**05 17 12.5**	**-0.9**
	2.1nm,0.8s,mb4.2,baz=135,slow=10,SNR=8.8						
FINES	**FINESS Array B**	**78.62**	**333**	P	**P**	**05 19 42.9**	**-0.4**
	0.8nm,0.7s,mb3.8,baz=117,slow=9.3,SNR=3.0						
ARCES	**ARCESS Array B**	**81.22**	**340**	P	**P**	**05 19 58.2**	**+1.0**
	4.2nm,1.2s,mb4.2,baz=56,slow=3.3,SNR=2.8						
WMOK	**Wichita Mounta**	**140.63**	**20**	*e*PKPdf	PKPdf	05 27 09.0	-1.3

*IDC **07** 05:12:06.9±0.6,62.46S×161.66W,mb4.4/12,mb1 4.5/13, mb1mx4.4/18,mbtmp4.4/13,ML3.0/1,MS4.9/9,Ms1 4.9/9, ms1mx4.8/17,Error ellipse: s-maj=23.7km s-min=13.9km az=32.0*

*BJI **07** 05:12:08.2,62.40S×161.40W,h10^{km},mB5.4,Ms5.2, Msz4.9*

*HRVD **07** 05:12:08.2±0.2,62.62S×161.79W,h12^{km},MW5.4/60, Centroid moment Tensor Solution. LP body waves: s47,c73;Mantle waves: s60,c96; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.20±.04; $M_{\theta\theta}$1.37±.04; $M_{\phi\phi}$-1.17±.03; $M_{r\theta}$-0.27±.09; $M_{\theta\phi}$0.28±.04; $M_{\phi r}$0.49±.08; Best double couple: $M_0$1.424×10^{17} NP1: ϕ_s221°,δ68°,λ-169°. NP2:ϕ_s127°,δ80°,λ-22°. Principal axes: T 1.43, Plg8°, Azm175°; N -.011, Plg65°, Azm283°; P -1.419, Plg23°, Azm82°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **07** 05:12:08.2±0.4,62.40S×161.44W,h10^{km},mb4.9/7 Error ellipse: s-maj=13.0km s-min=8.0km az=48.0*

ISC 07 05:12:06.2±0.5,**62.28S**±0.07×**161.5W**±0.2,**h10^{km}, (h10^{km}**±.1^{km}**:pP-P),n62,**σ**1^{s}11**/40,**mb4.6**/15,**MS4.8**/11, **4C-1D,Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	**Scott Base**	**18.54**	**201**	*e*P	**P**	**05 16 24.1**	**-0.3**
	135nm,2.1s						
VNDA	**Vanda**	**19.20**	**203**	P	**P**	**05 16 31.0**	**-1.3**
	0.0nm,0.3s,baz=58,slow=8.7,SNR=13						
VNDA				LR	LR	05 21 53.9	
	comp=Z,7µm,20.9s,baz=60,slow=31						
VNDA	**Vanda**	**19.20**	**203**	*e*P	**P**	**05 16 33.0**	**+0.7**
	35nm,1.4s						
RPZ	**Rata Peaks**	**24.56**	**306**	LR	LR	05 24 24.4	
	comp=Z,952nm,19.8s,MS4.3,baz=316,slow=30						
URZ	**Urewera**	**27.41**	**321**	P	**P**	**05 17 55.9**	**+2.3**
	12nm,1.1s,mb4.3,baz=162,slow=4.0,SNR=3.4						
URZ				LR	LR	05 26 26.2	
	comp=Z,2µm,20.6s,MS4.7,baz=21,slow=31						
QSPA	**South Pole Qui**	**27.83**	**180**	*e*P	**P**	**05 17 57.0**	**+0.1**
	13nm,1.1s,mb4.5						
CASY	**Casey**	**35.41**	**224**	*e*P	**P**	**05 19 04.1**	**+0.4**
	15nm,1.1s,mb4.8						
TBI	**Tubuai**	**39.77**	**17**	*e*S	**S**	**05 25 42.7**	**-1.7**
	312nm,28.2s						
TBI				*e*LR	LR	05 30 03.6	
	4µm,28.2s,baz=189						
RAR	**Rarotonga**	**41.06**	**2**	LR	LR	05 32 12.1	
	comp=Z,1µm,19.1s,MS4.8,baz=172,slow=29						
RKT	**Rikitea**	**43.08**	**37**	*e*LQ		05 30 09.1	
	3µm,40.0s						
RKT				*e*LR	LR	05 31 53.0	
	2µm,27.5s,baz=195						
VNA3	**Neumayer Olymp**	**45.32**	**168**	*e*	**P**	**05 20 27.4**	**+2.1**
VNA3	**Neumayer Olymp**	**45.32**	**168**	*e*	**P**	**05 20 35.1**	**+10**
VNA3	**Neumayer Olymp**	**45.32**	**168**	*e*	**P**	**05 20 45.0**	**+20**
VNA3	**Neumayer Olymp**	**45.32**	**168**	*e*		05 25 49.6	
VNA3	**Neumayer Olymp**	**45.32**	**168**	⇑*i*P	**P**	**05 20 24.3**	**-1.0**
VNA3				*e*	pP	05 20 27.4	-0.9
VNA3				*e*		05 20 35.1	
VNA3				*e*		05 20 45.0	
VNA3				*e*		05 25 49.6	
PPT	**Papeete**	**45.44**	**16**	*e*S	**S**	**05 27 06.5**	**-1.1**
	544nm,20.5s						
PPT				*e*LR	LR	05 32 34.2	
	5µm,25.2s,baz=194						
PPT	**Papeete**	**45.44**	**16**	LR	LR	05 34 20.7	
	comp=Z,2µm,18.2s,MS5.1,baz=186,slow=29						
SNAA	**Sanae**	**45.51**	**171**	*e*	**P**	**05 20 28.7**	**+2.0**
SNAA	**Sanae**	**45.51**	**171**	*e*	**P**	**05 20 35.7**	**+9.0**
SNAA	**Sanae**	**45.51**	**171**	*e*	tx	05 20 48.2	
SNAA	**Sanae**	**45.51**	**171**	*e*		05 25 49.7	
SNAA	**Sanae**	**45.51**	**171**	P	**P**	**05 20 26.0**	**-0.7**
	7.2nm,1.2s,mb4.5,baz=190,slow=5.3,SNR=10						
SNAA	**Sanae**	**45.51**	**171**	⇑*i*P	**P**	**05 20 25.7**	**-1.0**
SNAA				*e*	pP	05 20 28.7	-1.0
SNAA				*e*		05 20 35.7	
SNAA				*e*		05 20 48.2	
SNAA				*e*		05 25 49.7	
DZM	**Mont Dzumac**	**45.76**	**317**	P	**P**	**05 20 28.7**	**-0.6**
	11nm,1.0s,mb4.7,baz=164,slow=23,SNR=3.0						
VNA2	**Neumayer--Watz**	**45.85**	**168**	*e*	**P**	**05 20 30.7**	**+1.3**
VNA2	**Neumayer--Watz**	**45.85**	**168**	*e*	**P**	**05 20 36.9**	**+7.5**
VNA2	**Neumayer--Watz**	**45.85**	**168**	*e*	**P**	**05 20 48.4**	**+19**
VNA2	**Neumayer--Watz**	**45.85**	**168**	*e*		05 25 52.5	
VNA2	**Neumayer--Watz**	**45.85**	**168**	⇑*i*P	**P**	**05 20 27.8**	**-1.6**
VNA2				*e*	pP	05 20 30.7	-1.7
VNA2				*e*		05 20 36.9	
VNA2				*e*		05 20 48.4	
VNA2				*e*		05 25 52.5	
VNA1	**Neumayer--Stat**	**46.03**	**168**	*e*	**P**	**05 20 33.3**	**+2.5**
VNA1	**Neumayer--Stat**	**46.03**	**168**	*e*	**P**	**05 20 39.9**	**+9.1**
VNA1	**Neumayer--Stat**	**46.03**	**168**	*e*	**P**	**05 20 47.6**	**+17**
VNA1	**Neumayer--Stat**	**46.03**	**168**	*e*		05 25 50.5	
VNA1	**Neumayer--Stat**	**46.03**	**168**	⇑*i*P	**P**	**05 20 30.2**	**-0.6**
VNA1				*e*	pP	05 20 33.3	-0.6
VNA1				*e*		05 20 39.9	
VNA1				*e*		05 20 47.6	
VNA1				*e*		05 25 50.5	
MAW	**Mawson**	**46.50**	**202**	P	**P**	**05 20 32.6**	**-2.0**
	3.4nm,0.9s,mb4.3,baz=345,slow=12,SNR=2.1						
MAW				LR	LR	05 38 14.6	
	comp=Z,1µm,18.7s,MS4.9,baz=147,slow=34						
STKA	**Stephens Creek**	**47.03**	**283**	P	**P**	**05 20 40.8**	**+1.5**
	10nm,1.1s,mb4.7,baz=133,slow=6.1,SNR=6.3						
STKA				LR	LR	05 35 57.8	
	comp=Z,1µm,21.1s,MS4.9,baz=132,slow=30						
SYO	**Syowa Base**	**48.14**	**190**	⇓pP	pP	05 20 49.0	-1.5
RPN	**Rapa Nui**	**48.95**	**69**	LR	LR	05 36 38.8	
	comp=Z,2µm,19.4s,MS5.2,baz=261,slow=30						
CTA	**Charters Tower**	**55.20**	**295**	P	**P**	**05 21 41.4**	**0.0**
	4.6nm,0.5s,mb4.8,baz=164,slow=7.6,SNR=4.6						
CTAO	**Charters Tower**	**55.20**	**295**	*e*P	**P**	**05 21 42.5**	**+1.1**
	40nm,1.8s,mb5.2						
PLCA	**Paso Flores**	**55.33**	**112**	P	**P**	**05 21 41.8**	**-0.2**
	3.7nm,1.0s,mb4.4,baz=202,slow=6.4,SNR=4.6						
ASAR	**Alice Springs**	**57.55**	**281**	P	**P**	**05 21 57.5**	**-0.6**
	10nm,1.1s,mb4.8,baz=149,slow=7.1,SNR=22						
ASPA	**Alice Springs**	**57.55**	**281**	*e*P	**P**	**05 21 57.5**	**-0.6**
HNR	**Honiara**	**59.70**	**315**	P	**P**	**05 22 12.3**	**-0.9**
	36nm,0.3s,baz=192,slow=4.6,SNR=3.5						
WRA	**Warramunga Arr**	**60.58**	**284**	P	**P**	**05 22 17.8**	**-1.3**
	4.8nm,1.0s,mb4.6,baz=157,slow=6.0,SNR=11						
WRAB	**Tennant Creek**	**60.58**	**284**	*e*P	**P**	**05 22 19.7**	**+0.6**
	49nm,1.7s,mb5.4						
CFAA	**Coronel Fontan**	**63.99**	**109**	P	**P**	**05 22 41.7**	**0.0**
	0.3nm,0.8s,baz=225,slow=5.0,SNR=6.3						
CFAA				LR	LR	05 44 23.7	
	comp=Z,59nm,19.6s,MS3.8,baz=332,slow=30						
FITZ	**Fitzroy Crossi**	**66.18**	**276**	P	**P**	**05 22 56.7**	**+0.7**
	4.8nm,0.8s,mb4.6,baz=112,slow=11,SNR=3.9						
LPAZ	**La Paz**	**77.28**	**101**	P	**P**	**05 24 04.6**	**+2.4**
	1.9nm,0.9s,mb4.0,baz=197,slow=6.7,SNR=5.5						
LPAZ	**La Paz**	**77.28**	**101**	*e*P	**P**	**05 24 04.1**	**+1.9**
	25nm,1.5s,mb4.9						
SIV	**San Ignacio**	**80.74**	**107**	P	**P**	**05 24 21.0**	**0.0**
	0.9nm,0.9s,mb3.7,baz=260,slow=11,SNR=2.6						
MATP	**Matopo**	**97.19**	**189**	LR	LR	06 09 21.4	
	comp=Z,525nm,19.0s,MS5.0,baz=90,slow=35						
KMI	**Kunming**	**114.58**	**277**	PKP	PKPdf	05 30 48.9	-0.4
KMI				SKKS		05 38 45.0	
KMI				SS	SS	05 47 42.3	+4.4
KMI				SSS	SSS	05 52 04.5	+9.4
KMI				LR	LR		
	comp=N,470nm,24.9s,MS5.1						
KMI				LR	LR		
	comp=E,450nm,25.9s,MS5.1						
KMI				LR	LR		
	comp=Z,970nm,24.9s,MS5.3						
ILAR	**Eielson Array**	**127.21**	**8**	PKP	PKPdf	05 31 13.7	+1.2
	comp=Z,1.0nm,1.0s,baz=203,slow=6.4,SNR=5.2						
WMQ	**Urumqi**	**136.91**	**278**	*e*PKP	PKPdf	05 31 31.4	+0.1
WMQ				PP	PP	05 34 18.7	+3.5
WMQ				PPP	PPP	05 37 19.7	+3.7
WMQ				SKKS		05 41 05.7	
WMQ				PP	PP		
	comp=Z,100nm,6.0s						
WMQ				LR	LR		
	comp=N,220nm,25.0s,MS4.9						
WMQ				LR	LR		
	comp=E,210nm,24.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,230nm,24.0s,MS4.8						
MKAR	**Makanchi Array**	**141.66**	**277**	PKP	PKPdf	05 31 38.5	-1.2
	comp=Z,0.5nm,0.8s,baz=124,slow=5.2,SNR=3.4						
FRB	**Frobisher Bay**	**143.35**	**48**	PKP	PKPdf	05 31 39.9	-2.2
	comp=Z,1.5nm,0.8s,baz=180,slow=1.0,SNR=2.1						
ZAL	**Zalesovo**	**145.50**	**287**	PKPbc	PKPbc	05 31 44.1	+0.4
	comp=Z,1.4nm,0.4s,baz=263,slow=7.0,SNR=4.6						
MSL	**Mosul**	**149.82**	**222**	*e*	x	05 32 11.5	
ESDC	**Sonseca Array**	**153.57**	**138**	PKP	PKPdf	05 31 59.4	+0.3
	comp=Z,0.3nm,0.4s,baz=298,slow=37,SNR=2.3						
ESDC				PKPbc	PKPdf	05 32 08.1	+9.0
	comp=Z,0.2nm,0.3s,baz=155,slow=2.5,SNR=5.0						
BRTR	**Keskin Array B**	**155.62**	**209**	PKP	PKPdf	05 32 01.2	-0.6
	comp=Z,0.4nm,0.5s,baz=27,slow=8.3,SNR=2.6						
AKASG	**Malin Array Be**	**167.00**	**212**	PKPab	PKPab	05 33 14.0	-2.3
	comp=Z,3.0nm,0.7s,baz=41,slow=3.8,SNR=11						

*CSEM **07** 05:20:27.7±0.7,38.65N×28.60W,h15^{km},ML1.8,Error ellipse: s-maj=22.7km s-min=15.2km az=155.0,After PDA*

*PDA **07** 05:20:27.7±0.8,38.65N×28.60W,h15^{km},MD3.1,ML1.8, Error ellipse: s-maj=4.1km s-min=2.2km az=132.0*

SVSA 07 05:20:27.7±0.8,**38.65N×28.60W,h15^{km},MD3.1,ML1.8, Error ellipse: s-maj=4.1km s-min=2.2km az=132.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.11**	**230**	*i* P	Pb	05 20 30.7	-0.3
CALA				*e*S	Sb	05 20 33.4	+0.3
HOR	**Horta**	**0.13**	**192**	*i* P	Pb	05 20 30.4	-0.9
HOR				*e*S	Sb	05 20 33.2	-0.4
PICO	**Pico**	**0.20**	**139**	*i* P	Pb	05 20 31.7	-0.8
PICO				*e*S	Sb	05 20 35.2	-0.5
PMAN	**Manadas**	**0.40**	**93**	*e*P	Pb	05 20 34.3	-1.6
PMAN				*e*S	Sb	05 20 39.5	-1.9
	40nm,0.1s						
PGRA	**Graciosa**	**0.61**	**52**	*e*P	Pb	05 20 37.4	-2.1
PGRA				*e*S	Sb	05 20 44.9	-2.7
	20nm,0.3s						
PSBA	**Serra de Santa**	**1.00**	**83**	*e*P	Pb	05 20 42.7	-3.5
PSBA				*e*S	Sb	05 20 54.4	-4.5
	11nm,0.4s						

*MOS **07** 05:34:14.9±2.0,62.41S×161.45W,h10^{km},mb5.4/9, MS5.5/12,Error ellipse: s-maj=32.0km s-min=13.7km az=87.4*

*IDC **07** 05:34:15.8±0.6,62.36S×161.35W,mb4.4/11,mb1 4.6/12, mb1mx4.5/14,mbtmp4.4/12,ML4.0/1,MS5.4/15,Ms1 5.4/15, ms1mx5.4/17,Error ellipse: s-maj=28.3km s-min=14.9km az=20.0*

*BJI **07** 05:34:16.6,62.40S×161.50W,h10^{km},mB5.8,Ms5.7, Msz5.3*

*HRVD **07** 05:34:16.6±0.1,62.69S×161.62W,h12^{km},MW5.8/71, Centroid moment Tensor Solution. LP body waves: s61,c119;Mantle waves: s71,c150; Half duration: 1^{s}9 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.85±.07; $M_{\theta\theta}$5.48±.07; $M_{\phi\phi}$-4.63±.06; $M_{r\theta}$-1.36±.20; $M_{\theta\phi}$1.12±.07; $M_{\phi r}$1.63±.19; Best double couple: $M_0$5.635×10^{17} NP1: ϕ_s220°,δ67°,λ-172°. NP2:ϕ_s127°,δ82°,λ-23°. Principal axes: T 5.819, Plg10°, Azm176°; N -.372, Plg66°, Azm290°; P -5.452, Plg22°, Azm81°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **07** 05:34:16.6±0.5,62.43S×161.50W,h10^{km},mb5.3/18, MS5.4/51 Error ellipse: s-maj=15.7km s-min=11.2km az=212.0*

ISC 07 05:34:15.1±0.4,**62.35S**±0.07×**161.3W**±0.1,**h10^{km},n165,** σ**1^{s}54**/71,**mb5.1**/23,**MS5.4**/67,**10C,Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	**Scott Base**	**18.50**	**201**	⇑*e*P	**P**	**05 38 31.0**	**-1.7**
SBA				pmax	pmax		
	comp=Z,185nm,1.5s						
SBA	**Scott Base**	**18.50**	**201**	⇑*e*P	**P**	**05 38 31.0**	**-1.8**
	comp=Z,185nm,1.5s						
VNDA	**Vanda**	**19.16**	**203**	*e*P	**P**	**05 38 40.1**	**-0.6**
VNDA				pmax	pmax		
	comp=Z,105nm,1.6s						
VNDA	**Vanda**	**19.16**	**203**	P	**P**	**05 38 41.3**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=58,slow=14,SNR=55						
VNDA				LR	LR	05 44 03.0	
	comp=Z,28µm,21.0s,baz=61,slow=31						
VNDA	**Vanda**	**19.16**	**203**	*e*P	**P**	**05 38 40.1**	**-0.6**
	comp=Z,104nm,1.6s						
RPZ	**Rata Peaks**	**24.65**	**306**	P	**P**	**05 39 39.3**	**+2.6**
	comp=Z,13nm,0.9s,mb4.5,baz=214,slow=23,SNR=2.2						
RPZ				LR	LR	05 46 38.7	
	comp=Z,4µm,20.4s,MS4.9,baz=313,slow=30						
DRV	**Dumont d'Urvil**	**24.77**	**234**	P	**P**	**05 39 41.0**	**+3.4**
DRV				S	**S**	**05 44 05.0**	**+8.1**
DRV				R		05 46 00.0	
SNZO	**South Karori**	**25.46**	**315**	PFAKE		05 40 00.0	+16
SNZO				LR	LR		
	comp=Z,6µm,19.0s,MS5.1						
URZ	**Urewera**	**27.50**	**321**	LR	LR	05 48 29.1	
	comp=Z,9µm,21.9s,MS5.3,baz=162,slow=31						
QSPA	**South Pole Qui**	**27.77**	**180**	⇑*e*P	**P**	**05 40 04.3**	**-0.9**
	comp=Z,774nm,2.9s,mb5.8						
QSPA				LR	LR		
	comp=Z,11µm,20.0s,MS5.4						
RAO	**Raoul Island**	**34.84**	**334**	PFAKE		05 41 20.0	+12
RAO				LR	LR		
	comp=Z,6µm,22.0s,MS5.3						
CASY	**Casey**	**35.41**	**224**	*e*P	**P**	**05 41 13.5**	**+1.0**
	comp=Z,56nm,1.5s,mb5.3						
CASY				LR	LR		
	comp=Z,7µm,19.0s,MS5.5						
TAU	**Tasmania Unive**	**35.50**	**279**	PFAKE		05 41 20.0	+6.5
TAU				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
PMSA	**Palmer Station**	**39.30**	**138**	PFAKE		05 42 00.0	+15
PMSA				LR	LR		
	comp=Z,6µm,19.0s,MS5.5						
TBI	**Tubuai**	**39.81**	**17**	*e*S	**S**	**05 47 49.2**	**-4.7**
	comp=Z,1µm,29.0s						
TBI				*e*LQ		05 50 54.7	
	comp=Z,5µm,32.2s						
TBI				*e*LR	LR	05 52 31.6	
	comp=Z,17µm,28.2s,baz=188						
MIR	**Mirnyy**	**40.51**	**216**	*e*P	**P**	**05 41 56.0**	**+0.8**
MIR				*e*S	**S**	**05 48 11.0**	**+7.1**
MIR				*e*S	**S**	**05 48 11.0**	**+7.1**
MIR				*e*SS	SS	05 50 56.0	-1.9
MIR				*e*SSS	SSS	05 52 05.0	+30
MIR				pmax	pmax		
	comp=Z,80nm,1.6s,mb5.1						
MIR				smax			
	comp=N,2µm,11.0s						
MIR				smax			
	comp=E,980nm,10.0s						
MIR				MLR	MLR		
	comp=N,3µm,14.0s,MS5.3						
MIR				MLR	MLR		
	comp=E,2µm,14.0s,MS5.3						
MIR				MLR	MLR		
	comp=Z,11µm,14.0s,MS5.9						
RAR	**Rarotonga**	**41.12**	**2**	PFAKE		05 42 10.0	+9.3
RAR				LR	LR		
	comp=Z,7µm,21.0s,MS5.5						
RKT	**Rikitea**	**43.10**	**37**	*e*S	**S**	**05 48 38.6**	**-3.9**
	comp=Z,2µm,29.0s						
RKT				*e*LQ		05 52 16.2	
	comp=Z,6µm,28.8s						
RKT				*e*LR	LR	05 54 03.9	
	comp=Z,7µm,27.8s,baz=195						
VNA3	**Neumayer Olymp**	**45.24**	**168**	*e*	**P**	**05 42 39.1**	**+5.6**
VNA3	**Neumayer Olymp**	**45.24**	**168**	*e*	**P**	**05 42 42.3**	**+8.8**
VNA3	**Neumayer Olymp**	**45.24**	**168**	⇑*i*P	**P**	**05 42 32.3**	**-1.2**
VNA3				*e*		05 42 39.1	
VNA3				*e*		05 42 42.3	
VNA3				*e*		05 44 22.6	
VNA3				*e*		05 52 28.3	
SNAA	**Sanae**	**45.43**	**171**	*e*	**P**	**05 42 39.4**	**+4.4**
SNAA	**Sanae**	**45.43**	**171**	*e*	**P**	**05 42 42.6**	**+7.6**
SNAA	**Sanae**	**45.43**	**171**	⇑*i*P	**P**	**05 42 33.5**	**-1.5**
SNAA				*e*		05 42 39.4	
SNAA				*e*		05 44 20.0	
SNAA				*e*		05 44 22.9	
SNAA	**Sanae**	**45.43**	**171**	⇑*i*P	**P**	**05 42 33.5**	**-1.5**
SNAA				*e*		05 42 39.4	
SNAA				*e*		05 42 42.6	
SNAA				*e*		05 44 20.0	
SNAA				*e*		05 44 22.9	
PPT	**Papeete**	**45.49**	**16**	*e*S	**S**	**05 49 13.6**	**-3.5**
	comp=Z,3µm,25.2s						
PPT				*e*LQ		05 53 16.2	
	comp=Z,15µm,30.0s						
PPT				*e*LR	LR	05 55 08.9	
	comp=Z,18µm,25.2s,baz=193						
PPT	**Papeete**	**45.49**	**16**	LR	LR	05 57 12.6	
	comp=Z,5µm,18.9s,MS5.5,baz=190,slow=30						
VNA2	**Neumayer--Watz**	**45.77**	**168**	*e*	**P**	**05 42 41.9**	**+4.3**
VNA2	**Neumayer--Watz**	**45.77**	**168**	*e*	**P**	**05 42 45.3**	**+7.7**
VNA2	**Neumayer--Watz**	**45.77**	**168**	⇑*i*P	**P**	**05 42 36.7**	**-0.9**
VNA2				*e*		05 42 41.9	
VNA2				*e*		05 42 45.3	
VNA2				*e*		05 44 24.7	
VNA2				*e*		05 44 28.9	
VNA2				*e*		05 52 28.9	
VNA1	**Neumayer--Stat**	**45.95**	**168**	*e*	**P**	**05 42 45.1**	**+6.0**
VNA1	**Neumayer--Stat**	**45.95**	**168**	*e*	**P**	**05 42 48.2**	**+9.1**
VNA1	**Neumayer--Stat**	**45.95**	**168**	⇑*i*P	**P**	**05 42 37.9**	**-1.2**
VNA1				*e*		05 42 45.1	
VNA1				*e*		05 42 48.2	
VNA1				*e*		05 44 22.0	
VNA1				*e*		05 52 31.8	
MAW	**Mawson**	**46.46**	**202**	P	**P**	**05 42 44.5**	**+1.3**
	comp=Z,5.8nm,1.1s,mb4.4,baz=149,slow=10,SNR=4.3						
MAW				LR	LR	06 00 23.3	
	comp=Z,5µm,19.5s,MS5.4,baz=149,slow=34						
NVL	**N'lazarevskaya**	**47.08**	**177**	⇑*i*P	**P**	**05 42 44.4**	**-3.6**
NVL				*i*		05 44 17.2	
NVL				*i* PPP	PPP	05 45 18.1	-6.9
NVL				*i* S	**S**	**05 49 38.1**	**-1.0**
NVL				MLR	MLR		
	comp=Z,410nm,15.8s,MS4.5						
STKA	**Stephens Creek**	**47.11**	**283**	*e*P	**P**	**05 42 51.2**	**+2.5**
STKA	**Stephens Creek**	**47.11**	**283**	P	**P**	**05 42 49.6**	**+0.9**
	comp=Z,6.7nm,0.9s,mb4.5,baz=131,slow=7.5,SNR=10						
STKA				LR	LR	05 58 11.6	
	comp=Z,4µm,21.5s,MS5.4,baz=142,slow=30						
STKA	**Stephens Creek**	**47.11**	**283**	*e*P	**P**	**05 42 45.5**	**-3.2**
STKA				P	pP	05 42 49.6	-2.2
STKA				*e*P		05 42 51.2	
STKA				LR	LR	05 58 11.6	
SYO	**Syowa Base**	**48.08**	**190**	⇑P	**P**	**05 42 55.0**	**-0.9**
AFI	**Afiamalu**	**48.94**	**347**	PFAKE		05 43 20.0	+17
AFI				LR	LR		
	comp=Z,5µm,20.0s,MS5.5						
PLCA	**Paso Flores**	**55.25**	**112**	*e*P	**P**	**05 43 48.8**	**-1.4**
PLCA				pmax	pmax		
	comp=Z,37nm,1.3s						
PLCA				MLR	MLR		
	comp=Z,4µm,20.0s						
PLCA	**Paso Flores**	**55.25**	**112**	P	**P**	**05 43 49.0**	**-1.3**
	comp=Z,5.5nm,0.9s,mb4.6,baz=213,slow=9.8,SNR=5.7						
PLCA				LR	LR	06 03 21.1	
	comp=Z,4µm,18.3s,MS5.5,baz=210,slow=32						
PLCA	**Paso Flores**	**55.25**	**112**	*e*P	**P**	**05 43 48.8**	**-1.4**
	comp=Z,37nm,1.3s,mb5.2						
PLCA				LR	LR		
	comp=Z,4µm,20.0s,MS5.5						
CTAO	**Charters Tower**	**55.28**	**295**	*e*P	**P**	**05 43 48.0**	**-2.8**
CTAO				pmax	pmax		
	comp=Z,44nm,1.4s,mb5.3						
CTAO				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.1						
CTAO	**Charters Tower**	**55.28**	**295**	*e*P	**P**	**05 43 48.0**	**-2.8**
	comp=Z,44nm,1.4s,mb5.3						
CTAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
NWAO	**Narrogin (SRO)**	**57.52**	**260**	P	**P**	**05 44 09.3**	**+2.7**
NWAO				pmax	pmax		
	comp=Z,45nm,1.3s						
NWAO				MLR	MLR		
	comp=Z,3µm,22.0s						

NWAO	**Narrogin (SRO)**	**57.52**	**260**	LR	LR	06 02 48.3	
	comp=Z,3µm,20.3s,MS5.5,baz=309,slow=30						
NWAO	**Narrogin (SRO)**	**57.52**	**260**	P	**P**	**05 44 09.2**	**+2.7**
	comp=Z,45nm,1.3s,mb5.3						
NWAO				LR	LR		
	comp=Z,3µm,22.0s,MS5.4						
ASAR	**Alice Springs**	**57.62**	**281**	P	**P**	**05 44 05.6**	**-1.8**
	comp=Z,3.5nm,0.6s,mb4.5,baz=148,slow=7.0,SNR=17						
ASAR				LR	LR	06 05 22.5	
	comp=Z,3µm,20.3s,MS5.4,baz=149,slow=32						
ASPA	**Alice Springs**	**57.63**	**281**	*e*P	**P**	**05 44 06.9**	**-0.5**
HNR	**Honiara**	**59.79**	**314**	PFAKE		05 44 30.0	+7.4
HNR				LR	LR		
	comp=Z,1µm,22.0s,MS5.1						
WB2	**Warramunga Arr**	**60.65**	**283**	*e*P	**P**	**05 44 29.6**	**+1.2**
WRA	**Warramunga Arr**	**60.66**	**283**	P	**P**	**05 44 28.1**	**-0.3**
	comp=Z,2.9nm,0.9s,mb4.4,baz=143,slow=5.5,SNR=13						
WRAB	**Tennant Creek**	**60.66**	**283**	*e*P	**P**	**05 44 26.3**	**-2.2**
WRAB				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.2						
WRAB				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.1						
WRAB	**Tennant Creek**	**60.66**	**283**	*e*P	**P**	**05 44 26.3**	**-2.1**
	comp=Z,21nm,1.1s,mb5.2						
WRAB				LR	LR		
	comp=Z,1µm,21.0s,MS5.1						
TRQA	**Tornquist**	**61.11**	**117**	*e*P	**P**	**05 44 31.2**	**-0.1**
	comp=Z,49nm,1.6s,mb5.4						
TRQA				LR	LR		
	comp=Z,4µm,20.0s,MS5.5						
CFAA	**Coronel Fontan**	**63.91**	**108**	P	**P**	**05 44 51.2**	**+1.2**
	comp=Z,1.0nm,1.1s,baz=231,slow=4.6,SNR=7.3						
CFAA	**Coronel Fontan**	**63.91**	**108**	P	**P**	**05 44 51.2**	**+1.2**
PMG	**Port Moresby**	**64.52**	**301**	PFAKE		05 45 10.0	+16
PMG				LR	LR		
	comp=Z,1µm,21.0s,MS5.1						
FITZ	**Fitzroy Crossi**	**66.25**	**276**	LR	LR	06 08 55.1	
	comp=Z,2µm,21.2s,MS5.4,baz=137,slow=31						
MBWA	**Marble Bar**	**66.36**	**269**	*e*P	**P**	**05 45 03.6**	**-2.3**
MBWA				LR	LR		
	comp=Z,4µm,20.0s,MS5.6						
CPUP	**Villa Florida**	**73.21**	**115**	*e*P	**P**	**05 45 45.9**	**-1.8**
CPUP				pmax	pmax		
	comp=Z,20nm,1.3s						
CPUP				MLR	MLR		
	comp=Z,3µm,20.0s						
CPUP	**Villa Florida**	**73.21**	**115**	P	**P**	**05 45 47.7**	**0.0**
	comp=Z,4.5nm,1.1s,mb4.3,baz=220,slow=12,SNR=5.4						
CPUP				LR	LR	06 14 49.2	
	comp=Z,3µm,18.1s,MS5.6,baz=224,slow=33						
CPUP	**Villa Florida**	**73.21**	**115**	*e*P	**P**	**05 45 45.9**	**-1.8**
	comp=Z,20nm,1.3s,mb4.9						
CPUP				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
NNA	**Nana**	**76.92**	**91**	P	**P**	**05 46 09.6**	**+0.5**
	comp=Z,113nm,1.8s,mb5.5						
NNA				LR	LR		
	comp=Z,989nm,20.0s,MS5.1						
LPAZ	**La Paz**	**77.20**	**100**	*e*P	**P**	**05 46 12.9**	**+2.3**
LPAZ				pmax	pmax		
	comp=Z,25nm,1.1s						
LPAZ				MLR	MLR		
	comp=Z,2µm,19.0s						
LPAZ	**La Paz**	**77.20**	**100**	P	**P**	**05 46 12.2**	**+1.6**
	comp=Z,2.9nm,0.9s,mb4.2,baz=194,slow=5.6,SNR=9.2						
LPAZ				LR	LR	06 13 13.8	
	comp=Z,2µm,19.8s,MS5.3,baz=203,slow=30						
LPAZ	**La Paz**	**77.20**	**100**	*e*P	**P**	**05 46 12.9**	**+2.3**
	comp=Z,25nm,1.1s,mb5.0						
LPAZ				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
TRIS	**Tristan da Cun**	**77.82**	**155**	PFAKE		05 46 30.0	+16
TRIS				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
POHA	**Pohakuloa**	**81.96**	**6**	PFAKE		05 46 50.0	+14
POHA				LR	LR		
	comp=Z,33µm,19.0s						
SUR	**Sutherland**	**85.59**	**182**	*e*P	**P**	**05 46 56.1**	**+1.9**
	comp=Z,78nm,1.0s,mb5.9						
SUR				LR	LR		
	comp=Z,818nm,19.0s,MS5.1						
SAML	**Samuel**	**85.91**	**101**	*e*P	**P**	**05 46 56.5**	**+0.3**
	comp=Z,11nm,1.3s,mb4.9						
SAML				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
GUMO	**Guam**	**86.48**	**308**	*e*P	**P**	**05 47 03.2**	**+4.2**
GUMO				pmax	pmax		
	comp=Z,97nm,1.1s,mb6.0						
GUMO				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.4						
GUMO	**Guam**	**86.48**	**308**	*e*P	**P**	**05 47 03.2**	**+4.2**
	comp=Z,97nm,1.1s,mb5.9						
GUMO				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
BDFB	**Brasilia**	**86.62**	**118**	P	**P**	**05 47 01.7**	**+2.1**
	comp=Z,5.4nm,0.9s,mb4.8,baz=212,slow=5.9,SNR=6.3						
BDFB				LR	LR	06 22 14.7	
	comp=Z,5µm,19.6s,MS5.9,baz=199,slow=33						
OTAV	**Otavalo**	**86.90**	**84**	*e*P	**P**	**05 47 01.7**	**+0.6**
	comp=Z,17nm,1.4s,mb5.1						
OTAV				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
BOSA	**Boshof**	**89.20**	**186**	*e*P	**P**	**05 47 10.5**	**-1.4**
BOSA				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.3						
BOSA				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.1						
BOSA	**Boshof**	**89.20**	**186**	P	**P**	**05 47 12.3**	**+0.4**
	comp=Z,8.3nm,1.2s,mb4.9,baz=165,slow=6.2,SNR=3.0						
BOSA	**Boshof**	**89.20**	**186**	*e*P	**P**	**05 47 10.5**	**-1.4**
	comp=Z,21nm,1.3s,mb5.3						
BOSA				LR	LR		
	comp=Z,7µm,20.0s,MS6.1						
MIDW	**Midway**	**91.16**	**346**	PFAKE		05 47 30.0	+9.0
MIDW				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
LBTB	**Lobatse**	**92.76**	**186**	*e*P	**P**	**05 47 28.9**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,22nm,1.4s,mb5.4						
LBTB				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.9						
LBTB	**Lobatse**	**92.76**	**186**	*e*P	**P**	**05 47 28.9**	**+0.5**
	comp=Z,22nm,1.4s,mb5.4						
LBTB				LR	LR		
	comp=Z,5µm,20.0s,MS5.9						
JTS	**JuntasAbangare**	**92.80**	**73**	PFAKE		05 47 40.0	+11
JTS				LR	LR		
	comp=Z,596nm,19.0s,MS5.1						
ROSC	**El Rosal**	**92.87**	**85**	LR	LR	06 21 29.4	
	comp=Z,1µm,19.6s,MS5.4,baz=5.5,slow=30						
SDV	**Santo Domingo**	**98.13**	**86**	PFAKE		05 48 10.0	+17
SDV				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
TSUM	**Tsumeb**	**98.72**	**179**	PFAKE		05 48 10.0	+14
TSUM				LR	LR		
	comp=Z,7µm,20.0s,MS6.2						
DGAR	**Diego Garcia**	**99.20**	**234**	PFAKE		05 48 10.0	+12
DGAR				LR	LR		
	comp=Z,599nm,19.0s,MS5.1						
CBIJ	**Chichi jima**	**99.85**	**311**	LR	LR	06 27 06.3	
	comp=Z,646nm,19.4s,MS5.1,baz=130,slow=32						
RCBR	**Riachuelo**	**100.36**	**125**	PFAKE		05 48 10.0	+6.7
RCBR				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
LSZ	**Lusaka**	**102.27**	**189**	PFAKE		05 48 20.0	+8.2
LSZ				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
TATO	**Taipei**	**106.11**	**293**	PFAKE		05 52 50.0	
TATO				LR	LR		
	comp=Z,686nm,20.0s,MS5.2						
SJG	**San Juan**	**108.27**	**86**	PFAKE		05 53 00.0	
SJG				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
MAJO	**Matsushiro**	**109.82**	**312**	PFAKE		05 53 00.0	
MAJO				LR	LR		
	comp=Z,681nm,20.0s,MS5.2						
MAT	**Matsushiro**	**109.82**	**312**	SKS	SKS	05 59 21.0	-6.9
HWUT	**Hardware Ranch**	**111.05**	**38**	PFAKE		05 53 00.0	+9.2
HWUT				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
SSE	**Sheshan**	**111.58**	**296**	PDIF	Pdif	05 48 55.9	+3.5
SSE				PP	PP	05 53 33.8	-1.2
SSE				SKS	SKS	06 00 02.1	+27
SSE				PP	PP		
	comp=Z,90nm,12.0s						
SSE				LR	LR		
	comp=N,410nm,34.4s,MS5.3						
SSE				LR	LR		
	comp=E,1µm,34.8s,MS5.3						
SSE				LR	LR		
	comp=Z,520nm,23.7s						
NJ2	**Nanjing**	**113.39**	**294**	*e*PKP	PKPdf	05 52 49.1	-6.6
NJ2				PPP	PPP	05 56 05.0	-7.1
NJ2				PKS	PKS	05 56 26.0	-2.3
NJ2				PP	PP		
	comp=Z,810nm,9.1s						
NJ2				LR	LR		
	comp=N,320nm,17.8s						
NJ2				LR	LR		
	comp=E,1µm,10.7s						
NJ2				LR	LR		
	comp=Z,2µm,16.5s,MS5.8						
KMI	**Kunming**	**114.65**	**277**	PKP	PKPdf	05 52 52.0	-6.2
RSSD	**Black Hills**	**115.60**	**42**	PFAKE		05 53 10.0	+10
RSSD				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
ENH	**Enshi**	**115.97**	**286**	PFAKE		05 53 10.0	+9.2
ENH				LR	LR		
	comp=Z,657nm,20.0s,MS5.2						
MBAR	**Mbarara**	**116.55**	**194**	PFAKE		05 53 10.0	+7.7
MBAR				LR	LR		
	comp=Z,766nm,20.0s,MS5.3						
YSS	**Yuzh-Sakhalins**	**117.72**	**320**	PFAKE		05 53 10.0	+6.3
YSS				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
MDJ	**Mudanjiang**	**120.01**	**310**	PKP	PKPdf	05 53 06.0	-2.1
MDJ				PP	PP	05 54 30.7	-3.0
MDJ				SKS	SKS	06 00 16.7	+10
MDJ				SKKS		06 01 27.3	
MDJ				PS	PS	06 04 21.5	+1.8
MDJ				SS	SS	06 10 58.1	+1.3
MDJ				PP	PP		
	comp=Z,80nm,5.3s						
MDJ				LR	LR		
	comp=N,430nm,29.6s,MS5.1						
MDJ				LR	LR		
	comp=E,580nm,29.6s,MS5.1						
MDJ				LR	LR		
	comp=Z,370nm,19.8s						
MDJ	**Mudanjiang**	**120.01**	**310**	PFAKE		05 53 20.0	+12
MDJ				LR	LR		
	comp=Z,390nm,21.0s,MS5.0						
CN2	**Changchun**	**120.83**	**306**	*e*PKP	PKPdf	05 53 09.7	-0.2
CN2				PP	PP	05 54 43.3	+3.8
CN2				PP	PP		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,700nm,23.0s,MS5.4						
CN2				LR	LR		
	comp=E,700nm,23.0s,MS5.4						
CN2				LR	LR		
	comp=Z,700nm,25.0s,MS5.2						
DBIC	**Dimbokro**	**121.80**	**152**	PFAKE		05 53 20.0	+7.6
DBIC				LR	LR		
	comp=Z,998nm,20.0s,MS5.5						
LSA	**Lhasa**	**123.93**	**270**	PFAKE		05 53 30.0	+14
LSA				LR	LR		
	comp=Z,555nm,22.0s,MS5.2						
HHC	**Hu-ho-hao-te**	**123.94**	**294**	*e*PKP	PKPdf	05 53 13.9	-2.1
HHC				PP	PP	05 55 04.2	+2.9
HHC				SKS	SKS	06 00 24.3	+5.2
HHC				SKKS		06 01 57.8	
HHC				SS	SS	06 11 51.9	+4.7
HHC				PP	PP		
	comp=Z,150nm,10.8s						
HHC				LR	LR		
	comp=N,380nm,20.4s,MS5.3						
HHC				LR	LR		
	comp=E,590nm,21.6s,MS5.3						
HHC				LR	LR		
	comp=Z,630nm,30.0s						
MA2	**Magadan**	**127.03**	**332**	PFAKE		05 53 30.0	+8.9
MA2				LR	LR		
	comp=Z,834nm,22.0s,MS5.4						
ILAR	**Eielson Array**	**127.27**	**8**	PKP	PKPdf	05 53 20.9	-0.6
	comp=Z,0.4nm,0.7s,baz=195,slow=1.3,SNR=4.5						
HIA	**Hailar**	**127.56**	**306**	PFAKE		05 53 30.0	+7.5
HIA				LR	LR		
	comp=Z,737nm,21.0s,MS5.3						
BILL	**Bilibino**	**132.17**	**344**	PFAKE		05 53 40.0	+9.1
BILL				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
YAK	**Yakutsk**	**134.52**	**322**	PFAKE		05 53 50.0	+15
YAK				LR	LR		
	comp=Z,642nm,22.0s,MS5.3						
WMQ	**Urumqi**	**136.98**	**278**	*e*PKP	PKPdf	05 53 38.2	-2.0
WMQ				*e*PP	PP	05 56 25.1	+0.7
WMQ				PPP	PPP	05 59 25.4	0.0
WMQ				SKS	SKS	06 00 43.6	-6.7
WMQ				SS	SS	06 14 23.8	-3.4
WMQ				PP	PP		
	comp=Z,170nm,4.8s						
WMQ				LR	LR		
	comp=N,830nm,24.0s,MS5.6						
WMQ				LR	LR		
	comp=E,1µm,25.0s,MS5.6						
WMQ				LR	LR		
	comp=Z,1µm,24.0s,MS5.6						
MKAR	**Makanchi Array**	**141.72**	**276**	PKhKP		05 53 42.8	
	comp=Z,0.4nm,0.6s,baz=141,slow=3.0,SNR=3.1						
MKAR				PKP	PKPdf	05 53 48.3	-0.4
	comp=Z,0.7nm,0.8s,baz=158,slow=6.5,SNR=4.0						
ZAL	**Zalesovo**	**145.58**	**287**	PKIKP	PKPdf	05 53 54.2	-0.9
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ZAL	**Zalesovo**	**145.58**	**287**	PKPbc	PKPbc	05 53 54.2	+1.4
	comp=Z,4.0nm,0.3s,baz=61,slow=1.5,SNR=5.8						
EIL	**Elat**	**145.62**	**206**	*e*PKPdf	PKPdf	05 53 52.4	-3.5
NVS	**Novosibirsk**	**146.86**	**287**	*e*PKP2	PKPab	05 54 00.2	+0.7
NVS				pmax	pmax		
	comp=Z,32nm,1.3s						
NVS				pmax	pmax		
	comp=N,4.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,16nm,1.3s						
ASF	**Jabal al Asfar**	**147.61**	**210**	PKPbc	PKPdf	05 54 02.7	+3.5
	comp=E,2.3nm,0.7s,baz=43,slow=19,SNR=4.0						
BVAR	**Borovoye Array**	**151.58**	**275**	PKPbc	PKPdf	05 54 10.3	+5.6
	comp=E,1.6nm,0.7s,baz=117,slow=3.3,SNR=10						
CART	**Cartagena**	**152.40**	**145**	*e*PKP	PKPdf	05 54 17.1	+11
GNI	**Garni**	**152.78**	**227**	*e*PKIKP	PKPdf	05 54 10.6	+3.7
GNI				MLR	MLR		
	comp=Z,1µm,22.0s						
GNI	**Garni**	**152.78**	**227**	PKPbc	PKPdf	05 54 12.3	+5.4
	comp=Z,3.8nm,0.4s,baz=45,slow=18,SNR=2.7						
MALT	**Malatya**	**153.06**	**216**	*e*PKIKP	PKPdf	05 54 13.8	+6.5
ESDC	**Sonseca Array**	**153.48**	**138**	PKPbc	PKPdf	05 54 14.2	+6.4
	comp=Z,0.4nm,0.4s,baz=315,slow=1.8,SNR=4.0						
BRTR	**Keskin Array B**	**155.59**	**209**	PKP	PKPdf	05 54 11.2	+0.6
	comp=Z,0.2nm,0.3s,baz=315,slow=2.0,SNR=2.4						
KIV	**Kislovodsk**	**156.86**	**228**	PFAKE		05 54 20.0	+7.8
KIV				LR	LR		
	comp=Z,216nm,19.0s,MS5.0						
SJPF	**Ste Jean**	**157.46**	**139**	*e*PKP2	PKPab	05 54 50.4	+6.3
ETSF	**Etsaut**	**157.46**	**141**	*e*PKP2	PKPab	05 54 50.8	+6.7
EPF	**Esparros**	**157.84**	**142**	*e*PKP2	PKPab	05 54 52.4	+6.6
MTLF	**Montolieu**	**158.65**	**145**	*e*PKP2	PKPab	05 54 54.8	+5.6
	comp=Z,31nm,1.0s						
ARU	**Arti**	**159.11**	**272**	PFAKE		05 54 20.0	+5.4
ARU				LR	LR		
	comp=Z,223nm,20.0s,MS5.0						
LASF	**Ste Croix**	**159.75**	**148**	*e*PKP2	PKPab	05 54 59.8	+5.8
	comp=Z,66nm,1.4s						
CAF	**Calviac**	**160.07**	**143**	*e*PKP2	PKPab	05 55 01.7	+6.4
RJF	**Les Rejaudoux**	**160.26**	**142**	*e*PKP2	PKPab	05 55 02.3	+6.2
RJF				*e*R			
	comp=Z,2µm,20.2s						
VIVF	**Saint-Julien-l**	**160.69**	**149**	*e*PKP2	PKPab	05 55 03.7	+5.8
	comp=Z,30nm,1.2s						
ORIF	**Oris-en-Rattie**	**161.03**	**151**	*e*PKP2	PKPab	05 55 05.2	+5.8
ORIF				*e*R			
	comp=Z,2µm,23.0s						
TCF	**Toulx Ste Croi**	**161.36**	**142**	*e*PKP2	PKPab	05 55 07.0	+6.2
	comp=Z,18nm,1.0s						
LPG	**La Plagne**	**161.77**	**152**	*e*PKP2	PKPab	05 55 08.7	+6.0
	comp=Z,18nm,1.1s						
LPL	**La Plagne**	**161.78**	**152**	*e*PKP2	PKPab	05 55 08.8	+6.1
SMF	**Signal de Mont**	**162.14**	**145**	*e*PKP2	PKPab	05 55 10.1	+5.9
	comp=Z,53nm,1.4s						
AVF	**Avril sur Loir**	**162.14**	**144**	*e*PKP2	PKPab	05 55 10.4	+6.2
	comp=Z,26nm,1.3s						
SSF	**Saint Saulge**	**162.43**	**144**	*e*PKP2	PKPab	05 55 11.4	+5.9
	comp=Z,38nm,1.4s						
CABF	**La Chapelle**	**162.68**	**150**	*e*PKP2	PKPab	05 55 12.1	+5.6
FLN	**La Foliniere**	**162.71**	**133**	*e*PKP2	PKPab	05 55 12.6	+6.0
FLN				*e*R			
	comp=Z,3µm,21.8s						
LOR	**Lormes**	**162.72**	**144**	*e*PKP2	PKPab	05 55 12.6	+5.9
	comp=Z,40nm,1.4s						
LOR				*e*R			
	comp=Z,2µm,22.0s						
KBS	**Kingsbay**	**163.22**	**4**	*e*SS	SS	06 19 28.8	+12
KBS				AMS	AMS	07 03 38.4	
	comp=Z,628nm,19.0s						
VYHS	**Vyhne**	**166.11**	**180**	*e*PKP	PKPab	05 55 21.6	+0.2
VYHS				*e*		05 55 27.4	
GERES	**GERESS Array B**	**166.18**	**166**	PKPab	PKPab	05 55 23.1	+1.3
	comp=Z,0.4nm,0.5s,baz=285,slow=26,SNR=2.3						
JMIC	**Jan Mayen**	**166.33**	**39**	*e*SS	SS	06 19 55.8	+7.1
JMIC				AMS	AMS	07 03 29.3	
	comp=Z,1µm,20.6s						
KHC	**Kasperske Hory**	**166.45**	**166**	*e*PKPAB	PKPab	05 55 30.2	+7.3
KHC				AMS	AMS	07 15 40.0	
	comp=Z,2µm,19.6s						
GRF	**Grafenberg Arr**	**166.66**	**159**	*e*PKP2	PKPab	05 55 28.4	+4.6
AKASG	**Malin Array Be**	**166.97**	**211**	PKPab	PKPab	05 55 23.7	-1.4
	comp=Z,0.3nm,0.3s,baz=178,slow=3.7,SNR=3.8						
NKC	**Novy Kostel**	**167.38**	**161**	AMS	AMS	07 12 50.0	
	comp=Z,2µm,21.4s						
PRU	**Pruhonice**	**167.40**	**168**	*e*PKPAB	PKPab	05 55 32.5	+5.5
PRU				AMS	AMS	07 10 40.0	
	comp=Z,2µm,20.7s						
OKC	**Ostrava-Krasne**	**167.45**	**178**	AMS	AMS	07 14 40.0	
	comp=Z,1µm,19.6s						
DPC	**Dobruska-Polom**	**167.90**	**173**	*e*PKPAB	PKPab	05 55 29.5	+0.3
DPC				AMS	AMS	07 15 10.0	
	comp=Z,2µm,19.9s						
PVCC	**Panska Ves**	**167.94**	**167**	AMS	AMS	07 19 10.0	
	comp=Z,1µm,20.6s						
UPC	**Upice**	**168.04**	**172**	*e*PKPAB	PKPab	05 55 33.0	+3.2
OBN	**Obninsk**	**168.24**	**240**	PFAKE		05 54 30.0	+7.0
OBN				LR	LR		
	comp=Z,285nm,19.0s						
CLL	**Collm**	**168.51**	**162**	*e*	PKPdf	05 54 31.0	+7.7
CLL				*e**PPKP2		05 55 38.0	
CLL				*e*SKSP		06 09 54.0	
TRO	**Tromso**	**172.69**	**359**	*e*PP	PP	05 59 42.6	+0.5
TRO				*e*SS	SS	06 21 03.5	+12
TRO				AMS	AMS	07 06 31.4	
	comp=Z,1µm,23.0s						
BER	**Bergen**	**173.30**	**101**	*e*	SS	06 20 55.4	-1.9
BER				AMS	AMS	07 06 29.5	
	comp=Z,1µm,18.3s						
NSS	**Namsos**	**176.28**	**51**	AMS	AMS	07 06 33.4	
	comp=Z,1µm,25.6s						

*CSEM **07** 05:48:53.7±0.6, 38.68N×28.55W, h6^{km}±12^{km}, ML0.8, Error ellipse: s-maj=8.4km s-min=2.9km az=27.0, After PDA*

*PDA **07** 05:48:53.7±0.6, 38.68N×28.55W, h6^{km}±12^{km}, MD2.9, ML0.8, Error ellipse: s-maj=8.4km s-min=2.9km az=27.0*

SVSA 07 05:48:53.7±0.6,**38.68N**×**28.55W,h6**^{km}±12^{km}**,MD2.9, ML0.8,Error ellipse: s-maj=8.4km s-min=2.9km az=27.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**0.16**	**230**	*e*P	Pg	05 48 56.6	-0.4
CALA				*e*S	Sg	05 48 59.2	0.0
PICO	**Pico**	**0.21**	**152**	*e*P	Pg	05 48 57.5	-0.4
PICO				*e*S	Sg	05 49 00.6	-0.2
PMAN	**Manadas**	**0.36**	**98**	*e*P	Pg	05 49 00.3	-0.7
PMAN				*e*S	Sg	05 49 04.9	-1.0
	12nm,0.2s						
PMAN	**Manadas**	**0.36**	**98**	*e*P	Pg	05 49 00.3	-0.7
PMAN				*e*S	Sg	05 49 04.9	-1.0
	12nm,0.2s						

*IDC **07** 05:49:11.2±1.1, 11.99N×92.12E, mb3.8/10, mb1 4.0/11, mb1mx3.9/22, mbtmp3.8/11, ML3.9/1, Error ellipse: s-maj=38.1km s-min=18.0km az=55.0*

*NEIC **07** 05:49:15.9±0.8, 12.01N×92.26E, h30^{km}, mb4.1/6, Error ellipse: s-maj=21.3km s-min=10.8km az=51.0*

ISC 07 05:49:13.8±0.9,**12.0N**±0.1×**92.3E**±0.1,**h30**^{km}**,n18,** σ1^{s}**05**/19,**mb3.9**/10,**Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.12**	**44**	Pn	**P**	**05 51 24.7**	**-1.9**
	0.4nm,0.3s,baz=239,slow=16,SNR=7.6						
VIS	**Vishakhapatnam**	**10.34**	**305**	*i* P	**P**	**05 51 42.6**	**-0.9**
VIS				*i* S	**S**	**05 53 28.6**	**-11**
PKI	**Pulchoki**	**16.79**	**339**	*e*P	**P**	**05 53 08.7**	**+0.2**
	10nm,0.4s						
DMN	**Daman**	**16.93**	**338**	*e*P	**P**	**05 53 09.8**	**-0.5**
	12nm,0.3s						
GUN	**Gumba**	**16.93**	**340**	*e*P	**P**	**05 53 13.1**	**+2.7**
	24nm,0.7s						
KKN	**Kakani**	**17.03**	**338**	*e*P	**P**	**05 53 11.5**	**-0.1**
	20nm,0.8s						
GKN	**Gorkha**	**17.46**	**337**	*e*P	**P**	**05 53 17.1**	**+0.1**
	15nm,0.3s						
KOLN	**Koldanda**	**17.68**	**334**	*e*P	**P**	**05 53 21.8**	**+2.1**
	12nm,0.4s						
MKAR	**Makanchi Array**	**35.71**	**348**	P	**P**	**05 56 11.8**	**+0.1**
	1.6nm,0.8s,mb4.0,baz=170,slow=8.6,SNR=7.1						
SONM	**Songino Array**	**37.66**	**16**	P	**P**	**05 56 28.3**	**+0.3**
	0.4nm,0.5s,mb3.4,baz=204,slow=8.4,SNR=3.2						
ZAL	**Zalesovo**	**42.27**	**353**	P	**P**	**05 57 05.1**	**-1.1**
	1.4nm,0.3s,mb4.0,baz=271,slow=14,SNR=2.2						
BVAR	**Borovoye Array**	**44.53**	**341**	P	**P**	**05 57 24.9**	**+0.4**
	0.3nm,0.4s,mb3.5,baz=117,slow=6.4,SNR=3.0						
WRA	**Warramunga Arr**	**52.18**	**127**	P	**P**	**05 58 24.9**	**+0.6**
	0.6nm,0.5s,mb3.8,baz=300,slow=10,SNR=21						
ASAR	**Alice Springs**	**53.98**	**131**	P	**P**	**05 58 38.1**	**+0.5**
	0.6nm,0.5s,mb3.8,baz=306,slow=6.8,SNR=10						
BRTR	**Keskin Array B**	**58.38**	**309**	P	**P**	**05 59 07.1**	**-1.8**
	0.3nm,0.4s,mb3.7,baz=180,slow=2.9,SNR=2.4						
FINES	**FINESS Array B**	**68.23**	**332**	P	**P**	**06 00 12.7**	**-1.0**
	3.2nm,1.1s,mb4.3,baz=104,slow=7.9,SNR=4.0						
ARCES	**ARCESS Array B**	**70.80**	**340**	P	**P**	**06 00 30.0**	**+0.8**
	3.2nm,1.0s,mb4.2,baz=63,slow=5.4,SNR=7.5						
ILAR	**Eielson Array**	**91.65**	**22**	P	**P**	**06 02 19.4**	**+0.3**
	0.5nm,0.7s,mb4.0,baz=283,slow=4.8,SNR=4.4						

CASC 07 06:03:09.8±2.0,**13.10N**×**89.97W,h27**^{km}±6^{km}**,MD4.5, ML4.3,6C-1D,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**0.81**	**25**	*e*P	Pb	06 03 24.9	-0.3
SNJE	**San Jose**	**0.84**	**25**	*e*P	Pb	06 03 25.4	-0.4
RTR	**El Retiro**	**0.85**	**22**	*e*P	Pb	06 03 25.6	-0.3
BOQS	**Boqueron**	**0.92**	**47**	⇑*e*P	Pb	06 03 26.8	-0.3
SNET	**Serv Nac Est T**	**0.93**	**51**	*e*P	Pn	06 03 26.9	-0.2
SNET				*e*S	Sb	06 03 39.7	+0.6
SNET				*i*		06 03 46.1	
	comp=Z,3µm,0.2s						
LFRS	**El Faro**	**1.03**	**59**	*e*P	Pn	06 03 28.1	-0.5
LFRS				*e*S	Sb	06 03 43.9	+1.9
RBDL	**Robledal**	**1.05**	**15**	⇑*e*P	Pn	06 03 28.6	-0.3
RBDL				*e*S	Sb	06 03 43.9	+1.3
LFU	**La Fuente**	**1.06**	**52**	⇓*e*P	Pn	06 03 28.9	0.0
LBRS	**Las Brisas**	**1.10**	**55**	⇑*e*P	Pn	06 03 29.6	-0.1
LBRS				*e*S	Sn	06 03 45.5	+1.3
LCBS	**La Ceiba**	**1.11**	**60**	⇑*e*P	Pn	06 03 29.2	-0.6
LCBS				*e*S	Sn	06 03 44.9	+0.5
IXG	**Ixpaco**	**1.17**	**336**	⇑*e*P	Pn	06 03 28.7	-1.8
IXG				AML	AML	06 03 52.6	
	comp=E,18µm,0.5s						
MTO2	**Montecristo 2**	**1.42**	**25**	*e*P	Pn	06 03 34.4	+0.1
VSM	**San Miguel**	**1.69**	**79**	*e*P	Pn	06 03 37.7	-0.3
VSM				*e*S	Sn	06 03 59.6	+0.7
MRL	**Marmol**	**1.98**	**8**	*e*P	Pn	06 03 42.3	+0.2
MRL				⇑*e*P		06 03 42.5	
LEON	**Leon**	**3.08**	**102**	*e*P	Pn	06 03 57.6	-0.3
TEL3	**Telica 3**	**3.09**	**99**	*e*P	Pn	06 03 57.6	-0.5
MIRN	**Miramar**	**3.25**	**101**	*e*P	Pn	06 03 59.6	-0.6
CNGN	**Cerro Negro**	**3.25**	**100**	*e*P	Pn	06 03 59.2	-1.1
APYN	**Apoyeque**	**3.64**	**103**	*e*P	Pn	06 04 05.9	+0.1
APYN				*e*S	Sn	06 04 46.6	-1.7
XAVN	**Gruta Xavier**	**3.68**	**104**	*e*P	Pn	06 04 06.2	-0.2
MGAN	**Managua**	**3.76**	**104**	*e*S	Sn	06 04 48.1	-3.2
WILN	**Americas 2**	**3.81**	**104**	*e*S	Sn	06 04 49.9	-2.8

PYTN	Playitas	3.86	98	eP	Pn	06 04 08.8	-0.1
APON	Apoyo	3.99	107	eS	Sn	06 04 56.2	-1.1

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*UCR **07** 06:04:50.9, 7.99N×81.77W, h0^{km}, MD4.5*
*UPA **07** 06:04:54.8, 7.58N×82.22W, h2^{km}, MD4.4*
CASC 07 06:04:55.0±2.6**, 7.50N×82.26W, h5^{km}**±11^{km}**, MD4.4, 5C-1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTP1	Petroterminal	0.72	346	eP	Pg	06 05 13.7	+4.3
SFX2	San Felix	0.88	26	⇑iP	Pb	06 05 11.1	-1.2
SFX2				eS	Sb	06 05 26.1	+2.1
DVD	David	0.95	348	⇓iP	Pb	06 05 13.7	+0.2
SVTC	San Vito de Co	1.45	332	eP	Pn	06 05 20.3	-1.7
ACR	Cerro Adams	1.46	322	⇑eP	Pn	06 05 19.8	-2.3
ACR				eS	Sb	06 05 43.8	+2.9
CNI	Changuinola	1.92	352	eP	Pn	06 05 27.5	-1.2
AZU2	Pedas	2.21	89	⇑eP	Pn	06 05 30.9	-1.9
AZU2				eS	Sn	06 05 59.9	-0.9
BUS	Buena Vista	2.52	324	eP	Pn	06 05 36.2	-1.1
BUS				eS	Sn	06 06 10.8	+2.0
ZANG	Zanguenga, Cho	2.77	58	⇑eP	Pn	06 05 39.6	-1.3
ZANG				eS	Sn	06 06 16.8	+1.7
LCR2	La Lucha 2	2.82	322	eP	Pn	06 05 40.4	-1.1
LAJ	Bijagual	2.98	322	eP	Pn	06 05 46.9	+3.0
SJS	Escuela Geolog	3.00	324	eP	Pn	06 05 43.1	-1.0
SJS				eS	Sn	06 06 19.7	-1.3
UPA	Univ. de Panam	3.07	61	eP	Pn	06 05 44.3	-0.8
PRS1	Puriscal	3.20	321	⇑eP	Pn	06 05 45.3	-1.6
CGA2	Cerro Gallo 2	3.32	319	eP	Pn	06 05 48.2	-0.4
TRTC	Tortuguero	3.38	335	eP	Pn	06 05 48.5	-1.0
FORC	Fortuna	3.79	321	eP	Pn	06 05 54.8	-0.5

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*CSEM **07** 06:15:42.7±0.2, 62.03N×26.57W, h10^{km}, mb4.6/5, Error ellipse: s-maj=13.9km s-min=4.2km az=37.0*
*IDC **07** 06:15:43.0±1.2, 61.87N×26.77W, mb3.6/5, mb1 4.0/6, mb1mx3.6/26, mbtmp3.7/6, ML3.2/1, Error ellipse: s-maj=47.2km s-min=22.2km az=30.0*
*NEIC **07** 06:15:45.0±0.7, 62.07N×26.52W, h10^{km}, mb4.6/6, Error ellipse: s-maj=25.3km s-min=7.7km az=221.0*
ISC 07 06:15:43.3±0.7**, 62.1N**±0.1×**26.5W**±0.3**, h10^{km}, n28,** σ**0^{s}94**/27**, mb4.0**/11**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUMG	Summit	11.42	342	ePn	P	06 18 28.9	-0.5
	12nm,1.0s						
ESK	Eskdalemuir	13.81	109	ePn	P	06 18 59.7	-1.5
ESK	Eskdalemuir	13.81	109	ePn	P	06 18 59.7	-1.5
EKA	Eskdalemuir Ar	13.82	109	Pn	P	06 19 00.5	-0.8
	0.1nm,0.3s,baz=304,slow=12,SNR=6.4						
EKA	Eskdalemuir Ar	13.82	109	Pn	P	06 19 00.4	-0.9
ROSF	Rostrenen	18.97	126	eP	P	06 20 07.5	+0.7
GRR	Gorron	19.87	122	eP	P	06 20 17.3	+0.2
LDF	La Druitiere	20.00	121	eP	P	06 20 18.2	-0.4
MFF	Saint Martin d	21.60	124	eP	P	06 20 35.2	+0.1
	58nm,1.3s,mb4.5						
LOR	Lormes	22.68	117	eP	P	06 20 45.2	-0.5
SSF	Saint Saulge	22.70	118	eP	P	06 20 45.1	-0.8
	32nm,1.6s,mb4.5						
TCF	Toulx Ste Croi	22.79	121	eP	P	06 20 47.8	+1.0
	48nm,1.3s,mb4.5						
BGF	Bois d'Agland	22.83	120	eP	P	06 20 46.8	-0.4
AVF	Avril sur Loir	22.85	118	eP	P	06 20 47.1	-0.3
SMF	Signal de Mont	23.17	118	eP	P	06 20 49.4	-1.1
	43nm,1.1s,mb4.5						
HAU	Haudompre	23.18	112	eP	P	06 20 51.1	+0.6
	34nm,1.0s,mb4.4						
CLL	Collm	23.81	99	e*PP		06 21 03.0	
CAF	Calviac	23.86	123	eP	P	06 20 59.9	+2.8
	37nm,1.1s,mb4.4						
SJPF	Ste Jean	24.16	130	eP	P	06 21 01.5	+1.3
MBDF	Montbardon	25.94	117	eP	P	06 21 18.1	+1.1
ESDC	Sonseca Array	26.32	138	P	P	06 21 19.7	-0.9
	0.2nm,0.2s,mb3.2,baz=352,slow=9.1,SNR=4.0						
YKA	Yellowknife Ar	37.92	311	P	P	06 23 02.2	+0.3
	1.1nm,1.0s,mb3.5,baz=49,slow=9.0,SNR=9.0						
YKA	Yellowknife Ar	37.92	311	P	P	06 23 02.2	+0.3
ILAR	Eielson Array	45.93	329	P	P	06 24 08.2	+1.1
	0.4nm,0.8s,mb3.4,baz=32,slow=7.1,SNR=6.1						
ILAR	Eielson Array	45.93	329	P	P	06 24 08.2	+1.0
PDAR	Pinedale Array	50.30	288	P	P	06 24 40.0	-1.5
	0.8nm,0.6s,mb3.9,baz=45,slow=8.4,SNR=9.0						
PDAR	Pinedale Array	50.30	288	P	P	06 24 40.0	-1.6
MKAR	Makanchi Array	57.47	51	P	P	06 25 35.0	+0.7
	0.4nm,0.8s,mb3.5,baz=304,slow=5.2,SNR=4.1						

IDC 07 06:34:25.2±4.9**, 1.81N×97.63E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/19**, mbtmp3.6**/3**, Error ellipse: s-maj=185.8km s-min=31.6km az=58.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.00	123	P	P	06 42 18.3	-1.8
	0.2nm,0.6s,baz=307,slow=9.5,SNR=5.5						
SONM	Songino Array	46.47	8	P	P	06 42 55.1	-0.7
	0.5nm,0.5s,baz=187,slow=9.4,SNR=3.8						
MKAR	Makanchi Array	46.76	346	P	P	06 42 55.4	-2.8
	0.4nm,0.7s,baz=158,slow=8.9,SNR=3.9						

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*IDC **07** 06:39:21.1±2.4, 9.42S×113.48E, mb3.6/4, mb1 3.8/4, mb1mx3.6/17, mbtmp3.7/4, Error ellipse: s-maj=151.2km s-min=25.1km az=49.0*
*DJA **07** 06:39:23.1±0.8, 9.65S×113.38E, h33^{km}, MD4.5/3, ML5.2/4, Error ellipse: s-maj=17.4km s-min=14.0km az=30.0*
ISC 07 06:39:26.0±2.3**, 9.5S**±0.1×**113.6E**±0.1**, h41^{km}**±24^{km}**, n10,** σ**1^{s}08**/14**, mb3.7**/4**, 7C-3D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	1.16	26	⇑iPn	P	06 39 44.4	-1.6
	1µm,0.2s						
SRDI	Scrawed	1.16	26	⇓iP	P	06 39 45.2	-0.8
SRDI				⇑iSn	S	06 40 01.9	+0.9
KELI	Kelakatan	1.56	33	⇑ePn	P	06 39 51.6	-0.2
	603nm,0.3s						
KELI	Kelakatan	1.56	33	⇓iP	P	06 39 52.7	+0.9
KELI				⇑iSn	S	06 40 12.6	+1.6
RATI	Rata	2.05	67	⇑iPn	P	06 39 58.4	-0.3
	5µm,0.2s						
RATI				⇑iSn	S	06 40 22.1	-1.1
KEDI	Kedomdong	2.67	67	⇓iPn	P	06 40 07.4	-0.2
	1µm,0.3s						
KEDI				⇑iSn	S	06 40 38.3	-0.6
WRA	Warramunga Arr	22.52	120	P	P	06 44 24.1	+0.4
	0.9nm,0.4s,mb3.5,baz=294,slow=12,SNR=16						
ASAR	Alice Springs	23.94	128	P	P	06 44 39.1	+1.6
	1.5nm,0.6s,mb3.6,baz=303,slow=8.9,SNR=20						
STKA	Stephens Creek	34.15	135	P	P	06 46 09.7	+0.3
	0.9nm,0.4s,mb4.1,baz=319,slow=9.3,SNR=3.0						
MKAR	Makanchi Array	62.65	336	P	P	06 49 46.3	-2.5
	0.2nm,0.5s,mb3.5,baz=131,slow=7.5,SNR=4.2						

IDC 07 06:43:49.8±7.3**, 15.21S×176.54W, mb3.8**/3**, mb1 4.2**/3**, mb1mx3.7**/16**, mbtmp3.8**/3**, Error ellipse: s-maj=321.6km s-min=36.4km az=140.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.94	257	P	P	06 52 22.6	-1.8
	0.3nm,0.4s,baz=91,slow=7.6,SNR=17						
ASAR	Alice Springs	47.30	252	P	P	06 52 25.4	-1.8
	2.5nm,0.4s,baz=88,slow=8.0,SNR=44						
ILAR	Eielson Array	82.87	12	P	P	06 56 15.8	-1.4
	0.2nm,0.4s,baz=213,slow=4.7,SNR=4.9						

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*IDC **07** 06:54:35.2±0.7, 61.94N×26.60W, mb3.8/14, mb1 4.0/15, mb1mx3.9/26, mbtmp3.8/15, ML3.4/1, Error ellipse: s-maj=22.9km s-min=13.3km az=7.0*
*CSEM **07** 06:54:35.6±0.1, 62.14N×26.34W, h20^{km}, mb4.8/3, Error ellipse: s-maj=6.6km s-min=3.0km az=147.0*
*NEIC **07** 06:54:37.1±0.3, 61.96N×26.58W, h10^{km}, mb4.6/4, Error ellipse: s-maj=10.5km s-min=6.1km az=193.0*
*BJI **07** 06:54:38.4, 62.93N×26.64W, h10^{km}, mB4.4, mb4.5, Ms4.8, Msz4.5*
ISC 07 06:54:35.2±0.4**, 62.18N**±0.05×**26.32W**±0.08**, h10^{km}, n55,** σ**1^{s}31**/66**, mb3.9**/18**, MS4.5**/2**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INYL	Nylenda	2.43	41	P	Pn	06 55 16.2	+0.5
IVOG	Vogar	2.54	43	P	Pn	06 55 17.2	0.0
IKRI	Krysuvik	2.58	47	P	Pn	06 55 16.8	-1.0
IKRI				S	Sn	06 55 50.2	+0.7
IVOS	Vogsosar	2.69	49	P	Pn	06 55 18.1	-1.3
IVOS				S	Sn	06 55 52.0	-0.4
ISAN	Sandskeio	2.87	47	P	Pn	06 55 21.1	-0.8
ISAN				S	Sn	06 55 57.9	+1.2
IBJA	Bjarnastaoir	2.89	50	P	Pn	06 55 20.9	-1.3
IBJA				S	Sn	06 55 56.8	-0.6
IKUD	Kuludalsa	2.94	41	P	Pn	06 55 23.4	+0.4
ISOL	Solvholt	3.01	52	P	Pn	06 55 22.2	-1.8
ISOL				S	Sn	06 56 00.7	+0.2
IKRO	Krokur	3.05	48	P	Pn	06 55 23.3	-1.1
IKRO				S	Sn	06 56 01.7	+0.3
IHEI	Heioarbar	3.07	46	P	Pn	06 55 24.0	-0.8
IHEI				S	Sn	06 56 03.4	+1.5
IASM	Asmuli	3.09	55	P	Pn	06 55 23.1	-1.9
IASM				S	Sn	06 56 01.2	-1.2
ISAU	Saurbar	3.24	53	P	Pn	06 55 25.3	-1.9
ISAU				S	Sn	06 56 04.7	-1.6
IHAU	Haukadalur	3.40	55	P	Pn	06 55 27.2	-2.3
IHAU				S	Sn	06 56 09.4	-1.0
IASB	`sbjarnarst	3.42	39	P	Pn	06 55 30.7	+1.0
IGYG	Gygjarholskot	3.48	50	P	Pn	06 55 29.5	-1.0
IGYG				S	Sn	06 56 13.1	+0.9
SUMG	Summit	11.40	341	eP	P	06 57 23.2	+2.2
	50nm,1.8s						
SUMG	Summit	11.40	341	eP	P	06 57 23.2	+2.2
	50nm,1.8s						
EKA	Eskdalemuir Ar	13.78	109	Pn	P	06 57 53.2	+0.6
	0.1nm,0.3s,baz=311,slow=15,SNR=3.7						
ARCES	ARCESS Array B	21.77	48	P	P	06 59 30.6	+2.1
	2.0nm,0.7s,mb3.6,baz=281,slow=9.2,SNR=3.4						
SCHQ	Schefferville	22.08	269	P	P	06 59 30.4	-1.4
	3.3nm,0.7s,mb3.9,baz=79,slow=5.4,SNR=6.2						
MOX	Moxa	23.57	102	eP	P	06 59 50.0	+3.8
CLL	Collm	23.75	99	P	P	06 59 50.0	+2.0
CLL				e*PP		06 59 57.0	
CLL				e		07 00 05.0	
FINES	FINESS Array B	24.21	68	P	P	06 59 54.1	+1.8
	2.7nm,1.1s,mb3.6,baz=312,slow=23,SNR=2.8						
GERES	GERESS Array B	25.80	103	P	P	07 00 07.4	-0.2
	0.3nm,0.2s,mb3.4,baz=344,slow=7.1,SNR=3.7						
GERES	GERESS Array B	25.80	103	P	P	07 00 07.4	-0.2
ESDC	Sonseca Array	26.31	139	P	P	07 00 12.1	-0.3
	0.2nm,0.3s,mb3.1,baz=349,slow=7.6,SNR=5.9						
MORC	Moravsky Berou	26.91	97	eP	P	07 00 20.5	+2.6
	8.4nm,1.5s,mb4.0						
CART	Cartagena	29.16	136	eP	P	07 00 37.7	-0.6
	42nm,1.3s,mb5.0						
CART	Cartagena	29.16	136	eP	P	07 00 37.7	-0.6
	42nm,1.3s,mb5.0						
AKASG	Malin Array Be	31.75	85	P	P	07 01 00.8	-0.4
	0.2nm,0.4s,mb3.3,baz=308,slow=8.7,SNR=6.8						
AKASG	Malin Array Be	31.75	85	P	P	07 01 00.8	-0.4
YKA	Yellowknife Ar	37.94	311	P	P	07 01 54.5	+0.5
	1.6nm,0.9s,mb3.8,baz=48,slow=8.8,SNR=15						
YKA	Yellowknife Ar	37.94	311	P	P	07 01 54.5	+0.5
ELN	Prospectdale	41.43	259	eP	P	07 02 22.8	-0.4
ELN	Prospectdale	41.43	259	eP	P	07 02 22.8	-0.4
BRTR	Keskin Array B	41.99	94	P	P	07 02 30.3	+2.7
	0.7nm,0.6s,mb3.4,baz=329,slow=7.2,SNR=3.6						
ILAR	Eielson Array	45.92	329	P	P	07 03 00.6	+1.5
	0.8nm,0.9s,mb3.7,baz=26,slow=6.8,SNR=9.2						
ILAR				PcP	PcP	07 04 35.5	-1.1
	1.0nm,0.7s,baz=357,slow=2.9,SNR=12						
ILAR	Eielson Array	45.92	329	PcP	PcP	07 04 35.5	-1.0
PDAR	Pinedale Array	50.35	288	P	P	07 03 33.0	-0.8
	2.7nm,0.8s,mb4.3,baz=53,slow=5.4,SNR=16						
PDAR	Pinedale Array	50.35	288	P	P	07 03 33.0	-0.8
HWUT	Hardware Ranch	52.17	289	eP	P	07 03 47.0	-0.6
	4.7nm,1.0s,mb4.4						
HWUT	Hardware Ranch	52.17	289	eP	P	07 03 47.0	-0.7
	4.7nm,1.0s,mb4.4						
MSU	Marysvale	54.96	287	eP	P	07 04 08.7	+0.4
MSU	Marysvale	54.96	287	eP	P	07 04 08.7	+0.4
JCT	Junction City	55.89	271	eP	P	07 04 13.4	-1.7
	15nm,1.2s,mb4.9						
JCT	Junction City	55.89	271	eP	P	07 04 13.4	-1.7
	15nm,1.2s,mb4.9						
GDL2	Guadalupe Moun	56.59	276	eP	P	07 04 19.7	-0.4
MKAR	Makanchi Array	57.40	51	P	P	07 04 27.1	+1.4
	0.5nm,0.7s,mb3.7,baz=323,slow=6.1,SNR=5.7						
TXAR	Lajitas Array	58.66	274	P	P	07 04 32.4	-2.4
	0.6nm,0.7s,mb3.8,baz=57,slow=5.9,SNR=9.4						
TXAR	Lajitas Array	58.66	274	P	P	07 04 32.3	-2.4
WMQ	Urumqi	61.89	49	eP	P	07 04 59.0	+2.3
WMQ				AP	pP	07 05 03.6	+3.8
WMQ				XP	sP	07 05 06.0	+5.1
WMQ				PCP	PcP	07 05 38.8	+1.5
WMQ				eS	S	07 13 21.9	+3.2
WMQ				SCS	ScS	07 14 46.6	+1.7
WMQ				SS	SS	07 17 25.4	+2.8
WMQ				AMB	AMB		
	comp=Z,10.0nm,4.2s						
WMQ				LR	LR		
	comp=N,310nm,21.2s,MS4.6						
WMQ				LR	LR		
	comp=E,310nm,18.4s,MS4.6						
WMQ				LR	LR		
	comp=Z,320nm,20.6s,MS4.5						
SONM	Songino Array	64.02	33	P	P	07 05 12.4	+1.9
	comp=Z,2.5nm,1.1s,mb4.2,baz=326,slow=4.5,SNR=9.9						
GTA	Gaotai	69.88	42	eP	P	07 05 49.6	+1.9
GTA				AP	pP	07 05 58.5	+7.7
GTA				XP	sP	07 06 02.7	+11
MDJ	Mudanjiang	71.81	18	P	P	07 06 00.2	+0.9
MDJ				PP	PP	07 08 38.1	-2.4
MDJ				S	S	07 15 20.4	+2.0
MDJ				SS	SS	07 19 53.1	-3.2
MDJ				AMB	AMB		
	comp=Z,60nm,4.5s						
MDJ				LR	LR		
	comp=N,220nm,23.8s,MS4.4						
MDJ				LR	LR		
	comp=E,100nm,27.4s,MS4.4						
MDJ				LR	LR		
	comp=Z,290nm,21.9s						
BDFB	Brasilia	79.43	201	P	P	07 06 42.0	-1.0
	comp=Z,2.0nm,0.7s,mb4.1,baz=7.2,slow=10,SNR=4.2						

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*CSEM **07** 07:11:21.9±0.1, 30.60N×50.36E, h25^{km}, ML3.0, Error ellipse: s-maj=3.4km s-min=2.8km az=134.0*
*TEH **07** 07:11:22.2, 30.32N×50.19E, h24^{km}, Mn3.2*
*THR **07** 07:11:27.6±0.4, 31.13N×50.38E, h14^{km}±4^{km}, ML2.9*
ISC 07 07:11:22.8±0.5**, 30.52N**±0.05×**50.42E**±0.06**, h25^{km}, n18,** σ**1^{s}20**/22**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	2.10	319	ePG	Pn	07 11 57.9	+0.8
SHGR				AML	AML	07 12 39.4	
	comp=N,165nm,0.5s						
IGAR	Garneh	2.29	41	Pn	Pn	07 12 00.1	+0.3
IPAR	Pars	2.37	106	Pn	Pn	07 12 02.3	+1.3
IMOK	Mook	2.48	126	Pn	Pn	07 12 01.8	-0.7
UMR	Umm Al-Rimmam	2.54	248	eP	Pn	07 12 03.7	+0.4
UMR				eS	Sn	07 12 34.9	+1.2
IZEF	Zefreh	2.87	34	Pn	Pn	07 12 09.2	+1.1
IKLH	Kalahroud	2.96	19	Pn	Pn	07 12 08.6	-0.7
RDF	Al-Radifah	2.96	238	eP	Pn	07 12 09.4	0.0
RDF				eS	Sn	07 12 45.1	+0.6
NASN	Na'in	3.05	41	ePN	Pn	07 12 12.3	+1.7
NASN				eSG	Sn	07 12 50.9	+4.2
ASAO	Ashtian	4.03	355	ePN	Pn	07 12 22.9	-1.7
ASAO				AML	AML	07 13 45.6	
	comp=N,23nm,0.6s						
IVRN	Varamin	4.60	14	Sn	Sn	07 13 25.4	-0.5
IVRN	Varamin	4.60	14	Pn	Pn	07 12 24.3	-8.3
IDMV	Damavand	5.22	15	Pn	Pn	07 12 41.4	0.0
HASS	Wahat al Ahsa'	5.35	187	P	Pn	07 12 41.4	-1.8
HASS				S	Sn	07 13 40.9	-3.9
IDHR	Dehrash	5.38	322	Pn	Pn	07 12 40.8	-2.8
MZLS	Mizel	7.96	217	P	Pn	07 13 14.7	-5.2
HILS	Ha'il	8.18	250	P	P	07 13 17.3	-5.7
AFFS	'Afif	9.31	227	P	P	07 13 32.2	-6.5

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*IDC **07** 07:12:00.9±3.1, 0.82N×97.50E, mb3.8/5, mb1 4.0/6, mb1mx3.8/20, mbtmp3.8/6, ML4.1/1, MS3.4/1, Ms1 3.6/1, ms1mx3.2/26, Error ellipse: s-maj=121.5km s-min=21.1km az=60.0*
*NEIC **07** 07:12:04.3±1.0, 0.83N×97.36E, h30^{km}, mb4.6/3, Error ellipse: s-maj=20.9km s-min=16.6km az=48.0*
ISC 07 07:12:02.5±1.0**, 0.9N**±0.1×**97.4E**±0.1**, h30^{km}, n11,** σ**1^{s}12**/11**, mb4.1**/7**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.49	37	ePn	Pn	07 13 23.2	-1.2
CMAR	Chiang Mai Arr	17.56	5	P	P	07 16 07.3	+0.4
	0.3nm,0.3s,baz=195,slow=12,SNR=7.3						
CMAR				LR	LR	07 22 28.6	
	comp=Z,117nm,18.8s,baz=270,slow=36						
PALK	Pallekele	17.80	291	eP	P	07 16 08.5	-1.4
	22nm,1.1s						
ENH	Enshi	31.44	20	eP	P	07 18 21.9	-1.7
	5.2nm,0.5s,mb4.6						
WRA	Warramunga Arr	41.71	122	P	P	07 19 50.3	-0.4
	0.8nm,0.6s,mb3.5,baz=304,slow=8.8,SNR=9.9						
ASAR	Alice Springs	43.05	127	P	P	07 20 02.1	+0.4
	0.6nm,0.6s,mb3.5,baz=306,slow=8.1,SNR=5.5						
SONM	Songino Array	47.44	8	P	P	07 20 37.9	+1.5
	0.8nm,0.8s,mb3.7,baz=180,slow=8.6,SNR=4.9						
MKAR	Makanchi Array	47.61	346	P	P	07 20 38.9	+1.1
	1.1nm,0.5s,mb4.1,baz=153,slow=8.1,SNR=12						
CTAO	Charters Tower	52.20	116	eP	P	07 21 05.7	-7.5
	23nm,1.3s,mb5.0						
STKA	Stephens Creek	53.00	132	eP	P	07 21 11.8	-7.2
ZAL	Zalesovo	53.91	351	P	P	07 21 26.6	+1.2
	1.3nm,0.4s,mb4.2,baz=314,slow=4.5,SNR=4.3						

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*NAO **07** 07:22:40.2±1.8, 59.78N×22.49E, ML2.2*
*HEL **07** 07:22:41.0±0.2, 59.78N×22.24E, ML2.0, ML2.3(UPP), ML2.2(NAO), Explosion*
*IDC **07** 07:22:41.2±1.8, 59.86N×22.45E, mb1 3.1/4, mb1mx3.0/23, mbtmp3.0/4, ML2.6/4, Error ellipse: s-maj=25.1km s-min=7.1km az=156.0*
*BER **07** 07:22:42.2±3.9, 59.89N×22.34E, ML2.2(NAO), Suspected explosion*
ISC 07 07:22:39.9±0.5**, 59.81N**±0.04×**22.21E**±0.05**, n44,** σ**1^{s}04**/60**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAL	Aland	1.17	289	eP	Pb	07 23 02.2	-0.5
AAL				eS	Sb	07 23 17.9	-0.4
GRAU	Graesoe	1.91	287	eP	Pn	07 23 13.3	-0.7
PVF	Pernaja	1.97	67	eP	Pn	07 23 14.4	-0.5
PVF				eSG	Sg	07 23 42.2	-3.2
PVF				MSG		07 23 44.5	
	comp=Z,9.4nm,0.1s						
FORU	Forsmark	2.10	288	eP	Pn	07 23 17.6	+0.8
FLYU	Flymyra	2.20	280	eP	Pn	07 23 19.0	+0.9
NYNU	Nynaeshamn	2.30	251	eP	Pn	07 23 20.4	+0.8
UPP	Uppsala	2.31	273	eP	Pn	07 23 20.5	+0.7
FIA0	FINESS Array S	2.51	48	Pn	Pn	07 23 23.0	+0.3
	baz=226,slow=14						
FIA0				Lg		07 23 55.4	
	baz=231,slow=22						
FIA0				Rg		07 24 09.8	
	baz=214,slow=37						
FIA0	FINESS Array S	2.51	48	eP	Pn	07 23 23.1	+0.5
FIA0				eS	Sn	07 23 55.2	+0.8
FIA0				MSG		07 23 58.9	
	comp=Z,6.0nm,0.1s						
FINES	FINESS Array B	2.51	48	Pn	Pn	07 23 23.0	+0.3
	comp=Z,0.8nm,0.3s,baz=229,slow=14,SNR=39						
FINES				Lg		07 23 55.5	
	comp=Z,3.3nm,0.3s,baz=237,slow=23,SNR=26						
FINES				Rg		07 24 11.7	
	comp=Z,5.1nm,0.8s,baz=243,slow=30,SNR=4.9						
BACU	Backbrunna	2.58	273	eP	Pn	07 23 24.2	+0.7
OSTU	Oestervaala	2.58	282	eP	Pn	07 23 24.0	+0.4
IGGU	Iggoen	2.65	296	eP	Pn	07 23 25.0	+0.3
KEF	Keuruu	2.69	28	eP	Pn	07 23 26.5	+1.3
KEF				eS	Sn	07 24 00.8	+1.8
KEF				MSG		07 24 03.6	
	comp=Z,4.6nm,0.1s						
VJF	Virojoki	2.77	72	eP	Pn	07 23 25.2	-1.2
VJF				eS	Sn	07 23 58.8	-2.2
ESKU	Eskilstuna	3.02	261	eP	Pn	07 23 30.6	+0.7
ARNU	Arnoeviken	3.03	311	eP	Pn	07 23 30.2	+0.2
KAF	Kangasniemi	3.05	39	eP	Pn	07 23 31.2	+0.9
KAF				eS	Sn	07 24 09.3	+1.2
KAF				MSG		07 24 11.3	
	comp=Z,2.7nm,0.2s						
VIKU	Vikbolandet	3.13	248	eP	Pn	07 23 31.7	+0.2
VAF	Ylistaro	3.25	4	eP	Pn	07 23 34.3	+1.2
VAF				eS	Sn	07 24 14.3	+1.2
FALU	Falun	3.26	285	eP	Pn	07 23 33.9	+0.6
SUF	Sumiainen	3.48	31	eP	Pn	07 23 37.1	+0.6
SUF				eS	Sn	07 24 20.1	+1.1
SUF				MSG		07 24 23.7	
	comp=Z,2.0nm,0.2s						
HEMU	Hemsoen	3.51	327	eP	Pn	07 23 37.5	+0.6
ROTU	Roteberg	3.54	300	eP	Pn	07 23 36.5	-0.8
HASU	Hassela	3.60	313	eP	Pn	07 23 38.4	+0.3
NRAU	Nora	3.64	269	eP	Pn	07 23 39.5	+0.8
VSTU	Vaestervik	3.66	236	eP	Pn	07 23 39.5	+0.5
LNKU	Linkoeping	3.81	248	eP	Pn	07 23 41.5	+0.3
UMAU	Umeaa	4.15	351	eP	Pn	07 23 46.0	+0.1
UMAU				eS	Sn	07 24 34.8	-1.1
HFS	Hagfors	4.29	278	Pn	Pn	07 23 47.2	-0.7
	baz=97,slow=9.3						
HFS				Sn	Sn	07 24 38.0	-1.5
	baz=91,slow=37						
HFS				Lg		07 24 55.0	
	baz=97,slow=37						
HFS	Hagfors	4.29	278	eP	Pn	07 23 47.2	-0.7
HFS				eS	Sn	07 24 38.0	-1.5
HFS				eSG		07 24 55.0	
HFS	Hagfors	4.29	278	Pn	Pn	07 23 48.3	+0.3
	comp=Z,0.0nm,0.3s,baz=105,slow=11,SNR=12						
HFS				Lg		07 24 57.0	
	comp=Z,0.2nm,0.3s,baz=90,slow=31,SNR=8.4						
BURU	Burvik	4.80	356	eP	Pn	07 23 54.2	-1.1
SVAU	Svanoeiden	4.86	346	eP	Pn	07 23 55.2	-0.8
NB2	NORSAR Subarra	5.58	287	Pn	Pn	07 24 04.6	-1.6
	baz=96,slow=14						
NB2				Sn	Sn	07 25 08.8	-3.2
NB2				Lg		07 25 32.7	
NB2	NORSAR Subarra	5.58	287	eP	Pn	07 24 04.6	-1.6
NB2				eS	Sn	07 25 08.8	-3.2
NB2				eSG		07 25 32.7	
NOA	NORSAR Array B	5.58	287	Pn	Pn	07 24 05.2	-1.0
	comp=Z,0.2nm,0.3s,baz=317,slow=9.2,SNR=2.6						
LILU	Lilltraesk	5.60	350	eP	Pn	07 24 05.2	-1.3
SJUU	Sjulsmark	5.72	357	eP	Pn	07 24 06.5	-1.8
APA0	Apatity Array	9.15	27	Pn	P	07 24 54.3	-1.9
	baz=231,slow=11						
APA0	Apatity Array	9.15	27	eP	P	07 24 54.3	-1.9
ARA0	ARCESS Array S	9.86	7	Pn	P	07 25 01.0	-4.8
	baz=187,slow=14						
ARA0				Sn	Sn	07 26 47.5	-11
	baz=189,slow=28						
ARA0	ARCESS Array S	9.86	7	eP	P	07 25 01.0	-4.8
ARA0				eS	Sn	07 26 47.5	-11
ARCES	ARCESS Array B	9.86	7	Pn	P	07 25 01.5	-4.3
	comp=Z,0.2nm,0.3s,baz=183,slow=14,SNR=6.3						
ARCES				Sn	Sn	07 26 46.7	-12
	comp=Z,0.1nm,0.3s,baz=188,slow=26,SNR=2.6						

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*NEIC **07** 07:27:32.1, 37.28N×20.63E, h5^{km}, MD3.5(ATH), After ATH.*
*CSEM **07** 07:27:32.1±1.6, 37.28N×20.63E, h5^{km}, MD3.5, Error ellipse: s-maj=37.6km s-min=9.7km az=46.0, After ATH*
ATH 07 07:27:31.9, 37.25N×20.60E, h5^{km}±2^{km}**, MD3.5**/4**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.93	359	ePB	Pb	07 27 49.6	-0.4
VLS				eSB	Sb	07 28 02.9	+0.5

RLS	Riolos of Patr	1.06	40	*e*PB	Pb	07 27 50.9	-1.4
ITM	Ithomi	1.06	93	*e*PB	Pb	07 27 51.9	-0.5
ITM				*e*SB	Sb	07 28 06.7	+0.3
EVR	Evrytania	1.92	29	*e*PG	Pg	07 28 07.7	-2.5
EVR				*e*SN	Sn	07 28 33.0	+2.7

CASC 07 07:29:55.8±1.0,13.97N×91.62W,h21^{km}±4^{km},MD4.0, ML2.9,1C-1D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	1.15	80	⇑*e*P	Pb	07 30 16.1	-0.7
IXG				*e*S	Sb	07 30 33.0	+1.6
RBDL	Robledal	1.88	85	*e*P	Pn	07 30 27.3	-0.1
RBDL				*e*S	Sn	07 30 51.9	+1.1
RTR	El Retiro	1.92	92	*e*P	Pn	07 30 27.6	-0.3
RTR				*e*S	Sn	07 30 53.1	+1.4
SBLS	San Blas	1.94	93	*e*P	Pn	07 30 28.1	-0.1
SBLS				*e*S	Sn	07 30 52.9	+0.6
SNJE	San Jose	1.96	93	*e*P	Pn	07 30 28.5	0.0
SNJE				*e*S	Sn	07 30 52.9	+0.2
MRL	Marmol	2.17	59	⇓*e*P	Pn	07 30 30.9	-0.5
MRL				*e*S	Sn	07 30 58.0	+0.1
MRL				AML	AML	07 31 05.4	
	comp=E,100nm,0.6s						
BOQS	Boqueron	2.29	95	*e*P	Pn	07 30 32.5	-0.6
BOQS				*e*S	Sn	07 31 01.0	0.0
LFU	La Fuente	2.45	95	*e*P	Pn	07 30 34.4	-1.0
LFRS	El Faro	2.51	97	*e*P	Pn	07 30 36.0	-0.3
LFRS				*e*S	Sn	07 31 06.5	-0.2
LCBS	La Ceiba	2.59	97	*e*P	Pn	07 30 37.0	-0.4
LCBS				*e*S	Sn	07 31 08.5	0.0

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*IDC **07** 07:40:12.8±3.2,29.94S×178.38W,mb4.3/3,mb1 4.5/3, mb1mx4.0/14,mbtmp4.3/3,Error ellipse: s-maj=197.7km s-min=33.8km az=159.0*

*NEIC **07** 07:40:32.0±0.7,30.28S×178.77W,h150^{km},mb4.1/1, Error ellipse: s-maj=24.5km s-min=18.6km az=171.0*

ISC 07 07:40:13.4±6.7,29.7S±1.0×178.1W±0.9,h33^{km},n13, σ0^{s}25/6,mb4.3/4,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	34.58	256	P	P	07 47 01.4	+0.2
	3.8nm,0.7s,mb4.4,baz=88,slow=11,SNR=9.7						
STKA	Stephens Creek	34.58	256	*e*P	P	07 47 01.2	0.0
STKA				P		07 47 01.4	
ASAR	Alice Springs	43.09	266	P	P	07 48 11.9	-0.3
	1.1nm,0.3s,mb4.0,baz=105,slow=7.3,SNR=5.8						
WB2	Warramunga Arr	44.01	271	*e*P	P	07 48 19.8	+0.1
WRA	Warramunga Arr	44.02	271	P	P	07 48 20.0	+0.2
	2.1nm,0.3s,mb4.4,baz=111,slow=8.1,SNR=73						
QSPA	South Pole Qui	60.38	180	*e*P	P	07 50 21.2	0.0
	0.9nm,0.3s,mb4.3						
BVAR	Borovoye Array	125.88	316	PKP	PKPdf	07 59 15.7	+4.0
	1.0nm,0.6s,SNR=7.1						
KEV	Kevo	137.46	347	*e*pkp	PKPdf	07 59 41.6	+8.4
KAF	Kangasniemi	143.90	341	*e*pkp	PKPdf	07 59 43.2	-1.4
	baz=25,slow=3.5						
FINES	FINESS Array B	144.50	340	PKP	PKPdf	07 59 49.5	+3.8
	6.7nm,0.6s,baz=58,slow=3.8,SNR=32						
NOA	NORSAR Array B	148.08	351	PKPbc	PKPdf	08 00 00.7	+9.0
	1.7nm,0.7s,baz=16,slow=4.2,SNR=4.8						
AKASG	Malin Array Be	150.73	323	PKPbc	PKPdf	08 00 06.6	+10
	2.8nm,0.6s,baz=47,slow=2.4,SNR=12						
BRTR	Keskin Array B	152.22	300	PKPbc	PKPdf	08 00 09.0	+10
	0.5nm,0.4s,baz=90,slow=6.2,SNR=4.2						

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*NEIC **07** 08:29:51.2,19.10N×70.02W,h63^{km},MD3.8(RSPR), After RSPR.*

RSPR 07 08:29:51.2,19.10N×70.02W,h63^{km}±3^{km},MD3.8/12, MD3.8/12,5C-5D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STDO	Santo Domingo	0.65	172	⇓*e*P	P	08 30 04.9	-0.3
STDO				*e*S	S	08 30 14.3	-1.3
AGPR	Aguadilla, PR	2.83	102	⇑*e*P	P	08 30 33.0	-2.1
AGPR				*e*S	S	08 31 04.2	-3.9
MGP	Maguayo	2.98	111	⇓*i*P	P	08 30 36.1	-1.2
MGP				*e*S	S	08 31 04.9	-7.1
LRS	Lares	3.12	104	⇓*e*P	P	08 30 37.5	-1.7
LRS				*e*S	S	08 31 10.8	-4.5
AOPR	Arecibo Observ	3.19	103	⇑*e*P	P	08 30 38.1	-2.1
AOPR				*e*S	S	08 31 16.2	-1.0
PORP	Portuguez	3.37	107	⇑*e*P	P	08 30 40.3	-2.5
CELP	Cerrillos	3.42	107	⇑*e*P	P	08 30 41.4	-2.0
CPD	Cerro la Pandu	4.03	105	⇑*e*P	P	08 30 49.3	-2.8
CPD				*e*S	S	08 31 31.9	-6.5
HUMP	Col San Antoni	4.07	103	⇓*e*P	P	08 30 49.2	-3.2
HUMP				*e*S	S	08 31 33.4	-5.8
MTP	Monte Pirata	4.35	103	⇓*e*P	P	08 30 52.3	-4.2
MTP				*e*S	S	08 31 38.1	-8.2

IDC 07 08:36:17.0±55.0,16.23S×179.99E,mb4.6/3,mb1 4.7/3, mb1mx4.0/16,mbtmp4.6/3,3D,Error ellipse: s-maj=991.1km s-min=137.8km az=76.0,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.14	239	P	P	08 43 37.9	-2.0
	3.2nm,0.6s,baz=91,slow=9.2,SNR=13						
WB2	Warramunga Arr	43.44	258	⇓*i*P	P	08 44 22.2	-1.5
WRA	Warramunga Arr	43.45	258	P	P	08 44 22.4	-1.4
	1.0nm,0.3s,baz=90,slow=7.7,SNR=67						
ASAR	Alice Springs	43.80	253	P	P	08 44 24.8	-1.8
	10nm,0.4s,baz=89,slow=8.0,SNR=257						
ASPA	Alice Springs	43.80	253	⇓*i*P	P	08 44 24.7	-1.9
KAKA	Kakadu	46.10	268	⇓*i*P	P	08 44 45.1	0.0

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*MOS **07** 08:41:19.5±1.0,4.50S×103.14E,h33^{km},mb5.0/9,Error ellipse: s-maj=16.4km s-min=9.6km az=117.0*

*BJI **07** 08:41:20.2,4.60S×103.00E,h30^{km},mB5.0,mb4.8,Ms4.8, Msz4.5*

*NEIC **07** 08:41:20.3±0.3,4.59S×103.05E,h30^{km},mb4.9/13,Error ellipse: s-maj=17.0km s-min=6.6km az=49.0*

*IDC **07** 08:41:23.7±3.6,4.61S×102.96E,h59^{km}±29^{km},mb4.4/14, mb1 4.6/14,mb1mx4.4/20,mbtmp4.7/14,MS3.2/1, Ms1 3.4/1,ms1mx2.8/28,Error ellipse: s-maj=34.3km s-min=12.0km az=51.0*

*DJA **07** 08:41:25.3±1.1,4.71S×103.24E,h58^{km}±11^{km},mb5.5/1, Error ellipse: s-maj=50.6km s-min=20.0km az=49.0*

ISC 07 08:41:22.9±1.3,4.58S±0.10×103.1E±0.1,h66^{km}±12^{km}, n90,σ0^{s}94/69,mb4.8/29,4C-5D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PENI	Pendagan	2.26	116	⇓*i*P	P	08 41 58.9	+0.1
PASI	Pasiripis	3.23	131	*e*P	P	08 42 12.3	-0.1
PASI				*e*S	S	08 42 48.4	-1.4
PULI	Pulasari	3.34	122	⇓*i*P	P	08 42 14.5	+0.5
KALI	Kaliastana	4.32	126	*e*P	P	08 42 28.7	+1.0
KALI				*e*S	S	08 43 16.0	-1.3
SRDI	Scrawed	11.61	110	⇑*i*P	P	08 44 09.0	+1.0
KELI	Kelakatan	11.86	108	⇑*i*P	P	08 44 13.7	+2.4
	146nm,0.2s						
RATI	Rata	12.99	109	⇑*i*P	P	08 44 25.1	-1.3
CMAR	Chiang Mai Arr	23.26	350	P	P	08 46 26.7	+1.3
	8.5nm,0.6s,mb4.3,baz=188,slow=9.0,SNR=26						
CMAR				PcP	PcP	08 50 13.2	+0.2
	2.1nm,0.6s,baz=202,slow=3.0,SNR=7.0						
CMAR				LR	LR	08 55 38.8	
	comp=Z,57nm,18.9s,baz=180,slow=37						
KMI	Kunming	29.53	359	P	P	08 47 25.0	+1.5
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
WRA	Warramunga Arr	34.01	119	P	P	08 48 02.9	+0.2
	comp=Z,1.7nm,0.3s,mb4.3,baz=290,slow=7.5,SNR=52						
WRA				PcP	PcP	08 50 39.3	-0.1
	comp=Z,2.0nm,0.5s,baz=304,slow=2.1,SNR=9.9						
WRAB	Tennant Creek	34.02	119	*e*P	P	08 48 02.8	0.0
WRAB				*e*		08 50 39.6	
WRAB				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.9						
WRAB	Tennant Creek	34.02	119	*e*P	P	08 48 02.8	+0.1
	comp=Z,12nm,0.6s,mb4.9						
WRAB				*e*PcP	PcP	08 50 39.6	+0.1
WB2	Warramunga Arr	34.02	119	*e*P	P	08 48 02.4	-0.4
ENH	Enshi	35.19	10	P	P	08 48 07.9	-4.7
ASPA	Alice Springs	35.22	126	*e*P	P	08 48 13.4	+0.4
ASAR	Alice Springs	35.22	126	P	P	08 48 13.3	+0.3
	comp=Z,2.6nm,0.4s,mb4.4,baz=295,slow=7.6,SNR=43						
ASAR				PcP	PcP	08 50 43.1	+0.2
	comp=Z,2.9nm,0.5s,baz=321,slow=2.6,SNR=15						
ASAR				ScP		08 54 23.7	
	comp=Z,1.1nm,0.7s,baz=303,slow=3.1,SNR=6.3						
LSA	Lhasa	35.97	342	*e*P	P	08 48 20.0	+0.7
LSA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
LSA	Lhasa	35.97	342	*e*P	P	08 48 20.0	+0.7
	comp=Z,13nm,1.0s,mb4.8						
PKI	Pulchoki	36.25	333	*e*P	P	08 48 21.3	-0.4
	comp=Z,14nm,0.8s,mb5.0						
PKI	Pulchoki	36.25	333	*e*P	P	08 48 21.3	-0.4
PKI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
GUN	Gumba	36.33	334	*e*P	P	08 48 22.5	+0.1
	comp=Z,64nm,0.7s,mb5.7						
DMN	Daman	36.42	332	*e*P	P	08 48 23.0	-0.1
	comp=Z,14nm,0.6s,mb5.1						
KKN	Kakani	36.50	333	*e*P	P	08 48 23.4	-0.4
	comp=Z,40nm,0.8s,mb5.4						
KKN	Kakani	36.50	333	*e*P	P	08 48 23.4	-0.4
KKN				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
GKN	Gorkha	36.97	332	*e*P	P	08 48 27.6	-0.2
	comp=Z,20nm,0.5s,mb5.3						
KOLN	Koldanda	37.27	331	*e*P	P	08 48 30.5	+0.3
	comp=Z,53nm,0.8s,mb5.5						
NDI	New Delhi	41.41	325	*e*x	P	08 49 02.5	-2.0
GTA	Gaotai	43.88	356	*e*P	P	08 49 25.4	+0.8
GTA				AP	pP	08 49 32.0	-9.4
GTA				XP	sP	08 49 35.4	-14
CTA	Charters Tower	44.70	114	P	P	08 49 32.6	+1.2
	comp=Z,22nm,0.8s,mb4.9,baz=275,slow=8.8,SNR=16						
CTAO	Charters Tower	44.70	114	*e*P	P	08 49 32.3	+0.9
CTAO				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
CTAO	Charters Tower	44.70	114	*e*P	P	08 49 32.3	+0.9
	comp=Z,29nm,0.9s,mb5.0						
STKA	Stephens Creek	45.12	132	⇑*i*P	P	08 49 35.2	+0.6
STKA	Stephens Creek	45.12	132	P	P	08 49 35.3	+0.7
	comp=Z,17nm,0.8s,mb4.8,baz=307,slow=8.2,SNR=42						
STKA				PcP	PcP	08 51 14.7	0.0
	comp=Z,4.2nm,0.5s,baz=320,slow=2.8,SNR=3.7						
HHC	Hu-ho-hao-te	45.87	9	*e*P	P	08 49 41.0	+0.5
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
SONM	Songino Array	52.27	3	P	P	08 50 30.5	+0.9
	comp=Z,12nm,0.7s,mb5.0,baz=186,slow=9.0,SNR=85						
SONM				PcP	PcP	08 51 40.1	-0.2
	comp=Z,3.5nm,0.6s,baz=183,slow=4.0,SNR=7.0						
ULN	Ulaanbaatar	52.34	3	*e*P	P	08 50 30.6	+0.4
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
ULN	Ulaanbaatar	52.34	3	*e*P	P	08 50 30.6	+0.4
	comp=Z,8.5nm,1.1s,mb4.7						
MAJO	Matsushiro	52.42	36	*e*P	P	08 50 28.8	-2.2
MAT	Matsushiro	52.42	36	*e*P	P	08 50 29.0	-2.0
MAT				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
MAT	Matsushiro	52.42	36	*e*P	P	08 50 29.0	-2.0
	comp=Z,7.5nm,0.8s,mb4.8						
MAT	Matsushiro	52.42	36	P	P	08 50 29.4	-1.6
MJAR	Matsushiro Arr	52.42	36	P	P	08 50 30.6	-0.4
	comp=Z,8.2nm,0.9s,mb4.8,baz=217,slow=7.2,SNR=15						
KZA	Kyzart	52.91	334	P	P	08 50 35.1	+0.6
	SNR=6.2						
UCH	Uchtor	53.35	334	P	P	08 50 37.6	-0.2
	SNR=5.8						
TKM2	Tokmak 2	53.45	335	P	P	08 50 37.9	-0.7
	SNR=18						
AML	Almayashu	53.64	333	P	P	08 50 39.3	-0.7
	SNR=13						
EKS2	Erkin-Say	54.03	333	P	P	08 50 42.4	-0.4
	SNR=8.8						
USP	Ospenovka	54.20	334	P	P	08 50 42.9	-1.1
	SNR=6.3						
MKAR	Makanchi Array	54.37	343	P	P	08 50 44.2	-1.0
	comp=Z,18nm,0.5s,mb5.3,baz=145,slow=8.0,SNR=213						
ZAK	Zakamensk	54.74	0	*e*P	P	08 50 48.0	+0.1
ZAK				*e*		08 51 48.3	
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
TLY	Talaya	56.05	0	*i* P	P	08 50 58.4	+1.1
TLY	Talaya	56.05	0	*e*P	P	08 50 56.5	-0.8
	comp=Z,5.2nm,0.8s,mb4.6						
ZAL	Zalesovo	60.30	348	P	P	08 51 25.7	-1.2
	comp=Z,11nm,0.4s,mb5.2,baz=302,slow=5.3,SNR=49						
ZAL	Zalesovo	60.30	348	P	P	08 51 25.7	-1.2
YSS	Yuzh-Sakhalins	62.09	30	*e*P	P	08 51 40.0	+0.9
YAK	Yakutsk	69.49	13	*i* P	P	08 52 25.4	-0.7
ARU	Arti	70.81	336	*i* P	P	08 52 32.7	-1.5
BRTR	Keskin Array B	77.35	312	P	P	08 53 11.7	-0.8
	comp=Z,4.1nm,0.7s,mb4.3,baz=133,slow=7.1,SNR=22						
AKASG	Malin Array Be	83.42	322	P	P	08 53 43.8	-0.6
	comp=Z,1.3nm,0.4s,mb4.1,baz=84,slow=4.8,SNR=14						
VRI	Vrincioaia	83.85	317	⇓*i*P	P	08 53 47.9	+1.2
MLR	Muntele Rosu	84.31	316	P	P	08 53 50.0	+1.0
	comp=Z,6.3nm,0.8s,mb4.5,baz=136,slow=5.9,SNR=9.7						
MLR	Muntele Rosu	84.31	316	⇓*i*P	P	08 53 50.0	+1.0
BURAR	Bucovina Array	85.25	318	⇓*i*P	P	08 53 55.1	+1.5
FINES	FINESS Array B	87.83	332	P	P	08 54 06.3	+0.4
	comp=Z,1.8nm,0.5s,mb4.4,baz=116,slow=5.4,SNR=19						
KAF	Kangasniemi	87.89	333	*e*p	P	08 54 06.0	-0.1
	comp=Z,4.5nm,0.5s,mb4.8,baz=98,slow=4.3						
KAF	Kangasniemi	87.89	333	*e*P	P	08 54 06.0	-0.1
KAF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
ARCES	ARCESS Array B	89.95	340	P	P	08 54 16.3	+0.6
	comp=Z,3.4nm,0.7s,mb4.6,baz=101,slow=4.4,SNR=12						
YKA	Yellowknife Ar	115.87	18	PKP	PKPdf	08 59 58.2	+0.4
	comp=Z,0.2nm,0.5s,baz=305,slow=2.4,SNR=3.6						
YKA	Yellowknife Ar	115.87	18	PKP	PKPdf	08 59 58.2	+0.4
FRB	Frobisher Bay	120.64	356	PKP	PKPdf	09 00 07.1	+0.1
	comp=Z,1.3nm,0.4s,slow=2.0,SNR=5.6						
SCHQ	Schefferville	129.24	353	PKP	PKPdf	09 00 25.2	+1.4
	comp=Z,1.8nm,0.8s,baz=308,slow=3.3,SNR=5.7						
SCHQ	Schefferville	129.24	353	PKP	PKPdf	09 00 25.2	+1.4
NVAR	Mina Array Bea	129.51	42	PKP	PKPdf	09 00 26.8	+2.0
	comp=Z,0.5nm,0.7s,baz=316,slow=3.4,SNR=4.2						
WMOK	Wichita Mounta	143.78	31	*e*PKPpre		09 00 49.9	
LTX	Lajitas	144.66	43	*e*PKPdf	PKPdf	09 00 53.9	+1.2
TXAR	Lajitas Array	144.66	43	PKIKP	PKPdf	09 00 54.3	+1.6
TXAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TXAR	Lajitas Array	144.66	43	PKP	PKPdf	09 00 54.2	+1.6
	comp=Z,7.8nm,0.7s,baz=274,slow=1.4,SNR=114						
MCWV	Mont Chateau	144.98	4	*e*PKPdf	PKPdf	09 00 53.7	+0.8
BDFB	Brasilia	145.07	234	PKP	PKPdf	09 00 55.1	+1.4
	comp=Z,4.6nm,0.4s,baz=100,slow=2.4,SNR=11						
SDMD	Soldier's Deli	145.33	360	*e*PKPdf	PKPdf	09 00 54.5	+1.0
WCI	Wyandotte Cave	145.43	13	*e*PKPdf	PKPdf	09 00 54.9	+1.2
JCT	Junction City	146.37	37	*e*PKPdf	PKPdf	09 00 59.0	+3.4
MIAR	Mount Ida	146.40	25	*e*PKPdf	PKPdf	09 00 58.6	+3.1
WVT	Waverly	147.02	16	*e*PKPdf	PKPdf	09 00 59.6	+3.1
TZTN	Tazewell	147.61	10	*e*PKPdf	PKPdf	09 01 00.2	+2.8
PLAL	Pickwick Lake	148.02	18	*e*PKPdf	PKPdf	09 01 01.4	+3.3
PLAL				*e*PKPbc	PKPdf	09 01 05.0	+6.8
SWET	Sewanee	148.39	14	*e*PKPbc	PKPdf	09 01 02.8	+4.1
CPCT	Cooper Cave	148.48	12	*e*PKPdf	PKPdf	09 01 02.0	+3.2
CPCT				*e*PKPbc	PKPdf	09 01 03.9	+5.0
CPCT				*e*PKPab	PKPab	09 01 07.3	-0.9
LRAL	Lakeview Retre	150.16	17	*e*PKPbc	PKPdf	09 01 07.4	+5.8
JSC	Jenkinsville	150.17	7	*e*PKPbc	PKPdf	09 01 08.0	+6.4

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*BJI **07** 08:41:40.9,61.90N×26.70W,h10^{km},mB4.5,mb4.7,Ms4.8, Msz4.6*

*CSEM **07** 08:41:42.6±0.3,62.16N×26.24W,h2^{km},mb4.3/4,Ms3.5, Error ellipse: s-maj=8.3km s-min=2.3km az=104.0*

*IDC **07** 08:41:44.4±0.7,61.95N×26.72W,mb3.9/15,mb1 4.1/17, mb1mx4.0/28,mbtmp3.9/17,ML3.6/2,MS3.7/24,Ms1 3.7/24, ms1mx3.6/46,Error ellipse: s-maj=23.1km s-min=13.1km az=8.0*

*NEIC **07** 08:41:45.9±0.2,61.93N×26.66W,h10^{km},mb4.5/16,Error ellipse: s-maj=8.2km s-min=3.9km az=199.0*

*ZUR_RM **07** 08:41:45,61.93N×26.66W,h12^{km},Mw4.6/10,Moment Tensor Solution. s10 Moment tensor: Scale 10^{15}Nm; M_{rr}-8.26; $M_{\theta\theta}$1.57; $M_{\phi\phi}$6.69; $M_{r\theta}$-0.50; $M_{\theta\phi}$0.41; $M_{\phi r}$2.42; Best double couple: $M_0$7.88×10^{15} NP1:ϕ_s180°,δ54°,λ-94°. NP2:ϕ_s8°,δ36°,λ-84°. Principal axes: T 7.092, Plg9°, Azm273°; N 1.584, Plg4°, Azm183°; P -8.677, Plg80°, Azm71°;*

ISC 07 08:41:44.1±0.3,62.21N±0.03×26.43W±0.06,h10^{km},n85, σ1^{s}32/78,mb4.2/30,MS3.8/21,Iceland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INYL	Nylenda	2.44	42	P	Pn	08 42 25.1	+0.4
IVOG	Vogar	2.55	44	P	Pn	08 42 26.0	-0.2
IVOG				S	Sn	08 43 00.1	+2.5
IKRI	Krysuvik	2.60	48	P	Pn	08 42 26.1	-0.8
IKRI				S	Sn	08 42 58.7	-0.1
IVOS	Vogsosar	2.71	50	P	Pn	08 42 27.2	-1.4
IVOS				S	Sn	08 43 01.1	-0.7
ISAN	Sandskeio	2.88	48	P	Pn	08 42 30.2	-0.8
ISAN				S	Sn	08 43 06.9	+0.8
IBJA	Bjarnastaoir	2.91	51	P	Pn	08 42 30.0	-1.4
IBJA				S	Sn	08 43 05.9	-0.9
IKUD	Kuludalsa	2.95	42	P	Pn	08 42 31.9	-0.1
ISOL	Solvholt	3.04	53	P	Pn	08 42 31.0	-2.2
ISOL				S	Sn	08 43 08.7	-1.2
IKRO	Krokur	3.06	49	P	Pn	08 42 32.3	-1.3
IKRO				S	Sn	08 43 10.6	-0.1
IHEI	Heioarbar	3.09	47	P	Pn	08 42 33.0	-0.9
IHEI				S	Sn	08 43 11.7	+0.5
IASM	Asmuli	3.11	56	P	Pn	08 42 31.5	-2.8
IASM				S	Sn	08 43 10.2	-1.7
ISAU	Saurbar	3.27	54	P	Pn	08 42 34.1	-2.3
IASB	`sbjarnarst	3.42	40	P	Pn	08 42 39.6	+0.9
IASB				S	Sn	08 43 22.7	+2.9
IHAU	Haukadalur	3.43	56	P	Pn	08 42 36.4	-2.4
IGYG	Gygjarholskot	3.50	51	P	Pn	08 42 38.5	-1.2
JMIC	Jan Mayen	11.27	31	LR	LR	08 47 57.8	
	comp=Z,178nm,19.9s,baz=39,slow=32						
SUMG	Summit	11.36	341	*e*Pn	P	08 44 31.3	+2.1
	7.9nm,0.8s						
EKA	Eskdalemuir Ar	13.84	109	Pn	P	08 45 02.9	+0.6
	0.2nm,0.3s,baz=304,slow=12,SNR=4.0						
NOA	NORSAR Array B	17.77	77	P	P	08 45 55.7	+3.0
	0.1nm,0.3s,baz=274,slow=7.8,SNR=2.5						
NOA				LR	LR	08 52 16.2	
	comp=Z,149nm,18.6s,baz=295,slow=35						
FRB	Frobisher Bay	18.95	293	LR	LR	08 52 42.7	
	comp=Z,422nm,18.9s,baz=128,slow=35						
ROSF	Rostrenen	19.00	126	*e*P	P	08 46 06.8	-1.2
HFS	Hagfors	19.24	78	LR	LR	08 53 30.0	
	comp=Z,188nm,18.1s,baz=80,slow=36						
GRR	Gorron	19.90	122	*e*P	P	08 46 16.6	-1.7
BAIF	Baives	20.72	112	*e*P	P	08 46 28.3	+1.4
	51nm,1.2s						
MFF	Saint Martin d	21.63	124	*e*P	P	08 46 35.2	-1.0
	35nm,1.1s,mb4.4						
ARCES	ARCESS Array B	21.79	48	P	P	08 46 40.6	+3.0
	3.6nm,0.8s,mb3.8,baz=277,slow=9.8,SNR=5.3						
SCHQ	Schefferville	22.03	269	P	P	08 46 39.2	-0.9
	2.8nm,0.8s,mb3.8,baz=51,slow=9.5,SNR=3.4						
SCHQ				LR	LR	08 54 00.5	
	comp=Z,79nm,20.6s,MS3.1,baz=62,slow=34						
KEV	Kevo	22.29	47	*e*P	P	08 46 44.4	+1.9
LOR	Lormes	22.71	117	*e*P	P	08 46 46.3	-0.5
	17nm,0.9s,mb4.2						
LOR				*e*R			
	478nm,17.8s						
SSF	Saint Saulge	22.73	118	*e*P	P	08 46 46.0	-0.9
TCF	Toulx Ste Croi	22.82	121	*e*P	P	08 46 48.1	+0.2
	11nm,0.8s,mb4.0						
BGF	Bois d'Agland	22.86	120	*e*P	P	08 46 48.1	-0.2
HAU	Haudompre	23.20	113	*e*P	P	08 46 50.1	-1.4
HAU				*e*R			
	175nm,18.1s						
SMF	Signal de Mont	23.20	118	*e*P	P	08 46 52.4	+0.9
	26nm,1.0s,mb4.3						
CDF	Champ du Feu	23.29	111	*e*P	P	08 46 53.7	+1.3
MOX	Moxa	23.62	102	*e*P	P	08 46 58.0	+2.4
MOX				L		08 57 25.0	
CLL	Collm	23.81	99	*e*P	P	08 46 59.0	+1.6
	26nm,1.8s,mb4.4						
CLL	Collm	23.81	99	P	P	08 46 59.0	+1.6
	logA/T=1.2,mb4.4						
SJPF	Ste Jean	24.20	130	*e*P	P	08 47 01.3	-0.1
FINES	FINESS Array B	24.25	68	P	P	08 47 04.0	+2.4
	1.9nm,0.7s,mb3.7,baz=299,slow=14,SNR=10						
FINES				LR	LR	08 56 13.3	
	comp=Z,72nm,18.1s,MS3.2,baz=181,slow=36						
EPF	Esparros	24.84	128	*e*P	P	08 47 08.6	+1.1
PRU	Pruhonice	25.43	100	*e*P	P	08 47 14.0	+1.0
KHC	Kasperske Hory	25.59	102	*e*P	P	08 47 15.5	+0.9
DAVOX	Davos	25.68	110	LR	LR	08 57 05.1	
	comp=Z,75nm,18.4s,MS3.2,baz=266,slow=36						
GERES	GERESS Array B	25.86	102	P	P	08 47 16.7	-0.3
	0.4nm,0.2s,mb3.5,baz=315,slow=9.4,SNR=3.9						
GERES				LR	LR	08 57 39.6	
	comp=Z,151nm,18.7s,MS3.5,baz=1.3,slow=37						
ESDC	Sonseca Array	26.36	138	P	P	08 47 21.7	-0.1
	0.2nm,0.3s,mb3.1,baz=338,slow=8.0,SNR=5.5						
AKASG	Malin Array Be	31.80	85	P	P	08 48 10.2	-0.2
	0.3nm,0.4s,mb3.5,baz=311,slow=8.5,SNR=7.4						
MLR	Muntele Rosu	33.99	95	LR	LR	09 04 06.1	
	comp=Z,105nm,18.2s,MS3.6,baz=183,slow=39						
YKA	Yellowknife Ar	37.88	311	P	P	08 49 02.1	-0.3
	1.6nm,0.9s,mb3.8,baz=47,slow=9.0,SNR=10						
YKA				LR	LR	09 04 04.5	
	comp=Z,124nm,20.0s,MS3.7,baz=60,slow=35						
ULM	Lac du Bonnet	38.47	285	LR	LR	09 04 05.0	
	comp=Z,109nm,18.7s,MS3.7,baz=56,slow=35						
ELN	Prospectdale	41.38	259	*e*P	P	08 49 30.5	-1.2
IDI	Anoyia	41.61	106	LR	LR	09 08 14.5	
	comp=Z,70nm,19.2s,MS3.5,baz=278,slow=38						
BRTR	Keskin Array B	42.04	94	P	P	08 49 38.8	+1.8
	1.0nm,0.7s,mb3.6,baz=321,slow=7.1,SNR=5.1						
WCI	Wyandotte Cave	43.14	265	*e*P	P	08 49 46.3	+0.3
	14nm,1.2s,mb4.5						
ILAR	Eielson Array	45.87	329	P	P	08 50 09.1	+1.6
	1.4nm,0.9s,mb3.9,baz=24,slow=7.0,SNR=12						
ILAR				PcP	PcP	08 51 44.1	-1.1
	1.0nm,0.8s,baz=357,slow=2.8,SNR=9.3						
ILAR				LR	LR	09 09 26.3	
	comp=Z,55nm,18.7s,MS3.5,baz=2.7,slow=36						
GNI	Garni	46.90	84	LR	LR	09 11 24.1	
	comp=Z,85nm,19.1s,MS3.7,baz=108,slow=38						
BVAR	Borovoye Array	47.90	54	P	P	08 50 26.2	+2.4
	0.6nm,0.4s,mb4.0,baz=315,slow=6.3,SNR=9.4						
BOZ	Bozeman (W)	48.92	292	*e*P	P	08 50 32.9	+1.1
	10nm,1.3s,mb4.7						
NEW	Newport	49.20	298	LR	LR	09 11 00.7	
	comp=Z,107nm,19.7s,MS3.9,baz=6.9,slow=36						
PHWY	Pilot Hill	49.61	284	*e*P	P	08 50 37.1	0.0
ASF	Jabal al Asfar	49.72	97	LR	LR	09 10 45.3	
	comp=Z,45nm,18.2s,MS3.5,baz=28,slow=35						
MCMT	McKenzie Canyo	50.10	292	*e*P	P	08 50 42.1	+1.4
PDAR	Pinedale Array	50.29	288	P	P	08 50 41.7	-0.5
	2.8nm,0.8s,mb4.3,baz=50,slow=6.8,SNR=21						
PDAR				LR	LR	09 10 36.0	
	comp=Z,80nm,21.4s,MS3.7,baz=24,slow=34						
TPAW	Teton Pass	50.33	290	*e*P	P	08 50 41.4	-1.2
	6.9nm,1.0s,mb4.6						
BBB	Bella Bella	50.38	308	LR	LR	09 11 17.5	
	comp=Z,106nm,20.4s,MS3.8,baz=39,slow=35						
WMOK	Wichita Mounta	51.82	273	*e*P	P	08 50 52.9	-1.1
	4.6nm,1.1s,mb4.3						
HWUT	Hardware Ranch	52.11	289	*e*P	P	08 50 55.3	-0.8
	4.2nm,0.9s,mb4.4						
ELK	Elko	54.43	291	*e*P	P	08 51 13.9	+0.6
	9.8nm,1.3s,mb4.6						
MSU	Marysvale	54.90	287	*e*P	P	08 51 16.8	+0.1
ANMO	Albuquerque	55.22	280	LR	LR	09 13 54.2	
	comp=Z,149nm,19.0s,MS4.1,slow=35						
ANMO	Albuquerque	55.22	280	*e*P	P	08 51 18.6	-0.6
	3.1nm,1.1s,mb4.2						
JCT	Junction City	55.83	271	*e*P	P	08 51 22.4	-1.2
	17nm,1.4s,mb4.9						
GDL2	Guadalupe Moun	56.53	276	*e*P	P	08 51 23.9	-4.6
YBH	Yreka Blue Hor	56.81	297	LR	LR	09 15 54.4	
	comp=Z,185nm,18.1s,MS4.2,baz=162,slow=36						
MKAR	Makanchi Array	57.42	51	LR	LR	09 16 45.4	
	comp=Z,52nm,19.1s,MS3.6,baz=95,slow=36						
MNTX	Cornudas Mount	57.42	277	*e*P	P	08 51 32.5	-2.5
	7.6nm,1.3s,mb4.6						
NVAR	Mina Array Bea	57.67	292	P	P	08 51 36.3	-0.3
	0.8nm,0.8s,mb3.8,baz=57,slow=6.0,SNR=4.9						

NVAR				LR	LR	09 15 42.7	
	comp=Z,115nm,19.1s,MS4.0,baz=270,slow=35						
TXAR	**Lajitas Array**	**58.60**	**274**	LR	LR	09 16 25.0	
	comp=Z,114nm,18.7s,MS4.0,slow=36						
WMQ	**Urumqi**	**61.91**	**48**	*e*P	**P**	**08 52 07.0**	**+1.3**
WMQ				AP	pP	08 52 11.6	+2.8
WMQ				AMB	AMB		
	comp=Z,10.0nm,4.6s						
WMQ				LR	LR		
	comp=N,460nm,22.0s,MS4.7						
WMQ				LR	LR		
	comp=E,350nm,21.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,440nm,18.6s,MS4.7						
SONM	**Songino Array**	**64.02**	**33**	P	**P**	**08 52 21.9**	**+2.5**
	comp=Z,2.6nm,1.1s,mb4.2,baz=333,slow=8.3,SNR=7.4						
ULN	**Ulaanbaatar**	**64.16**	**33**	*e*P	**P**	**08 52 23.5**	**+3.2**
	comp=Z,8.7nm,1.2s,mb4.7						
FX1	**Attu Island--F**	**64.21**	**347**	LR	LR	09 22 32.2	
	comp=Z,1.8nm,18.8s,baz=214,slow=38						
BDFB	**Brasilia**	**79.44**	**201**	P	**P**	**08 53 51.0**	**-0.9**
	comp=Z,2.9nm,0.8s,mb4.3,baz=78,slow=4.2,SNR=4.8						
CMAR	**Chiang Mai Arr**	**88.83**	**51**	P	**P**	**08 54 42.4**	**+3.0**
	comp=Z,2.7nm,0.9s,mb4.5,baz=321,slow=4.5,SNR=7.0						
BOSA	**Boshof**	**99.52**	**136**	LR	LR	09 41 44.1	
	comp=Z,85nm,18.0s,MS4.3,baz=36,slow=36						

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*IDC **07** 08:53:01.4±1.0,49.87S×116.10E,mb4.0/6,mb1 4.3/7,mb1mx4.1/14,mbtmp4.1/7,ML3.0/1,MS3.6/5,Ms1 3.6/5,ms1mx3.4/24,Error ellipse: s-maj=41.8km s-min=19.2km az=107.0*

*NEIC **07** 08:53:02.7±0.5,49.90S×116.19E,h10^{km},mb4.7/1,Error ellipse: s-maj=23.0km s-min=8.5km az=107.0*

ISC 07 08:53:00.9±0.7,**49.90S**±0.10×**116.3E**±0.3,**h10**^{km},**(h6**^{km}±.4^{km}**:pP-P),n30,**σ**0**^{s}.**81**/21,**mb4.1**/7,**MS3.7**/4,**3C, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**16.97**	**3**	Pn	**P**	**08 57 01.0**	**+1.2**
	2.9nm,0.3s,baz=195,slow=8.7,SNR=20						
NWAO				LR	LR	09 02 17.5	
	comp=Z,89nm,20.6s,baz=121,slow=33						
NWAO	**Narrogin (SRO)**	**16.97**	**3**	Pn	**P**	**08 57 01.0**	**+1.2**
STKA	**Stephens Creek**	**26.07**	**56**	P	**P**	**08 58 37.3**	**+1.2**
	3.4nm,0.8s,mb4.0,baz=193,slow=8.5,SNR=7.4						
STKA	**Stephens Creek**	**26.07**	**56**	P	**P**	**08 58 37.3**	**+1.2**
STKA				P		08 58 38.1	
ASAR	**Alice Springs**	**29.59**	**34**	P	**P**	**08 59 07.8**	**-0.3**
	1.8nm,0.7s,mb3.9,baz=208,slow=7.6,SNR=19						
VNDA	**Vanda**	**32.54**	**163**	P	**P**	**08 59 33.4**	**-0.2**
	0.9nm,0.8s,mb3.8,baz=289,slow=8.5,SNR=5.6						
VNDA				LR	LR	09 12 01.9	
	comp=Z,102nm,21.5s,MS3.5,baz=348,slow=35						
VNDA	**Vanda**	**32.54**	**163**	P	**P**	**08 59 33.4**	**-0.2**
VNDA				*e*P	pP	08 59 35.2	-1.3
WRA	**Warramunga Arr**	**33.17**	**32**	P	**P**	**08 59 39.4**	**-0.2**
	2.9nm,0.5s,mb4.4,baz=201,slow=11,SNR=29						
WB2	**Warramunga Arr**	**33.17**	**32**	*e*P	**P**	**08 59 39.1**	**-0.5**
WRAB	**Tennant Creek**	**33.18**	**32**	*e*P	**P**	**08 59 38.8**	**-0.9**
	5.9nm,0.6s,mb4.7						
CTA	**Charters Tower**	**38.09**	**50**	LR	LR	09 14 55.2	
	comp=Z,86nm,18.8s,MS3.6,baz=28,slow=34						
PMG	**Port Moresby**	**47.81**	**43**	LR	LR	09 20 43.0	
	comp=Z,88nm,20.4s,MS3.7,baz=205,slow=35						
SNAA	**Sanae**	**51.39**	**201**	*e*	**P**	**09 02 08.5**	**+1.3**
SNAA	**Sanae**	**51.39**	**201**	*e*	**P**	**09 02 13.8**	**+6.6**
SNAA	**Sanae**	**51.39**	**201**	*e*	x	09 02 37.3	
SNAA	**Sanae**	**51.39**	**201**	P	**P**	**09 02 06.7**	**-0.4**
	1.0nm,0.9s,mb3.7,baz=149,slow=11,SNR=10						
SNAA	**Sanae**	**51.39**	**201**	⇑*i*P	**P**	**09 02 06.2**	**-1.0**
SNAA				*e*P		09 02 06.5	
SNAA				*e*	pP	09 02 08.5	-1.7
SNAA				*e*		09 02 13.8	
SNAA				*e*		09 02 37.3	
VNA2	**Neumayer--Watz**	**52.95**	**200**	*e*	**P**	**09 02 20.5**	**+1.5**
VNA2	**Neumayer--Watz**	**52.95**	**200**	*e*	**P**	**09 02 25.0**	**+6.0**
VNA2	**Neumayer--Watz**	**52.95**	**200**	*e*	x	09 02 53.5	
VNA2	**Neumayer--Watz**	**52.95**	**200**	⇑*i*P	**P**	**09 02 18.6**	**-0.4**
VNA2				*e*	pP	09 02 20.5	-1.5
VNA2				*e*		09 02 25.0	
VNA2				*e*		09 02 53.5	
VNA3	**Neumayer Olymp**	**53.21**	**199**	*e*	**P**	**09 02 21.9**	**+1.1**
VNA3	**Neumayer Olymp**	**53.21**	**199**	*e*	**P**	**09 02 27.2**	**+6.4**
VNA3	**Neumayer Olymp**	**53.21**	**199**	*e*	x	09 02 58.0	
VNA3	**Neumayer Olymp**	**53.21**	**199**	⇑*i*P	**P**	**09 02 20.2**	**-0.6**
VNA3				*e*	pP	09 02 21.9	-2.0
VNA3				*e*		09 02 27.2	
VNA3				*e*		09 02 58.0	
CMAR	**Chiang Mai Arr**	**69.77**	**342**	P	**P**	**09 04 12.6**	**-0.7**
	0.7nm,0.3s,mb4.0,baz=214,slow=5.2,SNR=5.1						
PLCA	**Paso Flores**	**89.55**	**175**	LR	LR	09 43 13.5	
	comp=Z,72nm,21.8s,MS4.1,baz=210,slow=34						
ANMO	**Albuquerque**	**145.59**	**99**	PKPbc	PKPbc	09 12 42.5	+2.9
	2.1nm,0.8s,baz=216,slow=4.6,SNR=10						
ANMO	**Albuquerque**	**145.59**	**99**	PKPbc	PKPbc	09 12 42.5	+2.9
YKA	**Yellowknife Ar**	**149.87**	**46**	PKPbc	PKPdf	09 12 52.9	+4.9
	0.7nm,0.8s,baz=275,slow=1.8,SNR=7.2						

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*ATH **07** 09:09:10.6,40.44N×19.73E,h18^{km}±4^{km},MD3.7/6*

*IDC **07** 09:09:10.7±1.9,40.28N×19.78E,mb3.4/5,mb1 3.6/9,mb1mx3.5/28,mbtmp3.5/9,ML3.5/4,Error ellipse: s-maj=24.0km s-min=18.0km az=2.0*

*TIR **07** 09:09:11.9,40.39N×19.96E,h4^{km},Ml3.3*

*THE **07** 09:09:12.5,40.50N×19.55E,h20^{km},ML3.8*

*ROM **07** 09:09:14.7±0.6,40.45N×19.84E,h10^{km},Ml3.6/4,Error ellipse: s-maj=10.5km s-min=2.8km az=138.0*

*NEIC **07** 09:09:14.4±0.7,40.14N×19.68E,h33^{km}±12^{km},MD3.7(ATH),MD3.4(PDG),Error ellipse: s-maj=12.1km s-min=5.3km az=48.0*

*CSEM **07** 09:09:14.0±0.1,40.28N×19.94E,h2^{km},MD3.7,Error ellipse: s-maj=1.7km s-min=1.3km az=33.0*

*PDG **07** 09:09:14.5±0.1,40.40N×19.46E,h6^{km}*

ISC 07 09:09:12.9±0.2,**40.36N**±0.02×**19.90E**±0.02,**h4**^{km}**,n80,**σ**1**^{s}.**43**/116,**mb3.3**/4,**14C-3D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPE	**Tepelena**	**0.10**	**126**	*i* Pg	**Pg**	**09 09 14.7**	**-0.3**
TPE				*i* Sg	**Sg**	**09 09 16.1**	**-0.4**
SRN	**Sarande**	**0.48**	**171**	*i* Pg	**Pg**	**09 09 21.8**	**-0.7**
SRN				*i* Sg	**Sg**	**09 09 28.0**	**-0.9**
LSK	**Leskovik**	**0.57**	**111**	*i* Pg	**Pg**	**09 09 22.4**	**-1.9**
LSK				*i* Sg	**Sg**	**09 09 29.8**	**-2.1**
KEK	**Kerkira**	**0.65**	**187**	*e*PN	**Pn**	**09 09 24.9**	**-3.6**
IGT	**Igoumenitsa**	**0.89**	**158**	*e*Pg	**Pg**	**09 09 30.9**	**+0.4**
IGT				*e*Sg	**Sg**	**09 09 46.5**	**+4.1**
TIR	**Tirane**	**0.99**	**358**	⇓*i*Pn	**Pn**	**09 09 28.7**	**-4.7**
TIR				*i* Sn	**Sn**	**09 09 52.8**	**+4.8**
TIR	**Tirane**	**0.99**	**358**	Pn	**Pn**	**09 09 32.6**	**-0.8**
TIR				*i* Sn	**Sn**	**09 09 52.8**	**+4.8**
JAN	**Janina**	**1.01**	**133**	*e*PN	**Pn**	**09 09 32.1**	**-1.5**
JAN				*e*SN	**Sn**	**09 09 48.4**	**0.0**
OHR	**Ohrid**	**1.02**	**42**	*i* Pn	**Pn**	**09 09 31.0**	**-2.7**
OHR				*i*		09 09 36.9	
OHR				⇑*i*Sg	**Sg**	**09 09 47.8**	**+1.1**
OHR	**Ohrid**	**1.02**	**42**	*i* Pn	**Pn**	**09 09 31.0**	**-2.7**
OHR				⇑*i*Sg	**Sg**	**09 09 47.8**	**+1.1**
QSH	**Qafa e Shtames**	**1.17**	**0**	*i* Pn	**Pn**	**09 09 35.4**	**-0.5**
MEV	**Metsovon**	**1.17**	**119**	*e*Pg	**Pg**	**09 09 34.0**	**-2.1**
	comp=Z,20nm,0.1s						
MEV				*e*Sg	**Sg**	**09 09 54.0**	**+2.3**
FNA	**Florina**	**1.20**	**69**	*e*Pg	**Pg**	**09 09 35.0**	**-1.9**
	comp=Z,56nm,0.1s						
FNA				*e*Sg	**Sg**	**09 09 52.7**	**-0.2**
LCI	**Lecce**	**1.37**	**270**	Pn	**Pn**	**09 09 39.5**	**+0.7**
LCI				Sn	**Sn**	**09 10 00.8**	**+3.2**
PHP	**Peshkopia**	**1.39**	**17**	*i* pn?	**Pn**	**09 09 41.7**	**+2.6**
PHP				*i* Sn	**Sn**	**09 09 59.7**	**+1.6**
KZN	**Kozani**	**1.43**	**91**	*e*PN	**Pn**	**09 09 40.0**	**+0.4**
KZN				*e*SN	**Sn**	**09 10 01.1**	**+2.0**
ULC	**Ulcinj**	**1.68**	**343**	⇑*i*Pg	**Pg**	**09 09 43.5**	**-2.9**
ULC				*e*Sg	**Sg**	**09 10 07.1**	**-1.7**
PUK	**Puka**	**1.69**	**360**	*e*Pn	**Pn**	**09 09 44.6**	**+1.3**
PUK				*i* Sn	**Sn**	**09 10 09.9**	**+4.3**
LKD	**Levkas**	**1.75**	**160**	*e*Pb	**Pb**	**09 09 43.9**	**-1.2**
	comp=Z,13nm,0.3s						
SKO	**Skopje**	**1.99**	**35**	*i* Pn	**Pn**	**09 09 49.6**	**+2.0**
SKO				*i* Sg	**Sg**	**09 10 17.0**	**-2.1**
SKO				Lg		09 10 19.0	
	comp=Z,0.1nm,0.7s						
GRG	**Griva**	**1.99**	**72**	*e*Pn	**Pn**	**09 09 48.0**	**+0.3**
GRG				*e*Sn	**Sn**	**09 10 14.4**	**+1.0**
LIT	**Litokhoron**	**2.00**	**96**	*e*Pn	**Pn**	**09 09 49.0**	**+1.2**
	comp=Z,12nm,0.2s						
LIT				*e*Sn	**Sn**	**09 10 16.6**	**+3.1**
EVR	**Evrytania**	**2.06**	**134**	*e*PN	**Pn**	**09 09 50.0**	**+1.4**
EVR				*e*SN	**Sn**	**09 10 17.4**	**+2.4**
BUM	**Brajici-Budva**	**2.09**	**339**	⇑*i*Pn	**Pn**	**09 09 49.0**	**-0.1**
BUM				*e*Sn	**Sn**	**09 10 16.7**	**+1.0**
TTG	**Podgorica**	**2.13**	**347**	⇑*i*Pn	**Pn**	**09 09 49.8**	**+0.2**
TTG				*e*Sn	**Sn**	**09 10 18.6**	**+1.8**
PVY	**Plav**	**2.24**	**1**	⇑*i*Pn	**Pn**	**09 09 52.8**	**+1.5**
PVY				*e*Sn	**Sn**	**09 10 23.2**	**+3.5**
VLS	**Valsamata**	**2.24**	**166**	*e*PB	**Pb**	**09 09 50.2**	**-3.4**
AGG	**Agios Georgios**	**2.30**	**125**	*e*Pn	**Pn**	**09 09 53.0**	**+1.0**
	comp=Z,6.6nm,0.5s						
AGG				*e*Sn	**Sn**	**09 10 24.2**	**+3.0**
HCY	**Herceg Novi**	**2.34**	**334**	⇑*i*Pn	**Pn**	**09 09 51.9**	**-0.9**
HCY				*e*Sn	**Sn**	**09 10 21.7**	**-0.6**
LTRZ	**Laterza**	**2.37**	**277**	Pn	**Pn**	**09 09 55.5**	**+2.5**
IVA	**Berane**	**2.51**	**360**	⇑*i*Pn	**Pn**	**09 09 56.7**	**+1.6**
IVA				*e*Sn	**Sn**	**09 10 29.8**	**+3.1**
NKY	**Niksic**	**2.55**	**345**	⇑*i*Pn	**Pn**	**09 09 55.9**	**+0.3**
NKY				*e*Sn	**Sn**	**09 10 28.5**	**+1.0**
TREB	**Trebinje**	**2.63**	**334**	Pn	**Pn**	**09 09 55.6**	**-1.3**
TIP	**Timpagrande**	**2.69**	**245**	Pn	**Pn**	**09 10 01.2**	**+3.5**
PLG	**Polygyros**	**2.71**	**88**	*e*PB	**Pb**	**09 09 58.1**	**-3.5**
XOR	**Xorichti**	**2.72**	**110**	*e*Pn	**Pn**	**09 09 58.6**	**+0.5**
XOR				*e*Sn	**Sn**	**09 10 34.0**	**+2.1**
BRY	**Bratogost**	**2.74**	**339**	⇑*i*Pn	**Pn**	**09 09 58.0**	**-0.4**
BRY				*e*Sn	**Sn**	**09 10 31.9**	**-0.5**
BARS	**Barje**	**2.85**	**30**	⇓*i*Pn	Px	09 10 22.7	
PAIG	**Paliouri**	**2.93**	**97**	*e*Pn	**Pn**	**09 10 00.6**	**-0.4**
PAIG				*e*Sn	**Sn**	**09 10 37.3**	**+0.1**
UPM	**Unac-Piva**	**2.94**	**346**	⇑*i*Pn	**Pn**	**09 10 01.4**	**+0.2**
UPM				*e*Sn	**Sn**	**09 10 37.6**	**+0.1**
PLE	**Pljevlja**	**3.00**	**353**	⇑*i*Pn	**Pn**	**09 10 03.0**	**+0.9**
PLE				*e*Sn	**Sn**	**09 10 40.3**	**+1.4**
OUR	**Ouranopolis**	**3.12**	**89**	*e*Pn	**Pn**	**09 10 03.4**	**-0.4**
	comp=Z,2.2nm,0.2s						
NVSS	**Nova Varos 2**	**3.15**	**357**	*e*Pn	**Pn**	**09 10 02.8**	**-1.5**
SLCN	**Sala Consilina**	**3.26**	**272**	Pn	**Pn**	**09 10 08.5**	**+2.7**
AOS	**Alonnisos**	**3.29**	**110**	*e*Pn	**Pn**	**09 10 06.7**	**+0.6**
MGR	**Morigerati**	**3.34**	**268**	Pn	**Pn**	**09 10 08.1**	**+1.2**
MRLC	**Muro Lucano**	**3.39**	**278**	Pn	**Pn**	**09 10 08.7**	**+1.1**
	comp=Z,24nm,0.8s						
SGO	**Sicignano**	**3.51**	**275**	Pn	**Pn**	**09 10 09.9**	**+0.5**
	comp=Z,11nm,0.3s						
BBLS	**Bajina Basta -**	**3.53**	**354**	⇓*i*Pn	**Pn**	**09 10 14.8**	**+5.2**
GRUS	**Gruza**	**3.58**	**9**	*e*	**Pn**	**09 10 22.5**	**+12**
DIVS	**Divcibare**	**3.74**	**1**	⇑*i*Pn	**Pn**	**09 10 13.4**	**+0.8**
SACR	**S. Croce Del S**	**4.08**	**286**	Pn	**Pn**	**09 10 18.0**	**+0.6**
	comp=Z,113nm,1.7s						
ISOR	**Termini**	**4.25**	**275**	Pn	**Pn**	**09 10 19.5**	**-0.4**
SGG	**Gregorio Mates**	**4.31**	**286**	Pn	**Pn**	**09 10 21.7**	**+0.9**
VAGA	**Valle Agricola**	**4.43**	**286**	Pn	**Pn**	**09 10 22.7**	**+0.3**
CII	**Carovilli**	**4.45**	**290**	Pn	**Pn**	**09 10 23.1**	**+0.4**
	comp=Z,33nm,0.3s						
MIDA	**Miranda**	**4.46**	**289**	Pn	**Pn**	**09 10 23.1**	**+0.2**
	comp=Z,35nm,0.4s						
ALN	**Alexandroupoli**	**4.71**	**81**	*e*Pn	**Pn**	**09 10 24.6**	**-1.7**
SDI	**San Donato**	**4.80**	**288**	Pn	**Pn**	**09 10 28.2**	**+0.5**
	comp=Z,20nm,0.2s						
FAGN	**Fagnano**	**5.13**	**294**	Pn	**Pn**	**09 10 32.7**	**+0.4**
	comp=Z,65nm,0.4s						
TERO	**Teramo**	**5.25**	**298**	Pn	**Pn**	**09 10 33.0**	**-1.0**
	comp=Z,40nm,0.4s						
CAMP	**Campotosto**	**5.34**	**296**	Pn	**Pn**	**09 10 34.8**	**-0.6**
NRCA	**Norcia**	**5.66**	**298**	Pn	**Pn**	**09 10 39.2**	**-0.6**
ASS	**Assisi**	**6.06**	**299**	Pn	**Pn**	**09 10 45.6**	**+0.1**
ARV	**Arcevia**	**6.07**	**303**	Pn	**Pn**	**09 10 44.1**	**-1.5**
BOJS	**Bojanci**	**6.17**	**328**	*i* Pn	**Pn**	**09 10 45.1**	**-1.9**
IDI	**Anoyia**	**6.42**	**140**	Pn	**Pn**	**09 10 47.3**	**-3.1**
	comp=Z,0.9nm,0.3s,baz=328,slow=17,SNR=4.2						
IDI				Sn	**Sn**	**09 11 55.8**	**-9.2**
	comp=Z,1.2nm,0.3s,baz=50,slow=22,SNR=3.0						
LEGS	**Legarje**	**6.52**	**331**	*i* Pn	**Pn**	**09 10 49.4**	**-2.5**
MLR	**Muntele Rosu**	**6.78**	**39**	Pn	**Pn**	**09 10 54.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=184,slow=14,SNR=2.3						
MLR				Sn	**Sn**	**09 12 13.2**	**-1.0**
	baz=104,slow=23,SNR=2.2						
MLR	**Muntele Rosu**	**6.78**	**39**	Pn	**Pn**	**09 10 54.9**	**-0.7**
MLR				Sn	**Sn**	**09 12 13.2**	**-1.0**
VOY	**Vojsko**	**7.17**	**324**	*e*Pn	**Pn**	**09 10 58.3**	**-2.8**
VOY				*e*Sn	**Sn**	**09 12 19.7**	**-4.3**
OBKA	**Obir**	**7.28**	**329**	⇑*i*PN	**Pn**	**09 10 59.3**	**-3.3**
OBKA				*i* SN	**Sn**	**09 12 12.0**	**-15**
GERES	**GERESS Array B**	**9.57**	**335**	Pn	**P**	**09 11 30.6**	**-3.8**
	comp=Z,0.4nm,0.3s,baz=153,slow=15,SNR=4.9						
DAVOX	**Davos**	**9.70**	**315**	Pn	**P**	**09 11 32.6**	**-3.6**
	comp=Z,0.3nm,0.3s,baz=169,slow=16,SNR=2.1						
HFS	**Hagfors**	**20.18**	**351**	P	**P**	**09 13 46.7**	**-4.3**
	comp=Z,1.4nm,0.6s,baz=166,slow=12,SNR=4.3						
NB2	**NORSAR Subarra**	**21.39**	**348**	P	**P**	**09 14 00.1**	**-3.3**
	comp=Z,0.6nm,0.6s,mb3.1,baz=162,slow=11						
NOA	**NORSAR Array B**	**21.39**	**348**	P	**P**	**09 14 01.3**	**-2.2**
	comp=Z,0.6nm,0.5s,mb3.1,baz=161,slow=9.2,SNR=3.0						
EKA	**Eskdalemuir Ar**	**21.39**	**322**	P	**P**	**09 14 01.1**	**-2.4**
	comp=Z,1.4nm,0.9s,mb3.3,baz=124,slow=13,SNR=4.2						
FINES	**FINESS Array B**	**21.45**	**8**	P	**P**	**09 14 00.5**	**-3.6**
	comp=Z,1.2nm,0.6s,mb3.4,baz=196,slow=10,SNR=3.1						
MKAR	**Makanchi Array**	**44.60**	**60**	P	**P**	**09 17 24.4**	**-3.3**
	comp=Z,0.2nm,0.3s,mb3.4,baz=281,slow=7.2,SNR=4.5						

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*CSEM **07** 09:17:06.9±0.1,36.16N×31.51E,h60^{km},Mw3.1,Error ellipse: s-maj=2.5km s-min=1.9km az=3.0*

*ISK **07** 09:17:07.3,36.09N×31.52E,h83^{km},MD3.6*

*HLW **07** 09:17:07.6,36.27N×31.31E,h25^{km},Mb3.9*

*NEIC **07** 09:17:13.1,36.07N×32.20E,h10^{km},ML3.5(NIC),ML3.5(ISK),After NIC.*

*NIC **07** 09:17:13.1±0.3,36.07N×32.20E,h10^{km},ML3.5,MW3.1*

ISC 07 09:17:08.2±0.3,**36.11N**±0.03×**31.52E**±0.03,**h83**^{km}**,n37,**σ**1**^{s}.**17**/49,**5C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HDMB	**Hadim**	**1.16**	**42**	PN	**P**	**09 17 29.8**	**+0.2**
HDMB				SN	**S**	**09 17 45.3**	**-0.4**
ALFC	**Alevga**	**1.29**	**137**	⇓P	**P**	**09 17 30.6**	**-0.8**
	54nm,0.2s						
ALFC				S	**S**	**09 17 45.3**	**-3.5**
PPCY	**Paphos**	**1.40**	**151**	P	**P**	**09 17 35.5**	**+2.7**
PPCY				S	**S**	**09 17 53.4**	**+2.5**
ELL	**Elmali**	**1.45**	**297**	PN	**P**	**09 17 33.8**	**+0.4**
LEF	**Lefka**	**1.49**	**131**	PN	**P**	**09 17 33.0**	**-1.0**
AKAS	**Kas**	**1.55**	**275**	*i* P	**P**	**09 17 35.7**	**+0.9**
AKAS				*i* S	**S**	**09 17 58.4**	**+4.1**
SZAC	**Souni-Zanaja**	**1.75**	**140**	P	**P**	**09 17 38.8**	**+1.4**
	13nm,0.3s						
SZAC				S	**S**	**09 17 58.5**	**-0.4**
IKL	**Isikli**	**1.76**	**85**	PN	**P**	**09 17 37.9**	**+0.4**
CSS	**Prodhromos**	**1.87**	**127**	⇓P	**P**	**09 17 39.0**	**0.0**
	3.7nm,0.3s						
CSS				S	**S**	**09 17 58.9**	**-2.7**
ISP	**Isparta**	**1.91**	**335**	PN	**P**	**09 17 38.9**	**-0.6**
GOLH	**Golhisar**	**1.93**	**306**	*i* P	**P**	**09 17 42.8**	**+3.0**
GOLH				*i* S	**S**	**09 18 09.8**	**+6.6**
KONT	**Konya--Tatoy**	**1.96**	**20**	*e*PN	**P**	**09 17 39.6**	**-0.5**
FETY	**Fethiye**	**2.03**	**286**	*e*PN	**P**	**09 17 40.7**	**-0.4**
TKTP	**Tekketepe**	**2.15**	**334**	*i* P	**P**	**09 17 43.0**	**+0.1**
TKTP				*i* S	**S**	**09 18 08.1**	**-0.4**
MEST	**Erdemli**	**2.18**	**77**	*i* P	**P**	**09 17 44.1**	**+1.0**
MEST				*i* S	**S**	**09 18 11.2**	**+2.1**
DALT	**Dalyan (Mudla)**	**2.41**	**287**	*e*PN	**P**	**09 17 46.0**	**-0.5**
DNZL	**Cakiroluk**	**2.53**	**309**	*i* P	**P**	**09 17 50.9**	**+2.7**
DNZL				*i* S	**S**	**09 18 23.8**	**+5.8**
DENT	**Denizli**	**2.58**	**310**	*e*PN	**P**	**09 17 49.1**	**+0.3**
BODT	**Bodrum**	**3.52**	**287**	*e*PN	**P**	**09 18 01.1**	**-0.7**
CEYT	**Ceyhan**	**3.52**	**74**	*e*PN	**P**	**09 18 01.3**	**-0.6**
ARNB	**Al Arnab**	**3.62**	**93**	⇑*i*P	**P**	**09 18 02.2**	**-1.1**
HTY	**Hatay**	**3.74**	**88**	*e*PN	**P**	**09 18 04.6**	**-0.3**
SLNF	**Slenfeh**	**3.86**	**96**	⇑*i*P	**P**	**09 18 05.7**	**-0.8**
BTCH	**Batrach**	**4.00**	**90**	⇑*i*P	**P**	**09 18 07.8**	**-0.8**
HWQ	**Hawqa**	**4.06**	**115**	*e*Pn	**P**	**09 18 10.3**	**+0.9**
DRWC	**Darouich**	**4.19**	**81**	⇑*i*P	**P**	**09 18 09.2**	**-1.9**
TOTH	**TOTAH**	**4.88**	**123**	⇑*i*P	**P**	**09 18 22.7**	**+2.0**
HBRG	**Burj al ‘Arab**	**5.69**	**195**	⇑P	**P**	**09 18 31.7**	**-0.1**
KOT	**Kottamia**	**6.17**	**177**	⇑P	**P**	**09 18 39.4**	**+1.0**
HMAT	**Matruh**	**6.21**	**218**	⇓P	**P**	**09 18 38.5**	**-0.5**
HSAF	**As Saff**	**6.47**	**180**	⇑P	**P**	**09 18 43.2**	**+0.6**
HNAT	**Natroun**	**6.50**	**187**	⇑P	**P**	**09 18 43.3**	**+0.3**
SLUM		**6.98**	**231**	P	**P**	**09 18 48.2**	**-1.5**
SLUM				S	**S**	**09 20 00.4**	**-7.7**
HKAT	**Jabal Katrina**	**7.85**	**164**	P	**P**	**09 19 02.9**	**+1.3**
SWA1		**8.39**	**217**	⇑P	**P**	**09 19 07.9**	**-1.1**
SWA1				S	**S**	**09 20 36.5**	**-6.5**
SWA2		**8.54**	**218**	⇓P	**P**	**09 19 09.6**	**-1.3**
HFRF	**Wahat Farafira**	**9.34**	**198**	⇓P	**P**	**09 19 21.4**	**-0.4**

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*NEIC **07** 09:17:14.3±1.3,0.64S×96.55E,h30^{km},mb4.6/2,Error ellipse: s-maj=52.1km s-min=13.8km az=57.0*

*IDC **07** 09:17:18.0±3.0,0.39N×97.85E,h24^{km}±5^{km},mb3.4/4,mb1 3.6/4,mb1mx3.4/16,mbtmp3.6/4,MS3.2/2,Ms1 3.3/2,ms1mx3.0/20,Error ellipse: s-maj=168.7km s-min=15.7km az=53.0*

ISC 07 09:17:11.8±1.9,**0.6S**±0.3×**96.6E**±0.4,**h24**^{km},**h24**^{km}±.3^{km}**:pP-P,n15,**σ**0**^{s}.**39**/7,**mb3.8**/5,**MS3.5**/1,**Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**19.05**	**7**	LR	LR	09 28 32.4	
	comp=Z,51nm,21.4s,baz=215,slow=38						
ENH	**Enshi**	**33.04**	**21**	*e*P	**P**	**09 23 47.8**	**+0.1**
	9.3nm,0.5s,mb5.0						
WRA	**Warramunga Arr**	**41.66**	**120**	P	**P**	**09 24 59.9**	**-0.5**
	0.7nm,0.8s,mb3.3,baz=311,slow=9.3,SNR=15						
WRA				pP	pP	09 25 06.9	-0.8
	1.9nm,0.6s,baz=301,slow=9.0,SNR=17						
WRAB	**Tennant Creek**	**41.67**	**120**	*e*P	pP	09 25 07.6	-0.2
	4.3nm,0.6s						
WB2	**Warramunga Arr**	**41.67**	**120**	*e*P	**P**	**09 25 00.3**	**-0.2**
WB2				*i*	pP	09 25 07.6	-0.2
ASPA	**Alice Springs**	**42.86**	**125**	*e*P	pP	09 25 18.7	+1.3
ASAR	**Alice Springs**	**42.86**	**125**	P	**P**	**09 25 10.9**	**+0.7**
	0.6nm,0.5s,mb3.5,baz=300,slow=7.1,SNR=8.6						
ASAR				pP	pP	09 25 18.6	+1.1
	2.1nm,0.6s,baz=299,slow=8.0,SNR=20						
MKAR	**Makanchi Array**	**48.81**	**347**	P	**P**	**09 25 57.2**	**+0.1**
	0.4nm,0.6s,mb3.6,baz=158,slow=6.5,SNR=5.0						
MKAR				pP	pP	09 26 04.5	0.0
	0.9nm,0.7s,baz=163,slow=7.9,SNR=8.3						
MKAR	**Makanchi Array**	**48.81**	**347**	P	**P**	**09 25 57.2**	**+0.1**
MKAR				pP	pP	09 26 04.5	0.0
SONM	**Songino Array**	**48.96**	**9**	pP	pP	09 26 03.1	-2.6
	0.8nm,0.8s,baz=180,slow=7.4,SNR=4.5						
SONM				LR	LR	09 47 54.1	
	comp=Z,52nm,20.0s,MS3.5,baz=264,slow=38						
STKA	**Stephens Creek**	**52.66**	**131**	pP	pP	09 26 36.1	+2.1
	0.6nm,0.4s,baz=296,slow=15,SNR=1.7						
ZAL	**Zalesovo**	**55.19**	**352**	pP	pP	09 26 51.6	-0.8
	1.6nm,0.5s,baz=287,slow=3.0,SNR=2.8						
BVAR	**Borovoye Array**	**57.72**	**342**	P	**P**	**09 27 02.8**	**-0.1**
	0.3nm,0.5s,mb3.6,baz=117,slow=3.2,SNR=2.0						
BVAR				pP	pP	09 27 10.2	-0.2
	0.6nm,0.4s,baz=158,slow=8.0,SNR=3.4						
TXAR	**Lajitas Array**	**145.49**	**32**	PKP	PKPdf	09 36 49.9	-3.3
	0.2nm,0.8s,slow=0.9,SNR=3.4						
TXAR				pPKP		09 36 58.6	
	0.1nm,0.4s,baz=270,slow=1.8,SNR=2.9						
TXAR	**Lajitas Array**	**145.49**	**32**	PKP	PKPdf	09 36 49.9	-3.3
TXAR				pPKP		09 36 58.6	

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*NEIC **07** 09:20:53.7,58.99N×153.89W,h103^{km},MG3.1(AEIC),After AEIC.*

*IDC **07** 09:20:54.7±7.2,59.22N×153.45W,h126^{km}±67^{km},mb3.4/1,mb1 3.3/5,mb1mx3.1/24,mbtmp3.6/5,Error ellipse: s-maj=58.3km s-min=30.4km az=30.0*

ISC 07 09:20:50.8±0.5,**58.99N**±0.04×**153.85W**±0.08,**h121**^{km}±3^{km}**,n72,**σ**0**^{s}.**74**/80,**mb3.9**/1,**Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCNL	**McNeil River**	**0.32**	**309**	P	**P**	**09 21 07.8**	**-0.2**
AUI	**Augustine Isla**	**0.41**	**32**	P	**P**	**09 21 08.7**	**+0.2**
AUI				S	**S**	**09 21 20.4**	**-1.5**
AUW	**Augustine West**	**0.43**	**27**	P	**P**	**09 21 09.0**	**+0.4**
AUE	**Augustine Isla**	**0.45**	**33**	P	**P**	**09 21 09.2**	**+0.4**
KAPH	**Katmai Pasha**	**0.47**	**214**	P	**P**	**09 21 08.9**	**+0.1**
KAPH				S	**S**	**09 21 20.9**	**-1.6**
OPT	**Oil Point**	**0.74**	**25**	P	**P**	**09 21 11.4**	**+0.7**
OPT				S	**S**	**09 21 24.4**	**-1.4**
SYI	**Shuyak Island**	**0.85**	**116**	P	**P**	**09 21 12.4**	**+0.7**
ILW	**Iliamna West**	**1.14**	**18**	P	**P**	**09 21 15.2**	**+0.5**
ILW				S	**S**	**09 21 32.1**	**-0.4**
INE	**Iliamna NE**	**1.15**	**20**	P	**P**	**09 21 15.5**	**+0.7**
INE				S	**S**	**09 21 32.7**	**0.0**
ILIM	**Iliamna**	**1.19**	**22**	P	**P**	**09 21 15.7**	**+0.5**
XLV	**Seldovia**	**1.19**	**66**	P	**P**	**09 21 15.9**	**+0.7**
CAHL	**Cahill**	**1.21**	**220**	P	**P**	**09 21 15.8**	**+0.4**
HOM	**Homer**	**1.32**	**58**	P	**P**	**09 21 17.7**	**+1.0**
HOM				S	**S**	**09 21 36.1**	**-0.2**
KDAK	**Kodiak Island**	**1.38**	**151**	P	**P**	**09 21 17.5**	**+0.1**
CNPM	**China Poot**	**1.45**	**67**	P	**P**	**09 21 18.8**	**+0.6**
CNPM				S	**S**	**09 21 38.4**	**-0.5**
RDN	**Redoubt North**	**1.63**	**19**	P	**P**	**09 21 21.1**	**+0.9**
NCT	**North Crescent**	**1.65**	**16**	P	**P**	**09 21 21.2**	**+0.8**
BRLK	**Bradley Lake**	**1.71**	**62**	P	**P**	**09 21 21.6**	**+0.4**
DFR	**Drift River**	**1.71**	**20**	P	**P**	**09 21 22.0**	**+0.7**
NKA	**Nikishka**	**2.20**	**36**	P	**P**	**09 21 29.6**	**+2.2**
SVW2	**Sparrevohn**	**2.29**	**338**	P	**P**	**09 21 28.6**	**0.0**
CKL	**Chakachamna La**	**2.34**	**18**	P	**P**	**09 21 30.2**	**+0.9**
SPU	**Mount Spurr**	**2.38**	**21**	P	**P**	**09 21 30.3**	**+0.6**
SLKM	**Skilak Lake**	**2.39**	**49**	P	**P**	**09 21 30.3**	**+0.4**
VOGL	**Vogel Lake**	**2.65**	**39**	P	**P**	**09 21 35.1**	**+1.8**
MPA	**Moose Pass**	**2.73**	**55**	P	**P**	**09 21 34.2**	**-0.1**
FIB	**Fire Island**	**2.86**	**39**	P	**P**	**09 21 37.5**	**+1.4**
RC01	**Rabbit Creek A**	**2.95**	**43**	P	**P**	**09 21 37.5**	**+0.2**
PWA	**Palmer West**	**3.32**	**35**	P	**P**	**09 21 43.1**	**+0.7**
PMR	**Palmer**	**3.52**	**40**	P	**P**	**09 21 44.3**	**-0.6**
KNK	**Knik Glacier**	**3.63**	**46**	P	**P**	**09 21 46.0**	**-0.4**
GHO	**Glory Hole Cre**	**3.71**	**39**	P	**P**	**09 21 47.5**	**-0.1**
CUT	**Chulitna**	**3.85**	**26**	P	**P**	**09 21 50.0**	**+0.6**
MID	**Middleton Isla**	**3.89**	**80**	P	**P**	**09 21 50.1**	**+0.2**
SML	**Sawmill**	**3.94**	**42**	P	**P**	**09 21 50.0**	**-0.6**
HIN	**Hinchinbrook I**	**3.98**	**66**	P	**P**	**09 21 51.3**	**+0.1**
TT01	**Tatalina**	**4.07**	**346**	P	**P**	**09 21 52.5**	**+0.1**
SCM	**Sheep Creek Mo**	**4.31**	**46**	P	**P**	**09 21 55.5**	**-0.2**
VLZ	**Valdez**	**4.34**	**57**	P	**P**	**09 21 55.6**	**-0.4**
EYAK	**Cordova Ski Ar**	**4.39**	**66**	P	**P**	**09 21 56.0**	**-0.7**
HUR	**Hurricane**	**4.50**	**25**	P	**P**	**09 21 58.8**	**+0.6**
DIV	**Divide**	**4.58**	**59**	P	**P**	**09 21 59.2**	**-0.1**
KTH	**Kantishna Hill**	**4.79**	**16**	P	**P**	**09 22 01.6**	**-0.6**
TRF	**Thorofare Moun**	**4.80**	**20**	P	**P**	**09 22 01.7**	**-0.5**
RAGM	**Ragged Mountai**	**4.86**	**69**	P	**P**	**09 22 03.1**	**+0.1**
RND	**Reindeer**	**5.05**	**26**	P	**P**	**09 22 05.7**	**+0.1**
TZL	**Tazlina**	**5.17**	**50**	P	**P**	**09 22 07.3**	**+0.2**
DHY	**Denali Highway**	**5.17**	**35**	P	**P**	**09 22 07.0**	**-0.2**
MCK	**McKinley**	**5.32**	**24**	P	**P**	**09 22 09.0**	**-0.2**
GLB	**Gilahina Butte**	**5.58**	**60**	P	**P**	**09 22 12.4**	**-0.2**
PAX	**Paxson**	**5.71**	**42**	P	**P**	**09 22 14.2**	**-0.3**
TGL	**Tana Glacier**	**5.83**	**68**	P	**P**	**09 22 16.4**	**+0.3**
THY	**Trims Highway**	**5.92**	**38**	P	**P**	**09 22 17.7**	**+0.4**
BALM	**Baldy**	**6.12**	**65**	P	**P**	**09 22 20.4**	**+0.3**
WRH	**Wood River Hil**	**6.14**	**24**	P	**P**	**09 22 19.2**	**-1.2**
MENT	**Mentasta**	**6.33**	**47**	*e*P	**P**	**09 22 23.5**	**+0.7**
HDA	**Harding Lake**	**6.35**	**28**	P	**P**	**09 22 22.6**	**-0.6**
CCB	**Clear Creek Bu**	**6.36**	**24**	P	**P**	**09 22 22.0**	**-1.3**
COLA	**College**	**6.55**	**23**	P	**P**	**09 22 24.8**	**-1.1**
CTGM	**Chitina Glacie**	**6.59**	**67**	P	**P**	**09 22 26.6**	**+0.1**
IL1	**Eielson Array**	**6.67**	**27**	P	**P**	**09 22 26.4**	**-1.2**
ILAR	**Eielson Array**	**6.67**	**27**	P	**P**	**09 22 26.6**	**-1.0**
	1.4nm,0.3s,baz=216,slow=14,SNR=51						
ILAR				S	**S**	**09 23 36.4**	**-6.2**
	0.9nm,0.3s,baz=200,slow=24,SNR=9.1						
IM3	**Indian Mountai**	**7.02**	**0**	P	**P**	**09 22 32.4**	**0.0**
BCA3	**Beaver Creek A**	**7.14**	**50**	P	**P**	**09 22 33.9**	**-0.1**
PNL	**Peninsula**	**7.43**	**79**	P	**P**	**09 22 37.0**	**-0.8**
UNV	**Unalaska Valle**	**8.69**	**239**	P	**P**	**09 22 54.1**	**-0.8**
BM3	**Burnt Mountain**	**9.42**	**22**	P	**P**	**09 23 02.8**	**-1.8**
DLBC	**Dease Lake**	**12.38**	**82**	P	**P**	**09 23 42.8**	**-0.8**
	0.3nm,0.3s,baz=76,slow=12,SNR=6.2						
INK	**Inuvik**	**12.92**	**35**	P	**P**	**09 23 50.6**	**0.0**
	0.1nm,0.3s,baz=238,slow=13,SNR=4.6						
YKA	**Yellowknife Ar**	**19.29**	**63**	P	**P**	**09 25 07.0**	**-1.0**
	0.1nm,0.3s,baz=271,slow=9.3,SNR=4.6						
YKA	**Yellowknife Ar**	**19.29**	**63**	P	**P**	**09 25 07.0**	**-1.0**

SONM	Songino Array	55.03	306	P	P	09 30 12.7	+1.2
	0.7nm,0.5s,mb3.9,baz=46,slow=7.3,SNR=5.6						

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*NAO **07** 09:27:40.6±1.8,59.84N×22.37E,ML2.1*
*HEL **07** 09:27:40.4±0.2,59.74N×22.29E,ML2.0,ML2.4(UPP), ML2.1(NAO),Explosion*
*IDC **07** 09:27:41.2±1.8,59.84N×22.36E,mb1 2.9/4, mb1mx2.8/23,mbtmp2.8/4,ML2.7/4,Error ellipse: s-maj=23.9km s-min=7.6km az=162.0*
*BER **07** 09:27:42.3±6.7,59.89N×22.40E,ML2.1(NAO), Suspected explosion*
ISC 07 09:27:39.4±0.6,**59.77N**±0.06×**22.28E**±0.06,**n36**,σ1^{s}**06**/53, **Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAL	Aland	1.22	291	eP	Pb	09 28 02.2	-0.8
AAL				eS	Sb	09 28 17.7	-1.5
PVF	Pernaja	1.96	65	eP	Pn	09 28 14.3	+0.2
PVF				eS	Sn	09 28 38.3	-1.5
PVF				MSG		09 28 44.3	
	comp=Z,11nm,0.1s						
GRAU	Graesoe	1.96	289	eP	Pn	09 28 13.2	-1.0
FORU	Forsmark	2.15	289	eP	Pn	09 28 17.4	+0.6
FLYU	Flymyra	2.24	281	eP	Pn	09 28 19.1	+0.9
NYNU	Nynaeshamn	2.32	253	eP	Pn	09 28 20.4	+1.1
UPP	Uppsala	2.35	274	eP	Pn	09 28 20.3	+0.6
FIA0	FINESS Array S	2.52	46	eP	Pn	09 28 22.8	+0.6
FIA0				eSB	Sb	09 28 55.8	-1.1
FIA0				MSG		09 28 57.7	
	comp=Z,5.3nm,0.1s						
FIA0	FINESS Array S	2.52	46	Pn	Pn	09 28 22.9	+0.7
	baz=230,slow=14						
FIA0				Lg		09 28 55.6	
	baz=231,slow=28						
FIA0				Rg		09 29 09.6	
	baz=214,slow=37						
FINES	FINESS Array B	2.52	46	Pn	Pn	09 28 22.9	+0.8
	comp=Z,0.8nm,0.3s,baz=229,slow=14,SNR=36						
FINES				Sn	Sn	09 28 55.3	+1.2
	comp=Z,3.4nm,0.3s,baz=236,slow=25,SNR=23						
BACU	Backbrunna	2.61	274	eP	Pn	09 28 24.2	+0.6
BACU				eS	Sn	09 28 58.1	+1.7
IGGU	Iggoen	2.71	296	eP	Pn	09 28 24.9	+0.1
KEF	Keuruu	2.72	27	eP	Pn	09 28 26.5	+1.4
KEF				eS	Sn	09 29 00.6	+1.4
KEF				MSG		09 29 03.6	
	comp=Z,5.0nm,0.1s						
VJF	Virojoki	2.75	71	eP	Pn	09 28 24.3	-1.2
VJF				eS	Sn	09 28 59.4	-0.5
ESKU	Eskilstuna	3.05	262	eP	Pn	09 28 30.3	+0.5
KAF	Kangasniemi	3.07	38	eP	Pn	09 28 31.4	+1.3
KAF				eS	Sn	09 29 07.7	-0.3
KAF				MSG		09 29 11.3	
	comp=Z,2.8nm,0.2s						
ARNU	Arnoeviken	3.08	311	eP	Pn	09 28 30.0	-0.3
VIKU	Vikbolandet	3.14	249	eP	Pn	09 28 31.4	+0.4
VAF	Ylistaro	3.29	3	eP	Pn	09 28 35.6	+2.3
VAF				eS	Sn	09 29 16.8	+3.1
FALU	Falun	3.31	286	eP	Pn	09 28 33.6	+0.2
HASU	Hassela	3.65	313	eP	Pn	09 28 38.0	-0.3
NRAU	Nora	3.68	270	eP	Pn	09 28 38.3	-0.4
LNKU	Linkoeping	3.83	249	eP	Pn	09 28 41.2	+0.4
ASKU	Askersund	3.92	260	eP	Pn	09 28 41.6	-0.5
SOLU	Sollefteaa	4.24	328	eP	Pn	09 28 46.0	-0.7
HFS	Hagfors	4.33	279	Pn	Pn	09 28 47.2	-0.7
	baz=99,slow=9.3						
HFS				Sn	Sn	09 29 38.4	-1.6
	baz=82,slow=37						
HFS				Lg		09 29 53.4	
	baz=92,slow=37						
HFS	Hagfors	4.33	279	eP	Pn	09 28 47.2	-0.7
HFS				eS	Sn	09 29 38.4	-1.6
HFS				eSG		09 29 53.4	
HFS	Hagfors	4.33	279	Pn	Pn	09 28 48.1	+0.2
	comp=Z,0.0nm,0.3s,baz=90,slow=14,SNR=10						
HFS				Sn	Sn	09 29 39.4	-0.6
	comp=Z,0.1nm,0.3s,baz=90,slow=17,SNR=3.1						
HFS				Lg		09 29 56.9	
	comp=Z,0.2nm,0.3s,baz=93,slow=30,SNR=8.1						
NB2	NORSAR Subarra	5.63	288	Pn	Pn	09 29 04.3	-2.1
	baz=96,slow=14						
NB2				Sn	Sn	09 30 13.1	+0.4
	baz=131,slow=10						
NB2				Lg		09 30 35.2	
	baz=59,slow=16						
NB2	NORSAR Subarra	5.63	288	eP	Pn	09 29 04.3	-2.1
NB2				e		09 30 13.1	
NB2				eSG		09 30 35.2	
NOA	NORSAR Array B	5.63	288	Pn	Pn	09 29 04.2	-2.1
	comp=Z,0.2nm,0.3s,baz=236,slow=14,SNR=2.3						
NOA				Sn	Sn	09 30 07.3	-5.4
	comp=Z,0.2nm,0.3s,baz=224,slow=21,SNR=2.1						
APA0	Apatity Array	9.18	27	Pn	P	09 29 54.1	-1.9
	baz=224,slow=12						
APA0	Apatity Array	9.18	27	eP	P	09 29 54.1	-1.9
ARA0	ARCESS Array S	9.90	7	Pn	P	09 30 01.4	-4.4
	baz=192,slow=14						
ARA0				Sn	Sn	09 31 46.8	-12
	baz=189,slow=28						
ARA0	ARCESS Array S	9.90	7	eP	P	09 30 01.4	-4.4
ARA0				eS	Sn	09 31 46.8	-12
ARCES	ARCESS Array B	9.90	7	Pn	P	09 30 01.4	-4.4
	comp=Z,0.2nm,0.3s,baz=188,slow=14,SNR=7.1						
ARCES				Sn	Sn	09 31 46.1	-13
	baz=190,slow=27,SNR=2.8						

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*IDC **07** 09:30:50.5±2.2,1.23N×96.87E,mb3.8/7,mb1 3.9/8, mb1mx3.8/21,mbtmp3.8/8,ML4.4/1,MS3.1/1,Ms1 3.3/1, ms1mx2.7/31,Error ellipse: s-maj=95.2km s-min=17.6km az=60.0*
*NEIC **07** 09:30:56.0±0.9,1.33N×97.15E,h30^{km},mb4.5/2,Error ellipse: s-maj=25.8km s-min=13.1km az=59.0*
ISC 07 09:30:54.4±0.9,**1.3N**±0.1×**97.2E**±0.1,**h30**^{km},**n15**, σ1^{s}**16**/15,**mb4.1**/11,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.22	41	ePn	Pn	09 32 12.5	-0.1
CMAR	Chiang Mai Arr	17.10	6	Pn	P	09 34 54.0	+0.9
	0.5nm,0.3s,baz=196,slow=12,SNR=5.1						
CMAR				LR	LR	09 41 25.4	
	comp=Z,60nm,18.5s,baz=180,slow=37						
PKI	Pulchoki	28.43	338	eP	P	09 36 51.5	+2.6
	5.2nm,0.4s,mb4.5						
GUN	Gumba	28.56	339	eP	P	09 36 48.9	-1.1
	22nm,0.9s,mb4.9						
DMN	Daman	28.58	337	eP	P	09 36 52.2	+2.0
KKN	Kakani	28.68	338	eP	P	09 36 51.4	+0.3
	3.0nm,0.2s,mb4.6						
KOLN	Koldanda	29.34	335	eP	P	09 36 56.8	-0.2
	9.1nm,0.7s,mb4.6						
WRA	Warramunga Arr	42.10	122	P	P	09 38 46.5	+0.6
	0.4nm,0.5s,mb3.3,baz=304,slow=9.0,SNR=6.8						
ASAR	Alice Springs	43.47	127	P	P	09 38 56.2	-0.8
	0.7nm,1.0s,mb3.3,baz=300,slow=7.3,SNR=3.5						
SONM	Songino Array	46.99	8	P	P	09 39 24.2	-0.7
	1.1nm,0.5s,mb4.0,baz=194,slow=8.2,SNR=8.2						
MKAR	Makanchi Array	47.11	346	P	P	09 39 25.1	-0.6
	1.3nm,0.5s,mb4.1,baz=157,slow=8.5,SNR=20						
ZAL	Zalesovo	53.41	351	P	P	09 40 12.7	-1.1
	2.1nm,0.7s,mb4.2,baz=301,slow=3.2,SNR=6.6						
STKA	Stephens Creek	53.44	132	P	P	09 40 15.1	+0.8
	1.0nm,0.8s,mb3.8,baz=353,slow=8.1,SNR=3.1						
STKA	Stephens Creek	53.44	132	P	P	09 40 15.1	+0.8
BVAR	Borovoye Array	56.12	341	P	P	09 40 30.4	-3.0
	1.3nm,0.7s,mb4.0,baz=149,slow=8.6,SNR=5.5						

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*CSEM **07** 09:34:40.5±0.4,35.13N×3.58W,h12^{km},MD3.0,Error ellipse: s-maj=17.0km s-min=11.4km az=143.0,After CNRM*
*CNRM **07** 09:34:40.5,35.13N×3.58W,h12^{km},MD3.0*
MDD 07 09:34:41.2±0.4,**35.10N**×**3.59W**,**mbLg1.5**/2,**Error ellipse: s-maj=3.8km s-min=3.1km az=169.0**,**PRXIMO**, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOU	Touzarine	0.19	225	Pg	Pg	09 34 45.5	+0.5
TOU				Lg		09 34 47.5	
TOU	Touzarine	0.19	225	iS	Sg	09 34 47.5	-0.1
MPAL	Palemas	0.32	294	Pg	Pg	09 34 47.0	-0.5
MPAL				Lg		09 34 50.5	
MPAL	Palemas	0.32	294	iS	Sg	09 34 50.5	-1.2
ZAI	Zaio	0.70	100	Pg	Pg	09 34 53.0	-2.2
ZAI				Lg		09 35 03.0	
EALB	Alboran	0.95	28	Pg	Pg	09 35 00.1	-0.1
	5.5nm,0.6s,SNR=7.9						
EALB				Lg		09 35 15.6	
	5.8nm,0.1s,SNR=7.9						
TZK	Tazeka	1.12	206	Pg	Pg	09 35 02.0	-1.6
TZK				Lg		09 35 16.0	
EBER	Berja	1.88	17	Pg	Pg	09 35 16.2	-2.6
	0.1nm,0.3s,SNR=7.9						
EBER				Lg		09 35 43.3	
	0.8nm,0.3s,SNR=7.9						
CZD	Col de Zad	2.39	211	Pn	Pn	09 35 18.0	-4.2
CZD				Sn	Sn	09 35 46.0	-6.6

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*ISK **07** 09:35:29.2,34.15N×26.45E,h42^{km},MD3.9*
*IDC **07** 09:35:29.5±0.8,34.47N×26.42E,mb4.1/13,mb1 4.2/20, mb1mx4.1/31,mbtmp4.1/20,ML4.1/7,MS3.0/2,Ms1 3.1/2, ms1mx2.4/36,Error ellipse: s-maj=16.9km s-min=16.0km az=132.0*
*MOS **07** 09:35:30.1±1.3,34.54N×26.30E,h10^{km},mb4.3/9,Error ellipse: s-maj=11.8km s-min=7.1km az=86.2*
*ATH **07** 09:35:31.5,34.31N×26.51E,h25^{km}±5^{km},MD4.0/9*
*HLW **07** 09:35:31.7,34.49N×26.61E,h33^{km},Mb4.0*
*CSEM **07** 09:35:32.3±0.1,34.28N×26.66E,h40^{km},mb4.2/7,Error ellipse: s-maj=2.3km s-min=1.5km az=62.0*
*NEIC **07** 09:35:34.4±0.7,34.35N×26.49E,h42^{km}±7^{km},mb4.0/6, MD4.0(ATH),Error ellipse: s-maj=10.4km s-min=5.6km az=189.0*
ISC 07 09:35:32.3±0.3,**34.28N**±0.02×**26.59E**±0.03,**h47**^{km}±4^{km}, **n110**,σ1^{s}**24**/120,**mb4.1**/19,**MS3.4**/1,**11C-7D**,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.94	309	ePB	P	09 35 48.0	-1.4
NPS	Neapolis	1.27	321	ePN	P	09 35 54.4	+0.5
NPS				eSN	S	09 36 11.1	+1.0
KARP	Karpathos	1.35	20	⇑iPN	P	09 35 57.5	+2.3
KARP				eSN	S	09 36 14.7	+2.5
IDI	Anoyia	1.72	306	Pn	P	09 36 02.1	+1.7
	17nm,0.3s,baz=136,slow=12,SNR=47						
IDI				Sn	S	09 36 20.2	-1.0
	21nm,0.3s,baz=114,slow=19,SNR=13						
GVD	Gavdhos	2.13	286	ePB	P	09 36 07.0	+0.7
VAM	Vamos	2.26	300	ePB	P	09 36 09.0	+0.9
SANT	Santorini	2.28	337	eP	P	09 36 08.7	+0.3
SANT	Santorini	2.28	337	eP	P	09 36 08.7	+0.4
ARG	Arkhangelos	2.31	33	⇑iPB	P	09 36 11.3	+2.6
NISR	Nisiros	2.37	11	ePN	P	09 36 10.0	+0.4
BODT	Bodrum	2.84	12	PN	P	09 36 15.4	-0.9
BDRM	Kayabasi	2.87	14	iP	P	09 36 17.7	+1.0
APE	Apeiranthos	2.91	343	PN	P	09 36 16.2	-1.1
APE				SN	S	09 36 49.9	-1.5
DALT	Dalyan (Mudla)	2.99	33	PN	P	09 36 18.1	-0.4
SLUM		3.01	203	⇓P	P	09 36 20.2	+1.4
SLUM				S	S	09 36 54.9	+1.0
FETY	Fethiye	3.11	40	ePN	P	09 36 20.4	+0.2
AKAS	Kas	3.15	51	iP	P	09 36 22.0	+1.3
MLSB	Milas	3.16	18	ePN	P	09 36 20.6	-0.3
HMAT	Matruh	3.21	172	⇓P	P	09 36 23.1	+1.6
SMG	Samos	3.43	3	ePN	P	09 36 24.7	+0.1
AYDN	Tasoluk	3.53	17	iP	P	09 36 27.1	+1.0
ELL	Elmali	3.66	47	ePN	P	09 36 28.2	+0.2
GOLH	Golhisar	3.81	39	iP	P	09 36 31.7	+1.6
VLI	Veliai	3.84	310	ePN	P	09 36 29.9	-0.6
DNZL	Cakiroluk	3.94	30	iP	P	09 36 32.5	+0.5
DENT	Denizli	3.99	29	ePN	P	09 36 32.6	0.0
IZM	Izmir	4.14	7	ePN	P	09 36 33.5	-1.3
MANT	Manisa	4.49	20	iP	P	09 36 39.4	-0.3
HBRG	Burj al ‘Arab	4.61	142	⇑P	P	09 36 41.6	+0.3
TKTP	Tekketepe	4.82	38	iP	P	09 36 47.2	+3.0
SWA1		5.06	189	⇓P	P	09 36 48.1	+0.5
SWA1				S	S	09 37 44.3	-1.2
SWA2		5.11	191	⇓P	P	09 36 48.8	+0.4
LEF	Lefka	5.26	79	ePN	P	09 36 49.2	-1.2
HDMB	Hadim	5.50	59	ePN	P	09 36 54.3	+0.5
CSS	Prodhromos	5.60	81	eP	P	09 36 55.2	0.0
	15nm,0.5s						
CSS	Prodhromos	5.60	81	eP	P	09 36 55.2	0.0
	15nm,0.5s						
HNAT	Natroun	5.76	142	⇑P	P	09 36 57.5	0.0
FYM	Al Fayyum	5.94	139	⇑P	P	09 36 60.0	+0.1
IKL	Isikli	6.13	69	ePN	P	09 37 01.7	-0.9
KOT	Kottamia	6.21	133	⇑P	P	09 37 03.5	-0.3
KIZT	Kizilcal	6.26	41	ePN	P	09 37 04.0	-0.4
HSAF	As Saff	6.28	136	⇑P	P	09 37 04.1	-0.6
GLL	Jalalah	6.40	136	⇑P	P	09 37 05.6	-0.8
MEST	Erdemli	6.59	67	iP	P	09 37 10.2	+1.1
AMAG	Maghara	6.67	121	⇑P	P	09 37 09.6	-0.5
SUZ		6.91	128	⇓P	P	09 37 12.6	-0.9
ZAF		7.11	133	⇑P	P	09 37 15.8	-0.6
HFRF	Wahat Farafira	7.26	168	⇓P	P	09 37 18.2	-0.3
MMLI	Mount Malkishu	7.62	102	S	S	09 38 46.2	-3.0
HNKL	Nakhl	7.63	123	P	P	09 37 22.2	-1.3
HNKL				S	S	09 38 43.6	-5.8
BRTR	Keskin Array B	7.83	44	Pn	P	09 37 25.0	-1.3
	0.3nm,0.3s,baz=221,slow=13,SNR=11						
BRTR				Sn	S	09 38 54.0	-0.6
	0.2nm,0.3s,baz=209,slow=25,SNR=3.5						
EIL	Elat	8.46	121	Pn	P	09 37 35.0	0.0
	0.9nm,0.3s,baz=270,slow=16,SNR=13						
EIL				Sn	S	09 39 06.6	-3.6
	4.6nm,0.3s,baz=70,slow=5.1,SNR=8.0						
HKAT	Jabal Katrina	8.54	130	⇑P	P	09 37 35.5	-0.6
ALWS	Ilw as Safayha	8.75	122	P	P	09 37 39.1	0.0
HAQS	Haql	8.81	124	P	P	09 37 39.3	-0.6
JMOS	Jabal al Moall	8.87	123	P	P	09 37 40.0	-0.6
ASF	Jabal al Asfar	8.89	101	Pn	P	09 37 39.4	-1.5
	0.5nm,0.3s,baz=78,slow=8.8,SNR=3.8						
ASF				Sn	S	09 39 18.7	-2.2
	0.6nm,0.3s,baz=49,slow=19,SNR=2.7						
BDAS	Al Bad‘	9.33	126	P	P	09 37 47.6	+0.7
GTR	Jabal at Tayr	9.40	157	⇓P	P	09 37 47.3	-0.6
JMQS	Jabal Moqyreh	9.58	122	P	P	09 37 50.9	+0.5
AYUS	‘Aynunah	9.60	127	P	P	09 37 51.9	+1.2
VAE	Valguarnera	10.38	291	Pn	P	09 37 59.1	-2.3
	1.3nm,0.3s,baz=119,slow=13,SNR=2.4						
VAE	Valguarnera	10.38	291	Pn	P	09 37 59.0	-2.4
MLR	Muntele Rosu	11.21	358	Pn	P	09 38 07.8	-4.8
	0.5nm,0.3s,baz=157,slow=8.7,SNR=3.5						
MLR				LR	LR	09 42 36.9	
	comp=Z,32nm,20.7s,baz=153,slow=39						
MLR	Muntele Rosu	11.21	358	Pn	P	09 38 07.8	-4.8
KIV	Kislovodsk	15.77	47	eP	P	09 39 15.3	+2.7
KIV	Kislovodsk	15.77	47	eP	P	09 39 15.3	+2.7
ZEI	Tsey	15.96	53	eP	P	09 39 19.2	+4.1
AKASG	Malin Array Be	16.52	6	Pn	P	09 39 20.9	-1.2
	4.8nm,0.3s,baz=194,slow=11,SNR=18						
GERES	GERESS Array B	17.42	331	P	P	09 39 31.6	-1.7
	0.3nm,0.3s,baz=144,slow=12,SNR=12						
DAVOX	Davos	17.76	320	P	P	09 39 36.2	-1.4
	1.1nm,0.3s,baz=342,slow=16,SNR=3.4						
MBDF	Montbardon	18.46	310	eP	P	09 39 44.6	-1.7
CLL	Collm	19.66	334	P	P	09 39 58.0	-1.9
	logA/T=0.9						
CDF	Champ du Feu	20.16	320	eP	P	09 40 04.6	-0.6
	12nm,0.7s						
CDF	Champ du Feu	20.16	320	eP	P	09 40 04.6	-0.6
CDF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HAU	Haudompre	20.42	318	eP	P	09 40 07.6	-0.3
	comp=Z,9.4nm,0.6s						
HAU	Haudompre	20.42	318	eP	P	09 40 07.6	-0.3
HAU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LOR	Lormes	21.46	314	eP	P	09 40 16.8	-1.7
	comp=Z,7.1nm,0.6s,mb3.9						
LOR	Lormes	21.46	314	eP	P	09 40 16.8	-1.7
LOR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb3.9						
SSF	Saint Saulge	21.57	313	eP	P	09 40 19.3	-0.3
SSF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1						
SSF	Saint Saulge	21.57	313	eP	P	09 40 19.3	-0.3
	comp=Z,6.3nm,0.8s,mb4.1						
OBN	Obninsk	21.96	15	eP	P	09 40 22.4	-1.0
OBN				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.5						
OBN	Obninsk	21.96	15	eP	P	09 40 22.4	-1.0
	comp=Z,11nm,0.5s,mb4.5						
BAIF	Baives	22.75	321	eP	P	09 40 31.7	+0.5
ESDC	Sonseca Array	24.92	291	P	P	09 40 53.8	+1.4
	comp=Z,0.5nm,0.4s,mb3.4,baz=80,slow=9.0,SNR=4.1						
FINES	FINESS Array B	27.18	359	P	P	09 41 12.0	-1.2
	comp=Z,1.6nm,0.4s,mb3.9,baz=158,slow=11,SNR=24						
HFS	Hagfors	27.20	346	P	P	09 41 11.8	-1.6
	comp=Z,1.8nm,0.6s,mb3.8,baz=124,slow=11,SNR=6.4						
KAF	Kangasniemi	27.85	360	ep	P	09 41 17.7	-1.5
	comp=Z,1.7nm,0.4s,mb4.0,baz=177,slow=9.0						
KAF	Kangasniemi	27.85	360	eP	P	09 41 17.7	-1.5
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
EKA	Eskdalemuir Ar	29.43	325	P	P	09 41 32.3	-1.1
	comp=Z,1.5nm,0.6s,mb3.9,baz=131,slow=8.9,SNR=5.1						
ARCES	ARCESS Array B	35.31	359	P	P	09 42 23.5	-1.0
	comp=Z,2.4nm,0.4s,mb4.5,baz=175,slow=9.0,SNR=35						
KEV	Kevo	35.53	0	ep	P	09 42 26.2	-0.2
BVAR	Borovoye Array	36.12	45	P	P	09 42 32.3	+0.8
	comp=Z,1.1nm,0.5s,mb4.1,baz=243,slow=6.6,SNR=5.6						
DBIC	Dimbokro	39.97	234	P	P	09 43 05.6	+1.6
	comp=Z,2.1nm,0.6s,mb4.1,baz=56,slow=4.4,SNR=4.9						
DBIC				LR	LR	10 01 38.3	
	comp=Z,61nm,20.5s,MS3.4,baz=88,slow=39						
MKAR	Makanchi Array	43.29	56	P	P	09 43 33.4	+2.4
	comp=Z,2.1nm,0.6s,mb4.0,baz=272,slow=6.7,SNR=15						
MKAR	Makanchi Array	43.29	56	P	P	09 43 33.3	+2.4
NVS	Novosibirsk	43.89	44	eP	P	09 43 38.7	+3.0
ZAL	Zalesovo	44.76	46	P	P	09 43 44.5	+1.8
	comp=Z,3.0nm,0.5s,mb4.4,baz=207,slow=6.1,SNR=8.5						
ZAL	Zalesovo	44.76	46	P	P	09 43 44.5	+1.8
MATP	Matopo	54.43	178	P	P	09 44 59.7	+2.4
	comp=Z,1.0nm,0.5s,mb4.0,baz=349,slow=9.1,SNR=8.4						
ZAK	Zakamensk	56.45	48	eP	P	09 45 14.1	+2.7
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
ZAK	Zakamensk	56.45	48	eP	P	09 45 14.1	+2.7
	comp=Z,4.0nm,0.9s,mb4.5						
SONM	Songino Array	59.14	51	P	P	09 45 32.9	+2.6
	comp=Z,2.6nm,0.7s,mb4.4,baz=283,slow=8.5,SNR=15						
ULN	Ulaanbaatar	59.55	50	eP	P	09 45 35.5	+2.3
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
ULN	Ulaanbaatar	59.55	50	eP	P	09 45 35.5	+2.3
	comp=Z,5.1nm,1.0s,mb4.5						
ULN	Ulaanbaatar	59.55	50	eP	P	09 45 35.5	+2.3
	comp=Z,5.0nm,1.0s,mb4.5						
YKA	Yellowknife Ar	78.64	343	P	P	09 47 31.1	+0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	78.64	343	P	P	09 47 31.1	+0.8
	comp=Z,0.7nm,0.8s,mb3.6,baz=32,slow=5.7,SNR=5.3						
ILAR	Eielson Array	81.14	357	P	P	09 47 45.8	+2.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	81.14	357	P	P	09 47 45.8	+2.0
	comp=Z,0.5nm,0.6s,mb3.6,baz=12,slow=3.2,SNR=5.1						

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*THR **07** 09:51:16.2±0.7,37.99N×46.84E,h18^{km}±6^{km},ML4.0*
*CSEM **07** 09:51:17.2±0.1,38.04N×46.97E,h19^{km}±1^{km},ML4.4, Error ellipse: s-maj=2.9km s-min=1.6km az=52.0*
*TEH **07** 09:51:18.0,38.02N×46.97E,h1^{km},Mn4.4*
*BJI **07** 09:51:18.7,38.00N×46.90E,h15^{km},mB4.5,mb4.4,Ms4.4, Msz4.2*
*NEIC **07** 09:51:18.7±1.2,38.00N×46.93E,h15^{km}±9^{km},mb4.2/2, ML4.4(TEH),Error ellipse: s-maj=9.9km s-min=5.9km az=45.0*
*IDC **07** 09:51:18.3±3.8,37.91N×46.83E,h16^{km}±18^{km},mb3.8/10, mb1 4.0/13,mb1mx3.8/23,mbtmp3.9/13,ML3.7/1,MS3.2/6, Ms1 3.3/6,ms1mx3.0/25,Error ellipse: s-maj=35.5km s-min=17.2km az=21.0*
*MOS **07** 09:51:19.8±2.2,37.95N×46.79E,h33^{km},mb4.3/2,Error ellipse: s-maj=14.6km s-min=7.3km az=115.9*
*NSSP **07** 09:51:21.0,38.12N×45.10E,h10^{km},ML3.8*
*NNC **07** 09:51:22.5±76.0,38.39N×47.40E,Error ellipse: s-maj=919.8km s-min=591.0km az=90.0*
ISC 07 09:51:16.8±0.3,**38.05N**±0.02×**47.00E**±0.03,**h10**^{km},**n77**, σ1^{s}**40**/86,**mb3.8**/11,**MS3.6**/4,**2C-2D**,**Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHRS	Heris	0.27	6	Pg	Pg	09 51 23.7	+1.1
IHSH	Hashtroud	0.33	38	Pg	Sg	09 51 28.6	+0.4
GRMI	Germi	1.03	42	ePG	Pg	09 51 37.7	+0.1
GRMI				eSG	Sg	09 51 54.1	+2.7
GRMI				AML	AML	09 52 01.3	
	comp=N,5μm,0.4s						
GRS	Goris	1.57	341	⇑iP	Pn	09 51 42.0	-2.9
GRS				iS	Sb	09 52 06.0	+0.7
MAKU	Maku	2.24	306	ePG	Pn	09 51 55.4	+1.0
MAKU				eSG	Sn	09 52 25.0	+2.6
MAKU				AML	AML	09 52 32.5	
	comp=N,573nm,0.6s						
HKR	Hakkari	2.63	261	PN	Pn	09 52 01.6	+1.6
CLDR	Caldiran	2.66	295	PN	Pn	09 52 02.0	+1.5
GNI	Garni	2.74	321	Pn	Pn	09 52 04.5	+2.9
	comp=N,7.4nm,0.3s,baz=174,slow=2.8,SNR=38						
GNI				Pg	Pg	09 52 10.4	-1.2
	comp=N,56nm,0.3s,baz=283,slow=1.6,SNR=68						
GNI				Lg		09 52 47.0	
	comp=N,23nm,0.3s,baz=222,slow=24,SNR=8.7						
GNI				LR	LR	09 53 33.1	
	comp=N,785nm,22.0s,baz=356,slow=49						
GNI	Garni	2.74	321	ePn	Pn	09 52 04.0	+2.3
GNI	Garni	2.74	321	ePn	Pn	09 52 04.3	+2.6
VANB	Van	2.90	282	ePN	Pn	09 52 04.9	+1.0
SNGE	Sanandaj	2.96	175	ePN	Pn	09 52 04.0	-0.8
SNGE				AML	AML	09 52 52.7	
	comp=N,376nm,0.6s						
IGZV	Gazvin	3.05	122	Pn	Pn	09 52 05.0	-1.1
ILIN	Laeen	3.12	181	Pn	Pn	09 52 07.9	+0.8
IDHR	Dehrash	3.38	189	Pn	Pn	09 52 10.5	-0.2
IVIS	Veys	3.52	182	Pn	Pn	09 52 16.7	+4.0
IRAZ	Razeghan	3.53	137	Pn	Pn	09 52 12.8	-0.1
IRAZ				Sn	Sn	09 52 54.4	-0.8
STE	Stepanavan	3.57	326	S	Sn	09 52 57.0	+0.8
MSL	Mosul	3.58	242	ePn	x	09 52 23.5	
MSL				iSn	x	09 52 14.0	
MSL				i	x	09 52 19.5	
MSL				iPb	x	09 52 32.0	
MSL				iSg	x	09 52 37.5	
MSL				e	x	09 52 49.5	
DGRG	David-gareji	3.63	340	P	Pg	09 52 23.1	-6.1
DGRG				S	Sg	09 53 15.6	-2.0
THKV	Tehran--Karaj	3.76	123	ePN	Pn	09 52 16.7	+0.5
IKOM	Komasi	3.88	174	Pn	Pn	09 52 19.5	+1.6
KARS	Kars	3.97	311	ePN	Pn	09 52 23.0	+3.9
MTA	Mtatsminda	4.02	336	P	Pg	09 52 30.1	-7.0
MTA				S	Sg	09 53 25.8	-4.9
TI2	Plekhanov	4.07	336	⇓iP	Pg	09 52 31.2	-6.9
TI2				pmax	pmax		
	comp=Z,80nm,0.8s						
TBLG	Delisi	4.07	335	P	Pg	09 52 30.5	-7.6
TBLG				S	Sg	09 53 26.5	-5.9
ASAO	Ashtian	4.26	144	ePN	Pn	09 52 23.4	+0.1
ASAO				eSG	Sg	09 53 29.5	-9.1
BTMT	Batman	4.35	274	ePN	Pn	09 52 25.2	+0.6
IAFJ	Afjeh	4.36	119	Pn	Pn	09 52 24.9	+0.2
DUS	Dusheti	4.41	337	P	Pg	09 52 36.0	-8.9
GOR	Gori	4.52	331	P	Pg	09 52 39.1	-8.0
GOR				S	Sg	09 53 43.3	-4.0
IPRN	Paran-Amol	4.55	112	Pn	Pn	09 52 29.4	+1.9
DAMV	Damavand	4.66	120	ePN	Pn	09 52 29.1	+0.3
DAMV				AML	AML	09 53 52.0	
	comp=N,146nm,0.6s						
IDMV	Damavand	4.73	120	Pn	Pn	09 52 30.0	+0.1
EZM	Erzurum	4.77	295	ePN	Pn	09 52 29.4	-1.1
IVRN	Varamin	4.87	127	Pn	Pn	09 52 31.7	-0.2
IVRN				Lg		09 53 49.9	
BHD	Baghdad	5.22	205	ePn	x	09 52 49.5	
BHD				eSn	x	09 53 49.5	
BHD				iSb	x	09 54 07.0	
ONI	Oni	5.28	330	P	Pb	09 52 46.1	-2.9
ONI				S	Sx	09 54 03.8	
ZEI	Tsey	5.28	334	eP	Pn	09 52 41.2	+3.5
ZEI				e		09 53 35.5	
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.1s						

ZEI				pmax	pmax		
	comp=Z,13nm,0.1s						
ZEI				smax			
	comp=Z,13nm,0.2s						
ZEI	**Tsey**	5.28	334	*e*S	Sn	09 53 35.5	-3.9
	comp=Z,13nm,0.2s						
IGLO	**Galoogah**	5.47	107	Pn	Pn	09 52 41.5	+1.2
IKIA	**Kiasar**	5.64	107	Pn	Pn	09 52 40.2	-2.6
SHGO	**Shushtar**	6.10	166	*e*PN	Pn	09 52 47.4	-2.0
URFA	**Urfa**	6.51	267	*e*P	Pn	09 52 56.4	+1.3
KIV	**Kislovodsk**	6.75	332	P	Pn	09 52 58.2	-0.2
KIV	**Kislovodsk**	6.75	332	Pn	Pn	09 52 58.2	-0.2
MALT	**Malatya**	6.76	275	*e*P	Pn	09 52 55.3	-3.3
NASN	**Na'in**	7.06	136	*e*PN	Pn	09 53 02.0	-0.8
SOC	**Sochi**	7.82	317	*e*P	Pn	09 53 08.5	-4.9
SOC				*e*		09 54 44.5	
SOC				pmax	pmax		
	comp=Z,19nm,1.1s						
SOC				pmax	pmax		
	comp=N,18nm,1.4s						
SOC				pmax	pmax		
	comp=E,24nm,1.4s						
SOC				MLR	MLR		
	comp=Z,546nm,11.0s						
SOC				MLR	MLR		
	comp=N,582nm,15.0s						
SOC				MLR	MLR		
	comp=E,657nm,14.0s						
SOC	**Sochi**	7.82	317	*e*S	Sn	09 54 44.5	+1.7
	comp=E,582nm,15.0s						
BRTR	**Keskin Array B**	10.55	283	Pn	P	09 53 53.1	+1.9
	comp=E,0.1nm,0.3s,baz=105,slow=14,SNR=16						
AB31	**Akbulak array**	14.58	36	P	P	09 54 44.2	-0.8
	comp=E,3.0nm,0.7s,baz=209,slow=12,SNR=20						
AB31				⇑S	S	09 57 21.8	-5.7
	comp=E,3.5nm,0.9s,baz=311,slow=28,SNR=4.5						
MLR	**Muntele Rosu**	17.35	302	P	P	09 55 22.5	+2.0
	comp=E,0.1nm,0.3s,baz=196,slow=12,SNR=2.4						
MLR				LR	LR	10 03 48.2	
	comp=E,80nm,18.7s,baz=204,slow=43						
AKASG	**Malin Array Be**	17.88	321	P	P	09 55 25.2	-1.8
	comp=E,0.6nm,0.3s,baz=120,slow=13,SNR=7.5						
IDI	**Anoyia**	17.95	268	P	P	09 55 26.6	-1.5
	comp=E,0.2nm,0.3s,baz=33,slow=17,SNR=2.5						
IDI				LR	LR	10 02 25.7	
	comp=E,9.1nm,19.1s,baz=251,slow=38						
OBN	**Obninsk**	18.48	341	P	P	09 55 39.4	+4.8
OBN				*e*		09 59 03.4	
KK31	**Karatay Array**	18.54	67	⇓P	P	09 55 34.8	-0.5
	comp=E,18nm,1.3s,baz=280,slow=13,SNR=38						
ARU	**Arti**	19.95	19	*e*P	P	09 55 51.0	-0.6
ARU				*e*		09 56 08.5	
ARU				*e*S	S	09 59 39.5	+9.2
ARU				*e*SS	SS	10 00 01.9	+3.4
ARU	**Arti**	19.95	19	*e*P	P	09 55 52.0	+0.4
	comp=E,5.8nm,0.6s						
SVE	**Sverdlovsk**	20.86	21	*e*P	P	09 56 05.0	+3.9
SVE				*e*		09 56 25.5	
AAK	**Ala-Archa**	21.41	69	*e*P	P	09 56 10.2	+3.4
AAK				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.2						
AAK	**Ala-Archa**	21.41	69	*e*P	P	09 56 10.2	+3.4
	comp=Z,16nm,1.4s,mb4.2						
BVAR	**Borovoye Array**	22.05	40	P	P	09 56 13.1	-0.1
	comp=Z,1.7nm,0.6s,mb3.7,baz=247,slow=39,SNR=12						
GERES	**GERESS Array B**	26.28	305	P	P	09 56 52.0	-1.9
	comp=Z,1.8nm,0.7s,mb3.7,baz=108,slow=8.4,SNR=12						
KHC	**Kasperske Hory**	26.42	306	*e*P	P	09 56 54.0	-1.2
FINES	**FINESS Array B**	26.80	338	P	P	09 56 58.5	-0.1
	comp=Z,0.5nm,0.5s,mb3.3,baz=245,slow=27,SNR=6.7						
FINES				LR	LR	10 09 11.7	
	comp=Z,67nm,18.9s,MS3.2,baz=358,slow=40						
MKAR	**Makanchi Array**	27.29	60	P	P	09 57 04.6	+1.4
	comp=Z,0.5nm,0.7s,mb3.2,baz=256,slow=10.0,SNR=5.0						
HFS	**Hagfors**	30.51	327	P	P	09 57 30.2	-1.7
	comp=Z,6.9nm,0.9s,mb4.5,baz=117,slow=9.9,SNR=5.7						
WMQ	**Urumqi**	31.05	66	*e*P	P	09 57 39.7	+2.8
WMQ				AP	pP	09 57 43.5	+3.7
WMQ				XP	sP	09 57 45.7	+4.6
WMQ				AMB	AMB		
	comp=Z,20nm,4.8s						
WMQ				LR	LR		
	comp=Z,380nm,18.0s,MS4.1						
NB2	**NORSAR Subarra**	32.02	328	P	P	09 57 43.2	-2.1
	comp=Z,1.0nm,0.8s,mb3.7,baz=121,slow=8.6						
NOA	**NORSAR Array B**	32.02	328	P	P	09 57 43.1	-2.2
	comp=Z,1.5nm,0.8s,mb3.9,baz=121,slow=8.2,SNR=4.1						
NOA				LR	LR	10 11 36.2	
	comp=Z,112nm,18.9s,MS3.6,baz=120,slow=38						
ARCES	**ARCESS Array B**	33.61	347	P	P	09 57 58.2	-0.7
	comp=Z,2.9nm,1.0s,mb4.2,baz=131,slow=9.6,SNR=3.3						
JMIC	**Jan Mayen**	43.42	337	LR	LR	10 17 31.7	
	comp=Z,45nm,20.6s,MS3.4,baz=268,slow=36						
CMAR	**Chiang Mai Arr**	49.07	98	P	P	10 00 05.0	-1.2
	comp=Z,0.9nm,0.6s,mb4.0,baz=309,slow=9.8,SNR=6.8						
ILAR	**Eielson Array**	76.94	6	P	P	10 03 10.3	-0.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	**Eielson Array**	76.94	6	P	P	10 03 10.3	-0.1
	comp=Z,0.8nm,1.0s,mb3.6,baz=340,slow=7.3,SNR=5.3						
YKA	**Yellowknife Ar**	78.72	351	P	P	10 03 21.4	+1.1
	comp=Z,0.2nm,0.3s,mb3.5,baz=12,slow=5.7,SNR=3.7						

IDC 07 09:57:32.2±6.5**, 6.01S**×**146.29E, h77**^{km}±60^{km}**, mb3.3**/3**, mb1 3.4**/5**, mb1mx3.3**/15**, mbtmp3.5**/5**, ML3.1**/2**, Error ellipse: s-maj=79.6km s-min=30.5km az=126.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	3.48	166	P	P	09 58 24.2	-1.2
	4.3nm,0.3s,baz=305,slow=7.2,SNR=13						
PMG				S	S	09 58 59.4	-6.2
	5.4nm,0.3s,baz=114,slow=22,SNR=16						
WRA	**Warramunga Arr**	18.08	219	P	P	10 01 37.5	-2.3
	0.1nm,0.3s,baz=41,slow=11,SNR=16						
ASAR	**Alice Springs**	21.22	213	P	P	10 02 11.9	-1.7
	0.4nm,0.5s,baz=50,slow=8.3,SNR=8.9						
STKA	**Stephens Creek**	26.11	189	P	P	10 02 59.0	-1.8
	0.9nm,0.6s,baz=358,slow=12,SNR=3.3						
ILAR	**Eielson Array**	85.77	23	P	P	10 10 02.8	-1.1
	0.6nm,0.6s,baz=242,slow=5.6,SNR=9.2						

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*IDC **07** 10:15:03.7±2.3, 59.63N×22.33E, mb1 3.1/3, mb1mx2.9/22, mbtmp2.9/3, ML2.6/2, Error ellipse: s-maj=28.5km s-min=10.6km az=163.0*

*HEL **07** 10:15:05.7±0.1, 59.80N×22.27E, ML2.0, ML2.4(UPP), ML2.1(NAO), Explosion*

*NAO **07** 10:15:06.0±1.7, 59.90N×22.31E, ML2.1*

*BER **07** 10:15:07.8±6.2, 59.92N×22.37E, ML2.1(NAO), Suspected explosion*

ISC 07 10:15:04.6±0.5**, 59.80N**±0.05×**22.23E**±0.05**, n42,** σ**1^{s}00**/58**,**
Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	**Aland**	1.19	290	*e*P	Pb	10 15 27.3	-0.5
AAL				*e*S	Sb	10 15 42.4	-1.1
GRAU	**Graesoe**	1.93	288	*e*P	Pn	10 15 38.3	-0.7
PVF	**Pernaja**	1.96	66	*e*P	Pn	10 15 39.4	-0.1
PVF				*e*S	Sn	10 16 04.6	-0.6
PVF				MSG		10 16 09.5	
	comp=Z,9.7nm,0.1s						
FORU	**Forsmark**	2.12	288	*e*P	Pn	10 15 42.7	+1.0
NYNU	**Nynaeshamn**	2.30	252	*e*P	Pn	10 15 45.5	+1.2
FIA0	**FINESS Array S**	2.52	47	*e*P	Pn	10 15 48.1	+0.7
FIA0				*e*S	Sn	10 16 20.2	+1.0
FIA0				MSG		10 16 23.9	
	comp=Z,6.1nm,0.1s						
FIA0	**FINESS Array S**	2.52	47	Pn	Pn	10 15 48.1	+0.7
	baz=232,slow=14						
FIA0				Lg		10 16 20.7	
	baz=231,slow=22						
FIA0				Rg		10 16 35.1	
	baz=212,slow=37						
FINES	**FINESS Array B**	2.52	47	Pn	Pn	10 15 48.0	+0.6
	comp=Z,0.7nm,0.3s,baz=228,slow=14,SNR=40						
FINES				Sn	Sn	10 16 20.5	+1.3
	comp=Z,3.3nm,0.3s,baz=237,slow=23,SNR=26						
BACU	**Backbrunna**	2.59	274	*e*P	Pn	10 15 49.2	+0.8
BACU				*e*S	Sn	10 16 23.2	+2.2
IGGU	**Iggoen**	2.67	296	*e*P	Pn	10 15 50.1	+0.5
KEF	**Keuruu**	2.71	27	*e*P	Pn	10 15 51.6	+1.5
KEF				*e*S	Sn	10 16 25.8	+1.8
KEF				MSG		10 16 28.6	
	comp=Z,4.2nm,0.1s						
VJF	**Virojoki**	2.76	72	*e*P	Pn	10 15 50.0	-0.9
VJF				*e*S	Sn	10 16 23.9	-1.6
GOTU	**Gotland**	2.85	224	*e*P	Pn	10 15 52.8	+0.6
ESKU	**Eskilstuna**	3.03	262	*e*P	Pn	10 15 55.3	+0.6
ARNU	**Arnoeviken**	3.05	311	*e*P	Pn	10 15 55.2	+0.2
KAF	**Kangasniemi**	3.06	39	*e*P	Pn	10 15 56.2	+1.1
KAF				*e*S	Sn	10 16 34.0	+1.0
KAF				MSG		10 16 36.2	
	comp=Z,2.9nm,0.2s						
VIKU	**Vikbolandet**	3.13	248	*e*P	Pn	10 15 56.5	+0.3
FALU	**Falun**	3.28	285	*e*P	Pn	10 15 58.9	+0.6
SUF	**Sumiainen**	3.49	31	*e*P	Pn	10 16 01.5	+0.2
SUF				*e*S	Sn	10 16 44.9	+0.9
SUF				MSG		10 16 48.7	
	comp=Z,2.2nm,0.2s						
HEMU	**Hemsoen**	3.53	327	*e*P	Pn	10 16 02.4	+0.5
HASU	**Hassela**	3.62	313	*e*P	Pn	10 16 03.2	+0.2
NRAU	**Nora**	3.65	270	*e*P	Pn	10 16 04.1	+0.5
LNKU	**Linkoeping**	3.82	249	*e*P	Pn	10 16 06.6	+0.6
ASKU	**Askersund**	3.90	260	*e*P	Pn	10 16 06.9	-0.1
UMAU	**Umeaa**	4.17	350	*e*P	Pn	10 16 09.9	-1.0
SOLU	**Sollefteaa**	4.20	328	*e*P	Pn	10 16 11.1	-0.3
HFS	**Hagfors**	4.30	278	Pn	Pn	10 16 12.4	-0.5
	baz=98,slow=9.3						
HFS				Sn	Sn	10 17 03.1	-1.4
	baz=107,slow=22						
HFS				Lg		10 17 18.5	
	baz=90,slow=28						
HFS	**Hagfors**	4.30	278	*e*P	Pn	10 16 12.4	-0.5
HFS				*e*S	Sn	10 17 03.1	-1.4
HFS				*e*SG		10 17 18.5	
BURU	**Burvik**	4.82	356	*e*P	Pn	10 16 19.0	-1.2
SVAU	**Svanoeiden**	4.88	346	*e*P	Pn	10 16 20.5	-0.5
BLEU	**Blekinge**	4.88	227	*e*P	Pn	10 16 20.0	-1.1
FINU	**Finntorp**	4.97	270	*e*P	Pn	10 16 21.8	-0.5
NB2	**NORSAR Subarra**	5.60	288	Pn	Pn	10 16 29.5	-1.6
	baz=96,slow=14						
NB2				Sn	Sn	10 17 38.3	+1.1
	baz=86,slow=22						
NB2				Lg		10 18 00.0	
	baz=60,slow=18						
NB2	**NORSAR Subarra**	5.60	288	*e*P	Pn	10 16 29.5	-1.6
NB2				*e*		10 17 38.3	
NB2				*e*SG		10 18 00.0	
NOA	**NORSAR Array B**	5.60	288	Pn	Pn	10 16 26.6	-4.6
	comp=Z,0.1nm,0.3s,baz=33,slow=17,SNR=2.2						
NOA				Sn	Sn	10 17 32.6	-4.6
	comp=Z,0.2nm,0.3s,baz=60,slow=21,SNR=2.3						
LILU	**Lilltraesk**	5.62	350	*e*P	Pn	10 16 30.4	-1.1
SJUU	**Sjulsmark**	5.74	357	*e*P	Pn	10 16 31.4	-1.8
APA0	**Apatity Array**	9.16	27	Pn	P	10 17 18.9	-2.1
	baz=233,slow=10						
APA0	**Apatity Array**	9.16	27	*e*P	P	10 17 18.9	-2.1
ARA0	**ARCESS Array S**	9.88	7	Pn	P	10 17 26.1	-4.6
	baz=182,slow=16						
ARA0				Sn	Sn	10 19 10.9	-13
	baz=189,slow=28						
ARA0	**ARCESS Array S**	9.88	7	*e*P	P	10 17 26.1	-4.6
ARA0				*e*S	Sn	10 19 10.9	-13
ARCES	**ARCESS Array B**	9.88	7	Pn	P	10 17 26.5	-4.2
	comp=Z,0.1nm,0.3s,baz=184,slow=14,SNR=8.7						
ARCES				Sn	Sn	10 19 12.5	-11
	comp=Z,0.1nm,0.3s,baz=192,slow=25,SNR=2.8						

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*FUNV **07** 10:16:45.5, 10.68N×61.56W, h23^{km}, MW2.3*

*TRN **07** 10:16:46.6, 10.73N×61.73W, h14^{km}, MD3.0*

*NEIC **07** 10:16:46.6, 10.73N×61.73W, h14^{km}, MD3.0(TRN), After TRN.*

ISC 07 10:16:47.3±0.7**, 10.67N**±0.07×**61.67W**±0.05**, h30**^{km}±9^{km}**,**
n8, σ**0^{s}68**/15**, 1C-1D, Trinidad**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	0.27	95	*e*P	Pb	10 16 53.9	-0.4
TRN				*e*S	Sb	10 16 58.5	-0.6
TPP	**Pointe-a-Pierr**	0.42	148	⇑*i*P	Pb	10 16 55.6	-0.8
TPP				*i* S	Sb	10 17 04.2	+1.6
GUIV	**Guiria**	0.54	267	⇓*i*P	Pb	10 16 57.8	-0.5
GUIV				*e*S	Sb	10 17 06.6	+0.7
GRW	**Mount Saint Ca**	1.48	0	*e*P	Pn	10 17 12.7	+0.5
GRW				*e*S	Sn	10 17 31.4	+0.7
CRUV	**Carupano**	1.54	270	*e*P	Pn	10 17 12.4	-0.7
GRHS	**Sauteurs**	1.54	1	*e*P	Pn	10 17 13.3	+0.2
GRHS				*e*S	Sn	10 17 32.1	-0.2
ITEV	**Isla Los Testi**	1.58	295	*e*P	Pn	10 17 13.2	-0.6
ITEV				*e*S	Sn	10 17 33.5	+0.1
BAUV	**El Baul**	6.51	255	*e*P	Pn	10 18 18.9	-4.7
BAUV				*e*S	Sn	10 19 28.9	-8.6

IDC 07 10:35:08.3±2.2**, 8.74S**×**130.43E, mb3.7**/1**, mb1 3.4**/3**, mb1mx3.3**/14**, mbtmp3.3**/3**, ML2.7**/2**, Error ellipse: s-maj=128.3km s-min=32.3km az=69.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	11.77	162	Pn	P	10 37 57.0	-3.6
	0.1nm,0.3s,baz=344,slow=13,SNR=5.3						
WRA				Sn	S	10 40 06.7	-7.1
	0.2nm,0.3s,baz=344,slow=22,SNR=6.4						
ASAR	**Alice Springs**	15.21	168	Pn	P	10 38 45.5	-0.8
	0.1nm,0.3s,baz=344,slow=8.8,SNR=3.7						
MKAR	**Makanchi Array**	69.90	327	P	P	10 46 21.3	-2.0
	0.4nm,0.5s,baz=117,slow=6.4,SNR=5.1						

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*NAO **07** 11:04:25.6±1.7, 59.87N×22.33E, ML2.1*

*HEL **07** 11:04:25.5±0.2, 59.77N×22.28E, ML2.0, ML2.5(UPP), ML2.1(NAO), Explosion*

*IDC **07** 11:04:25.7±1.9, 59.79N×22.38E, mb1 2.9/4, mb1mx2.8/23, mbtmp2.8/4, ML2.6/4, Error ellipse: s-maj=25.7km s-min=7.5km az=162.0*

*CSEM **07** 11:04:25.5±0.1, 59.79N×22.19E, h2^{km}, ML2.0, Error ellipse: s-maj=4.0km s-min=1.6km az=149.0, Mining explosion.*

*UPP **07** 11:04:26.6, 59.83N×22.07E, h0^{km}, ML2.5, Mining explosion.*

*BER **07** 11:04:27.3±5.8, 59.90N×22.40E, ML2.1(NAO), Suspected explosion*

ISC 07 11:04:24.2±0.6**, 59.72N**±0.05×**22.26E**±0.05**, n45,** σ**1^{s}03**/68**,**
Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	**Aland**	1.23	293	*e*P	Pb	11 04 47.0	-1.0
AAL				*e*S	Sb	11 05 03.2	-1.1
GRAU	**Graesoe**	1.96	290	*e*P	Pn	11 04 58.0	-1.1
PVF	**Pernaja**	1.98	64	*e*P	Pn	11 04 59.1	-0.2
PVF				*e*S	Sn	11 05 24.4	-0.9
PVF				MSG		11 05 26.7	
	comp=Z,6.7nm,0.1s						
PVF	**Pernaja**	1.98	64	P	Pn	11 04 59.1	-0.3
PVF				S	Sn	11 05 24.3	-1.0
	comp=Z,6.7nm,0.1s						
FORU	**Forsmark**	2.15	290	*e*P	Pn	11 05 02.2	+0.5
FLYU	**Flymyra**	2.24	282	*e*P	Pn	11 05 03.4	+0.3
FLYU				*e*S	Sn	11 05 32.4	+0.6
FLYU	**Flymyra**	2.24	282	P	Pn	11 05 03.3	+0.3
FLYU				S	Sn	11 05 32.4	+0.6
NYNU	**Nynaeshamn**	2.29	254	*e*P	Pn	11 05 05.2	+1.4
FIA0	**FINESS Array S**	2.56	46	Pn	Pn	11 05 07.8	+0.3
	baz=233,slow=14						
FIA0				Lg		11 05 40.5	
	baz=230,slow=22						
FIA0				Rg		11 05 54.3	
	baz=213,slow=28						
FIA0	**FINESS Array S**	2.56	46	*e*P	Pn	11 05 08.1	+0.5
FIA0				*e*S	Sn	11 05 40.3	+0.5
FIA0				MSG		11 05 44.0	
	comp=Z,7.4nm,0.1s						
FIA0	**FINESS Array S**	2.56	46	P	Pn	11 05 08.0	+0.4
FIA0				S	Sn	11 05 40.2	+0.4
	comp=Z,7.4nm,0.1s						
FINES	**FINESS Array B**	2.56	46	Pn	Pn	11 05 07.8	+0.2
	comp=Z,0.8nm,0.3s,baz=225,slow=12,SNR=36						
FINES				Sn	Sn	11 05 40.1	+0.3
	comp=Z,3.0nm,0.3s,baz=237,slow=24,SNR=22						
FINES				Rg		11 05 54.3	
	comp=Z,8.8nm,0.8s,baz=217,slow=29,SNR=8.5						
BACU	**Backbrunna**	2.61	275	*e*P	Pn	11 05 08.9	+0.6
IGGU	**Iggoen**	2.72	297	*e*P	Pn	11 05 09.9	0.0
KEF	**Keuruu**	2.76	26	*e*P	Pn	11 05 11.3	+0.8
KEF				*e*S	Sn	11 05 46.7	+1.6
KEF				MSG		11 05 48.4	
	comp=Z,3.9nm,0.1s						
KEF	**Keuruu**	2.76	26	P	Pn	11 05 11.3	+0.8
KEF				S	Sn	11 05 46.7	+1.6
	comp=Z,3.9nm,0.1s						
VJF	**Virojoki**	2.77	71	*e*P	Pn	11 05 09.7	-1.0
VJF				*e*S	Sn	11 05 43.5	-1.9
VJF	**Virojoki**	2.77	71	P	Pn	11 05 09.6	-1.1
GOTU	**Gotland**	2.81	225	*e*P	Pn	11 05 12.6	+1.5
ESKU	**Eskilstuna**	3.03	263	*e*P	Pn	11 05 15.3	+0.9
ARNU	**Arnoeviken**	3.11	312	*e*P	Pn	11 05 14.8	-0.6
KAF	**Kangasniemi**	3.11	38	*e*P	Pn	11 05 16.1	+0.7
KAF				*e*S	Sn	11 05 54.5	+0.7
KAF				MSG		11 05 56.1	
	comp=Z,3.0nm,0.2s						
KAF	**Kangasniemi**	3.11	38	P	Pn	11 05 16.1	+0.7
KAF				S	Sn	11 05 54.4	+0.6
	comp=Z,3.0nm,0.2s						
VIKU	**Vikbolandet**	3.12	249	*e*P	Pn	11 05 16.3	+0.7
FALU	**Falun**	3.31	286	*e*P	Pn	11 05 18.5	+0.2
VAF	**Ylistaro**	3.34	3	*e*S	Sn	11 06 02.0	+2.3
SUF	**Sumiainen**	3.55	30	*e*S	Sn	11 06 05.5	+0.6
HEMU	**Hemsoen**	3.60	327	*e*P	Pn	11 05 22.2	-0.2
NRAU	**Nora**	3.67	271	*e*P	Pn	11 05 24.2	+0.9
HASU	**Hassela**	3.68	314	*e*P	Pn	11 05 23.0	-0.5
ASKU	**Askersund**	3.90	261	*e*P	Pn	11 05 26.6	-0.1
ASKU	**Askersund**	3.90	261	P	Pn	11 05 26.5	-0.2
HFS	**Hagfors**	4.33	279	Pn	Pn	11 05 32.2	-0.6
	baz=98,slow=8.6						
HFS				Sn	Sn	11 06 23.0	-1.7
	baz=102,slow=28						
HFS				Lg		11 06 38.3	
	baz=94,slow=28						
HFS	**Hagfors**	4.33	279	*e*P	Pn	11 05 32.2	-0.6
HFS				*e*S	Sn	11 06 23.0	-1.7
HFS				*e*SG		11 06 38.3	
HFS	**Hagfors**	4.33	279	Pn	Pn	11 05 33.0	+0.2
	comp=Z,0.1nm,0.3s,baz=105,slow=9.8,SNR=10						
HFS				Pg	Pg	11 05 41.4	-9.2
	comp=Z,0.1nm,0.3s,baz=93,slow=17,SNR=7.2						
HFS				Sn	Sn	11 06 23.0	-1.8
	comp=Z,0.0nm,0.3s,baz=103,slow=25,SNR=2.3						
HFS				Lg		11 06 42.1	
	comp=Z,0.2nm,0.3s,baz=87,slow=30,SNR=8.6						
HFS	**Hagfors**	4.33	279	P	Pn	11 05 32.1	-0.7
HFS				S	Sn	11 06 23.0	-1.7
HFS				Sg		11 06 38.2	
NB2	**NORSAR Subarra**	5.63	288	Pn	Pn	11 05 49.5	-1.8
	baz=93,slow=12						
NB2				Sn	Sn	11 06 57.7	+0.1
NB2				Lg		11 07 20.9	
	baz=61,slow=18						
NB2	**NORSAR Subarra**	5.63	288	*e*P	Pn	11 05 49.5	-1.8
NB2				*e*		11 06 57.7	
NB2				*e*SG		11 07 20.9	
NB2	**NORSAR Subarra**	5.63	288	P	Pn	11 05 49.4	-1.9
NOA	**NORSAR Array B**	5.63	288	Pn	Pn	11 05 48.7	-2.5
	comp=Z,0.2nm,0.3s,baz=115,slow=10,SNR=2.3						
NOA				Sn	Sn	11 06 51.9	-5.7
	comp=Z,0.2nm,0.3s,baz=125,slow=21,SNR=2.3						
NOA				Lg		11 07 18.1	
	comp=Z,0.4nm,0.3s,baz=80,slow=10,SNR=2.9						
APA0	**Apatity Array**	9.22	26	Pn	P	11 06 38.8	-2.7
	baz=226,slow=14						
APA0	**Apatity Array**	9.22	26	*e*P	P	11 06 38.8	-2.7
ARA0	**ARCESS Array S**	9.95	7	Pn	P	11 06 45.8	-5.5
	baz=183,slow=16						
ARA0				Sn	Sn	11 08 31.1	-14
	baz=190,slow=28						
ARA0	**ARCESS Array S**	9.95	7	*e*P	P	11 06 45.8	-5.5
ARA0				*e*S	Sn	11 08 31.1	-14
ARCES	**ARCESS Array B**	9.95	7	Pn	P	11 06 46.1	-5.1
	comp=Z,0.1nm,0.3s,baz=184,slow=14,SNR=9.6						
ARCES				Sn	Sn	11 08 32.0	-13
	comp=Z,0.1nm,0.3s,baz=190,slow=24,SNR=2.9						

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*NEIC **07** 11:36:43.2±2.8, 19.91S×169.51E, h123^{km}±18^{km}, Error ellipse: s-maj=32.6km s-min=20.1km az=213.0*

*IDC **07** 11:36:43.8±5.2, 19.95S×169.37E, h120^{km}±40^{km}, mb3.8/4, mb1 3.9/5, mb1mx3.6/16, mbtmp4.1/5, Error ellipse: s-maj=65.8km s-min=40.4km az=155.0*

ISC 07 11:36:45.2±3.8**, 20.1S**±0.3×**169.3E**±0.2**, h141**^{km}±24^{km}**,**
n16, σ**0^{s}86**/19**, mb4.0**/4**, 4C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	3.33	232	*e*P	P	11 37 37.0	-0.2
DZM				*e*S	S	11 38 16.7	-0.4
DZM	**Mont Dzumac**	3.33	232	P	P	11 37 37.1	-0.1
	10nm,0.3s,baz=51,slow=18,SNR=160						
DZM				S	S	11 38 16.6	-0.4
	65nm,0.3s,baz=320,slow=23,SNR=19						
DZM	**Mont Dzumac**	3.33	232	*e*P	P	11 37 37.0	-0.2
DZM				*e*S	S	11 38 16.7	-0.4
NOUC	**Port Laguerre**	3.45	233	*e*P	P	11 37 39.1	+0.3
NOUC				*e*S	S	11 38 20.2	+0.3
NOUC	**Port Laguerre**	3.45	233	*e*P	P	11 37 39.1	+0.3
NOUC				*e*S	S	11 38 20.2	+0.3
CTA	**Charters Tower**	21.63	266	P	P	11 41 27.5	+2.4
	4.6nm,0.7s,mb4.0,baz=85,slow=11,SNR=4.6						
STKA	**Stephens Creek**	27.46	239	P	P	11 42 20.7	+0.6
	1.2nm,0.5s,mb3.8,baz=66,slow=10.0,SNR=7.3						
STKA	**Stephens Creek**	27.46	239	P	P	11 42 20.7	+0.6
STKA				*e*P		11 42 21.5	
WRA	**Warramunga Arr**	32.80	264	P	P	11 43 05.7	-1.7
	0.6nm,0.4s,mb3.6,baz=92,slow=8.5,SNR=33						
ASAR	**Alice Springs**	32.98	257	P	P	11 43 08.2	-0.7
	5.6nm,0.6s,mb4.4,baz=88,slow=8.9,SNR=65						
SNAA	**Sanae**	88.36	182	⇑*i*	P	11 49 21.7	+0.1
VNA3	**Neumayer Olymp**	88.95	180	⇑*i*	P	11 49 24.5	+0.2
VNA2	**Neumayer--Watz**	89.24	181	⇑*i*	P	11 49 26.2	+0.5
VNA1	**Neumayer--Stat**	89.53	181	⇑*i*	P	11 49 26.3	-0.8
ARCES	**ARCESS Array B**	125.86	345	PKP	PKPdf	11 55 29.6	-0.2
	2.4nm,0.8s,baz=56,slow=3.3,SNR=5.7						
GERES	**GERESS Array B**	145.22	331	PKPbc	PKPbc	11 56 06.6	+0.3
	0.6nm,0.4s,baz=45,slow=1.9,SNR=3.8						

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*HEL **07** 11:50:54.5±0.3, 59.67N×22.26E, ML1.9, ML2.5(UPP), ML2.1(NAO), Explosion*

*IDC **07** 11:50:54.6±2.5, 59.72N×22.38E, mb1 3.0/3, mb1mx2.9/22, mbtmp2.8/3, ML2.6/3, Error ellipse: s-maj=30.4km s-min=11.8km az=165.0*

*NAO **07** 11:50:55.2±1.7, 59.85N×22.36E, ML2.1*

*BER **07** 11:50:56.9±6.1, 59.88N×22.43E, ML2.1(NAO), Suspected explosion*

ISC 07 11:50:53.5±0.8**, 59.72N**±0.06×**22.26E**±0.05**, n32,** σ**0^{s}93**/49**,**
Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	**Aland**	1.23	293	*e*P	Pb	11 51 16.8	-0.5
AAL				*e*S	Sb	11 51 32.7	-0.9
GRAU	**Graesoe**	1.97	290	*e*P	Pn	11 51 27.8	-0.6
GRAU				*e*S	Sn	11 51 53.7	-0.5
PVF	**Pernaja**	1.99	64	*e*P	Pn	11 51 28.9	+0.2
PVF				*e*SG	Sg	11 51 57.0	-2.6
PVF				MSG		11 51 57.5	
	comp=Z,9.1nm,0.1s						
FORU	**Forsmark**	2.15	290	*e*P	Pn	11 51 32.0	+1.0
FLYU	**Flymyra**	2.24	282	*e*P	Pn	11 51 33.9	+1.6
FIA0	**FINESS Array S**	2.56	46	*e*P	Pn	11 51 37.1	+0.2
FIA0				*e*S	Sn	11 52 09.8	+0.6
FIA0				MSG		11 52 13.6	
	comp=Z,5.2nm,0.1s						
FIA0	**FINESS Array S**	2.56	46	Pn	Pn	11 51 37.7	+0.8
	baz=227,slow=14						
FIA0				Lg		11 52 10.1	
	baz=231,slow=28						
FIA0				Rg		11 52 23.7	
	baz=212,slow=37						
FINES	**FINESS Array B**	2.56	46	Pn	Pn	11 51 37.6	+0.7
	comp=Z,0.7nm,0.3s,baz=229,slow=14,SNR=34						
FINES				Sn	Sn	11 52 10.1	+0.9
	comp=Z,3.2nm,0.3s,baz=237,slow=23,SNR=27						
FINES				Rg		11 52 26.3	

	comp=Z,10nm,0.8s,baz=220,slow=32,SNR=9.6						
IGGU	Iggoen	2.72	297	eP	Pn	11 51 39.7	+0.5
KEF	Keuruu	2.77	26	eP	Pn	11 51 41.1	+1.2
KEF				eS	Sn	11 52 16.0	+1.4
KEF				MSG		11 52 18.2	
	comp=Z,4.2nm,0.1s						
VJF	Virojoki	2.78	70	eP	Pn	11 51 39.6	-0.5
VJF				eS	Sn	11 52 14.1	-0.7
ARNU	Arnoeviken	3.11	312	eP	Pn	11 51 44.6	-0.1
KAF	Kangasniemi	3.11	38	eP	Pn	11 51 45.7	+0.9
KAF				eS	Sn	11 52 23.6	+0.3
KAF				MSG		11 52 25.9	
	comp=Z,2.5nm,0.2s						
FALU	Falun	3.31	286	eP	Pn	11 51 48.3	+0.7
VAF	Ylistaro	3.34	3	eP	Pn	11 51 48.7	+0.6
VAF				eS	Sn	11 52 29.1	+0.1
SUF	Sumiainen	3.55	30	eP	Pn	11 51 51.0	0.0
SUF				eS	Sn	11 52 34.8	+0.4
SUF				MSG		11 52 38.4	
	comp=Z,1.8nm,0.2s						
HEMU	Hemsoen	3.60	327	eP	Pn	11 51 52.1	+0.3
HASU	Hassela	3.68	314	eP	Pn	11 51 52.8	-0.1
ASKU	Askersund	3.90	261	eP	Pn	11 51 57.2	+1.2
UMAU	Umeaa	4.25	351	eP	Pn	11 51 60.0	-0.9
HFS	Hagfors	4.33	279	Pn	Pn	11 52 02.2	+0.1
	baz=98,slow=9.3						
HFS				Sn	Sn	11 52 52.7	-1.4
	baz=90,slow=37						
HFS				Lg		11 53 08.1	
	baz=96,slow=37						
HFS	Hagfors	4.33	279	eP	Pn	11 52 02.2	+0.1
HFS				eS	Sn	11 52 52.7	-1.4
HFS				eSG		11 53 08.1	
BURU	Burvik	4.90	356	eP	Pn	11 52 09.2	-1.0
SVAU	Svanoeiden	4.96	346	eP	Pn	11 52 10.4	-0.6
NB2	NORSAR Subarra	5.64	288	Pn	Pn	11 52 19.8	-0.7
	baz=96,slow=14						
NB2				Sn	Sn	11 53 28.1	+1.1
NB2				Lg		11 53 50.6	
	baz=58,slow=16						
NB2	NORSAR Subarra	5.64	288	eP	Pn	11 52 19.8	-0.7
NB2				e		11 53 28.1	
NB2				eSG		11 53 50.6	
NOA	NORSAR Array B	5.64	288	Pn	Pn	11 52 18.7	-1.9
	comp=Z,0.2nm,0.3s,baz=341,slow=4.1,SNR=2.6						
NOA				Sn	Sn	11 53 21.7	-5.2
	baz=130,slow=19,SNR=2.1						
NOA				Lg		11 53 49.8	
	comp=Z,0.4nm,0.3s,baz=110,slow=12,SNR=2.6						
APA0	Apatity Array	9.23	26	Pn	P	11 53 08.6	-2.3
	baz=223,slow=11						
APA0	Apatity Array	9.23	26	eP	P	11 53 08.6	-2.3
ARA0	ARCESS Array S	9.95	7	Pn	P	11 53 15.3	-5.4
	baz=182,slow=16						
ARA0				Sn	Sn	11 55 02.1	-12
	baz=189,slow=28						
ARA0	ARCESS Array S	9.95	7	eP	P	11 53 15.3	-5.4
ARA0				eS	Sn	11 55 02.1	-12
ARCES	ARCESS Array B	9.95	7	Pn	P	11 53 16.1	-4.6
	comp=Z,0.1nm,0.3s,baz=182,slow=14,SNR=8.2						
ARCES				Sn	Sn	11 55 02.1	-12
	comp=Z,0.1nm,0.3s,baz=190,slow=24,SNR=2.6						

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*NEIC **07** 12:00:58.7,29.44S×71.91W,h31^{km},ML3.6(GUC),After GUC.*

GUC 07 12:00:58.7±0.6,29.44S×71.91W,h31^{km}±6^{km},MD3.7, ML3.6,1C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSCH	La Serena	0.74	129	i P	Pn	12 01 12.6	-0.5
LSCH				i S	Sb	12 01 22.9	0.0
LSCH				AMP		12 01 25.7	
	comp=E,5μm,0.3s						
LCO	Las Campanas	1.14	68	⇓iP	Pn	12 01 18.9	+0.2
LCO				i S	Sn	12 01 34.7	+1.5
LCO				AMP		12 01 38.1	
	comp=E,2μm,0.4s						
VACH	Vallenar	1.32	50	⇑iP	Pn	12 01 21.8	+0.5
VACH				i S	Sn	12 01 39.3	+1.3
VACH				AMP		12 01 46.9	
	comp=E,3μm,0.2s						
CHNG	Los Chungos	2.46	172	i P	Pn	12 01 37.9	+0.2
CHNG				i S	Sn	12 02 07.8	+0.9
CHNG				AMP		12 02 24.2	
	comp=E,230nm,0.6s						
PACH	Papudo	3.12	173	i P	Pn	12 01 46.9	0.0

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*ATH **07** 12:07:25.1,34.13N×26.46E,h22^{km}±18^{km},MD3.5/4*
*NEIC **07** 12:07:25.1,34.13N×26.46E,h22^{km},MD3.5(ATH),After ATH.*
*HLW **07** 12:07:26.5,34.47N×26.49E,h11^{km},Mb3.1*
*CSEM **07** 12:07:26.6±0.1,34.23N×26.49E,h5^{km},MD3.5,Error ellipse: s-maj=5.6km s-min=3.2km az=87.0*
*IDC **07** 12:07:35.0±5.3,34.34N×25.99E,h98^{km}±37^{km},mb3.4/3, mb1 3.4/4,mb1mx3.1/21,mbtmp3.7/4,Error ellipse: s-maj=122.9km s-min=53.7km az=35.0*

ISC 07 12:07:27.4±2.0,34.24N±0.03×26.50E±0.08,h14^{km}±14^{km}, n16,σ1^{s}16/23,mb3.5/3,2C-3D,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	Khrisi	0.91	314	ePN	Pn	12 07 43.5	-2.3
XRY				eSN	Sn	12 07 57.5	-1.2
NPS	Neapolis	1.25	325	ePN	Pn	12 07 50.5	-0.1
NPS				eSN	Sn	12 08 08.0	+0.7
KARP	Karpathos	1.41	23	ePN	Pn	12 07 53.6	+0.7
KARP				eSN	Sn	12 08 13.6	+2.2
IDI	Anoyia	1.68	309	P	Pn	12 07 58.6	+1.9
	3.8nm,0.3s,baz=120,slow=8.1,SNR=9.2						
IDI				S	Sn	12 08 22.3	+4.0
	7.7nm,0.3s,baz=227,slow=18,SNR=6.3						
ARG	Arkhangelos	2.38	34	ePN	Pn	12 08 06.2	-0.5
SLUM		2.95	202	⇓P	Pn	12 08 15.7	+0.9
SLUM				S	Sn	12 08 51.2	+0.9
SLUM		2.95	202	P	Pn	12 08 15.7	+0.8
SLUM				S	Sn	12 08 51.2	+0.8
HMAT	Matruh	3.18	171	⇓P	Pn	12 08 19.2	+1.1
HBRG	Burj al 'Arab	4.62	141	⇑P	Pn	12 08 38.5	-0.1
SWA1		5.01	188	⇑P	Pn	12 08 44.4	+0.3
SWA1				S	Sn	12 09 41.5	-1.0
SWA2		5.06	190	⇓P	Pn	12 08 45.0	+0.1
HFRF	Wahat Farafira	7.24	167	P	Pn	12 09 14.8	-0.8
AKASG	Malin Array Be	16.57	6	P	P	12 11 20.4	-0.5
	1.0nm,0.3s,baz=196,slow=11,SNR=4.7						
FINES	FINESS Array B	27.22	360	P	P	12 13 09.5	-3.1
	0.6nm,0.4s,mb3.4,baz=174,slow=13,SNR=3.9						
ARCES	ARCESS Array B	35.35	359	P	P	12 14 18.6	-5.5
	1.1nm,0.7s,mb3.9,baz=172,slow=8.6,SNR=5.8						
MKAR	Makanchi Array	43.37	56	P	P	12 15 29.8	-1.1
	0.3nm,0.5s,mb3.3,baz=292,slow=6.5,SNR=3.7						

ISC 07 12:09:10.2±1.8,37.61N±0.09×29.25E±0.07,h2^{km}±10^{km}, n6,σ0^{s}74/11,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DNZL	Cakiroluk	0.18	296	i P	Pg	12 09 13.2	-0.7
DNZL				i S	Sg	12 09 16.9	+0.6
DENT	Denizli	0.23	310	PG	Pg	12 09 14.0	-0.8
DENT				SG	Sg	12 09 18.6	+0.8
DENT	Denizli	0.23	310	eSg	Sg	12 09 18.6	+0.8
TKTP	Tekketepe	0.95	63	i P	Pb	12 09 30.0	+0.9
TKTP				i S	Sg	12 09 47.0	+5.1
MANT	Manisa	1.04	328	i P	Pb	12 09 29.1	-1.4
MANT				i S	Sb	12 09 44.4	0.0
AYDN	Tasoluk	1.09	273	i P	Pb	12 09 31.7	+0.2
AYDN				i S	Sb	12 09 46.2	+0.2

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*NEIC **07** 12:10:24.1±4.0,5.47S×151.09E,h67^{km}±32^{km},Error ellipse: s-maj=56.8km s-min=23.3km az=105.0*
*IDC **07** 12:10:24.5±5.8,5.48S×151.03E,h68^{km}±51^{km},mb3.6/6, mb1 3.9/7,mb1mx3.7/15,mbtmp4.0/7,ML3.5/1,MS3.1/2, Ms1 3.1/2,ms1mx2.9/17,Error ellipse: s-maj=53.7km s-min=27.9km az=111.0*

ISC 07 12:10:24.0±4.1,5.5S±0.2×150.9E±0.3,h76^{km}±36^{km},n9, σ0^{s}54/10,mb3.6/6,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.41	223	P	P	12 11 44.3	+0.5
	9.4nm,0.3s,baz=41,slow=4.9,SNR=22						
PMG				S	S	12 12 45.2	-0.3
	4.4nm,0.3s,baz=129,slow=19,SNR=5.7						
PMG				LR	LR	12 13 49.5	
	comp=Z,190nm,18.2s,baz=225,slow=37						
PMG	Port Moresby	5.41	223	ePn	P	12 11 43.8	0.0
PMG				P		12 11 44.3	
PMG				S	S	12 12 45.2	-0.3
CTA	Charters Tower	15.23	197	LR	LR	12 19 27.2	
	comp=Z,72nm,19.1s,baz=234,slow=36						
WRA	Warramunga Arr	21.62	227	P	P	12 15 09.4	-0.2
	2.1nm,0.6s,mb3.7,baz=49,slow=10,SNR=19						
ASAR	Alice Springs	24.42	220	P	P	12 15 37.2	+0.3
	1.7nm,0.8s,mb3.4,baz=54,slow=8.9,SNR=16						
STKA	Stephens Creek	27.69	197	P	P	12 16 07.3	0.0
	2.9nm,0.9s,mb3.8,baz=36,slow=13,SNR=3.6						
SONM	Songino Array	65.90	329	P	P	12 21 04.5	+0.5
	0.6nm,0.7s,mb3.5,baz=139,slow=5.6,SNR=4.5						
ILAR	Eielson Array	83.47	22	P	P	12 22 43.1	-1.2
	0.7nm,0.7s,mb3.6,baz=247,slow=5.2,SNR=5.9						
NVAR	Mina Array Bea	93.96	52	P	P	12 23 35.5	+0.6
	0.1nm,0.4s,mb3.5,baz=226,slow=4.8,SNR=4.4						

IDC 07 12:18:10.0±9.2,7.41S×128.46E,h110^{km}±93^{km},mb3.5/4, mb1 3.6/6,mb1mx3.5/15,mbtmp3.8/6,ML3.6/2,Error ellipse: s-maj=114.6km s-min=26.2km az=58.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.70	156	P	P	12 21 18.4	-2.4
	0.3nm,0.3s,baz=339,slow=13,SNR=22						
WRA				S	S	12 23 40.9	-10
	1.4nm,0.3s,baz=331,slow=22,SNR=10						
ASAR	Alice Springs	16.99	163	P	P	12 22 02.6	+0.4
	0.6nm,0.3s,baz=342,slow=11,SNR=46						
ASAR				S	S	12 25 01.1	-4.9
	0.3nm,0.3s,baz=319,slow=17,SNR=4.9						
STKA	Stephens Creek	27.25	155	P	P	12 23 43.8	-2.1
	1.4nm,0.4s,baz=328,slow=12,SNR=10						
CMAR	Chiang Mai Arr	38.84	312	P	P	12 25 24.6	-1.4
	0.5nm,0.6s,baz=142,slow=7.4,SNR=4.3						
SONM	Songino Array	58.36	343	P	P	12 27 54.2	-1.7
	0.3nm,0.4s,baz=169,slow=6.3,SNR=4.1						
MKAR	Makanchi Array	67.74	328	P	P	12 28 55.2	-2.5
	0.5nm,0.3s,baz=129,slow=7.6,SNR=7.1						

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*NEIC **07** 12:24:25.5±2.0,7.11S×127.55E,h218^{km}±22^{km},mb4.6/3, Error ellipse: s-maj=18.4km s-min=10.7km az=97.0*
*IDC **07** 12:24:25.8±6.5,7.13S×127.50E,h221^{km}±69^{km},mb3.7/7, mb1 3.9/10,mb1mx3.7/17,mbtmp4.4/10,MS3.4/2, Ms1 3.4/2,ms1mx2.9/20,Error ellipse: s-maj=32.4km s-min=14.1km az=98.0*

ISC 07 12:24:24.6±1.4,7.13S±0.06×127.5E±0.1,h228^{km}±14^{km}, n21,σ0^{s}84/25,mb3.9/8,2D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	7.35	139	⇓iP	P	12 26 09.7	-0.5
KAKA				eS	S	12 27 27.3	-5.6
WRAB	Tennant Creek	14.34	153	ePn	P	12 27 39.5	+0.7
WRA	Warramunga Arr	14.34	153	P	P	12 27 38.2	-0.8
	2.0nm,0.3s,baz=329,slow=12,SNR=29						
WRA				S	S	12 30 12.8	+0.2
	1.8nm,0.3s,baz=330,slow=20,SNR=14						
WB2	Warramunga Arr	14.35	153	eP	P	12 27 39.3	+0.3
WB2				eS	S	12 30 13.0	+0.4
MBWA	Marble Bar	15.86	208	eP	P	12 27 57.8	+0.5
	15nm,0.5s						
ASAR	Alice Springs	17.54	160	P	P	12 28 15.7	-0.5
	5.5nm,0.3s,baz=340,slow=11,SNR=97						
ASAR				S	S	12 31 23.0	+1.2
	0.4nm,0.3s,baz=327,slow=19,SNR=8.8						
ASAR				ScP		12 35 52.9	
	0.1nm,0.3s,baz=350,slow=2.2,SNR=5.1						
ASPA	Alice Springs	17.54	160	eP	P	12 28 15.6	-0.6
ASPA				eS	S	12 31 20.2	-1.6
PMG	Port Moresby	19.55	98	P	P	12 28 38.9	+2.1
	1.2nm,0.3s,baz=217,slow=2.3,SNR=6.2						
PMG	Port Moresby	19.55	98	eP	P	12 28 38.5	+1.6
	22nm,0.7s						
PMG				P		12 28 39.0	
FORT	Forrest	23.53	179	⇓iP	P	12 29 15.9	+0.3
NWAO	Narrogin (SRO)	27.39	199	P	P	12 29 51.0	-0.1
	7.8nm,0.5s,mb4.6,baz=53,slow=8.1,SNR=15						
NWAO				LR	LR	12 39 46.3	
	comp=Z,75nm,21.3s,baz=223,slow=34						
STKA	Stephens Creek	27.89	154	P	P	12 29 54.7	-1.0
	1.3nm,0.4s,mb4.0,baz=253,slow=2.2,SNR=12						
STKA	Stephens Creek	27.89	154	eP	P	12 29 54.5	-1.2
STKA				P		12 29 54.7	
MJAR	Matsushiro Arr	44.58	12	P	P	12 32 14.2	-1.7
	2.9nm,0.8s,mb3.7,baz=187,slow=9.3,SNR=6.6						
ULN	Ulaanbaatar	57.67	344	eP	P	12 33 53.8	+0.5
	1.8nm,0.8s,mb3.8						
SONM	Songino Array	57.83	343	P	P	12 33 55.1	+0.8
	1.3nm,0.8s,mb3.6,baz=166,slow=6.8,SNR=8.1						
MKAR	Makanchi Array	67.02	328	P	P	12 34 55.5	+0.5
	0.8nm,0.5s,mb3.6,baz=122,slow=8.5,SNR=7.8						
MKAR	Makanchi Array	67.02	328	P	P	12 34 55.5	+0.5
ZAL	Zalesovo	70.64	335	P	P	12 35 16.4	-0.7
	0.8nm,0.3s,mb3.8,baz=288,slow=7.2,SNR=4.1						
MAW	Mawson	73.94	201	P	P	12 35 36.8	+0.5
	1.4nm,0.5s,mb3.9,baz=79,slow=8.6,SNR=4.7						
KMBO	Kilima Mbogo	90.14	269	LR	LR	13 18 42.1	
	comp=Z,23nm,18.7s,baz=89,slow=36						

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*NAO **07** 12:30:20.5±1.7,59.83N×22.37E,ML2.1*
*HEL **07** 12:30:20.9±0.2,59.75N×22.24E,ML1.9,ML2.5(UPP), ML2.1(NAO),Explosion*
*IDC **07** 12:30:20.8±1.8,59.83N×22.46E,mb1 2.9/4, mb1mx2.8/23,mbtmp2.8/4,ML2.6/4,Error ellipse: s-maj=25.0km s-min=6.8km az=156.0*
*BER **07** 12:30:22.4±6.9,59.89N×22.41E,ML2.1(NAO), Suspected explosion*

ISC 07 12:30:19.5±0.5,59.76N±0.05×22.28E±0.05,n41,σ0^{s}96/55, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	Aland	1.23	291	eP	Pb	12 30 42.2	-1.0
PVF	Pernaja	1.96	65	eP	Pn	12 30 54.4	+0.1
PVF				eSG	Sg	12 31 22.3	-2.2
PVF				MSG		12 31 23.4	
	comp=Z,6.6nm,0.1s						
GRAU	Graesoe	1.96	289	eP	Pn	12 30 53.2	-1.1
FORU	Forsmark	2.15	289	eP	Pn	12 30 57.6	+0.6
FORU				eS	Sn	12 31 25.4	+0.6
FLYU	Flymyra	2.24	281	eP	Pn	12 30 58.6	+0.3
NYNU	Nynaeshamn	2.32	253	eP	Pn	12 31 00.4	+1.0
UPP	Uppsala	2.35	274	eP	Pn	12 31 00.7	+0.7
FIA0	FINESS Array S	2.52	46	eP	Pn	12 31 03.2	+0.9
FIA0				eS	Sn	12 31 35.2	+1.0
FIA0				MSG		12 31 38.9	
	comp=Z,4.3nm,0.1s						
FIA0	FINESS Array S	2.52	46	Pn	Pn	12 31 03.1	+0.8
	baz=226,slow=14						
FIA0				Lg		12 31 35.5	
	baz=231,slow=22						
FIA0				Rg		12 31 49.6	
	baz=217,slow=37						
FINES	FINESS Array B	2.52	46	Pn	Pn	12 31 03.0	+0.7
	comp=Z,0.8nm,0.3s,baz=229,slow=14,SNR=34						
FINES				Lg		12 31 35.3	
	comp=Z,3.1nm,0.3s,baz=237,slow=23,SNR=26						
FINES				Rg		12 31 52.6	
	comp=Z,12nm,0.9s,baz=216,slow=26,SNR=9.2						
BACU	Backbrunna	2.62	274	eP	Pn	12 31 04.0	+0.3
IGGU	Iggoen	2.71	296	eP	Pn	12 31 05.1	0.0
KEF	Keuruu	2.73	26	eP	Pn	12 31 06.5	+1.3
KEF				eS	Sn	12 31 40.8	+1.4
KEF				MSG		12 31 43.6	
	comp=Z,4.1nm,0.1s						
VJF	Virojoki	2.75	71	eP	Pn	12 31 05.0	-0.6
VJF				eS	Sn	12 31 39.4	-0.7
GOTU	Gotland	2.84	225	eP	Pn	12 31 07.8	+0.9
ESKU	Eskilstuna	3.05	263	eP	Pn	12 31 10.7	+0.8
KAF	Kangasniemi	3.07	38	eP	Pn	12 31 11.3	+1.1
KAF				eS	Sn	12 31 48.8	+0.7
KAF				MSG		12 31 51.2	
	comp=Z,2.6nm,0.2s						
ARNU	Arnoeviken	3.09	311	eP	Pn	12 31 10.1	-0.4
VIKU	Vikbolandet	3.14	249	eP	Pn	12 31 11.6	+0.4
VAF	Ylistaro	3.30	3	eP	Pn	12 31 13.9	+0.5
VAF				eS	Sn	12 31 54.4	+0.4
FALU	Falun	3.31	286	eP	Pn	12 31 13.7	+0.1
SUF	Sumiainen	3.51	31	eP	Pn	12 31 16.4	0.0
HEMU	Hemsoen	3.58	327	eP	Pn	12 31 17.3	0.0
HASU	Hassela	3.66	313	eP	Pn	12 31 18.2	-0.3
LNKU	Linkoeping	3.83	249	eP	Pn	12 31 21.4	+0.4
ASKU	Askersund	3.92	260	eP	Pn	12 31 22.0	-0.2
SOLU	Sollefteaa	4.25	328	eP	Pn	12 31 28.1	+1.2
HFS	Hagfors	4.34	279	Pn	Pn	12 31 27.4	-0.7
	baz=96,slow=9.3						
HFS				Sn	Sn	12 32 18.1	-2.0
	baz=91,slow=37						
HFS				Lg		12 32 33.3	
	baz=97,slow=28						
HFS	Hagfors	4.34	279	eP	Pn	12 31 27.4	-0.7
HFS				eS	Sn	12 32 18.1	-2.0
HFS				eSG		12 32 33.3	
HFS	Hagfors	4.34	279	Pn	Pn	12 31 28.2	+0.1
	comp=Z,0.1nm,0.3s,baz=103,slow=10,SNR=8.8						
HFS				Pg	Pg	12 31 36.3	-10
	comp=Z,0.1nm,0.3s,baz=92,slow=17,SNR=6.2						
HFS				Lg		12 32 37.5	
	comp=Z,0.2nm,0.3s,baz=93,slow=31,SNR=7.3						
BURU	Burvik	4.86	355	eP	Pn	12 31 33.9	-1.7
SVAU	Svanoeiden	4.92	346	eP	Pn	12 31 35.4	-1.1
FINU	Finntorp	5.00	270	eP	Pn	12 31 36.9	-0.6
NB2	NORSAR Subarra	5.64	288	Pn	Pn	12 31 44.5	-2.0
	baz=97,slow=14						
NB2				Sn	Sn	12 32 53.4	+0.5
NB2				Lg		12 33 16.2	
	baz=45,slow=22						
NB2	NORSAR Subarra	5.64	288	eP	Pn	12 31 44.5	-2.0
NB2				e		12 32 53.4	
NB2				eSG		12 33 16.2	
NOA	NORSAR Array B	5.64	288	Pn	Pn	12 31 45.1	-1.5
	comp=Z,0.2nm,0.3s,baz=139,slow=24,SNR=2.4						
NOA				Lg		12 33 14.6	
	comp=Z,0.4nm,0.3s,baz=346,slow=19,SNR=2.5						
APA0	Apatity Array	9.18	26	Pn	P	12 32 33.7	-2.5
	baz=231,slow=12						
APA0	Apatity Array	9.18	26	eP	P	12 32 33.7	-2.5
ARA0	ARCESS Array S	9.91	7	Pn	P	12 32 41.3	-4.7
	baz=190,slow=16						
ARA0				Sn	Sn	12 34 27.5	-12
	baz=188,slow=28						
ARA0	ARCESS Array S	9.91	7	eP	P	12 32 41.3	-4.7
ARA0				eS	Sn	12 34 27.5	-12
ARCES	ARCESS Array B	9.91	7	Pn	P	12 32 41.1	-5.0
	comp=Z,0.1nm,0.3s,baz=191,slow=14,SNR=7.6						
ARCES				Sn	Sn	12 34 27.1	-12
	comp=Z,0.1nm,0.3s,baz=191,slow=24,SNR=2.3						

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*NNC **07** 12:45:34.2±1.9,41.59N×74.34E,mpv3.0,Error ellipse: s-maj=16.1km s-min=6.8km az=131.0*
*KNET **07** 12:45:35.5±0.6,41.74N×73.93E,h17^{km}±2^{km},ml2.3,Error ellipse: s-maj=4.0km s-min=1.8km az=30.0*

ISC 07 12:45:35.3±1.7,41.69N±0.08×73.84E±0.08,h10^{km},n10, σ1^{s}14/17,9C-8D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	0.46	346	⇓P	Pg	12 45 43.3	-1.3
	210nm,0.5s,SNR=228						
AML				⇑S	Sg	12 45 51.7	+0.9
	621nm,0.6s						
UCH	Uchtor	0.74	43	⇓P	Pb	12 45 48.2	-1.5
	25nm,0.2s,SNR=41						
UCH				⇓S	Sb	12 45 59.1	-0.5
	56nm,0.3s						
EKS2	Erkin-Say	0.97	357	⇓P	Pb	12 45 52.7	-1.1
	7.9nm,0.2s,SNR=14						
EKS2				⇑S	Sb	12 46 06.9	+0.4
	32nm,0.5s						
AAK	Ala-Archa	1.06	27	⇓P	Pb	12 45 54.3	-1.0
	27nm,0.4s,SNR=14						
AAK	Ala-Archa	1.06	27	⇓P	Pb	12 45 54.3	-1.0
	8.0nm,0.3s						
AAK				⇑S	Sb	12 46 09.1	+0.1
	38nm,0.7s						
KZA	Kyzart	1.12	69	⇓P	Pb	12 45 55.1	-1.2
	13nm,0.2s,SNR=32						
KZA				⇑S	Sb	12 46 10.7	0.0
	83nm,0.5s						
USP	Ospenovka	1.65	17	⇑P	Pn	12 46 05.1	+0.6
	24nm,0.4s,SNR=18						
TKM2	Tokmak 2	1.79	46	⇑P	Pn	12 46 07.5	+0.9
	27nm,0.3s,SNR=45						
ULHL	Ulahol	1.87	72	⇑P	Pn	12 46 08.3	+0.6
	8.6nm,0.2s,SNR=30						
ULHL				⇑S	Sn	12 46 33.6	+2.0
	26nm,0.3s						
KK31	Karatay Array	2.84	301	⇓P	Pn	12 46 26.5	+4.9
	1.8nm,0.3s,baz=112,slow=12,SNR=66						
KK31				⇑S	Sn	12 47 05.9	+10
	3.7nm,0.3s,baz=121,slow=29,SNR=6.4						

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*NEIC **07** 13:18:35.9,17.07N×94.79W,h128^{km},MD4.0(MEX),After MEX.*

MEX 07 13:18:35.9±1.3,17.07N×94.79W,h128^{km}±10^{km},MD4.0, 1C,Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.09	285	eP	P	13 18 52.4	-1.1
CMIG				i S	S	13 19 04.7	-2.0
TUIG	Tuzandepetl	1.02	20	i P	P	13 18 57.3	-1.9
TUIG				i S	S	13 19 14.1	-2.5
EVV	El Vigia	1.48	339	eP	P	13 19 02.0	-2.1
EVV				i S	S	13 19 23.0	-2.5
HUIG	Huatulco	1.81	225	⇑eP	P	13 19 05.0	-2.9
HUIG				i S	S	13 19 29.4	-2.7
OXX	Oaxaca	1.85	271	i P	P	13 19 07.7	-0.6
OXX				i S	S	13 19 31.0	-2.0
VHO	Vista Hermosa	1.86	270	eP	P	13 19 07.8	-0.7
VHO				i S	S	13 19 32.4	-0.8
CCIG	Comitan	2.66	107	i P	P	13 19 18.6	-0.3
CCIG				i S	S	13 19 48.6	-2.8
PPM	Popocatepetl	4.16	299	eP	P	13 19 40.0	+1.3

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*BJI **07** 13:19:54.3,62.00N×26.60W,h10^{km},mB4.9,mb4.6,Ms4.4, Msz4.5*
*CSEM **07** 13:19:55.7±0.0,62.20N×26.46W,h2^{km},mb4.4/37,Ms4.0, Error ellipse: s-maj=2.0km s-min=1.2km az=8.0*
*MOS **07** 13:19:57.6±0.8,61.92N×26.70W,h10^{km},mb4.6/30, MS4.0/5,Error ellipse: s-maj=16.9km s-min=7.4km az=44.9*
*IDC **07** 13:19:57.7±0.6,61.98N×26.64W,mb3.9/17,mb1 4.2/18, mb1mx4.1/26,mbtmp4.0/18,ML3.4/1,MS4.0/21,Ms1 4.0/21, ms1mx4.0/27,Error ellipse: s-maj=20.2km s-min=12.6km az=1.0*
*NEIC **07** 13:19:59.4±0.1,61.97N×26.63W,h10^{km},mb4.5/39,Error ellipse: s-maj=7.4km s-min=2.5km az=201.0*
*ZUR_RM **07** 13:19:59,61.97N×26.63W,h12^{km},Mw4.8/10,Moment Tensor Solution. s10 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.71; $M_{\theta\theta}$0.46; $M_{\phi\phi}$1.25; $M_{r\theta}$0.55; $M_{\theta\phi}$0.51; $M_{\phi r}$0.83; Best double couple: $M_0$1.89×10^{16} NP1:ϕ_s210°,δ61°,λ-87°. NP2:ϕ_s23°,δ29°,λ-96°. Principal axes: T 1.779, Plg16°, Azm297°; N .213, Plg3°, Azm28°; P -1.992, Plg74°, Azm128°;*

ISC 07 13:19:56.5±1.3,62.25N±0.03×26.43W±0.05,h3^{km}±8^{km}, n196,σ1^{s}11/193,mb4.3/59,MS4.0/25,Iceland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INYL	Nylenda	2.41	42	P	Pn	13 20 38.5	+1.0
IVOG	Vogar	2.52	45	P	Pn	13 20 39.8	+0.8
IKRI	Krysuvik	2.57	49	P	Pn	13 20 40.3	+0.6
IKRI				S	Sn	13 21 12.3	+0.4
IVOS	Vogsosar	2.69	51	P	Pn	13 20 40.5	-0.9
IVOS				S	Sn	13 21 14.4	-0.5
ISAN	Sandskeio	2.85	48	P	Pn	13 20 43.5	-0.3
ISAN				S	Sn	13 21 20.2	+1.0
IBJA	Bjarnastaoir	2.89	52	P	Pn	13 20 43.2	-1.1

IBJA				S	Sn	13 21 19.2	-0.8
IKUD	Kuludalsa	2.92	43	P	Pn	13 20 45.9	+1.1
ISOL	Solvholt	3.01	54	P	Pn	13 20 44.4	-1.6
ISOL				S	Sn	13 21 21.8	-1.3
IKRO	Krokur	3.04	50	P	Pn	13 20 45.8	-0.7
IKRO				S	Sn	13 21 23.9	0.0
IHEI	Heioarbar	3.06	48	P	Pn	13 20 46.5	-0.2
IHEI				S	Sn	13 21 25.4	+1.0
IASM	Asmuli	3.09	56	P	Pn	13 20 45.0	-2.2
IASM				S	Sn	13 21 23.1	-2.0
ISAU	Saurbar	3.24	55	P	Pn	13 20 47.7	-1.6
ISAU				S	Sn	13 21 27.2	-1.8
IASB	`sbjarnarst	3.40	40	P	Pn	13 20 52.7	+1.2
IASB				S	Sn	13 21 36.8	+3.9
IHAU	Haukadalur	3.41	57	P	Pn	13 20 49.6	-2.1
IHAU				S	Sn	13 21 31.3	-1.9
IGYG	Gygjarholskot	3.47	51	P	Pn	13 20 51.6	-1.0
IGYG				S	Sn	13 21 34.7	-0.1
JMIC	Jan Mayen	11.23	31	LR	LR	13 26 11.4	
	comp=Z,420nm,20.1s,baz=266,slow=32						
SUMG	Summit	11.32	341	ePn	P	13 22 44.4	+2.4
	8.8nm,0.8s						
EKA	Eskdalemuir Ar	13.85	109	Pn	P	13 23 16.1	+0.3
	0.1nm,0.3s,baz=302,slow=13,SNR=6.1						
NOA	NORSAR Array B	17.76	77	LR	LR	13 30 48.7	
	comp=Z,382nm,18.1s,baz=295,slow=36						
FRB	Frobisher Bay	18.93	293	LR	LR	13 30 56.8	
	comp=Z,1µm,18.7s,baz=140,slow=35						
ROSF	Rostrenen	19.02	126	eP	P	13 24 20.1	-1.6
HFS	Hagfors	19.23	78	LR	LR	13 31 15.8	
	comp=Z,476nm,19.1s,baz=293,slow=35						
QUIF	Quistinic	19.41	127	eP	P	13 24 24.7	-1.5
	127nm,1.5s						
QUIF	Quistinic	19.41	127	eP	P	13 24 24.7	-1.5
QUIF				pmax	pmax		
	comp=Z,64nm,1.5s						
GRR	Gorron	19.92	122	eP	P	13 24 31.0	-0.9
LDF	La Druitiere	20.05	121	eP	P	13 24 32.7	-0.6
BAIF	Baives	20.73	112	eP	P	13 24 40.2	-0.3
GIVF	Givet	20.97	111	eP	P	13 24 42.7	-0.2
MFF	Saint Martin d	21.65	124	eP	P	13 24 48.8	-1.1
	comp=Z,57nm,1.2s,mb4.6						
MFF	Saint Martin d	21.65	124	eP	P	13 24 48.8	-1.1
MFF				pmax	pmax		
	comp=Z,28nm,1.2s,mb4.6						
ARCES	ARCESS Array B	21.76	48	P	P	13 24 54.7	+3.9
	comp=Z,5.0nm,0.7s,mb4.0,baz=288,slow=7.7,SNR=9.2						
ARCES	ARCESS Array B	21.76	48	P	P	13 24 54.7	+3.9
SCHQ	Schefferville	22.03	269	P	P	13 24 52.4	-1.2
	comp=Z,2.9nm,0.8s,mb3.8,baz=73,slow=11,SNR=3.0						
SCHQ	Schefferville	22.03	269	P	P	13 24 52.3	-1.3
LOR	Lormes	22.73	117	eP	P	13 24 59.9	-0.5
	comp=Z,60nm,1.4s,mb4.5						
LOR				eR			
	comp=Z,1µm,17.8s						
SSF	Saint Saulge	22.75	118	eP	P	13 24 59.9	-0.7
SSF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.3						
SSF	Saint Saulge	22.75	118	eP	P	13 24 59.9	-0.7
	comp=Z,14nm,1.1s,mb4.3						
TCF	Toulx Ste Croi	22.84	121	eP	P	13 25 02.4	+0.9
	comp=Z,48nm,1.3s,mb4.5						
TCF	Toulx Ste Croi	22.84	121	eP	P	13 25 02.4	+0.9
TCF				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.5						
BGF	Bois d'Agland	22.88	120	eP	P	13 25 01.6	-0.3
	comp=Z,48nm,1.1s,mb4.5						
BGF	Bois d'Agland	22.88	120	eP	P	13 25 01.6	-0.3
BGF				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.5						
THEF	They Montfort	22.88	113	eP	P	13 25 06.4	+4.5
HAU	Haudompre	23.21	113	eP	P	13 25 06.0	+0.9
HAU				eR			
	comp=Z,497nm,22.3s						
SMF	Signal de Mont	23.22	118	eP	P	13 25 04.8	-0.4
	comp=Z,49nm,1.2s,mb4.5						
SMF	Signal de Mont	23.22	118	eP	P	13 25 04.8	-0.4
SMF				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.5						
CDF	Champ du Feu	23.30	111	eP	P	13 25 06.5	+0.5
WLS	Welschbruch	23.34	111	eP	P	13 25 08.8	+2.5
ECH	Echery	23.40	111	eP	P	13 25 09.2	+2.3
AGO	Saint Agoulin	23.40	120	eP	P	13 25 09.9	+2.9
HINF	Hinteralfeld	23.57	112	eP	P	13 25 08.4	-0.2
PYM	Petit Puy Mans	23.60	121	eP	P	13 25 13.2	+4.3
MOX	Moxa	23.63	102	eP	P	13 25 05.3	-3.9
MOX				pmax	pmax		
	comp=Z,63nm,2.0s,mb4.7						
MOX				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.2						
MOX	Moxa	23.63	102	i P	P	13 25 05.3	-3.9
	comp=Z,logA/T=1.5,mb4.7						
MOX				L		13 35 44.0	
MOX	Moxa	23.63	102	eP	P	13 25 05.3	-3.9
	comp=Z,63nm,2.0s,mb4.7						
MOF	Molkenrain	23.67	112	eP	P	13 25 11.8	+2.3
PLDF	La Plantade	23.67	120	eP	P	13 25 12.1	+2.5
CLL	Collm	23.82	99	eP	P	13 25 11.0	+0.1
CLL				i		13 25 18.4	
CLL				pmax	pmax		
	comp=Z,31nm,1.9s,mb4.4						
CLL				MLR	MLR		
	comp=Z,500nm,22.0s,MS3.9						
CLL	Collm	23.82	99	eP	P	13 25 11.0	+0.1
	comp=Z,31nm,1.9s,mb4.4						
CLL				i		13 25 18.4	
CLL	Collm	23.82	99	P	P	13 25 11.0	+0.1
	comp=Z,logA/T=1.2,mb4.4						
CLL				i *PP		13 25 18.4	
CLL				e		13 25 27.0	
CLL				ePPP	PPP	13 25 56.0	+1.9
CAF	Calviac	23.91	123	eP	P	13 25 11.5	-0.4
	comp=Z,64nm,1.3s,mb4.6						
CAF	Calviac	23.91	123	eP	P	13 25 11.5	-0.4
CAF				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.6						
LOMF	Lomont	23.92	113	eP	P	13 25 13.0	+1.0
GRA1	Grafenberg Arr	24.12	104	eP	P	13 25 14.5	+0.5
	comp=Z,12nm,1.4s,mb4.1						
GRF	Grafenberg Arr	24.12	104	eP	P	13 25 14.5	+0.5
GRF				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.1						
GRF	Grafenberg Arr	24.12	104	eP	P	13 25 14.5	+0.5
GRF				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.1						
GRF				MLR	MLR		
	comp=Z,600nm,19.0s,MS4.1						
GRF	Grafenberg Arr	24.12	104	eP	P	13 25 14.5	+0.5
	comp=Z,12nm,1.4s,mb4.1						
FINES	FINESS Array B	24.23	68	P	P	13 25 17.2	+2.3
	comp=Z,3.1nm,0.8s,mb3.8,baz=323,slow=9.5,SNR=8.3						
FINES				LR	LR	13 34 27.0	
	comp=Z,164nm,19.2s,MS3.5,baz=323,slow=36						
NKC	Novy Kostel	24.30	102	eP	P	13 25 16.3	+0.6
NKC	Novy Kostel	24.30	102	eP	P	13 25 16.3	+0.6
NKC				AMS	AMS	13 36 00.0	
	comp=Z,600nm,14.4s						
BRG	Berggiesshubel	24.55	99	eP	P	13 25 19.7	+1.6
BRG				e		13 25 26.9	
BRG				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2						
BRG				MLR	MLR		
	comp=N,360nm,17.5s,MS4.0						
BRG				MLR	MLR		
	comp=E,230nm,17.5s,MS4.0						
BRG				MLR	MLR		
	comp=Z,420nm,17.5s,MS4.0						
BRG	Berggiesshubel	24.55	99	eP	P	13 25 19.7	+1.6
	comp=Z,8.8nm,1.1s,mb4.2						
BRG				e		13 25 26.9	
PVCC	Panska Ves	25.07	99	AMS	AMS	13 35 20.0	
	comp=Z,300nm,16.0s						
MTLF	Montolieu	25.30	125	eP	P	13 25 24.9	-0.5
LPL	La Plagne	25.32	116	eP	P	13 25 25.4	-0.2
LPG	La Plagne	25.35	116	eP	P	13 25 25.9	+0.1
PRU	Pruhonice	25.43	100	eP	P	13 25 27.4	+0.8
PRU	Pruhonice	25.43	100	eP	P	13 25 27.4	+0.8
PRU				AMS	AMS	13 36 50.0	
	comp=Z,500nm,14.8s						
ORIF	Oris-en-Rattie	25.45	118	eP	P	13 25 26.5	-0.3
	comp=Z,13nm,0.8s,mb4.2						
ORIF				eR			
	comp=Z,904nm,18.5s						
KHC	Kasperske Hory	25.60	102	eP	P	13 25 28.7	+0.6
KHC				e		13 25 58.5	
KHC	Kasperske Hory	25.60	102	eP	P	13 25 28.7	+0.6
KHC				x	x	13 25 58.5	
KHC				AMS	AMS	13 36 30.0	
	comp=Z,600nm,15.0s						
BNI	Bardonecchia	25.68	117	P	P	13 25 27.0	-1.9
BNI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
BNI	Bardonecchia	25.68	117	P	P	13 25 27.0	-1.9
	comp=Z,6.7nm,1.0s,mb4.1						
BNI	Bardonecchia	25.68	117	P	P	13 25 27.0	-1.9
	comp=Z,6.7nm,1.0s,mb4.1						
DAVOX	Davos	25.69	110	LR	LR	13 34 51.8	
	comp=Z,159nm,18.7s,MS3.6,baz=85,slow=35						
UPC	Upice	25.75	97	eP	P	13 25 32.2	+2.6
GERES	GERESS Array B	25.86	103	P	P	13 25 30.5	-0.1
	comp=Z,0.7nm,0.7s,mb3.3,baz=323,slow=6.7,SNR=6.6						
GERES				LR	LR	13 36 03.1	
	comp=Z,380nm,18.7s,MS4.0,baz=358,slow=37						
MBDF	Montbardon	25.98	117	eP	P	13 25 31.3	-0.4
	comp=Z,39nm,1.3s,mb4.5						
MBDF	Montbardon	25.98	117	eP	P	13 25 31.3	-0.4
MBDF				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.5						
DPC	Dobruska-Polom	26.01	97	eP	P	13 25 33.0	+1.1
DPC				AMS	AMS	13 36 00.0	
	comp=Z,400nm,18.1s						
SMRF	Simiane la Rot	26.10	120	eP	P	13 25 32.5	-0.3
ESDC	Sonseca Array	26.39	138	P	P	13 25 33.8	-1.8
	comp=Z,0.4nm,0.3s,mb3.4,baz=342,slow=8.5,SNR=8.3						
SBF	Sospel	26.96	117	eP	P	13 25 41.1	+0.4
	comp=Z,28nm,0.9s,mb4.5						
SBF	Sospel	26.96	117	eP	P	13 25 41.1	+0.4
SBF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.5						
MORC	Moravsky Berou	26.97	97	eP	P	13 25 41.5	+0.7
MORC				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
MORC	Moravsky Berou	26.97	97	eP	P	13 25 41.5	+0.7
	comp=Z,3.7nm,0.9s,mb3.9						
MORC	Moravsky Berou	26.97	97	eP	P	13 25 41.5	+0.7
	comp=Z,3.7nm,0.9s,mb3.9						
LMR	La Mourre	27.01	119	eP	P	13 25 40.6	-0.6
OKC	Ostrava-Krasne	27.21	96	AMS	AMS	13 36 40.0	
	comp=Z,300nm,20.5s						
PGF	Pioggiola	28.69	117	eP	P	13 25 56.2	-0.2
	comp=Z,44nm,1.3s,mb4.7						
PGF	Pioggiola	28.69	117	eP	P	13 25 56.2	-0.2
PGF				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.7						
YKA	Yellowknife Ar	37.86	311	P	P	13 27 16.3	+0.6
	comp=Z,0.8nm,0.7s,mb3.6,baz=51,slow=8.9,SNR=7.7						
YKA				PcP	PcP	13 29 30.8	-1.8
	comp=Z,0.7nm,0.8s,baz=50,slow=4.0,SNR=4.2						
YKA				LR	LR	13 42 27.9	
	comp=Z,341nm,18.4s,MS4.2,baz=55,slow=36						
YKA	Yellowknife Ar	37.86	311	P	P	13 27 16.3	+0.6
YKA				PcP	PcP	13 29 30.8	-1.8
YKA	Yellowknife Ar	37.86	311	PcP	PcP	13 29 30.8	-1.8
ULM	Lac du Bonnet	38.46	285	LR	LR	13 42 01.4	
	comp=Z,217nm,19.5s,MS4.0,baz=65,slow=34						
BRTR	Keskin Array B	42.04	94	P	P	13 27 51.4	+0.9
	comp=Z,1.3nm,0.8s,mb3.6,baz=315,slow=5.2,SNR=7.6						
FVM	French Village	45.27	268	eP	P	13 28 16.1	-0.6
FVM				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.7						
FVM	French Village	45.27	268	eP	P	13 28 16.1	-0.6
	comp=Z,12nm,0.9s,mb4.7						
FVM	French Village	45.27	268	eP	P	13 28 16.1	-0.6
	comp=Z,12nm,0.9s,mb4.7						
ILAR	Eielson Array	45.84	329	P	P	13 28 22.4	+1.6
	comp=Z,1.0nm,0.9s,mb3.8,baz=27,slow=6.0,SNR=8.3						
ILAR				PcP	PcP	13 29 58.0	-0.7
	comp=Z,1.2nm,0.7s,baz=1.7,slow=3.0,SNR=11						
ILAR				LR	LR	13 48 49.4	
	comp=Z,129nm,18.1s,MS3.9,baz=245,slow=38						
ILAR	Eielson Array	45.84	329	PcP	PcP	13 29 58.0	-0.7
IMA	Indian Mountai	46.27	333	eP	P	13 28 27.2	+3.0
IMA				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
IMA	Indian Mountai	46.27	333	eP	P	13 28 27.2	+3.0
	comp=Z,26nm,1.1s,mb5.1						
IMA	Indian Mountai	46.27	333	eP	P	13 28 27.2	+3.0
	comp=Z,26nm,1.1s,mb5.1						
RSSD	Black Hills	46.73	285	eP	P	13 28 28.6	+0.4
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
RSSD	Black Hills	46.73	285	eP	P	13 28 28.6	+0.4
	comp=Z,1.8nm,0.7s,mb4.1						
RSSD	Black Hills	46.73	285	eP	P	13 28 28.5	+0.3
	comp=Z,1.8nm,0.7s,mb4.1						
BVAR	Borovoye Array	47.88	54	P	P	13 28 39.2	+2.1
	comp=Z,0.9nm,0.6s,mb4.0,baz=310,slow=11,SNR=9.3						
HRY	Holter Researc	48.16	293	eP	P	13 28 39.2	-0.2
HRY	Holter Researc	48.16	293	eP	P	13 28 39.2	-0.2
BOZ	Bozeman (W)	48.91	292	eP	P	13 28 45.1	-0.1
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
BOZ	Bozeman (W)	48.91	292	eP	P	13 28 45.0	-0.1
	comp=Z,6.5nm,1.1s,mb4.6						
BOZ	Bozeman (W)	48.91	292	eP	P	13 28 45.1	-0.1
	comp=Z,6.0nm,1.1s,mb4.5						
MOOW	Moose Ponds	50.02	290	eP	P	13 28 53.9	+0.2
	comp=Z,2.0nm,0.9s,mb4.2						
MOOW	Moose Ponds	50.02	290	eP	P	13 28 53.9	+0.2
	comp=Z,2.0nm,0.9s,mb4.2						
MCMT	McKenzie Canyo	50.09	292	eP	P	13 28 54.8	+0.6
MCMT	McKenzie Canyo	50.09	292	eP	P	13 28 54.8	+0.6
BW06	Boulder Array	50.28	288	eP	P	13 28 55.0	-0.7
	comp=Z,5.9nm,0.9s,mb4.6						
BW06	Boulder Array	50.28	288	eP	P	13 28 55.0	-0.7
	comp=Z,5.9nm,0.9s,mb4.6						
PDAR	Pinedale Array	50.28	288	P	P	13 28 55.0	-0.7
	comp=Z,4.2nm,0.8s,mb4.5,baz=45,slow=6.3,SNR=26						
PDAR				PcP	PcP	13 30 14.5	-0.4
	comp=Z,0.5nm,0.7s,baz=60,slow=7.3,SNR=2.1						
PDAR				LR	LR	13 49 12.8	
	comp=Z,190nm,19.9s,MS4.1,baz=54,slow=35						
PDAR	Pinedale Array	50.28	288	PcP	PcP	13 30 14.6	-0.3
TPAW	Teton Pass	50.32	290	eP	P	13 28 56.5	+0.5
	comp=Z,3.3nm,0.9s,mb4.4						
TPAW	Teton Pass	50.32	290	eP	P	13 28 56.5	+0.5
	comp=Z,3.3nm,0.9s,mb4.4						
RRI2	Red Ridge	50.59	290	eP	P	13 28 58.1	0.0
	comp=Z,7.7nm,1.4s,mb4.4						
NVS	Novosibirsk	50.97	45	eP	P	13 29 01.7	+0.9
NVS				pmax	pmax		
	comp=N,7.0nm,1.7s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.7s						
NVS				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.7						
HLID	Hailey	51.77	292	eP	P	13 29 07.1	+0.1
	comp=Z,1.3nm,0.8s,mb3.9						
HLID	Hailey	51.77	292	eP	P	13 29 07.1	0.0
	comp=Z,1.3nm,0.8s,mb3.9						
WMOK	Wichita Mounta	51.82	273	eP	P	13 29 05.9	-1.6
WMOK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
WMOK	Wichita Mounta	51.82	273	eP	P	13 29 05.9	-1.7
	comp=Z,6.8nm,1.0s,mb4.5						
WMOK	Wichita Mounta	51.82	273	eP	P	13 29 05.9	-1.6
	comp=Z,6.8nm,1.0s,mb4.5						
BMO	Blue Mountains	51.97	295	eP	P	13 29 08.7	+0.1
	comp=Z,1.6nm,0.7s,mb4.1						
BMO	Blue Mountains	51.97	295	eP	P	13 29 08.6	0.0
	comp=Z,1.6nm,0.7s,mb4.1						
HWUT	Hardware Ranch	52.10	289	eP	P	13 29 08.7	-0.9
	comp=Z,6.0nm,1.1s,mb4.4						
HWUT	Hardware Ranch	52.10	289	eP	P	13 29 08.6	-0.9
	comp=Z,6.0nm,1.1s,mb4.4						
ZAL	Zalesovo	52.23	44	LR	LR	13 53 11.9	
	comp=Z,66nm,18.6s,MS3.7,baz=179,slow=38						
SDCO	Great Sand Dun	52.48	281	eP	P	13 29 13.2	+0.7
	comp=Z,4.1nm,1.2s,mb4.2						
SDCO	Great Sand Dun	52.48	281	eP	P	13 29 13.2	+0.7
	comp=Z,4.1nm,1.2s,mb4.2						
PV10	Paradox Valley	53.58	284	P	P	13 29 19.4	-1.3
PV10	Paradox Valley	53.58	284	P	P	13 29 19.4	-1.2
ELK	Elko	54.42	291	eP	P	13 29 27.1	+0.4
ELK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ELK	Elko	54.42	291	eP	P	13 29 27.1	+0.5
	comp=Z,3.3nm,0.8s,mb4.3						
ELK	Elko	54.42	291	eP	P	13 29 27.1	+0.4
	comp=Z,3.3nm,0.8s,mb4.3						
ANMO	Albuquerque	55.22	280	eP	P	13 29 32.3	-0.4
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ANMO	Albuquerque	55.22	280	eP	P	13 29 32.3	-0.4
	comp=Z,1.3nm,0.6s,mb4.1						
CPRX	Cap Rock	55.60	276	P	P	13 29 35.1	-0.4
CPRX	Cap Rock	55.60	276	P	P	13 29 35.1	-0.4
JCT	Junction City	55.83	271	eP	P	13 29 35.1	-2.1
JCT				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
JCT	Junction City	55.83	271	eP	P	13 29 35.1	-2.1
	comp=Z,14nm,1.0s,mb4.9						
JCT	Junction City	55.83	271	eP	P	13 29 35.1	-2.1
	comp=Z,14nm,1.0s,mb4.9						
BNM	Barren Site	55.95	280	eP	P	13 29 38.2	+0.2
BNM	Barren Site	55.95	280	eP	P	13 29 38.2	+0.2
LAZ	Ladron	55.98	280	eP	P	13 29 38.7	+0.5
LAZ	Ladron	55.98	280	eP	P	13 29 38.7	+0.5
ARUT	Antelope Range	56.05	287	eP	P	13 29 38.6	0.0
GDL2	Guadalupe Moun	56.53	276	P	P	13 29 41.4	-0.7
GDL2	Guadalupe Moun	56.53	276	P	P	13 29 41.4	-0.7
MKAR	Makanchi Array	57.40	51	P	P	13 29 48.8	+0.7
	comp=Z,0.9nm,0.7s,mb3.9,baz=331,slow=5.8,SNR=9.9						
MKAR				LR	LR	13 54 07.0	
	comp=Z,64nm,18.1s,MS3.8,baz=338,slow=36						
MNTX	Cornudas Mount	57.42	277	eP	P	13 29 46.9	-1.6
	comp=Z,4.8nm,1.0s,mb4.5						
MNTX	Cornudas Mount	57.42	277	eP	P	13 29 46.8	-1.7
	comp=Z,4.8nm,1.0s,mb4.5						
NVAR	Mina Array Bea	57.66	292	P	P	13 29 49.9	-0.2
	comp=Z,1.0nm,0.8s,mb3.9,baz=55,slow=5.9,SNR=5.5						
NVAR				LR	LR	13 54 56.3	
	comp=Z,462nm,18.9s,MS4.6,slow=36						
NVAR	Mina Array Bea	57.66	292	P	P	13 29 49.9	-0.2
DBIC	Dimbokro	57.70	154	LR	LR	13 52 38.5	
	comp=Z,96nm,18.7s,MS3.9,baz=22,slow=34						
LTX	Lajitas	58.60	274	eP	P	13 29 55.5	-1.3
LTX				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
LTX	Lajitas	58.60	274	eP	P	13 29 55.5	-1.3
	comp=Z,2.3nm,0.6s,mb4.4						
LTX	Lajitas	58.60	274	eP	P	13 29 55.5	-1.3
	comp=Z,2.0nm,0.6s,mb4.3						
TXAR	Lajitas Array	58.60	274	P	P	13 29 55.6	-1.1
	comp=Z,0.5nm,0.6s,mb3.8,baz=34,slow=4.5,SNR=5.8						
TXAR				LR	LR	13 54 47.2	
	comp=Z,385nm,18.1s,MS4.6,baz=80,slow=36						
TUC	Tucson	59.40	282	P	P	13 30 01.7	-0.6
TUC				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
TUC	Tucson	59.40	282	P	P	13 30 01.7	-0.6
	comp=Z,1.6nm,0.7s,mb4.2						
TUC	Tucson	59.40	282	P	P	13 30 01.7	-0.6
	comp=Z,2.0nm,0.7s,mb4.3						
TLY	Talaya	59.74	33	eP	P	13 30 07.2	+2.8
TLY				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
TLY				MLR	MLR		
	comp=Z,67nm,15.0s,MS3.9						
TLY	Talaya	59.74	33	eP	P	13 30 07.2	+2.8
	comp=Z,67nm,15.0s						
ZAK	Zakamensk	60.83	34	eP	P	13 30 11.2	-0.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.9						
ZAK	Zakamensk	60.83	34	eP	P	13 30 11.2	-0.6
	comp=Z,1.0nm,1.1s,mb3.9						
WMQ	Urumqi	61.89	49	eP	P	13 30 19.0	-0.1
WMQ				PCP	PcP	13 30 58.8	-0.9
WMQ				eS	S	13 38 41.9	0.0
WMQ				SCS	ScS	13 40 06.6	-1.5
WMQ				SS	SS	13 42 45.4	-0.1
WMQ				AMB	AMB		
	comp=Z,40nm,5.6s						
WMQ				LR	LR		
	comp=N,280nm,22.0s,MS4.6						
WMQ				LR	LR		
	comp=E,280nm,18.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,290nm,18.0s,MS4.5						
SONM	Songino Array	63.98	33	P	P	13 30 34.2	+1.4
	comp=Z,1.5nm,0.7s,mb4.1,baz=333,slow=8.3,SNR=10.0						
SONM				LR	LR	14 00 40.5	
	comp=Z,90nm,18.2s,MS4.0,baz=78,slow=38						
ULN	Ulaanbaatar	64.12	33	eP	P	13 30 34.4	+0.7
ULN				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
ULN	Ulaanbaatar	64.12	33	eP	P	13 30 34.4	+0.7
	comp=Z,9.0nm,1.4s,mb4.6						
GTA	Gaotai	69.86	42	eP	P	13 31 11.0	+1.0
GTA				AP	pP	13 31 16.2	+5.3
GTA				XP	sP	13 31 19.2	+8.0
GTA				PP	PP	13 33 48.1	+1.7
GTA				PPP	PPP	13 35 28.1	+2.0
GTA				S	S	13 40 20.7	+1.6
GTA				PS	PS	13 40 48.3	+2.5
GTA				SS	SS	13 44 52.0	+2.9
GTA				AMB	AMB		
	comp=Z,80nm,7.2s						
GTA				LR	LR		
	comp=N,50nm,13.7s,MS4.1						
GTA				LR	LR		
	comp=E,80nm,17.9s,MS4.1						
GTA				LR	LR		
	comp=Z,150nm,12.2s						
CN2	Changchun	71.91	21	eP	P	13 31 22.5	+0.1
KMBO	Kilima Mbogo	79.03	114	LR	LR	14 12 05.8	
	comp=Z,77nm,18.0s,MS4.1,baz=93,slow=40						
BDFB	Brasilia	79.48	201	P	P	13 32 05.6	-0.1
	comp=Z,1.6nm,0.4s,mb4.3,baz=57,slow=2.3,SNR=5.1						
BDFB				LR	LR	13 59 30.1	
	comp=Z,88nm,18.6s,MS4.1,baz=201,slow=30						
NJ2	Nanjing	81.95	29	eP	P	13 32 21.5	+3.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
SSE	Sheshan	83.39	28	P	P	13 32 25.6	-0.4
SSE				S	S	13 42 47.4	+0.8
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,110nm,4.8s						
SSE				LR	LR		
	comp=N,50nm,18.8s,MS3.9						
SSE				LR	LR		
	comp=E,20nm,19.3s,MS3.9						
SSE				LR	LR		
	comp=Z,50nm,17.6s,MS3.9						
LPAZ	La Paz	84.87	220	P	P	13 32 33.4	-0.2
	comp=Z,0.5nm,0.6s,mb3.8,baz=39,slow=6.5,SNR=3.7						
CMAR	Chiang Mai Arr	88.80	51	P	P	13 32 54.1	+1.3
	comp=Z,1.3nm,0.9s,mb4.3,baz=327,slow=5.5,SNR=5.7						
CMAR				LR	LR	14 15 40.9	
	comp=Z,37nm,18.1s,MS3.8,baz=148,slow=38						
BOSA	Boshof	99.54	136	LR	LR	14 16 53.0	
	comp=Z,96nm,20.3s,MS4.3,baz=152,slow=34						
STKA	Stephens Creek	148.65	20	PKPbc	PKPdf	13 39 46.6	+3.9
	comp=Z,1.6nm,0.8s,baz=350,slow=9.7,SNR=2.3						

IDC 07 13:22:36.5±7.4,21.30S×173.44E,mb3.5/3,mb1 3.8/4, mb1mx3.6/15,mbtmp3.6/4,ML3.3/1,MS3.5/6,Ms1 3.5/6, ms1mx3.4/14,3C,Error ellipse: s-maj=174.9km s-min=39.6km az=32.0,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.55	262	Pn	Pn	13 24 13.6	-3.0
	0.7nm,0.3s,baz=90,slow=18,SNR=15						
RAO	Raoul Island	11.12	137	LR	LR	13 28 47.7	
	comp=Z,150nm,18.7s,baz=4.4,slow=33						
HNR	Honiara	17.55	310	LR	LR	13 32 01.2	
	comp=Z,100nm,20.1s,baz=100,slow=32						
CTA	Charters Tower	25.45	268	LR	LR	13 36 33.1	
	comp=Z,151nm,19.4s,baz=64,slow=33						
PMG	Port Moresby	27.92	291	LR	LR	13 37 23.6	
	comp=Z,99nm,19.3s,baz=199,slow=32						
PPT	Papeete	35.02	90	LR	LR	13 41 14.2	
	comp=Z,126nm,21.2s,baz=242,slow=32						
ASAR	Alice Springs	36.53	259	P	P	13 29 44.4	-1.4
	1.2nm,1.0s,baz=84,slow=9.1,SNR=5.4						
ASAR				LR	LR	13 44 01.3	
	comp=Z,78nm,20.1s,baz=111,slow=35						
WRA	Warramunga Arr	36.56	265	P	P	13 29 44.3	-1.9
	0.2nm,0.6s,baz=98,slow=8.3,SNR=2.5						
VNDA	Vanda	56.55	183	P	P	13 32 20.1	-2.6
	0.5nm,0.7s,baz=7.2,slow=7.5,SNR=3.9						
SNAA	Sanae	87.24	181		P	13 35 24.8	-0.7
SNAA	Sanae	87.24	181		P	13 35 26.6	+1.1
SNAA	Sanae	87.24	181		P	13 35 31.8	+6.3

VNA3	Neumayer Olymp	87.68	179	⇑i	P	13 35 27.2	-0.4
VNA3	Neumayer Olymp	87.68	179		P	13 35 31.1	+3.5
VNA3	Neumayer Olymp	87.68	179	⇑i	P	13 35 34.5	+6.9
VNA2	Neumayer--Watz	88.02	180		P	13 35 29.9	+0.6
VNA2	Neumayer--Watz	88.02	180		P	13 35 33.1	+3.8
VNA2	Neumayer--Watz	88.02	180	⇑i	P	13 35 37.9	+8.6

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*NEIC **07** 13:59:40.8±0.9, 17.42S×178.77W, h523^{km}±11^{km}, mb4.5/3, Error ellipse: s-maj=15.5km s-min=9.3km az=157.0*

*IDC **07** 13:59:41.0±1.4, 17.51S×178.71W, h524^{km}±16^{km}, mb3.6/10, mb1 3.7/12, mb1mx3.5/20, mbtmp4.5/12, Error ellipse: s-maj=19.4km s-min=13.4km az=150.0*

ISC 07 13:59:40.0±1.2**, 17.4S**±0.1×**178.82W**±0.10**, h522**^{km}±17^{km}**, n29, σ1^{s}08**/27**, mb4.2**/11**, 4C-5D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.61	64	P	P	14 01 33.7	-0.3
	14nm,0.3s,baz=342,slow=20,SNR=17						
AFI	Afiamalu	7.61	64	ePn	P	14 01 33.2	-0.8
AFI				P		14 01 33.7	
DZM	Mont Dzumac	14.63	249	P	P	14 02 48.4	+2.2
	1.6nm,0.3s,baz=75,slow=18,SNR=12						
URZ	Urewera	21.10	189	P	P	14 03 47.0	-1.4
	5.9nm,0.3s,mb4.7,baz=312,slow=4.1,SNR=14						
ARMA	Armidale	29.87	239	⇓iP	P	14 05 07.3	+1.0
CTA	Charters Tower	33.15	260	P	P	14 05 34.6	+0.4
	6.9nm,0.5s,mb4.5,baz=92,slow=9.8,SNR=12						
CTAO	Charters Tower	33.15	260	eP	P	14 05 34.4	+0.2
	6.5nm,0.5s,mb4.4						
PMG	Port Moresby	33.99	279	P	P	14 05 43.2	+1.9
	16nm,0.8s,mb4.6,baz=28,slow=17,SNR=7.6						
STKA	Stephens Creek	38.54	240	⇓iP	P	14 06 19.7	+1.1
STKA	Stephens Creek	38.54	240	P	P	14 06 19.8	+1.2
	8.2nm,0.5s,mb4.6,baz=89,slow=9.3,SNR=58						
STKA	Stephens Creek	38.54	240	eP	P	14 06 18.2	-0.3
STKA				⇓iP		14 06 19.7	
WB2	Warramunga Arr	44.33	259	⇓iP	P	14 07 04.2	-0.8
WRAB	Tennant Creek	44.33	259	eP	P	14 07 04.1	-0.9
	16nm,0.7s,mb4.7						
WRA	Warramunga Arr	44.34	259	P	P	14 07 04.3	-0.8
	6.5nm,0.4s,mb4.5,baz=97,slow=7.7,SNR=189						
WRA				ScP		14 11 39.8	
	0.7nm,0.6s,baz=92,slow=3.9,SNR=5.1						
ASAR	Alice Springs	44.56	254	P	P	14 07 06.8	+0.1
	52nm,0.4s,baz=89,slow=7.9,SNR=2497						
ASAR				ScP		14 11 40.9	
	1.1nm,0.8s,baz=115,slow=4.2,SNR=4.8						
ASPA	Alice Springs	44.56	254	⇓iP	P	14 07 06.7	0.0
KAKA	Kakadu	47.20	269	⇑iP	P	14 07 26.9	-0.2
MBWA	Marble Bar	57.82	256	eP	P	14 08 41.7	-1.6
	7.6nm,0.3s,mb4.4						
NWAO	Narrogin (SRO)	59.11	242	P	P	14 08 50.0	-1.9
	20nm,1.2s,mb4.2,baz=60,slow=8.5,SNR=3.5						
NWAO	Narrogin (SRO)	59.11	242	P	P	14 08 50.0	-1.9
MJAR	Matsushiro Arr	67.25	323	P	P	14 09 43.0	-0.9
	1.3nm,0.5s,mb3.7,baz=159,slow=7.0,SNR=4.4						
NVAR	Mina Array Bea	79.32	44	P	P	14 10 53.1	+0.8
	0.5nm,0.7s,baz=218,slow=10,SNR=4.0						
PDAR	Pinedale Array	87.24	44	P	P	14 11 31.9	+0.3
	0.5nm,0.7s,mb3.2,baz=207,slow=2.0,SNR=3.0						
SNAA	Sanae	91.13	179	⇑i	P	14 11 48.5	-0.5
SNAA	Sanae	91.13	179	P	P	14 11 48.6	-0.4
	0.3nm,0.4s,mb3.6,baz=196,slow=11,SNR=23						
VNA3	Neumayer Olymp	91.29	177	⇑i	P	14 11 50.9	+1.2
VNA2	Neumayer--Watz	91.72	177	⇑i	P	14 11 53.1	+1.4
BRTR	Keskin Array B	144.13	315	PKP	PKPdf	14 18 16.9	+1.0
	0.6nm,0.4s,slow=2.5,SNR=3.8						
GERES	GERESS Array B	147.00	345	PKPbc	PKPdf	14 18 24.9	+4.5
	1.0nm,0.6s,baz=27,slow=6.0,SNR=5.1						

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*THR **07** 14:10:40.8±0.9, 38.04N×46.77E, h14^{km}, ML3.2*

*CSEM **07** 14:10:41.8±0.1, 37.99N×46.82E, h16^{km}, ML4.2/2, Error ellipse: s-maj=1.5km s-min=1.1km az=17.0*

*TEH **07** 14:10:43.0, 38.02N×46.81E, h6^{km}, Mn3.6*

ISC 07 14:10:40.6±0.6**, 38.02N**±0.04×**46.78E**±0.05**, h9**^{km}±9^{km}**, n19, σ1^{s}58**/22**, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBST	Bostanabad	0.33	164	Pg	Pg	14 10 45.8	-1.6
IHRS	Heris	0.36	35	Pg	Pg	14 10 49.6	+1.6
ITBZ	Tabriz	0.54	293	Pg	Pg	14 10 53.3	+1.8
IAZR	Azarshahr	0.72	242	Pg	Pg	14 10 55.7	+0.7
GRMI	Germi	1.18	48	ePG	Pg	14 11 03.5	-0.6
GRMI				eSG	Sg	14 11 20.0	+0.1
GRMI				AML	AML	14 11 27.6	
	comp=N,971nm,0.5s						
GRMI	Germi	1.18	48	ePg	Pg	14 11 03.5	-0.7
	SNR=92						
GRMI				eSg	Sg	14 11 20.0	+0.1
	comp=N,971nm,0.5s,SNR=92						
MAKU	Maku	2.11	310	ePG	Pg	14 11 21.3	-1.5
MAKU				eSG	Sg	14 11 49.9	-1.1
MAKU				AML	AML	14 11 59.2	
	comp=N,138nm,0.4s						
MAKU	Maku	2.11	310	ePg	Pg	14 11 21.3	-1.5
	SNR=91						
MAKU				eSg	Sg	14 11 49.9	-1.0
	comp=N,138nm,0.4s,SNR=91						
SNGE	Sanandaj	2.96	171	ePN	Pn	14 11 30.6	+2.0
SNGE				AML	AML	14 12 28.7	
	comp=N,46nm,0.8s						
IGZV	Gazvin	3.19	120	Pn	Pn	14 11 29.0	-3.0
IVIS	Veys	3.49	179	Pn	Pg	14 11 49.8	-0.4
DGRG	David-gareji	3.59	343	P	Pg	14 11 48.6	-3.7
IRAZ	Razeghan	3.64	135	Lg		14 12 35.8	
IRAZ	Razeghan	3.64	135	Pn	Pn	14 11 44.9	+6.7
ASAO	Ashtian	4.35	142	ePN	Pn	14 11 48.6	+0.3
IPRN	Paran-Amol	4.71	110	Pn	Pn	14 11 54.8	+1.3
IDMV	Damavand	4.87	118	Pn	Px	14 12 10.6	
IDMV				Sn	Sn	14 12 49.7	-3.3
IVRN	Varamin	5.00	126	Sn	Sn	14 12 52.9	-3.3
IGLO	Galoogah	5.63	106	Pn	Pn	14 12 09.0	+2.5

WEL 07 14:28:50.5±0.2**, 36.97S**×**177.37E, h173**^{km}±2^{km}**, ML3.6**/12**, 1C-1D, Error ellipse: s-maj=1.9km s-min=1.9km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.95	129	PN	P	14 29 16.8	-0.4
MXZ				SN	S	14 29 37.6	-0.4
URZ	Urewera	1.30	189	⇑PN	P	14 29 20.1	-0.2
URZ				SN	S	14 29 42.5	-0.9
PUZ	Puketiti	1.31	148	PN	P	14 29 20.1	-0.3
PUZ				SN	S	14 29 42.5	-1.0
PUZ				SN	S	14 29 42.5	-0.9
KUZ	Kuaotunu	1.34	279	⇓PN	P	14 29 20.4	-0.3
MWZ	Matawai	1.37	175	PN	P	14 29 20.7	-0.2
MWZ				SN	S	14 29 44.0	-0.5
KNZ	Kokohu	2.06	173	PN	P	14 29 27.5	-0.6
BKZ	Black Stump Fm	2.30	197	PN	P	14 29 29.9	-1.0
BKZ				SN	S	14 29 59.8	-2.3
PWZ	Pawanui	3.08	187	ePN	P	14 29 38.3	-2.2
TSZ	Takapari Road	3.28	199	ePN	P	14 29 40.4	-2.5
MRZ	Mangatainoka R	3.94	200	SN	S	14 30 33.3	-5.1
KIW	Kapiti Island	4.33	206	ePN	P	14 29 52.5	-3.9
MTW	Mount Morrison	4.43	199	ePN	P	14 29 53.3	-4.3
CAW	Cannon Point	4.51	203	PN	P	14 29 54.4	-4.2
THZ	Tophouse	5.91	214	ePN	P	14 30 12.9	-4.0
LTZ	Lake Taylor	7.01	212	ePN	P	14 30 26.2	-5.4

IGQ 07 14:32:29.8, 2.86S×**79.46W, h12**^{km}±5^{km}**, mb4.1, 2C-10D, Error ellipse: s-maj=8.1km s-min=2.7km az=47.5, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	Igualata	1.59	31	⇓P	Pn	14 32 59.3	+1.3
IGUA				S	Sn	14 33 20.9	+2.4
ARRY	Arrayan	1.68	37	⇓P	Pn	14 33 00.7	+1.5
ARRY				S	Sn	14 33 23.0	+2.2
CUSU	Cusua	1.71	35	P	Pn	14 33 01.8	+2.0
JUIV	Juive	1.74	35	P	Pn	14 33 02.0	+1.9
ULBA	Ulba	1.75	37	P	Pn	14 33 02.4	+2.1
ULBA				S	Sn	14 33 26.9	+4.2
RUN5	Runtun	1.77	36	⇑P	Pn	14 33 02.9	+2.3
PISA	Pisayambo	2.09	31	⇓P	Pn	14 33 07.8	+2.7
CAMI	Rancho Maria	2.37	24	⇓P	Pn	14 33 12.0	+2.9
CAMI				S	Sn	14 33 45.9	+7.6
NAS1	Nasa	2.42	24	P	Pn	14 33 13.1	+3.3
NAS1				S	Sn	14 33 48.2	+8.6
VC1	Cotopaxi 1	2.44	26	⇓P	Pn	14 33 13.3	+3.1
JAMA	Jama	2.68	344	P	Pn	14 33 14.0	+0.4
ANTI	Antisana	2.72	29	P	Pn	14 33 16.9	+2.7
JUA2	San Juan 2	2.76	18	⇑P	Pn	14 33 17.8	+3.0
TERV	Terraza Guagua	2.80	18	⇓P	Pn	14 33 17.1	+1.8
TERV				S	Sn	14 33 51.9	+2.6
GGP	Refugio Guagua	2.80	18	⇓P	Pn	14 33 17.2	+1.9
GGP				S	Sn	14 33 51.8	+2.5
PINO	Pino	2.81	18	⇓P	Pn	14 33 17.1	+1.6
PINO				S	Sn	14 33 53.0	+3.3
YANA	Yana	2.86	18	⇓P	Pn	14 33 17.6	+1.4
YANA				S	Sn	14 33 52.9	+2.0
JOR1	San Jorge 1	2.96	16	⇓P	Pn	14 33 16.2	-1.3
JOR1				S	Sn	14 33 49.3	-3.9
COTA	Cotacachi	3.37	20	P	Pn	14 33 25.5	+2.2
ECEN	Cerro Negro	3.95	22	P	Pn	14 33 34.1	+2.5

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*MOS **07** 14:57:19.6±1.3, 46.57N×85.88E, h33^{km}, mb4.8/1, Error ellipse: s-maj=13.4km s-min=6.5km az=89.8*

*BJI **07** 14:57:20.1, 46.71N×85.99E, h32^{km}, mb4.4, ML4.4, Ms3.8, Msz3.4*

*NNC **07** 14:57:21.3±9.2, 46.91N×85.87E, h9^{km}±34^{km}, mpv3.7, Error ellipse: s-maj=62.5km s-min=22.3km az=86.0*

*IDC **07** 14:57:21.1±0.6, 46.68N×86.08E, h30^{km}±4^{km}, mb3.7/10, mb1 4.0/13, mb1mx3.8/24, mbtmp3.9/13, ML4.1/3, MS3.2/4, Ms1 3.2/4, ms1mx3.0/22, Error ellipse: s-maj=11.3km s-min=8.6km az=40.0*

*NEIC **07** 14:57:21.9±0.4, 46.60N×85.91E, mb3.9/8, Error ellipse: s-maj=9.4km s-min=5.8km az=75.0*

*KNET **07** 14:58:10.7±1.4, 45.19N×80.75E, ml3.6, Error ellipse: s-maj=15.9km s-min=13.0km az=35.0*

ISC 07 14:57:19.1±0.3**, 46.69N**±0.03×**86.02E**±0.06**, h30**^{km}**, h30**^{km}±.6^{km}**:pP-P, n58, σ1^{s}23**/65**, mb3.9**/11**, MS3.2**/3**, 6C-11D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	2.56	274	⇑Pn	Pn	14 58 02.6	+3.0
	6.1nm,0.3s,baz=92,slow=17,SNR=3149						
MK31				⇓Pg	Pn	14 58 05.9	+6.3
	41nm,0.3s,baz=91,slow=19						
MK31				⇑Lg		14 58 39.9	
	341nm,0.4s,baz=82,slow=33,SNR=14						
MKAR	Makanchi Array	2.56	274	Pn	Pn	14 58 02.6	+3.0
	29nm,0.3s,baz=94,slow=15,SNR=175						
MKAR				Pg	Pn	14 58 06.8	+7.2
	64nm,0.3s,baz=86,slow=20,SNR=170						
MKAR				Sn	Sn	14 58 36.8	+6.6
	242nm,0.3s,baz=73,slow=20,SNR=21						
MKAR	Makanchi Array	2.56	274	Pn	Pn	14 58 02.6	+3.0
MKAR				e		14 58 36.8	
WMQ	Urumqi	3.10	157	⇓P	Pn	14 58 09.4	+2.2
WMQ				S	Sn	14 58 49.0	+5.4
WMQ				Smax			
	comp=N,890nm,0.8s						
WMQ				Smax			
	comp=E,910nm,0.8s						
UKR	Ust'-Kan	4.33	350	ePN	Pn	14 58 29.1	+4.4
UKR				e		14 58 41.4	
UKR				eS	Sn	14 59 38.3	+23
ELDR	Elanda	4.54	1	ePN	Pn	14 58 31.5	+3.9
ELDR				e		14 58 45.5	
ELDR				e		14 59 26.4	
ELDR				eS	Sn	14 59 43.2	+23
TASR	Tashtagol	6.20	11	ePN	Pn	14 58 54.3	+3.2
ELT	Yel'tsovka	6.58	1	ePN	Pn	14 58 59.0	+2.5
ZAL	Zalesovo	7.30	354	Pn	Pn	14 59 06.5	-0.1
	comp=E,10.0nm,0.3s,baz=302,slow=9.6,SNR=55						
ZAL				Sn	Sn	15 00 27.6	-1.7
	comp=E,14nm,0.3s,baz=80,slow=21,SNR=10						
ZAL				Lg		15 01 10.2	
	baz=84,slow=10						
ZAL	Zalesovo	7.30	354	P	Pn	14 59 06.5	-0.1
ZAL				e		15 00 27.6	
ULHL	Ulahol	8.28	241	⇑P	P	14 59 21.2	+1.0
	comp=E,8.9nm,0.2s,SNR=6.8						
TKM2	Tokmak 2	8.31	247	⇓P	P	14 59 20.6	0.0
	comp=E,12nm,0.1s,SNR=46						
NVS	Novosibirsk	8.35	349	eP	P	14 59 21.0	-0.2
NVS				e		15 00 52.5	
CHMS	Chumysh	8.81	249	⇓P	P	14 59 27.2	-0.4
	comp=E,26nm,0.2s,SNR=19						
KBK	Karagaybulak	8.86	247	⇑P	P	14 59 28.7	+0.5
	comp=E,73nm,0.2s,SNR=72						
KZA	Kyzart	8.98	243	P	P	14 59 31.3	+1.4
	comp=E,4.1nm,0.2s,SNR=7.4						
AAK	Ala-Archa	9.15	248	⇓P	P	14 59 32.4	+0.1
	comp=E,16nm,0.3s,SNR=16						
AAK	Ala-Archa	9.15	248	⇓P	P	14 59 32.4	+0.1
	comp=E,18nm,0.6s						
AAK	Ala-Archa	9.15	248	eP	P	14 59 30.9	-1.4
UCH	Uchtor	9.35	246	⇓P	P	14 59 36.0	+0.9
	comp=E,4.8nm,0.2s,SNR=9.2						
EKS2	Erkin-Say	9.60	250	⇓P	P	14 59 38.4	+0.1
	comp=E,15nm,0.2s,SNR=18						
KK31	Karatay Array	11.57	258	⇓Pn	P	15 00 03.3	-1.9
	comp=E,5.4nm,0.8s,baz=65,slow=11,SNR=24						
KK31				⇓Lg		15 03 28.7	
	comp=E,15nm,0.6s,slow=0.1,SNR=3.6						
KKAR	Karatay Array	11.57	258	eP	P	15 00 02.9	-2.3
BVA0	Borovoye Array	11.90	308	Pn	P	15 00 09.0	-0.7
	comp=E,1.0nm,0.5s,baz=120,slow=13,SNR=49						
BVA0				⇑Sn	S	15 02 17.8	-4.7
	comp=E,0.8nm,0.4s,baz=106,slow=24,SNR=6.9						
BVA0				⇓Lg		15 03 31.9	
	comp=E,7.2nm,1.1s,baz=105,slow=25,SNR=4.9						
BVA0	Borovoye Array	11.90	308	P	P	15 00 09.0	-0.8
BVA0						15 02 14.6	
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVA0	Borovoye Array	11.90	308	P	P	15 00 09.0	-0.8
	comp=Z,1.0nm,0.6s						
BVA0				e		15 02 14.6	
BVAR	Borovoye Array	11.90	308	Pn	P	15 00 08.0	-1.8
	comp=Z,1.1nm,0.3s,baz=116,slow=10,SNR=12						
BVAR				Sn	S	15 02 18.3	-4.2
	comp=Z,4.0nm,0.3s,baz=109,slow=23,SNR=8.3						
BVAR				Lg		15 03 36.4	
	comp=Z,0.2nm,0.3s,baz=111,slow=25,SNR=3.6						
GTA	Gaotai	12.43	121	eP	P	15 00 16.4	-0.4
GTA				AP		15 00 21.7	
GTA				XP		15 00 25.1	
GTA				S	S	15 02 33.8	-1.4
GTA				LG2		15 03 54.5	
GTA				LR	LR		
	comp=N,120nm,6.8s						
GTA				LR	LR		
	comp=E,150nm,7.6s						
GTA				LR	LR		
	comp=Z,100nm,7.6s						
GTA	Gaotai	12.43	121	eP	P	15 00 16.4	-0.4
	comp=Z,2.0nm,0.6s						
GTA				pP		15 00 21.7	
GTA				sP		15 00 25.1	
GTA				S	S	15 02 33.8	-1.4
SONM	Songino Array	13.89	78	Pn	P	15 00 42.2	+6.2
	comp=Z,0.1nm,0.3s,baz=276,slow=13,SNR=2.6						
SONM				Lg		15 04 40.8	
	comp=Z,0.3nm,0.3s,baz=273,slow=24,SNR=6.2						
SONM				LR	LR	15 06 02.3	
	comp=Z,45nm,19.2s,baz=82,slow=38						
AB31	Akbulak array	17.62	288	⇑P	P	15 01 22.8	-1.0
	comp=Z,1.6nm,0.5s,baz=95,slow=11,SNR=13						
GKN	Gorkha	18.68	184	eP	P	15 01 38.5	+1.4
GUN	Gumba	18.74	180	eP	P	15 01 36.8	-1.0
	comp=Z,17nm,0.5s						
KKN	Kakani	18.87	182	eP	P	15 01 38.8	-0.6
	comp=Z,12nm,0.5s						
KKN	Kakani	18.87	182	eP	P	15 01 38.8	-0.6
KKN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KOLN	Koldanda	18.98	187	eP	P	15 01 42.2	+1.6
	comp=Z,4.1nm,0.6s						
DMN	Daman	19.05	182	eP	P	15 01 40.6	-1.0
	comp=Z,14nm,1.1s						
PKI	Pulchoki	19.09	182	eP	P	15 01 40.0	-1.9
	comp=Z,9.4nm,0.5s						
PKI	Pulchoki	19.09	182	eP	P	15 01 40.0	-1.9
PKI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ARU	Arti	19.53	310	eP	P	15 01 46.2	-0.6
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU	Arti	19.53	310	eP	P	15 01 46.2	-0.6
	comp=Z,5.0nm,0.8s						
SHL	Shillong	21.59	165	eP	P	15 02 08.0	-0.4
CMAR	Chiang Mai Arr	30.10	155	P	P	15 03 28.7	+0.5
	comp=Z,1.5nm,0.8s,mb3.8,baz=334,slow=9.9,SNR=7.4						
CMAR				pP	pP	15 03 37.7	+0.6
	comp=Z,2.2nm,0.7s,baz=336,slow=9.1,SNR=11						
FINES	FINESS Array B	36.70	316	P	P	15 04 24.6	-0.2
	comp=Z,0.9nm,0.4s,mb3.9,baz=83,slow=8.7,SNR=11						
FINES				LR	LR	15 20 39.6	
	comp=Z,20nm,21.0s,MS2.9,baz=147,slow=38						
AKASG	Malin Array Be	36.92	298	P	P	15 04 27.1	+0.4
	comp=Z,0.3nm,0.3s,mb3.6,baz=60,slow=8.7,SNR=4.6						
AKASG				pP	pP	15 04 37.0	+1.2
	comp=Z,0.3nm,0.3s,baz=61,slow=8.7,SNR=2.6						
ARCES	ARCESS Array B	37.05	329	P	P	15 04 29.0	+1.4
	comp=Z,2.5nm,0.6s,mb4.3,baz=82,slow=8.6,SNR=13						
ARCES	ARCESS Array B	37.05	329	P	P	15 04 29.0	+1.4
BR131	Keskin Array S	38.20	279	eP	P	15 04 37.8	0.0
	comp=Z,1.4nm,0.7s,mb3.8						
BRTR	Keskin Array B	38.20	279	P	P	15 04 38.6	+0.9
	comp=Z,1.5nm,0.7s,mb3.9,baz=87,slow=7.7,SNR=5.9						
NB2	NORSAR Subarra	43.83	317	P	P	15 05 23.8	+0.2
	comp=Z,0.9nm,0.5s,mb3.8,baz=72,slow=7.9						
NOA	NORSAR Array B	43.83	317	P	P	15 05 23.8	+0.2
	comp=Z,0.8nm,0.6s,mb3.6,baz=69,slow=7.6,SNR=4.3						
NOA				pP	pP	15 05 32.9	+0.2
	comp=Z,0.4nm,0.4s,baz=75,slow=7.1,SNR=1.8						
CLL	Collm	46.30	304	P	P	15 05 44.8	+1.3
	comp=Z,logA/T=0.9,mb4.6						
GERES	GERESS Array B	46.95	301	LR	LR	15 25 33.1	
	comp=Z,33nm,21.0s,MS3.3,baz=44,slow=36						
ILAR	Eielson Array	61.49	23	P	P	15 07 34.9	+0.1
	comp=Z,0.5nm,0.6s,mb3.8,baz=314,slow=5.1,SNR=6.0						
ILAR				pP	pP	15 07 44.3	0.0
	comp=Z,0.6nm,0.6s,baz=307,slow=4.7,SNR=4.8						
INK	Inuvik	61.58	16	P	P	15 07 34.2	-1.1
	comp=Z,1.4nm,0.7s,mb4.2,baz=14,slow=6.9,SNR=3.0						
YKA	Yellowknife Ar	69.93	10	LR	LR	15 39 56.2	
	comp=Z,34nm,18.8s,MS3.6,baz=75,slow=36						
WRA	Warramunga Arr	79.35	134	P	P	15 09 23.3	-0.4
	comp=Z,0.5nm,0.7s,mb3.5,baz=330,slow=4.2,SNR=13						
WRA				pP	pP	15 09 32.6	-0.7
	comp=Z,1.0nm,0.5s,baz=340,slow=5.8,SNR=7.3						
ASAR	Alice Springs	82.31	137	P	P	15 09 39.4	+0.2
	comp=Z,0.4nm,0.5s,mb3.6,baz=328,slow=4.7,SNR=11						
ASAR				pP	pP	15 09 48.7	-0.2
	comp=Z,0.8nm,0.6s,baz=331,slow=4.8,SNR=6.7						

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*CSEM **07** 14:58:46.6±0.2, 43.41N×18.84E, h12^{km}, ML2.5, Error ellipse: s-maj=3.5km s-min=1.7km az=146.0*

*BEO **07** 14:58:48.2±0.3, 43.32N×18.93E, h8^{km}±1^{km}*

*NEIC **07** 14:58:48.6, 43.32N×18.92E, h9^{km}, ML2.5(PDG), After PDG.*

*PDG **07** 14:58:48.6±0.2, 43.32N×18.92E, h9^{km}±1^{km}*

ISC 07 14:58:46.8±0.7**, 43.38N**±0.03×**18.87E**±0.04**, h9**^{km}**, n16, σ1^{s}11**/32**, 8C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPM	Unac-Piva	0.18	170	⇓iPg	Pg	14 58 51.4	+0.6
UPM				eSg	Sg	14 58 53.3	-0.2
PLE	Pljevlja	0.39	98	⇑iPg	Pg	14 58 55.1	+0.4
PLE				eSg	Sg	14 59 00.5	+0.4
BRY	Bratogost	0.54	206	⇓iPg	Pg	14 58 57.6	0.0
BRY				eSg	Sg	14 59 06.0	+1.1
NKY	Niksic	0.58	170	⇑iPg	Pg	14 58 58.3	-0.2
NKY				eSg	Sg	14 59 06.4	+0.2
NVSS	Nova Varos 2	0.62	78	⇑iPg	Pg	14 59 01.9	+2.6
NVSS				Sg	Sg	14 59 10.8	+3.2
BBLS	Bajina Basta -	0.63	39	⇑iPg	Pg	14 59 00.1	+0.7
BBLS				Sg	Sg	14 59 11.2	+3.4
TREB	Trebinje	0.77	210	Pn	Pn	14 59 01.4	-2.1
TREB				Sn	Sn	14 59 14.6	-0.6
IVA	Berane	0.91	124	⇑iPg	Pg	14 59 04.3	-0.8
IVA				eSg	Sg	14 59 17.3	0.0
HCY	Herceg Novi	0.97	196	⇑iPg	Pg	14 59 05.4	-0.9
HCY				eSg	Sg	14 59 20.6	+1.3
STON	Ston	0.99	240	i Pg	Pg	14 59 06.0	-0.7
STON				i Sg	Sg	14 59 21.9	+1.9
TTG	Podgorica	0.99	163	ePg	Pg	14 59 05.2	-1.6
TTG				eSg	Sg	14 59 20.3	+0.2
BUM	Brajici-Budva	1.08	179	ePg	Pg	14 59 07.6	-0.9
BUM				eSg	Sg	14 59 23.6	+0.6
BUM	Brajici-Budva	1.08	179	ePg	Pg	14 59 07.6	-0.9
BUM				eSg	Sg	14 59 23.5	+0.6
PVY	Plav	1.13	134	ePg	Pg	14 59 08.4	-1.1
PVY				eSg	Sg	14 59 25.0	+0.4
GRUS	Gruza	1.44	69	⇑iPg	Pg	14 59 14.7	-0.8
GRUS				Sg	Sg	14 59 33.5	-1.2
ULC	Ulcinj	1.45	169	⇑iPg	Pg	14 59 14.2	-1.5
ULC				eSg	Sg	14 59 35.8	+0.8

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*NNC **07** 15:33:29.0±3.4, 39.09N×71.14E, mpv4.0, Error ellipse: s-maj=25.9km s-min=18.6km az=9.0*

*IDC **07** 15:33:37.7±1.8, 39.90N×71.52E, mb3.7/2, mb1 3.7/4, mb1mx3.4/22, mbtmp3.5/4, ML3.3/2, MS3.0/1, Ms1 3.2/1, ms1mx2.5/34, Error ellipse: s-maj=30.1km s-min=26.6km az=73.0*

ISC 07 15:33:26.8±1.9**, 39.0N**±0.1×**71.0E**±0.1**, h10**^{km}**, n18, σ0^{s}79**/19**, mb3.6**/2**, MS2.9**/1**, 4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.75	32	P	Pn	15 34 26.0	-0.1
	SNR=22						
KK31	Karatay Array	4.15	355	⇑Pn	Pn	15 34 31.4	-0.4
	8.6nm,0.3s,baz=160,slow=11,SNR=396						
KK31				⇑Sn	Sn	15 35 21.2	+0.2
	18nm,0.3s,baz=164,slow=29,SNR=7.0						
UCH	Uchtor	4.20	38	P	Pn	15 34 33.1	+0.7
	SNR=19						
EKS2	Erkin-Say	4.24	28	P	Pn	15 34 33.1	+0.2
	SNR=10						
KZA	Kyzart	4.47	45	P	Pn	15 34 37.0	+0.8
	SNR=12						
AAK	Ala-Archa	4.50	34	P	Pn	15 34 37.0	+0.2
	SNR=9.9						
AAK	Ala-Archa	4.50	34	⇑Pn	Pn	15 34 36.9	+0.1
	13nm,0.4s,baz=231,slow=15						
AAK				⇓Sn	Sn	15 35 29.5	-0.4
	74nm,1.1s,baz=231,slow=15						
KBK	Karagaybulak	4.73	38	P	Pn	15 34 41.2	+1.2
	SNR=27						
CHMS	Chumysh	4.91	34	P	Pn	15 34 42.5	0.0
	SNR=16						
USP	Ospenovka	5.03	30	P	Pn	15 34 43.6	-0.5
	SNR=35						
TKM2	Tokmak 2	5.24	40	P	Pn	15 34 47.8	+0.6
	SNR=34						
MK31	Makanchi Array	11.36	43	P	P	15 36 10.9	-1.3
	0.5nm,0.4s,baz=231,slow=15,SNR=7.8						
MKAR	Makanchi Array	11.36	43	Pn	P	15 36 09.3	-2.9
	0.1nm,0.3s,baz=231,slow=14,SNR=8.4						
MKAR				Lg		15 39 03.4	
	0.1nm,0.3s,baz=242,slow=24,SNR=3.6						
AB31	Akbulak array	13.00	326	⇑P	P	15 36 34.2	0.0
	0.5nm,0.3s,baz=122,slow=12,SNR=13						
BVAR	Borovoye Array	14.07	358	Pn	P	15 36 43.9	-4.3
	0.3nm,0.3s,baz=154,slow=12,SNR=4.8						
BVAR				Lg		15 40 42.6	
	0.2nm,0.3s,baz=166,slow=30,SNR=2.6						
CMAR	Chiang Mai Arr	31.68	122	LR	LR	15 56 13.2	
	comp=Z,26nm,18.5s,MS2.9,baz=180,slow=42						
FINES	FINESS Array B	35.48	324	P	P	15 40 30.4	+5.2
	1.3nm,0.8s,mb3.9,baz=112,slow=10,SNR=4.7						
WRA	Warramunga Arr	83.27	122	P	P	15 46 07.5	+12
	0.3nm,0.9s,mb3.3,baz=328,slow=4.9,SNR=9.0						

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*CSEM **07** 15:42:46.6±0.1, 34.56N×28.54E, h44^{km}±2^{km}, MD3.6, Error ellipse: s-maj=3.9km s-min=2.0km az=83.0*

*ATH **07** 15:42:49.1, 36.81N×26.51E, h10^{km}, MD3.4/3*

*ISK **07** 15:42:49.2, 34.77N×28.36E, h87^{km}, MD3.6*

*HLW **07** 15:42:49.5, 34.44N×28.51E, h22^{km}, Mb3.6*

NEIC **07** *15:42:51.8±2.0, 34.72N×28.38E, h55^{km}±14^{km}, MD3.4(ATH), Error ellipse: s-maj=30.4km s-min=11.6km az=156.0*

IDC **07** *15:42:52.7±3.4, 34.93N×28.33E, h44^{km}±26^{km}, mb3.4/4, mb1 3.5/6, mb1mx3.3/20, mbtmp3.5/6, ML2.9/2, Error ellipse: s-maj=46.1km s-min=12.9km az=162.0*

ISC 07 15:42:47.4±0.4**, 34.51N**±0.03×**28.48E**±0.04**, h45**^{km}±11^{km}**, n40,** σ1^{s}**09**/50**, mb3.5**/4**, 8C-3D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	1.50	314	*e*PB	P	15 43 14.7	+2.4
ARG	Arkhangelos	1.73	350	*e*PB	P	15 43 16.0	+0.4
AKAS	Kas	1.95	28	*i* P	P	15 43 20.2	+1.5
AKAS				*i* S	S	15 43 41.5	-0.6
FETY	Fethiye	2.18	13	*i* PN	P	15 43 22.0	0.0
FETY				*i* SN	S	15 43 46.0	-1.9
DALT	Dalyan (Mudla)	2.26	3	PN	P	15 43 22.9	-0.2
XRY	Khrisi	2.33	280	*e*PN	P	15 43 25.7	+1.7
ELL	Elmali	2.52	27	PN	P	15 43 27.7	+0.9
BDRM	Kayabasi	2.69	342	*i* P	P	15 43 27.5	-1.7
BDRM				*i* S	S	15 43 53.8	-7.0
BODT	Bodrum	2.72	340	*e*PN	P	15 43 28.6	-1.1
GOLH	Golhisar	2.86	18	*i* P	P	15 43 33.0	+1.3
GOLH				*i* S	S	15 44 05.1	-0.1
IDI	Anoyia	3.05	286	P	P	15 43 35.5	+1.1
	2.2nm,0.3s,baz=101,slow=16,SNR=19						
IDI				S	S	15 44 09.1	-0.9
	5.0nm,0.3s,baz=292,slow=17,SNR=13						
DNZL	Cakiroluk	3.21	8	*i* P	P	15 43 36.6	0.0
DNZL				*i* S	S	15 44 07.1	-6.9
DENT	Denizli	3.27	8	*e*PN	P	15 43 36.5	-1.0
HMAT	Matruh	3.60	199	P	P	15 43 42.8	+0.8
LEF	Lefka	3.68	79	*e*PN	P	15 43 46.2	+3.0
SLUM		4.07	223	⇑P	P	15 43 49.7	+0.9
SLUM				S	S	15 44 32.9	-2.9
HDMB	Hadim	4.08	52	*e*PN	P	15 43 49.5	+0.6
HBRG	Burj al ‘Arab	4.08	163	⇓P	P	15 43 48.5	-0.5
IKL	Isikli	4.59	66	*e*PN	P	15 43 56.6	+0.5
KIZT	Kizilcal	5.15	31	*e*PN	P	15 44 02.0	-2.0
KOT	Kottamia	5.37	147	⇑P	P	15 44 07.0	0.0
KOT				S	S	15 45 04.0	-4.6
HSAF	As Saff	5.53	151	⇑P	P	15 44 09.2	0.0
AMAG	Maghara	5.54	133	⇑P	P	15 44 09.0	-0.5
SWA1		5.73	205	⇑P	P	15 44 12.2	+0.1
SWA1				S	S	15 45 12.1	-5.4
SWA2		5.84	207	⇓P	P	15 44 13.7	+0.1
SUZ		5.94	140	P	P	15 44 14.5	-0.4
BRTR	Keskin Array B	6.64	37	P	P	15 44 25.1	+0.2
	0.2nm,0.3s,baz=219,slow=16,SNR=4.9						
BRTR				S	S	15 45 36.2	-3.9
	0.5nm,0.3s,baz=204,slow=26,SNR=11						
BRTR	Keskin Array B	6.64	37	S	S	15 45 36.2	-3.9
HFRF	Wahat Farafira	7.33	181	P	P	15 44 34.4	-0.2
HBST	Basata	7.49	133	⇓P	P	15 44 36.1	-0.6
NUB		7.57	134	⇑P	P	15 44 38.0	+0.1
HKAT	Jabal Katrina	7.59	140	⇑P	P	15 44 37.7	-0.5
HDHB	Dhahab	7.79	136	P	P	15 44 40.2	-0.5
HHRG	Al Ghardaqah	8.48	148	⇑P	P	15 44 49.5	-0.8
HHRG	Al Ghardaqah	8.48	148	P	P	15 44 49.5	-0.8
FINES	FINESS Array B	27.00	357	P	P	15 48 26.0	-0.8
	0.4nm,0.3s,mb3.4,baz=172,slow=14,SNR=4.5						
ARCES	ARCESS Array B	35.12	358	P	P	15 49 37.5	-0.6
	1.4nm,0.6s,mb4.0,baz=171,slow=8.7,SNR=6.8						
ARCES	ARCESS Array B	35.12	358	P	P	15 49 37.5	-0.7
MKAR	Makanchi Array	41.86	56	P	P	15 50 36.5	+2.0
	0.4nm,0.7s,mb3.1,baz=278,slow=5.0,SNR=5.0						
SONM	Songino Array	57.78	51	P	P	15 52 38.7	+2.5
	0.3nm,0.6s,mb3.5,baz=284,slow=5.9,SNR=2.4						

NEIC **07** *15:48:56.0, 18.54N×66.08W, h107^{km}, MD3.5(RSPR), After RSPR.*

RSPR 07 15:48:56.0, 18.54N×66.08W, h107^{km}**, MD3.5**/13**, MD3.5**/13**, 12C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	0.43	189	⇓*e*P	P	15 49 11.2	-1.0
SJG				*e*S	S	15 49 23.1	-1.2
SJG	San Juan	0.43	189	⇑*e*P	P	15 49 11.2	-1.1
SJG				*e*S	S	15 49 24.1	-0.3
HUMP	Col San Antoni	0.45	151	⇑*e*P	P	15 49 11.7	-0.7
HUMP				*e*S	S	15 49 23.8	-0.8
CPD	Cerro la Pandu	0.52	162	⇑*e*P	P	15 49 12.1	-0.7
CPD				*e*S	S	15 49 25.1	-0.3
CELP	Cerrillos	0.66	226	⇑*e*P	P	15 49 13.2	-0.7
CELP				*e*S	S	15 49 26.6	-0.7
AOPR	Arecibo Observ	0.66	253	⇑*i*P	P	15 49 13.5	-0.4
AOPR				*e*S	S	15 49 27.1	-0.3
MTP	Monte Pirata	0.67	132	⇓*i*P	P	15 49 13.5	-0.4
MTP				*e*S	S	15 49 26.8	-0.6
PORP	Portuguez	0.72	228	⇑*i*P	P	15 49 13.7	-0.7
PORP				*e*S	S	15 49 28.0	-0.2
LRS	Lares	0.77	251	⇑*e*P	P	15 49 14.1	-0.8
LRS				*e*S	S	15 49 28.4	-0.6
ICM	Isla Caja Muer	0.77	213	⇑*e*P	P	15 49 14.1	-0.8
ICM				*e*S	S	15 49 28.4	-0.5
AGPR	Aguadilla, PR	0.98	266	⇑*e*P	P	15 49 16.4	-0.6
AGPR				*e*S	S	15 49 31.9	-0.9
LSP	Las Mesas	1.02	249	⇑*e*P	P	15 49 16.7	-0.7
LSP				*e*S	S	15 49 33.0	-0.6
STVI	Saint Thomas	1.08	100	⇑*e*P	P	15 49 17.4	-0.7
STVI				*e*S	S	15 49 34.3	-0.4
MGP	Maguayo	1.09	241	⇑*e*P	P	15 49 17.7	-0.5
MGP				*e*S	S	15 49 34.5	-0.5
CRPR	Cabo Rojo, PR	1.11	242	⇑*e*P	P	15 49 18.5	0.0
CRPR				*e*S	S	15 49 34.6	-0.7

NEIC **07** *15:51:42.7±1.5, 51.58N×16.10E, h5^{km}, ML2.9(PDG), ML2.8(SZGRF), Error ellipse: s-maj=16.3km s-min=6.1km az=205.0*

IPEC **07** *15:51:42.2±0.3, 51.61N×16.14E, ML2.0/3, Error ellipse: s-maj=2.0km s-min=1.6km az=36.0*

CSEM **07** *15:51:43.9±0.3, 51.53N×16.07E, h1^{km}±2^{km}, ML3.1/5, Error ellipse: s-maj=3.9km s-min=1.8km az=5.0*

WAR **07** *15:51:44.5, 51.54N×16.03E, h1^{km}, ML2.8, Mining Induced*

PRU **07** *15:51:44.1, 51.52N×16.05E*

ISC 07 15:51:41.9±0.7**, 51.49N**±0.04×**16.05E**±0.03**, n25,** σ1^{s}**32**/54**, 2C-3D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.66	167	⇓*i*Pg	Pg	15 51 57.5	+2.3
KSP				*e*		15 51 59.4	
KSP				*e*Sg	Sg	15 52 07.1	+3.1
KSP				*e*		15 52 11.1	
KSP	Ksiaz	0.66	167	*i* PG	Pg	15 51 57.5	+2.3
KSP				*e*SG	Sg	15 52 07.5	+3.5
KSP	Ksiaz	0.66	167	⇓*e*Pg	Pg	15 51 57.5	+2.4
KSP				*e*Sg	Sg	15 52 07.0	+3.0
KSP	Ksiaz	0.66	167	⇓*i*Pg	Pg	15 51 57.5	+2.3
KSP				*e*Sg	Sg	15 52 07.1	+3.1
UPC	Upice	0.98	181	*e*PG	Pg	15 52 03.2	+1.7
DPC	Dobruska-Polom	1.15	171	*e*PG	Pg	15 52 06.1	+1.2
DPC				*e*SG	Sg	15 52 21.8	+1.5
	18nm,0.2s						
DPC	Dobruska-Polom	1.15	171	*e*Pg	Pg	15 52 06.1	+1.2
DPC				*e*Sg	Sg	15 52 21.6	+1.3
PVCC	Panska Ves	1.34	225	*e*PG	Pg	15 52 09.5	+0.8
PVCC	Panska Ves	1.34	225	*e*Pn	Pn	15 52 09.7	+1.8
PVCC				*e*Sg	Sg	15 52 28.4	+1.8
BRG	Berggiesshubel	1.46	246	*i* Pg	Pg	15 52 11.4	+0.3
BRG				*i* Sg	Sg	15 52 31.6	+1.0
PRU	Pruhonice	1.78	213	*e*PN	Pn	15 52 15.4	+1.2
PRU				*e*PG	Pg	15 52 17.0	-0.5
PRU				*e*SG	Sg	15 52 41.1	-0.1
PRU	Pruhonice	1.78	213	*e*Pg	Pg	15 52 17.0	-0.5
PRU				*e*Sg	Sg	15 52 41.1	-0.1
CLL	Collm	1.92	266	*i* Pn	Pn	15 52 16.2	0.0
CLL				*e*Pg	Pg	15 52 19.0	-1.2
CLL				*i* Sg	Sg	15 52 45.0	-0.8
CLL	Collm	1.92	266	*i* PN	Pn	15 52 16.2	0.0
CLL				*e*PG	Pg	15 52 19.0	-1.2
CLL				*e*		15 52 23.0	
CLL				*i* SG	Sg	15 52 45.0	-0.8
MORC	Moravsky Berou	1.96	150	*e*Pn	Pn	15 52 17.2	+0.5
MORC				*e*Sg	Sg	15 52 46.3	-0.8
	7.0nm,0.2s						
OKC	Ostrava-Krasne	2.12	140	*e*PG	Pg	15 52 24.0	-0.3
OKC				*e*SG	Sg	15 52 51.6	-1.0
VRAC	Vranov	2.21	171	*e*Pn	Pn	15 52 21.4	+1.1
VRAC				*e*Sg	Sg	15 52 54.8	-0.7
	11nm,0.3s						
KRUC	Moravsky	2.44	175	*e*Pn	Pn	15 52 25.3	+1.7
KRUC				*e*Sg	Sg	15 53 02.3	-0.8
	4.5nm,0.3s						
NKC	Novy Kostel	2.61	243	*e*PN	Pn	15 52 27.2	+1.2
NKC				*e*PG	Pg	15 52 33.8	-0.2
NKC				*e*SG	Sg	15 53 06.4	-2.3
	37nm,0.5s						
OJC	Ojcow	2.69	117	*e*PG	Pg	15 52 34.0	-1.7
OJC				*e*SN	Sn	15 52 59.0	-2.0
OJC				*e*SG	Sg	15 53 11.0	-0.6
KHC	Kasperske Hory	2.84	215	*e*PN	Pn	15 52 30.1	+0.7
KHC				*e*PG	Pg	15 52 36.2	-2.5
KHC				*e*SN	Sn	15 53 06.1	+1.3
KHC				*e*SG	Sg	15 53 14.8	-1.8
MOX	Moxa	2.92	255	Pg	Pg	15 52 39.0	-1.3
MOX				Sg	Sg	15 53 18.0	-1.2
MOA	Molln	3.82	198	⇑*i*PN	Pn	15 52 43.0	-0.3
MOA				*i* SG	Sg	15 53 46.1	-3.1
	4.0nm,0.4s						
KBA	Koelnbreinsper	4.75	203	⇑*i*PN	Pn	15 52 57.4	+0.8
KBA				*i* SG	Sg	15 54 17.6	-2.6
	4.4nm,0.6s						

IDC 07 15:55:36.9±2.1**, 5.81N×125.23E, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/20**, mbtmp3.5**/4**, Error ellipse: s-maj=201.9km s-min=24.3km az=64.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.11	161	P	P	16 01 22.0	-1.6
	0.5nm,1.0s,baz=340,slow=9.4,SNR=7.3						
ASAR	Alice Springs	30.49	164	P	P	16 01 51.9	-2.2
	0.3nm,0.4s,baz=340,slow=7.4,SNR=12						
STKA	Stephens Creek	40.59	158	P	P	16 03 17.9	-2.1
	0.8nm,0.5s,baz=318,slow=14,SNR=3.7						
MKAR	Makanchi Array	55.01	325	P	P	16 05 10.2	-2.3
	0.2nm,0.3s,baz=118,slow=7.6,SNR=7.7						

IDC 07 15:58:16.8±2.5**, 49.65N×151.09E, h362**^{km}±30^{km}**, mb3.0**/4**, mb1 3.3**/7**, mb1mx3.0**/26**, mbtmp4.0**/7**, Error ellipse: s-maj=28.4km s-min=14.8km az=132.0, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	8.03	230	P	P	16 00 10.6	-1.7
	baz=76,slow=12						
FX1	Attu Island--F	14.18	68	P	P	16 01 21.7	-2.6
	1.0nm,0.3s,baz=246,slow=10.0,SNR=4.8						
MJAR	Matsushiro Arr	16.10	220	P	P	16 01 44.6	0.0
	0.8nm,0.3s,baz=23,slow=11,SNR=10						
ILAR	Eielson Array	35.19	41	P	P	16 04 37.7	-1.0
	0.4nm,0.6s,baz=279,slow=9.0,SNR=5.2						
INK	Inuvik	39.97	34	P	P	16 05 16.6	-1.7
	1.1nm,0.4s,baz=288,slow=6.5,SNR=13						
MKAR	Makanchi Array	44.47	294	P	P	16 05 53.1	-1.4
	0.6nm,0.6s,baz=67,slow=8.0,SNR=9.0						
ASAR	Alice Springs	74.57	196	P	P	16 09 16.6	-1.6
	0.4nm,0.4s,baz=10,slow=5.8,SNR=14						

CSEM **07** *16:01:16.7±0.0, 62.00N×26.60W, h6^{km}, mb4.9/83, Ms4.1, Mw4.8, Error ellipse: s-maj=2.6km s-min=1.2km az=16.0*

BJI **07** *16:01:17.8, 62.58N×27.38W, h10^{km}, mB5.0, mb4.7, Ms4.5, Msz4.5*

MOS **07** *16:01:18.2±0.9, 61.95N×26.60W, h10^{km}, mb4.9/51, MS4.1/20, Error ellipse: s-maj=8.8km s-min=5.7km az=124.9*

IDC **07** *16:01:18.7±0.4, 62.09N×26.49W, mb4.3/29, mb1 4.4/32, mb1mx4.4/36, mbtmp4.2/32, ML3.6/2, MS4.1/27, Ms1 4.1/27, ms1mx3.9/49, Error ellipse: s-maj=15.8km s-min=9.1km az=7.0*

HRVD **07** *16:01:19.8±0.4, 62.06N×26.44W, h12^{km}, MW4.8/46, Centroid moment Tensor Solution. LP body waves: s6,c7; Mantle waves: s46,c62; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.65±.08; M$_{\theta\theta}$0.19±.10; M$_{\phi\phi}$1.46±.07; M$_{r\theta}$0.96±.38; M$_{\theta\phi}$0.15±.07; M$_{\phi r}$-0.79±.38; Best double couple: M$_{0}$1.943×10^{16} NP1:ϕ$_{s}$202°,δ35°,λ-53°. NP2: ϕ$_{s}$340°,δ62°,λ-113°. Principal axes: T 1.655, Plg15°, Azm86°; N .577, Plg20°, Azm351°; P -2.23, Plg65°, Azm209°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC **07** *16:01:19.8±0.1, 61.99N×26.58W, h10^{km}, mb4.9/78, MS4.1/10 Error ellipse: s-maj=4.9km s-min=2.2km az=18.0*

ISC 07 16:01:18.1±0.1**, 62.04N**±0.03×**26.59W**±0.04**, h10**^{km}**, (h15**^{km}±2.2^{km}**:pP-P), n340,** σ0^{s}**95**/330**, mb4.7**/117**, MS4.1**/46**, 20C-10D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INYL	Nylenda	2.62	40	P	Pn	16 01 59.5	-1.7
IKUD	Kuludalsa	3.13	41	P	Pn	16 02 06.4	-2.2
IASB	`sbjarnarst	3.61	39	P	Pn	16 02 13.9	-1.4
IASB				S	Sn	16 02 57.9	-0.5
SCO	Scoresbysund	8.68	10	*i* P	P	16 03 23.7	-3.0
SCO				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SCO	Scoresbysund	8.68	10	*i* P	P	16 03 23.7	-3.0
	comp=Z,9.9nm,0.7s						
SCO				*i* S	Sn	16 05 28.7	+23
JMIC	Jan Mayen	11.45	31	LR	LR	16 07 31.6	
	comp=Z,551nm,19.5s,baz=247,slow=33						
SUMG	Summit	11.50	342	*e*P	P	16 04 04.3	-0.8
	comp=Z,134nm,1.8s						
SUMG	Summit	11.50	342	*e*P	P	16 04 04.3	-0.8
	comp=Z,134nm,1.8s						
EKA	Eskdalemuir Ar	13.85	108	Pn	P	16 04 34.9	-1.6
	baz=307,slow=12,SNR=6.8						
DAG	Danmarks Havn	15.04	7	*i* P	P	16 04 55.0	+3.1
DAG	Danmarks Havn	15.04	7	*e*P	P	16 04 55.0	+3.1
NOA	NORSAR Array B	17.88	76	P	P	16 05 27.0	-1.2
	comp=Z,0.1nm,0.3s,baz=289,slow=12,SNR=3.0						
NOA				LR	LR	16 12 00.1	
	comp=Z,411nm,18.9s,baz=295,slow=36						
FRB	Frobisher Bay	18.95	294	P	P	16 05 41.5	+0.3
	comp=Z,0.1nm,0.3s,baz=64,slow=7.7,SNR=3.7						
FRB				LR	LR	16 12 17.2	
	comp=Z,1μm,18.8s,baz=146,slow=35						
FRB	Frobisher Bay	18.95	294	P	P	16 05 41.5	+0.3
ROSF	Rostrenen	18.96	126	*e*P	P	16 05 40.4	-1.1
SGMF	Saint Gilles	19.31	125	*e*P	P	16 05 45.0	-0.6
QUIF	Quistinic	19.35	126	*e*P	P	16 05 45.5	-0.6
HFS	Hagfors	19.35	78	LR	LR	16 13 04.2	
	comp=Z,531nm,18.0s,baz=276,slow=37						
FLN	La Foliniere	19.72	120	*e*P	P	16 05 49.2	-1.2
FLN				*e*R			
	comp=Z,1μm,20.7s						
GRR	Gorron	19.87	122	*e*P	P	16 05 51.2	-0.8
LDF	La Druitiere	20.00	120	*e*P	P	16 05 52.6	-0.8
	comp=Z,31nm,1.1s						
LDF	La Druitiere	20.00	120	*e*P	P	16 05 52.6	-0.8
LDF				pmax	pmax		
	comp=Z,15nm,1.1s						
WTSB	Winterswijk	20.55	104	*e*P	P	16 05 57.5	-1.6
	comp=Z,43nm,1.2s						
BAIF	Baives	20.73	111	*e*P	P	16 06 00.1	-0.9
	comp=Z,183nm,1.6s						
BAIF	Baives	20.73	111	*e*P	P	16 06 00.1	-0.9
BAIF				pmax	pmax		
	comp=Z,92nm,1.6s						
GIVF	Givet	20.97	110	*e*P	P	16 06 02.7	-0.7
	comp=Z,212nm,1.7s						
GIVF	Givet	20.97	110	*e*P	P	16 06 02.7	-0.7
GIVF				pmax	pmax		
	comp=Z,106nm,1.7s						
HGN	Heimansgroeve	20.99	108	*e*P	P	16 06 03.4	-0.2
	comp=Z,34nm,1.7s						
HGN				*e*S	S	16 10 02.9	+10
MFF	Saint Martin d	21.60	123	*e*P	P	16 06 08.8	-1.1
	comp=Z,67nm,1.2s,mb4.7						
MFF	Saint Martin d	21.60	123	*e*P	P	16 06 08.8	-1.1
MFF				pmax	pmax		
	comp=Z,33nm,1.2s,mb4.6						
WLF	Walferdange	21.88	109	*e*P	P	16 06 13.2	+0.6
WLF				pmax	pmax		
	comp=Z,37nm,1.4s,mb4.6						
WLF	Walferdange	21.88	109	*e*P	P	16 06 13.2	+0.6
	comp=Z,37nm,1.4s,mb4.6						
WLF	Walferdange	21.88	109	*e*P	P	16 06 13.1	+0.5
	comp=Z,37nm,1.4s,mb4.6						
SCHQ	Schefferville	21.95	269	P	P	16 06 14.4	+1.1
	comp=Z,9.1nm,0.8s,mb4.2,baz=55,slow=6.9,SNR=8.5						
SCHQ				LR	LR	16 13 15.1	
	comp=Z,279nm,21.5s,MS3.6,baz=207,slow=33						
ARCES	ARCESS Array B	21.96	48	P	P	16 06 14.4	+1.1
	comp=Z,13nm,1.0s,mb4.3,baz=260,slow=7.4,SNR=9.4						
MEZF	Maizieres J’vi	22.26	113	*e*P	P	16 06 15.5	-0.9
KEV	Kevo	22.46	47	*e*p	P	16 06 18.9	+0.6
LOR	Lormes	22.70	117	*e*P	P	16 06 19.7	-1.0
	comp=Z,110nm,1.3s,mb4.8						
LOR				*e*R			
	comp=Z,1μm,17.8s						
LOR	Lormes	22.70	117	*e*P	P	16 06 19.7	-1.0
LOR				pmax	pmax		
	comp=Z,55nm,1.3s,mb4.8						
LOR				MLR	MLR		
	comp=Z,1μm,17.8s,MS4.4						
SSF	Saint Saulge	22.71	117	*e*P	P	16 06 19.9	-0.9
SSF				pmax	pmax		
	comp=Z,59nm,1.5s,mb4.8						
SSF	Saint Saulge	22.71	117	*e*P	P	16 06 19.9	-0.9
	comp=Z,59nm,1.5s,mb4.8						
TCF	Toulx Ste Croi	22.80	120	*e*P	P	16 06 21.2	-0.4
	comp=Z,105nm,1.4s,mb4.8						
TCF	Toulx Ste Croi	22.80	120	*e*P	P	16 06 21.2	-0.4
TCF				pmax	pmax		
	comp=Z,52nm,1.4s,mb4.8						
BGF	Bois d’Agland	22.84	119	*e*P	P	16 06 21.4	-0.7
THEF	They Montfort	22.87	112	*e*P	P	16 06 24.6	+2.2
LANF	Langenberg	23.11	109	*e*P	P	16 06 25.5	+0.8
SMF	Signal de Mont	23.18	118	*e*P	P	16 06 25.4	0.0
	comp=Z,70nm,1.2s,mb4.7						
SMF	Signal de Mont	23.18	118	*e*P	P	16 06 25.4	0.0
SMF				pmax	pmax		
	comp=Z,35nm,1.2s,mb4.7						
HAU	Haudompre	23.20	112	*e*P	P	16 06 24.5	-1.0
	comp=Z,205nm,1.6s,mb5.0						
HAU				*e*R			
	comp=Z,524nm,22.1s						
HAU	Haudompre	23.20	112	*e*P	P	16 06 24.5	-1.0
HAU				pmax	pmax		
	comp=Z,103nm,1.6s,mb5.0						
HAU				MLR	MLR		
	comp=Z,520nm,22.1s,MS3.9						
CDF	Champ du Feu	23.30	110	*e*P	P	16 06 26.0	-0.5
	comp=Z,131nm,1.5s,mb4.8						
CDF	Champ du Feu	23.30	110	*e*P	P	16 06 26.0	-0.5
CDF				pmax	pmax		
	comp=Z,66nm,1.5s,mb4.8						
WLS	Welschbruch	23.33	110	*e*P	P	16 06 28.3	+1.5
AGO	Saint Agoulin	23.37	119	*e*P	P	16 06 31.4	+4.2
ECH	Echery	23.40	111	*e*P	P	16 06 28.6	+1.2
RUE	Ruedersdorf	23.45	95	*e*P	P	16 06 29.1	+1.1
	comp=Z,21nm,0.6s,mb4.8						
RUE	Ruedersdorf	23.45	95	*e*P	P	16 06 29.1	+1.2
	comp=Z,21nm,0.6s,mb4.8						
PYM	Petit Puy Mans	23.56	120	*e*P	P	16 06 32.4	+3.3
HINF	Hinteralfeld	23.56	112	*e*P	P	16 06 28.1	-1.0
PLDF	La Plantade	23.63	119	*e*P	P	16 06 33.0	+3.2
MOF	Molkenrain	23.66	111	*e*P	P	16 06 30.9	+0.9
MOX	Moxa	23.66	101	*e*P	P	16 06 32.0	+2.0
MOX				pmax	pmax		
	comp=Z,60nm,1.6s,mb4.8						
MOX				MLR	MLR		
	comp=Z,600nm,17.0s,MS4.1						
MOX	Moxa	23.66	101	*e*Pdu	P	16 06 32.0	+2.0
	comp=Z,60nm,1.6s,mb4.8						
MOX				LR	LR		
	comp=Z,600nm,17.0s,MS4.1						
MOX	Moxa	23.66	101	⇓*i*P	P	16 06 32.0	+2.0
	comp=Z,logA/T=1.6,mb4.8						
MOX				L		16 17 15.0	
MOX	Moxa	23.66	101	*e*P	P	16 06 32.0	+2.0
	comp=Z,600nm,17.0s						
CLL	Collm	23.86	98	⇑*i*P	P	16 06 32.4	+0.5
CLL				*i*		16 06 41.0	
CLL				pmax	pmax		
	comp=Z,27nm,1.5s,mb4.5						
CLL				MLR	MLR		
	comp=Z,500nm,20.4s,MS4.0						
CLL	Collm	23.86	98	⇑*i*P	P	16 06 32.4	+0.5
	comp=Z,27nm,1.5s,mb4.5						
CLL				*i*		16 06 41.0	
CLL				LR	LR		
	comp=Z,500nm,20.4s,MS4.0						
CLL	Collm	23.86	98	⇑P	P	16 06 32.4	+0.5
	comp=Z,logA/T=1.3,mb4.5						
CLL				*i*		16 06 41.0	
STU	Stuttgart	23.89	107	*e*P	P	16 06 33.7	+1.5
STU				pmax	pmax		
	comp=Z,92nm,1.4s,mb5.0						
STU	Stuttgart	23.89	107	*e*P	P	16 06 33.7	+1.5
	comp=Z,92nm,1.4s,mb5.0						
STU	Stuttgart	23.89	107	*e*P	P	16 06 33.7	+1.5
	comp=Z,92nm,1.4s,mb5.0						
LOMF	Lomont	23.91	112	*e*P	P	16 06 33.0	+0.6
FELD	Feldberg	24.02	110	*e*P	P	16 06 33.7	+0.1
BBS	Basel-Blauen	24.12	111	*e*P	P	16 06 36.6	+2.1
GRA1	Grafenberg Arr	24.15	103	*e*P	P	16 06 36.0	+1.3
	comp=Z,35nm,1.6s,mb4.5						
GRA1				LR	LR		
	comp=Z,700nm,18.6s,MS4.2						
GRF	Grafenberg Arr	24.15	103	*e*P	P	16 06 36.0	+1.3
GRF				pmax	pmax		
	comp=Z,35nm,1.6s,mb4.5						
GRF				MLR	MLR		
	comp=Z,700nm,18.6s,MS4.2						
GRF	Grafenberg Arr	24.15	103	*e*P	P	16 06 36.0	+1.3
GRF				pmax	pmax		
	comp=Z,35nm,1.6s,mb4.5						
GRF				MLR	MLR		
	comp=Z,700nm,18.6s,MS4.2						
GRF	Grafenberg Arr	24.15	103	*e*P	P	16 06 36.0	+1.3
	comp=Z,35nm,1.6s,mb4.5						
GRF				LR	LR		
	comp=Z,700nm,18.6s,MS4.2						
GRF	Grafenberg Arr	24.15	103	*e*P	P	16 06 36.0	+1.3
	comp=Z,35nm,1.6s,mb4.5						
SJPF	Ste Jean	24.15	130	*e*P	P	16 06 34.6	-0.2
CABF	La Chapelle	24.16	115	*e*P	P	16 06 34.2	-0.7
	comp=Z,163nm,1.7s,mb4.9						
CABF	La Chapelle	24.16	115	*e*P	P	16 06 34.2	-0.7
CABF				pmax	pmax		
	comp=Z,81nm,1.7s,mb4.9						
KAF	Kangasniemi	24.21	66	*e*p	P	16 06 35.9	+0.7
NKC	Novy Kostel	24.33	101	*e*P	P	16 06 37.3	+0.8
NKC				AMS	AMS	16 17 20.0	
	comp=Z,600nm,15.3s						
FINES	FINESS Array B	24.38	68	P	P	16 06 37.1	+0.2
	comp=Z,6.1nm,1.1s,mb4.0,baz=243,slow=4.3,SNR=7.5						
FINES				LR	LR	16 15 56.7	
	comp=Z,178nm,18.2s,MS3.6,baz=2.3,slow=36						
ETSF	Etsaut	24.58	129	*e*P	P	16 06 38.4	-0.6
BRG	Berggiesshubel	24.59	98	*e*P	P	16 06 39.3	+0.3
BRG				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.4						
BRG				MLR	MLR		
	comp=N,400nm,14.6s,MS4.1						
BRG				MLR	MLR		
	comp=E,290nm,14.6s,MS4.1						
BRG				MLR	MLR		
	comp=Z,410nm,14.6s,MS4.1						
BRG	Berggiesshubel	24.59	98	*e*P	P	16 06 39.3	+0.3
	comp=Z,18nm,1.5s,mb4.4						
BRG				*e*		16 06 51.8	
BRG				LR	LR		
	comp=Z,410nm,14.6s,MS4.1						
EPF	Esparros	24.80	128	*e*P	P	16 06 40.0	-1.1
VIVF	Saint-Julien-l	24.97	119	*e*P	P	16 06 42.2	-0.5
PVCC	Panska Ves	25.12	98	*e*P	P	16 06 44.5	+0.4
PVCC				AMS	AMS	16 16 40.0	
	comp=Z,400nm,18.4s						
APA	Apatity	25.20	51	⇓*e*P	P	16 06 46.0	+1.4
APA				*e*S	S	16 11 18.0	+11
APA				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.5						
APA				MLR	MLR		

	comp=Z,600nm,12.0s,MS4.3						
APA	Apatity	25.20	51	*e*P	P	16 06 46.0	+1.4
	comp=Z,18nm,1.2s,mb4.5						
MTLF	Montolieu	25.25	124	*e*P	P	16 06 44.0	-1.4
	comp=Z,59nm,1.5s,mb4.6						
MTLF	Montolieu	25.25	124	*e*P	P	16 06 44.0	-1.4
MTLF				pmax	pmax		
	comp=Z,30nm,1.5s,mb4.6						
LASF	Ste Croix	25.28	121	*e*P	P	16 06 44.8	-0.9
	comp=Z,50nm,1.3s,mb4.6						
LPL	La Plagne	25.30	115	*e*P	P	16 06 45.5	-0.4
DAVA	Damuels	25.30	109⇑	*i*P	P	16 06 46.5	+0.6
	comp=Z,24nm,1.5s,mb4.5						
LPG	La Plagne	25.33	115	*e*P	P	16 06 45.7	-0.4
	comp=Z,50nm,1.3s,mb4.6						
LPG	La Plagne	25.33	115	*e*P	P	16 06 45.7	-0.4
LPG				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.6						
ORIF	Oris-en-Rattie	25.42	117	*e*P	P	16 06 46.5	-0.5
	comp=Z,16nm,0.8s,mb4.3						
ORIF				*e*R			
	comp=Z,992nm,18.8s						
PRU	Pruhonice	25.48	99	*e*P	P	16 06 47.4	-0.1
PRU				AMS	AMS	16 18 00.0	
	comp=Z,500nm,14.6s						
KHC	Kasperske Hory	25.63	102*c*	*i*P	P	16 06 49.5	+0.6
KHC	Kasperske Hory	25.63	102	*e*P	P	16 06 49.1	+0.2
KHC				AMS	AMS	16 17 40.0	
	comp=Z,700nm,15.3s						
DAVOX	Davos	25.69	110	P	P	16 06 50.8	+1.3
	comp=Z,4.6nm,0.9s,mb4.0,baz=323,slow=13,SNR=5.9						
DAVOX				LR	LR	16 16 12.1	
	comp=Z,176nm,19.0s,MS3.6,baz=84,slow=35						
KSP	Ksiaz	25.71	96	*e*P	P	16 06 51.5	+1.8
KSP	Ksiaz	25.71	96	*e*P	P	16 06 49.8	+0.2
KSP				*e*pP	pP	16 06 51.4	-1.1
UPC	Upice	25.80	97	*e*P	P	16 06 50.5	0.0
MOTA	Moosalm	25.81	107⇑	*i*P	P	16 06 52.3	+1.7
	comp=Z,20nm,1.3s,mb4.5						
MOTA	Moosalm	25.81	107⇑	*i*P	P	16 06 52.3	+1.7
MOTA				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.5						
GERES	GERESS Array B	25.89	102	P	P	16 06 50.9	-0.5
	comp=Z,1.7nm,0.8s,mb3.6,baz=315,slow=3.8,SNR=9.8						
GERES				LR	LR	16 17 04.2	
	comp=Z,432nm,20.1s,MS4.0,baz=355,slow=37						
MBDF	Montbardon	25.95	116	*e*P	P	16 06 51.5	-0.5
	comp=Z,79nm,1.6s,mb4.7						
MBDF	Montbardon	25.95	116	*e*P	P	16 06 51.5	-0.5
MBDF				pmax	pmax		
	comp=Z,39nm,1.6s,mb4.7						
DPC	Dobruska-Polom	26.06	97	*e*P	P	16 06 53.5	+0.6
DPC				AMS	AMS	16 17 10.0	
	comp=Z,400nm,18.7s						
SMRF	Simiane la Rot	26.06	119	*e*P	P	16 06 52.1	-0.9
VSU	Vasula	26.07	74	*e*P	P	16 06 52.8	-0.1
WTTA	Wattenberg	26.11	107⇑	*i*P	P	16 06 55.4	+2.0
	comp=Z,31nm,1.5s,mb4.6						
WTTA	Wattenberg	26.11	107⇑	*i*P	P	16 06 55.4	+2.0
WTTA				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.6						
ESDC	Sonseca Array	26.29	138	P	P	16 06 55.7	+0.6
	comp=Z,0.7nm,0.4s,mb3.5,baz=339,slow=8.1,SNR=15						
MOA	Molln	26.87	103⇑	*i*P	P	16 07 00.1	-0.3
	comp=Z,7.9nm,1.1s,mb4.2						
VRAC	Vranov	26.91	98	P	P	16 07 00.4	-0.3
	comp=Z,5.9nm,1.0s,mb4.1,baz=327,slow=15,SNR=5.5						
SUW	Suwalki	26.92	84	*e*P	P	16 07 01.0	+0.2
LMR	La Mourre	26.98	119	*e*P	P	16 07 00.4	-1.0
	comp=Z,132nm,1.7s,mb4.9						
LMR	La Mourre	26.98	119	*e*P	P	16 07 00.4	-1.0
LMR				pmax	pmax		
	comp=Z,66nm,1.7s,mb4.9						
KBA	Koelnbreinsper	27.02	105⇑	*i*P	P	16 07 02.6	+0.8
	comp=Z,13nm,1.2s,mb4.3						
KBA	Koelnbreinsper	27.02	105⇑	*i*P	P	16 07 02.6	+0.8
KBA				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.3						
MORC	Moravsky Berou	27.02	97	*e*P	P	16 07 00.9	-0.9
MORC				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.3						
MORC	Moravsky Berou	27.02	97	*e*P	P	16 07 00.9	-0.9
	comp=Z,11nm,1.2s,mb4.3						
MORC	Moravsky Berou	27.02	97	*e*P	P	16 07 00.9	-0.9
	comp=Z,11nm,1.2s,mb4.3						
OKC	Ostrava-Krasne	27.27	96	*e*P	P	16 07 04.1	+0.1
OKC				AMS	AMS	16 17 40.0	
	comp=Z,300nm,20.5s						
ARSA	Arzberg	27.89	102⇑	*i*P	P	16 07 10.0	+0.3
	comp=Z,17nm,1.8s,mb4.4						
ZST	Bratislava	27.93	99	*i* P	P	16 07 15.8	+5.7
PGF	Pioggiola	28.66	116	*e*P	P	16 07 16.0	-0.7
	comp=Z,68nm,1.4s,mb4.9						
PGF	Pioggiola	28.66	116	*e*P	P	16 07 16.0	-0.7
PGF				pmax	pmax		
	comp=Z,34nm,1.4s,mb4.9						
KOLS	Kolonicke sedl	29.83	93	*i* P	P	16 07 28.8	+1.6
AKASG	Malin Array Be	31.89	85	P	P	16 07 43.8	-1.4
	comp=Z,2.3nm,0.8s,mb4.1,baz=310,slow=8.7,SNR=19						
OBN	Obninsk	32.42	73α	*i*P	P	16 07 50.5	+0.7
OBN				*e*		16 07 59.6	
OBN						16 10 37.0	
OBN				S	S	16 13 04.0	+0.9
OBN				pmax	pmax		
	comp=Z,25nm,1.4s,mb4.8						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s,MS3.9						
OBN	Obninsk	32.42	73	*i* P	P	16 07 50.5	+0.7
	comp=Z,25nm,1.4s,mb4.8						
OBN	Obninsk	32.42	73	PcP	PcP	16 10 37.0	-0.3
OBN				S	S	16 13 04.0	+0.9
	comp=Z,200nm,16.0s						
MLR	Muntele Rosu	34.05	94	P	P	16 08 04.4	+0.3
	comp=Z,2.0nm,0.4s,mb4.4,baz=126,slow=8.0,SNR=7.5						
SADO	Sadowa	34.60	265	P	P	16 08 08.9	0.0
	comp=Z,7.5nm,1.0s,mb4.6,baz=56,slow=12,SNR=4.8						
SADO				LR	LR	16 20 49.1	
	comp=Z,507nm,18.8s,MS4.3,baz=47,slow=34						
VAE	Valguarnera	35.18	115	LR	LR	16 22 32.3	
	comp=Z,540nm,18.1s,MS4.3,baz=122,slow=36						
VRSR	Storozhevoye	36.17	76	*e*P	P	16 08 22.1	0.0
VRSR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
VRSR				pmax	pmax		
	comp=N,6.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.8s						
VRSR	Storozhevoye	36.17	76	*e*P	P	16 08 22.1	0.0
	comp=E,6.0nm,0.6s,mb4.7						
YKA	Yellowknife Ar	37.94	311	P	P	16 08 37.0	+0.2
	comp=E,3.9nm,0.9s,mb4.2,baz=49,slow=8.8,SNR=16						
YKA				LR	LR	16 23 48.0	
	comp=E,365nm,18.5s,MS4.2,baz=45,slow=36						
EYMN	Ely	38.07	279	*e*P	P	16 08 37.3	-0.8
	comp=E,6.0nm,0.9s,mb4.3						
EYMN	Ely	38.07	279	*e*P	P	16 08 37.3	-0.8
	comp=E,6.0nm,0.9s,mb4.3						
ULM	Lac du Bonnet	38.44	285	LR	LR	16 23 00.2	
	comp=E,75nm,21.6s,MS3.5,baz=45,slow=34						
INK	Inuvik	39.85	326	P	P	16 08 52.7	-0.1
	comp=E,1.9nm,0.5s,mb4.1,baz=35,slow=13,SNR=6.0						
INK				LR	LR	16 25 22.0	
	comp=E,228nm,18.7s,MS4.0,baz=230,slow=36						
ARU	Arti	40.94	58⇑	*i*P	P	16 09 02.8	+1.0
ARU				*e*		16 10 36.1	
ARU				*e*		16 11 01.1	
ARU				*e*S	S	16 15 14.7	+1.4
ARU				*e*SS	SS	16 18 17.5	+7.3
ARU				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.2						
ARU				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.2						
ARU				MLR	MLR		
	comp=N,200nm,16.0s,MS4.2						
ARU				MLR	MLR		
	comp=E,200nm,17.0s,MS4.2						
ARU	Arti	40.94	58	*e*P	P	16 09 02.0	+0.2
	comp=E,9.4nm,1.1s,mb4.3						
ARU	Arti	40.94	58	*e*P	P	16 09 02.0	+0.2
	comp=E,9.4nm,1.1s,mb4.3						
ARU	Arti	40.94	58	*e*PcP	PcP	16 11 01.1	-1.8
ARU				*e*S	S	16 15 14.7	+1.4
	comp=E,300nm,17.0s						
FWV	Forest Hill	41.01	259	*e*P	P	16 09 03.3	+0.6
FWV	Forest Hill	41.01	259	*e*P	P	16 09 03.3	+0.7
IDI	Anoyia	41.64	106	LR	LR	16 27 48.3	
	comp=E,195nm,20.3s,MS4.0,baz=163,slow=38						
SOC	Sochi	41.97	84	*e*P	P	16 09 10.2	-0.1
SOC				*e*PPP	PPP	16 11 25.2	+3.2
SOC				*e*S	S	16 15 21.1	-7.5
SOC				*e*SS	SS	16 18 35.3	+5.4
SOC				pmax	pmax		
	comp=N,5.0nm,0.5s						
SOC				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.5						
SOC				pmax	pmax		
	comp=E,2.0nm,0.4s						
SOC				MLR	MLR		
	comp=Z,282nm,21.0s,MS4.1						
SOC				MLR	MLR		
	comp=N,125nm,17.0s,MS4.0						
SOC				MLR	MLR		
	comp=E,153nm,21.0s,MS4.0						
BRTR	Keskin Array B	42.11	93	P	P	16 09 12.8	+1.3
	comp=E,1.9nm,0.9s,mb3.7,baz=323,slow=6.2,SNR=9.5						
WCI	Wyandotte Cave	43.05	265	*e*P	P	16 09 19.3	+0.1
WCI				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
WCI	Wyandotte Cave	43.05	265	*e*P	P	16 09 19.3	+0.1
	comp=Z,14nm,0.8s,mb4.7						
WCI	Wyandotte Cave	43.05	265	*e*P	P	16 09 19.3	+0.1
	comp=Z,14nm,0.8s,mb4.7						
KIV	Kislovodsk	43.07	82	*e*P	P	16 09 15.1	-4.2
KIV				*e*S	S	16 15 39.1	-5.8
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
KIV				pmax	pmax		
	comp=E,3.0nm,0.7s						
KIV				MLR	MLR		
	comp=N,197nm,20.0s						
KIV				MLR	MLR		
	comp=Z,270nm,20.0s,MS4.1						
TZTN	Tazewell	43.13	261	P	P	16 09 18.5	-1.4
TZTN	Tazewell	43.13	261	P	P	16 09 18.5	-1.4
CPCT	Cooper Cave	44.48	261	*e*P	P	16 09 31.6	+0.8
CPCT	Cooper Cave	44.48	261	*e*P	P	16 09 31.6	+0.8
SLM	Saint Louis	44.58	269	*e*P	P	16 09 32.2	+0.6
SLM				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.3						
SLM	Saint Louis	44.58	269	*e*P	P	16 09 32.2	+0.5
	comp=Z,60nm,1.2s,mb5.3						
SLM	Saint Louis	44.58	269	*e*P	P	16 09 32.2	+0.6
	comp=Z,60nm,1.2s,mb5.3						
FVM	French Village	45.19	269	*e*P	P	16 09 36.6	+0.1
FVM				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.0						
FVM	French Village	45.19	269	*e*P	P	16 09 36.6	+0.1
	comp=Z,34nm,1.2s,mb5.0						
FVM	French Village	45.19	269	*e*P	P	16 09 36.6	+0.1
	comp=Z,34nm,1.2s,mb5.0						
SWET	Sewanee	45.32	262	*e*P	P	16 09 37.7	+0.1
SWET	Sewanee	45.32	262	*e*P	P	16 09 37.7	+0.1
WVT	Waverly	45.47	265	*e*P	P	16 09 38.0	-0.7
WVT				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.7						
WVT	Waverly	45.47	265	*e*P	P	16 09 38.0	-0.7
	comp=Z,18nm,1.3s,mb4.7						
WVT	Waverly	45.47	265	*e*P	P	16 09 38.0	-0.7
	comp=Z,18nm,1.3s,mb4.7						
MALT	Malatya	45.48	90	*e*P	P	16 09 40.1	+1.3
MALT				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
MALT	Malatya	45.48	90	*e*P	P	16 09 40.1	+1.3
	comp=Z,9.9nm,1.4s,mb4.5						
MALT	Malatya	45.48	90	*e*P	P	16 09 40.1	+1.3
	comp=Z,9.9nm,1.4s,mb4.5						
TIXI	Tiksi	45.52	11*c*	*i*P	P	16 09 39.5	+0.9
TIXI				pmax	pmax		
	comp=Z,19nm,2.0s,mb4.7						
TIXI	Tiksi	45.52	11	*i* P	P	16 09 39.5	+0.9
	comp=Z,19nm,2.0s,mb4.7						
LAO	LASA Array	45.73	289	*e*P	P	16 09 41.8	+1.2
	comp=Z,28nm,1.1s,mb5.1						
PARMO	Parma	45.94	267	P	P	16 09 42.3	-0.1
PARMO	Parma	45.94	267	P	P	16 09 42.3	-0.1
ILAR	Eielson Array	45.98	329	P	P	16 09 42.6	+0.2
	comp=Z,3.5nm,1.0s,mb4.2,baz=30,slow=5.9,SNR=7.1						
ILAR				PcP	PcP	16 11 18.2	-1.4
	comp=Z,1.8nm,0.8s,baz=1.1,slow=2.9,SNR=8.7						
ILAR				LR	LR	16 30 09.8	
	comp=Z,132nm,18.2s,MS3.9,baz=13,slow=38						
ILAR	Eielson Array	45.98	329	PcP	PcP	16 11 18.2	-1.4
COLA	College	46.13	330*c*	*i*P	P	16 09 45.1	+1.6
COLA	College	46.13	330	*e*P	P	16 09 44.2	+0.6
	comp=Z,14nm,1.1s,mb4.8						
COLA				LR	LR		
	comp=Z,122nm,18.9s,MS3.9						
COLA	College	46.13	330	*e*P	P	16 09 44.2	+0.7
	comp=Z,14nm,1.1s,mb4.8						
DLBC	Dease Lake	46.17	315	P	P	16 09 44.9	+0.9
	comp=Z,3.9nm,0.8s,mb4.4,baz=19,slow=4.4,SNR=7.4						
DLBC				LR	LR	16 28 43.5	
	comp=Z,230nm,19.6s,MS4.1,baz=242,slow=36						
DLBC	Dease Lake	46.17	315	P	P	16 09 44.9	+0.9
DLBC				LR	LR	16 28 43.5	
IMA	Indian Mountai	46.43	333	*e*P	P	16 09 47.5	+1.6
IMA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
IMA	Indian Mountai	46.43	333	*e*P	P	16 09 47.5	+1.6
	comp=Z,7.9nm,1.0s,mb4.6						
PLAL	Pickwick Lake	46.52	264	*e*P	P	16 09 46.8	-0.2
	comp=Z,27nm,1.3s,mb5.0						
PLAL	Pickwick Lake	46.52	264	*e*P	P	16 09 46.8	-0.3
	comp=Z,27nm,1.3s,mb5.0						
GNAR	Gosnell	46.63	266	P	P	16 09 47.6	-0.3
GNAR	Gosnell	46.63	266	P	P	16 09 47.6	-0.3
GNI	Garni	47.00	83*d*	*i*P	P	16 09 51.9	+1.1
GNI				pmax	pmax		
	comp=Z,30nm,1.6s						
GNI				MLR	MLR		
	comp=Z,200nm,17.0s						
GNI	Garni	47.00	83	LR	LR	16 30 49.5	
	comp=Z,211nm,18.3s,MS4.1,baz=165,slow=38						
GNI	Garni	47.00	83	*i* P	P	16 09 51.9	+1.1
	comp=Z,200nm,17.0s						
KSU1	Kansas State U	47.21	275	*e*P	P	16 09 52.0	-0.5
KSU1	Kansas State U	47.21	275	*e*P	P	16 09 52.0	-0.5
MCK	McKinley	47.34	329	*e*P	P	16 09 53.6	+0.4
MCK				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
MCK	McKinley	47.34	329	*e*P	P	16 09 53.6	+0.4
	comp=Z,14nm,1.3s,mb4.7						
MCK	McKinley	47.34	329	*e*P	P	16 09 53.6	+0.4
	comp=Z,14nm,1.3s,mb4.7						
LRAL	Lakeview Retre	47.62	261	*e*P	P	16 09 54.5	-1.3
	comp=Z,38nm,1.4s,mb5.2						
LRAL	Lakeview Retre	47.62	261	*e*P	P	16 09 54.5	-1.3
	comp=Z,38nm,1.4s,mb5.2						
HRY	Holter Researc	48.18	293	*e*P	P	16 10 00.1	+0.2
HRY	Holter Researc	48.18	293	*e*P	P	16 10 00.1	+0.2
BOZ	Bozeman (W)	48.92	292	*e*P	P	16 10 06.1	+0.4
	comp=Z,19nm,1.2s,mb5.0						
BOZ				*e*PcP	PcP	16 11 29.6	-0.7
BOZ				LR	LR		
	comp=Z,623nm,21.0s,MS4.6						
BOZ	Bozeman (W)	48.92	292	*e*P	P	16 10 06.1	+0.4
	comp=Z,19nm,1.2s,mb5.0						
BOZ	Bozeman (W)	48.92	292	*e*PcP	PcP	16 11 29.6	-0.8
PWA	Palmer West	49.35	328	*e*P	P	16 10 10.3	+1.6
	comp=Z,21nm,0.9s,mb5.2						
YFT	Old Faithful	49.51	290	*e*P	P	16 10 12.1	+1.9
YFT	Old Faithful	49.51	290	*e*P	P	16 10 12.1	+1.9
ASF	Jabal al Asfar	49.78	96	LR	LR	16 32 11.3	
	comp=Z,91nm,20.7s,MS3.8,baz=8.4,slow=37						
BILL	Bilibino	49.89	354α	*i*P	P	16 10 13.4	+0.6
BILL				pmax	pmax		
	comp=Z,23nm,1.5s,mb5.0						
BILL				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.9						
BILL	Bilibino	49.89	354	*e*P	P	16 10 13.0	+0.2
	comp=Z,31nm,1.5s,mb5.1						
IMW	Indian Meadow	49.99	290	*e*P	P	16 10 14.3	+0.3
	comp=Z,33nm,1.5s,mb5.2						
IMW	Indian Meadow	49.99	290	*e*P	P	16 10 14.3	+0.4
	comp=Z,33nm,1.5s,mb5.2						
MOOW	Moose Ponds	50.02	290	*e*P	P	16 10 11.9	-2.3
	comp=Z,13nm,1.5s,mb4.7						
MOOW	Moose Ponds	50.02	290	*e*P	P	16 10 11.9	-2.3
	comp=Z,13nm,1.5s,mb4.7						
MCMT	McKenzie Canyo	50.09	292	*e*P	P	16 10 14.9	+0.2
MCMT	McKenzie Canyo	50.09	292	*e*P	P	16 10 14.9	+0.2
WUWY	Wally Ulrich	50.19	290	*e*P	P	16 10 15.5	+0.1
WUWY	Wally Ulrich	50.19	290	*e*P	P	16 10 15.5	+0.1
PDAR	Pinedale Array	50.27	288	P	P	16 10 15.9	-0.1
	comp=Z,7.5nm,0.8s,mb4.8,baz=53,slow=7.4,SNR=16						
PDAR				LR	LR	16 30 42.6	
	comp=Z,194nm,18.5s,MS4.2,baz=68,slow=35						
PDAR	Pinedale Array	50.27	288	P	P	16 10 15.9	-0.2
SPU	Mount Spurr	50.28	329	*e*P	P	16 10 15.2	-0.8
SPU	Mount Spurr	50.28	329	*e*P	P	16 10 15.2	-0.7
TPAW	Teton Pass	50.32	290	*e*P	P	16 10 16.6	+0.1
	comp=Z,16nm,1.1s,mb5.0						
TPAW	Teton Pass	50.32	290	*e*P	P	16 10 16.6	+0.2
	comp=Z,16nm,1.1s,mb5.0						
RRI2	Red Ridge	50.59	290	*e*P	P	16 10 18.8	+0.3
	comp=Z,54nm,1.8s,mb5.2						
ISCO	Idaho Springs	50.84	283	*e*P	P	16 10 21.0	+0.5
	comp=Z,6.3nm,1.0s,mb4.5						
ISCO				LR	LR		
	comp=Z,401nm,20.0s,MS4.4						
ISCO	Idaho Springs	50.84	283	*e*P	P	16 10 21.0	+0.5
	comp=Z,6.3nm,1.0s,mb4.5						
EIL	Elat	50.96	100	LR	LR	16 34 06.1	
	comp=Z,62nm,20.3s,MS3.6,baz=302,slow=39						
NVS	Novosibirsk	51.17	44	*e*P	P	16 10 21.6	-1.2
NVS				*e*		16 11 35.0	
NVS				pmax	pmax		
	comp=N,14nm,1.4s						
NVS				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.0						
NVS				pmax	pmax		
	comp=E,4.0nm,1.5s						
NVS	Novosibirsk	51.17	44	*e*PcP	PcP	16 11 35.0	-3.5
WMOK	Wichita Mounta	51.76	273	*e*P	P	16 10 26.9	-0.6
WMOK				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
WMOK	Wichita Mounta	51.76	273	*e*P	P	16 10 26.9	-0.6
	comp=Z,17nm,1.1s,mb4.9						
WMOK	Wichita Mounta	51.76	273	*e*P	P	16 10 26.9	-0.6
	comp=Z,17nm,1.1s,mb4.9						
HLID	Hailey	51.78	292	*e*P	P	16 10 27.3	-0.3
	comp=Z,22nm,1.8s,mb4.8						
HLID	Hailey	51.78	292	*e*P	P	16 10 27.3	-0.3
	comp=Z,22nm,1.8s,mb4.8						
BMO	Blue Mountains	52.00	295	*e*P	P	16 10 27.9	-1.2
	comp=Z,6.1nm,1.0s,mb4.5						
BMO	Blue Mountains	52.00	295	*e*P	P	16 10 27.9	-1.3
	comp=Z,6.1nm,1.0s,mb4.5						
ZAL	Zalesovo	52.44	44	P	P	16 10 32.0	-0.3
	comp=Z,0.6nm,0.4s,mb3.9,baz=34,slow=3.2,SNR=6.0						
ZAL				LR	LR	16 32 20.6	
	comp=Z,65nm,20.9s,MS3.6,baz=176,slow=36						
ZAL	Zalesovo	52.44	44	P	P	16 10 32.0	-0.4
SDCO	Great Sand Dun	52.45	281	*e*P	P	16 10 32.8	+0.2
	comp=Z,15nm,1.4s,mb4.7						
SDCO	Great Sand Dun	52.45	281	*e*P	P	16 10 32.8	+0.1
	comp=Z,15nm,1.4s,mb4.7						
DUG	Dugway	53.79	289	*e*P	P	16 10 42.3	-0.2
	comp=Z,5.5nm,0.8s,mb4.5						
ELK	Elko	54.42	291	*e*P	P	16 10 48.2	+1.1
ELK				pmax	pmax		
	comp=Z,20nm,1.3s						
ELK	Elko	54.42	291	P	P	16 10 48.5	+1.3
	comp=Z,5.3nm,0.8s,mb4.5,baz=31,slow=6.2,SNR=18						
ELK	Elko	54.42	291	*e*P	P	16 10 48.2	+1.0
	comp=Z,20nm,1.3s,mb4.9						
ELK	Elko	54.42	291	*e*P	P	16 10 48.2	+1.1
	comp=Z,20nm,1.3s,mb4.9						
MSU	Marysvale	54.88	287	*e*P	P	16 10 51.0	+0.4
ANMO	Albuquerque	55.18	280	*e*P	P	16 10 51.8	-1.0
ANMO				pmax	pmax		
	comp=Z,12nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,419nm,20.0s						
ANMO	Albuquerque	55.18	280	P	P	16 10 53.8	+0.9
	comp=Z,3.4nm,0.8s,mb4.4,baz=46,slow=8.8,SNR=12						
ANMO	Albuquerque	55.18	280	*e*P	P	16 10 51.8	-1.1
	comp=Z,12nm,1.3s,mb4.8						
ANMO				LR	LR		
	comp=Z,419nm,20.0s,MS4.5						
ANMO	Albuquerque	55.18	280	*e*P	P	16 10 51.8	-1.0
	comp=Z,12nm,1.3s,mb4.8						
CPRX	Cap Rock	55.55	276	*e*P	P	16 10 55.3	-0.3
CPRX	Cap Rock	55.55	276	*e*P	P	16 10 55.3	-0.3
MOD	Modoc	55.66	296⇓	*e*P	P	16 10 55.9	-0.4
	comp=Z,18nm,1.3s,mb5.0						
MOD	Modoc	55.66	296⇓	*e*P	P	16 10 55.9	-0.3
	comp=Z,18nm,1.3s,mb4.9						
JCT	Junction City	55.76	271	*e*P	P	16 10 56.0	-1.1
	comp=Z,34nm,1.2s,mb5.2						
JCT	Junction City	55.76	271	*e*P	P	16 10 56.0	-1.1
	comp=Z,34nm,1.2s,mb5.2						
LAZ	Ladron	55.94	280	*e*P	P	16 10 58.8	+0.5
LAZ	Ladron	55.94	280	*e*P	P	16 10 58.8	+0.5
ARUT	Antelope Range	56.04	287	*e*P	P	16 10 56.6	-2.3
ARUT	Antelope Range	56.04	287	*e*P	P	16 10 56.6	-2.4
GDL2	Guadalupe Moun	56.47	276	*e*P	P	16 11 01.3	-0.9
GDL2	Guadalupe Moun	56.47	276	*e*P	P	16 11 01.3	-0.9
WUAZ	Wupatki	56.97	284	*e*P	P	16 11 05.2	-0.5
	comp=Z,22nm,1.1s,mb5.1						
WUAZ	Wupatki	56.97	284	*e*P	P	16 11 05.2	-0.5
	comp=Z,22nm,1.1s,mb5.1						
MNTX	Cornudas Mount	57.37	277	*e*P	P	16 11 07.5	-1.0
	comp=Z,18nm,1.3s,mb4.9						
MNTX	Cornudas Mount	57.37	277	*e*P	P	16 11 07.5	-1.1
	comp=Z,18nm,1.3s,mb4.9						
DBIC	Dimbokro	57.54	154	P	P	16 11 10.0	0.0
	comp=Z,3.5nm,0.9s,mb4.4,baz=264,slow=5.2,SNR=3.4						
DBIC				LR	LR	16 33 23.3	
	comp=Z,121nm,19.3s,MS4.0,baz=230,slow=33						
WCN	Washoe City	57.58	293	*e*P	P	16 11 10.6	+0.6
	comp=Z,24nm,1.2s,mb5.1						
WCN	Washoe City	57.58	293	*e*P	P	16 11 10.6	+0.7
	comp=Z,24nm,1.2s,mb5.1						
MKAR	Makanchi Array	57.59	50	P	P	16 11 09.2	-0.7
	comp=Z,6.2nm,1.1s,mb4.5,baz=326,slow=4.4,SNR=28						
MKAR				LR	LR	16 35 46.2	
	comp=Z,96nm,18.4s,MS3.9,baz=187,slow=36						
NVAR	Mina Array Bea	57.67	292	P	P	16 11 10.6	0.0
	comp=Z,2.9nm,0.9s,mb4.3,baz=68,slow=6.6,SNR=9.5						
NVAR				LR	LR	16 35 36.5	
	comp=Z,430nm,19.1s,MS4.6,baz=90,slow=36						
NVAR	Mina Array Bea	57.67	292	P	P	16 11 10.6	0.0
NVAR				LR	LR	16 35 36.5	
FRU	Bishkek	57.99	58	*e*P	P	16 11 14.0	+1.2
AAK	Ala-Archa	58.11	59	*e*P	P	16 11 13.8	+0.2
AAK				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
AAK	Ala-Archa	58.11	59	*e*P	P	16 11 13.8	+0.2
	comp=Z,14nm,1.3s,mb4.8						
AAK	Ala-Archa	58.11	59	*e*P	P	16 11 13.8	+0.2
	comp=Z,14nm,1.3s,mb4.8						
LTX	Lajitas	58.54	274	*e*P	P	16 11 15.7	-1.1
	comp=Z,22nm,1.5s,mb5.0						
TXAR	Lajitas Array	58.54	274	P	P	16 11 16.1	-0.7
	comp=Z,0.8nm,0.4s,mb4.1,baz=56,slow=4.5,SNR=8.4						
TXAR				LR	LR	16 36 07.7	
	comp=Z,409nm,18.5s,MS4.6,baz=25,slow=36						
DAC	Darwin (Calif)	59.14	290	*e*P	P	16 11 21.0	+0.1
	comp=Z,18nm,1.2s,mb5.0						
DAC	Darwin (Calif)	59.14	290	*e*P	P	16 11 21.0	+0.1
	comp=Z,18nm,1.2s,mb5.0						
MOY	Mondy	59.27	35	*e*P	P	16 11 25.1	+3.5
MOY				pmax	pmax		
	comp=Z,25nm,1.5s,mb5.0						
TUC	Tucson	59.37	282	*e*P	P	16 11 22.4	-0.1
	comp=Z,13nm,1.3s,mb4.8						
TUC	Tucson	59.37	282	*e*P	P	16 11 22.4	-0.1
	comp=Z,13nm,1.3s,mb4.8						
IRK	Irkutsk	59.61	33	*e*P	P	16 11 22.4	-1.5
IRK				*e*		16 12 17.5	
IRK				pmax	pmax		
	comp=Z,43nm,1.7s,mb5.2						
IRK	Irkutsk	59.61	33	*e*P	P	16 11 22.4	-1.5
	comp=Z,43nm,1.7s,mb5.2						
TLY	Talaya	59.96	33*d*	*i*P	P	16 11 25.4	-0.9
TLY				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.6						
TLY				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.1						
TLY	Talaya	59.96	33	*i* P	P	16 11 25.4	-0.9
	comp=Z,100nm,15.0s						
ZAK	Zakamensk	61.05	34	*e*P	P	16 11 33.7	0.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.4						
ZAK	Zakamensk	61.05	34	*e*P	P	16 11 33.7	0.0
	comp=Z,4.0nm,1.4s,mb4.4						
SDV	Santo Domingo	61.96	231	LR	LR	16 33 47.4	
	comp=Z,398nm,20.9s,MS4.5,baz=176,slow=31						

CIT	Chita	61.98	27	*e*P	P	16 11 40.7	+0.7
CIT				*e*		16 12 18.2	
CIT				pmax	pmax		
	comp=Z,27nm,4.0s						
CIT	Chita	61.98	27	*e*P	P	16 11 40.7	+0.7
	comp=Z,27nm,4.0s						
CIT	Chita	61.98	27	*e*PcP	PcP	16 12 18.2	-2.2
WMQ	Urumqi	62.08	48	*e*P	P	16 11 40.0	-0.8
WMQ				AP	pP	16 11 44.6	+0.6
WMQ				XP	sP	16 11 47.0	+1.9
WMQ				PCP	PcP	16 12 19.8	-1.1
WMQ				*e*S	S	16 20 02.9	-1.1
WMQ				SCS	ScS	16 21 27.6	-1.6
WMQ				SS	SS	16 24 06.4	-2.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,4.2s						
WMQ				LR	LR		
	comp=Z,320nm,20.6s,MS4.5						
SONM	Songino Array	64.20	33	P	P	16 11 54.5	-0.1
	comp=Z,6.0nm,1.0s,mb4.6,baz=326,slow=3.6,SNR=36						
ULN	Ulaanbaatar	64.34	33	⇓*e*P	P	16 11 55.6	+0.1
ULN				pmax	pmax		
	comp=Z,48nm,1.6s,mb5.3						
ULN				MLR	MLR		
	comp=Z,120nm,19.0s,MS4.1						
ULN	Ulaanbaatar	64.34	33	⇓*e*P	P	16 11 55.6	+0.1
	comp=Z,48nm,1.6s,mb5.3						
ULN				LR	LR		
	comp=Z,120nm,19.0s,MS4.1						
ULN	Ulaanbaatar	64.34	33	⇓*e*P	P	16 11 55.6	+0.1
	comp=Z,48nm,1.6s,mb5.3						
HIA	Hailar	65.83	23	*e*P	P	16 12 05.4	+0.3
HIA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
HIA	Hailar	65.83	23	*e*P	P	16 12 05.4	+0.3
	comp=Z,2.7nm,0.4s,mb4.6						
HIA	Hailar	65.83	23	*e*P	P	16 12 05.4	+0.3
	comp=Z,2.7nm,0.4s,mb4.6						
ROSC	El Rosal	67.04	233	P	P	16 12 15.4	+2.0
	comp=Z,2.1nm,0.3s,mb4.6,baz=80,slow=23,SNR=8.5						
GTA	Gaotai	70.07	42	*e*P	P	16 12 31.9	+0.2
GTA				AP	pP	16 12 37.1	+2.3
GTA				XP	sP	16 12 40.8	+4.8
GTA				PP	PP	16 15 08.7	+0.1
GTA				PPP	PPP	16 16 49.1	+0.4
GTA				S	S	16 21 42.8	+1.7
GTA				XS		16 21 49.5	
GTA				PS	PS	16 22 08.1	-1.1
GTA				SKS	SKS	16 22 27.9	-5.6
GTA				SS	SS	16 26 14.9	+2.7
GTA				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.5						
GTA				AMB	AMB		
	comp=Z,60nm,7.6s						
GTA				LR	LR		
	comp=N,120nm,16.4s,MS4.4						
GTA				LR	LR		
	comp=E,130nm,17.1s,MS4.4						
GTA				LR	LR		
	comp=Z,240nm,15.6s,MS4.5						
BTO	Baotou	71.88	33	*e*P	P	16 12 41.5	-1.2
MDJ	Mudanjiang	71.98	18	P	P	16 12 39.1	-4.1
MDJ				AMB	AMB		
	comp=Z,50nm,4.3s						
HHC	Hu-ho-hao-te	72.05	32	*e*P	P	16 12 42.3	-1.4
HHC				AP	pP	16 12 46.3	-0.5
HHC				XP	sP	16 12 49.9	+2.0
HHC				PP	PP	16 15 26.9	+1.5
HHC				S	S	16 22 04.9	+0.9
HHC				XS		16 22 14.5	
HHC				PS	PS	16 22 37.3	+1.4
HHC				SKS	SKS	16 22 40.9	-7.3
HHC				SCS	ScS	16 22 45.7	-0.5
HHC				SS	SS	16 26 43.1	+0.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
HHC				AMB	AMB		
	comp=Z,40nm,10.3s						
HHC				LR	LR		
	comp=Z,130nm,14.4s,MS4.3						
OTAV	Otavalo	72.86	235	*e*P	P	16 12 49.4	+0.5
	comp=Z,18nm,1.4s,mb4.8						
OTAV	Otavalo	72.86	235	*e*P	P	16 12 49.3	+0.4
	comp=Z,18nm,1.4s,mb4.8						
KOLN	Koldanda	74.66	60	*e*P	P	16 12 59.2	+0.1
	comp=Z,36nm,1.4s,mb5.1						
GKN	Gorkha	74.87	59	*e*P	P	16 13 00.0	-0.3
	comp=Z,33nm,1.4s,mb5.1						
KKN	Kakani	75.32	58	*e*P	P	16 13 02.6	-0.3
	comp=Z,41nm,1.4s,mb5.2						
DMN	Daman	75.41	58	*e*P	P	16 13 03.8	+0.4
	comp=Z,33nm,1.2s,mb5.2						
GUN	Gumba	75.45	58	*e*P	P	16 13 04.3	+0.7
	comp=Z,34nm,1.1s,mb5.2						
PKI	Pulchoki	75.56	58	*e*P	P	16 13 04.9	+0.6
	comp=Z,92nm,1.9s,mb5.4						
XAN	Xi'an	77.75	37	P	P	16 13 15.5	-0.8
XAN				AP	pP	16 13 24.7	+5.2
BDFB	Brasilia	79.25	201	P	P	16 13 26.4	+1.5
	comp=Z,3.8nm,0.8s,mb4.4,baz=301,slow=4.6,SNR=4.0						
MJAR	Matsushiro Arr	81.00	12	P	P	16 13 33.5	-0.3
	comp=Z,1.1nm,0.5s,mb4.0,baz=346,slow=5.6,SNR=6.4						
MJAR	Matsushiro Arr	81.00	12	P	P	16 13 33.5	-0.3
NJ2	Nanjing	82.18	29	*e*P	P	16 13 43.2	+3.1
NJ2				AP	pP	16 13 48.5	+5.2
NJ2				XP	sP	16 13 50.9	+6.6
NJ2				PP	PP	16 16 52.0	+1.5
NJ2				S	S	16 23 59.0	+5.3
NJ2				LR	LR		
	comp=N,310nm,18.0s,MS4.7						
NJ2				LR	LR		
	comp=E,160nm,21.9s,MS4.7						
NJ2				LR	LR		
	comp=Z,140nm,24.7s,MS4.2						
WHN	Wuhan	82.52	33	*e*P	P	16 13 40.0	-1.9
SSE	Sheshan	83.62	27	P	P	16 13 46.3	-1.1
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,80nm,3.8s						
KMI	Kunming	84.17	45	P	P	16 13 50.5	+0.1
KMI				XP	sP	16 13 59.9	+5.3
GYA	Guiyang	84.19	41	⇓*i*P	P	16 13 51.1	+0.7
GYA				AP	pP	16 13 55.4	+1.8
GYA				XP	sP	16 13 58.6	+3.9
GYA				PP	PP	16 17 07.3	+0.7
GYA				S	S	16 24 14.1	+0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.0						
GYA				AMB	AMB		
	comp=Z,90nm,3.0s						
GYA				LR	LR		
	comp=Z,590nm,18.0s,MS5.0						
LPAZ	La Paz	84.66	220	P	P	16 13 53.6	+0.6
	comp=Z,0.6nm,0.8s,mb3.8,baz=40,slow=7.2,SNR=3.7						
CMAR	Chiang Mai Arr	89.00	51	P	P	16 14 14.7	+0.5
	comp=Z,4.5nm,1.0s,mb4.8,baz=323,slow=4.3,SNR=17						
MATP	Matopo	93.04	130	LR	LR	16 58 48.1	
	comp=Z,142nm,19.9s,MS4.4,baz=243,slow=37						
ASAR	Alice Springs	139.41	28	PKhKP		16 20 40.4	
	comp=Z,0.4nm,0.6s,baz=358,slow=3.4,SNR=4.5						
ASAR				PKP	PKPdf	16 20 48.0	-0.4
	comp=Z,0.9nm,0.9s,baz=351,slow=2.5,SNR=4.7						
ASAR	Alice Springs	139.41	28	PKP	PKPdf	16 20 48.0	-0.4
MAW	Mawson	144.38	139	PKP	PKPdf	16 20 53.1	-2.6
	comp=Z,7.2nm,1.0s,baz=84,slow=2.0,SNR=7.2						
STKA	Stephens Creek	148.87	20	PKPbc	PKPdf	16 21 09.3	+5.0
	comp=Z,2.1nm,0.9s,baz=21,slow=8.1,SNR=4.6						

IDC 07 16:15:57.1±4.0**, 18.73S**×**178.23E, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.7**/15**, mbtmp3.7**/4**, Error ellipse: s-maj=167.4km s-min=36.1km az=141.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.44	241	P	P	16 22 55.5	-1.6
	1.2nm,0.8s,baz=66,slow=10.0,SNR=4.1						
WRA	Warramunga Arr	41.34	261	P	P	16 23 44.7	-1.7
	0.5nm,1.0s,baz=96,slow=7.9,SNR=11						
ASAR	Alice Springs	41.49	255	P	P	16 23 46.0	-1.7
	0.8nm,0.5s,baz=91,slow=8.3,SNR=30						
ILAR	Eielson Array	87.43	14	P	P	16 28 45.9	-1.3
	0.4nm,0.7s,baz=225,slow=6.4,SNR=4.1						

*MOS **07** 16:19:57.5±0.8, 10.62S×74.32W, h90^{km}, mb5.4/68, MS4.1/4, Error ellipse: s-maj=7.4km s-min=4.9km az=89.7*

*CRAAG **07** 16:19:57.1, 10.61S×74.33W, Mb5.3*

*BJI **07** 16:20:01.4, 11.38S×73.38W, h128^{km}, mB5.2*

*IDC **07** 16:20:02.2±0.6, 10.66S×74.15W, h119^{km}±5^{km}, mb4.6/24, mb1 4.8/27, mb1mx4.8/30, mbtmp5.0/27, MS4.0/6, Ms1 4.0/6, ms1mx3.5/35, Error ellipse: s-maj=13.4km s-min=8.5km az=75.0*

*HRVD **07** 16:20:03.0±0.2, 10.67S×74.28W, h132^{km}±2^{km}, MW5.3/61, Centroid moment Tensor Solution. LP body waves: s44,c59;Mantle waves: s61,c113; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.07±.03; M$_{\theta\theta}$0.44±.03; M$_{\phi\phi}$-0.37±.03; M$_{r\theta}$-0.08±.02; M$_{\theta\phi}$-0.86±.02; M$_{\phi r}$-0.57±.02; Best double couple: M$_0$1.108×10^{17} NP1: ϕ_s80°, δ61°, λ-171°. NP2:ϕ_s346°, δ82°, λ-29°. Principal axes: T 1.04, Plg14°, Azm36°; N .136, Plg60°, Azm151°; P -1.176, Plg26°, Azm299°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **07** 16:20:03.0±0.1, 10.70S×74.24W, mb5.2/145 Error ellipse: s-maj=4.8km s-min=3.1km az=41.0*

NEIC Felt [III] at Satipo and [II] at Huancayo.

ISC 07 16:20:01.2±0.2**, 10.64S**±0.04×**74.30W**±0.03**, h121**^{km}**, h121**^{km}±2.9^{km}**:pP-P, n486,** σ**0**^{s}**93**/436**, mb5.2**/165**, 44C-86D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.83	241	⇑*i*P	P	16 20 45.1	-1.0
NNA				*e*S	S	16 21 15.1	-5.1
ARE	Arequipa	6.40	155	⇑*i*P	P	16 21 32.5	-1.8
ARE				*i*		16 21 48.8	
LPAZ	La Paz	8.22	134	⇓*i*P	P	16 21 57.3	-1.7
LPAZ				pmax	pmax		
	comp=Z,245nm,0.6s						
LPAZ	La Paz	8.22	134	P	P	16 21 57.4	-1.6
	comp=Z,20nm,0.3s,baz=325,slow=13,SNR=1089						
LPAZ				LR	LR	16 25 59.3	
	comp=Z,918nm,18.4s,baz=314,slow=44						
LPAZ	La Paz	8.22	134	⇓*i*P	P	16 21 57.3	-1.6
	comp=Z,245nm,0.6s						
SAML	Samuel	11.09	82	⇑*e*P	P	16 22 33.4	-3.9
	comp=Z,364nm,0.7s						
SAML				*e*S	S	16 24 30.5	-8.9
OTAV	Otavalo	11.56	339	*e*P	P	16 22 44.9	+1.3
	comp=Z,116nm,0.9s						
SIV	San Ignacio	13.93	114	P	P	16 23 11.6	-2.9
	comp=Z,13nm,0.3s,baz=289,slow=13,SNR=270						
ROSC	El Rosal	15.39	360	P	P	16 23 36.6	+3.5
	comp=Z,13nm,0.3s,baz=102,slow=11,SNR=36						
PAYG	Puerto Ayora	18.72	301	*e*P	P	16 24 12.8	-0.2
	comp=Z,574nm,1.4s						
TLL	Tololo Astrono	19.70	171	*e*P	P	16 24 20.4	-3.0
SDV	Santo Domingo	19.73	11	P	P	16 24 22.6	-1.2
	comp=Z,65nm,0.3s,baz=218,slow=9.8,SNR=317						
SDV				S	S	16 28 01.5	+7.0
	comp=Z,2.1nm,0.3s,baz=352,slow=15,SNR=3.8						
SDV	Santo Domingo	19.73	11	⇑*e*P	P	16 24 22.6	-1.2
	comp=Z,707nm,0.9s						
SDV				*e*S	S	16 27 59.5	+5.0
CFAA	Coronel Fontan	21.61	166	P	P	16 24 43.8	+1.2
	comp=Z,0.9nm,0.7s,baz=342,slow=10.0,SNR=14						
CPUP	Villa Florida	22.38	137	P	P	16 24 49.0	-1.2
CPUP				*PP		16 25 12.0	
CPUP				*SP		16 25 26.3	
CPUP				pmax	pmax		
	comp=Z,21nm,0.7s						
CPUP				pmax	pmax		
	comp=Z,54nm,0.9s						
CPUP				pmax	pmax		
	comp=Z,94nm,1.0s						
CPUP	Villa Florida	22.38	137	P	P	16 24 49.0	-1.1
	comp=Z,21nm,0.7s,mb4.6,baz=328,slow=13,SNR=42						
CPUP				pP		16 25 12.0	
	comp=Z,54nm,0.9s,baz=333,slow=13,SNR=11						
CPUP				sP		16 25 26.3	
	comp=Z,94nm,1.0s,baz=323,slow=14,SNR=8.3						
CPUP	Villa Florida	22.38	137	⇑*e*P	P	16 24 48.9	-1.3
	comp=Z,239nm,1.3s,mb5.4						
CPUP				*e*pP		16 25 11.9	
CPUP				*e*sP		16 25 26.2	
PCRV	Puerto La Cruz	22.80	25	P	P	16 24 54.4	-0.1
	comp=Z,64nm,0.5s,mb5.2,baz=190,slow=7.6,SNR=37						
FCH	Farellones	22.88	171	*i* P	P	16 24 56.8	+1.8
JATB	Jatai	23.24	111	*c i*P	P	16 24 57.9	-0.7
JATB				*i*		16 25 02.2	
JATB				*e*		16 25 08.1	
JATB				*i*		16 25 22.6	
JATB				*i*		16 25 28.3	
JATB				*i*		16 25 39.6	
JATB				*i*		16 25 49.9	
JATB				*i*		16 26 02.5	
JATB				*i*		16 26 10.2	
JATB				*e*		16 26 34.1	
JTS	JuntasAbangare	23.33	333	⇑*e*P	P	16 25 02.2	+2.6
JTS				pmax	pmax		
	comp=Z,70nm,1.0s						
JTS	JuntasAbangare	23.33	333	P	P	16 25 02.4	+2.9
	comp=Z,32nm,0.8s,mb4.7,baz=115,slow=3.4,SNR=18						
JTS				LR	LR	16 33 22.6	
	comp=Z,345nm,20.0s,baz=167,slow=34						
JTS	JuntasAbangare	23.33	333	⇑*e*P	P	16 25 02.2	+2.6
	comp=Z,70nm,1.0s,mb4.9						
TPP	Pointe-a-Pierr	24.43	32	*e*P	P	16 25 10.3	+0.2
TRN	Trinidad (W)	24.73	32	*e*P	P	16 25 13.5	+0.5
TPR	Prospect	25.51	32	*e*P	P	16 25 20.6	+0.3
GRW	Mount Saint Ca	25.90	29	*e*P	P	16 25 23.3	-0.6
GRHS	Sauteurs	25.96	29	*e*P	P	16 25 21.2	-3.3
BDFB	Brasilia	26.07	104	P	P	16 25 23.4	-2.1
	comp=Z,11nm,0.6s,mb4.5,baz=275,slow=9.5,SNR=15						
BDFB				pP	pP	16 25 50.4	-0.7
	comp=Z,153nm,0.9s,baz=270,slow=10,SNR=23						
BDFB				LR	LR	16 36 15.1	
	comp=Z,511nm,18.8s,baz=17,slow=38						
BAO	Brasilia Array	26.09	104	P	P	16 25 19.0	-6.6
BIM	Bigot	28.22	28	*e*P	P	16 25 40.4	-4.7
PCJ	Portland Cotta	28.34	354	⇑*i*P	P	16 25 53.3	+7.2
MVM	Montagne Vaucl	28.34	28	*e*P	P	16 25 41.8	-4.3
FDF	Fort de France	28.38	28	*e*P	P	16 25 42.1	-4.3
YHJ	Yallahs	28.43	356	⇓*i*P	P	16 25 53.5	+6.6
CRM	Caravelle	28.50	28	*e*P	P	16 25 42.9	-4.7
MCJ	Malvern	28.57	353	⇓*i*P	P	16 25 55.9	+7.7
GWJ	Greenwich	28.63	355	⇓*i*P	P	16 25 55.2	+6.5
STH	Stony Hill	28.64	355	⇑*e*P	P	16 25 54.6	+5.8
BBJ	Bamboo Saint A	28.98	354	⇑*i*P	P	16 25 59.0	+7.2
SJG	San Juan	29.68	16	P	P	16 25 56.1	-1.9
SJG				S	S	16 30 44.0	+0.6
SJG				pmax	pmax		
	comp=Z,111nm,0.6s						
SJG				smax			
	comp=N,9.0nm,0.3s						
SJG	San Juan	29.68	16	P	P	16 25 56.1	-1.9
	comp=N,110nm,0.6s,mb5.7,baz=183,slow=2.9,SNR=37						
SJG				S	S	16 30 44.0	+0.6
	comp=N,9.0nm,0.3s,baz=318,slow=21,SNR=5.8						
SJG	San Juan	29.68	16	*e*P	P	16 25 56.0	-2.0
	comp=N,249nm,1.0s,mb5.8						
BPA	Boggy Peak	30.13	24	*e*P	P	16 25 59.8	-2.3
PLCA	Paso Flores	30.16	174	P	P	16 26 00.1	-2.0
	comp=N,7.4nm,1.1s,mb4.2,baz=340,slow=12,SNR=6.9						
CPB	Codrington	30.68	24	*e*P	P	16 26 04.0	-2.9
CPB	Codrington	30.68	24	*e*P	P	16 26 04.7	-2.2
CCIG	Comitan	32.04	326	*i* P	P	16 26 19.4	+0.6
TEIG	Tepich	33.61	336	*i* P	P	16 26 33.0	+0.7
CMIG	Matias Romero	34.25	323	*e*P	P	16 26 38.5	+0.8
VHO	Vista Hermosa	35.35	321	*i* P	P	16 26 49.3	+2.2
OXX	Oaxaca	35.35	321	*i* P	P	16 26 50.0	+2.9
CS6B	Jaguaretama	35.63	85	⇓*i*P	P	16 26 46.6	-2.8
CS6B				*i*		16 26 47.7	
CS6B				*i*		16 26 48.2	
CS6B				*i*		16 26 49.1	
CS6B				*e*		16 26 54.3	
CS6B				*e*		16 37 46.1	
CAUB	Caruaru	37.84	90	*c i*P	P	16 27 06.6	-1.4
CAUB				*e*		16 27 10.4	
PPM	Popocatepetl	38.03	321	*i* P	P	16 27 12.0	+2.4
DWPF	Disney	39.13	350	⇓*e*P	P	16 27 19.1	+0.5
	comp=N,256nm,0.9s,mb6.0						
DWPF				*i*		16 27 26.5	
SFJM	Santa Fe	41.90	318	*i* P	P	16 27 42.5	+1.0
ZAIG	Zacatecas	43.23	320	*i* P	P	16 27 54.4	+2.1
CSU	Charleston Sou	43.72	353	P	P	16 27 55.7	-0.5
CSU				*i*		16 28 03.8	
BBSR	BB Station	43.74	12	*e*P	P	16 27 55.5	-0.8
	comp=N,88nm,0.8s,mb5.5						
TWB	Tillmans-White	43.85	353	*e*P	P	16 27 57.6	+0.4
TWB				*i*		16 28 05.1	
NHSC	New Hope	43.86	353	⇑*e*P	P	16 27 58.0	+0.7
	comp=N,430nm,0.9s,mb6.2						
NHSC				*i*		16 28 04.9	
COW	Cow Castle Cre	44.19	352	P	P	16 27 59.4	-0.5
COW				*e*		16 28 07.5	
GOGA	Godfrey	44.66	349	*e*P	P	16 28 03.7	0.0
GOGA				pmax	pmax		
	comp=Z,89nm,1.0s,mb5.5						
GOGA	Godfrey	44.66	349	*e*P	P	16 28 03.7	-0.1
	comp=Z,89nm,1.0s,mb5.5						
GOGA				*i*		16 28 12.5	
LRAL	Lakeview Retre	45.08	345	⇓*e*P	P	16 28 05.7	-1.4
	comp=Z,48nm,1.0s,mb5.2						
LRAL				*e*		16 28 16.3	
NATX	Nacogdoches	46.45	336	*e*P	P	16 28 18.6	+0.7
CPCT	Cooper Cave	46.84	349	⇓*e*P	P	16 28 19.5	-1.4
CPCT				*i*		16 28 29.0	
SWET	Sewanee	46.91	347	*e*P	P	16 28 20.3	-1.1
SWET				*i*		16 28 30.4	
OXF	Oxford	47.13	343	⇓*e*P	P	16 28 21.0	-2.2
OXF				pmax	pmax		
	comp=Z,112nm,1.1s,mb5.5						
OXF	Oxford	47.13	343	⇓*e*P	P	16 28 21.0	-2.2
	comp=Z,112nm,1.1s,mb5.5						
OXF				*e*		16 28 32.7	
PLAL	Pickwick Lake	47.21	345	⇓*e*P	P	16 28 21.6	-2.2
	comp=Z,53nm,0.9s,mb5.3						
PLAL				*i*		16 28 32.2	
JCT	Junction City	47.67	330	⇓*i*P	P	16 28 27.4	0.0
JCT				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
JCT	Junction City	47.67	330	⇓*i*P	P	16 28 27.4	0.0
	comp=Z,16nm,0.9s,mb4.8						
TZTN	Tazewell	47.73	350	*e*P	P	16 28 26.9	-0.9
TZTN				*i*		16 28 35.2	
MET	Memphis--Engin	47.85	343	P	P	16 28 27.8	-1.0
BLA	Blacksburg	47.94	353	*e*P	P	16 28 29.4	-0.1
BLA				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.5						
BLA	Blacksburg	47.94	353	*e*P	P	16 28 29.4	0.0
	comp=Z,70nm,0.9s,mb5.5						
BLA				*e*		16 28 37.0	
ELN	Prospectdale	47.99	353	*e*P	P	16 28 30.1	+0.2
WVT	Waverly	48.23	345	⇓*e*P	P	16 28 29.3	-2.4
WVT				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.3						
WVT	Waverly	48.23	345	⇓*e*P	P	16 28 29.3	-2.4
	comp=Z,46nm,0.9s,mb5.3						
WVT				*e*		16 28 39.4	
UALR	University of	48.29	340	⇓*e*P	P	16 28 30.7	-1.6
	comp=Z,88nm,1.0s,mb5.5						
FWV	Forest Hill	48.35	353	*e*P	P	16 28 32.3	-0.3
FWV				*e*		16 28 39.3	
GNAR	Gosnell	48.66	343	P	P	16 28 34.0	-1.1
CBN	Corbin	48.67	357	P	P	16 28 36.4	+1.3
	comp=Z,79nm,0.6s,mb5.8						
CBN				*e*		16 28 41.2	
LTX	Lajitas	48.80	325	⇓*i*P	P	16 28 36.3	+0.1
LTX				pmax	pmax		
	comp=Z,53nm,1.2s,mb5.3						
LTX	Lajitas	48.80	325	⇓*i*P	P	16 28 36.3	+0.1
	comp=Z,53nm,1.2s,mb5.3						
TXAR	Lajitas Array	48.80	325	P	P	16 28 35.8	-0.4
	comp=Z,18nm,0.7s,mb5.1,baz=147,slow=9.1,SNR=124						
SDMD	Soldier's Deli	49.84	357	*e*P	P	16 28 44.6	+0.5
WCI	Wyandotte Cave	49.89	348	*e*P	P	16 28 42.7	-1.7
WCI				pmax	pmax		
	comp=Z,146nm,0.9s,mb5.9						
WCI	Wyandotte Cave	49.89	348	*e*P	P	16 28 42.7	-1.7
	comp=Z,146nm,0.9s,mb5.9						
WCI				*e*		16 28 52.2	
MCWV	Mont Chateau	50.30	354	*e*P	P	16 28 47.4	-0.2
	comp=Z,100nm,0.9s,mb5.8						
MCWV				*e*		16 28 54.4	
FVM	French Village	50.66	344	⇓*e*P	P	16 28 48.4	-2.0
FVM				pmax	pmax		
	comp=Z,118nm,0.8s,mb6.0						
FVM	French Village	50.66	344	⇓*e*P	P	16 28 48.4	-1.9
	comp=Z,118nm,0.8s,mb6.0						
FVM				*e*		16 28 59.5	
WMOK	Wichita Mounta	50.74	334	⇓*i*P	P	16 28 49.9	-1.1
WMOK				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
WMOK	Wichita Mounta	50.74	334	⇓*i*P	P	16 28 49.9	-1.1
	comp=Z,12nm,0.8s,mb5.0						
BLO	Bloomington	50.84	348	*e*P	P	16 28 50.2	-1.5
BLO				pmax	pmax		
	comp=Z,217nm,0.8s,mb6.2						
BLO	Bloomington	50.84	348	*e*P	P	16 28 50.2	-1.5
	comp=Z,217nm,0.8s,mb6.2						
BLO				*e*		16 28 59.4	
SLM	Saint Louis	51.22	344	*e*P	P	16 28 53.3	-1.3
SLM				pmax	pmax		
	comp=Z,130nm,0.9s,mb6.0						
SLM	Saint Louis	51.22	344	*e*P	P	16 28 53.2	-1.3
	comp=Z,130nm,0.9s,mb6.0						
SLM				*e*		16 29 03.8	
ACSO	Alum Creek Sta	51.24	351	*e*P	P	16 28 53.3	-1.4
	comp=Z,54nm,1.0s,mb5.5						
ACSO				*e*		16 29 01.5	
PAL	Palisades	51.38	0	*e*P	P	16 28 53.6	-2.1
PAL				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.5						
PAL	Palisades	51.38	0	*e*P	P	16 28 53.6	-2.1
	comp=Z,53nm,1.0s,mb5.5						
GDL2	Guadalupe Moun	51.38	327	*e*P	P	16 28 55.8	0.0
MNTX	Cornudas Mount	51.55	326	⇓*i*P	P	16 28 56.0	-1.2
	comp=Z,40nm,1.3s,mb5.3						
CPRX	Cap Rock	51.77	328	*e*P	P	16 28 58.8	0.0
BRYW	Bryant College	52.35	3	*e*P	P	16 29 02.7	-0.3
	comp=Z,134nm,0.9s,mb6.0						
BRYW				*e*		16 29 06.9	
BINY	Binghamton	52.60	358	*e*P	P	16 29 05.5	+0.7
	comp=Z,87nm,0.8s,mb5.8						
BINY				*e*		16 29 09.7	
HRV	Harvard--Oak R	52.94	3	*e*P	P	16 29 06.7	-0.7
HRV				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.4						
HRV	Harvard--Oak R	52.94	3	*e*P	P	16 29 06.7	-0.7
	comp=Z,35nm,0.8s,mb5.4						
GENY	Geneseo	53.24	357	*e*P	P	16 29 09.2	-0.3
KSU1	Kansas State U	53.67	338	*e*P	P	16 29 11.7	-1.1
KSU1				*e*		16 29 24.9	
ACCN	Adirondack Com	53.76	1	P	P	16 29 14.2	+0.9
ACCN				*e*		16 29 17.9	
BNM	Barren Site	54.09	327	*e*P	P	16 29 15.3	-0.6
NCB	Newcomb	54.34	0	P	P	16 29 17.7	+0.1
	comp=Z,26nm,1.0s,mb5.2						
NCB				*e*		16 29 21.8	
MIV	Mineville/With	54.45	1	*e*P	P	16 29 18.4	0.0
LAZ	Ladron	54.56	327	*e*P	P	16 29 19.4	+0.1
CBKS	Cedar Bluff	54.61	336	*e*P	P	16 29 19.2	-0.4
CBKS				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.5						
CBKS	Cedar Bluff	54.61	336	*e*P	P	16 29 19.2	-0.4
	comp=Z,46nm,1.0s,mb5.5						
CBKS				*e*		16 29 34.2	
ANMO	Albuquerque	54.62	328	P	P	16 29 19.7	0.0
ANMO				pmax	pmax		
	comp=Z,11nm,0.8s						
ANMO	Albuquerque	54.62	328	P	P	16 29 19.6	-0.1
	comp=Z,11nm,0.8s,mb4.9,baz=138,slow=7.8,SNR=31						
ANMO	Albuquerque	54.62	328	*e*P	P	16 29 19.6	-0.1
	comp=Z,28nm,1.3s,mb5.1						
TUC	Tucson	55.13	322	*e*P	P	16 29 23.2	-0.3
TUC				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
TUC	Tucson	55.13	322	*e*P	P	16 29 23.2	-0.3
	comp=Z,18nm,1.1s,mb5.0						
FRNY	Flat Rock	55.21	1	*e*P	P	16 29 23.5	-0.4
MSNY	Massena	55.37	360	*e*P	P	16 29 25.4	+0.3
SDCO	Great Sand Dun	56.30	330	*e*P	P	16 29 31.5	-0.3
	comp=Z,76nm,1.2s,mb5.6						
SDCO				*e*sP	sP	16 30 14.0	-0.1
WUAZ	Wupatki	57.74	324	⇓*i*P	P	16 29 42.0	+0.1
	comp=Z,117nm,1.0s,mb5.9						
RW3	Ridgway	57.78	329	*e*P	P	16 29 42.4	+0.2
ISCO	Idaho Springs	57.99	332	⇓*e*P	P	16 29 43.4	-0.2

ISCO				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.2						
ISCO	**Idaho Springs**	**57.99**	**332**	⇓*e*P	**P**	**16 29 43.4**	**-0.2**
	comp=Z,28nm,1.2s,mb5.2						
ISCO				*e*sP	sP	16 30 25.0	-1.0
PV01	**Paradox Valley**	**58.14**	**328**	P	**P**	**16 29 44.9**	**+0.2**
RKT	**Rikitea**	**59.01**	**249**	*e*S	Sx	16 37 23.7	
	comp=Z,300nm,25.5s						
RKT				*e*LQ		16 44 38.4	
	comp=Z,392nm,31.5s						
RKT				*e*LR	LR	16 45 46.9	
	comp=Z,171nm,32.0s						
PFO	**Pinyon Flat Ob**	**59.52**	**319**	⇓*e*P	**P**	**16 29 54.4**	**+0.1**
PFO				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.4						
PFO	**Pinyon Flat Ob**	**59.52**	**319**	⇓*e*P	**P**	**16 29 54.4**	**+0.1**
	comp=Z,43nm,1.1s,mb5.4						
LDFC	**Landfair**	**59.64**	**322**	⇓*e*P	**P**	**16 29 55.7**	**+0.6**
NEN	**Nelson**	**59.87**	**322**	⇓*e*P	**P**	**16 29 56.4**	**-0.3**
EYMN	**Ely**	**60.29**	**347**	⇓*e*P	**P**	**16 29 57.2**	**-2.2**
	comp=Z,55nm,1.0s,mb5.5						
EYMN				*e*		16 30 06.8	
EYMN				*e*pP	pP	16 30 28.2	-0.5
MSU	**Marysvale**	**60.33**	**326**	*e*P	**P**	**16 29 59.6**	**-0.2**
ARUT	**Antelope Range**	**60.51**	**325**	*e*P	**P**	**16 30 01.5**	**+0.5**
RSSD	**Black Hills**	**60.82**	**336**	⇓*e*P	**P**	**16 30 02.3**	**-0.7**
RSSD				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
RSSD	**Black Hills**	**60.82**	**336**	⇓*e*P	**P**	**16 30 02.3**	**-0.8**
	comp=Z,40nm,1.2s,mb5.3						
RSSD				*e*		16 30 17.6	
MPU	**Maple Canyon**	**61.13**	**328**	⇓*e*P	**P**	**16 30 04.9**	**-0.3**
DAU	**Daniels Canyon**	**61.22**	**328**	*e*P	**P**	**16 30 05.9**	**+0.1**
NLU	**North Lily Min**	**61.31**	**328**	⇓*e*P	**P**	**16 30 06.8**	**+0.3**
JLU	**Jordanelle**	**61.46**	**328**	⇓*i*P	**P**	**16 30 07.3**	**-0.1**
CTU	**Camp Tracy**	**61.68**	**328**	⇓*e*P	**P**	**16 30 08.4**	**-0.5**
DUG	**Dugway**	**61.88**	**327**	⇓*e*P	**P**	**16 30 10.4**	**+0.2**
DUG				pmax	pmax		
	comp=Z,90nm,1.1s,mb5.7						
DUG	**Dugway**	**61.88**	**327**	⇓*e*P	**P**	**16 30 10.4**	**+0.2**
	comp=Z,90nm,1.1s,mb5.7						
TRCR	**Troy Canyon**	**62.13**	**324**	⇓*i*P	**P**	**16 30 12.4**	**+0.5**
BW06	**Boulder Array**	**62.16**	**331**	⇓*e*P	**P**	**16 30 11.0**	**-1.1**
	comp=Z,29nm,1.2s,mb5.2						
PDAR	**Pinedale Array**	**62.16**	**331**	P	**P**	**16 30 11.2**	**-0.9**
	comp=Z,14nm,1.1s,mb4.9,baz=143,slow=7.4,SNR=50						
PDAR				LR	LR	16 58 23.6	
	comp=Z,69nm,18.1s,baz=313,slow=37						
BGU	**Big Grassy Mou**	**62.52**	**328**	⇓*e*P	**P**	**16 30 13.9**	**-0.5**
TPH	**Tonopah**	**62.90**	**323**	⇓*e*P	**P**	**16 30 17.2**	**+0.2**
TPH				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2						
TPH	**Tonopah**	**62.90**	**323**	⇓*e*P	**P**	**16 30 17.2**	**+0.1**
	comp=Z,33nm,1.1s,mb5.2						
HVU	**Hansel Valley**	**63.00**	**329**	⇓*i*P	**P**	**16 30 16.7**	**-1.0**
MTUM	**Tungsten Hills**	**63.24**	**321**	*e*P	**P**	**16 30 19.5**	**+0.2**
SNOW	**Snow King Moun**	**63.25**	**331**	⇓*e*P	**P**	**16 30 19.0**	**-0.3**
	comp=Z,12nm,0.8s,mb4.9						
WUWY	**Wally Ulrich**	**63.30**	**331**	*e*P	**P**	**16 30 18.9**	**-0.7**
TPAW	**Teton Pass**	**63.37**	**331**	⇓*e*P	**P**	**16 30 19.3**	**-0.7**
	comp=Z,16nm,0.9s,mb4.9						
RRI2	**Red Ridge**	**63.44**	**331**	⇓*i*P	**P**	**16 30 19.9**	**-0.5**
	comp=Z,73nm,0.9s,mb5.6						
MOOW	**Moose Ponds**	**63.47**	**331**	⇓*i*P	**P**	**16 30 19.8**	**-0.9**
	comp=Z,16nm,1.1s,mb4.9						
MOOW				*e*PP	PP	16 32 43.7	+0.6
ELK	**Elko**	**63.58**	**326**	⇓*e*P	**P**	**16 30 21.1**	**-0.4**
ELK				pmax	pmax		
	comp=Z,27nm,1.1s						
ELK	**Elko**	**63.58**	**326**	⇓*e*P	**P**	**16 30 21.1**	**-0.4**
	comp=Z,27nm,1.1s,mb5.0						
IMW	**Indian Meadow**	**63.67**	**331**	⇓*i*P	**P**	**16 30 21.5**	**-0.5**
	comp=Z,47nm,1.2s,mb5.2						
OMM	**Old Mammoth Mi**	**63.67**	**321**	⇓*e*P	**P**	**16 30 22.7**	**+0.5**
MNV	**Mina**	**63.69**	**323**	⇓*e*P	**P**	**16 30 22.4**	**+0.2**
MNV				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.9						
MNV	**Mina**	**63.69**	**323**	⇓*e*P	**P**	**16 30 22.4**	**+0.2**
	comp=Z,22nm,1.1s,mb4.9						
NVAR	**Mina Array Bea**	**63.78**	**323**	P	**P**	**16 30 22.1**	**-0.7**
	comp=Z,12nm,0.9s,mb4.7,baz=134,slow=7.8,SNR=77						
LAO	**LASA Array**	**63.81**	**336**	⇓*i*P	**P**	**16 30 21.8**	**-1.0**
	comp=Z,22nm,1.0s,mb5.0						
YFT	**Old Faithful**	**64.04**	**332**	*e*P	**P**	**16 30 25.3**	**+0.9**
YNR	**Norris Junctio**	**64.17**	**332**	⇓*e*P	**P**	**16 30 25.6**	**+0.4**
LRV	**Little Rabbit**	**64.20**	**319**	*e*P	**P**	**16 30 26.4**	**+0.8**
YMR	**Madison River**	**64.27**	**332**	*e*P	**P**	**16 30 26.4**	**+0.5**
GCMT	**Greycliff**	**64.54**	**333**	*e*P	**P**	**16 30 27.3**	**-0.4**
CMB	**Columbia Colle**	**64.79**	**321**	⇓*e*P	**P**	**16 30 29.0**	**-0.4**
CMB				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.8						
CMB	**Columbia Colle**	**64.79**	**321**	⇓*e*P	**P**	**16 30 28.9**	**-0.5**
	comp=Z,16nm,1.1s,mb4.8						
HLID	**Hailey**	**65.13**	**329**	⇓*e*P	**P**	**16 30 31.4**	**-0.1**
	comp=Z,36nm,1.4s,mb5.0						
HLID				*e*		16 30 48.9	
WCN	**Washoe City**	**65.20**	**322**	⇓*i*P	**P**	**16 30 32.7**	**+0.6**
WCN				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.2						
WCN	**Washoe City**	**65.20**	**322**	⇓*i*P	**P**	**16 30 32.7**	**+0.6**
	comp=Z,48nm,1.1s,mb5.2						
PAHR	**Pah Rah Range**	**65.24**	**323**	⇓*e*P	**P**	**16 30 32.8**	**+0.6**
	comp=Z,37nm,1.0s,mb5.2						
MCMT	**McKenzie Canyo**	**65.27**	**331**	*e*P	**P**	**16 30 32.4**	**0.0**
BOZ	**Bozeman (W)**	**65.31**	**332**	*e*P	**P**	**16 30 31.2**	**-1.4**
BOZ				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
BOZ	**Bozeman (W)**	**65.31**	**332**	*e*P	**P**	**16 30 31.2**	**-1.5**
	comp=Z,28nm,1.0s,mb5.0						
SCHQ	**Schefferville**	**65.52**	**5**	P	**P**	**16 30 32.5**	**-1.4**
	comp=Z,14nm,0.8s,mb4.8,baz=179,slow=6.3,SNR=12						
HRY	**Holter Researc**	**66.21**	**333**	*e*P	**P**	**16 30 37.7**	**-0.6**
CHIE	**El Hierro**	**66.54**	**54**	P	**P**	**16 30 40.2**	**-0.5**
	comp=Z,4.2nm,0.4s,mb4.6						
WVOR	**Wild Horse Val**	**66.59**	**326**	⇓*e*P	**P**	**16 30 40.1**	**-0.7**
WVOR				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.1						
WVOR	**Wild Horse Val**	**66.59**	**326**	⇓*e*P	**P**	**16 30 40.0**	**-0.8**
	comp=Z,36nm,1.2s,mb5.1						
CHMT	**Chamberlain Mo**	**67.01**	**332**	*e*P	**P**	**16 30 42.8**	**-0.5**
MOD	**Modoc**	**67.18**	**324**	⇓*i*P	**P**	**16 30 44.7**	**+0.2**
	comp=Z,51nm,0.8s,mb5.4						
MOD				*e*sP	sP	16 31 27.4	-0.1
MSO	**Missoula**	**67.26**	**332**	⇓*i*P	**P**	**16 30 45.0**	**+0.1**
	comp=Z,45nm,1.1s,mb5.2						
EGOM	**La Gomera**	**67.33**	**53**	P	**P**	**16 30 45.0**	**-0.7**
	comp=Z,12nm,0.7s,mb4.8						
BMO	**Blue Mountains**	**67.51**	**328**	⇓*e*P	**P**	**16 30 45.6**	**-0.9**
BMO				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
BMO	**Blue Mountains**	**67.51**	**328**	⇓*e*P	**P**	**16 30 45.6**	**-0.9**
	comp=Z,9.2nm,0.9s,mb4.6						
WDC	**Whiskeytown Da**	**67.67**	**322**	⇓*e*P	**P**	**16 30 45.7**	**-1.9**
WDC				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
WDC	**Whiskeytown Da**	**67.67**	**322**	⇓*e*P	**P**	**16 30 45.7**	**-1.9**
	comp=Z,12nm,0.8s,mb4.8						
YBH	**Yreka Blue Hor**	**68.48**	**323**	⇓*e*P	**P**	**16 30 51.4**	**-1.1**
YBH				pmax	pmax		
	comp=Z,18nm,0.9s						
YBH	**Yreka Blue Hor**	**68.48**	**323**	⇓*e*P	**P**	**16 30 51.4**	**-1.1**
	comp=Z,18nm,0.9s,mb4.9						
KHMM	**Horse Mountain**	**68.57**	**322**	⇓*e*P	**P**	**16 30 53.9**	**+0.7**
HUMO	**Hull Mountain**	**69.16**	**324**	P	**P**	**16 30 56.0**	**-0.7**
	comp=Z,8.2nm,0.9s,mb4.6						
FFC	**Flin Flon**	**69.17**	**343**	⇓*e*P	**P**	**16 30 55.3**	**-1.2**
FFC				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
FFC	**Flin Flon**	**69.17**	**343**	⇓*e*P	**P**	**16 30 55.3**	**-1.2**
	comp=Z,30nm,1.0s,mb5.1						
FFC				*i*		16 31 07.9	
CROR	**Criterion Ridg**	**69.55**	**327**	P	**P**	**16 31 00.2**	**+1.1**
IRO	**Indian Ridge**	**69.62**	**325**	P	**P**	**16 30 60.0**	**+0.4**
FRIS	**Frissel Point**	**69.67**	**325**	P	**P**	**16 31 00.6**	**+0.8**
HAWA	**Hanford**	**69.71**	**328**	⇓*e*P	**P**	**16 31 00.1**	**+0.1**
	comp=Z,3.4nm,1.2s						
GBL	**Gable Mountain**	**69.81**	**329**	P	**P**	**16 31 01.3**	**+0.7**
OD2	**Odessa Site #2**	**69.96**	**330**	P	**P**	**16 31 02.3**	**+0.8**
EFAM	**Famara**	**70.66**	**54**	P	**P**	**16 31 07.8**	**+1.7**
	comp=Z,68nm,1.1s,mb5.4						
TBM	**Table Mountain**	**70.77**	**329**	P	**P**	**16 31 07.6**	**+1.3**
WTV	**Waterville**	**70.79**	**329**	P	**P**	**16 31 07.5**	**+1.0**
LVP	**Lakeview Peak**	**71.01**	**327**	P	**P**	**16 31 08.6**	**+0.8**
DBIC	**Dimbokro**	**71.24**	**79**	⇑*e*P	**P**	**16 31 07.5**	**-2.2**
DBIC				*e**PP	pP	16 31 37.7	-2.2
DBIC				pmax	pmax		
	comp=Z,67nm,1.1s						
DBIC	**Dimbokro**	**71.24**	**79**	P	**P**	**16 31 07.7**	**-2.0**
	comp=Z,49nm,1.0s,mb5.3,baz=236,slow=5.5,SNR=40						
DBIC				LR	LR	17 01 24.5	
	comp=Z,79nm,20.5s,baz=121,slow=35						
DBIC	**Dimbokro**	**71.24**	**79**	⇑*e*P	**P**	**16 31 07.5**	**-2.2**
	comp=Z,67nm,1.1s,mb5.4						
DBIC				*e*pP	pP	16 31 37.7	-2.2
KMOR	**Kings Mountain**	**71.33**	**326**	P	**P**	**16 31 11.1**	**+1.4**
RMW	**Rattlesnake Mo**	**71.58**	**328**	P	**P**	**16 31 11.5**	**+0.3**
VNA3	**Neumayer Olymp**	**71.95**	**162**		PcP	16 31 31.8	+0.6
VNA3	**Neumayer Olymp**	**71.95**	**162**	⇑*i*	pP	16 31 43.0	-0.3
VNA3	**Neumayer Olymp**	**71.95**	**162**	⇑*i*	Px	16 31 55.4	
VNA3	**Neumayer Olymp**	**71.95**	**162**	⇑*i*P	**P**	**16 31 13.1**	**+0.1**
VNA3				P		16 31 31.8	
VNA1	**Neumayer--Stat**	**72.18**	**161**	⇓*i*	PcP	16 31 31.8	-0.3
VNA1	**Neumayer--Stat**	**72.18**	**161**	⇑*i*	pP	16 31 44.8	+0.2
VNA1	**Neumayer--Stat**	**72.18**	**161**	⇑*i*P	**P**	**16 31 15.8**	**+1.4**
VNA1				⇓*i*P		16 31 31.8	
TBI	**Tubuai**	**72.32**	**249**	*e*LR	LR	16 53 40.7	
	comp=Z,246nm,45.0s,baz=66						
VNA2	**Neumayer--Watz**	**72.55**	**162**	⇑*i*	PcP	16 31 33.0	-0.6
VNA2	**Neumayer--Watz**	**72.55**	**162**	⇑*i*	pP	16 31 46.3	-0.4
VNA2	**Neumayer--Watz**	**72.55**	**162**		Px	16 31 58.8	
VNA2	**Neumayer--Watz**	**72.55**	**162**	⇓*i*P	**P**	**16 31 16.9**	**+0.4**
VNA2				⇑*i*P		16 31 33.0	
OSD	**Olympics--Snow**	**72.80**	**328**	P	**P**	**16 31 20.2**	**+1.8**
PPT	**Papeete**	**72.94**	**255**	*e*S	S	16 40 39.2	+4.2
	comp=Z,362nm,21.0s						
PPT				*e*LQ		16 51 02.2	
	comp=Z,287nm,20.8s						
PPT				*e*LR	LR	16 52 42.9	
	comp=Z,173nm,26.5s,baz=53						
OOW	**Octopus West**	**73.01**	**327**	P	**P**	**16 31 21.4**	**+1.9**
OCWA	**Octopus Mounta**	**73.01**	**327**	⇓*e*P	**P**	**16 31 20.9**	**+1.3**
	comp=Z,53nm,1.0s,mb5.3						
SNAA	**Sanae**	**74.17**	**162**	⇑*i*	pP	16 31 54.8	-1.5
SNAA	**Sanae**	**74.17**	**162**		Px	16 32 08.3	
SNAA	**Sanae**	**74.17**	**162**	P	**P**	**16 31 24.8**	**-1.1**
	comp=Z,4.4nm,1.0s,mb4.1,baz=302,slow=4.4,SNR=24						
SNAA				pP	pP	16 31 53.9	-2.4
	comp=Z,12nm,1.0s,baz=280,slow=4.6,SNR=13						
SNAA	**Sanae**	**74.17**	**162**	⇓*i*P	**P**	**16 31 25.2**	**-0.7**
SNAA				⇑*i*P	pP	16 31 54.8	-1.5
FRB	**Frobisher Bay**	**74.29**	**3**	P	**P**	**16 31 25.2**	**-1.5**
	comp=Z,11nm,0.6s,mb4.8,baz=220,slow=6.2,SNR=19						
PBEJ	**Beja**	**78.59**	**48**	*e*P	**P**	**16 31 51.6**	**+0.3**
	comp=Z,22nm,2.1s,mb4.6						
EGRO	**El Granado**	**78.68**	**48**	P	**P**	**16 31 52.9**	**+1.1**
	comp=Z,11nm,0.5s,mb4.9						
PTOM	**Tomar**	**78.83**	**46**	*e*P	**P**	**16 31 52.9**	**+0.3**
	comp=Z,56nm,1.1s,mb5.3						
YKA	**Yellowknife Ar**	**79.30**	**342**	P	**P**	**16 31 53.9**	**-0.7**
	comp=Z,26nm,0.9s,mb5.1,baz=136,slow=6.0,SNR=80						
EMIN	**Mina Concepcio**	**79.36**	**48**	P	**P**	**16 31 56.2**	**+0.7**
	comp=Z,11nm,0.7s,mb4.8						
QSPA	**South Pole Qui**	**79.49**	**180**	*e*P	**P**	**16 31 56.4**	**+1.0**
	comp=Z,24nm,1.1s,mb4.9						
EBAD	**Badajoz**	**79.49**	**47**	P	**P**	**16 31 58.0**	**+1.9**
	comp=Z,6.5nm,0.5s,mb4.7						
PCBR	**Castelo Branco**	**79.58**	**46**	*e*P	**P**	**16 31 56.8**	**+0.2**
	comp=Z,30nm,1.9s,mb4.8						
ESPR	**Espera**	**79.63**	**49**	P	**P**	**16 31 58.0**	**+1.1**
	comp=Z,14nm,0.7s,mb4.9						
PVIS	**Viseu**	**79.64**	**45**	*e*P	**P**	**16 31 57.0**	**+0.1**
	comp=Z,30nm,0.9s,mb5.1						
MTE	**Manteigas**	**79.75**	**45**	*e*P	**P**	**16 31 57.9**	**+0.3**
	comp=Z,36nm,0.7s,mb5.3						
MTE	**Manteigas**	**79.75**	**45**	⇑*e*P	**P**	**16 31 57.2**	**-0.3**
	comp=Z,19nm,0.6s,mb5.1						
EMAZ	**Mazaricos**	**79.82**	**43**	P	**P**	**16 31 57.2**	**-0.6**
	comp=Z,1.7nm,0.5s,mb4.1						
PVRL	**Vila Real**	**79.98**	**45**	*e*P	**P**	**16 31 58.9**	**+0.1**
	comp=Z,44nm,1.1s,mb5.2						
EMIJ	**Mijas**	**80.33**	**50**	P	**P**	**16 32 01.2**	**+0.5**
	comp=Z,19nm,0.8s,mb5.0						
ECAB	**El Cabril**	**80.39**	**48**	P	**P**	**16 32 03.1**	**+2.1**
	comp=Z,7.7nm,1.0s,mb4.5						
ERUA	**La Rua**	**80.82**	**44**	P	**P**	**16 32 03.8**	**+0.6**
ERUA				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.0						
ERUA	**La Rua**	**80.82**	**44**	P	**P**	**16 32 03.8**	**+0.6**
	comp=Z,22nm,0.8s,mb5.0						
ECAL	**Calabor**	**80.92**	**44**	P	**P**	**16 32 04.3**	**+0.5**
	comp=Z,26nm,1.0s,mb5.0						
ELOJ	**Sierra Loja**	**81.00**	**50**	P	**P**	**16 32 05.8**	**+1.6**
ELOJ				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.1						
ELOJ	**Sierra Loja**	**81.00**	**50**	P	**P**	**16 32 05.8**	**+1.5**
	comp=Z,30nm,0.9s,mb5.1						
EADA	**Adamuz**	**81.05**	**48**	P	**P**	**16 32 04.9**	**+0.4**
	comp=Z,17nm,0.9s,mb4.9						
ELUQ	**Luque**	**81.06**	**49**	P	**P**	**16 32 05.6**	**+1.0**
ELUQ				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.7						
ELUQ	**Luque**	**81.06**	**49**	P	**P**	**16 32 05.6**	**+1.1**
	comp=Z,5.4nm,0.4s,mb4.7						
EPON	**Pontenova**	**81.19**	**43**	P	**P**	**16 32 05.1**	**0.0**
	comp=Z,23nm,0.7s,mb5.1						
ERON	**Agron**	**81.21**	**50**	P	**P**	**16 32 06.3**	**+0.9**
	comp=Z,24nm,0.7s,mb5.1						
EBAN	**Banos Encina**	**81.63**	**49**	P	**P**	**16 32 08.3**	**+0.8**
EBAN				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9						
EBAN	**Banos Encina**	**81.63**	**49**	P	**P**	**16 32 08.3**	**+0.7**
	comp=Z,16nm,0.8s,mb4.9						
EBER	**Berja**	**81.86**	**50**	P	**P**	**16 32 10.5**	**+1.8**
	comp=Z,28nm,0.8s,mb5.2						
ESDC	**Sonseca Array**	**82.03**	**47**	P	**P**	**16 32 09.1**	**-0.5**
	comp=Z,9.1nm,0.7s,mb4.7,baz=253,slow=5.7,SNR=29						
ESDC	**Sonseca Array**	**82.03**	**47**	P	**P**	**16 32 10.9**	**+1.4**
ESLA	**Sonseca Array**	**82.03**	**47**	*e*P	**P**	**16 32 08.8**	**-0.7**
	comp=Z,14nm,1.3s,mb4.6						
EQES	**Quesada**	**82.03**	**49**	P	**P**	**16 32 09.8**	**+0.2**
	comp=Z,17nm,0.8s,mb4.9						
DLBC	**Dease Lake**	**82.23**	**334**	P	**P**	**16 32 10.8**	**+0.6**
	baz=114,slow=7.4						
GUD	**Guadarrama**	**82.24**	**46**	P	**P**	**16 32 11.6**	**+1.0**
GUD				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
GUD	**Guadarrama**	**82.24**	**46**	P	**P**	**16 32 11.6**	**+1.0**
	comp=Z,13nm,0.8s,mb4.8						
EVIA	**Vianos**	**82.74**	**49**	P	**P**	**16 32 14.4**	**+1.2**
EVIA				pmax	pmax		
	comp=Z,77nm,0.8s,mb5.6						
EVIA	**Vianos**	**82.74**	**49**	P	**P**	**16 32 14.4**	**+1.2**
	comp=Z,77nm,0.8s,mb5.6						
ETOB	**Tobarra**	**83.44**	**49**	P	**P**	**16 32 17.4**	**+0.7**
	comp=Z,37nm,0.7s,mb5.3						
ELAN	**Lanestosa**	**83.67**	**44**	P	**P**	**16 32 18.6**	**+0.8**
	comp=Z,40nm,0.8s,mb5.3						
ECRI	**Cripan**	**84.08**	**45**	P	**P**	**16 32 20.1**	**+0.2**
ECRI				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.6						
ECRI	**Cripan**	**84.08**	**45**	P	**P**	**16 32 20.1**	**+0.2**
	comp=Z,74nm,0.8s,mb5.6						
ECHE	**Chera**	**84.18**	**48**	P	**P**	**16 32 22.1**	**+1.7**
ECHE				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.1						
ECHE	**Chera**	**84.18**	**48**	P	**P**	**16 32 22.1**	**+1.7**
	comp=Z,29nm,0.9s,mb5.1						
EBEN	**Beniarda**	**84.44**	**49**	P	**P**	**16 32 22.9**	**+1.1**
	comp=Z,36nm,0.8s,mb5.3						
ETRT	**Tiaret**	**84.61**	**53**	P	**P**	**16 32 24.0**	**+1.3**
EANR	**'Ain N'Sour**	**84.62**	**52**	P	**P**	**16 32 23.5**	**+0.8**
EMOS	**Mosqueruela**	**84.79**	**47**	P	**P**	**16 32 24.9**	**+1.4**
	comp=Z,18nm,0.8s,mb5.0						
ECHF	**Ech Chlef**	**84.86**	**52**	P	**P**	**16 32 25.0**	**+1.1**
ECHA	**Ech Chlef**	**84.88**	**52**	P	**P**	**16 32 25.0**	**+1.0**
EBNR	**Beni Rached**	**85.05**	**52**	P	**P**	**16 32 27.0**	**+2.1**
SJPF	**Ste Jean**	**85.14**	**45**	*e*P	**P**	**16 32 24.6**	**-0.6**
	comp=Z,33nm,0.9s,mb4.9						
SJPF	**Ste Jean**	**85.14**	**45**	*e*P	**P**	**16 32 24.6**	**-0.6**
SJPF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
ESAC	**San Caprasio**	**85.22**	**46**	P	**P**	**16 32 28.0**	**+2.4**
	comp=Z,22nm,0.7s,mb5.2						
SBA	**Scott Base**	**85.50**	**191**	P	**P**	**16 32 27.0**	**+0.8**
SBA				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
SBA	**Scott Base**	**85.50**	**191**	P	**P**	**16 32 27.0**	**+0.8**
	comp=Z,8.0nm,1.4s,mb4.5						
QUIF	**Quistinic**	**85.52**	**40**	*e*P	**P**	**16 32 26.3**	**-0.6**
	comp=Z,68nm,1.2s,mb5.2						
QUIF	**Quistinic**	**85.52**	**40**	*e*P	**P**	**16 32 26.3**	**-0.6**
QUIF				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
ETSF	**Etsaut**	**85.54**	**45**	*e*P	**P**	**16 32 26.7**	**-0.4**
	comp=Z,17nm,0.9s,mb4.7						
ETSF	**Etsaut**	**85.54**	**45**	*e*P	**P**	**16 32 26.7**	**-0.4**
ETSF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
ERTA	**Horta de San J**	**85.55**	**47**	P	**P**	**16 32 27.8**	**+0.5**
	comp=Z,25nm,0.8s,mb5.2						
ROSF	**Rostrenen**	**85.60**	**39**	*e*P	**P**	**16 32 27.1**	**-0.2**
EBR	**Ebro Roquetas**	**85.63**	**47**	*e*P	**P**	**16 32 29.0**	**+1.4**
EGRA	**Graus**	**85.93**	**46**	P	**P**	**16 32 29.3**	**+0.3**
	comp=Z,12nm,0.6s,mb5.0						
EBIE	**Bielsa**	**85.96**	**45**	P	**P**	**16 32 30.2**	**+1.1**
	comp=Z,17nm,0.8s,mb5.0						
SGMF	**Saint Gilles**	**86.02**	**40**	*e*P	**P**	**16 32 29.2**	**-0.1**
LABF	**Labassere**	**86.02**	**45**	*e*P	**P**	**16 32 29.6**	**+0.1**
EMHD	**Djebel Mahouad**	**86.13**	**52**	P	**P**	**16 32 31.0**	**+0.9**
EPF	**Esparros**	**86.20**	**45**	*e*P	**P**	**16 32 29.5**	**-0.8**
	comp=Z,24nm,1.0s,mb4.8						
EPF	**Esparros**	**86.20**	**45**	*e*P	**P**	**16 32 29.5**	**-0.8**
EPF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
SUMG	**Summit**	**86.26**	**10**	*e*P	**P**	**16 32 30.6**	**+0.6**
	comp=Z,38nm,0.7s,mb5.4						
ABA	**Alger-Bouzarea**	**86.36**	**52**	P	**P**	**16 32 32.5**	**+1.3**
VNDA	**Vanda**	**86.57**	**190**	*e*P	**P**	**16 32 31.9**	**+0.5**
VNDA				*e*		16 32 53.8	
VNDA				*e*	pP	16 33 03.3	+0.6
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VNDA	**Vanda**	**86.57**	**190**	P	**P**	**16 32 32.2**	**+0.8**
	comp=Z,1.9nm,0.8s,mb4.1,baz=347,slow=1.0,SNR=11						
VNDA				pP	pP	16 33 03.3	+0.6
	comp=Z,3.9nm,0.8s,baz=149,slow=2.7,SNR=5.9						
VNDA	**Vanda**	**86.57**	**190**	*e*P	**P**	**16 32 31.9**	**+0.5**
	comp=Z,2.2nm,0.8s,mb4.1						
VNDA				*e*		16 32 53.8	
VNDA				*e*	pP	16 33 03.2	+0.6
SALF	**Salau**	**86.71**	**46**	*e*P	**P**	**16 32 33.4**	**+0.6**
MFF	**Saint Martin d**	**87.01**	**42**	*e*P	**P**	**16 32 33.6**	**-0.5**
	comp=Z,35nm,0.8s,mb5.0						
MFF	**Saint Martin d**	**87.01**	**42**	*e*P	**P**	**16 32 33.6**	**-0.5**
MFF				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
LFF	**La Frestale**	**87.07**	**43**	*e*P	**P**	**16 32 33.9**	**-0.6**
GRR	**Gorron**	**87.13**	**40**	*e*P	**P**	**16 32 34.2**	**-0.5**
	comp=Z,49nm,0.9s,mb5.1						
GRR	**Gorron**	**87.13**	**40**	*e*P	**P**	**16 32 34.2**	**-0.5**
GRR				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
FLN	**La Foliniere**	**87.49**	**40**	*e*P	**P**	**16 32 36.1**	**-0.3**
	comp=Z,66nm,1.0s,mb5.2						
FLN				*e*R			
	comp=Z,65nm,18.6s						
FLN	**La Foliniere**	**87.49**	**40**	*e*P	**P**	**16 32 36.1**	**-0.3**
FLN				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
FLN				MLR	MLR		
	comp=Z,70nm,18.6s						
MTLF	**Montolieu**	**87.61**	**45**	*e*P	**P**	**16 32 36.4**	**-0.7**
	comp=Z,36nm,1.0s,mb5.0						
MTLF	**Montolieu**	**87.61**	**45**	*e*P	**P**	**16 32 36.4**	**-0.7**
MTLF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
LDF	**La Druitiere**	**87.66**	**40**	*e*P	**P**	**16 32 37.0**	**-0.3**
	comp=Z,55nm,0.8s,mb5.3						
LDF	**La Druitiere**	**87.66**	**40**	*e*P	**P**	**16 32 37.0**	**-0.3**
LDF				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.3						
RJF	**Les Rejaudoux**	**87.71**	**43**	*e*P	**P**	**16 32 36.9**	**-0.6**
	comp=Z,48nm,1.0s,mb5.2						
RJF				*e*R			
	comp=Z,100nm,19.3s						
RJF	**Les Rejaudoux**	**87.71**	**43**	*e*P	**P**	**16 32 36.9**	**-0.6**
RJF				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
RJF				MLR	MLR		
	comp=Z,100nm,19.3s						
CAF	**Calviac**	**87.96**	**44**	*e*P	**P**	**16 32 38.3**	**-0.5**
CKHR	**Kef el Ahmar**	**88.08**	**53**	P	**P**	**16 32 40.0**	**+0.4**
EKA	**Eskdalemuir Ar**	**88.22**	**33**	P	**P**	**16 32 39.6**	**-0.1**
	comp=Z,2.0nm,0.7s,mb4.2,baz=236,slow=6.0,SNR=5.8						
TSUM	**Tsumeb**	**88.32**	**109**	LR	LR	17 09 03.5	
	comp=Z,75nm,19.0s,baz=127,slow=33						
TSUM	**Tsumeb**	**88.32**	**109**	*e*P	**P**	**16 32 40.4**	**-0.6**
	comp=Z,21nm,1.1s,mb5.1						
SYO	**Syowa Base**	**88.42**	**161**	⇑P	**P**	**16 32 39.5**	**-0.9**
SYO	**Syowa Base**	**88.42**	**161**	⇑PcP	PcP	16 32 43.5	+1.3
TCF	**Toulx Ste Croi**	**88.46**	**42**	*e*P	**P**	**16 32 40.5**	**-0.6**
	comp=Z,29nm,0.9s,mb5.0						
TCF	**Toulx Ste Croi**	**88.46**	**42**	*e*P	**P**	**16 32 40.5**	**-0.6**
TCF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
DFRA	**Djebel Bou Aff**	**88.49**	**53**	P	**P**	**16 32 43.0**	**+1.5**
PYM	**Petit Puy Mans**	**88.84**	**43**	*e*P	**P**	**16 32 42.4**	**-0.5**
LBL	**Lubilhac**	**88.85**	**44**	*e*P	**P**	**16 32 42.7**	**-0.3**
LASF	**Ste Croix**	**88.95**	**45**	*e*P	**P**	**16 32 42.7**	**-0.8**
	comp=Z,30nm,1.0s,mb5.0						
BGF	**Bois d'Agland**	**88.96**	**42**	*e*P	**P**	**16 32 43.0**	**-0.4**
AGO	**Saint Agoulin**	**89.01**	**43**	*e*P	**P**	**16 32 43.1**	**-0.6**
INK	**Inuvik**	**89.04**	**341**	P	**P**	**16 32 43.8**	**+0.5**
	comp=Z,35nm,0.9s,mb5.4,baz=120,slow=5.0,SNR=41						
CKFL	**Kef-Lekhel**	**89.12**	**53**	P	**P**	**16 32 45.0**	**+0.6**
CAEH	**'Ain El Ouahch**	**89.31**	**53**	P	**P**	**16 32 46.0**	**+0.7**
PLDF	**La Plantade**	**89.31**	**43**	*e*P	**P**	**16 32 44.8**	**-0.3**
SSF	**Saint Saulge**	**89.54**	**42**	*e*P	**P**	**16 32 45.2**	**-0.9**
SSF				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.1						
SSF	**Saint Saulge**	**89.54**	**42**	*e*P	**P**	**16 32 45.2**	**-0.9**
	comp=Z,15nm,0.9s,mb5.1						
SMF	**Signal de Mont**	**89.64**	**42**	*e*P	**P**	**16 32 46.1**	**-0.5**
	comp=Z,86nm,1.0s,mb5.5						
SMF	**Signal de Mont**	**89.64**	**42**	*e*P	**P**	**16 32 46.1**	**-0.5**
SMF				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.5						
CMAH	**Djebel Manchou**	**89.72**	**53**	P	**P**	**16 32 48.0**	**+0.7**
VIVF	**Saint-Julien-l**	**89.72**	**44**	*e*P	**P**	**16 32 47.1**	**0.0**
	comp=Z,56nm,1.1s,mb5.3						
VIVF	**Saint-Julien-l**	**89.72**	**44**	*e*P	**P**	**16 32 47.1**	**0.0**
VIVF				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.3						
LOR	**Lormes**	**89.83**	**42**	*e*P	**P**	**16 32 46.7**	**-0.8**
	comp=Z,49nm,1.0s,mb5.3						
LOR				*e*R			
	comp=Z,69nm,20.5s						
LOR	**Lormes**	**89.83**	**42**	*e*P	**P**	**16 32 46.7**	**-0.8**
LOR				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.3						
LOR				MLR	MLR		
	comp=Z,70nm,20.5s						
SMRF	**Simiane la Rot**	**90.12**	**45**	*e*P	**P**	**16 32 49.2**	**+0.2**
DIV	**Divide**	**90.50**	**333**	⇓*e*P	**P**	**16 32 50.3**	**0.0**
	comp=Z,64nm,0.9s,mb5.8						
ORIF	**Oris-en-Rattie**	**90.57**	**44**	*e*P	**P**	**16 32 50.5**	**-0.6**
	comp=Z,54nm,0.9s,mb5.4						
ORIF				*e*R			
	comp=Z,112nm,22.0s						
LMR	**La Mourre**	**90.62**	**46**	*e*P	**P**	**16 32 50.7**	**-0.6**
	comp=Z,46nm,1.0s,mb5.3						
LMR	**La Mourre**	**90.62**	**46**	*e*P	**P**	**16 32 50.7**	**-0.6**
LMR				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.3						
FRF	**La Foret Royal**	**90.77**	**46**	*e*P	**P**	**16 32 51.6**	**-0.5**
	comp=Z,52nm,0.9s,mb5.4						
FRF	**La Foret Royal**	**90.77**	**46**	*e*P	**P**	**16 32 51.6**	**-0.5**
FRF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.4						
BAIF	**Baives**	**90.80**	**39**	*e*P	**P**	**16 32 51.6**	**-0.4**
MEZF	**Maizieres J'vi**	**90.93**	**41**	*e*P	**P**	**16 32 52.1**	**-0.5**
CALN	**Calern**	**90.99**	**46**	*e*P	**P**	**16 32 53.4**	**+0.3**
CABF	**La Chapelle**	**91.13**	**43**	*e*P	**P**	**16 32 53.2**	**-0.4**
MBDF	**Montbardon**	**91.14**	**45**	*e*P	**P**	**16 32 53.2**	**-0.5**
	comp=Z,39nm,1.2s,mb5.1						
MBDF	**Montbardon**	**91.14**	**45**	*e*P	**P**	**16 32 53.2**	**-0.5**
MBDF				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.1						
GIVF	**Givet**	**91.20**	**39**	*e*P	**P**	**16 32 53.5**	**-0.4**
LPL	**La Plagne**	**91.30**	**44**	*e*P	**P**	**16 32 53.9**	**-0.6**
	comp=Z,29nm,0.8s,mb5.2						
LPL	**La Plagne**	**91.30**	**44**	*e*P	**P**	**16 32 53.9**	**-0.6**
LPL				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.2						
LPG	**La Plagne**	**91.31**	**44**	*e*P	**P**	**16 32 54.6**	**+0.1**
	comp=Z,62nm,1.1s,mb5.4						
LPG	**La Plagne**	**91.31**	**44**	*e*P	**P**	**16 32 54.6**	**+0.1**

LPG				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.3						
REVF	Revere	91.33	46	eP	P	16 32 54.5	-0.1
SBF	Sospel	91.40	46	eP	P	16 32 54.4	-0.6
AUTN	L'Aution	91.43	46	eP	P	16 32 54.0	-1.1
AUTN	L'Aution	91.43	46	eP	P	16 32 55.9	+0.8
AUTN	L'Aution	91.43	46	eP	P	16 32 55.9	+0.8
THEF	They Montfort	91.46	41	eP	P	16 32 55.1	0.0
SAOF	Saorge	91.51	46	eP	P	16 32 55.3	-0.2
HAU	Haudompre	91.64	42	eP	P	16 32 55.5	-0.5
HAU				eR			
	comp=Z,94nm,22.6s						
LOMF	Lomont	91.80	42	eP	P	16 32 56.5	-0.2
SML	Sawmill	91.89	333	⇓eP	P	16 32 56.6	-0.1
WLF	Walferdange	91.92	40	⇑eP	P	16 32 57.2	0.0
WLF				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.3						
WLF	Walferdange	91.92	40	⇑eP	P	16 32 57.2	0.0
	comp=Z,22nm,1.0s,mb5.3						
HINF	Hinteralfeld	91.93	42	eP	P	16 32 56.5	-0.8
MOF	Molkenrain	92.12	42	eP	P	16 32 57.7	-0.4
ECH	Echery	92.22	41	eP	P	16 32 58.2	-0.4
ILAR	Eielson Array	92.27	336	P	P	16 32 58.3	-0.1
	comp=Z,3.3nm,0.8s,mb4.6,baz=153,slow=3.2,SNR=16						
ILAR				PP	PP	16 36 42.0	-0.7
	comp=Z,1.5nm,0.8s,baz=111,slow=5.6,SNR=4.4						
CDF	Champ du Feu	92.34	41	eP	P	16 32 58.8	-0.3
	comp=Z,35nm,1.0s,mb5.3						
CDF	Champ du Feu	92.34	41	eP	P	16 32 58.8	-0.3
CDF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.3						
WLS	Welschbruch	92.39	41	eP	P	16 32 59.1	-0.3
COLA	College	92.69	336	eP	P	16 33 01.0	+0.6
COLA				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.5						
COLA	College	92.69	336	eP	P	16 33 01.0	+0.6
	comp=Z,20nm,0.9s,mb5.5						
FELD	Feldberg	92.69	42	eP	P	16 33 00.5	-0.3
LANF	Langenberg	92.81	41	eP	P	16 33 01.2	-0.1
DAG	Danmarks Havn	92.91	11	⇑eP	P	16 33 01.5	+0.3
DAG				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.4						
DAG	Danmarks Havn	92.91	11	⇑eP	P	16 33 01.5	+0.3
	comp=Z,11nm,0.6s,mb5.3						
DAG	Danmarks Havn	92.91	11	⇑iP	P	16 33 01.5	+0.3
	comp=Z,11nm,0.6s,mb5.3						
SPU	Mount Spurr	93.40	332	eP	P	16 33 03.4	-0.3
DAVOX	Davos	93.71	43	P	P	16 33 05.5	+0.1
	comp=Z,9.6nm,0.8s,mb5.2,baz=214,slow=3.3,SNR=7.8						
DAVA	Damuels	93.81	43	⇑iP	P	16 33 06.2	+0.3
	comp=Z,12nm,0.9s,mb5.2						
MOTA	Moosalm	94.64	43	⇑iP	P	16 33 09.8	+0.2
	comp=Z,24nm,1.2s,mb5.5						
MOTA	Moosalm	94.64	43	⇑iP	P	16 33 09.8	+0.2
MOTA				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.5						
SQTA	Sankt Quirin	94.69	43	⇑iP	P	16 33 10.2	+0.3
	comp=Z,15nm,1.0s,mb5.4						
SQTA	Sankt Quirin	94.69	43	⇑iP	P	16 33 10.2	+0.3
SQTA				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.4						
FUR	Furstenfeldbru	94.91	42	eP	P	16 33 11.5	+0.7
FUR				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.6						
FUR	Furstenfeldbru	94.91	42	eP	P	16 33 11.5	+0.7
	comp=Z,17nm,0.7s,mb5.6						
WATA	Walderalm	94.96	43	⇑iP	P	16 33 11.2	+0.1
	comp=Z,11nm,0.8s,mb5.3						
WATA	Walderalm	94.96	43	⇑iP	P	16 33 11.2	+0.1
WATA				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.3						
GRA1	Grafenberg Arr	95.14	41	eP	P	16 33 12.0	+0.1
	comp=Z,7.0nm,0.8s,mb5.1						
GRF	Grafenberg Arr	95.14	41	eP	P	16 33 12.0	+0.1
GRF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.1						
GRF	Grafenberg Arr	95.14	41	eP	P	16 33 12.0	+0.1
GRF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.1						
GRF	Grafenberg Arr	95.14	41	eP	P	16 33 12.0	+0.1
	comp=Z,7.0nm,0.8s,mb5.1						
IMA	Indian Mountai	95.36	336	eP	P	16 33 12.5	0.0
IMA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.1						
IMA	Indian Mountai	95.36	336	eP	P	16 33 12.5	0.0
	comp=Z,7.1nm,0.8s,mb5.2						
MOX	Moxa	95.56	40	eP	P	16 33 15.0	+1.3
MOX				MLR	MLR		
	comp=Z,700nm,17.0s						
NKC	Novy Kostel	96.02	40	eP	P	16 33 17.1	+1.3
ROBS	Robic	96.08	44	iP	P	16 33 16.5	+0.3
KBA	Koelnbreinsper	96.10	43	⇑iP	P	16 33 16.3	0.0
	comp=Z,18nm,1.2s,mb5.4						
KBA	Koelnbreinsper	96.10	43	⇑iP	P	16 33 16.3	0.0
KBA				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.4						
VOJS	Vojsko	96.31	44	eP	P	16 33 18.0	+0.7
KHC	Kasperske Hory	96.57	41	eP	P	16 33 19.0	+0.6
KHC				e	pP	16 33 49.0	-1.0
KHC	Kasperske Hory	96.57	41	eP	P	16 33 19.0	+0.6
KHC				pP	pP	16 33 49.0	-1.0
GEC2	GERESS Array S	96.61	42	eP	P	16 33 18.6	+0.1
GEC2				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.2						
GEC2	GERESS Array S	96.61	42	eP	P	16 33 18.6	+0.1
	comp=Z,8.0nm,0.9s,mb5.2						
GERES	GERESS Array B	96.61	42	P	P	16 33 18.0	-0.5
	comp=Z,5.1nm,0.9s,mb5.0,baz=243,slow=3.0,SNR=31						
CEY	Cerknica	96.64	45	eP	P	16 33 19.3	+0.5
MOA	Molln	96.83	43	⇑iP	P	16 33 19.8	+0.2
	comp=Z,30nm,1.1s,mb5.6						
BRG	Berggiesshubel	97.05	40	eP	P	16 33 21.5	+0.9
BRG				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb5.0						
BRG	Berggiesshubel	97.05	40	eP	P	16 33 21.5	+0.9
	comp=Z,8.3nm,1.2s,mb5.0						
NB2	NORSAR Subarra	97.05	29	P	P	16 33 22.3	+2.0
	comp=Z,0.9nm,0.7s,mb4.3,baz=294,slow=7.0						
NOA	NORSAR Array B	97.05	29	P	P	16 33 20.6	+0.3
	comp=Z,2.3nm,0.9s,mb4.6,baz=260,slow=4.7,SNR=4.4						
PERS	Pernice	97.24	44	eP	P	16 33 21.8	+0.2
PRU	Pruhonice	97.31	41	eP	P	16 33 22.4	+0.6
PVCC	Panska Ves	97.40	40	eP	P	16 33 22.8	+0.7
ARSA	Arzberg	97.60	43	⇑iP	P	16 33 22.6	-0.5
	comp=Z,12nm,1.1s,mb5.3						
HFS	Hagfors	98.14	30	P	P	16 33 26.4	+1.2
	comp=Z,3.1nm,0.9s,mb4.8,baz=180,slow=4.3,SNR=3.7						
UPC	Upice	98.31	40	eP	P	16 33 26.9	+0.6
DPC	Dobruska-Polom	98.49	40	eP	P	16 33 27.4	+0.3
VRAC	Vranov	98.55	41	P	P	16 33 27.9	+0.5
	comp=Z,6.8nm,1.0s,mb5.2,baz=295,slow=4.1,SNR=5.8						
ZST	Bratislava	98.77	43	iP	P	16 33 29.3	+0.9
OKC	Ostrava-Krasne	99.61	41	eP	P	16 33 33.3	+1.1
VYHS	Vyhne	99.95	42	iP	P	16 33 34.3	+0.6
ARCES	ARCESS Array B	103.33	21	Pdiff	Pdif	16 33 50.1	+1.8
	comp=Z,1.4nm,0.7s,baz=292,slow=6.5,SNR=4.0						
IDI	Anoyia	103.53	56	Pdiff	Pdif	16 33 49.2	-0.8
	comp=Z,8.2nm,1.0s,baz=102,slow=3.1,SNR=4.1						
AKASG	Malin Array Be	106.72	40	PP	PP	16 38 25.2	-8.2
	comp=Z,0.6nm,0.5s,baz=269,slow=7.4,SNR=5.5						
BRTR	Keskin Array B	110.50	52	PP	PP	16 38 54.0	-7.4
	comp=Z,0.7nm,0.7s,baz=243,slow=5.5,SNR=4.1						
ARU	Arti	121.60	29	PKIKP	PKPdf	16 38 41.0	+0.4
STKA	Stephens Creek	125.53	218	PKP	PKPdf	16 38 49.7	+0.8
	comp=Z,1.6nm,0.8s,baz=310,slow=3.2,SNR=3.6						
STKA	Stephens Creek	125.53	218	PKP	PKPdf	16 38 49.7	+0.8
BVAR	Borovoye Array	129.10	27	PKP	PKPdf	16 38 57.2	+2.1
	comp=Z,1.9nm,0.9s,baz=315,slow=2.1,SNR=9.0						
NVS	Novosibirsk	132.46	17	ePKIKP	PKPdf	16 38 58.2	-3.2
NVS				e		16 39 32.4	
NVS				pmax	pmax		
	comp=Z,10.0nm,1.6s						
NVS				pmax	pmax		
	comp=N,4.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.8s						
ASAR	Alice Springs	136.15	219	PKP	PKPdf	16 39 10.0	+0.9
	comp=E,2.9nm,0.9s,baz=138,slow=2.1,SNR=16						
ASAR				pPKP		16 39 43.0	
	comp=E,4.9nm,0.8s,baz=135,slow=2.2,SNR=8.4						
WRA	Warramunga Arr	138.54	223	PKP	PKPdf	16 39 15.0	+1.4
	comp=E,4.5nm,0.8s,baz=120,slow=2.1,SNR=18						
WRA				pPKP		16 39 46.6	
	comp=E,6.2nm,0.9s,baz=139,slow=1.6,SNR=5.2						
MKAR	Makanchi Array	138.86	25	PKP	PKPdf	16 39 14.6	+1.2
	comp=E,1.3nm,0.8s,baz=296,slow=0.8,SNR=2.8						
MAJO	Matsushiro	140.93	317	ePKHKP		16 39 10.6	
MJAR	Matsushiro Arr	140.93	317	PKhKP		16 39 11.3	
	comp=E,13nm,0.9s,baz=78,slow=1.5,SNR=25						
MAT	Matsushiro	140.93	317	ePKP	PKPdf	16 39 12.0	-5.5
MAT	Matsushiro	140.93	317	PKP	PKPdf	16 39 11.6	-5.9
CN2	Changchun	142.79	336	ePKP	PKPdf	16 39 23.0	+2.5
SONM	Songino Array	142.92	359	PKP	PKPdf	16 39 19.4	-1.2
	comp=E,2.4nm,0.8s,baz=326,slow=2.7,SNR=7.7						
WMQ	Urumqi	143.44	22	ePKP	PKPdf	16 39 21.2	-0.4
WMQ				PP	PP	16 42 37.3	-0.2
WMQ				PPP	PPP	16 45 50.2	-0.5
WMQ				SKKS		16 49 16.1	
WMQ				PP	PP		
	comp=Z,150nm,5.2s						
WMQ				LR	LR		
	comp=N,160nm,22.0s						
WMQ				LR	LR		
	comp=E,100nm,22.0s						
WMQ				LR	LR		
	comp=Z,180nm,22.0s						
KAKA	Kakadu	144.74	230	eP	PKPdf	16 39 24.9	+0.2
KAKA				e		16 39 58.7	
SNY	Shenyang	145.19	336	⇓PKP	PKPdf	16 39 25.4	+0.7
MBWA	Marble Bar	145.53	204	iPKPdf	PKPdf	16 39 26.9	+1.0
MBWA				epPKPdf		16 39 58.3	
SMLA	Simla	146.61	48	iP	PKPdf	16 39 27.3	-0.1
KS15	Wonju Array Si	146.67	327	ePKPdf	PKPdf	16 39 29.2	+1.8
KS15				ePKPbc	PKPbc	16 39 31.0	+2.1
JNU	Nakatsue	147.81	318	PKPbc	PKPdf	16 39 33.1	+3.8
	comp=Z,20nm,0.9s,baz=60,slow=11,SNR=8.0						
NDI	New Delhi	147.86	52	eP	PKPdf	16 39 45.0	+15
POO	Poona	148.24	72	eP	PKPdf	16 39 33.5	+3.1
BTO	Baotou	149.91	353	ePKP	PKPdf	16 39 37.0	+4.6
GTA	Gaotai	150.87	9	PKP	PKPdf	16 39 36.3	+2.4
HYB	Hyderabad	152.84	73	ePKIKP		16 39 50.5	
HYB	Hyderabad	152.84	73	iPKP		16 39 50.5	
KOLN	Koldanda	153.14	48	eP	PKPab	16 39 58.6	-1.0
	comp=Z,36nm,1.2s						
GKN	Gorkha	153.74	46	eP	PKPab	16 40 01.9	-0.3
	comp=Z,90nm,1.0s						
DMN	Daman	154.31	46	eP	PKPab	16 40 04.4	-0.2
	comp=Z,159nm,1.0s						
KKN	Kakani	154.32	46	eP	PKPab	16 40 04.1	-0.5
	comp=Z,90nm,0.9s						
PKI	Pulchoki	154.55	46	eP	PKPab	16 40 05.0	-0.6
	comp=Z,91nm,1.0s						
GUN	Gumba	154.67	45	eP	PKPab	16 40 06.2	+0.1
	comp=Z,170nm,1.0s						
NJ2	Nanjing	155.47	332	ePKP	PKPdf	16 39 43.1	+2.5
NJ2				APKP		16 40 09.8	
NJ2				PKP2	PKPab	16 40 13.3	+4.0
NJ2				PKS	PKS	16 43 15.0	+1.2
NJ2				PP	PP	16 43 50.0	+3.0
NJ2				PP	PP		
	comp=Z,120nm,11.1s						
NJ2				LR	LR		
	comp=N,930nm,20.0s						
NJ2				LR	LR		
	comp=E,300nm,18.2s						
NJ2				LR	LR		
	comp=Z,230nm,21.2s						
GYA	Guiyang	164.24	357	iPKP	PKPdf	16 39 52.7	+2.1
GYA				APKP		16 40 19.6	
GYA				PKP2	PKPab	16 40 50.6	+3.2
GYA				PP	PP	16 44 37.8	+3.2
GYA				PP	PP		
	comp=Z,110nm,7.9s						
KMI	Kunming	165.32	11	PKP	PKPdf	16 39 51.9	+0.2
KMI				LR	LR		
	comp=Z,110nm,17.0s						
CMAR	Chiang Mai Arr	169.84	39	PKP	PKPdf	16 39 57.2	+2.3
	comp=Z,1.7nm,0.9s,baz=273,slow=2.5,SNR=6.9						
CMAR				PKPab	PKPab	16 41 11.5	-0.6
	comp=Z,2.6nm,0.9s,baz=318,slow=5.3,SNR=5.1						

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*BJI **07** 16:29:32.5, 1.24N×97.31E, h34^{km}, mB4.5, mb4.6, Ms4.0*

*IDC **07** 16:29:34.8±0.8, 1.40N×96.96E, h27^{km}±3^{km}, mb4.0/12, mb1 4.1/13, mb1mx3.9/22, mbtmp4.2/13, ML4.3/1, MS4.3/3, Ms1 4.4/3, ms1mx3.5/36, Error ellipse: s-maj=29.4km s-min=12.9km az=49.0*

*NEIC **07** 16:29:35.2±0.5, 1.43N×97.09E, mb4.5/9, Error ellipse: s-maj=13.4km s-min=8.8km az=51.0*

ISC 07 16:29:33.6±0.7**, 1.46N**±0.09×**97.11E**±0.10**, h27**^{km}**, h27**^{km}±.4^{km}**:pP-P, n31, σ0**^{s}**93**/32**, mb4.3**/22**, MS4.4**/3**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.19	43	⇑eP	Pn	16 30 52.1	+0.5
CM31	Chiang Mai Arr	16.98	6	eP	P	16 33 31.2	0.0
	3.0nm,0.6s						
CMAR	Chiang Mai Arr	16.98	6	P	P	16 33 29.8	-1.4
	0.4nm,0.3s,baz=198,slow=11,SNR=21						
CMAR				LR	LR	16 41 18.6	
	comp=Z,163nm,18.3s,baz=185,slow=41						
CMAR	Chiang Mai Arr	16.98	6	P	P	16 33 29.8	-1.4
CMAR				LR	LR	16 41 18.6	
KMI	Kunming	24.14	13	P	P	16 34 50.6	+1.9
KMI				AP		16 35 03.8	
KMI				S	S	16 39 07.7	+5.9
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
KMI				AMB	AMB		
	comp=Z,60nm,7.4s						
KMI				LR	LR		
	comp=N,190nm,14.8s,MS3.8						
KMI				LR	LR		
	comp=E,150nm,14.8s,MS3.8						
PKI	Pulchoki	28.28	338	eP	P	16 35 28.8	+1.8
GUN	Gumba	28.41	339	eP	P	16 35 28.9	+0.7
	comp=E,6.9nm,0.6s,mb4.5						
DMN	Daman	28.43	337	eP	P	16 35 29.9	+1.5
	comp=E,16nm,1.4s,mb4.5						
KKN	Kakani	28.52	338	eP	P	16 35 29.7	+0.4
	comp=E,14nm,1.2s,mb4.6						
KKN				eP		16 40 04.1	
LSA	Lhasa	28.65	349	eP	P	16 35 31.7	+1.3
LSA	Lhasa	28.65	349	eP	P	16 35 30.5	+0.1
	comp=E,2.6nm,0.5s,mb4.2						
LSA				eS	S	16 40 14.6	-1.3
GKN	Gorkha	28.96	337	eP	P	16 35 33.5	+0.3
	comp=E,12nm,1.0s,mb4.6						
KOLN	Koldanda	29.18	335	eP	P	16 35 35.7	+0.5
	comp=E,13nm,0.7s,mb4.8						
XAN	Xi'an	34.24	18	P	P	16 36 17.8	-1.7
XAN				AP	pP	16 36 25.9	-1.7
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GTA	Gaotai	37.85	3	eP	P	16 36 49.9	-0.1
GTA				AP	pP	16 36 57.8	-0.3
GTA				XP	sP	16 37 02.2	+0.7
JOW	Kunigami	39.13	47	P	P	16 37 00.7	-0.2
	comp=Z,13nm,0.5s,mb4.9,baz=167,slow=18,SNR=3.4						
JOW				LR	LR	16 52 28.3	
	comp=Z,2µm,18.3s,MS5.1,baz=249,slow=35						
WRA	Warramunga Arr	42.25	122	P	P	16 37 26.9	+0.2
	comp=Z,1.1nm,0.8s,mb3.5,baz=306,slow=8.9,SNR=12						
WRA				pP	pP	16 37 35.1	+0.3
	comp=Z,2.0nm,0.6s,baz=303,slow=8.9,SNR=8.3						
WRAB	Tennant Creek	42.26	122	eP	P	16 37 26.8	+0.1
	comp=Z,4.8nm,0.8s,mb4.2						
ASAR	Alice Springs	43.63	127	P	P	16 37 37.9	+0.1
	comp=Z,0.6nm,0.4s,mb3.6,baz=299,slow=7.6,SNR=11						
ASAR				pP	pP	16 37 46.4	+0.4
	comp=Z,0.8nm,0.7s,baz=302,slow=7.5,SNR=4.9						
SONM	Songino Array	46.89	9	P	P	16 38 03.3	-0.2
	comp=Z,10nm,1.0s,mb4.7,baz=189,slow=9.0,SNR=61						
SONM				pP	pP	16 38 11.6	-0.1
	comp=Z,1.3nm,0.4s,baz=192,slow=9.0,SNR=5.5						
MKAR	Makanchi Array	46.97	346	P	P	16 38 04.3	+0.1
	comp=Z,8.0nm,0.7s,mb4.7,baz=160,slow=8.3,SNR=90						
MKAR				pP	pP	16 38 12.8	+0.4
	comp=Z,3.4nm,0.5s,baz=160,slow=7.9,SNR=12						
ULN	Ulaanbaatar	47.02	9	eP	P	16 38 04.5	0.0
	comp=Z,4.8nm,0.7s,mb4.5						
CBIJ	Chichi jima	50.15	55	LR	LR	16 57 20.4	
	comp=Z,352nm,20.3s,MS4.4,baz=186,slow=33						
ZAL	Zalesovo	53.28	351	P	P	16 38 51.3	-1.0
	comp=Z,2.9nm,0.4s,mb4.5,baz=328,slow=6.2,SNR=13						
ZAL				pP	pP	16 39 00.3	-0.3
	comp=Z,5.2nm,0.5s,baz=334,slow=5.2,SNR=9.1						
BVAR	Borovoye Array	55.97	341	P	P	16 39 10.8	-1.1
	comp=Z,2.1nm,0.7s,mb4.3,baz=158,slow=8.0,SNR=8.9						
BVAR				pP	pP	16 39 18.8	-1.5
	comp=Z,3.0nm,0.6s,baz=143,slow=7.9,SNR=8.0						
BRTR	Keskin Array B	68.87	312	P	P	16 40 36.7	-1.5
	comp=Z,0.6nm,0.5s,mb3.8,baz=111,slow=7.5,SNR=3.1						
BRTR				pP	pP	16 40 44.8	-1.9
	comp=Z,1.6nm,0.6s,baz=130,slow=6.4,SNR=5.7						
BR131	Keskin Array S	68.87	312	eP	P	16 40 36.6	-1.6
BR131				epP	pP	16 40 44.9	-1.7
AKASG	Malin Array Be	75.00	322	P	P	16 41 13.1	-1.4
	comp=Z,1.3nm,0.6s,mb4.0,baz=88,slow=4.8,SNR=6.7						
AKASG				pP	pP	16 41 20.9	-2.1
	comp=Z,1.5nm,0.5s,baz=90,slow=5.1,SNR=6.0						
FINES	FINESS Array B	79.72	332	P	P	16 41 39.8	-0.7
	comp=Z,0.9nm,0.5s,mb3.9,baz=104,slow=6.8,SNR=8.6						
FINES				pP	pP	16 41 48.9	-0.2
	comp=Z,1.5nm,0.6s,baz=97,slow=6.9,SNR=4.8						
ARCES	ARCESS Array B	82.26	340	P	P	16 41 54.3	+0.6
	comp=Z,1.1nm,0.5s,mb4.0,baz=90,slow=3.6,SNR=11						
ARCES				pP	pP	16 42 02.8	+0.5
	comp=Z,3.0nm,0.8s,baz=63,slow=5.4,SNR=2.6						
GERES	GERESS Array B	84.56	319	P	P	16 42 06.6	+0.8
	comp=Z,0.7nm,0.9s,mb3.8,baz=108,slow=4.2,SNR=4.1						

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*TAP **07** 16:37:47.8, 24.17N×122.55E, h53^{km}±1^{km}, ML3.0*

JMA 07 16:37:47.6±0.2**, 24.24N×122.58E, h64**^{km}**, M1.9, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.45	61	P	P	16 37 59.5	0.0
YOJ				eS	S	16 38 08.3	+0.1
IRIF	Iriomote-Funau	1.05	85	P	P	16 38 06.6	-0.2
IRIF				S	S	16 38 20.4	-0.6
JKRS	Kuro-shima	1.30	90	P	P	16 38 10.5	+0.2
JKRS				eS	S	16 38 27.3	+0.2
JIJ	Ishigaki jima	1.43	85	P	P	16 38 11.4	-0.6
JIJ				eS	S	16 38 28.9	-1.1
JTJ	Tarama	1.98	78	P	P	16 38 19.4	0.0
JTJ				eS	S	16 38 43.3	+0.4

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*IDC **07** 16:38:45.9±1.6, 2.28S×100.69E, mb4.1/9, mb1 4.2/9, mb1mx4.0/19, mbtmp4.1/9, Error ellipse: s-maj=88.7km s-min=16.3km az=55.0*

*NEIC **07** 16:38:56.5±3.7, 2.15S×100.97E, h80^{km}±26^{km}, mb4.4/2, Error ellipse: s-maj=65.2km s-min=9.0km az=55.0*

ISC 07 16:38:55.3±6.2**, 2.1S**±0.4×**101.0E**±0.6**, h82**^{km}±45^{km}**, n14, σ0**^{s}**65**/13**, mb4.1**/11**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	7.33	357	ePn	P	16 40 41.8	+0.2
WRA	Warramunga Arr	37.07	121	P	P	16 45 59.3	-0.2
	0.8nm,0.4s,mb4.0,baz=308,slow=9.7,SNR=36						
WRAB	Tennant Creek	37.07	121	eP	P	16 45 59.0	-0.5
	2.7nm,0.6s,mb4.3						
ASAR	Alice Springs	38.38	127	P	P	16 46 10.7	+0.4
	2.3nm,0.6s,mb4.2,baz=302,slow=8.0,SNR=42						
ASAR				PcP	PcP	16 48 23.2	+0.3
	0.3nm,0.4s,baz=312,slow=2.2,SNR=4.1						
STKA	Stephens Creek	48.33	132	P	P	16 47 30.7	+0.1
	0.9nm,0.4s,mb4.0,baz=317,slow=8.3,SNR=6.8						
SONM	Songino Array	49.93	5	P	P	16 47 43.4	+0.7
	0.7nm,0.5s,mb3.8,baz=185,slow=9.1,SNR=8.2						
MKAR	Makanchi Array	51.39	344	P	P	16 47 53.4	-0.5
	3.0nm,0.4s,mb4.7,baz=159,slow=9.1,SNR=60						
ZAL	Zalesovo	57.43	349	P	P	16 48 37.2	-0.6
	3.0nm,0.4s,mb4.6,baz=290,slow=4.7,SNR=11						
ZAL	Zalesovo	57.43	349	P	P	16 48 37.2	-0.6
BVAR	Borovoye Array	60.62	339	P	P	16 48 58.5	-1.3
	0.4nm,0.3s,mb3.9,baz=143,slow=12,SNR=4.4						
FINES	FINESS Array B	84.66	332	P	P	16 51 21.9	+1.0
	0.6nm,0.7s,mb3.6,baz=204,slow=33,SNR=3.6						
ARCES	ARCESS Array B	86.90	340	P	P	16 51 32.5	+0.7
	1.6nm,0.7s,mb4.0,baz=90,slow=6.1,SNR=5.7						
BRG	Berggiesshubel	89.75	321	P	P	16 51 52.9	+7.2
	3.7nm,1.2s,mb4.4						
TXAR	Lajitas Array	144.13	39	PKP	PKPdf	16 58 23.6	+1.5
	0.8nm,0.5s,baz=274,slow=1.1,SNR=11						

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*NEIC **07** 16:43:11.5±2.5, 29.43S×178.10W, h89^{km}±12^{km}, Error ellipse: s-maj=174.1km s-min=33.3km az=160.0*

IDC 07 16:43:08.9±4.2**, 30.00S×177.88W, h73**^{km}±35^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/14**, mbtmp3.7**/3**, Error ellipse: s-maj=76.1km s-min=54.3km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.74	357	P	P	16 43 24.7	+0.1
	90nm,0.3s,baz=62,slow=17,SNR=9.4						
RAO				S	S	16 43 37.4	+1.0
	399nm,0.3s,baz=302,slow=24,SNR=16						
RAO	Raoul Island	0.74	357	ePn	P	16 43 24.5	-0.2
RAO				eS	S	16 43 37.4	+1.0
STKA	Stephens Creek	34.67	256	P	P	16 49 52.4	-1.0
	0.8nm,0.5s,baz=97,slow=13,SNR=3.0						
ASAR	Alice Springs	43.23	266	P	P	16 51 02.7	-2.0
	0.3nm,0.6s,baz=105,slow=7.5,SNR=5.6						
WRA	Warramunga Arr	44.19	272	P	P	16 51 10.5	-2.0
	0.7nm,0.4s,baz=110,slow=8.1,SNR=25						
FINES	FINESS Array B	144.80	340	PKP	PKPdf	17 02 36.3	-0.3
	0.7nm,0.5s,baz=63,slow=4.3,SNR=5.3						

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*NIED **07** 16:45:00, 24.00N×121.50E, h5^{km}, Mw4.9 Best double couple: M$_0$2.24×10^{16} NP1:φ$_s$37°, δ62°, λ82°. NP2:φ$_s$233°, δ29°, λ104°.*

*IDC **07** 16:45:03.6±0.6, 23.94N×121.89E, mb4.3/19, mb1 4.4/23, mb1mx4.4/28, mbtmp4.3/23, ML4.0/4, MS4.4/18, Ms1 4.4/18, ms1mx4.2/34, Error ellipse: s-maj=16.8km s-min=13.9km az=62.0*

*BJI **07** 16:45:04.0, 24.06N×121.80E, h2^{km}, mB5.1, mb4.7, ML5.1, Ms5.1, Msz5.1*

*HRVD **07** 16:45:04.3±0.5, 24.00N×121.99E, h16^{km}±2^{km}, MW5.0/43, Centroid moment Tensor Solution. LP body waves: s13,c13;Mantle waves: s43,c70; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.61±.19; M$_{\theta\theta}$-0.52±.11; M$_{\phi\phi}$-1.09±.13; M$_{r\theta}$1.01±.32; M$_{\theta\phi}$-0.86±.07; M$_{\phi r}$3.02±.61; Best double couple: M$_0$3.593×10^{16} NP1:φ$_s$231°, δ15°, λ119°. NP2:φ$_s$21°, δ77°, λ82°. Principal axes: T 3.605, Plg58°, Azm280°; N -.027, Plg7°, Azm22°; P -3.58, Plg31°, Azm117°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*JMA **07** 16:45:04.6±0.5, 24.03N×121.54E, h69^{km}, M5.6*

*TAP **07** 16:45:05.0, 23.99N×121.74E, h2^{km}, ML5.2*

TAP Felt IV J at Hualien, II J at Chiawan, I J at Shilin, II J at Nanau, II J at Nanshan, II J at Tachien, I J at Suao, I J at Nioudou, I J at Ilan, I J at Ryuetan, I J at Nanjuang, I J at Taichung, I J at Tsauling, I J at Taipai, I J at Hsinchu, I J, I J at Jungli (National Central University), I J at Gukeng, I J at Dacheng, I J at Szhu.

*NEIC **07** 16:45:04.3±1.2, 23.96N×121.88E, h2^{km}±7^{km}, mb5.1/34, MS4.6/79, ML5.2(TAP), Error ellipse: s-maj=6.6km s-min=5.6km az=141.0*

NEIC Recorded [4 TAP] in Hua-lien, [2 TAP] in I-lan and T'ai-chung and [1 TAP] in Nan-t'ou Counties.

*MOS **07** 16:45:07.1±1.2, 23.97N×121.92E, h33^{km}, mb5.1/33, MS4.5/16, Error ellipse: s-maj=10.4km s-min=6.7km az=106.2*

ISC 07 16:45:03.2±0.2**, 23.93N**±0.01×**121.92E**±0.02**, h2**^{km}**, (h18**^{km}±4.4^{km}**:pP-P), n312, σ1**^{s}**33**/291**, mb4.7**/66**, MS4.6**/101**, 12C-14D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.29	279	⇑iP	Pg	16 45 08.6	-0.5
TWD	Chiawan	0.33	297	⇑iP	Pg	16 45 08.8	-1.0
ESF	Shoufeng Towns	0.38	261	eP	Pg	16 45 10.8	-0.1
ESF				S	Sg	16 45 16.4	+0.5
NACB	Ninganchiao	0.38	309	⇓eP	Pg	16 45 09.7	-1.2
NACB				eS	Sg	16 45 14.6	-1.4
EHP	Heping Village	0.41	336	P	Pg	16 45 12.8	+1.4
EHP				S	Sg	16 45 17.8	+0.9
TEGC	Jichi Village	0.41	238	eP	Pg	16 45 13.1	+1.6
TEGC				S	Sg	16 45 21.1	+4.2
ESL	Shilin	0.46	255	⇓iP	Pg	16 45 12.1	-0.3

ENA	Nanau	0.52	342	⇑*i*P	Pg	16 45 14.2	+0.6
ENA				S	Sg	16 45 21.8	+1.3
TWC	Suao	0.68	354	P	Pg	16 45 18.4	+1.7
EHY	Hungye	0.69	232	*e*P	Pg	16 45 17.6	+0.6
EHY				S	Sg	16 45 29.9	+3.6
NNS	Nan Shan	0.71	315	⇑*i*P	Pg	16 45 16.5	-0.9
NNS				S	Sg	16 45 24.4	-2.5
TWT	Tachien	0.75	295	⇑*i*P	Pg	16 45 17.4	-0.9
ENTT	Nioudou	0.78	335	⇑P	Pg	16 45 18.7	0.0
TWF1	Yuli	0.81	225	*e*P	Pg	16 45 19.7	+0.3
ILA	Ilan	0.84	349	*e*P	Pg	16 45 21.3	+1.3
ILA				S	Sg	16 45 32.9	+1.6
YHNB	Yeheng	0.89	326	⇓*i*P	Pg	16 45 20.3	-0.6
YHNB				*e*S	Sg	16 45 31.3	-1.4
NSK	Sanguang	0.90	325	⇑*i*P	Pg	16 45 20.6	-0.6
NSK				S	Sg	16 45 32.5	-0.7
SMLT	Sun Moon Lake	0.94	267	⇓*i*P	Pb	16 45 21.0	-0.8
SMLT				S	Sg	16 45 32.7	-1.6
TYC	Yuchr	0.97	269	⇓*i*P	Pb	16 45 21.5	-0.9
TWB1	Santiao Chiao	1.07	3	P	Pb	16 45 26.0	+1.9
TWB1				S	Sb	16 45 42.7	+4.2
TWA	Mucha	1.09	344	*e*P	Pb	16 45 25.1	+0.7
TWA				S	Sb	16 45 40.2	+1.3
NSTT	Nanjuang	1.09	310	*e*P	Pb	16 45 23.9	-0.5
NSTT				S	Sb	16 45 38.2	-0.7
ELDTW	Lidau	1.11	228	*e*P	Pb	16 45 24.3	-0.5
TATO	Taipei	1.11	339	⇑*i*P	Pb	16 45 25.3	+0.5
TATO				*e*S	Sb	16 45 39.0	-0.6
YOJ	Yonaguni jima	1.13	62	P	Pb	16 45 28.7	+3.7
YOJ				*e*S	Sb	16 45 46.9	+6.9
TWQ1	Liyutan	1.13	292	⇓*i*P	Pb	16 45 24.9	-0.1
TWQ1				S	Sb	16 45 40.1	+0.1
WNT	Mingjian	1.13	268	*e*P	Pb	16 45 25.4	+0.2
WNT				S	Sb	16 45 40.6	+0.4
NWF	Wu-fen Shan	1.14	354	⇓P	Pb	16 45 26.8	+1.5
NWF				S	Sb	16 45 42.1	+1.7
TCU	Taichung	1.16	281	⇓P	Pb	16 45 25.9	+0.4
TCU				S	Sb	16 45 40.4	-0.5
TAP1	Taipei	1.16	342	*e*P	Pb	16 45 25.6	0.0
TAP1				S	Sb	16 45 42.9	+1.9
NSY	Sanyi	1.16	295	⇓*i*P	Pb	16 45 26.1	+0.4
TAP	Taipei	1.17	341	*e*P	Pb	16 45 26.7	+0.9
TAP				S	Sb	16 45 42.7	+1.6
CHN5	Tsauling	1.19	254	⇓*i*P	Pb	16 45 26.2	+0.1
HSN	Hsinchu	1.23	315	*e*P	Pb	16 45 27.6	+0.9
HSN				S	Sb	16 45 44.4	+1.5
NCU	National Centr	1.23	327	*e*P	Pb	16 45 27.8	+1.0
NCU				S	Sb	16 45 45.4	+2.4
TWS1	Kuangyinshan	1.25	339	*e*P	Pb	16 45 28.1	+0.9
TWS1				S	Sb	16 45 46.2	+2.6
WGK	Gukeng	1.27	259	*e*P	Pb	16 45 28.0	+0.6
CHN4	Tsaushan	1.35	245	⇓P	Pb	16 45 29.1	+0.3
CHN4				S	Sb	16 45 49.3	+2.9
TWY	Chenhua	1.37	348	*e*P	Pb	16 45 30.0	+0.8
TWY				S	Sb	16 45 50.5	+3.5
TTN	Taitung	1.37	211	*e*P	Pb	16 45 29.6	+0.3
WTP	Ta-pu	1.38	241	⇓*i*P	Pb	16 45 29.5	+0.1
WTP				S	Sb	16 45 49.6	+2.3
CHN2	Minshiung	1.38	254	*e*P	Pb	16 45 29.9	+0.4
CHY	Chiayi	1.44	253	*e*P	Pn	16 45 31.1	+0.8
CHY				S	Sb	16 45 51.0	+1.9
TWK	Hsinying	1.47	244	*e*P	Pn	16 45 30.8	0.0
TWK				S	Sb	16 45 52.4	+2.4
CHN1	Nanshi	1.48	240	*e*P	Pn	16 45 31.1	+0.2
CHN1				S	Sb	16 45 53.0	+2.8
SGST	Jiashian	1.49	236	*e*P	Pn	16 45 30.9	-0.2
SGST				S	Sb	16 45 52.5	+1.9
WTCT	Ta-ch'eng	1.50	268	*e*P	Pn	16 45 30.6	-0.6
WSF	Szhu	1.58	260	*e*P	Pn	16 45 32.7	+0.3
WSF				S	Sb	16 45 54.5	+1.2
ECL	Taimali	1.60	214	*e*P	Pn	16 45 29.9	-2.7
CHN3	Shinhua	1.66	240	*e*P	Pn	16 45 34.6	+1.1
SSD	Sandimen	1.67	225	*e*P	Pn	16 45 33.7	+0.1
CHN8	Yiju	1.67	250	*e*P	Pn	16 45 33.9	+0.2
PCYT	Pengchaiyu	1.70	5	*e*P	Pn	16 45 35.4	+1.4
PCYT				S	Sb	16 46 00.1	+3.6
IRIF	Iriomote-Funau	1.70	76	P	Pn	16 45 36.9	+2.8
IRIF				*e*S	Sn	16 46 02.3	+5.6
HATJ	Hateruma jima	1.73	85	P	Pn	16 45 38.3	+3.8
HATJ				*e*S	Sn	16 46 01.6	+4.2
SCLT	Jiali	1.75	245	*e*P	Pn	16 45 35.7	+0.8
TWM1	Shoushan	1.76	232	*e*P	Pn	16 45 37.1	+2.1
SGLT	Jiouru	1.78	228	*e*P	Pn	16 45 38.0	+2.8
TAI1	Yung-k'ang	1.79	241	*e*P	Pn	16 45 36.5	+1.1
JKRS	Kuro-shima	1.93	81	P	Pn	16 45 40.7	+3.3
JKRS				*e*S	Sn	16 46 07.7	+5.1
SCZT	Fangliau	1.96	218	*e*P	Pn	16 45 38.5	+0.7
KAU	Kaohsiung	2.01	228	*e*P	Pn	16 45 43.0	+4.5
JIJ	Ishigaki jima	2.08	78	P	Pn	16 45 41.6	+2.2
JIJ				*e*S	Sn	16 46 09.9	+3.7
TSEB	Hengchuen, Pin	2.23	205	*e*P	Pn	16 45 42.7	+1.0
JTJ	Tarama	2.63	74	P	Pn	16 45 50.3	+2.9
QZH	Quanzhou	3.20	289	⇑*i*P	Pn	16 45 53.1	-2.3
QZH				S	Sn	16 46 34.3	-0.4
QZH				Smax			
	comp=N,7µm,1.0s						
QZH				Smax			
	comp=E,4µm,1.0s						
KNM	Kinmen	3.22	279	*e*P	Pn	16 45 55.1	-0.7
BBP	Basco	3.47	179	*e*P	Pn	16 46 00.3	+0.9
BBP				*e*S	Sn	16 46 39.5	-2.1
JKE	Kume jima 2	5.01	61	P	Pn	16 46 22.0	+0.8
APYP	Conner	6.07	186	*e*P	Pn	16 46 37.1	+1.0
CVP	Callao Caves	6.20	181	*e*P	Pn	16 46 39.0	+1.1
JIH	Iheya	6.28	59	P	Pn	16 46 39.8	+0.7
ABRA	Dolores	6.35	190	*e*P	Pn	16 46 39.0	-1.1
JOW	Kunigami	6.43	62	Pn	Pn	16 46 40.5	-0.7
	comp=E,6.2nm,0.3s,baz=162,slow=12,SNR=11						
JOW	Kunigami	6.43	62	P	Pn	16 46 40.7	-0.5
SSE	Sheshan	7.17	355	P	Pn	16 46 52.3	+0.7
SSE				S	Sn	16 48 10.8	-3.7
SSE				AMB	AMB		
	comp=Z,70nm,0.9s						
SSE				AMB	AMB		
	comp=Z,260nm,7.7s						
SSE				Smax			
	comp=N,450nm,1.1s						
SSE				Smax			
	comp=E,370nm,1.3s						
SSE				LR	LR		
	comp=N,8µm,9.9s						
SSE				LR	LR		
	comp=E,6µm,9.9s						
SSE				LR	LR		
	comp=Z,10µm,10.1s						
JTK	Tokunoshima	7.40	57	P	Pn	16 46 53.9	-1.0
BALP	Baler	8.15	182	*e*P	P	16 47 06.9	+1.5
JAM	Amami Oshima	8.22	55	P	P	16 47 04.6	-1.7
NJ2	Nanjing	8.53	342	*e*P	P	16 47 08.0	-2.6
NJ2				AP		16 47 11.4	
NJ2				XP		16 47 13.9	
NJ2				S	Sn	16 48 49.0	+0.4
NJ2				XS		16 48 53.0	
NJ2				PCP	PcP	16 53 38.3	-2.3
NJ2				Smax			
	comp=N,350nm,0.9s						
NJ2				Smax			
	comp=E,650nm,0.6s						
NJ2				LR	LR		
	comp=Z,12µm,11.1s						
WHN	Wuhan	9.42	316	P	P	16 47 20.1	-2.8
WHN				S	Sn	16 49 01.4	-9.2
WHN				Smax			
	comp=N,3µm,1.5s						
WHN				Smax			
	comp=E,2µm,1.5s						
WHN				LR	LR		
	comp=Z,45µm,9.3s						
JNU	Nakatsue	12.07	39	Pn	P	16 47 57.0	-2.3
	comp=Z,0.2nm,0.3s,baz=284,slow=12,SNR=2.7						
JNU				LR	LR	16 53 24.6	
	comp=Z,2µm,18.8s,baz=216,slow=42						
QIZ	Qiongzhong	12.25	249	P	P	16 48 03.1	+1.4
QIZ				S	S	16 50 23.4	+3.3
QIZ				LR	LR		
	comp=N,6µm,15.3s						
QIZ				LR	LR		
	comp=Z,4µm,9.5s						
ENH	Enshi	12.74	302	Pn	P	16 48 06.1	-2.1
	comp=Z,30nm,1.0s						
GYA	Guiyang	14.04	284	⇓*i*P	P	16 48 25.1	-0.4
GYA				AP		16 48 29.8	
GYA				XP		16 48 32.4	
GYA				S	S	16 50 52.4	-11
GYA				AMB	AMB		
	comp=Z,60nm,1.0s						
GYA				AMB	AMB		
	comp=Z,290nm,4.8s						
INCN	Inchon	14.10	16	P	P	16 48 25.8	-0.4
	comp=Z,114nm,1.1s						
INCN				*e*		16 48 32.8	
KS15	Wonju Array Si	14.40	19	*e*P	P	16 48 34.0	+3.8
XAN	Xi'an	15.18	314	P	P	16 48 37.9	-2.4
XAN				AMB	AMB		
	comp=Z,30nm,1.3s						
XAN				LR	LR		
	comp=Z,12µm,9.8s						
TIY	Taiyuan	15.96	332	PR		16 48 47.0	
TIY				S	S	16 51 49.0	+0.8
TIY				LR	LR		
	comp=E,4µm,9.0s						
TIY				LR	LR		
	comp=Z,13µm,8.0s						
KMI	Kunming	17.50	278	P	P	16 49 08.7	-1.3
KMI				AP		16 49 11.5	
KMI				XP		16 49 13.4	
KMI				PP	PP	16 49 23.8	-0.7
KMI				PPP	PPP	16 49 32.1	-0.9
KMI				S	S	16 52 25.0	+1.3
KMI				XS		16 52 29.3	
KMI				SS	SS	16 52 42.6	-2.8
KMI				AMB	AMB		
	comp=Z,590nm,5.1s						
CD2	Chengdu	17.55	297	⇑*i*P	P	16 49 10.4	-0.2
CD2				S	S	16 52 28.9	+4.0
CD2				AMB	AMB		
	comp=Z,70nm,1.0s						
CD2				AMB	AMB		
	comp=Z,550nm,9.2s						
JHJ	Hachijo jima 2	18.15	56	LR	LR	16 55 58.7	
	comp=Z,718nm,18.3s,baz=302,slow=36						
CBIJ	Chichi jima	18.56	76	P	P	16 49 23.4	+0.2
	comp=Z,14nm,0.3s,baz=262,slow=21,SNR=3.7						
KKM	Kota Kinabalu	18.61	198	P	P	16 49 25.1	+1.2
KKM				*e*		16 49 30.9	
MAJO	Matsushiro	18.83	44	*e*P	P	16 49 25.0	-1.5
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MAJO	Matsushiro	18.83	44	*e*P	P	16 49 25.0	-1.5
	comp=Z,9.2nm,0.9s						
MAT	Matsushiro	18.83	44	*e*P	P	16 49 28.0	+1.5
MAT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAT	Matsushiro	18.83	44	*e*P	P	16 49 28.0	+1.5
	comp=Z,10.0nm,1.0s						
MAT				*e*S	S	16 53 06.0	+12
MAT	Matsushiro	18.83	44	P	P	16 49 25.7	-0.8
MAT				*e*S	S	16 52 54.0	+0.1
MJAR	Matsushiro Arr	18.83	44	P	P	16 49 26.3	-0.2
	comp=Z,0.2nm,0.3s,baz=234,slow=9.0,SNR=14						
MJAR				LR	LR	16 57 48.2	
	comp=Z,1µm,19.1s,baz=265,slow=40						
HHC	Hu-ho-hao-te	18.98	335	*e*P	P	16 49 32.2	+4.0
HHC				AMB	AMB		
	comp=Z,30nm,1.7s						
HHC				AMB	AMB		
	comp=Z,770nm,10.8s						
HHC				LR	LR		
	comp=N,7µm,9.5s						
HHC				LR	LR		
	comp=E,3µm,10.9s						
HHC				LR	LR		
	comp=Z,4µm,12.0s						
BTO	Baotou	19.40	332	*e*P	P	16 49 33.7	+0.5
BTO				S	S	16 53 05.4	-1.4
BTO				AMB	AMB		
	comp=Z,40nm,1.1s						
KKTK	Khon Kaen	19.45	251	P	P	16 49 37.0	+3.2
LZH	Lanzhou	19.75	312	P	P	16 49 39.8	+2.5
LZH				PP	PP	16 49 58.4	+2.8
LZH				S	S	16 53 18.4	+3.8
LZH				AMB	AMB		
	comp=Z,130nm,1.2s						
LZH				AMB	AMB		
	comp=Z,2µm,4.3s						
LZH				LR	LR		
	comp=Z,19µm,10.0s						
CN2	Changchun	20.03	7	*e*P	P	16 49 38.9	-1.3
CN2				S	S	16 53 20.3	-0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,4µm,10.0s,MS5.1						
CN2				LR	LR		
	comp=E,2µm,10.0s,MS5.1						
CN2				LR	LR		
	comp=Z,5µm,11.0s,MS5.1						
NANT	Nan	20.41	260	⇑P	P	16 49 43.0	-1.3
	comp=Z,238nm,1.0s						
MDJ	Mudanjiang	21.57	15	P	P	16 49 55.9	-0.1
MDJ				AP		16 50 04.9	
MDJ				PP	PP	16 50 24.3	+4.0
MDJ				S	S	16 53 58.3	+7.5
MDJ				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,60nm,3.8s						
MDJ				LR	LR		
	comp=N,2µm,17.0s,MS5.1						
MDJ				LR	LR		
	comp=E,6µm,15.4s,MS5.1						
MDJ				LR	LR		
	comp=Z,3µm,12.2s,MS5.0						
MDJ	Mudanjiang	21.57	15	*e*P	P	16 49 55.2	-0.8
	comp=Z,28nm,1.0s,mb4.6						
MDJ				LR	LR		
	comp=Z,1µm,19.0s,MS4.3						
CHG	Chiang Mai	21.98	261	P	P	16 50 01.4	+1.0
CM31	Chiang Mai Arr	22.09	260	*e*P	P	16 50 01.0	-0.5
	comp=Z,10nm,0.9s,mb4.3						
CM31				*e*		16 50 21.7	
CMAR	Chiang Mai Arr	22.09	260	*i* P	P	16 50 02.0	+0.5
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	Chiang Mai Arr	22.09	260	P	P	16 50 00.7	-0.8
	comp=Z,2.5nm,0.8s,mb3.7,baz=65,slow=8.5,SNR=10						
CMAR				LR	LR	16 58 53.1	
	comp=Z,680nm,19.1s,MS4.1,baz=75,slow=38						
GUMO	Guam	24.00	111	PFAKE		16 50 30.0	+10
GUMO				LR	LR		
	comp=Z,997nm,22.0s,MS4.2						
GTA	Gaotai	24.24	315	P	P	16 50 23.0	+0.6
GTA				AP		16 50 27.8	
GTA				XP		16 50 30.7	
GTA				AMB	AMB		
	comp=Z,20nm,2.3s,mb4.1						
GTA				AMB	AMB		
	comp=Z,520nm,7.2s						
GTA				LR	LR		
	comp=N,3µm,9.5s						
GTA				LR	LR		
	comp=E,5µm,12.9s						
GTA				LR	LR		
	comp=Z,5µm,10.3s,MS5.3						
KSM	Kuching	25.00	208	*e*P	P	16 50 29.5	-0.5
HIA	Hailar	25.34	357	*e*P	P	16 50 32.3	-0.6
HIA				pmax	pmax		
	comp=Z,25nm,0.9s						
HIA				MLR	MLR		
	comp=Z,2µm,19.0s						
HIA	Hailar	25.34	357	*e*P	P	16 50 32.3	-0.6
	comp=Z,25nm,0.9s,mb4.7						
HIA				LR	LR		
	comp=Z,2µm,19.0s,MS4.6						
ASAJ	Asahikawa	26.31	35	LR	LR	17 01 18.0	
	comp=Z,1µm,19.4s,MS4.4,baz=251,slow=37						
ULN	Ulaanbaatar	26.65	337	*i* P	P	16 50 43.6	-1.5
ULN	Ulaanbaatar	26.65	337	*e*P	P	16 50 43.4	-1.7
	comp=Z,36nm,0.6s,mb5.1						
ULN				LR	LR		
	comp=Z,712nm,22.0s,MS4.2						
SONM	Songino Array	26.86	336	P	P	16 50 46.5	-0.5
	comp=Z,8.9nm,0.9s,mb4.3,baz=152,slow=8.2,SNR=53						
SONM				LR	LR	17 02 33.7	
	comp=Z,2µm,19.3s,MS4.7,baz=146,slow=39						
SONM	Songino Array	26.86	336	P	P	16 50 46.5	-0.5
SONM				LR	LR	17 02 33.7	
SHL	Shillong	27.30	280	*e*P	P	16 50 52.0	+0.8
LSA	Lhasa	28.01	289	P	P	16 50 58.2	+0.6
LSA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
LSA				LR	LR		
	comp=N,1µm,10.5s						
LSA				LR	LR		
	comp=E,5µm,9.7s						
LSA				LR	LR		
	comp=Z,6µm,9.7s						
LSA	Lhasa	28.01	289	*e*P	P	16 50 57.0	-0.6
LSA				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7						
LSA	Lhasa	28.01	289	*e*P	P	16 50 57.0	-0.6
	comp=Z,15nm,0.8s,mb4.7						
YSS	Yuzh-Sakhalins	28.39	31	⇑*e*P	P	16 51 03.5	+2.6
YSS				*e*		16 51 20.0	
YSS				*e*		16 57 34.0	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
YSS				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.3						
YSS				MLR	MLR		
	comp=N,900nm,14.0s,MS4.7						
YSS				MLR	MLR		
	comp=E,1µm,16.0s,MS4.7						
YSS	Yuzh-Sakhalins	28.39	31	P	P	16 50 59.7	-1.2
	comp=E,47nm,1.4s,mb4.9						
YSS				LR	LR		
	comp=Z,501nm,19.0s,MS4.1						
CIT	Chita	28.77	349	*e*P	P	16 51 03.0	-1.2
CIT				*e*		16 51 50.7	
CIT				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.7						
ZAK	Zakamensk	30.12	336	*e*P	P	16 51 15.0	-1.4
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
TLY	Talaya	31.06	338	*e*P	P	16 51 26.6	+2.0
TLY				*e*		16 52 44.1	
TLY				*e*S	S	16 56 32.7	+3.2
TLY				*e*SSS	SSS	16 58 17.5	-18
TLY				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.9						
TLY				MLR	MLR		
	comp=Z,2µm,21.0s,MS4.7						
TLY	Talaya	31.06	338	*e*P	P	16 51 23.2	-1.5
	comp=Z,14nm,0.9s,mb4.8						
TLY				LR	LR		
	comp=Z,374nm,19.0s,MS4.1						
IRK	Irkutsk	31.32	339	*e*P	P	16 51 25.5	-1.4
IRK				pmax	pmax		
	comp=Z,45nm,2.1s,mb4.9						
MOY	Mondy	32.02	335	*e*P	P	16 51 32.2	-0.9
MOY				pmax	pmax		
	comp=Z,16nm,1.8s,mb4.5						
GUN	Gumba	32.58	285	*e*P	P	16 51 38.1	-0.1
	comp=Z,180nm,1.6s,mb5.8						
PKI	Pulchoki	33.01	284	*e*P	P	16 51 41.8	-0.1
	comp=Z,142nm,1.7s,mb5.6						
PKI	Pulchoki	33.01	284	*e*P	P	16 51 41.8	-0.1
PKI				pmax	pmax		
	comp=Z,71nm,1.7s,mb5.3						
KKN	Kakani	33.12	285	*e*P	P	16 51 42.5	-0.4
	comp=Z,114nm,1.5s,mb5.6						
KKN	Kakani	33.12	285	*e*P	P	16 51 42.5	-0.4
KKN				pmax	pmax		
	comp=Z,57nm,1.5s,mb5.3						
DMN	Daman	33.28	284	*e*P	P	16 51 44.0	-0.3
	comp=Z,70nm,1.2s,mb5.5						
GKN	Gorkha	33.68	285	*e*P	P	16 51 46.0	-1.8
	comp=Z,110nm,1.4s,mb5.6						
WMQ	Urumqi	34.31	314	*e*P	P	16 51 53.2	+0.1
WMQ				AP	pP	16 51 56.2	+2.5
WMQ				XP	sP	16 51 58.2	+4.2
WMQ				PP	PP	16 53 07.9	-0.1
WMQ				PPP	PPP	16 53 25.9	-0.1
WMQ				PCP	PcP	16 54 30.0	+0.5
WMQ				*e*S	S	16 57 18.3	-1.9
WMQ				SS	SS	16 59 27.0	-2.1
WMQ				SCS	ScS	17 02 14.2	-1.2
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,180nm,4.0s						
WMQ				LR	LR		
	comp=N,800nm,20.0s,MS4.6						
WMQ				LR	LR		
	comp=E,930nm,19.8s,MS4.6						
WMQ				LR	LR		
	comp=Z,970nm,19.0s,MS4.6						
KOLN	Koldanda	34.60	285	*e*P	P	16 51 55.3	-0.5
	comp=Z,59nm,1.0s,mb5.5						
YAK	Yakutsk	38.45	6	*e*P	P	16 52 25.5	-2.4
YAK				*e*		16 53 59.2	
YAK				*e*PPP	PPP	16 54 21.3	-0.3
YAK				*e*		17 02 26.9	
YAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
YAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
YAK				MLR	MLR		
	comp=Z,1µm,14.0s,MS4.9						
YAK				MLR	MLR		
	comp=N,967nm,13.0s,MS5.0						
YAK				MLR	MLR		
	comp=E,1µm,12.0s,MS5.0						
YAK	Yakutsk	38.45	6	*e*P	P	16 52 25.1	-2.7
	comp=E,25nm,1.1s,mb4.9						
YAK				*e*		16 52 34.8	
YAK				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
MKAR	Makanchi Array	38.99	316	P	P	16 52 31.4	-1.2
	comp=Z,6.3nm,0.8s,mb4.4,baz=104,slow=10,SNR=26						
MKAR				LR	LR	17 09 47.8	
	comp=Z,917nm,18.3s,MS4.6,baz=126,slow=38						
PET	Petropavlovsk	40.14	34	PFAKE		16 52 50.0	+8.0
PET				LR	LR		
	comp=Z,557nm,21.0s,MS4.4						
NDI	New Delhi	40.18	287	*e*P	P	16 52 41.0	-1.6
ZAL	Zalesovo	40.83	327	P	P	16 52 46.0	-1.6
	comp=Z,6.7nm,0.8s,mb4.3,baz=1.5,slow=8.8,SNR=22						
ZAL				LR	LR	17 11 19.4	
	comp=Z,954nm,18.3s,MS4.7,baz=343,slow=39						
MA2	Magadan	40.96	22	PFAKE		16 53 00.0	+11
MA2				LR	LR		
	comp=Z,286nm,19.0s,MS4.2						
KSH	Kashi	41.60	303	*e*P	P	16 52 59.1	+4.9
KSH				*e*AP	pP	16 53 04.0	+9.2
KSH				*e*XP	sP	16 53 07.0	+12
KSH				*e*PP	PP	16 54 37.1	+3.5
KSH				*e*PPP	PPP	16 55 06.0	+2.2
KSH				*e*SCP		16 58 47.0	
KSH				*e*S	S	16 59 14.3	+3.3
KSH				*e*XS		16 59 18.6	
KSH				*e*SS	SS	17 02 10.4	+0.1
KSH				*e*SCS	ScS	17 03 01.8	+5.0
KSH				AMB	AMB		
	comp=Z,180nm,4.2s						
NVS	Novosibirsk	42.08	327	*e*P	P	16 52 55.9	-2.0
NVS				*e**PP	pP	16 53 11.4	+13
NVS				*e*		16 54 40.6	
NVS				*e*PPP	PPP	16 55 12.2	+2.4
NVS				pmax	pmax		
	comp=Z,58nm,2.3s,mb4.8						
NVS				pmax	pmax		
	comp=N,31nm,2.0s						
NVS				pmax	pmax		
	comp=E,32nm,2.0s						
PALK	Pallekele	42.81	254	PFAKE		16 53 20.0	+16
PALK				LR	LR		
	comp=Z,68nm,21.0s,MS3.5						
FRU	Bishkek	43.14	308	*e*P	P	16 53 11.5	+4.8
AAK	Ala-Archa	43.19	307	*e*P	P	16 53 06.3	-0.9
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.4						
AAK				MLR	MLR		
	comp=Z,134nm,20.0s,MS3.8						
AAK	Ala-Archa	43.19	307	*e*P	P	16 53 06.2	-0.9
	comp=Z,8.0nm,1.1s,mb4.4						
AAK				LR	LR		
	comp=Z,134nm,20.0s,MS3.8						
MBWA	Marble Bar	44.87	183	*e*P	P	16 53 18.9	-2.2
	comp=Z,5.2nm,0.7s,mb4.5						

POO	**Poona**	**44.97**	**273**	*e*P	**P**	**16 53 22.0**	**+0.2**
WRAB	**Tennant Creek**	**45.25**	**163**	*e*P	**P**	**16 53 23.0**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**45.25**	**163**	*e*P	**P**	**16 53 23.0**	**-1.1**
	comp=Z,26nm,1.1s,mb5.0						
WRA	**Warramunga Arr**	**45.26**	**163**	P	**P**	**16 53 22.2**	**-2.0**
	comp=Z,3.1nm,0.7s,mb4.2,baz=345,slow=8.8,SNR=24						
WB2	**Warramunga Arr**	**45.26**	**163**	*e*P	**P**	**16 53 23.2**	**-0.9**
TIXI	**Tiksi**	**47.91**	**3**	*e*P	**P**	**16 53 37.8**	**-6.6**
TIXI				*e*S	**S**	**17 00 31.4**	**-10**
TIXI				*e*		17 03 31.0	
TIXI				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,1µm,13.0s,MS5.1						
BVAR	**Borovoye Array**	**48.30**	**321**	P	**P**	**16 53 46.0**	**-1.6**
	comp=Z,2.3nm,0.8s,mb4.3,baz=112,slow=8.0,SNR=12						
ASAR	**Alice Springs**	**48.72**	**165**	P	**P**	**16 53 50.0**	**-1.3**
	comp=Z,4.3nm,0.9s,mb4.5,baz=340,slow=6.1,SNR=12						
ASAR				LR	LR	17 14 27.8	
	comp=Z,98nm,20.1s,MS3.8,baz=349,slow=36						
ASPA	**Alice Springs**	**48.72**	**165**	*e*P	**P**	**16 53 50.6**	**-0.7**
CTA	**Charters Tower**	**49.76**	**150**	LR	LR	17 12 28.6	
	comp=Z,394nm,21.7s,MS4.4,baz=337,slow=33						
CTAO	**Charters Tower**	**49.76**	**150**	*e*P	**P**	**16 54 00.1**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
CTAO				MLR	MLR		
	comp=Z,410nm,20.0s,MS4.4						
CTAO	**Charters Tower**	**49.76**	**150**	*e*P	**P**	**16 54 00.1**	**+0.7**
	comp=Z,20nm,1.0s,mb5.1						
CTAO				LR	LR		
	comp=Z,410nm,20.0s,MS4.4						
BILL	**Bilibino**	**51.69**	**20**	*e*P	**P**	**16 54 11.7**	**-1.7**
BILL				*e*		16 54 19.7	
BILL				*e*		16 56 15.3	
BILL				S	**S**	**17 01 37.0**	**+2.7**
BILL				SS	SS	17 05 09.0	+0.5
BILL				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.7						
BILL				MLR	MLR		
	comp=Z,400nm,14.0s,MS4.6						
SVE	**Sverdlovsk**	**54.65**	**324**	*e*P	**P**	**16 54 34.0**	**-1.5**
SVE				*e*		16 54 49.0	
SVE				*e*S	**S**	**17 02 14.0**	**-0.5**
SVE				*e*PS	PS	17 02 31.0	+6.1
SVE				*e*		17 04 20.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.2						
SVE				MLR	MLR		
	comp=N,500nm,12.0s,MS5.2						
SVE				MLR	MLR		
	comp=E,1µm,12.0s,MS5.2						
SVE				MLR	MLR		
	comp=Z,1µm,12.0s,MS5.2						
ARU	**Arti**	**55.71**	**323**	⇓*i*P	**P**	**16 54 41.8**	**-1.4**
ARU				*i*		16 56 46.1	
ARU				*e*PPP	PPP	16 57 58.9	-4.4
ARU				*e*S	**S**	**17 02 25.9**	**-2.9**
ARU				*e*		17 04 23.4	
ARU				*e*SS	SS	17 06 16.2	+2.3
ARU				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.8						
ARU				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.6						
ARU				MLR	MLR		
	comp=N,200nm,14.0s,MS4.6						
ARU				MLR	MLR		
	comp=E,300nm,17.0s,MS4.6						
ARU	**Arti**	**55.71**	**323**	*e*P	**P**	**16 54 41.2**	**-2.0**
	comp=E,12nm,1.0s,mb4.9						
ARU				LR	LR		
	comp=Z,162nm,19.0s,MS4.1						
STKA	**Stephens Creek**	**58.60**	**160**	*e*P	**P**	**16 55 03.1**	**-0.9**
STKA	**Stephens Creek**	**58.60**	**160**	P	**P**	**16 55 02.5**	**-1.5**
	comp=Z,2.8nm,0.6s,mb4.5,baz=360,slow=7.6,SNR=12						
STKA				LR	LR	17 22 58.3	
	comp=Z,176nm,18.9s,MS4.2,baz=27,slow=39						
TNA	**Tin City**	**60.26**	**27**	PFAKE		16 55 30.0	+15
TNA				LR	LR		
	comp=Z,232nm,19.0s,MS4.3						
GNI	**Garni**	**65.50**	**305**	LR	LR	17 26 41.5	
	comp=Z,105nm,19.8s,MS4.0,baz=233,slow=38						
GNI	**Garni**	**65.50**	**305**	PFAKE		16 56 00.0	+10
GNI				LR	LR		
	comp=Z,238nm,20.0s,MS4.4						
ZEI	**Tsey**	**65.62**	**308**	*e*P	**P**	**16 55 45.2**	**-5.7**
ZEI				*i* *PP	pP	16 55 53.6	+2.1
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
IMA	**Indian Mountai**	**66.13**	**26**	P	**P**	**16 55 53.6**	**-0.1**
IMA				pmax	pmax		
	comp=Z,52nm,1.2s,mb5.4						
IMA	**Indian Mountai**	**66.13**	**26**	P	**P**	**16 55 53.5**	**-0.2**
	comp=Z,52nm,1.2s,mb5.4						
KIV	**Kislovodsk**	**66.27**	**309**	*e*P	**P**	**16 55 54.5**	**-0.5**
KIV				*e*		16 56 25.4	
KIV				*e*S	S	17 04 42.2	-1.5
KIV				pmax	pmax		
	comp=N,6.0nm,1.1s						
KIV				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
KIV				MLR	MLR		
	comp=Z,206nm,17.0s,MS4.4						
KIV	**Kislovodsk**	**66.27**	**309**	*e*P	**P**	**16 55 54.6**	**-0.4**
	comp=Z,44nm,1.4s,mb5.3						
KIV				LR	LR		
	comp=Z,60nm,19.0s,MS3.8						
VRSR	**Storozhevoye**	**67.27**	**317**	*e*P	**P**	**16 55 59.6**	**-1.6**
VRSR				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
VRSR				pmax	pmax		
	comp=N,10.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,8.0nm,0.7s						
MOS	**Moscow**	**67.41**	**322**	*e*P	**P**	**16 56 01.4**	**-0.7**
MOS				*e*		16 56 19.0	
MOS				*e*		16 58 24.8	
MOS				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.1						
SPU	**Mount Spurr**	**67.44**	**32**	*e*P	**P**	**16 56 00.5**	**-1.7**
OBN	**Obninsk**	**68.11**	**322**	*e*P	**P**	**16 56 06.4**	**-0.1**
OBN				*e*		16 56 13.2	
OBN						16 56 30.0	
OBN				*e*S	S	17 05 03.3	-2.4
OBN				*e*		17 05 58.6	
OBN				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.0						
OBN				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.6						
OBN	**Obninsk**	**68.11**	**322**	PFAKE		16 56 20.0	+14
OBN				LR	LR		
	comp=Z,91nm,19.0s,MS4.0						
FIB	**Fire Island**	**68.34**	**31**	PFAKE		16 56 20.0	+12
FIB				LR	LR		
	comp=Z,1µm,22.0s,MS5.1						
MCK	**McKinley**	**68.45**	**29**	*e*P	**P**	**16 56 06.0**	**-2.4**
MCK				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.9						
MCK				MLR	MLR		
	comp=Z,121nm,19.0s,MS4.2						
MCK	**McKinley**	**68.45**	**29**	*e*P	**P**	**16 56 06.0**	**-2.4**
	comp=Z,19nm,1.4s,mb4.9						
MCK				LR	LR		
	comp=Z,121nm,19.0s,MS4.2						
SOC	**Sochi**	**68.45**	**309**	*e*P	**P**	**16 55 55.0**	**-14**
SOC				*e*		16 56 36.0	
SOC				*e*PPP	PPP	17 00 14.0	-5.4
SOC				*e*S	S	17 05 00.4	-10
SOC				*e*		17 06 00.9	
SOC				*e*SSS	SSS	17 12 36.3	+0.5
SOC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
SOC				pmax	pmax		
	comp=N,2.0nm,0.3s						
SOC				pmax	pmax		
	comp=E,3.0nm,0.5s						
SOC				MLR	MLR		
	comp=N,128nm,13.0s,MS4.5						
SOC				MLR	MLR		
	comp=E,149nm,13.0s,MS4.5						
SOC				MLR	MLR		
	comp=Z,299nm,13.0s,MS4.7						
COLA	**College**	**68.70**	**27**	*i* P	**P**	**16 56 10.3**	**+0.3**
COLA	**College**	**68.70**	**27**	PFAKE		16 56 20.0	+10
COLA				LR	LR		
	comp=Z,146nm,20.0s,MS4.2						
SML	**Sawmill**	**69.09**	**31**	*e*P	**P**	**16 56 11.1**	**-1.3**
ILAR	**Eielson Array**	**69.13**	**27**	P	**P**	**16 56 10.7**	**-1.9**
	comp=Z,1.8nm,0.7s,mb4.1,baz=294,slow=9.2,SNR=7.9						
ILAR				LR	LR	17 31 40.7	
	comp=Z,140nm,18.2s,MS4.2,baz=183,slow=40						
KEV	**Kevo**	**69.46**	**338**	PFAKE		16 56 30.0	+15
KEV				LR	LR		
	comp=Z,283nm,21.0s,MS4.5						
ANN	**Anapa**	**69.77**	**311**	*e*P	**P**	**16 56 15.2**	**-1.6**
ANN				*e*S	S	17 05 22.1	-3.4
ANN				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
KBS	**Kingsbay**	**70.41**	**349**	PFAKE		16 56 30.0	+10
KBS				LR	LR		
	comp=Z,814nm,21.0s,MS5.0						
DIV	**Divide**	**70.44**	**31**	*e*P	**P**	**16 56 19.9**	**-0.8**
	comp=Z,46nm,1.0s,mb5.4						
EYAK	**Cordova Ski Ar**	**70.59**	**32**	P	**P**	**16 56 20.3**	**-1.3**
MALT	**Malatya**	**70.69**	**304**	*e*P	**P**	**16 56 21.6**	**-1.0**
MALT				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
MALT	**Malatya**	**70.69**	**304**	*e*P	**P**	**16 56 21.6**	**-1.0**
	comp=Z,11nm,0.9s,mb4.8						
FINES	**FINESS Array B**	**72.00**	**330**	*i* P	**P**	**16 56 29.9**	**-0.2**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**72.00**	**330**	P	**P**	**16 56 28.6**	**-1.5**
	comp=Z,3.1nm,0.8s,mb4.3,baz=90,slow=7.6,SNR=8.4						
FINES				LR	LR	17 31 46.5	
	comp=Z,534nm,18.5s,MS4.8,baz=69,slow=39						
AKASG	**Malin Array Be**	**73.51**	**319**	P	**P**	**16 56 37.4**	**-1.7**
	comp=Z,2.5nm,0.8s,mb4.2,baz=58,slow=5.9,SNR=9.7						
ASF	**Jabal al Asfar**	**73.68**	**298**	P	**P**	**16 56 39.8**	**-0.6**
	comp=Z,5.7nm,0.9s,mb4.5,baz=301,slow=5.1,SNR=5.0						
BR131	**Keskin Array S**	**73.86**	**307**	*e*P	**P**	**16 56 40.4**	**-1.0**
	comp=Z,8.5nm,1.0s,mb4.6						
BRTR	**Keskin Array B**	**73.86**	**307**	P	**P**	**16 56 41.0**	**-0.3**
	comp=Z,4.9nm,0.8s,mb4.5,baz=101,slow=6.3,SNR=23						
SUW	**Suwalki**	**75.90**	**323**	*e*P	**P**	**16 56 52.4**	**-0.4**
DAG	**Danmarks Havn**	**76.72**	**351**	*e*P	**P**	**16 56 56.0**	**-1.0**
DAG	**Danmarks Havn**	**76.72**	**351**	*i* P	**P**	**16 56 56.0**	**-1.0**
SIT	**Sitka**	**76.85**	**33**	PFAKE		16 57 10.0	+12
SIT				LR	LR		
	comp=Z,271nm,20.0s,MS4.6						
NB2	**NORSAR Subarra**	**78.76**	**332**	P	**P**	**16 57 06.7**	**-1.8**
	comp=Z,1.6nm,0.8s,mb4.0,baz=61,slow=5.3						
NOA	**NORSAR Array B**	**78.76**	**332**	P	**P**	**16 57 06.6**	**-1.9**
	comp=Z,0.6nm,0.8s,mb3.6,baz=77,slow=1.8,SNR=4.0						
NOA				LR	LR	17 34 42.1	
	comp=Z,400nm,18.0s,MS4.8,baz=40,slow=38						
KONO	**Kongsberg**	**80.16**	**332**	PFAKE		16 57 30.0	+14
KONO				LR	LR		
	comp=Z,644nm,19.0s,MS5.0						
DPC	**Dobruska-Polom**	**81.25**	**321**	*e*P	**P**	**16 57 31.2**	**+9.2**
DPC				AMS	AMS	17 36 10.0	
	comp=Z,400nm,15.4s						
PVCC	**Panska Ves**	**82.16**	**322**	AMS	AMS	17 38 30.0	
	comp=Z,400nm,14.7s						
PRU	**Pruhonice**	**82.44**	**322**	AMS	AMS	17 38 30.0	
	comp=Z,400nm,21.0s						
CLL	**Collm**	**82.66**	**323**	P	**P**	**16 57 28.0**	**-1.3**
YKA	**Yellowknife Ar**	**82.94**	**23**	P	**P**	**16 57 29.9**	**-0.6**
	comp=Z,2.5nm,0.6s,mb4.4,baz=314,slow=4.9,SNR=20						
YKA				LR	LR	17 37 40.1	
	comp=Z,187nm,18.1s,MS4.5,baz=275,slow=38						
YKA	**Yellowknife Ar**	**82.94**	**23**	P	**P**	**16 57 29.9**	**-0.6**
YKA				LR	LR	17 37 40.1	
KHC	**Kasperske Hory**	**83.40**	**321**	*e*P	**P**	**16 57 34.4**	**+1.2**
KHC				*e*		16 57 46.0	
KHC	**Kasperske Hory**	**83.40**	**321**	*e*P	**P**	**16 57 34.0**	**+0.8**
KHC				x	x	16 57 46.0	
KHC	**Kasperske Hory**	**83.40**	**321**	*e*P	**P**	**16 57 34.4**	**+1.2**
KHC				x	x	16 57 46.0	
KHC				AMS	AMS	17 36 00.0	
	comp=Z,300nm,14.9s						
GERES	**GERESS Array B**	**83.46**	**321**	P	**P**	**16 57 33.1**	**-0.4**
	comp=Z,0.6nm,0.7s,mb3.8,baz=72,slow=4.2,SNR=5.3						
GERES				LR	LR	17 39 39.6	
	comp=Z,274nm,18.5s,MS4.7,baz=272,slow=39						
NKC	**Novy Kostel**	**83.50**	**322**	AMS	AMS	17 38 00.0	
	comp=Z,700nm,12.3s						
OPO	**Ambohidratompo**	**84.21**	**247**	P	**P**	**16 57 37.6**	**-0.4**
	comp=Z,7.0nm,0.9s,mb4.8,baz=57,slow=6.8,SNR=9.7						
GRA1	**Grafenberg Arr**	**84.45**	**322**	*e*P	**P**	**16 57 47.3**	**+8.8**
	comp=Z,16nm,1.6s,mb4.9						
GRF	**Grafenberg Arr**	**84.45**	**322**	*e*P	**P**	**16 57 47.3**	**+8.8**
GRF				pmax	pmax		
	comp=Z,16nm,1.6s,mb4.9						
GRF	**Grafenberg Arr**	**84.45**	**322**	*e*P	**P**	**16 57 47.3**	**+8.8**
GRF				pmax	pmax		
	comp=Z,16nm,1.6s,mb4.9						
GRF	**Grafenberg Arr**	**84.45**	**322**	*e*P	**P**	**16 57 47.3**	**+8.8**
	comp=Z,16nm,1.6s,mb4.9						
KMBO	**Kilima Mbogo**	**85.58**	**267**	P	**P**	**16 57 45.9**	**+0.9**
	comp=Z,0.8nm,0.3s,mb4.4,baz=48,slow=12,SNR=5.2						
ESK	**Eskdalemuir**	**88.28**	**332**	PFAKE		16 58 10.0	+13
ESK				LR	LR		
	comp=Z,129nm,19.0s,MS4.4						
MXC	**Moxie City**	**90.13**	**38**	P	**P**	**16 58 08.6**	**+2.5**
VFP	**Flag Point**	**90.19**	**39**	P	**P**	**16 58 09.1**	**+2.6**
CASY	**Casey**	**90.34**	**185**	PFAKE		16 58 20.0	+13
CASY				LR	LR		
	comp=Z,399nm,21.0s,MS4.8						
HAWA	**Hanford**	**90.66**	**37**	P	**P**	**16 58 09.0**	**+0.4**
	comp=Z,0.9nm,1.1s,mb4.0						
NEW	**Newport**	**90.83**	**35**	*e*P	**P**	**16 58 09.9**	**+0.6**
NEW				pmax	pmax		
	comp=Z,20nm,1.1s						
NEW				MLR	MLR		
	comp=Z,185nm,19.0s						
NEW	**Newport**	**90.83**	**35**	*e*P	**P**	**16 58 09.9**	**+0.6**
	comp=Z,20nm,1.1s,mb5.4						
NEW				LR	LR		
	comp=Z,185nm,19.0s,MS4.5						
MBAR	**Mbarara**	**91.32**	**270**	PFAKE		16 58 20.0	+7.6
MBAR				LR	LR		
	comp=Z,31nm,19.0s,MS3.8						
YBH	**Yreka Blue Hor**	**91.49**	**43**	*e*P	**P**	**16 58 14.8**	**+2.3**
YBH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
YBH	**Yreka Blue Hor**	**91.49**	**43**	*e*P	**P**	**16 58 14.8**	**+2.4**
	comp=Z,7.9nm,1.2s,mb4.9						
WDC	**Whiskeytown Da**	**92.24**	**43**	PFAKE		16 58 30.0	+14
WDC				LR	LR		
	comp=Z,147nm,20.0s,MS4.4						
LASM	**Arnica Sink**	**92.26**	**42**	P	**P**	**16 58 22.8**	**+6.8**
BSMT	**Bassoo Peak**	**92.30**	**34**	P	**P**	**16 58 18.4**	**+2.4**
BMO	**Blue Mountains**	**92.84**	**38**	*e*P	**P**	**16 58 18.6**	**0.0**
BMO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
BMO				MLR	MLR		
	comp=Z,172nm,20.0s,MS4.5						
BMO	**Blue Mountains**	**92.84**	**38**	*e*P	**P**	**16 58 18.6**	**0.0**
	comp=Z,3.9nm,0.9s,mb4.8						
BMO				LR	LR		
	comp=Z,172nm,20.0s,MS4.5						
MOD	**Modoc**	**92.86**	**41**	PFAKE		16 58 30.0	+11
MOD				LR	LR		
	comp=Z,88nm,21.0s,MS4.2						
FFC	**Flin Flon**	**93.09**	**24**	*e*P	**P**	**16 58 16.2**	**-3.3**
FFC				pmax	pmax		
	comp=Z,39nm,1.6s,mb5.6						
FFC				MLR	MLR		
	comp=Z,53nm,20.0s,MS4.0						
FFC	**Flin Flon**	**93.09**	**24**	*e*P	**P**	**16 58 16.2**	**-3.3**
	comp=Z,39nm,1.6s,mb5.6						
FFC				LR	LR		
	comp=Z,53nm,20.0s,MS4.0						
MSO	**Missoula**	**93.40**	**35**	PFAKE		16 58 30.0	+8.8
MSO				LR	LR		
	comp=Z,125nm,19.0s,MS4.4						
WVOR	**Wild Horse Val**	**93.54**	**40**	*e*P	**P**	**16 58 23.0**	**+1.1**
WVOR				pmax	pmax		
	comp=Z,15nm,1.4s,mb5.2						
WVOR				MLR	MLR		
	comp=Z,194nm,19.0s,MS4.6						
WVOR	**Wild Horse Val**	**93.54**	**40**	*e*P	**P**	**16 58 23.0**	**+1.1**
	comp=Z,15nm,1.4s,mb5.2						
WVOR				LR	LR		
	comp=Z,194nm,19.0s,MS4.6						
CMB	**Columbia Colle**	**95.07**	**45**	PFAKE		16 58 40.0	+11
CMB				LR	LR		
	comp=Z,126nm,20.0s,MS4.4						
HLID	**Hailey**	**95.26**	**37**	P	**P**	**16 58 27.5**	**-2.3**
	comp=Z,7.7nm,1.3s,mb5.0						
HLID				LR	LR		
	comp=Z,202nm,20.0s,MS4.6						
BOZ	**Bozeman (W)**	**95.39**	**35**	PFAKE		16 58 40.0	+10
BOZ				LR	LR		
	comp=Z,156nm,19.0s,MS4.5						
PPT	**Papeete**	**95.64**	**107**	*e*P	**P**	**16 58 41.5**	**+9.4**
	comp=Z,139nm,25.5s						
PPT				*e*LR	LR	17 29 15.1	
	comp=Z,270nm,26.2s						
NVAR	**Mina Array Bea**	**96.16**	**43**	P	**P**	**16 58 35.4**	**+1.3**
	comp=Z,1.8nm,1.0s,mb4.5,baz=304,slow=2.6,SNR=5.4						
MNV	**Mina**	**96.25**	**43**	PFAKE		16 58 50.0	+16
MNV				LR	LR		
	comp=Z,199nm,22.0s,MS4.5						
ELK	**Elko**	**96.59**	**40**	PFAKE		16 58 50.0	+14
ELK				LR	LR		
	comp=Z,221nm,20.0s,MS4.6						
LKWY	**Lake**	**96.76**	**35**	PFAKE		16 58 50.0	+13
LKWY				LR	LR		
	comp=Z,274nm,19.0s,MS4.8						
TPH	**Tonopah**	**97.05**	**43**	PFAKE		16 58 50.0	+12
TPH				LR	LR		
	comp=Z,145nm,19.0s,MS4.5						
LAO	**LASA Array**	**97.34**	**31**	PFAKE		16 58 50.0	+11
LAO				LR	LR		
	comp=Z,323nm,19.0s,MS4.8						
AHID	**Auburn Hatcher**	**97.61**	**36**	PFAKE		16 58 50.0	+10
AHID				LR	LR		
	comp=Z,157nm,20.0s,MS4.5						
HWUT	**Hardware Ranch**	**98.13**	**38**	PFAKE		16 58 50.0	+7.2
HWUT				LR	LR		
	comp=Z,222nm,19.0s,MS4.7						
DUG	**Dugway**	**98.36**	**39**	PFAKE		16 59 00.0	+16
DUG				LR	LR		
	comp=Z,216nm,19.0s,MS4.7						
BW06	**Boulder Array**	**98.44**	**36**	PFAKE		16 59 00.0	+16
BW06				LR	LR		
	comp=Z,188nm,19.0s,MS4.6						
ULM	**Lac du Bonnet**	**98.91**	**23**	LR	LR	17 46 53.7	
	comp=Z,254nm,18.8s,MS4.7,baz=0.3,slow=38						
LSZ	**Lusaka**	**99.39**	**257**	PFAKE		16 59 00.0	+11
LSZ				LR	LR		
	comp=Z,571nm,20.0s,MS5.1						
MVU	**Marysvale**	**99.82**	**40**	PFAKE		16 59 00.0	+9.4
MVU				LR	LR		
	comp=Z,229nm,19.0s,MS4.7						
WUAZ	**Wupatki**	**102.29**	**42**	PFAKE		16 59 10.0	+8.2
WUAZ				LR	LR		
	comp=Z,267nm,19.0s,MS4.8						
EYMN	**Ely**	**102.41**	**22**	PFAKE		16 59 10.0	+8.0
EYMN				LR	LR		
	comp=Z,272nm,19.0s,MS4.8						
ISCO	**Idaho Springs**	**102.64**	**36**	PFAKE		16 59 10.0	+6.8
ISCO				LR	LR		
	comp=Z,220nm,21.0s,MS4.7						
VNDA	**Vanda**	**103.95**	**172**	PFAKE		16 59 20.0	+12
VNDA				LR	LR		
	comp=Z,479nm,20.0s,MS5.0						
SDCO	**Great Sand Dun**	**104.18**	**37**	PFAKE		16 59 20.0	+10
SDCO				LR	LR		
	comp=Z,158nm,22.0s,MS4.5						
TUC	**Tucson**	**104.77**	**44**	PFAKE		16 59 20.0	+7.2
TUC				LR	LR		
	comp=Z,155nm,19.0s,MS4.6						
LBTB	**Lobatse**	**105.13**	**249**	PFAKE		17 03 40.0	
LBTB				LR	LR		
	comp=Z,687nm,20.0s,MS5.2						
ANMO	**Albuquerque**	**105.62**	**40**	PFAKE		17 03 40.0	
ANMO				LR	LR		
	comp=Z,121nm,19.0s,MS4.5						
CBKS	**Cedar Bluff**	**106.40**	**33**	PFAKE		17 03 40.0	
CBKS				LR	LR		
	comp=Z,218nm,19.0s,MS4.7						
AMTX	**Amarillo**	**108.37**	**37**	PFAKE		17 03 50.0	
AMTX				LR	LR		
	comp=Z,163nm,21.0s,MS4.6						
MNTX	**Cornudas Mount**	**108.54**	**41**	*e*Pn		17 03 33.4	
WMOK	**Wichita Mounta**	**110.03**	**35**	PFAKE		17 03 50.0	+12
WMOK				LR	LR		
	comp=Z,233nm,20.0s,MS4.8						
TSUM	**Tsumeb**	**110.24**	**257**	PFAKE		17 03 50.0	+11
TSUM				LR	LR		
	comp=Z,159nm,19.0s,MS4.6						
RKT	**Rikitea**	**110.40**	**107**	*e*S	tx	17 11 40.1	
	comp=Z,106nm,35.8s						
RKT				*e*LQ		17 31 45.2	
	comp=Z,218nm,37.0s						
RKT				*e*LR	LR	17 35 27.2	
	comp=Z,187nm,26.5s,baz=298						
LTX	**Lajitas**	**111.26**	**42**	PFAKE		17 03 50.0	+9.1
LTX				LR	LR		
	comp=Z,251nm,19.0s,MS4.8						
ACSO	**Alum Creek Sta**	**112.08**	**20**	PFAKE		17 03 50.0	+7.8
ACSO				LR	LR		
	comp=Z,136nm,19.0s,MS4.6						
JCT	**Junction City**	**112.71**	**39**	PFAKE		17 03 50.0	+6.3
JCT				LR	LR		
	comp=Z,197nm,20.0s,MS4.7						
HRV	**Harvard--Oak R**	**112.73**	**11**	PFAKE		17 03 50.0	+6.5
HRV				LR	LR		
	comp=Z,245nm,21.0s,MS4.8						
WCI	**Wyandotte Cave**	**112.73**	**24**	PFAKE		17 03 50.0	+6.4
WCI				LR	LR		
	comp=Z,171nm,20.0s,MS4.6						
WES	**Weston**	**112.89**	**11**	PFAKE		17 03 50.0	+6.2
WES				LR	LR		
	comp=Z,417nm,19.0s,MS5.0						
QSPA	**South Pole Qui**	**113.72**	**180**	PFAKE		17 04 00.0	+15
QSPA				LR	LR		
	comp=Z,698nm,19.0s,MS5.3						
WVT	**Waverly**	**113.98**	**26**	PFAKE		17 04 00.0	+14
WVT				LR	LR		
	comp=Z,282nm,20.0s,MS4.9						
NATX	**Nacogdoches**	**114.50**	**34**	PFAKE		17 04 00.0	+13
NATX				LR	LR		
	comp=Z,150nm,19.0s,MS4.6						
OXF	**Oxford**	**114.71**	**28**	PFAKE		17 04 00.0	+12
OXF				LR	LR		
	comp=Z,323nm,20.0s,MS4.9						
PLAL	**Pickwick Lake**	**114.87**	**27**	PFAKE		17 04 00.0	+12
PLAL				LR	LR		
	comp=Z,211nm,21.0s,MS4.7						
CBN	**Corbin**	**115.59**	**17**	PFAKE		17 04 00.0	+11
CBN				LR	LR		
	comp=Z,719nm,20.0s,MS5.3						
BLA	**Blacksburg**	**115.65**	**20**	PFAKE		17 04 00.0	+11
BLA				LR	LR		
	comp=Z,295nm,19.0s,MS4.9						
LRAL	**Lakeview Retre**	**117.00**	**27**	PFAKE		17 04 00.0	+7.9
LRAL				LR	LR		
	comp=Z,209nm,21.0s,MS4.7						
NHSC	**New Hope**	**119.49**	**21**	PFAKE		17 04 10.0	+13
NHSC				LR	LR		
	comp=Z,320nm,19.0s,MS5.0						
DBIC	**Dimbokro**	**119.84**	**293**	PFAKE		17 04 10.0	+12
DBIC				LR	LR		
	comp=Z,297nm,19.0s,MS4.9						
DWPF	**Disney**	**123.58**	**25**	PFAKE		17 04 20.0	+15
DWPF				LR	LR		
	comp=Z,245nm,21.0s,MS4.8						
BBSR	**BB Station**	**123.66**	**7**	PFAKE		17 04 20.0	+15
BBSR				LR	LR		
	comp=Z,169nm,20.0s,MS4.7						
VNA2	**Neumayer--Watz**	**124.86**	**198**		PKPdf	17 04 08.1	+1.8
VNA2	**Neumayer--Watz**	**124.86**	**198**	P	PKPdf	17 04 05.7	-0.6
VNA2				P		17 04 08.1	
VNA3	**Neumayer Olymp**	**125.32**	**197**		PKPdf	17 04 06.3	-0.9
JTS	**JuntasAbangare**	**137.03**	**41**	PFAKE		17 04 40.0	+9.4
JTS				LR	LR		
	comp=Z,49nm,20.0s,MS4.2						
PAYG	**Puerto Ayora**	**141.16**	**58**	PFAKE		17 04 50.0	+12
PAYG				LR	LR		
	comp=Z,690nm,19.0s,MS5.4						
SDV	**Santo Domingo**	**145.15**	**22**	*e*PKPdf	PKPdf	17 04 43.0	-2.3
OTAV	**Otavalo**	**148.89**	**42**	*e*PKPbc	PKPdf	17 04 54.3	+2.8
OTAV				*e*PKPab	PKPab	17 04 60.0	+0.5
LPAZ	**La Paz**	**167.88**	**53**	PKP	PKPdf	17 05 12.7	-0.9
	comp=Z,0.3nm,0.5s,baz=59,slow=5.9,SNR=2.4						
LPAZ	**La Paz**	**167.88**	**53**	PKPdf	PKPdf	17 05 12.4	-1.2

TAP 07 16:46:12.2, 23.99N×121.78E, h9^{km}, ML4.1, Taiwan

BJI **07** *16:51:13.1, 56.90S×26.30W, h59^{km}, mB5.4, Ms4.9, Msz4.7*
NEIC **07** *16:51:13.2±0.2, 56.92S×26.28W, mb4.6/8, Error ellipse: s-maj=10.4km s-min=6.4km az=66.0*
IDC **07** *16:51:17.3±4.8, 57.06S×26.19W, h95^{km}±42^{km}, mb4.0/10, mb1 4.1/11, mb1mx3.9/18, mbtmp4.3/11, MS3.5/5, Ms1 3.4/5, ms1mx3.3/19, Error ellipse: s-maj=19.2km s-min=15.4km az=47.0*
ISC 07 16:51:11.8±0.5**, 56.92S**±0.07×**26.3W**±0.2**, h60**^{km}**, n51, σ1^{s}13**/29**, mb4.5**/14**, MS3.8**/5**, 6C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.80	158	⇑*i*	P	16 54 53.2	+1.7
VNA3	Neumayer Olymp	16.00	160	⇑*i*	P	16 54 54.9	+0.9
VNA3	Neumayer Olymp	16.00	160		P	16 54 55.7	+1.7
VNA2	Neumayer--Watz	16.20	158	⇑*i*	P	16 54 58.3	+1.9
VNA2	Neumayer--Watz	16.20	158		P	16 54 59.5	+3.1
SNAA	Sanae	17.74	156	⇑*i*	P	16 55 13.5	-2.3
SNAA	Sanae	17.74	156	⇑*i*	P	16 55 18.0	+2.2
SNAA	Sanae	17.74	156	⇑*i*	P	16 55 19.7	+3.9
SNAA	Sanae	17.74	156	P	P	16 55 14.7	-1.1
	0.6nm,0.3s,baz=321,slow=15,SNR=42						
SNAA				S	S	16 58 15.6	-13
	0.1nm,0.3s,baz=345,slow=18,SNR=2.4						
SNAA				LR	LR	17 00 15.3	
	comp=Z,35nm,20.4s,baz=210,slow=31						
SNAA	Sanae	17.74	156	*e*P	P	16 55 15.1	-0.7
	6.2nm,0.6s						
SNAA				*e*		16 55 18.3	
PMSA	Palmer Station	19.73	231	P	P	16 55 37.4	-1.4
	64nm,1.1s						
USHA	Ushuaia	23.48	257	P	P	16 56 18.2	+1.9
	16nm,1.0s,mb4.4,baz=101,slow=5.2,SNR=3.5						
PLCA	Paso Flores	32.66	281	LR	LR	17 09 02.6	
	comp=Z,142nm,21.3s,MS3.6,baz=129,slow=33						
QSPA	South Pole Qui	33.33	180	⇓*i*P	P	16 57 44.6	-0.9
	27nm,0.7s,mb5.3						
CPUP	Villa Florida	37.77	311	P	P	16 58 24.5	+0.9
	0.6nm,0.3s,mb3.7,baz=172,slow=9.4,SNR=4.1						
CPUP				LR	LR	17 10 33.5	
	comp=Z,72nm,21.9s,MS3.4,baz=3.9,slow=30						
MAW	Mawson	39.15	143	P	P	16 58 33.9	-0.7
	1.1nm,0.3s,mb4.1,baz=212,slow=11,SNR=4.8						
MAW				LR	LR	17 14 32.6	
	comp=Z,100nm,18.5s,MS3.7,baz=357,slow=36						
BDFB	Brasilia	44.37	329	LR	LR	17 14 54.0	
	comp=Z,62nm,21.1s,MS3.5,baz=11,slow=32						
SBA	Scott Base	45.25	184	*e*P	P	16 59 23.7	-0.5
	8.1nm,1.0s,mb4.5						
VNDA	Vanda	45.73	182	P	P	16 59 27.3	-0.7
	5.2nm,0.6s,mb4.6,baz=188,slow=7.0,SNR=34						
VNDA	Vanda	45.73	182	*e*P	P	16 59 27.2	-0.8
	8.0nm,0.9s,mb4.7						
VNDA				*e*pP	pP	16 59 42.7	-0.7
VNDA				*e*sP	sP	16 59 49.9	-0.5
TSUM	Tsumeb	49.67	59	P	P	17 00 00.3	+0.8
	1.1nm,0.4s,mb4.3,baz=125,slow=12,SNR=5.9						
LPAZ	La Paz	51.29	305	P	P	17 00 13.4	+1.6
	2.9nm,0.4s,mb4.6,baz=87,slow=6.2,SNR=43						
LPAZ	La Paz	51.29	305	*e*P	P	17 00 12.3	+0.4
	2.6nm,0.4s,mb4.5						
LPAZ				*e*PcP	PcP	17 01 26.6	+0.4
MATP	Matopo	54.07	71	P	P	17 00 31.9	-0.6
	1.1nm,0.5s,mb4.0,baz=200,slow=9.8,SNR=4.6						
DBIC	Dimbokro	65.75	23	P	P	17 01 52.3	-0.3
	3.3nm,0.8s,mb4.4,baz=175,slow=7.2,SNR=3.7						
OTAV	Otavalo	70.56	303	*e*P	P	17 02 21.6	-0.8
	8.0nm,1.2s,mb4.5						
SDV	Santo Domingo	74.98	314	*e*P	P	17 02 48.2	-0.1
	8.2nm,0.6s,mb4.8						
SDV				*e*sP	sP	17 03 10.3	-1.2
STKA	Stephens Creek	90.96	170	P	P	17 04 09.6	-0.5
	1.3nm,0.4s,mb4.6,baz=71,slow=8.4,SNR=6.7						
STKA	Stephens Creek	90.96	170	*e*P	P	17 04 09.3	-0.7
STKA				*e*pP	pP	17 04 26.3	-0.9
STKA				*e*sP	sP	17 04 33.3	-0.1
ASAR	Alice Springs	98.01	162	P	P	17 04 41.0	-1.4
	0.7nm,0.4s,mb4.5,baz=185,slow=4.4,SNR=15						
WRA	Warramunga Arr	101.72	161	P	P	17 04 58.0	-1.2
	0.3nm,0.4s,baz=193,slow=4.6,SNR=8.1						
MSU	Marysvale	119.20	296	*e*PKPdf	PKPdf	17 09 55.1	+1.5
PDAR	Pinedale Array	121.23	301	PKP	PKPdf	17 09 57.6	+0.2
	0.9nm,0.4s,baz=123,slow=5.9,SNR=6.4						
NVAR	Mina Array Bea	122.20	292	PKP	PKPdf	17 10 01.0	+1.6
	0.9nm,0.6s,baz=107,slow=3.9,SNR=7.1						
MOOW	Moose Ponds	122.54	301	*e*PKPdf	PKPdf	17 10 00.6	+0.6
FINES	FINESS Array B	124.91	28	PKP	PKPdf	17 10 03.9	0.0
	1.0nm,0.5s,baz=225,slow=2.7,SNR=9.0						
FINES				pPKP		17 10 29.4	
	0.8nm,0.8s,baz=217,slow=9.5,SNR=3.8						
FINES	FINESS Array B	124.91	28	PKP	PKPdf	17 10 03.9	0.0
FINES				pPKP		17 10 29.4	
WVOR	Wild Horse Val	125.37	295	*e*PKPdf	PKPdf	17 10 07.0	+1.6
ARCES	ARCESS Array B	131.56	22	PKP	PKPdf	17 10 17.0	+0.6
	0.8nm,0.5s,baz=195,slow=2.3,SNR=7.1						
ARCES	ARCESS Array B	131.56	22	PKP	PKPdf	17 10 17.0	+0.6
BVAR	Borovoye Array	134.81	58	PKP	PKPdf	17 10 24.2	+1.2
	1.0nm,0.4s,baz=212,slow=3.4,SNR=8.3						
MKAR	Makanchi Array	136.68	72	PKP	PKPdf	17 10 27.1	+0.6
	0.4nm,0.5s,baz=241,slow=2.0,SNR=6.2						
YKA	Yellowknife Ar	137.15	317	PKP	PKPdf	17 10 27.7	+0.8
	1.7nm,0.3s,baz=128,slow=2.2,SNR=17						
WMQ	Urumqi	137.58	79	*e*PKP	PKPdf	17 10 29.2	+0.9
WMQ				PP	PP	17 13 19.6	+0.9
WMQ				SS	SS	17 31 17.2	-2.8
WMQ				PP	PP		
	comp=Z,40nm,6.2s						
WMQ				LR	LR		
	comp=N,80nm,21.2s,MS4.6						
WMQ				LR	LR		
	comp=E,100nm,21.2s,MS4.6						
WMQ				LR	LR		
	comp=Z,90nm,23.6s,MS4.4						
INK	Inuvik	146.79	320	PKPbc	PKPbc	17 10 46.8	+1.6
	comp=Z,11nm,0.4s,baz=80,slow=3.0,SNR=44						
DIV	Divide	149.56	304	*e*PKPbc	PKPdf	17 10 54.8	+6.5
SONM	Songino Array	150.26	87	PKPbc	PKPdf	17 10 56.0	+6.2
	comp=Z,4.0nm,0.4s,baz=224,slow=3.5,SNR=58						
SONM				pPKPbc		17 11 19.8	
	comp=Z,2.0nm,0.4s,baz=221,slow=3.8,SNR=9.8						
SML	Sawmill	150.94	304	*e*PKPbc	PKPdf	17 10 57.4	+7.1
ILAR	Eielson Array	151.07	310	PKPbc	PKPdf	17 10 57.5	+7.0
	comp=Z,26nm,1.0s,baz=137,slow=1.5,SNR=89						
MCK	McKinley	151.71	308	*e*PKPbc	PKPdf	17 10 59.6	+8.2
IMA	Indian Mountai	154.07	312	*e*PKPbc	PKPdf	17 11 05.3	+11
IMA				*e*PKPab	PKPab	17 11 19.2	+0.2

IDC **07** *16:52:10.8±1.0, 12.95N×93.24E, mb3.8/8, mb1 3.9/9, mb1mx3.8/22, mbtmp3.7/9, ML4.1/1, Error ellipse: s-maj=33.9km s-min=17.9km az=60.0*
NEIC **07** *16:52:15.4±0.5, 12.98N×93.28E, h30^{km}, mb3.8/2, Error ellipse: s-maj=12.2km s-min=8.6km az=64.0*
ISC 07 16:52:12.8±4.9**, 12.98N**±0.09×**93.3E**±0.1**, h25**^{km}±35^{km}**, n13, σ0^{s}44**/14**, mb3.8**/9**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	7.67	44	Pn	Pn	16 54 05.8	-0.1
CMAR	Chiang Mai Arr	7.67	44	Pn	Pn	16 54 05.5	-0.4
	0.7nm,0.3s,baz=237,slow=15,SNR=35						
CMAR				Sn	Sn	16 55 32.9	0.0
	0.0nm,0.3s,baz=225,slow=19,SNR=3.2						
LSA	Lhasa	16.77	353	P	P	16 56 08.4	+0.6
	2.8nm,0.5s						
MKAR	Makanchi Array	34.97	347	P	P	16 59 05.0	-0.1
	1.0nm,0.7s,mb3.9,baz=161,slow=8.1,SNR=6.6						
MKAR	Makanchi Array	34.97	347	P	P	16 59 05.0	-0.1
SONM	Songino Array	36.42	15	P	P	16 59 18.0	+0.6
	1.2nm,0.9s,mb3.8,baz=207,slow=8.2,SNR=6.1						
ZAL	Zalesovo	41.42	352	P	P	16 59 59.0	+0.2
	1.2nm,0.5s,mb3.8,baz=280,slow=6.3,SNR=4.1						
BVAR	Borovoye Array	43.94	340	P	P	17 00 18.9	-0.5
	0.3nm,0.4s,mb3.4,baz=121,slow=8.4,SNR=3.1						
WRA	Warramunga Arr	51.94	128	P	P	17 01 22.1	-0.1
	0.4nm,0.6s,mb3.6,baz=308,slow=7.8,SNR=13						
WRA				PcP	PcP	17 02 34.4	-0.3
	0.3nm,0.7s,baz=316,slow=2.8,SNR=8.5						
WRAB	Tennant Creek	51.95	128	*e*P	P	17 01 22.6	+0.3
	0.9nm,0.5s,mb4.0						
ASAR	Alice Springs	53.85	132	P	P	17 01 36.5	+0.1
	0.3nm,0.4s,mb3.5,baz=301,slow=6.5,SNR=8.2						
FINES	FINESS Array B	67.87	331	P	P	17 03 10.1	-1.0
	1.5nm,0.7s,mb4.1,baz=90,slow=9.7,SNR=4.2						
GERES	GERESS Array B	73.54	317	P	P	17 03 45.8	+0.3
	0.4nm,0.4s,mb3.7,baz=72,slow=4.2,SNR=6.1						

GUC 07 16:52:54.6±0.9**, 26.06S×70.56W, h46**^{km}±3^{km}**, ML3.8, 3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRCH	Chaqaral	0.29	192	⇓*i*P	P	16 53 03.7	+0.4
CRCH				*i* S	S	16 53 09.6	+0.2
CRCH				AMP		16 53 10.2	
	comp=E,9μm,0.5s						
CPCH	Copiapo	1.30	172	⇓*i*P	P	16 53 18.8	+2.0
CPCH				*i* S	S	16 53 36.2	+2.9
CPCH				AMP		16 53 38.2	
	comp=E,16μm,0.1s						
CPN1	Cerro Paranal	1.44	6	⇓*i*P	P	16 53 19.6	+0.9
CPN1				*i* S	S	16 53 38.3	+1.6
CPN1				AMP		16 53 43.9	
	comp=E,784nm,0.4s						
TLL	Tololo Astrono	4.09	183	*e*P	P	16 53 55.8	-0.5
TLL				*i* S	S	16 54 42.3	-1.2

TAP 07 16:54:32.6, 24.02N×121.75E, h4^{km}**, ML3.8, 8C-5D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.14	252	⇑*i*P	Pg	16 54 36.3	+0.8
HWA				S	Sg	16 54 40.0	+2.5
TWD	Chiawan	0.15	293	⇑*i*P	Pg	16 54 36.2	+0.4
TWD				S	Sg	16 54 39.2	+1.3
ESF	Shoufeng Towns	0.27	236	*e*P	Pg	16 54 37.5	-0.5
ESL	Shilin	0.35	235	⇓*i*P	Pg	16 54 39.9	+0.1
ESL				S	Sg	16 54 45.8	+1.3
TEGC	Jichi Village	0.36	212	*e*P	Pg	16 54 43.5	+3.5
ENA	Nanau	0.41	359	⇑*i*P	Pg	16 54 41.4	+0.6
ENA				S	Sg	16 54 48.0	+1.8
NNS	Nan Shan	0.54	321	⇑*i*P	Pg	16 54 43.8	+0.3
NNS				S	Sg	16 54 51.8	+1.1
TWT	Tachien	0.57	294	⇑*i*P	Pg	16 54 44.8	+0.7
TWT				S	Sg	16 54 55.3	+3.5
TWC	Suao	0.59	9	*e*P	Pg	16 54 45.3	+0.8
TWC				S	Sg	16 54 55.1	+2.7
ENTT	Nioudou	0.64	345	⇑*i*P	Pg	16 54 46.0	+0.5
ENTT				S	Sg	16 54 55.4	+1.4
EHY	Hungye	0.65	218	*e*P	Pg	16 54 45.1	-0.4
NSK	Sanguang	0.74	331	⇑*i*P	Pg	16 54 48.0	+0.4
NSK				S	Sg	16 54 58.4	+1.0
TWF1	Yuli	0.78	212	*e*P	Pg	16 54 48.4	+0.1
SMLT	Sun Moon Lake	0.79	260	⇓*i*P	Pg	16 54 48.6	+0.2
SMLT				S	Sg	16 55 00.3	+1.4
TYC	Yuchr	0.82	262	⇓*i*P	Pg	16 54 49.1	0.0
TYC				S	Sg	16 55 00.2	+0.1
NSTT	Nanjuang	0.92	312	P	Pb	16 54 51.3	+0.7
NSTT				S	Sb	16 55 04.6	+1.6
TWQ1	Liyutan	0.95	290	⇓*i*P	Pb	16 54 52.6	+1.3
TWQ1				S	Sb	16 55 07.3	+3.3
TWA	Mucha	0.97	351	*e*P	Pb	16 54 51.2	-0.3
NSY	Sanyi	0.98	294	*e*P	Pb	16 54 53.2	+1.4
WNT	Mingjian	0.98	262	*e*P	Pb	16 54 53.0	+1.1
WNT				S	Sb	16 55 08.3	+3.3
TCU	Taichung	0.99	278	P	Pb	16 54 53.7	+1.8
TCU				S	Sb	16 55 08.5	+3.4
TWB1	Santiao Chiao	1.01	12	*e*P	Pb	16 54 53.0	+0.8
TAP1	Taipei	1.03	349	⇑P	Pb	16 54 54.0	+1.3
TAP	Taipei	1.04	348	*e*P	Pb	16 54 53.9	+1.2
TAP				S	Sb	16 55 07.5	+1.0
NWF	Wu-fen Shan	1.05	2	*e*P	Pb	16 54 53.9	+1.0
NWF				S	Sb	16 55 08.1	+1.3
HSN	Hsinchu	1.05	318	*e*P	Pb	16 54 55.2	+2.1
HSN				S	Sb	16 55 12.9	+5.9
ELDTW	Lidau	1.07	219	*e*P	Pb	16 54 51.6	-1.7
CHN5	Tsauling	1.07	247	⇓*i*P	Pb	16 54 54.0	+0.7
CHN5				S	Sb	16 55 10.6	+3.2
NCU	National Centr	1.08	332	*e*P	Pb	16 54 55.2	+1.8
TWS1	Kuangyinshan	1.12	344	*e*P	Pb	16 54 55.3	+1.2
TWS1				S	Sb	16 55 13.0	+4.2
WGK	Gukeng	1.14	253	*e*P	Pb	16 54 55.5	+1.0
WGK				S	Sb	16 55 12.9	+3.5
CHN4	Tsaushan	1.25	238	*e*P	Pb	16 54 56.8	+0.4
CHN4				S	Sb	16 55 17.7	+5.0
TWY	Chenhua	1.26	354	*e*P	Pb	16 54 57.4	+0.9
CHN2	Minshiung	1.27	248	*e*P	Pb	16 54 58.1	+1.4
CHN2				S	Sb	16 55 17.2	+4.1
WTP	Ta-pu	1.30	234	P	Pb	16 54 57.3	+0.1
WTP				S	Sb	16 55 17.1	+3.1
CHY	Chiayi	1.32	247	*e*P	Pb	16 54 59.2	+1.6
TWK	Hsinying	1.38	237	*e*P	Pb	16 54 58.7	+0.1
CHN1	Nanshi	1.40	234	*e*P	Pb	16 54 59.3	+0.4
SGST	Jiashian	1.42	229	*e*P	Pn	16 54 59.4	+0.2
SGST				S	Sb	16 55 20.6	+2.9
WSF	Szhu	1.45	255	*e*P	Pn	16 55 00.0	+0.3
WSF				S	Sb	16 55 21.6	+3.1
CHN3	Shinhua	1.58	234	*e*P	Pn	16 55 03.7	+2.2
ECL	Taimali	1.59	207	*e*P	Pn	16 54 58.9	-2.8
PCYT	Pengchaiyu	1.63	10	*e*P	Pn	16 55 02.4	+0.2
SSD	Sandimen	1.63	219	*e*P	Pn	16 55 02.0	-0.3
TWM1	Shoushan	1.71	226	*e*P	Pn	16 55 04.4	+1.1
SGLT	Jiouru	1.73	222	*e*P	Pn	16 55 03.4	-0.3
SCZT	Fangliau	1.94	213	*e*P	Pn	16 55 06.3	-0.4

IDC **07** *17:02:18.8±6.7, 11.34S×163.39E, h43^{km}±38^{km}, mb4.2/3, mb1 4.3/6, mb1mx3.8/19, mbtmp4.5/6, ML4.3/3, MS3.2/1, Ms1 3.2/1, ms1mx2.9/21, Error ellipse: s-maj=134.3km s-min=20.4km az=46.0*
NEIC **07** *17:02:19.2±8.1, 10.96S×163.62E, h86^{km}±41^{km}, mb4.1/2, Error ellipse: s-maj=98.9km s-min=46.8km az=84.0*
ISC 07 17:02:15.9±3.5**, 11.3S**±0.4×**163.5E**±0.4**, h50**^{km}±28^{km}**, n9, σ0^{s}80**/11**, mb4.2**/4**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.96	297	P	P	17 03 17.1	+1.3
	25nm,0.3s,baz=176,slow=13,SNR=18						
HNR				S	S	17 04 00.3	-1.2
	72nm,0.3s,baz=343,slow=19,SNR=4.5						
HNR				LR	LR	17 04 47.3	
	comp=Z,306nm,18.6s,baz=143,slow=38						
DZM	Mont Dzumac	11.08	166	P	P	17 04 53.6	-0.9
	2.1nm,0.3s,baz=85,slow=21,SNR=37						
DZM				S	S	17 06 49.0	-8.8
	0.4nm,0.3s,slow=20,SNR=2.3						
CTA	Charters Tower	18.76	240	P	P	17 06 34.8	+1.3
	0.4nm,0.3s,baz=68,slow=13,SNR=7.8						
CTAO	Charters Tower	18.76	240	*e*P	P	17 06 34.1	+0.6
	16nm,1.2s						
STKA	Stephens Creek	28.78	221	P	P	17 08 12.1	+0.7
	3.8nm,0.9s,mb4.1,baz=45,slow=14,SNR=5.8						
WRAB	Tennant Creek	29.33	249	*e*P	P	17 08 16.2	-0.1
	2.3nm,0.6s,mb4.1						
WRA	Warramunga Arr	29.34	249	P	P	17 08 16.4	0.0
	1.4nm,0.6s,mb3.9,baz=81,slow=9.1,SNR=18						
ASAR	Alice Springs	30.73	242	P	P	17 08 28.3	-0.4
	7.6nm,0.6s,mb4.7,baz=63,slow=10,SNR=65						
ASPA	Alice Springs	30.73	242	*e*P	P	17 08 28.4	-0.4

NEIC **07** *17:04:30.4, 17.36N×101.49W, h18^{km}, MD3.7(MEX), After MEX.*
MEX 07 17:04:30.4±0.4**, 17.36N×101.49W, h18**^{km}±32^{km}**, MD3.7, 1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.24	6	⇓*i*P	Pb	17 04 35.0	-1.0
ZIIG				*i* S	Sb	17 04 38.9	-1.0
CAIG	El Cayaco	1.21	105	*e*P	Pb	17 04 49.2	-3.2
CAIG				*i* S	Sb	17 05 03.4	-4.4
ACX	Acapulco	1.58	108	*i* P	Pn	17 04 54.0	-3.9
ACX				*i* S	Sn	17 05 13.0	-5.1
PLIG	Platanillo	2.15	61	*e*P	Pn	17 05 03.5	-2.5
PLIG				*i* S	Sn	17 05 27.3	-5.2
PPM	Popocatepetl	3.21	58	*e*P	Pn	17 05 20.7	-0.4
PPM				*i* S	Sn	17 05 54.9	-4.4
PPM	Popocatepetl	3.21	58	*e*P	Pn	17 05 20.0	-1.1
PPM				*e*P		17 05 20.7	
PPM				*i* S	Sn	17 05 54.9	-4.4

BJI **07** *17:04:32.3, 4.70N×92.30E, h31^{km}, mb4.4*
MOS **07** *17:04:34.0±2.7, 4.67N×92.72E, h33^{km}, mb4.8/6, Error ellipse: s-maj=29.3km s-min=13.1km az=105.5*
NEIC **07** *17:04:34.4±0.7, 4.72N×92.28E, mb4.8/10, Error ellipse: s-maj=15.3km s-min=9.7km az=217.0*
IDC **07** *17:04:34.7±0.8, 4.73N×92.23E, h30^{km}±4^{km}, mb3.9/9, mb1 4.1/10, mb1mx3.9/20, mbtmp4.1/10, ML3.6/1, Error ellipse: s-maj=31.9km s-min=15.0km az=55.0*
ISC 07 17:04:33.2±0.7**, 4.80N**±0.09×**92.44E**±0.08**, h31**^{km}**, h31**^{km}±1.2^{km}**:pP-P, n43, σ1^{s}02**/42**, mb4.5**/20**, 1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	8.20	86	*e*Pn	P	17 06 33.0	0.0
KULM				*e*S	Sn	17 08 00.8	-4.8
PALK	Pallekele	11.93	282	*e*Pn	P	17 07 18.4	-5.9
	63nm,0.8s						
PALK				*e*S	Sx	17 09 17.4	
CM31	Chiang Mai Arr	14.99	25	*e*Pn	P	17 08 04.5	-0.3
	5.6nm,0.7s						
CM31				*e*P		17 08 10.9	
CMAR	Chiang Mai Arr	14.99	25	Pn	P	17 08 04.5	-0.4
	0.1nm,0.3s,baz=218,slow=14,SNR=18						
VIS	Vishakhapatnam	15.64	326	*i* P	P	17 08 06.1	-7.1
VIS				*i* S	Sx	17 10 47.6	
KSM	Kuching	18.14	100	*e*P	P	17 08 44.1	-0.8
HYB	Hyderabad	18.50	314	*e*P	P	17 08 56.0	+6.8
HYB				*e*S	Sx	17 12 01.0	
HYB	Hyderabad	18.50	314	*i* P	P	17 08 49.0	-0.2
HYB				*e*S	S	17 12 10.5	-0.6
LATR	Latur	20.59	312	*e*S	S	17 12 44.5	-12
SHL	Shillong	20.66	359	*e*P	P	17 09 12.2	-1.0
SHL				*e*S	S	17 12 51.2	-6.2
POO	Poona	22.72	308	*e*x		17 09 42.5	
PKI	Pulchoki	23.62	344	*e*P	P	17 09 49.2	+6.6
	29nm,0.5s,mb4.9						
PKI	Pulchoki	23.62	344	*e*P	P	17 09 49.2	+6.6
PKI				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.7						
DMN	Daman	23.74	344	*e*P	P	17 09 49.6	+5.8
	comp=Z,33nm,0.5s,mb5.0						
GUN	Gumba	23.82	346	*e*P	P	17 09 46.7	+2.1
	comp=Z,48nm,0.7s,mb5.0						
KKN	Kakani	23.86	344	*e*P	P	17 09 48.4	+3.4
	comp=Z,14nm,0.4s,mb4.7						
KKN	Kakani	23.86	344	*e*P	P	17 09 48.4	+3.4
KKN				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.4						
GKN	Gorkha	24.24	343	*e*P	P	17 09 47.9	-0.8
	comp=Z,94nm,0.5s,mb5.5						
KOLN	Koldanda	24.35	341	*e*P	P	17 09 50.8	+1.1
	comp=Z,65nm,0.5s,mb5.3						
LSA	Lhasa	24.80	357	*e*P	P	17 09 56.4	+2.3
LSA	Lhasa	24.80	357	*e*P	P	17 09 55.8	+1.7
LSA				*e**PP		17 10 05.0	
LSA				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.8						
LSA	Lhasa	24.80	357	*e*P	P	17 09 55.8	+1.7
	comp=Z,20nm,0.6s,mb4.8						
LSA				*e*pP		17 10 05.0	
XAN	Xi'an	32.88	26	P	P	17 11 06.4	-0.4
MKAR	Makanchi Array	42.75	350	P	P	17 12 28.5	-1.0
	comp=Z,1.0nm,0.5s,mb3.8,baz=170,slow=7.4,SNR=10						
MKAR				pP	pP	17 12 38.3	-0.4
	comp=Z,3.6nm,0.7s,baz=166,slow=8.6,SNR=22						
SONM	Songino Array	44.52	13	P	P	17 12 44.7	+0.9
	comp=Z,1.6nm,0.8s,mb3.9,baz=189,slow=8.0,SNR=6.1						
SONM				pP	pP	17 12 54.3	+1.2
	comp=Z,3.2nm,0.8s,baz=198,slow=8.7,SNR=12						
ZAK	Zakamensk	46.34	10	*e*P	P	17 12 57.4	-0.8
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s,mb3.5						
WRA	Warramunga Arr	47.96	122	P	P	17 13 11.7	+0.3
	comp=Z,4.0nm,0.8s,mb4.5,baz=300,slow=8.8,SNR=18						
WRAB	Tennant Creek	47.97	122	*e*P	P	17 13 11.5	+0.1
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
WRAB	Tennant Creek	47.97	122	*e*P	P	17 13 11.5	+0.1
	comp=Z,9.6nm,1.0s,mb4.8						
ASAR	Alice Springs	49.34	127	P	P	17 13 22.3	+0.3
	comp=Z,2.5nm,0.8s,mb4.3,baz=312,slow=7.2,SNR=14						
ASAR				PcP	PcP	17 14 44.1	-0.4
	comp=Z,0.7nm,0.7s,baz=304,slow=3.6,SNR=4.7						
ZAL	Zalesovo	49.38	354	P	P	17 13 22.4	+0.5
	comp=Z,2.8nm,0.5s,mb4.5,baz=306,slow=5.3,SNR=10.0						
ZAL				pP	pP	17 13 30.8	-0.6
	comp=Z,8.5nm,0.5s,baz=307,slow=5.2,SNR=20						
ZAL	Zalesovo	49.38	354	P	P	17 13 22.4	+0.5
ZAL				pP	pP	17 13 30.8	-0.6
NVS	Novosibirsk	50.45	353	*e*P	P	17 13 32.6	+2.6
NVS				pmax	pmax		
	comp=N,6.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
BVAR	Borovoye Array	51.38	343	P	P	17 13 36.6	-0.5
	comp=Z,0.9nm,0.6s,mb3.9,baz=149,slow=8.6,SNR=7.8						
BVAR				pP	pP	17 13 45.1	-1.5
	comp=Z,3.3nm,0.6s,baz=149,slow=8.6,SNR=17						
STKA	Stephens Creek	59.28	132	⇓*i*P	P	17 14 34.8	+0.2
STKA	Stephens Creek	59.28	132	P	P	17 14 34.9	+0.3
	comp=Z,4.2nm,0.6s,mb4.7,baz=316,slow=8.1,SNR=19						
BR131	Keskin Array S	63.19	312	P	P	17 14 57.8	-3.1
	comp=Z,1.7nm,0.6s,mb4.3						
BR131				*e*pP	pP	17 15 09.0	-1.5
BRTR	Keskin Array B	63.19	312	P	P	17 14 59.6	-1.2
	comp=Z,0.8nm,0.7s,mb4.0,baz=130,slow=8.0,SNR=3.5						
BRTR				pP	pP	17 15 08.8	-1.7
	comp=Z,2.2nm,0.6s,baz=130,slow=6.9,SNR=11						
MATP	Matopo	67.55	246	pP	pP	17 15 37.6	-1.4
	comp=Z,1.2nm,0.4s,baz=78,slow=7.2,SNR=3.3						
AKASG	Malin Array Be	69.53	323	pP	pP	17 15 48.4	-2.3
	comp=Z,0.9nm,0.5s,baz=90,slow=5.0,SNR=2.1						
TIXI	Tiksi	70.56	12	*e*P	P	17 15 45.8	-1.2
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
FINES	FINESS Array B	74.64	333	pP	pP	17 16 19.3	-1.7
	comp=Z,2.1nm,0.8s,baz=135,slow=5.4,SNR=3.2						
GERES	GERESS Array B	78.99	319	P	P	17 16 35.6	-0.2
	comp=Z,0.5nm,0.5s,mb3.7,baz=90,slow=4.0,SNR=6.7						
GERES				pP	pP	17 16 45.5	-0.1
	comp=Z,1.9nm,0.7s,baz=135,slow=3.8,SNR=8.9						

MOS **07** *17:19:54.8±1.0, 53.66S×51.24W, h10^{km}, mb5.3/9, MS4.8/5, Error ellipse: s-maj=30.5km s-min=11.8km az=102.2*
IDC **07** *17:19:54.5±0.6, 53.66S×51.32W, mb4.4/9, mb1 4.5/10, mb1mx4.4/15, mbtmp4.4/10, ML4.7/1, MS4.4/12, Ms1 4.4/12, ms1mx4.3/18, Error ellipse: s-maj=24.9km s-min=14.5km az=58.0*
BJI **07** *17:19:56.4, 53.50S×51.20W, h10^{km}, mB5.3, Ms5.3, Msz5.1*
HRVD **07** *17:19:56.5±0.3, 53.71S×51.63W, h12^{km}, MW5.1/52, Centroid moment Tensor Solution. LP body waves: s37,c51;Mantle waves: s52,c75; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.28±.15; M$_{\theta\theta}$-1.15±.14; M$_{\phi\phi}$2.44±.13; M$_{r\theta}$-1.29±.41; M$_{\theta\phi}$2.48±.12; M$_{\phi r}$5.17±.35; Best double couple: M$_0$6.244×10^{16} NP1:φ$_s$67°,δ29°,λ-14°. NP2:φ$_s$169°,δ83°,λ-119°. Principal axes: T 6.314, Plg32°, Azm282°; N -.13, Plg28°, Azm173°; P -6.174, Plg45°, Azm51°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC **07** *17:19:56.5±0.3, 53.49S×51.16W, h10^{km}, mb5.1/18, MS4.6/6 Error ellipse: s-maj=13.4km s-min=7.4km az=65.0*
ISC 07 17:19:54.9±0.3**, 53.53S**±0.06×**51.2W**±0.1**, h10**^{km}**, n109, σ1^{s}02**/60**, mb4.8**/23**, MS4.6**/18**, 3C-6D, South Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USHA	Ushuaia	10.21	256	Pn	P	17 22 12.6	-12
	2.4nm,0.3s,baz=54,slow=8.9,SNR=8.3						
USHA				Sn	S	17 24 03.6	-17

	14nm,0.3s,baz=322,slow=12,SNR=11						
PMSA	**Palmer Station**	**13.04**	**205**	Pn	**P**	**17 23 03.6**	**+0.9**
TRQA	**Tornquist**	**17.18**	**330**	*e*P	**P**	**17 23 55.4**	**-1.2**
	26nm,0.6s						
PLCA	**Paso Flores**	**18.31**	**307**	*e*P	**P**	**17 24 10.9**	**+0.4**
PLCA				pmax	pmax		
	comp=Z,23nm,0.8s						
PLCA	**Paso Flores**	**18.31**	**307**	P	**P**	**17 24 10.4**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=133,slow=13,SNR=18						
PLCA				LR	LR	17 32 45.4	
	comp=Z,2µm,18.3s,baz=136,slow=42						
PLCA	**Paso Flores**	**18.31**	**307**	*e*P	**P**	**17 24 10.9**	**+0.4**
	comp=Z,23nm,0.8s						
PLCA				*e*		17 24 20.2	
CFAA	**Coronel Fontan**	**25.14**	**324**	P	**P**	**17 25 22.0**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=157,slow=4.0,SNR=3.3						
CFAA				LR	LR	17 37 28.2	
	comp=Z,151nm,19.1s,baz=154,slow=42						
CFAA	**Coronel Fontan**	**25.14**	**324**	P	**P**	**17 25 22.0**	**+0.6**
CFAA				LR	LR	17 37 28.2	
VNA3	**Neumayer Olymp**	**25.34**	**150**	⇓*i*P	**P**	**17 25 25.0**	**+2.1**
VNA3	**Neumayer Olymp**	**25.34**	**150**		**P**	**17 25 32.0**	**+9.1**
VNA1	**Neumayer--Stat**	**25.56**	**148**	⇓*i*P	**P**	**17 25 27.4**	**+2.4**
VNA1	**Neumayer--Stat**	**25.56**	**148**		**P**	**17 25 31.8**	**+6.8**
VNA2	**Neumayer--Watz**	**25.92**	**149**	⇓*i*P	**P**	**17 25 30.2**	**+1.9**
VNA2	**Neumayer--Watz**	**25.92**	**149**		**P**	**17 25 34.3**	**+6.0**
VNA2	**Neumayer--Watz**	**25.92**	**149**	⇑*i*	**P**	**17 25 37.2**	**+8.9**
SNAA	**Sanae**	**27.55**	**149**	⇓*i*P	**P**	**17 25 43.1**	**-0.1**
SNAA	**Sanae**	**27.55**	**149**		**P**	**17 25 46.0**	**+2.8**
SNAA	**Sanae**	**27.55**	**149**		**P**	**17 25 51.0**	**+7.8**
SNAA	**Sanae**	**27.55**	**149**	*e*P	**P**	**17 25 43.1**	**-0.1**
SNAA				*e*		17 29 00.0	
SNAA				pmax	pmax		
	comp=Z,17nm,1.1s						
SNAA	**Sanae**	**27.55**	**149**	P	**P**	**17 25 43.0**	**-0.3**
	comp=Z,3.6nm,0.9s,mb4.0,baz=292,slow=8.1,SNR=29						
SNAA	**Sanae**	**27.55**	**149**	*e*P	**P**	**17 25 43.1**	**-0.1**
	comp=Z,17nm,1.1s,mb4.6						
SNAA				*e*PcP	PcP	17 29 00.0	-1.5
CPUP	**Villa Florida**	**27.55**	**348**	*e*P	**P**	**17 25 43.9**	**+0.1**
CPUP				pmax	pmax		
	comp=Z,11nm,1.3s						
CPUP				MLR	MLR		
	comp=Z,589nm,22.0s						
CPUP	**Villa Florida**	**27.55**	**348**	P	**P**	**17 25 43.8**	**0.0**
	comp=Z,2.7nm,0.8s,mb4.0,baz=184,slow=12,SNR=4.1						
CPUP				LR	LR	17 36 11.4	
	comp=Z,540nm,21.7s,MS4.1,baz=192,slow=35						
CPUP	**Villa Florida**	**27.55**	**348**	*e*P	**P**	**17 25 43.9**	**+0.1**
	comp=Z,11nm,1.3s,mb4.3						
CPUP				LR	LR		
	comp=Z,589nm,22.0s,MS4.1						
NVL	**N'lazarevskaya**	**32.14**	**146**	⇑*i*P	**P**	**17 26 23.5**	**-0.7**
NVL				*i* *PP	pP	17 26 31.3	+4.2
NVL				*i* PPP	PP	17 27 32.2	+1.2
NVL				*i*		17 29 19.4	
NVL				*e*SSS	SSS	17 33 50.4	-1.5
NVL				*i*		17 36 51.3	
NVL				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
NVL				MLR	MLR		
	comp=Z,110nm,17.3s,MS3.6						
QSPA	**South Pole Qui**	**36.73**	**180**	*e*P	**P**	**17 27 03.3**	**-0.2**
	comp=Z,54nm,1.0s,mb5.3						
BDFB	**Brasilia**	**37.88**	**5**	P	**P**	**17 27 14.6**	**+0.8**
	comp=Z,2.2nm,0.4s,mb4.2,baz=174,slow=1.9,SNR=4.3						
BDFB				LR	LR	17 43 06.0	
	comp=Z,650nm,19.6s,MS4.4,baz=177,slow=37						
BAO	**Brasilia Array**	**37.89**	**5**	P	**P**	**17 27 10.0**	**-3.9**
SIV	**San Ignacio**	**38.26**	**344**	P	**P**	**17 27 17.1**	**+0.2**
	comp=Z,0.9nm,0.5s,mb3.8,baz=185,slow=18,SNR=7.1						
LPAZ	**La Paz**	**39.47**	**334**	P	**P**	**17 27 28.4**	**+1.3**
	comp=Z,2.8nm,0.9s,mb4.0,baz=139,slow=6.2,SNR=16						
SYO	**Syowa Base**	**41.79**	**147**	⇓P	**P**	**17 27 45.0**	**-0.5**
SAML	**Samuel**	**45.51**	**343**	*e*P	**P**	**17 28 15.1**	**-1.2**
	comp=Z,11nm,1.1s,mb4.7						
SAML				*e*		17 28 24.3	
SAML				LR	LR		
	comp=Z,637nm,20.0s,MS4.6						
SBA	**Scott Base**	**46.82**	**190**	*e*P	**P**	**17 28 26.9**	**+1.0**
SBA				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
SBA	**Scott Base**	**46.82**	**190**	*e*P	**P**	**17 28 26.9**	**+1.0**
	comp=Z,14nm,0.9s,mb4.9						
VNDA	**Vanda**	**47.61**	**189**	P	**P**	**17 28 29.6**	**-2.6**
	comp=Z,2.8nm,1.1s,mb4.2,baz=212,slow=9.5,SNR=2.4						
VNDA				LR	LR	17 48 36.0	
	comp=Z,421nm,18.2s,MS4.5,baz=154,slow=36						
MAW	**Mawson**	**49.62**	**153**	LR	LR	17 48 52.1	
	comp=Z,272nm,19.2s,MS4.3,baz=63,slow=35						
SUR	**Sutherland**	**54.27**	**98**	P	**P**	**17 29 23.9**	**+0.8**
	comp=Z,32nm,0.9s,mb5.2,baz=254,slow=6.5,SNR=11						
SUR	**Sutherland**	**54.27**	**98**	*e*P	**P**	**17 29 23.2**	**+0.1**
	comp=Z,60nm,1.0s,mb5.5						
SUR				*e*		17 29 30.8	
MIR	**Mirnyy**	**57.22**	**164**	*e*P	**P**	**17 29 41.0**	**-3.0**
MIR				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.9						
MIR				MLR	MLR		
	comp=N,720nm,18.0s,MS4.9						
MIR				MLR	MLR		
	comp=E,520nm,18.0s,MS4.9						
MIR				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.2						
OTAV	**Otavalo**	**58.18**	**327**	*e*P	**P**	**17 29 52.6**	**+1.2**
	comp=Z,62nm,1.3s,mb5.5						
OTAV				*e*		17 30 01.7	
OTAV				LR	LR		
	comp=Z,298nm,20.0s,MS4.4						
BOSA	**Boshof**	**59.63**	**98**	*e*P	**P**	**17 30 00.8**	**-0.5**
BOSA				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.7						
BOSA				MLR	MLR		
	comp=Z,779nm,20.0s,MS4.8						
BOSA	**Boshof**	**59.63**	**98**	P	**P**	**17 30 00.8**	**-0.5**
	comp=Z,57nm,1.1s,mb5.5,baz=227,slow=6.9,SNR=25						
BOSA				LR	LR	17 53 02.2	
	comp=Z,367nm,18.2s,MS4.5,baz=223,slow=33						
BOSA	**Boshof**	**59.63**	**98**	*e*P	**P**	**17 30 00.8**	**-0.6**
	comp=Z,80nm,1.1s,mb5.7						
BOSA				LR	LR		
	comp=Z,779nm,20.0s,MS4.8						
TSUM	**Tsumeb**	**62.17**	**85**	⇓*e*P	**P**	**17 30 18.2**	**-0.4**
	comp=Z,10nm,0.9s,mb5.0						
LBTB	**Lobatse**	**62.52**	**95**	*e*P	**P**	**17 30 20.3**	**-0.6**
LBTB				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.5						
LBTB	**Lobatse**	**62.52**	**95**	*e*P	**P**	**17 30 20.3**	**-0.7**
	comp=Z,44nm,1.2s,mb5.5						
SDV	**Santo Domingo**	**64.34**	**339**	*e*P	**P**	**17 30 32.4**	**-0.7**
	comp=Z,19nm,0.9s,mb5.1						
SDV				*e*		17 30 40.8	
MATP	**Matopo**	**67.74**	**94**	LR	LR	17 55 54.6	
	comp=Z,514nm,19.8s,MS4.8,baz=223,slow=32						
RKT	**Rikitea**	**68.14**	**260**	*e*P	**P**	**17 30 56.7**	**-0.4**
	comp=Z,85nm,24.2s						
RKT				*e*LR	LR	17 51 59.6	
	comp=Z,348nm,30.0s						
DBIC	**Dimbokro**	**71.51**	**49**	*e*P	**P**	**17 31 18.2**	**+0.3**
DBIC				*e*		17 31 26.0	
DBIC				pmax	pmax		
	comp=Z,58nm,1.4s						
DBIC				MLR	MLR		
	comp=Z,297nm,19.0s						
DBIC	**Dimbokro**	**71.51**	**49**	P	**P**	**17 31 18.6**	**+0.7**
	comp=Z,17nm,0.9s,mb5.0,baz=169,slow=8.3,SNR=13						
DBIC				LR	LR	17 56 18.8	
	comp=Z,225nm,21.0s,MS4.4,baz=164,slow=30						
DBIC	**Dimbokro**	**71.51**	**49**	*e*P	**P**	**17 31 18.2**	**+0.3**
	comp=Z,58nm,1.4s,mb5.3						
DBIC				*e*		17 31 26.0	
DBIC				LR	LR		
	comp=Z,297nm,19.0s,MS4.6						
LSZ	**Lusaka**	**71.54**	**91**	P	**P**	**17 31 18.8**	**+0.8**
LSZ				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
LSZ				MLR	MLR		
	comp=Z,571nm,20.0s,MS4.8						
LSZ	**Lusaka**	**71.54**	**91**	P	**P**	**17 31 18.8**	**+0.7**
	comp=Z,17nm,0.8s,mb5.0						
LSZ				LR	LR		
	comp=Z,571nm,20.0s,MS4.8						
SJG	**San Juan**	**72.51**	**345**	P	**P**	**17 31 24.5**	**+0.8**
SJG				pmax	pmax		
	comp=Z,18nm,1.1s						
SJG	**San Juan**	**72.51**	**345**	P	**P**	**17 31 24.5**	**+0.7**
	comp=Z,18nm,1.1s,mb4.9						
KMBO	**Kilima Mbogo**	**88.15**	**89**	LR	LR	18 08 58.6	
	comp=Z,641nm,19.7s,MS5.0,baz=88,slow=33						
JCT	**Junction City**	**93.69**	**320**	*e*P	**P**	**17 33 12.0**	**-0.6**
JCT				*e*		17 33 20.7	
JCT				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.4						
JCT	**Junction City**	**93.69**	**320**	*e*P	**P**	**17 33 12.0**	**-0.6**
	comp=Z,22nm,1.3s,mb5.4						
JCT				*e*		17 33 20.7	
TXAR	**Lajitas Array**	**94.23**	**316**	P	**P**	**17 33 15.7**	**+0.6**
	comp=Z,0.2nm,0.3s,mb4.0,baz=169,slow=9.2,SNR=3.2						
TXAR				LR	LR	18 15 05.6	
	comp=Z,223nm,18.0s,MS4.7,baz=100,slow=35						
WMOK	**Wichita Mounta**	**97.11**	**322**	P	**P**	**17 33 26.8**	**-1.3**
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.8						
WMOK	**Wichita Mounta**	**97.11**	**322**	P	**P**	**17 33 26.8**	**-1.3**
	comp=Z,4.6nm,1.3s,mb4.8						
DZM	**Mont Dzumac**	**97.99**	**215**	LR	LR	18 15 55.8	
	comp=Z,87nm,18.1s,MS4.3,baz=169,slow=34						
ASAR	**Alice Springs**	**103.00**	**185**	Pdiff	Pdif	17 33 52.9	-2.0
	comp=Z,0.5nm,0.9s,baz=162,slow=5.7,SNR=2.9						
WRA	**Warramunga Arr**	**106.68**	**185**	Pdiff	Pdif	17 34 08.9	-2.3
	comp=Z,0.4nm,0.9s,baz=189,slow=4.2,SNR=3.7						
BRTR	**Keskin Array B**	**117.96**	**60**	PKP	PKPdf	17 38 42.5	-1.9
	comp=Z,0.6nm,0.7s,baz=270,slow=1.2,SNR=4.2						
AKASG	**Malin Array Be**	**123.76**	**49**	PKP	PKPdf	17 38 51.9	-3.5
	comp=Z,0.3nm,0.3s,baz=314,slow=0.8,SNR=6.6						
NOA	**NORSAR Array B**	**124.48**	**32**	PKP	PKPdf	17 38 54.2	-2.4
	comp=Z,0.7nm,0.8s,baz=248,slow=3.0,SNR=2.4						
NOA	**NORSAR Array B**	**124.48**	**32**	PKP	PKPdf	17 38 54.2	-2.4
YKA	**Yellowknife Ar**	**125.92**	**329**	PKP	PKPdf	17 38 56.7	-2.4
	comp=Z,0.5nm,0.5s,baz=136,slow=1.9,SNR=4.0						
YKA	**Yellowknife Ar**	**125.92**	**329**	PKP	PKPdf	17 38 56.7	-2.4
FINES	**FINESS Array B**	**129.80**	**38**	PKP	PKPdf	17 39 03.6	-2.9
	comp=Z,2.8nm,0.9s,baz=135,slow=8.1,SNR=8.6						
KAF	**Kangasniemi**	**130.32**	**37**	*e*p	PKPdf	17 39 04.1	-3.5
CMAR	**Chiang Mai Arr**	**138.05**	**135**	PKP	PKPdf	17 39 20.3	-2.8
	comp=Z,2.5nm,0.9s,baz=236,slow=3.4,SNR=8.0						
ILAR	**Eielson Array**	**138.62**	**320**	PKP	PKPdf	17 39 20.6	-2.3
	comp=Z,2.8nm,1.0s,baz=232,slow=0.7,SNR=16						
ARU	**Arti**	**141.16**	**57**	*e*PKHKP		17 39 18.3	
ARU						17 39 25.2	
ARU	**Arti**	**141.16**	**57**	*e*PKPpre		17 39 18.3	
ARU				PKPdf	PKPdf	17 39 25.2	-2.4
IMA	**Indian Mountai**	**141.75**	**320**	PKIKP	PKPdf	17 39 24.1	-4.1
UCH	**Uchtor**	**142.72**	**85**	P	PKPdf	17 39 26.6	-4.1
	SNR=6.0						
AAK	**Ala-Archa**	**142.95**	**84**	*e*PKHKP		17 39 24.6	
KZA	**Kyzart**	**143.07**	**86**	P	PKPbc	17 39 27.3	+1.0
	SNR=6.3						
CHMS	**Chumysh**	**143.32**	**84**	P	PKPbc	17 39 26.9	0.0
	SNR=6.2						
USP	**Ospenovka**	**143.33**	**84**	P	PKPbc	17 39 26.7	-0.2
	SNR=5.6						
LSA	**Lhasa**	**143.75**	**116**	PKP	PKPdf	17 39 29.6	-3.2
LSA	**Lhasa**	**143.75**	**116**	*e*PKPdf	PKPdf	17 39 29.3	-3.4
LSA				*e*		17 39 36.9	
ULHL	**Ulahol**	**143.76**	**86**	P	PKPbc	17 39 28.8	+0.5
	SNR=8.6						
TKM2	**Tokmak 2**	**143.78**	**85**	P	PKPbc	17 39 28.3	-0.1
	SNR=16						
KMI	**Kunming**	**145.56**	**135**	PKP	PKPdf	17 39 34.3	-1.8
KMI				PP	PP		
	comp=Z,50nm,3.5s						
BVAR	**Borovoye Array**	**145.89**	**67**	PKPbc	PKPbc	17 39 33.9	+0.2
	comp=Z,5.4nm,0.8s,baz=243,slow=3.3,SNR=26						
GYA	**Guiyang**	**148.33**	**140**	⇑*i*PKP	PKPdf	17 39 41.4	+0.8
GYA				PKS	PKS	17 43 15.8	+4.4
GYA				PP	PP		
	comp=Z,170nm,10.3s						
GYA				LR	LR		
	comp=N,380nm,18.9s,MS5.4						
GYA				LR	LR		
	comp=E,410nm,20.4s,MS5.4						
GYA				LR	LR		
	comp=Z,530nm,21.2s,MS5.3						
MKAR	**Makanchi Array**	**149.88**	**84**	PKP	PKPdf	17 39 39.3	-3.2
	comp=Z,0.6nm,0.9s,baz=252,slow=4.6,SNR=5.0						
MKAR				PKPbc	PKPdf	17 39 44.7	+2.2
	comp=Z,4.8nm,0.8s,baz=270,slow=1.2,SNR=33						
MKAR	**Makanchi Array**	**149.88**	**84**	PKP	PKPdf	17 39 39.3	-3.2
MKAR				PKPbc	PKPdf	17 39 44.7	+2.2
WMQ	**Urumqi**	**151.51**	**93**	*e*PKP	PKPdf	17 39 43.9	-1.1
WMQ				*e*PP	PP	17 43 32.7	+1.6
WMQ				PPP	PPP	17 46 59.7	+1.6
WMQ				SKKS		17 50 20.7	
WMQ				*e*SS	SS	18 02 54.9	+1.9
WMQ				PP	PP		
	comp=Z,180nm,5.6s						
WMQ				LR	LR		
	comp=N,100nm,22.6s,MS4.7						
WMQ				LR	LR		
	comp=E,80nm,20.6s,MS4.7						
WMQ				LR	LR		
	comp=Z,100nm,22.0s,MS4.6						
ENH	**Enshi**	**152.83**	**141**	*e*PKPdf	PKPdf	17 39 45.8	-1.5
ENH				*e*PKPbc	PKPdf	17 39 52.2	+4.9
NVS	**Novosibirsk**	**153.63**	**69**	*e*PKIKP	PKPdf	17 39 44.2	-3.5
NVS				pmax	pmax		
	comp=Z,20nm,1.7s						
NVS				pmax	pmax		
	comp=N,7.0nm,1.7s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.7s						
NVS				pmax	pmax		
	comp=N,5.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,3.0nm,1.0s						
ZAL	**Zalesovo**	**154.25**	**71**	PKIKP	PKPdf	17 39 54.8	+6.3
ZAL						17 40 08.9	
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL	**Zalesovo**	**154.25**	**71**	PKPbc	PKPdf	17 39 54.8	+6.2
	comp=Z,0.5nm,0.3s,baz=161,slow=21,SNR=4.7						
ZAL				PKPab	PKPab	17 40 08.9	-1.3
	comp=Z,1.0nm,0.5s,baz=181,slow=6.2,SNR=4.6						
GTA	**Gaotai**	**155.74**	**114**	*e*PKP	PKPdf	17 39 51.3	+0.3
XAN	**Xi'an**	**155.93**	**136**	PKP	PKPdf	17 39 53.7	+2.3
BILL	**Bilibino**	**157.17**	**324**	*i* PKP2	PKPab	17 40 17.6	-4.6
NJ2	**Nanjing**	**157.36**	**157**	*e*PKP	PKPdf	17 39 48.5	-4.9
NJ2				APKP		17 39 57.6	
NJ2				XPKP		17 40 01.0	
NJ2				PKP2	PKPab	17 40 22.6	-1.6
NJ2				PKS	PKS	17 43 20.0	-3.0
NJ2				PP	PP	17 44 03.0	-1.1
NJ2				PP	PP		
	comp=Z,220nm,9.9s						
NJ2				LR	LR		
	comp=N,350nm,16.6s,MS5.4						
NJ2				LR	LR		
	comp=E,290nm,14.4s,MS5.4						
NJ2				LR	LR		
	comp=Z,250nm,19.0s,MS5.1						
MJAR	**Matsushiro Arr**	**161.80**	**205**	PKP2	PKPab	17 40 42.4	-0.8
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MJAR	**Matsushiro Arr**	**161.80**	**205**	PKPab	PKPab	17 40 42.4	-0.8
	comp=Z,1.2nm,0.7s,baz=164,slow=4.0,SNR=5.3						
MAT	**Matsushiro**	**161.80**	**205**	PKP2	PKPab	17 40 41.7	-1.5
TIXI	**Tiksi**	**161.81**	**360**	*i* PKP2	PKPab	17 40 41.3	-0.9
ZAK	**Zakamensk**	**163.96**	**91**	*e*PKIKP	PKPdf	17 39 58.1	-1.8
ZAK				*e*		17 40 48.7	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.8s						
TLY	**Talaya**	**164.60**	**87**	*i* PKIKP	PKPdf	17 39 59.3	-1.2
SONM	**Songino Array**	**164.70**	**103**	PKP	PKPdf	17 39 58.9	-1.8
	comp=Z,1.0nm,0.8s,baz=225,slow=3.5,SNR=6.4						
SONM				PKPab	PKPab	17 40 55.4	-0.1
	comp=Z,1.7nm,0.8s,baz=236,slow=4.5,SNR=8.1						
ULN	**Ulaanbaatar**	**165.10**	**104**	*e*PKIKP	PKPdf	17 39 59.3	-1.8
ULN				MLR	MLR		
	comp=Z,233nm,22.0s						

IDC 07 17:27:15.2±3.7**, 31.56S**×**178.10W, mb3.6**/2**, mb1 3.9**/3**, mb1mx3.7**/16**, mbtmp3.7**/3**, ML3.9**/1**, Error ellipse: s-maj=84.2km s-min=27.9km az=121.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.31**	**4**	Pn	Pn	17 27 54.9	-0.1
	31nm,0.3s,baz=72,slow=19,SNR=2.6						
RAO				Sn	Sn	17 28 25.2	+0.7
	48nm,0.3s,baz=58,slow=19,SNR=3.1						
ASAR	**Alice Springs**	**42.97**	**268**	P	P	17 35 16.3	-1.6
	0.4nm,0.7s,baz=104,slow=7.6,SNR=5.8						
WRA	**Warramunga Arr**	**44.07**	**273**	P	P	17 35 25.2	-1.6
	0.6nm,0.4s,baz=113,slow=7.9,SNR=20						
FINES	**FINESS Array B**	**146.20**	**339**	PKPbc	PKPbc	17 46 55.5	-1.3
	0.5nm,0.5s,baz=56,slow=5.0,SNR=5.2						

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*BJI **07** 17:36:50.9, 0.59N×97.18E, h53^{km}, mB5.1, mb4.6, Ms4.4, Msz4.4*

*MOS **07** 17:36:51.5±1.4, 0.92N×97.23E, h33^{km}, mb4.8/8, Error ellipse: s-maj=29.2km s-min=13.5km az=112.4*

*NEIC **07** 17:36:52.1±0.4, 1.06N×97.27E, mb4.6/10, Error ellipse: s-maj=11.4km s-min=7.5km az=70.0*

*IDC **07** 17:36:52.2±0.6, 1.06N×97.28E, h23^{km}±4^{km}, mb4.1/11, mb1 4.3/12, mb1mx4.0/21, mbtmp4.2/12, ML4.0/1, MS4.0/6, Ms1 4.1/6, ms1mx3.8/25, Error ellipse: s-maj=26.1km s-min=12.9km az=49.0*

ISC 07 17:36:50.3±0.6**, 1.04N**±0.07×**97.21E**±0.07**, h24^{km}, h24^{km}**±.6^{km}**:pP-P, n58,** σ**0^{s}95**/50**, mb4.5**/26**, MS4.1**/6**, 2C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**5.18**	**47**	P	**Pn**	**17 38 09.4**	**+0.9**
KULM	**Kulim**	**5.44**	**39**	⇑*i*P	**Pn**	**17 38 12.2**	**+0.1**
KGM	**Kluang**	**6.18**	**81**	P	**Pn**	**17 38 23.5**	**+0.9**
CM31	**Chiang Mai Arr**	**17.39**	**6**	*e*Pn	**P**	**17 40 52.7**	**-0.6**
	3.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**17.39**	**6**	P	**P**	**17 40 52.2**	**-1.0**
	0.2nm,0.3s,baz=197,slow=12,SNR=16						
CMAR				LR	LR	17 48 48.7	
	comp=Z,373nm,18.2s,baz=190,slow=41						
KKM	**Kota Kinabalu**	**19.61**	**75**	P	**P**	**17 41 21.0**	**+0.9**
KMI	**Kunming**	**24.53**	**12**	P	**P**	**17 42 12.2**	**+2.7**
KMI				PP	PP	17 42 48.0	+2.5
KMI				S	**S**	**17 46 30.2**	**+4.5**
KMI				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.7						
KMI				AMB	AMB		
	comp=Z,120nm,3.1s						
KMI				LR	LR		
	comp=N,440nm,14.8s,MS4.2						
KMI				LR	LR		
	comp=E,250nm,13.0s,MS4.2						
KMI				LR	LR		
	comp=Z,490nm,14.2s,MS4.1						
SHL	**Shillong**	**24.92**	**349**	*e*x	**P**	**17 42 14.0**	**+0.8**
PKI	**Pulchoki**	**28.70**	**338**	*e*P	**P**	**17 42 52.1**	**+4.2**
	comp=Z,41nm,1.1s,mb5.1						
PKI	**Pulchoki**	**28.70**	**338**	*e*P	**P**	**17 42 52.1**	**+4.2**
PKI				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.8						
GUN	**Gumba**	**28.84**	**339**	*e*P	**P**	**17 42 49.7**	**+0.6**
	comp=Z,35nm,0.8s,mb5.1						
DMN	**Daman**	**28.85**	**337**	*e*P	**P**	**17 42 53.1**	**+3.9**
KKN	**Kakani**	**28.95**	**338**	*e*P	**P**	**17 42 51.2**	**+1.1**
	comp=Z,36nm,1.0s,mb5.0						
KKN	**Kakani**	**28.95**	**338**	*e*P	**P**	**17 42 51.2**	**+1.1**
KKN				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
LSA	**Lhasa**	**29.08**	**349**	*e*P	**P**	**17 42 51.0**	**-0.3**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
LSA	**Lhasa**	**29.08**	**349**	*e*P	**P**	**17 42 51.0**	**-0.3**
	comp=Z,5.3nm,0.8s,mb4.3						
GKN	**Gorkha**	**29.39**	**337**	*e*P	**P**	**17 42 52.0**	**-2.1**
KOLN	**Koldanda**	**29.60**	**335**	*e*P	**P**	**17 42 56.8**	**+0.8**
	comp=Z,24nm,1.0s,mb4.9						
ENH	**Enshi**	**31.32**	**21**	P	**P**	**17 43 09.8**	**-1.4**
	comp=Z,13nm,0.8s,mb4.8						
ENH				*e*pP	pP	17 43 16.0	-2.4
XAN	**Xi'an**	**34.61**	**17**	P	**P**	**17 43 38.5**	**-1.2**
GTA	**Gaotai**	**38.26**	**3**	*e*P	**P**	**17 44 11.1**	**+0.6**
HHC	**Hu-ho-hao-te**	**41.71**	**16**	*e*P	**P**	**17 44 39.2**	**+0.2**
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.3						
WRA	**Warramunga Arr**	**41.94**	**122**	P	**P**	**17 44 40.4**	**-0.8**
	comp=Z,1.9nm,0.7s,mb3.8,baz=300,slow=9.1,SNR=19						
WRA				pP	pP	17 44 47.6	-1.0
	comp=Z,2.3nm,0.6s,baz=302,slow=8.9,SNR=9.9						
WRAB	**Tennant Creek**	**41.95**	**122**	*e*P	**P**	**17 44 40.7**	**-0.6**
WRAB				*e**PP	pP	17 44 48.3	-0.3
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
WRAB	**Tennant Creek**	**41.95**	**122**	*e*P	**P**	**17 44 40.6**	**-0.6**
	comp=Z,4.2nm,0.7s,mb4.2						
WRAB				*e*pP	pP	17 44 48.3	-0.3
ASAR	**Alice Springs**	**43.29**	**127**	P	**P**	**17 44 52.0**	**-0.1**
	comp=Z,2.6nm,0.9s,mb4.0,baz=304,slow=7.8,SNR=20						
ASAR				pP	pP	17 44 59.2	-0.3
	comp=Z,1.0nm,0.4s,baz=299,slow=7.9,SNR=6.8						
KS15	**Wonju Array Si**	**45.94**	**34**	*e*P	**P**	**17 45 12.6**	**-0.6**
SONM	**Songino Array**	**47.28**	**8**	P	**P**	**17 45 24.1**	**+0.4**
	comp=Z,7.1nm,0.9s,mb4.6,baz=184,slow=8.5,SNR=21						
SONM				PcP	PcP	17 46 55.4	+0.4
	comp=Z,1.9nm,0.7s,baz=187,slow=3.6,SNR=6.5						
SONM				pPcP		17 47 02.3	
	comp=Z,1.4nm,0.7s,baz=189,slow=3.9,SNR=3.6						
MKAR	**Makanchi Array**	**47.40**	**346**	P	**P**	**17 45 24.7**	**+0.1**
	comp=Z,6.7nm,0.9s,mb4.6,baz=159,slow=7.1,SNR=31						
ULN	**Ulaanbaatar**	**47.41**	**9**	*e*P	**P**	**17 45 25.0**	**+0.2**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**47.41**	**9**	*e*P	**P**	**17 45 25.0**	**+0.2**
	comp=Z,4.0nm,0.9s,mb4.3						
ZAK	**Zakamensk**	**49.43**	**5**	⇑*e*P	**P**	**17 45 40.6**	**+0.3**
ZAK				*e*		17 47 03.1	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.7						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.8						
CN2	**Changchun**	**49.44**	**27**	*e*P	**P**	**17 45 39.9**	**-0.6**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
HIA	**Hailar**	**51.79**	**19**	*e*P	**P**	**17 45 56.7**	**-1.6**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HIA	**Hailar**	**51.79**	**19**	*e*P	**P**	**17 45 56.7**	**-1.6**
	comp=Z,7.6nm,0.7s,mb4.7						
MDJ	**Mudanjiang**	**52.00**	**29**	P	**P**	**17 45 59.9**	**-0.1**
MDJ				AMB	AMB		
	comp=Z,50nm,3.5s						
CIT	**Chita**	**52.62**	**13**	*e*P	**P**	**17 46 05.4**	**+0.9**
CIT				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
STKA	**Stephens Creek**	**53.24**	**132**	*e*P	**P**	**17 46 09.7**	**+0.3**
STKA	**Stephens Creek**	**53.24**	**132**	P	**P**	**17 46 09.4**	**0.0**
	comp=Z,4.0nm,0.7s,mb4.5,baz=312,slow=8.6,SNR=9.9						
STKA				LR	LR	18 09 11.0	
	comp=Z,385nm,21.1s,MS4.4,baz=206,slow=36						
STKA	**Stephens Creek**	**53.24**	**132**	*e*P	**P**	**17 46 09.4**	**-0.1**
STKA				*e*pP	pP	17 46 17.4	+0.5
ZAL	**Zalesovo**	**53.71**	**351**	P	**P**	**17 46 12.4**	**-0.1**
	comp=Z,4.0nm,0.6s,mb4.5,baz=304,slow=4.3,SNR=18						
BVAR	**Borovoye Array**	**56.40**	**341**	P	**P**	**17 46 31.3**	**-0.8**
	comp=Z,2.6nm,0.8s,mb4.3,baz=135,slow=8.4,SNR=15						
BRTR	**Keskin Array B**	**69.22**	**312**	P	**P**	**17 47 56.8**	**-0.6**
	comp=Z,1.7nm,1.1s,mb3.9,baz=112,slow=6.7,SNR=4.1						
BRTR				pP	pP	17 48 05.0	0.0
	comp=Z,0.6nm,0.6s,baz=112,slow=6.7,SNR=2.8						
MATP	**Matopo**	**70.47**	**248**	P	**P**	**17 48 06.1**	**+0.7**
	comp=Z,1.4nm,0.8s,mb3.9,baz=120,slow=8.5,SNR=3.5						
MATP				pP	pP	17 48 14.0	+1.0
	comp=Z,4.6nm,0.9s,baz=78,slow=6.2,SNR=5.3						
MATP	**Matopo**	**70.47**	**248**	P	**P**	**17 48 06.1**	**+0.7**
MATP				pP	pP	17 48 14.0	+1.0
TIXI	**Tiksi**	**73.34**	**10**	*e*P	**P**	**17 48 19.4**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
IDI	**Anoyia**	**75.00**	**306**	LR	LR	18 23 23.5	
	comp=Z,72nm,19.4s,MS4.0,baz=331,slow=37						
MLR	**Muntele Rosu**	**76.19**	**317**	LR	LR	18 23 51.5	
	comp=Z,65nm,19.5s,MS4.0,baz=77,slow=37						
FINES	**FINESS Array B**	**80.14**	**333**	LR	LR	18 32 31.0	
	comp=Z,93nm,19.2s,MS4.1,baz=186,slow=42						
GERES	**GERESS Array B**	**84.94**	**319**	P	**P**	**17 49 26.0**	**+1.3**
	comp=Z,1.2nm,0.8s,mb4.1,baz=108,slow=4.2,SNR=7.6						
GERES				pP	pP	17 49 33.5	+0.8

	comp=Z,1.2nm,0.8s,baz=124,slow=4.8,SNR=4.0						
NB2	**NORSAR Subarra**	**87.15**	**331**	P	**P**	**17 49 36.0**	**+0.6**
	comp=Z,1.3nm,0.8s,mb4.2,baz=94,slow=5.0						
NOA	**NORSAR Array B**	**87.15**	**331**	P	**P**	**17 49 36.3**	**+0.9**
	comp=Z,1.5nm,0.9s,mb4.2,baz=95,slow=4.8,SNR=3.8						
ILAR	**Eielson Array**	**99.84**	**23**	LR	LR	18 45 31.1	
	comp=Z,71nm,18.9s,MS4.2,baz=353,slow=41						
NVAR	**Mina Array Bea**	**128.91**	**36**	PKP	PKPdf	17 56 00.0	-1.2
	comp=Z,0.2nm,0.3s,baz=208,slow=1.2,SNR=4.1						
TXAR	**Lajitas Array**	**143.80**	**32**	PKP	PKPdf	17 56 24.6	-4.1
	comp=Z,0.4nm,0.3s,baz=297,slow=2.8,SNR=4.1						
JCT	**Junction City**	**144.71**	**26**	*e*PKPdf	PKPdf	17 56 26.7	-3.7
CPUP	**Villa Florida**	**144.90**	**222**	PKP	PKPdf	17 56 27.2	-3.6
	comp=Z,1.3nm,0.7s,baz=145,slow=12,SNR=4.0						
LRAL	**Lakeview Retre**	**145.88**	**6**	*e*PKPdf	PKPdf	17 56 29.7	-2.6
LRAL				*e*pPKPdf		17 56 37.1	

IDC 07 17:38:41.6±3.7**,30.58S**×**138.85E,mb1 3.1**/3**,mb1mx3.0**/12**,mbtmp2.8**/3**,ML2.5**/3**,Error ellipse: s-maj=102.1km s-min=15.8km az=41.0,South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**2.69**	**120**	Pn	Pn	17 39 25.4	-1.4
	0.2nm,0.3s,baz=300,slow=15,SNR=13						
STKA				Pg	Pg	17 39 32.5	-2.7
	0.9nm,0.3s,baz=290,slow=16,SNR=16						
STKA				Lg		17 40 05.7	
	3.0nm,0.3s,baz=351,slow=20,SNR=12						
ASAR	**Alice Springs**	**8.17**	**326**	Pn	P	17 40 41.1	-3.2
	0.1nm,0.3s,baz=151,slow=13,SNR=7.2						
ASAR				Sn	Sn	17 42 14.6	-3.8
	0.1nm,0.3s,baz=150,slow=22,SNR=5.4						
WRA	**Warramunga Arr**	**11.35**	**338**	Pn	P	17 41 25.6	-2.5
	0.1nm,0.3s,baz=156,slow=13,SNR=8.1						

IDC 07 18:07:00.1±8.0**,62.17N**×**26.86W,mb3.6**/4**,mb1 3.8**/4**,mb1mx3.5**/26**,mbtmp3.6**/4**,Error ellipse: s-maj=297.3km s-min=31.8km az=169.0,Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BVAR	**Borovoye Array**	**48.09**	**54**	P	P	18 15 41.0	-1.8
	0.3nm,0.4s,baz=315,slow=6.3,SNR=4.2						
PDAR	**Pinedale Array**	**50.11**	**288**	P	P	18 15 56.7	-1.7
	1.1nm,0.9s,baz=50,slow=7.0,SNR=6.5						
MKAR	**Makanchi Array**	**57.60**	**50**	P	P	18 16 51.1	-2.5
	0.3nm,0.8s,baz=315,slow=6.9,SNR=3.7						
SONM	**Songino Array**	**64.16**	**33**	P	P	18 17 36.0	-1.9
	0.3nm,0.7s,baz=323,slow=6.2,SNR=5.2						

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*CSEM **07** 18:50:19.5±0.1,62.12N×26.30W,h2^{km},mb4.6/8,Ms3.9, Error ellipse: s-maj=2.4km s-min=2.1km az=121.0*

*BJI **07** 18:50:20.5,62.00N×26.50W,h10^{km},mB4.4,mb4.5,Ms4.5, Msz4.4*

*IDC **07** 18:50:20.9±1.0,61.97N×26.53W,mb3.8/13,mb1 4.0/14, mb1mx3.9/26,mbtmp3.8/14,ML3.1/1,MS3.9/25,Ms1 3.9/25, ms1mx3.8/40,Error ellipse: s-maj=34.5km s-min=14.2km az=4.0*

*NEIC **07** 18:50:22.5±0.3,61.97N×26.51W,h10^{km},mb4.4/15, MS4.0/3,Error ellipse: s-maj=10.3km s-min=5.2km az=210.0*

ISC 07 18:50:21.4±0.4**,62.15N**±0.03×**26.24W**±0.07**,h10^{km},n87,** σ**1^{s}09**/80**,mb4.1**/23**,MS3.9**/27**,3C,Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INYL	**Nylenda**	**2.43**	**40**	P	**Pn**	**18 51 02.4**	**+0.6**
IVOG	**Vogar**	**2.53**	**42**	P	**Pn**	**18 51 03.5**	**+0.2**
IKRI	**Krysuvik**	**2.57**	**46**	P	**Pn**	**18 51 03.5**	**-0.4**
IKRI				S	**Sn**	**18 51 36.4**	**+0.9**
IVOS	**Vogsosar**	**2.68**	**48**	P	**Pn**	**18 51 04.1**	**-1.4**
IVOS				S	**Sn**	**18 51 39.0**	**+0.7**
ISAN	**Sandskeio**	**2.86**	**46**	P	**Pn**	**18 51 07.3**	**-0.6**
ISAN				S	**Sn**	**18 51 44.1**	**+1.4**
IBJA	**Bjarnastaoir**	**2.88**	**49**	P	**Pn**	**18 51 07.0**	**-1.3**
IBJA				S	**Sn**	**18 51 43.2**	**-0.2**
IKUD	**Kuludalsa**	**2.94**	**40**	P	**Pn**	**18 51 09.6**	**+0.5**
ISOL	**Solvholt**	**3.00**	**51**	P	**Pn**	**18 51 08.2**	**-1.8**
ISOL				S	**Sn**	**18 51 45.2**	**-1.2**
IKRO	**Krokur**	**3.04**	**48**	P	**Pn**	**18 51 09.9**	**-0.6**
IKRO				S	**Sn**	**18 51 48.3**	**+1.0**
IHEI	**Heioarbar**	**3.06**	**46**	P	**Pn**	**18 51 10.3**	**-0.6**
IHEI				S	**Sn**	**18 51 49.0**	**+1.1**
IASM	**Asmuli**	**3.07**	**54**	P	**Pn**	**18 51 09.1**	**-1.9**
IASM				S	**Sn**	**18 51 46.9**	**-1.3**
ISAU	**Saurbar**	**3.23**	**53**	P	**Pn**	**18 51 11.6**	**-1.6**
ISAU				S	**Sn**	**18 51 50.7**	**-1.5**
IHAU	**Haukadalur**	**3.39**	**55**	P	**Pn**	**18 51 13.6**	**-1.9**
IHAU				S	**Sn**	**18 51 55.4**	**-0.8**
IASB	**`sbjarnarst**	**3.42**	**38**	P	**Pn**	**18 51 17.2**	**+1.3**
IGYG	**Gygjarholskot**	**3.47**	**49**	P	**Pn**	**18 51 15.5**	**-1.1**
IGYG				S	**Sn**	**18 51 58.6**	**+0.5**
SCO	**Scoresbysund**	**8.54**	**10**	*e*P	**P**	**18 52 28.5**	**+0.4**
	2.5nm,0.9s						
SCO				*i* S		18 54 40.8	
SCO	**Scoresbysund**	**8.54**	**10**	*i* P	**P**	**18 52 28.5**	**+0.4**
	2.5nm,0.9s						
SCO				*i* S		18 54 40.8	
JMIC	**Jan Mayen**	**11.27**	**31**	LR	LR	18 56 34.9	
	comp=Z,356nm,19.8s,baz=38,slow=32						
SUMG	**Summit**	**11.44**	**341**	*e*P	**P**	**18 53 08.4**	**+0.7**
	60nm,1.7s						
SUMG	**Summit**	**11.44**	**341**	*e*P	**P**	**18 53 08.4**	**+0.7**
	60nm,1.7s						
EKA	**Eskdalemuir Ar**	**13.73**	**109**	Pn	**P**	**18 53 38.5**	**+0.2**
	0.1nm,0.3s,baz=308,slow=13,SNR=3.7						
DAG	**Danmarks Havn**	**14.91**	**7**⇑	*e*P	**P**	**18 54 02.2**	**+8.7**
	9.6nm,1.3s						
DAG	**Danmarks Havn**	**14.91**	**7**⇑	*i*P	**P**	**18 54 02.2**	**+8.7**
	9.6nm,1.3s						
NOA	**NORSAR Array B**	**17.70**	**77**	LR	LR	19 00 53.7	
	comp=Z,308nm,19.2s,baz=295,slow=35						
MUD	**Monsted U’grnd**	**18.77**	**92**	*e*P	**P**	**18 54 40.4**	**-2.1**
MUD				*e*		18 58 21.9	
MUD	**Monsted U’grnd**	**18.77**	**92**	*i* P	**P**	**18 54 40.4**	**-2.1**
MUD				*e*		18 58 21.9	
	comp=Z,160nm,16.0s						
ROSF	**Rostrenen**	**18.90**	**126**	*e*P	**P**	**18 54 43.4**	**-0.6**
	comp=Z,33nm,1.1s						
HFS	**Hagfors**	**19.17**	**78**	LR	LR	19 01 39.2	
	comp=Z,385nm,19.1s,baz=273,slow=35						
SGMF	**Saint Gilles**	**19.24**	**125**	*e*P	**P**	**18 54 47.6**	**-0.5**
QUIF	**Quistinic**	**19.29**	**127**	*e*P	**P**	**18 54 48.9**	**+0.2**
	comp=Z,65nm,1.5s						
BAIF	**Baives**	**20.62**	**112**	*e*P	**P**	**18 55 02.6**	**-0.5**
	comp=Z,32nm,1.3s						
COP	**Copenhagen**	**20.73**	**91**	*i* P	**P**	**18 55 09.5**	**+5.3**
COP				*i* S	**S**	**18 59 08.8**	**+18**
	comp=Z,40nm,16.0s						
MFF	**Saint Martin d**	**21.53**	**124**	*e*P	**P**	**18 55 12.0**	**-0.4**
	comp=Z,57nm,1.3s,mb4.5						
ARCES	**ARCESS Array B**	**21.76**	**48**	P	**P**	**18 55 15.9**	**+1.3**
	comp=Z,2.3nm,0.8s,mb3.7,baz=259,slow=9.2,SNR=3.8						
SCHQ	**Schefferville**	**22.12**	**269**	P	**P**	**18 55 16.9**	**-1.3**
	comp=Z,3.4nm,0.9s,mb3.8,baz=67,slow=15,SNR=2.8						
SCHQ				LR	LR	19 02 18.1	
	comp=Z,221nm,21.1s,MS3.5,baz=264,slow=33						
LOR	**Lormes**	**22.60**	**117**	*e*P	**P**	**18 55 22.4**	**-0.6**
LOR				*e*R			
	comp=Z,979nm,17.8s						
SSF	**Saint Saulge**	**22.62**	**118**	*e*P	**P**	**18 55 21.8**	**-1.4**
	comp=Z,11nm,1.1s,mb4.2						
TCF	**Toulx Ste Croi**	**22.72**	**121**	*e*P	**P**	**18 55 24.6**	**+0.5**
	comp=Z,20nm,1.0s,mb4.2						
HAU	**Haudompre**	**23.09**	**113**	*e*P	**P**	**18 55 27.5**	**-0.3**
HAU				*e*R			
	comp=Z,403nm,22.1s						
SMF	**Signal de Mont**	**23.09**	**118**	*e*P	**P**	**18 55 28.0**	**+0.2**
	comp=Z,21nm,0.9s,mb4.2						
HINF	**Hinteralfeld**	**23.45**	**112**	*e*P	**P**	**18 55 31.1**	**-0.2**
MOX	**Moxa**	**23.53**	**102**⇑	*e*P	**P**	**18 55 35.1**	**+3.1**
	comp=Z,33nm,2.0s,mb4.4						
MOX				LR	LR		
	comp=Z,400nm,17.0s,MS4.0						
MOX	**Moxa**	**23.53**	**102**	*i* P	**P**	**18 55 35.1**	**+3.1**
	comp=Z,logA/T=1.2,mb4.4						
MOX				L		19 06 07.0	
CLL	**Collm**	**23.71**	**99**	*e*P	**P**	**18 55 35.0**	**+1.2**
CLL				LR	LR		
	comp=Z,400nm,21.6s,MS3.9						
CLL	**Collm**	**23.71**	**99**	*e*P	**P**	**18 55 35.0**	**+1.2**
GRA1	**Grafenberg Arr**	**24.02**	**104**	*e*P	**P**	**18 55 38.8**	**+2.1**
	comp=Z,39nm,2.1s,mb4.5						
GRA1				LR	LR		
	comp=Z,500nm,18.5s,MS4.0						
GRF	**Grafenberg Arr**	**24.02**	**104**	*e*P	**P**	**18 55 38.8**	**+2.1**
	comp=Z,39nm,2.1s,mb4.5						
GRF				LR	LR		
	comp=Z,500nm,18.5s,MS4.0						
FINES	**FINESS Array B**	**24.19**	**68**	P	**P**	**18 55 39.0**	**+0.7**
	comp=Z,1.6nm,0.8s,mb3.5,baz=297,slow=4.3,SNR=6.1						
FINES				LR	LR	19 04 29.8	
	comp=Z,130nm,20.5s,MS3.4,baz=155,slow=35						
FINES	**FINESS Array B**	**24.19**	**68**	P	**P**	**18 55 39.0**	**+0.7**
BRG	**Berggiesshubel**	**24.44**	**99**	*e*P	**P**	**18 55 42.4**	**+1.5**
	comp=Z,4.2nm,1.0s,mb3.8						
BRG				*e*		18 55 44.3	
BRG				LR	LR		
	comp=Z,320nm,15.2s,MS3.9						
ORIF	**Oris-en-Rattie**	**25.33**	**118**	*e*P	**P**	**18 55 49.0**	**-0.4**
ORIF				*e*R			
	comp=Z,725nm,18.5s						
PRU	**Pruhonice**	**25.33**	**100**	*e*P	**P**	**18 55 49.8**	**+0.4**
KHC	**Kasperske Hory**	**25.50**	**102**	*e*P	**P**	**18 55 52.3**	**+1.4**
DAVOX	**Davos**	**25.57**	**110**	LR	LR	19 05 25.5	
	comp=Z,119nm,19.4s,MS3.4,baz=85,slow=35						
GERES	**GERESS Array B**	**25.76**	**103**	P	**P**	**18 55 53.7**	**+0.3**
	comp=Z,0.8nm,0.8s,mb3.3,baz=281,slow=6.8,SNR=5.1						
GERES				LR	LR	19 05 46.7	
	comp=Z,317nm,21.0s,MS3.8,baz=350,slow=36						
DPC	**Dobruska-Polom**	**25.91**	**97**	*e*P	**P**	**18 55 55.2**	**+0.4**
AKASG	**Malin Array Be**	**31.72**	**85**	P	**P**	**18 56 46.1**	**-0.9**
	comp=Z,0.4nm,0.4s,mb3.6,baz=310,slow=8.9,SNR=7.9						
MLR	**Muntele Rosu**	**33.90**	**95**	LR	LR	19 12 24.7	
	comp=Z,153nm,18.9s,MS3.8,baz=349,slow=39						
VAE	**Valguarnera**	**35.08**	**116**	LR	LR	19 11 44.9	
	comp=Z,366nm,18.6s,MS4.2,baz=127,slow=37						
YKA	**Yellowknife Ar**	**37.99**	**311**	P	**P**	**18 57 39.9**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.6,baz=47,slow=8.5,SNR=5.1						
YKA				LR	LR	19 12 51.4	
	comp=Z,272nm,18.5s,MS4.1,baz=60,slow=36						
ULM	**Lac du Bonnet**	**38.57**	**285**	LR	LR	19 12 04.7	
	comp=Z,194nm,20.3s,MS3.9,baz=351,slow=34						
IDI	**Anoyia**	**41.51**	**106**	LR	LR	19 17 01.5	
	comp=Z,149nm,20.3s,MS3.9,baz=314,slow=38						
BRTR	**Keskin Array B**	**41.95**	**94**	P	**P**	**18 58 15.6**	**+2.1**
	comp=Z,1.2nm,0.7s,mb3.6,baz=326,slow=4.5,SNR=5.9						
ILAR	**Eielson Array**	**45.97**	**329**	P	**P**	**18 58 46.2**	**+0.6**
	comp=Z,0.6nm,0.8s,mb3.5,baz=37,slow=7.0,SNR=8.9						
ILAR				PcP	PcP	19 00 20.6	-2.3
	comp=Z,0.9nm,0.8s,baz=353,slow=3.1,SNR=5.9						
ILAR				LR	LR	19 17 53.0	
	comp=Z,113nm,18.2s,MS3.9,baz=1.6,slow=36						
ILAR	**Eielson Array**	**45.97**	**329**	PcP	PcP	19 00 20.6	-2.3
IMA	**Indian Mountai**	**46.40**	**333**	*e*P	**P**	**18 58 49.6**	**+0.6**
	comp=Z,19nm,1.4s,mb4.8						
IMA	**Indian Mountai**	**46.40**	**333**	*e*P	**P**	**18 58 49.6**	**+0.6**
	comp=Z,19nm,1.4s,mb4.8						
GNI	**Garni**	**46.82**	**84**	LR	LR	19 20 02.6	
	comp=Z,175nm,20.0s,MS4.0,baz=174,slow=38						
BOZ	**Bozeman (W)**	**49.03**	**292**	*e*P	**P**	**18 59 09.8**	**0.0**
	comp=Z,18nm,1.8s,mb4.8						
NEW	**Newport**	**49.31**	**298**	LR	LR	19 19 28.8	
	comp=Z,237nm,18.4s,MS4.2,baz=235,slow=36						
ASF	**Jabal al Asfar**	**49.62**	**97**	LR	LR	19 20 38.6	
	comp=Z,36nm,20.9s,MS3.4,baz=14,slow=36						
PDAR	**Pinedale Array**	**50.39**	**288**	P	**P**	**18 59 17.9**	**-2.4**
	comp=Z,1.2nm,0.7s,mb4.0,baz=45,slow=6.3,SNR=5.9						
PDAR				LR	LR	19 19 46.2	
	comp=Z,176nm,18.6s,MS4.1,baz=40,slow=35						
BBB	**Bella Bella**	**50.49**	**309**	LR	LR	19 19 43.2	
	comp=Z,151nm,20.1s,MS4.0,baz=7.0,slow=35						
LAZ	**Ladron**	**56.09**	**280**	*e*P	**P**	**19 00 02.3**	**-0.4**
YBH	**Yreka Blue Hor**	**56.92**	**297**	LR	LR	19 24 22.6	
	comp=Z,386nm,18.1s,MS4.5,baz=7.9,slow=36						
MKAR	**Makanchi Array**	**57.39**	**51**	P	**P**	**19 00 12.4**	**+0.6**
	comp=Z,0.9nm,0.8s,mb3.9,baz=329,slow=5.9,SNR=10						
MKAR				LR	LR	19 23 49.6	
	comp=Z,65nm,19.2s,MS3.8,baz=180,slow=35						
TXAR	**Lajitas Array**	**58.70**	**274**	P	**P**	**19 00 19.3**	**-1.9**
	comp=Z,0.4nm,0.2s,mb4.0,baz=117,slow=5.6,SNR=3.8						
TXAR				LR	LR	19 25 02.1	
	comp=Z,243nm,18.8s,MS4.3,baz=15,slow=36						
WMQ	**Urumqi**	**61.88**	**49**	*e*P	**P**	**19 00 44.0**	**+1.2**
WMQ				AP	pP	19 00 48.6	+2.7
WMQ				XP	sP	19 00 51.0	+4.0
WMQ				LR	LR		
	comp=N,200nm,21.0s,MS4.4						
WMQ				LR	LR		
	comp=E,210nm,19.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,250nm,19.0s,MS4.4						
SONM	**Songino Array**	**64.02**	**33**	P	**P**	**19 00 57.8**	**+1.1**
	comp=Z,3.7nm,1.1s,mb4.3,baz=321,slow=7.9,SNR=21						
ULN	**Ulaanbaatar**	**64.16**	**33**	*e*P	**P**	**19 00 59.2**	**+1.6**
	comp=Z,20nm,1.5s,mb4.9						
JTS	**JuntasAbangare**	**66.63**	**246**	LR	LR	19 27 18.1	
	comp=Z,66nm,20.4s,MS3.8,baz=199,slow=33						
GTA	**Gaotai**	**69.87**	**42**	*e*P	**P**	**19 01 35.4**	**+1.6**
GTA				AP	pP	19 01 45.4	+8.4
BDFB	**Brasilia**	**79.42**	**201**	LR	LR	19 30 25.0	
	comp=Z,96nm,21.0s,MS4.1,baz=188,slow=30						
LPAZ	**La Paz**	**84.86**	**220**	LR	LR	19 39 18.3	
	comp=Z,41nm,18.6s,MS3.8,baz=175,slow=35						
CMAR	**Chiang Mai Arr**	**88.80**	**51**	P	**P**	**19 03 17.9**	**+1.5**
	comp=Z,1.5nm,0.8s,mb4.4,baz=310,slow=4.4,SNR=7.3						
BOSA	**Boshof**	**99.41**	**136**	LR	LR	19 47 41.7	
	comp=Z,94nm,19.2s,MS4.3,baz=94,slow=35						
QSPA	**South Pole Qui**	**152.06**	**180**	*e*P	PKPdf	19 10 15.4	+4.4

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*IDC **07** 19:15:50.3±0.8,61.83N×26.62W,mb3.6/12,mb1 3.8/13, mb1mx3.8/27,mbtmp3.6/13,ML3.4/1,MS3.5/15,Ms1 3.5/15, ms1mx3.4/29,Error ellipse: s-maj=30.9km s-min=14.7km az=178.0*

*NEIC **07** 19:15:51.8±0.6,61.81N×26.57W,h10^{km},Error ellipse: s-maj=16.7km s-min=9.9km az=194.0*

ISC 07 19:15:50.0±0.6**,61.8N**±0.1×**26.6W**±0.2**,h10^{km},n27,** σ**1^{s}05**/17**,mb3.6**/12**,MS3.5**/12**,Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMIC	**Jan Mayen**	**11.64**	**30**	LR	LR	19 21 55.3	
	comp=Z,60nm,18.4s,baz=262,slow=31						
SUMG	**Summit**	**11.68**	**342**	*e*P	**P**	**19 18 39.4**	**-0.2**
	3.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**13.81**	**108**	Pn	**P**	**19 19 06.1**	**-1.8**
	0.1nm,0.3s,baz=309,slow=18,SNR=3.1						
NOA	**NORSAR Array B**	**17.95**	**76**	LR	LR	19 26 34.1	
	comp=Z,83nm,18.7s,baz=295,slow=36						
HFS	**Hagfors**	**19.42**	**77**	LR	LR	19 26 59.5	
	comp=Z,122nm,18.2s,baz=318,slow=34						
SCHQ	**Schefferville**	**21.93**	**270**	LR	LR	19 27 24.2	
	comp=Z,116nm,22.0s,MS3.2,baz=100,slow=32						
ARCES	**ARCESS Array B**	**22.12**	**48**	P	**P**	**19 20 46.6**	**-0.2**
	4.1nm,1.0s,mb3.8,baz=277,slow=14,SNR=3.0						
CLL	**Collm**	**23.85**	**98**	P	**P**	**19 21 05.0**	**+1.2**
FINES	**FINESS Array B**	**24.48**	**67**	P	**P**	**19 21 09.4**	**-0.4**
	1.5nm,0.9s,mb3.4,baz=301,slow=8.1,SNR=2.2						
FINES				LR	LR	19 30 10.9	
	comp=Z,50nm,18.8s,MS3.0,baz=295,slow=35						
DAVOX	**Davos**	**25.64**	**109**	LR	LR	19 30 11.7	
	comp=Z,48nm,21.2s,MS3.0,baz=69,slow=34						
GERES	**GERESS Array B**	**25.88**	**102**	P	**P**	**19 21 24.6**	**+1.5**
	0.5nm,0.7s,mb3.1,baz=320,slow=10,SNR=3.5						
GERES				LR	LR	19 31 48.2	
	comp=Z,105nm,20.1s,MS3.4,baz=2.7,slow=37						
AKASG	**Malin Array Be**	**31.93**	**84**	P	**P**	**19 22 15.6**	**-2.0**
	0.4nm,0.2s,mb3.8,baz=338,slow=15,SNR=3.1						
AKASG	**Malin Array Be**	**31.93**	**84**	P	**P**	**19 22 15.6**	**-2.0**
YKA	**Yellowknife Ar**	**38.05**	**311**	LR	LR	19 38 12.6	
	comp=Z,98nm,19.8s,MS3.6,baz=55,slow=35						
ULM	**Lac du Bonnet**	**38.47**	**285**	LR	LR	19 38 04.8	
	comp=Z,52nm,18.9s,MS3.4,baz=7.6,slow=35						
BRTR	**Keskin Array B**	**42.12**	**93**	P	**P**	**19 23 44.0**	**+0.5**
	0.7nm,0.8s,mb3.4,baz=321,slow=6.4,SNR=4.5						
ILAR	**Eielson Array**	**46.14**	**329**	P	**P**	**19 24 16.7**	**+1.1**
	0.3nm,0.7s,mb3.3,baz=33,slow=8.1,SNR=4.8						
ILAR				PcP	PcP	19 25 52.0	-0.1
	0.8nm,0.9s,baz=346,slow=1.6,SNR=6.2						
NEW	**Newport**	**49.29**	**298**	LR	LR	19 44 34.9	
	comp=Z,66nm,19.4s,MS3.6,baz=62,slow=35						
PDAR	**Pinedale Array**	**50.31**	**288**	P	**P**	**19 24 48.1**	**-0.2**
	1.9nm,0.8s,mb4.2,baz=45,slow=8.4,SNR=7.8						
PDAR				LR	LR	19 44 18.4	
	comp=Z,88nm,18.2s,MS3.8,baz=203,slow=34						
ANMO	**Albuquerque**	**55.19**	**280**	LR	LR	19 47 43.3	
	comp=Z,84nm,21.8s,MS3.8,slow=35						
YBH	**Yreka Blue Hor**	**56.90**	**297**	LR	LR	19 49 52.9	
	comp=Z,124nm,18.7s,MS4.0,baz=4.2,slow=36						
NVAR	**Mina Array Bea**	**57.72**	**292**	P	**P**	**19 25 42.5**	**-0.4**
	0.2nm,0.5s,mb3.5,baz=54,slow=6.1,SNR=4.2						
NVAR				LR	LR	19 50 09.7	
	comp=Z,80nm,20.5s,MS3.8,baz=15,slow=36						
MKAR	**Makanchi Array**	**57.74**	**50**	P	**P**	**19 25 43.9**	**+1.1**
	0.5nm,0.7s,mb3.6,baz=344,slow=6.6,SNR=6.4						
MKAR	**Makanchi Array**	**57.74**	**50**	P	**P**	**19 25 43.9**	**+1.1**
TXAR	**Lajitas Array**	**58.53**	**274**	P	**P**	**19 25 47.0**	**-1.6**
	0.2nm,0.2s,mb3.7,baz=80,slow=5.5,SNR=3.1						
TXAR				LR	LR	19 50 32.1	
	comp=Z,89nm,18.3s,MS3.9,slow=36						
SDV	**Santo Domingo**	**61.81**	**231**	P	**P**	**19 26 12.3**	**+1.0**
	1.1nm,0.4s,mb4.4,baz=270,slow=13,SNR=3.5						
SONM	**Songino Array**	**64.39**	**33**	P	**P**	**19 26 27.7**	**0.0**
	0.3nm,0.6s,mb3.5,baz=315,slow=4.1,SNR=3.2						

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*NEIC **07** 19:17:44.8,35.79S×71.39W,h108^{km},mb3.9/1,After GUC.*

NEIC Felt [II] at Talca.

GUC 07 19:17:44.8±0.6**,35.79S**×**71.39W,h108^{km}**±4^{km}**,ML3.6,5C-1D,Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNCH	**Linares**	**0.18**	**251**⇑	*i*P	P	19 17 59.9	-0.1
LNCH				*i* S	S	19 18 11.3	0.0
LNCH				AMP		19 18 12.4	
	comp=E,2µm,0.3s						
TALC	**Talca**	**0.44**	**333**⇑	*i*P	P	19 18 01.0	-0.1
TALC				*i* S	S	19 18 13.3	-0.1
TALC				AMP		19 18 14.5	
	comp=N,5µm,0.1s						
CCHI	**Chillan**	**0.98**	**214**⇑	*i*P	P	19 18 05.6	-0.3
CCHI				*i* S	S	19 18 21.5	-0.3
LNV	**Longovilo**	**1.83**	**359**⇑	*i*P	P	19 18 16.2	+0.2
LNV				*i* S	S	19 18 39.3	+0.1
CHCH	**Chadas Angostu**	**1.95**	**18**	*e*P	P	19 18 17.6	+0.2
CHCH				*i* S	S	19 18 42.0	+0.1
TACH	**Talagante**	**2.16**	**10**⇓	*i*P	P	19 18 19.9	-0.4
TACH				*i* S	S	19 18 46.0	-1.0
LMEL	**Las Melosas**	**2.17**	**27**⇑	*i*P	P	19 18 20.9	+0.4
LMEL				AMP		19 18 52.5	
	comp=N,293nm,0.2s						
PCH	**Pirque**	**2.28**	**19**	*i* P	P	19 18 21.9	0.0
PCH				*i* S	S	19 18 50.4	+0.6
ANTU	**Antumapu**	**2.30**	**16**	*i* S	S	19 18 50.1	-0.2
ANTU				AMP		19 18 51.9	
	comp=N,272nm,0.3s						
RCDM	**Rinconada Maip**	**2.34**	**12**	*e*P	P	19 18 22.1	-0.7
RCDM				*i* S	S	19 18 49.9	-1.4
RCDM				AMP		19 18 51.7	
	comp=E,568nm,0.2s						
CLCH	**Cerro Calan**	**2.49**	**17**	*i* P	P	19 18 24.5	-0.2
CLCH				*i* S	S	19 18 54.9	+0.1
CLCH				AMP		19 18 56.4	
	comp=N,238nm,0.6s						
FCH	**Farellones**	**2.62**	**21**	*e*P	P	19 18 26.7	+0.2
FCH				*i* S	S	19 18 58.8	+0.9
FCH				AMP		19 19 00.1	
	comp=N,217nm,0.4s						
PEL	**Peldehue**	**2.70**	**13**	*i* S	S	19 18 59.6	-0.3
PLCA	**Paso Flores**	**4.98**	**173**	Pn	P	19 18 57.7	-0.9
TRQA	**Tornquist**	**7.87**	**109**	*e*P	P	19 19 35.0	-3.0
	comp=N,2.6nm,0.8s						

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*NEIC **07** 19:19:50.8±1.7,11.44S×166.19E,h74^{km}±15^{km},mb4.2/2, Error ellipse: s-maj=16.3km s-min=15.6km az=65.0*

*IDC **07** 19:19:50.9±3.5,11.42S×166.14E,h73^{km}±31^{km},mb3.9/7, mb1 4.1/9,mb1mx3.9/19,mbtmp4.2/9,MS3.5/5,Ms1 3.5/5, ms1mx3.2/32,Error ellipse: s-maj=24.3km s-min=23.5km az=126.0*

ISC 07 19:19:49.6±2.5**,11.5S**±0.1×**166.1E**±0.1**,h75^{km}**±21^{km}**,n15,** σ**0^{s}68**/13**,mb4.0**/7**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.38**	**288**	P	**P**	**19 21 23.1**	**+0.3**
	16nm,0.3s,baz=164,slow=7.0,SNR=6.2						
HNR				S	**S**	**19 22 34.6**	**-0.3**
	14nm,0.3s,baz=110,slow=21,SNR=4.8						
DZM	**Mont Dzumac**	**10.52**	**178**	P	**P**	**19 22 19.3**	**-0.3**
	0.5nm,0.3s,baz=115,slow=24,SNR=8.7						
DZM				LR	LR	19 26 00.3	
	comp=Z,131nm,18.9s,baz=54,slow=35						
PMG	**Port Moresby**	**18.73**	**275**	LR	LR	19 30 28.7	
	comp=Z,154nm,20.5s,baz=182,slow=34						
CTA	**Charters Tower**	**20.89**	**243**	P	**P**	**19 24 29.4**	**+1.6**
	8.3nm,0.9s,baz=92,slow=11,SNR=3.6						
CTA				LR	LR	19 31 14.6	
	comp=Z,109nm,19.9s,baz=50,slow=33						
CTA	**Charters Tower**	**20.89**	**243**	P	**P**	**19 24 29.4**	**+1.6**
CTA				LR	LR	19 31 14.6	
CTAO	**Charters Tower**	**20.89**	**243**	*e*P	**P**	**19 24 30.0**	**+2.2**
	7.3nm,0.8s						
AFI	**Afiamalu**	**21.73**	**99**	LR	LR	19 30 24.2	
	comp=Z,164nm,21.2s,baz=246,slow=29						
STKA	**Stephens Creek**	**30.35**	**224**	P	**P**	**19 25 56.9**	**+0.3**
	2.5nm,0.8s,mb3.9,baz=294,slow=19,SNR=4.5						
WRAB	**Tennant Creek**	**31.63**	**251**	P	**P**	**19 26 06.6**	**-1.3**
	5.3nm,1.0s,mb4.2						
WRA	**Warramunga Arr**	**31.64**	**251**	P	**P**	**19 26 08.0**	**0.0**
	2.3nm,0.8s,mb3.9,baz=82,slow=9.2,SNR=12						
ASAR	**Alice Springs**	**32.89**	**244**	P	**P**	**19 26 18.4**	**-0.4**
	2.6nm,0.7s,mb4.2,baz=69,slow=9.7,SNR=26						
NWAO	**Narrogin (SRO)**	**49.49**	**236**	LR	LR	19 49 10.1	
	comp=Z,84nm,18.4s,baz=226,slow=36						
ILAR	**Eielson Array**	**83.83**	**18**	P	**P**	**19 32 11.8**	**0.0**
	0.8nm,0.7s,mb3.7,baz=263,slow=5.4,SNR=6.2						
NVAR	**Mina Array Bea**	**86.06**	**50**	P	**P**	**19 32 23.6**	**+0.1**
	1.1nm,0.7s,mb3.9,baz=225,slow=5.5,SNR=7.0						
MKAR	**Makanchi Array**	**94.08**	**317**	P	**P**	**19 33 00.8**	**0.0**
	1.1nm,0.6s,mb4.4,baz=90,slow=6.5,SNR=9.9						

IDC 07 19:23:43.9±26.0**,21.35S**×**172.98W,mb5.0**/2**,mb1 5.2**/2**,mb1mx4.0**/17**,mbtmp5.0**/2**,2D,Error ellipse: s-maj=474.9km s-min=148.9km az=75.0,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.08**	**264**	P	P	19 31 05.5	-0.7
	13nm,0.4s,baz=93,slow=11,SNR=48						
STKA	**Stephens Creek**	**41.69**	**246**	P	P	19 31 33.0	-3.0
	1.7nm,0.6s,baz=95,slow=12,SNR=5.9						
ASAR	**Alice Springs**	**48.90**	**257**	P	P	19 32 31.6	-2.1
	9.2nm,0.3s,baz=96,slow=7.4,SNR=0.3						
ASPA	**Alice Springs**	**48.90**	**257**⇓	*i*P	P	19 32 31.6	-2.1
WB2	**Warramunga Arr**	**49.12**	**262**⇓	*i*P	P	19 32 33.7	-1.7
WRA	**Warramunga Arr**	**49.13**	**262**	P	P	19 32 33.9	-1.6
	3.1nm,0.3s,baz=94,slow=8.3,SNR=141						

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*IDC **07** 19:30:22.0±3.1,16.09S×168.00E,h171^{km}±20^{km},mb3.8/7, mb1 4.0/8,mb1mx3.8/18,mbtmp4.3/8,Error ellipse: s-maj=31.5km s-min=22.8km az=62.0*

*NEIC **07** 19:30:25.9±2.3,16.18S×167.90E,h204^{km}±16^{km},mb4.2/4, Error ellipse: s-maj=26.1km s-min=12.9km az=213.0*

ISC 07 19:30:26.7±2.8**,16.3S**±0.2×**167.8E**±0.2**,h218^{km}**±21^{km}**, n22,** σ**0^{s}90**/25**,mb4.0**/9**,5C,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.87**	**192**	*e*P	**P**	**19 31 53.0**	**-0.2**
DZM				*e*S	**S**	**19 33 00.3**	**-0.3**
DZM	**Mont Dzumac**	**5.87**	**192**	P	**P**	**19 31 52.1**	**-1.1**
	12nm,0.3s,baz=46,slow=17,SNR=69						
DZM				S	**S**	**19 33 00.3**	**-0.3**
	baz=288,slow=20,SNR=2.6						
DZM	**Mont Dzumac**	**5.87**	**192**	*e*P	**P**	**19 31 53.0**	**-0.2**
DZM				*e*S	**S**	**19 33 00.3**	**-0.3**
NOUC	**Port Laguerre**	**5.93**	**193**	*e*P	**P**	**19 31 54.7**	**+0.7**
CTA	**Charters Tower**	**20.76**	**256**	P	**P**	**19 34 54.1**	**+2.3**
	7.3nm,0.8s,baz=79,slow=11,SNR=6.0						
CTAO	**Charters Tower**	**20.76**	**256**	P	**P**	**19 34 53.8**	**+2.0**
	7.4nm,0.7s						
STKA	**Stephens Creek**	**28.36**	**232**	*e*P	**P**	**19 36 03.4**	**+0.6**
STKA	**Stephens Creek**	**28.36**	**232**	P	**P**	**19 36 03.3**	**+0.5**
	2.5nm,0.5s,mb4.1,baz=78,slow=10,SNR=7.0						

STKA				PcP	PcP	19 39 09.4	-0.3
	1.8nm,0.9s,baz=48,slow=5.3,SNR=2.9						
WRAB	**Tennant Creek**	**31.92**	**258**	eP	**P**	**19 36 33.0**	**-1.0**
	3.3nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**31.93**	**258**	P	**P**	**19 36 33.1**	**-1.0**
	0.8nm,0.3s,mb3.7,baz=80,slow=6.0,SNR=16						
WRA				PcP	PcP	19 39 18.2	-0.9
	0.4nm,0.6s,baz=89,slow=3.4,SNR=5.3						
WRA				ScP		19 42 47.2	
	1.4nm,1.1s,baz=84,slow=3.7,SNR=6.6						
ASAR	**Alice Springs**	**32.58**	**252**	P	**P**	**19 36 39.7**	**-0.1**
	22nm,0.6s,mb4.9,baz=77,slow=9.0,SNR=34						
ASAR				PcP	PcP	19 39 19.6	-1.2
	0.6nm,0.6s,baz=77,slow=2.1,SNR=5.6						
ASAR				ScP		19 42 48.6	
	2.3nm,0.8s,baz=101,slow=3.5,SNR=14						
ASPA	**Alice Springs**	**32.58**	**252**	eP	**P**	**19 36 39.7**	**-0.1**
VNDA	**Vanda**	**61.31**	**181**	P	**P**	**19 40 19.9**	**-0.9**
	0.8nm,0.6s,mb3.5,baz=353,slow=7.1,SNR=7.2						
QSPA	**South Pole Qui**	**73.73**	**180**	⇑iP	**P**	**19 41 38.7**	**+0.7**
	7.8nm,0.8s,mb4.4						
SONM	**Songino Array**	**84.03**	**324**	P	**P**	**19 42 32.9**	**-1.0**
	0.9nm,0.7s,mb3.6,baz=146,slow=5.2,SNR=4.3						
SNAA	**Sanae**	**92.01**	**183**	⇑i	**P**	**19 43 10.5**	**-0.9**
SNAA	**Sanae**	**92.01**	**183**	eP	**P**	**19 43 11.2**	**-0.1**
	1.6nm,0.7s,mb4.1						
VNA3	**Neumayer Olymp**	**92.66**	**181**	⇑i	**P**	**19 43 15.1**	**+0.7**
VNA3	**Neumayer Olymp**	**92.66**	**181**	⇑i	**P**	**19 43 18.2**	**+3.8**
VNA2	**Neumayer--Watz**	**92.93**	**182**	⇑i	**P**	**19 43 16.6**	**+1.0**
VNA2	**Neumayer--Watz**	**92.93**	**182**		**P**	**19 43 20.2**	**+4.6**
MKAR	**Makanchi Array**	**98.65**	**316**	P	**P**	**19 43 42.9**	**+0.8**
	0.3nm,0.7s,mb3.7,baz=106,slow=6.8,SNR=3.9						

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*IDC **07** 19:38:36.4±1.2, 24.82N×127.46E, mb3.3/3, mb1 3.4/4, mb1mx3.3/22, mbtmp3.3/4, ML2.6/1, Error ellipse: s-maj=45.1km s-min=20.3km az=89.0*

*JMA **07** 19:38:39.9±0.3, 24.75N×127.42E, h62^{km}*

ISC 07 19:38:40.1±1.6**, 24.79N**±0.09×**127.38E**±0.09**, h41**^{km}±19^{km}**, n15,** σ0$\overset{s}{.}$**98**/18**, mb3.3**/3**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**1.39**	**14**	eS	**S**	**19 39 21.8**	**+1.0**
JKE	**Kume jima 2**	**1.62**	**341**	P	**P**	**19 39 07.5**	**+0.7**
JOGS	**Gusukube**	**1.79**	**270**	eS	**S**	**19 39 31.4**	**+0.5**
JAGN	**Aguni-jima**	**1.80**	**356**	P	**P**	**19 39 10.0**	**+0.7**
JMJ	**Miyako jima 2**	**1.90**	**271**	P	**P**	**19 39 11.3**	**+0.7**
JMJ				eS	**S**	**19 39 34.2**	**+0.8**
JOW	**Kunigami**	**2.19**	**21**	Pn	**P**	**19 39 13.7**	**-1.2**
	3.1nm,0.3s,baz=238,slow=9.6,SNR=8.2						
JOW				Sn	**S**	**19 39 40.5**	**-0.4**
	7.4nm,0.3s,baz=127,slow=26,SNR=9.2						
JOW	**Kunigami**	**2.19**	**21**	P	**P**	**19 39 14.8**	**-0.1**
JOW				eS	**S**	**19 39 40.8**	**-0.2**
JIH	**Iheya**	**2.30**	**13**	eS	**S**	**19 39 43.8**	**+0.1**
JIJ	**Ishigaki jima**	**2.98**	**263**	eS	**S**	**19 39 57.8**	**-3.1**
JKRS	**Kuro-shima**	**3.12**	**261**	eS	**S**	**19 40 02.7**	**-1.8**
JTK	**Tokunoshima**	**3.31**	**25**	eS	**S**	**19 40 07.0**	**-2.2**
IRIF	**Iriomote-Funau**	**3.35**	**263**	P	**P**	**19 39 31.5**	**+0.1**
MKAR	**Makanchi Array**	**41.94**	**313**	P	**P**	**19 46 29.0**	**+0.6**
	0.2nm,0.5s,mb3.0,baz=95,slow=8.5,SNR=7.5						
WRA	**Warramunga Arr**	**44.97**	**171**	P	**P**	**19 46 53.6**	**+0.2**
	0.5nm,0.6s,mb3.5,baz=352,slow=8.7,SNR=8.1						
ASAR	**Alice Springs**	**48.58**	**172**	P	**P**	**19 47 21.8**	**+0.1**
	0.2nm,0.7s,mb3.2,baz=352,slow=6.4,SNR=5.7						

IDC 07 19:43:58.7±1.8**, 0.97N**×**124.29E, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/18**, mbtmp3.4**/3**, Error ellipse: s-maj=175.2km s-min=26.4km az=63.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.00**	**155**	P	P	19 49 04.7	-1.8
	0.9nm,0.4s,baz=333,slow=11,SNR=24						
ASAR	**Alice Springs**	**26.21**	**160**	P	P	19 49 36.0	-1.1
	0.4nm,0.8s,baz=340,slow=7.0,SNR=7.0						
MKAR	**Makanchi Array**	**58.48**	**327**	P	P	19 53 56.7	-2.3
	0.1nm,0.4s,baz=121,slow=8.2,SNR=4.1						

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*IDC **07** 19:48:32.3±2.1, 23.92N×121.99E, mb3.6/4, mb1 3.7/4, mb1mx3.5/21, mbtmp3.6/4, MS3.3/5, Ms1 3.3/5, ms1mx3.0/23, Error ellipse: s-maj=156.4km s-min=26.3km az=65.0*

*BJI **07** 19:48:33.2, 23.90N×121.80E, h5^{km}, mB4.5, mb4.0, ML4.1, Ms4.1, Msz3.8*

*NEIC **07** 19:48:33.2±0.9, 23.88N×121.84E, h5^{km}, mb3.8/1, Error ellipse: s-maj=40.3km s-min=9.6km az=66.0*

*TAP **07** 19:48:34.4, 23.98N×121.74E, h3^{km}, ML4.2*

TAP Felt II J at Hualien.

ISC 07 19:48:34.5±0.5**, 23.94N**±0.02×**121.87E**±0.03**, h3**^{km}**, n64,** σ1$\overset{s}{.}$**23**/103**, mb3.5**/5**, MS3.2**/4**, 7C-11D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.24**	**278**	⇑iP	**Pg**	**19 48 38.5**	**-0.9**
TWD	**Chiawan**	**0.28**	**299**	⇑iP	**Pg**	**19 48 39.0**	**-1.2**
TWD				S	**Sg**	**19 48 42.5**	**-1.4**
ESF	**Shoufeng Towns**	**0.34**	**258**	eP	**Pg**	**19 48 40.5**	**-0.8**
ESF				S	**Sg**	**19 48 47.9**	**+2.2**
NACB	**Ninganchiao**	**0.34**	**313**	⇓iP	**Pg**	**19 48 40.0**	**-1.3**
NACB				eS	**Sg**	**19 48 44.3**	**-1.5**
TEGC	**Jichi Village**	**0.38**	**232**	eP	**Pg**	**19 48 43.2**	**+1.2**
TEGC				S	**Sg**	**19 48 50.6**	**+3.5**
ESL	**Shilin**	**0.42**	**252**	⇓iP	**Pg**	**19 48 41.9**	**-0.9**
ESL				S	**Sg**	**19 48 48.1**	**-0.3**
ENA	**Nanau**	**0.50**	**347**	⇑iP	**Pg**	**19 48 44.5**	**+0.1**
ENA				S	**Sg**	**19 48 52.3**	**+1.2**
EHY	**Hungye**	**0.66**	**229**	eP	**Pg**	**19 48 47.4**	**-0.3**
TWC	**Suao**	**0.66**	**359**	eP	**Pg**	**19 48 48.3**	**+0.5**
TWC				S	**Sg**	**19 48 59.7**	**+3.1**
NNS	**Nan Shan**	**0.67**	**318**	⇑P	**Pg**	**19 48 46.8**	**-1.1**
NNS				S	**Sg**	**19 48 55.9**	**-1.0**
TWT	**Tachien**	**0.70**	**296**	⇓P	**Pg**	**19 48 47.5**	**-1.0**
TWT				S	**Sg**	**19 48 56.3**	**-1.6**
ENTT	**Nioudou**	**0.75**	**339**	⇑iP	**Pg**	**19 48 48.9**	**-0.5**
ENTT				S	**Sg**	**19 49 00.2**	**+0.9**
TWF1	**Yuli**	**0.79**	**222**	eP	**Pg**	**19 48 49.6**	**-0.6**
ILA	**Ilan**	**0.83**	**353**	P	**Pg**	**19 48 51.2**	**+0.2**
ILA				S	**Sg**	**19 49 04.0**	**+1.9**
YHNB	**Yeheng**	**0.85**	**328**	⇓eP	**Pg**	**19 48 50.6**	**-0.9**
YHNB				eS	**Sg**	**19 49 01.6**	**-1.2**
NSK	**Sanguang**	**0.86**	**328**	⇑iP	**Pg**	**19 48 50.9**	**-0.9**
NSK				S	**Sg**	**19 49 02.5**	**-0.8**
SMLT	**Sun Moon Lake**	**0.89**	**266**	⇓iP	**Pb**	**19 48 50.9**	**-1.3**
SMLT				S	**Sg**	**19 49 01.7**	**-2.3**
TYC	**Yuchr**	**0.92**	**268**	⇓iP	**Pb**	**19 48 51.4**	**-1.5**
TYC				S	**Sg**	**19 49 03.8**	**-1.5**
NSTT	**Nanjuang**	**1.04**	**311**	⇓iP	**Pb**	**19 48 54.5**	**-0.4**
NSTT				S	**Sb**	**19 49 08.0**	**-0.9**
TWA	**Mucha**	**1.06**	**346**	eP	**Pb**	**19 48 55.5**	**+0.2**
TWA				S	**Sb**	**19 49 10.3**	**+0.9**
TWB1	**Santiao Chiao**	**1.07**	**6**	eP	**Pb**	**19 48 56.1**	**+0.8**
TWQ1	**Liyutan**	**1.08**	**292**	P	**Pb**	**19 48 55.2**	**-0.3**
TWQ1				S	**Sb**	**19 49 09.6**	**-0.2**
ELDTW	**Lidau**	**1.08**	**226**	eP	**Pb**	**19 48 54.1**	**-1.4**
WNT	**Mingjian**	**1.08**	**267**	⇓iP	**Pb**	**19 48 55.3**	**-0.2**
WNT				S	**Sb**	**19 49 11.1**	**+1.1**
TATO	**Taipei**	**1.08**	**342**	eP	**Pb**	**19 48 54.8**	**-0.8**
TATO				eS	**Sb**	**19 49 11.2**	**+1.2**
TCU	**Taichung**	**1.11**	**281**	⇑iP	**Pb**	**19 48 55.6**	**-0.3**
TCU				S	**Sb**	**19 49 11.2**	**+0.5**
NSY	**Sanyi**	**1.11**	**295**	eP	**Pb**	**19 48 56.0**	**-0.1**
NSY				S	**Sb**	**19 49 11.5**	**+0.7**
NWF	**Wu-fen Shan**	**1.13**	**356**	⇓iP	**Pb**	**19 48 57.1**	**+0.8**
TAP1	**Taipei**	**1.14**	**344**	eP	**Pb**	**19 48 56.3**	**-0.2**
TAP1				S	**Sb**	**19 49 13.0**	**+1.5**
TAP	**Taipei**	**1.14**	**343**	eP	**Pb**	**19 48 56.9**	**+0.4**
TAP				S	**Sb**	**19 49 12.3**	**+0.7**
CHN5	**Tsauling**	**1.14**	**253**	⇓iP	**Pb**	**19 48 56.3**	**-0.3**
CHN5				S	**Sb**	**19 49 13.2**	**+1.5**
HSN	**Hsinchu**	**1.18**	**317**	eP	**Pb**	**19 48 57.8**	**+0.5**
HSN				S	**Sb**	**19 49 13.6**	**+0.7**
NCU	**National Centr**	**1.20**	**329**	eP	**Pb**	**19 48 56.9**	**-0.6**
NCU				S	**Sb**	**19 49 15.2**	**+1.9**
WGK	**Gukeng**	**1.22**	**258**	eP	**Pb**	**19 48 57.5**	**-0.5**
TWS1	**Kuangyinshan**	**1.22**	**341**	eP	**Pb**	**19 48 58.8**	**+0.8**
TWS1				S	**Sb**	**19 49 16.6**	**+2.6**
CHN4	**Tsaushan**	**1.31**	**243**	⇓P	**Pb**	**19 48 58.8**	**-0.6**
CHN4				S	**Sb**	**19 49 19.3**	**+2.8**
CHN2	**Minshiung**	**1.34**	**253**	eP	**Pb**	**19 48 59.7**	**-0.3**
CHN2				S	**Sb**	**19 49 18.7**	**+1.3**
WTP	**Ta-pu**	**1.34**	**239**	eP	**Pb**	**19 48 59.2**	**-0.7**
WTP				S	**Sb**	**19 49 18.5**	**+1.0**
TWY	**Chenhua**	**1.35**	**350**	eP	**Pb**	**19 49 00.0**	**-0.1**
TWY				S	**Sb**	**19 49 21.1**	**+3.4**
CHY	**Chiayi**	**1.39**	**252**	eP	**Pb**	**19 48 59.9**	**-1.0**
CHY				S	**Sb**	**19 49 18.8**	**-0.2**
TWK	**Hsinying**	**1.43**	**242**	eP	**Pn**	**19 49 00.7**	**-0.7**
TWK				S	**Sb**	**19 49 21.9**	**+1.8**
CHN1	**Nanshi**	**1.44**	**239**	eP	**Pn**	**19 49 00.9**	**-0.7**
CHN1				S	**Sb**	**19 49 22.3**	**+2.0**
WTCT	**Ta-ch'eng**	**1.45**	**267**	eP	**Pn**	**19 49 01.1**	**-0.6**
WTCT				S	**Sb**	**19 49 20.9**	**+0.2**
SGST	**Jiashian**	**1.46**	**234**	eP	**Pn**	**19 49 01.7**	**-0.1**
SGST				S	**Sb**	**19 49 24.4**	**+3.6**
WSF	**Szhu**	**1.54**	**259**	eP	**Pn**	**19 49 02.9**	**0.0**
WSF				S	**Sb**	**19 49 25.3**	**+2.2**
ECL	**Taimali**	**1.58**	**212**	eP	**Pn**	**19 49 00.8**	**-2.8**
CHN3	**Shinhua**	**1.62**	**238**	eP	**Pn**	**19 49 04.6**	**+0.4**
CHN3				S	**Sb**	**19 49 28.5**	**+2.8**
CHN8	**Yiju**	**1.63**	**249**	eP	**Pn**	**19 49 05.6**	**+1.3**
SSD	**Sandimen**	**1.64**	**224**	eP	**Pn**	**19 49 04.3**	**-0.2**
SSD				S	**Sb**	**19 49 27.6**	**+1.3**
PCYT	**Pengchaiyu**	**1.69**	**6**	eP	**Pn**	**19 49 07.9**	**+2.7**
TWM1	**Shoushan**	**1.73**	**230**	eP	**Pn**	**19 49 06.3**	**+0.5**
SGLT	**Jiouru**	**1.75**	**226**	eP	**Pn**	**19 49 07.1**	**+1.1**
SCZT	**Fangliau**	**1.94**	**217**	eP	**Pn**	**19 49 08.0**	**-0.7**
SCZT				S	**Sn**	**19 49 36.3**	**+2.4**
QZH	**Quanzhou**	**3.15**	**289**	ePG	**Pb**	**19 49 32.3**	**+1.4**
QZH				SG	**Sb**	**19 50 09.0**	**-0.8**
QZH				Smax			
	comp=N,1µm,1.3s						
QZH				Smax			
	comp=E,620nm,1.3s						
WHN	**Wuhan**	**9.38**	**316**	eP	**P**	**19 50 51.2**	**-2.4**
WHN				LR	LR		
	comp=Z,1µm,8.0s						
CBIJ	**Chichi jima**	**18.61**	**76**	LR	LR	19 59 22.9	
	comp=Z,141nm,18.1s,baz=97,slow=35						
CMAR	**Chiang Mai Arr**	**22.05**	**260**	LR	LR	20 02 44.4	
	comp=Z,32nm,20.7s,MS2.7,baz=110,slow=38						
ULN	**Ulaanbaatar**	**26.62**	**337**	eP	**P**	**19 54 13.6**	**-2.5**
	comp=Z,1.8nm,0.8s,mb3.6						
SONM	**Songino Array**	**26.83**	**337**	P	**P**	**19 54 15.3**	**-2.7**
	comp=Z,0.9nm,0.7s,mb3.4,baz=148,slow=12,SNR=4.5						
SONM				LR	LR	20 06 14.1	
	comp=Z,96nm,21.6s,MS3.3,baz=59,slow=40						
MKAR	**Makanchi Array**	**38.94**	**316**	P	**P**	**19 56 01.3**	**-2.2**
	comp=Z,0.7nm,0.8s,mb3.5,baz=109,slow=9.6,SNR=8.5						
MKAR	**Makanchi Array**	**38.94**	**316**	P	**P**	**19 56 01.3**	**-2.2**
ZAL	**Zalesovo**	**40.79**	**327**	P	**P**	**19 56 15.0**	**-3.6**
	comp=Z,0.8nm,0.4s,mb3.7,baz=335,slow=9.1,SNR=4.7						
ZAL				LR	LR	20 15 20.9	
	comp=Z,39nm,18.7s,MS3.3,baz=87,slow=39						
WRA	**Warramunga Arr**	**45.28**	**163**	P	**P**	**19 56 51.3**	**-4.2**
	comp=Z,0.6nm,0.8s,mb3.5,baz=343,slow=8.6,SNR=4.5						
FINES	**FINESS Array B**	**71.97**	**330**	LR	LR	20 34 41.8	
	comp=Z,23nm,18.6s,MS3.5,baz=106,slow=38						

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*IDC **07** 20:02:18.5±2.7, 62.56N×26.28W, mb3.6/7, mb1 3.7/8, mb1mx3.6/26, mbtmp3.6/8, ML3.4/1, MS3.1/8, Ms1 3.1/8, ms1mx2.9/27, Error ellipse: s-maj=62.1km s-min=26.7km az=33.0*

*NEIC **07** 20:02:20.1±2.0, 62.48N×26.24W, h10^{km}, mb4.3/2, Error ellipse: s-maj=46.0km s-min=18.6km az=221.0*

*CSEM **07** 20:02:20.0±0.0, 62.48N×26.24W, h10^{km}, mb4.3/2, Error ellipse: s-maj=1.6km s-min=0.7km az=33.0, After NEIC*

ISC 07 20:02:18.9±1.9**, 62.6N**±0.2×**26.3W**±0.5**, h10**^{km}**, n18,** σ1$\overset{s}{.}$**07**/12**, mb3.6**/9**, MS3.1**/4**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**10.87**	**32**	LR	LR	20 08 30.0	
	comp=Z,32nm,21.4s,baz=255,slow=34						
EKA	**Eskdalemuir Ar**	**13.90**	**111**	Pn	**P**	**20 05 34.3**	**-3.5**
	0.1nm,0.3s,baz=312,slow=9.5,SNR=2.7						
NOA	**NORSAR Array B**	**17.60**	**78**	LR	LR	20 12 48.6	
	comp=Z,34nm,18.3s,baz=295,slow=36						
FRB	**Frobisher Bay**	**18.87**	**292**	LR	LR	20 12 30.9	
	comp=Z,81nm,21.5s,baz=7.8,slow=32						
HFS	**Hagfors**	**19.08**	**79**	LR	LR	20 14 02.1	
	comp=Z,58nm,19.4s,baz=177,slow=37						
ARCES	**ARCESS Array B**	**21.45**	**49**	P	**P**	**20 07 09.0**	**0.0**
	1.7nm,0.9s,mb3.4,baz=275,slow=10.0,SNR=2.6						
MOX	**Moxa**	**23.63**	**103**	eP	**P**	**20 07 30.0**	**-0.4**
CLL	**Collm**	**23.79**	**100**	P	**P**	**20 07 36.0**	**+4.0**
FINES	**FINESS Array B**	**24.02**	**69**	P	**P**	**20 07 33.5**	**-0.7**
	1.4nm,0.9s,mb3.4,baz=315,slow=22,SNR=6.0						
BRG	**Berggiesshubel**	**24.52**	**100**	eP	**P**	**20 07 40.5**	**+1.4**
	5.3nm,1.2s,mb4.0						
BRG				e		20 07 57.1	
DAVOX	**Davos**	**25.74**	**111**	LR	LR	20 18 16.3	
	comp=Z,18nm,18.2s,MS2.6,baz=84,slow=37						
GERES	**GERESS Array B**	**25.86**	**104**	P	**P**	**20 07 52.5**	**+0.6**
	0.7nm,0.8s,mb3.2,baz=321,slow=8.5,SNR=4.4						
GERES				LR	LR	20 17 08.3	
	comp=Z,46nm,21.0s,MS3.0,baz=216,slow=34						
AKASG	**Malin Array Be**	**31.68**	**86**	P	**P**	**20 08 42.5**	**-1.8**
	1.3nm,0.8s,mb3.8,baz=312,slow=8.7,SNR=5.3						
BRTR	**Keskin Array B**	**41.98**	**94**	P	**P**	**20 10 11.7**	**+0.4**
	0.8nm,0.7s,mb3.5,baz=332,slow=6.2,SNR=5.4						
ILAR	**Eielson Array**	**45.56**	**329**	P	**P**	**20 10 39.1**	**-0.8**
	0.7nm,0.9s,mb3.6,baz=16,slow=6.6,SNR=5.1						
ILAR				LR	LR	20 32 02.5	
	comp=Z,28nm,18.9s,MS3.2,baz=1.1,slow=39						
YBH	**Yreka Blue Hor**	**56.70**	**297**	LR	LR	20 36 20.2	
	comp=Z,52nm,20.1s,MS3.6,baz=223,slow=36						
MKAR	**Makanchi Array**	**57.09**	**51**	P	**P**	**20 12 07.4**	**+0.2**
	0.7nm,0.8s,mb3.8,baz=348,slow=5.7,SNR=7.2						
ULN	**Ulaanbaatar**	**63.77**	**33**	P	**P**	**20 12 54.0**	**+1.5**
	3.7nm,1.2s,mb4.3						

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*KRSC **07** 20:07:43.4±1.6, 53.12N×172.76E, h39^{km}±27^{km}, ML4.5*

*MOS **07** 20:07:44.6±0.8, 53.29N×172.74E, h104^{km}, mb4.6/11, Error ellipse: s-maj=16.0km s-min=9.3km az=84.3*

*NEIC **07** 20:07:46.1±0.2, 53.21N×172.88E, mb4.5/19, Error ellipse: s-maj=7.2km s-min=5.0km az=168.0*

*IDC **07** 20:07:46.3±0.7, 53.22N×172.85E, h106^{km}±4^{km}, mb4.0/24, mb1 4.2/24, mb1mx4.1/30, mbtmp4.3/24, Error ellipse: s-maj=14.8km s-min=10.5km az=176.0*

ISC 07 20:07:44.8±0.3**, 53.29N**±0.04×**172.67E**±0.04**, h103**^{km}**, h103**^{km}±1.5^{km}**:pP-P, n96,** σ1$\overset{s}{.}$**26**/117**, mb4.3**/44**, 4D, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**0.51**	**144**	P	**P**	**20 07 59.2**	**-1.9**
BKI	**Bering**	**4.37**	**299**	eP	**P**	**20 08 52.5**	**+2.2**
BKI				eS	**S**	**20 09 40.1**	**-0.3**
BKI				Smax			
	170nm,1.0s						
KBTR	**Krutoberegovo**	**6.41**	**301**	eP	**P**	**20 09 18.6**	**+0.5**
KBTR				eS	**S**	**20 10 28.8**	**-1.6**
MKZ	**Mys Kozlova**	**6.59**	**285**	i P	**P**	**20 09 21.1**	**+0.5**
MKZ				eS	**S**	**20 10 31.4**	**-3.4**
ZLN	**Zelenaya**	**7.41**	**296**	eS	**S**	**20 10 55.9**	**+1.1**
CIRR	**Tsirk**	**7.46**	**297**	eS	**S**	**20 10 55.3**	**-0.9**
LGNR	**Loginova**	**7.49**	**297**	eS	**S**	**20 10 54.5**	**-2.2**
KLY	**Klyuchi**	**7.58**	**298**	eP	**P**	**20 09 35.1**	**+1.0**
KLY				eS	**S**	**20 10 56.1**	**-2.9**
KRSR	**Krestovskiy**	**7.59**	**298**	eP	**P**	**20 09 36.2**	**+1.9**
KRSR				eS	**S**	**20 10 58.2**	**-1.1**
TUMR	**Tumrok**	**7.60**	**290**	eP	**P**	**20 09 36.5**	**+2.1**
TUMR				eS	**S**	**20 10 58.5**	**-1.0**
SPN	**Mys Shipunski**	**7.60**	**274**	eP	**P**	**20 09 34.9**	**+0.4**
SPN				eS	**S**	**20 10 55.0**	**-4.6**
KMNR	**Kamenistaya**	**7.65**	**294**	eP	**P**	**20 09 37.1**	**+2.1**
KMNR				eS	**S**	**20 11 01.2**	**+0.6**
KPT	**Kopyto**	**7.71**	**295**	eP	**P**	**20 09 38.4**	**+2.5**
KPT				eS	**S**	**20 11 02.7**	**+0.6**
KII	**Karymskiy**	**7.89**	**281**	eP	**P**	**20 09 39.5**	**+1.1**
KII				eS	**S**	**20 11 04.7**	**-2.0**
NLC	**Nalytchevo**	**8.00**	**274**	eP	**P**	**20 09 40.3**	**+0.5**
NLC				eS	**S**	**20 11 05.4**	**-3.9**
OSSR	**Ossora**	**8.01**	**322**	eP	**P**	**20 09 41.0**	**+1.0**
OSSR				eS	**S**	**20 11 09.8**	**+0.2**
UGLR	**Uglovaya**	**8.31**	**275**	i P	**P**	**20 09 45.4**	**+1.4**
UGLR				eS	**S**	**20 11 14.4**	**-2.4**
AVH	**Avacha**	**8.36**	**275**	eP	**P**	**20 09 46.0**	**+1.4**
AVH				eS	**S**	**20 11 15.7**	**-2.2**
KOK	**Koryaka**	**8.41**	**276**	eP	**P**	**20 09 46.5**	**+1.1**
KOK				eS	**S**	**20 11 15.6**	**-3.7**
PET	**Petropavlovsk**	**8.43**	**274**	eS	**S**	**20 11 16.5**	**-3.3**
ESO	**Esso**	**8.53**	**294**	i P	**P**	**20 09 49.5**	**+2.6**
ESO				eS	**S**	**20 11 21.8**	**-0.4**
RUS	**Russkaya**	**8.61**	**270**	eP	**P**	**20 09 48.9**	**+0.8**
RUS				eS	**S**	**20 11 19.1**	**-5.1**
GNL	**Ganaly**	**8.79**	**279**	eP	**P**	**20 09 52.5**	**+2.0**
GNL				eS	**S**	**20 11 26.2**	**-2.4**
GRL	**Gorelyy**	**8.86**	**271**	eP	**P**	**20 09 52.2**	**+0.9**
GRL				eS	**S**	**20 11 25.1**	**-5.0**
APC	**Apacha**	**9.34**	**274**	i P	**P**	**20 10 00.9**	**+3.0**
APC				eS	**S**	**20 11 40.4**	**-1.4**
APC				Smax			
	30nm,0.7s						
KAMR	**Kamenskoye**	**9.81**	**342**	i P	**P**	**20 10 06.2**	**+2.2**
KAMR				eS	**S**	**20 11 52.7**	**-0.1**
KAMR				Smax			
	10.0nm,0.8s						
ALID	**Alaid**	**10.81**	**264**	eP	**P**	**20 10 19.1**	**+1.6**
BILL	**Bilibino**	**15.11**	**351**	d iP	**P**	**20 11 16.4**	**+3.0**
BILL				pmax	pmax		
	comp=Z,16nm,1.1s						
BILL	**Bilibino**	**15.11**	**351**	eP	**P**	**20 11 14.3**	**+1.0**
	comp=Z,23nm,1.4s						
YSS	**Yuzh-Sakhalins**	**20.10**	**264**	i P	**P**	**20 12 11.6**	**-0.5**
YSS				pmax	pmax		
	comp=Z,25nm,2.8s						
MCK	**McKinley**	**22.24**	**47**	eP	**P**	**20 12 32.9**	**-0.5**
MCK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
MCK	**McKinley**	**22.24**	**47**	eP	**P**	**20 12 32.9**	**-0.5**
	comp=Z,9.0nm,0.8s,mb4.2						
SML	**Sawmill**	**22.27**	**52**	eP	**P**	**20 12 33.2**	**-0.5**
COLA	**College**	**22.92**	**44**	eP	**P**	**20 12 40.3**	**+0.5**
COLA				pmax	pmax		
	comp=Z,30nm,0.8s,mb4.7						
COLA	**College**	**22.92**	**44**	eP	**P**	**20 12 40.3**	**+0.6**
	comp=Z,30nm,0.8s,mb4.7						
ILAR	**Eielson Array**	**23.31**	**45**	P	**P**	**20 12 43.1**	**-0.3**
	comp=Z,9.2nm,0.6s,mb4.3,baz=257,slow=8.8,SNR=64						
ILAR				pP		20 13 07.3	
	comp=Z,2.6nm,0.7s,baz=250,slow=8.6,SNR=3.6						
YAK	**Yakutsk**	**24.17**	**308**	eP	**P**	**20 12 52.8**	**+1.0**
YAK				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
YAK				pmax	pmax		
	comp=E,10.0nm,1.2s						
YAK	**Yakutsk**	**24.17**	**308**	eP	**P**	**20 12 53.0**	**+1.2**
	comp=E,41nm,0.6s,mb4.9						
INK	**Inuvik**	**29.05**	**38**	P	**P**	**20 13 36.0**	**-0.7**
	comp=E,3.1nm,0.3s,mb4.4,baz=266,slow=7.8,SNR=18						
YKA	**Yellowknife Ar**	**37.71**	**46**	P	**P**	**20 14 51.0**	**-0.2**
	comp=E,3.4nm,0.4s,mb4.6,baz=290,slow=8.1,SNR=21						
YKA	**Yellowknife Ar**	**37.71**	**46**	P	**P**	**20 14 51.0**	**-0.2**
ULN	**Ulaanbaatar**	**40.70**	**290**	eP	**P**	**20 15 12.2**	**-4.0**
SONM	**Songino Array**	**41.09**	**290**	P	**P**	**20 15 21.0**	**+1.7**
	comp=E,2.1nm,0.5s,mb4.2,baz=61,slow=7.2,SNR=12						
ZAK	**Zakamensk**	**41.44**	**295**	eP	**P**	**20 15 23.4**	**+1.2**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.6						
NEW	**Newport**	**43.04**	**67**	P	**P**	**20 15 35.6**	**+0.4**
	comp=Z,2.2nm,0.5s,mb4.1,baz=345,slow=12,SNR=3.2						
YBH	**Yreka Blue Hor**	**43.70**	**78**	P	**P**	**20 15 41.0**	**+0.3**
	comp=Z,1.1nm,0.5s,mb3.9,baz=318,slow=12,SNR=3.6						
FFC	**Flin Flon**	**47.18**	**52**	P	**P**	**20 16 07.3**	**-0.8**
FFC				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
FFC	**Flin Flon**	**47.18**	**52**	P	**P**	**20 16 07.3**	**-0.8**
	comp=Z,1.4nm,0.7s,mb3.8						
NVAR	**Mina Array Bea**	**48.41**	**79**	P	**P**	**20 16 17.6**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.4,baz=320,slow=7.0,SNR=3.4						
NVAR				pP	pP	20 16 39.9	-2.6
	comp=Z,0.4nm,0.5s,baz=304,slow=5.3,SNR=2.8						
ZAL	**Zalesovo**	**48.84**	**308**	P	**P**	**20 16 20.6**	**-0.4**
	comp=Z,0.8nm,0.5s,mb4.0,baz=114,slow=8.1,SNR=4.3						
NVS	**Novosibirsk**	**49.02**	**310**	eP	**P**	**20 16 21.4**	**-0.9**
NVS				e	pP	20 16 46.7	-0.3
NVS				pmax	pmax		
	comp=N,2.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.7s						
DAG	**Danmarks Havn**	**50.01**	**3**	⇓iP	**P**	**20 16 29.7**	**0.0**
DAG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
DAG	**Danmarks Havn**	**50.01**	**3**	⇓iP	**P**	**20 16 29.7**	**0.0**
	comp=Z,4.1nm,0.7s,mb4.5						
BW06	**Boulder Array**	**50.60**	**69**	eP	**P**	**20 16 33.3**	**-1.3**
	comp=Z,2.7nm,0.4s,mb4.6						
PDAR	**Pinedale Array**	**50.60**	**69**	P	**P**	**20 16 33.6**	**-1.0**
	comp=Z,0.9nm,0.5s,mb4.1,baz=326,slow=2.8,SNR=7.0						
FRB	**Frobisher Bay**	**54.00**	**29**	P	**P**	**20 16 57.6**	**-2.1**
	comp=Z,4.4nm,0.4s,mb4.8,baz=330,slow=6.9,SNR=9.2						
MKAR	**Makanchi Array**	**54.67**	**303**	P	**P**	**20 17 04.4**	**-0.3**
	comp=Z,2.0nm,0.4s,mb4.5,baz=48,slow=7.1,SNR=47						
MKAR				pP	pP	20 17 30.2	+0.4
	comp=Z,0.7nm,0.5s,baz=50,slow=7.0,SNR=3.5						
KEV	**Kevo**	**54.75**	**346**	ep	**P**	**20 17 04.7**	**-0.3**
	comp=Z,2.0nm,0.4s,mb4.5						
KEV	**Kevo**	**54.75**	**346**	eP	**P**	**20 17 04.7**	**-0.3**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
ARCES	**ARCESS Array B**	**55.16**	**347**	P	**P**	**20 17 07.5**	**-0.6**
	comp=Z,1.3nm,0.3s,mb4.4,baz=36,slow=8.2,SNR=22						
ARU	**Arti**	**58.08**	**323**	⇓iP	**P**	**20 17 29.2**	**+0.3**
ARU				i	pP	20 17 55.0	+0.7
ARU				e		20 18 16.9	
ARU				e		20 19 42.1	
ARU				eS	**S**	**20 25 25.1**	**+5.3**
ARU				eSS	SS	20 29 19.2	+5.0
ARU	**Arti**	**58.08**	**323**	eP	**P**	**20 17 28.6**	**-0.3**
	comp=Z,7.3nm,0.8s,mb4.8						
ARU				epP	pP	20 17 54.6	+0.2
MNTX	**Cornudas Mount**	**60.67**	**75**	eP	**P**	**20 17 44.9**	**-2.1**
	comp=Z,0.9nm,0.5s,mb4.1						
SCHQ	**Schefferville**	**61.57**	**35**	P	**P**	**20 17 51.5**	**-1.3**
	comp=Z,7.0nm,0.7s,mb4.8,baz=335,slow=8.7,SNR=10						
KAF	**Kangasniemi**	**61.91**	**343**	ep	**P**	**20 17 54.1**	**-0.9**
	comp=Z,5.0nm,0.5s,mb4.8,baz=17,slow=6.0						
KAF	**Kangasniemi**	**61.91**	**343**	eP	**P**	**20 17 54.1**	**-0.9**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
WMOK	**Wichita Mounta**	**62.21**	**69**	eP	**P**	**20 17 55.9**	**-1.5**
WMOK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
WMOK	**Wichita Mounta**	**62.21**	**69**	eP	**P**	**20 17 55.9**	**-1.5**
	comp=Z,1.0nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**62.58**	**343**	P	**P**	**20 17 59.0**	**-0.4**
	comp=Z,3.7nm,0.6s,mb4.5,baz=22,slow=6.3,SNR=24						
FINES	**FINESS Array B**	**62.58**	**343**	P	**P**	**20 17 59.0**	**-0.5**
TXAR	**Lajitas Array**	**63.41**	**76**	P	**P**	**20 18 04.0**	**-1.4**
	comp=Z,1.0nm,0.5s,mb4.0,baz=305,slow=6.3,SNR=8.5						
TXAR				pP	pP	20 18 28.3	-2.9
	comp=Z,0.4nm,0.5s,baz=311,slow=8.3,SNR=2.6						
TXAR				PcP	PcP	20 18 39.1	-1.9
	comp=Z,0.2nm,0.3s,baz=297,slow=2.8,SNR=3.5						
NB2	**NORSAR Subarra**	**65.06**	**350**	P	**P**	**20 18 15.1**	**-0.4**
	comp=Z,4.0nm,0.6s,mb4.4,baz=12,slow=6.5						
NOA	**NORSAR Array B**	**65.06**	**350**	P	**P**	**20 18 15.5**	**0.0**
	comp=Z,2.7nm,0.5s,mb4.3,baz=12,slow=6.4,SNR=13						
NOA				pP	pP	20 18 41.8	+0.4
	comp=Z,3.1nm,0.8s,baz=12,slow=6.5,SNR=6.3						
HFS	**Hagfors**	**65.68**	**349**	P	**P**	**20 18 18.8**	**-0.6**
	comp=Z,4.3nm,0.5s,mb4.6,baz=27,slow=3.3,SNR=43						
HFS				pP	pP	20 18 45.7	+0.2
	comp=Z,2.0nm,0.6s,baz=45,slow=4.2,SNR=2.8						
GUN	**Gumba**	**66.29**	**285**	eP	**P**	**20 18 25.1**	**+1.2**
	comp=Z,15nm,0.5s,mb5.0						
KKN	**Kakani**	**66.73**	**286**	eP	**P**	**20 18 27.6**	**+0.9**
	comp=Z,8.8nm,0.6s,mb4.7						
KKN	**Kakani**	**66.73**	**286**	eP	**P**	**20 18 27.6**	**+0.9**
KKN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
PKI	**Pulchoki**	**66.82**	**285**	eP	**P**	**20 18 27.8**	**+0.5**
	comp=Z,14nm,0.6s,mb5.0						
PKI	**Pulchoki**	**66.82**	**285**	eP	**P**	**20 18 27.8**	**+0.5**
PKI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
GKN	**Gorkha**	**66.94**	**286**	eP	**P**	**20 18 28.6**	**+0.6**
	comp=Z,3.0nm,0.3s,mb4.6						
DMN	**Daman**	**66.97**	**286**	eP	**P**	**20 18 28.8**	**+0.6**
	comp=Z,4.8nm,0.4s,mb4.7						
KOLN	**Koldanda**	**67.71**	**287**	eP	**P**	**20 18 32.3**	**-0.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,11nm,1.0s,mb4.7						
AKASG	Malin Array Be	71.91	337	P	P	20 18 58.5	+0.6
	comp=Z,3.7nm,0.4s,mb4.6,baz=25,slow=6.3,SNR=18						
AKASG				pP	pP	20 19 25.1	+0.7
	comp=Z,0.8nm,0.3s,baz=25,slow=6.2,SNR=5.1						
SOC	Sochi	75.40	327	eP	P	20 19 17.2	-0.9
SOC				e		20 19 36.3	
SOC				e		20 22 13.2	
SOC				ePPP	PPP	20 23 59.6	+3.1
SOC				e		20 29 29.2	
SOC				eSS	SS	20 33 41.8	-1.0
SOC				eSSS	SSS	20 36 53.2	-5.1
SOC				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
SOC				pmax	pmax		
	comp=N,5.0nm,0.7s						
SOC				pmax	pmax		
	comp=E,3.0nm,0.8s						
VRAC	Vranov	75.79	344	P	P	20 19 21.4	+1.2
	comp=E,3.3nm,0.8s,mb4.1,baz=211,slow=22,SNR=4.0						
KHC	Kasperske Hory	76.43	346	eP	P	20 19 24.5	+0.6
GERES	GERESS Array B	76.69	346	P	P	20 19 26.4	+1.1
	comp=E,0.7nm,0.5s,mb3.7,baz=27,slow=6.0,SNR=11						
GERES				pP	pP	20 19 53.0	+0.9
	comp=E,0.6nm,0.6s,baz=45,slow=5.7,SNR=3.3						
WRAB	Tennant Creek	80.09	216	eP	P	20 19 43.8	-0.7
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
WRAB	Tennant Creek	80.09	216	eP	P	20 19 43.8	-0.7
	comp=Z,6.5nm,0.8s,mb4.5						
WRA	Warramunga Arr	80.10	216	P	P	20 19 44.0	-0.6
	comp=Z,2.5nm,0.8s,mb4.1,baz=29,slow=6.4,SNR=16						
BRTR	Keskin Array B	80.82	329	P	P	20 19 49.3	+1.3
	comp=Z,1.3nm,0.6s,mb4.0,baz=45,slow=2.6,SNR=9.0						
BRTR				pP	pP	20 20 16.8	+1.8
	comp=Z,0.8nm,0.6s,baz=63,slow=3.5,SNR=2.9						
ASAR	Alice Springs	83.69	215	P	P	20 20 03.2	+0.2
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	83.69	215	P	P	20 20 03.3	+0.3
ASAR	Alice Springs	83.69	215	P	P	20 20 03.2	+0.3
	comp=Z,1.3nm,0.8s,mb3.8,baz=17,slow=4.7,SNR=14						
STKA	Stephens Creek	89.02	206	P	P	20 20 28.5	-0.2
	comp=Z,2.8nm,0.7s,mb4.4,baz=4.3,slow=8.4,SNR=6.4						
MAW	Mawson	144.75	219	PKP	PKPdf	20 27 08.4	+0.7
	comp=Z,1.5nm,0.6s,baz=71,slow=3.8,SNR=4.9						

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*IDC **07** 20:37:30.8±1.1, 7.37N×93.58E, mb3.8/8, mb1 3.9/9, mb1mx3.7/21, mbtmp3.7/9, ML3.1/1, Error ellipse: s-maj=43.5km s-min=19.3km az=55.0*
*NEIC **07** 20:37:35.4±0.6, 7.35N×93.61E, h30^{km}, mb4.2/8, Error ellipse: s-maj=19.9km s-min=8.6km az=58.0*
ISC 07 20:37:33.6±0.8**, 7.4N**±0.1×**93.7E**±0.2**, h30**^{km}**, n18, σ0^{s}70**/18**, mb4.1**/16**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.15	24	Pn	P	20 40 28.0	+0.1
	0.0nm,0.3s,baz=212,slow=14,SNR=3.0						
PKI	Pulchoki	21.56	340	eP	P	20 42 23.7	+0.8
	11nm,0.6s,mb4.5						
DMN	Daman	21.70	339	eP	P	20 42 25.3	+1.0
	17nm,0.8s,mb4.5						
GUN	Gumba	21.72	341	eP	P	20 42 23.3	-1.2
	15nm,0.6s,mb4.6						
KKN	Kakani	21.81	340	eP	P	20 42 25.4	0.0
	14nm,0.8s,mb4.4						
GKN	Gorkha	22.23	338	eP	P	20 42 29.3	-0.3
	8.5nm,0.5s,mb4.5						
LSA	Lhasa	22.34	354	eP	P	20 42 31.0	+0.4
	3.9nm,0.5s,mb4.1						
KOLN	Koldanda	22.42	336	eP	P	20 42 32.7	+1.3
	15nm,1.0s,mb4.3						
MKAR	Makanchi Array	40.48	348	P	P	20 45 12.0	+0.6
	0.6nm,0.7s,mb3.4,baz=174,slow=7.9,SNR=7.3						
SONM	Songino Array	41.75	13	P	P	20 45 20.6	-1.2
	0.3nm,0.4s,mb3.2,baz=196,slow=10,SNR=2.6						
ZAL	Zalesovo	46.98	353	P	P	20 46 02.9	-0.9
	1.4nm,0.4s,mb4.3,baz=306,slow=7.9,SNR=4.4						
ZAL	Zalesovo	46.98	353	P	P	20 46 02.9	-0.9
WRA	Warramunga Arr	48.35	125	P	P	20 46 15.2	+0.2
	1.1nm,0.7s,mb4.0,baz=304,slow=8.6,SNR=19						
WRAB	Tennant Creek	48.36	125	eP	P	20 46 15.3	+0.2
	2.1nm,0.8s,mb4.2						
ASAR	Alice Springs	49.95	129	P	P	20 46 27.4	+0.1
	0.5nm,0.7s,mb3.6,baz=298,slow=7.2,SNR=7.6						
BRTR	Keskin Array B	62.41	311	P	P	20 47 55.5	-0.8
	0.3nm,0.3s,mb3.9,baz=90,slow=5.8,SNR=2.7						
FINES	FINESS Array B	72.94	332	P	P	20 49 01.7	-0.2
	0.5nm,0.6s,mb3.7,baz=112,slow=7.5,SNR=3.6						
ARCES	ARCESS Array B	75.58	340	P	P	20 49 16.9	-0.2
	1.5nm,0.8s,mb4.0,baz=108,slow=7.7,SNR=4.1						

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*ATH **07** 20:41:28.2, 40.35N×24.07E, h32^{km}±1^{km}, MD3.1/5*
*NEIC **07** 20:41:28.2, 40.35N×24.07E, h32^{km}, MD3.1(ATH), After ATH.*
*CSEM **07** 20:41:28.6±0.1, 40.34N×24.10E, h15^{km}, ML3.0, Error ellipse: s-maj=3.1km s-min=2.6km az=159.0*
*THE **07** 20:41:29.3, 40.28N×24.08E, h10^{km}, ML3.0*
ISC 07 20:41:27.9±0.4**, 40.33N**±0.03×**24.11E**±0.03**, h12**^{km}±3^{km}**, n15, σ0^{s}73**/28**, 1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUR	Ouranopolis	0.10	273	ePg	Pg	20 41 31.7	+0.9
OUR				eSg	Sg	20 41 32.8	0.0
PLG	Polygyros	0.51	275	⇓iPB	Pb	20 41 38.6	+0.3
PLG				eSB	Sb	20 41 45.3	-0.1
PAIG	Paliouri	0.52	220	ePg	Pg	20 41 39.2	+0.7
PAIG				eSg	Sg	20 41 44.6	-1.0
SOH	Sokhos	0.76	311	ePg	Pg	20 41 43.4	+0.2
LOS	Limnos	0.84	118	ePg	Pg	20 41 45.4	+0.6
LOS				eSg	Sg	20 41 57.3	+1.2
LIA	Limnos Island	0.93	117	ePN	Pn	20 41 47.1	+0.5
LIA				eSN	Sn	20 41 59.8	0.0
NVR	Nevrokopi	1.04	350	ePN	Pn	20 41 47.9	-0.3
NVR				eSN	Sn	20 42 01.6	-1.0
AOS	Alonnisos	1.17	189	ePg	Pg	20 41 50.2	-1.1
AOS				eSg	Sg	20 42 06.3	-0.7
XOR	Xorichti	1.20	217	ePg	Pg	20 41 50.7	-1.2
XOR				eSg	Sg	20 42 07.6	-0.2
NEO	Neokhori	1.23	214	ePN	Pn	20 41 51.3	+0.4
NEO				eSN	Sn	20 42 07.4	-0.1
RDO	Rodhopi	1.36	53	ePN	Pn	20 41 52.7	0.0
RDO				eSN	Sn	20 42 10.3	-0.4
GRG	Griva	1.44	296	ePg	Pg	20 41 55.6	-1.2
GRG				eSg	Sg	20 42 17.1	+1.0
ALN	Alexandroupoli	1.58	68	ePg	Pg	20 41 58.4	-1.1
ALN				eSg	Sg	20 42 20.7	+0.2
AGG	Agios Georgios	1.90	227	ePb	Pb	20 42 01.8	-0.1
AGG				eSb	Sb	20 42 26.9	+1.4
FNA	Florina	2.13	283	ePn	Pn	20 42 04.8	+0.9
	comp=Z,4.1nm,0.2s						

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*CSEM **07** 20:58:05.1±0.1, 40.08N×42.11E, h12^{km}, MD3.6, Error ellipse: s-maj=1.6km s-min=1.2km az=149.0*
*ISK **07** 20:58:06.7, 40.12N×42.14E, h30^{km}, MD3.6*
*NEIC **07** 20:58:06.7, 40.12N×42.14E, h30^{km}, MD3.6(ISK), After ISK.*
ISC 07 20:58:06.0±0.6**, 40.13N**±0.05×**42.19E**±0.05**, h12**^{km}**, n27, σ1^{s}01**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZM	Erzurum	0.67	251	i P	Pb	20 58 19.1	0.0
ERZM				i S	Sb	20 58 28.5	+0.4
EZM	Erzurum	0.67	251	PG	Pg	20 58 19.4	-0.2
EZM				SG	Sg	20 58 29.3	+0.6
EZM	Erzurum	0.67	251	Pg	Pg	20 58 19.5	-0.2
EZM				Sg	Sg	20 58 29.5	+0.8
KARS	Kars	0.84	55	PG	Pg	20 58 23.2	+0.2
KARS	Kars	0.84	55	Pg	Pg	20 58 23.3	+0.3
KARS	Kars	0.84	55	Pg	Pg	20 58 23.3	+0.3
BCA	Borcka	1.38	342	ePN	Pn	20 58 31.4	+0.1
BCA	Borcka	1.38	342	Pn	Pn	20 58 31.4	+0.2
CLDR	Caldiran	1.66	126	PN	Pn	20 58 34.3	-0.9
CLDR	Caldiran	1.66	126	Pn	Pn	20 58 34.4	-0.8
VANB	Van	1.79	148	ePN	Pn	20 58 36.9	-0.2
VANB	Van	1.79	148	Pn	Pn	20 58 36.9	-0.2
BINT	Bingol	1.81	227	ePN	Pn	20 58 36.6	-0.8
BINT	Bingol	1.81	227	Pn	Pn	20 58 36.6	-0.8
TVAN	Van	1.85	149	i P	Pn	20 58 37.6	-0.4
VANT	Van	1.92	151	ePN	Pn	20 58 38.2	-0.8
VANT	Van	1.92	151	Pn	Pn	20 58 38.2	-0.7
GNI	Garni	1.96	89	ePN	Pn	20 58 39.7	+0.2
GNI	Garni	1.96	89	ePn	Pn	20 58 39.1	-0.4
GNI				e		20 58 44.1	
BTMT	Batman	2.01	196	ePN	Pn	20 58 40.5	+0.3
GUMT	Gumushane	2.10	280	ePN	Pn	20 58 39.8	-1.7
GUMT	Gumushane	2.10	280	Pn	Pn	20 58 39.9	-1.6
KELT	Kelkit	2.25	271	i P	Pn	20 58 50.4	+6.8
KELT				i S	Sn	20 59 25.0	+14
BEST	Besiri	2.35	198	i P	Pn	20 58 45.7	+0.7
BEST				i S	Sn	20 59 15.9	+1.9
ONI	Oni	2.63	21	P	Pn	20 58 53.1	+4.0
DGRG	David-gareji	2.75	60	P	Pn	20 58 54.0	+3.1
URFA	Urfa	3.76	226	ePN	Pn	20 59 03.8	-1.3

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*NEIC **07** 20:58:46.0±1.0, 15.26S×73.69W, h84^{km}±8^{km}, mb4.2/5, Error ellipse: s-maj=15.6km s-min=9.0km az=49.0*
*IDC **07** 20:58:46.6±4.7, 15.20S×73.63W, h85^{km}±41^{km}, mb3.7/6, mb1 4.0/8, mb1mx3.8/18, mbtmp4.0/8, Error ellipse: s-maj=34.1km s-min=23.3km az=81.0*
ISC 07 20:58:45.2±0.9**, 15.30S**±0.10×**73.69W**±0.09**, h90**^{km}±9^{km}**, n28, σ0^{s}85**/22**, mb4.1**/9**, 2C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	2.41	119	⇑iP	P	20 59 23.6	0.0
ARE				eS	S	20 59 52.4	+0.2
NNA	Nana	4.50	317	eP	P	20 59 51.9	-0.6
NNA				eS	S	21 00 44.5	+0.6
LPAZ	La Paz	5.44	101	P	P	21 00 05.6	+0.3
	9.6nm,0.3s,baz=274,slow=11,SNR=121						
LPAZ	La Paz	5.44	101	⇑eP	P	21 00 06.1	+0.8
SAML	Samuel	12.05	60	eP	P	21 01 28.8	-6.4
	7.2nm,0.6s						
SIV	San Ignacio	12.17	95	P	P	21 01 32.0	-4.8
	3.6nm,0.3s,baz=279,slow=14,SNR=79						
CFAA	Coronel Fontan	16.98	164	P	P	21 02 36.6	-1.6
	0.1nm,0.3s,baz=150,slow=19,SNR=6.7						
CPUP	Villa Florida	18.80	128	P	P	21 02 58.9	-1.3
	0.2nm,0.3s,baz=331,slow=14,SNR=3.7						
CPUP	Villa Florida	18.80	128	eP	P	21 02 59.6	-0.5
	1.1nm,0.6s						
BDFB	Brasilia	24.74	94	P	P	21 04 00.6	+0.8
	4.0nm,0.6s,mb4.0,baz=274,slow=9.2,SNR=6.5						
PLCA	Paso Flores	25.49	174	P	P	21 04 07.0	+0.4
	2.9nm,0.8s,mb3.8,baz=341,slow=12,SNR=5.6						
PLCA	Paso Flores	25.49	174	eP	P	21 04 07.2	+0.5
	3.1nm,0.8s,mb3.8						
TXAR	Lajitas Array	52.98	327	P	P	21 07 55.0	0.0
	0.4nm,0.5s,mb3.7,baz=159,slow=11,SNR=3.6						
TXAR				pP	pP	21 08 21.1	+3.8
	0.1nm,0.3s,baz=146,slow=9.0,SNR=3.8						
SNAA	Sanae	69.58	161	eP	P	21 09 46.4	+0.4
	2.8nm,0.5s,mb4.3						
DBIC	Dimbokro	71.58	77	P	P	21 09 59.0	-0.1
	2.6nm,0.8s,mb4.1						
VNDA	Vanda	82.12	190	P	P	21 10 59.2	+2.4
	1.2nm,0.9s,mb3.7,baz=108,slow=4.0,SNR=4.3						
VNDA	Vanda	82.12	190	P	P	21 10 59.2	+2.4
YKA	Yellowknife Ar	83.90	342	P	P	21 11 05.2	-0.7
	2.2nm,0.8s,mb4.1,baz=135,slow=4.8,SNR=11						
ESDC	Sonseca Array	84.76	47	P	P	21 11 10.5	-0.3
	1.1nm,0.7s,mb3.9,baz=251,slow=4.7,SNR=5.0						
SUMG	Summit	90.72	10	eP	P	21 11 37.9	-0.8
	6.3nm,0.6s,mb4.9						
ASAR	Alice Springs	132.81	215	PKP	PKPdf	21 17 52.6	+2.0
	0.4nm,0.6s,baz=121,slow=2.5,SNR=5.3						
WRA	Warramunga Arr	135.44	219	PKP	PKPdf	21 17 57.5	+1.9
	0.9nm,0.5s,baz=135,slow=2.0,SNR=12						
WRAB	Tennant Creek	135.44	219	ePKPdf	PKPdf	21 17 57.7	+2.1
ZAL	Zalesovo	137.93	19	PKP	PKPdf	21 18 01.0	+1.8
	2.0nm,0.6s,baz=178,slow=3.5,SNR=14						
MKAR	Makanchi Array	142.76	28	PKhKP		21 18 04.7	
	0.4nm,0.6s,baz=317,slow=3.4,SNR=6.1						
MAJO	Matsushiro	144.61	313	ePKPdf	PKPdf	21 18 12.1	+0.5
MJAR	Matsushiro Arr	144.61	313	PKP	PKPdf	21 18 12.0	+0.4
	2.1nm,0.6s,baz=80,slow=2.6,SNR=7.6						
SONM	Songino Array	147.56	360	PKPbc	PKPdf	21 18 20.9	+4.8
	4.8nm,0.6s,baz=333,slow=2.2,SNR=19						

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*MOS **07** 21:06:00.9±2.6, 43.04N×46.00E, h7^{km}, mb3.6/1, Error ellipse: s-maj=15.3km s-min=9.7km az=12.2*
*CSEM **07** 21:06:00.9±0.4, 43.04N×46.00E, h7^{km}, mb3.6, Error ellipse: s-maj=13.1km s-min=6.5km az=19.0, After OBN*
*TIF **07** 21:06:02.0, 43.25N×46.15E, h35^{km}±4^{km}*
ISC 07 21:06:01.0±0.8**, 43.22N**±0.06×**45.94E**±0.04**, h7**^{km}**, n11, σ1^{s}14**/17**, 1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	Botlikh	0.59	160	i PG	Pg	21 06 11.0	-1.9
BTLR				eS	Sg	21 06 20.0	-0.8
DBC	Dubki	0.68	107	ePG	Pg	21 06 14.0	-0.6
DBC				i S	Sg	21 06 25.0	+1.3
KRNR	Karanay	0.81	119	ePG	Pg	21 06 16.5	-0.7
KRNR				eS	Sb	21 06 28.5	+0.7
ARNR	Ardon	1.22	269	⇓ePG	Pg	21 06 27.1	+1.7
ARNR				eS	Sb	21 06 45.1	+5.4
DUS	Dusheti	1.45	220	P	Pg	21 06 31.1	+1.0
ZEI	Tsey	1.57	254	i PG	Pg	21 06 31.1	-1.2
ZEI				e		21 06 53.2	
ZEI				pmax	pmax		
	comp=Z,12nm,0.1s						
ZEI				smax			
	comp=E,45nm,0.1s						
ZEI	Tsey	1.57	254	i Pg	Pg	21 06 31.1	-1.2
	comp=E,12nm,0.1s						
ZEI				eSg	Sg	21 06 53.2	0.0
TI2	Plekhanov	1.73	211	ePg	Pg	21 06 39.6	+4.1
DGRG	David-gareji	1.82	194	P	Pg	21 06 37.9	+0.6
DGRG				S	Sg	21 07 05.7	+4.2
KIV	Kislovodsk	2.48	288	ePN	Pn	21 06 49.9	+7.4
GOF	Gofitskoye	2.79	312	i Pn	Pn	21 06 46.0	-0.9

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*IDC **07** 21:09:27.3±0.7, 10.66N×85.99W, mb4.4/11, mb1 4.6/12, mb1mx4.3/22, mbtmp4.3/12, ML4.2/1, MS3.4/4, Ms1 3.5/4, ms1mx3.2/20, Error ellipse: s-maj=22.9km s-min=9.2km az=37.0*
*MOS **07** 21:09:31.0±1.2, 10.54N×85.96W, h33^{km}, mb4.5/8, Error ellipse: s-maj=19.4km s-min=8.7km az=122.2*
*BJI **07** 21:09:32.9, 10.50N×85.90W, h42^{km}, mB4.2, Ms4.8, Msz4.4*
*NEIC **07** 21:09:32.9±0.4, 10.51N×85.93W, mb4.5/25, MD4.3(CASC), MD4.2(HDC), Error ellipse: s-maj=12.1km s-min=4.0km az=218.0*
NEIC Felt strongly at Santa Cruz.
*CASC **07** 21:09:33.0±2.2, 10.36N×85.94W, h35^{km}±14^{km}, MD4.5, ML4.2, mb4.5(NEIC)*
ISC 07 21:09:32.7±0.5**, 10.39N**±0.05×**85.93W**±0.05**, h62**^{km}±4^{km}**, n117, σ0^{s}98**/120**, mb4.4**/36**, 16C-12D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCR	Jicaral	0.96	124	⇑iP	P	21 09 49.0	-1.6
JCR	Jicaral	0.96	124	⇑iP	P	21 09 49.0	-1.5
JTS	JuntasAbangare	0.96	96	P	P	21 09 49.8	-0.7
JTS						21 10 04.1	
JTS				pmax	pmax		
	comp=Z,920nm,0.3s						
JTS				smax			
	comp=N,1.0nm,0.3s						
JTS	JuntasAbangare	0.96	96	Pg	P	21 09 49.8	-0.8
	comp=N,920nm,0.3s,baz=300,slow=12,SNR=3592						
JTS				Lg		21 10 04.1	
	comp=N,506nm,0.3s,baz=308,slow=21,SNR=9.1						
JTS	JuntasAbangare	0.96	96	⇓iP	P	21 09 49.7	-0.8
JTS				S	S	21 10 03.6	-0.2
CONN	Concepcion	1.21	14	⇑iP	P	21 09 54.6	+0.8
FORC	Fortuna	1.24	86	eP	P	21 09 54.7	+0.4
FORC	Fortuna	1.24	86	⇓eP	P	21 09 54.9	+0.5
CGA2	Cerro Gallo 2	1.48	104	eP	P	21 09 57.6	-0.2
CGA2	Cerro Gallo 2	1.48	104	⇓eP	P	21 09 57.4	-0.3
CGA2				eS	S	21 10 16.6	+0.3
APON	Apoyo	1.53	355	⇑eP	P	21 09 58.9	+0.5
MASN	Masaya	1.60	352	⇑eP	P	21 09 59.0	-0.4
MASN				eP		21 09 59.5	
MASN				eS	S	21 10 19.4	+0.2
CRUN	El Crucero	1.63	347	⇓eP	P	21 10 00.2	+0.5
PRS1	Puriscal	1.64	104	⇓eP	P	21 09 59.2	-0.6
PRS1	Puriscal	1.64	104	⇓eP	P	21 09 59.2	-0.6
TICN	Ticuantepe	1.66	350	⇑eP	P	21 10 00.8	+0.7
VPS2	Volcan Poas 2	1.68	97	eP	P	21 10 01.1	+0.8
MGAN	Managua	1.78	350	⇑eP	P	21 10 01.9	+0.2
MGAN				eS	S	21 10 22.1	-1.1
MGAN				i		21 10 26.3	
	comp=N,3µm,0.3s						
WILN	Americas 2	1.78	352	⇑eP	P	21 10 02.3	+0.5
WILN				eS	S	21 10 24.7	+1.4
XAVN	Gruta Xavier	1.79	347	⇑eP	P	21 10 02.3	+0.3
LAJ	Bijagual	1.85	106	eP	P	21 09 56.9	-5.9
APYN	Apoyeque	1.88	347	⇓eP	P	21 10 03.8	+0.7
APYN				eS	S	21 10 27.8	+2.1
SJS	Escuela Geolog	1.90	103	⇓eP	P	21 10 03.7	+0.3
SJS				eS	S	21 10 19.6	-6.4
SJS	Escuela Geolog	1.90	103	⇑eP	P	21 10 03.5	+0.2
LCR2	La Lucha 2	2.00	109	⇓eP	P	21 10 04.7	-0.1
LCR2	La Lucha 2	2.00	109	⇓eP	P	21 10 04.7	-0.1
MOMJ	Momotombo	2.10	343	⇑eP	P	21 10 06.4	+0.2
PYTN	Playitas	2.14	357	⇑eP	P	21 10 07.4	+0.6
MIRN	Miramar	2.18	339	⇓eP	P	21 10 07.3	-0.1
MIRN				eS	S	21 10 32.4	-0.7
TRTC	Tortuguero	2.18	85	⇑iP	P	21 10 07.1	-0.3
TRTC	Tortuguero	2.18	85	⇑iP	P	21 10 07.1	-0.3
LEON	Leon	2.23	335	⇑eP	P	21 10 08.0	0.0
LEON				eS	S	21 10 32.8	-1.6
CNGN	Cerro Negro	2.23	340	⇑eP	P	21 10 08.0	-0.1
BUS	Buena Vista	2.29	111	eP	P	21 10 08.8	-0.1
BUS	Buena Vista	2.29	111	eP	P	21 10 08.7	-0.2
TEL3	Telica 3	2.35	338	⇓eP	P	21 10 09.9	+0.1
TELN	Telica	2.38	338	eP	P	21 10 08.1	-2.1
CRIN	San Cristobal	2.55	335	eP	P	21 10 12.4	-0.2
CRIN				eS	S	21 10 44.9	+2.4
LIO	Limon	2.87	97	eP	P	21 10 17.4	+0.2
ACR	Cerro Adams	3.22	122	eP	P	21 10 21.7	-0.3
ACR				eS	S	21 10 54.3	-5.1
ACR	Cerro Adams	3.22	122	eP	P	21 10 21.8	-0.3
ACR				eS	S	21 10 57.6	-1.8
SVTC	San Vito de Co	3.33	118	eP	P	21 10 24.0	+0.4
CNCH	Conchagua	3.42	327	eP	P	21 10 24.2	-0.7
BLLM	Bellamira	3.79	324	eP	P	21 10 29.5	-0.5
BLLM				eS	S	21 11 14.7	+1.0
VSM	San Miguel	3.80	323	eP	P	21 10 30.9	+0.8
LCBS	La Ceiba	4.41	318	eP	P	21 10 37.6	-1.1
LFRS	El Faro	4.44	317	eP	P	21 10 38.0	-1.3
LBRS	Las Brisas	4.51	318	eP	P	21 10 39.3	-0.9
BOQS	Boqueron	4.67	316	eP	P	21 10 41.9	-0.5
SBLS	San Blas	4.98	314	eP	P	21 10 46.3	-0.4
SNJE	San Jose	4.99	314	eP	P	21 10 47.0	+0.1
RTR	El Retiro	5.04	314	eP	P	21 10 48.3	+0.8
RBDL	Robledal	5.22	316	eP	P	21 10 50.1	+0.2
SDV	Santo Domingo	15.15	94	Pn	P	21 13 05.6	+1.1
	comp=N,0.9nm,0.3s,baz=336,slow=7.9,SNR=6.7						
SDV	Santo Domingo	15.15	94	eP	P	21 13 06.3	+1.8
	comp=N,10nm,0.9s						
SJG	San Juan	20.63	66	P	P	21 14 10.9	+1.5
SJG				pmax	pmax		
	comp=Z,16nm,0.6s						
SJG	San Juan	20.63	66	P	P	21 14 10.9	+1.4
	comp=Z,16nm,0.6s,baz=255,slow=7.1,SNR=7.3						
LRAL	Lakeview Retre	22.56	358	eP	P	21 14 29.1	+0.5
	comp=Z,19nm,0.6s,mb4.7						
JCT	Junction City	23.80	329	eP	P	21 14 41.6	+0.9
	comp=Z,9.1nm,0.5s,mb4.5						
OXF	Oxford	24.22	353	eP	P	21 14 44.2	-0.5
	comp=Z,62nm,1.1s,mb5.0						
PLAL	Pickwick Lake	24.56	356	eP	P	21 14 47.3	-0.7
	comp=Z,8.0nm,0.5s,mb4.5						
PLAL				epP		21 14 58.5	
SWET	Sewanee	24.72	360	eP	P	21 14 49.2	-0.3
UALR	University of	24.97	347	eP	P	21 14 50.7	-1.3
	comp=Z,18nm,0.6s,mb4.8						
UALR				epP		21 15 02.5	
CPCT	Cooper Cave	24.98	3	eP	P	21 14 51.9	-0.2
MIAR	Mount Ida	25.04	345	eP	P	21 14 51.6	-1.0
	comp=Z,34nm,0.9s,mb4.9						
TXAR	Lajitas Array	25.11	321	P	P	21 14 53.5	+0.2
TXAR						21 18 29.8	
TXAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TXAR				pmax	pmax		
	comp=N,1.0nm,0.9s						
TXAR				MLR	MLR		
	comp=Z,39nm,18.9s						
TXAR	Lajitas Array	25.11	321	P	P	21 14 53.5	+0.1
	comp=Z,6.6nm,0.7s,mb4.2,baz=140,slow=9.9,SNR=37						
TXAR				PcP	PcP	21 18 29.8	+2.7
	comp=Z,1.6nm,0.7s,baz=135,slow=5.3,SNR=7.3						
TXAR				ScP		21 22 10.1	
	comp=Z,0.9nm,0.9s,baz=153,slow=5.6,SNR=5.9						
TXAR				LR	LR	21 26 25.3	
	comp=Z,39nm,18.9s,baz=55,slow=41						
LTX	Lajitas	25.11	321	eP	P	21 14 55.0	+1.6
	comp=Z,16nm,0.8s,mb4.6						
LTX				epP	pP	21 15 05.4	-2.8
TZTN	Tazewell	26.13	4	eP	P	21 15 02.1	-0.7
WMOK	Wichita Mounta	26.93	336	eP	P	21 15 08.5	-1.7
	comp=Z,16nm,0.8s,mb4.6						
GDL2	Guadalupe Moun	27.59	325	eP	P	21 15 15.4	-0.8
WCI	Wyandotte Cave	27.72	359	eP	P	21 15 15.2	-2.2
	comp=Z,7.6nm,0.6s,mb4.5						
SAML	Samuel	29.69	130	eP	P	21 15 35.0	-0.1
	comp=Z,15nm,1.3s,mb4.6						
ANMO	Albuquerque	30.80	326	eP	P	21 15 45.3	+0.5
	comp=Z,2.4nm,0.8s,mb4.1						
LPAZ	La Paz	31.82	146	P	P	21 15 55.7	+1.8
LPAZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
LPAZ				MLR	MLR		
	comp=Z,51nm,22.0s						
LPAZ	La Paz	31.82	146	P	P	21 15 55.6	+1.8
	comp=Z,1.0nm,1.0s,mb3.6,baz=337,slow=7.7,SNR=3.4						
LPAZ				LR	LR	21 28 53.7	
	comp=Z,51nm,22.0s,baz=85,slow=36						
LPAZ	La Paz	31.82	146	eP	P	21 15 55.6	+1.7
SADO	Sadowa	34.75	8	P	P	21 16 16.2	-2.7
	comp=Z,11nm,0.7s,mb4.9,baz=207,slow=7.9,SNR=8.7						
SIV	San Ignacio	35.95	136	P	P	21 16 30.2	+0.8
	comp=Z,2.6nm,0.9s,mb4.2,baz=317,slow=9.5,SNR=10						
RSSD	Black Hills	37.09	338	eP	P	21 16 38.4	-0.3
	comp=Z,2.8nm,0.6s,mb4.3						
PDAR	Pinedale Array	38.29	332	P	P	21 16 48.4	-0.3
	comp=Z,2.4nm,0.6s,mb4.1,baz=129,slow=9.5,SNR=18						
PDAR				PcP	PcP	21 19 03.4	+1.1
	comp=Z,1.1nm,0.6s,baz=131,slow=3.6,SNR=5.6						
HWUT	Hardware Ranch	38.40	329	eP	P	21 16 49.7	0.0
	comp=Z,10nm,0.9s,mb4.6						
TPAW	Teton Pass	39.50	331	eP	P	21 16 59.6	+0.9
	comp=Z,5.8nm,0.8s,mb4.4						
RRI2	Red Ridge	39.57	331	eP	P	21 16 59.2	-0.1
	comp=Z,4.7nm,0.6s,mb4.4						
MOOW	Moose Ponds	39.60	331	eP	P	21 16 59.4	-0.2
	comp=Z,3.0nm,0.9s,mb4.0						
IMW	Indian Meadow	39.80	331	eP	P	21 17 01.5	+0.2
	comp=Z,3.6nm,0.6s,mb4.3						
ELK	Elko	39.80	324	eP	P	21 17 01.3	0.0
ELK	Elko	39.80	324	P	P	21 17 01.3	0.0
	comp=Z,5.9nm,0.9s,mb4.3						
MNV	Mina	40.14	319	eP	P	21 17 06.2	+2.1
	comp=Z,6.9nm,0.8s,mb4.4						
MNV				ePcP	PcP	21 19 10.5	+2.3
NVAR	Mina Array Bea	40.23	319	P	P	21 17 05.6	+0.7
	comp=Z,8.7nm,0.6s,mb4.6,baz=124,slow=6.5,SNR=59						
NVAR				PcP	PcP	21 19 10.5	+2.0
	comp=Z,4.2nm,0.7s,baz=122,slow=5.3,SNR=14						
NVAR	Mina Array Bea	40.23	319	P	P	21 17 05.5	+0.7
NVAR				PcP	PcP	21 19 10.5	+2.0
ULM	Lac du Bonnet	40.58	350	P	P	21 17 04.8	-2.9
	comp=Z,1.8nm,0.4s,mb4.0,baz=179,slow=7.2,SNR=3.9						
HLID	Hailey	41.27	328	eP	P	21 17 14.5	+1.1
	comp=Z,2.1nm,0.6s,mb3.9						
MCMT	McKenzie Canyo	41.40	331	eP	P	21 17 15.6	+1.1
BOZ	Bozeman (W)	41.45	333	eP	P	21 17 15.0	+0.2
	comp=Z,2.7nm,0.6s,mb4.0						
WVOR	Wild Horse Val	42.84	324	eP	P	21 17 26.5	+0.2
	comp=Z,11nm,0.6s,mb4.8						
YBH	Yreka Blue Hor	44.88	321	eP	P	21 17 42.5	-0.3
	comp=Z,2.9nm,0.6s,mb4.3						

HUMO	**Hull Mountain**	45.52	321	*e*P	**P**	**21 17 47.2**	**-0.7**
	comp=Z,2.1nm,0.5s,mb4.3						
SCHQ	**Schefferville**	46.84	15	P	**P**	**21 17 55.9**	**-2.3**
	comp=Z,6.2nm,0.5s,mb4.8,baz=222,slow=6.0,SNR=26						
SCHQ				LR	LR	21 41 14.7	
	comp=Z,69nm,18.7s,baz=266,slow=41						
PLCA	**Paso Flores**	52.81	165	P	**P**	**21 18 46.0**	**+2.0**
PLCA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PLCA	**Paso Flores**	52.81	165	P	**P**	**21 18 46.0**	**+2.0**
	comp=Z,2.2nm,1.0s,mb4.0,baz=353,slow=15,SNR=1.7						
YKA	**Yellowknife Ar**	55.98	344	P	**P**	**21 19 03.4**	**-3.5**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	**Yellowknife Ar**	55.98	344	P	**P**	**21 19 03.4**	**-3.5**
	comp=Z,1.6nm,0.6s,mb4.2,baz=136,slow=7.3,SNR=13						
YKA	**Yellowknife Ar**	55.98	344	P	**P**	**21 19 03.4**	**-3.5**
ILAR	**Eielson Array**	68.50	336	P	**P**	**21 20 29.0**	**-1.2**
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ILAR				MLR	MLR		
	comp=Z,57nm,18.2s						
ILAR	**Eielson Array**	68.50	336	P	**P**	**21 20 29.0**	**-1.2**
	comp=Z,2.9nm,0.8s,mb4.3,baz=117,slow=4.9,SNR=19						
ILAR				LR	LR	21 54 34.7	
	comp=Z,57nm,18.2s,baz=360,slow=40						
BILL	**Bilibino**	86.97	339	*e*P	**P**	**21 22 13.2**	**+1.4**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.7						
CN2	**Changchun**	118.99	334	*e*PKP	PKPdf	21 28 17.8	+3.3
MKAR	**Makanchi Array**	122.11	10	PKP	PKPdf	21 28 22.0	+1.5
	comp=Z,0.2nm,0.5s,baz=297,slow=2.7,SNR=4.1						
WMQ	**Urumqi**	125.74	6	*e*PKP	PKPdf	21 28 31.1	+3.5
WMQ				LR	LR		
	comp=E,110nm,20.0s						
WMQ				LR	LR		
	comp=Z,120nm,20.0s						
NJ2	**Nanjing**	131.60	332	*e*PKP	PKPdf	21 28 43.1	+3.9
ASAR	**Alice Springs**	139.84	246	PKIKP	PKPdf	21 28 58.5	+3.9
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	139.84	246	PKP	PKPdf	21 28 58.5	+4.0
	comp=Z,0.7nm,0.6s,baz=98,slow=1.8,SNR=6.0						
WRA	**Warramunga Arr**	140.08	251	PKIKP	PKPdf	21 28 55.7	+0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	140.08	251	PKhKP		21 28 55.7	
	comp=Z,0.6nm,0.5s,baz=95,slow=2.5,SNR=12						
WRA				PKP	PKPdf	21 28 59.0	+3.9
	comp=Z,0.6nm,0.5s,baz=91,slow=2.4,SNR=11						
CMAR	**Chiang Mai Arr**	150.94	350	PKIKP	PKPdf	21 29 16.8	+3.4
CMAR						21 29 22.1	
CMAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CMAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	**Chiang Mai Arr**	150.94	350	PKP	PKPdf	21 29 16.8	+3.4
	comp=Z,1.5nm,1.0s,baz=328,slow=1.2,SNR=5.7						
CMAR				PKPbc	PKPdf	21 29 22.1	+8.7
	comp=Z,4.3nm,1.0s,baz=330,slow=2.8,SNR=12						

IDC ***07*** *21:32:05.8±0.7, 17.11N×73.83E, mb4.0/12, mb1 4.1/12, mb1mx3.9/22, mbtmp4.0/12, MS3.1/3, Ms1 3.2/3, ms1mx2.9/25, Error ellipse: s-maj=20.9km s-min=17.6km az=77.0*
BJI ***07*** *21:32:07.3, 17.10N×73.90E, h10^{km}, mB4.8, mb4.6*
NDI ***07*** *21:32:07.2±6.2, 17.32N×73.74E, h5^{km}, MD4.4, ML4.3*
NEIC ***07*** *21:32:07.3±0.5, 17.14N×73.85E, h10^{km}, mb4.4/5, ML4.4(MERI), Error ellipse: s-maj=12.1km s-min=11.2km az=211.0*
NEIC Felt in the Koyna area and at Bombay, Phaltan, Ratnagiri, Satara and Warnawati.
MOS ***07*** *21:32:09.4±1.9, 17.33N×74.00E, h33^{km}, mb4.3/4, Error ellipse: s-maj=15.6km s-min=11.0km az=50.9*
ISC 07 21:32:09.8±0.7**, 17.42N**±0.05×**74.04E**±0.04**, h31**^{km}±4^{km}**, n64, σ1§52**/69**, mb4.0**/17**, MS3.1**/3**, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAD	**Karad**	0.18	130	*e*P	**Pb**	**21 32 15.5**	**-0.3**
KAD				*e*S	**Sb**	**21 32 21.2**	**+1.2**
KAD				AML	AML	21 32 21.8	
	comp=E,9μm,0.2s						
KAD				AML	AML	21 32 21.9	
	comp=N,11μm,0.1s						
POO	**Poona**	1.11	351	*e*P	**Pn**	**21 32 30.6**	**+1.1**
POO				*e*S	**Sn**	**21 32 46.0**	**+2.1**
POO				AML	AML	21 32 47.4	
	comp=N,3μm,0.3s						
BOM	**Bombay**	1.87	322	*e*P	**Pn**	**21 32 40.7**	**+0.4**
BOM				*e*S	**Sn**	**21 33 03.6**	**+0.5**
LATR	**Latur**	2.60	67	*e*P	**Pn**	**21 32 52.2**	**+1.5**
LATR				*e*x	**Sn**	**21 33 35.7**	**+14**
HYB	**Hyderabad**	4.31	89	*i* Pn	**Pn**	**21 33 15.0**	**0.0**
HYB				*e*Pg	**Pb**	**21 33 29.0**	**+4.3**
HYB				*e*Sn	**Sn**	**21 34 06.0**	**+1.1**
HYB				*e*Sg	Sb	21 34 27.0	+10
MNGI	**Mangalore**	4.52	170	*e*x	**Pn**	**21 33 14.9**	**-3.1**
MNGI				*e*x	**Sn**	**21 33 56.5**	**-14**
BHV	**Bhavnagar**	4.66	338	*e*PG	**Pn**	**21 33 29.0**	**+9.0**
BHV				*e*SG	**Sn**	**21 34 32.5**	**+19**
NGP	**Nagpur**	6.01	51	*e*P	**Pn**	**21 33 41.3**	**+2.2**
NGP				*e*S	**Sn**	**21 34 47.9**	**+0.3**
BHPL	**Bhopal**	6.60	28	*e*S	**Sn**	**21 35 01.0**	**-1.4**
BHPL				*e*x	Sn	21 35 38.3	+36
BHPL				*e*x	x	21 35 59.0	
BHPL				*e*x	x	21 36 48.0	
MDRS	**Chennai**	7.39	125	*e*x	Sx	21 35 54.0	
VIS	**Vishakhapatnam**	8.87	87	*e*S	**Sn**	**21 35 58.0**	**-0.8**
VIS				*e*x	x	21 36 43.8	
AJM	**Ajmer**	9.03	3	*e*x	**Sn**	**21 36 13.0**	**+10**
JASL	**Jaisalmer**	9.89	343	*e*x	x	21 36 36.8	
AGRA	**Agra**	10.41	20	*e*P	**P**	**21 34 37.7**	**-2.4**
AGRA				*e*S	**S**	**21 36 28.3**	**-8.5**
AGRA				AML	AML	21 37 50.4	
	comp=N,284nm,0.5s						
AGRA				AML	AML	21 37 50.5	
	comp=E,371nm,0.6s						
KHET	**Khetri**	10.72	8	*e*P	**P**	**21 34 42.4**	**-2.2**
KHET				*e*S	**S**	**21 36 38.4**	**-6.1**
KUDL	**Kundal**	10.91	12	*e*P	**P**	**21 34 44.3**	**-2.7**
KUDL				*e*S	**S**	**21 36 42.7**	**-6.2**
SONA	**Sohna**	11.13	14	*e*P	**P**	**21 34 45.8**	**-4.3**
SONA				*e*S	**S**	**21 36 49.2**	**-5.3**
SONA				AML	AML	21 38 09.3	
	comp=E,192nm,0.5s						
SONA				AML	AML	21 38 09.6	
	comp=N,58nm,0.5s						
AYAN	**Aya Nagar**	11.37	14	*e*x	x	21 38 10.2	
BWNR	**Bhubaneshwar**	11.50	74	*e*x	x	21 37 32.0	
BWNR				*e*x	x	21 38 03.0	
BHGR	**Bahadurgarh**	11.52	13	*e*x	x	21 38 13.9	
NDI	**New Delhi**	11.58	14	*e*P	**P**	**21 34 52.0**	**-4.2**
NDI				*e*x	x	21 38 11.0	
RTK	**Rohtak**	11.76	10	*e*P	**P**	**21 34 55.9**	**-2.7**
RTK				*e*x	x	21 36 51.1	
RTK				*e*S	**S**	**21 37 02.6**	**-7.1**
ASOR	**Ausora**	11.79	16	*e*x	x	21 38 24.0	
BOK	**Bokaro**	12.77	58	*i* x	x	21 38 48.1	
BOK				*i* x	x	21 39 47.1	
LGTI	**Lohaghat**	13.25	24	*e*P	**P**	**21 35 19.5**	**+1.0**
LGTI				*e*x	x	21 39 14.7	
KOLN	**Koldanda**	13.56	39	*e*P	**P**	**21 35 19.6**	**-3.0**
	comp=N,31nm,0.2s						
SMLA	**Simla**	13.94	11	*i* x	x	21 35 21.7	
SMLA				*i* x	x	21 37 57.0	
BHK	**Bhakra**	14.10	8	*e*x	x	21 38 45.8	
SDNR	**Sundarnagar**	14.27	10	*e*P	**P**	**21 35 31.0**	**-0.9**
SDNR				*e*x	x	21 39 32.0	
GKN	**Gorkha**	14.36	41	*e*P	**P**	**21 35 30.4**	**-2.7**
	comp=N,64nm,0.6s						
DMN	**Daman**	14.39	43	*e*P	**P**	**21 35 30.9**	**-2.6**
	comp=N,75nm,0.9s						
PKI	**Pulchoki**	14.56	44	*e*P	**P**	**21 35 32.6**	**-3.2**
	comp=N,50nm,0.7s						
PKI	**Pulchoki**	14.56	44	*e*P	**P**	**21 35 32.6**	**-3.2**
PKI				pmax	pmax		
	comp=Z,25nm,0.7s						
KKN	**Kakani**	14.62	43	*e*P	**P**	**21 35 34.3**	**-2.3**
	comp=Z,45nm,0.5s						
KKN	**Kakani**	14.62	43	*e*P	**P**	**21 35 34.3**	**-2.3**
KKN				pmax	pmax		
	comp=Z,22nm,0.5s						
THN	**Thein Dam**	15.02	5	*e*x	x	21 35 50.7	
THN				*e*x	**S**	**21 38 40.4**	**+13**
GUN	**Gumba**	15.10	44	*e*P	**P**	**21 35 40.4**	**-2.4**
	comp=Z,49nm,0.6s						
SHL	**Shillong**	18.46	61	*e*P	**P**	**21 36 27.0**	**+1.7**
SHL				*e*x	**S**	**21 39 48.0**	**+1.1**
SHL				*e*x	x	21 41 47.5	
LSA	**Lhasa**	19.85	49	P	**P**	**21 36 48.8**	**+7.5**
LSA				AMB	AMB		
	comp=Z,40nm,0.7s						
LSA	**Lhasa**	19.85	49	*e*P	**P**	**21 36 43.3**	**+2.0**
LSA				pmax	pmax		
	comp=Z,41nm,0.8s						
LSA	**Lhasa**	19.85	49	*e*P	**P**	**21 36 43.3**	**+1.9**
	comp=Z,40nm,0.8s						
LSA				*i*		21 36 48.6	
CMAR	**Chiang Mai Arr**	23.71	84	P	**P**	**21 37 22.1**	**+2.0**
	comp=Z,2.5nm,0.7s,mb3.8,baz=273,slow=10.0,SNR=18						
CMAR				LR	LR	21 48 56.3	
	comp=Z,31nm,18.9s,MS2.8,baz=59,slow=42						
AAK	**Ala-Archa**	25.13	1	*e*P	**P**	**21 37 34.7**	**+1.1**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
AAK	**Ala-Archa**	25.13	1	*e*P	**P**	**21 37 34.7**	**+1.1**
	comp=Z,2.6nm,0.8s,mb3.8						
MKAR	**Makanchi Array**	30.07	11	P	**P**	**21 38 18.0**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.6,baz=199,slow=9.1,SNR=9.7						
XAN	**Xi'an**	35.30	55	P	**P**	**21 39 05.1**	**+0.9**
XAN				AP	pP	21 39 12.5	-0.8
BVAR	**Borovoye Array**	35.64	356	P	**P**	**21 39 08.1**	**+1.3**
	comp=Z,0.7nm,0.5s,mb3.9,baz=158,slow=8.0,SNR=6.7						
ZAL	**Zalesovo**	37.39	10	P	**P**	**21 39 21.6**	**+0.1**
	comp=Z,1.8nm,0.5s,mb4.2,baz=258,slow=8.5,SNR=6.7						
ZAL				LR	LR	21 56 25.2	
	comp=Z,29nm,19.6s,MS3.1,baz=24,slow=39						
SONM	**Songino Array**	40.25	34	P	**P**	**21 39 47.9**	**+2.4**
	comp=Z,2.4nm,0.8s,mb4.0,baz=231,slow=7.9,SNR=8.8						
ULN	**Ulaanbaatar**	40.62	34	*e*P	**P**	**21 39 49.2**	**+0.7**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
ULN	**Ulaanbaatar**	40.62	34	*e*P	**P**	**21 39 49.2**	**+0.7**
	comp=Z,2.2nm,0.9s,mb3.8						
AKASG	**Malin Array Be**	48.67	323	P	**P**	**21 40 54.3**	**+1.3**
	comp=Z,0.4nm,0.5s,mb3.7,baz=115,slow=5.3,SNR=2.8						
MLR	**Muntele Rosu**	48.70	316	LR	LR	22 04 44.7	
	comp=Z,34nm,20.4s,MS3.3,baz=77,slow=40						
CN2	**Changchun**	50.47	47	*e*P	**P**	**21 41 08.0**	**+1.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
FINES	**FINESS Array B**	55.38	334	P	**P**	**21 41 43.0**	**-0.1**
	comp=Z,0.8nm,0.8s,mb3.8,baz=149,slow=8.1,SNR=2.8						
MATP	**Matopo**	58.41	232	P	**P**	**21 42 00.7**	**-4.5**
	comp=Z,1.6nm,0.7s,mb4.2,baz=58,slow=7.5,SNR=5.1						
ARCES	**ARCESS Array B**	59.94	342	P	**P**	**21 42 15.6**	**+0.4**
	comp=Z,2.2nm,0.8s,mb4.2,baz=146,slow=4.4,SNR=4.6						
ARCES	**ARCESS Array B**	59.94	342	P	**P**	**21 42 15.6**	**+0.4**
TIXI	**Tiksi**	62.84	17	*e*P	**P**	**21 42 32.8**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
BOSA	**Boshof**	65.71	227	P	**P**	**21 42 49.6**	**-4.5**
	comp=Z,4.3nm,0.9s,mb4.5,baz=11,slow=13,SNR=5.8						
WRA	**Warramunga Arr**	69.88	120	P	**P**	**21 43 19.5**	**-0.7**
	comp=Z,1.0nm,0.7s,mb3.9,baz=307,slow=5.8,SNR=12						
WRAB	**Tennant Creek**	69.88	119	*e*P	**P**	**21 43 19.8**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
WRAB	**Tennant Creek**	69.88	119	*e*P	**P**	**21 43 19.8**	**-0.4**
	comp=Z,2.6nm,0.8s,mb4.2						
ASAR	**Alice Springs**	71.30	123	P	**P**	**21 43 27.7**	**-1.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=301,slow=5.7,SNR=7.5						

BJI ***07*** *22:00:22.4, 61.90N×26.50W, h10^{km}, mB4.4, mb4.5*
CSEM ***07*** *22:00:24.8±0.0, 62.07N×26.34W, h10^{km}, mb4.4/21, Ms3.5*
IDC ***07*** *22:00:25.6±0.5, 61.92N×26.54W, mb4.0/24, mb1 4.2/27, mb1mx4.1/35, mbtmp4.0/27, ML3.2/3, MS3.8/22, Ms1 3.7/22, ms1mx3.6/37, Error ellipse: s-maj=18.7km s-min=10.0km az=1.0*
NEIC ***07*** *22:00:27.4±0.2, 61.86N×26.55W, h10^{km}, mb4.4/29, MS3.6/2, Error ellipse: s-maj=7.7km s-min=3.8km az=202.0*
ISC 07 22:00:25.0±1.3**, 62.09N**±0.03×**26.33W**±0.06**, h6**^{km}±8^{km}**, n129, σ1§13**/126**, mb4.2**/46**, MS3.7**/23**, 1C, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INYL	**Nylenda**	2.50	39	P	**Pn**	**22 01 07.7**	**+0.8**
IVOG	**Vogar**	2.60	42	P	**Pn**	**22 01 08.2**	**-0.2**
IKRI	**Krysuvik**	2.64	45	P	**Pn**	**22 01 08.3**	**-0.6**
IKRI				S	**Sn**	**22 01 41.9**	**+0.2**
IVOS	**Vogsosar**	2.75	48	P	**Pn**	**22 01 09.8**	**-0.7**
ISAN	**Sandskeio**	2.92	46	P	**Pn**	**22 01 12.6**	**-0.4**
ISAN				S	**Sn**	**22 01 49.3**	**+0.4**
IBJA	**Bjarnastaoir**	2.95	49	P	**Pn**	**22 01 12.1**	**-1.3**
IBJA				S	**Sn**	**22 01 49.2**	**-0.3**
IKUD	**Kuludalsa**	3.01	40	P	**Pn**	**22 01 15.3**	**+1.1**
ISOL	**Solvholt**	3.07	51	P	**Pn**	**22 01 13.2**	**-1.8**
ISOL				S	**Sn**	**22 01 51.2**	**-1.3**
IKRO	**Krokur**	3.10	47	P	**Pn**	**22 01 15.1**	**-0.5**
IKRO				S	**Sn**	**22 01 53.2**	**-0.3**
IHEI	**Heioarbar**	3.13	45	P	**Pn**	**22 01 15.8**	**-0.1**
IASM	**Asmuli**	3.14	54	P	**Pn**	**22 01 14.6**	**-1.4**
IASM				S	**Sn**	**22 01 53.0**	**-1.3**
ISAU	**Saurbar**	3.30	52	P	**Pn**	**22 01 16.4**	**-1.9**
ISAU				S	**Sn**	**22 01 56.7**	**-1.6**
IHAU	**Haukadalur**	3.46	54	P	**Pn**	**22 01 18.5**	**-2.0**
IHAU				S	**Sn**	**22 02 00.4**	**-1.9**
IASB	**`sbjarnarst**	3.48	38	P	**Pn**	**22 01 22.0**	**+1.0**
IGYG	**Gygjarholskot**	3.53	49	P	**Pn**	**22 01 20.6**	**-1.0**
IGYG				S	**Sn**	**22 02 04.1**	**-0.2**
SCO	**Scoresbysund**	8.61	10	*i* P	**P**	**22 02 35.4**	**+2.3**
	5.5nm,0.8s						
SCO				*i* S	Sn	22 04 37.8	+26
SUMG	**Summit**	11.48	341	*e*P	**P**	**22 03 14.2**	**+1.8**
	13nm,1.2s						
SUMG	**Summit**	11.48	341	*e*P	**P**	**22 03 14.2**	**+1.8**
	13nm,1.2s						
EKA	**Eskdalemuir Ar**	13.75	109	Pn	**P**	**22 03 43.5**	**+0.9**
	0.1nm,0.3s,baz=304,slow=12,SNR=6.1						
EKA	**Eskdalemuir Ar**	13.75	109	Pn	**P**	**22 03 43.5**	**+0.9**
DAG	**Danmarks Havn**	14.97	7	*e*P	**P**	**22 04 06.0**	**+7.6**
DAG	**Danmarks Havn**	14.97	7	*i* P	**P**	**22 04 06.0**	**+7.6**
NOA	**NORSAR Array B**	17.75	77	P	**P**	**22 04 35.0**	**+1.0**
	0.1nm,0.3s,baz=288,slow=12,SNR=4.0						
ROSF	**Rostrenen**	18.90	126	*e*P	**P**	**22 04 47.6**	**-0.6**
	46nm,1.3s						
FRB	**Frobisher Bay**	19.04	294	LR	LR	22 11 25.3	
	comp=Z,492nm,18.8s,baz=128,slow=35						
HFS	**Hagfors**	19.22	78	P	**P**	**22 04 53.4**	**+1.4**
	0.0nm,0.3s,baz=176,slow=40,SNR=2.6						
HFS				LR	LR	22 12 03.9	
	comp=Z,157nm,18.1s,baz=260,slow=36						
SGMF	**Saint Gilles**	19.24	125	*e*P	**P**	**22 04 51.7**	**-0.6**
QUIF	**Quistinic**	19.28	127	*e*P	**P**	**22 04 52.3**	**-0.5**
	98nm,1.6s						
FLN	**La Foliniere**	19.65	121	*e*P	**P**	**22 04 56.8**	**-0.2**
	59nm,1.3s						
FLN				*e*R			
	447nm,18.4s						
GRR	**Gorron**	19.79	122	*e*P	**P**	**22 04 58.5**	**-0.2**
	46nm,1.3s						
LDF	**La Druitiere**	19.93	121	*e*P	**P**	**22 04 59.9**	**-0.2**
	36nm,1.3s						
BAIF	**Baives**	20.63	112	*e*P	**P**	**22 05 07.4**	**-0.1**
	28nm,1.1s						
DOU	**Dourbes**	20.77	111	P	**P**	**22 05 10.5**	**+1.5**
MEM	**Membach**	21.03	108	P	**P**	**22 05 13.5**	**+1.9**
MFF	**Saint Martin d**	21.53	124	*e*P	**P**	**22 05 16.3**	**-0.4**
	26nm,1.0s,mb4.3						
ARCES	**ARCESS Array B**	21.83	48	P	**P**	**22 05 20.0**	**+0.5**
	1.9nm,0.8s,mb3.6,baz=285,slow=10,SNR=2.4						
ARCES	**ARCESS Array B**	21.83	48	P	**P**	**22 05 20.0**	**+0.5**
SCHQ	**Schefferville**	22.08	269	P	**P**	**22 05 22.1**	**-0.1**
	3.6nm,0.8s,mb3.9,baz=156,slow=2.3,SNR=4.0						
SCHQ				LR	LR	22 12 34.7	
	comp=Z,56nm,21.1s,MS3.0,baz=83,slow=33						
SCHQ	**Schefferville**	22.08	269	P	**P**	**22 05 22.0**	**-0.1**
LOR	**Lormes**	22.61	117	*e*P	**P**	**22 05 26.8**	**-0.6**
LOR				*e*R			
	609nm,17.8s						
SSF	**Saint Saulge**	22.63	118	*e*P	**P**	**22 05 27.0**	**-0.5**
	7.8nm,1.0s,mb4.1						
TCF	**Toulx Ste Croi**	22.72	121	*e*P	**P**	**22 05 28.1**	**-0.3**
	17nm,1.0s,mb4.1						
BGF	**Bois d'Agland**	22.76	120	*e*P	**P**	**22 05 28.2**	**-0.6**
	18nm,0.9s,mb4.2						
SMF	**Signal de Mont**	23.10	118	*e*P	**P**	**22 05 32.0**	**-0.2**
	37nm,1.1s,mb4.4						
HAU	**Haudompre**	23.11	113	*e*P	**P**	**22 05 32.1**	**-0.1**
	30nm,1.1s,mb4.3						
HAU				*e*R			
	229nm,18.1s						
CDF	**Champ du Feu**	23.20	111	*e*P	**P**	**22 05 33.5**	**+0.4**
	16nm,1.1s,mb4.0						
LFF	**La Frestale**	23.26	125	*e*P	**P**	**22 05 33.1**	**-0.6**
	19nm,1.0s,mb4.2						
HINF	**Hinteralfeld**	23.47	112	*e*P	**P**	**22 05 35.2**	**-0.5**
MOX	**Moxa**	23.55	102	*e*P	**P**	**22 05 39.0**	**+2.5**
	24nm,1.9s,mb4.3						
MOX				LR	LR		
	comp=Z,300nm,17.0s,MS3.8						
MOX	**Moxa**	23.55	102	*i* P	**P**	**22 05 39.0**	**+2.5**
	comp=Z,logA/T=1.1,mb4.3						
MOX				L		22 16 14.0	
CLL	**Collm**	23.74	99	*e*P	**P**	**22 05 42.0**	**+3.7**
CLL				*e*		22 05 53.0	
CLL				LR	LR		
	comp=Z,200nm,16.5s,MS3.7						
CLL	**Collm**	23.74	99	P	**P**	**22 05 42.0**	**+3.7**
CLL				*e**PP		22 05 53.0	
CAF	**Calviac**	23.78	123	*e*P	**P**	**22 05 38.4**	**-0.4**
	comp=Z,29nm,1.2s,mb4.3						
SJPF	**Ste Jean**	24.09	130	*e*P	**P**	**22 05 41.2**	**-0.6**
NKC	**Novy Kostel**	24.22	101	*e*P	**P**	**22 05 46.8**	**+3.8**
FINES	**FINESS Array B**	24.25	68	P	**P**	**22 05 44.5**	**+1.3**
	comp=Z,3.5nm,0.8s,mb3.8,baz=333,slow=8.5,SNR=8.6						
FINES				LR	LR	22 15 05.4	
	comp=Z,60nm,18.8s,MS3.1,baz=145,slow=36						
BRG	**Berggiesshubel**	24.48	99	*e*P	**P**	**22 05 47.9**	**+2.4**
	comp=Z,3.5nm,0.9s,mb3.8						
BRG				LR	LR		
	comp=Z,170nm,18.9s,MS3.6						
ETSF	**Etsaut**	24.52	130	*e*P	**P**	**22 05 45.1**	**-0.9**
EPF	**Esparros**	24.73	128	*e*P	**P**	**22 05 47.6**	**-0.4**
ORIF	**Oris-en-Rattie**	25.34	118	*e*P	**P**	**22 05 53.5**	**-0.3**
	comp=Z,20nm,1.0s,mb4.3						
ORIF				*e*R			
	comp=Z,426nm,19.0s						
PRU	**Pruhonice**	25.36	100	*e*P	**P**	**22 05 55.1**	**+1.1**
KHC	**Kasperske Hory**	25.52	102	*e*P	**P**	**22 05 57.0**	**+1.5**
DAVOX	**Davos**	25.59	110	LR	LR	22 15 21.2	
	comp=Z,69nm,20.6s,MS3.2,baz=271,slow=35						
UPC	**Upice**	25.69	97	*e*P	**P**	**22 06 00.2**	**+3.2**
GERES	**GERESS Array B**	25.78	102	P	**P**	**22 05 57.7**	**-0.2**
	comp=Z,1.0nm,0.8s,mb3.4,baz=315,slow=5.7,SNR=7.6						
GERES				LR	LR	22 16 02.2	
	comp=Z,177nm,20.4s,MS3.6,baz=3.9,slow=36						
MBDF	**Montbardon**	25.86	117	*e*P	**P**	**22 05 58.8**	**+0.1**
	comp=Z,8.2nm,0.8s,mb4.0						
DPC	**Dobruska-Polom**	25.94	97	*e*P	**P**	**22 06 02.6**	**+3.2**
ESDC	**Sonseca Array**	26.25	138	P	**P**	**22 06 01.8**	**-0.5**
	comp=Z,1.5nm,1.0s,mb3.5,baz=337,slow=9.8,SNR=4.4						
SBF	**Sospel**	26.84	117	*e*P	**P**	**22 06 07.6**	**-0.2**
KWP	**Kalwaria**	29.43	92	*e*P	**P**	**22 06 31.8**	**+0.7**
	comp=Z,7.7nm,0.9s,mb4.4						
KWP	**Kalwaria**	29.43	92	*e*P	**P**	**22 06 31.8**	**+0.7**
	comp=Z,7.7nm,0.9s,mb4.4						
AKASG	**Malin Array Be**	31.76	85	P	**P**	**22 06 51.4**	**-0.3**
	comp=Z,2.0nm,0.8s,mb4.0,baz=314,slow=8.7,SNR=8.9						
MLR	**Muntele Rosu**	33.93	95	LR	LR	22 22 11.6	
	comp=Z,85nm,18.2s,MS3.5,baz=320,slow=38						
SADO	**Sadowa**	34.73	265	P	**P**	**22 07 15.1**	**-2.4**
	comp=Z,6.9nm,0.9s,mb4.6,baz=57,slow=7.7,SNR=4.4						
SADO				LR	LR	22 19 46.2	
	comp=Z,164nm,18.2s,MS3.8,baz=96,slow=34						
VAE	**Valguarnera**	35.09	115	LR	LR	22 21 48.6	
	comp=Z,246nm,18.2s,MS4.0,baz=133,slow=37						
YKA	**Yellowknife Ar**	37.99	311	P	**P**	**22 07 44.8**	**-0.1**
	comp=Z,1.2nm,0.8s,mb3.7,baz=43,slow=9.7,SNR=4.9						
YKA				PcP	PcP	22 09 57.8	-3.3
	comp=Z,1.0nm,0.8s,baz=27,slow=3.0,SNR=3.6						
YKA				LR	LR	22 22 56.3	
	comp=Z,179nm,18.4s,MS3.9,baz=60,slow=36						
YKA	**Yellowknife Ar**	37.99	311	PcP	PcP	22 09 57.8	-3.3
ULM	**Lac du Bonnet**	38.55	285	LR	LR	22 22 18.7	
	comp=Z,114nm,18.6s,MS3.7,baz=17,slow=34						
IDI	**Anoyia**	41.53	106	P	**P**	**22 08 14.0**	**-0.4**
	comp=Z,2.2nm,0.7s,mb3.9,baz=312,slow=15,SNR=3.6						
IDI				LR	LR	22 27 06.6	
	comp=Z,82nm,19.1s,MS3.6,baz=284,slow=38						
BR131	**Keskin Array S**	41.98	94	*e*P	**P**	**22 08 20.4**	**+2.3**
	comp=Z,1.9nm,0.8s,mb3.8						
BR131	**Keskin Array S**	41.98	94	*e*P	**P**	**22 08 20.4**	**+2.3**
	comp=Z,1.9nm,0.8s,mb3.8						
BRTR	**Keskin Array B**	41.98	94	P	**P**	**22 08 19.8**	**+1.7**
	comp=Z,1.5nm,0.8s,mb3.7,baz=315,slow=5.2,SNR=7.3						
WVT	**Waverly**	45.60	265	P	**P**	**22 08 46.1**	**-1.3**
	comp=Z,6.2nm,1.1s,mb4.5						
WVT	**Waverly**	45.60	265	P	**P**	**22 08 46.1**	**-1.3**
	comp=Z,6.2nm,1.1s,mb4.5						
ILAR	**Eielson Array**	45.99	329	P	**P**	**22 08 50.9**	**+0.8**
	comp=Z,1.0nm,0.9s,mb3.7,baz=31,slow=4.6,SNR=7.6						
ILAR				PcP	PcP	22 10 26.3	-1.0
	comp=Z,1.3nm,0.8s,baz=0.8,slow=3.8,SNR=7.9						
ILAR				LR	LR	22 29 17.0	
	comp=Z,61nm,18.3s,MS3.6,baz=356,slow=38						
ILAR	**Eielson Array**	45.99	329	P	**P**	**22 08 50.8**	**+0.7**
ILAR	**Eielson Array**	45.99	329	PcP	PcP	22 10 26.3	-1.0
DLBC	**Dease Lake**	46.22	315	P	**P**	**22 08 52.5**	**+0.5**
	comp=Z,0.7nm,0.3s,mb4.1,baz=49,slow=11,SNR=2.2						
DLBC				LR	LR	22 28 00.3	
	comp=Z,94nm,19.6s,MS3.7,baz=223,slow=36						
DLBC	**Dease Lake**	46.22	315	P	**P**	**22 08 52.5**	**+0.6**
DLBC				LR	LR	22 28 00.2	
IMA	**Indian Mountai**	46.43	333	*e*P	**P**	**22 08 56.2**	**+2.6**
	comp=Z,8.8nm,0.8s,mb4.7						
IMA	**Indian Mountai**	46.43	333	*e*P	**P**	**22 08 56.2**	**+2.7**
	comp=Z,8.8nm,0.8s,mb4.7						
PLAL	**Pickwick Lake**	46.65	264	*e*P	**P**	**22 08 55.4**	**-0.3**
	comp=Z,6.7nm,0.9s,mb4.6						
PLAL	**Pickwick Lake**	46.65	264	*e*P	**P**	**22 08 55.3**	**-0.4**
	comp=Z,6.7nm,0.9s,mb4.6						
GNI	**Garni**	46.87	83	LR	LR	22 29 58.6	
	comp=Z,75nm,18.1s,MS3.7,baz=192,slow=38						
BVAR	**Borovoye Array**	47.93	54	P	**P**	**22 09 07.5**	**+1.9**
	comp=Z,2.8nm,0.9s,mb4.3,baz=315,slow=6.3,SNR=12						
BOZ	**Bozeman (W)**	49.01	292	*e*P	**P**	**22 09 14.8**	**+0.8**
	comp=Z,6.1nm,1.1s,mb4.5						
BOZ	**Bozeman (W)**	49.01	292	*e*P	**P**	**22 09 14.8**	**+0.8**
	comp=Z,6.1nm,1.1s,mb4.5						
NEW	**Newport**	49.30	298	LR	LR	22 29 42.5	
	comp=Z,208nm,18.3s,MS4.2,baz=175,slow=36						
PDAR	**Pinedale Array**	50.37	288	P	**P**	**22 09 23.2**	**-1.2**
	comp=Z,5.0nm,0.8s,mb4.6,baz=53,slow=7.4,SNR=26						
PDAR				LR	LR	22 29 50.0	
	comp=Z,98nm,18.6s,MS3.9,baz=188,slow=35						
PDAR	**Pinedale Array**	50.37	288	P	**P**	**22 09 23.2**	**-1.3**
ISCO	**Idaho Springs**	50.95	283	*e*P	**P**	**22 09 28.9**	**0.0**
	comp=Z,2.5nm,0.8s,mb4.2						
ISCO	**Idaho Springs**	50.95	283	*e*P	**P**	**22 09 28.9**	**0.0**
	comp=Z,2.5nm,0.8s,mb4.2						
WMOK	**Wichita Mounta**	51.88	273	*e*P	**P**	**22 09 35.1**	**-0.9**
	comp=Z,7.6nm,1.0s,mb4.6						
WMOK	**Wichita Mounta**	51.88	273	*e*P	**P**	**22 09 35.1**	**-0.9**
	comp=Z,7.6nm,1.0s,mb4.6						
HWUT	**Hardware Ranch**	52.19	289	*e*P	**P**	**22 09 38.3**	**-0.1**
	comp=Z,5.8nm,1.2s,mb4.4						
HWUT	**Hardware Ranch**	52.19	289	*e*P	**P**	**22 09 38.3**	**0.0**
	comp=Z,5.8nm,1.2s,mb4.4						
ELK	**Elko**	54.52	291	P	**P**	**22 09 55.6**	**+0.2**
	comp=Z,2.4nm,0.8s,mb4.3,baz=24,slow=6.4,SNR=9.9						
MSU	**Marysvale**	54.98	287	*e*P	**P**	**22 09 58.7**	**-0.2**
MSU	**Marysvale**	54.98	287	*e*P	**P**	**22 09 58.7**	**-0.2**
ANMO	**Albuquerque**	55.29	280	P	**P**	**22 10 00.7**	**-0.5**
	comp=Z,1.3nm,0.5s,mb4.2,baz=56,slow=7.0,SNR=4.8						
LAZ	**Ladron**	56.06	280	*e*P	**P**	**22 10 06.9**	**+0.1**
GDL2	**Guadalupe Moun**	56.59	276	*e*P	**P**	**22 10 09.7**	**-0.9**
MKAR	**Makanchi Array**	57.46	51	P	**P**	**22 10 17.2**	**+0.7**
	comp=Z,1.2nm,0.9s,mb3.9,baz=334,slow=5.6,SNR=9.5						
DBIC	**Dimbokro**	57.54	154	LR	LR	22 32 30.8	
	comp=Z,67nm,19.8s,MS3.8,baz=298,slow=34						
NVAR	**Mina Array Bea**	57.76	292	P	**P**	**22 10 17.6**	**-1.3**
	comp=Z,1.3nm,0.8s,mb4.0,baz=52,slow=4.9,SNR=6.4						
NVAR				LR	LR	22 35 25.2	
	comp=Z,140nm,18.1s,MS4.1,baz=270,slow=36						
NVAR	**Mina Array Bea**	57.76	292	P	**P**	**22 10 17.5**	**-1.3**
TXAR	**Lajitas Array**	58.66	274	P	**P**	**22 10 23.4**	**-1.9**

	comp=Z,0.8nm,0.6s,mb3.9,baz=56,slow=4.5,SNR=6.8						
TXAR				LR	LR	22 35 24.3	
	comp=Z,167nm,18.3s,MS4.2,baz=225,slow=36						
WMQ	Urumqi	61.95	49	*e*P	P	22 10 49.0	+1.4
WMQ				AP	pP	22 10 53.6	+4.2
WMQ				XP	sP	22 10 56.0	+6.0
WMQ				PCP	PcP	22 11 28.8	+0.8
WMQ				*e*S	S	22 19 11.9	+1.5
WMQ				SCS	ScS	22 20 36.6	+0.3
WMQ				SS	SS	22 23 15.4	+1.0
WMQ				AMB	AMB		
	comp=Z,10.0nm,4.4s						
SDV	Santo Domingo	62.09	231	P	P	22 10 47.3	-1.6
	comp=Z,3.1nm,0.6s,mb4.6,baz=29,slow=6.3,SNR=5.1						
SONM	Songino Array	64.09	33	P	P	22 11 02.8	+1.4
	comp=Z,1.3nm,0.9s,mb4.0,baz=342,slow=7.8,SNR=6.0						
ULN	Ulaanbaatar	64.23	33	*e*P	P	22 11 05.1	+2.7
	comp=Z,11nm,1.5s,mb4.7						
ULN	Ulaanbaatar	64.23	33	*e*P	P	22 11 05.1	+2.7
	comp=Z,11nm,1.5s,mb4.7						
GTA	Gaotai	69.94	42	*e*P	P	22 11 41.4	+2.8
GTA				AP	pP	22 11 47.1	+6.7
GTA				XP	sP	22 11 50.3	+9.2
BDFB	Brasilia	79.35	201	P	P	22 12 32.5	-0.6
	comp=Z,2.9nm,0.6s,mb4.4,baz=24,slow=7.1,SNR=4.6						
BDFB				LR	LR	22 42 34.3	
	comp=Z,41nm,18.1s,MS3.8,baz=130,slow=32						
LPAZ	La Paz	84.79	220	P	P	22 13 01.0	-0.3
	comp=Z,0.2nm,0.4s,mb3.6,baz=67,slow=1.9,SNR=4.0						
CMAR	Chiang Mai Arr	88.86	51	P	P	22 13 24.1	+3.0
	comp=Z,1.2nm,1.0s,mb4.2,baz=331,slow=5.9,SNR=4.2						
BOSA	Boshof	99.40	136	LR	LR	22 59 09.6	
	comp=Z,74nm,20.2s,MS4.2,baz=206,slow=36						
STKA	Stephens Creek	148.78	20	PKPbc	PKPdf	22 20 12.4	+1.2
	comp=Z,3.8nm,1.1s,baz=31,slow=3.8,SNR=2.9						
QSPA	South Pole Qui	152.01	180	⇑*i*P	PKPdf	22 20 21.3	+6.5

KRSC 07 22:00:39.9±0.5**, 52.65N**×**159.65E, h31**^{km}±4^{km}**, ML3.8, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.50	27	*i* P	Pb	22 00 50.6	+0.2
SPN				*i* S	Sb	22 00 58.6	+1.0
NLC	Nalytchevo	0.55	341	*i* P	Pb	22 00 51.6	+0.4
NLC				*e*S	Sb	22 01 00.6	+1.6
PET	Petropavlovsk	0.71	302	*i* P	Pb	22 00 53.7	-0.1
PET				*e*S	Sb	22 01 03.4	+0.1
RUS	Russkaya	0.73	253	*e*P	Pb	22 00 53.4	-0.6
RUS				*e*S	Sb	22 01 03.7	-0.1
UGLR	Uglovaya	0.75	319	*i* P	Pn	22 00 54.8	+0.4
UGLR				*e*S	Sb	22 01 05.9	+1.5
AVH	Avacha	0.83	319	*i* P	Pn	22 00 56.0	+0.5
AVH				*e*S	Sb	22 01 07.4	+0.8
KOK	Koryaka	0.89	317	*i* P	Pn	22 00 56.7	+0.3
GRL	Gorelyy	0.97	265	*e*P	Pn	22 00 57.8	+0.3
GRL				*e*S	Sn	22 01 10.4	+0.2
KII	Karymskiy	1.39	355	*e*P	Pn	22 01 03.6	0.0
KII				*e*S	Sn	22 01 21.0	-0.1
GNL	Ganaly	1.47	316	*i* P	Pn	22 01 05.4	+0.8
GNL				*e*S	Sn	22 01 24.4	+1.5
APC	Apacha	1.54	281	*i* P	Pn	22 01 06.3	+0.7
APC				*e*S	Sn	22 01 26.2	+1.5
APC				Smax			
	80nm,0.9s						
PAU	Pauzhetka	2.12	237	*e*P	Pn	22 01 15.0	+1.1
PAU				*e*S	Sn	22 01 40.8	+1.4
MKZ	Mys Kozlova	2.28	32	*e*P	Pn	22 01 15.2	-1.0
MKZ				*e*S	Sn	22 01 40.0	-3.5
TUMR	Tumrok	2.66	6	*e*P	Pn	22 01 22.0	+0.4
TUMR				*e*S	Sn	22 01 52.2	-0.9
ALID	Alaid	3.11	237	*e*P	Pn	22 01 28.6	+0.5
KMNR	Kamenistaya	3.13	6	*e*P	Pn	22 01 28.9	+0.5
ESO	Esso	3.33	351	P	Pn	22 01 31.4	+0.2
KPT	Kopyto	3.34	6	P	Pn	22 01 32.2	+0.9
KRSR	Krestovskiy	3.61	8	*e*P	Pn	22 01 35.6	+0.4
KBTR	Krutoberegovo	4.02	26	*e*P	Pn	22 01 40.9	-0.1
KBTR				*e*S	Sn	22 02 26.4	-1.2
BKI	Bering	4.53	53	*e*S	Sn	22 02 34.0	-6.5

IDC 07 22:16:45.7±1.5**, 1.46N**×**123.13E, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.5**/19**, mbtmp3.6**/3**, Error ellipse: s-maj=189.6km s-min=26.2km az=64.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.94	153	P	P	22 22 01.5	-1.2
	0.8nm,1.0s,baz=336,slow=9.9,SNR=7.4						
SONM	Songino Array	48.42	345	P	P	22 25 30.7	-0.9
	0.8nm,0.8s,baz=164,slow=9.0,SNR=3.6						
MKAR	Makanchi Array	57.45	328	P	P	22 26 36.0	-2.8
	0.5nm,0.6s,baz=128,slow=8.2,SNR=7.2						

DJA 07 22:24:50.2±1.2**, 9.58S**×**113.50E, h30**^{km}±5^{km}**, MD4.9**/3**, ML4.4**/2**, 1C-5D, Error ellipse: s-maj=28.1km s-min=22.1km az=65.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KELI	Kelakatan	1.67	36	⇓*i*Pn	Pn	22 25 15.9	-2.1
	147nm,0.2s						
KELI	Kelakatan	1.67	36	⇓*i*P	Pn	22 25 18.0	0.0
KELI				⇓*i*Sn	Sn	22 25 36.5	-2.1
RATI	Rata	2.18	67	⇓*i*Pn	Pn	22 25 23.9	-1.4
	429nm,0.2s						
RATI				⇓*i*Sn	Sn	22 25 46.7	-4.8
KEDI	Kedomdong	2.80	67	⇑*i*Pn	Pn	22 25 32.1	-2.0

CSEM ***07*** *22:42:12.6±0.4, 51.47N×16.14E, h2^{km}, ML2.6/2, Error ellipse: s-maj=6.1km s-min=2.5km az=23.0*
PRU ***07*** *22:42:13.0, 51.44N×16.13E*
NEIC ***07*** *22:42:14.1±2.2, 51.36N×16.06E, h5^{km}, ML2.7(VIE), Error ellipse: s-maj=23.6km s-min=10.2km az=204.0*
WAR 07 22:42:13.5, 51.45N×**16.08E, h1**^{km}**, ML2.1, 1C, Mining Induced, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.62	168	*e*PG	Pg	22 42 25.0	-1.0
KSP				*e*SG	Sg	22 42 33.0	-1.3
UPC	Upice	0.95	183	*e*PG	Pg	22 42 31.0	-1.4
DPC	Dobruska-Polom	1.11	172	*e*PG	Pg	22 42 33.5	-2.3
DPC				*e*SG	Sg	22 42 47.8	-2.8
	6.8nm,0.3s						
PVCC	Panska Ves	1.33	227	*e*PG	Pg	22 42 38.3	-1.8
BRG	Berggiesshubel	1.47	248	*e*Pg	Pg	22 42 40.6	-2.2
BRG				*e*Sg	Sg	22 43 00.7	-1.6
PRU	Pruhonice	1.76	214	*e*PG	Pg	22 42 44.3	-4.4
PRU				*e*SG	Sg	22 43 08.6	-3.6
MORC	Moravsky Berou	1.92	150	Pn	Pn	22 42 46.7	-0.9
MORC				*e*Pg	Pg	22 42 50.0	-1.8
MORC				*e*Sn	Sn	22 43 10.6	-2.1
MORC	Moravsky Berou	1.92	150	*e*Pn	Pn	22 42 46.2	-1.4
MORC	Moravsky Berou	1.92	150	*e*Pg	Pg	22 42 50.0	-1.8
MORC				*e*Sg	Sg	22 43 14.0	-3.4
OKC	Ostrava-Krasne	2.08	140	*e*SG	Sg	22 43 17.7	-5.2
VRAC	Vranov	2.17	171	*e*Sg	Sg	22 43 21.3	-4.5
NKC	Novy Kostel	2.61	243	*e*SG	Sg	22 43 35.8	-4.5
KHC	Kasperske Hory	2.83	216	*e*PN	Pn	22 42 59.2	-1.4
KHC				*e*PG	Pg	22 43 04.9	-5.0
KHC				*e*SN	Sn	22 43 33.4	-2.4
KHC				*e*SG	Sg	22 43 42.5	-5.1
KHC	Kasperske Hory	2.83	216	Pg	Pg	22 43 04.9	-5.0
KHC				Sg	Sg	22 43 42.5	-5.1
MOX	Moxa	2.93	256	*e*Pg	Pg	22 43 08.3	-3.7
MOX				*e*Sg	Sg	22 43 47.9	-3.2
MOA	Molln	3.79	199	⇑*i*PN	Pn	22 43 11.1	-3.3
MOA				*i* SG	Sg	22 44 15.3	-4.6
	1.7nm,0.3s						

IDC ***07*** *22:50:52.4±1.1, 49.65N×126.88W, mb3.5/1, mb1 3.9/6, mb1mx3.5/22, mbtmp3.5/6, ML3.3/4, MS3.0/4, Ms1 3.0/4, ms1mx2.6/23, Error ellipse: s-maj=42.2km s-min=6.6km az=67.0*
PGC ***07*** *22:50:53.2, 49.48N×127.24W, h33^{km}±8^{km}, ML3.6/33, Mw4.1/7, Southwest of Nootka Island, British Columbia*
NEIC ***07*** *22:50:53.0, 49.48N×127.24W, h33^{km}, mb3.4/1, MW4.0(PGC), After PGC.*
ISC 07 22:50:53.1±0.4**, 49.53N**±0.03×**127.24W**±0.04**, h33**^{km}**, n54, σ1**$\overset{s}{.}$**21**/88**, mb3.1**/1**, 1C-3D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDB	Eliza Dome	0.35	13	P	P	22 51 01.6	0.0
EDB				S	S	22 51 07.7	+0.1
EDB				Trac		22 51 08.0	
	comp=Z,7μm,0.1s						
ETB	Estevan Point	0.48	108	P	P	22 51 02.4	-1.0
ETB				S	S	22 51 09.6	-1.1
ETB				Trac		22 51 10.1	
	comp=Z,14μm,0.2s						
BPBC	Brooks Peninsu	0.72	332	⇑P	P	22 51 07.2	+0.4
BPBC				S	S	22 51 17.9	+1.2
BPBC				Trac		22 51 18.3	
	comp=Z,934nm,0.2s						
WOSB	Woss	0.77	34	⇓P	P	22 51 07.7	+0.2
WOSB				S	S	22 51 18.6	+0.6
WOSB				Trac		22 51 18.7	
	comp=Z,2μm,0.3s						
GDR	Gold River	0.82	72	⇓P	P	22 51 07.5	-0.8
GDR				S	S	22 51 18.7	-0.7
GDR				Trac		22 51 20.3	
	comp=Z,689nm,0.2s						
MAYB	Maynard	0.88	3	P	P	22 51 09.7	+0.7
MAYB				S	S	22 51 21.6	+0.8
MAYB				Trac		22 51 24.5	
	comp=Z,876nm,0.4s						
BTB	Buttle Lake	1.12	92	⇑P	P	22 51 11.8	-0.7
BTB				S	S	22 51 26.3	-0.8
BTB				Trac		22 51 28.7	
	comp=Z,2μm,0.4s						
NCRB	Newcastle Ridg	1.16	41	⇓P	P	22 51 13.8	+0.6
NCRB				S	S	22 51 29.5	+1.4
NCRB				Trac		22 51 45.8	
	comp=Z,478nm,0.4s						
PHC	Port Hardy	1.19	354	⇑P	P	22 51 14.3	+0.9
PHC				S	S	22 51 29.1	+0.4
PHC				Trac		22 51 41.9	
	comp=Z,895nm,0.6s						
HOLB	Holberg	1.25	333	⇑P	P	22 51 14.9	+0.5
HOLB				S	S	22 51 30.6	+0.3
HOLB				Trac		22 51 31.7	
	comp=Z,233nm,0.2s						
OZB	Mount Ozzard	1.28	116	⇑P	P	22 51 13.2	-1.5
OZB				S	S	22 51 30.8	-0.2
OZB				Trac		22 51 39.5	
	comp=Z,1μm,0.3s						
CBB	Campbell River	1.32	67	P	P	22 51 15.2	-0.1
CBB				S	S	22 51 32.4	+0.4
CBB				Trac		22 51 37.6	
	comp=Z,416nm,0.5s						
ALB	Alberni	1.59	98	P	P	22 51 19.9	+0.6
ALB				S	S	22 51 40.0	+1.0
ALB				Trac		22 51 42.9	
	comp=Z,400nm,0.2s						
MGB	Mount Grey	1.75	107	P	P	22 51 19.9	-1.7
MGB				S	S	22 51 45.1	+2.2
MGB				Trac		22 51 52.6	
	comp=Z,334nm,0.4s						
TXB	Texada	1.83	84	P	P	22 51 22.2	-0.5
TXB				S	S	22 51 44.0	-0.9
TXB				Trac		22 51 51.3	
	comp=Z,445nm,0.3s						
PFB	Port Renfrew	2.08	116	P	P	22 51 24.7	-1.5
PFB				S	S	22 51 49.0	-2.1
PFB				Trac		22 52 04.6	
	comp=Z,284nm,0.6s						
NLLB	Nanaimo Lost L	2.15	97	P	P	22 51 27.2	0.0
NLLB				S	S	22 51 51.3	-1.7
NLLB				Trac		22 52 02.3	
	comp=Z,212nm,0.4s						
SHB	Sechelt	2.19	87	P	P	22 51 27.9	0.0
SHB				S	S	22 51 53.4	-0.7
SHB				Trac		22 52 02.7	
	comp=Z,445nm,0.2s						
LZB	Mount Lazard	2.43	111	P	P	22 51 30.5	-0.8
LZB				S	S	22 51 59.6	-0.5
LZB				Trac		22 52 11.1	
	comp=Z,82nm,0.5s						
GOBB	Galiano Island	2.51	102	P	P	22 51 33.0	+0.6
GOBB				S	S	22 52 03.5	+1.3
GOBB				Trac		22 52 17.4	
	comp=Z,173nm,0.4s						
BIB	Bowen Island	2.57	91	P	P	22 51 35.4	+2.1
BIB				S	S	22 52 01.3	-2.3
BIB				Trac		22 52 14.3	
	comp=Z,92nm,0.3s						
WPB	Watts Point	2.62	86	P	P	22 51 34.4	+0.3
WPB				S	S	22 52 06.1	+1.0
WPB				Trac		22 52 20.1	
	comp=Z,340nm,0.6s						
PGC	Sidney	2.64	108	P	P	22 51 36.5	+2.2
PGC				S	S	22 52 06.4	+0.9
PGC				Trac		22 52 20.2	
	comp=Z,211nm,0.7s						
OCWA	Octopus Mounta	2.70	130	*e*P	P	22 51 33.9	-1.2
BBB	Bella Bella	2.72	349	Pn	P	22 51 36.0	+0.6
	1.3nm,0.3s,baz=241,slow=8.9,SNR=1.9						
BBB				Pg	P	22 51 40.2	+4.8
	11nm,0.3s,baz=191,slow=12,SNR=9.0						
BBB				Sn	S	22 52 06.8	-0.6
	15nm,0.3s,baz=201,slow=16,SNR=2.8						
BBB				Lg		22 52 16.1	
	18nm,0.3s,baz=73,slow=22,SNR=3.9						
BBB	Bella Bella	2.72	349	Pn	P	22 51 36.0	+0.6
BBB				Pg	P	22 51 40.2	+4.8
BBB				Sn	S	22 52 06.8	-0.6
BBB				Lg		22 52 16.1	
BBB	Bella Bella	2.72	349	P	P	22 51 35.9	+0.5
BBB				S	S	22 52 06.3	-1.2
BBB				Trac		22 52 30.4	
	comp=Z,347nm,0.9s						
SNB	Saturna Island	2.77	104	P	P	22 51 37.0	+0.8
SNB				S	S	22 52 08.4	-0.5
SNB				Trac		22 52 27.8	
	comp=Z,152nm,0.6s						
VGZ	Gonzales	2.81	112	P	P	22 51 37.2	+0.5
VGZ				S	S	22 52 05.5	-4.4
VGZ				Trac		22 52 27.1	
	comp=Z,101nm,0.6s						
WSLR	Whistler	2.86	76	P	P	22 51 37.6	+0.2
WSLR				S	S	22 52 12.3	+1.3
WSLR				Trac		22 52 29.7	
	comp=Z,131nm,0.8s						
HNB	Haney	3.05	93	P	P	22 51 40.7	+0.5
HNB				S	S	22 52 13.7	-2.3
HNB				Trac		22 52 32.1	
	comp=Z,156nm,0.5s						
VDB	Vedder Mountai	3.40	97	P	P	22 51 45.4	+0.2
VDB				Trac		22 52 43.6	
	comp=Z,41nm,0.5s						
LLLB	Lillooet	3.62	71	P	P	22 51 47.7	-0.5
LLLB				Trac		22 52 48.1	
	comp=Z,87nm,0.7s						
HOPB	Hope	3.80	90	P	P	22 51 50.6	-0.2
HOPB				S	S	22 52 31.1	-3.9
BNB	Barry Inlet	4.17	319	P	P	22 51 55.2	-0.9
BNB				S	S	22 52 42.1	-2.4
BNB				Trac		22 52 45.2	
	comp=Z,335nm,0.2s						
MOBC	Moresby Island	4.69	323	P	P	22 52 01.9	-1.6
MOBC				S	S	22 52 53.4	-4.1
MOBC				Trac		22 53 01.4	
	comp=Z,17nm,0.7s						
PNT	Penticton	4.98	90	Trac		22 53 39.7	
	comp=Z,52nm,0.8s						
VIB	Van Inlet	4.99	320	P	P	22 52 06.1	-1.7
VIB				S	S	22 53 00.9	-4.1
VIB				Trac		22 53 05.2	
	comp=Z,7.0nm,0.3s						
RUBB	Prince Rupert	5.15	340	P	P	22 52 10.6	+0.6
RUBB				S	S	22 53 07.0	-2.1
RUBB				Trac		22 53 46.4	
	comp=Z,42nm,0.6s						
NDB	Naden	5.67	324	P	P	22 52 15.8	-1.4
NDB				S	S	22 53 16.9	-5.2
NDB				Trac		22 53 23.0	
	comp=Z,7.0nm,0.3s						
SLEB	Sale Mountain	6.06	71	Trac		22 54 08.0	
	comp=Z,33nm,0.9s						
NEW	Newport	6.79	97	Lg		22 54 19.8	
	0.3nm,0.3s,baz=126,slow=7.5,SNR=3.2						
HUMO	Hull Mountain	7.53	155	*e*P	P	22 52 44.6	+1.3
BMO	Blue Mountains	8.22	121	P	P	22 52 51.1	-1.9
YBH	Yreka Blue Hor	8.42	156	Pn	P	22 52 58.1	+2.5
	0.8nm,0.3s,baz=355,slow=8.6,SNR=18						
YBH				LR	LR	22 55 43.3	
	comp=Z,33nm,20.7s,baz=258,slow=34						
DLBC	Dease Lake	9.08	351	LR	LR	22 56 28.3	
	comp=Z,64nm,19.0s,baz=133,slow=37						
WDC	Whiskeytown Da	9.54	158	*e*P	P	22 53 09.4	-1.8
ELK	Elko	12.19	132	Pn	P	22 53 49.0	+1.8
	0.1nm,0.3s,baz=303,slow=14,SNR=4.2						
NVAR	Mina Array Bea	12.81	147	Pn	P	22 53 57.8	+2.2
	0.1nm,0.3s,baz=323,slow=12,SNR=14						
PDAR	Pinedale Array	13.98	112	Pn	P	22 54 12.6	+1.7
	0.1nm,0.3s,baz=320,slow=12,SNR=3.0						
MSU	Marysvale	15.42	130	P	P	22 54 31.1	+1.5
FFC	Flin Flon	16.32	62	P	P	22 54 41.1	+0.1
	2.6nm,0.8s						
ILAR	Eielson Array	18.49	333	P	P	22 55 10.7	+2.5
	baz=139,slow=9.6,SNR=1.2						
TXAR	Lajitas Array	26.97	130	P	P	22 56 36.2	+2.6
	0.2nm,0.3s,mb3.1,baz=339,slow=7.7,SNR=2.0						

FUNV ***07*** *22:58:04.1, 11.10N×61.80W, h88^{km}, MW2.4*
TRN ***07*** *22:58:07.4, 11.26N×61.75W, h11^{km}, MD3.4*
NEIC ***07*** *22:58:07.4, 11.26N×61.75W, h10^{km}, MD3.4(TRN), After TRN.*
ISC 07 22:58:03.7±1.1**, 11.13N**±0.04×**61.91W**±0.04**, h92**^{km}±11^{km}**, n13, σ1**$\overset{s}{.}$**13**/25**, 1C, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	Guiria	0.57	212	*e*P	P	22 58 19.2	-0.1
GUIV				*e*S	S	22 58 30.3	-0.6
TRN	Trinidad (W)	0.69	134	⇑*e*P	P	22 58 21.3	+0.8
TRN				*e*S	S	22 58 32.0	-1.1
TPP	Pointe-a-Pierr	0.93	151	*e*P	P	22 58 26.5	+3.6
TPP				*e*S	S	22 58 40.7	+3.4
GRW	Mount Saint Ca	1.05	14	*e*P	P	22 58 25.1	+0.7
GRW				*e*S	S	22 58 37.9	-2.1
TPR	Prospect	1.12	87	*e*P	P	22 58 25.7	+0.5
TPR				*e*S	S	22 58 39.8	-1.5
GRHS	Sauteurs	1.12	14	*e*P	P	22 58 25.7	+0.5
GRHS				*e*S	S	22 58 40.4	-0.9
GRIC	Isle de Caille	1.19	16	*e*P	P	22 58 26.8	+0.6
GRIC				*e*S	S	22 58 43.0	+0.1
GRSS	Sisters	1.20	14	*e*P	P	22 58 27.3	+1.0
GRSS				*e*S	S	22 58 43.6	+0.6
ITEV	Isla Los Testi	1.22	281	*e*P	P	22 58 27.4	+0.9
ITEV				*e*S	S	22 58 44.3	+0.9
CRUV	Carupano	1.38	251	*e*P	P	22 58 28.6	+0.2
CRUV				*e*S	S	22 58 46.8	+0.1
GUNV	Guanoco	1.40	227	*e*P	P	22 58 28.9	+0.2
GUNV				*e*S	S	22 58 47.5	+0.3
BIRV	Birongo	4.33	262	*e*S	S	22 59 54.9	-3.3
CAOV	Caicara del Or	5.76	229	*e*P	P	22 59 26.1	-2.1
CAOV				*e*S	S	23 00 27.3	-6.3

DJA 07 23:01:27.0±1.0**, 7.73S**×**107.19E, h100**^{km}**, MD4.6**/1**, ML4.9**/2**, 3C-1D, Error ellipse: s-maj=48.4km s-min=23.6km az=44.0, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PULI	Pulasari	1.83	319	⇑*i*Pn	P	23 01 58.1	+0.3
	1μm,0.2s						
PULI				⇑*i*Sn	S	23 02 17.6	-3.0
PASI	Pasiripis	1.89	303	*e*Pn	P	23 01 57.9	-0.8
PASI				*e*Sn	S	23 02 21.5	-0.6
PENI	Pendagan	2.94	317	⇑*i*Pn	P	23 02 11.8	-1.1
	260nm,0.2s						
PENI				⇓*i*Sn	S	23 02 46.8	-0.6

IDC ***07*** *23:03:37.6±1.1, 61.82N×26.60W, mb3.8/11, mb1 4.0/12, mb1mx3.8/27, mbtmp3.8/12, ML3.4/1, MS3.3/9, Ms1 3.3/9, ms1mx3.1/33, Error ellipse: s-maj=46.0km s-min=15.9km az=180.0*
NEIC ***07*** *23:03:39.0±0.8, 61.70N×26.61W, h10^{km}, mb3.8/1, Error ellipse: s-maj=22.3km s-min=11.1km az=194.0*
CSEM ***07*** *23:03:39.0±0.2, 61.70N×26.61W, h10^{km}, mb3.8/1, Error ellipse: s-maj=9.9km s-min=5.5km az=22.0, After NEIC*
ISC 07 23:03:37.1±0.7**, 61.8N**±0.1×**26.6W**±0.2**, h10**^{km}**, n21, σ1**$\overset{s}{.}$**20**/14**, mb3.8**/12**, MS3.3**/6**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUMG	Summit	11.78	342	P	P	23 06 27.1	-0.8
EKA	Eskdalemuir Ar	13.76	107	Pn	P	23 06 52.7	-1.6
	0.1nm,0.3s,baz=308,slow=14,SNR=5.8						
NOA	NORSAR Array B	17.95	75	LR	LR	23 14 11.1	
	comp=Z,32nm,20.1s,baz=300,slow=35						
FRB	Frobisher Bay	19.07	294	LR	LR	23 14 37.0	
	comp=Z,148nm,19.2s,baz=152,slow=35						
HFS	Hagfors	19.41	77	LR	LR	23 14 55.6	
	comp=Z,59nm,18.6s,baz=297,slow=35						
DAVOX	Davos	25.59	109	LR	LR	23 18 21.2	
	comp=Z,21nm,19.7s,MS2.7,baz=87,slow=34						
GERES	GERESS Array B	25.83	101	LR	LR	23 19 43.5	
	comp=Z,47nm,18.5s,MS3.0,baz=195,slow=37						
AKASG	Malin Array Be	31.91	84	P	P	23 10 03.1	-1.4
	0.8nm,0.7s,mb3.6,baz=313,slow=8.4,SNR=4.6						
YKA	Yellowknife Ar	38.13	311	LR	LR	23 26 35.0	
	comp=Z,45nm,18.2s,MS3.3,slow=36						
ARU	Arti	41.09	57	*e*P	P	23 11 25.0	+2.9
	1.3nm,0.6s,mb3.7						
BRTR	Keskin Array B	42.09	93	P	P	23 11 32.2	+1.8
	0.6nm,0.5s,mb3.5,baz=307,slow=7.2,SNR=3.6						
ILAR	Eielson Array	46.23	329	P	P	23 12 03.6	+0.2
	0.3nm,0.6s,mb3.4,baz=36,slow=6.6,SNR=4.1						
ILAR				PcP	PcP	23 13 37.5	-2.1
	0.4nm,0.7s,slow=3.6,SNR=4.2						
ILAR				LR	LR	23 34 06.5	
	comp=Z,43nm,19.6s,MS3.4,slow=40						
BVAR	Borovoye Array	48.24	53	P	P	23 12 19.6	+0.3
	1.8nm,0.9s,mb4.1,baz=333,slow=6.4,SNR=7.6						
PDAR	Pinedale Array	50.37	288	P	P	23 12 35.0	-0.9
	2.0nm,0.8s,mb4.2,baz=54,slow=6.5,SNR=15						
PDAR				LR	LR	23 33 56.7	
	comp=Z,54nm,18.2s,MS3.6,baz=326,slow=36						
ELK	Elko	54.53	291	P	P	23 13 07.9	+0.9
	0.4nm,0.3s,mb3.9,baz=29,slow=5.6,SNR=6.3						
ANMO	Albuquerque	55.23	280	P	P	23 13 12.7	+0.5
	0.9nm,0.7s,mb3.9,baz=28,slow=5.1,SNR=4.1						
MKAR	Makanchi Array	57.77	50	P	P	23 13 30.5	+0.3
	0.8nm,0.8s,mb3.8,baz=320,slow=6.7,SNR=8.1						
NVAR	Mina Array Bea	57.78	292	LR	LR	23 39 24.4	
	comp=Z,49nm,18.4s,MS3.6,baz=225,slow=37						
TXAR	Lajitas Array	58.56	274	P	P	23 13 35.4	-0.6
	0.4nm,0.5s,mb3.8,baz=72,slow=4.0,SNR=4.5						
SONM	Songino Array	64.45	33	P	P	23 14 13.6	-1.7
	0.9nm,0.9s,mb3.8,baz=323,slow=5.5,SNR=5.9						
CMAR	Chiang Mai Arr	89.18	51	P	P	23 16 35.5	+1.5
	1.2nm,1.0s,mb4.2,baz=312,slow=6.1,SNR=5.3						

NDI 07 23:04:17.9±4.0**, 17.36N**×**73.78E, h5**^{km}±12^{km}**, ML3.4, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAD	Karad	0.39	98	*e*P	Pg	23 04 25.5	-0.3
KAD				*e*S	Sg	23 04 31.6	+0.5
KAD				AML	AML	23 04 31.9	
	comp=E,989nm,0.2s						
KAD				AML	AML	23 04 32.3	
	comp=N,637nm,0.1s						
POO	Poona	1.16	3	*e*P	Pb	23 04 40.5	+0.4
POO				*e*S	Sb	23 04 56.6	+1.2
POO				AML	AML	23 05 01.9	
	comp=E,507nm,0.2s						
POO				AML	AML	23 05 02.3	
	comp=N,587nm,0.4s						
BOM	Bombay	1.78	329	*e*P	Pn	23 04 50.0	+0.3
BOM				*e*S	Sn	23 05 13.1	+0.2
BOM				AML	AML	23 05 17.6	
	comp=N,684nm,0.1s						
BOM				AML	AML	23 05 17.8	
	comp=E,453nm,0.3s						
LATR	Latur	2.85	68	*e*PB	Pb	23 05 06.8	-2.2

LATR				eSB	Sb	23 05 46.5	+2.1
AKL	**Akola**	4.52	42	ex	Sn	23 06 19.8	-2.6
AKL				ex	x	23 06 41.5	
NGP	**Nagpur**	6.25	52	eP	Pn	23 05 51.4	-1.7
NGP				eS	Sn	23 06 59.4	-6.4
BHPL	**Bhopal**	6.78	30	eP	Pn	23 05 57.7	-2.8
BHPL				eS	Sn	23 07 08.9	-10
BHPL				AML	AML	23 07 55.0	
	comp=N,33nm,0.3s						
BHPL				AML	AML	23 07 55.3	
	comp=E,50nm,0.3s						
VIS	**Vishakhapatnam**	9.12	86	eS	Sn	23 08 05.0	-12
VIS				AML	AML	23 09 01.1	
	comp=N,30nm,0.6s						
VIS				AML	AML	23 09 03.3	
	comp=E,25nm,0.6s						
BLSP	**Bilaspur**	9.19	58	eP	P	23 06 29.4	-4.8
BLSP				ex	x	23 08 03.2	
BLSP				AML	AML	23 09 10.9	
	comp=N,52nm,0.3s						
BLSP				AML	AML	23 09 11.5	
	comp=E,29nm,0.6s						
NDI	**New Delhi**	11.70	15	ex	x	23 09 34.0	
NDI				ex	x	23 10 30.0	

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*TAP **07** 23:23:41.4, 24.31N×122.92E, h39^{km}±1^{km}, ML4.2*

JMA 07 23:23:41.4±0.1**, 24.37N×122.99E, h48**^{km}±1^{km}**, M3.4, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	0.09	12	P	P	23 23 48.9	0.0
YOJ				S	S	23 23 54.2	-0.1
IRIF	**Iriomote-Funau**	0.68	93	P	P	23 23 54.5	-0.3
IRIF				S	S	23 24 04.7	+0.1
HATJ	**Hateruma jima**	0.81	113	P	P	23 23 56.5	-0.1
HATJ				S	S	23 24 08.1	+0.4
JKRS	**Kuro-shima**	0.94	98	P	P	23 23 58.6	+0.2
JKRS				S	S	23 24 11.6	+0.6
JIJ	**Ishigaki jima**	1.05	90	P	P	23 23 59.8	-0.2
JIJ				S	S	23 24 13.1	-0.7
JTJ	**Tarama**	1.58	80	P	P	23 24 07.7	+0.1
JTJ				S	S	23 24 27.1	+0.1
JMJ	**Miyako jima 2**	2.14	78	S	S	23 24 41.3	+0.4
JOGS	**Gusukube**	2.23	79	eS	S	23 24 45.0	+1.8

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*IDC **07** 23:38:45.6±0.9, 18.85S×65.59E, mb4.0/11, mb1 4.2/12, mb1mx4.0/23, mbtmp4.0/12, ML3.4/1, MS3.7/9, Ms1 3.7/9, ms1mx3.5/22, Error ellipse: s-maj=30.0km s-min=18.9km az=54.0*

*NEIC **07** 23:38:47.1±0.5, 18.89S×65.55E, h10^{km}, mb4.6/3, Error ellipse: s-maj=14.5km s-min=11.3km az=203.0*

ISC 07 23:38:45.2±0.7**, 18.9S**±0.1×**65.6E**±0.1**, h10**^{km}**, n26, σ0^{s}55**/18**, mb4.2**/13**, MS3.8**/9**, Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	17.42	268	P	P	23 42 50.0	-0.2
	0.1nm,0.3s,baz=90,slow=20,SNR=2.2						
KMBO	**Kilima Mbogo**	32.89	299	LR	LR	23 56 01.8	
	comp=Z,125nm,19.6s,MS3.6,baz=90,slow=32						
BOSA	**Boshof**	38.01	247	LR	LR	23 58 05.1	
	comp=Z,110nm,19.6s,MS3.7,baz=45,slow=30						
KULM	**Kulim**	42.07	59	eP	P	23 46 44.2	+5.0
MAW	**Mawson**	48.75	181	LR	LR	00 02 14.8	
	comp=Z,112nm,18.4s,MS3.9,baz=244,slow=29						
CMAR	**Chiang Mai Arr**	49.49	43	P	P	23 47 38.5	+0.3
	1.1nm,0.5s,mb4.2,baz=240,slow=8.2,SNR=5.9						
AAK	**Ala-Archa**	61.74	7	P	P	23 49 07.0	+0.8
	3.1nm,0.7s,mb4.5						
GNI	**Garni**	61.84	342	P	P	23 49 07.9	+1.0
	4.0nm,0.8s,mb4.6,baz=302,slow=12,SNR=5.0						
GNI	**Garni**	61.84	342	P	P	23 49 07.9	+1.0
ASAR	**Alice Springs**	63.33	108	P	P	23 49 16.8	-0.3
	3.0nm,0.8s,mb4.5,baz=267,slow=6.2,SNR=24						
WRA	**Warramunga Arr**	64.43	104	P	P	23 49 24.2	-0.2
	4.4nm,0.8s,mb4.5,baz=262,slow=5.8,SNR=18						
WRAB	**Tennant Creek**	64.44	104	eP	P	23 49 24.5	0.0
	7.9nm,0.8s,mb4.8						
WRAB				e		23 49 30.4	
BRTR	**Keskin Array B**	65.47	333	P	P	23 49 31.2	+0.3
	0.4nm,0.7s,mb3.6,baz=146,slow=5.2,SNR=3.3						
SNAA	**Sanae**	65.47	199	LR	LR	00 12 08.8	
	comp=Z,33nm,19.3s,MS3.5,baz=76,slow=31						
IDI	**Anoyia**	66.26	324	LR	LR	00 15 56.0	
	comp=Z,20nm,21.4s,MS3.3,baz=254,slow=34						
MKAR	**Makanchi Array**	67.07	12	P	P	23 49 40.3	-0.6
	1.0nm,0.9s,mb3.9,baz=180,slow=4.9,SNR=6.5						
STKA	**Stephens Creek**	68.68	118	LR	LR	00 13 17.5	
	comp=Z,92nm,21.0s,MS4.0,baz=26,slow=30						
BVAR	**Borovoye Array**	71.71	3	P	P	23 50 08.4	-0.9
	1.1nm,0.7s,mb3.9,baz=169,slow=7.6,SNR=7.6						
VNDA	**Vanda**	73.07	167	P	P	23 50 17.4	+0.5
	0.5nm,0.6s,mb3.6,baz=254,slow=5.6,SNR=4.4						
VNDA	**Vanda**	73.07	167	eP	P	23 50 17.4	+0.5
	0.7nm,0.7s,mb3.7						
DBIC	**Dimbokro**	73.86	283	LR	LR	00 18 07.7	
	comp=Z,68nm,21.7s,MS3.9,baz=146,slow=32						
ZAL	**Zalesovo**	74.36	12	P	P	23 50 24.3	-0.5
	1.1nm,0.2s,mb4.3,baz=310,slow=5.0,SNR=6.9						
ZAL	**Zalesovo**	74.36	12	P	P	23 50 24.3	-0.5
SONM	**Songino Array**	75.80	27	P	P	23 50 33.6	+0.4
	1.9nm,0.8s,mb4.1,baz=218,slow=6.1,SNR=17						
SONM				LR	LR	00 22 32.7	
	comp=Z,73nm,21.4s,MS4.0,baz=80,slow=35						
AKASG	**Malin Array Be**	76.29	337	P	P	23 50 35.3	-0.6
	0.2nm,0.4s,mb3.4,baz=139,slow=4.7,SNR=5.0						
GERES	**GERESS Array B**	81.67	328	LR	LR	00 22 57.0	
	comp=Z,72nm,20.7s,MS4.0,baz=195,slow=32						

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*MAN **07** 23:52:21.8, 7.67N×126.50E, h1^{km}, mb5.2, ML4.1, MS4.3*

MAN Compostela Compostela Valley - Intensity III Mati Davao Oriental Intensity III.

*NEIC **07** 23:52:24.4±1.7, 7.55N×126.64E, h82^{km}±15^{km}, mb4.4/7, Error ellipse: s-maj=12.2km s-min=6.4km az=66.0*

*IDC **07** 23:52:26.6±2.2, 7.51N×126.56E, h101^{km}±19^{km}, mb4.2/28, mb1 4.3/29, mb1mx4.3/32, mbtmp4.5/29, MS3.4/4, Ms1 3.4/4, ms1mx3.2/23, Error ellipse: s-maj=19.0km s-min=7.5km az=67.0*

ISC 07 23:52:22.8±0.6**, 7.49N**±0.04×**126.64E**±0.06**, h81**^{km}±5^{km}**, n75, σ0^{s}96**/78**, mb4.4**/36**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	0.66	215	eP	P	23 52 36.1	-2.2
MATI				eS	S	23 52 45.7	-4.1
KCP	**Kidapawan**	1.60	253	⇓eP	P	23 52 50.2	+0.2
KCP				i S	S	23 53 10.0	-0.1
BUKP	**Musuan**	1.61	284	eP	P	23 52 50.6	+0.6
BUTP	**Butuan**	1.78	326	eP	P	23 52 53.7	+1.4
CGP	**Cagayan de Oro**	2.15	297	⇑eP	P	23 52 58.0	+0.6
CGP				eS	S	23 53 27.3	+4.3
MSLP	**Maasin**	3.16	326	eP	P	23 53 11.8	+0.3
PAGZ	**Pagadian**	3.24	277	eP	P	23 53 12.8	+0.2
TBP	**Tagbilaran**	3.51	309	eP	P	23 53 16.7	+0.3
TBP				eS	S	23 53 56.1	-0.8
LLP	**Lapu-Lapu**	3.85	317	eP	P	23 53 21.8	+0.7
LLP				eS	S	23 54 04.5	-0.9
PLP	**Palo**	4.00	336	eP	P	23 53 23.2	0.0
BESP	**Borongan**	4.25	344	eP	P	23 53 26.4	-0.2
GUIM	**Jordan**	5.07	308	eP	P	23 53 38.6	+0.7
CNP	**Catarman**	5.36	339	eP	P	23 53 40.8	-1.0
RCP	**Roxas**	5.58	317	⇑eP	P	23 53 45.8	+1.0
PVCP	**Virac**	6.54	338	eP	P	23 53 59.0	+0.8
KKM	**Kota Kinabalu**	10.45	263	P	P	23 54 49.5	-2.1
KSM	**Kuching**	17.33	251	eP	P	23 56 24.0	+2.9
JOW	**Kunigami**	19.30	4	P	P	23 56 44.6	+0.7
	5.2nm,0.3s,baz=220,slow=16,SNR=3.4						
JOW				LR	LR	00 02 51.5	
	comp=Z,202nm,20.4s,baz=116,slow=32						
QIZ	**Qiongzhong**	19.95	307	eP	P	23 56 51.7	+0.8
	24nm,0.8s						
KAKA	**Kakadu**	20.88	164	eP	P	23 57 00.3	-0.2
JNU	**Nakatsue**	25.81	8	P	P	23 57 47.1	-1.1
	15nm,0.8s,mb4.5,baz=116,slow=9.6,SNR=8.3						
JNU				LR	LR	00 07 10.0	
	comp=Z,82nm,18.5s,baz=197,slow=34						
PMG	**Port Moresby**	26.45	129	P	P	23 57 54.5	+0.2
	9.6nm,0.7s,mb4.3,baz=352,slow=15,SNR=2.3						
WRAB	**Tennant Creek**	28.29	165	eP	P	23 58 10.3	-0.6
	8.0nm,0.5s,mb4.5						
WRA	**Warramunga Arr**	28.29	165	P	P	23 58 09.9	-1.1
	4.1nm,0.5s,mb4.2,baz=346,slow=11,SNR=22						
WRA				PcP	PcP	00 01 22.5	+0.1
	0.9nm,0.4s,baz=332,slow=2.4,SNR=5.1						
WRA				S	S	00 02 52.8	+3.0
	0.8nm,0.8s,baz=336,slow=15,SNR=3.1						
WB2	**Warramunga Arr**	28.30	165	eP	P	23 58 10.5	-0.5
CMAR	**Chiang Mai Arr**	29.06	295	P	P	23 58 18.1	+0.2
	1.4nm,0.4s,mb4.0,baz=114,slow=8.9,SNR=4.5						
MBWA	**Marble Bar**	29.26	193	eP	P	23 58 18.8	-0.8
	3.1nm,0.7s,mb4.0						
MJAR	**Matsushiro Arr**	30.79	18	P	P	23 58 30.9	-2.1
	3.6nm,0.8s,mb4.2,baz=196,slow=9.5,SNR=6.9						
MJAR				LR	LR	00 09 30.9	
	comp=Z,45nm,18.4s,baz=190,slow=33						
ASAR	**Alice Springs**	31.77	167	P	P	23 58 40.6	-1.0
	2.6nm,0.4s,mb4.3,baz=342,slow=7.6,SNR=30						
ASAR				PcP	PcP	00 01 31.5	+0.2
	1.7nm,0.4s,baz=351,slow=2.4,SNR=7.6						
ASAR				S	S	00 03 43.4	-1.2
	0.4nm,0.6s,baz=351,slow=12,SNR=2.8						
ASPA	**Alice Springs**	31.77	167	eP	P	23 58 42.6	+0.9
SHL	**Shillong**	37.68	303	ex	x	23 59 29.0	
ASAJ	**Asahikawa**	39.06	18	P	P	23 59 45.1	+1.7
	24nm,0.4s,mb5.4,baz=226,slow=8.6,SNR=28						
ASAJ				LR	LR	00 13 53.8	
	comp=Z,48nm,19.6s,baz=81,slow=33						
NWAO	**Narrogin (SRO)**	41.17	192	eP	P	00 00 01.9	+1.0
	9.4nm,0.7s,mb4.7						
STKA	**Stephens Creek**	41.67	161	eP	P	00 00 05.6	+0.5
STKA	**Stephens Creek**	41.67	161	P	P	00 00 05.3	+0.3
	9.1nm,0.5s,mb4.7,baz=335,slow=8.1,SNR=23						
GUN	**Gumba**	43.53	303	eP	P	00 00 20.9	+0.5
	6.9nm,0.4s,mb4.8						
SONM	**Songino Array**	43.74	340	P	P	00 00 21.0	-0.7
	1.4nm,0.4s,mb4.0,baz=159,slow=10,SNR=13						
SONM	**Songino Array**	43.74	340	P	P	00 00 21.0	-0.7
PKI	**Pulchoki**	43.81	302	eP	P	00 00 22.4	-0.2
	5.5nm,0.5s,mb4.6						
DMN	**Daman**	44.08	302	eP	P	00 00 24.1	-0.7
	6.3nm,0.5s,mb4.6						
GKN	**Gorkha**	44.60	303	eP	P	00 00 29.5	+0.6
	5.8nm,0.4s,mb4.7						
KOLN	**Koldanda**	45.39	302	eP	P	00 00 35.6	+0.3
	7.6nm,0.3s,mb4.9						
DZM	**Mont Dzumac**	48.84	128	P	P	00 01 03.3	+1.0
	21nm,1.2s,mb4.9,baz=23,slow=18,SNR=3.8						
MKAR	**Makanchi Array**	54.46	324	P	P	00 01 43.7	-0.5
	5.4nm,0.5s,mb4.8,baz=113,slow=7.3,SNR=116						
MKAR				PcP	PcP	00 02 46.4	-0.3
	1.9nm,0.4s,baz=101,slow=6.5,SNR=7.0						
MKAR				S	S	00 09 13.7	-1.3
	0.4nm,1.0s,baz=108,slow=9.1,SNR=2.3						
MKAR	**Makanchi Array**	54.46	324	P	P	00 01 43.7	-0.5
MKAR				PcP	PcP	00 02 46.4	-0.3
MKAR				S	S	00 09 13.7	-1.3
KZA	**Kyzart**	56.83	316	P	P	00 02 02.2	+0.9
	SNR=6.6						
ZAL	**Zalesovo**	57.23	332	P	P	00 02 01.7	-2.3
	3.1nm,0.4s,mb4.7,baz=2.4,slow=6.6,SNR=8.3						
ZAL				PcP	PcP	00 02 55.6	-1.6
	0.9nm,0.5s,baz=294,slow=3.6,SNR=1.8						
UCH	**Uchtor**	57.39	316	P	P	00 02 06.0	+0.7
	SNR=10						
USP	**Ospenovka**	57.79	317	P	P	00 02 05.5	-2.5
	SNR=6.7						
AML	**Almayashu**	57.93	316	P	P	00 02 09.9	+0.9
	SNR=9.0						
EKS2	**Erkin-Say**	58.06	316	P	P	00 02 10.2	+0.3
	SNR=7.4						
BVAR	**Borovoye Array**	64.15	326	P	P	00 02 49.8	-1.1
	2.7nm,0.4s,mb4.5,baz=101,slow=6.1,SNR=25						
BVAR				PcP	PcP	00 03 24.1	-1.0
	2.5nm,0.7s,baz=117,slow=6.6,SNR=5.6						
GNI	**Garni**	79.03	309	P	P	00 04 20.3	+0.4
	1.2nm,0.4s,mb4.1,baz=290,slow=16,SNR=3.5						
ILAR	**Eielson Array**	81.78	26	P	P	00 04 33.8	-0.1
	2.0nm,0.7s,mb4.1,baz=243,slow=5.7,SNR=15						
ASF	**Jabal al Asfar**	85.85	302	P	P	00 04 55.8	+0.7
	1.8nm,0.4s,mb4.3,baz=2.6,slow=4.7,SNR=5.4						
INK	**Inuvik**	86.72	22	P	P	00 04 58.1	-0.5
	1.1nm,0.7s,mb3.9,baz=207,slow=2.3,SNR=2.6						
ARCES	**ARCESS Array B**	86.91	340	P	P	00 04 59.5	+0.1
	1.4nm,0.5s,mb4.1,baz=78,slow=5.3,SNR=11						
VNDA	**Vanda**	87.14	173	P	P	00 05 01.2	+0.8
	1.3nm,0.5s,mb4.1,baz=326,slow=5.8,SNR=12						
VNDA	**Vanda**	87.14	173	eP	P	00 05 01.7	+1.2
	2.4nm,0.9s,mb4.1						
BRTR	**Keskin Array B**	87.57	310	P	P	00 05 03.1	-0.2
	0.9nm,0.5s,mb4.0,baz=120,slow=4.8,SNR=9.3						
EIL	**Elat**	87.80	299	P	P	00 05 04.9	+0.3
	2.8nm,0.7s,mb4.4,baz=20,slow=5.9,SNR=3.8						
SBA	**Scott Base**	88.05	172	eP	P	00 05 07.2	+2.4
KAF	**Kangasniemi**	88.24	332	ep	P	00 05 05.4	-0.6
	baz=68,slow=4.8						
FINES	**FINESS Array B**	88.50	332	P	P	00 05 06.8	-0.4
	0.9nm,0.3s,mb4.2,baz=73,slow=4.5,SNR=31						
AKASG	**Malin Array Be**	88.94	321	P	P	00 05 08.4	-1.1
	1.8nm,0.5s,mb4.4,baz=61,slow=4.3,SNR=6.9						
MLR	**Muntele Rosu**	92.14	316	P	P	00 05 24.9	+0.3
	0.6nm,0.4s,mb4.2,baz=77,slow=4.7,SNR=3.2						
HFS	**Hagfors**	94.67	332	P	P	00 05 35.1	-0.6
	4.2nm,0.9s,mb4.8,baz=90,slow=4.4,SNR=7.1						
NOA	**NORSAR Array B**	95.40	334	P	P	00 05 38.7	-0.3
	0.3nm,0.6s,mb3.9,baz=84,slow=5.2,SNR=2.9						
YKA	**Yellowknife Ar**	96.14	24	P	P	00 05 43.3	+1.0
	1.0nm,0.8s,mb4.3,baz=297,slow=5.4,SNR=5.9						
GERES	**GERESS Array B**	99.09	322	P	P	00 05 56.5	+0.4
	0.9nm,0.7s,mb4.4,baz=56,slow=4.8,SNR=8.5						
TXAR	**Lajitas Array**	119.34	50	PKP	PKPdf	00 11 05.9	+2.5
	0.4nm,0.4s,baz=341,slow=0.8,SNR=17						
JCT	**Junction City**	121.64	47	PKPdf	PKPdf	00 11 10.6	+2.8
DBIC	**Dimbokro**	129.61	285	PKP	PKPdf	00 11 25.9	+2.2
	3.6nm,0.8s,baz=87,slow=12,SNR=7.1						
CPUP	**Villa Florida**	160.88	169	PKP	PKPdf	00 12 13.8	0.0
	0.4nm,0.3s,baz=176,slow=7.2,SNR=3.4						
LPAZ	**La Paz**	163.12	123	PKP	PKPdf	00 12 18.9	+2.7
	0.8nm,0.8s,baz=20,slow=7.4,SNR=4.8						
LPAZ				PKPab	PKPab	00 13 11.4	+2.3
	1.7nm,0.7s,baz=168,slow=8.1,SNR=10						

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*CSEM **08** 00:07:19.4±0.1, 62.15N×26.42W, h10^{km}, mb4.3/12, Ms3.1, Error ellipse: s-maj=2.1km s-min=1.7km az=4.0*

*IDC **08** 00:07:20.3±0.8, 61.85N×26.63W, mb3.9/15, mb1 4.1/17, mb1mx3.9/29, mbtmp3.9/17, ML3.3/2, MS3.2/12, Ms1 3.2/12, ms1mx3.1/29, Error ellipse: s-maj=26.2km s-min=13.1km az=5.0*

*NEIC **08** 00:07:22.1±0.3, 61.92N×26.56W, h10^{km}, mb4.2/15, Error ellipse: s-maj=10.5km s-min=4.9km az=203.0*

ISC 08 00:07:20.0±1.3**, 62.14N**±0.03×**26.29W**±0.08**, h8**^{km}±8^{km}**, n84, σ1^{s}21**/90**, mb4.0**/29**, MS3.2**/8**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INYL	**Nylenda**	2.45	40	P	Pn	00 08 02.7	+1.7
IVOG	**Vogar**	2.55	42	P	Pn	00 08 03.6	+1.1
IKRI	**Krysuvik**	2.59	46	P	Pn	00 08 03.5	+0.4
IKRI				S	Sn	00 08 36.7	+1.5
IVOS	**Vogsosar**	2.71	49	P	Pn	00 08 04.3	-0.4
ISAN	**Sandskeio**	2.88	46	P	Pn	00 08 07.4	+0.2
ISAN				S	Sn	00 08 44.2	+1.8
IBJA	**Bjarnastaoir**	2.91	49	P	Pn	00 08 07.2	-0.3
IBJA				S	Sn	00 08 43.8	+0.8
IKUD	**Kuludalsa**	2.96	40	P	Pn	00 08 09.8	+1.5
ISOL	**Solvholt**	3.02	51	P	Pn	00 08 08.4	-0.8
ISOL				S	Sn	00 08 44.2	-1.9
IVES	**Vestmannaeyjar**	3.05	62	P	Pn	00 08 07.8	-1.8
IKRO	**Krokur**	3.06	48	P	Pn	00 08 09.6	-0.1
IKRO				S	Sn	00 08 47.5	+0.5
IHEI	**Heioarbar**	3.08	46	P	Pn	00 08 10.5	+0.4
IHEI				S	Sn	00 08 50.0	+2.4
IASM	**Asmuli**	3.10	54	P	Pn	00 08 09.0	-1.2
IASM				S	Sn	00 08 45.9	-2.0
ISAU	**Saurbar**	3.25	53	P	Pn	00 08 11.6	-0.9
ISAU				S	Sn	00 08 50.1	-1.8
IMID	**Miomork**	3.30	60	P	Pn	00 08 11.1	-2.1
IMID				S	Sn	00 08 51.6	-1.5
IHAU	**Haukadalur**	3.41	55	P	Pn	00 08 13.5	-1.2
IHAU				S	Sn	00 08 54.4	-1.5
IESK	**Eystri-Skogar**	3.43	63	P	Pn	00 08 12.7	-2.3
IESK				S	Sn	00 08 54.5	-1.8
IASB	**\`sbjarnarst**	3.44	38	P	Pn	00 08 16.8	+1.7
IGYG	**Gygjarholskot**	3.49	49	P	Pn	00 08 15.8	0.0
IGYG				S	Sn	00 08 57.8	0.0
IHVO	**Lagu-Hvolar**	3.69	65	P	Pn	00 08 16.1	-2.5
IVAT	**Vatnsfell**	3.92	55	P	Pn	00 08 21.4	-0.6
IVAT				S	Sn	00 09 08.9	+0.1
JMIC	**Jan Mayen**	11.29	31	LR	LR	00 13 17.6	
	comp=Z,21nm,21.1s,baz=193,slow=31						
EKA	**Eskdalemuir Ar**	13.76	109	Pn	P	00 10 37.5	+0.1
	0.1nm,0.3s,baz=307,slow=12,SNR=9.2						
EKA	**Eskdalemuir Ar**	13.76	109	Pn	P	00 10 37.5	+0.1
NOA	**NORSAR Array B**	17.72	77	P	P	00 11 30.7	+2.3
	0.1nm,0.3s,baz=288,slow=16,SNR=3.2						
NOA				LR	LR	00 17 11.7	
	comp=Z,47nm,21.7s,baz=290,slow=33						
ROSF	**Rostrenen**	18.91	126	eP	P	00 11 42.0	-1.2
FRB	**Frobisher Bay**	19.03	294	LR	LR	00 18 19.9	
	comp=Z,179nm,19.0s,baz=314,slow=35						
HFS	**Hagfors**	19.19	78	LR	LR	00 19 08.6	
	comp=Z,50nm,18.5s,baz=296,slow=36						
QUIF	**Quistinic**	19.30	127	eP	P	00 11 46.8	-1.0
FLN	**La Foliniere**	19.66	121	eP	P	00 11 51.5	-0.4
FLN				eR			
	150nm,19.4s						
LDF	**La Druitiere**	19.94	121	eP	P	00 11 55.1	+0.1
	33nm,1.1s						
BAIF	**Baives**	20.64	112	eP	P	00 12 02.7	+0.4
	14nm,0.9s						
MEM	**Membach**	21.03	108	P	P	00 12 06.9	+0.6
MFF	**Saint Martin d**	21.54	124	eP	P	00 12 11.4	-0.1
	12nm,0.9s,mb4.0						
ARCES	**ARCESS Array B**	21.79	48	P	P	00 12 15.2	+1.4
	5.4nm,0.9s,mb4.0,baz=270,slow=11,SNR=4.9						
SCHQ	**Schefferville**	22.09	269	LR	LR	00 19 45.7	
	comp=Z,26nm,18.1s,MS2.7,baz=115,slow=34						
LOR	**Lormes**	22.62	117	eP	P	00 12 22.1	-0.1
LOR				eR			
	211nm,18.2s						
SSF	**Saint Saulge**	22.64	118	eP	P	00 12 22.2	-0.1
	7.8nm,1.0s,mb4.1						
TCF	**Toulx Ste Croi**	22.73	121	eP	P	00 12 23.3	0.0
	9.6nm,0.9s,mb4.0						
BGF	**Bois d'Agland**	22.77	120	eP	P	00 12 23.7	0.0
	10nm,0.7s,mb4.0						
HAU	**Haudompre**	23.11	113	eP	P	00 12 27.7	+0.8
	25nm,1.0s,mb4.3						
HAU				eR			
	99nm,21.2s						
SMF	**Signal de Mont**	23.11	118	eP	P	00 12 26.9	-0.1
	19nm,1.0s,mb4.2						
CDF	**Champ du Feu**	23.21	111	eP	P	00 12 29.0	+1.1
MOX	**Moxa**	23.55	102	i P	P	00 12 33.9	+2.7
MOX	**Moxa**	23.55	102	eP	P	00 12 33.9	+2.7
CAF	**Calviac**	23.80	123	eP	P	00 12 36.7	+3.1
	27nm,1.1s,mb4.3						
SJPF	**Ste Jean**	24.11	131	eP	P	00 12 36.5	-0.2
	20nm,1.2s,mb4.1						
FINES	**FINESS Array B**	24.21	68	P	P	00 12 39.7	+2.2
	2.0nm,0.8s,mb3.6,baz=248,slow=7.5,SNR=4.4						
VIVF	**Saint-Julien-l**	24.90	120	eP	P	00 12 44.5	+0.1
LPL	**La Plagne**	25.22	116	eP	P	00 12 48.1	+0.7
LPG	**La Plagne**	25.25	116	eP	P	00 12 48.3	+0.7
ORIF	**Oris-en-Rattie**	25.35	118	eP	P	00 12 48.8	+0.2
	16nm,1.0s,mb4.2						
ORIF				eR			
	183nm,18.8s						
PRU	**Pruhonice**	25.36	100	eP	P	00 12 49.0	+0.4
KHC	**Kasperske Hory**	25.52	102	eP	P	00 12 53.5	+3.4
DAVOX	**Davos**	25.59	110	LR	LR	00 21 31.2	
	comp=Z,49nm,21.6s,MS3.0,baz=265,slow=33						
GERES	**GERESS Array B**	25.78	103	P	P	00 12 53.1	+0.5
	0.7nm,0.8s,mb3.3,baz=310,slow=10,SNR=5.4						
MBDF	**Montbardon**	25.87	117	eP	P	00 12 53.9	+0.4
EVO	**Evora**	26.17	146	eP	P	00 12 54.3	-2.0
	64nm,1.8s,mb4.5						
EVO				eR			
	60nm,19.0s						
SBF	**Sospel**	26.85	117	eP	P	00 13 02.6	0.0
LMR	**La Mourre**	26.90	119	eP	P	00 13 03.1	+0.1
	57nm,1.4s,mb4.6						
AKASG	**Malin Array Be**	31.74	85	P	P	00 13 46.1	-0.1
	1.6nm,0.8s,mb3.9,baz=311,slow=8.5,SNR=7.5						
MLR	**Muntele Rosu**	33.92	95	LR	LR	00 28 58.3	
	comp=Z,36nm,19.8s,MS3.1,baz=112,slow=38						
YKA	**Yellowknife Ar**	37.97	311	P	P	00 14 38.8	-0.6
	0.5nm,0.6s,mb3.4,baz=50,slow=8.9,SNR=4.6						
YKA				LR	LR	00 29 42.6	
	comp=Z,71nm,19.3s,MS3.5,baz=90,slow=35						
ULM	**Lac du Bonnet**	38.55	285	LR	LR	00 28 43.0	
	comp=Z,13nm,21.4s,MS2.7,baz=21,slow=33						
IDI	**Anoyia**	41.53	106	P	P	00 15 08.6	-0.5
	4.0nm,0.8s,mb4.1,baz=333,slow=8.1,SNR=3.2						
BRTR	**Keskin Array B**	41.97	94	P	P	00 15 15.1	+2.4
	1.0nm,0.8s,mb3.5,baz=322,slow=5.2,SNR=6.4						
ILAR	**Eielson Array**	45.96	329	P	P	00 15 44.1	-0.4
	0.9nm,0.9s,mb3.7,baz=23,slow=6.9,SNR=8.1						
ILAR				LR	LR	00 35 14.6	
	comp=Z,50nm,18.3s,MS3.5,baz=269,slow=36						
ILAR	**Eielson Array**	45.96	329	P	P	00 15 44.1	-0.4
ILAR				LR	LR	00 35 14.6	
BVAR	**Borovoye Array**	47.89	54	P	P	00 16 03.5	+3.5
	1.8nm,0.8s,mb4.1,baz=315,slow=6.3,SNR=12						
BOZ	**Bozeman (W)**	49.01	292	eP	P	00 16 09.6	+0.9
	2.8nm,0.9s,mb4.3						
BOZ	**Bozeman (W)**	49.01	292	eP	P	00 16 09.6	+0.9
	2.8nm,0.9s,mb4.3						
PDAR	**Pinedale Array**	50.37	288	P	P	00 16 18.7	-0.5
	3.7nm,0.8s,mb4.5,baz=53,slow=7.4,SNR=26						
PDAR				LR	LR	00 37 39.0	
	comp=Z,49nm,18.1s,MS3.6,baz=57,slow=36						
WMOK	**Wichita Mounta**	51.89	273	eP	P	00 16 30.0	-0.8
	1.6nm,0.6s,mb4.1						
WMOK	**Wichita Mounta**	51.89	273	eP	P	00 16 30.0	-0.8
	1.6nm,0.6s,mb4.1						
GDL2	**Guadalupe Moun**	56.60	276	eP	P	00 17 04.9	-0.5
GDL2	**Guadalupe Moun**	56.60	276	eP	P	00 17 04.9	-0.5
MKAR	**Makanchi Array**	57.41	51	P	P	00 17 12.9	+2.0
	1.0nm,0.8s,mb3.9,baz=332,slow=6.2,SNR=9.1						
MNTX	**Cornudas Mount**	57.49	277	eP	P	00 17 10.4	-1.4
	2.6nm,1.0s,mb4.2						
MNTX	**Cornudas Mount**	57.49	277	eP	P	00 17 10.4	-1.4
	2.6nm,1.0s,mb4.2						
NVAR	**Mina Array Bea**	57.76	292	P	P	00 17 13.2	-0.4
	0.8nm,0.8s,mb3.8,baz=63,slow=5.3,SNR=3.7						
NVAR				LR	LR	00 43 19.6	
	comp=Z,76nm,18.3s,MS3.8,baz=90,slow=37						
NVAR	**Mina Array Bea**	57.76	292	P	P	00 17 13.1	-0.4
TXAR	**Lajitas Array**	58.67	274	P	P	00 17 18.8	-1.2
	0.9nm,0.8s,mb3.9,baz=62,slow=5.5,SNR=10						
TXAR	**Lajitas Array**	58.67	274	P	P	00 17 18.8	-1.2
SONM	**Songino Array**	64.04	33	P	P	00 17 58.2	+2.3
	0.9nm,0.7s,mb3.9,baz=323,slow=6.2,SNR=7.7						
BDFB	**Brasilia**	79.40	201	P	P	00 19 25.9	-2.1
	2.1nm,0.6s,mb4.3,baz=11,slow=5.2,SNR=3.1						

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*MOS **08** 00:08:05.3±2.5, 42.82N×47.01E, h10^{km}, mb3.9/1, Error ellipse: s-maj=12.2km s-min=7.9km az=10.3*

*TIF **08** 00:08:06.8, 42.79N×46.72E, h4^{km}±2^{km}*

ISC 08 00:08:06.9±0.7**, 42.94N**±0.05×**47.03E**±0.05**, h12**^{km}±3^{km}**, n17, σ1^{s}22**/28**, 1C-4D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRNR	**Karanay**	0.14	219	⇑iPG	Pg	00 08 10.5	0.0
KRNR				i S	Sg	00 08 13.3	+0.4
DBC	**Dubki**	0.17	299	i PG	Pg	00 08 10.0	-0.9
DBC				i S	Sg	00 08 14.0	+0.4
DLMR	**Dylym**	0.32	294	⇓iPG	Pg	00 08 12.8	-0.9
DLMR				i S	Sg	00 08 19.3	+1.0
MAK	**Makhachkala**	0.35	86	⇓iPG	Pg	00 08 11.8	-2.4
MAK				i		00 08 21.8	
MAK				pmax	pmax		
	comp=Z,350nm,0.5s						
MAK				smax			
	comp=N,2μm,0.8s						
MAK				smax			
	comp=E,1μm,0.8s						
XNZR	**Khunzakh**	0.46	211	i PG	Pg	00 08 10.0	-6.4
MNSR	**Manas**	0.56	115	ePG	Pg	00 08 20.0	+1.7
BTLR	**Botlikh**	0.66	246	⇓iPG	Pg	00 08 13.0	-7.2
DRN	**Derbent**	1.32	133	ePG	Pg	00 08 28.5	-4.9
DRN				eS	Sb	00 08 49.0	+1.1
DUS	**Dusheti**	1.92	245	P	Pn	00 08 39.3	-0.6
DUS				S	Sn	00 09 01.4	-2.6
DGRG	**David-gareji**	1.93	220	P	Pn	00 08 39.2	-0.8
DGRG				S	Sn	00 09 04.3	0.0
ARNR	**Ardon**	2.03	278	⇓iPN	Pn	00 08 44.1	+2.7

ARNR				iS	Sn	00 09 10.7	+3.8
MTA	**Mtatsminda**	2.07	234	P	Pn	00 08 40.1	-2.0
MTA				S	Sn	00 09 03.5	-4.5
TI2	**Plekhanov**	2.08	235	ePN	Pn	00 08 43.0	+0.9
TI2				iS	Sn	00 09 08.0	0.0
TI2				smax			
	comp=E,30nm,0.8s						
TBLG	**Delisi**	2.08	235	P	Pn	00 08 41.9	-0.3
ZEI	**Tsey**	2.31	267	ePN	Pn	00 08 45.6	+0.2
ZEI				eS	Sn	00 09 13.2	-0.8
ONI	**Oni**	2.66	263	P	Pn	00 08 52.4	+2.0
ONI				S	Sn	00 09 23.9	+1.0
KIV	**Kislovodsk**	3.32	289	ePN	Pn	00 08 59.2	-0.6
KIV				pmax	pmax		
	comp=N,3.0nm,1.1s						
KIV				pmax	pmax		
	comp=E,4.0nm,1.1s						
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						

*NEIC **08** 00:19:23.5, 17.90N×68.60W, h123^{km}, MD3.7(RSPR), After RSPR.*

RSPR 08 00:19:23.5, 17.90N×68.60W, h123^{km}±5^{km}, MD3.7/7, MD3.7/7, 5C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	1.42	85	⇑eP	P	00 19 49.6	-1.1
CRPR				eS	S	00 20 11.2	-0.1
MGP	**Maguayo**	1.44	85	⇓iP	P	00 19 49.9	-0.9
AGPR	**Aguadilla, PR**	1.52	68	⇑eP	P	00 19 51.6	-0.2
AGPR				eS	S	00 20 12.0	-1.3
LRS	**Lares**	1.71	77	⇑eP	P	00 19 53.8	-0.3
AOPR	**Arecibo Observ**	1.81	76	⇑eP	P	00 19 54.0	-1.2
AOPR				eS	S	00 20 19.4	+0.1
HUMP	**Col San Antoni**	2.63	84	⇓eP	P	00 20 05.5	-0.3
HUMP				eS	S	00 20 37.4	-0.5
MTP	**Monte Pirata**	2.90	86	⇑eP	P	00 20 09.2	-0.3
MTP				eS	S	00 20 43.3	-1.0

*NEIC **08** 00:25:43.4, 33.10S×72.49W, h33^{km}, ML3.5(GUC), After GUC.*

GUC 08 00:25:43.4±0.9, 33.10S×72.49W, h33^{km}±3^{km}, MD3.7, ML3.5, 10C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHA	**Instituto Hidr**	0.71	84	⇑iP	P	00 25 57.1	+0.1
IHA				iS	S	00 26 07.2	+0.2
LCCH	**Las Cruces**	0.85	116	⇓iP	P	00 25 58.9	0.0
LCCH				iS	S	00 26 11.5	+1.1
PACH	**Papudo**	1.05	58	⇓iP	P	00 26 02.4	+0.7
PACH				iS	S	00 26 16.2	+0.8
LNV	**Longovilo**	1.24	134	⇑iP	P	00 26 04.9	+0.5
ROCH	**El Roble**	1.25	84	⇑iP	P	00 26 05.4	+0.8
TACH	**Talagante**	1.41	113	eP	P	00 26 07.4	+0.4
RCDM	**Rinconada Maip**	1.46	106	eP	P	00 26 08.1	+0.4
RCDM				eS	S	00 26 27.0	+1.2
RCDM				AMP		00 26 33.7	
	comp=N,592nm,0.4s						
PEL	**Peldehue**	1.51	92	⇓iP	P	00 26 09.9	+1.4
PEL				iS	S	00 26 28.6	+1.5
ANTU	**Antumapu**	1.62	107	iP	P	00 26 11.3	+1.4
ANTU				iS	S	00 26 32.2	+2.3
ANTU				AMP		00 26 41.7	
	comp=N,683nm,0.5s						
DSCH	**Colegio Aleman**	1.64	101	⇑iP	P	00 26 11.7	+1.5
DSCH				AMP		00 26 39.2	
	comp=N,2µm,0.6s						
JACH	**Jahuel**	1.65	76	⇑iP	P	00 26 11.1	+0.7
CLCH	**Cerro Calan**	1.66	101	⇑iP	P	00 26 11.7	+1.1
CLCH				iS	S	00 26 33.6	+2.7
CLCH				AMP		00 26 39.8	
	comp=N,873nm,0.7s						
PCH	**Pirque**	1.73	108	⇑iP	P	00 26 13.1	+1.5
CHCH	**Chadas Angostu**	1.74	119	⇑iP	P	00 26 12.2	+0.5
FCH	**Farellones**	1.86	98	⇑iP	P	00 26 14.9	+1.5
LMEL	**Las Melosas**	2.05	112	⇑iP	P	00 26 17.3	+1.2
LMEL				iS	S	00 26 41.8	+1.1
LMEL				AMP		00 26 52.8	
	comp=N,440nm,0.5s						
CICH	**Cipreses**	2.11	126	⇓iP	P	00 26 18.0	+1.0

KRSC 08 00:35:46.9±0.7, 54.62N×160.92E, h95^{km}±3^{km}, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	0.48	97	iP	P	00 36 02.8	+0.6
MKZ				eS	S	00 36 14.4	+0.9
TUMR	**Tumrok**	0.80	326	iP	P	00 36 06.0	+0.9
TUMR				eS	S	00 36 19.2	+0.7
KII	**Karymskiy**	1.04	236	eP	P	00 36 08.6	+0.9
KII				eS	S	00 36 24.7	+1.4
KMNR	**Kamenistaya**	1.20	341	iP	P	00 36 10.5	+0.7
KMNR				eS	S	00 36 27.7	+1.0
ZLN	**Zelenaya**	1.40	357	eP	P	00 36 13.0	+0.9
ZLN				eS	S	00 36 31.6	+0.8
KPT	**Kopyto**	1.41	344	eP	P	00 36 12.6	+0.4
KPT				eS	S	00 36 31.3	+0.4
LGNR	**Loginova**	1.47	355	eP	P	00 36 14.2	+1.2
LGNR				eS	S	00 36 34.6	+2.3
CIRR	**Tsirk**	1.50	356	eP	P	00 36 14.2	+0.8
CIRR				eS	S	00 36 33.8	+0.9
KOZ	**Kozyrevsk**	1.56	338	eP	P	00 36 15.3	+1.2
KOZ				eS	S	00 36 35.3	+1.1
KRSR	**Krestovskiy**	1.61	353	eP	P	00 36 15.1	+0.3
KRSR				eS	S	00 36 35.5	+0.2
SPN	**Mys Shipunski**	1.61	200	iP	P	00 36 14.4	-0.4
SPN				eS	S	00 36 34.4	-1.0
KLY	**Klyuchi**	1.70	355	eP	P	00 36 16.4	+0.5
KLY				eS	S	00 36 38.0	+0.7
NLC	**Nalytchevo**	1.73	213	iP	P	00 36 16.5	+0.3
NLC				iS	S	00 36 38.3	+0.5
SDLR	**Sedlovina**	1.80	223	eP	P	00 36 18.2	+1.0
ESO	**Esso**	1.82	317	iP	P	00 36 17.6	+0.2
ESO				eS	S	00 36 39.6	-0.4
ESO				Smax			
	140nm,1.1s						
SRDR	**Sredinnyy**	1.83	339	eP	P	00 36 17.3	-0.3
SRDR				eS	S	00 36 40.0	-0.2
AVH	**Avacha**	1.87	224	eP	P	00 36 19.3	+1.2
AVH				eS	S	00 36 42.9	+1.8
UGLR	**Uglovaya**	1.88	222	iP	P	00 36 19.1	+0.9
UGLR				eS	S	00 36 42.8	+1.5
KOK	**Koryaka**	1.90	226	eP	P	00 36 19.4	+1.0
KOK				eS	S	00 36 43.5	+1.9
KBTR	**Krutoberegovo**	1.93	33	eP	P	00 36 19.0	+0.2
KBTR				eS	S	00 36 42.3	0.0
GNL	**Ganaly**	1.98	243	iP	P	00 36 20.4	+0.9
PET	**Petropavlovsk**	2.09	221	eP	P	00 36 21.9	+0.9
PET				eS	S	00 36 47.4	+1.2
RUS	**Russkaya**	2.62	214	iP	P	00 36 27.9	-0.4
RUS				eS	S	00 36 58.2	-1.1
GRL	**Gorelyy**	2.68	220	eP	P	00 36 30.0	+0.9
GRL				eS	S	00 37 01.3	+0.6
APC	**Apacha**	2.81	234	iP	P	00 36 32.1	+1.2
APC				eS	S	00 37 06.2	+2.3
BKI	**Bering**	2.98	77	eP	P	00 36 32.5	-0.7
BKI				eS	S	00 37 04.6	-3.4
BKI				Smax			
	40nm,0.2s						

IDC 08 00:38:22.4±3.7, 49.43S×124.56E, mb3.8/3, mb1 4.0/3, mb1mx3.8/12, mbtmp3.8/3, MS3.2/3, Ms1 3.2/3, ms1mx3.0/16, Error ellipse: s-maj=140.9km s-min=28.0km az=98.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	21.69	42	P	P	00 43 14.8	-1.9
	3.6nm,0.8s,baz=210,slow=8.9,SNR=4.5						
STKA				LR	LR	00 49 58.5	
	comp=Z,82nm,20.4s,baz=353,slow=32						
ASAR	**Alice Springs**	26.74	19	P	P	00 44 03.6	-1.8
	0.6nm,0.6s,baz=190,slow=10,SNR=4.7						
ASAR				LR	LR	00 53 21.7	
	comp=Z,68nm,19.3s,baz=217,slow=34						
VNDA	**Vanda**	31.54	165	P	P	00 44 45.8	-2.2
	1.1nm,0.8s,baz=310,slow=8.7,SNR=6.5						
SNAA	**Sanae**	53.63	198	LR	LR	01 08 58.5	
	comp=Z,18nm,19.7s,baz=102,slow=34						
SUR	**Sutherland**	74.19	239	LR	LR	01 14 28.3	
	comp=Z,430nm,19.4s,baz=272,slow=29						

*IDC **08** 00:54:55.3±0.9, 18.86S×65.62E, mb4.1/9, mb1 4.2/10, mb1mx4.0/22, mbtmp4.0/10, MS3.8/8, Ms1 3.8/8, ms1mx3.6/24, Error ellipse: s-maj=31.6km s-min=20.4km az=51.0*

*NEIC **08** 00:54:57.1±0.6, 18.86S×65.65E, h10^{km}, Error ellipse: s-maj=17.4km s-min=13.8km az=190.0*

ISC 08 00:54:55.2±0.7, 18.8S±0.1×65.7E±0.1, h10^{km}, n15, σ0^{s}75/11, mb4.1/9, MS3.8/8, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	17.52	268	P	**P**	**00 59 01.9**	**+0.6**
	0.1nm,0.3s,baz=106,slow=23,SNR=2.9						
KMBO	**Kilima Mbogo**	32.96	299	LR	LR	01 12 22.9	
	comp=Z,81nm,20.6s,MS3.4,baz=269,slow=32						
CMAR	**Chiang Mai Arr**	49.40	43	P	**P**	**01 03 49.0**	**+1.6**
	0.9nm,0.3s,mb4.2,baz=231,slow=8.6,SNR=4.8						
CMAR				LR	LR	01 21 30.0	
	comp=Z,65nm,19.6s,MS3.6,baz=230,slow=32						
GNI	**Garni**	61.83	342	P	**P**	**01 05 17.0**	**+0.1**
	3.7nm,0.6s,mb4.7,baz=216,slow=8.7,SNR=5.5						
ASAR	**Alice Springs**	63.24	108	P	**P**	**01 05 26.4**	**0.0**
	2.5nm,0.7s,mb4.4,baz=262,slow=5.8,SNR=20						
ASAR				LR	LR	01 29 29.2	
	comp=Z,97nm,18.2s,MS4.0,baz=105,slow=33						
WRA	**Warramunga Arr**	64.34	104	P	**P**	**01 05 33.7**	**-0.1**
	3.7nm,0.8s,mb4.5,baz=262,slow=5.5,SNR=18						
BRTR	**Keskin Array B**	65.48	333	P	**P**	**01 05 40.6**	**-0.2**
	0.3nm,0.4s,mb3.7,baz=162,slow=4.6,SNR=3.2						
MKAR	**Makanchi Array**	67.01	12	P	**P**	**01 05 49.5**	**-1.0**
	0.9nm,0.9s,mb3.8,baz=203,slow=9.2,SNR=5.5						
MKAR				PcP	PcP	01 06 17.7	-1.2
	0.6nm,0.8s,baz=180,slow=1.4,SNR=4.2						
MKAR				LR	LR	01 32 35.7	
	comp=Z,30nm,18.7s,MS3.5,baz=14,slow=34						
MKAR	**Makanchi Array**	67.01	12	P	**P**	**01 05 49.5**	**-1.0**
MKAR				PcP	PcP	01 06 17.7	-1.2
MKAR				LR	LR	01 32 35.6	
BVAR	**Borovoye Array**	71.67	3	P	**P**	**01 06 17.8**	**-1.2**
	1.1nm,0.8s,mb3.9,baz=166,slow=6.1,SNR=7.4						
VNDA	**Vanda**	73.08	167	P	**P**	**01 06 26.6**	**-0.3**
	0.9nm,1.0s,mb3.7,baz=263,slow=6.3,SNR=4.7						
VNDA				LR	LR	01 34 42.5	
	comp=Z,52nm,18.3s,MS3.8,baz=79,slow=33						
ZAL	**Zalesovo**	74.31	12	LR	LR	01 37 39.7	
	comp=Z,53nm,21.9s,MS3.8,baz=86,slow=34						
SONM	**Songino Array**	75.72	27	P	**P**	**01 06 43.4**	**+0.7**
	1.7nm,0.8s,mb4.0,baz=210,slow=6.1,SNR=12						
SONM				LR	LR	01 38 52.0	
	comp=Z,74nm,19.4s,MS4.0,baz=60,slow=35						
USHA	**Ushuaia**	96.88	205	LR	LR	01 41 52.3	
	comp=Z,110nm,19.0s,MS4.4,baz=290,slow=29						
TXAR	**Lajitas Array**	165.73	319	PKPab	PKPab	01 16 01.7	-0.1
	0.4nm,0.9s,baz=45,slow=5.1,SNR=3.9						

IDC 08 01:03:51.5±3.3, 24.19S×175.37W, mb4.0/2, mb1 4.3/2, mb1mx3.8/15, mbtmp4.0/2, Error ellipse: s-maj=241.2km s-min=37.4km az=160.0, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	46.16	260	P	P	01 12 17.2	-2.6
	1.1nm,0.8s,baz=91,slow=7.9,SNR=6.5						
TXAR	**Lajitas Array**	87.03	56	P	P	01 16 38.5	-1.9
	1.8nm,1.1s,baz=207,slow=5.6,SNR=9.5						
AKASG	**Malin Array Be**	147.41	331	PKPbc	PKPdf	01 23 34.7	-1.6
	0.9nm,0.6s,baz=38,slow=3.6,SNR=9.5						
BRTR	**Keskin Array B**	151.08	309	PKPbc	PKPdf	01 23 48.8	+6.4
	0.9nm,0.8s,baz=72,slow=4.6,SNR=7.2						
GERES	**GERESS Array B**	154.37	346	PKPbc	PKPdf	01 23 55.0	+8.2
	0.6nm,0.9s,SNR=4.1						

*NEIC **08** 01:21:21.2±0.5, 53.09N×2.06W, h5^{km}, ML2.6(BGS), Error ellipse: s-maj=8.7km s-min=5.4km az=53.0*

NEIC Felt [IV] at Stoke-on-Trent.

*CSEM **08** 01:21:22.5±0.1, 53.07N×2.28W, h5^{km}, ML2.8/2, Error ellipse: s-maj=3.0km s-min=2.1km az=50.0*

*LDG **08** 01:21:23.8±0.4, 53.03N×2.07W, h2^{km}, Ml2.9/18, Error ellipse: s-maj=7.1km s-min=5.6km az=167.0*

BGS 08 01:21:23.2±0.3, 53.03N×2.20W, h3^{km}±4^{km}, ML2.6, 6C-6D, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KWE	**Weaver Farm**	0.21	93	⇑iP	Pg	01 21 27.8	+0.2
KBI1	**Birley Grange**	0.46	61	⇑iP	Pg	01 21 32.4	0.0
LHO	**Holmfirth**	0.56	22	eP	Pg	01 21 33.9	-0.4
SBD1	**Bryn Du**	0.65	259	⇑iP	Pg	01 21 35.6	-0.6
HLM1	**Long Mynd**	0.66	219	⇓iP	Pg	01 21 35.7	-0.6
HLM1	**Long Mynd**	0.66	219	⇓iP	Pg	01 21 35.8	-0.6
SSP1	**Stoney Pound**	0.83	223	⇓iP	Pg	01 21 39.0	-0.7
SSP1				eS	Sg	01 21 49.9	-0.8
SSP1				AML	AML	01 21 53.8	
	comp=N,75nm,0.4s						
SSP1				AML	AML	01 21 54.9	
	comp=E,98nm,0.3s						
HPK	**Haverah Park**	0.99	20	eP	Pb	01 21 41.8	-0.9
HPK				eS	Sb	01 21 55.3	-0.6
HPK				AML	AML	01 21 58.2	
	comp=N,372nm,0.2s						
HPK				AML	AML	01 21 58.8	
	comp=E,466nm,0.2s						
HAE	**Alders End**	1.02	192	eP	Pb	01 21 42.3	-0.8
WPM1	**Penmaenmawr**	1.05	283	eP	Pb	01 21 42.5	-1.2
MCH1	**Michaelchurch**	1.14	206	⇑eP	Pb	01 21 44.6	-0.7
MCH1				eS	Sb	01 21 59.7	-0.7
MCH1				AML	AML	01 22 03.5	
	comp=E,160nm,0.1s						
MCH1				AML	AML	01 22 05.9	
	comp=N,149nm,0.3s						
MCH1	**Michaelchurch**	1.14	206	⇑eP	Pb	01 21 44.6	-0.7
MCH1				eS	Sb	01 21 59.7	-0.7
	comp=N,149nm,0.3s						
HTR	**Trewern Hill**	1.16	215	eP	Pb	01 21 45.1	-0.4
YLL	**Llanberis**	1.19	276	eP	Pb	01 21 45.0	-1.2
WME	**Myndd Eilian**	1.32	287	eP	Pb	01 21 47.2	-1.0
YRE	**Yr Eifl**	1.35	269	⇑eP	Pb	01 21 47.6	-1.1
WLF1	**Llynfaes**	1.35	282	eP	Pb	01 21 47.6	-1.2
LRN	**Richmond**	1.41	10	eP	Pb	01 21 49.1	-0.8
HGH	**Gray Hill**	1.44	195	eP	Pn	01 21 49.9	-0.4
YRC	**Rhoscolyn**	1.45	280	eP	Pn	01 21 49.2	-1.2
WCB1	**Church Bay**	1.46	285	⇓iP	Pn	01 21 49.5	-1.0
WCB1				eS	Sb	01 22 07.5	-2.0
WCB1				AML	AML	01 22 08.8	
	comp=N,29nm,0.2s						
WCB1				AML	AML	01 22 09.2	
	comp=E,61nm,0.2s						
WCB1	**Church Bay**	1.46	285	⇓iP	Pn	01 21 49.5	-1.0
WCB1				eS	Sb	01 22 07.5	-1.9
WCB1				AML	AML	01 22 08.8	
	comp=N,29nm,0.2s						
WCB1				AML	AML	01 22 09.2	
	comp=E,61nm,0.2s						
WCB1	**Church Bay**	1.46	285	⇓iP	Pn	01 21 49.5	-1.0
WCB1				eS	Sb	01 22 07.5	-1.9
	comp=E,61nm,0.2s						
SWN1	**Swindon**	1.54	171	eP	Pn	01 21 52.2	+0.5
SWN1				eS	Sb	01 22 13.9	+2.0
SWN1				AML	AML	01 22 14.2	
	comp=E,95nm,0.2s						
SWN1				AML	AML	01 22 17.3	
	comp=N,118nm,0.3s						
SWN1	**Swindon**	1.54	171	eP	Pn	01 21 52.2	+0.5
SWN1				eS	Sb	01 22 13.9	+2.0
SWN1				AML	AML	01 22 14.2	
	comp=E,95nm,0.2s						
SWN1				AML	AML	01 22 17.3	
	comp=N,118nm,0.3s						
SWN1	**Swindon**	1.54	171	eP	Pn	01 21 52.2	+0.5
SWN1				eS	Sb	01 22 13.9	+2.0
	comp=N,118nm,0.3s						
SKP1	**Kophill**	1.56	146	eP	Pn	01 21 52.0	0.0
LCP	**Cassop**	1.76	14	eP	Pn	01 21 53.8	-1.1
SWK	**Warminster**	1.89	181	eP	Pn	01 21 57.4	+0.8
ESK	**Eskdalemuir**	2.37	346	ePn	Pn	01 22 00.3	-3.3
ESK				ePg	Pg	01 22 07.6	-2.8
ESK				eS	Sn	01 22 31.5	-1.9
ESK	**Eskdalemuir**	2.37	346	ePn	Pn	01 22 00.3	-3.2
ESK	**Eskdalemuir**	2.37	346	ePg	Pg	01 22 07.6	-2.8
DLF	**Lyons Farm**	2.62	278	eP	Pn	01 22 04.9	-2.3
DLF				eS	Sn	01 22 37.8	-2.2
FLN	**La Foliniere**	4.41	165	ePn	Pn	01 22 30.0	-2.6
	baz=346						
FLN				eSn	Sn	01 23 18.6	-6.6
	comp=N,3.4nm,0.3s						
LDF	**La Druitiere**	4.63	163	ePn	Pn	01 22 32.0	-3.8
LDF				eSn	Sn	01 23 23.5	-7.4
	comp=N,1.5nm,0.2s						
GRR	**Gorron**	4.72	169	ePn	Pn	01 22 34.6	-2.5
GRR				eSn	Sn	01 23 26.0	-7.2
	comp=N,2.0nm,0.2s						
ROSF	**Rostrenen**	4.75	189	ePn	Pn	01 22 35.0	-2.4
ROSF				eSn	Sn	01 23 27.1	-6.7
	comp=N,4.2nm,0.3s						
SGMF	**Saint Gilles**	4.79	183	ePn	Pn	01 22 35.0	-3.0
SGMF				eSn	Sn	01 23 26.9	-7.9
	comp=N,1.2nm,0.2s						
QUIF	**Quistinic**	5.16	187	ePn	Pn	01 22 39.9	-3.3
QUIF				eSn	Sn	01 23 36.1	-8.0
	comp=N,0.7nm,0.2s						
MEZF	**Maizieres J’vi**	6.46	132	ePn	Pn	01 22 56.4	-5.1
MEZF				eSn	Sn	01 24 06.4	-10
	comp=N,3.7nm,0.4s						
HYF	**Humbligny**	6.55	150	ePn	Pn	01 22 57.9	-5.0
RFYF	**Reffroy**	6.56	129	ePn	Pn	01 22 57.8	-5.2
	baz=313						
RFYF				eSn	Sn	01 24 09.9	-9.3
	comp=N,2.8nm,0.2s						
MFF	**Saint Martin d**	6.57	168	ePn	Pn	01 22 59.8	-3.3
MFF				eSn	Sn	01 24 09.2	-10
	comp=N,1.0nm,0.3s						
SFTF	**Sexfontaines**	6.67	133	ePn	Pn	01 22 59.4	-5.2
	baz=310						
SFTF				eSn	Sn	01 24 11.9	-10
	comp=N,3.4nm,0.3s						
LOR	**Lormes**	6.96	144	ePn	Pn	01 23 04.0	-4.6
	baz=317						
LOR				eSn	Sn	01 24 17.8	-11
	comp=N,1.3nm,0.3s						
SSF	**Saint Saulge**	7.01	146	ePn	Pn	01 23 04.8	-4.5
SSF				eSn	Sn	01 24 19.8	-11
	comp=N,0.8nm,0.2s						
BGF	**Bois d’Agland**	7.25	151	ePn	Pn	01 23 08.7	-4.0
BGF				eSn	Sn	01 24 26.9	-10
	comp=N,4.9nm,0.3s						
TCF	**Toulx Ste Croi**	7.33	155	ePn	Pn	01 23 08.8	-5.0
TCF				eSn	Sn	01 24 27.4	-11
	comp=N,0.7nm,0.2s						
HAU	**Haudompre**	7.41	129	eSn	Sn	01 24 29.1	-11
	comp=N,1.0nm,0.2s						
SMF	**Signal de Mont**	7.49	146	ePn	Pn	01 23 10.7	-5.3
RJF	**Les Rejaudoux**	8.11	161	ePn	P	01 23 19.4	-5.2
RJF				eSn	Sn	01 24 46.6	-11
	comp=N,1.8nm,0.3s						
LFF	**La Frestale**	8.32	165	ePn	P	01 23 22.6	-5.1
CAF	**Calviac**	8.58	159	ePn	P	01 23 26.3	-5.0
CAF				eSn	Sn	01 24 57.9	-12
	comp=N,1.1nm,0.2s						
SJPF	**Ste Jean**	9.95	176	ePn	P	01 23 44.7	-5.3
MTLF	**Montolieu**	10.13	161	ePn	P	01 23 46.8	-5.8
EPF	**Esparros**	10.15	169	ePn	P	01 23 47.1	-5.7

*MOS **08** 01:38:14.7±1.1, 6.66S×155.26E, h33^{km}, mb4.9/4, Error ellipse: s-maj=15.6km s-min=11.9km az=162.3*

*NEIC **08** 01:38:20.6±1.1, 6.86S×155.32E, h78^{km}±9^{km}, mb4.7/10, Error ellipse: s-maj=9.1km s-min=7.2km az=179.0*

*IDC **08** 01:38:21.0±2.2, 6.83S×155.38E, h79^{km}±20^{km}, mb4.0/12, mb1 4.2/15, mb1mx4.2/18, mbtmp4.4/15, MS3.7/9, Ms1 3.7/9, ms1mx3.5/21, Error ellipse: s-maj=17.2km s-min=12.7km az=7.0*

ISC 08 01:38:19.5±1.5, 6.85S±0.09×155.35E±0.05, h80^{km}±14^{km}, n55, σ0^{s}69/44, mb4.4/23, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.22	120	P	**P**	**01 39 36.5**	**-0.1**
HNR				pmax	pmax		
	comp=Z,174nm,0.8s						
HNR	**Honiara**	5.22	120	P	**P**	**01 39 36.3**	**-0.3**
	comp=Z,15nm,0.3s,baz=208,slow=6.0,SNR=2.7						
HNR				S	**S**	**01 40 36.6**	**+0.5**
	comp=Z,10nm,0.3s,baz=75,slow=24,SNR=3.6						
HNR				LR	LR	01 41 38.8	
	comp=Z,599nm,19.0s,baz=322,slow=38						
HNR	**Honiara**	5.22	120	P	**P**	**01 39 36.5**	**-0.1**
	comp=Z,174nm,0.8s						
PMG	**Port Moresby**	8.50	252	eP	**P**	**01 40 20.8**	**-1.0**
PMG	**Port Moresby**	8.50	252	P	**P**	**01 40 21.7**	**-0.1**
	comp=Z,2.3nm,0.3s,baz=90,slow=6.8,SNR=6.1						
PMG				S	**S**	**01 41 58.2**	**+1.3**
	comp=Z,1.4nm,0.3s,baz=111,slow=10.0,SNR=3.6						
PMG				LR	LR	01 43 36.4	
	comp=Z,236nm,19.5s,baz=258,slow=37						
CTA	**Charters Tower**	15.85	213	LR	LR	01 46 58.2	
	comp=Z,153nm,20.0s,baz=46,slow=33						
DZM	**Mont Dzumac**	18.53	146	P	**P**	**01 42 31.4**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=60,slow=8.3,SNR=8.1						
DZM				LR	LR	01 47 56.9	
	comp=Z,158nm,18.7s,baz=341,slow=31						
KAKA	**Kakadu**	23.31	254	eP	**P**	**01 43 20.6**	**-0.6**
WRAB	**Tennant Creek**	24.18	235	eP	**P**	**01 43 29.7**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	24.18	235	eP	**P**	**01 43 29.7**	**+0.1**
	comp=Z,19nm,0.8s,mb4.5						
WB2	**Warramunga Arr**	24.18	235	eP	**P**	**01 43 30.0**	**+0.4**
WRA	**Warramunga Arr**	24.19	235	P	**P**	**01 43 30.2**	**+0.5**
	comp=Z,4.7nm,0.5s,mb4.1,baz=59,slow=9.4,SNR=40						
WRA				PcP	PcP	01 47 09.7	-0.1
	comp=Z,1.3nm,0.5s,baz=62,slow=2.5,SNR=10						
ASAR	**Alice Springs**	26.53	229	P	**P**	**01 43 50.6**	**-1.1**
	comp=Z,2.0nm,0.5s,mb3.9,baz=63,slow=9.1,SNR=24						
ASAR				PcP	PcP	01 47 14.9	0.0
	comp=Z,1.3nm,0.6s,baz=69,slow=2.4,SNR=8.0						
ASAR				LR	LR	01 53 52.1	
	comp=Z,69nm,19.7s,baz=240,slow=35						
ASPA	**Alice Springs**	26.54	229	eP	**P**	**01 43 50.2**	**-1.6**
STKA	**Stephens Creek**	28.02	206	P	**P**	**01 44 04.9**	**-0.3**
	comp=Z,2.8nm,0.7s,mb3.9,baz=13,slow=14,SNR=3.3						
STKA				PcP	PcP	01 47 18.3	0.0
	comp=Z,1.9nm,0.6s,baz=69,slow=8.6,SNR=5.0						
STKA				LR	LR	01 55 21.9	
	comp=Z,130nm,18.6s,baz=24,slow=36						
RAO	**Raoul Island**	33.63	135	LR	LR	01 54 55.3	
	comp=Z,391nm,19.3s,baz=122,slow=30						
RPZ	**Rata Peaks**	39.22	162	LR	LR	01 59 03.4	
	comp=Z,169nm,18.6s,baz=271,slow=32						
CMAR	**Chiang Mai Arr**	61.05	295	P	**P**	**01 48 28.1**	**+0.6**
	comp=Z,12nm,0.7s,mb5.0,baz=125,slow=5.3,SNR=38						
SONM	**Songino Array**	69.41	327	P	**P**	**01 49 21.0**	**+0.1**
	comp=Z,1.9nm,0.8s,mb4.0,baz=139,slow=6.0,SNR=16						
VNDA	**Vanda**	70.71	179	P	**P**	**01 49 28.5**	**+0.2**
	comp=Z,0.9nm,0.6s,mb3.8,baz=331,slow=6.2,SNR=7.9						
VNDA	**Vanda**	70.71	179	eP	**P**	**01 49 28.2**	**-0.1**
ZAK	**Zakamensk**	72.56	328	eP	**P**	**01 49 39.2**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.9						
GUN	**Gumba**	75.35	301	eP	**P**	**01 49 57.3**	**+0.9**
	comp=Z,24nm,0.6s,mb5.1						
PKI	**Pulchoki**	75.66	301	eP	**P**	**01 49 58.0**	**-0.1**
	comp=Z,9.8nm,0.6s,mb4.7						
PKI	**Pulchoki**	75.66	301	eP	**P**	**01 49 58.0**	**-0.1**
PKI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
KKN	**Kakani**	75.83	301	eP	**P**	**01 49 59.3**	**+0.2**
	comp=Z,10nm,0.5s,mb4.8						
KKN	**Kakani**	75.83	301	eP	**P**	**01 49 59.3**	**+0.2**
KKN				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
DMN	**Daman**	75.93	301	eP	**P**	**01 49 59.5**	**-0.2**
	comp=Z,25nm,0.7s,mb5.0						
GKN	**Gorkha**	76.43	301	eP	**P**	**01 50 02.5**	**0.0**
	comp=Z,28nm,0.8s,mb5.0						
KOLN	**Koldanda**	77.26	300	eP	**P**	**01 50 06.6**	**-0.5**
	comp=Z,13nm,0.9s,mb4.7						
HYB	**Hyderabad**	79.56	289	eP	**P**	**01 50 19.5**	**-0.4**

HYB	**Hyderabad**	**79.56**	**289**	*i* P	**P**	**01 50 20.0**	**+0.1**
IMA	**Indian Mountai**	**81.55**	**19**	*e*P	**P**	**01 50 30.5**	**+1.0**
IMA				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
IMA	**Indian Mountai**	**81.55**	**19**	*e*P	**P**	**01 50 30.5**	**+0.9**
	comp=Z,20nm,0.7s,mb5.0						
MCK	**McKinley**	**81.79**	**22**	*e*P	**P**	**01 50 30.2**	**-0.6**
MCK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
MCK	**McKinley**	**81.79**	**22**	*e*P	**P**	**01 50 30.2**	**-0.6**
	comp=Z,4.8nm,0.8s,mb4.4						
ILAR	**Eielson Array**	**83.11**	**21**	P	**P**	**01 50 36.6**	**-0.9**
	comp=Z,1.9nm,0.7s,mb4.0,baz=261,slow=4.9,SNR=15						
ILAR				LR	LR	02 24 03.7	
	comp=Z,54nm,19.6s,baz=180,slow=33						
QSPA	**South Pole Qui**	**83.12**	**180**	*e*P	**P**	**01 50 38.0**	**+0.7**
	comp=Z,7.4nm,0.7s,mb4.6						
MKAR	**Makanchi Array**	**83.53**	**319**	P	**P**	**01 50 40.0**	**0.0**
	comp=Z,1.6nm,0.7s,mb3.9,baz=102,slow=5.4,SNR=13						
ZAL	**Zalesovo**	**84.27**	**326**	P	**P**	**01 50 42.5**	**-1.0**
	comp=Z,1.1nm,0.5s,mb3.9,baz=82,slow=3.1,SNR=3.6						
ZAL	**Zalesovo**	**84.27**	**326**	P	**P**	**01 50 42.5**	**-1.0**
MAW	**Mawson**	**84.66**	**203**	P	**P**	**01 50 46.1**	**+0.9**
	comp=Z,1.8nm,0.6s,mb4.2,baz=1.4,slow=16,SNR=3.5						
NVAR	**Mina Array Bea**	**91.35**	**52**	P	**P**	**01 51 18.8**	**+0.9**
	comp=Z,0.8nm,0.7s,mb4.0,baz=149,slow=23,SNR=4.3						
YKA	**Yellowknife Ar**	**96.05**	**28**	P	**P**	**01 51 39.5**	**+0.8**
	comp=Z,0.9nm,0.5s,mb4.5,baz=259,slow=4.8,SNR=7.6						
YKA	**Yellowknife Ar**	**96.05**	**28**	P	**P**	**01 51 39.5**	**+0.8**
ARCES	**ARCESS Array B**	**109.56**	**343**	PKiKP		01 56 42.1	
	comp=Z,2.0nm,0.9s,baz=45,slow=3.8,SNR=5.4						
NOA	**NORSAR Array B**	**119.68**	**341**	PKP	PKPdf	01 57 00.5	+0.5
	comp=Z,1.0nm,0.8s,baz=65,slow=2.9,SNR=3.5						
NOA	**NORSAR Array B**	**119.68**	**341**	PKP	PKPdf	01 57 00.5	+0.5
GERES	**GERESS Array B**	**127.12**	**329**	PKP	PKPdf	01 57 17.0	+2.3
	comp=Z,0.8nm,0.8s,baz=90,slow=2.7,SNR=6.3						
LPAZ	**La Paz**	**131.21**	**119**	PKP	PKPdf	01 57 26.2	+2.8
	comp=Z,0.5nm,0.4s,baz=246,slow=4.5,SNR=11						
LPAZ	**La Paz**	**131.21**	**119**	PKP	PKPdf	01 57 26.2	+2.8
CPUP	**Villa Florida**	**134.25**	**137**	PKP	PKPdf	01 57 30.8	+1.9
	comp=Z,1.8nm,0.7s,baz=360,slow=3.8,SNR=6.7						
CPUP	**Villa Florida**	**134.25**	**137**	PKP	PKPdf	01 57 30.8	+1.9
BDFB	**Brasilia**	**147.82**	**134**	PKPbc	PKPdf	01 57 55.8	+2.6
	comp=Z,11nm,0.6s,baz=273,slow=1.6,SNR=26						
BAO	**Brasilia Array**	**147.84**	**134**	P	PKPdf	01 57 55.5	+2.3

IDC 08 01:38:33.8±7.6**, 62.70S**×**156.14E, mb4.0**/2**, mb1 4.0**/3**, mb1mx3.8**/13**, mbtmp3.8**/3**, ML3.0**/1**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx3.1**/17**, Error ellipse: s-maj=466.7km s-min=42.8km az=76.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**15.01**	**175**	Pn	P	01 42 06.8	-1.5
	0.1nm,0.3s,baz=348,slow=16,SNR=5.0						
MAW	**Mawson**	**35.95**	**221**	LR	LR	02 00 09.1	
	comp=Z,79nm,19.5s,baz=249,slow=36						
NWAO	**Narrogin (SRO)**	**38.57**	**302**	LR	LR	01 57 03.7	
	comp=Z,64nm,18.6s,baz=26,slow=29						
ASAR	**Alice Springs**	**41.80**	**329**	P	P	01 46 25.1	-1.3
	1.5nm,0.7s,baz=166,slow=8.3,SNR=6.3						
WRA	**Warramunga Arr**	**45.28**	**331**	P	P	01 46 52.4	-2.2
	1.5nm,0.6s,baz=163,slow=6.9,SNR=7.5						

IDC 08 01:53:00.9±3.3**, 0.89N**×**97.52E, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.6**/20**, mbtmp3.7**/5**, ML4.0**/1**, Error ellipse: s-maj=119.6km s-min=29.9km az=59.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.52**	**4**	P	P	01 57 08.4	+0.2
	0.2nm,0.3s,baz=194,slow=11,SNR=5.9						
WRA	**Warramunga Arr**	**41.60**	**122**	P	P	02 00 50.9	-1.6
	0.3nm,0.4s,baz=304,slow=9.0,SNR=3.5						
SONM	**Songino Array**	**47.39**	**8**	P	P	02 01 36.8	-2.0
	0.5nm,0.6s,baz=192,slow=10.0,SNR=3.2						
MKAR	**Makanchi Array**	**47.62**	**346**	P	P	02 01 38.5	-2.1
	0.9nm,0.5s,baz=163,slow=8.0,SNR=8.2						
ZAL	**Zalesovo**	**53.91**	**351**	P	P	02 02 25.4	-2.8
	1.5nm,0.4s,baz=279,slow=4.6,SNR=4.4						

IDC 08 01:53:31.5±1.8**, 11.14N**×**92.59E, mb3.5**/4**, mb1 3.7**/5**, mb1mx3.4**/21**, mbtmp3.5**/5**, ML3.8**/1**, Error ellipse: s-maj=52.6km s-min=28.9km az=60.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.53**	**39**	Pn	P	01 55 51.0	-2.0
	0.3nm,0.3s,baz=225,slow=15,SNR=6.8						
MKAR	**Makanchi Array**	**36.59**	**348**	P	P	02 00 39.1	-2.0
	0.2nm,0.3s,baz=181,slow=7.2,SNR=3.7						
SONM	**Songino Array**	**38.38**	**15**	P	P	02 00 54.0	-2.1
	0.3nm,0.6s,baz=198,slow=9.1,SNR=3.2						
WRA	**Warramunga Arr**	**51.41**	**127**	P	P	02 02 38.7	-2.0
	0.3nm,0.5s,baz=308,slow=8.2,SNR=6.2						
FINES	**FINESS Array B**	**69.13**	**332**	P	P	02 04 39.5	-1.9
	0.4nm,0.5s,baz=79,slow=7.1,SNR=5.6						

IDC 08 02:18:20.4±1.5**, 15.75S**×**172.96W, mb3.9**/6**, mb1 4.2**/7**, mb1mx4.1**/19**, mbtmp3.9**/7**, MS3.6**/3**, Ms1 3.6**/3**, ms1mx3.1**/32**, Error ellipse: s-maj=94.8km s-min=19.3km az=145.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.16**	**32**	Pn	Pn	02 18 55.5	-2.5
	12nm,0.3s,baz=218,slow=2.9,SNR=11						
AFI				Sn	Sn	02 19 20.2	-5.8
	77nm,0.3s,baz=212,slow=22,SNR=15						
DZM	**Mont Dzumac**	**20.46**	**249**	LR	LR	02 29 22.9	
	comp=Z,127nm,19.1s,baz=204,slow=32						
HNR	**Honiara**	**27.16**	**280**	LR	LR	02 33 45.5	
	comp=Z,143nm,18.1s,baz=168,slow=34						
STKA	**Stephens Creek**	**44.23**	**240**	P	P	02 26 30.6	-2.7
	3.7nm,0.8s,baz=112,slow=5.4,SNR=3.5						
WRA	**Warramunga Arr**	**50.18**	**257**	P	P	02 27 18.0	-2.1
	0.5nm,0.6s,baz=96,slow=6.7,SNR=7.9						
ASAR	**Alice Springs**	**50.41**	**252**	P	P	02 27 19.5	-2.3
	2.2nm,0.8s,baz=90,slow=8.3,SNR=11						
NVAR	**Mina Array Bea**	**74.31**	**42**	P	P	02 30 01.1	-0.5
	0.3nm,0.3s,baz=236,slow=9.8,SNR=3.6						
TXAR	**Lajitas Array**	**80.46**	**56**	P	P	02 30 33.8	-2.2
	0.4nm,0.8s,baz=219,slow=8.0,SNR=4.2						
PDAR	**Pinedale Array**	**82.24**	**42**	P	P	02 30 44.4	-0.7
	0.5nm,0.5s,baz=202,slow=8.0,SNR=3.8						
CFAA	**Coronel Fontan**	**93.91**	**124**	LR	LR	03 02 17.0	
	comp=Z,26nm,20.8s,baz=85,slow=28						
BRTR	**Keskin Array B**	**146.70**	**321**	PKPbc	PKPbc	02 38 05.5	+1.4
	2.2nm,0.8s,baz=90,slow=2.5,SNR=12						

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*NEIC **08** 02:29:34.3±0.6, 51.49N×16.27E, h5^{km}, ML2.7(VIE), ML2.5(SZGRF), Error ellipse: s-maj=8.0km s-min=5.7km az=96.0*
*IPEC **08** 02:29:34.3±0.3, 51.48N×16.34E, ML1.9/3, Error ellipse: s-maj=1.9km s-min=1.5km az=40.0*
*PRU **08** 02:29:35.7, 51.38N×16.26E*
*WAR **08** 02:29:36.4, 51.41N×16.24E, h1^{km}, ML2.8, Mining Induced*
*IDC **08** 02:29:36.3±0.9, 51.39N×16.17E, mb1 3.2/5, mb1mx3.1/23, mbtmp3.1/5, ML2.7/5, Error ellipse: s-maj=17.5km s-min=8.3km az=99.0*
*CSEM **08** 02:29:36.0±0.3, 51.40N×16.28E, h1^{km}, ML2.9/5, Error ellipse: s-maj=4.3km s-min=1.7km az=22.0*
ISC 08 02:29:32.4±0.6**, 51.45N**±0.03×**16.25E**±0.04**, n31, σ1$^{\mathrm{s}}$57**/51**, 3C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.61**	**177**	⇓*i*Pg	**Pg**	**02 29 46.7**	**+2.2**
KSP				*e*Sg	**Sg**	**02 29 54.7**	**+2.0**
KSP	**Ksiaz**	**0.61**	**177**	*e*PG	**Pg**	**02 29 47.0**	**+2.5**
KSP				*e*SG	**Sg**	**02 29 55.0**	**+2.3**
KSP	**Ksiaz**	**0.61**	**177**	⇓*i*Pg	**Pg**	**02 29 46.7**	**+2.2**
KSP				*e*Sg	**Sg**	**02 29 54.0**	**+1.3**
UPC	**Upice**	**0.96**	**189**	*e*PG	**Pg**	**02 29 53.0**	**+1.5**
DPC	**Dobruska-Polom**	**1.10**	**178**	*e*PG	**Pg**	**02 29 55.7**	**+1.3**
DPC				*e*SG	**Sg**	**02 30 09.2**	**+0.1**
	8.6nm,0.2s						
PVCC	**Panska Ves**	**1.41**	**230**	*e*PG	**Pg**	**02 30 02.2**	**+1.7**
PVCC	**Panska Ves**	**1.41**	**230**	Pg	**Pg**	**02 30 02.2**	**+1.7**
PVCC				*e*Sg	**Sg**	**02 30 20.3**	**+1.1**
BRG	**Berggiesshubel**	**1.56**	**249**	*i* Pg	**Pg**	**02 30 04.5**	**+0.9**
BRG				*i* Sg	**Sg**	**02 30 25.5**	**+1.1**
PRU	**Pruhonice**	**1.82**	**217**	*e*PG	**Pg**	**02 30 08.4**	**-0.3**
PRU				*e*SG	**Sg**	**02 30 32.1**	**-0.9**
MORC	**Moravsky Berou**	**1.87**	**153**	*e*P	**Pn**	**02 30 07.2**	**+1.3**
MORC	**Moravsky Berou**	**1.87**	**153**	*e*P	**Pn**	**02 30 07.2**	**+1.3**
MORC	**Moravsky Berou**	**1.87**	**153**	*e*Pn	**Pn**	**02 30 07.5**	**+1.6**
MORC				*e*Sg	**Sg**	**02 30 33.1**	**-1.4**
	11nm,0.2s						
OKC	**Ostrava-Krasne**	**2.02**	**142**	*e*SG	**Sg**	**02 30 37.4**	**-2.1**
CLL	**Collm**	**2.04**	**267**	*i* PG	**Pg**	**02 30 13.6**	**+0.5**
CLL				*e*SG	**Sg**	**02 30 41.0**	**+0.7**
VRAC	**Vranov**	**2.16**	**174**	Pn	**Pn**	**02 30 12.6**	**+2.6**
	1.7nm,0.3s,baz=345,slow=13,SNR=9.2						
VRAC				Pg	**Pg**	**02 30 15.1**	**-0.3**
	1.7nm,0.3s,baz=346,slow=13,SNR=9.1						
VRAC				Lg		02 30 43.0	
	2.0nm,0.3s,baz=75,slow=21,SNR=8.4						
VRAC	**Vranov**	**2.16**	**174**	*e*Pn	**Pn**	**02 30 11.8**	**+1.8**
VRAC	**Vranov**	**2.16**	**174**	Pg	**Pg**	**02 30 15.1**	**-0.3**
VRAC				*e*Sg	**Sg**	**02 30 42.7**	**-1.5**
	7.0nm,0.3s						
KRUC	**Moravsky**	**2.39**	**178**	*e*Pn	**Pn**	**02 30 15.4**	**+2.0**
KRUC				*e*Sg	**Sg**	**02 30 50.5**	**-1.6**
	4.5nm,0.3s						
OJC	**Ojcow**	**2.57**	**117**	*e*PG	**Pg**	**02 30 25.0**	**+1.4**
OJC				*e*SG	**Sg**	**02 30 59.0**	**+1.2**
NKC	**Novy Kostel**	**2.70**	**245**	*e*SG	**Sg**	**02 31 00.4**	**-1.9**
KHC	**Kasperske Hory**	**2.89**	**217**	*e*PN	**Pn**	**02 30 22.6**	**+2.2**
KHC				*e*PG	**Pg**	**02 30 28.0**	**-2.0**
KHC				*e*SN	**Sn**	**02 30 56.0**	**-0.4**
KHC				*e*SG	**Sg**	**02 31 05.7**	**-2.7**
SMOL	**Smolenice**	**3.04**	**165**	*e*PG	**Pg**	**02 30 33.3**	**+0.3**
GEC2	**GERESS Array S**	**3.08**	**213**	*e*Pn	**Pn**	**02 30 24.9**	**+1.7**
GERES	**GERESS Array B**	**3.08**	**213**	Pn	**Pn**	**02 30 24.8**	**+1.6**
	0.2nm,0.3s,baz=34,slow=14,SNR=4.7						
GERES				Pg	**Pg**	**02 30 31.8**	**-2.1**
	1.2nm,0.3s,baz=29,slow=18,SNR=28						
GERES				Lg		02 31 10.1	
	1.1nm,0.3s,baz=27,slow=32,SNR=16						
GERES	**GERESS Array B**	**3.08**	**213**	Pg	**Pg**	**02 30 31.8**	**-2.1**
MOA	**Molln**	**3.83**	**200**	⇑*i*PN	**Pn**	**02 30 31.1**	**-2.7**
MOA				*i* SG	**Sg**	**02 31 35.0**	**-4.8**
	3.2nm,0.5s						
ARSA	**Arzberg**	**4.23**	**187**	⇑*i*PN	**Pn**	**02 30 37.7**	**-1.9**
ARSA				*i* SG	**Sg**	**02 31 45.4**	**-7.8**
	3.6nm,0.6s						
KBA	**Koelnbreinsper**	**4.77**	**205**	⇑*i*PN	**Pn**	**02 30 43.3**	**-3.9**
KBA				*i* SG	**Sg**	**02 32 03.5**	**-7.7**
	3.6nm,0.6s						
HFS	**Hagfors**	**8.82**	**352**	Pn	**P**	**02 31 42.2**	**-1.9**
	0.0nm,0.3s,baz=160,slow=17,SNR=3.6						
FINES	**FINESS Array B**	**11.38**	**25**	Pn	**P**	**02 32 17.6**	**-1.5**
	0.1nm,0.3s,baz=216,slow=12,SNR=3.6						
ARCES	**ARCESS Array B**	**18.66**	**10**	Pn	**P**	**02 33 51.1**	**-2.4**
	0.1nm,0.3s,baz=188,slow=13,SNR=3.5						

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*MOS **08** 02:39:31.6±1.0, 28.23S×68.93W, h97^{km}, mb5.2/29, Error ellipse: s-maj=13.4km s-min=6.4km az=103.9*
*GUC **08** 02:39:34.3±0.7, 28.39S×69.32W, h141^{km}±19^{km}, ML5.7*
*BJI **08** 02:39:35.2, 28.40S×69.00W, h122^{km}, mB5.2*
*IDC **08** 02:39:35.8±0.4, 28.39S×68.91W, h125^{km}±3^{km}, mb4.6/16, mb1 4.7/17, mb1mx4.7/18, mbtmp5.0/17, MS3.7/3, Ms1 3.7/3, ms1mx3.3/20, Error ellipse: s-maj=14.0km s-min=7.7km az=80.0*
*HRVD **08** 02:39:35.3±0.3, 28.52S×69.29W, h134^{km}±2^{km}, MW5.2/60, Centroid moment Tensor Solution. LP body waves: s47,c62;Mantle waves: s60,c99; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.70±.20; $M_{\theta\theta}$-0.84±.27; $M_{\phi\phi}$-4.85±.30; $M_{r\theta}$3.19±.17; $M_{\theta\phi}$0.89±.24; $M_{\phi r}$-2.38±.22; Best double couple: $M_0$6.601×10^{16} NP1:ϕ_s1°,δ32°,λ120°. NP2:ϕ_s147°,δ63°,λ73°. Principal axes: T 7.293, Plg68°, Azm24°; N -1.378, Plg15°, Azm155°; P -5.909, Plg16°, Azm250°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **08** 02:39:35.3±0.1, 28.42S×69.02W, mb5.1/72 Error ellipse: s-maj=6.3km s-min=3.8km az=77.0*
NEIC Felt [IV] at Copiapo and Tierra Amarilla; [III] at Vallenar; [II] at Alto del Carmen, El Salvador, Huasco and La Serena, Chile.
ISC 08 02:39:33.8±0.2**, 28.45S**±0.02×**69.02W**±0.04**, h124^{km}, h124^{km}**±**.9^{km}:pP-P, n297, σ1$^{\mathrm{s}}$13**/218**, mb5.1**/81**, 12C-9D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VACH	**Vallenar**	**1.54**	**265**	⇑*i*P	**P**	**02 40 01.5**	**-0.8**
VACH				*i* S	**S**	**02 40 21.7**	**-2.3**
LCO	**Las Campanas**	**1.58**	**249**	*e*P	**P**	**02 40 02.4**	**-0.5**
LCO				*i* S	**S**	**02 40 23.7**	**-1.1**
LCO				AMP		02 40 24.9	
	comp=E,205µm,0.3s						
TLL	**Tololo Astrono**	**2.32**	**222**	⇓*i*P	**P**	**02 40 12.2**	**+0.2**
TLL				*i* S	**S**	**02 40 41.0**	**+0.1**
TLL				AMP		02 40 50.6	
	comp=N,59µm,0.8s						
LSCH	**La Serena**	**2.43**	**233**	⇓*i*P	**P**	**02 40 12.3**	**-1.2**
LSCH				*i* S	**S**	**02 40 41.2**	**-2.4**
LSCH				AMP		02 40 43.3	
	comp=N,47µm,0.4s						
CRCH	**Chaqaral**	**2.53**	**325**	⇓*i*P	**P**	**02 40 13.4**	**-1.5**
CRCH				*i* S	**S**	**02 40 42.6**	**-3.4**
CRCH				AMP		02 40 53.6	
	comp=E,13µm,0.3s						
ZON	**Zonda**	**3.10**	**175**	⇓*i*P	**P**	**02 40 22.7**	**+0.3**
ZON				*e*S	**S**	**02 40 57.7**	**-1.7**
CFAA	**Coronel Fontan**	**3.22**	**168**	P	**P**	**02 40 26.3**	**+2.3**
CFAA				S	**S**	**02 41 03.5**	**+1.3**
	comp=E,310nm,0.3s,baz=347,slow=16,SNR=30						
ANTU	**Antumapu**	**5.29**	**195**	⇑*i*P	**P**	**02 40 50.4**	**-1.3**
ANTU				*i* S	**S**	**02 41 49.9**	**-2.1**
CPUP	**Villa Florida**	**10.60**	**81**	P	**P**	**02 41 59.7**	**-3.5**
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CPUP				MLR	MLR		
	comp=Z,246nm,20.0s						
CPUP	**Villa Florida**	**10.60**	**81**	P	**P**	**02 41 59.6**	**-3.6**
	comp=Z,2.1nm,0.3s,baz=289,slow=12,SNR=35						
CPUP				LR	LR	02 46 48.9	
	comp=Z,246nm,20.0s,baz=315,slow=41						
CPUP	**Villa Florida**	**10.60**	**81**	*e*P	**P**	**02 41 59.3**	**-4.0**
	comp=Z,2.1nm,1.3s						
TRQA	**Tornquist**	**11.24**	**150**	*e*P	**P**	**02 42 10.2**	**-1.5**
	comp=Z,135nm,0.6s						
LPA	**La Plata**	**11.43**	**127**	*de*P	**P**	**02 42 11.0**	**-3.1**
	comp=Z,657nm,0.8s						
LPAZ	**La Paz**	**12.13**	**4**	*e*P	**P**	**02 42 20.1**	**-3.3**
LPAZ				pmax	pmax		
	comp=Z,38nm,1.0s						
LPAZ	**La Paz**	**12.13**	**4**	P	**P**	**02 42 19.9**	**-3.5**
	comp=Z,1.8nm,0.3s,baz=190,slow=8.9,SNR=89						
LPAZ	**La Paz**	**12.13**	**4**	*e*P	**P**	**02 42 20.1**	**-3.3**
	comp=Z,38nm,1.0s						
ARE	**Arequipa**	**12.14**	**349**	*e*P	**P**	**02 42 18.0**	**-5.6**
PLCA	**Paso Flores**	**12.32**	**185**	P	**P**	**02 42 23.7**	**-2.2**
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PLCA	**Paso Flores**	**12.32**	**185**	P	**P**	**02 42 23.7**	**-2.2**
	comp=Z,0.8nm,0.3s,baz=1.9,slow=13,SNR=7.5						
PLCA	**Paso Flores**	**12.32**	**185**	*e*P	**P**	**02 42 23.3**	**-2.5**
	comp=Z,33nm,1.2s						
SIV	**San Ignacio**	**14.41**	**32**	P	**P**	**02 42 49.1**	**-3.9**
	comp=Z,2.1nm,0.3s,baz=229,slow=12,SNR=50						
NNA	**Nana**	**17.93**	**334**	*e*P	**P**	**02 43 37.8**	**+1.1**
	comp=Z,44nm,1.1s						
JATB	**Jatai**	**19.21**	**61**	⇓*i*P	**P**	**02 43 49.9**	**-0.6**
JATB				*e*		02 43 56.6	
JATB				*e*		02 44 01.3	
JATB				*e*		02 44 12.1	
JATB				*i*		02 44 28.1	
JATB				*e*		02 44 51.5	
JATB				*i*		02 45 23.5	
SAML	**Samuel**	**20.16**	**17**	⇑*i*P	**P**	**02 43 59.7**	**-0.7**
	comp=Z,336nm,1.3s						
SAML				*e*		02 44 39.4	
BDFB	**Brasilia**	**23.22**	**61**	P	**P**	**02 44 30.4**	**-0.3**
	comp=Z,60nm,0.9s,mb4.9,baz=239,slow=8.8,SNR=72						
BDFB				S	**S**	**02 48 33.0**	**+3.4**
	comp=Z,5.9nm,0.8s,baz=50,slow=23,SNR=2.2						
BAO	**Brasilia Array**	**23.24**	**61**	P	**P**	**02 44 30.9**	**+0.1**
USHA	**Ushuaia**	**26.37**	**179**	P	**P**	**02 44 59.8**	**-0.1**
	comp=Z,35nm,0.8s,mb4.8,baz=335,slow=10,SNR=21						
OTAV	**Otavalo**	**29.92**	**341**	*e*P	**P**	**02 45 32.8**	**+0.4**
	comp=Z,32nm,1.3s,mb4.8						
OTAV				*e*PcP	PcP	02 48 32.6	+0.5
ROSC	**El Rosal**	**33.50**	**350**	P	**P**	**02 46 03.6**	**+0.1**
	comp=Z,4.1nm,0.6s,mb4.5,baz=264,slow=16,SNR=7.6						
ROSC				PcP	PcP	02 48 41.4	-0.3
	comp=Z,8.2nm,0.8s,baz=94,slow=5.1,SNR=4.6						
SDV	**Santo Domingo**	**37.15**	**357**	*e*P	**P**	**02 46 32.6**	**-1.7**
	comp=Z,53nm,1.0s,mb5.4						
JTS	**JuntasAbangare**	**41.48**	**336**	*e*P	**P**	**02 47 11.5**	**+1.4**
BIM	**Bigot**	**43.40**	**11**	*e*P	**P**	**02 47 23.7**	**-2.1**
MVM	**Montagne Vaucl**	**43.46**	**11**	*e*P	**P**	**02 47 24.7**	**-1.6**
FDF	**Fort de France**	**43.59**	**11**	*e*P	**P**	**02 47 25.2**	**-2.2**
CRM	**Caravelle**	**43.66**	**11**	*e*P	**P**	**02 47 26.3**	**-1.6**
SJG	**San Juan**	**46.37**	**4**	*e*P	**P**	**02 47 46.3**	**-3.1**
SJG				pmax	pmax		
	comp=Z,81nm,1.1s						
SJG	**San Juan**	**46.37**	**4**	*e*P	**P**	**02 47 46.3**	**-3.2**
	comp=Z,82nm,1.1s,mb5.4						
VNA3	**Neumayer Olymp**	**53.59**	**160**	⇑*i*P	**P**	**02 48 44.1**	**+0.4**
VNA3				*e*		02 49 06.4	
VNA3				*e*	pP	02 49 14.0	+0.9
VNA3				*e*		02 49 45.5	
VNA3				*e*		02 49 55.5	
VNA3				*e*		02 50 39.7	
VNA3				*e*		02 50 47.2	
VNA1	**Neumayer--Stat**	**53.83**	**159**	⇑*i*P	**P**	**02 48 46.3**	**+0.8**
VNA1				*e*		02 49 08.8	
VNA1				*e*	pP	02 49 16.0	+1.1
VNA1				*e*		02 49 47.6	
VNA1				*e*		02 49 56.3	
VNA1				*e*		02 50 44.2	
VNA1				*e*		02 50 51.6	
VNA2	**Neumayer--Watz**	**54.19**	**159**	⇑*i*P	**P**	**02 48 48.4**	**+0.3**
VNA2				*e*		02 49 11.0	
VNA2				*e*	pP	02 49 19.4	+1.8
VNA2				*e*		02 49 49.9	
VNA2				*e*		02 49 56.9	
VNA2				*e*		02 50 45.4	
VNA2				*e*		02 50 52.0	
SNAA	**Sanae**	**55.80**	**160**	*e*	pP	02 49 22.6	-6.8
SNAA	**Sanae**	**55.80**	**160**	*e*	Px	02 49 29.2	
SNAA	**Sanae**	**55.80**	**160**	*e*	PcP	02 49 56.8	-0.3
SNAA	**Sanae**	**55.80**	**160**	⇑*i*P	**P**	**02 48 59.6**	**-0.3**
SNAA				*e*		02 49 22.6	
SNAA				*e*		02 49 56.8	
SNAA	**Sanae**	**55.80**	**160**	P	**P**	**02 48 59.5**	**-0.4**
SNAA	**Sanae**	**55.80**	**160**	⇑*i*P	**P**	**02 48 59.6**	**-0.3**
SNAA				*e*		02 49 22.6	
SNAA				*e*	pP	02 49 29.2	-0.2
SNAA				*e*		02 49 56.8	
SNAA				*e*		02 50 05.0	
SNAA				*e*		02 50 48.7	
SNAA				*e*		02 50 56.8	
MAIT	**Maitri**	**60.40**	**158**	*e*P	**P**	**02 49 32.0**	**+0.2**
NVL	**N'lazarevskaya**	**60.43**	**158**	⇓*i*P	**P**	**02 49 30.2**	**-1.9**
NVL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
QSPA	**South Pole Qui**	**61.77**	**180**	⇑*i*P	**P**	**02 49 42.1**	**+1.1**
	comp=Z,28nm,0.9s,mb5.3						
CSU	**Charleston Sou**	**61.99**	**349**	*e*P	**P**	**02 49 42.1**	**-1.0**
CSU				*e*		02 50 18.7	
NHSC	**New Hope**	**62.12**	**349**	*e*P	**P**	**02 49 43.0**	**-0.9**
	comp=Z,170nm,1.3s,mb5.9						
COW	**Cow Castle Cre**	**62.48**	**349**	*e*P	**P**	**02 49 44.6**	**-1.7**
LRAL	**Lakeview Retre**	**63.48**	**343**	*e*P	**P**	**02 49 50.8**	**-2.2**
	comp=Z,48nm,1.6s,mb5.2						
CPCT	**Cooper Cave**	**65.22**	**346**	*e*P	**P**	**02 50 02.5**	**-1.7**
SWET	**Sewanee**	**65.30**	**345**	*e*P	**P**	**02 50 03.1**	**-1.6**
JCT	**Junction City**	**65.55**	**331**	*e*P	**P**	**02 50 06.2**	**-0.2**
JCT				pmax	pmax		
	comp=Z,87nm,0.9s,mb5.6						
JCT	**Junction City**	**65.55**	**331**	*e*P	**P**	**02 50 06.2**	**-0.2**
	comp=Z,87nm,0.9s,mb5.6						
PLAL	**Pickwick Lake**	**65.61**	**343**	*e*P	**P**	**02 50 04.6**	**-2.1**
	comp=Z,28nm,1.0s,mb5.0						
TZTN	**Tazewell**	**66.07**	**347**	*e*P	**P**	**02 50 07.3**	**-2.4**
BLA	**Blacksburg**	**66.18**	**350**	*e*P	**P**	**02 50 09.1**	**-1.2**
BLA				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
BLA	**Blacksburg**	**66.18**	**350**	*e*P	**P**	**02 50 09.1**	**-1.2**
	comp=Z,7.0nm,0.7s,mb4.6						
ELN	**Prospectdale**	**66.25**	**350**	*e*P	**P**	**02 50 09.4**	**-1.3**
LTX	**Lajitas**	**66.32**	**327**	*e*P	**P**	**02 50 10.9**	**-0.4**
LTX				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.1						
LTX	**Lajitas**	**66.32**	**327**	*e*P	**P**	**02 50 10.9**	**-0.4**
	comp=Z,35nm,1.0s,mb5.2						
TXAR	**Lajitas Array**	**66.32**	**327**	P	**P**	**02 50 11.3**	**0.0**
	comp=Z,14nm,0.8s,mb4.9,baz=148,slow=8.1,SNR=191						
TXAR				sP	sP	02 50 55.5	+0.1
	comp=Z,5.8nm,0.9s,baz=150,slow=7.3,SNR=3.3						
TXAR	**Lajitas Array**	**66.32**	**327**	P	**P**	**02 50 11.3**	**0.0**
TXAR				sP	sP	02 50 55.5	0.0
FWV	**Forest Hill**	**66.61**	**350**	*e*P	**P**	**02 50 11.8**	**-1.1**
WVT	**Waverly**	**66.63**	**343**	*e*P	**P**	**02 50 11.1**	**-2.1**
WVT				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.5						
WVT	**Waverly**	**66.63**	**343**	*e*P	**P**	**02 50 11.1**	**-2.1**
	comp=Z,63nm,0.9s,mb5.5						
UALR	**University of**	**66.63**	**339**	*e*P	**P**	**02 50 11.9**	**-1.3**
	comp=Z,41nm,1.1s,mb5.2						
MIAR	**Mount Ida**	**66.82**	**338**	*e*P	**P**	**02 50 13.3**	**-1.1**
MIAR				pmax	pmax		
	comp=Z,68nm,1.4s,mb5.3						
MIAR	**Mount Ida**	**66.82**	**338**	*e*P	**P**	**02 50 13.3**	**-1.0**
	comp=Z,68nm,1.4s,mb5.3						
GNAR	**Gosnell**	**67.05**	**342**	*e*P	**P**	**02 50 15.4**	**-0.4**
UTMT	**University of**	**67.10**	**343**	*e*P	**P**	**02 50 15.1**	**-1.0**
	comp=Z,45nm,0.4s,mb5.7						
PARMO	**Parma**	**67.64**	**342**	*e*P	**P**	**02 50 18.6**	**-0.8**
WCI	**Wyandotte Cave**	**68.27**	**345**	*e*P	**P**	**02 50 21.2**	**-2.1**
WCI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
WCI	**Wyandotte Cave**	**68.27**	**345**	*e*P	**P**	**02 50 21.2**	**-2.1**
	comp=Z,9.0nm,0.8s,mb4.7						
MCWV	**Mont Chateau**	**68.50**	**351**	*e*P	**P**	**02 50 23.9**	**-0.8**
	comp=Z,7.7nm,0.4s,mb4.9						
WMOK	**Wichita Mounta**	**68.85**	**334**	*e*P	**P**	**02 50 25.7**	**-1.2**
WMOK				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.1						
WMOK	**Wichita Mounta**	**68.85**	**334**	*e*P	**P**	**02 50 25.7**	**-1.3**
	comp=Z,40nm,1.3s,mb5.1						
GDL2	**Guadalupe Moun**	**69.04**	**328**	*e*P	**P**	**02 50 28.3**	**+0.1**
FVM	**French Village**	**69.06**	**342**	*e*P	**P**	**02 50 27.3**	**-0.8**
FVM				pmax	pmax		
	comp=Z,96nm,0.8s,mb5.7						
FVM	**French Village**	**69.06**	**342**	*e*P	**P**	**02 50 27.3**	**-0.9**
	comp=Z,96nm,0.8s,mb5.7						
MNTX	**Cornudas Mount**	**69.10**	**327**	*e*P	**P**	**02 50 27.4**	**-1.1**
	comp=Z,31nm,0.9s,mb5.1						
BLO	**Bloomington**	**69.22**	**346**	*e*P	**P**	**02 50 27.2**	**-1.9**
BLO				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.9						
BLO	**Bloomington**	**69.22**	**346**	*e*P	**P**	**02 50 27.2**	**-1.9**
	comp=Z,13nm,0.6s,mb4.9						
CPRX	**Cap Rock**	**69.51**	**329**	*e*P	**P**	**02 50 31.1**	**+0.1**
ACSO	**Alum Creek Sta**	**69.55**	**349**	*e*P	**P**	**02 50 29.4**	**-1.8**
	comp=Z,24nm,0.9s,mb5.0						
SLM	**Saint Louis**	**69.62**	**342**	*e*P	**P**	**02 50 30.4**	**-1.2**
SLM				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
SLM	**Saint Louis**	**69.62**	**342**	*e*P	**P**	**02 50 30.4**	**-1.2**
	comp=Z,14nm,0.5s,mb5.0						
VNDA	**Vanda**	**70.02**	**190**	*e*P	**P**	**02 50 34.8**	**+1.4**
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VNDA	**Vanda**	**70.02**	**190**	P	**P**	**02 50 35.2**	**+1.8**
	comp=Z,2.8nm,0.8s,mb4.1,baz=131,slow=6.0,SNR=15						
VNDA	**Vanda**	**70.02**	**190**	*e*P	**P**	**02 50 34.8**	**+1.4**
	comp=Z,4.9nm,0.9s,mb4.3						
SYO	**Syowa Base**	**70.08**	**159**	⇓P	**P**	**02 50 32.5**	**-1.3**
SYO	**Syowa Base**	**70.08**	**159**	⇓PcP	PcP	02 50 50.0	-5.2
AMTX	**Amarillo**	**70.14**	**332**	*e*P	**P**	**02 50 34.2**	**-0.6**
	comp=Z,257nm,2.0s,mb5.7						
BINY	**Binghamton**	**70.59**	**355**	*e*P	**P**	**02 50 36.9**	**-0.4**
	comp=Z,87nm,1.6s,mb5.3						
HRV	**Harvard--Oak R**	**70.64**	**358**	*e*P	**P**	**02 50 37.6**	**0.0**
HRV				pmax	pmax		

	comp=Z,23nm,1.3s,mb4.8						
HRV	**Harvard--Oak R**	**70.64**	**358**	*e*P	**P**	**02 50 37.6**	**0.0**
	comp=Z,23nm,1.3s,mb4.8						
DBIC	**Dimbokro**	**70.94**	**71**	*e*P	**P**	**02 50 40.1**	**+0.2**
DBIC				pmax	pmax		
	comp=Z,47nm,0.9s						
DBIC	**Dimbokro**	**70.94**	**71**	P	**P**	**02 50 39.8**	**-0.1**
	comp=Z,32nm,0.8s,mb5.2,baz=210,slow=6.4,SNR=28						
DBIC	**Dimbokro**	**70.94**	**71**	*e*P	**P**	**02 50 40.1**	**+0.2**
	comp=Z,47nm,0.9s,mb5.3						
GENY	**Geneseo**	**71.32**	**353**	*e*P	**P**	**02 50 40.8**	**-0.9**
BNM	**Barren Site**	**71.71**	**328**	*e*P	**P**	**02 50 45.3**	**+1.1**
LENM	**Lemitar**	**71.89**	**328**	*e*P	**P**	**02 50 40.5**	**-4.8**
KSU1	**Kansas State U**	**71.96**	**338**	*e*P	**P**	**02 50 44.7**	**-0.9**
NCB	**Newcomb**	**72.22**	**356**	*e*P	**P**	**02 50 45.5**	**-1.5**
	comp=Z,11nm,0.9s,mb4.7						
TUC	**Tucson**	**72.29**	**324**	*e*P	**P**	**02 50 48.0**	**+0.3**
TUC				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.0						
TUC	**Tucson**	**72.29**	**324**	*e*P	**P**	**02 50 48.0**	**+0.4**
	comp=Z,38nm,1.5s,mb5.0						
ANMO	**Albuquerque**	**72.30**	**328**	*e*P	**P**	**02 50 48.3**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,45nm,1.1s						
ANMO	**Albuquerque**	**72.30**	**328**	*e*P	**P**	**02 50 48.3**	**+0.7**
	comp=Z,45nm,1.1s,mb5.2						
CBKS	**Cedar Bluff**	**72.80**	**335**	*e*P	**P**	**02 50 50.7**	**+0.2**
CBKS				pmax	pmax		
	comp=Z,176nm,1.4s,mb5.7						
CBKS	**Cedar Bluff**	**72.80**	**335**	*e*P	**P**	**02 50 50.7**	**+0.1**
	comp=Z,176nm,1.4s,mb5.7						
FRNY	**Flat Rock**	**73.05**	**357**	*e*P	**P**	**02 50 51.6**	**-0.3**
MSNY	**Massena**	**73.28**	**356**	*e*P	**P**	**02 50 53.3**	**+0.1**
SDCO	**Great Sand Dun**	**74.19**	**331**	*e*P	**P**	**02 50 59.2**	**+0.6**
	comp=Z,48nm,1.2s,mb5.1						
WUAZ	**Wupatki**	**75.12**	**325**	*e*P	**P**	**02 51 05.1**	**+1.2**
	comp=Z,85nm,1.1s,mb5.4						
PV01	**Paradox Valley**	**75.87**	**329**	*e*P	**P**	**02 51 09.2**	**+1.0**
ISCO	**Idaho Springs**	**75.96**	**332**	*e*P	**P**	**02 51 09.5**	**+0.9**
ISCO				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1						
ISCO	**Idaho Springs**	**75.96**	**332**	*e*P	**P**	**02 51 09.5**	**+0.8**
	comp=Z,40nm,1.0s,mb5.1						
PV10	**Paradox Valley**	**76.28**	**329**	*e*P	**P**	**02 51 11.1**	**+0.6**
PFO	**Pinyon Flat Ob**	**76.35**	**321**	*e*P	**P**	**02 51 12.1**	**+1.2**
PFO				pmax	pmax		
	comp=Z,56nm,1.6s,mb5.0						
PFO	**Pinyon Flat Ob**	**76.35**	**321**	*e*P	**P**	**02 51 12.1**	**+1.2**
	comp=Z,56nm,1.6s,mb5.0						
LDFC	**Landfair**	**76.71**	**323**	*e*P	**P**	**02 51 14.6**	**+1.7**
NEN	**Nelson**	**77.01**	**323**	*e*P	**P**	**02 51 15.1**	**+0.5**
PHWY	**Pilot Hill**	**77.16**	**333**	*e*P	**P**	**02 51 15.7**	**+0.4**
MAW	**Mawson**	**77.74**	**163**	P	**P**	**02 51 19.1**	**+1.1**
	comp=Z,11nm,0.6s,mb4.8,baz=231,slow=6.3,SNR=15						
MAW				pP	pP	02 51 50.3	+0.9
	comp=Z,28nm,1.0s,baz=244,slow=8.4,SNR=8.0						
MSU	**Marysvale**	**77.87**	**327**	*e*P	**P**	**02 51 20.5**	**+1.2**
MVU	**Marysvale**	**77.88**	**327**	*e*P	**P**	**02 51 20.7**	**+1.4**
	comp=Z,56nm,1.2s,mb5.2						
ARUT	**Antelope Range**	**77.93**	**325**	*e*P	**P**	**02 51 21.2**	**+1.6**
RWWY	**Rawlins**	**78.20**	**332**	*e*P	**P**	**02 51 22.2**	**+1.2**
	comp=Z,92nm,1.0s,mb5.5						
TSUM	**Tsumeb**	**78.22**	**105**	*e*P	**P**	**02 51 22.5**	**+1.0**
	comp=Z,36nm,1.0s,mb5.0						
MPU	**Maple Canyon**	**78.80**	**328**	*e*P	**P**	**02 51 24.9**	**+0.6**
DAU	**Daniels Canyon**	**78.94**	**328**	*e*P	**P**	**02 51 26.3**	**+1.2**
RSSD	**Black Hills**	**79.01**	**335**	*e*P	**P**	**02 51 25.8**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.2						
RSSD	**Black Hills**	**79.01**	**335**	*e*P	**P**	**02 51 25.8**	**+0.4**
	comp=Z,37nm,0.9s,mb5.2						
JLU	**Jordanelle**	**79.18**	**328**	*e*P	**P**	**02 51 27.3**	**+1.0**
CTU	**Camp Tracy**	**79.39**	**328**	*e*P	**P**	**02 51 28.2**	**+0.7**
TRCR	**Troy Canyon**	**79.44**	**324**	*e*P	**P**	**02 51 29.1**	**+1.2**
TRCR				*e*	pP	02 52 01.1	+1.7
DUG	**Dugway**	**79.50**	**327**	*e*P	**P**	**02 51 28.9**	**+0.8**
DUG				pmax	pmax		
	comp=Z,61nm,1.5s,mb5.2						
DUG	**Dugway**	**79.50**	**327**	*e*P	**P**	**02 51 28.9**	**+0.8**
	comp=Z,61nm,1.5s,mb5.2						
TCUT	**Toone Canyon**	**79.57**	**329**	*e*P	**P**	**02 51 29.2**	**+0.8**
HWUT	**Hardware Ranch**	**80.03**	**329**	*e*P	**P**	**02 51 31.6**	**+0.7**
	comp=Z,55nm,1.1s,mb5.3						
PDAR	**Pinedale Array**	**80.08**	**331**	P	**P**	**02 51 31.6**	**+0.5**
	comp=Z,20nm,0.9s,mb5.0,baz=135,slow=4.2,SNR=92						
PDAR				PKKPbc		03 10 14.5	
	comp=Z,0.6nm,0.5s,SNR=4.9						
TPH	**Tonopah**	**80.08**	**323**	*e*P	**P**	**02 51 32.5**	**+1.2**
TPH				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.2						
TPH	**Tonopah**	**80.08**	**323**	*e*P	**P**	**02 51 32.5**	**+1.2**
	comp=Z,50nm,1.3s,mb5.2						
BGU	**Big Grassy Mou**	**80.17**	**328**	*e*P	**P**	**02 51 32.0**	**+0.3**
SPUT	**South Promonto**	**80.20**	**328**	*e*P	**P**	**02 51 32.6**	**+0.8**
BOSA	**Boshof**	**80.33**	**117**	P	**P**	**02 51 33.1**	**+0.3**
	comp=Z,9.8nm,0.5s,mb4.9,baz=246,slow=5.2,SNR=25						
BOSA				LR	LR	03 22 27.2	
	comp=Z,91nm,19.6s,baz=30,slow=32						
OMM	**Old Mammoth Mi**	**80.69**	**322**	*e*P	**P**	**02 51 35.6**	**+1.1**
HVU	**Hansel Valley**	**80.72**	**328**	*e*P	**P**	**02 51 34.9**	**+0.3**
HVU				*e*	pP	02 52 06.1	-0.1
AHID	**Auburn Hatcher**	**80.75**	**330**	*e*P	**P**	**02 51 35.3**	**+0.6**
	comp=Z,81nm,1.2s,mb5.4						
MNV	**Mina**	**80.84**	**323**	*e*P	**P**	**02 51 35.9**	**+0.6**
MNV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6						
MNV	**Mina**	**80.84**	**323**	*e*P	**P**	**02 51 35.9**	**+0.6**
	comp=Z,10nm,1.1s,mb4.6						
NVAR	**Mina Array Bea**	**80.92**	**323**	P	**P**	**02 51 36.4**	**+0.7**
	comp=Z,9.2nm,0.9s,mb4.6,baz=140,slow=6.7,SNR=36						
NVAR				pP	pP	02 52 07.8	+0.4
	comp=Z,6.6nm,1.0s,baz=130,slow=5.9,SNR=5.1						
NVAR				PKKPbc		03 10 13.7	
	comp=Z,0.5nm,0.5s,baz=264,slow=4.4,SNR=4.3						
NVAR	**Mina Array Bea**	**80.92**	**323**	P	**P**	**02 51 36.4**	**+0.7**
NVAR				pP	pP	02 52 07.8	+0.4
NVAR				PKKPbc		03 10 13.7	
ELK	**Elko**	**81.09**	**326**	*e*P	**P**	**02 51 37.1**	**+0.5**
ELK				pmax	pmax		
	comp=Z,27nm,1.1s						
ELK	**Elko**	**81.09**	**326**	*e*P	**P**	**02 51 37.0**	**+0.5**
	comp=Z,27nm,1.1s,mb5.0						
ELK				*e*	pP	02 52 07.9	-0.3
SNOW	**Snow King Moun**	**81.16**	**331**	*e*P	**P**	**02 51 37.5**	**+0.6**
	comp=Z,53nm,1.1s,mb5.3						
WUWY	**Wally Ulrich**	**81.22**	**331**	*e*P	**P**	**02 51 37.8**	**+0.6**
TPAW	**Teton Pass**	**81.27**	**331**	*e*P	**P**	**02 51 38.2**	**+0.8**
	comp=Z,64nm,1.1s,mb5.4						
RRI2	**Red Ridge**	**81.31**	**330**	*e*P	**P**	**02 51 38.4**	**+0.7**
	comp=Z,55nm,1.1s,mb5.3						
MOOW	**Moose Ponds**	**81.39**	**331**	*e*P	**P**	**02 51 38.4**	**+0.4**
	comp=Z,18nm,1.1s,mb4.8						
IMW	**Indian Meadow**	**81.59**	**331**	*e*P	**P**	**02 51 40.0**	**+0.9**
	comp=Z,80nm,1.2s,mb5.4						
CMB	**Columbia Colle**	**81.76**	**321**	*e*P	**P**	**02 51 40.4**	**+0.3**
CMB				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.6						
CMB	**Columbia Colle**	**81.76**	**321**	*e*P	**P**	**02 51 40.4**	**+0.3**
	comp=Z,11nm,1.2s,mb4.6						
ULM	**Lac du Bonnet**	**81.89**	**343**	P	**P**	**02 51 40.0**	**-0.5**
	comp=Z,30nm,0.8s,mb5.1,baz=154,slow=5.3,SNR=31						
ULM				LR	LR	03 26 54.4	
	comp=Z,46nm,20.8s,baz=341,slow=35						
YFT	**Old Faithful**	**81.99**	**331**	*e*P	**P**	**02 51 43.0**	**+1.9**
LAO	**LASA Array**	**82.00**	**335**	*e*P	**P**	**02 51 41.5**	**+0.3**
	comp=Z,82nm,1.1s,mb5.5						
YNR	**Norris Junctio**	**82.14**	**331**	*e*P	**P**	**02 51 43.2**	**+1.3**
YMR	**Madison River**	**82.22**	**331**	*e*P	**P**	**02 51 44.0**	**+1.6**
LBTB	**Lobatse**	**82.24**	**114**	*e*P	**P**	**02 51 43.5**	**+0.6**
LBTB				pmax	pmax		
	comp=Z,38nm,1.3s,mb5.1						
LBTB	**Lobatse**	**82.24**	**114**	*e*P	**P**	**02 51 43.5**	**+0.6**
	comp=Z,38nm,1.3s,mb5.1						
QLMT	**Earthquake Lak**	**82.55**	**331**	*e*P	**P**	**02 51 45.1**	**+1.0**
HLID	**Hailey**	**82.87**	**329**	*e*P	**P**	**02 51 46.6**	**+1.0**
	comp=Z,31nm,1.1s,mb5.0						
SCHQ	**Schefferville**	**82.96**	**1**	P	**P**	**02 51 45.6**	**-0.2**
	comp=Z,20nm,1.1s,mb4.9,baz=157,slow=4.2,SNR=8.3						
BEKR	**Beckwourth**	**83.06**	**323**	*e*P	**P**	**02 51 47.5**	**+0.8**
	comp=Z,28nm,1.2s,mb5.0						
MCMT	**McKenzie Canyo**	**83.16**	**330**	*e*P	**P**	**02 51 48.5**	**+1.4**
BOZ	**Bozeman (W)**	**83.29**	**331**	*e*P	**P**	**02 51 47.9**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.0						
BOZ	**Bozeman (W)**	**83.29**	**331**	*e*P	**P**	**02 51 47.9**	**+0.2**
	comp=Z,26nm,1.1s,mb5.0						
WVOR	**Wild Horse Val**	**84.04**	**325**	*e*P	**P**	**02 51 52.2**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.7						
WVOR	**Wild Horse Val**	**84.04**	**325**	*e*P	**P**	**02 51 52.2**	**+0.7**
	comp=Z,18nm,1.4s,mb4.7						
HRY	**Holter Researc**	**84.22**	**332**	*e*P	**P**	**02 51 53.7**	**+1.3**
MOD	**Modoc**	**84.50**	**324**	*e*P	**P**	**02 51 54.7**	**+0.9**
	comp=Z,32nm,1.4s,mb5.0						
WDC	**Whiskeytown Da**	**84.74**	**322**	*e*P	**P**	**02 51 54.7**	**-0.4**
WDC				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
WDC	**Whiskeytown Da**	**84.74**	**322**	*e*P	**P**	**02 51 54.6**	**-0.4**
	comp=Z,30nm,1.5s,mb5.0						
WDC				*e*		02 52 02.8	
CHMT	**Chamberlain Mo**	**84.98**	**331**	*e*P	**P**	**02 51 56.9**	**+0.8**
BMO	**Blue Mountains**	**85.20**	**328**	*e*P	**P**	**02 51 57.5**	**+0.2**
BMO				pmax	pmax		
	comp=Z,32nm,1.5s,mb5.0						
BMO	**Blue Mountains**	**85.20**	**328**	*e*P	**P**	**02 51 57.5**	**+0.3**
	comp=Z,32nm,1.5s,mb5.0						
MSO	**Missoula**	**85.20**	**331**	*e*P	**P**	**02 51 58.3**	**+1.1**
	comp=Z,27nm,1.4s,mb5.0						
CASY	**Casey**	**85.58**	**180**	*e*P	**P**	**02 51 60.0**	**+1.4**
	comp=Z,23nm,1.0s,mb5.1						
CASY				*e*		02 52 16.5	
CASY				*e*	pP	02 52 32.2	+1.5
YBH	**Yreka Blue Hor**	**85.64**	**323**	P	**P**	**02 51 59.2**	**-0.3**
YBH				*PP	pP	02 52 31.6	+0.1
YBH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YBH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YBH	**Yreka Blue Hor**	**85.64**	**323**	P	**P**	**02 51 59.2**	**-0.3**
	comp=Z,3.6nm,0.7s,mb4.4,baz=156,slow=3.6,SNR=8.1						
YBH				pP	pP	02 52 31.6	+0.1
	comp=Z,3.6nm,0.8s,baz=217,slow=3.4,SNR=3.4						
YBH	**Yreka Blue Hor**	**85.64**	**323**	*e*P	**P**	**02 51 59.4**	**-0.2**
	comp=Z,12nm,1.3s,mb4.7						
PINOR	**Pine Mountain**	**86.17**	**325**	P	**P**	**02 52 03.5**	**+1.4**
BSMT	**Bassoo Peak**	**86.36**	**331**	P	**P**	**02 52 04.0**	**+1.1**
HUMO	**Hull Mountain**	**86.38**	**323**	P	**P**	**02 52 02.3**	**-0.8**
CROR	**Criterion Ridg**	**87.06**	**326**	P	**P**	**02 52 08.0**	**+1.6**
FRIS	**Frissel Point**	**87.07**	**325**	P	**P**	**02 52 07.5**	**+1.1**
HAWA	**Hanford**	**87.39**	**328**	*e*P	**P**	**02 52 08.5**	**+0.7**
	comp=Z,5.7nm,1.5s,mb4.3						
FFC	**Flin Flon**	**87.56**	**342**	*e*P	**P**	**02 52 08.2**	**-0.3**
FFC				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.2						
FFC	**Flin Flon**	**87.56**	**342**	*e*P	**P**	**02 52 08.2**	**-0.3**
	comp=Z,40nm,1.5s,mb5.2						
NEW	**Newport**	**87.69**	**330**	*e*P	**P**	**02 52 08.6**	**-0.6**
NEW				pmax	pmax		
	comp=Z,37nm,1.4s						
NEW	**Newport**	**87.69**	**330**	*e*P	**P**	**02 52 08.6**	**-0.6**
	comp=Z,37nm,1.4s,mb5.2						
OD2	**Odessa Site #2**	**87.74**	**329**	P	**P**	**02 52 10.2**	**+0.7**
DPW	**Davenport**	**87.87**	**329**	P	**P**	**02 52 11.2**	**+1.1**
COR	**Corvallis**	**87.95**	**325**	*e*P	**P**	**02 52 12.2**	**+1.6**
COR				pmax	pmax		
	comp=Z,140nm,1.5s,mb5.8						
COR	**Corvallis**	**87.95**	**325**	*e*P	**P**	**02 52 12.2**	**+1.6**
	comp=Z,140nm,1.5s,mb5.8						
RPZ	**Rata Peaks**	**89.55**	**219**	P	**P**	**02 52 20.5**	**+2.3**
	comp=Z,15nm,0.8s,mb5.2,baz=223,slow=4.6,SNR=5.3						
RPZ				pP	pP	02 52 51.8	+1.3
	comp=Z,46nm,1.0s,baz=35,slow=15,SNR=5.9						
RPW	**Rockport**	**89.81**	**328**	P	**P**	**02 52 18.8**	**-0.5**
ESDC	**Sonseca Array**	**90.84**	**44**	P	**P**	**02 52 24.8**	**+0.5**
	comp=Z,1.0nm,0.8s,mb4.0,baz=225,slow=3.6,SNR=4.7						
YKA	**Yellowknife Ar**	**97.67**	**340**	P	**P**	**02 52 54.9**	**0.0**
	comp=Z,7.3nm,0.8s,mb5.2,baz=136,slow=4.6,SNR=43						
YKA				pP	pP	02 53 26.7	-0.6
	comp=Z,0.4nm,0.3s,baz=142,slow=4.4,SNR=2.4						
YKA	**Yellowknife Ar**	**97.67**	**340**	P	**P**	**02 52 54.9**	**0.0**
YKA				pP	pP	02 53 26.8	-0.6
GERES	**GERESS Array B**	**106.38**	**43**	PKiKP		02 57 44.4	
	comp=Z,0.2nm,0.6s,baz=180,slow=2.0,SNR=4.3						
ILAR	**Eielson Array**	**110.42**	**333**	PKiKP		02 57 51.7	
	comp=Z,0.9nm,0.7s,baz=135,slow=1.3,SNR=7.4						
ILAR				PKKPbc		03 08 52.0	
	comp=Z,0.6nm,0.9s,baz=270,slow=1.8,SNR=4.9						
AKASG	**Malin Array Be**	**116.49**	**45**	PKP	PKPdf	02 58 03.1	+0.5
	comp=Z,2.1nm,0.6s,baz=266,slow=2.8,SNR=17						
AKASG				pPKP		02 58 37.7	
	comp=Z,0.9nm,0.6s,baz=269,slow=2.9,SNR=3.1						
AKASG				PP	PP	02 59 06.1	-10
	comp=Z,0.2nm,0.3s,baz=258,slow=6.7,SNR=5.5						
AKASG	**Malin Array Be**	**116.49**	**45**	PKP	PKPdf	02 58 03.1	+0.5
AKASG				pPKP		02 58 37.7	
AKASG				PP	PP	02 59 06.1	-10
BRTR	**Keskin Array B**	**116.77**	**57**	PKP	PKPdf	02 58 05.0	+1.6
	comp=Z,3.0nm,0.8s,baz=183,slow=2.5,SNR=21						
BRTR				pPKP		02 58 39.8	
	comp=Z,1.5nm,0.8s,baz=185,slow=3.1,SNR=5.1						
BRTR				PP	PP	02 59 13.4	-4.8
	comp=Z,1.5nm,1.0s,baz=225,slow=4.1,SNR=3.9						
FINES	**FINESS Array B**	**116.95**	**32**	PKP	PKPdf	02 58 04.3	+1.1
	comp=Z,1.8nm,0.9s,baz=270,slow=3.8,SNR=5.3						
FINES				PKKPbc		03 08 31.3	
	comp=Z,1.2nm,0.8s,baz=63,slow=4.3,SNR=6.1						
FINES	**FINESS Array B**	**116.95**	**32**	PKP	PKPdf	02 58 04.3	+1.1
FINES				PKKPbc		03 08 31.3	
ARCES	**ARCESS Array B**	**117.91**	**23**	PP	PP	02 59 18.3	-7.1
	comp=Z,4.0nm,1.1s,baz=4.1,slow=17,SNR=3.8						
ARCES				PKKPbc		03 08 27.4	
	comp=Z,4.3nm,1.0s,baz=82,slow=3.9,SNR=6.3						
MALT	**Malatya**	**120.02**	**60**	*e*PKIKP	PKPdf	02 58 11.9	+2.1
OBN	**Obninsk**	**121.59**	**41**	*e*PKIKP	PKPdf	02 58 13.6	+1.2
OBN				*e*		02 58 48.1	
OBN				pmax	pmax		
	comp=Z,15nm,1.1s						
ASAR	**Alice Springs**	**123.68**	**205**	PKP	PKPdf	02 58 17.8	+0.5
	comp=Z,7.2nm,0.8s,baz=151,slow=2.1,SNR=38						
ASAR				pPKP		02 58 51.9	
	comp=Z,2.3nm,0.7s,baz=134,slow=2.1,SNR=3.8						
ASPA	**Alice Springs**	**123.68**	**205**	*e*P	PKPdf	02 58 18.2	+1.0
KIV	**Kislovodsk**	**124.26**	**54**	*e*PKIKP	PKPdf	02 58 19.5	+1.6
KIV				*e*		02 58 54.4	
KIV				pmax	pmax		
	comp=N,6.0nm,1.0s						
KIV				pmax	pmax		
	comp=E,5.0nm,1.0s						
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV	**Kislovodsk**	**124.26**	**54**	*e*PKPdf	PKPdf	02 58 19.3	+1.4
GOF	**Gofitskoye**	**124.66**	**53**	*e*PKIKP	PKPdf	02 58 20.0	+1.4
GOF				pmax	pmax		
	comp=Z,32nm,1.0s						
ZEI	**Tsey**	**124.97**	**56**	*e*PKIKP	PKPdf	02 58 20.6	+1.3
GNI	**Garni**	**125.19**	**59**	PKP	PKPdf	02 58 21.9	+2.2
	comp=Z,3.5nm,0.3s,baz=6.0,slow=21,SNR=4.1						
GNI	**Garni**	**125.19**	**59**	PKP	PKPdf	02 58 21.9	+2.2
WB2	**Warramunga Arr**	**126.86**	**208**	⇑*i*P	PKPdf	02 58 24.8	+1.4
WRA	**Warramunga Arr**	**126.86**	**208**	PKP	PKPdf	02 58 24.7	+1.2
	comp=Z,15nm,0.8s,baz=161,slow=1.6,SNR=74						
WRA				pPKP		02 58 58.9	
	comp=Z,6.0nm,0.6s,baz=163,slow=1.6,SNR=4.8						
BILL	**Bilibino**	**128.88**	**337**	*e*PKIKP	PKPdf	02 58 27.4	+1.3
BILL				*e*		03 00 36.7	
BILL				pmax	pmax		
	comp=Z,15nm,1.0s						
BILL	**Bilibino**	**128.88**	**337**	*e*PKPdf	PKPdf	02 58 27.7	+1.6
FITZ	**Fitzroy Crossi**	**131.60**	**199**	PKP	PKPdf	02 58 34.4	+1.9
	comp=Z,12nm,0.6s,baz=194,slow=4.8,SNR=18						
FITZ				SKPbc		03 01 48.6	
	comp=Z,19nm,1.2s,baz=187,slow=4.9,SNR=5.3						
ARU	**Arti**	**133.82**	**38**	*e*PKIKP	PKPdf	02 58 37.4	+1.7
ARU				*e*		02 59 12.1	
ARU	**Arti**	**133.82**	**38**	*e*PKPdf	PKPdf	02 58 37.5	+1.8
ARU				*e*		02 59 11.8	
TIXI	**Tiksi**	**135.64**	**352**	*i* PKHKP		02 58 27.3	
YAK	**Yakutsk**	**144.21**	**345**	⇑*i*PKIKP	PKPdf	02 58 53.4	-0.7
KAD	**Karad**	**144.46**	**100**	*e*PKP	PKPdf	02 58 56.4	+0.5
KAD				AMb	AMB	02 58 59.8	
	comp=Z,57nm,1.3s						
POO	**Poona**	**144.67**	**98**	*e*PKP	PKPdf	02 58 57.6	+1.4
POO				AMb	AMB	02 59 00.7	
	comp=Z,48nm,1.0s						
EKS2	**Erkin-Say**	**146.86**	**55**	P	PKPdf	02 59 02.7	+3.4
	SNR=26						
NVS	**Novosibirsk**	**146.86**	**30**	*e*PKIKP	PKPdf	02 59 00.4	+1.6
NVS				*e*		02 59 34.9	
NVS				pmax	pmax		
	comp=Z,136nm,1.4s						
NVS				pmax	pmax		
	comp=N,8.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,43nm,1.5s						
AML	**Almayashu**	**146.91**	**56**	P	PKPdf	02 59 03.0	+3.6
	SNR=30						
USP	**Ospenovka**	**147.23**	**53**	P	PKPdf	02 59 03.4	+3.5
	SNR=17						
AAK	**Ala-Archa**	**147.38**	**54**	P	PKPdf	02 59 03.7	+3.6
	SNR=32						
AAK	**Ala-Archa**	**147.38**	**54**	*e*PKPdf	PKPdf	02 59 02.5	+2.4
AAK				*e*		02 59 37.3	
FRU	**Bishkek**	**147.42**	**54**	*e*PKP2	PKPab	02 59 04.0	-3.3
FRU				pmax	pmax		
	comp=Z,220nm,1.6s						
CHMS	**Chumysh**	**147.47**	**54**	P	PKPdf	02 59 05.7	+5.4
	SNR=24						
UCH	**Uchtor**	**147.49**	**55**	P	PKPdf	02 59 04.4	+4.1
	SNR=80						
KBK	**Karagaybulak**	**147.70**	**54**	P	PKPdf	02 59 07.1	+6.5
	SNR=18						
KZA	**Kyzart**	**148.06**	**55**	P	PKPdf	02 59 05.5	+4.3
	SNR=30						
TKM2	**Tokmak 2**	**148.09**	**54**	P	PKPdf	02 59 04.3	+3.0
	SNR=42						
ZAL	**Zalesovo**	**148.15**	**30**	PKP	PKPdf	02 59 02.9	+1.9
	comp=Z,46nm,0.9s,baz=169,slow=3.2,SNR=34						
ZAL				PKPbc	PKPdf	02 59 06.5	+5.5
	comp=Z,46nm,0.9s,baz=169,slow=3.1,SNR=93						
ZAL				pPKPbc		02 59 38.1	
	comp=Z,41nm,0.9s,baz=193,slow=2.6,SNR=7.9						
ZAL	**Zalesovo**	**148.15**	**30**	PKP	PKPdf	02 59 02.9	+1.9
ZAL				PKPbc	PKPdf	02 59 06.5	+5.5
ZAL				pPKPbc		02 59 38.1	
HYB	**Hyderabad**	**148.28**	**103**	*e*PKIKP	PKPdf	02 59 05.0	+2.7
HYB				*e*		02 59 08.0	
HYB				*e*		02 59 42.0	
HYB	**Hyderabad**	**148.28**	**103**	*i* PKP	PKPdf	02 59 05.0	+2.7
	comp=Z,70nm,1.0s						
HYB				*e*		02 59 08.0	
HYB				*e*		02 59 42.0	
HYB				*e*pPKP		02 59 53.0	
ULHL	**Ulahol**	**148.73**	**55**	P	PKPdf	02 59 05.6	+3.3
	SNR=66						
YSS	**Yuzh-Sakhalins**	**149.10**	**315**	⇑*i*PKP2	PKPab	02 59 08.4	-5.5
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS	**Yuzh-Sakhalins**	**149.10**	**315**	*e*PKPbc	PKPdf	02 59 08.0	+5.2
KSH	**Kashi**	**149.12**	**60**	*i* PKP	PKPdf	02 59 10.1	+7.1
KSH				*e*APKP		02 59 36.0	
KSH				XPKP		02 59 47.4	
KSH				PP	PP		
	comp=Z,400nm,4.9s						
BHPL	**Bhopal**	**149.42**	**92**	*e*PKPb		02 59 10.6	
BHPL				AMb	AMB	02 59 11.8	
	comp=Z,46nm,1.0s						
THN	**Thein Dam**	**149.42**	**74**	*e*PKPb		02 59 09.8	
	comp=Z,27nm,0.8s						
CLNS	**Chul’man**	**149.96**	**345**	*e*PKHKP		02 59 09.9	
CLNS				pmax	pmax		
	comp=Z,63nm,0.7s						
CLNS				pmax	pmax		
	comp=N,23nm,0.9s						
CLNS				pmax	pmax		
	comp=E,12nm,1.0s						
ASAJ	**Asahikawa**	**150.32**	**310**	PKIKP	PKPdf	02 59 07.3	+2.6
ASAJ						02 59 45.9	
ASAJ				pmax	pmax		
	comp=Z,41nm,0.9s						
ASAJ				pmax	pmax		
	comp=Z,41nm,0.9s						
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ASAJ	**Asahikawa**	**150.32**	**310**	PKP	PKPdf	02 59 07.3	+2.6
	comp=Z,41nm,0.9s,baz=247,slow=3.7,SNR=5.4						
ASAJ				PKPbc	PKPdf	02 59 12.0	+7.3
	comp=Z,41nm,0.9s,baz=248,slow=3.9,SNR=22						
ASAJ				pPKPbc		02 59 45.9	
	comp=Z,7.9nm,0.7s,baz=272,slow=10,SNR=3.0						
NDI	**New Delhi**	**150.40**	**81**	*e*x	PKPdf	02 59 07.0	+1.7
NDI				*e*PKPb	PKPdf	02 59 11.6	+6.3
BOD	**Bodaibo**	**150.56**	**357**	*e*PKIKP	PKPdf	02 59 10.0	+5.4
BOD				pmax	pmax		
	comp=Z,42nm,1.2s						
SMLA	**Simla**	**150.60**	**76**	*i* PKP	PKPdf	02 59 09.6	+4.1
MKAR	**Makanchi Array**	**151.05**	**43**	PKIKP	PKPdf	02 59 07.2	+1.5
MKAR						02 59 47.9	
MKAR	**Makanchi Array**	**151.05**	**43**	PKP	PKPdf	02 59 07.2	+1.5
	comp=Z,2.0nm,0.8s,baz=315,slow=1.7,SNR=14						
MKAR				PKPbc	PKPdf	02 59 13.8	+8.1
	comp=Z,64nm,0.9s,baz=297,slow=2.7,SNR=262						
MKAR				PKPab	PKPab	02 59 22.5	+0.4
	comp=Z,19nm,0.8s,baz=288,slow=3.8,SNR=10						
MKAR				pPKPbc		02 59 47.9	
	comp=Z,44nm,1.0s,baz=297,slow=2.7,SNR=6.5						
MKAR	**Makanchi Array**	**151.05**	**43**	PKP	PKPdf	02 59 07.2	+1.5
MKAR				PKPbc	PKPdf	02 59 13.8	+8.1
MKAR				PKPab	PKPab	02 59 22.5	+0.4
MKAR				pPKPbc		02 59 47.9	
VIS	**Vishakhapatnam**	**152.48**	**107**	*e*PKPb	PKPdf	02 59 15.8	+7.2
BLSP	**Bilaspur**	**153.21**	**97**	*e*PKPb	PKPdf	02 59 19.4	+10
MOY	**Mondy**	**155.63**	**15**	*e*PKIKP	PKPdf	02 59 16.0	+4.1
MOY				pmax	pmax		
	comp=Z,50nm,2.9s						
MJAR	**Matsushiro Arr**	**155.72**	**296**	PKP	PKPdf	02 59 14.1	+1.6
	comp=Z,0.7nm,0.4s,baz=238,slow=0.5,SNR=8.5						
MJAR				PKPab	PKPab	02 59 42.1	+0.1
	comp=Z,2.1nm,0.7s,baz=125,slow=2.9,SNR=7.8						
MAT	**Matsushiro**	**155.72**	**296**	*e*PKP	PKPdf	02 59 13.0	+0.5
MAT	**Matsushiro**	**155.72**	**296**	PKP	PKPdf	02 59 12.7	+0.2
WMQ	**Urumqi**	**155.84**	**44**	*e*PKP	PKPdf	02 59 12.9	+0.5
WMQ				PP	PP	03 03 19.9	-0.8
WMQ				PPP	PPP	03 06 56.5	-1.0
WMQ				SKKS		03 09 57.3	
WMQ				SS	SS	03 22 56.9	+1.2
WMQ				PP	PP		
	comp=Z,80nm,5.0s						
WMQ				LR	LR		
	comp=N,110nm,22.6s						
WMQ				LR	LR		
	comp=E,80nm,20.6s						
WMQ				LR	LR		
	comp=Z,100nm,22.0s						
CIT	**Chita**	**156.37**	**356**	*e*PKIKP	PKPdf	02 59 15.8	+3.0
CIT				*e*		02 59 44.3	
CIT				*e*		02 59 50.6	
BOK	**Bokaro**	**157.01**	**96**	*e*x	x	02 59 57.4	
ZAK	**Zakamensk**	**157.33**	**13**	*e*PKIKP	PKPdf	02 59 09.9	-4.3
ZAK				*e*		02 59 48.4	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MDJ	**Mudanjiang**	**158.08**	**322**	PKP	PKPdf	02 59 16.6	+1.2
MDJ				PP	PP		
	comp=Z,50nm,5.1s						
HIA	**Hailar**	**158.15**	**344**	PKIKP	PKPdf	02 59 16.1	+0.8
SONM	**Songino Array**	**160.32**	**9**	PKP	PKPdf	02 59 20.2	+2.5
	comp=Z,6.7nm,1.2s,SNR=16						
SONM				pPKP		02 59 54.6	
	comp=Z,6.4nm,1.1s,SNR=6.0						
SONM				PKPab	PKPab	03 00 01.4	-0.1
	comp=Z,6.3nm,0.9s,baz=316,slow=4.1,SNR=10						
SONM				PP	PP	03 03 43.8	-0.6
	comp=Z,1.2nm,1.0s,baz=333,slow=3.2,SNR=3.2						
SONM	**Songino Array**	**160.32**	**9**	PKP	PKPdf	02 59 20.2	+2.5
SONM				pPKP		02 59 54.6	
SONM				PKPab	PKPab	03 00 01.4	-0.1
SONM				PP	PP	03 03 43.8	-0.6
ULN	**Ulaanbaatar**	**160.37**	**8**	*e*PKIKP	PKPdf	02 59 20.8	+3.0
CN2	**Changchun**	**160.78**	**327**	*e*PKP	PKPdf	02 59 19.0	+0.6
LSA	**Lhasa**	**162.62**	**81**	*e*PKP	PKPdf	02 59 24.6	+3.9
SHL	**Shillong**	**162.74**	**95**	*e*PKP	PKPdf	02 59 22.0	+1.1
CMAR	**Chiang Mai Arr**	**165.15**	**129**	PKP	PKPdf	02 59 26.0	+2.5
	comp=Z,1.8nm,0.6s,baz=276,slow=2.6,SNR=11						
CMAR				PKPab	PKPab	03 00 22.8	-0.6
	comp=Z,2.9nm,1.0s,baz=245,slow=4.6,SNR=6.6						
HHC	**Hu-ho-hao-te**	**167.62**	**358**	*e*PKP	PKPdf	02 59 28.0	+3.3
HHC				APKP		02 59 56.3	
HHC				PKS	PKS	03 03 01.3	+5.0
HHC				PP	PP		
	comp=Z,170nm,7.1s						
HHC				LR	LR		
	comp=N,150nm,13.7s						
HHC				LR	LR		
	comp=E,330nm,30.4s						

HHC				LR	LR		
	comp=Z,120nm,13.7s						
LZH	**Lanzhou**	**170.28**	**37**	PKP	PKPdf	02 59 29.0	+2.6
LZH				PP	PP	03 04 39.0	+2.7
LZH				PP	PP		
	comp=Z,210nm,4.6s						
LZH				LR	LR		
	comp=N,490nm,16.8s						
LZH				LR	LR		
	comp=Z,210nm,17.6s						
KMI	**Kunming**	**171.93**	**112**	PKP	PKPdf	02 59 28.1	+0.4
NJ2	**Nanjing**	**172.30**	**300**	*e*PKP	PKPdf	02 59 28.2	+0.5
ENH	**Enshi**	**177.76**	**35**	PKPdf	PKPdf	02 59 31.2	+1.9

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*IDC **08** 02:46:39.8±1.2,10.82S×167.14E,mb4.3/8,mb1 4.6/8, mb1mx4.3/16,mbtmp4.3/8,MS4.0/16,Ms1 4.0/16, ms1mx3.9/30,Error ellipse: s-maj=84.0km s-min=18.8km az=145.0*

*NEIC **08** 02:46:41.4±0.6,10.79S×167.11E,h10^{km},mb4.8/1,Error ellipse: s-maj=27.1km s-min=10.9km az=144.0*

ISC 08 02:46:43.6±0.7,**10.8S**±0.2×**167.0E**±0.2,**h33**^{km},**n26,** σ**0**^{s}**77**/15,**mb4.3**/9,**MS4.1**/15,**1C,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.25**	**183**	LR	LR	02 52 16.3	
	comp=Z,195nm,20.8s,baz=222,slow=30						
CTA	**Charters Tower**	**22.01**	**243**	P	**P**	**02 51 38.0**	**+1.2**
	14nm,0.9s,mb4.4,baz=56,slow=11,SNR=8.6						
CTA				LR	LR	02 58 48.1	
	comp=Z,344nm,20.9s,MS3.7,baz=60,slow=33						
ARMA	**Armidale**	**24.22**	**214**	*e*P	**P**	**02 51 59.6**	**+1.1**
STKA	**Stephens Creek**	**31.49**	**224**	*e*P	**P**	**02 53 04.3**	**-0.4**
STKA	**Stephens Creek**	**31.49**	**224**	P	**P**	**02 53 04.1**	**-0.6**
	8.3nm,0.7s,mb4.7,baz=30,slow=9.3,SNR=16						
STKA				LR	LR	03 04 36.1	
	comp=Z,368nm,21.6s,MS4.0,baz=23,slow=34						
WB2	**Warramunga Arr**	**32.72**	**250**	*e*P	**P**	**02 53 15.5**	**0.0**
WRA	**Warramunga Arr**	**32.73**	**250**	P	**P**	**02 53 14.9**	**-0.7**
	4.5nm,0.8s,mb4.4,baz=81,slow=9.0,SNR=20						
RPZ	**Rata Peaks**	**33.02**	**175**	LR	LR	03 02 43.7	
	comp=Z,255nm,21.7s,MS3.9,baz=241,slow=29						
ASAR	**Alice Springs**	**34.01**	**243**	P	**P**	**02 53 25.9**	**-0.8**
	9.4nm,0.8s,mb4.8,baz=74,slow=9.5,SNR=51						
ASAR				LR	LR	03 06 22.6	
	comp=Z,167nm,19.8s,MS3.8,baz=69,slow=35						
ASPA	**Alice Springs**	**34.01**	**243**	*e*P	**P**	**02 53 25.7**	**-1.0**
FITZ	**Fitzroy Crossi**	**40.63**	**255**⇑	*i*P	**P**	**02 54 23.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**40.63**	**255**	P	**P**	**02 54 23.4**	**+1.0**
	22nm,0.7s,mb4.9,baz=90,slow=3.2,SNR=21						
FITZ				LR	LR	03 10 17.1	
	comp=Z,236nm,20.3s,MS4.0,baz=2.9,slow=35						
NWAO	**Narrogin (SRO)**	**50.63**	**236**	LR	LR	03 17 02.3	
	comp=Z,348nm,18.8s,MS4.4,baz=57,slow=36						
ASAJ	**Asahikawa**	**58.95**	**340**	LR	LR	03 16 57.4	
	comp=Z,87nm,20.2s,MS3.9,baz=177,slow=31						
VNDA	**Vanda**	**66.79**	**181**	LR	LR	03 24 12.0	
	comp=Z,71nm,19.0s,MS3.9,baz=30,slow=34						
CMAR	**Chiang Mai Arr**	**73.13**	**293**	pP	pP	02 58 20.4	-3.0
	0.7nm,0.4s,baz=107,slow=4.1,SNR=1.9						
SONM	**Songino Array**	**79.17**	**323**	pP	pP	02 58 54.5	-2.6
	2.8nm,1.1s,baz=127,slow=6.2,SNR=9.6						
QSPA	**South Pole Qui**	**79.24**	**180**	*e*P	**P**	**02 58 46.0**	**-0.6**
	13nm,1.3s,mb4.7						
YBH	**Yreka Blue Hor**	**82.83**	**45**	pP	pP	02 59 12.8	-3.8
	0.7nm,0.5s,baz=212,slow=5.3,SNR=3.6						
YBH				LR	LR	03 29 55.1	
	comp=Z,81nm,21.6s,MS4.1,baz=192,slow=31						
ILAR	**Eielson Array**	**82.86**	**18**	P	**P**	**02 59 05.8**	**0.0**
	0.7nm,0.8s,mb3.7,baz=244,slow=4.1,SNR=4.0						
ILAR				LR	LR	03 30 57.2	
	comp=Z,78nm,18.7s,MS4.1,baz=66,slow=32						
BBB	**Bella Bella**	**83.66**	**34**	LR	LR	03 30 19.7	
	comp=Z,130nm,21.3s,MS4.3,baz=329,slow=31						
NVAR	**Mina Array Bea**	**84.91**	**50**	P	**P**	**02 59 16.4**	**-0.4**
	0.2nm,0.3s,mb3.7,baz=241,slow=9.3,SNR=3.0						
NVAR				pP	pP	02 59 23.3	-4.0
	2.8nm,1.1s,baz=237,slow=13,SNR=4.6						
NVAR				LR	LR	03 28 11.3	
	comp=Z,182nm,19.8s,MS4.5,baz=130,slow=29						
NVAR	**Mina Array Bea**	**84.91**	**50**	P	**P**	**02 59 16.4**	**-0.4**
NVAR				pP	pP	02 59 23.3	-4.0
NVAR				LR	LR	03 28 11.3	
ELK	**Elko**	**87.85**	**48**	LR	LR	03 31 10.9	
	comp=Z,107nm,20.6s,MS4.2,baz=197,slow=30						
PDAR	**Pinedale Array**	**92.47**	**47**	P	**P**	**02 59 53.5**	**+0.8**
	0.2nm,0.4s,mb3.8,baz=248,slow=4.9,SNR=2.7						
PDAR				LR	LR	03 35 50.8	
	comp=Z,59nm,18.8s,MS4.1,baz=163,slow=32						
TXAR	**Lajitas Array**	**94.62**	**61**	LR	LR	03 34 04.0	
	comp=Z,80nm,19.3s,MS4.2,baz=325,slow=30						

IDC 08 02:48:23.2±1.8,**6.18S**×**147.19E,mb3.5**/3,**mb1 3.7**/5, **mb1mx3.6**/16,**mbtmp3.5**/5,**ML2.9**/2,**Error ellipse: s-maj=60.4km s-min=28.4km az=119.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.20**	**180**	Pn	Pn	02 49 15.3	-0.5
	6.5nm,0.3s,baz=6.4,slow=8.1,SNR=11						
PMG				Sn	Sn	02 49 51.6	-3.7
	4.8nm,0.3s,baz=141,slow=23,SNR=2.6						
WRA	**Warramunga Arr**	**18.52**	**221**	P	P	02 52 39.3	-3.8
	0.1nm,0.3s,baz=52,slow=12,SNR=4.7						
ASAR	**Alice Springs**	**21.57**	**215**	P	P	02 53 15.5	-1.2
	0.8nm,0.8s,baz=49,slow=9.6,SNR=6.0						
FITZ	**Fitzroy Crossi**	**24.13**	**239**	P	P	02 53 41.3	-0.6
	1.0nm,0.4s,baz=38,slow=9.5,SNR=5.9						
ILAR	**Eielson Array**	**85.58**	**23**	P	P	03 01 03.0	-1.3
	0.3nm,0.6s,baz=252,slow=4.8,SNR=4.1						

IDC 08 02:51:16.9±45.0,**19.22S**×**65.05E,mb4.1**/3,**mb1 4.3**/3, **mb1mx3.7**/20,**mbtmp4.1**/3,**MS3.7**/1,**Ms1 3.7**/1, **ms1mx3.1**/24,**Error ellipse: s-maj=1391.0km s-min=46.1km az=61.0,Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	**Sutherland**	**41.65**	**243**	LR	LR	03 13 26.6	
	comp=Z,105nm,20.7s,baz=36,slow=32						
ASAR	**Alice Springs**	**63.70**	**107**	P	P	03 01 50.8	-2.0
	2.0nm,0.8s,baz=258,slow=6.0,SNR=9.9						
WRA	**Warramunga Arr**	**64.83**	**104**	P	P	03 01 58.0	-2.2
	2.2nm,0.8s,baz=260,slow=5.9,SNR=7.4						
SONM	**Songino Array**	**76.34**	**27**	P	P	03 03 07.9	-1.6
	1.1nm,0.9s,baz=225,slow=6.1,SNR=4.7						

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*IDC **08** 03:10:29.4±0.8,61.88N×26.77W,mb3.7/12,mb1 3.9/13, mb1mx3.8/27,mbtmp3.7/13,ML3.3/1,MS3.0/4,Ms1 3.0/4, ms1mx2.8/31,Error ellipse: s-maj=29.4km s-min=15.4km az=3.0*

*NEIC **08** 03:10:30.8±0.5,61.86N×26.83W,h10^{km},mb4.3/2,Error ellipse: s-maj=15.5km s-min=9.1km az=190.0*

*CSEM **08** 03:10:30.8±0.1,61.86N×26.83W,h10^{km},mb4.2/2,Error ellipse: s-maj=7.7km s-min=5.7km az=19.0,After NEIC*

ISC 08 03:10:29.3±0.6,**61.9N**±0.1×**26.9W**±0.1,**h10**^{km},**n26,** σ**1**^{s}**11**/21,**mb3.8**/14,**MS3.1**/1,**Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUMG	**Summit**	**11.56**	**342**	*e*P	**P**	**03 13 16.3**	**-0.9**
SUMG	**Summit**	**11.56**	**342**	*e*P	**P**	**03 13 16.3**	**-0.9**
JMIC	**Jan Mayen**	**11.63**	**31**	LR	LR	03 16 43.3	
	comp=Z,55nm,20.0s,baz=203,slow=32						
EKA	**Eskdalemuir Ar**	**13.96**	**107**	Pn	**P**	**03 13 46.0**	**-3.1**
	0.1nm,0.3s,baz=304,slow=12,SNR=3.4						
NOA	**NORSAR Array B**	**18.06**	**76**	LR	LR	03 21 37.8	
	comp=Z,30nm,19.1s,baz=290,slow=37						
HFS	**Hagfors**	**19.53**	**77**	LR	LR	03 22 24.0	
	comp=Z,56nm,20.2s,baz=156,slow=37						
ARCES	**ARCESS Array B**	**22.15**	**48**	P	**P**	**03 15 27.6**	**+1.2**
	2.4nm,0.8s,mb3.7,baz=287,slow=13,SNR=4.5						
FINES	**FINESS Array B**	**24.57**	**67**	P	**P**	**03 15 48.9**	**-1.0**
	1.7nm,0.8s,mb3.6,baz=304,slow=6.9,SNR=4.2						
BRG	**Berggiesshubel**	**24.72**	**98**	*e*P	**P**	**03 15 53.0**	**+1.5**
	3.6nm,0.9s,mb3.9						
GERES	**GERESS Array B**	**26.02**	**101**	P	**P**	**03 16 04.3**	**+0.6**
	0.5nm,0.7s,mb3.1,baz=305,slow=12,SNR=4.3						
GERES				LR	LR	03 27 23.2	
	comp=Z,51nm,18.4s,MS3.1,baz=205,slow=39						
GERES	**GERESS Array B**	**26.02**	**101**	LR	LR	03 27 23.2	
MIV	**Mineville/With**	**32.34**	**258**	*e*P	**P**	**03 16 58.0**	**-2.4**
MIV	**Mineville/With**	**32.34**	**258**	*e*P	**P**	**03 16 58.0**	**-2.4**
YKA	**Yellowknife Ar**	**37.90**	**311**	P	**P**	**03 17 48.2**	**+0.5**
	0.4nm,0.5s,mb3.4,baz=41,slow=9.5,SNR=4.8						
YKA				PcP	PcP	03 20 02.0	-2.3
	0.4nm,0.6s,baz=41,slow=3.7,SNR=3.8						
YKA	**Yellowknife Ar**	**37.90**	**311**	P	**P**	**03 17 48.2**	**+0.5**
YKA				PcP	PcP	03 20 02.0	-2.3
YKA	**Yellowknife Ar**	**37.90**	**311**	PcP	PcP	03 20 02.0	-2.4
BRTR	**Keskin Array B**	**42.25**	**93**	P	**P**	**03 18 24.4**	**+0.6**
	0.9nm,0.9s,mb3.4,baz=315,slow=7.0,SNR=4.4						
ILAR	**Eielson Array**	**46.00**	**329**	P	**P**	**03 18 54.0**	**+0.3**
	0.6nm,0.9s,mb3.5,baz=24,slow=8.2,SNR=5.2						
PDAR	**Pinedale Array**	**50.16**	**288**	P	**P**	**03 19 26.9**	**+0.5**
	2.2nm,0.8s,mb4.2,baz=53,slow=7.4,SNR=16						
ELK	**Elko**	**54.32**	**291**	P	**P**	**03 19 59.4**	**+1.8**
	1.4nm,0.8s,mb3.9,baz=34,slow=7.9,SNR=8.6						
JCT	**Junction City**	**55.61**	**271**	*e*P	**P**	**03 20 07.5**	**+0.3**
	4.8nm,0.9s,mb4.5						
JCT	**Junction City**	**55.61**	**271**	*e*P	**P**	**03 20 07.5**	**+0.3**
	4.8nm,0.9s,mb4.5						
MKAR	**Makanchi Array**	**57.78**	**50**	P	**P**	**03 20 20.9**	**-1.5**
	0.7nm,0.8s,mb3.8,baz=333,slow=5.4,SNR=5.8						
TXAR	**Lajitas Array**	**58.40**	**274**	P	**P**	**03 20 26.8**	**-0.1**
	0.4nm,0.8s,mb3.5,baz=63,slow=5.6,SNR=3.9						
SONM	**Songino Array**	**64.39**	**33**	P	**P**	**03 21 06.6**	**-0.4**
	0.8nm,0.7s,mb3.8,baz=333,slow=3.2,SNR=6.4						
BDFB	**Brasilia**	**79.09**	**201**	P	**P**	**03 22 34.8**	**-0.3**
	1.3nm,0.6s,mb4.0,baz=2.0,slow=8.2,SNR=2.1						

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*IDC **08** 03:41:05.2±14.0,6.15S×130.05E,h120^{km}±154^{km}, mb3.4/1,mb1 3.3/4,mb1mx3.2/16,mbtmp3.6/4,ML3.4/3, Error ellipse: s-maj=83.8km s-min=55.5km az=21.0*

ISC 08 03:41:10.1±1.5,**6.47S**±0.09×**130.5E**±0.2,**h200**^{km},**n6,** σ**1**^{s}**39**/10,**mb3.5**/1,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.50**	**202**	*e*P	**P**	**03 44 02.2**	**-0.1**
FITZ				*e*S	**S**	**03 46 18.1**	**+0.2**
FITZ	**Fitzroy Crossi**	**12.50**	**202**	P	**P**	**03 44 02.2**	**-0.1**
	0.6nm,0.3s,baz=20,slow=11,SNR=26						
FITZ				S	**S**	**03 46 18.0**	**+0.2**
	0.2nm,0.3s,baz=345,slow=21,SNR=2.7						
WRA	**Warramunga Arr**	**13.90**	**165**	P	**P**	**03 44 21.0**	**+1.0**
	0.1nm,0.3s,baz=343,slow=12,SNR=14						
WRA				S	**S**	**03 46 48.9**	**-0.8**
	0.3nm,0.3s,baz=343,slow=24,SNR=11						
WB2	**Warramunga Arr**	**13.91**	**165**	*e*P	**P**	**03 44 22.0**	**+2.0**
WB2				*e*S	**S**	**03 46 48.1**	**-1.7**
ASAR	**Alice Springs**	**17.41**	**170**	P	**P**	**03 45 05.7**	**+3.5**
	0.1nm,0.3s,baz=358,slow=11,SNR=5.4						
MKAR	**Makanchi Array**	**68.06**	**326**	P	**P**	**03 51 48.5**	**-1.5**
	0.4nm,0.3s,mb3.5,baz=124,slow=5.2,SNR=6.5						

IDC 08 03:45:53.1±2.4,**4.73N**×**123.19E,mb3.7**/3,**mb1 3.9**/3, **mb1mx3.5**/20,**mbtmp3.7**/3,**Error ellipse: s-maj=339.7km s-min=27.2km az=63.0,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.86**	**156**	P	P	03 51 35.8	-1.7
	0.6nm,0.3s,baz=336,slow=9.7,SNR=9.8						
ASAR	**Alice Springs**	**30.10**	**160**	P	P	03 52 04.5	-2.3
	0.3nm,0.5s,baz=332,slow=6.7,SNR=3.7						
MKAR	**Makanchi Array**	**54.75**	**327**	P	P	03 55 24.5	-2.3
	0.2nm,0.3s,baz=127,slow=7.7,SNR=4.9						

IDC 08 04:02:12.0±1.7,**15.65S**×**175.83W,mb4.0**/4,**mb1 4.2**/5, **mb1mx3.9**/17,**mbtmp4.1**/5,**Error ellipse: s-maj=57.6km s-min=29.1km az=166.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.29**	**67**	Pn	Pn	04 03 18.3	-1.7
	25nm,0.3s,baz=132,slow=1.2,SNR=20						
AFI				Sn	Sn	04 03 58.7	-13
	31nm,0.3s,baz=30,slow=23,SNR=9.1						
STKA	**Stephens Creek**	**41.89**	**240**	P	P	04 10 03.4	-2.4
	2.7nm,0.7s,baz=84,slow=10,SNR=5.3						
WRA	**Warramunga Arr**	**47.51**	**257**	P	P	04 10 49.7	-1.4
	0.2nm,0.4s,baz=94,slow=7.1,SNR=12						
ASAR	**Alice Springs**	**47.81**	**252**	P	P	04 10 51.4	-2.1
	1.8nm,0.6s,baz=87,slow=8.4,SNR=22						
VNDA	**Vanda**	**62.90**	**185**	P	P	04 12 39.9	-2.0
	1.0nm,0.7s,baz=32,slow=4.7,SNR=5.4						

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*CSEM **08** 04:25:10.1±0.0,62.08N×26.50W,h2^{km},mb4.9/68,Ms4.0, Mw4.8,Error ellipse: s-maj=2.1km s-min=1.1km az=15.0*

*MOS **08** 04:25:11.9±0.9,61.99N×26.58W,h10^{km},mb4.9/46, MS4.0/20,Error ellipse: s-maj=9.0km s-min=5.8km az=129.5*

*IDC **08** 04:25:12.1±0.4,62.00N×26.61W,mb4.4/24,mb1 4.5/27, mb1mx4.4/33,mbtmp4.3/27,ML3.3/3,MS4.0/29,Ms1 4.0/29, ms1mx4.0/39,Error ellipse: s-maj=16.5km s-min=9.8km az=179.0*

*BJI **08** 04:25:13.9,62.77N×26.22W,h4^{km},mB5.2,mb4.8,Ms4.5, Msz4.5*

*HRVD **08** 04:25:13.7±0.3,61.96N×26.49W,h12^{km},MW4.8/47, Centroid moment Tensor Solution. LP body waves: s11,c11;Mantle waves: s47,c69; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.69±.07; $M_{\theta\theta}$0.14±.09; $M_{\phi\phi}$1.55±.06; $M_{r\theta}$-0.66±.41; $M_{\theta\phi}$0.20±.06; $M_{\phi r}$-0.36±.28; Best double couple: $M_0$1.783×10^{16} NP1:ϕ_s173°,δ39°, λ-115°. NP2:ϕ_s25°,δ55°,λ-71°. Principal axes: T 1.641, Plg8°, Azm101°; N .285, Plg16°, Azm193°; P -1.924, Plg72°, Azm344°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **08** 04:25:13.7±0.1,62.01N×26.54W,h10^{km},mb4.9/65, MS4.0/5 Error ellipse: s-maj=4.6km s-min=2.0km az=197.0*

*ZUR_RM **08** 04:25:13,62.01N×26.54W,h12^{km},Mw4.8/12,Moment Tensor Solution. s12 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.01; $M_{\theta\theta}$0.42; $M_{\phi\phi}$1.59; $M_{r\theta}$0.82; $M_{\theta\phi}$0.32; $M_{\phi r}$-0.31; Best double couple: $M_0$1.99×10^{16} NP1:ϕ_s356°,δ49°, λ-114°. NP2:ϕ_s211°,δ46°,λ-64°. Principal axes: T 1.68, Plg2°, Azm103°; N .62, Plg18°, Azm13°; P -2.3, Plg72°, Azm198°;*

ISC 08 04:25:12.1±0.1,**62.10N**±0.03×**26.54W**±0.04,**h10**^{km}, **(h15**^{km}±1.5^{km}**:pP-P),n366,**σ**1**^{s}**01**/350,**mb4.7**/101, **MS4.1**/45,**9C-15D,Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INYL	**Nylenda**	**2.56**	**41**	P	**Pn**	**04 25 53.2**	**-1.1**
IVOG	**Vogar**	**2.66**	**43**	P	**Pn**	**04 25 54.3**	**-1.5**
IKRI	**Krysuvik**	**2.71**	**47**	P	**Pn**	**04 25 54.1**	**-2.3**
IVOS	**Vogsosar**	**2.82**	**49**	P	**Pn**	**04 25 55.2**	**-2.9**
ISAN	**Sandskeio**	**2.99**	**47**	P	**Pn**	**04 25 58.2**	**-2.3**
IBJA	**Bjarnastaoir**	**3.02**	**50**	P	**Pn**	**04 25 57.8**	**-3.1**
IKUD	**Kuludalsa**	**3.07**	**41**	P	**Pn**	**04 26 00.4**	**-1.2**
IKRO	**Krokur**	**3.17**	**48**	P	**Pn**	**04 25 59.9**	**-3.2**
IKRO				S	**Sn**	**04 26 39.2**	**-2.2**
IHEI	**Heioarbar**	**3.20**	**46**	P	**Pn**	**04 26 00.9**	**-2.5**
IASB	**`sbjarnarst**	**3.54**	**39**	P	**Pn**	**04 26 07.7**	**-0.6**
IASB				S	**Sn**	**04 26 52.0**	**+1.3**
IGYG	**Gygjarholskot**	**3.60**	**50**	P	**Pn**	**04 26 06.5**	**-2.7**
IVAT	**Vatnsfell**	**4.04**	**55**	P	**Pn**	**04 26 12.4**	**-3.0**
SCO	**Scoresbysund**	**8.62**	**10**	*e*P	**P**	**04 27 16.8**	**-3.0**
SCO				pmax	pmax		
	comp=Z,17nm,0.8s						
SCO	**Scoresbysund**	**8.62**	**10**	*e*P	**P**	**04 27 16.8**	**-3.0**
	comp=Z,17nm,0.8s						
SCO				*i* S	Sn	04 29 27.9	+30
SCO	**Scoresbysund**	**8.62**	**10**	*i* P	**P**	**04 27 16.8**	**-3.0**
	comp=Z,17nm,0.8s						
SCO				*i* S	Sn	04 29 27.9	+30
JMIC	**Jan Mayen**	**11.38**	**31**	LR	LR	04 31 25.6	
	comp=Z,544nm,19.7s,baz=264,slow=32						
SUMG	**Summit**	**11.44**	**342**	*e*P	**P**	**04 27 56.8**	**-1.6**
	comp=Z,104nm,1.5s						
SUMG	**Summit**	**11.44**	**342**	*e*P	**P**	**04 27 56.8**	**-1.6**
	comp=Z,104nm,1.5s						
ESK	**Eskdalemuir**	**13.84**	**109**	*e*P	**P**	**04 28 32.5**	**+2.2**
ESK				pmax	pmax		
	comp=Z,21nm,1.0s						
ESK	**Eskdalemuir**	**13.84**	**109**	*e*P	**P**	**04 28 32.5**	**+2.2**
	comp=Z,21nm,1.0s						
EKA	**Eskdalemuir Ar**	**13.85**	**109**	Pn	**P**	**04 28 29.1**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=297,slow=13,SNR=7.3						
DAG	**Danmarks Havn**	**14.97**	**7**	*e*P	**P**	**04 28 45.0**	**0.0**
DAG				pmax	pmax		
	comp=Z,40nm,1.6s						
DAG	**Danmarks Havn**	**14.97**	**7**	*e*P	**P**	**04 28 45.0**	**0.0**
	comp=Z,40nm,1.6s						
DAG	**Danmarks Havn**	**14.97**	**7**	*i* P	**P**	**04 28 45.0**	**0.0**
	comp=Z,40nm,1.6s						
NOA	**NORSAR Array B**	**17.84**	**77**	P	**P**	**04 29 21.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=290,slow=11,SNR=3.2						
NOA				LR	LR	04 35 54.0	
	comp=Z,421nm,18.8s,baz=290,slow=36						
MUD	**Monsted U’grnd**	**18.91**	**91**	*i* P	**P**	**04 29 34.8**	**0.0**
MUD				*i* S	S	04 33 24.0	+22
FRB	**Frobisher Bay**	**18.95**	**294**	LR	LR	04 36 11.2	
	comp=Z,1μm,18.9s,baz=169,slow=35						
ROSF	**Rostrenen**	**18.98**	**126**	*e*P	**P**	**04 29 35.1**	**-0.6**
	comp=Z,109nm,1.4s						
ROSF	**Rostrenen**	**18.98**	**126**	*e*P	**P**	**04 29 35.1**	**-0.6**
ROSF				pmax	pmax		
	comp=Z,55nm,1.4s						
HFS	**Hagfors**	**19.31**	**78**	P	**P**	**04 29 38.9**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=203,slow=11,SNR=3.8						
HFS				LR	LR	04 36 49.3	
	comp=Z,532nm,18.7s,baz=279,slow=36						
SGMF	**Saint Gilles**	**19.32**	**125**	*e*P	**P**	**04 29 39.1**	**-0.6**
	comp=Z,64nm,1.2s						
SGMF	**Saint Gilles**	**19.32**	**125**	*e*P	**P**	**04 29 39.1**	**-0.6**
SGMF				pmax	pmax		
	comp=Z,32nm,1.2s						
QUIF	**Quistinic**	**19.37**	**126**	*e*P	**P**	**04 29 39.3**	**-1.0**
	comp=Z,62nm,1.2s						
QUIF	**Quistinic**	**19.37**	**126**	*e*P	**P**	**04 29 39.3**	**-1.0**
QUIF				pmax	pmax		
	comp=Z,31nm,1.2s						
FLN	**La Foliniere**	**19.73**	**121**	*e*P	**P**	**04 29 43.4**	**-1.0**
FLN				*e*R			
	comp=Z,1μm,22.0s						
GRR	**Gorron**	**19.88**	**122**	*e*P	**P**	**04 29 44.9**	**-1.2**
	comp=Z,74nm,1.4s						
GRR	**Gorron**	**19.88**	**122**	*e*P	**P**	**04 29 44.9**	**-1.2**
GRR				pmax	pmax		
	comp=Z,37nm,1.4s						
LDF	**La Druitiere**	**20.01**	**120**	*e*P	**P**	**04 29 45.9**	**-1.6**
	comp=Z,80nm,1.5s						
LDF	**La Druitiere**	**20.01**	**120**	*e*P	**P**	**04 29 45.9**	**-1.6**
LDF				pmax	pmax		
	comp=Z,40nm,1.5s						
UCC	**Uccle**	**20.26**	**110**	P	**P**	**04 29 50.1**	**+0.1**
WTSB	**Winterswijk**	**20.54**	**104**	*e*P	**P**	**04 29 52.6**	**-0.4**
	comp=Z,42nm,1.5s						
BAIF	**Baives**	**20.73**	**111**	*e*P	**P**	**04 29 53.9**	**-1.0**
COP	**Copenhagen**	**20.86**	**90**	*i* P	**P**	**04 29 54.7**	**-1.6**
COP				*e*S	**S**	**04 33 49.1**	**+5.1**
	comp=Z,80nm,15.0s						
DOU	**Dourbes**	**20.87**	**111**	P	**P**	**04 29 56.3**	**-0.1**
GIVF	**Givet**	**20.96**	**111**	*e*P	**P**	**04 29 56.6**	**-0.8**
HGN	**Heimansgroeve**	**20.98**	**108**	*e*P	**P**	**04 29 56.5**	**-1.0**
	comp=Z,33nm,1.7s						
HGN				*e*S	**S**	**04 33 58.5**	**+12**
MFF	**Saint Martin d**	**21.61**	**124**	*e*P	**P**	**04 30 02.9**	**-1.1**
	comp=Z,32nm,0.9s,mb4.4						
MFF	**Saint Martin d**	**21.61**	**124**	*e*P	**P**	**04 30 02.9**	**-1.1**
MFF				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
ARCES	**ARCESS Array B**	**21.90**	**48**	P	**P**	**04 30 07.6**	**+0.9**
	comp=Z,14nm,1.1s,mb4.3,baz=249,slow=10,SNR=11						
SCHQ	**Schefferville**	**21.98**	**269**	P	**P**	**04 30 06.7**	**-0.8**
	comp=Z,9.0nm,0.8s,mb4.2,baz=70,slow=6.7,SNR=6.6						
SCHQ				LR	LR	04 37 08.6	
	comp=Z,317nm,20.6s,MS3.7,baz=283,slow=33						
SCHQ	**Schefferville**	**21.98**	**269**	P	**P**	**04 30 06.7**	**-0.8**
SCHQ				LR	LR	04 37 08.6	
MEZF	**Maizieres J’vi**	**22.26**	**113**	*e*P	**P**	**04 30 09.4**	**-1.0**
ABH	**Alteburg**	**22.34**	**107**	*e*P	**P**	**04 30 11.3**	**+0.1**
KEV	**Kevo**	**22.40**	**47**	*e*p	**P**	**04 30 12.7**	**+1.1**
LOR	**Lormes**	**22.70**	**117**	*e*P	**P**	**04 30 13.3**	**-1.4**
	comp=Z,108nm,1.3s,mb4.8						
LOR				*e*R			
	comp=Z,1μm,17.5s						
LOR	**Lormes**	**22.70**	**117**	*e*P	**P**	**04 30 13.3**	**-1.4**
LOR				pmax	pmax		
	comp=Z,54nm,1.3s,mb4.8						
LOR				MLR	MLR		
	comp=Z,1μm,17.5s,MS4.4						
SSF	**Saint Saulge**	**22.72**	**118**	*e*P	**P**	**04 30 12.8**	**-2.0**
SSF				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.6						
SSF	**Saint Saulge**	**22.72**	**118**	*e*P	**P**	**04 30 12.8**	**-2.0**
	comp=Z,28nm,1.1s,mb4.6						
TCF	**Toulx Ste Croi**	**22.81**	**121**	*e*P	**P**	**04 30 15.5**	**-0.2**
	comp=Z,112nm,1.6s,mb4.8						
TCF	**Toulx Ste Croi**	**22.81**	**121**	*e*P	**P**	**04 30 15.5**	**-0.2**
TCF				pmax	pmax		
	comp=Z,56nm,1.6s,mb4.7						
BGF	**Bois d’Agland**	**22.85**	**119**	*e*P	**P**	**04 30 15.4**	**-0.7**
	comp=Z,66nm,1.0s,mb4.7						
BGF	**Bois d’Agland**	**22.85**	**119**	*e*P	**P**	**04 30 15.4**	**-0.7**
BGF				pmax	pmax		
	comp=Z,33nm,1.0s,mb4.7						
THEF	**They Montfort**	**22.87**	**112**	*e*P	**P**	**04 30 18.5**	**+2.2**
TOD	**Tromm**	**23.10**	**106**	*e*P	**P**	**04 30 17.8**	**-0.7**
LANF	**Langenberg**	**23.11**	**109**	*e*P	**P**	**04 30 18.8**	**+0.2**
SWS	**Schriesheim**	**23.14**	**107**	*e*P	**P**	**04 30 20.1**	**+1.2**
SMF	**Signal de Mont**	**23.19**	**118**	*e*P	**P**	**04 30 19.1**	**-0.3**
	comp=Z,104nm,1.3s,mb4.8						
SMF	**Signal de Mont**	**23.19**	**118**	*e*P	**P**	**04 30 19.1**	**-0.3**
SMF				pmax	pmax		
	comp=Z,52nm,1.3s,mb4.8						
HAU	**Haudompre**	**23.20**	**112**	*e*P	**P**	**04 30 19.2**	**-0.3**
	comp=Z,106nm,1.3s,mb4.8						
HAU				*e*R			
	comp=Z,512nm,22.4s						
HAU	**Haudompre**	**23.20**	**112**	*e*P	**P**	**04 30 19.2**	**-0.3**
HAU				pmax	pmax		
	comp=Z,53nm,1.3s,mb4.8						
HAU				MLR	MLR		
	comp=Z,510nm,22.4s,MS3.9						
CDF	**Champ du Feu**	**23.30**	**110**	*e*P	**P**	**04 30 21.3**	**+0.9**
	comp=Z,134nm,1.5s,mb4.8						
CDF	**Champ du Feu**	**23.30**	**110**	*e*P	**P**	**04 30 21.3**	**+0.9**
CDF				pmax	pmax		
	comp=Z,67nm,1.5s,mb4.8						
WLS	**Welschbruch**	**23.33**	**110**	*e*P	**P**	**04 30 21.7**	**+0.9**
LFF	**La Frestale**	**23.34**	**125**	*e*P	**P**	**04 30 20.4**	**-0.5**
AGO	**Saint Agoulin**	**23.38**	**120**	*e*P	**P**	**04 30 25.5**	**+4.3**
ECH	**Echery**	**23.39**	**111**	*e*P	**P**	**04 30 22.4**	**+1.0**
HINF	**Hinteralfeld**	**23.56**	**112**	*e*P	**P**	**04 30 23.0**	**0.0**
LIBD	**Limburg**	**23.64**	**110**	*e*P	**P**	**04 30 25.3**	**+1.5**
PLDF	**La Plantade**	**23.64**	**119**	*e*P	**P**	**04 30 27.1**	**+3.3**
SIND	**Sindeldorf**	**23.65**	**106**⇓	*e*P	**P**	**04 30 25.3**	**+1.5**
MOX	**Moxa**	**23.65**	**101**	*e*P	**P**	**04 30 25.0**	**+1.1**
MOX				pmax	pmax		
	comp=Z,58nm,1.6s,mb4.8						
MOX				MLR	MLR		
	comp=Z,300nm,22.0s,MS3.7						
MOX	**Moxa**	**23.65**	**101**	*e*P	**P**	**04 30 25.0**	**+1.1**
	comp=Z,58nm,1.6s,mb4.8						
MOX				LR	LR		
	comp=Z,300nm,22.0s,MS3.7						
MOX	**Moxa**	**23.65**	**101**	*i* P	**P**	**04 30 25.0**	**+1.1**
	comp=Z,logA/T=1.6,mb4.8						
MOX				L		04 39 06.0	
MOF	**Molkenrain**	**23.66**	**111**	*e*P	**P**	**04 30 24.8**	**+0.8**
LBG	**Lerchenberg**	**23.78**	**108**⇓	*e*P	**P**	**04 30 26.6**	**+1.4**
CLL	**Collm**	**23.84**	**99**⇓	*i*P	**P**	**04 30 26.5**	**+0.8**
CLL				pmax	pmax		
	comp=Z,33nm,1.4s,mb4.6						
CLL				MLR	MLR		
	comp=Z,400nm,18.9s,MS3.9						
CLL	**Collm**	**23.84**	**99**⇓	*i*P	**P**	**04 30 26.5**	**+0.8**
	comp=Z,33nm,1.4s,mb4.6						
CLL				*e*S	**S**	**04 34 51.0**	**+13**
CLL				LR	LR		
	comp=Z,400nm,18.9s,MS3.9						
CLL	**Collm**	**23.84**	**99**	⇓P	**P**	**04 30 26.5**	**+0.8**
	comp=Z,logA/T=1.4,mb4.6						
CLL				*e*S	**S**	**04 34 51.0**	**+13**
CAF	**Calviac**	**23.87**	**123**	*e*P	**P**	**04 30 25.4**	**-0.6**
	comp=Z,90nm,1.3s,mb4.7						
CAF	**Calviac**	**23.87**	**123**	*e*P	**P**	**04 30 25.4**	**-0.6**
CAF				pmax	pmax		
	comp=Z,45nm,1.3s,mb4.7						

STU	**Stuttgart**	**23.89**	**107**	*e*P	**P**	**04 30 27.5**	**+1.4**
STU				pmax	pmax		
	comp=Z,72nm,1.3s,mb4.9						
STU	**Stuttgart**	**23.89**	**107**	*e*P	**P**	**04 30 27.5**	**+1.4**
	comp=Z,72nm,1.3s,mb4.9						
STU	**Stuttgart**	**23.89**	**107**	*e*P	**P**	**04 30 27.5**	**+1.4**
	comp=Z,72nm,1.3s,mb4.9						
LOMF	**Lomont**	**23.91**	**113**	*e*P	**P**	**04 30 28.3**	**+1.9**
KIZ	**Kirchzarten**	**23.92**	**110**	*e*P	**P**	**04 30 27.5**	**+1.0**
FELD	**Feldberg**	**24.02**	**110**⇓	*e*P	**P**	**04 30 28.5**	**+1.0**
FELD	**Feldberg**	**24.02**	**110**	*e*P	**P**	**04 30 28.1**	**+0.6**
LBL	**Lubilhac**	**24.09**	**121**	*e*P	**P**	**04 30 32.5**	**+4.3**
GRA1	**Grafenberg Arr**	**24.14**	**103**	*e*P	**P**	**04 30 29.1**	**+0.5**
	comp=Z,37nm,1.6s,mb4.6						
GRA1				LR	LR		
	comp=Z,700nm,18.2s,MS4.2						
GRF	**Grafenberg Arr**	**24.14**	**103**	*e*P	**P**	**04 30 29.1**	**+0.5**
GRF				pmax	pmax		
	comp=Z,37nm,1.6s,mb4.6						
GRF				MLR	MLR		
	comp=Z,700nm,18.2s,MS4.2						
GRF	**Grafenberg Arr**	**24.14**	**103**	*e*P	**P**	**04 30 29.1**	**+0.5**
GRF				pmax	pmax		
	comp=Z,37nm,1.6s,mb4.6						
GRF				MLR	MLR		
	comp=Z,700nm,18.2s,MS4.2						
GRF	**Grafenberg Arr**	**24.14**	**103**	*e*P	**P**	**04 30 29.1**	**+0.5**
	comp=Z,37nm,1.6s,mb4.6						
GRF				LR	LR		
	comp=Z,700nm,18.2s,MS4.2						
GRF	**Grafenberg Arr**	**24.14**	**103**	*e*P	**P**	**04 30 29.1**	**+0.5**
	comp=Z,37nm,1.6s,mb4.6						
KAF	**Kangasniemi**	**24.16**	**66**	*e*p	**P**	**04 30 31.3**	**+2.6**
CABF	**La Chapelle**	**24.16**	**115**	*e*P	**P**	**04 30 28.6**	**-0.3**
	comp=Z,119nm,1.5s,mb4.8						
CABF	**La Chapelle**	**24.16**	**115**	*e*P	**P**	**04 30 28.6**	**-0.3**
CABF				pmax	pmax		
	comp=Z,60nm,1.5s,mb4.8						
SJPF	**Ste Jean**	**24.17**	**130**	*e*P	**P**	**04 30 28.2**	**-0.8**
BUCH	**Bad Urach**	**24.19**	**108**⇓	*e*P	**P**	**04 30 30.7**	**+1.5**
SPAK	**Spaichingen**	**24.20**	**109**⇓	*e*P	**P**	**04 30 30.5**	**+1.3**
NKC	**Novy Kostel**	**24.32**	**101**	AMS	AMS	04 41 20.0	
	comp=Z,600nm,14.5s						
FINES	**FINESS Array B**	**24.34**	**68**	P	**P**	**04 30 30.9**	**+0.5**
	comp=Z,6.8nm,0.8s,mb4.1,baz=304,slow=6.9,SNR=10						
FINES				LR	LR	04 39 41.5	
	comp=Z,192nm,19.8s,MS3.6,baz=156,slow=36						
FINES	**FINESS Array B**	**24.34**	**68**	P	**P**	**04 30 30.9**	**+0.5**
FINES				LR	LR	04 39 41.5	
GUT	**Gutenstein**	**24.37**	**109**⇓	*e*P	**P**	**04 30 32.0**	**+1.1**
HDH	**Heidenheim**	**24.48**	**107**	*e*P	**P**	**04 30 33.2**	**+1.3**
BRG	**Berggiesshubel**	**24.57**	**98**	*e*P	**P**	**04 30 34.3**	**+1.5**
BRG				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.5						
BRG				MLR	MLR		
	comp=N,360nm,16.4s,MS4.0						
BRG				MLR	MLR		
	comp=E,270nm,16.4s,MS4.0						
BRG				MLR	MLR		
	comp=Z,510nm,16.4s,MS4.1						
BRG	**Berggiesshubel**	**24.57**	**98**	*e*P	**P**	**04 30 34.3**	**+1.5**
	comp=Z,22nm,1.4s,mb4.5						
BRG				*e*		04 30 51.2	
BRG				LR	LR		
	comp=Z,510nm,16.4s,MS4.1						
ETSF	**Etsaut**	**24.60**	**129**	*e*P	**P**	**04 30 32.3**	**-0.8**
EPF	**Esparros**	**24.81**	**128**	*e*P	**P**	**04 30 34.5**	**-0.7**
VIVF	**Saint-Julien-l**	**24.98**	**119**	*e*P	**P**	**04 30 36.0**	**-0.8**
PVCC	**Panska Ves**	**25.10**	**98**	*e*P	**P**	**04 30 38.3**	**+0.4**
PVCC				AMS	AMS	04 40 40.0	
	comp=Z,400nm,17.9s						
UBR	**Uberruh**	**25.10**	**108**⇓	*e*P	**P**	**04 30 39.0**	**+1.1**
APA	**Apatity**	**25.14**	**51**⇑	*i*P	**P**	**04 30 37.0**	**-1.0**
APA				pmax	pmax		
	comp=Z,43nm,1.2s,mb4.8						
APA				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.4						
APA	**Apatity**	**25.14**	**51**	*i* P	**P**	**04 30 37.0**	**-1.0**
	comp=Z,1µm,16.0s						
MTLF	**Montolieu**	**25.26**	**125**	*e*P	**P**	**04 30 38.7**	**-0.8**
LASF	**Ste Croix**	**25.29**	**121**	*e*P	**P**	**04 30 39.0**	**-0.7**
	comp=Z,68nm,1.4s,mb4.7						
LPL	**La Plagne**	**25.31**	**116**	*e*P	**P**	**04 30 39.3**	**-0.6**
LPG	**La Plagne**	**25.33**	**116**	*e*P	**P**	**04 30 39.9**	**-0.2**
ORIF	**Oris-en-Rattie**	**25.43**	**118**	*e*P	**P**	**04 30 40.0**	**-1.0**
	comp=Z,19nm,0.8s,mb4.4						
ORIF				*e*R			
	comp=Z,968nm,18.5s						
PRU	**Pruhonice**	**25.46**	**99**	*e*P	**P**	**04 30 40.8**	**-0.5**
PRU				AMS	AMS	04 42 00.0	
	comp=Z,600nm,14.1s						
KHC	**Kasperske Hory**	**25.62**	**102**	*e*P	**P**	**04 30 43.4**	**+0.6**
KHC				*e*	pP	04 30 47.0	+1.3
KHC				MLR	MLR		
	comp=Z,600nm,15.7s,MS4.2						
KHC	**Kasperske Hory**	**25.62**	**102**	*e*P	**P**	**04 30 43.4**	**+0.6**
KHC				pP	pP	04 30 47.0	+1.3
KHC				AMS	AMS	04 41 50.0	
	comp=Z,600nm,15.7s						
DAVOX	**Davos**	**25.68**	**110**	P	**P**	**04 30 44.2**	**+0.8**
	comp=Z,4.8nm,0.7s,mb4.1,baz=344,slow=12,SNR=5.4						
DAVOX				LR	LR	04 40 06.1	
	comp=Z,177nm,19.6s,MS3.6,baz=274,slow=35						
DAVOX	**Davos**	**25.68**	**110**	P	**P**	**04 30 44.2**	**+0.8**
KSP	**Ksiaz**	**25.69**	**96**	*e*P	**P**	**04 30 43.8**	**+0.4**
KSP	**Ksiaz**	**25.69**	**96**	*e*P	**P**	**04 30 43.2**	**-0.2**
UPC	**Upice**	**25.79**	**97**	*e*P	**P**	**04 30 45.3**	**+1.0**
GERES	**GERESS Array B**	**25.88**	**102**	P	**P**	**04 30 45.1**	**-0.1**
	comp=Z,3.1nm,0.9s,mb3.8,baz=297,slow=6.0,SNR=11						
GERES				LR	LR	04 41 17.6	
	comp=Z,413nm,18.9s,MS4.0,baz=351,slow=37						
MBDF	**Montbardon**	**25.96**	**117**	*e*P	**P**	**04 30 45.5**	**-0.5**
DPC	**Dobruska-Polom**	**26.04**	**97**	*e*P	**P**	**04 30 47.2**	**+0.5**
DPC				AMS	AMS	04 41 00.0	
	comp=Z,400nm,19.8s						
SMRF	**Simiane la Rot**	**26.07**	**119**	*e*P	**P**	**04 30 46.4**	**-0.6**
EVO	**Evora**	**26.20**	**146**	*e*P	**P**	**04 30 47.0**	**-1.3**
	comp=Z,27nm,1.3s,mb4.3						
EVO				*e*R			
	comp=Z,201nm,18.1s						
ESDC	**Sonseca Array**	**26.32**	**138**	P	**P**	**04 30 49.2**	**-0.2**
	comp=Z,7.6nm,1.2s,mb4.1,baz=342,slow=8.7,SNR=12						
SUW	**Suwalki**	**26.89**	**85**	*e*P	**P**	**04 30 55.0**	**+0.6**
VRAC	**Vranov**	**26.89**	**98**	P	**P**	**04 30 54.3**	**-0.2**
	comp=Z,2.1nm,0.4s,mb4.0,baz=327,slow=8.4,SNR=6.3						
VRAC	**Vranov**	**26.89**	**98**	*e*P	**P**	**04 30 54.0**	**-0.5**
MORC	**Moravsky Berou**	**27.00**	**97**	*e*P	**P**	**04 30 55.5**	**-0.1**
MORC				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2						
MORC	**Moravsky Berou**	**27.00**	**97**	*e*P	**P**	**04 30 55.5**	**-0.1**
	comp=Z,9.3nm,1.1s,mb4.2						
MORC	**Moravsky Berou**	**27.00**	**97**	*e*P	**P**	**04 30 55.5**	**-0.1**
	comp=Z,9.3nm,1.1s,mb4.2						
OKC	**Ostrava-Krasne**	**27.25**	**96**	*e*P	**P**	**04 30 57.6**	**-0.2**
OKC				AMS	AMS	04 42 30.0	
	comp=Z,300nm,18.8s						
KOLS	**Kolonicke sedl**	**29.81**	**93**	*e*P	**P**	**04 31 21.4**	**+0.5**
LVV	**L’vov**	**30.02**	**91**	*e*P	**P**	**04 31 22.1**	**-0.7**
LVV				MLR	MLR		
	comp=Z,200nm,21.0s,MS3.7						
LVV				MLR	MLR		
	comp=E,400nm,22.0s,MS4.1						
LVV				MLR	MLR		
	comp=N,300nm,20.0s,MS4.1						
LVV	**L’vov**	**30.02**	**91**	*e*P	**P**	**04 31 22.1**	**-0.7**
	comp=N,300nm,20.0s						
AKASG	**Malin Array Be**	**31.86**	**85**	P	**P**	**04 31 37.9**	**-1.1**
	comp=N,0.5nm,0.3s,mb3.8,baz=310,slow=8.9,SNR=26						
OBN	**Obninsk**	**32.38**	**73**⇓	*i*P	**P**	**04 31 43.3**	**-0.1**
OBN				*e*		04 34 30.7	
OBN				*e*S	**S**	**04 36 56.5**	**+0.1**
OBN				*e*SS	SS	04 38 48.8	-2.6
OBN				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.0						
OBN				MLR	MLR		
	comp=Z,300nm,21.0s,MS4.0						
OBN	**Obninsk**	**32.38**	**73**	*i* P	**P**	**04 31 43.3**	**-0.1**
	comp=Z,33nm,1.3s,mb5.0						
OBN	**Obninsk**	**32.38**	**73**	*e*PcP	PcP	04 34 30.7	-0.5
OBN				*e*S	**S**	**04 36 56.5**	**+0.1**
SADO	**Sadowa**	**34.63**	**265**	LR	LR	04 44 43.2	
	comp=Z,509nm,19.1s,MS4.3,baz=107,slow=34						
VRSR	**Storozhevoye**	**36.13**	**77**	*e*P	**P**	**04 32 15.9**	**+0.2**
VRSR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
VRSR				pmax	pmax		
	comp=N,8.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,9.0nm,0.8s						
VRSR	**Storozhevoye**	**36.13**	**77**	*e*P	**P**	**04 32 15.9**	**+0.2**
	comp=E,8.0nm,0.6s,mb4.8						
YKA	**Yellowknife Ar**	**37.91**	**311**	P	**P**	**04 32 30.5**	**-0.1**
YKA						04 34 45.5	
YKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA				MLR	MLR		
	comp=Z,352nm,19.4s						
YKA	**Yellowknife Ar**	**37.91**	**311**	P	**P**	**04 32 30.5**	**-0.1**
	comp=Z,4.2nm,0.9s,mb4.2,baz=48,slow=8.6,SNR=21						
YKA				PcP	PcP	04 34 45.5	-1.7
	comp=Z,0.7nm,0.7s,baz=46,slow=3.0,SNR=4.5						
YKA				LR	LR	04 47 32.7	
	comp=Z,352nm,19.4s,MS4.2,baz=65,slow=35						
YKA	**Yellowknife Ar**	**37.91**	**311**	P	**P**	**04 32 30.6**	**-0.1**
YKA				PcP	PcP	04 34 45.5	-1.7
YKA				LR	LR	04 47 32.7	
YKA	**Yellowknife Ar**	**37.91**	**311**	PcP	PcP	04 34 45.5	-1.7
FFC	**Flin Flon**	**38.06**	**294**	*e*P	**P**	**04 32 31.7**	**-0.2**
FFC				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.4						
FFC	**Flin Flon**	**38.06**	**294**	*e*P	**P**	**04 32 31.7**	**-0.2**
	comp=Z,11nm,1.4s,mb4.4						
FFC	**Flin Flon**	**38.06**	**294**	*e*P	**P**	**04 32 31.7**	**-0.2**
	comp=Z,11nm,1.4s,mb4.4						
ULM	**Lac du Bonnet**	**38.45**	**285**	P	**P**	**04 32 34.8**	**-0.5**
	comp=Z,3.6nm,0.8s,mb4.2,baz=53,slow=3.9,SNR=4.7						
ULM				LR	LR	04 47 15.7	
	comp=Z,242nm,19.4s,MS4.0,baz=56,slow=34						
INK	**Inuvik**	**39.81**	**326**	LR	LR	04 49 24.7	
	comp=Z,260nm,18.4s,MS4.1,baz=48,slow=36						
ACSO	**Alum Creek Sta**	**39.94**	**264**	*e*P	**P**	**04 32 47.8**	**+0.1**
	comp=Z,14nm,1.3s,mb4.5						
ARU	**Arti**	**40.88**	**58**⇓	*i*P	**P**	**04 32 56.0**	**+0.7**
ARU				*e*		04 34 51.2	
ARU				*e*S	**S**	**04 39 07.2**	**+0.7**
ARU				*e*SS	SS	04 42 01.2	-1.8
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.3						
ARU				MLR	MLR		
	comp=N,200nm,17.0s,MS4.2						
ARU				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.2						
ARU				MLR	MLR		
	comp=E,200nm,18.0s,MS4.2						
ARU	**Arti**	**40.88**	**58**	*i* P	**P**	**04 32 56.0**	**+0.7**
	comp=E,8.0nm,1.1s,mb4.3						
ARU				*e*S	**S**	**04 39 07.2**	**+0.7**
FWV	**Forest Hill**	**41.05**	**259**	*e*P	**P**	**04 32 55.3**	**-1.7**
FWV	**Forest Hill**	**41.05**	**259**	*e*P	**P**	**04 32 55.3**	**-1.6**
ELN	**Prospectdale**	**41.31**	**259**	*e*P	**P**	**04 32 59.1**	**+0.1**
ELN	**Prospectdale**	**41.31**	**259**	*e*P	**P**	**04 32 59.1**	**0.0**
IDI	**Anoyia**	**41.63**	**106**	LR	LR	04 51 42.3	
	comp=E,196nm,20.0s,MS4.0,baz=302,slow=38						
SOC	**Sochi**	**41.94**	**84**	*e*P	**P**	**04 33 05.2**	**+1.2**
SOC				*e*		04 34 39.5	
SOC				*e*		04 34 58.9	
SOC				*e*PPP	PPP	04 35 12.8	-2.7
SOC				*e*S	**S**	**04 39 22.0**	**-0.1**
SOC				*e*SS	SS	04 42 18.0	-5.3
SOC				*e*SSS	SSS	04 43 01.2	-5.0
SOC				*e*		04 43 15.3	
SOC				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.3						
SOC				pmax	pmax		
	comp=N,6.0nm,0.5s						
SOC				pmax	pmax		
	comp=E,3.0nm,0.4s						
SOC				MLR	MLR		
	comp=N,78nm,13.0s,MS3.9						
SOC				MLR	MLR		
	comp=Z,153nm,13.0s,MS4.1						
SOC				MLR	MLR		
	comp=E,82nm,14.0s,MS3.9						
SOC	**Sochi**	**41.94**	**84**	*e*P	**P**	**04 33 05.2**	**+1.2**
	comp=E,6.0nm,0.5s,mb4.5						
SOC	**Sochi**	**41.94**	**84**	*e*PcP	PcP	04 34 58.9	-1.2
SOC				*e*S	**S**	**04 39 22.0**	**-0.1**
BRTR	**Keskin Array B**	**42.08**	**93**	P	**P**	**04 33 06.5**	**+1.2**
	comp=E,2.1nm,0.7s,mb3.9,baz=315,slow=5.2,SNR=8.9						
BRTR	**Keskin Array B**	**42.08**	**93**	P	**P**	**04 33 06.4**	**+1.1**
BLO	**Bloomington**	**42.44**	**266**	P	**P**	**04 33 09.9**	**+1.7**
KIV	**Kislovodsk**	**43.04**	**82**	*e*P	**P**	**04 33 14.7**	**+1.7**
KIV				*e*S	**S**	**04 39 34.8**	**-3.5**
KIV				pmax	pmax		
	comp=N,5.0nm,1.1s						
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
KIV				pmax	pmax		
	comp=E,4.0nm,0.7s						
KIV				MLR	MLR		
	comp=N,208nm,20.0s,MS4.2						
KIV				MLR	MLR		
	comp=E,179nm,20.0s,MS4.2						
KIV				MLR	MLR		
	comp=Z,271nm,20.0s,MS4.1						
WCI	**Wyandotte Cave**	**43.08**	**265**	*e*P	**P**	**04 33 13.7**	**+0.2**
WCI				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.9						
WCI	**Wyandotte Cave**	**43.08**	**265**	*e*P	**P**	**04 33 13.7**	**+0.2**
	comp=Z,28nm,1.1s,mb4.9						
WCI	**Wyandotte Cave**	**43.08**	**265**	*e*P	**P**	**04 33 13.7**	**+0.2**
	comp=Z,28nm,1.1s,mb4.9						
TZTN	**Tazewell**	**43.16**	**261**	*e*P	**P**	**04 33 14.0**	**-0.1**
TZTN	**Tazewell**	**43.16**	**261**	*e*P	**P**	**04 33 14.0**	**-0.1**
JSC	**Jenkinsville**	**43.97**	**257**	*e*P	**P**	**04 33 20.7**	**0.0**
CPCT	**Cooper Cave**	**44.51**	**261**	*e*P	**P**	**04 33 25.5**	**+0.4**
CPCT	**Cooper Cave**	**44.51**	**261**	*e*P	**P**	**04 33 25.5**	**+0.4**
FVM	**French Village**	**45.22**	**268**	*e*P	**P**	**04 33 30.6**	**-0.1**
FVM				pmax	pmax		
	comp=Z,32nm,1.3s,mb5.0						
FVM	**French Village**	**45.22**	**268**	*e*P	**P**	**04 33 30.6**	**-0.1**
	comp=Z,32nm,1.3s,mb5.0						
FVM	**French Village**	**45.22**	**268**	*e*P	**P**	**04 33 30.6**	**-0.1**
	comp=Z,32nm,1.3s,mb5.0						
SWET	**Sewanee**	**45.36**	**262**	*e*P	**P**	**04 33 31.5**	**-0.3**
SWET	**Sewanee**	**45.36**	**262**	*e*P	**P**	**04 33 31.5**	**-0.4**
TIXI	**Tiksi**	**45.45**	**11**	*e*P	**P**	**04 33 32.0**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,14nm,2.0s,mb4.5						
TIXI	**Tiksi**	**45.45**	**11**	*e*P	**P**	**04 33 32.0**	**-0.1**
	comp=Z,14nm,2.0s,mb4.5						
WVT	**Waverly**	**45.50**	**265**	*e*P	**P**	**04 33 32.4**	**-0.5**
WVT				pmax	pmax		
	comp=Z,42nm,1.7s,mb5.0						
WVT	**Waverly**	**45.50**	**265**	*e*P	**P**	**04 33 32.4**	**-0.6**
	comp=Z,42nm,1.7s,mb5.0						
WVT	**Waverly**	**45.50**	**265**	*e*P	**P**	**04 33 32.4**	**-0.5**
	comp=Z,42nm,1.7s,mb5.0						
LAO	**LASA Array**	**45.73**	**289**	*e*P	**P**	**04 33 36.0**	**+1.4**
	comp=Z,37nm,1.1s,mb5.2						
LAO	**LASA Array**	**45.73**	**289**	*e*P	**P**	**04 33 36.0**	**+1.4**
	comp=Z,37nm,1.1s,mb5.2						
ILAR	**Eielson Array**	**45.94**	**329**	P	**P**	**04 33 36.8**	**+0.7**
	comp=Z,4.1nm,1.0s,mb4.3,baz=27,slow=7.2,SNR=21						
ILAR				PcP	PcP	04 35 11.9	-1.5
	comp=Z,1.7nm,0.8s,baz=357,slow=3.0,SNR=9.5						
ILAR				LR	LR	04 53 16.4	
	comp=Z,163nm,18.9s,MS4.0,baz=4.5,slow=37						
ILAR	**Eielson Array**	**45.94**	**329**	PcP	PcP	04 35 11.9	-1.5
COLA	**College**	**46.09**	**330**⇓	*i*P	**P**	**04 33 38.0**	**+0.8**
COLA	**College**	**46.09**	**330**	*e*P	**P**	**04 33 38.6**	**+1.4**
	comp=Z,26nm,1.3s,mb5.0						
DLBC	**Dease Lake**	**46.15**	**315**	LR	LR	04 52 45.9	
	comp=Z,202nm,18.1s,MS4.1,baz=290,slow=36						
IMA	**Indian Mountai**	**46.38**	**333**	*e*P	**P**	**04 33 41.7**	**+2.2**
IMA				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
IMA	**Indian Mountai**	**46.38**	**333**	*e*P	**P**	**04 33 41.7**	**+2.2**
	comp=Z,8.2nm,1.1s,mb4.6						
PLAL	**Pickwick Lake**	**46.55**	**264**	*e*P	**P**	**04 33 40.3**	**-1.0**
	comp=Z,26nm,1.4s,mb5.0						
PLAL	**Pickwick Lake**	**46.55**	**264**	*e*P	**P**	**04 33 40.3**	**-1.0**
	comp=Z,26nm,1.4s,mb5.0						
RSSD	**Black Hills**	**46.72**	**285**	*e*P	**P**	**04 33 43.2**	**+0.7**
RSSD				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
RSSD	**Black Hills**	**46.72**	**285**	*e*P	**P**	**04 33 43.2**	**+0.7**
	comp=Z,14nm,1.3s,mb4.7						
RSSD	**Black Hills**	**46.72**	**285**	*e*P	**P**	**04 33 43.2**	**+0.7**
	comp=Z,14nm,1.3s,mb4.7						
THY	**Trims Highway**	**46.78**	**327**	*e*P	**P**	**04 33 44.4**	**+1.8**
THY	**Trims Highway**	**46.78**	**327**	*e*P	**P**	**04 33 44.4**	**+1.7**
GNI	**Garni**	**46.96**	**83***c*	*i*P	**P**	**04 33 47.3**	**+2.8**
GNI				pmax	pmax		
	comp=Z,29nm,1.5s						
GNI				MLR	MLR		
	comp=Z,200nm,18.0s						
GNI	**Garni**	**46.96**	**83**	*e*P	**P**	**04 33 47.2**	**+2.7**
	comp=Z,32nm,1.4s,mb5.1						
KSU1	**Kansas State U**	**47.23**	**275**	*e*P	**P**	**04 33 45.9**	**-0.7**
KSU1	**Kansas State U**	**47.23**	**275**	*e*P	**P**	**04 33 45.9**	**-0.7**
LRAL	**Lakeview Retre**	**47.66**	**261**	*e*P	**P**	**04 33 49.4**	**-0.7**
	comp=Z,24nm,1.3s,mb5.1						
LRAL	**Lakeview Retre**	**47.66**	**261**	*e*P	**P**	**04 33 49.3**	**-0.8**
	comp=Z,24nm,1.3s,mb5.1						
HRY	**Holter Researc**	**48.17**	**293**	*e*P	**P**	**04 33 54.2**	**+0.3**
HRY	**Holter Researc**	**48.17**	**293**	*e*P	**P**	**04 33 54.2**	**+0.3**
CHMT	**Chamberlain Mo**	**48.63**	**294**	*e*P	**P**	**04 33 57.1**	**-0.3**
CHMT	**Chamberlain Mo**	**48.63**	**294**	*e*P	**P**	**04 33 57.1**	**-0.3**
UALR	**University of**	**48.72**	**268**	*e*P	**P**	**04 33 57.4**	**-0.9**
	comp=Z,46nm,1.5s,mb5.3						
UALR	**University of**	**48.72**	**268**	*e*P	**P**	**04 33 57.4**	**-0.9**
	comp=Z,46nm,1.5s,mb5.3						
BOZ	**Bozeman (W)**	**48.92**	**292**	*e*P	**P**	**04 34 00.6**	**+1.0**
MSO	**Missoula**	**48.99**	**295**	*e*P	**P**	**04 33 59.8**	**-0.3**
	comp=Z,3.1nm,1.1s,mb4.2						
MSO	**Missoula**	**48.99**	**295**	*e*P	**P**	**04 33 59.8**	**-0.4**
	comp=Z,3.1nm,1.1s,mb4.2						
PWA	**Palmer West**	**49.31**	**328**	*e*P	**P**	**04 34 03.8**	**+1.4**
PWA				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.3						
PWA	**Palmer West**	**49.31**	**328**	*e*P	**P**	**04 34 03.8**	**+1.4**
	comp=Z,38nm,1.2s,mb5.3						
PHWY	**Pilot Hill**	**49.59**	**284**	*e*P	**P**	**04 34 05.0**	**+0.2**
PHWY	**Pilot Hill**	**49.59**	**284**	*e*P	**P**	**04 34 05.0**	**+0.2**
BILL	**Bilibino**	**49.83**	**354**	*i* P	**P**	**04 34 06.3**	**0.0**
BILL				*e*S	**S**	**04 41 19.5**	**+4.8**
BILL				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.0						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.9						
BILL	**Bilibino**	**49.83**	**354**	*e*P	**P**	**04 34 06.1**	**-0.3**
	comp=Z,30nm,1.4s,mb5.1						
BILL	**Bilibino**	**49.83**	**354**	*e*P	**P**	**04 34 06.1**	**-0.2**
	comp=Z,30nm,1.4s,mb5.1						
IMW	**Indian Meadow**	**49.99**	**290**	*e*P	**P**	**04 34 08.9**	**+1.0**
	comp=Z,26nm,1.4s,mb5.1						
IMW	**Indian Meadow**	**49.99**	**290**	*e*P	**P**	**04 34 08.9**	**+1.0**
	comp=Z,26nm,1.4s,mb5.1						
MOOW	**Moose Ponds**	**50.02**	**290**	*e*P	**P**	**04 34 08.8**	**+0.6**
	comp=Z,17nm,1.7s,mb4.8						
MOOW	**Moose Ponds**	**50.02**	**290**	*e*P	**P**	**04 34 08.8**	**+0.6**
	comp=Z,17nm,1.7s,mb4.8						
MCMT	**McKenzie Canyo**	**50.09**	**292**	*e*P	**P**	**04 34 09.7**	**+1.0**
MCMT	**McKenzie Canyo**	**50.09**	**292**	*e*P	**P**	**04 34 09.7**	**+1.0**
WUWY	**Wally Ulrich**	**50.19**	**290**	*e*P	**P**	**04 34 10.1**	**+0.6**
WUWY	**Wally Ulrich**	**50.19**	**290**	*e*P	**P**	**04 34 10.1**	**+0.7**
SNOW	**Snow King Moun**	**50.26**	**290**	*e*P	**P**	**04 34 10.6**	**+0.7**
	comp=Z,8.9nm,1.0s,mb4.8						
SNOW	**Snow King Moun**	**50.26**	**290**	*e*P	**P**	**04 34 10.6**	**+0.7**
	comp=Z,8.9nm,1.0s,mb4.8						
PDAR	**Pinedale Array**	**50.27**	**288**	P	**P**	**04 34 09.1**	**-1.1**
	comp=Z,7.6nm,0.9s,mb4.7,baz=61,slow=6.4,SNR=50						
PDAR				LR	LR	04 55 40.2	
	comp=Z,253nm,18.1s,MS4.3,baz=62,slow=36						
TPAW	**Teton Pass**	**50.32**	**290**	*e*P	**P**	**04 34 10.4**	**0.0**
	comp=Z,15nm,1.2s,mb4.9						
TPAW	**Teton Pass**	**50.32**	**290**	*e*P	**P**	**04 34 10.4**	**0.0**
	comp=Z,15nm,1.2s,mb4.9						
BBB	**Bella Bella**	**50.41**	**308**	LR	LR	04 53 06.0	
	comp=Z,115nm,21.5s,MS3.9,baz=221,slow=33						
RRI2	**Red Ridge**	**50.60**	**290**	*e*P	**P**	**04 34 13.3**	**+0.8**
	comp=Z,33nm,1.6s,mb5.0						
ISCO	**Idaho Springs**	**50.86**	**283**	*e*P	**P**	**04 34 15.2**	**+0.6**
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
ISCO	**Idaho Springs**	**50.86**	**283**	*e*P	**P**	**04 34 15.2**	**+0.6**
	comp=Z,6.5nm,1.1s,mb4.5						
NVS	**Novosibirsk**	**51.11**	**44**	*e*P	**P**	**04 34 16.0**	**-0.3**
NVS				*e*		04 35 31.2	
NVS				pmax	pmax		
	comp=Z,34nm,1.4s,mb5.1						
NVS				pmax	pmax		
	comp=N,17nm,1.7s						
NVS	**Novosibirsk**	**51.11**	**44**	*e*P	**P**	**04 34 16.0**	**-0.3**
	comp=N,17nm,1.7s,mb4.7						
NVS	**Novosibirsk**	**51.11**	**44**	*e*PcP	PcP	04 35 31.2	-1.0
WMOK	**Wichita Mounta**	**51.78**	**273**	*e*P	**P**	**04 34 21.0**	**-0.6**
WMOK				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.9						
WMOK	**Wichita Mounta**	**51.78**	**273**	*e*P	**P**	**04 34 21.0**	**-0.7**
	comp=Z,21nm,1.3s,mb4.9						
WMOK	**Wichita Mounta**	**51.78**	**273**	*e*P	**P**	**04 34 21.0**	**-0.6**
	comp=Z,21nm,1.3s,mb4.9						
HLID	**Hailey**	**51.78**	**292**	*e*P	**P**	**04 34 22.1**	**+0.5**
	comp=Z,12nm,1.6s,mb4.6						
HLID	**Hailey**	**51.78**	**292**	*e*P	**P**	**04 34 22.1**	**+0.6**
	comp=Z,12nm,1.6s,mb4.6						
BMO	**Blue Mountains**	**51.99**	**295**	*e*P	**P**	**04 34 22.2**	**-0.9**
	comp=Z,34nm,1.8s,mb5.0						
BMO	**Blue Mountains**	**51.99**	**295**	*e*P	**P**	**04 34 22.2**	**-0.9**
	comp=Z,34nm,1.8s,mb5.0						
HWUT	**Hardware Ranch**	**52.10**	**289**	*e*P	**P**	**04 34 23.6**	**-0.3**
	comp=Z,19nm,1.2s,mb4.9						
HWUT				*e*PcP	PcP	04 35 34.1	-2.0
HWUT	**Hardware Ranch**	**52.10**	**289**	*e*P	**P**	**04 34 23.6**	**-0.4**
	comp=Z,19nm,1.2s,mb4.9						
HWUT	**Hardware Ranch**	**52.10**	**289**	*e*PcP	PcP	04 35 34.1	-1.9
ZAL	**Zalesovo**	**52.37**	**44**	P	**P**	**04 34 26.5**	**+0.6**
	comp=Z,0.7nm,0.4s,mb3.9,baz=344,slow=7.4						
ZAL				PcP	PcP	04 35 37.6	+0.8
	comp=Z,1.6nm,0.5s,baz=162,slow=4.6,SNR=6.7						
SDCO	**Great Sand Dun**	**52.46**	**281**	*e*P	**P**	**04 34 27.0**	**+0.2**
	comp=Z,25nm,1.7s,mb4.9						
SDCO	**Great Sand Dun**	**52.46**	**281**	*e*P	**P**	**04 34 27.0**	**+0.3**
	comp=Z,25nm,1.7s,mb4.9						
HVU	**Hansel Valley**	**52.50**	**290**	*e*P	**P**	**04 34 26.8**	**-0.1**
SPUT	**South Promonto**	**52.73**	**289**	*e*P	**P**	**04 34 29.0**	**+0.3**
SPUT	**South Promonto**	**52.73**	**289**	*e*P	**P**	**04 34 29.0**	**+0.3**
DAU	**Daniels Canyon**	**52.92**	**288**	*e*P	**P**	**04 34 30.5**	**+0.3**
AMTX	**Amarillo**	**53.02**	**276**	*e*P	**P**	**04 34 31.1**	**+0.2**
	comp=Z,7.8nm,0.9s,mb4.6						
AMTX	**Amarillo**	**53.02**	**276**	*e*P	**P**	**04 34 31.1**	**+0.1**
	comp=Z,7.8nm,0.9s,mb4.6						
ELK	**Elko**	**54.42**	**291**	*e*P	**P**	**04 34 42.4**	**+1.3**
ELK				pmax	pmax		
	comp=Z,22nm,1.1s						
ELK	**Elko**	**54.42**	**291**	P	**P**	**04 34 41.8**	**+0.6**
	comp=Z,4.2nm,0.6s,mb4.5,baz=232,slow=7.3,SNR=3.5						
ELK	**Elko**	**54.42**	**291**	*e*P	**P**	**04 34 42.4**	**+1.3**
	comp=Z,22nm,1.1s,mb5.0						
ELK	**Elko**	**54.42**	**291**	*e*P	**P**	**04 34 42.4**	**+1.3**
	comp=Z,22nm,1.1s,mb5.0						
WVOR	**Wild Horse Val**	**54.52**	**295**	*e*P	**P**	**04 34 41.7**	**-0.1**
WVOR				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.8						
WVOR	**Wild Horse Val**	**54.52**	**295**	*e*P	**P**	**04 34 41.7**	**-0.1**
	comp=Z,16nm,1.5s,mb4.8						
WVOR	**Wild Horse Val**	**54.52**	**295**	*e*P	**P**	**04 34 41.7**	**-0.1**
	comp=Z,16nm,1.5s,mb4.8						
ANMO	**Albuquerque**	**55.19**	**280**⇓	*i*P	**P**	**04 34 46.7**	**-0.2**
ANMO	**Albuquerque**	**55.19**	**280**	*e*P	**P**	**04 34 46.4**	**-0.5**
	comp=Z,17nm,1.4s,mb4.9						
ANMO	**Albuquerque**	**55.19**	**280**	*e*P	**P**	**04 34 46.4**	**-0.5**
	comp=Z,17nm,1.4s,mb4.9						
CPRX	**Cap Rock**	**55.57**	**276**	*e*P	**P**	**04 34 49.3**	**-0.4**
CPRX	**Cap Rock**	**55.57**	**276**	*e*P	**P**	**04 34 49.3**	**-0.4**
MOD	**Modoc**	**55.66**	**296**	*e*P	**P**	**04 34 48.2**	**-2.0**
	comp=Z,24nm,1.3s,mb5.1						
MOD	**Modoc**	**55.66**	**296**	*e*P	**P**	**04 34 48.2**	**-2.0**
	comp=Z,24nm,1.3s,mb5.1						
JCT	**Junction City**	**55.79**	**271**	*e*P	**P**	**04 34 49.6**	**-1.6**
JCT				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.2						
JCT	**Junction City**	**55.79**	**271**	*e*P	**P**	**04 34 49.6**	**-1.7**
	comp=Z,32nm,1.2s,mb5.2						
JCT	**Junction City**	**55.79**	**271**	*e*P	**P**	**04 34 49.6**	**-1.6**
	comp=Z,32nm,1.2s,mb5.2						
BNM	**Barren Site**	**55.93**	**280**	*e*P	**P**	**04 34 52.6**	**+0.4**
BNM	**Barren Site**	**55.93**	**280**	*e*P	**P**	**04 34 52.6**	**+0.4**
GDL2	**Guadalupe Moun**	**56.49**	**276**	*e*P	**P**	**04 34 55.7**	**-0.5**
GDL2	**Guadalupe Moun**	**56.49**	**276**	*e*P	**P**	**04 34 55.7**	**-0.6**
MNTX	**Cornudas Mount**	**57.39**	**277**	*e*P	**P**	**04 35 01.5**	**-1.2**
	comp=Z,18nm,1.3s,mb4.9						
MNTX	**Cornudas Mount**	**57.39**	**277**	*e*P	**P**	**04 35 01.5**	**-1.2**

	comp=Z,18nm,1.3s,mb4.9						
MKAR	**Makanchi Array**	**57.53**	**50**	iP	**P**	**04 35 04.3**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR	**Makanchi Array**	**57.53**	**50**	P	**P**	**04 35 03.0**	**-0.4**
	comp=Z,3.5nm,0.9s,mb4.4,baz=333,slow=5.4,SNR=30						
MKAR				LR	LR	04 59 49.2	
	comp=Z,89nm,18.1s,MS3.9,baz=356,slow=36						
WCN	**Washoe City**	**57.58**	**293**	eP	**P**	**04 35 03.5**	**-0.4**
WCN				pmax	pmax		
	comp=Z,65nm,1.7s,mb5.4						
WCN	**Washoe City**	**57.58**	**293**	eP	**P**	**04 35 03.5**	**-0.4**
	comp=Z,65nm,1.7s,mb5.4						
WCN	**Washoe City**	**57.58**	**293**	eP	**P**	**04 35 03.5**	**-0.4**
	comp=Z,65nm,1.7s,mb5.4						
DBIC	**Dimbokro**	**57.59**	**154**	LR	LR	04 56 56.2	
	comp=Z,117nm,18.6s,MS4.0,baz=344,slow=33						
NVAR	**Mina Array Bea**	**57.67**	**292**	P	**P**	**04 35 04.8**	**+0.3**
	comp=Z,1.9nm,0.8s,mb4.2,baz=59,slow=7.5,SNR=3.9						
NVAR				LR	LR	04 59 30.9	
	comp=Z,453nm,20.2s,MS4.6,baz=90,slow=36						
KHMM	**Horse Mountain**	**57.96**	**297**	P	**P**	**04 35 06.0**	**-0.5**
KHMM	**Horse Mountain**	**57.96**	**297**	P	**P**	**04 35 05.9**	**-0.6**
AAK	**Ala-Archa**	**58.05**	**59**	eP	**P**	**04 35 07.1**	**-0.1**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
AAK	**Ala-Archa**	**58.05**	**59**	eP	**P**	**04 35 07.1**	**-0.1**
	comp=Z,9.6nm,1.1s,mb4.7						
AAK	**Ala-Archa**	**58.05**	**59**	eP	**P**	**04 35 07.1**	**-0.1**
	comp=Z,9.6nm,1.1s,mb4.7						
LTX	**Lajitas**	**58.56**	**274**	eP	**P**	**04 35 10.1**	**-0.8**
LTX				pmax	pmax		
	comp=Z,36nm,1.7s,mb5.1						
LTX	**Lajitas**	**58.56**	**274**	eP	**P**	**04 35 10.1**	**-0.8**
	comp=Z,36nm,1.7s,mb5.1						
LTX	**Lajitas**	**58.56**	**274**	eP	**P**	**04 35 10.1**	**-0.8**
	comp=Z,36nm,1.7s,mb5.1						
TXAR	**Lajitas Array**	**58.56**	**274**	P	**P**	**04 35 09.7**	**-1.2**
	comp=Z,2.1nm,0.9s,mb4.2,baz=40,slow=4.4,SNR=16						
TXAR				PcP	PcP	04 36 00.4	-0.6
	comp=Z,0.8nm,0.8s,baz=27,slow=4.0,SNR=2.5						
TXAR				LR	LR	05 00 01.9	
	comp=Z,407nm,18.2s,MS4.6,baz=30,slow=36						
TXAR	**Lajitas Array**	**58.56**	**274**	PcP	PcP	04 36 00.4	-0.6
MOY	**Mondy**	**59.21**	**35**	eP	**P**	**04 35 16.4**	**+1.3**
MOY				pmax	pmax		
	comp=Z,34nm,1.6s,mb5.1						
MOY	**Mondy**	**59.21**	**35**	eP	**P**	**04 35 16.4**	**+1.3**
	comp=Z,34nm,1.6s,mb5.1						
TUC	**Tucson**	**59.38**	**282**	eP	**P**	**04 35 16.2**	**-0.4**
TUC				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
TUC	**Tucson**	**59.38**	**282**	eP	**P**	**04 35 16.2**	**-0.3**
	comp=Z,12nm,1.2s,mb4.8						
TUC	**Tucson**	**59.38**	**282**	eP	**P**	**04 35 16.2**	**-0.4**
	comp=Z,12nm,1.2s,mb4.8						
ZAK	**Zakamensk**	**60.98**	**34**	eP	**P**	**04 35 27.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.5						
ZAK	**Zakamensk**	**60.98**	**34**	eP	**P**	**04 35 27.2**	**0.0**
	comp=Z,5.0nm,1.4s,mb4.5						
SDV	**Santo Domingo**	**62.02**	**231**	P	**P**	**04 35 34.0**	**-0.8**
	comp=Z,4.1nm,1.1s,mb4.5,baz=44,slow=6.2,SNR=6.7						
SDV				LR	LR	04 56 44.1	
	comp=Z,84nm,21.3s,MS3.9,baz=238,slow=31						
SDV	**Santo Domingo**	**62.02**	**231**	eP	**P**	**04 35 33.9**	**-0.9**
	comp=Z,17nm,1.5s,mb5.0						
SDV	**Santo Domingo**	**62.02**	**231**	eP	**P**	**04 35 33.9**	**-0.8**
	comp=Z,17nm,1.5s,mb5.0						
WMQ	**Urumqi**	**62.02**	**48**	eP	**P**	**04 35 35.0**	**+0.6**
WMQ				AP	pP	04 35 39.6	+2.1
WMQ				XP	sP	04 35 42.0	+3.4
WMQ				PCP	PcP	04 36 14.8	+0.2
WMQ				eS	**S**	**04 43 57.9**	**+0.8**
WMQ				SCS	ScS	04 45 22.6	-0.1
WMQ				SS	SS	04 48 01.4	-0.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,130nm,4.0s						
WMQ				LR	LR		
	comp=Z,820nm,18.8s,MS4.9						
SONM	**Songino Array**	**64.14**	**33**	P	**P**	**04 35 48.7**	**+0.6**
	comp=Z,8.0nm,1.1s,mb4.7,baz=315,slow=3.5,SNR=31						
ULN	**Ulaanbaatar**	**64.28**	**33**	⇓iP	**P**	**04 35 49.6**	**+0.6**
ULN	**Ulaanbaatar**	**64.28**	**33**	eP	**P**	**04 35 50.0**	**+1.0**
	comp=Z,42nm,1.4s,mb5.3						
ULN	**Ulaanbaatar**	**64.28**	**33**	eP	**P**	**04 35 50.0**	**+1.0**
	comp=Z,42nm,1.4s,mb5.3						
JTS	**JuntasAbangare**	**66.48**	**246**	LR	LR	05 02 27.1	
	comp=Z,77nm,20.4s,MS3.9,baz=282,slow=34						
ROSC	**El Rosal**	**67.10**	**233**	P	**P**	**04 36 07.4**	**-0.4**
	comp=Z,3.2nm,0.4s,mb4.7,baz=75,slow=12,SNR=12						
GTA	**Gaotai**	**70.00**	**42**	eP	**P**	**04 36 25.8**	**+0.5**
GTA				AP	pP	04 36 31.3	+2.9
GTA				XP	sP	04 36 34.2	+4.7
GTA				PP	PP	04 39 04.7	+2.7
GTA				PPP	PPP	04 40 44.3	+2.3
GTA				S	S	04 45 37.1	+2.8
GTA				XS		04 45 45.5	
GTA				PS	PS	04 46 05.2	+2.9
GTA				SKS	SKS	04 46 22.3	-4.7
GTA				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.5						
GTA				AMB	AMB		
	comp=Z,120nm,4.0s						
GTA				LR	LR		
	comp=N,130nm,16.7s,MS4.4						
GTA				LR	LR		
	comp=E,120nm,17.9s,MS4.4						
GTA				LR	LR		
	comp=Z,210nm,17.5s,MS4.4						
BTO	**Baotou**	**71.81**	**33**	eP	**P**	**04 36 36.6**	**+0.3**
MDJ	**Mudanjiang**	**71.91**	**18**	P	**P**	**04 36 35.4**	**-1.4**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.9s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,40nm,6.1s						
HHC	**Hu-ho-hao-te**	**71.98**	**32**	eP	**P**	**04 36 38.0**	**+0.8**
HHC				AP	pP	04 36 42.0	+1.6
HHC				XP	sP	04 36 44.2	+2.7
HHC				PP	PP	04 39 20.4	+1.6
HHC				S	S	04 45 56.0	-1.2
HHC				XS		04 46 05.2	
HHC				PS	PS	04 46 34.2	+5.2
HHC				SCS	ScS	04 46 40.2	+0.6
HHC				SS	SS	04 50 27.2	-8.5
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
HHC				AMB	AMB		
	comp=Z,110nm,4.1s						
HHC				LR	LR		
	comp=N,90nm,19.0s,MS4.5						
HHC				LR	LR		
	comp=E,240nm,19.0s,MS4.5						
HHC				LR	LR		
	comp=Z,160nm,14.3s,MS4.4						
CN2	**Changchun**	**72.06**	**21**	eP	**P**	**04 36 37.9**	**+0.2**
OTAV	**Otavalo**	**72.92**	**235**	eP	**P**	**04 36 43.5**	**+0.3**
	comp=Z,13nm,1.4s,mb4.7						
LZH	**Lanzhou**	**74.30**	**40**	⇑P	**P**	**04 36 51.5**	**+0.7**
LZH				AP	pP	04 36 59.0	+5.1
LZH				XP	sP	04 37 04.0	+9.0
LZH				AMB	AMB		
	comp=Z,40nm,1.5s,mb5.1						
XAN	**Xi'an**	**77.69**	**37**	P	**P**	**04 37 09.8**	**-0.2**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.5						
BDFB	**Brasilia**	**79.32**	**201**	P	**P**	**04 37 18.1**	**-1.1**
	comp=Z,3.8nm,0.8s,mb4.4,baz=355,slow=4.4,SNR=4.8						
BDFB				LR	LR	05 07 01.4	
	comp=Z,120nm,19.7s,MS4.2,baz=203,slow=32						
BDFB	**Brasilia**	**79.32**	**201**	P	**P**	**04 37 18.1**	**-1.1**
BDFB				LR	LR	05 07 01.4	
NJ2	**Nanjing**	**82.11**	**29**	eP	**P**	**04 37 35.9**	**+2.2**
NJ2				AP	pP	04 37 40.5	+3.6
NJ2				XP	sP	04 37 43.2	+5.3
NJ2				S	S	04 47 50.0	+3.0
NJ2				SKS	SKS	04 47 53.0	-1.8
NJ2				XS		04 48 00.0	
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,380nm,5.0s						
NJ2				LR	LR		
	comp=Z,410nm,24.7s,MS4.7						
SIV	**San Ignacio**	**82.47**	**213**	P	**P**	**04 37 35.6**	**-0.2**
	comp=Z,1.7nm,0.8s,mb4.0,baz=55,slow=7.0,SNR=11						
SSE	**Sheshan**	**83.55**	**27**	P	**P**	**04 37 40.7**	**-0.4**
SSE				AP	pP	04 37 43.8	-0.5
SSE				XP	sP	04 37 45.2	-0.1
SSE				S	S	04 48 03.7	+2.2
SSE				XS		04 48 09.7	
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,210nm,4.9s						
SSE				LR	LR		
	comp=N,90nm,21.6s,MS4.2						
SSE				LR	LR		
	comp=E,60nm,21.6s,MS4.2						
SSE				LR	LR		
	comp=Z,70nm,16.4s						
KMI	**Kunming**	**84.11**	**45**	P	**P**	**04 37 45.8**	**+1.8**
GYA	**Guiyang**	**84.12**	**41**	⇑iP	**P**	**04 37 44.7**	**+0.6**
GYA				AP	pP	04 37 49.5	+2.2
GYA				XP	sP	04 37 51.8	+3.5
GYA				PP	PP	04 40 59.6	-0.5
GYA				S	S	04 48 06.0	-1.3
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.3						
GYA				AMB	AMB		
	comp=Z,100nm,3.4s						
GYA				LR	LR		
	comp=Z,300nm,18.0s,MS4.7						
LPAZ	**La Paz**	**84.73**	**220**	LR	LR	05 09 50.7	
	comp=Z,56nm,21.7s,MS3.9,baz=202,slow=32						
CMAR	**Chiang Mai Arr**	**88.94**	**51**	iP	**P**	**04 38 09.3**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**88.94**	**51**	P	**P**	**04 38 08.3**	**+0.5**
	comp=Z,5.7nm,1.0s,mb4.9,baz=315,slow=5.3,SNR=17						
CPUP	**Villa Florida**	**91.53**	**207**	LR	LR	05 15 40.4	
	comp=Z,45nm,20.0s,MS3.9,baz=20,slow=33						
MATP	**Matopo**	**93.06**	**130**	LR	LR	05 21 29.1	
	comp=Z,132nm,20.2s,MS4.4,baz=5.7,slow=36						
CFAA	**Coronel Fontan**	**99.24**	**215**	LR	LR	05 19 04.8	
	comp=Z,8.2nm,18.4s,MS3.3,baz=54,slow=33						
BOSA	**Boshof**	**99.47**	**136**	LR	LR	05 25 56.7	
	comp=Z,89nm,19.6s,MS4.3,baz=36,slow=37						
RKT	**Rikitea**	**118.78**	**275**	ePP	PP	04 45 56.0	+32
	comp=Z,191nm,38.0s						
RKT				eLQ		05 15 30.7	
	comp=Z,224nm,38.5s						
RKT				eLR	LR	05 22 08.1	
	comp=Z,140nm,27.0s						
PPT	**Papeete**	**120.62**	**292**	eS	SKS	04 51 22.0	+16
	comp=Z,229nm,21.2s						
PPT				eLR	LR	05 22 23.3	
	comp=Z,90nm,21.5s,baz=48						
VNA1	**Neumayer--Stat**	**133.09**	**172**	⇑iP	PKPdf	04 44 27.2	-2.3
VNA2	**Neumayer--Watz**	**133.42**	**171**	⇑iP	PKPdf	04 44 28.9	-1.1
VNA3	**Neumayer Olymp**	**133.58**	**173**	⇑iP	PKPdf	04 44 29.3	-1.0
SNAA	**Sanae**	**134.50**	**170**	⇑iP	PKPdf	04 44 26.8	-5.3
ASAR	**Alice Springs**	**139.34**	**28**	PKP	PKPdf	04 44 40.3	-1.9
	comp=Z,1.0nm,1.0s,baz=27,slow=6.4,SNR=4.9						
MAW	**Mawson**	**144.41**	**139**	PKP	PKPdf	04 44 47.4	-2.2
	comp=Z,4.8nm,0.8s,baz=312,slow=4.5,SNR=6.4						
QSPA	**South Pole Qui**	**152.01**	**180**	⇑iP	PKPdf	04 45 06.5	+4.9

IDC 08 04:30:28.7±14.0**,21.30S**×**179.38E,h499**^{km}±169^{km}**, mb3.0**/3**,mb1 3.3**/3**,mb1mx3.0**/15**,mbtmp3.8**/3**,Error ellipse: s-maj=262.1km s-min=55.9km az=166.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.95**	**258**	P	P	04 37 34.4	-2.2
	0.8nm,0.8s,baz=102,slow=7.3,SNR=4.2						
WRA	**Warramunga Arr**	**42.07**	**263**	P	P	04 37 36.8	-0.7
	1.1nm,0.3s,baz=96,slow=8.4,SNR=60						
TXAR	**Lajitas Array**	**89.56**	**58**	P	P	04 42 32.8	-0.8
	0.4nm,0.6s,baz=218,slow=6.6,SNR=6.9						
HFS	**Hagfors**	**139.90**	**349**	PKhKP		04 48 55.1	
	2.1nm,0.9s,baz=90,slow=3.0,SNR=5.0						
AKASG	**Malin Array Be**	**142.47**	**329**	PKP	PKPdf	04 49 03.6	-0.1
	1.0nm,0.6s,baz=35,slow=4.2,SNR=5.9						

ATH ***08*** *04:34:40.5,39.63N×22.69E,h21*^{km}*±5*^{km}*,MD3.0/3*
NEIC ***08*** *04:34:40.5,39.63N×22.69E,h21*^{km}*,MD3.0(ATH),After ATH.*
CSEM ***08*** *04:34:40.6±0.1,39.64N×22.65E,h15*^{km}*,ML2.9,Error ellipse: s-maj=1.4km s-min=1.2km az=66.0*
THE ***08*** *04:34:41.2,39.65N×22.72E,h5*^{km}*,ML2.9*
ISC 08 04:34:40.1±0.4**,39.65N**±0.02×**22.71E**±0.03**,h14**^{km}±4^{km}**, n18,**σ**0**^{s}**96**/32**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.47**	**127**	ePg	**Pg**	**04 34 50.2**	**+0.3**
XOR				eSg	**Sg**	**04 34 57.3**	**+0.9**
LIT	**Litokhoron**	**0.48**	**340**	ePg	**Pg**	**04 34 49.6**	**-0.5**
	comp=Z,26nm,0.1s						
LIT				eSg	**Sg**	**04 34 57.6**	**+0.9**
NEO	**Neokhori**	**0.53**	**131**	ePN	**Pn**	**04 34 50.9**	**-1.9**
NEO				eSN	**Sn**	**04 34 58.6**	**-2.8**
AGG	**Agios Georgios**	**0.69**	**205**	ePg	**Pg**	**04 34 53.2**	**-1.0**
AGG				eSg	**Sg**	**04 35 04.5**	**+1.0**
PAIG	**Paliouri**	**0.80**	**69**	ePg	**Pg**	**04 34 56.7**	**+0.4**
PAIG				eSg	**Sg**	**04 35 07.6**	**+0.5**
PLG	**Polygyros**	**0.92**	**38**	ePN	**Pn**	**04 34 58.6**	**+0.1**
PLG				eSN	**Sn**	**04 35 11.0**	**-0.4**
KZN	**Kozani**	**0.97**	**313**	ePB	**Pb**	**04 34 58.5**	**+0.2**
KZN				eSN	**Sn**	**04 35 13.3**	**+0.5**
EVR	**Evrytania**	**1.01**	**224**	ePB	**Pb**	**04 34 58.6**	**-0.3**
EVR				eSN	**Sn**	**04 35 14.3**	**+0.5**
AOS	**Alonnisos**	**1.03**	**117**	ePg	**Pg**	**04 35 00.8**	**0.0**
AOS				eSg	**Sg**	**04 35 14.5**	**-0.1**
MEV	**Metsovon**	**1.15**	**277**	ePg	**Pg**	**04 35 02.3**	**-1.0**
MEV				eSg	**Sg**	**04 35 20.4**	**+1.7**
OUR	**Ouranopolis**	**1.19**	**55**	ePg	**Pg**	**04 35 03.7**	**-0.4**
	comp=Z,2.8nm,0.3s						
OUR				eSg	**Sg**	**04 35 20.9**	**+0.8**
SOH	**Sokhos**	**1.27**	**23**	ePg	**Pg**	**04 35 04.5**	**-1.1**
SOH				eSg	**Sg**	**04 35 22.2**	**-0.5**
GRG	**Griva**	**1.33**	**350**	ePg	**Pg**	**04 35 05.7**	**-1.1**
GRG				eSg	**Sg**	**04 35 24.4**	**-0.1**
FNA	**Florina**	**1.52**	**318**	ePg	**Pg**	**04 35 08.1**	**-2.6**
FNA				eSg	**Sg**	**04 35 30.4**	**-0.7**
NVR	**Nevrokopi**	**1.91**	**27**	ePN	**Pn**	**04 35 14.5**	**+1.8**
MMB	**Musomiste**	**2.09**	**21**	P	**Pn**	**04 35 16.0**	**+0.8**
KKB	**Krupnik**	**2.23**	**7**	eP	**Pn**	**04 35 18.0**	**+0.7**
RZN	**Rozhen**	**2.54**	**36**	eP	**Pn**	**04 35 22.5**	**+0.8**

CASC 08 04:36:15.7±2.5**,8.29N**×**82.87W,h4**^{km}±12^{km}**,MD3.6, MW4.2,2C-1D,Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.46**	**321**	eP	Pg	04 36 24.8	-0.2
SVTC	**San Vito de Co**	**0.50**	**350**	⇑iP	Pg	04 36 26.5	+0.8
SVTC				eS	Sg	04 36 33.9	+1.5
BRU2	**Volcan**	**0.53**	**20**	⇓eP	Pg	04 36 27.5	+1.1
BRU2				eS	Sg	04 36 36.1	+2.7
BUS	**Buena Vista**	**1.53**	**325**	⇑eP	Pn	04 36 42.8	-1.2
BUS				eS	Sb	04 37 03.2	-0.9
LCR2	**La Lucha 2**	**1.82**	**322**	eP	Pn	04 36 48.5	+0.3
LCR2				eS	Sn	04 37 12.9	+0.8
PRS1	**Puriscal**	**2.20**	**320**	eP	Pn	04 36 53.5	-0.1
PRS1				eS	Sn	04 37 22.4	+0.8

TRN 08 04:36:45.1,15.84N×**61.53W,h17**^{km}**,MD3.6,M2.7**(FDF)**, 1C-1D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOG	**Dongo Capester**	**0.20**	**336**	eP	Pb	04 36 51.0	+0.8
MGG	**Marie-Galante**	**0.22**	**70**	eP	Pb	04 36 52.6	+2.2
SCG	**Saint Claude**	**0.23**	**322**	⇓eP	Pb	04 36 51.2	+0.6
BCG	**Bois Riant Cap**	**0.25**	**341**	eP	Pb	04 36 52.0	+1.0
BBL	**Barber's Block**	**0.32**	**169**	eP	Pb	04 36 53.7	+1.6
DWS	**Wesley**	**0.35**	**142**	eP	Pb	04 36 55.9	+3.4
DWS				eS	Sb	04 37 00.7	+3.2
SEG	**Port Louis**	**0.56**	**3**	eP	Pb	04 36 57.5	+1.5
DEG	**La Desirade**	**0.65**	**44**	⇑eP	Pb	04 36 59.1	+1.5
FDF	**Fort de France**	**1.16**	**162**	eP	Pb	04 37 07.2	+0.8
FDF				eS	Sb	04 37 24.2	+3.1
BPA	**Boggy Peak**	**1.23**	**345**	eP	Pb	04 37 10.1	+2.5
BPA				eS	Sb	04 37 25.8	+2.7
CPB	**Codrington**	**1.81**	**351**	eP	Pn	04 37 18.2	+2.3
CPB				eS	Sn	04 37 41.6	+3.1
SKI	**Saint Kitts**	**1.88**	**322**	eS	Sn	04 37 44.5	+4.1

BJI ***08*** *04:56:14.8,2.10N×96.79E,h19*^{km}*,mb4.9,Ms4.1,Msz3.9*
NEIC ***08*** *04:56:17.4±0.4,2.02N×96.68E,mb4.5/8,Error ellipse: s-maj=13.2km s-min=6.7km az=53.0*
IDC ***08*** *04:56:17.2±0.8,1.98N×96.55E,h24*^{km}*±3*^{km}*,mb4.1/11, mb1 4.3/12,mb1mx4.1/21,mbtmp4.3/12,ML4.3/1,MS3.7/6, Ms1 3.7/6,ms1mx3.4/25,Error ellipse: s-maj=36.2km s-min=13.3km az=51.0*
ISC 08 04:56:16.0±0.6**,2.05N**±0.09×**96.7E**±0.1**,h26**^{km}**, h26**^{km}±1.6^{km}**:pP-P,n38,**σ**0**^{s}**72**/34**,mb4.4**/21**,MS3.8**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.07**	**50**	eP	**Pn**	**04 57 32.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**16.45**	**7**	Pn	**P**	**05 00 07.6**	**+0.6**
	0.4nm,0.3s,baz=197,slow=11,SNR=51						
CMAR				LR	LR	05 06 48.5	
	comp=Z,122nm,19.5s,baz=180,slow=38						
PKI	**Pulchoki**	**27.59**	**338**	eP	**P**	**05 02 03.4**	**-0.1**
	9.1nm,0.5s,mb4.6						
GUN	**Gumba**	**27.73**	**339**	eP	**P**	**05 02 04.8**	**+0.1**
	24nm,0.7s,mb5.0						
DMN	**Daman**	**27.74**	**337**	eP	**P**	**05 02 05.0**	**+0.2**
	15nm,1.0s,mb4.6						
KKN	**Kakani**	**27.84**	**338**	eP	**P**	**05 02 06.1**	**+0.4**
	24nm,1.0s,mb4.8						
LSA	**Lhasa**	**28.00**	**350**	P	**P**	**05 02 07.4**	**+0.2**
LSA	**Lhasa**	**28.00**	**350**	eP	**P**	**05 02 07.0**	**-0.2**
	9.4nm,1.0s,mb4.4						
GKN	**Gorkha**	**28.28**	**337**	eP	**P**	**05 02 08.7**	**-1.0**
	7.0nm,0.3s,mb4.8						
KOLN	**Koldanda**	**28.49**	**335**	eP	**P**	**05 02 11.4**	**-0.2**
	17nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**34.81**	**126**	eP	**P**	**05 03 06.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**34.81**	**126**	P	**P**	**05 03 06.7**	**-0.4**
	3.7nm,0.7s,mb4.4,baz=300,slow=5.6,SNR=8.8						
GTA	**Gaotai**	**37.29**	**4**	eP	**P**	**05 03 27.3**	**-0.6**
GTA				AP	pP	05 03 39.8	+4.2
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
WRA	**Warramunga Arr**	**42.88**	**122**	P	**P**	**05 04 14.5**	**+0.1**
	comp=Z,3.7nm,0.7s,mb4.2,baz=300,slow=9.3,SNR=29						
WRAB	**Tennant Creek**	**42.89**	**122**	eP	**P**	**05 04 14.4**	**-0.1**
	comp=Z,20nm,1.5s,mb4.6						
WB2	**Warramunga Arr**	**42.89**	**122**	eP	**P**	**05 04 14.9**	**+0.3**
ULHL	**Ulahol**	**44.03**	**338**	P	**P**	**05 04 24.2**	**+0.7**
	SNR=7.5						
ASAR	**Alice Springs**	**44.28**	**127**	P	**P**	**05 04 26.4**	**+0.6**
	comp=Z,2.0nm,0.7s,mb4.0,baz=302,slow=8.0,SNR=13						
ASAR				pP	pP	05 04 34.2	+0.7
	comp=Z,1.0nm,0.5s,baz=298,slow=7.8,SNR=5.0						
UCH	**Uchtor**	**44.69**	**336**	P	**P**	**05 04 30.1**	**+1.3**
	SNR=8.0						
AML	**Almayashu**	**44.94**	**336**	P	**P**	**05 04 31.8**	**+1.0**
	SNR=6.3						
EKS2	**Erkin-Say**	**45.35**	**336**	P	**P**	**05 04 35.1**	**+1.0**
	SNR=5.3						
USP	**Ospenovka**	**45.57**	**337**	P	**P**	**05 04 36.0**	**+0.2**
	SNR=12						
MKAR	**Makanchi Array**	**46.31**	**346**	P	**P**	**05 04 41.1**	**-0.4**
	comp=Z,12nm,0.7s,mb4.9,baz=160,slow=8.0,SNR=109						
MKAR				pP	pP	05 04 48.9	-0.5
	comp=Z,6.2nm,0.8s,baz=162,slow=7.7,SNR=9.0						
MKAR				LR	LR	05 27 57.3	
	comp=Z,62nm,18.1s,MS3.6,baz=261,slow=41						
SONM	**Songino Array**	**46.37**	**9**	P	**P**	**05 04 42.1**	**+0.1**
	comp=Z,3.7nm,0.5s,mb4.6,baz=189,slow=8.9,SNR=26						
SONM				pP	pP	05 04 49.3	-0.5
	comp=Z,1.9nm,0.9s,baz=190,slow=7.5,SNR=3.4						
ULN	**Ulaanbaatar**	**46.50**	**10**	eP	**P**	**05 04 42.9**	**-0.2**
	comp=Z,2.7nm,0.8s,mb4.2						
HIA	**Hailar**	**50.99**	**19**	eP	**P**	**05 05 16.0**	**-1.9**
ZAL	**Zalesovo**	**52.64**	**351**	P	**P**	**05 05 29.3**	**-1.0**
	comp=Z,6.9nm,0.7s,mb4.7,baz=306,slow=6.0,SNR=8.8						
ZAL				pP	pP	05 05 37.8	-0.3
	comp=Z,4.5nm,0.6s,baz=313,slow=5.7,SNR=3.2						
ZAL	**Zalesovo**	**52.64**	**351**	P	**P**	**05 05 29.3**	**-1.0**
ZAL				pP	pP	05 05 37.8	-0.3
STKA	**Stephens Creek**	**54.27**	**132**	LR	LR	05 30 48.7	
	comp=Z,101nm,21.1s,MS3.9,baz=269,slow=38						
KMBO	**Kilima Mbogo**	**59.55**	**268**	LR	LR	05 27 28.4	
	comp=Z,70nm,21.5s,MS3.8,baz=184,slow=32						
BRTR	**Keskin Array B**	**68.19**	**312**	P	**P**	**05 07 15.6**	**-1.1**
	comp=Z,0.3nm,0.4s,mb3.7,baz=135,slow=8.2,SNR=3.8						
BRTR				pP	pP	05 07 22.3	-2.4
	comp=Z,1.3nm,0.8s,baz=121,slow=7.2,SNR=6.5						
AKASG	**Malin Array Be**	**74.30**	**322**	P	**P**	**05 07 51.6**	**-1.5**
	comp=Z,0.4nm,0.4s,mb3.8,baz=89,slow=4.1,SNR=5.2						
AKASG				pP	pP	05 07 59.7	-1.5
	comp=Z,0.3nm,0.2s,baz=88,slow=4.6,SNR=1.9						
AKASG	**Malin Array Be**	**74.30**	**322**	P	**P**	**05 07 51.6**	**-1.5**
AKASG				pP	pP	05 07 59.7	-1.5
FINES	**FINESS Array B**	**79.03**	**332**	P	**P**	**05 08 19.1**	**-0.2**
	comp=Z,1.0nm,0.6s,mb4.0,baz=90,slow=3.8,SNR=7.7						
FINES				LR	LR	05 48 34.3	
	comp=Z,24nm,20.9s,MS3.5,baz=166,slow=40						
ARCES	**ARCESS Array B**	**81.58**	**340**	P	**P**	**05 08 33.2**	**+0.4**
	comp=Z,2.1nm,0.7s,mb4.2,baz=90,slow=3.6,SNR=8.1						
URZ	**Urewera**	**83.71**	**129**	LR	LR	05 48 04.6	
	comp=Z,99nm,21.5s,MS4.2,baz=281,slow=37						
GERES	**GERESS Array B**	**83.87**	**319**	P	**P**	**05 08 46.0**	**+1.0**
	comp=Z,0.3nm,0.3s,mb3.9,baz=101,slow=6.8,SNR=6.1						
GERES				pP	pP	05 08 53.5	+0.4
	comp=Z,0.3nm,0.3s,baz=108,slow=4.2,SNR=2.5						
TXAR	**Lajitas Array**	**143.19**	**31**	PKP	PKPdf	05 15 48.4	-5.0
	comp=Z,0.3nm,0.6s,baz=129,slow=1.3,SNR=4.8						

IDC 08 05:18:48.6±6.5**,7.75S**×**129.21E,h206**^{km}±69^{km}**,mb3.2**/1**, mb1 3.7**/4**,mb1mx3.3**/16**,mbtmp4.1**/4**,Error ellipse: s-maj=57.8km s-min=33.8km az=61.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.86**	**198**	P	P	05 21 19.5	-0.2
	3.6nm,0.3s,baz=34,slow=12,SNR=68						
FITZ				S	S	05 23 19.1	+0.9
	3.4nm,0.3s,baz=152,slow=16,SNR=6.7						
WRA	**Warramunga Arr**	**13.10**	**158**	P	P	05 21 46.1	-1.9
	0.2nm,0.3s,baz=336,slow=13,SNR=31						
WRA				S	S	05 24 09.6	0.0
	1.5nm,0.3s,baz=333,slow=24,SNR=11						
ASAR	**Alice Springs**	**16.45**	**165**	P	P	05 22 28.0	-1.5
	0.7nm,0.3s,baz=345,slow=11,SNR=23						
ASAR				S	S	05 25 30.4	+5.5
	0.5nm,0.3s,baz=321,slow=15,SNR=8.1						
MKAR	**Makanchi Array**	**68.43**	**327**	P	P	05 29 28.1	-2.0
	0.4nm,0.5s,baz=119,slow=8.1,SNR=4.7						

MEX ***08*** *05:25:15.4±1.0,15.47N×94.78W,h22*^{km}*±20*^{km}*,MD4.6*
NEIC ***08*** *05:25:15.4,15.47N×94.78W,h22*^{km}*,mb4.3/27, MD4.6(MEX),After MEX.*
IDC ***08*** *05:25:15.3±1.0,15.46N×94.68W,h35*^{km}*±5*^{km}*,mb4.0/16, mb1 4.2/16,mb1mx4.1/25,mbtmp4.2/16,MS3.7/12, Ms1 3.7/12,ms1mx3.5/28,Error ellipse: s-maj=38.2km s-min=11.7km az=47.0*
CASC ***08*** *05:25:52.5±1.3,15.90N×91.57W,MD4.7,mb4.3(NEIC)*
ISC 08 05:25:13.4±0.4**,15.50N**±0.04×**94.74W**±0.03**,h32**^{km}**, h32**^{km}±1.3^{km}**:pP-P,n97,**σ**1**^{s}**25**/107**,mb4.2**/32**,MS3.7**/11**,4D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.35**	**281**	⇓eP	**Pn**	**05 25 35.3**	**-1.0**
HUIG				iS	**Sn**	**05 25 50.7**	**-2.6**
CMIG	**Matias Romero**	**1.58**	**355**	⇓iP	**Pn**	**05 25 39.5**	**-0.2**
CMIG				iS	**Sn**	**05 25 58.2**	**-1.1**
SCX	**San Cristobal**	**2.36**	**59**	iP	**Pn**	**05 25 51.2**	**+0.3**
SCX				iS	**Sn**	**05 26 20.5**	**+1.4**
OXX	**Oaxaca**	**2.47**	**310**	iP	**Pn**	**05 25 52.0**	**-0.4**
OXX				iS	**Sn**	**05 26 21.5**	**-0.3**
VHO	**Vista Hermosa**	**2.47**	**309**	⇓eP	**Pn**	**05 25 53.6**	**+1.1**
VHO				iS	**Sn**	**05 26 22.0**	**+0.1**
TUIG	**Tuzandepetl**	**2.53**	**7**	iP	**Pn**	**05 25 53.6**	**+0.3**
TUIG				iS	**Sn**	**05 26 23.5**	**0.0**

CCIG	Comitan	2.62	72	⇓eP	Pn	05 25 55.0	+0.5
CCIG				iS	Sn	05 26 24.6	-1.0
EVV	El Vigia	2.99	349	eP	Pn	05 25 59.2	-0.7
EVV				iS	Sn	05 26 37.0	+1.9
PNIG	Pinotepa	3.38	286	eP	Pn	05 26 04.4	-0.9
PNIG				iS	Sn	05 26 39.1	-5.7
IISM	Ciudad Serdan	4.29	324	iP	Pn	05 26 18.0	-0.2
IISM				iS	Sn	05 27 05.0	-2.8
IXG	Ixpaco	4.35	107	eP	Pn	05 26 18.4	-0.8
SCIG		4.83	44	eP	Pn	05 26 24.9	-1.1
SCIG				iS	Sn	05 27 20.6	-1.1
MRL	Marmol	4.89	94	eP	Pn	05 26 26.7	-0.1
RBDL	Robledal	5.08	105	eP	Pn	05 26 35.4	+5.9
PPM	Popocatepetl	5.13	314	eP	Pn	05 26 32.3	+2.1
PPM				eP		05 26 34.2	
PPM				iS	Sn	05 27 27.5	-1.6
ACX	Acapulco	5.16	286	eP	Pn	05 26 28.7	-1.8
ACX				iS	Sn	05 27 24.5	-5.2
RTR	El Retiro	5.18	107	eP	Pn	05 26 38.1	+7.2
SBLS	San Blas	5.22	108	eP	Pn	05 26 38.4	+7.0
SNJE	San Jose	5.23	107	eP	Pn	05 26 38.6	+7.0
YAIG	Yautepec	5.32	310	eP	Pn	05 26 35.6	+2.8
YAIG				iS	Sn	05 27 29.8	-3.9
PLIG	Platanillo	5.39	303	iP	Pn	05 26 37.2	+3.4
PLIG				iS	Sn	05 27 31.7	-3.8
BOQS	Boqueron	5.57	108	eP	Pn	05 26 43.5	+7.2
UNM	Universidad Na	5.69	313	eP	Pn	05 26 40.0	+1.9
LFRS	El Faro	5.80	108	eP	Pn	05 26 46.4	+6.7
LCBS	La Ceiba	5.87	108	eP	Pn	05 26 47.0	+6.3
ZAIG	Zacatecas	10.34	316	iP	P	05 27 45.4	+2.5
JTS	JuntasAbangare	10.85	117	Pn	P	05 27 50.1	+0.2
	1.1nm,0.3s,baz=320,slow=18,SNR=5.7						
JCT	Junction City	15.61	344	eP	P	05 28 53.3	+0.3
	30nm,0.8s						
LTX	Lajitas	16.04	331	eP	P	05 29 00.3	+1.9
	7.1nm,0.9s						
TXAR	Lajitas Array	16.04	331	LR	LR	05 36 36.5	
	comp=Z,68nm,19.2s,baz=250,slow=42						
GDL2	Guadalupe Moun	18.79	334	eP	P	05 29 33.1	+0.3
LRAL	Lakeview Retre	18.81	21	eP	P	05 29 30.3	-2.6
	3.9nm,0.7s						
MNTX	Cornudas Mount	18.82	331	eP	P	05 29 32.5	-0.6
	5.7nm,0.9s						
UALR	University of	19.31	6	eP	P	05 29 36.4	-2.4
	16nm,1.0s						
CPRX	Cap Rock	19.31	336	eP	P	05 29 38.0	-0.9
WMOK	Wichita Mounta	19.49	350	eP	P	05 29 38.1	-2.8
	8.9nm,0.7s						
AMTX	Amarillo	20.28	343	eP	P	05 29 48.9	-0.4
	33nm,0.9s						
PLAL	Pickwick Lake	20.30	16	eP	P	05 29 47.7	-1.7
	5.2nm,0.9s						
GOGA	Godfrey	20.54	28	eP	P	05 29 53.4	+1.4
	10nm,0.8s						
SWET	Sewanee	21.16	20	eP	P	05 29 57.6	-0.7
BNM	Barren Site	21.44	332	eP	P	05 30 02.4	+1.2
WVT	Waverly	21.45	15	eP	P	05 30 01.4	+0.2
	5.5nm,0.9s,mb3.9						
WVT				eS	S	05 33 52.0	-0.4
NHSC	New Hope	21.94	34	P	P	05 30 05.9	-0.3
	67nm,1.2s,mb5.0						
ANMO	Albuquerque	22.04	334	P	P	05 30 09.0	+1.8
	3.6nm,1.0s,mb3.8,baz=151,slow=12,SNR=7.4						
ANMO	Albuquerque	22.04	334	eP	P	05 30 09.1	+1.9
	5.2nm,1.1s,mb3.9						
TUC	Tucson	22.20	322	eP	P	05 30 10.9	+2.1
	12nm,1.1s,mb4.2						
JSC	Jenkinsville	22.30	31	eP	P	05 30 10.7	+1.0
ROSC	El Rosal	22.68	116	P	P	05 30 16.6	+2.9
	11nm,0.9s,mb4.3,baz=98,slow=3.5,SNR=11						
TZTN	Tazewell	23.20	23	P	P	05 30 17.4	-1.2
WCI	Wyandotte Cave	23.83	17	P	P	05 30 28.0	+3.3
	7.1nm,0.8s,mb4.2						
SDCO	Great Sand Dun	24.11	339	eP	P	05 30 29.1	+1.6
	24nm,1.3s,mb4.5						
SDCO				epP		05 30 38.1	
SDV	Santo Domingo	24.45	103	P	P	05 30 32.0	+1.0
	3.1nm,0.7s,mb3.9,baz=300,slow=3.7,SNR=8.4						
SDV				pP		05 30 41.2	
	5.6nm,0.8s,baz=290,slow=1.9,SNR=6.1						
SDV				LR	LR	05 40 44.9	
	comp=Z,192nm,21.0s,MS3.6,baz=332,slow=38						
SDV	Santo Domingo	24.45	103	eP	P	05 30 30.3	-0.6
	6.3nm,0.8s,mb4.1						
SDV				epP		05 30 38.9	
WUAZ	Wupatki	24.88	326	eP	P	05 30 36.3	+1.5
	22nm,1.0s,mb4.7						
WUAZ				epP		05 30 45.7	
PV01	Paradox Valley	25.64	334	eP	P	05 30 43.1	+1.1
ISCO	Idaho Springs	26.01	341	eP	P	05 30 45.4	0.0
	4.2nm,0.9s,mb4.0						
PV10	Paradox Valley	26.04	334	eP	P	05 30 45.8	+0.1
NEN	Nelson	26.94	322	eP	P	05 30 54.6	+0.6
ARUT	Antelope Range	27.68	327	eP	P	05 31 02.6	+1.9
ARUT				epP	pP	05 31 11.6	+1.6
HWUT	Hardware Ranch	29.80	334	eP	P	05 31 19.2	-0.6
	3.1nm,0.9s,mb4.0						
PDAR	Pinedale Array	30.00	338	P	P	05 31 21.2	-0.3
	1.2nm,0.9s,mb3.6,baz=143,slow=7.4,SNR=8.9						
PDAR				pP	pP	05 31 30.2	-0.6
	0.7nm,0.9s,baz=149,slow=8.6,SNR=4.2						
MNV	Mina	30.77	322	eP	P	05 31 27.7	-0.7
	4.0nm,1.4s,mb4.1						
ELK	Elko	30.82	329	P	P	05 31 30.2	+1.5
	3.0nm,0.9s,mb4.1,baz=129,slow=6.1,SNR=15						
ELK				pP	pP	05 31 39.1	+1.1
	1.9nm,0.9s,baz=137,slow=4.1,SNR=4.9						
ELK				LR	LR	05 45 48.8	
	comp=Z,357nm,18.8s,MS4.0,baz=118,slow=40						
ELK	Elko	30.82	329	eP	P	05 31 29.7	+1.0
	3.3nm,0.9s,mb4.2						
NVAR	Mina Array Bea	30.86	322	P	P	05 31 30.4	+1.4
	3.0nm,0.9s,mb4.1,baz=126,slow=10,SNR=14						
NVAR				pP	pP	05 31 39.0	+0.6
	4.1nm,1.0s,baz=119,slow=8.8,SNR=6.1						
NVAR				LR	LR	05 45 17.9	
	comp=Z,221nm,19.6s,MS3.8,baz=135,slow=39						
NVAR	Mina Array Bea	30.86	322	P	P	05 31 30.4	+1.4
NVAR				pP	pP	05 31 39.0	+0.6
NVAR				LR	LR	05 45 17.9	
SNOW	Snow King Moun	31.04	337	eP	P	05 31 31.2	+0.5
	19nm,0.9s,mb4.9						
TPAW	Teton Pass	31.14	337	eP	P	05 31 32.1	+0.6
	9.1nm,1.2s,mb4.5						
HLID	Hailey	32.61	333	eP	P	05 31 44.6	+0.1
	5.5nm,0.9s,mb4.5						
MCMT	McKenzie Canyo	33.00	336	eP	P	05 31 49.3	+1.5
WVOR	Wild Horse Val	33.79	327	eP	P	05 31 55.2	+0.5
	8.7nm,1.4s,mb4.5						
HRY	Holter Researc	34.22	339	eP	P	05 31 58.4	+0.1
ULM	Lac du Bonnet	34.67	359	LR	LR	05 48 22.0	
	comp=Z,58nm,20.7s,MS3.3,baz=17,slow=40						
CHMT	Chamberlain Mo	34.91	338	eP	P	05 32 04.0	-0.2
CHMT				epP	pP	05 32 12.8	-0.8
MSO	Missoula	35.09	337	eP	P	05 32 03.6	-2.2
	2.8nm,1.0s,mb4.2						
YBH	Yreka Blue Hor	35.56	323	LR	LR	05 48 02.3	
	comp=Z,179nm,20.8s,MS3.8,baz=152,slow=38						
NEW	Newport	37.51	335	P	P	05 32 26.6	+0.5
	1.5nm,0.5s,mb4.0,baz=135,slow=6.6,SNR=4.6						
NEW				LR	LR	05 50 28.2	
	comp=Z,132nm,19.0s,MS3.8,baz=4.4,slow=40						
NEW	Newport	37.51	335	P	P	05 32 26.6	+0.5
NEW				LR	LR	05 50 28.2	
LPAZ	La Paz	41.08	139	LR	LR	05 48 28.1	
	comp=Z,104nm,19.3s,MS3.7,baz=78,slow=34						
SIV	San Ignacio	45.65	132	P	P	05 33 31.8	-1.5
	2.7nm,1.0s,mb4.1,baz=317,slow=9.5,SNR=8.9						
YKA	Yellowknife Ar	48.98	348	P	P	05 33 57.4	-1.3
	2.7nm,0.8s,mb4.3,baz=152,slow=7.4,SNR=21						
YKA				PcP	PcP	05 35 20.5	-2.3
	0.4nm,0.5s,baz=143,slow=3.9,SNR=5.2						
YKA	Yellowknife Ar	48.98	348	P	P	05 33 57.4	-1.4
YKA				PcP	PcP	05 35 20.6	-2.3
DLBC	Dease Lake	50.22	337	P	P	05 34 09.4	+1.1
	2.6nm,0.9s,mb4.2,baz=139,slow=11,SNR=3.6						
CPUP	Villa Florida	55.25	138	LR	LR	05 58 58.7	
	comp=Z,40nm,21.0s,MS3.5,baz=350,slow=37						
BDFB	Brasilia	55.56	122	P	P	05 34 48.2	-0.4
	3.3nm,0.7s,mb4.5,baz=222,slow=2.4,SNR=6.4						
BDFB				LR	LR	05 59 46.6	
	comp=Z,68nm,18.1s,MS3.8,baz=100,slow=37						
INK	Inuvik	58.26	344	P	P	05 35 05.7	-1.4
	2.4nm,0.6s,mb4.4,baz=135,slow=5.8,SNR=8.2						
INK	Inuvik	58.26	344	P	P	05 35 05.7	-1.4
PLCA	Paso Flores	60.29	159	P	P	05 35 19.7	-1.8
	2.0nm,0.9s,mb4.1,baz=301,slow=7.1,SNR=4.0						
PLCA				LR	LR	05 55 54.9	
	comp=Z,78nm,20.1s,MS3.9,baz=210,slow=30						
PLCA	Paso Flores	60.29	159	P	P	05 35 19.7	-1.8
PLCA				LR	LR	05 55 54.9	
ILAR	Eielson Array	60.43	337	P	P	05 35 21.1	-0.9
	3.2nm,0.9s,mb4.4,baz=141,slow=4.2,SNR=21						
ILAR				LR	LR	06 02 38.9	
	comp=Z,82nm,19.5s,MS3.9,baz=176,slow=37						
BILL	Bilibino	79.08	338	eP	P	05 37 15.9	0.0
	2.0nm,0.4s,mb4.4						
ESDC	Sonseca Array	80.86	51	P	P	05 37 25.4	-0.6
	3.5nm,0.8s,mb4.3,baz=286,slow=5.5,SNR=11						
NB2	NORSAR Subarra	84.08	28	P	P	05 37 41.8	-0.3
	0.8nm,0.7s,mb4.0,baz=292,slow=5.0						
NOA	NORSAR Array B	84.08	28	P	P	05 37 42.2	+0.1
	1.7nm,0.8s,mb4.2,baz=297,slow=5.0,SNR=4.0						
NOA				pP	pP	05 37 53.9	+1.7
	2.8nm,0.9s,baz=290,slow=5.2,SNR=5.1						
NOA	NORSAR Array B	84.08	28	P	P	05 37 42.2	+0.1
NOA				pP	pP	05 37 53.9	+1.7
GERES	GERESS Array B	90.12	39	P	P	05 38 12.4	+0.7
	0.4nm,0.6s,mb3.9,slow=2.7,SNR=5.4						
GERES				pP	pP	05 38 23.1	+1.2
	0.3nm,0.2s,baz=135,slow=3.8,SNR=1.9						
MKAR	Makanchi Array	117.94	2	PKP	PKPdf	05 43 56.9	-5.4
	0.3nm,0.6s,baz=34,slow=4.4,SNR=4.2						

IDC 08 05:30:40.0±49.0**,16.32S**×**177.81W,mb4.2**/3**,mb1 4.3**/3**, mb1mx3.8**/16**,mbtmp4.2**/3**,Error ellipse: s-maj=905.5km s-min=155.2km az=77.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.91	240	P	P	05 38 16.7	-0.9
	0.8nm,0.3s,baz=83,slow=8.1,SNR=5.6						
WB2	Warramunga Arr	45.49	258	eP	P	05 39 00.9	-2.3
WRA	Warramunga Arr	45.50	258	P	P	05 39 01.1	-2.2
	0.8nm,0.7s,baz=95,slow=7.9,SNR=35						
ASAR	Alice Springs	45.79	253	P	P	05 39 03.5	-2.0
	4.1nm,0.4s,baz=88,slow=8.0,SNR=56						
ASPA	Alice Springs	45.79	253	eP	P	05 39 03.5	-2.1

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*NIED **08** 06:03:00,23.60N×126.30E,h11km,Mw4.2 Best double couple: $M_0$1.9×10^{15} NP1:ϕ_s65°,δ62°,λ70°. NP2:ϕ_s283°, δ34°,λ122°.*

*JMA **08** 06:03:46.7±0.4,23.60N×126.31E,M4.1*

*IDC **08** 06:03:53.3±1.2,23.84N×125.66E,mb3.8/5,mb1 4.0/6, mb1mx3.8/21,mbtmp3.8/6,ML3.9/1,MS3.2/2,Ms1 3.2/2, ms1mx2.8/32,Error ellipse: s-maj=56.7km s-min=20.8km az=70.0*

ISC 08 06:03:50.5±0.8**,23.74N**±0.06×**126.27E**±0.06**,h10km,n19,** σ**1ˢ35**/21**,mb3.7**/5**,Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	Gusukube	1.28	322	P	Pb	06 04 13.7	-0.6
JOGS				eS	Sb	06 04 32.3	+1.6
JMJ	Miyako jima 2	1.39	321	P	Pn	06 04 15.2	-0.9
JMJ				eS	Sb	06 04 35.4	+1.6
JTJ	Tarama	1.69	302	P	Pn	06 04 18.8	-1.5
JTJ				eS	Sn	06 04 44.3	+2.2
JIJ	Ishigaki jima	2.04	288	P	Pn	06 04 24.1	-1.2
JKRS	Kuro-shima	2.12	284	P	Pn	06 04 25.8	-0.8
HATJ	Hateruma jima	2.27	278	P	Pn	06 04 27.5	-1.2
IRIF	Iriomote-Funau	2.39	285	P	Pn	06 04 29.2	-1.2
JKE	Kume jima 2	2.62	10	P	Pn	06 04 33.7	+0.1
JOW	Kunigami	3.58	30	Pn	Pn	06 04 48.5	+1.2
	8.4nm,0.3s,baz=112,slow=27,SNR=5.5						
JOW				LR	LR	06 06 34.0	
	comp=Z,197nm,19.9s,baz=253,slow=42						
JTK	Tokunoshima	4.70	30	P	Pn	06 05 02.9	-0.3
JAM	Amami Oshima	5.54	32	P	Pn	06 05 14.2	-0.8
CVP	Callao Caves	7.30	216	eP	Pn	06 05 42.6	+2.7
JHJ	Hachijo jima 2	15.11	49	LR	LR	06 12 54.6	
	comp=Z,117nm,19.7s,baz=343,slow=35						
MJAR	Matsushiro Arr	16.40	36	Pn	P	06 07 48.8	+6.5
	0.5nm,0.3s,baz=228,slow=10,SNR=3.7						
SONM	Songino Array	28.78	332	P	P	06 09 49.9	-0.7
	0.5nm,0.5s,mb3.5,baz=144,slow=11,SNR=3.6						
MKAR	Makanchi Array	41.93	314	P	P	06 11 42.1	-0.8
	0.9nm,0.5s,mb3.7,baz=100,slow=10,SNR=19						
WRA	Warramunga Arr	44.12	169	P	P	06 12 04.7	+3.6
	2.2nm,0.9s,mb3.9,baz=350,slow=8.6,SNR=9.5						
ASAR	Alice Springs	47.70	171	P	P	06 12 34.0	+4.5
	0.3nm,0.5s,mb3.5,baz=354,slow=14,SNR=4.9						
NOA	NORSAR Array B	80.74	333	P	P	06 16 05.8	+0.7
	1.2nm,0.8s,mb3.9,baz=53,slow=5.4,SNR=3.9						

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*MOS **08** 06:04:46.8±1.5,36.51N×21.50E,h10km,mb4.3/1,Error ellipse: s-maj=10.7km s-min=5.8km az=78.0*

*ATH **08** 06:04:50.1,36.70N×21.69E,h29km±1km,MD3.9/15, ML3.9*

*NEIC **08** 06:04:50.0,36.70N×21.69E,h29km,ML3.9(ATH),After ATH.*

NEIC Felt in the Kalamata area.

*HLW **08** 06:04:51.2,36.26N×20.86E,h33km,Mb3.7*

*CSEM **08** 06:04:53.0±0.1,36.66N×21.79E,h40km,ML3.9,Error ellipse: s-maj=3.9km s-min=2.4km az=25.0*

*THE **08** 06:04:54.8,36.77N×21.85E,h22km,ML4.0*

*IDC **08** 06:04:55.1±1.5,36.78N×21.80E,h63km±24km,mb3.6/7, mb1 3.6/10,mb1mx3.4/29,mbtmp3.8/10,ML3.5/3,MS3.0/2, Ms1 3.0/2,ms1mx2.6/26,Error ellipse: s-maj=32.1km s-min=10.6km az=21.0*

ISC 08 06:04:48.1±0.5**,36.59N**±0.03×**21.61E**±0.05**,h10km,n75,** σ**1ˢ35**/81**,mb3.8**/8**,MS2.9**/1**,1C-5D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITM	Ithomi	0.64	23	ePN	Pg	06 05 00.9	0.0
ITM				eSN	Sg	06 05 08.9	-0.6
VLI	Veliai	1.07	83	ePN	Pn	06 05 09.2	+0.1
VLI				eSN	Sn	06 05 23.3	-0.8
KYTH	Kithira	1.19	105	ePN	Pn	06 05 12.0	+1.2
RLS	Riolos of Patr	1.47	356	ePN	Pn	06 05 14.7	0.0
VLS	Valsamata	1.78	333	ePN	Pn	06 05 20.2	+1.0
NAIG	Nisos Aigina	1.90	52	ePN	Pn	06 05 21.7	+0.8
MGER	Gerania Oros	1.91	43	ePN	Pn	06 05 21.5	+0.4
NSAL	Nisos Salamina	1.98	48	ePB	Pb	06 05 22.1	-1.6
ATH	Athens Observa	2.17	50	ePN	Pn	06 05 24.2	-0.6
LKD	Levkas	2.24	340	ePn	Pn	06 05 29.2	+3.4
	comp=Z,6.8nm,0.3s						
MPAR	Parnis Oros	2.30	47	ePN	Pn	06 05 26.4	-0.2
PTL	Penteli	2.31	50	⇓iPN	Pn	06 05 26.6	-0.2
LKR	Lokris	2.33	28	ePB	Pb	06 05 27.5	-2.3
VAM	Vamos	2.41	119	ePB	Pb	06 05 30.8	-0.3
AGG	Agios Georgios	2.49	13	ePn	Pn	06 05 31.0	+1.6
	comp=Z,14nm,0.2s						
GVD	Gavdhos	2.67	130	eP	Pn	06 05 36.5	+4.6
GVD	Gavdhos	2.67	130	eP	Pn	06 05 36.5	+4.6
IDI	Anoyia	2.96	115	P	Pn	06 05 37.5	+1.4
	3.4nm,0.3s,baz=273,slow=14,SNR=14						
IDI				S	Sn	06 06 13.8	+1.8
	13nm,0.3s,baz=291,slow=19,SNR=6.3						
IDI				LR	LR	06 07 00.4	
	comp=Z,271nm,19.5s,baz=304,slow=43						
XOR	Xorichti	3.04	24	ePn	Pn	06 05 38.6	+1.4
IGT	Igoumenitsa	3.10	341	ePn	Pn	06 05 40.1	+2.0
SANT	Santorini	3.11	93	eP	Pn	06 05 38.4	+0.3
SANT	Santorini	3.11	93	eP	Pn	06 05 38.4	+0.2
AOS	Alonnisos	3.14	34	ePn	Pn	06 05 37.9	-0.7
APE	Apeiranthos	3.18	80	ePG	Pn	06 05 37.7	-1.5
APE	Apeiranthos	3.18	80	d iP	Pn	06 05 38.7	-0.5
APE	Apeiranthos	3.18	80	ePn	Pn	06 05 38.9	-0.3
MEV	Metsovon	3.20	355	ePn	Pn	06 05 41.8	+2.3
	comp=Z,4.7nm,0.2s						
MEV				eSn	Sn	06 06 18.1	0.0
KEK	Kerkira	3.43	336	ePN	Pn	06 05 42.8	+0.1
NPS	Neapolis	3.51	111	ePN	Pn	06 05 45.5	+1.7
LIT	Litokhoron	3.57	11	ePn	Pn	06 05 46.8	+2.1
	comp=Z,2.7nm,0.2s						
PAIG	Paliouri	3.71	25	ePn	Pn	06 05 47.1	+0.4
XRY	Khrisi	3.74	116	ePN	Pn	06 05 48.0	+0.9
OUR	Ouranopolis	4.17	26	ePn	Pn	06 05 54.5	+1.2
	comp=Z,2.1nm,0.2s						
FNA	Florina	4.19	358	ePn	Pn	06 05 54.7	+1.2
	comp=Z,6.3nm,0.2s						
URLA	Izmir	4.34	65	iP	Pn	06 05 53.4	-2.2
BODT	Bodrum	4.59	82	ePN	Pn	06 05 58.6	-0.7
BDRM	Kayabasi	4.70	83	iP	Pn	06 06 01.2	+0.4
IZM	Izmir	4.84	66	ePN	Pn	06 06 03.7	+0.9
KDAG	Bornova	4.84	66	iP	Pg	06 06 17.2	-7.6
MMB	Musomiste	5.25	18	eP	Pn	06 06 07.5	-1.1
KKB	Krupnik	5.39	12	eP	Pn	06 06 14.0	+3.5
RZN	Rozhen	5.63	24	eP	Pn	06 06 15.0	+1.1
DALT	Dalyan (Mudla)	5.65	86	ePN	Pn	06 06 12.9	-1.3
VAE	Valguarnera	5.83	281	P	Pn	06 06 20.8	+4.1
	7.6nm,0.3s,baz=85,slow=11,SNR=5.5						
VAE				S	Sn	06 07 29.7	+5.3
	12nm,0.3s,baz=300,slow=13,SNR=5.9						
SLUM		5.90	149	⇓P	Pn	06 06 17.8	0.0
BTOK	Tokmak	5.96	56	iP	Pn	06 06 21.3	+2.7
FETY	Fethiye	6.01	87	ePN	Pn	06 06 18.8	-0.5
VTS	Vitosha	6.12	11	eP	Pn	06 06 13.0	-7.8
GOLH	Golhisar	6.40	82	iP	Pn	06 06 32.9	+8.1
AKAS	Kas	6.46	91	iP	Pn	06 06 26.0	+0.5
TREB	Trebinje	6.61	339	Pn	Pn	06 06 24.6	-3.2
TREB				Sn	Sn	06 07 35.5	-8.5
HMAT	Matruh	7.13	139	⇑P	Pn	06 06 36.2	+1.1
SWA2		8.01	155	⇓P	P	06 06 45.6	-1.7
SWA1		8.08	154	⇓P	P	06 06 46.9	-1.5
SWA1				S	Sn	06 08 11.7	-9.0
SGKT	Sivrigoynuk	9.09	61	iP	P	06 07 03.2	+0.9
MLR	Muntele Rosu	9.47	19	P	P	06 07 11.0	+3.4
	0.2nm,0.3s,baz=186,slow=5.9,SNR=3.7						
BRTR	Keskin Array B	9.97	68	P	P	06 07 13.8	-0.8
	0.2nm,0.3s,baz=262,slow=8.7,SNR=3.8						
MALT	Malatya	13.47	78	eP	P	06 08 02.2	+0.4
MALT				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MALT	Malatya	13.47	78	eP	P	06 08 02.2	+0.4
	comp=Z,2.0nm,0.4s						
MALT	Malatya	13.47	78	eP	P	06 08 02.2	+0.4
	comp=Z,2.0nm,0.4s						
ZEI	Tsey	18.21	63	eP	P	06 09 02.0	-0.5
OBN	Obninsk	21.17	24	eP	P	06 09 33.1	-2.5
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.0						
HFS	Hagfors	24.10	350	P	P	06 10 02.9	-1.6
	comp=Z,1.7nm,0.4s,mb3.9,baz=150,slow=12,SNR=14						
FINES	FINESS Array B	25.03	5	P	P	06 10 11.2	-2.2
	comp=Z,1.0nm,0.3s,mb3.8,baz=166,slow=10,SNR=15						
FINES				LR	LR	06 20 31.5	
	comp=Z,36nm,18.9s,MS2.9,baz=337,slow=38						
EKA	Eskdalemuir Ar	25.22	326	P	P	06 10 14.8	-0.5
	comp=Z,1.4nm,0.7s,mb3.6,baz=119,slow=10,SNR=4.0						
NB2	NORSAR Subarra	25.34	348	P	P	06 10 14.3	-2.0
	comp=Z,1.0nm,0.5s,mb3.6,baz=154,slow=9.3						
NOA	NORSAR Array B	25.34	348	P	P	06 10 14.0	-2.3
	comp=Z,0.8nm,0.5s,mb3.5,baz=156,slow=8.9,SNR=5.8						
NOA	NORSAR Array B	25.34	348	P	P	06 10 14.0	-2.3
KAF	Kangasniemi	25.71	5	ep	P	06 10 16.5	-3.3
ARU	Arti	31.70	39	eP	P	06 11 08.4	-5.4
ARCES	ARCESS Array B	33.07	3	P	P	06 11 23.1	-2.5
	comp=Z,1.1nm,0.7s,mb3.9,baz=193,slow=9.5,SNR=8.2						
BVAR	Borovoye Array	37.50	48	P	P	06 12 01.0	-2.5
	comp=Z,1.0nm,0.6s,mb3.8,baz=270,slow=5.9,SNR=7.6						
MKAR	Makanchi Array	45.41	57	P	P	06 13 05.1	-3.4
	comp=Z,0.4nm,0.3s,mb3.7,baz=268,slow=8.2,SNR=12						
MKAR	Makanchi Array	45.41	57	P	P	06 13 05.1	-3.4
WRA	Warramunga Arr	119.59	94	PKP	PKPdf	06 23 37.8	-3.7
	comp=Z,0.6nm,1.1s,baz=318,slow=1.3,SNR=4.8						

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*NAO **08** 06:13:55.5±1.7,59.82N×22.43E,ML2.1*

*HEL **08** 06:13:55.4±0.1,59.82N×22.33E,ML1.8,ML2.4(UPP), ML2.1(NAO),Explosion*

*IDC **08** 06:13:55.1±2.0,59.73N×22.44E,mb1 2.9/4, mb1mx2.9/23,mbtmp2.8/4,ML2.6/4,Error ellipse: s-maj=30.1km s-min=9.2km az=156.0*

*BER **08** 06:13:57.5±5.7,59.89N×22.37E,ML2.1(NAO)*

ISC 08 06:13:54.6±0.5**,59.84N**±0.06×**22.27E**±0.06**,n37,**σ**0ˢ97**/49**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	Aland	1.20	288	eP	Pb	06 14 17.1	-0.7
NRTU	Norrtaelje	1.85	267	eP	Pn	06 14 28.2	+0.3
PVF	Pernaja	1.93	67	eP	Pn	06 14 29.3	+0.3
PVF				eS	Sn	06 14 53.6	-0.7
GRAU	Graesoe	1.94	287	eP	Pn	06 14 28.8	-0.2
FORU	Forsmark	2.12	287	eP	Pn	06 14 32.4	+0.6
FLYU	Flymyra	2.23	279	eP	Pn	06 14 33.6	+0.4
NYNU	Nynaeshamn	2.34	251	eP	Pn	06 14 35.2	+0.4
UPP	Uppsala	2.35	273	eP	Pn	06 14 35.6	+0.7
FIA0	FINESS Array S	2.47	48	Pn	Pn	06 14 37.9	+1.1
	baz=229,slow=14						
FIA0				Lg		06 15 10.4	
	baz=232,slow=22						
FIA0				Rg		06 15 25.4	
	baz=213,slow=37						
FIA0	FINESS Array S	2.47	48	eP	Pn	06 14 38.1	+1.4
FIA0				eSG	Sg	06 15 11.1	-5.8
FINES	FINESS Array B	2.47	48	Pn	Pn	06 14 37.9	+1.2
	0.8nm,0.3s,baz=227,slow=14,SNR=40						
FINES				Sn	Sn	06 15 10.2	+2.1
	3.2nm,0.3s,baz=237,slow=23,SNR=26						
FINES				Rg		06 15 25.2	
	12nm,0.9s,baz=212,slow=29,SNR=8.0						
BACU	Backbrunna	2.61	273	eP	Pn	06 14 39.0	+0.3
KEF	Keuruu	2.66	27	eP	Pn	06 14 41.5	+2.1
KEF				eSG	Sg	06 15 17.4	-5.7
IGGU	Iggoen	2.67	295	eP	Pn	06 14 39.9	+0.3
VJF	Virojoki	2.73	73	eP	Pn	06 14 39.6	-0.8
VJF				eS	Sn	06 15 14.4	-0.3
GOTU	Gotland	2.90	223	eP	Pn	06 14 42.5	-0.3
KAF	Kangasniemi	3.01	39	eSB	Sb	06 15 24.7	-1.7
KAF				MSG		06 15 26.1	
	comp=Z,2.0nm,0.1s						
ARNU	Arnoeviken	3.04	310	eP	Pn	06 14 45.0	+0.2
ESKU	Eskilstuna	3.06	261	eP	Pn	06 14 45.2	+0.1
VIKU	Vikbolandet	3.17	247	eP	Pn	06 14 46.3	-0.4
SUF	Sumiainen	3.44	31	eP	Pn	06 14 51.3	+0.7
SUF				MSG		06 15 39.1	
	comp=Z,1.8nm,0.1s						
HEMU	Hemsoen	3.51	326	eP	Pn	06 14 52.3	+0.9
HASU	Hassela	3.60	313	eP	Pn	06 14 53.0	+0.1
NRAU	Nora	3.68	269	eP	Pn	06 14 54.3	+0.4
VSTU	Vaestervik	3.70	236	eP	Pn	06 14 54.1	-0.1
LNKU	Linkoeping	3.85	248	eP	Pn	06 14 56.3	-0.2
ASKU	Askersund	3.93	259	eP	Pn	06 14 57.2	-0.2
HFS	Hagfors	4.32	278	Pn	Pn	06 15 03.1	+0.1
	baz=98,slow=9.3						
HFS				Sn	Sn	06 15 52.9	-2.0
	baz=91,slow=56						
HFS				Lg		06 16 10.4	
	baz=96,slow=37						
HFS	Hagfors	4.32	278	eP	Pn	06 15 03.1	+0.1
HFS				eS	Sn	06 15 52.9	-2.0
HFS				eSG		06 16 10.4	
HFS	Hagfors	4.32	278	Pn	Pn	06 15 02.7	-0.3
	comp=Z,0.0nm,0.3s,baz=102,slow=13,SNR=8.8						
HFS				Pg	Pg	06 15 11.6	-9.2
	comp=Z,0.1nm,0.3s,baz=90,slow=16,SNR=6.3						
HFS				Lg		06 16 09.2	
	comp=Z,0.2nm,0.3s,baz=99,slow=28,SNR=7.4						
BURU	Burvik	4.78	355	eP	Pn	06 15 08.9	-0.7
NB2	NORSAR Subarra	5.61	287	Pn	Pn	06 15 19.1	-2.1
	baz=96,slow=14						
NB2				Sn	Sn	06 16 28.4	+1.1
NB2				Lg		06 16 50.7	
	baz=58,slow=18						
NB2	NORSAR Subarra	5.61	287	eP	Pn	06 15 19.1	-2.1
NB2				e		06 16 28.4	
NB2				eSG		06 16 50.7	
NOA	NORSAR Array B	5.61	287	Pn	Pn	06 15 19.0	-2.3
	comp=Z,0.2nm,0.3s,baz=244,slow=19,SNR=2.4						
ARA0	ARCESS Array S	9.83	7	Pn	P	06 16 15.6	-4.5
	baz=184,slow=16						
ARA0				Sn	Sn	06 18 02.4	-10
	baz=190,slow=28						
ARA0	ARCESS Array S	9.83	7	eP	P	06 16 15.6	-4.5
ARA0				eS	Sn	06 18 02.4	-10
ARCES	ARCESS Array B	9.83	7	Pn	P	06 16 16.0	-4.1
	comp=Z,0.1nm,0.3s,baz=184,slow=14,SNR=7.9						
ARCES				Sn	Sn	06 18 02.7	-10
	comp=Z,0.1nm,0.3s,baz=191,slow=24,SNR=3.1						

IDC 08 06:19:48.7±2.9**,2.36N**×**97.38E,mb3.7**/3**,mb1 4.0**/4**,**

mb1mx3.6/21, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=123.9km s-min=27.1km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.07	5	Pn	P	06 23 37.4	-0.5
	0.2nm,0.3s,baz=197,slow=11,SNR=13						
WRA	Warramunga Arr	42.51	123	P	P	06 27 46.1	-1.7
	0.5nm,0.4s,baz=304,slow=9.2,SNR=8.1						
MKAR	Makanchi Array	46.17	346	P	P	06 28 15.3	-1.6
	0.8nm,0.8s,baz=159,slow=8.3,SNR=7.7						
BVAR	Borovoye Array	55.22	341	P	P	06 29 22.8	-2.9
	0.8nm,0.5s,baz=158,slow=8.0,SNR=5.0						

*BJI **08** 06:24:34.1, 61.80N×26.60W, h10km, mB4.9, mb4.8*

*MOS **08** 06:24:38.6±0.9, 61.74N×26.62W, h10km, mb4.1/4, Error ellipse: s-maj=16.7km s-min=9.1km az=133.3*

*IDC **08** 06:24:38.7±0.7, 61.84N×26.69W, mb4.0/13, mb1 4.2/15, mb1mx4.1/28, mbtmp4.0/15, ML3.6/1, MS2.6/1, Ms1 2.6/1, ms1mx2.6/32, Error ellipse: s-maj=25.7km s-min=13.4km az=180.0*

*CSEM **08** 06:24:38.0±0.1, 62.15N×26.43W, h10km, mb4.3/18, Ms3.2, Error ellipse: s-maj=3.6km s-min=2.5km az=164.0*

*NEIC **08** 06:24:40.2±0.2, 61.84N×26.57W, h10km, mb4.3/19, Error ellipse: s-maj=9.5km s-min=3.7km az=198.0*

ISC 08 06:24:38.1±1.3**, 62.13N**±0.03×**26.32W**±0.05**, h7km**±8km**, n111, σ1ˢ26**/117**, mb4.2**/35**, 1C-1D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INYL	Nylenda	2.47	40	P	Pn	06 25 19.7	+0.4
IVOG	Vogar	2.57	42	P	Pn	06 25 21.5	+0.7
IKRI	Krysuvik	2.61	46	P	Pn	06 25 21.4	0.0
IKRI				S	Sn	06 25 54.8	+1.1
IVOS	Vogsosar	2.72	49	P	Pn	06 25 22.4	-0.6
IVOS				S	Sn	06 25 56.8	+0.2
ISAN	Sandskeio	2.90	46	P	Pn	06 25 25.4	-0.1
ISAN				S	Sn	06 26 02.2	+1.2
IBJA	Bjarnastaoir	2.92	49	P	Pn	06 25 25.2	-0.6
IBJA				S	Sn	06 26 02.0	+0.4
IKUD	Kuludalsa	2.98	41	P	Pn	06 25 27.8	+1.1
ISOL	Solvholt	3.04	51	P	Pn	06 25 26.5	-1.0
ISOL				S	Sn	06 26 02.4	-2.2
IKRO	Krokur	3.08	48	P	Pn	06 25 27.6	-0.5
IKRO				S	Sn	06 26 05.5	0.0
IHEI	Heioarbar	3.10	46	P	Pn	06 25 28.5	+0.1
IHEI				S	Sn	06 26 07.8	+1.6
IASM	Asmuli	3.11	54	P	Pn	06 25 27.1	-1.5
IASM				S	Sn	06 26 04.2	-2.2
ISAU	Saurbar	3.27	53	P	Pn	06 25 29.6	-1.2
ISAU				S	Sn	06 26 08.4	-2.0
IMID	Miomork	3.32	60	P	Pn	06 25 29.1	-2.4
IHAU	Haukadalur	3.43	55	P	Pn	06 25 31.5	-1.6
IHAU				S	Sn	06 26 12.6	-1.9
IASB	`sbjarnarst	3.45	38	P	Pn	06 25 35.0	+1.6
IGYG	Gygjarholskot	3.51	49	P	Pn	06 25 33.7	-0.4
IGYG				S	Sn	06 26 15.7	-0.7
IVAT	Vatnsfell	3.94	55	P	Pn	06 25 39.6	-0.7
IVAT				S	Sn	06 26 27.2	-0.1
ISKR	Skrokkalda	4.33	52	P	Pn	06 25 45.7	-0.1
IKAL	Kalfafell	4.33	61	S	Sn	06 26 35.3	-2.0
JMIC	Jan Mayen	11.31	31	LR	LR	06 30 33.9	
	comp=Z,34nm,20.6s,baz=99,slow=30						
SUMG	Summit	11.45	341	eP	P	06 27 25.4	+0.6
	12nm,1.0s						
ESK	Eskdalemuir	13.75	109	eP	P	06 27 54.8	-0.7
	11nm,1.0s						
ESK	Eskdalemuir	13.75	109	eP	P	06 27 54.8	-0.7
	11nm,1.0s						
EKA	Eskdalemuir Ar	13.76	109	Pn	P	06 27 56.2	+0.6
	0.2nm,0.3s,baz=304,slow=12,SNR=14						
NOA	NORSAR Array B	17.74	77	P	P	06 28 47.8	+1.1
	0.1nm,0.3s,baz=290,slow=12,SNR=3.3						
ROSF	Rostrenen	18.92	126	eP	P	06 28 58.8	-2.5
QUIF	Quistinic	19.30	127	eP	P	06 29 03.0	-2.9
LDF	La Druitiere	19.94	121	eP	P	06 29 11.8	-1.3
BAIF	Baives	20.64	112	eP	P	06 29 21.4	+0.9
DOU	Dourbes	20.79	111	P	P	06 29 23.3	+1.4
GIVF	Givet	20.88	111	eP	P	06 29 23.7	+0.8
MFF	Saint Martin d	21.55	124	eP	P	06 29 27.6	-2.1
	26nm,0.9s,mb4.3						
ARCES	ARCESS Array B	21.80	48	P	P	06 29 35.2	+3.1
	6.5nm,1.0s,mb4.0,baz=281,slow=6.2,SNR=5.8						
LOR	Lormes	22.63	117	eP	P	06 29 40.5	+0.2
LOR				eR			
	281nm,17.5s						
SSF	Saint Saulge	22.65	118	eP	P	06 29 40.2	-0.3
	10nm,0.9s,mb4.2						
TCF	Toulx Ste Croi	22.74	121	eP	P	06 29 41.4	0.0
	19nm,0.9s,mb4.2						
BGF	Bois d'Agland	22.78	120	eP	P	06 29 41.8	0.0
	17nm,0.7s,mb4.3						
SMF	Signal de Mont	23.12	118	eP	P	06 29 45.1	0.0
	24nm,1.0s,mb4.3						
HAU	Haudompre	23.12	113	eP	P	06 29 46.3	+1.2
	37nm,1.1s,mb4.4						
HAU				eR			
	114nm,20.3s						
CDF	Champ du Feu	23.21	111	eP	P	06 29 47.3	+1.2
HINF	Hinteralfeld	23.48	112	eP	P	06 29 49.6	+0.9
CLL	Collm	23.75	99	i P		06 29 59.1	
CLL	Collm	23.75	99	i *PP		06 29 59.1	
FINES	FINESS Array B	24.23	68	P	P	06 29 58.4	+2.6
	3.1nm,0.9s,mb3.8,baz=281,slow=9.7,SNR=6.8						
FINES	FINESS Array B	24.23	68	P	P	06 29 58.4	+2.6
ORIF	Oris-en-Rattie	25.35	118	eP	P	06 30 04.5	-2.2
ORIF				eR			
	207nm,20.8s						
PRU	Pruhonice	25.37	100	eP	P	06 30 07.8	+1.0
KHC	Kasperske Hory	25.53	102	i P	P	06 30 09.4	+1.1
KHC	Kasperske Hory	25.53	102	eP	P	06 30 09.3	+1.0
UPC	Upice	25.69	97	eP	P	06 30 11.8	+1.9
GERES	GERESS Array B	25.79	102	P	P	06 30 12.2	+1.4
	0.6nm,0.5s,mb3.4,baz=310,slow=10,SNR=3.5						
DPC	Dobruska-Polom	25.94	97	eP	P	06 30 13.4	+1.2
AKASG	Malin Array Be	31.75	85	i P	P	06 31 10.0	+5.5
AKASG	Malin Array Be	31.75	85	P	P	06 31 04.9	+0.4
	1.2nm,0.5s,mb4.0,baz=310,slow=8.6,SNR=4.0						
YKA	Yellowknife Ar	37.97	311	i P	P	06 31 58.1	+0.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	37.97	311	P	P	06 31 58.1	+0.6
	comp=Z,1.1nm,0.8s,mb3.6,baz=49,slow=8.8,SNR=8.5						
YKA				PcP	PcP	06 34 12.3	-1.5
	comp=Z,0.8nm,0.7s,baz=46,slow=3.0,SNR=5.5						
YKA	Yellowknife Ar	37.97	311	PcP	PcP	06 34 12.3	-1.5
ARU	Arti	40.78	58	⇓iP	P	06 32 25.8	+4.9
ARU				e		06 33 58.9	
ARU				e		06 34 21.1	
ARU				eS	S	06 38 39.0	+7.3
ARU				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
ARU	Arti	40.78	58	ePcP	PcP	06 34 21.1	-1.7
ELN	Prospectdale	41.42	259	eP	P	06 32 25.4	-0.9
ELN	Prospectdale	41.42	259	eP	P	06 32 25.4	-1.0
BRTR	Keskin Array B	41.98	94	P	P	06 32 32.8	+1.9
	comp=Z,1.6nm,0.8s,mb3.7,baz=333,slow=5.5,SNR=6.5						
FVM	French Village	45.32	269	eP	P	06 32 57.7	-0.3
	comp=Z,10nm,1.0s,mb4.6						
FVM	French Village	45.32	269	eP	P	06 32 57.7	-0.3
	comp=Z,10nm,1.0s,mb4.6						
TIXI	Tiksi	45.40	11	i P	P	06 33 00.5	+2.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
TIXI	Tiksi	45.40	11	i P	P	06 33 00.5	+2.4
	comp=Z,2.0nm,0.7s,mb4.1						
ILAR	Eielson Array	45.96	329	P	P	06 33 04.1	+1.4
	comp=Z,1.3nm,1.0s,mb3.8,baz=26,slow=7.2,SNR=11						
ILAR				PcP	PcP	06 34 39.2	-0.8
	comp=Z,1.1nm,0.6s,baz=359,slow=3.4,SNR=14						
ILAR	Eielson Array	45.96	329	PcP	PcP	06 34 39.2	-0.8
COLA	College	46.11	330	i P	P	06 33 05.3	+1.5
BVAR	Borovoye Array	47.91	54	P	P	06 33 21.1	+2.9
	comp=Z,2.4nm,0.8s,mb4.3,baz=315,slow=6.3,SNR=11						
BOZ	Bozeman (W)	49.00	292	eP	P	06 33 27.7	+1.0
	comp=Z,2.8nm,0.9s,mb4.3						
BOZ	Bozeman (W)	49.00	292	eP	P	06 33 27.7	+1.0
	comp=Z,2.8nm,0.9s,mb4.3						
PDAR	Pinedale Array	50.36	288	P	P	06 33 36.3	-0.9
	comp=Z,5.1nm,0.8s,mb4.6,baz=53,slow=6.7,SNR=36						
TPAW	Teton Pass	50.41	290	eP	P	06 33 34.9	-2.6
	comp=Z,4.8nm,1.0s,mb4.5						
ISCO	Idaho Springs	50.95	283	eP	P	06 33 41.2	-0.5
	comp=Z,3.4nm,1.0s,mb4.2						
ISCO	Idaho Springs	50.95	283	eP	P	06 33 41.2	-0.5
	comp=Z,3.4nm,1.0s,mb4.2						
WMOK	Wichita Mounta	51.88	273	eP	P	06 33 47.0	-1.8
	comp=Z,6.4nm,1.1s,mb4.5						
WMOK	Wichita Mounta	51.88	273	eP	P	06 33 47.0	-1.8
	comp=Z,6.4nm,1.1s,mb4.5						
BMO	Blue Mountains	52.07	296	eP	P	06 33 49.3	-0.8
	comp=Z,1.6nm,1.0s,mb3.9						
BMO	Blue Mountains	52.07	296	eP	P	06 33 49.3	-0.8
	comp=Z,1.6nm,1.0s,mb3.9						
HWUT	Hardware Ranch	52.18	289	eP	P	06 33 50.0	-1.0
	comp=Z,3.6nm,0.9s,mb4.3						
HWUT	Hardware Ranch	52.18	289	eP	P	06 33 50.0	-1.0
	comp=Z,3.6nm,0.9s,mb4.3						
SDCO	Great Sand Dun	52.55	281	eP	P	06 33 52.7	-1.2
	comp=Z,3.3nm,1.1s,mb4.2						
SDCO	Great Sand Dun	52.55	281	eP	P	06 33 52.7	-1.2
	comp=Z,3.3nm,1.1s,mb4.2						
PV10	Paradox Valley	53.66	285	eP	P	06 34 02.4	+0.3
PV10	Paradox Valley	53.66	285	eP	P	06 34 02.4	+0.3
ELK	Elko	54.50	291	eP	P	06 34 09.1	+0.9
	comp=Z,3.2nm,0.9s,mb4.3						
ELK	Elko	54.50	291	eP	P	06 34 09.1	+0.9
	comp=Z,3.2nm,0.9s,mb4.3						
MSU	Marysvale	54.97	287	eP	P	06 34 11.1	-0.6
ANMO	Albuquerque	55.28	280	⇑eP	P	06 34 14.7	+0.7
ANMO	Albuquerque	55.28	280	eP	P	06 34 14.3	+0.3
	comp=Z,1.4nm,0.8s,mb4.0						
ANMO	Albuquerque	55.28	280	eP	P	06 34 14.4	+0.4
	comp=Z,1.4nm,0.8s,mb4.0						
MOD	Modoc	55.74	296	P	P	06 34 16.7	-0.4
	comp=Z,3.1nm,0.6s,mb4.5						
MOD	Modoc	55.74	296	P	P	06 34 16.7	-0.5
	comp=Z,3.1nm,0.6s,mb4.5						
JCT	Junction City	55.89	271	eP	P	06 34 17.1	-1.3
	comp=Z,2.0nm,0.4s,mb4.5						
JCT	Junction City	55.89	271	eP	P	06 34 17.1	-1.3
	comp=Z,2.0nm,0.4s,mb4.5						
ARUT	Antelope Range	56.13	288	eP	P	06 34 20.1	+0.1
GDL2	Guadalupe Moun	56.59	276	eP	P	06 34 22.8	-0.6
GDL2	Guadalupe Moun	56.59	276	eP	P	06 34 22.8	-0.6
MKAR	Makanchi Array	57.43	51	P	P	06 34 32.1	+2.9
	comp=Z,1.4nm,0.8s,mb4.0,baz=332,slow=5.7,SNR=15						
TXAR	Lajitas Array	58.66	274	P	P	06 34 36.6	-1.5
	comp=Z,0.9nm,0.7s,mb3.9,baz=70,slow=4.8,SNR=14						
TXAR				PcP	PcP	06 35 26.9	-1.0
	comp=Z,0.5nm,0.8s,baz=60,slow=3.8,SNR=3.6						
TXAR	Lajitas Array	58.66	274	PcP	PcP	06 35 26.9	-1.0
TUC	Tucson	59.47	282	eP	P	06 34 43.9	+0.3
	comp=Z,2.1nm,0.9s,mb4.2						
TUC	Tucson	59.47	282	eP	P	06 34 43.9	+0.2
	comp=Z,2.0nm,0.9s,mb4.2						
SONM	Songino Array	64.05	33	P	P	06 35 16.0	+1.9
	comp=Z,1.4nm,0.8s,mb4.0,baz=322,slow=7.5,SNR=9.5						
ULN	Ulaanbaatar	64.19	33	i P	P	06 35 17.1	+2.1
MDJ	Mudanjiang	71.85	18	P	P	06 36 01.5	-1.4
MDJ				AMB	AMB		
	comp=Z,80nm,8.6s						
CN2	Changchun	72.00	21	eP	P	06 36 03.9	+0.2
BDFB	Brasilia	79.39	201	P	P	06 36 44.9	-1.2
	comp=Z,2.9nm,0.7s,mb4.3,baz=150,slow=2.7,SNR=5.6						
BDFB	Brasilia	79.39	201	eP	P	06 36 44.9	-1.2
SSE	Sheshan	83.47	28	P	P	06 37 08.3	+1.1
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						

*ATH **08** 06:27:37.8, 36.98N×27.97E, h53km±12km, MD3.0/3*

*CSEM **08** 06:27:37.7±0.1, 36.94N×27.81E, h15km, MD3.0, Error ellipse: s-maj=3.9km s-min=2.5km az=61.0*

*ISK **08** 06:27:38.4, 37.01N×27.78E, h22km, MD3.0*

ISC 08 06:27:38.5±0.6**, 36.95N**±0.03×**27.81E**±0.04**, h12km**±5km**, n12, σ0ˢ94**/21**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.31	292	i P	Pg	06 27 44.8	-0.3
BDRM				i S	Sg	06 27 50.0	+0.5
MLSB	Milas	0.34	356	i PG	Pg	06 27 45.3	-0.4
MLSB				i SG	Sg	06 27 50.4	-0.1
BODT	Bodrum	0.41	286	PG	Pg	06 27 46.5	-0.5
BODT				SG	Sg	06 27 53.4	+0.7
DALT	Dalyan (Mudla)	0.69	105	ePG	Pg	06 27 53.3	+0.9
AYDN	Tasoluk	0.71	5	i P	Pb	06 27 51.5	-0.8
AYDN				i S	Sb	06 28 00.8	-1.0
ARG	Arkhangelos	0.78	161	eP	Pb	06 27 52.9	-0.6
ARG				eS	Sb	06 28 05.1	+1.4
FETY	Fethiye	1.07	107	ePN	Pn	06 27 59.1	-0.2
SMG	Samos	1.08	315	eP	Pb	06 27 58.9	+0.2
SMG				eS	Sb	06 28 13.9	+1.3
DNZL	Cakiroluk	1.23	53	i P	Pb	06 28 00.7	-0.6
DNZL				i S	Sb	06 28 17.3	+0.4
KARP	Karpathos	1.49	201	eP	Pn	06 28 04.6	-0.7
KARP				eS	Sb	06 28 23.8	-0.8
IZM	Izmir	1.51	344	ePN	Pn	06 28 03.9	-1.6
MANT	Manisa	1.65	21	i P	Pn	06 28 09.4	+1.9
MANT				i S	Sn	06 28 32.2	+3.4

*BJI **08** 06:28:08.9, 2.09N×96.82E, h27km, mB6.2, mb5.7, Ms6.3, Msz6.2*

*HRVD **08** 06:28:10.9±0.1, 1.86N×96.46E, h24km, MW6.0/75, Centroid moment Tensor Solution. LP body waves: s73,c176;Mantle waves: s75,c239; Half duration: 2ˢ7 Moment tensor: Scale 10^{18}Nm; M_{rr}0.76±.01; $M_{\theta\theta}$-0.43±.01; $M_{\phi\phi}$-0.32±.01; $M_{r\theta}$0.72±.01; $M_{\theta\phi}$0.46±.01; $M_{\phi r}$-0.71±.02; Best double couple: $M_0$1.29×10^{18} NP1: ϕ_s308°, δ19°, λ85°. NP2:ϕ_s134°, δ71°, λ92°. Principal axes: T 1.25, Plg64°, Azm47°; N .079, Plg2°, Azm313°; P -1.33, Plg26°, Azm223°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **08** 06:28:10.9±0.1, 2.17N×96.72E, mb5.8/106, ME5.6, MS5.7/19, MW6.1 Error ellipse: s-maj=4.4km s-min=2.9km az=39.0 Broadband fault plane solution: P waves. NP1: ϕ_s125°, δ80°, λ90°. NP2:ϕ_s305°, δ10°, λ90°. Principal axes: T Plg55°, Azm35°; N Plg0°, Azm0°; P Plg35°, Azm215°; Moment Tensor Solution. s36 Moment tensor: Scale 10^{18} Nm; M_{rr}0.62; $M_{\theta\theta}$-0.68; $M_{\phi\phi}$0.06; $M_{r\theta}$1.07; $M_{\theta\phi}$0.31; $M_{\phi r}$-0.79; Best double couple: $M_0$1.5×10^{18} NP1: ϕ_s269°, δ16°, λ55°. NP2:ϕ_s125°, δ77°, λ100°. Principal axes: T 1.46, Plg57°, Azm48°; N .11, Plg9°, Azm303°; P -1.56, Plg31°, Azm207°; Two events about 2.5 seconds apart. Depth and focal mechanism from synthetics of broadband displacement seismograms based on first event. Energy computed from BB mechanism.*

NEIC Felt [IV] at Sinabang. Felt at Gunungsitoli, Nias. Also felt at Sungai Petani, Malaysia.

*IDC **08** 06:28:10.4±2.1, 2.21N×96.76E, h19km±12km, mb5.3/32, mb1 5.3/33, mb1mx5.3/33, mbtmp5.4/33, ML5.4/1, MS6.0/19, Ms1 6.0/19, ms1mx5.9/26 Error ellipse: s-maj=15.1km s-min=8.3km az=53.0*

*MOS **08** 06:28:11.7±0.9, 2.29N×96.80E, h38km, mb6.0/96, MS5.8/37, Error ellipse: s-maj=8.3km s-min=3.8km az=123.0*

*BGS **08** 06:28:11.2±2.6, 2.17N×96.72E, h25km, mb5.7*

ISC 08 06:28:10.2±0.1**, 2.18N**±0.02×**96.74E**±0.02**, h30km, h30**km±1.2km**:pP-P, n786, σ1ˢ00**/673**, mb5.8**/187**, MS6.0**/85**, 134C-18D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	4.89	61	P	Pn	06 29 25.4	+1.7
KULM	Kulim	4.97	52	⇑iP	Pn	06 29 26.3	+1.5
SNG	Songkhla	6.29	38	P	Pn	06 29 43.5	+0.1
	2µm,1.0s						
KGM	Kluang	6.57	91	P	Pn	06 29 48.4	+0.9
NNT	Nongplab	10.76	16	P	P	06 30 46.0	+0.5
KSM	Kuching	13.58	93	⇑eP	P	06 31 24.6	+1.2
NST	Nakhon Sawan	13.81	14	P	P	06 31 25.5	-1.1
UBT	Ubonrachathani	15.33	32	P	P	06 31 46.5	+0.1
CM31	Chiang Mai Arr	16.32	7	eP	P	06 31 58.9	-0.1
	354nm,0.8s						
CMAR	Chiang Mai Arr	16.32	7	Pn	P	06 31 58.3	-0.7
	4.6nm,0.3s,baz=202,slow=13,SNR=76						
CMAR				LR	LR	06 38 45.6	
	comp=Z,43µm,21.1s,baz=190,slow=39						
CHG	Chiang Mai	16.67	7	⇑P	P	06 32 03.3	-0.2
	150nm,1.0s						
CHTO	Chiang Mai	16.67	7	Pn	P	06 32 03.1	-0.4
PALK	Pallekele	16.76	288	eP	P	06 32 05.1	+0.4
	702nm,1.5s						
NANT	Nan	16.96	13	⇑P	P	06 32 06.0	-1.2
	2µm,1.0s						
MDRS	Chennai	19.58	304	ex	x	06 32 53.0	
MDRS				ex	S	06 36 12.0	-0.6
MDRS				ex	x	06 37 52.0	
KKM	Kota Kinabalu	19.79	78	⇑eP	P	06 32 41.1	-0.3
KKM	Kota Kinabalu	19.79	78	P	P	06 32 41.4	0.0
VIS	Vishakhapatnam	20.30	320	⇑iP	P	06 32 46.8	+0.2
VIS				AMb	AMB	06 32 54.5	
	comp=Z,610nm,1.1s						
VIS				eS	S	06 36 28.7	+1.4
TRD	Trivandrum	20.67	288	eP	P	06 32 50.6	+0.2
TRD				AMb	AMB	06 33 07.4	
	comp=Z,537nm,1.5s						
TRD				ex	S	06 36 30.6	-4.2
BWNR	Bhubaneshwar	20.93	330	ex	P	06 32 47.0	-6.1
QIZ	Qiongzhong	21.09	37	P	P	06 32 54.8	+0.1
QIZ				AP		06 33 05.8	
QIZ				S	S	06 36 41.2	-1.7
QIZ				XS		06 36 58.7	
QIZ				LR	LR		
	comp=N,59µm,19.9s,MS6.1						
QIZ				LR	LR		
	comp=E,41µm,18.7s,MS6.1						
QIZ				LR	LR		
	comp=Z,41µm,18.9s,MS5.8						
TSM	Tawau	21.20	84	P	P	06 32 55.3	-0.6
CAL	Calcutta	21.82	339	eP	P	06 33 01.3	-0.8
	comp=Z,965nm,0.4s,mb6.6						
CAL				ex	S	06 37 02.0	+5.5
BATP	Bataraza	21.95	72	eP	P	06 33 03.7	+0.2
IMP	Imphal	22.63	353	ex	P	06 33 04.5	-5.7
IMP				eS	S	06 37 10.0	-1.4
HYB	Hyderabad	23.42	311	⇑eP	P	06 33 20.0	+2.1
HYB				eS	S	06 37 32.0	+6.6
HYB				pmax	pmax		
	comp=Z,230nm,1.0s,mb5.6						
HYB	Hyderabad	23.42	311	⇑eP	P	06 33 20.0	+2.1
	comp=Z,230nm,1.0s,mb5.6						
HYB				eS	S	06 37 32.0	+6.6
HYB	Hyderabad	23.42	311	⇑iP	P	06 33 20.0	+2.1
	comp=Z,230nm,1.0s,mb5.6						
HYB				eS	S	06 37 28.0	+2.6
HYB				LR	LR	06 41 40.0	
	comp=Z,51nm,20.0s						
KMI	Kunming	23.53	14	⇑P	P	06 33 20.9	+2.0
KMI				AP		06 33 31.9	
KMI				PP	PP	06 33 53.7	+2.4
KMI				PPP	PPP	06 34 06.3	+5.0
KMI				S	S	06 37 29.9	+2.7
KMI				XS		06 37 47.6	
KMI				SS	SS	06 38 20.7	+5.0
KMI				AMB	AMB		
	comp=Z,330nm,1.6s,mb5.5						
KMI				AMB	AMB		
	comp=Z,4µm,3.7s						
KMI				LR	LR		
	comp=N,25µm,16.3s						
KMI				LR	LR		
	comp=E,32µm,21.5s						
KMI				LR	LR		
	comp=Z,36µm,17.0s,MS5.9						
SHL	Shillong	23.71	349	i P	P	06 33 19.0	-1.7
SHL				ex	S	06 37 33.5	+3.0
BOK	Bokaro	23.92	335	i P	P	06 33 22.4	-0.3
BOK				eP		06 33 23.8	
BOK				AMb	AMB	06 33 29.2	
	comp=Z,763nm,1.1s,mb6.0						
BOK				eS	S	06 37 33.5	-0.5
BOK				i x	x	06 37 39.4	
MNGI	Mangalore	24.19	297	i P	P	06 33 27.9	+2.5
MNGI				i S	S	06 37 46.4	+7.7
ENPP	El Nido	24.22	67	eP	P	06 33 27.2	+1.4
MNCY	Minicoy	24.36	285	i P	P	06 33 34.0	+6.9
MNCY				i x	x	06 35 58.0	
LKP	Lekhapani	25.02	359	eP	P	06 33 31.0	-2.3
LKP				ex	x	06 33 35.0	
BUSP	Coron	25.21	66	eP	P	06 33 35.6	+0.4
LATR	Latur	25.53	311	eP	P	06 33 39.3	+1.1
LATR				ex	x	06 38 23.0	
NGP	Nagpur	25.55	319	eP	P	06 33 40.2	+1.9
NGP				ex	x	06 38 27.1	
CUYO	Cuyo Island	25.59	69	eP	P	06 33 39.2	+0.4
ZMPH	Zamboanga City	25.67	79	⇓eP	P	06 33 40.0	+0.4
LUBP	Lubang	25.91	62	eP	P	06 33 42.8	+1.0
GYA	Guiyang	25.95	21	⇑iP	P	06 33 41.5	-0.5
GYA				AP	pP	06 33 52.8	+2.0
GYA				XP	sP	06 33 59.4	+4.6
GYA				PP	PP	06 34 27.6	+4.4
GYA				S	S	06 38 13.2	+5.1
GYA				AMB	AMB		
	comp=Z,150nm,0.8s,mb5.6						
GYA				LR	LR		
	comp=N,33µm,13.2s,MS6.2						
GYA				LR	LR		
	comp=E,36µm,14.2s,MS6.2						
GYA				LR	LR		
	comp=Z,44µm,12.3s,MS6.2						
HKC	Hong Kong	26.21	39	⇑iP	P	06 33 46.0	+1.6
HKC				i S	S	06 38 48.0	+36
SJMP	San Jose	26.21	66	eP	P	06 33 45.5	+1.0
IPIL	Ipil	26.32	77	eP	P	06 33 46.6	+1.1
KAD	Karad	26.78	306	eP	P	06 33 50.9	+1.1
KAD				AMb	AMB	06 34 07.7	
	comp=Z,253nm,1.7s,mb5.5						
GUIM	Jordan	27.00	71	eP	P	06 33 56.3	+4.6
OTRP	Odiongan	27.00	67	eP	P	06 33 52.2	+0.4
PAGZ	Pagadian	27.11	77	eP	P	06 33 53.8	+1.0
BOAC	Boac	27.23	64	eP	P	06 33 54.2	+0.2
RCP	Roxas	27.42	69	⇑eP	P	06 33 56.1	+0.6
PKI	Pulchoki	27.48	338	eP	P	06 33 56.5	+0.5
	comp=Z,762nm,1.3s,mb6.1						
PKI	Pulchoki	27.48	338	eP	P	06 33 56.5	+0.5
PKI				pmax	pmax		
	comp=Z,381nm,1.3s,mb5.8						
GUN	Gumba	27.61	339	eP	P	06 33 58.1	+0.9
	comp=Z,1µm,0.7s,mb6.5						
DMN	Daman	27.63	337	eP	P	06 33 58.0	+0.6
	comp=Z,709nm,1.0s,mb6.2						
POO	Poona	27.70	307	eP	P	06 33 59.8	+1.6
POO				ex	S	06 38 33.2	-3.5
POO				i x	x	06 39 20.0	
KKN	Kakani	27.72	338	eP	P	06 33 58.7	+0.5
	comp=Z,557nm,0.8s,mb6.2						
KKN	Kakani	27.72	338	eP	P	06 33 58.7	+0.5
KKN				pmax	pmax		
	comp=Z,279nm,0.8s,mb5.9						
POLP	Polilio Island	27.82	62	eP	P	06 33 58.9	-0.3
LSA	Lhasa	27.88	350	P	P	06 34 00.6	+1.0
LSA				AMB	AMB		
	comp=Z,150nm,1.1s,mb5.5						
LSA				LR	LR		
	comp=N,13µm,23.9s,MS5.7						
LSA				LR	LR		
	comp=E,22µm,25.2s,MS5.7						
LSA				LR	LR		
	comp=Z,30µm,25.2s,MS5.8						
LSA	Lhasa	27.88	350	⇑iP	P	06 34 00.3	+0.7
LSA				pmax	pmax		
	comp=Z,144nm,0.6s,mb5.8						
LSA	Lhasa	27.88	350	⇑iP	P	06 34 00.3	+0.6
	comp=Z,144nm,0.6s,mb5.8						
BALP	Baler	27.93	60	eP	P	06 33 59.2	-1.1
AUQP	San Andres	27.94	65	eP	P	06 34 11.7	+11
BHPL	Bhopal	28.09	320	eP	P	06 34 02.2	+0.7
BHPL				AMb	AMB	06 34 05.9	
	comp=Z,113nm,1.2s,mb5.4						
BHPL				i S	S	06 38 43.9	+1.0
ABRA	Dolores	28.11	55	eP	P	06 34 00.9	-0.9
GKN	Gorkha	28.16	337	eP	P	06 34 02.6	+0.4
	comp=Z,1µm,1.1s,mb6.4						
LLP	Lapu-Lapu	28.22	72	eP	P	06 34 02.2	-0.6
KOLN	Koldanda	28.38	335	eP	P	06 34 04.9	+0.7
	comp=Z,652nm,0.8s,mb6.3						
APYP	Conner	28.65	55	eP	P	06 34 05.7	-1.0
CAUP	Cauayan	28.69	58	eP	P	06 34 06.1	-0.9
BOM	Bombay	28.72	307	ex	S	06 38 46.0	-7.2
BOM				ex	x	06 43 26.4	

BUKP	**Musuan**	**28.76**	**78**	*e*P	**P**	**06 34 08.2**	**+0.5**
MSLP	**Maasin**	**29.02**	**73**	*e*P	**P**	**06 34 12.0**	**+1.9**
JHNI	**Jhansi**	**29.04**	**324**	*e*P	**P**	**06 34 08.0**	**-2.1**
JHNI				*e*x	pP	06 34 17.0	-1.9
DAV	**Davao City (W)**	**29.14**	**79**	*e*P	**P**	**06 34 13.0**	**+1.9**
CD2	**Chengdu**	**29.33**	**12**	⇑*i*P	**P**	**06 34 11.4**	**-1.3**
CD2				S	**S**	**06 39 03.1**	**+0.3**
CD2				SS	SS	06 40 35.4	+0.4
CD2				AMB	AMB		
	comp=Z,300nm,0.7s,mb6.1						
CD2				LR	LR		
	comp=E,57µm,15.6s						
CD2				LR	LR		
	comp=Z,33µm,13.2s,MS6.1						
PVCP	**Virac**	**29.38**	**66**	*e*P	**P**	**06 34 12.3**	**-0.9**
CNP	**Catarman**	**29.49**	**68**	*e*P	**P**	**06 34 14.7**	**+0.4**
BUTP	**Butuan**	**29.50**	**76**	*e*P	**P**	**06 34 14.6**	**+0.1**
MATI	**Mati**	**29.79**	**80**	*e*P	**P**	**06 34 11.4**	**-5.5**
ENH	**Enshi**	**30.44**	**22**	*e*P	**P**	**06 34 20.6**	**-2.0**
	comp=Z,154nm,1.0s,mb5.7						
BBP	**Basco**	**30.58**	**52**	*e*P	**P**	**06 34 23.3**	**-0.6**
AGRA	**Agra**	**30.74**	**326**	*e*P	**P**	**06 34 25.2**	**+0.1**
AGRA				AMb	AMB	06 34 28.7	
	comp=Z,163nm,0.5s,mb6.2						
BHV	**Bhavnagar**	**30.84**	**311**	*e*P	**P**	**06 34 26.5**	**+0.4**
QZH	**Quanzhou**	**30.92**	**41**	⇑*i*P	**P**	**06 34 26.6**	**-0.2**
QZH				S	**S**	**06 39 32.0**	**+4.0**
QZH				LR	LR		
	comp=Z,79µm,17.4s,MS6.4						
LGTI	**Lohaghat**	**31.33**	**332**	*i* P	**P**	**06 34 30.5**	**+0.1**
LGTI				*e*x	x	06 35 44.5	
PTH	**Pithoragarh**	**31.43**	**332**	*e*P	**P**	**06 34 31.6**	**+0.3**
PTH				*e*x	**S**	**06 39 39.0**	**+3.2**
SONA	**Sohna**	**32.01**	**326**	*e*P	**P**	**06 34 35.8**	**-0.5**
SONA				AMb	AMB	06 34 40.1	
	comp=Z,298nm,0.6s,mb6.3						
ASOR	**Ausora**	**32.02**	**327**	*e*P	**P**	**06 34 34.6**	**-1.9**
ASOR				AML	AML	06 34 35.7	
	comp=Z,148nm,0.1s						
KALG	**Kalgarh**	**32.11**	**330**	*e*x	x	06 34 17.0	
KALG				AMb	AMB	06 34 20.2	
	comp=Z,97nm,0.5s,mb5.9						
AYAN	**Aya Nagar**	**32.16**	**326**	*e*P	**P**	**06 34 37.7**	**0.0**
AYAN				AMb	AMB	06 34 41.2	
	comp=Z,43nm,0.9s,mb5.3						
NDI	**New Delhi**	**32.27**	**327**	*i* P	**P**	**06 34 36.8**	**-1.8**
NDI				*e*x	**S**	**06 39 51.5**	**+2.6**
MBWA	**Marble Bar**	**32.32**	**137**	⇑*i*P	**P**	**06 34 38.8**	**-0.3**
	comp=Z,86nm,0.9s,mb5.6						
NACB	**Ninganchiao**	**32.48**	**46**	*e*P	**P**	**06 34 41.0**	**+0.5**
KHET	**Khetri**	**32.60**	**324**	*e*P	**P**	**06 34 41.7**	**+0.2**
KHET				AMb	AMB	06 34 48.9	
	comp=Z,206nm,1.3s,mb5.9						
YHNB	**Yeheng**	**32.64**	**45**	*e*P	**P**	**06 34 42.0**	**+0.2**
WHN	**Wuhan**	**32.77**	**29**	⇑P	**P**	**06 34 42.5**	**-0.5**
WHN				AMB	AMB		
	comp=Z,420nm,1.4s,mb6.2						
TATO	**Taipei**	**32.91**	**44**	*e*P	**P**	**06 34 44.4**	**+0.2**
	comp=Z,453nm,1.5s,mb6.2						
RTK	**Rohtak**	**32.98**	**326**	*e*P	**P**	**06 34 45.3**	**+0.5**
RTK				AMb	AMB	06 34 49.3	
	comp=Z,113nm,0.5s,mb6.1						
BHJ	**Bhuj**	**33.58**	**311**	*e*x	**P**	**06 34 54.3**	**+4.2**
BHJ				*e*x	x	06 40 30.0	
XAN	**Xi’an**	**33.67**	**18**	P	**P**	**06 34 49.5**	**-1.3**
XAN				AP	pP	06 34 59.9	+0.2
XAN				S	**S**	**06 40 09.8**	**-0.9**
XAN				XS		06 40 25.8	
XAN				AMB	AMB		
	comp=Z,90nm,1.1s,mb5.6						
XAN				LR	LR		
	comp=E,30µm,16.9s						
XAN				LR	LR		
	comp=Z,26µm,16.9s,MS6.0						
SMLA	**Simla**	**34.22**	**329**	*i* x	x	06 34 52.0	
SMLA				*i* x	x	06 40 15.7	
LZH	**Lanzhou**	**34.37**	**10**	⇑P	**P**	**06 34 56.6**	**-0.2**
LZH				AP	pP	06 35 06.9	+1.2
LZH				XP	sP	06 35 14.4	+4.9
LZH				S	**S**	**06 40 26.0**	**+4.5**
LZH				XS		06 40 39.0	
LZH				AMB	AMB		
	comp=Z,480nm,1.2s,mb6.3						
LZH				AMB	AMB		
	comp=Z,2µm,4.0s						
LZH				LR	LR		
	comp=Z,39µm,19.6s,MS6.2						
SDNR	**Sundarnagar**	**34.62**	**329**	*e*P	**P**	**06 34 59.2**	**+0.2**
BHK	**Bhakra**	**34.84**	**329**	*e*P	**P**	**06 35 00.7**	**-0.2**
JASL	**Jaisalmer**	**34.91**	**317**	*e*x	**P**	**06 35 05.1**	**+3.6**
JASL				AMb	AMB	06 35 09.2	
	comp=Z,180nm,1.1s,mb5.9						
PONG	**Pong**	**35.51**	**329**	*e*P	**P**	**06 35 06.0**	**-0.5**
THN	**Thein Dam**	**36.01**	**329**	*e*x	**S**	**06 40 52.8**	**+5.9**
NJ2	**Nanjing**	**36.28**	**33**	*e*P	**P**	**06 35 13.1**	**0.0**
NJ2				AP	pP	06 35 24.1	+2.1
NJ2				XP	sP	06 35 30.2	+4.4
NJ2				PP	PP	06 36 36.8	+0.4
NJ2				PPP	PPP	06 36 50.0	-6.4
NJ2				S	**S**	**06 40 49.0**	**-2.1**
NJ2				XS		06 41 10.0	
NJ2				AMB	AMB		
	comp=Z,500nm,1.2s,mb6.3						
NJ2				AMB	AMB		
	comp=Z,3µm,10.7s						
NJ2				LR	LR		
	comp=Z,28µm,14.2s,MS6.2						
SSE	**Sheshan**	**36.88**	**36**	P	**P**	**06 35 18.9**	**+0.7**
SSE				AP	pP	06 35 30.1	+3.0
SSE				PP	PP	06 36 43.2	-1.1
SSE				AMB	AMB		
	comp=Z,100nm,1.1s,mb5.6						
SSE				AMB	AMB		
	comp=Z,2µm,12.0s						
SSE				LR	LR		
	comp=N,35µm,20.0s,MS6.2						
SSE				LR	LR		
	comp=E,27µm,20.0s,MS6.2						
SSE				LR	LR		
	comp=Z,38µm,16.9s,MS6.3						
GTA	**Gaotai**	**37.16**	**4**	⇑*i*P	**P**	**06 35 20.6**	**+0.2**
GTA				AP	pP	06 35 34.7	+5.4
GTA				PP	PP	06 36 50.3	+2.7
GTA				PCP	PcP	06 37 41.3	+0.8
GTA				S	**S**	**06 41 03.6**	**-0.9**
GTA				SCP		06 41 20.9	
GTA				XS		06 41 21.7	
GTA				PCS		06 41 29.3	
GTA				SS	SS	06 43 36.3	+0.7
GTA				SCS	ScS	06 45 31.2	+0.8
GTA				AMB	AMB		
	comp=Z,230nm,1.0s,mb6.0						
GTA				AMB	AMB		
	comp=Z,3µm,6.1s						
GTA				LR	LR		
	comp=N,10µm,19.0s,MS5.9						
GTA				LR	LR		
	comp=E,13µm,18.2s,MS5.9						
GTA				LR	LR		
	comp=Z,11µm,18.2s,MS5.7						
KAKA	**Kakadu**	**38.41**	**114**	⇑*i*P	**P**	**06 35 29.6**	**-1.5**
MUN	**Mundaring**	**38.67**	**153**	*e*P	**P**	**06 35 35.7**	**+2.6**
TIA	**Tai’an**	**38.76**	**27**	⇑P	**P**	**06 35 33.5**	**-0.3**
TIA				S	**S**	**06 41 31.1**	**+2.4**
TIA				AMB	AMB		
	comp=Z,250nm,1.6s,mb5.7						
TIA				LR	LR		
	comp=N,9µm,13.7s,MS5.9						
TIA				LR	LR		
	comp=E,8µm,13.9s,MS5.9						
KLBR	**Kellerberrin**	**39.07**	**151**	*e*P	**P**	**06 35 37.8**	**+1.3**
NWAO	**Narrogin (SRO)**	**39.93**	**153**	P	**P**	**06 35 45.2**	**+1.5**
	comp=E,32nm,0.9s,mb5.0,baz=312,slow=10,SNR=7.1						
NWAO				LR	LR	06 51 26.7	
	comp=E,27µm,21.4s,MS6.1,baz=328,slow=35						
NWAO	**Narrogin (SRO)**	**39.93**	**153**	P	**P**	**06 35 45.2**	**+1.5**
NWAO				LR	LR	06 51 26.7	
BTO	**Baotou**	**40.09**	**16**	*e*P	**P**	**06 35 45.1**	**+0.3**
BTO				PP	PP	06 37 19.8	-0.9
BTO				AMB	AMB		
	comp=Z,100nm,1.4s,mb5.3						
BTO				LR	LR		
	comp=N,6µm,14.6s,MS6.0						
BTO				LR	LR		
	comp=E,16µm,16.6s,MS6.0						
HHC	**Hu-ho-hao-te**	**40.76**	**17**	*e*P	**P**	**06 35 51.8**	**+1.5**
HHC				AP	pP	06 35 59.3	0.0
HHC				XP	sP	06 36 02.6	-0.4
HHC				PP	PP	06 37 31.9	+4.5
HHC				PCP	PcP	06 37 54.9	+3.1
HHC				PCS		06 41 45.2	
HHC				S	**S**	**06 41 54.8**	**-3.9**
HHC				XS		06 42 09.6	
HHC				SS	SS	06 44 53.6	-1.7
HHC				SCS	ScS	06 45 52.3	+1.2
HHC				AMB	AMB		
	comp=Z,160nm,1.4s,mb5.5						
HHC				AMB	AMB		
	comp=Z,4µm,13.9s						
HHC				LR	LR		
	comp=N,11µm,19.0s,MS6.2						
HHC				LR	LR		
	comp=E,31µm,17.8s,MS6.2						
HHC				LR	LR		
	comp=Z,15µm,20.2s,MS5.8						
KSH	**Kashi**	**41.69**	**336**	⇑*i*P	**P**	**06 35 58.8**	**+0.8**
KSH				AP	pP	06 36 11.0	+4.0
KSH				XP	sP	06 36 15.3	+4.5
KSH				PP	PP	06 37 39.3	+1.8
KSH				PCP	PcP	06 37 53.4	-1.6
KSH				PPP	PPP	06 38 11.3	+2.5
KSH				*e*SCP		06 41 38.2	
KSH				*e*PCS		06 41 43.0	
KSH				S	**S**	**06 42 13.9**	**+1.2**
KSH				SS	SS	06 45 16.1	+2.6
KSH				SCS	ScS	06 45 54.0	-2.8
KSH				AMB	AMB		
	comp=Z,2µm,4.8s						
WMQ	**Urumqi**	**42.23**	**350**	⇑*i*P	**P**	**06 36 03.5**	**+1.1**
WMQ				AP	pP	06 36 15.8	+4.4
WMQ				PP	PP	06 37 44.9	+1.8
WMQ				PCP	PcP	06 37 57.7	+1.0
WMQ				PPP	PPP	06 38 17.4	+1.7
WMQ				S	**S**	**06 42 13.7**	**-6.9**
WMQ				SS	SS	06 45 23.5	0.0
WMQ				SCS	ScS	06 45 59.4	-0.6
WMQ				AMB	AMB		
	comp=Z,190nm,1.2s,mb5.6						
WMQ				AMB	AMB		
	comp=Z,400nm,4.5s						
WMQ				LR	LR		
	comp=N,10µm,19.2s,MS5.9						
WMQ				LR	LR		
	comp=E,12µm,20.1s,MS5.9						
WMQ				LR	LR		
	comp=Z,11µm,21.2s,MS5.7						
SMDO	**Samad**	**42.85**	**302**	P	**P**	**06 36 09.5**	**+1.8**
	SNR=13						
WRA	**Warramunga Arr**	**42.94**	**123**	P	**P**	**06 36 07.8**	**-0.7**
WRA				S	**S**	**06 42 30.6**	**-0.7**
WRA	**Warramunga Arr**	**42.94**	**123**	P	**P**	**06 36 07.8**	**-0.7**
	comp=Z,153nm,0.7s,mb5.8,baz=300,slow=9.3,SNR=670						
WRA				ScP		06 41 50.1	
	comp=Z,16nm,1.2s,baz=303,slow=3.6,SNR=7.4						
WRA				S	**S**	**06 42 30.6**	**-0.6**
	comp=Z,9.8nm,1.2s,baz=295,slow=17,SNR=5.3						
WRAB	**Tennant Creek**	**42.95**	**123**	⇑*i*P	**P**	**06 36 07.7**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,241nm,0.8s,mb6.0						
WRAB	**Tennant Creek**	**42.95**	**123**	⇑*i*P	**P**	**06 36 07.7**	**-0.9**
	comp=Z,241nm,0.8s,mb6.0						
WB2	**Warramunga Arr**	**42.95**	**123**	⇑*i*P	**P**	**06 36 07.8**	**-0.8**
WB2				*e*S	**S**	**06 42 27.9**	**-3.5**
BIDO	**Bidbid**	**42.97**	**303**	P	**P**	**06 36 10.8**	**+2.0**
	SNR=19						
DL2	**Dalian**	**43.03**	**29**	⇑P	**P**	**06 36 09.3**	**+0.3**
DL2				AP	pP	06 36 20.1	+2.1
DL2				S	**S**	**06 42 38.7**	**+6.4**
DL2				AMB	AMB		
	comp=Z,200nm,0.9s,mb5.8						
DL2				AMB	AMB		
	comp=Z,800nm,7.1s						
DL2				LR	LR		
	comp=N,6µm,18.4s,MS5.8						
DL2				LR	LR		
	comp=E,10µm,16.1s,MS5.8						
DL2				LR	LR		
	comp=Z,11µm,19.2s,MS5.8						
BSY	**Bisya**	**43.45**	**301**	P	**P**	**06 36 14.6**	**+1.9**
	SNR=15						
HOQ	**Hoqain**	**43.68**	**302**	P	**P**	**06 36 16.3**	**+1.8**
	SNR=7.3						
KZA	**Kyzart**	**44.15**	**337**	P	**P**	**06 36 19.4**	**+1.4**
	SNR=53						
ASPA	**Alice Springs**	**44.35**	**128**	*e*P	**P**	**06 36 19.3**	**-0.6**
ASPA				*e*S	**S**	**06 42 50.3**	**-1.3**
ASPA				*e*SCS	ScS	06 46 14.0	+0.7
ASAR	**Alice Springs**	**44.35**	**128**	P	**P**	**06 36 19.4**	**-0.5**
ASAR						06 38 03.8	
ASAR				S	**S**	**06 42 53.1**	**+1.4**
ASAR	**Alice Springs**	**44.35**	**128**	P	**P**	**06 36 19.4**	**-0.6**
	comp=Z,58nm,0.8s,mb5.4,baz=303,slow=7.8,SNR=312						
ASAR				PcP	PcP	06 38 03.8	-0.3
	comp=Z,18nm,0.7s,baz=321,slow=3.2,SNR=4.8						
ASAR				ScP		06 41 55.4	
	comp=Z,12nm,1.1s,baz=294,slow=4.3,SNR=5.5						
ASAR				S	**S**	**06 42 53.1**	**+1.5**
	comp=Z,4.9nm,1.0s,baz=300,slow=12,SNR=3.4						
AAA	**Alma-Ata**	**44.55**	**339**	*i* P	**P**	**06 36 22.0**	**+0.7**
AAA				*e*S	**S**	**06 42 52.0**	**-2.3**
AAA				*e*SS	SS	06 46 19.0	+13
AAA				pmax	pmax		
	comp=Z,3µm,3.5s						
AAA				smax			
	comp=N,4µm,10.0s						
AAA				smax			
	comp=E,7µm,10.0s						
UCH	**Uchtor**	**44.57**	**336**	P	**P**	**06 36 22.9**	**+1.4**
	SNR=124						
INCN	**Inchon**	**44.59**	**34**	*e*P	**P**	**06 36 20.6**	**-1.0**
	comp=E,416nm,1.4s,mb6.1						
TKM2	**Tokmak 2**	**44.74**	**338**	P	**P**	**06 36 23.7**	**+0.9**
	SNR=68						
KBK	**Karagaybulak**	**44.76**	**337**	P	**P**	**06 36 23.7**	**+0.7**
	SNR=34						
AML	**Almayashu**	**44.83**	**336**	P	**P**	**06 36 24.9**	**+1.4**
	SNR=213						
AAK	**Ala-Archa**	**44.92**	**337**	P	**P**	**06 36 25.8**	**+1.5**
	SNR=28						
AAK	**Ala-Archa**	**44.92**	**337**	⇑*e*P	**P**	**06 36 24.3**	**0.0**
AAK				pmax	pmax		
	comp=Z,329nm,1.3s,mb6.0						
AAK	**Ala-Archa**	**44.92**	**337**	⇑*e*P	**P**	**06 36 24.3**	**0.0**
	comp=Z,329nm,1.3s,mb6.0						
WHFO	**Wadi Hawf**	**44.95**	**293**	P	**P**	**06 36 25.9**	**+1.1**
	SNR=30						
FRU	**Bishkek**	**45.04**	**337**	*i* P	**P**	**06 36 26.0**	**+0.8**
FRU				*e*S	**S**	**06 43 04.0**	**+2.6**
FRU				pmax	pmax		
	comp=Z,720nm,1.8s,mb6.2						
FRU				smax			
	comp=E,6µm,16.0s						
FRU				MLR	MLR		
	comp=Z,22µm,20.0s,MS6.1						
CHMS	**Chumysh**	**45.13**	**337**	P	**P**	**06 36 26.5**	**+0.6**
	SNR=26						
ASHO	**Ashiyiah**	**45.17**	**303**	P	**P**	**06 36 28.9**	**+2.5**
	SNR=6.5						
EKS2	**Erkin-Say**	**45.23**	**336**	P	**P**	**06 36 28.1**	**+1.4**
	SNR=76						
ABTO	**Aybut**	**45.24**	**292**	P	**P**	**06 36 28.4**	**+1.3**
	SNR=7.6						
KS15	**Wonju Array Si**	**45.28**	**35**	*e*P	**P**	**06 36 26.8**	**-0.3**
USP	**Ospenovka**	**45.46**	**337**	P	**P**	**06 36 29.3**	**+0.8**
	SNR=167						
MKAR	**Makanchi Array**	**46.18**	**346**	*i* P	**P**	**06 36 34.3**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,152nm,0.6s						
MKAR	**Makanchi Array**	**46.18**	**346**	P	**P**	**06 36 34.4**	**+0.2**
	comp=Z,218nm,0.8s,mb6.2,baz=162,slow=7.9,SNR=811						
MKAR				S	**S**	**06 43 19.1**	**+1.4**
	comp=Z,1.9nm,0.9s,baz=170,slow=14,SNR=2.9						
MKAR				LR	LR	06 59 53.4	
	comp=Z,18µm,21.1s,MS6.0,baz=172,slow=41						
SONM	**Songino Array**	**46.23**	**9**	P	**P**	**06 36 35.0**	**+0.5**
	comp=Z,59nm,0.6s,mb5.7,baz=188,slow=8.7,SNR=248						
SONM				S	**S**	**06 43 23.1**	**+4.7**
	comp=Z,1.6nm,1.1s,baz=305,slow=18,SNR=2.1						
SNY	**Shenyang**	**46.25**	**28**	⇑P	**P**	**06 36 34.1**	**-0.6**
SNY				AMB	AMB		
	comp=Z,160nm,1.0s,mb5.9						
SNY				LR	LR		
	comp=N,26µm,18.3s						
SNY				LR	LR		
	comp=Z,22µm,18.9s,MS6.1						
ULN	**Ulaanbaatar**	**46.37**	**10**	⇑*i*P	**P**	**06 36 35.7**	**+0.1**
ULN				pmax	pmax		
	comp=Z,118nm,1.0s,mb5.8						
ULN	**Ulaanbaatar**	**46.37**	**10**	⇑*i*P	**P**	**06 36 35.7**	**+0.1**
	comp=Z,118nm,1.0s,mb5.8						
ZAK	**Zakamensk**	**48.34**	**6**	*e*P	**P**	**06 36 50.8**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,74nm,1.6s,mb5.5						
CN2	**Changchun**	**48.65**	**28**	⇑P	**P**	**06 36 52.8**	**-0.7**
CN2				*e*AP	pP	06 37 05.3	+2.7
CN2				*e*XP	sP	06 37 10.4	+4.2
CN2				PCP	PcP	06 38 16.6	-2.4
CN2				PP	PP	06 38 46.6	+0.3
CN2				PPP	PPP	06 39 45.5	+6.4
CN2				*e*S	**S**	**06 43 56.9**	**+4.4**
CN2				SS	SS	06 47 19.6	+1.6
CN2				AMB	AMB		
	comp=Z,110nm,0.7s,mb6.0						
CN2				AMB	AMB		
	comp=Z,3µm,10.0s						
CN2				LR	LR		
	comp=N,14µm,19.0s,MS6.1						
CN2				LR	LR		
	comp=E,16µm,19.0s,MS6.1						
CN2				LR	LR		
	comp=Z,14µm,21.0s,MS5.9						
MOY	**Mondy**	**49.44**	**3**	*e*P	**P**	**06 37 00.0**	**+0.5**
MOY				pmax	pmax		
	comp=Z,401nm,2.7s,mb6.0						
VAN	**Vannovskaya**	**50.19**	**320**	*e*P	**P**	**06 37 06.0**	**+0.6**
IRK	**Irkutsk**	**50.28**	**6**	⇑*i*P	**P**	**06 37 05.9**	**-0.1**
IRK				*e*		06 39 07.1	
IRK				*e*S	**S**	**06 44 19.4**	**+4.2**
IRK				pmax	pmax		
	comp=Z,534nm,2.3s,mb6.2						
HASS	**Wahat al Ahsa’**	**50.74**	**301**	P	**P**	**06 37 10.2**	**+0.4**
MDJ	**Mudanjiang**	**51.24**	**30**	P	**P**	**06 37 13.1**	**-0.2**
MDJ				AP	pP	06 37 24.6	+2.1
MDJ				XP	sP	06 37 29.6	+3.5
MDJ				PCP	PcP	06 38 27.5	-0.9
MDJ				PP	PP	06 39 10.4	-0.6
MDJ				SCP		06 42 20.4	
MDJ				PCS		06 42 25.3	
MDJ				S	**S**	**06 44 28.5**	**0.0**
MDJ				XS		06 44 49.1	
MDJ				SCS	ScS	06 46 59.5	+1.2
MDJ				SS	SS	06 48 06.7	+4.8
MDJ				AMB	AMB		
	comp=Z,120nm,1.2s,mb5.7						
MDJ				AMB	AMB		
	comp=Z,2µm,9.6s						
MDJ				LR	LR		
	comp=Z,24µm,17.2s,MS6.3						
MAJO	**Matsushiro**	**51.28**	**43**	⇑*e*P	**P**	**06 37 12.8**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,574nm,1.7s,mb6.2						
MAJO	**Matsushiro**	**51.28**	**43**	⇑*e*P	**P**	**06 37 12.8**	**-0.9**
	comp=Z,574nm,1.7s,mb6.2						
MAT	**Matsushiro**	**51.28**	**43**	*e*P	**P**	**06 37 12.0**	**-1.8**
MAT				*e*S	**S**	**06 44 31.0**	**+1.8**
MAT				pmax	pmax		
	comp=Z,244nm,1.5s,mb5.9						
MAT				MLR	MLR		
	comp=Z,12µm,20.0s,MS5.9						
MAT	**Matsushiro**	**51.28**	**43**	*e*P	**P**	**06 37 12.0**	**-1.8**
	comp=Z,244nm,1.5s,mb5.9						
MAT				*e*S	**S**	**06 44 31.0**	**+1.8**
MAT				LR	LR		
	comp=Z,12µm,20.0s,MS5.9						
MAT	**Matsushiro**	**51.28**	**43**	P	**P**	**06 37 12.3**	**-1.5**
MAT				S	**S**	**06 44 30.0**	**+0.8**
MJAR	**Matsushiro Arr**	**51.28**	**43**	P	**P**	**06 37 13.4**	**-0.4**
	comp=Z,34nm,1.0s,mb5.2,baz=222,slow=6.4,SNR=44						
MJAR				PcP	PcP	06 38 29.1	+0.4
	comp=Z,21nm,0.9s,baz=235,slow=4.1,SNR=5.3						
MJAR				LR	LR	06 59 58.1	
	comp=Z,10µm,20.1s,MS5.8,baz=230,slow=37						
PMG	**Port Moresby**	**51.52**	**104**	P	**P**	**06 37 15.5**	**-0.4**
PMG				pmax	pmax		
	comp=Z,267nm,0.7s						
PMG	**Port Moresby**	**51.52**	**104**	P	**P**	**06 37 15.5**	**-0.4**
	comp=Z,267nm,0.7s,mb6.3,baz=306,slow=2.9,SNR=85						
PMG	**Port Moresby**	**51.52**	**104**	*e*P	**P**	**06 37 14.9**	**-1.0**
	comp=Z,265nm,0.7s,mb6.3						
CIT	**Chita**	**51.62**	**13**	⇑*i*P	**P**	**06 37 16.6**	**+0.5**
CIT				*e*	pP	06 37 27.0	+1.7
CIT				*e*		06 44 40.8	
CIT				pmax	pmax		
	comp=Z,704nm,2.3s,mb6.2						
LBOS		**52.18**	**286**	*e*P	**P**	**06 37 22.7**	**+1.9**
ZAL	**Zalesovo**	**52.51**	**351**	P	**P**	**06 37 22.5**	**-0.3**
	comp=Z,120nm,0.5s,mb6.1,baz=306,slow=5.7,SNR=354						
ZAL				S	**S**	**06 44 49.0**	**+3.2**
	comp=Z,11nm,1.2s,baz=186,slow=21,SNR=13						
ZAL	**Zalesovo**	**52.51**	**351**	P	**P**	**06 37 22.5**	**-0.3**
ZAL				S	**S**	**06 44 49.0**	**+3.2**
RYDS	**Riyadh**	**53.08**	**299**	P	**P**	**06 37 28.5**	**+1.1**
CTA	**Charters Tower**	**53.35**	**117**	P	**P**	**06 37 29.3**	**-0.2**
	comp=Z,57nm,0.9s,mb5.5,baz=293,slow=8.1,SNR=34						
CTA				LR	LR	07 04 20.1	
	comp=Z,17µm,19.5s,MS6.1,baz=282,slow=41						
CTA	**Charters Tower**	**53.35**	**117**	P	**P**	**06 37 29.3**	**-0.2**
CTA				LR	LR	07 04 20.1	
CTAO	**Charters Tower**	**53.35**	**117**	⇑*i*P	**P**	**06 37 29.0**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,228nm,1.1s,mb6.0						
CTAO	**Charters Tower**	**53.35**	**117**	⇑*i*P	**P**	**06 37 29.0**	**-0.5**
	comp=Z,228nm,1.1s,mb6.0						
NVS	**Novosibirsk**	**53.64**	**350**	⇑*i*P	**P**	**06 37 29.4**	**-1.7**
NVS				*e*S	**S**	**06 44 55.9**	**-5.2**
NVS				pmax	pmax		
	comp=N,198nm,1.2s						
NVS				pmax	pmax		
	comp=E,183nm,1.2s						
NVS				pmax	pmax		
	comp=Z,258nm,1.2s,mb6.0						
NVS				smax			
	comp=N,279nm,2.0s						
NVS				smax			
	comp=E,204nm,1.7s						
ADE	**Adelaide**	**53.94**	**137**	*e*P	**P**	**06 37 33.9**	**+0.3**
KAMS	**Al Khamasin**	**53.96**	**294**	P	**P**	**06 37 33.0**	**-0.8**
STKA	**Stephens Creek**	**54.35**	**132**	⇑*i*P	**P**	**06 37 36.1**	**-0.5**
STKA				*e*S	**S**	**06 45 07.9**	**-3.1**
STKA	**Stephens Creek**	**54.35**	**132**	P	**P**	**06 37 36.2**	**-0.5**
	comp=E,38nm,0.7s,mb5.4,baz=309,slow=7.7,SNR=60						
STKA				LR	LR	07 03 18.5	
	comp=E,18µm,21.8s,MS6.1,baz=295,slow=39						
DJNS	**Zahran al Janu**	**54.41**	**290**	P	**P**	**06 37 38.3**	**+1.0**
TATS	**Tathlith**	**54.81**	**292**	P	**P**	**06 37 40.5**	**+0.3**
BVA0	**Borovoye Array**	**55.18**	**341**	*i* P	**P**	**06 37 41.4**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.3						
BVAR	**Borovoye Array**	**55.18**	**341**	P	**P**	**06 37 41.4**	**-1.0**
	comp=Z,46nm,0.7s,mb5.6,baz=142,slow=8.9,SNR=173						
BVAR				PP	PP	06 39 50.9	+3.6
	comp=Z,6.7nm,0.8s,baz=135,slow=10,SNR=1.8						
BOD	**Bodaibo**	**57.13**	**11**	*e*P	**P**	**06 37 55.6**	**-0.8**
BOD				pmax	pmax		
	comp=Z,129nm,1.7s,mb5.7						
HILS	**Ha’il**	**58.16**	**301**	P	**P**	**06 38 04.7**	**+0.8**
CLNS	**Chul’man**	**58.95**	**18**	*e*P	**P**	**06 38 08.8**	**-0.3**
CLNS				*e**PP	pP	06 38 15.1	-3.3
CLNS				*e*		06 38 58.9	
CLNS				*e*		06 40 13.4	
CLNS				*e*S	**S**	**06 46 07.6**	**-3.9**
CLNS				*e*		06 47 44.8	
CLNS				*e*SSS	SSS	06 52 25.4	-6.7
CLNS				pmax	pmax		
	comp=N,56nm,0.7s						
CLNS				pmax	pmax		
	comp=E,42nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,130nm,0.7s,mb6.1						
CLNS				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.2						
CLNS				pmax	pmax		
	comp=N,27nm,1.0s						
CLNS				pmax	pmax		

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      comp=E,23nm,1.0s
CLNS                              smax
      comp=N,2µm,10.7s
CLNS                              smax
      comp=Z,1µm,11.0s
CLNS                              smax
      comp=E,218nm,12.1s
CLNS                              MLR    MLR
      comp=Z,27µm,15.0s,MS6.5
CLNS                              MLR    MLR
      comp=N,12µm,13.0s,MS6.2
CLNS                              MLR    MLR
      comp=E,2µm,14.0s,MS6.2
KMBO  Kilima Mbogo      59.57 267 P      P      06 38 14.9 +1.0
      comp=E,9.6nm,0.8s,mb4.8,baz=56,slow=10.0,SNR=24
KMBO                              LR     LR     06 59 31.2
      comp=E,16µm,20.8s,MS6.1,baz=82,slow=32
MAK   Makhachkala       59.69 320d iP    P      06 38 06.0 -8.4
MAK                               i             06 39 01.0
MAK                               ePPP   PPP    06 41 57.0 +3.4
MAK                               i S    S      06 46 12.0 -9.3
MAK                               i PS   PS     06 46 28.0  -12
MAK                               i             06 47 56.0
MAK                               pmax   pmax
      comp=Z,2µm,12.0s
MAK                               pmax   pmax
      comp=Z,1µm,8.0s
MAK                               smax
      comp=N,2µm,8.0s
MAK                               smax
      comp=E,1µm,8.0s
YSS   Yuzh-Sakhalins    59.80  35α iP    P      06 38 15.0 -0.1
YSS                               i      pP     06 38 25.1 +0.6
YSS                               e*PP   pP     06 38 29.0 +4.5
YSS                               i             06 38 58.0
YSS                               e             06 40 29.0
YSS                               ePPP   PPP    06 41 57.0 +2.3
YSS                               eS     S      06 46 26.0 +3.3
YSS                               i PS   PS     06 46 41.0 -0.8
YSS                               eSSS   SSS    06 52 46.0 -4.7
YSS                               pmax   pmax
      comp=N,50nm,0.8s
YSS                               pmax   pmax
      comp=Z,170nm,0.8s,mb6.1
YSS                               pmax   pmax
      comp=Z,3µm,7.0s
YSS                               smax
      comp=N,1µm,8.0s
YSS                               MLR    MLR
      comp=Z,6µm,16.0s,MS5.9
YSS                               MLR    MLR
      comp=N,6µm,15.0s,MS6.1
YSS                               MLR    MLR
      comp=E,8µm,17.0s,MS6.1
YSS   Yuzh-Sakhalins    59.80  35⇑ eP    P      06 38 15.1  0.0
      comp=E,150nm,0.8s,mb6.1
KBRS  Khaybar           59.96 299  P     P      06 38 17.4 +0.9
TOO   Toolangi          59.96 136⇑ iP    P      06 38 17.0 +0.6
YUK   Yuzh-Kuril'sk     60.14  39  eP    P      06 38 16.0 -1.5
YUK                                             06 39 00.5
YUK                               e             06 40 27.4
YUK                               eS     S      06 46 24.0 -3.0
YUK                               ePS    PS     06 46 50.0 +3.6
YUK                               e             06 48 07.0
YUK                               pmax   pmax
      comp=Z,3µm,2.2s
YUK                               pmax   pmax
      comp=N,2µm,3.0s
YUK                               pmax   pmax
      comp=E,2µm,3.0s
YUK                               smax
      comp=E,2µm,3.0s
YUK                               smax
      comp=N,2µm,4.0s
YUK                               MLR    MLR
      comp=Z,12µm,16.0s,MS6.1
YUK                               MLR    MLR
      comp=N,6µm,17.0s,MS6.2
YUK                               MLR    MLR
      comp=E,12µm,16.0s,MS6.2
GNI   Garni             60.27 316  eP    P      06 38 18.1 -0.3
GNI   Garni             60.27 316c iP    P      06 38 17.9 -0.5
GNI                               pmax   pmax
      comp=Z,54nm,1.2s
GNI   Garni             60.27 316  P     P      06 38 18.2 -0.3
      comp=Z,5.9nm,0.4s,mb5.0,baz=331,slow=0.7,SNR=13
GNI   Garni             60.27 316⇑ iP    P      06 38 17.7 -0.7
      comp=Z,210nm,1.2s,mb6.0
DGRG  David-gareji      60.40 318  P     P      06 38 19.1 -0.2
DGRG                              S      S      06 46 32.5 +2.0
CLDR  Caldiran          60.44 315  eP    P      06 38 14.7 -4.9
TVAN  Van               60.56 314  i P   sP     06 38 34.9 +1.7
TI2   Plekhanov         60.95 318⇑ iP    P      06 38 22.6 -0.4
TI2                               e             06 40 35.0
TI2                               eS     S      06 46 39.0 +1.6
TI2                               i S    S      06 46 39.0 +1.6
TI2                               MLR    MLR
      comp=N,3µm,17.0s,MS5.6
TI2                               MLR    MLR
      comp=E,2µm,17.0s,MS5.6
TI2                               MLR    MLR
      comp=Z,3µm,17.0s,MS5.5
TBLG  Delisi            60.95 318  P     P      06 38 22.4 -0.6
UMJS  Umm Lajj          61.56 298  P     P      06 38 28.3 +1.0
SVE   Sverdlovsk        61.61 338α eP    P      06 38 27.3  0.0
SVE                               e             06 39 10.5
SVE                               e             06 40 45.0
SVE                               ePPP   PPP    06 42 16.0 +2.3
SVE                               eS     S      06 46 46.0 +0.4
SVE                               pmax   pmax
      comp=Z,340nm,2.2s,mb6.1
SVE                               pmax   pmax
      comp=N,600nm,12.0s
SVE                               pmax   pmax
      comp=E,600nm,12.0s
SVE                               pmax   pmax
      comp=Z,2µm,12.0s
SVE                               smax
      comp=N,3µm,17.0s
SVE                               smax
      comp=E,4µm,17.0s
SVE                               MLR    MLR
      comp=N,8µm,20.0s,MS5.9
SVE                               MLR    MLR
      comp=E,4µm,20.0s,MS5.9
SVE                               MLR    MLR
      comp=Z,12µm,20.0s,MS6.0
CNB   Canberra Magne    61.68 132⇑ iP    P      06 38 27.6 -0.5
BEST  Besiri            61.88 312  i P   P      06 38 29.5 +0.1
ZEI   Tsey              61.97 318  eP    P      06 38 29.5 -0.4
ZEI                               i *PP  pP     06 38 39.0 -0.3
ZEI                               i             06 40 46.2
ZEI                               pmax   pmax
      comp=Z,26nm,0.9s,mb5.4
ARU   Arti              62.11 337⇑ iP    P      06 38 29.3 -1.3
ARU                               i             06 39 04.2
ARU                               i             06 40 46.8
ARU                               i PPP  PPP    06 42 17.6 -1.1
ARU                               i S    S      06 46 54.0 +2.1
ARU                               i             06 48 18.2
ARU                               pmax   pmax
      comp=Z,99nm,1.2s,mb5.8
ARU                               MLR    MLR
      comp=Z,12µm,21.0s,MS6.0
ARU                               MLR    MLR
      comp=N,9µm,20.0s,MS6.0
ARU                               MLR    MLR
      comp=E,6µm,21.0s,MS6.0
ARU   Arti              62.11 337⇑ iP    P      06 38 29.2 -1.4
      comp=E,83nm,0.9s,mb5.9
ERZM  Erzurum           62.55 314  i P   P      06 38 34.2 +0.3
EZM   Erzurum           62.56 314  eP    P      06 38 31.0 -2.8
TBKS  Tabuk             62.87 301  P     P      06 38 37.0 +1.0
QURS  Qurayyt al Mil    62.97 304  P     P      06 38 36.8 +0.1
KIV   Kislovodsk        63.27 319c iP    P      06 38 37.8 -0.7
KIV                               e             06 40 56.7
KIV                               ePPP   PPP    06 42 26.6 -3.9
KIV                               i S    S      06 47 06.4 -0.3
KIV                               eSS    SS     06 51 19.7 +4.6
KIV                               pmax   pmax
      comp=N,110nm,1.2s
KIV                               pmax   pmax
      comp=E,66nm,1.2s
KIV                               pmax   pmax
      comp=Z,166nm,1.2s,mb6.0
KIV                               smax
      comp=N,294nm,3.4s
KIV                               smax
      comp=E,83nm,2.3s
KIV                               MLR    MLR
      comp=Z,5µm,23.0s,MS5.6
KIV                               MLR    MLR
      comp=N,2µm,18.0s,MS5.6
KIV                               MLR    MLR
      comp=E,3µm,23.0s,MS5.6
KIV   Kislovodsk        63.27 319⇑ iP    P      06 38 37.6 -0.9
      comp=E,166nm,0.9s,mb6.2
GOF   Gofitskoye        63.52 320⇑ iP    P      06 38 39.1 -1.0
GOF                               eS     ScS    06 48 32.0 +4.7
GOF                               pmax   pmax
      comp=Z,100nm,1.2s,mb5.7
GOF                               smax
      comp=E,60nm,1.6s
ASF   Jabal al Asfar    63.53 305  P     P      06 38 40.6 +0.1
      comp=E,18nm,0.8s,mb5.2,baz=333,slow=5.7,SNR=19
ASF                               LR     LR     07 08 36.2
      comp=E,14µm,18.2s,MS6.2,baz=209,slow=38
URFA  Urfa              63.56 311  eP    P      06 38 38.5 -2.1
JMQS  Jabal Moqyreh     63.59 301  P     P      06 38 41.1 +0.2
ELZG  Elazig            63.78 312  i P   P      06 38 41.9 -0.1
TAU   Tasmania Unive    63.86 141  eP    P      06 38 42.7 +0.3
TAU                               pmax   pmax
      comp=Z,259nm,1.5s,mb6.0
TAU   Tasmania Unive    63.86 141  eP    P      06 38 42.7 +0.3
      comp=Z,260nm,1.5s,mb6.0
HNR   Honiara           64.00 102  P     P      06 38 43.0 -0.9
      comp=Z,196nm,0.8s,mb6.2,baz=258,slow=7.7,SNR=3.9
MALT  Malatya           64.14 312⇑ eP    P      06 38 43.8 -0.5
MALT                              pmax   pmax
      comp=Z,134nm,1.5s,mb5.8
MALT  Malatya           64.14 312⇑ eP    P      06 38 43.8 -0.6
      comp=Z,134nm,1.5s,mb5.8
BDAS  Al Bad‘           64.16 301  P     P      06 38 44.9 +0.2
JMOS  Jabal al Moall    64.31 301  P     P      06 38 45.7 +0.1
ALWS  Ilw as Safayha    64.38 301  P     P      06 38 46.3 +0.2
HAQS  Haql              64.44 301  P     P      06 38 46.7 +0.3
EIL   Elat              64.55 302  eP    P      06 38 46.8 -0.4
      comp=Z,54nm,0.8s,mb5.6
YAK   Yakutsk           64.61  16c iP    P      06 38 46.2 -0.8
YAK                               i *PP  pP     06 38 54.2 -2.1
YAK                               i             06 39 20.3
YAK                               e             06 41 15.2
YAK                               i S    S      06 47 23.8 +0.7
YAK                               pmax   pmax
      comp=Z,257nm,1.1s,mb6.2
YAK                               pmax   pmax
      comp=N,119nm,1.2s
YAK                               pmax   pmax
      comp=E,111nm,1.2s
YAK                               pmax   pmax
      comp=N,7.0nm,0.9s
YAK                               pmax   pmax
      comp=E,6.0nm,0.9s
YAK                               pmax   pmax
      comp=Z,13nm,0.9s,mb5.0
YAK                               smax
      comp=N,2µm,17.1s
YAK                               smax
      comp=Z,774nm,18.8s
YAK                               smax
      comp=E,748nm,19.2s
YAK                               MLR    MLR
      comp=N,7µm,16.0s,MS6.1
YAK                               MLR    MLR
      comp=E,7µm,16.0s,MS6.1
YAK                               MLR    MLR
      comp=Z,10µm,16.0s,MS6.1
YAK   Yakutsk           64.61  16⇑ iP    P      06 38 44.3 -2.7
      comp=Z,590nm,1.1s,mb6.5
GAZ   Gaziantep         64.69 310  eP    P      06 38 46.4 -1.5
SOKR  Solikamsk         65.01 339c iP    P      06 38 48.1 -1.5
SOKR                              i SS   SS     06 51 33.6 -8.3
SOKR                              pmax   pmax
      comp=Z,130nm,1.0s,mb5.9
SOKR                              MLR    MLR
      comp=Z,12µm,20.0s,MS6.1
KAHT  Ahir Dag          65.09 311  i P   P      06 38 50.7 +0.2
SOC   Sochi             65.09 318d iP    P      06 38 48.5 -1.9
SOC                               e             06 39 21.9
SOC                               e             06 41 08.3
SOC                               i S    S      06 47 25.3 -3.9
SOC                               e             06 48 40.4
SOC                               eSS    SS     06 51 44.6 +1.1
SOC                               pmax   pmax
      comp=N,20nm,0.8s
SOC                               pmax   pmax
      comp=Z,112nm,0.8s,mb6.0
SOC                               pmax   pmax
      comp=E,36nm,0.9s
SOC                               MLR    MLR
      comp=N,815nm,17.0s,MS5.4
SOC                               MLR    MLR
      comp=E,2µm,17.0s,MS5.4
SOC                               MLR    MLR
      comp=Z,2µm,17.0s,MS5.4
COBT  Iskenderun        65.23 309  i P   P      06 38 51.6 +0.1
MBAR  Mbarara           66.05 268  eP    P      06 38 56.1 -0.9
MBAR                              pmax   pmax
      comp=Z,53nm,1.1s,mb5.5
MBAR  Mbarara           66.05 268  eP    P      06 38 56.1 -0.9
      comp=Z,53nm,1.1s,mb5.5
TOKT  Tokat             66.17 314  eP    P      06 38 53.5 -3.8
BNN   Bunyan            66.23 312  eP    P      06 38 54.2 -3.5
MEST  Erdemli           66.88 309  i P   P      06 39 01.1 -0.9
NIG   Nigde             66.94 311  eP    P      06 38 59.4 -3.0
AVNT  Avonos            66.94 311  i P   P      06 39 01.0 -1.3
ANN   Anapa             67.07 318⇓ iP    P      06 39 00.2 -2.8
ANN                               e             06 41 36.7
ANN                               eS     S      06 47 49.8 -3.5
ANN                               e             06 48 49.5
ANN                               pmax   pmax
      comp=Z,16nm,0.7s,mb5.2
ANN                               pmax   pmax
      comp=Z,1µm,12.8s
ANN                               smax
      comp=N,3µm,16.6s
ANN                               smax
      comp=E,1µm,8.7s
ANN                               MLR    MLR
      comp=N,5µm,22.0s,MS5.8
ANN                               MLR    MLR
      comp=E,4µm,22.0s,MS5.8
ANN                               MLR    MLR
      comp=Z,5µm,22.0s,MS5.7
ANN   Anapa             67.07 318  eP    P      06 39 00.2 -2.8
CSS   Prodhromos        67.11 307  eP    P      06 39 02.6 -0.8
      comp=Z,217nm,1.4s,mb6.0
IKL   Isikli            67.15 309  eP    P      06 38 58.7 -5.0
CORM  Corum             67.52 313  eP    P      06 39 02.9 -3.1
CTKT  Corum             67.53 313  i P   P      06 39 05.0 -1.0
CDAG  Cicekdag          67.55 312  i P   P      06 39 05.5 -0.6
BOYT  Boyabat           67.69 314  i P   P      06 39 05.9 -1.1
KAMT  Kaman             67.96 312  eP    P      06 39 07.0 -1.7
BRTR  Keskin Array B    68.12 312  P     P      06 39 08.4 -1.3
      comp=Z,27nm,0.7s,mb5.4,baz=129,slow=6.9,SNR=115
TOS   Tosya             68.21 314  eP    P      06 39 08.3 -2.0
HDMB  Hadim             68.27 309  eP    P      06 39 08.3 -2.4
CANT  Cankiri           68.38 313  eP    P      06 39 05.5 -5.8
ELDT  Eldivan           68.49 313  i P   P      06 39 11.0 -1.0
VRSR  Storozhevoye      68.49 325⇑ iP    P      06 39 10.0 -1.8
VRSR                              e             06 41 42.1
VRSR                              eS     S      06 48 06.8 -3.4
VRSR                              eSS    SS     06 52 28.8 -7.1
VRSR                              pmax   pmax
      comp=Z,40nm,0.8s,mb5.5
VRSR                              pmax   pmax
      comp=N,10.0nm,1.0s
VRSR                              pmax   pmax
      comp=E,20nm,0.6s
VRSR                              smax
      comp=Z,2.0nm,0.4s
VRSR                              smax
      comp=N,20nm,0.8s
VRSR                              smax
      comp=E,10.0nm,0.7s
VRSR                              MLR    MLR
      comp=Z,470nm,18.0s
VRSR                              MLR    MLR
      comp=N,360nm,20.0s
VRSR                              MLR    MLR
      comp=E,250nm,21.0s
MIR   Mirnyy            68.63 182  eP    P      06 39 14.0 +1.6
MIR                               eS     S      06 48 13.0 +1.4
MIR                               pmax   pmax
      comp=Z,1µm,7.0s
MIR                               smax
      comp=N,980nm,14.0s
VOR   Voronezh          68.71 326  eP    P      06 39 12.0 -1.1
VOR                               e*PP   pP     06 39 20.0 -2.5
VOR                               eS     S      06 48 12.0 -0.8
VOR                               pmax   pmax
      comp=Z,200nm,1.8s,mb5.8
VOR                               pmax   pmax
      comp=N,140nm,1.4s
VOR                               pmax   pmax
      comp=E,100nm,1.4s
VOR                               smax
      comp=N,200nm,1.8s
ANTO  Ankara            68.78 312  eP    P      06 39 07.7 -6.1
ANTO  Ankara            68.78 312  P     P      06 39 13.0 -0.8
ANTO                              S      S      06 48 13.1 -0.8
CASY  Casey             69.02 174⇓ iP    P      06 39 14.7 -0.1
KIZT  Kizilcal          69.21 311  eP    P      06 39 14.6 -1.9
SAFT  Safranbolu        69.23 314  eP    P      06 39 12.0 -4.6
SKR   Severo-Kuril's    69.33  36  eP    P      06 39 14.0 -3.0
SKR                               e      pP     06 39 22.5 -3.8
SKR                               e             06 39 36.0
SKR                               e             06 41 54.0
SKR                               ePPP   PPP    06 43 30.0 -1.0
SKR                               eS     S      06 48 26.0 +5.9
SKR                               ePS    PS     06 49 02.0  +12
SKR                               e             06 49 04.0
SKR                               pmax   pmax
      comp=N,180nm,1.0s
SKR                               pmax   pmax
      comp=E,220nm,1.0s
SKR                               pmax   pmax
      comp=Z,400nm,1.0s,mb6.3
SKR                               pmax   pmax
      comp=N,3µm,14.0s
SKR                               pmax   pmax
      comp=E,3µm,14.0s
SKR                               pmax   pmax
      comp=Z,3µm,14.0s
SKR                               smax
      comp=N,8µm,10.0s
SKR                               smax
      comp=E,6µm,10.0s
SKR                               MLR    MLR
      comp=N,9µm,18.0s
SKR                               MLR    MLR
      comp=Z,8µm,18.0s,MS6.0
SIM   Simferopol'       69.34 318d iP    P      06 39 16.8 -0.3
SIM                               e      pP     06 39 28.0 +1.5
SIM                               i S    S      06 48 19.0 -1.3
SIM                               pmax   pmax
      comp=Z,56nm,0.8s,mb5.5
SIM   Simferopol'       69.34 318⇑ eP    P      06 39 16.6 -0.5
SGKT  Sivrigoynuk       69.52 313  i P   P      06 39 16.7 -1.6
LSZ   Lusaka            69.96 253  P     P      06 39 21.8 +0.4
LSZ                               pmax   pmax
      comp=Z,180nm,1.7s,mb5.7
LSZ   Lusaka            69.96 253  eP    P      06 39 21.3  0.0
      comp=Z,181nm,1.7s,mb5.7
ISP   Isparta           70.00 310  eP    P      06 39 16.3 -5.0
MDU   Mudurnu           70.11 312  eP    P      06 39 19.3 -2.6
TKTP  Tekketepe         70.20 310  i P   P      06 39 21.2 -1.3
ELL   Elmali            70.23 308  eP    P      06 39 19.7 -3.0
AKAS  Kas               70.36 308  i P   P      06 39 23.2 -0.3
HENT  Hendek            70.43 313  i P   P      06 39 22.6 -1.2
MATP  Matopo            70.47 248  LR    LR     07 07 59.4
      comp=Z,10µm,18.0s,MS6.1,baz=89,slow=34
ALT   Altintas          70.59 311  eP    P      06 39 22.8 -2.1
GOLH  Golhisar          70.61 309  i P   P      06 39 25.2 +0.2
MA2   Magadan           70.65  26c iP    P      06 39 25.2 +0.3
MA2                               e             06 42 03.2
MA2                               eS     S      06 48 36.8 +1.3
MA2                               eSS    SS     06 53 00.9 -8.3
MA2                               pmax   pmax
      comp=Z,100nm,1.5s,mb5.5
MA2                               pmax   pmax
      comp=E,40nm,1.3s
MA2                               MLR    MLR
      comp=Z,22µm,22.0s,MS6.4
MA2   Magadan           70.65  26  eP    P      06 39 24.8 -0.1
      comp=Z,82nm,0.8s,mb5.7
FETY  Fethiye           70.85 308  eP    P      06 39 21.9 -4.6
GDZ   Gediz             71.07 311  i P   P      06 39 26.1 -1.8
DNZL  Cakiroluk         71.10 309  i P   P      06 39 28.0  0.0
DALT  Dalyan (Mudla)    71.23 308  eP    P      06 39 22.4 -6.4
MOS   Moscow            71.26 329α iP    P      06 39 28.5 -0.1
MOS                               e      pP     06 39 39.3 +1.3
MOS                               e             06 39 49.0
MOS                               e             06 42 07.7
MOS                               ePPP   PPP    06 43 47.9 -2.1
MOS                               eS     S      06 48 41.1 -1.5
MOS                               ePS    PS     06 49 03.1  -12
MOS                               e             06 49 26.8
MOS                               eSSS   SSS    06 56 28.4 +2.8
MOS                               pmax   pmax
      comp=Z,165nm,0.7s,mb6.1
MOS                               MLR    MLR
      comp=Z,17µm,21.7s,MS6.3
MOS                               MLR    MLR
      comp=N,13µm,20.7s,MS6.2
MOS                               MLR    MLR
      comp=E,9µm,22.2s,MS6.2
HRT   Hereke            71.33 312  eP    P      06 39 28.0 -1.4
YLV   Yalova            71.49 312  eP    P      06 39 25.7 -4.6
ARG   Arkhangelos       71.53 307  eP    P      06 39 30.0 -0.6
OBN   Obninsk           71.55 328c iP    P      06 39 29.6 -0.8
OBN                               e      pP     06 39 37.4 -2.4
OBN                               i S    S      06 48 42.7 -3.3
OBN                               pmax   pmax
      comp=Z,132nm,1.3s,mb5.7
OBN                               MLR    MLR
      comp=Z,8µm,22.0s,MS5.9
OBN   Obninsk           71.55 328  eP    P      06 39 29.5 -0.9
      comp=Z,888nm,1.8s,mb6.4
ULDT  Uludag            71.57 312  i P   P      06 39 29.9 -0.9
MANT  Manisa            71.65 310  i P   P      06 39 30.3 -0.9
PET   Petropavlovsk     71.68  34c iP    P      06 39 31.1 -0.1
PET                               ePPP   PPP    06 43 53.3 -0.5
PET                               i S    S      06 48 51.4 +3.9
PET                               ePPS   PPS    06 49 30.7 -3.4
PET                               eSS    SS     06 53 26.2 +1.1
PET                               pmax   pmax
      comp=Z,161nm,1.0s,mb5.9
PET                               pmax   pmax
      comp=Z,3µm,18.1s
PET                               pmax   pmax
      comp=Z,2µm,17.0s
PET                               pmax   pmax
      comp=Z,1µm,19.9s
PET                               pmax   pmax
      comp=Z,800nm,18.0s
PET                               pmax   pmax
      comp=Z,900nm,18.4s
PET                               pmax   pmax
      comp=Z,900nm,13.9s
PET                               smax
      comp=E,3µm,11.8s
PET                               smax
      comp=N,3µm,11.2s
PET                               smax
      comp=E,4µm,21.8s
PET                               smax
      comp=N,2µm,13.1s
PET                               MLR    MLR
      comp=Z,10µm,18.0s,MS6.1
PET                               MLR    MLR
      comp=Z,8µm,18.0s
PET   Petropavlovsk     71.68  34  eP    P      06 39 30.9 -0.2
      comp=Z,223nm,1.3s,mb5.9
BADT  Buyukada          71.75 312  eP    P      06 39 29.3 -2.5
NOUC  Port Laguerre     71.97 114  eP    P      06 39 33.1 -0.4
MLSB  Milas             72.01 308  eP    P      06 39 27.1 -6.3
KARP  Karpathos         72.17 307  eP    P      06 39 34.0 -0.4
BDRM  Kayabasi          72.23 308  i P   P      06 39 33.4 -1.4
TIXI  Tiksi             72.31  10  eP    P      06 39 29.5 -5.1
TIXI                              e             06 42 10.9
TIXI                              eS     S      06 48 49.2 -5.2
TIXI                              eSS    SS     06 53 33.3 -1.2
TIXI                              eSSS   SSS    06 56 47.0 +3.2
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TIXI                           pmax   pmax
      comp=Z,153nm,1.4s,mb5.7
TIXI                           MLR    MLR
      comp=Z,8µm,15.0s,MS6.1
TIXI                           MLR    MLR
      comp=N,6µm,16.0s,MS6.0
TIXI                           MLR    MLR
      comp=E,2µm,13.0s,MS6.0
TIXI  Tiksi          72.31  10⇑iP     P      06 39 33.5 -1.1
BTOK  Tokmak         72.32 311 i P    P      06 39 34.4 -0.8
BODT  Bodrum         72.33 308 eP     P      06 39 32.8 -2.5
BALB  Balikesir      72.41 311 eP     P      06 39 32.3 -3.5
BNT   Bandirma       72.53 312 eP     P      06 39 32.0 -4.5
KDAG  Bornova        72.62 310 i P    P      06 39 36.1 -1.0
IZM   Izmir          72.62 310 eP     P      06 39 35.8 -1.4
SMG   Samos          72.82 309 eP     P      06 39 38.0 -0.3
TLCR                 73.00 317⇓iP     P      06 39 39.4 +0.2
PSN   Preselentsi    73.08 315 P      P      06 39 39.2 -0.5
TIRR  Tirgusor       73.10 316⇑iP     P      06 39 39.0 -0.8
URLA  Izmir          73.13 309 i P    P      06 39 39.4 -0.7
XRY   Khrisi         73.24 306 eP     P      06 39 39.0 -1.8
AYVA  Ayvalik        73.24 310 i P    P      06 39 40.6 -0.1
NPS   Neapolis       73.37 306 eP     P      06 39 41.5  0.0
KIS   Kishinev       73.46 319 eP     P      06 39 39.0 -2.8
KIS                            e             06 42 26.0
KIS                            ePPP   PPP    06 44 12.0 +0.6
KIS                            eS     S      06 49 04.0 -3.9
KIS                            pmax   pmax
      comp=Z,1µm,13.0s
KIS                            pmax   pmax
      comp=Z,1µm,16.0s
KIS                            MLR    MLR
      comp=Z,5µm,21.0s,MS5.8
KIS                            MLR    MLR
      comp=N,2µm,18.0s,MS5.7
KIS                            MLR    MLR
      comp=E,4µm,20.0s,MS5.7
CFR   Carcaliu       73.47 317⇓iP     P      06 39 41.5 -0.4
HARR  Harsova        73.49 316⇓iP     P      06 39 41.8 -0.3
PRD   Provadia       73.53 314 eP     P      06 39 42.0 -0.3
PRK   Paraskevi      73.55 310 eP     P      06 39 42.0 -0.5
MAW   Mawson         73.56 193 P      P      06 39 43.1 +1.1
      comp=E,4.4nm,0.6s,baz=47,slow=6.4,SNR=13
MAW                            LR     LR     07 05 26.4
      comp=E,6µm,21.2s,MS5.9,baz=36,slow=30
MAW   Mawson         73.56 193 eP     P      06 39 42.8 +0.8
MAW                            LR     LR     07 05 26.4
LBTB  Lobatse        73.92 243 P      P      06 39 45.6 +0.7
LBTB                           pmax   pmax
      comp=Z,80nm,1.0s,mb5.6
LBTB  Lobatse        73.92 243 LR     LR     07 06 57.4
      comp=Z,17µm,20.5s,MS6.3,baz=86,slow=32
LBTB  Lobatse        73.92 243 eP     P      06 39 44.9 +0.1
      comp=Z,80nm,1.0s,mb5.6
JMB   Yambol         73.95 314 eP     P      06 39 44.5 -0.3
IDI   Anoyia         73.96 306 P      P      06 39 44.5 -0.5
      comp=Z,36nm,0.7s,mb5.4,baz=92,slow=7.3,SNR=29
IDI                            LR     LR     07 12 44.5
      comp=Z,3µm,20.7s,MS5.6,baz=89,slow=36
ALN   Alexandroupoli 74.03 312 eP     P      06 39 44.7 -0.6
AKASG Malin Array Be 74.21 322 P      P      06 39 44.5 -1.6
      comp=Z,31nm,0.7s,mb5.3,baz=91,slow=4.6,SNR=60
VAM   Vamos          74.53 306 eP     P      06 39 48.0 -0.3
GVD   Gavdhos        74.54 305 P      P      06 39 47.6 -0.7
      comp=Z,42nm,0.8s,mb5.4
ISR   Istrita        74.55 316⇑iP     P      06 39 49.6 +1.4
ISR   Istrita        74.55 316⇑iP     P      06 39 49.5 +1.3
SZH   Strazhica      74.59 314 eP     P      06 39 48.0 -0.4
VRI   Vrincioaia     74.59 317⇑iP     P      06 39 48.6 +0.2
BUC1  Bucharest      74.74 315 P      pP     06 39 58.2 -0.5
BOSA  Boshof         74.87 240 P      P      06 39 50.2 -0.2
      comp=Z,8.0nm,0.6s,mb4.8,baz=90,slow=4.5,SNR=23
BOSA                           LR     LR     07 09 30.7
      comp=Z,10µm,19.1s,MS6.2,baz=61,slow=33
BOSA  Boshof         74.87 240 eP     P      06 39 50.3 -0.1
      comp=Z,137nm,1.6s,mb5.6
PVL   Pavlikeni      75.01 314 eP     pP     06 39 58.5 -1.8
MLR   Muntele Rosu   75.04 317 P      P      06 39 51.0  0.0
      comp=Z,29nm,0.8s,mb5.3,baz=102,slow=1.3,SNR=67
MLR   Muntele Rosu   75.04 317⇑iP     P      06 39 51.1 +0.1
RZN   Rozhen         75.17 313 P      P      06 39 51.0 -0.8
DRV   Dumont d’Urvil 75.22 164 P      pP     06 39 59.0 -2.0
DRV                            S      S      06 49 28.0 +0.9
DRV                            SS     SS     06 54 08.0  -11
DRV                            L             06 59 00.0
MTUR  Matau          75.60 316 P      P      06 39 54.0 -0.2
PAIG  Paliouri       75.64 311 eP     P      06 39 53.8 -0.8
VLI   Veliai         75.73 307 eP     P      06 39 53.1 -2.0
BURAR Bucovina Array 75.99 319⇑iP     P      06 39 57.0 +0.6
BURAR Bucovina Array 75.99 319⇑iP     P      06 39 57.0 +0.7
SOH   Sokhos         76.03 311 eP     P      06 39 55.9 -0.8
MNK   Minsk          76.09 326 eP     P      06 39 54.0 -2.7
KKB   Krupnik        76.40 312 P      P      06 39 57.2 -1.6
PUL   Pulkovo        76.42 331 eP     P      06 39 58.7 +0.2
PUL                            eS     S      06 49 40.2 -0.1
PUL                            MLR    MLR
      comp=Z,10µm,21.0s,MS6.1
PUL                            MLR    MLR
      comp=N,6µm,23.0s,MS6.1
PUL                            MLR    MLR
      comp=E,9µm,20.0s,MS6.1
PUL   Pulkovo        76.42 331 i P    P      06 39 58.0 -0.5
VTS   Vitosha        76.43 313 P      P      06 39 58.0 -0.9
VTS   Vitosha        76.43 313 P      P      06 39 58.3 -0.6
AGG   Agios Georgios 76.53 310 eP     P      06 39 57.9 -1.7
LIT   Litokhoron     76.57 311 eP     P      06 39 58.1 -1.6
ITM   Ithomi         76.60 308 eP     P      06 39 58.6 -1.4
VAY   Valandovo      76.69 312⇑iP     P      06 39 59.1 -1.3
GRG   Griva          76.76 311 eP     P      06 39 59.7 -1.2
EVR   Evrytania      76.92 309 eP     P      06 40 02.1 +0.3
ZAPS  Zavoj/Pirot    76.97 314⇑iP     P      06 40 00.9 -1.0
LVV   L’vov          77.22 321 eP     P      06 40 02.5 -0.7
LVV                            e      pP     06 40 11.1 -1.6
LVV                            e             06 42 57.9
LVV                            e             06 44 48.3
LVV                            eS     S      06 49 44.9 -4.4
LVV                            e             06 58 08.7
MEV   Metsovon       77.48 310 eP     P      06 40 03.8 -1.0
DRGR                 77.50 317 P      P      06 40 05.3 +0.5
FNA   Florina        77.51 311 eP     P      06 40 03.4 -1.6
BOLS  Boljevac       77.53 314⇑iP     P      06 40 04.1 -0.9
SKO   Skopje         77.63 312 i P    P      06 40 04.0 -1.6
LVZ   Lovozero       77.76 340 i P    P      06 40 05.6 -0.2
LVZ                            e             06 43 02.1
LVZ                            eS     S      06 49 52.4 -2.3
LVZ                            pmax   pmax
      comp=Z,40nm,0.7s,mb5.5
LVZ                            pmax   pmax
      comp=E,6.0nm,0.5s
LVZ                            smax
      comp=N,590nm,3.5s
LVZ                            MLR    MLR
      comp=Z,10µm,21.0s,MS6.1
LVZ                            MLR    MLR
      comp=N,8µm,18.0s,MS6.3
LVZ                            MLR    MLR
      comp=E,12µm,20.0s,MS6.3
VLS   Valsamata      77.78 308 eP     P      06 40 05.5 -1.0
VSU   Vasula         77.78 330c iP    P      06 40 05.7 -0.3
VSU   Vasula         77.78 330⇑iP     P      06 40 05.8 -0.2
LKD   Levkas         77.79 309 eP     P      06 40 06.0 -0.6
KWP   Kalwaria       78.03 320 eP     P      06 40 07.9 +0.3
KWP                            e*PP   pP     06 40 18.2 +1.1
KWP                            eS     S      06 49 58.5 +0.5
KWP                            pmax   pmax
      comp=Z,300nm,2.0s,mb5.9
KWP                            MLR    MLR
      comp=Z,4µm,24.3s,MS5.6
KWP   Kalwaria       78.03 320 eP     P      06 40 07.9 +0.3
      comp=Z,300nm,2.0s,mb5.9
KWP                            epP    pP     06 40 18.2 +1.1
KWP                            eS     S      06 49 58.5 +0.5
KWP                            MLR    MLR    07 17 27.5
      comp=Z,4µm,24.3s,MS5.6
APA   Apatity        78.05 339⇓iP     P      06 40 07.5 +0.1
APA                            ePPP   PPP    06 45 00.0 +5.1
APA                            eS     S      06 49 49.0 -8.9
APA                            i PS          06 50 17.0
APA                            i             06 50 51.0
APA                            eSS    SS     06 55 05.0 +2.5
APA                            pmax   pmax
      comp=Z,97nm,1.2s,mb5.6
APA                            pmax   pmax
      comp=Z,2µm,17.0s
BZS   Buzias         78.06 316⇑iP     P      06 40 07.8  0.0
UZH   Uzhgorod       78.11 319 eP     P      06 40 08.5 +0.4
UZH                            i S    S      06 49 57.4 -1.5
SVIS  Svilajnac      78.13 315⇑iP     P      06 40 07.2 -1.1
KOLS  Kolonicke sedl 78.18 320 i P    P      06 40 09.5 +1.1
GRUS  Gruza          78.43 314⇓iP     P      06 40 09.8 -0.1
SUW   Suwalki        78.61 325 eP     P      06 40 10.2 -0.5
      comp=Z,600nm,2.2s,mb6.1
SUW                            epP    pP     06 40 18.5 -1.7
SUW                            eS     S      06 50 04.1  0.0
SUW                            MLR    MLR    07 21 09.8
      comp=Z,4µm,21.7s,MS5.8
BEO   Belgrade       78.75 315⇑iP     P      06 40 07.5 -4.2
FINES FINESS Array B 78.92 332 P      P      06 40 12.2 -0.1
      comp=Z,34nm,0.6s,mb5.4,baz=108,slow=6.0,SNR=119
FINES                          LR     LR     07 19 54.3
      comp=Z,9µm,21.8s,MS6.1,baz=301,slow=39
FINES FINESS Array B 78.92 332 P      P      06 40 12.2 -0.1
FINES                          LR     LR     07 19 54.3
DIVS  Divcibare      78.98 314⇓iP     P      06 40 11.8 -1.1
KAF   Kangasniemi    79.01 333 ep     P      06 40 13.1 +0.4
      comp=Z,34nm,0.8s,mb5.3,baz=103,slow=5.0
KAF   Kangasniemi    79.01 333 eP     P      06 40 13.1 +0.4
KAF                            pmax   pmax
      comp=Z,34nm,0.8s,mb5.3
KECS  Kecovo         79.27 319 i P    P      06 40 14.8 +0.4
SUR   Sutherland     79.32 237 LR     LR     07 08 35.5
      comp=Z,14µm,21.7s,MS6.3,baz=84,slow=31
BBLS  Bajina Basta - 79.36 314⇑iP     P      06 40 14.3 -0.8
NIE   Niedzica       79.53 320⇑eP     P      06 40 16.2 +0.4
PSZ   Piszkesteto    79.58 318 eP     P      06 40 15.8 -0.3
PSZ                            pmax   pmax
      comp=Z,419nm,1.7s,mb6.1
PSZ   Piszkesteto    79.58 318 eP     P      06 40 15.8 -0.3
      comp=Z,418nm,1.7s,mb6.1
PSZ   Piszkesteto    79.58 318⇑iP     P      06 40 16.4 +0.3
OJC   Ojcow          79.98 321⇑iP     P      06 40 18.3 +0.1
OJC                            i S    S      06 50 18.3 -0.3
OJC   Ojcow          79.98 321⇑iP     P      06 40 18.3 +0.1
OJC                            ePP    PP     06 43 29.5 +7.9
OJC                            i S    S      06 50 18.3 -0.3
OJC                            MLR    MLR    07 20 47.6
      comp=Z,5µm,21.0s,MS5.8
FX1   Attu Island--F 80.08  37 eP     P      06 40 19.5 +0.8
BUD   Budapest       80.10 318 ePcP   PcP    06 40 26.1 -0.5
VYHS  Vyhne          80.36 319 i P    P      06 40 20.5 +0.2
VYHS                           i S    S      06 50 22.1 -0.5
VYHS                           i SS   SS     06 55 33.2 -4.2
BILL  Bilibino       80.42  21c iP    P      06 40 20.0 -0.2
BILL                           e      pP     06 40 29.0 -0.7
BILL                           i S    S      06 50 25.7 +2.9
BILL                           pmax   pmax
      comp=Z,114nm,1.8s,mb5.5
BILL                           MLR    MLR
      comp=Z,17µm,18.0s,MS6.4
BILL  Bilibino       80.42  21 eP     P      06 40 19.8 -0.4
      comp=Z,27nm,0.6s,mb5.4
TSUM  Tsumeb         80.49 250 eP     P      06 40 22.8 +1.2
      comp=Z,56nm,1.4s,mb5.3
SMY   Shemya         80.61  37 eP     P      06 40 22.3 +0.8
SMY                            pmax   pmax
      comp=Z,242nm,0.8s,mb6.2
SMY   Shemya         80.61  37 eP     P      06 40 22.3 +0.8
      comp=Z,242nm,0.8s,mb6.2
SRO   Srobarova      80.62 318 eP     P      06 40 22.8 +1.2
KOLL  Kolacno        80.65 319 i P    P      06 40 21.9 +0.1
SYO   Syowa Base     80.79 198 ⇑P     P      06 40 15.0 -7.2
SYO   Syowa Base     80.79 198 ⇑P     P      06 40 20.5 -1.6
SYO   Syowa Base     80.79 198 ⇑PcP   PcP    06 40 29.0 -0.1
SYO   Syowa Base     80.79 198 ⇑pP    pP     06 40 34.2 +2.5
OKC   Ostrava-Krasne 80.98 320⇑iP     P      06 40 23.9 +0.4
OKC                            epP    pP     06 40 31.3 -1.8
OKC                            eSKS   SKS    06 50 29.2  -15
OKC   Ostrava-Krasne 80.98 320⇑iP     P      06 40 23.9 +0.4
OKC                            epP    pP     06 40 31.3 -1.8
OKC                            eS     S      06 50 29.2 +0.2
OKC                            AMS    AMS    07 21 20.0
      comp=Z,4µm,19.6s
RAC   Raciborz       80.98 320 eP     P      06 40 24.5 +1.0
RAC                            ePcP   PcP    06 40 30.9 +0.6
RAC                            eS     S      06 50 31.1 +2.0
RAC                            MLR    MLR    07 24 38.9
      comp=Z,3µm,21.0s,MS5.6
KEV   Kevo           81.03 341 ep     P      06 40 23.5 +0.1
      comp=Z,38nm,0.9s,mb5.3
KEV   Kevo           81.03 341 P      P      06 40 23.3 -0.1
KEV                            pmax   pmax
      comp=Z,50nm,1.0s,mb5.4
MORC  Moravsky Berou 81.36 320 eP     P      06 40 26.0 +0.5
MORC                           pmax   pmax
      comp=Z,263nm,1.8s,mb5.9
MORC  Moravsky Berou 81.36 320 eP     P      06 40 26.0 +0.5
      comp=Z,263nm,1.8s,mb5.9
ARCES ARCESS Array B 81.46 340 P      P      06 40 26.3 +0.6
      comp=Z,20nm,0.6s,mb5.3,baz=96,slow=5.1,SNR=173
ARCES ARCESS Array B 81.46 340 P      P      06 40 26.3 +0.6
ZST   Bratislava     81.47 318 i P    P      06 40 26.9 +0.8
ZST                            i S    S      06 50 32.5 -1.6
KOGS  Kog            81.87 316 eP     P      06 40 28.6 +0.4
VRAC  Vranov         81.92 319 P      P      06 40 29.0 +0.6
VRAC                           pmax   pmax
      comp=Z,5.0nm,0.5s
VRAC  Vranov         81.92 319 P      P      06 40 29.0 +0.6
      comp=Z,4.5nm,0.5s,mb4.7,baz=100,slow=11,SNR=6.9
VRAC  Vranov         81.92 319 P      P      06 40 29.2 +0.8
GKP   Gorka Klasztor 81.98 323 eP     P      06 40 30.0 +1.4
GKP                            LR     LR
      comp=Z,4µm,22.0s,MS5.8
GKP   Gorka Klasztor 81.98 323 eP     P      06 40 30.0 +1.4
GKP                            MLR    MLR    07 26 09.5
      comp=Z,4µm,22.0s,MS5.8
VKA   Vienna         82.00 318⇑iP     P      06 40 30.2 +1.4
VKA                            pmax   pmax
      comp=Z,343nm,2.0s,mb5.9
VKA                            MLR    MLR
      comp=Z,2µm,20.0s,MS5.5
VKA   Vienna         82.00 318⇑iP     P      06 40 30.2 +1.4
      comp=Z,343nm,2.0s,mb5.9
VKA                            LR     LR
      comp=Z,2µm,20.0s,MS5.5
DPC   Dobruska-Polom 82.21 320⇑iP     P      06 40 30.6 +0.7
DPC                            epP    pP     06 40 38.5 -1.0
DPC                            eS     S      06 50 43.2 +1.6
DPC                            AMS    AMS    07 23 00.0
      comp=Z,3µm,20.2s
KSP   Ksiaz          82.28 321⇑eP     P      06 40 30.9 +0.7
KSP                            ePP    pP     06 40 39.1 -0.7
KSP                            ePP    PP     06 43 45.0 +4.0
KSP                            eS     S      06 50 42.5 +0.1
KSP                            LR     LR
      comp=Z,7µm,22.6s,MS6.0
KSP   Ksiaz          82.28 321 eP     P      06 40 31.0 +0.7
KSP                            epP    pP     06 40 41.2 +1.4
KSP                            eS     S      06 50 43.0 +0.6
KSP                            MLR    MLR    07 21 50.9
      comp=Z,6µm,22.6s,MS5.9
UPC   Upice          82.42 321⇑iP     P      06 40 31.7 +0.7
ARSA  Arzberg        82.44 317⇑iP     P      06 40 31.7 +0.6
      comp=Z,251nm,2.3s,mb5.7
LEGS  Legarje        82.47 316 i P    P      06 40 31.7 +0.3
BOJS  Bojanci        82.48 315 eP     P      06 40 31.4  0.0
BOJS                           e      pP     06 40 40.0 -1.0
PERS  Pernice        82.66 317 eP     P      06 40 32.7 +0.4
LJU   Ljubljana      83.03 316 eP     P      06 40 34.7 +0.4
LJU                            e      pP     06 40 43.1 -0.7
LJU                            eS     S      06 50 50.6 +0.5
OBKA  Obir           83.05 316⇑iP     P      06 40 34.6 +0.3
      comp=Z,285nm,2.5s,mb5.9
PRU   Pruhonice      83.31 320⇑iP     P      06 40 36.2 +0.6
PRU                            e             06 50 53.5
PRU                            MLR    MLR
      comp=Z,3µm,20.8s,MS5.7
PRU   Pruhonice      83.31 320⇑iP     P      06 40 36.2 +0.6
PRU                            epP    pP     06 40 42.4 -2.8
PRU                            eS     S      06 50 53.5 +0.6
PRU                            AMS    AMS    07 23 20.0
      comp=Z,3µm,20.8s
MOA   Molln          83.33 318⇑iP     P      06 40 35.9 +0.1
      comp=Z,243nm,3.6s
PVCC  Panska Ves     83.34 320⇑eP     P      06 40 36.4 +0.7
PVCC                           epP    pP     06 40 44.0 -1.3
PVCC                           eS     S      06 50 54.9 +1.8
PVCC                           AMS    AMS    07 26 30.0
      comp=Z,3µm,20.2s
VOY   Vojsko         83.47 316 eP     P      06 40 36.4 -0.1
AQU   L’Aquila       83.61 312 eP     P      06 40 37.8 +0.5
AQU                            pmax   pmax
      comp=Z,141nm,1.0s,mb6.0
AQU   L’Aquila       83.61 312 eP     P      06 40 37.8 +0.4
      comp=Z,141nm,1.0s,mb6.0
TRO   Tromso         83.73 340 eP     P      06 40 36.2 -1.1
TRO                            LR     LR
      comp=Z,7210µm,18.4s
TRO   Tromso         83.73 340 eP     P      06 40 36.3 -1.0
TRO                            ePP    PP     06 43 53.6 +1.5
TRO                            eSKSa         06 50 58.2
TRO                            AMS    AMS    07 21 18.2
      comp=Z,7µm,18.4s,MS6.1
BRG   Berggiesshubel 83.77 321 i P    P      06 40 38.5 +0.6
BRG                            i      pP     06 40 46.9 -0.6
BRG                            i             06 43 59.0
BRG                            i S    S      06 51 01.0 +3.6
BRG                            i PS   PS     06 51 57.0 +2.2
BRG                            pmax   pmax
      comp=Z,260nm,2.0s,mb6.0
BRG                            MLR    MLR
      comp=N,5µm,21.6s,MS5.9
BRG                            MLR    MLR
      comp=E,3µm,21.6s,MS5.9
BRG                            MLR    MLR
      comp=Z,4µm,21.3s,MS5.8
BRG   Berggiesshubel 83.77 321 i P    P      06 40 38.5 +0.6
      comp=Z,260nm,2.0s,mb6.0
BRG                            i      pP     06 40 46.9 -0.6
BRG                            i PP   PP     06 43 59.0 +6.1
BRG                            i             06 44 08.7
BRG                            i S    S      06 51 01.0 +3.6
BRG                            i PS   PS     06 51 57.0 +2.2
BRG                            i SS   SS     06 56 44.0  +16
BRG                            LR     LR
      comp=Z,4µm,21.3s,MS5.8
GEC2  GERESS Array S 83.78 319 eP     P      06 40 38.7 +0.7
GEC2                           eS     S      06 50 59.1 +1.6
GEC2                           pmax   pmax
      comp=Z,267nm,1.8s,mb6.1
GEC2  GERESS Array S 83.78 319 eP     P      06 40 38.7 +0.7
      comp=Z,267nm,1.8s,mb6.1
GEC2                           eS     S      06 50 59.1 +1.6
GERES GERESS Array B 83.78 319 P      P      06 40 38.6 +0.6
      comp=Z,24nm,0.7s,mb5.4,baz=90,slow=4.0,SNR=98
GERES                          LR     LR     07 24 20.1
      comp=Z,2µm,20.6s,MS5.6,baz=281,slow=40
KHC   Kasperske Hory 83.88 319⇑iP     P      06 40 38.8 +0.3
KHC                            e*PP   pP     06 40 46.3 -1.8
KHC                            e             06 50 59.9
KHC                            MLR    MLR
      comp=Z,4µm,20.1s,MS5.8
KHC   Kasperske Hory 83.88 319⇑iP     P      06 40 38.8 +0.3
KHC                            epP    pP     06 40 46.3 -1.8
KHC                            e             06 41 21.0
KHC                            e             06 41 41.5
KHC                            eSKS   SKS    06 50 59.9 -4.0
KHC                            LR     LR
      comp=Z,4µm,20.1s,MS5.8
KHC   Kasperske Hory 83.88 319⇑iP     P      06 40 38.8 +0.3
KHC                            epP    pP     06 40 46.3 -1.8
KHC                            x      x      06 41 21.0
KHC                            x      x      06 41 41.5
KHC                            eS     S      06 50 59.9 +1.4
KHC                            AMS    AMS    07 25 10.0
      comp=Z,4µm,20.1s
KBA   Koelnbreinsper 83.91 317⇑iP     P      06 40 38.5 -0.2
      comp=Z,162nm,2.4s,mb5.7
KBA   Koelnbreinsper 83.91 317⇑iP     P      06 40 38.5 -0.2
KBA                            pmax   pmax
      comp=Z,162nm,2.4s,mb5.7
RUE   Ruedersdorf    83.98 322 eP     P      06 40 39.3 +0.3
      comp=Z,119nm,1.0s,mb6.0
CLL   Collm          84.39 321⇑iP     P      06 40 41.2 +0.2
CLL                            i *PP  pP     06 40 49.3 -1.3
CLL                            eS     S      06 51 04.0 +0.5
CLL                            pmax   pmax
      comp=Z,16nm,1.0s,mb5.1
CLL                            MLR    MLR
      comp=Z,4µm,20.9s,MS5.8
CLL   Collm          84.39 321⇑iP     P      06 40 41.2 +0.2
      comp=Z,16nm,1.0s,mb5.1
CLL                            i pP   pP     06 40 49.3 -1.3
CLL                            eS     S      06 51 04.0 +0.5
CLL                            LR     LR
      comp=Z,4µm,20.9s,MS5.8
CLL   Collm          84.39 321 ⇑P     P      06 40 41.2 +0.2
      comp=Z,logA/T=1.2,mb5.1
CLL                            i *PP  pP     06 40 49.3 -1.3
CLL                            i *SP  sP     06 40 51.9 -1.8
CLL                            ePP    PP     06 44 03.0 +5.2
CLL                            ePPP   PPP    06 45 48.0 -5.2
CLL                            e             06 47 28.0
CLL                            eS     S      06 51 04.0 +0.5
CLL                            e*SS          06 51 19.0
CLL                            ePS    PS     06 52 03.0 +0.7
CLL                            ePPS   PPS    06 52 13.0  -13
CLL                            eSS    SS     06 56 30.0 -6.8
CLL                            eSSS   SSS    06 59 49.0  -15
CLL                            e             07 00 39.0
CLL                            e             07 03 16.0
HFS   Hagfors        84.65 330 P      P      06 40 42.5 +0.4
      comp=Z,13nm,0.9s,mb5.1,baz=117,slow=3.3,SNR=18
NKC   Novy Kostel    84.68 320⇑eP     P      06 40 43.1 +0.6
NKC                            eS     S      06 51 08.9 +2.5
NKC                            AMS    AMS    07 25 50.0
      comp=Z,4µm,20.3s
MOR8  Moi Rana       84.90 336⇑iP     P      06 40 43.0 -0.2
      comp=Z,165nm,1.9s,mb5.8
MOR8  Moi Rana       84.90 336⇑iP     P      06 40 43.0 -0.2
MOR8                           AMb    AMB    06 40 57.9
      comp=Z,165nm,1.9s,mb5.8
COP   Copenhagen     84.99 326 i P    P      06 40 46.1 +2.2
COP                            i             06 46 00.4
COP                            i S    S      06 51 12.0 +2.6
COP                            pmax   pmax
      comp=Z,33nm,1.1s,mb5.4
COP                            MLR    MLR
      comp=Z,2µm,19.0s,MS5.6
COP   Copenhagen     84.99 326 i P    P      06 40 46.1 +2.2
      comp=Z,33nm,1.1s,mb5.4
COP                            e             06 43 54.8
COP                            i             06 46 00.4
COP                            i S    S      06 51 12.0 +2.6
      comp=Z,2µm,19.0s
WTTA  Wattenberg     85.08 317⇑iP     P      06 40 44.5 -0.1
      comp=Z,215nm,2.0s,mb5.9
WTTA  Wattenberg     85.08 317⇑iP     P      06 40 44.5 -0.1
WTTA                           pmax   pmax
      comp=Z,215nm,2.0s,mb5.9
WATA  Walderalm      85.12 317⇑iP     P      06 40 44.5 -0.3
      comp=Z,164nm,1.9s,mb5.8
WATA  Walderalm      85.12 317⇑iP     P      06 40 44.5 -0.3
WATA                           pmax   pmax
      comp=Z,164nm,1.9s,mb5.8
MOX   Moxa           85.23 320 eP     P      06 40 45.2  0.0
MOX                            pmax   pmax
      comp=Z,148nm,2.0s,mb5.8
MOX                            MLR    MLR
      comp=Z,3µm,21.0s,MS5.6
MOX   Moxa           85.23 320 eP     P      06 40 45.2  0.0
      comp=Z,148nm,2.0s,mb5.8
MOX                            eS     S      06 51 15.0 +3.2
MOX                            LR     LR
      comp=Z,3µm,21.0s,MS5.6
MOX   Moxa           85.23 320 i P    P      06 40 45.2  0.0
      comp=Z,logA/T=1.9,mb5.8
MOX                            S      S      06 51 15.0 +3.2
MOX                            L             07 23 38.0
MELSS Ber_school_2   85.25 337 eP     P      06 40 45.9 +0.9
FUR   Furstenfeldbru 85.36 318 eP     P      06 40 45.9  0.0
FUR                            eS     S      06 51 13.5 +0.4
FUR                            pmax   pmax
      comp=Z,40nm,1.0s,mb5.5
FUR   Furstenfeldbru 85.36 318 eP     P      06 40 45.9  0.0
      comp=Z,40nm,1.0s,mb5.5
FUR                            eS     S      06 51 13.5 +0.4
SQTA  Sankt Quirin   85.37 317⇓iP     P      06 40 46.0  0.0
      comp=Z,85nm,1.7s,mb5.6
SQTA  Sankt Quirin   85.37 317⇓iP     P      06 40 46.0  0.0
SQTA                           pmax   pmax
      comp=Z,85nm,1.7s,mb5.6
```

GRA1	**Grafenberg Arr**	**85.44**	**319**	*e*P	**P**	**06 40 47.2**	**+0.9**
	comp=Z,70nm,1.0s,mb5.8						
GRA1				*e*S	S	06 51 16.6	+2.7
GRA1				LR	LR		
	comp=Z,3µm,21.8s,MS5.7						
GRF	**Grafenberg Arr**	**85.44**	**319**	*e*P	**P**	**06 40 47.2**	**+0.9**
GRF				*e*S	S	06 51 16.6	+2.7
GRF				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.8						
GRF				MLR	MLR		
	comp=Z,3µm,21.8s,MS5.7						
GRF	**Grafenberg Arr**	**85.44**	**319**	*e*P	**P**	**06 40 47.2**	**+0.9**
	comp=Z,70nm,1.0s,mb5.8						
GRF				*e*S	S	06 51 16.6	+2.7
GRF				LR	LR		
	comp=Z,3µm,21.8s,MS5.7						
LOF	**Lofoten**	**85.45**	**338**	*e*P	**P**	**06 40 48.4**	**+2.5**
	comp=Z,219nm,1.6s,mb6.0						
LOF	**Lofoten**	**85.45**	**338**	*e*P	**P**	**06 40 48.4**	**+2.5**
LOF				AMb	AMB	06 41 01.0	
	comp=Z,219nm,1.6s,mb6.0						
MOTA	**Moosalm**	**85.45**	**317**	⇓*i*P	**P**	**06 40 46.4**	**0.0**
	comp=Z,41nm,1.1s,mb5.5						
MOTA	**Moosalm**	**85.45**	**317**	⇓*i*P	**P**	**06 40 46.4**	**0.0**
MOTA				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.5						
NSS	**Namsos**	**85.79**	**334**	*e*P	**P**	**06 40 47.2**	**-0.5**
NSS	**Namsos**	**85.79**	**334**	*e*P	**P**	**06 40 49.6**	**+1.9**
NSS				*e*SKSa		06 51 15.3	
NSS				AMS	AMS	07 23 19.6	
	comp=Z,6µm,22.7s,MS5.9						
KIWB	**Kanaga Island**	**85.88**	**38**	P	**P**	**06 40 47.8**	**-0.7**
NB2	**NORSAR Subarra**	**85.93**	**331**	P	**P**	**06 40 48.7**	**+0.2**
	comp=Z,237nm,2.0s,mb6.1,baz=97,slow=5.0						
NB2	**NORSAR Subarra**	**85.93**	**331**	P	**P**	**06 40 48.7**	**+0.2**
	baz=97,slow=5.1						
NOA	**NORSAR Array B**	**85.93**	**331**	P	**P**	**06 40 48.6**	**+0.1**
	comp=Z,14nm,0.7s,mb5.3,baz=94,slow=5.1,SNR=48						
NOA				PP	PP	06 44 10.3	+0.3
	comp=Z,5.8nm,0.8s,baz=95,slow=7.9,SNR=4.6						
NOA				LR	LR	07 23 43.7	
	comp=Z,7µm,20.9s,MS6.1,baz=70,slow=39						
NOA	**NORSAR Array B**	**85.93**	**331**	P	**P**	**06 40 48.6**	**+0.1**
NOA				PP	PP	06 44 10.3	+0.3
NOA				LR	LR	07 23 43.7	
CLZ	**Clausthal**	**86.05**	**322**	*e*P	**P**	**06 40 49.9**	**+0.6**
CLZ				*e*S	S	06 51 19.9	+0.2
CLZ				pmax	pmax		
	comp=Z,63nm,1.2s,mb5.7						
CLZ	**Clausthal**	**86.05**	**322**	*e*P	**P**	**06 40 49.9**	**+0.6**
	comp=Z,63nm,1.2s,mb5.7						
CLZ				*e*S	S	06 51 19.9	+0.2
NAO01	**NORSAR Array S**	**86.08**	**331**	*e*P	**P**	**06 40 49.2**	**-0.1**
	comp=Z,30nm,0.9s,mb5.5						
BSEG	**Bad Segeberg**	**86.14**	**324**	*e*P	**P**	**06 40 50.6**	**+0.9**
BSEG				*e*S	S	06 51 21.6	+1.1
BSEG				pmax	pmax		
	comp=Z,82nm,1.2s,mb5.8						
DAVOX	**Davos**	**86.27**	**317**	P	**P**	**06 40 51.4**	**+0.9**
	comp=Z,60nm,0.6s,mb6.0,baz=123,slow=5.9,SNR=65						
DAVA	**Damuels**	**86.28**	**317**	⇑*i*P	**P**	**06 40 51.0**	**+0.5**
	comp=Z,187nm,1.9s,mb6.0						
VSL	**Villasalto**	**86.59**	**309**	*e*P	**P**	**06 40 52.5**	**+0.2**
	comp=Z,56nm,1.1s,mb5.7						
STU	**Stuttgart**	**86.75**	**319**	*e*P	**P**	**06 40 53.1**	**+0.3**
STU				pmax	pmax		
	comp=Z,32nm,0.6s,mb5.7						
STU	**Stuttgart**	**86.75**	**319**	*e*P	**P**	**06 40 53.1**	**+0.2**
	comp=Z,32nm,0.6s,mb5.7						
MUD	**Monsted U’grnd**	**86.85**	**326**	⇑*i*P	**P**	**06 40 54.4**	**+1.3**
MUD				*e*		06 44 23.3	
MUD				*i*		06 46 16.9	
MUD				*e*S	S	06 51 32.5	+5.2
MUD				*i*		06 52 42.5	
MUD				pmax	pmax		
	comp=Z,76nm,1.3s,mb5.8						
MUD				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.9						
MUD	**Monsted U’grnd**	**86.85**	**326**	⇑*i*P	**P**	**06 40 54.4**	**+1.3**
	comp=Z,76nm,1.3s,mb5.8						
MUD				*e*		06 44 23.3	
MUD				*i*		06 46 16.9	
MUD				*e*S	S	06 51 32.5	+5.2
MUD				*i*		06 52 42.5	
	comp=Z,5µm,19.0s						
KBS	**Kingsbay**	**86.87**	**349**	P	**P**	**06 40 52.7**	**-0.1**
KBS	**Kingsbay**	**86.87**	**349**	*e*P	**P**	**06 40 52.6**	**-0.2**
KBS				LR	LR		
	comp=Z,6624µm,13.5s						
KBS	**Kingsbay**	**86.87**	**349**	*e*P	**P**	**06 40 52.4**	**-0.4**
KBS				*e*PP	PP	06 44 18.6	+0.6
KBS				*e*SKSa		06 51 18.1	
KBS				AMS	AMS	07 25 40.2	
	comp=Z,7µm,13.5s,MS6.2						
VNDA	**Vanda**	**86.87**	**169**	P	**P**	**06 40 53.0**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=305,slow=4.7,SNR=18						
VNDA				S	S	06 51 15.7	-11
	comp=Z,0.4nm,0.6s,baz=10,slow=3.6,SNR=2.5						
VNDA				LR	LR	07 16 55.6	
	comp=Z,8µm,19.0s,MS6.2,baz=306,slow=34						
VNDA	**Vanda**	**86.87**	**169**	*e*P	**P**	**06 40 52.1**	**-0.8**
	comp=Z,29nm,1.1s,mb5.4						
PGF	**Pioggiola**	**86.87**	**312**	*e*P	**P**	**06 40 53.8**	**+0.2**
	comp=Z,50nm,0.9s,mb5.5						
PGF	**Pioggiola**	**86.87**	**312**	*e*P	**P**	**06 40 53.8**	**+0.2**
PGF				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.4						
TNS	**Taunus Mts**	**87.24**	**320**	*e*P	**P**	**06 40 55.9**	**+0.7**
TNS				*e*S	S	06 51 33.7	+2.5
TNS				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.7						
TNS	**Taunus Mts**	**87.24**	**320**	*e*P	**P**	**06 40 55.9**	**+0.7**
	comp=Z,40nm,0.9s,mb5.7						
TNS				*e*S	S	06 51 33.7	+2.5
BFO	**Black Forest**	**87.33**	**318**	*e*P	**P**	**06 40 55.5**	**-0.1**
BFO				*e*S	S	06 51 32.8	+0.8
BFO				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.4						
BFO	**Black Forest**	**87.33**	**318**	*e*P	**P**	**06 40 55.5**	**-0.1**
	comp=Z,24nm,0.9s,mb5.4						
BFO				*e*S	S	06 51 32.8	+0.8
MOL	**Molde**	**87.71**	**332**	*e*P	**P**	**06 40 58.1**	**+1.0**
	comp=Z,203nm,1.7s,mb6.1						
MOL	**Molde**	**87.71**	**332**	*e*P	**P**	**06 40 58.1**	**+1.0**
MOL				*e*sP	sP	06 41 08.5	-1.3
MOL				AMb	AMB	06 41 18.7	
	comp=Z,203nm,1.7s,mb6.1						
SBA	**Scott Base**	**87.97**	**169**	*e*P	**P**	**06 40 58.9**	**+0.8**
SBA				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.6						
SBA	**Scott Base**	**87.97**	**169**	*e*P	**P**	**06 40 58.9**	**+0.8**
	comp=Z,49nm,1.2s,mb5.6						
SBF	**Sospel**	**88.00**	**314**	*e*P	**P**	**06 40 59.2**	**+0.2**
	comp=Z,144nm,0.9s,mb5.9						
SBF	**Sospel**	**88.00**	**314**	*e*P	**P**	**06 40 59.2**	**+0.2**
SBF				pmax	pmax		
	comp=Z,72nm,0.9s,mb5.9						
CDF	**Champ du Feu**	**88.03**	**318**	*e*P	**P**	**06 40 58.9**	**-0.1**
	comp=Z,31nm,0.8s,mb5.3						
WTSB	**Winterswijk**	**88.26**	**322**	⇑*e*P	**P**	**06 41 00.9**	**+0.9**
	comp=Z,53nm,0.9s,mb5.8						
WIT	**Witteveen**	**88.32**	**323**	*e*P	pP	06 41 08.0	-2.0
LPG	**La Plagne**	**88.45**	**315**	*e*P	**P**	**06 41 01.7**	**+0.6**
	comp=Z,37nm,0.7s,mb5.4						
LPG	**La Plagne**	**88.45**	**315**	*e*P	**P**	**06 41 01.7**	**+0.6**
LPG				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.4						
MBDF	**Montbardon**	**88.46**	**315**	*e*P	**P**	**06 41 01.1**	**0.0**
	comp=Z,15nm,0.7s,mb5.0						
MBDF	**Montbardon**	**88.46**	**315**	*e*P	**P**	**06 41 01.1**	**0.0**
MBDF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.1						
LPL	**La Plagne**	**88.47**	**315**	*e*P	**P**	**06 41 01.7**	**+0.5**
	comp=Z,128nm,1.1s,mb5.8						
LPL	**La Plagne**	**88.47**	**315**	*e*P	**P**	**06 41 01.7**	**+0.5**
LPL				pmax	pmax		
	comp=Z,64nm,1.1s,mb5.8						
BNI	**Bardonecchia**	**88.52**	**315**	*e*P	**P**	**06 41 02.0**	**+0.6**
BNI				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.6						
BNI	**Bardonecchia**	**88.52**	**315**	*e*P	**P**	**06 41 02.0**	**+0.6**
	comp=Z,27nm,0.9s,mb5.6						
FRF	**La Foret Royal**	**88.58**	**313**	*e*P	**P**	**06 41 02.0**	**+0.2**
HAU	**Haudompre**	**88.66**	**318**	*e*P	**P**	**06 41 02.0**	**0.0**
	comp=Z,58nm,0.8s,mb5.7						
HAU				*e*R			
	comp=Z,5µm,22.7s						
HAU	**Haudompre**	**88.66**	**318**	*e*P	**P**	**06 41 02.0**	**0.0**
HAU				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.7						
HAU				MLR	MLR		
	comp=Z,5µm,22.7s,MS5.8						
LMR	**La Mourre**	**88.69**	**313**	*e*P	**P**	**06 41 02.4**	**+0.1**
WLF	**Walferdange**	**88.74**	**319**	P	**P**	**06 41 03.8**	**+1.5**
WLF				*e*	pP	06 41 12.1	+0.1
WLF				pmax	pmax		
	comp=Z,230nm,1.9s,mb6.2						
WLF	**Walferdange**	**88.74**	**319**	*e*P	**P**	**06 41 03.6**	**+1.2**
	comp=Z,26nm,1.1s,mb5.5						
BER	**Bergen**	**88.82**	**330**	*e*	**P**	**06 41 03.2**	**+0.7**
BER				AMS	AMS	07 25 40.3	
	comp=Z,6µm,16.5s,MS6.1						
HGN	**Heimansgroeve**	**88.84**	**321**	*e*P	**P**	**06 41 03.0**	**+0.2**
	comp=Z,48nm,1.8s,mb5.5						
HGN				*e*PP	PP	06 44 32.5	-2.0
HGN				*i* S	S	06 51 47.7	+1.6
CABF	**La Chapelle**	**88.88**	**316**	*e*P	**P**	**06 41 03.6**	**+0.5**
	comp=Z,120nm,1.2s,mb5.8						
CABF	**La Chapelle**	**88.88**	**316**	*e*P	**P**	**06 41 03.6**	**+0.5**
CABF				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.8						
ORIF	**Oris-en-Rattie**	**89.09**	**315**	*e*P	**P**	**06 41 04.2**	**+0.1**
ORIF				*e*R			
	comp=Z,5µm,19.5s						
SMRF	**Simiane la Rot**	**89.34**	**314**	*e*P	**P**	**06 41 05.6**	**+0.2**
	comp=Z,69nm,1.0s,mb5.6						
MEZF	**Maizieres J’vi**	**89.51**	**318**	*e*P	**P**	**06 41 06.4**	**+0.4**
GIVF	**Givet**	**89.58**	**320**	*e*P	**P**	**06 41 06.9**	**+0.6**
	comp=Z,68nm,0.9s,mb5.7						
GIVF	**Givet**	**89.58**	**320**	*e*P	**P**	**06 41 06.9**	**+0.6**
GIVF				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.7						
VIVF	**Saint-Julien-l**	**89.95**	**315**	*e*P	**P**	**06 41 08.6**	**+0.4**
BAIF	**Baives**	**89.98**	**320**	*e*P	**P**	**06 41 09.0**	**+0.8**
	comp=Z,101nm,0.8s,mb5.9						
BAIF	**Baives**	**89.98**	**320**	*e*P	**P**	**06 41 09.0**	**+0.8**
BAIF				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.9						
NVL	**N’lazarevskaya**	**90.36**	**199**	⇑*i*P	**P**	**06 41 17.7**	**+8.2**
NVL				*i* *SP	sP	06 41 30.3	+8.1
NVL				*i*		06 44 42.3	
NVL				*i*		06 52 02.4	
NVL				*e*SS	SS	06 58 04.1	+0.5
NVL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NVL				MLR	MLR		
	comp=Z,1µm,16.2s,MS5.3						
LOR	**Lormes**	**90.38**	**317**	*e*P	**P**	**06 41 10.5**	**+0.4**
	comp=Z,155nm,1.3s,mb5.9						
LOR				*e*R			
	comp=Z,4µm,21.0s						
LOR	**Lormes**	**90.38**	**317**	*e*P	**P**	**06 41 10.5**	**+0.4**
LOR				pmax	pmax		
	comp=Z,78nm,1.3s,mb5.9						
LOR				MLR	MLR		
	comp=Z,4µm,21.0s,MS5.8						
MAIT	**Maitri**	**90.39**	**199**	*e*P	**P**	**06 41 13.7**	**+4.1**
MAIT				*e*S	S	06 52 04.1	+4.3
SMF	**Signal de Mont**	**90.43**	**317**	*e*P	**P**	**06 41 10.6**	**+0.3**
	comp=Z,123nm,1.2s,mb5.8						
SMF	**Signal de Mont**	**90.43**	**317**	*e*P	**P**	**06 41 10.6**	**+0.3**
SMF				pmax	pmax		
	comp=Z,62nm,1.2s,mb5.8						
LASF	**Ste Croix**	**90.58**	**314**	*e*P	**P**	**06 41 12.0**	**+0.9**
	comp=Z,56nm,1.1s,mb5.5						
SSF	**Saint Saulge**	**90.63**	**317**	*e*P	**P**	**06 41 11.7**	**+0.4**
NIKO	**Nikolski**	**90.93**	**37**	*e*P	**P**	**06 41 12.3**	**-0.2**
BGF	**Bois d’Agland**	**91.12**	**316**	*e*P	**P**	**06 41 13.7**	**+0.2**
HYF	**Humbligny**	**91.20**	**317**	*e*P	**P**	**06 41 15.0**	**+1.1**
TCF	**Toulx Ste Croi**	**91.58**	**316**	*e*P	**P**	**06 41 16.4**	**+0.8**
CAF	**Calviac**	**91.79**	**315**	*e*P	**P**	**06 41 17.6**	**+0.9**
MTLF	**Montolieu**	**91.81**	**313**	*e*P	**P**	**06 41 17.6**	**+0.8**
	comp=Z,79nm,1.0s,mb5.7						
MTLF	**Montolieu**	**91.81**	**313**	*e*P	**P**	**06 41 17.6**	**+0.8**
MTLF				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.7						
QSPA	**South Pole Qui**	**92.12**	**180**	*e*P	**P**	**06 41 18.6**	**+1.2**
	comp=Z,121nm,2.0s,mb5.9						
RJF	**Les Rejaudoux**	**92.15**	**315**	*e*P	**P**	**06 41 19.3**	**+1.0**
RJF				*e*R			
	comp=Z,3µm,21.5s						
UNV	**Unalaska Valle**	**92.25**	**36**	*e*P	**P**	**06 41 17.3**	**-1.2**
	comp=Z,90nm,0.7s,mb6.2						
LFF	**La Frestale**	**92.73**	**315**	*e*P	**P**	**06 41 22.1**	**+1.1**
JMIC	**Jan Mayen**	**92.89**	**342**	*e*P	**P**	**06 41 21.7**	**+0.6**
JMIC				LR	LR		
	comp=Z,4148µm,18.5s						
JMIC	**Jan Mayen**	**92.89**	**342**	*e*	**P**	**06 41 21.7**	**+0.6**
JMIC				*e*P		06 41 21.9	
JMIC				*e*PP	PP	06 45 03.7	-2.8
JMIC				*e*SS	SS	06 58 39.6	-0.3
JMIC				AMS	AMS	07 28 59.7	
	comp=Z,4µm,18.5s,MS5.9						
LDF	**La Druitiere**	**92.92**	**319**	*e*P	**P**	**06 41 22.4**	**+0.6**
	comp=Z,180nm,1.3s,mb6.0						
LDF	**La Druitiere**	**92.92**	**319**	*e*P	**P**	**06 41 22.4**	**+0.6**
LDF				pmax	pmax		
	comp=Z,90nm,1.3s,mb6.0						
FLN	**La Foliniere**	**93.14**	**319**	*e*P	**P**	**06 41 23.3**	**+0.5**
	comp=Z,70nm,0.9s,mb5.8						
FLN				*e*R			
	comp=Z,3µm,22.0s						
FLN	**La Foliniere**	**93.14**	**319**	*e*P	**P**	**06 41 23.3**	**+0.5**
FLN				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.8						
FLN				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.8						
MFF	**Saint Martin d**	**93.17**	**317**	*e*P	**P**	**06 41 23.6**	**+0.7**
	comp=Z,115nm,1.0s,mb6.0						
MFF	**Saint Martin d**	**93.17**	**317**	*e*P	**P**	**06 41 23.6**	**+0.7**
MFF				pmax	pmax		
	comp=Z,58nm,1.0s,mb6.0						
HPK	**Haverah Park**	**93.18**	**324**	*e*P	**P**	**06 41 23.5**	**+0.7**
HPK				AMb	AMB	06 41 33.1	
	comp=Z,154nm,1.8s,mb6.1						
LRN	**Richmond**	**93.21**	**325**	*e*P	**P**	**06 41 23.7**	**+0.8**
LRN				AMb	AMB	06 41 34.1	
	comp=Z,64nm,1.5s,mb5.8						
EPF	**Esparros**	**93.21**	**313**	*e*P	**P**	**06 41 23.2**	**0.0**
KBI1	**Birley Grange**	**93.22**	**323**	*e*P	**P**	**06 41 23.3**	**+0.3**
KBI1				AMb	AMB	06 41 36.1	
	comp=Z,90nm,1.7s,mb5.9						
EBR	**Ebro Roquetas**	**93.32**	**311**	*e*PCP	PcP	06 41 24.5	-0.1
LHO	**Holmfirth**	**93.37**	**324**	*e*P	**P**	**06 41 24.4**	**+0.7**
LHO				AMb	AMB	06 41 36.9	
	comp=Z,69nm,2.2s,mb5.7						
GRR	**Gorron**	**93.44**	**319**	*e*P	**P**	**06 41 24.8**	**+0.7**
	comp=Z,184nm,1.5s,mb6.0						
GRR	**Gorron**	**93.44**	**319**	*e*P	**P**	**06 41 24.8**	**+0.7**
GRR				pmax	pmax		
	comp=Z,92nm,1.5s,mb6.0						
KWE	**Weaver Farm**	**93.44**	**323**	*e*P	**P**	**06 41 24.8**	**+0.8**
KWE				AMb	AMB	06 41 28.4	
	comp=Z,50nm,1.6s,mb5.7						
DAG	**Danmarks Havn**	**93.55**	**348***j*	*i*P	**P**	**06 41 24.0**	**-0.1**
DAG				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.4						
DAG				MLR	MLR		
	comp=N,5µm,20.0s,MS6.2						
DAG				MLR	MLR		
	comp=Z,6µm,20.0s,MS6.1						
DAG				MLR	MLR		
	comp=E,6µm,19.0s,MS6.2						
DAG	**Danmarks Havn**	**93.55**	**348**	*i* Pdu	**P**	**06 41 24.0**	**-0.1**
	comp=E,9.3nm,0.6s,mb5.4						
DAG				LR	LR		
	comp=Z,7µm,20.0s,MS6.1						
DAG	**Danmarks Havn**	**93.55**	**348***j*	*i*P	**P**	**06 41 24.0**	**-0.1**
	comp=Z,9.3nm,0.6s,mb5.4						
	comp=Z,7µm,20.0s						
EKA	**Eskdalemuir Ar**	**93.85**	**326**	P	**P**	**06 41 26.9**	**+1.0**
	comp=Z,16nm,0.7s,mb5.6,baz=99,slow=4.8,SNR=54						
ESK	**Eskdalemuir**	**93.88**	**326**	*e*P	**P**	**06 41 26.8**	**+0.8**
ESK				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.5						
ESK	**Eskdalemuir**	**93.88**	**326**	*e*P	**P**	**06 41 26.8**	**+0.8**
	comp=Z,16nm,0.8s,mb5.5						
ETSF	**Etsaut**	**93.88**	**313**	*e*P	**P**	**06 41 26.6**	**+0.3**
	comp=Z,26nm,0.7s,mb5.5						
ETSF	**Etsaut**	**93.88**	**313**	*e*P	**P**	**06 41 26.6**	**+0.3**
ETSF				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.5						
SJPF	**Ste Jean**	**94.34**	**313**	*e*P	**P**	**06 41 29.5**	**+1.1**
	comp=Z,21nm,0.8s,mb5.3						
SJPF	**Ste Jean**	**94.34**	**313**	*e*P	**P**	**06 41 29.5**	**+1.1**
SJPF				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.3						
SGMF	**Saint Gilles**	**94.58**	**319**	*e*P	**P**	**06 41 29.6**	**+0.2**
QUIF	**Quistinic**	**95.03**	**318**	*e*P	**P**	**06 41 32.0**	**+0.5**
ROSF	**Rostrenen**	**95.04**	**319**	*e*P	**P**	**06 41 31.7**	**+0.2**
	comp=Z,14nm,0.7s,mb5.2						
ROSF	**Rostrenen**	**95.04**	**319**	*e*P	**P**	**06 41 31.7**	**+0.2**
ROSF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb5.2						
SNAA	**Sanae**	**95.08**	**198**	*e*	PP	06 45 20.1	-2.8
SNAA	**Sanae**	**95.08**	**198**	*e*		06 46 10.8	
SNAA	**Sanae**	**95.08**	**198**	*e*	x	06 46 25.1	
SNAA	**Sanae**	**95.08**	**198**	⇑*i*P	**P**	**06 41 28.7**	**-2.5**
SNAA				*e*		06 41 42.3	
SNAA				*e*		06 41 49.4	
SNAA				*e*		06 45 20.1	
SNAA	**Sanae**	**95.08**	**198**	⇑*i*P	**P**	**06 41 28.7**	**-2.5**
SNAA				*e*		06 41 42.3	
SNAA				*e*		06 41 49.4	
SNAA				*e*		06 45 01.9	
SNAA				*e*		06 45 20.1	
SNAA				*e*		06 46 10.8	
SNAA				*e*		06 46 25.1	
TTA	**Tatalina**	**95.85**	**26**	*e*P	**P**	**06 41 38.5**	**+3.6**
IMA	**Indian Mountai**	**95.86**	**23**	P	**P**	**06 41 36.0**	**+1.2**
IMA				pmax	pmax		
	comp=Z,350nm,1.5s,mb6.6						
IMA	**Indian Mountai**	**95.86**	**23**	*e*P	**P**	**06 41 36.7**	**+1.9**
	comp=Z,72nm,1.5s,mb5.9						
VNA2	**Neumayer--Watz**	**96.66**	**199**	*e*	PP	06 45 29.2	-6.4
VNA2	**Neumayer--Watz**	**96.66**	**199**	*e*		06 46 12.8	
VNA2	**Neumayer--Watz**	**96.66**	**199**	*e*	x	06 46 23.2	
VNA2	**Neumayer--Watz**	**96.66**	**199**	*e*	x	06 46 29.7	
VNA2	**Neumayer--Watz**	**96.66**	**199**	⇑*i*P	**P**	**06 41 35.9**	**-2.5**
VNA2				*e*		06 41 49.8	
VNA2				*e*		06 41 56.7	
VNA2				*e*		06 45 08.3	
VNA2				*e*		06 45 29.2	
VNA2				*e*		06 46 12.8	
VNA2				*e*		06 46 23.2	
VNA2				*e*		06 46 29.7	
ESDC	**Sonseca Array**	**96.85**	**310**	P	**P**	**06 41 40.8**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=58,slow=4.3,SNR=5.0						
VNA1	**Neumayer--Stat**	**97.00**	**199**	*e*	x	06 45 29.4	
VNA1	**Neumayer--Stat**	**97.00**	**199**	⇑*i*P	**P**	**06 41 38.3**	**-1.6**
VNA1				*e*		06 41 52.3	
VNA1				*e*		06 41 59.6	
VNA1				*e*		06 45 07.9	
VNA1				*e*		06 45 29.4	
SCO	**Scoresbysund**	**97.22**	**343**	*i* P	**P**	**06 41 36.4**	**-4.5**
SCO				*i*		06 45 42.6	
VNA3	**Neumayer Olymp**	**97.30**	**198**	*e*	PP	06 45 31.2	-10
VNA3	**Neumayer Olymp**	**97.30**	**198**	*e*		06 46 13.5	
VNA3	**Neumayer Olymp**	**97.30**	**198**	*e*	x	06 46 24.6	
VNA3	**Neumayer Olymp**	**97.30**	**198**	*e*	x	06 46 31.3	
VNA3	**Neumayer Olymp**	**97.30**	**198**	⇑*i*P	**P**	**06 41 43.0**	**+1.7**
VNA3				*e*		06 41 57.7	
VNA3				*e*		06 42 05.0	
VNA3				*e*		06 45 31.2	
VNA3				*e*		06 46 13.5	
VNA3				*e*		06 46 24.6	
VNA3				*e*		06 46 31.3	
SPU	**Mount Spurr**	**98.17**	**27**	P	**P**	**06 41 45.3**	**0.0**
MCK	**McKinley**	**98.58**	**24**	P	**P**	**06 41 47.0**	**-0.2**
MCK				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.4						
MCK	**McKinley**	**98.58**	**24**	P	**P**	**06 41 47.0**	**-0.2**
	comp=Z,14nm,1.2s,mb5.4						
ILAR	**Eielson Array**	**98.98**	**23**	P	**P**	**06 41 48.5**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=297,slow=6.5,SNR=9.9						
ILAR				PKKPbc		06 58 14.6	
	comp=Z,1.7nm,0.8s,baz=147,slow=2.1,SNR=14						
ILAR				PKKP	PKKP	06 58 22.7	+11
	comp=Z,2.0nm,0.8s,baz=158,slow=2.5,SNR=8.3						
ILAR				LR	LR	07 35 40.0	
	comp=Z,5µm,18.2s,MS6.0,baz=162,slow=41						
SUMG	**Summit**	**100.23**	**348**	*e*Pdif	P	06 41 55.4	+0.9
	comp=Z,38nm,1.5s						
YKA	**Yellowknife Ar**	**111.27**	**15**	PKIKP	PKPdf	06 46 43.0	-2.9
YKA						06 47 18.4	
YKA						06 57 55.0	
YKA	**Yellowknife Ar**	**111.27**	**15**	PKiKP		06 46 43.0	
	comp=Z,0.8nm,0.7s,baz=346,slow=3.0,SNR=4.1						
YKA				PP	PP	06 47 18.4	-6.9
	comp=Z,3.7nm,0.9s,baz=330,slow=8.0,SNR=9.4						
YKA				PKKPbc		06 57 37.7	
	comp=Z,0.5nm,0.4s,baz=144,slow=3.3,SNR=7.7						
YKA				PKKPab		06 57 48.5	
	comp=Z,1.1nm,0.8s,baz=149,slow=3.0,SNR=5.3						
YKA				PKKP	PKKP	06 57 55.0	+5.8
	comp=Z,1.1nm,0.7s,baz=139,slow=3.5,SNR=6.9						
YKA	**Yellowknife Ar**	**111.27**	**15**	PKPdf	PKPdf	06 46 43.0	-2.9
YKA				PP	PP	06 47 18.4	-6.9
YKA				PKKPbc		06 57 37.7	
YKA				PKKPab		06 57 48.5	
YKA				PKKP	PKKP	06 57 55.0	+5.7
TBI	**Tubuai**	**112.67**	**114**	*e*S		06 55 21.2	
	comp=Z,2µm,27.5s						
TBI				*e*SS	SS	07 03 09.1	-4.0
	comp=Z,4µm,26.0s						
TBI				*e*LQ		07 17 03.7	
	comp=Z,7µm,36.5s						
TBI				*e*LR	LR	07 20 16.0	
	comp=Z,7µm,23.8s,baz=232						
PPT	**Papeete**	**113.22**	**108**	*e*P	Pdif	06 42 36.6	-16
	comp=Z,144nm,24.5s						
PPT				*e*S		06 55 26.2	
	comp=Z,3µm,26.0s						
PPT				*e*LQ		07 16 33.2	
	comp=Z,11µm,38.8s						
PPT				*e*LR	LR	07 21 48.7	
	comp=Z,5µm,22.8s,baz=251						
RPW	**Rockport**	**119.62**	**28**	P	PKPdf	06 46 58.9	-3.6
TBM	**Table Mountain**	**120.96**	**29**	P	PKPdf	06 47 02.2	-3.0
FFC	**Flin Flon**	**121.21**	**13**	*e*PKIKP	PKPdf	06 47 01.1	-4.4
SCHQ	**Schefferville**	**121.58**	**349**	PKP	PKPdf	06 47 02.5	-3.7
	comp=Z,4.9nm,0.8s,baz=40,slow=15,SNR=6.3						
SCHQ				PP	PP	06 48 37.8	+0.1
	comp=Z,17nm,1.1s,baz=24,slow=5.6,SNR=3.8						
NEW	**Newport**	**121.75**	**26**	*e*PKIKP	PKPdf	06 47 01.9	-4.8
WRD	**Warden**	**121.92**	**28**	P	PKPdf	06 47 03.7	-3.3
HAWA	**Hanford**	**122.03**	**29**	*e*PKPdf	PKPdf	06 47 03.8	-3.4
REDWA	**Red Mountain**	**122.14**	**29**	P	PKPdf	06 47 04.7	-2.8
HUMO	**Hull Mountain**	**122.83**	**34**	*e*PKPdf	PKPdf	06 47 05.8	-3.1
KHMM	**Horse Mountain**	**123.49**	**36**	*e*PKPdf	PKPdf	06 47 06.3	-3.9
YBH	**Yreka Blue Hor**	**123.53**	**35**	*e*PKIKP	PKPdf	06 47 05.4	-4.9
BMO	**Blue Mountains**	**124.22**	**29**	*e*PKIKP	PKPdf	06 47 06.7	-4.8
MSO	**Missoula**	**124.23**	**25**	*e*PKPdf	PKPdf	06 47 07.2	-4.4
WDC	**Whiskeytown Da**	**124.37**	**36**	*e*PKIKP	PKPdf	06 47 07.8	-4.2
CHMT	**Chamberlain Mo**	**124.45**	**25**	*e*PKPdf	PKPdf	06 47 07.8	-4.1
CHMT				*e*PP	PP	06 48 54.2	-3.4
LTIM	**Timbered Crate**	**124.59**	**35**	P	PKPdf	06 47 09.4	-3.0
MOD	**Modoc**	**124.77**	**33**	*e*PKPdf	PKPdf	06 47 09.5	-3.2
HOPS	**Hopland**	**125.06**	**38**	*e*PKPdf	PKPdf	06 47 08.6	-4.8
HRY	**Holter Researc**	**125.20**	**24**	*e*PKPdf	PKPdf	06 47 09.1	-4.3
WVOR	**Wild Horse Val**	**125.29**	**32**	*e*PKIKP	PKPdf	06 47 10.6	-3.1
NSHM	**Saint Helena R**	**125.64**	**38**	*e*PKPdf	PKPdf	06 47 09.7	-4.7
RKT	**Rikitea**	**125.78**	**117**	*e*S		06 57 12.6	
	comp=Z,1µm,28.8s						
RKT				*e*SS	SS	07 06 11.6	+9.4
	comp=Z,3µm,29.8s						
RKT				*e*LQ		07 21 10.1	
	comp=Z,4µm,38.5s						
RKT				*e*LR	LR	07 25 53.0	
	comp=Z,5µm,24.2s,baz=250						
BOZ	**Bozeman (W)**	**126.14**	**24**	*e*PKIKP	PKPdf	06 47 11.3	-3.9
MCMT	**McKenzie Canyo**	**126.28**	**26**	*e*PKPdf	PKPdf	06 47 12.0	-3.5
HLID	**Hailey**	**126.56**	**28**	*e*PKPdf	PKPdf	06 47 13.2	-2.9
ULM	**Lac du Bonnet**	**126.66**	**10**	PKP	PKPdf	06 47 11.5	-4.6
	comp=Z,18nm,0.7s,baz=10.0,slow=3.1,SNR=17						
ULM				PP	PP	06 49 08.7	-3.0
	comp=Z,3.8nm,0.7s,baz=31,slow=4.6,SNR=2.4						
WCN	**Washoe City**	**126.83**	**35**	*e*PKIKP	PKPdf	06 47 13.8	-2.9
QLMT	**Earthquake Lak**	**126.89**	**25**	PKPdf	PKPdf	06 47 14.2	-2.4
YNR	**Norris Junctio**	**127.29**	**24**	*e*PKPdf	PKPdf	06 47 15.3	-2.1
CMB	**Columbia Colle**	**127.29**	**37**	*e*PKIKP	PKPdf	06 47 13.9	-3.8
LAO	**LASA Array**	**127.30**	**20**	*e*PKPdf	PKPdf	06 47 14.5	-2.9
YFT	**Old Faithful**	**127.44**	**25**	*e*PKPdf	PKPdf	06 47 16.9	-0.9
BMN	**Battle Mountai**	**127.46**	**32**	*e*PKIKP	PKPdf	06 47 15.0	-2.9
IMW	**Indian Meadow**	**127.85**	**25**	*e*P	PKPdf	06 47 16.5	-2.1

LRV	Little Rabbit	127.94	39	*e*PKPdf	PKPdf	06 47 15.7	-3.3
MOOW	Moose Ponds	128.05	25	*e*PKPdf	PKPdf	06 47 15.6	-3.4
MOOW				*e*PP	PP	06 49 19.9	-1.4
RRI2	Red Ridge	128.13	26	*e*PKPdf	PKPdf	06 47 16.8	-2.4
RRI2				*e*PP	PP	06 49 19.7	-2.2
TPAW	Teton Pass	128.17	25	*e*PKPdf	PKPdf	06 47 16.7	-2.6
TPAW				*e*PP	PP	06 49 20.2	-2.0
WUWY	Wally Ulrich	128.22	25	*e*PKPdf	PKPdf	06 47 15.8	-3.6
WUWY				*e*PP	PP	06 49 20.3	-2.2
NVAR	Mina Array Bea	128.25	35	PKP	PKPdf	06 47 15.3	-4.2
	comp=Z,6.8nm,0.8s,baz=280,slow=4.1,SNR=28						
ELK	Elko	128.27	31	*e*PKIKP	PKPdf	06 47 16.7	-2.8
SNOW	Snow King Moun	128.28	25	*e*PKPdf	PKPdf	06 47 16.4	-3.0
SNOW				*e*PP	PP	06 49 22.2	-0.8
MNV	Mina	128.34	35	*e*PKIKP	PKPdf	06 47 15.6	-4.1
OMM	Old Mammoth Mi	128.40	36	PKPdf	PKPdf	06 47 18.0	-1.8
HVU	Hansel Valley	128.70	28	*e*PKIKP	PKPdf	06 47 16.7	-3.6
HVU				*e*		06 49 23.3	
MTUM	Tungsten Hills	128.83	36	*e*PKPdf	PKPdf	06 47 17.9	-2.8
TPH	Tonopah	129.11	35	*e*PKIKP	PKPdf	06 47 18.3	-2.9
BGU	Big Grassy Mou	129.24	29	*e*PKPdf	PKPdf	06 47 18.4	-2.9
PDAR	Pinedale Array	129.35	25	PKP	PKPdf	06 47 17.8	-3.8
	comp=Z,4.7nm,0.6s,baz=218,slow=1.0,SNR=40						
PDAR				PP	PP	06 49 29.5	-0.6
	comp=Z,4.0nm,1.1s,baz=333,slow=6.0,SNR=4.4						
HWUT	Hardware Ranch	129.40	27	*e*PKPdf	PKPdf	06 47 18.8	-2.8
HWUT				*e*PP	PP	06 49 25.0	-5.5
EYMN	Ely	129.56	7	*e*PKPdf	PKPdf	06 47 17.5	-4.2
TRCR	Troy Canyon	129.83	33	*e*PKPdf	PKPdf	06 47 19.9	-2.6
TCUT	Toone Canyon	129.86	28	*e*PKPdf	PKPdf	06 47 20.4	-2.2
NOQ	North Oquirrh	129.89	29	*e*PKPdf	PKPdf	06 47 18.5	-4.1
CTU	Camp Tracy	130.03	28	*e*PKPdf	PKPdf	06 47 20.4	-2.4
JLU	Jordanelle	130.25	28	*e*PKPdf	PKPdf	06 47 19.3	-3.9
RSSD	Black Hills	130.29	20	*e*PKPdf	PKPdf	06 47 16.9	-6.3
RSSD				*e*PP	PP	06 49 30.7	-5.3
RSSD				*e*SKPab		06 50 40.7	
DAU	Daniels Canyon	130.49	28	*e*PKIKP	PKPdf	06 47 20.5	-3.2
MPU	Maple Canyon	130.62	29	*e*PKPdf	PKPdf	06 47 23.9	0.0
MWC	Mount Wilson	131.20	39	PKIKP	PKPdf	06 47 23.0	-2.3
ARUT	Antelope Range	131.40	32	*e*PKIKP	PKPdf	06 47 23.4	-2.1
MVU	Marysvale	131.50	30	*e*PKPdf	PKPdf	06 47 23.3	-2.4
MSU	Marysvale	131.51	30	*e*PKPdf	PKPdf	06 47 23.7	-2.0
MSU				*e*SKPbc		06 50 46.2	
NEN	Nelson	132.17	35	*e*PKPdf	PKPdf	06 47 24.4	-2.7
PHWY	Pilot Hill	132.24	23	*e*PKPdf	PKPdf	06 47 23.8	-3.3
LDFC	Landfair	132.42	36	*e*PKPdf	PKPdf	06 47 24.8	-2.7
PFO	Pinyon Flat Ob	132.61	38	PKIKP	PKPdf	06 47 20.9	-7.1
MIV	Mineville/With	133.13	350	*e*PKPdf	PKPdf	06 47 25.7	-2.9
PV10	Paradox Valley	133.15	28	*e*PKPdf	PKPdf	06 47 26.1	-2.7
NCB	Newcomb	133.34	351	*e*PKPdf	PKPdf	06 47 25.3	-3.7
ISCO	Idaho Springs	133.46	24	*e*PKIKP	PKPdf	06 47 25.0	-4.3
ISCO				*e*		06 49 54.0	
PV01	Paradox Valley	133.56	28	*e*PKPdf	PKPdf	06 47 25.3	-4.2
PV01				*e*PP	PP	06 49 51.4	-5.7
WUAZ	Wupatki	134.20	32	*e*PKPdf	PKPdf	06 47 28.2	-2.6
SDCO	Great Sand Dun	135.25	25	*e*PKPpre		06 47 21.1	
BINY	Binghamton	135.34	352	*e*PKPdf	PKPdf	06 47 30.0	-2.8
TUC	Tucson	136.91	35	*e*PKIKP	PKPdf	06 47 26.9	-9.0
KSU1	Kansas State U	137.12	15	PKPdf	PKPdf	06 47 31.9	-4.1
ANMO	Albuquerque	137.13	28	*e*PKHKP		06 47 24.0	
MVL	Millersville	137.55	352	*e*PKPpre		06 47 16.8	
BNM	Barren Site	137.70	29	*e*PKPdf	PKPdf	06 47 34.6	-2.7
BLO	Bloomington	138.74	4	PKIKP	PKPdf	06 47 37.0	-2.1
SLM	Saint Louis	138.88	8	PKIKP	PKPdf	06 47 35.2	-4.1
TRQA	Tornquist	139.31	206	*e*PKPpre		06 47 25.8	
FVM	French Village	139.49	9	*e*PKIKP	PKPdf	06 47 30.7	-10
WCI	Wyandotte Cave	139.69	4	*e*PKHKP		06 47 29.5	
CPRX	Cap Rock	139.93	27	PKPpre		06 47 31.2	
PLCA	Paso Flores	139.94	195	PKhKP		06 47 30.4	
	comp=Z,3.1nm,0.8s,baz=83,slow=2.1,SNR=6.5						
MNTX	Cornudas Mount	140.29	30	*e*PKPpre		06 47 29.6	
FWV	Forest Hill	140.37	357	*e*PKPdf	PKPdf	06 47 37.6	-4.4
GDL2	Guadalupe Moun	140.38	29	*e*PKPpre		06 47 30.6	
GDL2				*e*SKPdf		06 51 12.7	
WMOK	Wichita Mounta	140.49	20	*e*PKHKP		06 47 30.0	
WMOK				*e*		06 50 32.1	
BLA	Blacksburg	140.72	356	*e*PKIKP	PKPdf	06 47 38.9	-3.9
ELN	Prospectdale	140.72	357	*e*PKPdf	PKPdf	06 47 38.4	-4.4
UTMT	University of	141.32	7	PKPdf	PKPdf	06 47 41.1	-2.8
TZTN	Tazewell	141.47	0	*e*PKPpre		06 47 35.1	
WVT	Waverly	141.65	6	*e*PKHKP		06 47 35.0	
MIAR	Mount Ida	142.20	14	*e*PKHKP		06 47 36.4	
UALR	University of	142.26	12	*e*PKPpre		06 47 37.0	
CPCT	Cooper Cave	142.55	2	*e*PKPpre		06 47 36.8	
SWET	Sewanee	142.71	4	*e*PKPpre		06 47 37.8	
PLAL	Pickwick Lake	142.76	7	*e*PKPpre		06 47 38.1	
BAO	Brasilia Array	142.77	247	PKPdf	PKPdf	06 47 41.5	-5.3
BDFB	Brasilia	142.79	247	PKhKP		06 47 39.9	
	comp=Z,7.7nm,0.7s,baz=192,slow=7.8,SNR=7.0						
OXF	Oxford	143.04	8	*e*PKIKP	PKPdf	06 47 42.3	-4.5
LTX	Lajitas	143.07	30	*e*PKIKP	PKPdf	06 47 40.6	-6.4
TXAR	Lajitas Array	143.07	30	PKhKP		06 47 40.3	
	comp=Z,8.6nm,0.8s,baz=279,slow=2.5,SNR=31						
TXAR				PP	PP	06 50 55.8	-0.1
	comp=Z,3.8nm,0.9s,baz=306,slow=2.8,SNR=3.9						
JSC	Jenkinsville	143.68	357	*e*PKIKP	PKPdf	06 47 41.9	-6.0
JCT	Junction City	143.89	25	*e*PKIKP	PKPdf	06 47 42.3	-6.1
CCHI	Chillan	144.23	195	*e*P	PKPbc	06 47 48.8	+5.7
COW	Cow Castle Cre	144.54	356	*e*PKPdf	PKPdf	06 47 44.4	-5.1
GOGA	Godfrey	144.60	0	*e*PKIKP	PKPdf	06 47 44.6	-5.0
NHSC	New Hope	144.78	356	*e*PKPdf	PKPdf	06 47 45.3	-4.6
LRAL	Lakeview Retre	144.79	5	*e*PKPdf	PKPdf	06 47 44.6	-5.3
CSU	Charleston Sou	144.89	355	*e*PKPdf	PKPdf	06 47 46.0	-4.1
RGRS	Roger Stewart	144.98	356	*e*PKPdf	PKPdf	06 47 45.9	-4.4
JATB	Jatai	145.14	241	*ce*P	PKPbc	06 47 47.7	+1.6
JATB				*e*		06 47 52.7	
JATB				*i*		06 47 55.1	
JATB				*i*		06 48 00.9	
JATB				*e*		06 48 09.1	
JATB				*i*		06 48 28.3	
JATB				*e*		06 48 42.1	
CPUP	Villa Florida	145.41	224	PKIKP	PKPdf	06 47 47.4	-3.8
CPUP				pmax	pmax		
	comp=Z,54nm,0.7s						
CPUP	Villa Florida	145.41	224	PKPbc	PKPbc	06 47 47.4	+0.8
	comp=Z,54nm,0.7s,baz=130,slow=3.2,SNR=266						
CPUP	Villa Florida	145.41	224	*e*PKPdf	PKPdf	06 47 47.1	-4.1
LMEL	Las Melosas	146.22	200	*e*P	PKPbc	06 47 50.3	+2.0
CLCH	Cerro Calan	146.74	200	*e*P	PKPbc	06 47 51.0	+1.4
ZAIG	Zacatecas	148.86	36	*e*P	PKPdf	06 47 55.3	-1.7
TLL	Tololo Astrono	149.76	202	*e*P	PKPdf	06 47 59.7	+1.5
DWPF	Disney	149.83	357	*e*PKPdf	PKPdf	06 47 54.5	-3.9
SEG	Port Louis	151.67	311	*e*P	PKPdf	06 48 03.3	+1.9
MGG	Marie-Galante	151.82	310	*e*P	PKPdf	06 48 04.4	+2.7
SCG	Saint Claude	152.03	311	*e*P	PKPdf	06 48 03.3	+1.3
MOIG	Morelia	152.03	38	*i* P	PKPdf	06 47 59.9	-2.0
BBL	Barber's Block	152.18	310	*e*P	PKPdf	06 48 04.8	+2.6
SJG	San Juan	153.72	321	PKP2	PKPab	06 48 23.1	+0.8
PPM	Popocatepetl	154.03	35	*i* P	PKPdf	06 48 03.0	-1.8
OXX	Oaxaca	156.70	34	*e*P	PKPdf	06 48 10.0	+1.7
SAML	Samuel	158.93	251	*e*PKPdf	PKPdf	06 48 06.9	-4.3
LPAZ	La Paz	159.55	226	PKIKP	PKPdf	06 48 09.5	-2.3
LPAZ						06 48 47.2	
LPAZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LPAZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LPAZ	La Paz	159.55	226	PKP	PKPdf	06 48 09.4	-2.4
	comp=Z,4.0nm,0.7s,baz=105,slow=0.5,SNR=27						
LPAZ				PKPab	PKPab	06 48 47.1	-0.1
	comp=Z,5.5nm,0.7s,baz=193,slow=2.8,SNR=3.8						
LPAZ	La Paz	159.55	226	*e*PKPdf	PKPdf	06 48 09.2	-2.6
ARE	Arequipa	161.69	219	*e*PKIKP	PKPdf	06 48 11.0	-3.0
SDV	Santo Domingo	163.29	311	*e*PKPdf	PKPdf	06 48 11.6	-4.1
ROSC	El Rosal	168.67	308	PKP	PKPdf	06 48 16.9	-3.1
	comp=Z,8.1nm,0.7s,baz=144,slow=8.0,SNR=8.6						
OTAV	Otavalo	174.63	297	*e*PKPdf	PKPdf	06 48 19.4	-3.6

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*NEIC **08** 07:11:13.8±0.7, 2.03N×96.65E, mb4.4/1, Error ellipse: s-maj=17.6km s-min=11.2km az=54.0*

*IDC **08** 07:11:13.7±1.2, 2.03N×96.59E, h26^{km}±4^{km}, mb3.9/10, mb1 4.1/11, mb1mx3.9/21, mbtmp4.1/11, Error ellipse: s-maj=50.2km s-min=13.9km az=55.0*

ISC 08 07:11:12.0±0.8**, 2.1N**±0.1×**96.7E**±0.1**, h26^{km}, h26^{km}**±.9^{km}**:pP-P, n14, σ0^{s}90**/14**, mb4.1**/11**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.10	51	*e*P	Pn	07 12 28.0	-0.8
CMAR	Chiang Mai Arr	16.44	8	Pn	P	07 15 05.2	+2.4
	baz=197,slow=12,SNR=9.2						
WRA	Warramunga Arr	42.94	122	P	P	07 19 10.8	-0.2
	3.8nm,0.6s,mb4.3,baz=301,slow=9.0,SNR=41						
WRA				pP	pP	07 19 19.0	+0.2
	1.2nm,0.5s,baz=302,slow=8.9,SNR=5.4						
WRAB	Tennant Creek	42.95	122	*e*P	P	07 19 11.0	+0.1
	4.6nm,0.6s,mb4.4						
ASAR	Alice Springs	44.34	127	P	P	07 19 22.8	+0.5
	1.0nm,0.8s,mb3.6,baz=297,slow=7.3,SNR=7.0						
ASAR				pP	pP	07 19 30.1	+0.1
	0.8nm,0.5s,baz=301,slow=8.0,SNR=4.9						
MKAR	Makanchi Array	46.28	346	P	P	07 19 37.2	-0.1
	2.2nm,0.5s,mb4.3,baz=162,slow=7.5,SNR=29						
MKAR				pP	pP	07 19 45.2	0.0
	2.3nm,0.7s,baz=170,slow=8.7,SNR=10.0						
SONM	Songino Array	46.36	9	P	P	07 19 38.0	+0.1
	0.6nm,0.5s,mb3.8,baz=185,slow=8.8,SNR=6.0						
SONM				pP	pP	07 19 45.5	-0.3
	1.3nm,0.5s,baz=193,slow=8.3,SNR=8.1						
SONM				PcP	PcP	07 21 12.3	-0.9
	0.3nm,0.4s,baz=187,slow=3.5,SNR=2.8						
ZAL	Zalesovo	52.61	351	P	P	07 20 25.4	-0.6
	3.6nm,0.6s,mb4.5,baz=313,slow=6.8,SNR=10						
ZAL				pP	pP	07 20 32.6	-1.4
	3.2nm,0.5s,baz=305,slow=4.2,SNR=2.8						
BVAR	Borovoye Array	55.26	341	P	P	07 20 44.1	-1.3
	0.9nm,0.5s,mb4.1,baz=138,slow=10,SNR=7.3						
BVAR				pP	pP	07 20 53.3	-0.1
	1.5nm,0.8s,baz=196,slow=21,SNR=5.3						
AKASG	Malin Array Be	74.25	322	P	P	07 22 47.7	-1.0
	0.4nm,0.3s,mb3.8,baz=101,slow=4.7,SNR=4.2						
FINES	FINESS Array B	78.99	333	P	P	07 23 14.7	-0.4
	0.8nm,0.5s,mb3.9,baz=108,slow=6.0,SNR=4.3						
ARCES	ARCESS Array B	81.54	340	P	P	07 23 29.2	+0.7
	2.1nm,0.6s,mb4.3,baz=63,slow=8.1,SNR=10						
ARCES	ARCESS Array B	81.54	340	P	P	07 23 29.2	+0.7
GERES	GERESS Array B	83.81	319	P	P	07 23 41.9	+1.2
	0.9nm,0.8s,mb4.0,baz=108,slow=8.4,SNR=4.5						

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*THR **08** 07:11:15.6±0.9, 31.63N×48.90E, h14^{km}±12^{km}, ML3.3*

*CSEM **08** 07:11:15.8±0.2, 31.65N×48.90E, h16^{km}, ML3.9/1, Error ellipse: s-maj=5.9km s-min=2.7km az=59.0*

*TEH **08** 07:11:20.3, 31.70N×49.16E, h10^{km}, Mn3.4*

ISC 08 07:11:18.1±0.9**, 31.81N**±0.05×**49.08E**±0.06**, h10^{km}, n22, σ1^{s}30**/25**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGO	Shushtar	0.38	322	*e*PG	Pg	07 11 25.1	-0.8
SHGR	Shooshtar-Gavs	0.38	322	*e*PG	Pg	07 11 25.1	-0.8
SHGR				AML	AML	07 11 47.5	
	comp=N,2μm,0.5s						
IKLH	Kalahroud	2.59	54	Pn	Pn	07 12 02.6	+1.7
IGAR	Garneh	2.69	80	Pn	Pn	07 12 01.6	-0.6
ASAO	Ashtian	2.85	16	*e*PN	Pn	07 12 06.5	+2.0
ASAO				*e*SG	Sg	07 12 51.2	-1.7
ASAO				AML	AML	07 13 01.2	
	comp=N,106nm,0.6s						
ASAO	Ashtian	2.85	16	*e*Pn	Pn	07 12 06.5	+2.0
	SNR=52						
ASAO				*e*Sg	Sg	07 12 51.2	-1.7
	comp=N,106nm,0.6s,SNR=90						
IZEF	Zefreh	2.96	68	Pn	Pn	07 12 06.7	+0.6
QAM	Qamsar	3.10	47	Pn	Pn	07 12 07.0	-1.1
NASN	Na'in	3.31	72	*e*PN	Pn	07 12 11.9	+0.8
SNGE	Sanandaj	3.58	337	*e*PN	Pn	07 12 14.5	-0.4
IRAZ	Razeghan	3.66	11	Pn	Px	07 12 32.3	
IRAZ				Sn	Sn	07 13 00.1	+0.4
IDHR	Dehrash	3.66	323	Pn	Pn	07 12 18.4	+2.4
IVRN	Varamin	3.88	34	Pn	Pn	07 12 20.0	+0.9
IVRN				Sn	Sn	07 13 04.2	-1.0
IPAR	Pars	3.94	119	Pn	Pn	07 12 19.1	-0.9
IMOK	Mook	4.17	130	Pn	Pn	07 12 21.0	-2.3
IDMV	Damavand	4.50	32	Pn	Pn	07 12 28.4	+0.5
IGZV	Gazvin	4.67	11	Pn	Pg	07 12 48.4	-2.8
IMEH	Mehriz	4.74	94	Pn	Pn	07 12 21.5	-10
ILAS	Lasjerd	4.82	41	Pn	Pb	07 12 44.2	+1.9
IFIR	Firoozkooh	4.90	38	Sn	Sn	07 13 30.5	-0.6
ISHM	Shahmirzad	5.31	40	Pn	Pb	07 12 51.8	+1.0
IANJ	Anjiloo	5.44	47	Pn	Pn	07 12 49.0	+7.8

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*UPP **08** 08:02:55.4, 57.51N×10.22E, h0^{km}, ML2.7, Mining explosion.*

*CSEM **08** 08:02:57.8±0.1, 57.62N×10.64E, h2^{km}, ML3.0, Error ellipse: s-maj=3.0km s-min=2.1km az=165.0, Mining explosion.*

*HEL **08** 08:02:58.4±0.1, 57.64N×10.62E, ML3.0, ML2.7(UPP), ML1.7(BER), Explosion*

*BER **08** 08:02:59.2±3.4, 57.59N×10.74E, MD2.6, ML1.7, ML2.2(NAO)*

*NEIC **08** 08:03:00.3±0.8, 57.73N×10.53E, h10^{km}, MD2.6(BER), Error ellipse: s-maj=11.9km s-min=9.7km az=210.0*

*NAO **08** 08:03:01.8±2.1, 57.82N×10.66E, ML2.2*

*IDC **08** 08:03:01.9±2.1, 57.77N×10.74E, mb1 3.3/4, mb1mx3.1/24, mbtmp3.2/4, ML2.8/4, Error ellipse: s-maj=16.9km s-min=14.5km az=54.0*

ISC 08 08:02:57.2±0.4**, 57.73N**±0.03×**10.69E**±0.05**, n50, σ1^{s}32**/80**, Denmark**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MUD	Monsted U'grnd	1.53	214	*i* P	Pn	08 03 24.7	-1.1
MUD				*i* S	Sb	08 03 46.4	+0.5
FINU	Finntorp	1.92	28	*e*P	Pn	08 03 33.7	+2.3
FINU	Finntorp	1.92	28	P	Pn	08 03 33.6	+2.2
SNART	Snartemo	1.95	290	*e*P	Pn	08 03 32.2	+0.3
SNART				*e*S	Sn	08 03 58.1	+0.7
SNART				AML	AML	08 04 02.3	
	comp=Z,13nm,0.2s						
DEL	Delary	2.15	125	*e*P	Pn	08 03 34.3	-0.4
DEL				*e*S	Sn	08 04 01.4	-1.0
ASKU	Askersund	2.47	60	*e*P	Pn	08 03 41.1	+1.7
ASKU				*e*S	Sn	08 04 15.7	+4.9
ASKU	Askersund	2.47	60	P	Pn	08 03 41.0	+1.6
ASKU				S	Sn	08 04 15.6	+4.9
EKSU	Eksjoe	2.48	92	*e*P	Pn	08 03 40.6	+1.1
LNKU	Linkoeping	2.61	77	*e*P	Pn	08 03 42.7	+1.4
LNKU	Linkoeping	2.61	77	P	Pn	08 03 42.6	+1.3
BLS5	Blasjo	2.79	309	*e*P	Pn	08 03 45.4	+1.5
BLS5				AML	AML	08 04 30.0	
	comp=Z,7.1nm,0.3s						
BLS5	Blasjo	2.79	309	P	Pn	08 03 45.3	+1.4
	comp=Z,7.1nm,0.3s						
HFS	Hagfors	2.87	32	*e*P	Pn	08 03 46.4	+1.4
HFS				*e*PG	Pg	08 03 51.6	-2.8
HFS				*e*S	Sn	08 04 20.4	-0.3
HFS				*e*SG		08 04 30.1	
HFS	Hagfors	2.87	32	Pn	Pn	08 03 46.4	+1.4
	comp=Z,0.2nm,0.3s,baz=215,slow=12,SNR=14						
HFS				Pg	Pg	08 03 52.2	-2.2
	comp=Z,0.4nm,0.3s,baz=203,slow=19,SNR=30						
HFS				Lg		08 04 30.0	
	comp=Z,0.7nm,0.3s,baz=204,slow=29,SNR=13						
HFS	Hagfors	2.87	32	Pn	Pn	08 03 46.4	+1.4
	baz=223,slow=14						
HFS				Pg	Pg	08 03 51.6	-2.8
	baz=212,slow=18						
HFS				Sn	Sn	08 04 20.4	-0.3
	baz=205,slow=14						
HFS				Lg		08 04 30.1	
	baz=214,slow=28						
HFS	Hagfors	2.87	32	Pg	Pg	08 03 51.6	-2.8
	SNR=90						
HFS				Sn	Sn	08 04 20.4	-0.3
	SNR=50						
NRAU	Nora	2.92	49	*e*P	Pn	08 03 48.0	+2.1
NRAU				*e*S	Sn	08 04 27.5	+5.3
ODD1	Odda	3.04	318	*e*P	Pn	08 03 47.7	+0.2
ODD1				*e*S	Sn	08 04 24.3	-0.8
ODD1				AML	AML	08 04 37.1	
	comp=Z,9.0nm,0.4s						
VSTU	Vaestervik	3.14	89	*e*P	Pn	08 03 49.5	+0.7
BLEU	Blekinge	3.15	115	*e*P	Pn	08 03 47.5	-1.4
KMY	Karmoy	3.22	300	*e*P	Pn	08 03 49.8	-0.3
KMY				*e*S	Sn	08 04 28.0	-1.7
KMY				AML	AML	08 04 28.4	
	comp=Z,3.3nm,0.3s						
KMY	Karmoy	3.22	300	*e*P	Pn	08 03 49.8	-0.2
	SNR=50						
KMY				*e*S	Sn	08 04 28.0	-1.7
	comp=Z,3.3nm,0.3s,SNR=50						
VIKU	Vikbolandet	3.28	74	*e*P	Pn	08 03 52.2	+1.4
NB2	NORSAR Subarra	3.33	4	*e*P	Pn	08 03 52.5	+1.0
NB2				*e*PG	Pg	08 04 01.5	-2.1
NB2				*e*S	Sn	08 04 34.9	+2.5
NB2				*e*SG		08 04 44.8	
NB2	NORSAR Subarra	3.33	4	Pn	Pn	08 03 52.5	+1.0
	baz=186,slow=14						
NB2				Pg	Pg	08 04 01.5	-2.1
	baz=186,slow=18						
NB2				Sn	Sn	08 04 34.9	+2.5
	baz=195,slow=28						
NB2				Lg		08 04 44.8	
	baz=176,slow=37						
NOA	NORSAR Array B	3.33	4	Pn	Pn	08 03 52.1	+0.6
	comp=Z,0.5nm,0.3s,baz=180,slow=13,SNR=3.2						
NOA				Pg	Pg	08 04 00.7	-3.0
	comp=Z,0.7nm,0.3s,baz=186,slow=16,SNR=3.9						
NOA				Sn	Sn	08 04 33.4	+1.0
	comp=Z,1.2nm,0.3s,baz=27,slow=19,SNR=7.0						
NOA				Lg		08 04 44.9	
	comp=Z,1.6nm,0.3s,baz=224,slow=28,SNR=5.6						
NOA	NORSAR Array B	3.33	4	Pn	Pn	08 03 52.1	+0.6
NOA				Pg	Pg	08 04 00.7	-3.0
NOA				Sn	Sn	08 04 33.4	+1.0
NOA				Lg		08 04 44.9	
NOA	NORSAR Array B	3.33	4	Pg	Pg	08 04 00.7	-2.9
ESKU	Eskilstuna	3.35	61	*e*P	Pn	08 03 53.0	+1.2
ESKU	Eskilstuna	3.35	61	P	Pn	08 03 53.0	+1.1
BSD	Bornholm Skovb	3.52	136	*i* P	Pn	08 03 58.4	+4.1
BSD				*e*S	Sn	08 04 43.1	+5.9
EGD	Espegrend	3.80	314	*e*P	Pn	08 03 58.6	+0.3
FALU	Falun	3.83	42	*e*P	Pn	08 03 59.7	+1.0
BER	Bergen	3.84	316	*e*P	Pn	08 03 58.6	-0.1
ASK	Askoy	3.96	317	*e*P	Pn	08 04 00.6	+0.1
BACU	Backbrunna	3.96	55	*e*P	Pn	08 04 01.4	+0.9
NYNU	Nynaeshamn	4.06	69	*e*P	Pn	08 04 03.0	+1.1
GOTU	Gotland	4.23	87	*e*P	Pn	08 04 04.4	+0.1
FLYU	Flymyra	4.43	54	*e*P	Pn	08 04 08.0	+0.8
VAF	Ylistaro	7.96	43	*e*P	Pn	08 04 56.9	-0.1
VAF				MPN		08 04 57.3	
	comp=Z,2.1nm,0.2s						
VAF				*e*S	Sn	08 06 27.4	-1.5
PVF	Pernaja	8.29	64	*e*P	P	08 04 59.4	-2.2
PVF				MPN		08 05 00.8	
	comp=Z,1.3nm,0.2s						
KEF	Keuruu	8.38	52	*e*P	P	08 05 00.8	-2.0
KEF				MPN		08 05 03.2	
	comp=Z,0.4nm,0.1s						
KEF				*e*S	Sn	08 06 32.4	-7.0
FIA0	FINESS Array S	8.64	58	Pn	P	08 05 04.9	-1.5
	baz=249,slow=12						
FIA0				Sn	Sn	08 06 35.9	-10
	baz=233,slow=22						
FIA0				Lg		08 07 28.1	
	baz=254,slow=28						
FIA0	FINESS Array S	8.64	58	*e*P	P	08 05 05.0	-1.4
FIA0				*e*S	Sn	08 06 41.8	-3.9
FINES	FINESS Array B	8.64	58	Pn	P	08 05 04.8	-1.6
	comp=Z,0.4nm,0.3s,baz=249,slow=13,SNR=14						
FINES				Sn	Sn	08 06 40.5	-5.2
	comp=Z,0.2nm,0.3s,baz=256,slow=23,SNR=3.6						
FINES				Lg		08 07 27.8	
	comp=Z,0.3nm,0.3s,baz=248,slow=26,SNR=3.1						
KAF	Kangasniemi	8.98	54	*e*P	P	08 05 09.2	-1.9
KAF				MPN		08 05 10.6	
	comp=Z,0.4nm,0.2s						
KAF				*e*S	Sn	08 06 47.9	-6.2
SUF	Sumiainen	9.16	50	*e*P	P	08 05 11.4	-2.2
ARA0	ARCESS Array S	13.49	23	Pn	P	08 06 08.7	-3.5
	baz=212,slow=14						
ARA0	ARCESS Array S	13.49	23	*e*P	P	08 06 08.7	-3.5
ARCES	ARCESS Array B	13.49	23	Pn	P	08 06 07.9	-4.3
	comp=Z,0.1nm,0.3s,baz=212,slow=14,SNR=3.5						

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*THR **08** 08:05:09.5±0.7, 37.20N×53.81E, h14^{km}±12^{km}, ML3.0*

*CSEM **08** 08:05:11.9±0.1, 36.39N×54.21E, h8^{km}, ML3.8/1, Error ellipse: s-maj=3.2km s-min=2.2km az=163.0*

*TEH **08** 08:05:13.2, 36.42N×54.19E, h10^{km}, Mn3.5*

ISC 08 08:05:14.2±0.7**, 36.2N**±0.1×**54.21E**±0.07**, h10^{km}, n23, σ1^{s}05**/21**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKIA	Kiasar	0.43	265	Pg	Pg	08 05 21.3	-1.6
IGLO	Galoogah	0.58	276	Pg	Pg	08 05 18.8	-7.2
IANJ	Anjiloo	0.81	197	Pg	Pg	08 05 30.5	0.0
ISHM	Shahmirzad	0.86	240	Pg	Pg	08 05 30.9	-0.6
IFIR	Firoozkooh	1.33	243	Lg		08 05 59.8	
IFIR	Firoozkooh	1.33	243	Pn	Pn	08 05 39.3	+0.5
ILAS	Lasjerd	1.33	230	Pn	Pn	08 05 38.7	-0.2
IPRN	Paran-Amol	1.59	270	Pn	Pn	08 05 40.7	-1.9
IDMV	Damavand	1.89	250	Pn	Pn	08 05 48.0	+1.1
DAMV	Damavand	1.92	252	*e*PG	Pb	08 05 48.5	-0.4
DAMV				*e*SG	Sg	08 06 17.7	-0.5
DAMV				AML	AML	08 06 22.9	
	comp=N,102nm,0.5s						
DAMV	Damavand	1.92	252	*e*Pg	Pb	08 05 48.5	-0.4
	SNR=90						
DAMV				*e*Sg	Sg	08 06 17.7	-0.5
	comp=N,102nm,0.5s,SNR=90						
IAFJ	Afjeh	2.06	260	Pn	Pn	08 05 50.7	+1.4
IVRN	Varamin	2.38	239	Pn	Pn	08 05 54.7	+0.9
IVRN	Varamin	2.38	239	Lg		08 06 30.8	
ISFR	Esferayen	3.15	74	Pn	Pn	08 06 03.6	-1.2
IGZV	Gazvin	3.23	274	Pn	Pn	08 06 08.3	+2.3
IGZV	Gazvin	3.23	274	Lg		08 06 53.5	
IRAZ	Razeghan	3.58	258	Pn	Pn	08 06 11.6	+0.6
IRAZ	Razeghan	3.58	258	Lg		08 07 05.2	
NASN	Na'in	3.63	199	*e*PN	Pn	08 06 19.1	+7.4
NASN				AML	AML	08 07 23.6	
	comp=N,12nm,0.2s						
IEMG	Emamqoli	3.75	71	Pn	Pn	08 06 13.9	+0.6
ASAO	Ashtian	3.82	245	*e*PN	Pn	08 06 13.7	-0.6
KRBR	Kerman	6.60	160	*e*PN	Pn	08 07 02.7	+9.0

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*IDC **08** 08:14:17.0±1.6, 2.57N×95.66E, mb4.2/7, mb1 4.3/8, mb1mx4.0/20, mbtmp4.2/8, ML4.4/1, Error ellipse: s-maj=68.6km s-min=19.9km az=57.0*

*NEIC **08** 08:14:21.6±0.7, 2.57N×95.80E, h30^{km}, mb4.5/7, Error ellipse: s-maj=17.9km s-min=10.5km az=46.0*

ISC 08 08:14:20.7±1.0**, 2.6N**±0.1×**95.8E**±0.1**, h33^{km}, n18, σ0^{s}58**/17**, mb4.4**/14**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.47	61	*e*P	P	08 15 41.6	-0.4
CMAR	Chiang Mai Arr	16.02	11	Pn	P	08 18 06.8	+1.6
	0.5nm,0.3s,baz=197,slow=11,SNR=9.1						
PKI	Pulchoki	26.73	339	*e*P	P	08 19 59.4	+0.1
	10nm,0.5s,mb4.6						
DMN	Daman	26.87	339	*e*P	P	08 20 01.0	+0.4
	11nm,0.6s,mb4.5						
GUN	Gumba	26.88	340	*e*P	P	08 20 01.1	+0.4
	24nm,0.6s,mb4.9						
KKN	Kakani	26.98	339	*e*P	P	08 20 01.8	+0.2
	21nm,0.6s,mb4.8						
GKN	Gorkha	27.40	338	*e*P	P	08 20 04.9	-0.6
	25nm,0.8s,mb4.8						
KOLN	Koldanda	27.60	336	*e*P	P	08 20 07.5	+0.2
	9.5nm,0.6s,mb4.6						
WRA	Warramunga Arr	43.94	122	P	P	08 22 27.0	+0.3
	0.7nm,0.5s,mb3.6,baz=302,slow=9.1,SNR=13						
ASAR	Alice Springs	45.34	127	P	P	08 22 38.2	+0.4
	0.4nm,0.6s,mb3.4,baz=303,slow=8.2,SNR=5.9						
MKAR	Makanchi Array	45.54	347	P	P	08 22 38.9	-0.3
	4.1nm,0.6s,mb4.5,baz=157,slow=8.7,SNR=38						
SONM	Songino Array	45.94	10	P	P	08 22 41.7	-0.7
	4.6nm,0.7s,mb4.5,baz=190,slow=9.2,SNR=30						
SONM				PcP	PcP	08 24 19.0	-0.2
	0.3nm,0.4s,baz=176,slow=4.0,SNR=4.3						
ULN	Ulaanbaatar	46.09	10	*e*P	P	08 22 42.6	-0.9
	2.0nm,0.8s,mb4.1						
ZAL	Zalesovo	51.94	352	P	P	08 23 27.8	-0.6
	4.9nm,0.5s,mb4.7,baz=164,slow=2.4,SNR=14						
FINES	FINESS Array B	78.11	333	P	P	08 26 17.7	-0.1
	0.9nm,0.6s,mb3.9,baz=108,slow=6.0,SNR=4.9						
ARCES	ARCESS Array B	80.74	340	P	P	08 26 31.9	0.0
	2.8nm,0.9s,mb4.2,baz=101,slow=4.6,SNR=6.7						
ARCES	ARCESS Array B	80.74	340	P	P	08 26 31.9	0.0

TXAR	**Lajitas Array**	**143.13**	**29**	PKP	PKPdf	08 33 51.4	-0.7
	0.1nm,0.5s,baz=160,slow=1.2,SNR=4.2						

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*IDC **08** 08:27:13.1±1.3, 1.04N×97.36E, mb4.2/9, mb1 4.5/10, mb1mx4.2/20, mbtmp4.3/10, ML4.7/1, MS3.5/1, Ms1 3.7/1, ms1mx3.4/32, Error ellipse: s-maj=59.6km s-min=18.3km az=57.0*

*BJI **08** 08:27:17.3, 0.94N×97.45E, h53^{km}, mB4.9, mb4.8*

*NEIC **08** 08:27:19.5±2.3, 1.11N×97.43E, h44^{km}±18^{km}, mb4.5/8, Error ellipse: s-maj=19.7km s-min=7.2km az=48.0*

ISC 08 08:27:17.6±3.6**, 1.1N**±0.1×**97.5E**±0.1**, h43**^{km}±28^{km}**, n31,** σ**0^{s}72**/30**, mb4.5**/19**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.22**	**38**	*e*P	**P**	**08 28 35.6**	**+0.4**
CMAR	**Chiang Mai Arr**	**17.28**	**5**	P	**P**	**08 31 16.9**	**-0.7**
	0.9nm,0.3s,baz=196,slow=11,SNR=42						
CMAR				LR	LR	08 38 25.4	
	comp=Z,152nm,20.4s,baz=205,slow=39						
KKM	**Kota Kinabalu**	**19.34**	**75**	P	**P**	**08 31 43.2**	**+0.8**
KMI	**Kunming**	**24.39**	**12**	P	**P**	**08 32 35.3**	**+1.9**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
SHL	**Shillong**	**24.89**	**348**	*i* P	**P**	**08 32 38.0**	**-0.1**
PKI	**Pulchoki**	**28.72**	**337**	*e*P	**P**	**08 33 13.6**	**+0.3**
	comp=Z,8.7nm,0.7s,mb4.6						
GUN	**Gumba**	**28.85**	**338**	*e*P	**P**	**08 33 14.8**	**+0.4**
	comp=Z,23nm,0.8s,mb5.0						
DMN	**Daman**	**28.87**	**337**	*e*P	**P**	**08 33 15.0**	**+0.3**
	comp=Z,16nm,0.9s,mb4.7						
KKN	**Kakani**	**28.97**	**337**	*e*P	**P**	**08 33 14.8**	**-0.7**
	comp=Z,16nm,0.8s,mb4.8						
GKN	**Gorkha**	**29.41**	**336**	*e*P	**P**	**08 33 19.2**	**-0.2**
	comp=Z,12nm,0.7s,mb4.8						
KOLN	**Koldanda**	**29.63**	**335**	*e*P	**P**	**08 33 20.7**	**-0.7**
	comp=Z,10nm,0.7s,mb4.7						
ENH	**Enshi**	**31.16**	**20**	*e*P	**P**	**08 33 33.5**	**-1.4**
	comp=Z,12nm,0.7s,mb4.8						
XAN	**Xi'an**	**34.46**	**17**	P	**P**	**08 34 02.5**	**-1.0**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GTA	**Gaotai**	**38.16**	**3**	*e*P	**P**	**08 34 34.5**	**-0.3**
WRA	**Warramunga Arr**	**41.78**	**122**	P	**P**	**08 35 04.4**	**-0.5**
	comp=Z,0.8nm,0.4s,mb3.7,baz=302,slow=9.1,SNR=5.8						
ASAR	**Alice Springs**	**43.14**	**127**	P	**P**	**08 35 16.0**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.5,baz=303,slow=8.2,SNR=3.8						
WMQ	**Urumqi**	**43.39**	**350**	*e*P	**P**	**08 35 19.2**	**+1.3**
KS15	**Wonju Array Si**	**45.73**	**34**	*e*P	**P**	**08 35 36.7**	**0.0**
SONM	**Songino Array**	**47.16**	**8**	P	**P**	**08 35 48.3**	**+0.4**
	comp=Z,2.6nm,0.5s,mb4.4,baz=192,slow=9.7,SNR=24						
SONM				PcP	PcP	08 37 19.5	+0.1
	comp=Z,1.4nm,0.6s,baz=189,slow=4.1,SNR=5.9						
MKAR	**Makanchi Array**	**47.37**	**346**	P	**P**	**08 35 49.7**	**+0.2**
	comp=Z,7.4nm,0.7s,mb4.7,baz=159,slow=7.8,SNR=67						
MKAR	**Makanchi Array**	**47.37**	**346**	P	**P**	**08 35 49.7**	**+0.2**
HIA	**Hailar**	**51.63**	**18**	P	**P**	**08 36 21.8**	**-0.3**
STKA	**Stephens Creek**	**53.12**	**132**	P	**P**	**08 36 33.4**	**-0.1**
	comp=Z,2.4nm,1.0s,mb4.1,baz=325,slow=5.6,SNR=4.2						
STKA	**Stephens Creek**	**53.12**	**132**	P	**P**	**08 36 33.4**	**-0.1**
ZAL	**Zalesovo**	**53.66**	**351**	P	**P**	**08 36 36.8**	**-0.4**
	comp=Z,10.0nm,0.5s,mb5.0,baz=309,slow=4.4						
CHKZ	**Chkalovo**	**56.88**	**341**	*e*P	**P**	**08 36 59.5**	**-1.0**
	comp=Z,9.3nm,0.8s,mb4.9						
ARCES	**ARCESS Array B**	**82.69**	**340**	P	**P**	**08 39 38.4**	**+0.5**
	comp=Z,1.7nm,0.9s,mb4.1,baz=76,slow=5.0,SNR=6.6						
GERES	**GERESS Array B**	**85.04**	**319**	P	**P**	**08 39 51.1**	**+1.0**
	comp=Z,1.0nm,0.6s,mb4.1,baz=90,slow=4.0,SNR=4.9						
NB2	**NORSAR Subarra**	**87.19**	**331**	P	**P**	**08 40 00.8**	**+0.4**
	comp=Z,1.2nm,0.8s,mb4.2,baz=91,slow=4.8						
NOA	**NORSAR Array B**	**87.19**	**331**	P	**P**	**08 40 00.9**	**+0.5**
	comp=Z,1.3nm,0.7s,mb4.2,baz=95,slow=4.7,SNR=4.1						
TXAR	**Lajitas Array**	**143.59**	**32**	PKP	PKPdf	08 46 49.8	+1.3
	comp=Z,0.3nm,0.8s,SNR=4.5						

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*IDC **08** 08:29:36.3±2.5, 6.47S×127.41E, mb3.6/1, mb1 4.5/3, mb1mx3.9/15, mbtmp4.2/3, ML4.3/2, Error ellipse: s-maj=307.6km s-min=31.3km az=65.0*

ISC 08 08:29:48.1±3.2**, 7.2S**±0.3×**126.7E**±0.6**, h124**^{km}±38^{km}**, n6,** σ**0^{s}70**/9**, mb3.4**/1**, 3C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.90**	**135**	⇑*i*P	**P**	**08 31 41.7**	**+0.2**
KAKA				*i* S	**S**	**08 32 58.0**	**-12**
WRA	**Warramunga Arr**	**14.72**	**151**	Pn	**P**	**08 33 10.9**	**-0.4**
	1.1nm,0.3s,baz=332,slow=13,SNR=66						
WRA				Sn	**S**	**08 35 50.0**	**-1.3**
	0.3nm,0.3s,baz=337,slow=20,SNR=4.0						
WB2	**Warramunga Arr**	**14.72**	**150**	⇑*i*P	**P**	**08 33 11.0**	**-0.3**
WB2				*e*S	**S**	**08 35 52.8**	**+1.3**
ASAR	**Alice Springs**	**17.82**	**158**	P	**P**	**08 33 49.9**	**+0.2**
	2.2nm,0.3s,baz=343,slow=10,SNR=128						
ASPA	**Alice Springs**	**17.82**	**158**	⇑*i*P	**P**	**08 33 50.0**	**+0.3**
MKAR	**Makanchi Array**	**66.60**	**328**	P	**P**	**08 40 27.3**	**0.0**
	0.4nm,0.6s,mb3.4,baz=120,slow=7.5,SNR=4.4						

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*IDC **08** 08:46:00.7±1.3, 39.00N×107.62W, mb1 3.4/2, mb1mx3.2/23, mbtmp2.9/2, ML3.1/2, Error ellipse: s-maj=57.0km s-min=10.6km az=70.0*

NEIC 08 08:46:00.4±0.5**, 38.95N**×**107.53W, h1**^{km}**, ML3.5, 1D, Error ellipse: s-maj=7.3km s-min=6.0km az=151.0, Suspected Mining induced., Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OMCO	**Orchard Mesa**	**0.78**	**276**	P	Pg	08 46 15.8	-0.1
PV01	**Paradox Valley**	**1.16**	**225**	⇓*i*P	Pb	08 46 22.3	-0.5
PV01				*e*S	Sb	08 46 38.5	+0.3
PV10	**Paradox Valley**	**1.32**	**245**	*e*P	Pb	08 46 25.9	+0.3
ISCO	**Idaho Springs**	**1.71**	**60**	*e*Pn	Pn	08 46 31.5	0.0
ISCO				*e*S	Sb	08 46 57.0	+2.8
SDCO	**Great Sand Dun**	**2.00**	**126**	*e*Pn	Pn	08 46 36.2	+0.5
RWWY	**Rawlins**	**2.74**	**5**	*e*Pn	Pn	08 46 44.9	-1.5
RWWY				*e*Pg	Pg	08 46 51.1	-4.0
RWWY				*e*Sg	Sg	08 47 30.9	-0.8
PHWY	**Pilot Hill**	**2.83**	**33**	*e*Pn	Pn	08 46 47.1	-0.5
PHWY				*e*Pg	Pg	08 46 53.4	-3.6
DAU	**Daniels Canyon**	**3.23**	**298**	*e*Pn	Pn	08 46 53.0	-0.2
MPU	**Maple Canyon**	**3.35**	**290**	*e*Pn	Pn	08 46 54.4	-0.6
MPU				*e*Pb	Pb	08 47 01.5	+1.1
MPU				*e*Pg	Pg	08 47 05.2	-2.1
JLU	**Jordanelle**	**3.44**	**300**	*e*Pn	Pn	08 46 57.6	+1.3
JLU				*e*Pg	Pg	08 47 08.1	-1.1
MSU	**Marysvale**	**3.66**	**265**	*e*Pn	Pn	08 46 59.9	+0.5
TCUT	**Toone Canyon**	**3.68**	**307**	*e*Pn	Pn	08 47 00.7	+1.0
TCUT				*i* Pg	Pg	08 47 12.9	-0.9
CTU	**Camp Tracy**	**3.69**	**299**	*e*Pn	Pn	08 46 59.3	-0.5
CTU				*e*Pg	Pg	08 47 12.1	-1.9
MVU	**Marysvale**	**3.69**	**264**	*e*Pn	Pn	08 47 00.9	+1.1
NOQ	**North Oquirrh**	**3.92**	**297**	Pn	Pn	08 47 05.2	+2.1
NOQ				*e*Pg	Pg	08 47 16.2	-2.5
HWUT	**Hardware Ranch**	**4.07**	**312**	*e*Pn	Pn	08 47 06.1	+0.9
HWUT				*e*Sg	Sg	08 48 12.7	-3.2
ANMO	**Albuquerque**	**4.09**	**168**	*e*Pn	Pn	08 47 03.8	-1.6
ANMO				*e*Pg	Pg	08 47 15.9	-6.0
ANMO				*e*Sg	Sg	08 48 11.7	-4.7
PDAR	**Pinedale Array**	**4.11**	**339**	Pn	Pn	08 47 06.0	+0.2
	0.2nm,0.3s,baz=153,slow=12,SNR=9.2						
PDAR				Pg	Pg	08 47 16.3	-6.1
	0.8nm,0.3s,baz=152,slow=15,SNR=9.8						
PDAR				Lg		08 48 10.5	
	0.7nm,0.3s,baz=135,slow=27,SNR=4.8						
DUG	**Dugway**	**4.27**	**289**	Pn	Pn	08 47 05.8	-2.2
DUG				*e*Pg	Pg	08 47 24.1	-1.5
SPUT	**South Promonto**	**4.45**	**304**	Pn	Pn	08 47 10.2	-0.3
WUAZ	**Wupatki**	**4.60**	**223**	*e*Pn	Pn	08 47 11.4	-1.3
WUAZ				*e*Pg	Pg	08 47 24.5	-7.8
WUAZ				*e*Sg	Sg	08 48 28.6	-5.0
BGU	**Big Grassy Mou**	**4.67**	**297**	*e*Pn	Pn	08 47 11.8	-1.8
AHID	**Auburn Hatcher**	**4.67**	**326**	*e*Pn	Pn	08 47 14.8	+1.1
AHID				*e*Pb	Pb	08 47 27.5	+4.5
AHID				*e*Pg	Pg	08 47 34.2	+0.5
ARUT	**Antelope Range**	**4.79**	**258**	Pn	Pn	08 47 17.2	+1.7
ARUT				*e*Pg	Pg	08 47 30.8	-5.2
BNM	**Barren Site**	**4.85**	**171**	*e*Pg	Pg	08 47 30.9	-6.3
HVU	**Hansel Valley**	**4.90**	**307**	Pn	Pn	08 47 12.3	-4.7
SNOW	**Snow King Moun**	**5.12**	**333**	*e*Pn	Pn	08 47 20.8	+0.7
	18nm,0.8s						
SNOW				*e*Pg	Pg	08 47 34.5	-8.2
SNOW				*e*S	Sg	08 48 38.7	-12
WUWY	**Wally Ulrich**	**5.18**	**333**	*e*Pn	Pn	08 47 22.4	+1.5
TPAW	**Teton Pass**	**5.22**	**331**	*e*Pn	Pn	08 47 21.1	-0.3
TPAW				*e*Pg	Pg	08 47 41.6	-2.9
RRI2	**Red Ridge**	**5.24**	**328**	*e*Pn	Pn	08 47 22.8	+1.0
	12nm,0.8s						
RRI2				*e*Pg	Pg	08 47 38.5	-6.5
MOOW	**Moose Ponds**	**5.37**	**334**	Pn	Pn	08 47 24.2	+0.6
IMW	**Indian Meadow**	**5.56**	**334**	*e*Pn	Pn	08 47 26.9	+0.6
IMW				*e*S	Sg	08 48 56.2	-9.5
RSSD	**Black Hills**	**5.79**	**26**	Pn	Pn	08 47 27.6	-1.9
RSSD				*e*Pg	Pg	08 47 48.0	-8.0
RSSD				*e*S	Sg	08 49 00.1	-13
AMTX	**Amarillo**	**6.20**	**129**	*e*Pg	Pg	08 47 55.3	-8.9
ELK	**Elko**	**6.20**	**289**	*e*Pg	Pg	08 47 58.8	-5.4
CPRX	**Cap Rock**	**6.61**	**152**	Pn	Pn	08 47 39.2	-1.9
NEN	**Nelson**	**6.70**	**243**	Pn	Pn	08 47 40.2	-2.2
HLID	**Hailey**	**6.94**	**314**	Pn	Pn	08 47 42.7	-3.0
HLID				*e*Pg	Pg	08 48 08.2	-11
MCMT	**McKenzie Canyo**	**7.08**	**328**	Pn	Pn	08 47 45.7	-2.1
TUC	**Tucson**	**7.14**	**203**	*e*Pn	Pn	08 47 36.0	-13
TUC				*e*Pg	Pg	08 48 10.9	-12
TUC				*e*Sg	Sg	08 49 43.2	-15
WMOK	**Wichita Mounta**	**8.18**	**118**	Pn	P	08 47 56.3	-6.7
WMOK				*e*Pg	P	08 48 35.1	+32
WMOK				*e*Sg	Sg	08 50 24.6	-7.9
NVAR	**Mina Array Bea**	**8.45**	**270**	Pg	P	08 48 18.7	+12
	0.1nm,0.3s,baz=87,slow=20,SNR=5.2						
CHMT	**Chamberlain Mo**	**8.99**	**334**	*e*P	P	08 48 14.2	-0.2
TXAR	**Lajitas Array**	**10.11**	**160**	Pn	P	08 48 30.3	+0.4
	0.0nm,0.3s,baz=344,slow=9.1,SNR=4.9						
TXAR				Pg	P	08 49 11.2	+41
	0.0nm,0.3s,baz=357,slow=13,SNR=5.8						

IGQ 08 08:56:12.3, 2.06S×80.93W, h25^{km}±5^{km}, mb4.0, 4C-2D, Error ellipse: s-maj=8.2km s-min=4.3km az=173.7, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	**Salinas**	**0.14**	**205**	P	Pb	08 56 30.9	+14
HOJA	**Cerro de Hojas**	**1.07**	**21**	⇑P	Pn	08 56 32.2	+0.3
JAMA	**Jama**	**1.93**	**22**	P	Pn	08 56 46.2	+2.1
JAMA				S	Sn	08 57 08.3	+0.6
IGUA	**Igualata**	**2.36**	**76**	P	Pn	08 56 51.1	+0.8
CUSU	**Cusua**	**2.52**	**76**	P	Pn	08 56 54.6	+1.9
JUIV	**Juive**	**2.54**	**76**	P	Pn	08 56 54.5	+1.5
RUN5	**Runtun**	**2.58**	**76**	P	Pn	08 56 55.7	+2.2
ULBA	**Ulba**	**2.59**	**77**	⇑P	Pn	08 56 55.0	+1.4
PISA	**Pisayambo**	**2.73**	**69**	P	Pn	08 56 56.9	+1.4
CAMI	**Rancho Maria**	**2.79**	**61**	P	Pn	08 56 58.2	+1.8
NAS1	**Nasa**	**2.83**	**60**	P	Pn	08 57 00.1	+3.1
VC1	**Cotopaxi 1**	**2.89**	**61**	P	Pn	08 56 59.6	+1.7
VC1				S	Sn	08 57 33.7	+1.5
JUA2	**San Juan 2**	**2.96**	**52**	P	Pn	08 57 00.7	+1.9
TERV	**Terraza Guagua**	**2.98**	**51**	P	Pn	08 57 00.8	+1.6
TERV				S	Sn	08 57 34.9	+0.4
GGP	**Refugio Guagua**	**2.99**	**51**	⇓P	Pn	08 57 00.2	+0.9
PINO	**Pino**	**2.99**	**51**	⇑P	Pn	08 57 00.7	+1.4
YANA	**Yana**	**3.04**	**51**	⇓P	Pn	08 57 01.0	+0.9
YANA				S	Sn	08 57 37.0	+0.9
ANTI	**Antisana**	**3.20**	**60**	⇑P	Pn	08 57 04.6	+2.4

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*NEIC **08** 09:23:29.7±1.0, 18.07S×178.34W, h565^{km}±13^{km}, mb3.8/2, Error ellipse: s-maj=19.6km s-min=10.6km az=148.0*

*IDC **08** 09:23:29.6±1.8, 18.09S×178.32W, h561^{km}±22^{km}, mb3.2/10, mb1 3.4/11, mb1mx3.3/19, mbtmp4.1/11, Error ellipse: s-maj=23.9km s-min=13.5km az=149.0*

ISC 08 09:23:27.9±1.0**, 18.1S**±0.1×**178.4W**±0.1**, h551**^{km}±15^{km}**, n21,** σ**0^{s}96**/17**, mb3.6**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.56**	**58**	P	**P**	**09 25 23.7**	**+1.7**
	4.2nm,0.3s,baz=180,slow=5.0,SNR=5.7						
AFI				S	**S**	**09 26 51.9**	**-1.0**
	2.3nm,0.3s,baz=90,slow=20,SNR=3.0						
URZ	**Urewera**	**20.52**	**190**	P	**P**	**09 27 27.9**	**-1.7**
	3.7nm,0.4s,baz=314,slow=21,SNR=6.3						
PMG	**Port Moresby**	**34.52**	**280**	P	**P**	**09 29 31.8**	**-0.1**
	8.9nm,0.5s,mb4.6,baz=346,slow=12,SNR=6.4						
STKA	**Stephens Creek**	**38.60**	**241**	P	**P**	**09 30 07.0**	**+1.8**
	0.5nm,0.4s,mb3.4,baz=105,slow=15,SNR=3.7						
WB2	**Warramunga Arr**	**44.63**	**260**	*e*P	**P**	**09 30 53.0**	**-0.3**
WRAB	**Tennant Creek**	**44.63**	**260**	*e*P	**P**	**09 30 52.7**	**-0.6**
	2.5nm,0.8s,mb3.8						
WRA	**Warramunga Arr**	**44.64**	**260**	P	**P**	**09 30 53.1**	**-0.3**
	0.8nm,0.5s,mb3.5,baz=94,slow=8.2,SNR=33						
WRA				PcP	PcP	09 32 23.5	-1.0
	0.3nm,0.3s,baz=89,slow=3.8,SNR=9.4						
ASAR	**Alice Springs**	**44.79**	**254**	P	**P**	**09 30 54.9**	**+0.4**
	4.0nm,0.5s,mb4.2,baz=88,slow=8.5,SNR=75						
ASAR				PcP	PcP	09 32 23.9	-1.1
	0.9nm,0.5s,baz=105,slow=3.6,SNR=9.0						
ASPA	**Alice Springs**	**44.79**	**254**	*e*P	**P**	**09 30 55.0**	**+0.5**
MJAR	**Matsushiro Arr**	**68.04**	**323**	P	**P**	**09 33 33.3**	**-0.9**
	1.7nm,0.5s,mb3.9,baz=152,slow=6.5,SNR=7.2						
QSPA	**South Pole Qui**	**72.01**	**180**	P	**P**	**09 33 57.1**	**+0.1**
	2.3nm,0.9s,mb3.6						
NVAR	**Mina Array Bea**	**79.50**	**44**	P	**P**	**09 34 39.4**	**+0.7**
	0.5nm,0.7s,mb3.0,baz=237,slow=9.4,SNR=4.5						
NVAR	**Mina Array Bea**	**79.50**	**44**	P	**P**	**09 34 39.4**	**+0.7**
ILAR	**Eielson Array**	**86.01**	**13**	P	**P**	**09 35 09.3**	**-1.3**
	0.5nm,0.5s,mb3.4,baz=220,slow=5.3,SNR=9.0						
TXAR	**Lajitas Array**	**86.04**	**58**	P	**P**	**09 35 12.6**	**+1.0**
	0.9nm,0.8s,mb3.4,baz=216,slow=5.6,SNR=13						
PDAR	**Pinedale Array**	**87.43**	**43**	P	**P**	**09 35 17.9**	**+0.1**
	0.5nm,0.7s,mb3.3,baz=180,slow=1.5,SNR=4.6						
MKAR	**Makanchi Array**	**109.26**	**314**	PKiKP		09 40 54.3	
	0.2nm,0.5s,baz=90,slow=1.2,SNR=4.2						
BRTR	**Keskin Array B**	**144.91**	**315**	PKP	PKPdf	09 42 04.0	+1.7
	1.6nm,0.7s,baz=135,slow=3.5,SNR=8.9						
CLL	**Collm**	**145.61**	**347**	*i* PKIKP	PKPdf	09 42 05.3	+2.2
	logA/T=1.0						
GERES	**GERESS Array B**	**147.76**	**345**	PKPbc	PKPdf	09 42 11.2	+4.6
	1.7nm,0.6s,baz=27,slow=3.0,SNR=8.4						
DAVOX	**Davos**	**150.55**	**348**	PKPbc	PKPdf	09 42 18.7	+7.6
	4.1nm,0.6s,baz=210,slow=3.1,SNR=5.5						

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*BER **08** 09:35:34.5±4.1, 59.32N×27.25E, ML2.2(NAO), Suspected explosion*

*NAO **08** 09:35:36.2±2.1, 59.42N×27.06E, ML2.2*

HEL 08 09:35:34.2±0.4**, 59.30N**×**27.23E, ML1.7**(FIA0)**, ML1.8**(UPP)**, ML2.2**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIA0	**FINESS Array S**	**2.22**	**346**	*e*P	Pn	09 36 11.8	-1.0
FIA0				*e*SB	Sb	09 36 41.0	-2.2
FIA0				*e*RG		09 36 58.9	
FIA0	**FINESS Array S**	**2.22**	**346**	Pn	Pn	09 36 11.9	-0.9
	baz=165,slow=18						
FIA0				Lg		09 36 42.0	
	baz=170,slow=28						
FIA0				Rg		09 36 57.0	
	baz=167,slow=37						
GRAU	**Graesoe**	**4.51**	**287**	*e*P	Pn	09 36 40.9	-4.4
UMAU	**Umeaa**	**5.56**	**329**	*e*P	Pn	09 36 58.5	-1.7
HEMU	**Hemsoen**	**5.61**	**311**	*e*P	Pn	09 36 58.8	-2.0
HEMU				*e*S	Sn	09 38 01.8	-5.2
BURU	**Burvik**	**5.97**	**335**	*e*P	Pn	09 37 03.2	-2.9
BREU	**Bredtraesk**	**6.18**	**322**	*e*P	Pn	09 37 06.7	-2.2
SVAU	**Svanoeiden**	**6.34**	**329**	*e*P	Pn	09 37 08.2	-2.9
SJUU	**Sjulsmark**	**6.75**	**340**	*e*P	Pn	09 37 14.6	-2.4
HFS	**Hagfors**	**6.90**	**283**	Pn	Pn	09 37 14.9	-4.1
	baz=121,slow=12						
HFS				Sn	Sn	09 38 31.4	-7.8
	baz=101,slow=37						
HFS				Lg		09 39 06.4	
	baz=90,slow=37						
LILU	**Lilltraesk**	**6.92**	**333**	*e*P	Pn	09 37 16.0	-3.3
ARA0	**ARCESS Array S**	**10.30**	**357**	Pn	P	09 38 00.6	-5.5
	baz=171,slow=14						
ARA0				Sn	S	09 39 50.8	-13
	baz=178,slow=28						
ARA0				Lg		09 40 50.8	
	baz=166,slow=37						

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*BJI **08** 09:55:28.6, 62.43N×27.34W, h10^{km}, mB5.1, mb4.7, Ms4.8, Msz4.6*

*MOS **08** 09:55:29.7±1.0, 61.99N×26.67W, h10^{km}, mb4.7/17, Error ellipse: s-maj=13.2km s-min=10.3km az=123.2*

*IDC **08** 09:55:29.6±0.6, 61.95N×26.64W, mb4.0/19, mb1 4.2/21, mb1mx4.1/32, mbtmp4.0/21, ML3.4/2, MS3.7/21, Ms1 3.7/21, ms1mx3.6/35, Error ellipse: s-maj=22.0km s-min=11.5km az=8.0*

*CSEM **08** 09:55:30.6±0.1, 62.04N×26.66W, h20^{km}, mb4.6/30, Error ellipse: s-maj=6.1km s-min=1.9km az=8.0*

*NEIC **08** 09:55:31.5±0.2, 61.95N×26.64W, h10^{km}, mb4.6/27, Error ellipse: s-maj=7.2km s-min=3.0km az=192.0*

*ZUR_RM **08** 09:55:31, 61.95N×26.64W, h12^{km}, Mw4.6/8, Moment Tensor Solution. s8 Moment tensor: Scale 10^{15}Nm; M_{rr}-8.36; $M_{\theta\theta}$0.95; $M_{\phi\phi}$7.41; $M_{r\theta}$3.39; $M_{\theta\phi}$2.45; $M_{\phi r}$1.67; Best double couple: $M_0$9.09×10^{15} NP1:ϕ_s214°,δ56°,λ-72°. NP2:ϕ_s4°,δ38°,λ-114°. Principal axes: T 8.667, Plg9°, Azm292°; N .836, Plg15°, Azm24°; P -9.503, Plg72°, Azm170°;*

ISC 08 09:55:29.8±0.2**, 62.01N**±0.06×**26.65W**±0.06**, h10**^{km}**, (h15**^{km}±.7^{km}**:pP-P), n163,** σ**0^{s}95**/152**, mb4.4**/53**, MS3.8**/29**, 3C-5D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**8.72**	**10**	*e*P	**P**	**09 57 33.9**	**-5.0**
SCO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SCO	**Scoresbysund**	**8.72**	**10**	*e*P	**P**	**09 57 33.9**	**-5.0**
	comp=Z,6.8nm,0.8s						
SCO				*i* S	Sx	09 59 53.8	
SCO	**Scoresbysund**	**8.72**	**10**	*i* P	**P**	**09 57 33.9**	**-5.0**
	comp=Z,6.8nm,0.8s						
SCO				*i* S	Sx	09 59 53.8	
JMIC	**Jan Mayen**	**11.49**	**31**	LR	LR	10 01 42.8	
	comp=Z,227nm,19.1s,baz=242,slow=32						
SUMG	**Summit**	**11.52**	**342**	*e*P	**P**	**09 58 16.1**	**-1.0**
	comp=Z,11nm,0.8s						
SUMG	**Summit**	**11.52**	**342**	*e*P	**P**	**09 58 16.1**	**-1.0**
	comp=Z,11nm,0.8s						
ESK	**Eskdalemuir**	**13.86**	**108**	P	**P**	**09 58 47.5**	**-0.8**
ESK				pmax	pmax		
	comp=Z,16nm,1.1s						
ESK	**Eskdalemuir**	**13.86**	**108**	P	**P**	**09 58 47.5**	**-0.8**
	comp=Z,16nm,1.1s						
ESK	**Eskdalemuir**	**13.86**	**108**	P	**P**	**09 58 47.5**	**-0.8**
	comp=Z,16nm,1.1s						
EKA	**Eskdalemuir Ar**	**13.87**	**108**	Pn	**P**	**09 58 46.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=295,slow=14,SNR=5.9						
DAG	**Danmarks Havn**	**15.07**	**7**	⇓*e*P	**P**	**09 59 06.1**	**+2.1**
DAG				pmax	pmax		
	comp=Z,12nm,1.3s						
DAG	**Danmarks Havn**	**15.07**	**7**	⇓*i*P	**P**	**09 59 06.1**	**+2.1**
	comp=Z,12nm,1.3s						
DAG	**Danmarks Havn**	**15.07**	**7**	⇓*e*P	**P**	**09 59 06.1**	**+2.1**
	comp=Z,12nm,1.3s						
NOA	**NORSAR Array B**	**17.92**	**76**	P	**P**	**09 59 39.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=195,slow=15,SNR=2.7						
NOA				LR	LR	10 06 01.8	
	comp=Z,161nm,19.0s,baz=300,slow=35						
HFS	**Hagfors**	**19.39**	**77**	LR	LR	10 07 06.1	
	comp=Z,234nm,18.2s,baz=352,slow=36						
DOU	**Dourbes**	**20.89**	**110**	P	**P**	**10 00 14.2**	**-0.1**
MEM	**Membach**	**21.15**	**108**	P	**P**	**10 00 15.9**	**-1.1**
SCHQ	**Schefferville**	**21.92**	**269**	P	**P**	**10 00 22.2**	**-2.5**
	comp=Z,4.1nm,0.8s,mb3.9,baz=45,slow=10.0,SNR=3.0						
SCHQ				LR	LR	10 07 36.7	
	comp=Z,96nm,18.4s,MS3.2,baz=114,slow=33						
RUE	**Ruedersdorf**	**23.48**	**95**	P	**P**	**10 00 41.5**	**+1.7**
RUE	**Ruedersdorf**	**23.48**	**95**	P	**P**	**10 00 41.5**	**+1.6**
MOX	**Moxa**	**23.69**	**101**	*e*P	**P**	**10 00 43.4**	**+1.5**
MOX				pmax	pmax		
	comp=Z,28nm,1.6s,mb4.4						
MOX				MLR	MLR		
	comp=Z,200nm,17.0s,MS3.6						
MOX	**Moxa**	**23.69**	**101**	⇑*e*P	**P**	**10 00 43.4**	**+1.5**
	comp=Z,28nm,1.6s,mb4.4						
MOX				LR	LR		
	comp=Z,200nm,17.0s,MS3.6						
MOX	**Moxa**	**23.69**	**101**	⇑*i*P	**P**	**10 00 43.4**	**+1.5**
	comp=Z,logA/T=1.2,mb4.4						
MOX				L		10 11 23.0	
CLL	**Collm**	**23.88**	**98**	*e*P	**P**	**10 00 44.0**	**+0.2**
CLL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.1						
CLL				MLR	MLR		
	comp=Z,200nm,17.5s,MS3.6						
CLL	**Collm**	**23.88**	**98**	*e*P	**P**	**10 00 44.0**	**+0.2**
	comp=Z,9.0nm,1.2s,mb4.1						
CLL				LR	LR		
	comp=Z,200nm,17.5s,MS3.6						
CLL	**Collm**	**23.88**	**98**	P	**P**	**10 00 44.0**	**+0.2**
	comp=Z,logA/T=0.9,mb4.1						
CLL	**Collm**	**23.88**	**98**	*e*P	**P**	**10 00 44.0**	**+0.2**
	comp=Z,9.0nm,1.2s,mb4.1						
STU	**Stuttgart**	**23.91**	**107**	*e*P	**P**	**10 00 46.0**	**+1.9**
GRA1	**Grafenberg Arr**	**24.17**	**103**	*e*P	**P**	**10 00 47.9**	**+1.3**
	comp=Z,8.0nm,1.0s,mb4.1						
GRF	**Grafenberg Arr**	**24.17**	**103**	*e*P	**P**	**10 00 47.9**	**+1.3**
GRF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
GRF	**Grafenberg Arr**	**24.17**	**103**	*e*P	**P**	**10 00 47.9**	**+1.3**
GRF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
GRF	**Grafenberg Arr**	**24.17**	**103**	*e*P	**P**	**10 00 47.9**	**+1.3**
	comp=Z,8.0nm,1.0s,mb4.1						
FINES	**FINESS Array B**	**24.42**	**68**	P	**P**	**10 00 49.9**	**+0.9**
	comp=Z,3.6nm,0.9s,mb3.8,baz=309,slow=12,SNR=7.0						
FINES				LR	LR	10 09 59.7	
	comp=Z,79nm,20.7s,MS3.2,baz=171,slow=36						
BRG	**Berggiesshubel**	**24.61**	**98**	*e*P	**P**	**10 00 52.7**	**+1.8**
BRG				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
BRG				MLR	MLR		
	comp=N,240nm,22.4s,MS3.7						
BRG				MLR	MLR		
	comp=E,100nm,22.4s,MS3.7						
BRG				MLR	MLR		
	comp=Z,150nm,14.2s						
BRG	**Berggiesshubel**	**24.61**	**98**	*e*P	**P**	**10 00 52.7**	**+1.8**
	comp=Z,7.6nm,1.2s,mb4.1						
BRG				*e*		10 01 09.6	
BRG				LR	LR		
	comp=Z,150nm,14.2s,MS3.6						
PVCC	**Panska Ves**	**25.14**	**98**	*e*P	**P**	**10 00 56.5**	**+0.5**
PVCC				LR	LR		
	comp=Z,200nm,17.6s,MS3.7						
PVCC	**Panska Ves**	**25.14**	**98**	*e*P	**P**	**10 00 56.5**	**+0.5**
PVCC				AMS	AMS	10 11 30.0	
	comp=Z,200nm,17.6s						
PRU	**Pruhonice**	**25.50**	**99**	*e*P	**P**	**10 00 59.3**	**-0.1**
PRU				LR	LR		
	comp=Z,200nm,14.7s,MS3.8						
PRU	**Pruhonice**	**25.50**	**99**	*e*P	**P**	**10 00 59.3**	**-0.1**
PRU				AMS	AMS	10 12 20.0	
	comp=Z,200nm,14.7s						
KHC	**Kasperske Hory**	**25.65**	**102**	*e*P	**P**	**10 01 01.7**	**+0.9**
KHC				AMS	AMS	10 11 20.0	
	comp=Z,200nm,13.9s						
DAVOX	**Davos**	**25.70**	**109**	LR	LR	10 09 39.3	
	comp=Z,126nm,21.7s,MS3.4,baz=82,slow=33						
KSP	**Ksiaz**	**25.73**	**96**	*e*P	**P**	**10 01 01.7**	**+0.1**
UPC	**Upice**	**25.83**	**97**	*e*P	**P**	**10 01 02.8**	**+0.3**
GERES	**GERESS Array B**	**25.91**	**102**	P	**P**	**10 01 03.1**	**-0.1**
	comp=Z,0.3nm,0.3s,mb3.3,baz=299,slow=10,SNR=3.7						
GERES				LR	LR	10 11 35.0	
	comp=Z,195nm,18.1s,MS3.7,baz=8.5,slow=37						
DPC	**Dobruska-Polom**	**26.08**	**97**	*e*P	**P**	**10 01 05.2**	**+0.4**
DPC				AMS	AMS	10 10 40.0	
	comp=Z,200nm,19.5s						
ESDC	**Sonseca Array**	**26.28**	**138**	P	**P**	**10 01 05.7**	**-1.0**
	comp=Z,0.2nm,0.3s,mb3.2,baz=342,slow=9.4,SNR=6.6						
MORC	**Moravsky Berou**	**27.05**	**96**	*e*P	**P**	**10 01 13.5**	**-0.2**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.1						
MORC	**Moravsky Berou**	**27.05**	**96**	*e*P	**P**	**10 01 13.5**	**-0.2**
	comp=Z,6.6nm,1.1s,mb4.1						
MORC	**Moravsky Berou**	**27.05**	**96**	*e*P	**P**	**10 01 13.5**	**-0.2**
	comp=Z,6.6nm,1.1s,mb4.1						
OKC	**Ostrava-Krasne**	**27.29**	**96**	AMS	AMS	10 11 30.0	
	comp=Z,200nm,17.0s						
AKASG	**Malin Array Be**	**31.92**	**85**	P	**P**	**10 01 55.0**	**-2.2**
	comp=Z,0.9nm,0.5s,mb3.9,baz=312,slow=8.9,SNR=4.2						
AKASG	**Malin Array Be**	**31.92**	**85**	P	**P**	**10 01 55.0**	**-2.2**

OBN	Obninsk	32.46	73	*e*P	P	10 02 01.4	-0.4
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6						
OBN				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.5						
OBN	Obninsk	32.46	73	*e*P	P	10 02 01.4	-0.4
	comp=Z,100nm,20.0s						
YKA	Yellowknife Ar	37.93	311	P	P	10 02 48.1	-0.4
	comp=Z,2.6nm,1.0s,mb3.9,baz=48,slow=8.8,SNR=13						
YKA				PcP	PcP	10 05 03.5	-1.5
	comp=Z,0.7nm,0.7s,baz=38,slow=3.1,SNR=7.1						
YKA				LR	LR	10 17 59.6	
	comp=Z,125nm,18.5s,MS3.8,baz=75,slow=36						
YKA	Yellowknife Ar	37.93	311	PcP	PcP	10 05 03.5	-1.5
ULM	Lac du Bonnet	38.42	285	LR	LR	10 17 42.8	
	comp=Z,86nm,18.5s,MS3.6,baz=11,slow=35						
INK	Inuvik	39.86	326	P	P	10 03 03.7	-0.9
	comp=Z,2.0nm,1.0s,mb3.8,baz=39,slow=12,SNR=5.6						
INK				LR	LR	10 19 41.2	
	comp=Z,102nm,18.3s,MS3.7,baz=315,slow=36						
ELN	Prospectdale	41.24	259	*e*P	P	10 03 16.8	+0.6
ELN	Prospectdale	41.24	259	*e*P	P	10 03 16.8	+0.6
SOC	Sochi	42.00	84	*e*P	P	10 03 21.3	-0.9
SOC				*e*PPP	PPP	10 05 25.1	-9.0
SOC				*e*S	S	10 09 39.0	-1.8
SOC				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.4						
SOC				pmax	pmax		
	comp=N,3.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,3.0nm,0.3s						
SOC				MLR	MLR		
	comp=N,87nm,21.0s,MS4.1						
SOC				MLR	MLR		
	comp=Z,118nm,21.0s,MS3.7						
SOC				MLR	MLR		
	comp=E,249nm,24.0s,MS4.1						
SOC	Sochi	42.00	84	*e*P	P	10 03 21.3	-0.9
	comp=E,3.0nm,0.6s,mb4.1						
SOC				*e*S	S	10 09 39.0	-1.8
BRTR	Keskin Array B	42.13	93	P	P	10 03 24.0	+0.6
	comp=E,1.5nm,0.8s,mb3.7,baz=320,slow=5.3,SNR=5.7						
WVT	Waverly	45.44	265	*e*P	P	10 03 50.0	-0.2
WVT				pmax	pmax		
	comp=Z,21nm,1.7s,mb4.7						
WVT	Waverly	45.44	265	*e*P	P	10 03 50.0	-0.2
	comp=Z,21nm,1.7s,mb4.7						
WVT	Waverly	45.44	265	*e*P	P	10 03 50.0	-0.2
	comp=Z,21nm,1.7s,mb4.7						
TIXI	Tiksi	45.55	11	*e*P	P	10 03 51.4	+0.8
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
TIXI	Tiksi	45.55	11	*e*P	P	10 03 51.4	+0.8
	comp=Z,4.0nm,1.0s,mb4.3						
ILAR	Eielson Array	45.99	329	P	P	10 03 54.5	+0.4
	comp=Z,2.4nm,1.0s,mb4.1,baz=28,slow=7.5,SNR=14						
ILAR				PcP	PcP	10 05 29.8	-1.6
	comp=Z,1.3nm,0.8s,baz=357,slow=3.1,SNR=11						
ILAR				LR	LR	10 24 21.0	
	comp=Z,68nm,18.8s,MS3.6,baz=1.3,slow=38						
ILAR	Eielson Array	45.99	329	P	P	10 03 54.5	+0.3
ILAR	Eielson Array	45.99	329	PcP	PcP	10 05 29.8	-1.6
COLA	College	46.14	330	*e*P	P	10 03 55.2	-0.1
COLA	College	46.14	330	*e*P	P	10 03 56.0	+0.6
	comp=Z,8.4nm,1.1s,mb4.6						
COLA	College	46.14	330	*e*P	P	10 03 56.0	+0.7
	comp=Z,8.4nm,1.1s,mb4.6						
DLBC	Dease Lake	46.17	315	P	P	10 03 56.9	+1.2
	comp=Z,2.1nm,0.9s,mb4.0,baz=11,slow=9.3,SNR=5.0						
DLBC				LR	LR	10 22 20.9	
	comp=Z,68nm,19.3s,MS3.6,baz=306,slow=35						
IMA	Indian Mountai	46.44	333	*e*P	P	10 03 57.5	-0.2
IMA				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
IMA	Indian Mountai	46.44	333	*e*P	P	10 03 57.5	-0.2
	comp=Z,14nm,0.9s,mb4.9						
IMA	Indian Mountai	46.44	333	*e*P	P	10 03 57.5	-0.2
	comp=Z,14nm,0.9s,mb4.9						
PLAL	Pickwick Lake	46.49	264	*e*P	P	10 03 58.0	-0.5
	comp=Z,10nm,1.3s,mb4.6						
GNI	Garni	47.03	83	LR	LR	10 25 08.4	
	comp=Z,85nm,18.0s,MS3.8,baz=176,slow=38						
CHKZ	Chkalovo	47.69	53	*e*P	P	10 04 07.7	0.0
CHKZ				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.9						
CHKZ	Chkalovo	47.69	53	*e*P	P	10 04 07.7	-0.1
	comp=Z,14nm,1.3s,mb4.8						
CHKZ	Chkalovo	47.69	53	*e*P	P	10 04 07.7	0.0
	comp=Z,14nm,1.3s,mb4.8						
BVAR	Borovoye Array	48.11	54	P	P	10 04 10.9	-0.1
	comp=Z,4.6nm,1.0s,mb4.5,baz=304,slow=5.3,SNR=18						
HRY	Holter Researc	48.16	293	*e*P	P	10 04 12.0	+0.5
HRY	Holter Researc	48.16	293	*e*P	P	10 04 12.0	+0.5
BOZ	Bozeman (W)	48.90	292	*e*P	P	10 04 18.3	+1.1
BOZ				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.8						
BOZ	Bozeman (W)	48.90	292	*e*P	P	10 04 18.3	+1.0
	comp=Z,12nm,1.3s,mb4.8						
BOZ	Bozeman (W)	48.90	292	*e*P	P	10 04 18.3	+1.1
	comp=Z,12nm,1.3s,mb4.8						
NEW	Newport	49.20	298	LR	LR	10 24 36.4	
	comp=Z,98nm,20.8s,MS3.8,baz=321,slow=36						
BILL	Bilibino	49.91	354	*e*P	P	10 04 24.0	-0.7
BILL				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
BILL	Bilibino	49.91	354	*e*P	P	10 04 24.0	-0.7
	comp=Z,8.0nm,1.2s,mb4.6						
IMW	Indian Meadow	49.97	290	*e*P	P	10 04 27.1	+1.6
	comp=Z,15nm,1.4s,mb4.8						
IMW	Indian Meadow	49.97	290	*e*P	P	10 04 27.1	+1.6
	comp=Z,15nm,1.4s,mb4.8						
MCMT	McKenzie Canyo	50.08	292	*e*P	P	10 04 27.2	+0.9
MCMT	McKenzie Canyo	50.08	292	*e*P	P	10 04 27.2	+0.9
PDAR	Pinedale Array	50.25	288	P	P	10 04 27.2	-0.5
	comp=Z,4.1nm,0.8s,mb4.5,baz=52,slow=6.5,SNR=34						
PDAR				LR	LR	10 24 21.6	
	comp=Z,131nm,19.5s,MS4.0,baz=46,slow=34						
TPAW	Teton Pass	50.30	290	*e*P	P	10 04 28.8	+0.8
	comp=Z,5.4nm,1.0s,mb4.5						
TPAW	Teton Pass	50.30	290	*e*P	P	10 04 28.8	+0.8
	comp=Z,5.4nm,1.0s,mb4.5						
BBB	Bella Bella	50.43	308	LR	LR	10 25 01.5	
	comp=Z,123nm,20.3s,MS3.9,baz=52,slow=35						
ISCO	Idaho Springs	50.82	283	*e*P	P	10 04 32.6	+0.6
	comp=Z,2.9nm,1.0s,mb4.2						
ISCO	Idaho Springs	50.82	283	*e*P	P	10 04 32.6	+0.6
	comp=Z,2.9nm,1.0s,mb4.2						
WMOK	Wichita Mounta	51.73	273	*e*P	P	10 04 38.5	-0.5
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
WMOK	Wichita Mounta	51.73	273	*e*P	P	10 04 38.5	-0.5
	comp=Z,6.3nm,1.2s,mb4.4						
WMOK	Wichita Mounta	51.73	273	*e*P	P	10 04 38.5	-0.5
	comp=Z,6.3nm,1.2s,mb4.4						
BMO	Blue Mountains	51.98	295	*e*P	P	10 04 39.8	-1.0
	comp=Z,3.7nm,1.0s,mb4.3						
HWUT	Hardware Ranch	52.08	289	*e*P	P	10 04 41.4	-0.2
	comp=Z,8.1nm,1.1s,mb4.6						
HWUT	Hardware Ranch	52.08	289	*e*P	P	10 04 41.3	-0.2
	comp=Z,8.1nm,1.1s,mb4.6						
SPUT	South Promonto	52.71	289	*e*P	P	10 04 46.4	+0.2
SPUT	South Promonto	52.71	289	*e*P	P	10 04 46.4	+0.1
PV10	Paradox Valley	53.54	284	*e*P	P	10 04 52.9	+0.5
PV10	Paradox Valley	53.54	284	*e*P	P	10 04 52.9	+0.4
DUG	Dugway	53.77	289	*e*P	P	10 04 55.9	+1.8
DUG				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.6						
DUG	Dugway	53.77	289	*e*P	P	10 04 55.9	+1.8
	comp=Z,12nm,1.6s,mb4.6						
DUG	Dugway	53.77	289	*e*P	P	10 04 55.9	+1.8
	comp=Z,12nm,1.6s,mb4.6						
ELK	Elko	54.40	291	*e*P	P	10 04 59.9	+1.2
ELK				pmax	pmax		
	comp=Z,35nm,1.8s						
ELK	Elko	54.40	291	P	P	10 04 59.4	+0.7
	comp=Z,3.6nm,1.0s,mb4.3,baz=19,slow=5.9,SNR=11						
ELK				LR	LR	10 26 25.7	
	comp=Z,121nm,20.4s,MS4.0,baz=356,slow=34						
ELK	Elko	54.40	291	*e*P	P	10 04 59.9	+1.2
	comp=Z,35nm,1.8s,mb5.0						
MSU	Marysvale	54.86	287	*e*P	P	10 05 02.1	0.0
MVU	Marysvale	54.88	287	*e*P	P	10 05 02.5	+0.3
	comp=Z,2.9nm,1.1s,mb4.2						
MVU	Marysvale	54.88	287	*e*P	P	10 05 02.5	+0.2
	comp=Z,2.9nm,1.1s,mb4.2						
ANMO	Albuquerque	55.15	280	⇓*e*P	P	10 05 04.5	+0.1
ANMO	Albuquerque	55.15	280	*e*P	P	10 05 04.5	+0.1
CPRX	Cap Rock	55.53	276	*e*P	P	10 05 06.8	-0.3
CPRX	Cap Rock	55.53	276	*e*P	P	10 05 06.8	-0.3
MOD	Modoc	55.65	296	*e*P	P	10 05 07.4	-0.5
	comp=Z,19nm,1.5s,mb4.9						
MOD	Modoc	55.65	296	*e*P	P	10 05 07.4	-0.4
	comp=Z,19nm,1.5s,mb4.9						
JCT	Junction City	55.73	271	*e*P	P	10 05 07.1	-1.5
JCT				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
JCT	Junction City	55.73	271	*e*P	P	10 05 07.1	-1.5
	comp=Z,10nm,1.0s,mb4.8						
JCT	Junction City	55.73	271	*e*P	P	10 05 07.1	-1.5
	comp=Z,10nm,1.0s,mb4.8						
BNM	Barren Site	55.89	279	*e*P	P	10 05 10.5	+0.8
BNM	Barren Site	55.89	279	*e*P	P	10 05 10.5	+0.8
ARUT	Antelope Range	56.02	287	*e*P	P	10 05 10.7	+0.2
GDL2	Guadalupe Moun	56.45	276	*e*P	P	10 05 13.3	-0.4
GDL2	Guadalupe Moun	56.45	276	*e*P	P	10 05 13.3	-0.4
YBH	Yreka Blue Hor	56.81	297	LR	LR	10 29 30.9	
	comp=Z,127nm,19.1s,MS4.0,baz=15,slow=36						
WUAZ	Wupatki	56.95	284	*e*P	P	10 05 17.2	-0.1
	comp=Z,8.1nm,1.0s,mb4.7						
WUAZ	Wupatki	56.95	284	*e*P	P	10 05 17.2	-0.1
	comp=Z,8.1nm,1.0s,mb4.7						
MNTX	Cornudas Mount	57.34	277	*e*P	P	10 05 19.0	-1.1
	comp=Z,6.8nm,1.3s,mb4.5						
MNTX	Cornudas Mount	57.34	277	*e*P	P	10 05 19.0	-1.1
	comp=Z,6.8nm,1.3s,mb4.5						
MKAR	Makanchi Array	57.63	50	P	P	10 05 21.0	-0.9
	comp=Z,1.3nm,0.8s,mb4.0,baz=323,slow=6.1,SNR=16						
MKAR				LR	LR	10 30 28.9	
	comp=Z,56nm,19.6s,MS3.7,baz=202,slow=36						
NVAR	Mina Array Bea	57.65	292	P	P	10 05 21.7	-0.5
	comp=Z,0.7nm,0.7s,mb3.8,baz=67,slow=6.7,SNR=6.8						
NVAR				LR	LR	10 29 37.5	
	comp=Z,148nm,19.7s,MS4.1,baz=270,slow=36						
TXAR	Lajitas Array	58.51	274	P	P	10 05 27.4	-0.9
	comp=Z,0.9nm,0.8s,mb3.8,baz=67,slow=5.7,SNR=11						
ZAK	Zakamensk	61.09	34	*e*P	P	10 05 44.9	-0.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb4.1						
ZAK	Zakamensk	61.09	34	*e*P	P	10 05 44.9	-0.8
	comp=Z,2.0nm,1.3s,mb4.1						
WMQ	Urumqi	62.12	48	*e*P	P	10 05 52.0	-0.8
WMQ				AP	pP	10 05 56.6	+0.7
WMQ				XP	sP	10 05 59.0	+2.0
WMQ				PCP	PcP	10 06 31.8	-1.0
WMQ				AMB	AMB		
	comp=Z,100nm,4.6s						
WMQ				LR	LR		
	comp=N,450nm,22.0s						
WMQ				LR	LR		
	comp=Z,440nm,18.4s,MS4.7						
SONM	Songino Array	64.24	33	P	P	10 06 06.0	-0.6
	comp=Z,3.6nm,1.1s,mb4.3,baz=326,slow=4.5,SNR=18						
ULN	Ulaanbaatar	64.38	33	*di*P	P	10 06 07.2	-0.3
ULN	Ulaanbaatar	64.38	33	*e*P	P	10 06 07.7	+0.2
	comp=Z,22nm,1.5s,mb5.0						
ULN	Ulaanbaatar	64.38	33	*e*P	P	10 06 07.7	+0.2
	comp=Z,22nm,1.5s,mb5.0						
GTA	Gaotai	70.11	41	*e*P	P	10 06 43.3	-0.4
GTA				AP	pP	10 06 48.7	+1.9
GTA				XP	sP	10 06 52.2	+4.3
GTA				PP	PP	10 09 22.3	+1.6
GTA				PPP	PPP	10 11 03.8	+3.0
GTA				S	S	10 15 56.3	+3.0
GTA				XS		10 16 04.5	
GTA				PS	PS	10 16 24.7	+3.3
GTA				AMB	AMB		
	comp=Z,40nm,8.0s						
GTA				LR	LR		
	comp=N,100nm,16.0s,MS4.3						
GTA				LR	LR		
	comp=E,100nm,14.8s,MS4.3						
GTA				LR	LR		
	comp=Z,110nm,17.5s,MS4.2						
MDJ	Mudanjiang	72.02	18	P	P	10 06 53.4	-1.7
MDJ				AMB	AMB		
	comp=Z,20nm,5.6s						
HHC	Hu-ho-hao-te	72.09	32	*e*P	P	10 06 56.0	+0.4
HHC				AP	pP	10 07 00.2	+1.5
HHC				XP	sP	10 07 03.7	+3.9
HHC				PP	PP	10 09 35.1	-2.4
HHC				S	S	10 16 14.4	-1.8
HHC				PS	PS	10 16 35.7	-12
HHC				SKS	SKS	10 16 53.4	-6.7
HHC				SCS	ScS	10 16 57.6	-0.6
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,120nm,5.7s						
HHC				LR	LR		
	comp=N,110nm,10.2s						
HHC				LR	LR		
	comp=E,270nm,19.0s						
HHC				LR	LR		
	comp=Z,90nm,13.1s,MS4.2						
CN2	Changchun	72.17	21	*e*P	P	10 06 54.9	-1.1
LZH	Lanzhou	74.40	40	⇑P	P	10 07 09.5	+0.4
LZH				AP	pP	10 07 15.0	+2.7
LZH				XP	sP	10 07 19.0	+5.6
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.0						
BDFB	Brasilia	79.22	201	LR	LR	10 39 37.6	
	comp=Z,41nm,18.4s,MS3.8,baz=199,slow=33						
NJ2	Nanjing	82.22	29	*e*P	P	10 07 54.1	+2.1
NJ2				AP	pP	10 07 58.8	+3.6
NJ2				XP	sP	10 08 01.3	+5.1
NJ2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
SIV	San Ignacio	82.36	213	P	P	10 07 53.3	+0.3
	comp=Z,1.3nm,0.9s,mb3.9,baz=47,slow=1.0,SNR=6.8						
SSE	Sheshan	83.66	27	P	P	10 07 56.0	-3.3
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,130nm,4.4s						
KMI	Kunming	84.21	45	P	P	10 08 02.1	-0.2
GYA	Guiyang	84.23	41	P	P	10 08 01.2	-1.1
GYA				AP	pP	10 08 05.8	+0.3
GYA				XP	sP	10 08 08.2	+1.6
GYA				S	S	10 18 22.5	-3.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.0						
GYA				AMB	AMB		
	comp=Z,70nm,2.8s,mb5.3						
GYA				LR	LR		
	comp=N,210nm,18.2s,MS4.8						
GYA				LR	LR		
	comp=E,320nm,17.8s,MS4.8						
GYA				LR	LR		
	comp=Z,380nm,18.0s,MS4.8						
CMAR	Chiang Mai Arr	89.04	51	P	P	10 08 27.4	+1.5
	comp=Z,2.0nm,0.5s,mb4.7,baz=346,slow=5.9,SNR=5.7						
QSPA	South Pole Qui	151.92	180	P	PKPdf	10 15 24.0	+4.8

IDC ***08*** *10:01:09.9±1.9, 59.77N×22.46E, mb1 3.0/4, mb1mx2.9/23, mbtmp2.9/4, ML2.6/4, Error ellipse: s-maj=27.3km s-min=8.3km az=157.0*

NAO ***08*** *10:01:10.0±1.8, 59.84N×22.33E, ML2.0*

HEL ***08*** *10:01:10.4±0.1, 59.82N×22.24E, ML1.9, ML2.4(UPP), ML2.0(NAO), Explosion*

BER ***08*** *10:01:11.0±4.0, 59.84N×22.34E, ML2.0(NAO), Suspected explosion*

ISC 08 10:01:09.5±0.5**, 59.85N**±0.05×**22.22E**±0.06**, n42,** σ**0^{s}80**/55**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAL	Aland	1.16	287	*e*P	Pb	10 01 31.7	-0.5
AAL				*e*S	Sb	10 01 47.0	-0.7
NRTU	Norrtaelje	1.82	266	*e*P	Pn	10 01 42.8	+0.4
GRAU	Graesoe	1.91	286	*e*P	Pn	10 01 42.8	-0.8
PVF	Pernaja	1.95	67	*e*P	Pn	10 01 43.9	-0.3
PVF				*e*S	Sn	10 02 08.4	-1.3
FORU	Forsmark	2.09	287	*e*P	Pn	10 01 47.0	+0.8
FLYU	Flymyra	2.19	279	*e*P	Pn	10 01 48.6	+0.9
NYNU	Nynaeshamn	2.31	250	*e*P	Pn	10 01 49.8	+0.4
UPP	Uppsala	2.32	272	*e*P	Pn	10 01 50.0	+0.5
FIA0	FINESS Array S	2.48	48	*e*P	Pn	10 01 52.8	+0.9
FIA0				*e*SB	Sb	10 02 25.1	-0.9
FIA0	FINESS Array S	2.48	48	Pn	Pn	10 01 52.5	+0.6
	baz=231,slow=14						
FIA0				Lg		10 02 25.1	
	baz=232,slow=22						
FIA0				Rg		10 02 40.5	
	baz=213,slow=37						
FINES	FINESS Array B	2.48	48	Pn	Pn	10 01 52.4	+0.6
	0.9nm,0.3s,baz=228,slow=14,SNR=40						
FINES				Sn	Sn	10 02 23.9	+0.6
	3.3nm,0.3s,baz=238,slow=23,SNR=22						
BACU	Backbrunna	2.58	272	*e*P	Pn	10 01 53.7	+0.5
IGGU	Iggoen	2.64	295	*e*P	Pn	10 01 54.5	+0.3
KEF	Keuruu	2.66	28	*e*P	Pn	10 01 55.9	+1.5
KEF				*e*SB	Sb	10 02 30.4	-0.7
VJF	Virojoki	2.75	73	*e*S	Sn	10 02 25.5	-4.7
GOTU	Gotland	2.88	223	*e*P	Pn	10 01 57.3	-0.2
ARNU	Arnoeviken	3.01	310	*e*P	Pn	10 01 59.6	+0.3
KAF	Kangasniemi	3.02	40	*e*P	Pn	10 02 00.9	+1.4
KAF				MSG		10 02 41.0	
	comp=Z,3.5nm,0.1s						
ESKU	Eskilstuna	3.03	261	*e*P	Pn	10 01 59.9	+0.3
ESKU				*e*S	Sn	10 02 37.3	+0.2
VIKU	Vikbolandet	3.15	247	*e*P	Pn	10 02 00.8	-0.5
VAF	Ylistaro	3.21	4	*e*P	Pn	10 02 03.6	+1.4
FALU	Falun	3.26	284	*e*P	Pn	10 02 03.2	+0.3
SUF	Sumiainen	3.45	32	*e*P	Pn	10 02 05.7	+0.1
SUF				MSG		10 02 53.6	
	comp=Z,2.1nm,0.1s						
HEMU	Hemsoen	3.48	326	*e*P	Pn	10 02 06.7	+0.7
HASU	Hassela	3.58	313	*e*P	Pn	10 02 07.5	+0.1
NRAU	Nora	3.65	269	*e*P	Pn	10 02 08.6	+0.2
VSTU	Vaestervik	3.68	236	*e*P	Pn	10 02 08.8	-0.1
LNKU	Linkoeping	3.83	248	*e*P	Pn	10 02 11.0	-0.1
ASKU	Askersund	3.90	259	*e*P	Pn	10 02 11.7	-0.2
UMAU	Umeaa	4.11	350	*e*P	Pn	10 02 15.2	+0.2
SOLU	Sollefteaa	4.15	327	*e*P	Pn	10 02 15.2	-0.4
HFS	Hagfors	4.29	277	Pn	Pn	10 02 16.5	-1.0
	baz=98,slow=9.3						
HFS				Sn	Sn	10 03 07.5	-1.5
	baz=95,slow=18						
HFS				Lg		10 03 22.1	
	baz=103,slow=28						
HFS	Hagfors	4.29	277	*e*P	Pn	10 02 16.5	-1.0
HFS				*e*S	Sn	10 03 07.5	-1.5
HFS				*e*SG		10 03 22.1	
HFS	Hagfors	4.29	277	Pn	Pn	10 02 17.7	+0.2
	comp=Z,0.0nm,0.3s,baz=103,slow=10,SNR=9.8						
HFS				Pg	Pg	10 02 25.4	-10
	comp=Z,0.1nm,0.3s,baz=95,slow=16,SNR=6.7						
HFS				Sn	Sn	10 03 09.0	-0.1
	comp=Z,0.0nm,0.3s,baz=112,slow=23,SNR=2.5						
HFS				Lg		10 03 22.0	
	comp=Z,0.1nm,0.3s,baz=98,slow=31,SNR=4.8						
NB2	NORSAR Subarra	5.58	287	*e*P	Pn	10 02 33.7	-2.0
NB2				*e*SG		10 04 05.3	
NB2	NORSAR Subarra	5.58	287	Pn	Pn	10 02 33.7	-2.0
	baz=95,slow=14						
NB2				Lg		10 04 05.3	
	baz=101,slow=6.9						
NOA	NORSAR Array B	5.58	287	Pn	Pn	10 02 33.3	-2.4
	comp=Z,0.2nm,0.3s,baz=113,slow=12,SNR=2.3						
NOA				Lg		10 04 02.5	
	comp=Z,0.4nm,0.3s,baz=58,slow=15,SNR=3.4						
APA0	Apatity Array	9.12	27	Pn	P	10 03 23.9	-1.5
	baz=230,slow=12						
APA0	Apatity Array	9.12	27	*e*P	P	10 03 23.9	-1.5
ARA0	ARCESS Array S	9.83	7	Pn	P	10 03 30.6	-4.3
	baz=181,slow=16						
ARA0				Sn	Sn	10 05 16.8	-10
	baz=190,slow=28						
ARA0	ARCESS Array S	9.83	7	*e*P	P	10 03 30.6	-4.3
ARA0				*e*S	Sn	10 05 16.8	-10
ARCES	ARCESS Array B	9.83	7	Pn	P	10 03 30.2	-4.7
	comp=Z,0.2nm,0.3s,baz=182,slow=13,SNR=9.0						
ARCES				Sn	Sn	10 05 16.4	-11
	comp=Z,0.1nm,0.3s,baz=189,slow=24,SNR=2.7						

IDC 08 10:05:47.9±3.7**, 5.12N×95.00E, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/20**, mbtmp3.5**/4**, Error ellipse: s-maj=144.6km s-min=24.1km az=62.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	42.95	347	P	P	10 13 48.6	-1.7
	1.3nm,0.7s,baz=167,slow=7.7,SNR=13						
SONM	Songino Array	43.67	11	P	P	10 13 54.4	-1.7
	0.3nm,0.6s,baz=182,slow=7.8,SNR=3.1						
WRA	Warramunga Arr	45.99	124	P	P	10 14 13.5	-1.6
	0.6nm,0.6s,baz=302,slow=9.0,SNR=6.5						
ASAR	Alice Springs	47.52	129	P	P	10 14 25.0	-2.1
	0.3nm,0.6s,baz=299,slow=6.5,SNR=4.9						

BGR ***08*** *10:11:41.0±0.3, 48.35N×6.66E, h10^{km}, ML1.5/2, Error ellipse: s-maj=2.2km s-min=2.2km az=65.0*

NEIC ***08*** *10:11:41.1, 48.34N×6.63E, h11^{km}, ML2.5(LDG), ML2.2(STR), After LDG.*

STR ***08*** *10:11:41.0±0.2, 48.34N×6.65E, h5^{km}±1^{km}, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

CSEM ***08*** *10:11:41.1±0.1, 48.34N×6.64E, h12^{km}, ML2.5/12, Error ellipse: s-maj=1.2km s-min=0.9km az=179.0*

LDG 08 10:11:41.1±0.0**, 48.34N×6.63E, h11^{km}, Md2.8**/3**, Ml2.5**/13**, Error ellipse: s-maj=0.9km s-min=0.7km az=170.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECH	Echery	0.37	109	*e*Pg	Pg	10 11 48.1	-0.8
	SNR=12						
ECH				*e*Sg	Sg	10 11 52.6	-1.4
	SNR=3.7						
ECH	Echery	0.37	109	Pg	Pg	10 11 48.0	-0.8
ECH				Sg	Sg	10 11 53.0	-1.0
HAU	Haudompre	0.38	210	*e*Pg	Pg	10 11 48.7	-0.3
HAU				*e*Sg	Sg	10 11 53.9	-0.4
	40nm,0.2s						
CDF	Champ du Feu	0.44	80	*e*Pg	Pg	10 11 49.2	-0.9
CDF				*e*Sg	Sg	10 11 55.8	-0.3
CDF				*e*Sn	Sn	10 11 58.7	-2.0
	17nm,0.2s						
THEF	They Montfort	0.44	256	Pg	Pg	10 11 49.7	-0.5
THEF				Sg	Sg	10 11 55.8	-0.5
THEF	They Montfort	0.44	256	*e*Pg	Pg	10 11 49.6	-0.6
	SNR=11						
WLS	Welschbruch	0.49	81	*e*Pg	Pg	10 11 50.1	-0.9
	SNR=14						
WLS				*e*Sg	Sg	10 11 56.6	-1.1
	SNR=0.9						
WLS	Welschbruch	0.49	81	Pg	Pg	10 11 50.2	-0.9
WLS				Sg	Sg	10 11 56.8	-0.9
HINF	Hinteralfeld	0.54	164	*e*Pg	Pg	10 11 51.3	-0.8
HINF				*e*Sg	Sg	10 11 58.2	-1.3
HINF				*e*Sn	Sn	10 12 01.4	-2.0
	20nm,0.2s						
MOF	Molkenrain	0.59	145	*e*Pg	Pg	10 11 52.2	-0.9
	SNR=7.1						
MOF				*e*Sg	Sg	10 12 00.4	-0.7
	SNR=4.0						
MOF	Molkenrain	0.59	145	Pg	Pg	10 11 53.0	-0.1
LIBD	Limburg	0.68	106	Pg	Pg	10 11 54.6	-0.2
LIBD				Sg	Sg	10 12 03.6	-0.3
STR	Strasbourg	0.80	72	Pg	Pg	10 11 56.4	-0.7
RFYF	Reffroy	0.82	291	*e*Pg	Pg	10 11 56.8	-0.8
	baz=114						
RFYF				*e*Sn	Sn	10 12 08.2	-2.3
	30nm,0.2s						
LOMF	Lomont	1.00	172	*e*Pg	Pg	10 12 00.0	-1.1
	SNR=12						
LOMF				*e*Sg	Sg	10 12 13.0	-1.5
	SNR=0.6						
LOMF	Lomont	1.00	172	Pg	Pg	10 12 00.3	-0.8
LANF	Langenberg	1.01	50	Pg	Pg	10 11 59.8	-1.6
LANF				Sg	Sg	10 12 13.5	-1.4
LANF	Langenberg	1.01	50	*e*Sg	Sg	10 12 11.5	-3.4
	SNR=4.5						
BOURR	Bourrignon	1.03	157	*e*Pg	Pg	10 12 00.7	-1.0
	SNR=3.1						
BOURR				*e*Sg	Sg	10 12 13.8	-1.7
	SNR=5.5						
FELD	Feldberg	1.03	116	*e*Pg	Pg	10 12 00.2	-1.6
	SNR=2.1						
FELD				*e*Sg	Sg	10 12 13.0	-2.6
	SNR=5.9						
FELD	Feldberg	1.03	116	Pg	Pg	10 12 00.5	-1.3

FELD				Sg	Sg	10 12 14.0	-1.6
BBS	**Basel-Blauen**	**1.06**	**146**	Pg	Pg	10 12 00.8	-1.5
BBS				Sg	Sg	10 12 15.2	-1.2
MEZF	**Maizieres J’vi**	**1.06**	**279**	*e*Pn	Pn	10 12 01.2	-0.6
MEZF				*e*Pg	Pg	10 12 01.6	-0.8
MEZF				*e*Sn	Sn	10 12 15.0	-1.6
	16nm,0.2s						
MEZF	**Maizieres J’vi**	**1.06**	**279**	*e*Pg	Pg	10 12 01.6	-0.8
MEZF				*e*Sn	Sn	10 12 15.0	-1.6
	8.1nm,0.2s						
SFTF	**Sexfontaines**	**1.07**	**263**	*e*Pn	Pn	10 12 01.0	-0.9
	baz=84						
SFTF				*e*Pg	Pg	10 12 01.8	-0.8
SFTF				*e*Sg	Sg	10 12 15.4	-1.5
	14nm,0.2s						
SFTF	**Sexfontaines**	**1.07**	**263**	*e*Pg	Pg	10 12 01.8	-0.8
SFTF				*e*Sg	Sg	10 12 15.4	-1.5
	6.9nm,0.2s						
BFO	**Black Forest**	**1.14**	**90**	*e*Pg	Pg	10 12 02.2	-1.7
	SNR=3.7						
BFO				*e*Sg	Sg	10 12 17.2	-1.9
	SNR=2.8						
SULZ	**Sulz-Cheisache**	**1.29**	**129**	*e*Sg	Sg	10 12 21.5	-2.5
	SNR=5.8						
WLF	**Walferdange**	**1.36**	**347**	*e*Pg	Pg	10 12 06.7	-1.7
	SNR=1.9						
WLF				*e*Sg	Sg	10 12 24.6	-2.1
	SNR=2.7						
SLE	**Schleitheim**	**1.38**	**114**	*e*Pn	Pn	10 12 04.8	-1.5
	SNR=1.0						
SLE				*e*Pg	Pg	10 12 06.7	-2.0
	SNR=8.0						
SLE				*e*Sg	Sg	10 12 24.1	-2.9
	SNR=5.8						
CABF	**La Chapelle**	**1.77**	**192**	*e*Pn	Pn	10 12 10.0	-1.9
CABF				*e*Pg	Pg	10 12 14.4	-2.0
CABF				*e*Sn	Sn	10 12 31.2	-3.3
CABF				*e*Sg	Sg	10 12 37.1	-2.9
	11nm,0.6s						
WILA	**Wila**	**1.79**	**120**	*e*Sg	Sg	10 12 37.4	-3.4
	SNR=4.0						
GIVF	**Givet**	**2.13**	**327**	*e*Pg	Pg	10 12 20.6	-3.0
GIVF				*e*Sg	Sg	10 12 47.3	-4.6
	4.8nm,0.2s						
LOR	**Lormes**	**2.15**	**241**	*e*Pn	Pn	10 12 15.0	-2.4
LOR				*e*Pg	Pg	10 12 21.4	-2.7
LOR				*e*Sn	Sn	10 12 40.0	-4.3
LOR				*e*Sg	Sg	10 12 48.6	-4.2
	6.5nm,0.2s						
LIENZ	**Alp Oberkamor**	**2.19**	**117**	*e*Sg	Sg	10 12 50.9	-3.3
	SNR=1.7						
BAIF	**Baives**	**2.34**	**318**	*e*Pn	Pn	10 12 17.7	-2.4
BAIF				*e*Pg	Pg	10 12 24.6	-3.3
BAIF				*e*Sg	Sg	10 12 54.6	-4.6
	2.6nm,0.3s						
SSF	**Saint Saulge**	**2.47**	**240**	*e*Pn	Pn	10 12 19.7	-2.2
SSF				*e*Pg	Pg	10 12 26.6	-3.8
SSF				*e*Sn	Sn	10 12 47.6	-4.7
SSF				*e*Sg	Sg	10 12 58.8	-4.5
	4.4nm,0.3s						
SSF	**Saint Saulge**	**2.47**	**240**	*e*Pg	Pg	10 12 26.6	-3.8
SSF				*e*Sn	Sn	10 12 47.6	-4.7
SSF				*e*Sg	Sg	10 12 58.8	-4.5
	2.2nm,0.3s						
SMF	**Signal de Mont**	**2.54**	**229**	*e*Pn	Pn	10 12 20.5	-2.4
SMF				*e*Pg	Pg	10 12 28.1	-3.7
SMF				*e*Sg	Sg	10 13 00.6	-5.1
	9.3nm,0.3s						
LPL	**La Plagne**	**2.82**	**179**	*e*Pn	Pn	10 12 24.5	-2.5
LPL				*e*Pg	Pg	10 12 33.7	-3.8
LPL				*e*Sg	Sg	10 13 10.4	-4.8
	1.4nm,0.3s						
LPG	**La Plagne**	**2.84**	**178**	*e*Pn	Pn	10 12 25.0	-2.3
LPG				*e*Pg	Pg	10 12 34.5	-3.4
LPG				*e*Sg	Sg	10 13 10.8	-5.0
	0.9nm,0.3s						
BGF	**Bois d’Agland**	**3.12**	**237**	*e*Pn	Pn	10 12 28.4	-2.9
BGF				*e*Pg	Pg	10 12 39.1	-4.4
BGF				*e*Sg	Sg	10 13 19.2	-6.0
	7.1nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.46**	**189**	*e*Pn	Pn	10 12 33.1	-3.0
ORIF				*e*Pg	Pg	10 12 45.1	-5.1
TCF	**Toulx Ste Croi**	**3.64**	**237**	*e*Pn	Pn	10 12 35.4	-3.2
TCF				*e*Pg	Pg	10 12 48.5	-5.3
VIVF	**Saint-Julien-l**	**3.73**	**202**	*e*Pn	Pn	10 12 36.9	-3.1

BGR ***08*** *10:21:05.7±0.2, 48.35N×6.64E, h10^{km}, ML3.2/8, Error ellipse: s-maj=2.2km s-min=1.1km az=77.0*

STR ***08*** *10:21:05.2±0.1, 48.36N×6.60E, h5^{km}±1^{km}, Ml3.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

CSEM ***08*** *10:21:05.9±0.0, 48.33N×6.66E, h15^{km}, ML3.5/34, Error ellipse: s-maj=0.7km s-min=0.5km az=171.0*

NEIC ***08*** *10:21:06.0, 48.33N×6.64E, h12^{km}, ML3.5(LDG), ML3.4(VIE), ML3.3(STR), ML3.3(SZGRF), ML3.1(LEDBW), After LDG.*

LEDBW ***08*** *10:21:06.1±0.2, 48.34N×6.65E, h10^{km}, ML3.1, Error ellipse: s-maj=6.0km s-min=2.0km az=174.0*

ZUR ***08*** *10:21:06.2, 48.34N×6.64E, h10^{km}, ML3.1/14*

LDG 08 10:21:06.0±0.0**, 48.33N×6.64E, h12**^{km}**, Md3.6**/4**, Ml3.5**/31**, 17C-11D, Error ellipse: s-maj=0.9km s-min=0.6km az=165.0, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECH	**Echery**	**0.37**	**108**	*e*Pg	Pg	10 21 13.2	-0.4
	SNR=115						
ECH				*e*Sg	Sg	10 21 17.8	-1.0
	SNR=11						
ECH	**Echery**	**0.37**	**108**	⇑*i*P	Pg	10 21 13.3	-0.3
ECH				S	Sg	10 21 18.1	-0.6
ECH	**Echery**	**0.37**	**108**	Pg	Pg	10 21 13.2	-0.5
ECH				Sg	Sg	10 21 18.0	-0.8
HAU	**Haudompre**	**0.38**	**211**	*e*Pg	Pg	10 21 13.7	-0.1
HAU				*e*Sg	Sg	10 21 18.8	-0.2
	926nm,0.2s						
CDF	**Champ du Feu**	**0.43**	**79**	*e*Pg	Pg	10 21 14.3	-0.7
CDF				*e*Sg	Sg	10 21 20.0	-0.9
	560nm,0.3s						
THEF	**They Montfort**	**0.45**	**257**	Pg	Pg	10 21 13.6	-1.6
THEF				Sg	Sg	10 21 19.2	-2.1
THEF	**They Montfort**	**0.45**	**257**	*e*Pg	Pg	10 21 14.6	-0.5
	SNR=115						
THEF	**They Montfort**	**0.45**	**257**	⇑*i*P	Pg	10 21 14.8	-0.4
WLS	**Welschbruch**	**0.49**	**80**	Pg	Pg	10 21 15.2	-0.7
WLS				Sg	Sg	10 21 21.7	-0.9
WLS	**Welschbruch**	**0.49**	**80**	*e*Pg	Pg	10 21 15.3	-0.6
	SNR=166						
WLS				PmP		10 21 16.6	
WLS				*e*Sg	Sg	10 21 21.7	-0.9
	SNR=7.3						
WLS				SmS		10 21 24.6	
WLS	**Welschbruch**	**0.49**	**80**	⇑*i*P	Pg	10 21 15.3	-0.6
WLS				P		10 21 16.6	
WLS				*i* S	Sg	10 21 21.9	-0.7
WLS				S	Sg	10 21 24.6	+2.0
HINF	**Hinteralfeld**	**0.53**	**164**	*e*Pg	Pg	10 21 16.3	-0.6
HINF				*e*Sg	Sg	10 21 23.2	-0.9
HINF				*e*Sn	Sn	10 21 26.4	-1.5
	405nm,0.2s						
MOF	**Molkenrain**	**0.58**	**145**	*e*Pg	Pg	10 21 17.2	-0.6
	SNR=146						
MOF				PmP		10 21 18.8	
MOF				*e*Sg	Sg	10 21 25.4	-0.3
	SNR=3.8						
MOF	**Molkenrain**	**0.58**	**145**	⇓*i*P	Pb	10 21 17.4	-0.2
MOF				P		10 21 18.8	
MOF	**Molkenrain**	**0.58**	**145**	Pg	Pg	10 21 17.9	+0.1
LIBD	**Limburg**	**0.67**	**105**	*e*Pg	Pg	10 21 19.1	-0.5
	SNR=16						
LIBD				*e*Sg	Sg	10 21 27.9	-0.7
	SNR=6.6						
LIBD	**Limburg**	**0.67**	**105**	⇑*i*P	Pb	10 21 19.3	+0.2
LIBD	**Limburg**	**0.67**	**105**	Pg	Pg	10 21 19.2	-0.4
LIBD				Sg	Sg	10 21 28.5	-0.1
RFYF	**Reffroy**	**0.83**	**292**	*e*Pg	Pg	10 21 21.9	-0.8
	baz=113						
RFYF				*e*Pn	Pn	10 21 22.2	-1.1
RFYF				*e*Sn	Sn	10 21 33.6	-1.8
	416nm,0.2s						
FBB	**Freiburg**	**0.88**	**111**	*e*Pn	Pn	10 21 22.9	-1.1
KIZ	**Kirchzarten**	**0.94**	**113**	⇑*e*P	Pb	10 21 23.4	-0.3
KIZ				*e*P		10 21 23.8	
KIZ				*e*S	Sb	10 21 36.1	+0.3
LOMF	**Lomont**	**0.99**	**172**	Pg	Pg	10 21 24.7	-1.1
LOMF				Sg	Sg	10 21 38.8	-0.3
LOMF	**Lomont**	**0.99**	**172**	*e*Pg	Pg	10 21 24.5	-1.3
	SNR=163						
LOMF				⇓*e*Pn	Pn	10 21 24.7	-0.8
LOMF	**Lomont**	**0.99**	**172**	⇓*e*P	Pb	10 21 24.7	+0.2
LOMF				⇑*i*P		10 21 25.3	
LANF	**Langenberg**	**1.01**	**50**	*e*Pg	Pg	10 21 24.6	-1.7
	SNR=37						
LANF				⇑*i*Pn	Pn	10 21 24.7	-1.3
LANF				*e*Sg	Sg	10 21 37.1	-2.8
	SNR=5.0						
LANF	**Langenberg**	**1.01**	**50**	⇑*i*P	Pb	10 21 24.7	-0.3
LANF	**Langenberg**	**1.01**	**50**	Pg	Pb	10 21 24.5	-0.5
LANF				Sg	Sb	10 21 37.5	-0.5
BOURR	**Bourrignon**	**1.02**	**157**	*e*Pn	Pn	10 21 25.3	-0.7
	SNR=1.3						
BOURR				*e*Pg	Pg	10 21 25.8	-0.7
	SNR=51						
BOURR				*e*Sg	Sg	10 21 38.6	-1.5
	SNR=20						
BOURR	**Bourrignon**	**1.02**	**157**	⇓*e*Pn	Pn	10 21 25.2	-0.8
FELD	**Feldberg**	**1.02**	**116**	Pg	Pg	10 21 24.8	-1.7
FELD				Sg	Sg	10 21 39.8	-0.5
FELD	**Feldberg**	**1.02**	**116**	Pn	Pn	10 21 24.8	-1.3
FELD				*e*Pg	Pg	10 21 24.8	-1.7
	SNR=34						
FELD				*e*Sg	Sg	10 21 38.7	-1.6
	SNR=11						
FELD	**Feldberg**	**1.02**	**116**	P	Pb	10 21 24.8	-0.3
FELD				*e*P		10 21 25.5	
FELD				*e*S	Sb	10 21 39.0	+0.7
BBS	**Basel-Blauen**	**1.05**	**145**	⇓*i*Pg	Pg	10 21 26.2	-0.8
BBS				*e*Sg	Sg	10 21 38.8	-2.3
	SNR=7.6						
BBS	**Basel-Blauen**	**1.05**	**145**	Pg	Pg	10 21 25.7	-1.3
MEZF	**Maizieres J’vi**	**1.07**	**280**	*e*Pg	Pg	10 21 26.2	-1.2
	baz=99						
MEZF				*e*Sn	Sn	10 21 39.1	-2.4
MEZF				*e*Sg	Sg	10 21 40.3	-1.5
	100nm,0.2s						
SFTF	**Sexfontaines**	**1.07**	**264**	*e*Pn	Pn	10 21 25.7	-1.1
SFTF				*e*Pg	Pg	10 21 26.1	-1.5
	baz=88						
SFTF				*e*Sn	Sn	10 21 39.2	-2.4
SFTF				*e*Sg	Sg	10 21 40.3	-1.6
	133nm,0.2s						
SFTF	**Sexfontaines**	**1.07**	**264**	*e*Pg	Pg	10 21 26.1	-1.5
SFTF				*e*Sn	Sn	10 21 39.2	-2.4
SFTF				*e*Sg	Sg	10 21 40.3	-1.6
	67nm,0.2s						
BFO	**Black Forest**	**1.13**	**89**	*e*Pn	Pn	10 21 26.1	-1.5
	SNR=61						
BFO				Pg	Pg	10 21 27.6	-1.0
BFO				Sn	Sn	10 21 40.1	-3.0
BFO				*e*Sg	Sg	10 21 40.1	-3.7
	SNR=6.6						
BFO	**Black Forest**	**1.13**	**89**	⇑*i*P	Pb	10 21 26.2	-0.8
BFO				P		10 21 27.6	
BFO				S	Sb	10 21 40.1	-1.4
BFO				S	Sb	10 21 42.2	+0.8
BFO	**Black Forest**	**1.13**	**89**	*e*Pg	Pb	10 21 26.1	-0.9
BFO				*e*Sg	Sb	10 21 41.9	+0.4
SULZ	**Sulz-Cheisache**	**1.28**	**128**	*e*Pg	Pg	10 21 29.5	-2.1
	SNR=7.2						
SULZ				*e*Sg	Sg	10 21 46.1	-2.6
	SNR=19						
SULZ	**Sulz-Cheisache**	**1.28**	**128**	*e*Pn	Pn	10 21 29.0	-0.7
SLE	**Schleitheim**	**1.37**	**114**	*e*Pn	Pn	10 21 29.8	-1.2
	SNR=7.9						
SLE				*e*Sg	Sg	10 21 49.2	-2.5
	SNR=5.6						
SLE	**Schleitheim**	**1.37**	**114**	⇓*i*P*	Pb	10 21 32.0	+0.9
SLE	**Schleitheim**	**1.37**	**114**	⇑*i*Pn	Pn	10 21 29.7	-1.3
SLE	**Schleitheim**	**1.37**	**114**	⇓*i*Pb	Pb	10 21 32.0	+0.9
WLF	**Walferdange**	**1.37**	**347**	*e*Pg	Pb	10 21 31.8	+0.7
	SNR=18						
WLF				*e*Sg	Sb	10 21 49.5	+1.0
	SNR=6.0						
WLF	**Walferdange**	**1.37**	**347**	*e*P	Pn	10 21 31.6	+0.5
WLF	**Walferdange**	**1.37**	**347**	*e*P	Pn	10 21 31.6	+0.5
KTD	**Kalmit**	**1.38**	**43**	*e*Pn	Pn	10 21 29.3	-1.9
	SNR=1.6						
KTD				*e*Pg	Pg	10 21 31.8	-1.8
	SNR=16						
KTD				*e*Sg	Sg	10 21 49.9	-2.1
	SNR=8.0						
KTD	**Kalmit**	**1.38**	**43**	Pg	Pb	10 21 31.6	+0.4
KTD				Sg	Sb	10 21 50.3	+1.7
BRANT	**Les Verrieres**	**1.40**	**185**	*e*Pn	Pn	10 21 30.7	-0.7
RUP	**Ruppelstein**	**1.40**	**11**	Pg	Pg	10 21 32.1	-2.0
RUP	**Ruppelstein**	**1.40**	**11**	Pg	Pg	10 21 31.9	-2.2
SPAK	**Spaichingen**	**1.46**	**98**	*e*Pn	Pn	10 21 30.7	-1.6
	SNR=1.2						
SPAK				*e*Pg	Pg	10 21 33.7	-1.4
	SNR=25						
SPAK				*e*Sg	Sg	10 21 52.1	-2.5
	SNR=2.0						
SPAK	**Spaichingen**	**1.46**	**98**	⇓*e*PG	Pg	10 21 33.8	-1.4
SPAK	**Spaichingen**	**1.46**	**98**	Pg	Pg	10 21 33.6	-1.6
LBG	**Lerchenberg**	**1.48**	**76**	Pn	Pn	10 21 30.9	-1.6
LBG				Pg	Pg	10 21 33.9	-1.7
LBG				Sn	Sn	10 21 48.2	-3.6
TRULL	**Truellikon**	**1.53**	**116**	*e*Pn	Pn	10 21 32.0	-1.4
TRULL	**Truellikon**	**1.53**	**116**	⇑*i*P*	Pb	10 21 34.3	+0.4
TRULL	**Truellikon**	**1.53**	**116**	⇑*i*Pb	Pb	10 21 34.3	+0.4
ZUR	**Zurich**	**1.62**	**126**	*e*Pg	Pg	10 21 37.1	-1.5
	SNR=5.4						
ZUR				*e*Sg	Sg	10 21 57.9	-2.3
	SNR=7.9						
TUBL	**Tuebingen Lnz**	**1.64**	**82**	Pg	Pg	10 21 37.2	-1.7
ABH	**Alteburg**	**1.67**	**21**	*e*Pg	Pb	10 21 36.5	+0.3
	SNR=18						
ABH				*e*Sg	Sb	10 21 58.1	+1.1
	SNR=4.4						
GUT	**Gutenstein**	**1.68**	**98**	Pg	Pg	10 21 37.7	-1.9
GUT				Sg	Sg	10 21 59.2	-2.8
SISB	**Singen-Sch Ber**	**1.69**	**111**	Pg	Pg	10 21 38.2	-1.6
SISB				Sg	Sg	10 21 59.7	-2.7
STU	**Stuttgart**	**1.76**	**74**	*e*Pn	Pn	10 21 34.8	-1.8
	SNR=1.8						
STU				*e*Pg	Pg	10 21 38.9	-2.3
	SNR=7.5						
STU				*e*Sg	Sg	10 22 00.8	-3.9
	SNR=6.7						
STU	**Stuttgart**	**1.76**	**74**	*e*Pn	Pn	10 21 34.7	-1.9
STU				*e*Sg	Sg	10 22 01.7	-2.9
CABF	**La Chapelle**	**1.76**	**192**	*e*Pn	Pn	10 21 35.6	-1.0
CABF				*e*Pg	Pg	10 21 39.3	-1.9
CABF				*e*Sn	Sn	10 21 55.4	-3.6
CABF				*e*Sg	Sg	10 22 01.7	-3.0
	86nm,0.3s						
WILA	**Wila**	**1.78**	**120**	*e*Pg	Pg	10 21 39.7	-1.9
	SNR=19						
WILA				*e*Sg	Sg	10 22 02.6	-2.9
	SNR=9.1						
SWS	**Schriesheim**	**1.79**	**49**	Pg	Pg	10 21 39.6	-2.1
WIMIS	**Wimmis**	**1.79**	**158**	*e*Pn	Pn	10 21 36.6	-0.5
GIMEL	**Gimel**	**1.81**	**188**	⇓*i*Pn	Pn	10 21 36.5	-0.9
GIMEL	**Gimel**	**1.81**	**188**	*i* P*	Pb	10 21 40.4	+1.7
GIMEL	**Gimel**	**1.81**	**188**	*i* Pb	Pb	10 21 40.4	+1.7
BUCH	**Bad Urach**	**1.82**	**85**	Pn	Pn	10 21 35.8	-1.6
BNALP	**Bannalp**	**1.90**	**140**	*e*Pn	Pn	10 21 38.2	-0.4
TOD	**Tromm**	**1.92**	**47**	*e*Pn	Pn	10 21 35.9	-3.0
	SNR=2.6						
TOD				*e*Pg	Pg	10 21 41.6	-2.7
	SNR=5.9						
TOD				*e*Sg	Sg	10 22 05.9	-4.0
	SNR=6.3						
TOD	**Tromm**	**1.92**	**47**	S	Sn	10 22 05.8	+2.7
TOD	**Tromm**	**1.92**	**47**	Pn	Pb	10 21 36.8	-3.6
TOD				Sg	Sb	10 22 07.8	+3.5
GIVF	**Givet**	**2.14**	**327**	*e*Pn	Pn	10 21 39.9	-2.1
GIVF				*e*P		10 21 42.2	
GIVF				*e*Pg	Pg	10 21 45.7	-3.0
GIVF				*e*Sn	Sn	10 22 04.6	-4.0
GIVF				*e*Sg	Sg	10 22 11.9	-5.3
	64nm,0.2s						
LOR	**Lormes**	**2.15**	**241**	*e*Pn	Pn	10 21 40.1	-2.1
LOR				*e*Pg	Pg	10 21 46.2	-2.8
LOR				*e*Sn	Sn	10 22 05.0	-4.0
LOR				*e*Sg	Sg	10 22 13.6	-4.1
	137nm,0.2s						
LIENZ	**Alp Oberkamor**	**2.19**	**117**	*e*Pn	Pn	10 21 42.4	-0.3
	SNR=8.0						
LIENZ				*e*Sn	Sn	10 22 07.8	-2.1
	SNR=3.6						
LIENZ				*e*Sg	Sg	10 22 15.8	-3.1
	SNR=1.8						
LIENZ	**Alp Oberkamor**	**2.19**	**117**	⇑*i*Pn	Pn	10 21 42.4	-0.3
SALAN	**Lac Salanfe**	**2.20**	**174**	⇑*i*P	Pn	10 21 42.1	-0.8
SALAN	**Lac Salanfe**	**2.20**	**174**	⇑*i*Pn	Pn	10 21 42.2	-0.7
SIND	**Sindeldorf**	**2.21**	**61**	Pn	Pn	10 21 40.7	-2.4
TNS	**Taunus Mts**	**2.24**	**31**	*e*Pn	Pn	10 21 41.1	-2.4
	SNR=3.1						
TNS				*e*Pg	Pg	10 21 47.4	-3.3
	SNR=4.9						
TNS				*e*Sg	Sg	10 22 15.9	-4.6
	SNR=9.1						
TNS	**Taunus Mts**	**2.24**	**31**	P	Pn	10 21 41.0	-2.4
TNS	**Taunus Mts**	**2.24**	**31**	*e*Pn	Pb	10 21 41.1	-4.8
TNS				*e*Sg	Sb	10 22 15.7	+2.2
PLONS	**Plons**	**2.25**	**124**	⇓*i*Pn	Pn	10 21 43.4	-0.3
EMV	**Vieux Emosson**	**2.27**	**175**	*e*Pn	Pn	10 21 43.2	-0.8
EMV	**Vieux Emosson**	**2.27**	**175**	⇑*i*P*	Pb	10 21 49.0	+2.4
EMV	**Vieux Emosson**	**2.27**	**175**	⇑*i*Pb	Pb	10 21 49.0	+2.4
DIX	**Grande Dixence**	**2.31**	**166**	*e*Pn	Pn	10 21 44.3	-0.2
BAIF	**Baives**	**2.35**	**318**	*e*Pn	Pn	10 21 42.8	-2.3
BAIF				*e*Pg	Pg	10 21 49.8	-3.2
BAIF				*e*Sn	Sn	10 22 09.4	-4.7
BAIF				*e*Sg	Sg	10 22 19.3	-5.1
	32nm,0.3s						
HDH	**Heidenheim**	**2.39**	**83**	Pg	Pg	10 21 51.2	-2.6
UBR	**Uberruh**	**2.42**	**104**	Pg	Pb	10 21 52.2	+3.1
UBR				Sg	Sb	10 22 22.8	+3.9
DAVA	**Damuels**	**2.42**	**114**	⇑*i*PN	Pn	10 21 45.8	-0.3
DAVA				*i* PG	Pg	10 21 51.9	-2.5
DAVA				*i* SN	Sn	10 22 15.1	-0.8
DAVA				*i* SG	Sg	10 22 23.4	-3.4
	63nm,0.5s						
SSF	**Saint Saulge**	**2.46**	**240**	*e*Pn	Pn	10 21 44.6	-2.1
SSF				*e*Pg	Pg	10 21 51.4	-3.9
SSF				*e*Sn	Sn	10 22 12.1	-4.9
SSF				*e*Sg	Sg	10 22 22.9	-5.2
	121nm,0.4s						
SSF	**Saint Saulge**	**2.46**	**240**	*e*Pg	Pg	10 21 51.4	-3.9
SSF				*e*Sn	Sn	10 22 12.1	-4.9
SSF				*e*Sg	Sg	10 22 22.9	-5.2
	60nm,0.4s						
HGN	**Heimansgroeve**	**2.48**	**350**	*e*Pg	Pg	10 21 51.5	-4.0
	17nm,0.6s,baz=190						
HGN				*e*Sg	Sg	10 22 22.9	-5.7
HGN	**Heimansgroeve**	**2.48**	**350**	*e*Pg	Pg	10 21 51.5	-4.1
	SNR=4.4						
HGN				*e*Sg	Sg	10 22 23.2	-5.5
	SNR=2.2						
SMF	**Signal de Mont**	**2.54**	**229**	*e*Pn	Pn	10 21 45.0	-2.7
SMF				*e*Pg	Pg	10 21 53.3	-3.4
SMF				*e*Sn	Sn	10 22 14.0	-4.8
SMF				*e*Sg	Sg	10 22 25.4	-5.1
	83nm,0.2s						
LPL	**La Plagne**	**2.81**	**179**	*e*Pn	Pn	10 21 50.8	-0.9
LPL				*e*Pg	Pg	10 21 59.6	-2.6
LPL				*e*Sg	Sg	10 22 34.5	-5.3
	13nm,0.3s						
LPG	**La Plagne**	**2.83**	**178**	*e*Pn	Pn	10 21 51.0	-1.0
LPG				*e*Pg	Pg	10 21 59.2	-3.4
LPG				*e*Sg	Sg	10 22 34.0	-6.4
	13nm,0.3s						
HYF	**Humbligny**	**2.90**	**250**	*e*Pn	Pn	10 21 50.4	-2.4
HYF				*e*Pg	Pg	10 21 59.8	-4.0
HYF				*e*Sn	Sn	10 22 22.7	-5.2
HYF				*e*Sg	Sg	10 22 37.2	-5.2
FUR	**Furstenfeldbru**	**3.11**	**91**	*e*Sg	Sg	10 22 43.8	-5.7
	SNR=2.1						
BGF	**Bois d’Agland**	**3.12**	**237**	*e*Pn	Pn	10 21 53.0	-3.1
BGF				*e*Pg	Pg	10 22 03.9	-4.5
BGF				*e*Sn	Sn	10 22 28.0	-5.6
BGF				*e*Sg	Sg	10 22 44.1	-5.9
	182nm,0.4s						
PLDF	**La Plantade**	**3.13**	**222**	Pn	Pn	10 21 53.4	-2.8
MOTA	**Moosalm**	**3.17**	**106**	⇑*i*PN	Pn	10 21 56.9	+0.2
MOTA				*i* PG	Pg	10 22 05.6	-3.7
MOTA				*i* SN	Sn	10 22 33.2	-1.6
MOTA				*i* SG	Sg	10 22 46.7	-4.8
	26nm,0.3s						
SQTA	**Sankt Quirin**	**3.28**	**108**	⇑*i*PN	Pn	10 21 58.3	0.0
SQTA				*i* PG	Pg	10 22 07.9	-3.6
SQTA				*i* SN	Sn	10 22 36.2	-1.4
SQTA				*i* SG	Sg	10 22 50.6	-4.6
	21nm,0.3s						
AGO	**Saint Agoulin**	**3.30**	**228**	Pn	Pn	10 21 56.0	-2.6
GRA1	**Grafenberg Arr**	**3.31**	**64**	*e*Sg	Sg	10 22 49.6	-6.8
GRA1	**Grafenberg Arr**	**3.31**	**64**	*e*Sg	Sg	10 22 49.6	-6.8
GRF	**Grafenberg Arr**	**3.31**	**64**	*e*Sg	Sg	10 22 49.6	-6.8
GRF	**Grafenberg Arr**	**3.31**	**64**	*e*Sg	Sg	10 22 49.6	-6.8
ORIF	**Oris-en-Rattie**	**3.45**	**189**	*e*Pn	Pn	10 21 58.1	-2.6
ORIF				*e*Pg	Pg	10 22 08.9	-6.0
ORIF				*e*Sg	Sg	10 22 54.0	-7.0
	21nm,0.2s						
WATA	**Walderalm**	**3.47**	**105**	⇓*i*PN	Pn	10 22 01.2	+0.1
WATA				*i* PG	Pg	10 22 12.3	-3.1
WATA				*i* SN	Sn	10 22 41.0	-1.5
WATA				*i* SG	Sg	10 22 56.9	-4.8
	16nm,0.4s						
WTTA	**Wattenberg**	**3.54**	**106**	⇑*i*PN	Pn	10 22 02.4	+0.5
WTTA				*i* SN	Sn	10 22 43.2	-0.9
WTTA				*i* SG	Sg	10 22 59.3	-4.5
	9.2nm,0.4s						
WTTA	**Wattenberg**	**3.54**	**106**	⇑*i*Pn	Pn	10 22 02.4	+0.5
WTTA				*i* Sg	Sg	10 22 59.3	-4.5
	9.2nm,0.4s						
PYM	**Petit Puy Mans**	**3.58**	**225**	Pn	Pn	10 21 59.5	-3.0
MBDF	**Montbardon**	**3.60**	**178**	*e*Pn	Pn	10 22 01.9	-1.0
MBDF				*e*Pg	Pg	10 22 13.4	-4.6
MBDF				*e*Sn	Sn	10 22 39.0	-6.8
MBDF				*e*Sg	Sg	10 22 58.8	-7.3
	15nm,0.6s						
TCF	**Toulx Ste Croi**	**3.64**	**237**	*e*Pn	Pn	10 21 59.7	-3.7
TCF				*e*Pg	Pg	10 22 12.8	-5.8
TCF				*e*Sn	Sn	10 22 40.4	-6.3
TCF				*e*Sg	Sg	10 23 00.0	-7.2
	46nm,0.3s						
VIVF	**Saint-Julien-l**	**3.73**	**202**	*e*Pn	Pn	10 22 02.6	-2.1
VIVF				*e*Pg	Pg	10 22 13.0	-7.5
VIVF				*e*Sg	Sg	10 23 02.1	-8.1
	30nm,0.3s						
LBL	**Lubilhac**	**3.88**	**218**	Pn	Pn	10 22 04.1	-2.6
NOTT	**Nottersdorf**	**3.90**	**66**	*e*Sn	Sn	10 22 47.0	-6.3
MOX	**Moxa**	**3.99**	**53**	*e*Pg	Pg	10 22 20.1	-5.6
	SNR=2.6						
MOX				*e*Sg	Sg	10 23 12.0	-6.8
	SNR=4.6						
NKC	**Novy Kostel**	**4.25**	**61**	*e*SG	Sg	10 23 17.7	-10
CLZ	**Clausthal**	**4.26**	**33**	*e*Sg	Sg	10 23 21.7	-6.2
	SNR=2.1						
WERD	**Werda**	**4.27**	**58**	*e*Pg	Pg	10 22 25.6	-5.6
	SNR=2.9						
WERD				*e*Sg	Sg	10 23 19.8	-8.3
	SNR=6.7						
TANN	**Tannenbergstha**	**4.34**	**59**	*e*Pg	Pg	10 22 26.9	-5.8
	SNR=2.7						
TANN				*e*Sg	Sg	10 23 22.0	-8.6
	SNR=6.1						
LDF	**La Druitiere**	**4.50**	**276**	*e*Pn	Pn	10 22 12.4	-3.3
LDF				*e*Pg	Pg	10 22 28.0	-7.9
LDF				*e*Sn	Sn	10 23 01.0	-7.6
LDF				*e*Sg	Sg	10 23 27.8	-8.2
	28nm,0.5s						
CAF	**Calviac**	**4.64**	**224**	*e*Pn	Pn	10 22 13.9	-3.7
CAF				*e*Sg	Sg	10 23 31.2	-9.2
	29nm,0.5s						
RJF	**Les Rejaudoux**	**4.64**	**231**	*e*Pn	Pn	10 22 13.9	-3.7
RJF				*e*Sg	Sg	10 23 30.9	-10
	32nm,0.4s						
KHC	**Kasperske Hory**	**4.67**	**78**	*e*PN	Pn	10 22 15.5	-2.5
KHC				*e*x	x	10 22 32.7	
KHC				*e*x	x	10 23 06.5	
KHC				*e*SG	Sg	10 23 31.8	-10
KHC	**Kasperske Hory**	**4.67**	**78**	*e*Pn	Pn	10 22 15.5	-2.5
KHC				*e*Sg	Sg	10 23 31.8	-10
LASF	**Ste Croix**	**4.67**	**205**	*e*Pn	Pn	10 22 14.9	-3.2
LASF				*e*Pg	Pg	10 22 32.0	-7.3
LASF				*e*Sg	Sg	10 23 30.2	-11
	18nm,0.5s						
KBA	**Koelnbreinsper**	**4.70**	**103**	⇑*i*PN	Pn	10 22 18.0	-0.5

KBA				i PG	Pg	10 22 35.2	-4.6
KBA				i SN	Sn	10 23 11.7	-1.9
KBA				i SG	Sg	10 23 39.2	-3.3
	7.8nm,0.5s						
GEC2	GERESS Array S	4.72	81	ePn	Pn	10 22 15.4	-3.3
	SNR=4.8						
GEC2				e(Sn)	Sn	10 23 07.4	-6.6
	SNR=4.2						
GEC2				eSg	Sg	10 23 35.3	-7.9
	SNR=3.2						
GEC2	GERESS Array S	4.72	81	ePn	Pn	10 22 16.8	-1.9
FLN	La Foliniere	4.75	278	ePn	Pn	10 22 15.9	-3.2
	baz=98						
FLN				eSn	Sn	10 23 06.8	-8.0
FLN				eSg	Sg	10 23 35.0	-9.1
	29nm,0.5s						
FRF	La Foret Royal	4.77	180	eSn	Sn	10 23 07.2	-8.1
	3.3nm,0.3s						
MFF	Saint Martin d	4.91	252	ePn	Pn	10 22 17.9	-3.6
MFF				ePg	Pg	10 22 36.5	-7.6
MFF				eSn	Sn	10 23 10.9	-8.0
MFF				eSg	Sg	10 23 39.6	-10
	18nm,0.4s						
GRR	Gorron	5.00	273	eSn	Sn	10 23 12.6	-8.4
GRR				eSg	Sg	10 23 42.8	-10
	12nm,0.3s						
LMR	La Mourre	5.00	181	eSn	Sn	10 23 12.9	-8.2
	13nm,0.9s						
CLL	Collm	5.09	52	eSg	Sg	10 23 47.0	-8.4
	SNR=2.5						
CLL	Collm	5.09	52	eSg	Sg	10 23 47.0	-8.4
MOA	Molln	5.14	93⇑	iPN	Pn	10 22 23.3	-1.3
MOA				i PG	Pg	10 22 44.9	-3.7
MOA				i SN	Sn	10 23 21.4	-3.2
LFF	La Frestale	5.29	232	eSg	Sg	10 23 51.8	-10
	63nm,0.5s						
PRU	Pruhonice	5.45	69	eSG	Sg	10 23 55.9	-11
PRU	Pruhonice	5.45	69	eSg	Sg	10 23 55.9	-11
PVCC	Panska Ves	5.62	64	eSG	Sg	10 24 02.2	-11
PVCC	Panska Ves	5.62	64	eSg	Sg	10 24 02.2	-11
MTLF	Montolieu	5.87	213	ePg	Pg	10 22 54.0	-9.1
MTLF				eSg	Sg	10 24 09.9	-11
	14nm,0.5s						
SGMF	Saint Gilles	6.14	273	ePn	Pn	10 22 34.5	-4.2
SGMF				eSn	Sn	10 23 40.2	-9.4
SGMF				eSg	Sg	10 24 18.5	-12
	11nm,0.5s						
QUIF	Quistinic	6.58	270	eSn	Sn	10 23 49.9	-11
	2.2nm,0.2s						
ROSF	Rostrenen	6.61	274	eSn	Sn	10 23 51.3	-10
ROSF				eSg	Sg	10 24 32.9	-13
	3.8nm,0.3s						

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*BJI **08** 10:53:43.6, 15.09S×173.38W, h11^{km}, mB4.6, mb4.9, Ms4.5, Msz4.4*

*IDC **08** 10:53:43.6±0.5, 15.23S×173.51W, mb4.4/12, mb1 4.6/12, mb1mx4.5/19, mbtmp4.4/12, MS3.7/17, Ms1 3.7/17, ms1mx3.6/27, Error ellipse: s-maj=30.3km s-min=14.7km az=128.0*

*NEIC **08** 10:53:45.1±0.2, 15.21S×173.54W, h10^{km}, mb4.5/16, Error ellipse: s-maj=10.1km s-min=4.7km az=129.0*

ISC 08 10:53:43.6±0.3**, 15.21S**±0.08×**173.58W**±0.09**, h10^{km}, n89, σ0^{s}72**/65**, mb4.4**/30**, MS3.8**/14**, 12C-6D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.17	54	Pn	Pn	10 54 16.9	-3.4
	318nm,0.3s,baz=129,slow=0.6,SNR=278						
AFI				Sn	Sn	10 54 35.8	-12
	baz=45,slow=19						
AFI				LR	LR	10 55 01.0	
	comp=Z,1µm,20.5s,baz=190,slow=36						
AFI	Afiamalu	2.17	54	eP	Pn	10 54 16.5	-3.8
AFI				eS	Sn	10 54 35.8	-12
RAR	Rarotonga	14.41	117	LR	LR	11 01 00.1	
	comp=Z,161nm,20.3s,baz=174,slow=30						
RAO	Raoul Island	14.54	195	LR	LR	11 02 02.3	
	comp=Z,348nm,18.6s,baz=66,slow=34						
DZM	Mont Dzumac	20.11	247	LR	LR	11 04 14.3	
	comp=Z,86nm,20.2s,MS3.1,baz=42,slow=31						
URZ	Urewera	24.39	198	P	P	10 59 03.2	+0.1
	5.5nm,0.3s,mb4.4,baz=274,slow=2.2,SNR=11						
URZ				LR	LR	11 07 09.4	
	comp=Z,278nm,19.2s,MS3.8,baz=236,slow=33						
HNR	Honiara	26.48	279	LR	LR	11 08 31.8	
	comp=Z,59nm,19.3s,MS3.1,baz=116,slow=34						
RPZ	Rata Peaks	31.29	202	P	P	11 00 04.6	-1.4
	3.4nm,0.4s,mb4.5,baz=42,slow=14,SNR=5.7						
CTA	Charters Tower	38.52	257	LR	LR	11 14 48.8	
	comp=Z,94nm,19.8s,MS3.6,baz=306,slow=33						
STKA	Stephens Creek	43.98	240	P	P	11 01 53.2	+0.2
	7.9nm,0.6s,mb4.6,baz=88,slow=11,SNR=17						
STKA				PcP	PcP	11 03 38.8	-0.5
	2.8nm,0.7s,baz=349,slow=5.2,SNR=3.2						
STKA				LR	LR	11 17 10.1	
	comp=Z,88nm,20.6s,MS3.7,baz=184,slow=32						
STKA	Stephens Creek	43.98	240	P	P	11 01 53.2	+0.2
STKA				PcP	PcP	11 03 38.8	-0.5
STKA				LR	LR	11 17 10.1	
WB2	Warramunga Arr	49.71	257	eP	P	11 02 38.0	-0.2
WRAB	Tennant Creek	49.71	257	eP	P	11 02 37.9	-0.3
WRA	Warramunga Arr	49.72	257	P	P	11 02 37.5	-0.8
	3.5nm,0.5s,mb4.7,baz=91,slow=7.0,SNR=72						
WRA				PcP	PcP	11 03 59.5	-0.2
	1.3nm,0.7s,baz=92,slow=4.4,SNR=5.8						
ASAR	Alice Springs	50.01	252	P	P	11 02 40.1	-0.3
	13nm,0.7s,mb5.1,baz=86,slow=7.8,SNR=88						
ASAR				LR	LR	11 21 45.2	
	comp=Z,135nm,19.2s,MS4.0,baz=58,slow=34						
ASPA	Alice Springs	50.01	252	eP	P	11 02 40.1	-0.3
SBA	Scott Base	63.42	185	eP	P	11 04 16.3	+0.9
VNDA	Vanda	63.55	186	P	P	11 04 15.9	-0.1
	2.8nm,1.0s,mb4.2,baz=1.3,slow=7.7,SNR=10						
VNDA	Vanda	63.55	186	eP	P	11 04 16.2	+0.1
CASY	Casey	70.51	205	eP	P	11 04 59.1	-1.0
	3.2nm,0.8s,mb4.3						
YBH	Yreka Blue Hor	73.55	37	eP	P	11 05 18.6	-0.2
	3.0nm,0.8s,mb4.3						
NVAR	Mina Array Bea	74.30	42	P	P	11 05 22.6	-0.6
	1.3nm,0.7s,mb4.0,baz=230,slow=10,SNR=10						
NVAR				LR	LR	11 31 17.5	
	comp=Z,86nm,19.3s,MS4.1,baz=290,slow=30						
QSPA	South Pole Qui	74.83	180⇑	iP	P	11 05 26.0	+0.5
	8.9nm,0.8s,mb4.8						
MOD	Modoc	75.08	38	eP	P	11 05 27.6	0.0
	4.9nm,1.1s,mb4.3						
WVOR	Wild Horse Val	76.39	39	eP	P	11 05 34.5	-0.5
	5.7nm,1.0s,mb4.5						
TUC	Tucson	76.41	51	eP	P	11 05 35.2	-0.1
	3.5nm,1.0s,mb4.2						
ELK	Elko	77.56	41	eP	P	11 05 40.3	-1.3
	3.8nm,1.3s,mb4.2						
SSE	Sheshan	77.70	307	P	P	11 05 43.5	+1.0
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,90nm,4.6s						
MVU	Marysvale	78.39	45	eP	P	11 05 46.6	+0.5
	comp=Z,4.8nm,1.2s,mb4.3						
MSU	Marysvale	78.41	45	eP	P	11 05 47.2	+0.9
BMO	Blue Mountains	78.58	37	eP	P	11 05 45.9	-1.1
	comp=Z,1.9nm,0.8s,mb4.1						
MDJ	Mudanjiang	78.77	322	P	P	11 05 48.1	0.0
MDJ				AMB	AMB		
	comp=Z,30nm,5.3s						
DUG	Dugway	78.84	43	eP	P	11 05 48.4	-0.2
	comp=Z,2.5nm,1.0s,mb4.1						
HLID	Hailey	79.59	39	eP	P	11 05 52.8	+0.2
	comp=Z,7.4nm,0.9s,mb4.6						
NJ2	Nanjing	79.91	307	eP	P	11 05 55.0	+0.4
NJ2				AP	pP	11 05 59.9	+2.2
NJ2				XP	sP	11 06 02.4	+3.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
TCUT	Toone Canyon	80.23	43	eP	P	11 05 56.4	+0.3
TXAR	Lajitas Array	80.65	56	P	P	11 05 58.7	+0.2
	comp=Z,1.7nm,1.0s,mb3.9,baz=225,slow=5.3,SNR=14						
TXAR				LR	LR	11 34 25.7	
	comp=Z,62nm,18.4s,MS4.0,baz=195,slow=30						
PV01	Paradox Valley	80.72	46	eP	P	11 05 59.0	+0.2
CN2	Changchun	80.83	320	eP	P	11 06 00.1	+0.9
MCMT	McKenzie Canyo	81.22	39	eP	P	11 06 01.7	+0.5
GDL2	Guadalupe Moun	81.25	53	eP	P	11 06 00.8	-0.8
RRI2	Red Ridge	81.40	41	eP	P	11 06 01.9	-0.3
	comp=Z,5.1nm,0.8s,mb4.5						
TPAW	Teton Pass	81.71	41	eP	P	11 06 04.2	+0.4
	comp=Z,5.6nm,1.0s,mb4.5						
SNOW	Snow King Moun	81.82	41	eP	P	11 06 05.0	+0.6
	comp=Z,6.9nm,0.9s,mb4.6						
IMW	Indian Meadow	81.92	40	eP	P	11 06 04.8	-0.1
	comp=Z,6.3nm,0.9s,mb4.5						
CPRX	Cap Rock	81.97	53	eP	P	11 06 05.2	-0.1
COLA	College	82.21	11	P	P	11 06 06.2	+0.3
	comp=Z,5.6nm,0.9s,mb4.5						
PDAR	Pinedale Array	82.24	42	P	P	11 06 06.5	-0.1
	comp=Z,2.1nm,0.8s,mb4.1,baz=225,slow=2.1,SNR=14						
PDAR				LR	LR	11 37 47.1	
	comp=Z,55nm,20.1s,MS3.9,baz=266,slow=32						
ILAR	Eielson Array	82.29	11	P	P	11 06 06.1	-0.3
	comp=Z,0.8nm,0.6s,mb3.8,baz=212,slow=4.7,SNR=11						
ILAR				LR	LR	11 34 18.4	
	comp=Z,49nm,21.7s,MS3.8,baz=180,slow=30						
HRY	Holter Researc	82.80	38	eP	P	11 06 09.4	0.0
MAW	Mawson	87.92	199	P	P	11 06 35.0	+0.6
	comp=Z,5.9nm,0.7s,mb4.9,baz=112,slow=7.0,SNR=9.9						
MAW				LR	LR	11 41 06.1	
	comp=Z,74nm,18.3s,MS4.1,baz=236,slow=32						
YKA	Yellowknife Ar	89.99	23	P	P	11 06 44.6	+0.4
	comp=Z,0.3nm,0.6s,mb3.8,baz=230,slow=5.0,SNR=5.4						
YKA				LR	LR	11 39 49.1	
	comp=Z,57nm,21.3s,MS4.0,baz=270,slow=31						
JTS	JuntasAbangare	91.35	80	LR	LR	11 37 18.5	
	comp=Z,59nm,19.7s,MS4.0,baz=221,slow=29						
SYO	Syowa Base	92.75	191	⇑P	P	11 06 55.2	-1.6
VNA3	Neumayer Olymp	93.06	175⇑	iP	P	11 06 58.4	+0.2
VNA3	Neumayer Olymp	93.06	175	e	P	11 06 59.3	+1.1
VNA3	Neumayer Olymp	93.06	175	e	P	11 07 01.0	+2.8
SNAA	Sanae	93.10	177⇑	iP	P	11 06 58.3	-0.1
SNAA	Sanae	93.10	177	e	P	11 06 59.4	+1.0
SNAA	Sanae	93.10	177	e	P	11 07 01.7	+3.3
SNAA	Sanae	93.10	177	e	P	11 07 02.7	+4.3
VNA2	Neumayer--Watz	93.56	175⇑	iP	P	11 07 01.1	+0.6
VNA2	Neumayer--Watz	93.56	175	e	P	11 07 02.0	+1.5
VNA2	Neumayer--Watz	93.56	175	e	P	11 07 04.0	+3.5
VNA2	Neumayer--Watz	93.56	175	e	P	11 07 05.2	+4.7
VNA1	Neumayer--Stat	93.75	175⇑	iP	P	11 07 02.4	+1.0
VNA1	Neumayer--Stat	93.75	175	e	P	11 07 03.1	+1.7
VNA1	Neumayer--Stat	93.75	175	e	P	11 07 05.4	+4.0
VNA1	Neumayer--Stat	93.75	175	e	P	11 07 06.4	+5.0
ULM	Lac du Bonnet	93.89	39	LR	LR	11 44 28.5	
	comp=Z,64nm,18.9s,MS4.1,baz=28,slow=32						
MKAR	Makanchi Array	110.57	315	PKiKP		11 12 17.4	
	comp=Z,0.3nm,0.6s,baz=90,slow=2.4,SNR=4.1						
BVAR	Borovoye Array	117.63	322	PKP	PKPdf	11 12 31.5	-1.4
	comp=Z,0.7nm,0.6s,baz=63,slow=3.2,SNR=4.2						
ARCES	ARCESS Array B	124.40	352	PKP	PKPdf	11 12 43.5	-2.3
	comp=Z,6.2nm,1.1s,baz=45,slow=1.7,SNR=5.7						
BURAR	Bucovina Array	144.13	338⇑	iP	PKPbc	11 13 21.1	+2.1
BURAR	Bucovina Array	144.13	338⇑	iP	PKPbc	11 13 21.0	+2.1
CFR	Carcaliu	144.95	333⇑	eP	PKPbc	11 13 23.1	+1.8
CFR	Carcaliu	144.95	333⇑	eP	PKPbc	11 13 23.1	+1.8
VRI	Vrincioaia	145.00	335⇓	eP	PKPbc	11 13 23.0	+1.5
VRI	Vrincioaia	145.00	335⇓	eP	PKPbc	11 13 23.0	+1.6
HARR	Harsova	145.43	333⇑	eP	PKPbc	11 13 25.1	+2.5
HARR	Harsova	145.43	333⇑	eP	PKPbc	11 13 25.0	+2.5
KMBO	Kilima Mbogo	145.46	245	PKPbc	PKPbc	11 13 25.4	+1.9
	comp=Z,2.5nm,0.6s,baz=69,slow=4.6,SNR=6.8						
MLR	Muntele Rosu	145.62	335	PKPbc	PKPbc	11 13 24.9	+1.9
	comp=Z,9.0nm,0.9s,baz=154,slow=3.0,SNR=16						
MLR	Muntele Rosu	145.62	335⇓	eP	PKPbc	11 13 25.0	+2.0
MLR	Muntele Rosu	145.62	335⇓	eP	PKPbc	11 13 25.0	+2.0
BRTR	Keskin Array B	145.90	321	PKPbc	PKPbc	11 13 25.7	+1.8
	comp=Z,3.9nm,0.8s,baz=90,slow=2.5,SNR=18						
SNX	Sinaia	145.91	336⇓	eP	PKPbc	11 13 26.2	+2.5
SNX	Sinaia	145.91	336⇓	eP	PKPbc	11 13 26.2	+2.5
GERES	GERESS Array B	145.93	351	PKPbc	PKPbc	11 13 25.2	+1.6
	comp=Z,2.2nm,0.9s,slow=4.0,SNR=7.0						

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*NEIC **08** 11:10:33.0, 34.87N×24.21E, h14^{km}, MD3.5(ATH), After ATH.*

*CSEM **08** 11:10:33.0±0.2, 34.87N×24.21E, h14^{km}, MD3.5, Error ellipse: s-maj=7.7km s-min=5.2km az=177.0, After ATH*

ATH 08 11:10:33.0, 34.87N×24.21E, h14^{km}±3^{km}, MD3.5/7**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.10	253	ePG	Pg	11 10 36.1	-0.2
VAM	Vamos	0.54	359	ePB	Pb	11 10 43.5	-0.1
NPS	Neapolis	1.22	71	ePG	Pg	11 10 56.3	-1.1
NPS				eSB	Sb	11 11 11.9	+1.3
XRY	Khrisi	1.22	89	ePB	Pb	11 10 56.0	+0.6
KYTH	Kithira	1.70	326	ePG	Pg	11 11 05.0	-2.1
VLI	Veliai	2.12	331	ePB	Pb	11 11 09.3	-1.4
KARP	Karpathos	2.51	74	ePN	Pn	11 11 15.6	+1.5

IDC 08 11:21:02.0±1.4**, 2.81S**×**152.95E, mb3.9**/5**, mb1 4.1**/5**, mb1mx3.9**/15**, mbtmp3.8**/5**, MS3.2**/6**, Ms1 3.2**/6**, ms1mx3.0**/27**, Error ellipse: s-maj=75.7km s-min=24.0km az=124.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.72	221	LR	LR	11 25 33.1	
	comp=Z,30nm,20.8s,baz=46,slow=31						
HNR	Honiara	9.57	134	LR	LR	11 26 23.4	
	comp=Z,48nm,19.6s,baz=302,slow=34						
CTA	Charters Tower	18.37	200	LR	LR	11 30 01.6	
	comp=Z,43nm,20.0s,baz=210,slow=29						
WRA	Warramunga Arr	24.90	225	P	P	11 26 26.3	-1.9
	1.3nm,0.7s,baz=49,slow=9.5,SNR=15						
ASAR	Alice Springs	27.73	220	P	P	11 26 53.0	-1.4
	0.3nm,0.5s,baz=44,slow=8.7,SNR=4.0						
STKA	Stephens Creek	30.82	199	LR	LR	11 39 50.7	
	comp=Z,76nm,18.2s,baz=224,slow=37						
MKAR	Makanchi Array	78.94	319	P	P	11 33 08.2	-0.9
	0.5nm,0.5s,baz=117,slow=5.4,SNR=4.9						
ILAR	Eielson Array	80.27	22	P	P	11 33 13.9	-2.0
	2.2nm,0.8s,baz=245,slow=5.7,SNR=18						
NEW	Newport	92.03	42	LR	LR	12 07 55.2	
	comp=Z,29nm,19.9s,baz=213,slow=31						
YKA	Yellowknife Ar	93.61	28	P	P	11 34 20.6	-0.5
	0.3nm,0.6s,baz=267,slow=4.7,SNR=8.5						
PDAR	Pinedale Array	97.41	47	LR	LR	12 10 21.7	
	comp=Z,31nm,19.9s,baz=241,slow=30						

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*IDC **08** 11:36:56.4±3.6, 2.95N×96.52E, mb3.8/5, mb1 3.9/5, mb1mx3.7/19, mbtmp3.8/5, Error ellipse: s-maj=152.7km s-min=22.5km az=59.0*

ISC 08 11:36:58.5±1.4**, 2.8N**±0.1×**96.3E**±0.2**, h33^{km}, n7, σ0^{s}28**/7**, mb3.8**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	6.13	45	P	P	11 38 29.0	0.0
CMAR	Chiang Mai Arr	15.77	9	Pn	P	11 40 44.9	+5.0
	0.2nm,0.3s,baz=197,slow=11,SNR=6.7						
WRA	Warramunga Arr	43.68	123	P	P	11 45 02.5	+0.1
	0.8nm,0.7s,mb3.6,baz=302,slow=9.2,SNR=5.2						
ASAR	Alice Springs	45.11	128	P	P	11 45 13.6	-0.1
	0.4nm,0.7s,mb3.4,baz=303,slow=7.4,SNR=4.7						
MKAR	Makanchi Array	45.46	347	P	P	11 45 16.8	+0.5
	1.9nm,0.5s,mb4.2,baz=162,slow=7.7,SNR=17						
SONM	Songino Array	45.69	10	P	P	11 45 18.0	-0.1
	0.4nm,0.5s,mb3.6,baz=194,slow=8.7,SNR=3.9						
ZAL	Zalesovo	51.82	351	P	P	11 46 05.0	-0.4
	1.6nm,0.5s,mb4.2,baz=296,slow=4.9,SNR=9.1						

IDC 08 11:43:10.4±14.0**, 2.30S**×**125.41E, h234^{km}**±161^{km}**, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.1**/18**, mbtmp3.9**/3**, Error ellipse: s-maj=171.5km s-min=33.8km az=75.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.59	154	P	P	11 47 21.3	-1.3
	0.5nm,0.3s,baz=332,slow=10,SNR=16						
ASAR	Alice Springs	22.78	160	P	P	11 47 53.0	-0.9
	2.6nm,0.3s,baz=334,slow=8.5,SNR=47						
SONM	Songino Array	52.62	344	P	P	11 52 00.5	-1.8
	0.2nm,0.3s,baz=147,slow=5.7,SNR=3.7						

IDC 08 11:52:51.8±3.7**, 2.69N**×**96.16E, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.5**/19**, mbtmp3.6**/5**, Error ellipse: s-maj=150.2km s-min=22.8km az=59.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.70	123	P	P	12 00 58.8	-1.8
	0.2nm,0.5s,baz=300,slow=9.3,SNR=4.5						
ASAR	Alice Springs	45.12	128	P	P	12 01 10.3	-1.7
	0.2nm,0.7s,baz=306,slow=9.0,SNR=3.9						
MKAR	Makanchi Array	45.56	347	P	P	12 01 13.3	-1.9
	0.7nm,0.5s,baz=161,slow=7.9,SNR=10						
SONM	Songino Array	45.84	10	P	P	12 01 15.9	-1.5
	0.7nm,0.5s,baz=189,slow=9.5,SNR=7.0						
ZAL	Zalesovo	51.93	351	P	P	12 02 01.9	-2.6
	1.1nm,0.5s,baz=281,slow=0.3,SNR=3.2						

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*CSEM **08** 12:08:16.4±0.3, 35.43N×21.61E, h30^{km}, ML3.1, Error ellipse: s-maj=10.5km s-min=4.5km az=82.0*

*HLW **08** 12:08:18.2, 35.52N×21.73E, h20^{km}, Mb3.1*

*ATH **08** 12:08:21.5, 35.80N×22.13E, h45^{km}, MD3.6/5*

*NEIC **08** 12:08:21.5, 35.80N×22.13E, h45^{km}, MD3.6(ATH), After ATH.*

ISC 08 12:08:14.8±1.7**, 35.49N**±0.07×**21.7E**±0.2**, h10^{km}, n9, σ0^{s}93**/11**, 4C, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYTH	Kithira	1.32	53	eP	Pb	12 08 37.5	-1.7
VLI	Veliai	1.57	38	eP	Pn	12 08 42.5	-0.4
ITM	Ithomi	1.70	5	eP	Pn	12 08 45.4	+0.7
VAM	Vamos	2.02	92	eP	Pn	12 08 50.4	+1.1
NPS	Neapolis	3.18	93	eP	Pn	12 09 07.0	+1.1
SLUM		4.93	143	⇑P	Pn	12 09 31.2	+0.4
SLUM				S	Sn	12 10 23.8	-4.8
HMAT	Matruh	6.27	133	⇑P	Pn	12 09 49.5	-0.2
SWA2		6.98	152	⇑P	Pn	12 09 59.1	-0.5
SWA1		7.06	150	⇑P	Pn	12 10 00.2	-0.5
SWA1				S	Sn	12 11 15.3	-6.5

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*BJI **08** 12:50:51.5, 19.30S×68.90W, h133^{km}, mB4.7*

*NEIC **08** 12:50:51.5±0.3, 19.34S×68.87W, mb4.5/27, Error ellipse: s-maj=10.6km s-min=7.1km az=55.0*

NEIC Felt [IV] at Cochiza, Esquina, Illapata and Tulapalca; [III] at Arica, Camarones, Camina, Cantinjagua, Cuya, Huara, Pisagua and Pozo Almonte; [II] at Chaca and Iquique. Also felt [II] at Arequipa and Tacna, Peru.

*IDC **08** 12:50:51.7±0.5, 19.40S×68.96W, h134^{km}±3^{km}, mb4.2/16, mb1 4.4/18, mb1mx4.3/22, mbtmp4.7/18, Error ellipse: s-maj=14.0km s-min=9.4km az=85.0*

ISC 08 12:50:49.5±0.3**, 19.47S**±0.04×**68.94W**±0.05**, h133^{km}, h133^{km}**±.8^{km}**:pP-P, n98, σ1^{s}38**/74**, mb4.3**/35**, 8C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.25	14	P	P	12 51 43.5	+3.1
	79nm,0.3s,baz=198,slow=5.7,SNR=1393						
LPAZ				S	S	12 52 20.9	+1.7
	10nm,0.3s,baz=94,slow=22,SNR=3.8						
LPAZ	La Paz	3.25	14	eP	P	12 51 43.4	+3.0
ARE	Arequipa	3.85	321⇑	iP	P	12 51 46.4	-1.9
ARE				eS	S	12 52 28.0	-5.4
ANCH	Antofagasta	4.41	198⇑	iP	P	12 51 53.5	-2.4
ANCH				i S	S	12 52 39.7	-7.1
CPN1	Cerro Paranal	5.31	195⇑	iP	P	12 52 05.1	-2.7
CPN1				AMP		12 53 32.7	
	comp=N,1µm,0.3s						
CRCH	Chaqaral	7.02	192⇓	iP	P	12 52 26.3	-4.7
SIV	San Ignacio	8.26	66	P	P	12 52 46.8	-0.8
	comp=N,79nm,0.3s,baz=262,slow=11,SNR=868						
SIV				S	S	12 54 17.6	-1.9
	baz=346,slow=21,SNR=4.3						
NNA	Nana	10.63	313	eP	P	12 53 15.8	-3.5
	comp=N,17nm,0.5s						
SAML	Samuel	11.85	29	eP	P	12 53 33.1	-2.1
	comp=N,16nm,0.8s						
CFAA	Coronel Fontan	12.10	177	P	P	12 53 36.9	-1.6
	comp=N,0.3nm,0.3s,baz=352,slow=11,SNR=13						
CFAA				S	S	12 55 45.5	-5.5
	comp=N,0.4nm,0.3s,baz=177,slow=14,SNR=6.1						
CPUP	Villa Florida	12.69	125	P	P	12 53 45.9	-0.3
	comp=N,2.7nm,0.3s,baz=323,slow=12,SNR=61						
JATB	Jatai	16.61	87c	iP	P	12 54 36.9	+1.0
JATB				i		12 54 41.1	
JATB				i		12 54 48.3	
JATB				i		12 55 07.2	
JATB				e		12 55 34.8	
JATB				i		12 55 43.8	
JATB				i		12 55 48.7	
TRQA	Tornquist	19.49	163	eP	P	12 55 08.0	-0.4
	comp=N,50nm,0.8s						
BDFB	Brasilia	20.31	82	P	P	12 55 16.7	-0.2
	comp=N,46nm,0.4s,baz=255,slow=11,SNR=40						
BAO	Brasilia Array	20.33	82	P	P	12 55 16.8	-0.3
PLCA	Paso Flores	21.24	183	P	P	12 55 27.0	+0.9
	comp=N,33nm,0.8s,mb4.7,baz=3.9,slow=11,SNR=45						
PLCA	Paso Flores	21.24	183	eP	P	12 55 26.9	+0.8
	comp=N,47nm,0.9s,mb4.8						
OTAV	Otavalo	21.69	333	eP	P	12 55 33.2	+2.6
	comp=N,12nm,0.9s,mb4.3						
SDV	Santo Domingo	28.22	356	P	P	12 56 30.4	-1.7
	comp=N,3.2nm,0.4s,mb4.4,baz=232,slow=3.2,SNR=5.6						
SDV	Santo Domingo	28.22	356	P	P	12 56 29.1	-3.1
	comp=N,3.7nm,0.5s,mb4.4						
PCRV	Puerto La Cruz	29.76	9	P	P	12 56 45.9	+0.1
	comp=N,5.3nm,0.3s,mb4.7,baz=205,slow=5.0,SNR=6.1						
CS6B	Jaguaretama	32.57	69	eP	P	12 57 09.7	-0.8
CS6B				i		12 57 11.0	
RCBR	Riachuelo	34.88	72	eP	P	12 57 28.9	-1.3
SWET	Sewanee	56.72	343	eP	P	13 00 19.6	-2.1
PLAL	Pickwick Lake	57.12	341	P	P	13 00 21.3	-3.2
	comp=N,3.6nm,0.3s,mb4.7						
WVT	Waverly	58.11	342	eP	P	13 00 28.8	-2.6
	comp=N,7.1nm,0.6s,mb4.7						
TXAR	Lajitas Array	58.96	325	P	P	13 00 36.4	-1.0
	comp=N,0.6nm,0.3s,mb3.9,baz=135,slow=8.8,SNR=3.4						
TXAR				pP	pP	13 01 07.8	-1.5
	comp=N,0.7nm,0.3s,baz=259,slow=16,SNR=2.9						
FVM	French Village	60.61	341	eP	P	13 00 46.3	-2.3
	comp=N,9.7nm,0.6s,mb4.8						
MNTX	Cornudas Mount	61.72	325	eP	P	13 00 52.6	-3.5
	comp=N,0.8nm,0.6s,mb3.7						
MNTX				epP	pP	13 01 23.9	-4.4
CPRX	Cap Rock	61.96	327	eP	P	13 00 55.4	-2.3
VNA3	Neumayer Olymp	62.00	162	P	P	13 00 59.5	+2.0
VNA3	Neumayer Olymp	62.00	162		x	13 01 34.0	
VNA1	Neumayer--Stat	62.20	161	P	P	13 01 03.4	+4.6
VNA1	Neumayer--Stat	62.20	161		pP	13 01 33.7	+2.7
VNA2	Neumayer--Watz	62.57	161	P	P	13 01 03.9	+2.6
VNA2	Neumayer--Watz	62.57	161		pP	13 01 34.1	+0.6
VNA2	Neumayer--Watz	62.57	161		x	13 01 37.7	
VNA2	Neumayer--Watz	62.57	161		x	13 01 49.6	
SNAA	Sanae	64.20	161⇑	iP	P	13 01 12.3	+0.5
SNAA	Sanae	64.20	161⇑	i	pP	13 01 44.9	+0.7
SNAA	Sanae	64.20	161⇑	i	x	13 02 00.7	
SNAA	Sanae	64.20	161	P	P	13 01 12.0	+0.1
	comp=N,1.5nm,0.7s,mb3.9,baz=277,slow=5.6,SNR=28						
SNAA				pP	pP	13 01 44.8	+0.6
	comp=N,4.2nm,1.0s,baz=296,slow=6.8,SNR=6.6						
SDCO	Great Sand Dun	66.49	329	eP	P	13 01 27.1	0.0
	comp=N,6.7nm,0.9s,mb4.5						
SDCO				e	pP	13 01 58.6	-1.1
ISCO	Idaho Springs	68.17	330	eP	P	13 01 37.7	+0.2
	comp=N,5.4nm,1.1s,mb4.2						
ISCO				ePcP	PcP	13 02 02.6	+0.2
DBIC	Dimbokro	68.20	74	P	P	13 01 37.7	-0.4
	comp=N,68nm,1.0s,mb5.3,baz=213,slow=5.8,SNR=43						
DBIC	Dimbokro	68.20	74	eP	P	13 01 37.6	-0.5
	comp=N,61nm,0.9s,mb5.3						
NEN	Nelson	69.97	321	eP	P	13 01 47.2	-1.4
NEN				e	pP	13 02 19.5	-1.9
MSU	Marysvale	70.50	325	eP	P	13 01 52.7	+1.0
MVU	Marysvale	70.51	325	eP	P	13 01 52.8	+1.0
	comp=N,17nm,1.4s,mb4.6						
MVU				epP	pP	13 02 26.8	+2.1
RSSD	Black Hills	70.96	334	eP	P	13 01 54.6	+0.2
	comp=N,4.3nm,0.7s,mb4.3						
RSSD				epP	pP	13 02 27.2	-0.2
DUG	Dugway	72.06	326	eP	P	13 02 01.8	+0.8
	comp=N,4.2nm,1.1s,mb4.1						
DUG				epP	pP	13 02 34.9	+0.9

PDAR	**Pinedale Array**	72.34	330	P	P	13 02 02.3	-0.3
	comp=N,1.2nm,0.6s,mb3.8,baz=125,slow=6.2,SNR=8.8						
HWUT	**Hardware Ranch**	72.45	328	*e*P	P	13 02 03.3	+0.1
	comp=N,5.6nm,0.8s,mb4.3						
ULM	**Lac du Bonnet**	73.38	342	P	P	13 02 07.7	-0.8
	comp=N,2.7nm,0.4s,mb4.3,baz=152,slow=7.2,SNR=3.7						
ULM				pP	pP	13 02 40.2	-1.5
	comp=N,4.2nm,0.8s,baz=83,slow=2.6,SNR=2.5						
ULM	**Lac du Bonnet**	73.38	342	P	P	13 02 07.7	-0.8
ULM				pP	pP	13 02 40.2	-1.5
TPAW	**Teton Pass**	73.56	329	*e*P	P	13 02 09.8	+0.1
	comp=N,2.9nm,0.7s,mb4.1						
RRI2	**Red Ridge**	73.63	329	*e*P	P	13 02 10.9	+0.8
	comp=N,8.1nm,0.8s,mb4.5						
RRI2				*e*pP	pP	13 02 43.3	0.0
ELK	**Elko**	73.74	325	*e*P	P	13 02 11.3	+0.5
	comp=N,3.0nm,1.2s,mb3.9						
ELK				*e*pP	pP	13 02 45.5	+1.4
MNV	**Mina**	73.80	322	P	P	13 02 11.3	+0.1
MNV				*e*pP	pP	13 02 45.4	+0.9
IMW	**Indian Meadow**	73.86	330	*e*P	P	13 02 12.2	+0.7
	comp=N,3.3nm,0.5s,mb4.3						
IMW				*e*pP	pP	13 02 46.1	+1.5
NVAR	**Mina Array Bea**	73.88	322	P	P	13 02 12.6	+0.9
	comp=N,1.3nm,0.8s,mb3.7,baz=136,slow=7.1,SNR=9.5						
NVAR				pP	pP	13 02 45.1	+0.1
	comp=N,2.6nm,0.8s,baz=139,slow=7.7,SNR=6.4						
HLID	**Hailey**	75.31	328	*e*P	P	13 02 21.1	+1.4
	comp=N,3.3nm,0.9s,mb4.0						
HLID				*e*pP	pP	13 02 55.3	+2.1
MCMT	**McKenzie Canyo**	75.46	329	*e*P	P	13 02 22.0	+1.4
MCMT				*e*pP	pP	13 02 56.8	+2.8
BOZ	**Bozeman (W)**	75.50	331	*e*P	P	13 02 21.2	+0.5
	comp=N,14nm,1.8s,mb4.3						
BMO	**Blue Mountains**	77.70	327	*e*P	P	13 02 33.9	+0.8
	comp=N,6.4nm,1.1s,mb4.2						
BMO				*e*pP	pP	13 03 07.6	+1.0
SBA	**Scott Base**	77.81	190	*e*P	P	13 02 34.1	+1.1
	comp=N,4.9nm,1.2s,mb4.0						
SYO	**Syowa Base**	78.41	160	⇑PcP	PcP	13 02 41.5	-4.0
VNDA	**Vanda**	78.84	190	P	P	13 02 41.1	+2.4
	comp=N,1.5nm,0.7s,mb3.7,baz=139,slow=4.4,SNR=7.1						
TSUM	**Tsumeb**	80.66	107	P	P	13 02 51.3	+1.8
	comp=N,11nm,0.9s,mb4.5,baz=233,slow=7.0,SNR=16						
TSUM				pP	pP	13 03 24.9	+1.7
	comp=N,6.8nm,0.9s,baz=227,slow=5.0,SNR=3.9						
TSUM	**Tsumeb**	80.66	107	*e*P	P	13 02 50.7	+1.2
	comp=N,16nm,1.0s,mb4.6						
TSUM				*e*pP	pP	13 03 23.8	+0.6
ESDC	**Sonseca Array**	84.41	45	P	P	13 03 09.5	+1.2
	comp=N,2.3nm,0.8s,mb4.0,baz=245,slow=5.3,SNR=8.6						
BOSA	**Boshof**	84.43	118	P	P	13 03 09.9	+1.2
	comp=N,9.8nm,0.9s,mb4.5,baz=256,slow=5.5,SNR=9.9						
BOSA	**Boshof**	84.43	118	*e*P	P	13 03 09.1	+0.5
LBTB	**Lobatse**	85.89	115	P	P	13 03 17.2	+1.2
	comp=N,9.5nm,1.1s,mb4.5,baz=272,slow=5.9,SNR=5.6						
LBTB	**Lobatse**	85.89	115	*e*P	P	13 03 16.8	+0.8
	comp=N,10nm,0.9s,mb4.6						
YKA	**Yellowknife Ar**	89.27	341	P	P	13 03 31.3	+0.2
	comp=N,5.7nm,0.7s,mb4.6,baz=133,slow=4.6,SNR=79						
YKA				pP	pP	13 04 05.6	0.0
	comp=N,7.1nm,0.8s,baz=134,slow=4.7,SNR=7.2						
GERES	**GERESS Array B**	99.72	42	P	P	13 04 20.9	+1.5
	comp=N,1.8nm,0.4s,mb4.8,baz=226,slow=46,SNR=10						
AKASG	**Malin Array Be**	109.93	42	PP	PP	13 09 44.6	+0.7
	comp=N,0.2nm,0.3s,baz=254,slow=7.8,SNR=4.4						
ASAR	**Alice Springs**	131.69	208	PKhKP		13 09 38.8	
	comp=N,0.2nm,0.5s,baz=124,slow=1.7,SNR=6.6						
ASAR				PKP	PKPdf	13 09 48.6	+1.2
	comp=N,1.3nm,0.7s,baz=132,slow=1.6,SNR=15						
ASAR				pPKP		13 10 23.9	
	comp=N,1.0nm,0.8s,baz=153,slow=1.6,SNR=3.5						
ASAR				SKPbc		13 13 02.1	
	comp=N,2.4nm,0.9s,baz=137,slow=4.6,SNR=8.2						
WRA	**Warramunga Arr**	134.67	212	PKhKP		13 09 48.3	
	comp=N,0.4nm,0.6s,baz=204,slow=1.1,SNR=8.0						
WRA				PKP	PKPdf	13 09 55.1	+2.0
	comp=N,2.3nm,0.6s,baz=143,slow=1.6,SNR=26						
WRA				pPKP		13 10 29.8	
	comp=N,0.9nm,0.6s,baz=156,slow=1.9,SNR=2.9						
WRA				SKPbc		13 13 12.1	
	comp=N,2.4nm,1.1s,baz=140,slow=3.3,SNR=4.9						
ZAL	**Zalesovo**	140.13	24	PKP	PKPdf	13 10 03.7	+1.6
	comp=N,2.1nm,0.3s,baz=113,slow=1.4,SNR=3.8						
MKAR	**Makanchi Array**	143.99	34	PKP	PKPdf	13 10 09.3	+0.4
	comp=N,0.3nm,0.3s,baz=297,slow=2.7,SNR=8.0						
MKAR				pPKP		13 10 48.0	
	comp=N,1.5nm,0.6s,baz=325,slow=3.4,SNR=4.3						
TLY	**Talaya**	147.33	9	*e*PKPdf	PKPdf	13 10 16.5	+1.9
TLY				*e*PKPbc	PKPdf	13 10 19.8	+5.3
NDI	**New Delhi**	147.86	67	*e*P	PKPdf	13 10 20.5	+4.4
WMQ	**Urumqi**	148.82	34	*e*PKP	PKPdf	13 10 18.1	+0.9
WMQ				LR	LR		
	comp=N,150nm,20.5s						
WMQ				LR	LR		
	comp=Z,150nm,20.3s						
MJAR	**Matsushiro Arr**	150.75	311	PKPbc	PKPdf	13 10 28.1	+7.7
	comp=Z,5.4nm,0.7s,baz=93,slow=1.6,SNR=21						
MJAR				pPKPbc		13 11 03.8	
	comp=Z,6.0nm,0.9s,baz=167,slow=0.5,SNR=6.0						
MAJO	**Matsushiro**	150.75	311	*e*PKPbc	PKPdf	13 10 28.4	+8.0
MAJO				*e*pPKPdf		13 11 03.6	
MAT	**Matsushiro**	150.75	311	PKP	PKPdf	13 10 27.0	+6.6
SONM	**Songino Array**	151.45	7	PKP	PKPdf	13 10 24.5	+3.4
	comp=Z,0.5nm,0.3s,slow=1.2,SNR=5.3						
SONM				PKPbc	PKPdf	13 10 30.0	+9.0
	comp=Z,3.8nm,0.5s,baz=316,slow=1.6,SNR=32						
SONM				pPKPbc		13 11 06.4	
	comp=Z,6.1nm,0.8s,baz=334,slow=2.0,SNR=4.9						
ULN	**Ulaanbaatar**	151.49	6	*e*PKPbc	PKPdf	13 10 30.0	+8.9
CN2	**Changchun**	152.90	337	*e*PKP	PKPdf	13 10 29.1	+5.8
GKN	**Gorkha**	154.41	66	*e*P	PKPab	13 10 50.3	-1.3
	comp=Z,54nm,1.0s						
DMN	**Daman**	154.90	66	*e*P	PKPab	13 10 53.7	0.0
	comp=Z,34nm,0.8s						
KKN	**Kakani**	155.01	66	*e*P	PKPab	13 10 51.9	-2.2
	comp=Z,14nm,0.4s						
PKI	**Pulchoki**	155.17	66	*e*P	PKPab	13 10 53.4	-1.4
	comp=Z,36nm,1.3s						
GUN	**Gumba**	155.49	65	*e*P	PKPab	13 10 53.6	-2.6
	comp=Z,31nm,0.8s						
NJ2	**Nanjing**	165.64	332	*e*PKP	PKPdf	13 10 36.4	-1.9
CMAR	**Chiang Mai Arr**	168.49	93	PKPab	PKPab	13 11 53.4	+0.6
	comp=Z,2.6nm,1.0s,baz=256,slow=6.5,SNR=7.2						

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*PRU **08** 13:02:48.8, 50.29N×19.00E*

WAR 08 13:02:49.0, 50.24N×19.07E, h0^{km}, ML2.4, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	0.47	92	*e*PG	Pg	13 02 58.0	-0.4
OJC				*e*SG	Sg	13 03 06.0	+1.4
OKC	**Ostrava-Krasne**	0.72	236	*e*PG	Pg	13 03 03.0	-0.3
OKC				*e*SG	Sg	13 03 11.5	-1.4
	13nm,0.4s						
NIE	**Niedzica**	1.15	135	*e*PG	Pg	13 03 11.0	-1.0
NIE				*e*SG	Sg	13 03 28.0	+0.7
VYHS	**Vyhne**	1.75	185	*i* PN	Pn	13 03 19.8	-1.0
VYHS				*e*SN	Sn	13 03 42.1	-2.0
DPC	**Dobruska-Polom**	1.77	275	*e*PG	Pg	13 03 19.5	-4.7
DPC				*e*SG	Sg	13 03 43.2	-4.5
KSP	**Ksiaz**	1.87	290	*e*PN	Pn	13 03 21.0	-1.5
KSP				*e*PG	Pg	13 03 24.0	-2.4
KSP				*e*SG	Sg	13 03 48.0	-3.3
UPC	**Upice**	1.98	279	*e*SG	Sg	13 03 50.8	-4.0
KHC	**Kasperske Hory**	3.73	255	*e*SG	Sg	13 04 45.0	-8.3

IDC 08 13:14:01.2±2.2, 11.38N×91.42E, mb3.3/4, mb1 3.5/5, mb1mx3.4/21, mbtmp3.3/5, ML3.6/1, MS2.6/1, Ms1 2.8/1, ms1mx2.6/10, Error ellipse: s-maj=66.6km s-min=23.2km az=69.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	10.11	45	Pn	P	13 16 26.6	-4.3
	0.1nm,0.3s,baz=237,slow=15,SNR=4.6						
CMAR				LR	LR	13 20 40.0	
	comp=Z,33nm,18.4s,baz=135,slow=39						
MKAR	**Makanchi Array**	36.13	349	P	P	13 21 04.3	-2.6
	0.1nm,0.3s,baz=164,slow=10,SNR=2.7						
SONM	**Songino Array**	38.45	16	P	P	13 21 25.8	-0.6
	0.3nm,0.8s,baz=207,slow=6.4,SNR=2.8						
WRA	**Warramunga Arr**	52.48	126	P	P	13 23 15.7	-2.7
	0.3nm,0.6s,baz=306,slow=8.5,SNR=12						
ASAR	**Alice Springs**	54.21	130	P	P	13 23 29.4	-1.7
	0.4nm,0.9s,baz=308,slow=7.5,SNR=6.0						

PRE 08 13:14:41.8±2.4, 26.04S×29.23E, ML3.6, 1D, Explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BFT	**Belfast (SA)**	0.81	64	*e*P	Pg	13 14 56.2	-1.8
BFT				*e*S	Sg	13 15 07.0	-1.9
SLR	**Silverton**	0.91	289	⇓*e*P	Pg	13 14 58.0	-1.9
SLR				*e*S	Sg	13 15 10.6	-1.4
SLR				AML	AML	13 15 20.7	
	comp=Z,2μm,0.7s						
NWL	**Newcastle**	1.79	159	*e*P	Pn	13 15 13.3	-0.9
NWL				*e*S	Sn	13 15 36.2	-1.8
NWL				AML	AML	13 15 40.0	
	comp=Z,996nm,0.5s						
PRYS	**Parys**	1.89	242	*e*P	Pn	13 15 15.3	-0.4
PRYS				*e*S	Sn	13 15 39.5	-1.1
PRYS				AML	AML	13 15 41.5	
	comp=Z,461nm,0.4s						
KSR	**Koster**	2.11	275	*e*P	Pn	13 14 17.6	-61
KSR				*e*S	Sn	13 14 41.6	-64
KSR				AML	AML	13 14 45.8	
	comp=Z,806nm,0.5s						
POGA	**Pongola**	2.51	122	*e*P	Pn	13 15 23.9	-0.6
POGA				*e*S	Sn	13 15 55.5	-0.7
POGA				AML	AML	13 16 01.4	
	comp=Z,106nm,0.5s						
BOSA	**Boshof**	4.37	233	*e*P	Pn	13 15 56.0	+5.1
BOSA				*e*S	Sn	13 16 37.0	-6.2

JMA 08 13:19:18.9±0.3, 43.86N×147.38E, h18^{km}, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	1.29	248	P	Pn	13 19 42.0	-0.2
NEM2				*e*S	Sb	13 19 59.2	+0.8
JRA	**Rausu**	1.63	274	P	Pn	13 19 47.0	-0.1
JRA				*e*S	Sn	13 20 07.9	+0.1
JNK	**Nakash**	1.95	263	P	Pn	13 19 51.4	-0.2
JNK				*e*S	Sn	13 20 15.2	-0.6
JAK	**Akkeshi**	2.14	247	P	Pn	13 19 54.0	-0.3
JAK				*e*S	Sn	13 20 20.2	-0.4
JTKR	**Abashiri--Toko**	2.51	274	P	Pn	13 19 59.5	-0.2
JAR	**Ashorobuto**	2.68	259	P	Pn	13 20 02.8	+0.7
JAR				*e*S	Sn	13 20 34.6	+0.1
JOB	**Onbets**	2.76	251	P	Pn	13 20 03.4	+0.2
JOB				*e*S	Sn	13 20 36.2	-0.1
JCH	**Churui**	3.19	248	P	Pn	13 20 09.1	-0.2
JCH				*e*S	Sn	13 20 47.5	+0.2
JEM	**Erimo**	3.61	241	P	Pn	13 20 16.7	+1.4
JNBK	**Urakawa-nobuka**	3.74	247	P	Pn	13 20 17.0	-0.1

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*TRN **08** 13:28:47.4, 10.80N×62.37W, MD3.1*

*FUNV **08** 13:28:47.5, 10.70N×62.34W, h76^{km}, MW2.6*

ISC 08 13:28:46.3±0.7, 10.62N±0.04×62.46W±0.03, h87^{km}±7^{km}, n14, σ1$\overset{s}{.}$17/28, 3C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	**Guiria**	0.23	83	⇑*i*P	P	13 28 58.9	-0.3
GUIV				*e*S	S	13 29 06.7	-2.1
GUNV	**Guanoco**	0.66	226	*e*P	P	13 29 04.4	+2.0
GUNV				*e*S	S	13 29 16.0	+1.7
CRUV	**Carupano**	0.76	274	⇓*i*P	P	13 29 04.1	+0.6
CRUV				*i* S	S	13 29 16.1	-0.1
ITEV	**Isla Los Testi**	0.98	318	⇓*i*P	P	13 29 05.8	0.0
ITEV				*i* S	S	13 29 19.2	-1.4
TPP	**Pointe-a-Pierr**	1.04	107	*e*P	P	13 29 07.4	+0.9
TPP				*e*S	S	13 29 22.6	+0.9
TRN	**Trinidad (W)**	1.04	88	⇑*i*P	P	13 29 06.5	0.0
TRN				*e*S	S	13 29 19.0	-2.7
GRW	**Mount Saint Ca**	1.72	27	*e*P	P	13 29 15.1	-0.2
GRW				*e*S	S	13 29 37.9	+1.3
PCRV	**Puerto La Cruz**	2.19	259	*e*P	P	13 29 23.1	+1.5
PCRV				*e*S	S	13 29 48.6	+1.0
IBAV	**Isla La Blanqu**	2.40	300	⇑*i*P	P	13 29 24.9	+0.5
IBAV				*e*S	S	13 29 52.2	-0.6
GURV	**El Guri**	2.91	192	*e*P	P	13 29 32.2	+0.6
GURV				*e*S	S	13 30 04.6	-0.9
BIRV	**Birongo**	3.75	268	*e*P	P	13 29 43.8	+0.6
BIRV				*e*S	S	13 30 25.0	-1.4
LUEV	**Luepa**	4.85	168	*i* P	P	13 29 57.4	-0.9
LUEV				*e*S	S	13 30 48.6	-5.1
CAOV	**Caicara del Or**	5.03	230	*e*P	P	13 30 01.0	+0.2
CAOV				*e*S	S	13 30 55.1	-3.0
BAUV	**El Baul**	5.75	254	*e*P	P	13 30 10.2	-0.5
BAUV				*e*S	S	13 31 12.0	-3.9

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*IDC **08** 13:37:14.5±0.5, 35.58S×103.33W, mb4.4/15, mb1 4.5/15, mb1mx4.5/20, mbtmp4.4/15, MS4.8/24, Ms1 4.8/24, ms1mx4.8/25, Error ellipse: s-maj=18.3km s-min=18.0km az=145.0*

*MOS **08** 13:37:15.6±1.5, 35.88S×103.02W, h10^{km}, mb5.2/22, MS4.8/10, Error ellipse: s-maj=19.9km s-min=9.5km az=91.2*

*BJI **08** 13:37:17.3, 35.90S×102.90W, h10^{km}, mB5.5, Ms5.3, Msz5.2*

*HRVD **08** 13:37:17.4±0.1, 35.92S×103.43W, h19^{km}, MW5.6/73, Centroid moment Tensor Solution. LP body waves: s68,c149;Mantle waves: s73,c168; Half duration: 1$\overset{s}{.}$6 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.16±.04; $M_{\theta\theta}$-0.90±.04; $M_{\phi\phi}$1.06±.04; $M_{r\theta}$-0.12±.09; $M_{\theta\phi}$-3.33±.04; $M_{\phi r}$-0.60±.10; Best double couple: $M_0$3.526×10^{17} NP1: ϕ_s98°,δ80°,λ-179°. NP2:ϕ_s8°,δ89°,λ-10°. Principal axes: T 3.594, Plg6°, Azm54°; N -.138, Plg80°, Azm181°; P -3.458, Plg8°, Azm323°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **08** 13:37:17.4±0.3, 35.90S×102.91W, h10^{km}, mb5.0/47, MS4.8/19, MW5.6 Error ellipse: s-maj=12.2km s-min=7.5km az=76.0, Moment Tensor Solution. s4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.09; $M_{\theta\theta}$-0.83; $M_{\phi\phi}$0.74; $M_{r\theta}$-0.12; $M_{\theta\phi}$-3.06; $M_{\phi r}$-0.90; Best double couple: $M_0$3.3×10^{17} NP1:ϕ_s97°,δ74°,λ179°. NP2:ϕ_s187°, δ89°,λ16°. Principal axes: T 3.25, Plg12°, Azm53°; N .08, Plg74°, Azm189°; P -3.33, Plg11°, Azm321°;*

ISC 08 13:37:16.0±0.3, 35.87S±0.05×102.93W±0.10, h10^{km}, n195, σ1$\overset{s}{.}$27/126, mb4.8/61, MS4.8/46, 9C-3D, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	25.79	111	*e*P	P	13 42 48.1	-0.5
PLCA				pmax	pmax		
	comp=Z,19nm,1.0s						
PLCA	**Paso Flores**	25.79	111	P	P	13 42 51.5	+2.8
	comp=Z,10nm,0.8s,mb4.4,baz=277,slow=8.0,SNR=14						
PLCA				LR	LR	13 50 30.4	
	comp=Z,1μm,21.2s,MS4.3,baz=170,slow=30						
PLCA	**Paso Flores**	25.79	111	*e*P	P	13 42 48.1	-0.6
	comp=Z,19nm,1.0s,mb4.6						
PLCA				LR	LR	13 50 30.4	
CFAA	**Coronel Fontan**	29.07	92	P	P	13 43 22.3	+3.6
	comp=Z,0.7nm,0.9s,baz=252,slow=8.4,SNR=4.3						
CFAA				LR	LR	13 53 29.8	
	comp=Z,45nm,19.1s,baz=255,slow=33						
CFAA	**Coronel Fontan**	29.07	92	P	P	13 43 22.3	+3.6
CFAA				LR	LR	13 53 29.8	
USHA	**Ushuaia**	30.34	140	LR	LR	13 52 42.2	
	comp=Z,6μm,21.4s,MS5.2,baz=260,slow=30						
RKT	**Rikitea**	30.50	286	*e*P	P	13 43 22.0	-9.5
	comp=Z,112nm,27.0s						
RKT				*e*S	S	13 48 24.4	-7.2
	comp=Z,1μm,25.0s						
RKT				*e*LQ		13 49 54.6	
	comp=Z,8μm,32.0s						
RKT				*e*LR	LR	13 50 07.2	
	comp=Z,1μm,27.2s						
TRQA	**Tornquist**	32.61	106	P	P	13 43 51.0	+1.2
TRQA				LR	LR		
	comp=Z,2μm,21.0s,MS4.8						
LPAZ	**La Paz**	36.57	67	*e*P	P	13 44 23.8	-0.2
LPAZ				pmax	pmax		
	comp=Z,20nm,1.1s						
LPAZ	**La Paz**	36.57	67	P	P	13 44 23.2	-0.8
	comp=Z,0.9nm,0.4s,mb4.0,baz=204,slow=9.5,SNR=3.4						
LPAZ				LR	LR	13 56 52.2	
	comp=Z,737nm,20.3s,MS4.5,baz=249,slow=32						
LPAZ	**La Paz**	36.57	67	*e*P	P	13 44 23.8	-0.2
	comp=Z,20nm,1.1s,mb4.9						
CPUP	**Villa Florida**	39.89	89	P	P	13 44 51.4	-0.3
CPUP	**Villa Florida**	39.89	89	P	P	13 44 52.3	+0.6
	comp=Z,1.5nm,0.8s,mb3.8,baz=270,slow=7.4,SNR=3.2						
CPUP				LR	LR	13 58 15.3	
	comp=Z,915nm,21.5s,MS4.6,baz=86,slow=31						
TBI	**Tubuai**	41.97	274	*e*LQ		13 54 45.4	
	comp=Z,3μm,34.2s						
TBI				*e*LR	LR	13 55 44.5	
	comp=Z,2μm,23.5s,baz=106						
SIV	**San Ignacio**	42.14	73	P	P	13 45 10.6	+0.3
	comp=Z,4.0nm,0.8s,mb4.1,baz=242,slow=9.0,SNR=20						
OTAV	**Otavalo**	42.54	38	*e*P	P	13 45 14.2	+0.6
	comp=Z,41nm,1.5s,mb4.9						
SAML	**Samuel**	45.00	63	*e*P	P	13 45 33.0	-0.6
	comp=Z,37nm,1.6s,mb5.0						
PPT	**Papeete**	45.01	281	*e*S	Sx	13 51 49.0	
	comp=Z,2μm,26.0s						
PPT				*e*LR	LR	13 58 21.0	
	comp=Z,640nm,24.8s						
ROSC	**El Rosal**	48.58	40	LR	LR	14 02 57.9	
	comp=Z,2μm,20.8s,MS5.0,baz=195,slow=32						
RAR	**Rarotonga**	51.36	270	LR	LR	14 03 02.9	
	comp=Z,420nm,18.1s,MS4.5,baz=105,slow=30						
BDFB	**Brasilia**	52.70	82	P	P	13 46 34.1	+1.0
	comp=Z,2.2nm,0.5s,mb4.3,baz=246,slow=9.5,SNR=4.2						
BDFB				LR	LR	14 07 57.1	
	comp=Z,742nm,18.7s,MS4.8,baz=240,slow=35						
SDV	**Santo Domingo**	53.92	41	*e*P	P	13 46 39.7	-2.4
	comp=Z,13nm,0.8s,mb4.9						
SDV				LR	LR		
	comp=Z,738nm,21.0s,MS4.7						
QSPA	**South Pole Qui**	54.34	180	*e*P	P	13 46 43.0	-1.3
	comp=Z,46nm,1.1s,mb5.3						
SBA	**Scott Base**	55.31	195	*e*P	P	13 46 49.3	-2.2
SBA				pmax	pmax		
	comp=Z,73nm,1.8s,mb5.4						
SBA				MLR	MLR		
	comp=Z,1μm,20.0s,MS4.9						
SBA	**Scott Base**	55.31	195	*e*P	P	13 46 49.3	-2.2
	comp=Z,73nm,1.8s,mb5.4						
SBA				LR	LR		
	comp=Z,1μm,20.0s,MS4.9						
VNDA	**Vanda**	56.41	195	P	P	13 46 57.4	-2.0
	comp=Z,6.9nm,1.2s,mb4.5,baz=106,slow=7.2,SNR=7.2						
VNDA				LR	LR	14 05 41.6	
	comp=Z,1μm,19.2s,MS5.0,baz=97,slow=30						
VNDA	**Vanda**	56.41	195	*e*P	P	13 47 00.1	+0.7
	comp=Z,0.7nm,1.0s						
VNA3	**Neumayer Olymp**	57.52	157	⇑*i*P	P	13 47 06.5	-0.9
VNA3	**Neumayer Olymp**	57.52	157		P	13 47 09.1	+1.7
VNA3	**Neumayer Olymp**	57.52	157	⇑*i*	P	13 47 10.9	+3.5
VNA1	**Neumayer--Stat**	58.13	157	⇓*i*P	P	13 47 10.7	-0.9
VNA1	**Neumayer--Stat**	58.13	157		P	13 47 13.3	+1.7
VNA1	**Neumayer--Stat**	58.13	157	⇑*i*	P	13 47 15.7	+4.1
VNA2	**Neumayer--Watz**	58.32	157	P	P	13 47 11.8	-1.2
VNA2	**Neumayer--Watz**	58.32	157		P	13 47 14.4	+1.4
VNA2	**Neumayer--Watz**	58.32	157	⇑*i*	P	13 47 16.6	+3.6
VNA2	**Neumayer--Watz**	58.32	157		PcP	13 48 03.0	-0.8
SNAA	**Sanae**	59.45	159	⇓*i*P	P	13 47 19.2	-1.6
SNAA	**Sanae**	59.45	159	⇑*i*	P	13 47 23.8	+3.0
SNAA	**Sanae**	59.45	159	⇑*i*	PcP	13 48 09.5	+1.2
URZ	**Urewera**	61.89	242	LR	LR	14 07 40.2	
	comp=Z,2μm,21.7s,MS5.3,baz=272,slow=30						
RAO	**Raoul Island**	62.13	253	LR	LR	14 07 16.2	
	comp=Z,1μm,21.9s,MS5.1,baz=134,slow=29						
RPZ	**Rata Peaks**	63.73	234	LR	LR	14 08 49.9	
	comp=Z,2μm,18.5s,MS5.3,baz=63,slow=30						
SJG	**San Juan**	63.99	39	*e*P	P	13 47 49.3	-2.8
SJG				pmax	pmax		
	comp=Z,17nm,0.6s						
SJG	**San Juan**	63.99	39	*e*P	P	13 47 49.3	-2.7
	comp=Z,17nm,0.6s,mb5.2						
NVL	**N'lazarevskaya**	64.05	160	⇓*i*P	P	13 47 53.9	+2.3
NVL				*i*		13 50 08.3	
NVL				*i* S	S	13 56 21.2	-5.2
NVL				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
LTX	**Lajitas**	64.86	359	*e*P	P	13 47 57.6	+0.1
LTX				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
LTX	**Lajitas**	64.86	359	*e*P	P	13 47 57.5	0.0
	comp=Z,8.0nm,0.8s,mb4.8						
TXAR	**Lajitas Array**	64.86	359	P	P	13 47 53.1	-4.5
	comp=Z,0.3nm,0.3s,mb3.8,baz=188,slow=6.4,SNR=4.0						
TXAR				LR	LR	14 10 28.4	
	comp=Z,541nm,18.7s,MS4.8,baz=260,slow=31						
AFI	**Afiamalu**	64.91	271	LR	LR	14 08 36.4	
	comp=Z,305nm,20.5s,MS4.5,baz=128,slow=29						
JCT	**Junction City**	66.06	3	*e*P	P	13 48 03.4	-1.8
JCT				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.3						
JCT				MLR	MLR		
	comp=Z,258nm,20.0s,MS4.4						
JCT	**Junction City**	66.06	3	*e*P	P	13 48 03.4	-1.8
	comp=Z,35nm,1.2s,mb5.3						
JCT				LR	LR		
	comp=Z,258nm,20.0s,MS4.4						
MNTX	**Cornudas Mount**	67.25	358	*e*P	P	13 48 09.8	-3.0
	comp=Z,11nm,1.4s,mb4.7						
NATX	**Nacogdoches**	67.72	8	P	P	13 48 15.9	+0.2
GDL2	**Guadalupe Moun**	67.72	359	*e*P	P	13 48 15.2	-0.5
TUC	**Tucson**	68.22	353	P	P	13 48 16.9	-2.0
TUC				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.9						
TUC	**Tucson**	68.22	353	P	P	13 48 16.9	-2.0
	comp=Z,17nm,1.3s,mb4.9						
CPRX	**Cap Rock**	68.55	359	*e*P	P	13 48 20.9	0.0
BNM	**Barren Site**	69.74	357	*e*P	P	13 48 28.7	+0.5
LRAL	**Lakeview Retre**	70.15	14	P	P	13 48 30.3	-0.4
	comp=Z,11nm,0.2s,mb5.4						
WMOK	**Wichita Mounta**	70.35	4	*e*P	P	13 48 31.2	-0.7
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
WMOK	**Wichita Mounta**	70.35	4	*e*P	P	13 48 31.2	-0.7
	comp=Z,4.6nm,1.0s,mb4.4						
AMTX	**Amarillo**	70.40	1	*e*P	P	13 48 32.5	+0.4
	comp=Z,43nm,1.4s,mb5.2						
AMTX				LR	LR		
	comp=Z,430nm,21.0s,MS4.7						
ANMO	**Albuquerque**	70.53	357	⇑*e*P	P	13 48 33.5	+0.5
ANMO	**Albuquerque**	70.53	357	*e*P	P	13 48 33.8	+0.9
	comp=Z,5.7nm,1.3s,mb4.3						
WUAZ	**Wupatki**	71.45	353	*e*P	P	13 48 39.5	+0.9
	comp=Z,8.1nm,1.3s,mb4.5						
LDFC	**Landfair**	71.49	349	*e*P	P	13 48 37.5	-1.3
SYO	**Syowa Base**	71.83	167	⇑P	P	13 48 37.3	-2.9
PLAL	**Pickwick Lake**	71.84	13	*e*P	P	13 48 39.7	-1.2
	comp=Z,5.9nm,0.8s,mb4.6						
NEN	**Nelson**	72.01	350	*e*P	P	13 48 41.7	-0.2
SWET	**Sewanee**	72.47	15	*e*P	P	13 48 42.8	-1.9
CPCT	**Cooper Cave**	73.00	16	P	P	13 48 48.5	+0.8
WVT	**Waverly**	73.00	13	*e*P	P	13 48 46.5	-1.2
WVT				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
WVT	**Waverly**	73.00	13	*e*P	P	13 48 46.5	-1.2
	comp=Z,11nm,1.2s,mb4.7						
SDCO	**Great Sand Dun**	73.28	358	*e*P	P	13 48 50.2	+0.9
	comp=Z,8.2nm,1.0s,mb4.6						
PV01	**Paradox Valley**	73.82	355	*e*P	P	13 48 50.8	-1.7
PV10	**Paradox Valley**	74.09	355	*e*P	P	13 48 50.8	-3.2
MTUM	**Tungsten Hills**	74.28	347	*e*P	P	13 48 55.6	+0.5
MVU	**Marysvale**	74.50	352	*e*P	P	13 48 57.8	+1.4
	comp=Z,28nm,1.6s,mb5.0						
MVU				LR	LR		
	comp=Z,542nm,21.0s,MS4.8						
MSU	**Marysvale**	74.50	352	*e*P	P	13 48 57.4	+1.0
TPH	**Tonopah**	74.75	348	*e*P	P	13 48 59.8	+2.0
TPH				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
TPH	**Tonopah**	74.75	348	*e*P	P	13 48 59.8	+2.0
	comp=Z,26nm,1.2s,mb5.0						
TRCR	**Troy Canyon**	74.77	350	*e*P	P	13 48 57.8	-0.1
CASY	**Casey**	74.97	193	*e*P	P	13 48 59.3	+0.8
	comp=Z,24nm,1.1s,mb5.0						
MNV	**Mina**	75.26	348	*e*P	P	13 49 01.6	+0.9
MNV				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
MNV	**Mina**	75.26	348	*e*P	P	13 49 01.6	+0.8

	comp=Z,28nm,1.2s,mb5.1						
NVAR	**Mina Array Bea**	75.28	348	P	P	13 48 56.8	-4.1
	comp=Z,4.6nm,0.7s,mb4.5,baz=158,slow=6.3,SNR=16						
NVAR				LR	LR	14 14 33.3	
	comp=Z,464nm,19.8s,MS4.8,baz=195,slow=30						
CMB	**Columbia Colle**	75.29	346	*e*P	P	13 49 01.4	+0.5
CMB				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
CMB	**Columbia Colle**	75.29	346	*e*P	P	13 49 01.4	+0.5
	comp=Z,22nm,1.3s,mb4.9						
BLA	**Blacksburg**	75.65	18	P	P	13 49 03.7	+0.7
BLA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
BLA	**Blacksburg**	75.65	18	P	P	13 49 03.7	+0.7
	comp=Z,7.7nm,0.8s,mb4.7						
DUG	**Dugway**	76.23	352	*e*P	P	13 49 07.4	+1.2
DUG				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.6						
DUG				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.4						
DUG	**Dugway**	76.23	352	*e*P	P	13 49 07.4	+1.2
	comp=Z,12nm,1.4s,mb4.6						
DUG				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
MAW	**Mawson**	76.29	174	P	P	13 49 06.6	+0.7
	comp=Z,16nm,0.9s,mb4.9,baz=234,slow=4.3,SNR=10						
MAW				LR	LR	14 20 27.1	
	comp=Z,715nm,19.0s,MS5.0,baz=4.2,slow=34						
DAU	**Daniels Canyon**	76.29	353	*e*P	P	13 49 07.7	+1.1
JLU	**Jordanelle**	76.50	353	*e*P	P	13 49 08.9	+1.2
CTU	**Camp Tracy**	76.62	353	*e*P	P	13 49 09.1	+0.7
BEKR	**Beckwourth**	77.05	346	*e*P	P	13 49 11.9	+1.1
	comp=Z,39nm,1.4s,mb5.1						
BMN	**Battle Mountai**	77.06	349	*e*P	P	13 49 11.6	+0.8
BMN				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
BMN				MLR	MLR		
	comp=Z,296nm,19.0s,MS4.6						
BMN	**Battle Mountai**	77.06	349	*e*P	P	13 49 11.6	+0.8
	comp=Z,15nm,1.0s,mb4.9						
BMN				LR	LR		
	comp=Z,296nm,19.0s,MS4.6						
ELK	**Elko**	77.07	350	P	P	13 49 08.7	-2.2
	comp=Z,1.2nm,0.5s,mb4.0,baz=131,slow=4.3,SNR=8.4						
ELK				LR	LR	14 16 05.1	
	comp=Z,496nm,21.4s,MS4.8,baz=169,slow=30						
MIR	**Mirnyy**	77.17	186	*e*P	P	13 49 11.0	+0.1
MIR				pmax	pmax		
	comp=Z,54nm,2.0s,mb5.1						
HWUT	**Hardware Ranch**	77.50	353	*e*P	P	13 49 12.8	-0.5
	comp=Z,9.5nm,1.0s,mb4.7						
WDC	**Whiskeytown Da**	78.18	345	*e*P	P	13 49 16.5	-0.5
WDC				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
WDC	**Whiskeytown Da**	78.18	345	*e*P	P	13 49 16.5	-0.5
	comp=Z,18nm,1.0s,mb5.0						
PDAR	**Pinedale Array**	78.49	355	P	P	13 49 13.4	-5.3
	comp=Z,7.5nm,0.9s,mb4.6,baz=156,slow=4.7,SNR=19						
PDAR				LR	LR	14 19 45.8	
	comp=Z,239nm,18.2s,MS4.6,baz=7.6,slow=33						
MOD	**Modoc**	79.01	347	*e*P	P	13 49 22.6	+1.1
	comp=Z,24nm,1.1s,mb5.0						
MOD				LR	LR		
	comp=Z,507nm,21.0s,MS4.8						
RRI2	**Red Ridge**	79.21	354	*e*P	P	13 49 22.0	-0.6
	comp=Z,35nm,1.3s,mb5.1						
WVOR	**Wild Horse Val**	79.24	348	*e*P	P	13 49 20.1	-2.7
WVOR				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
WVOR				MLR	MLR		
	comp=Z,671nm,21.0s,MS5.0						
WVOR	**Wild Horse Val**	79.24	348	*e*P	P	13 49 20.1	-2.7
	comp=Z,27nm,1.3s,mb5.0						
WVOR				LR	LR		
	comp=Z,671nm,21.0s,MS5.0						
SNOW	**Snow King Moun**	79.28	354	*e*P	P	13 49 24.2	+1.3
	comp=Z,41nm,1.2s,mb5.2						
TPAW	**Teton Pass**	79.32	354	*e*P	P	13 49 21.5	-1.7
	comp=Z,52nm,1.3s,mb5.3						
YBH	**Yreka Blue Hor**	79.32	345	*e*P	P	13 49 23.1	-0.1
YBH				pmax	pmax		
	comp=Z,13nm,1.2s						
YBH				MLR	MLR		
	comp=Z,750nm,22.0s						
YBH	**Yreka Blue Hor**	79.32	345	P	P	13 49 20.5	-2.7
	comp=Z,6.0nm,0.9s,mb4.5,baz=121,slow=4.6,SNR=12						
YBH	**Yreka Blue Hor**	79.32	345	*e*P	P	13 49 23.1	-0.1
	comp=Z,13nm,1.2s,mb4.7						
YBH				LR	LR		
	comp=Z,750nm,22.0s,MS5.0						
MOOW	**Moose Ponds**	79.56	354	*e*P	P	13 49 23.3	-1.2
	comp=Z,15nm,1.4s,mb4.7						
RSSD	**Black Hills**	79.62	359	*e*P	P	13 49 22.3	-2.5
RSSD				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
RSSD				MLR	MLR		
	comp=Z,447nm,19.0s,MS4.8						
RSSD	**Black Hills**	79.62	359	*e*P	P	13 49 22.3	-2.4
	comp=Z,19nm,1.2s,mb4.9						
RSSD				LR	LR		
	comp=Z,447nm,19.0s,MS4.8						
IMW	**Indian Meadow**	79.72	354	*e*P	P	13 49 26.0	+0.6
	comp=Z,27nm,1.2s,mb5.0						
HLID	**Hailey**	79.74	352	*e*P	P	13 49 26.3	+0.8
	comp=Z,32nm,1.0s,mb5.2						
HLID				LR	LR		
	comp=Z,422nm,19.0s,MS4.8						
HUMO	**Hull Mountain**	80.21	345	*e*P	P	13 49 28.7	+0.7
	comp=Z,8.8nm,0.8s,mb4.7						
QLMT	**Earthquake Lak**	80.69	354	*e*P	P	13 49 31.7	+1.2
MCMT	**McKenzie Canyo**	80.82	353	*e*P	P	13 49 32.3	+1.1
BMO	**Blue Mountains**	81.39	350	*e*P	P	13 49 35.8	+1.6
	comp=Z,10nm,1.3s,mb4.6						
BOZ	**Bozeman (W)**	81.52	354	*e*P	P	13 49 35.6	+0.8
BOZ				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.0						
BOZ				MLR	MLR		
	comp=Z,632nm,20.0s,MS5.0						
BOZ	**Bozeman (W)**	81.52	354	*e*P	P	13 49 35.6	+0.8
	comp=Z,28nm,1.5s,mb5.0						
BOZ				LR	LR		
	comp=Z,632nm,20.0s,MS5.0						
HRY	**Holter Researc**	82.59	354	*e*P	P	13 49 41.9	+1.5
CHMT	**Chamberlain Mo**	82.93	353	*e*P	P	13 49 42.2	+0.2
SADO	**Sadowa**	83.11	17	P	P	13 49 41.1	-2.0
	comp=Z,4.4nm,0.9s,mb4.5,baz=243,slow=4.5,SNR=2.3						
HAWA	**Hanford**	83.24	349	*e*P	P	13 49 44.8	+1.2
	comp=Z,1.5nm,1.2s,mb3.9						
HAWA				LR	LR		
	comp=Z,62nm,21.0s,MS4.0						
NCB	**Newcomb**	83.64	20	*e*P	P	13 49 45.1	-0.7
	comp=Z,9.7nm,0.8s,mb5.0						
NEW	**Newport**	84.71	351	*e*P	P	13 49 52.0	+1.0
NEW				pmax	pmax		
	comp=Z,66nm,1.7s						
NEW				MLR	MLR		
	comp=Z,480nm,21.0s						
NEW	**Newport**	84.71	351	*e*P	P	13 49 52.0	+1.0
	comp=Z,66nm,1.7s,mb5.5						
NEW				LR	LR		
	comp=Z,480nm,21.0s,MS4.9						
ULM	**Lac du Bonnet**	85.97	5	LR	LR	14 21 15.9	
	comp=Z,212nm,21.9s,MS4.5,baz=59,slow=31						
STKA	**Stephens Creek**	89.46	230	P	P	13 50 13.9	-0.7
	comp=Z,2.1nm,0.5s,mb4.7,baz=326,slow=12,SNR=5.7						
STKA				LR	LR	14 23 46.8	
	comp=Z,1µm,19.2s,MS5.4,baz=98,slow=31						
HNR	**Honiara**	90.25	258	LR	LR	14 21 23.6	
	comp=Z,382nm,21.8s,MS4.8,baz=144,slow=29						
SCHQ	**Schefferville**	95.51	20	LR	LR	14 31 03.5	
	comp=Z,402nm,18.5s,MS4.9,baz=116,slow=34						
YKA	**Yellowknife Ar**	98.47	355	P	P	13 50 51.7	-3.4
	comp=Z,0.2nm,0.3s,mb4.2,baz=135,slow=34,SNR=2.6						
YKA				LR	LR	14 31 54.1	
	comp=Z,308nm,18.7s,MS4.8,baz=90,slow=33						
BOSA	**Boshof**	99.42	136	LR	LR	14 28 27.5	
	comp=Z,521nm,20.3s,MS5.0,baz=220,slow=31						
ASAR	**Alice Springs**	100.05	231	P	P	13 51 01.2	-2.0
	comp=Z,0.5nm,0.8s,baz=129,slow=5.1,SNR=6.3						
ASAR				PKKPbc		14 07 22.6	
	comp=Z,0.4nm,0.8s,baz=320,slow=2.7,SNR=4.3						
ASAR				LR	LR	14 30 53.1	
	comp=Z,1µm,18.3s,MS5.5,baz=152,slow=32						
MOX	**Moxa**	131.66	51	*e*PKIKP	PKPdf	13 56 31.0	-1.0
MOX				*e*		13 58 48.6	
MOX				*e*		14 08 58.0	
MOX				*e*PS	PS	14 09 05.1	+2.9
MOX				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.8						
MOX	**Moxa**	131.66	51	*e*P	PKPdf	13 56 31.0	-1.0
MOX				PP	PP	13 58 49.0	-3.9
MOX				*e*		14 08 58.0	
MOX				PS	PS	14 09 05.0	+2.8
MOX				L		14 50 49.0	
CLL	**Collm**	132.62	50	*e*PKIKP	PKPdf	13 56 34.0	+0.2
CLL				*e*PKS	PKS	14 00 09.0	+3.2
CLL				*e*		14 05 55.0	
CLL				*e*		14 08 59.0	
CLL				*e*PPS	PPS	14 10 55.0	+2.9
CLL				*e*SS	SS	14 16 40.0	+3.6
CLL				*e*SSS	SSS	14 21 23.0	-9.3
KHC	**Kasperske Hory**	132.69	53	*i* PKIKP	PKPdf	13 56 31.9	-2.1
KHC	**Kasperske Hory**	132.69	53	AMS	AMS	14 51 10.0	
	comp=Z,200nm,21.8s						
PRU	**Pruhonice**	133.43	52	AMS	AMS	14 46 20.0	
	comp=Z,200nm,19.6s						
PVCC	**Panska Ves**	133.51	51	AMS	AMS	14 44 00.0	
	comp=Z,400nm,27.3s						
DPC	**Dobruska-Polom**	134.60	52	AMS	AMS	14 52 20.0	
	comp=Z,200nm,21.1s						
OKC	**Ostrava-Krasne**	135.73	53	AMS	AMS	14 52 50.0	
	comp=Z,200nm,21.7s						
FINES	**FINESS Array B**	139.22	35	PKP	PKPdf	13 56 43.9	-1.7
	comp=Z,1.4nm,0.9s,baz=135,slow=2.7,SNR=4.3						
MDJ	**Mudanjiang**	139.57	299	PKP	PKPdf	13 56 41.3	-5.4
MDJ				PP	PP		
	comp=Z,70nm,5.7s						
CN2	**Changchun**	142.46	297	*e*PKP	PKPdf	13 56 52.0	+0.2
CN2				PP	PP	14 00 03.9	+4.0
CN2				LR	LR		
	comp=N,300nm,21.0s,MS5.1						
CN2				LR	LR		
	comp=E,200nm,21.0s,MS5.1						
CN2				LR	LR		
	comp=Z,200nm,23.0s,MS4.8						
AKASG	**Malin Array Be**	142.83	51	PKP	PKPdf	13 56 48.6	-3.6
	comp=Z,1.0nm,0.5s,baz=272,slow=3.4,SNR=5.7						
SSE	**Sheshan**	143.13	276	PKP	PKPdf	13 56 53.9	+0.6
SSE				SS	SS	14 18 46.8	+5.9
SSE				LR	LR		
	comp=N,290nm,20.0s,MS5.1						
SSE				LR	LR		
	comp=E,120nm,20.0s,MS5.1						
SSE				LR	LR		
	comp=Z,210nm,23.1s,MS4.8						
HAQS	**Haql**	144.02	89	P	PKPbc	13 56 56.7	+5.6
JMOS	**Jabal al Moall**	144.20	89	P	PKPbc	13 56 57.0	+5.3
EIL	**Elat**	144.26	88	*e*PKPpre		13 56 50.4	
EIL				*e*PKPdf	PKPdf	13 56 54.6	-0.7
CSS	**Prodhromos**	144.56	78	*e*PKPpre		13 56 51.7	
JMQS	**Jabal Moqyreh**	144.72	89	P	PKPbc	13 56 58.4	+5.3
DJNS	**Zahran al Janu**	145.26	112	P	PKPbc	13 56 57.6	+2.8
NJ2	**Nanjing**	145.32	276	*e*PKP	PKPdf	13 56 51.5	-5.6
NJ2				PKP2	PKPab	13 56 53.6	-2.5
NJ2				APKP		13 57 01.6	
NJ2				PKS	PKS	14 00 25.0	-3.4
NJ2				PP	PP		
	comp=Z,410nm,9.1s						
NJ2				LR	LR		
	comp=Z,340nm,21.0s,MS5.1						
BRTR	**Keskin Array B**	145.72	70	PKIKP	PKPdf	13 56 54.5	-3.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	145.72	70	PKPbc	PKPbc	13 56 54.5	-0.8
	comp=Z,1.5nm,0.7s,baz=207,slow=2.8,SNR=7.9						
HIA	**Hailar**	146.30	307	*e*PKIKP	PKPdf	13 56 54.7	-3.5
OBN	**Obninsk**	146.34	42	*i* PKP2	PKPab	13 56 55.6	-3.6
OBN				pmax	pmax		
	comp=Z,31nm,1.1s						
OBN				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.9						
OBN	**Obninsk**	146.34	42	*e*PKPdf	PKPdf	13 56 55.8	-2.3
OBN				LR	LR		
	comp=Z,63nm,20.0s,MS4.4						
SIM	**Simferopol’**	146.40	61	*i* PKP2	PKPab	13 57 04.4	+4.6
SIM				pmax	pmax		
	comp=Z,22nm,1.4s						
BOD	**Bodaibo**	147.16	324	*e*PKHKP		13 56 54.1	
BOD				pmax	pmax		
	comp=Z,41nm,1.6s						
KAMS	**Al Khamasin**	147.60	110	P	PKPdf	13 57 01.7	+0.5
WHN	**Wuhan**	148.49	271	*e*PKP	PKPdf	13 57 05.0	+2.6
ANN	**Anapa**	148.76	61	*i* PKP2	PKPab	13 57 08.4	-0.7
ANN				pmax	pmax		
	comp=Z,29nm,1.4s						
VOR	**Voronezh**	148.82	48	PKP2	PKPab	13 57 05.0	-4.2
VOR				pmax	pmax		
	comp=Z,70nm,2.0s						
VRSR	**Storozhevoye**	148.95	48	*e*PKIKP	PKPdf	13 57 02.8	+0.3
VRSR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
VRSR				pmax	pmax		
	comp=N,4.0nm,0.5s						
MALT	**Malatya**	149.23	74	*e*PKIKP	PKPdf	13 57 04.0	+0.6
CIT	**Chita**	149.56	314	*e*PKIKP	PKPdf	13 56 55.6	-7.8
CIT				pmax	pmax		
	comp=Z,46nm,1.7s						
SOC	**Sochi**	150.45	63	*i* PKIKP	PKPdf	13 57 11.7	+6.6
SOC				*e*PPP	PPP	14 04 09.6	-2.2
SOC				pmax	pmax		
	comp=Z,40nm,1.1s						
SOC				pmax	pmax		
	comp=N,14nm,0.8s						
SOC				pmax	pmax		
	comp=E,9.0nm,0.8s						
ENH	**Enshi**	152.34	268	*e*PKPbc	PKPdf	13 57 12.6	+4.3
KIV	**Kislovodsk**	152.57	62	*i* PKIKP	PKPdf	13 57 20.2	+12
KIV				pmax	pmax		
	comp=N,10.0nm,0.8s						
KIV				pmax	pmax		
	comp=E,6.0nm,0.8s						
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GOF	**Gofitskoye**	152.70	60	*e*PKIKP	PKPdf	13 57 23.0	+15
GOF				pmax	pmax		
	comp=Z,20nm,1.2s						
SOKR	**Solikamsk**	152.87	23	*e*PKIKP	PKPdf	13 57 12.6	+4.5
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEI	**Tsey**	153.55	65	*e*PKIKP	PKPdf	13 57 09.4	-0.2
CMAR	**Chiang Mai Arr**	154.03	234	PKIKP	PKPdf	13 57 16.6	+5.7
CMAR						13 57 29.3	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CMAR	**Chiang Mai Arr**	154.03	234	PKPbc	PKPdf	13 57 16.6	+5.6
	comp=Z,1.2nm,0.8s,baz=236,slow=1.2,SNR=6.1						
CMAR				PKPab	PKPab	13 57 29.2	-2.7
	comp=Z,2.8nm,0.9s,baz=161,slow=2.3,SNR=6.9						
GNI	**Garni**	154.26	71	*i* PKIKP	PKPdf	13 57 21.6	+11
ULN	**Ulaanbaatar**	154.82	308*c*	*i*PKIKP	PKPdf	13 57 18.9	+7.8
ULN	**Ulaanbaatar**	154.82	308	*e*PKPbc	PKPdf	13 57 19.0	+7.9
ULN				LR	LR		
	comp=Z,221nm,20.0s,MS5.0						
SONM	**Songino Array**	155.25	308	PKP	PKPdf	13 57 09.3	-2.4
	comp=Z,1.0nm,1.1s,baz=90,slow=2.5,SNR=5.1						
SONM				PKPbc	PKPdf	13 57 18.7	+7.0
	comp=Z,3.2nm,0.9s,SNR=4.5						
SONM				PKPab	PKPab	13 57 30.9	-5.3
	comp=Z,3.2nm,0.8s,baz=77,slow=2.8,SNR=11						
TLY	**Talaya**	155.33	318	*i* PKIKP	PKPdf	13 57 19.1	+7.4
TLY				*e*		14 01 14.6	
TLY				*e*		14 21 38.6	
TLY				pmax	pmax		
	comp=Z,28nm,2.0s						
KMI	**Kunming**	155.49	251	PKP	PKPdf	13 57 10.3	-2.4
ZAK	**Zakamensk**	156.15	316	*e*PKIKP	PKPdf	13 57 20.2	+7.4
ZAK				*e*		13 57 33.0	
ZAK				*e*		14 01 15.4	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,2.0s						
SVE	**Sverdlovsk**	156.29	23	*e*PKIKP	PKPdf	13 57 15.0	+2.3
ZAL	**Zalesovo**	161.14	346	PKP	PKPdf	13 57 14.7	-3.9
	comp=Z,1.1nm,0.4s,baz=190,slow=5.5,SNR=6.3						
GTA	**Gaotai**	161.65	288	PKP	PKPdf	13 57 19.0	-0.6
GTA				PKP2	PKPab	13 58 01.2	-2.9
GTA				PP	PP	14 01 48.2	-0.4
GTA				SS	SS	14 22 03.0	-0.2
GTA				PP	PP		
	comp=Z,110nm,3.5s						
GTA				LR	LR		
	comp=N,130nm,21.3s						
GTA				LR	LR		
	comp=E,270nm,22.1s						
GTA				LR	LR		
	comp=Z,340nm,25.9s						
MKAR	**Makanchi Array**	168.40	342	PKP	PKPdf	13 57 22.8	-2.3
	comp=Z,0.1nm,0.3s,baz=270,slow=1.4,SNR=2.7						
WMQ	**Urumqi**	168.61	317	*e*PKP	PKPdf	13 57 23.8	-1.5
WMQ				PPP	PPP	14 06 27.8	+1.3
WMQ				SKKS		14 09 11.8	
WMQ				SS	SS	14 23 16.8	+2.7
WMQ				PP	PP		
	comp=Z,120nm,5.6s						
WMQ				LR	LR		
	comp=N,370nm,24.0s						
WMQ				LR	LR		
	comp=E,330nm,22.0s						
WMQ				LR	LR		
	comp=Z,480nm,22.2s						

JMA ***08*** *14:22:26.7±0.3, 32.96N×141.98E, h28^{km}, M3.3*
IDC ***08*** *14:22:27.4±2.1, 32.91N×141.66E, mb3.5/3, mb1 3.6/4, mb1mx3.4/22, mbtmp3.4/4, ML2.8/1, Error ellipse: s-maj=50.3km s-min=21.3km az=48.0*
ISC 08 14:22:30.2±2.4**, 33.1N**±0.1×**141.8E**±0.2**, h43^{km}**±24^{km}**, n9, σ0^{s}98**/11**, mb3.5**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	1.63	272	P	**P**	**14 22 57.2**	**+0.3**
JHJ	**Hachijo jima 2**	1.66	273	Pn	**P**	**14 22 57.6**	**+0.3**
	18nm,0.3s,baz=77,slow=18,SNR=8.5						
JHJ				Sn	**S**	**14 23 16.8**	**-0.7**
	34nm,0.3s,baz=61,slow=22,SNR=4.4						
JYT	**Yasato**	3.42	338	P	**P**	**14 23 24.8**	**+2.5**
JHO	**Hitachi**	3.68	345	P	**P**	**14 23 26.0**	**0.0**
MJAR	**Matsushiro Arr**	4.54	321	Pn	**P**	**14 23 38.2**	**0.0**
	0.5nm,0.3s,baz=159,slow=12,SNR=4.6						
JMM	**Marumori**	4.86	351	P	**P**	**14 23 41.7**	**-1.1**
JMM				*e*S	**S**	**14 24 34.3**	**-4.2**
MKAR	**Makanchi Array**	46.56	305	P	**P**	**14 30 56.3**	**+1.0**
	0.2nm,0.4s,mb3.4,baz=87,slow=9.6,SNR=4.6						
WRA	**Warramunga Arr**	53.17	189	P	**P**	**14 31 45.9**	**-0.4**
	0.4nm,0.4s,mb3.7,baz=4.1,slow=7.5,SNR=21						
ASAR	**Alice Springs**	56.90	189	P	**P**	**14 32 12.9**	**-0.4**
	0.3nm,0.6s,mb3.5,baz=3.3,slow=5.6,SNR=7.6						

IDC 08 14:45:04.7±8.9**, 18.58S**×**171.18E, h216^{km}**±53^{km}**, mb3.4**/3**, mb1 3.5**/4**, mb1mx3.2**/16**, mbtmp3.9**/4**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.8**/14**, Error ellipse: s-maj=101.1km s-min=78.1km az=127.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	5.64	231	P	P	14 46 27.7	-0.5
	1.1nm,0.3s,baz=60,slow=20,SNR=12						
DZM				S	S	14 47 33.7	+0.4
	0.4nm,0.3s,baz=80,slow=15,SNR=2.4						
RAO	**Raoul Island**	14.56	139	LR	LR	14 53 04.8	
	comp=Z,251nm,19.1s,baz=100,slow=33						
STKA	**Stephens Creek**	29.75	238	P	P	14 50 52.3	-0.8
	1.3nm,0.7s,baz=79,slow=5.2,SNR=3.3						
WRA	**Warramunga Arr**	34.76	262	P	P	14 51 34.3	-2.1
	0.2nm,0.2s,baz=98,slow=8.6,SNR=23						
ASAR	**Alice Springs**	35.07	255	P	P	14 51 37.2	-1.8
	2.6nm,0.5s,baz=84,slow=8.8,SNR=63						

THR ***08*** *14:56:40.0±0.7, 32.88N×48.19E, h18^{km}±7^{km}, ML2.9*
CSEM ***08*** *14:56:41.7±0.1, 32.82N×48.30E, h20^{km}, ML2.9, Error ellipse: s-maj=2.9km s-min=2.0km az=55.0*
TEH ***08*** *14:56:43.7, 32.67N×48.27E, h28^{km}, Mn3.2*
ISC 08 14:56:42.5±0.7**, 32.82N**±0.06×**48.35E**±0.07**, h18^{km}, n18, σ0^{s}85**/20**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGO	**Shushtar**	0.80	152	*e*PG	**Pb**	**14 56 57.5**	**-0.1**
SHGR	**Shooshtar-Gavs**	0.80	152	*e*PG	**Pb**	**14 56 57.5**	**-0.1**
SHGR				AML	AML	14 57 31.6	
	comp=N,413nm,0.5s						
IKOM	**Komasi**	1.53	333	Pn	**Pn**	**14 57 07.3**	**-1.9**
IVIS	**Veys**	2.12	324	Pn	**Pn**	**14 57 17.8**	**+0.2**
IGHG	**Ghaleghazi**	2.12	316	Pn	**Pn**	**14 57 17.7**	**0.0**
ASAO	**Ashtian**	2.22	38	*e*PG	**Pn**	**14 57 20.7**	**+1.6**
ASAO				*e*SG	**Sn**	**14 57 51.2**	**+4.9**
ASAO				AML	AML	14 57 59.5	
	comp=N,70nm,0.6s						
ASAO	**Ashtian**	2.22	38	*e*Pg	**Pn**	**14 57 20.7**	**+1.6**
	SNR=91						
ASAO				*e*Sg	**Sn**	**14 57 51.2**	**+4.9**
	SNR=91						
ILIN	**Laeen**	2.40	332	Pn	**Pn**	**14 57 22.0**	**+0.4**
SNGE	**Sanandaj**	2.42	340	*e*PG	**Pn**	**14 57 22.1**	**+0.2**
SNGE				AML	AML	14 58 02.5	
	comp=N,72nm,0.6s						
IKLH	**Kalahroud**	2.76	79	Pn	**Pn**	**14 57 27.5**	**+0.8**
IRAZ	**Razeghan**	2.90	26	Pn	**Pn**	**14 57 39.2**	**+10**
IRAZ	**Razeghan**	2.90	26	Lg		14 58 19.1	
IGAR	**Garneh**	3.30	99	Pn	**Pn**	**14 57 30.9**	**-3.5**
IZEF	**Zefreh**	3.35	88	Pn	**Pn**	**14 57 34.6**	**-0.6**
IVRN	**Varamin**	3.55	51	Pn	**Pn**	**14 57 38.7**	**+0.7**
IVRN				Sn	**Sn**	**14 58 18.7**	**-1.3**
NASN	**Na’in**	3.75	89	*e*PN	**Pn**	**14 57 41.0**	**+0.1**
NASN				AML	AML	14 58 52.2	
	comp=N,14nm,0.7s						
IDMV	**Damavand**	4.11	47	Pn	**Pn**	**14 57 46.0**	**0.0**
IAFJ	**Afjeh**	4.12	42	Pn	**Pn**	**14 57 46.3**	**+0.2**

NEIC ***08*** *15:18:13.3, 40.42S×175.01E, h29^{km}, ML4.0(WEL), After WEL.*
WEL 08 15:18:13.4±0.1**, 40.43S**×**175.02E, h26^{km}**±1^{km}**, ML3.9**/36**, Error ellipse: s-maj=1.3km s-min=0.6km az=90.0, 4., North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIW	**Kapiti Island**	0.44	191	P	Pb	15 18 22.6	+0.1
KIW				S	Sb	15 18 29.1	+0.3
KIW	**Kapiti Island**	0.44	191	P*	Pb	15 18 22.6	+0.1
KIW				S*	Sb	15 18 29.3	+0.5
MRZ	**Mangatainoka R**	0.49	118	P	Pb	15 18 23.6	+0.3
MRZ				S	Sb	15 18 30.5	+0.4
MRZ	**Mangatainoka R**	0.49	118	P*	Pb	15 18 23.7	+0.3
MRZ				S*	Sb	15 18 30.8	+0.7
CAW	**Cannon Point**	0.68	177	P	Pb	15 18 26.3	-0.2
CAW	**Cannon Point**	0.68	177	P*	Pb	15 18 26.3	-0.1
CAW				S*	Sb	15 18 35.7	+0.2
WAZ	**Wanganui**	0.68	358	P	Pb	15 18 26.3	-0.2
WAZ	**Wanganui**	0.68	358	P*	Pb	15 18 26.2	-0.2
WAZ				S*	Sb	15 18 35.7	+0.2
MTW	**Mount Morrison**	0.81	153	P	Pb	15 18 29.1	+0.3
MTW	**Mount Morrison**	0.81	153	P*	Pb	15 18 28.9	+0.1
MTW				S*	Sb	15 18 40.8	+1.4
TSZ	**Takapari Road**	0.81	63	P	Pb	15 18 28.0	-0.8
TSZ				S	Sb	15 18 38.7	-0.7
TSZ	**Takapari Road**	0.81	63	P*	Pb	15 18 28.0	-0.8
TSZ				S*	Sb	15 18 38.5	-0.8
MRW	**Makara Radio**	0.83	197	P	Pb	15 18 28.7	-0.4
MRW	**Makara Radio**	0.83	197	P*	Pb	15 18 28.7	-0.3
MRW				S*	Sb	15 18 40.0	+0.1
WEL	**Wellington**	0.87	192	P	Pb	15 18 29.3	-0.5
WEL	**Wellington**	0.87	192	P*	Pb	15 18 29.4	-0.4
WEL				S*	Sb	15 18 41.0	0.0
SNZO	**South Karori**	0.91	195	P	Pb	15 18 29.8	-0.6
SNZO	**South Karori**	0.91	195	P*	Pb	15 18 29.8	-0.6
SNZO				P*	Pb	15 18 29.9	-0.5
DUWZ	**D’Urville Isla**	0.91	246	P*	Pb	15 18 29.7	-0.8
TCW	**Tory Channel**	0.96	216	P	Pb	15 18 30.2	-1.0
TCW	**Tory Channel**	0.96	216	P*	Pb	15 18 30.3	-1.0
BFZ	**Birch Farm**	0.97	105	P*	Pb	15 18 31.0	-0.4
BHW	**Baring Head**	0.98	186	P	Pb	15 18 31.3	-0.3
BHW	**Baring Head**	0.98	186	P*	Pb	15 18 31.3	-0.4
MSWZ	**Moikau Station**	1.00	170	P	Pn	15 18 31.7	-0.2
MSWZ	**Moikau Station**	1.00	170	P*	Pb	15 18 31.9	0.0
PAWZ	**Paruwai Farm**	1.00	162	P*	Pb	15 18 32.0	+0.1

MTVZ	Mangateitei	1.10	19	PN	Pn	15 18 32.4	-0.9
MOVZ	Moawhango	1.17	29	P	Pn	15 18 32.7	-1.6
MOVZ	Moawhango	1.17	29	PN	Pn	15 18 32.8	-1.5
WNVZ	Wahianoa	1.19	22	PN	Pn	15 18 33.5	-1.1
DRZ	Dome Shelter	1.23	20	PN	Pn	15 18 34.6	-0.6
RAEZ	Rainy Point	1.24	337	P	Pn	15 18 35.2	-0.1
RAEZ	Rainy Point	1.24	337	PN	Pn	15 18 35.2	-0.2
FWVZ	Far West T-bar	1.25	20	P	Pn	15 18 34.4	-1.0
FWVZ	Far West T-bar	1.25	20	PN	Pn	15 18 34.6	-0.8
TUVZ	Tukino	1.26	23	PN	Pn	15 18 34.8	-0.8
TUWZ	Tuamarina	1.29	219	P*	Pb	15 18 35.6	-1.2
WPVZ	Whakapapa	1.29	19	PN	Pn	15 18 35.2	-0.9
CNZ	Chateau	1.30	19	PN	Pn	15 18 35.1	-1.0
DFE	Dawson Falls	1.31	327	P	Pn	15 18 36.6	+0.3
VRZ	Vera Road	1.32	351	PN	Pn	15 18 35.9	-0.6
NGZ	Ngauruhoe	1.33	20	PN	Pn	15 18 35.9	-0.7
NEZ	North Egmont	1.36	328	P	Pn	15 18 37.1	+0.1
NEZ	North Egmont	1.36	328	PN	Pn	15 18 36.7	-0.3
OTVZ	Oturere	1.36	22	PN	Pn	15 18 36.5	-0.6
NRZ	Ngariki Road	1.38	322	P	Pn	15 18 37.3	0.0
WTVZ	West Tongariro	1.39	19	PN	Pn	15 18 36.5	-1.0
TWVZ	Taurewa	1.40	14	PN	Pn	15 18 36.3	-1.3
KRVZ	Karewarewa	1.42	20	PN	Pn	15 18 37.4	-0.5
CMWZ	Cape Campbell	1.45	204	P	Pn	15 18 38.9	+0.6
CMWZ	Cape Campbell	1.45	204	PN	Pn	15 18 38.5	+0.2
NNZ	Nelson	1.47	237	P	Pn	15 18 37.8	-0.8
NNZ	Nelson	1.47	237	PN	Pn	15 18 37.9	-0.7
PWZ	Pawanui	1.47	75	eP	Pn	15 18 37.7	-0.9
PWZ	Pawanui	1.47	75	PN	Pn	15 18 37.6	-1.0
BSWZ	Blackbirch Sta	1.54	214	P	Pn	15 18 39.8	+0.1
BSWZ	Blackbirch Sta	1.54	214	PN	Pn	15 18 39.5	-0.1
KATZ	Kakaramea	1.55	20	PN	Pn	15 18 39.4	-0.3
RITZ	Rihia Road	1.59	24	P	Pn	15 18 40.1	-0.2
RITZ	Rihia Road	1.59	24	PN	Pn	15 18 40.2	-0.1
RATZ	Rangitukua	1.67	21	P	Pn	15 18 41.7	+0.3
RATZ	Rangitukua	1.67	21	PN	Pn	15 18 41.3	-0.1
BKZ	Black Stump Fm	1.70	42	PN	Pn	15 18 41.3	-0.6
HATZ	Hinemaiaia	1.75	29	P	Pn	15 18 42.0	-0.6
WATZ	Wairara	1.81	18	P	Pn	15 18 43.6	+0.2
WHTZ	Whakaora	1.91	23	P	Pn	15 18 45.1	+0.2
QRZ	Quartz Range	1.93	257	P	Pn	15 18 44.3	-0.9
THZ	Tophouse	2.08	230	P	Pn	15 18 46.8	-0.5
KHZ	Kahutara	2.27	209	P	Pn	15 18 48.9	-1.2
KNZ	Kokohu	2.49	56	eP	Pn	15 18 50.6	-2.6
URZ	Urewera	2.71	37	P	Pn	15 18 53.6	-2.7
TOZ	Tahuroa Road	2.73	8	P	Pn	15 18 56.3	-0.3
DSZ	Denniston Nort	2.76	241	eP	Pn	15 18 55.8	-1.3
MWZ	Matawai	2.86	44	P	Pn	15 18 55.6	-2.9
LTZ	Lake Taylor	3.12	220	P	Pn	15 19 00.2	-2.0
CRLZ	Canterbury Las	3.61	209	eP	Pn	15 19 05.6	-3.6
MQZ	McQueen's Vall	3.71	207	eP	Pn	15 19 06.3	-4.3
KUZ	Kuaotunu	3.72	9	eP	Pn	15 19 07.2	-3.5
MXZ	Matakaoa Point	3.84	43	eP	Pn	15 19 08.6	-3.9
WVZ	Waitaha Valley	4.15	229	eP	Pn	15 19 14.0	-2.8
RPZ	Rata Peaks	4.41	221	eP	Pn	15 19 22.6	+2.1
FOZ	Fox Glacier	5.05	230	eP	Pn	15 19 24.9	-4.7
ODZ	Otahua Downs	5.62	213	eP	Pn	15 19 32.5	-5.1
JCZ	Jackson Bay	5.90	230	eP	Pn	15 19 36.7	-4.8

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*NEIC **08** 15:31:40.8, 34.49S×71.50W, h61^{km}, MD4.0(GUC), After GUC.*

NEIC Felt [III] at Curico, Hualane, Licanten, Pichilemu, Rancagua, San Fernando and Talca; [II] at Romeral.

GUC 08 15:31:40.8±0.7**, 34.49S×71.50W, h61^{km}±6^{km}, MD4.0, ML4.2, 11C-10D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.42	107	⇓iP	P	15 31 52.6	+0.4
LNV	Longovilo	0.54	8	⇓iP	P	15 31 53.9	+0.5
NICH	Los Niches	0.56	156	⇑iP	P	15 31 53.9	+0.3
NICH				iS	S	15 32 03.5	+0.5
CACH	El Canelo	0.83	64	⇓iP	P	15 31 57.4	+0.5
CACH				iS	S	15 32 09.1	+0.2
CHCH	Chadas Angostu	0.90	52	⇑iP	P	15 31 58.2	+0.4
CICH	Cipreses	0.91	80	⇓iP	P	15 31 58.3	+0.4
TALC	Talca	0.91	187	⇑iP	P	15 31 58.2	+0.3
TALC				iS	S	15 32 11.0	+0.2
TALC				AMP		15 32 12.0	
	comp=N,34µm,0.1s						
TACH	Talagante	0.96	30	⇑iP	P	15 31 58.6	+0.1
TACH				iS	S	15 32 12.2	+0.5
LCCH	Las Cruces	1.01	357	⇑iP	P	15 31 59.1	-0.2
LCCH				iS	S	15 32 12.9	-0.1
RCDM	Rinconada Maip	1.15	30	⇓iP	P	15 32 01.1	-0.1
RCDM				iS	S	15 32 16.4	0.0
RCDM				AMP		15 32 20.6	
	comp=E,7µm,0.2s						
ANTU	Antumapu	1.17	38	⇓iP	P	15 32 01.7	+0.4
ANTU				iS	S	15 32 17.5	+0.7
ANTU				AMP		15 32 18.7	
	comp=N,10µm,0.3s						
PCH	Pirque	1.19	44	⇑iP	P	15 32 02.1	+0.4
SAN	Santiago	1.25	34	⇑iP	P	15 32 02.6	+0.1
SAN				iS	S	15 32 19.1	+0.4
SAN				AMP		15 32 19.4	
	comp=E,3µm,0.4s						
LMEL	Las Melosas	1.25	60	⇓iP	P	15 32 03.0	+0.4
LMEL				iS	S	15 32 19.7	+0.9
LMEL				AMP		15 32 22.4	
	comp=N,7µm,0.2s						
DSCH	Colegio Aleman	1.34	36	⇑iP	P	15 32 04.0	+0.1
DSCH				iS	S	15 32 21.9	+1.0
DSCH				AMP		15 32 23.1	
	comp=N,10µm,0.2s						
CLCH	Cerro Calan	1.35	37	⇓iP	P	15 32 04.3	+0.2
CLCH				iS	S	15 32 22.1	+0.7
CLCH				AMP		15 32 24.1	
	comp=N,6µm,0.7s						
CLCH				AMP		15 32 24.6	
	comp=N,7µm,0.7s						
LNCH	Linares	1.36	183	⇓iP	P	15 32 03.8	-0.3
LNCH				iS	S	15 32 21.6	+0.2
LNCH				AMP		15 32 24.0	
	comp=E,3µm,0.4s						
PEL	Peldehue	1.50	27	⇑iP	P	15 32 06.5	+0.4
FCH	Farellones	1.54	41	⇓iP	P	15 32 07.0	+0.4
FCH				iS	S	15 32 26.7	+1.1
FCH				AMP		15 32 31.0	
	comp=E,3µm,0.3s						
ROCH	El Roble	1.57	15	⇑iP	P	15 32 07.5	+0.5
ROCH				iS	S	15 32 27.5	+1.2
PACH	Papudo	1.95	2	eP	P	15 32 12.0	-0.2
JACH	Jahuel	1.96	23	⇑iP	P	15 32 12.4	+0.1
JACH				iS	S	15 32 36.7	+1.1
CCHI	Chillan	2.16	192	eP	P	15 32 15.1	-0.1
ZON	Zonda	3.77	40	eP	P	15 32 39.5	+1.5
PLCA	Paso Flores	6.28	173	eP	P	15 33 12.2	-0.6
	comp=E,13nm,0.6s						

OTT 08 15:31:43.6±0.3**, 52.91N×66.89W, MN3.0**/8**, Blast, Labrador City, Nl Mining explosion., Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	1.93	1	PN	Pn	15 32 17.9	-0.1
SCHQ				SG	Sg	15 32 43.3	-4.3
SCHQ				Trac		15 32 46.5	
	comp=Z,130nm,0.5s						
MNQ	Manicouagan	2.65	207	PN	Pn	15 32 28.4	0.0
MNQ				SN	Sn	15 33 00.9	-0.8
MNQ				Trac		15 33 06.3	
	comp=Z,14nm,0.2s						
SMQ	Clarke City	2.69	177	PN	Pn	15 32 27.6	-1.3
SMQ				SN	Sn	15 33 01.0	-1.7
SMQ				Trac		15 33 07.3	
	comp=Z,50nm,0.4s						
ICQ	Pointe Anglais	3.40	184	PN	Pn	15 32 35.9	-3.1
ICQ				SN	Sn	15 33 17.4	-3.2
ICQ				SG	Sg	15 33 30.9	-5.9
ICQ				Trac		15 33 35.8	
	comp=Z,33nm,0.4s						
CNQ	Baie Comeau	3.69	192	PN	Pn	15 32 41.3	-1.8
CNQ				SN	Sn	15 33 20.3	-7.6
CNQ				SG	Sg	15 33 35.8	-11
CNQ				Trac		15 33 44.4	
	comp=Z,2.5nm,0.1s						
GSQ	Grosses Roches	4.01	182	PN	Pn	15 32 45.8	-1.8
GSQ				SN	Sn	15 33 33.8	-2.2
GSQ				SG	Sg	15 33 51.5	-5.5
GSQ				Trac		15 33 56.2	
	comp=Z,3.3nm,0.1s						
LG4Q	La Grande 4	4.38	282	PN	Pn	15 32 50.1	-2.8
LG4Q				PG	Pg	15 33 01.0	-10
LG4Q				SG	Sg	15 33 58.9	-11
LG4Q				Trac		15 34 07.0	
	comp=Z,20nm,0.4s						
DAQ	Lac Daran	5.68	211	PN	Pn	15 33 09.4	-1.9
DAQ				SN	Sn	15 34 11.9	-6.2
DAQ				Trac		15 34 49.9	
	comp=Z,8.3nm,0.3s						
LMQ	La Malbaie	5.80	204	PN	Pn	15 33 09.2	-3.8
LMQ				SN	Sn	15 34 12.9	-8.3
DRLN	Deer Lake	6.95	118	PN	Pn	15 33 25.4	-3.8
DRLN				SN	Sn	15 34 40.8	-9.3
DRLN				LG		15 35 18.4	
LMN	Caledonia Moun	7.20	168	PN	Pn	15 33 27.9	-4.8
LMN				SN	Sn	15 34 49.4	-6.7
MALO	McAlpine Lake	8.54	255	PN	P	15 33 45.8	-5.6
MALO				SN	Sn	15 35 16.8	-13
MALO				LG		15 36 08.9	
VIMO	Victor Mine	10.20	276	PN	P	15 34 07.8	-6.3
VIMO				SN	S	15 35 57.9	-13
SILO	Sutton Inlier	10.80	286	PN	P	15 34 15.7	-6.7
SILO				SN	S	15 36 07.7	-18
SILO				LG		15 37 13.8	

IDC 08 15:47:07.2±9.0**, 7.99N×101.88W, mb3.3**/2**, mb1 3.9**/2**, mb1mx3.5**/19**, mbtmp3.4**/2**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.7**/16**, Error ellipse: s-maj=710.5km s-min=38.2km az=94.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	21.30	356	P	P	15 51 56.3	-1.5
	0.3nm,0.4s,baz=168,slow=12,SNR=4.7						
TXAR				LR	LR	16 00 16.4	
	comp=Z,56nm,18.6s,baz=155,slow=37						
PDAR	Pinedale Array	35.29	350	P	P	15 54 03.5	-2.4
	0.3nm,0.3s,baz=159,slow=7.7,SNR=4.5						
WRA	Warramunga Arr	124.39	251	PKP	PKPdf	16 06 08.9	-2.2
	0.2nm,0.5s,baz=92,slow=2.5,SNR=7.6						
ASAR	Alice Springs	124.45	247	PKP	PKPdf	16 06 09.2	-1.9
	0.3nm,0.8s,baz=89,slow=1.7,SNR=4.3						
CMAR	Chiang Mai Arr	146.64	322	PKPbc	PKPbc	16 06 51.4	-0.2
	1.2nm,0.8s,baz=4.8,slow=2.4,SNR=7.8						

IDC 08 16:20:49.3±2.3**, 1.82N×127.31E, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/17**, mbtmp3.3**/3**, Error ellipse: s-maj=182.9km s-min=26.7km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.70	163	P	P	16 25 53.7	-0.4
	0.8nm,0.4s,baz=342,slow=11,SNR=20						
ASAR	Alice Springs	26.13	166	P	P	16 26 24.4	-2.7
	0.3nm,0.8s,baz=344,slow=8.0,SNR=4.7						
MKAR	Makanchi Array	59.45	326	P	P	16 30 54.2	-2.1
	0.3nm,0.9s,baz=108,slow=7.7,SNR=4.1						

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*IDC **08** 16:25:24.3±1.4, 7.54N×91.63E, mb3.7/6, mb1 3.9/7, mb1mx3.7/21, mbtmp3.7/7, ML3.4/1, Error ellipse: s-maj=52.1km s-min=20.2km az=59.0*

*NEIC **08** 16:25:31.1±1.4, 7.57N×91.76E, h46^{km}±14^{km}, mb4.2/5, Error ellipse: s-maj=12.8km s-min=11.3km az=62.0*

ISC 08 16:25:27.9±2.7**, 7.5N**±0.1×**91.8E**±0.1**, h35^{km}**±26^{km}**, n17,** σ**0^{s}.81**/17**, mb4.0**/11**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	10.97	269	P	P	16 28 05.3	-0.4
CMAR	Chiang Mai Arr	12.92	32	Pn	P	16 28 31.4	-0.6
	0.1nm,0.3s,baz=231,slow=14,SNR=9.7						
PKI	Pulchoki	20.83	344	eP	P	16 30 10.9	+1.8
	5.2nm,0.4s						
DMN	Daman	20.95	343	eP	P	16 30 12.5	+2.2
GUN	Gumba	21.03	345	eP	P	16 30 10.8	-0.3
	18nm,0.7s,mb4.5						
KKN	Kakani	21.07	344	eP	P	16 30 11.7	+0.2
	12nm,0.8s,mb4.2						
GKN	Gorkha	21.46	343	eP	P	16 30 14.8	-0.6
KOLN	Koldanda	21.57	340	eP	P	16 30 16.8	+0.3
	19nm,0.8s,mb4.6						
LSA	Lhasa	22.07	359	eP	P	16 30 22.1	+0.6
	5.3nm,0.7s,mb4.1						
MKAR	Makanchi Array	39.96	350	P	P	16 32 59.9	-0.8
	1.5nm,0.8s,mb3.8,baz=170,slow=8.7,SNR=15						
SONM	Songino Array	42.06	15	P	P	16 33 17.5	-0.5
	0.8nm,0.7s,mb3.5,baz=190,slow=7.8,SNR=9.2						
ZAL	Zalesovo	46.62	354	P	P	16 33 54.0	-0.5
	baz=249,slow=6.9,SNR=4.3						
BVAR	Borovoye Array	48.59	343	P	P	16 34 09.0	-1.0
	0.7nm,0.5s,mb4.0,baz=149,slow=8.6,SNR=6.5						
CHKZ	Chkalovo	49.10	344	eP	P	16 34 13.4	-0.5
	1.7nm,0.6s,mb4.2						
WRA	Warramunga Arr	50.00	124	P	P	16 34 22.0	+0.7
	0.9nm,0.8s,mb3.9,baz=305,slow=8.5,SNR=9.1						
ASAR	Alice Springs	51.53	128	P	P	16 34 32.8	0.0
	0.3nm,0.6s,mb3.4,baz=303,slow=7.6,SNR=7.1						
GERES	GERESS Array B	76.52	318	P	P	16 37 16.3	+0.1
	0.4nm,0.5s,mb3.6,baz=72,slow=4.2,SNR=3.4						

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*MAN **08** 16:28:47.9, 5.15N×125.36E, h32^{km}, mb5.3, ML4.3, MS4.6*

*BJI **08** 16:28:56.7, 5.70N×125.40E, h70^{km}, mB4.7, mb4.6*

*NEIC **08** 16:28:56.7±5.3, 5.66N×125.44E, h71^{km}±52^{km}, mb4.6/8, Error ellipse: s-maj=22.6km s-min=8.1km az=55.0*

*IDC **08** 16:28:57.3±7.9, 5.67N×125.43E, h77^{km}±75^{km}, mb4.0/10, mb1 4.1/10, mb1mx3.9/22, mbtmp4.3/10, MS3.6/9, Ms1 3.6/9, ms1mx3.5/25, Error ellipse: s-maj=39.0km s-min=13.6km az=61.0*

ISC 08 16:28:54.8±0.9**, 5.53N**±0.06×**125.33E**±0.07**, h66^{km}**±9^{km}**, n46,** σ**1^{s}.36**/48**, mb4.4**/19**, 4C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	1.49	351	⇓iP	P	16 29 21.5	+1.4
KCP				iS	S	16 29 38.7	-0.1
MATI	Mati	1.69	33	eP	P	16 29 20.0	-2.7
MATI				eS	S	16 29 44.0	+0.7
BUKP	Musuan	2.35	354	eP	P	16 29 30.0	-2.0
BUKP				eS	S	16 29 59.1	-0.6
CGP	Cagayan de Oro	2.98	348	⇑eP	P	16 29 40.7	-0.1
PAGZ	Pagadian	3.01	320	eP	P	16 29 38.4	-2.9
PAGZ				eS	S	16 30 18.4	+2.1
BUTP	Butuan	3.43	5	eP	P	16 29 47.9	+0.7
BUTP				eS	S	16 30 30.2	+3.3
ZMPH	Zamboanga City	3.54	294	⇓iP	P	16 29 44.7	-4.0
IPIL	Ipil	3.54	310	eP	P	16 29 46.1	-2.6
IPIL				eS	S	16 30 26.9	-2.8
SCPH	Surigao	4.23	2	⇑iP	P	16 29 57.0	-1.3
SNPH	Sibulan	4.32	331	⇑eP	P	16 30 04.1	+4.5
SNPH				eS	S	16 31 09.1	+20
TBP	Tagbilaran	4.39	341	eP	P	16 30 08.6	+8.0
TBP				eS	S	16 30 54.8	+4.0
MSLP	Maasin	4.60	354	eP	P	16 30 07.4	+3.9
SJMP	San Jose	8.05	329	eP	P	16 31 02.6	+11
KAKA	Kakadu	19.45	159	⇓iP	P	16 33 19.3	+0.5
PMG	Port Moresby	26.33	124	P	P	16 34 25.9	-0.7
	15nm,0.7s,mb4.5,baz=337,slow=11,SNR=5.1						
PMG				LR	LR	16 43 35.3	
	comp=Z,99nm,21.9s,baz=41,slow=33						
WRAB	Tennant Creek	26.81	161	eP	P	16 34 30.3	-0.6
	34nm,1.1s,mb4.8						
WRA	Warramunga Arr	26.81	161	P	P	16 34 30.1	-0.9
	5.4nm,0.6s,mb4.3,baz=343,slow=10,SNR=36						
WRA	Warramunga Arr	26.81	161	P	P	16 34 30.1	-0.9
WB2	Warramunga Arr	26.82	161	eP	P	16 34 31.3	+0.3
MBWA	Marble Bar	27.08	192	eP	P	16 34 33.7	+0.3
	22nm,1.1s,mb4.6						
CMAR	Chiang Mai Arr	28.78	299	P	P	16 34 48.6	-0.1
	1.1nm,0.9s,mb3.5,baz=129,slow=8.1,SNR=4.9						
ENH	Enshi	28.79	331	eP	P	16 34 47.8	-0.9
	17nm,0.9s,mb4.7						
ASAR	Alice Springs	30.20	164	P	P	16 35 01.4	0.0
	2.9nm,0.5s,mb4.1,baz=339,slow=7.0,SNR=89						
ASAR				PcP	PcP	16 37 58.8	-2.3
	0.9nm,0.6s,baz=332,slow=2.7,SNR=4.9						
ASPA	Alice Springs	30.20	164	⇑iP	P	16 35 01.9	+0.6
XAN	Xi'an	32.20	334	P	P	16 35 19.1	+0.3
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
CTA	Charters Tower	32.73	142	LR	LR	16 48 23.9	
	comp=Z,58nm,20.4s,baz=48,slow=36						
MJAR	Matsushiro Arr	33.05	19	LR	LR	16 46 46.8	
	comp=Z,73nm,18.9s,baz=195,slow=32						
LZH	Lanzhou	36.26	330	eP	P	16 35 57.0	+3.4
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
SHL	Shillong	37.70	306	eP	P	16 36 06.0	+0.3
STKA	Stephens Creek	40.30	158	⇓iP	P	16 36 29.5	+2.3
STKA	Stephens Creek	40.30	158	P	P	16 36 28.9	+1.7
	comp=Z,10nm,0.7s,mb4.8,baz=335,slow=8.4,SNR=18						
GUN	Gumba	43.55	305	eP	P	16 36 54.5	+0.5
	comp=Z,18nm,0.8s,mb4.9						
PKI	Pulchoki	43.80	305	eP	P	16 36 58.2	+2.1
KKN	Kakani	43.99	305	eP	P	16 36 55.3	-2.3
	comp=Z,18nm,1.1s,mb4.7						
DMN	Daman	44.07	305	eP	P	16 36 59.6	+1.4
	comp=Z,8.6nm,0.7s,mb4.6						
GKN	Gorkha	44.60	305	eP	P	16 37 02.2	-0.3
	comp=Z,7.4nm,0.8s,mb4.5						
SONM	Songino Array	45.17	342	P	P	16 37 05.7	-1.0
	comp=Z,0.3nm,0.5s,baz=148,slow=7.1,SNR=3.6						
SONM				LR	LR	16 56 04.0	
	comp=Z,137nm,21.7s,baz=112,slow=36						
MKAR	Makanchi Array	55.30	325	P	P	16 38 22.6	-1.2
	comp=Z,1.8nm,0.6s,mb4.3,baz=121,slow=8.3,SNR=26						
MKAR				LR	LR	17 03 12.0	
	comp=Z,101nm,18.7s,baz=100,slow=37						
ZAL	Zalesovo	58.37	333	LR	LR	17 06 00.1	
	comp=Z,69nm,19.0s,baz=5.3,slow=38						
BVAR	Borovoye Array	65.06	327	P	P	16 39 28.3	-2.1
	comp=Z,1.3nm,0.8s,mb3.8,baz=121,slow=8.6,SNR=8.2						
IMA	Indian Mountai	81.32	24	eP	P	16 41 04.7	-0.6
	comp=Z,21nm,1.0s,mb4.9						
ILAR	Eielson Array	84.09	26	P	P	16 41 18.9	-0.5
	comp=Z,2.2nm,0.8s,mb4.0,baz=242,slow=5.3,SNR=12						
VNDA	Vanda	85.37	173	P	P	16 41 27.1	+1.6
	comp=Z,0.6nm,0.8s,mb3.6,baz=288,slow=6.4,SNR=5.6						
FINES	FINESS Array B	89.60	332	LR	LR	17 23 17.9	
	comp=Z,37nm,19.4s,baz=145,slow=36						
NOA	NORSAR Array B	96.57	333	LR	LR	17 29 39.3	
	comp=Z,28nm,19.8s,baz=110,slow=38						
GERES	GERESS Array B	99.82	321	LR	LR	17 30 14.0	
	comp=Z,25nm,18.4s,baz=339,slow=37						

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*ATH **08** 16:50:04.0, 38.61N×23.81E, h28^{km}±1^{km}, MD3.3/13, ML3.6*

*THE **08** 16:50:04.8, 38.65N×23.93E, h8^{km}, ML3.4*

*NEIC **08** 16:50:04.0, 38.61N×23.81E, h27^{km}, MD3.4(ATH), After ATH.*

*CSEM **08** 16:50:04.3±0.1, 38.62N×23.87E, h5^{km}, ML3.7, Error ellipse: s-maj=1.8km s-min=1.2km az=96.0*

ISC 08 16:50:04.0±0.5**, 38.59N**±0.02×**23.87E**±0.05**, h20^{km}**±6^{km}**, n27,** σ**0^{s}.94**/37**, 1C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAR	Parnis Oros	0.45	193	ePB	Pb	16 50 13.5	+0.3
MPAR				eSB	Sb	16 50 21.5	+2.1
PTL	Penteli	0.54	180	ePN	Pn	16 50 15.2	-1.2
AOS	Alonnisos	0.58	1	ePg	Pb	16 50 14.9	-0.3
AOS				eSg	Sb	16 50 23.2	+0.3
ATH	Athens Observa	0.63	191	ePN	Pn	16 50 16.9	-0.8
ATH				eSN	Sn	16 50 26.2	-0.9
LKR	Lokris	0.68	275	ePN	Pn	16 50 16.6	-1.8
NSAL	Nisos Salamina	0.76	205	ePN	Pn	16 50 19.0	-0.4
MGER	Gerania Oros	0.77	218	ePN	Pn	16 50 19.0	-0.7
NEO	Neokhori	0.87	325	⇑iPN	Pn	16 50 20.3	-0.8
NEO				eSN	Sn	16 50 32.5	-0.7
NAIG	Nisos Aigina	0.88	200	ePN	Pn	16 50 21.5	+0.2
XOR	Xorichti	0.93	326	ePg	Pb	16 50 21.7	+0.4
XOR				eSg	Sb	16 50 35.3	+2.0
AGG	Agios Georgios	1.27	290	ePg	Pn	16 50 27.8	+0.9
	comp=Z,6.8nm,0.2s						
AGG				eSg	Sb	16 50 47.5	+4.4
PAIG	Paliouri	1.34	354	ePg	Pn	16 50 27.8	0.0
LOS	Limnos	1.64	35	ePg	Pn	16 50 32.3	+0.2
EVR	Evrytania	1.64	282	ePN	Pn	16 50 32.7	+0.6
LIA	Limnos Island	1.66	38	ePB	Pb	16 50 32.9	-0.8
OUR	Ouranopolis	1.74	3	ePb	Pb	16 50 33.6	-1.6
	comp=Z,5.8nm,0.2s						
OUR				eSb	Sb	16 50 55.6	-1.0
PLG	Polygyros	1.81	350	ePN	Pn	16 50 34.3	-0.2
LIT	Litokhoron	1.84	325	ePb	Pb	16 50 35.8	-1.0
	comp=Z,4.9nm,0.1s						
LIT				eSb	Sb	16 51 00.1	+0.5
PRK	Paraskevi	1.99	70	ePB	Pb	16 50 38.8	-0.5
PRK				eSN	Sn	16 51 03.8	+2.2
VLI	Veliai	2.01	202	ePB	Pb	16 50 38.7	-1.0
APE	Apeiranthos	2.01	139	ePN	Pn	16 50 38.4	+0.9
ITM	Ithomi	2.08	228	ePN	Pn	16 50 39.1	+0.6
SOH	Sokhos	2.26	350	ePn	Pn	16 50 41.5	+0.5
GRG	Griva	2.62	335	ePn	Pn	16 50 46.5	+0.4
GRG				eSn	Sn	16 51 18.6	+1.0
ALN	Alexandroupoli	2.85	35	ePn	Pn	16 50 49.2	-0.2
FNA	Florina	2.91	320	ePn	Pn	16 50 50.6	+0.3
	comp=Z,2.4nm,0.2s						
VAM	Vamos	3.19	175	ePn	Pn	16 50 55.5	+1.2

IDC 08 17:41:39.6±5.5**, 0.72S×100.92E, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/18**, mbtmp3.4**/3**, Error ellipse: s-maj=293.3km s-min=27.5km az=54.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	37.87	122	P	P	17 48 59.3	-1.1
	0.4nm,0.4s,baz=301,slow=9.2,SNR=6.6						
ASAR	Alice Springs	39.28	128	P	P	17 49 09.8	-2.3
	0.2nm,0.4s,baz=301,slow=7.8,SNR=10.0						
MKAR	Makanchi Array	50.06	343	P	P	17 50 36.1	-2.1
	0.3nm,0.4s,baz=159,slow=9.2,SNR=6.9						

IDC 08 17:57:06.2±2.5**, 7.65N×91.93E, mb3.5**/4**, mb1 3.7**/5**, mb1mx3.5**/21**, mbtmp3.5**/5**, ML3.3**/1**, Error ellipse: s-maj=78.9km s-min=27.6km az=63.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDRS	Chennai	12.69	296	ex	x	18 01 03.0	
CMAR	Chiang Mai Arr	12.73	32	Pn	P	18 00 09.5	-2.0
	0.1nm,0.3s,baz=233,slow=14,SNR=6.5						
MKAR	Makanchi Array	39.87	350	P	P	18 04 41.3	-2.1
	0.8nm,0.8s,baz=159,slow=8.7,SNR=7.8						
SONM	Songino Array	41.90	15	P	P	18 04 58.0	-2.0
	0.3nm,0.5s,baz=193,slow=8.7,SNR=4.9						
ZAL	Zalesovo	46.52	354	P	P	18 05 35.7	-1.4
	0.6nm,0.3s,baz=221,slow=9.3,SNR=2.3						
WRA	Warramunga Arr	49.93	124	P	P	18 06 02.1	-2.0
	0.3nm,0.4s,baz=304,slow=8.7,SNR=8.2						

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*INMG **08** 18:12:41.8±0.7, 36.07N×10.05W, h10^{km}, ML1.7, Error ellipse: s-maj=6.9km s-min=4.3km az=105.0*

MDD 08 18:12:41.7±2.5**, 36.10N×9.88W, mb3.3**/5**, Error ellipse: s-maj=24.0km s-min=19.4km az=104.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	Sao Teotonio	1.71	33	ePn	Pn	18 13 11.6	-1.4
PTEO				eSn	Sn	18 13 33.1	-2.8
	3.5nm,0.1s						
PTEO	Sao Teotonio	1.71	33	Pn	Pn	18 13 11.6	-1.4
PTEO				Sn	Sn	18 13 33.1	-2.8
	1.8nm,0.1s						
PALC	Alcoutim	2.36	54	ePn	Pn	18 13 20.2	-2.1
PALC				eSn	Sn	18 13 49.7	-2.7
	4.1nm,0.2s						
PALC	Alcoutim	2.36	54	Pn	Pn	18 13 20.2	-2.1
PALC				Sn	Sn	18 13 49.7	-2.7
	2.0nm,0.2s						
EGRO	El Granado	2.40	53	Pn	Pn	18 13 20.9	-1.9
	0.9nm,0.1s,SNR=11						
EGRO				Sn	Sn	18 13 50.4	-2.9
	2.0nm,0.1s,SNR=5.0						
PBEJ	Beja	2.51	39	eSn	Sn	18 13 53.1	-3.0
MOE	Montemor	2.71	26	eSn	Sn	18 13 57.2	-3.9

EMIN	Mina Concepcio	3.06	56	Pn	Pn	18 13 29.9	-2.3
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	18 14 06.1	-4.0
	0.3nm,0.1s,SNR=7.9						
ESPR	Espera	3.33	76	Pn	Pn	18 13 34.1	-2.1
	0.2nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	18 14 11.7	-5.4
	1.8nm,0.1s,SNR=7.9						
EBAD	Badajoz	3.50	40	Sn	Sn	18 14 16.4	-4.8
	0.7nm,0.1s,SNR=7.9						
ECAB	El Cabril	4.08	60	Pn	Pn	18 13 44.0	-2.7
	0.8nm,0.1s,SNR=7.6						
ECAB				Sn	Sn	18 14 30.4	-5.4
	0.2nm,0.1s						
EADA	Adamuz	4.71	63	Pn	Pn	18 13 52.4	-3.3
	0.0nm,0.0s,SNR=7.9						
EADA				Sn	Sn	18 14 45.4	-6.6
	0.9nm,0.1s,SNR=7.9						

NEIC ***08*** *18:17:23.7, 34.04S×70.17W, h5^{km}, ML2.9(GUC), After GUC.*

GUC 08 18:17:23.7±0.7**, 34.04S×70.17W, h5**^{km}±1^{km}**, MD3.7, ML2.9, 7C-8D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CICH	Cipreses	0.35	216	⇑iP	Pg	18 17 30.8	0.0
CICH				iS	Sg	18 17 36.1	+0.6
CACH	El Canelo	0.36	257	⇑iP	Pg	18 17 31.4	+0.4
CACH				iS	Sg	18 17 36.9	+1.0
CHCH	Chadas Angostu	0.41	284	⇓iP	Pg	18 17 32.5	+0.6
CHCH				iS	Sg	18 17 39.0	+1.6
SJCH	San Jose de Ma	0.42	339	⇑iP	Pg	18 17 32.2	+0.1
SJCH				iS	Sg	18 17 38.9	+1.1
SJCH				AMP		18 17 39.2	
	comp=E,2µm,0.2s						
PCH	Pirque	0.50	325	⇓iP	Pg	18 17 34.1	+0.4
PCH				iS	Sg	18 17 41.8	+1.4
ANTU	Antumapu	0.60	320	⇓iP	Pg	18 17 36.0	+0.3
ANTU				iS	Sg	18 17 45.2	+1.4
ANTU				AMP		18 17 45.5	
	comp=N,2µm,0.2s						
FSR	Penalolen	0.63	332	iP	Pg	18 17 36.5	+0.2
FSR				iS	Sg	18 17 45.9	+1.3
FSR				AMP		18 17 47.4	
	comp=N,923nm,0.3s						
CLCH	Cerro Calan	0.71	334	⇓iP	Pg	18 17 37.9	+0.1
CLCH				iS	Sg	18 17 48.5	+1.3
CLCH				AMP		18 17 50.9	
	comp=E,904nm,0.6s						
CLCH				AMP		18 17 53.9	
	comp=E,969nm,0.7s						
FCH	Farellones	0.71	352	⇓iP	Pg	18 17 37.4	-0.6
FCH				iS	Sg	18 17 48.6	+1.2
FCH				AMP		18 17 51.7	
	comp=E,545nm,0.3s						
DSCH	Colegio Aleman	0.71	332	⇑iP	Pg	18 17 38.4	+0.3
DSCH				iS	Sg	18 17 48.8	+1.2
DSCH				AMP		18 17 51.0	
	comp=N,1µm,0.3s						
TACH	Talagante	0.74	301	⇑iP	Pg	18 17 38.3	-0.3
TACH				iS	Sg	18 17 49.5	+1.1
RCDM	Rinconada Maip	0.76	316	⇑iP	Pg	18 17 38.8	-0.1
RCDM				iS	Sg	18 17 50.1	+1.1
RCDM				AMP		18 17 50.8	
	comp=N,667nm,0.1s						
PUEX	Pudahuel	0.77	320	⇓iP	Pg	18 17 39.0	0.0
PUEX				iS	Sg	18 17 50.5	+1.2
PUEX				AMP		18 17 51.1	
	comp=E,3µm,0.4s						
SFDO	San Fernando	0.91	230	⇓iP	Pb	18 17 41.0	-0.5
SFDO				iS	Sb	18 17 54.0	+0.4
PEL	Peldehue	0.99	334	eP	Pb	18 17 42.7	-0.2
PEL				iS	Sb	18 17 56.8	+0.8
LNV	Longovilo	1.03	274	⇑iP	Pb	18 17 43.1	-0.6
LNV				iS	Sb	18 17 57.7	+0.3
ROCH	El Roble	1.27	326	eP	Pb	18 17 47.2	-0.6
ROCH				iS	Sb	18 18 05.0	+0.7
LCCH	Las Cruces	1.29	295	⇓iP	Pb	18 17 47.5	-0.6
JACH	Jahuel	1.39	345	eP	Pb	18 17 49.1	-0.7
JACH				iS	Sb	18 18 08.4	+0.6

IDC ***08*** *18:48:31.4±1.1, 6.21S×147.01E, mb3.9/7, mb1 4.1/10, mb1mx4.1/16, mbtmp4.0/10, ML3.4/3, MS3.2/4, Ms1 3.1/4, ms1mx2.9/23, Error ellipse: s-maj=31.5km s-min=11.7km az=97.0*

NEIC ***08*** *18:48:33.5±0.8, 6.23S×146.84E, h10^{km}, mb4.0/1, Error ellipse: s-maj=20.3km s-min=10.7km az=95.0*

ISC 08 18:48:35.1±0.8**, 6.27S**±0.06×**146.8E**±0.1**, h33**^{km}**, n16, σ0ˢ98**/17**, mb3.9**/7**, MS3.1**/3**, 1C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.14	173	Pn	Pn	18 49 24.1	+0.6
	17nm,0.3s,baz=48,slow=7.6,SNR=40						
PMG				Sn	Sn	18 50 00.7	+0.5
	17nm,0.3s,baz=307,slow=18,SNR=2.6						
PMG				Lg		18 50 12.1	
	35nm,0.3s,baz=135,slow=21,SNR=8.5						
HNR	Honiara	13.41	104	LR	LR	18 55 46.6	
	comp=Z,55nm,19.3s,baz=285,slow=33						
CTA	Charters Tower	13.75	182	Pn	P	18 51 49.2	-0.9
	0.2nm,0.3s,baz=16,slow=17,SNR=2.7						
CTA	Charters Tower	13.75	182	Pn	P	18 51 49.2	-0.9
KAKA	Kakadu	15.53	245	⇑iP	P	18 52 14.6	+1.2
WRAB	Tennant Creek	18.18	221	eP	P	18 52 45.3	-1.6
	9.0nm,0.8s						
WB2	Warramunga Arr	18.19	220	eP	P	18 52 45.9	-1.1
WRA	Warramunga Arr	18.20	221	P	P	18 52 46.5	-0.6
	0.2nm,0.3s,baz=46,slow=12,SNR=19						
ASAR	Alice Springs	21.28	214	P	P	18 53 20.8	-0.3
	1.4nm,0.4s,mb3.7,baz=51,slow=8.1,SNR=20						
ASAR				S	S	18 57 21.1	+11
	1.0nm,0.9s,baz=36,slow=19,SNR=5.0						
ASAR				LR	LR	19 00 48.0	
	comp=Z,65nm,19.6s,MS3.0,baz=140,slow=34						
ASPA	Alice Springs	21.28	214	eP	P	18 53 21.6	+0.5
STKA	Stephens Creek	25.94	190	P	P	18 54 08.0	+1.6
	1.8nm,0.5s,mb3.9,baz=94,slow=12,SNR=5.1						
STKA				LR	LR	19 05 32.2	
	comp=Z,36nm,18.9s,MS2.9,baz=156,slow=39						
CMAR	Chiang Mai Arr	53.19	298	P	P	18 57 54.5	+1.8
	1.0nm,1.0s,mb3.7,baz=129,slow=5.8,SNR=4.1						
SONM	Songino Array	64.53	331	P	P	18 59 11.5	+0.4
	0.4nm,0.4s,mb3.8,baz=109,slow=4.2,SNR=11						
SONM				LR	LR	19 25 47.7	
	comp=Z,29nm,20.8s,MS3.5,baz=81,slow=35						
MKAR	Makanchi Array	77.57	321	P	P	19 00 29.8	+0.2
	0.3nm,0.4s,mb3.6,baz=97,slow=8.7,SNR=11						
ZAL	Zalesovo	79.13	328	P	P	19 00 37.0	-1.0
	0.7nm,0.4s,mb4.0,baz=106,slow=3.7,SNR=3.7						
ILAR	Eielson Array	85.81	23	P	P	19 01 11.2	-1.0
	2.5nm,0.6s,mb4.6,baz=254,slow=4.9,SNR=21						

NEIC ***08*** *18:56:30.9, 18.95N×103.49W, h8^{km}, MD4.0(MEX), After MEX.*

MEX 08 18:56:30.9±0.7**, 18.95N×103.49W, h8**^{km}±5^{km}**, MD4.0, 1C-1D, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COLM	Colima	0.30	321	⇓iP	Pg	18 56 35.8	-1.1
COLM				iS	Sg	18 56 41.1	+0.1
CJM	Chamela	1.56	291	⇑iP	Pn	18 56 56.0	-3.2
CJM				iS	Sb	18 57 14.1	-5.5
SFJM	Santa Fe	1.59	16	iP	Pn	18 56 56.0	-3.5
SFJM				iS	Sb	18 57 15.5	-4.7
MOIG	Morelia	2.29	71	iP	Pn	18 57 06.1	-3.6
MOIG				iS	Sn	18 57 32.8	-5.6
ZIIG	Zihuatanejo	2.34	124	eP	Pn	18 57 06.1	-4.3
ZIIG				iS	Sn	18 57 34.9	-4.8
CAIG	El Cayaco	3.61	121	eP	Pn	18 57 27.5	-0.9
CAIG				iS	Sn	18 58 06.9	-4.8
PLIG	Platanillo	3.82	98	eP	Pn	18 57 27.9	-3.5
PLIG				iS	Sn	18 58 11.4	-5.7

JMA ***08*** *19:04:28.5±0.1, 33.21N×140.53E, h59^{km}±4^{km}, M2.8*

IDC ***08*** *19:04:29.7±3.1, 32.94N×140.26E, h61^{km}±33^{km}, mb3.1/2, mb1 3.3/3, mb1mx3.0/22, mbtmp3.3/3, ML2.9/1, Error ellipse: s-maj=81.3km s-min=41.9km az=96.0*

ISC 08 19:04:27.4±1.0**, 33.15N**±0.05×**140.5E**±0.1**, h73**^{km}±9^{km}**, n11, σ0ˢ79**/17**, mb3.6**/2**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.56	266	P	P	19 04 41.9	+0.6
JHJ2				S	S	19 04 51.2	-0.3
JHJ	Hachijo jima 2	0.59	267	P	P	19 04 41.9	+0.3
	55nm,0.3s,baz=117,slow=6.8,SNR=29						
JHJ				S	S	19 04 51.4	-0.6
	231nm,0.3s,baz=76,slow=23,SNR=62						
BSO1	Boso 1	1.55	15	P	P	19 04 52.7	-1.0
BSO3	Boso 3	1.64	1	P	P	19 04 55.0	0.0
BSO3				eS	S	19 05 15.3	+0.1
JIM2	Oshima 3	1.79	331	P	P	19 04 57.2	+0.3
JIM2				eS	S	19 05 17.9	-0.7
JIZS	Izushimoda	2.05	320	P	P	19 05 01.6	+1.1
KTJJ	Kamata 2	2.12	327	P	P	19 05 02.3	+0.8
KTJJ				eS	S	19 05 26.6	-0.2
JOD2	Odawara 2	2.40	332	P	P	19 05 05.9	+0.5
JOD2				eS	S	19 05 32.3	-1.4
MJAR	Matsushiro Arr	3.86	332	P	P	19 05 27.9	+2.0
	0.8nm,0.3s,baz=152,slow=13,SNR=6.7						
WRA	Warramunga Arr	53.12	187	P	P	19 13 39.4	-0.6
	0.2nm,0.4s,mb3.5,baz=2.7,slow=7.5,SNR=11						
ASAR	Alice Springs	56.85	187	P	P	19 14 06.5	-0.5
	0.8nm,1.2s,mb3.6,baz=4.0,slow=6.7,SNR=7.5						

IDC ***08*** *19:31:48.9±0.7, 11.65N×86.24W, h36^{km}±5^{km}, mb3.8/7, mb1 4.1/7, mb1mx3.7/20, mbtmp4.0/7, MS3.3/2, Ms1 3.3/2, ms1mx2.8/20, Error ellipse: s-maj=61.3km s-min=13.5km az=53.0*

NEIC ***08*** *19:31:49.1±0.6, 11.32N×86.73W, mb4.8/1, MD4.2(CASC), Error ellipse: s-maj=26.8km s-min=6.9km az=217.0*

CASC ***08*** *19:31:49.3±2.5, 11.28N×86.65W, h29^{km}±6^{km}, MD4.3, ML4.1, mb4.8(NEIC)*

ISC 08 19:31:48.9±0.4**, 11.24N**±0.03×**86.67W**±0.03**, h41**^{km}**, h41**^{km}±.5^{km}**:pP-P, n61, σ1ˢ09**/69**, mb4.1**/8**, MS3.4**/1**, 6C-13D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUN	El Crucero	0.83	26	⇑eP	P	19 32 04.3	+0.1
APON	Apoyo	0.90	41	⇓eP	P	19 32 05.0	-0.3
TICN	Ticuantepe	0.90	29	⇓eP	P	19 32 05.0	-0.2
MASN	Masaya	0.91	34	⇓eP	P	19 32 04.6	-0.7
XAVN	Gruta Xavier	0.97	21	⇓eP	P	19 32 05.7	-0.5
MGAN	Managua	1.00	25	⇓iP	P	19 32 06.3	-0.2
MGAN				eS	S	19 32 19.9	+0.2
MGAN				i		19 32 22.4	
	comp=N,5µm,0.5s						
WILN	Americas 2	1.04	27	⇓eP	P	19 32 06.7	-0.4
WILN				eS	S	19 32 21.6	+0.9
APYN	Apoyeque	1.04	18	⇑eP	P	19 32 06.7	-0.5
CONN	Concepcion	1.08	72	⇓iP	P	19 32 07.5	-0.2
MOMJ	Momotombo	1.17	6	⇓eP	P	19 32 08.1	-0.9
LEON	Leon	1.19	350	⇑eP	P	19 32 11.3	+2.0
MIRN	Miramar	1.20	358	⇑iP	P	19 32 08.9	-0.5
CNGN	Cerro Negro	1.26	359	⇓eP	P	19 32 09.6	-0.7
TEL3	Telica 3	1.34	353	⇓eP	P	19 32 10.9	-0.6
TEL3				eS	S	19 32 27.4	-0.9
TELN	Telica	1.37	354	eP	P	19 32 11.7	-0.3
PYTN	Playitas	1.43	25	⇓eP	P	19 32 12.1	-0.7
PYTN				eS	S	19 32 31.1	+0.6
CRIN	San Cristobal	1.50	346	⇓eP	P	19 32 13.2	-0.6
CRIN				eS	S	19 32 34.1	+1.7
JTS	JuntasAbangare	1.93	119	Pn	P	19 32 19.4	-0.5
	comp=N,48nm,0.3s,baz=320,slow=17,SNR=96						
JTS				Lg		19 32 47.8	
	comp=N,97nm,0.3s,baz=145,slow=22,SNR=11						
FORC	Fortuna	2.11	111	eP	P	19 32 24.5	+2.0
CNCH	Conchagua	2.32	331	⇑eP	P	19 32 25.7	+0.2
CNCH				eS	S	19 32 54.4	+1.4
CGA2	Cerro Gallo 2	2.49	119	eP	P	19 32 28.5	+0.7
CGA2				eS	S	19 33 06.9	+10
CGA2	Cerro Gallo 2	2.49	119	eP	P	19 32 30.2	+2.4
PRS1	Puriscal	2.63	118	eP	P	19 32 33.2	+3.3
BLLM	Bellamira	2.67	325	eP	P	19 32 31.0	+0.5
BLLM				eS	S	19 33 02.9	+0.9
VSM	San Miguel	2.68	325	eP	P	19 32 31.0	+0.4
LAJ	Bijagual	2.86	118	eP	P	19 32 31.5	-1.6
LAJ	Bijagual	2.86	118	eP	P	19 32 29.9	-3.2
SJS	Escuela Geolog	2.88	116	eP	P	19 32 33.8	+0.3
SJS				eS	S	19 33 16.2	+9.0
TRTC	Tortuguero	2.98	102	eP	P	19 32 33.5	-1.4
TRTC	Tortuguero	2.98	102	⇓eP	P	19 32 33.4	-1.5
LCR2	La Lucha 2	3.02	119	eP	P	19 32 37.1	+1.7
LCR2	La Lucha 2	3.02	119	eP	P	19 32 36.5	+1.1
SNVI	San Vicente	3.17	318	eP	P	19 32 38.6	+1.0
SNVI				eS	S	19 33 13.8	-0.8
SNVI				eS	S	19 33 14.1	-0.5
LCBS	La Ceiba	3.29	317	eP	P	19 32 39.0	-0.4
LCBS				eS	S	19 33 16.6	-1.1
BUS	Buena Vista	3.32	120	eP	P	19 32 44.2	+4.5
BUS	Buena Vista	3.32	120	eP	P	19 32 41.7	+2.0
LFRS	El Faro	3.33	316	eP	P	19 32 39.9	+0.1
LFRS				eS	S	19 33 17.4	-1.2
LBRS	Las Brisas	3.40	317	eP	P	19 32 42.1	+1.3
LFU	La Fuente	3.45	317	eP	P	19 32 43.3	+1.8
LFU				eS	S	19 33 20.8	-1.0
BOQS	Boqueron	3.56	315	eP	P	19 32 44.5	+1.5
BOQS				eS	S	19 33 24.4	0.0
MTO2	Montecristo 2	4.09	320	eP	P	19 32 51.7	+1.0
RBDL	Robledal	4.10	315	⇑eP	P	19 32 52.3	+1.5
ACR	Cerro Adams	4.30	126	eP	P	19 32 53.3	-0.3
ACR	Cerro Adams	4.30	126	eP	P	19 32 53.2	-0.4
ROSC	El Rosal	13.76	116	LR	LR	19 40 03.3	
	comp=N,94nm,19.3s,baz=112,slow=36						
SDV	Santo Domingo	15.97	97	eP	P	19 35 33.3	+1.0
TXAR	Lajitas Array	23.99	321	P	P	19 37 00.1	-0.7
	comp=N,2.6nm,0.6s,mb3.9,baz=135,slow=9.9,SNR=17						
TXAR				PcP	PcP	19 40 42.5	-1.2
	comp=N,0.3nm,0.4s,baz=72,slow=4.0,SNR=3.6						
WMOK	Wichita Mounta	25.87	337	eP	P	19 37 17.6	-1.1
	comp=N,31nm,1.1s,mb4.8						
SIV	San Ignacio	37.06	136	P	P	19 38 55.6	-1.6
	comp=N,4.7nm,0.7s,mb4.4,baz=314,slow=9.3,SNR=37						
SIV				PcP	PcP	19 41 16.2	-1.4
	comp=N,2.6nm,0.6s,baz=273,slow=2.5,SNR=12						
PDAR	Pinedale Array	37.20	332	P	P	19 38 56.0	-2.0
	comp=N,0.8nm,0.6s,mb3.7,baz=127,slow=11,SNR=7.2						
PDAR				pP	pP	19 39 07.2	-2.2
	comp=N,1.0nm,0.5s,baz=128,slow=10,SNR=5.5						
NVAR	Mina Array Bea	39.11	319	P	P	19 39 12.7	-1.3
	comp=N,0.6nm,0.6s,mb3.5,baz=149,slow=6.0,SNR=4.8						
NVAR				pP	pP	19 39 24.4	-1.1
	comp=N,0.6nm,0.6s,baz=128,slow=7.7,SNR=3.6						
NVAR				PcP	PcP	19 41 23.4	-0.5
	comp=N,0.7nm,0.6s,baz=176,slow=3.2,SNR=4.9						
SCHQ	Schefferville	46.23	16	LR	LR	19 59 21.8	
	comp=N,43nm,20.1s,MS3.4,baz=119,slow=36						
BDFB	Brasilia	46.67	124	P	P	19 40 13.4	-2.3
	comp=N,1.3nm,0.4s,mb4.2,baz=175,slow=5.1,SNR=3.2						
YKA	Yellowknife Ar	54.98	345	P	P	19 41 13.1	-5.0
	comp=N,0.9nm,0.6s,mb4.0,baz=136,slow=8.0,SNR=6.6						
YKA				pP	pP	19 41 24.8	-5.1
	comp=N,0.5nm,0.6s,baz=136,slow=8.0,SNR=2.4						
YKA	Yellowknife Ar	54.98	345	P	P	19 41 13.1	-5.0
YKA				pP	pP	19 41 24.8	-5.1
ILAR	Eielson Array	67.43	336	P	P	19 42 38.3	-3.8
	comp=N,1.0nm,0.6s,mb4.0,baz=135,slow=4.3,SNR=10						
SONM	Songino Array	120.06	350	PKP	PKPdf	19 50 34.7	-0.7
	comp=N,0.3nm,0.4s,baz=306,slow=0.6,SNR=5.5						
STKA	Stephens Creek	131.10	237	PKP	PKPdf	19 50 57.9	+0.7
	comp=N,2.0nm,1.0s,baz=71,slow=9.8,SNR=3.6						
STKA				pPKP		19 51 08.8	
	comp=N,1.9nm,1.0s,baz=23,slow=7.7,SNR=1.8						
ASAR	Alice Springs	139.51	247	PKP	PKPdf	19 51 13.3	+0.4
	comp=N,0.6nm,0.6s,baz=91,slow=1.9,SNR=12						
ASAR				pPKP		19 51 24.6	
	comp=N,0.8nm,0.6s,baz=104,slow=2.0,SNR=4.4						
WRA	Warramunga Arr	139.65	252	PKP	PKPdf	19 51 14.1	+0.9
	comp=N,0.8nm,0.6s,baz=92,slow=2.5,SNR=15						
WRA				pPKP		19 51 25.2	
	comp=N,0.7nm,0.6s,baz=92,slow=2.3,SNR=7.3						
CMAR	Chiang Mai Arr	149.98	349	PKPbc	PKPdf	19 51 36.0	+5.1
	comp=N,0.8nm,0.6s,baz=313,slow=3.2,SNR=5.8						

IDC 08 20:16:25.8±48.0**, 17.59S×177.66W, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.8**/16**, mbtmp3.9**/3**, Error ellipse: s-maj=880.5km s-min=148.7km az=79.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.41	241	P	P	20 23 58.0	-1.2
	0.9nm,0.8s,baz=97,slow=14,SNR=2.7						
WRA	Warramunga Arr	45.39	259	P	P	20 24 46.4	-1.8
	1.0nm,0.3s,baz=97,slow=7.4,SNR=63						
ASAR	Alice Springs	45.56	254	P	P	20 24 47.2	-2.3
	1.2nm,0.5s,baz=86,slow=8.5,SNR=44						

CSEM ***08*** *20:39:50.6±0.2, 35.06N×2.63W, h7^{km}±1^{km}, MD3.5, Error ellipse: s-maj=4.4km s-min=2.9km az=125.0*

MDD ***08*** *20:39:51.9±0.7, 34.98N×2.57W, mbLg2.9/2, Error ellipse: s-maj=5.1km s-min=3.9km az=133.0, PRXIMO*

NEIC ***08*** *20:39:53.2, 35.01N×2.60W, h12^{km}, MG3.8(MDD), After MDD.*

CNRM ***08*** *20:39:54.7, 34.98N×2.73W, h2^{km}, MD3.5*

ISC 08 20:39:51.9±0.6**, 35.06N**±0.03×**2.71W**±0.06**, h10**^{km}**, n46, σ1ˢ32**/69**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAI	Zaio	0.10	196	Pg	Pg	20 39 54.5	0.0
ZAI				Lg		20 39 56.0	
ZAI	Zaio	0.10	196	iP	Pg	20 39 54.5	0.0
MELI	Melilla	0.29	322	Pg	Pg	20 40 00.7	+2.7
MELI				Lg		20 40 06.1	
MELI	Melilla	0.29	322	eS	Sg	20 40 06.1	+4.0
EMLI	Melilla	0.30	321	S	Sg	20 40 06.8	+4.3
	846nm,0.2s,SNR=7.9						
EMEL	Melilla	0.31	320	Pg	Pg	20 40 01.4	+3.0
	206nm,0.2s,SNR=7.9						
EMEL				Lg		20 40 06.8	
	846nm,0.2s,SNR=7.9						
TOU	Touzarine	0.86	264	Pg	Pg	20 40 10.0	+0.8
TOU				Lg		20 40 21.0	
TOU	Touzarine	0.86	264	eP	Pg	20 40 10.0	+0.8
EALB	Alboran	0.91	343	P	Pb	20 40 10.8	+1.4
EALB				S	Sb	20 40 23.0	+1.6
EALB	Alboran	0.91	343	Pg	Pg	20 40 10.8	+0.6
	7.3nm,0.1s,SNR=7.9						
EALB				Lg		20 40 23.0	
	31nm,0.2s,SNR=7.9						
EALB	Alboran	0.91	343	P	Pb	20 40 10.8	+1.4
	7.3nm,0.1s,SNR=7.9						
EALB				S	Sb	20 40 23.0	+1.6
	31nm,0.2s,SNR=7.9						
EBER	Berja	1.84	356	P	Pn	20 40 25.2	+1.3
EBER				S	Sn	20 40 47.5	+0.2
EBER	Berja	1.84	356	Pn	Pn	20 40 25.2	+1.3
	0.1nm,0.1s,SNR=7.9						
EBER				Sn	Sn	20 40 47.3	0.0
	22nm,0.4s,SNR=7.9						
EBER	Berja	1.84	356	P	Pn	20 40 25.2	+1.3
	0.1nm,0.1s,SNR=7.9						
EBER				S	Sn	20 40 47.5	+0.2
	22nm,0.4s,SNR=7.9						
ENIJ	Nijar	1.95	12	P	Pn	20 40 24.4	-1.1
ENIJ				S	Sn	20 40 50.0	-0.1
ENIJ	Nijar	1.95	12	Pn	Pn	20 40 24.4	-1.1
	2.9nm,0.2s,SNR=7.9						
ENIJ				Sn	Sn	20 40 50.0	-0.1
	6.5nm,0.3s,SNR=7.9						
EMIJ	Mijas	2.25	312	Pn	Pn	20 40 30.1	+0.4
	0.5nm,0.1s,SNR=7.9						
EMIJ				Sn	Sn	20 40 55.2	-2.6
	2.3nm,0.2s,SNR=7.9						
ECOG	Cogollos-Vega	2.31	343	Pn	Pn	20 40 31.1	+0.4
	1.9nm,0.1s,SNR=7.9						
ELOJ	Sierra Loja	2.38	331	Pn	Pn	20 40 32.5	+0.8
	0.2nm,0.1s,SNR=7.9						
ELOJ				Sn	Sn	20 41 03.1	+1.9
	3.5nm,0.5s,SNR=4.0						
ELOJ	Sierra Loja	2.38	331	S	Sn	20 41 03.1	+1.9
	3.5nm,0.5s,SNR=4.0						
EQES	Quesada	2.75	354	P	Pn	20 40 38.2	+1.3
EQES				S	Sn	20 41 10.4	-0.1
EQES	Quesada	2.75	354	Pn	Pn	20 40 37.6	+0.7
	1.9nm,0.2s,SNR=10						
EQES				Sn	Sn	20 41 10.4	-0.1
	7.4nm,0.3s,SNR=7.9						
EQES	Quesada	2.75	354	P	Pn	20 40 38.2	+1.3
	1.9nm,0.2s,SNR=10						
EQES				S	Sn	20 41 10.4	-0.1
	7.4nm,0.3s,SNR=7.9						
ELUQ	Luque	2.79	334	Pn	Pn	20 40 40.5	+3.0
	1.1nm,0.2s,SNR=4.0						
ELUQ				Sn	Sn	20 41 12.5	+1.0
	2.7nm,0.3s,SNR=7.9						
ELUQ	Luque	2.79	334	S	Sn	20 41 12.5	+1.0
	2.7nm,0.3s,SNR=7.9						
CZD	Col de Zad	2.80	224	Pn	Pn	20 40 39.0	+1.4
CZD				Sn	Sn	20 41 10.7	-1.1
CZD	Col de Zad	2.80	224	eP	Pn	20 40 39.0	+1.4
EMUR	La Murta	3.02	23	Pn	Pn	20 40 39.3	-1.5
	2.8nm,0.2s,SNR=4.0						
EMUR	La Murta	3.02	23	P	Pn	20 40 39.3	-1.4
	2.8nm,0.2s,SNR=4.0						
EBAN	Banos Encina	3.21	345	Sn	Sn	20 41 22.1	-0.2
	0.7nm,0.2s,SNR=4.0						
ZFT	Errachidia	3.32	205	eP	Pn	20 40 45.0	0.0
EADA	Adamuz	3.44	335	Pn	Pn	20 40 46.8	+0.1
	0.1nm,0.1s,SNR=7.9						
EADA				Sn	Sn	20 41 25.4	-2.7
	1.4nm,0.2s,SNR=7.9						
EADA	Adamuz	3.44	335	P	Pn	20 40 46.8	+0.1
	0.1nm,0.1s,SNR=7.9						
EADA				S	Sn	20 41 25.4	-2.6
	1.4nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.69	14	Pn	Pn	20 40 49.8	-0.6
	0.4nm,0.1s,SNR=13						
ETOB				Sn	Sn	20 41 32.2	-2.3
	22nm,0.9s,SNR=7.9						
ETOB	Tobarra	3.69	14	P	Pn	20 40 49.8	-0.5
	0.4nm,0.1s,SNR=13						
ETOB				S	Sn	20 41 32.2	-2.3
	22nm,0.9s,SNR=7.9						
EBEN	Beniarda	4.15	28	P	Pn	20 40 55.2	-1.5
EBEN	Beniarda	4.15	28	P	Pn	20 40 55.3	-1.5
	SNR=7.9						
EMIN	Mina Concepcio	4.18	311	Pn	Pn	20 40 56.8	-0.4
	0.4nm,0.2s,SNR=6.9						
EMIN				Sn	Sn	20 41 43.2	-3.5
	1.3nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	4.18	311	P	Pn	20 40 56.8	-0.4
	0.4nm,0.2s,SNR=6.9						
EMIN				S	Sn	20 41 43.2	-3.5
	1.3nm,0.3s,SNR=7.9						
PALC	Alcoutim	4.53	303	ePn	Pn	20 41 02.1	-0.2
PALC				eSn	Sn	20 41 52.5	-3.2
EGRO	El Granado	4.57	304	Pn	Pn	20 41 02.4	-0.5
	3.3nm,0.4s,SNR=11						
EGRO				Sn	Sn	20 41 52.6	-4.1
	68nm,1.8s,SNR=7.9						
EGRO	El Granado	4.57	304	P	Pn	20 41 02.4	-0.4
	3.3nm,0.4s,SNR=11						
EBAD	Badajoz	5.04	318	Pn	Pn	20 41 09.2	-0.3
	2.4nm,0.2s,SNR=4.0						
EBAD				Sn	Sn	20 42 03.4	-5.2
	2.1nm,0.2s,SNR=7.9						
EBAD	Badajoz	5.04	318	P	Pn	20 41 09.2	-0.3
PTEO	Sao Teotonio	5.45	299	eSn	Sn	20 42 17.5	-1.2
PCBR	Castelo Branco	6.09	323	eSn	Sn	20 42 28.4	-6.4

AUST ***08*** *21:00:53.7, 32.90S×140.02E, h10^{km}, ML3.3*

NEIC ***08*** *21:00:53.0, 32.90S×140.02E, h10^{km}, ML3.3(AUST), After AUST.*

IDC ***08*** *21:00:53.5±5.6, 32.64S×139.85E, mb1 4.1/3, mb1mx3.7/13, mbtmp3.9/3, ML3.6/3, Error ellipse: s-maj=67.2km s-min=19.5km az=0.0*

ISC 08 21:00:50.1±0.8**, 32.89S**±0.05×**139.92E**±0.08**, h10**^{km}**, n11, σ1ˢ60**/16**, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	1.74	55	eP	Pn	21 01 23.9	+3.2
STKA				eS	Sn	21 01 45.1	+2.0
STKA	Stephens Creek	1.74	55	Pn	Pn	21 01 24.1	+3.4
	76nm,0.3s,baz=232,slow=14,SNR=624						

STKA				Lg		21 01 46.1	
	127nm,0.3s,baz=330,slow=23,SNR=17						
STKA				Rg		21 01 55.2	
	96nm,0.3s,baz=301,slow=18,SNR=4.7						
BBOO	**Buckleboo**	**3.25**	**270**	*e*P	**Pn**	**21 01 46.3**	**+4.1**
ARPS	**Mount Arapiles**	**4.18**	**158**	*e*P	**Pn**	**21 01 57.3**	**+1.9**
ARPS				*e*S	**Sn**	**21 02 42.8**	**-2.1**
CMSA	**Cobar Meteorol**	**5.08**	**76**	*e*P	**Pn**	**21 02 08.3**	**+0.2**
CMSA				*e*S	**Sn**	**21 03 05.8**	**-1.7**
TOO	**Toolangi**	**6.53**	**137**	*e*P	**Pn**	**21 02 29.2**	**+0.7**
YNG	**Young**	**7.21**	**104**	*e*P	**Pn**	**21 02 38.3**	**+0.1**
YNG				*e*S	**Sn**	**21 03 57.3**	**-3.7**
QLP	**Quilpie**	**7.32**	**32**	*e*P	**Pn**	**21 02 41.3**	**+1.6**
ASAR	**Alice Springs**	**10.61**	**329**	Pn	**P**	**21 03 24.9**	**-0.3**
	0.3nm,0.3s,baz=148,slow=12,SNR=22						
ASAR				Sn	**S**	**21 05 20.4**	**-4.7**
	0.4nm,0.3s,baz=157,slow=23,SNR=5.7						
WRA	**Warramunga Arr**	**13.83**	**338**	Pn	**P**	**21 04 06.6**	**-2.0**
	0.3nm,0.3s,baz=163,slow=11,SNR=33						
CTA	**Charters Tower**	**13.95**	**25**	Pn	**P**	**21 04 08.7**	**-1.5**
	0.4nm,0.3s,baz=203,slow=15,SNR=5.0						

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*KNET **08** 21:05:20.4±0.3, 42.16N×75.10E, h18^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.1km az=175.0*
*NNC **08** 21:05:22.5±1.6, 42.28N×75.10E, h6^{km}±5^{km}, mpv3.5, Error ellipse: s-maj=18.3km s-min=8.9km az=16.0*
ISC 08 21:05:21.5±0.8, **42.13N**±0.04×**75.11E**±0.04, **h20**^{km}±7^{km}, **n16**, σ**0$\overset{s}{.}$50**/25, **15C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZA	**Kyzart**	**0.12**	**114**	⇑P	**Pb**	**21 05 25.4**	**-0.1**
	820nm,0.1s,SNR=6989						
KZA				⇑S	**Sb**	**21 05 28.4**	**+0.1**
	22μm,0.2s						
UCH	**Uchtor**	**0.45**	**283**	P	**Pb**	**21 05 30.1**	**-0.6**
	174nm,0.2s,SNR=520						
UCH				⇑S	**Sb**	**21 05 36.3**	**-0.6**
	728nm,0.2s						
KBK	**Karagaybulak**	**0.54**	**347**	⇑P	**Pb**	**21 05 31.9**	**-0.3**
	3μm,0.1s,SNR=8354						
KBK				⇑S	**Sb**	**21 05 39.3**	**-0.2**
	8μm,0.2s						
AAK	**Ala-Archa**	**0.68**	**318**	P	**Pb**	**21 05 34.2**	**-0.3**
	428nm,0.1s,SNR=519						
AAK				⇑S	**Sb**	**21 05 42.8**	**-0.7**
	850nm,0.2s						
AAK	**Ala-Archa**	**0.68**	**318**	⇑P	**Pb**	**21 05 34.2**	**-0.3**
	199nm,0.3s						
AAK				⇓S	**Sb**	**21 05 42.9**	**-0.5**
	421nm,0.3s						
ULHL	**Ulahol**	**0.85**	**82**	⇑P	**Pb**	**21 05 37.4**	**0.0**
	50nm,0.1s,SNR=54						
TKM2	**Tokmak 2**	**0.87**	**24**	⇓P	**Pb**	**21 05 37.6**	**-0.2**
	83nm,0.1s,SNR=145						
TKM2				⇓S	**Sb**	**21 05 49.2**	**+0.2**
	479nm,0.1s						
CHMS	**Chumysh**	**0.91**	**343**	⇓P	**Pb**	**21 05 38.2**	**-0.2**
	94nm,0.1s,SNR=200						
CHMS				⇓S	**Sb**	**21 05 50.1**	**+0.1**
	399nm,0.2s						
AML	**Almayashu**	**1.05**	**271**	⇑P	**Pb**	**21 05 41.0**	**+0.2**
	69nm,0.2s,SNR=267						
AML				⇓S	**Sb**	**21 05 54.9**	**+0.7**
	418nm,0.4s						
EKS2	**Erkin-Say**	**1.12**	**299**	⇓P	**Pb**	**21 05 42.2**	**+0.1**
	67nm,0.1s,SNR=383						
EKS2				⇑S	**Sb**	**21 05 57.4**	**+1.2**
	300nm,0.2s						
USP	**Ospenovka**	**1.23**	**339**	P	**Pn**	**21 05 43.8**	**+0.1**
	70nm,0.1s,SNR=600						
USP				⇓S	**Sb**	**21 05 59.8**	**+0.6**
	150nm,0.1s						
KK31	**Karatay Array**	**3.53**	**288**	⇑Pn	**Pn**	**21 06 23.0**	**+6.4**
	1.8nm,0.3s,baz=101,slow=16,SNR=128						
KK31				Lg		21 07 10.4	
	19nm,0.5s,baz=104,slow=28,SNR=14						
MK31	**Makanchi Array**	**6.94**	**45**	⇑Pn	**Pn**	**21 07 05.5**	**+0.7**
	1.1nm,0.4s,baz=228,slow=14						
MK31				⇓Lg		21 08 56.8	
	5.5nm,0.8s,baz=236,slow=29						
BVA0	**Borovoye Array**	**11.36**	**345**	⇑Lg		21 11 17.6	
	1.3nm,1.3s,baz=170,slow=27,SNR=5.2						
CHKZ	**Chkalovo**	**11.94**	**347**	⇑Lg		21 11 37.0	
	3.5nm,1.1s						
AB31	**Akbulak array**	**12.76**	**309**	Pn	**P**	**21 08 23.7**	**-0.9**
	0.9nm,0.6s,baz=117,slow=12,SNR=8.8						
AB31				⇑Sn	**S**	**21 10 42.0**	**-5.2**
	1.5nm,1.0s,baz=109,slow=25						

IDC 08 21:14:28.5±2.2, **2.37N**×**128.60E**, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.4**/18, **mbtmp3.5**/3, **Error ellipse: s-maj=157.5km s-min=24.6km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.88**	**166**	P	P	21 19 32.8	-2.3
	0.8nm,0.8s,baz=346,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**26.39**	**169**	P	P	21 20 07.7	-1.0
	0.3nm,0.8s,baz=351,slow=13,SNR=4.2						
MKAR	**Makanchi Array**	**59.73**	**325**	P	P	21 24 35.2	-2.2
	0.7nm,0.5s,baz=117,slow=8.0,SNR=19						

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*CSEM **08** 21:18:14.7±0.2, 34.31N×46.61E, h14^{km}, ML3.1, Error ellipse: s-maj=5.3km s-min=4.4km az=21.0*
*TEH **08** 21:18:15.8, 34.31N×46.59E, h10^{km}, Mn3.1*
*THR **08** 21:18:19.2±0.6, 34.66N×46.63E, h34^{km}±6^{km}, ML2.9*
ISC 08 21:18:18.0±1.8, **34.4N**±0.1×**46.9E**±0.1, **h5**^{km}±8^{km}, **n15**, σ**1$\overset{s}{.}$15**/17, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVIS	**Veys**	**0.13**	**350**	Pg	**Pg**	**21 18 21.4**	**+0.7**
IGHG	**Ghaleghazi**	**0.27**	**255**	Pg	**Pg**	**21 18 17.5**	**-5.9**
ILIN	**Laeen**	**0.52**	**7**	Pg	**Pg**	**21 18 28.2**	**-0.3**
IKOM	**Komasi**	**0.57**	**113**	Pg	**Pg**	**21 18 29.8**	**+0.4**
SNGE	**Sanandaj**	**0.79**	**29**	*e*PG	**Pg**	**21 18 33.7**	**-0.1**
SNGE				AML	AML	21 18 54.9	
	comp=N,552nm,0.5s						
ASAO	**Ashtian**	**2.60**	**86**	*e*PN	**Pn**	**21 19 03.6**	**+2.1**
ASAO				*e*SG	**Sg**	**21 19 45.1**	**+0.5**
ASAO				AML	AML	21 19 58.5	
	comp=E,32nm,0.6s						
IRAZ	**Razeghan**	**2.70**	**67**	Pn	**Pn**	**21 19 06.8**	**+3.9**
IRAZ				Sn	**Sn**	**21 19 37.2**	**+0.8**
SHGO	**Shushtar**	**2.80**	**144**	*e*PN	**Pn**	**21 19 08.2**	**+3.9**
IGZV	**Gazvin**	**3.37**	**53**	Pn	**Pn**	**21 19 08.1**	**-4.3**
IQOM	**Qom**	**3.48**	**82**	Pn	**Pg**	**21 19 26.3**	**-1.3**
THKV	**Tehran--Karaj**	**3.61**	**64**	*e*PN	**Pn**	**21 19 16.5**	**+0.7**
IVRN	**Varamin**	**4.04**	**80**	Lg		21 20 29.3	
IVRN	**Varamin**	**4.04**	**80**	Pn	**Pn**	**21 19 21.5**	**-0.4**
IDMV	**Damavand**	**4.39**	**73**	Pn	**Pn**	**21 19 26.5**	**-0.4**
IFIR	**Firoozkooh**	**4.98**	**74**	Pn	**Pn**	**21 19 32.8**	**-2.4**
IFIR				Sn	**Sn**	**21 20 30.7**	**-3.3**

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*MOS **08** 21:24:55.0±1.1, 28.06S×178.21W, h202^{km}, mb4.9/8, Error ellipse: s-maj=15.8km s-min=13.3km az=179.1*
*IDC **08** 21:24:57.8±0.5, 28.06S×178.16W, h216^{km}±4^{km}, mb4.5/10, mb1 4.6/11, mb1mx4.4/16, mbtmp5.1/11, Error ellipse: s-maj=13.3km s-min=12.2km az=91.0*
*BJI **08** 21:24:58.4, 28.50S×178.00W, h234^{km}, mB4.9, mb4.6*
*HRVD **08** 21:24:58.5±0.6, 27.93S×177.85W, h235^{km}±5^{km}, MW5.0/36, Centroid moment Tensor Solution. LP body waves: s15,c17;Mantle waves: s36,c44; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.59±.29; M$_{\theta\theta}$-0.91±.38; M$_{\phi\phi}$-2.67±.38; M$_{r\theta}$1.30±.35; M$_{\theta\phi}$1.64±.39; M$_{\phi r}$2.73±.31; Best double couple: M$_0$4.63×10^{16} NP1: ϕ_s129°, δ36°, λ49°. NP2: ϕ_s357°, δ64°, λ116°. Principal axes: T 5.155, Plg62°, Azm308°; N -1.042, Plg23°, Azm165°; P -4.106, Plg15°, Azm68°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **08** 21:24:58.5±1.0, 28.52S×178.04W, h235^{km}±9^{km}, mb4.9/11 Error ellipse: s-maj=12.6km s-min=10.4km az=121.0*
ISC 08 21:24:55.5±0.8, **28.63S**±0.04×**178.06W**±0.08, **h218**^{km}±8^{km}, **n181**, σ**1$\overset{s}{.}$45**/141, **mb4.7**/23, **7C-2D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.63**	**168**	P	**P**	**21 25 31.9**	**+6.4**
RAO				S	**S**	**21 25 56.1**	**+7.3**
RAO	**Raoul Island**	**0.63**	**168**	P	**P**	**21 25 31.9**	**+6.3**
	2μm,0.3s,baz=298,slow=0.8,SNR=168						
RAO				S	**S**	**21 25 56.1**	**+7.3**
	7μm,0.3s,baz=63,slow=23,SNR=18						
RAO	**Raoul Island**	**0.63**	**168**	*e*P	**P**	**21 25 31.7**	**+6.1**
MXZ	**Matakaoa Point**	**9.41**	**198**	*e*P	**P**	**21 27 07.6**	**-0.2**
MXZ	**Matakaoa Point**	**9.41**	**198**	PN	**P**	**21 27 07.9**	**+0.2**
MXZ				SN	**S**	**21 28 55.7**	**+4.4**
PUZ	**Puketiti**	**9.90**	**197**	*e*P	**P**	**21 27 13.3**	**-0.8**
PUZ	**Puketiti**	**9.90**	**197**	PN	**P**	**21 27 12.8**	**-1.3**
PUZ				SN	**S**	**21 29 04.5**	**+1.9**
MWZ	**Matawai**	**10.35**	**200**	*e*P	**P**	**21 27 20.0**	**+0.1**
MWZ	**Matawai**	**10.35**	**200**	PN	**P**	**21 27 18.5**	**-1.3**
MWZ				SN	**S**	**21 29 14.5**	**+1.5**
URZ	**Urewera**	**10.41**	**202**	P	**P**	**21 27 20.3**	**-0.4**
	1.3nm,0.3s,baz=26,slow=9.7,SNR=17						
URZ				S	**S**	**21 29 17.7**	**+3.3**
	43nm,0.3s,baz=68,slow=22,SNR=15						
URZ	**Urewera**	**10.41**	**202**	*e*P	**P**	**21 27 21.4**	**+0.8**
URZ	**Urewera**	**10.41**	**202**	PN	**P**	**21 27 19.9**	**-0.7**
URZ				SN	**S**	**21 29 15.5**	**+1.1**
KNZ	**Kokohu**	**10.95**	**198**	*e*PN	**P**	**21 27 28.5**	**+1.0**
KNZ				SN	**S**	**21 29 24.0**	**-2.8**
BKZ	**Black Stump Fm**	**11.44**	**202**	*e*P	**P**	**21 27 34.0**	**+0.3**
BKZ	**Black Stump Fm**	**11.44**	**202**	PN	**P**	**21 27 34.0**	**+0.3**
HIZ	**Hauiti**	**11.48**	**209**	P	**P**	**21 27 39.7**	**+5.4**
NGZ	**Ngauruhoe**	**11.76**	**205**	P	**P**	**21 27 40.9**	**+3.2**
NGZ	**Ngauruhoe**	**11.76**	**205**	PN	**P**	**21 27 41.0**	**+3.3**
FWVZ	**Far West T-bar**	**11.84**	**205**	*e*P	**P**	**21 27 41.2**	**+2.4**
FWVZ	**Far West T-bar**	**11.84**	**205**	PN	**P**	**21 27 40.2**	**+1.5**
WNVZ	**Wahianoa**	**11.89**	**205**	P	**P**	**21 27 40.6**	**+1.2**
WNVZ	**Wahianoa**	**11.89**	**205**	PN	**P**	**21 27 41.6**	**+2.3**
PWZ	**Pawanui**	**12.11**	**199**	*e*PN	**P**	**21 27 39.9**	**-2.3**
PWZ				SN	**S**	**21 29 51.2**	**-2.3**
BFZ	**Birch Farm**	**12.90**	**200**	*e*P	**P**	**21 27 50.2**	**-1.8**
BFZ	**Birch Farm**	**12.90**	**200**	PN	**P**	**21 27 50.2**	**-1.8**
BFZ				SN	**S**	**21 30 06.8**	**-4.5**
MRZ	**Mangatainoka R**	**13.09**	**202**	*e*P	**P**	**21 27 53.2**	**-1.2**
MRZ	**Mangatainoka R**	**13.09**	**202**	PN	**P**	**21 27 53.2**	**-1.2**
KIW	**Kapiti Island**	**13.49**	**203**	P	**P**	**21 27 58.2**	**-1.2**
KIW	**Kapiti Island**	**13.49**	**203**	PN	**P**	**21 27 56.7**	**-2.7**
KIW				SN	**S**	**21 30 23.0**	**-1.7**
MTW	**Mount Morrison**	**13.56**	**201**	P	**P**	**21 28 00.9**	**+0.6**
MTW	**Mount Morrison**	**13.56**	**201**	PN	**P**	**21 28 00.9**	**+0.6**
CAW	**Cannon Point**	**13.66**	**203**	*e*PN	**P**	**21 27 58.8**	**-2.7**
PAWZ	**Paruwai Farm**	**13.79**	**201**	SN	**S**	**21 30 28.7**	**-2.7**
DUWZ	**D’Urville Isla**	**13.81**	**206**	SN	**S**	**21 30 32.6**	**+0.9**
MRW	**Makara Radio**	**13.89**	**203**	*e*PN	**P**	**21 28 04.7**	**+0.3**
MRW				SN	**S**	**21 30 30.5**	**-3.1**
SNZO	**South Karori**	**13.96**	**203**	P	**P**	**21 28 06.0**	**+0.7**
TCW	**Tory Channel**	**14.03**	**205**	P	**P**	**21 28 05.6**	**-0.4**
TCW	**Tory Channel**	**14.03**	**205**	PN	**P**	**21 28 05.6**	**-0.4**
TUWZ	**Tuamarina**	**14.34**	**205**	PN	**P**	**21 28 10.7**	**+0.8**
NNZ	**Nelson**	**14.37**	**207**	*e*P	**P**	**21 28 10.2**	**-0.1**
NNZ	**Nelson**	**14.37**	**207**	PN	**P**	**21 28 10.2**	**-0.1**
NNZ				SN	**S**	**21 30 44.4**	**0.0**
CMWZ	**Cape Campbell**	**14.52**	**204**	SN	**S**	**21 30 49.2**	**+1.5**
THZ	**Tophouse**	**15.03**	**207**	*e*P	**P**	**21 28 19.4**	**+1.1**
THZ	**Tophouse**	**15.03**	**207**	PN	**P**	**21 28 19.4**	**+1.1**
THZ				SN	**S**	**21 31 00.7**	**+1.7**
KHZ	**Kahutara**	**15.35**	**204**	*e*P	**P**	**21 28 22.1**	**-0.2**
KHZ	**Kahutara**	**15.35**	**204**	PN	**P**	**21 28 22.1**	**-0.1**
KHZ				SN	**S**	**21 31 04.3**	**-1.9**
DZM	**Mont Dzumac**	**15.45**	**292**	*e*P	**P**	**21 28 25.6**	**+1.9**
DZM	**Mont Dzumac**	**15.45**	**292**	P	**P**	**21 28 25.7**	**+2.1**
	2.3nm,0.3s,baz=103,slow=14,SNR=19						
DZM	**Mont Dzumac**	**15.45**	**292**	*e*P	**P**	**21 28 25.6**	**+1.9**
DSZ	**Denniston Nort**	**15.47**	**210**	PN	**P**	**21 28 23.4**	**-0.4**
DSZ				SN	**S**	**21 31 07.5**	**-1.4**
NOUC	**Port Laguerre**	**15.55**	**291**	*e*P	**P**	**21 28 26.7**	**+1.8**
NOUC	**Port Laguerre**	**15.55**	**291**	*e*P	**P**	**21 28 26.7**	**+1.8**
AFI	**Afiamalu**	**15.77**	**23**	S	**S**	**21 31 00.0**	**-16**
	3.4nm,0.3s,baz=68,slow=23,SNR=3.6						
LTZ	**Lake Taylor**	**16.14**	**206**	*e*P	**P**	**21 28 30.5**	**-1.3**
LTZ	**Lake Taylor**	**16.14**	**206**	PN	**P**	**21 28 30.5**	**-1.3**
LTZ				SN	**S**	**21 31 21.6**	**-2.2**
CRLZ	**Canterbury Las**	**16.69**	**204**	SN	**S**	**21 31 33.5**	**-2.3**
MQZ	**McQueen’s Vall**	**16.79**	**204**	SN	**S**	**21 31 36.3**	**-1.7**
RPZ	**Rata Peaks**	**17.40**	**207**	P	**P**	**21 28 47.3**	**+1.2**
	0.8nm,0.3s,baz=13,slow=5.0,SNR=4.6						
RPZ				S	**S**	**21 31 50.1**	**-0.6**
	10.0nm,0.3s,baz=172,slow=16,SNR=17						
RPZ	**Rata Peaks**	**17.40**	**207**	SN	**S**	**21 31 48.2**	**-2.5**
FOZ	**Fox Glacier**	**17.86**	**210**	P	**P**	**21 28 52.6**	**+1.7**
FOZ	**Fox Glacier**	**17.86**	**210**	PN	**P**	**21 28 52.6**	**+1.7**
FOZ				SN	**S**	**21 31 56.6**	**-3.3**
RAR	**Rarotonga**	**18.15**	**70**	*e*P	**P**	**21 28 53.2**	**-0.8**
RAR				pmax	pmax		
	comp=Z,174nm,1.0s						
RAR	**Rarotonga**	**18.15**	**70**	P	**P**	**21 28 52.6**	**-1.4**
	comp=Z,2.2nm,0.3s,baz=245,slow=6.7,SNR=12						
RAR	**Rarotonga**	**18.15**	**70**	*e*P	**P**	**21 28 53.2**	**-0.8**
	comp=Z,174nm,1.0s						
LBZ	**Lake Benmore**	**18.31**	**208**	*e*PN	**P**	**21 29 00.2**	**+4.7**
JCZ	**Jackson Bay**	**18.67**	**211**	*e*P	**P**	**21 29 00.1**	**+0.9**
JCZ	**Jackson Bay**	**18.67**	**211**	PN	**P**	**21 28 59.1**	**-0.1**
JCZ				SN	**S**	**21 32 17.1**	**+1.4**
ODZ	**Otahua Downs**	**18.68**	**206**	SN	**S**	**21 32 18.8**	**+3.0**
HNR	**Honiara**	**28.13**	**308**	P	**P**	**21 30 26.5**	**-3.1**
HNR				pmax	pmax		
	comp=Z,29nm,0.3s,mb5.4						
HNR	**Honiara**	**28.13**	**308**	P	**P**	**21 30 26.5**	**-3.2**
	comp=Z,29nm,0.3s,mb5.4,baz=195,slow=8.6,SNR=3.8						
CNB	**Canberra Magne**	**28.34**	**248**	⇑*i*P	**P**	**21 30 33.9**	**+2.6**
TOO	**Toolangi**	**31.64**	**244**	*e*P	**P**	**21 31 02.8**	**+2.6**
CTA	**Charters Tower**	**33.50**	**277**	P	**P**	**21 31 16.3**	**-0.1**
	comp=Z,18nm,0.8s,mb4.7,baz=96,slow=10.0,SNR=11						
CTA	**Charters Tower**	**33.50**	**277**	P	**P**	**21 31 16.3**	**-0.1**
CTAO	**Charters Tower**	**33.50**	**277**	*e*P	**P**	**21 31 16.3**	**0.0**
CTAO				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.6						
CTAO	**Charters Tower**	**33.50**	**277**	*e*P	**P**	**21 31 16.3**	**-0.1**
	comp=Z,15nm,0.7s,mb4.6						
STKA	**Stephens Creek**	**34.86**	**254**	*e*P	**P**	**21 31 28.8**	**+1.0**
STKA	**Stephens Creek**	**34.86**	**254**	P	**P**	**21 31 29.7**	**+1.9**
	comp=Z,6.0nm,0.4s,mb4.5,baz=95,slow=10.0,SNR=29						
STKA				PcP	PcP	21 33 57.1	+1.2
	comp=Z,5.4nm,0.8s,baz=92,slow=7.1,SNR=4.0						
ASAR	**Alice Springs**	**43.18**	**265**	P	**P**	**21 32 36.4**	**-0.2**
	comp=Z,28nm,0.7s,mb4.8,baz=95,slow=7.5,SNR=232						
ASAR				PcP	PcP	21 34 22.1	-0.2
	comp=Z,2.7nm,0.6s,baz=123,slow=3.0,SNR=4.0						
ASAR				ScP		21 37 54.0	
	comp=Z,1.8nm,1.0s,baz=118,slow=4.5,SNR=4.2						
ASPA	**Alice Springs**	**43.18**	**265**	*e*P	**P**	**21 32 36.6**	**0.0**
WB2	**Warramunga Arr**	**43.99**	**270**	*e*P	**P**	**21 32 42.9**	**-0.2**
WRAB	**Tennant Creek**	**44.00**	**270**	*e*P	**P**	**21 32 42.4**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,56nm,0.7s,mb5.0						
WRAB	**Tennant Creek**	**44.00**	**270**	*e*P	**P**	**21 32 42.4**	**-0.7**
	comp=Z,56nm,0.7s,mb5.0						
WRA	**Warramunga Arr**	**44.00**	**270**	P	**P**	**21 32 42.7**	**-0.5**
	comp=Z,35nm,0.5s,mb4.9,baz=111,slow=7.3,SNR=400						
WRA				PcP	PcP	21 34 25.5	+0.3
	comp=Z,6.1nm,0.8s,baz=106,slow=3.3,SNR=7.2						
WRA				ScP		21 37 56.8	
	comp=Z,2.2nm,0.9s,baz=106,slow=4.2,SNR=5.4						
KAKA	**Kakadu**	**48.60**	**278**	*e*P	**P**	**21 33 17.6**	**-1.5**
SBA	**Scott Base**	**49.79**	**184**	*e*P	**P**	**21 33 34.7**	**+7.3**
SBA				pmax	pmax		
	comp=Z,34nm,0.6s,mb4.8						
SBA	**Scott Base**	**49.79**	**184**	*e*P	**P**	**21 33 34.7**	**+7.3**
	comp=Z,34nm,0.6s,mb4.8						
VNDA	**Vanda**	**49.84**	**186**	P	**P**	**21 33 34.1**	**+6.3**
	comp=Z,10nm,0.6s,mb4.4,baz=1.6,slow=8.1,SNR=17						
KLBR	**Kellerberrin**	**54.88**	**250**	*e*P	**P**	**21 34 04.5**	**-1.1**
MBWA	**Marble Bar**	**56.38**	**263**	*e*P	**P**	**21 34 15.1**	**-1.2**
	comp=Z,59nm,0.9s,mb5.1						
CASY	**Casey**	**56.67**	**207**	⇑*i*P	**P**	**21 34 19.5**	**+1.7**
QSPA	**South Pole Qui**	**61.47**	**180**	⇑*i*P	**P**	**21 34 55.4**	**+4.9**
	comp=Z,16nm,0.7s,mb4.8						
MIR	**Mirnyy**	**63.67**	**207**	*c* *i*P	**P**	**21 35 06.6**	**+1.5**
MIR				pmax	pmax		
	comp=Z,65nm,1.2s,mb5.1						
MAW	**Mawson**	**73.94**	**200**	P	**P**	**21 36 11.4**	**+3.5**
	comp=Z,25nm,0.7s,mb5.0,baz=124,slow=7.3,SNR=36						
KSM	**Kuching**	**74.64**	**280**	*e*P	**P**	**21 36 12.4**	**-0.7**
MJAR	**Matsushiro Arr**	**76.76**	**325**	P	**P**	**21 36 22.2**	**-2.3**
	comp=Z,13nm,0.8s,mb4.6,baz=161,slow=5.7,SNR=30						
MAJO	**Matsushiro**	**76.76**	**325**	*e*P	**P**	**21 36 22.3**	**-2.2**
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
MAJO	**Matsushiro**	**76.76**	**325**	*e*P	**P**	**21 36 22.3**	**-2.2**
	comp=Z,14nm,0.8s,mb4.6						
MAT	**Matsushiro**	**76.76**	**325**	*e*P	**P**	**21 36 22.0**	**-2.5**
MAT				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.8						
MAT	**Matsushiro**	**76.76**	**325**	*e*P	**P**	**21 36 22.0**	**-2.5**
	comp=Z,21nm,0.9s,mb4.8						
MAT	**Matsushiro**	**76.76**	**325**	P	**P**	**21 36 22.0**	**-2.5**
SYO	**Syowa Base**	**78.82**	**193**	⇓P	**P**	**21 36 35.5**	**+0.5**
SNAA	**Sanae**	**79.92**	**178**	⇑*i*	**P**	**21 36 44.2**	**+3.4**
VNA3	**Neumayer Olymp**	**80.07**	**176**	⇑*i*	**P**	**21 36 45.8**	**+4.2**
VNA2	**Neumayer--Watz**	**80.50**	**177**		**P**	**21 36 48.5**	**+4.5**
VNA1	**Neumayer--Stat**	**80.73**	**177**	⇑*i*	**P**	**21 36 50.0**	**+4.8**
YSS	**Yuzh-Sakhalins**	**83.14**	**334**	*e*P	**P**	**21 36 57.3**	**-0.7**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
IPM	**Ipoh**	**84.23**	**278**	P	**P**	**21 37 04.2**	**0.0**
KULM	**Kulim**	**84.90**	**279**	*e*P	**P**	**21 37 07.7**	**+0.1**
NVAR	**Mina Array Bea**	**86.98**	**43**	P	**P**	**21 37 17.3**	**+0.2**
	comp=Z,0.7nm,0.7s,mb3.5,baz=211,slow=5.9,SNR=3.9						
MDJ	**Mudanjiang**	**87.14**	**326**	P	**P**	**21 37 17.2**	**-0.6**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,30nm,4.0s						
MDJ	**Mudanjiang**	**87.14**	**326**	*e*P	**P**	**21 37 17.6**	**-0.1**
	comp=Z,12nm,1.0s,mb4.6						
WHN	**Wuhan**	**87.24**	**307**	⇓P	**P**	**21 37 19.0**	**+0.4**
CN2	**Changchun**	**88.70**	**323**	*e*P	**P**	**21 37 24.8**	**-0.3**
CN2				*e*AP	pP	21 38 20.1	+1.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
ENH	**Enshi**	**90.56**	**304**	*e*P	**P**	**21 37 34.6**	**+0.5**
	comp=Z,36nm,0.9s,mb5.3						
TXAR	**Lajitas Array**	**91.48**	**57**	P	**P**	**21 37 39.6**	**+1.1**
	comp=Z,0.2nm,0.5s,mb3.3,baz=211,slow=5.3,SNR=2.1						
TXAR				pP	pP	21 38 33.8	+1.5
	comp=Z,0.3nm,0.3s,baz=217,slow=6.3,SNR=2.5						
CMAR	**Chiang Mai Arr**	**92.77**	**289**	P	**P**	**21 37 45.7**	**+1.1**
	comp=Z,2.8nm,0.6s,mb4.5,baz=130,slow=4.1,SNR=12						
KMI	**Kunming**	**92.98**	**297**	P	**P**	**21 37 46.6**	**+1.1**
XAN	**Xi’an**	**93.00**	**307**	P	**P**	**21 37 46.8**	**+1.4**
MCK	**McKinley**	**94.89**	**13**	*e*P	**P**	**21 37 51.8**	**-1.4**
MCK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
MCK	**McKinley**	**94.89**	**13**	*e*P	**P**	**21 37 51.8**	**-1.4**
	comp=Z,4.4nm,0.8s,mb4.6						
WMQ	**Urumqi**	**112.08**	**309**	*e*PDIF	Pdif	21 39 10.9	+0.7
WMQ				PP	PP	21 43 56.4	+0.7
WMQ				PP	PP		
	comp=Z,30nm,5.4s						
MKAR	**Makanchi Array**	**116.59**	**311**	PKP	PKPdf	21 43 13.4	+0.2
	comp=Z,1.1nm,0.6s,baz=95,slow=0.9,SNR=14						
CHKZ	**Chkalovo**	**124.98**	**317**	*e*PKIKP	PKPdf	21 43 28.9	-0.4
ARU	**Arti**	**131.68**	**322**	*e*PKIKP	PKPdf	21 43 42.9	+0.8
ARU	**Arti**	**131.68**	**322**	*e*PKPdf	PKPdf	21 43 42.9	+0.8
KMBO	**Kilima Mbogo**	**135.06**	**235**	PKP	PKPdf	21 43 51.7	+2.2
	comp=Z,1.1nm,0.7s,baz=17,slow=2.1,SNR=5.2						
KMBO	**Kilima Mbogo**	**135.06**	**235**	PKP	PKPdf	21 43 51.7	+2.2
ARCES	**ARCESS Array B**	**136.85**	**348**	PKP	PKPdf	21 43 51.6	+0.4
	comp=Z,2.3nm,0.8s,baz=139,slow=1.1,SNR=8.2						
KAF	**Kangasniemi**	**142.87**	**341**	*e*p	PKPdf	21 43 58.2	-3.8
AFFS	**‘Afif**	**143.01**	**272**	P	PKPdf	21 44 03.7	+0.3
FINES	**FINESS Array B**	**143.47**	**341**	PKhKP		21 44 00.4	
	comp=Z,2.6nm,0.7s,baz=46,slow=4.4,SNR=10						
ONI	**Oni**	**143.86**	**304**	P	PKPbc	21 44 04.6	+0.9
KIV	**Kislovodsk**	**144.16**	**306**	*e*PKHKP		21 44 03.0	
KIV				pmax	pmax		
	comp=N,7.0nm,1.0s						
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				pmax	pmax		
	comp=E,6.0nm,0.8s						
KIV	**Kislovodsk**	**144.16**	**306**	*e*PKPdf	PKPdf	21 44 05.0	0.0
VRSR	**Storozhevoye**	**144.16**	**319**	*e*PKIKP	PKPdf	21 44 04.1	-0.6
VRSR				pmax	pmax		
	comp=N,10.0nm,1.1s						
VRSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VRSR				pmax	pmax		
	comp=E,7.0nm,0.7s						
TVAN	**Van**	**144.33**	**297**	*i* P	PKPbc	21 44 05.4	+0.3
MSL	**Mosul**	**144.65**	**293**	*e*PKP	PKPdf	21 44 07.0	+1.0
HILS	**Ha’il**	**144.90**	**278**	P	PKPdf	21 44 09.7	+3.0
ERZM	**Erzurum**	**145.78**	**300**	*i* P	PKPdf	21 44 10.9	+3.1
BEST	**Besiri**	**146.05**	**296**	*i* P	PKPdf	21 44 11.2	+2.9
KBRS	**Khaybar**	**146.77**	**274**	P	PKPdf	21 44 15.6	+5.7
NB2	**NORSAR Subarra**	**147.00**	**352**	PKPabc	PKPdf	21 44 11.4	+2.2
	comp=E,22nm,1.2s,baz=11,slow=2.9						
NOA	**NORSAR Array B**	**147.00**	**352**	PKIKP	PKPdf	21 44 11.7	+2.5
NOA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NOA	**NORSAR Array B**	**147.00**	**352**	PKPbc		21 44 11.7	
	comp=Z,4.4nm,0.7s,baz=15,slow=4.5,SNR=12						
ANN	**Anapa**	**147.60**	**310**	*e*PKP2	PKPab	21 44 14.5	-4.2
ANN				pmax	pmax		
	comp=Z,60nm,1.0s						
ELZG	**Elazig**	**147.78**	**298**	*i* P	PKPdf	21 44 16.6	+5.4
MALT	**Malatya**	**148.24**	**297**	*e*PKP2	PKPab	21 44 17.5	-4.0
UMJS	**Umm Lajj**	**148.35**	**272**	P	PKPdf	21 44 19.3	+6.9
GZT	**Gaziantep**	**149.02**	**296**	*i* P	PKPdf	21 44 19.0	+5.8
QURS	**Qurayyt al Mil**	**149.31**	**284**	P	PKPdf	21 44 22.0	+8.1
KAHT	**Ahir Dag**	**149.54**	**296**	*i* P	PKPdf	21 44 20.5	+6.5
TBKS	**Tabuk**	**149.62**	**278**	P	PKPdf	21 44 22.2	+7.7
AKASG	**Malin Array Be**	**149.85**	**325**	PKP2	PKPab	21 44 19.7	-8.0
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**149.85**	**325**	PKPbc	PKPdf	21 44 19.7	+5.7
	comp=Z,9.4nm,0.6s,baz=45,slow=3.3,SNR=41						
AKASG				pPKPbc		21 45 16.8	
	comp=Z,3.3nm,0.7s,baz=44,slow=3.2,SNR=2.9						
COBT	**Iskenderun**	**150.15**	**294**	*i* P	PKPdf	21 44 21.7	+6.7
JMQS	**Jabal Moqyreh**	**150.30**	**279**	P	PKPdf	21 44 23.9	+8.4
BOYT	**Boyabat**	**150.33**	**304**	*i* P	PKPdf	21 44 21.4	+6.3
AYUS	**‘Aynunah**	**150.73**	**277**	P	PKPdf	21 44 24.3	+8.2
BHL	**Bhannes**	**150.79**	**289**	*e*P	PKPdf	21 44 24.3	+8.3
AVNT	**Avonos**	**150.94**	**299**	*i* P	PKPdf	21 44 22.6	+6.5
JMOS	**Jabal al Moall**	**151.00**	**279**	P	PKPdf	21 44 25.2	+8.7
ALWS	**Ilw as Safayha**	**151.06**	**279**	P	PKPdf	21 44 25.4	+8.8
HAQS	**Haql**	**151.15**	**279**	P	PKPdf	21 44 25.4	+8.7
EIL	**Elat**	**151.20**	**280**	*e*PKPbc	PKPdf	21 44 25.4	+8.6
BRTR	**Keskin Array B**	**151.67**	**301**	PKIKP	PKPdf	21 44 25.0	+7.8
BRTR						21 45 22.0	
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	**Keskin Array B**	**151.67**	**301**	PKPbc	PKPdf	21 44 25.0	+7.8
	comp=Z,5.0nm,0.7s,baz=148,slow=4.4,SNR=24						
BRTR				pPKPbc		21 45 22.0	
	comp=Z,2.0nm,0.8s,baz=90,slow=1.2,SNR=2.4						
MEST	**Erdemli**	**151.83**	**295**	*i* P	PKPdf	21 44 25.4	+7.9
OKC	**Ostrava-Krasne**	**155.48**	**334**	*e*PKPAB	PKPab	21 44 48.8	-2.6
UPC	**Upice**	**155.69**	**338**	*e*PKPAB	PKPab	21 44 50.7	-1.6
DPC	**Dobruska-Polom**	**155.72**	**337**	*e*PKPAB	PKPab	21 44 51.4	-1.0
CLL	**Collm**	**155.87**	**343**	*e*PKIKP	PKPdf	21 44 33.0	+10
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	**Collm**	**155.87**	**343**	P	PKPdf	21 44 33.0	+10
	comp=Z,logA/T=0.7						
CLL	**Collm**	**155.87**	**343**	*e*	PKPdf	21 44 33.0	+10
CLL				*e*PKP2	PKPab	21 44 51.0	-2.0
BRG	**Berggiesshubel**	**156.01**	**341**	*e*PKP2	PKPab	21 44 53.0	-0.6
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VYHS	**Vyhne**	**156.27**	**331**	*e*PKP	PKPab	21 44 53.4	-1.4
PRU	**Pruhonice**	**156.61**	**339**	*e*PKPAB	PKPab	21 44 55.4	-0.8
NKC	**Novy Kostel**	**157.00**	**343**	*e*PKPAB	PKPab	21 44 55.9	-2.0
KHC	**Kasperske Hory**	**157.67**	**340**	*e*PKPAB	PKPab	21 44 59.0	-1.8
GERES	**GERESS Array B**	**157.88**	**339**	PKP2	PKPab	21 44 59.7	-2.0
GERES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GERES	**GERESS Array B**	**157.88**	**339**	PKPab	PKPab	21 44 59.7	-2.0
	comp=Z,1.7nm,1.0s,baz=45,slow=3.8,SNR=8.7						

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*IDC **08** 21:33:11.0±1.6, 12.75N×92.95E, mb3.6/4, mb1 3.8/5, mb1mx3.5/21, mbtmp3.6/5, ML3.9/1, Error ellipse:*

s-maj=57.0km s-min=23.8km az=59.0

ISC 08 21:33:14.9±1.2**,12.9N**±0.1×**93.3E**±0.1**,h33^{km},n6,**σ**0^{s}71**/7**,**
mb3.6/4**,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.71**	**44**	Pn	**Pn**	**21 35 09.3**	**+1.5**
	0.5nm,0.3s,baz=237,slow=15,SNR=16						
CMAR				Sn	**Sn**	**21 36 34.1**	**-0.8**
	0.1nm,0.3s,baz=201,slow=28,SNR=3.3						
KGM	**Kluang**	**14.68**	**137**	P	**P**	**21 36 48.2**	**+6.0**
MKAR	**Makanchi Array**	**35.01**	**347**	P	**P**	**21 40 06.1**	**-0.3**
	0.4nm,0.7s,mb3.5,baz=159,slow=10,SNR=5.1						
WRA	**Warramunga Arr**	**51.92**	**128**	P	**P**	**21 42 23.0**	**0.0**
	0.3nm,0.7s,mb3.4,baz=306,slow=8.4,SNR=4.8						
ASAR	**Alice Springs**	**53.83**	**132**	P	**P**	**21 42 36.9**	**-0.3**
	0.2nm,0.4s,mb3.4,baz=313,slow=7.1,SNR=4.6						
ARCES	**ARCESS Array B**	**70.27**	**340**	P	**P**	**21 44 26.4**	**-0.1**
	2.7nm,0.9s,mb4.2,baz=100,slow=5.5,SNR=4.3						

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*BJI **08** 21:34:05.6,51.70N×130.90W,h10^{km},mB4.7,mb4.3,*
Ms4.2,Msz4.0
*PGC **08** 21:34:06.6,51.64N×130.96W,h20^{km},Mw4.5,South of*
Moresby Island, British Columbia
*NEIC **08** 21:34:09.6±0.6,51.69N×130.90W,h10^{km},mb4.1/14,*
MW4.5(PGC),Error ellipse: s-maj=10.4km s-min=5.0km
az=66.0
*IDC **08** 21:34:09.7±1.1,51.56N×130.73W,mb3.9/4,mb1 4.1/10,*
mb1mx3.9/26,mbtmp3.8/10,ML3.9/3,MS3.6/20,Ms1 3.6/20,
ms1mx3.4/36,Error ellipse: s-maj=15.7km s-min=11.1km
az=68.0

ISC 08 21:34:07.9±0.4**,51.65N**±0.03×**131.02W**±0.07**,h20^{km},**
n122,σ**1^{s}38**/144**,mb4.0**/8**,MS3.6**/9**,2C-2D,Queen**
Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNB	**Barry Inlet**	**1.03**	**334**	P	**Pb**	**21 34 26.2**	**-0.8**
BNB				S	**Sb**	**21 34 40.5**	**+0.4**
BNB				Trac		21 34 41.6	
	comp=Z,29µm,0.2s						
BNB	**Barry Inlet**	**1.03**	**334**	P	**Pb**	**21 34 26.2**	**-0.8**
BNB				S	**Sb**	**21 34 40.5**	**+0.4**
BNB				Trac		21 34 41.6	
	comp=Z,29µm,0.2s						
MOBC	**Moresby Island**	**1.64**	**341**	P	**Pn**	**21 34 34.8**	**-1.4**
MOBC				S	**Sn**	**21 34 55.6**	**-1.3**
MOBC				Trac		21 34 55.8	
	comp=Z,382nm,0.3s						
MOBC	**Moresby Island**	**1.64**	**341**	P	**Pn**	**21 34 34.8**	**-1.4**
MOBC				S	**Sn**	**21 34 55.6**	**-1.3**
MOBC				Trac		21 34 55.8	
	comp=Z,382nm,0.3s						
VIB	**Van Inlet**	**1.86**	**331**	P	**Pn**	**21 34 37.3**	**-1.9**
VIB				S	**Sn**	**21 34 59.5**	**-2.8**
VIB				Trac		21 34 59.6	
	comp=Z,301nm,0.3s						
VIB	**Van Inlet**	**1.86**	**331**	P	**Pn**	**21 34 37.3**	**-1.9**
VIB				S	**Sn**	**21 34 59.5**	**-2.8**
VIB				Trac		21 34 59.6	
	comp=Z,301nm,0.3s						
BBB	**Bella Bella**	**1.88**	**72**	Pn	**Pn**	**21 34 39.5**	**0.0**
	4.5nm,0.3s,baz=258,slow=14,SNR=23						
BBB				Sn	**Sn**	**21 35 04.7**	**+1.9**
	62nm,0.3s,baz=8.7,slow=19,SNR=14						
BBB	**Bella Bella**	**1.88**	**72**	Pg	**Pn**	**21 34 39.9**	**+0.4**
BBB				Sg	**Sn**	**21 35 04.1**	**+1.3**
BBB				Trac		21 35 15.8	
	comp=Z,144nm,0.2s						
BBB	**Bella Bella**	**1.88**	**72**	Pg	**Pn**	**21 34 39.9**	**+0.4**
BBB				Sg	**Sn**	**21 35 04.1**	**+1.3**
BBB				Trac		21 35 15.8	
	comp=Z,144nm,0.2s						
HOLB	**Holberg**	**2.08**	**118**	⇑P	**Pn**	**21 34 39.9**	**-2.4**
HOLB				S	**Sn**	**21 35 04.6**	**-3.3**
HOLB				Trac		21 35 06.3	
	comp=Z,315nm,0.5s						
HOLB	**Holberg**	**2.08**	**118**	⇑P	**Pn**	**21 34 39.9**	**-2.4**
HOLB				S	**Sn**	**21 35 04.6**	**-3.3**
HOLB				Trac		21 35 06.3	
	comp=Z,315nm,0.5s						
PHC	**Port Hardy**	**2.45**	**111**	P	**Pn**	**21 34 44.2**	**-3.4**
PHC				S	**Sn**	**21 35 13.1**	**-4.2**
PHC				Trac		21 35 16.0	
	comp=Z,44nm,0.2s						
PHC	**Port Hardy**	**2.45**	**111**	P	**Pn**	**21 34 44.2**	**-3.4**
PHC				S	**Sn**	**21 35 13.1**	**-4.2**
PHC				Trac		21 35 16.0	
	comp=Z,44nm,0.2s						
BPBC	**Brooks Peninsu**	**2.54**	**125**	P	**Pn**	**21 34 45.3**	**-3.6**
BPBC				Sg	**Sn**	**21 35 21.1**	**+1.5**
BPBC				Trac		21 35 22.0	
	comp=Z,227nm,0.3s						
BPBC	**Brooks Peninsu**	**2.54**	**125**	P	**Pn**	**21 34 45.3**	**-3.6**
BPBC				Sg	**Sn**	**21 35 21.1**	**+1.5**
BPBC				Trac		21 35 22.0	
	comp=Z,227nm,0.3s						
NDB	**Naden**	**2.59**	**334**	P	**Pn**	**21 34 48.1**	**-1.5**
NDB				Trac		21 35 23.0	
	comp=Z,93nm,0.2s						
NDB	**Naden**	**2.59**	**334**	P	**Pn**	**21 34 48.1**	**-1.5**
NDB				Trac		21 35 23.0	
	comp=Z,93nm,0.2s						
RUBB	**Prince Rupert**	**2.73**	**9**	⇓P	**Pn**	**21 34 52.5**	**+0.9**
RUBB				Trac		21 36 00.2	
	comp=Z,902nm,0.8s						
RUBB	**Prince Rupert**	**2.73**	**9**	⇓P	**Pn**	**21 34 52.5**	**+0.9**
RUBB				Trac		21 36 00.2	
	comp=Z,902nm,0.8s						
MAYB	**Maynard**	**2.73**	**116**	P	**Pn**	**21 34 48.6**	**-3.1**
MAYB	**Maynard**	**2.73**	**116**	P	**Pn**	**21 34 48.6**	**-3.1**
EDB	**Eliza Dome**	**3.05**	**124**	P	**Pn**	**21 34 52.2**	**-3.9**
EDB				S	**Sn**	**21 35 33.6**	**+1.2**
EDB				Trac		21 35 36.1	
	comp=Z,121nm,0.6s						
EDB	**Eliza Dome**	**3.05**	**124**	P	**Pn**	**21 34 52.2**	**-3.9**
EDB				S	**Sn**	**21 35 33.6**	**+1.2**
EDB				Trac		21 35 36.1	
	comp=Z,121nm,0.6s						
WOSB	**Woss**	**3.19**	**116**	P	**Pn**	**21 34 55.8**	**-2.3**
WOSB				S	**Sn**	**21 35 34.7**	**-1.2**
WOSB				Trac		21 35 37.8	
	comp=Z,85nm,0.3s						
WOSB	**Woss**	**3.19**	**116**	P	**Pn**	**21 34 55.8**	**-2.3**
WOSB				S	**Sn**	**21 35 34.7**	**-1.2**
WOSB				Trac		21 35 37.8	
	comp=Z,85nm,0.3s						
NCRB	**Newcastle Ridg**	**3.37**	**110**	P	**Pn**	**21 34 59.5**	**-1.2**
NCRB	**Newcastle Ridg**	**3.37**	**110**	P	**Pn**	**21 34 59.5**	**-1.2**
ETB	**Estevan Point**	**3.65**	**127**	P	**Pn**	**21 35 01.8**	**-3.0**
ETB	**Estevan Point**	**3.65**	**127**	P	**Pn**	**21 35 01.8**	**-3.0**
GDR	**Gold River**	**3.68**	**119**	P	**Pn**	**21 35 02.1**	**-3.0**
GDR				S	**Sn**	**21 35 48.1**	**-0.3**
GDR				Trac		21 35 50.6	
	comp=Z,84nm,0.6s						
GDR	**Gold River**	**3.68**	**119**	P	**Pn**	**21 35 02.1**	**-3.0**
GDR				S	**Sn**	**21 35 48.1**	**-0.3**
GDR				Trac		21 35 50.6	
	comp=Z,84nm,0.6s						
CBB	**Campbell River**	**3.93**	**112**	P	**Pn**	**21 35 07.4**	**-1.3**
CBB				S	**Sn**	**21 35 51.7**	**-3.1**
CBB				Trac		21 35 54.5	
	comp=Z,56nm,0.7s						
CBB	**Campbell River**	**3.93**	**112**	P	**Pn**	**21 35 07.4**	**-1.3**
CBB				S	**Sn**	**21 35 51.7**	**-3.1**
CBB				Trac		21 35 54.5	
	comp=Z,56nm,0.7s						
BTB	**Buttle Lake**	**4.13**	**120**	P	**Pn**	**21 35 08.7**	**-2.9**
BTB				Trac		21 36 12.1	
	comp=Z,64nm,0.5s						
BTB	**Buttle Lake**	**4.13**	**120**	P	**Pn**	**21 35 08.7**	**-2.9**
BTB				Trac		21 36 12.1	
	comp=Z,64nm,0.5s						
OZB	**Mount Ozzard**	**4.45**	**125**	P	**Pn**	**21 35 12.5**	**-3.5**
OZB				Pg	**Pn**	**21 35 21.1**	**+5.0**
OZB	**Mount Ozzard**	**4.45**	**125**	P	**Pn**	**21 35 12.5**	**-3.5**
OZB				Pg	**Pn**	**21 35 21.1**	**+5.0**
ALB	**Alberni**	**4.61**	**119**	Pg	**Pn**	**21 35 23.4**	**+5.0**
ALB	**Alberni**	**4.61**	**119**	Pg	**Pn**	**21 35 23.4**	**+5.0**
TXB	**Texada**	**4.62**	**112**	P	**Pn**	**21 35 16.7**	**-1.8**
TXB	**Texada**	**4.62**	**112**	P	**Pn**	**21 35 16.7**	**-1.8**
MGB	**Mount Grey**	**4.84**	**121**	P	**Pn**	**21 35 21.4**	**-0.3**
MGB	**Mount Grey**	**4.84**	**121**	P	**Pn**	**21 35 21.4**	**-0.3**
SHB	**Sechelt**	**4.99**	**111**	P	**Pn**	**21 35 23.1**	**-0.6**
SHB	**Sechelt**	**4.99**	**111**	P	**Pn**	**21 35 23.1**	**-0.6**
PFB	**Port Renfrew**	**5.23**	**123**	P	**Pn**	**21 35 24.7**	**-2.5**
PFB				Pg	**Pn**	**21 35 34.7**	**+7.5**
PFB	**Port Renfrew**	**5.23**	**123**	P	**Pn**	**21 35 24.7**	**-2.5**
PFB				Pg	**Pn**	**21 35 34.7**	**+7.5**
WSLR	**Whistler**	**5.35**	**103**	P	**Pn**	**21 35 28.4**	**-0.4**
WSLR	**Whistler**	**5.35**	**103**	P	**Pn**	**21 35 28.4**	**-0.4**
BIB	**Bowen Island**	**5.41**	**111**	P	**Pn**	**21 35 24.4**	**-5.2**
BIB	**Bowen Island**	**5.41**	**111**	P	**Pn**	**21 35 24.4**	**-5.2**
GOBB	**Galiano Island**	**5.52**	**116**	P	**Pn**	**21 35 32.6**	**+1.5**
GOBB	**Galiano Island**	**5.52**	**116**	P	**Pn**	**21 35 32.6**	**+1.5**
LZB	**Mount Lazard**	**5.54**	**120**	P	**Pn**	**21 35 31.3**	**-0.1**
LZB				Trac		21 36 53.4	
	comp=Z,7.0nm,0.8s						
LZB	**Mount Lazard**	**5.54**	**120**	P	**Pn**	**21 35 31.3**	**-0.1**
LZB				Trac		21 36 53.4	
	comp=Z,7.0nm,0.8s						
PGC	**Sidney**	**5.71**	**119**	Pg	**Pn**	**21 35 40.8**	**+6.9**
PGC	**Sidney**	**5.71**	**119**	Pg	**Pn**	**21 35 40.8**	**+6.9**
LLLB	**Lillooet**	**5.85**	**97**	P	**Pn**	**21 35 36.0**	**+0.2**
LLLB	**Lillooet**	**5.85**	**97**	P	**Pn**	**21 35 36.0**	**+0.2**
OCWA	**Octopus Mounta**	**5.91**	**129**	*e*P	**Pn**	**21 35 34.7**	**-2.0**
DLBC	**Dease Lake**	**6.83**	**4**	Pn	**Pn**	**21 35 51.7**	**+2.0**
	1.4nm,0.3s,baz=179,slow=15,SNR=11						
DLBC				Sn	**Sn**	**21 37 11.3**	**+3.7**
	0.4nm,0.3s,baz=262,slow=23,SNR=2.2						
DLBC				Lg		21 37 46.1	
	0.1nm,0.3s,baz=301,slow=27,SNR=7.0						
DLBC				LR	LR	21 38 31.2	
	comp=Z,400nm,18.1s,baz=181,slow=38						
BMBC	**Bull Mountain**	**6.86**	**47**	P	**Pn**	**21 35 51.5**	**+1.4**
BMBC				Sg	Sn	21 37 51.0	+43
BMBC				Trac		21 37 59.4	
	comp=Z,56nm,0.8s						
BMBC	**Bull Mountain**	**6.86**	**47**	P	**Pn**	**21 35 51.5**	**+1.4**
BMBC				Sg	Sn	21 37 51.0	+43
BMBC				Trac		21 37 59.4	
	comp=Z,56nm,0.8s						
FMW	**Mount Fremont**	**7.72**	**124**	P	**Pn**	**21 36 01.6**	**-0.5**
LON	**Longmire**	**7.77**	**126**	P	**Pn**	**21 36 01.6**	**-1.2**
ERK	**Elk Rock**	**7.82**	**130**	P	**Pn**	**21 36 02.3**	**-1.2**
TDL	**Tradedollar La**	**7.84**	**129**	P	**Pn**	**21 36 02.8**	**-1.1**
WPW	**White Pass**	**7.94**	**125**	P	**Pn**	**21 36 04.5**	**-0.6**
TBM	**Table Mountain**	**8.14**	**119**	P	**P**	**21 36 06.8**	**-1.2**
NEW	**Newport**	**9.57**	**105**	Sn	**Sn**	**21 38 11.6**	**-4.2**
	0.4nm,0.3s,baz=126,slow=6.5,SNR=6.5						
NEW				LR	LR	21 39 60.0	
	comp=Z,401nm,18.5s,baz=288,slow=37						
HUMO	**Hull Mountain**	**10.57**	**146**	*e*P	**P**	**21 36 42.0**	**+0.6**
BMO	**Blue Mountains**	**11.38**	**121**	*e*P	**P**	**21 36 51.2**	**-1.2**
YBH	**Yreka Blue Hor**	**11.43**	**147**	Pn	**P**	**21 36 53.9**	**+0.8**
	0.1nm,0.3s,baz=344,slow=11,SNR=5.1						
YBH				LR	LR	21 40 33.3	
	comp=Z,315nm,18.1s,baz=324,slow=34						
YBH	**Yreka Blue Hor**	**11.43**	**147**	*e*P	**P**	**21 36 54.1**	**+0.9**
KHMM	**Horse Mountain**	**11.89**	**152**	*e*P	**P**	**21 36 59.8**	**+0.4**
MOD	**Modoc**	**12.19**	**139**	*e*P	**P**	**21 37 03.0**	**-0.4**
WVOR	**Wild Horse Val**	**12.48**	**133**	*e*P	**P**	**21 37 06.6**	**-0.7**
WDC	**Whiskeytown Da**	**12.52**	**149**	*e*P	**P**	**21 37 08.1**	**+0.3**
HLID	**Hailey**	**13.79**	**119**	*e*P	**P**	**21 37 24.5**	**-0.1**
	4.7nm,1.0s						
MCMT	**McKenzie Canyo**	**13.88**	**112**	*e*P	**P**	**21 37 26.3**	**+0.6**
YKA	**Yellowknife Ar**	**14.01**	**33**	Pn	**P**	**21 37 27.1**	**-0.2**
	baz=220,slow=12,SNR=9.8						
YKA				LR	LR	21 43 06.1	
	comp=Z,225nm,21.8s,baz=220,slow=38						
QLMT	**Earthquake Lak**	**14.70**	**110**	*e*P	**P**	**21 37 37.7**	**+1.2**
BMN	**Battle Mountai**	**14.72**	**134**	P	**P**	**21 37 38.0**	**+1.3**
	16nm,1.0s						
YMR	**Madison River**	**15.07**	**110**	*e*P	**P**	**21 37 42.6**	**+1.3**
ELK	**Elko**	**15.40**	**129**	Pn	**P**	**21 37 45.4**	**-0.2**
	0.0nm,0.3s,baz=310,slow=12,SNR=3.9						
ELK				LR	LR	21 43 49.1	
	comp=Z,161nm,20.2s,baz=321,slow=38						
ELK	**Elko**	**15.40**	**129**	*e*P	**P**	**21 37 45.4**	**-0.2**
	5.6nm,0.9s						
ILAR	**Eielson Array**	**15.52**	**334**	Pn	**P**	**21 37 53.8**	**+6.8**
	0.1nm,0.3s,baz=150,slow=10,SNR=22						
ILAR				LR	LR	21 43 27.9	
	comp=Z,217nm,18.9s,baz=299,slow=36						
IMW	**Indian Meadow**	**15.53**	**112**	*e*P	**P**	**21 37 48.5**	**+1.2**
	14nm,1.0s						
CMB	**Columbia Colle**	**15.54**	**147**	P	**P**	**21 37 49.9**	**+2.5**
MOOW	**Moose Ponds**	**15.73**	**112**	P	**P**	**21 37 50.6**	**+0.7**
	8.2nm,0.8s						
TPAW	**Teton Pass**	**15.77**	**113**	*e*P	**P**	**21 37 52.8**	**+2.3**
	25nm,0.9s						
WUWY	**Wally Ulrich**	**15.86**	**113**	*e*P	**P**	**21 37 53.3**	**+1.7**
COLA	**College**	**15.86**	**333**	P	**P**	**21 37 51.4**	**-0.1**
NVAR	**Mina Array Bea**	**15.95**	**141**	Pn	**P**	**21 37 54.3**	**+1.6**
	0.0nm,0.3s,baz=321,slow=11,SNR=6.5						
NVAR				LR	LR	21 43 28.9	
	comp=Z,169nm,20.3s,baz=335,slow=36						
NVAR	**Mina Array Bea**	**15.95**	**141**	Pn	**P**	**21 37 54.3**	**+1.6**
NVAR				LR	LR	21 43 28.9	
MNV	**Mina**	**16.00**	**141**	*e*P	**P**	**21 37 54.8**	**+1.4**
	22nm,1.5s						
HWUT	**Hardware Ranch**	**16.66**	**119**	*e*P	**P**	**21 38 02.1**	**+0.3**
	3.0nm,1.1s						
BW06	**Boulder Array**	**17.02**	**113**	*e*P	**P**	**21 38 07.9**	**+1.7**
	14nm,1.2s						
PDAR	**Pinedale Array**	**17.02**	**113**	Pn	**P**	**21 38 08.0**	**+1.7**
	baz=63,slow=34,SNR=11						
FFC	**Flin Flon**	**17.62**	**69**	*e*P	**P**	**21 38 14.2**	**+0.6**
	7.0nm,1.0s						
IMA	**Indian Mountai**	**18.44**	**330**	*e*P	**P**	**21 38 24.5**	**+0.7**
	217nm,1.8s						
MSU	**Marysvale**	**18.62**	**127**	*e*P	**P**	**21 38 27.7**	**+1.5**
WUAZ	**Wupatki**	**21.40**	**131**	*e*P	**P**	**21 38 56.2**	**-0.2**
	23nm,1.1s,mb4.4						
SDCO	**Great Sand Dun**	**22.70**	**118**	*e*P	**P**	**21 39 10.4**	**+1.0**
	7.9nm,1.2s,mb4.0						
ANMO	**Albuquerque**	**24.28**	**124**	P	**P**	**21 39 26.9**	**+2.2**
	2.4nm,0.6s,mb3.8,baz=329,slow=11,SNR=6.6						
ANMO				LR	LR	21 49 16.6	
	comp=Z,96nm,19.2s,MS3.3,baz=83,slow=38						
ANMO	**Albuquerque**	**24.28**	**124**	*e*P	**P**	**21 39 25.9**	**+1.1**
	3.6nm,0.9s,mb3.8						
LAZ	**Ladron**	**24.36**	**126**	*e*P	**P**	**21 39 27.1**	**+1.6**
BNM	**Barren Site**	**24.82**	**125**	*e*P	**P**	**21 39 31.0**	**+1.0**
EYMN	**Ely**	**25.56**	**83**	*e*P	**P**	**21 39 36.2**	**-0.6**
	35nm,1.1s,mb4.8						
WMOK	**Wichita Mounta**	**28.63**	**114**	*e*P	**P**	**21 40 05.2**	**+0.2**
	2.3nm,0.9s,mb3.9						
WMOK				*e*	pP	21 40 10.9	0.0
TXAR	**Lajitas Array**	**30.18**	**127**	P	**P**	**21 40 19.6**	**+0.7**
	0.4nm,0.4s,mb3.5,baz=315,slow=8.8,SNR=4.2						
TXAR				LR	LR	21 52 23.8	
	comp=Z,81nm,20.9s,MS3.4,slow=36						
JMIC	**Jan Mayen**	**51.01**	**21**	LR	LR	22 06 52.3	
	comp=Z,31nm,19.0s,MS3.4,baz=321,slow=38						
MDJ	**Mudanjiang**	**61.65**	**307**	P	**P**	**21 44 25.2**	**-1.1**
MDJ				AMB	AMB		
	comp=Z,50nm,4.3s						
CN2	**Changchun**	**64.28**	**309**	*e*P	**P**	**21 44 44.2**	**+0.5**
HFS	**Hagfors**	**65.00**	**19**	LR	LR	22 12 28.5	
	comp=Z,61nm,19.6s,MS3.8,baz=188,slow=35						
ROSC	**El Rosal**	**66.00**	**114**	LR	LR	22 14 58.7	
	comp=Z,28nm,19.9s,MS3.5,baz=21,slow=37						
SONM	**Songino Array**	**69.40**	**323**	LR	LR	22 16 13.0	
	comp=Z,65nm,20.9s,MS3.9,baz=251,slow=36						
GERES	**GERESS Array B**	**75.45**	**23**	LR	LR	22 20 08.3	
	comp=Z,29nm,18.8s,MS3.6,baz=176,slow=37						
RAR	**Rarotonga**	**76.80**	**207**	LR	LR	22 11 14.1	
	comp=Z,113nm,19.3s,MS4.2,baz=61,slow=29						
MKAR	**Makanchi Array**	**77.85**	**337**	P	**P**	**21 46 11.2**	**+6.1**
	comp=Z,0.5nm,0.7s,mb3.6,baz=29,slow=4.9,SNR=4.7						
MKAR				LR	LR	22 25 38.2	
	comp=Z,34nm,18.5s,MS3.7,baz=274,slow=40						
WMQ	**Urumqi**	**79.18**	**333**	*e*P	**P**	**21 46 15.1**	**+2.7**
WMQ				AP	pP	21 46 19.7	+0.9
WMQ				XP	sP	21 46 22.1	+1.2
LPAZ	**La Paz**	**86.86**	**121**	P	**P**	**21 46 56.0**	**+3.7**
	comp=Z,0.9nm,0.8s,mb4.0,baz=351,slow=5.2,SNR=5.6						

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*PRU **08** 21:38:10.5,50.15N×19.13E*
*NEIC **08** 21:38:10.1±0.8,50.00N×19.20E,h5^{km},MG2.5(WAR),*
Error ellipse: s-maj=12.1km s-min=7.3km az=163.0

WAR 08 21:38:10.4,50.10N×19.17E,h0^{km},ML2.4,Mining
Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.42**	**74**	*e*Pg	Pg	21 38 18.6	-0.2
OJC				*e*Sg	Sg	21 38 24.8	+0.4
RAC	**Raciborz**	**0.63**	**268**	*e*PG	Pg	21 38 23.0	0.0
RAC				*e*SG	Sg	21 38 32.0	+0.6
OKC	**Ostrava-Krasne**	**0.71**	**248**	*e*PG	Pg	21 38 23.8	-0.8
OKC				*e*SG	Sg	21 38 33.7	-0.4
	22nm,0.3s						
NIE	**Niedzica**	**1.01**	**132**	*e*PG	Pg	21 38 30.0	-0.6
NIE				*e*SG	Sg	21 38 45.0	+1.0
LIKS	**Likavka**	**1.06**	**182**	*e*SG	Sg	21 38 45.1	-0.5
MORC	**Moravsky Berou**	**1.10**	**253**	*e*P	Pb	21 38 30.5	-1.5
KOLL	**Kolacno**	**1.61**	**199**	*e*SG	Sg	21 39 00.8	-3.1
VYHS	**Vyhne**	**1.63**	**188**	*e*PG	Pg	21 38 39.5	-3.4
VYHS				*i* SG	Sg	21 39 01.0	-3.5
DPC	**Dobruska-Polom**	**1.85**	**279**	*e*PG	Pg	21 38 42.1	-5.2
DPC				*e*SG	Sg	21 39 06.4	-5.5
	12nm,0.2s						
KSP	**Ksiaz**	**1.98**	**293**	*e*PG	Pg	21 38 47.0	-3.0
KSP				*e*SG	Sg	21 39 12.0	-4.4
UPC	**Upice**	**2.06**	**282**	*e*SG	Sg	21 39 13.2	-6.0
KOLS	**Kolonicke sedl**	**2.34**	**119**	*e*PN	Pn	21 38 52.8	+2.2
ZST	**Bratislava**	**2.34**	**216**	*e*SN	Sn	21 39 19.2	-1.3
PRU	**Pruhonice**	**2.99**	**270**	*e*SG	Sg	21 39 42.2	-7.6
KHC	**Kasperske Hory**	**3.77**	**257**	*e*PN	Pn	21 39 08.5	-2.4
KHC				*e*x	x	21 39 43.5	
KHC				*e*SG	Sg	21 40 07.9	-7.8
MOA	**Molln**	**3.94**	**237**	*i* SG	Sg	21 40 15.0	-6.6
	3.3nm,0.6s						
MOA	**Molln**	**3.94**	**237**	*i* P	Pn	21 39 14.2	+0.8
MOA				*i* Sg	Sg	21 40 15.0	-6.6
CLL	**Collm**	**4.10**	**289**	*e*SG	Sg	21 40 20.0	-7.0
CLL	**Collm**	**4.10**	**289**	*e*SG	Sg	21 40 20.0	-7.0

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*LDG **08** 21:41:15.9±0.2,51.68N×7.05E,h1^{km},Ml2.8/5,Error*
ellipse: s-maj=3.5km s-min=2.2km az=34.0,Suspected
Mining induced.
*BNS **08** 21:41:15.9±0.8,51.68N×7.06E,h1^{km},ML2.2*
*NEIC **08** 21:41:15.2±0.6,51.65N×7.05E,h10^{km},ML2.8(LDG),*
ML2.2(SZGRF),Error ellipse: s-maj=7.6km s-min=6.2km
az=138.0
*CSEM **08** 21:41:16.5±0.1,51.66N×7.01E,h2^{km},ML2.8/4,Error*
ellipse: s-maj=1.9km s-min=1.3km az=64.0,Suspected
Mining induced.
*BGR **08** 21:41:17.4±0.3,51.62N×7.01E,h1^{km},ML2.0/4,Error*
ellipse: s-maj=5.6km s-min=3.3km az=78.0
*BUG **08** 21:41:17.0,51.59N×7.05E,h1^{km},ML1.4*

ISC 08 21:41:14.5±0.4**,51.57N**±0.02×**6.96E**±0.05**,n32,**σ**1^{s}25**/52**,**
1D,Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUG	**Bochum--Univer**	**0.24**	**124**	⇓*i*Pg	**Pg**	**21 41 22.0**	**+2.8**
BUG				Sg	**Sg**	**21 41 25.7**	**+3.4**
BUG	**Bochum--Univer**	**0.24**	**124**	*e*Pg	**Pg**	**21 41 21.8**	**+2.6**
BUG				*e*Sg	**Sg**	**21 41 25.8**	**+3.5**
WTSB	**Winterswijk**	**0.41**	**346**	*e*Pg	**Pg**	**21 41 23.7**	**+1.1**
	40nm,0.4s						
WTSB				*e*Sg	**Sg**	**21 41 28.6**	**+0.6**
WTSB	**Winterswijk**	**0.41**	**346**	*e*Pg	**Pg**	**21 41 23.6**	**+1.0**
	SNR=12						
WTSB				*e*Sg	**Sg**	**21 41 28.9**	**+0.9**
	SNR=5.8						
BNS	**Bensberg**	**0.63**	**167**	*e*Sg	**Sg**	**21 41 40.1**	**+4.8**
IBBN	**Ibbenburen**	**0.89**	**34**	*e*Pg	**Pg**	**21 41 30.3**	**-1.9**
IBBN				*e*Sg	**Sg**	**21 41 44.1**	**+0.1**
	SNR=3.9						
IBBN	**Ibbenburen**	**0.89**	**34**	*e*Pg	**Pg**	**21 41 30.3**	**-1.9**
IBBN				*e*Sg	**Sg**	**21 41 45.2**	**+1.2**
KLL	**Kalltalsperre**	**1.01**	**204**	*e*Pg	**Pg**	**21 41 36.9**	**+2.1**
KLL				*e*Sg	**Sg**	**21 41 53.2**	**+4.9**
HGN	**Heimansgroeve**	**1.04**	**219**	*e*Pg	**Pg**	**21 41 37.3**	**+2.1**
	22nm,0.3s,baz=30						
HGN				*e*Sg	**Sg**	**21 41 53.8**	**+4.8**
HGN	**Heimansgroeve**	**1.04**	**219**	*e*Pg	**Pg**	**21 41 37.4**	**+2.2**
	SNR=30						
HGN				*e*Sg	**Sg**	**21 41 52.8**	**+3.8**
	SNR=4.5						
MEM	**Membach**	**1.14**	**212**	P	**Pb**	**21 41 38.7**	**+2.0**
MEM				S	**Sb**	**21 41 55.7**	**+3.8**
WIT	**Witteveen**	**1.25**	**352**	*e*Sg	**Sg**	**21 41 56.4**	**+0.2**
	SNR=3.8						
BGG	**Burgeitz**	**1.39**	**170**	*e*Pg	**Pg**	**21 41 42.9**	**+0.6**
BGG				*e*Sg	**Sg**	**21 42 01.4**	**+0.6**
TNS	**Taunus Mts**	**1.65**	**145**	*e*Pg	**Pg**	**21 41 47.3**	**-0.1**
	SNR=4.2						
TNS				*e*Sg	**Sg**	**21 42 09.8**	**+0.4**
	SNR=3.3						
TNS	**Taunus Mts**	**1.65**	**145**	*e*Pg	**Pg**	**21 41 45.7**	**-1.7**
TNS				*e*Sg	**Sg**	**21 42 10.8**	**+1.4**
TNS	**Taunus Mts**	**1.65**	**145**	*e*Sg	**Sg**	**21 42 10.8**	**+1.4**
GIVF	**Givet**	**2.00**	**223**	*e*Pn	**Pn**	**21 41 50.7**	**+0.8**
GIVF				*e*Pg	**Pg**	**21 41 55.3**	**+0.8**
GIVF				*e*Sg	**Sg**	**21 42 22.1**	**+1.0**
	14nm,0.3s						
BAIF	**Baives**	**2.31**	**230**	*e*Pn	**Pn**	**21 41 54.8**	**+0.4**
BAIF				*e*Pg	**Pg**	**21 42 00.6**	**-0.1**
BAIF				*e*Sn	**Sn**	**21 42 23.2**	**-0.7**
BAIF				*e*Sg	**Sg**	**21 42 32.2**	**+0.7**
	7.4nm,0.3s						
MOX	**Moxa**	**3.08**	**106**	*e*Sg	**Sg**	**21 42 53.1**	**-3.9**
RFYF	**Reffroy**	**3.10**	**199**	*e*Pn	**Pn**	**21 42 05.7**	**+0.1**
	baz=22						
CDF	**Champ du Feu**	**3.17**	**176**	*e*Pn	**Pn**	**21 42 06.4**	**-0.2**
CDF				*e*Sg	**Sg**	**21 42 58.5**	**-1.6**
	3.1nm,0.3s						
MEZF	**Maizieres J'vi**	**3.31**	**203**	*e*Pn	**Pn**	**21 42 08.3**	**-0.3**
SFTF	**Sexfontaines**	**3.59**	**201**	*e*Pn	**Pn**	**21 42 12.5**	**-0.1**
	baz=16						
HINF	**Hinteralfeld**	**3.76**	**181**	*e*Pn	**Pn**	**21 42 14.5**	**-0.5**
LOR	**Lormes**	**4.76**	**206**	*e*Pn	**Pn**	**21 42 28.5**	**-0.7**
	baz=28						
SSF	**Saint Saulge**	**5.05**	**208**	*e*Pn	**Pn**	**21 42 32.1**	**-1.2**
AVF	**Avril sur Loir**	**5.34**	**208**	*e*Pn	**Pn**	**21 42 35.8**	**-1.6**
SMF	**Signal de Mont**	**5.34**	**204**	*e*Pn	**Pn**	**21 42 36.2**	**-1.2**
FLN	**La Foliniere**	**5.55**	**242**	*e*Pn	**Pn**	**21 42 38.8**	**-1.5**
	baz=61						
BGF	**Bois d'Agland**	**5.70**	**210**	*e*Pn	**Pn**	**21 42 41.1**	**-1.4**
GRR	**Gorron**	**5.96**	**241**	*e*Pn	**Pn**	**21 42 44.5**	**-1.7**
GRR				*e*Sn	**Sn**	**21 43 50.7**	**-5.5**
	4.7nm,0.3s						
TCF	**Toulx Ste Croi**	**6.14**	**212**	*e*Pn	**Pn**	**21 42 47.1**	**-1.7**

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*CSEM **08** 21:56:41.4,12.46N×45.81E,h7^{km},ML3.7,After DHMR*

DHMR 08 21:56:41.4±0.6**,12.46N×45.81E,h8^{km}**±34^{km}**,ML3.7,3D,**
Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBOS		**1.51**	**339**	*i* P	Pn	21 57 09.4	+0.5
LBOS				*i* S	Sb	21 57 30.8	+2.3
BDHA	**Al Bayda'**	**1.53**	**351**	⇓*i*P	Pn	21 57 09.0	-0.2
BDHA				*i* S	Sb	21 57 31.5	+2.5
BDHA				AML	AML	21 57 32.3	
	comp=N,1µm,0.7s						
BDHA	**Al Bayda'**	**1.53**	**351**	⇓*i*P	Pn	21 57 09.0	-0.2
BDHA				*i* S	Sb	21 57 31.5	+2.5
	comp=N,615nm,0.7s						
TRBA	**At Turbah**	**1.82**	**295**	⇓*i*P	Pn	21 57 14.3	+0.9
TRBA				*i* S	Sn	21 57 39.5	+2.6
TRBA				AML	AML	21 57 41.4	
	comp=N,790nm,0.5s						
DHBB	**Dhamar BB**	**2.52**	**327**	*i* P	Pn	21 57 25.2	+1.9
DHBB				*i* S	Sn	21 57 59.4	+4.9
DHBB	**Dhamar BB**	**2.52**	**327**	*i* P	Pn	21 57 25.2	+1.9
DHBB				*i* S	Sn	21 57 59.3	+4.8

MAN 08 21:59:17.5,10.07N×122.28E,h27^{km},mb3.7,ML2.5,
MS2.0,Panay

IDC 08 22:04:36.4±6.2**,9.62S×160.63E,h18^{km}**±36^{km}**,mb3.7**/5**,**
mb1 3.9/5**,mb1mx3.7**/15**,mbtmp3.8**/5**,Error ellipse:**
s-maj=34.9km s-min=26.0km az=46.0,Bougainville -
Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.70	286	Pg	Pb	22 04 49.9	+0.2
	202nm,0.3s,baz=173,slow=11,SNR=72						
HNR				Lg		22 04 59.6	
	1µm,0.3s,baz=15,slow=20,SNR=52						
WRA	Warramunga Arr	27.37	245	P	P	22 10 20.0	-2.8
	1.1nm,0.9s,baz=73,slow=8.7,SNR=7.7						
ASAR	Alice Springs	29.09	238	P	P	22 10 36.4	-1.9
	0.6nm,0.9s,baz=80,slow=11,SNR=3.9						
VNDA	Vanda	67.88	180	P	P	22 15 33.6	-1.8
	0.7nm,0.8s,baz=352,slow=8.2,SNR=5.6						
SONM	Songino Array	74.60	325	P	P	22 16 14.9	-1.3
	1.2nm,0.7s,baz=141,slow=5.9,SNR=6.7						
SONM				pP	pP	22 16 22.3	+0.3
	1.0nm,0.6s,baz=143,slow=6.2,SNR=5.5						
MKAR	Makanchi Array	89.07	318	P	P	22 17 30.0	-1.9
	0.3nm,0.7s,baz=90,slow=5.8,SNR=3.8						
MKAR				pP	pP	22 17 37.1	-0.6
	0.4nm,0.8s,baz=117,slow=5.4,SNR=4.2						

IDC 08 22:39:11.7±3.0**, 5.84N×92.70E, mb3.7**/3**, mb1 4.1**/4**, mb1mx3.7**/19**, mbtmp3.8**/4**, ML4.2**/1**, Error ellipse: s-maj=93.5km s-min=28.0km az=65.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.94	25	Pn	P	22 42 31.6	-1.4
	0.4nm,0.3s,baz=225,slow=14,SNR=12						
MKAR	Makanchi Array	41.77	349	P	P	22 47 02.7	-1.8
	0.8nm,0.8s,baz=162,slow=8.1,SNR=9.1						
SONM	Songino Array	43.45	13	P	P	22 47 16.4	-1.7
	0.3nm,0.4s,baz=214,slow=5.2,SNR=2.9						
WRA	Warramunga Arr	48.31	123	P	P	22 47 55.1	-2.0
	2.2nm,0.8s,baz=304,slow=9.0,SNR=13						

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*IDC **08** 22:39:23.4±1.6, 6.36N×92.93E, mb3.9/7, mb1 4.1/7, mb1mx3.8/19, mbtmp3.9/7, Error ellipse: s-maj=52.3km s-min=25.3km az=49.0*

*NEIC **08** 22:39:28.6±1.2, 6.55N×93.11E, h30^{km}, mb4.3/2, Error ellipse: s-maj=28.6km s-min=23.8km az=53.0*

ISC 08 22:39:25.3±1.1**, 6.2N**±0.1×**92.8E**±0.2**, h30^{km}, n20, σ1^{s}12**/20**, mb4.2**/13**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.60	26	Pn	P	22 42 39.9	+1.0
	0.3nm,0.3s,baz=229,slow=12,SNR=11						
PKI	Pulchoki	22.42	343	eP	P	22 44 22.2	-0.9
	25nm,0.7s,mb4.8						
DMN	Daman	22.55	342	eP	P	22 44 24.5	+0.1
	55nm,1.0s,mb5.0						
GUN	Gumba	22.61	344	eP	P	22 44 24.1	-0.9
	15nm,0.6s,mb4.6						
KKN	Kakani	22.66	342	eP	P	22 44 26.0	+0.4
GKN	Gorkha	23.06	341	eP	P	22 44 31.3	+1.8
KOLN	Koldanda	23.20	339	eP	P	22 44 34.0	+3.2
	23nm,0.6s,mb4.8						
LSA	Lhasa	23.46	356	eP	P	22 44 26.1	-7.2
	5.3nm,0.6s,mb4.2						
MKAR	Makanchi Array	41.48	349	P	P	22 47 09.2	-2.0
	1.2nm,0.6s,mb3.7,baz=163,slow=8.8,SNR=12						
MKAR	Makanchi Array	41.48	349	P	P	22 47 09.2	-2.0
SONM	Songino Array	43.11	13	P	P	22 47 24.1	-0.5
	1.1nm,0.6s,mb3.8,baz=193,slow=9.3,SNR=5.8						
SONM	Songino Array	43.11	13	P	P	22 47 24.1	-0.5
WRA	Warramunga Arr	48.38	123	P	P	22 48 07.3	+0.4
	1.7nm,0.5s,mb4.3,baz=302,slow=9.0,SNR=13						
BVAR	Borovoye Array	50.19	343	P	P	22 48 20.2	-0.2
	0.8nm,0.7s,mb3.9,baz=170,slow=8.8,SNR=3.7						
CHKZ	Chkalovo	50.69	343	eP	P	22 48 24.3	+0.1
	1.7nm,0.5s,mb4.2						
MJAR	Matsushiro Arr	51.27	47	P	P	22 48 28.2	-0.6
	0.7nm,0.3s,mb4.0,baz=246,slow=7.3,SNR=5.0						
FINES	FINESS Array B	73.60	333	P	P	22 50 57.9	+0.5
	2.0nm,0.8s,mb4.1,baz=135,slow=3.9,SNR=5.2						
FINES	FINESS Array B	73.60	333	P	P	22 50 57.9	+0.5
KAF	Kangasniemi	73.71	333	ep	P	22 50 56.1	-1.9
GERES	GERESS Array B	78.22	318	P	P	22 51 25.2	+1.5
	0.2nm,0.4s,mb3.4,baz=131,slow=10,SNR=2.7						

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*ATH **08** 22:40:11.3, 35.98N×26.92E, h30^{km}±1^{km}, MD3.3/7*

*ISK **08** 22:40:11.8, 35.90N×26.73E, h30^{km}, MD3.3*

*NEIC **08** 22:40:11.3, 35.98N×26.92E, h30^{km}, MD3.3(ATH), After ATH.*

*CSEM **08** 22:40:11.9±0.1, 36.01N×26.88E, h15^{km}, MD3.3, Error ellipse: s-maj=3.1km s-min=2.7km az=88.0*

ISC 08 22:40:10.3±1.5**, 35.98N**±0.03×**26.85E**±0.04**, h1^{km}**±11^{km}**, n23, σ0^{s}99**/32**, 4D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.50	149	ePB	Pb	22 40 21.8	+0.3
KARP				eSB	Sb	22 40 28.7	-0.2
NISR	Nisiros	0.67	19	ePN	Pn	22 40 25.1	-1.5
ARG	Arkhangelos	1.06	77	⇓iPN	Pn	22 40 31.1	-1.1
ARG				eSN	Sn	22 40 44.7	-3.0
BODT	Bodrum	1.15	19	PN	Pn	22 40 33.1	-0.3
BODT				SN	Sn	22 40 49.8	-0.1
BDRM	Kayabasi	1.19	24	i P	Pb	22 40 33.2	-0.1
BDRM				i S	Sb	22 40 50.3	+1.2
SANT	Santorini	1.19	290	eP	Pb	22 40 33.8	+0.4
SANT	Santorini	1.19	290	eP	Pb	22 40 33.8	+0.4
NPS	Neapolis	1.23	235	⇓iPN	Pn	22 40 35.1	+0.5
NPS				eSN	Sn	22 40 52.0	-0.1
MLSB	Milas	1.51	29	ePN	Pn	22 40 39.7	+1.1
APE	Apeiranthos	1.52	316	PN	Pn	22 40 37.5	-1.3
APE	Apeiranthos	1.52	316	⇓iPB	Pb	22 40 38.4	-0.7
APE				eSN	Sn	22 40 58.9	-0.6
APE	Apeiranthos	1.52	316	⇓iPb	Pb	22 40 38.4	-0.7
APE				eSn	Sn	22 40 58.9	-0.6
DALT	Dalyan (Mudla)	1.65	61	ePN	Pn	22 40 40.9	+0.4
SMG	Samos	1.73	360	ePB	Pb	22 40 40.4	-2.2
AYDN	Tasoluk	1.87	26	i P	Pn	22 40 45.3	+1.5
AYDN				i S	Sn	22 41 09.4	+1.1
FETY	Fethiye	1.92	69	ePN	Pn	22 40 45.3	+0.9
VAM	Vamos	2.23	256	ePN	Pn	22 40 49.6	+0.7
BLCB	Balcova	2.41	4	ePN	Pn	22 40 52.3	+0.8
IZM	Izmir	2.44	8	ePN	Pn	22 40 51.6	-0.3
DNZL	Cakiroluk	2.46	45	i P	Pn	22 40 50.5	-1.6
DNZL				i S	Sn	22 41 27.4	+4.2
DENT	Denizli	2.49	44	ePN	Pn	22 40 53.6	+0.9
ELL	Elmali	2.59	72	ePN	Pn	22 40 54.0	0.0
VLI	Veliai	3.25	284	ePN	Pn	22 41 04.3	+0.9

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*NNC **08** 22:52:20.1±4.7, 40.21N×69.94E, h22^{km}±21^{km}, mpv3.3, Error ellipse: s-maj=26.4km s-min=14.1km az=26.0*

ISC 08 22:52:13.9±2.5**, 39.7N**±0.2×**70.0E**±0.1**, h33^{km}, n11, σ0^{s}75**/13**, 5C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	3.46	6	⇓Pn	Pn	22 53 08.5	+1.7
	2.4nm,0.2s,baz=184,slow=16,SNR=126						
KK31				⇑Lg		22 53 53.4	
	4.0nm,0.2s,baz=184,slow=30,SNR=8.7						
AML	Almayashu	3.73	47	P	P	22 53 10.6	0.0
	SNR=11						
EKS2	Erkin-Say	4.14	42	P	P	22 53 16.0	-0.3
	SNR=9.4						
UCH	Uchtor	4.27	52	P	P	22 53 18.1	-0.2
	SNR=7.6						
AAK	Ala-Archa	4.51	47	⇑Pn	Pn	22 53 21.9	+0.1
	3.1nm,0.3s						
AAK				⇑Sn	Sn	22 54 13.6	-0.2
	12nm,0.6s						
KZA	Kyzart	4.66	57	P	P	22 53 24.1	+0.4
	SNR=14						
KBK	Karagaybulak	4.79	50	P	P	22 53 25.7	+0.1
	SNR=12						
USP	Ospenovka	4.94	42	P	P	22 53 26.4	-1.4
	SNR=7.4						
TKM2	Tokmak 2	5.33	51	P	P	22 53 32.6	-0.5
	SNR=9.5						
ULHL	Ulahol	5.38	59	P	P	22 53 35.1	+1.1
	SNR=6.4						
AB31	Akbulak array	11.97	327	⇑Pn	P	22 55 04.4	-0.6
	0.4nm,0.5s,baz=135,slow=11,SNR=8.1						
AB31				⇑Sn	S	22 57 10.3	-8.1
	0.3nm,0.4s,baz=142,slow=22,SNR=3.1						

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*MAN **08** 23:21:11.2, 5.02N×126.47E, h2^{km}, mb5.2, ML4.1, MS4.3*

*BJI **08** 23:21:12.0, 4.92N×126.28E, h33^{km}, mB5.1, mb4.5*

*NEIC **08** 23:21:13.8±0.4, 5.52N×126.42E, h10^{km}, mb4.7/12, Error ellipse: s-maj=19.0km s-min=7.3km az=67.0*

*MOS **08** 23:21:15.2±0.8, 5.55N×126.37E, h33^{km}, mb4.8/11, Error ellipse: s-maj=28.9km s-min=10.3km az=115.7*

*IDC **08** 23:21:15.3±3.5, 5.43N×126.22E, h18^{km}±20^{km}, mb4.3/14, mb1 4.4/14, mb1mx4.3/18, mbtmp4.4/14, MS3.3/4, Ms1 3.3/4, ms1mx3.1/23, Error ellipse: s-maj=40.8km s-min=14.1km az=77.0*

ISC 08 23:21:19.6±0.9**, 5.41N**±0.06×**126.35E**±0.10**, h70^{km}**±7^{km}**, n80, σ0^{s}96**/75**, mb4.4**/36**, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.53	356	eP	P	23 21 45.0	-0.4
KCP	Kidapawan	2.02	322	⇑eP	P	23 21 57.7	+5.5
KCP				i S	S	23 22 25.5	+9.3
BUKP	Musuan	2.77	332	eP	P	23 22 02.3	-0.4
BUKP				eS	S	23 22 37.8	+2.8
CGP	Cagayan de Oro	3.44	332	⇑eP	P	23 22 10.6	-1.5
BUTP	Butuan	3.61	348	eP	P	23 22 16.2	+1.8
PAGZ	Pagadian	3.82	310	eP	P	23 22 17.3	-0.1
SCPH	Surigao	4.43	349	⇑eP	P	23 22 22.3	-3.6
IPIL	Ipil	4.44	302	eP	P	23 22 25.6	-0.5
KAKA	Kakadu	18.99	161	eP	P	23 25 37.4	-0.9
PMG	Port Moresby	25.43	125	LR	LR	23 36 03.8	
	comp=Z,32nm,20.0s,baz=244,slow=35						
WRAB	Tennant Creek	26.39	163	eP	P	23 26 51.5	0.0
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
WRAB	Tennant Creek	26.39	163	eP	P	23 26 51.5	0.0
	comp=Z,10.0nm,0.6s,mb4.4						
WRA	Warramunga Arr	26.39	163	P	P	23 26 51.3	-0.3
	comp=Z,5.1nm,0.6s,mb4.2,baz=343,slow=10.0,SNR=28						
WRA				PcP	PcP	23 30 16.3	+0.3
	comp=Z,1.9nm,0.7s,baz=322,slow=2.5,SNR=6.9						
WRA				ScP		23 33 54.4	
	comp=Z,1.8nm,0.6s,baz=342,slow=2.9,SNR=16						
WB2	Warramunga Arr	26.39	163	eP	P	23 26 52.2	+0.6
MBWA	Marble Bar	27.19	194	eP	P	23 26 58.2	-0.7
CMAR	Chiang Mai Arr	29.73	298	P	P	23 27 23.3	+1.7
	comp=Z,1.1nm,0.6s,mb3.7,baz=101,slow=7.5,SNR=5.0						
CMAR				PcP	PcP	23 30 25.9	+1.8
	comp=Z,0.9nm,0.6s,baz=133,slow=1.7,SNR=5.0						
CTA	Charters Tower	32.02	143	LR	LR	23 39 38.2	
	comp=Z,62nm,18.9s,baz=50,slow=34						
XAN	Xi'an	32.76	333	P	P	23 27 47.1	-1.0
XAN				AP	pP	23 27 55.0	-10
XAN				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
MJAR	Matsushiro Arr	32.84	18	LR	LR	23 39 57.7	
	comp=Z,62nm,19.2s,baz=170,slow=34						
LZH	Lanzhou	36.88	329	eP	P	23 28 24.0	+0.8
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
SHL	Shillong	38.60	305	eP	P	23 28 38.0	+0.4
NWAO	Narrogin (SRO)	39.10	192	P	P	23 28 41.9	+0.2
	comp=Z,10nm,0.7s,mb4.8,baz=20,slow=3.5,SNR=7.3						
NWAO	Narrogin (SRO)	39.10	192	P	P	23 28 42.1	+0.4
STKA	Stephens Creek	39.82	160	P	P	23 28 48.0	+0.3
	comp=Z,3.4nm,0.6s,mb4.4,baz=334,slow=8.0,SNR=10						
STKA				PcP	PcP	23 30 53.4	+0.1
	comp=Z,2.3nm,0.6s,baz=331,slow=7.0,SNR=3.2						
ASAJ	Asahikawa	41.11	18	P	P	23 28 59.0	+0.9
	comp=Z,2.3nm,0.3s,mb4.5,baz=229,slow=11,SNR=3.8						
GTA	Gaotai	41.47	328	eP	P	23 29 02.0	+0.8
GTA				PCP	PcP	23 30 59.9	+1.4
YSS	Yuzh-Sakhalins	43.74	16	eP	P	23 29 25.2	+5.5
GUN	Gumba	44.45	305	eP	P	23 29 26.3	+0.6
	comp=Z,46nm,0.6s,mb5.4						
PKI	Pulchoki	44.71	304	eP	P	23 29 27.9	+0.2
	comp=Z,11nm,0.5s,mb4.8						
PKI	Pulchoki	44.71	304	eP	P	23 29 27.9	+0.2
PKI				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
KKN	Kakani	44.90	304	eP	P	23 29 29.2	0.0
	comp=Z,12nm,0.6s,mb4.8						
KKN	Kakani	44.90	304	eP	P	23 29 29.2	0.0
KKN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
DMN	Daman	44.97	304	eP	P	23 29 30.4	+0.6
	comp=Z,12nm,0.6s,mb4.8						
ULN	Ulaanbaatar	45.41	342	eP	P	23 29 33.4	+0.3
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
ULN	Ulaanbaatar	45.41	342	eP	P	23 29 33.4	+0.3
	comp=Z,2.2nm,0.6s,mb4.1						
GKN	Gorkha	45.50	304	eP	P	23 29 33.9	-0.2
	comp=Z,14nm,0.5s,mb4.9						
SONM	Songino Array	45.59	341	P	P	23 29 34.9	+0.4
	comp=Z,2.2nm,0.7s,mb4.0,baz=153,slow=8.3,SNR=8.8						
SONM				PcP	PcP	23 31 13.1	+0.7
	comp=Z,3.1nm,0.7s,baz=171,slow=4.0,SNR=11						
KOLN	Koldanda	46.27	304	eP	P	23 29 40.7	+0.5
	comp=Z,36nm,0.6s,mb5.3						
ZAK	Zakamensk	48.82	341	eP	P	23 29 54.6	-5.1
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
TLY	Talaya	49.83	342	eP	P	23 30 06.6	-0.8
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
MKAR	Makanchi Array	55.97	325	P	P	23 30 52.3	-0.8
	comp=Z,8.8nm,0.5s,mb5.1,baz=120,slow=8.0,SNR=204						
MKAR				PcP	PcP	23 31 50.3	-0.3
	comp=Z,1.9nm,0.6s,baz=114,slow=3.9,SNR=5.0						
MKAR				ScP		23 35 50.7	
	comp=Z,0.6nm,0.9s,baz=117,slow=5.4,SNR=4.0						
MKAR				LR	LR	23 55 33.4	
	comp=Z,41nm,18.9s,baz=263,slow=37						
MKAR	Makanchi Array	55.97	325	P	P	23 30 52.3	-0.8
MKAR				PcP	PcP	23 31 50.3	-0.3
MKAR				ScP		23 35 50.7	
MKAR				LR	LR	23 55 33.4	
KZA	Kyzart	58.13	317	P	P	23 31 09.1	+0.7
	SNR=5.8						
UCH	Uchtor	58.69	317	P	P	23 31 12.7	+0.4
	SNR=7.3						
USP	Ospenovka	59.12	318	P	P	23 31 14.6	-0.7
	SNR=8.1						
AML	Almayashu	59.22	316	P	P	23 31 16.4	+0.5
	SNR=6.9						
EKS2	Erkin-Say	59.37	317	P	P	23 31 17.1	+0.2
	SNR=5.8						
NVS	Novosibirsk	60.21	333	eP	P	23 31 20.1	-2.5
KKAR	Karatay Array	61.76	317	i P	P	23 31 32.3	-0.9
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
BVA0	Borovoye Array	65.72	327	i P	P	23 31 58.1	-0.9
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
CHKZ	Chkalovo	65.87	327	eP	P	23 31 58.3	-1.7
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
CHKZ	Chkalovo	65.87	327	eP	P	23 31 58.3	-1.6
	comp=Z,1.6nm,0.5s,mb4.1						
TIXI	Tiksi	66.18	1	eP	P	23 32 00.3	-1.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
AB31	Akbulak array	70.62	320	i P	P	23 32 28.1	-1.4
AB31				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
ARU	Arti	73.32	328	eP	P	23 32 44.1	-1.2
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
ARU	Arti	73.32	328	eP	P	23 32 44.1	-1.3
	comp=Z,6.6nm,0.6s,mb4.6						
IMA	Indian Mountai	81.01	24	eP	P	23 33 30.5	+2.6
ILAR	Eielson Array	83.76	25	P	P	23 33 42.8	+0.8
	comp=Z,1.0nm,0.8s,mb3.7,baz=251,slow=5.5,SNR=6.9						
VNDA	Vanda	85.13	173	P	P	23 33 49.8	+1.1
	comp=Z,0.8nm,0.6s,mb3.9,baz=321,slow=6.2,SNR=3.0						
MAW	Mawson	85.19	200	P	P	23 33 50.9	+1.8
	comp=Z,1.5nm,0.8s,mb4.0,baz=49,slow=11,SNR=3.0						
OBN	Obninsk	85.48	325	eP	P	23 33 49.8	-1.0
OBN				e	pP	23 34 04.5	-5.7
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
OBN	Obninsk	85.48	325	eP	P	23 33 50.7	-0.1
KEV	Kevo	88.19	340	ep	P	23 34 03.6	-0.1
	comp=Z,7.3nm,1.0s,mb4.7						
KEV	Kevo	88.19	340	eP	P	23 34 03.6	-0.1
KEV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
BRTR	Keskin Array B	88.67	310	P	P	23 34 07.0	+0.3
	comp=Z,0.5nm,0.6s,mb3.7,baz=104,slow=5.9,SNR=2.7						
ARCES	ARCESS Array B	88.75	340	P	P	23 34 06.9	+0.6
	comp=Z,9.0nm,0.7s,mb4.9,baz=80,slow=6.8,SNR=22						
KAF	Kangasniemi	89.94	332	ep	P	23 34 11.7	-0.3
	comp=Z,1.9nm,0.6s,mb4.4,baz=74,slow=4.2						
KAF	Kangasniemi	89.94	332	eP	P	23 34 11.7	-0.3
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
FINES	FINESS Array B	90.18	332	P	P	23 34 13.3	+0.1
	comp=Z,1.7nm,0.5s,mb4.5,baz=57,slow=5.8,SNR=29						
FINES	FINESS Array B	90.18	332	P	P	23 34 13.3	+0.1
AKASG	Malin Array Be	90.36	321	P	P	23 34 13.6	-0.7
	comp=Z,0.1nm,0.3s,mb3.4,baz=67,slow=4.9,SNR=4.0						
AKASG	Malin Array Be	90.36	321	P	P	23 34 13.6	-0.7
NB2	NORSAR Subarra	97.12	334	P	P	23 34 44.3	-0.7
	comp=Z,0.9nm,0.6s,mb4.4,baz=65,slow=4.5						
NB2	NORSAR Subarra	97.12	334	P	P	23 34 44.3	-0.7
	baz=65,slow=4.4						
NOA	NORSAR Array B	97.12	334	P	P	23 34 44.7	-0.3
	comp=Z,1.0nm,0.6s,mb4.4,baz=66,slow=4.5,SNR=6.5						
NOA	NORSAR Array B	97.12	334	P	P	23 34 44.7	-0.3
PLCA	Paso Flores	141.70	159	PKP	PKPdf	23 40 47.4	+3.9
	comp=Z,2.6nm,0.6s,baz=208,slow=3.2,SNR=10						
SDV	Santo Domingo	157.90	50	eP	PKPdf	23 41 12.2	+3.2
CPUP	Villa Florida	158.90	171	PKP	PKPdf	23 41 13.6	+3.7
	comp=Z,0.9nm,0.7s,baz=123,slow=4.7,SNR=3.3						
LPAZ	La Paz	162.15	128	PKP	PKPdf	23 41 18.2	+4.8
	comp=Z,0.6nm,0.7s,baz=212,slow=6.7,SNR=4.1						

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*IDC **08** 23:22:06.2±1.7, 58.49S×25.12W, mb4.4/3, mb1 4.4/3, mb1mx3.9/13, mbtmp4.4/3, MS3.3/2, Ms1 3.4/2, ms1mx3.0/11, Error ellipse: s-maj=64.5km s-min=41.3km az=22.0*

*NEIC **08** 23:22:07.9±0.5, 58.41S×25.16W, h10^{km}, mb3.9/1, Error ellipse: s-maj=34.5km s-min=8.4km az=65.0*

ISC 08 23:22:06.6±0.8**, 58.3S**±0.2×**25.0W**±0.5**, h10^{km}, n23, σ1^{s}14**/13**, mb4.3**/3**, MS3.3**/2**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	14.23	157		P	23 25 29.5	-0.4
VNA1	Neumayer--Stat	14.23	157		P	23 25 32.3	+2.4
VNA1	Neumayer--Stat	14.23	157		Px	23 25 39.1	
VNA1	Neumayer--Stat	14.23	157		Px	23 25 44.1	
VNA3	Neumayer Olymp	14.44	160		P	23 25 32.0	-0.6
VNA3	Neumayer Olymp	14.44	160		P	23 25 36.3	+3.7
VNA3	Neumayer Olymp	14.44	160		Px	23 25 53.0	
VNA2	Neumayer--Watz	14.63	157		P	23 25 33.4	-1.6
VNA2	Neumayer--Watz	14.63	157		P	23 25 36.1	+1.1
VNA2	Neumayer--Watz	14.63	157		Px	23 25 42.8	
VNA2	Neumayer--Watz	14.63	157		Px	23 25 50.5	
SNAA	Sanae	16.17	155		P	23 25 54.0	-1.1
SNAA	Sanae	16.17	155		P	23 25 55.2	+0.1
SNAA	Sanae	16.17	155		P	23 26 00.9	+5.8
SNAA	Sanae	16.17	155		Px	23 26 08.0	
PLCA	Paso Flores	33.60	281	LR	LR	23 41 57.8	
	comp=Z,40nm,19.8s,MS3.1,baz=165,slow=36						
BDFB	Brasilia	45.93	328	P	P	23 30 32.4	+1.2
	3.8nm,0.7s,mb4.4,baz=162,slow=6.4,SNR=6.7						
LPAZ	La Paz	52.66	304	P	P	23 31 22.4	-0.6
	0.8nm,0.4s,mb4.0,baz=104,slow=8.3,SNR=12						
LPAZ				LR	LR	23 52 29.8	
	comp=Z,39nm,21.1s,MS3.4,baz=112,slow=35						
LPAZ	La Paz	52.66	304	eP	P	23 31 21.9	-1.1
	0.9nm,0.5s,mb4.0						
LPAZ				LR	LR	23 52 29.8	
DBIC	Dimbokro	66.80	22	P	P	23 32 60.0	-0.4
	6.6nm,1.0s,mb4.6,baz=157,slow=7.7,SNR=4.2						
INK	Inuvik	148.31	318	PKPbc	PKPdf	23 41 52.4	+1.6
	1.5nm,0.5s,baz=102,slow=3.1,SNR=6.1						
SONM	Songino Array	149.63	89	PKPbc	PKPdf	23 41 56.8	+3.2
	1.3nm,0.9s,baz=225,slow=2.0,SNR=4.4						
ILAR	Eielson Array	152.49	308	PKPbc	PKPdf	23 42 02.5	+5.2
	0.9nm,0.6s,baz=135,slow=2.6,SNR=5.7						

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*ATH **08** 23:33:41.8, 39.63N×20.69E, h39^{km}±1^{km}, MD3.0/4*

*NEIC **08** 23:33:41.8, 39.63N×20.69E, h39^{km}, MD3.0(ATH), After ATH.*

*THE **08** 23:33:45.0, 39.77N×20.59E, h3^{km}, ML2.9*

*CSEM **08** 23:33:44.7±0.2, 39.78N×20.59E, h1^{km}±2^{km}, ML2.9, Error ellipse: s-maj=4.2km s-min=2.6km az=161.0*

ISC 08 23:33:43.7±0.7**, 39.76N**±0.04×**20.59E**±0.05**, h11^{km}**±5^{km}**, n13, σ1^{s}09**/21**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	Janina	0.23	116	ePB	Pb	23 33 49.2	-0.1
JAN				eSB	Sb	23 33 53.5	+0.5
IGT	Igoumenitsa	0.30	222	ePg	Pg	23 33 50.8	+0.8
IGT				eSg	Sg	23 33 55.6	+1.5
MEV	Metsovon	0.49	86	ePg	Pg	23 33 53.8	0.0
	comp=Z,16nm,0.1s						
MEV				eSg	Sg	23 34 01.5	+1.1
KEK	Kerkira	0.61	266	ePN	Pn	23 33 56.0	-2.0
LKD	Levkas	1.05	177	ePg	Pg	23 34 04.7	0.0
KZN	Kozani	1.06	58	ePN	Pn	23 34 02.0	-2.4
FNA	Florina	1.19	30	ePg	Pg	23 34 06.9	-0.6
	comp=Z,5.8nm,0.2s						
FNA				eSg	Sg	23 34 24.7	+1.3
LIT	Litokhoron	1.50	76	ePg	Pg	23 34 12.1	-1.6
	comp=Z,3.0nm,0.2s						
LIT				eSg	Sg	23 34 32.7	-1.1
AGG	Agios Georgios	1.54	118	ePg	Pg	23 34 12.9	-1.5
	comp=Z,1.7nm,0.4s						
AGG				eSg	Sg	23 34 34.6	-0.3
VLS	Valsamata	1.58	180	ePN	Pn	23 34 07.5	-4.3
GRG	Griva	1.83	49	ePb	Pb	23 34 16.9	+0.2
GRG				eSb	Sb	23 34 40.3	+0.7
SOH	Sokhos	2.37	62	ePn	Pn	23 34 23.8	+0.7
OUR	Ouranopolis	2.67	76	ePn	Pn	23 34 27.8	+0.4
OUR				eSn	Sn	23 35 01.4	+1.5

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*IDC **08** 23:41:40.5±0.8, 61.30N×158.50W, mb3.9/13, mb1 4.2/15, mb1mx4.1/24, mbtmp4.0/15, ML4.2/2, MS3.5/7, Ms1 3.5/7, ms1mx3.3/22, Error ellipse: s-maj=20.9km s-min=13.2km az=6.0*

*BJI **08** 23:41:41.1, 62.08N×159.17W, h12^{km}, mB4.6, mb4.2, Ms4.3, Msz4.2*

*NEIC **08** 23:41:43.3, 61.27N×158.43W, h45^{km}, mb3.8/2, ML4.6(AEIC), ML4.6(PMR), After AEIC.*

NEIC Felt [III] at Aniak and [II] at Russian Mission.

ISC 08 23:41:38.0±2.0**, 61.32N**±0.04×**158.47W**±0.08**, h5^{km}**±14^{km}**, n71, σ1^{s}18**/71**, mb3.9**/14**, MS3.7**/7**, 1C, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVW2	Sparrevohn	1.42	98	P	Pn	23 42 05.7	+1.2
SVW2				S	Sb	23 42 22.9	+0.1
TTA	Tatalina	1.99	34	P	Pn	23 42 14.1	+1.4
NCT	North Crescent	2.81	103	P	Pn	23 42 24.6	+0.2
RDN	Redoubt North	2.90	104	P	Pn	23 42 26.1	+0.4
ILW	Iliamna West	2.91	113	P	Pn	23 42 26.0	+0.1
DFR	Drift River	2.92	102	P	Pn	23 42 26.1	+0.2
RSO	Redoubt South	2.92	105	P	Pn	23 42 26.1	+0.1
BGL	Barrier Glacie	2.94	88	P	Pn	23 42 27.0	+0.8
REF	Redoubt East F	2.94	104	P	Pn	23 42 26.6	+0.3
INE	Iliamna NE	2.94	113	P	Pn	23 42 26.4	+0.1
CKL	Chakachamna La	2.97	90	P	Pn	23 42 27.3	+0.7
ILIM	Iliamna	2.98	112	P	Pn	23 42 26.8	0.0
CKN	Chakachatna No	3.04	89	P	Pn	23 42 28.6	+0.9
OPT	Oil Point	3.08	120	P	Pn	23 42 28.8	+0.5
SPU	Mount Spurr	3.10	90	⇑iP	Pn	23 42 29.1	+0.5
AUW	Augustine West	3.16	126	P	Pn	23 42 29.8	+0.3
AUI	Augustine Isla	3.20	126	P	Pn	23 42 30.3	+0.3
GCSA	Galena City Sc	3.52	11	P	Pn	23 42 35.2	+0.8
CAHL	Cahill	3.65	152	P	Pn	23 42 35.9	-0.4
FIB	Fire Island	4.01	89	eP	Pn	23 42 41.8	+0.3
SLKM	Skilak Lake	4.11	98	P	Pn	23 42 42.7	-0.2
PWA	Palmer West	4.13	82	P	Pn	23 42 43.5	+0.2
PMR	Palmer	4.49	82	eP	Pn	23 42 49.6	+1.3
KDAK	Kodiak Island	4.64	137	eP	Pn	23 42 51.3	+0.9
SML	Sawmill	4.87	80	eP	Pn	23 42 53.7	-0.1
MCK	McKinley	5.04	57	eP	Pn	23 42 55.8	-0.3

MLY	Manley	5.11	40	P	Pn	23 42 56.2	-0.9
IM3	Indian Mountai	5.13	22	P	Pn	23 42 57.1	-0.3
IMA	Indian Mountai	5.22	22	eP	Pn	23 42 59.2	+0.5
VLZ	Valdez	5.87	86	P	Pn	23 43 06.8	-0.9
COLA	College	6.00	49	eP	Pn	23 43 09.1	-0.4
TNA	Tin City	6.00	319	P	Pn	23 43 10.4	+0.7
SDPT	Sand Point	6.08	191	eP	Pn	23 43 09.7	-1.0
DIV	Divide	6.14	86	P	Pn	23 43 10.5	-1.1
EYAK	Cordova Ski Ar	6.25	91	P	Pn	23 43 12.5	-0.6
THY	Trims Highway	6.28	65	P	Pn	23 43 11.1	-2.5
HAG	Hague Volcano	6.28	198	P	Pn	23 43 12.4	-1.2
ILAR	Eielson Array	6.30	52	Pn	Pn	23 43 11.5	-2.4
	1.5nm,0.3s,baz=253,slow=15,SNR=30						
ILAR				Lg		23 44 58.8	
	9.2nm,0.3s,baz=284,slow=29,SNR=3.7						
MENT	Mentasta	7.10	70	eP	Pn	23 43 24.9	-0.3
BM3	Burnt Mountain	8.56	38	P	P	23 43 43.2	-2.3
INK	Inuvik	12.64	46	Pn	P	23 44 40.0	-1.0
	1.3nm,0.3s,baz=243,slow=15,SNR=41						
INK				Lg		23 48 27.6	
	0.1nm,0.3s,baz=162,slow=19,SNR=2.7						
DLBC	Dease Lake	14.51	89	Pn	P	23 45 05.9	+0.2
	0.1nm,0.3s,baz=283,slow=13,SNR=4.6						
DLBC				Lg		23 49 33.4	
	0.1nm,0.3s,baz=158,slow=27,SNR=3.8						
DLBC				LR	LR	23 51 23.0	
	comp=Z,201nm,18.0s,baz=104,slow=40						
BBB	Bella Bella	18.82	105	LR	LR	23 52 51.4	
	comp=Z,76nm,20.6s,baz=301,slow=36						
YKA	Yellowknife Ar	20.40	67	P	P	23 46 17.5	-0.6
	7.6nm,0.7s,baz=285,slow=12,SNR=24						
NEW	Newport	26.66	100	LR	LR	23 58 22.1	
	comp=Z,153nm,19.4s,MS3.6,baz=144,slow=38						
YBH	Yreka Blue Hor	29.09	116	P	P	23 47 42.9	+1.8
	0.5nm,0.3s,mb3.7,baz=329,slow=5.5,SNR=3.4						
YBH				LR	LR	23 58 02.0	
	comp=Z,86nm,19.9s,MS3.4,baz=339,slow=34						
CHMT	Chamberlain Mo	29.46	98	eP	P	23 47 43.2	-1.3
FFC	Flin Flon	29.78	77	eP	P	23 47 45.2	-2.0
	4.7nm,1.1s,mb4.1						
HLID	Hailey	31.40	104	P	P	23 47 59.1	-2.6
	0.5nm,0.6s,mb3.5						
ELK	Elko	33.22	108	P	P	23 48 14.5	-3.1
NVAR	Mina Array Bea	33.72	114	P	P	23 48 24.0	+2.0
	0.6nm,0.6s,mb3.7,baz=332,slow=9.0,SNR=4.4						
NVAR	Mina Array Bea	33.72	114	P	P	23 48 24.0	+2.0
BW06	Boulder Array	34.30	100	P	P	23 48 24.5	-2.4
PDAR	Pinedale Array	34.30	100	P	P	23 48 28.4	+1.5
	0.3nm,0.4s,mb3.5,baz=307,slow=9.0,SNR=3.4						
ULM	Lac du Bonnet	35.50	79	P	P	23 48 37.7	+0.6
	5.3nm,0.6s,mb4.7,baz=305,slow=8.1,SNR=5.4						
ULM				LR	LR	00 03 38.2	
	comp=Z,101nm,19.5s,MS3.6,baz=26,slow=37						
ULM	Lac du Bonnet	35.50	79	P	P	23 48 37.7	+0.6
ULM				LR	LR	00 03 38.2	
MDJ	Mudanjiang	43.95	282	P	P	23 49 44.2	-2.9
MDJ				AP	pP	23 49 55.5	+6.8
MDJ				XP	sP	23 50 00.5	+11
MDJ				PP	PP	23 51 26.5	-4.7
MDJ				PCP	PcP	23 51 30.4	-3.2
MDJ				PCS		23 55 23.3	
MDJ				S	S	23 56 12.1	-6.7
MDJ				AMB	AMB		
	comp=Z,30nm,6.1s						
MDJ				LR	LR		
	comp=N,60nm,25.2s,MS3.5						
MDJ				LR	LR		
	comp=E,60nm,27.6s,MS3.5						
MDJ				LR	LR		
	comp=Z,20nm,19.2s						
SCHQ	Schefferville	45.05	55	LR	LR	00 11 48.1	
	comp=Z,44nm,18.5s,MS3.4,baz=186,slow=40						
CN2	Changchun	46.51	284	eP	P	23 50 06.1	-1.5
TXAR	Lajitas Array	47.95	106	P	P	23 50 20.3	+1.2
	comp=Z,0.7nm,0.9s,mb3.7,baz=315,slow=3.5,SNR=6.2						
SONM	Songino Array	51.82	301	P	P	23 50 50.6	+2.2
	comp=Z,1.1nm,0.7s,mb3.9,baz=39,slow=7.9,SNR=6.3						
SONM				LR	LR	00 14 08.2	
	comp=Z,88nm,20.5s,MS3.8,baz=255,slow=38						
FINES	FINESS Array B	57.52	357	P	P	23 51 31.6	+1.8
	comp=Z,1.6nm,1.0s,mb4.0,baz=333,slow=12,SNR=3.4						
NJ2	Nanjing	59.01	281	eP	P	23 51 40.6	-0.2
NJ2				PP	PP	23 53 53.0	0.0
NJ2				S	S	23 59 42.0	-4.1
BVAR	Borovoye Array	59.58	328	P	P	23 51 44.8	+0.5
	comp=Z,0.3nm,0.5s,mb3.6,baz=37,slow=7.2,SNR=3.1						
GTA	Gaotai	61.45	300	eP	P	23 51 51.2	-6.1
GTA				AP	pP	23 52 01.2	+2.3
GTA				XP	sP	23 52 06.7	+7.2
MKAR	Makanchi Array	61.67	317	P	P	23 51 59.2	+0.5
	comp=Z,0.8nm,0.7s,mb4.0,baz=72,slow=3.8,SNR=7.0						
MKAR	Makanchi Array	61.67	317	P	P	23 51 59.2	+0.5
WMQ	Urumqi	62.40	312	eP	P	23 52 03.6	-0.1
WMQ				PCP	PcP	23 52 42.5	-0.4
WMQ				PP	PP	23 54 23.1	+0.2
WMQ				PPP	PPP	23 55 53.7	+1.0
WMQ				AMB	AMB		
	comp=Z,90nm,5.2s						
WMQ				LR	LR		
	comp=N,340nm,18.4s,MS4.7						
WMQ				LR	LR		
	comp=E,340nm,20.2s,MS4.7						
WMQ				LR	LR		
	comp=Z,330nm,20.2s,MS4.5						
AKASG	Malin Array Be	68.16	355	P	P	23 52 41.9	+1.3
	comp=Z,0.5nm,0.5s,mb3.8,baz=9.4,slow=6.6,SNR=4.2						
BRTR	Keskin Array B	78.83	351	P	P	23 53 45.6	+2.7
	comp=Z,0.5nm,0.6s,mb3.6,baz=108,slow=3.9,SNR=4.1						
CMAR	Chiang Mai Arr	79.87	290	P	P	23 53 50.8	+1.8
	comp=Z,0.8nm,0.3s,mb4.1,baz=354,slow=8.2,SNR=3.2						

CASC 08 23:43:44.4±1.7, 11.58N×87.08W, h25^{km}±9^{km}, MD3.6, ML2.7, 2C-3D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEON	Leon	0.85	12	⇑eP	Pb	23 44 00.2	-0.2
LEON				eS	Sb	23 44 13.8	+2.3
XAVN	Gruta Xavier	0.93	52	eP	Pb	23 44 01.5	-0.2
MIRN	Miramar	0.93	23	⇑eP	Pb	23 44 01.4	-0.3
MIRN				eS	Sb	23 44 14.8	+1.1
TICN	Ticuantepe	0.94	61	eP	Pb	23 44 02.1	+0.1
APYN	Apoyeque	0.97	47	⇓eP	Pb	23 44 02.0	-0.3
MOMJ	Momotombo	0.98	32	eP	Pb	23 44 01.7	-0.9
CNGN	Cerro Negro	0.99	22	eP	Pb	23 44 02.5	-0.3
MGAN	Managua	0.99	55	eP	Pb	23 44 01.1	-1.7
MGAN				eS	Sb	23 44 15.8	+0.4
MGAN				i		23 44 17.4	
	comp=E,182nm,0.3s						
TEL3	Telica 3	1.02	13	⇓eP	Pb	23 44 02.6	-0.6
TELN	Telica	1.05	13	eP	Pn	23 44 02.9	-0.8
CRIN	San Cristobal	1.12	1	eP	Pn	23 44 03.9	-0.8
PYTN	Playitas	1.38	46	⇓eP	Pn	23 44 07.7	-0.7
PYTN				eS	Sn	23 44 26.6	+0.5
PYTN				eS	Sn	23 44 26.8	+0.8
CONN	Concepcion	1.42	90	eP	Pn	23 44 07.6	-1.4

*OMAN **08** 23:44:53.0, 29.46N×51.97E, h116^{km}±30^{km}, Error ellipse: s-maj=224.7km s-min=94.1km az=328.0*

*IDC **08** 23:44:59.2±12.0, 28.30N×52.59E, mb3.7/4, mb1 3.8/5, mb1mx3.6/21, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=249.1km s-min=35.9km az=1.0*

*THR **08** 23:45:00.7±0.7, 28.39N×52.40E, h34^{km}±5^{km}, ML3.4*

*CSEM **08** 23:45:02.5±0.1, 28.58N×52.57E, h25^{km}, mb2.7/1, Error ellipse: s-maj=3.3km s-min=2.9km az=45.0*

ISC 08 23:45:02.9±1.0, 28.56N±0.05×52.55E±0.05, h27^{km}±9^{km}, n31, σ0^{s}.82/34, mb3.4/4, 4C-4D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GHIR	Ghir-Karzin	0.48	126	ePG	Pb	23 45 12.3	-0.5
GHIR				eSG	Sb	23 45 20.0	+0.4
BNDS	Bandar-Abbas	3.41	109	ePN	Pn	23 45 54.7	-0.9
BNDS				AML	AML	23 47 06.4	
	comp=N,105nm,0.6s						
KRBR	Kerman	3.94	68	ePN	Pn	23 46 04.2	+1.0
KRBR				AML	AML	23 47 13.9	
	comp=N,88nm,0.5s						
HASS	Wahat al Ahsa’	4.22	218	P	Pn	23 46 12.1	+4.9
NASN	Na’in	4.23	3	ePN	Pn	23 46 07.6	+0.3
NASN				eSG	Sn	23 47 14.1	+18
NASN				AML	AML	23 47 35.4	
	comp=N,14nm,0.7s						
NASN	Na’in	4.23	3	ePn	Pn	23 46 07.6	+0.3
	SNR=54						
NASN				eSg	Sn	23 47 14.1	+18
	comp=N,14nm,0.7s,SNR=92						
BANOM	Banah	4.25	127	⇑P	Pn	23 46 08.7	+1.1
	SNR=56						
ASHO	Ashiyiah	4.98	140	⇓P	Pn	23 46 19.1	+1.1
	SNR=30						
HOQ	Hoqain	6.55	138	⇓P	Pn	23 46 40.8	+0.6
DAMV	Damavand	7.06	356	ePN	Pn	23 46 46.1	-1.2
BSY	Bisya	7.15	143	⇓P	Pn	23 46 48.8	+0.2
BSYO	Bisya	7.19	143	P	Pn	23 46 48.8	-0.2
SMDO	Samad	7.39	137	⇑P	Pn	23 46 52.5	+0.6
	SNR=9.2						
MZLS	Mizel	7.99	237	P	Pn	23 47 01.1	+0.9
WBK	Wadi Bani Khal	8.29	134	⇑P	P	23 47 02.9	-1.5
HILS	Ha’il	9.58	265	P	P	23 47 22.5	+0.2
AFFS	‘Afif	9.73	244	P	P	23 47 25.0	+0.6
WHFO	Wadi Hawf	10.65	174	⇑P	P	23 47 35.4	-1.6
KAMS	Al Khamasin	10.96	223	P	P	23 47 40.8	-0.4
RBK	Rabkut	11.11	172	⇓P	P	23 47 42.2	-1.2
	SNR=6.9						
KBRS	Khaybar	12.15	260	P	P	23 47 57.8	+0.5
TATS	Tathlith	12.21	225	P	P	23 47 58.1	-0.1
BLJS	Baljurashi	13.20	232	P	P	23 48 12.3	+1.0
QURS	Qurayyt al Mil	13.49	286	P	P	23 48 13.2	-1.9
DJNS	Zahran al Janu	13.61	219	P	P	23 48 16.6	-0.1
BRTR	Keskin Array B	19.17	310	P	P	23 49 27.6	+0.6
	comp=N,0.1nm,0.3s,baz=126,slow=14,SNR=6.4						
BVAR	Borovoye Array	27.77	23	P	P	23 50 51.6	+0.3
	comp=N,0.6nm,0.8s,mb3.3,baz=214,slow=5.2,SNR=3.0						
MKAR	Makanchi Array	29.50	44	P	P	23 51 06.7	-0.3
	comp=N,0.4nm,0.7s,mb3.2,baz=236,slow=8.3,SNR=4.4						
FINES	FINESS Array B	37.30	339	P	P	23 52 14.3	0.0
	comp=N,0.6nm,0.5s,mb3.7,baz=138,slow=10,SNR=7.7						
NB2	NORSAR Subarra	42.52	332	P	P	23 52 57.8	+0.3
	comp=N,0.1nm,0.6s,mb2.7,baz=118,slow=8.6						
NOA	NORSAR Array B	42.52	332	P	P	23 52 57.7	+0.2
	comp=N,0.7nm,0.7s,mb3.5,baz=122,slow=8.3,SNR=3.8						

WEL 08 23:56:35.8±0.3, 39.30S×174.81E, h206^{km}±2^{km}, ML3.6/15, 2C, Error ellipse: s-maj=2.4km s-min=2.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	Vera Road	0.18	347	PN	P	23 57 02.0	-1.0
VRZ				SN	S	23 57 22.6	-1.4
RAEZ	Rainy Point	0.32	272	PN	P	23 57 02.8	-0.5
WAZ	Wanganui	0.47	163	⇑PN	P	23 57 03.7	0.0
WAZ				SN	S	23 57 23.8	-1.6
MTVZ	Mangateitei	0.52	99	PN	P	23 57 03.5	-0.4
MTVZ				SN	S	23 57 24.5	-1.2
DFE	Dawson Falls	0.55	267	PN	P	23 57 03.7	-0.3
NEZ	North Egmont	0.56	273	PN	P	23 57 03.7	-0.4
FWVZ	Far West T-bar	0.58	86	PN	P	23 57 03.9	-0.2
FWVZ				SN	S	23 57 24.6	-1.5
WNVZ	Wahianoa	0.61	93	PN	P	23 57 04.1	-0.2
WNVZ				SN	S	23 57 25.1	-1.2
TUVZ	Tukino	0.66	87	PN	P	23 57 05.6	+1.2
TUVZ				SN	S	23 57 25.7	-1.0
NRZ	Ngariki Road	0.68	267	PN	P	23 57 04.0	-0.6
MOVZ	Moawhango	0.74	99	PN	P	23 57 04.1	-0.7
MOVZ				SN	S	23 57 25.1	-2.3
TSZ	Takapari Road	1.17	131	⇑PN	P	23 57 07.6	+0.1
TSZ				SN	S	23 57 31.2	-0.9
BKZ	Black Stump Fm	1.31	85	PN	P	23 57 07.8	-1.0
MRZ	Mangatainoka R	1.48	157	PN	P	23 57 09.7	-0.5
KIW	Kapiti Island	1.56	177	PN	P	23 57 10.4	-0.5
DUWZ	D’Urville Isla	1.65	204	PN	P	23 57 11.0	-0.7
BFZ	Birch Farm	1.77	142	PN	P	23 57 12.2	-0.5
MRW	Makara Radio	1.93	182	PN	P	23 57 13.6	-0.7
MTW	Mount Morrison	1.93	164	PN	P	23 57 13.5	-0.8
TCW	Tory Channel	1.95	192	PN	P	23 57 14.1	-0.5
SNZO	South Karori	2.01	182	PN	P	23 57 14.4	-0.7
URZ	Urewera	2.08	61	PN	P	23 57 13.4	-2.5
PAWZ	Paruwai Farm	2.13	167	PN	P	23 57 15.6	-0.8
MSWZ	Moikau Station	2.14	171	PN	P	23 57 15.6	-0.9
NNZ	Nelson	2.21	209	PN	P	23 57 15.3	-1.9
TUWZ	Tuamarina	2.23	197	PN	P	23 57 16.7	-0.8
QRZ	Quartz Range	2.32	228	PN	P	23 57 16.2	-2.3
MWZ	Matawai	2.33	66	PN	P	23 57 16.4	-2.2
THZ	Tophouse	2.85	210	PN	P	23 57 22.8	-1.7
MXZ	Matakaoa Point	3.25	59	PN	P	23 57 27.0	-2.1
KHZ	Kahutara	3.26	197	PN	P	23 57 27.9	-1.4
LTZ	Lake Taylor	3.97	208	PN	P	23 57 35.9	-2.1

IDC 09 00:06:38.2±11.0, 34.87N×70.22E, mb3.7/2, mb1 3.7/4, mb1mx3.4/21, mbtmp3.6/4, ML3.7/2, MS3.9/1, Ms1 3.9/1, ms1mx2.7/26, Error ellipse: s-maj=199.6km s-min=49.1km az=155.0, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMLA	Simla	6.92	121	i P	Pn	00 08 15.4	-8.1
SMLA				i S	Sn	00 09 21.6	-22
NDI	New Delhi	8.57	134	ex	P	00 09 17.0	+31
MKAR	Makanchi Array	14.99	34	Pn	P	00 10 11.7	-1.3
	0.2nm,0.3s,baz=210,slow=12,SNR=15						
BVAR	Borovoye Array	18.15	0	P	P	00 10 51.2	-2.0
	0.3nm,0.3s,baz=164,slow=10,SNR=7.3						
ARCES	ARCESS Array B	42.42	338	P	P	00 14 33.9	-1.8
	2.1nm,0.9s,baz=107,slow=9.4,SNR=4.3						
NOA	NORSAR Array B	45.31	324	P	P	00 14 57.6	-1.6
	0.9nm,1.0s,baz=96,slow=7.2,SNR=2.5						
JOW	Kunigami	49.89	82	LR	LR	00 36 36.3	
	comp=Z,110nm,19.7s,baz=117,slow=36						

NEIC 09 00:07:58.0, 61.28N×158.49W, h44^{km}, ML3.9(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVW2	Sparrevohn	1.42	96	P	P	00 08 20.9	-0.9
SVW2				S	S	00 08 37.6	-2.0
TT01	Tatalina	2.01	34	P	P	00 08 28.8	-1.3
TTA	Tatalina	2.03	34	P	P	00 08 28.9	-1.6
PDB	Pedro Bay	2.60	123	P	P	00 08 37.1	-1.4
PDB				S	S	00 09 07.4	-1.7
NCT	North Crescent	2.81	102	P	P	00 08 40.0	-1.6
NCT				S	S	00 09 12.2	-2.3
RDN	Redoubt North	2.90	103	P	P	00 08 41.1	-1.8
ILW	Iliamna West	2.90	112	P	P	00 08 41.1	-1.8
DFR	Drift River	2.92	101	P	P	00 08 41.2	-1.9
DFR				S	S	00 09 16.1	-1.1
RSO	Redoubt South	2.92	104	P	P	00 08 41.8	-1.4
RSO				S	S	00 09 17.5	+0.2
INE	Iliamna NE	2.94	112	P	P	00 08 41.6	-1.8
REF	Redoubt East F	2.94	103	P	P	00 08 41.6	-1.8
REF				S	S	00 09 15.7	-2.0
BGL	Barrier Glacie	2.95	88	P	P	00 08 41.9	-1.6
IVS	Iliamna South	2.95	113	P	P	00 08 42.1	-1.5
ILIM	Iliamna	2.97	111	P	P	00 08 42.0	-2.0
CKL	Chakachamna La	2.98	89	P	P	00 08 42.2	-1.8
CKL				S	S	00 09 18.2	-0.5
IVE	Iliamna Volcan	2.98	113	P	P	00 08 42.5	-1.5
CKT	Bend	3.04	89	P	P	00 08 42.9	-1.9
CKN	Chakachatna No	3.05	88	P	P	00 08 42.9	-2.1
OPT	Oil Point	3.07	120	P	P	00 08 43.0	-2.3
SPU	Mount Spurr	3.11	89	eP	P	00 08 43.8	-2.2
AUW	Augustine West	3.14	125	P	P	00 08 44.8	-1.5
KAHC	Katmai Hardscr	3.16	145	P	P	00 08 45.2	-1.4
AUP	Augustine Pinn	3.17	125	P	P	00 08 45.4	-1.3
AUI	Augustine Isla	3.18	125	P	P	00 08 44.7	-2.2
KAPH	Katmai Pasha	3.40	140	P	P	00 08 48.5	-1.5
ACHA	Angle Creek He	3.47	151	P	P	00 08 47.8	-3.1
CAHL	Cahill	3.62	152	P	P	00 08 51.4	-1.6
FIB	Fire Island	4.02	88	P	P	00 08 56.4	-2.4
BRLK	Bradley Lake	4.05	109	P	P	00 08 57.3	-1.9
CUT	Chulitna	4.06	70	P	P	00 08 57.5	-1.8
SLKM	Skilak Lake	4.11	97	eP	P	00 08 57.1	-2.9
PWA	Palmer West	4.15	81	P	P	00 08 57.7	-2.9
KTH	Kantishna Hill	4.20	54	P	P	00 08 57.8	-3.4
RC01	Rabbit Creek A	4.24	89	P	P	00 09 00.6	-1.2
MPA	Moose Pass	4.53	96	P	P	00 09 04.2	-1.8
KDAK	Kodiak Island	4.62	137	eP	P	00 09 05.6	-1.5
SML	Sawmill	4.89	79	P	P	00 09 09.0	-2.0
MCK	McKinley	5.07	57	P	P	00 09 09.3	-4.2
IM3	Indian Mountai	5.18	22	P	P	00 09 12.9	-2.1
IMA	Indian Mountai	5.27	22	eP	P	00 09 13.4	-2.8
SCM	Sheep Creek Mo	5.37	79	P	P	00 09 15.8	-1.8
WRH	Wood River Hil	5.74	52	P	P	00 09 18.5	-4.3
COLA	College	6.03	49	P	P	00 09 23.7	-3.2
DIV	Divide	6.15	86	eP	P	00 09 22.1	-6.5
BM3	Burnt Mountain	8.60	38	P	P	00 09 57.8	-4.9
INK	Inuvik	12.68	46	eP	P	00 10 54.8	-3.2

NEIC 09 00:08:54.8, 61.13N×158.20W, h6^{km}, ML3.9(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVW2	Sparrevohn	1.27	90	P	Pb	00 09 16.6	-2.1
SVW2				S	Sb	00 09 34.3	-0.9
TT01	Tatalina	2.06	29	P	Pn	00 09 28.4	-2.0
TT01				S	Sn	00 09 52.7	-4.0
TTA	Tatalina	2.08	29	P	Pn	00 09 28.7	-2.0
TTA				S	Sn	00 09 56.0	-1.2
PDB	Pedro Bay	2.40	122	P	Pn	00 09 33.8	-1.4

*IDC **09** 00:22:38.5±0.5, 31.02S×178.31W, mb4.6/10, mb1 4.7/13, mb1mx4.6/18, mbtmp4.6/13, ML4.6/3, MS3.7/7, Ms1 3.7/7, ms1mx3.5/20, Error ellipse: s-maj=20.7km s-min=15.9km az=126.0*

*BJI **09** 00:22:41.6, 31.10S×178.40W, h21^{km}, mB5.1, mb5.1, Ms5.2, Msz5.0*

*NEIC **09** 00:22:41.6±2.3, 31.05S×178.44W, h22^{km}±16^{km}, mb5.2/16, Error ellipse: s-maj=11.3km s-min=7.8km az=120.0*

*MOS **09** 00:22:42.5±1.2, 31.04S×178.37W, h33^{km}, mb5.1/7, Error ellipse: s-maj=16.2km s-min=12.4km az=57.3*

ISC 09 00:22:38.4±1.9, 31.24S±0.04×178.42W±0.08, h7^{km}±12^{km}, n160, σ1^{s}.18/112, mb4.9/25, MS4.1/7, 9C-1D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.02	12	Pn	Pn	00 23 12.6	-0.8
	713nm,0.3s,baz=88,slow=23,SNR=47						
RAO				Sn	Sn	00 23 32.3	-6.9
	3µm,0.3s,baz=114,slow=20,SNR=18						
RAO	Raoul Island	2.02	12	ePn	Pn	00 23 13.0	-0.4
RAO				eSn	Sn	00 23 31.0	-8.2
MXZ	Matakaoa Point	6.87	202	P	Pn	00 24 22.4	+0.3
MXZ	Matakaoa Point	6.87	202	PN	Pn	00 24 22.4	+0.3
MXZ				SN	Sn	00 25 41.4	+0.1
PUZ	Puketiti	7.35	201	P	Pn	00 24 29.2	+0.4
PUZ	Puketiti	7.35	201	PN	Pn	00 24 28.4	-0.4
PUZ				SN	Sn	00 25 51.2	-2.3
WCZ	Waipu Caves	7.65	230	P	Pn	00 24 42.4	+9.4
WCZ	Waipu Caves	7.65	230	ePN	Pn	00 24 43.1	+10
OUZ	Omahuta	7.78	237	ePN	Pn	00 24 44.3	+9.5
MWZ	Matawai	7.83	204	eP	Pn	00 24 34.9	-0.6
MWZ	Matawai	7.83	204	PN	Pn	00 24 34.9	-0.6
MWZ				SN	Sn	00 26 06.0	+0.7
URZ	Urewera	7.91	206	Pn	Pn	00 24 36.6	-0.1
	6.5nm,0.3s,baz=346,slow=1.5,SNR=33						
URZ				Sn	Sn	00 26 07.7	+0.2
	18nm,0.3s,baz=73,slow=22,SNR=11						
URZ	Urewera	7.91	206	P	Pn	00 24 36.6	-0.1
URZ	Urewera	7.91	206	PN	Pn	00 24 36.6	-0.1
URZ				SN	Sn	00 26 08.0	+0.5
KNZ	Kokohu	8.40	201	PN	P	00 24 42.2	-1.3
KNZ				SN	Sn	00 26 17.8	-1.8
NGZ	Ngauruhoe	9.31	210	P	P	00 24 57.9	+1.8
NGZ	Ngauruhoe	9.31	210	PN	P	00 24 57.9	+1.8
BFZ	Birch Farm	10.37	203	eP	P	00 25 05.6	-5.0
BFZ	Birch Farm	10.37	203	PN	P	00 25 05.6	-5.0
MRZ	Mangatainoka R	10.59	206	eP	P	00 25 09.1	-4.5
MRZ	Mangatainoka R	10.59	206	PN	P	00 25 07.6	-6.0
MRZ				SN	S	00 27 04.2	-9.4
KIW	Kapiti Island	11.02	207	SN	S	00 27 18.1	-6.0
PAWZ	Paruwai Farm	11.27	204	SN	S	00 27 23.3	-7.1
SNZO	South Karori	11.48	207	eP	P	00 25 25.8	0.0
SNZO	South Karori	11.48	207	SN	S	00 27 26.6	-8.8
NNZ	Nelson	11.96	211	SN	S	00 27 41.5	-5.5
THZ	Tophouse	12.61	211	eP	P	00 25 37.6	-3.4
THZ	Tophouse	12.61	211	PN	P	00 25 36.3	-4.7
THZ				SN	S	00 27 55.2	-7.6
KHZ	Kahutara	12.88	208	eP	P	00 25 38.9	-5.7
KHZ	Kahutara	12.88	208	PN	P	00 25 38.9	-5.7
LTZ	Lake Taylor	13.71	210	eP	P	00 25 50.4	-5.2
LTZ	Lake Taylor	13.71	210	PN	P	00 25 50.4	-5.2
RPZ	Rata Peaks	14.98	211	Pn	P	00 26 12.6	+0.3
	2.1nm,0.3s,baz=319,slow=12,SNR=8.9						
RPZ				Sn	S	00 28 47.9	-12
	1.6nm,0.3s,baz=356,slow=16,SNR=5.7						
DZM	Mont Dzumac	16.31	300	Pn	P	00 26 23.8	-5.8
	2.2nm,0.3s,baz=114,slow=16,SNR=16						
DZM				LR	LR	00 30 27.4	
	comp=Z,100nm,21.7s,baz=216,slow=29						
JCZ	Jackson Bay	16.32	215	eP	P	00 26 27.7	-1.9
JCZ	Jackson Bay	16.32	215	PN	P	00 26 27.7	-1.9
RAR	Rarotonga	19.45	64	P	P	00 27 05.9	-2.6
	2.5nm,0.3s,baz=284,slow=20,SNR=3.2						
RAR				LR	LR	00 32 29.5	
	comp=Z,356nm,18.4s,baz=237,slow=31						
PPT	Papeete	29.48	69	LR	LR	00 37 15.8	
	comp=Z,9.5nm,20.2s,baz=290,slow=30						
TAU	Tasmania Unive	29.52	237	eP	P	00 28 46.1	+0.6
TAU				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
TAU	Tasmania Unive	29.52	237	eP	P	00 28 46.1	+0.6
	comp=Z,18nm,0.9s,mb4.8						
HNR	Honiara	29.59	313	LR	LR	00 39 00.1	
	comp=Z,106nm,18.6s,MS3.5,baz=146,slow=33						
CTAO	Charters Tower	33.59	281	eP	P	00 29 23.4	+1.9
CTAO				pmax	pmax		
	comp=Z,37nm,0.6s,mb5.5						
CTAO	Charters Tower	33.59	281	eP	P	00 29 23.4	+1.9
	comp=Z,36nm,0.6s,mb5.5						
STKA	Stephens Creek	33.95	258	⇑iP	P	00 29 26.9	+2.4
STKA	Stephens Creek	33.95	258	P	P	00 29 26.6	+2.1
	comp=Z,19nm,0.4s,mb5.4,baz=98,slow=10,SNR=97						
STKA				LR	LR	00 42 12.6	
	comp=Z,123nm,18.5s,MS3.7,baz=117,slow=34						
PMG	Port Moresby	38.65	297	P	P	00 30 04.3	-0.2
PMG				pmax	pmax		
	comp=Z,12nm,0.6s						
PMG	Port Moresby	38.65	297	P	P	00 30 05.4	+0.9
	comp=Z,14nm,0.6s,mb4.9,baz=125,slow=6.5,SNR=4.1						
PMG	Port Moresby	38.65	297	P	P	00 30 04.3	-0.2
	comp=Z,12nm,0.6s,mb4.8						
WB2	Warramunga Arr	43.77	273	eP	P	00 30 46.9	+0.4
WRAB	Tennant Creek	43.77	273	eP	P	00 30 47.0	+0.4
WRAB				pmax	pmax		
	comp=Z,130nm,0.8s,mb5.7						
WRAB	Tennant Creek	43.77	273	eP	P	00 30 47.0	+0.5
	comp=Z,130nm,0.8s,mb5.7						
WRA	Warramunga Arr	43.78	273	P	P	00 30 47.7	+1.1
	comp=Z,61nm,0.4s,mb5.7,baz=111,slow=8.0,SNR=651						
SBA	Scott Base	47.18	184	eP	P	00 31 16.6	+3.6
SBA				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
SBA	Scott Base	47.18	184	eP	P	00 31 16.6	+3.6
	comp=Z,11nm,1.2s,mb4.7						
VNDA	Vanda	47.23	186	P	P	00 31 15.9	+2.5
	comp=Z,0.9nm,0.5s,mb4.0,baz=5.0,slow=6.2,SNR=4.6						
KAKA	Kakadu	48.73	281	eP	P	00 31 25.3	-0.6
KLBR	Kellerberrin	53.74	252	eP	P	00 32 02.6	-1.0
NWAO	Narrogin (SRO)	53.77	250	P	P	00 32 02.3	-1.5
NWAO				pmax	pmax		
	comp=Z,138nm,1.8s						
NWAO	Narrogin (SRO)	53.77	250	P	P	00 32 02.3	-1.5
	comp=Z,138nm,1.8s,mb5.6						
CASY	Casey	54.23	208	P	P	00 32 05.8	-0.8
	comp=Z,20nm,0.6s,mb5.2						
MBWA	Marble Bar	55.78	264	eP	P	00 32 16.5	-2.1
	comp=Z,12nm,0.8s,mb5.0						
QSPA	South Pole Qui	58.88	180	eP	P	00 32 41.9	+2.2
	comp=Z,47nm,0.7s,mb5.6						
MAW	Mawson	71.40	201	P	P	00 34 01.2	+0.4
	comp=Z,7.3nm,0.5s,mb4.8,baz=145,slow=7.6,SNR=23						
MAW				LR	LR	01 03 47.1	
	comp=Z,80nm,21.0s,MS4.0,baz=243,slow=34						
JHJ	Hachijo jima 2	75.21	325	LR	LR	01 00 18.8	
	comp=Z,2µm,21.7s,baz=290,slow=30						
SYO	Syowa Base	76.22	193	⇓P	P	00 34 28.8	+0.2
SNAA	Sanae	77.33	179	e	P	00 34 40.4	+5.6
SNAA	Sanae	77.33	179	e	P	00 34 41.1	+6.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SNAA	Sanae	77.33	179	e	P	00 34 44.4	+10
SNAA	Sanae	77.33	179	⇑iP	P	00 34 35.5	+0.7
SNAA				e		00 34 41.1	
SNAA				e		00 34 44.4	
SNAA	Sanae	77.33	179	⇑iP	P	00 34 35.5	+0.7
SNAA				e		00 34 40.4	
SNAA				e		00 34 41.1	
SNAA				e		00 34 44.4	
VNA3	Neumayer Olymp	77.50	176	e	P	00 34 42.0	+6.3
VNA3	Neumayer Olymp	77.50	176	e	P	00 34 43.2	+7.5
VNA3	Neumayer Olymp	77.50	176	e	P	00 34 46.5	+11
VNA3	Neumayer Olymp	77.50	176	⇑iP	P	00 34 36.6	+0.9
VNA3				e		00 34 42.0	
VNA3				e		00 34 43.2	
VNA3				e		00 34 46.5	
VNA2	Neumayer--Watz	77.93	177	e	P	00 34 44.5	+6.4
VNA2	Neumayer--Watz	77.93	177	e	P	00 34 45.7	+7.6
VNA2	Neumayer--Watz	77.93	177	e	P	00 34 48.5	+10
VNA2	Neumayer--Watz	77.93	177	⇑iP	P	00 34 39.2	+1.1
VNA2				e		00 34 44.5	
VNA2				e		00 34 45.7	
VNA2				e		00 34 48.5	
MAIT	Maitri	78.02	183	eP	P	00 34 39.8	+1.2
VNA1	Neumayer--Stat	78.16	177	e	P	00 34 46.1	+6.8
VNA1	Neumayer--Stat	78.16	177	e	P	00 34 47.2	+7.9
VNA1	Neumayer--Stat	78.16	177	e	P	00 34 50.2	+11
VNA1	Neumayer--Stat	78.16	177	⇑iP	P	00 34 40.8	+1.5
VNA1				e		00 34 46.1	
VNA1				e		00 34 47.2	
VNA1				e		00 34 50.2	
PLCA	Paso Flores	82.20	133	eP	P	00 35 02.6	+1.1
PLCA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PLCA	Paso Flores	82.20	133	P	P	00 35 03.0	+1.5
	comp=Z,4.7nm,0.8s,mb4.5,baz=208,slow=6.3,SNR=9.3						
PLCA	Paso Flores	82.20	133	eP	P	00 35 02.6	+1.1
	comp=Z,6.9nm,0.9s,mb4.6						
SSE	Sheshan	84.39	311	P	P	00 35 13.0	+0.1
SSE				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.6						
SSE				AMB	AMB		
	comp=Z,120nm,5.9s						
NJ2	Nanjing	86.52	311	eP	P	00 35 22.6	-0.9
NJ2				AP	pP	00 35 33.1	+7.5
NJ2				PP	PP	00 38 46.0	-1.2
NJ2				S	S	00 45 53.0	-5.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.2						
NJ2				LR	LR		
	comp=N,990nm,18.0s						
NJ2				LR	LR		
	comp=E,1µm,22.2s						
NJ2				LR	LR		
	comp=Z,410nm,15.0s,MS5.0						
CMB	Columbia Colle	87.62	42	eP	P	00 35 28.0	-0.7
CMB				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.5						
CMB	Columbia Colle	87.62	42	eP	P	00 35 28.0	-0.7
	comp=Z,1.8nm,0.7s,mb4.4						
DAC	Darwin (Calif)	88.08	45	P	P	00 35 30.0	-1.0
DAC				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.4						
DAC	Darwin (Calif)	88.08	45	P	P	00 35 30.0	-0.9
	comp=Z,3.1nm,1.2s,mb4.4						
YBH	Yreka Blue Hor	88.91	38	P	P	00 35 34.9	+0.1
	comp=Z,0.9nm,0.6s,mb4.3,baz=270,slow=5.1,SNR=3.9						
NVAR	Mina Array Bea	89.09	43	P	P	00 35 35.8	0.0
	comp=Z,3.1nm,0.7s,mb4.7,baz=214,slow=7.3,SNR=15						
MDJ	Mudanjiang	89.11	326	P	P	00 35 35.9	+0.2
MDJ				AMB	AMB		
	comp=Z,40nm,4.9s						
TPH	Tonopah	89.49	44	P	P	00 35 34.4	-3.2
TPH				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.0						
TPH	Tonopah	89.49	44	P	P	00 35 34.4	-3.3
	comp=Z,7.4nm,0.8s,mb5.1						
TUC	Tucson	89.91	52	eP	P	00 35 40.3	+0.6
CN2	Changchun	90.59	323	eP	P	00 35 43.7	+1.1
ENH	Enshi	91.78	305	P	P	00 35 45.0	-3.3
	comp=Z,13nm,1.0s,mb5.2						
CMAR	Chiang Mai Arr	93.34	289	P	P	00 35 55.5	-0.3
	comp=Z,0.8nm,0.4s,mb4.5,baz=108,slow=2.9,SNR=4.5						
KMI	Kunming	93.88	297	P	P	00 35 57.5	-0.7
PDAR	Pinedale Array	96.98	44	P	P	00 36 11.1	-0.8
	comp=Z,0.3nm,0.5s,mb4.0,baz=315,slow=2.1,SNR=4.0						
LPAZ	La Paz	98.13	115	P	P	00 36 18.9	+1.2
	comp=Z,0.6nm,0.6s,mb4.3,baz=237,slow=4.7,SNR=5.4						
ILAR	Eielson Array	98.82	13	LR	LR	01 14 27.3	
	comp=Z,29nm,19.6s,MS3.8,baz=0.2,slow=32						
CPUP	Villa Florida	99.75	129	LR	LR	01 11 28.3	
	comp=Z,55nm,22.0s,MS4.0,baz=197,slow=29						
YKA	Yellowknife Ar	106.35	26	PKiKP		00 41 02.7	
	comp=Z,0.6nm,0.5s,baz=249,slow=1.8,SNR=7.3						
YKA				PKKPbc		00 52 24.9	
	comp=Z,0.6nm,0.5s,baz=31,slow=3.4,SNR=4.9						
YKA	Yellowknife Ar	106.35	26	PKPdf		00 41 02.7	
YKA				PKKPbc		00 52 24.9	
WMQ	Urumqi	113.46	308	ePDIF	Pdif	00 37 25.0	0.0
WMQ				PP	PP	00 42 13.2	-0.3
WMQ				PPP	PPP	00 44 36.5	-0.4
WMQ				SKS	SKS	00 48 25.0	+18
WMQ				SS	SS	00 57 53.0	-3.6
WMQ				PP	PP		
	comp=Z,100nm,4.5s						
WMQ				LR	LR		
	comp=N,220nm,22.0s,MS4.8						
WMQ				LR	LR		
	comp=E,110nm,21.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,110nm,24.0s,MS4.4						
MKAR	Makanchi Array	118.03	310	i PKIKP	PKPdf	00 41 25.0	-3.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	118.03	310	PKP	PKPdf	00 41 24.7	-3.8
	comp=Z,0.6nm,0.3s,baz=253,slow=1.4,SNR=22						
CHKZ	Chkalovo	126.66	316	ePKIKP	PKPdf	00 41 41.0	-3.9
BVAR	Borovoye Array	126.75	315	PKP	PKPdf	00 41 42.3	-2.8
	comp=Z,2.8nm,0.4s,baz=137,slow=2.0,SNR=25						
KMBO	Kilima Mbogo	133.29	233	PKP	PKPdf	00 41 57.8	-0.9
	comp=Z,0.8nm,0.5s,baz=216,slow=8.7,SNR=3.4						
ARCES	ARCESS Array B	139.33	347	PKhKP		00 41 58.0	
	comp=Z,1.3nm,0.4s,baz=79,slow=2.6,SNR=15						
ARCES				PKP	PKPdf	00 42 07.1	-1.2
	comp=Z,1.3nm,0.4s,baz=83,slow=2.3,SNR=5.9						
GNI	Garni	144.13	297	PKP	PKPdf	00 42 15.4	-2.1
	comp=Z,1.5nm,0.3s,baz=143,slow=5.1,SNR=2.7						
ZEI	Tsey	144.64	301	ePKIKP	PKPdf	00 42 14.2	-4.1
GOF	Gofitskoye	144.99	305	ePKIKP	PKPdf	00 42 15.2	-3.7
KAF	Kangasniemi	145.21	340	epkp	PKPdf	00 42 14.0	-4.7
	baz=42,slow=3.2						
KIV	Kislovodsk	145.39	303	⇑iPKIKP	PKPdf	00 42 17.5	-2.1
KIV	Kislovodsk	145.39	303	ePKPdf	PKPdf	00 42 15.9	-3.7
OBN	Obninsk	145.65	324	c iPKP2	PKPab	00 42 16.8	-2.8
OBN				e		00 48 59.7	
OBN				pmax	pmax		
	comp=Z,24nm,0.6s						
OBN	Obninsk	145.65	324	ePKPdf	PKPdf	00 42 16.5	-3.2
FINES	FINESS Array B	145.80	339	PKPbc	PKPbc	00 42 16.8	-1.2
	comp=Z,19nm,0.5s,baz=56,slow=4.0,SNR=154						
VRSR	Storozhevoye	145.89	317	ePKP2	PKPab	00 42 17.8	-2.9
VRSR				pmax	pmax		
	comp=N,6.0nm,0.6s						
VRSR				pmax	pmax		
	comp=Z,20nm,0.6s						
VRSR				pmax	pmax		
	comp=E,2.0nm,0.4s						
ERZM	Erzurum	146.73	296	i P	PKPbc	00 42 22.5	+1.7
BEST	Besiri	146.84	293	i P	PKPbc	00 42 20.4	-0.7
VSU	Vasula	147.84	335	c iPKP2	PKPab	00 42 23.1	-5.0
KELT	Kelkit	148.33	297	i P	PKPdf	00 42 26.4	+1.9
ELZG	Elazig	148.63	294	i P	PKPdf	00 42 27.5	+2.4
MALT	Malatya	149.07	293	ePKP2	PKPab	00 42 27.7	-6.1
NB2	NORSAR Subarra	149.52	351	PKPabc	PKPdf	00 42 27.1	+1.3
	comp=E,15nm,0.9s,baz=18,slow=2.6						
NOA	NORSAR Array B	149.52	351	PKPbc	PKPdf	00 42 27.4	+1.5
	comp=E,6.3nm,0.6s,baz=16,slow=4.2,SNR=26						
GZT	Gaziantep	149.78	292	i P	PKPdf	00 42 29.9	+2.9
COBT	Iskenderun	150.84	290	i P	PKPdf	00 42 32.8	+4.1
KONO	Kongsberg	151.08	352	i PKIKP	PKPdf	00 42 29.0	+0.8
CTKT	Corum	151.67	299	i P	PKPdf	00 42 35.4	+5.7
AKASG	Malin Array Be	151.74	321	PKPbc	PKPdf	00 42 32.9	+3.4
	comp=E,4.6nm,0.4s,baz=45,slow=2.9,SNR=26						
AVNT	Avonos	151.84	295	i P	PKPdf	00 42 34.1	+4.0
BRTR	Keskin Array B	152.67	297	PKPbc	PKPdf	00 42 35.9	+4.7
	comp=E,5.1nm,0.5s,baz=149,slow=5.1,SNR=20						
ELDT	Eldivan	152.71	299	i P	PKPdf	00 42 38.5	+7.3
SGKT	Sivrigoynuk	153.72	299	i P	PKPdf	00 42 40.0	+7.3
DPC	Dobruska-Polom	157.96	334	ePKPAB	PKPab	00 43 08.6	-2.3
DPC				ex	x	00 43 11.4	
KHC	Kasperske Hory	159.96	337	ePKPAB	PKPab	00 43 17.2	-2.3
KHC				ex	x	00 43 20.2	
GERES	GERESS Array B	160.16	336	PKP2	PKPab	00 43 17.4	-3.0
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	160.16	336	PKPab	PKPab	00 43 17.4	-3.0
	comp=Z,0.7nm,0.7s,baz=45,slow=5.6,SNR=3.1						
GRF	Grafenberg Arr	160.19	341	ePKP2	PKPab	00 43 18.1	-2.4
BAIF	Baives	161.09	355	ePKP2	PKPab	00 43 21.6	-2.8
FLN	La Foliniere	162.43	5	ePKP2	PKPab	00 43 27.1	-3.1
MEZF	Maizieres J’vi	162.56	352	ePKP2	PKPab	00 43 27.3	-3.5
	comp=Z,6.7nm,0.7s						
SGMF	Saint Gilles	162.71	9	ePKP2	PKPab	00 43 28.3	-3.2
	comp=Z,9.4nm,0.7s						
HAU	Haudompre	162.86	349	ePKP2	PKPab	00 43 28.3	-3.8
	comp=Z,5.6nm,0.6s						
DAVOX	Davos	163.21	340	PKPab	PKPab	00 43 31.2	-2.5
	comp=Z,3.0nm,0.6s,baz=336,slow=3.3,SNR=6.1						
LOR	Lormes	163.90	354	ePKP2	PKPab	00 43 33.3	-3.4
SSF	Saint Saulge	164.13	355	ePKP2	PKPab	00 43 34.2	-3.5
	comp=Z,6.3nm,0.7s						
SMF	Signal de Mont	164.51	354	ePKP2	PKPab	00 43 35.8	-3.6
	comp=Z,11nm,0.7s						
BGF	Bois d’Agland	164.67	357	ePKP2	PKPab	00 43 36.4	-3.7
	comp=Z,4.2nm,0.6s						
LPL	La Plagne	165.19	346	ePKP2	PKPab	00 43 39.5	-2.8
LPG	La Plagne	165.20	346	ePKP2	PKPab	00 43 39.8	-2.6
	comp=Z,8.0nm,0.8s						
ESDC	Sonseca Array	170.45	27	PKPab	PKPab	00 44 03.2	-2.5
	comp=Z,1.0nm,0.6s,baz=316,slow=3.8,SNR=6.6						

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*NIED **09** 00:28:00, 35.60N×140.10E, h62^{km}, Mw4.5 Best double couple: M$_0$7.34×10^{15} NP1:ϕ_s321°, δ78°, λ72°. NP2:ϕ_s198°, δ22°, λ145°.*

*MOS **09** 00:28:40.8±0.9, 35.54N×139.96E, h33^{km}, mb4.7/22, Error ellipse: s-maj=13.0km s-min=7.2km az=90.7*

*JMA **09** 00:28:45.9±0.2, 35.63N×140.08E, h72^{km}±2^{km}, M4.5 Broadband fault plane solution: P waves. NP1:ϕ_s157°, δ6°, λ99°. NP2:ϕ_s328°, δ84°, λ89°. Principal axes: T Plg51°, Azm237°; N Plg1°, Azm328°; P Plg39°, Azm59°;*

JMA Felt II J1.

*BJI **09** 00:28:46.1, 35.50N×140.00E, h67^{km}, mB4.9, mb4.6, Ms3.6, Msz3.9*

*NEIC **09** 00:28:46.1±0.3, 35.47N×140.03E, mb4.5/28, MW4.5(NIED), Error ellipse: s-maj=8.6km s-min=6.3km az=167.0*

NEIC Felt at Chiba, Tokyo, Yokohama, Yokosuka and Zama. Recorded [2 JMA] in Chiba, Ibaraki, Kanagawa, Saitama, Shizuoka, Tochigi and Tokyo; [1 JMA] in Gumma and Yamanashi Prefectures.

*IDC **09** 00:28:46.1±0.5, 35.40N×140.01E, h68^{km}±4^{km}, mb3.9/21, mb1 4.1/23, mb1mx4.1/28, mbtmp4.3/23, MS3.4/6, Ms1 3.5/6, ms1mx3.3/20, Error ellipse: s-maj=12.9km s-min=6.8km az=42.0*

ISC 09 00:28:45.4±0.3**, 35.53N**±0.03×**140.07E**±0.04**, h74**^{km}±2^{km}**, h69**^{km}±4.7^{km}**:pP-P, n132,** σ1^{s}15/150**, mb4.3**/55**, 6C-7D,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOK	Tokyo	0.30	301	⇓P	P	00 28 57.9	+0.7
TOK				eS	S	00 29 06.4	+0.5
JYT	Yasato	0.70	8	⇑P	P	00 28 59.8	-1.1
JYT				S	S	00 29 09.7	-2.6
BSO3	Boso 3	0.81	154	⇓P	P	00 29 03.0	+0.9
JOD2	Odawara 2	0.85	252	⇓P	P	00 29 03.0	+0.5
JOD2				eS	S	00 29 15.1	-0.1
JIM2	Oshima 3	0.97	213	⇓P	P	00 29 04.4	+0.4
JIM2				eS	S	00 29 18.9	+1.1
JAG	Ashikaga	1.02	331	⇑P	P	00 29 04.3	-0.4
JAG				eS	S	00 29 17.8	-1.3
JRY	Ryogami san	1.07	297	⇓P	P	00 29 05.8	+0.5
JRY				eS	S	00 29 21.0	+1.0
BSO1	Boso 1	1.15	139	P	P	00 29 06.7	+0.4
BSO1				eS	S	00 29 20.2	-1.7
JYN	Shimob	1.25	269	⇓P	P	00 29 08.1	+0.5
JYN				eS	S	00 29 24.4	+0.3
JKT	Katashina	1.40	332	P	P	00 29 09.2	-0.6
JKT				eS	S	00 29 26.9	-0.9
MJAR	Matsushiro Arr	1.82	304	P	P	00 29 15.0	-0.3
	152nm,0.3s,baz=150,slow=14,SNR=216						
MJAR				S	S	00 29 38.2	+0.9
	196nm,0.3s,baz=141,slow=24,SNR=14						
MAJO	Matsushiro	1.82	304	eP	P	00 29 15.7	+0.4
MAT	Matsushiro	1.82	304	eP	P	00 29 16.0	+0.7
MAT				eS	S	00 29 40.0	+2.7
MAT	Matsushiro	1.82	304	P	P	00 29 15.7	+0.4
MAT				S	S	00 29 39.8	+2.5
JNS	Sasagawa	2.36	345	P	P	00 29 22.8	-0.1
JMM	Marumori	2.40	14	P	P	00 29 23.0	-0.5
JMM				eS	S	00 29 51.5	-0.2
JHJ	Hachijo jima 2	2.42	186	P	P	00 29 23.2	-0.5
	302nm,0.3s,baz=233,slow=10,SNR=38						
JHJ				S	S	00 29 53.5	+1.4
	567nm,0.3s,baz=237,slow=22,SNR=15						
JHJ				LR	LR	00 29 54.0	
	comp=Z,1µm,21.3s,baz=148,slow=30						
JNU	Nakatsue	7.97	255	P	P	00 30 41.5	+0.8
	1.3nm,0.3s,baz=60,slow=9.5,SNR=5.3						
CBIJ	Chichi jima	8.60	167	P	P	00 30 45.2	-4.1
	36nm,0.3s,baz=282,slow=22,SNR=4.6						
CBIJ				S	S	00 32 16.8	-8.9
	26nm,0.3s,baz=300,slow=22,SNR=3.1						
ASAJ	Asahikawa	8.79	12	P	P	00 30 48.0	-3.9
ASAJ				S	S	00 32 22.5	-7.8
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ	Asahikawa	8.79	12	P	P	00 30 48.0	-3.9
	comp=N,6.2nm,0.3s,baz=208,slow=12,SNR=8.7						
ASAJ				S	S	00 32 22.5	-7.8
	comp=N,1.6nm,0.3s,baz=314,slow=30,SNR=2.5						
YUK	Yuzh-Kuril’sk	9.59	26	P	P	00 31 08.3	+5.6
YSS	Yuzh-Sakhalins	11.59	9	eP	P	00 31 25.3	-4.4
YSS	Yuzh-Sakhalins	11.59	9	P	P	00 31 21.8	-7.9
	comp=N,26nm,1.3s						
MDJ	Mudanjiang	12.11	322	P	P	00 31 41.0	+4.4
MDJ				AP		00 31 52.1	
MDJ				XP		00 32 02.3	
MDJ				S	S	00 34 01.1	+11
MDJ				AMB	AMB		
	comp=Z,70nm,4.9s						
MDJ				LR	LR		
	comp=N,150nm,28.9s						
MDJ				LR	LR		
	comp=E,130nm,29.6s						
MDJ	Mudanjiang	12.11	322	eP	P	00 31 38.1	+1.5
	comp=E,12nm,1.0s						
CN2	Changchun	13.95	311	eP	P	00 32 04.6	+3.8
CN2				eS	S	00 34 38.1	+3.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=N,100nm,11.0s						
CN2				LR	LR		
	comp=E,100nm,11.0s						
CN2				LR	LR		
	comp=Z,100nm,12.0s						
SNY	Shenyang	14.33	301	⇓P	P	00 32 10.8	+5.1
SNY				S	S	00 34 46.7	+3.5
SNY				AMB	AMB		
	comp=Z,10.0nm,1.2s						
SNY				LR	LR		
	comp=E,150nm,13.7s						
SNY				LR	LR		
	comp=Z,140nm,14.9s						
SSE	Sheshan	16.39	260	P	P	00 32 29.2	-2.9
SSE				AP		00 32 45.3	
SSE				AMB	AMB		
	comp=Z,20nm,0.6s						
SSE				AMB	AMB		
	comp=Z,180nm,5.4s						
SSE				LR	LR		
	comp=N,100nm,26.0s						
SSE				LR	LR		
	comp=E,50nm,26.0s						
NJ2	Nanjing	17.97	265	eP	P	00 32 51.0	-0.7
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s						
NACB	Ninganchiao	19.58	240	P	P	00 33 06.2	-3.9
PET	Petropavlovsk	21.86	31	eP	P	00 33 33.7	+0.6
PET				eS	S	00 37 28.3	+3.3
PET				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.4						
PET				smax			
	comp=N,100nm,15.8s						
PET				MLR	MLR		
	comp=Z,100nm,21.0s						
PET	Petropavlovsk	21.86	31	eP	P	00 33 32.2	-0.9
	comp=Z,55nm,1.6s,mb4.6						
XAN	Xi’an	25.58	276	P	P	00 34 07.1	-2.0
YAK	Yakutsk	27.32	349	i P	P	00 34 25.4	+0.5
ULN	Ulaanbaatar	27.35	307	eP	P	00 34 24.5	-0.8
SONM	Songino Array	27.77	307	P	P	00 34 27.9	-1.2
	comp=Z,0.5nm,0.4s,mb3.4,baz=106,slow=10,SNR=6.7						
SONM				pP	pP	00 34 45.0	-1.4
	comp=Z,1.1nm,0.7s,baz=100,slow=7.5,SNR=3.6						
SONM				LR	LR	00 45 32.9	
	comp=Z,54nm,20.1s,baz=254,slow=36						
ZAK	Zakamensk	30.39	311	eP	P	00 34 52.1	-0.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.3						
TLY	Talaya	30.53	313	i P	P	00 34 52.4	-1.3
GTA	Gaotai	32.00	289	eP	P	00 35 08.3	+1.6
KMI	Kunming	33.68	262	P	P	00 35 19.1	-2.3
BILL	Bilibino	35.77	17	⇑eP	P	00 35 38.5	-0.3
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
BILL	Bilibino	35.77	17	eP	P	00 35 38.4	-0.5
	comp=Z,7.7nm,1.2s,mb4.5						
TIXI	Tiksi	36.66	354	eP	P	00 35 44.7	-1.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
CMAR	Chiang Mai Arr	40.07	256	LR	LR	00 53 31.4	
	comp=Z,39nm,19.0s,baz=100,slow=37						
WMQ	Urumqi	40.57	298	eP	P	00 36 19.3	+0.3
WMQ				AMB	AMB		
	comp=Z,70nm,4.3s						
WMQ				LR	LR		
	comp=N,440nm,22.4s						
WMQ				LR	LR		
	comp=E,330nm,24.0s						
WMQ				LR	LR		
	comp=Z,330nm,20.2s						
NVS	Novosibirsk	43.11	315	eP	P	00 36 38.5	-1.2
NVS				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
NVS				pmax	pmax		
	comp=N,1.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.8s						
MKAR	Makanchi Array	44.02	303	P	P	00 36 47.1	0.0
	comp=E,1.7nm,0.4s,mb4.1,baz=88,slow=9.3,SNR=26						
MKAR				LR	LR	00 55 36.5	
	comp=E,43nm,19.0s,baz=255,slow=37						
GUN	Gumba	46.23	276	eP	P	00 37 04.8	-0.2
	comp=E,23nm,1.0s,mb4.9						
PKI	Pulchoki	46.75	276	eP	P	00 37 08.2	-0.9
	comp=E,10nm,0.7s,mb4.7						
PKI	Pulchoki	46.75	276	eP	P	00 37 08.2	-0.9
PKI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
KKN	Kakani	46.77	277	eP	P	00 37 08.3	-0.9
	comp=Z,4.1nm,0.2s,mb4.7						
DMN	Daman	46.98	276	eP	P	00 37 10.7	-0.2
GKN	Gorkha	47.20	277	eP	P	00 37 12.4	-0.3
	comp=Z,10.0nm,0.5s,mb4.8						
KOLN	Koldanda	48.14	277	eP	P	00 37 19.9	0.0
	comp=Z,25nm,1.3s,mb4.9						
IMA	Indian Mountai	48.53	30	eP	P	00 37 20.2	-2.2
IMA				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
IMA	Indian Mountai	48.53	30	eP	P	00 37 20.2	-2.2
	comp=Z,13nm,1.2s,mb4.7						
MCK	McKinley	50.48	33	P	P	00 37 36.1	-1.4
MCK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
MCK	McKinley	50.48	33	P	P	00 37 36.1	-1.4
	comp=Z,3.6nm,1.0s,mb4.3						
CHKZ	Chkalovo	50.56	314	eP	P	00 37 37.3	-0.9
CHKZ				pmax	pmax		
	comp=Z,40nm,0.6s						
CHKZ	Chkalovo	50.56	314	eP	P	00 37 37.3	-0.9
	comp=Z,40nm,0.6s						
BVAR	Borovoye Array	50.79	313	P	P	00 37 40.0	0.0
	comp=Z,1.0nm,0.4s,mb4.2,baz=107,slow=9.0,SNR=6.8						
COLA	College	50.93	32	i P	P	00 37 40.2	-0.6
ILAR	Eielson Array	51.34	32	P	P	00 37 43.9	0.0
	comp=Z,3.0nm,0.9s,mb4.3,baz=267,slow=6.6,SNR=23						
ILAR				pP	pP	00 38 01.3	-1.4
	comp=Z,2.2nm,0.8s,baz=269,slow=6.8,SNR=5.6						
WRAB	Tennant Creek	55.42	187	eP	P	00 38 12.9	-1.8
WRAB				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.2						
WRAB	Tennant Creek	55.42	187	eP	P	00 38 12.9	-1.7
	comp=Z,29nm,1.1s,mb5.2						
WRA	Warramunga Arr	55.44	187	P	P	00 38 13.6	-1.1
	comp=Z,8.2nm,0.8s,mb4.8,baz=3.5,slow=7.6,SNR=31						
WRA				pP	pP	00 38 31.2	-2.5
	comp=Z,5.8nm,0.8s,baz=4.1,slow=7.6,SNR=4.3						
SVE	Sverdlovsk	55.56	319	eP	P	00 38 05.0	-10
INK	Inuvik	56.22	27	P	P	00 38 19.6	-0.1
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	56.22	27	P	P	00 38 19.6	-0.1
	comp=Z,0.6nm,0.6s,mb3.8,baz=297,slow=5.4,SNR=6.9						
INK	Inuvik	56.22	27	eP	P	00 38 19.1	-0.6
	comp=Z,4.6nm,1.0s,mb4.5						
ARU	Arti	56.77	319	⇑iP	P	00 38 22.6	-1.2
ARU				e		00 40 25.3	
ARU				ePPP	PPP	00 41 44.9	-6.8
ARU				eS	S	00 46 10.8	+1.6
ARU				e		00 48 08.4	
ARU				eSS	SS	00 49 59.9	+0.8
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
ARU	Arti	56.77	319	eP	P	00 38 22.1	-1.7
	comp=Z,9.8nm,0.9s,mb4.8						
MBWA	Marble Bar	59.59	202	eP	P	00 38 42.2	-1.7
	comp=Z,29nm,1.1s,mb5.2						
DLBC	Dease Lake	60.48	37	eP	P	00 38 49.3	-0.2
RES	Resolute Bay	64.32	14	eP	P	00 39 14.6	-0.1
RES				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
RES	Resolute Bay	64.32	14	eP	P	00 39 14.6	-0.2
	comp=Z,2.6nm,0.7s,mb4.2						
ARCES	ARCESS Array B	65.02	339	P	P	00 39 18.9	-0.4
	comp=Z,2.3nm,0.8s,mb4.1,baz=55,slow=7.6,SNR=8.9						
ARCES	ARCESS Array B	65.02	339	P	P	00 39 18.9	-0.4
YKA	Yellowknife Ar	65.65	29	P	P	00 39 23.4	-0.1
	comp=Z,1.0nm,0.7s,mb3.8,baz=299,slow=6.5,SNR=6.3						
STKA	Stephens Creek	67.07	179	P	P	00 39 31.8	-1.2
	comp=Z,2.1nm,0.9s,mb4.0,baz=352,slow=11,SNR=4.0						
OBN	Obninsk	68.65	323	⇑eP	P	00 39 41.0	-1.4
OBN				eS	S	00 48 35.1	-2.9
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
OBN	Obninsk	68.65	323	P	P	00 39 40.5	-1.9
	comp=Z,7.0nm,0.5s,mb4.8						
VRSR	Storozhevoye	69.33	319	eP	P	00 39 46.7	0.0
VRSR				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
VRSR				pmax	pmax		
	comp=N,4.0nm,0.4s						
VRSR				pmax	pmax		
	comp=E,7.0nm,0.7s						
FINES	FINESS Array B	69.64	332	P	P	00 39 47.9	-0.4
	comp=E,1.9nm,0.5s,mb4.2,baz=64,slow=5.5,SNR=29						
KIV	Kislovodsk	71.07	311	eP	P	00 39 57.7	+0.4
KIV				e	pP	00 40 13.1	-4.0
KIV				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
KIV	Kislovodsk	71.07	311	eP	P	00 39 57.6	+0.3
	comp=Z,14nm,1.0s,mb4.8						
KIV				e	pP	00 40 13.1	-4.1
NEW	Newport	71.96	43	eP	P	00 40 03.5	+0.9
NEW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NEW	Newport	71.96	43	P	P	00 40 03.4	+0.8
	comp=Z,2.6nm,0.7s,mb4.2,baz=306,slow=5.5,SNR=4.1						

NEW				LR	LR	01 09 09.6	
	comp=Z,69nm,19.1s,baz=67,slow=34						
NEW	Newport	71.96	43	eP	P	00 40 03.5	+0.9
	comp=Z,3.6nm,0.9s,mb4.2						
YBH	Yreka Blue Hor	72.12	51	P	P	00 40 05.1	+1.5
	comp=Z,1.3nm,0.5s,mb4.0,baz=287,slow=3.9,SNR=5.4						
SUMG	Summit	72.18	360	eP	P	00 40 05.2	+1.7
	comp=Z,5.5nm,0.8s,mb4.4						
SOC	Sochi	73.09	312	eP	P	00 40 07.9	-1.3
SOC				e	pP	00 40 28.9	-0.2
SOC				e		00 42 46.8	
SOC				ePPP	PPP	00 44 34.4	-3.9
SOC				eS	S	00 49 30.4	+1.0
SOC				e		00 50 12.4	
SOC				pmax	pmax		
	comp=N,4.0nm,0.7s						
SOC				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
SOC				pmax	pmax		
	comp=E,3.0nm,0.5s						
BMO	Blue Mountains	73.75	46	eP	P	00 40 14.8	+1.7
BMO				e	pP	00 40 39.3	+6.3
BMO				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
BMO	Blue Mountains	73.75	46	eP	P	00 40 14.8	+1.7
	comp=Z,4.3nm,1.0s,mb4.1						
BMO				e	pP	00 40 39.3	+6.3
AKASG	Malin Array Be	74.82	322	P	P	00 40 18.8	-0.3
	comp=Z,0.9nm,0.4s,mb3.8,baz=44,slow=6.2,SNR=13						
NB2	NORSAR Subarra	75.15	337	P	P	00 40 20.3	-0.5
	comp=Z,1.6nm,0.8s,mb3.8,baz=42,slow=5.8						
NOA	NORSAR Array B	75.15	337	P	P	00 40 20.8	0.0
	comp=Z,1.6nm,0.7s,mb3.9,baz=40,slow=5.8,SNR=7.8						
NOA				LR	LR	01 15 53.2	
	comp=Z,22nm,20.9s,baz=350,slow=38						
FFC	Flin Flon	75.55	32	eP	P	00 40 23.8	+0.6
FFC				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
FFC	Flin Flon	75.55	32	eP	P	00 40 23.8	+0.6
	comp=Z,2.7nm,1.0s,mb3.9						
CMB	Columbia Colle	75.63	54	P	P	00 40 23.6	-0.4
CMB				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
CMB	Columbia Colle	75.63	54	P	P	00 40 23.6	-0.4
	comp=Z,2.3nm,0.7s,mb4.0						
FCC	Fort Churchill	75.83	26	eP	P	00 40 24.8	+0.1
FCC				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
FCC	Fort Churchill	75.83	26	eP	P	00 40 24.8	+0.1
	comp=Z,5.7nm,1.1s,mb4.2						
HLID	Hailey	76.19	46	eP	P	00 40 28.7	+1.6
	comp=Z,2.0nm,1.0s,mb3.8						
BOZ	Bozeman (W)	76.55	43	eP	P	00 40 30.8	+1.8
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
BOZ	Bozeman (W)	76.55	43	eP	P	00 40 30.8	+1.7
	comp=Z,5.0nm,0.9s,mb4.2						
NVAR	Mina Array Bea	76.76	52	P	P	00 40 32.7	+2.3
	comp=Z,1.9nm,0.6s,mb4.0,baz=291,slow=4.9,SNR=14						
NVAR				sP	sP	00 40 57.6	-1.0
	comp=Z,1.4nm,0.8s,baz=286,slow=5.5,SNR=4.2						
MALT	Malatya	76.84	308	eP	P	00 40 31.2	+0.3
MALT				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
MALT	Malatya	76.84	308	eP	P	00 40 31.2	+0.3
	comp=Z,2.9nm,1.1s,mb3.9						
TPH	Tonopah	77.66	52	eP	P	00 40 37.1	+1.7
TPH				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
TPH	Tonopah	77.66	52	eP	P	00 40 37.1	+1.7
	comp=Z,7.5nm,1.0s,mb4.4						
TPAW	Teton Pass	78.25	45	eP	P	00 40 40.9	+2.4
	comp=Z,5.6nm,0.8s,mb4.3						
KWP	Kalwaria	78.71	324	eP	P	00 40 41.1	+0.2
KWP				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
KWP	Kalwaria	78.71	324	eP	P	00 40 41.1	+0.2
	comp=Z,10nm,1.0s,mb4.6						
BRTR	Keskin Array B	79.03	311	P	P	00 40 43.1	+0.3
	comp=Z,0.8nm,0.7s,mb3.7,baz=117,slow=5.5,SNR=5.0						
BRTR				pP	pP	00 41 00.7	-2.3
	comp=Z,1.1nm,0.8s,baz=24,slow=2.7,SNR=2.6						
HWUT	Hardware Ranch	79.05	46	eP	P	00 40 44.8	+1.8
	comp=Z,4.1nm,1.1s,mb4.2						
HWUT				e	pP	00 41 09.7	+6.6
PDAR	Pinedale Array	79.49	45	P	P	00 40 46.5	+1.2
	comp=Z,1.3nm,0.5s,mb4.0,baz=297,slow=2.0,SNR=9.4						
DAU	Daniels Canyon	79.97	47	eP	P	00 40 49.7	+1.8
DAU				e		00 41 15.9	
RSSD	Black Hills	81.67	41	eP	P	00 40 56.9	+0.1
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
RSSD	Black Hills	81.67	41	eP	P	00 40 56.9	0.0
	comp=Z,2.0nm,0.8s,mb4.0						
CLL	Collm	81.85	330	e*PP	pP	00 41 18.0	+0.2
KHC	Kasperske Hory	83.25	328	eP	P	00 41 05.5	+0.7
GERES	GERESS Array B	83.41	328	P	P	00 41 06.3	+0.7
	comp=Z,0.4nm,0.7s,mb3.4,baz=34,slow=4.8,SNR=5.2						
GERES				pP	pP	00 41 23.8	-2.1
	comp=Z,0.3nm,0.3s,baz=37,slow=4.9,SNR=2.8						
RPZ	Rata Peaks	83.76	158	P	P	00 41 05.0	-2.4
	comp=Z,13nm,1.0s,mb4.7,baz=8.4,slow=6.9,SNR=3.1						
GRF	Grafenberg Arr	83.82	329	eP	P	00 41 08.5	+0.9
GRF				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
SKO	Skopje	84.61	319	ePKP	pP	00 41 30.5	-1.6
SKO				i		00 41 35.3	
ANMO	Albuquerque	86.38	49	⇑eP	P	00 41 23.4	+2.8
ANMO	Albuquerque	86.38	49	P	P	00 41 22.6	+1.9
	comp=Z,0.9nm,0.3s,mb4.2,baz=326,slow=2.7,SNR=3.9						
ANMO	Albuquerque	86.38	49	eP	P	00 41 21.3	+0.7
	comp=Z,3.0nm,0.9s,mb4.2						
TXAR	Lajitas Array	91.90	52	P	P	00 41 48.8	+2.0
	comp=Z,0.8nm,0.8s,mb4.0,baz=295,slow=3.6,SNR=3.7						
LPAZ	La Paz	148.38	60	PKPbc	PKPdf	00 48 24.9	+4.7
	comp=Z,1.4nm,0.7s,baz=253,slow=1.4,SNR=11						
LPAZ				pPKPbc		00 48 45.0	
	comp=Z,2.4nm,0.9s,baz=25,slow=6.1,SNR=4.6						

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*NNC **09** 00:33:30.2±4.9, 38.22N×68.56E, mpv3.4, Error ellipse: s-maj=53.3km s-min=31.1km az=164.0*

ISC 09 00:33:29.9±2.8**, 38.0N**±0.2×**68.6E**±0.1**, h33^{km}, n9, σ0^{s}66**/11**, 3C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.33	15	⇑Pn	Pn	00 34 49.6	+0.2
	0.6nm,0.3s,baz=183,slow=10,SNR=18						
KK31				⇓Pg	P	00 35 04.9	+16
	3.4nm,0.5s,baz=195,slow=15,SNR=17						
KK31				⇑Lg		00 36 10.3	
	9.3nm,0.5s,baz=189,slow=31,SNR=5.8						
AML	Almayashu	5.71	42	P	P	00 34 58.5	+4.0
	SNR=15						
UCH	Uchtor	6.22	45	P	P	00 35 02.6	+0.9
	SNR=16						
AAK	Ala-Archa	6.49	42	⇑Pn	Pn	00 35 06.5	+0.9
	3.1nm,0.5s						
AAK				⇓Sn	Sn	00 36 19.0	-0.2
	21nm,1.3s						
KZA	Kyzart	6.55	49	P	P	00 35 05.8	-0.7
	SNR=16						
KBK	Karagaybulak	6.75	44	P	P	00 35 09.4	+0.3
	SNR=7.2						
TKM2	Tokmak 2	7.28	45	P	P	00 35 15.9	-0.7
	SNR=14						
AB31	Akbulak array	12.90	334	Pn	P	00 36 33.2	-0.2
	0.6nm,0.5s,baz=162,slow=12,SNR=23						
MK31	Makanchi Array	13.41	45	P	P	00 36 39.5	-0.7
	9.6nm,1.1s,baz=87,slow=9.6,SNR=20						

WEL 09 00:36:45.5±0.1**, 37.90S×176.71E, h9^{km}, ML3.6**/8**, 2C-1D, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARZ	Manawahe	0.09	199	PG	Pg	00 36 47.9	-0.1
EDRZ	Edgecumbe	0.21	175	⇓PG	Pg	00 36 49.9	-0.1
EDRZ				SG	Sg	00 36 52.9	-0.1
LIRZ	Lichensteins R	0.28	248	PG	Pg	00 36 51.5	+0.2
MKRZ	Makatiti	0.31	219	PG	Pg	00 36 52.4	+0.5
MKRZ				SG	Sg	00 36 57.8	+1.6
TAZ	Tarawera	0.37	206	PG	Pg	00 36 53.6	+0.6
TGRZ	Tauranga	0.40	295	PG	Pg	00 36 53.5	-0.2
TGRZ				SG	Sg	00 36 59.3	+0.3
URZ	Urewera	0.48	139	⇑PG	Pg	00 36 54.5	-0.7
URZ				SG	Sg	00 37 01.5	-0.2
WIZ	White Island	0.53	46	P*	Pb	00 36 55.8	-0.7
MYRZ	Mayor Island	0.72	329	P*	Pb	00 36 59.1	-0.7
MWZ	Matawai	0.78	124	⇑P*	Pb	00 37 00.0	-0.7
MWZ				S*	Sb	00 37 09.7	-1.5
TOZ	Tahuroa Road	0.97	280	P*	Pb	00 37 02.6	-1.5
TOZ				S*	Sb	00 37 15.9	-1.0
PUZ	Puketiti	1.23	99	P*	Pb	00 37 08.2	-0.3
BKZ	Black Stump Fm	1.28	188	P*	Pb	00 37 08.3	-1.1
MXZ	Matakaoa Point	1.31	76	P*	Pb	00 37 08.6	-1.2
KNZ	Kokohu	1.35	146	PN	Pn	00 37 10.4	-0.2
KUZ	Kuaotunu	1.40	325	PN	Pn	00 37 09.7	-1.6
MKAZ	Moumakai	1.46	302	PN	Pn	00 37 11.9	-0.3
HIZ	Hauiti	1.59	247	PN	Pn	00 37 11.8	-2.2

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*IDC **09** 01:12:30.8±2.3, 10.97N×127.13E, mb3.7/4, mb1 3.8/4, mb1mx3.6/18, mbtmp3.7/4, MS3.5/1, Ms1 3.5/1, ms1mx2.8/32, Error ellipse: s-maj=242.8km s-min=25.3km az=67.0*

*MAN **09** 01:12:33.6, 9.73N×125.39E, h13^{km}, mb4.6, ML3.4, MS3.4*

MAN Surigao City Intensity II.

ISC 09 01:12:32.8±0.8**, 9.71N**±0.03×**125.33E**±0.04**, h10^{km}**±6^{km}**, n16, σ1^{s}17**/25**, mb3.7**/4**, MS3.4**/1**, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.17	66	⇑iP	Pg	01 12 36.5	-0.3
SCPH				eS	Sg	01 12 38.5	-0.9
MSLP	Maasin	0.62	312	eP	Pg	01 12 46.7	+1.2
MSLP				eS	Sg	01 12 57.3	+3.4
BUTP	Butuan	0.79	159	eP	Pb	01 12 48.8	+0.6
BUTP				eS	Sb	01 13 03.6	+5.0
TBP	Tagbilaran	1.45	269	eP	Pn	01 12 59.5	+0.4
TBP				eS	Sb	01 13 17.8	+0.1
LLP	Lapu-Lapu	1.47	294	eP	Pn	01 12 59.2	-0.2
LLP				eS	Sb	01 13 16.6	-1.8
PLP	Palo	1.48	347	eP	Pn	01 12 58.7	-0.9
PLP				i S	Sb	01 13 21.9	+3.1
BUKP	Musuan	1.84	188	eP	Pn	01 13 04.5	-0.2
BUKP				eS	Sn	01 13 29.6	+1.4
BESP	Borongan	1.88	3	eP	Pn	01 13 05.0	-0.4
BESP				eS	Sn	01 13 30.2	+1.0
PAGZ	Pagadian	2.67	226	eP	Pn	01 13 17.2	+0.6
PAGZ				eS	Sn	01 13 48.2	-1.1
CNP	Catarman	2.86	347	eP	Pn	01 13 20.0	+0.7
CNP				eS	Sn	01 13 58.8	+4.8
MATI	Mati	2.90	161	eP	Pn	01 13 24.8	+4.9
JHJ	Hachijo jima 2	26.84	28	LR	LR	01 26 01.6	
	comp=Z,110nm,21.9s,MS3.4,baz=110,slow=32						
WRA	Warramunga Arr	30.77	163	P	P	01 18 56.4	+5.5
	0.5nm,0.9s,mb3.4,baz=345,slow=9.5,SNR=5.5						
STKA	Stephens Creek	44.18	160	P	P	01 20 44.5	+0.7
	1.3nm,0.8s,mb3.7,baz=342,slow=6.4,SNR=2.9						
MKAR	Makanchi Array	51.91	323	P	P	01 21 41.8	-2.0
	0.4nm,0.6s,mb3.5,baz=129,slow=7.8,SNR=4.3						
FINES	FINESS Array B	85.94	332	P	P	01 25 11.5	-2.5
	1.3nm,0.9s,mb4.2,baz=63,slow=4.3,SNR=6.3						

NEIC 09 01:33:32.9, 51.67N×174.27W, h13^{km}, ML3.5(AEIC)**, After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.54	5	P	Pb	01 33 43.3	-0.3
ATKA				S	Sb	01 33 51.5	+0.6
GSIG	Igitkin Island	1.08	288	P	Pb	01 33 51.6	-1.3
GSIG				S	Sb	01 34 06.5	-0.2
GSMY	Great Sitkin M	1.17	289	P	Pb	01 33 52.7	-1.8
GSMY				S	Sb	01 34 08.3	-1.1
GSTR	Great Sitkin T	1.19	292	P	Pb	01 33 53.1	-1.7
GSTR				S	Sb	01 34 08.9	-1.1
GSTD	Great Sitkin T	1.23	289	P	Pb	01 33 53.5	-2.0
GSTD				S	Sb	01 34 09.4	-1.6
GSSP	Great Sitkin S	1.26	290	P	Pb	01 33 53.9	-2.1
ADAG	Mount Adagdak	1.48	283	P	Pn	01 33 57.5	-2.0
ADAG				S	Sb	01 34 16.8	-1.7
KIRH	Kanaga Island	1.77	279	P	Pn	01 34 02.0	-1.5
KINC	Kanaga Island	1.79	280	P	Pn	01 34 02.1	-1.8
KIWB	Kanaga Island	1.80	277	P	Pn	01 34 02.4	-1.6
KIKV	Kanaga Island	1.82	278	P	Pn	01 34 02.2	-2.0
KIMD	Kanaga Island	1.85	274	P	Pn	01 34 03.4	-1.3
KIMD				S	Sn	01 34 21.5	-6.5

IDC 09 01:41:55.9±2.1**, 64.49S×176.42E, mb4.3**/2**, mb1 4.5**/3**, mb1mx4.0**/11**, mbtmp4.2**/3**, ML3.8**/1**, MS3.9**/7**, Ms1 3.8**/7**, ms1mx3.6**/19**, Error ellipse: s-maj=75.8km s-min=39.6km az=68.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	13.84	193	Pn	P	01 45 12.3	-3.0
	0.4nm,0.3s,baz=39,slow=18,SNR=20						
RPZ	Rata Peaks	21.03	349	LR	LR	01 53 21.5	
	comp=Z,219nm,19.9s,baz=14,slow=33						
URZ	Urewera	26.27	1	LR	LR	01 55 34.2	
	comp=Z,209nm,19.3s,baz=213,slow=31						
MAW	Mawson	39.98	213	LR	LR	02 04 57.2	
	comp=Z,92nm,18.4s,baz=168,slow=35						
TBI	Tubuai	46.79	45	eS	S	01 57 16.7	-2.4
	139nm,39.5s						
TBI				eLQ		02 01 09.7	
	198nm,31.0s						
TBI				eLR	LR	02 03 31.7	
	172nm,43.5s,baz=177						
NWAO	Narrogin (SRO)	47.61	282	LR	LR	02 05 47.1	
	comp=Z,118nm,21.7s,baz=114,slow=30						
RKT	Rikitea	52.01	61	eLR	LR	02 06 00.7	
	65nm,41.8s						
PPT	Papeete	52.20	42	eS	S	01 58 31.7	-3.0
	204nm,30.5s						
PPT				eLR	LR	02 05 45.8	
	120nm,26.0s,baz=204						
PPT	Papeete	52.20	42	LR	LR	02 06 39.6	
	comp=Z,252nm,20.9s,baz=162,slow=28						
WRA	Warramunga Arr	52.55	307	P	P	01 51 10.2	-2.8
	1.7nm,0.6s,baz=157,slow=6.5,SNR=19						
FITZ	Fitzroy Crossi	57.40	299	P	P	01 51 46.3	-2.0
	5.7nm,1.0s,baz=182,slow=10.0,SNR=3.4						
PLCA	Paso Flores	62.80	128	LR	LR	02 12 54.6	
	comp=Z,41nm,20.7s,baz=187,slow=30						
BOSA	Boshof	84.50	205	LR	LR	02 28 01.9	
	comp=Z,144nm,18.5s,baz=149,slow=33						
ILAR	Eielson Array	131.72	20	PKP	PKPdf	02 01 08.8	-2.6
	0.4nm,0.8s,baz=252,slow=1.5,SNR=3.3						
BRTR	Keskin Array B	147.11	239	PKPbc	PKPdf	02 01 39.4	-0.1
	3.9nm,0.9s,baz=154,slow=4.1,SNR=17						

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*IDC **09** 01:54:02.4±2.1, 51.61N×174.13W, mb3.9/7, mb1 4.0/8, mb1mx3.7/24, mbtmp3.9/8, ML4.2/1, Error ellipse: s-maj=48.5km s-min=32.6km az=25.0*

*NEIC **09** 01:54:07.7±1.6, 51.54N×174.21W, h39^{km}±14^{km}, ML3.0(AEIC), Error ellipse: s-maj=22.7km s-min=11.0km az=155.0*

ISC 09 01:54:05.8±1.4**, 51.4N**±0.1×**174.1W**±0.1**, h50^{km}**±12^{km}**, n19, σ0^{s}51**/24**, mb3.9**/7**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.80	358	P	P	01 54 21.4	+0.5
ATKA				S	S	01 54 32.1	0.0
GSIG	Igitkin Island	1.25	298	P	P	01 54 26.8	-0.5
GSIG				S	S	01 54 43.8	+0.4
GSMY	Great Sitkin M	1.35	299	P	P	01 54 28.5	-0.4
GSMY				S	S	01 54 45.8	-0.1
GSTR	Great Sitkin T	1.38	301	P	P	01 54 29.1	-0.1
GSTD	Great Sitkin T	1.41	298	P	P	01 54 29.5	-0.1
GSTD				S	S	01 54 47.1	-0.1
GSSP	Great Sitkin S	1.44	299	P	P	01 54 30.1	0.0
GSSP				S	S	01 54 47.6	-0.4
ADAG	Mount Adagdak	1.64	292	P	P	01 54 32.8	+0.1
ADAG				S	S	01 54 53.1	+0.3
KIRH	Kanaga Island	1.91	286	P	P	01 54 36.9	+0.3
KIKV	Kanaga Island	1.95	285	P	P	01 54 37.7	+0.5
KIMD	Kanaga Island	1.96	282	P	P	01 54 37.0	-0.4
ILAR	Eielson Array	19.45	36	P	P	01 58 30.1	-0.5
	0.4nm,0.3s,baz=239,slow=9.5,SNR=23						
INK	Inuvik	25.79	34	P	P	01 59 33.9	+0.6
	0.5nm,0.4s,mb3.4,baz=227,slow=12,SNR=5.0						
BBB	Bella Bella	28.11	70	P	P	01 59 55.4	+0.6
	7.8nm,1.0s,mb4.3,baz=45,slow=17,SNR=1.7						
TXAR	Lajitas Array	55.75	85	P	P	02 03 39.6	-0.1
	0.2nm,0.8s,mb3.2,baz=297,slow=2.8,SNR=3.8						
SCHQ	Schefferville	58.13	41	P	P	02 03 54.5	-1.6
	2.3nm,0.8s,mb4.3,baz=180,slow=7.1,SNR=2.6						
ARCES	ARCESS Array B	58.52	352	P	P	02 03 58.6	-0.1
	3.0nm,1.0s,mb4.3,baz=21,slow=10,SNR=5.2						
FINES	FINESS Array B	66.35	350	P	P	02 04 50.6	-0.1
	1.5nm,0.9s,mb4.0,baz=21,slow=12,SNR=3.3						
GERES	GERESS Array B	79.90	355	P	P	02 06 11.3	+1.0
	0.6nm,0.8s,mb3.6,slow=2.7,SNR=4.1						
PLCA	Paso Flores	128.21	110	PKP	PKPdf	02 13 11.7	+5.4
	1.2nm,0.7s,baz=339,slow=14,SNR=2.9						

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*IDC **09** 01:57:00.9±1.0, 1.22N×129.01E, mb4.2/7, mb1 4.4/8, mb1mx4.1/16, mbtmp4.2/8, ML3.2/1, MS3.5/2, Ms1 3.5/2, ms1mx3.0/17, Error ellipse: s-maj=43.7km s-min=17.0km az=77.0*

*BJI **09** 01:57:07.6, 0.90N×129.09E, h91^{km}, mB4.9, mb4.7*

*NEIC **09** 01:57:09.7±2.1, 1.21N×128.95E, h72^{km}±20^{km}, mb4.6/17, Error ellipse: s-maj=15.0km s-min=6.6km az=70.0*

ISC 09 01:57:07.7±3.2**, 1.21N**±0.07×**129.0E**±0.1**, h69^{km}**±30^{km}**, n35, σ0^{s}84**/33**, mb4.5**/25**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	13.60	291	P	P	02 00 19.3	+0.2
KSM	Kuching	18.65	271	eP	P	02 01 22.4	-0.3
FITZ	Fitzroy Crossi	19.47	190	P	P	02 01 29.4	-2.3
	0.1nm,0.3s,baz=2.5,slow=13,SNR=3.6						
WRAB	Tennant Creek	21.67	166	eP	P	02 01 54.2	-0.1
	18nm,0.9s,mb4.4						
WRA	Warramunga Arr	21.67	166	P	P	02 01 54.7	+0.3
	10nm,0.8s,mb4.2,baz=344,slow=11,SNR=32						
MBWA	Marble Bar	24.00	202	eP	P	02 02 17.0	-0.1
	12nm,1.0s,mb4.2						
QIZ	Qiongzhong	25.78	315	eP	P	02 02 35.0	+0.9
	7.1nm,0.8s,mb4.2						
CTA	Charters Tower	27.12	142	LR	LR	02 14 58.0	
	comp=Z,151nm,18.3s,baz=47,slow=40						
CMAR	Chiang Mai Arr	34.08	302	P	P	02 03 48.8	+0.9
	1.9nm,0.9s,mb3.9,baz=126,slow=7.8,SNR=9.2						
ENH	Enshi	34.31	329	eP	P	02 03 48.7	-1.1
	11nm,0.9s,mb4.7						
STKA	Stephens Creek	35.02	161	P	P	02 03 55.7	0.0
	2.8nm,0.8s,mb4.1,baz=340,slow=8.1,SNR=3.7						
STKA	Stephens Creek	35.02	161	P	P	02 03 55.7	0.0
NWAO	Narrogin (SRO)	35.71	197	P	P	02 04 03.4	+1.7
	77nm,1.4s,mb5.4						
KS15	Wonju Array Si	36.07	359	eP	P	02 04 04.9	+0.3
MJAR	Matsushiro Arr	36.18	13	P	P	02 04 05.0	-0.6
	1.0nm,0.4s,mb4.1,baz=187,slow=9.8,SNR=3.4						
XAN	Xi'an	37.66	332	P	P	02 04 17.9	-0.1
LZH	Lanzhou	41.79	329	P	P	02 04 53.5	+1.3
LZH				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.0						
SHL	Shillong	43.16	307	i P	P	02 05 05.0	+1.5
MDJ	Mudanjiang	43.22	1	eP	P	02 05 03.9	+0.1
	comp=Z,16nm,1.1s,mb4.7						
ASAJ	Asahikawa	44.41	14	LR	LR	02 22 57.4	
	comp=Z,33nm,18.2s,baz=103,slow=35						
GTA	Gaotai	46.39	329	eP	P	02 05 29.9	+0.7
GUN	Gumba	49.01	307	eP	P	02 05 49.6	-0.1
	comp=Z,18nm,0.8s,mb5.1						
PKI	Pulchoki	49.24	306	eP	P	02 05 50.0	-1.5
	comp=Z,7.5nm,0.6s,mb4.8						
KKN	Kakani	49.44	306	eP	P	02 05 52.5	-0.5
	comp=Z,12nm,0.7s,mb4.9						
DMN	Daman	49.50	306	eP	P	02 05 52.8	-0.7
	comp=Z,33nm,1.1s,mb5.2						
GKN	Gorkha	50.04	306	eP	P	02 05 58.0	+0.3
	comp=Z,22nm,1.0s,mb5.0						
ULN	Ulaanbaatar	50.20	341	eP	P	02 05 58.6	0.0
	comp=Z,14nm,1.2s,mb4.8						
SONM	Songino Array	50.39	340	P	P	02 06 00.3	+0.2
	comp=Z,3.6nm,1.0s,mb4.3,baz=153,slow=8.3,SNR=16						
KOLN	Koldanda	50.79	306	eP	P	02 06 03.3	-0.1
	comp=Z,34nm,1.1s,mb5.3						
MKAR	Makanchi Array	60.88	325	P	P	02 07 15.2	-0.3
	comp=Z,2.0nm,0.5s,mb4.4,baz=119,slow=8.6,SNR=23						
CHKZ	Chkalovo	70.79	328	eP	P	02 08 17.7	-1.0
	comp=Z,4.5nm,1.3s,mb4.1						
ARU	Arti	78.24	328	P	P	02 09 00.8	-0.6
	comp=Z,2.5nm,0.7s,mb4.0						
VNDA	Vanda	80.67	173	eP	P	02 09 15.9	+1.6
	comp=Z,3.0nm,1.3s,mb4.0						
MAW	Mawson	82.19	201	P	P	02 09 21.7	-0.6
	comp=Z,2.6nm,0.9s,mb4.1,baz=345,slow=12,SNR=3.7						
MALT	Malatya	89.68	308	eP	P	02 09 59.1	-0.6
	comp=Z,1.4nm,0.8s,mb4.1						

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*ISK **09** 02:14:22.5, 39.35N×40.89E, h2^{km}, MD3.6*

*CSEM **09** 02:14:23.5±0.1, 39.34N×40.86E, h10^{km}, MD3.6, Error ellipse: s-maj=3.0km s-min=2.0km az=150.0*

ISC 09 02:14:23.3±0.9**, 39.36N**±0.04×**40.90E**±0.06**, h2^{km}**±9^{km}**, n18, σ0^{s}65**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BINT	Bingol	0.58	213	i PG	Pg	02 14 34.6	-0.2
BINT				i SG	Sg	02 14 43.3	+0.8
EZM	Erzurum	0.65	33	i PG	Pg	02 14 35.5	-0.8
EZM				i SG	Sg	02 14 46.2	+1.1
ERZM	Erzurum	0.66	33	i P	Pg	02 14 35.4	-0.9
BTMT	Batman	1.25	158	i PN	Pn	02 14 46.8	-1.0
KELT	Kelkit	1.49	302	i P	Pn	02 14 51.4	+0.2
BEST	Besiri	1.49	169	i P	Pn	02 14 51.4	+0.1
GUMT	Gumushane	1.55	316	PN	Pn	02 14 52.1	+0.1
DIY	Diyarbakir	1.55	200	ePN	Pn	02 14 52.7	+0.6
ELZG	Elazig	1.72	241	i P	Pn	02 14 55.1	+0.6
VANB	Van	2.09	111	ePN	Pn	02 15 00.1	+0.4
KARS	Kars	2.10	53	PN	Pn	02 15 00.0	+0.1
VANT	Van	2.15	114	ePN	Pn	02 14 59.4	-1.2
MYA	Malataya	2.19	243	ePN	Pn	02 15 00.6	-0.6
MALT	Malatya	2.19	242	ePN	Pn	02 15 00.6	-0.6
CLDR	Caldiran	2.36	94	ePN	Pn	02 15 04.2	+0.6
URFA	Urfa	2.51	221	ePN	Pn	02 15 05.6	-0.2
HKR	Hakkari	2.85	128	ePN	Pn	02 15 11.1	+0.4
GNI	Garni	3.07	74	ePN	Pn	02 15 14.3	+0.5

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*IDC **09** 02:32:06.7±1.3, 0.71N×123.04E, mb3.9/4, mb1 4.3/5, mb1mx3.9/18, mbtmp4.0/5, ML4.7/1, Error ellipse: s-maj=74.1km s-min=20.0km az=64.0*

*NEIC **09** 02:32:08.3±0.6, 0.52N×122.68E, h10^{km}, mb4.7/7, Error ellipse: s-maj=39.3km s-min=8.5km az=59.0*

ISC 09 02:32:10.1±0.7**, 0.5N**±0.2×**122.6E**±0.3**, h33^{km}, n15, σ0^{s}72**/15**, mb4.5**/11**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.73	171	eP	P	02 36 28.3	-0.3
FITZ	Fitzroy Crossi	18.73	171	P	P	02 36 28.4	-0.2
	1.7nm,0.3s,baz=3.6,slow=9.0,SNR=30						
WRAB	Tennant Creek	23.34	151	eP	P	02 37 16.9	+0.4
	1.5nm,0.5s,mb3.7						
WRA	Warramunga Arr	23.34	151	P	P	02 37 16.8	+0.2
	1.5nm,0.5s,mb3.7,baz=328,slow=11,SNR=44						
WB2	Warramunga Arr	23.35	151	eP	P	02 37 16.4	-0.2
CMAR	Chiang Mai Arr	29.31	309	P	P	02 38 13.7	+1.7
	2.8nm,0.8s,mb4.1,baz=127,slow=7.1,SNR=11						
ENH	Enshi	32.13	338	eP	P	02 38 38.0	+1.2
	11nm,0.9s,mb4.7						
GUN	Gumba	44.51	311	eP	P	02 40 20.8	+0.3
PKI	Pulchoki	44.69	310	eP	P	02 40 21.7	-0.3
	9.2nm,0.5s,mb4.9						
KKN	Kakani	44.90	310	eP	P	02 40 23.4	-0.2
	12nm,0.7s,mb4.8						
DMN	Daman	44.94	310	eP	P	02 40 23.9	-0.1
	12nm,0.5s,mb5.0						
GKN	Gorkha	45.50	310	eP	P	02 40 27.9	-0.5
	16nm,0.5s,mb5.1						
KOLN	Koldanda	46.18	309	eP	P	02 40 33.5	-0.3
	26nm,0.6s,mb5.4						
SONM	Songino Array	49.20	346	P	P	02 40 56.7	-0.4
	0.4nm,0.6s,mb3.6,baz=153,slow=6.4,SNR=2.9						
MKAR	Makanchi Array	57.99	328	P	P	02 42 00.4	-1.5
	1.1nm,0.3s,mb4.3,baz=116,slow=8.3,SNR=15						

CSEM ***09*** *02:44:25.6±0.0, 61.87N×26.62W, h8^{km}, mb4.6/63, Ms3.6, Error ellipse: s-maj=3.4km s-min=1.4km az=20.0*

MOS ***09*** *02:44:26.6±1.0, 61.86N×26.62W, h10^{km}, mb4.6/51, Error ellipse: s-maj=9.1km s-min=5.6km az=122.8*

IDC ***09*** *02:44:27.1±0.4, 61.97N×26.66W, mb4.2/27, mb1 4.3/30, mb1mx4.2/33, mbtmp4.1/30, ML3.2/3, MS3.6/16, Ms1 3.6/16, ms1mx3.5/30, Error ellipse: s-maj=15.6km s-min=9.8km az=178.0*

BJI ***09*** *02:44:28.2, 62.74N×26.85W, h9^{km}, mB5.0, mb4.8, Ms5.0, Msz4.7*

NEIC ***09*** *02:44:28.4±0.2, 61.93N×26.58W, h10^{km}, mb4.6/69, Error ellipse: s-maj=6.1km s-min=2.8km az=201.0*

ZUR_RM ***09*** *02:44:28, 61.93N×26.58W, h12^{km}, Mw4.5/11, Moment Tensor Solution. s11 Moment tensor: Scale 10^{15}Nm; M_{rr}-7.60; $M_{\theta\theta}$2.52; $M_{\phi\phi}$5.08; $M_{r\theta}$0.15; $M_{\theta\phi}$1.30; $M_{\phi r}$0.17; Best double couple: $M_0$6.62×10^{15} NP1:ϕ_s203°, δ46°, λ-89°. NP2:ϕ_s22°, δ44°, λ-91°. Principal axes: T 5.628, Plg1°, Azm293°; N 1.975, Plg0°, Azm23°; P -7.604, Plg89°, Azm137°;*

ISC 09 02:44:25.5±2.0**, 61.92N**±0.04×**26.63W**±0.05**, h1**^{km}±12^{km}**, n299,** σ**1**^{s}**11**/296**, mb4.4**/94**, MS3.7**/22**, 4C-7D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	Scoresbysund	8.80	10	*i* P	P	02 46 33.6	-3.1
SCO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SCO	Scoresbysund	8.80	10	*i* P	P	02 46 33.6	-3.1
	comp=Z,8.8nm,0.9s						
SCO				*i* S	Sn	02 48 49.0	+31
JMIC	Jan Mayen	11.56	31	LR	LR	02 50 31.3	
	comp=Z,177nm,20.4s,baz=276,slow=32						
SUMG	Summit	11.60	342	*e*P	P	02 47 12.8	-2.2
	comp=Z,38nm,1.4s						
ESK	Eskdalemuir	13.82	108	*e*P	P	02 47 43.5	-1.0
ESK				pmax	pmax		
	comp=Z,26nm,1.3s						
ESK	Eskdalemuir	13.82	108	*e*P	P	02 47 43.5	-1.1
	comp=Z,26nm,1.3s						
ESK	Eskdalemuir	13.82	108	*e*P	P	02 47 43.5	-1.0
	comp=Z,26nm,1.3s						
EKA	Eskdalemuir Ar	13.83	108	Pn	P	02 47 44.0	-0.6
	comp=Z,0.1nm,0.3s,baz=307,slow=12,SNR=7.2						
DAG	Danmarks Havn	15.16	7	*e*P	P	02 48 03.0	+1.1
DAG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DAG	Danmarks Havn	15.16	7	*e*P	P	02 48 03.0	+1.1
	comp=Z,7.6nm,1.1s						
DAG	Danmarks Havn	15.16	7	*i* P	P	02 48 03.0	+1.1
	comp=Z,7.6nm,1.1s						
NOA	NORSAR Array B	17.93	76	P	P	02 48 35.6	-1.5
	comp=Z,0.0nm,0.3s,baz=80,slow=12,SNR=3.2						
NOA				LR	LR	02 55 08.9	
	comp=Z,140nm,19.1s,baz=295,slow=36						
ROSF	Rostrenen	18.91	125	*e*P	P	02 48 48.6	-0.8
	comp=Z,56nm,1.3s						
ROSF	Rostrenen	18.91	125	*e*P	P	02 48 48.6	-0.8
ROSF				pmax	pmax		
	comp=Z,28nm,1.3s						
FRB	Frobisher Bay	18.98	294	LR	LR	02 55 16.6	
	comp=Z,379nm,19.6s,baz=239,slow=34						
SGMF	Saint Gilles	19.26	124	*e*P	P	02 48 53.3	-0.2
	comp=Z,62nm,1.5s						
SGMF	Saint Gilles	19.26	124	*e*P	P	02 48 53.3	-0.2
SGMF				pmax	pmax		
	comp=Z,31nm,1.5s						
QUIF	Quistinic	19.30	126	*e*P	P	02 48 53.7	-0.3
	comp=Z,40nm,1.2s						
QUIF	Quistinic	19.30	126	*e*P	P	02 48 53.7	-0.3
QUIF				pmax	pmax		
	comp=Z,20nm,1.2s						
HFS	Hagfors	19.39	77	P	P	02 48 54.9	-0.1
	comp=Z,0.0nm,0.3s,baz=294,slow=14,SNR=4.2						
HFS				LR	LR	02 55 45.3	
	comp=Z,181nm,20.0s,baz=248,slow=35						
FLN	La Foliniere	19.68	120	*e*P	P	02 48 57.5	-0.9
	comp=Z,104nm,1.6s						
FLN				*e*R			
	comp=Z,354nm,17.2s						
GRR	Gorron	19.82	121	*e*P	P	02 48 58.3	-1.7
	comp=Z,48nm,1.4s						
GRR	Gorron	19.82	121	*e*P	P	02 48 58.3	-1.7
GRR				pmax	pmax		
	comp=Z,24nm,1.4s						
LDF	La Druitiere	19.96	120	*e*P	P	02 49 00.0	-1.6
	comp=Z,83nm,1.7s						
LDF	La Druitiere	19.96	120	*e*P	P	02 49 00.0	-1.6
LDF				pmax	pmax		
	comp=Z,41nm,1.7s						
WTSB	Winterswijk	20.54	104	⇓*e*P	P	02 49 08.6	+1.0
	comp=Z,26nm,1.4s						
KBS	Kingsbay	20.63	20	*e*P	P	02 49 10.3	+1.9
KBS				pmax	pmax		
	comp=Z,23nm,1.2s						
KBS	Kingsbay	20.63	20	*e*P	P	02 49 10.3	+2.0
	comp=Z,23nm,1.2s						
KBS	Kingsbay	20.63	20	*e*P	P	02 49 10.3	+1.9
	comp=Z,23nm,1.2s						
BAIF	Baives	20.70	111	*e*P	P	02 49 08.4	-0.9
DOU	Dourbes	20.85	110	P	P	02 49 11.0	+0.2
GIVF	Givet	20.94	110	*e*P	P	02 49 11.0	-0.8
HGN	Heimansgroeve	20.97	107	*e*P	P	02 49 12.2	+0.2
	comp=Z,15nm,1.4s						
HGN				*e*S	S	02 53 06.2	+4.6
MEM	Membach	21.11	107	P	P	02 49 13.6	+0.1
MFF	Saint Martin d	21.55	123	*e*P	P	02 49 17.2	-0.8
	comp=Z,61nm,1.4s,mb4.5						
MFF	Saint Martin d	21.55	123	*e*P	P	02 49 17.2	-0.8
MFF				pmax	pmax		
	comp=Z,30nm,1.4s,mb4.5						
SCHQ	Schefferville	21.93	269	P	P	02 49 21.7	-0.1
	comp=Z,5.0nm,0.8s,mb4.0,baz=55,slow=9.4,SNR=5.3						
SCHQ				LR	LR	02 57 00.3	
	comp=Z,79nm,18.5s,MS3.2,baz=28,slow=34						
RGN	Rugen	21.98	91	P	P	02 49 18.9	-3.3
	comp=Z,75nm,1.0s,mb5.1						
ARCES	ARCESS Array B	22.05	48	P	P	02 49 21.0	-1.9
	comp=Z,14nm,1.2s,mb4.3,baz=288,slow=8.6,SNR=5.8						
ABH	Alteburg	22.32	107	*e*P	P	02 49 27.4	+1.7
KEV	Kevo	22.55	47	*e*p	P	02 49 27.9	+0.3
LOR	Lormes	22.66	116	*e*P	P	02 49 28.0	-0.9
	comp=Z,75nm,1.3s,mb4.6						
LOR				*e*R			
	comp=Z,473nm,18.8s						
LOR	Lormes	22.66	116	*e*P	P	02 49 28.0	-0.9
LOR				pmax	pmax		
	comp=Z,37nm,1.3s,mb4.7						
LOR				MLR	MLR		
	comp=Z,470nm,18.8s,MS4.0						
SSF	Saint Saulge	22.68	117	*e*P	P	02 49 28.0	-1.1
SSF				pmax	pmax		
	comp=Z,30nm,1.4s,mb4.5						
SSF	Saint Saulge	22.68	117	*e*P	P	02 49 28.0	-1.1
	comp=Z,30nm,1.4s,mb4.5						
TCF	Toulx Ste Croi	22.76	120	*e*P	P	02 49 29.4	-0.5
	comp=Z,55nm,1.3s,mb4.5						
TCF	Toulx Ste Croi	22.76	120	*e*P	P	02 49 29.4	-0.5
TCF				pmax	pmax		
	comp=Z,28nm,1.3s,mb4.5						
BGF	Bois d'Agland	22.80	119	*e*P	P	02 49 29.7	-0.6
	comp=Z,29nm,1.0s,mb4.4						
BGF	Bois d'Agland	22.80	119	*e*P	P	02 49 29.7	-0.6
BGF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.4						
AVF	Avril sur Loir	22.83	118	*e*P	P	02 49 30.0	-0.5
	comp=Z,32nm,1.2s,mb4.3						
AVF	Avril sur Loir	22.83	118	*e*P	P	02 49 30.0	-0.5
AVF				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.3						
THEF	They Montfort	22.85	112	*e*P	P	02 49 32.7	+2.0
TOD	Tromm	23.09	106	*e*P	P	02 49 35.1	+2.0
LANF	Langenberg	23.09	108	*e*P	P	02 49 36.0	+2.9
SMF	Signal de Mont	23.15	117	*e*P	P	02 49 33.5	-0.2
	comp=Z,42nm,1.1s,mb4.5						
SMF	Signal de Mont	23.15	117	*e*P	P	02 49 33.5	-0.2
SMF				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.5						
HAU	Haudompre	23.17	112	*e*P	P	02 49 32.7	-1.2
	comp=Z,92nm,1.4s,mb4.7						
HAU				*e*R			
	comp=Z,182nm,19.7s						
HAU	Haudompre	23.17	112	*e*P	P	02 49 32.7	-1.2
HAU				pmax	pmax		
	comp=Z,46nm,1.4s,mb4.7						
HAU				MLR	MLR		
	comp=Z,180nm,19.7s,MS3.5						
LFF	La Frestale	23.27	124	*e*P	P	02 49 34.6	-0.3
	comp=Z,59nm,1.4s,mb4.5						
LFF	La Frestale	23.27	124	*e*P	P	02 49 34.6	-0.3
LFF				pmax	pmax		
	comp=Z,30nm,1.4s,mb4.5						
CDF	Champ du Feu	23.28	110	*e*P	P	02 49 34.2	-0.7
	comp=Z,63nm,1.4s,mb4.5						
CDF	Champ du Feu	23.28	110	*e*P	P	02 49 34.2	-0.7
CDF				pmax	pmax		
	comp=Z,31nm,1.4s,mb4.5						
RJF	Les Rejaudoux	23.28	123	*e*P	P	02 49 34.2	-0.8
	comp=Z,52nm,1.5s,mb4.5						
RJF				*e*R			
	comp=Z,179nm,18.0s						
RJF	Les Rejaudoux	23.28	123	*e*P	P	02 49 34.2	-0.8
RJF				pmax	pmax		
	comp=Z,26nm,1.5s,mb4.4						
RJF				MLR	MLR		
	comp=Z,180nm,18.0s,MS3.6						
WLS	Welschbruch	23.31	110	*e*P	P	02 49 37.9	+2.7
AGO	Saint Agoulin	23.32	119	*e*P	P	02 49 39.9	+4.5
STR	Strasbourg	23.37	109	*e*P	P	02 49 39.1	+3.3
ECH	Echery	23.37	110	*e*P	P	02 49 37.4	+1.6
RUE	Ruedersdorf	23.46	95	*e*P	P	02 49 36.9	+0.3
	comp=Z,70nm,1.4s,mb4.9						
RUE	Ruedersdorf	23.46	95	*e*P	P	02 49 36.9	+0.3
	comp=Z,70nm,1.4s,mb4.9						
HINF	Hinteralfeld	23.54	111	*e*P	P	02 49 36.1	-1.3
PLDF	La Plantade	23.59	119	*e*P	P	02 49 41.5	+3.5
MOF	Molkenrain	23.63	111	*e*P	P	02 49 39.8	+1.4
MOX	Moxa	23.66	101	*e*P	P	02 49 40.9	+2.3
MOX				pmax	pmax		
	comp=Z,30nm,1.6s,mb4.5						
MOX				MLR	MLR		
	comp=Z,200nm,16.0s,MS3.7						
MOX	Moxa	23.66	101	*e*P	P	02 49 40.9	+2.3
	comp=Z,30nm,1.6s,mb4.5						
MOX				LR	LR		
	comp=Z,200nm,16.0s,MS3.7						
MOX	Moxa	23.66	101	*i* P	P	02 49 40.9	+2.3
	comp=Z,logA/T=1.3,mb4.5						
MOX				L		03 00 13.0	
CAF	Calviac	23.81	122	*e*P	P	02 49 40.0	-0.1
	comp=Z,55nm,1.2s,mb4.5						
CAF	Calviac	23.81	122	*e*P	P	02 49 40.0	-0.1
CAF				pmax	pmax		
	comp=Z,27nm,1.2s,mb4.5						
CLL	Collm	23.86	98	⇓*i*P	P	02 49 41.3	+0.8
CLL				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.2						
CLL	Collm	23.86	98	⇓P	P	02 49 41.3	+0.8
	comp=Z,logA/T=1.0,mb4.2						
CLL	Collm	23.86	98	⇓*i*P	P	02 49 41.3	+0.8
	comp=Z,10.0nm,1.1s,mb4.2						
STU	Stuttgart	23.87	107	*e*P	P	02 49 42.3	+1.6
STU				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.6						
STU	Stuttgart	23.87	107	*e*P	P	02 49 42.3	+1.6
	comp=Z,26nm,1.0s,mb4.6						
STU	Stuttgart	23.87	107	*e*P	P	02 49 42.3	+1.6
	comp=Z,26nm,1.0s,mb4.6						
FELD	Feldberg	24.00	110	*e*P	P	02 49 44.3	+2.3
LBL	Lubilhac	24.04	120	*e*P	P	02 49 45.8	+3.5
SJPF	Ste Jean	24.09	130	*e*P	P	02 49 42.4	-0.5
CABF	La Chapelle	24.13	114	*e*P	P	02 49 42.4	-0.8
	comp=Z,33nm,1.2s,mb4.3						
CABF	La Chapelle	24.13	114	*e*P	P	02 49 42.4	-0.8
CABF				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.3						
GRA1	Grafenberg Arr	24.14	103	*e*P	P	02 49 45.1	+1.8
	comp=Z,13nm,1.2s,mb4.2						
GRA1				LR	LR		
	comp=Z,200nm,18.5s,MS3.6						
GRF	Grafenberg Arr	24.14	103	*e*P	P	02 49 45.1	+1.8
GRF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.2						
GRF				MLR	MLR		
	comp=Z,200nm,18.5s,MS3.6						
GRF	Grafenberg Arr	24.14	103	*e*P	P	02 49 45.1	+1.8
GRF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.2						
GRF				MLR	MLR		
	comp=Z,200nm,18.5s,MS3.6						
GRF	Grafenberg Arr	24.14	103	*e*P	P	02 49 45.1	+1.8
	comp=Z,13nm,1.2s,mb4.2						
GRF				LR	LR		
	comp=Z,200nm,18.5s,MS3.6						
GRF	Grafenberg Arr	24.14	103	*e*P	P	02 49 45.1	+1.8
	comp=Z,13nm,1.2s,mb4.2						
SPAK	Spaichingen	24.18	109	*e*P	P	02 49 45.2	+1.5
KAF	Kangasniemi	24.27	66	*e*p	P	02 49 49.3	+4.9
NKC	Novy Kostel	24.33	101	*e*P	P	02 49 46.3	+1.2
NKC				AMS	AMS	03 00 20.0	
	comp=Z,200nm,17.4s						
FINES	FINESS Array B	24.44	67	P	P	02 49 46.2	+0.1
	comp=Z,3.1nm,0.9s,mb3.8,baz=307,slow=9.5,SNR=8.3						
FINES				LR	LR	02 58 56.0	
	comp=Z,68nm,19.5s,MS3.1,baz=175,slow=36						
FINES	FINESS Array B	24.44	67	P	P	02 49 46.2	+0.1
FINES				LR	LR	02 58 56.0	
FINES	FINESS Array B	24.44	67	P	P	02 49 46.2	+0.1
ETSF	Etsaut	24.52	129	*e*P	P	02 49 46.8	-0.3
BRG	Berggiesshubel	24.59	98	*i* P	P	02 49 49.9	+2.2
BRG				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.3						
BRG				MLR	MLR		
	comp=N,140nm,15.4s,MS3.7						
BRG				MLR	MLR		
	comp=E,100nm,15.4s,MS3.7						
BRG				MLR	MLR		
	comp=Z,180nm,15.4s,MS3.7						
BRG	Berggiesshubel	24.59	98	*i* P	P	02 49 49.9	+2.2
	comp=Z,11nm,1.2s,mb4.2						
BRG				LR	LR		
	comp=Z,180nm,15.4s,MS3.7						
BRG	Berggiesshubel	24.59	98	*i* P	P	02 49 49.9	+2.2
	comp=Z,11nm,1.2s,mb4.2						
EPF	Esparros	24.74	127	*e*P	P	02 49 47.8	-1.4
VIVF	Saint-Julien-l	24.93	119	*e*P	P	02 49 50.4	-0.6
PVCC	Panska Ves	25.12	98	AMS	AMS	02 58 50.0	
	comp=Z,100nm,25.2s						
MTLF	Montolieu	25.20	124	*e*P	P	02 49 52.3	-1.2
	comp=Z,9.4nm,0.9s,mb4.0						
MTLF	Montolieu	25.20	124	*e*P	P	02 49 52.3	-1.2
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
LASF	Ste Croix	25.23	121	*e*P	P	02 49 52.8	-1.1
	comp=Z,48nm,1.4s,mb4.5						
LPL	La Plagne	25.27	115	*e*P	P	02 49 53.9	-0.3
	comp=Z,35nm,1.3s,mb4.4						
LPL	La Plagne	25.27	115	*e*P	P	02 49 53.9	-0.3
LPL				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.4						
LPG	La Plagne	25.29	115	*e*P	P	02 49 54.1	-0.3
	comp=Z,29nm,1.3s,mb4.3						
LPG	La Plagne	25.29	115	*e*P	P	02 49 54.1	-0.3
LPG				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.3						
ORIF	Oris-en-Rattie	25.38	117	*e*P	P	02 49 54.7	-0.6
	comp=Z,28nm,1.2s,mb4.4						
ORIF				*e*R			
	comp=Z,348nm,20.0s						
PRU	Pruhonice	25.47	99	*e*P	P	02 49 56.1	0.0
PRU				AMS	AMS	03 00 00.0	
	comp=Z,200nm,20.0s						
KHC	Kasperske Hory	25.63	101	*e*P	P	02 49 58.4	+0.9
KHC				AMS	AMS	03 00 50.0	
	comp=Z,200nm,15.9s						
DAVOX	Davos	25.67	109	P	P	02 49 59.1	+1.2
	comp=Z,4.8nm,1.0s,mb4.0,baz=332,slow=15,SNR=3.5						
DAVOX				LR	LR	02 59 10.8	
	comp=Z,75nm,19.1s,MS3.2,baz=264,slow=34						
UPC	Upice	25.81	97	*e*P	P	02 49 58.9	-0.3
GERES	GERESS Array B	25.89	102	P	P	02 50 00.6	+0.6
	comp=Z,1.7nm,0.9s,mb3.6,baz=321,slow=8.5,SNR=11						
GERES				LR	LR	03 00 02.8	
	comp=Z,152nm,20.1s,MS3.5,baz=356,slow=36						
MBDF	Montbardon	25.91	116	*e*P	P	02 49 59.5	-0.8
	comp=Z,29nm,1.2s,mb4.4						
MBDF	Montbardon	25.91	116	*e*P	P	02 49 59.5	-0.8
MBDF				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.4						
DPC	Dobruska-Polom	26.06	97	*e*P	P	02 50 02.4	+0.8
DPC				AMS	AMS	02 59 40.0	
	comp=Z,200nm,22.7s						
ESDC	Sonseca Array	26.21	138	P	P	02 50 04.5	+1.4
	comp=Z,3.6nm,1.0s,mb3.9,baz=338,slow=9.2,SNR=12						
RES	Resolute Bay	26.38	326	*e*P	P	02 50 05.0	+0.7
RES				pmax	pmax		
	comp=Z,25nm,1.9s,mb4.4						
RES	Resolute Bay	26.38	326	*e*P	P	02 50 05.0	+0.7
	comp=Z,25nm,1.9s,mb4.4						
RES	Resolute Bay	26.38	326	*e*P	P	02 50 05.0	+0.7
	comp=Z,25nm,1.9s,mb4.4						
SBF	Sospel	26.89	116	*e*P	P	02 50 08.1	-1.2
VRAC	Vranov	26.91	98	P	P	02 50 09.7	+0.3
	comp=Z,1.6nm,0.5s,mb3.8,baz=355,slow=9.1,SNR=3.6						
LMR	La Mourre	26.94	118	*e*P	P	02 50 08.8	-0.9
	comp=Z,66nm,1.6s,mb4.6						
LMR	La Mourre	26.94	118	*e*P	P	02 50 08.8	-0.9
LMR				pmax	pmax		
	comp=Z,33nm,1.6s,mb4.6						
MORC	Moravsky Berou	27.03	96	*e*P	P	02 50 09.5	-1.0
MORC				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
MORC	Moravsky Berou	27.03	96	*e*P	P	02 50 09.5	-0.9
	comp=Z,6.5nm,1.0s,mb4.1						
MORC	Moravsky Berou	27.03	96	*e*P	P	02 50 09.5	-1.0
	comp=Z,6.5nm,1.0s,mb4.1						
OKC	Ostrava-Krasne	27.27	96	*e*P	P	02 50 12.9	+0.2
OKC				AMS	AMS	03 01 30.0	
	comp=Z,100nm,17.4s						
PSZ	Piszkesteto	29.44	97	P	P	02 50 32.7	+0.4
PSZ				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.4						
PSZ	Piszkesteto	29.44	97	P	P	02 50 32.7	+0.4
	comp=Z,9.5nm,1.2s,mb4.4						
PSZ	Piszkesteto	29.44	97	P	P	02 50 32.7	+0.4
	comp=Z,9.5nm,1.2s,mb4.4						
KWP	Kalwaria	29.57	92	*e*P	P	02 50 33.2	-0.2
KWP				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
KWP	Kalwaria	29.57	92	*e*P	P	02 50 33.2	-0.2
	comp=Z,10nm,1.0s,mb4.5						
KWP	Kalwaria	29.57	92	*e*P	P	02 50 33.2	-0.2
	comp=Z,10nm,1.0s,mb4.5						
KOLS	Kolonicke sedl	29.84	93	*e*P	P	02 50 33.7	-2.2
AKASG	Malin Array Be	31.92	85	P	P	02 50 53.5	-0.7
	comp=Z,1.2nm,0.6s,mb3.9,baz=311,slow=8.8,SNR=12						
FCC	Fort Churchill	32.18	295	*e*P	P	02 50 55.0	-1.4
FCC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
FCC	Fort Churchill	32.18	295	*e*P	P	02 50 55.0	-1.4
	comp=Z,2.7nm,0.8s,mb4.1						
FCC	Fort Churchill	32.18	295	*e*P	P	02 50 55.0	-1.4
	comp=Z,2.7nm,0.8s,mb4.1						
OBN	Obninsk	32.47	73	⇓*e*P	P	02 50 58.2	-0.8
OBN				*e*S	S	02 56 13.1	-0.5
OBN				*e*SS	SS	02 58 10.1	+1.5
OBN				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.5						
OBN	Obninsk	32.47	73	P	P	02 50 58.0	-0.9
	comp=Z,21nm,1.4s,mb4.8						
OBN	Obninsk	32.47	73	P	P	02 50 58.0	-1.0
	comp=Z,21nm,1.4s,mb4.8						
OBN				*e*S	S	02 56 13.1	-0.5
	comp=Z,100nm,18.0s						
YKW3	Yellowknife Ar	37.96	311	P	P	02 51 44.2	-1.6
YKW3	Yellowknife Ar	37.96	311	P	P	02 51 44.2	-1.5
YKA	Yellowknife Ar	38.00	311	*i* P	P	02 51 46.3	+0.2
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	38.00	311	P	P	02 51 45.5	-0.6
	comp=Z,2.0nm,0.8s,mb3.9,baz=49,slow=9.0,SNR=8.0						
YKA	Yellowknife Ar	38.00	311	P	P	02 51 45.5	-0.6
EYMN	Ely	38.07	279	P	P	02 51 50.0	+3.2
	comp=Z,16nm,1.2s,mb4.6						
ULM	Lac du Bonnet	38.46	285	P	P	02 51 49.4	-0.7
	comp=Z,1.6nm,0.6s,mb3.9,baz=49,slow=7.8,SNR=2.9						
ULM				LR	LR	03 06 21.3	
	comp=Z,88nm,21.2s,MS3.5,baz=332,slow=34						
ULM	Lac du Bonnet	38.46	285	P	P	02 51 49.3	-0.7
INK	Inuvik	39.94	326	*e*P	P	02 52 01.0	-1.2
INK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
INK	Inuvik	39.94	326	*e*P	P	02 52 00.9	-1.3
	comp=Z,7.9nm,1.3s,mb4.3						
INK	Inuvik	39.94	326	*e*P	P	02 52 00.9	-1.3
	comp=Z,7.8nm,1.3s,mb4.3						
ARU	Arti	41.01	58	⇑*i*P	P	02 52 12.2	+1.1
ARU				*e*		02 53 47.1	
ARU				*e*		02 54 10.5	
ARU				*e*S	S	02 58 22.0	-2.1
ARU				*e*SS	SS	03 01 22.8	+1.9
ARU				*e*		03 02 14.0	
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
ARU	Arti	41.01	58	*e*P	P	02 52 11.4	+0.2
	comp=Z,8.7nm,1.2s,mb4.3						
ARU	Arti	41.01	58	*e*P	P	02 52 11.4	+0.3
	comp=Z,8.7nm,1.2s,mb4.3						
ARU	Arti	41.01	58	*e*PcP	PcP	02 54 10.5	-1.4
ARU				*e*S	S	02 58 22.0	-2.1
ELN	Prospectdale	41.23	259	*e*P	P	02 52 13.6	+0.5
ELN	Prospectdale	41.23	259	*e*P	P	02 52 13.6	+0.4
SOC	Sochi	42.00	84	*e*P	P	02 52 19.7	+0.5
SOC				*e*		02 54 12.9	
SOC				*e*PPP	PPP	02 54 27.1	-3.7
SOC				*e*S	S	02 58 35.4	-3.4
SOC				*e*SS	SS	03 01 46.1	+6.5
SOC				*e*SSS	SSS	03 02 20.3	-2.4
SOC				pmax	pmax		
	comp=N,6.0nm,0.7s						
SOC				pmax	pmax		
	comp=E,8.0nm,0.7s						
SOC				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.6						
SOC				MLR	MLR		
	comp=Z,177nm,21.0s,MS3.9						
SOC				MLR	MLR		
	comp=N,99nm,23.0s,MS3.8						
SOC				MLR	MLR		
	comp=E,82nm,21.0s,MS3.8						
SOC	Sochi	42.00	84	*e*PcP	PcP	02 54 12.9	-2.2
BRTR	Keskin Array B	42.12	93	P	P	02 52 21.4	+1.2
	comp=E,1.8nm,0.8s,mb3.8,baz=331,slow=5.9,SNR=7.3						
WCI	Wyandotte Cave	43.02	265	*e*P	P	02 52 28.8	+1.1
WCI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
WCI	Wyandotte Cave	43.02	265	*e*P	P	02 52 28.8	+1.1
	comp=Z,9.5nm,0.8s,mb4.6						
WCI	Wyandotte Cave	43.02	265	*e*P	P	02 52 28.8	+1.1
	comp=Z,9.4nm,0.8s,mb4.6						
DAWY	Dawson	44.70	325	*e*P	P	02 52 41.5	+0.5
DAWY	Dawson	44.70	325	*e*P	P	02 52 41.5	+0.5
FVM	French Village	45.17	269	*e*P	P	02 52 45.3	+0.2
FVM				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
FVM	French Village	45.17	269	*e*P	P	02 52 45.3	+0.2
	comp=Z,11nm,1.0s,mb4.7						
FVM	French Village	45.17	269	*e*P	P	02 52 45.3	+0.2
	comp=Z,11nm,1.0s,mb4.7						
MALT	Malatya	45.50	90	P	P	02 52 49.3	+1.6
MALT				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
MALT	Malatya	45.50	90	P	P	02 52 49.3	+1.6
	comp=Z,8.7nm,1.4s,mb4.5						
MALT	Malatya	45.50	90	P	P	02 52 49.3	+1.6
	comp=Z,8.6nm,1.4s,mb4.5						
TIXI	Tiksi	45.63	11	⇓*e*P	P	02 52 49.7	+1.4
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
TIXI	Tiksi	45.63	11	*e*P	P	02 52 49.7	+1.4
	comp=Z,6.0nm,1.3s,mb4.4						
LAO	LASA Array	45.75	289	*e*P	P	02 52 51.2	+1.7
	comp=Z,18nm,1.0s,mb5.0						
LAO	LASA Array	45.75	289	*e*P	P	02 52 51.2	+1.7
	comp=Z,18nm,1.0s,mb5.0						
ILAR	Eielson Array	46.07	329	P	P	02 52 52.4	+0.6
	comp=Z,2.1nm,0.9s,mb4.0,baz=24,slow=7.2,SNR=15						
ILAR				PcP	PcP	02 54 27.2	-1.4
	comp=Z,1.2nm,0.8s,baz=1.1,slow=3.3,SNR=11						
ILAR				LR	LR	03 14 01.8	
	comp=Z,55nm,18.8s,MS3.5,baz=1.4,slow=39						
ILAR	Eielson Array	46.07	329	PcP	PcP	02 54 27.2	-1.5
COLA	College	46.22	330	*i* P	P	02 52 54.5	+1.5

COLA	College	46.22	330	P	P	02 52 52.6	-0.4
	comp=Z,7.8nm,1.0s,mb4.6						
COLA	College	46.22	330	P	P	02 52 52.6	-0.4
	comp=Z,7.8nm,1.0s,mb4.6						
PLAL	Pickwick Lake	46.49	264	*e*P	P	02 52 55.0	-0.6
	comp=Z,13nm,1.3s,mb4.7						
PLAL	Pickwick Lake	46.49	264	*e*P	P	02 52 55.0	-0.5
	comp=Z,13nm,1.3s,mb4.7						
IMA	Indian Mountai	46.52	333	*e*P	P	02 52 54.0	-1.4
IMA				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
IMA	Indian Mountai	46.52	333	*e*P	P	02 52 54.0	-1.4
	comp=Z,21nm,1.0s,mb5.0						
IMA	Indian Mountai	46.52	333	*e*P	P	02 52 54.0	-1.4
	comp=Z,21nm,1.0s,mb5.0						
RSSD	Black Hills	46.73	285	*e*P	P	02 52 58.4	+1.1
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
RSSD	Black Hills	46.73	285	*e*P	P	02 52 58.4	+1.1
	comp=Z,2.2nm,0.8s,mb4.1						
RSSD	Black Hills	46.73	285	*e*P	P	02 52 58.3	+1.0
	comp=Z,2.2nm,0.8s,mb4.1						
GNI	Garni	47.03	83	P	P	02 53 01.5	+1.8
GNI				pmax	pmax		
	comp=Z,19nm,1.4s						
GNI	Garni	47.03	83	P	P	02 53 01.5	+1.7
	comp=Z,19nm,1.4s,mb4.8						
GNI	Garni	47.03	83	P	P	02 53 01.5	+1.8
	comp=Z,19nm,1.4s,mb4.8						
MCK	McKinley	47.43	329	P	P	02 53 02.4	-0.2
LRAL	Lakeview Retre	47.59	261	*e*P	P	02 53 04.3	+0.1
	comp=Z,40nm,1.7s,mb5.2						
LRAL	Lakeview Retre	47.59	261	*e*P	P	02 53 04.3	0.0
	comp=Z,40nm,1.7s,mb5.2						
CHKZ	Chkalovo	47.73	53	*i* P	P	02 53 05.3	+0.2
CHKZ				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.7						
CHKZ	Chkalovo	47.73	53	*e*P	P	02 53 05.7	+0.6
	comp=Z,15nm,1.3s,mb4.9						
CHKZ	Chkalovo	47.73	53	*e*P	P	02 53 05.7	+0.6
	comp=Z,15nm,1.3s,mb4.9						
BVA0	Borovoye Array	48.15	54	*i* P	P	02 53 09.6	+1.2
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb4.0						
BVA0	Borovoye Array	48.15	54	*i* P	P	02 53 09.6	+1.2
	comp=Z,2.0nm,1.3s,mb4.0						
BVAR	Borovoye Array	48.15	54	P	P	02 53 09.8	+1.5
	comp=Z,4.7nm,1.0s,mb4.5,baz=315,slow=6.3,SNR=22						
HRY	Holter Researc	48.21	293	*e*P	P	02 53 09.6	+0.7
HRY	Holter Researc	48.21	293	*e*P	P	02 53 09.6	+0.7
BOZ	Bozeman (W)	48.95	292	*e*P	P	02 53 15.4	+0.8
BOZ				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
BOZ	Bozeman (W)	48.95	292	*e*P	P	02 53 15.4	+0.8
	comp=Z,9.2nm,1.2s,mb4.7						
BOZ	Bozeman (W)	48.95	292	*e*P	P	02 53 15.4	+0.8
	comp=Z,9.2nm,1.2s,mb4.7						
PHWY	Pilot Hill	49.59	284	P	P	02 53 18.5	-1.1
PHWY	Pilot Hill	49.59	284	P	P	02 53 18.5	-1.1
BILL	Bilibino	50.00	354	*i* P	P	02 53 21.4	-1.0
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
BILL	Bilibino	50.00	354	P	P	02 53 22.1	-0.3
BILL	Bilibino	50.00	354	P	P	02 53 22.1	-0.3
MCMT	McKenzie Canyo	50.12	292	*e*P	P	02 53 24.6	+0.9
MCMT				*e*PcP	PcP	02 54 42.0	-1.4
MCMT	McKenzie Canyo	50.12	292	*e*P	P	02 53 24.6	+0.9
MCMT	McKenzie Canyo	50.12	292	*e*PcP	PcP	02 54 42.0	-1.5
PDAR	Pinedale Array	50.29	288	P	P	02 53 24.8	-0.2
	comp=Z,4.7nm,0.8s,mb4.6,baz=59,slow=6.4,SNR=34						
PDAR				LR	LR	03 13 42.5	
	comp=Z,80nm,19.8s,MS3.7,baz=19,slow=35						
TPAW	Teton Pass	50.34	290	*e*P	P	02 53 25.6	+0.2
	comp=Z,7.5nm,1.1s,mb4.6						
TPAW	Teton Pass	50.34	290	*e*P	P	02 53 25.6	+0.2
	comp=Z,7.5nm,1.1s,mb4.6						
ISCO	Idaho Springs	50.85	283	*e*P	P	02 53 29.6	+0.3
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
ISCO	Idaho Springs	50.85	283	*e*P	P	02 53 29.6	+0.3
	comp=Z,3.7nm,1.0s,mb4.3						
ISCO	Idaho Springs	50.85	283	*e*P	P	02 53 29.6	+0.3
	comp=Z,3.7nm,1.0s,mb4.3						
NVS	Novosibirsk	51.27	44	*e*P	P	02 53 34.0	+1.8
WMOK	Wichita Mounta	51.75	273	*e*P	P	02 53 35.5	-0.7
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
WMOK	Wichita Mounta	51.75	273	*e*P	P	02 53 35.5	-0.6
	comp=Z,5.8nm,0.9s,mb4.5						
WMOK	Wichita Mounta	51.75	273	*e*P	P	02 53 35.5	-0.7
	comp=Z,5.8nm,0.9s,mb4.5						
HLID	Hailey	51.81	292	*e*P	P	02 53 37.9	+1.4
	comp=Z,1.3nm,0.7s,mb4.0						
HLID	Hailey	51.81	292	*e*P	P	02 53 37.9	+1.4
	comp=Z,1.3nm,0.7s,mb4.0						
BMO	Blue Mountains	52.03	296	*e*P	P	02 53 37.7	-0.4
	comp=Z,6.0nm,1.1s,mb4.4						
BMO	Blue Mountains	52.03	296	*e*P	P	02 53 37.7	-0.5
	comp=Z,6.0nm,1.1s,mb4.4						
HWUT	Hardware Ranch	52.12	289	*e*P	P	02 53 38.6	-0.2
	comp=Z,8.3nm,1.1s,mb4.6						
HWUT				*e*PcP	PcP	02 54 50.5	-0.4
PV01	Paradox Valley	53.56	284	*e*P	P	02 53 49.4	-0.2
PV01	Paradox Valley	53.56	284	*e*P	P	02 53 49.4	-0.2
PV10	Paradox Valley	53.58	284	*e*P	P	02 53 47.5	-2.3
PV10				*e*PcP	PcP	02 54 56.6	+0.2
PV10	Paradox Valley	53.58	284	*e*P	P	02 53 47.5	-2.2
DUG	Dugway	53.81	289	*e*P	P	02 53 53.1	+1.7
DUG				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.6						
DUG	Dugway	53.81	289	*e*P	P	02 53 53.1	+1.7
	comp=Z,12nm,1.5s,mb4.6						
DUG	Dugway	53.81	289	*e*P	P	02 53 53.1	+1.7
	comp=Z,12nm,1.5s,mb4.6						
ELK	Elko	54.45	291	*e*P	P	02 53 57.5	+1.4
ELK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ELK	Elko	54.45	291	*e*P	P	02 53 57.5	+1.4
	comp=Z,7.7nm,1.1s,mb4.5						
ELK	Elko	54.45	291	*e*P	P	02 53 57.5	+1.4
	comp=Z,7.7nm,1.1s,mb4.5						
MSU	Marysvale	54.89	287	P	P	02 53 58.0	-1.4
YAK	Yakutsk	55.06	13	*i* P	P	02 53 59.8	-0.5
ANMO	Albuquerque	55.18	280	⇑*e*P	P	02 54 02.8	+1.2
ANMO	Albuquerque	55.18	280	P	P	02 54 02.8	+1.2
	comp=Z,2.6nm,1.0s,mb4.2,baz=52,slow=9.5,SNR=7.5						
ANMO	Albuquerque	55.18	280	*e*P	P	02 54 02.3	+0.7
	comp=Z,5.8nm,1.2s,mb4.5						
ANMO	Albuquerque	55.18	280	*e*P	P	02 54 02.3	+0.7
	comp=Z,5.8nm,1.2s,mb4.5						
CPRX	Cap Rock	55.55	276	P	P	02 54 03.5	-0.7
CPRX	Cap Rock	55.55	276	P	P	02 54 03.5	-0.8
JCT	Junction City	55.75	271	*e*P	P	02 54 05.4	-0.3
JCT				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
JCT	Junction City	55.75	271	*e*P	P	02 54 05.4	-0.3
	comp=Z,8.9nm,0.8s,mb4.8						
JCT	Junction City	55.75	271	*e*P	P	02 54 05.4	-0.3
	comp=Z,8.9nm,0.8s,mb4.8						
BNM	Barren Site	55.92	280	*e*P	P	02 54 08.1	+1.2
BNM	Barren Site	55.92	280	*e*P	P	02 54 08.1	+1.2
GDL2	Guadalupe Moun	56.47	276	*e*P	P	02 54 10.9	0.0
GDL2	Guadalupe Moun	56.47	276	*e*P	P	02 54 10.9	0.0
WUAZ	Wupatki	56.99	284	*e*P	P	02 54 14.7	+0.1
	comp=Z,11nm,1.1s,mb4.8						
WUAZ	Wupatki	56.99	284	*e*P	P	02 54 14.7	+0.1
	comp=Z,11nm,1.1s,mb4.8						
MNTX	Cornudas Mount	57.36	277	*e*P	P	02 54 16.6	-0.7
	comp=Z,7.8nm,1.2s,mb4.6						
MNTX	Cornudas Mount	57.36	277	*e*P	P	02 54 16.6	-0.7
	comp=Z,7.8nm,1.2s,mb4.6						
DBIC	Dimbokro	57.45	154	P	P	02 54 17.1	-1.0
	comp=Z,4.6nm,0.9s,mb4.5,baz=298,slow=7.5,SNR=3.3						
DBIC	Dimbokro	57.45	154	*e*P	P	02 54 17.4	-0.7
DBIC	Dimbokro	57.45	154	*e*P	P	02 54 17.4	-0.7
MKAR	Makanchi Array	57.67	50	P	P	02 54 18.9	-0.3
	comp=Z,1.6nm,0.8s,mb4.1,baz=346,slow=5.0,SNR=10.0						
MKAR				LR	LR	03 17 18.3	
	comp=Z,33nm,18.9s,MS3.5,baz=196,slow=34						
NVAR	Mina Array Bea	57.69	292	P	P	02 54 18.6	-0.9
	comp=Z,0.4nm,0.3s,mb3.9,baz=80,slow=6.3,SNR=5.4						
NVAR				LR	LR	03 18 55.4	
	comp=Z,118nm,19.4s,MS4.0,baz=305,slow=36						
LTX	Lajitas	58.53	274	P	P	02 54 25.2	-0.3
TXAR	Lajitas Array	58.53	274	P	P	02 54 24.9	-0.6
	comp=Z,0.9nm,0.8s,mb3.8,baz=62,slow=6.9,SNR=13						
TXAR				LR	LR	03 19 26.1	
	comp=Z,143nm,18.4s,MS4.1,baz=315,slow=36						
TLY	Talaya	60.07	33	⇑*e*P	P	02 54 35.1	-0.7
TLY	Talaya	60.07	33	P	P	02 54 34.5	-1.2
TLY	Talaya	60.07	33	P	P	02 54 34.5	-1.3
ZAK	Zakamensk	61.16	34	*e*P	P	02 54 41.8	-1.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.3						
ZAK	Zakamensk	61.16	34	*e*P	P	02 54 41.8	-1.4
	comp=Z,3.0nm,1.3s,mb4.3						
SDV	Santo Domingo	61.87	231	P	P	02 54 46.7	-1.8
	comp=Z,1.4nm,0.3s,mb4.5,baz=65,slow=4.9,SNR=4.2						
SDV	Santo Domingo	61.87	231	P	P	02 54 46.8	-1.7
WMQ	Urumqi	62.17	48	*e*P	P	02 54 49.0	-1.2
WMQ				PCP	PcP	02 55 28.8	-1.2
WMQ				AMB	AMB		
	comp=Z,100nm,4.2s						
SONM	Songino Array	64.31	33	P	P	02 55 03.8	-0.2
	comp=Z,3.7nm,1.1s,mb4.3,baz=329,slow=4.8,SNR=17						
ULN	Ulaanbaatar	64.45	33	⇓*e*P	P	02 55 05.8	+0.8
ULN	Ulaanbaatar	64.45	33	*e*P	P	02 55 04.4	-0.5
	comp=Z,18nm,1.4s,mb4.9						
ULN	Ulaanbaatar	64.45	33	*e*P	P	02 55 04.4	-0.6
	comp=Z,18nm,1.4s,mb4.9						
HIA	Hailar	65.95	23	P	P	02 55 14.6	0.0
ROSC	El Rosal	66.96	233	P	P	02 55 23.4	+1.7
	comp=Z,2.3nm,0.4s,mb4.5,baz=92,slow=23,SNR=5.2						
GTA	Gaotai	70.16	41	*e*P	P	02 55 41.6	+0.5
GTA				AP	pP	02 55 46.8	+5.3
GTA				XP	sP	02 55 49.6	+7.9
GTA				PP	PP	02 58 18.2	0.0
GTA				PPP	PPP	02 59 57.5	-0.8
GTA				S	S	03 04 51.4	-0.6
GTA				AMB	AMB		
	comp=Z,70nm,6.1s						
GTA				LR	LR		
	comp=N,130nm,19.8s,MS4.3						
GTA				LR	LR		
	comp=E,100nm,21.3s,MS4.3						
GTA				LR	LR		
	comp=Z,70nm,17.1s,MS4.0						
CN2	Changchun	72.25	21	*e*P	P	02 55 52.5	-1.1
BDFB	Brasilia	79.14	201	P	P	02 56 33.1	+0.1
	comp=Z,3.8nm,0.7s,mb4.4,baz=204,slow=3.8,SNR=7.0						
BDFB				LR	LR	03 26 45.0	
	comp=Z,48nm,18.2s,MS3.9,baz=207,slow=32						
MJAR	Matsushiro Arr	81.11	12	P	P	02 56 42.1	-1.1
	comp=Z,1.0nm,0.5s,mb4.0,baz=170,slow=7.4,SNR=4.1						
NJ2	Nanjing	82.29	29	*e*P	P	02 56 49.3	-0.1
NJ2				AP	pP	02 56 59.7	+10
NJ2				PP	PP	03 00 00.6	+0.6
NJ2				S	S	03 07 01.0	-3.7
NJ2				AMB	AMB		
	comp=Z,50nm,0.6s,mb5.6						
NJ2				LR	LR		
	comp=N,1µm,25.3s						
NJ2				LR	LR		
	comp=E,2µm,26.6s						
NJ2				LR	LR		
	comp=Z,1µm,23.4s						
SIV	San Ignacio	82.30	213	P	P	02 56 51.1	+1.4
	comp=Z,3.0nm,1.1s,mb4.2,baz=54,slow=3.4,SNR=7.9						
SSE	Sheshan	83.73	27	P	P	02 56 55.1	-1.7
SSE				S	S	03 07 15.3	-3.9
SSE				SCS	ScS	03 07 29.0	-1.6
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,100nm,4.8s						
SSE				LR	LR		
	comp=N,120nm,18.3s,MS4.3						
SSE				LR	LR		
	comp=E,50nm,18.4s,MS4.3						
KMI	Kunming	84.27	45	P	P	02 56 59.4	-0.2
LPAZ	La Paz	84.56	220	P	P	02 57 01.6	+0.4
	comp=E,0.6nm,0.7s,mb3.9,baz=8.7,slow=13,SNR=4.3						
CMAR	Chiang Mai Arr	89.08	51	P	P	02 57 25.2	+1.9
	comp=E,3.4nm,1.0s,mb4.6,baz=323,slow=6.0,SNR=5.1						
BOSA	Boshof	99.38	135	LR	LR	03 47 42.0	
	comp=E,48nm,18.4s,MS4.0,baz=138,slow=38						
QSPA	South Pole Qui	151.83	180	⇑*i*P	PKPdf	03 04 21.7	+6.5

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*KNET **09** 02:51:06.9±0.7, 42.17N×72.75E, h9^{km}±2^{km}, ml3.1, Error ellipse: s-maj=4.3km s-min=2.8km az=117.0*

*NNC **09** 02:51:08.6±4.2, 42.10N×72.67E, h20^{km}±29^{km}, mpv3.6, Error ellipse: s-maj=29.7km s-min=7.7km az=1.0*

ISC 09 02:51:07.0±1.1**, 42.08N**±0.09×**72.65E**±0.05**, h10**^{km}**, n12,** σ**1**^{s}**12**/19**, 9C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	0.78	86	⇓P	Pb	02 51 20.7	-1.4
	116nm,0.2s,SNR=233						
AML				⇓S	Sb	02 51 31.6	-0.9
	249nm,0.2s						
EKS2	Erkin-Say	1.02	55	⇑P	Pb	02 51 24.9	-1.4
	28nm,0.1s,SNR=14						
EKS2				⇓S	Sb	02 51 38.2	-1.3
	117nm,0.1s						
UCH	Uchtor	1.39	83	⇓P	Pn	02 51 31.7	-0.9
	40nm,0.1s,SNR=44						
AAK	Ala-Archa	1.47	67	⇑P	Pn	02 51 32.3	-1.4
	141nm,0.2s,SNR=91						
AAK	Ala-Archa	1.47	67	⇓P	Pn	02 51 34.6	+0.8
	36nm,0.2s						
AAK				⇑S	Sb	02 51 53.0	+0.2
	44nm,0.4s						
KBK	Karagaybulak	1.80	70	⇑P	Pn	02 51 39.2	+0.8
	88nm,0.2s,SNR=83						
KBK				⇓S	Sn	02 52 04.0	+2.6
	327nm,0.3s						
CHMS	Chumysh	1.80	59	⇓P	Pn	02 51 38.7	+0.2
	40nm,0.1s,SNR=50						
CHMS				⇓S	Sn	02 52 02.6	+1.0
	100nm,0.2s						
USP	Ospenovka	1.81	48	P	Pn	02 51 38.4	-0.1
	67nm,0.1s,SNR=166						
USP				⇑S	Sn	02 52 02.3	+0.6
	272nm,0.3s						
KK31	Karatay Array	1.89	304	⇑P	Pn	02 51 39.9	+0.2
	7.7nm,0.2s,baz=122,slow=16,SNR=481						
KK31				⇑S	Sn	02 52 03.6	-0.1
	40nm,0.3s,baz=122,slow=26,SNR=15						
KZA	Kyzart	1.93	89	⇓P	Pn	02 51 42.0	+1.6
	40nm,0.2s,SNR=132						
TKM2	Tokmak 2	2.33	68	⇑P	Pn	02 51 47.7	+1.6
	61nm,0.3s,SNR=54						
MK31	Makanchi Array	8.35	52	⇑Pn	P	02 53 09.6	-1.5
	0.5nm,0.3s,baz=230,slow=13,SNR=13						
MK31				⇓Lg		02 55 32.9	
	3.7nm,0.8s,baz=236,slow=22,SNR=3.8						

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*NEIC **09** 03:17:31.4, 38.26S×176.28E, h136^{km}, MG3.8(WEL), After WEL.*

WEL 09 03:17:30.1±0.2**, 38.23S**×**176.30E, h148**^{km}±2^{km}**, ML3.8**/16**, 4C, Error ellipse: s-maj=1.8km s-min=1.5km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.64	93	P	P	03 17 51.8	-0.6
URZ	Urewera	0.64	93	⇑PN	P	03 17 51.8	-0.6
URZ				SN	S	03 18 08.3	-1.1
BKZ	Black Stump Fm	0.94	171	P	P	03 17 54.4	0.0
BKZ	Black Stump Fm	0.94	171	⇑PN	P	03 17 54.4	+0.1
BKZ				SN	S	03 18 12.6	-0.5
MWZ	Matawai	0.97	96	P	P	03 17 54.9	+0.3
MWZ	Matawai	0.97	96	PN	P	03 17 54.7	+0.1
MWZ				SN	S	03 18 12.9	-0.5
KRVZ	Karewarewa	1.00	211	PN	P	03 17 54.8	0.0
WTVZ	West Tongariro	1.04	212	P	P	03 17 55.1	-0.1
WTVZ	West Tongariro	1.04	212	PN	P	03 17 55.1	-0.1
OTVZ	Oturere	1.05	208	PN	P	03 17 55.6	+0.3
NGZ	Ngauruhoe	1.09	210	P	P	03 17 55.6	-0.1
NGZ				P		03 17 55.9	
NGZ	Ngauruhoe	1.09	210	PN	P	03 17 55.9	+0.3
CNZ	Chateau	1.13	211	P	P	03 17 55.9	-0.2
CNZ	Chateau	1.13	211	PN	P	03 17 55.9	-0.1
WPVZ	Whakapapa	1.14	211	P	P	03 17 55.9	-0.2
WPVZ	Whakapapa	1.14	211	PN	P	03 17 55.9	-0.3
TUVZ	Tukino	1.15	206	⇑PN	P	03 17 56.3	0.0
HIZ	Hauiti	1.17	256	P	P	03 17 56.1	-0.4
HIZ	Hauiti	1.17	256	⇑PN	P	03 17 56.1	-0.4
HIZ				SN	S	03 18 16.5	-0.3
FWVZ	Far West T-bar	1.18	210	P	P	03 17 56.2	-0.3
FWVZ	Far West T-bar	1.18	210	PN	P	03 17 56.2	-0.3
WNVZ	Wahianoa	1.22	207	P	P	03 17 56.8	-0.2
WNVZ	Wahianoa	1.22	207	PN	P	03 17 56.8	-0.2
MOVZ	Moawhango	1.25	200	P	P	03 17 56.6	-0.7
MOVZ	Moawhango	1.25	200	PN	P	03 17 56.6	-0.6
MTVZ	Mangateitei	1.32	209	PN	P	03 17 57.6	-0.3
KNZ	Kokohu	1.33	127	PN	P	03 17 58.3	+0.3
PUZ	Puketiti	1.55	85	PN	P	03 17 59.9	-0.5
MXZ	Matakaoa Point	1.72	68	P	P	03 18 01.8	-0.4
MXZ	Matakaoa Point	1.72	68	PN	P	03 18 01.8	-0.4
WAZ	Wanganui	1.83	214	P	P	03 18 02.8	-0.7
WAZ	Wanganui	1.83	214	PN	P	03 18 02.8	-0.7
TSZ	Takapari Road	1.84	188	P	P	03 18 02.7	-0.9
TSZ	Takapari Road	1.84	188	PN	P	03 18 02.7	-0.9
BFZ	Birch Farm	2.44	181	P	P	03 18 08.3	-2.7
BFZ	Birch Farm	2.44	181	PN	P	03 18 08.3	-2.8
MRZ	Mangatainoka R	2.49	193	P	P	03 18 09.4	-2.2
MRZ	Mangatainoka R	2.49	193	PN	P	03 18 09.4	-2.2
KIW	Kapiti Island	2.84	202	P	P	03 18 12.9	-3.1
MTW	Mount Morrison	2.99	192	P	P	03 18 14.7	-3.2
CAW	Cannon Point	3.02	198	P	P	03 18 15.3	-3.1
MRW	Makara Radio	3.24	202	P	P	03 18 17.6	-3.6
MSWZ	Moikau Station	3.28	194	P	P	03 18 18.2	-3.5
SNZO	South Karori	3.31	201	P	P	03 18 18.2	-3.9
TCW	Tory Channel	3.36	207	P	P	03 18 19.1	-3.7
QRZ	Quartz Range	3.90	227	*e*P	P	03 18 25.2	-4.7
KHZ	Kahutara	4.68	206	P	P	03 18 35.4	-4.8
LTZ	Lake Taylor	5.49	213	*e*P	P	03 18 46.1	-4.7
ODZ	Otahua Downs	8.02	210	*e*P	P	03 19 18.7	-6.0

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*NEIC **09** 03:19:07.4±3.8, 3.78N×126.34E, h112^{km}±39^{km}, mb4.4/2, Error ellipse: s-maj=32.8km s-min=12.0km az=61.0*

*IDC **09** 03:19:13.7±19.0, 3.51N×125.63E, h175^{km}±194^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.4/16, mbtmp4.1/5, MS3.2/1, Ms1 3.2/1, ms1mx2.7/18, Error ellipse: s-maj=101.5km s-min=23.7km az=60.0*

ISC 09 03:19:06.5±2.1**, 3.82N**±0.08×**126.3E**±0.1**, h121**^{km}±25^{km}**, n20,** σ**0**^{s}**90**/20**, mb4.0**/8**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	4.22	343	*e*P	P	03 20 04.0	-6.2
BUKP						03 20 50.6	
PAGZ	Pagadian	4.96	324	*e*P	P	03 20 15.7	-4.5
SCPH	Surigao	5.98	352	⇑*i*P	P	03 20 39.1	+5.3
SCPH				*e*S	S	03 21 41.4	-0.1
KKM	Kota Kinabalu	10.33	283	Pn	P	03 21 32.6	+0.1
LUBP	Lubang	11.54	329	*e*P	P	03 21 54.8	+6.2
FITZ	Fitzroy Crossi	21.80	182	*e*P	P	03 23 49.5	-0.3
FITZ	Fitzroy Crossi	21.80	182	P	P	03 23 49.4	-0.4
	6.8nm,0.6s,mb4.2,baz=5.8,slow=11,SNR=14						
PMG	Port Moresby	24.56	122	LR	LR	03 34 43.4	
	comp=Z,55nm,18.8s,baz=221,slow=37						
WRAB	Tennant Creek	24.89	162	*e*P	P	03 24 19.4	-0.3
	9.4nm,0.8s,mb4.3						
WRA	Warramunga Arr	24.89	162	P	P	03 24 18.9	-0.9
	1.5nm,0.4s,mb3.7,baz=333,slow=11,SNR=29						
WB2	Warramunga Arr	24.89	162	*e*P	P	03 24 19.2	-0.6
WB2				*e*		03 50 40.9	
KULM	Kulim	25.65	274	*e*P	P	03 24 36.3	+9.3
MBWA	Marble Bar	25.66	194	P	P	03 24 27.3	+0.4
	17nm,1.2s,mb4.4						
CMAR	Chiang Mai Arr	30.49	301	P	P	03 25 12.4	+1.9
	1.0nm,0.5s,mb3.7,baz=124,slow=6.5,SNR=2.5						
HNR	Honiara	35.98	112	*e*P	P	03 25 59.4	+1.6
	85nm,0.9s						
STKA	Stephens Creek	38.35	159	P	P	03 26 18.0	+0.6
	1.8nm,0.5s,mb4.2,baz=341,slow=9.7,SNR=8.5						
STKA	Stephens Creek	38.35	159	*e*P	P	03 26 17.6	+0.2
STKA				P		03 26 18.0	
SONM	Songino Array	47.09	342	P	P	03 27 27.3	-0.6
	0.3nm,0.4s,mb3.4,baz=155,slow=8.1,SNR=4.0						
MKAR	Makanchi Array	57.26	325	P	P	03 28 42.4	-1.3
	1.2nm,0.4s,mb4.3,baz=122,slow=8.5,SNR=18						
MKAR	Makanchi Array	57.26	325	P	P	03 28 42.4	-1.3

IDC 09 03:22:31.8±2.2**, 60.18S**×**27.02W, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.7**/14**, mbtmp3.8**/3**, MS3.2**/1**, Ms1 3.1**/1**, ms1mx2.8**/13**, 4C, Error ellipse: s-maj=254.8km s-min=36.7km az=35.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.00	152	⇑*i*	P	03 25 18.5	-22
VNA1	Neumayer--Stat	13.00	152	*e*	P	03 25 19.2	-21
VNA3	Neumayer Olymp	13.12	155	⇑*i*	P	03 25 19.9	-22
VNA3	Neumayer Olymp	13.12	155	*e*	P	03 25 20.6	-21
VNA2	Neumayer--Watz	13.40	152	⇑*i*	P	03 25 24.3	-21
VNA2	Neumayer--Watz	13.40	152	*e*	P	03 25 24.8	-21
SNAA	Sanae	15.00	150	⇑*i*	P	03 26 04.5	-2.0
SNAA	Sanae	15.00	150	*e*	P	03 26 05.4	-1.1
CPUP	Villa Florida	39.71	315	P	P	03 30 05.7	-1.7
	1.1nm,0.5s,baz=181,slow=8.1,SNR=6.6						
BDFB	Brasilia	47.03	332	LR	LR	03 46 53.6	
	comp=Z,23nm,18.4s,baz=278,slow=31						
SIV	San Ignacio	50.55	316	P	P	03 31 31.2	-2.7
	0.6nm,0.5s,baz=170,slow=9.3,SNR=9.0						
LPAZ	La Paz	52.91	308	P	P	03 31 50.8	-0.9
	0.4nm,0.3s,baz=171,slow=5.7,SNR=7.9						
SONM	Songino Array	150.63	94	PKPbc	PKPdf	03 42 24.7	+3.9
	1.2nm,0.6s,baz=211,slow=2.8,SNR=8.1						
ILAR	Eielson Array	152.78	306	PKPbc	PKPdf	03 42 28.2	+4.9
	0.5nm,0.9s,baz=146,slow=3.3,SNR=5.0						

JMA 09 03:29:58.2, 36.82N×**138.68E, h7**^{km}±2^{km}**, M0.7, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAT	Matsushiro	0.47	234	P	Pg	03 30 07.3	-0.4
MAT				S	Sg	03 30 13.4	-0.6
JHK	Hiroka	0.51	32	P	Pg	03 30 07.9	-0.5

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*NIED **09** 03:30:00, 36.80N×138.70E, h5^{km}, Mw3.9 Best double couple: $M_0$8.57×10^{14} NP1:ϕ_s172°, δ77°, λ21°. NP2:ϕ_s77°, δ69°, λ166°.*

*JMA **09** 03:30:16.8±0.2, 36.81N×138.69E, M4.1 Broadband fault plane solution: P waves. NP1:ϕ_s82°, δ74°, λ176°. NP2: ϕ_s174°, δ86°, λ16°. Principal axes: T Plg14°, Azm39°; N Plg74°, Azm188°; P Plg8°, Azm307°;*

JMA Felt II J1.

*IDC **09** 03:30:17.2±0.8, 36.81N×138.59E, mb3.8/7, mb1 4.2/8, mb1mx3.9/22, mbtmp3.9/8, ML4.0/1, MS3.7/3, Ms1 3.7/3, ms1mx3.1/31 Error ellipse: s-maj=27.3km s-min=7.0km az=130.0*

ISC 09 03:30:16.9±0.5**, 36.80N**±0.03×**138.69E**±0.04**, h8**^{km}±4^{km}**, n21,** σ**1**^{s}**01**/25**, mb3.7**/7**, MS4.0**/2**, 4C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGK	Kuni	0.24	189	⇑P	Pg	03 30 22.3	+0.5
JGK				*e*S	Sg	03 30 26.3	+1.2
JKT	Katashina	0.45	94	⇓P	Pg	03 30 25.6	-0.4
JKT				*e*S	Sg	03 30 31.8	-0.3
MAT	Matsushiro	0.46	237	P	Pg	03 30 25.9	-0.3
MAT				S	Sg	03 30 32.1	-0.3
MJAR	Matsushiro Arr	0.46	237	Pg	Pg	03 30 25.7	-0.5
	218nm,0.3s,baz=47,slow=18,SNR=898						
MJAR				Lg		03 30 29.3	
	325nm,0.3s,baz=51,slow=17,SNR=144						
JHK	Hiroka	0.52	30	⇑P	Pg	03 30 26.7	-0.7
JHK				*e*S	Sg	03 30 33.7	-0.8
JNG	Nsakai	0.61	231	⇑P	Pg	03 30 28.8	-0.4
JNG				*e*S	Sg	03 30 37.1	-0.3
JAG	Ashikaga	0.72	121	⇓P	Pb	03 30 30.9	-0.4
JIZZ	Izumozaki	0.73	1	⇑P	Pb	03 30 32.1	+0.6
JIZZ				*e*S	Sg	03 30 43.6	+2.1
JRY	Ryogami san	0.80	167	⇓P	Pb	03 30 32.1	-0.5
JRY				*e*S	Sb	03 30 43.6	+0.3
JHJ	Hachijo jima 2	3.78	166	Pn	Pn	03 31 19.1	+2.4
	32nm,0.3s,baz=64,slow=21,SNR=5.6						
JNU	Nakatsue	7.38	243	LR	LR	03 35 06.5	
	comp=Z,158nm,18.5s,baz=345,slow=40						
SONM	Songino Array	26.12	305	LR	LR	03 46 36.8	
	comp=Z,76nm,19.2s,MS3.2,baz=67,slow=38						

ILAR	**Eielson Array**	**50.86**	**32**	P	**P**	**03 39 18.5**	**-1.3**
	0.7nm,0.8s,mb3.7,baz=292,slow=8.9,SNR=7.2						
WRA	**Warramunga Arr**	**56.58**	**185**	P	**P**	**03 40 00.2**	**-2.4**
	1.3nm,0.7s,mb4.1,baz=0.3,slow=7.6,SNR=21						
FINES	**FINESS Array B**	**67.99**	**331**	P	**P**	**03 41 17.1**	**-1.1**
	1.5nm,0.9s,mb4.0,baz=90,slow=6.9,SNR=3.9						
STKA	**Stephens Creek**	**68.37**	**177**	LR	LR	04 12 12.5	
	comp=Z,383nm,19.1s,MS4.7,baz=230,slow=37						
NB2	**NORSAR Subarra**	**73.54**	**336**	P	**P**	**03 41 51.2**	**-0.4**
	0.7nm,0.7s,mb3.7,baz=42,slow=5.8						
NOA	**NORSAR Array B**	**73.54**	**336**	P	**P**	**03 41 51.5**	**-0.2**
	1.4nm,0.8s,mb3.9,baz=39,slow=6.1,SNR=5.3						
NVAR	**Mina Array Bea**	**76.87**	**52**	P	**P**	**03 42 12.9**	**+1.8**
	0.2nm,0.3s,mb3.5,baz=290,slow=4.0,SNR=5.7						
PDAR	**Pinedale Array**	**79.38**	**44**	P	**P**	**03 42 25.6**	**+0.8**
	0.4nm,0.7s,mb3.5,baz=315,slow=5.1,SNR=3.3						
GERES	**GERESS Array B**	**81.74**	**327**	P	**P**	**03 42 37.9**	**+0.7**
	0.5nm,0.6s,mb3.6,baz=31,slow=5.7,SNR=3.5						

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*CSEM **09** 03:39:45.8±0.3, 51.56N×16.13E, h1^{km}, ML2.7/2, Error ellipse: s-maj=5.7km s-min=2.3km az=30.0*

*IPEC **09** 03:39:45.8±0.3, 51.56N×16.58E, ML1.6/3, Error ellipse: s-maj=3.0km s-min=2.0km az=95.0*

*PRU **09** 03:39:46.2, 51.51N×16.14E*

*NEIC **09** 03:39:47.3±4.3, 51.48N×16.01E, h5^{km}, ML2.5(VIE), Error ellipse: s-maj=46.8km s-min=6.9km az=215.0*

WAR 09 03:39:46.7, 51.55N×16.09E, h1^{km}, ML2.6, 1C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**170**	*e*Pg	Pg	03 39 59.9	-1.2
KSP				*e*Sg	Sg	03 40 09.5	-1.2
KSP	**Ksiaz**	**0.72**	**170**	*e*Pg	Pg	03 39 59.9	-1.2
KSP				*e*Sg	Sg	03 40 09.6	-1.2
KSP	**Ksiaz**	**0.72**	**170**	*e*Pg	Pg	03 39 59.9	-1.2
KSP				*e*Sg	Sg	03 40 09.4	-1.3
UPC	**Upice**	**1.05**	**183**	*e*PG	Pg	03 40 06.0	-1.6
DPC	**Dobruska-Polom**	**1.21**	**173**	*e*PG	Pg	03 40 08.5	-2.4
DPC				*e*SG	Sg	03 40 24.2	-2.9
	7.9nm,0.2s						
DPC	**Dobruska-Polom**	**1.21**	**173**	*e*Pg	Pg	03 40 08.7	-2.2
DPC				*e*Sg	Sg	03 40 24.0	-3.1
PVCC	**Panska Ves**	**1.41**	**224**	*e*PG	Pg	03 40 12.2	-2.5
BRG	**Berggiesshubel**	**1.51**	**244**	*i* Pg	Pg	03 40 14.5	-2.4
BRG				*i* Sg	Sg	03 40 34.9	-2.1
PRU	**Pruhonice**	**1.85**	**213**	*e*PG	Pg	03 40 18.9	-4.7
PRU				*e*SG	Sg	03 40 43.3	-4.9
CLL	**Collm**	**1.95**	**264**	*e*PG	Pg	03 40 23.0	-2.6
CLL				*e*SG	Sg	03 40 48.0	-3.6
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pg	Pg	03 40 20.2	-6.5
MORC				*e*Sg	Sg	03 40 44.9	-8.5
	7.9nm,0.2s						
OKC	**Ostrava-Krasne**	**2.16**	**142**	*e*SG	Sg	03 40 53.9	-4.7
VRAC	**Vranov**	**2.27**	**172**	*e*Pn	Pn	03 40 24.9	-1.0
VRAC				*e*Sg	Sg	03 40 55.9	-6.4
	1.7nm,0.1s						
KRUC	**Moravsky**	**2.50**	**175**	*e*Pn	Pn	03 40 27.7	-1.5
KRUC				*e*Sg	Sg	03 41 04.1	-5.9
	3.0nm,0.3s						
NKC	**Novy Kostel**	**2.66**	**242**	*e*PN	Pn	03 40 29.9	-1.5
NKC				*e*PG	Pg	03 40 36.1	-3.7
NKC				*e*SG	Sg	03 41 10.9	-4.3
NKC	**Novy Kostel**	**2.66**	**242**	*e*Pg	Pg	03 40 36.1	-3.7
NKC				*e*Sg	Sg	03 41 10.9	-4.3
OJC	**Ojcow**	**2.70**	**118**	*e*PG	Pg	03 40 37.0	-3.6
OJC				*e*SG	Sg	03 41 12.0	-4.6
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN	Pn	03 40 32.9	-2.1
KHC				*e*PG	Pg	03 40 39.1	-5.7
KHC				*e*SG	Sg	03 41 18.7	-4.9
KHC	**Kasperske Hory**	**2.91**	**215**	*e*Pg	Pg	03 40 39.1	-5.7
KHC				*e*Sg	Sg	03 41 18.7	-4.9
MOA	**Molln**	**3.89**	**198**	⇑*i*PN	Pn	03 40 47.1	-1.8
MOA				*i* SG	Sg	03 41 51.0	-5.2
	2.4nm,0.5s						

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*MOS **09** 03:45:09.5±0.9, 5.24N×126.84E, h33^{km}, mb5.4/43, MS4.6/23, Error ellipse: s-maj=10.3km s-min=5.2km az=113.0*

*BJI **09** 03:45:09.4, 4.39N×127.19E, h98^{km}, mB5.0, mb5.0*

*IDC **09** 03:45:12.4±1.7, 5.23N×126.81E, h45^{km}±14^{km}, mb4.9/28, mb1 4.9/28, mb1mx4.9/29, mbtmp5.1/28, MS4.4/19, Ms1 4.4/19, ms1mx4.3/27, Error ellipse: s-maj=20.4km s-min=10.4km az=79.0*

*MAN **09** 03:45:13.2, 5.13N×126.95E, h35^{km}, mb5.3, ML4.3, MS4.7*

*NEIC **09** 03:45:16.9±0.5, 5.18N×126.90E, h89^{km}±4^{km}, mb5.1/75, Error ellipse: s-maj=6.1km s-min=4.3km az=81.0*

*HRVD **09** 03:45:17.9±0.2, 5.31N×126.99E, h50^{km}±1^{km}, MW5.2/60, Centroid moment Tensor Solution. LP body waves: s46,c79;Mantle waves: s60,c104; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.02±.28; M$_{\theta\theta}$-1.55±.18; M$_{\phi\phi}$-1.46±.22; M$_{r\theta}$-2.63±.18; M$_{\theta\phi}$-7.81±.17; M$_{\phi r}$3.64±.24; Best double couple: M$_0$9.38×10^{16} NP1: φ$_s$265°, δ63°, λ156°. NP2: φ$_s$6°, δ69°, λ29°. Principal axes: T 9.401, Plg35°, Azm227°; N -.032, Plg55°, Azm39°; P -9.359, Plg4°, Azm134°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 09 03:45:11.8±0.2**, 5.15N**±0.03×**127.03E**±0.04**, h59^{km}, h59^{km}**±4.3^{km}**:pP-P, n354, σ1^{s}17**/342**, mb5.2**/107**, MS4.5**/51**, 29C-18D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.39**	**323**	⇓*e*P	**P**	**03 45 51.0**	**+1.5**
BUKP	**Musuan**	**3.34**	**324**	*e*P	**P**	**03 46 04.3**	**+1.4**
BUKP				*e*S	**S**	**03 46 42.0**	**+0.3**
BUTP	**Butuan**	**4.04**	**340**	*e*P	**P**	**03 46 15.6**	**+2.8**
BUTP				*e*S	**S**	**03 47 02.6**	**+3.3**
PAGZ	**Pagadian**	**4.51**	**307**	*e*P	**P**	**03 46 20.1**	**+0.8**
SCPH	**Surigao**	**4.85**	**342**	⇑*e*P	**P**	**03 46 25.4**	**+1.3**
DCPH	**Dipolog City**	**5.00**	**313**	⇓*i*P	**P**	**03 46 30.2**	**+4.1**
IPIL	**Ipil**	**5.15**	**301**	*e*P	**P**	**03 46 29.2**	**+1.0**
IPIL				*e*S	**S**	**03 47 29.7**	**+2.6**
MSLP	**Maasin**	**5.40**	**337**	*e*P	**P**	**03 46 31.8**	**+0.2**
MSLP				*e*S	**S**	**03 47 34.9**	**+1.7**
SNPH	**Sibulan**	**5.62**	**318**	⇑*e*P	**P**	**03 46 37.6**	**+2.9**
SNPH				*e*S	**S**	**03 47 53.5**	**+15**
LLP	**Lapu-Lapu**	**5.96**	**330**	⇓*i*P	**P**	**03 46 40.7**	**+1.2**
PLP	**Palo**	**6.31**	**341**	*i* P	**P**	**03 46 48.2**	**+3.8**
BESP	**Borongan**	**6.60**	**346**	*e*P	**P**	**03 46 49.1**	**+0.6**
GUIM	**Jordan**	**7.00**	**321**	*e*P	**P**	**03 46 55.2**	**+1.2**
AAP	**Anini-y**	**7.27**	**316**	⇓*e*P	**P**	**03 47 01.1**	**+3.3**
RCP	**Roxas**	**7.65**	**327**	⇓*e*P	**P**	**03 47 04.4**	**+1.3**
CNP	**Catarman**	**7.68**	**342**	*e*P	**P**	**03 47 05.7**	**+2.3**
CNP				*e*S	**S**	**03 48 25.9**	**-3.9**
KALP	**Kalibo**	**7.97**	**325**	*e*P	**P**	**03 47 01.0**	**-6.5**
CUYO	**Cuyo Island**	**8.22**	**314**	*e*P	**P**	**03 47 11.3**	**+0.4**
OTRP	**Odiongan**	**8.71**	**326**	*e*P	**P**	**03 47 20.4**	**+2.8**
PVCP	**Virac**	**8.86**	**341**	*e*P	**P**	**03 47 21.6**	**+1.9**
TSM	**Tawau**	**9.17**	**265**	P	**P**	**03 47 26.2**	**+2.2**
PPR	**Puerto Princes**	**9.43**	**300**	*e*P	**P**	**03 47 32.2**	**+4.8**
BUSP	**Coron**	**9.59**	**316**	*e*P	**P**	**03 47 35.2**	**+5.4**
BATP	**Bataraza**	**9.85**	**292**	*e*P	**P**	**03 47 38.9**	**+5.5**
KKM	**Kota Kinabalu**	**10.80**	**275**	*e*P	**P**	**03 47 48.4**	**+2.1**
KKM	**Kota Kinabalu**	**10.80**	**275**	P	**P**	**03 47 49.3**	**+2.9**
BALP	**Baler**	**11.81**	**333**	*e*P	**P**	**03 48 00.0**	**+0.2**
CAUP	**Cauayan**	**12.78**	**337**	*e*P	**P**	**03 48 11.5**	**-1.4**
CVP	**Callao Caves**	**13.47**	**338**	*e*P	**P**	**03 48 32.0**	**+10**
APYP	**Conner**	**13.84**	**336**	*e*P	**P**	**03 48 36.1**	**+9.3**
KSM	**Kuching**	**17.09**	**258**	*e*P	**P**	**03 49 08.9**	**+0.5**
KSM				*e*ScP		03 57 07.2	
KAKA	**Kakadu**	**18.54**	**163**	*e*P	**P**	**03 49 27.2**	**+0.9**
GUMO	**Guam**	**19.48**	**63**	*e*P	**P**	**03 49 39.9**	**+3.1**
GUMO				pmax	pmax		
	comp=Z,80nm,1.1s						
GUMO	**Guam**	**19.48**	**63**	*e*P	**P**	**03 49 39.9**	**+3.1**
	comp=Z,80nm,1.1s						
YHNB	**Yeheng**	**20.15**	**345**	*e*P	**P**	**03 49 44.1**	**+0.1**
YHNB				*e*S	**S**	**03 53 22.6**	**+0.6**
QZH	**Quanzhou**	**21.28**	**338**	⇑*i*P	**P**	**03 49 56.0**	**+0.5**
QZH				AMB	AMB		
	comp=Z,80nm,0.9s,mb5.0						
QZH				LR	LR		
	comp=Z,4μm,26.0s,MS4.7						
QZH	**Quanzhou**	**21.28**	**338**	⇑*i*P	**P**	**03 49 56.0**	**+0.5**
	comp=Z,80nm,0.9s,mb5.0						
QZH				LR	LR		
	comp=Z,4μm,26.0s,MS4.7						
JOW	**Kunigami**	**21.59**	**3**	P	**P**	**03 50 00.2**	**+1.6**
	comp=Z,47nm,0.8s,mb5.0,baz=201,slow=6.9,SNR=6.4						
JOW				LR	LR	03 57 11.4	
	comp=Z,810nm,18.9s,MS4.2,baz=171,slow=33						
JOW	**Kunigami**	**21.59**	**3**	P	**P**	**03 50 00.2**	**+1.6**
JOW				LR	LR	03 57 11.4	
QIZ	**Qiongzhong**	**21.71**	**311**	*e*P	**P**	**03 49 60.0**	**+0.2**
	comp=Z,63nm,1.3s,mb4.9						
GZH	**Guangzhou**	**22.19**	**325**	P	**P**	**03 50 07.5**	**+3.0**
GZH				S	**S**	**03 54 05.4**	**+5.2**
GZH				LR	LR		
	comp=N,930nm,19.6s,MS4.4						
GZH				LR	LR		
	comp=E,1μm,19.6s,MS4.4						
GZH				LR	LR		
	comp=Z,2μm,19.6s,MS4.5						
FITZ	**Fitzroy Crossi**	**23.15**	**183**	*e*P	**P**	**03 50 15.2**	**+1.2**
FITZ				*e*S	**S**	**03 54 25.3**	**+8.0**
FITZ	**Fitzroy Crossi**	**23.15**	**183**	P	**P**	**03 50 15.5**	**+1.5**
	comp=Z,106nm,0.6s,mb5.5,baz=5.3,slow=10,SNR=117						
FITZ				S	**S**	**03 54 20.7**	**+3.4**
	comp=Z,10nm,0.8s,baz=352,slow=19,SNR=2.2						
PMG	**Port Moresby**	**24.73**	**126**	LR	LR	04 00 36.4	
	comp=Z,535nm,19.8s,MS4.0,baz=200,slow=37						
IPM	**Ipoh**	**25.92**	**270**	P	**P**	**03 50 39.8**	**-0.8**
WRAB	**Tennant Creek**	**25.95**	**164**	*e*P	**P**	**03 50 40.9**	**+0.1**
WRAB				*e*S	**S**	**03 55 06.8**	**+2.2**
WRAB				pmax	pmax		
	comp=Z,201nm,1.0s,mb5.6						
WRAB	**Tennant Creek**	**25.95**	**164**	*e*P	**P**	**03 50 40.9**	**+0.1**
	comp=Z,201nm,1.0s,mb5.6						
WRAB				*e*S	**S**	**03 55 06.8**	**+2.2**
WRA	**Warramunga Arr**	**25.95**	**164**	P	**P**	**03 50 40.8**	**0.0**
	comp=Z,37nm,0.3s,mb5.3,baz=342,slow=10,SNR=368						
WRA				S	**S**	**03 55 06.9**	**+2.2**
	comp=Z,10nm,1.2s,baz=344,slow=16,SNR=5.4						
WRA				ScP		03 57 44.3	
	comp=Z,3.1nm,0.8s,baz=342,slow=3.4,SNR=6.6						
WB2	**Warramunga Arr**	**25.95**	**164**	*e*S	**S**	**03 55 06.9**	**+2.1**
KKTK	**Khon Kaen**	**26.22**	**297**	P	**P**	**03 50 43.0**	**-0.3**
	comp=Z,494nm,0.5s						
KULM	**Kulim**	**26.27**	**272**	*e*P	**P**	**03 50 42.1**	**-1.8**
SNG	**Songkhla**	**26.34**	**276**	P	**P**	**03 50 44.0**	**-0.5**
SSE	**Sheshan**	**26.39**	**349**	P	**P**	**03 50 44.6**	**-0.2**
SSE				AP	pP	03 51 06.7	+7.7
SSE				XP	sP	03 51 18.7	+13
SSE				S	**S**	**03 55 12.7**	**+0.9**
SSE				XS		03 55 51.9	
SSE				PCS		03 57 47.4	
SSE				AMB	AMB		
	comp=Z,50nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,160nm,5.0s						
SSE				LR	LR		
	comp=N,400nm,22.7s,MS4.0						
SSE				LR	LR		
	comp=E,390nm,22.7s,MS4.0						
SSE				LR	LR		
	comp=Z,660nm,22.4s,MS4.1						
SSE	**Sheshan**	**26.39**	**349**	P	**P**	**03 50 44.6**	**-0.2**
	comp=Z,50nm,0.7s,mb5.2						
SSE				pP	pP	03 51 06.7	+7.7
SSE				sP	sP	03 51 18.7	+13
SSE				S	**S**	**03 55 12.7**	**+0.9**
SSE				sS		03 55 51.9	
SSE				PcS		03 57 47.4	
SSE				LR	LR		
	comp=Z,660nm,22.4s,MS4.1						
MBWA	**Marble Bar**	**27.11**	**195**	*e*P	**P**	**03 50 51.4**	**-0.2**
	comp=Z,44nm,0.8s,mb5.0						
WHN	**Wuhan**	**27.94**	**336**	⇓P	**P**	**03 51 00.5**	**+1.5**
NNT	**Nongplab**	**27.95**	**287**	P	**P**	**03 51 03.0**	**+3.8**
JNU	**Nakatsue**	**28.06**	**7**	P	**P**	**03 51 00.3**	**+0.3**
	comp=Z,19nm,1.0s,mb4.7,baz=180,slow=8.9,SNR=6.6						
JNU				LR	LR	04 01 03.0	
	comp=Z,493nm,21.1s,MS4.1,baz=303,slow=34						
NST	**Nakhon Sawan**	**28.41**	**294**	P	**P**	**03 50 54.0**	**-9.3**
GYA	**Guiyang**	**28.77**	**320**	P	**P**	**03 51 06.4**	**0.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
GYA				AMB	AMB		
	comp=Z,320nm,3.1s						
GYA	**Guiyang**	**28.77**	**320**	P	**P**	**03 51 06.4**	**0.0**
	comp=Z,10.0nm,0.9s,mb4.5						
NANT	**Nan**	**29.05**	**300**	⇑P	**P**	**03 51 07.5**	**-1.5**
	comp=Z,188nm,0.6s,mb6.0						
ENH	**Enshi**	**29.97**	**329**	*e*P	**P**	**03 51 16.3**	**-0.7**
	comp=Z,20nm,0.7s,mb5.0						
ENH				*e*PcP	PcP	03 54 17.9	-0.5
JHJ	**Hachijo jima 2**	**30.26**	**22**	LR	LR	04 00 38.5	
	comp=Z,844nm,21.9s,MS4.3,baz=307,slow=31						
CMAR	**Chiang Mai Arr**	**30.45**	**298**	P	**P**	**03 51 19.3**	**-2.1**
	comp=Z,8.8nm,0.6s,mb4.7,baz=100,slow=7.1,SNR=28						
CMAR				PcP	PcP	03 54 21.1	+1.3
	comp=Z,1.3nm,0.4s,baz=100,slow=0.3,SNR=5.4						
CMAR				ScP		03 57 58.6	
	comp=Z,1.4nm,0.4s,baz=102,slow=2.0,SNR=4.9						
CMAR				LR	LR	04 03 14.0	
	comp=Z,547nm,21.4s,MS4.2,baz=115,slow=36						
CHG	**Chiang Mai**	**30.58**	**299**	⇓P	**P**	**03 51 20.8**	**-1.8**
	comp=Z,20nm,0.6s,mb5.1						
KMI	**Kunming**	**30.62**	**313**	P	**P**	**03 51 24.0**	**+1.2**
KMI				AP	pP	03 51 46.9	+9.4
KMI				XP	sP	03 51 59.5	+15
KMI				PP	PP	03 52 25.9	+1.1
KMI				S	**S**	**03 56 17.0**	**-2.5**
KMI				XS		03 56 56.9	
KMI				SS	SS	03 58 08.4	+4.2
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
KMI				AMB	AMB		
	comp=Z,100nm,4.1s						
KMI				LR	LR		
	comp=N,820nm,20.0s,MS4.4						
KMI				LR	LR		
	comp=E,580nm,23.2s,MS4.4						
KMI				LR	LR		
	comp=Z,1μm,31.6s						
KMI	**Kunming**	**30.62**	**313**	P	**P**	**03 51 24.0**	**+1.2**
	comp=Z,17nm,0.8s,mb4.9						
KMI				pP	pP	03 51 46.9	+9.4
KMI				sP	sP	03 51 59.5	+15
KMI				PP	PP	03 52 25.9	+1.1
KMI				S	**S**	**03 56 17.0**	**-2.5**
KMI				sS		03 56 56.9	
KMI				SS	SS	03 58 08.4	+4.2
KMI				LR	LR		
	comp=Z,1μm,31.6s,MS4.4						
CTA	**Charters Tower**	**31.40**	**144**	LR	LR	04 05 21.0	
	comp=Z,922nm,19.3s,MS4.5,baz=321,slow=38						
CTAO	**Charters Tower**	**31.40**	**144**	*e*P	**P**	**03 51 30.1**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.0						
CTAO	**Charters Tower**	**31.40**	**144**	*e*P	**P**	**03 51 30.1**	**+0.4**
	comp=Z,29nm,1.1s,mb5.0						
KS15	**Wonju Array Si**	**32.15**	**1**	*e*P	**P**	**03 51 36.4**	**+0.3**
INCN	**Inchon**	**32.18**	**359**	P	**P**	**03 51 37.0**	**+0.6**
	comp=Z,19nm,0.9s,mb4.9						
MJAR	**Matsushiro Arr**	**32.88**	**17**	P	**P**	**03 51 40.9**	**-1.6**
	comp=Z,2.3nm,0.6s,mb4.3,baz=189,slow=9.6,SNR=7.4						
MJAR				PcP	PcP	03 54 26.6	+0.5
	comp=Z,5.3nm,0.7s,baz=182,slow=3.2,SNR=8.8						
MJAR				ScP		03 58 07.2	
	comp=Z,1.5nm,0.9s,baz=199,slow=5.1,SNR=5.3						
MJAR				LR	LR	04 02 59.4	
	comp=Z,714nm,21.9s,MS4.3,baz=200,slow=32						
MJAR	**Matsushiro Arr**	**32.88**	**17**	P	**P**	**03 51 40.9**	**-1.6**
MJAR				PcP	PcP	03 54 26.6	+0.5
MJAR				ScP		03 58 07.2	
MJAR				LR	LR	04 02 59.4	
MAJO	**Matsushiro**	**32.88**	**17**	P	**P**	**03 51 40.5**	**-2.0**
MAJO				*e*		03 54 25.5	
MAJO				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
MAJO	**Matsushiro**	**32.88**	**17**	P	**P**	**03 51 40.5**	**-2.1**
	comp=Z,13nm,0.9s,mb4.9						
MAJO				*e*PcP	PcP	03 54 25.5	-0.6
MAJO				*e*ScP		03 58 07.8	
MAT	**Matsushiro**	**32.88**	**17**	*e*P	**P**	**03 51 43.0**	**+0.5**
MAT				*e*S	**S**	**03 56 52.0**	**-2.8**
MAT				MLR	MLR		
	comp=Z,710nm,20.0s,MS4.4						
MAT	**Matsushiro**	**32.88**	**17**	P	**P**	**03 51 43.4**	**+0.9**
MAT				S	**S**	**03 56 52.0**	**-2.8**
XAN	**Xi’an**	**33.30**	**332**	P	**P**	**03 51 45.1**	**-1.1**
XAN				PP	PP	03 52 59.2	+0.1
XAN				S	**S**	**03 56 58.7**	**-2.6**
XAN				SS	SS	03 59 20.1	+14
XAN				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.5						
XAN				AMB	AMB		
	comp=Z,70nm,4.9s						
XAN				LR	LR		
	comp=N,740nm,27.5s,MS4.3						
XAN				LR	LR		
	comp=E,480nm,29.2s,MS4.3						
XAN				LR	LR		
	comp=Z,990nm,25.8s,MS4.4						
XAN	**Xi’an**	**33.30**	**332**	P	**P**	**03 51 45.1**	**-1.1**
	comp=Z,42nm,0.7s,mb5.5						
XAN				PP	PP	03 52 59.2	+0.1
XAN				S	**S**	**03 56 58.7**	**-2.6**
XAN				SS	SS	03 59 20.1	+14
XAN				LR	LR		
	comp=Z,990nm,25.8s,MS4.4						
CD2	**Chengdu**	**33.70**	**322**	P	**P**	**03 51 50.8**	**+1.2**
CD2				AMB	AMB		
	comp=Z,20nm,0.4s,mb5.4						
CD2	**Chengdu**	**33.70**	**322**	P	**P**	**03 51 50.8**	**+1.2**
	comp=Z,20nm,0.4s,mb5.4						
DL2	**Dalian**	**33.95**	**352**	P	**P**	**03 51 49.7**	**-2.1**
DL2				AP	pP	03 52 10.0	+3.4
DL2				*e*S	**S**	**03 57 12.8**	**+1.4**
DL2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
DL2				LR	LR		
	comp=E,320nm,16.9s						
DL2				LR	LR		
	comp=Z,410nm,15.5s,MS4.3						
DL2	**Dalian**	**33.95**	**352**	P	**P**	**03 51 49.7**	**-2.1**
	comp=Z,20nm,0.9s,mb5.0						
DL2				pP	pP	03 52 10.0	+3.4
DL2				*e*S	**S**	**03 57 12.8**	**+1.4**
DL2				LR	LR		
	comp=Z,410nm,15.5s,MS4.3						
HNR	**Honiara**	**35.86**	**114**	LR	LR	04 05 27.8	
	comp=Z,479nm,20.2s,MS4.3,baz=116,slow=34						
SNY	**Shenyang**	**36.65**	**356**	⇓P	**P**	**03 52 15.0**	**+0.4**
SNY				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
SNY				LR	LR		
	comp=E,770nm,17.9s						
SNY				LR	LR		
	comp=Z,500nm,30.2s						
SNY	**Shenyang**	**36.65**	**356**	⇓P	**P**	**03 52 15.0**	**+0.4**
	comp=Z,20nm,1.4s,mb4.8						
SNY				LR	LR		
	comp=Z,500nm,30.2s,MS4.1						
LZH	**Lanzhou**	**37.45**	**328**	P	**P**	**03 52 21.1**	**-0.3**
LZH				AP	pP	03 52 47.4	+11
LZH				XP	sP	03 52 57.3	+14
LZH				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.5						
LZH				AMB	AMB		
	comp=Z,310nm,5.2s						
LZH				LR	LR		
	comp=E,3μm,19.0s						
LZH				LR	LR		
	comp=Z,4μm,21.0s,MS5.2						
LZH	**Lanzhou**	**37.45**	**328**	P	**P**	**03 52 21.1**	**-0.3**
	comp=Z,70nm,1.0s,mb5.5						
LZH				pP	pP	03 52 47.4	+11
LZH				sP	sP	03 52 57.3	+14
LZH				LR	LR		
	comp=Z,4μm,21.0s,MS5.2						
KLBR	**Kellerberrin**	**37.59**	**193**	*e*P	**P**	**03 52 22.6**	**0.0**
HHC	**Hu-ho-hao-te**	**38.16**	**341**	*e*P	**P**	**03 52 28.3**	**+1.1**
HHC				AP	pP	03 52 51.8	+10
HHC				PP	PP	03 54 04.4	+6.0
HHC				PCP	PcP	03 54 41.2	-0.4
HHC				S	**S**	**03 58 13.5**	**-2.3**
HHC				PCS		03 58 28.4	
HHC				SS	SS	04 01 03.0	+6.4
HHC				SCS	ScS	04 02 22.4	-8.7
HHC				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.9						
HHC				AMB	AMB		
	comp=Z,160nm,4.1s						
HHC				LR	LR		
	comp=N,510nm,16.7s,MS4.6						
HHC				LR	LR		
	comp=E,680nm,16.7s,MS4.6						
HHC				LR	LR		
	comp=Z,690nm,25.0s						
HHC	**Hu-ho-hao-te**	**38.16**	**341**	*e*P	**P**	**03 52 28.3**	**+1.1**
	comp=Z,36nm,1.3s,mb4.9						
HHC				pP	pP	03 52 51.8	+10
HHC				PP	PP	03 54 04.4	+6.0
HHC				PcP	PcP	03 54 41.2	-0.4
HHC				S	**S**	**03 58 13.5**	**-2.3**
HHC				PcS		03 58 28.4	
HHC				SS	SS	04 01 03.0	+6.4
HHC				ScS	ScS	04 02 22.4	-8.7
HHC				LR	LR		
	comp=Z,700nm,25.0s,MS4.4						
MUN	**Mundaring**	**38.34**	**195**	*e*P	**P**	**03 52 29.9**	**+1.1**
CN2	**Changchun**	**38.52**	**358**	*e*P	**P**	**03 52 30.0**	**-0.2**
CN2				*e*AP	pP	03 52 52.1	+6.9
CN2				*e*XP	sP	03 53 04.8	+13
CN2				PCP	PcP	03 54 42.3	-0.4
CN2				*e*S	**S**	**03 58 19.4**	**-1.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
CN2				AMB	AMB		
	comp=Z,190nm,7.0s						
CN2				LR	LR		
	comp=N,400nm,21.0s,MS4.3						
CN2				LR	LR		
	comp=E,300nm,21.0s,MS4.3						
CN2				LR	LR		
	comp=Z,450nm,19.0s,MS4.3						
CN2	**Changchun**	**38.52**	**358**	*e*P	**P**	**03 52 30.0**	**-0.2**
	comp=Z,10.0nm,0.7s,mb4.7						
CN2				*e*pP	pP	03 52 52.1	+6.9
CN2				*e*sP	sP	03 53 04.8	+13
CN2				PcP	PcP	03 54 42.3	-0.4
CN2				*e*S	**S**	**03 58 19.4**	**-1.9**
CN2				LR	LR		
	comp=Z,450nm,19.0s,MS4.3						
NWAO	**Narrogin (SRO)**	**39.00**	**193**	*e*P	**P**	**03 52 34.9**	**+0.6**
NWAO				pmax	pmax		
	comp=Z,54nm,1.1s						
NWAO	**Narrogin (SRO)**	**39.00**	**193**	P	**P**	**03 52 35.0**	**+0.7**
	comp=Z,18nm,0.3s,mb5.2,baz=20,slow=8.3,SNR=29						
NWAO	**Narrogin (SRO)**	**39.00**	**193**	*e*P	**P**	**03 52 34.9**	**+0.6**
	comp=Z,54nm,1.1s,mb5.2						
SHL	**Shillong**	**39.30**	**305**	⇑*i*P	**P**	**03 52 37.0**	**+0.1**
SHL				*e*x	x	03 58 20.0	
STKA	**Stephens Creek**	**39.35**	**160**	*e*P	**P**	**03 52 38.0**	**+0.8**
STKA	**Stephens Creek**	**39.35**	**160**	P	**P**	**03 52 38.2**	**+1.0**
	comp=Z,17nm,0.3s,mb5.3,baz=339,slow=7.8,SNR=66						
MDJ	**Mudanjiang**	**39.37**	**3**	P	**P**	**03 52 38.5**	**+1.3**
MDJ				AP	pP	03 53 01.5	+9.2
MDJ				XP	sP	03 53 13.2	+14
MDJ				PCP	PcP	03 54 44.5	-0.8
MDJ				S	**S**	**03 58 36.6**	**+2.5**
MDJ				XS		03 59 14.3	
MDJ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,90nm,7.6s						
MDJ				LR	LR		
	comp=N,370nm,30.9s,MS4.1						
MDJ				LR	LR		
	comp=E,200nm,30.0s,MS4.1						
MDJ				LR	LR		
	comp=Z,510nm,30.0s,MS4.2						
MDJ	**Mudanjiang**	**39.37**	**3**	P	**P**	**03 52 38.5**	**+1.3**
	comp=Z,26nm,1.0s,mb4.9						
MDJ				pP	pP	03 53 01.5	+9.2
MDJ				sP	sP	03 53 13.2	+14
MDJ				PcP	PcP	03 54 44.5	-0.8
MDJ				S	**S**	**03 58 36.6**	**+2.5**
MDJ				sS		03 59 14.3	
MDJ				LR	LR		
	comp=Z,510nm,30.0s,MS4.2						
ASAJ	**Asahikawa**	**41.15**	**17**	P	**P**	**03 52 53.6**	**+1.6**
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.6s						

ASAJ				MLR	MLR		
	comp=Z,652nm,19.5s						
ASAJ	**Asahikawa**	**41.15**	**17**	P	**P**	**03 52 53.5**	**+1.6**
	comp=Z,9.3nm,0.6s,mb4.6,baz=212,slow=5.9,SNR=7.9						
ASAJ				LR	LR	04 10 47.5	
	comp=Z,652nm,19.5s,MS4.5,baz=187,slow=37						
ADE	**Adelaide**	**41.39**	**165**	*e*P	**P**	**03 52 56.1**	**+2.0**
LSA	**Lhasa**	**41.75**	**310**	P	**P**	**03 52 57.5**	**+0.4**
LSA	**Lhasa**	**41.75**	**310**	*e*P	**P**	**03 52 56.8**	**-0.3**
LSA				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
GTA	**Gaotai**	**42.05**	**328**	*e*P	**P**	**03 53 00.3**	**+0.9**
GTA				AP	pP	03 53 24.2	+10
GTA				XP	sP	03 53 37.9	+16
GTA				PP	PP	03 54 40.8	+0.3
GTA				PPP	PPP	03 55 16.6	+3.5
GTA				SCP		03 58 32.2	
GTA				PCS		03 58 44.9	
GTA				S	**S**	**03 59 11.3**	**-2.8**
GTA				XS		03 59 56.0	
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
GTA				AMB	AMB		
	comp=Z,120nm,5.7s						
GTA				LR	LR		
	comp=N,720nm,23.9s,MS4.7						
GTA				LR	LR		
	comp=E,980nm,27.8s,MS4.7						
GTA				LR	LR		
	comp=Z,2μm,26.2s,MS4.8						
GTA	**Gaotai**	**42.05**	**328**	*e*P	**P**	**03 53 00.3**	**+0.9**
	comp=Z,17nm,1.1s,mb4.6						
GTA				pP	pP	03 53 24.2	+10
GTA				sP	sP	03 53 37.9	+16
GTA				PP	PP	03 54 40.8	+0.3
GTA				ScP		03 58 32.2	
GTA				PcS		03 58 44.9	
GTA				S	**S**	**03 59 11.3**	**-2.8**
GTA				sS		03 59 56.0	
GTA				LR	LR		
	comp=Z,2μm,26.2s,MS4.8						
YSS	**Yuzh-Sakhalins**	**43.80**	**16**	*e*P	**P**	**03 53 15.6**	**+2.0**
YSS				*e*	pP	03 53 26.6	-2.2
KLR	**Kul'dur**	**44.10**	**4**	*e*P	**P**	**03 53 13.0**	**-3.0**
HIA	**Hailar**	**44.39**	**353**	*e*P	**P**	**03 53 18.2**	**-0.2**
HIA				*e*		03 55 00.4	
HIA				pmax	pmax		
	comp=Z,21nm,1.1s						
HIA	**Hailar**	**44.39**	**353**	*e*P	**P**	**03 53 18.2**	**-0.1**
	comp=Z,21nm,1.1s,mb4.8						
HIA				*e*PcP	PcP	03 55 00.4	-1.5
GUN	**Gumba**	**45.15**	**305**	*e*P	**P**	**03 53 23.9**	**-0.9**
	comp=Z,232nm,0.7s,mb6.1						
CNB	**Canberra Magne**	**45.40**	**154**	*e*P	**P**	**03 53 28.8**	**+2.2**
PKI	**Pulchoki**	**45.41**	**304**	*e*P	**P**	**03 53 25.3**	**-1.5**
	comp=Z,110nm,0.9s,mb5.7						
PKI	**Pulchoki**	**45.41**	**304**	*e*P	**P**	**03 53 25.3**	**-1.5**
PKI				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.4						
KKN	**Kakani**	**45.60**	**304**	*e*P	**P**	**03 53 26.9**	**-1.4**
	comp=Z,157nm,0.9s,mb5.9						
KKN	**Kakani**	**45.60**	**304**	*e*P	**P**	**03 53 26.9**	**-1.4**
KKN				pmax	pmax		
	comp=Z,79nm,0.9s,mb5.6						
DMN	**Daman**	**45.68**	**304**	*e*P	**P**	**03 53 27.8**	**-1.1**
	comp=Z,174nm,1.0s,mb6.0						
ULN	**Ulaanbaatar**	**45.87**	**341**	*e*P	**P**	**03 53 30.7**	**+0.5**
ULN				*e*		03 55 06.5	
ULN				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.5						
ULN	**Ulaanbaatar**	**45.87**	**341**	*e*P	**P**	**03 53 30.7**	**+0.5**
	comp=Z,46nm,0.8s,mb5.5						
ULN				*e*PcP	PcP	03 55 06.5	-0.5
SONM	**Songino Array**	**46.06**	**341**	P	**P**	**03 53 32.1**	**+0.4**
	comp=Z,15nm,0.7s,mb5.0,baz=155,slow=8.4,SNR=118						
SONM				PcP	PcP	03 55 07.6	-0.1
	comp=Z,11nm,0.8s,baz=168,slow=3.6,SNR=8.4						
SONM				ScP		03 58 56.4	
	comp=Z,1.4nm,1.1s,baz=135,slow=2.0,SNR=4.0						
SONM				LR	LR	04 14 38.9	
	comp=Z,324nm,20.9s,MS4.2,baz=318,slow=38						
GKN	**Gorkha**	**46.21**	**304**	*e*P	**P**	**03 53 31.4**	**-1.7**
	comp=Z,77nm,0.7s,mb5.8						
KOLN	**Koldanda**	**46.98**	**304**	*e*P	**P**	**03 53 38.2**	**-1.0**
	comp=Z,258nm,0.7s,mb6.3						
CIT	**Chita**	**48.04**	**349**	*e*P	**P**	**03 53 47.7**	**+0.6**
CIT				*e*		03 55 15.0	
CIT				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.3						
CIT	**Chita**	**48.04**	**349**	*e*P	**P**	**03 53 47.7**	**+0.6**
	comp=Z,41nm,1.4s,mb5.3						
CIT				*e*		03 55 15.0	
ZAK	**Zakamensk**	**49.29**	**340⇑**	*i*P	**P**	**03 53 56.7**	**-0.1**
ZAK				*e*		03 55 18.7	
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
ZAK	**Zakamensk**	**49.29**	**340⇑**	*i*P	**P**	**03 53 56.7**	**-0.1**
	comp=Z,6.0nm,0.9s,mb4.6						
ZAK				*e*		03 55 18.7	
TLY	**Talaya**	**50.28**	**341**	*e*P	**P**	**03 54 04.5**	**+0.1**
TLY				*e*S	**S**	**04 01 03.6**	**-7.6**
TLY				*e*SS	ScS	04 03 47.9	+1.0
TLY				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2						
TLY				MLR	MLR		
	comp=Z,336nm,23.0s,MS4.3						
LGTI	**Lohaghat**	**50.32**	**304**	*e*P	**P**	**03 54 03.3**	**-1.8**
TAU	**Tasmania Unive**	**51.25**	**161**	P	**P**	**03 54 09.1**	**-2.8**
TAU				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
TAU	**Tasmania Unive**	**51.25**	**161**	P	**P**	**03 54 09.1**	**-2.9**
	comp=Z,28nm,1.2s,mb5.1						
CLNS	**Chul'man**	**51.57**	**358**	*e*P	**P**	**03 54 12.8**	**-1.3**
CLNS				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.3						
CLNS				pmax	pmax		
	comp=N,15nm,0.8s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.6s						
WMQ	**Urumqi**	**51.75**	**324**	P	**P**	**03 54 15.0**	**-0.6**
WMQ				AP	pP	03 54 39.8	+8.8
WMQ				XP	sP	03 54 51.8	+14
WMQ				PCP	PcP	03 55 27.6	-0.7
WMQ				PP	PP	03 56 14.7	+0.4
WMQ				PPP	PPP	03 57 18.3	+0.2
WMQ				S	**S**	**04 01 27.0**	**-4.5**
WMQ				SCS	ScS	04 03 52.3	-4.8
WMQ				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,90nm,4.5s						
WMQ				LR	LR		
	comp=N,790nm,24.0s,MS4.9						
WMQ				LR	LR		
	comp=E,960nm,24.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,1μm,24.0s,MS4.9						
WMQ	**Urumqi**	**51.75**	**324**	P	**P**	**03 54 15.0**	**-0.6**
	comp=Z,22nm,1.3s,mb4.9						
WMQ				pP	pP	03 54 39.8	+8.8
WMQ				sP	sP	03 54 51.8	+14
WMQ				PcP	PcP	03 55 27.6	-0.7
WMQ				PP	PP	03 56 14.7	+0.4
WMQ				S	**S**	**04 01 27.0**	**-4.5**
WMQ				ScS	ScS	04 03 52.3	-4.8
WMQ				LR	LR		
	comp=Z,1μm,24.0s,MS4.9						
NDI	**New Delhi**	**52.61**	**302**	*e*P	**P**	**03 54 18.0**	**-4.3**
SMLA	**Simla**	**53.39**	**305**	*i* P	**P**	**03 54 22.4**	**-5.6**
SMLA				*i* S	**S**	**04 01 46.0**	**-8.0**
BOD	**Bodaibo**	**53.51**	**351**	*e*P	**P**	**03 54 27.4**	**-1.2**
BOD				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
BOD	**Bodaibo**	**53.51**	**351**	*e*P	**P**	**03 54 27.4**	**-1.2**
	comp=Z,23nm,1.0s,mb5.1						
POO	**Poona**	**53.52**	**289**	*e*P	**P**	**03 54 25.0**	**-4.2**
SDNR	**Sundarnagar**	**53.66**	**306**	*e*P	**P**	**03 54 27.4**	**-2.7**
PET	**Petropavlovsk**	**54.31**	**23**	*e*P	**P**	**03 54 45.5**	**+11**
PET				*e*S	**S**	**04 02 14.6**	**+8.5**
PET				pmax	pmax		
	comp=Z,100nm,17.7s						
PET				smax			
	comp=N,200nm,21.8s						
PET				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.2						
PET	**Petropavlovsk**	**54.31**	**23**	P	**P**	**03 54 34.2**	**-0.2**
THN	**Thein Dam**	**54.97**	**306**	*e*P	**P**	**03 54 35.7**	**-3.9**
	comp=Z,25nm,0.7s,mb5.3						
MKAR	**Makanchi Array**	**56.57**	**325**	P	**P**	**03 54 49.4**	**-1.5**
	comp=Z,12nm,0.3s,mb5.3,baz=118,slow=7.8,SNR=105						
MKAR				ScP		03 59 40.3	
	comp=Z,1.5nm,0.9s,baz=117,slow=6.4,SNR=4.5						
MKAR				LR	LR	04 21 54.4	
	comp=Z,423nm,19.3s,MS4.5,baz=171,slow=39						
MKAR	**Makanchi Array**	**56.57**	**325**	P	**P**	**03 54 49.4**	**-1.5**
YAK	**Yakutsk**	**56.79**	**1**	*e*P	**P**	**03 54 51.3**	**-0.9**
YAK				*e*S	**S**	**04 02 49.8**	**+11**
YAK				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.5						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK	**Yakutsk**	**56.79**	**1**	*e*P	**P**	**03 54 51.3**	**-0.9**
	comp=N,45nm,0.9s,mb5.5						
YAK				*e*S	**S**	**04 02 49.8**	**+11**
MA2	**Magadan**	**57.26**	**14**	*e*P	**P**	**03 54 55.5**	**-0.1**
KSH	**Kashi**	**57.26**	**314**	*e*P	**P**	**03 54 53.6**	**-2.3**
KSH				*e*AP	pP	03 55 18.2	+6.5
KSH				*e*XP	sP	03 55 29.1	+11
KSH				*e*PP	PP	03 57 01.4	-3.6
KSH				*e*PPP	PPP	03 58 19.7	-6.3
KSH				*e*SCP		03 59 38.6	
KSH				*e*PCS		03 59 48.6	
KSH				*e*S	**S**	**04 02 35.5**	**-10**
KSH				*e*SCS	ScS	04 04 30.7	-5.5
KSH				AMB	AMB		
	comp=Z,260nm,2.6s,mb5.8						
KSH				LR	LR		
	comp=N,610nm,14.5s,MS5.1						
KSH				LR	LR		
	comp=E,950nm,16.0s,MS5.1						
KSH	**Kashi**	**57.26**	**314**	*e*P	**P**	**03 54 53.6**	**-2.3**
KSH				*e*pP	pP	03 55 18.2	+6.5
KSH				*e*sP	sP	03 55 29.1	+11
KSH				*e*PP	PP	03 57 01.4	-3.6
KSH				*e*ScP		03 59 38.6	
KSH				*e*PcS		03 59 48.6	
KSH				*e*S	**S**	**04 02 35.5**	**-10**
KSH				*e*ScS	ScS	04 04 30.7	-5.5
ULHL	**Ulahol**	**58.18**	**317**	P	**P**	**03 55 01.3**	**-1.0**
	SNR=15						
KZA	**Kyzart**	**58.78**	**317**	P	**P**	**03 55 06.1**	**-0.4**
	SNR=16						
TKM2	**Tokmak 2**	**58.89**	**318**	P	**P**	**03 55 06.0**	**-1.2**
	SNR=11						
KBK	**Karagaybulak**	**59.22**	**317**	P	**P**	**03 55 10.1**	**+0.6**
	SNR=5.4						
UCH	**Uchtor**	**59.34**	**317**	P	**P**	**03 55 10.4**	**+0.1**
	SNR=26						
FRU	**Bishkek**	**59.52**	**317**	*e*P	**P**	**03 55 24.0**	**+12**
AAK	**Ala-Archa**	**59.52**	**317**	*i* P	**P**	**03 55 11.0**	**-0.5**
AAK				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.8						
AAK	**Ala-Archa**	**59.52**	**317**	*e*P	**P**	**03 55 07.2**	**-4.4**
	comp=Z,10nm,0.9s,mb4.9						
USP	**Ospenovka**	**59.77**	**318**	P	**P**	**03 55 12.2**	**-1.1**
	SNR=11						
AML	**Almayashu**	**59.87**	**316**	P	**P**	**03 55 13.1**	**-0.8**
	SNR=27						
EKS2	**Erkin-Say**	**60.02**	**317**	P	**P**	**03 55 14.1**	**-0.9**
	SNR=17						
SEY	**Seymchan**	**60.59**	**13**	*e*P	**P**	**03 55 19.3**	**+0.7**
SEY				*e*		03 57 28.4	
SEY				*e*S	**S**	**04 03 33.4**	**+5.0**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
SEY				smax			
	comp=N,100nm,5.8s						
SEY				smax			
	comp=E,60nm,10.3s						
FX1	**Attu Island--F**	**60.71**	**30**	*e*P	**P**	**03 55 18.7**	**-0.8**
NVS	**Novosibirsk**	**60.75**	**333**	*i* P	**P**	**03 55 18.0**	**-1.8**
NVS				*i* S	**S**	**04 03 26.7**	**-3.9**
NVS				pmax	pmax		
	comp=N,43nm,1.3s						
NVS				pmax	pmax		
	comp=E,43nm,1.3s						
NVS				pmax	pmax		
	comp=Z,79nm,1.3s,mb5.7						
NVS				smax			
	comp=N,26nm,1.8s						
NVS				smax			
	comp=E,36nm,1.8s						
NVS	**Novosibirsk**	**60.75**	**333**	*i* P	**P**	**03 55 18.0**	**-1.8**
	comp=E,79nm,1.3s,mb5.7						
NVS				*i* S	**S**	**04 03 26.7**	**-3.9**
BVA0	**Borovoye Array**	**66.30**	**327**	*e*P	**P**	**03 55 55.3**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
BVA0	**Borovoye Array**	**66.30**	**327**	*e*P	**P**	**03 55 55.3**	**-0.9**
	comp=Z,3.0nm,0.7s,mb4.4						
BVAR	**Borovoye Array**	**66.30**	**327**	P	**P**	**03 55 55.0**	**-1.3**
	comp=Z,25nm,0.6s,mb5.5,baz=53,slow=4.3,SNR=62						
BRVK	**Borovoye**	**66.38**	**327**	*e*P	**P**	**03 55 59.3**	**+2.6**
TIXI	**Tiksi**	**66.42**	**1**	*e*P	**P**	**03 55 51.9**	**-4.8**
TIXI				*e*SS	SS	04 09 02.4	+2.5
TIXI				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
TIXI	**Tiksi**	**66.42**	**1**	*e*P	**P**	**03 55 51.9**	**-4.8**
	comp=Z,23nm,0.9s,mb5.2						
TIXI				*e*SS	SS	04 09 02.4	+2.5
CHKZ	**Chkalovo**	**66.45**	**327**	*i* P	**P**	**03 55 55.8**	**-1.4**
CHKZ				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.3						
BILL	**Bilibino**	**68.11**	**15**	*i* P	**P**	**03 56 07.0**	**-0.3**
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
BILL				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.4						
BILL	**Bilibino**	**68.11**	**15**	*i* P	**P**	**03 56 07.0**	**-0.3**
	comp=Z,6.0nm,0.9s,mb4.6						
BILL				LR	LR		
	comp=Z,200nm,18.0s,MS4.4						
AB31	**Akbulak array**	**71.25**	**320**	*i* P	**P**	**03 56 25.8**	**-1.0**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
AB31	**Akbulak array**	**71.25**	**320**	*i* P	**P**	**03 56 25.8**	**-1.0**
	comp=Z,1.0nm,0.3s,mb4.2						
SVE	**Sverdlovsk**	**72.92**	**328⇑**	*e*P	**P**	**03 56 36.3**	**-0.2**
SVE				*e*	pP	03 56 53.0	+0.1
SVE				*e*		04 06 48.0	
SVE				pmax	pmax		
	comp=Z,176nm,1.5s,mb5.8						
SVE				MLR	MLR		
	comp=N,200nm,18.0s,MS4.6						
SVE				MLR	MLR		
	comp=E,200nm,18.0s,MS4.6						
SVE				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.6						
SVE	**Sverdlovsk**	**72.92**	**328⇑**	*e*P	**P**	**03 56 36.3**	**-0.2**
	comp=Z,176nm,1.5s,mb5.8						
SVE				*e*	pP	03 56 53.0	+0.1
SVE				*e*		04 06 48.0	
SVE				LR	LR		
	comp=Z,300nm,18.0s,MS4.6						
ARU	**Arti**	**73.91**	**327⇓**	*i*P	**P**	**03 56 42.0**	**-0.3**
ARU				*e*	pP	03 56 54.9	-3.8
ARU				*e*		03 59 27.8	
ARU				*e*PPP	PPP	04 01 11.2	-3.2
ARU				*e*S	S	04 06 05.2	-3.0
ARU				*e*		04 06 37.2	
ARU				*e*SS	SS	04 10 53.4	-2.4
ARU				pmax	pmax		
	comp=Z,58nm,0.8s,mb5.6						
ARU	**Arti**	**73.91**	**327⇓**	*i*P	**P**	**03 56 42.0**	**-0.3**
	comp=Z,58nm,0.8s,mb5.6						
ARU				*e*	pP	03 56 54.9	-3.8
ARU				*e*		03 59 27.8	
ARU				*e*PPP	PPP	04 01 11.2	-3.2
ARU				*e*S	S	04 06 05.2	-3.0
ARU				*e*		04 06 37.2	
ARU				*e*SS	SS	04 10 53.4	-2.4
MIR	**Mirnyy**	**75.60**	**193*d***	*i*P	**P**	**03 56 52.8**	**+0.9**
MIR				pmax	pmax		
	comp=Z,137nm,1.6s,mb5.6						
SOKR	**Solikamsk**	**75.63**	**330⇑**	*i*P	**P**	**03 56 50.1**	**-2.1**
SOKR				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,360nm,20.0s,MS4.7						
SOKR	**Solikamsk**	**75.63**	**330⇑**	*i*P	**P**	**03 56 50.1**	**-2.1**
	comp=Z,30nm,1.0s,mb5.2						
SOKR				LR	LR		
	comp=Z,360nm,20.0s,MS4.7						
MZLS	**Mizel**	**80.47**	**293**	P	**P**	**03 57 18.5**	**-1.0**
KDAK	**Kodiak Island**	**80.53**	**32**	*e*P	**P**	**03 57 19.0**	**-0.2**
	comp=Z,14nm,0.6s,mb5.1						
GNI	**Garni**	**80.81**	**310**	*i* P	**P**	**03 57 21.8**	**+0.7**
GNI				pmax	pmax		
	comp=Z,28nm,1.9s						
GNI	**Garni**	**80.81**	**310**	P	**P**	**03 57 24.1**	**+3.0**
	comp=Z,2.9nm,0.4s,mb4.6,baz=36,slow=21,SNR=5.5						
GNI	**Garni**	**80.81**	**310**	*i* P	**P**	**03 57 21.8**	**+0.7**
	comp=Z,28nm,1.9s,mb4.9						
TI2	**Plekhanov**	**80.84**	**311**	*i* P	**P**	**03 57 18.0**	**-3.2**
TBLG	**Delisi**	**80.84**	**311**	*i* P	**P**	**03 57 18.0**	**-3.2**
IMA	**Indian Mountai**	**80.97**	**24**	*e*P	**P**	**03 57 22.1**	**+0.8**
IMA				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.3						
IMA	**Indian Mountai**	**80.97**	**24**	*e*P	**P**	**03 57 22.1**	**+0.8**
	comp=Z,32nm,0.8s,mb5.3						
KAMS	**Al Khamasin**	**81.17**	**290**	P	**P**	**03 57 21.7**	**-1.6**
ZEI	**Tsey**	**81.49**	**312**	*e*P	**P**	**03 57 24.3**	**-0.2**
ZEI				*i* *PP	pP	03 57 41.3	+0.2
ZEI				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
GOF	**Gofitskoye**	**82.14**	**315⇓**	*i*P	**P**	**03 57 40.6**	**+13**
GOF				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.8						
TATS	**Tathlith**	**82.24**	**289**	P	**P**	**03 57 28.4**	**-0.5**
DJNS	**Zahran al Janu**	**82.27**	**287**	P	**P**	**03 57 29.1**	**0.0**
KIV	**Kislovodsk**	**82.38**	**314*c***	*e*P	**P**	**03 57 29.9**	**+0.8**
KIV				*i* S	S	04 07 42.3	+3.2
KIV				pmax	pmax		
	comp=N,10.0nm,1.0s						
KIV				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
KIV				pmax	pmax		
	comp=E,7.0nm,0.9s						
KIV				smax			
	comp=N,71nm,2.2s						
KIV				smax			
	comp=E,95nm,2.2s						
KIV				MLR	MLR		
	comp=N,119nm,22.0s						
KIV				MLR	MLR		
	comp=Z,197nm,22.0s,MS4.4						
KIV	**Kislovodsk**	**82.38**	**314**	*e*P	**P**	**03 57 26.1**	**-3.0**
	comp=Z,23nm,0.6s,mb5.3						
KIV				*i* S	S	04 07 42.3	+3.2
KIV				LR	LR		
	comp=Z,200nm,22.0s,MS4.4						
MCK	**McKinley**	**82.76**	**26**	*e*P	**P**	**03 57 30.2**	**-0.5**
MCK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
MCK	**McKinley**	**82.76**	**26**	*e*P	**P**	**03 57 30.1**	**-0.5**
	comp=Z,11nm,0.8s,mb4.9						
COLA	**College**	**83.29**	**25**	*i* P	**P**	**03 57 33.2**	**-0.1**
COLA	**College**	**83.29**	**25**	*e*P	**P**	**03 57 32.1**	**-1.2**
ILAR	**Eielson Array**	**83.70**	**25**	P	**P**	**03 57 35.0**	**-0.4**
	comp=Z,4.6nm,0.9s,mb4.6,baz=230,slow=5.7,SNR=30						
BLJS	**Baljurashi**	**83.99**	**289**	P	**P**	**03 57 38.1**	**+0.2**
DIV	**Divide**	**84.17**	**29**	*e*P	**P**	**03 57 38.2**	**+0.4**
	comp=Z,47nm,0.8s,mb5.7						
SOC	**Sochi**	**84.54**	**313**	*e*P	**P**	**03 57 38.3**	**-1.8**
SOC				*e*		04 00 53.4	
SOC				*e*PPP	PPP	04 02 49.1	-4.5
SOC				*e*S	S	04 07 55.9	-4.8
SOC				*e*SS	SS	04 13 34.7	-0.7
SOC				*e*SSS	SSS	04 17 03.4	+0.1
SOC				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.2						
SOC				pmax	pmax		
	comp=N,9.0nm,0.9s						
SOC				pmax	pmax		
	comp=E,3.0nm,0.4s						
SOC	**Sochi**	**84.54**	**313**	*e*P	**P**	**03 57 38.3**	**-1.8**
	comp=E,15nm,0.8s,mb5.2						
SOC				*e*		04 00 53.4	
SOC				*e*PPP	PPP	04 02 49.1	-4.5
SOC				*e*S	S	04 07 55.9	-4.8
SOC				*e*SS	SS	04 13 34.7	-0.7
SOC				*e*SSS	SSS	04 17 03.4	+0.1
VOR	**Voronezh**	**84.65**	**321**	*e*P	**P**	**03 57 40.5**	**+0.1**
VOR				*e*	pP	03 57 57.0	-0.1
VOR				pmax	pmax		
	comp=E,100nm,1.4s						
VOR				pmax	pmax		
	comp=Z,140nm,1.4s,mb5.9						
VRSR	**Storozhevoye**	**84.67**	**321**	*e*P	**P**	**03 57 40.5**	**0.0**
VRSR				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.9						
VRSR				pmax	pmax		
	comp=N,40nm,1.1s						
VRSR				pmax	pmax		
	comp=E,50nm,0.8s						
VRSR	**Storozhevoye**	**84.67**	**321**	*e*P	**P**	**03 57 40.5**	**0.0**
	comp=E,110nm,1.2s,mb5.9						
VNDA	**Vanda**	**84.79**	**173**	P	**P**	**03 57 41.6**	**+1.0**
VNDA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VNDA				MLR	MLR		
	comp=Z,258nm,21.4s						
VNDA	**Vanda**	**84.79**	**173**	P	**P**	**03 57 41.5**	**+0.9**
	comp=Z,6.8nm,0.8s,mb4.8,baz=317,slow=5.7,SNR=27						
VNDA				LR	LR	04 35 05.3	
	comp=Z,258nm,21.4s,MS4.6,baz=334,slow=35						
VNDA	**Vanda**	**84.79**	**173**	*e*P	**P**	**03 57 41.1**	**+0.5**
	comp=Z,7.1nm,0.9s,mb4.8						
MAW	**Mawson**	**85.19**	**200**	P	**P**	**03 57 43.9**	**+1.2**
	comp=Z,7.8nm,0.8s,mb4.9,baz=58,slow=5.9,SNR=9.5						
MAW				LR	LR	04 35 27.3	
	comp=Z,114nm,18.4s,MS4.3,baz=61,slow=35						
PPT	**Papeete**	**85.26**	**108**	*e*S	S	04 08 10.6	+2.3
	comp=Z,176nm,22.8s						
PPT				*e*SS	SS	04 14 03.3	+17
	comp=Z,282nm,31.2s						
PPT				*e*LR	LR	04 25 22.6	
	comp=Z,348nm,25.5s,baz=288						
PPT	**Papeete**	**85.26**	**108**	LR	LR	04 32 03.6	
	comp=Z,217nm,20.4s,MS4.5,baz=285,slow=33						
MOS	**Moscow**	**85.45**	**325α**	*i*P	**P**	**03 57 45.1**	**+0.8**
MOS				*e*		03 57 55.8	
MOS				*e*S	S	04 08 05.2	-4.0
MOS				pmax	pmax		
	comp=Z,219nm,1.2s,mb6.2						
MOS				pmax	pmax		
	comp=Z,500nm,1.8s,mb6.3						
MOS				MLR	MLR		
	comp=Z,900nm,22.5s,MS5.1						
MOS	**Moscow**	**85.45**	**325**	*i* Pcu		03 57 45.1	
	comp=Z,219nm,1.2s						
MOS				*e*		03 57 55.8	
MOS				*e*S	S	04 08 05.2	-4.0
MOS				LR	LR		
	comp=Z,900nm,22.5s,MS5.1						
SBA	**Scott Base**	**85.69**	**172**	*e*P	**P**	**03 57 46.6**	**+1.5**
SBA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.9						
SBA	**Scott Base**	**85.69**	**172**	*e*P	**P**	**03 57 46.6**	**+1.6**
	comp=Z,6.6nm,0.9s,mb4.9						
MALT	**Malatya**	**85.75**	**308**	*e*P	**P**	**03 57 46.8**	**+0.6**
MALT				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.3						
MALT	**Malatya**	**85.75**	**308**	*e*P	**P**	**03 57 46.8**	**+0.6**
	comp=Z,18nm,0.8s,mb5.3						
KBRS	**Khaybar**	**85.78**	**295**	P	**P**	**03 57 47.5**	**+0.9**
TBI	**Tubuai**	**86.08**	**114**	*e*S	S	04 08 16.9	+0.8
	comp=Z,205nm,29.8s						
TBI				*e*SS	SS	04 14 12.8	+14
	comp=Z,127nm,31.5s						
TBI				*e*LQ		04 21 55.6	
	comp=Z,470nm,39.2s						
TBI				*e*LR	LR	04 25 17.4	
	comp=Z,374nm,26.2s,baz=300						
OBN	**Obninsk**	**86.08**	**325*c***	*i*P	**P**	**03 57 47.2**	**-0.2**
OBN				*i* *PP	pP	03 58 05.0	+0.9
OBN				*i*		04 01 08.2	
OBN				*i* S	S	04 08 00.8	-15
OBN				pmax	pmax		
	comp=Z,200nm,1.3s,mb6.2						
OBN				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.7						
OBN	**Obninsk**	**86.08**	**325⇑**	*i*P	**P**	**03 57 47.2**	**-0.2**
	comp=Z,200nm,1.3s,mb6.2						

OBN				*i* pP	pP	03 58 05.0	+0.9
OBN				*i*		04 01 08.2	
OBN				*i* S	S	04 08 00.8	-15
OBN				LR	LR		
	comp=Z,300nm,20.0s,MS4.7						
ANN	**Anapa**	**86.12**	**314**	*c i*P	**P**	**03 57 47.2**	**-0.6**
ANN				*e*S	S	04 08 03.2	-13
ANN				pmax	pmax		
	comp=Z,120nm,0.9s,mb6.1						
ANN				MLR	MLR		
	comp=Z,523nm,28.0s,MS4.8						
ANN				MLR	MLR		
	comp=N,372nm,26.0s,MS5.0						
ANN				MLR	MLR		
	comp=E,747nm,28.0s,MS5.0						
ANN	**Anapa**	**86.12**	**314**	⇑*i*P	**P**	**03 57 47.2**	**-0.6**
	comp=E,120nm,0.9s,mb6.1						
ANN				*e*S	S	04 08 03.2	-13
ANN				LR	LR		
	comp=Z,520nm,28.0s,MS4.8						
APA	**Apatity**	**86.66**	**337**	⇑*i*P	**P**	**03 57 50.0**	**0.0**
APA				*i*	pP	03 58 08.0	+1.3
APA				*i* S	S	04 08 20.0	-0.7
APA				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.4						
APA	**Apatity**	**86.66**	**337**	⇑*i*P	**P**	**03 57 50.0**	**0.0**
	comp=Z,26nm,1.0s,mb5.4						
APA				*i*	pP	03 58 08.0	+1.3
APA				*i* S	S	04 08 20.0	-0.7
DAWY	**Dawson**	**86.97**	**26**	*e*P	**P**	**03 57 51.8**	**+0.3**
ASF	**Jabal al Asfar**	**87.41**	**302**	P	**P**	**03 57 55.0**	**+0.6**
	comp=Z,14nm,0.8s,mb5.2,baz=349,slow=3.2,SNR=13						
UMJS	**Umm Lajj**	**87.58**	**295**	P	**P**	**03 57 56.2**	**+0.8**
JMQS	**Jabal Moqyreh**	**88.55**	**299**	P	**P**	**03 58 00.7**	**+0.7**
KEV	**Kevo**	**88.67**	**340**	*e*p	**P**	**03 57 58.3**	**-1.2**
	comp=Z,7.5nm,0.9s,mb5.0						
KEV	**Kevo**	**88.67**	**340**	*e*P	**P**	**03 57 58.3**	**-1.2**
KEV				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
INK	**Inuvik**	**88.74**	**22**	*e*P	**P**	**03 57 59.6**	**-0.3**
INK				*e*	pP	03 58 17.0	+0.3
INK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
INK	**Inuvik**	**88.74**	**22**	P	**P**	**03 58 00.2**	**+0.3**
	comp=Z,2.3nm,0.8s,mb4.6,baz=173,slow=1.4,SNR=4.9						
INK	**Inuvik**	**88.74**	**22**	*e*P	**P**	**03 57 59.6**	**-0.3**
	comp=Z,4.5nm,1.1s,mb4.7						
INK				*e*	pP	03 58 17.0	+0.3
AYUS	**‘Aynunah**	**89.15**	**298**	P	**P**	**03 58 03.0**	**+0.2**
JMOS	**Jabal al Moall**	**89.20**	**299**	P	**P**	**03 58 03.2**	**+0.2**
ARCES	**ARCESS Array B**	**89.23**	**340**	P	**P**	**03 58 01.6**	**-0.6**
	comp=Z,23nm,0.8s,mb5.6,baz=68,slow=6.5,SNR=46						
EIL	**Elat**	**89.29**	**300**	P	**P**	**03 58 03.1**	**-0.3**
	comp=Z,7.0nm,0.8s,mb5.1,baz=263,slow=3.2,SNR=6.1						
EIL	**Elat**	**89.29**	**300**	*e*P	**P**	**03 58 02.9**	**-0.6**
	comp=Z,33nm,1.4s,mb5.5						
BR131	**Keskin Array S**	**89.35**	**310**	*e*P	**P**	**03 58 02.7**	**-0.8**
	comp=Z,18nm,0.9s,mb5.4						
BRTR	**Keskin Array B**	**89.35**	**310**	P	**P**	**03 58 02.4**	**-1.1**
	comp=Z,14nm,0.9s,mb5.3,baz=117,slow=4.6,SNR=30						
KMBO	**Kilima Mbogo**	**89.88**	**269**	*i* P	**P**	**03 58 07.6**	**+1.0**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KMBO	**Kilima Mbogo**	**89.88**	**269**	P	**P**	**03 58 05.5**	**-1.1**
	comp=Z,0.9nm,0.4s,mb4.4,baz=46,slow=6.7,SNR=6.4						
KMBO				LR	LR	04 37 44.0	
	comp=Z,97nm,21.5s,MS4.2,baz=96,slow=35						
KMBO	**Kilima Mbogo**	**89.88**	**269**	P	**P**	**03 58 05.5**	**-1.1**
KMBO				LR	LR	04 37 44.0	
KAF	**Kangasniemi**	**90.48**	**332**	*e*p	**P**	**03 58 06.9**	**-1.3**
	comp=Z,7.0nm,0.7s,mb5.1,baz=74,slow=4.2						
KAF	**Kangasniemi**	**90.48**	**332**	*e*P	**P**	**03 58 06.9**	**-1.3**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb5.1						
FINES	**FINESS Array B**	**90.73**	**332**	P	**P**	**03 58 08.9**	**-0.5**
	comp=Z,4.2nm,0.5s,mb5.1,baz=74,slow=4.3,SNR=61						
FINES				LR	LR	04 43 15.2	
	comp=Z,139nm,20.6s,MS4.4,baz=263,slow=38						
AKASG	**Malin Array Be**	**90.99**	**321**	P	**P**	**03 58 09.8**	**-1.1**
	comp=Z,2.6nm,0.4s,mb4.9,baz=66,slow=4.1,SNR=38						
VSU	**Vasula**	**91.02**	**329**	⇓*e*P	**P**	**03 58 10.5**	**-0.3**
KIS	**Kishinev**	**91.86**	**317**	*e*P	**P**	**03 58 13.0**	**-2.0**
KIS				MLR	MLR		
	comp=Z,600nm,20.0s,MS5.0						
KIS				MLR	MLR		
	comp=Z,500nm,20.0s						
ISP	**Isparta**	**92.01**	**308**	*i* P	**P**	**03 58 14.9**	**-1.0**
DLBC	**Dease Lake**	**92.38**	**31**	LR	LR	04 39 53.4	
	comp=Z,115nm,18.7s,MS4.3,baz=274,slow=36						
CFR	**Carcaliu**	**92.63**	**316**	⇓*i*P	**P**	**03 58 18.1**	**-0.5**
VRI	**Vrincioaia**	**93.48**	**316**	⇑*i*P	**P**	**03 58 22.5**	**+0.1**
SYO	**Syowa Base**	**93.85**	**201**	⇑P	**P**	**03 58 23.8**	**+0.2**
SYO	**Syowa Base**	**93.85**	**201**	⇑pP	pP	03 58 47.6	+7.1
SUW	**Suwalki**	**93.94**	**325**	*e*P	**P**	**03 58 24.2**	**-0.1**
SUW				MLR	MLR	04 43 05.6	
	comp=Z,300nm,24.1s,MS4.7						
MLR	**Muntele Rosu**	**94.09**	**316**	P	**P**	**03 58 25.0**	**-0.2**
	comp=Z,10nm,0.7s,mb5.4,baz=267,slow=1.4,SNR=28						
MLR	**Muntele Rosu**	**94.09**	**316**	⇑*i*P	**P**	**03 58 24.3**	**-0.9**
BURAR	**Bucovina Array**	**94.15**	**318**	⇑*i*P	**P**	**03 58 25.6**	**+0.3**
BURAR	**Bucovina Array**	**94.15**	**318**	⇑*i*P	**P**	**03 58 25.6**	**+0.2**
JMB	**Yambol**	**94.22**	**313**	*e*P	**P**	**03 58 26.0**	**+0.1**
LVV	**L’vov**	**94.43**	**321**	*e*P	**P**	**03 58 26.1**	**-0.5**
LVV				*e*		04 08 57.5	
LVV				*e*S	S	04 09 29.1	-1.8
QSPA	**South Pole Qui**	**95.05**	**180**	*e*P	**P**	**03 58 29.9**	**+1.1**
	comp=Z,6.6nm,0.8s,mb5.1						
KWP	**Kalwaria**	**95.31**	**321**	*e*P	**P**	**03 58 30.6**	**0.0**
KWP				MLR	MLR	04 45 16.5	
	comp=Z,300nm,24.7s,MS4.7						
KOLS	**Kolonicke sedl**	**95.76**	**320**	*e*P	**P**	**03 58 33.8**	**+1.1**
UZH	**Uzhgorod**	**95.82**	**320**	*e*P	**P**	**03 58 35.0**	**+2.0**
DAG	**Danmarks Havn**	**95.89**	**353**	⇑*i*P	**P**	**03 58 32.4**	**-0.3**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb5.1						
DAG	**Danmarks Havn**	**95.89**	**353**	⇑*i*P	**P**	**03 58 32.4**	**-0.3**
	comp=Z,5.3nm,0.6s,mb5.2						
DRGR		**96.00**	**318**	⇑*i*P	**P**	**03 58 33.9**	**+0.1**
RES	**Resolute Bay**	**96.37**	**10**	*e*P	**P**	**03 58 34.9**	**0.0**
RES				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
RES	**Resolute Bay**	**96.37**	**10**	*e*P	**P**	**03 58 34.9**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.8						
MMB	**Musomiste**	**96.49**	**313**	*e*P	**P**	**03 58 35.0**	**-1.2**
VTS	**Vitosha**	**96.64**	**314**	*e*P	**P**	**03 58 36.0**	**-0.9**
NIE	**Niedzica**	**96.87**	**321**	*e*P	**P**	**03 58 39.0**	**+1.2**
KKB	**Krupnik**	**96.89**	**313**	*e*P	**P**	**03 58 37.0**	**-1.1**
IDI	**Anoyia**	**96.90**	**306**	P	**P**	**03 58 38.1**	**-0.1**
	comp=Z,11nm,0.9s,mb5.3,baz=272,slow=14,SNR=4.1						
HFS	**Hagfors**	**96.91**	**332**	P	**P**	**03 58 36.9**	**-0.7**
	comp=Z,8.8nm,0.8s,mb5.3,baz=108,slow=4.7,SNR=36						
OJC	**Ojcow**	**96.96**	**322**	*e*P	**P**	**03 58 38.5**	**+0.3**
KECS	**Kecovo**	**97.02**	**320**	*i* P	**P**	**03 58 38.8**	**+0.3**
PSZ	**Piszkesteto**	**97.55**	**320**	P	**P**	**03 58 39.5**	**-1.4**
PSZ				pmax	pmax		
	comp=Z,11nm,1.2s,mb5.3						
PSZ	**Piszkesteto**	**97.55**	**320**	P	**P**	**03 58 39.5**	**-1.4**
	comp=Z,11nm,1.2s,mb5.2						
NB2	**NORSAR Subarra**	**97.66**	**334**	P	**P**	**03 58 39.8**	**-1.2**
	comp=Z,7.2nm,0.9s,mb5.2,baz=65,slow=4.5						
NB2	**NORSAR Subarra**	**97.66**	**334**	P	**P**	**03 58 39.8**	**-1.2**
	baz=65,slow=4.6						
NOA	**NORSAR Array B**	**97.66**	**334**	P	**P**	**03 58 40.1**	**-0.9**
	comp=Z,5.1nm,0.9s,mb5.1,baz=66,slow=4.5,SNR=12						
NOA				LR	LR	04 46 43.8	
	comp=Z,312nm,21.8s,MS4.8,baz=60,slow=38						
NOA	**NORSAR Array B**	**97.66**	**334**	P	**P**	**03 58 40.1**	**-0.9**
NOA				LR	LR	04 46 43.8	
VYHS	**Vyhne**	**98.06**	**320**	*e*P	**P**	**03 58 43.4**	**+0.2**
YKA	**Yellowknife Ar**	**98.09**	**24**	P	**P**	**03 58 43.0**	**0.0**
	comp=Z,0.8nm,0.6s,mb4.4,baz=296,slow=4.1,SNR=4.0						
YKA				PKKPbc		04 15 15.6	
	comp=Z,0.5nm,0.3s,baz=114,slow=2.4,SNR=5.1						
YKA	**Yellowknife Ar**	**98.09**	**24**	P	**P**	**03 58 43.0**	**0.0**
YKA				PKKPbc		04 15 15.6	
OKC	**Ostrava-Krasne**	**98.09**	**322**	*e*P	**P**	**03 58 44.2**	**+0.9**
OKC				AMS	AMS	04 48 20.0	
	comp=Z,300nm,22.4s						
MORC	**Moravsky Berou**	**98.48**	**322**	*e*P	**P**	**03 58 45.2**	**+0.1**
MORC				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.3						
MORC	**Moravsky Berou**	**98.48**	**322**	*e*P	**P**	**03 58 45.2**	**+0.1**
	comp=Z,12nm,1.2s,mb5.3						
JMIC	**Jan Mayen**	**98.55**	**347**	LR	LR	04 47 44.9	
	comp=Z,141nm,19.7s,MS4.5,baz=284,slow=38						
KSP	**Ksiaz**	**98.90**	**323**	*e*P	**P**	**03 58 47.3**	**+0.4**
KSP				MLR	MLR	04 47 52.0	
	comp=Z,500nm,20.6s,MS5.0						
DPC	**Dobruska-Polom**	**99.04**	**323**	*e*PDIF	**P**	**03 58 48.3**	**+0.7**
DPC				AMS	AMS	04 47 20.0	
	comp=Z,300nm,20.5s						
UPC	**Upice**	**99.18**	**323**	*e*PDIF	**P**	**03 58 48.6**	**+0.4**
VRAC	**Vranov**	**99.22**	**322**	P	**P**	**03 58 49.3**	**+0.9**
	comp=Z,7.5nm,0.9s,mb5.2,baz=61,slow=6.9,SNR=7.2						
VRAC	**Vranov**	**99.22**	**322**	*e*Pdif	**P**	**03 58 49.2**	**+0.8**
LSZ	**Lusaka**	**99.86**	**255**	*e*P	**P**	**03 58 51.1**	**-1.0**
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
LSZ	**Lusaka**	**99.86**	**255**	*e*P	**P**	**03 58 51.1**	**-0.9**
	comp=Z,9.8nm,0.9s,mb5.2						
PVCC	**Panska Ves**	**100.03**	**323**	*e*PDIF	P	03 58 52.3	+0.2
PVCC				AMS	AMS	04 47 30.0	
	comp=Z,200nm,21.8s						
PRU	**Pruhonice**	**100.24**	**323**	*e*PDIF	P	03 58 52.7	-0.4
PRU				AMS	AMS	04 48 10.0	
	comp=Z,200nm,20.3s						
BRG	**Berggiesshubel**	**100.28**	**324**	*i* P	P	03 58 54.2	+1.0
BRG				pmax	pmax		
	comp=Z,17nm,1.1s						
BRG				MLR	MLR		
	comp=N,190nm,18.3s,MS4.8						
BRG				MLR	MLR		
	comp=E,210nm,18.3s,MS4.8						
BRG				MLR	MLR		
	comp=Z,360nm,18.0s,MS4.9						
BRG	**Berggiesshubel**	**100.28**	**324**	*i* P	P	03 58 54.2	+1.0
	comp=Z,17nm,1.1s						
BRG				*e*		03 59 08.3	
BRG				LR	LR		
	comp=Z,360nm,18.3s,MS4.9						
CLL	**Collm**	**100.67**	**324**	⇓*i*P	P	03 58 55.2	+0.3
CLL				pmax	pmax		
	comp=Z,13nm,1.3s						
CLL				MLR	MLR		
	comp=Z,300nm,20.9s,MS4.8						
CLL	**Collm**	**100.67**	**324**	⇓*i*P	P	03 58 55.2	+0.3
	comp=Z,13nm,1.3s						
CLL				LR	LR		
	comp=Z,300nm,20.9s,MS4.8						
CLL	**Collm**	**100.67**	**324**	⇓P	P	03 58 55.2	+0.3
	comp=Z,logA/T=1.0						
BSEG	**Bad Segeberg**	**101.12**	**327**	*e*Pdif	P	03 58 57.0	+0.1
BSEG				*e*SP	SP	04 11 54.9	-7.9
KHC	**Kasperske Hory**	**101.14**	**322**	*i* P	P	03 58 58.1	+1.0
KHC	**Kasperske Hory**	**101.14**	**322**	*e*PDIF	P	03 58 57.0	-0.1
KHC				AMS	AMS	04 48 50.0	
	comp=Z,200nm,19.9s						
GEC2	**GERESS Array S**	**101.17**	**322**	*e*P	P	03 58 57.5	+0.3
GEC2				*e*SP	SP	04 11 57.7	-5.7
GERES	**GERESS Array B**	**101.17**	**322**	P	P	03 58 57.6	+0.4
	comp=Z,2.7nm,0.9s,baz=72,slow=4.2,SNR=19						
NKC	**Novy Kostel**	**101.41**	**323**	*e*PDIF	P	03 58 58.9	+0.6
NKC				AMS	AMS	04 49 00.0	
	comp=Z,300nm,18.3s						
MOX	**Moxa**	**101.74**	**324**	*e*P	P	03 58 58.3	-1.4
MOX				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MOX				MLR	MLR		
	comp=Z,200nm,22.0s,MS4.6						
MOX	**Moxa**	**101.74**	**324**	*e*P	P	03 58 58.3	-1.4
	comp=Z,7.0nm,1.1s						
MOX				LR	LR		
	comp=Z,200nm,22.0s,MS4.6						
MOX	**Moxa**	**101.74**	**324**	*i* P	P	03 58 58.3	-1.4
	comp=Z,logA/T=0.8						
MOX				L		04 50 27.0	
CLZ	**Clausthal**	**101.97**	**325**	*e*Pdif	P	03 59 01.6	+0.9
CLZ				*e*SP	SP	04 12 03.7	-7.6
GRA1	**Grafenberg Arr**	**102.35**	**323**	*e*Pdif	Pdif	03 59 02.9	+0.4
GRA1				*e*SP	SP	04 12 08.4	-7.1
GRA1				LR	LR		
	comp=Z,300nm,21.0s,MS4.8						
GRF	**Grafenberg Arr**	**102.35**	**323**	*e*P	Pdif	03 59 02.9	+0.4
GRF				MLR	MLR		
	comp=Z,300nm,21.0s,MS4.8						
GRF	**Grafenberg Arr**	**102.35**	**323**	*e*Pdif	Pdif	03 59 02.9	+0.4
GRF				*e*SP	SP	04 12 08.4	-7.1
GRF				LR	LR		
	comp=Z,300nm,21.0s,MS4.8						
FUR	**Furstenfeldbru**	**102.92**	**322**	*e*P	Pdif	03 59 06.0	+1.0
FUR				*e*SP	SP	04 12 17.2	-4.6
TNS	**Taunus Mts**	**103.75**	**324**	*e*P	Pdif	03 59 09.8	+1.1
TNS				*e*SP	SP	04 12 29.0	-1.2
DAVOX	**Davos**	**104.33**	**321**	Pdiff	Pdif	03 59 11.8	+0.6
	comp=Z,1.7nm,0.6s,baz=74,slow=9.6,SNR=4.5						
NVAR	**Mina Array Bea**	**105.74**	**48**	Pdiff	Pdif	03 59 20.3	+2.7
	comp=Z,0.5nm,0.7s,baz=301,slow=5.3,SNR=3.3						
NVAR				PKKPab		04 15 11.2	
	comp=Z,0.8nm,0.6s,baz=104,slow=5.6,SNR=4.4						
PDAR	**Pinedale Array**	**110.09**	**41**	PKKPab		04 14 51.7	
	comp=Z,1.9nm,0.9s,baz=108,slow=5.7,SNR=14						
SCHQ	**Schefferville**	**119.12**	**9**	PKP	PKPdf	04 03 56.3	+2.1
	comp=Z,3.3nm,0.5s,baz=24,slow=2.7,SNR=13						
TXAR	**Lajitas Array**	**120.49**	**52**	PKP	PKPdf	04 03 59.8	+2.3
	comp=Z,1.5nm,0.8s,baz=227,slow=1.2,SNR=20						
TXAR				PKKPab		04 14 06.0	
	comp=Z,0.4nm,0.7s,baz=122,slow=5.9,SNR=6.8						
JCT	**Junction City**	**122.90**	**49**	*e*PKIKP	PKPdf	04 04 03.7	+1.6
WVT	**Waverly**	**127.53**	**36**	*e*PKIKP	PKPdf	04 04 11.8	+0.8
PLAL	**Pickwick Lake**	**128.18**	**37**	*e*PKPdf	PKPdf	04 04 13.2	+0.9
SWET	**Sewanee**	**129.27**	**35**	*e*PKPdf	PKPdf	04 04 15.6	+1.2
SWET				*e*SKP		04 07 33.1	
LRAL	**Lakeview Retre**	**130.16**	**38**	*e*PKPdf	PKPdf	04 04 18.4	+2.3
LRAL				*e*SKP		04 07 36.5	
DBIC	**Dimbokro**	**130.56**	**283**	PKP	PKPdf	04 04 18.0	+0.6
	comp=Z,5.6nm,0.8s,baz=254,slow=1.1,SNR=6.0						
PLCA	**Paso Flores**	**141.22**	**158**	PKhKP		04 04 34.9	
	comp=Z,3.2nm,0.8s,baz=238,slow=5.3,SNR=2.9						
PLCA				PKP	PKPdf	04 04 39.5	+3.2
	comp=Z,4.5nm,0.8s,baz=194,slow=6.1,SNR=5.9						
PLCA	**Paso Flores**	**141.22**	**158**	PKP	PKPdf	04 04 34.9	-1.4
PLCA				PKP	PKPdf	04 04 39.5	+3.2
JTS	**JuntasAbangare**	**144.64**	**64**	*e*PKIKP	PKPdf	04 04 44.7	+1.7
TRQA	**Tornquist**	**146.24**	**167**	*e*PKPdf	PKPdf	04 04 48.2	+3.1
SDV	**Santo Domingo**	**157.53**	**52**	*e*PKPdf	PKPdf	04 05 04.1	+1.8
SDV				*e*		04 05 27.0	
SDV				*e*		04 06 02.3	
CPUP	**Villa Florida**	**158.53**	**169**	PKP	PKPdf	04 05 06.0	+2.9
	comp=Z,2.5nm,1.0s,baz=234,slow=1.7,SNR=4.2						
CPUP				PKPab	PKPab	04 05 41.1	+0.4
	comp=Z,3.4nm,0.7s,baz=201,slow=4.7,SNR=6.9						
LPAZ	**La Paz**	**161.46**	**128**	PKP	PKPdf	04 05 11.2	+4.7
	comp=Z,3.5nm,0.9s,baz=236,slow=4.8,SNR=12						
LPAZ				PKPab	PKPab	04 05 56.9	+3.2
	comp=Z,7.5nm,0.9s,baz=234,slow=1.9,SNR=13						
LPAZ	**La Paz**	**161.46**	**128**	*e*PKPdf	PKPdf	04 05 09.7	+3.2
LPAZ				*e*PKPab	PKPab	04 05 56.3	+2.7
BDFB	**Brasilia**	**168.50**	**205**	PKP2	PKPab	04 06 25.3	+1.0
BDFB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BDFB	**Brasilia**	**168.50**	**205**	PKPab	PKPab	04 06 25.3	+1.0
	comp=Z,4.3nm,0.8s,baz=148,slow=1.6,SNR=4.9						
SAML	**Samuel**	**169.18**	**111**	*e*PKPdf	PKPdf	04 05 15.4	+2.3

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*NEIC **09** 04:10:27.4±0.5, 4.30N×93.40E, h30^{km}, mb4.7/8, Error ellipse: s-maj=12.8km s-min=7.7km az=49.0*

*IDC **09** 04:10:27.7±0.6, 4.34N×93.39E, h33^{km}±4^{km}, mb4.0/12, mb1 4.1/13, mb1mx3.9/22, mbtmp4.1/13, ML4.2/1, MS3.8/1, Ms1 3.8/1, ms1mx3.0/19, Error ellipse: s-maj=28.9km s-min=12.2km az=53.0*

*BJI **09** 04:10:28.3, 4.18N×93.06E, h45^{km}, mB4.9, mb4.4, Ms4.5, Msz3.7*

ISC 09 04:10:26.2±0.6, **4.22N**±0.07×**93.36E**±0.08, **h33**^{km}, **(h33**^{km}±1.6^{km}**:pP-P), n44,** σ1^{s}.**40**/39, **mb4.4**/24, **MS3.9**/2, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**7.34**	**81**	*e*Pn	**P**	**04 12 12.5**	**-1.2**
KULM				*e*Sn	**S**	**04 13 30.5**	**-6.2**
CMAR	**Chiang Mai Arr**	**15.17**	**21**	Pn	**P**	**04 13 57.9**	**-1.9**
	0.3nm,0.3s,baz=217,slow=14,SNR=12						
VIS	**Vishakhapatnam**	**16.63**	**325**	*e*x	**P**	**04 14 15.8**	**-2.7**
KSM	**Kuching**	**17.14**	**99**	P	**P**	**04 14 28.0**	**+3.1**
SHL	**Shillong**	**21.27**	**356**	*e*P	**P**	**04 15 10.0**	**-2.0**
QIZ	**Qiongzhong**	**21.81**	**46**	*e*P	**P**	**04 15 15.5**	**-1.9**
	90nm,1.5s,mb5.0						
KMI	**Kunming**	**22.66**	**23**	P	**P**	**04 15 28.2**	**+2.3**
KMI				AP		04 15 35.4	
KMI				S	**S**	**04 19 35.3**	**+8.2**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
KMI				AMB	AMB		
	comp=Z,130nm,4.6s						
KMI				LR	LR		
	comp=N,260nm,14.9s,MS4.0						
KMI				LR	LR		
	comp=E,320nm,15.3s,MS4.0						
KMI				LR	LR		
	comp=Z,200nm,21.9s						
KKM	**Kota Kinabalu**	**22.83**	**84**	P	**P**	**04 15 28.7**	**+1.0**
PKI	**Pulchoki**	**24.43**	**343**	*e*P	**P**	**04 15 44.8**	**+1.7**
	comp=Z,22nm,0.4s,mb5.0						
DMN	**Daman**	**24.56**	**342**	*e*P	**P**	**04 15 45.4**	**+1.0**
KKN	**Kakani**	**24.68**	**343**	*e*P	**P**	**04 15 46.3**	**+0.8**
	comp=Z,19nm,0.4s,mb4.9						
GKN	**Gorkha**	**25.07**	**342**	*e*P	**P**	**04 15 49.4**	**+0.1**
	comp=Z,24nm,0.3s,mb5.2						
KOLN	**Koldanda**	**25.20**	**339**	*e*P	**P**	**04 15 52.4**	**+1.9**
	comp=Z,18nm,0.5s,mb4.8						
LSA	**Lhasa**	**25.43**	**356**	P	**P**	**04 15 54.4**	**+1.7**
	comp=Z,9.9nm,0.4s,mb4.7						
GYA	**Guiyang**	**25.52**	**29**	P	**P**	**04 15 55.6**	**+2.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
XAN	**Xi’an**	**33.02**	**24**	P	pP	04 17 07.9	-2.4
LZH	**Lanzhou**	**33.15**	**16**	*e*P	**P**	**04 17 04.5**	**+2.7**
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
GTA	**Gaotai**	**35.52**	**9**	*e*P	**P**	**04 17 27.3**	**+5.3**
GTA				AP	pP	04 17 36.6	+4.8
GTA				XP	sP	04 17 42.7	+6.6
FITZ	**Fitzroy Crossi**	**38.79**	**126**	*e*P	**P**	**04 17 49.2**	**-0.4**
FITZ	**Fitzroy Crossi**	**38.79**	**126**	P	**P**	**04 17 49.5**	**-0.1**
	comp=Z,9.7nm,0.8s,mb4.6,baz=320,slow=3.9,SNR=14						
FITZ				pP	pP	04 17 60.0	+0.5
	comp=Z,3.3nm,0.8s,baz=305,slow=3.3,SNR=4.2						
AAK	**Ala-Archa**	**41.78**	**339**	P	**P**	**04 18 16.3**	**+2.1**
	comp=Z,9.6nm,1.5s,mb4.2						
MKAR	**Makanchi Array**	**43.48**	**349**	P	**P**	**04 18 27.2**	**-0.9**
	comp=Z,0.8nm,0.6s,mb3.6,baz=172,slow=8.2,SNR=7.4						
MKAR				pP	pP	04 18 36.0	-2.1
	comp=Z,1.3nm,0.5s,baz=167,slow=8.6,SNR=7.1						
MKAR				LR	LR	04 39 43.9	
	comp=Z,98nm,18.7s,MS3.7,baz=176,slow=40						
MKAR	**Makanchi Array**	**43.48**	**349**	P	**P**	**04 18 27.2**	**-0.9**
MKAR				pP	pP	04 18 36.0	-2.1
MKAR				LR	LR	04 39 43.9	
SONM	**Songino Array**	**44.88**	**12**	P	**P**	**04 18 38.4**	**-0.8**
	comp=Z,0.4nm,0.5s,mb3.5,baz=207,slow=5.5,SNR=5.6						
ULN	**Ulaanbaatar**	**45.05**	**13**	P	pP	04 18 47.2	-3.4
	comp=Z,2.8nm,0.9s						
WRA	**Warramunga Arr**	**46.88**	**122**	P	**P**	**04 18 55.8**	**+0.4**
	comp=Z,7.9nm,0.9s,mb4.7,baz=301,slow=9.0,SNR=34						
WRA				pP	pP	04 19 05.5	+0.1
	comp=Z,6.3nm,0.8s,baz=300,slow=9.0,SNR=13						
WRAB	**Tennant Creek**	**46.88**	**122**	*e*P	**P**	**04 18 55.6**	**+0.2**
	comp=Z,20nm,1.0s,mb5.0						
WRAB				*e*	pP	04 19 06.5	+1.1
WB2	**Warramunga Arr**	**46.88**	**122**	*e*P	**P**	**04 18 55.8**	**+0.3**
MDJ	**Mudanjiang**	**51.27**	**33**	P	**P**	**04 19 29.2**	**+0.2**
MDJ				AMB	AMB		
	comp=Z,100nm,7.3s						
BVAR	**Borovoye Array**	**52.20**	**343**	P	**P**	**04 19 34.3**	**-1.5**
	comp=Z,1.6nm,0.7s,mb4.1,baz=140,slow=12,SNR=6.4						
CHKZ	**Chkalovo**	**52.70**	**343**	*e*P	**P**	**04 19 37.5**	**-2.1**
	comp=Z,4.7nm,0.7s,mb4.5						
PMG	**Port Moresby**	**55.29**	**104**	P	**P**	**04 19 58.3**	**-0.8**
	comp=Z,4.4nm,0.3s,mb4.9,baz=189,slow=8.8,SNR=3.2						
PMG	**Port Moresby**	**55.29**	**104**	*e*P	**P**	**04 19 58.3**	**-0.9**
	comp=Z,54nm,1.2s,mb5.5						
STKA	**Stephens Creek**	**58.21**	**132**	P	**P**	**04 20 18.6**	**-1.1**
	comp=Z,0.7nm,0.3s,mb4.1,baz=293,slow=9.4,SNR=4.4						
BRTR	**Keskin Array B**	**64.26**	**312**	P	**P**	**04 20 59.8**	**-0.7**
	comp=Z,1.1nm,0.8s,mb4.0,baz=135,slow=7.0,SNR=4.5						
MAW	**Mawson**	**74.82**	**192**	P	**P**	**04 22 05.8**	**+1.1**
	comp=Z,1.4nm,0.6s,mb4.1,baz=358,slow=12,SNR=4.1						
FINES	**FINESS Array B**	**75.58**	**333**	P	**P**	**04 22 09.0**	**-0.1**
	comp=Z,2.2nm,1.1s,mb4.0,baz=169,slow=6.1,SNR=2.3						
FINES				pP	pP	04 22 18.8	-0.6
	comp=Z,2.6nm,0.8s,baz=135,slow=7.9,SNR=5.0						
ARCES	**ARCESS Array B**	**78.43**	**341**	P	**P**	**04 22 23.4**	**-1.4**
	comp=Z,0.6nm,0.6s,mb3.7,baz=102,slow=8.3,SNR=3.1						
GERES	**GERESS Array B**	**80.03**	**319**	P	**P**	**04 22 33.4**	**-0.6**
	comp=Z,1.2nm,0.8s,mb3.9,baz=90,slow=5.3,SNR=11						
GERES				pP	pP	04 22 44.7	+0.2
	comp=Z,2.9nm,0.9s,baz=90,slow=5.3,SNR=8.0						
CLL	**Collm**	**80.69**	**321**	*e**SP	sP	04 22 51.0	-0.6
PDAR	**Pinedale Array**	**128.83**	**22**	PKP	PKPdf	04 29 32.8	+1.9
	comp=Z,0.3nm,0.8s,baz=190,slow=5.5,SNR=2.4						
PDAR				pPKP		04 29 42.1	
	comp=Z,0.3nm,0.5s,baz=288,slow=2.9,SNR=3.1						
TXAR	**Lajitas Array**	**142.85**	**25**	PKhKP		04 29 54.7	
	comp=Z,0.2nm,0.5s,baz=173,slow=1.8,SNR=5.8						
TXAR				PKP	PKPdf	04 29 56.5	-0.4
	comp=Z,0.1nm,0.4s,baz=342,slow=0.8,SNR=5.9						
CPUP	**Villa Florida**	**144.36**	**229**	PKP	PKPdf	04 29 59.1	-0.6
	comp=Z,2.7nm,0.9s,baz=130,slow=2.4,SNR=6.0						
CPUP				pPKP		04 30 12.6	
	comp=Z,2.5nm,0.8s,baz=113,slow=5.2,SNR=4.7						
CFAA	**Coronel Fontan**	**147.73**	**210**	PKPbc	PKPdf	04 30 08.8	+3.6
	comp=Z,0.3nm,0.7s,baz=177,slow=3.2,SNR=5.0						

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*ATH **09** 04:20:37.6, 38.31N×26.59E, h31^{km}, MD3.0/3*

*ISK **09** 04:20:38.0, 38.40N×26.61E, h11^{km}, MD2.9*

*CSEM **09** 04:20:38.2±0.1, 38.36N×26.63E, h6^{km}±1^{km}, MD2.9, Error ellipse: s-maj=3.2km s-min=2.1km az=164.0*

ISC 09 04:20:38.3±0.7, **38.38N**±0.04×**26.58E**±0.05, **h10**^{km}±3^{km}, **n13,** σ0^{s}.**82**/22, **1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.02**	**149**	*i* P	**Pg**	**04 20 40.3**	**+0.2**
URLA				*i* S	**Sg**	**04 20 42.0**	**+0.6**
BLCB	**Balcova**	**0.36**	**89**	PG	**Pg**	**04 20 45.1**	**-0.6**
BLCB				SG	**Sg**	**04 20 50.2**	**-0.5**
IZM	**Izmir**	**0.54**	**88**	PG	**Pg**	**04 20 48.8**	**-0.3**
IZM				SG	**Sg**	**04 20 56.4**	**0.0**
KDAG	**Bornova**	**0.54**	**87**	*i* P	**Pg**	**04 20 48.7**	**-0.5**
KDAG				*i* S	**Sg**	**04 20 56.5**	**0.0**
SMG	**Samos**	**0.70**	**163**	*e*PN	**Pn**	**04 20 50.5**	**-3.5**
SMG				*e*SN	**Sn**	**04 21 00.2**	**-4.6**
PRK	**Paraskevi**	**0.90**	**345**	⇓*i*PN	**Pn**	**04 20 56.8**	**+0.1**
PRK				*e*SN	**Sn**	**04 21 09.4**	**-0.4**
AYDN	**Tasoluk**	**1.25**	**125**	*i* P	**Pb**	**04 21 00.5**	**-1.0**
AYDN				*i* S	**Sb**	**04 21 16.6**	**-0.9**
BODT	**Bodrum**	**1.44**	**156**	*e*PN	**Pn**	**04 21 05.1**	**+0.6**
MLSB	**Milas**	**1.44**	**138**	*e*PN	**Pn**	**04 21 04.6**	**+0.1**
BDRM	**Kayabasi**	**1.48**	**152**	*i* P	**Pn**	**04 21 06.6**	**+1.5**
BDRM				*i* S	**Sb**	**04 21 24.4**	**+0.2**
APE	**Apeiranthos**	**1.55**	**213**	*e*PN	**Pn**	**04 21 06.4**	**+0.3**
APE	**Apeiranthos**	**1.55**	**213**	*e*PN	**Pn**	**04 21 04.4**	**-1.7**
MANT	**Manisa**	**1.56**	**85**	*i* P	**Pn**	**04 21 07.4**	**+1.2**
MANT				*i* S	**Sb**	**04 21 27.7**	**+1.3**

CASC 09 04:55:39.6±2.2, **8.57N**×**83.00W, h33**^{km}±6^{km}**, MD3.5, MW3.8, 1C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.19**	**295**	⇓*i*P	P	04 55 45.8	-0.3
ACR				*e*S	S	04 55 50.8	+0.2
SVTC	**San Vito de Co**	**0.21**	**10**	⇑*i*P	P	04 55 46.9	+0.5
BRU2	**Volcan**	**0.37**	**54**	*e*P	P	04 55 49.1	+0.7
BUS	**Buena Vista**	**1.23**	**322**	*e*P	P	04 56 00.0	-0.5
BUS				*e*S	S	04 56 16.3	0.0
LCR2	**La Lucha 2**	**1.53**	**320**	*e*P	P	04 56 04.7	-0.1
LCR2				*e*S	S	04 56 25.2	+1.5
LAJ	**Bijagual**	**1.70**	**319**	*e*P	P	04 56 11.7	+4.4
PRS1	**Puriscal**	**1.91**	**317**	*e*P	P	04 56 09.5	-0.8
PRS1				*e*S	S	04 56 34.4	+0.9

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*BJI **09** 05:01:37.4, 7.40S×129.00E, h94^{km}, mb4.6*

*NEIC **09** 05:01:37.5±1.6, 7.38S×128.98E, h94^{km}±16^{km}, mb4.3/4, Error ellipse: s-maj=16.3km s-min=9.4km az=60.0*

*IDC **09** 05:01:37.3±3.9, 7.34S×128.94E, h89^{km}±36^{km}, mb4.1/7, mb1 4.3/9, mb1mx4.1/16, mbtmp4.5/9, Error ellipse: s-maj=36.9km s-min=15.7km az=71.0*

ISC 09 05:01:36.1±0.5, **7.39S**±0.06×**129.0E**±0.1, **h100**^{km}**, n27,**

σ1^{s}21/29, mb4.2/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	6.28	148	eP	P	05 03 12.7	+5.0
	43nm,0.4s						
KAKA				eS	S	05 04 19.6	+1.0
FITZ	Fitzroy Crossi	11.15	197	eP	P	05 04 13.7	0.0
	10nm,0.4s						
FITZ				eS	S	05 06 09.9	-6.9
FITZ	Fitzroy Crossi	11.15	197	P	P	05 04 13.8	+0.1
	8.8nm,0.3s,baz=27,slow=9.1,SNR=87						
FITZ				S	S	05 06 09.1	-7.7
	13nm,0.3s,baz=116,slow=19,SNR=18						
WRAB	Tennant Creek	13.51	158	eP	P	05 04 45.7	+0.8
	22nm,0.6s						
WRAB				eS	S	05 06 57.1	-16
WRA	Warramunga Arr	13.51	158	P	P	05 04 45.0	+0.1
	3.5nm,0.3s,baz=334,slow=11,SNR=147						
WRA				S	S	05 07 06.5	-6.4
	4.9nm,0.3s,baz=334,slow=23,SNR=9.5						
WB2	Warramunga Arr	13.52	158	eP	P	05 04 45.5	+0.5
WB2				eS	S	05 07 05.9	-7.1
MBWA	Marble Bar	16.37	212	eP	P	05 05 20.8	-0.5
	17nm,1.1s						
KKM	Kota Kinabalu	18.46	316	P	P	05 05 41.2	-5.5
KSM	Kuching	20.63	295	eP	P	05 06 10.4	+0.7
STKA	Stephens Creek	27.05	156	P	P	05 07 12.8	+1.6
	2.6nm,0.5s,mb4.0,baz=328,slow=8.1,SNR=9.4						
STKA	Stephens Creek	27.05	156	eP	P	05 07 12.5	+1.4
STKA				e	pP	05 07 37.2	+4.0
NWAO	Narrogin (SRO)	27.67	202	P	P	05 07 17.1	+0.2
	25nm,1.1s,mb4.7,baz=23,slow=7.7,SNR=3.5						
CMAR	Chiang Mai Arr	39.23	311	P	P	05 08 57.0	+0.4
	1.8nm,0.8s,mb4.0,baz=140,slow=9.0,SNR=7.0						
ENH	Enshi	41.87	334	eP	P	05 09 18.2	0.0
	6.1nm,0.7s,mb4.4						
MJAR	Matsushiro Arr	44.54	11	P	P	05 09 39.5	-0.2
	1.7nm,0.6s,mb4.0,baz=184,slow=9.5,SNR=5.7						
KS15	Wonju Array Si	44.60	359	eP	P	05 09 40.7	+0.4
XAN	Xi’an	45.38	336	P	P	05 09 45.7	-0.8
GTA	Gaotai	53.84	332	eP	P	05 10 51.1	0.0
SONM	Songino Array	58.50	342	P	P	05 11 24.9	+0.7
	0.7nm,0.6s,mb3.9,baz=151,slow=6.4,SNR=6.4						
MKAR	Makanchi Array	68.01	327	P	P	05 12 26.8	0.0
	6.5nm,0.5s,mb4.7,baz=121,slow=7.9,SNR=76						
BVAR	Borovoye Array	77.87	328	P	P	05 13 23.9	-0.4
	1.1nm,0.4s,mb4.0,baz=127,slow=7.4,SNR=12						
CHKZ	Chkalovo	78.08	329	eP	P	05 13 25.3	-0.2
	3.4nm,0.8s,mb4.1						
ARU	Arti	85.51	328	P	P	05 14 02.5	-1.5
	4.1nm,1.0s,mb4.3						
TXAR	Lajitas Array	125.97	59	PKP	PKPdf	05 20 29.8	+2.5
	0.1nm,0.4s,baz=288,slow=2.9,SNR=3.8						
CPUP	Villa Florida	145.93	170	PKPbc	PKPbc	05 21 05.9	+0.9
	1.3nm,0.8s,baz=166,slow=4.2,SNR=4.1						
LPAZ	La Paz	151.00	144	PKPbc	PKPdf	05 21 21.9	+10
	0.9nm,0.4s,baz=20,slow=3.3,SNR=14						
LPAZ	La Paz	151.00	144	PKPbc	PKPdf	05 21 21.9	+10

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*IDC **09** 05:54:50.8±6.0, 5.12S×145.00E, h55^{km}±62^{km}, mb3.7/3, mb1 3.9/6, mb1mx3.7/16, mbtmp4.0/6, ML3.4/2, MS3.3/3, Ms1 3.3/3, ms1mx3.0/23, Error ellipse: s-maj=39.0km s-min=36.4km az=63.0*

*NEIC **09** 05:54:51.8±3.5, 5.12S×145.24E, h84^{km}±33^{km}, mb4.1/4, Error ellipse: s-maj=31.0km s-min=28.0km az=122.0*

ISC 09 05:54:49.9±3.7**, 5.1S**±0.2×**145.1E**±0.1**, h77^{km}**±33^{km}**, n16, σ1^{s}16**/16**, mb4.0**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.74	155	P	P	05 55 58.7	-1.8
	2.8nm,0.3s,baz=313,slow=4.5,SNR=3.9						
PMG				S	S	05 56 55.2	+0.5
	5.4nm,0.3s,baz=104,slow=23,SNR=6.2						
PMG				LR	LR	05 57 51.6	
	comp=Z,98nm,21.5s,baz=94,slow=38						
PMG	Port Moresby	4.74	155	ePn	P	05 55 58.6	-1.9
PMG				S	S	05 56 55.2	+0.5
PMG				LR	LR	05 57 51.6	
CTA	Charters Tower	14.96	176	P	P	05 58 20.3	+1.9
	0.2nm,0.3s,baz=2.1,slow=15,SNR=2.8						
WRAB	Tennant Creek	18.11	214	eP	P	05 58 58.0	+0.2
	10.0nm,1.0s						
WB2	Warramunga Arr	18.12	214	eP	P	05 58 58.1	+0.2
WRA	Warramunga Arr	18.12	214	P	P	05 58 57.7	-0.3
	0.3nm,0.3s,baz=33,slow=12,SNR=25						
FITZ	Fitzroy Crossi	23.03	234	eP	P	05 59 50.2	+1.1
	3.4nm,0.6s,mb3.9						
FITZ	Fitzroy Crossi	23.03	234	P	P	05 59 50.2	+1.0
	8.6nm,0.5s,mb4.3,baz=38,slow=4.5,SNR=24						
DZM	Mont Dzumac	26.66	131	LR	LR	06 10 03.5	
	comp=Z,87nm,19.9s,baz=214,slow=34						
STKA	Stephens Creek	26.86	187	P	P	06 00 25.3	0.0
	1.8nm,0.7s,mb3.7,baz=20,slow=12,SNR=5.8						
STKA	Stephens Creek	26.86	187	eP	P	06 00 25.2	-0.2
MBWA	Marble Bar	29.37	235	P	P	06 00 46.0	-2.0
PALK	Pallekele	65.45	280	eP	P	06 05 27.1	-0.4
	16nm,0.9s,mb4.8						
MKAR	Makanchi Array	75.61	321	P	P	06 06 29.8	+1.6
	0.2nm,0.7s,mb3.0,baz=106,slow=10,SNR=2.4						
QSPA	South Pole Qui	84.88	180	P	P	06 07 15.6	-1.2
	2.4nm,0.8s,mb4.2						
YBH	Yreka Blue Hor	94.96	49	LR	LR	06 46 21.2	
	comp=Z,37nm,18.1s,baz=75,slow=32						

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*NEIC **09** 06:36:39.8, 17.05N×95.93W, h60^{km}, MD3.5(MEX), After MEX.*

MEX 09 06:36:39.8±1.0**, 17.05N×95.93W, h60^{km}**±23^{km}**, MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OXX	Oaxaca	0.76	273	iP	P	06 36 54.0	-0.9
OXX				iS	S	06 37 04.0	-2.1
VHO	Vista Hermosa	0.77	272	iP	P	06 36 52.5	-2.5
VHO				iS	S	06 37 05.0	-1.4
CMIG	Matias Romero	1.00	87	iP	P	06 36 56.6	-1.4
CMIG				iS	S	06 37 09.1	-2.5
HUIG	Huatulco	1.28	188	iP	P	06 37 00.2	-1.8
HUIG				iS	S	06 37 15.5	-2.9
PPM	Popocatepetl	3.26	308	eP	P	06 37 28.8	-1.0
PPM				iS	S	06 38 03.9	-3.6

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*IDC **09** 07:04:49.9±0.9, 48.95S×121.60E, mb4.1/6, mb1 4.4/7, mb1mx4.2/13, mbtmp4.3/7, ML2.2/1, MS3.9/9, Ms1 3.8/9, ms1mx3.7/17, Error ellipse: s-maj=38.4km s-min=18.2km az=106.0*

*BJI **09** 07:04:51.3, 48.90S×121.60E, h10^{km}, mB4.9, mb5.0, Ms4.2, Msz4.4*

*NEIC **09** 07:04:51.3±0.3, 48.94S×121.59E, h10^{km}, mb4.6/9, Error ellipse: s-maj=13.3km s-min=6.9km az=108.0*

ISC 09 07:04:49.6±0.4**, 48.95S**±0.06×**121.6E**±0.2**, h10^{km}, n42, σ0^{s}92**/23**, mb4.5**/14**, MS3.9**/9**, 4C-1D, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	Narrogin (SRO)	16.34	347	Pn	P	07 08 41.7	+1.1
	0.4nm,0.3s,baz=148,slow=13,SNR=4.0						
NWAO				LR	LR	07 13 31.2	
	comp=Z,541nm,20.9s,baz=50,slow=32						
TAU	Tasmania Unive	18.83	81	P	P	07 09 11.4	-0.2
	12nm,0.8s						
STKA	Stephens Creek	22.75	49	P	P	07 09 53.8	+0.9
	8.0nm,1.0s,mb4.1,baz=199,slow=9.8,SNR=8.4						
STKA				LR	LR	07 17 30.5	
	comp=Z,285nm,18.8s,MS3.7,baz=206,slow=33						
WRA	Warramunga Arr	30.70	24	P	P	07 11 05.3	-1.4
	5.1nm,1.0s,mb4.3,baz=196,slow=9.0,SNR=12						
WRAB	Tennant Creek	30.71	24	eP	P	07 11 05.3	-1.6
	18nm,1.2s,mb4.8						
VNDA	Vanda	32.50	165	P	P	07 11 22.4	+0.4
	1.6nm,0.7s,mb4.0,baz=305,slow=8.1,SNR=7.9						
VNDA				LR	LR	07 23 35.3	
	comp=Z,294nm,18.7s,MS4.0,baz=319,slow=35						
VNDA	Vanda	32.50	165	eP	P	07 11 20.6	-1.3
	3.6nm,0.9s,mb4.2						
SBA	Scott Base	33.55	164	P	P	07 11 32.0	+0.9
	6.1nm,1.1s,mb4.4						
MAW	Mawson	34.34	215	P	P	07 11 37.3	-0.8
	3.6nm,0.9s,mb4.3,baz=87,slow=15,SNR=4.2						
MAW				LR	LR	07 22 20.3	
	comp=Z,89nm,20.5s,MS3.5,baz=63,slow=31						
CTAO	Charters Tower	34.93	43	P	P	07 11 42.9	-0.7
	14nm,1.3s,mb4.7						
QSPA	South Pole Qui	41.17	180	⇓iP	P	07 12 36.2	+1.0
	19nm,1.1s,mb4.6						
PMG	Port Moresby	44.85	37	LR	LR	07 31 20.1	
	comp=Z,150nm,20.5s,MS3.9,baz=231,slow=36						
PMG	Port Moresby	44.85	37	eP	P	07 13 05.3	-0.6
	22nm,0.9s,mb5.0						
SNAA	Sanae	53.46	199	e	pP	07 14 17.6	+3.1
SNAA	Sanae	53.46	199	P	P	07 14 10.7	-0.7
	3.3nm,1.2s,mb4.2,baz=139,slow=7.8,SNR=9.4						
SNAA	Sanae	53.46	199	⇑iP	P	07 14 11.0	-0.4
SNAA				e		07 14 17.6	
VNA2	Neumayer--Watz	54.98	198	e	pP	07 14 28.7	+3.0
VNA2	Neumayer--Watz	54.98	198	⇑iP	P	07 14 22.3	-0.3
VNA2				e		07 14 28.7	
VNA3	Neumayer Olymp	55.19	197	e	pP	07 14 29.8	+2.6
VNA3	Neumayer Olymp	55.19	197	⇑iP	P	07 14 23.4	-0.7
VNA3				e		07 14 29.8	
VNA1	Neumayer--Stat	55.38	198	e	pP	07 14 32.3	+3.7
VNA1	Neumayer--Stat	55.38	198	⇑iP	P	07 14 25.3	-0.2
VNA1				e		07 14 32.3	
RAR	Rarotonga	66.93	96	eP	P	07 15 45.6	+1.3
	8.0nm,0.6s,mb4.9						
CMAR	Chiang Mai Arr	70.08	337	P	P	07 16 04.1	+0.3
	0.8nm,0.4s,mb4.0,baz=190,slow=5.5,SNR=4.3						
BOSA	Boshof	72.89	246	LR	LR	07 39 44.7	
	comp=Z,36nm,20.0s,MS3.6,baz=15,slow=29						
KMI	Kunming	75.64	342	P	P	07 16 37.4	+0.8
KMI				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
JNU	Nakatsue	82.13	8	LR	LR	07 54 34.2	
	comp=Z,54nm,19.9s,MS3.9,baz=189,slow=36						
JHJ	Hachijo jima 2	83.30	15	LR	LR	07 50 10.8	
	comp=Z,156nm,19.3s,MS4.4,baz=304,slow=33						
KMBO	Kilima Mbogo	85.44	274	LR	LR	07 47 53.4	
	comp=Z,35nm,18.8s,MS3.8,baz=89,slow=30						
PLCA	Paso Flores	90.05	171	P	P	07 17 54.0	+3.7
	comp=Z,2.9nm,0.9s,mb4.6						
MDJ	Mudanjiang	93.45	6	P	P	07 18 07.1	+1.2
MDJ				AMB	AMB		
	comp=Z,30nm,5.2s						
WMQ	Urumqi	97.06	336	eP	P	07 18 22.0	-0.4
WMQ				AP	pP	07 18 26.8	+1.1
WMQ				LR	LR		
	comp=Z,220nm,24.0s,MS4.6						
TXAR	Lajitas Array	140.50	103	PKhKP		07 24 15.9	
	comp=Z,0.3nm,0.7s,baz=192,slow=5.4,SNR=4.9						
BOZ	Bozeman (W)	144.36	75	ePKPdf	PKPdf	07 24 26.5	-1.7
YMR	Madison River	144.36	77	ePKPdf	PKPdf	07 24 26.1	-2.2
PDAR	Pinedale Array	144.41	80	PKP	PKPdf	07 24 26.2	-2.1
	comp=Z,1.5nm,1.0s,baz=180,slow=3.0,SNR=9.3						
HRY	Holter Researc	144.67	73	ePKPdf	PKPdf	07 24 27.1	-1.7
ISCO	Idaho Springs	145.53	87	ePKPdf	PKPdf	07 24 30.5	+0.1
EDM	Edmonton	145.94	62	ePKPdf	PKPdf	07 24 30.0	-0.7
YKA	Yellowknife Ar	146.75	45	PKPbc	PKPbc	07 24 31.9	+1.7
	comp=Z,2.1nm,0.8s,baz=274,slow=2.0,SNR=17						
WMOK	Wichita Mounta	147.15	100	ePKPbc	PKPdf	07 24 34.5	+1.1
RSSD	Black Hills	148.61	81	ePKPbc	PKPdf	07 24 37.5	+2.2

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*NEIC **09** 07:06:13.5±0.5, 35.75N×135.16E, h335^{km}±8^{km}, mb3.4/2, Error ellipse: s-maj=18.3km s-min=10.8km az=219.0*

*JMA **09** 07:06:14.8±0.1, 35.97N×135.43E, h348^{km}±1^{km}, M3.3*

*IDC **09** 07:06:14.8±1.6, 35.96N×135.70E, h364^{km}±26^{km}, mb3.1/5, mb1 3.2/6, mb1mx2.9/24, mbtmp3.7/6, Error ellipse: s-maj=56.0km s-min=16.0km az=64.0*

ISC 09 07:06:13.5±0.5**, 35.87N**±0.09×**135.44E**±0.09**, h360^{km}**±4^{km}**, n27, σ0^{s}65**/32**, mb3.3**/7**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKY	Yasaka	0.37	229	P	P	07 06 59.1	+0.3
JKY				S	S	07 07 33.6	-0.8
JWT	Wachi	0.59	183	P	P	07 06 59.5	+0.3
JWT				S	S	07 07 34.0	-1.1
JGM	Miyama	1.05	99	P	P	07 07 00.8	+0.1
JGM				S	S	07 07 37.4	-0.3
JWY	Kouya	1.65	176	P	P	07 07 04.5	+0.7
JIE	Ise	1.80	145	P	P	07 07 05.4	+0.7
JIE				S	S	07 07 45.0	+0.1
JHS	Saijyo	2.09	246	P	P	07 07 06.8	+0.1
JAI	Aioi	2.23	202	P	P	07 07 08.3	+0.6
MAJO	Matsushiro	2.33	72	ePn	P	07 07 08.3	-0.2
MAT	Matsushiro	2.33	72	eP	P	07 07 08.0	-0.5
MAT	Matsushiro	2.33	72	P	P	07 07 08.4	-0.1
MJAR	Matsushiro Arr	2.33	73	P	P	07 07 08.4	-0.1
	3.5nm,0.3s,baz=264,slow=9.9,SNR=19						
JWZ	Kozaga	2.35	174	P	P	07 07 09.8	+1.2
JYN	Shimob	2.55	97	P	P	07 07 10.2	0.0
JYN				S	S	07 07 53.8	-0.9
JRY	Ryogami san	2.81	86	P	P	07 07 12.9	+0.6
JOD2	Odawara 2	3.03	100	P	P	07 07 14.9	+0.7
KS15	Wonju Array Si	6.28	287	ePn	P	07 07 44.2	-4.1
ENH	Enshi	22.43	263	eP	P	07 10 42.7	-1.2
	7.6nm,0.7s,mb4.0						
SONM	Songino Array	24.57	308	P	P	07 11 03.5	+0.2
	0.5nm,0.5s,mb3.0,baz=119,slow=10,SNR=5.0						
MKAR	Makanchi Array	40.67	302	P	P	07 13 21.8	+0.7
	1.8nm,0.6s,mb3.5,baz=90,slow=10,SNR=27						
MKAR	Makanchi Array	40.67	302	P	P	07 13 21.8	+0.7
BVAR	Borovoye Array	47.79	312	P	P	07 14 17.7	+0.5
	0.5nm,0.4s,mb3.1,baz=76,slow=12,SNR=6.2						
BRVK	Borovoye	47.85	312	eP	P	07 14 21.5	+3.8
	0.3nm,0.6s,mb2.7						
WRAB	Tennant Creek	55.51	181	eP	P	07 15 13.9	-0.5
WB2	Warramunga Arr	55.52	181	eP	P	07 15 13.9	-0.5
WRA	Warramunga Arr	55.52	181	P	P	07 15 13.9	-0.5
	0.6nm,0.3s,mb3.4,baz=359,slow=7.6,SNR=53						
FINES	FINESS Array B	67.53	331	P	P	07 16 32.4	-0.5
	0.4nm,0.4s,mb3.5,baz=58,slow=7.5,SNR=9.8						
FINES	FINESS Array B	67.53	331	P	P	07 16 32.4	-0.5

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*NAO **09** 07:14:31.1±3.1, 78.50N×18.48E, ML2.8*

*MOS **09** 07:14:31.6±1.8, 77.94N×14.71E, h10^{km}, mb4.4/4, Error ellipse: s-maj=80.0km s-min=8.5km az=93.6*

*IDC **09** 07:14:32.7±0.8, 78.07N×14.18E, mb3.7/8, mb1 3.9/12, mb1mx3.8/25, mbtmp3.8/12, ML3.5/4, Error ellipse: s-maj=25.0km s-min=11.4km az=65.0*

*NEIC **09** 07:14:33.8±0.4, 78.04N×14.30E, h10^{km}, mb4.3/7, Error ellipse: s-maj=11.3km s-min=6.1km az=55.0*

*BER **09** 07:14:33.9±3.0, 78.58N×16.96E, h21^{km}±18^{km}, MD2.8, ML3.4, ML2.8(NAO)*

*CSEM **09** 07:14:33.9, 78.58N×16.96E, h21^{km}, ML3.4, After BER*

ISC 09 07:14:31.2±1.4**, 77.91N**±0.04×**14.4E**±0.3**, h9^{km}**±9^{km}**, n47, σ1^{s}49**/55**, mb3.9**/15**, 1C-2D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPA0	Spitsbergen Ar	0.50	56	Pg	Pg	07 14 41.5	+0.2
SPA0				Lg		07 14 47.8	
SPA0	Spitsbergen Ar	0.50	56	Pg	Pg	07 14 41.5	+0.2
	SNR=111						
SPA0				Lg		07 14 47.8	
	SNR=90						
KBS	Kingsbay	1.13	336	eP	Pb	07 14 50.9	-1.7
KBS				eS	Sb	07 15 05.7	-1.5
KBS				AML	AML	07 15 09.0	
	comp=Z,1µm,0.6s						
KBS	Kingsbay	1.13	336	eP	Pb	07 14 50.9	-1.7
	SNR=55						
KBS				eS	Sb	07 15 05.7	-1.5
	comp=Z,1µm,0.6s,SNR=55						
DAG	Danmarks Havn	7.27	277	⇓eP	Pn	07 16 21.0	+0.7
	comp=Z,3.4nm,0.4s						
DAG	Danmarks Havn	7.27	277	⇓iP	Pn	07 16 21.0	+0.7
	comp=Z,3.4nm,0.4s						
KEV	Kevo	8.89	150	eP	P	07 16 43.2	+0.3
ARA0	ARCESS Array S	8.95	154	Pn	P	07 16 42.9	-0.9
	baz=352,slow=12						
ARA0				Sn	Sn	07 18 22.4	-3.5
	baz=343,slow=28						
ARA0	ARCESS Array S	8.95	154	P	P	07 16 42.9	-0.9
	baz=352,slow=12,SNR=51						
ARA0				Sn	Sn	07 18 22.4	-3.5
	baz=343,slow=23,SNR=55						
ARCES	ARCESS Array B	8.95	154	Pn	P	07 16 43.1	-0.7
	comp=Z,0.9nm,0.3s,baz=349,slow=11,SNR=23						
ARCES				Sn	Sn	07 18 22.7	-3.1
	comp=Z,0.9nm,0.3s,baz=355,slow=23,SNR=4.6						
APA0	Apatity Array	11.63	143	Pn	P	07 17 17.6	-2.7
	baz=344,slow=12						
APA0				Sn	S	07 19 28.3	-3.1
	baz=342,slow=37						
APA0	Apatity Array	11.63	143	P	P	07 17 17.6	-2.7
	baz=344,slow=12,SNR=51						
APA0				Sn	S	07 19 28.3	-3.1
	baz=342,slow=31,SNR=55						
APA	Apatity	11.72	142	⇑iP	P	07 17 19.0	-2.5
APA				i		07 19 34.4	
APA				pmax	pmax		
	comp=Z,24nm,0.8s						
SUMG	Summit	13.95	275	eP	P	07 17 50.4	-0.5
	comp=Z,21nm,1.3s						
KAF	Kangasniemi	16.32	160	epkp	P	07 18 21.1	-0.7
FIA0	FINESS Array S	16.97	160	Pn	P	07 18 29.7	-0.3
	baz=357,slow=16						
FIA0				Sn	S	07 21 33.3	-4.4
	baz=11,slow=28						
FIA0	FINESS Array S	16.97	160	P	P	07 18 29.7	-0.3
	baz=357,slow=16,SNR=51						
FIA0				Sn	S	07 21 33.3	-4.4
	baz=11,slow=23,SNR=55						
FINES	FINESS Array B	16.97	160	Pn	P	07 18 29.8	-0.2
	comp=Z,0.2nm,0.3s,baz=8.1,slow=14,SNR=10						
NB2	NORSAR Subarra	16.98	185	P	P	07 18 37.0	+6.8
	comp=Z,7.3nm,1.1s,baz=3.0,slow=11						
NOA	NORSAR Array B	16.98	185	P	P	07 18 32.4	+2.2
	comp=Z,0.1nm,0.3s,baz=2.0,slow=11,SNR=3.5						
NAO01	NORSAR Array S	17.19	186	P	P	07 18 35.6	+2.8
	comp=Z,4.2nm,0.8s						
HFS	Hagfors	17.87	181	Pn	P	07 18 44.1	+2.9
	baz=350,slow=12						
HFS	Hagfors	17.87	181	P	P	07 18 44.1	+2.9
	comp=Z,0.0nm,0.3s,baz=9.5,slow=9.0,SNR=6.8						
HFS	Hagfors	17.87	181	P	P	07 18 44.1	+2.9
	baz=350,slow=12,SNR=51						
RES	Resolute Bay	22.50	319	P	P	07 19 33.3	+1.4
RES				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
RES	Resolute Bay	22.50	319	P	P	07 19 33.3	+1.4
	comp=Z,3.4nm,1.0s,mb3.7						
TIXI	Tiksi	25.91	41	eP	P	07 20 04.2	-0.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
ARU	Arti	26.27	119	eP	P	07 20 09.7	+1.7
ARU				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.4						
ARU	Arti	26.27	119	eP	P	07 20 09.7	+1.8
	comp=Z,11nm,0.9s,mb4.4						
GERES	GERESS Array B	29.18	181	P	P	07 20 38.0	+3.5
	comp=Z,0.4nm,0.3s,mb3.6,baz=27,slow=6.0,SNR=4.6						
VYHS	Vyhne	29.58	174	eSG	S	07 25 35.4	+3.5
BVAR	Borovoye Array	31.77	108	P	P	07 20 59.3	+1.9
	comp=Z,1.7nm,0.8s,mb3.9,baz=323,slow=7.4,SNR=8.4						
AQU	L’Aquila	35.67	181	P	P	07 21 29.3	-2.0
YKA	Yellowknife Ar	36.46	323	P	P	07 21 37.5	-0.3
	comp=Z,0.5nm,0.8s,mb3.5,baz=13,slow=8.2,SNR=3.0						
ILAR	Eielson Array	37.09	347	P	P	07 21 42.5	-0.5
	comp=Z,0.7nm,1.0s,mb3.4,baz=354,slow=8.9,SNR=4.9						
BRTR	Keskin Array B	39.13	156	P	P	07 22 03.0	+2.6
	comp=Z,1.5nm,1.0s,mb3.7,baz=344,slow=10,SNR=3.5						
MKAR	Makanchi Array	40.12	99	P	P	07 22 09.9	+1.4
	comp=Z,1.3nm,0.7s,mb3.8,baz=340,slow=7.3,SNR=16						
SONM	Songino Array	44.17	75	P	P	07 22 42.5	+1.2
	comp=Z,0.8nm,0.9s,mb3.4,baz=344,slow=9.0,SNR=4.5						
ULN	Ulaanbaatar	44.27	74	eP	P	07 22 42.3	+0.1
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
ULN	Ulaanbaatar	44.27	74	eP	P	07 22 42.3	+0.1
	comp=Z,3.9nm,0.9s,mb4.1						
ULM	Lac du Bonnet	45.36	302	eP	P	07 22 49.1	-1.8
	comp=Z,16nm,1.4s,mb4.7						
EIL	Elat	49.22	156	P	P	07 23 22.9	+1.5
	comp=Z,4.7nm,0.8s,mb4.6						
CHMT	Chamberlain Mo	51.43	316	eP	P	07 23 37.6	-0.4
MCMT	McKenzie Canyo	53.41	315	eP	P	07 23 53.7	+0.8
IMW	Indian Meadow	54.03	313	eP	P	07 23 58.7	+1.2
	comp=Z,2.4nm,0.9s,mb4.1						
TXAR	Lajitas Array	67.05	303	P	P	07 25 25.9	-0.5
	comp=Z,0.4nm,0.7s,mb3.6,baz=50,slow=4.3,SNR=5.4						
MAW	Mawson	148.15	147	PKPbc	PKPdf	07 34 18.3	+3.4
	comp=Z,1.5nm,0.7s,baz=326,slow=11,SNR=3.6						

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*IDC **09** 07:41:21.0±0.8, 53.24N×161.36W, mb4.0/14, mb1 4.2/16, mb1mx4.1/28, mbtmp4.0/16, ML4.0/2, MS3.6/3, Ms1 3.6/3, ms1mx2.8/24, Error ellipse: s-maj=20.3km s-min=15.3km az=12.0*

*NEIC **09** 07:41:25.6, 53.19N×161.27W, h34^{km}, mb4.3/13, ML4.1(AEIC), ML4.1(PMR), After AEIC.*

ISC 09 07:41:22.3±1.1**, 53.18N**±0.03×**161.28W**±0.03**, h22^{km}**±9^{km}**, n84, σ1^{s}04**/102**, mb4.2**/25**, MS3.6**/3**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRIA	Deer Island	1.89	342	P	Pn	07 41 54.2	+0.5
DOL	Dolgoi Island	2.01	350	P	Pn	07 41 55.5	0.0
DOL				S	Sn	07 42 20.6	+0.5
DT1	Dutton Round H	2.02	343	P	Pn	07 41 55.9	+0.2
DT1				S	Sn	07 42 20.2	-0.3
DTNA	Dutton South F	2.06	344	P	Pn	07 41 56.4	+0.2
FALS	False Pass	2.10	324	P	Pn	07 41 56.8	0.0
FALS				S	Sn	07 42 23.1	+0.5
HAG	Hague Volcano	2.18	350	P	Pn	07 41 58.6	+0.8
HAG				S	Sn	07 42 25.7	+1.3
BALA	Baldy Mountain	2.21	337	P	Pn	07 41 59.7	+1.3
PVV	Pavlof Volcano	2.22	352	P	Pn	07 41 59.0	+0.4
PVV				S	Sn	07 42 26.8	+1.2
SDPT	Sand Point	2.23	12	P	Pn	07 41 57.9	-0.7
SDPT				S	Sn	07 42 23.9	-1.8
PS1A	Pavlof South-1	2.27	353	P	Pn	07 41 59.7	+0.5
PS1A				S	Sn	07 42 27.8	+1.1
SSLN	Shishaldin Nor	2.29	317	P	Pn	07 42 00.7	+1.2
PN6	Pavlof North-6	2.31	351	P	Pn	07 42 01.1	+1.3
SSLW	Shishaldin Wes	2.32	315	P	Pn	07 42 00.6	+0.6
SSLW				S	Sn	07 42 29.5	+1.5
WESN	West Dahl Nort	2.40	307	P	Pn	07 42 02.2	+1.0
WESS	West Dahl Sout	2.42	304	P	Pn	07 42 02.0	+0.6
WESS				S	Sn	07 42 30.2	-0.5
WFAR	Faris Peak	2.48	305	P	Pn	07 42 02.9	+0.7
WPOG	Pogromni	2.50	306	P	Pn	07 42 03.3	+0.8
WPOG				S	Sn	07 42 33.7	+1.1
BLHA	Black Hill	2.57	350	P	Pn	07 42 04.5	+1.0
BLHA				S	Sn	07 42 35.9	+1.4
AKA	Akutan	2.84	292	P	Pn	07 42 08.2	+0.8
AKA				S	Sn	07 42 40.6	-0.7
AKUT	Akutan	2.84	292	P	Pn	07 42 08.1	+0.7
AKUT				S	Sn	07 42 40.6	-0.7
AKLV	Akutan Long Va	2.95	291	P	Pn	07 42 09.3	+0.3
AKLV				S	Sn	07 42 43.7	-0.5
AKGG	Akutan Green G	2.99	292	P	Pn	07 42 10.3	+0.9
AKGG				S	Sn	07 42 44.1	-0.8
LVA	Lava Point	3.00	291	P	Pn	07 42 10.3	+0.8
UNV	Unalaska Valle	3.19	284	P	Pn	07 42 12.1	-0.2
UNV				S	Sn	07 42 47.9	-2.3
MNAT	Makushin Natee	3.31	285	P	Pn	07 42 14.2	+0.3
MNAT				S	Sn	07 42 51.6	-1.3
MTBL	Makushin Table	3.32	286	P	Pn	07 42 14.5	+0.4
MSW	Makushin Switc	3.37	285	P	Pn	07 42 14.9	+0.1
MSW				S	Sn	07 42 53.4	-1.2
OKFG	Magazine Ridge	3.99	276	P	Pn	07 42 23.9	+0.2
OKFG				S	Sn	07 43 08.3	-2.0
NIKO	Nikolski	4.58	270	P	Pn	07 42 31.6	-0.4
KJL	Kejulik	5.86	31	P	Pn	07 42 48.7	-1.4
CAHL	Cahill	5.94	32	P	Pn	07 42 49.5	-1.8
KDAK	Kodiak Island	6.76	43	eP	Pn	07 42 59.3	-3.5
SVW2	Sparrevohn	8.52	19	eP	P	07 43 25.3	-2.1
GSTR	Great Sitkin T	9.06	269	P	P	07 43 34.0	-0.9
SLKM	Skilak Lake	9.51	35	P	P	07 43 38.3	-2.6
TT01	Tatalina	10.14	14	P	P	07 43 47.1	-2.5
TTA	Tatalina	10.17	14	eP	P	07 43 47.7	-2.2
PWA	Palmer West	10.47	31	eP	P	07 43 52.1	-2.0
	14nm,1.0s						
PMR	Palmer	10.66	33	eP	P	07 43 53.3	-3.4
	4.2nm,0.5s						
EYAK	Cordova Ski Ar	11.24	43	P	P	07 44 00.9	-3.6
SCM	Sheep Creek Mo	11.44	35	P	P	07 44 03.8	-3.6
IMA	Indian Mountai	13.47	13	eP	P	07 44 32.5	-2.0
ILAR	Eielson Array	13.74	27	Pn	P	07 44 32.9	-5.0
	0.4nm,0.3s,baz=220,slow=13,SNR=21						
ILAR				Sn	S	07 46 59.1	-12
	0.2nm,0.3s,baz=217,slow=28,SNR=4.5						

DLBC	**Dease Lake**	**18.23**	**61**	P	**P**	**07 45 35.6**	**+0.3**
	0.2nm,0.3s,baz=287,slow=14,SNR=4.3						
INK	**Inuvik**	**20.06**	**30**	P	**P**	**07 45 55.1**	**-1.3**
	2.8nm,0.5s,baz=228,slow=14,SNR=14						
INK	**Inuvik**	**20.06**	**30**	*e*P	**P**	**07 45 54.1**	**-2.4**
	13nm,1.0s						
BILL	**Bilibino**	**21.42**	**326**	*e*P	**P**	**07 46 10.0**	**-0.5**
	8.3nm,0.8s,mb4.1						
YKA	**Yellowknife Ar**	**25.97**	**50**	P	**P**	**07 46 54.9**	**+0.4**
	1.6nm,0.7s,mb3.6,baz=271,slow=8.6,SNR=11						
YKA				PcP	PcP	07 50 22.0	-1.3
	0.8nm,0.5s,baz=275,slow=1.8,SNR=6.8						
YBH	**Yreka Blue Hor**	**28.14**	**98**	P	**P**	**07 47 16.0**	**+1.5**
	2.0nm,0.7s,mb3.8,baz=77,slow=0.6,SNR=6.4						
YBH				LR	LR	07 55 49.4	
	comp=Z,33nm,21.1s,MS2.9,baz=96,slow=31						
WVOR	**Wild Horse Val**	**30.16**	**93**	*e*P	**P**	**07 47 32.8**	**+0.2**
	1.3nm,0.7s,mb3.8						
HLID	**Hailey**	**32.05**	**88**	*e*P	**P**	**07 47 49.3**	**0.0**
MCMT	**McKenzie Canyo**	**32.30**	**85**	*e*P	**P**	**07 47 51.6**	**+0.2**
BOZ	**Bozeman (W)**	**32.59**	**83**	*e*P	**P**	**07 47 54.1**	**+0.2**
	1.8nm,0.6s,mb4.2						
NVAR	**Mina Array Bea**	**32.84**	**99**	P	**P**	**07 47 57.6**	**+1.4**
	1.6nm,0.8s,mb4.0,baz=303,slow=7.6,SNR=12						
DUG	**Dugway**	**35.01**	**92**	*e*P	**P**	**07 48 15.1**	**+0.3**
	6.0nm,1.0s,mb4.5						
BW06	**Boulder Array**	**35.42**	**86**	*e*P	**P**	**07 48 18.2**	**-0.2**
PDAR	**Pinedale Array**	**35.42**	**86**	P	**P**	**07 48 19.1**	**+0.7**
	1.0nm,0.4s,mb4.1,baz=314,slow=4.3,SNR=12						
ARUT	**Antelope Range**	**36.16**	**96**	*e*P	**P**	**07 48 25.8**	**+1.1**
MSU	**Marysvale**	**36.45**	**94**	*e*P	**P**	**07 48 28.2**	**+1.1**
RSSD	**Black Hills**	**37.95**	**80**	*e*P	**P**	**07 48 39.6**	**0.0**
	3.8nm,0.8s,mb4.2						
PV10	**Paradox Valley**	**38.42**	**91**	*e*P	**P**	**07 48 44.4**	**+0.7**
PV01	**Paradox Valley**	**38.86**	**91**	*e*P	**P**	**07 48 47.6**	**+0.2**
WUAZ	**Wupatki**	**38.91**	**97**	*e*P	**P**	**07 48 48.9**	**+1.1**
	6.8nm,0.8s,mb4.4						
ULM	**Lac du Bonnet**	**39.37**	**67**	P	**P**	**07 48 51.1**	**-0.3**
	3.6nm,0.6s,mb4.3,baz=317,slow=1.6,SNR=4.6						
SDCO	**Great Sand Dun**	**40.96**	**89**	*e*P	**P**	**07 49 05.4**	**+0.7**
	3.9nm,1.1s,mb4.0						
BNM	**Barren Site**	**42.69**	**94**	*e*P	**P**	**07 49 19.8**	**+1.0**
WMOK	**Wichita Mounta**	**47.01**	**87**	*e*P	**P**	**07 49 52.6**	**-0.8**
	7.9nm,0.9s,mb4.6						
TXAR	**Lajitas Array**	**47.87**	**96**	P	**P**	**07 50 00.8**	**+0.5**
	5.4nm,0.7s,mb4.7,baz=300,slow=5.5,SNR=69						
TXAR	**Lajitas Array**	**47.87**	**96**	P	**P**	**07 50 00.8**	**+0.5**
JCT	**Junction City**	**49.37**	**92**	*e*P	**P**	**07 50 11.2**	**-0.6**
	20nm,0.8s,mb5.2						
WVT	**Waverly**	**52.58**	**78**	*e*P	**P**	**07 50 34.1**	**-2.1**
	2.5nm,0.8s,mb4.2						
SONM	**Songino Array**	**55.00**	**305**	P	**P**	**07 50 53.1**	**-0.7**
	0.6nm,0.5s,mb3.9,baz=14,slow=5.9,SNR=3.5						
KEV	**Kevo**	**57.23**	**357**	*e*p	**P**	**07 51 09.1**	**-0.4**
	5.3nm,0.8s,mb4.6						
KAF	**Kangasniemi**	**64.90**	**356**	*e*p	**P**	**07 52 00.8**	**-0.5**
	1.9nm,0.5s,mb4.4,baz=1.7,slow=6.3						
FINES	**FINESS Array B**	**65.58**	**356**	P	**P**	**07 52 05.8**	**+0.1**
	1.2nm,0.7s,mb4.1,slow=8.3,SNR=5.6						
FINES				LR	LR	08 21 06.7	
	comp=Z,30nm,19.1s,MS3.5,baz=9.1,slow=36						
BVAR	**Borovoye Array**	**65.74**	**329**	P	**P**	**07 52 07.6**	**+0.7**
	1.2nm,0.7s,mb4.1,baz=38,slow=6.9,SNR=8.1						
NB2	**NORSAR Subarra**	**65.98**	**4**	P	**P**	**07 52 14.1**	**+5.9**
	0.8nm,0.6s,mb3.9,baz=357,slow=6.2						
NOA	**NORSAR Array B**	**65.98**	**4**	P	**P**	**07 52 08.6**	**+0.4**
	0.5nm,0.8s,mb3.6,baz=340,slow=15,SNR=2.3						
MKAR	**Makanchi Array**	**66.67**	**318**	P	**P**	**07 52 13.1**	**+0.2**
	0.3nm,0.5s,mb3.6,baz=44,slow=7.3,SNR=5.8						
HFS	**Hagfors**	**66.97**	**3**	P	**P**	**07 52 14.5**	**-0.1**
	1.2nm,0.4s,mb4.3,baz=45,slow=4.2,SNR=10.0						
PPT	**Papeete**	**71.17**	**168**	LR	LR	08 22 15.1	
	comp=Z,159nm,18.3s,MS4.3,baz=95,slow=34						
MOX	**Moxa**	**76.38**	**5**	*e*P	**P**	**07 53 18.0**	**+7.2**
WRA	**Warramunga Arr**	**91.49**	**238**	P	**P**	**07 54 27.6**	**-0.5**
	0.8nm,0.6s,mb4.2,baz=36,slow=5.7,SNR=10						
MATP	**Matopo**	**146.45**	**343**	PKPbc	PKPbc	08 01 03.0	+1.7
	2.0nm,0.5s,baz=58,slow=4.7,SNR=7.7						

JMA 09 07:42:02.0±0.7**, 30.59N×138.32E, h477^{km}, M3.5, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWZ	**Kozaga**	**3.67**	**324**	P	P	07 43 16.5	-0.3
JIE	**Ise**	**4.03**	**341**	P	P	07 43 20.5	+0.7
JKN2	**Miekihoku**	**4.03**	**335**	P	P	07 43 20.1	+0.3
BSO3	**Boso 3**	**4.59**	**23**	S	S	07 44 30.3	+0.2
BSO1	**Boso 1**	**4.63**	**28**	*e*S	S	07 44 33.1	+2.3
BSO4	**Boso 4**	**4.71**	**21**	*e*S	S	07 44 34.2	+2.2
JRY	**Ryogami san**	**5.43**	**5**	P	P	07 43 32.8	+0.1
JAG	**Ashikaga**	**5.90**	**9**	P	P	07 43 35.9	-1.4
JAG				*e*S	S	07 44 50.1	-2.5
JFK	**Kawauchi**	**7.08**	**17**	P	P	07 43 49.3	-0.1
JFK				S	S	07 45 13.2	-1.3
JMK	**Ichinoseki**	**8.68**	**15**	P	P	07 44 07.2	+0.8

WEL 09 07:44:17.1±0.1**, 38.87S×176.18E, h77^{km}±1^{km}, ML3.6**/11**, 11C-9D, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATZ	**Hinemaiaia**	**0.07**	**250**	⇓P*	P	07 44 27.8	-0.3
HATZ				S*	S	07 44 34.9	-1.4
HATZ				S*	S	07 44 35.8	-0.5
WHTZ	**Whakaora**	**0.27**	**319**	P*	P	07 44 29.0	+0.1
RITZ	**Rihia Road**	**0.27**	**246**	P*	P	07 44 29.0	+0.1
RATZ	**Rangitukua**	**0.32**	**270**	P*	P	07 44 28.8	-0.4
WATZ	**Wairara**	**0.38**	**294**	P*	P	07 44 28.8	-0.8
WATZ				S*	S	07 44 38.8	-0.2
BKZ	**Black Stump Fm**	**0.39**	**141**	⇓P*	P	07 44 29.6	-0.1
BKZ				S*	S	07 44 39.0	0.0
KATZ	**Kakaramea**	**0.39**	**254**	P*	P	07 44 29.7	0.0
KATZ				S*	S	07 44 40.0	+0.9
KRVZ	**Karewarewa**	**0.48**	**241**	P*	P	07 44 30.3	0.0
KRVZ				S*	S	07 44 40.2	-0.1
PATZ	**Paeroa**	**0.49**	**7**	⇑P*	P	07 44 30.6	+0.1
OTVZ	**Oturere**	**0.50**	**233**	⇑P*	P	07 44 30.6	+0.1
OTVZ				S*	S	07 44 41.0	+0.3
WTVZ	**West Tongariro**	**0.52**	**241**	P*	P	07 44 30.6	-0.2
WTVZ				S*	S	07 44 41.3	+0.2
NGZ	**Ngauruhoe**	**0.55**	**235**	P*	P	07 44 31.0	-0.1
NGZ				S*	S	07 44 41.8	+0.4
TUVZ	**Tukino**	**0.57**	**225**	⇑P*	P	07 44 31.2	-0.1
TUVZ				S*	S	07 44 42.0	+0.2
CNZ	**Chateau**	**0.59**	**236**	P*	P	07 44 31.2	-0.3
WPVZ	**Whakapapa**	**0.60**	**235**	P*	P	07 44 31.3	-0.4
WPVZ				S*	S	07 44 42.6	+0.3
TWVZ	**Taurewa**	**0.61**	**250**	⇓P*	P	07 44 31.3	-0.5
TWVZ				S*	S	07 44 41.7	-0.9
FWVZ	**Far West T-bar**	**0.62**	**231**	P*	P	07 44 31.6	-0.3
FWVZ				S*	S	07 44 42.5	-0.3
DRZ	**Dome Shelter**	**0.63**	**229**	P*	P	07 44 31.7	-0.2
DRZ				S*	S	07 44 43.0	+0.1
MOVZ	**Moawhango**	**0.63**	**211**	⇑P*	P	07 44 31.4	-0.6
MOVZ				S*	S	07 44 42.2	-0.8
WNVZ	**Wahianoa**	**0.65**	**224**	⇑P*	P	07 44 31.9	-0.2
WNVZ				S*	S	07 44 42.8	-0.4
TAZ	**Tarawera**	**0.68**	**22**	P*	P	07 44 32.6	+0.1
MTVZ	**Mangateitei**	**0.76**	**227**	⇑P*	P	07 44 33.1	-0.3
MTVZ				S*	S	07 44 43.1	-2.2
EDRZ	**Edgecumbe**	**0.88**	**30**	P*	P	07 44 33.9	-0.8
URZ	**Urewera**	**0.95**	**51**	⇓P*	P	07 44 35.1	-0.4
URZ				S*	S	07 44 49.0	-0.4
MARZ	**Manawahe**	**0.96**	**24**	P*	P	07 44 35.3	-0.3
HIZ	**Hauiti**	**1.09**	**288**	⇓PN	P	07 44 36.9	-0.5
HIZ				SN	S	07 44 52.0	-0.6
TGRZ	**Tauranga**	**1.14**	**3**	⇑P*	P	07 44 37.6	-0.3
VRZ	**Vera Road**	**1.14**	**256**	P*	P	07 44 36.8	-1.1
VRZ				S*	S	07 44 52.9	-0.6
KNZ	**Kokohu**	**1.18**	**98**	PN	P	07 44 38.2	-0.2
MWZ	**Matawai**	**1.18**	**64**	⇓P*	P	07 44 38.2	-0.3
TSZ	**Takapari Road**	**1.20**	**188**	⇑PN	P	07 44 38.0	-0.8
TOZ	**Tahuroa Road**	**1.25**	**335**	⇓P*	P	07 44 39.0	-0.5
PWZ	**Pawanui**	**1.27**	**156**	PN	P	07 44 38.9	-0.8
PWZ				SN	S	07 44 55.4	-1.3
WAZ	**Wanganui**	**1.28**	**226**	⇑PN	P	07 44 39.7	-0.1
WAZ				SN	S	07 44 57.5	+0.7
RAEZ	**Rainy Point**	**1.45**	**253**	⇓PN	P	07 44 42.0	-0.1
MYRZ	**Mayor Island**	**1.58**	**2**	P*	P	07 44 43.7	-0.2
NEZ	**North Egmont**	**1.67**	**255**	PN	P	07 44 45.2	+0.1
BFZ	**Birch Farm**	**1.81**	**178**	PN	P	07 44 44.8	-2.1
BFZ				SN	S	07 45 07.3	-1.7
PUZ	**Puketiti**	**1.81**	**65**	⇓PN	P	07 44 46.1	-0.9
PUZ				SN	S	07 45 08.9	0.0
MRZ	**Mangatainoka R**	**1.85**	**194**	⇑PN	P	07 44 45.2	-2.2
MXZ	**Matakaoa Point**	**2.12**	**53**	PN	P	07 44 50.5	-0.6
KUZ	**Kuaotunu**	**2.15**	**350**	⇑PN	P	07 44 50.7	-0.9
KIW	**Kapiti Island**	**2.22**	**206**	PN	P	07 44 49.8	-2.8
MTW	**Mount Morrison**	**2.35**	**193**	PN	P	07 44 50.9	-3.4
CAW	**Cannon Point**	**2.40**	**201**	PN	P	07 44 51.7	-3.3
PAWZ	**Paruwai Farm**	**2.58**	**193**	PN	P	07 44 53.7	-3.8
DUWZ	**D'Urville Isla**	**2.60**	**221**	PN	P	07 44 54.7	-3.2
MRW	**Makara Radio**	**2.62**	**205**	PN	P	07 44 54.4	-3.7
MSWZ	**Moikau Station**	**2.64**	**195**	PN	P	07 44 54.6	-3.9
WEL	**Wellington**	**2.65**	**204**	PN	P	07 44 54.8	-3.8
SNZO	**South Karori**	**2.69**	**204**	PN	P	07 44 55.1	-4.1
TCW	**Tory Channel**	**2.76**	**211**	PN	P	07 44 56.4	-3.7
TUWZ	**Tuamarina**	**3.08**	**213**	PN	P	07 45 00.4	-4.2
NNZ	**Nelson**	**3.18**	**222**	PN	P	07 45 01.7	-4.3
BSWZ	**Blackbirch Sta**	**3.34**	**211**	PN	P	07 45 03.8	-4.5
QRZ	**Quartz Range**	**3.42**	**234**	PN	P	07 45 05.4	-4.0
THZ	**Tophouse**	**3.83**	**220**	PN	P	07 45 10.5	-4.5
KHZ	**Kahutara**	**4.08**	**209**	PN	P	07 45 12.9	-5.6
DSZ	**Denniston Nort**	**4.41**	**228**	PN	P	07 45 18.1	-5.0
LTZ	**Lake Taylor**	**4.91**	**216**	PN	P	07 45 23.5	-6.5
MQZ	**McQueen's Vall**	**5.52**	**208**	PN	P	07 45 30.8	-7.5
ODZ	**Otahua Downs**	**7.42**	**212**	PN	P	07 45 56.8	-8.0

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*NEIC **09** 08:41:51.2, 16.18N×98.53W, h7^{km}, MD3.8(MEX), After MEX.*

MEX 09 08:41:51.2±1.0**, 16.18N×98.53W, h7^{km}±9^{km}, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.44**	**61**	*e*P	Pg	08 41 59.9	-0.2
PNIG				*i* S	Sg	08 42 05.3	-0.8
ACX	**Acapulco**	**1.50**	**297**	*i* P	Pn	08 42 14.3	-4.3
ACX				*i* S	Sb	08 42 33.8	-4.2
VHO	**Vista Hermosa**	**1.94**	**62**	*i* P	Pn	08 42 20.9	-4.0
VHO				*i* S	Sn	08 42 45.4	-4.4
OXX	**Oaxaca**	**1.95**	**62**	*i* P	Pn	08 42 25.0	-0.1
PLIG	**Platanillo**	**2.39**	**337**	*e*P	Pn	08 42 28.6	-2.8
PLIG				*i* S	Sn	08 42 56.2	-5.0
YAIG	**Yautepec**	**2.72**	**349**	*e*P	Pn	08 42 32.4	-3.7
YAIG				*i* S	Sn	08 43 02.6	-7.0
PPM	**Popocatepetl**	**2.88**	**358**	*e*P	Pn	08 42 34.0	-4.3
PPM				*i* S	Sn	08 43 10.0	-3.5
PPM				*i* S	Sn	08 43 11.0	-2.6
PPM	**Popocatepetl**	**2.88**	**358**	*e*P	Pn	08 42 34.0	-4.3
PPM				*e*P		08 42 34.9	
PPM				*i* S	Sn	08 43 10.0	-3.5
PPM				*i* S	Sn	08 43 11.0	-2.6
UNM	**Universidad Na**	**3.19**	**349**	*e*P	Pn	08 42 38.4	-4.4
UNM				*i* S	Sn	08 43 15.2	-6.5

IDC 09 08:44:45.9±5.2**, 10.58S×114.95E, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.6**/16**, mbtmp3.6**/3**, Error ellipse: s-maj=219.3km s-min=33.1km az=46.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.87**	**119**	P	P	08 49 29.8	-2.4
	0.7nm,0.6s,baz=290,slow=13,SNR=5.6						
SONM	**Songino Array**	**58.65**	**353**	P	P	08 54 44.8	-2.5
	0.8nm,0.7s,baz=173,slow=9.4,SNR=5.2						
MKAR	**Makanchi Array**	**64.14**	**336**	P	P	08 55 22.3	-2.1
	0.2nm,0.4s,baz=150,slow=7.0,SNR=4.1						

IDC 09 08:53:13.2±3.1**, 10.47N×91.95E, mb3.9**/4**, mb1 4.0**/4**, mb1mx3.7**/19**, mbtmp3.9**/4**, Error ellipse: s-maj=128.7km s-min=24.0km az=66.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.12**	**349**	P	P	09 00 25.1	-2.2
	1.3nm,0.8s,baz=169,slow=8.7,SNR=12						
SONM	**Songino Array**	**39.18**	**15**	P	P	09 00 43.1	-1.5
	1.0nm,0.8s,baz=196,slow=10,SNR=4.4						
WRA	**Warramunga Arr**	**51.52**	**126**	P	P	09 02 20.1	-3.2
	1.4nm,0.5s,baz=301,slow=10.0,SNR=57						
STKA	**Stephens Creek**	**63.45**	**134**	P	P	09 03 47.0	-0.5
	0.7nm,0.4s,baz=316,slow=7.1,SNR=3.6						

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*IDC **09** 08:58:13.8±0.8, 6.08N×93.40E, mb4.1/8, mb1 4.2/8, mb1mx4.0/19, mbtmp4.1/8, MS3.2/1, Ms1 3.4/1, ms1mx2.8/17, Error ellipse: s-maj=36.0km s-min=19.0km az=61.0*

*NEIC **09** 08:58:18.3±0.5, 6.01N×93.42E, h30^{km}, mb4.8/6, Error ellipse: s-maj=16.8km s-min=8.6km az=52.0*

ISC 09 08:58:16.6±0.6**, 5.95N**±0.09×**93.5E**±0.1**, h30^{km}, n24, σ1^{s}10**/25**, mb4.4**/14**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**7.17**	**95**	*e*Pn	**Pn**	**09 00 03.2**	**+0.9**
PALK	**Pallekele**	**12.75**	**277**	*e*P	**P**	**09 01 23.2**	**+4.3**
PALK				*e*S	**S**	**09 03 20.6**	**-20**
CMAR	**Chiang Mai Arr**	**13.53**	**23**	Pn	**P**	**09 01 34.6**	**+5.4**
	0.9nm,0.3s,baz=229,slow=14,SNR=30						
CMAR				LR	LR	09 07 19.3	
	comp=Z,106nm,18.9s,baz=210,slow=41						
PKI	**Pulchoki**	**22.83**	**341**	*e*P	**P**	**09 03 20.5**	**+2.0**
	58nm,0.6s,mb5.2						
DMN	**Daman**	**22.96**	**341**	*e*P	**P**	**09 03 21.7**	**+1.9**
	22nm,0.3s,mb5.1						
GUN	**Gumba**	**23.00**	**343**	*e*P	**P**	**09 03 19.0**	**-1.2**
	17nm,0.5s,mb4.8						
KKN	**Kakani**	**23.07**	**341**	*e*P	**P**	**09 03 22.3**	**+1.4**
GKN	**Gorkha**	**23.48**	**340**	*e*P	**P**	**09 03 25.4**	**+0.6**
KOLN	**Koldanda**	**23.64**	**338**	*e*P	**P**	**09 03 27.4**	**+1.0**
LSA	**Lhasa**	**23.72**	**355**	*e*P	**P**	**09 03 26.1**	**-1.1**
	15nm,0.6s,mb4.6						
AAK	**Ala-Archa**	**40.21**	**338**	P	**P**	**09 05 52.1**	**-0.1**
MKAR	**Makanchi Array**	**41.82**	**348**	P	**P**	**09 06 04.3**	**-1.0**
	1.4nm,0.5s,mb3.9,baz=165,slow=8.7,SNR=22						
SONM	**Songino Array**	**43.17**	**13**	P	**P**	**09 06 15.6**	**-0.8**
	0.4nm,0.5s,mb3.4,baz=205,slow=8.8,SNR=2.5						
WRA	**Warramunga Arr**	**47.72**	**124**	P	**P**	**09 06 53.7**	**+0.6**
	4.6nm,0.8s,mb4.6,baz=306,slow=8.6,SNR=40						
WRA				PcP	PcP	09 08 22.7	+0.3
	0.5nm,0.3s,baz=312,slow=2.8,SNR=7.6						
WRAB	**Tennant Creek**	**47.73**	**124**	*e*P	**P**	**09 06 52.9**	**-0.2**
	11nm,0.9s,mb4.9						
WB2	**Warramunga Arr**	**47.73**	**124**	*e*P	**P**	**09 06 52.1**	**-1.1**
ZAL	**Zalesovo**	**48.36**	**353**	P	**P**	**09 06 56.3**	**-1.2**
	2.3nm,0.3s,mb4.7,baz=2.3,slow=1.5,SNR=5.0						
STKA	**Stephens Creek**	**59.28**	**133**	*e*P	**P**	**09 08 18.5**	**+0.3**
STKA	**Stephens Creek**	**59.28**	**133**	P	**P**	**09 08 18.3**	**+0.1**
	1.4nm,0.3s,mb4.4,baz=290,slow=4.5,SNR=7.6						
LBTB	**Lobatse**	**72.75**	**242**	P	**P**	**09 09 43.8**	**-0.7**
	7.5nm,1.0s,mb4.6						
CASY	**Casey**	**73.11**	**173**	*e*P	**P**	**09 09 49.2**	**+3.4**
	61nm,0.6s						
BOSA	**Boshof**	**74.01**	**238**	P	**P**	**09 09 52.5**	**+0.6**
	3.0nm,0.8s,mb4.3,baz=101,slow=8.0,SNR=4.4						
FINES	**FINESS Array B**	**74.09**	**333**	P	**P**	**09 09 50.1**	**-1.5**
	0.5nm,0.7s,mb3.6,baz=63,slow=3.1,SNR=3.4						
GERES	**GERESS Array B**	**78.81**	**318**	P	**P**	**09 10 18.0**	**-0.3**
	0.5nm,0.5s,mb3.7,baz=76,slow=5.5,SNR=4.1						

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*NEIC **09** 09:03:15.5, 30.92S×70.32W, h116^{km}, MD3.5(GUC), After GUC.*

GUC 09 09:03:15.5±1.0**, 30.92S×70.32W, h116^{km}±8^{km}, MD3.5, ML3.7, 11C-7D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**0.64**	**246**	⇓*i*P	P	09 03 34.0	0.0
CMCH				*i* S	S	09 03 48.4	+0.1
CMCH				AMP		09 03 49.4	
	comp=E,4µm,0.3s						
TLL	**Tololo Astrono**	**0.86**	**331**	*e*P	P	09 03 36.7	+0.6
TLL				*i* S	S	09 03 52.6	+1.1
TLL				AMP		09 03 54.5	
	comp=N,2µm,0.4s						
ILCH	**Illapel**	**1.02**	**225**	⇑*i*P	P	09 03 37.8	0.0
ILCH				*i* S	S	09 03 54.2	-0.1
ILCH				AMP		09 03 55.4	
	comp=N,963nm,0.2s						
LSCH	**La Serena**	**1.28**	**321**	⇑*i*P	P	09 03 40.8	+0.2
LSCH				*i* S	S	09 03 59.8	+0.3
LSCH				AMP		09 04 00.1	
	comp=E,679nm,0.1s						
ZON	**Zonda**	**1.54**	**114**	⇑*i*P	P	09 03 41.9	-1.7
ZON				*e*S	S	09 04 00.9	-3.9
JACH	**Jahuel**	**1.77**	**187**	⇑*i*P	P	09 03 46.7	+0.3
JACH				*i* S	S	09 04 10.5	+0.8
PACH	**Papudo**	**1.87**	**210**	⇑*i*P	P	09 03 47.7	+0.1
PACH				*i* S	S	09 04 12.5	+0.7
ROCH	**El Roble**	**2.13**	**196**	*e*P	P	09 03 51.2	+0.2
PEL	**Peldehue**	**2.24**	**188**	*i* S	S	09 04 19.9	-0.3
PEL				AMP		09 04 23.8	
	comp=N,452nm,0.3s						
VACH	**Vallenar**	**2.37**	**351**	⇑*i*P	P	09 03 54.0	-0.1
VACH				*i* S	S	09 04 23.1	-0.2
VACH				AMP		09 04 24.2	
	comp=N,2µm,0.1s						
FCH	**Farellones**	**2.40**	**179**	⇓*i*P	P	09 03 55.3	+0.7
FCH				*e*S	S	09 04 25.0	+1.0
CLCH	**Cerro Calan**	**2.48**	**184**	⇓*i*P	P	09 03 55.4	-0.2
CLCH				*i* S	S	09 04 26.6	+0.8
CLCH				AMP		09 04 32.9	
	comp=E,302nm,0.7s						
DSCH	**Colegio Aleman**	**2.48**	**185**	⇑*i*P	P	09 03 55.7	+0.1
DSCH				*i* S	S	09 04 26.3	+0.4
DSCH				AMP		09 04 27.4	
	comp=E,315nm,0.3s						
STL	**Santa Lucia**	**2.52**	**186**	*i* S	S	09 04 26.7	-0.3
STL				AMP		09 04 35.4	
	comp=N,84nm,0.4s						
FSR	**Penalolen**	**2.56**	**184**	⇑*i*P	P	09 03 57.2	+0.5
FSR				*i* S	S	09 04 28.5	+0.8
FSR				AMP		09 04 35.6	
	comp=E,224nm,0.5s						
RCDM	**Rinconada Maip**	**2.59**	**189**	⇑*i*P	P	09 03 56.6	-0.6
RCDM				*i* S	S	09 04 28.7	+0.1
RCDM				AMP		09 04 29.5	
	comp=E,533nm,0.1s						
ANTU	**Antumapu**	**2.66**	**186**	*i* S	S	09 04 30.3	+0.2
ANTU				AMP		09 04 31.4	
	comp=E,372nm,0.4s						
ANTU	**Antumapu**	**2.66**	**186**	P	P	09 04 00.0	+2.0
ANTU				*i* S	S	09 04 30.3	+0.2
PCH	**Pirque**	**2.70**	**183**	⇓*i*P	P	09 03 58.6	+0.1
PCH				*i* S	S	09 04 31.8	+0.8
SJCH	**San Jose de Ma**	**2.71**	**181**	*i* P	P	09 03 58.5	-0.2
SJCH				*i* S	S	09 04 31.6	+0.2
SJCH				AMP		09 04 32.8	
	comp=E,134nm,0.3s						
TACH	**Talagante**	**2.78**	**191**	⇓*i*P	P	09 03 58.8	-0.8
TACH				*e*S	S	09 04 32.3	-0.6
CHCH	**Chadas Angostu**	**3.02**	**185**	⇑*i*P	P	09 04 02.1	-0.7
CHCH				*i* S	S	09 04 38.2	-0.5
LNV	**Longovilo**	**3.17**	**197**	⇑*i*P	P	09 04 03.4	-1.5
LNV				*i* S	S	09 04 38.9	-3.3
CACH	**El Canelo**	**3.20**	**184**	*e*P	P	09 04 05.0	-0.3
CACH				*i* S	S	09 04 43.2	+0.2
CICH	**Cipreses**	**3.39**	**181**	⇓*i*P	P	09 04 07.8	-0.1
SFDO	**San Fernando**	**3.73**	**189**	⇓*i*P	P	09 04 11.0	-1.5
SFDO				*i* S	S	09 04 53.6	-2.3

NNC 09 09:29:28.4±3.3**, 48.63N×67.18E, h7^{km}±21^{km}, mpv2.7, 8C-4D, Error ellipse: s-maj=13.3km s-min=12.3km az=50.0, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AB31	**Akbulak array**	**4.81**	**280**	⇑Pg	Pg	09 30 53.9	-10
	0.4nm,0.4s,baz=86,slow=15,SNR=4.1						
AB31				⇑Sn	Sn	09 31 38.4	-1.2
	0.1nm,0.2s,baz=96,slow=25,SNR=6.7						
AB31				⇓Lg		09 32 01.2	
	2.1nm,0.4s,baz=98,slow=27						
BVA0	**Borovoye Array**	**4.85**	**24**	⇑Pn	Pn	09 30 41.1	-2.4
	0.1nm,0.3s,baz=216,slow=14,SNR=5.6						
BVA0				⇑Lg		09 32 02.5	
	1.2nm,0.8s,baz=203,slow=35,SNR=9.1						
CHKZ	**Chkalovo**	**5.50**	**22**	⇑Pn	Pn	09 30 49.2	-3.4
	0.5nm,0.3s						
CHKZ				⇑Sn	Sn	09 31 55.1	-1.8
	1.5nm,0.5s						
CHKZ				⇑Lg		09 32 25.4	
	4.5nm,0.9s						
KK31	**Karatay Array**	**6.00**	**156**	⇓Pn	Pn	09 31 01.8	+2.1
	0.7nm,0.4s,baz=350,slow=13,SNR=4.5						
KK31				⇓Sn	Sn	09 32 11.1	+1.7
	4.3nm,0.6s,baz=341,slow=28,SNR=3.1						
MK31	**Makanchi Array**	**10.35**	**95**	⇑Pn	P	09 31 59.2	-1.0
	0.3nm,0.3s,baz=272,slow=15,SNR=7.2						
MK31				⇓Sn	S	09 34 00.4	+2.8
	1.1nm,0.6s,baz=292,slow=30,SNR=4.3						

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*IDC **09** 09:55:01.6±1.7, 10.52N×124.33E, mb3.8/4, mb1 4.1/4, mb1mx3.8/19, mbtmp3.8/4, Error ellipse: s-maj=68.5km s-min=25.9km az=61.0*

*MAN **09** 09:55:26.7, 13.22N×122.35E, h9^{km}, mb4.5, ML3.4, MS3.2*

ISC 09 09:55:26.8±0.8**, 13.18N**±0.03×**122.36E**±0.03**, h8^{km}**±6^{km}**, n23, σ1^{s}13**/32**, mb3.5**/3**, 1C-3D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.34**	**65**	*e*P	**Pg**	**09 55 34.4**	**+0.7**
AUQP				*e*S	**Sg**	**09 55 43.0**	**+4.8**
BOAC	**Boac**	**0.57**	**299**	*e*P	**Pg**	**09 55 37.8**	**-0.6**
BOAC				*e*S	**Sg**	**09 55 47.8**	**+1.8**
GQP	**Guinayangan**	**0.72**	**7**	⇓*e*P	**Pb**	**09 55 39.4**	**-1.9**
GQP				*e*S	**Sg**	**09 55 50.7**	**-0.3**
OTRP	**Odiongan**	**0.88**	**202**	*e*P	**Pb**	**09 55 44.2**	**+0.2**
OTRP				*e*S	**Sb**	**09 55 54.5**	**-1.1**
PGP	**Puerto Galera**	**1.41**	**283**	*e*P	**Pn**	**09 55 51.7**	**-1.2**
SJMP	**San Jose**	**1.41**	**240**	*e*P	**Pn**	**09 55 53.0**	**+0.1**
SJMP				*e*S	**Sb**	**09 56 14.2**	**+3.2**
POLP	**Polilio Island**	**1.59**	**345**	*e*S	**Sb**	**09 56 16.9**	**+0.7**
RCP	**Roxas**	**1.66**	**167**	⇓*e*P	**Pn**	**09 55 55.7**	**-0.7**
TGY	**Tagaytay City**	**1.66**	**304**	⇑*e*P	**Pn**	**09 55 57.3**	**+0.8**
PVCP	**Virac**	**1.79**	**77**	*e*P	**Pn**	**09 55 57.5**	**-0.8**
PVCP				*e*S	**Sn**	**09 56 21.9**	**+0.4**
LUBP	**Lubang**	**2.13**	**285**	*e*P	**Pn**	**09 56 02.5**	**-0.6**
LUBP				*e*S	**Sn**	**09 56 30.3**	**+0.2**
CNP	**Catarman**	**2.34**	**106**	*e*P	**Pn**	**09 56 08.2**	**+2.0**
BUSP	**Coron**	**2.42**	**241**	*e*P	**Pn**	**09 56 06.8**	**-0.4**
GUIM	**Jordan**	**2.55**	**175**	*e*P	**Pn**	**09 56 08.8**	**-0.4**
GUIM				*e*S	**Sn**	**09 56 43.4**	**+2.6**
BALP	**Baler**	**2.66**	**343**	*e*P	**Pn**	**09 56 10.2**	**-0.5**
BALP				*e*S	**Sn**	**09 56 43.8**	**+0.4**
PCPH	**Palayan**	**2.66**	**333**	⇓*e*P	**Pn**	**09 56 12.5**	**+1.7**
CUYO	**Cuyo Island**	**2.67**	**210**	*e*P	**Pn**	**09 56 10.4**	**-0.5**
ENPP	**El Nido**	**3.48**	**236**	*e*P	**Pn**	**09 56 21.6**	**-0.8**
CAUP	**Cauayan**	**3.77**	**352**	*e*P	**Pn**	**09 56 24.4**	**-2.3**
SNPH	**Sibulan**	**3.91**	**167**	*e*P	**Pn**	**09 56 28.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**23.12**	**286**	P	**P**	**10 00 35.4**	**+0.8**
	4.7nm,1.0s,mb3.9,baz=97,slow=7.3,SNR=5.4						
SONM	**Songino Array**	**37.03**	**342**	P	**P**	**10 02 40.0**	**+1.1**
	0.2nm,0.4s,mb3.3,baz=169,slow=6.3,SNR=3.5						
MKAR	**Makanchi Array**	**47.41**	**323**	P	**P**	**10 04 01.4**	**-2.3**
	0.4nm,0.6s,mb3.5,baz=117,slow=8.1,SNR=4.5						

ISC 09 10:46:35.8±0.6**, 39.69N**±0.04×**29.43E**±0.05**, h10^{km}, n7, σ0^{s}89**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.50**	**334**	*i* P	**Pg**	**10 46 44.8**	**-1.1**
ULDT				*i* S	**Sg**	**10 46 53.2**	**+0.5**
YLV	**Yalova**	**0.87**	**357**	PG	**Pg**	**10 46 53.1**	**-0.2**
YLV				SG	**Sg**	**10 47 06.5**	**+1.5**
KCT	**Karacabey**	**1.00**	**305**	PG	**Pg**	**10 46 54.3**	**-1.5**
BTOK	**Tokmak**	**1.08**	**274**	*i* P	**Pb**	**10 46 56.4**	**+0.3**
BTOK				*i* S	**Sb**	**10 47 10.2**	**+0.2**
ESKT	**Eskisehir**	**1.11**	**99**	PN	**Pn**	**10 46 56.1**	**-1.4**
ESKT	**Eskisehir**	**1.11**	**99**	*i* P	**Pb**	**10 46 56.7**	**-0.1**
ESKT				*i* S	**Sb**	**10 47 11.9**	**+0.8**
MANT	**Manisa**	**1.38**	**210**	*i* P	**Pn**	**10 47 01.2**	**0.0**
MANT				*i* S	**Sb**	**10 47 19.7**	**+1.0**

*IDC **09** 10:59:32.3±1.0, 1.87N×97.68E, mb4.3/11, mb1 4.5/12, mb1mx4.3/20, mbtmp4.3/12, ML4.5/1, MS3.2/2, Ms1 3.3/2, ms1mx2.9/20, Error ellipse: s-maj=45.8km s-min=20.8km az=52.0*

*BJI **09** 10:59:33.5, 1.18N×97.58E, h58^{km}, mB4.7, mb4.5, Ms4.2, Msz3.8*

*MOS **09** 10:59:35.4±1.2, 1.87N×97.84E, h33^{km}, mb4.5/9, Error ellipse: s-maj=28.1km s-min=9.9km az=109.7*

*NEIC **09** 10:59:36.0±0.4, 1.73N×97.78E, h30^{km}, mb4.6/10, Error ellipse: s-maj=11.5km s-min=8.4km az=61.0*

ISC 09 10:59:33.3±2.3**, 1.70N**±0.08×**97.72E**±0.09**, h25**^{km}±16^{km}**, n48, σ0**^{s}**95**/49**, mb4.5**/25**, MS3.6**/4**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**4.37**	**49**	P	**Pn**	**11 00 41.1**	**+1.4**
KULM	**Kulim**	**4.61**	**39**	*e*Pn	**Pn**	**11 00 43.8**	**+0.5**
KGM	**Kluang**	**5.61**	**87**	P	**Pn**	**11 00 51.0**	**-6.3**
CMAR	**Chiang Mai Arr**	**16.69**	**4**	Pn	**P**	**11 03 26.9**	**-0.5**
	0.7nm,0.3s,baz=195,slow=11,SNR=15						
CMAR				LR	LR	11 09 22.0	
	comp=Z,71nm,20.4s,baz=195,slow=36						
CMAR	**Chiang Mai Arr**	**16.69**	**4**	Pn	**P**	**11 03 26.9**	**-0.5**
CMAR				LR	LR	11 09 22.0	
QIZ	**Qiongzhong**	**20.92**	**34**	*e*P	**P**	**11 04 14.9**	**-1.7**
	16nm,1.0s						
KMI	**Kunming**	**23.78**	**11**	P	**P**	**11 04 45.5**	**+0.5**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
SHL	**Shillong**	**24.38**	**347**	*e*P	**P**	**11 04 49.5**	**-1.4**
PKI	**Pulchoki**	**28.29**	**336**	*e*P	**P**	**11 05 28.1**	**+1.0**
	comp=Z,11nm,0.6s,mb4.7						
PKI	**Pulchoki**	**28.29**	**336**	*e*P	**P**	**11 05 28.1**	**+1.0**
PKI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
GUN	**Gumba**	**28.41**	**338**	*e*P	**P**	**11 05 28.6**	**+0.4**
	comp=Z,24nm,0.6s,mb5.0						
DMN	**Daman**	**28.45**	**336**	*e*P	**P**	**11 05 28.9**	**+0.4**
KKN	**Kakani**	**28.54**	**336**	*e*P	**P**	**11 05 29.4**	**+0.1**
	comp=Z,12nm,0.5s,mb4.9						
KKN	**Kakani**	**28.54**	**336**	*e*P	**P**	**11 05 29.4**	**+0.1**
KKN				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
GKN	**Gorkha**	**28.99**	**336**	*e*P	**P**	**11 05 32.8**	**-0.6**
	comp=Z,8.6nm,0.3s,mb4.9						
KOLN	**Koldanda**	**29.23**	**334**	*e*P	**P**	**11 05 35.9**	**+0.4**
	comp=Z,17nm,0.6s,mb5.0						
GTA	**Gaotai**	**37.58**	**3**	*e*P	**P**	**11 06 47.6**	**0.0**
GTA				PP	PP	11 08 16.1	-0.2
GTA				S	**S**	**11 12 35.4**	**+0.4**
GTA				SS	SS	11 15 18.5	+9.4
GTA				AMB	AMB		
	comp=Z,60nm,5.7s						
GTA				LR	LR		
	comp=N,60nm,12.9s,MS3.8						
GTA				LR	LR		
	comp=E,80nm,12.2s,MS3.8						
GTA				LR	LR		
	comp=Z,70nm,12.2s,MS3.7						
WRA	**Warramunga Arr**	**41.87**	**123**	P	**P**	**11 07 25.0**	**+1.6**
	comp=Z,2.5nm,0.4s,mb4.2,baz=303,slow=9.0,SNR=21						
WRA				PcP	PcP	11 09 21.7	+2.0
	comp=Z,0.5nm,0.5s,baz=317,slow=2.6,SNR=7.3						
WRAB	**Tennant Creek**	**41.87**	**123**	*e*P	**P**	**11 07 23.3**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	**41.87**	**123**	*e*P	**P**	**11 07 23.3**	**-0.2**
	comp=Z,5.6nm,0.6s,mb4.4						
WMQ	**Urumqi**	**42.87**	**349**	*e*P	**P**	**11 07 32.0**	**+0.6**
WMQ				AP	pP	11 07 42.0	+3.0
WMQ				AMB	AMB		
	comp=Z,20nm,4.6s						
WMQ				LR	LR		
	comp=Z,410nm,21.0s,MS4.3						
AAK	**Ala-Archa**	**45.75**	**336**	*e*P	**P**	**11 07 55.6**	**+1.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
AAK	**Ala-Archa**	**45.75**	**336**	*e*P	**P**	**11 07 55.6**	**+1.0**
	comp=Z,1.7nm,0.5s,mb4.2						
SONM	**Songino Array**	**46.56**	**8**	P	**P**	**11 08 00.5**	**-0.3**
	comp=Z,2.5nm,0.4s,mb4.5,baz=188,slow=9.9,SNR=23						
SONM				PcP	PcP	11 09 35.6	+0.4
	comp=Z,0.6nm,0.4s,baz=206,slow=3.5,SNR=4.6						
SONM				LR	LR	11 28 58.0	
	comp=Z,36nm,20.9s,MS3.3,baz=249,slow=38						
ULN	**Ulaanbaatar**	**46.69**	**9**	*e*P	**P**	**11 08 01.0**	**-0.8**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**46.69**	**9**	*e*P	**P**	**11 08 01.0**	**-0.8**
	comp=Z,3.2nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	**46.88**	**345**	*i* P	**P**	**11 08 03.4**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**46.88**	**345**	P	**P**	**11 08 03.1**	**-0.3**
	comp=Z,6.6nm,0.5s,mb4.8,baz=157,slow=8.1,SNR=92						
KKAR	**Karatay Array**	**47.84**	**333**	*i* P	**P**	**11 08 12.4**	**+1.4**
ZAK	**Zakamensk**	**48.73**	**5**	⇑*e*P	**P**	**11 08 16.7**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
MDJ	**Mudanjiang**	**51.18**	**29**	P	**P**	**11 08 36.3**	**-0.3**
MDJ				PCP	PcP	11 09 50.9	-1.1
MDJ				PCS		11 13 48.6	
MDJ				S	**S**	**11 15 52.5**	**+0.7**
MDJ				AMB	AMB		
	comp=Z,90nm,6.1s						
MDJ				LR	LR		
	comp=N,10.0nm,20.7s,MS3.0						
MDJ				LR	LR		
	comp=E,10.0nm,19.7s,MS3.0						
MDJ				LR	LR		
	comp=Z,20nm,16.6s,MS3.2						
ZAL	**Zalesovo**	**53.14**	**350**	P	**P**	**11 08 50.4**	**-0.9**
	comp=Z,10nm,0.4s,mb5.1,baz=320,slow=6.3,SNR=9.6						
BVA0	**Borovoye Array**	**55.95**	**340**	*i* P	**P**	**11 09 10.8**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
BVAR	**Borovoye Array**	**55.95**	**340**	P	**P**	**11 09 10.8**	**-0.9**
	comp=Z,6.4nm,0.5s,mb4.9,baz=140,slow=9.0,SNR=43						
CHKZ	**Chkalovo**	**56.42**	**341**	*e*P	**P**	**11 09 14.5**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,31nm,0.6s,mb5.5						
CHKZ	**Chkalovo**	**56.42**	**341**	*e*P	**P**	**11 09 14.5**	**-0.6**
	comp=Z,31nm,0.6s,mb5.5						
AB31	**Akbulak array**	**57.32**	**332**	*i* P	**P**	**11 09 20.9**	**-0.7**
CASY	**Casey**	**68.45**	**174**	P	**P**	**11 10 33.4**	**-1.7**
	comp=Z,33nm,1.0s,mb5.3						
BRTR	**Keskin Array B**	**69.16**	**312**	P	**P**	**11 10 40.1**	**+0.2**
	comp=Z,1.2nm,0.7s,mb4.0,baz=120,slow=6.8,SNR=6.2						
TIXI	**Tiksi**	**72.60**	**10**	*e*P	**P**	**11 10 57.4**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
AKASG	**Malin Array Be**	**75.18**	**322**	P	**P**	**11 11 15.6**	**+0.2**
	comp=Z,1.5nm,0.5s,mb4.2,baz=90,slow=5.0,SNR=9.4						
FINES	**FINESS Array B**	**79.80**	**332**	P	**P**	**11 11 41.2**	**+0.4**
	comp=Z,1.7nm,0.6s,mb4.2,baz=104,slow=7.9,SNR=9.7						
FINES	**FINESS Array B**	**79.80**	**332**	P	**P**	**11 11 41.2**	**+0.4**
ARCES	**ARCESS Array B**	**82.24**	**340**	P	**P**	**11 11 54.4**	**+0.9**
	comp=Z,0.8nm,0.4s,mb4.0,baz=105,slow=4.7,SNR=16						
GERES	**GERESS Array B**	**84.78**	**319**	P	**P**	**11 12 08.9**	**+2.1**
	comp=Z,0.3nm,0.2s,mb4.0,baz=135,slow=7.5,SNR=4.0						
NB2	**NORSAR Subarra**	**86.82**	**331**	P	**P**	**11 12 17.6**	**+1.0**
	comp=Z,0.9nm,0.6s,mb4.2,baz=96,slow=5.3						
NOA	**NORSAR Array B**	**86.82**	**331**	P	**P**	**11 12 17.5**	**+0.8**
	comp=Z,1.2nm,0.6s,mb4.3,baz=94,slow=4.9,SNR=5.4						
TXAR	**Lajitas Array**	**142.97**	**32**	PKP	PKPdf	11 19 08.8	-1.4
	comp=Z,0.2nm,0.6s,baz=262,slow=1.1,SNR=3.6						

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*THE **09** 11:12:20.6, 40.36N×24.11E, h10^{km}, ML2.7*

*ATH **09** 11:12:21.6, 40.34N×24.01E, h33^{km}±8^{km}, MD3.0/3*

*CSEM **09** 11:12:22.0±0.2, 40.37N×24.09E, h2^{km}, ML2.7, Error ellipse: s-maj=4.0km s-min=3.5km az=76.0*

ISC 09 11:12:20.4±1.1**, 40.37N**±0.04×**24.10E**±0.07**, h7**^{km}±7^{km}**, n8, σ0**^{s}**96**/15**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.10**	**249**	*e*Pg	**Pg**	**11 12 21.4**	**-1.3**
	comp=Z,43nm,0.1s						
OUR				*e*Sg	**Sg**	**11 12 24.6**	**+0.3**
PLG	**Polygyros**	**0.50**	**271**	*e*PB	**Pb**	**11 12 31.4**	**+0.4**
PLG				*e*SB	**Sb**	**11 12 37.6**	**-0.6**
PAIG	**Paliouri**	**0.55**	**216**	*e*Pg	**Pg**	**11 12 31.9**	**+0.5**
PAIG				*e*Sg	**Sg**	**11 12 39.4**	**+0.7**
SOH	**Sokhos**	**0.73**	**309**	*e*Pg	**Pg**	**11 12 35.8**	**+0.9**
SOH				*e*Sg	**Sg**	**11 12 45.8**	**+1.1**
LIA	**Limnos Island**	**0.95**	**119**	*e*PN	**Pn**	**11 12 40.5**	**+0.5**
NVR	**Nevrokopi**	**1.00**	**350**	*e*PN	**Pn**	**11 12 41.3**	**+0.7**
NVR				*e*SN	**Sn**	**11 12 54.5**	**-0.5**
XOR	**Xorichti**	**1.22**	**215**	*e*Pg	**Pg**	**11 12 43.0**	**-1.8**
XOR				*e*Sg	**Sg**	**11 13 01.7**	**+0.6**
GRG	**Griva**	**1.42**	**295**	*e*Pg	**Pg**	**11 12 46.2**	**-2.5**
GRG				*e*Sg	**Sg**	**11 13 07.7**	**+0.1**

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*BJI **09** 11:30:39.8, 50.41N×157.52E, h71^{km}, mB4.2, mb4.2, Ms3.6, Msz3.6*

*MOS **09** 11:30:40.5±1.2, 50.56N×157.17E, h58^{km}, mb4.7/6, Error ellipse: s-maj=14.4km s-min=6.1km az=73.3*

MOS Felt (II-III) at Severo-Kuril'sk.

*NEIC **09** 11:30:41.7±0.4, 50.64N×157.15E, mb4.5/11, Error ellipse: s-maj=10.1km s-min=6.6km az=144.0*

NEIC Felt [III] at Severo-Kuril'sk.

*KRSC **09** 11:30:41.0±1.3, 50.51N×157.21E, h40^{km}±7^{km}, ML4.9*

*IDC **09** 11:30:42.0±0.6, 50.72N×157.05E, h50^{km}±5^{km}, mb3.7/16, mb1 4.0/19, mb1mx3.9/28, mbtmp4.0/19, MS3.2/7, Ms1 3.2/7, ms1mx2.9/38, Error ellipse: s-maj=20.5km s-min=11.3km az=149.0*

ISC 09 11:30:40.0±0.4**, 50.44N**±0.03×**157.40E**±0.06**, h51**^{km}**, h51**^{km}±2.0^{km}**:pP-P, n90, σ1**^{s}**25**/111**, mb4.2**/23**, MS3.5**/6**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.85**	**287**	⇓*i*PN	**P**	**11 30 53.3**	**-2.6**
SKR				*i* S	**S**	**11 31 03.9**	**-3.8**
SKR				pmax	pmax		
	comp=Z,3µm,0.5s						
SKR				pmax	pmax		
	comp=N,2µm,0.3s						
SKR				pmax	pmax		
	comp=E,3µm,0.3s						
SKR				smax			
	comp=N,47µm,1.0s						
SKR				smax			
	comp=E,31µm,1.0s						
SKR	**Severo-Kuril's**	**0.85**	**287**	*i* P	**P**	**11 30 53.3**	**-2.6**
SKR				*i* S	**S**	**11 31 03.9**	**-3.8**
PAU	**Pauzhetka**	**1.10**	**340**	*i* P	**P**	**11 30 59.7**	**+0.4**
PAU				*i* S	**S**	**11 31 12.8**	**-0.8**
PAU				Smax			
	comp=E,15µm,0.1s						
ALID	**Alaid**	**1.25**	**291**	*i* P	**P**	**11 31 02.8**	**+1.3**
ALID				*i* S	**S**	**11 31 18.0**	**+0.4**
MIPR	**Malaya Ipel'ka**	**1.89**	**348**	*e*P	**P**	**11 31 12.0**	**+1.6**
RUS	**Russkaya**	**2.12**	**19**	P	**P**	**11 31 13.2**	**-0.5**
RUS				S	**S**	**11 31 36.5**	**-2.3**
RUS	**Russkaya**	**2.12**	**19**	*e*P	**P**	**11 31 13.1**	**-0.6**
RUS				*e*S	**S**	**11 31 36.7**	**-2.1**
GRL	**Gorelyy**	**2.16**	**11**	*i* P	**P**	**11 31 14.8**	**+0.5**
GRL				*e*S	**S**	**11 31 39.0**	**-0.9**
APC	**Apacha**	**2.50**	**357**	*e*P	**P**	**11 31 19.5**	**+0.4**
APC				*e*S	**S**	**11 31 48.1**	**-0.4**
APC				Smax			
	comp=E,590nm,0.8s						
PET	**Petropavlovsk**	**2.71**	**16**	*e*Pn	**P**	**11 31 21.5**	**-0.6**
PET	**Petropavlovsk**	**2.71**	**16**	*e*P	**P**	**11 31 22.1**	**0.0**
PET				*e*S	**S**	**11 31 51.9**	**-1.9**
UGLR	**Uglovaya**	**2.91**	**17**	*e*P	**P**	**11 31 25.7**	**+0.7**
UGLR				*e*S	**S**	**11 31 57.6**	**-1.4**
AVH	**Avacha**	**2.95**	**16**	*e*P	**P**	**11 31 26.6**	**+1.0**
AVH				*e*S	**S**	**11 32 00.5**	**+0.5**
KOK	**Koryaka**	**2.96**	**15**	*i* P	**P**	**11 31 27.1**	**+1.4**
KOK				*e*S	**S**	**11 32 01.0**	**+0.8**
SDLR	**Sedlovina**	**2.99**	**17**	*e*P	**P**	**11 31 26.4**	**+0.3**
NLC	**Nalytchevo**	**2.99**	**23**	*e*P	**P**	**11 31 24.7**	**-1.4**
SPN	**Mys Shipunski**	**3.12**	**30**	P	**P**	**11 31 27.9**	**-0.1**
SPN				S	**S**	**11 32 02.1**	**-2.2**
SPN	**Mys Shipunski**	**3.12**	**30**	*e*P	**P**	**11 31 27.9**	**-0.1**
SPN				*e*S	**S**	**11 32 02.3**	**-2.0**
GNL	**Ganaly**	**3.28**	**6**	*e*P	**P**	**11 31 31.0**	**+0.8**
KII	**Karymskiy**	**3.82**	**18**	P	**P**	**11 31 39.8**	**+2.0**
KII				S	**S**	**11 32 22.2**	**+0.3**
KII	**Karymskiy**	**3.82**	**18**	*e*P	**P**	**11 31 39.9**	**+2.1**
KII				*e*S	**S**	**11 32 22.5**	**+0.6**
MKZ	**Mys Kozlova**	**4.90**	**31**	P	**P**	**11 31 52.3**	**-0.7**
MKZ				S	**S**	**11 32 44.5**	**-4.6**
MKZ	**Mys Kozlova**	**4.90**	**31**	*e*P	**P**	**11 31 52.6**	**-0.4**
MKZ				*e*S	**S**	**11 32 44.9**	**-4.2**
TUMR	**Tumrok**	**5.13**	**18**	*e*P	**P**	**11 31 57.8**	**+1.6**
ESO	**Esso**	**5.55**	**8**	*e*P	**P**	**11 32 02.9**	**+0.8**
ESO				Smax			
	comp=E,30nm,1.5s						
KMNR	**Kamenistaya**	**5.60**	**17**	*e*P	**P**	**11 32 04.1**	**+1.4**
KPT	**Kopyto**	**5.79**	**16**	*e*P	**P**	**11 32 06.6**	**+1.2**
KOZ	**Kozyrevsk**	**5.82**	**14**	P	**P**	**11 32 08.1**	**+2.3**
KOZ	**Kozyrevsk**	**5.82**	**14**	*e*P	**P**	**11 32 07.9**	**+2.1**
KOZR	**Kozyr**	**5.83**	**14**	PN	**P**	**11 32 08.1**	**+2.1**
ZLN	**Zelenaya**	**5.95**	**19**	*e*P	**P**	**11 32 09.9**	**+2.3**
LGNR	**Loginova**	**5.99**	**18**	P	**P**	**11 32 10.2**	**+2.0**
SRDR	**Sredinnyy**	**6.05**	**12**	*e*P	**P**	**11 32 11.3**	**+2.3**
KRSR	**Krestovskiy**	**6.09**	**17**	P	**P**	**11 32 10.8**	**+1.2**
KLY	**Klyuchi**	**6.20**	**17**	P	**P**	**11 32 12.3**	**+1.2**
KLY	**Klyuchi**	**6.20**	**17**	*e*P	**P**	**11 32 12.2**	**+1.1**
KBTR	**Krutoberegovo**	**6.63**	**27**	P	**P**	**11 32 16.3**	**-0.9**
KBTR				S	**S**	**11 33 27.0**	**-5.2**
KBTR	**Krutoberegovo**	**6.63**	**27**	*e*P	**P**	**11 32 16.3**	**-0.9**
KBTR				*e*S	**S**	**11 33 27.3**	**-4.9**
BKI	**Bering**	**7.05**	**44**	*e*P	**P**	**11 32 21.8**	**-1.3**
BKI				*e*S	**S**	**11 33 33.0**	**-10**
MA2	**Magadan**	**9.91**	**340**	*e*PN	**P**	**11 33 00.4**	**-2.0**
FX1	**Attu Island--F**	**10.10**	**70**	P	**P**	**11 33 04.3**	**-0.6**
	comp=E,6.5nm,0.3s,baz=281,slow=3.1,SNR=61						
FX1				S	**S**	**11 34 49.5**	**-8.3**
	comp=E,9.6nm,0.3s,baz=196,slow=22,SNR=11						
YSS	**Yuzh-Sakhalins**	**10.29**	**256**	PN	**P**	**11 33 08.6**	**+1.0**
ASAJ	**Asahikawa**	**11.87**	**243**	PN	**P**	**11 33 29.0**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,42nm,18.4s						
ASAJ	**Asahikawa**	**11.87**	**243**	P	**P**	**11 33 29.0**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=83,slow=14,SNR=10						
ASAJ				LR	LR	11 37 48.7	
	comp=Z,42nm,18.4s,baz=158,slow=36						
BILL	**Bilibino**	**18.19**	**11**	*e*P	**P**	**11 34 50.7**	**+0.6**
BILL	**Bilibino**	**18.19**	**11**	*e*P	**P**	**11 34 50.7**	**+0.6**
BILL				*e*		11 35 19.2	
YAK	**Yakutsk**	**19.11**	**318**	*e*P	**P**	**11 34 57.1**	**-3.9**
YAK				pmax	pmax		
	comp=Z,29nm,0.6s						
YAK	**Yakutsk**	**19.11**	**318**	*e*P	**P**	**11 34 57.1**	**-3.9**
	comp=Z,29nm,0.6s						
MJAR	**Matsushiro Arr**	**19.59**	**232**	P	**P**	**11 35 06.0**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=30,slow=9.4,SNR=12						
MJAR				LR	LR	11 42 22.5	
	comp=Z,40nm,19.6s,baz=150,slow=36						
MAJO	**Matsushiro**	**19.59**	**232**	*e*P	**P**	**11 35 05.8**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MAJO	**Matsushiro**	**19.59**	**232**	*e*P	**P**	**11 35 05.8**	**-0.6**
	comp=Z,6.6nm,0.6s						
MDJ	**Mudanjiang**	**19.59**	**263**	P	**P**	**11 35 05.7**	**-0.7**
MDJ				XP		11 35 26.5	
MDJ				S	**S**	**11 38 42.4**	**+3.0**
MDJ				XS		11 39 05.8	
MDJ				SS	SS	11 39 07.5	-0.4
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,50nm,5.6s						
MDJ	**Mudanjiang**	**19.59**	**263**	*e*P	**P**	**11 35 08.0**	**+1.6**
	comp=Z,15nm,1.1s						
COLA	**College**	**31.48**	**42**	*e*P	**P**	**11 36 57.5**	**-1.0**
COLA				*e*	pP	11 37 11.0	-0.7
COLA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
COLA	**College**	**31.48**	**42**	*e*P	**P**	**11 36 57.5**	**-1.0**
	comp=Z,3.0nm,0.7s,mb4.2						
COLA				*e*	pP	11 37 11.0	-0.8
ILAR	**Eielson Array**	**31.89**	**42**	P	**P**	**11 37 01.7**	**-0.5**
	comp=Z,0.4nm,0.6s,mb3.4,baz=275,slow=5.4,SNR=5.9						
ILAR				pP	pP	11 37 13.3	-2.0
	comp=Z,1.9nm,0.8s,baz=262,slow=8.1,SNR=13						
SONM	**Songino Array**	**32.94**	**286**	P	**P**	**11 37 09.4**	**-2.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=69,slow=7.6,SNR=4.2						
SONM				LR	LR	11 50 29.0	
	comp=Z,36nm,20.1s,MS3.1,baz=240,slow=36						
TLY	**Talaya**	**33.17**	**293**	P	**P**	**11 37 13.2**	**-0.2**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
TLY	**Talaya**	**33.17**	**293**	P	**P**	**11 37 13.2**	**-0.3**
	comp=Z,8.2nm,0.8s,mb4.7						
INK	**Inuvik**	**37.00**	**35**	P	**P**	**11 37 46.0**	**+0.1**
INK				*PP	pP	11 37 58.7	-0.6
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	**Inuvik**	**37.00**	**35**	P	**P**	**11 37 46.0**	**+0.1**
	comp=Z,0.9nm,0.4s,mb4.0,baz=323,slow=4.7,SNR=7.4						
INK				pP	pP	11 37 58.6	-0.6
	comp=Z,0.8nm,0.7s,baz=311,slow=6.9,SNR=1.9						
INK	**Inuvik**	**37.00**	**35**	P	**P**	**11 37 45.0**	**-0.9**
	comp=Z,2.0nm,0.8s,mb4.0						
YKA	**Yellowknife Ar**	**46.27**	**40**	P	**P**	**11 39 01.5**	**0.0**
	comp=Z,1.5nm,0.6s,mb4.1,baz=297,slow=7.7,SNR=5.6						
YKA				pP	pP	11 39 14.5	-0.6
	comp=Z,1.2nm,0.8s,baz=303,slow=8.4,SNR=4.5						
WMQ	**Urumqi**	**46.29**	**290**	*e*P	**P**	**11 39 01.9**	**-0.1**
WMQ				AP	pP	11 39 18.9	+3.3
WMQ				XP	sP	11 39 26.9	+5.3
WMQ				LR	LR		
	comp=Z,420nm,21.2s,MS4.4						
RES	**Resolute Bay**	**46.41**	**20**	P	**P**	**11 39 01.0**	**-1.5**
MKAR	**Makanchi Array**	**47.82**	**296**	P	**P**	**11 39 11.6**	**-2.3**
	comp=Z,0.7nm,0.4s,mb4.1,baz=56,slow=6.2,SNR=9.3						
MKAR				LR	LR	12 00 27.5	
	comp=Z,36nm,19.9s,MS3.4,baz=108,slow=38						
MKAR	**Makanchi Array**	**47.82**	**296**	P	**P**	**11 39 11.6**	**-2.3**
MKAR				LR	LR	12 00 27.5	
CHKZ	**Chkalovo**	**50.26**	**309**	*e*P	**P**	**11 39 28.9**	**-3.8**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**50.26**	**309**	*e*P	**P**	**11 39 28.9**	**-3.8**
	comp=Z,3.0nm,0.8s,mb4.4						
BVAR	**Borovoye Array**	**50.74**	**309**	P	**P**	**11 39 33.1**	**-3.2**
	comp=Z,0.7nm,0.4s,mb4.0,baz=56,slow=6.4,SNR=7.9						
EDM	**Edmonton**	**51.73**	**50**	*e*P	**P**	**11 39 43.7**	**-0.1**
YBH	**Yreka Blue Hor**	**53.57**	**66**	LR	LR	11 57 21.9	
	comp=Z,49nm,21.1s,MS3.5,baz=348,slow=30						
CMAR	**Chiang Mai Arr**	**55.98**	**257**	P	**P**	**11 40 15.2**	**-0.3**
	comp=Z,4.5nm,0.7s,mb4.6,baz=29,slow=7.5,SNR=15						
FCC	**Fort Churchill**	**56.61**	**36**	*e*P	**P**	**11 40 18.6**	**-0.9**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
FCC	**Fort Churchill**	**56.61**	**36**	*e*P	**P**	**11 40 18.6**	**-0.9**
	comp=Z,3.4nm,0.6s,mb4.5						
SUMG	**Summit**	**56.79**	**6**	P	**P**	**11 40 18.9**	**-1.6**
	comp=Z,12nm,0.9s,mb4.9						
NVAR	**Mina Array Bea**	**58.28**	**67**	P	**P**	**11 40 32.2**	**+0.7**
	comp=Z,0.2nm,0.5s,mb3.5,baz=297,slow=8.1,SNR=2.9						
NVAR				pP	pP	11 40 46.9	+1.3
	comp=Z,1.1nm,0.6s,baz=315,slow=6.4,SNR=8.4						
PDAR	**Pinedale Array**	**60.32**	**58**	P	**P**	**11 40 46.4**	**+0.8**
	comp=Z,1.8nm,0.8s,mb4.2,baz=333,slow=3.3,SNR=13						
PDAR				pP	pP	11 41 00.3	+0.6
	comp=Z,1.3nm,0.9s,baz=315,slow=4.2,SNR=5.7						
FINES	**FINESS Array B**	**61.88**	**336**	P	**P**	**11 40 52.4**	**-3.4**
	comp=Z,0.5nm,0.5s,mb3.9,baz=45,slow=5.4,SNR=5.5						
RSSD	**Black Hills**	**62.30**	**54**	*e*P	**P**	**11 40 59.0**	**+0.1**
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
RSSD	**Black Hills**	**62.30**	**54**	*e*P	**P**	**11 40 59.0**	**+0.2**
	comp=Z,5.0nm,0.8s,mb4.7						
NOA	**NORSAR Array B**	**65.61**	**343**	LR	LR	12 15 34.1	
	comp=Z,17nm,18.9s,MS3.3,baz=310,slow=41						
SCHQ	**Schefferville**	**68.78**	**26**	P	**P**	**11 41 39.2**	**-0.8**
	comp=Z,1.2nm,0.4s,mb4.2,baz=314,slow=4.5,SNR=7.6						
WRAB	**Tennant Creek**	**72.96**	**203**	P	**P**	**11 42 06.8**	**+1.0**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
WRAB	**Tennant Creek**	**72.96**	**203**	P	**P**	**11 42 06.8**	**+1.1**
	comp=Z,8.3nm,1.1s,mb4.6						
WRA	**Warramunga Arr**	**72.97**	**203**	P	**P**	**11 42 06.4**	**+0.6**
	comp=Z,1.1nm,0.6s,mb3.9,baz=18,slow=6.1,SNR=22						
WRA				pP	pP	11 42 20.8	+0.4
	comp=Z,0.6nm,0.8s,baz=18,slow=6.2,SNR=4.2						
TXAR	**Lajitas Array**	**73.26**	**64**	P	**P**	**11 42 08.4**	**+1.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=300,slow=4.5,SNR=12						
TXAR				pP	pP	11 42 22.6	+0.7
	comp=Z,1.2nm,0.6s,baz=289,slow=5.0,SNR=8.5						
EKA	**Eskdalemuir Ar**	**73.36**	**349**	P	**P**	**11 42 05.8**	**-1.6**
	comp=Z,0.6nm,0.3s,mb4.0,baz=19,slow=5.2,SNR=4.9						
MLR	**Muntele Rosu**	**75.60**	**327**	P	**P**	**11 42 19.9**	**-0.7**
	comp=Z,2.1nm,0.6s,mb4.3,baz=122,slow=15,SNR=4.3						
GERES	**GERESS Array B**	**76.31**	**336**	P	**P**	**11 42 23.0**	**-1.5**
	comp=Z,0.4nm,0.4s,mb3.8,baz=31,slow=5.7,SNR=3.0						
GERES				LR	LR	12 20 19.2	
	comp=Z,19nm,20.6s,MS3.4,baz=354,slow=39						

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*CSEM **09** 11:34:26.4±0.1, 30.82N×34.92E, h2^{km}, ML2.9, Error ellipse: s-maj=2.4km s-min=1.5km az=92.0, Mining explosion.*

*SNSN **09** 11:34:28.6, 30.62N×34.63E, Ml2.4*

*HLW **09** 11:34:32.5, 30.74N×34.79E, h30^{km}, Mb3.0*

ISC 09 11:34:26.7±0.5**, 30.83N**±0.03×**34.92E**±0.06**, n20, σ0**^{s}**78**/24**, 5C, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASH	**Mash'abbe Sade**	**0.20**	**324**	Pg	**Pg**	**11 34 31.3**	**+0.6**
ZFRI	**Zfri**	**0.35**	**142**	Pg	**Pg**	**11 34 33.3**	**-0.4**
KZIT	**Kziot**	**0.46**	**279**	Pg	**Pg**	**11 34 37.5**	**+1.7**
PRNI	**Paran**	**0.48**	**172**	Pg	**Pg**	**11 34 36.5**	**+0.2**
PRNI				Sg	**Sg**	**11 34 43.8**	**+1.0**
MZDA	**Masada**	**0.61**	**38**	Pg	**Pg**	**11 34 38.5**	**-0.2**
MZDA				Sg	**Sg**	**11 34 48.1**	**+1.3**
KMTI	**Karmit**	**0.75**	**193**	Pg	**Pg**	**11 34 41.4**	**-0.2**
KMTI				Sg	**Sg**	**11 34 53.4**	**+1.9**
MBH	**Mount Berech**	**1.04**	**180**	Pg	**Pg**	**11 34 47.7**	**+0.3**
EIL	**Elat**	**1.16**	**179**	Pg	**Pg**	**11 34 49.3**	**-0.5**
HNKL	**Nakhl**	**1.22**	**222**	⇑P	**Pb**	**11 34 50.0**	**-0.2**
AMAG	**Maghara**	**1.49**	**263**	P	**Pn**	**11 34 54.2**	**-0.5**
HMDT	**Nahal Hemdat**	**1.51**	**20**	Pn	**Pn**	**11 34 55.0**	**0.0**
ALWS	**Ilw as Safayha**	**1.52**	**175**	P	**Pn**	**11 34 54.7**	**-0.6**
HBST	**Basata**	**1.62**	**186**	⇑P	**Pn**	**11 34 56.4**	**-0.2**
MMLI	**Mount Malkishu**	**1.66**	**15**	Pn	**Pn**	**11 34 56.1**	**-1.0**
JMOS	**Jabal al Moall**	**1.67**	**174**	P	**Pn**	**11 34 56.7**	**-0.6**
HAQS	**Haql**	**1.77**	**180**	P	**Pn**	**11 34 58.1**	**-0.7**
NUB		**1.82**	**188**	⇑P	**Pn**	**11 34 59.1**	**-0.4**
SUZ		**2.06**	**242**	⇑P	**Pn**	**11 35 02.1**	**-0.8**
JMQS	**Jabal Moqyreh**	**2.11**	**157**	P	**Pn**	**11 35 04.3**	**+0.6**
HKAT	**Jabal Katrina**	**2.44**	**200**	⇑P	**Pn**	**11 35 07.5**	**-0.9**
HKAT				S	**Sn**	**11 35 33.3**	**-6.1**

OTT 09 12:12:41.8±0.1**, 53.07N**×**66.95W, MN2.8**/8**, Blast, Labrador City, Nl Mining explosion., Labrador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**1.77**	**2**	PN	Pn	12 13 12.4	-1.5
SCHQ				SG	Sg	12 13 36.6	-4.1
SCHQ				Trac		12 13 38.8	
	comp=Z,21nm,0.1s						
MNQ	**Manicouagan**	**2.78**	**205**	PN	Pn	12 13 26.8	-1.6
MNQ				SN	Sn	12 14 01.6	-1.5
MNQ				Trac		12 14 07.9	
	comp=Z,9.0nm,0.1s						
SMQ	**Clarke City**	**2.85**	**177**	PN	Pn	12 13 27.1	-2.2
SMQ				SN	Sn	12 14 03.0	-2.0
SMQ				Trac		12 14 08.4	
	comp=Z,8.9nm,0.1s						
ICQ	**Pointe Anglais**	**3.56**	**183**	PN	Pn	12 13 36.9	-2.5
ICQ				SN	Sn	12 14 19.2	-3.6
ICQ				Trac		12 14 25.4	
	comp=Z,4.7nm,0.1s						
CNQ	**Baie Comeau**	**3.83**	**191**	PN	Pn	12 13 40.9	-2.5
CNQ				SN	Sn	12 14 25.8	-4.0
CNQ				Trac		12 14 40.8	
	comp=Z,4.9nm,0.1s						
GSQ	**Grosses Roches**	**4.16**	**182**	PN	Pn	12 13 45.1	-3.0
GSQ				SN	Sn	12 14 29.9	-8.2
GSQ				Trac		12 14 38.3	
	comp=Z,1.0nm,0.0s						
LG4Q	**La Grande 4**	**4.32**	**280**	PN	Pn	12 13 46.6	-3.7
LG4Q				PG	Pg	12 13 55.4	-13

LG4Q				SN	Sn	12 14 37.1	-5.1
LG4Q				SG	Sg	12 14 52.8	-13
LG4Q				Trac		12 14 58.2	
	comp=Z,7.0nm,0.3s						
DAQ	**Lac Daran**	5.79	210	PN	Pn	12 14 07.2	-3.9
DAQ				SN	Sn	12 15 12.9	-6.4
DAQ				Trac		12 15 19.9	
	comp=Z,1.3nm,0.1s						
LMQ	**La Malbaie**	5.93	203	PN	Pn	12 14 09.2	-3.9
LMQ				SN	Sn	12 15 16.9	-5.8
LMQ				Trac		12 15 19.4	
	comp=Z,1.4nm,0.1s						
DRLN	**Deer Lake**	7.05	119	PN	Pn	12 14 23.9	-5.0
DRLN				SN	Sn	12 15 34.0	-17
VLDQ	**Val d'Or**	8.32	238	PN	P	12 14 42.3	-4.3
MALO	**McAlpine Lake**	8.55	254	PN	P	12 14 43.6	-6.2
VIMO	**Victor Mine**	10.15	275	PN	P	12 15 05.1	-6.6
SILO	**Sutton Inlier**	10.73	285	PN	P	12 15 12.5	-7.2
FRB	**Frobisher Bay**	10.75	356	PN	P	12 15 12.2	-7.6

MOS 09 12:17:46.5±3.0**,52.14N×99.01E,h3^{km},mb4.4**/1**,1C,**
Error ellipse: s-maj=21.6km s-min=11.0km az=175.7,
Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOY	**Mondy**	1.32	110	*e*PG	Pg	12 18 09.3	-3.5
MOY				*e*		12 18 27.6	
MOY				pmax	pmax		
	comp=Z,138nm,0.8s						
MOY				smax			
	comp=N,2µm,1.3s						
ARS	**Arshan**	2.12	95	*e*PN	Pn	12 18 23.9	+0.6
ARS				*e*		12 18 53.7	
ARS				pmax	pmax		
	comp=Z,160nm,0.2s						
ARS				smax			
	comp=E,2µm,0.5s						
TLY	**Talaya**	2.91	97	*e*PN	Pn	12 18 38.1	+3.6
TLY				*e*		12 19 16.6	
TLY				pmax	pmax		
	comp=Z,40nm,0.4s						
TLY				smax			
	comp=N,336nm,0.7s						
IRK	**Irkutsk**	3.24	86	*e*PN	Pn	12 18 42.1	+2.8
IRK				*e*		12 19 26.0	
IRK				pmax	pmax		
	comp=Z,108nm,0.2s						
IRK				smax			
	comp=N,987nm,0.9s						
LSTR	**Listvyanka**	3.61	92	*e*PN	Pn	12 18 49.6	+5.1
LSTR				*e*		12 19 36.3	
LSTR				pmax	pmax		
	comp=Z,21nm,0.7s						
LSTR				smax			
	comp=N,267nm,1.4s						
TRG	**Tyrgan**	4.53	79	*e*PN	Pn	12 19 07.8	+10
TRG				*e*		12 20 07.0	
TRG				pmax	pmax		
	comp=Z,66nm,0.4s						
TRG				smax			
	comp=N,326nm,0.6s						
KAB	**Kabansk**	4.71	88	*e*PN	Pn	12 19 12.0	+12
KAB				*e*		12 20 14.3	
KAB				pmax	pmax		
	comp=Z,157nm,0.3s						
KAB				smax			
	comp=N,1µm,1.0s						
OGRR	**Ongureny**	5.41	70	*e*PN	Pn	12 19 25.9	+16
OGRR				*e*		12 20 34.1	
OGRR				pmax	pmax		
	comp=Z,23nm,0.5s						
OGRR				smax			
	comp=E,195nm,1.3s						
ULN	**Ulaanbaatar**	6.72	126	*ce*PN	Pn	12 19 44.2	+16
SYVR	**Suvo**	6.82	73	*e*PN	Pn	12 19 48.3	+18
SYVR				*e*		12 21 17.1	
SYVR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
SYVR				smax			
	comp=E,45nm,1.0s						
NIZ	**Nizh Angarsk**	7.20	55	*e*PN	Pn	12 19 34.3	-1.0
AKAR	**Aktash**	7.38	260	*e*PN	Pn	12 19 56.2	+18
YLYR	**Ulyunkhan**	7.75	64	*e*PN	Pn	12 19 40.0	-2.9
YLYR				*e*		12 20 05.7	
YLYR				*e*S	Sn	12 21 04.9	-7.3
ELDR	**Elanda**	8.09	269	*e*PN	P	12 19 42.5	-5.2
KMO	**Kumora**	8.10	58	*e*PG	P	12 20 12.8	+25
KMO				*e*		12 21 56.3	
KMO				pmax	pmax		
	comp=Z,12nm,0.4s						
KMO				smax			
	comp=E,93nm,1.3s						
KPC	**Khapcheranga**	8.79	101	*e*PG	P	12 20 26.0	+29
UKR	**Ust'-Kan**	8.96	268	*e*PG	P	12 20 24.0	+24

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*IDC **09** 12:40:22.6±0.9, 10.76N×91.50E, h22^{km}±4^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.8/21, mbtmp4.0/9, ML3.6/1, MS3.7/2, Ms1 3.7/2, ms1mx3.2/15, Error ellipse: s-maj=30.8km s-min=15.0km az=61.0*
*BJI **09** 12:40:26.8, 11.23N×91.43E, h33^{km}, mb4.2*
*NEIC **09** 12:40:26.0±2.2, 10.99N×91.80E, h44^{km}±24^{km}, mb4.3/8, Error ellipse: s-maj=20.0km s-min=10.6km az=81.0*
ISC 09 12:40:20.0±0.8**,10.70N**±0.09×**91.5E**±0.1**,h23^{km},**
h23^{km}±.6^{km}:pP-P,n29,σ0^s.81/25**,mb4.2**/12**,MS3.7**/2**,**
Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	10.53	120	P	P	12 43 00.1	+7.2
CMAR	**Chiang Mai Arr**	10.54	42	Pn	P	12 42 52.8	-0.3
	0.1nm,0.3s,baz=236,slow=15,SNR=9.3						
PALK	**Pallekele**	11.20	253	P	P	12 43 09.9	+7.8
MDRS	**Chennai**	11.27	283	*e*x	x	12 44 02.0	
MDRS				*e*x	x	12 46 08.0	
SHL	**Shillong**	14.79	1	*e*x	P	12 43 52.0	+2.2
PKI	**Pulchoki**	17.73	342	*e*P	P	12 44 26.3	-1.0
DMN	**Daman**	17.86	341	*e*P	P	12 44 28.2	-0.7
GUN	**Gumba**	17.92	344	*e*P	P	12 44 31.0	+1.4
	15nm,0.6s						
KKN	**Kakani**	17.98	342	*e*P	P	12 44 29.5	-0.8
GKN	**Gorkha**	18.38	340	*e*P	P	12 44 34.9	-0.5
	14nm,0.3s						
KOLN	**Koldanda**	18.54	337	*e*P	P	12 44 37.9	+0.6
	11nm,0.3s						
LSA	**Lhasa**	18.91	359	*e*P	P	12 44 40.8	-0.9
	9.5nm,0.9s						
ENH	**Enshi**	25.67	38	*e*P	P	12 45 48.9	-1.2
	27nm,0.8s,mb4.8						
ENH				*e*	pP	12 45 55.2	-1.7
GTA	**Gaotai**	29.53	13	*e*P	P	12 46 25.8	+0.6
GTA				AP	pP	12 46 32.5	+0.6
GTA				XP	sP	12 46 35.7	+0.8
MKAR	**Makanchi Array**	36.81	349	P	P	12 47 28.5	+0.4
	1.9nm,0.6s,mb4.1,baz=169,slow=8.4,SNR=15						
SONM	**Songino Array**	39.08	16	P	P	12 47 47.3	+0.2
	3.9nm,0.9s,mb4.1,baz=201,slow=8.9,SNR=19						
SONM				pP	pP	12 47 54.5	+0.5
	2.3nm,0.6s,baz=192,slow=11,SNR=8.4						
ULN	**Ulaanbaatar**	39.29	17	*e*P	P	12 47 48.9	0.0
	3.4nm,0.9s,mb4.1						
ZAL	**Zalesovo**	43.45	354	P	P	12 48 23.7	+0.7
	2.2nm,0.4s,mb4.2,baz=308,slow=6.8,SNR=3.3						
ZAL				pP	pP	12 48 31.2	+1.3
	1.4nm,0.4s,baz=359,slow=2.0,SNR=1.7						
ZAL	**Zalesovo**	43.45	354	P	P	12 48 23.7	+0.7
ZAL				pP	pP	12 48 31.2	+1.3
BVAR	**Borovoye Array**	45.51	342	P	P	12 48 39.8	+0.3
	0.5nm,0.4s,mb3.8,baz=141,slow=9.5,SNR=4.9						
CHKZ	**Chkalovo**	46.01	343	*e*P	P	12 48 43.8	+0.4
	4.4nm,0.9s,mb4.4						
CHKZ				*e*	pP	12 48 50.6	+0.2
MJAR	**Matsushiro Arr**	49.29	51	LR	LR	13 11 08.0	
	comp=Z,141nm,19.9s,MS4.0,baz=215,slow=37						
WRA	**Warramunga Arr**	52.01	126	P	P	12 49 30.3	0.0
	2.4nm,0.8s,mb4.2,baz=305,slow=8.2,SNR=17						
WRA				pP	pP	12 49 37.7	+0.4
	2.3nm,0.7s,baz=303,slow=8.5,SNR=9.1						
WRA				PcP	PcP	12 50 43.6	+1.1
	0.5nm,0.5s,baz=314,slow=3.1,SNR=5.6						
WRAB	**Tennant Creek**	52.01	126	*e*P	P	12 49 30.4	+0.1
	4.6nm,0.7s,mb4.5						
KMBO	**Kilima Mbogo**	55.22	261	LR	LR	13 09 20.0	
	comp=Z,36nm,21.1s,MS3.4,baz=94,slow=32						
BRTR	**Keskin Array B**	58.63	310	P	P	12 50 17.8	-0.1
	0.6nm,0.8s,mb3.7,baz=135,slow=6.1,SNR=3.1						
BRTR				pP	pP	12 50 24.3	-0.7
	0.3nm,0.2s,baz=175,slow=15,SNR=2.4						
STKA	**Stephens Creek**	63.92	133	P	P	12 50 54.1	+0.3
	0.9nm,0.5s,mb4.1,baz=296,slow=6.5,SNR=5.9						
FINES	**FINESS Array B**	69.01	332	P	P	12 51 24.3	-1.4
	0.8nm,0.7s,mb3.8,baz=127,slow=9.5,SNR=3.8						
PLCA	**Paso Flores**	146.15	205	PKPbc	PKPbc	13 00 02.9	+4.1
	2.3nm,0.7s,baz=76,slow=5.3,SNR=4.3						

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*IDC **09** 12:45:09.4±1.2, 20.56S×174.62W, mb3.9/2, mb1 4.3/3, mb1mx3.9/17, mbtmp4.0/3, ML3.9/1, MS3.6/1, Ms1 3.6/1, ms1mx2.9/25, Error ellipse: s-maj=98.0km s-min=35.0km az=117.0*
ISC 09 12:45:13.2±1.2**,20.8S**±0.2×**174.4W**±0.3**,h33^{km},n7,**
σ0^s.19/5**,mb3.8**/2**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	**Rarotonga**	13.71	94	LR	LR	12 51 37.8	
	comp=Z,245nm,19.3s,baz=288,slow=28						
URZ	**Urewera**	18.88	201	P	P	12 49 33.3	0.0
	0.4nm,0.3s,baz=48,slow=14,SNR=5.3						
RKT	**Rikitea**	36.61	101	*e*P	P	12 52 18.4	+0.1
	91nm,25.8s						
RKT				*e*S	S	12 57 51.6	-6.8
	103nm,45.8s						
RKT				*e*LR	LR	13 01 09.2	
	161nm,29.8s,baz=258						
NVAR	**Mina Array Bea**	78.99	42	P	P	12 57 15.3	-0.2
	1.0nm,0.6s,mb3.9,baz=202,slow=4.9,SNR=11						
ILAR	**Eielson Array**	87.90	11	P	P	12 58 00.3	+0.2
	0.5nm,0.8s,mb3.8,baz=219,slow=5.8,SNR=3.3						
BRTR	**Keskin Array B**	149.46	314	PKPbc	PKPdf	13 05 00.9	+6.3
	0.9nm,0.7s,baz=45,slow=2.0,SNR=4.1						
GERES	**GERESS Array B**	151.26	349	PKPbc	PKPdf	13 05 02.2	+5.2
	0.3nm,0.4s,baz=34,slow=3.5,SNR=2.0						

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*IDC **09** 12:49:42.0±0.8, 4.33S×134.09E, mb4.1/7, mb1 4.3/9, mb1mx4.2/13, mbtmp4.1/9, ML4.0/2, MS4.1/9, Ms1 4.1/9, ms1mx3.9/17, Error ellipse: s-maj=46.5km s-min=17.6km az=59.0*
*NEIC **09** 12:49:46.0±0.4, 4.44S×134.09E, h30^{km}, mb4.7/9, Error ellipse: s-maj=15.0km s-min=6.9km az=60.0*
*MOS **09** 12:49:46.6±1.7, 4.19S×133.86E, h33^{km}, mb4.4/3, Error ellipse: s-maj=53.6km s-min=18.3km az=129.8*
ISC 09 12:49:44.1±0.5**,4.44S**±0.07×**134.15E**±0.10**,h33^{km},n41,**
σ0^s.99/33**,mb4.4**/15**,MS4.1**/8**,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	8.39	191	*e*P	P	12 51 47.6	+1.3
KAKA				*e*S	S	12 53 28.4	+7.4
PMG	**Port Moresby**	13.83	112	Pn	P	12 52 59.3	-0.9
	0.8nm,0.3s,baz=248,slow=16,SNR=3.5						
PMG				LR	LR	12 58 56.7	
	comp=Z,656nm,19.8s,baz=331,slow=40						
WRAB	**Tennant Creek**	15.41	179	*e*P	P	12 53 19.9	-0.9
WRAB				pmax	pmax		
	comp=Z,38nm,0.6s						
WRAB	**Tennant Creek**	15.41	179	*e*P	P	12 53 19.9	-0.9
	comp=Z,38nm,0.6s						
WB2	**Warramunga Arr**	15.41	179	*e*P	P	12 53 20.4	-0.5
WRA	**Warramunga Arr**	15.41	179	Pn	P	12 53 19.1	-1.8
	comp=Z,0.4nm,0.3s,baz=2.0,slow=13,SNR=24						
WRA				Sn	S	12 56 03.7	-7.3
	comp=Z,0.5nm,0.3s,baz=0.9,slow=22,SNR=8.7						
CTA	**Charters Tower**	19.52	144	P	P	12 54 11.7	0.0
	comp=Z,0.8nm,0.3s,baz=335,slow=12,SNR=13						
CTAO	**Charters Tower**	19.52	144	*e*P	P	12 54 12.1	+0.4
CTAO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CTAO	**Charters Tower**	19.52	144	*e*P	P	12 54 12.1	+0.4
	comp=Z,9.6nm,0.8s						
KKM	**Kota Kinabalu**	20.71	300	*e*P	P	12 54 22.8	-1.6
MBWA	**Marble Bar**	21.73	219	*e*P	P	12 54 39.1	+4.5
	comp=Z,68nm,1.1s,mb5.0						
KSM	**Kuching**	24.53	283	*e*P	P	12 55 03.6	+1.4
STKA	**Stephens Creek**	28.18	166	P	P	12 55 37.0	+1.1
	comp=Z,3.1nm,0.9s,mb3.9,baz=344,slow=11,SNR=4.5						
STKA	**Stephens Creek**	28.18	166	*e*P	P	12 55 36.9	+1.1
DZM	**Mont Dzumac**	35.86	122	LR	LR	13 10 50.0	
	comp=Z,147nm,19.6s,MS3.8,baz=1.0,slow=35						
CMAR	**Chiang Mai Arr**	41.48	304	P	P	12 57 30.0	+0.1
	comp=Z,2.3nm,1.0s,mb3.8,baz=130,slow=7.0,SNR=6.2						
RPZ	**Rata Peaks**	50.88	146	LR	LR	13 18 52.4	
	comp=Z,425nm,18.1s,MS4.5,baz=230,slow=34						
LSA	**Lhasa**	53.37	312	P	P	12 59 04.1	+1.2
GUN	**Gumba**	56.52	308	*e*P	P	12 59 26.0	+0.1
	comp=Z,64nm,1.5s,mb5.4						
PKI	**Pulchoki**	56.74	307	*e*P	P	12 59 27.5	0.0
	comp=Z,6.6nm,0.7s,mb4.8						
PKI	**Pulchoki**	56.74	307	*e*P	P	12 59 27.5	0.0
PKI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KKN	**Kakani**	56.94	307	*e*P	P	12 59 28.7	-0.2
DMN	**Daman**	57.00	307	*e*P	P	12 59 28.8	-0.5
	comp=Z,16nm,0.9s,mb5.0						
SONM	**Songino Array**	57.47	338	P	P	12 59 31.7	-0.6
	comp=Z,1.3nm,1.0s,mb3.9,baz=158,slow=7.6,SNR=4.6						
SONM				LR	LR	13 23 39.4	
	comp=Z,177nm,20.2s,MS4.2,baz=74,slow=36						
GKN	**Gorkha**	57.55	307	*e*P	P	12 59 33.1	-0.1
	comp=Z,32nm,1.2s,mb5.2						
KOLN	**Koldanda**	58.28	306	*e*P	P	12 59 37.0	-1.2
	comp=Z,8.7nm,0.8s,mb4.9						
ZAK	**Zakamensk**	60.73	338	*e*P	P	12 59 54.4	-0.4
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s,mb3.7						
MKAR	**Makanchi Array**	68.45	324	P	P	13 00 44.8	-0.2
	comp=Z,2.7nm,0.6s,mb4.4,baz=129,slow=7.8,SNR=14						
MKAR				LR	LR	13 31 00.5	
	comp=Z,95nm,20.7s,MS4.0,baz=115,slow=36						
ZAL	**Zalesovo**	71.21	332	P	P	13 01 02.8	+1.1
	comp=Z,2.2nm,0.2s,mb4.6,baz=46,slow=6.1,SNR=3.5						
ZAL				LR	LR	13 35 51.0	
	comp=Z,42nm,19.4s,MS3.7,baz=176,slow=39						
AAK	**Ala-Archa**	71.34	318	P	P	13 01 01.8	-0.9
AAK				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
AAK	**Ala-Archa**	71.34	318	P	P	13 01 01.8	-0.9
	comp=Z,7.2nm,1.4s,mb4.4						
VNDA	**Vanda**	74.52	174	P	P	13 01 22.4	+1.7
	comp=Z,0.5nm,0.8s,mb3.5,baz=323,slow=5.9,SNR=4.5						
VNDA				LR	LR	13 30 45.1	
	comp=Z,164nm,19.9s,MS4.3,baz=352,slow=33						
PPT	**Papeete**	75.60	107	*e*S	S	13 11 01.4	-4.1
PPT				*e*LR	LR	13 25 50.7	
	comp=Z,235nm,34.2s,baz=256						
PPT	**Papeete**	75.60	107	LR	LR	13 30 08.0	
	comp=Z,159nm,18.4s,MS4.3,baz=278,slow=32						
TBI	**Tubuai**	75.77	113	*e*PP	PP	13 04 20.2	-0.7
TBI				*e*LR	LR	13 26 00.8	
	comp=Z,158nm,24.5s						
MAW	**Mawson**	78.84	202	LR	LR	13 33 34.1	
	comp=Z,152nm,19.7s,MS4.3,baz=246,slow=33						
RKT	**Rikitea**	89.09	113	*e*LR	LR	13 34 03.2	
	comp=Z,94nm,28.0s						
ILAR	**Eielson Array**	89.29	25	P	P	13 02 39.6	+1.6
	comp=Z,0.5nm,0.9s,mb3.9,baz=248,slow=4.9,SNR=3.4						
CPUP	**Villa Florida**	147.46	161	PKPbc	PKPdf	13 09 29.6	+6.7
	comp=Z,3.0nm,1.0s,baz=203,slow=6.9,SNR=4.5						
LPAZ	**La Paz**	149.84	134	PKPbc	PKPdf	13 09 36.5	+9.5
	comp=Z,8.0nm,1.3s,baz=286,slow=4.2,SNR=8.5						
LPAZ	**La Paz**	149.84	134	PKPbc	PKPdf	13 09 36.5	+9.5

MAN 09 12:58:55.5,15.41N×121.35E,h1^{km},mb3.5,ML2.2,MS1.6,
1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCPH	**Palayan**	0.28	302	⇑*e*P	Pg	12 59 01.2	0.0
PCPH				*e*S	Sg	12 59 05.5	+0.5
BALP	**Baler**	0.40	34	*e*P	Pg	12 59 03.5	0.0
BALP				*e*S	Sg	12 59 09.5	+0.8
POLP	**Polilio Island**	0.89	140	*e*P	Pg	12 59 13.0	-0.3
POLP				*e*S	Sg	12 59 23.9	-1.2
CAUP	**Cauayan**	1.59	17	*e*P	Pn	12 59 23.9	-1.1
CAUP				*e*S	Sb	12 59 47.5	+1.4
APYP	**Conner**	2.44	358	*e*P	Sn	13 00 07.0	-1.1

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*IDC **09** 12:59:56.6±4.1, 30.62S×179.19W, mb3.6/2, mb1 3.8/2, mb1mx3.6/13, mbtmp3.6/2, Error ellipse: s-maj=190.7km s-min=62.4km az=161.0*
ISC 09 13:00:40.9±2.4**,32.4S**±0.1×**179.9E**±0.4**,h400^{km},n8,**
σ0^s.72/8**,mb3.0**/2**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	5.34	193	PN	P	13 02 07.6	+0.5
MXZ				SN	S	13 03 14.0	-0.7
URZ	**Urewera**	6.30	200	PN	P	13 02 17.2	-0.2
BKZ	**Black Stump Fm**	7.32	201	PN	P	13 02 29.6	+0.5
MRZ	**Mangatainoka R**	8.97	201	SN	S	13 04 27.9	-0.5
TCW	**Tory Channel**	9.90	205	SN	S	13 04 48.5	+0.6
STKA	**Stephens Creek**	32.31	260	P	P	13 06 37.0	+1.0
	0.7nm,0.6s,mb3.2,baz=119,slow=13,SNR=3.3						
WRA	**Warramunga Arr**	42.41	275	P	P	13 07 58.5	-1.2
	0.2nm,0.4s,mb2.8,baz=111,slow=8.1,SNR=12						
FINES	**FINESS Array B**	146.31	338	PKP	PKPdf	13 19 34.5	+2.1
	1.0nm,0.5s,baz=63,slow=3.1,SNR=9.3						

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*FUNV **09** 13:19:48.2, 6.71N×73.24W, h164^{km}, MW3.5*
*IDC **09** 13:19:49.5±0.8, 6.78N×72.94W, h161^{km}±14^{km}, mb3.7/1, mb1 3.9/4, mb1mx3.3/23, mbtmp4.2/4, Error ellipse: s-maj=54.4km s-min=7.6km az=133.0*
ISC 09 13:19:49.1±0.7**,6.89N**±0.06×**73.00W**±0.06**,h171^{km}**±7^{km}**,**
n23,σ0^s.88/34**,mb4.0**/1**,5C,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	**Capacho**	1.18	35	⇑*i*P	P	13 20 18.7	+1.1
CAPV				*e*S	S	13 20 39.8	+0.1
ROSC	**El Rosal**	2.42	213	P	P	13 20 30.7	-0.1
	92nm,0.3s,baz=93,slow=17,SNR=111						
ROSC				S	S	13 21 01.4	-1.5
	64nm,0.3s,baz=265,slow=23,SNR=10						
VIGV	**El Vigia**	2.53	40	⇑*i*P	P	13 20 33.2	+1.1
VIGV				*e*S	S	13 21 05.9	+0.7
SOCV	**Socops**	2.54	57	⇑*i*P	P	13 20 33.5	+1.3
SOCV				*e*S	S	13 21 05.8	+0.3
SDV	**Santo Domingo**	3.07	50	P	P	13 20 40.2	+1.4
	42nm,0.3s,baz=258,slow=14,SNR=44						
SDV				S	S	13 21 16.7	-0.3
	40nm,0.3s,baz=62,slow=18,SNR=20						
ELOV	**Elorza**	3.50	88	*e*P	P	13 20 45.0	+0.8
VIRV	**Villa del Rosa**	3.64	9	*e*P	P	13 20 45.5	-0.5
VIRV				*e*S	S	13 21 27.9	-1.9
QARV	**Quebrada Arrib**	4.11	36	*e*P	P	13 20 53.1	+1.1
QARV				*e*S	S	13 21 39.3	-1.2
SANV	**Sanarito**	4.30	53	*e*P	P	13 20 55.1	+0.6
SANV				*e*S	S	13 21 45.2	+0.2
CURV	**Curarigua**	4.32	44	*e*P	P	13 20 55.5	+0.7
CURV				*e*S	S	13 21 45.7	+0.2
DABV	**Dabajuro**	4.64	30	*e*P	P	13 20 59.6	+0.7
TEPV	**Terepaima**	4.85	51	⇑*i*P	P	13 21 02.3	+0.6
TEPV				*e*S	S	13 21 56.9	-0.9
SIQV	**Siquisique**	4.89	40	*e*P	P	13 21 02.1	-0.1
SIQV				*e*S	S	13 21 57.9	-0.8
BAUV	**El Baul**	5.32	67	⇑*i*P	P	13 21 06.9	-0.9
BAUV				*e*S	S	13 22 07.5	-1.4
IMOV	**Isla Los Monje**	5.81	21	*e*P	P	13 21 14.1	-0.3
TURV	**Turiamo**	6.21	55	*e*P	P	13 21 19.6	0.0
CAOV	**Caicara del Or**	6.64	86	*e*P	P	13 21 23.9	-1.5
MERV	**Las Mercedes**	7.04	70	*e*P	P	13 21 30.6	0.0
BIRV	**Birongo**	7.55	61	*e*P	P	13 21 36.7	-0.7
CUPV	**Cœpira**	7.80	66	*e*P	P	13 21 39.9	-0.7
PCRV	**Puerto La Cruz**	8.89	68	P	P	13 21 56.4	+1.4
	0.9nm,0.3s,baz=259,slow=10,SNR=3.9						
YKA	**Yellowknife Ar**	63.24	340	P	P	13 30 01.6	+0.3
	1.1nm,0.5s,mb4.0,baz=132,slow=6.6,SNR=6.4						
WRA	**Warramunga Arr**	150.47	241	PKPbc	PKPdf	13 39 21.9	+6.4
	0.5nm,0.8s,baz=106,slow=2.8,SNR=4.8						

NEIC 09 13:33:05.5,35.55N×120.80W,h4^{km},ML3.5(NCEDC)**,1D,**
After NCEDC.,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LRV	**Little Rabbit**	0.89	349	⇓*e*P	Pb	13 33 22.7	-0.5
SAO	**San Andreas Ge**	1.32	337	*e*P	Pb	13 33 28.4	-2.1
SAO				*e*S	Sb	13 33 46.9	-0.7
SAC	**San Andreas**	2.41	328	*e*Pn	Pn	13 33 43.4	-2.9
CMB	**Columbia Colle**	2.50	7	*e*Pn	Pn	13 33 46.1	-1.5
OMM	**Old Mammoth Mi**	2.52	35	*e*Pn	Pn	13 33 47.5	-0.5
MTUM	**Tungsten Hills**	2.54	44	*e*Pn	Pn	13 33 47.9	-0.4
MWC	**Mount Wilson**	2.61	120	*e*Pn	Pn	13 33 46.5	-2.8
DAC	**Darwin (Calif)**	2.70	74	*e*Pn	Pn	13 33 48.9	-1.6
MNV	**Mina**	3.57	36	*e*Pn	Pn	13 34 01.6	-1.3
TPH	**Tonopah**	3.82	48	Pn	Pn	13 34 04.8	-1.6
WCN	**Washoe City**	3.83	12	Pn	Pn	13 34 05.2	-1.4
BEKR	**Beckwourth**	4.32	5	Pn	Pn	13 34 11.4	-2.2

IDC 09 13:38:38.4±8.4**,8.17S×128.89E,h79^{km}**±82^{km}**,mb3.4**/2**,**
mb1 3.7/3**,mb1mx3.3**/14**,mbtmp3.8**/3**,ML4.0**/1**,Error**
ellipse: s-maj=110.1km s-min=35.4km az=61.0,Timor
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	12.84	156	P	P	13 41 38.9	-0.4
	1.0nm,0.3s,baz=340,slow=13,SNR=39						
WRA				S	S	13 43 56.4	-4.3
	3.3nm,0.3s,baz=332,slow=22,SNR=14						
STKA	**Stephens Creek**	26.39	155	P	P	13 44 07.8	-1.6
	1.4nm,0.7s,baz=330,slow=14,SNR=4.0						
MKAR	**Makanchi Array**	68.60	328	P	P	13 49 32.8	-2.1
	0.2nm,0.4s,baz=121,slow=7.8,SNR=7.0						

IDC 09 13:43:06.9±1.1**,8.33S×130.80E,mb4.1**/5**,mb1 4.2**/6**,**
mb1mx4.0/13**,mbtmp4.0**/6**,ML3.5**/1**,Error ellipse:**
s-maj=85.9km s-min=22.1km az=71.0,Tanimbar Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	12.04	164	Pn	P	13 45 58.7	-4.2
	0.3nm,0.3s,baz=340,slow=13,SNR=2.8						
WRA				Sn	S	13 48 02.7	-17
	1.2nm,0.3s,baz=338,slow=23,SNR=8.5						
STKA	**Stephens Creek**	25.49	158	P	P	13 48 37.5	-1.1
	2.9nm,0.7s,baz=331,slow=12,SNR=5.6						
MJAR	**Matsushiro Arr**	45.17	8	P	P	13 51 25.2	-2.2
	2.5nm,0.9s,baz=187,slow=10,SNR=4.2						
SONM	**Songino Array**	59.94	341	P	P	13 53 15.3	-2.0
	0.6nm,0.8s,baz=153,slow=6.4,SNR=3.6						
MKAR	**Makanchi Array**	69.76	327	P	P	13 54 19.0	-2.0
	0.9nm,0.4s,baz=121,slow=7.7,SNR=16						
ZAL	**Zalesovo**	73.12	334	P	P	13 54 38.8	-2.2
	0.9nm,0.5s,baz=245,slow=5.5,SNR=3.8						

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*BJI **09** 13:57:06.9, 4.70N×17.50E, h10^{km}, mB4.7, mb4.6, Msz4.6*
*LDG **09** 13:57:07.2±0.5, 4.66N×17.41E, h10^{km}, Mb4.6/21, Error ellipse: s-maj=20.2km s-min=9.3km az=123.0*
*IDC **09** 13:57:07.2±0.5, 4.68N×17.47E, mb4.4/23, mb1 4.5/23, mb1mx4.5/26, mbtmp4.4/23, MS3.4/3, Ms1 3.3/3, ms1mx3.2/20, Error ellipse: s-maj=17.6km s-min=11.5km az=101.0*
*NEIC **09** 13:57:08.9±0.2, 4.68N×17.50E, h10^{km}, mb4.7/46, Error ellipse: s-maj=7.0km s-min=4.2km az=84.0*
*MOS **09** 13:57:10.4±0.9, 4.67N×17.41E, h32^{km}, mb4.9/34, Error ellipse: s-maj=12.5km s-min=5.2km az=97.8*
ISC 09 13:57:07.3±0.3**,4.69N**±0.04×**17.53E**±0.06**,h10^{km},n144,**
σ0^s.92/135**,mb4.5**/65**,7C,Central African Republic**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	**Mbarara**	14.21	111	*e*P	P	14 00 27.4	-3.5
	103nm,1.0s						
MBAR				*e*S	S	14 02 58.4	-11
MBAR				*e*Lg		14 04 28.2	
KMBO	**Kilima Mbogo**	20.54	106	P	P	14 01 51.7	+2.9
	25nm,0.9s,baz=274,slow=11,SNR=27						
KMBO				LR	LR	14 09 48.4	
	comp=Z,128nm,19.4s,baz=280,slow=37						
DBIC	**Dimbokro**	22.36	276	*e*P	P	14 02 05.4	-1.8

DBIC				pmax	pmax		
	comp=Z,26nm,0.9s						
DBIC	Dimbokro	22.36	276	P	P	14 02 05.5	-1.7
	comp=Z,20nm,0.8s,mb4.6,baz=78,slow=10,SNR=12						
DBIC				LR	LR	14 09 59.4	
	comp=Z,53nm,19.1s,baz=60,slow=35						
DBIC	Dimbokro	22.36	276	eP	P	14 02 05.4	-1.7
	comp=Z,26nm,0.9s,mb4.7						
LSZ	Lusaka	22.47	152	eP	P	14 02 07.9	-0.4
LSZ				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.7						
LSZ	Lusaka	22.47	152	eP	P	14 02 07.9	-0.4
	comp=Z,34nm,1.0s,mb4.7						
TSUM	Tsumeb	23.74	180	P	P	14 02 20.8	+0.1
	comp=Z,3.3nm,0.5s,mb4.0,baz=332,slow=7.6,SNR=8.0						
TSUM				LR	LR	14 12 11.8	
	comp=Z,92nm,18.6s,baz=103,slow=38						
TSUM	Tsumeb	23.74	180	eP	P	14 02 22.0	+1.2
	comp=Z,9.7nm,0.8s,mb4.3						
MATP	Matopo	27.19	157	P	P	14 02 52.6	-0.6
	comp=Z,7.7nm,0.5s,mb4.5,baz=11,slow=6.3,SNR=16						
EIL	Elat	29.82	32	P	P	14 03 16.8	-0.1
	comp=Z,5.5nm,0.7s,mb4.4,baz=316,slow=10,SNR=4.0						
EIL	Elat	29.82	32	eP	P	14 03 16.9	0.0
	comp=Z,5.6nm,0.8s,mb4.3						
LBTB	Lobatse	30.55	165	P	P	14 03 22.2	-1.2
LBTB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
LBTB	Lobatse	30.55	165	P	P	14 03 22.2	-1.2
	comp=Z,4.0nm,0.8s,mb4.3						
BOSA	Boshof	33.94	168	eP	P	14 03 51.5	-1.5
BOSA				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
BOSA	Boshof	33.94	168	P	P	14 03 52.0	-0.9
	comp=Z,11nm,0.9s,mb4.8,baz=334,slow=6.7,SNR=8.7						
BOSA	Boshof	33.94	168	eP	P	14 03 51.5	-1.5
	comp=Z,17nm,1.0s,mb4.9						
SUR	Sutherland	37.00	175	P	P	14 04 18.6	-0.4
	comp=Z,16nm,0.8s,mb4.9,baz=26,slow=7.4,SNR=7.6						
SUR	Sutherland	37.00	175	eP	P	14 04 18.8	-0.2
	comp=Z,75nm,1.4s,mb5.3						
BRTR	Keskin Array B	37.80	20	P	P	14 04 27.4	+1.8
	comp=Z,7.0nm,0.9s,mb4.4,baz=191,slow=9.3,SNR=15						
BR131	Keskin Array S	37.80	20	eP	P	14 04 27.0	+1.4
	comp=Z,5.4nm,0.7s,mb4.4						
PGF	Pioggiola	38.45	350	eP	P	14 04 31.9	+0.8
	comp=Z,21nm,1.0s,mb4.5						
PGF	Pioggiola	38.45	350	eP	P	14 04 31.9	+0.8
PGF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
MALT	Malatya	38.50	27	P	P	14 04 33.1	+1.6
MALT				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
MALT	Malatya	38.50	27	P	P	14 04 33.1	+1.5
	comp=Z,1.7nm,0.6s,mb4.0						
LMR	La Mourre	39.70	347	eP	P	14 04 41.3	-0.2
ESDC	Sonseca Array	39.88	334	P	P	14 04 44.3	+1.3
	comp=Z,1.5nm,0.5s,mb4.0,baz=147,slow=7.8,SNR=10.0						
FRF	La Foret Royal	39.89	348	eP	P	14 04 43.1	+0.1
	comp=Z,18nm,0.7s,mb4.6						
FRF	La Foret Royal	39.89	348	eP	P	14 04 43.1	+0.1
FRF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
SBF	Sospel	40.02	349	eP	P	14 04 44.2	+0.1
SMRF	Simiane la Rot	40.52	347	eP	P	14 04 47.9	-0.3
MTLF	Montolieu	40.81	343	eP	P	14 04 51.1	+0.5
EVO	Evora	40.91	329	eP	P	14 04 51.4	-0.1
	comp=Z,13nm,1.0s,mb4.2						
MBDF	Montbardon	40.98	348	eP	P	14 04 52.3	+0.3
LASF	Ste Croix	41.03	345	eP	P	14 04 53.0	+0.6
	comp=Z,28nm,1.0s,mb4.6						
EPF	Esparros	41.11	341	eP	P	14 04 53.9	+0.8
	comp=Z,20nm,0.8s,mb4.5						
EPF	Esparros	41.11	341	eP	P	14 04 53.9	+0.8
EPF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
ETSF	Etsaut	41.30	340	eP	P	14 04 55.5	+0.9
	comp=Z,28nm,0.6s,mb4.8						
ETSF	Etsaut	41.30	340	eP	P	14 04 55.5	+0.9
ETSF				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.8						
VIVF	Saint-Julien-l	41.56	346	eP	P	14 04 56.9	+0.1
SJPF	Ste Jean	41.72	339	eP	P	14 04 59.1	+1.0
	comp=Z,32nm,0.8s,mb4.7						
SJPF	Ste Jean	41.72	339	eP	P	14 04 59.1	+1.0
SJPF				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7						
LPG	La Plagne	41.72	349	eP	P	14 04 58.1	0.0
	comp=Z,7.1nm,0.8s,mb4.1						
LPG	La Plagne	41.72	349	eP	P	14 04 58.1	0.0
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
CAF	Calviac	42.30	344	eP	P	14 05 03.2	+0.3
	comp=Z,21nm,0.8s,mb4.5						
CAF	Calviac	42.30	344	eP	P	14 05 03.2	+0.3
CAF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
LFF	La Frestale	42.70	342	eP	P	14 05 06.6	+0.5
	comp=Z,47nm,0.9s,mb4.9						
LFF	La Frestale	42.70	342	eP	P	14 05 06.6	+0.5
LFF				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.9						
RJF	Les Rejaudoux	42.81	343	eP	P	14 05 07.1	+0.1
	comp=Z,28nm,0.8s,mb4.7						
RJF	Les Rejaudoux	42.81	343	eP	P	14 05 07.1	+0.1
RJF				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
PSZ	Piszkesteto	43.12	2	eP	P	14 05 11.2	+1.7
PSZ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
PSZ	Piszkesteto	43.12	2	eP	P	14 05 11.2	+1.7
	comp=Z,6.0nm,1.0s,mb4.3						
SMF	Signal de Mont	43.44	346	eP	P	14 05 11.9	-0.2
	comp=Z,17nm,0.7s,mb4.6						
SMF	Signal de Mont	43.44	346	eP	P	14 05 11.9	-0.2
SMF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
TCF	Toulx Ste Croi	43.52	345	eP	P	14 05 12.3	-0.5
BGF	Bois d'Agland	43.60	345	eP	P	14 05 13.6	+0.2
AVF	Avril sur Loir	43.70	346	eP	P	14 05 14.0	-0.2
	comp=Z,13nm,0.7s,mb4.4						
AVF	Avril sur Loir	43.70	346	eP	P	14 05 14.0	-0.2
AVF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
SSF	Saint Saulge	43.91	346	eP	P	14 05 15.9	0.0
HINF	Hinteralfeld	43.94	350	eP	P	14 05 15.5	-0.6
LOR	Lormes	44.03	347	eP	P	14 05 16.2	-0.6
	comp=Z,4.0nm,0.5s,mb4.1						
LOR	Lormes	44.03	347	eP	P	14 05 16.2	-0.6
LOR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
GERES	GERESS Array B	44.12	356	P	P	14 05 17.5	-0.1
	comp=Z,1.1nm,0.6s,mb3.8,baz=186,slow=12,SNR=5.9						
BFO	Black Forest	44.19	351	eP	P	14 05 17.3	-0.9
CDF	Champ du Feu	44.44	350	eP	P	14 05 19.8	-0.4
MFF	Saint Martin d	44.47	343	eP	P	14 05 20.3	-0.2
	comp=Z,21nm,0.8s,mb4.6						
MFF	Saint Martin d	44.47	343	eP	P	14 05 20.3	-0.2
MFF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
KIV	Kislovodsk	44.95	26	P	P	14 05 25.9	+1.5
KIV				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
KIV	Kislovodsk	44.95	26	P	P	14 05 25.9	+1.5
	comp=Z,13nm,0.8s,mb4.8						
KWP	Kalwaria	45.00	5	eP	P	14 05 25.6	+0.9
KWP				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
KWP	Kalwaria	45.00	5	eP	P	14 05 25.6	+0.9
	comp=Z,10nm,1.0s,mb4.6						
GRA1	Grafenberg Arr	45.16	354	eP	P	14 05 25.8	-0.2
	comp=Z,5.0nm,0.9s,mb4.3						
GRF	Grafenberg Arr	45.16	354	eP	P	14 05 25.8	-0.2
GRF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
GRF	Grafenberg Arr	45.16	354	eP	P	14 05 25.8	-0.2
GRF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
GRF	Grafenberg Arr	45.16	354	eP	P	14 05 25.8	-0.2
	comp=Z,5.0nm,0.9s,mb4.3						
LDF	La Druitiere	46.27	344	eP	P	14 05 34.1	-0.6
	comp=Z,18nm,0.8s,mb4.8						
LDF	La Druitiere	46.27	344	eP	P	14 05 34.1	-0.6
LDF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
GRR	Gorron	46.29	343	eP	P	14 05 34.5	-0.4
GIVF	Givet	46.51	349	eP	P	14 05 36.9	+0.3
QUIF	Quistinic	46.58	341	eP	P	14 05 36.9	-0.3
	comp=Z,38nm,1.1s,mb4.9						
QUIF	Quistinic	46.58	341	eP	P	14 05 36.9	-0.3
QUIF				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
BAIF	Baives	46.59	348	eP	P	14 05 36.4	-0.8
SGMF	Saint Gilles	46.68	342	eP	P	14 05 37.6	-0.4
AKASG	Malin Array Be	46.90	10	P	P	14 05 38.8	-0.8
	comp=Z,4.3nm,0.7s,mb4.5,baz=200,slow=7.2,SNR=14						
ROSF	Rostrenen	46.98	341	eP	P	14 05 39.9	-0.5
	comp=Z,24nm,1.0s,mb4.8						
ROSF	Rostrenen	46.98	341	eP	P	14 05 39.9	-0.5
ROSF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
SUW	Suwalki	49.39	4	P	P	14 06 01.9	+2.9
SUW				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
SUW	Suwalki	49.39	4	P	P	14 06 01.9	+2.9
	comp=Z,21nm,0.9s,mb5.2						
ESK	Eskdalemuir	53.17	345	eP	P	14 06 20.8	-6.8
ESK				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
ESK	Eskdalemuir	53.17	345	eP	P	14 06 20.8	-6.8
	comp=Z,20nm,1.0s,mb5.0						
NB2	NORSAR Subarra	56.42	356	P	P	14 06 49.5	-1.7
	comp=Z,1.0nm,0.6s,mb4.0,baz=161,slow=7.0						
NOA	NORSAR Array B	56.42	356	P	P	14 06 48.5	-2.7
	comp=Z,1.2nm,0.7s,mb4.1,baz=180,slow=7.1,SNR=5.5						
FINES	FINESS Array B	56.99	5	P	P	14 06 53.3	-2.0
	comp=Z,3.3nm,0.9s,mb4.3,baz=180,slow=7.6,SNR=8.9						
KAF	Kangasniemi	57.67	5	ep	P	14 06 58.5	-1.6
ARU	Arti	60.98	25	eP	P	14 07 21.9	-1.1
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
ARU	Arti	60.98	25	eP	P	14 07 21.9	-1.1
	comp=Z,4.5nm,0.6s,mb4.8						
PALK	Pallekele	62.84	84	P	P	14 07 35.6	-0.5
	comp=Z,59nm,1.3s,mb5.6						
AAK	Ala-Archa	62.89	44	P	P	14 07 34.7	-1.3
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
AAK	Ala-Archa	62.89	44	P	P	14 07 34.7	-1.3
	comp=Z,2.6nm,0.7s,mb4.5						
ARCES	ARCESS Array B	64.97	3	P	P	14 07 48.1	-1.1
	comp=Z,1.3nm,0.7s,mb4.1,baz=188,slow=8.6,SNR=7.3						
CHKZ	Chkalovo	65.08	32	eP	P	14 07 49.6	-0.6
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
CHKZ	Chkalovo	65.08	32	eP	P	14 07 49.6	-0.6
	comp=Z,3.1nm,0.9s,mb4.3						
KOLN	Koldanda	66.68	62	eP	P	14 08 00.2	-0.7
	comp=Z,9.7nm,1.0s,mb4.8						
GKN	Gorkha	67.62	62	eP	P	14 08 06.1	-0.8
	comp=Z,15nm,0.6s,mb5.2						
BAO	Brasilia Array	67.90	251	P	P	14 08 07.5	-1.3
BDFB	Brasilia	67.92	251	P	P	14 08 08.7	-0.2
	comp=Z,8.4nm,0.7s,mb4.9,baz=78,slow=7.9,SNR=10						
DMN	Daman	67.99	62	eP	P	14 08 09.1	-0.1
	comp=Z,23nm,0.9s,mb5.2						
KKN	Kakani	68.16	62	eP	P	14 08 09.9	-0.4
	comp=Z,6.9nm,0.4s,mb5.0						
GUN	Gumba	68.70	62	eP	P	14 08 13.2	-0.4
	comp=Z,17nm,0.9s,mb5.0						
MKAR	Makanchi Array	69.45	42	P	P	14 08 18.1	+0.2
	comp=Z,3.0nm,0.4s,mb4.5,baz=255,slow=5.6,SNR=44						
NVS	Novosibirsk	72.34	34	i P	P	14 08 35.5	+0.4
NVS				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
NVS				pmax	pmax		
	comp=N,5.0nm,1.4s						
WMQ	Urumqi	72.50	46	eP	P	14 08 36.0	-0.3
WMQ				AP	pP	14 08 40.6	+1.2
WMQ				XP	sP	14 08 43.0	+2.5
WMQ				LR	LR		
	comp=Z,220nm,21.0s						
ZAL	Zalesovo	72.95	35	P	P	14 08 38.7	-0.1
	comp=Z,2.0nm,0.5s,mb4.3,baz=221,slow=4.1,SNR=9.1						
DAG	Danmarks Havn	74.67	352⇑	eP	P	14 08 49.0	+0.6
DAG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
DAG				MLR	MLR		
	comp=N,13µm,16.0s						
DAG				MLR	MLR		
	comp=E,18µm,16.0s						
DAG				MLR	MLR		
	comp=Z,26µm,16.0s						
DAG	Danmarks Havn	74.67	352⇑	eP	P	14 08 49.0	+0.6
	comp=Z,4.0nm,1.0s,mb4.3						
DAG				LR	LR		
	comp=Z,26µm,16.0s						
VNA2	Neumayer--Watz	77.26	188⇑	i	P	14 09 05.2	+2.1
VNA2	Neumayer--Watz	77.26	188⇑	i	pP	14 09 07.8	+1.5
VNA2	Neumayer--Watz	77.26	188		sP	14 09 09.8	+2.5
VNA2	Neumayer--Watz	77.26	188		PcP	14 09 14.0	-0.2
SNAA	Sanae	77.37	186		P	14 09 04.9	+1.2
SNAA	Sanae	77.37	186		sP	14 09 09.6	+1.7
VNA3	Neumayer Olymp	77.88	189⇑	i	P	14 09 08.0	+1.5
VNA3	Neumayer Olymp	77.88	189⇑	i	pP	14 09 10.3	+0.7
VNA3	Neumayer Olymp	77.88	189⇑	i	PcP	14 09 17.6	+0.8
CPUP	Villa Florida	78.59	242	P	P	14 09 10.3	-1.0
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CPUP	Villa Florida	78.59	242	P	P	14 09 10.2	-1.0
	comp=Z,1.2nm,0.7s,mb4.0,baz=80,slow=11,SNR=3.4						
CPUP	Villa Florida	78.59	242	P	P	14 09 12.3	+1.0
	comp=Z,2.7nm,0.8s,mb4.2						
MAW	Mawson	78.85	164	P	P	14 09 12.9	+1.0
	comp=Z,1.2nm,0.5s,mb4.1,baz=31,slow=1.6,SNR=3.6						
SIV	San Ignacio	80.37	253	P	P	14 09 22.5	+1.4
	comp=Z,7.2nm,0.7s,mb4.7,baz=98,slow=7.3,SNR=29						
CMAR	Chiang Mai Arr	80.40	72	P	P	14 09 21.9	+0.8
	comp=Z,2.0nm,0.7s,mb4.1,baz=279,slow=6.4,SNR=8.8						
SAML	Samuel	81.58	260	eP	P	14 09 26.3	-1.2
	comp=Z,2.0nm,0.7s,mb4.2						
ZAK	Zakamensk	83.71	40	eP	P	14 09 38.3	+0.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s,mb3.7						
FRB	Frobisher Bay	84.08	334	P	P	14 09 38.8	-0.5
	comp=Z,11nm,1.0s,mb4.9,baz=192,slow=2.2,SNR=3.2						
TRQA	Tornquist	84.64	231	P	P	14 09 44.0	+1.3
	comp=Z,13nm,1.2s,mb4.9						
SONM	Songino Array	85.80	42	P	P	14 09 49.2	+0.9
	comp=Z,0.9nm,0.7s,mb4.1,baz=270,slow=4.9,SNR=7.1						
ULN	Ulaanbaatar	86.24	42	P	P	14 09 50.8	+0.3
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.5						
ULN	Ulaanbaatar	86.24	42	P	P	14 09 50.8	+0.3
	comp=Z,2.6nm,1.0s,mb4.4						
LPAZ	La Paz	87.14	253	eP	P	14 09 55.8	+0.2
LPAZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LPAZ	La Paz	87.14	253	P	P	14 09 56.1	+0.6
	comp=Z,2.2nm,0.8s,mb4.5,baz=45,slow=11,SNR=9.5						
LPAZ	La Paz	87.14	253	eP	P	14 09 55.8	+0.2
	comp=Z,3.4nm,0.9s,mb4.6						
WRA	Warramunga Arr	116.78	110	PKP	PKPdf	14 15 54.0	-1.9
	comp=Z,0.6nm,0.6s,baz=275,slow=1.8,SNR=18						
NVAR	Mina Array Bea	120.75	320	PKP	PKPdf	14 16 03.2	0.0
	comp=Z,0.8nm,0.7s,baz=110,slow=2.9,SNR=5.6						
NVAR	Mina Array Bea	120.75	320	PKP	PKPdf	14 16 03.2	0.0
STKA	Stephens Creek	121.18	125	PKP	PKPdf	14 16 03.0	-1.2
	comp=Z,1.6nm,0.8s,baz=2.9,slow=4.7,SNR=3.9						

PGC ***09*** *14:00:46.3, 51.45N×131.27W, h20^{km}, Mw5.9, South of Moresby Island, British Columbia*

IDC ***09*** *14:00:47.6±0.5, 51.44N×131.21W, mb4.6/23, mb1 4.8/33, mb1mx4.8/35, mbtmp4.6/33, ML4.4/9, MS5.4/39, Ms1 5.4/39, ms1mx5.4/42, Error ellipse: s-maj=12.5km s-min=8.6km az=38.0*

MOS ***09*** *14:00:48.0±1.0, 51.49N×131.20W, h10^{km}, mb5.4/66, MS5.6/52, Error ellipse: s-maj=7.2km s-min=3.4km az=103.7*

BJI ***09*** *14:00:49.9, 51.60N×131.10W, h10^{km}, mB5.6, mb4.9, Ms5.9, Msz5.6*

HRVD ***09*** *14:00:49.9±0.1, 51.40N×131.41W, h12^{km}, MW5.8/74, Centroid moment Tensor Solution. LP body waves: s64,c146;Mantle waves: s74,c178; Half duration: 1^{s}9 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.13±.06; M$_{\theta\theta}$-1.60±.06; M$_{\phi\phi}$1.73±.06; M$_{r\theta}$0.96±.14; M$_{\theta\phi}$5.14±.05; M$_{\phi r}$-0.96±.14; Best double couple: M$_0$5.57×10^{17} NP1: φ$_s$260°, δ79°, λ-8°. NP2:φ$_s$352°, δ82°, λ-169°. Principal axes: T 5.477, Plg2°, Azm126°; N .189, Plg76°, Azm26°; P -5.663, Plg14°, Azm216°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***09*** *14:00:49.9±0.1, 51.55N×131.13W, h10^{km}, mb5.2/96, MS5.5/99, MW5.7, MW5.9(PGC) Error ellipse: s-maj=3.9km s-min=1.6km az=49.0, Moment Tensor Solution. s30 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.22; M$_{\theta\theta}$-4.52; M$_{\phi\phi}$3.31; M$_{r\theta}$-0.43; M$_{\theta\phi}$3.10; M$_{\phi r}$0.14; Best double couple: M$_0$5×10^{17} NP1:φ$_s$154°, δ87°, λ-177°. NP2: φ$_s$64°, δ87°, λ-3°. Principal axes: T 4.39, Plg0°, Azm109°; N 1.25, Plg86°, Azm200°; P -5.63, Plg4°, Azm19°;*

ISC 09 14:00:48.3±0.1**, 51.55N**±0.02×**131.05W**±0.03**, h10^{km}, (h18^{km}**±1.3^{km}**:pP-P), n581, σ1^{s}15**/541**, mb5.0**/121**, MS5.5**/149**, 20C-5D, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNB	Barry Inlet	1.12	337	P	Pb	14 01 07.4	-1.9
BNB				S	Sb	14 01 22.6	-1.0
BNB				Trac		14 01 24.9	
	comp=Z,353µm,0.3s						
MOBC	Moresby Island	1.73	343	P	Pn	14 01 15.8	-2.9
MOBC				S	Sn	14 01 36.9	-4.2
MOBC				Trac		14 01 39.0	
	comp=Z,10µm,0.6s						
BBB	Bella Bella	1.93	70	Pn	Pn	14 01 20.7	-0.9
	67nm,0.3s,baz=255,slow=13,SNR=574						
BBB				Sn	Sn	14 01 49.2	+3.2
	baz=143,slow=20						
BBB				LR	LR	14 01 56.4	
	comp=Z,11µm,19.0s,baz=254,slow=33						
BBB	Bella Bella	1.93	70	P	Pn	14 01 21.1	-0.5
BBB				S	Sn	14 01 45.2	-0.8
BBB				Trac		14 01 58.4	
	comp=Z,11µm,0.6s						
VIB	Van Inlet	1.94	332	P	Pn	14 01 18.7	-3.0
VIB				S	Sn	14 01 41.0	-5.2
VIB				Trac		14 01 51.1	
	comp=Z,5µm,0.5s						
HOLB	Holberg	2.05	115	P	Pn	14 01 21.1	-2.2
HOLB				S	Sn	14 01 46.1	-3.1
HOLB				Trac		14 01 47.2	
	comp=Z,8µm,0.6s						
PHC	Port Hardy	2.43	109	P	Pn	14 01 25.8	-3.0
PHC				S	Sn	14 01 54.9	-3.9
PHC				Trac		14 02 18.9	
	comp=Z,3µm,0.7s						
BPBC	Brooks Peninsu	2.50	123	P	Pn	14 01 26.6	-3.1
BPBC				S	Sn	14 01 55.7	-4.9
BPBC				Sg	Sg	14 02 03.1	-8.5
BPBC				Trac		14 02 04.6	
	comp=Z,9µm,0.5s						
MASB	Masset	2.54	347	Pg	Pg	14 01 30.1	-9.0
MASB				Sg	Sg	14 02 02.5	-10
MASB				Trac		14 02 15.1	
	comp=Z,25nm,0.2s						
NDB	Naden	2.67	335	P	Pn	14 01 29.3	-2.9
NDB				S	Sn	14 02 01.1	-3.9
NDB				Trac		14 02 05.4	
	comp=Z,2µm,0.3s						
MAYB	Maynard	2.71	114	P	Pn	14 01 31.3	-1.4
MAYB				S	Sn	14 02 05.5	-0.3
MAYB				Trac		14 02 07.5	
	comp=Z,4µm,0.5s						
RUBB	Prince Rupert	2.82	9	⇓P	Pn	14 01 33.5	-0.8
RUBB				Trac		14 02 30.9	
	comp=Z,8µm,0.7s						
EDB	Eliza Dome	3.01	122	P	Pn	14 01 34.0	-3.0
EDB				Trac		14 02 21.9	
	comp=Z,4µm,0.7s						
WOSB	Woss	3.16	114	P	Pn	14 01 38.2	-0.9
WOSB				S	Sn	14 02 16.4	-0.9
WOSB				Trac		14 02 20.2	
	comp=Z,3µm,0.5s						
NCRB	Newcastle Ridg	3.36	108	P	Pn	14 01 41.0	-1.0
NCRB				S	Sn	14 02 22.0	-0.3
NCRB				Trac		14 02 29.1	
	comp=Z,1µm,0.6s						
ETB	Estevan Point	3.61	125	P	Pn	14 01 42.7	-2.8
ETB				Sg	Sg	14 02 36.7	-12
ETB				Trac		14 02 53.4	
	comp=Z,2µm,0.8s						
GDR	Gold River	3.65	117	P	Pn	14 01 43.3	-2.8
GDR				S	Sn	14 02 26.6	-3.1
GDR				Trac		14 02 32.8	
	comp=Z,3µm,0.7s						
CBB	Campbell River	3.91	111	P	Pn	14 01 48.4	-1.5
CBB				S	Sn	14 02 33.5	-2.9
CBB				Trac		14 02 36.8	
	comp=Z,1µm,0.6s						
BTB	Buttle Lake	4.10	118	P	Pn	14 01 50.1	-2.4
BTB				Trac		14 02 53.7	
	comp=Z,1µm,0.6s						
CRAG	Craig	4.12	343	eP	Pn	14 01 51.0	-1.8
OZB	Mount Ozzard	4.41	124	P	Pn	14 01 53.9	-3.0
OZB				Trac		14 03 07.5	
	comp=Z,735nm,0.8s						
ALB	Alberni	4.58	117	P	Pn	14 01 57.0	-2.4
ALB				Trac		14 03 27.2	
	comp=Z,2µm,1.3s						
TXB	Texada	4.60	111	P	Pn	14 01 57.9	-1.7
TXB				Trac		14 03 32.8	
	comp=Z,5µm,1.3s						
MGB	Mount Grey	4.81	120	P	Pn	14 01 58.9	-3.7
MGB				Trac		14 03 09.9	
	comp=Z,790nm,0.8s						
SHB	Sechelt	4.97	110	P	Pn	14 02 03.7	-1.2
SHB				Trac		14 03 41.8	
	comp=Z,2µm,0.8s						
NLLB	Nanaimo Lost L	5.08	114	P	Pn	14 02 06.8	+0.4
NLLB				Trac		14 03 36.4	
	comp=Z,679nm,0.8s						
PFB	Port Renfrew	5.20	122	P	Pn	14 02 06.1	-2.0
PFB				Trac		14 03 50.7	
	comp=Z,365nm,1.1s						
WPB	Watts Point	5.34	108	P	Pn	14 02 09.8	-0.3
WPB				Sg	Sg	14 03 31.4	-15
WPB				Trac		14 03 32.5	
	comp=Z,568nm,0.8s						
WSLR	Whistler	5.34	102	P	Pn	14 02 10.1	-0.1
WSLR				Trac		14 03 43.7	
	comp=Z,463nm,0.9s						
BIB	Bowen Island	5.39	110	P	Pn	14 02 10.1	-0.6
BIB				Trac		14 03 48.2	
	comp=Z,2µm,1.3s						
GOBB	Galiano Island	5.49	115	P	Pn	14 02 12.3	+0.1
GOBB				Trac		14 03 58.2	
	comp=Z,6µm,1.7s						
LZB	Mount Lazard	5.50	119	P	Pn	14 02 10.4	-2.0
LZB				Trac		14 03 35.7	
	comp=Z,190nm,0.8s						
PGC	Sidney	5.68	118	ePn	Pn	14 02 13.2	-1.8
PGC	Sidney	5.68	118	P	Pn	14 02 14.5	-0.4
PGC				Trac		14 04 07.8	
	comp=Z,422nm,1.0s						
SNB	Saturna Island	5.77	116	P	Pn	14 02 14.1	-2.1
SNB	Saturna Island	5.77	116	P	Pn	14 02 16.1	-0.1
SNB				Sg	Sg	14 03 43.4	-17
SNB				Trac		14 04 05.5	
	comp=Z,349nm,0.9s						
LLLB	Lillooet	5.85	96	P	Pn	14 02 17.3	-0.1
LLLB				Trac		14 04 19.6	
	comp=Z,409nm,1.0s						
STW	Striped Peak	5.86	123	P	Pn	14 02 18.2	+0.8
OCWA	Octopus Mounta	5.86	128	eP	Pn	14 02 15.0	-2.5
HNB	Haney	5.87	110	P	Pn	14 02 16.5	-1.1
HNB				Trac		14 04 02.2	
	comp=Z,310nm,0.8s						
VGZ	Gonzales	5.89	119	P	Pn	14 02 17.9	+0.1
VGZ				Trac		14 03 47.1	
	comp=Z,336nm,0.9s						
MCW	Mount Constitu	6.01	115	P	Pn	14 02 18.8	-0.8
SIT	Sitka	6.06	337	eP	Pn	14 02 18.5	-1.7
OSR	Olympics--Salm	6.13	129	P	Pn	14 02 20.0	-1.3
SQM	Sequim	6.24	121	P	Pn	14 02 19.7	-3.0
VDB	Vedder Mountai	6.26	110	P	Pn	14 02 22.5	-0.6
VDB				Trac		14 04 19.6	
	comp=Z,1µm,1.4s						
BLN	Blyn Mountain	6.32	121	P	Pn	14 02 24.6	+0.8
MBW	Mount Baker	6.50	112	P	Pn	14 02 26.4	+0.1
HDW	Hoodsport	6.50	124	P	Pn	14 02 26.3	-0.1
CMW	Cultus Mountai	6.55	115	P	Pn	14 02 27.1	-0.1
JCW	Jim Creek	6.78	116	P	Pn	14 02 29.1	-1.3

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DLBC Dease Lake          6.93   4 Pn     Pn     14 02 32.8 +0.3
     17nm,0.3s,baz=207,slow=14,SNR=59
DLBC                               LR     LR     14 05 13.5
     comp=Z,48µm,18.5s,baz=188,slow=38
DLBC Dease Lake          6.93   4 eP     Pn     14 02 32.4  -0.1
DLBC Dease Lake          6.93   4 P      Pn     14 02 32.7 +0.2
DLBC                               Sg     Sg     14 04 31.2  -7.9
DLBC                               Trac          14 04 47.4
     comp=Z,498nm,1.1s
BMBC Bull Mountain       6.94  46 P      Pn     14 02 32.9 +0.2
BMBC                               S      Sn     14 03 51.4  -1.0
BMBC                               Sg     Sg     14 04 34.8  -4.5
BMBC                               Trac          14 04 45.4
     comp=Z,2µm,1.2s
BMW  Boistfort Moun      7.22 132 P      Pn     14 02 35.6  -1.0
NLO  Nicolai Mounta      7.41 135 P      Pn     14 02 38.8  -0.5
GSM  Grass Mountain      7.44 122 P      Pn     14 02 39.0  -0.7
RVC  Mount Rainier-      7.52 124 P      Pn     14 02 40.4  -0.4
PNT  Penticton           7.63 103 P      Pn     14 02 42.8 +0.4
PNT                                Trac          14 05 19.1
     comp=Z,333nm,1.1s
DOWB Downie Slide        7.82  85 P      Pn     14 02 46.0 +1.1
DOWB                               Sg     Sg     14 04 58.4   -10
MNB  Mounoet Dainar      7.87  80 P      Pn     14 02 46.3 +0.7
MNB                                Sg     Sg     14 04 58.2   -12
SLEB Sale Mountain       8.10  88 P      P      14 02 49.8 +1.0
SLEB                               Sg     Sg     14 05 10.2  -7.6
SLEB                               Trac          14 05 20.0
     comp=Z,386nm,1.1s
PGO  Gresham             8.34 134 P      P      14 02 52.5 +0.4
VLMM Larch Mountain      8.47 132 P      P      14 02 54.2 +0.2
GT2  Goat Mountain       8.66 134 P      P      14 02 56.4  -0.2
FNBB Fort Nelson         8.67  29 P      P      14 02 56.5  -0.3
FNBB                               Sg     Sg     14 05 21.6   -15
FNBB                               Trac          14 05 51.9
     comp=Z,552nm,1.6s
COR  Corvallis           8.68 140 eP     P      14 02 56.4  -0.5
VLL  Laurance Lake       8.70 131 P      P      14 02 57.5 +0.3
TDH  Tom, Dick, Har      8.78 132 P      P      14 02 57.7  -0.5
WHY  Whitehorse          9.38 348 P      P      14 03 05.3  -1.3
WHY                                Trac          14 06 11.6
     comp=Z,125nm,1.1s
NEW  Newport             9.57 105 Pn     P      14 03 07.1  -2.0
     2.0nm,0.3s,baz=293,slow=13,SNR=9.4
NEW                                LR     LR     14 07 14.0
     comp=Z,14µm,19.1s,baz=291,slow=40
NEW  Newport             9.57 105 eP     P      14 03 08.0  -1.1
WIFE Three Sisters-      9.72 137 P      P      14 03 10.9  -0.4
HYT  Haines Junctio      9.96 341 P      P      14 03 14.3  -0.2
HYT                                Trac          14 06 39.6
     comp=Z,486nm,1.5s
EDM  Edmonton           10.95  74 eP     P      14 03 28.1 +0.1
EDM  Edmonton           10.95  74 P      P      14 03 28.3 +0.3
EDM                                Sg     S      14 06 36.3  +65
EDM                                Trac          14 06 54.5
     comp=Z,93nm,0.8s
KRMB Red Mountain       11.16 151 P      P      14 03 28.8  -2.2
WALA Waterton Lakes     11.24  96 P      P      14 03 33.5 +1.4
WALA                               Trac          14 07 17.4
     comp=Z,123nm,1.8s
BMO  Blue Mountains     11.35 121 eP     P      14 03 32.6  -0.8
     35nm,1.0s
YBH  Yreka Blue Hor     11.36 147 Pn     P      14 03 33.3  -0.4
     0.4nm,0.3s,baz=343,slow=13,SNR=47
YBH                                Sn     S      14 05 40.5  -1.2
     0.0nm,0.3s,baz=354,slow=18,SNR=3.1
YBH                                LR     LR     14 07 15.7
     comp=Z,47µm,18.4s,baz=326,slow=34
YBH  Yreka Blue Hor     11.36 147 eP     P      14 03 34.5 +0.8
     704nm,1.8s
KHMM Horse Mountain     11.81 152 eP     P      14 03 39.8 +0.1
MSO  Missoula           12.14 106 eP     P      14 03 42.8  -1.4
     36nm,1.1s
EYAK Cordova Ski Ar     12.17 323 eP     P      14 03 42.0  -2.6
WVOR Wild Horse Val     12.43 132 P      P      14 03 46.3  -1.8
WVOR                               pmax   pmax
     comp=Z,120nm,1.1s
WVOR Wild Horse Val     12.43 132 eP     P      14 03 47.2  -0.9
     comp=Z,123nm,1.2s
WDC  Whiskeytown Da     12.45 148 eP     P      14 03 49.0 +0.6
WDC                                pmax   pmax
     comp=Z,238nm,1.1s
WDC  Whiskeytown Da     12.45 148 eP     P      14 03 49.0 +0.6
     comp=Z,238nm,1.1s
CHMT Chamberlain Mo     12.51 105 eP     P      14 03 48.5  -0.8
DIV  Divide             12.57 325 eP     P      14 03 47.0  -3.0
     comp=Z,158nm,0.9s
MENT Mentasta           13.28 334 eP     P      14 03 59.3  -0.1
DAWY Dawson             13.30 344 eP     P      14 03 59.4  -0.2
DAWY Dawson             13.30 344 P      P      14 04 00.2 +0.7
DAWY                               Sg            14 07 53.1
DAWY                               Trac          14 08 37.9
     comp=Z,78nm,1.4s
HRY  Holter Researc     13.47 104 eP     P      14 04 01.3  -0.6
HOPS Hopland            13.74 153 eP     P      14 04 05.7 +0.2
     comp=Z,344nm,1.4s
HLID Hailey             13.76 119 eP     P      14 04 05.2  -0.5
     comp=Z,42nm,1.0s
BEKR Beckwourth         13.85 143 eP     P      14 04 07.3 +0.5
     comp=Z,455nm,1.7s
MCMT McKenzie Canyo     13.86 112 eP     P      14 04 06.3  -0.6
KDAK Kodiak Island      13.90 305 eP     P      14 04 06.6  -0.8
SLKM Skilak Lake        13.93 318 eP     P      14 04 05.7  -2.0
SML  Sawmill            13.94 324 eP     P      14 04 05.4  -2.5
YKA  Yellowknife Ar     14.10  33 Pn     P      14 04 09.1  -0.9
     comp=Z,1.2nm,0.3s,baz=220,slow=12,SNR=89
YKA                                LR     LR     14 10 06.6
     comp=Z,31µm,19.9s,baz=225,slow=39
PMR  Palmer             14.11 322 eP     P      14 04 08.7  -1.4
BOZ  Bozeman (W)        14.12 107 eP     P      14 04 09.9  -0.5
BOZ                                pmax   pmax
     comp=Z,163nm,0.6s
BOZ  Bozeman (W)        14.12 107 eP     P      14 04 09.9  -0.5
     comp=Z,163nm,0.6s
YKW3 Yellowknife Ar     14.15  32 eP     P      14 04 09.1  -1.5
YKW3 Yellowknife Ar     14.15  32 P      P      14 04 09.6  -1.0
YKW3                              ⇑P            14 04 09.7
YKW3                               Sg            14 08 16.8
YKW3                               Sg            14 08 18.3
YKW3                               Trac          14 08 36.6
     comp=Z,152nm,1.2s
YKW3                               Trac          14 08 36.9
     comp=Z,914nm,1.5s
THY  Trims Highway      14.23 332 eP     P      14 04 11.2  -0.6
PAHR Pah Rah Range      14.36 141 eP     P      14 04 14.8 +1.3
     comp=Z,140nm,1.2s
PWA  Palmer West        14.43 322 eP     P      14 04 14.5 +0.2
PWA                                pmax   pmax
     comp=Z,188nm,1.6s
PWA  Palmer West        14.43 322 eP     P      14 04 14.5 +0.2
     comp=Z,188nm,1.6s
WCN  Washoe City        14.56 143 eP     P      14 04 17.2 +0.9
WCN                                pmax   pmax
     comp=Z,885nm,1.9s
WCN  Washoe City        14.56 143 eP     P      14 04 17.1 +0.9
     comp=Z,885nm,1.9s
QLMT Earthquake Lak     14.69 110 eP     P      14 04 18.3 +0.5
RSO  Redoubt South      15.00 315 P      P      14 04 20.7  -1.1
SPU  Mount Spurr        15.05 318 eP     P      14 04 20.4  -2.0
YMR  Madison River      15.05 109 eP     P      14 04 23.5 +0.9
YNR  Norris Junctio     15.19 109 eP     P      14 04 25.6 +1.2
SAC  San Andreas        15.24 153 P      P      14 04 26.5 +1.4
YFT  Old Faithful       15.25 110 eP     P      14 04 26.9 +1.7
ELK  Elko               15.35 129 eP     P      14 04 26.6 +0.1
ELK                                pmax   pmax
     comp=Z,715nm,1.9s
ELK  Elko               15.35 129 Pn     P      14 04 27.0 +0.5
     comp=Z,0.1nm,0.3s,baz=313,slow=11,SNR=32
ELK                                LR     LR     14 10 30.9
     comp=Z,22µm,18.9s,baz=321,slow=38
ELK  Elko               15.35 129 eP     P      14 04 26.6   0.0
     comp=Z,715nm,1.9s
MCK  McKinley           15.44 329 eP     P      14 04 27.7 +0.2
MCK                                pmax   pmax
     comp=Z,133nm,0.9s
MCK  McKinley           15.44 329 eP     P      14 04 27.7 +0.2
     comp=Z,133nm,0.9s
LKWY Lake               15.44 109 eP     P      14 04 29.7 +2.0
LKWY                               pmax   pmax
     comp=Z,127nm,1.0s
LKWY Lake               15.44 109 eP     P      14 04 29.6 +2.0
     comp=Z,127nm,1.0s
CMB  Columbia Colle     15.46 147 eP     P      14 04 27.7  -0.3
CMB                                pmax   pmax
     comp=Z,241nm,1.6s
CMB  Columbia Colle     15.46 147 eP     P      14 04 27.7  -0.3
     comp=Z,241nm,1.6s
IMW  Indian Meadow      15.51 112 eP     P      14 04 29.5 +0.9
     comp=Z,181nm,1.1s
ILAR Eielson Array      15.60 334 Pn     P      14 04 28.7  -0.9
     comp=Z,0.1nm,0.3s,baz=147,slow=10,SNR=44
ILAR                               LR     LR     14 10 10.3
     comp=Z,29µm,18.6s,baz=156,slow=36
RRI2 Red Ridge          15.63 114 eP     P      14 04 31.0 +0.9
     comp=Z,79nm,0.6s
MOOW Moose Ponds        15.71 112 eP     P      14 04 32.7 +1.5
     comp=Z,211nm,1.1s
TPAW Teton Pass         15.75 113 eP     P      14 04 33.3 +1.6
     comp=Z,376nm,1.0s
WUWY Wally Ulrich       15.84 112 eP     P      14 04 34.6 +1.8
HVU  Hansel Valley      15.86 121 eP     P      14 04 33.9 +0.8
SNOW Snow King Moun     15.88 113 eP     P      14 04 35.3 +2.0
     comp=Z,280nm,1.2s
NVAR Mina Array Bea     15.88 141 Pn     P      14 04 34.7 +1.3
     comp=Z,0.2nm,0.3s,baz=320,slow=10,SNR=90
NVAR                               LR     LR     14 10 20.4
     comp=Z,28µm,18.1s,baz=330,slow=36
MNV  Mina               15.94 140 eP     P      14 04 35.1 +0.9
MNV                                pmax   pmax
     comp=Z,399nm,1.4s
MNV  Mina               15.94 140 eP     P      14 04 35.1 +0.9
     comp=Z,399nm,1.4s
COLA College            15.94 333 eP     P      14 04 35.0 +1.0
COLA                               pmax   pmax
     comp=Z,482nm,1.9s
COLA College            15.94 333 eP     P      14 04 35.0 +1.0
     comp=Z,482nm,1.9s
AHID Auburn Hatcher     16.12 115 eP     P      14 04 37.8 +1.3
     comp=Z,144nm,1.3s
SAO  San Andreas Ge     16.28 151 eP     P      14 04 38.9 +0.3
SAO                                pmax   pmax
     comp=Z,174nm,1.2s
SAO  San Andreas Ge     16.28 151 eP     P      14 04 38.9 +0.4
     comp=Z,174nm,1.2s
OMM  Old Mammoth Mi     16.33 144 eP     P      14 04 40.0 +0.8
BGU  Big Grassy Mou     16.33 124 eP     P      14 04 39.3 +0.2
SPUT South Promonto     16.36 121 eP     P      14 04 40.4 +0.9
SVW2 Sparrevohn         16.53 315 eP     P      14 04 37.9  -3.6
TPH  Tonopah            16.62 139 eP     P      14 04 43.9 +1.0
TPH                                pmax   pmax
     comp=Z,246nm,1.3s
TPH  Tonopah            16.62 139 eP     P      14 04 43.9 +1.1
     comp=Z,246nm,1.3s
HWUT Hardware Ranch     16.63 119 eP     P      14 04 43.4 +0.5
     comp=Z,439nm,2.0s
MTUM Tungsten Hills     16.72 143 eP     P      14 04 44.6 +0.5
LRV  Little Rabbit      16.73 151 eP     P      14 04 45.0 +0.8
INK  Inuvik             16.86 357 Pn     P      14 04 45.6   0.0
     comp=Z,0.2nm,0.3s,baz=179,slow=13,SNR=20
INK                                LR     LR     14 11 54.1
     comp=Z,23µm,18.8s,baz=179,slow=39
INK  Inuvik             16.86 357 eP     P      14 04 45.0  -0.6
INK  Inuvik             16.86 357 P      P      14 04 45.9 +0.3
INK                                Sg            14 09 41.0
INK                                Trac          14 10 26.9
     comp=Z,44nm,1.8s
LAO  LASA Array         16.93  97 eP     P      14 04 46.5  -0.2
     comp=Z,4.3nm,0.5s
BW06 Boulder Array      17.00 113 eP     P      14 04 49.1 +1.5
     comp=Z,170nm,1.3s
PDAR Pinedale Array     17.00 113 P      P      14 04 49.4 +1.8
     comp=Z,0.5nm,0.3s,baz=315,slow=10,SNR=99
PDAR                               LR     LR     14 11 59.8
     comp=Z,12µm,18.4s,baz=311,slow=39
NOQ  North Oquirrh      17.01 122 eP     P      14 04 48.6 +0.9
TCUT Toone Canyon       17.05 120 eP     P      14 04 48.9 +0.6
TRCR Troy Canyon        17.10 135 eP     P      14 04 49.1 +0.3
CTU  Camp Tracy         17.17 122 eP     P      14 04 49.8 +0.1
JLU  Jordanelle         17.40 121 eP     P      14 04 52.7 +0.2
TTA  Tatalina           17.54 320 eP     P      14 04 52.3  -1.8
NLU  North Lily Min     17.54 124 eP     P      14 04 55.1 +0.8
DAU  Daniels Canyon     17.64 121 eP     P      14 04 56.0 +0.4
FFC  Flin Flon          17.67  68 eP     P      14 04 54.2  -1.6
FFC                                pmax   pmax
     comp=Z,337nm,1.4s
FFC  Flin Flon          17.67  68 eP     P      14 04 54.2  -1.7
     comp=Z,337nm,1.4s
MPU  Maple Canyon       17.72 123 eP     P      14 04 56.3  -0.3
SDPT Sand Point         17.87 294 eP     P      14 04 59.5 +1.2
     comp=Z,1µm,1.3s
DAC  Darwin (Calif)     18.04 143 P      P      14 05 00.0  -0.6
DAC                                pmax   pmax
     comp=Z,270nm,1.3s
DAC  Darwin (Calif)     18.04 143 eP     P      14 05 01.7 +1.1
     comp=Z,272nm,1.4s
TMUT Trail Mountain     18.48 124 eP     P      14 05 06.3 +0.3
IMA  Indian Mountai     18.51 330 eP     P      14 05 06.7 +0.4
IMA                                pmax   pmax
     comp=Z,744nm,1.6s
IMA  Indian Mountai     18.51 330 eP     P      14 05 06.7 +0.4
     comp=Z,744nm,1.6s
ARUT Antelope Range     18.54 131 eP     P      14 05 06.9 +0.1
MSU  Marysvale          18.58 127⇑eP     P      14 05 07.5 +0.2
RWWY Rawlins            19.03 112 eP     P      14 05 11.8  -0.9
     comp=Z,169nm,1.3s
RSSD Black Hills        19.52 102 eP     P      14 05 17.4  -1.0
RSSD                               pmax   pmax
     comp=Z,46nm,0.9s
RSSD Black Hills        19.52 102 eP     P      14 05 17.4  -1.0
     comp=Z,46nm,0.9s
NEN  Nelson             19.68 138⇑eP     P      14 05 19.8  -0.5
MWC  Mount Wilson       19.70 146 eP     P      14 05 21.3 +0.7
LDFC Landfair           20.06 139 eP     P      14 05 23.8  -0.7
PV10 Paradox Valley     20.29 122 eP     P      14 05 26.8  -0.1
PHWY Pilot Hill         20.30 110 eP     P      14 05 25.8  -1.1
PV01 Paradox Valley     20.72 122 eP     P      14 05 30.6  -0.7
PFO  Pinyon Flat Ob     20.83 144 eP     P      14 05 32.0  -0.5
PFO                                pmax   pmax
     comp=Z,1µm,2.3s
PFO                                MLR    MLR
     comp=Z,4µm,21.0s,MS4.7
PFO  Pinyon Flat Ob     20.83 144 eP     P      14 05 32.0  -0.5
     comp=Z,1µm,2.3s
PFO                                LR     LR
     comp=Z,4µm,21.0s,MS4.7
RW3  Ridgway            21.11 120 eP     P      14 05 34.7  -0.6
ISCO Idaho Springs      21.18 114 eP     P      14 05 36.1 +0.1
ISCO                               pmax   pmax
     comp=Z,60nm,1.1s,mb4.8
ISCO                               MLR    MLR
     comp=Z,25µm,22.0s,MS5.6
ISCO Idaho Springs      21.18 114 eP     P      14 05 36.1 +0.1
     comp=Z,60nm,1.1s,mb4.8
ISCO                               LR     LR
     comp=Z,25µm,22.0s,MS5.6
WUAZ Wupatki            21.35 131 eP     P      14 05 37.8 +0.1
     comp=Z,265nm,1.0s,mb5.5
WUAZ                               LR     LR
     comp=Z,23µm,19.0s,MS5.6
UNV  Unalaska Valle     21.47 290 eP     P      14 05 37.1  -1.7
     comp=Z,865nm,1.4s,mb5.9
UNV                                LR     LR
     comp=Z,39µm,22.0s,MS5.8
BAR  Barrett            21.59 145 eP     P      14 05 41.3 +1.1
FCC  Fort Churchill     22.08  56 eP     P      14 05 44.8  -0.1
FCC                                pmax   pmax
     comp=Z,182nm,1.2s,mb5.4
FCC  Fort Churchill     22.08  56 eP     P      14 05 44.8  -0.1
     comp=Z,182nm,1.2s,mb5.4
FCC  Fort Churchill     22.08  56 P      P      14 05 46.0 +1.1
FCC                                Trac          14 12 44.5
     comp=Z,56nm,1.4s
ULM  Lac du Bonnet      22.10  79 P      P      14 05 45.5 +0.4
     comp=Z,42nm,0.9s,mb4.8,baz=294,slow=11,SNR=12
ULM                                S      S      14 09 48.4 +4.8
     comp=Z,3.3nm,0.7s,slow=20,SNR=2.3
ULM                                LR     LR     14 15 21.4
     comp=Z,3µm,21.8s,MS4.7,baz=108,slow=39
ULM  Lac du Bonnet      22.10  79 P      P      14 05 45.5 +0.4
ULM                                S      S      14 09 48.4 +4.8
ULM                                LR     LR     14 15 21.4
ULM  Lac du Bonnet      22.10  79 P      P      14 05 46.2 +1.1
ULM                                Trac          14 12 53.6
     comp=Z,41nm,1.8s
SDCO Great Sand Dun     22.67 118 eP     P      14 05 51.4 +0.6
     comp=Z,48nm,1.1s,mb4.8
SDCO                               LR     LR
     comp=Z,31µm,20.0s,MS5.7
NIKO Nikolski           23.01 289 eP     P      14 05 53.6  -0.4
TNA  Tin City           23.35 321 eP     P      14 05 56.9  -0.3
     comp=Z,54nm,1.1s,mb4.9
TNA                                LR     LR
     comp=Z,10µm,19.0s,MS5.3
ANMO Albuquerque        24.24 124c iP    P      14 06 07.6 +1.5
ANMO Albuquerque        24.24 124 P      P      14 06 07.2 +1.1
     comp=Z,51nm,0.9s,mb4.9,baz=323,slow=9.6,SNR=62
ANMO                               LR     LR     14 15 58.0
     comp=Z,9µm,20.1s,MS5.2,slow=38
ANMO Albuquerque        24.24 124 eP     P      14 06 06.9 +0.8
     comp=Z,55nm,0.9s,mb5.0
ANMO                               LR     LR
     comp=Z,8µm,19.0s,MS5.2
TUC  Tucson             24.29 135 eP     P      14 06 07.4 +0.8
TUC                                pmax   pmax
     comp=Z,90nm,1.2s,mb5.1
TUC                                MLR    MLR
     comp=Z,5µm,22.0s,MS4.9
TUC  Tucson             24.29 135 eP     P      14 06 07.4 +0.8
     comp=Z,90nm,1.2s,mb5.1
TUC                                LR     LR
     comp=Z,5µm,22.0s,MS4.9
LAZ  Ladron             24.32 126 eP     P      14 06 08.1 +1.2
LENM Lemitar            24.59 126 eP     P      14 06 10.7 +1.2
LPM  Los Pinos Moun     24.64 125 eP     P      14 06 11.5 +1.5
BNM  Barren Site        24.77 125 eP     P      14 06 12.1 +0.8
CBKS Cedar Bluff        25.26 108 PFAKE         14 06 30.0  +14
CBKS                               LR     LR
     comp=Z,13µm,22.0s,MS5.4
EYMN Ely                25.59  82 eP     P      14 06 19.7 +0.8
     comp=Z,247nm,1.0s,mb5.7
EYMN                               LR     LR
     comp=Z,8µm,21.0s,MS5.2
AMTX Amarillo           26.86 117 eP     P      14 06 31.0 +0.2
     comp=Z,73nm,0.8s,mb5.3
AMTX                               LR     LR
     comp=Z,23µm,20.0s,MS5.7
KSU1 Kansas State U     26.96 104 eP     P      14 06 31.8 +0.2
CPRX Cap Rock           27.08 123 eP     P      14 06 32.7  -0.1
MNTX Cornudas Mount     27.36 127 eP     P      14 06 35.2  -0.2
     comp=Z,81nm,1.1s,mb5.2
MNTX                               LR     LR
     comp=Z,13µm,19.0s,MS5.5
GDL2 Guadalupe Moun     27.47 124 eP     P      14 06 36.3  -0.1
RES  Resolute Bay       27.50  20 eP     P      14 06 35.3  -0.9
RES                                pmax   pmax
     comp=Z,67nm,1.4s,mb5.1
RES  Resolute Bay       27.50  20 eP     P      14 06 35.3  -1.0
     comp=Z,67nm,1.4s,mb5.1
RES  Resolute Bay       27.50  20 P      P      14 06 35.6  -0.7
RES                                Trac          14 15 59.9
     comp=Z,34nm,1.1s
WMOK Wichita Mounta     28.61 113 eP     P      14 06 46.5  -0.1
WMOK                               pmax   pmax
     comp=Z,56nm,0.9s,mb5.3
WMOK                               MLR    MLR
     comp=Z,4µm,20.0s,MS5.0
WMOK Wichita Mounta     28.61 113 eP     P      14 06 46.5  -0.2
     comp=Z,56nm,0.9s,mb5.3
WMOK                               LR     LR
     comp=Z,4µm,20.0s,MS5.0
LTX  Lajitas            30.14 127 eP     P      14 07 00.2  -0.2
LTX                                pmax   pmax
     comp=Z,39nm,1.1s,mb5.0
LTX                                MLR    MLR
     comp=Z,9µm,19.0s,MS5.4
LTX  Lajitas            30.14 127 eP     P      14 07 00.2  -0.2
     comp=Z,39nm,1.1s,mb5.0
LTX                                LR     LR
     comp=Z,9µm,19.0s,MS5.4
TXAR Lajitas Array      30.14 127 P      P      14 07 00.1  -0.3
     comp=Z,23nm,1.1s,mb4.8,baz=325,slow=6.3,SNR=31
TXAR                               LR     LR     14 19 37.0
     comp=Z,8µm,19.6s,MS5.3,baz=320,slow=38
FVM  French Village     31.44  99 eP     P      14 07 10.5  -1.3
FVM                                pmax   pmax
     comp=Z,27nm,1.1s,mb5.0
FVM  French Village     31.44  99 eP     P      14 07 10.5  -1.2
     comp=Z,26nm,1.1s,mb5.0
NATX Nacogdoches        33.14 112 PFAKE         14 07 40.0  +13
NATX                               LR     LR
     comp=Z,7µm,22.0s,MS5.3
FX1  Attu Island--F     33.48 295 eP     P      14 07 27.7  -1.7
BILL Bilibino           33.74 323 i P    P      14 07 31.0  -0.6
BILL                               pmax   pmax
     comp=Z,37nm,1.1s,mb5.2
BILL                               MLR    MLR
     comp=Z,9µm,23.0s,MS5.4
BILL Bilibino           33.74 323 eP     P      14 07 30.2  -1.4
     comp=Z,33nm,1.1s,mb5.2
BILL                               LR     LR
     comp=Z,8µm,21.0s,MS5.4
WCI  Wyandotte Cave     33.84  95 PFAKE         14 07 40.0 +7.3
WCI                                LR     LR
     comp=Z,3µm,20.0s,MS5.0
FRB  Frobisher Bay      34.12  45 P      P      14 07 36.0 +1.1
     comp=Z,5.1nm,0.5s,mb4.7,baz=270,slow=9.3,SNR=6.9
FRB                                LR     LR     14 20 52.4
     comp=Z,7µm,20.0s,MS5.4,baz=280,slow=35
WVT  Waverly            34.22 100 eP     P      14 07 34.7  -1.3
WVT                                pmax   pmax
     comp=Z,23nm,1.3s,mb5.0
WVT                                MLR    MLR
     comp=Z,18µm,22.0s,MS5.8
WVT  Waverly            34.22 100 eP     P      14 07 34.6  -1.3
     comp=Z,23nm,1.3s,mb5.0
WVT                                LR     LR
     comp=Z,18µm,22.0s,MS5.8
OXF  Oxford             34.32 103 eP     P      14 07 36.3  -0.6
OXF                                pmax   pmax
     comp=Z,138nm,1.1s,mb5.8
OXF                                MLR    MLR
     comp=Z,10µm,22.0s,MS5.5
OXF  Oxford             34.32 103 eP     P      14 07 36.3  -0.7
     comp=Z,138nm,1.1s,mb5.8
OXF                                LR     LR
     comp=Z,10µm,22.0s,MS5.5
SADO Sadowa             34.65  80 P      P      14 07 40.0 +0.3
     comp=Z,20nm,0.9s,mb5.1,baz=310,slow=10,SNR=12
SADO                               LR     LR     14 21 46.3
     comp=Z,9µm,19.0s,MS5.5,baz=318,slow=36
SADO Sadowa             34.65  80 P      P      14 07 40.0 +0.3
SADO                               LR     LR     14 21 46.3
PLAL Pickwick Lake      34.82 101 eP     P      14 07 39.9  -1.3
     comp=Z,40nm,1.3s,mb5.2
PLAL                               LR     LR
     comp=Z,2µm,22.0s,MS4.7
ALLY Alegheny Colle     35.68  86 eP     P      14 07 48.1  -0.4
GENY Geneseo            36.52  82 eP     P      14 07 54.3  -1.2
TZTN Tazewell           36.60  95 eP     P      14 07 56.3 +0.1
KIP  Kipapa             36.66 225 P      P      14 07 54.6  -2.3
KIP                                MLR    MLR
     comp=Z,12µm,21.0s,MS5.7
CPCT Cooper Cave        36.70  98 eP     P      14 07 56.2  -0.9
LRAL Lakeview Retre     36.80 103 eP     P      14 07 57.1  -0.8
     comp=Z,20nm,1.0s,mb4.9
LRAL                               LR     LR
     comp=Z,19µm,20.0s,MS5.9
MCWV Mont Chateau       37.01  88 eP     P      14 07 59.4  -0.2
     comp=Z,33nm,1.0s,mb5.1
MSNY Massena            37.16  77 eP     P      14 08 01.9 +1.1
SCHQ Schefferville      37.42  59 P      P      14 08 03.6 +0.7
     comp=Z,8.2nm,0.9s,mb4.6,baz=310,slow=9.2,SNR=6.6
SCHQ                               LR     LR     14 23 59.2
     comp=Z,17µm,19.9s,MS5.8,baz=294,slow=37
FWV  Forest Hill        37.66  92 eP     P      14 08 04.5  -0.6
ELN  Prospectdale       37.91  92 eP     P      14 08 07.1  -0.2
BINY Binghamton         37.96  82 eP     P      14 08 07.9 +0.3
     comp=Z,25nm,1.0s,mb4.9
BINY                               LR     LR
     comp=Z,11µm,19.0s,MS5.7
FRNY Flat Rock          38.02  77 eP     P      14 08 08.3 +0.2
NCB  Newcomb            38.08  78 eP     P      14 08 07.5  -1.1
     comp=Z,52nm,1.7s,mb5.0
NCB                                LR     LR
     comp=Z,12µm,21.0s,MS5.7
BLA  Blacksburg         38.13  92 eP     P      14 08 09.2 +0.1
BLA                                pmax   pmax
     comp=Z,101nm,1.0s,mb5.5
BLA                                MLR    MLR
     comp=Z,9µm,19.0s,MS5.6
BLA  Blacksburg         38.13  92 eP     P      14 08 09.2 +0.1
     comp=Z,101nm,1.0s,mb5.5
BLA                                LR     LR
     comp=Z,9µm,19.0s,MS5.6
MIV  Mineville/With     38.45  78 eP     P      14 08 12.4 +0.7
SDMD Soldier’s Deli     39.03  86 eP     P      14 08 17.2 +0.6
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CBN	**Corbin**	**39.42**	**88**	PFAKE		14 08 30.0	+10
CBN				LR	LR		
	comp=Z,10µm,20.0s,MS5.6						
QUA2	**Belchertown**	**40.15**	**80**	P	**P**	**14 08 26.9**	**+1.0**
	comp=Z,20nm,1.1s,mb4.8						
PQI	**Presque Isle**	**40.41**	**71**	PFAKE		14 08 40.0	+12
PQI				LR	LR		
	comp=Z,46µm,19.0s,MS6.4						
SEY	**Seymchan**	**40.46**	**317**	*e*P	**P**	**14 08 27.9**	**-0.2**
SEY						14 10 05.4	
SEY				*e*		14 10 29.5	
SEY				*e*S	**S**	**14 14 32.4**	**-4.1**
SEY				*e*SS	SS	14 17 29.6	-0.4
SEY				*e*SSS	SSS	14 18 10.6	+3.6
SEY				*e*		14 18 29.5	
SEY				pmax	pmax		
	comp=E,20nm,0.9s						
SEY				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.2						
SEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
SEY				smax			
	comp=N,1µm,11.3s						
SEY				smax			
	comp=E,2µm,10.5s						
SEY				MLR	MLR		
	comp=Z,24µm,15.0s,MS6.2						
SEY				MLR	MLR		
	comp=N,7µm,13.0s,MS6.0						
SEY				MLR	MLR		
	comp=E,14µm,15.0s,MS6.0						
HRV	**Harvard--Oak R**	**40.51**	**79**	PFAKE		14 08 40.0	+11
HRV				LR	LR		
	comp=Z,8µm,21.0s,MS5.6						
WVL	**Waterville**	**40.54**	**75**	P	**P**	**14 08 29.3**	**+0.3**
	comp=Z,166nm,1.1s,mb5.6						
WVL				LR	LR		
	comp=Z,16µm,19.0s,MS5.9						
SFJD	**Kangerlussuaq**	**40.62**	**37**	*i*P	**P**	**14 08 31.2**	**+1.7**
SFJD				*i*S	**S**	**14 14 48.3**	**+9.4**
SFJD				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.7						
SFJD				MLR	MLR		
	comp=Z,14µm,18.0s,MS5.9						
SFJD	**Kangerlussuaq**	**40.62**	**37**	*i*P	**P**	**14 08 31.2**	**+1.7**
	comp=Z,23nm,1.2s,mb4.7						
SFJD				*i*S	**S**	**14 14 48.3**	**+9.4**
	comp=Z,14µm,18.0s						
WES	**Weston**	**40.73**	**79**	PFAKE		14 08 40.0	+9.4
WES				LR	LR		
	comp=Z,15µm,20.0s,MS5.8						
NHSC	**New Hope**	**40.94**	**97**	*e*P	**P**	**14 08 32.7**	**+0.2**
NHSC				LR	LR		
	comp=Z,21µm,20.0s,MS6.0						
PPM	**Popocatepetl**	**41.22**	**130**	*e*P	**P**	**14 08 36.7**	**+1.8**
PET	**Petropavlovsk**	**41.44**	**301**	*c* *i*P	**P**	**14 08 35.4**	**-0.9**
PET				*e*		14 10 13.6	
PET				*e*S	**S**	**14 14 42.6**	**-8.6**
PET				*e*SS	SS	14 17 45.9	-4.5
PET				pmax	pmax		
	comp=Z,800nm,11.3s						
PET				pmax	pmax		
	comp=E,500nm,8.7s						
PET				pmax	pmax		
	comp=N,100nm,6.4s						
PET				pmax	pmax		
	comp=N,200nm,16.0s						
PET				pmax	pmax		
	comp=Z,600nm,10.2s						
PET				pmax	pmax		
	comp=E,400nm,10.0s						
PET				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.1						
PET				pmax	pmax		
	comp=E,1µm,15.1s						
PET				pmax	pmax		
	comp=Z,1µm,14.7s						
PET				pmax	pmax		
	comp=N,600nm,14.1s						
PET				pmax	pmax		
	comp=Z,2µm,14.2s						
PET				pmax	pmax		
	comp=N,700nm,16.1s						
PET				pmax	pmax		
	comp=E,1µm,9.8s						
PET				smax			
	comp=E,600nm,6.9s						
PET				smax			
	comp=E,300nm,11.6s						
PET				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.0						
PET				MLR	MLR		
	comp=Z,2µm,17.0s						
PET	**Petropavlovsk**	**41.44**	**301**	*e*P	**P**	**14 08 35.5**	**-0.9**
	comp=Z,50nm,1.1s,mb5.1						
PET				LR	LR		
	comp=Z,6µm,21.0s,MS5.5						
MA2	**Magadan**	**42.49**	**312**	*e*P	**P**	**14 08 49.5**	**+4.8**
MA2				*e*		14 10 25.2	
MA2				*e*		14 10 37.1	
MA2				MLR	MLR		
	comp=Z,8µm,18.0s,MS5.7						
MA2	**Magadan**	**42.49**	**312**	*e*P	**P**	**14 08 45.3**	**+0.6**
	comp=Z,59nm,1.3s,mb5.0						
MA2				LR	LR		
	comp=Z,7µm,21.0s,MS5.5						
SUMG	**Summit**	**42.58**	**26**	*e*P	**P**	**14 08 45.9**	**+0.5**
	comp=Z,40nm,1.1s,mb5.1						
DWPF	**Disney**	**43.66**	**103**	PFAKE		14 09 10.0	+15
DWPF				LR	LR		
	comp=Z,3µm,21.0s,MS5.2						
OXX	**Oaxaca**	**43.84**	**129**	*e*P	**P**	**14 08 58.0**	**+1.7**
SKR	**Severo-Kuril's**	**43.96**	**299**	P	**P**	**14 08 51.0**	**-5.8**
SKR				*e*		14 10 40.0	
SKR				*e*PPP	PPP	14 11 23.0	+4.9
SKR				*e*S	**S**	**14 15 33.0**	**+5.1**
SKR				*e*SS	SS	14 18 35.0	-1.8
SKR				pmax	pmax		
	comp=Z,3µm,8.0s						
SKR				smax			
	comp=N,3µm,10.0s						
SKR				smax			
	comp=E,4µm,10.0s						
SKR				MLR	MLR		
	comp=E,3µm,16.0s						
SKR				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.3						
TIXI	**Tiksi**	**45.07**	**334**	*e*P	**P**	**14 09 03.1**	**-2.4**
TIXI				*e*		14 10 44.6	
TIXI				*e*S	**S**	**14 15 40.7**	**-3.1**
TIXI				*e*SS	SS	14 19 03.4	+5.9
TIXI				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.5						
TIXI	**Tiksi**	**45.07**	**334**	PFAKE		14 09 20.0	+14
TIXI				LR	LR		
	comp=Z,6µm,19.0s,MS5.5						
KBS	**Kingsbay**	**47.94**	**9**	*e*P	**P**	**14 09 28.2**	**+0.1**
KBS				LR	LR		
	comp=Z,3408µm,20.6s						
KBS	**Kingsbay**	**47.94**	**9**	*e*P	**P**	**14 09 28.2**	**+0.1**
KBS				*e*PP	PP	14 11 20.0	+0.5
KBS				*e*S	**S**	**14 16 33.0**	**+8.5**
KBS				AMS	AMS	14 31 18.7	
	comp=Z,3µm,20.6s,MS5.3						
YAK	**Yakutsk**	**50.10**	**323**	*e*P	**P**	**14 09 48.5**	**+3.6**
YAK				e*PP	pP	14 09 57.3	+9.3
YAK				*e*		14 11 06.2	
YAK				*e*		14 11 44.5	
YAK				*e*PPP	PPP	14 12 41.4	+4.6
YAK				*e*S	**S**	**14 17 00.4**	**+5.4**
YAK				*e*		14 19 34.2	
YAK				pmax	pmax		
	comp=N,11nm,1.0s						
YAK				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=E,15nm,1.1s						
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				smax			
	comp=N,276nm,11.7s						
YAK				smax			
	comp=E,2µm,16.3s						
YAK				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.4						
YAK				MLR	MLR		
	comp=N,2µm,16.0s,MS5.4						
YAK				MLR	MLR		
	comp=E,2µm,16.0s,MS5.4						
YAK	**Yakutsk**	**50.10**	**323**	*e*P	**P**	**14 09 44.2**	**-0.7**
	comp=E,44nm,0.9s,mb5.5						
YAK				LR	LR		
	comp=Z,8µm,19.0s,MS5.7						
BBSR	**BB Station**	**51.09**	**85**	PFAKE		14 10 00.0	+7.2
BBSR				LR	LR		
	comp=Z,6µm,21.0s,MS5.6						
JMIC	**Jan Mayen**	**51.10**	**21**	*e*P	**P**	**14 09 49.5**	**-2.9**
JMIC				LR	LR		
	comp=Z,3770µm,16.2s						
JMIC	**Jan Mayen**	**51.10**	**21**	*e*P	**P**	**14 09 49.5**	**-2.9**
JMIC				*e*S	**S**	**14 17 17.7**	**+9.0**
JMIC				*e*SS	SS	14 21 08.5	+27
JMIC				AMS	AMS	14 32 26.6	
	comp=Z,4µm,16.2s,MS5.5						
YSS	**Yuzh-Sakhalins**	**53.32**	**302**	*e*P	**P**	**14 10 08.0**	**-1.4**
YSS				*e*		14 10 14.0	
YSS				*e*		14 12 12.0	
YSS				*e*S	**S**	**14 17 30.0**	**-9.3**
YSS				*e*PS	PS	14 17 44.0	-6.4
YSS				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.2						
YSS				MLR	MLR		
	comp=N,2µm,15.0s,MS5.4						
YSS				MLR	MLR		
	comp=E,2µm,19.0s,MS5.4						
YSS	**Yuzh-Sakhalins**	**53.32**	**302**	*e*P	**P**	**14 10 08.0**	**-1.3**
	comp=E,43nm,1.2s,mb5.3						
YSS				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
YUK	**Yuzh-Kuril'sk**	**53.47**	**297**	P	**P**	**14 10 20.0**	**+9.4**
YUK				*e*		14 12 18.0	
YUK				*e*S	**S**	**14 17 42.0**	**+0.5**
YUK				*e*SS	SS	14 21 18.0	-3.1
YUK				pmax	pmax		
	comp=Z,2µm,5.0s						
YUK				smax			
	comp=E,3µm,12.0s						
ASAJ	**Asahikawa**	**55.22**	**299**	P	**P**	**14 10 21.6**	**-1.8**
ASAJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ASAJ	**Asahikawa**	**55.22**	**299**	P	**P**	**14 10 21.6**	**-1.8**
	comp=Z,7.5nm,1.0s,mb4.7,baz=20,slow=4.8,SNR=4.0						
CLNS	**Chul'man**	**55.31**	**320**	*e*P	**P**	**14 10 23.9**	**+0.1**
CLNS				*e*		14 18 07.2	
CLNS				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
CLNS				pmax	pmax		
	comp=N,8.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,14nm,1.0s						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
CLNS				MLR	MLR		
	comp=Z,8µm,20.0s,MS5.8						
CLNS				MLR	MLR		
	comp=N,5µm,18.0s,MS5.6						
CLNS				MLR	MLR		
	comp=E,800nm,19.0s,MS5.6						
JTS	**JuntasAbangare**	**55.61**	**121**	PFAKE		14 10 40.0	+13
JTS				LR	LR		
	comp=Z,468nm,19.0s,MS4.6						
TRO	**Tromso**	**57.16**	**12**	*e*P	**P**	**14 10 28.6**	**-8.4**
TRO				*e*S	**S**	**14 18 34.3**	**+4.0**
TRO				AMS	AMS	14 34 35.4	
	comp=Z,2µm,31.3s,MS5.1						
KLR	**Kul'dur**	**57.42**	**309**	*e*P	**P**	**14 10 35.0**	**-4.0**
KLR				*e*S	**S**	**14 18 29.5**	**-4.5**
KLR				smax			
	comp=N,2µm,16.0s						
KLR				smax			
	comp=E,2µm,16.0s						
KLR				MLR	MLR		
	comp=N,3µm,14.0s						
KLR				MLR	MLR		
	comp=Z,4µm,14.0s,MS5.6						
KEV	**Kevo**	**57.95**	**9**	*e*p	**P**	**14 10 39.3**	**-3.2**
	comp=Z,31nm,1.0s,mb5.3						
KEV	**Kevo**	**57.95**	**9**	*e*P	**P**	**14 10 39.3**	**-3.2**
KEV				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.3						
WAKE	**Wake Island**	**57.95**	**261**	PFAKE		14 10 50.0	+6.8
WAKE				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
ARCES	**ARCESS Array B**	**58.02**	**9**	P	**P**	**14 10 42.0**	**-1.0**
	comp=Z,7.7nm,0.9s,mb4.7,baz=342,slow=3.8,SNR=6.4						
BOD	**Bodaibo**	**58.74**	**325**	*e*P	**P**	**14 10 40.3**	**-7.9**
SJG	**San Juan**	**60.44**	**98**	PFAKE		14 11 10.0	+10
SJG				LR	LR		
	comp=Z,4µm,21.0s,MS5.5						
APA	**Apatity**	**60.63**	**7**	⇑*i*P	**P**	**14 11 02.8**	**+1.7**
APA				*i*		14 11 44.0	
APA				*i*S	**S**	**14 19 21.0**	**+5.4**
APA				*e*		14 20 53.0	
APA				*e*SS	SS	14 23 23.0	+7.7
APA				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.4						
APA				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.6						
TAOE	**Nuku Hiva Isla**	**60.67**	**190**	*e*S	**S**	**14 19 19.0**	**+2.2**
	comp=Z,8µm,26.3s						
TAOE				*e*SS	SS	14 23 11.1	-5.5
	comp=Z,791nm,25.7s						
TAOE				*e*LQ		14 26 09.3	
	comp=Z,5µm,29.3s						
TAOE				*e*LR	LR	14 28 41.9	
	comp=Z,17µm,29.2s						
NSS	**Namsos**	**60.75**	**17**	AMS	AMS	14 37 10.0	
	comp=Z,5µm,19.9s,MS5.6						
MDJ	**Mudanjiang**	**61.69**	**307**	P	**P**	**14 11 04.6**	**-4.0**
MDJ	**Mudanjiang**	**61.69**	**307**	P	**P**	**14 11 07.6**	**-1.0**
PAYG	**Puerto Ayora**	**62.37**	**133**	PFAKE		14 11 30.0	+16
PAYG				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
MAJO	**Matsushiro**	**62.84**	**295**	*e*P	**P**	**14 11 13.5**	**-2.8**
MAJO				pmax	pmax		
	comp=Z,54nm,1.4s,mb5.5						
MAJO				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.3						
MAJO	**Matsushiro**	**62.84**	**295**	*e*P	**P**	**14 11 13.5**	**-2.8**
	comp=Z,54nm,1.4s,mb5.5						
MAJO				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
MAT	**Matsushiro**	**62.84**	**295**	*e*P	**P**	**14 11 14.0**	**-2.3**
MAT				*e*S	**S**	**14 19 57.0**	**+13**
MAT				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
MAT				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.1						
MAT	**Matsushiro**	**62.84**	**295**	*e*P	**P**	**14 11 14.0**	**-2.3**
	comp=Z,14nm,1.0s,mb5.0						
MAT				*e*S	**S**	**14 19 57.0**	**+13**
MAT				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
MAT	**Matsushiro**	**62.84**	**295**	P	**P**	**14 11 14.0**	**-2.3**
MAT				S	**S**	**14 19 47.8**	**+3.8**
MJAR	**Matsushiro Arr**	**62.84**	**295**	P	**P**	**14 11 13.2**	**-3.1**
	comp=Z,6.4nm,0.9s,mb4.8,baz=34,slow=5.9,SNR=14						
MJAR				LR	LR	14 34 07.9	
	comp=Z,2µm,20.9s,MS5.2,baz=65,slow=32						
BER	**Bergen**	**63.04**	**23**	*e*P	**P**	**14 11 16.4**	**-0.9**
BER				LR	LR		
	comp=Z,5982µm,19.3s						
BER	**Bergen**	**63.04**	**23**	*e*P	**P**	**14 11 16.4**	**-0.9**
BER				*e*S	**S**	**14 19 50.9**	**+4.8**
BER				AMS	AMS	14 38 53.4	
	comp=Z,6µm,19.3s,MS5.8						
CIT	**Chita**	**63.35**	**321**	*e*P	**P**	**14 11 19.0**	**-0.4**
CIT				pmax	pmax		
	comp=Z,580nm,2.2s						
NB2	**NORSAR Subarra**	**63.77**	**19**	P	**P**	**14 11 21.5**	**-0.4**
	comp=Z,21nm,1.1s,mb5.1,baz=336,slow=6.5						
NB2	**NORSAR Subarra**	**63.77**	**19**	P	**P**	**14 11 21.5**	**-0.4**
	baz=336,slow=6.5						
NOA	**NORSAR Array B**	**63.77**	**19**	P	**P**	**14 11 21.6**	**-0.3**
	comp=Z,5.4nm,0.8s,mb4.6,baz=337,slow=6.5,SNR=10.0						
CN2	**Changchun**	**64.33**	**309**	*e*P	**P**	**14 11 24.0**	**-1.9**
CN2				PCP	PcP	14 12 01.9	+1.5
CN2				PP	PP	14 13 45.2	-4.2
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
CN2				AMB	AMB		
	comp=Z,440nm,7.0s						
CN2				LR	LR		
	comp=N,2µm,18.0s,MS5.6						
CN2				LR	LR		
	comp=E,3µm,18.0s,MS5.6						
CN2				LR	LR		
	comp=Z,4µm,18.0s,MS5.6						
JHJ	**Hachijo jima 2**	**64.38**	**291**	LR	LR	14 33 26.8	
	comp=Z,1µm,20.5s,MS5.1,baz=102,slow=30						
KONO	**Kongsberg**	**64.68**	**21**	PFAKE		14 11 40.0	+12
KONO				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
SDV	**Santo Domingo**	**64.88**	**108**	*e*P	**P**	**14 11 28.6**	**-1.4**
	comp=Z,6.9nm,0.8s,mb4.7						
SDV				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
ESK	**Eskdalemuir**	**65.05**	**30**	PFAKE		14 11 40.0	+10
ESK				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
HFS	**Hagfors**	**65.10**	**19**	LR	LR	14 39 32.3	
	comp=Z,7µm,20.6s,MS5.8,baz=29,slow=36						
KAF	**Kangasniemi**	**65.27**	**11**	*e*p	**P**	**14 11 30.7**	**-1.0**
	comp=Z,29nm,1.1s,mb5.2,baz=341,slow=6.5						
KAF	**Kangasniemi**	**65.27**	**11**	*e*P	**P**	**14 11 30.7**	**-1.0**
KAF				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.2						
DCN	**Croghan**	**65.36**	**33**	*e*P	**P**	**14 11 31.7**	**-0.7**
KWAJ	**Kwajalein Atol**	**65.50**	**252**	PFAKE		14 11 50.0	+16
KWAJ				LR	LR		
	comp=Z,440nm,19.0s,MS4.7						
FINES	**FINESS Array B**	**65.89**	**12**	P	**P**	**14 11 35.5**	**-0.1**
	comp=Z,16nm,1.0s,mb5.0,slow=7.6,SNR=21						
FINES				LR	LR	14 40 56.4	
	comp=Z,3µm,18.4s,MS5.6,baz=157,slow=36						
ROSC	**El Rosal**	**65.97**	**114**	P	**P**	**14 11 37.6**	**+0.6**
	comp=Z,14nm,0.8s,mb5.1,baz=83,slow=24,SNR=10.0						
ROSC				LR	LR	14 45 56.6	
	comp=Z,1µm,18.6s,MS5.1,baz=13,slow=41						
IRK	**Irkutsk**	**66.58**	**327**	*e*P	**P**	**14 11 38.6**	**-1.6**
IRK				*e*		14 12 08.1	
IRK				pmax	pmax		
	comp=Z,57nm,2.2s,mb5.2						
TLY	**Talaya**	**67.26**	**327**	*d* *i*P	**P**	**14 11 44.8**	**+0.2**
TLY				*e*		14 12 13.7	
TLY				*e*		14 14 11.0	
TLY				*e*S	S	14 20 42.7	+4.7
TLY				*e*PS	PS	14 21 01.6	-0.7
TLY				*e*		14 21 40.6	
TLY				*e*SSS	SSS	14 28 00.3	+3.3
TLY				pmax	pmax		
	comp=Z,34nm,2.0s,mb5.0						
TLY				MLR	MLR		
	comp=Z,6µm,19.0s,MS5.8						
TLY	**Talaya**	**67.26**	**327**	*e*P	**P**	**14 11 44.0**	**-0.6**
	comp=Z,41nm,1.4s,mb5.3						
TLY				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
CBIJ	**Chichi jima**	**67.34**	**285**	LR	LR	14 37 57.1	
	comp=Z,805nm,18.4s,MS5.0,baz=143,slow=33						
MUD	**Monsted U'grnd**	**67.47**	**23**	*i*P	**P**	**14 11 39.9**	**-5.9**
MUD				*i*		14 15 59.0	
MUD				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.7						
MUD	**Monsted U'grnd**	**67.47**	**23**	*i*P	**P**	**14 11 39.9**	**-5.9**
MUD				*i*		14 15 59.0	
MUD				*i*		14 28 32.6	
	comp=Z,4µm,18.0s						
OTAV	**Otavalo**	**67.51**	**121**	*e*P	**P**	**14 11 47.2**	**+0.4**
	comp=Z,31nm,1.2s,mb5.2						
OTAV				LR	LR		
	comp=Z,1µm,22.0s,MS5.1						
PUL	**Pulkovo**	**68.02**	**10**	*i*P	**P**	**14 11 56.9**	**+7.7**
PUL				*i*S	S	14 20 53.6	+6.7
PUL				*i*		14 21 49.1	
PUL				pmax	pmax		
	comp=Z,108nm,0.5s,mb6.1						
PUL				smax			
	comp=N,47nm,6.2s						
PUL				smax			
	comp=Z,90nm,8.6s						
PUL				MLR	MLR		
	comp=N,4µm,19.0s,MS5.8						
PUL				MLR	MLR		
	comp=Z,7µm,19.0s,MS5.9						
PUL				MLR	MLR		
	comp=E,2µm,20.0s,MS5.8						
MOY	**Mondy**	**68.17**	**328**	*e*P	**P**	**14 11 50.7**	**+0.4**
ADH	**Angra Heroismo**	**68.34**	**55**	*i*LR	LR	14 32 20.0	
INCN	**Inchon**	**68.45**	**303**	*e*P	**P**	**14 11 49.5**	**-2.8**
INCN				LR	LR		
	comp=Z,2µm,22.0s,MS5.2						
ZAK	**Zakamensk**	**68.47**	**326**	*e*P	**P**	**14 11 54.2**	**+2.0**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
VSU	**Vasula**	**68.86**	**12**	*i*P	**P**	**14 11 54.3**	**-0.1**
COP	**Copenhagen**	**68.93**	**21**	*i*P	**P**	**14 11 56.4**	**+1.5**
COP				*i*S	S	14 21 07.3	+10
	comp=Z,1µm,16.0s						
ULN	**Ulaanbaatar**	**69.19**	**322**	*i*P	**P**	**14 11 57.0**	**+0.4**
ULN	**Ulaanbaatar**	**69.19**	**322**	*e*P	**P**	**14 11 54.8**	**-1.8**
	comp=Z,18nm,1.6s,mb4.8						
ULN				LR	LR		
	comp=Z,8µm,21.0s,MS5.9						
SONM	**Songino Array**	**69.47**	**323**	P	**P**	**14 11 59.0**	**+0.7**
	comp=Z,6.1nm,1.2s,mb4.4,baz=36,slow=3.7,SNR=13						
SONM				LR	LR	14 43 05.2	
	comp=Z,6µm,19.5s,MS5.9,baz=26,slow=36						
PDA	**Ponta Delgada**	**69.83**	**55**	*e*		14 36 07.0	
DL2	**Dalian**	**69.91**	**308**	P	**P**	**14 12 03.1**	**+1.9**
DL2				AMB	AMB		
	comp=Z,320nm,6.7s						
DL2				LR	LR		
	comp=N,1µm,17.3s,MS5.4						
DL2				LR	LR		
	comp=E,2µm,19.6s,MS5.4						
DL2				LR	LR		
	comp=Z,2µm,18.6s,MS5.5						
BSEG	**Bad Segeberg**	**70.03**	**23**	*e*P	**P**	**14 12 02.3**	**+0.6**
BSEG				pmax	pmax		
	comp=Z,49nm,1.5s,mb5.2						
NVS	**Novosibirsk**	**70.20**	**340**	*i*P	**P**	**14 12 01.6**	**-1.1**
NVS				*e*		14 14 35.3	
NVS				*e*S	S	14 21 14.1	+1.3
NVS				pmax	pmax		
	comp=Z,74nm,2.0s,mb5.3						
NVS				pmax	pmax		
	comp=N,43nm,1.9s						
NVS				pmax	pmax		
	comp=E,50nm,2.0s						
NVS				pmax	pmax		
	comp=Z,20nm,2.1s,mb4.7						
NVS				pmax	pmax		
	comp=N,15nm,1.9s						
NVS				pmax	pmax		
	comp=E,18nm,2.0s						
NVS				smax			
	comp=N,38nm,3.1s						
ZAL	**Zalesovo**	**70.69**	**338**	*i*P	**P**	**14 12 07.0**	**+1.3**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAL	**Zalesovo**	**70.69**	**338**	P	**P**	**14 12 05.5**	**-0.1**
	comp=Z,1.9nm,0.5s,mb4.3,baz=81,slow=6.6,SNR=10						
ZAL				LR	LR	14 49 10.6	
	comp=Z,3µm,18.6s,MS5.6,baz=95,slow=41						
PPT	**Papeete**	**70.70**	**199**	*e*P	**P**	**14 11 55.4**	**-11**
	comp=Z,120nm,24.0s						
PPT				*e*S	S	14 21 15.9	-3.4
	comp=Z,5µm,27.2s						
PPT				*e*SS	SS	14 25 47.2	-5.9
	comp=Z,657nm,29.2s						
PPT				*e*LQ		14 29 11.3	
PPT				*e*LR	LR	14 32 53.7	
	comp=Z,6µm,27.2s,baz=12						
PPT	**Papeete**	**70.70**	**199**	LR	LR	14 35 05.1	
	comp=Z,2µm,20.5s,MS5.4,baz=341,slow=29						
WTSB	**Winterswijk**	**70.90**	**26**	*e*P	**P**	**14 12 07.1**	**+0.1**
	comp=Z,36nm,1.0s,mb5.3						

ROSF	**Rostrenen**	70.94	34	*e*P	P	14 12 07.1	-0.2
SGMF	**Saint Gilles**	71.26	34	*e*P	P	14 12 09.2	0.0
QUIF	**Quistinic**	71.34	34	*e*P	P	14 12 09.1	-0.6
	comp=Z,146nm,1.6s,mb5.4						
QUIF	**Quistinic**	71.34	34	*e*P	P	14 12 09.1	-0.6
QUIF				pmax	pmax		
	comp=Z,73nm,1.6s,mb5.4						
FLN	**La Foliniere**	71.52	32	*e*P	P	14 12 10.6	-0.2
FLN				*e*R			
	comp=Z,10µm,19.5s						
SVE	**Sverdlovsk**	71.56	353⇑	*e*P	P	14 12 21.3	+10
SVE				*e*		14 14 48.1	
SVE				*e*		14 29 10.0	
SVE				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.2						
GRR	**Gorron**	71.72	32	*e*P	P	14 12 12.3	+0.3
	comp=Z,59nm,1.1s,mb5.1						
GRR	**Gorron**	71.72	32	*e*P	P	14 12 12.3	+0.3
GRR				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.1						
HGN	**Heimansgroeve**	71.73	27⇓	*e*P	P	14 12 12.4	+0.4
	comp=Z,32nm,1.1s,mb5.2						
HGN				*e*S	S	14 21 46.8	+16
LDF	**La Druitiere**	71.79	32	*e*P	P	14 12 12.2	-0.2
	comp=Z,67nm,1.2s,mb5.1						
LDF	**La Druitiere**	71.79	32	*e*P	P	14 12 12.2	-0.2
LDF				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
BAIF	**Baives**	71.86	29	*e*P	P	14 12 13.2	+0.4
	comp=Z,43nm,1.0s,mb5.0						
BAIF	**Baives**	71.86	29	*e*P	P	14 12 13.2	+0.4
BAIF				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0						
CLZ	**Clausthal**	71.96	24	*e*P	P	14 12 14.1	+0.8
CLZ				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.3						
CLZ	**Clausthal**	71.96	24	*e*P	P	14 12 14.1	+0.8
	comp=Z,45nm,1.1s,mb5.3						
GIVF	**Givet**	72.00	28	*e*P	P	14 12 13.9	+0.2
ARU	**Arti**	72.09	354⇑	*i*P	P	14 12 14.0	-0.1
ARU				*e*		14 12 30.6	
ARU				*e*		14 14 57.0	
ARU				*e*PPP	PPP	14 16 41.2	+3.1
ARU				*e*S	S	14 21 35.2	+0.5
ARU				*e*		14 22 12.6	
ARU				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.6						
ARU	**Arti**	72.09	354	*e*P	P	14 12 13.8	-0.3
	comp=Z,91nm,1.1s,mb5.6						
ARU				LR	LR		
	comp=Z,568nm,21.0s,MS4.8						
SUW	**Suwalki**	72.62	16	*e*P	P	14 12 17.1	0.0
SUW				MLR	MLR	14 45 39.1	
	comp=Z,3µm,18.1s,MS5.6						
MOS	**Moscow**	72.67	7	*e*P	P	14 12 22.9	+5.5
MOS				*i*		14 12 37.4	
MOS				*e*S	S	14 21 49.4	+8.3
MOS				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.5						
MOS				MLR	MLR		
	comp=N,2µm,19.0s						
MOS				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
MNK	**Minsk**	72.86	13	*e*P	P	14 12 19.0	+0.5
TNS	**Taunus Mts**	72.92	26	*e*P	P	14 12 19.4	+0.4
TNS				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
TNS	**Taunus Mts**	72.92	26	*e*P	P	14 12 19.4	+0.4
	comp=Z,20nm,1.2s,mb4.9						
HHC	**Hu-ho-hao-te**	73.08	315	*e*P	P	14 12 23.0	+2.9
HHC				AP	pP	14 12 26.2	+3.0
HHC				XP	sP	14 12 29.8	+5.5
HHC				SKS	SKS	14 22 19.0	-7.1
HHC				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
HHC				AMB	AMB		
	comp=Z,380nm,5.9s						
HHC				LR	LR		
	comp=N,3µm,19.0s,MS5.8						
HHC				LR	LR		
	comp=E,3µm,16.6s,MS5.8						
HHC				LR	LR		
	comp=Z,5µm,16.7s,MS5.9						
CLL	**Collm**	73.10	23	*i* P	P	14 12 20.8	+0.8
CLL				*i*		14 12 27.0	
CLL				*e*S	S	14 21 52.0	+5.9
CLL				pmax	pmax		
	comp=Z,23nm,1.6s,mb4.9						
CLL				MLR	MLR		
	comp=Z,4µm,17.8s,MS5.8						
CLL	**Collm**	73.10	23	*i* P	P	14 12 20.8	+0.8
	comp=Z,23nm,1.6s,mb4.9						
CLL				*i*		14 12 27.0	
CLL				*e*S	S	14 21 52.0	+5.9
CLL				LR	LR		
	comp=Z,4µm,17.8s,MS5.8						
CLL	**Collm**	73.10	23	P	P	14 12 20.8	+0.8
	comp=Z,logA/T=1.2,mb4.9						
CLL				*i*		14 12 27.0	
CLL				*e*PP	PP	14 15 03.0	-1.9
CLL				*e*PPP	PPP	14 16 47.0	-1.1
CLL				*e*		14 17 43.0	
CLL				*e*S	S	14 21 52.0	+5.9
CLL				*e*PS	PS	14 22 17.0	-2.7
CLL				*e*PPS	PPS	14 22 29.0	-4.8
CLL				*e*SS	SS	14 26 29.0	-0.7
OBN	**Obninsk**	73.21	7*c*	*i*P	P	14 12 21.8	+1.3
OBN				*i* S	S	14 21 46.1	-1.2
OBN				pmax	pmax		
	comp=Z,106nm,1.2s,mb5.7						
OBN				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.7						
OBN	**Obninsk**	73.21	7	*e*P	P	14 12 20.4	-0.1
	comp=Z,101nm,1.1s,mb5.7						
OBN				LR	LR		
	comp=Z,624nm,20.0s,MS4.9						
MOX	**Moxa**	73.37	24	*e*P	P	14 12 22.3	+0.8
MOX				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1						
MOX				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
MOX	**Moxa**	73.37	24	*e*P	P	14 12 22.3	+0.8
	comp=Z,27nm,1.1s,mb5.1						
MOX				*e*S	S	14 22 00.0	+11
MOX				*e*SS	SS	14 26 41.0	+7.3
MOX				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
MOX	**Moxa**	73.37	24	*i* P	P	14 12 22.3	+0.8
	comp=Z,logA/T=1.4,mb5.1						
MOX				S	S	14 22 00.0	+11
MOX				SS	SS	14 26 41.0	+7.3
MOX				L		14 46 02.0	
MFF	**Saint Martin d**	73.51	33	*e*P	P	14 12 22.9	+0.4
TOD	**Tromm**	73.58	26	*e*P	P	14 12 24.9	+2.1
CHKZ	**Chkalovo**	73.59	347	*i* P	P	14 12 22.4	-0.4
CHKZ				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
CHKZ	**Chkalovo**	73.59	347	*e*P	P	14 12 22.3	-0.5
	comp=Z,29nm,1.1s,mb5.1						
BRG	**Berggiesshubel**	73.72	22	*i* P	P	14 12 23.9	+0.3
BRG				*i*		14 12 31.4	
BRG				*e*		14 15 09.0	
BRG				*i* S	S	14 22 02.0	+8.9
BRG				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.2						
BRG				MLR	MLR		
	comp=N,3µm,18.2s,MS5.7						
BRG				MLR	MLR		
	comp=E,1µm,18.2s,MS5.7						
BRG				MLR	MLR		
	comp=Z,4µm,18.2s,MS5.8						
BRG	**Berggiesshubel**	73.72	22	*i* P	P	14 12 23.9	+0.3
	comp=Z,44nm,1.3s,mb5.2						
BRG				*i*		14 12 31.4	
BRG				*e*PP	PP	14 15 09.0	-0.9
BRG				*i* S	S	14 22 02.0	+8.9
BRG				*i*		14 23 16.0	
BRG				LR	LR		
	comp=Z,4µm,18.2s,MS5.8						
LANF	**Langenberg**	73.87	27	*e*P	P	14 12 27.1	+2.6
LANF	**Langenberg**	73.87	27	*e*P	P	14 12 25.7	+1.2
BTO	**Baotou**	73.95	316	*e*P	P	14 12 26.3	+1.1
NKC	**Novy Kostel**	73.95	23	*e*P	P	14 12 26.0	+1.0
NKC				*e*pP	pP	14 12 32.0	+3.9
NKC				*e*S	S	14 21 56.2	+0.5
NKC				AMS	AMS	14 45 40.0	
	comp=Z,3µm,17.6s						
THEF	**They Montfort**	74.02	28	*e*P	P	14 12 27.1	+1.7
GRA1	**Grafenberg Arr**	74.14	24	*e*P	P	14 12 27.0	+0.9
	comp=Z,20nm,1.0s,mb5.0						
GRA1				*e*pP	pP	14 12 33.7	+4.5
GRA1				*e*S	S	14 22 06.8	+9.0
GRA1				*e*SS	SS	14 26 51.4	+6.0
GRA1				LR	LR		
	comp=Z,3µm,21.3s,MS5.6						
GRF	**Grafenberg Arr**	74.14	24	*e*P	P	14 12 27.0	+0.9
GRF				*e**PP	pP	14 12 33.7	+4.5
GRF				*e*S	S	14 22 06.8	+9.0
GRF				*e*SS	SS	14 26 51.4	+6.0
GRF				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
GRF				MLR	MLR		
	comp=Z,3µm,21.3s,MS5.6						
GRF	**Grafenberg Arr**	74.14	24	*e*P	P	14 12 27.0	+0.9
GRF				*e**PP	pP	14 12 33.7	+4.5
GRF				*e*S	S	14 22 06.8	+9.0
GRF				*e*SS	SS	14 26 51.4	+6.0
GRF				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
GRF				MLR	MLR		
	comp=Z,3µm,21.3s,MS5.6						
GRF	**Grafenberg Arr**	74.14	24	*e*P	P	14 12 27.0	+0.9
	comp=Z,20nm,1.0s,mb5.0						
GRF				*e*pP	pP	14 12 33.7	+4.5
GRF				*e*S	S	14 22 06.8	+9.0
GRF				*e*SS	SS	14 26 51.4	+6.0
GRF				LR	LR		
	comp=Z,3µm,21.3s,MS5.6						
AFI	**Afiamalu**	74.16	221	PFAKE		14 12 40.0	+13
AFI				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
PVCC	**Panska Ves**	74.19	22	*e*P	P	14 12 27.5	+1.2
PVCC				*e*pP	pP	14 12 32.6	+3.1
PVCC				AMS	AMS	14 46 20.0	
	comp=Z,3µm,18.7s						
LOR	**Lormes**	74.23	30	*e*P	P	14 12 27.0	+0.4
	comp=Z,92nm,1.4s,mb5.2						
LOR				*e*R			
	comp=Z,8µm,20.0s						
LOR	**Lormes**	74.23	30	*e*P	P	14 12 27.0	+0.4
LOR				pmax	pmax		
	comp=Z,46nm,1.4s,mb5.2						
LOR				MLR	MLR		
	comp=Z,8µm,20.0s,MS6.0						
CDF	**Champ du Feu**	74.23	27	*e*P	P	14 12 27.1	+0.5
	comp=Z,81nm,1.3s,mb5.2						
CDF	**Champ du Feu**	74.23	27	*e*P	P	14 12 27.1	+0.5
CDF				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
BVA0	**Borovoye Array**	74.25	347	P	P	14 12 26.6	0.0
BVA0				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.5						
BVAR	**Borovoye Array**	74.25	347	P	P	14 12 26.7	0.0
	comp=Z,2.1nm,0.7s,mb4.2,baz=27,slow=3.3,SNR=9.9						
WLS	**Welschbruch**	74.25	27	*e*P	P	14 12 26.9	+0.2
WLS	**Welschbruch**	74.25	27	*e*P	P	14 12 27.9	+1.2
KSP	**Ksiaz**	74.29	21	*e*P	P	14 12 26.7	-0.2
KSP				*e**PP	pP	14 12 34.4	+4.4
KSP				*e*		14 15 12.0	
KSP				*e*S	S	14 22 05.0	+5.5
KSP				*e*		14 22 36.0	
KSP				*e*SS	SS	14 26 50.0	+2.4
KSP				MLR	MLR		
	comp=Z,8µm,20.7s,MS6.0						
KSP	**Ksiaz**	74.29	21	*e*P	P	14 12 27.9	+1.0
KSP				MLR	MLR	14 44 54.1	
	comp=Z,7µm,20.7s,MS5.9						
SSF	**Saint Saulge**	74.30	30	*e*P	P	14 12 27.4	+0.4
SSF				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.1						
SSF	**Saint Saulge**	74.30	30	*e*P	P	14 12 27.4	+0.4
	comp=Z,33nm,1.3s,mb5.1						
HAU	**Haudompre**	74.33	28	*e*P	P	14 12 27.4	+0.2
HAU				*e*R			
	comp=Z,5µm,22.4s						
ECH	**Echery**	74.38	28	*e*P	P	14 12 26.7	-0.7
ECH	**Echery**	74.38	28	*e*P	P	14 12 28.6	+1.2
RKT	**Rikitea**	74.42	184	*e*S	S	14 21 49.5	-12
	comp=Z,913nm,29.5s						
RKT				*e*SS	SS	14 26 43.4	-6.7
	comp=Z,727nm,28.8s						
RKT				*e*LQ		14 31 39.9	
	comp=Z,830nm,39.5s						
RKT				*e*LR	LR	14 34 58.8	
	comp=Z,5µm,28.2s,baz=4.5						
AVF	**Avril sur Loir**	74.50	31	*e*P	P	14 12 28.2	0.0
	comp=Z,34nm,1.0s,mb4.9						
AVF	**Avril sur Loir**	74.50	31	*e*P	P	14 12 28.2	0.0
AVF				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
BGF	**Bois d’Agland**	74.54	31	*e*P	P	14 12 28.5	+0.1
UPC	**Upice**	74.54	21	*e*P	P	14 12 29.2	+0.8
TCF	**Toulx Ste Croi**	74.57	32	*e*P	P	14 12 28.8	+0.2
	comp=Z,51nm,1.2s,mb5.0						
TCF	**Toulx Ste Croi**	74.57	32	*e*P	P	14 12 28.8	+0.2
TCF				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
BFO	**Black Forest**	74.61	27	*e*P	P	14 12 29.4	+0.6
BFO				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.2						
BFO	**Black Forest**	74.61	27	*e*P	P	14 12 29.4	+0.6
	comp=Z,42nm,1.4s,mb5.2						
HINF	**Hinteralfeld**	74.65	28	*e*P	P	14 12 29.3	+0.3
	comp=Z,67nm,1.4s,mb5.1						
HINF	**Hinteralfeld**	74.65	28	*e*P	P	14 12 29.3	+0.3
HINF				pmax	pmax		
	comp=Z,34nm,1.4s,mb5.1						
PRU	**Pruhonice**	74.69	22	*e*P	P	14 12 31.7	+2.5
PRU				*e*S	S	14 22 11.0	+7.1
PRU				AMS	AMS	14 46 30.0	
	comp=Z,4µm,17.6s						
MOF	**Molkenrain**	74.70	28	*e*P	P	14 12 30.0	+0.7
DPC	**Dobruska-Polom**	74.76	21	*e*P	P	14 12 30.6	+1.0
DPC				*e*S	S	14 22 11.7	+7.0
SMF	**Signal de Mont**	74.78	30	*e*P	P	14 12 29.8	0.0
FELD	**Feldberg**	74.93	27	*e*P	P	14 12 33.2	+2.6
FELD	**Feldberg**	74.93	27	*e*P	P	14 12 32.3	+1.7
RJF	**Les Rejaudoux**	75.21	33	*e*P	P	14 12 32.4	+0.1
	comp=Z,23nm,1.0s,mb4.8						
RJF				*e*R			
	comp=Z,6µm,21.0s						
RJF	**Les Rejaudoux**	75.21	33	*e*P	P	14 12 32.4	+0.1
RJF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
RJF				MLR	MLR		
	comp=Z,6µm,21.0s,MS5.8						
KHC	**Kasperske Hory**	75.25	23	*e*P	P	14 12 33.3	+0.8
KHC				*e*pP	pP	14 12 38.7	+3.1
KHC				*e*S	S	14 22 15.7	+5.4
KHC				AMS	AMS	14 46 00.0	
	comp=Z,3µm,18.7s						
CABF	**La Chapelle**	75.50	29	*e*P	P	14 12 34.8	+0.8
	comp=Z,148nm,1.6s,mb5.4						
CABF	**La Chapelle**	75.50	29	*e*P	P	14 12 34.8	+0.8
CABF				pmax	pmax		
	comp=Z,74nm,1.6s,mb5.4						
GEC2	**GERESS Array S**	75.55	23	*e*P	P	14 12 34.8	+0.6
GERES	**GERESS Array B**	75.55	23	P	P	14 12 34.7	+0.5
	comp=Z,2.5nm,0.7s,mb4.3,slow=4.0,SNR=18						
GERES				LR	LR	14 46 19.1	
	comp=Z,3µm,21.0s,MS5.6,baz=330,slow=36						
FUR	**Furstenfeldbru**	75.56	25	*e*P	P	14 12 35.2	+0.9
FUR				pmax	pmax		
	comp=Z,25nm,0.5s,mb5.4						
FUR	**Furstenfeldbru**	75.56	25	*e*P	P	14 12 35.2	+0.9
	comp=Z,25nm,0.5s,mb5.4						
MORC	**Moravsky Berou**	75.57	20	*e*P	P	14 12 34.6	+0.3
MORC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
MORC	**Moravsky Berou**	75.57	20	*e*P	P	14 12 34.5	+0.3
	comp=Z,10nm,1.0s,mb4.7						
OJC	**Ojcow**	75.62	19	*e*P	P	14 12 36.5	+1.9
OJC				*e*S	S	14 22 22.2	+7.9
OJC				MLR	MLR	14 47 16.9	
	comp=Z,4µm,19.3s,MS5.7						
OKC	**Ostrava-Krasne**	75.64	20	*e*P	P	14 12 35.2	+0.5
OKC				*e*pP	pP	14 12 40.7	+2.9
OKC				AMS	AMS	14 49 50.0	
	comp=Z,4µm,16.3s						
GUMO	**Guam**	75.82	274	PFAKE		14 12 50.0	+14
GUMO				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
SJPF	**Ste Jean**	76.17	35	*e*P	P	14 12 37.7	-0.1
SSE	**Sheshan**	76.23	303	P	P	14 12 36.4	-2.0
SSE				S	S	14 22 20.9	-0.5
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
SSE				AMB	AMB		
	comp=Z,240nm,8.0s						
SSE				LR	LR		
	comp=N,1µm,29.7s,MS5.1						
SSE				LR	LR		
	comp=E,1µm,29.6s,MS5.1						
SSE				LR	LR		
	comp=Z,2µm,20.0s						
TBI	**Tubuai**	76.31	197	*e*S	S	14 22 18.8	-3.5
	comp=Z,2µm,32.8s						
TBI				*e*SS	SS	14 27 12.1	-7.3
	comp=Z,453nm,28.2s						
TBI				*e*LQ		14 32 40.1	
TBI				*e*LR	LR	14 35 29.8	
	comp=Z,4µm,30.5s,baz=9.8						
DAVOX	**Davos**	76.45	26	LR	LR	14 46 46.3	
	comp=Z,5µm,21.5s,MS5.8,baz=300,slow=36						
NIE	**Niedzica**	76.49	19	*e*P	P	14 12 41.2	+1.7
ETSF	**Etsaut**	76.59	35	*e*P	P	14 12 40.9	+0.7
	comp=Z,30nm,1.1s,mb4.9						
ETSF	**Etsaut**	76.59	35	*e*P	P	14 12 40.9	+0.7
ETSF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
LPL	**La Plagne**	76.69	29	*e*P	P	14 12 41.9	+1.2
NJ2	**Nanjing**	76.69	305	*e*P	P	14 12 40.4	-0.6
NJ2				AP	pP	14 12 45.1	+1.0
NJ2				XP	sP	14 12 47.4	+2.2
NJ2				PP	PP	14 15 34.5	-0.5
NJ2				S	S	14 22 25.0	-1.3
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,630nm,3.8s						
NJ2				LR	LR		
	comp=N,8µm,25.2s,MS6.0						
NJ2				LR	LR		
	comp=E,5µm,21.8s,MS6.0						
NJ2				LR	LR		
	comp=Z,4µm,26.8s,MS5.6						
RAR	**Rarotonga**	76.71	207	LR	LR	14 38 58.8	
	comp=Z,2µm,19.1s,MS5.5,baz=330,slow=30						
RAR	**Rarotonga**	76.71	207	PFAKE		14 12 50.0	+8.7
RAR				LR	LR		
	comp=Z,4µm,20.0s,MS5.7						
LPG	**La Plagne**	76.71	29	*e*P	P	14 12 42.3	+1.5
AKASG	**Malin Array Be**	76.76	13	P	P	14 12 40.9	-0.1
	comp=Z,0.8nm,0.3s,mb4.2,baz=344,slow=5.3,SNR=12						
VOR	**Voronezh**	76.77	6	P	P	14 12 47.0	+6.0
VOR				pmax	pmax		
	comp=N,30nm,1.3s						
VOR				pmax	pmax		
	comp=Z,70nm,1.3s,mb5.4						
LVV	**L’vov**	76.80	16	*e*P	P	14 12 45.1	+3.9
ZST	**Bratislava**	76.96	21	*e*S	S	14 22 36.6	+7.7
ORIF	**Oris-en-Rattie**	76.96	30	*e*P	P	14 12 42.7	+0.5
ORIF				*e*R			
	comp=Z,7µm,22.8s						
VYHS	**Vyhne**	77.06	20	*e*P	P	14 12 44.8	+2.1
MTLF	**Montolieu**	77.18	33	*e*P	P	14 12 43.8	+0.4
VRSR	**Storozhevoye**	77.28	6	*e*P	P	14 12 43.7	-0.1
VRSR				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
VRSR				pmax	pmax		
	comp=N,4.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,6.0nm,0.5s						
KOLS	**Kolonicke sedl**	77.33	18	*e*P	P	14 12 46.3	+2.1
KOLS				*e*sP	sP	14 12 52.4	+4.0
MBDF	**Montbardon**	77.41	29	*e*P	P	14 12 46.0	+1.3
KECS	**Kecovo**	77.42	19	*e*pP	pP	14 12 49.8	+2.0
KECS				*e*		14 12 52.7	
EVO	**Evora**	77.43	42	*e*P	P	14 12 44.4	-0.6
	comp=E,34nm,1.1s,mb4.9						
EVO				*e*R			
	comp=E,4µm,18.0s						
SMRF	**Simiane la Rot**	77.71	30	*e*P	P	14 12 46.5	+0.1
	comp=E,19nm,1.0s,mb4.7						
PSZ	**Piszkesteto**	77.83	20	*e*P	P	14 12 47.3	+0.4
PSZ				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.2						
PSZ	**Piszkesteto**	77.83	20	*e*P	P	14 12 47.3	+0.3
	comp=Z,31nm,1.1s,mb5.2						
PSZ	**Piszkesteto**	77.83	20	*e*P	P	14 12 48.3	+1.4
MKAR	**Makanchi Array**	77.93	337	*i* P	P	14 12 47.4	-0.1
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MKAR	**Makanchi Array**	77.93	337	P	P	14 12 47.2	-0.3
	comp=Z,2.0nm,0.6s,mb4.2,baz=63,slow=2.7,SNR=16						
MKAR				LR	LR	14 53 25.4	
	comp=Z,3µm,18.2s,MS5.7,baz=5.7,slow=40						
PERS	**Pernice**	77.96	23	*e*P	P	14 12 48.7	+1.0
ESDC	**Sonseca Array**	78.11	39	P	P	14 12 48.9	+0.3
	comp=Z,0.6nm,0.4s,baz=326,slow=7.3,SNR=7.6						
SBF	**Sospel**	78.39	29	*e*P	P	14 12 50.8	+0.7
NNA	**Nana**	78.69	126	PFAKE		14 13 00.0	+7.7
NNA				LR	LR		
	comp=Z,373nm,20.0s,MS4.7						
BOJS	**Bojanci**	79.05	23	*e*P	P	14 12 53.8	+0.1
GTA	**Gaotai**	79.13	322	*e*P	P	14 12 57.2	+2.9
GTA				AP	pP	14 13 03.0	+5.6
GTA				XP	sP	14 13 05.8	+7.3
GTA				AMB	AMB		
	comp=Z,270nm,7.6s						
GTA				LR	LR		
	comp=N,3µm,21.3s,MS5.8						
GTA				LR	LR		
	comp=E,4µm,19.8s,MS5.8						
GTA				LR	LR		
	comp=Z,5µm,19.0s,MS5.9						
AB31	**Akbulak array**	79.14	353	*i* P	P	14 12 54.4	+0.3
AB31				pmax	pmax		
	comp=Z,55nm,1.4s,mb5.3						
WMQ	**Urumqi**	79.26	333	P	P	14 12 57.5	+2.7
WMQ				AP	pP	14 13 02.3	+4.3
WMQ				XP	sP	14 13 04.5	+5.4
WMQ				PP	PP	14 15 58.8	+2.5
WMQ				S	S	14 22 55.6	+1.9
WMQ				SCS	ScS	14 23 16.4	+1.9
WMQ				AMB	AMB		
	comp=Z,390nm,5.8s						
WMQ				LR	LR		
	comp=N,2µm,20.5s,MS5.6						
WMQ				LR	LR		
	comp=E,2µm,20.5s,MS5.6						
WMQ				LR	LR		
	comp=Z,2µm,22.8s,MS5.5						
XAN	**Xi’an**	79.88	313	P	P	14 12 57.3	-1.1
XAN				AP	pP	14 13 08.5	+6.9
XAN				S	S	14 22 59.0	-1.4
XAN				AMB	AMB		
	comp=Z,280nm,8.8s						
XAN				LR	LR		
	comp=N,2µm,17.9s,MS5.6						
XAN				LR	LR		
	comp=E,2µm,16.1s,MS5.6						
XAN				LR	LR		
	comp=Z,4µm,17.9s,MS5.8						
KIS	**Kishinev**	80.32	14	*e*P	P	14 13 05.0	+4.5
KIS				*e*S	S	14 23 08.0	+3.3
KIS				*e*PS	PS	14 23 46.0	-5.7
LZH	**Lanzhou**	80.38	318	P	P	14 13 04.3	+3.3
LZH				AP	pP	14 13 08.7	+4.5
LZH				XP	sP	14 13 13.2	+7.9
LZH				PP	PP	14 16 03.5	-2.3
LZH				S	S	14 23 04.0	-1.6
LZH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.5						
LZH				AMB	AMB		
	comp=Z,650nm,5.8s						
LZH				LR	LR		
	comp=E,5µm,16.0s						
LZH				LR	LR		
	comp=Z,8µm,21.4s						
TATO	**Taipei**	80.92	299	PFAKE		14 13 20.0	+16
TATO				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
MLR	**Muntele Rosu**	81.32	16	LR	LR	14 49 52.7	
	comp=Z,5µm,20.0s,MS5.9,baz=3.4,slow=36						

BBLS	**Bajina Basta -**	**81.58**	**21**	⇓*i*P	**P**	**14 13 09.6**	**+2.4**
QZH	**Quanzhou**	**82.51**	**301**	P	**P**	**14 13 11.6**	**-0.8**
QZH				S	S	14 23 27.5	-0.2
QZH				AMB	AMB		
	comp=Z,940nm,5.5s						
QZH				LR	LR		
	comp=N,860nm,9.2s						
QZH				LR	LR		
	comp=E,3µm,18.1s						
QZH				LR	LR		
	comp=Z,4µm,37.5s						
ENH	**Enshi**	**82.76**	**311**	*e*P	**P**	**14 13 13.6**	**0.0**
	comp=Z,72nm,1.5s,mb5.5						
SIM	**Simferopol’**	**83.03**	**11**	*e*P	**P**	**14 13 17.2**	**+2.5**
SIM				*e*		14 16 25.0	
SIM				*i* S	S	14 23 39.5	+6.9
SIM				*e*PS	PS	14 24 30.0	+4.1
SIM				pmax	pmax		
	comp=Z,29nm,6.1s						
SIM				MLR	MLR		
	comp=Z,4µm,17.5s,MS5.8						
FRU	**Bishkek**	**83.39**	**341**	*e*P	**P**	**14 13 18.0**	**+1.4**
FRU				*e*		14 23 43.0	
FRU				pmax	pmax		
	comp=Z,80nm,2.1s,mb5.4						
FRU				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.7						
ANN	**Anapa**	**83.52**	**8**	*e*P	**P**	**14 13 15.8**	**-1.3**
ANN				*e*PPP	PPP	14 18 27.8	+2.5
ANN				*i*		14 23 40.4	
ANN				*e*SS	SS	14 29 00.0	-6.5
ANN				*e*SSS	SSS	14 32 39.6	+7.1
ANN				pmax	pmax		
	comp=Z,284nm,6.9s						
ANN				MLR	MLR		
	comp=N,1µm,19.0s,MS5.4						
ANN				MLR	MLR		
	comp=E,900nm,19.0s,MS5.4						
ANN				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
SAML	**Samuel**	**83.58**	**113**	*e*P	**P**	**14 13 16.7**	**-1.4**
	comp=Z,10nm,1.2s,mb4.8						
SAML				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
AAK	**Ala-Archa**	**83.61**	**341**	*e*P	**P**	**14 13 18.1**	**+0.5**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
AAK				MLR	MLR		
	comp=Z,689nm,20.0s,MS5.0						
AAK	**Ala-Archa**	**83.61**	**341**	*e*P	**P**	**14 13 18.1**	**+0.5**
	comp=Z,8.8nm,1.0s,mb4.8						
AAK				LR	LR		
	comp=Z,689nm,20.0s,MS5.0						
GOF	**Gofitskoye**	**83.64**	**4**	⇓*i*P	**P**	**14 13 20.3**	**+2.6**
GOF				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.7						
SKO	**Skopje**	**83.83**	**20**	*e*P	**P**	**14 13 21.5**	**+2.8**
SKO				*i*	pP	14 13 26.5	+4.6
HNR	**Honiara**	**84.63**	**248**	PFAKE		14 13 30.0	+6.6
HNR				LR	LR		
	comp=Z,972nm,19.0s,MS5.2						
KIV	**Kislovodsk**	**84.72**	**5**	*e*P	**P**	**14 13 23.5**	**+0.3**
KIV				*e*		14 16 39.8	
KIV				*e*		14 23 43.9	
KIV				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.3						
KIV				pmax	pmax		
	comp=N,16nm,0.8s						
KIV				pmax	pmax		
	comp=E,8.0nm,0.8s						
KIV				MLR	MLR		
	comp=N,1µm,16.0s,MS5.5						
KIV				MLR	MLR		
	comp=E,902nm,16.0s,MS5.5						
KIV				MLR	MLR		
	comp=Z,2µm,16.0s,MS5.5						
KIV	**Kislovodsk**	**84.72**	**5**	PFAKE		14 13 40.0	+17
KIV				LR	LR		
	comp=Z,505nm,19.0s,MS4.9						
SOC	**Sochi**	**84.91**	**7**	*e*P	**P**	**14 13 23.9**	**-0.2**
SOC				*e*		14 16 43.8	
SOC				*e*PPP	PPP	14 18 35.9	-2.5
SOC				*e*S	S	14 23 44.9	-6.4
SOC				*e*SS	SS	14 29 29.5	+2.6
SOC				*e*SSS	SSS	14 32 54.9	0.0
SOC				pmax	pmax		
	comp=N,16nm,1.1s						
SOC				pmax	pmax		
	comp=E,22nm,1.1s						
SOC				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.3						
SOC				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.7						
SOC				MLR	MLR		
	comp=N,3µm,21.0s,MS5.8						
SOC				MLR	MLR		
	comp=E,3µm,21.0s,MS5.8						
KSH	**Kashi**	**86.29**	**339**	*e*P	**P**	**14 13 33.2**	**+2.1**
KSH				*e*AP	pP	14 13 37.4	+3.1
KSH				*e*XP	sP	14 13 40.3	+5.0
KSH				PP	PP	14 16 54.0	+0.1
KSH				*e*SKS	SKS	14 23 55.4	-3.9
KSH				S	S	14 24 06.0	+1.3
KSH				AMB	AMB		
	comp=Z,200nm,3.6s						
KSH				LR	LR		
	comp=N,6µm,17.0s,MS6.2						
KSH				LR	LR		
	comp=E,6µm,16.5s,MS6.2						
VAE	**Valguarnera**	**86.33**	**27**	LR	LR	14 53 13.8	
	comp=E,4µm,18.9s,MS5.8,baz=103,slow=36						
LPAZ	**La Paz**	**86.83**	**121**	*e*P	**P**	**14 13 33.8**	**-0.4**
LPAZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPAZ				MLR	MLR		
	comp=Z,1µm,20.0s						
LPAZ	**La Paz**	**86.83**	**121**	P	**P**	**14 13 33.9**	**-0.4**
	comp=Z,6.1nm,1.0s,mb4.8,baz=0.8,slow=25,SNR=15						
LPAZ				LR	LR	14 55 36.0	
	comp=Z,1µm,19.1s,MS5.3,baz=328,slow=38						
LPAZ	**La Paz**	**86.83**	**121**	*e*P	**P**	**14 13 33.8**	**-0.4**
	comp=Z,10nm,0.9s,mb5.1						
LPAZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
TI2	**Plekhanov**	**87.03**	**3**	*e*P	**P**	**14 13 35.6**	**+1.0**
TI2				*e*S	S	14 24 15.0	+3.3
GYA	**Guiyang**	**87.30**	**311**	P	**P**	**14 13 37.7**	**+1.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,260nm,6.9s						
GYA				LR	LR		
	comp=N,2µm,23.0s,MS5.6						
GYA				LR	LR		
	comp=E,2µm,24.5s,MS5.6						
GYA				LR	LR		
	comp=Z,2µm,23.6s,MS5.5						
BRTR	**Keskin Array B**	**88.12**	**12**	P	**P**	**14 13 41.6**	**+1.7**
	comp=Z,2.0nm,0.9s,mb4.3,slow=1.2,SNR=8.2						
GNI	**Garni**	**88.61**	**3**	*i* P	**P**	**14 13 44.1**	**+1.9**
GNI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GNI				MLR	MLR		
	comp=Z,2µm,16.0s						
GNI	**Garni**	**88.61**	**3**	LR	LR	14 56 33.9	
	comp=Z,2µm,18.6s,MS5.5,baz=180,slow=38						
GNI	**Garni**	**88.61**	**3**	PFAKE		14 13 50.0	+7.8
GNI				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
ISP	**Isparta**	**89.53**	**15**	*i* P	**P**	**14 13 48.4**	**+1.7**
MALT	**Malatya**	**90.04**	**8**	P	**P**	**14 13 48.2**	**-0.9**
MALT				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.2						
MALT	**Malatya**	**90.04**	**8**	P	**P**	**14 13 48.2**	**-0.9**
	comp=Z,13nm,1.0s,mb5.2						
KMI	**Kunming**	**90.26**	**313**	P	**P**	**14 13 54.8**	**+4.4**
KMI				XP	sP	14 13 59.7	+5.0
KMI				SKS	SKS	14 24 21.2	-3.4
KMI				S	S	14 24 43.0	+0.9
KMI				AMB	AMB		
	comp=Z,10.0nm,1.8s,mb4.8						
KMI				AMB	AMB		
	comp=Z,160nm,4.6s						
KMI				LR	LR		
	comp=N,2µm,22.2s,MS5.6						
KMI				LR	LR		
	comp=E,2µm,22.2s,MS5.6						
KMI				LR	LR		
	comp=Z,2µm,26.1s,MS5.4						
RAO	**Raoul Island**	**90.38**	**220**	LR	LR	14 46 07.8	
	comp=Z,2µm,19.7s,MS5.5,baz=52,slow=30						
RAO	**Raoul Island**	**90.38**	**220**	PFAKE		14 14 00.0	+9.1
RAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
SIV	**San Ignacio**	**90.47**	**115**	P	**P**	**14 13 50.9**	**-0.6**
	comp=Z,4.0nm,1.1s,mb4.7,baz=359,slow=3.5,SNR=9.1						
IDI	**Anoyia**	**90.99**	**19**	LR	LR	14 56 54.1	
	comp=Z,2µm,21.2s,MS5.5,baz=178,slow=37						
LSA	**Lhasa**	**91.00**	**324**	*e*P	**P**	**14 13 58.4**	**+4.7**
PMG	**Port Moresby**	**92.23**	**258**	PFAKE		14 14 10.0	+10
PMG				LR	LR		
	comp=Z,839nm,20.0s,MS5.2						
SHL	**Shillong**	**94.46**	**322**	*e*P	**P**	**14 14 12.0**	**+2.3**
ASF	**Jabal al Asfar**	**95.97**	**10**	LR	LR	15 02 28.2	
	comp=Z,1µm,19.5s,MS5.4,baz=221,slow=38						
RCBR	**Riachuelo**	**97.73**	**90**	PFAKE		14 14 40.0	+15
RCBR				LR	LR		
	comp=Z,3µm,22.0s,MS5.7						
CMAR	**Chiang Mai Arr**	**97.77**	**313**	*i* P	**P**	**14 14 28.0**	**+3.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**97.77**	**313**	P	**P**	**14 14 24.8**	**-0.1**
	comp=Z,1.3nm,0.9s,mb4.5,baz=10,slow=5.9,SNR=4.8						
CMAR				LR	LR	15 02 26.6	
	comp=Z,1µm,18.6s,MS5.5,baz=40,slow=38						
BDFB	**Brasilia**	**97.83**	**105**	LR	LR	15 02 11.9	
	comp=Z,2µm,18.5s,MS5.6,baz=329,slow=38						
EIL	**Elat**	**98.20**	**12**	LR	LR	15 01 25.7	
	comp=Z,496nm,18.8s,MS5.0,baz=114,slow=37						
CPUP	**Villa Florida**	**100.81**	**119**	PFAKE		14 14 50.0	+12
CPUP				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
CTAO	**Charters Tower**	**101.08**	**252**	PFAKE		14 14 50.0	+10
CTAO				LR	LR		
	comp=Z,924nm,20.0s,MS5.3						
SNZO	**South Karori**	**103.82**	**219**	PFAKE		14 15 00.0	+8.5
SNZO				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
PLCA	**Paso Flores**	**105.90**	**137**	PFAKE		14 19 20.0	
PLCA				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
DBIC	**Dimbokro**	**106.03**	**57**	PFAKE		14 19 30.0	
DBIC				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
TRQA	**Tornquist**	**107.66**	**129**	PFAKE		14 19 30.0	
TRQA				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
WRAB	**Tennant Creek**	**108.17**	**261**	PFAKE		14 19 30.0	
WRAB				LR	LR		
	comp=Z,411nm,20.0s,MS5.0						
TAU	**Tasmania Unive**	**117.59**	**235**	PFAKE		14 19 50.0	+13
TAU				LR	LR		
	comp=Z,247nm,19.0s,MS4.8						
MBWA	**Marble Bar**	**118.17**	**271**	PFAKE		14 19 50.0	+11
MBWA				LR	LR		
	comp=Z,794nm,21.0s,MS5.3						
MBAR	**Mbarara**	**126.96**	**23**	PFAKE		14 20 10.0	+14
MBAR				LR	LR		
	comp=Z,428nm,20.0s,MS5.1						
NWAO	**Narrogin (SRO)**	**128.09**	**263**	PFAKE		14 20 10.0	+12
NWAO				LR	LR		
	comp=Z,712nm,19.0s,MS5.4						
DGAR	**Diego Garcia**	**131.91**	**328**	PFAKE		14 20 20.0	+15
DGAR				LR	LR		
	comp=Z,458nm,21.0s,MS5.2						
SBA	**Scott Base**	**134.56**	**195**	PFAKE		14 20 20.0	+11
SBA				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
TSUM	**Tsumeb**	**139.40**	**49**	PFAKE		14 20 30.0	+11
TSUM				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
LSZ	**Lusaka**	**140.18**	**32**	PFAKE		14 20 30.0	+10
LSZ				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
MATP	**Matopo**	**145.06**	**35**	PKPbc	PKPbc	14 20 26.5	+0.4
	comp=Z,11nm,0.9s,baz=325,slow=5.1,SNR=14						
CASY	**Casey**	**146.57**	**220**	PFAKE		14 20 40.0	+12
CASY				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
OPO	**Ambohidratompo**	**147.06**	**3**	PKPbc	PKPdf	14 20 30.9	-1.4
	comp=Z,0.4nm,0.3s,baz=114,slow=19,SNR=2.3						
VNA3	**Neumayer Olymp**	**147.59**	**149**	⇑*i*P	PKPdf	14 20 32.5	+0.9
VNA3	**Neumayer Olymp**	**147.59**	**149**	⇑*i*	PKPdf	14 20 39.3	+7.7
VNA3	**Neumayer Olymp**	**147.59**	**149**	⇑*i*	PKPdf	14 20 42.4	+11
LBTB	**Lobatse**	**148.06**	**43**	PFAKE		14 20 40.0	+6.3
LBTB				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
VNA1	**Neumayer--Stat**	**148.12**	**148**	⇑*i*P	PKPdf	14 20 35.0	+2.6
VNA1	**Neumayer--Stat**	**148.12**	**148**	⇑*i*	PKPdf	14 20 39.1	+6.7
VNA1	**Neumayer--Stat**	**148.12**	**148**		PKPdf	14 20 45.7	+13
VNA2	**Neumayer--Watz**	**148.37**	**149**	⇑*i*P	PKPdf	14 20 34.7	+1.9
VNA2	**Neumayer--Watz**	**148.37**	**149**	⇑*i*	PKPdf	14 20 37.4	+4.6
VNA2	**Neumayer--Watz**	**148.37**	**149**	⇑*i*	PKPdf	14 20 41.0	+8.2
VNA2	**Neumayer--Watz**	**148.37**	**149**		PKPdf	14 20 47.4	+15
SNAA	**Sanae**	**149.67**	**151**	⇑*i*	PKPdf	14 20 37.6	+2.7
SNAA	**Sanae**	**149.67**	**151**		PKPdf	14 20 43.6	+8.7
SNAA	**Sanae**	**149.67**	**151**		PKPdf	14 20 46.7	+12
SNAA	**Sanae**	**149.67**	**151**	PKPdf	PKPdf	14 20 33.8	-1.1
SNAA				⇑*i*P		14 20 37.6	
BOSA	**Boshof**	**151.03**	**47**	PKIKP	PKPdf	14 20 40.6	+2.3
BOSA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BOSA	**Boshof**	**151.03**	**47**	PKPbc	PKPdf	14 20 40.6	+2.4
	comp=Z,7.9nm,0.9s,baz=29,slow=3.4,SNR=4.2						
BOSA	**Boshof**	**151.03**	**47**	PFAKE		14 20 50.0	+12
BOSA				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
SUR	**Sutherland**	**151.91**	**58**	PFAKE		14 20 50.0	+11
SUR				LR	LR		
	comp=Z,399nm,19.0s,MS5.2						
SYO	**Syowa Base**	**161.92**	**169**	⇑PKPab	PKPab	14 21 38.0	+1.8

IDC 09 14:04:20.4±4.1**, 1.99N**×**96.59E, mb4.2**/3**, mb1 4.3**/4**, mb1mx3.9**/19**, mbtmp4.1**/4**, ML3.9**/1**, Error ellipse: s-maj=139.0km s-min=28.7km az=63.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.53**	**8**	Pn	P	14 08 15.1	-0.4
	0.2nm,0.3s,baz=197,slow=12,SNR=15						
WRA	**Warramunga Arr**	**42.97**	**122**	P	P	14 12 21.7	-1.7
	0.9nm,0.6s,baz=301,slow=9.1,SNR=9.9						
SONM	**Songino Array**	**46.45**	**9**	P	P	14 12 48.9	-2.0
	5.6nm,1.2s,baz=190,slow=9.4,SNR=4.9						
ZAL	**Zalesovo**	**52.68**	**351**	P	P	14 13 36.3	-2.5
	1.2nm,0.3s,baz=283,slow=4.0,SNR=4.2						

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*INMG **09** 14:22:36.3±1.4, 37.34N×2.10W, h4km±4km, ML2.7, Error ellipse: s-maj=3.1km s-min=1.8km az=118.0*

*NEIC **09** 14:22:36.4, 37.34N×2.11W, h3km, MN2.9(MDD), After MDD.*

NEIC Felt [II] at Albanchez, Albox, Arboleas and Huercal-Overa.

*CSEM **09** 14:22:36.2±0.1, 37.34N×2.10W, h5km, ML3.5/13, Error ellipse: s-maj=2.9km s-min=1.9km az=155.0*

*SFS **09** 14:22:36.0, 37.34N×2.10W*

MDD 09 14:22:36.2±0.2**, 37.35N**×**2.11W, mbLg2.9**/24**, 3C, Error ellipse: s-maj=2.3km s-min=2.1km az=110.0, PRXIMO L, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EXOR	**Olula del Rio**	**0.15**	**272**	Pg	Pg	14 22 38.8	-0.4
EXOR				Lg		14 22 40.6	
EXOR	**Olula del Rio**	**0.15**	**272**	Pg	Pg	14 22 38.8	-0.4
	SNR=7.9						
EXOR				Lg		14 22 40.7	
	SNR=7.9						
ENIJ	**Nijar**	**0.38**	**192**	⇑Pg	Pg	14 22 43.5	-0.4
	232nm,0.1s,SNR=18						
ENIJ				Lg		14 22 47.8	
	428nm,0.2s,SNR=5.0						
EBER	**Berja**	**0.77**	**234**	⇑Pg	Pg	14 22 50.2	-1.4
	205nm,0.2s,SNR=18						
EBER				Lg		14 23 01.3	
	643nm,0.6s,SNR=7.0						
EBER	**Berja**	**0.77**	**234**	Pg	Pg	14 22 50.2	-1.4
	205nm,0.2s,SNR=18						
EMUR	**La Murta**	**0.85**	**54**	⇑Pg	Pg	14 22 51.7	-1.5
	110nm,0.2s,SNR=18						
EMUR				Lg		14 23 03.1	
	438nm,0.4s,SNR=34						
EMUR	**La Murta**	**0.85**	**54**	Pg	Pg	14 22 51.7	-1.5
	110nm,0.2s,SNR=18						
EQES	**Quesada**	**0.89**	**301**	Pg	Pg	14 22 53.2	-0.7
EQES				Lg		14 23 06.6	
EQES	**Quesada**	**0.89**	**301**	Pg	Pg	14 22 52.8	-1.1
	28nm,0.1s,SNR=171						
EQES				Lg		14 23 06.6	
	266nm,0.3s,SNR=19						
EQES	**Quesada**	**0.89**	**301**	Pg	Pg	14 22 53.2	-0.8
	28nm,0.1s,SNR=171						
CART	**Cartagena**	**0.91**	**75**	*e*Pg	Pg	14 22 52.2	-2.3
CART				*e*Sg	Sg	14 23 04.4	-2.2
CART	**Cartagena**	**0.91**	**75**	Pg	Pg	14 22 52.7	-1.7
CART				Lg		14 23 04.5	
CART	**Cartagena**	**0.91**	**75**	*e*Pg	Pg	14 22 52.2	-2.3
CART				*e*Sg	Sg	14 23 04.4	-2.2
ECOG	**Cogollos-Vega**	**1.16**	**267**	Pg	Pg	14 22 57.3	-2.2
	68nm,0.2s,SNR=21						
ECOG				Lg		14 23 14.7	
	57nm,0.2s,SNR=5.0						
EVIA	**Vianos**	**1.32**	**347**	Pn	Pn	14 23 00.4	-1.5
	1.2nm,0.2s,SNR=7.9						
EVIA				Pg	Pg	14 23 01.4	-1.3
	140nm,0.5s,SNR=45						
EVIA				Lg		14 23 18.7	
	146nm,0.2s,SNR=24						
ETOB	**Tobarra**	**1.37**	**19**	Pn	Pn	14 23 01.1	-1.5
	36nm,0.2s,SNR=81						
ETOB				Lg		14 23 19.9	
	198nm,0.4s,SNR=5.0						
ETOB	**Tobarra**	**1.37**	**19**	Pn	Pn	14 23 01.1	-1.5
	36nm,0.2s,SNR=81						
ERON	**Agron**	**1.39**	**257**	Pg	Pg	14 23 01.0	-3.0
	16nm,0.2s,SNR=21						
ERON				Lg		14 23 23.2	
	25nm,0.4s,SNR=5.0						
EALB	**Alboran**	**1.59**	**208**	Pg	Pg	14 23 05.4	-2.6
	9.3nm,0.1s,SNR=4.0						
EALB				Lg		14 23 25.3	
	13nm,0.2s,SNR=4.0						
EALB	**Alboran**	**1.59**	**208**	Pg	Pg	14 23 05.4	-2.6
	9.3nm,0.1s,SNR=4.0						
ELOJ	**Sierra Loja**	**1.64**	**264**	Pg	Pg	14 23 07.1	-1.9
	12nm,0.1s,SNR=23						
ELOJ				Lg		14 23 30.6	
	27nm,0.3s,SNR=8.2						
ELUQ	**Luque**	**1.73**	**278**	Pn	Pn	14 23 07.2	-0.6
	8.3nm,0.2s,SNR=38						
ELUQ				Pg	Pg	14 23 09.0	-1.8
	40nm,0.2s,SNR=7.9						
ELUQ				Lg		14 23 31.8	
	59nm,0.2s,SNR=12						
ELUQ	**Luque**	**1.73**	**278**	Pg	Pg	14 23 09.0	-1.7
	40nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**2.01**	**47**	Pn	Pn	14 23 08.3	-3.5
EBEN				Lg		14 23 44.2	
EBEN	**Beniarda**	**2.01**	**47**	Pn	Pn	14 23 08.3	-3.5
	4.8nm,0.2s,SNR=7.6						
EBEN				Sn	Sn	14 23 33.1	-4.9
	15nm,0.4s,SNR=7.9						
EBEN	**Beniarda**	**2.01**	**47**	Pn	Pn	14 23 08.3	-3.5
	4.8nm,0.2s,SNR=7.6						
EADA	**Adamuz**	**2.12**	**293**	Pn	Pn	14 23 11.3	-2.1
EADA				Sn	Sn	14 23 37.1	-3.6
EADA				Lg		14 23 44.1	
EADA	**Adamuz**	**2.12**	**293**	Pn	Pn	14 23 11.3	-2.1
	8.1nm,0.1s,SNR=7.9						
EADA				Pg	Pg	14 23 14.4	-4.1
	7.8nm,0.6s,SNR=7.9						
EADA				Sn	Sn	14 23 37.1	-3.6
	28nm,0.1s,SNR=7.9						
EADA				Lg		14 23 44.1	
	78nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.12**	**293**	Pn	Pn	14 23 11.3	-2.0
	8.1nm,0.1s,SNR=7.9						
EADA				Sn	Sn	14 23 37.1	-3.7
	28nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**2.27**	**251**	Pn	Pn	14 23 10.6	-4.9
	1.6nm,0.2s,SNR=7.9						
EMIJ				Pg	Pg	14 23 16.1	-5.4
	5.6nm,0.2s,SNR=4.0						
EMIJ				Lg		14 23 48.2	
	7.2nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**2.27**	**251**	Pg	Pg	14 23 16.1	-5.5
	5.6nm,0.2s,SNR=4.0						
ECHE	**Chera**	**2.41**	**21**	Pg	Pg	14 23 20.5	-3.9
	10nm,0.4s,SNR=9.8						
ECHE				Lg		14 23 51.6	
	34nm,0.5s,SNR=7.5						
LIJA	**Lijar**	**2.67**	**261**	Pn	Pn	14 23 16.8	-4.5
LIJA				Sn	Sn	14 23 49.0	-5.7
LIJA	**Lijar**	**2.67**	**261**	*i* P	Pn	14 23 16.8	-4.4
ECAB	**El Cabril**	**2.72**	**286**	Pn	Pn	14 23 19.5	-2.5
	17nm,0.2s,SNR=142						
ECAB				Sn	Sn	14 23 52.0	-4.1
	22nm,0.2s,SNR=13						
ECAB				Lg		14 24 01.6	
	52nm,0.2s,SNR=5.0						
ECAB	**El Cabril**	**2.72**	**286**	Pn	Pn	14 23 19.5	-2.5
	17nm,0.2s,SNR=142						
ECAB				Sn	Sn	14 23 52.0	-4.1
	22nm,0.2s,SNR=13						
ESDC	**Sonseca Array**	**2.74**	**329**	Pg	Pg	14 23 27.2	-3.7
	9.0nm,0.3s,baz=147,slow=17,SNR=11						
ESDC				Sn	Sn	14 23 51.2	-5.3
	18nm,0.1s,baz=144,slow=23,SNR=4.7						
ESDC				Lg		14 24 02.8	
	12nm,0.2s,baz=144,slow=29,SNR=7.3						
ESDC	**Sonseca Array**	**2.74**	**329**	Pg	Pg	14 23 27.2	-3.7
	9.0nm,0.3s,SNR=11						
ESDC				Sn	Sn	14 23 51.2	-5.3
	18nm,0.1s,SNR=4.7						
ESPR	**Espera**	**3.03**	**262**	Pn	Pn	14 23 23.2	-3.2
	SNR=7.9						
ESPR				Pg	Pg	14 23 32.1	-4.6
	5.0nm,0.3s,SNR=4.0						
ESPR				Lg		14 24 14.5	
	21nm,0.4s,SNR=4.0						
ESPR	**Espera**	**3.03**	**262**	Pg	Pg	14 23 32.1	-4.7
	5.0nm,0.3s,SNR=4.0						
EMOS	**Mosqueruela**	**3.27**	**22**	Pn	Pn	14 23 26.5	-3.2
	1.1nm,0.2s,SNR=7.9						
EMOS				Pg	Pg	14 23 38.0	-3.5
	2.9nm,0.3s,SNR=7.9						
EMOS				Lg		14 24 17.1	
	16nm,0.6s,SNR=7.9						
EMOS	**Mosqueruela**	**3.27**	**22**	Pn	Pn	14 23 26.5	-3.3
	1.1nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**3.27**	**22**	Pg	Pg	14 23 38.0	-3.5
	2.9nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.65**	**278**	Pn	Pn	14 23 31.8	-3.4
EMIN				Sn	Sn	14 24 13.5	-6.0
EMIN				Lg		14 24 26.5	
EMIN	**Mina Concepcio**	**3.65**	**278**	Pn	Pn	14 23 31.8	-3.4
	3.7nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	14 24 13.5	-6.0
	7.4nm,0.2s,SNR=7.9						
EMIN				Lg		14 24 29.0	
	20nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.65**	**278**	Pn	Pn	14 23 31.8	-3.3
	3.7nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	14 24 13.5	-6.1
	7.4nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**4.07**	**27**	Pn	Pn	14 23 38.7	-2.4
	0.6nm,0.1s,SNR=4.0						
ERTA	**Horta de San J**	**4.07**	**27**	Pn	Pn	14 23 38.7	-2.5
	0.6nm,0.1s,SNR=4.0						
EBAD	**Badajoz**	**4.12**	**291**	Pn	Pn	14 23 38.3	-3.5
	2.0nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	14 24 24.1	-7.3
	21nm,0.2s,SNR=7.9						
EBAD				Lg		14 24 45.6	
	12nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**4.12**	**291**	Pn	Pn	14 23 38.3	-3.5
	2.0nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	14 24 24.1	-7.3
	21nm,0.2s,SNR=7.9						
PALC	**Alcoutim**	**4.27**	**273**	*e*Pn	Pn	14 23 40.6	-3.4
PALC				*e*Sn	Sn	14 24 28.8	-6.6
	8.0nm,0.3s						
PALC	**Alcoutim**	**4.27**	**273**	*e*Pn	Pn	14 23 40.6	-3.4
PALC				*e*Sn	Sn	14 24 28.8	-6.6
	8.0nm,0.3s						

EGRO	**El Granado**	**4.28**	**274**	Sn	Sn	14 24 28.5	-7.1
	7.6nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**4.28**	**274**	Sn	Sn	14 24 28.5	-7.0
	7.6nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	**4.55**	**16**	Pn	Pn	14 23 44.2	-3.7
	SNR=7.9						
ESAC				Lg		14 24 58.5	
	58nm,0.4s,SNR=7.9						
ETOS	**Mallorca**	**4.55**	**56**	Pn	Pn	14 23 44.8	-3.2
	0.6nm,0.2s,SNR=4.0						
ETOS				Sn	Sn	14 24 35.5	-7.0
	1.4nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**4.55**	**56**	Pn	Pn	14 23 44.8	-3.2
	0.6nm,0.2s,SNR=4.0						
ETOS				Sn	Sn	14 24 35.5	-6.9
	1.4nm,0.2s,SNR=7.9						
PBEJ	**Beja**	**4.62**	**280**	*e*Pn	Pn	14 23 45.8	-3.1
PBEJ				*e*Sn	Sn	14 24 36.8	-7.2
PBEJ				*e*Sg	Sg	14 25 02.4	-7.5
	3.7nm,0.2s						
PBEJ	**Beja**	**4.62**	**280**	*e*Pn	Pn	14 23 45.8	-3.1
PBEJ				*e*Sn	Sn	14 24 36.8	-7.2
	3.7nm,0.2s						
PBEJ				*e*Sg	Sg	14 25 02.4	-7.5
PCBR	**Castelo Branco**	**4.89**	**302**	*e*Pn	Pn	14 23 49.8	-2.9
PCBR				*e*Sn	Sn	14 24 44.3	-6.5
	14nm,0.5s						
PCBR	**Castelo Branco**	**4.89**	**302**	*e*Pn	Pn	14 23 49.8	-2.9
PCBR				*e*Sn	Sn	14 24 44.3	-6.5
	14nm,0.5s						
MOE	**Montemor**	**5.07**	**285**	*e*Sn	Sn	14 24 48.8	-6.7
MTE	**Manteigas**	**5.22**	**307**	*e*Sn	Sn	14 24 53.3	-6.0
MTE				*e*Sg	Sg	14 25 23.1	-6.9
	15nm,0.6s						
MTE	**Manteigas**	**5.22**	**307**	*e*Sn	Sn	14 24 53.3	-6.0
MTE				*e*Sg	Sg	14 25 23.1	-6.9
	15nm,0.6s						
ECRI	**Cripan**	**5.26**	**357**	Pn	Pn	14 23 55.8	-2.3
	4.4nm,0.3s,SNR=4.0						
ECRI				Sn	Sn	14 24 53.0	-7.3
	2.5nm,0.4s,SNR=4.0						
ECRI				Lg		14 25 25.3	
	7.0nm,0.7s,SNR=4.0						
PTEO	**Sao Teotonio**	**5.27**	**274**	*e*Pn	Pn	14 23 54.1	-4.0
PTEO				*e*Sn	Sn	14 24 52.8	-7.6
PTEO				*e*Sg	Sg	14 25 24.5	-7.1
	8.9nm,0.6s						
PTEO	**Sao Teotonio**	**5.27**	**274**	*e*Pn	Pn	14 23 54.1	-4.0
PTEO				*e*Sn	Sn	14 24 52.8	-7.6
PTEO				*e*Sg	Sg	14 25 24.5	-7.1
	8.9nm,0.6s						
EMIR	**Miracle**	**5.35**	**30**	Sn	Sn	14 24 56.0	-6.6
	7.3nm,0.2s,SNR=7.9						
PTOM	**Tomar**	**5.44**	**297**	*e*Sn	Sn	14 24 56.8	-7.9
PTOM				*e*Sg	Sg	14 25 29.1	-8.2
	13nm,0.3s						
PTOM	**Tomar**	**5.44**	**297**	Sn	Sn	14 24 56.8	-7.9
PTOM				Lg		14 25 29.1	
	6.3nm,0.3s						
EBIE	**Bielsa**	**5.61**	**17**	Pn	Pn	14 24 00.1	-2.8
	0.5nm,0.2s,SNR=4.0						
EBIE	**Bielsa**	**5.61**	**17**	Pn	Pn	14 24 00.1	-2.7
PVIS	**Viseu**	**5.62**	**309**	*e*Pn	Pn	14 24 00.5	-2.6
PVIS				*e*Sg	Sg	14 25 37.4	-5.9
	5.2nm,0.3s						
PVIS	**Viseu**	**5.62**	**309**	Pn	Pn	14 24 00.5	-2.6
PVIS				Lg		14 25 37.4	
	2.6nm,0.3s						
ECAL	**Calabor**	**5.81**	**324**	Pn	Pn	14 24 02.6	-3.1
	1.1nm,0.2s,SNR=4.0						
ECAL				Sn	Sn	14 25 06.5	-7.6
	1.2nm,0.2s,SNR=7.9						
ECAL				Lg		14 25 40.5	
	SNR=7.9						
ECAL	**Calabor**	**5.81**	**324**	Pn	Pn	14 24 02.7	-3.1
ECAL				Sn	Sn	14 25 06.6	-7.5
EALK	**Alkurruntz**	**5.88**	**4**	Pn	Pn	14 24 04.7	-2.1
	0.7nm,0.2s,SNR=4.0						
ELAN	**Lanestosa**	**5.96**	**351**	Pn	Pn	14 24 05.0	-2.9
	SNR=7.9						
ELAN				Sn	Sn	14 25 08.3	-10
	SNR=7.9						
EARI	**Arriondas**	**6.40**	**339**	Pn	Pn	14 24 11.0	-3.1
	1.2nm,0.2s,SNR=4.0						
EARI				Sn	Sn	14 25 16.6	-12
	SNR=7.9						
EARI	**Arriondas**	**6.40**	**339**	Pn	Pn	14 24 11.0	-3.1
ELOB	**Lobios**	**6.44**	**316**	Pn	Pn	14 24 10.9	-3.7
	0.6nm,0.1s,SNR=4.0						
ELOB				Sn	Sn	14 25 21.7	-8.1
	1.4nm,0.2s,SNR=4.0						
ELOB	**Lobios**	**6.44**	**316**	Pn	Pn	14 24 10.9	-3.7
ELOB				Sn	Sn	14 25 21.7	-8.1

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*IDC **09** 14:27:18.9±3.3, 11.16S×165.24E, h41^{km}±28^{km}, mb4.0/10, mb1 4.3/12, mb1mx4.2/17, mbtmp4.4/12, ML4.6/2, MS4.1/2, Ms1 4.1/2, ms1mx3.7/22, Error ellipse: s-maj=23.8km s-min=14.8km az=58.0*

*NEIC **09** 14:27:19.3±1.4, 11.14S×165.29E, h49^{km}±12^{km}, mb4.5/8, Error ellipse: s-maj=13.8km s-min=10.1km az=48.0*

ISC 09 14:27:17.0±2.0**, 11.20S**±0.08×**165.20E**±0.09**, h40**^{km}±17^{km}**, n29, σ0$\overset{s}{.}$82**/32**, mb4.3**/16**, MS4.7**/1**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.46**	**288**	P	**P**	**14 28 39.3**	**+1.4**
	30nm,0.3s,baz=206,slow=2.0,SNR=13						
HNR				S	**S**	**14 29 40.0**	**-0.3**
	22nm,0.3s,baz=180,slow=19,SNR=6.7						
HNR	**Honiara**	**5.46**	**288**	*e*Pn	**P**	**14 28 39.4**	**+1.5**
	160nm,0.7s						
HNR				*e*Sn	**S**	**14 29 38.8**	**-1.5**
DZM	**Mont Dzumac**	**10.88**	**174**	*e*P	**P**	**14 29 52.2**	**-1.0**
DZM				*e*S	**S**	**14 31 48.2**	**-6.5**
DZM	**Mont Dzumac**	**10.88**	**174**	P	**P**	**14 29 52.7**	**-0.5**
	2.6nm,0.3s,baz=78,slow=23,SNR=44						
DZM				S	**S**	**14 31 49.9**	**-4.7**
	1.5nm,0.3s,baz=117,slow=15,SNR=5.9						
DZM				LR	LR	14 33 24.2	
	comp=Z,242nm,21.9s,baz=52,slow=34						
NOUC	**Port Laguerre**	**10.89**	**175**	*e*P	**P**	**14 29 53.3**	**-0.1**
CTA	**Charters Tower**	**20.25**	**242**	P	**P**	**14 31 52.5**	**+0.7**
	14nm,0.9s,baz=57,slow=12,SNR=8.6						
CTA	**Charters Tower**	**20.25**	**242**	P	**P**	**14 31 52.5**	**+0.7**
CTAO	**Charters Tower**	**20.25**	**242**	*e*P	**P**	**14 31 53.2**	**+1.5**
	19nm,1.1s						
URZ	**Urewera**	**28.98**	**160**	P	**P**	**14 33 15.2**	**+0.1**
	6.9nm,0.8s,mb4.4,baz=324,slow=5.4,SNR=5.8						
STKA	**Stephens Creek**	**29.96**	**223**	*e*P	**P**	**14 33 24.2**	**+0.3**
STKA	**Stephens Creek**	**29.96**	**223**	P	**P**	**14 33 24.4**	**+0.5**
	6.0nm,0.7s,mb4.4,baz=35,slow=8.2,SNR=15						
WRAB	**Tennant Creek**	**30.91**	**250**	*e*P	**P**	**14 33 31.5**	**-0.9**
	21nm,1.2s,mb4.8						
WB2	**Warramunga Arr**	**30.91**	**250**	*e*P	**P**	**14 33 31.9**	**-0.5**
WRA	**Warramunga Arr**	**30.93**	**250**	P	**P**	**14 33 32.0**	**-0.5**
	9.9nm,0.9s,mb4.6,baz=80,slow=9.2,SNR=44						
WRA				PcP	PcP	14 36 28.5	+0.1
	0.3nm,0.7s,baz=81,slow=3.8,SNR=5.1						
PPT	**Papeete**	**44.18**	**104**	LR	LR	14 48 47.1	
	comp=Z,975nm,19.6s,MS4.7,baz=87,slow=29						
MBWA	**Marble Bar**	**44.64**	**251**	P	**P**	**14 35 28.2**	**+0.5**
	13nm,1.0s,mb4.7						
CASY	**Casey**	**66.04**	**201**	P	**P**	**14 37 55.6**	**-5.9**
	32nm,1.2s,mb5.2						
VNDA	**Vanda**	**66.33**	**181**	P	**P**	**14 38 03.1**	**-0.1**
	0.7nm,0.8s,mb3.7,baz=335,slow=5.1,SNR=4.9						
VNDA	**Vanda**	**66.33**	**181**	*e*P	**P**	**14 38 02.8**	**-0.4**
	4.6nm,1.4s,mb4.3						
SBA	**Scott Base**	**66.65**	**180**	*e*P	**P**	**14 38 05.8**	**+0.6**
	2.8nm,1.0s,mb4.2						
CMAR	**Chiang Mai Arr**	**71.68**	**294**	P	**P**	**14 38 35.5**	**-1.5**
	1.2nm,0.9s,mb3.8,baz=138,slow=4.4,SNR=4.8						
SONM	**Songino Array**	**78.47**	**324**	P	**P**	**14 39 16.1**	**+0.6**
	0.3nm,0.8s,mb3.2,baz=108,slow=4.6,SNR=2.4						
BILL	**Bilibino**	**79.03**	**0**	*e*P	**P**	**14 39 18.4**	**+0.3**
	3.3nm,0.9s,mb4.3						
COLA	**College**	**83.60**	**18**	P	**P**	**14 39 42.0**	**-0.1**
	4.3nm,0.9s,mb4.6						
ILAR	**Eielson Array**	**83.83**	**19**	P	**P**	**14 39 43.1**	**-0.1**
	1.0nm,0.6s,mb4.1,baz=238,slow=4.9,SNR=18						
MAW	**Mawson**	**84.38**	**202**	P	**P**	**14 39 47.2**	**+1.2**
	2.2nm,0.8s,mb4.3,baz=146,slow=7.6,SNR=3.8						
NVAR	**Mina Array Bea**	**86.53**	**50**	P	**P**	**14 39 57.8**	**+0.5**
	0.9nm,0.8s,mb4.0,baz=229,slow=6.5,SNR=6.3						
BGU	**Big Grassy Mou**	**91.12**	**49**	*e*P	**P**	**14 40 17.3**	**-1.7**
MKAR	**Makanchi Array**	**93.26**	**317**	P	**P**	**14 40 29.3**	**+0.6**
	0.8nm,0.8s,mb4.2,baz=100,slow=7.4,SNR=6.6						

CASC 09 14:41:48.0±1.5**, 13.38N**×**90.66W, h12**^{km}±20^{km}**, MD3.7, 3C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**0.81**	**14**	*e*S	Sb	14 42 15.0	+0.8
BOQS	**Boqueron**	**1.38**	**75**⇑	*e*P	Pn	14 42 13.0	-0.3
BOQS				*e*S	Sb	14 42 30.4	-0.3
TP2	**Tecpan 2**	**1.44**	**346**	*e*P	Pn	14 42 12.9	-1.1
TP2				*e*S	Sb	14 42 34.3	+2.0
LFU	**La Fuente**	**1.54**	**76**	*e*P	Pn	14 42 15.7	+0.2
LFRS	**El Faro**	**1.57**	**81**⇑	*e*P	Pn	14 42 14.6	-1.3
LBRS	**Las Brisas**	**1.61**	**77**	*e*P	Pn	14 42 16.3	-0.1
LCBS	**La Ceiba**	**1.66**	**80**⇑	*e*P	Pn	14 42 15.9	-1.2
LCBS				*e*S	Sn	14 42 38.5	+0.1
SNVI	**San Vicente**	**1.78**	**82**	*e*P	Pn	14 42 19.0	+0.1

BJI 09 14:48:27.8, 35.27N×**121.03E, h24**^{km}**, ML3.7, Yellow Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIA	**Tai'an**	**3.31**	**288**	*e*P	Pn	14 49 19.3	-0.2
TIA				SG	Sn	14 50 10.5	+12
TIA				Smax			
	comp=N,290nm,0.8s						
TIA				Smax			
	comp=E,160nm,0.7s						
DL2	**Dalian**	**3.66**	**7**	PG	Pn	14 49 37.2	+13
DL2				SG	Sn	14 50 25.0	+18
DL2				Smax			
	comp=N,100nm,0.4s						
DL2				Smax			
	comp=E,200nm,0.5s						
NJ2	**Nanjing**	**3.69**	**210**	*e*PG	Pn	14 49 34.3	+10
NJ2				SG	Sn	14 50 22.4	+14
NJ2				Smax			
	comp=E,340nm,0.4s						

PGC 09 14:53:56.9, 51.71N×**130.77W, h20**^{km}**, ML2.7**/6**, South of Moresby Island, British Columbia Aftershock., Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNB	**Barry Inlet**	**1.06**	**325**	P	Pb	14 54 15.8	-0.5
BNB				S	Sb	14 54 30.5	+0.7
BNB				Trac		14 54 32.0	
	comp=Z,1μm,0.2s						
MOBC	**Moresby Island**	**1.64**	**336**	Pg	Pn	14 54 26.4	+1.3
MOBC				Trac		14 55 00.5	
	comp=Z,63nm,0.5s						
BBB	**Bella Bella**	**1.71**	**73**	P	Pn	14 54 25.6	-0.4
BBB				Pg	Pn	14 54 29.6	+3.5
BBB				Trac		14 55 05.8	
	comp=Z,28nm,0.3s						
VIB	**Van Inlet**	**1.89**	**326**	P	Pn	14 54 28.1	-0.5
VIB				Trac		14 55 12.8	
	comp=Z,55nm,0.5s						
HOLB	**Holberg**	**1.98**	**122**	P	Pn	14 54 29.1	-0.7
HOLB				Trac		14 54 55.4	
	comp=Z,41nm,0.6s						
PHC	**Port Hardy**	**2.33**	**114**	P	Pn	14 54 35.1	+0.2
BPBC	**Brooks Peninsu**	**2.45**	**128**	P	Pn	14 54 35.9	-0.8
BPBC				Pg	Pn	14 54 39.8	+3.1
BPBC				Sg	Sn	14 55 10.2	+3.9
BPBC				Trac		14 55 12.9	
	comp=Z,21nm,0.3s						
MAYB	**Maynard**	**2.62**	**119**	P	Pn	14 54 35.7	-3.3
MAYB				Pg	Pn	14 54 40.9	+1.8
RUBB	**Prince Rupert**	**2.64**	**7**	P	Pn	14 54 37.5	-1.8
RUBB				Pg	Pn	14 54 41.8	+2.5
RUBB				Trac		14 55 46.5	
	comp=Z,119nm,0.8s						

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*TAP **09** 15:07:01.3, 24.05N×122.54E, h3^{km}±1^{km}, ML2.9*

JMA 09 15:07:00.9±0.2**, 24.20N**×**122.54E, h25**^{km}**, M2.2, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.50**	**59**	P	Pb	15 07 11.0	-0.1
YOJ				S	Sb	15 07 18.1	0.0
IRIF	**Iriomote-Funau**	**1.09**	**83**	P	Pn	15 07 20.3	-0.5
IRIF				S	Sb	15 07 34.9	0.0
JKRS	**Kuro-shima**	**1.34**	**88**	P	Pn	15 07 24.8	+0.5
JIJ	**Ishigaki jima**	**1.47**	**83**	P	Pn	15 07 26.0	-0.2
JIJ				*e*S	Sn	15 07 44.4	-0.4
JTJ	**Tarama**	**2.02**	**77**	P	Pn	15 07 34.2	+0.2

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*BJI **09** 15:21:16.4, 61.90N×26.60W, h10^{km}, mB4.5, mb4.3, Ms4.5, Msz4.5*

*CSEM **09** 15:21:18.4±0.3, 62.13N×26.26W, h2^{km}, mb4.4/9, Ms3.7, Error ellipse: s-maj=8.9km s-min=2.0km az=106.0*

*MOS **09** 15:21:19.5±0.9, 61.92N×26.67W, h10^{km}, mb4.5/29, Error ellipse: s-maj=12.4km s-min=7.6km az=126.4*

*IDC **09** 15:21:19.8±0.5, 61.96N×26.64W, mb4.1/24, mb1 4.2/27, mb1mx4.1/35, mbtmp4.1/27, ML3.2/3, MS4.0/9, Ms1 4.0/9, ms1mx3.8/29, Error ellipse: s-maj=17.9km s-min=9.8km az=4.0*

*NEIC **09** 15:21:21.4±0.2, 61.90N×26.62W, h10^{km}, mb4.5/41, MS4.0/2, Error ellipse: s-maj=6.1km s-min=2.7km az=200.0*

*ZUR_RM **09** 15:21:21, 61.90N×26.62W, h4^{km}, Mw4.5/7, Moment Tensor Solution. s7 Moment tensor: Scale 10^{15}Nm; M_{rr}-5.96; $M_{\theta\theta}$1.06; $M_{\phi\phi}$4.91; $M_{r\theta}$3.56; $M_{\theta\phi}$1.98; $M_{\phi r}$2.92; Best double couple: $M_0$7.42×10^{15} NP1:ϕ_s219°,δ64°,λ-77°. NP2:ϕ_s10°,δ29°,λ-115°. Principal axes: T 7.084, Plg18°, Azm299°; N .677, Plg12°, Azm33°; P -7.761, Plg68°, Azm155°;*

ISC 09 15:21:19.8±0.2**, 62.15N**±0.03×**26.40W**±0.05**, h10**^{km}**, (h15**^{km}±.1^{km}**:pP-P), n156, σ1$\overset{s}{.}$21**/163**, mb4.3**/63**, MS4.2**/9**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INYL	**Nylenda**	**2.48**	**41**	P	**Pn**	**15 22 00.8**	**-0.2**
IVOG	**Vogar**	**2.58**	**43**	P	**Pn**	**15 22 02.5**	**0.0**
IKRI	**Krysuvik**	**2.63**	**47**	P	**Pn**	**15 22 02.2**	**-0.9**
IKRI				S	**Sn**	**15 22 34.9**	**-0.4**
IVOS	**Vogsosar**	**2.74**	**49**	P	**Pn**	**15 22 03.2**	**-1.5**
IVOS				S	**Sn**	**15 22 37.2**	**-1.1**
ISAN	**Sandskeio**	**2.91**	**47**	P	**Pn**	**15 22 06.4**	**-0.8**
ISAN				S	**Sn**	**15 22 42.5**	**-0.1**
IBJA	**Bjarnastaoir**	**2.94**	**50**	P	**Pn**	**15 22 05.8**	**-1.7**
IBJA				S	**Sn**	**15 22 42.9**	**-0.4**
IKUD	**Kuludalsa**	**2.99**	**41**	P	**Pn**	**15 22 08.4**	**+0.1**
ISOL	**Solvholt**	**3.06**	**52**	P	**Pn**	**15 22 06.9**	**-2.4**
ISOL				S	**Sn**	**15 22 45.1**	**-1.2**
IKRO	**Krokur**	**3.10**	**48**	P	**Pn**	**15 22 08.7**	**-1.1**
IKRO				S	**Sn**	**15 22 47.0**	**-0.2**
IHEI	**Heioarbar**	**3.12**	**46**	P	**Pn**	**15 22 08.9**	**-1.2**
IASM	**Asmuli**	**3.14**	**55**	P	**Pn**	**15 22 07.6**	**-2.7**
IASM				S	**Sn**	**15 22 45.9**	**-2.3**
ISAU	**Saurbar**	**3.29**	**53**	P	**Pn**	**15 22 10.1**	**-2.4**
ISAU				S	**Sn**	**15 22 50.8**	**-1.4**
IHAU	**Haukadalur**	**3.45**	**55**	P	**Pn**	**15 22 12.3**	**-2.5**
IASB	**`sbjarnarst**	**3.47**	**39**	P	**Pn**	**15 22 16.0**	**+1.0**
IASB				S	**Sn**	**15 22 59.5**	**+3.0**
IGYG	**Gygjarholskot**	**3.52**	**50**	P	**Pn**	**15 22 14.1**	**-1.7**
IGYG				S	**Sn**	**15 22 58.0**	**-0.1**
JMIC	**Jan Mayen**	**11.31**	**31**	LR	LR	15 27 33.8	
	comp=Z,282nm,20.6s,baz=107,slow=32						
SUMG	**Summit**	**11.42**	**341**	*e*P	**P**	**15 24 07.3**	**+1.5**
	6.8nm,0.6s						
ESK	**Eskdalemuir**	**13.79**	**109**	*e*P	**P**	**15 24 37.8**	**+0.4**
ESK				pmax	pmax		
	comp=Z,26nm,1.3s						
ESK	**Eskdalemuir**	**13.79**	**109**	*e*P	**P**	**15 24 37.8**	**+0.4**
	comp=Z,26nm,1.3s						
EKA	**Eskdalemuir Ar**	**13.80**	**109**	Pn	**P**	**15 24 37.4**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=300,slow=12,SNR=6.7						
NOA	**NORSAR Array B**	**17.77**	**77**	P	**P**	**15 25 30.0**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=286,slow=15,SNR=2.8						
NOA				LR	LR	15 32 11.2	
	comp=Z,236nm,18.5s,baz=95,slow=36						
ROSF	**Rostrenen**	**18.95**	**126**	*e*P	**P**	**15 25 42.2**	**-1.0**
FRB	**Frobisher Bay**	**18.99**	**293**	P	**P**	**15 25 38.1**	**-5.3**
	baz=78,slow=1.3,SNR=3.1						
FRB				LR	LR	15 32 19.3	
	comp=Z,598nm,18.9s,baz=151,slow=35						
HFS	**Hagfors**	**19.24**	**78**	P	**P**	**15 25 48.4**	**+2.0**
	comp=Z,0.0nm,0.3s,baz=302,slow=14,SNR=2.3						
HFS				LR	LR	15 32 36.6	
	comp=Z,409nm,19.1s,baz=198,slow=35						
QUIF	**Quistinic**	**19.34**	**127**	*e*P	**P**	**15 25 46.9**	**-0.8**
	comp=Z,38nm,1.2s						
QUIF	**Quistinic**	**19.34**	**127**	*e*P	**P**	**15 25 46.9**	**-0.8**
QUIF				pmax	pmax		
	comp=Z,19nm,1.2s						
FLN	**La Foliniere**	**19.70**	**121**	*e*P	**P**	**15 25 50.7**	**-1.1**
	comp=Z,23nm,1.0s						
FLN				*e*R			
	comp=Z,655nm,22.5s						
LDF	**La Druitiere**	**19.98**	**121**	*e*P	**P**	**15 25 54.3**	**-0.6**
BAIF	**Baives**	**20.68**	**112**	*e*P	**P**	**15 26 02.1**	**-0.1**
GIVF	**Givet**	**20.92**	**111**	*e*P	**P**	**15 26 03.7**	**-1.0**
MFF	**Saint Martin d**	**21.59**	**124**	*e*P	**P**	**15 26 10.5**	**-0.9**
ARCES	**ARCESS Array B**	**21.82**	**48**	P	**P**	**15 26 15.1**	**+1.4**
	comp=Z,3.0nm,0.7s,mb3.9,baz=270,slow=6.1,SNR=7.2						
ARCES	**ARCESS Array B**	**21.82**	**48**	P	**P**	**15 26 15.1**	**+1.4**
SCHQ	**Schefferville**	**22.04**	**269**	P	**P**	**15 26 13.8**	**-2.1**
	comp=Z,3.2nm,0.8s,mb3.8,baz=58,slow=5.8,SNR=5.5						
KEV	**Kevo**	**22.32**	**47**	*e*P	**P**	**15 26 23.0**	**+4.4**
KEV				pmax	pmax		
	comp=Z,50nm,1.4s,mb4.8						
KEV	**Kevo**	**22.32**	**47**	*e*P	**P**	**15 26 23.0**	**+4.4**
	comp=Z,50nm,1.4s,mb4.8						
LOR	**Lormes**	**22.67**	**117**	*e*P	**P**	**15 26 21.7**	**-0.4**
LOR				*e*R			
	comp=Z,745nm,18.5s						
SSF	**Saint Saulge**	**22.68**	**118**	*e*P	**P**	**15 26 21.7**	**-0.5**
SSF				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.4						
SSF	**Saint Saulge**	**22.68**	**118**	*e*P	**P**	**15 26 21.7**	**-0.5**
	comp=Z,18nm,1.2s,mb4.4						
TCF	**Toulx Ste Croi**	**22.78**	**121**	*e*P	**P**	**15 26 23.6**	**+0.4**
	comp=Z,20nm,1.0s,mb4.2						
TCF	**Toulx Ste Croi**	**22.78**	**121**	*e*P	**P**	**15 26 23.6**	**+0.4**
TCF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.2						
BGF	**Bois d'Agland**	**22.82**	**120**	*e*P	**P**	**15 26 23.3**	**-0.2**
	comp=Z,25nm,0.9s,mb4.3						
BGF	**Bois d'Agland**	**22.82**	**120**	*e*P	**P**	**15 26 23.3**	**-0.2**
BGF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**22.84**	**119**	*e*P	**P**	**15 26 23.3**	**-0.4**
	comp=Z,20nm,1.1s,mb4.2						
AVF	**Avril sur Loir**	**22.84**	**119**	*e*P	**P**	**15 26 23.3**	**-0.4**
AVF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.2						
SMF	**Signal de Mont**	**23.16**	**118**	*e*P	**P**	**15 26 26.6**	**-0.2**
	comp=Z,34nm,1.1s,mb4.4						
SMF	**Signal de Mont**	**23.16**	**118**	*e*P	**P**	**15 26 26.6**	**-0.2**
SMF				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.4						
HAU	**Haudompre**	**23.16**	**113**	*e*P	**P**	**15 26 26.7**	**-0.1**
	comp=Z,21nm,0.9s,mb4.3						
HAU				*e*R			
	comp=Z,324nm,18.6s						
HAU	**Haudompre**	**23.16**	**113**	*e*P	**P**	**15 26 26.7**	**-0.1**
HAU				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.3						
HAU				MLR	MLR		
	comp=Z,320nm,18.6s,MS3.8						
CDF	**Champ du Feu**	**23.25**	**111**	*e*P	**P**	**15 26 28.0**	**+0.2**
	comp=Z,28nm,1.2s,mb4.3						
CDF	**Champ du Feu**	**23.25**	**111**	*e*P	**P**	**15 26 28.0**	**+0.2**
CDF				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.3						
RUE	**Ruedersdorf**	**23.37**	**96**	*e*P	**P**	**15 26 30.9**	**+2.0**
	comp=Z,41nm,1.0s,mb4.8						
MOX	**Moxa**	**23.60**	**102**	*e*P	**P**	**15 26 33.7**	**+2.6**
MOX				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.3						
MOX	**Moxa**	**23.60**	**102**	*e*P	**P**	**15 26 33.7**	**+2.6**
	comp=Z,19nm,1.5s,mb4.3						
MOX	**Moxa**	**23.60**	**102**	*i* P	**P**	**15 26 33.7**	**+2.6**
	comp=Z,logA/T=1.1,mb4.3						
CLL	**Collm**	**23.79**	**99**	*e*P	**P**	**15 26 34.0**	**+1.1**
CLL				*e*		15 26 41.0	
CLL	**Collm**	**23.79**	**99**	P	**P**	**15 26 34.0**	**+1.1**
CLL				*e*		15 26 41.0	
STU	**Stuttgart**	**23.84**	**108**	*e*P	**P**	**15 26 35.1**	**+1.7**
STU				pmax	pmax		
	comp=Z,49nm,1.5s,mb4.7						
STU	**Stuttgart**	**23.84**	**108**	*e*P	**P**	**15 26 35.1**	**+1.7**
	comp=Z,50nm,1.5s,mb4.7						
CAF	**Calviac**	**23.84**	**123**	*e*P	**P**	**15 26 32.2**	**-1.3**
	comp=Z,28nm,1.0s,mb4.3						
CAF	**Calviac**	**23.84**	**123**	*e*P	**P**	**15 26 32.2**	**-1.3**
CAF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.3						
GRA1	**Grafenberg Arr**	**24.09**	**104**	*e*P	**P**	**15 26 37.8**	**+1.9**
	comp=Z,28nm,2.0s,mb4.3						
GRF	**Grafenberg Arr**	**24.09**	**104**	*e*P	**P**	**15 26 37.8**	**+1.9**
GRF				pmax	pmax		
	comp=Z,28nm,2.0s,mb4.3						
GRF	**Grafenberg Arr**	**24.09**	**104**	*e*P	**P**	**15 26 37.8**	**+1.9**
GRF				pmax	pmax		
	comp=Z,28nm,2.0s,mb4.3						
GRF	**Grafenberg Arr**	**24.09**	**104**	*e*P	**P**	**15 26 37.8**	**+1.9**
	comp=Z,28nm,2.0s,mb4.3						
CABF	**La Chapelle**	**24.13**	**115**	*e*P	**P**	**15 26 35.7**	**-0.6**
FINES	**FINESS Array B**	**24.26**	**68**	P	**P**	**15 26 38.7**	**+1.3**
	comp=Z,3.1nm,0.8s,mb3.8,baz=297,slow=8.5,SNR=8.1						
BRG	**Berggiesshubel**	**24.52**	**99**	*e*P	**P**	**15 26 41.3**	**+1.3**
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.1						
BRG	**Berggiesshubel**	**24.52**	**99**	*e*P	**P**	**15 26 41.3**	**+1.3**
	comp=Z,7.1nm,1.1s,mb4.1						
LPL	**La Plagne**	**25.27**	**116**	*e*P	**P**	**15 26 47.5**	**+0.2**
LPG	**La Plagne**	**25.29**	**116**	*e*P	**P**	**15 26 47.8**	**+0.3**
DAVOX	**Davos**	**25.64**	**110**	P	**P**	**15 26 51.1**	**+0.3**
	comp=Z,1.4nm,0.3s,mb3.9,baz=352,slow=15,SNR=3.1						
GERES	**GERESS Array B**	**25.83**	**102**	P	**P**	**15 26 53.3**	**+0.8**
	comp=Z,1.0nm,0.8s,mb3.4,baz=319,slow=12,SNR=6.7						
GERES				LR	LR	15 37 17.1	
	comp=Z,314nm,18.0s,MS3.9,baz=14,slow=37						
ESDC	**Sonseca Array**	**26.31**	**138**	P	**P**	**15 26 56.4**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.3,baz=341,slow=9.8,SNR=6.0						
MORC	**Moravsky Berou**	**26.95**	**97**	P	**P**	**15 27 03.4**	**+0.6**
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
MORC	**Moravsky Berou**	**26.95**	**97**	P	**P**	**15 27 03.4**	**+0.6**
	comp=Z,4.6nm,1.0s,mb4.0						
AKASG	**Malin Array Be**	**31.79**	**85**	P	**P**	**15 27 45.5**	**-0.6**
	comp=Z,1.7nm,0.7s,mb4.0,baz=311,slow=8.9,SNR=9.2						
AKASG	**Malin Array Be**	**31.79**	**85**	P	**P**	**15 27 45.5**	**-0.6**
FCC	**Fort Churchill**	**32.18**	**295**	*e*P	**P**	**15 27 48.7**	**-0.7**
FCC				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
FCC	**Fort Churchill**	**32.18**	**295**	*e*P	**P**	**15 27 48.7**	**-0.7**
	comp=Z,4.0nm,0.9s,mb4.2						
SADO	**Sadowa**	**34.70**	**265**	P	**P**	**15 28 09.8**	**-1.6**
	comp=Z,1.8nm,0.4s,mb4.3,baz=32,slow=10,SNR=3.7						
SADO	**Sadowa**	**34.70**	**265**	P	**P**	**15 28 09.8**	**-1.6**
YKW3	**Yellowknife Ar**	**37.89**	**311**	P	**P**	**15 28 40.0**	**+1.8**
YKA	**Yellowknife Ar**	**37.93**	**311**	P	**P**	**15 28 37.9**	**-0.6**
	comp=Z,1.5nm,0.7s,mb3.8,baz=47,slow=8.6,SNR=8.2						
YKA				PcP	PcP	15 30 51.9	-3.1
	comp=Z,0.4nm,0.3s,baz=39,slow=3.8,SNR=3.6						
YKA				LR	LR	15 42 57.0	
	comp=Z,193nm,20.2s,MS3.9,baz=100,slow=34						
YKA	**Yellowknife Ar**	**37.93**	**311**	P	**P**	**15 28 37.9**	**-0.6**
YKA				PcP	PcP	15 30 51.9	-3.1
YKA				LR	LR	15 42 57.0	
EYMN	**Ely**	**38.14**	**279**	*e*P	**P**	**15 28 40.9**	**+0.5**
	comp=Z,13nm,1.1s,mb4.6						
ULM	**Lac du Bonnet**	**38.50**	**285**	LR	LR	15 43 11.7	
	comp=Z,204nm,18.3s,MS4.0,baz=32,slow=34						
INK	**Inuvik**	**39.81**	**326**	*e*P	**P**	**15 28 53.4**	**-0.8**
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
INK	**Inuvik**	**39.81**	**326**	*e*P	**P**	**15 28 53.4**	**-0.8**
	comp=Z,5.9nm,1.2s,mb4.2						
ARU	**Arti**	**40.80**	**58**	P	**P**	**15 29 04.5**	**+2.1**
IDI	**Anoyia**	**41.58**	**106**	P	**P**	**15 29 11.3**	**+2.4**
	comp=Z,11nm,0.8s,mb4.5,baz=330,slow=14,SNR=3.3						
BRTR	**Keskin Array B**	**42.02**	**94**	P	**P**	**15 29 14.1**	**+1.5**
	comp=Z,1.5nm,0.8s,mb3.7,baz=316,slow=6.9,SNR=6.6						

DAWY	Dawson	44.58	325	eP	P	15 29 34.6	+1.5
MALT	Malatya	45.40	90	P	P	15 29 41.9	+2.0
MALT				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
MALT	Malatya	45.40	90	P	P	15 29 41.9	+2.0
	comp=Z,1.7nm,0.8s,mb3.9						
LAO	LASA Array	45.78	289	eP	P	15 29 44.0	+1.2
	comp=Z,21nm,1.1s,mb5.0						
ILAR	Eielson Array	45.93	329	P	P	15 29 44.9	+1.2
	comp=Z,1.8nm,1.0s,mb4.0,baz=27,slow=6.6,SNR=10						
ILAR				PcP	PcP	15 31 19.9	-1.2
	comp=Z,1.5nm,0.8s,baz=2.7,slow=2.4,SNR=9.9						
COLA	College	46.08	330	eP	P	15 29 46.9	+2.0
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
COLA	College	46.08	330	eP	P	15 29 46.9	+2.0
	comp=Z,8.6nm,0.9s,mb4.7						
DLBC	Dease Lake	46.16	315	P	P	15 29 46.7	+1.1
	comp=Z,2.4nm,0.9s,mb4.1,baz=4.3,slow=20,SNR=3.6						
DLBC	Dease Lake	46.16	315	P	P	15 29 46.7	+1.1
IMA	Indian Mountai	46.37	333	eP	P	15 29 49.0	+1.8
IMA				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.0						
IMA	Indian Mountai	46.37	333	eP	P	15 29 49.0	+1.8
	comp=Z,24nm,1.3s,mb5.0						
RSSD	Black Hills	46.77	285	eP	P	15 29 51.3	+0.6
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
RSSD	Black Hills	46.77	285	eP	P	15 29 51.3	+0.6
	comp=Z,2.9nm,0.8s,mb4.3						
MCK	McKinley	47.30	329	P	P	15 29 53.5	-1.0
MCK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
MCK	McKinley	47.30	329	P	P	15 29 53.5	-1.0
	comp=Z,6.7nm,1.3s,mb4.4						
CHKZ	Chkalovo	47.51	53	eP	P	15 29 57.9	+1.5
CHKZ				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
CHKZ	Chkalovo	47.51	53	eP	P	15 29 57.9	+1.5
	comp=Z,9.6nm,1.3s,mb4.7						
BOZ	Bozeman (W)	48.96	292	eP	P	15 30 08.2	+0.5
BOZ				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
BOZ	Bozeman (W)	48.96	292	eP	P	15 30 08.2	+0.4
	comp=Z,7.5nm,1.2s,mb4.6						
PHWY	Pilot Hill	49.64	284	eP	P	15 30 12.9	-0.1
BILL	Bilibino	49.79	354	eP	P	15 30 14.8	+1.0
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
BILL	Bilibino	49.79	354	eP	P	15 30 14.8	+1.0
	comp=Z,5.1nm,1.1s,mb4.5						
PDAR	Pinedale Array	50.32	288	P	P	15 30 17.4	-0.8
	comp=Z,5.3nm,0.8s,mb4.6,baz=54,slow=6.5,SNR=40						
NVS	Novosibirsk	51.03	44	i P	P	15 30 24.6	+1.2
HLID	Hailey	51.83	292	P	P	15 30 29.3	-0.3
	comp=Z,1.6nm,0.7s,mb4.1						
WMOK	Wichita Mounta	51.84	273	eP	P	15 30 28.5	-1.4
WMOK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
WMOK	Wichita Mounta	51.84	273	eP	P	15 30 28.4	-1.4
	comp=Z,9.0nm,1.2s,mb4.6						
BMO	Blue Mountains	52.03	296	eP	P	15 30 30.4	-0.7
	comp=Z,6.5nm,1.3s,mb4.4						
HWUT	Hardware Ranch	52.14	289	eP	P	15 30 31.3	-0.8
	comp=Z,5.4nm,1.0s,mb4.4						
PV10	Paradox Valley	53.62	284	eP	P	15 30 43.0	-0.1
ELK	Elko	54.47	291	eP	P	15 30 49.9	+0.7
ELK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ELK	Elko	54.47	291	P	P	15 30 50.0	+0.8
	comp=Z,3.5nm,0.8s,mb4.3,baz=20,slow=6.1,SNR=19						
ELK	Elko	54.47	291	eP	P	15 30 49.9	+0.7
	comp=Z,6.4nm,1.0s,mb4.5						
MSU	Marysvale	54.93	287	eP	P	15 30 52.2	-0.5
MVU	Marysvale	54.95	287	eP	P	15 30 52.5	-0.4
	comp=Z,3.2nm,0.9s,mb4.3						
ANMO	Albuquerque	55.25	280	P	P	15 30 54.6	-0.4
	comp=Z,1.5nm,0.5s,mb4.3,baz=57,slow=9.7,SNR=4.1						
LAZ	Ladron	56.01	280	eP	P	15 31 01.1	+0.6
GDL2	Guadalupe Moun	56.55	276	eP	P	15 31 03.3	-1.1
WUAZ	Wupatki	57.03	284	eP	P	15 31 07.6	-0.3
	comp=Z,7.7nm,0.9s,mb4.7						
MNTX	Cornudas Mount	57.44	277	eP	P	15 31 09.7	-1.2
	comp=Z,4.0nm,1.0s,mb4.4						
MKAR	Makanchi Array	57.45	51	P	P	15 31 11.4	+0.8
	comp=Z,1.2nm,0.7s,mb4.0,baz=333,slow=5.6,SNR=14						
NVAR	Mina Array Bea	57.71	292	P	P	15 31 11.8	-0.7
	comp=Z,1.5nm,0.9s,mb4.0,baz=71,slow=5.6,SNR=8.0						
AAK	Ala-Archa	57.98	59	P	P	15 31 15.8	+1.4
AAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
AAK	Ala-Archa	57.98	59	P	P	15 31 15.8	+1.4
	comp=Z,6.6nm,1.1s,mb4.6						
LTX	Lajitas	58.62	274	P	P	15 31 17.9	-1.2
LTX				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
LTX	Lajitas	58.62	274	P	P	15 31 17.9	-1.2
	comp=Z,3.8nm,0.8s,mb4.5						
TXAR	Lajitas Array	58.62	274	P	P	15 31 17.3	-1.8
	comp=Z,0.6nm,0.6s,mb3.8,baz=79,slow=6.4,SNR=4.9						
TXAR				LR	LR	15 56 18.2	
	comp=Z,257nm,18.1s,MS4.4,baz=330,slow=36						
TXAR	Lajitas Array	58.62	274	P	P	15 31 17.3	-1.8
TXAR				LR	LR	15 56 18.2	
ZAK	Zakamensk	60.91	34	eP	P	15 31 35.0	+0.5
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb4.1						
WMQ	Urumqi	61.94	48	eP	P	15 31 43.0	+1.4
WMQ				AP	pP	15 31 47.6	+2.8
WMQ				XP	sP	15 31 50.0	+4.1
WMQ				PCP	PcP	15 32 22.8	+0.7
WMQ				eS	S	15 40 05.9	+2.0
WMQ				SCS	ScS	15 41 30.6	+0.7
WMQ				SS	SS	15 44 09.4	+1.4
WMQ				AMB	AMB		
	comp=Z,10.0nm,4.4s						
WMQ				LR	LR		
	comp=Z,520nm,21.0s,MS4.7						
SDV	Santo Domingo	62.09	231	P	P	15 31 40.6	-2.4
	comp=Z,3.8nm,0.8s,mb4.6,baz=47,slow=7.4,SNR=4.6						
SONM	Songino Array	64.06	33	P	P	15 31 56.6	+1.2
	comp=Z,2.0nm,0.8s,mb4.2,baz=320,slow=5.6,SNR=14						
ULN	Ulaanbaatar	64.20	33	eP	P	15 31 57.6	+1.3
ULN				pmax	pmax		
	comp=Z,26nm,1.6s,mb5.0						
ULN	Ulaanbaatar	64.20	33	eP	P	15 31 57.6	+1.3
	comp=Z,26nm,1.6s,mb5.0						
GTA	Gaotai	69.92	42	P	P	15 32 33.9	+1.3
GTA				AP	pP	15 32 38.6	+2.9
GTA				XP	sP	15 32 41.1	+4.3
GTA				PP	PP	15 35 12.1	+3.0
GTA				PPP	PPP	15 36 51.7	+2.7
GTA				S	S	15 41 45.4	+4.2
GTA				XS		15 41 54.0	
GTA				PS	PS	15 42 14.5	+5.4
GTA				SS	SS	15 46 14.0	+2.3
GTA				AMB	AMB		
	comp=Z,120nm,6.9s						
GTA				LR	LR		
	comp=Z,150nm,17.5s,MS4.3						
MDJ	Mudanjiang	71.85	18	P	P	15 32 43.3	-0.8
XAN	Xi'an	77.61	37	P	P	15 33 19.2	+1.9
BAO	Brasilia Array	79.38	201	P	P	15 33 24.5	-2.8
BDFB	Brasilia	79.39	201	P	P	15 33 26.2	-1.2
	comp=Z,4.4nm,0.7s,mb4.5,baz=21,slow=4.5,SNR=6.1						
NJ2	Nanjing	82.04	29	eP	P	15 33 44.3	+3.2
NJ2				AP	pP	15 33 49.1	+4.8
NJ2				XP	sP	15 33 51.3	+6.0
NJ2				PP	PP	15 36 55.6	+4.5
NJ2				S	S	15 44 01.0	+7.0
NJ2				XS		15 44 10.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
NJ2				LR	LR		
	comp=Z,230nm,21.2s,MS4.5						
SIV	San Ignacio	82.54	213	P	P	15 33 43.1	-0.9
	comp=Z,1.4nm,0.8s,mb4.0,baz=42,slow=8.9,SNR=5.5						
CMAR	Chiang Mai Arr	88.86	51	P	P	15 34 15.8	+0.7
	comp=Z,1.9nm,0.8s,mb4.5,baz=322,slow=6.2,SNR=9.2						
CMAR				LR	LR	16 16 58.1	
	comp=Z,122nm,20.0s,MS4.3,baz=234,slow=38						
MAW	Mawson	144.40	139	PKP	PKPdf	15 40 55.4	-2.0
	comp=Z,0.8nm,0.4s,baz=352,slow=7.1,SNR=3.0						
STKA	Stephens Creek	148.74	20	PKPbc	PKPdf	15 41 09.3	+3.5
	comp=Z,1.2nm,0.8s,baz=352,slow=16,SNR=4.0						

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*CSEM **09** 15:23:07.6±0.1, 36.74N×5.02E, h5km, ML4.0, Error ellipse: s-maj=6.8km s-min=1.8km az=32.0*
*MDD **09** 15:23:09.7±0.4, 36.63N×5.03E, mb3.5/6, Error ellipse: s-maj=6.3km s-min=3.9km az=13.0, PRXIMO*
*NEIC **09** 15:23:09.4±0.3, 36.64N×5.06E, h10km, ML4.0(ALG), Error ellipse: s-maj=7.1km s-min=3.9km az=210.0*
*CRAAG **09** 15:23:13.8, 36.49N×5.33E, Ml4.0*

ISC 09 15:23:08.5±0.4, 36.82N±0.04×5.05E±0.05, h10km, n36, σ1§26/46, 1C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SET	Setif	0.68	155	P	Pb	15 23 17.5	-4.5
DFRA	Djebel Bou Aff	0.72	112	P	Pb	15 23 23.0	+0.3
CKHR	Kef el Ahmar	0.89	155	P	Pb	15 23 23.4	-2.1
ATAF	Djebel Tarf	1.13	214	P	Pb	15 23 28.1	-1.6
AKET	Djebel Ketaf	1.21	231	P	Pb	15 23 31.2	+0.1
CASM	Ain Smara	1.29	115	P	Pb	15 23 33.5	+1.1
CTEI	Djebel Teioual	1.33	124	P	Pb	15 23 32.5	-0.6
CMER	Merouana	1.38	150	P	Pn	15 23 33.0	-0.9
CKFL	Kef-Lekhel	1.41	107	P	Pn	15 23 34.0	-0.4
CAEH	'Ain El Ouahch	1.45	91	P	Pn	15 23 36.0	+1.1
ADJB	Djebel Djouab	1.45	243	P	Pn	15 23 35.8	+0.8
EMHD	Djebel Mahouad	1.79	250	P	Pn	15 23 41.0	+1.2
CMAH	Djebel Manchou	1.92	95	P	Pn	15 23 46.0	+4.4
EBNR	Beni Rached	2.88	260	P	Pn	15 24 05.0	+10
ECHA	Ech Chlef	3.04	258	P	Pn	15 24 07.0	+9.4
ECHF	Ech Chlef	3.06	259	P	Pn	15 24 07.0	+9.1
EANR	'Ain N'Sour	3.30	256	P	Pn	15 24 08.0	+6.7
ETRT	Tiaret	3.35	246	P	Pn	15 24 06.0	+3.9
ETOS	Mallorca	3.43	330	P	Pn	15 24 04.7	+1.5
ETOS				S	Sn	15 24 42.2	-2.1
ETOS	Mallorca	3.43	330	Pn	Pn	15 24 04.7	+1.5
	6.0nm,0.3s,SNR=29						
ETOS				Sn	Sn	15 24 46.4	+2.2
	6.7nm,0.5s,SNR=5.4						
ETOS	Mallorca	3.43	330	P	Pn	15 24 04.7	+1.6
	25nm,0.4s,SNR=29						
ETOS				S	Sn	15 24 42.2	-2.0
	6.7nm,0.5s,SNR=5.4						
EBEN	Beniarda	4.58	296	Pn	Pn	15 24 19.6	+0.1
	0.6nm,0.2s,SNR=7.9						
EBEN	Beniarda	4.58	296	P	Pn	15 24 19.6	+0.1
	8.7nm,0.5s,SNR=7.9						
EPOB	Poblet	5.48	327	P	Pn	15 24 32.8	+0.6
EPOB				S	Sn	15 25 30.9	-5.1
EPOB	Poblet	5.48	327	Pn	Pn	15 24 32.8	+0.6
	1.7nm,0.3s,SNR=7.9						
EPOB				Sn	Sn	15 25 33.3	-2.7
	1.4nm,0.2s,SNR=7.9						
EPOB	Poblet	5.48	327	P	Pn	15 24 32.8	+0.6
	1.1nm,0.2s,SNR=7.9						
ECHE	Chera	5.48	302	Pn	Pn	15 24 32.8	+0.5
	2.6nm,0.4s,SNR=4.8						
ETOB	Tobarra	5.53	291	Pn	Pn	15 24 32.8	-0.2
	0.3nm,0.2s,SNR=7.7						
ETOB	Tobarra	5.53	291	P	Pn	15 24 32.8	-0.2
	6.1nm,0.4s,SNR=7.7						
EMOS	Mosqueruela	5.58	311	P	Pn	15 24 34.1	+0.4
EMOS				S	Sn	15 25 31.3	-7.4
EMOS	Mosqueruela	5.58	311	Pn	Pn	15 24 34.1	+0.4
	0.1nm,0.2s,SNR=5.7						
EMOS				Sn	Sn	15 25 35.4	-3.3
	0.4nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	5.58	311	P	Pn	15 24 34.1	+0.4
	2.3nm,0.2s,SNR=5.7						
EMIR	Miracle	5.77	333	⇑P	Pn	15 24 38.1	+1.8
EMIR				S	Sn	15 25 42.3	-1.1
EMIR	Miracle	5.77	333	Pn	Pn	15 24 38.2	+1.8
	SNR=7.9						
EMIR				Sn	Sn	15 25 42.3	-1.1
	14nm,0.4s,SNR=4.0						
EMIR	Miracle	5.77	333	P	Pn	15 24 38.2	+1.9
	17nm,0.2s,SNR=18						
EMIR				S	Sn	15 25 42.3	-1.1
	14nm,0.4s,SNR=4.0						
EJON	La Jonquera	5.86	344	Sn	Sn	15 25 42.7	-3.0
	1.3nm,0.2s,SNR=4.0						

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*PRU **09** 15:40:10.1, 50.32N×18.83E*

WAR 09 15:40:10.0, 50.27N×18.89E, h0km, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.59	95	ePG	Pg	15 40 22.0	+0.3
OJC				eSG	Sg	15 40 30.0	+0.5
OKC	Ostrava-Krasne	0.65	228	ePG	Pg	15 40 22.5	-0.4
OKC				eSG	Sg	15 40 32.9	+1.4
	24nm,0.5s						
NIE	Niedzica	1.26	132	ePG	Pg	15 40 34.0	-1.1
NIE				eSG	Sg	15 40 52.0	+0.1
DPC	Dobruska-Polom	1.65	274	ePG	Pg	15 40 39.2	-3.7
DPC				eSG	Sg	15 41 01.3	-3.5
	21nm,0.5s						
KSP	Ksiaz	1.75	290	ePG	Pg	15 40 43.0	-2.0
KSP				eSN	Sn	15 41 04.0	-1.1
KSP				eSG	Sg	15 41 06.0	-2.3
VYHS	Vyhne	1.78	181	ePN	Pn	15 40 42.8	+0.6
VYHS				eSN	Sn	15 41 05.7	-0.1
UPC	Upice	1.86	278	eSG	Sg	15 41 09.3	-2.5
KECS	Kecovo	2.07	149	eSN	Sn	15 41 13.9	+0.6
KOLS	Kolonicke sedl	2.58	120	ePG	Pg	15 41 01.2	-0.3
PRU	Pruhonice	2.81	266	eSG	Sg	15 41 38.6	-5.0
KHC	Kasperske Hory	3.63	254	eSG	Sg	15 42 06.5	-4.4

MAN 09 15:52:11.5, 8.85N×122.59E, h36km, mb4.7, ML3.6, MS3.5, 4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCPH	Dipolog City	0.80	109	⇓iP	P	15 52 26.1	-0.2
DCPH				eS	S	15 52 35.7	-1.6
SNPH	Sibulan	0.81	52	⇑iP	P	15 52 27.2	+0.8
SNPH				i S	S	15 52 38.5	+1.0
IPIL	Ipil	1.05	181	eP	P	15 52 30.4	+0.5
IPIL				eS	S	15 52 43.4	-0.2
PAGZ	Pagadian	1.27	142	eP	P	15 52 33.5	+0.6
PAGZ				eS	S	15 52 50.9	+1.8
TBP	Tagbilaran	1.51	56	eP	P	15 52 36.3	-0.2
TBP				eS	S	15 52 50.8	-4.5
AAP	Anini-y	1.69	338	⇓eP	P	15 52 40.0	+1.0
GUIM	Jordan	1.77	0	eP	P	15 52 41.0	+0.8
GUIM				eS	S	15 53 02.6	+1.0
LLP	Lapu-Lapu	2.00	43	⇑iP	P	15 52 43.1	-0.3
LLP				i S	S	15 53 05.6	-1.8
CUYO	Cuyo Island	2.52	322	eP	P	15 52 51.2	+0.2
CUYO				eS	S	15 53 18.9	-1.9
MSLP	Maasin	2.58	60	eP	P	15 52 51.4	-0.4
MSLP				eS	S	15 53 20.7	-1.6
BUKP	Musuan	2.63	111	eP	P	15 52 58.2	+5.7
BUKP				eS	S	15 53 23.0	-0.6
RCP	Roxas	2.70	3	⇑eP	P	15 52 55.5	+2.0
RCP				eS	S	15 53 27.3	+1.9
BUTP	Butuan	3.00	87	eP	P	15 52 58.4	+0.6
BUTP				eS	S	15 53 33.3	+0.3
SCPH	Surigao	3.01	72	⇑eP	P	15 52 56.6	-1.4
OTRP	Odiongan	3.54	351	eP	P	15 53 05.6	+0.2
OTRP				eS	S	15 53 44.1	-2.5
SJMP	San Jose	3.87	338	eP	P	15 53 09.9	-0.3
SJMP				eS	S	15 53 52.2	-2.9
ENPP	El Nido	3.90	307	eP	P	15 53 10.0	-0.5
ENPP				eS	S	15 53 51.2	-4.6
BUSP	Coron	3.92	323	eP	P	15 53 09.9	-0.9
BUSP				eS	S	15 53 53.9	-2.4
BESP	Borongan	3.92	45	eP	P	15 53 08.1	-2.8
BESP				eS	S	15 53 45.4	-11
CNP	Catarman	4.17	29	eP	P	15 53 12.4	-2.0
CNP				eS	S	15 53 60.0	-2.8
BOAC	Boac	4.64	351	eP	P	15 53 18.2	-2.9
BATP	Bataraza	4.73	270	eP	S	15 54 09.8	-6.9
LUBP	Lubang	5.37	335	eP	P	15 53 31.2	-0.1

CASC 09 15:53:17.8±1.6, 14.72N×90.74W, h6km±8km, MD3.8, ML3.8, 4C-1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCG	Guatemala City	0.24	122	⇑iP	Pg	15 53 23.2	+0.5
TP2	Tecpan 2	0.28	284	⇑eP	Pg	15 53 24.7	+1.3
TP2				eS	Sg	15 53 29.7	+2.5
TP2				AML	AML	15 53 30.1	
	comp=E,16µm,0.2s						
FUG	Fuego 3	0.28	200	⇓iP	Pg	15 53 24.1	+0.6
PCG	Pacaya	0.34	158	⇑eP	Pg	15 53 25.4	+0.6
PCG				eS	Sg	15 53 30.3	+0.8
IXG	Ixpaco	0.61	152	⇑eP	Pg	15 53 30.0	+0.1
IXG				eS	Sg	15 53 41.0	+2.9
IXG				AML	AML	15 53 43.6	
	comp=E,10µm,0.3s						
MRL	Marmol	1.07	71	eP	Pb	15 53 38.2	-0.2
MRL				eS	Sb	15 53 53.2	+0.6
MRL				AML	AML	15 53 57.2	
	comp=E,1µm,0.6s						

PRE 09 16:12:59.1±1.7, 26.38S×27.38E, h2km, ML3.5, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSR	Koster	0.68	320	eP	Pg	16 12 05.5	-67
KSR				eS	Sg	16 12 15.6	-66
KSR				AML	AML	16 12 23.1	
	comp=Z,712nm,0.1s						
SWZ	Schweizer	2.00	246	eP	Pn	16 13 33.3	-1.0
SWZ				eS	Sn	16 13 59.3	-1.0
SWZ				AML	AML	16 14 00.3	
	comp=Z,802nm,0.3s						
NWL	Newcastle	2.66	121	eP	Pn	16 13 41.2	-2.5
NWL				eS	Sn	16 14 14.5	-2.3
NWL				AML	AML	16 14 20.2	
	comp=Z,221nm,0.7s						
BOSA	Boshof	2.92	220	eP	Pn	16 13 45.9	-1.6
BOSA				eS	Sn	16 14 20.0	-3.7
UPI	Upington	5.80	249	eS	Sn	16 15 27.3	-8.9
UPI				AML	AML	16 15 58.3	
	comp=Z,27nm,0.4s						

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*MOS **09** 16:23:07.5±0.9, 38.27N×74.24E, h123km, mb3.8/3, Error ellipse: s-maj=22.2km s-min=11.5km az=100.3*
*NEIC **09** 16:23:07.5±1.4, 38.19N×74.24E, h107km±16km, mb3.9/8, Error ellipse: s-maj=19.2km s-min=7.7km az=64.0*
*IDC **09** 16:23:09.8±7.2, 38.30N×74.14E, h124km±59km, mb3.4/6, mb1 3.5/9, mb1mx3.4/23, mbtmp3.8/9, Error ellipse: s-maj=48.7km s-min=19.4km az=28.0*
*NNC **09** 16:23:28.5±7.8, 40.12N×73.36E, mpv3.2, Error ellipse: s-maj=77.0km s-min=44.0km az=156.0*

ISC 09 16:23:07.1±0.6, 38.20N±0.04×74.2E±0.1, h119km±8km, n49, σ1§03/53, mb3.7/9, 3C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	3.94	355	P	P	16 24 06.8	-0.2
	SNR=123						
KZA	Kyzart	3.96	11	P	P	16 24 07.2	+0.1
	SNR=37						
UCH	Uchtor	4.03	3	P	P	16 24 08.3	+0.2
	SNR=71						
ULHL	Ulahol	4.33	20	P	P	16 24 12.6	+0.4
	SNR=11						
AAK	Ala-Archa	4.43	3	P	P	16 24 13.9	+0.4
	SNR=7.9						
AAK	Ala-Archa	4.43	3	⇑Pn	P	16 24 13.5	0.0
	22nm,0.8s						
AAK				⇓Lg		16 24 53.1	
	37nm,0.9s						
AAK	Ala-Archa	4.43	3	ePn	P	16 24 12.8	-0.8
AAK				ePg	P	16 24 26.2	+13
EKS2	Erkin-Say	4.47	356	P	P	16 24 13.9	-0.1
	SNR=20						
KBK	Karagaybulak	4.49	7	P	P	16 24 14.6	+0.4
	SNR=9.1						
CHMS	Chumysh	4.81	5	P	P	16 24 18.6	0.0
	SNR=7.4						
TKM2	Tokmak 2	4.83	12	P	P	16 24 19.6	+0.6
	SNR=6.2						
USP	Ospenovka	5.07	2	P	P	16 24 35.1	+13
	SNR=5.4						
KK31	Karatay Array	5.64	331	Pn	P	16 24 28.6	-1.2
	0.8nm,0.2s,baz=150,slow=13,SNR=42						
KK31				⇑Lg		16 25 25.7	
	3.6nm,0.3s,baz=135,slow=20,SNR=7.3						
THN	Thein Dam	5.89	167	eP	P	16 24 36.6	+3.5
THN				eS	S	16 25 40.4	+0.6
KLP	Kalpa	7.44	152	eS	S	16 26 09.4	-8.2
KLP				AML	AML	16 26 34.9	
	comp=N,64nm,0.4s						
KLP				AML	AML	16 26 38.1	
	comp=E,46nm,0.4s						
SMLA	Simla	7.47	160	i P	P	16 24 54.2	-0.5
SMLA				i S	S	16 26 09.4	-8.9
JOSI	Joshimath	8.82	148	ex	x	16 26 21.1	
NDI	New Delhi	9.82	164	eS	S	16 27 09.5	-5.5
AYAN	Aya Nagar	9.99	165	ex	x	16 26 50.6	
AYAN				i S	S	16 27 11.8	-7.5
KHET	Khetri	10.19	172	eP	P	16 25 32.0	+0.9
KHET				eS	S	16 27 19.9	-3.9
KHET				AML	AML	16 27 27.0	
	comp=E,17nm,0.2s						
KHET				AML	AML	16 27 27.1	
	comp=N,11nm,0.1s						
KUDL	Kundal	10.21	169	eS	S	16 27 19.0	-5.4
SONA	Sohna	10.21	166	ex	x	16 25 21.3	
SONA				eS	S	16 27 19.1	-5.3
SONA				AML	AML	16 27 31.2	
	comp=E,30nm,0.3s						
SONA				AML	AML	16 27 32.5	
	comp=N,14nm,0.0s						
MKAR	Makanchi Array	10.45	32	P	P	16 25 33.8	-0.8
	comp=N,0.1nm,0.3s,baz=212,slow=13,SNR=14						
KOLN	Koldanda	13.04	140	eP	P	16 26 08.7	-0.1
	comp=N,3.3nm,0.3s						
GKN	Gorkha	13.40	136	eP	P	16 26 14.4	+1.0
	comp=N,18nm,0.4s						
KKN	Kakani	13.92	135	eP	P	16 26 21.0	+0.9
	comp=N,13nm,0.5s						
KKN	Kakani	13.92	135	eP	P	16 26 21.0	+0.9
KKN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
DMN	Daman	13.97	136	eP	P	16 26 18.6	-2.1
PKI	Pulchoki	14.16	135	eP	P	16 26 23.3	+0.1
	comp=Z,11nm,0.8s						
PKI	Pulchoki	14.16	135	eP	P	16 26 23.3	+0.1
PKI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BVAR	Borovoye Array	15.06	351	P	P	16 26 36.2	+1.7
	comp=Z,0.5nm,0.3s,baz=164,slow=11,SNR=9.7						
AB31	Akbulak array	15.08	322	⇓Pn	P	16 26 34.6	-0.2
	comp=Z,0.5nm,0.6s,baz=122,slow=14,SNR=6.4						
AB31				⇑Sn	S	16 29 05.7	-13
	comp=Z,0.3nm,0.3s						
LSA	Lhasa	16.40	116	P	P	16 26 58.4	+6.9
LSA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LSA	Lhasa	16.40	116	P	P	16 26 58.4	+6.9
	comp=Z,6.1nm,1.3s						
ZAL	Zalesovo	17.34	21	P	P	16 27 01.4	-1.5
	comp=Z,0.7nm,0.3s,baz=291,slow=5.3,SNR=5.9						
ARU	Arti	21.00	335	P	P	16 27 42.1	-0.2
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.8						
ARU	Arti	21.00	335	P	P	16 27 42.0	-0.3
	comp=Z,3.5nm,0.8s,mb3.7						
SONM	Songino Array	25.27	57	P	P	16 28 25.8	+2.3
	comp=Z,1.5nm,0.8s,mb3.5,baz=259,slow=11,SNR=14						
SONM	Songino Array	25.27	57	P	P	16 28 25.8	+2.2
ULN	Ulaanbaatar	25.71	57	eP	P	16 28 26.6	-1.1
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
ULN	Ulaanbaatar	25.71	57	eP	P	16 28 26.6	-1.1
	comp=Z,1.6nm,0.8s,mb3.5						
FINES	FINESS Array B	37.55	324	P	P	16 30 10.6	-0.4
	comp=Z,1.1nm,0.5s,mb3.9,baz=114,slow=8.4,SNR=9.6						
FINES	FINESS Array B	37.55	324	P	P	16 30 10.6	-0.4
PSZ	Piszkesteto	40.10	302	P	P	16 30 33.5	+1.3
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
PSZ	Piszkesteto	40.10	302	P	P	16 30 33.5	+1.3
	comp=Z,3.1nm,0.9s,mb4.1						
ARCES	ARCESS Array B	40.59	336	P	P	16 30 36.1	+0.1
	comp=Z,1.7nm,0.5s,mb4.2,baz=109,slow=9.0,SNR=22						

NOA	**NORSAR Array B**	**44.59**	**322**	P	**P**	**16 31 08.4**	**-0.1**
	comp=Z,0.7nm,0.8s,mb3.4,baz=105,slow=8.0,SNR=2.3						
ILAR	**Eielson Array**	**72.43**	**17**	P	**P**	**16 34 20.1**	**-1.5**
	comp=Z,0.4nm,0.6s,mb3.4,baz=299,slow=5.1,SNR=4.2						
WRA	**Warramunga Arr**	**80.78**	**124**	P	**P**	**16 35 10.0**	**+1.0**
	comp=Z,0.2nm,0.4s,mb3.3,baz=327,slow=5.3,SNR=12						

IDC 09 16:41:24.3±3.1**,10.37S×161.26E,h45^{km}**±25^{km}**,mb3.7**/3**, mb1 3.9**/5**,mb1mx3.6**/17**,mbtmp4.0**/5**,ML3.6**/2**,Error ellipse: s-maj=36.8km s-min=17.1km az=60.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.59**	**306**	P	P	16 41 49.0	-1.5
	45nm,0.3s,baz=142,slow=6.9,SNR=18						
HNR				S	S	16 42 09.6	-0.5
	124nm,0.3s,baz=129,slow=19,SNR=10.0						
DZM	**Mont Dzumac**	**12.65**	**157**	P	P	16 44 22.4	-1.8
	0.1nm,0.3s,baz=328,slow=18,SNR=9.5						
CTA	**Charters Tower**	**17.39**	**234**	P	P	16 45 25.2	-0.2
	0.2nm,0.3s,baz=54,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**27.63**	**247**	P	P	16 47 07.4	-2.7
	0.5nm,0.4s,baz=78,slow=9.0,SNR=13						
STKA	**Stephens Creek**	**28.09**	**217**	P	P	16 47 12.2	-1.9
	1.0nm,0.7s,baz=54,slow=14,SNR=2.4						
SONM	**Songino Array**	**75.56**	**325**	P	P	16 53 04.4	-1.6
	0.5nm,0.5s,baz=135,slow=4.1,SNR=4.9						

*NEIC **09** 16:44:45.0,23.09S×115.07E,h15^{km},ML3.5(AUST),After AUST.*

AUST 09 16:44:45.9,23.09S×115.07E,h14^{km},ML3.5,Western Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GIRL	**Giralia**	**0.67**	**39**	*e*P	Pb	16 45 00.9	+2.1
GIRL				*e*S	Sb	16 45 14.3	+6.7
MBWA	**Marble Bar**	**4.73**	**67**	*e*P	Pn	16 45 56.8	-1.8
MBWA				*e*S	Sn	16 46 46.0	-7.8
MEEK	**Meekatharra**	**4.78**	**138**	*e*P	Pn	16 45 54.8	-4.4
MEEK				*e*S	Sn	16 46 46.5	-8.5
MORW	**Morawa**	**6.01**	**172**	*e*P	Pn	16 46 11.5	-5.2
MORW				*e*S	Sn	16 47 15.8	-10
BLDU	**Ballidu**	**7.63**	**169**	*e*P	Pn	16 46 33.7	-5.7
BLDU				*e*S	Sn	16 47 54.3	-12
KLBR	**Kellerberrin**	**8.79**	**165**	*e*P	P	16 46 50.0	-5.6
KLBR				*e*S	Sn	16 48 20.7	-15

*ISK **09** 16:46:12.3,35.47N×37.82E,h33^{km},MD3.5*

*GRAL **09** 16:46:15.5±3.1,35.61N×37.93E,h15^{km}±18^{km},MD3.4*

*CSEM **09** 16:46:15.7±0.4,35.89N×37.66E,h60^{km},MD3.5,Error ellipse: s-maj=19.4km s-min=7.2km az=118.0*

ISC 09 16:46:11.9±0.9**,35.58N**±0.04×**37.69E**±0.07**,h10^{km},n13, σ1^{s}03**/23**,Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTY	**Hatay**	**1.37**	**294**	PN	**Pn**	**16 46 38.5**	**+1.4**
HTY				SN	**Sn**	**16 46 55.5**	**0.0**
COBT	**Iskenderun**	**1.49**	**309**	*i* P	**Pn**	**16 46 39.8**	**+0.9**
COBT				*i* S	**Sb**	**16 46 56.6**	**-1.6**
GAZ	**Gaziantep**	**1.63**	**346**	PN	**Pn**	**16 46 41.4**	**+0.5**
GAZ				SN	**Sn**	**16 47 02.9**	**+0.8**
FKH	**Fakeheh**	**1.71**	**219**	*i* Pg	**Pg**	**16 46 46.1**	**+0.1**
FKH				*i* Sg	**Sg**	**16 47 09.6**	**+0.7**
GZT	**Gaziantep**	**1.77**	**357**	*i* P	**Pn**	**16 46 44.0**	**+1.1**
GZT				*i* S	**Sn**	**16 47 05.6**	**0.0**
HWQ	**Hawqa**	**1.93**	**228**	*i* Pg	**Pg**	**16 46 49.8**	**-0.8**
HWQ				*i* Sg	**Sg**	**16 47 16.0**	**-0.4**
URFA	**Urfa**	**2.07**	**26**	*e*PN	**Pn**	**16 46 45.7**	**-1.4**
KAHT	**Ahir Dag**	**2.15**	**342**	*i* P	**Pn**	**16 46 51.3**	**+3.0**
KAHT				*i* S	**Sn**	**16 47 14.2**	**-1.0**
BHL	**Bhannes**	**2.37**	**226**	*e*Pn	**Pg**	**16 46 55.8**	**-3.4**
BHL				Sn	**Sg**	**16 47 26.6**	**-4.2**
MALT	**Malatya**	**2.79**	**12**	*e*PN	**Pn**	**16 46 57.0**	**-0.5**
MYA	**Malataya**	**2.80**	**12**	*e*PN	**Pn**	**16 46 57.0**	**-0.6**
MEST	**Erdemli**	**3.04**	**290**	*i* P	**Pn**	**16 47 01.4**	**+0.4**
MEST				*i* S	**Sn**	**16 47 33.0**	**-4.8**
ELZG	**Elazig**	**3.09**	**19**	*i* P	**Pg**	**16 47 21.9**	**+8.4**
ELZG				*i* S	**Sg**	**16 47 48.9**	**-5.9**

MAN 09 17:10:09.4,9.34N×125.71E,h7^{km},mb4.0,ML2.8,MS2.4, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.38**	**194**	*e*P	Pg	17 10 17.2	0.0
SCPH	**Surigao**	**0.49**	**333**	⇑*e*P	Pg	17 10 19.8	+0.5
SCPH				*e*S	Sg	17 10 29.2	+3.2
MSLP	**Maasin**	**1.15**	**313**	*e*P	Pb	17 10 29.9	-1.4
BUKP	**Musuan**	**1.59**	**204**	*e*P	Pn	17 10 37.3	-0.9
BUKP				*e*S	Sb	17 10 59.2	+0.3
BESP	**Borongan**	**2.26**	**353**	*e*P	Pn	17 10 47.7	-0.1

*NIED **09** 17:12:00,25.90N×128.60E,h14^{km},Mw3.9 Best double couple: M$_0$6.71×10^{14} NP1:ϕ_s274°,δ88°,λ6°. NP2:ϕ_s184°, δ84°,λ178°.*

*BJI **09** 17:12:37.9,25.86N×128.78E,h39^{km},mB4.5,mb4.6, Ms4.2,Msz4.0*

*JMA **09** 17:12:38.8±0.2,25.93N×128.59E,h50^{km},M3.9*

*MOS **09** 17:12:39.3±0.9,25.94N×128.54E,h33^{km},mb4.7/14,Error ellipse: s-maj=16.6km s-min=11.7km az=103.8*

*NEIC **09** 17:12:40.8±0.6,26.02N×128.46E,mb4.6/15, MW3.8(NIED),Error ellipse: s-maj=13.2km s-min=7.4km az=139.0*

*IDC **09** 17:12:40.7±0.9,26.05N×128.54E,h30^{km}±4^{km},mb3.9/12, mb1 4.1/14,mb1mx4.0/23,mbtmp4.1/14,ML3.6/2,Error ellipse: s-maj=23.8km s-min=13.2km az=82.0*

ISC 09 17:12:38.1±0.4**,25.94N**±0.03×**128.57E**±0.04**,h28^{km}, h28^{km}**±1.0^{km}**:pP-P,n76,σ1^{s}09**/90**,mb4.4**/35**,MS4.1**/7**,1C, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**0.77**	**285**	P	**Pb**	**17 12 53.8**	**+1.0**
JJT2				S	**Sb**	**17 13 04.7**	**+1.8**
NAH1	**Naha**	**0.84**	**289**	P	**Pb**	**17 12 54.5**	**+0.5**
NAH1				S	**Sb**	**17 13 06.1**	**+1.2**
JOW	**Kunigami**	**0.93**	**343**	Pn	**Pn**	**17 12 55.8**	**+0.3**
	baz=160,slow=14						
JOW				Sn	**Sn**	**17 13 07.0**	**-0.9**
	baz=121,slow=19						
JOW	**Kunigami**	**0.93**	**343**	P	**Pn**	**17 12 55.9**	**+0.5**
JIH	**Iheya**	**1.22**	**334**	P	**Pn**	**17 13 00.3**	**+0.7**
JIH				*e*S	**Sn**	**17 13 15.1**	**-0.2**
JAGN	**Aguni-jima**	**1.36**	**299**	P	**Pn**	**17 13 02.4**	**+0.8**
JKE	**Kume jima 2**	**1.65**	**284**	P	**Pn**	**17 13 05.9**	**+0.2**
JTK	**Tokunoshima**	**1.87**	**10**	P	**Pn**	**17 13 09.4**	**+0.5**
JTK				S	**Sn**	**17 13 31.7**	**-0.1**
JMZ	**Minamidaito 2**	**2.39**	**92**	P	**Pn**	**17 13 15.9**	**-0.4**
JAM	**Amami Oshima**	**2.63**	**20**	P	**Pn**	**17 13 19.6**	**-0.1**
JAM				S	**Sn**	**17 13 48.5**	**-2.6**
JZK	**Kikaishima**	**2.68**	**27**	P	**Pn**	**17 13 22.8**	**+2.4**
JOGS	**Gusukube**	**3.10**	**248**	P	**Pn**	**17 13 26.5**	**+0.2**
JOGS				*e*S	**Sn**	**17 14 01.7**	**-1.1**
JMJ	**Miyako jima 2**	**3.17**	**250**	P	**Pn**	**17 13 27.0**	**-0.4**
JMJ				*e*S	**Sn**	**17 14 03.1**	**-1.6**
JTJ	**Tarama**	**3.73**	**251**	P	**Pn**	**17 13 34.3**	**-1.1**
JTJ				*e*S	**Sn**	**17 14 16.5**	**-2.5**
JIJ	**Ishigaki jima**	**4.31**	**250**	P	**Pn**	**17 13 41.6**	**-2.0**
JKRS	**Kuro-shima**	**4.47**	**249**	P	**Pn**	**17 13 45.6**	**-0.3**
IRIF	**Iriomote-Funau**	**4.67**	**251**	P	**Pn**	**17 13 46.8**	**-1.9**
JKC	**Kuchinoerabu**	**4.73**	**17**	P	**Pn**	**17 13 48.8**	**-0.8**
JTN	**Tanegashima 3**	**5.16**	**24**	P	**Pn**	**17 13 54.3**	**-1.3**
JTN				*e*S	**Sn**	**17 14 51.0**	**-3.9**
YHNB	**Yeheng**	**6.63**	**261**	*e*Pn	**Pn**	**17 14 14.8**	**-1.6**
JNU	**Nakatsue**	**7.44**	**15**	Pn	**Pn**	**17 14 26.6**	**-1.1**
	1.5nm,0.3s,baz=75,slow=5.6,SNR=14						
JNU				Sn	**Sn**	**17 15 48.6**	**-3.3**
	0.4nm,0.3s,baz=85,slow=44,SNR=2.4						
MJAR	**Matsushiro Arr**	**13.40**	**36**	Pn	**P**	**17 15 49.7**	**+0.7**
	0.1nm,0.3s,baz=225,slow=10,SNR=3.5						
MDJ	**Mudanjiang**	**18.66**	**2**	P	**P**	**17 16 56.2**	**+0.1**
MDJ				AP		17 17 02.1	
MDJ				XP		17 17 04.9	
MDJ				PP	PP	17 17 13.7	+1.8
MDJ				S	**S**	**17 20 18.6**	**-1.2**
MDJ				AMB	AMB		
	comp=Z,40nm,4.4s						
MDJ				LR	LR		
	comp=N,10.0nm,18.3s						
MDJ				LR	LR		
	comp=E,90nm,18.3s						
MDJ				LR	LR		
	comp=Z,70nm,17.4s						
XAN	**Xi’an**	**18.82**	**300**	P	**P**	**17 16 57.9**	**-0.2**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s						
XAN				LR	LR		
	comp=E,360nm,14.2s						
XAN				LR	LR		
	comp=Z,580nm,15.6s						
GYA	**Guiyang**	**19.67**	**276**	P	**P**	**17 17 10.3**	**+2.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
KMI	**Kunming**	**23.32**	**274**	P	**P**	**17 17 45.4**	**+0.5**
KMI				AP		17 17 52.3	
KMI				PP	PP	17 18 14.6	-1.7
KMI				S	**S**	**17 21 47.9**	**-3.8**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
KMI				LR	LR		
	comp=N,310nm,17.2s,MS4.0						
KMI				LR	LR		
	comp=E,240nm,15.0s,MS4.0						
KMI				LR	LR		
	comp=Z,210nm,17.2s,MS3.7						
LZH	**Lanzhou**	**23.43**	**302**	⇑P	**P**	**17 17 45.8**	**-0.1**
LZH				AP		17 17 58.8	
LZH				XP		17 18 04.3	
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,160nm,4.6s						
LZH				LR	LR		
	comp=E,640nm,14.0s						
LZH				LR	LR		
	comp=Z,520nm,14.3s,MS4.1						
YSS	**Yuzh-Sakhalins**	**23.80**	**25**	*e*P	**P**	**17 17 52.0**	**+2.6**
YSS				*e*		17 18 17.0	
YSS				*e*S	**S**	**17 22 07.0**	**+7.0**
YSS				MLR	MLR		
	comp=Z,200nm,14.0s,MS3.7						
YSS	**Yuzh-Sakhalins**	**23.80**	**25**	*e*P	**P**	**17 17 52.1**	**+2.7**
	comp=Z,17nm,0.8s,mb4.5						
GTA	**Gaotai**	**27.55**	**306**	*e*P	**P**	**17 18 23.7**	**-0.9**
GTA				AP	pP	17 18 31.5	-1.4
GTA				XP	sP	17 18 36.2	-0.4
GTA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.9						
GTA				AMB	AMB		
	comp=Z,50nm,5.7s						
GTA				LR	LR		
	comp=N,210nm,12.5s,MS4.1						
GTA				LR	LR		
	comp=E,270nm,15.2s,MS4.1						
GTA				LR	LR		
	comp=Z,400nm,15.6s,MS4.1						
ULN	**Ulaanbaatar**	**27.67**	**328**	*e*P	**P**	**17 18 27.1**	**+1.5**
ULN				*e**PP	pP	17 18 35.1	+1.3
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
ULN	**Ulaanbaatar**	**27.67**	**328**	*e*P	**P**	**17 18 27.1**	**+1.5**
	comp=Z,2.4nm,0.6s,mb4.0						
ULN				*e*pP	pP	17 18 35.1	+1.3
SONM	**Songino Array**	**27.97**	**327**	P	**P**	**17 18 26.3**	**-1.9**
	comp=Z,3.2nm,0.7s,mb4.0,baz=146,slow=5.2,SNR=11						
SONM				pP	pP	17 18 37.9	+1.4
	comp=Z,2.1nm,0.4s,baz=141,slow=11,SNR=12						
CMAR	**Chiang Mai Arr**	**28.38**	**261**	P	**P**	**17 18 32.9**	**+0.6**
	comp=Z,1.3nm,0.9s,mb3.6,baz=58,slow=8.2,SNR=4.6						
CMAR				pP	pP	17 18 42.7	+2.1
	comp=Z,1.3nm,0.9s,baz=56,slow=7.4,SNR=4.4						
YAK	**Yakutsk**	**36.09**	**1**	*e*P	**P**	**17 19 39.2**	**0.0**
YAK				*e**PP	pP	17 19 47.9	+0.3
YAK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
YAK	**Yakutsk**	**36.09**	**1**	*e*P	**P**	**17 19 39.2**	**0.0**
	comp=Z,9.0nm,0.7s,mb4.8						
YAK				*e*pP	pP	17 19 47.9	+0.2
WMQ	**Urumqi**	**37.54**	**309**	*e*P	**P**	**17 19 52.8**	**+1.2**
WMQ				AP	pP	17 20 00.0	0.0
WMQ				XP	sP	17 20 03.5	0.0
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,110nm,4.0s						
WMQ				LR	LR		
	comp=N,660nm,18.0s,MS4.7						
WMQ				LR	LR		
	comp=E,790nm,16.4s,MS4.7						
WMQ				LR	LR		
	comp=Z,710nm,15.4s,MS4.6						
GUN	**Gumba**	**37.98**	**283**	*e*P	**P**	**17 19 56.2**	**+0.8**
	comp=Z,12nm,0.6s,mb4.8						
PKI	**Pulchoki**	**38.44**	**282**	*e*P	**P**	**17 19 59.4**	**+0.1**
	comp=Z,30nm,0.9s,mb5.0						
PKI	**Pulchoki**	**38.44**	**282**	*e*P	**P**	**17 19 59.4**	**+0.1**
PKI				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.7						
KKN	**Kakani**	**38.52**	**283**	*e*P	**P**	**17 20 00.5**	**+0.5**
	comp=Z,14nm,0.6s,mb4.9						
KKN	**Kakani**	**38.52**	**283**	*e*P	**P**	**17 20 00.5**	**+0.5**
KKN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
DMN	**Daman**	**38.70**	**282**	*e*P	**P**	**17 20 01.8**	**+0.3**
GKN	**Gorkha**	**39.06**	**283**	*e*P	**P**	**17 20 04.8**	**+0.3**
	comp=Z,22nm,0.8s,mb5.0						
KOLN	**Koldanda**	**40.00**	**283**	*e*P	**P**	**17 20 12.9**	**+0.6**
	comp=Z,20nm,0.8s,mb4.9						
MKAR	**Makanchi Array**	**41.96**	**312**	P	**P**	**17 20 27.2**	**-0.9**
	comp=Z,1.7nm,0.5s,mb3.9,baz=98,slow=10,SNR=39						
MKAR				pP	pP	17 20 36.0	-0.6
	comp=Z,1.6nm,0.5s,baz=95,slow=10,SNR=11						
MKAR				PcP	PcP	17 22 23.6	-0.2
	comp=Z,0.5nm,0.6s,baz=92,slow=5.7,SNR=3.8						
ZAL	**Zalesovo**	**42.67**	**323**	*i* P	**P**	**17 20 39.7**	**+5.8**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL	**Zalesovo**	**42.67**	**323**	P	**P**	**17 20 31.9**	**-1.9**
	comp=Z,0.8nm,0.3s,mb3.9,baz=3.8,slow=15,SNR=2.8						
TIXI	**Tiksi**	**45.75**	**0**	*i* P	**P**	**17 20 58.3**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.9s,mb4.4						
WRAB	**Tennant Creek**	**45.94**	**172**	P	**P**	**17 21 12.8**	**+12**
WRAB				*PP	pP	17 21 20.9	+12
WRA	**Warramunga Arr**	**45.95**	**172**	P	**P**	**17 21 00.9**	**+0.3**
	comp=Z,1.9nm,0.7s,mb4.2,baz=353,slow=8.5,SNR=22						
WRA				pP	pP	17 21 10.5	+1.4
	comp=Z,1.3nm,0.7s,baz=353,slow=8.5,SNR=4.8						
CHKZ	**Chkalovo**	**50.67**	**319**	*e*P	**P**	**17 21 36.3**	**-0.6**
CHKZ				*e**SP	sP	17 21 47.3	-1.5
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CHKZ	**Chkalovo**	**50.67**	**319**	*e*P	**P**	**17 21 36.3**	**-0.6**
	comp=Z,1.8nm,0.8s,mb4.0						
CHKZ				*e*pP	pP	17 21 44.2	-1.2
CHKZ				*e*sP	sP	17 21 47.3	-1.5
BVAR	**Borovoye Array**	**50.70**	**318**	P	**P**	**17 21 36.7**	**-0.5**
	comp=Z,1.7nm,0.6s,mb4.2,baz=64,slow=8.3,SNR=15						
BVAR				pP	pP	17 21 45.5	-0.2
	comp=Z,2.7nm,0.5s,baz=86,slow=8.4,SNR=14						
ARU	**Arti**	**57.81**	**322**	P	**P**	**17 22 28.5**	**-0.7**
ARU				*e**PP	pP	17 22 36.0	-1.9
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ARU	**Arti**	**57.81**	**322**	P	**P**	**17 22 28.5**	**-0.6**
	comp=Z,2.0nm,0.6s,mb4.3						
ARU				*e*pP	pP	17 22 36.0	-1.9
ILAR	**Eielson Array**	**64.55**	**28**	P	**P**	**17 23 14.3**	**-0.3**
	comp=Z,0.3nm,0.5s,mb3.6,baz=246,slow=6.8,SNR=4.9						
KIV	**Kislovodsk**	**69.67**	**310**	*e*P	**P**	**17 23 47.5**	**+0.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
KIV				pmax	pmax		
	comp=E,1.0nm,0.6s						
KIV				MLR	MLR		
	comp=N,36nm,20.0s,MS3.8						
KIV				MLR	MLR		
	comp=Z,67nm,20.0s,MS3.9						
KIV				MLR	MLR		
	comp=E,32nm,16.0s,MS3.8						
KEV	**Kevo**	**69.82**	**339**	*e*p	**P**	**17 23 46.8**	**-0.9**
	comp=E,6.9nm,1.1s,mb4.5						
KEV	**Kevo**	**69.82**	**339**	*e*P	**P**	**17 23 46.8**	**-0.9**
KEV				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
OBN	**Obninsk**	**70.25**	**322**	*e*P	**P**	**17 23 51.7**	**+1.2**
OBN				*e*S	S	17 33 01.3	+2.2
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
SOC	**Sochi**	**71.83**	**310**	*e*P	**P**	**17 23 59.8**	**-0.4**
SOC				*e*		17 26 40.5	
SOC				*e*S	S	17 33 23.4	+5.9
SOC				*e*		17 34 06.1	
SOC				pmax	pmax		
	comp=Z,26nm,1.6s,mb4.9						
SOC				pmax	pmax		
	comp=N,16nm,1.5s						
SOC				pmax	pmax		
	comp=E,10.0nm,0.8s						
KAF	**Kangasniemi**	**72.91**	**331**	*e*p	**P**	**17 24 05.9**	**-0.3**
	comp=E,3.1nm,0.9s,mb4.2,baz=66,slow=5.7						
KAF	**Kangasniemi**	**72.91**	**331**	*e*P	**P**	**17 24 05.9**	**-0.3**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
FINES	**FINESS Array B**	**73.27**	**331**	P	**P**	**17 24 08.6**	**+0.2**
	comp=Z,1.7nm,0.7s,mb4.1,baz=63,slow=4.3,SNR=8.4						
FINES				pP	pP	17 24 17.1	-0.1
	comp=Z,1.4nm,0.5s,baz=72,slow=6.0,SNR=3.8						
MALT	**Malatya**	**74.53**	**305**	*e*P	**P**	**17 24 18.1**	**+2.0**
MALT				*e**PP	pP	17 24 26.6	+1.6
MALT				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
MALT	**Malatya**	**74.53**	**305**	*e*P	**P**	**17 24 18.1**	**+1.9**
	comp=Z,6.6nm,1.2s,mb4.4						
MALT				*e*pP	pP	17 24 26.6	+1.6
BRTR	**Keskin Array B**	**77.46**	**308**	P	**P**	**17 24 33.9**	**+1.2**
	comp=Z,2.9nm,0.8s,mb4.2,baz=104,slow=5.1,SNR=15						
BRTR				pP	pP	17 24 42.1	+0.6
	comp=Z,0.8nm,0.5s,baz=90,slow=7.4,SNR=3.3						
NB2	**NORSAR Subarra**	**79.71**	**334**	P	**P**	**17 24 45.2**	**+0.7**
	comp=Z,1.0nm,0.6s,mb3.9,baz=51,slow=5.6						
NOA	**NORSAR Array B**	**79.71**	**334**	P	**P**	**17 24 45.0**	**+0.5**
	comp=Z,2.2nm,0.8s,mb4.2,baz=52,slow=5.5,SNR=5.3						
MLR	**Muntele Rosu**	**80.17**	**316**	P	**P**	**17 24 48.2**	**+0.9**
	comp=Z,1.5nm,0.5s,mb4.1,baz=330,slow=12,SNR=3.6						
MLR	**Muntele Rosu**	**80.17**	**316**	P	**P**	**17 24 48.2**	**+0.9**
SUMG	**Summit**	**81.35**	**356**	*e*P	**P**	**17 24 58.6**	**+5.6**
	comp=Z,11nm,0.9s,mb4.8						
SUMG				*e*pP	pP	17 25 07.1	+5.2
SUMG				*e*sP	sP	17 25 10.1	+5.2
GERES	**GERESS Array B**	**85.62**	**323**	P	**P**	**17 25 16.8**	**+1.6**
	comp=Z,0.6nm,0.6s,mb4.0,baz=34,slow=4.8,SNR=5.0						
FCC	**Fort Churchill**	**88.50**	**21**	P	**P**	**17 25 29.8**	**+0.9**
FCC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.5						
FCC	**Fort Churchill**	**88.50**	**21**	P	**P**	**17 25 29.8**	**+0.9**
	comp=Z,1.8nm,0.8s,mb4.5						

PRE 09 17:14:29.9±0.9**,26.38S×27.33E,h2^{km},ML3.5,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSR	**Koster**	**0.65**	**324**	*e*P	Pg	17 13 37.1	-66
KSR				*e*S	Sg	17 13 45.8	-66
KSR				AML	AML	17 13 52.2	
	comp=Z,2μm,0.1s						
SLR	**Silverton**	**1.07**	**54**	*e*P	Pb	17 14 49.8	-1.1
SLR				*e*S	Sb	17 15 03.0	-2.1
SLR				AML	AML	17 15 07.1	
	comp=Z,354nm,0.1s						
NWL	**Newcastle**	**2.70**	**120**	*e*P	Pn	17 15 13.7	-1.4
NWL				*e*S	Sn	17 15 45.7	-3.1
NWL				AML	AML	17 15 53.6	
	comp=Z,695nm,0.5s						
BOSA	**Boshof**	**2.89**	**219**	*e*P	Pn	17 15 16.3	-1.4
BOSA				*e*S	Sn	17 15 50.1	-3.5
UPI	**Upington**	**5.75**	**249**	*e*P	Pn	17 15 54.1	-4.2

MAN 09 17:14:53.6,18.68N×120.74E,h1^{km},mb4.0,ML2.7,MS2.4, 1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**0.95**	**150**	*e*P	Pb	17 15 12.8	+0.4
APYP				*e*S	Sg	17 15 27.8	+2.8
ABRA	**Dolores**	**1.03**	**181**	*e*P	Pb	17 15 13.1	-0.8
ABRA				*e*S	Sb	17 15 28.6	+0.9
SGCP	**Mt. Cagua**	**1.31**	**109**	*e*P	Pb	17 15 17.6	-1.2
SGCP				*e*S	Sb	17 15 38.2	+2.1
CVP	**Callao Caves**	**1.42**	**133**	⇑*e*P	Pb	17 15 20.0	-0.5
CVP				*e*S	Sb	17 15 40.0	+1.0
CAUP	**Cauayan**	**2.01**	**149**	*e*P	Pn	17 15 30.3	+1.3

*NIED **09** 17:17:00,25.90N×128.60E,h11^{km},Mw4.4 Best double couple: M$_0$4.58×10^{15} NP1:ϕ_s46°,δ48°,λ92°. NP2:ϕ_s223°, δ42°,λ88°.*

*BJI **09** 17:17:00.5,25.66N×128.90E,h52^{km},mB4.5,mb4.4, Ms4.3,Msz4.2*

*JMA **09** 17:17:01.0±0.1,25.91N×128.62E,h47^{km}±3^{km},M4.0*

*MOS **09** 17:17:02.1±1.1,25.96N×128.39E,h33^{km},mb4.7/11,Error ellipse: s-maj=18.6km s-min=11.5km az=119.3*

*NEIC **09** 17:17:03.3±0.5,25.98N×128.38E,mb4.6/18, MW4.4(NIED),Error ellipse: s-maj=9.5km s-min=8.7km az=127.0*

*IDC **09** 17:17:03.2±1.2,26.03N×128.50E,h32^{km}±5^{km},mb3.9/11, mb1 4.1/12,mb1mx4.0/21,mbtmp4.1/12,ML3.8/1,Error ellipse: s-maj=31.4km s-min=13.4km az=83.0*

ISC 09 17:17:00.9±0.9**,25.93N**±0.03×**128.57E**±0.03**,h30^{km}**±7^{km}**, h30^{km}**±1.6^{km}**:pP-P,n74,σ1^{s}16**/91**,mb4.4**/31**,MS4.3**/2**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**0.77**	**286**	P	**Pn**	**17 17 16.3**	**+0.6**
JJT2				S	**Sb**	**17 17 27.4**	**+1.5**
NAH1	**Naha**	**0.84**	**289**	P	**Pn**	**17 17 17.2**	**+0.5**
NAH1				S	**Sn**	**17 17 29.1**	**+1.1**
JOW	**Kunigami**	**0.94**	**344**	Pn	**Pn**	**17 17 18.4**	**+0.3**
	350nm,0.3s,baz=151,slow=20,SNR=49						
JOW				Sn	**Sn**	**17 17 28.7**	**-1.9**
	431nm,0.3s,baz=146,slow=23,SNR=16						
JOW	**Kunigami**	**0.94**	**344**	P	**Pn**	**17 17 18.3**	**+0.2**
JIH	**Iheya**	**1.23**	**334**	P	**Pn**	**17 17 22.9**	**+0.6**
JIH				S	**Sn**	**17 17 38.4**	**+0.5**
JAGN	**Aguni-jima**	**1.36**	**299**	P	**Pn**	**17 17 24.9**	**+0.7**
JKE	**Kume jima 2**	**1.65**	**284**	P	**Pn**	**17 17 28.5**	**+0.2**
JKE				S	**Sn**	**17 17 49.2**	**+0.5**
JTK	**Tokunoshima**	**1.88**	**10**	P	**Pn**	**17 17 31.8**	**+0.2**
JMZ	**Minamidaito 2**	**2.39**	**92**	P	**Pn**	**17 17 38.3**	**-0.6**
JMZ				S	**Sn**	**17 18 05.2**	**-2.3**
JAM	**Amami Oshima**	**2.64**	**20**	S	**Sn**	**17 18 13.5**	**-0.3**
JZK	**Kikaishima**	**2.69**	**27**	*e*S	**Sn**	**17 18 15.0**	**0.0**
JOGS	**Gusukube**	**3.09**	**249**	P	**Pn**	**17 17 49.2**	**+0.3**
JOGS				*e*S	**Sn**	**17 18 24.5**	**-0.7**
JMJ	**Miyako jima 2**	**3.16**	**250**	P	**Pn**	**17 17 50.0**	**+0.1**
JMJ				*e*S	**Sn**	**17 18 25.8**	**-1.3**
JTJ	**Tarama**	**3.73**	**251**	P	**Pn**	**17 17 57.0**	**-0.9**
JTJ				S	**Sn**	**17 18 38.3**	**-3.1**
JNN	**Nakanoshima**	**4.07**	**16**	P	**Pn**	**17 18 02.1**	**-0.6**
JNN				*e*S	**Sn**	**17 18 47.5**	**-2.4**
JIJ	**Ishigaki jima**	**4.30**	**250**	P	**Pn**	**17 18 04.0**	**-2.1**
JIJ				*e*S	**Sn**	**17 18 51.0**	**-4.9**
JKRS	**Kuro-shima**	**4.46**	**249**	P	**Pn**	**17 18 06.7**	**-1.7**
IRIF	**Iriomote-Funau**	**4.67**	**251**	P	**Pn**	**17 18 09.0**	**-2.2**
IRIF				*e*S	**Sn**	**17 19 00.0**	**-5.0**
JKC	**Kuchinoerabu**	**4.74**	**17**	P	**Pn**	**17 18 11.3**	**-1.0**
JKC				*e*S	**Sn**	**17 19 02.3**	**-4.6**
JTN	**Tanegashima 3**	**5.17**	**24**	P	**Pn**	**17 18 18.0**	**-0.3**
JTN				S	**Sn**	**17 19 13.2**	**-4.4**
NACB	**Ninganchiao**	**6.56**	**256**	*e*Pn	**Pn**	**17 18 34.5**	**-3.5**
YHNB	**Yeheng**	**6.63**	**261**	*e*Pn	**Pn**	**17 18 37.8**	**-1.1**
JNU	**Nakatsue**	**7.45**	**15**	Pn	**Pn**	**17 18 49.8**	**-0.6**
	1.4nm,0.3s,baz=132,slow=8.7,SNR=11						
JNU				Sn	**Sn**	**17 20 10.7**	**-4.0**
	0.5nm,0.3s,baz=267,slow=43,SNR=2.5						

ENH	Enshi	17.38	289	P	P	17 20 58.9	-4.1
	17nm,1.2s						
MDJ	Mudanjiang	18.66	2	P	P	17 21 19.3	+0.6
MDJ				AMB	AMB		
	comp=Z,40nm,4.8s						
GUMO	Guam	19.62	126	P	P	17 21 32.5	+2.5
GUMO				pmax	pmax		
	comp=Z,37nm,1.0s						
GUMO	Guam	19.62	126	P	P	17 21 32.5	+2.5
	comp=Z,37nm,1.0s						
KMI	Kunming	23.31	274	P	P	17 22 10.5	+3.1
KMI				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.1						
YSS	Yuzh-Sakhalins	23.81	25	eP	P	17 22 14.2	+2.2
YSS				pmax	pmax		
	comp=Z,27nm,0.9s,mb4.7						
YSS	Yuzh-Sakhalins	23.81	25	eP	P	17 22 14.2	+2.2
	comp=Z,27nm,0.9s,mb4.7						
GTA	Gaotai	27.56	306	eP	P	17 22 46.2	-1.0
GTA				PP	PP	17 23 33.9	-1.6
GTA				PPP	PPP	17 23 45.7	-1.8
GTA				S	S	17 27 23.2	-1.5
GTA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
GTA				AMB	AMB		
	comp=Z,90nm,7.6s						
GTA				LR	LR		
	comp=N,230nm,13.3s,MS4.1						
GTA				LR	LR		
	comp=E,270nm,16.4s,MS4.1						
GTA				LR	LR		
	comp=Z,400nm,15.2s,MS4.1						
ULN	Ulaanbaatar	27.68	328	eP	P	17 22 49.9	+1.7
ULN				e*PP	pP	17 22 58.0	+1.0
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
ULN	Ulaanbaatar	27.68	328	eP	P	17 22 49.9	+1.7
	comp=Z,2.9nm,0.8s,mb4.0						
ULN				epP	pP	17 22 58.0	+0.9
SONM	Songino Array	27.97	327	P	P	17 22 49.3	-1.6
	comp=Z,3.2nm,0.7s,mb4.0,baz=145,slow=5.8,SNR=22						
SONM				pP	pP	17 23 00.2	+0.5
	comp=Z,1.9nm,0.4s,baz=141,slow=10,SNR=12						
CMAR	Chiang Mai Arr	28.38	261	P	P	17 22 53.8	-1.0
	comp=Z,0.7nm,0.8s,mb3.4,baz=44,slow=7.4,SNR=2.8						
CMAR				pP	pP	17 23 04.5	+0.9
	comp=Z,1.6nm,0.9s,baz=56,slow=8.0,SNR=4.4						
TLY	Talaya	31.93	330	eP	P	17 23 33.8	+7.8
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
TLY	Talaya	31.93	330	P	P	17 23 22.4	-3.6
	comp=Z,1.7nm,0.5s,mb4.1						
YAK	Yakutsk	36.10	1	eP	P	17 24 01.6	-0.2
YAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
YAK	Yakutsk	36.10	1	eP	P	17 24 01.6	-0.2
	comp=Z,11nm,0.8s,mb4.8						
WMQ	Urumqi	37.54	309	eP	P	17 24 14.5	+0.4
WMQ				PP	PP	17 25 42.1	-0.7
WMQ				PPP	PPP	17 26 02.5	-1.3
WMQ				eS	S	17 30 00.1	-0.7
WMQ				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,120nm,4.2s						
WMQ				LR	LR		
	comp=N,440nm,16.6s,MS4.6						
WMQ				LR	LR		
	comp=E,570nm,16.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,660nm,16.0s,MS4.5						
GUN	Gumba	37.98	283	eP	P	17 24 19.2	+1.3
	comp=Z,51nm,1.3s,mb5.1						
PKI	Pulchoki	38.44	282	eP	P	17 24 22.5	+0.7
	comp=Z,22nm,0.8s,mb5.0						
PKI	Pulchoki	38.44	282	eP	P	17 24 22.5	+0.7
PKI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
KKN	Kakani	38.52	283	eP	P	17 24 23.3	+0.8
	comp=Z,38nm,0.9s,mb5.1						
KKN	Kakani	38.52	283	eP	P	17 24 23.3	+0.8
KKN				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.8						
DMN	Daman	38.70	282	eP	P	17 24 24.8	+0.8
	comp=Z,27nm,0.3s,mb5.4						
GKN	Gorkha	39.06	283	eP	P	17 24 27.6	+0.6
	comp=Z,32nm,0.9s,mb5.0						
KOLN	Koldanda	40.00	283	eP	P	17 24 35.4	+0.6
	comp=Z,24nm,0.9s,mb4.9						
MKAR	Makanchi Array	41.96	312	P	P	17 24 49.9	-0.8
	comp=Z,1.8nm,0.6s,mb3.9,baz=99,slow=10,SNR=26						
MKAR				pP	pP	17 24 58.8	-1.0
	comp=Z,1.9nm,0.5s,baz=95,slow=10,SNR=13						
MKAR				PcP	PcP	17 26 46.3	0.0
	comp=Z,0.5nm,0.6s,baz=92,slow=5.6,SNR=4.2						
ZAL	Zalesovo	42.68	323	P	P	17 24 55.1	-1.3
	comp=Z,0.5nm,0.3s,mb3.6,baz=342,slow=3.7,SNR=3.2						
WRAB	Tennant Creek	45.93	172	eP	P	17 25 23.8	+0.8
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
WRAB	Tennant Creek	45.93	172	eP	P	17 25 23.8	+0.8
	comp=Z,5.9nm,0.8s,mb4.6						
WRA	Warramunga Arr	45.94	172	P	P	17 25 23.8	+0.7
	comp=Z,2.8nm,0.7s,mb4.3,baz=353,slow=8.5,SNR=25						
WRA	Warramunga Arr	45.94	172	P	P	17 25 23.8	+0.7
BILL	Bilibino	47.86	18	eP	P	17 25 39.0	+1.3
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
BILL	Bilibino	47.86	18	eP	P	17 25 39.0	+1.4
	comp=Z,4.8nm,1.1s,mb4.4						
CHKZ	Chkalovo	50.67	319	eP	P	17 25 58.8	-0.6
CHKZ				e*PP	pP	17 26 06.7	-2.0
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CHKZ	Chkalovo	50.67	319	eP	P	17 25 58.8	-0.6
	comp=Z,2.0nm,0.8s,mb4.1						
CHKZ				epP	pP	17 26 06.7	-2.0
ARU	Arti	57.82	322	eP	P	17 26 50.9	-0.8
ARU				e*PP	pP	17 26 59.6	-1.5
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
ARU	Arti	57.82	322	eP	P	17 26 50.9	-0.8
	comp=Z,2.5nm,0.6s,mb4.4						
ARU				epP	pP	17 26 59.6	-1.5
STKA	Stephens Creek	58.81	167	P	P	17 26 58.5	-0.5
	comp=Z,0.7nm,0.7s,mb3.8,baz=321,slow=14,SNR=2.2						
KIV	Kislovodsk	69.67	310	eP	P	17 28 10.9	+1.3
KIV				e*PP	pP	17 28 18.7	-0.4
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
KIV	Kislovodsk	69.67	310	eP	P	17 28 10.8	+1.2
	comp=Z,5.8nm,0.7s,mb4.6						
KIV				epP	pP	17 28 18.7	-0.4
FINES	FINESS Array B	73.28	331	P	P	17 28 30.9	+0.1
	comp=Z,2.2nm,0.7s,mb4.2,baz=45,slow=5.4,SNR=8.0						
FINES				pP	pP	17 28 39.6	-0.7
	comp=Z,1.6nm,0.6s,baz=64,slow=4.7,SNR=3.7						
MALT	Malatya	74.53	305	eP	P	17 28 40.2	+1.6
MALT				e*PP	pP	17 28 48.8	+0.6
MALT				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
MALT	Malatya	74.53	305	eP	P	17 28 40.2	+1.5
	comp=Z,8.9nm,1.3s,mb4.5						
MALT				epP	pP	17 28 48.8	+0.6
RES	Resolute Bay	75.79	11	eP	P	17 28 45.6	+0.5
BRTR	Keskin Array B	77.46	308	P	P	17 28 56.1	+1.0
	comp=Z,3.1nm,0.8s,mb4.3,baz=104,slow=5.1,SNR=14						
NB2	NORSAR Subarra	79.72	334	P	P	17 29 07.1	+0.1
	comp=Z,1.4nm,0.6s,mb4.1,baz=50,slow=5.6						
NOA	NORSAR Array B	79.72	334	P	P	17 29 06.9	-0.1
	comp=Z,2.3nm,0.7s,mb4.2,baz=52,slow=5.6,SNR=6.8						
MLR	Muntele Rosu	80.17	316	P	P	17 29 09.4	-0.3
	comp=Z,1.0nm,0.3s,mb4.2,baz=117,slow=4.5,SNR=2.7						
SUMG	Summit	81.36	356	eP	P	17 29 18.7	+3.2
	comp=Z,8.2nm,0.8s,mb4.7						
SUMG				e	pP	17 29 29.4	+4.2
GERES	GERESS Array B	85.62	323	P	P	17 29 38.9	+1.2
	comp=Z,0.6nm,0.6s,mb4.0,baz=59,slow=5.7,SNR=3.2						
FCC	Fort Churchill	88.51	21	P	P	17 29 52.6	+1.2

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*NIED **09** 17:36:00, 32.20N×141.00E, h32^{km}, Mw3.9 Best double couple: M$_0$6.8×10^{14} NP1:φ$_s$165°, δ63°, λ99°. NP2:φ$_s$326°, δ28°, λ73°.*

*MOS **09** 17:36:33.3±1.8, 31.77N×141.17E, h33^{km}, mb3.8/1, Error ellipse: s-maj=30.0km s-min=10.1km az=105.4*

*JMA **09** 17:36:38.6±0.2, 32.16N×141.02E, h26^{km}, M4.2*

*IDC **09** 17:36:39.1±2.5, 31.82N×140.67E, h59^{km}±21^{km}, mb3.5/11, mb1 3.8/12, mb1mx3.7/20, mbtmp3.8/12, ML4.0/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/22, Error ellipse: s-maj=25.8km s-min=18.4km az=77.0*

*NEIC **09** 17:36:42.1±1.2, 31.93N×140.71E, h84^{km}±10^{km}, MG4.5(JMA), Error ellipse: s-maj=15.3km s-min=9.3km az=83.0*

ISC 09 17:36:38.5±1.0**, 32.03N**±0.05×**140.91E**±0.10**, h67^{km}**±8^{km}**, n41, σ1§26**/47**, mb3.6**/11**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.42	320	P	P	17 37 02.9	0.0
JHJ2				eS	S	17 37 20.1	-0.8
JHJ	Hachijo jima 2	1.45	319	P	P	17 37 03.0	-0.1
	51nm,0.3s,baz=263,slow=20,SNR=55						
JHJ				S	S	17 37 19.2	-2.2
	245nm,0.3s,baz=75,slow=19,SNR=9.9						
JMY	Miyakejima3	2.35	330	eS	S	17 37 43.8	+0.4
BSO1	Boso 1	2.62	1	P	P	17 37 17.7	-1.8
BSO2	Boso 2	2.72	357	eS	S	17 37 51.7	-1.0
BSO3	Boso 3	2.79	353	P	P	17 37 20.6	-1.3
BSO3				eS	S	17 37 53.9	-0.5
JIM2	Oshima 3	2.96	336	P	P	17 37 24.3	+0.1
JIM2				S	S	17 37 58.4	-0.2
JOD2	Odawara 2	3.57	335	P	P	17 37 33.0	+0.2
JOD2				eS	S	17 38 11.8	-2.2
JYN	Shimob	3.98	331	P	P	17 37 40.7	+2.1
JIE	Ise	4.24	305	P	P	17 37 43.3	+1.1
JRY	Ryogami san	4.32	338	P	P	17 37 43.9	+0.7
JRY				eS	S	17 38 31.9	-0.8
JAG	Ashikaga	4.55	345	P	P	17 37 46.1	-0.4
JWY	Kouya	4.97	298	P	P	17 37 54.0	+1.7
MJAR	Matsushiro Arr	5.03	334	P	P	17 37 54.2	+1.0
	5.2nm,0.3s,baz=161,slow=14,SNR=37						
MJAR	Matsushiro Arr	5.03	334	P	P	17 37 54.2	+1.0
MAJO	Matsushiro	5.03	334	eP	P	17 37 55.4	+2.2
MAJO				pmax	pmax		
	comp=Z,33nm,0.8s						
MAJO	Matsushiro	5.03	334	ePn	P	17 37 55.4	+2.3
	comp=Z,33nm,0.8s						
MAT	Matsushiro	5.03	334	eP	P	17 37 56.0	+2.8
MAT				eS	S	17 38 52.0	+1.4
MAT	Matsushiro	5.03	334	P	P	17 37 55.5	+2.3
MAT				S	S	17 38 52.1	+1.5
JGM	Miyama	5.06	318	P	P	17 37 55.9	+2.4
JNU	Nakatsue	8.54	280	LR	LR	17 40 48.8	
	comp=Z,41nm,19.9s,baz=11,slow=30						
ASAJ	Asahikawa	12.14	6	P	P	17 39 26.4	-4.2
	comp=Z,0.4nm,0.3s,baz=176,slow=8.1,SNR=3.0						
YHNB	Yeheng	18.67	252	eP	P	17 40 52.4	-1.3
GUMO	Guam	18.71	168	eP	P	17 40 54.5	+0.4
SONM	Songino Array	30.51	311	P	P	17 42 45.3	-2.1
	comp=Z,0.1nm,0.4s,mb2.9,baz=101,slow=7.3,SNR=2.7						
MKAR	Makanchi Array	46.58	306	P	P	17 45 01.3	0.0
	comp=Z,0.7nm,0.4s,mb3.7,baz=83,slow=9.7,SNR=19						
WRAB	Tennant Creek	52.04	188	eP	P	17 45 41.9	-1.8
WRA	Warramunga Arr	52.05	188	P	P	17 45 40.2	-3.5
	comp=Z,0.6nm,0.3s,mb4.1,baz=5.6,slow=7.7,SNR=34						
CHKZ	Chkalovo	53.52	316	eP	P	17 45 53.4	-0.8
ILAR	Eielson Array	53.98	30	P	P	17 45 57.0	-0.5
	comp=Z,0.6nm,0.8s,mb3.7,baz=274,slow=7.7,SNR=5.4						
ARU	Arti	59.89	320	P	P	17 46 39.3	-0.1
ARU	Arti	59.89	320	P	P	17 46 39.3	-0.1
STKA	Stephens Creek	63.56	179	P	P	17 47 02.8	-1.7
	comp=Z,1.8nm,0.7s,mb4.0,baz=346,slow=15,SNR=4.0						
RES	Resolute Bay	67.55	14	eP	P	17 47 29.6	+0.4
ARCES	ARCESS Array B	68.54	340	P	P	17 47 35.6	+0.2
	comp=Z,2.3nm,1.0s,mb4.0,baz=41,slow=8.3,SNR=2.7						
FINES	FINESS Array B	73.06	333	P	P	17 48 03.0	+0.3
	comp=Z,0.4nm,0.4s,mb3.6,baz=44,slow=6.1,SNR=12						
NVAR	Mina Array Bea	78.36	52	P	P	17 48 35.9	+2.6
	comp=Z,0.1nm,0.3s,mb3.0,baz=281,slow=4.6,SNR=2.6						
NOA	NORSAR Array B	78.64	338	P	P	17 48 34.8	+0.5
	comp=Z,0.7nm,0.8s,mb3.6,baz=38,slow=17,SNR=2.4						
BRTR	Keskin Array B	81.87	312	P	P	17 48 52.4	+0.5
	comp=Z,0.3nm,0.4s,mb3.5,baz=86,slow=5.4,SNR=2.6						
TXAR	Lajitas Array	93.51	52	P	P	17 49 49.6	+1.4
	comp=Z,0.4nm,0.4s,mb4.1,baz=270,slow=2.5,SNR=6.3						
LPAZ	La Paz	149.35	66	PKPbc	PKPdf	17 56 24.0	+8.2
	comp=Z,0.7nm,0.8s,baz=30,slow=3.6,SNR=5.6						

MAN 09 17:55:15.6, 10.23N×125.87E, h30^{km}, mb4.1, ML2.9, MS2.6, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.58	220	⇓eP	Pb	17 55 27.6	+0.4
SCPH				eS	Sb	17 55 37.3	+2.1
MSLP	Maasin	1.00	265	eP	Pn	17 55 34.3	+0.6
MSLP				eS	Sn	17 55 50.6	+3.8
BUTP	Butuan	1.27	191	eP	Pn	17 55 37.0	-0.6
BUTP				eS	Sn	17 55 57.2	+3.4
BESP	Borongan	1.43	343	eP	Pn	17 55 39.4	-0.5
BESP				eS	Sn	17 55 58.3	+0.5
BUKP	Musuan	2.46	199	eP	Pn	17 55 56.2	+1.6
BUKP				eS	Sn	17 56 27.8	+3.8
CNP	Catarman	2.56	333	eP	Pn	17 55 55.7	-0.3
CNP				eS	Sn	17 56 27.6	+1.1
PVCP	Virac	3.75	334	eP	Pn	17 56 18.0	+5.1

TAP 09 18:15:07.5, 24.02N×121.76E, h7^{km}, ML3.8, 7C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.15	253	⇑iP	Pg	18 15 11.5	+0.8
HWA				S	Sg	18 15 15.4	+2.6
TWD	Chiawan	0.16	292	⇑iP	Pg	18 15 11.2	+0.3
TWD				S	Sg	18 15 14.4	+1.2
ESF	Shoufeng Towns	0.28	237	eP	Pg	18 15 13.6	+0.5
ESL	Shilin	0.36	236	⇓iP	Pg	18 15 14.8	0.0
ESL				S	Sg	18 15 20.5	+0.8
TEGC	Jichi Village	0.37	213	eP	Pg	18 15 17.1	+2.1
TEGC				S	Sg	18 15 24.5	+4.6
ENA	Nanau	0.41	358	⇑iP	Pg	18 15 16.1	+0.5
ENA				S	Sg	18 15 22.9	+1.7
NNS	Nan Shan	0.55	320	⇑iP	Pg	18 15 18.7	+0.2
NNS				S	Sg	18 15 26.5	+0.7
TWT	Tachien	0.58	294	P	Pg	18 15 19.7	+0.6
TWT				S	Sg	18 15 28.6	+1.7
TWC	Suao	0.59	8	eP	Pg	18 15 19.8	+0.5
TWC				S	Sg	18 15 30.7	+3.5
ENTT	Nioudou	0.64	344	⇑iP	Pg	18 15 20.8	+0.4
ENTT				S	Sg	18 15 30.6	+1.7
EHY	Hungye	0.65	218	eP	Pg	18 15 19.9	-0.6
ILA	Ilan	0.74	359	eP	Pb	18 15 22.2	-0.1
NSK	Sanguang	0.75	331	⇑iP	Pb	18 15 22.8	+0.4
NSK				S	Sg	18 15 33.9	+1.4
TWF1	Yuli	0.79	213	eP	Pb	18 15 22.3	-0.7
SMLT	Sun Moon Lake	0.80	260	P	Pb	18 15 23.3	+0.1
SMLT				S	Sb	18 15 34.9	+0.9
TYC	Yuchr	0.83	262	P	Pb	18 15 23.8	-0.1
TYC				S	Sb	18 15 35.0	-0.1
NSTT	Nanjuang	0.92	311	⇑iP	Pb	18 15 25.9	+0.5
NSTT				S	Sb	18 15 39.1	+1.5
TWQ1	Liyutan	0.96	290	P	Pb	18 15 27.1	+1.2
TWQ1				S	Sb	18 15 41.9	+3.3
TWA	Mucha	0.97	350	eP	Pb	18 15 26.9	+0.8
TWA				S	Sb	18 15 40.6	+1.6
CHKT	Chengkung	0.98	202	eP	Pb	18 15 25.8	-0.7
NSY	Sanyi	0.99	294	P	Pb	18 15 28.3	+1.7
NSY				S	Sb	18 15 42.7	+3.1
WNT	Mingjian	0.99	262	eP	Pb	18 15 27.6	+1.0
WNT				S	Sb	18 15 42.8	+3.1
TCU	Taichung	1.00	278	P	Pb	18 15 28.2	+1.5
TCU				S	Sb	18 15 43.4	+3.6
TWB1	Santiao Chiao	1.01	12	eP	Pb	18 15 27.8	+1.0
TWB1				S	Sb	18 15 43.0	+3.0
ALS	Alishan	1.01	240	eP	Pb	18 15 27.1	+0.3
TAP1	Taipei	1.04	348	eP	Pb	18 15 27.0	-0.3
TAP1				S	Sb	18 15 42.5	+1.6
TAP	Taipei	1.04	347	eP	Pb	18 15 28.4	+1.1
TAP				S	Sb	18 15 41.8	+0.8
NWF	Wu-fen Shan	1.05	1	⇓P	Pb	18 15 28.7	+1.2
NWF				S	Sb	18 15 42.8	+1.6
HSN	Hsinchu	1.06	317	eP	Pb	18 15 27.6	-0.1
ELDTW	Lidau	1.07	220	eP	Pb	18 15 26.9	-1.0
CHN5	Tsauling	1.08	247	⇓iP	Pb	18 15 28.8	+0.8
CHN5				S	Sb	18 15 45.2	+3.1
NCU	National Centr	1.08	331	eP	Pb	18 15 28.2	+0.1
TWS1	Kuangyinshan	1.12	344	eP	Pb	18 15 28.4	-0.3
TWS1				S	Sb	18 15 47.8	+4.5
WGK	Gukeng	1.15	253	eP	Pb	18 15 30.1	+0.9
TWY	Chenhua	1.26	353	eP	Pb	18 15 31.5	+0.4
CHN4	Tsaushan	1.26	238	eP	Pb	18 15 31.9	+0.8
CHN4				S	Sb	18 15 50.5	+3.1
CHN2	Minshiung	1.27	248	eP	Pb	18 15 33.0	+1.6
WTP	Ta-pu	1.30	234	eP	Pb	18 15 32.1	+0.2
WTP				S	Sb	18 15 51.3	+2.7
CHY	Chiayi	1.33	247	eP	Pb	18 15 32.2	-0.1
TWG	Pinlang	1.35	208	eP	Pb	18 15 29.9	-2.8
WTCT	Ta-ch’eng	1.36	264	eP	Pb	18 15 33.2	+0.4
TWK	Hsinying	1.39	238	eP	Pn	18 15 33.3	+0.1
CHN1	Nanshi	1.40	234	eP	Pn	18 15 34.2	+0.7
CHN1				S	Sb	18 15 54.3	+2.8
SGST	Jiashian	1.43	229	eP	Pn	18 15 34.6	+0.7
SGST				S	Sb	18 15 55.2	+3.0
WSF	Szhu	1.46	255	eP	Pn	18 15 34.7	+0.4
CHN3	Shinhua	1.59	234	eP	Pn	18 15 37.0	+0.8
ECL	Taimali	1.60	208	eP	Pn	18 15 35.1	-1.2
SSD	Sandimen	1.64	219	eP	Pn	18 15 35.8	-1.1
SSD				S	Sb	18 15 59.4	+1.1
EAST	Anshuo	1.83	207	eP	Pn	18 15 40.0	+0.4
SCZT	Fangliau	1.95	213	eP	Pn	18 15 41.6	+0.3
PNG	Penghu	2.07	258	eP	Pn	18 15 41.5	-1.6

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*BJI **09** 18:27:04.4, 23.30S×178.20W, h284^{km}, mB4.3, mb4.4*

*NEIC **09** 18:27:04.4±1.2, 23.31S×178.22W, h284^{km}±12^{km}, mb4.7/34, Error ellipse: s-maj=9.4km s-min=6.1km az=144.0*

*IDC **09** 18:27:06.5±1.3, 23.11S×178.21W, h299^{km}±11^{km}, mb4.3/20, mb1 4.4/21, mb1mx4.3/24, mbtmp4.9/21, Error ellipse: s-maj=15.0km s-min=10.1km az=149.0*

ISC 09 18:27:00.4±1.5**, 23.33S**±0.05×**178.20W**±0.06**, h255^{km}**±14^{km}**, n179, σ1§11**/134**, mb4.6**/49**, 18C-4D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.91	178	P	P	18 28 32.6	+4.6
	170nm,0.3s,baz=267,slow=22,SNR=18						
RAO				S	S	18 29 46.1	+9.5
	294nm,0.3s,baz=230,slow=22,SNR=11						
RAO	Raoul Island	5.91	178	ePn	P	18 28 33.3	+5.2
	708nm,0.2s						
AFI	Afiamalu	11.17	34	eP	P	18 29 31.5	-3.0
	150nm,0.5s						
AFI				eS	S	18 31 23.7	-12
DZM	Mont Dzumac	14.23	272	P	P	18 30 18.9	+6.4
	2.9nm,0.3s,baz=78,slow=15,SNR=26						
NOUC	Port Laguerre	14.35	272	eP	P	18 30 19.4	+5.3
MXZ	Matakaoa Point	14.50	191	eP	P	18 30 17.4	+1.6
MXZ	Matakaoa Point	14.50	191	PN	P	18 30 17.4	+1.6
MXZ				SN	S	18 32 49.7	-0.8
PUZ	Puketiti	15.01	191	eP	P	18 30 22.3	+0.4
PUZ	Puketiti	15.01	191	PN	P	18 30 22.3	+0.3
PUZ				SN	S	18 32 57.4	-4.2
MWZ	Matawai	15.40	193	eP	P	18 30 24.6	-1.9
MWZ	Matawai	15.40	193	PN	P	18 30 24.6	-1.9
MWZ				SN	S	18 33 09.6	-0.8
URZ	Urewera	15.42	194	P	P	18 30 26.7	0.0
	21nm,0.3s,baz=20,slow=4.7,SNR=86						
URZ				S	S	18 33 08.3	-2.5
	12nm,0.3s,baz=104,slow=22,SNR=12						
URZ	Urewera	15.42	194	eP	P	18 30 26.3	-0.4
URZ	Urewera	15.42	194	PN	P	18 30 26.3	-0.4
URZ				SN	S	18 33 08.8	-2.0
HIZ	Hauiti	16.26	200	eP	P	18 30 39.5	+3.2
HIZ	Hauiti	16.26	200	PN	P	18 30 39.5	+3.1
BKZ	Black Stump Fm	16.42	195	eP	P	18 30 36.9	-1.3
BKZ	Black Stump Fm	16.42	195	PN	P	18 30 36.9	-1.3
BKZ				SN	S	18 33 30.3	-2.0
NGZ	Ngauruhoe	16.66	197	P	P	18 30 40.3	-0.4
NGZ	Ngauruhoe	16.66	197	PN	P	18 30 40.3	-0.4
CNZ	Chateau	16.69	197	P	P	18 30 42.1	+1.0
CNZ	Chateau	16.69	197	PN	P	18 30 42.1	+1.0
TUVZ	Tukino	16.73	197	P	P	18 30 41.5	0.0
TUVZ	Tukino	16.73	197	PN	P	18 30 41.5	0.0
FWVZ	Far West T-bar	16.75	197	eP	P	18 30 40.1	-1.6
FWVZ	Far West T-bar	16.75	197	PN	P	18 30 40.1	-1.5
RAR	Rarotonga	17.19	87	P	P	18 30 45.7	-0.8
	0.7nm,0.3s,baz=310,slow=5.5,SNR=4.7						
MRZ	Mangatainoka R	18.06	195	SN	S	18 34 03.3	-1.3
SNZO	South Karori	18.89	197	eP	P	18 31 03.2	-0.6
QRZ	Quartz Range	19.11	202	PN	P	18 31 06.6	+0.5
NNZ	Nelson	19.19	200	PN	P	18 31 05.9	-0.9
KHZ	Kahutara	20.24	198	P	P	18 31 18.1	+0.7
KHZ	Kahutara	20.24	198	PN	P	18 31 18.1	+0.7
LTZ	Lake Taylor	20.95	200	eP	P	18 31 25.4	+1.0
LTZ	Lake Taylor	20.95	200	PN	P	18 31 25.4	+1.0
WVZ	Waitaha Valley	21.73	202	P	P	18 31 33.0	+1.1
RPZ	Rata Peaks	22.18	201	P	P	18 31 36.9	+0.6
	34nm,0.5s,mb5.2,baz=34,slow=2.0,SNR=32						
RPZ				S	S	18 35 26.1	+7.3
	8.0nm,0.6s,baz=347,slow=7.4,SNR=3.6						
FOZ	Fox Glacier	22.52	203	eP	P	18 31 39.3	-0.3
FOZ	Fox Glacier	22.52	203	PN	P	18 31 39.3	-0.3
WKZ	Wanaka	23.86	203	P	P	18 31 51.8	-0.4
WKZ	Wanaka	23.86	203	PN	P	18 31 51.8	-0.4
MSZ	Milford Sound	24.13	205	PN	P	18 31 56.9	+2.2
CNB	Canberra Magne	30.56	240	⇓iP	P	18 32 55.2	+2.6
CTA	Charters Tower	33.13	269	P	P	18 33 15.6	+0.7
	60nm,0.4s,mb5.5,baz=98,slow=11,SNR=163						
CTAO	Charters Tower	33.13	269	eP	P	18 33 16.0	+1.1
	77nm,0.6s,mb5.4						
TAU	Tasmania Unive	34.53	227	eP	P	18 33 28.2	+1.7
	19nm,0.6s,mb4.8						
PMG	Port Moresby	35.89	287	P	P	18 33 39.1	+0.9
	41nm,0.8s,mb5.0,baz=359,slow=15,SNR=8.6						
PMG	Port Moresby	35.89	287	eP	P	18 33 39.2	+1.0
	38nm,0.7s,mb5.0						
STKA	Stephens Creek	36.47	248	⇑iP	P	18 33 44.4	+1.5
STKA	Stephens Creek	36.47	248	P	P	18 33 44.4	+1.4
	12nm,0.4s,mb4.8,baz=95,slow=9.9,SNR=49						
STKA				PcP	PcP	18 35 59.5	-1.9
	2.9nm,0.6s,baz=56,slow=7.3,SNR=2.6						
WB2	Warramunga Arr	44.09	265	⇑iP	P	18 34 45.4	0.0
WB2				eS	S	18 40 51.3	-6.7
WRAB	Tennant Creek	44.09	265	eP	P	18 34 45.0	-0.4
	52nm,0.8s,mb4.9						
WRA	Warramunga Arr	44.10	265	P	P	18 34 45.5	0.0
	14nm,0.5s,mb4.6,baz=96,slow=8.4,SNR=918						
WRA				ScP		18 39 49.5	
	1.9nm,0.7s,baz=104,slow=3.9,SNR=6.1						
WRA				S	S	18 40 50.9	-7.2
	2.4nm,0.8s,baz=99,slow=14,SNR=9.0						
KAKA	Kakadu	47.91	274	⇑iP	P	18 35 14.8	-0.5
SBA	Scott Base	55.05	184	eP	P	18 36 10.6	+3.3
	22nm,0.9s,mb4.7						
SBA				e	pP	18 37 06.1	+2.3
SBA				e		18 37 18.9	
VNDA	Vanda	55.09	185	P	P	18 36 09.8	+2.1
	4.0nm,0.7s,mb4.0,baz=356,slow=8.0,SNR=30						
VNDA	Vanda	55.09	185	eP	P	18 36 09.9	+2.3
	6.2nm,0.9s,mb4.1						
KLBR	Kellerberrin	56.73	247	eP	P	18 36 19.3	-0.5
NWAO	Narrogin (SRO)	56.97	245	P	P	18 36 21.7	+0.2
	8.0nm,0.8s,mb4.4,baz=212,slow=23,SNR=6.2						
MBWA	Marble Bar	57.10	259	eP	P	18 36 21.9	-0.6
	59nm,0.8s,mb5.3						
MUN	Mundaring	57.97	246	eP	P	18 36 28.2	-0.3
CASY	Casey	61.34	206	eP	P	18 36 50.8	-0.2
	28nm,0.7s,mb5.0						
QSPA	South Pole Qui	66.75	180	⇑iP	P	18 37 27.8	+2.2
	34nm,0.8s,mb5.0						
MJAR	Matsushiro Arr	72.38	324	P	P	18 37 58.8	-1.7
	3.7nm,0.7s,mb4.2,baz=155,slow=5.7,SNR=9.9						
MAJO	Matsushiro	72.38	324	eP	P	18 37 58.9	-1.6
	5.2nm,0.6s,mb4.3						
ASAJ	Asahikawa	76.12	332	P	P	18 38 21.8	0.0
	6.7nm,0.7s,mb4.4,baz=59,slow=4.7,SNR=6.6						
UNV	Unalaska Valle	77.51	7	eP	P	18 38 27.0	-2.3
	63nm,0.7s,mb5.4						
MAW	Mawson	78.86	200	P	P	18 38 37.5	+1.3
	19nm,0.5s,mb5.0,baz=126,slow=8.8,SNR=20						
NJ2	Nanjing	81.54	310	eP	P	18 38 56.2	+5.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
CMB	Columbia Colle	81.66	42	eP	P	18 38 51.4	-0.2

	comp=Z,9.1nm,1.0s,mb4.4						
WDC	Whiskeytown Da	81.96	39	eP	P	18 38 53.3	+0.2
	comp=Z,15nm,1.3s,mb4.5						
MTUM	Tungsten Hills	82.39	44	eP	P	18 38 56.2	+0.8
YBH	Yreka Blue Hor	82.61	38	P	P	18 38 56.2	-0.2
	comp=Z,5.5nm,0.7s,mb4.4,baz=184,slow=1.8,SNR=18						
YBH	Yreka Blue Hor	82.61	38	eP	P	18 38 56.9	+0.5
	comp=Z,3.3nm,0.7s,mb4.2						
MDJ	Mudanjiang	82.72	325	P	P	18 38 56.8	-0.1
MDJ				AMB	AMB		
	comp=Z,60nm,4.4s						
BEKR	Beckwourth	82.81	41	eP	P	18 38 57.7	+0.2
	comp=Z,2.7nm,0.6s,mb4.2						
NVAR	Mina Array Bea	83.20	43	P	P	18 38 59.7	+0.2
	comp=Z,2.8nm,0.6s,mb4.2,baz=229,slow=8.3,SNR=6.3						
NVAR	Mina Array Bea	83.20	43	P	P	18 38 59.7	+0.2
TPH	Tonopah	83.68	44	eP	P	18 39 02.3	+0.4
	comp=Z,33nm,1.7s,mb4.8						
NEN	Nelson	83.84	47	eP	P	18 39 03.1	+0.3
SYO	Syowa Base	83.94	193	⇓P	P	18 39 02.5	0.0
SYO	Syowa Base	83.94	193	⇓PcP	PcP	18 39 05.0	-1.3
SYO	Syowa Base	83.94	193	⇑pP	pP	18 40 04.5	+0.8
CN2	Changchun	84.42	323	eP	P	18 39 06.9	+1.4
SNAA	Sanae	85.20	179	⇑iP	P	18 39 09.0	+0.3
SNAA	Sanae	85.20	179	⇑i	P	18 39 11.0	+2.3
VNA3	Neumayer Olymp	85.35	176	⇑iP	P	18 39 10.2	+0.7
VNA3	Neumayer Olymp	85.35	176	⇑i	P	18 39 14.3	+4.8
WVOR	Wild Horse Val	85.41	40	eP	P	18 39 10.4	0.0
	comp=Z,5.1nm,1.0s,mb4.2						
OCWA	Octopus Mounta	85.76	33	eP	P	18 39 13.1	+1.1
	comp=Z,20nm,1.1s,mb4.8						
VNA2	Neumayer--Watz	85.78	177	⇑iP	P	18 39 12.3	+0.7
VNA2	Neumayer--Watz	85.78	177	⇑i	P	18 39 14.9	+3.3
MA2	Magadan	86.45	345	eP	P	18 39 13.2	-1.8
ELK	Elko	86.47	43	P	P	18 39 15.1	-0.5
	comp=Z,1.5nm,0.7s,mb3.8,baz=239,slow=5.3,SNR=9.0						
BBB	Bella Bella	86.97	28	P	P	18 39 16.4	-1.4
	comp=Z,13nm,0.7s,mb4.8,baz=247,slow=5.5,SNR=7.2						
MVU	Marysvale	87.17	46	eP	P	18 39 20.1	+1.1
	comp=Z,7.3nm,1.2s,mb4.3						
MSU	Marysvale	87.20	46	eP	P	18 39 20.6	+1.4
BMO	Blue Mountains	87.63	38	eP	P	18 39 20.7	-0.3
	comp=Z,2.8nm,0.6s,mb4.3						
MNTX	Cornudas Mount	88.53	55	eP	P	18 39 26.2	+0.6
	comp=Z,13nm,1.1s,mb4.7						
MNTX				e		18 40 43.1	
HLID	Hailey	88.58	41	eP	P	18 39 25.9	+0.4
	comp=Z,4.7nm,1.0s,mb4.3						
LTX	Lajitas	88.73	57	eP	P	18 39 26.9	+0.3
	comp=Z,6.2nm,1.0s,mb4.4						
TXAR	Lajitas Array	88.73	57	P	P	18 39 27.2	+0.6
	comp=Z,4.8nm,0.9s,mb4.3,baz=217,slow=6.3,SNR=25						
TXAR				pP	pP	18 40 43.1	+15
	comp=Z,0.5nm,0.5s,baz=225,slow=7.1,SNR=1.8						
BNM	Barren Site	88.80	52	eP	P	18 39 27.2	+0.4
PV10	Paradox Valley	89.22	47	eP	P	18 39 27.5	-1.2
ANMO	Albuquerque	89.31	51	P	P	18 39 29.4	+0.3
	comp=Z,7.0nm,0.9s,mb4.5,baz=213,slow=5.5,SNR=13						
ANMO	Albuquerque	89.31	51	eP	P	18 39 29.5	+0.4
	comp=Z,8.6nm,0.9s,mb4.6						
GDL2	Guadalupe Moun	89.53	55	eP	P	18 39 31.0	+0.8
MCK	McKinley	89.76	13	eP	P	18 39 29.2	-1.4
	comp=Z,8.2nm,0.9s,mb4.6						
MCMT	McKenzie Canyo	90.22	40	eP	P	18 39 34.0	+0.8
CPRX	Cap Rock	90.29	54	P	P	18 39 32.0	-1.8
RRI2	Red Ridge	90.34	42	eP	P	18 39 34.2	+0.4
	comp=Z,12nm,1.1s,mb4.7						
DLBC	Dease Lake	90.71	23	P	P	18 39 35.6	+0.5
	comp=Z,7.7nm,0.8s,mb4.7,baz=226,slow=6.4,SNR=13						
DLBC	Dease Lake	90.71	23	eP	P	18 39 35.3	+0.2
IMW	Indian Meadow	90.87	42	eP	P	18 39 36.6	+0.4
	comp=Z,12nm,1.1s,mb4.7						
COLA	College	90.99	12	eP	P	18 39 34.7	-1.6
	comp=Z,23nm,1.3s,mb5.0						
IMA	Indian Mountai	91.05	10	eP	P	18 39 35.7	-0.8
	comp=Z,21nm,1.0s,mb5.0						
QLMT	Earthquake Lak	91.07	41	eP	P	18 39 38.0	+0.9
ILAR	Eielson Array	91.10	13	P	P	18 39 35.2	-1.5
	comp=Z,4.1nm,0.8s,mb4.4,baz=230,slow=5.5,SNR=25						
PDAR	Pinedale Array	91.14	43	P	P	18 39 37.4	-0.1
	comp=Z,4.0nm,0.7s,mb4.5,baz=222,slow=2.2,SNR=24						
PDAR				PP	PP	18 43 16.1	-3.5
	comp=Z,0.6nm,0.9s,baz=256,slow=6.1,SNR=3.9						
SDCO	Great Sand Dun	91.34	49	eP	P	18 39 38.8	+0.2
	comp=Z,4.8nm,1.3s,mb4.3						
BOZ	Bozeman (W)	91.39	40	eP	P	18 39 38.9	+0.3
	comp=Z,4.6nm,0.8s,mb4.5						
BILL	Bilibino	91.81	354	eP	P	18 39 38.6	-1.4
	comp=Z,5.5nm,0.9s,mb4.5						
INK	Inuvik	97.04	15	P	P	18 40 02.1	-1.7
	comp=Z,2.2nm,0.7s,mb4.5,baz=202,slow=4.3,SNR=4.2						
INK	Inuvik	97.04	15	eP	P	18 40 02.1	-1.8
	comp=Z,3.0nm,1.1s,mb4.4						
SONM	Songino Array	97.75	319	PP	PP	18 44 08.9	-2.1
	comp=Z,0.2nm,0.5s,baz=127,slow=6.2,SNR=3.7						
YKA	Yellowknife Ar	99.14	25	P	P	18 40 11.9	-1.7
	comp=Z,0.6nm,0.6s,mb4.1,baz=248,slow=3.8,SNR=3.6						
MKAR	Makanchi Array	112.98	313	PKiKP		18 45 05.7	
	comp=Z,0.2nm,0.4s,baz=119,slow=1.8,SNR=5.5						
BVAR	Borovoye Array	121.10	319	PKP	PKPdf	18 45 21.7	-0.9
	comp=Z,1.0nm,0.4s,baz=205,slow=2.1,SNR=7.6						
KEV	Kevo	131.19	349	epkp	PKPdf	18 45 41.5	-0.1
ARCES	ARCESS Array B	131.65	349	PKhKP		18 45 31.8	
	comp=Z,0.5nm,0.6s,baz=31,slow=1.4,SNR=5.4						
ARCES				PKP	PKPdf	18 45 41.8	-0.7
	comp=Z,1.6nm,0.5s,baz=57,slow=1.5,SNR=15						
ARCES				SKPbc		18 48 39.3	
	comp=Z,4.2nm,0.8s,baz=18,slow=3.8,SNR=8.2						
KAF	Kangasniemi	137.80	343	epkp	PKPdf	18 45 54.5	+0.6
KMBO	Kilima Mbogo	137.81	240	SKPbc		18 49 02.0	
	comp=Z,6.3nm,1.0s,baz=81,slow=6.8,SNR=7.8						
FINES	FINESS Array B	138.41	343	PKhKP		18 45 43.4	
	comp=Z,0.7nm,0.6s,baz=33,slow=2.5,SNR=8.5						
FINES				PKP	PKPdf	18 45 53.8	-1.2
	comp=Z,0.6nm,0.4s,baz=30,slow=3.6,SNR=7.4						
FINES				SKP		18 49 00.1	
	comp=Z,1.8nm,0.6s,baz=117,slow=4.3,SNR=8.4						
NB2	NORSAR Subarra	141.75	353	PKPabc	PKPdf	18 45 55.5	-5.4
	comp=Z,1.1nm,0.5s,baz=14,slow=3.5						
NOA	NORSAR Array B	141.75	353	PKhKP		18 45 55.7	
	comp=Z,2.1nm,0.8s,baz=11,slow=4.5,SNR=6.2						
NOA				SKPbc		18 49 09.3	
	comp=Z,4.8nm,0.9s,baz=14,slow=4.2,SNR=7.8						
NOA	NORSAR Array B	141.75	353	PKP	PKPdf	18 45 55.7	-5.2
NOA				SKPbc		18 49 09.3	
HFS	Hagfors	142.28	350	PKhKP		18 45 57.1	
	comp=Z,3.6nm,0.3s,baz=48,slow=2.6,SNR=60						
HFS				PKP	PKPdf	18 46 01.1	-0.8
	comp=Z,3.2nm,0.4s,baz=72,slow=4.6,SNR=15						
HFS				SKPbc		18 49 10.5	
	comp=Z,6.6nm,0.8s,slow=1.5,SNR=9.4						
SUW	Suwalki	145.39	338	ePKP	PKPdf	18 46 08.4	+1.0
SUW	Suwalki	145.39	338	ePKP	PKPdf	18 46 08.4	+1.0
EKA	Eskdalemuir Ar	147.82	5	PKPbc	PKPdf	18 46 14.6	+3.1
	comp=Z,6.7nm,0.5s,baz=349,slow=3.0,SNR=30						
BRTR	Keskin Array B	148.53	309	PKPbc	PKPdf	18 46 17.1	+3.9
	comp=Z,1.1nm,0.6s,baz=134,slow=3.6,SNR=4.6						
KWP	Kalwaria	149.04	333	ePKP	PKPdf	18 46 19.0	+5.4
KWP	Kalwaria	149.04	333	ePKP	PKPdf	18 46 19.0	+5.4
DCN	Croghan	149.25	11	eP	PKPdf	18 46 13.6	-0.2
DLF	Lyons Farm	149.41	10	eP	PKPdf	18 46 13.7	-0.3
DSB	Dublin	149.49	10	ePKPbc	PKPdf	18 46 19.0	+4.8
NIE	Niedzica	150.16	335	ePKP	PKPdf	18 46 22.5	+7.2
KSP	Ksiaz	150.31	341	ePKPdf	PKPdf	18 46 22.1	+6.6
KSP				ePKPab	PKPab	18 46 28.7	-1.8
KSP	Ksiaz	150.31	341	ePKP	PKPdf	18 46 22.1	+6.6
MLR	Muntele Rosu	150.44	324	PKPbc	PKPdf	18 46 20.8	+5.0
	comp=Z,1.2nm,0.4s,baz=226,slow=4.2,SNR=3.7						
OKC	Ostrava-Krasne	150.60	338	ePKP	PKPdf	18 46 22.1	+6.2
OKC				e		18 46 34.0	
OKC	Ostrava-Krasne	150.60	338	⇑ePKPB	PKPdf	18 46 22.1	+6.2
OKC				ePKPAB	PKPab	18 46 34.0	+2.2
UPC	Upice	150.69	341	ePKP	PKPdf	18 46 22.8	+6.7
UPC				e		18 46 28.5	
UPC	Upice	150.69	341	⇑ePKPB	PKPdf	18 46 22.8	+6.7
UPC				ePKPAB	PKPab	18 46 28.5	-3.7
DPC	Dobruska-Polom	150.74	341	ePKP	PKPdf	18 46 23.0	+6.9
DPC				e		18 46 30.3	
DPC	Dobruska-Polom	150.74	341	⇑ePKPB	PKPdf	18 46 23.0	+6.9
DPC				ePKPAB	PKPab	18 46 30.3	-2.1
CLL	Collm	150.75	346	⇓iPKP1	PKPdf	18 46 22.7	+6.6
CLL				e		18 46 26.0	
BRG	Berggiesshubel	150.93	344	i PKP	PKPdf	18 46 23.5	+7.1
PVCC	Panska Ves	151.08	343	ePKP	PKPdf	18 46 23.6	+7.0
PVCC	Panska Ves	151.08	343	⇑ePKPB	PKPdf	18 46 23.6	+7.0
PRU	Pruhonice	151.58	343	ePKP	PKPdf	18 46 24.6	+7.2
PRU				e		18 46 34.1	
PRU	Pruhonice	151.58	343	⇑ePKPB	PKPdf	18 46 24.6	+7.2
PRU				ePKPAB	PKPab	18 46 34.1	-1.8
NKC	Novy Kostel	151.88	345	ePKP	PKPdf	18 46 25.7	+7.9
NKC	Novy Kostel	151.88	345	⇑ePKPB	PKPdf	18 46 25.7	+7.9
KHC	Kasperske Hory	152.62	343	ePKP	PKPdf	18 46 26.9	+8.0
KHC				e		18 46 38.5	
KHC	Kasperske Hory	152.62	343	⇑ePKPB	PKPdf	18 46 26.9	+8.0
KHC				ePKPAB	PKPab	18 46 38.5	-1.8
GRF	Grafenberg Arr	152.66	347	ePKP	PKPdf	18 46 27.4	+8.4
GERES	GERESS Array B	152.85	343	PKPbc	PKPdf	18 46 26.7	+7.4
	comp=Z,1.2nm,0.5s,baz=18,slow=1.7,SNR=13						
GIVF	Givet	153.17	356	ePKIKP	PKPdf	18 46 27.8	+8.1
BAIF	Baives	153.25	357	ePKIKP	PKPdf	18 46 28.0	+8.2
	comp=Z,6.9nm,0.7s						
FLN	La Foliniere	154.55	4	ePKIKP	PKPdf	18 46 30.4	+8.8
ROSF	Rostrenen	154.72	8	ePKIKP	PKPdf	18 46 30.4	+8.6
LDF	La Druitiere	154.74	3	ePKIKP	PKPdf	18 46 31.0	+9.2
	comp=Z,3.1nm,0.4s						
GRR	Gorron	154.90	4	ePKIKP	PKPdf	18 46 31.3	+9.3
	comp=Z,5.4nm,0.5s						
HAU	Haudompre	155.11	353	ePKIKP	PKPdf	18 46 30.0	+7.7
DAVOX	Davos	155.71	346	PKPbc	PKPdf	18 46 34.4	+11
	comp=Z,2.7nm,0.4s,baz=173,slow=6.9,SNR=6.8						
DAVOX				PKPab	PKPab	18 46 51.4	-2.0
	comp=Z,2.6nm,0.6s,baz=187,slow=9.9,SNR=3.5						
DAVOX	Davos	155.71	346	PKPbc	PKPdf	18 46 34.4	+11
DAVOX				PKPab	PKPab	18 46 51.4	-2.0
DBIC	Dimbokro	162.24	158	PKPab	PKPab	18 47 22.2	-0.4
	comp=Z,3.7nm,0.9s,baz=175,slow=11,SNR=3.5						
ESDC	Sonseca Array	162.99	15	PKPab	PKPab	18 47 23.3	-1.8
	comp=Z,1.0nm,0.5s,baz=334,slow=4.4,SNR=7.5						

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*NEIC **09** 18:34:40.2±2.6, 21.47S×177.35W, h393^{km}±26^{km}, mb3.7/3, Error ellipse: s-maj=28.4km s-min=21.0km az=190.0*

*IDC **09** 18:35:05.9±4.7, 22.02S×178.42W, h654^{km}±57^{km}, mb3.1/6, mb1 3.3/6, mb1mx3.2/15, mbtmp4.1/6, Error ellipse: s-maj=30.0km s-min=27.3km az=171.0*

ISC 09 18:34:43.9±2.6**, 21.9S**±0.2×**178.0W**±0.1**, h398**^{km}±30^{km}**, n22,** σ**1^{s}01**/15**, mb3.6**/8**, 1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	7.32	180	Pn	P	18 36 31.6	-0.4
SNZO	South Karori	20.32	196	P	P	18 38 53.9	+2.1
	58nm,1.1s						
SNZO				e		18 38 59.8	
CTA	Charters Tower	33.42	266	P	P	18 40 50.2	+1.3
	1.8nm,0.3s,mb3.8,baz=98,slow=11,SNR=6.3						
CTA	Charters Tower	33.42	266	P	P	18 40 50.2	+1.3
CTAO	Charters Tower	33.42	266	eP	P	18 40 50.0	+1.2
	3.3nm,0.6s,mb3.8						
WB2	Warramunga Arr	44.46	263	eP	P	18 42 18.8	-0.4
WRAB	Tennant Creek	44.46	263	eP	P	18 42 19.0	-0.3
	4.1nm,0.6s,mb3.9						
WRA	Warramunga Arr	44.47	263	P	P	18 42 18.8	-0.5
	1.7nm,0.3s,mb3.9,baz=97,slow=7.6,SNR=88						
VNDA	Vanda	56.53	185	P	P	18 43 47.0	-1.1
	0.4nm,0.5s,mb3.0,baz=338,slow=3.4,SNR=5.9						
VNDA	Vanda	56.53	185	eP	P	18 43 46.6	-1.5
	0.5nm,0.6s,mb3.0						
MBWA	Marble Bar	57.60	258	P	P	18 43 52.5	-3.7
YBH	Yreka Blue Hor	81.35	38	P	P	18 46 18.5	0.0
	0.5nm,0.4s,mb3.6,baz=188,slow=6.3,SNR=4.4						
NVAR	Mina Array Bea	82.01	43	P	P	18 46 22.6	+0.7
	0.9nm,0.6s,mb3.7,baz=217,slow=6.9,SNR=5.1						
ILAR	Eielson Array	89.66	13	P	P	18 46 54.1	-4.2
	0.7nm,0.7s,mb3.6,baz=227,slow=6.5,SNR=5.1						
PDAR	Pinedale Array	89.95	43	P	P	18 46 60.0	-0.2
	0.6nm,0.6s,mb3.6,baz=270,slow=4.4,SNR=4.5						
BVAR	Borovoye Array	120.17	320	PKP	PKPdf	18 52 44.1	-3.9
	0.4nm,0.4s,baz=90,slow=1.5,SNR=3.7						
EKA	Eskdalemuir Ar	146.39	5	PKPbc	PKPbc	18 53 33.6	-4.3
	0.8nm,0.9s,baz=288,slow=2.2,SNR=3.7						
BRTR	Keskin Array B	147.79	311	PKPbc	PKPdf	18 53 39.6	+0.6
	0.8nm,0.6s,baz=117,slow=2.5,SNR=4.8						
MLR	Muntele Rosu	149.41	326	PKPbc	PKPdf	18 53 43.5	+2.1
	1.7nm,0.6s,baz=159,slow=5.4,SNR=3.9						
KHC	Kasperske Hory	151.32	344	eP	PKPdf	18 53 48.5	+4.3
KHC	Kasperske Hory	151.32	344	⇑ePKPB	PKPdf	18 53 48.5	+4.3
GERES	GERESS Array B	151.55	344	PKPbc	PKPdf	18 53 46.5	+1.9
	0.9nm,0.8s,slow=1.3,SNR=6.2						

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*IDC **09** 19:01:27.5±0.6, 1.21N×128.73E, mb4.4/14, mb1 4.6/14, mb1mx4.4/20, mbtmp4.5/14, MS4.0/6, Ms1 3.9/6, ms1mx3.5/18, Error ellipse: s-maj=29.0km s-min=12.8km az=70.0*

*MOS **09** 19:01:30.8±1.2, 1.17N×128.71E, h33^{km}, mb5.0/12, Error ellipse: s-maj=18.6km s-min=9.0km az=113.8*

*BJI **09** 19:01:31.7, 0.92N×129.16E, h73^{km}, mB5.0, mb4.8, Ms4.1, Msz3.9*

*NEIC **09** 19:01:34.9±1.6, 1.14N×128.75E, h55^{km}±16^{km}, mb5.0/14, Error ellipse: s-maj=10.9km s-min=5.8km az=57.0*

ISC 09 19:01:32.6±2.8**, 1.17N**±0.06×**128.80E**±0.08**, h50**^{km}±27^{km}**, n69,** σ**1^{s}00**/67**, mb4.7**/43**, MS3.9**/8**, 5C-2D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	13.45	291	eP	P	19 04 43.3	+0.6
KSM	Kuching	18.48	271	eP	P	19 05 44.9	-2.1
PMG	Port Moresby	21.09	120	P	P	19 06 15.9	+0.7
	14nm,0.9s,mb4.3,baz=356,slow=16,SNR=2.5						
WRAB	Tennant Creek	21.67	166	eP	P	19 06 20.5	-0.4
WRAB				pmax	pmax		
	comp=Z,59nm,0.9s,mb5.0						
WRAB	Tennant Creek	21.67	166	eP	P	19 06 20.5	-0.4
	comp=Z,60nm,0.9s,mb5.0						
WRA	Warramunga Arr	21.68	166	P	P	19 06 21.0	0.0
	comp=Z,31nm,0.8s,mb4.8,baz=345,slow=11,SNR=117						
WB2	Warramunga Arr	21.68	166	⇑iP	P	19 06 21.0	0.0
CTA	Charters Tower	27.19	142	P	P	19 07 14.9	+1.1
	comp=Z,2.7nm,0.5s,mb4.0,baz=328,slow=9.5,SNR=2.5						
CTA				LR	LR	19 19 34.4	
	comp=Z,416nm,18.4s,MS4.0,baz=337,slow=40						
JNU	Nakatsue	31.84	3	P	P	19 07 54.2	-0.8
	comp=Z,32nm,1.2s,mb5.0,baz=172,slow=4.8,SNR=6.8						
NJ2	Nanjing	32.11	344	eP	P	19 07 57.4	-0.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA	Guiyang	32.94	322	P	P	19 08 05.8	+1.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
JHJ	Hachijo jima 2	33.41	17	LR	LR	19 19 00.8	
	comp=Z,773nm,20.9s,MS4.4,baz=105,slow=32						
CMAR	Chiang Mai Arr	33.95	302	P	P	19 08 12.8	-0.7
	comp=Z,3.9nm,0.9s,mb4.3,baz=121,slow=7.4,SNR=16						
ENH	Enshi	34.26	329	eP	P	19 08 15.7	-0.3
	comp=Z,15nm,1.1s,mb4.8						
KMI	Kunming	34.63	316	P	P	19 08 20.7	+1.4
KMI				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
STKA	Stephens Creek	35.04	161	P	P	19 08 21.9	-0.7
	comp=Z,4.7nm,0.7s,mb4.5,baz=332,slow=10,SNR=9.1						
STKA				LR	LR	19 23 12.6	
	comp=Z,136nm,21.9s,MS3.7,baz=27,slow=37						
NWAO	Narrogin (SRO)	35.63	197	P	P	19 08 26.8	-1.0
	comp=Z,13nm,0.8s,mb4.9,baz=51,slow=6.5,SNR=3.0						
NWAO				LR	LR	19 22 30.3	
	comp=Z,106nm,18.9s,MS3.6,baz=149,slow=35						
MJAR	Matsushiro Arr	36.26	13	P	P	19 08 31.2	-1.7
	comp=Z,2.3nm,0.8s,mb4.1,baz=190,slow=9.1,SNR=4.4						
MAT	Matsushiro	36.26	13	eP	P	19 08 35.0	+2.0
MAT	Matsushiro	36.26	13	P	P	19 08 35.3	+2.3
XAN	Xi’an	37.62	332	P	P	19 08 44.0	-0.4
XAN				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.4						
SNY	Shenyang	40.74	354	⇓P	P	19 09 10.5	+0.2
SNY				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
LZH	Lanzhou	41.74	329	⇑P	P	19 09 20.0	+1.4
LZH				AP	pP	19 09 35.0	+3.0
LZH				XP	sP	19 09 41.5	+3.5
LZH				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.1						
HHC	Hu-ho-hao-te	42.47	341	eP	P	19 09 22.6	-1.9
HHC				AMB	AMB		
	comp=Z,100nm,4.8s						
SHL	Shillong	43.05	307	i P	P	19 09 30.5	+1.0
MDJ	Mudanjiang	43.26	1	P	P	19 09 30.6	-0.3
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,50nm,4.3s						
MDJ	Mudanjiang	43.26	1	eP	P	19 09 31.3	+0.4
	comp=Z,32nm,1.3s,mb4.9						
LSA	Lhasa	45.67	312	eP	P	19 09 52.9	+2.4
LSA	Lhasa	45.67	312	eP	P	19 09 52.1	+1.6
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
LSA	Lhasa	45.67	312	eP	P	19 09 52.1	+1.7
	comp=Z,7.3nm,0.8s,mb4.7						
GTA	Gaotai	46.34	329	eP	P	19 09 56.0	+0.4
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GTA				AMB	AMB		
	comp=Z,80nm,5.7s						
GTA				LR	LR		
	comp=N,90nm,17.5s,MS3.9						
GTA				LR	LR		
	comp=E,60nm,16.0s,MS3.9						
GTA				LR	LR		
	comp=Z,120nm,12.6s,MS4.0						
KLR	Kul’dur	47.94	3	eP	P	19 10 04.7	-3.3
GUN	Gumba	48.89	307	eP	P	19 10 16.6	+0.9
	comp=Z,38nm,0.8s,mb5.5						
PKI	Pulchoki	49.13	306	eP	P	19 10 18.2	+0.7
	comp=Z,30nm,1.1s,mb5.2						
PKI	Pulchoki	49.13	306	eP	P	19 10 18.2	+0.7
PKI				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
KKN	Kakani	49.32	306	eP	P	19 10 19.6	+0.6
	comp=Z,29nm,1.1s,mb5.2						
KKN	Kakani	49.32	306	eP	P	19 10 19.6	+0.6
KKN				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
DMN	Daman	49.39	306	eP	P	19 10 20.5	+1.0
	comp=Z,56nm,1.1s,mb5.5						
GKN	Gorkha	49.93	306	eP	P	19 10 24.0	+0.3
	comp=Z,37nm,1.1s,mb5.3						
ULN	Ulaanbaatar	50.18	341	c iP	P	19 10 25.4	+0.1
ULN	Ulaanbaatar	50.18	341	eP	P	19 10 25.2	-0.1
	comp=Z,23nm,1.1s,mb5.1						
SONM	Songino Array	50.37	341	P	P	19 10 26.7	-0.1
	comp=Z,7.4nm,1.1s,mb4.7,baz=158,slow=7.2,SNR=40						
SONM				PcP	PcP	19 11 46.1	+1.1
	comp=Z,1.5nm,0.9s,baz=162,slow=4.6,SNR=3.1						
KOLN	Koldanda	50.67	306	eP	P	19 10 30.1	+0.7
	comp=Z,64nm,1.1s,mb5.5						
HYB	Hyderabad	51.94	291	eP	P	19 10 39.0	0.0
HYB	Hyderabad	51.94	291	i P	P	19 10 39.0	0.0
CIT	Chita	52.26	348	eP	P	19 10 40.8	-0.1
ZAK	Zakamensk	53.61	340	eP	P	19 10 50.2	-0.8
ZAK				e		19 11 57.6	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
TLY	Talaya	54.59	341	eP	P	19 10 58.2	0.0
TLY				e		19 18 35.3	
TLY				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
WMQ	Urumqi	55.99	325	P	P	19 11 07.7	-0.7
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
WMQ				LR	LR		
	comp=N,90nm,22.4s,MS3.9						
WMQ				LR	LR		
	comp=E,50nm,24.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,70nm,24.0s,MS3.7						
MA2	Magadan	60.70	13	eP	P	19 11 41.5	+0.4
MA2				pmax	pmax		
	comp=Z,10.0nm,1.8s,mb4.6						
YAK	Yakutsk	60.71	0	c iP	P	19 11 40.1	-1.0
YAK				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.2						
YAK	Yakutsk	60.71	0	eP	P	19 11 40.2	-0.9
	comp=Z,17nm,0.6s,mb5.4						
MKAR	Makanchi Array	60.82	325	P	P	19 11 41.5	-0.6
	comp=Z,2.9nm,0.4s,mb4.7,baz=121,slow=8.2,SNR=51						
MKAR				LR	LR	19 39 38.0	
	comp=Z,47nm,18.1s,MS3.7,baz=209,slow=38						
MKAR	Makanchi Array	60.82	325	P	P	19 11 41.5	-0.6
MKAR				LR	LR	19 39 38.0	
ZAL	Zalesovo	63.79	333	P	P	19 12 00.2	-1.5
	comp=Z,2.9nm,1.0s,mb4.3,baz=5.7,slow=6.9,SNR=17						
ZAL	Zalesovo	63.79	333	P	P	19 12 00.2	-1.5
NVS	Novosibirsk	65.07	333	eP	P	19 12 07.7	-2.3
NVS				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
NVS				pmax	pmax		
	comp=N,7.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.2s						
BVAR	Borovoye Array	70.57	327	P	P	19 12 44.2	-0.2
	comp=E,7.0nm,1.0s,mb4.5,baz=135,slow=6.3,SNR=32						
SVE	Sverdlovsk	77.20	328	eP	P	19 13 28.9	+6.1
ARU	Arti	78.19	328	⇑iP	P	19 13 27.5	-0.7
ARU				e		19 16 25.8	
ARU				ePPP	PPP	19 18 17.7	+1.1
ARU				eS	S	19 23 23.6	+6.0
ARU				eSS	SS	19 28 27.0	+3.9
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
ARU	Arti	78.19	328	eP	P	19 13 27.4	-0.8
	comp=Z,6.2nm,1.2s,mb4.4						
VNDA	Vanda	80.65	173	P	P	19 13 41.6	+0.4
	comp=Z,3.1nm,1.0s,mb4.2,baz=317,slow=5.9,SNR=12						
PPT	Papeete	82.37	108	LR	LR	19 43 44.8	
	comp=Z,118nm,19.9s,MS4.2,baz=206,slow=31						
IMA	Indian Mountai	83.88	24	eP	P	19 14 00.4	+2.5
IMA				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.2						
IMA	Indian Mountai	83.88	24	eP	P	19 14 00.3	+2.4
	comp=Z,21nm,1.0s,mb5.2						
ZEI	Tsey	85.45	313	eP	P	19 14 05.7	-0.7
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
ILAR	Eielson Array	86.52	25	P	P	19 14 11.1	0.0
	comp=Z,0.9nm,1.0s,mb4.0,baz=243,slow=5.3,SNR=5.5						
SOC	Sochi	88.53	313	eP	P	19 14 15.9	-5.3
SOC				ePPP	PPP	19 19 48.0	-3.0
SOC				eS	S	19 24 38.7	-23
SOC				eSS	SS	19 30 52.7	-3.3
SOC				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.1						
SOC				pmax	pmax		
	comp=N,16nm,1.3s						
SOC				pmax	pmax		
	comp=E,8.0nm,1.0s						
OBN	Obninsk	90.33	325	⇓eP	P	19 14 17.9	-12
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb5.1						

IDC 09 19:05:41.7±1.2**, 2.40S**×**68.19E, mb3.9**/5**, mb1 4.1**/5**, mb1mx3.7**/18**, mbtmp3.9**/5**, MS3.6**/9**, Ms1 3.6**/9**, ms1mx3.4**/22**, Error ellipse: s-maj=40.4km s-min=28.9km az=127.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	30.95	272	LR	LR	19 22 08.2	
	comp=Z,113nm,19.9s,baz=95,slow=32						
CMAR	Chiang Mai Arr	36.69	54	P	P	19 12 51.1	-1.3
	0.6nm,0.7s,baz=235,slow=11,SNR=3.9						
CMAR				LR	LR	19 28 35.9	
	comp=Z,36nm,18.2s,baz=225,slow=38						
GNI	Garni	47.47	336	LR	LR	19 33 53.3	
	comp=Z,47nm,20.8s,baz=338,slow=36						
BOSA	Boshof	48.47	233	P	P	19 14 26.7	-1.7
	2.2nm,0.7s,baz=56,slow=8.2,SNR=3.9						
BOSA				LR	LR	19 34 19.0	
	comp=Z,72nm,18.4s,baz=228,slow=35						
TSUM	Tsumeb	52.20	248	LR	LR	19 33 00.3	
	comp=Z,78nm,21.9s,baz=62,slow=31						
ZAL	Zalesovo	57.82	12	P	P	19 15 34.1	-3.1
	0.8nm,0.5s,baz=290,slow=12,SNR=4.1						
ZAL				LR	LR	19 39 09.9	
	comp=Z,102nm,18.0s,baz=84,slow=35						
SONM	Songino Array	60.11	29	P	P	19 15 51.3	-2.0
	1.1nm,0.7s,baz=222,slow=6.1,SNR=9.3						
MAW	Mawson	65.19	182	LR	LR	19 39 01.9	
	comp=Z,36nm,18.5s,baz=250,slow=31						
WRA	Warramunga Arr	66.79	111	P	P	19 16 35.6	-2.2
	1.9nm,0.7s,baz=287,slow=5.9,SNR=13						
JNU	Nakatsue	68.77	53	LR	LR	19 47 21.8	

	comp=Z,85nm,18.1s,baz=189,slow=36						
JMIC	**Jan Mayen**	87.93	341	LR	LR	19 58 23.1	
	comp=Z,26nm,18.4s,baz=76,slow=36						

IDC 09 19:12:58.5±2.9**,22.78N**×**9.99W,mb3.6**/4**,mb1 3.8**/5**, mb1mx3.5**/24**,mbtmp3.7**/5**,ML3.6**/1**,Error ellipse: s-maj=88.5km s-min=28.2km az=76.0,Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	16.76	162	Pn	P	19 16 55.9	-0.5
	0.2nm,0.3s,baz=321,slow=14,SNR=3.1						
GERES	**GERESS Array B**	32.08	30	P	P	19 19 27.7	-1.6
	0.2nm,0.4s,baz=216,slow=12,SNR=4.5						
FINES	**FINESS Array B**	45.89	23	P	P	19 21 21.6	-2.6
	1.2nm,0.9s,baz=259,slow=7.1,SNR=4.4						
JMIC	**Jan Mayen**	48.24	1	P	P	19 21 40.4	-2.2
	30nm,0.5s,baz=176,slow=8.7,SNR=3.1						
KMBO	**Kilima Mbogo**	51.76	111	P	P	19 22 08.0	-2.3
	0.5nm,0.5s,baz=304,slow=13,SNR=2.0						
MKAR	**Makanchi Array**	75.26	45	P	P	19 24 44.1	-0.8
	0.4nm,0.6s,baz=283,slow=6.3,SNR=7.2						
WRA	**Warramunga Arr**	146.71	92	PKPbc	PKPbc	19 32 41.9	-0.8
	0.3nm,0.6s,baz=292,slow=2.4,SNR=4.6						

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*NEIC **09** 19:14:37.2,15.54N×94.85W,h8^{km},MD3.9(MEX),After MEX.*

MEX 09 19:14:37.2±0.7**,15.54N**×**94.85W,h8**^{km}±11^{km}**,MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	1.23	281	*e*P	Pb	19 14 56.9	-3.5
HUIG				*i* S	Sb	19 15 12.1	-4.2
CMIG	**Matias Romero**	1.54	359	*e*P	Pn	19 15 01.3	-3.8
CMIG				*i* S	Sb	19 15 20.1	-5.0
OXX	**Oaxaca**	2.36	311	*e*P	Pn	19 15 14.0	-2.9
OXX				*i* S	Sn	19 15 44.0	-2.4
VHO	**Vista Hermosa**	2.36	310	*e*P	Pn	19 15 14.4	-2.6
VHO				*i* S	Sn	19 15 42.9	-3.5
CCIG	**Comitan**	2.71	74	*i* P	Pn	19 15 18.7	-3.2
CCIG				*i* S	Sn	19 15 50.4	-4.7

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*NEIC **09** 19:33:52.0,38.39N×26.33E,h14^{km},MD3.1(ATH), MD3.1(ISK),After ISK.*
*ATH **09** 19:33:53.1,38.40N×26.38E,h34^{km}±17^{km},MD3.1/3*
*CSEM **09** 19:33:53.2±0.1,38.41N×26.43E,h25^{km},MD3.1,Error ellipse: s-maj=2.6km s-min=2.2km az=56.0*
*ISK **09** 19:33:53.4,38.36N×26.42E,h23^{km},MD3.1*

ISC 09 19:33:52.3±0.9**,38.37N**±0.03×**26.30E**±0.05**,h11**^{km}±5^{km}**, n17,**σ**0^{s}82**/26**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.23	93	*i* P	Pg	19 33 58.0	+0.7
URLA				*i* S	Sg	19 34 01.1	+0.4
BLCB	**Balcova**	0.58	88	PG	Pg	19 34 03.8	-0.3
BLCB				SG	Sg	19 34 11.1	-0.9
IZM	**Izmir**	0.76	88	*i* PG	Pg	19 34 07.2	-0.3
IZM				*i* SG	Sg	19 34 17.2	-0.5
KDAG	**Bornova**	0.76	87	*i* P	Pb	19 34 07.0	0.0
KDAG				*i* S	Sb	19 34 16.8	-0.3
SMG	**Samos**	0.79	147	*e*PN	Pn	19 34 09.1	0.0
SMG				*e*SN	Sn	19 34 19.8	-1.0
PRK	**Paraskevi**	0.87	359	*e*PN	Pn	19 34 09.6	-0.7
PRK				*e*SN	Sn	19 34 21.1	-1.9
AYVA	**Ayvalik**	0.98	18	*i* P	Pb	19 34 11.2	+0.4
AYVA				*i* S	Sb	19 34 24.7	+1.2
AYDN	**Tasoluk**	1.44	119	*i* P	Pn	19 34 18.0	-0.3
AYDN				*i* S	Sb	19 34 36.6	-0.1
APE	**Apeiranthos**	1.44	205	PN	Pn	19 34 18.9	+0.5
APE	**Apeiranthos**	1.44	205	*e*Pb	Pb	19 34 19.3	+0.7
EZN	**Ezine**	1.45	1	*e*PN	Pn	19 34 18.5	-0.1
BODT	**Bodrum**	1.53	148	*e*PN	Pn	19 34 19.7	0.0
MLSB	**Milas**	1.59	132	*e*PN	Pn	19 34 19.6	-0.9
LIA	**Limnos Island**	1.75	331	*e*PB	Pb	19 34 23.8	-0.2
BALB	**Balikesir**	1.77	44	*e*PN	Pn	19 34 23.4	+0.3
MANT	**Manisa**	1.78	85	*i* P	Pn	19 34 25.8	+2.5
MANT				*i* S	Sn	19 34 47.7	+1.8
KCT	**Karacabey**	2.47	40	*e*PN	Pn	19 34 33.1	-0.1

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*IDC **09** 19:35:01.3±3.6,31.96N×140.87E,h44^{km}±31^{km},mb3.2/5, mb1 3.4/5,mb1mx3.3/19,mbtmp3.5/5,Error ellipse: s-maj=35.9km s-min=22.6km az=74.0*
*JMA **09** 19:35:02.4±0.2,32.13N×140.99E,h32^{km},M3.8*
*NEIC **09** 19:35:03.8±1.9,31.89N×140.99E,h73^{km}±14^{km},mb3.9/1, Error ellipse: s-maj=25.4km s-min=18.0km az=78.0*

ISC 09 19:35:00.8±1.6**,31.96N**±0.10×**141.1E**±0.1**,h61**^{km}±12^{km}**, n21,**σ**1^{s}01**/26**,mb3.5**/6**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	1.56	318	P	P	19 35 26.7	-0.2
JHJ2				*e*S	S	19 35 44.1	-2.1
JHJ	**Hachijo jima 2**	1.58	317	P	P	19 35 26.8	-0.5
	19nm,0.3s,baz=53,slow=15,SNR=9.1						
JHJ				S	S	19 35 42.6	-4.2
	237nm,0.3s,baz=136,slow=19,SNR=19						
BSO1	**Boso 1**	2.69	359	P	P	19 35 42.4	-0.4
BSO3	**Boso 3**	2.88	351	P	P	19 35 45.0	-0.4
BSO3				*e*S	S	19 36 17.0	-1.9
JIM2	**Oshima 3**	3.07	334	P	P	19 35 47.7	-0.5
JOD2	**Odawara 2**	3.69	334	P	P	19 35 56.7	-0.1
JYN	**Shimob**	4.11	330	P	P	19 36 03.2	+0.5
JRY	**Ryogami san**	4.43	337	P	P	19 36 08.1	+0.9
JAG	**Ashikaga**	4.65	344	P	P	19 36 09.7	-0.6
MJAR	**Matsushiro Arr**	5.15	333	P	P	19 36 18.4	+1.2
	2.5nm,0.3s,baz=165,slow=14,SNR=20						
MAJO	**Matsushiro**	5.15	333	*e*P	P	19 36 19.0	+1.8
	6.7nm,0.3s						
MAT	**Matsushiro**	5.15	333	*e*P	P	19 36 19.0	+1.8
MAT				*e*S	S	19 37 17.0	+1.0
MAT	**Matsushiro**	5.15	333	P	P	19 36 19.2	+2.0
MAT				S	S	19 37 16.9	+0.9
MAT	**Matsushiro**	5.15	333	P	P	19 36 19.3	+2.1
JGM	**Miyama**	5.20	317	P	P	19 36 19.2	+1.3
SONM	**Songino Array**	30.66	311	P	P	19 41 11.7	+0.2
	0.2nm,0.5s,mb3.2,baz=112,slow=7.8,SNR=2.9						
MKAR	**Makanchi Array**	46.73	306	P	P	19 43 25.2	-0.2
	0.2nm,0.4s,mb3.4,baz=86,slow=9.4,SNR=12						
WRA	**Warramunga Arr**	52.00	188	P	P	19 44 05.3	-1.1
	0.1nm,0.3s,mb3.2,baz=4.7,slow=7.7,SNR=11						
CHKZ	**Chkalovo**	53.66	316	P	P	19 44 17.6	-0.6
	1.1nm,0.9s,mb3.8						
ILAR	**Eielson Array**	53.97	30	P	P	19 44 20.7	+0.3
	0.5nm,0.7s,mb3.6,baz=270,slow=4.5,SNR=6.2						
FINES	**FINESS Array B**	73.18	333	P	P	19 46 26.1	-0.3
	0.4nm,0.5s,mb3.6,baz=45,slow=5.4,SNR=6.2						

IDC 09 19:48:47.1±3.2**,4.46N**×**93.29E,mb3.5**/2**,mb1 3.7**/3**, mb1mx3.5**/19**,mbtmp3.5**/3**,ML3.7**/1**,Error ellipse: s-maj=109.6km s-min=30.6km az=60.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	14.97	21	Pn	P	19 52 20.6	-1.4
	0.1nm,0.3s,baz=214,slow=12,SNR=6.2						
MKAR	**Makanchi Array**	43.24	349	P	P	19 56 50.0	-1.8
	0.1nm,0.4s,baz=174,slow=8.9,SNR=3.2						
WRA	**Warramunga Arr**	47.06	122	P	P	19 57 20.9	-1.9
	3.2nm,1.2s,baz=300,slow=9.4,SNR=11						

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*CSEM **09** 20:02:07.9±0.1,36.76N×27.93E,h20^{km},MD3.4,Error ellipse: s-maj=2.3km s-min=1.6km az=14.0*
*ATH **09** 20:02:08.5,36.80N×27.92E,h33^{km}±2^{km},MD3.2/4*
*ISK **09** 20:02:08.1,36.82N×27.93E,h19^{km},MD3.4*
*NEIC **09** 20:02:08.5,36.80N×27.92E,h33^{km},MD3.2(ATH),After ATH.*
*HLW **09** 20:02:10.6,36.77N×27.97E,h10^{km},Mb3.1*

ISC 09 20:02:07.5±0.6**,36.72N**±0.02×**27.89E**±0.03**,h9**^{km}±4^{km}**, n35,**σ**1^{s}15**/51**,4C-2D,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	0.49	314	*i* P	Pg	20 02 18.2	+0.8
BDRM				*i* S	Sg	20 02 25.8	+1.8
ARG	**Arkhangelos**	0.54	159	*e*PN	Pn	20 02 21.1	+0.1
ARG				*e*SN	Sn	20 02 30.6	+0.4
BODT	**Bodrum**	0.57	306	*i* PG	Pg	20 02 19.6	+0.6
MLSB	**Milas**	0.58	351	*i* PG	Pg	20 02 18.2	-0.9
MLSB				*i* SG	Sg	20 02 26.1	-0.8
DALT	**Dalyan (Mudla)**	0.60	86	PG	Pg	20 02 19.8	+0.1
DALT				SG	Sg	20 02 28.5	+0.7
NISR	**Nisiros**	0.62	260	*e*PN	Pn	20 02 22.0	-0.1
AYDN	**Tasoluk**	0.94	360	*i* P	Pb	20 02 24.6	-0.9
AYDN				*i* S	Sb	20 02 35.5	-2.3
FETY	**Fethiye**	0.97	95	*e*PG	Pg	20 02 26.8	-0.1
SMG	**Samos**	1.29	320	*e*PN	Pn	20 02 31.5	-0.2
SMG				*e*SN	Sn	20 02 48.4	-0.9
KARP	**Karpathos**	1.31	207	*e*PN	Pn	20 02 34.2	+2.1
KARP				*e*SN	Sn	20 02 51.5	+1.7
DNZL	**Cakiroluk**	1.34	44	*i* P	Pb	20 02 31.8	-0.5
DNZL				*i* S	Sb	20 02 48.8	-0.6
DENT	**Denizli**	1.38	41	*e*PN	Pn	20 02 32.3	-0.7
GOLH	**Golhisar**	1.44	69	*i* P	Pn	20 02 35.4	+1.6
GOLH				*i* S	Sb	20 02 53.7	+1.5
AKAS	**Kas**	1.47	109	*i* P	Pn	20 02 36.9	+2.5
AKAS				*i* S	Sb	20 02 58.1	+4.9
ELL	**Elmali**	1.62	89	*e*PN	Pn	20 02 35.8	-0.7
IZM	**Izmir**	1.74	344	*e*PN	Pn	20 02 37.3	-0.9
KDAG	**Bornova**	1.75	344	*i* P	Pn	20 02 38.5	+0.2
KDAG				*i* S	Sn	20 03 04.4	+3.6
BLCB	**Balcova**	1.79	338	*e*PN	Pn	20 02 37.4	-1.5
MANT	**Manisa**	1.84	17	*i* P	Pn	20 02 40.1	+0.5
MANT				*i* S	Sn	20 03 06.3	+3.1
APE	**Apeiranthos**	1.92	281	*e*PN	Pn	20 02 41.0	+0.3
APE	**Apeiranthos**	1.92	281	*e*Pb	Pb	20 02 41.5	-0.8
URLA	**Izmir**	1.93	328	*i* P	Pn	20 02 40.1	-0.8
URLA				*i* S	Sn	20 03 09.5	+4.1
TKTP	**Tekketepe**	2.34	55	*i* P	Pn	20 02 51.0	+4.3
TKTP				*i* S	Sn	20 03 31.1	+15
ISP	**Isparta**	2.37	61	*e*PN	Pn	20 02 46.6	-0.6
BTOK	**Tokmak**	3.04	2	*i* P	Pn	20 03 05.0	+8.4
BTOK				*i* S	Sn	20 03 35.9	+2.4
HDMB	**Hadim**	3.70	85	*e*PN	Pn	20 03 05.6	-0.5
HMAT	**Matruh**	5.65	187	⇑P	Pn	20 03 34.6	+0.9
HMAT				S	Sn	20 04 37.1	-2.6
SLUM		5.67	204	⇓P	Pn	20 03 35.1	+1.0
AMAG	**Maghara**	7.51	142	⇓P	Pn	20 03 58.9	-1.0
SWA1		7.66	194	⇑P	Pn	20 04 01.9	-0.1
SWA2		7.73	196	P	Pn	20 04 03.0	-0.1
GLL	**Jalalah**	7.81	155	P	Pn	20 04 03.5	-0.7
SUZ		8.02	148	P	P	20 04 06.0	-1.0
HNKL	**Nakhl**	8.48	141	⇑P	P	20 04 12.2	-1.2
HFRF	**Wahat Farafira**	9.55	178	⇑P	P	20 04 27.3	-1.0

IDC 09 20:29:08.4±3.8**,29.95S**×**178.36W,h99**^{km}±30^{km}**,mb3.6**/2**, mb1 3.8**/2**,mb1mx3.5**/13**,mbtmp4.0**/2**,Error ellipse: s-maj=114.0km s-min=53.0km az=155.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	0.79	29	P	P	20 29 26.8	0.0
	75nm,0.3s,baz=105,slow=20,SNR=3.1						
RAO				S	S	20 29 41.2	+0.8
	130nm,0.3s,baz=101,slow=23,SNR=5.4						
STKA	**Stephens Creek**	34.28	256	P	P	20 35 45.0	-2.1
	2.1nm,0.8s,baz=95,slow=11,SNR=3.1						
WRA	**Warramunga Arr**	43.77	272	P	P	20 37 04.4	-1.6
	0.9nm,0.5s,baz=112,slow=7.8,SNR=13						
FINES	**FINESS Array B**	144.62	340	PKP	PKPdf	20 48 32.0	-0.5
	1.0nm,0.6s,baz=45,slow=3.9,SNR=10.0						

ISC 09 20:43:46.4±1.3**,46.33N**±0.06×**11.98E**±0.05**,h4**^{km}±10^{km}**, n9,**σ**0^{s}67**/17**,5C-1D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WTTA	**Wattenberg**	0.96	346	⇑*i*PG	Pg	20 44 06.2	+0.5
WTTA				*i* SG	Sg	20 44 18.9	+0.4
	8.2nm,0.7s						
SQTA	**Sankt Quirin**	1.04	330	⇑*i*PG	Pg	20 44 07.2	+0.1
SQTA				*i* SG	Sg	20 44 21.2	+0.3
	4.2nm,0.4s						
MOTA	**Moosalm**	1.18	330	⇑*i*PG	Pg	20 44 09.8	-0.2
MOTA				*i* SG	Sg	20 44 25.2	-0.5
	2.3nm,0.3s						
KBA	**Koelnbreinsper**	1.20	51	⇑*i*PG	Pg	20 44 10.3	-0.1
KBA				*i* SG	Sg	20 44 26.8	+0.4
	2.7nm,0.3s						
CADS	**Cadrg**	1.22	94	*e*Pn	Pn	20 44 09.3	-1.1
VOY	**Vojsko**	1.36	102	*e*Pn	Pn	20 44 12.6	+0.3
VOY				*e*Sn	Sn	20 44 33.0	+1.9
GORS	**Gorjuse**	1.40	90	*i* Pn	Pn	20 44 12.0	-0.8
DAVA	**Damuels**	1.73	304	⇓*i*PG	Pg	20 44 20.2	-0.8
DAVA				*i* SG	Sg	20 44 44.8	+0.8
	5.5nm,0.5s						
MOA	**Molln**	2.18	45	⇑*i*PN	Pn	20 44 23.9	-0.1
MOA				*i* SN	Sn	20 44 51.1	-0.7
MOA				*i* SG	Sg	20 44 58.8	-0.2
	2.0nm,0.5s						

OTT 09 20:53:04.4±0.6**,60.21N**×**56.21W,h18**^{km}**,ML3.7**/5**, LAlbertaRADOR Sea Seismic Zone. 450km northeast from Nutak, Nl,Davis Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUQ	**Kuujjuuaa**	6.62	257	PN	Pn	20 54 40.9	-2.5
KUQ				SN	Sn	20 55 48.4	-11
KUQ				Trac		20 55 53.6	
	comp=Z,8.2nm,0.2s						
SFJD	**Kangerlussuaq**	7.25	18	*i* P	Pn	20 54 48.9	-3.3
SFJD				*i* S	Sn	20 56 07.7	-7.2
SFJD	**Kangerlussuaq**	7.25	18	PN	Pn	20 54 48.4	-3.8
SFJD				SN	Sn	20 56 05.4	-9.5
SFJD				Trac		20 56 10.6	
	comp=Z,11nm,0.5s						
SCHQ	**Schefferville**	7.86	231	PN	Pn	20 54 58.1	-2.6
SCHQ				SN	Sn	20 56 20.2	-10
SCHQ				Trac		20 56 24.9	
	comp=Z,5.1nm,0.2s						
DRLN	**Deer Lake**	11.00	184	PN	P	20 55 39.7	-4.3
DRLN				SN	S	20 57 32.3	-15
DRLN				Trac		20 57 36.5	
	comp=Z,1.0nm,0.3s						
SMQ	**Clarke City**	11.65	215	PN	P	20 55 46.7	-6.0
SMQ				SN	S	20 57 47.6	-16
SMQ				Trac		20 57 56.4	
	comp=Z,2.2nm,0.3s						
LG4Q	**La Grande 4**	11.77	244	PN	P	20 55 49.0	-5.3
LG4Q				SN	S	20 57 49.2	-17
LG4Q				Trac		20 57 54.8	
	comp=Z,5.0nm,0.3s						
MNQ	**Manicouagan**	12.02	222	PN	P	20 55 51.5	-6.2
MNQ				SN	S	20 57 58.0	-14
ICQ	**Pointe Anglais**	12.44	215	PN	P	20 55 56.2	-7.1
ICQ				SN	S	20 58 09.4	-13
QILN	**Qililugaq Expl**	14.83	309	PN	P	20 56 30.0	-4.6
QILN				SN	S	20 59 00.8	-18
SILO	**Sutton Inlier**	16.43	262	PN	P	20 56 51.4	-4.0
MALO	**McAlpine Lake**	16.80	243	PN	P	20 56 54.2	-5.8
VIMO	**Victor Mine**	16.80	256	PN	P	20 56 55.6	-4.4

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*NEIC **09** 20:55:50.5,38.30S×175.89E,h165^{km},MG4.0(WEL), After WEL.*

WEL 09 20:55:50.6±0.3**,38.31S**×**175.90E,h166**^{km}±2^{km}**,ML4.0**/13**, 4C-1D,Error ellipse: s-maj=2.5km s-min=2.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVZ	**Karewarewa**	0.81	195	PN	P	20 56 15.6	-0.1
WTVZ	**West Tongariro**	0.84	197	P	P	20 56 15.8	-0.1
WTVZ	**West Tongariro**	0.84	197	PN	P	20 56 15.8	-0.1
WTVZ				SN	S	20 56 35.8	+0.3
TWVZ	**Taurewa**	0.84	206	P	P	20 56 15.7	-0.2
TWVZ	**Taurewa**	0.84	206	PN	P	20 56 15.7	-0.2
TWVZ				SN	S	20 56 35.6	+0.1
HIZ	**Hauiti**	0.85	256	P	P	20 56 15.1	-0.9
HIZ				S	S	20 56 34.9	-0.6
HIZ	**Hauiti**	0.85	256	PN	P	20 56 15.1	-0.8
HIZ				SN	S	20 56 34.9	-0.7
OTVZ	**Oturere**	0.87	192	PN	P	20 56 16.1	0.0
NGZ	**Ngauruhoe**	0.89	195	P	P	20 56 16.3	0.0
NGZ	**Ngauruhoe**	0.89	195	⇑PN	P	20 56 16.3	+0.1
CNZ	**Chateau**	0.93	197	P	P	20 56 16.5	0.0
CNZ	**Chateau**	0.93	197	⇓PN	P	20 56 16.5	0.0
WPVZ	**Whakapapa**	0.93	197	P	P	20 56 16.5	0.0
WPVZ	**Whakapapa**	0.93	197	⇑PN	P	20 56 16.5	0.0
BKZ	**Black Stump Fm**	0.97	152	P	P	20 56 16.8	0.0
BKZ	**Black Stump Fm**	0.97	152	⇑PN	P	20 56 16.8	0.0
BKZ				SN	S	20 56 36.2	-0.8
TUVZ	**Tukino**	0.97	191	P	P	20 56 16.8	0.0
TUVZ	**Tukino**	0.97	191	PN	P	20 56 16.8	0.0
FWVZ	**Far West T-bar**	0.98	196	P	P	20 56 16.9	0.0
FWVZ	**Far West T-bar**	0.98	196	PN	P	20 56 16.9	0.0
WNVZ	**Wahianoa**	1.04	193	P	P	20 56 17.3	-0.1
WNVZ	**Wahianoa**	1.04	193	PN	P	20 56 17.3	-0.1
MOVZ	**Moawhango**	1.10	186	P	P	20 56 17.4	-0.5
MOVZ	**Moawhango**	1.10	186	PN	P	20 56 17.4	-0.5
MOVZ				SN	S	20 56 37.2	-1.8
MTVZ	**Mangateitei**	1.12	197	PN	P	20 56 18.2	+0.1
MTVZ				SN	S	20 56 39.4	0.0
MWZ	**Matawai**	1.28	91	P	P	20 56 19.5	-0.1
MWZ				S	S	20 56 41.1	-0.8
MWZ	**Matawai**	1.28	91	⇑PN	P	20 56 19.5	-0.1
MWZ				SN	S	20 56 41.1	-0.9
KNZ	**Kokohu**	1.56	118	P	P	20 56 22.5	+0.2
KNZ	**Kokohu**	1.56	118	SN	S	20 56 46.3	-0.4
WAZ	**Wanganui**	1.61	206	P	P	20 56 22.3	-0.5
WAZ	**Wanganui**	1.61	206	PN	P	20 56 22.3	-0.5
WAZ				SN	S	20 56 46.9	-0.8
PWZ	**Pawanui**	1.87	157	P	P	20 56 25.3	-0.3
PWZ	**Pawanui**	1.87	157	PN	P	20 56 25.3	-0.3
PWZ				SN	S	20 56 51.2	-1.4
PUZ	**Puketiti**	1.87	83	P	P	20 56 25.2	-0.4
PUZ	**Puketiti**	1.87	83	PN	P	20 56 25.2	-0.3
PUZ				SN	S	20 56 51.4	-1.2
MXZ	**Matakaoa Point**	2.04	69	P	P	20 56 27.4	-0.1
MXZ	**Matakaoa Point**	2.04	69	PN	P	20 56 27.4	-0.1
MRZ	**Mangatainoka R**	2.36	186	P	P	20 56 29.2	-2.1
MRZ	**Mangatainoka R**	2.36	186	PN	P	20 56 29.2	-2.1
KIW	**Kapiti Island**	2.66	196	P	P	20 56 32.1	-2.9
KIW	**Kapiti Island**	2.66	196	PN	P	20 56 32.1	-2.9
MTW	**Mount Morrison**	2.86	186	P	P	20 56 34.3	-3.2
MTW	**Mount Morrison**	2.86	186	PN	P	20 56 34.3	-3.1
CAW	**Cannon Point**	2.86	193	P	P	20 56 34.6	-2.9
CAW	**Cannon Point**	2.86	193	PN	P	20 56 34.6	-3.0
DUWZ	**D'Urville Isla**	2.92	211	PN	P	20 56 35.0	-3.2
MRW	**Makara Radio**	3.06	197	PN	P	20 56 36.5	-3.4
SNZO	**South Karori**	3.13	197	P	P	20 56 37.2	-3.7
MSWZ	**Moikau Station**	3.14	189	P	P	20 56 37.4	-3.6
TCW	**Tory Channel**	3.15	203	P	P	20 56 37.6	-3.6
BHW	**Baring Head**	3.19	194	P	P	20 56 37.9	-3.8
NNZ	**Nelson**	3.49	213	*e*P	P	20 56 41.8	-3.7
THZ	**Tophouse**	4.14	213	*e*P	P	20 56 49.6	-4.3
LTZ	**Lake Taylor**	5.25	211	*e*P	P	20 57 03.0	-5.4

IDC 09 21:08:48.5±2.0**,32.83N**×**141.58E,mb3.7**/3**,mb1 3.8**/4**, mb1mx3.6**/20**,mbtmp3.6**/4**,ML3.1**/1**,Error ellipse: s-maj=47.0km s-min=23.1km az=51.0,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	1.54	281	Pn	Pn	21 09 17.9	+0.7
	32nm,0.3s,baz=30,slow=18,SNR=7.2						
JHJ				Sn	Sn	21 09 36.7	-1.6
	50nm,0.3s,baz=198,slow=20,SNR=4.3						
MJAR	**Matsushiro Arr**	4.63	324	Pn	Pn	21 09 59.0	-2.3
	0.8nm,0.3s,baz=146,slow=11,SNR=7.8						
MAT	**Matsushiro**	4.63	324	P	Pn	21 09 58.5	-2.8
MAT				S	Sn	21 10 52.7	-4.0
SONM	**Songino Array**	30.42	310	P	P	21 15 03.4	-1.1
	0.7nm,0.8s,baz=117,slow=8.3,SNR=5.1						
MKAR	**Makanchi Array**	46.57	306	P	P	21 17 16.9	-2.8
	0.5nm,0.8s,baz=90,slow=8.6,SNR=7.0						
WRA	**Warramunga Arr**	52.93	189	P	P	21 18 06.4	-2.5
	1.0nm,0.4s,baz=5.5,slow=7.5,SNR=42						

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*NEIC **09** 22:12:58.6±0.7,52.47N×169.32W,h48^{km}±5^{km}, ML3.5(AEIC),Error ellipse: s-maj=17.0km s-min=4.6km az=160.0*
*IDC **09** 22:13:02.0±3.9,52.53N×169.34W,h78^{km}±35^{km},mb3.4/12, mb1 3.6/14,mb1mx3.5/24,mbtmp3.7/14,MS3.1/1, Ms1 3.1/1,ms1mx2.2/28,Error ellipse: s-maj=38.8km s-min=17.8km az=0.0*

ISC 09 22:12:57.2±0.8**,52.42N**±0.10×**169.31W**±0.07**,h52**^{km}±6^{km}**, n37,**σ**1^{s}00**/53**,mb3.8**/13**,MS3.1**/1**,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKO	**Nikolski**	0.62	26	P	P	22 13 08.1	-2.0
NIKO				S	S	22 13 17.7	-1.7
OKFG	**Magazine Ridge**	1.30	40	P	P	22 13 18.5	-1.1
OKFG				S	S	22 13 35.5	-0.6
MSW	**Makushin Switc**	2.13	44	P	P	22 13 30.6	-0.6
MSW				S	S	22 13 58.1	+1.7
MNAT	**Makushin Natee**	2.15	46	P	P	22 13 31.3	-0.1
MNAT				S	S	22 13 57.5	+0.5
UNV	**Unalaska Valle**	2.21	49	P	P	22 13 31.3	-1.0
UNV				S	S	22 13 58.7	+0.2
MTBL	**Makushin Table**	2.21	45	P	P	22 13 32.0	-0.3
LVA	**Lava Point**	2.63	47	P	P	22 13 38.6	+0.4
LVA				S	S	22 14 06.8	-2.2
AKLV	**Akutan Long Va**	2.66	48	P	P	22 13 38.8	+0.1
AKLV				S	S	22 14 09.7	-0.2
AKGG	**Akutan Green G**	2.67	47	P	P	22 13 39.2	+0.3
AKGG				S	S	22 14 12.7	+2.7
AHB	**Akutan Harbor**	2.70	50	P	P	22 13 39.5	+0.3
AHB				S	S	22 14 13.5	+2.7
AKUT	**Akutan**	2.73	50	P	P	22 13 40.5	+0.8
ATKA	**Atka Island**	3.01	268	P	P	22 13 43.6	0.0
ATKA				S	S	22 14 19.7	+1.0
WFAR	**Faris Peak**	3.44	50	P	P	22 13 50.6	+0.9
WFAR				S	S	22 14 32.0	+2.5
WPOG	**Pogromni**	3.49	50	P	P	22 13 49.4	-1.0
WTUG	**Tugumak**	3.81	48	P	P	22 13 54.4	-0.5
WTUG				S	S	22 14 39.7	+0.9
GSTR	**Great Sitkin T**	4.16	268	P	P	22 14 00.1	+0.2
GSTR				S	S	22 14 48.5	+0.8
GSMY	**Great Sitkin M**	4.17	267	P	P	22 13 59.5	-0.5
GSMY				S	S	22 14 48.5	+0.6
GSTD	**Great Sitkin T**	4.22	268	P	P	22 14 00.4	-0.3
GSTD				S	S	22 14 49.6	+0.3
FALS	**False Pass**	4.27	53	P	P	22 14 02.1	+0.6
FALS				S	S	22 14 49.1	-1.5
ADAG	**Mount Adagdak**	4.51	267	P	P	22 14 04.7	-0.1
ADAG				S	S	22 14 56.4	-0.2
SPIA	**Saint Paul Isl**	4.80	354	P	P	22 14 09.4	+0.6
FX1	**Attu Island--F**	10.66	279	P	P	22 15 30.9	+1.0
	1.8nm,0.3s,baz=70,slow=7.1,SNR=19						
ILAR	**Eielson Array**	16.89	34	P	P	22 16 52.9	+1.9
	0.1nm,0.3s,baz=229,slow=12,SNR=4.4						
YKA	**Yellowknife Ar**	30.18	49	P	P	22 19 04.3	+0.1
	0.9nm,0.5s,mb3.7,baz=271,slow=8.3,SNR=3.6						
YBH	**Yreka Blue Hor**	32.94	90	LR	LR	22 29 52.7	
	comp=Z,33nm,18.6s,MS3.1,baz=275,slow=31						
PDAR	**Pinedale Array**	40.36	79	P	P	22 20 31.6	+0.4
	0.4nm,0.5s,mb3.4,baz=306,slow=3.4,SNR=3.9						
SONM	**Songino Array**	51.31	301	P	P	22 21 57.8	0.0
	0.3nm,0.3s,mb3.6,baz=44,slow=6.4,SNR=7.0						
TXAR	**Lajitas Array**	52.71	89	P	P	22 22 08.3	-0.2
	0.1nm,0.4s,mb3.1,baz=293,slow=6.9,SNR=1.6						
ARCES	**ARCESS Array B**	57.87	354	P	P	22 22 44.4	-1.0
	3.7nm,1.1s,mb4.3,baz=8.1,slow=6.4,SNR=3.6						
BVAR	**Borovoye Array**	63.68	324	P	P	22 23 24.0	-0.8
	1.4nm,0.5s,mb4.2,baz=57,slow=6.8,SNR=20						
MKAR	**Makanchi Array**	63.80	313	P	P	22 23 23.8	-1.9
	0.2nm,0.6s,mb3.4,baz=39,slow=6.7,SNR=4.4						
FINES	**FINESS Array B**	65.82	352	P	P	22 23 37.5	-1.1
	0.9nm,0.6s,mb4.0,baz=16,slow=7.5,SNR=8.7						
NOA	**NORSAR Array B**	66.89	360	P	P	22 23 44.3	-0.9
	0.7nm,0.8s,mb3.7,baz=296,slow=6.2,SNR=2.9						
HFS	**Hagfors**	67.77	358	P	P	22 23 49.7	-1.1
	1.1nm,0.6s,mb4.1,baz=18,slow=4.6,SNR=7.7						
CMAR	**Chiang Mai Arr**	76.64	283	P	P	22 24 44.6	+0.5
	1.8nm,0.8s,mb4.0,baz=26,slow=7.0,SNR=7.0						
GERES	**GERESS Array B**	79.08	358	P	P	22 24 57.2	+0.3
	0.1nm,0.3s,mb3.2,baz=11,slow=5.0,SNR=3.0						
ESDC	**Sonseca Array**	87.40	11	P	P	22 25 40.4	+1.0
	0.6nm,0.7s,mb3.9,baz=356,slow=4.9,SNR=3.0						

*BUG **09** 22:16:11.8, 51.53N×6.88E, h1^{km}, ML1.7*
*NEIC **09** 22:16:11.5±0.7, 51.60N×6.80E, h10^{km}, ML2.7(LDG), ML2.3(SZGRF), Error ellipse: s-maj=10.3km s-min=6.4km az=145.0*
*LDG **09** 22:16:12.3±0.2, 51.58N×6.88E, h1^{km}, Ml2.7/7, Error ellipse: s-maj=3.0km s-min=2.0km az=34.0, Suspected Mining induced.*
*CSEM **09** 22:16:12.2±0.1, 51.59N×6.86E, h2^{km}, ML2.7/6, Error ellipse: s-maj=2.4km s-min=1.3km az=108.0, Suspected Mining induced.*
*BNS **09** 22:16:12.7±0.8, 51.55N×6.88E, h1^{km}, ML2.1*
BGR 09 22:16:12.5±0.3**, 51.53N×6.93E, h1^{km}, ML2.0**/6**, 1D, Error ellipse: s-maj=4.4km s-min=3.3km az=86.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUG	Bochum--Univer	0.23	111	⇓*i*Pg	Pg	22 16 17.7	+0.6
BUG				Sg	Sg	22 16 22.1	+1.9
BUG	Bochum--Univer	0.23	111	*e*Pg	Pg	22 16 17.7	+0.6
BUG				*e*Sg	Sg	22 16 22.2	+2.0
BUG	Bochum--Univer	0.23	111	*e*Sg	Sg	22 16 22.2	+2.0
WTSB	Winterswijk	0.45	350	*e*Pg	Pg	22 16 19.8	-1.7
	33nm,0.4s						
WTSB				*e*Sg	Sg	22 16 25.5	-1.9
WTSB	Winterswijk	0.45	350	*e*Pg	Pg	22 16 19.8	-1.7
	SNR=12						
WTSB				*e*Sg	Sg	22 16 25.9	-1.5
	SNR=7.7						
BNS	Bensberg	0.58	164	*e*Pg	Pg	22 16 24.2	+0.1
BNS				*e*Sg	Sg	22 16 33.4	+1.5
	149nm,0.6s						
STB	Steinbach	0.93	183	*e*Pg	Pg	22 16 31.2	+0.1
STB				*e*Sg	Sg	22 16 44.0	+0.5
IBBN	Ibbenburen	0.94	33	*e*Pg	Pg	22 16 29.4	-1.8
IBBN				*e*Sg	Sg	22 16 44.7	+1.0
KLL	Kalltalsperre	0.96	204	*e*Pg	Pg	22 16 31.0	-0.7
KLL				*e*Sg	Sg	22 16 44.9	+0.4
	44nm,0.3s						
HGN	Heimansgroeve	0.99	220	*e*Pg	Pg	22 16 30.9	-1.2
	8.7nm,0.3s,baz=30						
HGN				*e*Sg	Sg	22 16 45.2	-0.1
HGN	Heimansgroeve	0.99	220	*e*Pg	Pg	22 16 31.4	-0.8
	SNR=12						
HGN				*e*Sg	Sg	22 16 44.9	-0.4
	SNR=7.8						
MEM	Membach	1.08	213	P	Pb	22 16 32.3	-1.4
MEM				S	Sb	22 16 46.9	-1.3
WIT	Witteveen	1.30	353	*e*Sg	Sg	22 16 54.6	-1.1
	SNR=3.5						
BGG	Burgeitz	1.35	169	*e*Pg	Pg	22 16 37.8	-1.5
BGG				*e*Sg	Sg	22 16 56.1	-1.2
TNS	Taunus Mts	1.62	143	*e*Pn	Pn	22 16 41.9	-0.4
	SNR=1.8						
TNS				*e*Sg	Sg	22 17 03.4	-3.1
	SNR=5.4						
WLF	Walferdange	1.93	195	*e*Sg	Sg	22 17 12.4	-4.2
	SNR=3.0						
WLF	Walferdange	1.93	195	*e*Pn	Pn	22 16 47.5	+0.8
WLF	Walferdange	1.93	195	*e*Pn	Pn	22 16 47.5	+0.8
GIVF	Givet	1.95	224	*e*Pn	Pn	22 16 45.1	-2.0
GIVF				*e*Sn	Sn	22 17 08.6	-3.9
GIVF				*e*Sg	Sg	22 17 13.7	-3.7
	24nm,0.5s						
CLZ	Clausthal	2.17	80	*e*Sg	Sg	22 17 21.9	-2.8
	SNR=2.6						
BAIF	Baives	2.26	231	*e*Pn	Pn	22 16 49.2	-2.3
BAIF				*e*Sn	Sn	22 17 16.1	-4.4
BAIF				*e*Sg	Sg	22 17 23.5	-4.4
	4.4nm,0.3s						
RFYF	Reffroy	3.05	198	*e*Pn	Pn	22 17 00.5	-2.2
RFYF				*e*Pg	Pg	22 17 09.4	-3.9
	baz=18						
RFYF				*e*Sg	Sg	22 17 48.8	-5.1
	5.8nm,0.3s						
RFYF	Reffroy	3.05	198	*e*Pg	Pg	22 17 09.4	-3.9
RFYF				*e*Sg	Sg	22 17 48.8	-5.1
	2.9nm,0.3s						
MOX	Moxa	3.09	105	*e*(Sg)	Sg	22 17 56.4	+1.2
CDF	Champ du Feu	3.12	176	*e*Pn	Pn	22 17 01.6	-2.2
CDF				*e*Sg	Sg	22 17 52.1	-4.4
	6.3nm,0.6s						
BSEG	Bad Segeberg	3.17	39	*e*Sg	Sg	22 17 55.8	-2.4
MEZF	Maizieres J'vi	3.26	202	*e*Pn	Pn	22 17 03.6	-2.1
	baz=23						
MEZF				*e*Sg	Sg	22 17 55.6	-5.4
	5.7nm,0.3s						
SFTF	Sexfontaines	3.54	201	*e*Pn	Pn	22 17 06.8	-2.9
CLL	Collm	3.81	91	*e*Sg	Sg	22 18 14.0	-5.3
BRG	Berggiesshubel	4.46	96	*e*Sg	Sg	22 18 35.4	-5.6
LOR	Lormes	4.71	206	*e*Pn	Pn	22 17 22.3	-4.0
	baz=34						
LOR				*e*Sn	Sn	22 18 15.3	-7.1
LOR				*e*Sg	Sg	22 18 40.5	-8.7
	3.7nm,0.4s						
SSF	Saint Saulge	5.00	208	*e*Pn	Pn	22 17 26.5	-3.9
AVF	Avril sur Loir	5.29	208	*e*Pn	Pn	22 17 30.6	-3.9
LDF	La Druitiere	5.40	240	*e*Pn	Pn	22 17 31.8	-4.4
FLN	La Foliniere	5.51	243	*e*Pn	Pn	22 17 32.3	-5.3
BGF	Bois d'Agland	5.65	210	*e*Pn	Pn	22 17 35.7	-3.9
GRR	Gorron	5.92	241	*e*Pn	Pn	22 17 39.0	-4.5
GRR				*e*Sn	Sn	22 18 43.6	-9.3

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*MOS **09** 22:16:21.6±1.0, 48.11N×152.51E, h117^{km}, mb4.5/2, Error ellipse: s-maj=28.9km s-min=12.8km az=65.2*
*IDC **09** 22:16:26.0±3.3, 47.72N×152.56E, h159^{km}±40^{km}, mb3.5/12, mb1 3.7/14, mb1mx3.5/25, mbtmp4.0/14, MS3.7/1, Ms1 3.7/1, ms1mx2.4/25, Error ellipse: s-maj=38.6km s-min=17.3km az=179.0*
*NEIC **09** 22:16:26.2±3.8, 47.81N×152.59E, h158^{km}±44^{km}, mb4.1/4, Error ellipse: s-maj=28.3km s-min=13.3km az=174.0*
ISC 09 22:16:18.9±0.7**, 47.9N**±0.1×**152.6E**±0.2**, h103^{km}**±8^{km}**, n48, σ1^{s}36**/54**, mb4.0**/15**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.64	38	*e*PN	P	22 17 14.5	+0.1
SKR				*e*S	S	22 17 56.0	-0.5
SKR				pmax	pmax		
	comp=Z,160nm,0.4s						
SKR				smax			
	comp=N,160nm,0.4s						
SKR				smax			
	comp=E,110nm,0.4s						
NEM2	Nemuro 2	6.59	229	P	P	22 17 53.4	-1.3
NEM2				*e*S	S	22 19 02.0	-6.9
JNK	Nakash	6.98	235	P	P	22 18 01.2	+1.1
JTKR	Abashiri--Toko	7.21	240	P	P	22 18 05.6	+2.4
JAK	Akkeshi	7.39	232	P	P	22 18 04.1	-1.6
JAK				*e*S	S	22 19 22.4	-6.1
JMP	Maruseppu	7.51	242	P	P	22 18 10.3	+3.0
JAR	Ashorobuto	7.70	237	P	P	22 18 11.4	+1.5
ASAJ	Asahikawa	7.91	245	PN	P	22 18 16.8	+4.0
ASAJ				S	S	22 19 45.2	+3.9
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	Asahikawa	7.91	245	P	P	22 18 16.8	+4.0
	comp=N,5.6nm,0.3s,baz=77,slow=13,SNR=37						
ASAJ				S	S	22 19 45.2	+3.9
	comp=N,1.1nm,0.3s,baz=271,slow=26,SNR=3.2						
JOB	Onbets	7.92	234	P	P	22 18 12.5	-0.3
JKK2	Kamakawa 2	7.95	243	P	P	22 18 16.5	+3.2
JCH	Churui	8.37	235	P	P	22 18 17.9	-1.0
JCH				*e*S	S	22 19 46.0	-6.4
JFR	Furan	8.45	240	P	P	22 18 21.9	+1.8
JBT2	Biratori 2	8.82	239	P	P	22 18 26.3	+1.2
JEM	Erimo	8.89	232	P	P	22 18 23.9	-2.0
JNBK	Urakawa-nobuka	8.93	235	P	P	22 18 24.4	-2.1
JNB	Noboribetsu	9.79	241	P	P	22 18 38.5	+0.6
JKB	Kayabe	10.15	238	P	P	22 18 41.1	-1.7
JKB				*e*S	S	22 20 28.4	-7.0
JSR	Shiriuchi	10.73	238	P	P	22 18 49.0	-1.6
JTM	Tenmabayashi	10.87	234	P	P	22 18 49.4	-3.1
JANG	Nango	10.93	231	P	P	22 18 48.8	-4.4
JOSM	Okushiri--Mats	10.95	243	P	P	22 18 54.0	+0.6
JTH	Tanohata	11.07	228	P	P	22 18 50.9	-4.3
MAJO	Matsushiro	15.52	228	*e*P	P	22 19 57.3	+4.4
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAJO	Matsushiro	15.52	228	*e*P	P	22 19 57.2	+4.3
	comp=Z,5.0nm,0.6s						
MJAR	Matsushiro Arr	15.52	228	P	P	22 19 55.0	+2.1
	comp=Z,0.4nm,0.3s,baz=30,slow=17,SNR=4.3						
ILAR	Eielson Array	35.90	40	P	P	22 23 10.8	+0.4
	comp=Z,1.0nm,0.8s,mb3.8,baz=259,slow=8.6,SNR=8.9						
INK	Inuvik	40.90	33	P	P	22 23 53.6	+1.8
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	Inuvik	40.90	33	P	P	22 23 53.5	+1.7
	comp=Z,2.2nm,0.5s,mb4.2,baz=291,slow=8.6,SNR=5.8						
INK	Inuvik	40.90	33	*e*P	P	22 23 53.0	+1.1
	comp=Z,2.8nm,0.6s,mb4.3						
DLBC	Dease Lake	45.07	46	P	P	22 24 27.7	+2.1
	comp=Z,1.3nm,0.5s,mb3.9,baz=278,slow=15,SNR=3.4						
DLBC	Dease Lake	45.07	46	P	P	22 24 26.8	+1.1
BVAR	Borovoye Array	49.88	309	P	P	22 24 59.3	-4.0
	comp=Z,0.9nm,0.5s,mb4.0,baz=58,slow=6.4,SNR=8.6						
YKA	Yellowknife Ar	50.24	37	P	P	22 25 05.9	0.0
	comp=Z,0.8nm,0.5s,mb3.9,baz=299,slow=6.8,SNR=4.3						
YKA	Yellowknife Ar	50.24	37	P	P	22 25 05.9	0.0
ARU	Arti	53.96	317	P	P	22 25 32.7	-1.0
ARU				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ARU	Arti	53.96	317	P	P	22 25 32.7	-1.0
	comp=Z,1.6nm,0.5s,mb4.3						
ARCES	ARCESS Array B	56.68	340	P	P	22 25 52.5	-0.8
	comp=Z,0.6nm,0.6s,mb3.8,baz=39,slow=5.8,SNR=3.4						
PMG	Port Moresby	57.22	186	LR	LR	22 48 34.8	
	comp=Z,68nm,18.7s,baz=242,slow=34						
NVAR	Mina Array Bea	62.23	63	P	P	22 26 30.6	-1.1
	comp=Z,0.6nm,0.5s,mb3.9,baz=292,slow=8.7,SNR=3.6						
FINES	FINESS Array B	62.88	334	P	P	22 26 34.6	-1.1
	comp=Z,0.6nm,0.3s,mb4.0,baz=31,slow=7.0,SNR=12						
PDAR	Pinedale Array	64.37	54	P	P	22 26 45.7	+0.1
	comp=Z,0.3nm,0.4s,mb3.5,baz=297,slow=2.0,SNR=3.3						
NB2	NORSAR Subarra	67.06	341	P	P	22 27 02.4	-0.1
	comp=Z,0.7nm,0.5s,mb3.8,baz=30,slow=6.2						
NOA	NORSAR Array B	67.06	341	P	P	22 27 03.0	+0.6
	comp=Z,0.6nm,0.5s,mb3.7,baz=34,slow=5.1,SNR=3.0						
HFS	Hagfors	67.29	339	P	P	22 27 03.4	-0.5
	comp=Z,2.6nm,0.4s,mb4.5,slow=5.8,SNR=35						
SDCO	Great Sand Dun	70.08	56	*e*P	P	22 27 27.6	+6.0
	comp=Z,15nm,1.5s,mb4.6						
SDCO				*e*		22 27 43.2	
TXAR	Lajitas Array	77.25	60	P	P	22 28 03.1	0.0
	comp=Z,0.8nm,0.5s,mb3.7,baz=309,slow=3.9,SNR=9.8						
GERES	GERESS Array B	77.30	334	P	P	22 28 04.0	+0.9
	comp=Z,0.5nm,0.5s,mb3.5,baz=31,slow=4.8,SNR=7.6						

MAN 09 22:27:18.3, 13.61N×120.67E, h86^{km}, mb3.9, ML2.7, MS2.3, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.29	111	*e*P	P	22 27 32.9	+1.6
PGP				*e*S	S	22 27 43.4	+2.2
LUBP	Lubang	0.43	287	*e*P	P	22 27 33.8	+1.5
LUBP				*e*S	S	22 27 44.3	+1.6
BOAC	Boac	1.15	97	*e*P	P	22 27 39.5	-0.3
BOAC				*e*S	S	22 27 59.9	+4.0
SJMP	San Jose	1.22	159	*e*P	P	22 27 42.1	+1.4
SJMP				*e*S	S	22 27 58.5	+1.0
BUSP	Coron	1.66	196	*e*P	P	22 27 46.6	+0.2
BUSP				*e*S	S	22 28 07.5	+0.3
POLP	Polilio Island	1.66	48	*e*P	P	22 27 48.9	+2.4
POLP				*e*S	S	22 28 03.3	-3.9
BALP	Baler	2.30	22	*e*P	P	22 27 55.6	+0.5
ENPP	El Nido	2.68	207	*e*P	P	22 28 00.3	-0.1
ENPP				*e*S	S	22 28 28.5	-3.4
CUYO	Cuyo Island	2.76	173	*e*P	P	22 28 01.3	-0.3

IDC 09 22:38:22.4±14.0**, 18.21S×65.33E, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.8**/19**, mbtmp4.0**/4**, MS3.7**/9**, Ms1 3.7**/9**, ms1mx3.6**/17**, Error ellipse: s-maj=475.2km s-min=35.2km az=55.0, Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	32.37	298	LR	LR	22 55 42.9	
	comp=Z,190nm,20.4s,baz=96,slow=32						
BOSA	Boshof	38.04	247	LR	LR	22 58 41.1	
	comp=Z,90nm,19.3s,baz=258,slow=32						
NWAO	Narrogin (SRO)	48.61	118	LR	LR	23 01 45.4	
	comp=Z,140nm,20.2s,baz=157,slow=29						
WRA	Warramunga Arr	64.81	104	P	P	22 49 03.5	-2.1
	1.5nm,0.8s,baz=267,slow=5.9,SNR=13						
MKAR	Makanchi Array	66.48	13	P	P	22 49 13.4	-2.5
	0.3nm,0.8s,baz=194,slow=5.0,SNR=4.2						
MKAR				LR	LR	23 16 52.7	
	comp=Z,37nm,19.4s,baz=109,slow=35						
STKA	Stephens Creek	69.20	118	LR	LR	23 13 16.7	
	comp=Z,114nm,21.1s,baz=357,slow=30						
BVAR	Borovoye Array	71.07	3	P	P	22 49 41.9	-2.4
	1.1nm,1.0s,baz=180,slow=5.9,SNR=4.9						
DBIC	Dimbokro	73.48	283	LR	LR	23 21 18.8	
	comp=Z,62nm,19.2s,baz=63,slow=35						
VNDA	Vanda	73.76	167	LR	LR	23 19 53.6	
	comp=Z,40nm,18.8s,baz=57,slow=34						
ZAL	Zalesovo	73.78	12	P	P	22 49 58.8	-1.4
	0.8nm,0.3s,baz=39,slow=6.5,SNR=2.7						
CTA	Charters Tower	75.70	107	LR	LR	23 18 35.9	
	comp=Z,58nm,21.8s,baz=226,slow=32						
NOA	NORSAR Array B	90.01	337	LR	LR	23 30 05.5	
	comp=Z,14nm,20.9s,baz=90,slow=34						

MEX 09 22:42:06.6±0.4**, 21.16N×99.53W, h3^{km}**±12^{km}**, MD3.9, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOIG	Morelia	2.14	227	*i* P	Pn	22 42 40.1	-3.6
MOIG				*i* S	Sn	22 43 06.2	-4.9
ZAIG	Zacatecas	3.25	300	*e*P	Pn	22 42 55.8	-3.6
ZAIG				*i* S	Sn	22 43 35.1	-4.1
SFJM	Santa Fe	3.35	259	*e*P	Pn	22 42 56.0	-5.0

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*NEIC **09** 22:42:57.2, 15.55N×95.29W, h6^{km}, MD3.9(MEX), After MEX.*
MEX 09 22:42:57.2±0.9**, 15.55N×95.29W, h6^{km}**±17^{km}**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.82	285	*e*P	Pb	22 43 11.1	-2.3
HUIG				*i* S	Sb	22 43 21.9	-2.7
CMIG	Matias Romero	1.58	14	*e*P	Pn	22 43 22.1	-3.8
CMIG				*i* S	Sb	22 43 41.4	-5.2
OXX	Oaxaca	2.06	318	*e*P	Pn	22 43 31.0	-1.7
OXX				*i* S	Sn	22 43 55.0	-3.9
VHO	Vista Hermosa	2.06	318	*i* P	Pn	22 43 31.8	-0.9
VHO				*i* S	Sn	22 43 54.9	-4.0
CCIG	Comitan	3.12	76	*e*P	Pn	22 43 44.3	-3.5
CCIG				*i* S	Sn	22 44 22.9	-2.9

IDC 09 22:49:08.7±1.6**, 8.68S×130.78E, mb3.7**/2**, mb1 3.7**/3**, mb1mx3.5**/13**, mbtmp3.6**/3**, ML3.3**/1**, Error ellipse: s-maj=94.1km s-min=28.7km az=71.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	11.71	163	Pn	P	22 51 58.1	-2.1
	0.2nm,0.3s,baz=347,slow=13,SNR=14						
WRA				Sn	S	22 54 07.9	-5.0
	0.5nm,0.3s,baz=342,slow=22,SNR=7.3						
SONM	Songino Array	60.27	341	P	P	22 59 19.2	-2.0
	0.3nm,0.6s,baz=155,slow=7.6,SNR=3.6						
MKAR	Makanchi Array	70.04	327	P	P	23 00 22.2	-2.2
	0.7nm,0.6s,baz=124,slow=7.9,SNR=12						

ISC 09 22:49:20.1±0.9**, 35.58N**±0.03×**36.57E**±0.10**, h10^{km}, n6, σ0^{s}84**/12**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTY	Hatay	0.64	327	*e*PG	Pg	22 49 33.5	+0.4
HTY				*e*SG	Sg	22 49 41.5	-0.2
COBT	Iskenderun	0.97	345	*i* P	Pb	22 49 38.7	+0.2
COBT				*i* S	Sb	22 49 51.5	+0.3
HWQ	Hawqa	1.39	202	*i* Pg	Pg	22 49 47.9	-0.1
HWQ				*i* Sg	Sg	22 50 07.8	+1.2
BHL	Bhannes	1.83	204	*i* Pg	Pg	22 49 57.2	+0.5
BHL				*i* Sg	Sg	22 50 20.1	-1.1
GZT	Gaziantep	1.95	24	*i* P	Pn	22 49 51.7	-1.9
GZT				*i* S	Sn	22 50 19.3	+1.0
MEST	Erdemli	2.20	298	*i* P	Pn	22 49 56.8	-0.5
MEST				*i* S	Sn	22 50 17.1	-7.8

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*BJI **09** 23:03:11.7, 17.80S×178.60W, h560^{km}, mB4.8, mb4.1*
*NEIC **09** 23:03:11.8±0.8, 17.84S×178.58W, h561^{km}±10^{km}, mb4.4/9, Error ellipse: s-maj=12.0km s-min=7.6km az=146.0*
*IDC **09** 23:03:14.6±3.9, 17.83S×178.66W, h590^{km}±45^{km}, mb3.5/13, mb1 3.7/14, mb1mx3.7/19, mbtmp4.5/14, Error ellipse: s-maj=24.5km s-min=19.0km az=121.0*
ISC 09 23:03:10.9±1.2**, 17.86S**±0.10×**178.62W**±0.09**, h560^{km}**±15^{km}**, n42, σ0^{s}97**/37**, mb4.1**/20**, 2C-5D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.66	60	*e*Pn	P	23 05 06.0	-0.3
DZM	Mont Dzumac	14.66	251	P	P	23 06 19.1	+2.7
	1.0nm,0.3s,baz=83,slow=18,SNR=14						
URZ	Urewera	20.67	190	P	P	23 07 10.9	-2.7
	3.3nm,0.4s,baz=11,slow=4.8,SNR=4.7						
CTA	Charters Tower	33.26	260	P	P	23 09 04.1	+0.3
	5.7nm,0.5s,mb4.4,baz=120,slow=11,SNR=7.4						
CTAO	Charters Tower	33.26	260	*e*P	P	23 09 03.4	-0.4
	27nm,1.3s,mb4.6						
CNB	Canberra Magne	33.30	232	⇓*i*P	P	23 09 05.1	+1.1
PMG	Port Moresby	34.26	280	P	P	23 09 13.4	+1.2
	43nm,0.9s,mb5.0,baz=110,slow=4.3,SNR=7.8						
PMG	Port Moresby	34.26	280	*e*P	P	23 09 13.2	+1.1
	67nm,1.0s,mb5.1						
TOO	Toolangi	37.05	231	⇓*i*P	P	23 09 36.0	+1.0
TAU	Tasmania Unive	38.14	222	*e*P	P	23 09 43.6	-0.3
	13nm,0.9s,mb4.5						
STKA	Stephens Creek	38.48	241	⇓*i*P	P	23 09 47.8	+1.1
STKA	Stephens Creek	38.48	241	P	P	23 09 47.8	+1.1
	17nm,0.5s,mb4.8,baz=83,slow=8.7,SNR=59						
WB2	Warramunga Arr	44.44	260	⇓*i*P	P	23 10 33.2	-1.0
WRAB	Tennant Creek	44.44	260	*e*P	P	23 10 33.1	-1.1
	70nm,1.4s,mb5.0						
WRA	Warramunga Arr	44.45	260	P	P	23 10 33.5	-0.8
	8.0nm,0.5s,mb4.5,baz=95,slow=6.9,SNR=239						
KAKA	Kakadu	47.39	269	⇓*i*P	P	23 10 56.0	-0.8
MBWA	Marble Bar	57.90	256	*e*P	P	23 12 10.4	-1.4
	25nm,1.0s,mb4.4						
NWAO	Narrogin (SRO)	59.06	242	P	P	23 12 18.6	-0.9
	14nm,0.9s,mb4.2,baz=129,slow=7.5,SNR=4.9						
SBA	Scott Base	60.45	184	*e*P	P	23 12 29.1	+1.0
	3.0nm,1.0s,mb3.6						
VNDA	Vanda	60.48	185	P	P	23 12 28.0	-0.2
	0.2nm,0.3s,mb2.9,baz=0.1,slow=8.5,SNR=4.5						
VNDA	Vanda	60.48	185	*e*P	P	23 12 27.9	-0.3
	0.8nm,0.8s,mb3.1						
CASY	Casey	66.10	205	*e*P	P	23 13 00.1	-4.1
MJAR	Matsushiro Arr	67.75	323	P	P	23 13 13.7	-1.1
	1.6nm,0.6s,mb3.7,baz=156,slow=8.0,SNR=4.3						
CMB	Columbia Colle	77.94	43	*e*P	P	23 14 12.3	-0.4
	3.8nm,0.9s,mb3.7						
MDJ	Mudanjiang	78.03	325	P	P	23 14 13.8	+0.8
MDJ				AMB	AMB		
	comp=Z,50nm,4.4s						
NVAR	Mina Array Bea	79.53	44	P	P	23 14 21.4	+0.3
	comp=Z,1.3nm,0.6s,mb3.5,baz=206,slow=6.5,SNR=6.9						
WVOR	Wild Horse Val	81.50	40	*e*P	P	23 14 30.8	-0.3
	comp=Z,5.9nm,1.1s,mb3.9						
MAW	Mawson	83.84	200	P	P	23 14 42.4	+0.2
	comp=Z,1.5nm,0.4s,mb3.9,baz=140,slow=3.2,SNR=5.5						
ENH	Enshi	84.08	304	P	P	23 14 44.7	+0.4
	comp=Z,5.2nm,0.6s,mb4.2						
PV10	Paradox Valley	85.83	48	P	P	23 14 53.5	+0.9
ILAR	Eielson Array	85.88	13	P	P	23 14 51.0	-1.3
	comp=Z,0.6nm,0.4s,mb3.6,baz=254,slow=5.0,SNR=8.4						
TXAR	Lajitas Array	86.14	58	P	P	23 14 55.5	+1.2
	comp=Z,3.0nm,0.9s,mb3.9,baz=225,slow=5.3,SNR=17						
PDAR	Pinedale Array	87.45	44	P	P	23 15 00.3	+0.2
	comp=Z,1.4nm,0.6s,mb3.8,baz=243,slow=3.3,SNR=10						
CMAR	Chiang Mai Arr	88.68	290	P	P	23 15 07.5	+1.0
	comp=Z,1.7nm,0.9s,mb3.9,baz=217,slow=7.1,SNR=4.0						
SNAA	Sanae	90.65	179		P	23 15 13.7	-0.7
VNA3	Neumayer Olymp	90.80	176	⇑*i*	P	23 15 15.4	+0.3
VNA2	Neumayer--Watz	91.24	177	⇑*i*	P	23 15 17.5	+0.4
MKAR	Makanchi Array	108.96	314	PKiKP		23 20 36.4	
	comp=Z,0.3nm,0.5s,baz=96,slow=0.5,SNR=8.2						
ARCES	ARCESS Array B	126.23	350	PKP	PKPdf	23 21 10.2	+0.8
	comp=Z,1.8nm,0.9s,baz=315,slow=1.7,SNR=3.9						
FINES	FINESS Array B	133.09	344	PKP	PKPdf	23 21 23.6	+1.0
	comp=Z,0.6nm,0.7s,baz=326,slow=37,SNR=3.5						
BRTR	Keskin Array B	144.61	315	PKP	PKPdf	23 21 45.0	+1.2
	comp=Z,1.2nm,0.5s,baz=135,slow=1.7,SNR=9.6						
GERES	GERESS Array B	147.51	345	PKPbc	PKPdf	23 21 53.0	+4.6
	comp=Z,0.6nm,0.4s,baz=28,slow=4.0,SNR=8.6						

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*IDC **09** 23:03:47.3±4.3, 34.69N×118.66E, mb4.0/4, mb1 4.0/5, mb1mx3.7/19, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=111.5km s-min=40.9km az=178.0*
*BJI **09** 23:03:51.6, 34.85N×118.47E, h16^{km}, ML4.3*
ISC 09 23:03:47.3±0.6**, 34.81N**±0.04×**118.53E**±0.08**, h10^{km}, n8, σ1^{s}23**/13**, mb3.9**/4**, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIA	Tai'an	1.81	321	PG	Pg	23 04 20.9	-2.6
TIA				S	Sn	23 04 42.8	+0.7
TIA				SG	Sg	23 04 46.4	-1.3
NJ2	Nanjing	2.76	174	*e*PG	Pg	23 04 43.1	+0.6
NJ2				SG	Sg	23 05 18.2	-1.2
NJ2				Smax			
	comp=N,10μm,0.3s						
NJ2				Smax			
	comp=E,10μm,0.2s						
DL2	Dalian	4.79	30	PG	Pg	23 05 20.8	-2.1
DL2				S	Sn	23 05 58.1	+0.6
DL2				SG	Sg	23 06 20.8	-5.9
DL2				Smax			
	comp=N,200nm,0.5s						
DL2				Smax			
	comp=E,530nm,0.5s						
SONM	Songino Array	15.86	329	Pn	P	23 07 33.8	+1.6
	comp=E,0.1nm,0.3s,baz=142,slow=14,SNR=4.3						
MKAR	Makanchi Array	29.67	305	P	P	23 09 56.5	+1.2
	comp=E,0.9nm,0.6s,mb3.7,baz=101,slow=10,SNR=15						
FINES	FINESS Array B	61.22	327	P	P	23 14 04.3	0.0
	comp=E,1.2nm,0.7s,mb4.2,baz=90,slow=5.7,SNR=8.8						
BRTR	Keskin Array B	65.28	302	P	P	23 14 32.0	+0.6
	comp=E,0.4nm,0.4s,mb3.8,baz=59,slow=7.2,SNR=4.0						
YKA	Yellowknife Ar	74.09	23	P	P	23 15 25.5	+0.6
	comp=E,1.2nm,0.5s,mb4.1,baz=320,slow=5.3,SNR=11						

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*BJI **09** 23:35:48.7, 78.20N×14.00E, h10^{km}, mB4.6, mb4.3, Ms3.7, Msz3.8*
*CSEM **09** 23:35:50.8±0.1, 78.13N×14.34E, h10^{km}, mb4.3/5, Error ellipse: s-maj=4.8km s-min=2.8km az=70.0*
*MOS **09** 23:35:51.3±1.1, 78.09N×14.79E, h10^{km}, mb4.4/5, Error ellipse: s-maj=86.1km s-min=11.1km az=91.3*
*IDC **09** 23:35:51.9±1.0, 78.08N×14.60E, mb3.6/7, mb1 3.9/10, mb1mx3.7/23, mbtmp3.7/10, ML3.3/3, Error ellipse: s-maj=26.3km s-min=13.1km az=71.0*
*NEIC **09** 23:35:52.8±0.4, 78.16N×14.02E, h10^{km}, mb4.2/5, Error ellipse: s-maj=9.8km s-min=7.1km az=59.0*
ISC 09 23:35:51.5±0.4**, 78.07N**±0.05×**14.7E**±0.3**, h10^{km}, n37, σ1^{s}17**/41**, mb3.9**/13**, 1D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.02	329	*e*P	Pb	23 36 09.4	-1.4
KBS				*e*S	Sb	23 36 24.8	+0.8
KBS				AML	AML	23 36 28.6	
	comp=Z,792nm,0.5s						
HSP	Hornsund	1.09	169	*e*P	Pb	23 36 11.3	-0.7
HOPEN	Hopen	2.77	119	*e*P	Pn	23 36 36.9	+0.1
HOPEN				*e*S	Sn	23 37 09.7	-1.0
HOPEN				AML	AML	23 37 26.6	
	comp=Z,267nm,0.9s						
KEV	Kevo	9.00	152	*e*Pn	P	23 38 01.0	-3.5
ARCES	ARCESS Array B	9.07	155	Pn	P	23 38 01.5	-4.0
	comp=Z,0.6nm,0.3s,baz=351,slow=12,SNR=25						

ARCES				Sn	**Sn**	23 39 41.2	-7.6
	comp=Z,0.6nm,0.3s,baz=348,slow=17,SNR=3.6						
ARCES	**ARCESS Array B**	9.07	155	Pn	**P**	23 38 01.5	-4.0
ARCES				Sn	**Sn**	23 39 41.2	-7.6
APA	**Apatity**	11.81	143	⇓*i*P	**P**	23 38 37.8	-5.0
APA				pmax	pmax		
	comp=Z,20nm,0.8s						
SUMG	**Summit**	14.00	275	*e*P	**P**	23 39 07.5	-4.2
	comp=Z,16nm,1.4s						
SUMG				*e*		23 39 20.6	
FINES	**FINESS Array B**	17.10	161	Pn	**P**	23 39 49.1	-2.6
	comp=Z,0.1nm,0.3s,slow=15,SNR=9.0						
HFS	**Hagfors**	18.03	182	P	**P**	23 40 04.8	+1.4
	comp=Z,0.0nm,0.3s,baz=350,slow=9.0,SNR=4.9						
KONO	**Kongsberg**	18.59	188	P	**P**	23 40 09.2	-1.1
RGN	**Rugen**	23.63	182	P	**P**	23 41 05.5	+2.5
	comp=Z,54nm,1.0s,mb4.9						
TIXI	**Tiksi**	25.75	42	*e*P	**P**	23 41 23.1	0.0
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
TIXI	**Tiksi**	25.75	42	*e*P	**P**	23 41 23.1	0.0
	comp=Z,5.0nm,0.8s,mb4.1						
ARU	**Arti**	26.29	120	*e*P	**P**	23 41 28.8	+0.5
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
ARU	**Arti**	26.29	120	*e*P	**P**	23 41 28.8	+0.5
	comp=Z,6.9nm,0.8s,mb4.2						
ARU				*e*		23 41 42.1	
MOX	**Moxa**	27.56	184	*i* P	**P**	23 41 40.7	+0.7
MOX	**Moxa**	27.56	184	*e*P	**P**	23 41 40.7	+0.7
GERES	**GERESS Array B**	29.34	181	P	**P**	23 41 56.9	+0.9
	comp=Z,0.5nm,0.7s,mb3.4,slow=6.7,SNR=6.4						
CHKZ	**Chkalovo**	31.19	108	*e*P	**P**	23 42 11.8	-0.6
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
CHKZ	**Chkalovo**	31.19	108	*e*P	**P**	23 42 11.8	-0.6
	comp=Z,2.4nm,0.8s,mb4.1						
CHKZ	**Chkalovo**	31.19	108	*e*P	**P**	23 42 11.8	-0.6
	comp=Z,2.4nm,0.8s,mb4.1						
BVAR	**Borovoye Array**	31.76	108	P	**P**	23 42 18.1	+0.7
	comp=Z,1.5nm,0.8s,mb3.9,baz=329,slow=8.6,SNR=11						
AQU	**L’Aquila**	35.83	182	P	**P**	23 42 53.0	+0.3
ILAR	**Eielson Array**	36.95	347	P	**P**	23 43 01.8	-0.1
	comp=Z,0.6nm,0.8s,mb3.5,baz=355,slow=7.1,SNR=5.3						
BRTR	**Keskin Array B**	39.25	157	P	**P**	23 43 21.9	+0.5
	comp=Z,1.0nm,0.9s,mb3.6,baz=346,slow=5.1,SNR=4.6						
MKAR	**Makanchi Array**	40.09	99	P	**P**	23 43 28.1	-0.1
	comp=Z,1.0nm,0.7s,mb3.7,baz=342,slow=7.3,SNR=14						
MALT	**Malatya**	41.09	151	*e*P	**P**	23 43 37.8	+1.2
MALT				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
MALT	**Malatya**	41.09	151	*e*P	**P**	23 43 37.8	+1.2
	comp=Z,2.0nm,0.8s,mb3.8						
WMQ	**Urumqi**	44.04	95	*e*P	**P**	23 44 02.2	+1.7
WMQ				AP	pP	23 44 06.7	+3.2
WMQ				XP	sP	23 44 09.2	+4.5
SONM	**Songino Array**	44.07	76	P	**P**	23 44 01.3	+0.7
	comp=Z,0.9nm,0.9s,mb3.5,baz=336,slow=7.7,SNR=7.1						
ULN	**Ulaanbaatar**	44.17	75	*e*P	**P**	23 44 02.4	+1.0
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
ULN	**Ulaanbaatar**	44.17	75	*e*P	**P**	23 44 02.4	+0.9
	comp=Z,3.1nm,0.9s,mb4.0						
ULN	**Ulaanbaatar**	44.17	75	*e*P	**P**	23 44 02.4	+1.0
	comp=Z,3.0nm,0.9s,mb4.0						
EYMN	**Ely**	46.75	298	P	**P**	23 44 21.0	-1.0
MDJ	**Mudanjiang**	51.54	56	P	**P**	23 44 56.8	-2.2
MDJ				AMB	AMB		
	comp=Z,70nm,4.7s						
TXAR	**Lajitas Array**	67.01	303	P	**P**	23 46 45.5	-0.7
	comp=Z,0.3nm,0.6s,mb3.5,baz=45,slow=5.3,SNR=4.4						

*IDC **09** 23:44:57.7±1.1, 32.62S×72.21W, mb3.4/2, mb1 3.7/6, mb1mx3.7/17, mbtmp3.6/6, ML3.8/2, MS3.3/2, Ms1 3.2/2, ms1mx2.9/8, Error ellipse: s-maj=30.5km s-min=23.9km az=90.0*

*NEIC **09** 23:45:03.1, 32.67S×71.68W, $h33^{km}$, mb4.2/4, ML4.3(GUC), After GUC.*

NEIC Felt [III] at Papudo, Puchuncavi, Valparaiso and Vina del Mar; [II] at Santiago.

*GUC **09** 23:45:03.1±0.7, 32.67S×71.68W, $h33^{km}\pm1^{km}$, MD4.1, ML4.3*

ISC 09 23:45:02.5±0.6**, 32.64S**±0.02×**71.78W**±0.06**,** $\mathbf{h43}^{km}\pm5^{km}$**, n43,** $\sigma1^{s}00$/64**, mb3.8**/6**, MS3.5**/1**, 12C-8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACH	**Papudo**	0.30	70	*i* P	**P**	23 45 10.2	-1.0
PACH				*i* S	**S**	23 45 15.5	-1.6
IHA	**Instituto Hidr**	0.40	163	⇓*i*P	**P**	23 45 11.3	-0.8
IHA				*i* S	**S**	23 45 17.2	-1.7
ROCH	**El Roble**	0.72	117	⇑*i*P	**P**	23 45 15.6	-0.8
ROCH				*i* S	**S**	23 45 25.3	-1.2
PTCH	**Petorca**	0.81	62	*i* P	**P**	23 45 17.4	-0.2
PTCH				AMP		23 45 28.4	
	comp=N,9μm,0.3s						
PTCH				AMP		23 45 32.1	
	comp=E,7μm,0.3s						
LCCH	**Las Cruces**	0.85	168	⇑*i*P	**P**	23 45 17.9	-0.2
LCCH				*i* S	**S**	23 45 29.4	-0.2
JACH	**Jahuel**	1.00	92	⇑*i*P	**P**	23 45 19.5	-0.8
JACH				*i* S	**S**	23 45 32.4	-1.0
PEL	**Peldehue**	1.04	119	⇑*i*P	**P**	23 45 20.7	-0.2
PEL				*i* S	**S**	23 45 33.9	-0.7
PEL				AMP		23 45 35.0	
	comp=N,25μm,0.2s						
ILCH	**Illapel**	1.13	27	⇑*i*P	**P**	23 45 23.4	+1.3
ILCH				*i* S	**S**	23 45 38.2	+1.5
ILCH				AMP		23 45 39.5	
	comp=E,8μm,0.5s						
PUEX	**Pudahuel**	1.17	133	⇓*i*P	**P**	23 45 23.9	+1.2
PUEX				*i* S	**S**	23 45 38.8	+1.2
PUEX				AMP		23 45 39.4	
	comp=E,35μm,0.3s						
TACH	**Talagante**	1.23	145	⇑*i*P	**P**	23 45 23.7	+0.2
TACH				*i* S	**S**	23 45 38.9	-0.4
SAN	**Santiago**	1.24	131	⇑*i*P	**P**	23 45 23.7	+0.1
SAN				*i* S	**S**	23 45 39.1	-0.3
STL	**Santa Lucia**	1.24	130	⇓*i*P	**P**	23 45 23.6	-0.1
STL				*i* S	**S**	23 45 39.1	-0.3
STL				AMP		23 45 39.6	
	comp=N,9μm,0.3s						
DSCH	**Colegio Aleman**	1.26	127	⇑*i*P	**P**	23 45 24.1	0.0
DSCH				*i* S	**S**	23 45 39.8	-0.3
DSCH				AMP		23 45 40.3	
	comp=N,31μm,0.4s						
CLCH	**Cerro Calan**	1.28	126	⇓*i*P	**P**	23 45 24.4	0.0
CLCH				*i* S	**S**	23 45 40.4	-0.2
CLCH				AMP		23 45 41.2	
	comp=N,21μm,0.5s						
CLCH				AMP		23 45 41.9	
	comp=N,24μm,0.5s						
ANTU	**Antumapu**	1.33	134	⇓*i*P	**P**	23 45 25.3	+0.2
ANTU				*i* S	**S**	23 45 41.8	-0.1
ANTU				AMP		23 45 44.5	
	comp=E,8μm,0.6s						
FSR	**Penalolen**	1.34	129	⇓*i*P	**P**	23 45 25.3	+0.1
FSR				*i* S	**S**	23 45 41.9	-0.2
FSR				AMP		23 45 42.6	
	comp=N,13μm,0.3s						
LNV	**Longovilo**	1.34	167	⇓*i*P	**P**	23 45 25.2	-0.1
LNV				*i* S	**S**	23 45 42.7	+0.5
PCH	**Pirque**	1.44	133	⇑*i*P	**P**	23 45 26.8	+0.2
PCH				*i* S	**S**	23 45 44.5	-0.1
SJCH	**San Jose de Ma**	1.55	130	⇑*i*P	**P**	23 45 28.2	-0.1
SJCH				*i* S	**S**	23 45 47.7	+0.3
SJCH				AMP		23 45 52.8	
	comp=E,3μm,0.3s						
CHCH	**Chadas Angostu**	1.59	144	*e*P	**P**	23 45 29.6	+0.8
CHCH				*i* S	**S**	23 45 49.4	+1.0
CMCH	**Combarbala**	1.61	24	⇑*i*P	**P**	23 45 30.5	+1.5
CMCH				*i* S	**S**	23 45 51.7	+3.0
CMCH				AMP		23 45 55.3	
	comp=N,29μm,0.6s						
CACH	**El Canelo**	1.77	147	⇑*i*P	**P**	23 45 32.9	+1.6
CACH				*i* S	**S**	23 45 55.1	+2.5
CICH	**Cipreses**	2.02	146	⇓*i*P	**P**	23 45 36.0	+1.2
CICH				*i* S	**S**	23 46 00.0	+1.1
SFDO	**San Fernando**	2.06	162	*e*P	**P**	23 45 36.1	+0.6
SFDO				*i* S	**S**	23 46 01.1	+0.9
ZON	**Zonda**	2.85	68	*e*P	**P**	23 45 48.5	+1.8
ZON				*e*S	**S**	23 46 28.5	+8.5
CFAA	**Coronel Fontan**	3.18	72	Pn	**P**	23 45 54.9	+3.5
	comp=N,4.3nm,0.3s,baz=251,slow=12,SNR=73						
CFAA				Sn	**S**	23 46 37.6	+9.2
	comp=N,13nm,0.3s,baz=144,slow=17,SNR=11						
PLCA	**Paso Flores**	8.13	173	Pn	**P**	23 46 59.4	-1.5
	comp=N,0.3nm,0.3s,baz=345,slow=12,SNR=7.0						
PLCA				LR	LR	23 50 06.3	
	comp=N,72nm,18.3s,baz=350,slow=38						
PLCA	**Paso Flores**	8.13	173	*e*P	**P**	23 46 58.8	-2.0
	comp=N,3.9nm,0.8s						
PLCA				LR	LR	23 50 06.3	
TRQA	**Tornquist**	9.65	127	*e*P	**P**	23 47 19.9	-1.9
	comp=N,20nm,1.0s						
LPAZ	**La Paz**	16.62	12	Pn	**P**	23 48 55.0	+1.1
	comp=N,0.2nm,0.3s,baz=190,slow=9.1,SNR=8.8						
LPAZ	**La Paz**	16.62	12	*e*P	**P**	23 48 54.2	+0.2
	comp=N,2.1nm,0.8s						
SIV	**San Ignacio**	19.21	33	P	**P**	23 49 24.2	-1.6
	comp=N,0.1nm,0.3s,baz=222,slow=12,SNR=9.0						
SAML	**Samuel**	24.89	21	*e*P	**P**	23 50 21.8	-1.1
	comp=N,3.7nm,1.0s,mb3.9						
BDFB	**Brasilia**	27.41	57	P	**P**	23 50 44.4	-1.9
	comp=N,1.8nm,0.4s,mb3.9,baz=248,slow=10,SNR=4.9						
BDFB				LR	LR	00 02 36.0	
	comp=N,148nm,20.4s,MS3.5,baz=52,slow=38						
SNAA	**Sanae**	52.76	158	P	**P**	23 54 14.8	-0.2
	comp=N,0.6nm,0.8s,mb3.6,baz=261,slow=8.1,SNR=4.9						
TXAR	**Lajitas Array**	68.66	330	P	**P**	23 56 02.3	-1.3
	comp=N,0.1nm,0.4s,mb3.1,baz=130,slow=7.0,SNR=2.6						
WVT	**Waverly**	70.05	346	*e*P	**P**	23 56 12.0	+0.1
	comp=N,2.9nm,0.8s,mb4.3						
TSUM	**Tsumeb**	79.37	106	*e*P	**P**	23 57 05.5	-0.4
	comp=N,4.3nm,1.0s,mb4.3						
LBTB	**Lobatse**	82.67	115	P	**P**	23 57 23.7	+0.5
BVAR	**Borovoye Array**	146.13	42	PKPbc	PKPbc	00 04 40.3	+2.7
	comp=N,1.1nm,0.5s,baz=287,slow=2.8,SNR=13						
ZAL	**Zalesovo**	152.96	31	PKPbc	PKPdf	00 04 55.2	+8.1
	comp=N,2.0nm,0.4s,baz=208,slow=1.6,SNR=7.0						
ZAL	**Zalesovo**	152.96	31	PKPbc	PKPdf	00 04 55.2	+8.0
MKAR	**Makanchi Array**	155.69	47	PKPab	PKPab	00 05 19.6	-0.3
	comp=N,0.9nm,0.7s,baz=295,slow=3.9,SNR=8.9						

*ZUR **09** 23:58:32.4, 48.33N×6.62E, ML2.9/12*

*BGR **09** 23:58:33.6±0.4, 48.37N×6.70E, $h10^{km}$, ML2.7/7, Error ellipse: s-maj=3.3km s-min=2.2km az=79.0*

*NEIC **09** 23:58:33.2, 48.35N×6.66E, $h5^{km}$, ML3.3(LDG), ML3.1(VIE), ML2.9(STR), ML2.9(SZGRF), ML2.8(LEDBW), After STR.*

*STR **09** 23:58:33.2±0.1, 48.35N×6.66E, $h5^{km}\pm1^{km}$, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **09** 23:58:33.2±0.0, 48.33N×6.67E, $h15^{km}$, ML3.3/26, Error ellipse: s-maj=0.9km s-min=0.6km az=166.0*

*LEDBW **09** 23:58:33.2±0.1, 48.34N×6.64E, $h10^{km}$, ML2.8, Error ellipse: s-maj=6.0km s-min=2.0km az=179.0*

*PRU **09** 23:58:34.1, 48.29N×6.64E*

LDG 09 23:58:33.4±0.0**, 48.33N**×**6.63E,** $\mathbf{h10}^{km}$**, Md3.3**/4**, Ml3.3**/27**, 19C-14D, Error ellipse: s-maj=1.0km s-min=0.7km az=164.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECH	**Echery**	0.37	108	⇑*i*Pg	Pg	23 58 40.4	-0.6
ECH				Sg	Sg	23 58 45.2	-0.9
ECH	**Echery**	0.37	108	Pg	Pg	23 58 40.2	-0.8
ECH				Sg	Sg	23 58 45.0	-1.1
HAU	**Haudompre**	0.38	210	*e*Pg	Pg	23 58 40.8	-0.4
HAU				*e*Sg	Sg	23 58 45.9	-0.5
	353nm,0.2s						
CDF	**Champ du Feu**	0.44	79	*e*Pg	Pg	23 58 41.3	-1.0
CDF				*e*Sg	Sg	23 58 48.0	-0.2
	172nm,0.2s						
THEF	**They Montfort**	0.44	256	⇑*i*Pg	Pg	23 58 41.8	-0.6
THEF	**They Montfort**	0.44	256	Pg	Pg	23 58 41.7	-0.8
THEF				Sg	Sg	23 58 48.5	0.0
WLS	**Welschbruch**	0.49	80	⇑*i*Pg	Pg	23 58 42.4	-0.9
WLS	**Welschbruch**	0.49	80	Pg	Pg	23 58 42.4	-0.9
WLS				Sg	Sg	23 58 48.7	-1.2
HINF	**Hinteralfeld**	0.54	164	*e*Pg	Pg	23 58 43.4	-0.9
HINF				*e*Sg	Sg	23 58 50.2	-1.4
HINF				*e*Sn	Sn	23 58 53.4	-2.4
	215nm,0.2s						
MOF	**Molkenrain**	0.59	145	⇓*i*Pg	Pg	23 58 44.5	-0.8
LIBD	**Limburg**	0.67	105	⇑Pg	Pg	23 58 46.4	-0.5
STR	**Strasbourg**	0.80	71	Pg	Pg	23 58 47.9	-1.5
RFYF	**Reffroy**	0.82	291	*e*Pg	Pg	23 58 49.4	-0.6
	baz=112						
RFYF				*e*Pn	Pn	23 58 49.6	-1.3
RFYF				*e*Sg	Sg	23 58 59.7	-1.3
	254nm,0.2s,baz=108						
RFYF	**Reffroy**	0.82	291	*e*Pg	Pg	23 58 49.4	-0.6
RFYF				*e*Sg	Sg	23 58 59.7	-1.3
	127nm,0.2s						
FBB	**Freiburg**	0.88	112	P	Pb	23 58 50.0	-0.3
FBB				*		00 00 11.3	
KIZ	**Kirchzarten**	0.94	113	⇑*i*Pn	Pn	23 58 50.4	-2.1
KIZ				Sn	Sn	23 59 02.4	-3.6
KIZ	**Kirchzarten**	0.94	113	⇑*i*P	Pb	23 58 50.4	-0.9
KIZ				*e*P		23 58 51.0	
KIZ				S	Sb	23 59 02.4	-1.2
KIZ				*e*S	Sb	23 59 03.0	-0.6
LOMF	**Lomont**	0.99	172	Pn	Pn	23 58 51.8	-1.4
LOMF				Pg	Pg	23 58 52.4	-0.8
LOMF	**Lomont**	0.99	172	Pg	Pg	23 58 52.3	-1.0
LANF	**Langenberg**	1.01	50	Pg	Pg	23 58 51.8	-1.9
LANF				Sg	Sg	23 59 05.7	-1.5
BOURR	**Bourrignon**	1.02	157	*e*Pg	Pg	23 58 52.9	-1.0
	SNR=53						
BOURR				*e*Sg	Sg	23 59 05.8	-1.8
	SNR=17						
BOURR	**Bourrignon**	1.02	157	*e*Pn	Pn	23 58 52.5	-1.2
FELD	**Feldberg**	1.03	116	Pg	Pg	23 58 52.3	-1.7
FELD				Sg	Sg	23 59 05.9	-1.8
FELD	**Feldberg**	1.03	116	P	Pb	23 58 51.8	-1.0
FELD				*e*P		23 58 52.6	
FELD				*e*S	Sb	23 59 05.5	-0.7
BBS	**Basel-Blauen**	1.05	146	⇑*i*Pg	Pg	23 58 53.2	-1.2
BBS	**Basel-Blauen**	1.05	146	Pg	Pg	23 58 53.1	-1.4
MEZF	**Maizieres J’vi**	1.07	280	*e*Pn	Pn	23 58 53.2	-1.1
	baz=97						
MEZF				*e*Pg	Pg	23 58 54.0	-0.8
MEZF				*e*Sn	Sn	23 59 06.6	-2.6
MEZF				*e*Sg	Sg	23 59 07.6	-1.4
	105nm,0.2s						
SFTF	**Sexfontaines**	1.07	264	*e*Pn	Pn	23 58 53.2	-1.2
	baz=84						
SFTF				*e*Pg	Pg	23 58 54.0	-0.9
SFTF				*e*Sg	Sg	23 59 07.0	-2.2
	142nm,0.2s						
BFO	**Black Forest**	1.13	90	*e*Pg	Pg	23 58 53.3	-2.8
	SNR=50						
BFO				*e*Sg	Sg	23 59 07.0	-4.2
	SNR=5.3						
BFO	**Black Forest**	1.13	90	*e*Pg	Pg	23 58 53.1	-3.0
BFO				*e*Sg	Sg	23 59 09.3	-1.9
BALST	**Balsthal**	1.23	144	*e*Pn	Pn	23 58 55.6	-1.0
SULZ	**Sulz-Cheisache**	1.28	128	*e*Pg	Pg	23 58 56.8	-2.3
	SNR=9.0						
SULZ				*e*Sg	Sg	23 59 13.8	-2.4
	SNR=16						
SULZ	**Sulz-Cheisache**	1.28	128	*e*Pn	Pn	23 58 56.0	-1.4
WLF	**Walferdange**	1.37	347	*e*Pg	Pg	23 58 59.0	-1.8
	SNR=32						
WLF				*e*Sg	Sg	23 59 16.4	-2.6
	SNR=6.6						
WLF	**Walferdange**	1.37	347	*e*Pn	Pn	23 58 58.9	+0.3
WLF				*e*Sn	Sn	23 59 15.4	-1.6
WLF	**Walferdange**	1.37	347	*e*Pn	Pn	23 58 58.9	+0.2
WLF				*e*Sn	Sn	23 59 15.4	-1.5
SLE	**Schleitheim**	1.37	114	*e*Pn	Pn	23 58 56.8	-1.9
	SNR=9.6						
SLE				*e*Pg	Pg	23 58 59.1	-1.7
	SNR=13						
SLE				*e*Sg	Sg	23 59 16.3	-2.8
	SNR=7.5						
SLE	**Schleitheim**	1.37	114	⇑*i*Pn	Pn	23 58 56.8	-1.9
KTD	**Kalmit**	1.38	44	Pg	Pg	23 58 59.4	-1.6
KTD				Sg	Sg	23 59 17.2	-2.1
KTD	**Kalmit**	1.38	44	S	Sb	23 59 17.2	+0.9
KTD	**Kalmit**	1.38	44	Pg	Pg	23 58 58.9	-2.0
KTD				Sg	Sg	23 59 17.2	-2.1
RUP	**Ruppelstein**	1.40	11	Pg	Pg	23 58 59.1	-2.3
RUP	**Ruppelstein**	1.40	11	Pg	Pg	23 58 59.1	-2.3
RUP				Sg	Sg	23 59 17.2	-2.8
BRANT	**Les Verrieres**	1.40	184	⇓*i*Pn	Pn	23 58 57.7	-1.4
SPAK	**Spaichingen**	1.46	98	Pg	Pg	23 59 00.4	-2.2
LBG	**Lerchenberg**	1.48	76	⇑*i*Pn	Pn	23 58 58.0	-2.2
LBG				⇓*i*Pg	Pg	23 59 01.0	-2.0
LBG				Sn	Sn	23 59 15.5	-4.1
LBG				Sg	Sg	23 59 20.0	-2.7
LBG	**Lerchenberg**	1.48	76	⇑*i*P	Pn	23 58 58.0	-2.2
LBG				*i* Pg	Pg	23 59 01.0	-1.9
LBG				S	Sb	23 59 15.5	-3.7
LBG				Sg	Sg	23 59 20.0	-2.6
LBG	**Lerchenberg**	1.48	76	*i* PG	Pg	23 59 01.0	-1.9
LBG	**Lerchenberg**	1.48	76	S	Sb	23 59 15.5	-3.7
LBG	**Lerchenberg**	1.48	76	SG	Sg	23 59 20.0	-2.6
LBG	**Lerchenberg**	1.48	76	*i* Pg	Pg	23 59 01.0	-1.9
FLACH	**Flaach**	1.51	120	*e*P	Pn	23 58 59.7	-0.9
TRULL	**Truellikon**	1.54	116	*e*Pn	Pn	23 58 59.0	-2.1
ZUR	**Zurich**	1.63	126	*e*Pn	Pn	23 59 02.3	-0.1
	SNR=1.9						
ZUR				*e*Pg	Pg	23 59 04.2	-1.8
	SNR=5.5						
ZUR				*e*Sg	Sg	23 59 25.0	-2.7
	SNR=14						
STEIN	**Stein am Rhein**	1.64	113	⇓*i*Pn	Pn	23 59 01.7	-0.9
TUBL	**Tuebingen Lnz**	1.64	82	Pn	Pn	23 59 01.2	-1.3
TUBL				⇓*i*Pg	Pg	23 59 04.4	-1.9
TUBL				Sn	Sn	23 59 19.3	-4.6
TUBL				Sg	Sg	23 59 25.6	-2.6
ABH	**Alteburg**	1.66	21	Pg	Pg	23 59 03.6	-3.1
ABH	**Alteburg**	1.66	21	Pg	Pg	23 59 03.6	-3.0
ABH				Sg	Sg	23 59 26.9	-1.9
GUT	**Gutenstein**	1.68	98	Pn	Pn	23 59 01.2	-1.9
GUT				⇓*i*Pg	Pg	23 59 04.9	-2.1
GUT				Sg	Sg	23 59 26.7	-2.8
GUT	**Gutenstein**	1.68	98	P	Pn	23 59 01.2	-1.9
GUT				*i* Pg	Pg	23 59 04.9	-2.1
GUT				Sg	Sg	23 59 26.7	-2.8
GUT	**Gutenstein**	1.68	98	*i* PG	Pg	23 59 04.9	-2.1
GUT				SG	Sg	23 59 26.7	-2.8
GUT	**Gutenstein**	1.68	98	*i* Pg	Pg	23 59 04.9	-2.1
SISB	**Singen-Sch Ber**	1.69	112	⇑Pn	Pn	23 59 02.3	-1.0
SISB				Pg	Pg	23 59 05.3	-1.9
SISB				Sn	Sn	23 59 22.3	-2.9
SISB				Sg	Sg	23 59 26.9	-3.0
STU	**Stuttgart**	1.76	75	*e*Pn	Pn	23 59 01.7	-2.5
STU				*e*Sg	Sg	23 59 28.8	-3.2
	SNR=6.3						
CABF	**La Chapelle**	1.76	192	*e*Pn	Pn	23 59 02.7	-1.6
CABF				*e*Pg	Pg	23 59 06.4	-2.2
CABF				*e*Sg	Sg	23 59 29.0	-3.1
	39nm,0.3s						
SWS	**Schriesheim**	1.79	49	Pg	Pg	23 59 07.2	-1.9
SWS				Sn	Sn	23 59 24.1	-3.4
SWS				Sg	Sg	23 59 29.4	-3.6
SWS	**Schriesheim**	1.79	49	Pg	Pg	23 59 07.2	-1.9
SWS				S	Sn	23 59 24.1	-3.4
SWS				Sg	Sg	23 59 29.4	-3.5
SWS	**Schriesheim**	1.79	49	S	Sn	23 59 24.1	-3.4
WILA	**Wila**	1.79	120	*e*Pn	Pn	23 59 03.4	-1.2
	SNR=4.2						
WILA				*e*Pg	Pg	23 59 07.0	-2.1
	SNR=6.3						
WILA				*e*Sg	Sg	23 59 29.8	-3.2
	SNR=7.0						
BUCH	**Bad Urach**	1.82	85	⇑*i*Pn	Pn	23 59 02.9	-2.1
BUCH				Pg	Pg	23 59 07.3	-2.4
BUCH				Sn	Sn	23 59 23.5	-4.8
BUCH				Sg	Sg	23 59 30.2	-3.7
BUCH	**Bad Urach**	1.82	85	⇑*i*P	Pn	23 59 02.9	-2.2
BUCH				Pg	Pg	23 59 07.3	-2.4
BUCH				S	Sn	23 59 23.5	-4.8
BUCH	**Bad Urach**	1.82	85	S	Sn	23 59 23.5	-4.8
GIMEL	**Gimel**	1.82	188	⇓*i*Pn	Pn	23 59 03.6	-1.5
GIMEL	**Gimel**	1.82	188	⇓*i*P*	Pb	23 59 07.5	+1.1
GIMEL	**Gimel**	1.82	188	⇓*i*Pb	Pb	23 59 07.5	+1.1
BNALP	**Bannalp**	1.90	140	⇓*i*Pn	Pn	23 59 05.3	-1.0
TOD	**Tromm**	1.92	48	Pg	Pg	23 59 10.1	-1.6
TOD				Sg	Sg	23 59 33.3	-3.9
OG01	**Vacheresse**	2.00	179	Pn	Pn	23 59 06.4	-1.3
OG01				Pg	Pg	23 59 11.0	-2.5
GIVF	**Givet**	2.13	327	*e*Pn	Pn	23 59 07.1	-2.5
GIVF				*e*Pg	Pg	23 59 12.8	-3.2
GIVF				*e*Sn	Sn	23 59 32.0	-4.3
GIVF				*e*Sg	Sg	23 59 39.0	-5.4
	58nm,0.3s						
LOR	**Lormes**	2.15	241	*e*Pn	Pn	23 59 07.5	-2.4
	baz=62						
LOR				*e*Pg	Pg	23 59 13.4	-3.0
	baz=61						
LOR				*e*Sn	Sn	23 59 32.0	-4.8
LOR				*e*Sg	Sg	23 59 40.9	-4.2
	63nm,0.2s,baz=58						
LOR	**Lormes**	2.15	241	*e*Pg	Pg	23 59 13.4	-3.0
LOR				*e*Sn	Sn	23 59 32.0	-4.8
LOR				*e*Sg	Sg	23 59 40.9	-4.2
	32nm,0.2s						
LIENZ	**Alp Oberkamor**	2.19	117	*e*Pn	Pn	23 59 09.5	-0.9
	SNR=7.0						
LIENZ				*e*Pg	Pg	23 59 14.9	-2.3
	SNR=4.7						
LIENZ				*e*Sn	Sn	23 59 34.9	-2.9
	SNR=2.8						
LIENZ				*e*Sg	Sg	23 59 42.5	-3.9
	SNR=5.3						
LIENZ	**Alp Oberkamor**	2.19	117	⇑*i*Pn	Pn	23 59 09.5	-0.9
SIND	**Sindeldorf**	2.21	62	Pg	Pg	23 59 14.5	-3.1
SIND				Sg	Sg	23 59 43.7	-3.4
TNS	**Taunus Mts**	2.23	31	*e*Pn	Pn	23 59 08.2	-2.8
	SNR=1.8						
TNS				*e*Pg	Pg	23 59 14.5	-3.6
	SNR=7.0						
TNS				*e*Sg	Sg	23 59 43.0	-4.8
	SNR=5.0						
TNS	**Taunus Mts**	2.23	31	*e*Pn	Pn	23 59 08.2	-2.8
TNS				*e*Sg	Sg	23 59 42.7	-5.1
PLONS	**Plons**	2.26	124	*e*Pn	Pn	23 59 10.5	-0.9
BAIF	**Baives**	2.35	318	*e*Pn	Pn	23 59 10.1	-2.6
BAIF				*e*Pg	Pg	23 59 17.1	-3.2
BAIF				*e*Sn	Sn	23 59 36.8	-5.0
BAIF				*e*Sg	Sg	23 59 46.4	-5.2
	22nm,0.3s						
HDH	**Heidenheim**	2.39	83	Pg	Pg	23 59 17.9	-3.3
HDH				Sg	Sg	23 59 48.9	-4.2
HDH	**Heidenheim**	2.39	83	S	Sn	23 59 48.9	+5.9
UBR	**Uberruh**	2.42	104	⇓*i*Pn	Pn	23 59 12.5	-1.2
UBR				⇓*i*Pg	Pg	23 59 19.2	-2.6
UBR				Sg	Sg	23 59 50.6	-3.6
UBR	**Uberruh**	2.42	104	⇓*i*P	Pn	23 59 12.5	-1.2
UBR				*i* Pg	Pg	23 59 19.2	-2.6
UBR				Sg	Sg	23 59 50.6	-3.5
UBR	**Uberruh**	2.42	104	*i* PG	Pg	23 59 19.2	-2.6
UBR				SG	Sg	23 59 50.6	-3.5
UBR	**Uberruh**	2.42	104	*i* Pg	Pg	23 59 19.2	-2.6
DAVA	**Damuels**	2.43	114	⇑*i*PN	Pn	23 59 12.8	-1.0
DAVA				*i* PG	Pg	23 59 19.3	-2.6
DAVA				*i* SN	Sn	23 59 43.6	-0.2
DAVA				*i* SG	Sg	23 59 51.0	-3.3
	15nm,0.3s						
OG05	**Jujurieux**	2.43	200	Pn	Pn	23 59 12.9	-0.9
SSF	**Saint Saulge**	2.46	240	*e*Pn	Pn	23 59 11.8	-2.5
SSF				*e*Pg	Pg	23 59 18.7	-3.9
SSF				*e*Sn	Sn	23 59 39.8	-5.0
SSF				*e*Sg	Sg	23 59 50.1	-5.4
	44nm,0.4s						
SSF	**Saint Saulge**	2.46	240	*e*Pg	Pg	23 59 18.7	-3.9
SSF				*e*Sn	Sn	23 59 39.8	-5.0
SSF				*e*Sg	Sg	23 59 50.1	-5.4
	22nm,0.4s						
HGN	**Heimansgroeve**	2.48	350	*e*Pg	Pg	23 59 18.7	-4.2
	baz=170						
HGN				*e*Sg	Sg	23 59 49.7	-6.2
SMF	**Signal de Mont**	2.54	229	*e*Pn	Pn	23 59 12.5	-2.9
SMF				*e*Pg	Pg	23 59 20.7	-3.4
SMF				*e*Sg	Sg	23 59 52.6	-5.3
	94nm,0.3s						
AVF	**Avril sur Loir**	2.70	236	*e*Pn	Pn	23 59 15.1	-2.7
AVF				*e*Pg	Pg	23 59 23.8	-3.6
AVF				*e*Sn	Sn	23 59 45.6	-5.3
AVF				*e*Sg	Sg	23 59 57.2	-6.3
	12nm,0.2s						
LPL	**La Plagne**	2.82	179	*e*Pn	Pn	23 59 17.8	-1.6

LPL				*e*Pg	Pg	23 59 26.0	-3.7
LPL				*e*Sg	Sg	00 00 02.3	-5.0
	6.2nm,0.4s						
LPG	**La Plagne**	**2.84**	**178**	*e*Pn	Pn	23 59 18.2	-1.5
LPG				*e*Pg	Pg	23 59 26.4	-3.7
LPG				*e*Sg	Sg	00 00 02.5	-5.4
	7.2nm,0.3s						
HYF	**Humbligny**	**2.90**	**250**	*e*Pn	Pn	23 59 18.4	-2.1
HYF				*e*Pg	Pg	23 59 26.9	-4.3
HYF				*e*Sg	Sg	00 00 04.2	-5.6
HYF	**Humbligny**	**2.90**	**250**	*e*Pg	Pg	23 59 26.9	-4.3
HYF				*e*Sg	Sg	00 00 04.2	-5.6
FUR	**Furstenfeldbru**	**3.11**	**91**	*e*Pg	Pg	23 59 31.5	-4.0
	SNR=2.1						
BGF	**Bois d'Agland**	**3.12**	**237**	*e*Pn	Pn	23 59 20.6	-3.1
BGF				*e*Pg	Pg	23 59 31.6	-4.2
BGF				*e*Sg	Sg	00 00 09.6	-7.8
	107nm,0.4s						
MOTA	**Moosalm**	**3.17**	**107**	⇑*i*PN	Pn	23 59 23.1	-1.3
MOTA				*i* PG	Pg	23 59 32.7	-4.0
SQTA	**Sankt Quirin**	**3.28**	**108**	⇑*i*PN	Pn	23 59 25.1	-0.9
SQTA				*i* PG	Pg	23 59 34.9	-4.0
AGO	**Saint Agoulin**	**3.30**	**228**	Pg	Pg	23 59 36.0	-3.3
GRF	**Grafenberg Arr**	**3.31**	**64**	*e*Sg	Sg	00 00 16.4	-7.4
ORIF	**Oris-en-Rattie**	**3.46**	**189**	*e*Pn	Pn	23 59 25.7	-2.7
ORIF				*e*Pg	Pg	23 59 37.1	-5.3
ORIF				*e*Sg	Sg	00 00 20.7	-7.8
	9.1nm,0.2s						
WTTA	**Wattenberg**	**3.54**	**106**	⇑*i*PN	Pn	23 59 28.3	-1.3
WTTA				*i* PG	Pg	23 59 39.3	-4.8
PYM	**Petit Puy Mans**	**3.58**	**225**	Pg	Pg	23 59 41.2	-3.7
MBDF	**Montbardon**	**3.61**	**178**	*e*Pn	Pn	23 59 27.2	-3.4
MBDF				*e*Pg	Pg	23 59 40.4	-5.1
MBDF				*e*Sg	Sg	00 00 27.0	-6.6
	6.6nm,0.5s						
TCF	**Toulx Ste Croi**	**3.64**	**237**	*e*Pn	Pn	23 59 27.7	-3.3
TCF				*e*Sn	Sn	00 00 07.9	-6.6
TCF				*e*Sg	Sg	00 00 27.2	-7.4
	13nm,0.2s						
VIVF	**Saint-Julien-l**	**3.73**	**202**	*e*Pn	Pn	23 59 28.9	-3.4
VIVF				*e*Pg	Pg	23 59 42.7	-5.2
VIVF				*e*Sg	Sg	00 00 30.2	-7.5
	13nm,0.3s						
MOX	**Moxa**	**3.99**	**53**	*e*Pg	Pg	23 59 47.2	-5.9
	SNR=2.2						
MOX				*e*Sg	Sg	00 00 37.9	-8.3
	SNR=5.7						
GUNZ	**Gunzen**	**4.24**	**59**	*e*Pg	Pg	23 59 52.6	-5.5
	SNR=2.2						
GUNZ				*e*Sg	Sg	00 00 46.2	-8.5
	SNR=7.0						
NKC	**Novy Kostel**	**4.25**	**61**	*e*PN	Pn	23 59 52.8	+13
NKC				*e*x	x	00 00 45.5	
WERD	**Werda**	**4.27**	**58**	*e*Pg	Pg	23 59 52.9	-5.8
	SNR=2.1						
WERD				*e*Sg	Sg	00 00 45.3	-10
TANN	**Tannenbergstha**	**4.34**	**59**	*e*Pg	Pg	23 59 54.5	-5.6
	SNR=2.7						
TANN				*e*Sg	Sg	00 00 48.5	-9.5
	SNR=4.9						
SMRF	**Simiane la Rot**	**4.42**	**190**	*e*Pn	Pn	23 59 38.8	-3.3
LDF	**La Druitiere**	**4.50**	**276**	*e*Pn	Pn	23 59 40.4	-2.9
LDF				*e*Sn	Sn	00 00 28.6	-7.8
LDF				*e*Sg	Sg	00 00 54.1	-9.2
	16nm,0.6s						
CAF	**Calviac**	**4.64**	**224**	*e*Pn	Pn	23 59 41.5	-3.7
CAF				*e*Sg	Sg	00 00 57.8	-10
	7.0nm,0.2s						
RJF	**Les Rejaudoux**	**4.64**	**231**	*e*Sg	Sg	00 00 57.9	-10
	14nm,0.4s						
KHC	**Kasperske Hory**	**4.67**	**78**	*e*PN	Pn	23 59 42.7	-2.9
KHC				*e*PG	Pg	23 59 59.6	-7.0
KHC				*e*SN	Sn	00 00 33.8	-6.7
KHC				*e*SG	Sg	00 00 59.3	-9.5
LASF	**Ste Croix**	**4.67**	**205**	*e*Pn	Pn	23 59 42.2	-3.5
LASF				*e*Sg	Sg	00 00 58.1	-11
KBA	**Koelnbreinsper**	**4.70**	**103**	⇓*i*PN	Pn	23 59 44.9	-1.2
KBA	**Koelnbreinsper**	**4.70**	**103**	⇑*i*PG	Pg	00 00 00.8	-6.5
KBA				*i* SN	Sn	00 00 40.0	-1.4
KBA				*i* SG	Sg	00 01 09.7	-0.3
	2.0nm,0.4s						
GEC2	**GERESS Array S**	**4.72**	**81**	*e*Pn	Pn	23 59 43.4	-3.0
	SNR=3.7						
GEC2				*e*Sg	Sg	00 01 02.3	-8.3
	SNR=3.1						
FLN	**La Foliniere**	**4.75**	**278**	*e*Pn	Pn	23 59 43.8	-2.9
	baz=95						
FLN				*e*Sn	Sn	00 00 34.6	-7.9
FLN				*e*Sg	Sg	00 01 03.2	-8.2
	9.6nm,0.3s,baz=102						
FRF	**La Foret Royal**	**4.77**	**180**	*e*Pn	Pn	23 59 44.1	-3.1
FRF				*e*Pg	Pg	00 00 01.7	-7.0
FRF	**La Foret Royal**	**4.77**	**180**	*e*Pg	Pg	00 00 01.7	-7.0
MFF	**Saint Martin d**	**4.91**	**252**	*e*Pn	Pn	23 59 45.2	-3.9
MFF				*e*Pg	Pg	00 00 04.4	-7.1
MFF				*e*Sn	Sn	00 00 38.0	-8.7
MFF				*e*Sg	Sg	00 01 06.2	-11
	11nm,0.5s						
MFF	**Saint Martin d**	**4.91**	**252**	*e*Pg	Pg	00 00 04.4	-7.1
MFF				*e*Sn	Sn	00 00 38.0	-8.7
MFF				*e*Sg	Sg	00 01 06.2	-11
	5.7nm,0.5s						
GRR	**Gorron**	**4.99**	**273**	*e*Sn	Sn	00 00 40.1	-8.7
LMR	**La Mourre**	**5.00**	**181**	*e*Pn	Pn	23 59 47.0	-3.4
LMR				*e*Sn	Sn	00 00 39.9	-9.1
CLL	**Collm**	**5.09**	**52**	*e*Sg	Sg	00 01 13.7	-9.1
	SNR=4.5						
MOA	**Molln**	**5.14**	**93**	⇑*i*PN	Pn	23 59 50.7	-1.6
LFF	**La Frestale**	**5.29**	**232**	*e*Sg	Sg	00 01 19.5	-10
	28nm,0.5s						
BRG	**Berggiesshubel**	**5.39**	**59**	*e*Sg	Sg	00 01 22.8	-10
MTLF	**Montolieu**	**5.87**	**213**	*e*Sg	Sg	00 01 35.5	-13
	8.2nm,0.7s						
SGMF	**Saint Gilles**	**6.13**	**273**	*e*Pn	Pn	00 00 02.0	-4.3
SGMF				*e*Sn	Sn	00 01 07.0	-10
	2.1nm,0.3s						
QUIF	**Quistinic**	**6.57**	**270**	*e*Pn	Pn	00 00 07.8	-4.7
QUIF				*e*Sn	Sn	00 01 15.4	-13
ROSF	**Rostrenen**	**6.61**	**274**	*e*Pn	Pn	00 00 08.4	-4.6
ROSF				*e*Pg	Pg	00 00 34.9	-10
ROSF				*e*Sn	Sn	00 01 17.1	-12
ROSF	**Rostrenen**	**6.61**	**274**	*e*Pg	Pg	00 00 34.9	-10
ROSF				*e*Sn	Sn	00 01 17.1	-12

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*MOS **10** 00:03:14.6±1.5, 36.25N×70.08E, h124^{km}, mb4.0/6, Error ellipse: s-maj=19.3km s-min=9.9km az=93.6*

*NEIC **10** 00:03:17.8±2.0, 36.30N×70.31E, h148^{km}±26^{km}, mb4.3/6, Error ellipse: s-maj=18.5km s-min=8.3km az=62.0*

*BJI **10** 00:03:19.2, 36.48N×70.10E, h176^{km}*

*NNC **10** 00:03:21.9±6.6, 36.74N×69.79E, h161^{km}±69^{km}, mpv4.8, Error ellipse: s-maj=56.0km s-min=37.7km az=24.0*

*IDC **10** 00:03:23.5±6.5, 36.85N×69.98E, h158^{km}±63^{km}, mb3.5/5, mb1 3.7/8, mb1mx3.3/23, mbtmp4.1/8, Error ellipse: s-maj=73.8km s-min=27.8km az=152.0*

ISC 10 00:03:16.8±0.5**, 36.29N**±0.03×**70.26E**±0.07**, h157**^{km}±8^{km}**, n64,** σ1^{s}**24**/78**, mb3.8**/5**, 12C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.81**	**151**	⇓P	**P**	**00 04 03.3**	**+0.7**
CEP				S	**S**	**00 04 39.0**	**+1.2**
CHCP	**Chirah Chowk**	**3.60**	**136**	⇑P	**P**	**00 04 14.9**	**+2.0**
THW	**Thamme Wali**	**3.69**	**160**	⇑P	**P**	**00 04 13.4**	**-0.6**
SBDP	**Sheikh Budin**	**4.00**	**173**	⇓P	**P**	**00 04 17.1**	**-1.0**
DRP	**Derazinda**	**4.53**	**181**	⇑P	**P**	**00 04 23.8**	**-1.2**
SARP	**Sargodha**	**4.79**	**155**	⇑P	**P**	**00 04 27.5**	**-0.9**
KSH	**Kashi**	**5.55**	**53**	P	**P**	**00 04 42.0**	**+3.5**
KSH				S	**S**	**00 05 47.2**	**+5.4**
KSH				Smax			
	comp=N,270nm,0.4s						
KSH				Smax			
	comp=E,240nm,0.8s						
THN	**Thein Dam**	**5.93**	**129**	*e*P	**P**	**00 04 44.4**	**+1.0**
THN				*e*S	**S**	**00 05 51.3**	**+0.5**
AML	**Almayashu**	**6.42**	**24**	P	**P**	**00 04 50.3**	**+0.3**
	SNR=263						
UCH	**Uchtor**	**6.79**	**28**	P	**P**	**00 04 55.2**	**+0.2**
	SNR=183						
KK31	**Karatay Array**	**6.81**	**2**	⇓P	**P**	**00 04 54.0**	**-1.3**
	comp=E,29nm,0.3s,baz=166,slow=8.6,SNR=884						
KK31				⇑S	**S**	**00 06 06.9**	**-5.0**
	comp=E,170nm,0.7s						
KKAR	**Karatay Array**	**6.81**	**2**	PN	**P**	**00 04 54.0**	**-1.3**
KKAR				pmax	pmax		
	comp=Z,19nm,0.3s						
EKS2	**Erkin-Say**	**6.92**	**22**	P	**P**	**00 04 57.2**	**+0.4**
	SNR=24						
KZA	**Kyzart**	**6.96**	**32**	P	**P**	**00 04 57.6**	**+0.3**
	SNR=103						
AAK	**Ala-Archa**	**7.14**	**26**	P	**P**	**00 05 00.3**	**+0.7**
	SNR=15						
AAK	**Ala-Archa**	**7.14**	**26**	⇓P	**P**	**00 05 00.3**	**+0.7**
	comp=Z,26nm,0.5s						
AAK				⇑S	**S**	**00 06 19.1**	**-0.6**
	comp=Z,32nm,0.8s						
AAK	**Ala-Archa**	**7.14**	**26**	*e*PN	**P**	**00 04 59.0**	**-0.6**
KBK	**Karagaybulak**	**7.32**	**28**	P	**P**	**00 05 03.0**	**+0.9**
	SNR=38						
SDNR	**Sundarnagar**	**7.34**	**129**	*e*x	**P**	**00 05 06.4**	**+4.0**
SDNR				*e*S	**S**	**00 06 22.0**	**-2.6**
ULHL	**Ulahol**	**7.55**	**36**	P	**P**	**00 05 05.6**	**+0.5**
	SNR=16						
CHMS	**Chumysh**	**7.55**	**26**	P	**P**	**00 05 05.3**	**+0.2**
	SNR=88						
USP	**Ospenovka**	**7.70**	**24**	P	**P**	**00 05 06.8**	**-0.4**
	SNR=24						
SMLA	**Simla**	**7.72**	**130**	*i* P	**P**	**00 05 04.8**	**-2.6**
SMLA				*i* S	**S**	**00 06 30.0**	**-3.6**
TKM2	**Tokmak 2**	**7.80**	**30**	P	**P**	**00 05 08.9**	**+0.4**
	SNR=39						
KLP	**Kalpa**	**8.16**	**123**	*e*P	**P**	**00 05 15.6**	**+2.4**
KLP				*e*x	x	00 06 51.0	
KLP				AML	AML	00 06 59.4	
	comp=N,72nm,0.6s						
KLP				AML	AML	00 06 59.9	
	comp=E,88nm,0.2s						
JASL	**Jaisalmer**	**9.35**	**176**	*e*x	**S**	**00 07 08.0**	**-4.3**
KHET	**Khetri**	**9.44**	**149**	*e*P	**P**	**00 05 30.2**	**+0.1**
KHET				*e*S	**S**	**00 07 05.2**	**-9.3**
KHET				AML	AML	00 07 12.6	
	comp=E,37nm,0.3s						
KHET				AML	AML	00 07 13.3	
	comp=N,49nm,0.3s						
NDI	**New Delhi**	**9.59**	**140**	*e*P	**P**	**00 05 32.5**	**+0.4**
NDI				*e*S	**S**	**00 07 11.5**	**-6.5**
JOSI	**Joshimath**	**9.64**	**124**	AML	AML	00 07 08.2	
	comp=N,88nm,0.3s						
JOSI				AML	AML	00 07 09.1	
	comp=E,85nm,0.6s						
AYAN	**Aya Nagar**	**9.71**	**141**	*e*x	x	00 06 10.0	
AYAN				*e*S	**S**	**00 07 15.3**	**-5.5**
SONA	**Sohna**	**9.88**	**142**	*e*x	x	00 06 19.9	
SONA				*e*S	**S**	**00 07 19.0**	**-5.8**
SONA				AML	AML	00 07 25.2	
	comp=N,16nm,0.1s						
SONA				AML	AML	00 07 25.4	
	comp=E,44nm,0.2s						
MK31	**Makanchi Array**	**13.82**	**37**	⇑P	**P**	**00 06 27.2**	**+0.4**
	comp=E,1.8nm,0.5s,baz=227,slow=15,SNR=19						
MKAR	**Makanchi Array**	**13.82**	**37**	*e*P	**P**	**00 06 27.4**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**13.82**	**37**	P	**P**	**00 06 27.2**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=226,slow=15,SNR=16						
KOLN	**Koldanda**	**14.14**	**123**	*e*P	**P**	**00 06 31.4**	**+0.4**
	comp=Z,7.6nm,0.3s						
KOLN				*e*S	**S**	**00 09 01.5**	**-2.6**
GKN	**Gorkha**	**14.71**	**120**	*e*P	**P**	**00 06 37.0**	**-1.1**
	comp=Z,26nm,0.5s						
GKN				*e*S	**S**	**00 09 13.0**	**-4.1**
AB31	**Akbulak array**	**14.99**	**333**	⇑P	**P**	**00 06 39.0**	**-2.6**
	comp=Z,2.8nm,0.6s						
AB31				⇑S	**S**	**00 09 14.8**	**-8.7**
	comp=Z,1.9nm,0.4s,baz=155,slow=23,SNR=2.8						
AB31	**Akbulak array**	**14.99**	**333**	P	**P**	**00 06 39.1**	**-2.5**
AB31				S	**S**	**00 09 14.8**	**-8.7**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AB31				smax			
	comp=E,1.0nm,0.4s						
DMN	**Daman**	**15.27**	**120**	*e*P	**P**	**00 06 46.4**	**+1.1**
KKN	**Kakani**	**15.29**	**119**	*e*P	**P**	**00 06 45.3**	**-0.1**
	comp=E,24nm,0.5s						
KKN	**Kakani**	**15.29**	**119**	*e*P	**P**	**00 06 45.3**	**-0.1**
KKN				pmax	pmax		
	comp=Z,12nm,0.5s						
GUN	**Gumba**	**15.64**	**118**	*e*P	**P**	**00 06 50.9**	**+1.1**
	comp=Z,16nm,0.3s						
BVA0	**Borovoye Array**	**16.74**	**0**	⇑P	**P**	**00 07 02.3**	**-0.8**
	comp=Z,0.4nm,0.7s						
BVAR	**Borovoye Array**	**16.74**	**0**	P	**P**	**00 07 02.0**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=164,slow=9.8,SNR=15						
BVAR				S	**S**	**00 10 01.0**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=180,slow=22,SNR=3.8						
CHKZ	**Chkalovo**	**17.39**	**1**	⇑P	**P**	**00 07 10.2**	**-0.8**
	comp=Z,2.2nm,0.8s						
CHKZ	**Chkalovo**	**17.39**	**1**	*e*P	**P**	**00 07 09.8**	**-1.2**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CHKZ	**Chkalovo**	**17.39**	**1**	*e*P	**P**	**00 07 09.8**	**-1.2**
	comp=Z,2.7nm,0.6s						
ZAL	**Zalesovo**	**20.35**	**25**	P	**P**	**00 07 43.7**	**+1.5**
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ZAL	**Zalesovo**	**20.35**	**25**	P	**P**	**00 07 43.7**	**+1.5**
	comp=Z,4.0nm,0.3s,baz=255,slow=8.4,SNR=26						
ZAL	**Zalesovo**	**20.35**	**25**	P	**P**	**00 07 43.7**	**+1.5**
GNI	**Garni**	**20.39**	**289**	P	**P**	**00 07 44.5**	**+1.7**
GNI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GNI	**Garni**	**20.39**	**289**	P	**P**	**00 07 44.5**	**+1.7**
	comp=Z,3.8nm,0.5s,baz=344,slow=1.7,SNR=5.6						
NVS	**Novosibirsk**	**20.60**	**22**	*e*P	**P**	**00 07 47.5**	**+2.7**
ARU	**Arti**	**21.65**	**342**	⇑*i*P	**P**	**00 07 57.0**	**+1.9**
ARU				*e*S	**S**	**00 11 51.0**	**+11**
ARU				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.3						
ARU	**Arti**	**21.65**	**342**	*e*P	**P**	**00 07 56.3**	**+1.2**
	comp=Z,10nm,0.9s,mb4.2						
MLR	**Muntele Rosu**	**34.36**	**299**	P	**P**	**00 09 51.5**	**+1.2**
MLR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MLR	**Muntele Rosu**	**34.36**	**299**	P	**P**	**00 09 51.5**	**+1.2**
	comp=Z,0.8nm,0.4s,mb3.8,baz=111,slow=8.6,SNR=3.2						
FINES	**FINESS Array B**	**37.33**	**326**	P	**P**	**00 10 14.4**	**-0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**37.33**	**326**	P	**P**	**00 10 14.3**	**-0.8**
	comp=Z,0.7nm,0.6s,mb3.5,baz=127,slow=9.5,SNR=4.8						
ARCES	**ARCESS Array B**	**41.12**	**338**	P	**P**	**00 10 47.2**	**+0.9**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	**ARCESS Array B**	**41.12**	**338**	P	**P**	**00 10 47.2**	**+0.9**
	comp=Z,2.7nm,0.7s,mb4.0,baz=102,slow=8.1,SNR=12						
NB2	**NORSAR Subarra**	**44.19**	**323**	P	**P**	**00 11 10.4**	**-0.8**
	comp=Z,0.4nm,0.3s,mb3.5,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.19**	**323**	P	**P**	**00 11 10.6**	**-0.6**
	comp=Z,0.3nm,0.4s,mb3.3,baz=101,slow=8.6,SNR=3.0						
LUBP	**Lubang**	**49.92**	**103**	*e*P	**P**	**00 12 02.4**	**+5.9**

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*CSEM **10** 00:20:54.3±0.4, 36.33N×5.48W, h8^{km}, ML2.5/2, Error ellipse: s-maj=10.7km s-min=2.9km az=21.0*

*SFS **10** 00:20:54.0, 36.28N×5.48W*

MDD 10 00:20:57.1±0.6**, 36.60N×5.42W, mbLg1.3**/6**, Error ellipse: s-maj=5.6km s-min=3.1km az=38.0, PRXIMO, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
REAL	**Reales**	**0.20**	**124**	Pg	Pg	00 21 01.1	0.0
REAL				Lg		00 21 06.5	
REAL	**Reales**	**0.20**	**124**	*i* P	Pg	00 21 01.1	0.0
REAL				*e*S	Sg	00 21 06.5	+2.7
LIJA	**Lijar**	**0.31**	**2**	Pg	Pg	00 21 01.1	-2.1
LIJA				Lg		00 21 06.8	
LIJA	**Lijar**	**0.31**	**2**	*i* P	Pg	00 21 01.1	-2.1
ESPR	**Espera**	**0.45**	**307**	Pg	Pg	00 21 05.7	-0.2
	2.4nm,0.2s,SNR=7.9						
ESPR				Lg		00 21 14.2	
	6.2nm,0.2s,SNR=4.0						
ESPR	**Espera**	**0.45**	**307**	Pg	Pg	00 21 05.7	-0.2
	2.4nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**0.52**	**94**	Pg	Pg	00 21 05.5	-1.9
	1.8nm,0.1s,SNR=7.9						
EMIJ				Lg		00 21 13.6	
	11nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.15**	**61**	Pg	Pg	00 21 19.5	-0.5
	0.7nm,0.2s,SNR=7.9						
ELOJ				Lg		00 21 37.7	
	5.3nm,0.6s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.15**	**61**	Pg	Pg	00 21 20.0	0.0
	0.7nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.54**	**320**	Pn	Pn	00 21 23.7	-2.2
	0.2nm,0.3s,SNR=7.9						
EMIN				Sn	Sn	00 21 44.5	-2.3
	4.3nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.54**	**320**	Pn	Pn	00 21 22.7	-3.2
	0.2nm,0.3s,SNR=7.9						
EMIN				Sn	Sn	00 21 44.5	-2.4
	4.3nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.63**	**65**	Pg	Pg	00 21 28.7	-0.9
	0.8nm,0.2s,SNR=4.0						
ECOG				Lg		00 21 52.1	
	0.6nm,0.1s,SNR=4.0						
EADA	**Adamuz**	**1.70**	**23**	Pn	Pn	00 21 26.7	-1.5
	0.4nm,0.1s,SNR=7.9						
EADA				Sn	Sn	00 21 49.1	-1.8
	2.6nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**1.70**	**23**	Pn	Pn	00 21 26.7	-1.5
	0.4nm,0.1s,SNR=7.9						
EADA				Sn	Sn	00 21 51.2	+0.2
	2.6nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**1.90**	**300**	Pn	Pn	00 21 28.4	-2.6
	0.1nm,0.1s,SNR=4.0						
EGRO				Lg		00 21 56.1	
	0.8nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**1.90**	**300**	Pn	Pn	00 21 28.4	-2.6
	0.1nm,0.1s,SNR=4.0						
EQES	**Quesada**	**2.22**	**57**	Pg	Pg	00 21 37.9	-3.6
	0.1nm,0.2s,SNR=7.9						
EQES				Lg		00 22 09.8	
	0.6nm,0.2s,SNR=7.9						

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*IDC **10** 00:36:52.8±0.8, 4.58N×17.44E, mb3.9/9, mb1 4.0/9, mb1mx3.9/21, mbtmp4.0/9, Error ellipse: s-maj=23.3km s-min=19.0km az=79.0*

*NEIC **10** 00:36:53.9±0.5, 4.57N×17.57E, h10^{km}, mb3.9/1, Error ellipse: s-maj=14.7km s-min=10.5km az=54.0*

ISC 10 00:36:52.4±0.6**, 4.57N**±0.10×**17.5E**±0.1**, h10**^{km}**, n11,** σ**0^{s}91**/11**, mb3.8**/9**, Central African Republic**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	**Mbarara**	**14.20**	**111**	*e*Pn	**P**	**00 40 13.1**	**-2.9**
	21nm,1.0s						
KMBO	**Kilima Mbogo**	**20.54**	**106**	P	**P**	**00 41 35.6**	**+1.7**
	5.2nm,1.0s,baz=280,slow=8.8,SNR=9.4						
KMBO				Lg		00 47 34.5	
	5.5nm,0.9s,baz=260,slow=9.2,SNR=3.8						
DBIC	**Dimbokro**	**22.34**	**276**	P	**P**	**00 41 51.6**	**-0.5**
	1.7nm,0.4s,mb3.8,baz=100,slow=10.0,SNR=6.2						
LSZ	**Lusaka**	**22.39**	**152**	*e*P	**P**	**00 41 53.0**	**+0.4**
	4.0nm,0.9s,mb3.9						
MATP	**Matopo**	**27.09**	**157**	P	**P**	**00 42 37.0**	**-0.5**
	1.9nm,0.6s,mb3.8,baz=318,slow=12,SNR=7.3						
SUR	**Sutherland**	**36.88**	**175**	P	**P**	**00 44 03.2**	**0.0**
	9.2nm,1.1s,mb4.5,baz=11,slow=16,SNR=3.0						
BRTR	**Keskin Array B**	**37.92**	**20**	P	**P**	**00 44 12.0**	**+0.2**
	1.3nm,0.9s,mb3.7,baz=180,slow=8.6,SNR=6.4						
ESDC	**Sonseca Array**	**39.97**	**334**	P	**P**	**00 44 29.5**	**+0.7**
	0.6nm,0.7s,mb3.5,baz=145,slow=7.0,SNR=4.2						
GERES	**GERESS Array B**	**44.23**	**356**	P	**P**	**00 45 02.8**	**-0.8**
	0.2nm,0.5s,mb3.1,baz=180,slow=8.8,SNR=2.7						
BDFB	**Brasilia**	**67.85**	**251**	P	**P**	**00 47 54.1**	**+0.4**
	2.2nm,0.6s,mb4.4,baz=86,slow=7.7,SNR=4.5						
MKAR	**Makanchi Array**	**69.56**	**42**	P	**P**	**00 48 03.5**	**-0.2**
	0.3nm,0.4s,mb3.6,baz=255,slow=4.7,SNR=9.2						

WEL 10 00:44:58.2±0.4**, 45.10S×167.52E, h99**^{km}±3^{km}**, ML3.5**/6**, 2C, Error ellipse: s-maj=3.6km s-min=1.8km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.52**	**34**	PN	P	00 45 13.9	-0.3
MLZ	**Mavora Lakes**	**0.52**	**118**	⇑PN	P	00 45 13.6	-0.6
MLZ				SN	S	00 45 25.2	-1.0
WKZ	**Wanaka**	**1.10**	**76**	PN	P	00 45 19.9	-0.1
WKZ				SN	S	00 45 36.0	-0.3
EAZ	**Earnscleugh**	**1.27**	**97**	⇑PN	P	00 45 21.7	-0.4
EAZ				SN	S	00 45 38.5	-1.5
JCZ	**Jackson Bay**	**1.35**	**41**	PN	P	00 45 22.3	-0.8
JCZ				SN	S	00 45 40.4	-1.1
TUZ	**Tuapeka**	**1.71**	**121**	PN	P	00 45 26.8	-0.7
TUZ				SN	S	00 45 47.2	-2.0
LBZ	**Lake Benmore**	**2.03**	**70**	PN	P	00 45 29.8	-1.8
LBZ				SN	S	00 45 54.0	-2.4
FOZ	**Fox Glacier**	**2.19**	**46**	*e*PN	P	00 45 33.2	-0.6
ODZ	**Otahua Downs**	**2.21**	**90**	PN	P	00 45 32.6	-1.6
ODZ				SN	S	00 45 57.5	-3.4

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*IDC **10** 01:00:09.0±0.9, 4.60N×17.53E, mb4.1/8, mb1 4.1/8, mb1mx3.9/21, mbtmp4.1/8, Error ellipse: s-maj=26.5km s-min=21.0km az=154.0*

*NEIC **10** 01:00:10.8±0.8, 4.60N×17.64E, h10^{km}, mb4.3/2, Error ellipse: s-maj=18.5km s-min=15.5km az=222.0*

ISC 10 01:00:08.8±0.7**, 4.6N**±0.1×**17.6E**±0.1**, h10**^{km}**, n13,** σ**1^{s}16**/13**, mb4.0**/8**, Central African Republic**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	**Mbarara**	**14.11**	**111**	*e*Pn	**P**	**01 03 28.6**	**-2.6**
	23nm,1.0s						
KMBO	**Kilima Mbogo**	**20.45**	**106**	P	**P**	**01 04 49.8**	**+0.4**
	3.3nm,0.9s,baz=259,slow=10,SNR=6.3						
KMBO				Lg		01 10 49.8	
	4.0nm,0.8s,baz=210,slow=22,SNR=5.5						
LSZ	**Lusaka**	**22.38**	**152**	*e*P	**P**	**01 05 10.4**	**+1.6**
	5.4nm,0.9s,mb4.0						
DBIC	**Dimbokro**	**22.44**	**276**	P	**P**	**01 05 07.8**	**-1.7**
	6.0nm,0.9s,mb4.0,baz=75,slow=12,SNR=5.0						
DBIC	**Dimbokro**	**22.44**	**276**	*e*P	**P**	**01 05 05.4**	**-4.2**
	33nm,1.6s,mb4.5						
MATP	**Matopo**	**27.09**	**157**	P	**P**	**01 05 53.7**	**-0.2**
	3.4nm,1.0s,mb3.8,baz=334,slow=9.8,SNR=8.0						
MATP	**Matopo**	**27.09**	**157**	P	**P**	**01 05 53.7**	**-0.3**
BRTR	**Keskin Array B**	**37.84**	**20**	P	**P**	**01 07 29.0**	**+1.5**
	1.4nm,0.9s,mb3.7,baz=188,slow=8.7,SNR=7.6						
BDFB	**Brasilia**	**67.97**	**251**	P	**P**	**01 11 10.2**	**-0.6**
	2.8nm,0.8s,mb4.3,baz=71,slow=3.9,SNR=3.7						
MKAR	**Makanchi Array**	**69.46**	**42**	P	**P**	**01 11 19.2**	**-0.3**
	0.8nm,0.4s,mb4.0,baz=251,slow=5.0,SNR=8.0						
ZAL	**Zalesovo**	**72.97**	**35**	P	**P**	**01 11 39.7**	**-0.7**
	1.0nm,0.3s,mb4.2,baz=168,slow=13,SNR=3.1						
ZAL	**Zalesovo**	**72.97**	**35**	P	**P**	**01 11 39.7**	**-0.7**
SIV	**San Ignacio**	**80.42**	**253**	P	**P**	**01 12 23.9**	**+1.0**
	1.5nm,0.7s,mb4.0,baz=79,slow=8.1,SNR=12						

MAN 10 01:05:59.5, 9.16N×124.22E, h39^{km}**, mb3.7, ML2.5, MS2.0, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.16**	**33**	*e*P	P	01 06 33.8	+14
SCPH	**Surigao**	**1.40**	**63**	⇑*i*P	P	01 06 23.3	+0.4
SCPH				*e*S	S	01 06 34.3	-6.0
BUKP	**Musuan**	**1.52**	**147**	*e*P	P	01 06 49.7	+25
PAGZ	**Pagadian**	**1.54**	**213**	*e*P	P	01 06 24.6	-0.4
IPIL	**Ipil**	**2.13**	**230**	*e*P	P	01 06 34.0	+0.8
BESP	**Borongan**	**2.71**	**26**	*e*P	P	01 06 41.4	-0.2

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*LDG **10** 01:07:41.5±0.3, 4.63N×17.50E, h10^{km}, Mb4.5/15, Ms3.0/6, Error ellipse: s-maj=13.8km s-min=8.5km az=118.0*

*IDC **10** 01:07:41.8±0.5, 4.63N×17.58E, mb4.3/23, mb1 4.4/23, mb1mx4.4/26, mbtmp4.3/23, MS3.3/4, Ms1 3.3/4, ms1mx3.0/19, Error ellipse: s-maj=19.3km s-min=11.3km az=98.0*

*NEIC **10** 01:07:43.2±0.2, 4.65N×17.63E, h10^{km}, mb4.5/19, Error ellipse: s-maj=8.5km s-min=4.5km az=79.0*

ISC 10 01:07:41.5±0.3**, 4.67N**±0.05×**17.68E**±0.08**, h10**^{km}**, (h7**^{km}±.4^{km}**:pP-P), n79,** σ**0^{s}88**/78**, mb4.3**/41**, MS3.2**/4**, 4C, Central African Republic**

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

MBAR	**Mbarara**	14.06	112	*e*Pn	P	01 11 01.8	-1.3
	70nm,0.8s						
MBAR				*e*Sn	S	01 13 35.2	-5.0
KMBO	**Kilima Mbogo**	20.39	106	P	P	01 12 25.8	+4.4
	10nm,0.8s,baz=271,slow=13,SNR=11						
KMBO				Lg		01 18 23.4	
	14nm,0.9s,baz=228,slow=24,SNR=4.0						
KMBO				LR	LR	01 20 33.1	
	comp=Z,85nm,19.2s,MS3.1,baz=277,slow=38						
LSZ	**Lusaka**	22.39	152	*e*P	P	01 12 41.3	-0.3
	16nm,0.8s,mb4.5						
DBIC	**Dimbokro**	22.51	276	P	P	01 12 39.0	-4.1
	16nm,0.5s,mb4.7,baz=81,slow=11,SNR=15						
DBIC				Lg		01 19 26.4	
	10nm,0.9s,baz=158,slow=18,SNR=3.3						
DBIC				LR	LR	01 21 30.7	
	comp=Z,65nm,21.6s,MS3.0,baz=359,slow=37						
DBIC	**Dimbokro**	22.51	276	*e*P	P	01 12 38.2	-4.8
	39nm,0.9s,mb4.8						
TSUM	**Tsumeb**	23.72	180	P	P	01 12 55.7	+1.0
	3.9nm,0.7s,mb4.0,baz=344,slow=12,SNR=9.5						
TSUM				Lg		01 20 03.5	
	4.5nm,0.8s,baz=274,slow=23,SNR=3.0						
TSUM				LR	LR	01 22 34.0	
	comp=Z,112nm,21.6s,MS3.3,baz=151,slow=38						
MATP	**Matopo**	27.11	157	P	P	01 13 26.6	-0.1
	4.3nm,0.5s,mb4.2,baz=331,slow=7.5,SNR=15						
MATP				Lg		01 21 57.2	
	8.5nm,1.2s,baz=65,slow=23,SNR=2.0						
EIL	**Elat**	29.75	31	P	P	01 13 51.9	+1.4
	4.3nm,0.9s,mb4.2,baz=324,slow=6.8,SNR=3.9						
LBTB	**Lobatse**	30.49	166	P	P	01 13 56.4	-0.7
	1.4nm,0.3s,mb4.1,baz=241,slow=17,SNR=14						
LBTB	**Lobatse**	30.49	166	*e*P	P	01 13 56.3	-0.8
	3.8nm,0.7s,mb4.2						
ASF	**Jabal al Asfar**	32.75	31	P	P	01 14 17.0	+0.2
	4.5nm,0.8s,mb4.4,baz=33,slow=3.4,SNR=6.5						
BOSA	**Boshof**	33.89	168	P	P	01 14 25.7	-1.0
	1.7nm,0.4s,mb4.3,baz=25,slow=14,SNR=10						
BOSA				LR	LR	01 27 58.3	
	comp=Z,50nm,18.2s,MS3.3,baz=292,slow=36						
BOSA	**Boshof**	33.89	168	*e*P	P	01 14 27.5	+0.8
	3.0nm,0.5s,mb4.5						
SUR	**Sutherland**	36.97	176	P	P	01 14 53.3	+0.4
	7.9nm,0.8s,mb4.6,baz=28,slow=11,SNR=8.2						
SUR	**Sutherland**	36.97	176	*e*P	P	01 14 52.7	-0.2
	12nm,0.8s,mb4.8						
BRTR	**Keskin Array B**	37.76	20	P	P	01 15 01.6	+2.2
	3.4nm,0.8s,mb4.1,baz=197,slow=9.0,SNR=15						
BR131	**Keskin Array S**	37.76	20	*e*P	P	01 15 01.3	+1.8
	3.1nm,0.8s,mb4.1						
PGF	**Pioggiola**	38.50	350	*e*P	P	01 15 05.6	-0.1
	22nm,1.0s,mb4.6						
LMR	**La Mourre**	39.75	347	*e*P	P	01 15 15.8	-0.3
	26nm,1.2s,mb4.5						
FRF	**La Foret Royal**	39.94	347	*e*P	P	01 15 17.6	0.0
	22nm,0.9s,mb4.6						
ESDC	**Sonseca Array**	39.96	334	P	P	01 15 18.5	+0.6
	1.0nm,0.5s,mb3.8,baz=145,slow=7.5,SNR=12						
ESLA	**Sonseca Array**	39.96	334	*e*P	P	01 15 18.4	+0.6
	0.4nm,0.7s,mb3.3						
SBF	**Sospel**	40.06	348	*e*P	P	01 15 18.5	-0.2
	8.7nm,0.7s,mb4.3						
SMRF	**Simiane la Rot**	40.57	347	*e*P	P	01 15 22.8	0.0
MTLF	**Montolieu**	40.87	343	*e*P	P	01 15 25.8	+0.5
MBDF	**Montbardon**	41.03	348	*e*P	P	01 15 26.7	+0.2
	7.0nm,0.8s,mb4.0						
LASF	**Ste Croix**	41.09	345	*e*P	P	01 15 27.4	+0.3
	23nm,1.0s,mb4.5						
EPF	**Esparros**	41.18	341	*e*P	P	01 15 28.4	+0.6
	20nm,1.1s,mb4.4						
ETSF	**Etsaut**	41.37	340	⇑*i*P	P	01 15 30.0	+0.7
	17nm,0.7s,mb4.5						
ORIF	**Oris-en-Rattie**	41.40	347	*e*P	P	01 15 29.8	+0.2
ORIF				*e*R			
	40nm,20.1s						
VIVF	**Saint-Julien-l**	41.62	346	*e*P	P	01 15 31.6	+0.2
LPG	**La Plagne**	41.77	348	*e*P	P	01 15 32.8	+0.1
SJPF	**Ste Jean**	41.79	339	*e*P	P	01 15 33.6	+0.8
	25nm,0.8s,mb4.6						
LPL	**La Plagne**	41.79	348	*e*P	P	01 15 32.8	0.0
CAF	**Calviac**	42.37	344	*e*P	P	01 15 37.7	+0.1
	13nm,0.9s,mb4.3						
LFF	**La Frestale**	42.77	342	*e*P	P	01 15 41.1	+0.3
	22nm,1.0s,mb4.6						
RJF	**Les Rejaudoux**	42.87	343	*e*P	P	01 15 41.6	-0.1
	16nm,0.9s,mb4.5						
RJF				*e*R			
	40nm,18.0s						
SMF	**Signal de Mont**	43.50	346	*e*P	P	01 15 46.4	-0.4
BGF	**Bois d'Agland**	43.66	345	*e*P	P	01 15 48.0	-0.1
AVF	**Avril sur Loir**	43.75	346	*e*P	P	01 15 48.6	-0.2
GERES	**GERESS Array B**	44.15	356	P	P	01 15 53.1	+1.1
	0.7nm,0.6s,mb3.6,baz=233,slow=6.7,SNR=5.4						
MFF	**Saint Martin d**	44.53	342	*e*P	P	01 15 54.8	-0.4
	18nm,1.0s,mb4.6						
GRR	**Gorron**	46.35	343	*e*P	P	01 16 09.0	-0.6
QUIF	**Quistinic**	46.65	341	*e*P	P	01 16 11.4	-0.5
SGMF	**Saint Gilles**	46.75	341	*e*P	P	01 16 11.9	-0.8
ROSF	**Rostrenen**	47.05	341	*e*P	P	01 16 14.5	-0.6
NOA	**NORSAR Array B**	56.45	356	P	P	01 17 25.2	-0.4
	1.3nm,0.8s,mb4.0,baz=163,slow=7.0,SNR=4.0						
NOA	**NORSAR Array B**	56.45	356	P	P	01 17 25.2	-0.4
FINES	**FINESS Array B**	56.99	5	P	P	01 17 27.9	-1.6
	2.9nm,1.0s,mb4.3,baz=182,slow=6.7,SNR=12						
KAF	**Kangasniemi**	57.67	5	*e*p	P	01 17 32.4	-1.9
ARCES	**ARCESS Array B**	64.97	3	P	P	01 18 22.4	-1.1
	1.4nm,0.6s,mb4.2,baz=180,slow=6.1,SNR=6.1						
CHKZ	**Chkalovo**	65.01	32	*e*P	P	01 18 22.1	-1.8
	2.2nm,0.9s,mb4.2						
KEV	**Kevo**	65.28	4	*e*p	P	01 18 23.8	-1.6
BAO	**Brasilia Array**	68.04	251	P	P	01 18 42.0	-1.8
BDFB	**Brasilia**	68.06	251	P	P	01 18 43.3	-0.7
	11nm,0.7s,mb5.0,baz=68,slow=6.0,SNR=14						
MKAR	**Makanchi Array**	69.37	42	P	P	01 18 52.0	+0.5
	2.6nm,0.5s,mb4.4,baz=248,slow=5.1,SNR=22						
MKAR	**Makanchi Array**	69.37	42	P	P	01 18 52.0	+0.4
ZAL	**Zalesovo**	72.88	35	P	P	01 19 12.8	+0.2
	1.7nm,0.3s,mb4.4,baz=154,slow=5.4,SNR=6.4						
VNA1	**Neumayer--Stat**	77.14	189	*e*	P	01 19 31.2	-5.4
VNA1	**Neumayer--Stat**	77.14	189	*e*	P	01 19 40.3	+3.7
VNA1	**Neumayer--Stat**	77.14	189	⇑*i*P	P	01 19 29.3	-7.3
VNA1				*e*	pP	01 19 31.2	-8.6
VNA1				*e*		01 19 40.3	
VNA2	**Neumayer--Watz**	77.27	188	*e*	P	01 19 40.7	+3.4
VNA2	**Neumayer--Watz**	77.27	188	*e*	P	01 19 49.0	+12
VNA2	**Neumayer--Watz**	77.27	188	⇑*i*P	P	01 19 38.3	+1.0
VNA2				*e*	pP	01 19 40.7	+0.2
VNA2				*e*		01 19 49.0	
SNAA	**Sanae**	77.37	187		P	01 19 45.0	+7.1
SNAA	**Sanae**	77.37	187	P	P	01 19 37.4	-0.5
	1.3nm,0.7s,mb4.0						
VNA3	**Neumayer Olymp**	77.89	189	*e*	P	01 19 43.7	+3.0
VNA3	**Neumayer Olymp**	77.89	189	*e*	P	01 19 51.8	+11
VNA3	**Neumayer Olymp**	77.89	189	⇑*i*P	P	01 19 41.4	+0.7
VNA3				*e*	pP	01 19 43.7	-0.2
VNA3				*e*		01 19 51.8	
CMAR	**Chiang Mai Arr**	80.26	72	P	P	01 19 56.9	+2.2
	1.2nm,0.7s,mb4.0,baz=272,slow=6.9,SNR=4.8						
SIV	**San Ignacio**	80.51	253	P	P	01 19 56.8	+0.8
	8.5nm,0.8s,mb4.7,baz=105,slow=7.0,SNR=30						
SCHQ	**Schefferville**	83.04	325	P	P	01 20 07.8	-0.6
	1.1nm,0.6s,mb4.0,baz=35,slow=5.5,SNR=4.8						
SCHQ	**Schefferville**	83.04	325	P	P	01 20 07.8	-0.6
FRB	**Frobisher Bay**	84.17	334	P	P	01 20 14.3	+0.4
	2.9nm,0.8s,mb4.5,baz=79,slow=3.1,SNR=3.4						
SONM	**Songino Array**	85.71	42	P	P	01 20 23.2	+1.2
	0.8nm,0.8s,mb4.0,baz=256,slow=5.1,SNR=6.9						
LPAZ	**La Paz**	87.28	254	P	P	01 20 30.4	0.0
	3.7nm,0.9s,mb4.6,baz=79,slow=5.6,SNR=10.0						
CFAA	**Coronel Fontan**	88.95	238	P	P	01 20 39.5	+1.4
	0.3nm,0.5s,mb3.9,baz=46,slow=3.0,SNR=4.3						
WRA	**Warramunga Arr**	116.62	110	PKP	PKPdf	01 26 28.3	-1.5
	0.5nm,0.5s,baz=274,slow=1.4,SNR=6.6						
NVAR	**Mina Array Bea**	120.86	321	PKP	PKPdf	01 26 37.8	+0.2
	0.3nm,0.5s,baz=117,slow=3.3,SNR=4.4						

BGR ***10*** *01:14:31.6±0.2, 49.38N×6.88E, h1^{km}, ML2.1/3, Error ellipse: s-maj=2.2km s-min=2.2km az=79.0*

NEIC ***10*** *01:14:31.3, 49.39N×6.85E, h1^{km}, ML2.9(LDG), ML2.5(STR), After STR.*

CSEM ***10*** *01:14:31.9±0.0, 49.38N×6.93E, h2^{km}, ML2.9/16, Error ellipse: s-maj=0.9km s-min=0.8km az=121.0*

STR ***10*** *01:14:31.3±0.2, 49.39N×6.85E, h1^{km}±1^{km}, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

LDG ***10*** *01:14:32.0±0.1, 49.39N×6.92E, h1^{km}, Md3.1/1, Ml2.9/16, Error ellipse: s-maj=1.7km s-min=1.5km az=172.0, Suspected Mining induced.*

BNS ***10*** *01:14:33.5±1.0, 49.45N×6.91E, h1^{km}±19^{km}, ML2.0*

PRU ***10*** *01:14:41.0, 49.23N×7.59E*

ISC 10 01:14:29.8±0.2**, 49.35N**±0.01×**6.84E**±0.02**, n73,** σ**1^{s}19**/143**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	0.38	23	*e*Pg	Pg	01 14 38.4	+1.0
	SNR=16						
WLF	**Walferdange**	0.54	305	*e*Pg	Pg	01 14 42.8	+2.2
	SNR=16						
WLF				*e*Sg	Sg	01 14 49.1	+1.2
	SNR=3.8						
WLF	**Walferdange**	0.54	305	*e*Pg	Pg	01 14 42.6	+2.0
WLF				*e*Sg	Sg	01 14 50.2	+2.3
WLF	**Walferdange**	0.54	305	P	Pg	01 14 42.9	+2.2
WLF				*e*Sg	Sg	01 14 50.2	+2.3
ABH	**Alteburg**	0.70	41	*e*Pg	Pg	01 14 43.8	0.0
	SNR=4.9						
ABH	**Alteburg**	0.70	41	Pg	Pg	01 14 43.5	-0.3
ABH				Sg	Sg	01 14 53.1	-0.1
ABH	**Alteburg**	0.70	41	Pg	Pg	01 14 43.8	0.0
	SNR=4.9						
ABH				Sg	Sg	01 14 53.1	-0.1
LANF	**Langenberg**	0.74	120	*e*Pg	Pg	01 14 44.9	+0.4
	SNR=9.4						
LANF	**Langenberg**	0.74	120	Pg	Pg	01 14 45.2	+0.7
KTD	**Kalmit**	0.82	92	*e*Pg	Pg	01 14 46.2	+0.1
	SNR=11						
KTD	**Kalmit**	0.82	92	Pg	Pg	01 14 47.2	+1.1
BGG	**Burgeitz**	0.91	21	*e*Pg	Pg	01 14 49.1	+1.0
BGG				*e*Sg	Sg	01 15 00.0	-0.2
	59nm,0.2s						
CDF	**Champ du Feu**	0.98	163	*e*Pg	Pg	01 14 49.8	+0.3
CDF				*e*Pn	Pn	01 14 51.0	+0.3
CDF				*e*Sg	Sg	01 15 03.8	+1.2
	34nm,0.3s						
CDF				*e*Sn	Sn	01 15 05.6	+0.1
WLS	**Welschbruch**	1.00	160	Pg	Pg	01 14 51.3	+1.5
WLS				Sg	Sg	01 15 05.5	+2.4
WLS	**Welschbruch**	1.00	160	*e*Pg	Pg	01 14 50.8	+1.0
	SNR=12						
WLS				*e*Sg	Sg	01 15 04.6	+1.5
	SNR=2.3						
RFYF	**Reffroy**	1.15	232	*e*Pg	Pg	01 14 54.4	+1.6
	baz=48						
RFYF				*e*Sg	Sg	01 15 10.6	+2.4
	50nm,0.3s						
ECH	**Echery**	1.16	169	Pg	Pg	01 14 54.1	+1.2
ECH				Sg	Sg	01 15 10.2	+1.9
ECH	**Echery**	1.16	169	*e*Pg	Pg	01 14 54.0	+1.1
	SNR=8.2						
ECH				*e*Sg	Sg	01 15 09.1	+0.8
	SNR=5.8						
ECH	**Echery**	1.16	169	Pg	Pg	01 14 54.1	+1.2
ECH				Sg	Sg	01 15 09.1	+0.8
	SNR=5.8						
STB	**Steinbach**	1.24	0	*e*Pg	Pg	01 14 55.2	+0.6
STB				*e*Sg	Sg	01 15 11.3	+0.1
	51nm,0.7s						
THEF	**They Montfort**	1.26	207	Pg	Pg	01 14 55.8	+0.9
THEF				Sg	Sg	01 15 13.5	+1.8
THEF	**They Montfort**	1.26	207	*e*Pg	Pg	01 14 55.7	+0.8
	SNR=19						
LIBD	**Limburg**	1.31	157	*e*Pg	Pg	01 14 56.8	+1.0
	SNR=2.2						
LIBD	**Limburg**	1.31	157	Pg	Pg	01 14 56.7	+0.8
TOD	**Tromm**	1.31	78	*e*Pg	Pg	01 14 54.7	-1.2
	SNR=13						
TOD				*e*Sg	Sg	01 15 12.7	-0.7
	SNR=3.8						
TOD	**Tromm**	1.31	78	Pg	Pg	01 14 55.0	-0.9
TOD				Sg	Sg	01 15 13.5	+0.2
TOD	**Tromm**	1.31	78	Pg	Pg	01 14 55.0	-0.9
TOD				Sg	Sg	01 15 12.7	-0.6
	SNR=3.8						
KLL	**Kalltalsperre**	1.34	346	*e*Pg	Pg	01 14 56.3	-0.2
KLL				*e*Sg	Sg	01 15 13.6	-0.8
	22nm,0.9s						
TNS	**Taunus Mts**	1.36	50	*e*Pg	Pg	01 14 56.7	-0.2
	SNR=10.0						
TNS				*e*Sg	Sg	01 15 14.0	-1.0
	SNR=4.1						
TNS	**Taunus Mts**	1.36	50	*e*Pg	Pg	01 14 56.4	-0.5
TNS				*e*Sg	Sg	01 15 15.3	+0.3
TNS	**Taunus Mts**	1.36	50	*e*Pg	Pg	01 14 56.4	-0.5
TNS				Sg	Sg	01 15 14.0	-1.0
	SNR=4.1						
MEM	**Membach**	1.37	337	P	Pb	01 14 57.2	+1.2
MEM				S	Sb	01 15 15.5	+1.6
HAU	**Haudompre**	1.39	194	*e*Pg	Pg	01 14 57.8	+0.3
HAU				*e*Sg	Sg	01 15 17.2	+1.2
	23nm,0.2s						
BFO	**Black Forest**	1.42	136	*e*Pg	Pg	01 14 58.3	+0.1
	SNR=10						
BFO				*e*Sg	Sg	01 15 17.0	-0.2
	SNR=7.4						
BFO	**Black Forest**	1.42	136	*e*Pg	Pg	01 14 58.3	+0.1
BFO				*e*Sg	Sg	01 15 16.9	-0.2
BFO	**Black Forest**	1.42	136	Pg	Pg	01 14 58.3	+0.1
	SNR=10						
BFO				*e*Sg	Sg	01 15 16.9	-0.2
MEZF	**Maizieres J'vi**	1.45	235	*e*Pn	Pn	01 14 58.9	+1.5
	baz=51						
MEZF				*e*Pg	Pg	01 15 01.5	+2.7
	baz=52						
MEZF				*e*Sn	Sn	01 15 18.1	+0.7
	26nm,0.4s						
MEZF	**Maizieres J'vi**	1.45	235	*e*Pg	Pg	01 15 01.5	+2.7
MEZF				*e*Sn	Sn	01 15 18.1	+0.7
	13nm,0.4s						
GIVF	**Givet**	1.51	301	*e*Pn	Pn	01 14 59.1	+1.0
GIVF				*e*Pg	Pg	01 15 01.0	+1.1
GIVF				*e*Sn	Sn	01 15 18.0	-0.8
GIVF				*e*Sg	Sg	01 15 20.5	+0.5
	32nm,0.4s						
MOF	**Molkenrain**	1.52	172	Pg	Pg	01 15 00.5	+0.5
MOF				Sg	Sg	01 15 21.8	+1.6
MOF	**Molkenrain**	1.52	172	*e*Pg	Pg	01 15 00.8	+0.7
	SNR=7.0						
MOF				*e*Sg	Sg	01 15 20.7	+0.5
	SNR=6.8						
HGN	**Heimansgroeve**	1.53	338	*e*Pg	Pg	01 14 58.8	-1.5
	7.7nm,0.4s,baz=160						
HGN				*e*Sg	Sg	01 15 19.7	-0.9
HGN	**Heimansgroeve**	1.53	338	*e*Pn	Pn	01 14 58.8	+0.4
	SNR=3.5						
HGN				*e*Pg	Pg	01 15 00.1	-0.2
	SNR=7.2						
HGN				*e*Sg	Sg	01 15 19.5	-1.2
	SNR=3.7						
HGN	**Heimansgroeve**	1.53	338	Pg	Pg	01 15 00.1	-0.2
	SNR=7.2						
HGN				Sg	Sg	01 15 19.5	-1.2
	SNR=3.7						
HINF	**Hinteralfeld**	1.54	180	*e*Pn	Pn	01 14 57.5	-1.1
HINF				*e*Pg	Pg	01 15 00.7	+0.2
HINF				*e*Sn	Sn	01 15 19.0	-0.5
HINF				*e*Sg	Sg	01 15 21.5	+0.5
	63nm,0.3s						
DOU	**Dourbes**	1.63	298	P	Pn	01 15 02.9	+2.9
DOU				S	Sb	01 15 21.9	+0.3
SFTF	**Sexfontaines**	1.65	227	*e*Pn	Pn	01 15 01.0	+0.8
	baz=41						
SFTF				*e*Sg	Sg	01 15 25.5	+0.7
	18nm,0.3s						
FELD	**Feldberg**	1.67	152	Pg	Pg	01 15 02.9	-0.2
FELD				Sg	Sg	01 15 26.5	+1.2
FELD	**Feldberg**	1.67	152	*e*Pg	Pg	01 15 03.3	+0.2
	SNR=4.6						
FELD				*e*Sg	Sg	01 15 24.8	-0.5
	SNR=6.9						
FELD	**Feldberg**	1.67	152	Pg	Pg	01 15 03.3	+0.2
	SNR=4.6						
FELD				Sg	Sg	01 15 26.5	+1.2
SPAK	**Spaichingen**	1.80	133	*e*Pg	Pg	01 15 05.4	-0.3
	SNR=2.6						
SPAK	**Spaichingen**	1.80	133	Pg	Pg	01 15 05.7	0.0
BAIF	**Baives**	1.85	293	*e*Pn	Pn	01 15 03.6	+0.6
BAIF				*e*Pg	Pg	01 15 06.8	+0.1
BAIF				*e*Sn	Sn	01 15 26.8	-0.6
	14nm,0.4s						
LOMF	**Lomont**	2.00	180	*e*Sg	Sg	01 15 36.0	-0.5
	SNR=4.0						
CABF	**La Chapelle**	2.79	191	*e*Pn	Pn	01 15 16.9	+0.4
CABF				*e*Pg	Pg	01 15 25.5	0.0
CABF				*e*Sg	Sg	01 16 01.2	-1.5
	14nm,0.6s						
GRF	**Grafenberg Arr**	2.88	82	*e*Sg	Sg	01 16 03.5	-2.1
LOR	**Lormes**	2.88	225	*e*Pn	Pn	01 15 17.1	-0.7
	baz=48						
LOR				*e*Sn	Sn	01 15 52.1	-1.6
	17nm,0.4s						
SSF	**Saint Saulge**	3.20	225	*e*Pn	Pn	01 15 21.4	-0.9
SSF				*e*Sn	Sn	01 16 00.0	-1.7
SSF				*e*Sg	Sg	01 16 14.1	-2.1
	4.7nm,0.5s						
MOX	**Moxa**	3.34	65	*e*Pg	Pg	01 15 32.2	-4.3
	SNR=2.8						
MOX				*e*Sg	Sg	01 16 16.1	-5.0
MOX	**Moxa**	3.34	65	*e*Pg	Pg	01 15 31.9	-4.6
MOX				*e*Sg	Sg	01 16 16.1	-5.0
SMF	**Signal de Mont**	3.37	218	*e*Pn	Pn	01 15 24.3	-0.5
SMF				*e*Pg	Pg	01 15 36.6	-0.6
SMF				*e*Sn	Sn	01 16 03.6	-2.6
SMF				*e*Sg	Sg	01 16 19.3	-2.8
	8.6nm,0.4s						
AVF	**Avril sur Loir**	3.47	224	*e*Pn	Pn	01 15 24.5	-1.6
AVF				*e*Sn	Sn	01 16 06.3	-2.2
AVF				*e*Sg	Sg	01 16 23.2	-2.1
	7.2nm,0.5s						
HYF	**Humbligny**	3.49	235	*e*Pn	Pn	01 15 26.8	+0.3
HYF				*e*Pg	Pg	01 15 38.4	-1.1
HYF				*e*Sg	Sg	01 16 23.8	-2.3
NKC	**Novy Kostel**	3.74	74	*e*PN	Pg	01 15 40.0	-4.5
NKC				*e*SN	Sg	01 16 28.7	-5.6
TANN	**Tannenbergstha**	3.79	72	*e*Pg	Pg	01 15 42.3	-3.2
	SNR=2.7						
BGF	**Bois d'Agland**	3.87	225	*e*Pn	Pn	01 15 30.9	-1.0
BGF				*e*Sn	Sn	01 16 15.8	-3.0
BGF				*e*Sg	Sg	01 16 35.4	-3.4
	29nm,0.5s						
CLL	**Collm**	4.41	61	*e*SG	Sg	01 16 55.0	-1.5
KHC	**Kasperske Hory**	4.42	90	*e*PN	Pn	01 15 38.7	-1.0
KHC				*e*x	x	01 16 27.8	
KHC				*e*x	x	01 16 52.4	
GEC2	**GERESS Array S**	4.54	94	*e*Pn	Pn	01 15 40.7	-0.7
	SNR=13						
LDF	**La Druitiere**	4.65	263	*e*Pn	Pn	01 15 42.1	-0.8
BRG	**Berggiesshubel**	4.82	69	*e*Pg	Pg	01 15 59.2	-6.8
BRG				*e*Sg	Sg	01 17 03.5	-6.7
FLN	**La Foliniere**	4.85	266	*e*Pn	Pn	01 15 45.6	-0.1
	baz=87						
FLN				*e*Sn	Sn	01 16 40.4	-3.1
	3.2nm,0.4s						
GRR	**Gorron**	5.17	262	*e*Sn	Sn	01 16 45.4	-6.2
	2.0nm,0.3s						

MAN ***10*** *01:24:58.9, 14.35N×121.34E, h4^{km}, mb4.1, ML2.9, MS2.5*

ISC 10 01:24:60.0±0.7**, 14.37N**±0.03×**121.31E**±0.04**, h13^{km}**±7^{km}**, n18,** σ**1^{s}02**/24**, 1C-3D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARP	**Angono**	0.23	318	*e*P	Pg	01 25 05.0	0.0
LBPH	**Los Banos**	0.25	210	*i* P	Pg	01 25 04.5	-0.9
TGY	**Tagaytay City**	0.45	234	⇓*e*P	Pg	01 25 09.5	+0.3
TGY				*e*S	Sg	01 25 17.4	+2.0
NZB	**Bigte**	0.53	338	*e*P	Pb	01 25 10.5	-0.2
POLP	**Polilio Island**	0.71	60	*e*P	Pb	01 25 12.7	-1.0
POLP				*e*S	Sb	01 25 23.0	-0.1
PGP	**Puerto Galera**	0.93	202	⇓*e*P	Pb	01 25 16.2	-1.2
PGP				*e*S	Sb	01 25 28.8	-0.7
NBP	**Mount Natib**	0.94	293	*e*P	Pb	01 25 17.6	0.0
BOAC	**Boac**	1.04	150	*e*P	Pb	01 25 19.1	-0.4
BOAC				*e*S	Sb	01 25 34.3	+1.5
GQP	**Guinayangan**	1.20	112	⇑*e*P	Pb	01 25 20.4	-1.6
GQP				*e*S	Sb	01 25 37.6	+0.3
PCPH	**Palayan**	1.21	350	⇓*e*P	Pb	01 25 21.5	-0.7
PCPH				*e*S	Sb	01 25 38.7	+1.2
LUBP	**Lubang**	1.21	239	*e*P	Pb	01 25 21.8	-0.5
LUBP	**Lubang**	1.21	239	*e*P	Pb	01 25 21.3	-0.9
BALP	**Baler**	1.39	11	*e*P	Pn	01 25 24.4	-0.9
AUQP	**San Andres**	1.69	128	*e*P	Pn	01 25 31.9	+2.5
SJMP	**San Jose**	1.90	186	*e*P	Pn	01 25 32.7	+0.1
OTRP	**Odiongan**	2.11	161	*e*P	Pn	01 25 34.7	-0.9
CAUP	**Cauayan**	2.61	11	*e*P	Pn	01 25 44.0	+1.3
PVCP	**Virac**	2.87	105	*e*P	Pn	01 25 47.6	+1.2

NEIC ***10*** *01:29:10.5±1.0, 8.29N×93.54E, h30^{km}, mb4.2/1, Error ellipse: s-maj=23.9km s-min=21.5km az=67.0*

IDC ***10*** *01:29:18.2±7.0, 8.57N×93.90E, h92^{km}±60^{km}, mb3.5/9, mb1 3.6/10, mb1mx3.5/20, mbtmp3.8/10, ML4.2/1, Error ellipse: s-maj=53.0km s-min=22.0km az=52.0*

ISC 10 01:29:08.8±1.1**, 8.3N**±0.2×**93.6E**±0.2**, h30^{km}, n12,** σ**0^{s}87**/12**, mb3.8**/10**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	11.32	27	P	P	01 31 53.0	+1.3
	0.5nm,0.3s,baz=211,slow=15,SNR=2.9						
MKAR	**Makanchi Array**	39.52	348	P	P	01 36 38.2	-0.4
	0.6nm,0.5s,mb3.6,baz=178,slow=8.1,SNR=6.3						
SONM	**Songino Array**	40.83	13	P	P	01 36 48.4	-1.0
	0.4nm,0.9s,mb3.1,baz=207,slow=6.4,SNR=2.7						
ZAL	**Zalesovo**	46.02	353	P	P	01 37 30.4	-0.9
	2.8nm,0.4s,mb4.6,baz=315,slow=6.3,SNR=9.4						
ZAL	**Zalesovo**	46.02	353	P	P	01 37 30.4	-0.9
CHKZ	**Chkalovo**	48.86	342	*e*P	P	01 37 52.4	-1.2
	1.4nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	48.97	126	P	P	01 37 54.7	-0.2
	0.3nm,0.5s,mb3.5,baz=304,slow=8.8,SNR=9.9						
BRTR	**Keskin Array B**	61.72	311	P	P	01 39 27.1	+0.3
	0.5nm,0.9s,mb3.7,baz=117,slow=6.4,SNR=3.2						
FINES	**FINESS Array B**	72.05	332	P	P	01 40 31.6	-0.3
	0.6nm,0.5s,mb3.8,baz=90,slow=5.7,SNR=4.9						
ARCES	**ARCESS Array B**	74.64	340	P	P	01 40 47.0	+0.2
	1.5nm,0.9s,mb3.9,baz=90,slow=4.9,SNR=6.8						
GERES	**GERESS Array B**	77.12	318	P	P	01 41 02.7	+1.5
	1.0nm,0.9s,mb3.7,baz=79,slow=6.8,SNR=5.7						
HFS	**Hagfors**	77.78	330	P	P	01 41 05.4	+0.8
	0.7nm,0.4s,mb4.0,baz=90,slow=7.4,SNR=7.9						

NIED ***10*** *01:32:00, 23.70N×121.90E, h5^{km}, Mw5.0 Best double couple: M$_0$3.29×10^{16} NP1:ϕ_s51°, δ77°, λ98°. NP2:ϕ_s200°, δ15°, λ60°.*

JMA ***10*** *01:32:45.6±0.7, 23.67N×121.89E, M5.2*

BJI ***10*** *01:32:46.6, 24.05N×121.70E, h3^{km}, mB4.9, mb4.4, ML5.1, Ms5.1, Msz4.8*

TAP ***10*** *01:32:46.9, 24.02N×121.75E, h2^{km}, ML5.0*

TAP Felt IV J at Hualien, II J at Chiawan, II J at Shilin, II J at Nanau, II J at Nanshan, II J at Tachien, I J at Nioudou, II J at Ryuetan, I J at Taichung, I J, I J at Hsinchu, II J at Tsauling, I J at Gukeng, I J at Tsaushan, I J at Chiayi, I J at Dacheng, I J at Szhu.

NEIC ***10*** *01:32:46.9±1.4, 24.03N×121.82E, h9^{km}±8^{km}, mb4.8/21, ML5.1(TAP), Error ellipse: s-maj=7.8km s-min=7.4km az=62.0*

NEIC Recorded [4 TAP] in Hua-lien; [2 TAP] in I-lan, Nan-t'ou and T'ai-chung Counties.

MOS ***10*** *01:32:48.8±1.2, 24.04N×121.84E, h33^{km}, mb4.9/21, MS4.6/6, Error ellipse: s-maj=14.4km s-min=9.0km az=112.0*

IDC ***10*** *01:32:52.1±3.6, 23.99N×121.86E, h52^{km}±33^{km}, mb3.8/13, mb1 4.0/15, mb1mx4.0/22, mbtmp4.1/15, ML4.0/2, MS4.2/17, Ms1 4.2/17, ms1mx4.0/29, Error ellipse: s-maj=20.2km s-min=16.8km az=60.0*

ISC 10 01:32:45.5±0.2**, 23.96N**±0.01×**121.88E**±0.01**, h2^{km}, n191,** σ**1^{s}51**/230**, mb4.5**/44**, MS4.4**/25**, 19C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	0.25	273	⇑*i*P	Pg	01 32 51.2	+0.7
TWD	**Chiawan**	0.28	294	⇑*i*P	Pg	01 32 50.8	-0.4
TWD				S	Sg	01 32 53.9	-1.0
NACB	**Ninganchiao**	0.33	309	⇓*i*Pn	Pn	01 32 51.6	-5.3
ESF	**Shoufeng Towns**	0.35	255	*e*P	Pg	01 32 53.0	+0.5
ESF				S	Sg	01 32 58.1	+0.9

EHP	**Heping Village**	0.37	340	*e*P	**Pg**	**01 32 53.6**	**+0.8**
EHP				S	**Sg**	**01 32 59.1**	**+1.4**
TEGC	**Jichi Village**	0.40	231	*e*P	**Pg**	**01 32 55.9**	**+2.5**
TEGC				S	**Sg**	**01 33 03.4**	**+4.6**
ESL	**Shilin**	0.43	250	⇓*i*P	**Pg**	**01 32 54.5**	**+0.4**
ENA	**Nanau**	0.48	345	⇑*i*P	**Pg**	**01 32 55.9**	**+0.8**
ENA				S	**Sg**	**01 33 02.5**	**+1.0**
TWC	**Suao**	0.65	358	⇑*i*P	**Pg**	**01 32 59.6**	**+1.2**
NNS	**Nan Shan**	0.66	316	⇑*i*P	**Pg**	**01 32 58.4**	**-0.3**
NNS				S	**Sg**	**01 33 06.4**	**-1.2**
EHY	**Hungye**	0.68	228	*e*P	**Pg**	**01 32 59.5**	**+0.4**
EHY				S	**Sg**	**01 33 10.5**	**+2.3**
TWT	**Tachien**	0.70	294	⇑*i*P	**Pg**	**01 32 59.4**	**-0.1**
ENTT	**Nioudou**	0.73	337	⇑*i*P	**Pg**	**01 33 00.5**	**+0.4**
ENTT				S	**Sg**	**01 33 10.4**	**+0.5**
TWF1	**Yuli**	0.81	221	*e*P	**Pg**	**01 33 01.6**	**0.0**
ILA	**Ilan**	0.81	352	*e*P	**Pg**	**01 33 02.3**	**+0.7**
YHNB	**Yeheng**	0.84	327	⇓*i*Pn	**Pn**	**01 33 02.2**	**-1.9**
NSK	**Sanguang**	0.85	326	⇑*i*P	**Pg**	**01 33 02.5**	**0.0**
NSK				S	**Sg**	**01 33 13.7**	**-0.3**
SMLT	**Sun Moon Lake**	0.90	265	⇓*i*P	**Pg**	**01 33 03.2**	**-0.2**
SMLT				S	**Sg**	**01 33 14.4**	**-1.0**
TYC	**Yuchr**	0.94	267	⇓*i*P	**Pb**	**01 33 03.6**	**-0.5**
TYC				S	**Sg**	**01 33 15.5**	**-1.1**
CHKT	**Chengkung**	0.98	209	*e*P	**Pb**	**01 33 05.0**	**+0.1**
CHKT				S	**Sg**	**01 33 21.6**	**+3.4**
NSTT	**Nanjuang**	1.04	310	⇑*i*P	**Pb**	**01 33 06.0**	**+0.1**
NSTT				S	**Sb**	**01 33 18.6**	**-1.3**
TWB1	**Santiao Chiao**	1.05	5	*e*P	**Pb**	**01 33 07.4**	**+1.4**
TWB1				S	**Sb**	**01 33 22.4**	**+2.4**
TWA	**Mucha**	1.05	345	⇑*i*P	**Pb**	**01 33 06.9**	**+0.8**
TWA				S	**Sb**	**01 33 20.4**	**+0.3**
TATO	**Taipei**	1.07	341	*e*Pn	**Pn**	**01 33 06.9**	**-0.5**
TWQ1	**Liyutan**	1.08	291	⇑P	**Pb**	**01 33 07.0**	**+0.4**
TWQ1				S	**Sb**	**01 33 22.4**	**+1.4**
ALS	**Alishan**	1.08	246	⇓*i*P	**Pb**	**01 33 06.8**	**+0.2**
WNT	**Mingjian**	1.10	266	⇓P	**Pb**	**01 33 07.6**	**+0.7**
WNT				S	**Sb**	**01 33 23.3**	**+1.8**
ELDTW	**Lidau**	1.10	226	*e*P	**Pb**	**01 33 06.4**	**-0.6**
NWF	**Wu-fen Shan**	1.11	355	⇑*i*P	**Pb**	**01 33 08.4**	**+1.3**
NWF				S	**Sb**	**01 33 22.8**	**+0.9**
TCU	**Taichung**	1.11	280	⇓*i*P	**Pb**	**01 33 08.1**	**+0.9**
TCU				S	**Sb**	**01 33 23.7**	**+1.7**
NSY	**Sanyi**	1.12	294	⇑*i*P	**Pb**	**01 33 08.1**	**+0.8**
NSY				S	**Sb**	**01 33 22.2**	**+0.2**
TAP1	**Taipei**	1.12	343	⇑P	**Pb**	**01 33 08.3**	**+1.0**
TAP1				S	**Sb**	**01 33 22.6**	**+0.4**
TAP	**Taipei**	1.12	343	*e*P	**Pb**	**01 33 08.4**	**+1.1**
TAP				S	**Sb**	**01 33 22.6**	**+0.3**
YOJ	**Yonaguni jima**	1.15	64	P	**Pb**	**01 33 10.3**	**+2.5**
YOJ				S	**Sb**	**01 33 27.7**	**+4.7**
CHN5	**Tsauling**	1.16	252	⇓*i*P	**Pb**	**01 33 08.5**	**+0.6**
HSN	**Hsinchu**	1.18	315	*e*P	**Pb**	**01 33 09.7**	**+1.4**
HSN				S	**Sb**	**01 33 23.6**	**-0.2**
NCU	**National Centr**	1.19	328	*e*P	**Pb**	**01 33 09.1**	**+0.7**
NCU				S	**Sb**	**01 33 26.3**	**+2.2**
TWS1	**Kuangyinshan**	1.21	340	*e*P	**Pb**	**01 33 09.8**	**+1.0**
TWS1				S	**Sb**	**01 33 27.3**	**+2.6**
WGK	**Gukeng**	1.24	257	*e*P	**Pb**	**01 33 10.1**	**+0.9**
WGK				S	**Sb**	**01 33 28.0**	**+2.5**
CHN4	**Tsaushan**	1.33	243	⇓*i*P	**Pb**	**01 33 11.3**	**+0.5**
CHN4				S	**Sb**	**01 33 31.0**	**+2.8**
TWY	**Chenhua**	1.33	349	*e*P	**Pb**	**01 33 12.2**	**+1.2**
CHN2	**Minshiung**	1.35	252	*e*P	**Pb**	**01 33 12.7**	**+1.4**
CHN2				S	**Sb**	**01 33 32.0**	**+3.0**
TWG	**Pinlang**	1.36	213	*e*P	**Pb**	**01 33 09.8**	**-1.6**
WTP	**Ta-pu**	1.36	239	⇓*i*P	**Pb**	**01 33 11.8**	**+0.4**
TTN	**Taitung**	1.38	209	*e*P	**Pb**	**01 33 10.2**	**-1.4**
CHY	**Chiayi**	1.41	251	*e*P	**Pb**	**01 33 12.5**	**+0.2**
CHY				S	**Sb**	**01 33 32.6**	**+2.0**
TWK	**Hsinying**	1.45	242	*e*P	**Pn**	**01 33 13.1**	**+0.2**
TWK				S	**Sb**	**01 33 33.1**	**+1.3**
CHN1	**Nanshi**	1.46	238	*e*P	**Pn**	**01 33 12.9**	**-0.1**
CHN1				S	**Sb**	**01 33 34.5**	**+2.4**
WTCT	**Ta-ch’eng**	1.47	266	*e*P	**Pn**	**01 33 13.5**	**+0.4**
WTCT				S	**Sb**	**01 33 33.8**	**+1.5**
SGST	**Jiashian**	1.48	234	*e*P	**Pn**	**01 33 13.7**	**+0.4**
SGST				S	**Sb**	**01 33 35.0**	**+2.5**
WSF	**Szhu**	1.55	258	*e*P	**Pn**	**01 33 15.5**	**+1.2**
WSF				S	**Sb**	**01 33 37.2**	**+2.5**
ECL	**Taimali**	1.60	212	*e*P	**Pn**	**01 33 13.6**	**-1.4**
CHN3	**Shinhua**	1.65	238	*e*P	**Pn**	**01 33 15.9**	**+0.2**
CHN8	**Yiju**	1.65	248	*e*P	**Pn**	**01 33 15.5**	**-0.2**
CHN8				S	**Sb**	**01 33 40.2**	**+2.7**
SSD	**Sandimen**	1.67	224	*e*P	**Pn**	**01 33 16.0**	**+0.1**
PCYT	**Pengchaiyu**	1.67	6	*e*P	**Pn**	**01 33 15.9**	**-0.1**
IRIF	**Iriomote-Funau**	1.73	77	P	**Pn**	**01 33 19.1**	**+2.2**
IRIF				S	**Sn**	**01 33 42.4**	**+2.5**
HATJ	**Hateruma jima**	1.76	87	P	**Pn**	**01 33 17.1**	**-0.2**
HATJ				*e*S	**Sn**	**01 33 42.9**	**+2.2**
TAI1	**Yung-k’ang**	1.77	239	*e*P	**Pn**	**01 33 18.9**	**+1.4**
SGLT	**Jiouru**	1.77	226	*e*P	**Pn**	**01 33 18.0**	**+0.5**
TAW	**Tawu**	1.83	210	*e*P	**Pn**	**01 33 20.8**	**+2.4**
EAST	**Anshuo**	1.84	211	*e*P	**Pn**	**01 33 16.7**	**-1.6**
SCZT	**Fangliau**	1.96	216	*e*P	**Pn**	**01 33 22.1**	**+1.9**
JKRS	**Kuro-shima**	1.97	82	P	**Pn**	**01 33 22.6**	**+2.4**
JKRS				*e*S	**Sn**	**01 33 48.6**	**+2.8**
JIJ	**Ishigaki jima**	2.11	79	P	**Pn**	**01 33 23.4**	**+1.2**
JIJ				S	**Sn**	**01 33 51.2**	**+1.8**
TWP	**Hsiaoliuchiu**	2.13	221	*e*P	**Pn**	**01 33 25.8**	**+3.2**
PNG	**Penghu**	2.17	260	*e*P	**Pn**	**01 33 21.9**	**-1.2**
HEN	**Hengchun**	2.21	209	*e*P	**Pn**	**01 33 25.0**	**+1.2**
TSEB	**Hengchuen, Pin**	2.24	204	*e*P	**Pn**	**01 33 23.1**	**-1.1**
JTJ	**Tarama**	2.66	75	P	**Pn**	**01 33 33.3**	**+3.1**
JTJ				*e*S	**Sn**	**01 34 06.7**	**+3.1**
QZH	**Quanzhou**	3.15	289	⇓*i*P	**Pn**	**01 33 35.4**	**-1.8**
QZH				S	**Sn**	**01 34 10.5**	**-5.4**
QZH				Smax			
	comp=N,5µm,1.1s						
QZH				Smax			
	comp=E,4µm,1.0s						
QZH				LR	LR		
	comp=N,25µm,10.8s						
QZH				LR	LR		
	comp=E,35µm,6.8s						
QZH				LR	LR		
	comp=Z,47µm,9.1s						
KNM	**Kinmen**	3.18	279	*e*P	**Pn**	**01 33 37.3**	**-0.2**
JMJ	**Miyako jima 2**	3.23	74	*e*S	**Sn**	**01 34 20.4**	**+2.6**
JOGS	**Gusukube**	3.31	75	P	**Pn**	**01 33 41.0**	**+1.5**
JOGS				*e*S	**Sn**	**01 34 22.0**	**+2.0**
JKE	**Kume jima 2**	5.03	61	P	**Pn**	**01 34 03.8**	**-0.1**
JAGN	**Aguni-jima**	5.51	61	P	**Pn**	**01 34 18.9**	**+8.2**
CVP	**Callao Caves**	6.23	180	*e*P	**Pn**	**01 34 19.0**	**-1.7**
JOW	**Kunigami**	6.45	62	P	**Pn**	**01 34 23.4**	**-0.5**
	comp=Z,5.6nm,0.3s,baz=285,slow=14,SNR=4.4						
JOW	**Kunigami**	6.45	62	P	**Pn**	**01 34 22.6**	**-1.3**
SSE	**Sheshan**	7.13	355	P	**Pn**	**01 34 32.4**	**-1.1**
SSE				S	**Sn**	**01 35 54.2**	**-1.9**
SSE				Smax			
	comp=N,190nm,1.4s						
SSE				Smax			
	comp=E,260nm,1.3s						
SSE				LR	LR		
	comp=N,4µm,10.7s						
SSE				LR	LR		
	comp=E,2µm,10.7s						
SSE				LR	LR		
	comp=Z,5µm,9.6s						
JTK	**Tokunoshima**	7.42	58	P	**Pn**	**01 34 35.1**	**-2.4**
JAM	**Amami Oshima**	8.23	56	P	**P**	**01 34 46.0**	**-2.9**
NJ2	**Nanjing**	8.49	342	*e*P	**P**	**01 34 49.6**	**-2.8**
NJ2				AP		01 34 52.8	
NJ2				XP		01 34 55.6	
NJ2				S	**Sn**	**01 36 25.1**	**-4.9**
NJ2				AMB	AMB		
	comp=Z,30nm,0.9s						
NJ2				Smax			
	comp=N,1µm,0.9s						
NJ2				Smax			
	comp=E,600nm,1.0s						
NJ2				LR	LR		
	comp=N,8µm,10.8s						
NJ2				LR	LR		
	comp=E,6µm,9.1s						
NJ2				LR	LR		
	comp=Z,5µm,11.2s						
WHN	**Wuhan**	9.37	316	*e*P	**P**	**01 35 03.0**	**-1.6**
WHN				S	**Sn**	**01 36 42.0**	**-10**
WHN				LR	LR		
	comp=N,4µm,7.0s						
WHN				LR	LR		
	comp=E,15µm,9.0s						
WHN				LR	LR		
	comp=Z,19µm,8.4s						
JNU	**Nakatsue**	12.07	39	LR	LR	01 41 01.3	
	comp=Z,1µm,18.2s,baz=64,slow=41						
QIZ	**Qiongzhong**	12.23	249	P	**P**	**01 35 42.3**	**-1.5**
QIZ				*e*S	**S**	**01 37 58.6**	**-3.3**
QIZ				LR	LR		
	comp=N,3µm,13.1s						
QIZ				LR	LR		
	comp=Z,3µm,9.1s						
ENH	**Enshi**	12.70	302	*e*Pn	**P**	**01 35 46.8**	**-3.2**
	comp=Z,18nm,1.2s						
GYA	**Guiyang**	13.99	283	P	**P**	**01 36 05.6**	**-1.7**
GYA				AP		01 36 10.2	
GYA				XP		01 36 12.8	
GYA				S	**S**	**01 38 31.6**	**-13**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s						
GYA				AMB	AMB		
	comp=Z,250nm,5.2s						
GYA				LR	LR		
	comp=N,3µm,8.3s						
GYA				LR	LR		
	comp=E,8µm,9.0s						
GYA				LR	LR		
	comp=Z,8µm,9.0s						
KS15	**Wonju Array Si**	14.39	20	*e*P	**P**	**01 36 17.2**	**+4.9**
DL2	**Dalian**	14.90	359	*e*P	**P**	**01 36 23.4**	**+4.4**
DL2				S	**S**	**01 39 13.7**	**+7.9**
DL2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
DL2				AMB	AMB		
	comp=Z,130nm,6.8s						
DL2				LR	LR		
	comp=E,1µm,21.3s						
DL2				LR	LR		
	comp=Z,1µm,13.5s						
XAN	**Xi’an**	15.13	314	P	**P**	**01 36 18.1**	**-4.0**
XAN				AMB	AMB		
	comp=Z,240nm,9.4s						
XAN				LR	LR		
	comp=N,2µm,6.7s						
XAN				LR	LR		
	comp=E,4µm,9.3s						
XAN				LR	LR		
	comp=Z,5µm,8.8s						
TIY	**Taiyuan**	15.91	332	*e*P	**P**	**01 36 29.0**	**-3.2**
TIY				LR	LR		
	comp=N,6µm,10.0s						
TIY				LR	LR		
	comp=Z,5µm,8.0s						
CD2	**Chengdu**	17.50	297	P	**P**	**01 36 52.1**	**-0.3**
CD2				AP		01 36 55.7	
CD2				XP		01 37 00.2	
CD2				S	**S**	**01 40 00.4**	**-5.8**
CD2				XS		01 40 10.2	
CD2				SS	SS	01 40 23.1	-4.7
CD2				AMB	AMB		
	comp=Z,20nm,0.3s						
CD2				AMB	AMB		
	comp=Z,430nm,3.9s						
CD2				LR	LR		
	comp=E,6µm,7.0s						
CD2				LR	LR		
	comp=Z,6µm,8.0s						
SNY	**Shenyang**	17.87	4	⇓P	**P**	**01 36 59.8**	**+2.9**
SNY				AMB	AMB		
	comp=Z,10.0nm,0.4s						
SNY				AMB	AMB		
	comp=Z,350nm,7.6s						
SNY				LR	LR		
	comp=N,2µm,11.1s						
SNY				LR	LR		
	comp=Z,3µm,11.6s						
KKM	**Kota Kinabalu**	18.63	198	*e*P	**P**	**01 37 04.9**	**-1.6**
MJAR	**Matsushiro Arr**	18.84	45	P	**P**	**01 37 09.8**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=235,slow=9.3,SNR=5.9						
MJAR				LR	LR	01 45 17.0	
	comp=Z,497nm,20.1s,baz=255,slow=40						
HHC	**Hu-ho-hao-te**	18.93	335	*e*P	**P**	**01 37 10.1**	**+0.1**
HHC				AP		01 37 14.9	
HHC				XP		01 37 17.4	
HHC				PP	PP	01 37 25.9	-0.5
HHC				S	**S**	**01 40 35.7**	**-2.9**
HHC				SS	SS	01 41 03.6	+0.1
HHC				PCP	PcP	01 41 34.6	-1.8
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s						
HHC				AMB	AMB		
	comp=Z,650nm,10.8s						
HHC				LR	LR		
	comp=N,3µm,9.6s						
HHC				LR	LR		
	comp=E,1µm,10.6s						
HHC				LR	LR		
	comp=Z,2µm,10.8s						
BTO	**Baotou**	19.36	332	*e*P	**P**	**01 37 17.9**	**+2.9**
BTO				S	**S**	**01 40 54.3**	**+6.1**
BTO				LR	LR		
	comp=N,6µm,9.6s						
BTO				LR	LR		
	comp=E,2µm,9.3s						
LZH	**Lanzhou**	19.71	312	⇑P	**P**	**01 37 18.0**	**-1.1**
LZH				PP	PP	01 37 38.3	+1.0
LZH				AMB	AMB		
	comp=Z,1µm,4.8s						
LZH				LR	LR		
	comp=E,5µm,10.2s						
LZH				LR	LR		
	comp=Z,7µm,10.8s						
CN2	**Changchun**	20.01	8	*e*P	**P**	**01 37 18.4**	**-3.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
CN2				AMB	AMB		
	comp=Z,240nm,4.0s						
CN2				LR	LR		
	comp=N,2µm,12.0s,MS4.8						
CN2				LR	LR		
	comp=E,1µm,12.0s,MS4.8						
CN2				LR	LR		
	comp=Z,2µm,13.0s,MS4.7						
NANT	**Nan**	20.37	259	P	**P**	**01 37 31.0**	**+4.6**
	comp=Z,138nm,1.0s						
MDJ	**Mudanjiang**	21.55	15	P	**P**	**01 37 36.2**	**-2.0**
MDJ				AP		01 37 38.9	
MDJ				S	**S**	**01 41 36.0**	**+3.1**
MDJ				XS		01 41 41.1	
MDJ				SCS	ScS	01 48 59.9	-0.8
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,60nm,4.7s						
MDJ				LR	LR		
	comp=N,680nm,15.4s,MS4.6						
MDJ				LR	LR		
	comp=E,2µm,17.0s,MS4.6						
MDJ				LR	LR		
	comp=Z,1µm,13.5s,MS4.5						
CHG	**Chiang Mai**	21.95	261	⇑P	**P**	**01 37 54.9**	**+12**
	comp=Z,18nm,1.2s,mb4.4						
CMAR	**Chiang Mai Arr**	22.06	260	P	**P**	**01 37 43.7**	**+0.1**
	comp=Z,4.3nm,1.0s,mb3.9,baz=64,slow=9.2,SNR=6.2						
CMAR				LR	LR	01 46 33.1	
	comp=Z,276nm,19.1s,MS3.7,baz=85,slow=37						
GTA	**Gaotai**	24.19	315	*e*P	**P**	**01 38 03.2**	**-1.1**
GTA				AP		01 38 08.1	
GTA				XP		01 38 10.8	
GTA				PP	PP	01 38 40.5	+1.6
GTA				PPP	PPP	01 38 52.3	+3.2
GTA				S	**S**	**01 42 25.7**	**+5.4**
GTA				AMB	AMB		
	comp=Z,10.0nm,1.8s,mb3.9						
GTA				AMB	AMB		
	comp=Z,80nm,5.7s						
GTA				LR	LR		
	comp=N,1µm,7.6s						
GTA				LR	LR		
	comp=E,2µm,11.0s						
GTA				LR	LR		
	comp=Z,2µm,11.4s,MS4.8						
KSM	**Kuching**	25.01	208	*e*P	**P**	**01 38 11.0**	**-1.4**
ASAJ	**Asahikawa**	26.30	35	LR	LR	01 48 59.3	
	comp=Z,387nm,18.4s,MS4.0,baz=168,slow=37						
KLR	**Kul’dur**	26.39	15	*e*P	**P**	**01 38 18.7**	**-6.3**
KLR				MLR	MLR		
	comp=N,2µm,12.0s						
KLR				MLR	MLR		
	comp=Z,3µm,12.0s,MS5.0						
ULN	**Ulaanbaatar**	26.61	337	*e*P	**P**	**01 38 24.9**	**-2.2**
ULN				pmax	pmax		
	comp=Z,30nm,1.4s,mb4.6						
ULN	**Ulaanbaatar**	26.61	337	*e*P	**P**	**01 38 24.9**	**-2.2**
	comp=Z,30nm,1.4s,mb4.6						
SONM	**Songino Array**	26.82	337	P	**P**	**01 38 27.4**	**-1.6**
	comp=Z,4.0nm,0.9s,mb4.0,baz=156,slow=9.4,SNR=26						
SONM				LR	LR	01 50 14.3	
	comp=Z,1µm,18.1s,MS4.5,baz=146,slow=39						
SHL	**Shillong**	27.26	280	*e*P	**P**	**01 38 31.5**	**-1.7**
CIT	**Chita**	28.73	349	*e*P	**P**	**01 38 43.0**	**-3.3**
CIT				*e*		01 43 33.9	
CIT				pmax	pmax		
	comp=Z,29nm,2.3s,mb4.6						
ZAK	**Zakamensk**	30.08	336	*e*P	**P**	**01 38 52.3**	**-6.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
TLY	**Talaya**	31.02	338	*e*P	**P**	**01 39 03.8**	**-2.9**
TLY				*e*		01 40 00.2	
TLY				*e*SS	SS	01 46 19.1	+25
TLY				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
TLY				MLR	MLR		
	comp=Z,572nm,14.0s,MS4.4						
GUN	**Gumba**	32.54	285	*e*P	**P**	**01 39 19.8**	**-0.4**
	comp=Z,101nm,1.5s,mb5.5						
PKI	**Pulchoki**	32.97	284	*e*P	**P**	**01 39 24.5**	**+0.6**
	comp=Z,60nm,1.4s,mb5.3						
PKI	**Pulchoki**	32.97	284	*e*P	**P**	**01 39 24.5**	**+0.6**
PKI				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0						
KKN	**Kakani**	33.07	285	*e*P	**P**	**01 39 24.3**	**-0.6**
	comp=Z,60nm,1.2s,mb5.4						
KKN	**Kakani**	33.07	285	*e*P	**P**	**01 39 24.3**	**-0.6**
KKN				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.1						
GKN	**Gorkha**	33.63	285	*e*P	**P**	**01 39 27.8**	**-2.0**
	comp=Z,34nm,1.0s,mb5.2						
WMQ	**Urumqi**	34.27	314	*e*P	**P**	**01 39 33.0**	**-2.1**
WMQ				AP	pP	01 39 37.4	+1.9
WMQ				XP	sP	01 39 40.0	+4.3
WMQ				PP	PP	01 40 47.3	-2.5
WMQ				PPP	PPP	01 41 05.7	-2.1
WMQ				PCP	PcP	01 42 10.0	-1.7
WMQ				*e*S	**S**	**01 44 57.6**	**-4.3**
WMQ				SS	SS	01 47 05.4	-5.0
WMQ				SCS	ScS	01 49 54.3	-3.3
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,100nm,5.2s						
WMQ				LR	LR		
	comp=N,480nm,13.2s,MS4.6						
WMQ				LR	LR		
	comp=E,520nm,12.4s,MS4.6						
WMQ				LR	LR		
	comp=Z,630nm,12.0s,MS4.6						
KOLN	**Koldanda**	34.56	285	*e*P	**P**	**01 39 36.1**	**-1.7**
	comp=Z,25nm,0.9s,mb5.2						
MKAR	**Makanchi Array**	38.94	316	P	**P**	**01 40 12.7**	**-1.9**
	comp=Z,1.2nm,0.5s,mb3.9,baz=100,slow=11,SNR=18						
MKAR				LR	LR	01 57 28.2	
	comp=Z,440nm,18.6s,MS4.3,baz=128,slow=38						
NDI	**New Delhi**	40.13	287	*e*x	x	01 40 26.0	
ZAL	**Zalesovo**	40.78	327	P	**P**	**01 40 26.9**	**-2.7**
	comp=Z,2.4nm,0.7s,mb4.0,baz=356,slow=6.6,SNR=14						
ZAL				LR	LR	01 59 12.5	
	comp=Z,354nm,21.0s,MS4.2,baz=344,slow=39						
ZAL	**Zalesovo**	40.78	327	P	**P**	**01 40 26.9**	**-2.7**
ZAL				LR	LR	01 59 12.5	
NVS	**Novosibirsk**	42.03	327	*e*P	**P**	**01 40 35.9**	**-4.0**
NVS				*e*		01 42 23.6	
NVS				pmax	pmax		
	comp=N,19nm,2.0s						
NVS				pmax	pmax		
	comp=E,20nm,2.0s						
NVS				pmax	pmax		
	comp=Z,25nm,2.0s,mb4.5						
FRU	**Bishkek**	43.09	308	*e*P	**P**	**01 41 01.0**	**+12**
WRAB	**Tennant Creek**	45.29	163	P	**P**	**01 41 06.6**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.8						
WRAB	**Tennant Creek**	45.29	163	P	**P**	**01 41 06.6**	**-0.2**
	comp=Z,20nm,1.2s,mb4.8						
WRA	**Warramunga Arr**	45.30	163	P	**P**	**01 41 04.3**	**-2.5**
	comp=Z,1.7nm,0.6s,mb4.1,baz=344,slow=8.7,SNR=9.3						
TIXI	**Tiksi**	47.88	3	*e*P	**P**	**01 41 20.6**	**-6.0**
TIXI				*e*S	**S**	**01 48 10.1**	**-14**
TIXI				pmax	pmax		
	comp=Z,29nm,1.6s,mb5.1						
TIXI				MLR	MLR		
	comp=Z,834nm,12.0s,MS4.9						
CHKZ	**Chkalovo**	48.30	322	*e*P	**P**	**01 41 26.9**	**-3.2**
CHKZ				pmax	pmax		
	comp=Z,61nm,0.9s,mb5.6						
CHKZ	**Chkalovo**	48.30	322	*e*P	**P**	**01 41 26.9**	**-3.2**
	comp=Z,60nm,0.9s,mb5.6						
CTA	**Charters Tower**	49.81	149	LR	LR	02 00 56.5	
	comp=Z,172nm,21.1s,MS4.0,baz=44,slow=34						
CTAO	**Charters Tower**	49.81	149	*e*P	**P**	**01 41 40.7**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
CTAO	**Charters Tower**	49.81	149	*e*P	**P**	**01 41 40.7**	**-1.5**
	comp=Z,4.1nm,0.7s,mb4.6						
BILL	**Bilibino**	51.68	20	*e*P	**P**	**01 41 58.5**	**+2.8**
BILL				*e*		01 42 10.1	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
BILL				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.5						
SVE	**Sverdlovsk**	54.60	324	*e*P	**P**	**01 42 22.7**	**+5.2**
SVE				*e*		01 42 32.0	
SVE				pmax	pmax		
	comp=Z,24nm,2.0s,mb4.9						
ARU	**Arti**	55.66	323	*e*P	**P**	**01 42 21.6**	**-3.7**
ARU	**Arti**	55.66	323	*e*P	**P**	**01 42 21.6**	**-3.7**
	comp=Z,12nm,1.0s,mb4.9						
STKA	**Stephens Creek**	58.64	160	P	**P**	**01 42 44.4**	**-2.3**
	comp=Z,2.4nm,0.6s,mb4.4,baz=332,slow=10,SNR=6.4						
STKA				LR	LR	02 07 51.9	
	comp=Z,134nm,18.2s,MS4.1,baz=24,slow=36						
DZM	**Mont Dzumac**	63.02	133	LR	LR	02 05 29.5	
	comp=Z,190nm,18.9s,MS4.3,baz=15,slow=31						
GOF	**Gofitskoye**	65.77	310	*e*P	**P**	**01 43 28.0**	**-6.2**
IMA	**Indian Mountai**	66.12	26	P	**P**	**01 43 34.3**	**-1.7**
IMA				pmax	pmax		
	comp=Z,65nm,1.6s,mb5.4						
IMA	**Indian Mountai**	66.12	26	P	**P**	**01 43 34.3**	**-1.8**
	comp=Z,66nm,1.6s,mb5.4						
KIV	**Kislovodsk**	66.22	309	*e*P	**P**	**01 43 35.5**	**-1.6**
KIV				*e*		01 43 41.5	
KIV						01 44 05.0	
KIV				pmax	pmax		
	comp=Z,24nm,1.9s,mb4.9						
OBN	**Obninsk**	68.07	322	*e*P	**P**	**01 43 47.4**	**-1.2**
OBN						01 44 11.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
OBN				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.4						
MCK	**McKinley**	68.44	29	*e*P	**P**	**01 43 49.3**	**-1.5**
MCK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
MCK	**McKinley**	68.44	29	*e*P	**P**	**01 43 49.3**	**-1.5**
	comp=Z,5.0nm,1.0s,mb4.5						
SML	**Sawmill**	69.08	31	*e*P	**P**	**01 43 53.3**	**-1.5**
ILAR	**Eielson Array**	69.12	27	P	**P**	**01 43 52.7**	**-2.2**
	comp=Z,1.0nm,0.6s,mb3.9,baz=281,slow=5.5,SNR=9.5						
ILAR				LR	LR	02 17 31.4	
	comp=Z,92nm,18.3s,MS4.0,baz=173,slow=39						
MALT	**Malatya**	70.65	304	*e*P	**P**	**01 44 03.2**	**-1.5**
MALT				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
MALT	**Malatya**	70.65	304	*e*P	**P**	**01 44 03.2**	**-1.5**
	comp=Z,6.3nm,1.0s,mb4.5						
KAF	**Kangasniemi**	71.66	330	*e*pkp	**P**	**01 44 07.5**	**-2.9**
FINES	**FINESS Array B**	71.96	330	P	**P**	**01 44 09.3**	**-2.9**
	comp=Z,3.0nm,0.9s,mb4.2,baz=56,slow=6.9,SNR=9.6						
FINES				LR	LR	02 18 34.9	
	comp=Z,306nm,18.5s,MS4.6,baz=76,slow=38						
INK	**Inuvik**	73.19	22	*e*P	**P**	**01 44 16.3**	**-3.0**
INK				pmax	pmax		

	comp=Z,8.0nm,0.8s						
INK	Inuvik	73.19	22	P	P	01 44 17.0	-2.3
	comp=Z,3.9nm,0.7s,mb4.4,baz=282,slow=8.0,SNR=7.7						
INK	Inuvik	73.19	22	*e*P	P	01 44 16.3	-3.0
	comp=Z,7.5nm,0.8s,mb4.7						
BR131	Keskin Array S	73.81	307	*e*P	P	01 44 20.9	-2.6
	comp=Z,1.2nm,0.7s,mb3.9						
BRTR	Keskin Array B	73.81	307	P	P	01 44 21.6	-1.9
	comp=Z,1.8nm,0.8s,mb4.1,baz=94,slow=6.0,SNR=13						
NB2	NORSAR Subarra	78.72	332	P	P	01 44 47.9	-2.7
	comp=Z,0.9nm,0.7s,mb3.8,baz=58,slow=5.6						
NOA	NORSAR Array B	78.72	332	P	P	01 44 47.9	-2.7
	comp=Z,1.1nm,0.8s,mb3.8,baz=323,slow=8.8,SNR=3.3						
NOA				LR	LR	02 22 47.6	
	comp=Z,320nm,18.7s,MS4.7,baz=50,slow=38						
NOA	NORSAR Array B	78.72	332	P	P	01 44 47.9	-2.7
NOA				LR	LR	02 22 47.6	
YKA	Yellowknife Ar	82.93	23	P	P	01 45 11.2	-1.7
	comp=Z,0.8nm,0.5s,mb4.0,baz=311,slow=4.9,SNR=6.8						
YKA				LR	LR	02 30 15.8	
	comp=Z,74nm,18.1s,MS4.1,baz=180,slow=42						
YKA	Yellowknife Ar	82.93	23	P	P	01 45 11.2	-1.7
YKA				LR	LR	02 30 15.8	
GERES	GERESS Array B	83.42	321	P	P	01 45 13.7	-2.0
	comp=Z,0.4nm,0.6s,mb3.6,baz=143,slow=6.7,SNR=5.7						
GERES				LR	LR	02 28 48.1	
	comp=Z,188nm,18.2s,MS4.5,baz=277,slow=40						
GRA1	Grafenberg Arr	84.40	322	*e*P	P	01 45 19.7	-1.0
	comp=Z,4.0nm,1.3s,mb4.4						
GRA1				LR	LR		
	comp=Z,300nm,18.6s,MS4.7						
GRF	Grafenberg Arr	84.40	322	*e*P	P	01 45 19.7	-1.0
GRF				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.4						
GRF				MLR	MLR		
	comp=Z,300nm,18.6s,MS4.7						
GRF	Grafenberg Arr	84.40	322	*e*P	P	01 45 19.7	-1.0
	comp=Z,4.0nm,1.3s,mb4.4						
GRF				LR	LR		
	comp=Z,300nm,18.6s,MS4.7						
KMBO	Kilima Mbogo	85.54	267	LR	LR	02 22 45.6	
	comp=Z,60nm,18.5s,MS4.0,baz=99,slow=35						
NEW	Newport	90.82	35	*e*P	P	01 45 51.3	-0.4
NEW				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NEW	Newport	90.82	35	*e*P	P	01 45 51.3	-0.4
	comp=Z,8.4nm,1.1s,mb5.0						
FCC	Fort Churchill	92.36	18	*e*P	P	01 45 56.2	-2.3
FCC				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.6						
FCC	Fort Churchill	92.36	18	*e*P	P	01 45 56.1	-2.3
	comp=Z,2.5nm,0.7s,mb4.7						
BMO	Blue Mountains	92.84	38	*e*P	P	01 46 00.9	-0.1
BMO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.3						
BMO	Blue Mountains	92.84	38	*e*P	P	01 46 00.9	-0.1
	comp=Z,1.3nm,0.7s,mb4.5						
FFC	Flin Flon	93.08	24	*e*P	P	01 46 00.6	-1.3
FFC				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.9						
FFC	Flin Flon	93.08	24	*e*P	P	01 46 00.6	-1.2
	comp=Z,7.4nm,1.3s,mb5.0						
PPT	Papeete	95.68	107	*e*SS	SS	02 04 08.1	+5.8
	comp=Z,160nm,24.5s						
PPT				*e*LR	LR	02 17 01.8	
	comp=Z,259nm,25.0s						
ULM	Lac du Bonnet	98.90	23	LR	LR	02 34 23.7	
	comp=Z,92nm,19.7s,MS4.3,baz=21,slow=37						
RKT	Rikitea	110.44	107	*e*LR	LR	02 23 07.1	
	comp=Z,138nm,26.2s,baz=297						
VNA2	Neumayer--Watz	124.88	198	*e*	PKPdf	01 51 55.6	+6.9
VNA2	Neumayer--Watz	124.88	198	⇑*i*PKPdf	PKPdf	01 51 49.1	+0.4
VNA2				*e*		01 51 55.6	
VNA1	Neumayer--Stat	125.26	198	*e*	PKPdf	01 51 55.0	+5.5
VNA1	Neumayer--Stat	125.26	198	⇑*i*PKPdf	PKPdf	01 51 48.4	-1.1
VNA1				*e*		01 51 55.0	
VNA3	Neumayer Olymp	125.34	197	*e*	PKPdf	01 51 57.4	+7.8
VNA3	Neumayer Olymp	125.34	197	⇑*i*PKPdf	PKPdf	01 51 51.4	+1.8
VNA3				*e*		01 51 57.4	
SDV	Santo Domingo	145.14	22	*e*PKPbc	PKPbc	01 52 24.5	-1.3
OTAV	Otavalo	148.89	42	PKPdf	PKPdf	01 52 32.0	-1.8

IDC 10 01:56:56.1±6.0, 5.92S×153.21E, h98^{km}±49^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.6/16, mbtmp4.0/5, MS3.4/1, Ms1 3.4/1, ms1mx2.9/19, Error ellipse: s-maj=91.9km s-min=32.0km az=130.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.93	240	P	P	01 58 35.2	-1.5
	1.5nm,0.3s,baz=42,slow=5.1,SNR=4.8						
PMG				S	S	01 59 57.9	+3.4
	1.3nm,0.3s,baz=199,slow=20,SNR=5.1						
WRA	Warramunga Arr	23.04	231	P	P	02 01 53.7	+0.1
	0.7nm,0.6s,baz=58,slow=9.4,SNR=6.0						
FITZ	Fitzroy Crossi	29.51	243	P	P	02 02 51.0	-2.6
	7.4nm,0.9s,baz=140,slow=6.0,SNR=4.3						
FITZ				LR	LR	02 14 22.7	
	comp=Z,72nm,18.5s,baz=2.6,slow=36						
MKAR	Makanchi Array	81.44	319	P	P	02 09 02.2	-1.7
	0.6nm,0.6s,baz=117,slow=5.4,SNR=5.3						
ILAR	Eielson Array	83.04	22	P	P	02 09 10.9	-0.9
	0.4nm,0.6s,baz=244,slow=6.4,SNR=4.3						

MAN 10 02:16:25.1, 8.30N×123.94E, h26^{km}, mb4.2, ML3.1, MS2.8, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCPH	Dipolog City	0.65	296	⇑*i*P	Pb	02 16 37.8	+0.1
DCPH				*i* S	Sb	02 16 48.8	+2.5
PAGZ	Pagadian	0.71	231	*e*P	Pb	02 16 39.5	+0.6
BUKP	Musuan	1.19	111	*e*P	Pn	02 16 45.5	-0.8
SNPH	Sibulan	1.25	326	⇑*e*P	Pn	02 16 48.0	+0.9
SNPH				*i* S	Sn	02 17 05.3	+2.2

*IDC **10** 02:16:33.3±2.8, 5.51S×147.34E, h170^{km}±24^{km}, mb3.6/4, mb1 3.8/7, mb1mx3.7/16, mbtmp4.1/7, Error ellipse: s-maj=30.2km s-min=24.5km az=98.0*

*NEIC **10** 02:16:34.2±1.7, 5.46S×147.28E, h178^{km}±15^{km}, mb4.1/2, Error ellipse: s-maj=18.2km s-min=14.4km az=127.0*

ISC 10 02:16:33.1±2.6, 5.5S±0.2×147.3E±0.2, h181^{km}±25^{km}, n11, σ0^{s}59/11, mb3.8/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.87	181	P	P	02 17 34.1	+0.9
	21nm,0.3s,baz=1.3,slow=5.5,SNR=63						
PMG				S	S	02 18 18.5	-1.2
	30nm,0.3s,baz=200,slow=17,SNR=13						
CTA	Charters Tower	14.52	184	P	P	02 19 51.9	+0.6
	0.1nm,0.3s,baz=352,slow=14,SNR=1.8						
CTAO	Charters Tower	14.52	184	*e*P	P	02 19 52.7	+1.4
	5.9nm,0.6s						
WRAB	Tennant Creek	19.05	220	*e*P	P	02 20 43.6	-0.1
	4.2nm,0.5s						
WB2	Warramunga Arr	19.06	220	*e*P	P	02 20 43.9	+0.1
WRA	Warramunga Arr	19.07	220	P	P	02 20 44.0	0.0
	1.9nm,0.3s,baz=45,slow=9.8,SNR=84						
FITZ	Fitzroy Crossi	24.54	238	P	P	02 21 37.7	0.0
	19nm,0.5s,mb4.9,baz=49,slow=4.4,SNR=26						
SONM	Songino Array	64.11	331	P	P	02 26 49.8	-0.2
	0.3nm,0.5s,mb3.3,baz=135,slow=3.5,SNR=3.8						
VNDA	Vanda	72.38	177	P	P	02 27 40.6	0.0
	1.0nm,0.7s,mb3.6,baz=328,slow=7.1,SNR=10						
ILAR	Eielson Array	84.94	23	P	P	02 28 48.2	-0.4
	0.4nm,0.7s,mb3.3,baz=254,slow=4.5,SNR=4.7						
SIV	San Ignacio	144.74	128	PKP	PKPdf	02 35 50.3	+1.2
	0.9nm,0.6s,baz=265,slow=3.2,SNR=8.7						

TAP 10 02:38:03.5, 24.01N×121.76E, h6^{km}, ML3.8, 5C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien	0.15	257	⇓*i*P	Pg	02 38 07.5	+0.9
TWD	Chiawan	0.17	295	⇑*i*P	Pg	02 38 07.3	+0.3
TWD				S	Sg	02 38 10.5	+1.2
ESF	Shoufeng Towns	0.27	239	*e*P	Pg	02 38 08.8	-0.2
ESF				S	Sg	02 38 13.7	+1.0
ESL	Shilin	0.36	237	⇓*i*P	Pg	02 38 10.8	+0.1
ESL				S	Sg	02 38 16.7	+1.1
TEGC	Jichi Village	0.36	214	*e*P	Pg	02 38 12.4	+1.6
ENA	Nanau	0.42	358	⇑*i*P	Pg	02 38 12.4	+0.5
ENA				S	Sg	02 38 19.3	+1.8
NNS	Nan Shan	0.56	321	⇑*i*P	Pg	02 38 14.9	+0.2
NNS				S	Sg	02 38 23.6	+1.5
TWT	Tachien	0.59	295	P	Pg	02 38 15.8	+0.6
TWT				S	Sg	02 38 24.7	+1.6
TWC	Suao	0.60	8	P	Pg	02 38 16.0	+0.4
TWC				S	Sg	02 38 26.0	+2.4
EHY	Hungye	0.64	219	*e*P	Pg	02 38 16.1	-0.3
ENTT	Nioudou	0.65	344	⇑*i*P	Pg	02 38 16.9	+0.4
ENTT				S	Sg	02 38 26.7	+1.4
NSK	Sanguang	0.76	331	⇑*i*P	Pg	02 38 19.0	+0.4
NSK				S	Sg	02 38 29.5	+0.7
TWF1	Yuli	0.78	213	*e*P	Pb	02 38 18.5	-0.6
SMLT	Sun Moon Lake	0.80	261	⇓*i*P	Pb	02 38 19.5	+0.2
SMLT				S	Sg	02 38 31.3	+1.2
TYC	Yuchr	0.83	263	⇓*i*P	Pb	02 38 20.0	0.0
TYC				S	Sb	02 38 31.6	+0.4
NSTT	Nanjuang	0.93	312	*e*P	Pb	02 38 21.9	+0.3
NSTT				S	Sb	02 38 35.7	+1.7
TWQ1	Liyutan	0.96	291	*e*P	Pb	02 38 23.5	+1.3
TWQ1				S	Sb	02 38 37.8	+2.9
CHKT	Chengkung	0.98	202	*e*P	Pb	02 38 21.7	-0.7
TWA	Mucha	0.98	351	*e*P	Pb	02 38 22.5	0.0
WNT	Mingjian	0.99	263	*e*P	Pb	02 38 23.0	+0.3
WNT				S	Sb	02 38 39.1	+3.2
NSY	Sanyi	1.00	294	*e*P	Pb	02 38 24.5	+1.8
NSY				S	Sb	02 38 39.2	+3.3
TCU	Taichung	1.00	278	*e*P	Pb	02 38 24.7	+1.9
TCU				S	Sb	02 38 40.0	+4.0
ALS	Alishan	1.01	241	*e*P	Pb	02 38 23.0	0.0
ALS				S	Sb	02 38 38.6	+2.3
TWB1	Santiao Chiao	1.01	12	*e*P	Pb	02 38 23.9	+0.8
TWB1				S	Sb	02 38 38.7	+2.2
TAP1	Taipei	1.05	348	*e*P	Pb	02 38 22.7	-0.9
NWF	Wu-fen Shan	1.06	1	*e*P	Pb	02 38 24.8	+1.0
NWF				S	Sb	02 38 39.7	+2.0
ELDTW	Lidau	1.06	220	*e*P	Pb	02 38 23.4	-0.5
HSN	Hsinchu	1.07	318	*e*P	Pb	02 38 25.7	+1.7
CHN5	Tsauling	1.07	248	P	Pb	02 38 25.1	+1.0
CHN5				S	Sb	02 38 41.2	+3.0
NCU	National Centr	1.09	331	*e*P	Pb	02 38 26.1	+1.8
TWS1	Kuangyinshan	1.13	344	*e*P	Pb	02 38 26.3	+1.3
TWS1				S	Sb	02 38 42.8	+3.0
WGK	Gukeng	1.14	254	*e*P	Pb	02 38 27.8	+2.5
CHN4	Tsaushan	1.25	239	*e*P	Pb	02 38 28.6	+1.4
CHN4				S	Sb	02 38 47.4	+4.0
TWY	Chenhua	1.27	353	*e*P	Pb	02 38 28.3	+0.9
CHN2	Minshiung	1.27	248	*e*P	Pb	02 38 27.4	-0.1
WTP	Ta-pu	1.30	234	*e*P	Pb	02 38 28.1	+0.2
WTP				S	Sb	02 38 47.5	+2.9
TWG	Pinlang	1.34	208	*e*P	Pb	02 38 27.3	-1.4
TWK	Hsinying	1.38	238	*e*P	Pb	02 38 29.8	+0.5
TWK				S	Sb	02 38 50.1	+3.0
CHN1	Nanshi	1.40	234	*e*P	Pn	02 38 30.3	+0.7
CHN1				S	Sb	02 38 51.1	+3.5
SGST	Jiashian	1.42	230	*e*P	Pn	02 38 30.6	+0.7
ECL	Taimali	1.59	208	*e*P	Pn	02 38 31.2	-1.1
SSD	Sandimen	1.63	220	*e*P	Pn	02 38 32.6	-0.4
PCYT	Pengchaiyu	1.64	10	*e*P	Pn	02 38 33.0	0.0
EAST	Anshuo	1.82	208	*e*P	Pn	02 38 36.5	+0.8
SCZT	Fangliau	1.94	213	*e*P	Pn	02 38 38.5	+1.2
PNG	Penghu	2.07	258	*e*P	Pn	02 38 39.7	+0.5

*NEIC **10** 02:40:24.8±0.4, 5.61N×94.30E, h30^{km}, mb4.6/9, Error ellipse: s-maj=12.3km s-min=6.9km az=219.0*

NEIC Felt [I] at Banda Aceh.

*IDC **10** 02:40:34.3±6.3, 5.61N×94.44E, h119^{km}±58^{km}, mb3.9/16, mb1 4.1/17, mb1mx4.0/23, mbtmp4.3/17, MS3.4/4, Ms1 3.5/4, ms1mx3.2/23, Error ellipse: s-maj=20.9km s-min=11.9km az=54.0*

ISC 10 02:40:22.9±0.4, 5.57N±0.08×94.34E±0.07, h30^{km}, n39, σ0^{s}86/39, mb4.4/23, MS3.6/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	6.29	92	*e*Pn	Pn	02 41 58.3	+2.2
CMAR	Chiang Mai Arr	13.58	19	P	P	02 43 42.1	+5.9
	1.3nm,0.3s,baz=207,slow=14,SNR=18						
CMAR				LR	LR	02 48 29.7	
	comp=Z,56nm,19.9s,baz=205,slow=35						
KSM	Kuching	16.45	104	*e*P	P	02 44 17.6	+4.2
HYB	Hyderabad	19.42	309	*e*P	P	02 44 50.0	+0.1
HYB	Hyderabad	19.42	309	*i* P	P	02 44 50.0	+0.1
HYB				*e*S	S	02 48 23.0	+1.2
KKM	Kota Kinabalu	21.77	88	P	P	02 45 16.6	+2.3
PKI	Pulchoki	23.48	340	*e*P	P	02 45 30.2	-0.9
GUN	Gumba	23.63	341	*e*P	P	02 45 32.5	-0.1
KKN	Kakani	23.72	340	*e*P	P	02 45 33.5	0.0
GKN	Gorkha	24.14	339	*e*P	P	02 45 38.3	+0.7
	31nm,0.7s,mb4.8						
KOLN	Koldanda	24.33	336	*e*P	P	02 45 39.8	+0.4
	27nm,0.8s,mb4.7						
ENH	Enshi	28.42	28	*e*P	P	02 46 16.0	-1.2
	8.8nm,0.7s,mb4.5						
FITZ	Fitzroy Crossi	38.81	128	*e*P	P	02 47 46.7	-0.5
FITZ	Fitzroy Crossi	38.81	128	P	P	02 47 47.0	-0.2
	4.6nm,0.6s,mb4.4,baz=344,slow=3.1,SNR=10.0						
FITZ				LR	LR	03 04 24.7	
	comp=Z,87nm,18.7s,MS3.6,baz=260,slow=37						
MKAR	Makanchi Array	42.37	348	P	P	02 48 16.5	+0.3
	2.8nm,0.5s,mb4.2,baz=166,slow=8.2,SNR=26						
SONM	Songino Array	43.36	12	P	P	02 48 24.0	-0.3
	0.9nm,0.5s,mb3.8,baz=195,slow=8.5,SNR=12						
JNU	Nakatsue	43.66	46	LR	LR	03 07 45.1	
	comp=Z,68nm,19.2s,MS3.6,baz=188,slow=37						
WRA	Warramunga Arr	46.79	124	P	P	02 48 52.0	0.0
	7.5nm,0.6s,mb4.8,baz=304,slow=9.2,SNR=63						
WRAB	Tennant Creek	46.80	124	*e*P	P	02 48 52.0	-0.1
	7.8nm,0.6s,mb4.8						
WB2	Warramunga Arr	46.80	124	*e*P	P	02 48 52.1	0.0
ZAL	Zalesovo	48.85	353	P	P	02 49 07.8	+0.2
	2.7nm,0.3s,mb4.8,baz=310,slow=6.7,SNR=8.8						
BVAR	Borovoye Array	51.23	342	P	P	02 49 25.2	-0.6
	2.0nm,0.6s,mb4.2,baz=143,slow=7.4,SNR=9.6						
CHKZ	Chkalovo	51.72	342	*e*P	P	02 49 29.0	-0.5
	4.4nm,0.4s,mb4.7						
PMG	Port Moresby	54.70	106	P	P	02 49 50.7	-1.4
	9.3nm,0.5s,mb5.0,baz=323,slow=10,SNR=3.9						
PMG	Port Moresby	54.70	106	P	P	02 49 51.4	-0.8
	3.3nm,0.6s,mb4.5						
KMBO	Kilima Mbogo	57.40	265	P	P	02 50 11.6	0.0
	1.6nm,0.6s,mb4.2,baz=41,slow=19,SNR=5.1						
KMBO				LR	LR	03 09 46.4	
	comp=Z,50nm,20.0s,MS3.6,baz=280,slow=30						
KMBO	Kilima Mbogo	57.40	265	P	P	02 50 11.6	0.0
KMBO				LR	LR	03 09 46.4	
STKA	Stephens Creek	58.39	133	P	P	02 50 17.2	-1.1
	1.4nm,0.6s,mb4.2,baz=320,slow=13,SNR=7.1						
STKA	Stephens Creek	58.39	133	*e*P	P	02 50 17.4	-0.9
BRTR	Keskin Array B	64.09	312	P	P	02 50 54.8	-1.9
	1.2nm,0.7s,mb4.0,baz=136,slow=7.8,SNR=6.5						
MATP	Matopo	69.59	246	P	P	02 51 32.2	+0.4
	5.1nm,1.0s,mb4.4,baz=72,slow=9.6,SNR=5.7						
BOSA	Boshof	74.54	238	P	P	02 52 01.8	+0.6
	2.1nm,0.6s,mb4.3,baz=22,slow=11,SNR=6.4						
FINES	FINESS Array B	74.83	332	P	P	02 52 01.3	-0.8
	0.9nm,0.5s,mb4.0,baz=89,slow=4.4,SNR=13						
ARCES	ARCESS Array B	77.49	340	P	P	02 52 17.0	0.0
	1.6nm,0.9s,mb3.9,baz=90,slow=4.9,SNR=5.1						
GERES	GERESS Array B	79.67	319	P	P	02 52 29.8	+0.5
	2.6nm,0.7s,mb4.3,baz=90,slow=5.3,SNR=23						
GRA1	Grafenberg Arr	81.33	319	*e*P	P	02 52 39.0	+0.9
	3.0nm,0.8s,mb4.3						
GRF	Grafenberg Arr	81.33	319	*e*P	P	02 52 39.0	+0.9
	3.0nm,0.8s,mb4.3						
LPG	La Plagne	84.38	315	*e*P	P	02 52 54.3	+0.5
	6.1nm,0.8s,mb4.5						
ILAR	Eielson Array	96.79	22	P	P	02 53 50.9	-1.0
	0.4nm,1.0s,mb3.8,baz=283,slow=4.0,SNR=4.6						

*MOS **10** 03:16:01.0±1.4, 51.12N×179.60E, h33^{km}, mb4.4/13, Error ellipse: s-maj=12.8km s-min=10.1km az=93.3*

*BJI **10** 03:16:03.1, 51.36N×179.73E, h53^{km}, mB4.7, mb4.6, Ms4.6, Msz4.2*

*NEIC **10** 03:16:05.6±0.8, 51.22N×179.56E, h52^{km}±6^{km}, mb4.4/17, Error ellipse: s-maj=11.3km s-min=4.4km az=184.0*

*IDC **10** 03:16:05.6±3.7, 51.25N×179.56E, h52^{km}±32^{km}, mb3.9/19, mb1 4.0/19, mb1mx4.0/26, mbtmp4.1/19, ML3.9/1, MS3.7/4, Ms1 3.7/4, ms1mx3.2/37, Error ellipse: s-maj=23.3km s-min=13.0km az=172.0*

ISC 10 03:16:04.0±1.0, 51.25N±0.09×179.58E±0.05, h52^{km}±8^{km}, h48^{km}±2.2^{km}:pP-P, n95, σ1^{s}00/96, mb4.3/36, MS4.0/7, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIWB	Kanaga Island	2.13	72	*e*P	P	03 16 38.2	+0.3
GSTR	Great Sitkin T	2.85	71	*e*P	P	03 16 48.5	+0.4
SMY	Shemya	3.69	296	*e*P	P	03 17 00.0	-0.1
SMY				*e*		03 17 50.3	
FX1	Attu Island--F	4.28	295	P	P	03 17 08.4	+0.1
FX1				S	S	03 18 05.9	+8.4
FX1				pmax	pmax		
	comp=Z,25nm,0.3s						
FX1				smax			
	comp=N,25nm,0.3s						
FX1	Attu Island--F	4.28	295	P	P	03 17 08.4	+0.1
	comp=N,25nm,0.3s,baz=131,slow=4.0,SNR=108						
FX1				S	S	03 18 05.9	+8.4
	comp=N,25nm,0.3s,baz=98,slow=21,SNR=14						
FX1	Attu Island--F	4.28	295	*e*Pn	P	03 17 08.5	+0.2
FX1				*e*		03 18 03.1	
NIKO	Nikolski	7.33	72	*e*P	P	03 17 49.6	-1.4
UNV	Unalaska Valle	8.87	68	*e*P	P	03 18 11.6	-0.6
PET	Petropavlovsk	12.97	286	*e*P	P	03 19 00.5	-7.1
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
RSO	Redoubt South	17.93	48	*e*P	P	03 20 13.2	+2.3
BILL	Bilibino	18.05	344	*e*P	P	03 20 14.3	+1.9
BILL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s						
BILL	Bilibino	18.05	344	*e*P	P	03 20 11.4	-1.0
	comp=Z,21nm,1.0s						
SPU	Mount Spurr	18.49	47	*e*P	P	03 20 18.8	+1.0
IMA	Indian Mountai	20.10	32	*e*P	P	03 20 35.9	+0.3
IMA				pmax	pmax		
	comp=Z,60nm,0.9s						
IMA	Indian Mountai	20.10	32	*e*P	P	03 20 35.9	+0.3
	comp=Z,60nm,0.9s						
SML	Sawmill	20.38	46	P	P	03 20 36.4	-2.2
DIV	Divide	21.41	49	*e*P	P	03 20 49.0	0.0
	comp=Z,24nm,0.6s,mb4.7						
ILAR	Eielson Array	21.98	39	P	P	03 20 54.3	-0.4
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ILAR	Eielson Array	21.98	39	P	P	03 20 54.2	-0.5
	comp=Z,1.0nm,0.5s,mb3.5,baz=242,slow=8.4,SNR=15						
DAWY	Dawson	24.90	43	*e*P	P	03 21 24.2	+1.2
ASAJ	Asahikawa	25.68	268	P	P	03 21 30.0	-0.6
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ	Asahikawa	25.68	268	P	P	03 21 29.9	-0.6
	comp=Z,3.5nm,0.3s,mb4.3,baz=113,slow=4.4,SNR=5.5						
INK	Inuvik	28.15	35	P	P	03 21 51.4	-1.5
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	Inuvik	28.15	35	P	P	03 21 52.2	-0.7
	comp=Z,1.1nm,0.6s,mb3.6,baz=277,slow=4.4,SNR=3.4						
INK				LR	LR	03 34 26.2	
	comp=Z,69nm,19.7s,MS3.2,baz=250,slow=39						
INK	Inuvik	28.15	35	P	P	03 21 51.4	-1.5
	comp=Z,2.0nm,0.6s,mb3.9						
KLR	Kul'dur	30.23	285	*e*P	P	03 22 07.8	-3.8
YKA	Yellowknife Ar	36.06	46	P	P	03 23 00.8	-1.1
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA				MLR	MLR		
	comp=Z,250nm,18.4s						
YKA	Yellowknife Ar	36.06	46	P	P	03 23 00.8	-1.1
	comp=Z,1.5nm,0.5s,mb4.2,baz=283,slow=8.3,SNR=6.7						
YKA				LR	LR	03 39 26.5	
	comp=Z,250nm,18.4s,MS4.0,baz=280,slow=39						
CN2	Changchun	36.57	280	*e*P	P	03 23 06.9	+0.5
CN2				*e*S	S	03 28 44.6	-0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,700nm,19.0s,MS4.5						
CN2				LR	LR		
	comp=E,400nm,19.0s,MS4.5						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
CIT	Chita	39.70	298	*e*P	P	03 23 33.1	+0.7
YBH	Yreka Blue Hor	39.91	81	LR	LR	03 36 50.7	
	comp=Z,73nm,20.1s,MS3.5,baz=313,slow=31						
BMO	Blue Mountains	41.51	73	*e*P	P	03 23 48.5	+1.2
	comp=Z,2.5nm,0.9s,mb3.8						
WVOR	Wild Horse Val	42.02	77	*e*P	P	03 23 52.8	+1.2
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
WVOR	Wild Horse Val	42.02	77	*e*P	P	03 23 52.8	+1.2
	comp=Z,3.8nm,0.8s,mb4.1						
HRY	Holter Researc	43.76	68	*e*P	P	03 24 05.6	-0.1
HLID	Hailey	43.96	73	*e*P	P	03 24 08.1	+0.7
	comp=Z,4.0nm,1.0s,mb4.1						
MCMT	McKenzie Canyo	44.19	71	*e*P	P	03 24 08.9	-0.2
BOZ	Bozeman (W)	44.45	69	*e*P	P	03 24 11.1	-0.2
BOZ				*e*	pP	03 24 25.4	+0.3
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
BOZ	Bozeman (W)	44.45	69	*e*P	P	03 24 11.1	-0.2
	comp=Z,5.4nm,0.8s,mb4.3						
BOZ				*e*	pP	03 24 25.4	+0.3
NVAR	Mina Array Bea	44.58	82	P	P	03 24 13.7	+1.2
	comp=Z,1.0nm,0.7s,mb3.8,baz=300,slow=6.5,SNR=6.3						
FFC	Flin Flon	45.04	53	*e*P	P	03 24 16.0	+0.2
ELK	Elko	45.08	77	*e*P	P	03 24 17.2	+0.8
ELK				*e*	pP	03 24 30.4	+0.2
ELK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ELK	Elko	45.08	77	*e*P	P	03 24 17.2	+0.8
	comp=Z,4.0nm,0.9s,mb4.2						
ELK				*e*	pP	03 24 30.4	+0.3
ULN	Ulaanbaatar	45.40	296	*e*P	P	03 24 18.9	+0.1
SONM	Songino Array	45.79	296	P	P	03 24 22.4	+0.5
	comp=Z,1.8nm,1.0s,mb4.0,baz=51,slow=7.9,SNR=6.8						
SONM				LR	LR	03 45 30.0	
	comp=Z,130nm,18.3s,MS3.9,baz=92,slow=38						
IMW	Indian Meadow	45.84	71	*e*P	P	03 24 22.0	-0.4
	comp=Z,6.1nm,0.9s,mb4.5						
IMW				*e*pP	pP	03 24 36.8	+0.7
RRI2	Red Ridge	45.93	72	*e*P	P	03 24 24.1	+1.0
	comp=Z,3.4nm,0.6s,mb4.5						
RRI2				*e*pP	pP	03 24 36.4	-0.5
FCC	Fort Churchill	46.78	46	P	P	03 24 30.0	+0.4
SSE	Sheshan	46.97	268	P	P	03 24 30.1	-1.4
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,40nm,6.2s						
BW06	Boulder Array	47.32	71	*e*P	P	03 24 33.7	-0.3
	comp=Z,7.1nm,0.9s,mb4.6						
PDAR	Pinedale Array	47.32	71	P	P	03 24 34.1	+0.1
	comp=Z,4.0nm,0.6s,mb4.5,baz=308,slow=3.2,SNR=30						
NJ2	Nanjing	47.79	271	*e*P	P	03 24 40.0	+2.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
MVU	Marysvale	48.30	77	*e*P	P	03 24 40.2	-1.5
	comp=Z,3.6nm,1.0s,mb4.4						
MSU	Marysvale	48.31	77	P	P	03 24 42.7	+0.9
TMUT	Trail Mountain	48.42	76	P	P	03 24 43.5	+0.8
SRU	San Rafael	48.95	76	*e*P	P	03 24 45.2	-1.5
PV10	Paradox Valley	50.31	75	*e*P	P	03 24 57.7	+0.5
PV01	Paradox Valley	50.75	75	P	P	03 25 00.4	-0.2
SDCO	Great Sand Dun	52.86	74	*e*P	P	03 25 17.5	+1.1
	comp=Z,5.0nm,1.3s,mb4.3						
ZAL	Zalesovo	53.39	313	P	P	03 25 20.5	+0.4
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.2s						
ZAL	Zalesovo	53.39	313	P	P	03 25 20.5	+0.4
	comp=Z,2.9nm,0.2s,mb4.8,baz=150,slow=11,SNR=4.4						
NVS	Novosibirsk	53.53	314	*i* P	P	03 25 19.6	-1.6
ANMO	Albuquerque	54.11	77	P	P	03 25 24.5	-1.2
GTA	Gaotai	54.66	291	*e*P	P	03 25 29.6	0.0
GTA				AP	pP	03 25 43.0	-0.8
GTA				XP	sP	03 25 49.0	-0.7
GTA				PP	PP	03 27 31.9	-2.0
GTA				PPP	PPP	03 28 42.2	-4.2

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GTA                                      S      S       03 33 05.0 +0.9
GTA                                      AMB    AMB
       comp=Z,80nm,5.7s
GTA                                      LR     LR
       comp=N,80nm,15.6s,MS4.0
GTA                                      LR     LR
       comp=E,80nm,18.3s,MS4.0
GTA                                      LR     LR
       comp=Z,140nm,17.5s,MS4.1
MNTX   Cornudas Mount     56.98   79   eP       P       03 25 46.2 -0.2
       comp=Z,3.4nm,1.2s,mb4.2
ARCES  ARCESS Array B     58.04  350    P       P       03 25 51.7 -1.6
ARCES                                   pmax    pmax
       comp=Z,2.0nm,0.7s
ARCES  ARCESS Array B     58.04  350    P       P       03 25 51.7 -1.6
       comp=Z,2.0nm,0.7s,mb4.2,baz=27,slow=8.1,SNR=5.3
ARCES  ARCESS Array B     58.04  350    P       P       03 25 51.7 -1.6
WMQ    Urumqi             58.55  302   eP       P       03 26 00.0 +2.8
WMQ                                     AP      pP      03 26 12.0 +0.5
WMQ                                     XP      sP      03 26 18.0 +0.5
WMQ                                     LR      LR
       comp=N,210nm,22.2s,MS4.4
WMQ                                     LR      LR
       comp=E,280nm,23.0s,MS4.4
WMQ                                     LR      LR
       comp=Z,230nm,20.8s,MS4.3
WMOK   Wichita Mounta     58.91   72   eP       P       03 25 58.8 -1.0
WMOK                                    pmax    pmax
       comp=Z,3.0nm,0.9s,mb4.3
WMOK   Wichita Mounta     58.91   72   eP       P       03 25 58.8 -1.0
       comp=Z,3.3nm,0.9s,mb4.4
MKAR   Makanchi Array     59.31  308    P       P       03 26 01.1 -1.3
MKAR                                    pmax    pmax
       comp=Z,1.0nm,0.5s
MKAR   Makanchi Array     59.31  308    P       P       03 26 01.1 -1.3
       comp=Z,1.1nm,0.5s,mb4.2,baz=53,slow=6.6,SNR=17
TXAR   Lajitas Array      59.68   80    P       P       03 26 04.6 -0.7
       comp=Z,0.4nm,0.5s,mb3.7,baz=302,slow=6.2,SNR=7.0
BVAR   Borovoye Array     60.32  319    P       P       03 26 09.4  0.0
       comp=Z,9.1nm,0.6s,mb5.0,baz=53,slow=7.1,SNR=52
SCHQ   Schefferville      60.73   37    P       P       03 26 12.6 +0.5
       comp=Z,2.5nm,0.8s,mb4.4,baz=335,slow=5.7,SNR=5.6
ARU    Arti               62.17  327   eP       P       03 26 21.6 -0.1
ARU                                     pmax    pmax
       comp=Z,16nm,0.3s
ARU    Arti               62.17  327   eP       P       03 26 21.6 -0.1
       comp=Z,16nm,0.3s
PLAL   Pickwick Lake      64.99   65   eP       P       03 26 40.0 -0.4
       comp=Z,3.0nm,0.6s,mb4.5
PLAL                                   e        pP      03 26 52.9 -2.1
FINES  FINESS Array B     65.67  346    P       P       03 26 42.6 -1.8
FINES                                   pmax    pmax
       comp=Z,1.0nm,0.7s
FINES  FINESS Array B     65.67  346    P       P       03 26 42.6 -1.8
       comp=Z,0.9nm,0.7s,mb3.9,baz=27,slow=8.5,SNR=3.8
AAK    Ala-Archa          66.16  309   eP       P       03 26 47.6 -0.2
LSA    Lhasa              66.52  289    P       P       03 26 51.8 +1.5
NB2    NORSAR Subarra     67.67  354    P       P       03 26 56.2 -0.8
       comp=Z,9.2nm,1.0s,mb4.8,baz=7.0,slow=6.5
NOA    NORSAR Array B     67.67  354    P       P       03 26 56.2 -0.8
NOA                                     pmax    pmax
       comp=Z,3.0nm,0.7s
NOA    NORSAR Array B     67.67  354    P       P       03 26 56.2 -0.8
       comp=Z,3.4nm,0.7s,mb4.5,baz=7.7,slow=6.3,SNR=8.3
NOA    NORSAR Array B     67.67  354    P       P       03 26 56.2 -0.8
GERES  GERESS Array B     79.55  351    P       P       03 28 06.4  0.0
       comp=Z,0.2nm,0.4s,mb3.4,baz=108,slow=4.2,SNR=3.1
WRA    Warramunga Arr     81.22  223    P       P       03 28 14.1 -1.7
WRA                                     pmax    pmax
       comp=Z,1.0nm,0.6s
WRA    Warramunga Arr     81.22  223    P       P       03 28 14.1 -1.7
       comp=Z,0.6nm,0.6s,mb3.7,baz=32,slow=6.2,SNR=5.1
FITZ   Fitzroy Crossi     83.59  231    P       P       03 28 28.3 +0.3
       comp=Z,3.0nm,0.6s,mb4.6,baz=8.5,slow=5.7,SNR=6.4
BRTR   Keskin Array B     84.63  334    P       P       03 28 33.9 +1.2
BRTR                                    pmax    pmax
       comp=Z,2.0nm,0.7s
BRTR   Keskin Array B     84.63  334    P       P       03 28 33.9 +1.2
       comp=Z,1.5nm,0.7s,mb4.2,baz=42,slow=2.7,SNR=8.4
BOSA   Boshof            150.29  310    PKIKP   PKPdf   03 35 51.3 +7.5
BOSA                                    pmax    pmax
       comp=Z,3.0nm,0.7s
BOSA   Boshof            150.29  310    PKPbc   PKPdf   03 35 51.3 +7.5
       comp=Z,3.3nm,0.7s,baz=26,slow=2.0,SNR=6.0
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*MOS **10** 03:22:29.9±0.9, 30.08S×177.99W, h33^{km}, mb5.4/36, Error ellipse: s-maj=12.5km s-min=9.3km az=69.7*

*BJI **10** 03:22:32.1, 29.81S×177.57W, h60^{km}, mB5.6, mb5.2, Ms5.6, Msz5.2*

*HRVD **10** 03:22:33.4±0.3, 29.96S×177.59W, h54^{km}±1^{km}, MW5.2/44, Centroid moment Tensor Solution. LP body waves: s44,c71;Mantle waves: s37,c53; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.21±.31; $M_{\theta\theta}$1.19±.28; $M_{\phi\phi}$-7.39±.22; $M_{r\theta}$1.10±.25; $M_{\theta\phi}$-1.17±.25; $M_{\phi r}$0.35±.24; Best double couple: $M_0$7.003×10^{16} NP1:ϕ_s176°,δ44°,λ73°. NP2:ϕ_s19°,δ48°,λ106°. Principal axes: T 6.441, Plg78°, Azm358°; N 1.133, Plg12°, Azm188°; P -7.565, Plg2°, Azm98°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 03:22:33.4±0.1, 30.13S×177.97W, mb5.3/45 Error ellipse: s-maj=7.2km s-min=4.8km az=150.0*

*IDC **10** 03:22:34.1±0.6, 29.92S×177.92W, h59^{km}±4^{km}, mb4.7/15, mb1 4.9/15, mb1mx4.9/16, mbtmp4.9/15, MS4.5/14, Ms1 4.5/14, ms1mx4.3/29, Error ellipse: s-maj=14.8km s-min=12.5km az=178.0*

*BGS **10** 03:23:06.4±4.3, 30.13S×177.97W, h60^{km}*

ISC 10 03:22:31.4±0.2**, 30.52S**±0.04×**177.96W**±0.06**, h56**^{km}**, h56**^{km}±1.5^{km}**:pP-P, n480,** σ1^{s}**26**/217**, mb5.2**/64**, MS4.8**/16**, 22C-8D, Kermadec Islands**

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Code   Station Name        Δ°    AZ°    Phase ID          Time      Res
                                        Op      ISC      h  m  s    ISC
RAO    Raoul Island        1.27    2    P       P       03 22 47.1 -6.2
       5µm,0.3s,baz=114,slow=6.3,SNR=601
RAO    Raoul Island        1.27    2   ePn      P       03 22 47.0 -6.2
RAO                                    eSn      S       03 22 59.6  -10
MXZ    Matakaoa Point      7.67  203    P       P       03 24 22.1 -0.9
MXZ    Matakaoa Point      7.67  203    PN      P       03 24 22.1 -0.8
MXZ                                     SN      S       03 25 52.5 +3.2
PUZ    Puketiti            8.15  202    P       P       03 24 29.0 -0.6
PUZ    Puketiti            8.15  202    PN      P       03 24 28.8 -0.8
PUZ                                    eSN      S       03 26 00.4 -0.8
OUZ    Omahuta             8.51  234   eP       P       03 24 43.4 +9.0
OUZ    Omahuta             8.51  234    PN      P       03 24 43.5 +9.1
MWZ    Matawai             8.64  204   eP       P       03 24 34.5 -1.7
MWZ    Matawai             8.64  204    PN      P       03 24 34.4 -1.8
URZ    Urewera             8.72  207    P       P       03 24 33.8 -3.7
       3.0nm,0.3s,baz=308,slow=5.6,SNR=23
URZ                                     S       S       03 26 18.2 +2.8
       17nm,0.3s,baz=168,slow=21,SNR=9.8
URZ    Urewera             8.72  207    P       P       03 24 33.7 -3.7
URZ    Urewera             8.72  207    PN      P       03 24 33.7 -3.7
KNZ    Kokohu              9.21  202   eP       P       03 24 43.8 -0.2
KNZ    Kokohu              9.21  202    PN      P       03 24 42.8 -1.2
BKZ    Black Stump Fm      9.75  206   eP       P       03 24 49.4 -2.1
BKZ    Black Stump Fm      9.75  206   ePN      P       03 24 47.0 -4.5
MOVZ   Moawhango          10.25  208   ePN      P       03 25 01.9 +3.5
MRZ    Mangatainoka R     11.40  206   eSN      S       03 27 15.4 -5.0
KIW    Kapiti Island      11.83  207   eSN      S       03 27 26.5 -4.3
MTW    Mount Morrison     11.86  205   ePN      P       03 25 17.1 -2.9
MTW                                    eSN      S       03 27 27.2 -4.4
CAW    Cannon Point       11.98  206   ePN      P       03 25 17.2 -4.4
PAWZ   Paruwai Farm       12.08  204    SN      S       03 27 32.3 -4.7
MRW    Makara Radio       12.22  207   eSN      S       03 27 36.3 -4.1
SNZO   South Karori       12.29  207   ePn      P       03 25 27.1 +1.3
TCW    Tory Channel       12.38  208   eSN      S       03 27 39.2 -5.0
TUWZ   Tuamarina          12.70  209   eSN      S       03 27 47.2 -4.6
QRZ    Quartz Range       12.86  214   ePN      P       03 25 32.0 -1.3
QRZ                                    eSN      S       03 27 53.1 -2.4
THZ    Tophouse           13.42  211   ePN      P       03 25 37.5 -3.2
THZ                                    eSN      S       03 28 03.4 -5.5
MQZ    McQueen's Vall     15.13  207   eSN      S       03 28 39.9 -9.4
RPZ    Rata Peaks         15.80  211    P       P       03 26 15.0 +3.5
       5.1nm,0.3s,baz=358,slow=1.9,SNR=15
RPZ                                     S       S       03 28 57.8 -7.0
       2.5nm,0.3s,baz=342,slow=19,SNR=5.9
RPZ                                     LR      LR      03 33 03.4
       comp=Z,429nm,18.4s,baz=42,slow=38
FOZ    Fox Glacier        16.30  214   ePN      P       03 26 16.1 -1.8
DZM    Mont Dzumac        16.31  297    P       P       03 26 22.4 +4.3
       2.2nm,0.3s,baz=106,slow=14,SNR=19
DZM                                     LR      LR      03 31 29.6
       comp=Z,3µm,18.0s,baz=201,slow=33
DZM    Mont Dzumac        16.31  297   eP       P       03 26 19.3 +1.2
DZM                                     LR      LR      03 31 29.6
NOUC   Port Laguerre      16.40  297   eP       P       03 26 22.6 +3.3
LBZ    Lake Benmore       16.71  211   ePN      P       03 26 23.6 +0.6
ODZ    Otahua Downs       17.04  209   ePN      P       03 26 24.5 -2.6
AFI    Afiamalu           17.49   20   eP       P       03 26 22.9  -10
RAR    Rarotonga          18.79   65    P       P       03 26 41.0 -7.6
       3.0nm,0.3s,baz=216,slow=4.0,SNR=5.2
RAR                                     LR      LR      03 31 59.6
       comp=Z,1µm,19.9s,baz=213,slow=31
RIV    Riverview          26.30  255   eP       P       03 28 08.4 +4.9
TBI    Tubuai             26.34   81   eS       S       03 32 27.5 -3.4
       725nm,30.5s
TBI                                    eLR      LR      03 34 14.7
       3µm,26.0s,baz=247
CNB    Canberra Magne     27.77  251⇑iP     P       03 28 21.2 +4.2
PPT    Papeete            28.86   70   eP       P       03 28 23.0 -3.8
       123nm,27.0s
PPT                                    eS       S       03 33 02.4 -9.1
       476nm,28.2s
PPT                                    eLR      LR      03 35 19.3
       3µm,27.2s,baz=238
PPT    Papeete            28.86   70    LR      LR      03 36 28.6
       comp=Z,1µm,21.9s,MS4.4,baz=231,slow=29
HNR    Honiara            29.41  311    LR      LR      03 38 17.6
       comp=Z,593nm,20.6s,MS4.2,baz=141,slow=32
TAU    Tasmania Unive     30.24  236   eP       P       03 28 40.4 +1.5
TAU                                     pmax    pmax
       comp=Z,35nm,0.9s,mb5.1
TAU    Tasmania Unive     30.24  236   eP       P       03 28 40.4 +1.5
       comp=Z,35nm,0.9s,mb5.1
TOO    Toolangi           30.95  247⇑iP     P       03 28 48.4 +3.2
CTA    Charters Tower     33.85  279    P       P       03 29 12.3 +1.6
CTA                                     pmax    pmax
       comp=Z,149nm,0.6s
CTA                                     MLR     MLR
       comp=Z,1µm,18.0s
CTA    Charters Tower     33.85  279    P       P       03 29 12.3 +1.7
       comp=Z,149nm,0.6s,mb6.1,baz=104,slow=10,SNR=176
CTA                                     LR      LR      03 41 48.3
       comp=Z,1µm,18.0s,MS4.8,baz=123,slow=34
CTA    Charters Tower     33.85  279    P       P       03 29 12.3 +1.7
CTA                                     LR      LR      03 41 48.3
CTAO   Charters Tower     33.85  279   eP       P       03 29 11.4 +0.7
CTAO                                    pmax    pmax
       comp=Z,118nm,0.6s,mb6.0
CTAO   Charters Tower     33.85  279   eP       P       03 29 11.4 +0.8
       comp=Z,118nm,0.6s,mb6.0
STKA   Stephens Creek     34.49  257⇑iP     P       03 29 18.8 +2.8
STKA   Stephens Creek     34.49  257    P       P       03 29 18.9 +3.0
       comp=Z,92nm,0.8s,mb5.8,baz=95,slow=9.6,SNR=122
STKA                                    ScP             03 35 38.9
       comp=Z,9.8nm,1.1s,baz=198,slow=5.2,SNR=3.2
STKA                                    LR      LR      03 42 34.2
       comp=Z,1µm,18.4s,MS4.7,baz=48,slow=35
ADE    Adelaide           36.51  251   eP       P       03 29 36.4 +3.3
PMG    Port Moresby       38.69  295    LR      LR      03 43 01.8
       comp=Z,862nm,20.8s,MS4.5,baz=339,slow=32
RKT    Rikitea            38.88   90   eS       Sx      03 35 28.6
       comp=Z,270nm,31.0s
RKT                                    eLR      LR      03 40 07.6
       comp=Z,2µm,28.5s,baz=258
TAOE   Nuku Hiva Isla     41.32   67   eLR      LR      03 41 32.8
       comp=Z,2µm,23.0s
WB2    Warramunga Arr     44.13  272⇑iP     P       03 30 36.5 +0.3
WB2                                    eS       S       03 37 06.2 +1.8
WRAB   Tennant Creek      44.13  272   eP       P       03 30 36.1 -0.1
WRAB                                    pmax    pmax
       comp=Z,185nm,0.6s,mb6.0
WRAB   Tennant Creek      44.13  272   eP       P       03 30 36.1 -0.2
       comp=Z,185nm,0.6s,mb6.0
WRA    Warramunga Arr     44.14  272    P       P       03 30 36.8 +0.5
WRA                                     S       S       03 37 07.0 +2.5
WRA                                     pmax    pmax
       comp=Z,140nm,0.6s
WRA                                     pmax    pmax
       comp=E,8.0nm,1.0s
WRA                                     smax
       comp=E,3.0nm,0.7s
WRA    Warramunga Arr     44.14  272    P       P       03 30 36.8 +0.5
       comp=E,140nm,0.6s,mb5.9,baz=110,slow=7.8,SNR=438
WRA                                     ScP             03 36 16.6
       comp=E,8.2nm,1.0s,baz=111,slow=4.2,SNR=9.8
WRA                                     S       S       03 37 07.0 +2.5
       comp=E,3.3nm,0.7s,baz=110,slow=13,SNR=5.0
WRA    Warramunga Arr     44.14  272    P       P       03 30 36.8 +0.5
WRA                                     ScP             03 36 16.6
WRA                                     S       S       03 37 07.0 +2.5
SBA    Scott Base         47.92  184   eP       P       03 31 11.1 +5.6
SBA                                     pmax    pmax
       comp=Z,60nm,1.1s,mb5.5
SBA    Scott Base         47.92  184   eP       P       03 31 11.1 +5.6
       comp=Z,60nm,1.1s,mb5.5
VNDA   Vanda              47.98  186   eP       P       03 31 09.5 +3.6
VNDA                                    pmax    pmax
       comp=Z,8.0nm,0.7s
VNDA   Vanda              47.98  186    P       P       03 31 11.2 +5.3
       comp=Z,5.1nm,0.6s,mb4.7,baz=8.8,slow=7.4,SNR=46
VNDA                                    LR      LR      03 48 01.0
       comp=Z,193nm,20.4s,MS4.1,baz=44,slow=31
VNDA   Vanda              47.98  186   eP       P       03 31 09.5 +3.6
       comp=Z,7.6nm,0.7s,mb4.8
KAKA   Kakadu             48.99  280   eP       P       03 31 13.8 -0.7
WAKE   Wake Island        51.69  341   eP       P       03 31 31.7 -3.3
       comp=Z,104nm,0.8s,mb5.8
FITZ   Fitzroy Crossi     52.40  270⇓iP     P       03 31 40.2 -0.1
FITZ   Fitzroy Crossi     52.40  270    P       P       03 31 40.4 +0.1
       comp=Z,88nm,0.8s,mb5.8,baz=174,slow=5.7,SNR=57
FITZ                                    LR      LR      03 52 42.6
       comp=Z,726nm,19.2s,MS4.7,baz=79,slow=34
KLBR   Kellerberrin       54.34  251   eP       P       03 31 54.1 -0.5
NWAO   Narrogin (SRO)     54.39  249    LR      LR      03 54 12.7
       comp=Z,589nm,19.7s,MS4.7,baz=275,slow=35
CASY   Casey              55.05  208⇓iP     P       03 32 01.2 +2.0
MBWA   Marble Bar         56.25  264   eP       P       03 32 07.4 -1.0
       comp=Z,18nm,0.7s,mb5.2
RPN    Rapa Nui           59.37  105    LR      LR      03 51 52.1
       comp=Z,594nm,18.2s,MS4.8,baz=256,slow=30
QSPA   South Pole Qui     59.59  180   eP       P       03 32 35.5 +4.4
       comp=Z,65nm,0.7s,mb5.8
MIR    Mirnyy             62.03  207c iP      P       03 32 48.8 +1.0
MIR                                     pmax    pmax
       comp=Z,90nm,1.2s,mb5.8
MAW    Mawson             72.21  201⇑iP     P       03 33 54.8 +3.1
MAW    Mawson             72.21  201    P       P       03 33 54.9 +3.2
       comp=Z,25nm,0.9s,mb5.1,baz=124,slow=6.8,SNR=24
MAW                                     LR      LR      04 03 59.6
       comp=Z,438nm,19.8s,MS4.7,baz=92,slow=34
KKM    Kota Kinabalu      72.63  288   eP       P       03 33 54.1 -1.0
KSM    Kuching            75.08  281   eP       P       03 34 08.6 -0.9
SYO    Syowa Base         77.00  193   ⇓P       P       03 34 20.5 +1.3
SYO    Syowa Base         77.00  193   ⇑PcP     PcP     03 34 28.8 -1.5
SYO    Syowa Base         77.00  193   ⇑pP      pP      03 34 32.4 -2.7
SNAA   Sanae              78.03  178   e        P       03 34 35.8  +11
SNAA   Sanae              78.03  178   e        P       03 34 38.1  +13
SNAA   Sanae              78.03  178   e        P       03 34 40.9  +16
SNAA   Sanae              78.03  178   e        P       03 34 44.0  +19
SNAA   Sanae              78.03  178⇑iP     P       03 34 27.7 +2.8
SNAA                                   e                03 34 35.8
SNAA                                   e                03 34 38.1
SNAA                                   e        pP      03 34 40.9 +0.1
SNAA                                   e        pP      03 34 44.0 +3.2
VNA3   Neumayer Olymp     78.18  176   e        P       03 34 34.4 +8.7
VNA3   Neumayer Olymp     78.18  176   e        P       03 34 38.4  +13
VNA3   Neumayer Olymp     78.18  176   e        P       03 34 41.9  +16
VNA3   Neumayer Olymp     78.18  176   e        P       03 34 45.0  +19
VNA3   Neumayer Olymp     78.18  176   e        PP      03 37 25.3 +0.6
VNA3   Neumayer Olymp     78.18  176⇑iP     P       03 34 28.6 +2.9
VNA3                                   e                03 34 34.4
VNA3                                   e                03 34 38.4
VNA3                                   e        pP      03 34 41.9 +0.3
VNA3                                   e        pP      03 34 45.0 +3.4
VNA3                                   e                03 37 25.3
VNA3                                   e                03 40 00.2
VNA3                                   e                03 40 11.2
MJAR   Matsushiro Arr     78.36  325    P       P       03 34 25.4 -2.0
MJAR                                    *PP     pP      03 34 41.3 -2.0
MJAR                                    pmax    pmax
       comp=Z,19nm,1.0s
MJAR                                    pmax    pmax
       comp=Z,8.0nm,0.9s
MJAR   Matsushiro Arr     78.36  325    P       P       03 34 25.4 -1.9
       comp=Z,19nm,1.0s,mb5.0,baz=164,slow=5.6,SNR=18
MJAR                                    pP      pP      03 34 41.3 -2.0
       comp=Z,7.9nm,0.9s,baz=156,slow=5.6,SNR=4.0
MAJO   Matsushiro         78.36  325   eP       P       03 34 25.4 -2.0
MAJO                                    pmax    pmax
       comp=Z,48nm,1.3s,mb5.3
MAJO   Matsushiro         78.36  325   eP       P       03 34 25.4 -2.0
       comp=Z,48nm,1.3s,mb5.3
MAT    Matsushiro         78.36  325   eP       P       03 34 25.0 -2.4
MAT                                     pmax    pmax
       comp=Z,39nm,1.2s,mb5.2
MAT    Matsushiro         78.36  325   eP       P       03 34 25.0 -2.4
       comp=Z,39nm,1.2s,mb5.2
MAT    Matsushiro         78.36  325    P       P       03 34 24.6 -2.8
VNA2   Neumayer--Watz     78.61  177   e        P       03 34 37.1 +9.0
VNA2   Neumayer--Watz     78.61  177   e        P       03 34 40.0  +12
VNA2   Neumayer--Watz     78.61  177   e        P       03 34 43.2  +15
VNA2   Neumayer--Watz     78.61  177   e        P       03 34 47.8  +20
VNA2   Neumayer--Watz     78.61  177⇑iP     P       03 34 31.4 +3.3
VNA2                                   e                03 34 37.1
VNA2                                   e                03 34 40.0
VNA2                                   e        pP      03 34 43.2 -0.8
VNA2                                   e        pP      03 34 47.8 +3.8
VNA2                                   e                03 37 28.5
VNA2                                   e                03 40 05.2
VNA2                                   e                03 40 14.6
NVL    N'lazarevskaya     78.75  183⇓iP     P       03 34 31.5 +2.6
NVL                                    i *PP    pP      03 34 41.2 -3.6
NVL                                    i *SP    sP      03 34 45.3 -5.7
NVL                                     pmax    pmax
       comp=Z,5.0nm,1.2s,mb4.3
VNA1   Neumayer--Stat     78.84  177   e        P       03 34 38.7 +9.3
VNA1   Neumayer--Stat     78.84  177   e        P       03 34 41.7  +12
VNA1   Neumayer--Stat     78.84  177   e        P       03 34 44.8  +15
VNA1   Neumayer--Stat     78.84  177   e        PP      03 37 28.5 -1.5
VNA1   Neumayer--Stat     78.84  177⇑iP     P       03 34 32.8 +3.5
VNA1                                   e                03 34 38.7
VNA1                                   e                03 34 41.7
VNA1                                   e        pP      03 34 44.8 -0.5
VNA1                                   e        pP      03 34 49.8 +4.5
VNA1                                   e                03 37 28.5
PLCA   Paso Flores        82.40  133   eP       P       03 34 51.6 +2.9
PLCA                                   e        pP      03 35 08.7 +3.9
PLCA                                    pmax    pmax
       comp=Z,12nm,1.0s
PLCA   Paso Flores        82.40  133    P       P       03 34 51.9 +3.1
       comp=Z,11nm,0.9s,mb4.8,baz=222,slow=5.8,SNR=15
PLCA                                    LR      LR      04 02 35.4
       comp=Z,290nm,21.7s,MS4.6,baz=90,slow=29
PLCA   Paso Flores        82.40  133   eP       P       03 34 51.6 +2.8
       comp=Z,12nm,1.0s,mb4.8
PLCA                                   e        pP      03 35 08.7 +3.9
ASAJ   Asahikawa          82.57  333    P       P       03 34 47.9 -1.6
ASAJ                                    pmax    pmax
       comp=Z,44nm,0.9s
ASAJ   Asahikawa          82.57  333    P       P       03 34 47.9 -1.6
       comp=Z,44nm,0.9s,mb5.5,baz=214,slow=7.6,SNR=18
FX1    Attu Island--F     83.41  355   eP       P       03 34 52.2 -1.4
SSE    Sheshan            84.22  311    P       P       03 35 00.6 +2.4
SSE                                     AMB     AMB
       comp=Z,20nm,0.7s,mb5.4
SSE                                     AMB     AMB
       comp=Z,30nm,3.5s
KS15   Wonju Array Si     84.48  320   eP       P       03 34 58.5 -0.9
UNV    Unalaska Valle     84.60    7   eP       P       03 34 57.8 -1.7
       comp=Z,108nm,1.0s,mb5.9
YSS    Yuzh-Sakhalins     84.87  334    P       P       03 35 01.0 -0.1
YSS                                    e        pP      03 35 13.0 -4.2
YSS                                     pmax    pmax
       comp=Z,100nm,1.0s,mb5.9
YSS                                     pmax    pmax
       comp=E,70nm,1.1s
YSS    Yuzh-Sakhalins     84.87  334   eP       P       03 35 01.0 -0.1
       comp=E,79nm,0.9s,mb5.8
KULM   Kulim              85.28  279   eP       P       03 35 03.6 -0.2
PET    Petropavlovsk      85.66  346   eP       P       03 35 05.5 +0.7
PET                                    e                03 45 26.6
PET                                     pmax    pmax
       comp=Z,54nm,1.3s,mb5.6
PET                                     pmax    pmax
       comp=Z,100nm,14.3s
PET                                     MLR     MLR
       comp=Z,800nm,17.0s,MS5.2
PFO    Pinyon Flat Ob     86.26   47   eP       P       03 35 08.7 +0.5
PFO                                    e        pP      03 35 25.3 +0.9
PFO                                     pmax    pmax
       comp=Z,20nm,1.4s,mb5.2
PFO    Pinyon Flat Ob     86.26   47   eP       P       03 35 08.7 +0.4
       comp=Z,20nm,1.4s,mb5.2
PFO                                    e        pP      03 35 25.3 +0.8
NJ2    Nanjing            86.35  311   eP       P       03 35 08.1 -0.6
NJ2                                     PP      PP      03 38 30.1 -2.0
NJ2                                     SKS     SKS     03 45 28.0 +0.7
NJ2                                     S       S       03 45 38.0 -0.2
NJ2                                     AMB     AMB
       comp=Z,20nm,1.0s,mb5.3
NJ2                                     AMB     AMB
       comp=Z,160nm,11.0s
NJ2                                     LR      LR
       comp=N,570nm,22.2s,MS5.1
NJ2                                     LR      LR
       comp=E,530nm,20.8s,MS5.1
NJ2                                     LR      LR
       comp=Z,350nm,25.4s,MS4.7
CMB    Columbia Colle     86.83   42   eP       P       03 35 10.4 -0.5
CMB                                    e        pP      03 35 27.4 +0.3
CMB                                     pmax    pmax
       comp=Z,30nm,1.2s,mb5.4
CMB    Columbia Colle     86.83   42   eP       P       03 35 10.4 -0.5
       comp=Z,30nm,1.2s,mb5.4
CMB                                    e        pP      03 35 27.4 +0.3
DAC    Darwin (Calif)     87.30   45   eP       P       03 35 13.4 +0.2
DAC                                     pmax    pmax
       comp=Z,51nm,1.8s,mb5.5
DAC    Darwin (Calif)     87.30   45   eP       P       03 35 13.4 +0.1
       comp=Z,51nm,1.8s,mb5.5
OMM    Old Mammoth Mi     87.36   43   eP       P       03 35 14.0 +0.5
OMM                                    e        pP      03 35 30.9 +1.2
WDC    Whiskeytown Da     87.39   39   eP       P       03 35 13.4 -0.1
WDC                                    e        pP      03 35 29.4 -0.4
WDC                                     pmax    pmax
       comp=Z,39nm,1.5s,mb5.4
WDC    Whiskeytown Da     87.39   39   eP       P       03 35 13.4 -0.2
       comp=Z,39nm,1.5s,mb5.4
WDC                                    e        pP      03 35 29.4 -0.3
MTUM   Tungsten Hills     87.43   43   eP       P       03 35 14.4 +0.6
WCN    Washoe City        88.05   41   eP       P       03 35 16.7 -0.1
WCN                                     pmax    pmax
       comp=Z,7.0nm,0.9s,mb4.9
WCN    Washoe City        88.05   41   eP       P       03 35 16.7  0.0
       comp=Z,7.1nm,0.9s,mb4.9
LDFC   Landfair           88.06   47   eP       P       03 35 17.8 +0.9
BEKR   Beckwourth         88.10   41   eP       P       03 35 16.8 -0.2
       comp=Z,34nm,1.7s,mb5.3
BEKR                                   e        pP      03 35 33.4 +0.2
YBH    Yreka Blue Hor     88.11   38    P       P       03 35 17.1 +0.2
YBH                                     pmax    pmax
       comp=Z,4.0nm,0.7s
YBH    Yreka Blue Hor     88.11   38    P       P       03 35 17.1 +0.1
       comp=Z,4.3nm,0.7s,mb4.8,baz=208,slow=2.5,SNR=12
YBH    Yreka Blue Hor     88.11   38   eP       P       03 35 17.1 +0.2
       comp=Z,10nm,1.1s,mb5.0
NVAR   Mina Array Bea     88.30   43    P       P       03 35 17.9  0.0
       comp=Z,8.2nm,0.7s,mb5.0,baz=228,slow=9.8,SNR=57
NVAR                                    pP      pP      03 35 34.7 +0.5
       comp=Z,8.0nm,1.0s,baz=210,slow=5.6,SNR=6.1
NVAR                                    PKKPbc          03 53 04.8
       comp=Z,0.6nm,0.6s,baz=282,slow=2.5,SNR=5.5
MNV    Mina               88.39   43   eP       P       03 35 18.1 -0.3
MNV                                     pmax    pmax
       comp=Z,49nm,1.7s,mb5.5
MNV    Mina               88.39   43   eP       P       03 35 18.1 -0.3
       comp=Z,49nm,1.7s,mb5.5
NEN    Nelson             88.59   47   eP       P       03 35 19.6 +0.1
NEN                                    e        pP      03 35 37.2 +1.5
TPH    Tonopah            88.71   44   eP       P       03 35 20.1 +0.2
TPH                                    e*PP     pP      03 35 32.3 -3.9
TPH                                     pmax    pmax
       comp=Z,7.0nm,0.7s,mb5.1
TPH    Tonopah            88.71   44   eP       P       03 35 20.1 +0.2
       comp=Z,6.8nm,0.7s,mb5.1
TPH                                    epP      pP      03 35 32.3 -3.9
TPH                                    esP      sP      03 35 37.0 -5.1
MDJ    Mudanjiang         88.75  326    P       P       03 35 19.0 -0.9
MDJ                                     AMB     AMB
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	comp=Z,10.0nm,0.8s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,100nm,4.7s						
MDJ	**Mudanjiang**	**88.75**	**326**	*e*P	**P**	**03 35 19.5**	**-0.4**
	comp=Z,10nm,0.8s,mb5.2						
CFAA	**Coronel Fontan**	**89.14**	**127**	P	**P**	**03 35 25.6**	**+3.5**
	comp=Z,1.3nm,0.9s,mb4.3,baz=246,slow=4.2,SNR=18						
CFAA				pP	pP	03 35 42.8	+4.4
	comp=Z,1.9nm,1.1s,baz=226,slow=5.2,SNR=5.8						
TUC	**Tucson**	**89.16**	**51**	*e*P	**P**	**03 35 22.7**	**+0.5**
TUC				*e*	pP	03 35 40.5	+2.0
TUC				pmax	pmax		
	comp=Z,70nm,1.6s,mb5.7						
TUC	**Tucson**	**89.16**	**51**	*e*P	**P**	**03 35 22.7**	**+0.5**
	comp=Z,70nm,1.6s,mb5.7						
TUC				*e*	pP	03 35 40.5	+2.0
MOD	**Modoc**	**89.52**	**39**	*e*P	**P**	**03 35 23.4**	**-0.2**
	comp=Z,13nm,1.1s,mb5.2						
MOD				*e*	pP	03 35 40.7	+0.8
BMN	**Battle Mountai**	**90.26**	**42**	*e*P	**P**	**03 35 26.8**	**-0.3**
BMN				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.1						
BMN	**Battle Mountai**	**90.26**	**42**	*e*P	**P**	**03 35 26.8**	**-0.3**
	comp=Z,12nm,1.2s,mb5.1						
CN2	**Changchun**	**90.26**	**323**	*e*P	**P**	**03 35 26.3**	**-0.8**
CN2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.8						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,1μm,15.0s,MS5.5						
CN2				LR	LR		
	comp=E,500nm,15.0s,MS5.5						
CN2				LR	LR		
	comp=Z,700nm,16.0s,MS5.2						
WUAZ	**Wupatki**	**90.72**	**48**	*e*P	**P**	**03 35 30.6**	**+1.2**
	comp=Z,61nm,1.4s,mb5.7						
WUAZ				*e*	pP	03 35 47.6	+1.9
NST	**Nakhon Sawan**	**91.07**	**287**	P	**P**	**03 35 32.3**	**+0.8**
KLR	**Kul'dur**	**91.16**	**330**	*e*P	**P**	**03 35 27.2**	**-3.9**
ELK	**Elko**	**91.61**	**42**	*e*P	**P**	**03 35 33.2**	**-0.2**
ELK				pmax	pmax		
	comp=Z,18nm,1.4s						
ELK	**Elko**	**91.61**	**42**	*e*P	**P**	**03 35 33.2**	**-0.3**
	comp=Z,18nm,1.4s,mb5.2						
GYA	**Guiyang**	**91.64**	**300**	P	**P**	**03 35 34.3**	**+0.4**
GYA				PP	PP	03 39 14.3	-1.0
GYA				SKS	SKS	03 46 01.5	+1.7
GYA				S	S	03 46 28.2	+1.3
GYA				PS	PS	03 47 47.6	-1.0
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb5.0						
GYA				LR	LR		
	comp=N,370nm,18.0s,MS5.0						
GYA				LR	LR		
	comp=E,390nm,17.8s,MS5.0						
GYA				LR	LR		
	comp=Z,410nm,18.4s,MS4.9						
ENH	**Enshi**	**91.70**	**304**	*e*P	**P**	**03 35 34.4**	**+0.2**
	comp=Z,29nm,0.9s,mb5.6						
MVU	**Marysvale**	**92.02**	**46**	*e*P	**P**	**03 35 36.3**	**+1.0**
	comp=Z,16nm,1.4s,mb5.2						
NANT	**Nan**	**92.22**	**290**	P	**P**	**03 35 39.0**	**+2.3**
TXAR	**Lajitas Array**	**92.42**	**57**	P	**P**	**03 35 38.2**	**+0.8**
TXAR				*PP	pP	03 35 54.6	+0.8
TXAR						03 52 49.4	
TXAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TXAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TXAR	**Lajitas Array**	**92.42**	**57**	P	**P**	**03 35 38.2**	**+0.7**
	comp=Z,2.6nm,1.0s,mb4.5,baz=211,slow=7.3,SNR=17						
TXAR				pP	pP	03 35 54.6	+0.8
	comp=Z,4.5nm,1.0s,baz=194,slow=5.2,SNR=11						
TXAR				PKKPbc		03 52 49.4	
	comp=Z,0.2nm,0.6s,baz=90,slow=3.8,SNR=3.8						
TXAR	**Lajitas Array**	**92.42**	**57**	P	**P**	**03 35 38.2**	**+0.7**
TXAR				pP	pP	03 35 54.6	+0.8
TXAR				PKKPbc		03 52 49.4	
MNTX	**Cornudas Mount**	**92.52**	**54**	*e*P	**P**	**03 35 37.8**	**0.0**
	comp=Z,11nm,1.3s,mb5.1						
MNTX				*e*	pP	03 35 54.9	+0.7
BNM	**Barren Site**	**93.06**	**52**	*e*P	**P**	**03 35 40.8**	**+0.5**
BNM				*e*	pP	03 35 57.5	+0.9
BMO	**Blue Mountains**	**93.12**	**38**	*e*P	**P**	**03 35 39.3**	**-0.9**
BMO				*e*	pP	03 35 56.6	0.0
BMO				pmax	pmax		
	comp=Z,18nm,1.6s,mb5.2						
BMO	**Blue Mountains**	**93.12**	**38**	*e*P	**P**	**03 35 39.3**	**-1.0**
	comp=Z,18nm,1.6s,mb5.2						
BMO				*e*	pP	03 35 56.6	0.0
TMUT	**Trail Mountain**	**93.12**	**46**	*e*P	**P**	**03 35 41.0**	**+0.6**
SRU	**San Rafael**	**93.43**	**46**	*e*P	**P**	**03 35 41.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**93.48**	**289**	P	**P**	**03 35 44.1**	**+1.6**
CMAR						03 39 29.2	
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**93.48**	**289**	P	**P**	**03 35 44.1**	**+1.6**
	comp=Z,5.3nm,0.7s,mb5.1,baz=142,slow=3.9,SNR=14						
CMAR				PP	PP	03 39 29.1	-0.9
	comp=Z,0.8nm,0.4s,baz=142,slow=8.0,SNR=4.6						
GDL2	**Guadalupe Moun**	**93.52**	**55**	*e*P	**P**	**03 35 42.6**	**+0.3**
GDL2				*e*	pP	03 35 59.7	+0.9
SPUT	**South Promonto**	**93.60**	**43**	*e*P	**P**	**03 35 42.5**	**0.0**
SPUT				*e*	pP	03 35 59.8	+0.9
ANMO	**Albuquerque**	**93.63**	**51**	P	**P**	**03 35 43.2**	**+0.4**
ANMO				*PP	pP	03 35 59.3	+0.1
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ANMO	**Albuquerque**	**93.63**	**51**	P	**P**	**03 35 43.1**	**+0.4**
	comp=Z,2.3nm,0.8s,mb4.7,baz=208,slow=7.0,SNR=11						
ANMO				pP	pP	03 35 59.3	+0.1
	comp=Z,7.4nm,1.2s,baz=220,slow=5.9,SNR=6.2						
ANMO	**Albuquerque**	**93.63**	**51**	*e*P	**P**	**03 35 43.2**	**+0.4**
	comp=Z,1.5nm,0.6s,mb4.6						
ANMO				*e*	pP	03 35 58.9	-0.3
HVU	**Hansel Valley**	**93.70**	**43**	*e*P	**P**	**03 35 43.2**	**+0.2**
HVU				*e*	pP	03 36 00.0	+0.7
SPU	**Mount Spurr**	**93.78**	**12**	*e*P	**P**	**03 35 40.8**	**-2.1**
HLID	**Hailey**	**93.87**	**41**	*e*P	**P**	**03 35 43.4**	**-0.3**
	comp=Z,4.7nm,0.8s,mb5.0						
PV01	**Paradox Valley**	**94.08**	**48**	*e*P	**P**	**03 35 44.9**	**+0.1**
TCUT	**Toone Canyon**	**94.11**	**44**	*e*P	**P**	**03 35 45.3**	**+0.5**
TCUT				*e*	pP	03 35 58.2	-3.0
CPRX	**Cap Rock**	**94.33**	**54**	*e*P	**P**	**03 35 46.5**	**+0.5**
CPRX				*e*	pP	03 36 03.0	+0.6
RRI2	**Red Ridge**	**95.51**	**42**	*e*P	**P**	**03 35 51.3**	**+0.2**
	comp=Z,30nm,1.5s,mb5.5						
RRI2				*e*	pP	03 36 08.3	+0.8
MCMT	**McKenzie Canyo**	**95.54**	**40**	*e*P	**P**	**03 35 51.7**	**+0.5**
MCMT				*e*	pP	03 36 08.6	+0.9
TPAW	**Teton Pass**	**95.81**	**42**	*e*P	**P**	**03 35 52.7**	**+0.2**
	comp=Z,3.7nm,0.8s,mb4.9						
SNOW	**Snow King Moun**	**95.91**	**42**	*e*P	**P**	**03 35 52.5**	**-0.4**
	comp=Z,11nm,0.9s,mb5.3						
WUWY	**Wally Ulrich**	**95.96**	**42**	*e*P	**P**	**03 35 53.2**	**0.0**
WUWY				*e*	pP	03 36 10.2	+0.6
IMW	**Indian Meadow**	**96.06**	**42**	*e*P	**P**	**03 35 53.8**	**+0.2**
	comp=Z,18nm,1.4s,mb5.3						
LOHW	**Long Hollow**	**96.09**	**42**	*e*P	**P**	**03 35 53.5**	**-0.3**
	comp=Z,25nm,1.7s,mb5.4						
BW06	**Boulder Array**	**96.20**	**44**	*e*P	**P**	**03 35 52.3**	**-1.9**
	comp=Z,4.9nm,1.4s,mb4.7						
PDAR	**Pinedale Array**	**96.20**	**44**	P	**P**	**03 35 54.0**	**-0.3**
	comp=Z,1.3nm,0.8s,mb4.4,baz=207,slow=3.3,SNR=9.6						
PDAR				PKKPbc		03 52 42.5	
	comp=Z,1.3nm,0.6s,baz=80,slow=4.5,SNR=11						
MCK	**McKinley**	**96.71**	**13**	*e*P	**P**	**03 35 55.5**	**-0.6**
MCK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
MCK	**McKinley**	**96.71**	**13**	*e*P	**P**	**03 35 55.5**	**-0.6**
	comp=Z,5.3nm,0.9s,mb5.0						
BOZ	**Bozeman (W)**	**96.73**	**40**	*e*P	**P**	**03 35 56.2**	**-0.4**
BOZ				*e**PP	pP	03 36 09.1	-3.9
BOZ				pmax	pmax		
	comp=Z,11nm,1.6s,mb5.0						
BOZ	**Bozeman (W)**	**96.73**	**40**	*e*P	**P**	**03 35 56.2**	**-0.4**
	comp=Z,11nm,1.6s,mb5.0						
BOZ				*e*pP	pP	03 36 09.1	-3.9
COLA	**College**	**97.95**	**12**	*i* P	**P**	**03 36 00.4**	**-1.3**
COLA	**College**	**97.95**	**12**	*e*P	**P**	**03 36 00.3**	**-1.4**
	comp=Z,7.3nm,0.8s,mb5.3						
ILAR	**Eielson Array**	**98.04**	**13**	P	**P**	**03 36 00.4**	**-1.7**
ILAR						03 39 55.4	
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**98.04**	**13**	P	**P**	**03 36 00.4**	**-1.7**
	comp=Z,2.5nm,0.9s,mb4.8,baz=219,slow=5.8,SNR=17						
ILAR				PP	PP	03 39 55.4	-9.0
	comp=Z,1.2nm,0.9s,baz=259,slow=7.3,SNR=4.2						
ILAR				PKKPbc		03 52 33.9	
	comp=Z,0.6nm,0.7s,baz=327,slow=3.0,SNR=6.2						
LPAZ	**La Paz**	**98.06**	**114**	P	**P**	**03 36 06.6**	**+3.3**
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LPAZ	**La Paz**	**98.06**	**114**	P	**P**	**03 36 06.6**	**+3.3**
	comp=Z,0.7nm,0.6s,mb4.4,baz=316,slow=7.2,SNR=6.2						
LPAZ				PKKPbc		03 52 37.8	
	comp=Z,0.6nm,0.7s,baz=160,slow=6.5,SNR=3.9						
IMA	**Indian Mountai**	**98.08**	**10**	*e*P	**P**	**03 36 01.8**	**-0.5**
IMA				pmax	pmax		
	comp=Z,32nm,1.3s,mb5.7						
IMA	**Indian Mountai**	**98.08**	**10**	*e*P	**P**	**03 36 01.8**	**-0.4**
	comp=Z,32nm,1.3s,mb5.7						
RSSD	**Black Hills**	**100.28**	**45**	*e*P	P	03 36 12.8	0.0
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RSSD	**Black Hills**	**100.28**	**45**	*e*Pdif	P	03 36 12.8	0.0
	comp=Z,4.4nm,0.9s						
SONM	**Songino Array**	**103.26**	**318**	Pdiff	Pdif	03 36 30.7	+4.7
	comp=Z,0.4nm,0.6s,baz=124,slow=4.5,SNR=4.5						
SONM				PP	PP	03 40 38.6	-5.8
	comp=Z,0.7nm,0.8s,baz=135,slow=5.2,SNR=5.2						
SIV	**San Ignacio**	**103.71**	**118**	PKKPbc		03 52 20.8	
	comp=Z,1.0nm,0.8s,baz=110,slow=5.2,SNR=5.2						
YKA	**Yellowknife Ar**	**105.54**	**26**	PKiKP		03 40 47.2	
	comp=Z,0.7nm,0.6s,baz=249,slow=1.5,SNR=4.2						
YKA				PKKPbc		03 52 14.4	
	comp=Z,2.6nm,0.8s,baz=39,slow=3.2,SNR=12						
YKA				PKKP	PKKP	03 52 30.3	+16
	comp=Z,1.1nm,0.7s,baz=45,slow=4.7,SNR=9.0						
YKA	**Yellowknife Ar**	**105.54**	**26**	PKPdf		03 40 47.2	
YKA				PKKPbc		03 52 14.4	
YKA				PKKP	PKKP	03 52 30.3	+16
ZAK	**Zakamensk**	**106.29**	**319**	*e*P	Pdif	03 36 42.2	+3.0
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ULM	**Lac du Bonnet**	**108.13**	**42**	PKiKP		03 40 52.7	
	comp=Z,2.1nm,0.6s,baz=357,slow=8.4,SNR=3.3						
ULM				PKKP	PKKP	03 52 20.4	+10
	comp=Z,2.3nm,0.7s,baz=69,slow=4.0,SNR=4.8						
BDFB	**Brasilia**	**113.47**	**126**	*i* PKIKP	PKPdf	03 41 04.9	+1.3
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BDFB	**Brasilia**	**113.47**	**126**	PKiKP		03 41 04.8	
	comp=Z,1.8nm,0.8s,baz=195,slow=9.2,SNR=4.2						
BDFB				PKKPbc		03 51 47.9	
	comp=Z,2.2nm,0.8s,baz=102,slow=9.3,SNR=2.8						
BOSA	**Boshof**	**117.16**	**203**	PKIKP	PKPdf	03 41 13.3	+2.8
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BOSA	**Boshof**	**117.16**	**203**	PKP	PKPdf	03 41 13.2	+2.8
	comp=Z,3.7nm,0.7s,baz=191,slow=8.1,SNR=3.7						
MKAR	**Makanchi Array**	**117.88**	**310**	PKP	PKPdf	03 41 11.8	+0.4
	comp=Z,4.0nm,0.7s,baz=194,slow=0.6,SNR=32						
MKAR				PKKPbc		03 51 34.9	
	comp=Z,0.3nm,0.3s,baz=270,slow=4.9,SNR=4.4						
ZAL	**Zalesovo**	**118.16**	**318**	PKIKP	PKPdf	03 41 11.9	+0.2
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZAL	**Zalesovo**	**118.16**	**318**	PKP	PKPdf	03 41 11.9	+0.1
	comp=Z,2.8nm,0.4s,baz=28,slow=14,SNR=7.4						
NVS	**Novosibirsk**	**119.25**	**319**	*i* PKIKP	PKPdf	03 41 12.7	-1.2
NVS				pmax	pmax		
	comp=Z,16nm,1.3s						
NVS				pmax	pmax		
	comp=E,13nm,1.5s						
KSH	**Kashi**	**120.33**	**301**	*e*PKP	PKPdf	03 41 18.7	+2.3
KSH				*e*PKS	PKS	03 44 53.1	+0.9
KSH				*e*SKS	SKS	03 48 25.1	+17
KSH				*e*SKKS		03 49 30.1	
KSH				PP	PP		
	comp=Z,350nm,4.2s						
KSH				LR	LR		
	comp=N,3μm,25.0s						
KSH				LR	LR		
	comp=E,690nm,12.5s						
ULHL	**Ulahol**	**120.86**	**304**	P	PKPdf	03 41 18.8	+1.4
	SNR=27						
TKM2	**Tokmak 2**	**121.49**	**304**	P	PKPdf	03 41 19.4	+0.8
	SNR=11						
KZA	**Kyzart**	**121.53**	**303**	P	PKPdf	03 41 20.3	+1.7
	SNR=30						
KBK	**Karagaybulak**	**121.89**	**304**	P	PKPdf	03 41 20.4	+1.1
	SNR=9.7						
UCH	**Uchtor**	**122.10**	**303**	P	PKPdf	03 41 21.7	+1.9
	SNR=30						
CHMS	**Chumysh**	**122.11**	**304**	P	PKPdf	03 41 20.8	+1.1
	SNR=8.7						
FRU	**Bishkek**	**122.17**	**304**	*e*PKIKP	PKPdf	03 41 20.6	+0.8
AAK	**Ala-Archa**	**122.21**	**304**	*e*PKIKP	PKPdf	03 41 20.0	+0.1
USP	**Ospenovka**	**122.35**	**304**	P	PKPdf	03 41 20.7	+0.5
	SNR=9.1						
AML	**Almayashu**	**122.67**	**303**	P	PKPdf	03 41 22.3	+1.5
	SNR=28						
EKS2	**Erkin-Say**	**122.73**	**304**	P	PKPdf	03 41 22.0	+1.1
	SNR=12						
SCHQ	**Schefferville**	**126.31**	**42**	PKP	PKPdf	03 41 27.0	-0.4
	comp=E,6.2nm,0.8s,baz=278,slow=2.5,SNR=17						
SCHQ	**Schefferville**	**126.31**	**42**	PKP	PKPdf	03 41 27.0	-0.4
LSZ	**Lusaka**	**127.97**	**213**	*e*PKIKP	PKPdf	03 41 34.8	+3.1
DAG	**Danmarks Havn**	**132.66**	**6**⇑	*e*PKIKP	PKPdf	03 41 38.4	-0.7
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DAG	**Danmarks Havn**	**132.66**	**6**⇑	*i*P	PKPdf	03 41 38.4	-0.7
	comp=Z,2.7nm,0.7s						
SUMG	**Summit**	**132.81**	**15**	*e*PKPdf	PKPdf	03 41 41.4	+2.0
ARU	**Arti**	**133.21**	**321**	*i* PKIKP	PKPdf	03 41 41.1	+0.5
ARU				*e*		03 44 15.8	
ARU	**Arti**	**133.21**	**321**	*e*PKPdf	PKPdf	03 41 41.2	+0.6
SOKR	**Solikamsk**	**133.51**	**325**	*e*PKIKP	PKPdf	03 41 40.1	-1.0
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMBO	**Kilima Mbogo**	**134.03**	**233**	PKIKP	PKPdf	03 41 46.5	+3.2
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMBO	**Kilima Mbogo**	**134.03**	**233**	PKP	PKPdf	03 41 46.5	+3.1
	comp=Z,4.9nm,0.9s,baz=53,slow=4.8,SNR=4.4						
APA	**Apatity**	**138.54**	**342**⇑	*i*PKIKP	PKPdf	03 41 51.6	+1.5
APA				pmax	pmax		
	comp=Z,18nm,1.0s						
ARCES	**ARCESS Array B**	**138.72**	**348**	PKHKP		03 41 42.1	
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	**ARCESS Array B**	**138.72**	**348**	PKhKP		03 41 42.1	
	comp=Z,2.6nm,0.7s,baz=45,slow=3.4,SNR=12						
TI2	**Plekhanov**	**144.07**	**300**	*e*PKHKP		03 41 56.4	
DUS	**Dusheti**	**144.08**	**301**	P	PKPbc	03 41 59.8	0.0
BHD	**Baghdad**	**144.13**	**286**	*e*PKP	PKPdf	03 42 02.5	+1.7
GNI	**Garni**	**144.16**	**297**	P	PKPbc	03 41 58.8	-1.3
GNI	**Garni**	**144.16**	**297**	*i* PKIKP	PKPdf	03 42 01.1	+0.4
GNI	**Garni**	**144.16**	**297**	*e*PKPdf	PKPdf	03 42 00.7	0.0
MOS	**Moscow**	**144.46**	**326**	*e*PKHKP		03 41 57.7	
ZEI	**Tsey**	**144.61**	**302**	*e*PKIKP	PKPdf	03 42 01.2	-0.2
KAF	**Kangasniemi**	**144.68**	**340**	*e*pkp	PKPdf	03 41 58.5	-2.4
	baz=38,slow=3.3						
CLDR	**Caldiran**	**144.82**	**296**	*i* P	PKPdf	03 42 02.8	+0.9
GOF	**Gofitskoye**	**144.90**	**306**⇑	*i*PKIKP	PKPdf	03 42 01.6	-0.2
GOF				pmax	pmax		
	comp=Z,50nm,1.3s						
ONI	**Oni**	**144.96**	**302**	P	PKPdf	03 42 02.4	+0.3
HKR	**Hakkari**	**144.96**	**293**	*i* P	PKPdf	03 42 03.2	+1.0
PUL	**Pulkovo**	**145.13**	**335**	*i* PKIKP	PKPdf	03 42 00.9	-0.9
PUL				pmax	pmax		
	comp=Z,140nm,0.6s						
TVAN	**Van**	**145.23**	**295**	*i* P	PKPdf	03 42 03.3	+0.6
VANB	**Van**	**145.24**	**295**	P	PKPdf	03 42 02.8	+0.1
FINES	**FINESS Array B**	**145.27**	**340**	PKIKP	PKPdf	03 42 01.9	-0.1
FINES				pmax	pmax		
	comp=Z,101nm,0.7s						
FINES	**FINESS Array B**	**145.27**	**340**	PKP	PKPdf	03 42 01.9	0.0
	comp=Z,100nm,0.7s,baz=63,slow=3.3,SNR=447						
OBN	**Obninsk**	**145.29**	**325**α	*i*PKIKP	PKPdf	03 42 02.3	+0.1
OBN				pmax	pmax		
	comp=Z,62nm,0.8s						
OBN	**Obninsk**	**145.29**	**325**	*e*PKPdf	PKPdf	03 42 02.3	+0.1
KIV	**Kislovodsk**	**145.33**	**304**α	*i*PKIKP	PKPdf	03 42 03.5	+0.9
KIV				*i*		03 42 15.0	
KIV				*e*		03 45 28.1	
KIV				pmax	pmax		
	comp=Z,40nm,1.3s						
KIV				MLR	MLR		
	comp=Z,800nm,17.0s,MS5.6						
KIV	**Kislovodsk**	**145.33**	**304**	*e*PKPdf	PKPdf	03 42 03.3	+0.6
NSS	**Namsos**	**145.41**	**352**	*e*P	PKPdf	03 42 01.4	-0.7
NSS	**Namsos**	**145.41**	**352**	*e*	PKPdf	03 42 01.4	-0.7
VOR	**Voronezh**	**145.43**	**319**	PKP2	PKPab	03 42 03.0	-1.9
VOR				pmax	pmax		
	comp=Z,50nm,1.5s						
MSL	**Mosul**	**145.44**	**291**	*e*PKP	PKPdf	03 42 04.5	+1.4
MSL				*e*		03 42 07.0	
VRSR	**Storozhevoye**	**145.64**	**318**	*e*PKIKP	PKPdf	03 42 03.9	+1.0
VRSR				pmax	pmax		
	comp=N,20nm,0.6s						
VRSR				pmax	pmax		
	comp=Z,60nm,0.6s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.9s						
BTMT	**Batman**	**146.74**	**294**	*e*P	PKPdf	03 42 07.0	+1.7
EZM	**Erzurum**	**146.76**	**297**	P	PKPdf	03 42 08.0	+2.8
BEST	**Besiri**	**146.92**	**294**	*i* P	PKPdf	03 42 09.4	+3.8
SOC	**Sochi**	**147.51**	**304**	*i* PKP2	PKPab	03 42 09.4	-3.8
SOC				*e*		03 45 42.8	
SOC				*e*PPP	PPP	03 49 08.4	+10
SOC				pmax	pmax		
	comp=N,22nm,1.0s						
SOC				pmax	pmax		
	comp=Z,82nm,1.0s						
SOC				pmax	pmax		
	comp=E,14nm,0.9s						
MOL	**Molde**	**147.75**	**355**	*e*P	PKPdf	03 42 11.3	+5.2
MOL				AMb	AMB	03 42 15.2	
	comp=Z,104nm,1.4s						
GUMT	**Gumushane**	**148.15**	**298**	P	PKPdf	03 42 12.9	+5.5
ANN	**Anapa**	**148.84**	**307**	*i* PKHKP		03 42 07.4	
ANN				*i*		03 49 09.2	
ANN				pmax	pmax		
	comp=Z,178nm,1.1s						
FOO	**Floro**	**148.86**	**357**	*e*P	PKPdf	03 42 12.9	+5.1
FOO				AMb	AMB	03 42 17.3	
	comp=Z,133nm,1.5s						
URFA	**Urfa**	**148.88**	**293**	*e*P	PKPdf	03 42 13.8	+5.1
NB2	**NORSAR Subarra**	**148.88**	**351**	PKPabc	PKPdf	03 42 12.5	+4.6
	comp=Z,44nm,0.8s,baz=13,slow=2.8						
NB2	**NORSAR Subarra**	**148.88**	**351**	PKPa	PKPdf	03 42 12.5	+4.6
	baz=13,slow=2.8						
NOA	**NORSAR Array B**	**148.88**	**351**	PKHKP		03 42 08.0	
NOA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NOA				pmax	pmax		
	comp=Z,25nm,0.7s						
NOA	**NORSAR Array B**	**148.88**	**351**	PKP	PKPdf	03 42 08.0	+0.1
	comp=Z,6.1nm,0.8s,baz=360,slow=2.8,SNR=22						
NOA				PKPbc	PKPdf	03 42 11.9	+4.0
	comp=Z,25nm,0.7s,baz=15,slow=4.4,SNR=58						
NOA	**NORSAR Array B**	**148.88**	**351**	PKP	PKPdf	03 42 08.0	+0.1
NOA				PKPbc	PKPdf	03 42 11.9	+4.0
MALT	**Malatya**	**149.15**	**295**	P	PKPdf	03 42 14.2	+5.2
MALT	**Malatya**	**149.15**	**295**	*e*PKPdf	PKPdf	03 42 10.7	+1.6
MALT				*e*PKPbc	PKPdf	03 42 15.6	+6.5
MALT				*e*PKPab	PKPab	03 42 19.4	-0.6
MYA	**Malataya**	**149.15**	**295**	P	PKPdf	03 42 15.8	+6.7
MNK	**Minsk**	**149.73**	**330**	*e*PKHKP		03 42 14.0	
RUND	**Rundenannen**	**150.03**	**357**	*e*P	PKPdf	03 42 16.1	+6.3
RUND				AMb	AMB	03 42 19.4	
	comp=Z,128nm,1.5s						
SVST	**Sivas**	**150.16**	**298**	*i* P	PKPdf	03 42 20.6	+10
GAZ	**Gaziantep**	**150.17**	**292**	*e*P	PKPdf	03 42 17.4	+6.6
KAHT	**Ahir Dag**	**150.41**	**293**	*i* P	PKPdf	03 42 18.8	+7.6
COBT	**Iskenderun**	**150.96**	**291**	*i* P	PKPdf	03 42 20.0	+8.0
SIM	**Simferopol'**	**151.05**	**309**	*i* PKIKP	PKPdf	03 42 19.2	+7.4
SIM				pmax	pmax		
	comp=Z,76nm,0.7s						
HTY	**Hatay**	**151.06**	**290**	*e*P	PKPdf	03 42 19.9	+7.7
BNN	**Bunyan**	**151.12**	**296**	P	PKPdf	03 42 19.6	+7.5
CEYT	**Ceyhan**	**151.34**	**292**	*e*P	PKPdf	03 42 20.6	+8.1
BOYT	**Boyabat**	**151.43**	**301**	*i* P	PKPdf	03 42 20.9	+8.5
BHL	**Bhannes**	**151.44**	**286**	*e*P	PKPdf	03 42 21.0	+8.3
EIL	**Elat**	**151.57**	**277**	*e*PKPdf	PKPdf	03 42 14.6	+1.6
EIL				*e*PKPbc	PKPdf	03 42 21.1	+8.1
CTKT	**Corum**	**151.66**	**300**	*i* P	PKPdf	03 42 21.3	+8.4
CORM	**Corum**	**151.86**	**299**	*i* P	PKPdf	03 42 21.5	+8.4
AVNT	**Avonos**	**151.89**	**296**	*i* P	PKPdf	03 42 24.1	+11
SUW	**Suwalki**	**152.00**	**333**	*e*PKP	PKPdf	03 42 20.5	+7.6
CDAG	**Cicekdag**	**152.15**	**298**	*i* P	PKPdf	03 42 25.4	+12
TOS	**Tosya**	**152.16**	**301**	*e*P	PKPdf	03 42 22.0	+8.4
CANT	**Cankiri**	**152.54**	**300**	P	PKPdf	03 42 23.3	+9.1
BR131	**Keskin Array S**	**152.69**	**298**	*e*PKPbc	PKPdf	03 42 22.8	+8.4
BRTR	**Keskin Array B**	**152.69**	**298**	PKIKP	PKPdf	03 42 16.2	+1.8
BRTR						03 42 23.7	
BRTR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRTR				pmax	pmax		
	comp=Z,22nm,0.9s						
BRTR	**Keskin Array B**	**152.69**	**298**	PKP	PKPdf	03 42 16.1	+1.8
	comp=Z,5.6nm,1.0s,baz=90,slow=1.2,SNR=6.2						
BRTR				PKPbc	PKPdf	03 42 23.7	+9.3
	comp=Z,22nm,0.9s,baz=132,slow=3.9,SNR=30						
KAMT	**Kaman**	**152.69**	**297**	*e*P	PKPdf	03 42 22.9	+8.5
ELDT	**Eldivan**	**152.71**	**300**	*i* P	PKPdf	03 42 23.0	+8.6
PHNC	**Paralimni**	**152.80**	**288**	P	PKPdf	03 42 15.7	+1.0
	comp=Z,2.0nm,0.8s						
IKL	**Isikli**	**153.04**	**291**	*e*P	PKPdf	03 42 23.1	+8.1
SAFT	**Safranbolu**	**153.09**	**302**	P	PKPdf	03 42 24.0	+9.1
ANTO	**Ankara**	**153.31**	**299**	*e*P	PKPdf	03 42 23.2	+7.9
CSS	**Prodhromos**	**153.37**	**288**	P	PKPdf	03 42 24.7	+9.2
	comp=Z,2.3nm,0.7s						
MUD	**Monsted U'grnd**	**153.60**	**351**	*i* PKIKP	PKPdf	03 42 26.1	+11
MUD				*i*		03 42 37.0	
MUD				pmax	pmax		
	comp=Z,50nm,1.3s						
MUD	**Monsted U'grnd**	**153.60**	**351**	*i* P	PKPdf	03 42 26.1	+11
	comp=Z,50nm,1.3s						
MUD				*i*		03 42 37.0	
SGKT	**Sivrigoynuk**	**153.71**	**301**	*i* P	PKPdf	03 42 24.5	+8.8
LEF	**Lefka**	**153.73**	**288**	*i* P	PKPdf	03 42 25.6	+10
SZAC	**Souni-Zanaja**	**153.74**	**287**	P	PKPdf	03 42 25.3	+9.3
BSD	**Bornholm Skovb**	**153.76**	**343**	*i* PKIKP	PKPdf	03 42 24.5	+9.2
BSD				*i*		03 42 29.1	
BSD				*e*		03 42 38.6	
BSD				pmax	pmax		
	comp=Z,32nm,0.7s						
BSD	**Bornholm Skovb**	**153.76**	**343**	*i* P	PKPdf	03 42 24.5	+9.2
	comp=Z,32nm,0.7s						
BSD				*i*		03 42 29.1	
BSD				*e*		03 42 38.6	
ALFC	**Alevga**	**153.97**	**288**	P	PKPdf	03 42 23.1	+6.8
	comp=Z,1.3nm,0.8s						
KIZT	**Kizilcal**	**154.18**	**297**	*e*P	PKPdf	03 42 26.3	+10
MDU	**Mudurnu**	**154.36**	**301**	*e*P	PKPdf	03 42 26.4	+10
LVV	**L'vov**	**154.59**	**326**	*e*PKP2	PKPab	03 42 43.3	+0.9
GKP	**Gorka Klasztor**	**154.72**	**338**	*e*PKP	PKPdf	03 42 27.6	+11
ESK	**Eskdalemuir**	**154.94**	**7**	*e*PKPab	PKPab	03 42 41.5	-2.2
KWP	**Kalwaria**	**155.36**	**327**	*e*PKP	PKPdf	03 42 27.5	+10
DBIC	**Dimbokro**	**155.40**	**163**	PKIKP	PKPdf	03 42 21.0	+2.2
DBIC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DBIC	**Dimbokro**	**155.40**	**163**	PKP	PKPdf	03 42 20.9	+2.1
	comp=Z,5.7nm,1.0s,baz=191,slow=20,SNR=3.3						
ISP	**Isparta**	**155.41**	**295**	*e*PKIKP	PKPdf	03 42 30.8	+13
BSEG	**Bad Segeberg**	**155.85**	**348**	*e*PKPdf	PKPdf	03 42 20.0	+1.9
BSEG				*e*PKPab	PKPab	03 42 45.7	-1.9
ELL	**Elmali**	**156.03**	**292**	*e*P	PKPdf	03 42 33.4	+14
KOLS	**Kolonicke sedl**	**156.04**	**326**	*e*PKP	PKPdf	03 42 20.6	+2.0
DCN	**Croghan**	**156.21**	**14**	*e*P	PKPab	03 42 47.0	-2.2
OJC	**Ojcow**	**156.24**	**331**	*e*PKP	PKPdf	03 42 20.7	+1.9
DLF	**Lyons Farm**	**156.40**	**13**	*e*P	PKPab	03 42 47.7	-2.3
NIE	**Niedzica**	**156.61**	**329**	*e*PKP	PKPdf	03 42 21.2	+1.9
KSP	**Ksiaz**	**157.08**	**336**	*e*PKPdf	PKPdf	03 42 21.0	+1.1
KSP				*e*PKPab	PKPab	03 42 51.5	-1.6

KSP	**Ksiaz**	157.08	336	*e*PKP	PKPab	03 42 51.7	-1.3
KECS	**Kecovo**	157.21	327	*e*PKP	PKPab	03 42 51.6	-2.1
OKC	**Ostrava-Krasne**	157.21	332	*e*PKPAB	PKPab	03 42 50.3	-3.3
SBD1	**Bryn Du**	157.30	8	*e*P	PKPab	03 42 52.1	-1.8
SBD1				AMb	AMB	03 42 54.3	
	comp=Z,54nm,1.8s						
UPC	**Upice**	157.46	336	*e*PKPAB	PKPab	03 42 53.6	-1.1
DPC	**Dobruska-Polom**	157.48	336	*e*PKPAB	PKPab	03 42 53.1	-1.7
MORC	**Moravsky Berou**	157.50	333	*e*PKPdf	PKPdf	03 42 21.9	+1.5
MORC				*e*PKPab	PKPab	03 42 52.6	-2.3
CLL	**Collm**	157.69	342	⇓*e*PKIKP	PKPdf	03 42 22.0	+1.3
CLL				*e*		03 42 33.0	
CLL				pmax	pmax		
	comp=Z,25nm,1.0s						
CLL	**Collm**	157.69	342	*e*PKIKP	PKPdf	03 42 22.0	+1.3
CLL				*e*		03 42 33.0	
CLL				*i* PKP2	PKPab	03 42 53.5	-2.2
CLL				*i* PKP2	PKPab	03 42 56.8	+1.1
CLL				*e*		03 43 05.0	
HLM1	**Long Mynd**	157.73	8	*e*P	PKPab	03 42 54.1	-1.7
HLM1				AMb	AMB	03 42 55.2	
	comp=Z,71nm,1.8s						
SSP1	**Stoney Pound**	157.80	8	*e*P	PKPab	03 42 54.3	-1.8
SSP1				AMb	AMB	03 42 57.1	
	comp=Z,78nm,1.5s						
BRG	**Berggiesshubel**	157.81	340	*i* PKIKP	PKPdf	03 42 22.3	+1.5
BRG				*i*		03 42 33.1	
BRG				pmax	pmax		
	comp=Z,12nm,1.5s						
BRG	**Berggiesshubel**	157.81	340	*i* PKP	PKPdf	03 42 22.3	+1.5
BRG				*i*		03 42 33.1	
BRG				*i*		03 42 54.4	
CLZ	**Clausthal**	157.83	346	*e*PKPdf	PKPdf	03 42 22.5	+1.7
CLZ				*e*PKPab	PKPab	03 42 54.5	-1.7
PVCC	**Panska Ves**	157.92	338	*e*PKPAB	PKPab	03 42 55.2	-1.5
VYHS	**Vyhne**	157.95	329	*e*PKP	PKPab	03 42 53.7	-3.2
HTR	**Trewern Hill**	158.11	9	*e*P	PKPab	03 42 55.4	-2.1
HTR				AMb	AMB	03 42 57.8	
	comp=Z,57nm,1.6s						
MCH1	**Michaelchurch**	158.22	8	*e*P	PKPab	03 42 56.2	-1.7
MCH1				AMb	AMB	03 42 57.0	
	comp=Z,41nm,2.1s						
HAE	**Alders End**	158.24	8	*e*P	PKPab	03 42 56.3	-1.7
HAE				AMb	AMB	03 42 59.3	
	comp=Z,182nm,1.2s						
WTSB	**Winterswijk**	158.29	352	*e*PKP	PKPdf	03 42 22.1	+0.7
	comp=Z,17nm,1.8s						
WTSB				*e*x	x	03 42 54.8	
PRU	**Pruhonice**	158.40	338	*e*PKPAB	PKPab	03 42 56.8	-1.9
HGH	**Gray Hill**	158.60	8	*e*P	PKPab	03 42 57.7	-1.8
HGH				AMb	AMB	03 42 58.9	
	comp=Z,108nm,1.6s						
MOX	**Moxa**	158.66	343	*e*PKIKP	PKPdf	03 42 23.4	+1.5
MOX				*e*		03 42 57.6	
SRO	**Srobarova**	158.69	329	*e*PKP	PKPab	03 43 01.6	+1.5
NKC	**Novy Kostel**	158.82	341	*e*PKPAB	PKPab	03 42 58.0	-2.5
ZST	**Bratislava**	158.92	331	*e*PKP	PKPab	03 43 00.4	-0.7
KHC	**Kasperske Hory**	159.46	338	*e*PKP	PKPdf	03 42 22.0	-0.8
KHC				*e*		03 43 01.8	
KHC				*e*		03 43 05.0	
KHC	**Kasperske Hory**	159.46	338	*e*PKPDF	PKPdf	03 42 22.0	-0.8
KHC				*e*PKPAB	PKPab	03 43 01.8	-1.5
KHC				x	x	03 43 05.0	
HGN	**Heimansgroeve**	159.57	353	*e*PKP	PKPab	03 43 00.4	-3.3
	comp=Z,38nm,1.1s						
GRA1	**Grafenberg Arr**	159.64	343	*e*PKPdf	PKPdf	03 42 23.6	+0.6
GRA1				*e*PKPab	PKPab	03 43 02.8	-1.3
GRF	**Grafenberg Arr**	159.64	343	*e*PKIKP	PKPdf	03 42 23.6	+0.6
GRF				*e*		03 43 02.8	
GEC2	**GERESS Array S**	159.66	337	*e*PKIKP	PKPdf	03 42 23.4	+0.3
GEC2				*e*		03 43 02.5	
GERES	**GERESS Array B**	159.66	337	PKIKP	PKPdf	03 42 24.4	+1.3
GERES						03 43 03.0	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GERES	**GERESS Array B**	159.66	337	PKP	PKPdf	03 42 24.4	+1.3
	comp=Z,1.1nm,0.9s,baz=45,slow=1.9,SNR=8.8						
GERES				PKPab	PKPab	03 43 03.0	-1.2
	comp=Z,4.8nm,0.6s,baz=37,slow=4.6,SNR=13						
TNS	**Taunus Mts**	159.74	348	*e*PKIKP	PKPdf	03 42 24.2	+1.1
TNS				*e*		03 43 02.5	
MOA	**Molln**	160.32	335	⇓*i*P	PKPdf	03 42 24.7	+0.9
MOA				*i*		03 43 01.7	
GIVF	**Givet**	160.33	355	*e*PKIKP	PKPdf	03 42 25.0	+1.3
BAIF	**Baives**	160.42	356	*e*PKIKP	PKPdf	03 42 25.1	+1.3
WLF	**Walferdange**	160.63	352	*e*PKPab	PKPab	03 43 06.3	-2.1
SKO	**Skopje**	160.68	312	*e*PKP	PKPdf	03 42 39.0	+15
SKO				*i* PKP2	PKPab	03 43 08.0	-0.8
LANF	**Langenberg**	161.05	348	PKP	PKPab	03 43 07.3	-2.9
KBA	**Koelnbreinsper**	161.30	335	⇑*i*P	PKPdf	03 42 26.8	+2.0
KBA				*i*		03 43 11.9	
WLS	**Welschbruch**	161.68	349	PKP	PKPab	03 43 10.6	-2.4
FLN	**La Foliniere**	161.68	5	*e*PKIKP	PKPdf	03 42 26.3	+1.2
	comp=Z,38nm,1.3s						
CDF	**Champ du Feu**	161.69	349	*e*PKIKP	PKPdf	03 42 26.2	+1.0
WTTA	**Wattenberg**	161.72	339	⇑*i*P	PKPdf	03 42 27.5	+2.3
MOTA	**Moosalm**	161.81	340	⇓*i*P	PKPdf	03 42 26.3	+1.0
LDF	**La Druitiere**	161.88	5	*e*PKIKP	PKPdf	03 42 26.4	+1.1
MEZF	**Maizieres J’vi**	161.90	354	*e*PKIKP	PKPdf	03 42 26.9	+1.5
ECH	**Echery**	161.90	349	PKP	PKPab	03 43 10.9	-3.1
GRR	**Gorron**	162.02	6	*e*PKIKP	PKPdf	03 42 26.9	+1.4
THEF	**They Montfort**	162.06	351	PKP	PKPab	03 43 12.0	-2.7
FELD	**Feldberg**	162.08	347	PKP	PKPab	03 43 11.8	-2.9
DAVA	**Damuels**	162.20	342	⇓*i*P	PKPdf	03 42 27.4	+1.7
HAU	**Haudompre**	162.23	350	*e*PKIKP	PKPdf	03 42 26.8	+1.1
MOF	**Molkenrain**	162.26	349	PKP	PKPab	03 43 12.8	-2.7
HINF	**Hinteralfeld**	162.34	349	*e*PKIKP	PKPdf	03 42 26.8	+1.0
LOMF	**Lomont**	162.80	349	PKP	PKPab	03 43 15.6	-2.2
LOR	**Lormes**	163.22	356	*e*PKIKP	PKPdf	03 42 28.1	+1.4
	comp=Z,33nm,1.4s						
SSF	**Saint Saulge**	163.45	356	*e*PKIKP	PKPdf	03 42 28.3	+1.3
CABF	**La Chapelle**	163.63	350	*e*PKIKP	PKPdf	03 42 29.0	+1.8
	comp=Z,62nm,1.5s						
AVF	**Avril sur Loir**	163.73	357	*e*PKIKP	PKPdf	03 42 28.4	+1.2
SMF	**Signal de Mont**	163.84	356	*e*PKIKP	PKPdf	03 42 28.4	+1.0
MFF	**Saint Martin d**	163.86	5	*e*PKIKP	PKPdf	03 42 29.0	+1.6
	comp=Z,55nm,1.5s						
BGF	**Bois d’Agland**	163.98	358	*e*PKIKP	PKPdf	03 42 29.0	+1.5
ORX	**Oropa**	164.22	345	P	PKPab	03 43 22.2	-1.9
TCF	**Toulx Ste Croi**	164.26	360	*e*PKIKP	PKPdf	03 42 29.1	+1.3
AGO	**Saint Agoulin**	164.47	357	PKP	PKPab	03 43 23.5	-1.7
PLDF	**La Plantade**	164.53	356	PKP	PKPab	03 43 24.2	-1.2
LSD	**Ceresole Reale**	164.56	346	P	PKPab	03 43 24.3	-1.3
LPL	**La Plagne**	164.59	348	*e*PKIKP	PKPdf	03 42 30.0	+1.9
LPG	**La Plagne**	164.60	347	*e*PKIKP	PKPdf	03 42 29.9	+1.7
VALM		164.75	337	P	PKPab	03 43 24.3	-2.1
RSP	**Reno Superiore**	164.83	346	P	PKPab	03 43 25.2	-1.6
SARO	**Sassorosso**	164.84	336	P	PKPab	03 43 24.8	-2.1
CODM		164.84	338	P	PKPab	03 43 24.7	-2.2
BACM		164.87	337	P	PKPab	03 43 23.9	-3.1
FENE	**Fenestrelle**	164.99	346	P	PKPab	03 43 25.2	-2.3
BNI	**Bardonecchia**	165.04	347	*e*PKIKP	PKPdf	03 42 30.7	+2.1
BNI				*e*		03 43 26.5	
MAIM		165.05	336	P	PKPab	03 43 25.9	-1.9
PCP	**Pian Castagno**	165.09	342	P	PKPab	03 43 26.0	-1.9
RRL	**Cesana Torines**	165.15	347	P	PKPab	03 43 26.9	-1.3
RJF	**Les Rejaudoux**	165.24	1	*e*PKIKP	PKPdf	03 42 30.2	+1.4
EPON	**Pontenova**	165.27	27	PKP	PKPdf	03 42 30.1	+1.3
LBL	**Lubilhac**	165.29	357	PKP	PKPab	03 43 27.8	-0.9
ORIF	**Oris-en-Rattie**	165.32	349	*e*PKIKP	PKPdf	03 42 30.5	+1.6
MBDF	**Montbardon**	165.34	347	*e*PKIKP	PKPdf	03 42 30.5	+1.6
PZZ	**Prazzo**	165.48	345	P	PKPab	03 43 26.1	-3.5
FIN	**Finale Ligure**	165.49	342	P	PKPab	03 43 28.0	-1.7
ROB	**Roburent**	165.50	343	P	PKPab	03 43 27.2	-2.5
VIVF	**Saint-Julien-l**	165.54	352	*e*PKIKP	PKPdf	03 42 30.7	+1.6
LFF	**La Frestale**	165.57	4	*e*PKIKP	PKPdf	03 42 30.6	+1.5
CAF	**Calviac**	165.62	360	*e*PKIKP	PKPdf	03 42 30.8	+1.6
	comp=Z,18nm,1.2s						
MONE	**Monesi**	165.73	343	P	PKPab	03 43 28.9	-1.9
IMI	**Imperia**	165.86	342	P	PKPab	03 43 29.1	-2.2
SAOF	**Saorge**	165.87	343	PKP	PKPab	03 43 28.7	-2.7
AUTN	**L’Aution**	165.89	344	PKP	PKPab	03 43 28.9	-2.6
AUTN				PKP	PKPab	03 43 29.7	-1.8
TOUF	**Mont Tournerai**	165.92	344	PKP	PKPab	03 43 29.2	-2.4
NEGI	**Negi**	165.96	343	P	PKPab	03 43 29.1	-2.6
MVIF	**Mont Vial**	166.05	345	PKP	PKPab	03 43 29.8	-2.3
ERUA	**La Rua**	166.05	29	PKIKP	PKPdf	03 42 30.1	+0.5
REVF	**Revere**	166.15	344	PKP	PKPab	03 43 30.3	-2.3
SMRF	**Simiane la Rot**	166.28	349	*e*PKIKP	PKPdf	03 42 31.5	+1.8
LASF	**Ste Croix**	166.40	354	*e*PKIKP	PKPdf	03 42 31.5	+1.7
PGF	**Pioggiola**	166.77	337	*e*PKIKP	PKPdf	03 42 32.8	+2.7
MTLF	**Montolieu**	167.21	359	*e*PKIKP	PKPdf	03 42 32.0	+1.6
EPF	**Esparros**	167.44	6	*e*PKIKP	PKPdf	03 42 32.5	+2.0
ETSF	**Etsaut**	167.48	9	*e*PKIKP	PKPdf	03 42 32.4	+1.9
	comp=Z,11nm,0.9s						
EBIE	**Bielsa**	167.77	7	PKP	PKPdf	03 42 32.5	+1.7
EVO	**Evora**	168.49	43	*e*PKIKP	PKPdf	03 42 33.8	+2.5
	comp=Z,24nm,1.2s						
EMIR	**Miracle**	168.62	2	PKP	PKPdf	03 42 31.2	-0.1
GUD	**Guadarrama**	168.72	25	PKIKP	PKPdf	03 42 35.1	+3.8
EBAD	**Badajoz**	168.91	40	PKP	PKPdf	03 42 33.8	+2.3
EPOB	**Poblet**	169.17	4	PKP	PKPdf	03 42 32.6	+1.0
ESDC	**Sonseca Array**	169.63	27	PKP	PKPdf	03 42 33.5	+1.5
	comp=Z,3.6nm,1.0s,slow=3.8,SNR=8.1						
ESDC				PKPab	PKPab	03 43 46.7	-1.2
	comp=Z,1.1nm,0.7s,baz=304,slow=2.6,SNR=3.8						
ESDC	**Sonseca Array**	169.63	27	PKP	PKPdf	03 42 34.4	+2.5
EMIN	**Mina Concepcio**	169.79	43	PKP	PKPdf	03 42 34.1	+2.0
EADA	**Adamuz**	170.62	34	PKP	PKPdf	03 42 34.6	+2.0
ESPR	**Espera**	170.87	44	PKP	PKPdf	03 42 36.2	+3.4
EVIA	**Vianos**	171.08	24	PKIKP	PKPdf	03 42 36.3	+3.5
ETOB	**Tobarra**	171.38	19	PKP	PKPdf	03 42 35.8	+2.8
EQES	**Quesada**	171.60	29	PKP	PKPdf	03 42 35.7	+2.5
ELOJ	**Sierra Loja**	171.62	36	PKIKP	PKPdf	03 42 36.4	+3.2
ENIJ	**Nijar**	172.66	28	PKIKP	PKPdf	03 42 36.2	+2.4

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*NIED **10** 03:29:00,24.00N×123.60E,h35^{km},Mw3.9 Best double couple: M$_0$8.46×10^{14} NP1:ϕ$_s$49°,δ74°,λ77°. NP2:ϕ$_s$267°, δ20°,λ127°.*

JMA 10 03:29:05.2±0.1,23.97N×123.57E,h31^{km}±1^{km},M3.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	0.23	68	P	Pb	03 29 11.7	-0.2
HATJ				S	Sb	03 29 16.5	+0.1
IRIF	**Iriomote-Funau**	0.39	22	P	Pb	03 29 13.8	-0.2
IRIF				S	Sb	03 29 20.0	-0.1
JKRS	**Kuro-shima**	0.48	56	P	Pb	03 29 15.3	-0.1
JKRS				S	Sb	03 29 22.6	+0.2
JIJ	**Ishigaki jima**	0.65	53	P	Pb	03 29 17.5	-0.6
JIJ				S	Sb	03 29 26.2	-0.8
YOJ	**Yonaguni jima**	0.71	314	P	Pb	03 29 19.0	0.0
YOJ				S	Sb	03 29 28.0	-0.5
JTJ	**Tarama**	1.23	57	P	Pn	03 29 27.2	+0.7
JTJ				S	Sn	03 29 43.7	+1.5
JMJ	**Miyako jima 2**	1.78	61	P	Pn	03 29 35.9	+1.5
JMJ				*e*S	Sn	03 29 59.1	+2.9
JOGS	**Gusukube**	1.85	64	P	Pn	03 29 37.1	+1.7
JOGS				S	Sn	03 30 00.1	+2.1

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*IDC **10** 03:41:57.9±0.8,1.57S×134.48E,mb4.3/8,mb1 4.6/10, mb1mx4.4/15,mbtmp4.4/10,ML4.8/2,MS3.8/1,Ms1 3.7/1, ms1mx3.3/21,Error ellipse: s-maj=41.1km s-min=17.2km az=75.0*

*MOS **10** 03:42:01.7±2.3,1.56S×134.10E,h33^{km},mb5.4/5,Error ellipse: s-maj=31.5km s-min=14.6km az=104.7*

*BJI **10** 03:42:01.2,1.96S×134.90E,h75^{km},mB5.1,mb4.9*

*NEIC **10** 03:42:05.5±2.0,1.65S×134.30E,h53^{km}±18^{km},mb4.4/5, Error ellipse: s-maj=15.2km s-min=8.4km az=67.0*

ISC 10 03:42:01.4±0.5**,1.63S**±0.04×**134.3E**±0.1**,h33^{km},n40, σ0^{s}93**/42**,mb4.4**/16**,1D,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	11.17	190	*e*P	**P**	**03 44 41.9**	**-0.1**
KAKA				*e*S	**S**	**03 46 44.8**	**-1.9**
WRAB	**Tennant Creek**	18.19	180	*e*P	**P**	**03 46 13.1**	**-0.2**
	19nm,0.5s						
WRA	**Warramunga Arr**	18.20	180	P	**P**	**03 46 13.7**	**+0.3**
WRA				S	**S**	**03 49 27.0**	**-5.2**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
WRA	**Warramunga Arr**	18.20	180	P	**P**	**03 46 13.7**	**+0.2**
	comp=Z,2.5nm,0.3s,baz=360,slow=12,SNR=152						
WRA				S	**S**	**03 49 27.0**	**-5.2**
	comp=Z,0.4nm,0.3s,baz=358,slow=23,SNR=3.8						
WB2	**Warramunga Arr**	18.20	180	*e*P	**P**	**03 46 13.9**	**+0.5**
FITZ	**Fitzroy Crossi**	18.46	207	P	**P**	**03 46 16.1**	**-0.6**
	comp=Z,3.7nm,0.3s,baz=25,slow=7.3,SNR=47						
FITZ				S	**S**	**03 49 29.5**	**-8.7**
	comp=Z,5.4nm,0.3s,baz=192,slow=16,SNR=8.1						
CTA	**Charters Tower**	21.73	148	P	**P**	**03 46 56.8**	**+4.9**
CTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CTA	**Charters Tower**	21.73	148	P	**P**	**03 46 56.8**	**+4.9**
	comp=Z,4.1nm,0.7s,mb4.0,baz=319,slow=9.3,SNR=3.5						
CTAO	**Charters Tower**	21.73	148	P	**P**	**03 46 54.4**	**+2.5**
	comp=Z,8.2nm,0.8s,mb4.2						
MBWA	**Marble Bar**	24.07	215	*e*P	**P**	**03 47 16.7**	**+1.7**
	comp=Z,41nm,1.4s,mb4.7						
KSM	**Kuching**	24.22	277	*e*P	**P**	**03 47 18.2**	**+1.6**
STKA	**Stephens Creek**	30.85	168	P	**P**	**03 48 16.8**	**-0.2**
	comp=Z,1.9nm,0.4s,mb4.3,baz=302,slow=6.0,SNR=7.2						
STKA				LR	LR	04 01 34.5	
	comp=Z,162nm,18.1s,baz=15,slow=38						
KLBR	**Kellerberrin**	33.66	206	*e*P	**P**	**03 48 41.7**	**+0.2**
CMAR	**Chiang Mai Arr**	40.13	301	P	**P**	**03 49 36.6**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	**Chiang Mai Arr**	40.13	301	P	**P**	**03 49 36.5**	**+0.4**
	comp=Z,1.5nm,0.9s,mb3.7,baz=125,slow=7.6,SNR=5.2						
CN2	**Changchun**	45.92	351	*e*P	**P**	**03 50 21.3**	**-1.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
MDJ	**Mudanjiang**	46.24	355	P	**P**	**03 50 24.6**	**-0.8**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,50nm,4.4s						
LZH	**Lanzhou**	47.07	326	⇓P	**P**	**03 50 32.5**	**+0.4**
LZH				AP	pP	03 50 50.0	+8.1
LZH				XP	sP	03 50 58.0	+12
LZH				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.2						
GTA	**Gaotai**	51.67	326	*e*P	**P**	**03 51 07.7**	**+0.3**
ULN	**Ulaanbaatar**	54.74	338	*e*P	**P**	**03 51 29.8**	**-0.3**
	comp=Z,3.5nm,0.9s,mb4.4						
SONM	**Songino Array**	54.96	337	P	**P**	**03 51 31.6**	**-0.1**
	comp=Z,1.3nm,0.5s,mb4.2,baz=149,slow=7.2,SNR=12						
ZAK	**Zakamensk**	58.23	337	*e*P	**P**	**03 51 54.2**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
MKAR	**Makanchi Array**	66.31	324	P	**P**	**03 52 48.4**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MKAR	**Makanchi Array**	66.31	324	P	**P**	**03 52 48.4**	**-0.4**
	comp=Z,3.6nm,0.5s,mb4.6,baz=112,slow=8.1,SNR=29						
MKAR	**Makanchi Array**	66.31	324	P	**P**	**03 52 48.4**	**-0.4**
ZAL	**Zalesovo**	68.85	331	P	**P**	**03 53 04.0**	**-0.7**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAL	**Zalesovo**	68.85	331	P	**P**	**03 53 04.0**	**-0.7**
	comp=Z,2.3nm,0.5s,mb4.4,baz=74,slow=15,SNR=3.6						
ZAL	**Zalesovo**	68.85	331	P	**P**	**03 53 04.0**	**-0.7**
NVS	**Novosibirsk**	70.12	331	*e*P	**P**	**03 53 11.0**	**-1.4**
VNDA	**Vanda**	77.27	174	P	**P**	**03 53 53.7**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
VNDA	**Vanda**	77.27	174	P	**P**	**03 53 53.7**	**-0.1**
	comp=Z,1.2nm,1.1s,mb3.7,baz=318,slow=7.0,SNR=4.3						
VNDA	**Vanda**	77.27	174	P	**P**	**03 53 53.7**	**-0.1**
IMA	**Indian Mountai**	84.24	23	*e*P	**P**	**03 54 32.7**	**+2.0**
IMA				pmax	pmax		
	comp=Z,1µm,1.1s						
ILAR	**Eielson Array**	86.68	25	P	**P**	**03 54 43.0**	**+0.2**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	86.68	25	P	**P**	**03 54 43.0**	**+0.2**
	comp=Z,0.9nm,0.6s,mb4.2,baz=261,slow=4.5,SNR=9.0						
QSPA	**South Pole Qui**	88.31	180	*e*P	**P**	**03 54 51.4**	**+1.1**
	comp=Z,0.8nm,0.5s,mb4.2						
ARCES	**ARCESS Array B**	98.04	340	P	**P**	**03 55 35.3**	**0.0**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	98.04	340	P	**P**	**03 55 35.3**	**0.0**
	comp=Z,0.9nm,0.4s,mb4.6,baz=84,slow=6.3,SNR=15						
LPAZ	**La Paz**	151.55	130	PKIKP	PKPdf	04 01 54.8	+7.9
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LPAZ	**La Paz**	151.55	130	PKPbc	PKPdf	04 01 54.8	+7.8
	comp=Z,1.6nm,0.7s,baz=4.3,slow=2.4,SNR=7.3						

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*BGS **10** 03:50:04.1±1.5,50.66N×178.21E,h33^{km},mb5.7*

*BJI **10** 03:50:05.4,51.19N×179.32E,h34^{km},mB5.5,mb5.6, Ms5.4,Msz5.1*

*MOS **10** 03:50:06.0±0.9,51.18N×179.56E,h37^{km},mb5.7/132, MS5.1/75,Error ellipse: s-maj=6.6km s-min=3.7km az=92.9*

*HRVD **10** 03:50:07.9±0.2,50.87N×179.71E,h37^{km},MW5.6/70, Centroid moment Tensor Solution. LP body waves: s63,c132;Mantle waves: s70,c161; Half duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}2.45±.06; $M_{\theta\theta}$-2.55±.04; $M_{\phi\phi}$0.09±.04; $M_{r\theta}$1.86±.05; $M_{\theta\phi}$-0.67±.03; $M_{\phi r}$0.85±.05; Best double couple: M$_0$3.293×10^{17} NP1: ϕ$_s$265°,δ27°,λ104°. NP2:ϕ$_s$69°,δ64°,λ83°. Principal axes: T 3.186, Plg70°, Azm325°; N .21, Plg6°, Azm72°; P -3.401, Plg19°, Azm164°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 03:50:07.9±0.1,51.19N×179.55E,mb5.4/195,MS5.2/136, MW5.6 Error ellipse: s-maj=3.4km s-min=1.8km az=184.0, Moment Tensor Solution. s50 Moment tensor: Scale 10^{17} Nm; M_{rr}1.23; $M_{\theta\theta}$-1.43; $M_{\phi\phi}$0.20; $M_{r\theta}$2.15; $M_{\theta\phi}$-0.16; $M_{\phi r}$1.18; Best double couple: M$_0$2.8×10^{17} NP1:ϕ$_s$285°, δ17°,λ130°. NP2:ϕ$_s$64°,δ77°,λ79°. Principal axes: T 2.79, Plg57°, Azm319°; N .02, Plg11°, Azm67°; P -2.81, Plg31°, Azm163°;*

*IDC **10** 03:50:07.7±1.5,51.21N×179.62E,h36^{km}±10^{km},mb5.0/27, mb1 5.1/28,mb1mx5.1/30,mbtmp5.2/28,ML4.9/1,MS5.1/31, Ms1 5.1/31,ms1mx5.1/36 Error ellipse: s-maj=15.1km s-min=9.0km az=161.0*

ISC 10 03:50:06.5±0.1**,51.15N**±0.03×**179.59E**±0.02**,h43^{km}, h43^{km}**±1.5^{km}**:pP-P,n845,σ0^{s}89**/792**,mb5.5**/273**,MS5.2**/190**, 153C-18D,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIWB	**Kanaga Island**	2.16	70	*e*P	**P**	**03 50 42.2**	**+1.5**
GSTR	**Great Sitkin T**	2.88	69	*e*P	**P**	**03 50 52.0**	**+1.0**
SMY	**Shemya**	3.75	297	*e*P	**P**	**03 51 02.8**	**-0.5**
FX1	**Attu Island--F**	4.33	296	P	**P**	**03 51 10.4**	**-1.2**
FX1				pmax	pmax		
	comp=Z,244nm,0.3s						
FX1				MLR	MLR		
	comp=Z,11µm,20.3s						
FX1	**Attu Island--F**	4.33	296	Pn	**P**	**03 51 10.4**	**-1.2**
	comp=Z,244nm,0.3s,baz=202,slow=4.8,SNR=285						
FX1				LR	LR	03 52 36.4	
	comp=Z,11µm,20.3s,baz=321,slow=34						
FX1	**Attu Island--F**	4.33	296	*e*P	**P**	**03 51 10.7**	**-0.9**
NIKO	**Nikolski**	7.36	71	*e*P	**P**	**03 51 53.5**	**-0.6**
UNV	**Unalaska Valle**	8.91	67	*e*P	**P**	**03 52 15.0**	**-0.5**
SDPT	**Sand Point**	12.65	63	*e*P	**P**	**03 53 04.5**	**-1.7**
	comp=Z,63nm,0.3s						
PET	**Petropavlovsk**	13.00	286	*e*P	**P**	**03 53 09.0**	**-2.0**
PET				*i* S	**S**	**03 55 35.2**	**+0.1**
PET				pmax	pmax		
	comp=Z,1µm,5.4s						
PET				pmax	pmax		
	comp=E,2µm,5.9s						
PET				pmax	pmax		
	comp=Z,1µm,13.1s						
PET				pmax	pmax		
	comp=E,2µm,13.1s						
PET				pmax	pmax		
	comp=Z,192nm,1.1s						
PET				smax			
	comp=N,6µm,28.7s						
PET				smax			
	comp=N,3µm,19.3s						
PET				MLR	MLR		
	comp=Z,6µm,20.0s						
PET				MLR	MLR		
	comp=Z,6µm,17.0s						
PET	**Petropavlovsk**	13.00	286	*e*P	**P**	**03 53 10.1**	**-0.9**
	comp=Z,220nm,1.2s						
SKR	**Severo-Kuril’s**	14.80	277	*e*P	**P**	**03 53 31.4**	**-3.0**
SKR				S	**S**	**03 56 08.0**	**-10**
SKR				pmax	pmax		
	comp=Z,2µm,6.0s						
SKR				pmax	pmax		
	comp=E,3µm,4.0s						
SKR				pmax	pmax		
	comp=E,180nm,1.0s						
SKR				pmax	pmax		
	comp=Z,360nm,1.0s						
SKR				smax			
	comp=E,450nm,1.0s						
SKR				smax			
	comp=N,5µm,12.0s						
SKR				smax			
	comp=E,3µm,12.0s						
SKR				MLR	MLR		
	comp=E,6µm,20.0s						
SKR				MLR	MLR		
	comp=Z,6µm,20.0s						
SKR				MLR	MLR		
	comp=N,3µm,14.0s						
TNA	**Tin City**	15.81	19	*e*P	**P**	**03 53 47.0**	**-0.4**
	comp=N,272nm,1.3s						
SVW2	**Sparrevohn**	16.94	44	*e*P	**P**	**03 54 03.0**	**+1.4**
KDAK	**Kodiak Island**	17.40	57	*e*P	**P**	**03 54 05.2**	**-2.2**
TTA	**Tatalina**	17.62	39	*e*P	**P**	**03 54 11.4**	**+1.3**
RSO	**Redoubt South**	17.99	48	*e*P	**P**	**03 54 15.8**	**+1.1**
BILL	**Bilibino**	18.15	344	α*i*P	**P**	**03 54 17.9**	**+1.2**
BILL				pmax	pmax		
	comp=Z,59µm,0.9s						
BILL				pmax	pmax		
	comp=Z,700nm,1.5s						
BILL				MLR	MLR		
	comp=Z,7µm,16.0s						
BILL	**Bilibino**	18.15	344	*e*P	**P**	**03 54 17.4**	**+0.7**
	comp=Z,567nm,1.2s						
MA2	**Magadan**	18.29	309	*ce*P	**P**	**03 54 18.7**	**+0.2**
MA2				*e*S	**S**	**03 57 39.8**	**+2.0**
MA2				pmax	pmax		
	comp=Z,50nm,1.1s						
MA2				MLR	MLR		
	comp=Z,9µm,18.0s						
MA2	**Magadan**	18.29	309	*e*P	**P**	**03 54 17.4**	**-1.1**
	comp=Z,74nm,1.0s						
SPU	**Mount Spurr**	18.56	46	*e*P	**P**	**03 54 21.3**	**-0.5**
SEY	**Seymchan**	18.75	319	*i* P	**P**	**03 54 23.3**	**-0.7**
SEY				*e*S	**S**	**03 57 51.9**	**+3.9**
SEY				pmax	pmax		
	comp=Z,60nm,0.8s						
SEY				pmax	pmax		
	comp=N,30nm,0.9s						
SEY				pmax	pmax		
	comp=E,30nm,0.9s						
SEY				smax			
	comp=N,2µm,11.2s						
SEY				smax			
	comp=E,2µm,10.7s						
SLKM	**Skilak Lake**	19.21	49	*e*P	**P**	**03 54 27.5**	**-1.7**
PWA	**Palmer West**	19.70	46	*e*P	**P**	**03 54 34.5**	**-0.2**
	comp=E,26nm,0.4s						
PMR	**Palmer**	20.02	46	*e*P	**P**	**03 54 36.4**	**-1.7**
PMR				pmax	pmax		
	comp=Z,11nm,0.4s						
PMR	**Palmer**	20.02	46	*e*P	**P**	**03 54 36.4**	**-1.7**
PMR				pmax	pmax		
	comp=Z,11nm,0.4s						
PMR	**Palmer**	20.02	46	*e*P	**P**	**03 54 36.4**	**-1.7**
	comp=Z,11nm,0.4s						
IMA	**Indian Mountai**	20.18	32	*e*P	**P**	**03 54 40.0**	**+0.3**
IMA				pmax	pmax		
	comp=Z,95nm,0.9s						
IMA	**Indian Mountai**	20.18	32	*e*P	**P**	**03 54 40.0**	**+0.3**
	comp=Z,95nm,0.9s						
SML	**Sawmill**	20.45	46	*e*P	**P**	**03 54 40.9**	**-1.7**
SML	**Sawmill**	20.45	46	P	**P**	**03 54 41.1**	**-1.5**
MCK	**McKinley**	20.84	41	*e*P	**P**	**03 54 44.9**	**-1.7**
MCK				pmax	pmax		
	comp=Z,106nm,1.1s						
MCK				MLR	MLR		
	comp=Z,3µm,20.0s,MS4.7						
MCK	**McKinley**	20.84	41	P	**P**	**03 54 45.3**	**-1.3**
MCK				pmax	pmax		

	comp=Z,110nm,1.1s						
MCK	**McKinley**	**20.84**	**41**	*e*P	**P**	**03 54 44.9**	**-1.6**
	comp=Z,106nm,1.1s						
MCK				LR	LR		
	comp=Z,3µm,20.0s,MS4.7						
EYAK	**Cordova Ski Ar**	**21.37**	**50**	*e*P	**P**	**03 54 50.5**	**-1.5**
DIV	**Divide**	**21.47**	**49**	*e*P	**P**	**03 54 52.4**	**-0.6**
	comp=Z,327nm,0.8s,mb5.7						
DIV				LR	LR		
	comp=Z,18µm,20.0s,MS5.5						
COLA	**College**	**21.72**	**38**	⇑*i*P	**P**	**03 54 54.4**	**-1.0**
COLA	**College**	**21.72**	**38**	⇑*i*P	**P**	**03 54 54.4**	**-1.0**
COLA	**College**	**21.72**	**38**	*e*P	**P**	**03 54 56.1**	**+0.7**
	comp=Z,56nm,0.8s,mb5.0						
ILAR	**Eielson Array**	**22.06**	**39**	P	**P**	**03 54 58.0**	**-0.8**
ILAR						03 58 54.6	
ILAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ILAR				pmax	pmax		
	comp=N,3.0nm,0.8s						
ILAR	**Eielson Array**	**22.06**	**39**	P	**P**	**03 54 58.0**	**-0.8**
	comp=N,6.6nm,0.5s,baz=240,slow=8.0,SNR=57						
ILAR				PcP	PcP	03 58 54.6	-1.9
	comp=N,4.0nm,0.7s,baz=268,slow=3.1,SNR=7.3						
ILAR				ScP		04 02 29.0	
	comp=N,3.0nm,0.8s,baz=292,slow=3.7,SNR=5.0						
THY	**Trims Highway**	**22.07**	**43**	*e*P	**P**	**03 54 58.5**	**-0.3**
MIDW	**Midway**	**23.02**	**173**	P	**P**	**03 55 07.0**	**-1.5**
	comp=N,185nm,1.0s,mb5.5						
MIDW				LR	LR		
	comp=Z,6µm,20.0s,MS5.0						
YUK	**Yuzh-Kuril'sk**	**23.67**	**266**	*i* P	**P**	**03 55 14.0**	**-0.6**
YUK				*e*S	**S**	**03 59 26.0**	**+2.8**
YUK				*e*SS	SS	04 00 21.0	+7.1
YUK				pmax	pmax		
	comp=N,2µm,3.0s						
YUK				pmax	pmax		
	comp=E,4µm,3.0s						
YUK				pmax	pmax		
	comp=Z,4µm,3.0s						
YUK				pmax	pmax		
	comp=Z,670nm,0.9s,mb6.1						
YUK				smax			
	comp=N,2µm,4.0s						
YUK				smax			
	comp=E,2µm,5.0s						
YUK				MLR	MLR		
	comp=Z,3µm,18.0s,MS4.8						
YUK				MLR	MLR		
	comp=N,2µm,19.0s,MS5.1						
YUK				MLR	MLR		
	comp=E,6µm,18.0s,MS5.1						
YSS	**Yuzh-Sakhalins**	**24.33**	**275**	⇑*e*P	**P**	**03 55 22.0**	**+1.0**
YSS				*e**PP		03 55 35.6	
YSS				*e*		03 55 59.1	
YSS				*e*S	**S**	**03 59 41.0**	**+6.6**
YSS				*e*		03 59 58.0	
YSS				*e*SS	SS	04 00 42.0	+12
YSS				pmax	pmax		
	comp=Z,280nm,1.1s,mb5.6						
YSS				pmax	pmax		
	comp=N,150nm,1.2s						
YSS				pmax	pmax		
	comp=Z,140nm,1.1s,mb5.3						
YSS				MLR	MLR		
	comp=Z,4µm,19.0s,MS4.9						
YSS				MLR	MLR		
	comp=N,3µm,18.0s,MS5.0						
YSS				MLR	MLR		
	comp=E,3µm,20.0s,MS5.0						
YSS	**Yuzh-Sakhalins**	**24.33**	**275**	*e*P	**P**	**03 55 21.9**	**+0.9**
	comp=E,326nm,1.1s,mb5.7						
YSS				LR	LR		
	comp=Z,5µm,20.0s,MS5.0						
ASAJ	**Asahikawa**	**25.69**	**269**	P	**P**	**03 55 34.5**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,318nm,0.9s						
ASAJ	**Asahikawa**	**25.69**	**269**	P	**P**	**03 55 34.5**	**+0.5**
	comp=Z,318nm,0.9s,mb5.8,baz=39,slow=5.7,SNR=62						
ERM	**Erimo**	**26.41**	**264**	P	pP	03 55 54.9	+2.9
SIT	**Sitka**	**26.68**	**60**	PFAKE		03 55 50.0	+6.9
SIT				LR	LR		
	comp=Z,6µm,21.0s,MS5.1						
INK	**Inuvik**	**28.23**	**35**	P	**P**	**03 55 56.4**	**-0.6**
INK						03 59 08.7	
INK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
INK				pmax	pmax		
	comp=Z,17nm,1.0s						
INK				pmax	pmax		
	comp=N,10.0nm,0.9s						
INK				MLR	MLR		
	comp=Z,4µm,18.4s						
INK	**Inuvik**	**28.23**	**35**	P	**P**	**03 55 56.4**	**-0.7**
	comp=Z,10nm,0.4s,mb4.8,baz=243,slow=7.1,SNR=18						
INK				PcP	PcP	03 59 08.7	-1.3
	comp=Z,16nm,1.0s,baz=264,slow=2.1,SNR=3.4						
INK				ScP		04 02 49.2	
	comp=Z,9.5nm,0.9s,baz=104,slow=31,SNR=15						
INK				LR	LR	04 08 59.7	
	comp=Z,4µm,18.4s,MS5.0,baz=243,slow=40						
INK	**Inuvik**	**28.23**	**35**	*e*P	**P**	**03 55 55.3**	**-1.7**
	comp=Z,84nm,1.3s,mb5.2						
YAK	**Yakutsk**	**28.81**	**312***c*	*i*P	**P**	**03 56 00.6**	**-1.6**
YAK				*e**PP	pP	03 56 10.1	-3.5
YAK				*e*PPP	PPP	03 57 06.8	-2.2
YAK				*e*		03 59 09.7	
YAK				*e*S	**S**	**04 00 48.9**	**+1.3**
YAK				*e*		04 06 40.3	
YAK				pmax	pmax		
	comp=Z,149nm,1.1s,mb5.6						
YAK				pmax	pmax		
	comp=N,14nm,1.0s						
YAK				pmax	pmax		
	comp=E,98nm,1.2s						
YAK				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.9						
YAK				pmax	pmax		
	comp=N,13nm,1.0s						
YAK				pmax	pmax		
	comp=E,40nm,1.1s						
YAK				smax			
	comp=N,16nm,1.1s						
YAK				smax			
	comp=Z,8.0nm,1.0s						
YAK				smax			
	comp=E,22nm,1.1s						
YAK				MLR	MLR		
	comp=N,2µm,16.0s,MS5.0						
YAK				MLR	MLR		
	comp=E,2µm,16.0s,MS5.0						
YAK				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.0						
YAK	**Yakutsk**	**28.81**	**312**	*e*P	**P**	**03 56 00.5**	**-1.8**
	comp=Z,462nm,1.3s,mb6.0						
YAK				LR	LR		
	comp=Z,5µm,20.0s,MS5.2						
DLBC	**Dease Lake**	**29.33**	**56**	P	**P**	**03 56 07.2**	**+0.4**
	comp=Z,9.6nm,1.1s,mb4.4,baz=293,slow=6.3,SNR=4.3						
DLBC				LR	LR	04 07 24.8	
	comp=Z,1µm,21.0s,MS4.5,baz=276,slow=35						
DLBC	**Dease Lake**	**29.33**	**56**	*e*P	**P**	**03 56 07.2**	**+0.3**
KLR	**Kul'dur**	**30.27**	**285**	*i* P	**P**	**03 56 11.9**	**-3.4**
KLR				*e*		03 57 22.0	
KLR				*e*S	**S**	**04 01 10.5**	**-0.3**
KLR				pmax	pmax		
	comp=N,150nm,1.2s						
KLR				pmax	pmax		
	comp=E,50nm,1.2s						
KLR				pmax	pmax		
	comp=Z,230nm,1.2s,mb5.8						
KLR				MLR	MLR		
	comp=E,2µm,16.0s						
KLR				MLR	MLR		
	comp=Z,2µm,16.0s,MS4.9						
TIXI	**Tiksi**	**30.34**	**331**	⇓*i*P	**P**	**03 56 11.2**	**-4.6**
TIXI				*e*		03 57 11.0	
TIXI				*e*S	**S**	**04 01 11.3**	**-0.5**
TIXI				*e*SS	SS	04 02 54.3	+1.3
TIXI				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.1						
TIXI	**Tiksi**	**30.34**	**331**	PFAKE		03 56 30.0	+14
TIXI				LR	LR		
	comp=Z,7µm,19.0s,MS5.3						
CLNS	**Chul'man**	**31.90**	**302**	*e*P	**P**	**03 56 28.1**	**-1.6**
CLNS				pmax	pmax		
	comp=Z,87nm,1.3s,mb5.4						
CLNS				pmax	pmax		
	comp=N,30nm,1.1s						
CLNS				pmax	pmax		
	comp=E,41nm,0.9s						
CLNS				MLR	MLR		
	comp=Z,11µm,24.0s,MS5.5						
CLNS				MLR	MLR		
	comp=N,5µm,20.0s,MS5.2						
CLNS				MLR	MLR		
	comp=E,900nm,24.0s,MS5.2						
MJAR	**Matsushiro Arr**	**32.75**	**260**	P	**P**	**03 56 37.2**	**-0.1**
MJAR						03 59 21.4	
MJAR				pmax	pmax		
	comp=Z,21nm,0.9s						
MJAR				pmax	pmax		
	comp=Z,13nm,1.0s						
MJAR				pmax	pmax		
	comp=N,7.0nm,1.0s						
MJAR				MLR	MLR		
	comp=Z,2µm,18.4s						
MJAR	**Matsushiro Arr**	**32.75**	**260**	P	**P**	**03 56 37.1**	**-0.1**
	comp=Z,21nm,0.9s,mb5.1,baz=48,slow=8.1,SNR=46						
MJAR				PcP	PcP	03 59 21.4	-0.6
	comp=Z,13nm,1.0s,baz=80,slow=2.9,SNR=10						
MJAR				ScP		04 03 03.5	
	comp=Z,6.6nm,1.0s,baz=342,slow=0.8,SNR=11						
MJAR				LR	LR	04 09 12.4	
	comp=Z,2µm,18.4s,MS4.9,baz=65,slow=35						
MAJO	**Matsushiro**	**32.75**	**260**	*e*P	**P**	**03 56 37.0**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,86nm,1.1s,mb5.6						
MAJO				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.0						
MAJO	**Matsushiro**	**32.75**	**260**	*e*P	**P**	**03 56 37.0**	**-0.2**
	comp=Z,86nm,1.1s,mb5.6						
MAJO				LR	LR		
	comp=Z,3µm,22.0s,MS5.0						
MAT	**Matsushiro**	**32.75**	**260**	*e*P	**P**	**03 56 37.0**	**-0.3**
MAT				*e*S	**S**	**04 01 56.0**	**+6.2**
MAT				pmax	pmax		
	comp=Z,71nm,1.0s,mb5.5						
MAT				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.0						
MAT	**Matsushiro**	**32.75**	**260**	*e*P	**P**	**03 56 37.0**	**-0.3**
	comp=Z,71nm,1.0s,mb5.5						
MAT				*e*S	**S**	**04 01 56.0**	**+6.2**
MAT				LR	LR		
	comp=Z,3µm,21.0s,MS5.0						
MAT	**Matsushiro**	**32.75**	**260**	P	**P**	**03 56 36.8**	**-0.5**
MAT				S	**S**	**04 01 55.0**	**+5.2**
WAKE	**Wake Island**	**33.40**	**203**	PFAKE		03 56 50.0	+6.9
WAKE				LR	LR		
	comp=Z,4µm,20.0s,MS5.1						
MDJ	**Mudanjiang**	**33.61**	**279**	P	**P**	**03 56 42.9**	**-1.7**
MDJ				AP	pP	03 56 54.4	-1.8
MDJ				XP	sP	03 56 59.3	-2.4
MDJ				PP	PP	03 57 59.3	+1.4
MDJ				PCP	PcP	03 59 23.6	-0.7
MDJ				S	**S**	**04 02 00.8**	**-2.3**
MDJ				XS		04 02 21.4	
MDJ				SCS	ScS	04 07 03.9	-0.1
MDJ				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.4						
MDJ				AMB	AMB		
	comp=Z,340nm,8.8s						
MDJ				LR	LR		
	comp=N,980nm,18.9s,MS5.0						
MDJ				LR	LR		
	comp=E,3µm,19.6s,MS5.0						
MDJ				LR	LR		
	comp=Z,4µm,20.9s,MS5.1						
MDJ	**Mudanjiang**	**33.61**	**279**	*e*P	**P**	**03 56 43.0**	**-1.6**
	comp=Z,58nm,1.0s,mb5.5						
MDJ				LR	LR		
	comp=Z,4µm,20.0s,MS5.2						
JHJ	**Hachijo jima 2**	**34.06**	**254**	LR	LR	04 12 45.9	
	comp=Z,1µm,18.2s,MS4.7,baz=127,slow=40						
KIP	**Kipapa**	**34.45**	**141**	PFAKE		03 57 00.0	+7.9
KIP				LR	LR		
	comp=Z,5µm,20.0s,MS5.2						
OCWA	**Octopus Mounta**	**35.96**	**73**	*e*P	**P**	**03 57 05.7**	**+1.0**
	comp=Z,69nm,0.9s,mb5.6						
OCWA				LR	LR		
	comp=Z,2µm,22.0s,MS4.9						
PGC	**Sidney**	**35.99**	**71**	*e*P	**P**	**03 57 04.8**	**-0.2**
	comp=Z,89nm,1.4s,mb5.5						
YKW3	**Yellowknife Ar**	**36.10**	**46**	*e*P	**P**	**03 57 04.5**	**-1.3**
YKA	**Yellowknife Ar**	**36.12**	**46**	P	**P**	**03 57 05.0**	**-0.9**
YKA						03 59 31.2	
YKA				pmax	pmax		
	comp=Z,13nm,0.4s						
YKA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YKA				pmax	pmax		
	comp=N,2.0nm,0.7s						
YKA				MLR	MLR		
	comp=Z,11µm,18.5s						
YKA	**Yellowknife Ar**	**36.12**	**46**	P	**P**	**03 57 05.0**	**-0.9**
	comp=Z,13nm,0.4s,mb5.2,baz=283,slow=8.3,SNR=90						
YKA				PcP	PcP	03 59 31.2	-0.2
	comp=Z,9.7nm,0.9s,baz=290,slow=3.2,SNR=10						
YKA				ScP		04 03 14.8	
	comp=Z,2.2nm,0.7s,baz=286,slow=3.3,SNR=7.1						
YKA				LR	LR	04 13 30.9	
	comp=Z,11µm,18.5s,MS5.7,baz=295,slow=39						
YKA	**Yellowknife Ar**	**36.12**	**46**	P	**P**	**03 57 05.0**	**-0.9**
YKA				PcP	PcP	03 59 31.2	-0.2
YKA				ScP		04 03 14.8	
YKA				LR	LR	04 13 30.9	
CN2	**Changchun**	**36.59**	**280**	*e*P	**P**	**03 57 09.0**	**-1.0**
CN2				*e*AP	pP	03 57 21.1	-0.7
CN2				*e*XP	sP	03 57 26.5	-0.6
CN2				PP	PP	03 58 33.5	-1.7
CN2				*e*S	**S**	**04 02 46.8**	**-2.4**
CN2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.3						
CN2				AMB	AMB		
	comp=Z,440nm,5.0s						
CN2				LR	LR		
	comp=N,3µm,19.0s,MS5.3						
CN2				LR	LR		
	comp=E,4µm,19.0s,MS5.3						
CN2				LR	LR		
	comp=Z,5µm,19.0s,MS5.3						
HDW	**Hoodsport**	**36.68**	**72**	P	**P**	**03 57 12.2**	**+1.4**
GNW	**Green Mountain**	**36.86**	**72**	P	**P**	**03 57 13.6**	**+1.4**
BOD	**Bodaibo**	**37.30**	**306**	*e*P	**P**	**03 57 15.0**	**-0.8**
BOD				pmax	pmax		
	comp=Z,258nm,1.1s,mb6.0						
HIA	**Hailar**	**37.43**	**291**	*e*P	**P**	**03 57 16.0**	**-1.0**
HIA				pmax	pmax		
	comp=Z,244nm,1.3s						
HIA				MLR	MLR		
	comp=Z,3µm,19.0s						
HIA	**Hailar**	**37.43**	**291**	*e*P	**P**	**03 57 15.9**	**-1.0**
	comp=Z,244nm,1.3s,mb5.9						
HIA				LR	LR		
	comp=Z,3µm,19.0s,MS5.1						
TTW	**Tolt Reservoir**	**37.48**	**72**	P	**P**	**03 57 18.4**	**+1.0**
PNT	**Penticton**	**37.96**	**68**	P	**P**	**03 57 21.7**	**+0.2**
COR	**Corvallis**	**38.02**	**77**	*e*P	**P**	**03 57 23.2**	**+1.2**
COR				pmax	pmax		
	comp=Z,200nm,1.3s,mb5.7						
COR				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.1						
COR	**Corvallis**	**38.02**	**77**	*e*P	**P**	**03 57 23.2**	**+1.2**
	comp=Z,200nm,1.3s,mb5.7						
COR				LR	LR		
	comp=Z,3µm,22.0s,MS5.1						
LTY	**Liberty**	**38.30**	**72**	P	**P**	**03 57 24.9**	**+0.7**
TBM	**Table Mountain**	**38.38**	**72**	P	**P**	**03 57 26.4**	**+1.5**
SNY	**Shenyang**	**38.81**	**279**	⇑P	**P**	**03 57 28.8**	**+0.2**
SNY				AP	pP	03 57 37.4	-3.0
SNY				XP	sP	03 57 41.5	-4.1
SNY				S	**S**	**04 03 25.9**	**+2.9**
SNY				AMB	AMB		
	comp=Z,100nm,1.2s,mb5.4						
SNY				AMB	AMB		
	comp=Z,510nm,6.5s						
SNY				LR	LR		
	comp=N,2µm,18.4s						
SNY				LR	LR		
	comp=Z,3µm,21.6s,MS5.1						
INCN	**Inchon**	**39.42**	**271**	*e*P	**P**	**03 57 33.8**	**+0.1**
	comp=Z,156nm,1.0s,mb5.7						
INCN				LR	LR		
	comp=Z,935nm,19.0s,MS4.6						
WRD	**Warden**	**39.43**	**72**	P	**P**	**03 57 33.9**	**+0.2**
JNU	**Nakatsue**	**39.54**	**262**	P	**P**	**03 57 35.8**	**+1.0**
	comp=Z,94nm,1.0s,mb5.5,baz=44,slow=12,SNR=36						
JNU				LR	LR	04 12 51.4	
	comp=Z,2µm,20.1s,MS5.0,baz=48,slow=34						
CIT	**Chita**	**39.76**	**298**	⇑*i*P	**P**	**03 57 36.5**	**+0.2**
CIT				*e*		04 03 28.3	
CIT				pmax	pmax		
	comp=Z,177nm,1.1s,mb5.7						
EDM	**Edmonton**	**39.81**	**60**	*e*P	**P**	**03 57 36.7**	**0.0**
EDM	**Edmonton**	**39.81**	**60**	*e*P	**P**	**03 57 36.1**	**-0.7**
NEW	**Newport**	**39.91**	**68**	*e*P	**P**	**03 57 37.6**	**-0.1**
NEW				pmax	pmax		
	comp=Z,43nm,0.9s						
NEW				MLR	MLR		
	comp=Z,2µm,20.0s						
NEW	**Newport**	**39.91**	**68**	*e*P	**P**	**03 57 37.6**	**-0.1**
	comp=Z,42nm,0.9s,mb5.2						
NEW				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
YBH	**Yreka Blue Hor**	**39.92**	**80**	*e*P	**P**	**03 57 39.1**	**+1.3**
YBH				pmax	pmax		
	comp=Z,31nm,0.9s						
YBH				MLR	MLR		
	comp=Z,3µm,22.0s						
YBH	**Yreka Blue Hor**	**39.92**	**80**	*e*P	**P**	**03 57 39.1**	**+1.4**
	comp=Z,31nm,0.9s,mb5.0						
YBH				LR	LR		
	comp=Z,3µm,22.0s,MS5.1						
RES	**Resolute Bay**	**40.37**	**24**	*e*P	**P**	**03 57 40.7**	**-0.5**
RES				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.2						
RES	**Resolute Bay**	**40.37**	**24**	*e*P	**P**	**03 57 40.7**	**-0.6**
	comp=Z,53nm,1.0s,mb5.2						
WDC	**Whiskeytown Da**	**40.68**	**82**	*e*P	**P**	**03 57 44.1**	**0.0**
WDC				pmax	pmax		
	comp=Z,87nm,1.3s,mb5.2						
WDC				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.9						
WDC	**Whiskeytown Da**	**40.68**	**82**	*e*P	**P**	**03 57 44.1**	**0.0**
	comp=Z,87nm,1.3s,mb5.2						
WDC				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
HOPS	**Hopland**	**41.27**	**84**	P	**P**	**03 57 48.5**	**-0.5**
	comp=Z,88nm,1.4s,mb5.2						
HOPS				LR	LR		
	comp=Z,4µm,20.0s,MS5.2						
MOD	**Modoc**	**41.31**	**79**	*e*P	**P**	**03 57 50.5**	**+1.2**
	comp=Z,18nm,1.0s,mb4.7						
MOD				LR	LR		
	comp=Z,3µm,22.0s,MS5.2						
BMO	**Blue Mountains**	**41.53**	**73**	*e*P	**P**	**03 57 51.5**	**+0.5**
	comp=Z,56nm,1.3s,mb5.0						
BMO				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
DL2	**Dalian**	**41.71**	**276**	P	**P**	**03 57 53.0**	**+0.5**
DL2				PP	PP	03 59 27.5	-4.8
DL2				S	**S**	**04 04 05.4**	**-0.8**
DL2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.1						
DL2				LR	LR		
	comp=N,530nm,20.0s,MS4.7						
DL2				LR	LR		
	comp=E,670nm,15.6s,MS4.7						
DL2				LR	LR		
	comp=Z,1µm,18.0s,MS4.7						
WVOR	**Wild Horse Val**	**42.04**	**77**	*e*P	**P**	**03 57 56.0**	**+0.8**
WVOR				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.0						
WVOR				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.3						
WVOR	**Wild Horse Val**	**42.04**	**77**	*e*P	**P**	**03 57 56.0**	**+0.8**
	comp=Z,40nm,0.9s,mb5.0						
WVOR				LR	LR		
	comp=Z,4µm,22.0s,MS5.3						
BEKR	**Beckwourth**	**42.45**	**81**	*e*P	**P**	**03 57 59.4**	**+0.8**
	comp=Z,34nm,1.1s,mb4.9						
MSO	**Missoula**	**42.50**	**69**	*e*P	**P**	**03 57 58.7**	**-0.2**
	comp=Z,40nm,1.1s,mb5.0						
MSO				LR	LR		
	comp=Z,624nm,20.0s,MS4.5						
CHMT	**Chamberlain Mo**	**42.86**	**68**	*e*P	**P**	**03 58 01.4**	**-0.5**
PAHR	**Pah Rah Range**	**43.15**	**81**	P	**P**	**03 58 04.8**	**+0.5**
	comp=Z,63nm,1.3s,mb5.2						
WCN	**Washoe City**	**43.16**	**81**	*e*P	**P**	**03 58 05.3**	**+0.9**
WCN				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.2						
WCN	**Washoe City**	**43.16**	**81**	*e*P	**P**	**03 58 05.2**	**+0.8**
	comp=Z,53nm,1.1s,mb5.2						
KWAJ	**Kwajalein Atol**	**43.36**	**197**	PFAKE		03 58 20.0	+14
KWAJ				LR	LR		
	comp=Z,579nm,21.0s,MS4.5						
CMB	**Columbia Colle**	**43.53**	**83**	*e*P	**P**	**03 58 08.1**	**+0.7**
CMB				pmax	pmax		
	comp=Z,62nm,1.3s,mb5.2						
CMB				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.1						
CMB	**Columbia Colle**	**43.53**	**83**	*e*P	**P**	**03 58 08.1**	**+0.7**
	comp=Z,62nm,1.3s,mb5.2						
CMB				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
SAO	**San Andreas Ge**	**43.65**	**86**	*e*P	**P**	**03 58 06.8**	**-1.6**
SAO				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.1						
SAO				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.0						
SAO	**San Andreas Ge**	**43.65**	**86**	*e*P	**P**	**03 58 06.8**	**-1.6**
	comp=Z,45nm,1.1s,mb5.1						
SAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
HRY	**Holter Researc**	**43.79**	**68**	*e*P	**P**	**03 58 09.2**	**-0.3**
HLID	**Hailey**	**43.98**	**73**	*e*P	**P**	**03 58 11.2**	**+0.3**
	comp=Z,82nm,1.1s,mb5.4						
HLID				LR	LR		
	comp=Z,2µm,22.0s,MS4.9						
BMN	**Battle Mountai**	**44.06**	**78**	*e*P	**P**	**03 58 12.7**	**+1.0**
BMN				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.2						
BMN				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.2						
BMN	**Battle Mountai**	**44.06**	**78**	*e*P	**P**	**03 58 12.7**	**+1.0**
	comp=Z,42nm,0.9s,mb5.2						
BMN				LR	LR		
	comp=Z,3µm,22.0s,MS5.2						
MCMT	**McKenzie Canyo**	**44.21**	**71**	*e*P	**P**	**03 58 12.8**	**0.0**
BOZ	**Bozeman (W)**	**44.48**	**69**	*e*P	**P**	**03 58 15.1**	**+0.1**
BOZ				pmax	pmax		
	comp=Z,73nm,0.8s,mb5.5						
BOZ				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.8						
BOZ	**Bozeman (W)**	**44.48**	**69**	*e*P	**P**	**03 58 15.1**	**+0.1**
	comp=Z,73nm,0.8s,mb5.5						
BOZ				LR	LR		
	comp=Z,1µm,19.0s,MS4.8						
NVAR	**Mina Array Bea**	**44.59**	**81**	P	**P**	**03 58 17.3**	**+1.4**
	comp=Z,9.6nm,0.8s,mb4.7,baz=304,slow=5.9,SNR=46						
NVAR				ScP		04 03 49.6	
	comp=Z,1.3nm,0.7s,baz=278,slow=6.1,SNR=4.0						
NVAR				LR	LR	04 14 41.9	
	comp=Z,2µm,20.1s,MS5.0,baz=295,slow=33						
OMM	**Old Mammoth Mi**	**44.66**	**83**	*e*P	**P**	**03 58 17.6**	**+1.1**
MNV	**Mina**	**44.68**	**81**	*e*P	**P**	**03 58 17.6**	**+0.9**
MNV				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.2						
MNV				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.0						
MNV	**Mina**	**44.68**	**81**	*e*P	**P**	**03 58 17.6**	**+0.9**
	comp=Z,42nm,1.1s,mb5.2						
MNV				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
IRK	**Irkutsk**	**44.71**	**302**	*e*P	**P**	**03 58 15.9**	**-0.8**
IRK				*e*		03 59 58.6	
IRK				pmax	pmax		
	comp=Z,156nm,1.3s,mb5.7						
QLMT	**Earthquake Lak**	**45.05**	**70**	*e*P	**P**	**03 58 19.7**	**+0.2**
ELK	**Elko**	**45.10**	**77**	*e*P	**P**	**03 58 20.7**	**+0.7**
ELK				pmax	pmax		
	comp=Z,47nm,1.0s						
ELK				MLR	MLR		
	comp=Z,3µm,22.0s						
ELK	**Elko**	**45.10**	**77**	*e*P	**P**	**03 58 20.7**	**+0.7**

	comp=Z,46nm,1.0s,mb5.3						
ELK				LR	LR		
	comp=Z,3µm,22.0s,MS5.2						
FFC	**Flin Flon**	**45.10**	**53**	eP	**P**	**03 58 17.8**	**-2.0**
FFC				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
FFC				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.8						
FFC	**Flin Flon**	**45.10**	**53**	eP	**P**	**03 58 17.8**	**-1.9**
	comp=Z,11nm,1.1s,mb4.6						
FFC				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
TLY	**Talaya**	**45.33**	**302**	eP	**P**	**03 58 21.9**	**+0.3**
TLY				e		04 00 08.5	
TLY				eS	**S**	**04 05 06.1**	**+7.5**
TLY				pmax	pmax		
	comp=Z,109nm,1.0s,mb5.6						
TLY				MLR	MLR		
	comp=Z,7µm,18.0s,MS5.6						
TLY	**Talaya**	**45.33**	**302**	eP	**P**	**03 58 21.5**	**-0.2**
	comp=Z,96nm,1.0s,mb5.6						
TLY				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
YMR	**Madison River**	**45.42**	**70**	eP	**P**	**03 58 22.6**	**+0.1**
ULN	**Ulaanbaatar**	**45.45**	**296**c	iP	**P**	**03 58 22.9**	**+0.2**
ULN	**Ulaanbaatar**	**45.45**	**296**⇑	iP	**P**	**03 58 22.0**	**-0.7**
ULN				LR	LR		
	comp=Z,7µm,19.0s,MS5.6						
TPH	**Tonopah**	**45.48**	**81**	eP	**P**	**03 58 23.5**	**+0.4**
TPH				pmax	pmax		
	comp=Z,63nm,1.0s,mb5.4						
TPH				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.1						
TPH	**Tonopah**	**45.48**	**81**	eP	**P**	**03 58 23.4**	**+0.4**
	comp=Z,63nm,1.0s,mb5.4						
TPH				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
JOW	**Kunigami**	**45.53**	**258**	P	**P**	**03 58 24.4**	**+0.8**
	comp=Z,109nm,1.0s,mb5.7,baz=67,slow=6.1,SNR=8.9						
JOW				LR	LR	04 19 29.3	
	comp=Z,970nm,18.2s,MS4.8,baz=79,slow=39						
GCMT	**Greycliff**	**45.55**	**68**	eP	**P**	**03 58 23.7**	**+0.1**
YNR	**Norris Junctio**	**45.56**	**70**	eP	**P**	**03 58 24.6**	**+1.0**
YFT	**Old Faithful**	**45.62**	**70**	eP	**P**	**03 58 25.2**	**+1.1**
LKWY	**Lake**	**45.81**	**70**	eP	**P**	**03 58 26.3**	**+0.7**
LKWY				pmax	pmax		
	comp=Z,81nm,0.8s,mb5.7						
LKWY				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.1						
LKWY	**Lake**	**45.81**	**70**	eP	**P**	**03 58 26.3**	**+0.7**
	comp=Z,81nm,0.8s,mb5.7						
LKWY				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
SONM	**Songino Array**	**45.84**	**296**	P	**P**	**03 58 26.3**	**+0.6**
	comp=Z,44nm,0.9s,mb5.4,baz=54,slow=11,SNR=237						
SONM				ScP		04 03 53.7	
	comp=Z,8.3nm,1.2s,baz=27,slow=2.8,SNR=6.5						
SONM				LR	LR	04 19 24.9	
	comp=Z,8µm,18.2s,MS5.7,baz=56,slow=38						
IMW	**Indian Meadow**	**45.87**	**71**	eP	**P**	**03 58 26.6**	**+0.5**
	comp=Z,72nm,1.0s,mb5.6						
RRI2	**Red Ridge**	**45.96**	**71**	eP	**P**	**03 58 27.5**	**+0.7**
	comp=Z,114nm,1.2s,mb5.7						
HVU	**Hansel Valley**	**45.99**	**74**	eP	**P**	**03 58 27.3**	**+0.2**
MOOW	**Moose Ponds**	**46.07**	**71**	eP	**P**	**03 58 27.6**	**0.0**
	comp=Z,29nm,1.0s,mb5.2						
TPAW	**Teton Pass**	**46.09**	**71**	eP	**P**	**03 58 27.9**	**0.0**
	comp=Z,45nm,1.0s,mb5.4						
TIA	**Tai'an**	**46.18**	**276**	eP	**P**	**03 58 28.0**	**-0.7**
TIA				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.7						
WUWY	**Wally Ulrich**	**46.19**	**71**	eP	**P**	**03 58 29.1**	**+0.5**
ZAK	**Zakamensk**	**46.20**	**300**⇓	iP	**P**	**03 58 28.7**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,78nm,1.2s,mb5.5						
SNOW	**Snow King Moun**	**46.23**	**71**	eP	**P**	**03 58 29.8**	**+0.9**
	comp=Z,74nm,1.1s,mb5.5						
LOHW	**Long Hollow**	**46.23**	**71**	eP	**P**	**03 58 29.2**	**+0.3**
	comp=Z,31nm,1.1s,mb5.2						
TRCR	**Troy Canyon**	**46.33**	**80**	eP	**P**	**03 58 30.1**	**+0.3**
BGU	**Big Grassy Mou**	**46.34**	**75**	eP	**P**	**03 58 29.6**	**-0.2**
DAC	**Darwin (Calif)**	**46.37**	**83**	eP	**P**	**03 58 30.6**	**+0.5**
DAC				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
DAC				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.1						
DAC	**Darwin (Calif)**	**46.37**	**83**	eP	**P**	**03 58 30.6**	**+0.5**
	comp=Z,22nm,0.9s,mb5.1						
DAC				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
AHID	**Auburn Hatcher**	**46.42**	**72**	eP	**P**	**03 58 30.0**	**-0.5**
	comp=Z,104nm,1.1s,mb5.7						
AHID				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
SPUT	**South Promonto**	**46.47**	**74**	eP	**P**	**03 58 30.8**	**0.0**
MOY	**Mondy**	**46.74**	**303**	eP	**P**	**03 58 33.4**	**+0.6**
MOY				pmax	pmax		
	comp=Z,153nm,1.3s,mb5.8						
HHC	**Hu-ho-hao-te**	**46.77**	**285**	i P	**P**	**03 58 34.3**	**+1.1**
HHC				AP	pP	03 58 48.1	+3.0
HHC				PCP	PcP	04 00 10.6	+4.2
HHC				PCS		04 03 59.0	
HHC				S	**S**	**04 05 22.2**	**+2.8**
HHC				SCS	ScS	04 08 17.8	-3.7
HHC				SS	SS	04 08 37.3	-1.5
HHC				AMB	AMB		
	comp=Z,130nm,1.2s,mb5.7						
HHC				AMB	AMB		
	comp=Z,570nm,12.8s						
HHC				LR	LR		
	comp=N,2µm,14.5s,MS5.3						
HHC				LR	LR		
	comp=E,2µm,14.7s,MS5.3						
HHC				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
GUMO	**Guam**	**46.78**	**229**	PFAKE		03 58 50.0	+16
GUMO				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
HWUT	**Hardware Ranch**	**46.82**	**74**	eP	**P**	**03 58 33.9**	**+0.3**
	comp=Z,6.2nm,0.4s,mb4.9						
HWUT				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
FCC	**Fort Churchill**	**46.85**	**45**	P	**P**	**03 58 32.6**	**-0.9**
FCC				pmax	pmax		
	comp=Z,73nm,1.3s,mb5.5						
FCC	**Fort Churchill**	**46.85**	**45**	eP	**P**	**03 58 32.1**	**-1.4**
	comp=Z,73nm,1.4s,mb5.4						
SSE	**Sheshan**	**46.98**	**268**	P	**P**	**03 58 33.7**	**-1.2**
SSE				AP	pP	03 58 47.5	+0.6
SSE				PP	PP	04 00 22.9	-2.4
SSE				S	**S**	**04 05 20.8**	**-1.6**
SSE				SCS	ScS	04 08 25.1	+2.1
SSE				AMB	AMB		
	comp=Z,80nm,1.0s,mb5.6						
SSE				AMB	AMB		
	comp=Z,380nm,8.9s						
SSE				LR	LR		
	comp=N,770nm,24.3s,MS4.7						
SSE				LR	LR		
	comp=E,530nm,24.3s,MS4.7						
SSE				LR	LR		
	comp=Z,840nm,19.4s,MS4.7						
LAO	**LASA Array**	**47.04**	**65**	eP	**P**	**03 58 35.0**	**-0.2**
	comp=Z,36nm,0.9s,mb5.3						
LAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
NOQ	**North Oquirrh**	**47.06**	**75**	eP	**P**	**03 58 35.8**	**+0.3**
DGMT	**Dagmar**	**47.19**	**62**	eP	**P**	**03 58 35.0**	**-1.4**
	comp=Z,29nm,1.1s,mb5.1						
DGMT				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
TCUT	**Toone Canyon**	**47.21**	**74**	eP	**P**	**03 58 37.5**	**+0.8**
CTU	**Camp Tracy**	**47.26**	**75**	eP	**P**	**03 58 37.4**	**+0.4**
BW06	**Boulder Array**	**47.34**	**71**	eP	**P**	**03 58 37.7**	**0.0**
	comp=Z,137nm,1.1s,mb5.8						
BW06				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
PDAR	**Pinedale Array**	**47.34**	**71**	P	**P**	**03 58 38.0**	**+0.3**
	comp=Z,59nm,0.8s,mb5.5,baz=304,slow=5.3,SNR=290						
PDAR				LR	LR	04 16 18.0	
	comp=Z,1µm,21.6s,MS4.8,baz=314,slow=33						
MWC	**Mount Wilson**	**47.39**	**86**	P	**P**	**03 58 38.8**	**+0.6**
MWC	**Mount Wilson**	**47.39**	**86**	eP	**P**	**03 58 38.3**	**+0.1**
JLU	**Jordanelle**	**47.49**	**75**	eP	**P**	**03 58 39.4**	**+0.5**
NLU	**North Lily Min**	**47.51**	**76**	eP	**P**	**03 58 39.7**	**+0.7**
DAU	**Daniels Canyon**	**47.73**	**75**	P	**P**	**03 58 42.3**	**+1.6**
DAU	**Daniels Canyon**	**47.73**	**75**	eP	**P**	**03 58 41.5**	**+0.8**
MPU	**Maple Canyon**	**47.74**	**75**	eP	**P**	**03 58 41.0**	**+0.2**
NJ2	**Nanjing**	**47.80**	**271**	eP	**P**	**03 58 41.1**	**-0.4**
NJ2				AP	pP	03 58 53.1	-0.3
NJ2				XP	sP	03 58 59.0	+0.5
NJ2				PP	PP	04 00 35.5	+2.8
NJ2				S	**S**	**04 05 41.0**	**+6.9**
NJ2				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,420nm,6.1s						
NJ2				LR	LR		
	comp=N,3µm,22.2s,MS5.4						
NJ2				LR	LR		
	comp=E,3µm,21.3s,MS5.4						
NJ2				LR	LR		
	comp=Z,2µm,21.1s,MS5.0						
BTO	**Baotou**	**47.86**	**286**	eP	**P**	**03 58 42.3**	**+0.5**
BTO				AMB	AMB		
	comp=Z,140nm,1.1s,mb5.9						
ARUT	**Antelope Range**	**48.00**	**79**	P	**P**	**03 58 43.5**	**+0.6**
ARUT	**Antelope Range**	**48.00**	**79**	eP	**P**	**03 58 43.2**	**+0.3**
TIY	**Taiyuan**	**48.16**	**281**	⇑P	**P**	**03 58 39.0**	**-5.1**
TIY				S	**S**	**04 05 39.0**	**0.0**
TIY				LR	LR		
	comp=N,2µm,18.0s						
MVU	**Marysvale**	**48.31**	**77**	eP	**P**	**03 58 45.7**	**+0.4**
	comp=N,42nm,0.9s,mb5.5						
MVU				LR	LR		
	comp=Z,3µm,21.0s,MS5.2						
MSU	**Marysvale**	**48.33**	**77**	P	**P**	**03 58 46.8**	**+1.4**
MSU	**Marysvale**	**48.33**	**77**	eP	**P**	**03 58 46.0**	**+0.5**
TMUT	**Trail Mountain**	**48.44**	**76**	eP	**P**	**03 58 47.0**	**+0.8**
NEN	**Nelson**	**48.48**	**82**	eP	**P**	**03 58 46.5**	**-0.1**
LDFC	**Landfair**	**48.69**	**83**	eP	**P**	**03 58 48.1**	**-0.2**
PFO	**Pinyon Flat Ob**	**48.80**	**85**	P	**P**	**03 58 49.8**	**+0.7**
PFO				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.2						
PFO	**Pinyon Flat Ob**	**48.80**	**85**	eP	**P**	**03 58 49.7**	**+0.6**
	comp=Z,32nm,1.2s,mb5.2						
PFO				LR	LR		
	comp=Z,454nm,19.0s,MS4.5						
SRU	**San Rafael**	**48.97**	**76**	P	**P**	**03 58 51.3**	**+0.9**
SRU	**San Rafael**	**48.97**	**76**	eP	**P**	**03 58 50.4**	**0.0**
BAR	**Barrett**	**49.28**	**86**	eP	**P**	**03 58 52.9**	**0.0**
RWWY	**Rawlins**	**49.39**	**71**	eP	**P**	**03 58 53.0**	**-0.6**
	comp=Z,75nm,1.0s,mb5.7						
RSSD	**Black Hills**	**49.78**	**66**	P	**P**	**03 58 56.4**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
RSSD	**Black Hills**	**49.78**	**66**	eP	**P**	**03 58 55.5**	**-1.0**
	comp=Z,17nm,1.1s,mb5.0						
RSSD				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
KBS	**Kingsbay**	**49.98**	**357**	P	**P**	**03 58 57.4**	**-0.2**
KBS				sS		04 06 28.7	
KBS	**Kingsbay**	**49.98**	**357**⇑	iP	**P**	**03 58 57.4**	**-0.2**
KBS				LR	LR		
	comp=Z,1541µm,18.8s						
KBS	**Kingsbay**	**49.98**	**357**⇑	iP	**P**	**03 58 57.4**	**-0.2**
KBS				AMb	AMB	03 59 00.8	
	comp=Z,140nm,1.1s,mb5.9						
KBS				ePP	PP	04 00 54.8	+1.2
KBS				eS	**S**	**04 06 05.1**	**+1.2**
KBS				AMS	AMS	04 21 56.2	
	comp=Z,2µm,18.8s,MS5.0						
PV10	**Paradox Valley**	**50.34**	**75**	eP	**P**	**03 59 01.4**	**+0.6**
ULM	**Lac du Bonnet**	**50.65**	**56**	P	**P**	**03 59 02.1**	**-1.0**
	comp=Z,3.2nm,0.4s,mb4.6,baz=314,slow=7.9,SNR=6.7						
ULM				PcP	PcP	04 00 19.1	-1.2
	comp=Z,15nm,1.1s,baz=326,slow=4.2,SNR=3.7						
ULM				LR	LR	04 20 40.0	
	comp=Z,3µm,21.3s,MS5.2,baz=311,slow=36						
PHWY	**Pilot Hill**	**50.66**	**70**	eP	**P**	**03 59 02.6**	**-0.7**
WUAZ	**Wupatki**	**50.73**	**80**	eP	**P**	**03 59 04.0**	**+0.1**
	comp=Z,103nm,1.1s,mb5.7						
WUAZ				LR	LR		
	comp=Z,4µm,19.0s,MS5.4						
PV01	**Paradox Valley**	**50.77**	**75**	eP	**P**	**03 59 03.9**	**-0.3**
TATO	**Taipei**	**51.08**	**262**	PFAKE		03 59 20.0	+13
TATO				LR	LR		
	comp=Z,2µm,21.0s,MS5.1						
YHNB	**Yeheng**	**51.37**	**262**	eP	**P**	**03 59 07.1**	**-1.8**
ISCO	**Idaho Springs**	**51.51**	**72**	P	**P**	**03 59 10.2**	**+0.5**
ISCO				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.4						
ISCO	**Idaho Springs**	**51.51**	**72**	eP	**P**	**03 59 10.0**	**+0.2**
	comp=Z,54nm,1.1s,mb5.4						
ISCO				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
WHN	**Wuhan**	**51.66**	**273**	P	**P**	**03 59 10.5**	**-0.5**
HSP	**Hornsund**	**51.72**	**355**	eP	**P**	**03 59 10.1**	**-0.7**
DAG	**Danmarks Havn**	**51.82**	**5**j	iP	**P**	**03 59 10.5**	**-1.1**
DAG				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
DAG				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.6						
DAG				MLR	MLR		
	comp=N,5µm,21.0s,MS5.5						
DAG				MLR	MLR		
	comp=E,2µm,20.0s,MS5.5						
DAG	**Danmarks Havn**	**51.82**	**5**	i Pdu		03 59 10.5	
	comp=E,16nm,0.8s						
DAG				LR	LR		
	comp=Z,5µm,20.0s,MS5.6						
DAG	**Danmarks Havn**	**51.82**	**5**j	iP	**P**	**03 59 10.5**	**-1.1**
	comp=Z,16nm,0.8s,mb5.0						
	comp=Z,5µm,20.0s						
SDCO	**Great Sand Dun**	**52.88**	**74**	eP	**P**	**03 59 20.1**	**+0.1**
	comp=Z,50nm,1.1s,mb5.4						
SDCO				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
QZH	**Quanzhou**	**52.91**	**264**⇑	iP	**P**	**03 59 20.4**	**-0.1**
QZH				S	**S**	**04 06 50.0**	**+5.1**
QZH				AMB	AMB		
	comp=Z,140nm,0.8s,mb5.9						
QZH				AMB	AMB		
	comp=Z,870nm,3.8s						
QZH				LR	LR		
	comp=N,580nm,12.3s						
QZH				LR	LR		
	comp=E,720nm,8.1s						
QZH				LR	LR		
	comp=Z,2µm,20.0s						
TUC	**Tucson**	**53.22**	**82**	eP	**P**	**03 59 22.1**	**-0.5**
TUC				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.1						
TUC				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.9						
TUC	**Tucson**	**53.22**	**82**	eP	**P**	**03 59 22.1**	**-0.5**
	comp=Z,28nm,1.1s,mb5.1						
TUC				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
ZAL	**Zalesovo**	**53.46**	**313**	P	**P**	**03 59 23.1**	**-1.0**
ZAL				pmax	pmax		
	comp=Z,14nm,0.5s						
ZAL	**Zalesovo**	**53.46**	**313**	P	**P**	**03 59 23.1**	**-1.0**
	comp=Z,14nm,0.5s,mb5.2,baz=49,slow=8.2,SNR=33						
NVS	**Novosibirsk**	**53.61**	**314**⇑	iP	**P**	**03 59 23.5**	**-1.7**
NVS				pmax	pmax		
	comp=Z,183nm,0.9s,mb6.0						
NVS				pmax	pmax		
	comp=N,112nm,1.2s						
NVS				pmax	pmax		
	comp=E,137nm,1.2s						
SUMG	**Summit**	**53.76**	**13**	eP	**P**	**03 59 25.2**	**-0.8**
	comp=E,95nm,1.1s,mb5.6						
ANMO	**Albuquerque**	**54.13**	**77**	P	**P**	**03 59 29.7**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,18nm,1.0s						
ANMO	**Albuquerque**	**54.13**	**77**	eP	**P**	**03 59 29.0**	**-0.3**
	comp=Z,18nm,1.0s,mb5.0						
ANMO				LR	LR		
	comp=Z,2µm,22.0s,MS5.2						
LENM	**Lemitar**	**54.34**	**78**	eP	**P**	**03 59 31.2**	**+0.3**
EYMN	**Ely**	**54.34**	**56**	eP	**P**	**03 59 28.7**	**-2.0**
	comp=Z,39nm,1.1s,mb5.2						
EYMN				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
LPM	**Los Pinos Moun**	**54.45**	**78**	P	**P**	**03 59 31.5**	**-0.1**
LZH	**Lanzhou**	**54.47**	**285**	⇑P	**P**	**03 59 32.1**	**+0.3**
LZH				AP	pP	03 59 42.6	-1.3
LZH				XP	sP	03 59 46.4	-2.5
LZH				PP	PP	04 01 34.2	-1.4
LZH				S	**S**	**04 07 10.0**	**+4.2**
LZH				XS		04 07 28.0	
LZH				AMB	AMB		
	comp=Z,210nm,1.0s,mb6.0						
LZH				AMB	AMB		
	comp=Z,1µm,4.2s						
LZH				LR	LR		
	comp=N,5µm,17.2s						
LZH				LR	LR		
	comp=Z,6µm,18.3s,MS5.7						
BNM	**Barren Site**	**54.56**	**78**	eP	**P**	**03 59 32.1**	**-0.3**
GTA	**Gaotai**	**54.70**	**291**⇑	iP	**P**	**03 59 33.2**	**-0.2**
GTA				AP	pP	03 59 44.2	-1.4
GTA				XP	sP	03 59 48.4	-2.2
GTA				PCP	PcP	04 00 32.4	-3.2
GTA				PP	PP	04 01 39.4	+1.7
GTA				PPP	PPP	04 02 56.2	+6.2
GTA				SCP		04 04 25.7	
GTA				PCS		04 04 30.4	
GTA				S	**S**	**04 07 16.7**	**+7.8**
GTA				PS	PS	04 07 32.6	+6.6
GTA				AMB	AMB		
	comp=Z,90nm,1.2s,mb5.7						
GTA				AMB	AMB		
	comp=Z,560nm,6.9s						
GTA				LR	LR		
	comp=N,2µm,16.7s,MS5.5						
GTA				LR	LR		
	comp=E,3µm,16.7s,MS5.5						
GTA				LR	LR		
	comp=Z,4µm,16.7s,MS5.5						
ENH	**Enshi**	**54.90**	**276**	eP	**P**	**03 59 33.0**	**-1.9**
	comp=Z,96nm,1.2s,mb5.7						
ENH				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
CBKS	**Cedar Bluff**	**55.63**	**69**	P	**P**	**03 59 39.9**	**-0.2**
CBKS				pmax	pmax		
	comp=Z,190nm,1.1s,mb6.0						
CBKS	**Cedar Bluff**	**55.63**	**69**	eP	**P**	**03 59 39.4**	**-0.7**
	comp=Z,192nm,1.1s,mb6.0						
CBKS				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
SFJD	**Kangerlussuaq**	**56.24**	**21**	eP	**P**	**03 59 42.9**	**-1.2**
SFJD				i S	**S**	**04 07 33.0**	**+4.0**
SFJD				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
SFJD				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.1						
SFJD	**Kangerlussuaq**	**56.24**	**21**	eP	**P**	**03 59 42.9**	**-1.2**
	comp=Z,23nm,1.0s,mb5.2						
SFJD				i S	**S**	**04 07 33.0**	**+4.0**
SFJD				i		04 14 06.9	
SFJD				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
SFJD	**Kangerlussuaq**	**56.24**	**21**	i P	**P**	**03 59 42.9**	**-1.2**
	comp=Z,23nm,1.0s,mb5.2						
SFJD				i S	**S**	**04 07 33.0**	**+4.0**
SFJD				i		04 14 06.9	
	comp=Z,1µm,20.0s						
MNTX	**Cornudas Mount**	**56.99**	**79**	eP	**P**	**03 59 49.1**	**-0.9**
	comp=Z,54nm,1.3s,mb5.4						
CPRX	**Cap Rock**	**57.01**	**77**	eP	**P**	**03 59 49.4**	**-0.7**
AMTX	**Amarillo**	**57.09**	**74**	P	**P**	**03 59 50.3**	**-0.3**
	comp=Z,36nm,1.0s,mb5.3						
AMTX				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
KSU1	**Kansas State U**	**57.27**	**67**	eP	**P**	**03 59 50.6**	**-1.3**
GDL2	**Guadalupe Moun**	**57.27**	**78**	eP	**P**	**03 59 51.4**	**-0.6**
CLNB	**Carlsbad**	**57.53**	**78**	eP	**P**	**03 59 53.5**	**-0.3**
SCO	**Scoresbysund**	**57.68**	**8**	i P	**P**	**03 59 53.6**	**-0.7**
SCO				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
SCO	**Scoresbysund**	**57.68**	**8**	i P	**P**	**03 59 53.6**	**-0.7**
	comp=Z,18nm,0.9s,mb5.1						
KEV	**Kevo**	**57.76**	**349**	ep	**P**	**03 59 52.3**	**-2.6**
	comp=Z,34nm,0.9s,mb5.4						
KEV	**Kevo**	**57.76**	**349**	P	**P**	**03 59 53.3**	**-1.6**
KEV				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.4						
CD2	**Chengdu**	**58.02**	**281**⇑	iP	**P**	**03 59 56.8**	**-0.5**
CD2				AP	pP	04 00 09.7	+0.2
CD2				XP	sP	04 00 15.4	+0.9
CD2				S	**S**	**04 07 50.5**	**-2.5**
CD2				XS		04 08 10.6	
CD2				SS	SS	04 11 39.1	-7.0
CD2				AMB	AMB		
	comp=Z,70nm,0.7s,mb5.8						
CD2				AMB	AMB		
	comp=Z,440nm,5.8s						
CD2				LR	LR		
	comp=E,2µm,19.2s						
CD2				LR	LR		
	comp=Z,2µm,19.8s,MS5.2						
JMIC	**Jan Mayen**	**58.03**	**3**	eP	**P**	**03 59 56.6**	**-0.1**
JMIC				eS	**S**	**04 07 50.5**	**-2.0**
JMIC				AMS	AMS	04 25 18.1	
	comp=Z,672nm,19.0s,MS4.8						
ARCES	**ARCESS Array B**	**58.14**	**350**	P	**P**	**03 59 56.1**	**-1.4**
ARCES				pmax	pmax		
	comp=Z,34nm,0.8s						
ARCES	**ARCESS Array B**	**58.14**	**350**	P	**P**	**03 59 56.1**	**-1.5**
	comp=Z,34nm,0.8s,mb5.5,baz=9.5,slow=7.4,SNR=74						
WMQ	**Urumqi**	**58.61**	**302**	⇑P	**P**	**04 00 01.0**	**-0.2**
WMQ				AP	pP	04 00 13.7	+0.3
WMQ				XP	sP	04 00 19.0	+0.6
WMQ				PCP	PcP	04 00 50.6	-0.1
WMQ				PP	PP	04 02 12.6	-0.1
WMQ				PPP	PPP	04 03 36.9	+0.2
WMQ				S	**S**	**04 08 00.0**	**-0.4**
WMQ				SCS	ScS	04 09 43.2	-0.4
WMQ				SS	SS	04 11 54.8	-0.4
WMQ				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.8						
WMQ				AMB	AMB		
	comp=Z,710nm,7.0s						
WMQ				LR	LR		
	comp=N,4µm,20.0s,MS5.7						
WMQ				LR	LR		
	comp=E,3µm,20.0s,MS5.7						
WMQ				LR	LR		
	comp=Z,6µm,21.2s,MS5.7						
TRO	**Tromso**	**58.70**	**352**	eP	**P**	**03 59 58.9**	**-2.6**
TRO				LR	LR		
	comp=Z,1193µm,19.3s						
TRO	**Tromso**	**58.70**	**352**	eP	**P**	**03 59 58.9**	**-2.6**
TRO				eS	**S**	**04 08 00.8**	**-0.5**
TRO				AMS	AMS	04 26 28.4	
	comp=Z,1µm,19.3s,MS5.0						
APA	**Apatity**	**58.91**	**346**	eP	**P**	**04 00 00.0**	**-2.9**
APA				i		04 00 52.3	
APA				eS	**S**	**04 08 04.0**	**0.0**
APA				e		04 08 20.0	
APA				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.2						
WMOK	**Wichita Mounta**	**58.93**	**72**	P	**P**	**04 00 03.2**	**-0.3**
WMOK				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
WMOK	**Wichita Mounta**	**58.93**	**72**	eP	**P**	**04 00 02.7**	**-0.8**
	comp=Z,40nm,1.0s,mb5.4						
WMOK				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
GYA	**Guiyang**	**59.33**	**275**⇑	iP	**P**	**04 00 05.6**	**-0.8**
GYA				AP	pP	04 00 18.4	-0.3
GYA				XP	sP	04 00 23.9	+0.2
GYA				PP	PP	04 02 18.7	-0.8
GYA				S	**S**	**04 08 10.3**	**+0.2**
GYA				XS		04 08 29.6	
GYA				SS	SS	04 12 02.2	-4.5
GYA				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.2						
GYA				AMB	AMB		
	comp=Z,550nm,7.5s						
GYA				LR	LR		
	comp=N,570nm,20.4s,MS5.1						
GYA				LR	LR		
	comp=E,1µm,20.1s,MS5.1						
GYA				LR	LR		
	comp=Z,1µm,20.4s,MS5.1						
MKAR	**Makanchi Array**	**59.38**	**308**	P	**P**	**04 00 05.1**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,64nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,3µm,20.6s						
MKAR	**Makanchi Array**	**59.38**	**308**	P	**P**	**04 00 05.1**	**-1.3**
	comp=Z,64nm,0.9s,mb5.7,baz=59,slow=7.1,SNR=293						
MKAR				LR	LR	04 26 17.1	
	comp=Z,3µm,20.6s,MS5.4,baz=14,slow=36						

LTX	**Lajitas**	**59.69**	**80**	P	**P**	**04 00 08.7**	**-0.2**
LTX				pmax	pmax		
	comp=Z,110nm,1.5s,mb5.7						
LTX	**Lajitas**	**59.69**	**80**	*e*P	**P**	**04 00 08.0**	**-0.9**
	comp=Z,106nm,1.5s,mb5.7						
LTX				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
TXAR	**Lajitas Array**	**59.69**	**80**	P	**P**	**04 00 08.6**	**-0.3**
TXAR				pmax	pmax		
	comp=Z,13nm,1.0s						
TXAR				MLR	MLR		
	comp=Z,1µm,18.1s						
TXAR	**Lajitas Array**	**59.69**	**80**	P	**P**	**04 00 08.6**	**-0.3**
	comp=Z,13nm,1.0s,mb4.9,baz=304,slow=5.3,SNR=86						
TXAR				LR	LR	04 26 00.5	
	comp=Z,1µm,18.1s,MS5.2,baz=305,slow=36						
TXAR	**Lajitas Array**	**59.69**	**80**	P	**P**	**04 00 08.6**	**-0.3**
TXAR				LR	LR	04 26 00.5	
SOKR	**Solikamsk**	**60.34**	**330**	⇑*i*P	**P**	**04 00 10.1**	**-2.8**
SOKR				pmax	pmax		
	comp=Z,140nm,1.1s,mb5.9						
SOKR				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.3						
BVA0	**Borovoye Array**	**60.40**	**319**	*i* P	**P**	**04 00 12.7**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.5						
LOF	**Lofoten**	**60.58**	**354**	*e*P	**P**	**04 00 13.0**	**-1.4**
LOF	**Lofoten**	**60.58**	**354**	*e*P	**P**	**04 00 13.0**	**-1.5**
SCHQ	**Schefferville**	**60.81**	**37**	P	**P**	**04 00 14.9**	**-1.2**
	comp=Z,20nm,0.8s,mb5.3,baz=333,slow=6.8,SNR=27						
SCHQ				LR	LR	04 28 16.6	
	comp=Z,3µm,21.1s,MS5.3,baz=320,slow=38						
SVE	**Sverdlovsk**	**61.23**	**327**	⇑*e*P	pP	04 00 28.4	-2.9
SVE				*e*		04 00 43.0	
SVE				*e*		04 02 38.0	
SVE				*e*		04 08 48.0	
SVE				*e*		04 15 20.0	
SVE				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.2						
FVM	**French Village**	**61.57**	**64**	P	**P**	**04 00 19.9**	**-1.6**
FVM				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.3						
FVM	**French Village**	**61.57**	**64**	*e*P	**P**	**04 00 19.6**	**-1.9**
	comp=Z,18nm,0.7s,mb5.3						
MELSS	**Ber_school_2**	**61.83**	**354**	*e*P	**P**	**04 00 21.4**	**-1.4**
ARU	**Arti**	**62.26**	**327**	⇑*i*P	**P**	**04 00 25.0**	**-0.8**
ARU				*e*		04 01 03.6	
ARU				*e*		04 02 43.5	
ARU				*e*PPP	PPP	04 04 09.2	-5.6
ARU				*e*S	**S**	**04 08 50.8**	**+3.8**
ARU				*e*		04 10 12.5	
ARU				*e*SS	SS	04 12 54.4	+2.0
ARU				pmax	pmax		
	comp=Z,195nm,1.0s,mb6.2						
ARU				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.5						
ARU				MLR	MLR		
	comp=N,2µm,19.0s,MS5.5						
ARU				MLR	MLR		
	comp=E,2µm,19.0s,MS5.5						
ARU	**Arti**	**62.26**	**327**	*e*P	**P**	**04 00 24.6**	**-1.2**
	comp=E,260nm,1.1s,mb6.3						
ARU				LR	LR		
	comp=Z,860nm,20.0s,MS4.9						
MOR8	**Moi Rana**	**62.46**	**353**	*e*P	**P**	**04 00 24.7**	**-2.4**
	comp=Z,102nm,1.5s,mb5.7						
MOR8	**Moi Rana**	**62.46**	**353**	*e*P	**P**	**04 00 24.6**	**-2.5**
MOR8				AMb	AMB	04 00 26.2	
	comp=Z,102nm,1.6s,mb5.7						
HNR	**Honiara**	**62.69**	**202**	LR	LR	04 24 57.8	
	comp=Z,2µm,19.0s,MS5.3,baz=13,slow=33						
HNR	**Honiara**	**62.69**	**202**	PFAKE		04 00 40.0	+11
HNR				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
UALR	**University of**	**62.71**	**68**	*e*P	**P**	**04 00 28.0**	**-1.2**
	comp=Z,8.2nm,0.5s,mb5.1						
QIZ	**Qiongzhong**	**62.74**	**267**	P	**P**	**04 00 30.0**	**+0.4**
QIZ				XP	sP	04 00 42.7	-4.1
QIZ				S	**S**	**04 08 54.2**	**+0.7**
QIZ				AMB	AMB		
	comp=Z,390nm,6.6s						
QIZ				LR	LR		
	comp=E,690nm,18.7s						
QIZ				LR	LR		
	comp=Z,780nm,22.8s,MS4.8						
QIZ	**Qiongzhong**	**62.74**	**267**	PFAKE		04 00 40.0	+10
QIZ				LR	LR		
	comp=Z,822nm,20.0s,MS4.9						
KMI	**Kunming**	**62.75**	**277**	P	**P**	**04 00 28.7**	**-0.9**
KMI				AP	pP	04 00 42.4	+0.5
KMI				XP	sP	04 00 47.7	+0.9
KMI				PCP	PcP	04 01 06.6	-1.0
KMI				PP	PP	04 02 49.2	-0.3
KMI				PPP	PPP	04 04 19.7	-0.4
KMI				SCP		04 05 03.2	
KMI				PCS		04 05 08.6	
KMI				S	**S**	**04 08 52.3**	**-1.3**
KMI				XS		04 09 15.4	
KMI				PS	PS	04 09 16.4	-0.9
KMI				SCS	ScS	04 10 13.0	-1.6
KMI				SS	SS	04 12 59.2	-1.5
KMI				SSS	SSS	04 15 43.5	-1.6
KMI				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.3						
KMI				AMB	AMB		
	comp=Z,300nm,9.3s						
KMI				LR	LR		
	comp=N,900nm,18.7s,MS5.1						
KMI				LR	LR		
	comp=E,540nm,15.1s,MS5.1						
KMI				LR	LR		
	comp=Z,1µm,18.8s,MS5.0						
PARMO	**Parma**	**62.88**	**65**	*e*P	**P**	**04 00 29.2**	**-1.0**
BLO	**Bloomington**	**62.91**	**61**	*e*P	**P**	**04 00 28.7**	**-1.8**
BLO				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.5						
BLO	**Bloomington**	**62.91**	**61**	*e*P	**P**	**04 00 28.7**	**-1.8**
	comp=Z,33nm,0.9s,mb5.5						
HBAR	**Harrisburg**	**63.14**	**66**	P	**P**	**04 00 30.8**	**-1.2**
NATX	**Nacogdoches**	**63.48**	**72**	*e*P	**P**	**04 00 34.3**	**0.0**
	comp=Z,57nm,1.0s,mb5.7						
NATX				LR	LR		
	comp=Z,2µm,21.0s,MS5.2						
UTMT	**University of**	**63.61**	**64**	*e*P	**P**	**04 00 35.1**	**+0.1**
	comp=Z,228nm,1.0s,mb6.2						
WCI	**Wyandotte Cave**	**63.70**	**61**	PKHKP	**P**	**04 00 34.1**	**-1.5**
WCI				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
WCI	**Wyandotte Cave**	**63.70**	**61**	P	**P**	**04 00 34.1**	**-1.5**
WCI				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
WCI	**Wyandotte Cave**	**63.70**	**61**	*e*P	**P**	**04 00 33.8**	**-1.8**
	comp=Z,24nm,0.8s,mb5.3						
WCI				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
NSS	**Namsos**	**64.26**	**354**	*e*P	**P**	**04 00 36.8**	**-1.9**
NSS				AMS	AMS	04 28 55.2	
	comp=Z,939nm,15.9s,MS5.1						
WVT	**Waverly**	**64.34**	**64**	PKHKP	**P**	**04 00 38.7**	**-1.1**
WVT				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.3						
WVT	**Waverly**	**64.34**	**64**	P	**P**	**04 00 38.7**	**-1.1**
WVT				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.3						
WVT	**Waverly**	**64.34**	**64**	*e*P	**P**	**04 00 38.6**	**-1.2**
	comp=Z,32nm,1.0s,mb5.3						
WVT				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
ALLY	**Alegheny Colle**	**64.53**	**55**	*e*P	**P**	**04 00 39.8**	**-1.1**
AAA	**Alma-Ata**	**64.54**	**308**	*e*P	**P**	**04 00 40.0**	**-0.9**
AAA				pmax	pmax		
	comp=Z,500nm,3.0s						
AAA				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.4						
OXF	**Oxford**	**64.60**	**66**	*e*PKHKP	**P**	**04 00 40.3**	**-1.2**
OXF				pmax	pmax		
	comp=Z,281nm,1.1s,mb6.2						
OXF				MLR	MLR		
	comp=Z,883nm,20.0s,MS5.0						
OXF	**Oxford**	**64.60**	**66**	*e*P	**P**	**04 00 40.3**	**-1.2**
OXF				pmax	pmax		
	comp=Z,281nm,1.1s,mb6.2						
OXF				MLR	MLR		
	comp=Z,883nm,20.0s,MS5.0						
OXF	**Oxford**	**64.60**	**66**	*e*P	**P**	**04 00 40.3**	**-1.2**
	comp=Z,281nm,1.1s,mb6.2						
OXF				LR	LR		
	comp=Z,883nm,20.0s,MS5.0						
GENY	**Geneseo**	**64.89**	**53**	*e*P	**P**	**04 00 41.3**	**-1.9**
PLAL	**Pickwick Lake**	**65.03**	**65**	*e*P	**P**	**04 00 42.9**	**-1.3**
	comp=Z,54nm,0.9s,mb5.6						
PLAL				LR	LR		
	comp=Z,966nm,20.0s,MS5.0						
KAF	**Kangasniemi**	**65.10**	**347**	*e*p	**P**	**04 00 41.9**	**-2.3**
	comp=Z,9.1nm,0.7s,mb4.9,baz=14,slow=5.7						
KAF	**Kangasniemi**	**65.10**	**347**	*e*P	**P**	**04 00 41.9**	**-2.3**
KAF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
AFI	**Afiamalu**	**65.22**	**171**	PFAKE		04 01 00.0	+14
AFI				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
TKM2	**Tokmak 2**	**65.47**	**308**	P	**P**	**04 00 47.0**	**+0.1**
	SNR=97						
ULHL	**Ulahol**	**65.65**	**308**	P	**P**	**04 00 48.6**	**+0.5**
	SNR=140						
USP	**Ospenovka**	**65.75**	**309**	P	**P**	**04 00 49.2**	**+0.5**
	SNR=95						
NCB	**Newcomb**	**65.76**	**50**	*e*P	**P**	**04 00 46.1**	**-2.7**
	comp=Z,9.3nm,0.7s,mb4.9						
NCB				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
FINES	**FINESS Array B**	**65.78**	**346**	P	**P**	**04 00 47.0**	**-1.6**
FINES				pmax	pmax		
	comp=Z,29nm,0.9s						
FINES				MLR	MLR		
	comp=Z,1µm,18.1s						
FINES	**FINESS Array B**	**65.78**	**346**	P	**P**	**04 00 47.0**	**-1.6**
	comp=Z,29nm,0.9s,mb5.3,baz=34,slow=6.9,SNR=58						
FINES				LR	LR	04 34 28.4	
	comp=Z,1µm,18.1s,MS5.2,baz=27,slow=40						
CHMS	**Chumysh**	**65.83**	**309**	P	**P**	**04 00 49.6**	**+0.4**
	SNR=26						
KBK	**Karagaybulak**	**65.98**	**309**	P	**P**	**04 00 51.4**	**+1.2**
	SNR=19						
FRU	**Bishkek**	**66.02**	**309**	⇑*i*P	**P**	**04 00 51.2**	**+0.8**
FRU				*e*		04 01 07.0	
FRU				pmax	pmax		
	comp=Z,360nm,2.2s,mb6.0						
FRU				MLR	MLR		
	comp=E,3µm,19.0s						
FRU				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.5						
SWET	**Sewanee**	**66.07**	**63**	*e*P	**P**	**04 00 49.3**	**-1.6**
MCWV	**Mont Chateau**	**66.14**	**56**	PFAKE		04 01 00.0	+8.7
MCWV				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
BINY	**Binghamton**	**66.22**	**52**	*e*P	**P**	**04 00 50.2**	**-1.5**
	comp=Z,24nm,0.8s,mb5.3						
BINY				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
AAK	**Ala-Archa**	**66.22**	**309**	P	**P**	**04 00 52.3**	**+0.6**
	SNR=48						
AAK	**Ala-Archa**	**66.22**	**309**	*i* P	**P**	**04 00 52.1**	**+0.3**
AAK				LR	LR		
	comp=Z,720nm,21.0s,MS4.9						
KZA	**Kyzart**	**66.27**	**308**	P	**P**	**04 00 49.0**	**-3.0**
	SNR=66						
TZTN	**Tazewell**	**66.43**	**61**	*e*P	**P**	**04 00 51.8**	**-1.3**
MOL	**Molde**	**66.45**	**356**	*e*P	**P**	**04 00 52.1**	**-0.7**
	comp=Z,280nm,1.2s,mb6.2						
MOL	**Molde**	**66.45**	**356**	*e*P	**P**	**04 00 52.1**	**-0.7**
MOL				AMb	AMB	04 00 55.4	
	comp=Z,280nm,1.2s,mb6.2						
ACCN	**Adirondack Com**	**66.47**	**50**	*e*P	**P**	**04 00 51.3**	**-1.9**
PMG	**Port Moresby**	**66.52**	**215**	LR	LR	04 28 20.6	
	comp=Z,2µm,19.9s,MS5.3,baz=52,slow=34						
PMG	**Port Moresby**	**66.52**	**215**	PFAKE		04 01 10.0	+16
PMG				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
UCH	**Uchtor**	**66.52**	**309**	P	**P**	**04 00 54.6**	**+1.0**
	SNR=84						
PQI	**Presque Isle**	**66.55**	**44**	PFAKE		04 01 10.0	+16
PQI				LR	LR		
	comp=Z,13µm,20.0s,MS6.1						
EKS2	**Erkin-Say**	**66.56**	**309**	P	**P**	**04 00 54.5**	**+0.6**
	SNR=90						
LSA	**Lhasa**	**66.56**	**289**	P	**P**	**04 00 55.4**	**+1.3**
LSA				AMB	AMB		
	comp=Z,100nm,0.9s,mb5.8						
LSA	**Lhasa**	**66.56**	**289**	*e*P	**P**	**04 00 55.2**	**+1.1**
LSA				pmax	pmax		
	comp=Z,132nm,1.1s,mb5.9						
LSA				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.3						
LSA	**Lhasa**	**66.56**	**289**	*e*P	**P**	**04 00 55.2**	**+1.2**
	comp=Z,132nm,1.1s,mb5.9						
LSA				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
CPCT	**Cooper Cave**	**66.69**	**62**	*e*P	**P**	**04 00 53.4**	**-1.4**
AML	**Almayashu**	**66.99**	**309**	P	**P**	**04 00 57.9**	**+1.3**
	SNR=124						
LRAL	**Lakeview Retre**	**67.05**	**66**	*e*P	**P**	**04 00 55.3**	**-1.8**
	comp=Z,23nm,0.9s,mb5.2						
LRAL				LR	LR		
	comp=Z,913nm,19.0s,MS5.0						
FFD	**Franklin Falls**	**67.36**	**48**	*e*P	**P**	**04 00 57.0**	**-1.9**
	comp=Z,12nm,0.6s,mb5.1						
WVL	**Waterville**	**67.44**	**46**	PFAKE		04 01 10.0	+11
WVL				LR	LR		
	comp=Z,12µm,19.0s,MS6.2						
AB31	**Akbulak array**	**67.50**	**322**	*i* P	**P**	**04 00 59.5**	**-0.1**
AB31				pmax	pmax		
	comp=Z,46nm,0.7s,mb5.6						
BLA	**Blacksburg**	**67.64**	**58**	PKHKP	**P**	**04 01 00.6**	**-0.1**
BLA				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
BLA	**Blacksburg**	**67.64**	**58**	P	**P**	**04 01 00.6**	**-0.1**
BLA				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
BLA	**Blacksburg**	**67.64**	**58**	*e*P	**P**	**04 01 00.0**	**-0.7**
	comp=Z,21nm,0.9s,mb5.2						
BLA				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
NB2	**NORSAR Subarra**	**67.77**	**354**	P	**P**	**04 01 00.5**	**-0.7**
	comp=Z,147nm,0.9s,mb6.0,baz=7.0,slow=6.2						
NB2	**NORSAR Subarra**	**67.77**	**354**	P	**P**	**04 01 00.5**	**-0.7**
	baz=6.6,slow=6.2						
NOA	**NORSAR Array B**	**67.77**	**354**	P	**P**	**04 01 00.8**	**-0.4**
NOA				pmax	pmax		
	comp=Z,85nm,0.8s						
NOA				MLR	MLR		
	comp=Z,808nm,19.1s						
NOA	**NORSAR Array B**	**67.77**	**354**	P	**P**	**04 01 00.8**	**-0.4**
	comp=Z,85nm,0.8s,mb5.8,baz=7.9,slow=6.3,SNR=140						
NOA				LR	LR	04 35 12.9	
	comp=Z,808nm,19.1s,MS5.0,baz=350,slow=40						
KKAR	**Karatay Array**	**67.78**	**312**	*i* P	**P**	**04 01 01.5**	**0.0**
KKAR				pmax	pmax		
	comp=Z,180nm,1.2s,mb6.0						
KSH	**Kashi**	**67.82**	**306**	⇑*i*P	**P**	**04 01 03.0**	**+1.2**
KSH				AP	pP	04 01 16.0	+1.7
KSH				XP	sP	04 01 21.0	+2.0
KSH				PCP	PcP	04 01 30.0	+1.7
KSH				PP	PP	04 03 34.2	+0.6
KSH				PPP	PPP	04 05 11.1	+0.5
KSH				SCP		04 05 28.3	
KSH				PCS		04 05 33.6	
KSH				S	S	04 09 54.2	-1.1
KSH				XS		04 10 18.1	
KSH				PS	PS	04 10 28.0	+2.6
KSH				SCS	ScS	04 10 55.7	+2.5
KSH				SS	SS	04 14 20.3	+1.6
KSH				AMB	AMB		
	comp=Z,1µm,3.7s						
KSH				LR	LR		
	comp=N,6µm,16.7s,MS6.0						
KSH				LR	LR		
	comp=E,4µm,15.6s,MS6.0						
NAO01	**NORSAR Array S**	**67.99**	**354**	*e*P	**P**	**04 01 01.2**	**-1.3**
	comp=E,60nm,1.1s,mb5.5						
HRV	**Harvard--Oak R**	**68.14**	**49**	PFAKE		04 01 20.0	+16
HRV				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
CPNY	**Central Park**	**68.28**	**52**	*e*P	**P**	**04 01 03.6**	**-1.1**
WES	**Weston**	**68.34**	**49**	PKHKP	**P**	**04 01 04.0**	**-1.1**
WES				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.3						
WES	**Weston**	**68.34**	**49**	P	**P**	**04 01 04.0**	**-1.1**
WES				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.3						
WES	**Weston**	**68.34**	**49**	*e*P	**P**	**04 01 03.2**	**-1.8**
	comp=Z,23nm,0.7s,mb5.3						
WES				LR	LR		
	comp=Z,5µm,19.0s,MS5.8						
CHRT	**Chiangrai**	**68.44**	**275**	⇑P	**P**	**04 01 05.0**	**-1.0**
	comp=Z,171nm,0.9s,mb6.1						
CBN	**Corbin**	**68.51**	**56**	PFAKE		04 01 20.0	+14
CBN				LR	LR		
	comp=Z,4µm,19.0s,MS5.7						
VSU	**Vasula**	**68.52**	**345**	*i* P	**P**	**04 01 05.1**	**-0.7**
NANT	**Nan**	**68.67**	**274**	⇓P	**P**	**04 01 07.0**	**-0.4**
	comp=Z,138nm,1.0s,mb5.8						
BER	**Bergen**	**68.72**	**357**	*e*P	**P**	**04 01 05.8**	**-1.3**
BER				LR	LR		
	comp=Z,422µm,20.0s						
BER	**Bergen**	**68.72**	**357**	*e*P	**P**	**04 01 05.8**	**-1.3**
BER				*e*S	S	04 10 05.5	-0.3
BER				AMS	AMS	04 28 27.9	
	comp=Z,422nm,20.0s,MS4.7						
MOS	**Moscow**	**68.90**	**338**	*e*P	**P**	**04 01 07.1**	**-1.1**
MOS				*e*		04 01 31.0	
MOS				*e*S	S	04 10 10.3	+2.4
MOS				pmax	pmax		
	comp=Z,100nm,0.9s,mb5.8						
MOS				pmax	pmax		
	comp=Z,127nm,0.8s,mb5.9						
MOS				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.7						
MOS				MLR	MLR		
	comp=N,4µm,18.7s						
SHL	**Shillong**	**69.13**	**285**	*i* P	**P**	**04 01 09.0**	**-1.2**
SHL				*e*S	S	04 10 13.0	+1.7
TAOE	**Nuku Hiva Isla**	**69.14**	**137**	*e*P	Px	04 00 36.7	
	comp=N,2µm,38.8s						
TAOE				*e*S	S	04 10 28.9	+17
	comp=N,6µm,26.5s						
TAOE				*e*LR	LR	04 21 10.2	
	comp=N,16µm,25.6s,baz=343						
KKTK	**Khon Kaen**	**69.17**	**270**	⇓P	**P**	**04 01 10.0**	**-0.6**
	comp=N,679nm,0.9s						
KONO	**Kongsberg**	**69.26**	**355**	PFAKE		04 01 20.0	+10
KONO				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
JSC	**Jenkinsville**	**69.36**	**61**	P	**P**	**04 01 11.4**	**-0.1**
JSC	**Jenkinsville**	**69.36**	**61**	*e*P	**P**	**04 01 10.7**	**-0.8**
OBN	**Obninsk**	**69.72**	**338**	α*i*P	**P**	**04 01 12.3**	**-1.0**
OBN				*e*	pP	04 01 27.2	+1.4
OBN				*e*		04 01 35.7	
OBN				PPP	PP	04 03 55.0	+5.3
OBN				*e*S	S	04 10 19.7	+2.1
OBN				*e*		04 11 04.8	
OBN				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.7						
OBN				pmax	pmax		
	comp=Z,172nm,1.6s,mb5.7						
OBN				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.8						
OBN	**Obninsk**	**69.72**	**338**	*e*P	**P**	**04 01 12.0**	**-1.2**
	comp=Z,92nm,1.0s,mb5.7						
OBN				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
CHG	**Chiang Mai**	**69.76**	**275**	⇑P	**P**	**04 01 13.4**	**-0.7**
	comp=Z,44nm,1.0s,mb5.3						
CMAR	**Chiang Mai Arr**	**70.02**	**275**	P	**P**	**04 01 15.4**	**-0.3**
CMAR				pmax	pmax		
	comp=Z,30nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,666nm,18.4s						
CMAR	**Chiang Mai Arr**	**70.02**	**275**	P	**P**	**04 01 15.3**	**-0.4**
	comp=Z,30nm,0.8s,mb5.2,baz=26,slow=7.0,SNR=66						
CMAR				LR	LR	04 34 15.4	
	comp=Z,666nm,18.4s,MS4.9,baz=35,slow=38						
COW	**Cow Castle Cre**	**70.34**	**61**	*e*P	**P**	**04 01 18.3**	**+0.9**
NHSC	**New Hope**	**70.83**	**61**	*e*P	**P**	**04 01 19.8**	**-0.6**
	comp=Z,65nm,0.9s,mb5.6						
NHSC				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
TWB	**Tillmans-White**	**70.87**	**61**	P	**P**	**04 01 20.5**	**-0.2**
MLA1	**Latheron**	**70.88**	**2**	*e*P	**P**	**04 01 19.7**	**-0.6**
GUN	**Gumba**	**71.00**	**291**	*e*P	**P**	**04 01 22.3**	**+0.8**
	comp=Z,583nm,1.0s,mb6.5						
MVH1	**Achvaich**	**71.24**	**2**	⇑*e*P	**P**	**04 01 22.2**	**-0.2**
KKN	**Kakani**	**71.44**	**291**	*e*P	**P**	**04 01 24.8**	**+0.6**
	comp=Z,330nm,1.1s,mb6.2						
KKN	**Kakani**	**71.44**	**291**	*e*P	**P**	**04 01 24.8**	**+0.6**
KKN				pmax	pmax		
	comp=Z,165nm,1.1s,mb5.9						
PKI	**Pulchoki**	**71.53**	**291**	*e*P	**P**	**04 01 24.9**	**+0.2**
	comp=Z,411nm,1.1s,mb6.3						
PKI	**Pulchoki**	**71.53**	**291**	*e*P	**P**	**04 01 24.9**	**+0.2**
PKI				pmax	pmax		
	comp=Z,206nm,1.1s,mb6.0						
MCD	**Coleburn Disti**	**71.61**	**2**	*e*P	**P**	**04 01 24.8**	**+0.2**
KSK	**Scoval**	**71.62**	**4**	⇑*e*P	**P**	**04 01 25.2**	**+0.4**
KAC	**Achnashellach**	**71.64**	**3**	⇑*i*P	**P**	**04 01 24.9**	**+0.1**
GKN	**Gorkha**	**71.66**	**292**	*e*P	**P**	**04 01 25.8**	**+0.4**
	comp=Z,454nm,1.1s,mb6.3						
DMN	**Daman**	**71.67**	**291**	*e*P	**P**	**04 01 26.1**	**+0.5**
	comp=Z,354nm,1.1s,mb6.2						
MDO	**Dochfour**	**71.72**	**2**	⇑*e*P	**P**	**04 01 25.0**	**-0.4**
MME1	**Meikle Cairn**	**71.88**	**1**	*e*P	**P**	**04 01 25.7**	**-0.5**
KSB	**Sheil Bridge**	**71.93**	**3**	⇑*i*P	**P**	**04 01 26.4**	**-0.1**
MNK	**Minsk**	**72.11**	**343**	*e*P	**P**	**04 01 26.0**	**-1.6**
KAR1	**Arisaig**	**72.20**	**3**	⇑*i*P	**P**	**04 01 28.5**	**+0.3**
KOLN	**Koldanda**	**72.44**	**292**	*e*P	**P**	**04 01 30.3**	**+0.2**
	comp=Z,241nm,1.1s,mb6.0						
MUD	**Monsted U’grnd**	**72.47**	**354**	⇑*i*P	**P**	**04 01 30.0**	**+0.3**
MUD				pmax	pmax		
	comp=Z,120nm,1.1s,mb5.7						
MUD				MLR	MLR		
	comp=Z,860nm,19.0s,MS5.0						
MUD				MLR	MLR		
	comp=Z,900nm,18.0s						
MUD	**Monsted U’grnd**	**72.47**	**354**	⇑*i*P	**P**	**04 01 30.0**	**+0.3**
	comp=Z,117nm,1.1s,mb5.7						
	comp=Z,860nm,19.0s						
	comp=Z,900nm,18.0s						
VRSR	**Storozhevoye**	**72.62**	**335**	*e*P	**P**	**04 01 30.5**	**-0.2**
VRSR				*e*		04 01 48.7	
VRSR				pmax	pmax		
	comp=N,80nm,1.0s						
VRSR				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.5						
VRSR				pmax	pmax		
	comp=E,40nm,2.4s						
VRSR				MLR	MLR		
	comp=Z,280nm,18.0s,MS4.6						
VRSR				MLR	MLR		
	comp=N,170nm,19.0s,MS4.5						
VRSR				MLR	MLR		
	comp=E,110nm,15.0s,MS4.5						
COP	**Copenhagen**	**73.00**	**352**	*i* P	**P**	**04 01 32.4**	**-0.4**
COP				pmax	pmax		
	comp=Z,120nm,1.3s,mb5.7						
COP				MLR	MLR		
	comp=Z,710nm,19.0s,MS5.0						
COP	**Copenhagen**	**73.00**	**352**	*i* P	**P**	**04 01 32.4**	**-0.4**
	comp=Z,117nm,1.3s,mb5.7						
COP				*e*		04 11 08.8	
	comp=Z,710nm,19.0s						
LGTI	**Lohaghat**	**73.09**	**296**	*e*P	**P**	**04 01 34.8**	**+0.9**
BSD	**Bornholm Skovb**	**73.34**	**351**	*i* P	**P**	**04 01 34.3**	**-0.5**
SUW	**Suwalki**	**73.36**	**346**	*e*P	**P**	**04 01 33.8**	**-1.2**
SUW				*e*pP	pP	04 01 44.8	-2.8
SUW				MLR	MLR	04 32 29.8	
	comp=Z,2µm,24.3s,MS5.3						
SMLA	**Simla**	**73.54**	**299**	*i* P	**P**	**04 01 33.3**	**-3.2**
SMLA				*i* x	x	04 07 36.2	
PPT	**Papeete**	**73.57**	**149**	*e*S	S	04 11 00.5	-2.0
	comp=Z,4µm,27.8s						
PPT				*e*LQ		04 20 09.6	
PPT				*e*LR	LR	04 23 23.4	
	comp=Z,4µm,25.8s,baz=343						
PPT	**Papeete**	**73.57**	**149**	LR	LR	04 30 58.2	
	comp=Z,2µm,18.8s,MS5.3,baz=310,slow=33						
GMK	**Mull of Kintyr**	**73.79**	**3**	⇑*e*P	**P**	**04 01 37.7**	**+0.3**
DZM	**Mont Dzumac**	**73.81**	**193**	LR	LR	04 27 46.8	
	comp=Z,2µm,21.5s,MS5.4,baz=19,slow=31						
ESK	**Eskdalemuir**	**73.88**	**2**	P	**P**	**04 01 38.5**	**+0.6**
ESK				pmax	pmax		
	comp=Z,82nm,1.1s,mb5.6						
ESK	**Eskdalemuir**	**73.88**	**2**	*e*P	**P**	**04 01 37.8**	**-0.2**
	comp=Z,82nm,1.1s,mb5.6						
ESK				LR	LR		
	comp=Z,261nm,20.0s,MS4.5						
DWPF	**Disney**	**73.91**	**65**	PFAKE		04 01 50.0	+11
DWPF				LR	LR		

	comp=Z,875nm,20.0s,MS5.0						
NNT	**Nongplab**	**73.94**	**270**	P	**P**	**04 01 39.5**	**+0.4**
GCL	**Cushendall**	**74.04**	**3**	⇑*e*P	**P**	**04 01 38.8**	**0.0**
BOK	**Bokaro**	**74.07**	**288**	*e*P	**P**	**04 01 39.4**	**-0.4**
BOK				AMb	AMB	04 01 41.6	
	comp=Z,145nm,1.2s,mb5.8						
BOK				*e*x	S	04 11 05.4	-2.6
BHH	**Howats Hill**	**74.10**	**2**	*e*P	**P**	**04 01 39.4**	**+0.2**
GAL1	**Galloway**	**74.29**	**3**	⇑*e*P	**P**	**04 01 40.1**	**-0.2**
BTA	**Talkin**	**74.30**	**1**	⇑*e*P	**P**	**04 01 40.7**	**+0.3**
RAR	**Rarotonga**	**74.30**	**160**	PFAKE		04 01 50.0	+8.9
RAR				LR	LR		
	comp=Z,4µm,20.0s,MS5.7						
GCD	**Castle Douglas**	**74.32**	**2**	⇑*e*P	**P**	**04 01 39.8**	**-0.7**
GMM	**Mts of Mourne**	**74.88**	**3**	⇑*e*P	**P**	**04 01 43.5**	**-0.2**
GKP	**Gorka Klasztor**	**74.90**	**349**	*e*P	**P**	**04 01 43.6**	**-0.3**
GKP				MLR	MLR	04 38 03.8	
	comp=Z,2µm,21.1s,MS5.4						
BSEG	**Bad Segeberg**	**74.90**	**353**	*e*P	**P**	**04 01 44.2**	**+0.3**
BSEG				pmax	pmax		
	comp=Z,146nm,1.3s,mb5.8						
HPK	**Haverah Park**	**75.26**	**1**	*e*P	**P**	**04 01 46.2**	**+0.3**
NDI	**New Delhi**	**75.39**	**298**	*e*P	**P**	**04 01 46.0**	**-1.2**
WAR	**Warsaw**	**75.40**	**347**	*e*P	**P**	**04 01 47.6**	**+0.8**
WAR				MLR	MLR	04 39 07.8	
	comp=Z,2µm,19.5s,MS5.4						
KAKA	**Kakadu**	**75.63**	**228**	⇓*i*P	**P**	**04 01 48.2**	**-0.6**
LHO	**Holmfirth**	**75.67**	**1**	⇑*e*P	**P**	**04 01 47.5**	**-0.7**
DCN	**Croghan**	**75.72**	**4**	*e*P	**P**	**04 01 47.6**	**-1.0**
DLF	**Lyons Farm**	**75.80**	**4**	*e*P	**P**	**04 01 48.0**	**-1.0**
DSB	**Dublin**	**75.86**	**4**	*e*P	**P**	**04 01 49.5**	**+0.1**
	comp=Z,52nm,0.9s,mb5.5						
KSM	**Kuching**	**75.96**	**255**	*e*P	**P**	**04 01 50.3**	**-0.4**
KBI1	**Birley Grange**	**75.97**	**1**	⇑*i*P	**P**	**04 01 49.8**	**-0.2**
KWE	**Weaver Farm**	**76.20**	**1**	⇑*e*P	**P**	**04 01 50.8**	**-0.5**
WIT	**Witteveen**	**76.24**	**356**	*e*P	**P**	**04 01 52.5**	**+1.0**
SBD1	**Bryn Du**	**76.29**	**2**	⇑*i*P	**P**	**04 01 52.2**	**+0.4**
HLM1	**Long Mynd**	**76.69**	**2**	⇑*e*P	**P**	**04 01 54.0**	**-0.1**
HLM1				AMb	AMB	04 01 56.3	
	comp=Z,86nm,1.4s,mb5.5						
CTA	**Charters Tower**	**76.74**	**212**	P	**P**	**04 01 54.7**	**-0.3**
	comp=Z,14nm,0.9s,mb4.9,baz=14,slow=7.6,SNR=8.5						
CTA				LR	LR	04 32 08.0	
	comp=Z,687nm,19.2s,MS5.0,baz=18,slow=33						
CTAO	**Charters Tower**	**76.74**	**212**	*e*P	**P**	**04 01 54.3**	**-0.7**
CTAO				MLR	MLR		
	comp=Z,752nm,19.0s,MS5.0						
SSP1	**Stoney Pound**	**76.78**	**2**	⇑*i*P	**P**	**04 01 54.8**	**+0.2**
VAL	**Valentia**	**76.95**	**6**	*e*P	**P**	**04 01 54.8**	**-0.8**
CLZ	**Clausthal**	**76.98**	**353**	*e*P	**P**	**04 01 56.2**	**+0.5**
CLZ				pmax	pmax		
	comp=Z,122nm,1.2s,mb5.7						
CLZ	**Clausthal**	**76.98**	**353**	*e*P	**P**	**04 01 56.2**	**+0.5**
	comp=Z,122nm,1.2s,mb5.7						
GOF	**Gofitskoye**	**77.07**	**330**	⇓*i*P	**P**	**04 01 54.6**	**-1.8**
GOF				pmax	pmax		
	comp=Z,300nm,1.3s,mb6.1						
WTSB	**Winterswijk**	**77.08**	**355**	⇑*e*P	**P**	**04 01 55.6**	**-0.7**
	comp=Z,75nm,1.1s,mb5.5						
HTR	**Trewern Hill**	**77.12**	**2**	⇑*i*P	**P**	**04 01 56.6**	**0.0**
HTR				AMb	AMB	04 01 58.7	
	comp=Z,185nm,1.3s,mb5.8						
HAE	**Alders End**	**77.17**	**1**	⇑*e*P	**P**	**04 01 56.8**	**0.0**
HAE				AMb	AMB	04 01 59.1	
	comp=Z,158nm,1.3s,mb5.8						
MCH1	**Michaelchurch**	**77.21**	**2**	⇑*e*P	**P**	**04 01 57.1**	**+0.1**
LVV	**L'vov**	**77.27**	**344**	*e*P	**P**	**04 01 56.7**	**-0.7**
LVV				*e*		04 02 13.9	
LVV				*e*S	S	04 11 40.9	-1.8
LVV				*e*		04 12 19.7	
CLL	**Collm**	**77.29**	**351**	⇑*i*P	**P**	**04 01 56.7**	**-0.8**
CLL				*i* *PP	pP	04 02 10.0	-0.1
CLL				*e*S	S	04 11 42.0	-0.8
CLL				pmax	pmax		
	comp=Z,48nm,1.4s,mb5.2						
CLL				MLR	MLR		
	comp=Z,2µm,20.2s,MS5.3						
CLL	**Collm**	**77.29**	**351**	⇑*i*P	**P**	**04 01 56.7**	**-0.8**
	comp=Z,48nm,1.4s,mb5.2						
CLL				*i* pP	pP	04 02 10.0	-0.1
CLL				*e*S	S	04 11 42.0	-0.8
CLL				LR	LR		
	comp=Z,2µm,20.2s,MS5.3						
CLL	**Collm**	**77.29**	**351**	⇑P	**P**	**04 01 56.7**	**-0.8**
	comp=Z,logA/T=1.5,mb5.2						
CLL				*i*		04 02 02.4	
CLL				*i* *PP	pP	04 02 10.0	-0.1
CLL				*i* *SP	sP	04 02 15.1	+0.3
CLL				*e*PP	PP	04 04 57.0	+3.6
CLL				*e*S	S	04 11 42.0	-0.8
CLL				*e*PS	PS	04 12 30.0	+2.0
KSP	**Ksiaz**	**77.40**	**349**	⇑*e*P	**P**	**04 01 57.5**	**-0.6**
KSP				*e**PP	pP	04 02 09.7	-1.0
KSP				*e*		04 12 18.0	
KSP				*e*SS	SS	04 16 48.0	+2.0
KSP				MLR	MLR		
	comp=Z,3µm,20.7s,MS5.6						
KSP	**Ksiaz**	**77.40**	**349**	*e*P	**P**	**04 01 57.6**	**-0.5**
KSP				*e*PcP	PcP	04 02 08.0	-0.8
KSP				*e*S	S	04 11 55.7	+12
KSP				MLR	MLR	04 39 19.1	
	comp=Z,2µm,20.6s,MS5.5						
MAK	**Makhachkala**	**77.44**	**326**	*e*P	**P**	**04 01 52.0**	**-6.5**
MAK				pmax	pmax		
	comp=Z,1µm,4.0s						
MAK				MLR	MLR		
	comp=N,8µm,18.0s,MS6.1						
MAK				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.7						
MAK				MLR	MLR		
	comp=E,2µm,15.0s,MS6.1						
OJC	**Ojcow**	**77.55**	**347**	⇑*e*P	**P**	**04 01 58.8**	**-0.2**
OJC				⇑*e*SKSa		04 12 06.4	
OJC				MLR	MLR	04 42 22.6	
	comp=E,2µm,18.6s,MS5.5						
HGH	**Gray Hill**	**77.57**	**2**	⇑*i*P	**P**	**04 01 59.0**	**-0.1**
HGH				AMb	AMB	04 02 01.8	
	comp=Z,176nm,1.3s,mb5.8						
BRG	**Berggiesshubel**	**77.62**	**351**	*i* P	**P**	**04 01 58.9**	**-0.4**
BRG				*i* S	S	04 11 48.0	+1.6
BRG				*i* SS	SS	04 16 43.0	-6.4
BRG				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.2						
BRG				MLR	MLR		
	comp=N,1µm,20.0s,MS5.4						
BRG				MLR	MLR		
	comp=E,1µm,20.8s,MS5.4						
BRG				MLR	MLR		
	comp=Z,2µm,20.8s,MS5.3						
BRG	**Berggiesshubel**	**77.62**	**351**	*i* P	**P**	**04 01 58.9**	**-0.4**
	comp=Z,38nm,1.2s,mb5.2						
BRG				*e*PP	PP	04 05 05.4	+9.0
BRG				*i* S	S	04 11 48.0	+1.6
BRG				*i* SS	SS	04 16 43.0	-6.4
BRG				*e*		04 28 55.0	
BRG				LR	LR		
	comp=Z,2µm,20.8s,MS5.3						
KWP	**Kalwaria**	**77.67**	**345**	*e*P	**P**	**04 02 00.1**	**+0.5**
KWP				MLR	MLR	04 35 59.5	
	comp=Z,3µm,23.9s,MS5.5						
UPC	**Upice**	**77.76**	**349**	*e*P	**P**	**04 01 59.8**	**-0.3**
DPC	**Dobruska-Polom**	**77.88**	**349**	*e*P	**P**	**04 02 00.7**	**0.0**
DPC				AMS	AMS	04 39 30.0	
	comp=Z,1µm,19.6s						
PVCC	**Panska Ves**	**77.90**	**350**	*e*P	**P**	**04 02 00.7**	**-0.2**
PVCC				AMS	AMS	04 39 30.0	
	comp=Z,2µm,20.0s						
MOX	**Moxa**	**78.07**	**352**	*e*P	**P**	**04 02 01.5**	**-0.3**
MOX				pmax	pmax		
	comp=Z,54nm,1.4s,mb5.3						
MOX				MLR	MLR		
	comp=Z,600nm,22.0s,MS4.9						
MOX	**Moxa**	**78.07**	**352**	*e*P	**P**	**04 02 01.5**	**-0.3**
	comp=Z,54nm,1.4s,mb5.3						
MOX				*e*S	S	04 12 03.0	+12
MOX				LR	LR		
	comp=Z,600nm,22.0s,MS4.9						
MOX	**Moxa**	**78.07**	**352**	*i* P	**P**	**04 02 01.5**	**-0.3**
	comp=Z,logA/T=1.6,mb5.3						
MOX				S	S	04 12 03.0	+12
MOX				L		04 40 03.0	
HEX	**Exmoor**	**78.12**	**2**	⇑*i*P	**P**	**04 02 01.9**	**-0.2**
OKC	**Ostrava-Krasne**	**78.15**	**348**	*e*P	**P**	**04 02 02.3**	**+0.1**
OKC				AMS	AMS	04 41 10.0	
	comp=Z,1µm,18.1s						
KIV	**Kislovodsk**	**78.17**	**330**	*ce*P	**P**	**04 02 02.9**	**+0.5**
KIV				*e*		04 02 10.8	
KIV				*e*	pP	04 02 14.5	-0.6
KIV				*e*		04 04 59.5	
KIV				S	S	04 12 07.8	+15
KIV				*e*PS	PS	04 12 37.8	-1.7
KIV				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.6						
KIV				pmax	pmax		
	comp=Z,66nm,1.2s,mb5.4						
KIV				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.3						
KIV	**Kislovodsk**	**78.17**	**330**	*e*P	**P**	**04 02 02.9**	**+0.5**
	comp=Z,58nm,1.0s,mb5.5						
KIV				LR	LR		
	comp=Z,367nm,20.0s,MS4.7						
HTL	**Hartland**	**78.17**	**3**	*e*P	**P**	**04 02 01.9**	**-0.5**
NIE	**Niedzica**	**78.26**	**346**	*e*P	**P**	**04 02 02.9**	**+0.1**
MORC	**Moravsky Berou**	**78.29**	**348**	P	**P**	**04 02 03.5**	**+0.5**
MORC	**Moravsky Berou**	**78.29**	**348**	*e*P	**P**	**04 02 02.9**	**-0.1**
	comp=Z,32nm,1.3s,mb5.1						
HGN	**Heimansgroeve**	**78.32**	**356**	*e*P	**P**	**04 02 03.1**	**0.0**
	comp=Z,83nm,1.3s,mb5.5						
HGN	**Heimansgroeve**	**78.32**	**356**	*e*S		04 12 11.6	
HGN				*e*S	SKS	04 12 12.2	+3.2
HGN				*e*SS	SS	04 17 27.7	+28
NKC	**Novy Kostel**	**78.40**	**352**	*e*P	**P**	**04 02 03.4**	**-0.2**
NKC				AMS	AMS	04 44 20.0	
	comp=Z,1µm,17.9s						
KOLS	**Kolonicke sedl**	**78.42**	**345**	*e*P	**P**	**04 02 04.1**	**+0.3**
PRU	**Pruhonice**	**78.44**	**350**	*e*P	**P**	**04 02 03.6**	**-0.2**
PRU				AMS	AMS	04 40 00.0	
	comp=Z,2µm,20.5s						
AJM	**Ajmer**	**78.53**	**298**	*e*P	**P**	**04 02 02.8**	**-2.0**
AJM				*i* P		04 02 04.0	
AJM				AMb	AMB	04 02 06.6	
	comp=Z,73nm,1.2s,mb5.5						
TNS	**Taunus Mts**	**78.72**	**354**	*e*P	**P**	**04 02 05.5**	**+0.1**
TNS				pmax	pmax		
	comp=Z,58nm,1.3s,mb5.3						
TNS	**Taunus Mts**	**78.72**	**354**	*e*P	**P**	**04 02 05.5**	**+0.1**
	comp=Z,58nm,1.3s,mb5.3						
ZEI	**Tsey**	**78.83**	**328**	*e*P	**P**	**04 02 02.0**	**-4.2**
ZEI				*i*		04 04 59.8	
ZEI				pmax	pmax		
	comp=Z,64nm,1.0s,mb5.5						
VRAC	**Vranov**	**78.87**	**349**	P	**P**	**04 02 06.9**	**+0.7**
TBI	**Tubuai**	**79.03**	**151**	*e*P	**P**	**04 02 01.2**	**-6.4**
	comp=Z,140nm,28.0s						
TBI				*e*S	S	04 12 18.6	+17
	comp=Z,2µm,32.8s						
TBI				*e*LR	LR	04 26 00.1	
	comp=Z,4µm,23.2s,baz=338						
GIVF	**Givet**	**79.03**	**357**	⇑*i*P	**P**	**04 02 06.8**	**-0.3**
	comp=Z,144nm,1.2s,mb5.5						
GIVF	**Givet**	**79.03**	**357**	⇑*i*P	**P**	**04 02 06.8**	**-0.3**
GIVF				pmax	pmax		
	comp=Z,72nm,1.2s,mb5.5						
GRA1	**Grafenberg Arr**	**79.05**	**352**	*e*P	**P**	**04 02 07.6**	**+0.4**
	comp=Z,109nm,1.3s,mb5.6						
GRA1				*e*PP	PP	04 05 02.6	-5.6
GRA1				LR	LR		
	comp=Z,1µm,21.5s,MS5.1						
GRF	**Grafenberg Arr**	**79.05**	**352**	*e*P	**P**	**04 02 07.6**	**+0.4**
GRF				*e*		04 05 02.6	
GRF				pmax	pmax		
	comp=Z,109nm,1.3s,mb5.6						
GRF				MLR	MLR		
	comp=Z,1µm,21.5s,MS5.1						
GRF	**Grafenberg Arr**	**79.05**	**352**	*e*P	**P**	**04 02 07.7**	**+0.5**
GRF				*e*		04 05 02.6	
GRF				pmax	pmax		
	comp=Z,109nm,1.3s,mb5.6						
GRF				MLR	MLR		
	comp=Z,1µm,21.5s,MS5.1						
GRF	**Grafenberg Arr**	**79.05**	**352**	*e*P	**P**	**04 02 07.7**	**+0.5**
	comp=Z,109nm,1.3s,mb5.6						
GRF				*e*PP	PP	04 05 02.6	-5.6
GRF				LR	LR		
	comp=Z,1µm,21.5s,MS5.1						
BAIF	**Baives**	**79.09**	**357**	⇑*i*P	**P**	**04 02 07.5**	**+0.1**
	comp=Z,206nm,1.2s,mb5.6						
BAIF	**Baives**	**79.09**	**357**	⇑*i*P	**P**	**04 02 07.5**	**+0.1**
BAIF				pmax	pmax		
	comp=Z,103nm,1.2s,mb5.6						
ABH	**Alteburg**	**79.12**	**355**	*e*P	**P**	**04 02 07.5**	**-0.1**
IAS	**Iasi**	**79.12**	**341**	P	**P**	**04 02 08.2**	**+0.6**
KECS	**Kecovo**	**79.14**	**346**	*e*P	**P**	**04 02 07.7**	**0.0**
DUS	**Dusheti**	**79.17**	**328**	P	**P**	**04 02 08.9**	**+0.9**
TOD	**Tromm**	**79.31**	**354**	⇑*e*P	**P**	**04 02 08.6**	**0.0**
RUP	**Ruppelstein**	**79.33**	**355**	*e*P	**P**	**04 02 08.7**	**0.0**
KOLL	**Kolacno**	**79.35**	**347**	*e*P	**P**	**04 02 09.3**	**+0.4**
VYHS	**Vyhne**	**79.37**	**347**	*e*P	**P**	**04 02 09.4**	**+0.4**
KHC	**Kasperske Hory**	**79.38**	**351**	*e*P	**P**	**04 02 08.9**	**-0.1**
KHC				MLR	MLR		
	comp=Z,2µm,20.6s,MS5.4						
KHC	**Kasperske Hory**	**79.38**	**351**	*e*P	**P**	**04 02 08.9**	**-0.1**
KHC				*e*x	x	04 03 37.0	
KHC				AMS	AMS	04 41 20.0	
	comp=Z,2µm,20.6s						
WLF	**Walferdange**	**79.41**	**356**	P	**P**	**04 02 09.3**	**+0.2**
WLF				pmax	pmax		
	comp=Z,53nm,1.2s,mb5.3						
WLF	**Walferdange**	**79.41**	**356**	*e*P	**P**	**04 02 09.1**	**-0.1**
	comp=Z,53nm,1.2s,mb5.3						
SOC	**Sochi**	**79.42**	**332**	*e*P	**P**	**04 02 08.7**	**-0.6**
SOC				*e*		04 02 15.7	
SOC				*e*S	S	04 12 07.4	+1.7
SOC				*e*		04 12 45.1	
SOC				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.3						
SOC				pmax	pmax		
	comp=N,28nm,0.8s						
SOC				pmax	pmax		
	comp=E,15nm,0.9s						
SOC				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.5						
SOC				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.7						
SOC				MLR	MLR		
	comp=N,1µm,17.0s,MS5.4						
SOC				MLR	MLR		
	comp=E,474nm,17.0s,MS5.4						
BHPL	**Bhopal**	**79.47**	**294**	*e*P	**P**	**04 02 09.4**	**-0.7**
BHPL				AMb	AMB	04 02 11.7	
	comp=Z,114nm,1.7s,mb5.5						
TI2	**Plekhanov**	**79.47**	**327**	⇑*i*P	**P**	**04 02 06.8**	**-2.9**
TI2				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.6						
TBLG	**Delisi**	**79.48**	**327**	P	**P**	**04 02 10.8**	**+1.2**
BBSR	**BB Station**	**79.48**	**51**	PFAKE		04 02 20.0	+10
BBSR				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
MTA	**Mtatsminda**	**79.49**	**327**	P	**P**	**04 02 10.3**	**+0.5**
DGRG	**David-gareji**	**79.51**	**327**	P	**P**	**04 02 10.7**	**+0.8**
SIND	**Sindeldorf**	**79.52**	**353**	⇑*e*P	**P**	**04 02 09.3**	**-0.4**
SMOL	**Smolenice**	**79.55**	**348**	*e*P	**P**	**04 02 11.4**	**+1.5**
KTD	**Kalmit**	**79.65**	**354**	*e*P	**P**	**04 02 10.7**	**+0.3**
GEC2	**GERESS Array S**	**79.65**	**351**	*e*P	**P**	**04 02 10.5**	**0.0**
GEC2				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.0						
GEC2	**GERESS Array S**	**79.65**	**351**	*e*P	**P**	**04 02 10.5**	**0.0**
	comp=Z,27nm,1.2s,mb5.0						
GERES	**GERESS Array B**	**79.65**	**351**	P	**P**	**04 02 10.8**	**+0.3**
GERES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GERES				MLR	MLR		
	comp=Z,2µm,21.0s						
GERES	**GERESS Array B**	**79.65**	**351**	P	**P**	**04 02 10.8**	**+0.3**
	comp=Z,5.4nm,0.8s,mb4.6,baz=18,slow=4.2,SNR=53						
GERES				LR	LR	04 40 58.7	
	comp=Z,2µm,21.0s,MS5.4,baz=17,slow=38						
SIM	**Simferopol'**	**79.72**	**336**	*ce*P	**P**	**04 02 10.7**	**-0.2**
SIM				*e*		04 05 08.0	
SIM				*e*S	S	04 12 17.0	+8.2
SIM				*e*PS	PS	04 12 57.0	-2.0
SIM				pmax	pmax		
	comp=Z,100nm,9.8s						
SIM				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.2						
SIM				pmax	pmax		
	comp=Z,200nm,16.0s						
SIM				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.7						
PSZ	**Piszkesteto**	**79.78**	**346**	P	**P**	**04 02 12.1**	**+0.9**
PSZ	**Piszkesteto**	**79.78**	**346**	*e*P	**P**	**04 02 11.7**	**+0.5**
	comp=Z,89nm,1.2s,mb5.6						
PSZ	**Piszkesteto**	**79.78**	**346**	⇑*e*P	**P**	**04 02 11.9**	**+0.7**
ZST	**Bratislava**	**79.90**	**348**	*e*P	**P**	**04 02 12.5**	**+0.7**
LANF	**Langenberg**	**80.00**	**355**	*e*P	**P**	**04 02 12.3**	**0.0**
RAO	**Raoul Island**	**80.08**	**178**	LR	LR	04 33 02.6	
	comp=Z,2µm,20.4s,MS5.4,baz=36,slow=32						
RAO	**Raoul Island**	**80.08**	**178**	PFAKE		04 02 20.0	+6.8
RAO				LR	LR		
	comp=Z,3µm,21.0s,MS5.5						
SRO	**Srobarova**	**80.11**	**347**	*e*P	**P**	**04 02 14.0**	**+1.0**
STU	**Stuttgart**	**80.12**	**354**	P	**P**	**04 02 13.5**	**+0.5**
STU				pmax	pmax		
	comp=Z,79nm,1.3s,mb5.5						
STU	**Stuttgart**	**80.12**	**354**	*e*P	**P**	**04 02 12.7**	**-0.3**
	comp=Z,79nm,1.3s,mb5.5						
SRO1	**Iza**	**80.17**	**347**	*e*P	**P**	**04 02 14.8**	**+1.5**
HDH	**Heidenheim**	**80.23**	**353**	⇑*e*P	**P**	**04 02 13.3**	**-0.3**
LBG	**Lerchenberg**	**80.25**	**354**	*e*P	**P**	**04 02 13.3**	**-0.4**
DRGR		**80.42**	**344**	P	**P**	**04 02 15.3**	**+0.7**
BUCH	**Bad Urach**	**80.43**	**353**	⇑*e*P	**P**	**04 02 14.8**	**+0.2**
FLN	**La Foliniere**	**80.47**	**0**	⇑*i*P	**P**	**04 02 14.4**	**-0.4**
	comp=Z,244nm,1.3s,mb5.7						
FLN				*e*R			
	comp=Z,1µm,19.8s						
FLN	**La Foliniere**	**80.47**	**0**	⇑*i*P	**P**	**04 02 14.4**	**-0.4**
FLN				pmax	pmax		
	comp=Z,122nm,1.3s,mb5.7						
FLN				MLR	MLR		
	comp=Z,1µm,19.8s,MS5.3						
FUR	**Furstenfeldbru**	**80.56**	**352**	*e*P	**P**	**04 02 15.5**	**+0.2**
FUR				pmax	pmax		
	comp=Z,93nm,1.3s,mb5.5						
FUR	**Furstenfeldbru**	**80.56**	**352**	*e*P	**P**	**04 02 15.5**	**+0.2**
	comp=Z,93nm,1.3s,mb5.5						
MOA	**Molln**	**80.58**	**350**	⇑*i*P	**P**	**04 02 15.5**	**+0.1**
	comp=Z,26nm,1.4s,mb5.0						
WLS	**Welschbruch**	**80.59**	**355**	*e*P	**P**	**04 02 15.6**	**+0.1**
CDF	**Champ du Feu**	**80.60**	**355**	⇑*i*P	**P**	**04 02 15.3**	**-0.2**
	comp=Z,73nm,1.3s,mb5.1						
CDF	**Champ du Feu**	**80.60**	**355**	⇑*i*P	**P**	**04 02 15.3**	**-0.2**
CDF				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.1						
BFO	**Black Forest**	**80.62**	**354**	*e*P	**P**	**04 02 15.7**	**+0.1**
BFO				pmax	pmax		
	comp=Z,48nm,1.4s,mb5.2						
BFO	**Black Forest**	**80.62**	**354**	*e*P	**P**	**04 02 15.7**	**+0.1**
	comp=Z,48nm,1.4s,mb5.2						
MEZF	**Maizieres J'vi**	**80.62**	**356**	⇑*i*P	**P**	**04 02 15.7**	**+0.1**
	comp=Z,166nm,1.2s,mb5.5						
LDF	**La Druitiere**	**80.64**	**360**	⇑*i*P	**P**	**04 02 15.2**	**-0.5**
	comp=Z,158nm,1.2s,mb5.5						
LDF	**La Druitiere**	**80.64**	**360**	⇑*i*P	**P**	**04 02 15.2**	**-0.5**
LDF				pmax	pmax		
	comp=Z,79nm,1.2s,mb5.5						
ECH	**Echery**	**80.80**	**355**	*e*P	**P**	**04 02 16.5**	**-0.1**
SPAK	**Spaichingen**	**80.81**	**354**	*e*P	**P**	**04 02 17.0**	**+0.3**
SPAK	**Spaichingen**	**80.81**	**354**	*e*P	**P**	**04 02 16.8**	**+0.1**
GUT	**Gutenstein**	**80.82**	**354**	⇑*e*P	**P**	**04 02 16.7**	**0.0**
LIBD	**Limburg**	**80.84**	**355**	⇑*e*P	**P**	**04 02 17.0**	**+0.2**
GRR	**Gorron**	**80.84**	**0**	⇑*i*P	**P**	**04 02 16.6**	**-0.2**
	comp=Z,183nm,1.1s,mb5.6						
GRR	**Gorron**	**80.84**	**0**	⇑*i*P	**P**	**04 02 16.6**	**-0.2**
GRR				pmax	pmax		
	comp=Z,92nm,1.1s,mb5.6						
THEF	**They Montfort**	**80.85**	**356**	*e*P	**P**	**04 02 17.0**	**+0.1**
ROSF	**Rostrenen**	**80.86**	**2**	⇑*i*P	**P**	**04 02 17.0**	**+0.1**
	comp=Z,216nm,1.2s,mb5.6						
ROSF	**Rostrenen**	**80.86**	**2**	⇑*i*P	**P**	**04 02 17.0**	**+0.1**
ROSF				pmax	pmax		
	comp=Z,108nm,1.2s,mb5.7						
GNI	**Garni**	**80.89**	**327**	P	**P**	**04 02 19.1**	**+1.9**
GNI				pmax	pmax		
	comp=Z,44nm,1.0s						
GNI	**Garni**	**80.89**	**327**	*e*P	**P**	**04 02 18.5**	**+1.3**
	comp=Z,44nm,1.0s,mb5.3						
GNI				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
CFR	**Carcaliu**	**80.92**	**340**	P	**P**	**04 02 18.4**	**+1.1**
SGMF	**Saint Gilles**	**80.96**	**1**	⇑*i*P	**P**	**04 02 17.4**	**0.0**
	comp=Z,186nm,1.2s,mb5.6						
SGMF	**Saint Gilles**	**80.96**	**1**	⇑*i*P	**P**	**04 02 17.4**	**0.0**
SGMF				pmax	pmax		
	comp=Z,93nm,1.2s,mb5.6						
KIZ	**Kirchzarten**	**81.02**	**354**	*e*P	**P**	**04 02 17.3**	**-0.4**
ARSA	**Arzberg**	**81.03**	**349**	⇑*i*P	**P**	**04 02 18.4**	**+0.6**
	comp=Z,64nm,1.5s,mb5.3						
HAU	**Haudompre**	**81.06**	**355**	⇑*i*P	**P**	**04 02 17.7**	**-0.2**
	comp=Z,74nm,1.2s,mb5.2						
HAU				*e*R			
	comp=Z,2µm,20.2s						
HAU	**Haudompre**	**81.06**	**355**	⇑*i*P	**P**	**04 02 17.7**	**-0.2**
HAU				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.2						
HAU				MLR	MLR		
	comp=Z,2µm,20.2s,MS5.3						
MLR	**Muntele Rosu**	**81.08**	**342**	P	**P**	**04 02 19.3**	**+1.2**
FELD	**Feldberg**	**81.09**	**354**	*e*P	**P**	**04 02 18.0**	**-0.1**
FELD	**Feldberg**	**81.09**	**354**	*e*P	**P**	**04 02 17.9**	**-0.2**
UBR	**Uberruh**	**81.14**	**353**	*e*P	**P**	**04 02 18.6**	**+0.2**
WRAB	**Tennant Creek**	**81.14**	**223**	*e*P	**P**	**04 02 17.7**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,69nm,1.4s,mb5.4						
WRAB				MLR	MLR		
	comp=Z,346nm,20.0s,MS4.7						
WRAB	**Tennant Creek**	**81.14**	**223**	*e*P	**P**	**04 02 17.7**	**-1.3**
	comp=Z,69nm,1.4s,mb5.4						
WRAB				LR	LR		
	comp=Z,346nm,20.0s,MS4.7						
WB2	**Warramunga Arr**	**81.15**	**223**	*e*P	**P**	**04 02 18.2**	**-0.8**
WRA	**Warramunga Arr**	**81.15**	**223**	P	**P**	**04 02 18.3**	**-0.7**
WRA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WRA	**Warramunga Arr**	**81.15**	**223**	P	**P**	**04 02 18.3**	**-0.7**
	comp=Z,10nm,0.9s,mb4.8,baz=38,slow=6.0,SNR=43						
MOF	**Molkenrain**	**81.17**	**355**	*e*P	**P**	**04 02 18.4**	**-0.1**
HINF	**Hinteralfeld**	**81.22**	**355**	⇑*i*P	**P**	**04 02 18.4**	**-0.4**
	comp=Z,61nm,1.3s,mb5.1						
HINF	**Hinteralfeld**	**81.22**	**355**	⇑*i*P	**P**	**04 02 18.4**	**-0.4**
HINF				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.1						
QUIF	**Quistinic**	**81.29**	**2**	⇑*i*P	**P**	**04 02 19.2**	**0.0**
	comp=Z,144nm,1.2s,mb5.5						
QUIF	**Quistinic**	**81.29**	**2**	⇑*i*P	**P**	**04 02 19.2**	**0.0**
QUIF				pmax	pmax		
	comp=Z,72nm,1.2s,mb5.5						
SNX	**Sinaia**	**81.29**	**342**	P	**P**	**04 02 21.7**	**+2.5**
WATA	**Walderalm**	**81.35**	**352**	⇑*i*P	**P**	**04 02 20.1**	**+0.6**
	comp=Z,66nm,1.1s,mb5.5						
WATA	**Walderalm**	**81.35**	**352**	⇑*i*P	**P**	**04 02 20.1**	**+0.6**
WATA				pmax	pmax		
	comp=Z,66nm,1.1s,mb5.5						
MOTA	**Moosalm**	**81.39**	**352**	⇑*i*P	**P**	**04 02 19.9**	**+0.2**
	comp=Z,84nm,1.2s,mb5.5						
MOTA	**Moosalm**	**81.39**	**352**	⇑*i*P	**P**	**04 02 19.9**	**+0.2**
MOTA				pmax	pmax		
	comp=Z,84nm,1.2s,mb5.5						
WTTA	**Wattenberg**	**81.42**	**352**	⇓*i*P	**P**	**04 02 20.2**	**+0.3**
	comp=Z,135nm,1.5s,mb5.7						
WTTA	**Wattenberg**	**81.42**	**352**	⇓*i*P	**P**	**04 02 20.2**	**+0.3**
WTTA				pmax	pmax		
	comp=Z,135nm,1.5s,mb5.7						
KBA	**Koelnbreinsper**	**81.44**	**351**	⇓*i*P	**P**	**04 02 20.9**	**+0.9**
	comp=Z,152nm,1.2s,mb5.8						
KBA	**Koelnbreinsper**	**81.44**	**351**	⇓*i*P	**P**	**04 02 20.9**	**+0.9**
KBA				pmax	pmax		
	comp=Z,152nm,1.2s,mb5.8						
SQTA	**Sankt Quirin**	**81.50**	**352**	⇑*i*P	**P**	**04 02 20.6**	**+0.3**
	comp=Z,62nm,1.2s,mb5.4						
SQTA	**Sankt Quirin**	**81.50**	**352**	⇑*i*P	**P**	**04 02 20.6**	**+0.3**
SQTA				pmax	pmax		
	comp=Z,62nm,1.2s,mb5.4						
MTUR	**Matau**	**81.51**	**342**	P	**P**	**04 02 22.3**	**+1.9**
BBS	**Basel-Blauen**	**81.53**	**355**	*e*P	**P**	**04 02 20.3**	**-0.1**
DAVA	**Damuels**	**81.55**	**353**	⇓*i*P	**P**	**04 02 20.8**	**+0.3**
	comp=Z,53nm,1.4s,mb5.3						
PERS	**Pernice**	**81.68**	**349**	*e*P	**P**	**04 02 21.6**	**+0.3**
LOMF	**Lomont**	**81.68**	**355**	*e*P	**P**	**04 02 21.5**	**+0.3**
BZS	**Buzias**	**81.75**	**345**	P	**P**	**04 02 22.1**	**+0.5**
OBKA	**Obir**	**81.87**	**350**	⇑*i*P	**P**	**04 02 22.7**	**+0.5**
	comp=Z,105nm,1.5s,mb5.5						
LOR	**Lormes**	**81.89**	**357**	⇑*i*P	**P**	**04 02 22.2**	**-0.1**
	comp=Z,110nm,1.3s,mb5.3						
LOR				*e*R			

	comp=Z,1µm,20.2s						
LOR	Lormes	81.89	357	⇑iP	P	04 02 22.2	-0.1
LOR				pmax	pmax		
	comp=Z,55nm,1.3s,mb5.3						
LOR				MLR	MLR		
	comp=Z,1µm,20.3s,MS5.3						
HYF	Humbligny	81.93	358	eP	P	04 02 22.8	+0.3
SSF	Saint Saulge	82.11	357	⇑iP	P	04 02 23.5	0.0
SSF				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2						
SSF	Saint Saulge	82.11	357	⇑iP	P	04 02 23.5	0.0
	comp=Z,32nm,1.1s,mb5.2						
BUC1	Bucharest	82.16	341	P	P	04 02 24.5	+0.8
ERZM	Erzurum	82.24	329	iP	P	04 02 25.6	+1.3
LJU	Ljubljana	82.33	350	eP	P	04 02 25.6	+0.9
AVF	Avril sur Loir	82.39	357	⇑iP	P	04 02 24.8	-0.1
	comp=Z,134nm,1.3s,mb5.4						
AVF	Avril sur Loir	82.39	357	⇑iP	P	04 02 24.8	-0.1
AVF				pmax	pmax		
	comp=Z,67nm,1.3s,mb5.4						
CABF	La Chapelle	82.46	355	⇑iP	P	04 02 25.5	+0.3
	comp=Z,121nm,1.3s,mb5.4						
CABF	La Chapelle	82.46	355	⇑iP	P	04 02 25.5	+0.3
CABF				pmax	pmax		
	comp=Z,60nm,1.3s,mb5.4						
SMF	Signal de Mont	82.52	357	⇑iP	P	04 02 25.5	0.0
	comp=Z,148nm,1.1s,mb5.6						
SMF	Signal de Mont	82.52	357	⇑iP	P	04 02 25.5	0.0
SMF				pmax	pmax		
	comp=Z,74nm,1.1s,mb5.6						
VISS	Visnje	82.53	349	eP	P	04 02 25.3	-0.3
MFF	Saint Martin d	82.63	360	⇑iP	P	04 02 26.3	+0.2
	comp=Z,74nm,1.0s,mb5.3						
MFF	Saint Martin d	82.63	360	⇑iP	P	04 02 26.3	+0.2
MFF				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.4						
BGF	Bois d'Agland	82.63	358	⇑iP	P	04 02 26.2	+0.1
	comp=Z,81nm,1.2s,mb5.3						
BGF	Bois d'Agland	82.63	358	⇑iP	P	04 02 26.2	+0.1
BGF				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
BEO	Belgrade	82.72	345	⇑iP	P	04 02 26.8	+0.2
BOJS	Bojanci	82.78	349	eP	P	04 02 27.0	+0.1
BOYT	Boyabat	82.80	334	iP	P	04 02 27.2	+0.2
TVAN	Van	82.80	327	iP	P	04 02 29.9	+2.7
TCF	Toulx Ste Croi	82.92	358	⇑iP	P	04 02 27.6	0.0
	comp=Z,31nm,1.0s,mb5.0						
TCF	Toulx Ste Croi	82.92	358	⇑iP	P	04 02 27.6	0.0
TCF				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
SVIS	Svilajnac	83.10	345	⇓iP	P	04 02 29.3	+0.7
AGO	Saint Agoulin	83.13	358	eP	P	04 02 30.6	+1.9
PLDF	La Plantade	83.20	357	eP	P	04 02 30.6	+1.6
ORX	Oropa	83.33	354	P	P	04 02 29.9	+0.2
HYB	Hyderabad	83.34	289	⇑eP	P	04 02 30.0	-0.3
HYB				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.8						
HYB	Hyderabad	83.34	289	⇑eP	P	04 02 30.0	-0.3
	comp=Z,110nm,1.0s,mb5.8						
HYB	Hyderabad	83.34	289	⇑iP	P	04 02 30.0	-0.3
	comp=Z,110nm,1.0s,mb5.8						
BOLS	Boljevac	83.43	344	⇓iP	P	04 02 29.9	-0.3
DIVS	Divcibare	83.49	345	⇓iP	P	04 02 30.8	+0.2
LPL	La Plagne	83.52	355	⇑iP	P	04 02 31.8	+1.3
	comp=Z,25nm,0.9s,mb5.0						
LPL	La Plagne	83.52	355	⇑iP	P	04 02 31.8	+1.3
LPL				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.1						
FITZ	Fitzroy Crossi	83.53	231	⇓iP	P	04 02 31.6	+0.4
FITZ	Fitzroy Crossi	83.53	231	P	P	04 02 31.7	+0.5
	comp=Z,60nm,0.9s,mb5.7,baz=24,slow=3.7,SNR=48						
FITZ				LR	LR	04 41 10.8	
	comp=Z,803nm,18.8s,MS5.1,baz=69,slow=37						
LPG	La Plagne	83.53	355	⇑iP	P	04 02 32.1	+1.5
	comp=Z,76nm,1.2s,mb5.4						
LPG	La Plagne	83.53	355	⇑iP	P	04 02 32.1	+1.5
LPG				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.4						
LSD	Ceresole Reale	83.55	355	P	P	04 02 32.4	+1.7
CTKT	Corum	83.57	334	iP	P	04 02 32.6	+1.6
GRUS	Gruza	83.58	345	⇑iP	P	04 02 31.7	+0.8
SVST	Sivas	83.74	332	iP	P	04 02 33.4	+1.6
BBLS	Bajina Basta -	83.81	346	⇓iP	P	04 02 33.1	+1.0
ZAPS	Zavoj/Pirot	83.83	343	⇑iP	P	04 02 32.2	0.0
RSP	Reno Superiore	83.85	355	P	P	04 02 32.6	+0.4
GDM	Grand'Maison	83.86	355	eP	P	04 02 33.5	+1.2
RJF	Les Rejaudoux	83.91	359	⇑iP	P	04 02 32.6	0.0
	comp=Z,74nm,1.1s,mb5.4						
RJF				eR			
	comp=Z,2µm,22.8s						
RJF	Les Rejaudoux	83.91	359	⇑iP	P	04 02 32.6	0.0
RJF				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.4						
RJF				MLR	MLR		
	comp=Z,2µm,22.8s,MS5.3						
LBL	Lubilhac	83.95	357	eP	P	04 02 34.6	+1.9
BNI	Bardonecchia	83.98	355	P	P	04 02 34.6	+1.7
BNI				pmax	pmax		
	comp=Z,67nm,1.2s,mb5.7						
BNI	Bardonecchia	83.98	355	eP	P	04 02 34.1	+1.2
	comp=Z,67nm,1.3s,mb5.6						
FENE	Fenestrelle	83.98	355	P	P	04 02 33.8	+0.9
RKT	Rikitea	84.05	139	eS	S	04 12 34.9	-19
RKT				eLQ		04 24 50.6	
RKT				eLR	LR	04 28 31.2	
	comp=Z,3µm,24.5s,baz=331						
ELDT	Eldivan	84.07	335	iP	P	04 02 34.9	+1.4
BEST	Besiri	84.09	328	iP	P	04 02 35.0	+1.4
RRL	Cesana Torines	84.11	355	P	P	04 02 35.1	+1.5
ORIF	Oris-en-Rattie	84.16	356	⇑iP	P	04 02 34.9	+1.1
	comp=Z,78nm,1.2s,mb5.4						
ORIF				eR			
	comp=Z,965nm,21.5s						
VIVF	Saint-Julien-l	84.27	356	⇑iP	P	04 02 35.0	+0.6
	comp=Z,54nm,1.2s,mb5.3						
VIVF	Saint-Julien-l	84.27	356	⇑iP	P	04 02 35.0	+0.6
VIVF				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
CAF	Calviac	84.28	358	⇑iP	P	04 02 35.0	+0.6
	comp=Z,126nm,1.3s,mb5.6						
CAF	Calviac	84.28	358	⇑iP	P	04 02 35.0	+0.6
CAF				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.6						
ELZG	Elazig	84.28	330	iP	P	04 02 36.2	+1.6
LFF	La Frestale	84.29	359	⇑iP	P	04 02 34.9	+0.4
	comp=Z,206nm,1.3s,mb5.8						
LFF	La Frestale	84.29	359	⇑iP	P	04 02 34.9	+0.4
LFF				pmax	pmax		
	comp=Z,103nm,1.3s,mb5.8						
MBDF	Montbardon	84.30	355	⇑iP	P	04 02 35.6	+1.1
	comp=Z,22nm,0.6s,mb5.1						
MBDF	Montbardon	84.30	355	⇑iP	P	04 02 35.6	+1.1
MBDF				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.2						
GRAM		84.31	352	P	P	04 02 34.8	+0.3
SGKT	Sivrigoynuk	84.35	336	iP	P	04 02 35.3	+0.4
PCP	Pian Castagno	84.37	354	P	P	04 02 34.7	-0.2
VTS	Vitosha	84.40	343	P	P	04 02 35.9	+0.8
HENT	Hendek	84.41	337	iP	P	04 02 35.6	+0.4
CODM		84.42	353	P	P	04 02 35.6	+0.5
PZZ	Prazzo	84.50	355	P	P	04 02 35.3	-0.3
BACM		84.52	352	P	P	04 02 35.4	-0.2
SURF	Saint Ours	84.55	355	eP	P	04 02 37.4	+1.6
SARO	Sassorosso	84.58	352	P	P	04 02 36.2	+0.2
VLC	Villacollemand	84.61	352	eP	P	04 02 36.2	+0.1
	comp=Z,61nm,1.2s,mb5.6						
CDAG	Cicekdag	84.62	334	iP	P	04 02 36.6	+0.4
MALT	Malatya	84.63	330	P	P	04 02 37.9	+1.6
MALT	Malatya	84.63	330	eP	P	04 02 37.2	+0.9
	comp=Z,43nm,1.1s,mb5.5						
VINC	Vinca	84.65	352	P	P	04 02 35.5	-0.8
ROB	Roburent	84.67	354	P	P	04 02 36.2	-0.2
BR131	Keskin Array S	84.72	334	eP	P	04 02 37.4	+0.6
	comp=Z,12nm,0.7s,mb5.1						
BRTR	Keskin Array B	84.72	334	P	P	04 02 37.7	+0.9
BRTR				pmax	pmax		
	comp=Z,20nm,0.8s						
BRTR	Keskin Array B	84.72	334	P	P	04 02 37.7	+0.9
	comp=Z,20nm,0.8s,mb5.3,baz=52,slow=3.0,SNR=86						
FIN	Finale Ligure	84.73	354	P	P	04 02 36.3	-0.4
STV2	Anna di Valdie	84.75	354	P	P	04 02 36.0	-0.8
STV	Sta Anna Valdi	84.75	354	P	P	04 02 35.9	-0.9
ENR	Entracque	84.76	354	P	P	04 02 35.9	-0.9
MAIM		84.84	352	P	P	04 02 36.5	-0.7
MONE	Monesi	84.89	354	P	P	04 02 37.3	-0.1
TOUF	Mont Tournerai	84.98	354	eP	P	04 02 38.7	+0.7
AUTN	L'Aution	84.99	354	eP	P	04 02 38.5	+0.5
SAOF	Saorge	84.99	354	eP	P	04 02 38.3	+0.3
IMI	Imperia	85.05	354	P	P	04 02 38.1	-0.1
STOF	St-Etienne Org	85.08	355	eP	P	04 02 39.2	+0.8
LASF	Ste Croix	85.08	357	⇑iP	P	04 02 39.1	+0.7
	comp=Z,49nm,1.1s,mb5.2						
MVIF	Mont Vial	85.11	355	eP	P	04 02 39.0	+0.4
SMRF	Simiane la Rot	85.11	356	⇑iP	P	04 02 39.9	+1.3
	comp=Z,116nm,1.1s,mb5.6						
NEGI	Negi	85.12	354	P	P	04 02 38.4	-0.3
SBF	Sospel	85.12	354	⇑iP	P	04 02 38.9	+0.3
	comp=Z,172nm,1.1s,mb5.8						
SBF	Sospel	85.12	354	⇑iP	P	04 02 38.9	+0.3
SBF				pmax	pmax		
	comp=Z,86nm,1.1s,mb5.8						
POO	Poona	85.22	294	eP	P	04 02 39.8	0.0
POO				AMb	AMB	04 02 41.2	
	comp=Z,123nm,1.7s,mb5.8						
VILF	Villemus	85.23	356	eP	P	04 02 40.6	+1.4
REVF	Revere	85.25	354	eP	P	04 02 39.9	+0.6
AVNT	Avonos	85.27	333	iP	P	04 02 39.8	+0.3
CALN	Calern	85.27	355	eP	P	04 02 38.0	-1.4
PRAF	Pradon	85.30	356	eP	P	04 02 40.3	+0.8
SKO	Skopje	85.32	344	iP	P	04 02 40.8	+1.1
TAVF	Tavernes	85.45	355	eP	P	04 02 41.5	+1.3
FRF	La Foret Royal	85.47	355	⇑iP	P	04 02 40.7	+0.3
	comp=Z,98nm,1.1s,mb5.5						
FRF	La Foret Royal	85.47	355	⇑iP	P	04 02 40.7	+0.3
FRF				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.5						
TREF	Trevaresse	85.47	356	eP	P	04 02 41.8	+1.4
JTS	JuntasAbangare	85.48	79	PFAKE		04 02 50.0	+8.9
JTS				LR	LR		
	comp=Z,135nm,21.0s,MS4.3						
ULDT	Uludag	85.48	338	iP	P	04 02 41.8	+1.3
PUYF	Puyloubier	85.55	356	eP	P	04 02 41.8	+1.0
ESKT	Eskisehir	85.65	336	iP	P	04 02 42.0	+0.7
MDRS	Chennai	85.70	285	ex	x	04 08 16.0	
LMR	La Mourre	85.70	355	⇑iP	P	04 02 42.0	+0.5
	comp=Z,79nm,1.1s,mb5.6						
LMR	La Mourre	85.70	355	⇑iP	P	04 02 42.0	+0.5
LMR				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.5						
GELF	Grande-Etoile	85.71	356	eP	P	04 02 42.7	+1.2
EPON	Pontenova	85.72	5	P	P	04 02 42.5	+0.9
	comp=Z,3.5nm,0.4s,mb4.9						
KAHT	Ahir Dag	85.73	331	iP	P	04 02 42.9	+1.1
VAY	Valandovo	85.75	343	iP	P	04 02 42.7	+0.9
BERF	Bertagne	85.77	356	eP	P	04 02 42.9	+1.1
GZT	Gaziantep	85.78	331	iP	P	04 02 43.2	+1.2
EARI	Arriondas	85.84	4	P	P	04 02 42.4	+0.2
	comp=Z,0.8nm,0.6s						
MTLF	Montolieu	85.86	358	⇑iP	P	04 02 43.0	+0.7
	comp=Z,44nm,1.0s,mb5.3						
MTLF	Montolieu	85.86	358	⇑iP	P	04 02 43.0	+0.7
MTLF				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.3						
ELAN	Lanestosa	85.96	2	P	P	04 02 43.1	+0.4
	comp=Z,67nm,1.3s,mb5.7						
KAD	Karad	85.99	293	eP	P	04 02 43.2	-0.3
KAD				AMb	AMB	04 02 44.8	
	comp=Z,88nm,1.4s,mb5.8						
ELIZ	Elizondo	86.06	1	P	P	04 02 44.6	+1.3
ELIZ				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
ELIZ	Elizondo	86.06	1	P	P	04 02 44.6	+1.3
	comp=Z,9.7nm,1.0s,mb5.0						
STS	Santiago	86.08	6	P	P	04 02 44.6	+1.3
STS				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.5						
STS	Santiago	86.08	6	P	P	04 02 44.6	+1.2
	comp=Z,40nm,1.2s,mb5.5						
AQU	L'Aquila	86.10	350	P	P	04 02 44.9	+1.4
AQU				pmax	pmax		
	comp=Z,97nm,1.1s,mb6.0						
AQU	L'Aquila	86.10	350	eP	P	04 02 44.3	+0.8
	comp=Z,97nm,1.1s,mb6.0						
BTOK	Tokmak	86.11	338	iP	P	04 02 45.0	+1.4
SJPF	Ste Jean	86.12	1	eP	P	04 02 43.8	+0.3
	comp=Z,35nm,1.2s,mb5.2						
SJPF	Ste Jean	86.12	1	eP	P	04 02 43.8	+0.3
SJPF				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.2						
EPF	Esparros	86.20	359	eP	P	04 02 43.8	-0.1
	comp=Z,29nm,1.0s,mb5.2						
EPF	Esparros	86.20	359	eP	P	04 02 43.8	-0.1
EPF				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.2						
KDHN	Kadinhani	86.26	335	iP	P	04 02 44.2	-0.1
ETSF	Etsaut	86.33	0	eP	P	04 02 45.5	+0.9
	comp=Z,45nm,1.0s,mb5.3						
GDZ	Gediz	86.40	337	iP	P	04 02 44.9	-0.1
EBIE	Bielsa	86.54	360	P	P	04 02 46.4	+0.8
	comp=Z,26nm,1.6s,mb5.2						
CII	Carovilli	86.62	349	eP	P	04 02 46.7	+0.7
	comp=Z,49nm,1.2s,mb5.6						
COBT	Iskenderun	86.95	331	iP	P	04 02 49.0	+1.2
TKTP	Tekketepe	87.18	336	iP	P	04 02 49.4	+0.5
MANT	Manisa	87.19	338	iP	P	04 02 49.9	+1.0
ISP	Isparta	87.32	336	eP	P	04 02 50.3	+0.8
	comp=Z,11nm,0.7s,mb5.2						
MEST	Erdemli	87.51	333	iP	P	04 02 50.6	+0.1
PVRL	Vila Real	87.73	6	eP	P	04 02 52.1	+0.7
	comp=Z,24nm,1.1s,mb5.3						
PVIS	Viseu	88.28	6	eP	P	04 02 53.8	-0.3
	comp=Z,30nm,1.2s,mb5.4						
MTE	Manteigas	88.62	5	eP	P	04 02 54.9	-0.8
	comp=Z,27nm,1.4s,mb5.4						
MTE	Manteigas	88.62	5	eP	P	04 02 54.8	-0.9
	comp=Z,21nm,0.8s,mb5.5						
TIP	Timpagrande	88.80	347	eP	P	04 02 56.3	-0.3
MBWA	Marble Bar	89.05	234	PFAKE		04 03 10.0	+12
MBWA				LR	LR		
	comp=Z,911nm,19.0s,MS5.2						
PCBR	Castelo Branco	89.18	5	eP	P	04 02 58.2	-0.2
	comp=Z,27nm,1.4s,mb5.4						
STKA	Stephens Creek	89.19	212	P	P	04 02 59.7	+1.1
	comp=Z,6.2nm,0.9s,mb5.0,baz=352,slow=6.7,SNR=6.0						
STKA				LR	LR	04 41 28.7	
	comp=Z,2µm,19.3s,MS5.5,baz=20,slow=34						
STKA	Stephens Creek	89.19	212	P	P	04 02 59.7	+1.1
STKA				LR	LR	04 41 28.7	
CSS	Prodhromos	89.26	333	eP	P	04 02 59.7	+0.8
	comp=Z,30nm,1.1s,mb5.5						
PTOM	Tomar	89.34	6	eP	P	04 03 00.2	+1.1
	comp=Z,30nm,1.3s,mb5.5						
ESDC	Sonseca Array	89.50	3	P	P	04 02 59.4	-0.5
	comp=Z,1.6nm,0.6s,mb4.5,baz=353,slow=4.8,SNR=12						
ESDC	Sonseca Array	89.50	3	P	P	04 02 59.3	-0.6
	comp=Z,9.0nm,1.2s,mb5.0						
SJG	San Juan	90.35	60	eP	P	04 03 05.5	+1.1
	comp=Z,80nm,1.2s,mb5.9						
SJG				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
EVO	Evora	90.45	6	⇑iP	P	04 03 03.8	-0.6
	comp=Z,37nm,1.4s,mb5.2						
EVO				eR			
	comp=Z,2µm,22.8s						
EVIA	Vianos	90.57	2	P	P	04 03 04.5	-0.4
	comp=Z,5.3nm,0.8s,mb4.9						
ETOB	Tobarra	90.58	1	P	P	04 03 05.3	+0.3
ASF	Jabal al Asfar	90.76	329	LR	LR	04 49 32.7	
	comp=Z,2µm,20.2s,MS5.5,baz=77,slow=39						
PBEJ	Beja	90.96	6	eP	P	04 03 07.3	+0.5
	comp=Z,22nm,1.2s,mb5.4						
EMIN	Mina Concepcio	91.29	5	P	P	04 03 07.7	-0.6
	comp=Z,17nm,1.1s,mb5.3						
PTEO	Sao Teotonio	91.38	7	eP	P	04 03 09.3	+0.6
	comp=Z,30nm,1.3s,mb5.5						
ELOJ	Sierra Loja	92.02	3	P	P	04 03 11.1	-0.6
	comp=Z,6.1nm,0.6s,mb5.1						
HASS	Wahat al Ahsa'	92.13	316	P	P	04 03 12.6	+0.1
SNZO	South Karori	92.18	184	PFAKE		04 03 20.0	+7.7
SNZO				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
ESPR	Espera	92.22	4	P	P	04 03 12.5	-0.1
	comp=Z,32nm,1.2s,mb5.5						
EMIJ	Mijas	92.58	4	P	P	04 03 15.5	+1.3
	comp=Z,26nm,1.2s,mb5.5						
HILS	Ha'il	93.41	323	P	P	04 03 19.6	+1.3
RYDS	Riyadh	94.32	318	P	P	04 03 21.2	-1.3
MZLS	Mizel	95.07	319	P	P	04 03 26.4	+0.5
SDV	Santo Domingo	95.25	69	LR	LR	04 44 37.6	
	comp=Z,463nm,21.4s,MS4.9,baz=0.7,slow=34						
SDV	Santo Domingo	95.25	69	eP	P	04 03 27.4	+0.5
	comp=Z,10nm,0.9s,mb5.2						
SDV				LR	LR		
	comp=Z,725nm,20.0s,MS5.1						
ROSC	El Rosal	96.23	74	LR	LR	04 44 20.2	
	comp=Z,267nm,20.1s,MS4.7,baz=239,slow=34						
OTAV	Otavalo	97.32	81	PFAKE		04 03 50.0	+14
OTAV				LR	LR		
	comp=Z,269nm,19.0s,MS4.8						
PCRV	Puerto La Cruz	97.66	63	LR	LR	04 46 55.1	
	comp=Z,822nm,21.4s,MS5.2,baz=148,slow=35						
TAU	Tasmania Unive	97.79	203	PFAKE		04 03 50.0	+12
TAU				LR	LR		
	comp=Z,217nm,20.0s,MS4.6						
NWAO	Narrogin (SRO)	100.04	229	PFAKE		04 04 00.0	+12
NWAO				LR	LR		
	comp=Z,543nm,20.0s,MS5.0						
SAML	Samuel	113.88	74	PFAKE		04 08 50.0	+9.2
SAML				LR	LR		
	comp=Z,596nm,19.0s,MS5.2						
LPAZ	La Paz	116.48	83	PKP	PKPdf	04 08 47.2	+1.5
	comp=Z,0.8nm,0.8s,baz=315,slow=2.9,SNR=3.8						
LPAZ	La Paz	116.48	83	PKP	PKPdf	04 08 47.2	+1.5
LPAZ				LR	LR		
	comp=Z,501nm,21.0s,MS5.1						
SIV	San Ignacio	120.63	77	PKP	PKPdf	04 08 54.7	+0.9
	comp=Z,2.9nm,0.9s,baz=345,slow=1.6,SNR=16						
SIV				PP	PP	04 10 21.9	-4.0
	comp=Z,4.7nm,1.2s,baz=302,slow=5.8,SNR=5.8						
SIV				PKKPab		04 19 00.1	
	comp=Z,1.0nm,0.8s,baz=212,slow=4.5,SNR=5.4						
KMBO	Kilima Mbogo	120.91	315	PKP	PKPdf	04 08 57.2	+2.7
	comp=Z,8.1nm,1.0s,baz=22,slow=6.2,SNR=12						
KMBO				PP	PP	04 10 24.8	-3.1
	comp=Z,6.5nm,1.1s,baz=20,slow=12,SNR=5.9						
DBIC	Dimbokro	122.29	5	PKP	PKPdf	04 08 58.4	+1.3
	comp=Z,4.4nm,0.5s,baz=340,slow=3.9,SNR=17						
DBIC	Dimbokro	122.29	5	PKP	PKPdf	04 08 58.4	+1.3
DBIC				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
MBAR	Mbarara	123.17	322	PFAKE		04 09 10.0	+11
MBAR				LR	LR		
	comp=Z,171nm,20.0s,MS4.7						
RCBR	Riachuelo	126.06	46	PFAKE		04 09 20.0	+16
RCBR				LR	LR		
	comp=Z,677nm,21.0s,MS5.3						
CFAA	Coronel Fontan	127.44	96	PKP	PKPdf	04 09 09.0	+2.4
	comp=Z,0.5nm,0.8s,baz=304,slow=3.6,SNR=8.4						
CFAA	Coronel Fontan	127.44	96	PKP	PKPdf	04 09 09.0	+2.4
BDFB	Brasilia	128.12	65	PKP	PKPdf	04 09 10.0	+1.7
	comp=Z,8.5nm,0.9s,baz=242,slow=0.9,SNR=12						
BAO	Brasilia Array	128.13	65	PKPdf	PKPdf	04 09 08.5	+0.2
CASY	Casey	128.26	209	PFAKE		04 09 20.0	+13
CASY				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
VNDA	Vanda	128.87	185	PKP	PKPdf	04 09 09.6	+1.4
	comp=Z,1.8nm,1.0s,baz=308,slow=4.7,SNR=7.7						
VNDA	Vanda	128.87	185	PKP	PKPdf	04 09 09.6	+1.4
VNDA				LR	LR		
	comp=Z,548nm,21.0s,MS5.2						
SBA	Scott Base	128.98	183	ePKPdf	PKPdf	04 09 10.3	+1.9
SBA				LR	LR		
	comp=Z,730nm,21.0s,MS5.3						
PLCA	Paso Flores	131.88	106	PKP	PKPdf	04 09 17.6	+2.8
	comp=Z,1.6nm,0.6s,baz=18,slow=4.4,SNR=3.7						
PLCA				SKP		04 12 47.6	
	comp=Z,5.6nm,0.9s,baz=333,slow=2.3,SNR=5.1						
PLCA	Paso Flores	131.88	106	PKP	PKPdf	04 09 17.6	+2.8
PLCA				SKP		04 12 47.6	
PLCA				LR	LR		
	comp=Z,902nm,20.0s,MS5.5						
TRQA	Tornquist	135.53	98	PFAKE		04 09 30.0	+8.3
TRQA				LR	LR		
	comp=Z,788nm,19.0s,MS5.5						
LSZ	Lusaka	137.48	317	PFAKE		04 09 40.0	+14
LSZ				LR	LR		
	comp=Z,855nm,22.0s,MS5.4						
QSPA	South Pole Qui	140.90	180	eP	PKPdf	04 09 28.4	-1.8
TSUM	Tsumeb	145.09	329	ePKPdf	PKPdf	04 09 40.6	+1.4
TSUM				LR	LR		
	comp=Z,870nm,22.0s,MS5.5						
PMSA	Palmer Station	145.25	138	PKP	PKPdf	04 09 40.0	+1.9
PMSA				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
MAW	Mawson	145.68	217	PKPbc	PKPbc	04 09 40.2	+0.7
	comp=Z,6.8nm,0.7s,baz=71,slow=7.9,SNR=7.8						
LBTB	Lobatse	147.16	313	ePKPdf	PKPdf	04 09 44.4	+1.9
LBTB				ePKPbc	PKPdf	04 09 47.1	+4.6
LBTB				LR	LR		
	comp=Z,943nm,21.0s,MS5.5						
BOSA	Boshof	150.36	310	PKPbc	PKPdf	04 09 55.2	+7.6
	comp=Z,53nm,0.9s,baz=48,slow=1.9,SNR=51						
BOSA	Boshof	150.36	310	ePKPdf	PKPdf	04 09 49.7	+2.2
BOSA				ePKPbc	PKPdf	04 09 54.9	+7.4
BOSA				PKPbc	PKPdf	04 09 55.2	+7.6
BOSA				LR	LR		
	comp=Z,1µm,19.0s,MS5.8						
SUR	Sutherland	155.61	312	PFAKE		04 10 10.0	+15
SUR				LR	LR		
	comp=Z,360nm,20.0s,MS5.2						
SNAA	Sanae	159.38	178	PKP	PKPdf	04 09 59.0	+0.7
	comp=Z,1.0nm,0.9s,baz=222,slow=1.6,SNR=7.7						
VNA3	Neumayer Olymp	159.40	171	e	PKPdf	04 09 59.3	+0.9
VNA3	Neumayer Olymp	159.40	171	e	PKPdf	04 10 09.7	+11
VNA3	Neumayer Olymp	159.40	171	e	PKPdf	04 10 15.7	+17
VNA3	Neumayer Olymp	159.40	171	e	PKPab	04 10 37.8	-0.8
VNA3	Neumayer Olymp	159.40	171	e		04 10 48.6	
VNA3	Neumayer Olymp	159.40	171	e		04 10 53.9	
VNA3	Neumayer Olymp	159.40	171	⇑iPKPdf	PKPdf	04 09 55.4	-3.0
VNA3				e		04 09 59.3	
VNA3				e		04 10 09.7	
VNA3				e		04 10 15.7	
VNA3				e		04 10 37.8	
VNA3				e		04 10 48.6	
VNA3				e		04 10 53.9	
VNA2	Neumayer--Watz	159.90	173	e	PKPdf	04 10 00.0	+1.0
VNA2	Neumayer--Watz	159.90	173	e	PKPdf	04 10 11.8	+13
VNA2	Neumayer--Watz	159.90	173	e	PKPdf	04 10 19.0	+20
VNA2	Neumayer--Watz	159.90	173	e	PKPab	04 10 39.2	-1.5
VNA2	Neumayer--Watz	159.90	173	e		04 10 50.9	
VNA2	Neumayer--Watz	159.90	173	e		04 10 56.5	
VNA2	Neumayer--Watz	159.90	173	⇑iPKPdf	PKPdf	04 09 57.7	-1.3
VNA2				e		04 10 00.0	
VNA2				e		04 10 11.8	
VNA2				e		04 10 19.0	
VNA2				e		04 10 39.2	
VNA2				e		04 10 50.9	
VNA2				e		04 10 56.5	
VNA1	Neumayer--Stat	160.10	172	PKPdf	PKPdf	04 10 00.2	+1.0
VNA1				e		04 10 14.1	
VNA1				e		04 10 19.7	
VNA1				e		04 10 41.4	
VNA1				e		04 10 53.5	
VNA1				e		04 10 58.2	

IDC 10 03:58:43.7±3.3**, 18.27S**×**177.60W, mb3.6**/3**, mb1 4.1**/3**, mb1mx3.8**/15**, mbtmp3.6**/3**, Error ellipse: s-maj=261.8km s-min=32.5km az=158.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.32	260	P	P	04 07 03.7	-1.8
	0.4nm,0.4s,baz=96,slow=7.2,SNR=9.9						
NVAR	Mina Array Bea	79.15	43	P	P	04 10 50.7	-1.3
	0.3nm,0.4s,baz=225,slow=12,SNR=3.8						
TXAR	Lajitas Array	85.54	57	P	P	04 11 24.3	-1.1
	0.3nm,0.8s,baz=240,slow=7.3,SNR=3.6						

*IDC **10** 04:17:42.4±0.6, 1.50S×134.28E, mb4.5/13, mb1 4.6/15, mb1mx4.6/20, mbtmp4.5/15, ML5.0/2, MS4.8/1, Ms1 4.8/1, ms1mx3.7/22, Error ellipse: s-maj=28.7km s-min=13.0km az=82.0*

*BJI **10** 04:17:43.2, 2.17S×134.62E, h65km, mB5.6, mb5.0, Ms5.2, Msz4.8*

*MOS **10** 04:17:45.3±1.4, 1.54S×134.19E, h33km, mb5.0/12, Error ellipse: s-maj=24.9km s-min=9.4km az=97.7*

*HRVD **10** 04:17:47.5±1.2, 1.57S×134.63E, h34km±1km, MW4.9/35, Centroid moment Tensor Solution. LP body waves: s12,c13;Mantle waves: s35,c45; Half duration: 0 Moment* *tensor: Scale 10^{16}Nm; M_{rr}-2.40±.48; $M_{\theta\theta}$3.18±.28; $M_{\phi\phi}$-0.78±.30; $M_{r\theta}$-0.35±.27; $M_{\theta\phi}$0.62±.14; $M_{\phi r}$0.01±.41; Best double couple: $M_0$2.859×10^{16} NP1:ϕ_s259°,δ42°, λ-93°. NP2:ϕ_s83°,δ49°,λ-87°. Principal axes: T 3.296, Plg3°, Azm171°; N -.877, Plg2°, Azm261°; P -2.423, Plg86°, Azm23°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 04:17:47.5±0.3, 1.55S×134.22E, h35^{km}, mb4.9/10 Error ellipse: s-maj=11.9km s-min=5.4km az=89.0*

NEIC Felt [IV] at Manokwari and Ransiki.

ISC 10 04:17:43.7±4.4**, 1.58S**±0.06×**134.3E**±0.1**, h22**^{km}±33^{km}**, n65, σ0^{s}96**/66**, mb4.7**/25**, MS4.8**/2**, 2C-1D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	11.20	189	eP	P	04 20 25.7	-0.2
KAKA				eS	S	04 22 28.1	-3.4
WRAB	**Tennant Creek**	18.24	180	eP	P	04 21 56.1	-1.4
WRAB				pmax	pmax		
	comp=Z,32nm,0.7s						
WRAB	**Tennant Creek**	18.24	180	eP	P	04 21 56.1	-1.4
	comp=Z,32nm,0.7s						
WB2	**Warramunga Arr**	18.25	180	⇓iP	P	04 21 58.0	+0.4
WRA	**Warramunga Arr**	18.25	180	P	P	04 21 58.2	+0.6
WRA				S	S	04 25 10.6	-6.9
WRA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
WRA	**Warramunga Arr**	18.25	180	P	P	04 21 58.2	+0.5
	comp=Z,2.9nm,0.3s,baz=360,slow=12,SNR=77						
WRA				S	S	04 25 10.6	-6.8
	comp=Z,0.4nm,0.3s,baz=359,slow=24,SNR=3.5						
FITZ	**Fitzroy Crossi**	18.47	207	eP	P	04 22 00.9	+0.5
FITZ				eS	S	04 25 14.8	-7.8
FITZ	**Fitzroy Crossi**	18.47	207	P	P	04 22 00.7	+0.2
	comp=Z,7.4nm,0.3s,baz=22,slow=10,SNR=61						
FITZ				S	S	04 25 13.8	-8.8
	comp=Z,3.9nm,0.3s,baz=198,slow=18,SNR=5.6						
CTA	**Charters Tower**	21.80	148	P	P	04 22 37.9	+1.4
CTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CTA	**Charters Tower**	21.80	148	P	P	04 22 37.9	+1.4
	comp=Z,4.8nm,0.6s,mb4.1,baz=304,slow=10.0,SNR=5.1						
CTAO	**Charters Tower**	21.80	148	eP	P	04 22 38.0	+1.5
CTAO				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.4						
CTAO	**Charters Tower**	21.80	148	eP	P	04 22 38.0	+1.5
	comp=Z,14nm,0.9s,mb4.4						
MBWA	**Marble Bar**	24.08	215	eP	P	04 22 59.1	+0.3
	comp=Z,44nm,1.1s,mb4.8						
KSM	**Kuching**	24.15	277	eP	P	04 23 00.6	+0.9
STKA	**Stephens Creek**	30.91	168	P	P	04 24 00.7	-0.7
	comp=Z,9.0nm,0.7s,mb4.7,baz=2.6,slow=5.6,SNR=13						
STKA	**Stephens Creek**	30.91	168	eP	P	04 24 01.3	-0.1
KLBR	**Kellerberrin**	33.68	206	eP	P	04 24 26.1	+0.6
JNU	**Nakatsue**	34.67	355	P	P	04 24 32.6	-1.4
	comp=Z,19nm,0.9s,mb5.0,baz=133,slow=9.9,SNR=10						
JHJ	**Hachijo jima 2**	34.91	8	LR	LR	04 35 20.2	
	comp=Z,1µm,21.8s,MS4.7,baz=337,slow=30						
NWAO	**Narrogin (SRO)**	35.05	205	P	P	04 24 37.2	-0.1
NWAO				pmax	pmax		
	comp=Z,17nm,0.9s						
NWAO	**Narrogin (SRO)**	35.05	205	P	P	04 24 37.2	-0.1
	comp=Z,17nm,0.9s,mb5.0,baz=18,slow=3.2,SNR=2.6						
MJAR	**Matsushiro Arr**	38.11	5	P	P	04 25 00.5	-2.5
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	38.11	5	P	P	04 25 00.5	-2.5
	comp=Z,1.0nm,0.3s,mb4.1,baz=211,slow=7.1,SNR=4.0						
CMAR	**Chiang Mai Arr**	40.05	301	P	P	04 25 20.0	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	40.05	301	P	P	04 25 20.0	+0.6
	comp=Z,1.4nm,0.4s,mb4.0,baz=133,slow=6.6,SNR=7.6						
CN2	**Changchun**	45.87	351	eP	P	04 26 06.2	-0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
ASAJ	**Asahikawa**	46.10	8	P	P	04 26 08.4	+0.2
ASAJ				pmax	pmax		
	comp=Z,11nm,0.7s						
ASAJ	**Asahikawa**	46.10	8	P	P	04 26 08.3	+0.1
	comp=Z,11nm,0.7s,mb4.9,baz=115,slow=31,SNR=7.0						
MDJ	**Mudanjiang**	46.19	355	P	P	04 26 09.0	+0.1
MDJ				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
MDJ	**Mudanjiang**	46.19	355	eP	P	04 26 08.6	-0.2
	comp=Z,14nm,0.8s,mb4.9						
LZH	**Lanzhou**	46.99	326	⇑P	P	04 26 16.5	+1.1
LZH				AP	pP	04 26 33.5	+12
LZH				XP	sP	04 26 42.0	+17
LZH				AMB	AMB		
	comp=Z,30nm,1.4s,mb5.0						
HHC	**Hu-ho-hao-te**	47.03	336	⇑iP	P	04 26 16.3	+0.7
HHC				AP	pP	04 26 30.1	+7.9
HHC				XP	sP	04 26 38.0	+13
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
YSS	**Yuzh-Sakhalins**	48.91	8	eP	P	04 26 29.8	-0.3
YSS				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
YSS	**Yuzh-Sakhalins**	48.91	8	eP	P	04 26 29.8	-0.3
	comp=Z,21nm,0.8s,mb5.2						
KLR	**Kul'dur**	50.66	358	eP	P	04 26 40.2	-3.3
GTA	**Gaotai**	51.60	326	eP	P	04 26 51.2	+0.4
GTA				LR	LR		
	comp=N,430nm,12.2s,MS4.9						
GTA				LR	LR		
	comp=E,540nm,10.3s,MS4.9						
GTA				LR	LR		
	comp=Z,530nm,14.1s,MS4.7						
ULN	**Ulaanbaatar**	54.67	338	eP	P	04 27 13.3	-0.2
ULN				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.9						
ULN	**Ulaanbaatar**	54.67	338	eP	P	04 27 13.3	-0.1
	comp=Z,16nm,1.3s,mb4.9						
SONM	**Songino Array**	54.90	337	P	P	04 27 15.2	0.0
	comp=Z,3.5nm,1.0s,mb4.4,baz=143,slow=6.2,SNR=18						
SONM				PcP	PcP	04 28 17.2	+0.2
	comp=Z,1.3nm,0.7s,baz=144,slow=3.6,SNR=5.2						
CIT	**Chita**	56.21	345	eP	P	04 27 24.7	+0.2
CIT				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.9						
ZAK	**Zakamensk**	58.16	337	eP	P	04 27 38.1	-0.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
FX1	**Attu Island--F**	63.28	25	P	P	04 28 13.3	+0.2
YAK	**Yakutsk**	63.54	358	eP	P	04 28 12.9	-1.8
YAK				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.5						
YAK	**Yakutsk**	63.54	358	eP	P	04 28 12.9	-1.8
	comp=Z,44nm,0.8s,mb5.5						
MKAR	**Makanchi Array**	66.23	324	P	P	04 28 32.1	-0.3
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	**Makanchi Array**	66.23	324	P	P	04 28 32.1	-0.2
	comp=Z,5.0nm,0.8s,mb4.6,baz=117,slow=8.1,SNR=28						
ZAL	**Zalesovo**	68.78	331	P	P	04 28 46.4	-1.9
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL	**Zalesovo**	68.78	331	P	P	04 28 46.4	-1.9
	comp=Z,2.3nm,0.3s,mb4.5,baz=89,slow=22,SNR=5.3						
ZAL	**Zalesovo**	68.78	331	P	P	04 28 46.4	-1.9
VNDA	**Vanda**	77.32	174	eP	P	04 29 39.0	+1.0
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	77.32	174	P	P	04 29 38.7	+0.7
	comp=Z,0.8nm,0.9s,mb3.7,baz=318,slow=5.0,SNR=4.1						
VNDA	**Vanda**	77.32	174	eP	P	04 29 39.0	+1.0
	comp=Z,1.2nm,0.8s,mb3.9						
IMA	**Indian Mountai**	84.22	23	eP	P	04 30 16.2	+1.6
IMA				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.1						
IMA	**Indian Mountai**	84.22	23	eP	P	04 30 16.2	+1.6
	comp=Z,13nm,0.9s,mb5.0						
SML	**Sawmill**	85.44	28	P	P	04 30 20.5	-0.3
MCK	**McKinley**	85.58	26	eP	P	04 30 22.2	+0.8
MCK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.9						
MCK	**McKinley**	85.58	26	eP	P	04 30 22.1	+0.7
	comp=Z,2.6nm,0.4s,mb4.8						
ILAR	**Eielson Array**	86.67	25	P	P	04 30 26.9	+0.1
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	86.67	25	P	P	04 30 26.9	+0.1
	comp=Z,2.3nm,0.8s,mb4.5,baz=262,slow=4.7,SNR=15						
DAWY	**Dawson**	89.80	26	eP	P	04 30 42.6	+0.8
ARCES	**ARCESS Array B**	97.98	340	P	P	04 31 19.1	0.0
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	97.98	340	P	P	04 31 19.1	-0.1
	comp=Z,1.7nm,0.7s,mb4.7,baz=68,slow=6.5,SNR=4.0						
ROSC	**El Rosal**	151.26	83	PKPbc	PKPdf	04 37 40.2	+5.2
	comp=Z,4.3nm,0.7s,baz=95,slow=22,SNR=6.0						
LPAZ	**La Paz**	151.63	130	ePKIKP	PKPdf	04 37 41.0	+5.6
LPAZ	**La Paz**	151.63	130	PKPbc	PKPdf	04 37 41.6	+6.2
	comp=Z,2.0nm,0.8s,baz=284,slow=0.7,SNR=9.5						

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*IDC **10** 04:41:02.4±1.6, 26.01N×128.35E, mb3.7/4, mb1 3.9/4, mb1mx3.7/19, mbtmp3.7/4, Error ellipse: s-maj=58.2km s-min=11.4km az=89.0*

*JMA **10** 04:41:03.0±0.2, 26.14N×128.77E, h37^{km}, M3.1*

ISC 10 04:41:02.6±1.0**, 26.14N**±0.05×**128.77E**±0.05**, h25**^{km}±8^{km}**, n14, σ0^{s}68**/22**, mb3.5**/4**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	0.82	327	Pg	Pb	04 41 18.4	+0.2
	134nm,0.3s,baz=146,slow=18,SNR=19						
JOW				Lg		04 41 29.1	
	255nm,0.3s,baz=94,slow=28,SNR=23						
JOW	**Kunigami**	0.82	327	P	Pb	04 41 18.3	+0.2
JOW				S	Sb	04 41 28.6	-0.2
JJT2	**Tamagusuku 2**	0.92	270	P	Pb	04 41 19.7	-0.2
JJT2				S	Sb	04 41 32.3	+0.6
NAH1	**Naha**	0.98	274	P	Pb	04 41 20.4	-0.4
NAH1				S	Sb	04 41 33.3	+0.1
JIH	**Iheya**	1.15	321	P	Pn	04 41 23.3	+0.1
JIH				S	Sb	04 41 38.3	+0.2
JAGN	**Aguni-jima**	1.44	288	P	Pn	04 41 27.4	-0.1
JAGN				eS	Sn	04 41 45.0	-0.8
JTK	**Tokunoshima**	1.65	5	P	Pn	04 41 30.8	+0.4
JTK				S	Sn	04 41 50.3	-0.6
JKE	**Kume jima 2**	1.79	276	P	Pn	04 41 31.4	-1.1
JMZ	**Minamidaito 2**	2.23	98	P	Pn	04 41 38.7	0.0
JMZ				eS	Sn	04 42 05.0	-0.7
JAM	**Amami Oshima**	2.38	18	P	Pn	04 41 40.7	-0.2
JAM				S	Sn	04 42 09.8	+0.3
SONM	**Songino Array**	27.89	327	P	P	04 46 53.4	+0.9
	0.9nm,0.7s,mb3.5,baz=124,slow=8.9,SNR=5.8						
MKAR	**Makanchi Array**	41.96	312	P	P	04 48 52.1	-0.9
	0.4nm,0.6s,mb3.2,baz=104,slow=8.1,SNR=4.4						
ZAL	**Zalesovo**	42.62	323	P	P	04 49 00.8	+2.5
	1.5nm,0.4s,mb4.0,baz=268,slow=24,SNR=4.1						
WRA	**Warramunga Arr**	46.13	173	P	P	04 49 27.5	+0.6
	0.5nm,1.0s,mb3.4,baz=350,slow=8.5,SNR=4.0						

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*NIED **10** 04:56:00, 26.10N×128.80E, h20^{km}, Mw4.4 Best double couple: $M_0$5.03×10^{15} NP1:ϕ_s39°,δ56°,λ91°. NP2:ϕ_s217°, δ34°,λ88°.*

*IDC **10** 04:56:29.5±0.8, 26.17N×128.69E, mb4.2/13, mb1 4.3/14, mb1mx4.2/22, mbtmp4.2/14, ML3.9/1, MS4.0/3, Ms1 4.0/3, ms1mx3.4/33, Error ellipse: s-maj=24.6km s-min=13.8km az=74.0*

*JMA **10** 04:56:31.7±0.2, 26.12N×128.77E, h37^{km}, M4.1*

*BJI **10** 04:56:32.9, 25.86N×128.89E, h57^{km}, mB4.3, mb4.5, Ms4.4, Msz4.2*

*MOS **10** 04:56:33.1±1.1, 26.17N×128.57E, h33^{km}, mb4.8/12, Error ellipse: s-maj=17.9km s-min=12.6km az=111.3*

*NEIC **10** 04:56:34.6±0.4, 26.16N×128.62E, mb4.7/18, MW4.4(NIED), Error ellipse: s-maj=9.6km s-min=7.3km az=140.0*

ISC 10 04:56:31.0±0.8**, 26.09N**±0.04×**128.75E**±0.04**, h25**^{km}±5^{km}**, h31**^{km}±2.2^{km}**:pP-P, n71, σ1^{s}01**/79**, mb4.5**/33**, MS4.4**/3**, 1C, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	0.86	330	Pn	Pn	04 56 47.1	-0.4
	727nm,0.3s,baz=146,slow=17,SNR=352						
JOW				Sn	Sn	04 56 59.8	+0.4
	1µm,0.3s,baz=328,slow=19,SNR=34						
JOW	**Kunigami**	0.86	330	P	Pb	04 56 47.3	+0.1
JOW				eS	Sb	04 56 57.8	-0.4
JJT2	**Tamagusuku 2**	0.90	274	P	Pb	04 56 48.5	+0.6
JJT2				eS	Sb	04 57 00.5	+1.0
NAH1	**Naha**	0.96	277	P	Pb	04 56 49.1	+0.2
NAH1				eS	Sb	04 57 01.9	+0.7
JIH	**Iheya**	1.18	324	P	Pn	04 56 52.3	+0.1
JIH				eS	Sb	04 57 08.1	+0.7
JAGN	**Aguni-jima**	1.44	291	P	Pn	04 56 56.3	+0.3
JAGN				eS	Sn	04 57 14.1	-0.2
JTK	**Tokunoshima**	1.70	6	P	Pn	04 56 59.8	+0.1
JTK				eS	Sn	04 57 19.1	-1.8
JKE	**Kume jima 2**	1.78	278	P	Pn	04 57 00.3	-0.5
JKE				eS	Sn	04 57 23.0	+0.2
JMZ	**Minamidaito 2**	2.24	96	P	Pn	04 57 07.5	+0.1
JMZ				eS	Sn	04 57 32.9	-1.6
JAM	**Amami Oshima**	2.44	18	P	Pn	04 57 09.7	-0.5
JNN	**Nakanoshima**	3.87	15	P	Pn	04 57 30.5	-0.1
JTJ	**Tarama**	3.93	249	P	Pn	04 57 30.0	-1.5
JIJ	**Ishigaki jima**	4.51	249	P	Pn	04 57 35.8	-3.9
YOJ	**Yonaguni jima**	5.44	254	P	Pn	04 57 50.0	-2.8
YHNB	**Yeheng**	6.82	260	ePn	Pn	04 58 10.0	-2.2
JNU	**Nakatsue**	7.25	14	Pn	Pn	04 58 17.1	-1.2
	1.8nm,0.3s,baz=167,slow=7.5,SNR=7.5						
JNU				LR	LR	05 01 28.6	
	comp=Z,350nm,19.1s,baz=350,slow=42						
JHJ	**Hachijo jima 2**	11.88	51	LR	LR	05 03 16.3	
	comp=Z,397nm,20.0s,baz=6.4,slow=34						
ENH	**Enshi**	17.48	288	eP	P	05 00 35.2	+0.2
	5.5nm,0.4s						
XAN	**Xi'an**	18.89	300	P	P	05 00 51.5	-0.7
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s						
HHC	**Hu-ho-hao-te**	20.50	320	eP	P	05 01 16.6	+6.7
HHC				AP		05 01 25.1	
HHC				XP		05 01 28.9	
HHC				PP	PP	05 01 36.2	+5.2
HHC				S	S	05 04 48.1	-5.0
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s						
HHC				LR	LR		
	comp=N,580nm,11.6s,MS4.3						
HHC				LR	LR		
	comp=E,440nm,12.5s,MS4.3						
HHC				LR	LR		
	comp=Z,590nm,12.5s,MS4.2						
KMI	**Kunming**	23.47	273	P	P	05 01 36.9	-2.8
LZH	**Lanzhou**	23.49	301	eP	P	05 01 39.0	-0.8
LZH				AP		05 01 50.0	
LZH				XP		05 01 55.0	
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb4.5						
YSS	**Yuzh-Sakhalins**	23.60	24	eP	P	05 01 42.8	+2.0
YSS				pmax	pmax		
	comp=Z,21nm,0.7s,mb4.7						
YSS	**Yuzh-Sakhalins**	23.60	24	eP	P	05 01 42.8	+2.0
	comp=Z,21nm,0.7s,mb4.7						
GTA	**Gaotai**	27.59	306	eP	P	05 02 16.5	-1.9
GTA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
GTA				AMB	AMB		
	comp=Z,40nm,6.5s						
GTA				LR	LR		
	comp=N,230nm,12.2s,MS4.2						
GTA				LR	LR		
	comp=E,340nm,15.2s,MS4.2						
GTA				LR	LR		
	comp=Z,480nm,13.3s,MS4.2						
ULN	**Ulaanbaatar**	27.63	328	eP	P	05 02 19.8	+1.2
ULN				e	pP	05 02 28.2	+2.4
ULN				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.5						
ULN	**Ulaanbaatar**	27.63	328	eP	P	05 02 19.8	+1.1
	comp=Z,12nm,0.9s,mb4.5						
ULN				e	pP	05 02 28.2	+2.4
SONM	**Songino Array**	27.93	327	P	P	05 02 22.5	+1.2
	comp=Z,10nm,0.9s,mb4.4,baz=139,slow=10,SNR=44						
CMAR	**Chiang Mai Arr**	28.56	261	P	P	05 02 27.6	+0.3
	comp=Z,0.7nm,0.3s,mb3.8,baz=72,slow=7.4,SNR=5.8						
GUN	**Gumba**	38.10	283	eP	P	05 03 50.2	+0.3
	comp=Z,22nm,0.7s,mb5.0						
PKI	**Pulchoki**	38.56	282	eP	P	05 03 53.5	-0.2
	comp=Z,30nm,0.8s,mb5.1						
PKI	**Pulchoki**	38.56	282	eP	P	05 03 53.5	-0.2
PKI				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
KKN	**Kakani**	38.64	283	eP	P	05 03 54.5	+0.1
	comp=Z,24nm,0.6s,mb5.1						
KKN	**Kakani**	38.64	283	eP	P	05 03 54.5	+0.1
KKN				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.8						
DMN	**Daman**	38.82	282	eP	P	05 03 55.6	-0.3
	comp=Z,47nm,1.1s,mb5.1						
GKN	**Gorkha**	39.18	283	eP	P	05 03 58.8	-0.1
	comp=Z,34nm,0.7s,mb5.2						
KOLN	**Koldanda**	40.12	283	eP	P	05 04 06.4	-0.3
	comp=Z,25nm,0.8s,mb5.0						
MKAR	**Makanchi Array**	41.98	312	P	P	05 04 20.8	-0.9
	comp=Z,3.3nm,0.6s,mb4.2,baz=98,slow=10,SNR=33						
FITZ	**Fitzroy Crossi**	44.02	184	P	P	05 04 39.5	+0.7
	comp=Z,2.4nm,0.7s,mb4.0,baz=15,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	46.07	173	P	P	05 04 55.9	+0.8
	comp=Z,1.8nm,0.6s,mb4.2,baz=353,slow=8.4,SNR=18						
BILL	**Bilibino**	47.66	18	eP	P	05 05 08.0	+1.0
BILL				e		05 05 18.2	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	50.66	319	eP	P	05 05 28.8	-1.4
CHKZ				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
CHKZ	**Chkalovo**	50.66	319	eP	P	05 05 28.8	-1.4
	comp=Z,2.2nm,1.0s,mb4.0						
ARU	**Arti**	57.79	322	eP	P	05 06 20.7	-1.8
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ARU	**Arti**	57.79	322	eP	P	05 06 20.7	-1.8
	comp=Z,5.2nm,0.8s,mb4.6						
ILAR	**Eielson Array**	64.34	28	P	P	05 07 06.1	-0.5
	comp=Z,0.6nm,0.7s,mb3.7,baz=255,slow=6.5,SNR=5.7						
INK	**Inuvik**	68.84	23	eP	P	05 07 36.1	+1.0
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	68.84	23	P	P	05 07 35.7	+0.6
	comp=Z,1.0nm,0.5s,mb4.0,baz=286,slow=4.0,SNR=3.6						
INK	**Inuvik**	68.84	23	eP	P	05 07 36.1	+1.0
	comp=Z,1.3nm,0.5s,mb4.1						
KIV	**Kislovodsk**	69.69	310	eP	P	05 07 40.8	+0.1
KIV				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
ARCES	**ARCESS Array B**	70.31	339	P	P	05 07 43.7	-0.4
	comp=Z,2.2nm,0.9s,mb4.1,baz=79,slow=6.2,SNR=4.4						
KAF	**Kangasniemi**	72.85	331	ep	P	05 07 58.5	-0.8
FINES	**FINESS Array B**	73.22	331	P	P	05 08 01.2	-0.3
	comp=Z,2.5nm,0.7s,mb4.2,baz=56,slow=6.9,SNR=9.5						
MALT	**Malatya**	74.57	305	eP	P	05 08 11.2	+1.4
MALT				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
MALT	**Malatya**	74.57	305	eP	P	05 08 11.2	+1.3
	comp=Z,2.7nm,0.6s,mb4.3						
RES	**Resolute Bay**	75.60	11	eP	P	05 08 19.3	+4.3
RES				e*PP	pP	05 08 28.5	+5.7
RES				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
RES	**Resolute Bay**	75.60	11	eP	P	05 08 19.3	+4.2
	comp=Z,4.4nm,0.6s,mb4.6						
RES				epP	pP	05 08 28.4	+5.7
BR131	**Keskin Array S**	77.49	308	eP	P	05 08 26.7	+0.4
	comp=Z,3.0nm,0.6s,mb4.4						
BR131				epP	pP	05 08 37.4	+3.3
BRTR	**Keskin Array B**	77.49	308	P	P	05 08 26.6	+0.3
	comp=Z,4.8nm,0.9s,mb4.4,baz=90,slow=4.9,SNR=22						
YKA	**Yellowknife Ar**	78.46	25	P	P	05 08 31.8	+0.7
	comp=Z,0.5nm,0.4s,mb3.8,baz=297,slow=5.5,SNR=5.8						
NB2	**NORSAR Subarra**	79.65	334	P	P	05 08 37.5	-0.1
	comp=Z,4.1nm,0.8s,mb4.4,baz=53,slow=5.8						
NOA	**NORSAR Array B**	79.65	334	P	P	05 08 37.3	-0.4
	comp=Z,3.1nm,0.8s,mb4.3,baz=52,slow=5.5,SNR=8.7						
SUMG	**Summit**	81.21	356	eP	P	05 08 47.8	+2.0
	comp=Z,13nm,0.8s,mb4.9						
SUMG				epP	pP	05 08 59.5	+6.0
OJC	**Ojcow**	81.52	322	eP	P	05 08 48.7	+1.0
CLL	**Collm**	84.54	325	⇑P	P	05 09 04.3	+1.2
	comp=Z,logA/T=0.9,mb4.8						
GERES	**GERESS Array B**	85.60	323	P	P	05 09 10.1	+1.6
	comp=Z,0.8nm,0.6s,mb4.1,baz=56,slow=4.8,SNR=8.7						
FCC	**Fort Churchill**	88.31	21	eP	P	05 09 22.3	+0.9
FCC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
FCC	**Fort Churchill**	88.31	21	eP	P	05 09 22.3	+0.9
	comp=Z,2.0nm,0.8s,mb4.4						
FFC	**Flin Flon**	88.51	27	eP	P	05 09 24.1	+1.6
FFC				e*PP	pP	05 09 32.4	+2.0
FFC				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.6						
FFC	**Flin Flon**	88.51	27	eP	P	05 09 24.1	+1.6
	comp=Z,3.1nm,1.0s,mb4.6						
FFC				epP	pP	05 09 32.4	+2.0
KMBO	**Kilima Mbogo**	91.84	270	LR	LR	05 51 07.7	
	comp=Z,409nm,20.3s,MS4.9,baz=207,slow=36						

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*IDC **10** 05:01:08.1±0.9, 1.55S×120.71E, mb4.0/6, mb1 4.2/6, mb1mx4.0/16, mbtmp4.0/6, Error ellipse: s-maj=76.1km s-min=19.4km az=61.0*

*NEIC **10** 05:01:16.4±1.6, 1.60S×120.81E, h65^{km}±16^{km}, mb4.3/3, Error ellipse: s-maj=49.0km s-min=8.6km az=59.0*

ISC 10 05:01:15.8±2.7**, 1.5S**±0.2×**120.8E**±0.4**, h77**^{km}±27^{km}**, n13, σ0^{s}60**/12**, mb4.1**/9**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	8.80	329	ePn	P	05 03 22.7	+0.4
WRAB	**Tennant Creek**	22.59	145	eP	P	05 06 10.6	-0.2
	32nm,1.4s,mb4.5						
WRA	**Warramunga Arr**	22.59	145	P	P	05 06 10.7	-0.2
	5.3nm,0.8s,mb3.9,baz=319,slow=11,SNR=17						
WB2	**Warramunga Arr**	22.60	145	eP	P	05 06 10.6	-0.3
CMAR	**Chiang Mai Arr**	29.27	314	P	P	05 07 12.0	-1.0
	4.7nm,0.7s,mb4.2,baz=136,slow=7.2,SNR=17						
ULN	**Ulaanbaatar**	50.63	348	eP	P	05 10 09.2	+0.1
	3.0nm,0.9s,mb4.3						
SONM	**Songino Array**	50.74	347	P	P	05 10 09.9	0.0
	1.3nm,0.6s,mb4.2,baz=162,slow=7.8,SNR=6.6						
MKAR	**Makanchi Array**	58.78	330	P	P	05 11 07.3	-1.0
	2.2nm,0.7s,mb4.3,baz=130,slow=8.0,SNR=12						
BVAR	**Borovoye Array**	68.67	330	P	P	05 12 13.5	+0.7
	1.0nm,0.7s,mb3.8,baz=153,slow=6.6,SNR=6.6						
CHKZ	**Chkalovo**	68.92	331	eP	P	05 12 14.9	+0.5
	5.4nm,1.4s,mb4.2						
VNDA	**Vanda**	79.06	172	P	P	05 13 13.8	+1.0
	0.4nm,0.7s,mb3.4,baz=293,slow=8.0,SNR=3.4						
VNDA	**Vanda**	79.06	172	P	P	05 13 13.8	+1.0
TXAR	**Lajitas Array**	129.48	52	PKP	PKPdf	05 20 20.1	+3.6
	0.3nm,0.7s,baz=114,slow=1.3,SNR=3.9						

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*IDC **10** 05:28:28.0±0.8, 62.00N×26.82W, mb3.6/12, mb1 3.8/13, mb1mx3.7/24, mbtmp3.6/13, ML3.4/1, MS3.5/8, Ms1 3.5/8, ms1mx3.3/30, Error ellipse: s-maj=28.4km s-min=14.8km az=7.0*

*NEIC **10** 05:28:29.4±0.6, 61.89N×26.80W, h10^{km}, mb3.9/2, Error ellipse: s-maj=16.1km s-min=9.0km az=198.0*

*CSEM **10** 05:28:31.2±0.1, 61.94N×26.74W, h40^{km}, mb3.7, Error ellipse: s-maj=4.6km s-min=2.7km az=25.0*

ISC 10 05:28:27.7±0.6**, 61.9N**±0.1×**26.8W**±0.2**, h10**^{km}**, n25, σ0^{s}78**/19**, mb3.6**/13**, MS3.5**/5**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUMG	**Summit**	11.57	342	P	P	05 31 17.4	+1.5
	3.5nm,0.7s						
SUMG	**Summit**	11.57	342	P	P	05 31 17.4	+1.6
JMIC	**Jan Mayen**	11.62	31	LR	LR	05 34 40.4	
	comp=Z,122nm,18.4s,baz=98,slow=32						
EKA	**Eskdalemuir Ar**	13.93	108	Pn	P	05 31 47.6	+0.6
	0.1nm,0.3s,baz=305,slow=8.7,SNR=2.6						
NOA	**NORSAR Array B**	18.02	76	LR	LR	05 38 40.1	
	comp=Z,89nm,20.2s,baz=280,slow=34						
HFS	**Hagfors**	19.49	77	LR	LR	05 39 14.1	
	comp=Z,155nm,20.6s,baz=84,slow=33						
SCHQ	**Schefferville**	21.83	269	P	P	05 33 22.3	+0.5
	1.5nm,0.7s,mb3.5,baz=32,slow=9.2,SNR=4.6						
SCHQ	**Schefferville**	21.83	269	P	P	05 33 22.3	+0.5
ARCES	**ARCESS Array B**	22.13	48	P	P	05 33 24.3	-0.3
	1.7nm,0.7s,mb3.6,baz=300,slow=9.8,SNR=3.8						
MOX	**Moxa**	23.76	101	eP	P	05 33 40.0	-0.5
GRA1	**Grafenberg Arr**	24.23	103	eP	P	05 33 39.5	-5.7
	2.0nm,0.6s,mb3.7						
GRF	**Grafenberg Arr**	24.23	103	eP	P	05 33 39.5	-5.7

	2.0nm,0.6s,mb3.7						
FINES	**FINESS Array B**	24.54	67	P	P	05 33 47.8	-0.3
	1.0nm,0.8s,mb3.4,baz=309,slow=8.9,SNR=2.9						
DAVOX	**Davos**	25.76	109	LR	LR	05 43 39.1	
	comp=Z,81nm,18.6s,MS3.3,baz=52,slow=35						
GERES	**GERESS Array B**	25.98	101	P	P	05 34 03.0	+1.2
	0.3nm,0.2s,mb3.4,baz=309,slow=8.5,SNR=4.2						
GERES				LR	LR	05 45 11.8	
	comp=Z,119nm,18.5s,MS3.5,baz=9.6,slow=39						
ESDC	**Sonseca Array**	26.28	137	P	P	05 34 04.9	+0.3
	0.2nm,0.3s,mb3.1,baz=338,slow=8.0,SNR=5.4						
SADO	**Sadowa**	34.47	265	LR	LR	05 48 33.6	
	comp=Z,44nm,20.5s,MS3.2,baz=313,slow=35						
YKA	**Yellowknife Ar**	37.93	311	P	P	05 35 45.4	-1.0
	0.3nm,0.4s,mb3.4,baz=45,slow=8.7,SNR=5.8						
ILAR	**Eielson Array**	46.02	329	P	P	05 36 52.6	+0.3
	0.4nm,0.8s,mb3.4,baz=23,slow=6.9,SNR=5.2						
ILAR				PcP	PcP	05 38 27.6	-1.9
	0.5nm,0.7s,baz=8.6,slow=2.5,SNR=5.0						
ILAR				LR	LR	05 56 29.3	
	comp=Z,66nm,18.1s,MS3.6,baz=180,slow=37						
ILAR	**Eielson Array**	46.02	329	PcP	PcP	05 38 27.5	-1.9
PDAR	**Pinedale Array**	50.20	288	P	P	05 37 24.7	-0.5
	1.6nm,0.8s,mb4.1,baz=57,slow=6.8,SNR=13						
ELK	**Elko**	54.35	291	P	P	05 37 56.7	+0.4
	2.1nm,1.1s,mb4.0,slow=12						
ELK				LR	LR	06 00 45.3	
	comp=Z,85nm,18.2s,MS3.9,baz=333,slow=36						
MKAR	**Makanchi Array**	57.75	50	P	P	05 38 19.0	-1.7
	0.5nm,0.8s,mb3.6,baz=326,slow=4.4,SNR=5.9						
TXAR	**Lajitas Array**	58.43	274	P	P	05 38 25.1	-0.5
	0.3nm,0.8s,mb3.4,baz=117,slow=2.8,SNR=3.7						
SONM	**Songino Array**	64.37	33	P	P	05 39 05.4	+0.1
	0.6nm,0.6s,mb3.8,baz=328,slow=12,SNR=5.7						

WEL 10 05:30:37.3±0.8**, 35.63S**×**177.68E, h239**^{km}±34^{km}**, ML3.5**/4**, Error ellipse: s-maj=44.7km s-min=36.7km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	1.99	166	PN	P	05 31 18.8	-0.2
MXZ				SN	S	05 31 51.0	-0.3
URZ	**Urewera**	2.66	190	PN	P	05 31 26.2	+0.4
URZ				SN	S	05 32 03.2	-0.3
MWZ	**Matawai**	2.70	183	PN	P	05 31 26.5	+0.3
MWZ				SN	S	05 32 03.6	-0.6
BKZ	**Black Stump Fm**	3.65	195	*e*PN	P	05 31 36.0	-1.0

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*BJI **10** 06:24:22.8, 31.40S×69.20W, h109^{km}, mB4.7*

*NEIC **10** 06:24:22.9±0.2, 31.39S×69.17W, h109^{km}±2^{km}, mb4.2/21, MD4.3(GUC), Error ellipse: s-maj=5.0km s-min=3.2km az=86.0*

*GUC **10** 06:24:22.0±0.9, 31.39S×69.43W, h150^{km}±11^{km}, MD4.3, ML4.5*

*IDC **10** 06:24:23.8±0.9, 31.36S×69.08W, h117^{km}±6^{km}, mb3.9/11, mb1 4.1/13, mb1mx4.0/17, mbtmp4.3/13, Error ellipse: s-maj=21.5km s-min=14.3km az=81.0*

ISC 10 06:24:22.2±0.3**, 31.37S**±0.02×**69.19W**±0.04**, h116**^{km}±2^{km}**, h115**^{km}±1.0^{km}**:pP-P, n93, σ0^{s}87**/105**, mb4.1**/30**, 13C-17D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	**Zonda**	0.47	112	⇓*i*P	P	06 24 39.5	-0.1
ZON				*e*S	S	06 24 51.5	-1.2
CFAA	**Coronel Fontan**	0.84	106	P	P	06 24 44.0	+1.4
	32nm,0.3s,baz=282,slow=8.4,SNR=3245						
CFAA				S	S	06 24 59.0	+1.1
	368nm,0.3s,baz=90,slow=19,SNR=214						
CMCH	**Combarbala**	1.57	277	⇓*i*P	P	06 24 50.7	+0.1
CMCH				*i* S	S	06 25 12.2	+0.3
CMCH				AMP		06 25 13.9	
	comp=E,43µm,0.6s						
ILCH	**Illapel**	1.71	261	⇓*i*P	P	06 24 52.2	-0.1
ILCH				*i* S	S	06 25 14.7	-0.4
ILCH				AMP		06 25 15.5	
	comp=N,8µm,0.7s						
JACH	**Jahuel**	1.77	222	⇑*i*P	P	06 24 53.5	+0.5
JACH				*i* S	S	06 25 17.1	+0.8
TLL	**Tololo Astrono**	1.84	310	⇑*i*P	P	06 24 55.0	+1.1
TLL				*i* S	S	06 25 19.1	+1.4
TLL				AMP		06 25 24.6	
	comp=N,4µm,0.6s						
OVCH	**Ovalle**	1.89	293	*e*P	P	06 24 54.6	+0.1
OVCH				*i* S	S	06 25 18.3	-0.5
OVCH				AMP		06 25 19.7	
	comp=N,3µm,0.2s						
FCH	**Farellones**	2.17	205	⇓*i*P	P	06 24 59.2	+1.1
FCH				*i* S	S	06 25 27.1	+2.0
PEL	**Peldehue**	2.18	215	⇓*i*P	P	06 24 58.4	+0.1
PEL				*i* S	S	06 25 25.8	+0.4
PEL				AMP		06 25 28.6	
	comp=N,3µm,0.5s						
ROCH	**El Roble**	2.23	224	⇑*i*P	P	06 24 58.5	-0.4
ROCH				*i* S	S	06 25 25.9	-0.6
PACH	**Papudo**	2.24	238	⇓*i*P	P	06 24 58.2	-0.9
PACH				*i* S	S	06 25 26.3	-0.6
LSCH	**La Serena**	2.30	309	⇑*i*P	P	06 24 59.6	-0.2
LSCH				*i* S	S	06 25 27.2	-0.9
LSCH				AMP		06 25 28.0	
	comp=N,2µm,0.2s						
CLCH	**Cerro Calan**	2.32	209	⇑*i*P	P	06 25 00.3	+0.2
CLCH				*i* S	S	06 25 28.9	+0.2
CLCH				AMP		06 25 30.7	
	comp=E,2µm,0.6s						
CLCH				AMP		06 25 31.3	
	comp=E,3µm,0.5s						
DSCH	**Colegio Aleman**	2.34	210	*e*P	P	06 25 00.7	+0.3
DSCH				*i* S	S	06 25 29.3	+0.2
DSCH				AMP		06 25 31.9	
	comp=N,3µm,0.5s						
FSR	**Penalolen**	2.39	208	⇓*i*P	P	06 25 01.4	+0.3
FSR				*i* S	S	06 25 31.2	+0.9
FSR				AMP		06 25 36.2	
	comp=E,2µm,0.6s						
STL	**Santa Lucia**	2.40	210	⇑*i*P	P	06 25 01.2	0.0
STL				*i* S	S	06 25 30.6	0.0
STL				AMP		06 25 32.9	
	comp=N,452nm,0.3s						
SAN	**Santiago**	2.42	211	AMP		06 25 34.2	
	comp=E,1µm,0.5s						
PUEX	**Pudahuel**	2.46	212	⇑*i*P	P	06 25 03.0	+1.0
PUEX				*i* S	S	06 25 33.0	+1.0
PUEX				AMP		06 25 35.7	
	comp=E,4µm,0.5s						
SJCH	**San Jose de Ma**	2.47	203	*e*P	P	06 25 02.0	-0.1
SJCH				*e*S	S	06 25 32.6	+0.3
SJCH				AMP		06 25 44.1	
	comp=E,501nm,0.5s						
PCH	**Pirque**	2.51	206	⇓*i*P	P	06 25 02.7	0.0
ANTU	**Antumapu**	2.51	209	⇓*i*P	P	06 25 02.6	-0.1
ANTU				*i* S	S	06 25 33.3	+0.1
ANTU				AMP		06 25 35.4	
	comp=E,1µm,0.4s						
IHA	**Instituto Hidr**	2.66	231	⇑*i*P	P	06 25 02.9	-1.8
LCO	**Las Campanas**	2.69	330	⇑*i*P	P	06 25 05.4	+0.3
LCO				AMP		06 25 41.0	
	comp=E,2µm,0.4s						
TACH	**Talagante**	2.72	213	⇓*i*P	P	06 25 04.5	-1.0
CHCH	**Chadas Angostu**	2.84	205	⇓*i*P	P	06 25 06.5	-0.6
LCCH	**Las Cruces**	2.91	223	⇓*i*P	P	06 25 06.7	-1.3
LCCH				*e*S	S	06 25 40.0	-2.7
CACH	**El Canelo**	2.99	203	⇑*i*P	P	06 25 09.4	+0.3
VACH	**Vallenar**	3.10	333	⇑*i*P	P	06 25 10.4	-0.2
VACH				*i* S	S	06 25 46.6	-0.7
VACH				AMP		06 25 47.4	
	comp=E,2µm,0.5s						
CICH	**Cipreses**	3.12	199	⇓*i*P	P	06 25 10.8	-0.1
SFDO	**San Fernando**	3.58	205	*e*P	P	06 25 15.7	-1.4
CRCH	**Chaqaral**	5.16	346	⇓*i*P	P	06 25 37.4	-1.0
CRCH				AMP		06 26 43.7	
	comp=E,355nm,0.4s						
TRQA	**Tornquist**	8.92	140	*e*Pn	P	06 26 27.1	-2.3
	comp=E,139nm,0.7s						
PLCA	**Paso Flores**	9.41	186	P	P	06 26 33.0	-2.9
	comp=E,0.3nm,0.3s,baz=1.1,slow=14,SNR=4.3						
PLCA				Lg		06 29 15.8	
	comp=E,0.1nm,0.3s,baz=177,slow=19,SNR=2.3						
PLCA	**Paso Flores**	9.41	186	P	P	06 26 33.0	-2.9
PLCA				Lg		06 29 15.8	
LPAZ	**La Paz**	15.04	4	P	P	06 27 51.0	+1.2
	comp=E,0.4nm,0.3s,baz=172,slow=9.1,SNR=30						
LPAZ	**La Paz**	15.04	4	*e*Pn	P	06 27 51.3	+1.4
	comp=E,7.1nm,0.8s						
SIV	**San Ignacio**	17.00	28	P	P	06 28 13.9	-0.3
	comp=E,2.4nm,0.3s,baz=216,slow=11,SNR=121						
SAML	**Samuel**	23.00	15	*e*P	P	06 29 18.0	+0.4
	comp=E,5.0nm,0.7s,mb4.0						
USHA	**Ushuaia**	23.46	179	P	P	06 29 23.0	+1.4
	comp=E,9.1nm,0.9s,mb4.1,baz=6.2,slow=12,SNR=6.6						
BDFB	**Brasilia**	24.87	56	P	P	06 29 35.2	-0.3
	comp=E,11nm,0.9s,mb4.3,baz=235,slow=7.5,SNR=18						
BAO	**Brasilia Array**	24.89	56	P	P	06 29 35.3	-0.4
VNA3	**Neumayer Olymp**	50.91	159	⇓*i*P	P	06 33 12.7	-0.4
VNA3				*e*	pP	06 33 40.2	-0.2
VNA3				*e*		06 33 52.0	
VNA3				*e*		06 35 09.1	
VNA3				*e*S	S	06 40 22.1	+3.0
VNA1	**Neumayer--Stat**	51.17	158	⇓*i*P	P	06 33 15.4	+0.3
VNA1				*e*	pP	06 33 42.1	-0.3
VNA1				*e*		06 33 54.2	
VNA2	**Neumayer--Watz**	51.53	158	⇓*i*P	P	06 33 17.3	-0.4
VNA2				*e*	pP	06 33 44.6	-0.5
VNA2				*e*		06 33 55.4	
VNA2				*e*		06 35 10.7	
VNA2				*e*S	S	06 40 33.3	+5.8
SNAA	**Sanae**	53.13	159	P	P	06 33 28.6	-1.1
	comp=E,1.3nm,0.8s,mb4.0,baz=283,slow=5.3,SNR=14						
SNAA	**Sanae**	53.13	159	*e*P	P	06 33 28.5	-1.2
	comp=E,2.1nm,0.6s,mb4.3						
VNDA	**Vanda**	67.13	191	P	P	06 35 05.2	+0.3
	comp=E,0.9nm,0.8s,mb3.7,baz=123,slow=5.7,SNR=4.3						
VNDA	**Vanda**	67.13	191	P	P	06 35 05.2	+0.3
SYO	**Syowa Base**	67.42	158	⇑P	P	06 35 04.3	-2.5
SYO	**Syowa Base**	67.42	158	⇑pP	pP	06 35 33.0	-2.5
CPCT	**Cooper Cave**	68.01	347	*e*P	P	06 35 10.0	-1.1
SWET	**Sewanee**	68.08	345	*e*P	P	06 35 10.4	-1.0
LTX	**Lajitas**	68.70	328	*e*P	P	06 35 15.0	-0.4
	comp=E,2.3nm,0.7s,mb4.1						
TXAR	**Lajitas Array**	68.70	328	P	P	06 35 15.3	0.0
	comp=E,1.4nm,0.6s,mb3.9,baz=152,slow=8.3,SNR=24						
WVT	**Waverly**	69.39	344	*e*P	P	06 35 18.6	-0.9
	comp=E,7.3nm,0.6s,mb4.7						
WCI	**Wyandotte Cave**	71.06	346	*e*P	P	06 35 28.0	-1.5
	comp=E,3.1nm,0.6s,mb4.3						
GDL2	**Guadalupe Moun**	71.45	329	*e*P	P	06 35 32.2	+0.2
MNTX	**Cornudas Mount**	71.48	328	*e*P	P	06 35 31.1	-1.1
	comp=E,3.0nm,0.8s,mb4.2						
DBIC	**Dimbokro**	72.04	70	P	P	06 35 35.4	-0.3
	comp=E,5.5nm,1.0s,mb4.3,baz=242,slow=7.9,SNR=8.6						
DBIC	**Dimbokro**	72.04	70	P	P	06 35 35.4	-0.3
AMTX	**Amarillo**	72.65	332	*e*P	P	06 35 38.7	-0.3
	comp=E,7.0nm,0.8s,mb4.5						
ANMO	**Albuquerque**	74.71	329	*e*P	P	06 35 51.9	+1.0
	comp=E,5.4nm,1.3s,mb4.1						
PV10	**Paradox Valley**	78.70	329	*e*P	P	06 36 13.9	+0.7
BOSA	**Boshof**	79.13	117	P	P	06 36 15.3	-0.4
	comp=E,2.2nm,0.8s,mb4.0,baz=209,slow=10,SNR=2.8						
BOSA	**Boshof**	79.13	117	P	P	06 36 15.3	-0.4
SRU	**San Rafael**	79.97	329	*e*P	P	06 36 20.2	+0.3
ARUT	**Antelope Range**	80.25	326	*e*P	P	06 36 23.1	+1.6
EYMN	**Ely**	81.45	345	*e*P	P	06 36 27.2	-0.4
	comp=E,4.9nm,1.1s,mb4.2						
RSSD	**Black Hills**	81.59	335	*e*P	P	06 36 29.1	+0.7
	comp=E,5.0nm,1.0s,mb4.3						
HWUT	**Hardware Ranch**	82.46	329	*e*P	P	06 36 33.1	+0.2
	comp=E,2.4nm,0.8s,mb4.1						
BW06	**Boulder Array**	82.56	331	*e*P	P	06 36 33.9	+0.4
	comp=E,1.0nm,0.8s,mb3.7						
PDAR	**Pinedale Array**	82.56	331	P	P	06 36 33.6	+0.2
	comp=E,1.6nm,0.8s,mb3.9,baz=136,slow=7.5,SNR=12						
NVAR	**Mina Array Bea**	83.16	323	P	P	06 36 37.8	+1.2
	comp=E,1.7nm,0.7s,mb4.0,baz=144,slow=6.7,SNR=12						
ELK	**Elko**	83.44	327	*e*P	P	06 36 38.0	0.0
	comp=E,2.8nm,0.9s,mb4.1						
LOHW	**Long Hollow**	83.69	331	*e*P	P	06 36 39.9	+0.8
	comp=E,2.1nm,0.9s,mb4.0						
MOOW	**Moose Ponds**	83.86	331	*e*P	P	06 36 40.5	+0.5
	comp=E,1.0nm,0.6s,mb3.8						
IMW	**Indian Meadow**	84.06	331	*e*P	P	06 36 41.8	+0.9
	comp=E,5.1nm,1.0s,mb4.3						
ULM	**Lac du Bonnet**	84.64	343	P	P	06 36 42.7	-0.9
	comp=E,1.2nm,0.4s,mb4.2,baz=162,slow=5.7,SNR=4.4						
HLID	**Hailey**	85.28	329	*e*P	P	06 36 48.1	+1.1
	comp=E,4.7nm,1.0s,mb4.4						
MCMT	**McKenzie Canyo**	85.62	330	*e*P	P	06 36 50.1	+1.5
BOZ	**Bozeman (W)**	85.78	332	*e*P	P	06 36 49.8	+0.4
	comp=E,0.8nm,0.5s,mb3.9						
SCHQ	**Schefferville**	85.87	1	P	P	06 36 49.8	+0.2
	comp=E,1.6nm,0.4s,mb4.3,baz=179,slow=6.2,SNR=14						
WVOR	**Wild Horse Val**	86.36	326	*e*P	P	06 36 53.0	+0.7
	comp=E,2.8nm,1.1s,mb4.1						
FFC	**Flin Flon**	90.28	342	*e*P	P	06 37 10.3	-0.3
	comp=E,1.1nm,0.4s,mb4.3						
WRA	**Warramunga Arr**	124.21	207	PKP	PKPdf	06 43 08.1	+0.4
	comp=E,0.9nm,0.5s,baz=168,slow=1.7,SNR=18						
BVAR	**Borovoye Array**	143.72	41	PKP	PKPdf	06 43 44.7	+1.8
	comp=E,0.7nm,0.5s,baz=243,slow=3.3,SNR=5.4						
ZAL	**Zalesovo**	150.72	32	PKPbc	PKPdf	06 44 01.1	+6.8
	comp=E,5.5nm,0.5s,baz=175,slow=3.2,SNR=21						
MKAR	**Makanchi Array**	153.22	47	PKPbc	PKPdf	06 44 07.3	+9.1
	comp=E,1.8nm,0.8s,baz=331,slow=1.6,SNR=16						
MKAR				PKPab	PKPab	06 44 19.4	-1.1
	comp=E,2.6nm,0.7s,baz=297,slow=4.2,SNR=16						
MKAR	**Makanchi Array**	153.22	47	PKPbc	PKPdf	06 44 07.3	+9.1
MKAR				PKPab	PKPab	06 44 19.4	-1.1
WMQ	**Urumqi**	157.95	49	*e*PKP	PKPdf	06 44 07.7	+3.1
CN2	**Changchun**	163.05	321	*e*PKP	PKPdf	06 44 13.5	+3.5
CN2				PP	PP	06 48 55.2	+7.0
SONM	**Songino Array**	163.21	10	PKPab	PKPab	06 45 03.1	-0.3
	comp=E,1.1nm,0.7s,baz=325,slow=3.1,SNR=7.8						
NJ2	**Nanjing**	173.12	278	*e*PKP	PKPdf	06 44 20.5	+3.1
NJ2				PP	PP		
	comp=Z,30nm,1.2s						

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*NIED **10** 06:26:00, 35.60N×140.30E, h65^{km}, Mw4.1 Best double couple: M$_0$1.87×10^{15} NP1:φ$_s$351°, δ62°, λ44°. NP2:φ$_s$237°, δ52°, λ144°.*

*MOS **10** 06:26:23.7±1.9, 35.32N×140.08E, h63^{km}, mb4.4/7, Error ellipse: s-maj=24.1km s-min=12.4km az=116.4*

*JMA **10** 06:26:24.3±0.2, 35.59N×140.23E, h75^{km}±2^{km}, M4.1 Broadband fault plane solution: P waves. NP1:φ$_s$248°, δ59°, λ151°. NP2:φ$_s$354°, δ65°, λ34°. Principal axes: T Plg41°, Azm213°; N Plg49°, Azm25°; P Plg4°, Azm120°;*

JMA Felt II J1.

*BJI **10** 06:26:27.4, 35.52N×140.06E, h88^{km}, mB4.9, mb4.5*

*NEIC **10** 06:26:27.7±1.5, 35.31N×139.72E, h72^{km}±12^{km}, mb4.2/4, Error ellipse: s-maj=19.8km s-min=11.3km az=84.0*

NEIC Recorded [2 JMA] in Saitama and Tokyo; [1 JMA] in Chiba, Kanagawa, Shizuoka and Tochigi Prefectures.

*IDC **10** 06:26:29.2±1.3, 35.33N×139.56E, h83^{km}±13^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.7/23, mbtmp4.0/10, Error ellipse: s-maj=24.2km s-min=9.9km az=72.0*

ISC 10 06:26:24.8±0.4**, 35.48N**±0.04×**140.18E**±0.06**, h78**^{km}±3^{km}**, n46, σ0^{s}81**/55**, mb4.1**/13**, 7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	**Nagara**	0.06	165	P	P	06 26 36.0	0.0
JCN				S	S	06 26 45.0	+0.8
KTR	**Katsuura**	0.35	162	⇓P	P	06 26 37.1	-0.1
KTR				S	S	06 26 46.8	+0.3
TOK	**Tokyo**	0.40	301	P	P	06 26 37.3	-0.3
BSO4	**Boso 4**	0.51	165	⇓P	P	06 26 38.7	+0.2
BSO3	**Boso 3**	0.73	158	P	P	06 26 40.5	-0.3
JOD2	**Odawara 2**	0.92	257	⇓P	P	06 26 42.9	0.0
JOD2				S	S	06 26 56.0	-0.6
JIM2	**Oshima 3**	0.98	219	P	P	06 26 43.9	+0.2
JIM2				S	S	06 26 58.2	+0.4
BSO1	**Boso 1**	1.05	141	P	P	06 26 43.6	-1.0
JAG	**Ashikaga**	1.11	328	⇓P	P	06 26 44.1	-1.2
JRY	**Ryogami san**	1.17	298	⇓P	P	06 26 46.0	-0.1
JIZS	**Izushimoda**	1.31	235	P	P	06 26 48.3	+0.2
JYN	**Shimob**	1.34	271	⇓P	P	06 26 48.3	-0.1
MJAR	**Matsushiro Arr**	1.92	304	P	P	06 26 55.4	-0.7
MJAR				pmax	pmax		
	comp=Z,109nm,0.3s						
MJAR	**Matsushiro Arr**	1.92	304	P	P	06 26 55.4	-0.7
	comp=Z,109nm,0.3s,baz=125,slow=14,SNR=474						
MAJO	**Matsushiro**	1.92	304	⇓*i*P	P	06 26 56.1	0.0
MAT	**Matsushiro**	1.92	304	*e*P	P	06 26 56.0	-0.1
MAT				*e*S	S	06 27 19.0	-0.2
MAT	**Matsushiro**	1.92	304	P	P	06 26 56.1	0.0
MAT				S	S	06 27 18.8	-0.4
JHJ	**Hachijo jima 2**	2.38	188	P	P	06 27 03.4	+0.8
	comp=Z,222nm,0.3s,baz=177,slow=7.8,SNR=37						
JHJ				S	S	06 27 31.4	+0.8
	comp=Z,166nm,0.3s,baz=288,slow=23,SNR=15						
CBIJ	**Chichi jima**	8.53	168	P	P	06 28 24.1	-3.5
	comp=Z,43nm,0.3s,baz=298,slow=21,SNR=5.2						
CBIJ				S	S	06 29 52.6	-11
	comp=Z,10.0nm,0.3s,baz=287,slow=20,SNR=2.1						
ASAJ	**Asahikawa**	8.82	11	P	P	06 28 31.0	-0.6
	comp=Z,0.9nm,0.3s,baz=231,slow=22,SNR=3.7						
ASAJ				S	S	06 30 03.1	-7.2
	comp=Z,0.1nm,0.3s,baz=190,slow=19,SNR=2.5						
MDJ	**Mudanjiang**	12.20	322	P	P	06 29 18.8	+1.7
MDJ				AMB	AMB		
	comp=Z,30nm,4.0s						
ULN	**Ulaanbaatar**	27.45	307	*e*P	P	06 32 07.3	+2.1
ULN				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.2						
ULN	**Ulaanbaatar**	27.45	307	*e*P	P	06 32 07.3	+2.0
	comp=Z,2.5nm,0.4s,mb4.1						
SONM	**Songino Array**	27.87	307	P	P	06 32 08.1	-1.0
	comp=Z,0.4nm,0.4s,mb3.3,baz=112,slow=9.3,SNR=6.3						
ZAL	**Zalesovo**	42.26	314	P	P	06 34 12.6	+1.0
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL	**Zalesovo**	42.26	314	P	P	06 34 12.6	+0.9
	comp=Z,1.4nm,0.5s,mb4.0,baz=33,slow=10.0,SNR=7.5						
ZAL	**Zalesovo**	42.26	314	P	P	06 34 12.6	+0.9
MKAR	**Makanchi Array**	44.12	303	P	P	06 34 27.0	+0.1
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	44.12	303	P	P	06 34 27.0	+0.1
	comp=Z,1.7nm,0.8s,mb3.8,baz=89,slow=9.5,SNR=15						
MKAR	**Makanchi Array**	44.12	303	P	P	06 34 27.0	+0.1
KAKA	**Kakadu**	48.48	190	*e*P	P	06 35 02.2	+0.5
BVAR	**Borovoye Array**	50.89	313	P	P	06 35 20.2	+0.5
	comp=Z,0.8nm,0.5s,mb4.0,baz=90,slow=7.4,SNR=6.0						
ILAR	**Eielson Array**	51.34	32	P	P	06 35 28.2	+5.3
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	51.34	32	P	P	06 35 28.2	+5.3
	comp=Z,1.0nm,0.7s,mb3.9,baz=272,slow=6.2,SNR=11						
FITZ	**Fitzroy Crossi**	55.04	197	*e*P	P	06 35 51.0	+0.1
FITZ	**Fitzroy Crossi**	55.04	197	P	P	06 35 50.9	0.0
	comp=Z,9.4nm,0.6s,mb5.0,baz=10.0,slow=5.7,SNR=14						
WRAB	**Tennant Creek**	55.38	187	*e*P	P	06 35 52.7	-0.7
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	55.38	187	*e*P	P	06 35 52.7	-0.7
	comp=Z,1.7nm,0.6s,mb4.2						
WB2	**Warramunga Arr**	55.39	187	*e*P	P	06 35 52.5	-0.9
WRA	**Warramunga Arr**	55.39	187	P	P	06 35 52.2	-1.2
WRA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRA	**Warramunga Arr**	55.39	187	P	P	06 35 52.2	-1.2
	comp=Z,3.9nm,0.7s,mb4.6,baz=2.4,slow=7.6,SNR=37						
INK	**Inuvik**	56.22	27	P	P	06 36 00.9	+2.2
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	**Inuvik**	56.22	27	P	P	06 36 00.9	+2.2
	comp=Z,1.7nm,0.8s,mb4.1						
MBWA	**Marble Bar**	59.57	202	*e*P	P	06 36 22.1	-0.7
	comp=Z,8.2nm,0.5s,mb5.0						
FINES	**FINESS Array B**	69.72	332	P	P	06 37 27.3	-0.5
	comp=Z,0.4nm,0.3s,mb3.7,baz=63,slow=4.3,SNR=5.7						
PDAR	**Pinedale Array**	79.47	45	P	P	06 38 29.6	+5.5
	comp=Z,0.2nm,0.4s,mb3.3,baz=288,slow=5.7,SNR=2.6						

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*ISK **10** 06:53:09.6, 39.47N×25.36E, h32^{km}, MD3.0*

*CSEM **10** 06:53:10.5±0.3, 39.42N×25.53E, h25^{km}, MD3.0, Error ellipse: s-maj=5.8km s-min=3.2km az=46.0*

*ATH **10** 06:53:11.2, 39.67N×25.85E, h19^{km}, MD3.2/3*

ISC 10 06:53:08.6±0.8**, 39.40N**±0.04×**25.44E**±0.06**, h10**^{km}**, n14, σ1^{s}06**/21**, 1C-1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	**Limnos Island**	0.54	339	⇑*i*PN	Pn	06 53 22.3	+0.4
PRK	**Paraskevi**	0.67	103	⇓*i*PN	Pn	06 53 21.8	-2.0
PRK				*e*SN	Sn	06 53 29.7	-4.6
EZN	**Ezine**	0.81	58	*i* PG	Pg	06 53 24.9	+0.1
EZN				*i* SG	Sg	06 53 36.4	+0.7
AYVA	**Ayvalik**	0.98	95	*i* P	Pb	06 53 27.5	+0.3
AYVA				*i* S	Sb	06 53 41.7	+1.8
URLA	**Izmir**	1.38	139	*i* P	Pn	06 53 34.4	+0.4
URLA				*i* S	Sb	06 53 51.9	+0.4
LPK	**Lapseki**	1.41	46	*e*PN	Pn	06 53 34.3	-0.1
IZM	**Izmir**	1.74	124	PN	Pn	06 53 40.0	+0.8
KDAG	**Bornova**	1.74	124	*i* P	Pn	06 53 39.8	+0.6
KDAG				*i* S	Sn	06 53 59.2	-2.4
RDO	**Rodhopi**	1.75	3	*e*PN	Pn	06 53 39.1	-0.1
BTOK	**Tokmak**	2.04	79	*i* P	Pg	06 53 48.2	-1.1
BTOK				*i* S	Sg	06 54 14.9	-1.7
MRMT	**Marmara Adasi**	2.05	53	*e*PN	Pn	06 53 43.5	-0.1
EDC	**Edincik**	2.09	62	*e*PN	Pn	06 53 44.2	0.0
APE	**Apeiranthos**	2.33	178	*e*PN	Pn	06 53 46.9	-0.7
MANT	**Manisa**	2.60	109	*i* P	Pb	06 53 57.8	+2.9
MANT				*i* S	Sb	06 54 27.4	+0.4

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*IDC **10** 07:06:50.9±1.0, 4.30S×137.73E, mb4.0/5, mb1 4.2/8, mb1mx4.1/14, mbtmp4.1/8, ML4.0/3, MS3.6/7, Ms1 3.6/7, ms1mx3.3/22, Error ellipse: s-maj=41.8km s-min=19.1km az=60.0*

*NEIC **10** 07:06:52.1±0.6, 4.45S×137.79E, h10^{km}, mb4.7/7, Error ellipse: s-maj=14.5km s-min=9.1km az=77.0*

ISC 10 07:06:53.3±0.6**, 4.54S**±0.05×**137.84E**±0.09**, h33**^{km}**, n25, σ1^{s}31**/26**, mb4.3**/11**, MS3.6**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	9.71	213	*e*P	P	07 09 14.0	+0.1
KAKA				*e*S	S	07 11 04.4	+1.4
PMG	**Port Moresby**	10.44	118	Pn	P	07 09 23.3	-0.6
	1.5nm,0.3s,baz=347,slow=15,SNR=3.9						
PMG				Sn	S	07 11 12.3	-8.5
	0.8nm,0.3s,baz=252,slow=19,SNR=2.0						
PMG				LR	LR	07 14 01.3	
	comp=Z,229nm,19.1s,baz=60,slow=40						
WRAB	**Tennant Creek**	15.67	192	*e*Pn	P	07 10 33.1	-0.3
	40nm,0.9s						
WRAB				*e*P		07 10 39.5	
WRAB				*e*Sn	S	07 13 21.1	-5.0
WB2	**Warramunga Arr**	15.68	192	*e*P	P	07 10 32.3	-1.3
WRA	**Warramunga Arr**	15.68	192	Pn	P	07 10 33.1	-0.5
	0.8nm,0.3s,baz=13,slow=13,SNR=43						
WRA				Sn	S	07 13 23.9	-2.5
	0.5nm,0.3s,baz=9.8,slow=23,SNR=6.5						
CTA	**Charters Tower**	17.50	153	P	P	07 11 01.1	+4.6
	0.5nm,0.3s,baz=320,slow=14,SNR=4.2						
CTA				LR	LR	07 18 26.3	
	comp=Z,144nm,20.0s,baz=332,slow=39						
FITZ	**Fitzroy Crossi**	18.00	221	*e*P	P	07 11 03.4	+0.6
FITZ	**Fitzroy Crossi**	18.00	221	P	P	07 11 03.6	+0.9
	0.8nm,0.3s,baz=31,slow=8.5,SNR=32						
FITZ				S	S	07 14 16.4	-3.2
	1.7nm,0.3s,baz=188,slow=12,SNR=3.8						
FITZ				LR	LR	07 18 39.4	
	comp=Z,101nm,18.8s,baz=62,slow=39						
HNR	**Honiara**	22.47	104	LR	LR	07 20 32.3	
	comp=Z,55nm,20.4s,MS3.0,baz=289,slow=36						
MBWA	**Marble Bar**	24.12	225	*e*P	P	07 12 09.9	+2.5
	12nm,1.0s,mb4.3						
STKA	**Stephens Creek**	27.42	173	P	P	07 12 41.1	+2.9
	2.4nm,0.9s,mb3.8,baz=333,slow=6.8,SNR=2.4						
NWAO	**Narrogin (SRO)**	34.17	212	LR	LR	07 29 01.5	
	comp=Z,104nm,21.7s,MS3.5,baz=16,slow=39						
CMAR	**Chiang Mai Arr**	44.62	302	P	P	07 15 03.0	-1.7
	2.2nm,0.9s,mb4.0,baz=127,slow=5.5,SNR=5.1						
RPZ	**Rata Peaks**	48.79	148	LR	LR	07 35 17.4	
	comp=Z,138nm,19.6s,MS4.0,baz=18,slow=35						
GUN	**Gumba**	59.53	306	*e*P	P	07 16 55.3	-0.9
	18nm,0.8s,mb5.2						
PKI	**Pulchoki**	59.77	305	*e*P	P	07 16 57.5	-0.3
KKN	**Kakani**	59.97	306	*e*P	P	07 16 59.3	+0.1
	10nm,0.6s,mb5.0						
DMN	**Daman**	60.03	305	*e*P	P	07 17 00.8	+1.2
	19nm,0.8s,mb5.2						
MKAR	**Makanchi Array**	70.71	323	P	P	07 18 07.5	-0.5

	0.8nm,0.8s,mb3.7,baz=121,slow=7.1,SNR=8.2						
VNDA	Vanda	74.05	175	P	P	07 18 29.4	+2.2
	1.0nm,0.9s,mb3.8,baz=316,slow=5.9,SNR=8.0						
VNDA				LR	LR	07 50 42.9	
	comp=Z,89nm,18.4s,MS4.1,baz=351,slow=35						
VNDA	Vanda	74.05	175	*e*P	P	07 18 28.4	+1.2
	0.8nm,0.5s,mb3.9						
VNDA				LR	LR	07 50 42.9	
BVAR	Borovoye Array	80.31	326	P	P	07 19 02.9	+0.3
	1.0nm,0.3s,mb4.2,baz=104,slow=5.9,SNR=11						
BRVK	Borovoye	80.38	326	*e*P	P	07 19 02.0	-1.0
	0.2nm,0.5s,mb3.3						
QSPA	South Pole Qui	85.42	180	*e*P	P	07 19 30.0	+1.9
	3.2nm,0.8s,mb4.5						
LPAZ	La Paz	147.02	129	PKPbc	PKPdf	07 26 37.3	+5.6
	2.6nm,1.1s,baz=351,slow=1.2,SNR=6.5						

*LDG **10** 07:22:36.3±0.3, 44.84N×93.85E, h10^{km}, Mb4.6/8, Ms2.7/1, Error ellipse: s-maj=10.7km s-min=7.5km az=7.0*

*MOS **10** 07:22:40.7±1.2, 45.03N×93.94E, h30^{km}, mb4.6/15, Error ellipse: s-maj=11.8km s-min=6.3km az=113.3*

*NEIC **10** 07:22:40.5±0.5, 45.06N×93.84E, h10^{km}, mb4.5/11, Error ellipse: s-maj=10.9km s-min=9.3km az=92.0*

*IDC **10** 07:22:40.6±1.1, 45.28N×93.98E, mb4.0/8, mb1 4.1/12, mb1mx4.0/26, mbtmp4.0/12, ML3.6/4, MS2.9/2, Ms1 3.0/2, ms1mx2.6/25, Error ellipse: s-maj=26.6km s-min=15.2km az=21.0*

*BJI **10** 07:22:41.1, 44.89N×93.80E, h10^{km}, mB4.7, mb4.2, ML4.4, Ms4.0, Msz3.8*

*NNC **10** 07:22:44.9±6.0, 45.63N×93.49E, mpv3.8, Error ellipse: s-maj=94.4km s-min=56.6km az=5.0*

ISC 10 07:22:38.9±0.3**, 45.09N**±0.05×**93.90E**±0.06**, h10^{km}, n79, σ1$^{\text{s}}$36**/83**, mb4.3**/25**, MS3.5**/2**, 4C-2D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	4.62	256	P	Pn	07 23 54.1	+3.6
WMQ				S	Sn	07 24 50.5	+5.7
WMQ				Smax			
	comp=N,830nm,1.0s						
WMQ				Smax			
	comp=E,950nm,1.0s						
AKAR	Aktash	6.73	323	*e*P	Pn	07 24 22.5	+2.2
GTA	Gaotai	7.17	140	P	Pn	07 24 27.1	+0.6
GTA				SG	Sb	07 26 18.5	+8.4
GTA				Smax			
	comp=N,150nm,0.9s						
GTA				Smax			
	comp=E,160nm,0.9s						
GTA				LR	LR		
	comp=N,440nm,9.1s						
GTA				LR	LR		
	comp=E,460nm,9.1s						
GTA				LR	LR		
	comp=Z,520nm,9.9s						
KTNR	Kaitanak	7.62	315	*e*P	Pn	07 24 35.3	+2.6
ELDR	Elanda	8.05	322	*e*P	P	07 24 40.0	+1.2
MK31	Makanchi Array	8.27	286	Pn	P	07 24 41.8	0.0
	comp=Z,2.9nm,0.5s,baz=99,slow=15,SNR=78						
MK31				Sn	Sn	07 26 16.1	-0.1
	baz=94,slow=29						
MK31				⇑Lg		07 26 57.6	
	comp=Z,33nm,0.6s,baz=84,slow=30,SNR=4.0						
MKAR	Makanchi Array	8.27	286	Pn	P	07 24 42.0	+0.1
	comp=Z,1.7nm,0.3s,baz=100,slow=16,SNR=38						
MKAR				Lg		07 27 01.9	
	comp=Z,3.6nm,0.3s,baz=90,slow=28,SNR=5.2						
UKR	Ust'-Kan	8.46	317	*e*P	P	07 24 46.1	+1.6
SONM	Songino Array	9.05	68	Pn	P	07 24 52.9	+0.2
	comp=Z,0.5nm,0.3s,baz=252,slow=15,SNR=11						
SONM				Lg		07 27 20.5	
	comp=Z,4.4nm,0.3s,baz=232,slow=14,SNR=5.9						
SONM				LR	LR	07 28 43.3	
	comp=Z,58nm,20.2s,baz=81,slow=41						
TLY	Talaya	9.24	41	*e*P	P	07 24 56.8	+1.4
TLY				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ULN	Ulaanbaatar	9.49	68	*e*P	P	07 25 02.2	+3.4
ZAL	Zalesovo	10.64	330	Pn	P	07 25 13.7	-0.7
	comp=Z,0.6nm,0.3s,baz=343,slow=7.1,SNR=5.1						
ZAL				Lg		07 28 15.2	
	comp=Z,1.9nm,0.3s,baz=30,slow=7.5,SNR=9.3						
FRU	Bishkek	14.07	268	*e*P	P	07 26 02.0	+1.6
FRU				pmax	pmax		
	comp=Z,30nm,1.6s						
AAK	Ala-Archa	14.21	267	⇑P	P	07 26 04.1	+1.8
	comp=Z,6.6nm,0.8s						
AAK				⇑Lg		07 30 18.3	
	comp=Z,21nm,1.4s						
AAK	Ala-Archa	14.21	267	*e*P	P	07 26 03.3	+1.0
AAK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AAK	Ala-Archa	14.21	267	*e*Pn	P	07 26 03.3	+1.1
	comp=Z,3.3nm,0.5s						
AAK				*e*P		07 26 11.3	
KK31	Karatay Array	16.91	272	P	P	07 26 38.7	+1.7
	comp=Z,5.7nm,0.9s,baz=69,slow=14,SNR=22						
BVA0	Borovoye Array	17.27	306	⇑P	P	07 26 41.3	-0.3
	comp=Z,0.8nm,0.8s						
BVAR	Borovoye Array	17.27	306	P	P	07 26 41.8	+0.2
	comp=Z,0.8nm,0.3s,baz=101,slow=12,SNR=16						
BVAR				Lg		07 31 48.9	
	comp=Z,0.2nm,0.3s,baz=115,slow=24,SNR=2.6						
CHKZ	Chkalovo	17.36	308	⇓P	P	07 26 43.9	+1.3
	comp=Z,4.8nm,0.8s						
GUN	Gumba	18.30	203	*e*P	P	07 26 56.1	+1.5
	comp=Z,28nm,0.8s						
KKN	Kakani	18.58	205	*e*P	P	07 26 57.8	-0.3
	comp=Z,9.4nm,0.6s						
KKN	Kakani	18.58	205	*e*P	P	07 26 57.8	-0.3
KKN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PKI	Pulchoki	18.75	204	*e*P	P	07 26 58.6	-1.5
KOLN	Koldanda	19.14	209	*e*P	P	07 27 01.2	-3.5
	comp=Z,8.5nm,0.7s						
GYA	Guiyang	21.23	147	P	P	07 27 29.0	+1.7
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
CN2	Changchun	22.50	82	*e*P	P	07 27 44.1	+4.3
CN2				*e*S	S	07 31 54.7	+13
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s,MS3.9						
CN2				LR	LR		
	comp=E,200nm,13.0s,MS3.9						
CN2				LR	LR		
	comp=Z,300nm,14.0s,MS3.9						
AB31	Akbulak array	23.33	292	P	P	07 27 50.0	+2.1
	comp=Z,0.9nm,0.5s,mb3.5,baz=86,slow=9.2,SNR=18						
SVE	Sverdlovsk	23.76	312	*e*P		07 28 03.8	
SVE				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.4						
ARU	Arti	24.78	310	⇓*i*P	P	07 28 03.3	+1.5
ARU				*e*		07 28 35.0	
ARU				*e*S	S	07 32 25.6	+4.4
ARU				*e*SS	SS	07 33 14.5	-3.7
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.3						
ARU	Arti	24.78	310	*e*P	P	07 28 03.2	+1.4
	comp=Z,6.3nm,0.6s,mb4.3						
SSE	Sheshan	25.48	114	P	P	07 28 08.8	+0.1
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,100nm,3.5s						
TIXI	Tiksi	31.42	20	*e*P	P	07 29 01.2	-0.8
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
KIV	Kislovodsk	36.03	287	*e*P	P	07 29 35.9	-6.2
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
OBN	Obninsk	37.12	307	*e*P	P	07 29 51.5	+0.4
OBN				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
SOC	Sochi	38.17	288	*e*P	P	07 29 57.7	-2.4
SOC				*e*S	S	07 35 47.2	-5.8
SOC				pmax	pmax		
	comp=Z,38nm,2.1s,mb4.8						
SOC				pmax	pmax		
	comp=N,20nm,1.0s						
SOC				pmax	pmax		
	comp=E,13nm,0.8s						
ARCES	ARCESS Array B	41.19	330	P	P	07 30 26.5	+1.7
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	41.19	330	P	P	07 30 26.4	+1.6
	comp=Z,0.9nm,0.8s,mb3.5,baz=68,slow=6.5,SNR=4.1						
FINES	FINESS Array B	41.62	318	P	P	07 30 29.3	+1.0
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	41.62	318	P	P	07 30 29.3	+1.0
	comp=Z,3.3nm,0.8s,mb4.0,baz=100,slow=12,SNR=11						
HFS	Hagfors	47.83	318	P	P	07 31 18.9	+0.8
HFS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HFS	Hagfors	47.83	318	P	P	07 31 18.9	+0.8
	comp=Z,5.4nm,0.8s,mb4.6,baz=76,slow=6.1,SNR=6.1						
NOA	NORSAR Array B	48.66	320	LR	LR	07 55 09.1	
	comp=Z,20nm,21.9s,MS3.0,baz=85,slow=40						
CLL	Collm	51.70	308	P	P	07 31 48.0	+0.1
BAIF	Baives	57.17	310	*e*P	P	07 32 26.8	-1.2
CABF	La Chapelle	58.00	306	*e*P	P	07 32 32.0	-1.8
EKA	Eskdalemuir Ar	58.02	318	P	P	07 32 34.2	+0.3
EKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EKA	Eskdalemuir Ar	58.02	318	P	P	07 32 34.2	+0.3
	comp=Z,2.3nm,0.9s,mb4.2,baz=49,slow=8.9,SNR=4.4						
LPG	La Plagne	58.23	304	*e*P	P	07 32 34.4	-1.0
	comp=Z,6.6nm,0.6s,mb4.5						
LPG	La Plagne	58.23	304	*e*P	P	07 32 34.4	-1.0
LPG				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
MBDF	Montbardon	58.64	304	*e*P	P	07 32 36.7	-1.7
	comp=Z,13nm,0.8s,mb4.7						
MBDF	Montbardon	58.64	304	*e*P	P	07 32 36.7	-1.7
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
LOR	Lormes	58.90	307	*e*P	P	07 32 39.9	-0.2
ORIF	Oris-en-Rattie	59.06	304	*e*P	P	07 32 39.8	-1.5
	comp=Z,5.8nm,0.6s,mb4.5						
ORIF	Oris-en-Rattie	59.06	304	*e*P	P	07 32 39.8	-1.5
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
SSF	Saint Saulge	59.22	307	*e*P	P	07 32 41.5	-0.8
SMF	Signal de Mont	59.26	307	*e*P	P	07 32 42.0	-0.7
AVF	Avril sur Loir	59.45	307	*e*P	P	07 32 43.3	-0.7
	comp=Z,3.0nm,0.5s,mb4.3						
AVF	Avril sur Loir	59.45	307	*e*P	P	07 32 43.3	-0.7
AVF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
LDF	La Druitiere	60.34	310	*e*P	P	07 32 48.0	-2.0
	comp=Z,13nm,0.8s,mb4.7						
LDF	La Druitiere	60.34	310	*e*P	P	07 32 48.0	-2.0
LDF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
TCF	Toulx Ste Croi	60.39	307	*e*P	P	07 32 48.6	-1.8
	comp=Z,7.5nm,0.8s,mb4.5						
TCF	Toulx Ste Croi	60.39	307	*e*P	P	07 32 48.6	-1.8
TCF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
FLN	La Foliniere	60.43	311	*e*P	P	07 32 48.7	-2.0
ILAR	Eielson Array	60.69	25	P	P	07 32 51.7	-0.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	Eielson Array	60.69	25	P	P	07 32 51.7	-0.5
	comp=Z,0.5nm,0.9s,mb3.6,baz=310,slow=4.5,SNR=4.1						
GRR	Gorron	60.85	310	*e*P	P	07 32 51.4	-2.1
INK	Inuvik	61.51	18	P	P	07 32 57.4	-0.3
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	Inuvik	61.51	18	P	P	07 32 57.4	-0.3
	comp=Z,1.8nm,0.8s,mb4.2,baz=291,slow=8.6,SNR=3.7						
MFF	Saint Martin d	61.52	309	*e*P	P	07 32 56.3	-1.8
QUIF	Quistinic	62.38	311	*e*P	P	07 33 01.2	-2.6
	comp=Z,32nm,1.0s,mb5.1						
QUIF	Quistinic	62.38	311	*e*P	P	07 33 01.2	-2.6
QUIF				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.1						
EPF	Esparros	63.40	305	*e*P	P	07 33 09.9	-0.8
YKA	Yellowknife Ar	70.36	14	*e*P	P	07 33 54.0	-0.3
YKA	Yellowknife Ar	70.36	14	P	P	07 33 53.2	-1.0
	comp=Z,0.4nm,0.5s,mb3.6,baz=339,slow=6.6,SNR=4.9						
YKA	Yellowknife Ar	70.36	14	P	P	07 33 53.2	-1.0
WRA	Warramunga Arr	74.46	141	*e*P	P	07 34 22.5	+3.2
WRA	Warramunga Arr	74.46	141	P	P	07 34 21.4	+2.2
	comp=Z,0.8nm,0.6s,mb3.8,baz=342,slow=6.3,SNR=8.8						
WRA	Warramunga Arr	74.46	141	P	P	07 34 21.4	+2.1

BJI 10 07:22:39.5, 25.85N×100.55E, h12^{km}, ML3.7, Ms3.8, Msz3.7, 1C, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	Kunming	2.11	110	P	Pn	07 23 13.3	-1.8
KMI				PG	Pg	07 23 16.9	-4.7
KMI				S	Sn	07 23 41.9	+0.5
KMI				SG	Sg	07 23 44.6	-5.2
KMI				Smax			
	comp=N,510nm,0.8s						
KMI				Smax			
	comp=E,600nm,1.0s						
CD2	Chengdu	5.78	29	P	Pn	07 24 07.8	+0.6
CD2				PG	Pg	07 24 18.2	-17
CD2				Smax			
	comp=N,60nm,0.8s						
CD2				Smax			
	comp=E,50nm,1.0s						
CD2				LR	LR		
	comp=N,520nm,5.5s						
CD2				LR	LR		
	comp=Z,380nm,6.0s						
CHRT	Chiangrai	5.99	187	PG	Pg	07 24 34.5	-4.7
CHRT				SG	Sg	07 25 47.0	-12
NANT	Nan	7.02	179	P	Pg	07 24 56.0	-3.6
	comp=Z,112nm,0.7s						
CHG	Chiang Mai	7.16	192	⇑P	Sg	07 26 31.1	-6.7
	comp=Z,33nm,0.9s						

TRN 10 07:24:09.1, 13.90N×58.03W, h35^{km}, M3.7(FDF)**, 1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MVM	Montagne Vaucl	2.85	284	*e*P	P	07 24 53.8	+0.5
MVM				*e*S	S	07 25 26.8	0.0
CRM	Caravelle	2.92	287	*e*P	P	07 24 55.0	+0.7
BIM	Bigot	3.01	282	*e*P	P	07 24 56.3	+0.8
BIM				*e*S	S	07 25 30.2	-0.7
FDF	Fort de France	3.14	286	⇓*e*P	P	07 24 58.1	+0.7
FDF				*e*S	S	07 25 34.5	+0.5
SVB	Belmont	3.19	259	*e*	S	07 25 36.5	+1.0
BBL	Barber's Block	3.70	296	*e*P	P	07 25 06.4	+1.0
MGG	Marie-Galante	3.76	303	*e*P	P	07 25 06.8	+0.6
DEG	La Desirade	3.79	310	*e*P	P	07 25 06.5	0.0
DEG				*e*S	S	07 25 42.6	-7.9
BCG	Bois Riant Cap	4.09	303	*e*P	P	07 25 11.7	+0.7
SEG	Port Louis	4.18	307	*e*P	P	07 25 12.4	+0.2

*NEIC **10** 07:30:04.6, 18.98N×69.93W, h76^{km}, MD3.9(RSPR), After RSPR.*

RSPR 10 07:30:04.6, 18.98N×69.93W, h76^{km}±64^{km}**, MD3.9**/4**, MD3.9**/4**, 2C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STDO	Santo Domingo	0.53	179	⇓*e*P	P	07 30 17.5	-0.9
STDO				*e*S	S	07 30 27.7	-0.8
CRPR	Cabo Rojo, PR	2.85	109	⇑*e*P	P	07 30 48.2	-0.8
CRPR				*e*S	S	07 31 20.8	-1.4
AOPR	Arecibo Observ	3.08	101	⇓*e*P	P	07 30 52.2	0.0
AOPR				*e*S	S	07 31 27.5	-0.5
MTP	Monte Pirata	4.25	101	⇑*e*P	P	07 31 04.2	-4.2
MTP				*e*S	S	07 31 50.7	-6.4

CASC 10 07:50:47.7±1.6**, 10.47N×86.57W, h0^{km}**±8^{km}**, MD4.3, 6C-5D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CONN	Concepcion	1.43	40	⇑*e*P	Pb	07 51 13.7	-1.2
APON	Apoyo	1.52	19	⇓*e*P	Pn	07 51 15.4	-0.8
CRUN	El Crucero	1.53	10	⇑*e*P	Pn	07 51 16.2	-0.1
JCR	Jicaral	1.56	113	*e*P	Pn	07 51 15.8	-1.0
TICN	Ticuantepe	1.59	12	*e*P	Pn	07 51 16.8	-0.4
XAVN	Gruta Xavier	1.69	8	⇓*e*P	Pn	07 51 18.1	-0.5
MGAN	Managua	1.70	11	⇑*e*P	Pn	07 51 18.0	-0.8
MGAN				*e*P		07 51 18.1	
WILN	Americas 2	1.72	12	⇑*e*P	Pn	07 51 18.0	-1.1
WILN				*e*S	Sb	07 51 44.9	+2.8
APYN	Apoyeque	1.77	7	⇑*e*P	Pn	07 51 19.1	-0.6
FORC	Fortuna	1.87	90	*e*P	Pn	07 51 20.8	-0.4
LEON	Leon	1.96	351	⇑*e*P	Pn	07 51 22.1	-0.5
MIRN	Miramar	1.96	356	⇓*e*P	Pn	07 51 22.0	-0.6
CNGN	Cerro Negro	2.02	356	⇓*e*P	Pn	07 51 22.7	-0.7
TEL3	Telica 3	2.11	353	⇓*e*P	Pn	07 51 24.3	-0.4
PYTN	Playitas	2.12	14	*e*P	Pn	07 51 23.6	-1.1
CGA2	Cerro Gallo 2	2.12	102	*e*P	Pn	07 51 24.6	-0.2
TELN	Telica	2.14	353	*e*P	Pn	07 51 24.5	-0.6
CRIN	San Cristobal	2.27	348	*e*P	Pn	07 51 26.9	0.0
PRS1	Puriscal	2.27	102	*e*P	Pn	07 51 26.6	-0.4
LAJ	Bijagual	2.48	104	*e*P	Pn	07 51 25.6	-4.4
LCR2	La Lucha 2	2.63	106	*e*P	Pn	07 51 31.3	-0.7
TRTC	Tortuguero	2.81	88	*e*P	Pn	07 51 33.7	-0.9
BUS	Buena Vista	2.91	108	*e*P	Pn	07 51 36.7	+0.6

CASC 10 08:24:48.6±2.4**, 10.52N×86.49W, h1^{km}**±18^{km}**, MD3.9, 2C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CONN	Concepcion	1.33	39	⇑*e*P	Pb	08 25 13.5	-0.7
APON	Apoyo	1.44	17	*e*P	Pn	08 25 15.0	-0.9
CRUN	El Crucero	1.46	7	*e*P	Pn	08 25 17.1	+0.9
JCR	Jicaral	1.51	116	⇑*e*P	Pn	08 25 14.9	-2.0
TICN	Ticuantepe	1.52	9	*e*P	Pn	08 25 16.4	-0.6
XAVN	Gruta Xavier	1.62	6	*e*P	Pn	08 25 16.9	-1.5
APYN	Apoyeque	1.71	5	*e*P	Pn	08 25 18.8	-0.8
LEON	Leon	1.92	348	*e*P	Pn	08 25 21.5	-1.2
TELN	Telica	2.10	351	*e*P	Pn	08 25 24.3	-1.0
PRS1	Puriscal	2.21	104	*e*P	Pn	08 25 28.3	+1.4
TRTC	Tortuguero	2.73	89	*e*P	Pn	08 25 33.1	-1.2

*IDC **10** 08:27:03.2±0.5, 1.56S×134.29E, mb4.8/12, mb1 4.9/13, mb1mx4.8/16, mbtmp4.8/13, ML4.8/1, MS4.5/15, Ms1 4.5/15, ms1mx4.4/22, Error ellipse: s-maj=29.0km s-min=9.6km az=86.0*

*BJI **10** 08:27:06.4, 1.68S×134.59E, h45^{km}, mB5.3, mb5.3, Ms4.8, Msz4.5*

*MOS **10** 08:27:07.6±1.1, 1.38S×134.15E, h33^{km}, mb5.2/36, MS4.4/6, Error ellipse: s-maj=13.5km s-min=6.7km az=106.5*

*HRVD **10** 08:27:08.3±0.2, 1.45S×134.22E, h16^{km}, MW5.3/65, Centroid moment Tensor Solution. LP body waves: s48,c74;Mantle waves: s65,c128; Half duration: 1$^{\text{s}}$0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.20±.02; M$_{\theta\theta}$0.63±.02; M$_{\phi\phi}$-0.83±.02; M$_{r\theta}$0.48±.05; M$_{\theta\phi}$0.38±.02; M$_{\phi r}$0.18±.05; Best double couple: M$_{o}$.987×10^{17} NP1:φ$_{s}$126°,δ66°,λ21°. NP2:φ$_{s}$27°,δ71°,λ154°. Principal axes: T 1.039, Plg31°, Azm345°; N -.106, Plg58°, Azm173°; P -.934, Plg4°, Azm77°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 08:27:08.3±2.8, 1.46S×134.20E, h28^{km}±20^{km}, mb5.1/27 Error ellipse: s-maj=8.7km s-min=5.9km az=68.0*

NEIC Felt [III] at Manokwari.

ISC 10 08:27:07.0±0.2**, 1.51S**±0.03×**134.30E**±0.05**, h33^{km}, h33^{km}**±1.1^{km}**:pP-P, n174, σ1$^{\text{s}}$11**/169**, mb5.0**/68**, MS4.5**/34**, 8C-3D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	11.28	189	*e*P	P	08 29 47.3	-2.0
KAKA				*e*S	S	08 31 51.1	-4.1
DAV	Davao City (W)	12.18	314	*e*P	P	08 30 02.0	+0.6
PMG	Port Moresby	15.01	122	*e*P	P	08 30 41.2	+2.4
PMG				pmax	pmax		
	comp=Z,99nm,1.2s						
PMG	Port Moresby	15.01	122	Pn	P	08 30 42.3	+3.5
	comp=Z,0.8nm,0.3s,baz=331,slow=8.0,SNR=7.4						
PMG	Port Moresby	15.01	122	*e*P	P	08 30 41.2	+2.5
	comp=Z,98nm,1.2s						
WRAB	Tennant Creek	18.31	180	*e*P	P	08 31 20.5	0.0
WRAB				pmax	pmax		
	comp=Z,87nm,0.8s						
WRAB	Tennant Creek	18.31	180	*e*P	P	08 31 20.5	0.0
	comp=Z,87nm,0.8s						
WB2	Warramunga Arr	18.32	180	*e*P	P	08 31 18.4	-2.3
WRA	Warramunga Arr	18.32	180	P	P	08 31 18.8	-1.9
WRA				S	S	08 34 41.8	+1.2
WRA				pmax	pmax		
	comp=Z,4.0nm,0.3s						
WRA				smax			
	comp=E,1.0nm,0.3s						
WRA	Warramunga Arr	18.32	180	P	P	08 31 18.8	-1.8
	comp=E,3.5nm,0.3s,baz=359,slow=12,SNR=120						
WRA				S	S	08 34 41.8	+1.1
	comp=E,0.9nm,0.3s,baz=358,slow=24,SNR=4.1						
KKM	Kota Kinabalu	19.55	293	*e*P	P	08 31 33.2	-2.0
BALP	Baler	21.26	324	*e*P	P	08 31 53.1	+0.2
CTA	Charters Tower	21.85	148	P	P	08 32 01.8	+2.9
CTA				pmax	pmax		
	comp=Z,15nm,0.7s						
CTA	Charters Tower	21.85	148	P	P	08 32 01.8	+2.9
	comp=Z,15nm,0.7s,mb4.5,baz=328,slow=11,SNR=15						
CTAO	Charters Tower	21.85	148	*e*P	P	08 32 02.7	+3.8
CTAO				pmax	pmax		
	comp=Z,48nm,1.0s,mb4.9						
CTAO	Charters Tower	21.85	148	*e*P	P	08 32 02.7	+3.8
	comp=Z,48nm,1.0s,mb4.9						
CAUP	Cauayan	22.08	327	*e*P	P	08 32 02.9	+1.7
CVP	Callao Caves	22.71	328	*e*P	P	08 32 08.4	+0.9
APYP	Conner	23.15	327	*e*P	P	08 32 12.8	+1.1
MBWA	Marble Bar	24.15	215	*e*P	P	08 32 22.2	+0.7
	comp=Z,78nm,0.9s,mb5.1						
KSM	Kuching	24.17	277	*e*P	P	08 32 22.8	+1.0
NACB	Ninganchiao	28.36	335	*e*P	P	08 32 59.4	-1.0
JOW	Kunigami	28.77	349	LR	LR	08 42 20.2	
	comp=Z,1μm,19.9s,MS4.5,baz=14,slow=32						
YHNB	Yeheng	28.89	335	*e*P	P	08 33 03.5	-1.7
STKA	Stephens Creek	30.98	168	*e*P	P	08 33 22.8	-1.0
STKA	Stephens Creek	30.98	168	P	P	08 33 22.5	-1.2
	comp=Z,19nm,0.8s,mb5.0,baz=344,slow=8.7,SNR=22						
STKA				LR	LR	08 47 33.2	
	comp=Z,2μm,20.6s,MS4.8,baz=341,slow=40						
QIZ	Qiongzhong	31.53	311	P	P	08 33 28.5	-0.2
QIZ				S	S	08 38 32.5	-1.2
QIZ				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
QIZ				LR	LR		
	comp=Z,880nm,28.3s,MS4.3						
KLBR	Kellerberrin	33.76	206	*e*P	P	08 33 47.5	-0.5
KULM	Kulim	34.28	282	*e*P	P	08 33 51.7	-1.1
JNU	Nakatsue	34.59	355	LR	LR	08 44 52.5	
	comp=Z,612nm,20.8s,MS4.3,baz=358,slow=31						
SSE	Sheshan	34.74	340	P	P	08 33 55.3	-1.2
SSE				PP	PP	08 35 14.7	+0.8
SSE				S	S	08 39 17.7	-5.8
SSE				SCS	ScS	08 44 08.1	-5.2
SSE				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.6						
SSE				AMB	AMB		
	comp=Z,150nm,4.7s						
SSE				LR	LR		
	comp=N,790nm,20.9s,MS4.5						
SSE				LR	LR		
	comp=E,380nm,21.0s,MS4.5						
SSE				LR	LR		
	comp=Z,1μm,20.9s,MS4.6						
JHJ	Hachijo jima 2	34.83	8	LR	LR	08 45 03.8	
	comp=Z,2μm,20.2s,MS4.7,baz=129,slow=31						
NWAO	Narrogin (SRO)	35.13	205	P	P	08 33 59.4	-0.4
NWAO				pmax	pmax		
	comp=Z,13nm,0.8s						
NWAO	Narrogin (SRO)	35.13	205	P	P	08 33 59.4	-0.4
	comp=Z,13nm,0.8s,mb4.9,baz=76,slow=12,SNR=5.9						
NJ2	Nanjing	36.45	338	*e*P	P	08 34 11.2	+0.3
NJ2				AP	pP	08 34 21.0	+0.3
NJ2				XP	sP	08 34 24.9	+0.1
NJ2				PP	PP	08 35 35.1	0.0
NJ2				S	S	08 39 52.0	+2.2
NJ2				XS		08 40 09.0	

NJ2				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,380nm,4.7s						
NJ2				LR	LR		
	comp=N,2µm,25.5s,MS4.8						
NJ2				LR	LR		
	comp=E,1µm,21.0s,MS4.8						
NJ2				LR	LR		
	comp=Z,970nm,18.2s,MS4.6						
WHN	**Wuhan**	**37.11**	**331**	P	**P**	**08 34 17.8**	**+1.3**
NST	**Nakhon Sawan**	**37.84**	**298**	P	**P**	**08 34 23.0**	**+0.3**
MAJO	**Matsushiro**	**38.03**	**5**	*e*P	**P**	**08 34 23.1**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
MAJO	**Matsushiro**	**38.03**	**5**	*e*P	**P**	**08 34 23.1**	**-1.1**
	comp=Z,12nm,1.0s,mb4.6						
MAT	**Matsushiro**	**38.03**	**5**	*e*P	**P**	**08 34 22.0**	**-2.2**
MAT				*e*S	**S**	**08 40 21.0**	**+7.0**
MAT				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
MAT				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.8						
MAT	**Matsushiro**	**38.03**	**5**	*e*P	**P**	**08 34 22.0**	**-2.2**
	comp=Z,10.0nm,1.0s,mb4.5						
MAT				*e*S	**S**	**08 40 21.0**	**+7.0**
MAT				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
MAT	**Matsushiro**	**38.03**	**5**	P	**P**	**08 34 21.8**	**-2.4**
MAT				S	**S**	**08 40 21.0**	**+7.0**
MJAR	**Matsushiro Arr**	**38.03**	**5**	P	**P**	**08 34 21.8**	**-2.4**
	comp=Z,4.3nm,0.8s,mb4.2,baz=188,slow=8.6,SNR=9.2						
MJAR				LR	LR	08 47 09.9	
	comp=Z,1µm,20.6s,MS4.7,baz=195,slow=32						
GYA	**Guiyang**	**38.53**	**318**	⇑*i*P	**P**	**08 34 29.5**	**+1.0**
GYA				AP	pP	08 34 39.4	+1.1
GYA				XP	sP	08 34 43.2	+0.8
GYA				PP	PP	08 36 01.8	+1.4
GYA				S	**S**	**08 40 21.9**	**+0.3**
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
GYA				LR	LR		
	comp=N,480nm,17.2s,MS4.5						
GYA				LR	LR		
	comp=E,420nm,17.0s,MS4.5						
GYA				LR	LR		
	comp=Z,310nm,17.5s,MS4.2						
NANT	**Nan**	**38.70**	**303**	P	**P**	**08 34 31.5**	**+1.5**
	comp=Z,75nm,1.2s,mb5.3						
CMAR	**Chiang Mai Arr**	**40.04**	**301**	P	**P**	**08 34 40.8**	**-0.2**
CMAR						08 36 46.8	
CMAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,323nm,18.5s						
CMAR	**Chiang Mai Arr**	**40.04**	**301**	P	**P**	**08 34 40.8**	**-0.3**
	comp=Z,8.2nm,1.0s,mb4.4,baz=123,slow=6.8,SNR=25						
CMAR				PcP	PcP	08 36 46.8	+0.7
	comp=Z,4.3nm,0.8s,baz=154,slow=2.0,SNR=6.4						
CMAR				LR	LR	08 52 19.1	
	comp=Z,323nm,18.5s,MS4.2,baz=91,slow=38						
KMI	**Kunming**	**40.44**	**313**	P	**P**	**08 34 45.8**	**+1.5**
KMI				AP	pP	08 34 55.5	+1.4
KMI				XP	sP	08 34 59.4	+1.2
KMI				PP	PP	08 36 22.5	+1.8
KMI				S	**S**	**08 40 50.3**	**0.0**
KMI				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
KMI				AMB	AMB		
	comp=Z,180nm,4.9s						
KMI				LR	LR		
	comp=N,260nm,19.7s,MS4.4						
KMI				LR	LR		
	comp=E,520nm,20.5s,MS4.4						
KMI				LR	LR		
	comp=Z,790nm,26.6s						
DL2	**Dalian**	**41.87**	**345**	P	**P**	**08 34 57.6**	**+1.6**
DL2				S	**S**	**08 41 15.3**	**+3.8**
DL2				XS		08 41 33.1	
DL2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
DL2				LR	LR		
	comp=N,320nm,20.8s,MS4.4						
DL2				LR	LR		
	comp=E,380nm,18.6s,MS4.4						
DL2				LR	LR		
	comp=Z,640nm,21.7s,MS4.5						
XAN	**Xi’an**	**42.66**	**328**	P	**P**	**08 35 02.2**	**-0.3**
XAN				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.8						
CD2	**Chengdu**	**43.40**	**321**	P	**P**	**08 35 08.9**	**+0.4**
CD2				AP	pP	08 35 20.6	+2.2
CD2				XP	sP	08 35 22.7	+0.3
CD2				S	**S**	**08 41 34.9**	**+1.0**
CD2				SS	SS	08 44 45.4	+4.2
CD2				AMB	AMB		
	comp=Z,20nm,0.3s,mb5.3						
CD2				AMB	AMB		
	comp=Z,230nm,3.5s						
CD2				LR	LR		
	comp=N,670nm,16.8s						
CD2				LR	LR		
	comp=Z,580nm,14.1s,MS4.6						
SNY	**Shenyang**	**44.22**	**348**	⇓P	**P**	**08 35 15.7**	**+0.7**
SNY				S	**S**	**08 41 50.1**	**+4.4**
SNY				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.9						
SNY				AMB	AMB		
	comp=Z,130nm,8.0s						
SNY				LR	LR		
	comp=N,750nm,20.9s						
SNY				LR	LR		
	comp=Z,530nm,32.9s						
CN2	**Changchun**	**45.80**	**351**	*e*P	**P**	**08 35 27.8**	**+0.2**
CN2				*e*AP	pP	08 35 37.7	+0.2
CN2				*e*S	**S**	**08 42 12.2**	**+3.8**
CN2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.2						
CN2				AMB	AMB		
	comp=Z,230nm,7.0s						
CN2				LR	LR		
	comp=N,300nm,19.0s,MS4.4						
CN2				LR	LR		
	comp=E,300nm,19.0s,MS4.4						
CN2				LR	LR		
	comp=Z,500nm,19.0s,MS4.5						
ASAJ	**Asahikawa**	**46.02**	**8**	P	**P**	**08 35 29.4**	**+0.1**
	comp=Z,29nm,0.8s,mb5.2,baz=231,slow=8.3,SNR=20						
ASAJ				LR	LR	08 52 46.6	
	comp=Z,551nm,21.7s,MS4.5,baz=194,slow=34						
MDJ	**Mudanjiang**	**46.11**	**355**	P	**P**	**08 35 29.3**	**-0.8**
MDJ				AP	pP	08 35 38.3	-1.7
MDJ				XP	sP	08 35 42.1	-1.9
MDJ				PCP	PcP	08 37 02.3	-4.0
MDJ				S	**S**	**08 42 13.7**	**+0.8**
MDJ				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.6						
MDJ				AMB	AMB		
	comp=Z,80nm,3.9s						
MDJ				LR	LR		
	comp=N,290nm,18.1s,MS4.3						
MDJ				LR	LR		
	comp=E,180nm,19.6s,MS4.3						
MDJ				LR	LR		
	comp=Z,340nm,19.6s,MS4.3						
MDJ	**Mudanjiang**	**46.11**	**355**	*e*P	**P**	**08 35 29.6**	**-0.5**
	comp=Z,75nm,1.0s,mb5.6						
LZH	**Lanzhou**	**46.95**	**326**	⇑P	**P**	**08 35 37.3**	**+0.5**
LZH				AP	pP	08 35 48.5	+1.8
LZH				XP	sP	08 35 55.5	+4.8
LZH				PP	PP	08 37 27.0	+0.2
LZH				S	**S**	**08 42 27.4**	**+2.5**
LZH				XS		08 42 44.0	
LZH				SS	SS	08 45 50.0	+5.5
LZH				AMB	AMB		
	comp=Z,100nm,1.5s,mb5.5						
LZH				AMB	AMB		
	comp=Z,500nm,4.2s						
LZH				LR	LR		
	comp=E,950nm,16.3s						
LZH				LR	LR		
	comp=Z,770nm,19.4s,MS4.7						
HHC	**Hu-ho-hao-te**	**46.97**	**336**	*e*P	**P**	**08 35 37.0**	**+0.1**
HHC				AP	pP	08 35 46.8	0.0
HHC				XP	sP	08 35 51.2	+0.4
HHC				PP	PP	08 37 23.7	-3.3
HHC				SCP		08 40 57.8	
HHC				S	**S**	**08 42 28.9**	**+3.8**
HHC				XS		08 42 42.4	
HHC				SCS	ScS	08 45 26.5	+0.5
HHC				AMB	AMB		
	comp=Z,70nm,1.2s,mb5.5						
HHC				AMB	AMB		
	comp=Z,190nm,8.2s						
HHC				LR	LR		
	comp=N,440nm,19.0s,MS4.5						
HHC				LR	LR		
	comp=E,390nm,23.8s,MS4.5						
HHC				LR	LR		
	comp=Z,430nm,21.4s,MS4.4						
YSS	**Yuzh-Sakhalins**	**48.83**	**8**	⇓*i*P	**P**	**08 35 51.8**	**+0.5**
YSS				pmax	pmax		
	comp=Z,43nm,0.8s,mb5.5						
YSS	**Yuzh-Sakhalins**	**48.83**	**8**	*e*P	**P**	**08 35 51.6**	**+0.3**
	comp=Z,35nm,0.8s,mb5.4						
SHL	**Shillong**	**49.05**	**306**	*e*P	**P**	**08 35 52.0**	**-1.3**
KLR	**Kul’dur**	**50.59**	**358**	*e*P	**P**	**08 36 01.0**	**-3.7**
KLR				*e*S	**S**	**08 43 11.0**	**-4.6**
KLR				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.2						
GTA	**Gaotai**	**51.55**	**326**	*e*P	**P**	**08 36 12.1**	**-0.1**
GTA				PCP	PcP	08 37 27.3	+1.3
GTA				PP	PP	08 38 10.0	-0.2
GTA				S	**S**	**08 43 31.1**	**+2.1**
GTA				XS		08 43 47.2	
GTA				SS	SS	08 47 05.3	+2.2
GTA				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
GTA				AMB	AMB		
	comp=Z,220nm,6.5s						
GTA				LR	LR		
	comp=N,350nm,17.9s,MS4.5						
GTA				LR	LR		
	comp=E,260nm,20.5s,MS4.5						
GTA				LR	LR		
	comp=Z,340nm,24.0s,MS4.3						
LSA	**Lhasa**	**51.56**	**311**	*e*P	**P**	**08 36 13.6**	**+1.2**
LSA	**Lhasa**	**51.56**	**311**	*e*P	**P**	**08 36 13.2**	**+0.8**
LSA				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
LSA	**Lhasa**	**51.56**	**311**	*e*P	**P**	**08 36 13.2**	**+0.8**
	comp=Z,15nm,0.8s,mb5.0						
HIA	**Hailar**	**52.12**	**348**	*e*P	**P**	**08 36 16.5**	**+0.2**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HIA	**Hailar**	**52.12**	**348**	*e*P	**P**	**08 36 16.4**	**+0.1**
	comp=Z,7.0nm,0.5s,mb4.8						
ULN	**Ulaanbaatar**	**54.61**	**338*c***	*i*P	**P**	**08 36 34.4**	**-0.4**
ULN	**Ulaanbaatar**	**54.61**	**338**	*e*P	**P**	**08 36 34.6**	**-0.2**
	comp=Z,30nm,1.0s,mb5.3						
SONM	**Songino Array**	**54.84**	**337**	P	**P**	**08 36 35.6**	**-0.9**
	comp=Z,15nm,1.0s,mb5.0,baz=151,slow=7.5,SNR=57						
SONM				PcP	PcP	08 37 38.1	-0.2
	comp=Z,4.6nm,0.7s,baz=155,slow=4.0,SNR=7.1						
SONM				LR	LR	09 02 33.5	
	comp=Z,484nm,18.5s,MS4.6,baz=137,slow=39						
GUN	**Gumba**	**54.90**	**306**	*e*P	**P**	**08 36 37.1**	**-0.1**
PKI	**Pulchoki**	**55.15**	**305**	*e*P	**P**	**08 36 38.3**	**-0.7**
	comp=Z,27nm,0.9s,mb5.3						
PKI	**Pulchoki**	**55.15**	**305**	*e*P	**P**	**08 36 38.3**	**-0.7**
PKI				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
KKN	**Kakani**	**55.34**	**306**	*e*P	**P**	**08 36 40.0**	**-0.4**
	comp=Z,66nm,1.3s,mb5.5						
KKN	**Kakani**	**55.34**	**306**	*e*P	**P**	**08 36 40.0**	**-0.4**
KKN				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.2						
DMN	**Daman**	**55.41**	**305**	*e*P	**P**	**08 36 40.8**	**-0.1**
	comp=Z,44nm,1.0s,mb5.5						
GKN	**Gorkha**	**55.95**	**306**	*e*P	**P**	**08 36 44.3**	**-0.5**
CIT	**Chita**	**56.14**	**345**	*e*P	**P**	**08 36 46.0**	**+0.2**
CIT				pmax	pmax		
	comp=Z,109nm,1.7s,mb5.6						
KOLN	**Koldanda**	**56.71**	**305**	*e*P	**P**	**08 36 48.9**	**-1.3**
	comp=Z,118nm,1.5s,mb5.7						
HYB	**Hyderabad**	**58.03**	**292**	*e*P	**P**	**08 36 59.0**	**-0.7**
HYB	**Hyderabad**	**58.03**	**292**	*i* P	**P**	**08 37 00.0**	**+0.3**
PET	**Petropavlovsk**	**58.04**	**17**	*e*P	**P**	**08 36 55.5**	**-3.7**
PET				*e*S	**S**	**08 44 54.7**	**-1.2**
PET				*e*		08 46 47.2	
PET				*e*SSS	SSS	08 51 05.3	-3.7
PET				pmax	pmax		
	comp=Z,100nm,13.7s						
PET				smax			
	comp=E,200nm,14.4s						
PET				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.2						
ZAK	**Zakamensk**	**58.10**	**337**	*e*P	**P**	**08 36 59.0**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.9						
CLNS	**Chul’man**	**58.66**	**354**	*e*P	**P**	**08 37 01.7**	**-1.8**
CLNS				pmax	pmax		
	comp=N,27nm,0.9s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.4						
CLNS				MLR	MLR		
	comp=Z,200nm,14.0s,MS4.4						
CLNS				MLR	MLR		
	comp=N,300nm,15.0s,MS4.6						
CLNS				MLR	MLR		
	comp=E,30nm,13.0s,MS4.6						
TLY	**Talaya**	**59.01**	**338**	*e*P	**P**	**08 37 06.4**	**+0.4**
TLY				*e*S	**S**	**08 45 10.7**	**+2.2**
TLY				*e*PS	PS	08 45 25.2	-2.0
TLY				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.9						
IRK	**Irkutsk**	**59.23**	**339**	*e*P	**P**	**08 37 07.8**	**+0.2**
IRK				pmax	pmax		
	comp=Z,51nm,2.2s,mb5.2						
MOY	**Mondy**	**60.01**	**337**	*e*P	**P**	**08 37 13.3**	**+0.4**
MOY				pmax	pmax		
	comp=Z,79nm,1.6s,mb5.5						
BOD	**Bodaibo**	**61.34**	**348**	*e*P	**P**	**08 37 20.8**	**-1.0**
BOD				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.3						
WMQ	**Urumqi**	**61.38**	**323**	*e*P	**P**	**08 37 23.4**	**+1.1**
WMQ				AP	pP	08 37 33.5	+1.0
WMQ				XP	sP	08 37 37.4	+1.2
WMQ				PCP	PcP	08 38 05.4	+1.4
WMQ				PP	PP	08 39 40.6	+1.0
WMQ				PPP	PPP	08 41 09.7	+1.7
WMQ				*e*S	**S**	**08 45 39.7**	**+0.7**
WMQ				SCS	ScS	08 47 08.4	+1.1
WMQ				SS	SS	08 49 41.4	+0.2
WMQ				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.7						
WMQ				AMB	AMB		
	comp=Z,230nm,4.6s						
WMQ				LR	LR		
	comp=N,790nm,24.0s,MS5.0						
WMQ				LR	LR		
	comp=E,760nm,22.1s,MS5.0						
WMQ				LR	LR		
	comp=Z,800nm,24.0s,MS4.8						
MA2	**Magadan**	**62.26**	**9**	*e*P	**P**	**08 37 26.5**	**-1.6**
MA2				*e*S	**S**	**08 45 41.5**	**-8.5**
MA2				*e**SP	tx	08 46 17.8	
MA2				*e*SS	SS	08 49 50.2	-5.0
MA2				*e*SSS	SSS	08 52 41.7	+3.7
MA2				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
MA2	**Magadan**	**62.26**	**9**	*e*P	**P**	**08 37 28.5**	**+0.4**
	comp=Z,9.6nm,0.8s,mb5.0						
FX1	**Attu Island--F**	**63.20**	**25**	*e*P	**P**	**08 37 33.8**	**-0.5**
YAK	**Yakutsk**	**63.47**	**358*c***	*i*P	**P**	**08 37 34.8**	**-1.2**
YAK				pmax	pmax		
	comp=Z,154nm,0.6s						
YAK	**Yakutsk**	**63.47**	**358**	*e*P	**P**	**08 37 35.0**	**-1.0**
	comp=Z,161nm,0.7s						
DRV	**Dumont d’Urvil**	**65.15**	**177**	S	S	08 46 33.0	+7.2
DRV				L		08 54 00.0	
SEY	**Seymchan**	**65.70**	**9**	*e*P	**P**	**08 37 50.1**	**-0.3**
SEY						08 38 21.9	
SEY				*e*		08 40 16.9	
SEY				*e*S	S	08 46 29.3	-3.3
SEY				*SS		08 47 12.8	
SEY						08 47 39.4	
SEY				*e*SS	SS	08 50 45.8	-2.7
SEY				*e*SSS	SSS	08 53 45.8	+3.4
SEY				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
SEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
SEY				smax			
	comp=N,50nm,4.8s						
SEY				smax			
	comp=E,300nm,10.5s						
MKAR	**Makanchi Array**	**66.19**	**324**	*i* P	**P**	**08 37 52.9**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,21nm,0.8s						
MKAR	**Makanchi Array**	**66.19**	**324**	P	**P**	**08 37 52.7**	**-1.1**
	comp=Z,18nm,0.7s,mb5.2,baz=114,slow=7.4,SNR=88						
MKAR				LR	LR	09 06 31.4	
	comp=Z,205nm,20.8s,MS4.3,baz=151,slow=36						
ZAL	**Zalesovo**	**68.73**	**331**	P	**P**	**08 38 08.0**	**-1.7**
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZAL				MLR	MLR		
	comp=Z,212nm,20.3s						
ZAL	**Zalesovo**	**68.73**	**331**	P	**P**	**08 38 08.0**	**-1.7**
	comp=Z,4.8nm,0.9s,mb4.4,baz=20,slow=6.3,SNR=16						
ZAL				LR	LR	09 11 33.8	
	comp=Z,212nm,20.3s,MS4.4,baz=133,slow=39						
FRU	**Bishkek**	**69.30**	**317**	*e*P	pP	08 38 27.0	+3.4
AAK	**Ala-Archa**	**69.31**	**317**	*e*P	**P**	**08 38 13.5**	**+0.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
AAK	**Ala-Archa**	**69.31**	**317**	*e*P	**P**	**08 38 13.5**	**0.0**
	comp=Z,4.7nm,0.5s,mb4.7						
MIR	**Mirnyy**	**71.06**	**196**	*e*P	**P**	**08 38 26.0**	**+2.3**
MIR				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
KKAR	**Karatay Array**	**72.21**	**316**	*i* P	**P**	**08 38 30.5**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
BILL	**Bilibino**	**72.86**	**12**	*i* P	**P**	**08 38 34.4**	**+0.1**
BILL				*e*	pP	08 38 42.7	-1.9
BILL				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.7						
BILL				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.4						
BILL	**Bilibino**	**72.86**	**12**	*e*P	**P**	**08 38 34.5**	**+0.2**
	comp=Z,5.9nm,0.9s,mb4.5						
BVA0	**Borovoye Array**	**75.83**	**326**	P	**P**	**08 38 51.5**	**-0.3**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
CHKZ	**Chkalovo**	**75.96**	**327**	*i* P	**P**	**08 38 50.4**	**-2.1**
CHKZ				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.8						
CHKZ	**Chkalovo**	**75.96**	**327**	*e*P	**P**	**08 38 51.4**	**-1.1**
	comp=Z,15nm,1.0s,mb4.9						
PPT	**Papeete**	**76.32**	**108**	*e*S	S	08 48 37.9	+1.6
	comp=Z,121nm,27.5s						
PPT				*e*SS	SS	08 53 34.0	+0.4
	comp=Z,99nm,24.8s						
PPT				*e*LQ		08 59 30.7	
	comp=Z,800nm,30.5s						
PPT				*e*LR	LR	09 02 45.5	
	comp=Z,286nm,25.0s						
PPT	**Papeete**	**76.32**	**108**	LR	LR	09 11 35.0	
	comp=Z,186nm,18.8s,MS4.4,baz=279,slow=35						
VNDA	**Vanda**	**77.39**	**174**	*e*P	**P**	**08 39 01.5**	**+1.5**
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VNDA	**Vanda**	**77.39**	**174**	P	**P**	**08 39 00.2**	**+0.2**
	comp=Z,2.8nm,0.7s,mb4.3,baz=330,slow=6.5,SNR=18						
VNDA				LR	LR	09 16 03.8	
	comp=Z,596nm,18.0s,MS5.0,baz=347,slow=38						
VNDA	**Vanda**	**77.39**	**174**	*e*P	**P**	**08 39 01.5**	**+1.4**
	comp=Z,3.0nm,0.8s,mb4.3						
AB31	**Akbulak array**	**80.97**	**320**	*i* P	**P**	**08 39 18.8**	**-1.1**
AB31				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
MAW	**Mawson**	**81.60**	**202**	P	**P**	**08 39 23.7**	**+0.9**
	comp=Z,0.6nm,0.3s,mb4.0,baz=45,slow=16,SNR=2.6						
MAW				LR	LR	09 13 22.8	
	comp=Z,263nm,20.6s,MS4.6,baz=63,slow=34						
KDAK	**Kodiak Island**	**82.33**	**31**	*e*P	**P**	**08 39 27.6**	**+0.8**
	comp=Z,25nm,0.8s,mb5.2						
SVE	**Sverdlovsk**	**82.37**	**328**	*e*P	**P**	**08 39 27.8**	**+0.8**
SVE				MLR	MLR		
	comp=N,100nm,16.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.4						
SVE				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.6						
ARU	**Arti**	**83.39**	**327**	⇑*i*P	**P**	**08 39 31.7**	**-0.6**
ARU				*e*		08 42 44.2	
ARU				*e*S	S	08 49 43.6	-6.0
ARU				*e*SS	SS	08 55 22.6	+4.1
ARU				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
ARU	**Arti**	**83.39**	**327**	*e*P	**P**	**08 39 31.7**	**-0.6**
	comp=Z,7.9nm,0.6s,mb4.9						
IMA	**Indian Mountai**	**84.15**	**23**	*e*P	**P**	**08 39 36.9**	**+1.0**
IMA				pmax	pmax		
	comp=Z,129nm,1.1s,mb6.0						
IMA	**Indian Mountai**	**84.15**	**23**	*e*P	**P**	**08 39 36.9**	**+1.0**
	comp=Z,129nm,1.1s,mb6.0						
SLKM	**Skilak Lake**	**84.19**	**29**	*e*P	**P**	**08 39 36.3**	**+0.1**
SOKR	**Solikamsk**	**84.98**	**330**	⇓*i*P	**P**	**08 39 38.9**	**-1.3**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
SOKR				MLR	MLR		
	comp=Z,220nm,21.0s,MS4.5						
SML	**Sawmill**	**85.36**	**28**	*e*P	**P**	**08 39 44.2**	**+2.1**
MCK	**McKinley**	**85.50**	**26**	*e*P	**P**	**08 39 43.0**	**+0.3**
MCK				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.3						
MCK	**McKinley**	**85.50**	**26**	*e*P	**P**	**08 39 43.0**	**+0.2**
	comp=Z,24nm,1.1s,mb5.3						
HASS	**Wahat al Ahsa’**	**85.75**	**295**	P	**P**	**08 39 45.5**	**+0.6**
COLA	**College**	**86.20**	**25**	⇑*i*P	**P**	**08 39 47.3**	**+1.1**
COLA	**College**	**86.20**	**25**	*e*P	**P**	**08 39 45.4**	**-0.8**
	comp=Z,18nm,1.0s,mb5.2						
DIV	**Divide**	**86.45**	**29**	*e*P	**P**	**08 39 48.6**	**+1.2**
	comp=Z,122nm,0.8s						
ILAR	**Eielson Array**	**86.59**	**25**	P	**P**	**08 39 47.4**	**-0.7**
	comp=Z,6.9nm,0.9s,mb4.9,baz=270,slow=4.2,SNR=38						
ILAR				LR	LR	09 14 51.9	
	comp=Z,154nm,20.6s,MS4.4,baz=94,slow=33						
QSPA	**South Pole Qui**	**88.43**	**180**	*e*P	**P**	**08 39 58.6**	**+1.9**
	comp=Z,22nm,1.4s,mb5.2						
DAWY	**Dawson**	**89.72**	**26**	*e*P	**P**	**08 40 03.6**	**+0.6**
MZLS	**Mizel**	**89.78**	**294**	P	**P**	**08 40 04.2**	**-0.1**
RKT	**Rikitea**	**90.08**	**113**	*e*S	S	08 51 00.6	+6.3
	comp=Z,78nm,25.8s						
RKT				*e*SS	SS	08 57 05.2	+8.2
	comp=Z,80nm,33.8s						
RKT				*e*LQ		09 05 19.1	
	comp=Z,158nm,29.5s						
RKT				*e*LR	LR	09 08 59.9	
	comp=Z,292nm,25.0s						
KAMS	**Al Khamasin**	**90.25**	**290**	P	**P**	**08 40 05.6**	**-1.0**
SYO	**Syowa Base**	**90.30**	**201**	⇑P	**P**	**08 40 06.5**	**+0.9**
SYO	**Syowa Base**	**90.30**	**201**	⇑PcP	PcP	08 40 08.2	+1.2
DJNS	**Zahran al Janu**	**91.17**	**288**	P	**P**	**08 40 12.3**	**+1.4**
TATS	**Tathlith**	**91.27**	**289**	P	**P**	**08 40 12.3**	**+1.0**
ARSS	**Ar Rass**	**91.61**	**296**	P	**P**	**08 40 13.3**	**+0.6**
INK	**Inuvik**	**92.20**	**22**	*e*P	**P**	**08 40 14.3**	**-0.1**
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
INK	**Inuvik**	**92.20**	**22**	*e*P	**P**	**08 40 14.3**	**-0.1**
	comp=Z,6.1nm,1.2s,mb4.8						
KIV	**Kislovodsk**	**92.20**	**314**	*e*P	**P**	**08 40 04.5**	**-10**
KIV				*e*PS	PS	08 52 33.8	+1.3
KIV				SS	SS	08 57 30.0	+3.6
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.7						
HILS	**Ha’il**	**92.92**	**297**	P	**P**	**08 40 20.4**	**+1.7**
BLJS	**Baljurashi**	**93.05**	**290**	P	**P**	**08 40 19.2**	**-0.2**
SOC	**Sochi**	**94.36**	**313**	*e*P	**P**	**08 40 22.4**	**-2.5**
SOC				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.5						
SOC				pmax	pmax		
	comp=N,28nm,1.1s						
SOC				pmax	pmax		
	comp=E,12nm,0.8s						
KBRS	**Khaybar**	**95.19**	**296**	P	**P**	**08 40 29.2**	**0.0**
ANN	**Anapa**	**95.94**	**315**	*e*P	pP	08 40 44.6	+1.9
ANN				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.7						
KMBO	**Kilima Mbogo**	**97.01**	**269**	*i* P	**P**	**08 40 44.3**	**+6.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KMBO	Kilima Mbogo	97.01	269	LR	LR	09 22 30.2	
	comp=Z,189nm,21.3s,MS4.5,baz=276,slow=34						
ARCES	ARCESS Array B	97.92	340	P	P	08 40 38.9	-1.6
ARCES				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARCES	ARCESS Array B	97.92	340	P	P	08 40 38.9	-1.6
	comp=Z,8.2nm,0.8s,mb5.3,baz=63,slow=5.4,SNR=18						
YKA	Yellowknife Ar	100.97	26	i P	P	08 40 55.6	+1.2
YKA	Yellowknife Ar	100.97	26	P	P	08 40 54.1	-0.3
	comp=Z,0.3nm,0.3s,baz=294,slow=4.5,SNR=6.4						
MNTX	Cornudas Mount	116.35	55	ePKPdf	PKPdf	08 45 50.0	-3.3
LPG	La Plagne	116.56	321	ePKIKP	PKPdf	08 45 45.8	-7.5
	comp=Z,8.4nm,0.7s						
MBDF	Montbardon	116.90	321	ePKIKP	PKPdf	08 45 49.1	-4.9
	comp=Z,4.4nm,0.6s						
TXAR	Lajitas Array	118.41	57	PKP	PKPdf	08 45 53.2	-4.1
	comp=Z,0.2nm,0.7s,baz=252,slow=2.9,SNR=3.3						
WCI	Wyandotte Cave	127.88	40	ePKIKP	PKPdf	08 46 12.7	-2.8
EVO	Evora	129.54	322	ePKIKP	PKPdf	08 46 15.6	-3.1
	comp=Z,13nm,1.1s						
PLCA	Paso Flores	132.25	154	PKIKP	PKPdf	08 46 19.6	-4.1
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PLCA	Paso Flores	132.25	154	PKP	PKPdf	08 46 19.6	-4.2
	comp=Z,2.2nm,0.9s,baz=307,slow=9.0,SNR=3.5						
DBIC	Dimbokro	138.96	278	PKIKP	PKPdf	08 46 31.9	-4.9
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DBIC	Dimbokro	138.96	278	PKP	PKPdf	08 46 31.9	-4.9
	comp=Z,3.2nm,0.8s,baz=137,slow=16,SNR=3.6						
OTAV	Otavalo	147.23	92	ePKPbc	PKPdf	08 46 51.5	+0.2
ROSC	El Rosal	151.23	83	PKPbc	PKPdf	08 47 01.4	+3.9
	comp=Z,6.0nm,0.4s,baz=275,slow=19,SNR=5.3						
LPAZ	La Paz	151.66	129	ePKIKP	PKPdf	08 46 57.6	-0.5
LPAZ				e		08 47 02.8	
LPAZ				e		08 47 11.7	
LPAZ	La Paz	151.66	129	PKPbc	PKPdf	08 47 02.8	+4.7
	comp=Z,2.4nm,0.7s,baz=244,slow=4.4,SNR=4.2						
SDV	Santo Domingo	154.13	73	ePKPdf	PKPdf	08 46 59.1	-2.5
SAML	Samuel	159.72	121	ePKPab	PKPab	08 47 45.3	+0.8

GUC 10 08:58:18.1±1.0**, 24.74S**×**69.25W, h42^{km}**±7^{km}**, ML3.7, 3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPN1	Cerro Paranal	1.06	276	⇓iP	P	08 58 38.1	+1.4
CPN1				i S	S	08 58 52.8	+2.3
CPN1				AMP		08 58 57.0	
	comp=E,2µm,0.2s						
ANCH	Antofagasta	1.50	315	⇓iP	P	08 58 43.5	+0.5
ANCH				i S	S	08 59 02.3	+0.7
CRCH	Chaqaral	2.02	218	⇓iP	P	08 58 51.2	+0.7
CRCH				i S	S	08 59 15.7	+1.1
CRCH				AMP		08 59 22.0	
	comp=E,1µm,0.2s						
VACH	Vallenar	4.05	199	i S	S	09 00 03.8	-2.2
LCO	Las Campanas	4.44	197	eP	P	08 59 24.0	-0.9

TAP 10 09:18:42.8, 24.04N×**121.72E, h3^{km}, ML4.0, 5C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan	0.12	289	i P	Pg	09 18 46.4	+1.1
TWD				S	Sg	09 18 48.2	+1.3
HWA	Hwalien	0.12	239	⇓iP	Pg	09 18 46.8	+1.4
ESF	Shoufeng Towns	0.26	229	eP	Pg	09 18 48.7	+0.8
ESL	Shilin	0.35	229	eP	Pg	09 18 50.0	+0.2
ESL				S	Sg	09 18 56.6	+2.3
TEGC	Jichi Village	0.37	207	eP	Pg	09 18 52.0	+1.9
TEGC				S	Sg	09 18 58.6	+3.6
ENA	Nanau	0.39	3	i P	Pg	09 18 51.3	+0.7
ENA				S	Sg	09 18 58.1	+2.4
WHF	Hehuan Shan	0.43	284	⇑iP	Pg	09 18 52.3	+0.9
WHF				S	Sg	09 18 59.7	+2.6
NNS	Nan Shan	0.51	322	⇑iP	Pg	09 18 53.9	+1.0
NNS				S	Sg	09 19 02.0	+2.2
TWT	Tachien	0.54	293	eP	Pg	09 18 54.9	+1.3
TWT				S	Sg	09 19 03.9	+3.1
TWC	Suao	0.58	12	eP	Pg	09 18 55.1	+0.8
TWC				S	Sg	09 19 04.5	+2.5
ENTT	Nioudou	0.61	347	P	Pg	09 18 56.1	+1.1
ENTT				S	Sg	09 19 06.5	+3.3
EHY	Hungye	0.65	215	eP	Pg	09 18 55.0	-0.6
TWE	Neicheng	0.68	356	⇑iP	Pg	09 18 57.4	+1.0
TWE				S	Sg	09 19 08.1	+2.7
NSK	Sanguang	0.71	333	⇑iP	Pg	09 18 58.1	+1.0
NSK				S	Sg	09 19 09.0	+2.4
ILA	Ilan	0.72	2	eP	Pg	09 18 58.3	+1.1
SMLT	Sun Moon Lake	0.77	258	⇓iP	Pg	09 18 58.8	+0.7
SMLT				S	Sg	09 19 10.1	+1.8
TWF1	Yuli	0.79	210	eP	Pg	09 18 57.0	-1.5
TYC	Yuchr	0.80	260	⇓iP	Pg	09 18 59.2	+0.4
TYC				S	Sg	09 19 09.4	-0.1
NSTT	Nanjuang	0.88	312	P	Pb	09 19 01.6	+1.3
NSTT				S	Sg	09 19 15.3	+3.1
TWQ1	Liyutan	0.92	290	⇓iP	Pb	09 19 02.7	+1.7
TWQ1				S	Sb	09 19 16.7	+3.3
TWA	Mucha	0.94	352	eP	Pb	09 19 02.3	+0.9
NSY	Sanyi	0.95	293	eP	Pb	09 19 03.6	+2.1
TCU	Taichung	0.96	277	eP	Pb	09 19 03.6	+1.9
TCU				S	Sb	09 19 19.5	+4.9
WNT	Mingjian	0.96	261	eP	Pb	09 19 02.8	+1.1
WNT				S	Sb	09 19 18.3	+3.7
TWB1	Santiao Chiao	0.99	14	eP	Pb	09 19 02.9	+0.6
TWB1				S	Sb	09 19 18.1	+2.5
TAP1	Taipei	1.01	350	eP	Pb	09 19 03.6	+1.1
TAP	Taipei	1.01	349	eP	Pb	09 19 03.5	+0.9
HSN	Hsinchu	1.02	318	eP	Pb	09 19 05.1	+2.4
HSN				S	Sb	09 19 20.5	+4.2
NWF	Wu-fen Shan	1.03	3	⇑P	Pb	09 19 04.0	+1.1
NWF				S	Sb	09 19 18.9	+2.4
NCU	National Centr	1.04	332	eP	Pb	09 19 05.1	+2.0
NCU				S	Sb	09 19 22.4	+5.4
CHN5	Tsauling	1.05	245	eP	Pb	09 19 03.9	+0.7
CHN5				S	Sb	09 19 20.2	+3.0
TWS1	Kuangyinshan	1.09	345	eP	Pb	09 19 05.6	+1.7
TWS1				S	Sb	09 19 23.7	+5.3
WGK	Gukeng	1.12	252	eP	Pb	09 19 05.2	+0.9
TWY	Chenhua	1.23	355	eP	Pb	09 19 08.0	+1.6
WTP	Ta-pu	1.29	232	eP	Pb	09 19 07.3	0.0
WTCT	Ta-ch'eng	1.33	263	eP	Pb	09 19 08.6	+0.7
WTCT				S	Sb	09 19 29.6	+4.4
CHN1	Nanshi	1.39	232	eP	Pb	09 19 09.1	+0.1
SGST	Jiashian	1.41	228	eP	Pn	09 19 09.3	-0.1
SGST				S	Sb	09 19 30.5	+2.8
PCYT	Pengchaiyu	1.61	11	eP	Pn	09 19 12.0	-0.3
SSD	Sandimen	1.63	218	eP	Pn	09 19 12.2	-0.3
SCZT	Fangliau	1.94	212	eP	Pn	09 19 17.7	+0.7
PNG	Penghu	2.04	257	eP	Pn	09 19 18.0	-0.3
WDGT	Dungji	2.04	248	eP	Pn	09 19 17.9	-0.5

*IDC **10** 09:28:31.5±2.6, 52.93N×35.14W, mb3.5/5, mb1 3.7/6, mb1mx3.5/27, mbtmp3.5/6, ML2.1/1, Error ellipse: s-maj=86.4km s-min=25.8km az=169.0*

*NEIC **10** 09:28:33.0±2.2, 52.99N×35.25W, h10^{km}, mb3.9/1, Error ellipse: s-maj=73.8km s-min=20.9km az=170.0*

ISC 10 09:28:31.8±2.4**, 53.1N**±0.5×**35.3W**±0.3**, h10^{km}, n8,** σ1§**07**/7**, mb3.5**/5**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	18.56	288	P	P	09 32 49.1	-1.3
	0.1nm,0.3s,baz=83,slow=15,SNR=4.2						
SCHQ	Schefferville	18.56	288	eP	P	09 32 48.7	-1.7
	12nm,1.5s						
PDAR	Pinedale Array	48.69	289	P	P	09 37 17.6	-0.2
	0.3nm,0.5s,mb3.6,baz=54,slow=7.9,SNR=3.9						
ILAR	Eielson Array	51.26	329	P	P	09 37 39.0	+1.8
	0.4nm,0.8s,mb3.4,baz=42,slow=6.3,SNR=5.5						
TXAR	Lajitas Array	54.35	273	P	P	09 38 01.7	+1.0
	0.3nm,0.9s,mb3.2,baz=68,slow=6.7,SNR=3.9						
BVAR	Borovoye Array	57.48	44	P	P	09 38 22.4	-0.5
	0.3nm,0.5s,mb3.6,baz=333,slow=6.6,SNR=5.1						
MKAR	Makanchi Array	67.16	41	P	P	09 39 27.0	-0.5
	0.3nm,0.6s,mb3.5,baz=315,slow=6.9,SNR=4.1						
WRA	Warramunga Arr	145.92	18	PKPbc	PKPbc	09 48 12.3	+0.7
	0.5nm,0.8s,baz=348,slow=3.5,SNR=5.2						

MAN 10 09:34:35.5, 18.39N×**120.91E, h55^{km}, mb3.7, ML2.5, MS2.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	0.62	149	eP	P	09 34 50.1	+1.7
APYP				eS	S	09 35 01.0	+3.0
ABRA	Dolores	0.77	194	eP	P	09 34 51.6	+1.3
CVP	Callao Caves	1.10	128	eP	P	09 34 55.7	+0.7
CAUP	Cauayan	1.68	149	eP	P	09 35 03.7	+0.6

*NEIC **10** 09:35:23.8±1.1, 51.00N×179.52E, h45^{km}±8^{km}, mb4.0/1, Error ellipse: s-maj=19.3km s-min=6.1km az=181.0*

*IDC **10** 09:35:25.9±4.1, 51.10N×179.54E, h61^{km}±36^{km}, mb3.6/9, mb1 3.8/10, mb1mx3.6/26, mbtmp3.9/10, ML3.8/1, Error ellipse: s-maj=33.6km s-min=17.0km az=173.0*

ISC 10 09:35:22.9±1.6**, 51.1N**±0.2×**179.52E**±0.09**, h50^{km}**±12^{km}**, n22,** σ0§**82**/23**, mb3.9**/10**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIWB	Kanaga Island	2.23	68	eP	P	09 35 58.4	+0.2
GSTR	Great Sitkin T	2.94	68	eP	P	09 36 08.0	-0.3
SMY	Shemya	3.74	298	eP	P	09 36 19.4	-0.2
FX1	Attu Island--F	4.32	297	P	P	09 36 27.8	0.0
	18nm,0.3s,baz=96,slow=2.1,SNR=68						
FX1				S	S	09 37 24.9	+7.4
	12nm,0.3s,baz=60,slow=22,SNR=7.2						
FX1	Attu Island--F	4.32	297	eP	P	09 36 27.7	-0.1
NIKO	Nikolski	7.42	71	P	P	09 37 07.2	-4.0
ILAR	Eielson Array	22.15	39	P	P	09 40 16.4	+1.0
	0.5nm,0.6s,mb3.1,baz=240,slow=8.1,SNR=8.7						
ILAR	Eielson Array	22.15	39	P	P	09 40 16.4	+1.0
DAWY	Dawson	25.05	43	P	P	09 40 44.1	+0.6
ASAJ	Asahikawa	25.64	269	P	P	09 40 51.7	+2.5
	3.1nm,0.8s,mb3.9,baz=75,slow=12,SNR=5.0						
HLID	Hailey	44.04	73	P	P	09 43 27.8	+0.7
SONM	Songino Array	45.83	296	P	P	09 43 41.7	+0.4
	0.4nm,0.4s,mb3.7,baz=63,slow=8.3,SNR=4.3						
BW06	Boulder Array	47.41	71	eP	P	09 43 53.5	-0.4
	1.5nm,0.8s,mb4.0						
PDAR	Pinedale Array	47.41	71	P	P	09 43 54.0	+0.2
	1.9nm,0.6s,mb4.2,baz=322,slow=3.8,SNR=19						
MKAR	Makanchi Array	59.39	308	P	P	09 45 20.8	-1.3
	0.7nm,0.3s,mb4.1,baz=49,slow=6.9,SNR=12						
TXAR	Lajitas Array	59.75	80	P	P	09 45 24.2	-0.7
	0.2nm,0.5s,mb3.5,baz=281,slow=4.6,SNR=4.0						
TXAR	Lajitas Array	59.75	80	P	P	09 45 24.2	-0.7
BVAR	Borovoye Array	60.43	319	P	P	09 45 29.0	-0.2
	3.3nm,0.5s,mb4.6,baz=34,slow=5.3,SNR=16						
NB2	NORSAR Subarra	67.84	354	P	P	09 46 16.2	-1.0
	1.2nm,0.8s,mb4.0,baz=8.0,slow=6.5						
NOA	NORSAR Array B	67.84	354	P	P	09 46 16.3	-0.9
	3.7nm,1.1s,mb4.3,baz=7.6,slow=6.6,SNR=3.9						
NOA	NORSAR Array B	67.84	354	P	P	09 46 16.3	-0.9
WRA	Warramunga Arr	81.06	222	P	P	09 47 33.6	-0.5
	0.4nm,1.0s,mb3.3,baz=32,slow=6.0,SNR=5.0						

*NIED **10** 09:44:00, 23.70N×121.70E, h5^{km}, Mw4.5 Best double couple: $M_0$6.89×10^{15} NP1:ϕ_s29°, δ57°, λ80°. NP2:ϕ_s228°, δ34°, λ106°.*

*JMA **10** 09:44:34.8±0.5, 23.70N×121.70E, M4.4*

*IDC **10** 09:44:34.8±0.7, 23.94N×121.67E, mb4.3/20, mb1 4.5/23, mb1mx4.4/30, mbtmp4.3/23, ML3.8/3, MS3.7/8, Ms1 3.7/8, ms1mx3.5/26, Error ellipse: s-maj=17.2km s-min=16.2km az=13.0*

*BJI **10** 09:44:35.2, 23.92N×121.68E, h10^{km}, mB4.7, mb4.5, ML4.7, Ms4.5, Msz4.3*

*NEIC **10** 09:44:36.2±1.4, 23.97N×121.72E, h9^{km}±8^{km}, mb4.7/19, ML4.9(TAP), Error ellipse: s-maj=8.7km s-min=7.3km az=164.0*

NEIC Recorded [5 TAP] in Hua-lien and [2 TAP] in I-lan and T'ai-chung Counties.

*TAP **10** 09:44:36.3, 23.94N×121.60E, h8^{km}, ML4.8*

TAP Felt VI J at Hualien, III J at Chiawan, IV J at Shilin, II J at Tachien, I J at Nanshan.

*MOS **10** 09:44:37.9±1.1, 23.91N×121.67E, h33^{km}, mb4.8/21, Error ellipse: s-maj=15.0km s-min=10.6km az=94.0*

ISC 10 09:44:35.7±0.3**, 23.93N**±0.01×**121.71E**±0.02**, h10^{km}**±2^{km}**, n171,** σ1§**27**/219**, mb4.5**/40**, MS3.9**/14**, 22C-8D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.11	296	⇑iP	Pg	09 44 38.2	-0.2
TWD	Chiawan	0.18	325	⇑iP	Pg	09 44 39.6	-0.1
TWD				S	Sg	09 44 41.9	-0.6
ESF	Shoufeng Towns	0.20	253	eP	Pg	09 44 39.1	-0.9
ESF				S	Sg	09 44 40.9	-1.9
NACB	Ninganchiao	0.27	336	⇓iPn	Pg	09 44 40.9	-0.4
TEGC	Jichi Village	0.27	216	eP	Pg	09 44 42.4	+1.0
ESL	Shilin	0.28	246	⇓iP	Pg	09 44 40.4	-1.1
WHF	Hehuan Shan	0.46	298	⇑iP	Pg	09 44 43.8	-1.3
ENA	Nanau	0.50	3	⇑iP	Pg	09 44 46.2	+0.4
ENA				S	Sg	09 44 53.0	+0.5
EHY	Hungye	0.55	221	eP	Pg	09 44 45.9	-0.9
TWT	Tachien	0.59	303	⇑iP	Pg	09 44 46.8	-0.8
NNS	Nan Shan	0.60	329	⇑iP	Pg	09 44 47.2	-0.5
NNS				S	Sg	09 44 54.2	-1.5
TWC	Suao	0.69	10	⇑iP	Pb	09 44 50.0	+0.7
TWC				S	Sb	09 44 57.9	-0.8
ENTT	Nioudou	0.72	349	⇑iP	Pb	09 44 50.2	+0.2
ENTT				S	Sb	09 45 00.1	+0.5
SMLT	Sun Moon Lake	0.75	267	⇓iP	Pb	09 44 49.3	-1.0
SMLT				S	Sb	09 44 58.2	-2.2
TYC	Yuchr	0.78	268	⇑iP	Pb	09 44 49.9	-1.1
TYC				S	Sb	09 44 58.8	-2.7
TWE	Neicheng	0.79	357	⇑iP	Pb	09 44 51.7	+0.6
TWE				S	Sb	09 45 02.0	+0.4
YHNB	Yeheng	0.80	337	⇓iPn	Pn	09 44 51.2	-1.6
NSK	Sanguang	0.81	337	⇑iP	Pb	09 44 51.6	+0.1
NSK				S	Sb	09 45 01.9	-0.4
ILA	Ilan	0.83	2	P	Pb	09 44 52.7	+0.9
ILA				S	Sb	09 45 04.8	+1.9
CHKT	Chengkung	0.89	201	eP	Pb	09 44 53.4	+0.6
WNT	Mingjian	0.94	267	eP	Pb	09 44 54.1	+0.4
WNT				S	Sb	09 45 06.0	0.0
NSTT	Nanjuang	0.95	317	⇑iP	Pb	09 44 54.1	+0.2
NSTT				S	Sb	09 45 05.1	-1.3
TWQ1	Liyutan	0.95	296	⇑P	Pb	09 44 54.1	+0.2
TWQ1				S	Sb	09 45 07.3	+0.9
TCU	Taichung	0.97	283	⇑iP	Pb	09 44 54.7	+0.5
TCU				S	Sb	09 45 08.0	+1.1
ELDTW	Lidau	0.97	221	eP	Pb	09 44 53.6	-0.7
ELDTW				S	Sb	09 45 07.3	+0.3
NSY	Sanyi	1.00	299	⇑iP	Pb	09 44 55.3	+0.7
NSY				S	Sb	09 45 08.5	+0.9
CHN5	Tsauling	1.00	251	eP	Pb	09 44 54.8	0.0
TWA	Mucha	1.05	354	⇑iP	Pb	09 44 56.5	+0.9
TWA				S	Sb	09 45 10.0	+0.7
TATO	Taipei	1.06	349	⇓iPn	Pn	09 44 56.4	-0.2
WGK	Gukeng	1.08	257	eP	Pb	09 44 57.0	+0.9
WGK				S	Sb	09 45 11.1	+1.0
HSN	Hsinchu	1.10	322	eP	Pb	09 44 57.9	+1.5
HSN				S	Sb	09 45 12.8	+2.1
TWB1	Santiao Chiao	1.10	13	⇑iP	Pb	09 44 57.7	+1.2
TWB1				S	Sb	09 45 13.1	+2.4
TAP1	Taipei	1.12	351	⇑P	Pb	09 44 57.9	+1.1
TAP1				S	Sb	09 45 11.4	+0.3
TAP	Taipei	1.12	350	eP	Pb	09 44 57.5	+0.7
TAP				S	Sb	09 45 11.7	+0.5
NWF	Wu-fen Shan	1.14	3	⇑iP	Pb	09 44 58.3	+1.3
NWF				S	Sb	09 45 13.4	+1.6
NCU	National Centr	1.14	335	eP	Pb	09 44 58.6	+1.5
NCU				S	Sb	09 45 15.1	+3.2
CHN4	Tsaushan	1.18	241	⇓P	Pb	09 44 58.3	+0.6
CHN4				S	Sb	09 45 14.2	+1.4
TWS1	Kuangyinshan	1.20	347	⇑P	Pb	09 44 59.5	+1.4
TWS1				S	Sb	09 45 15.6	+2.2
CHN2	Minshiung	1.20	251	eP	Pb	09 44 58.3	+0.1
CHN2				S	Sb	09 45 14.8	+1.2
WTP	Ta-pu	1.22	236	P	Pb	09 44 58.6	+0.3
TWG	Pinlang	1.25	208	eP	Pb	09 44 57.4	-1.6
CHY	Chiayi	1.26	250	eP	Pb	09 44 59.3	+0.3
CHY				S	Sb	09 45 16.0	+0.8
TTN	Taitung	1.28	204	eP	Pb	09 45 01.7	+2.2
YOJ	Yonaguni jima	1.30	66	P	Pb	09 45 01.6	+1.8
YOJ				eS	Sb	09 45 21.1	+4.7
TWK	Hsinying	1.30	240	⇓P	Pb	09 45 00.2	+0.3
TWK				S	Sb	09 45 17.6	+1.1
WTCT	Ta-ch'eng	1.31	267	eP	Pb	09 44 59.7	-0.3
WTCT				S	Sb	09 45 17.5	+0.7
CHN1	Nanshi	1.31	236	⇓iP	Pb	09 45 00.4	+0.3
CHN1				S	Sb	09 45 18.6	+1.7
SGST	Jiashian	1.34	231	eP	Pb	09 45 00.8	+0.4
SGST				S	Sb	09 45 19.8	+2.3
TWY	Chenhua	1.34	356	P	Pb	09 45 02.4	+1.8
WSF	Szhu	1.40	258	eP	Pn	09 45 01.7	+0.3
WSF				S	Sb	09 45 19.4	+0.2
CHN8	Yiju	1.50	247	eP	Pn	09 45 03.0	+0.2
CHN8				S	Sb	09 45 23.7	+1.6
ECL	Taimali	1.50	208	eP	Pn	09 45 02.3	-0.5
CHN3	Shinhua	1.50	236	eP	Pn	09 45 04.2	+1.3
SSD	Sandimen	1.54	220	eP	Pn	09 45 03.6	+0.2
SCLT	Jiali	1.58	242	eP	Pn	09 45 03.4	-0.6
TAI1	Yung-k'ang	1.62	237	eP	Pn	09 45 05.5	+0.8
SGLT	Jiouru	1.64	223	eP	Pn	09 45 06.7	+1.8
PCYT	Pengchaiyu	1.73	11	eP	Pn	09 45 06.7	+0.6
EAST	Anshuo	1.73	208	eP	Pn	09 45 04.2	-2.0
TAW	Tawu	1.73	206	eP	Pn	09 45 07.3	+1.1
SCZT	Fangliau	1.85	213	eP	Pn	09 45 08.9	+1.1
IRIF	Iriomote-Funau	1.89	77	P	Pn	09 45 10.2	+1.8
IRIF				eS	Sn	09 45 34.9	+2.5
HATJ	Hateruma jima	1.92	86	P	Pn	09 45 09.7	+0.9
HATJ				eS	Sn	09 45 38.5	+5.3
WDGT	Dungji	2.00	251	⇑P	Pn	09 45 09.8	-0.1
WDGT				S	Sn	09 45 34.8	-0.4
TWP	Hsiaoliuchiu	2.01	219	eP	Pn	09 45 12.2	+2.1
PNG	Penghu	2.01	260	eP	Pn	09 45 09.7	-0.5
PNG				S	Sn	09 45 34.8	-0.8
HEN	Hengchun	2.11	205	eP	Pn	09 45 13.1	+1.4
JKRS	Kuro-shima	2.12	81	P	Pn	09 45 13.5	+1.8
JIJ	Ishigaki jima	2.26	78	P	Pn	09 45 14.8	+1.0
JIJ				eS	Sn	09 45 43.8	+1.8
JTJ	Tarama	2.82	75	P	Pn	09 45 23.3	+1.6
QZH	Quanzhou	3.02	290	P	Pn	09 45 22.9	-1.7
QZH				S	Sn	09 46 00.3	-0.9
QZH				Smax			
	comp=N,3µm,0.8s						
QZH				Smax			
	comp=E,2µm,0.7s						
QZH				LR	LR		
	comp=N,10µm,10.5s						
QZH				LR	LR		
	comp=E,9µm,8.2s						
QZH				LR	LR		
	comp=Z,14µm,7.6s						
KNM	Kinmen	3.04	280	eP	Pn	09 45 25.1	+0.3
JOGS	Gusukube	3.47	75	eS	Sn	09 46 16.0	+3.4
JKE	Kume jima 2	5.18	62	P	Pn	09 45 55.7	+0.5
CVP	Callao Caves	6.20	179	eP	Pn	09 46 12.0	+2.5
JOW	Kunigami	6.60	63	Pn	Pn	09 46 13.8	-1.5
	comp=Z,13nm,0.3s,baz=223,slow=13,SNR=15						
JOW				Sn	Sn	09 47 29.8	-1.6
	comp=Z,0.9nm,0.3s,baz=117,slow=28,SNR=1.6						
JOW	Kunigami	6.60	63	P	Pn	09 46 14.3	-1.0
SSE	Sheshan	7.16	356	P	Pn	09 46 21.4	-1.7
SSE				S	Sn	09 47 44.3	-1.0
SSE				Smax			
	comp=N,180nm,1.3s						
SSE				Smax			
	comp=E,190nm,1.1s						
SSE				LR	LR		
	comp=N,800nm,10.1s						
SSE				LR	LR		
	comp=E,720nm,10.1s						
SSE				LR	LR		
	comp=Z,1µm,11.0s						
JTK	Tokunoshima	7.57	58	P	Pn	09 46 26.4	-2.4
NJ2	Nanjing	8.48	343	eP	P	09 46 38.6	-2.9
NJ2				AP		09 46 41.6	
NJ2				XP		09 46 44.7	
NJ2				S	Sn	09 48 14.9	-3.4
NJ2				AMB	AMB		
	comp=Z,100nm,0.6s						
NJ2				LR	LR		
	comp=N,3µm,11.2s						
NJ2				LR	LR		
	comp=E,2µm,8.8s						
NJ2				LR	LR		
	comp=Z,2µm,8.2s						
WHN	Wuhan	9.29	317	eP	P	09 46 49.0	-3.8
WHN				S	Sn	09 48 32.0	-6.5
WHN				Smax			
	comp=N,680nm,1.5s						
WHN				Smax			
	comp=E,300nm,1.0s						
WHN				LR	LR		
	comp=Z,4µm,9.5s						
QIZ	Qiongzhong	12.08	248	eP	P	09 47 26.0	-4.9
QIZ				eS	S	09 49 38.3	-8.5
QIZ				LR	LR		
	comp=N,710nm,15.0s						
QIZ				LR	LR		
	comp=Z,730nm,10.2s						
JNU	Nakatsue	12.19	39	Pn	P	09 47 31.1	-1.3
	comp=Z,0.2nm,0.3s,baz=252,slow=19,SNR=2.0						
JNU				LR	LR	09 53 03.0	
	comp=Z,195nm,18.7s,baz=218,slow=42						
GYA	Guiyang	13.86	284	⇑iP	P	09 47 53.7	-0.9
GYA				AP		09 47 57.9	
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
GYA				LR	LR		
	comp=N,2µm,8.7s						
GYA				LR	LR		
	comp=E,2µm,10.5s						
GYA				LR	LR		
	comp=Z,2µm,9.9s						
XAN	Xi'an	15.04	315	P	P	09 48 07.0	-3.2
XAN				S	S	09 51 01.6	+3.9
XAN				LR	LR		
	comp=N,680nm,8.7s						
XAN				LR	LR		
	comp=E,590nm,11.7s						
XAN				LR	LR		
	comp=Z,1µm,9.6s						
KMI	Kunming	17.31	278	P	P	09 48 38.1	-1.1
KMI				S	S	09 51 50.0	-0.3
KMI				AMB	AMB		
	comp=Z,10.0nm,0.5s						
KMI				LR	LR		
	comp=N,560nm,6.1s						
KMI				LR	LR		
	comp=E,1µm,9.6s						
KMI				LR	LR		
	comp=Z,1µm,10.2s						
CD2	Chengdu	17.38	298	P	P	09 48 40.0	0.0
CD2				PP	PP	09 48 57.4	+2.8
CD2				S	S	09 51 52.3	+0.4
CD2				SS	SS	09 52 14.7	+1.0
CD2				LR	LR		
	comp=E,1µm,5.6s						
CD2				LR	LR		
	comp=Z,1µm,7.4s						
SNY	Shenyang	17.92	5	PR		09 48 45.3	
SNY				AMB	AMB		
	comp=Z,160nm,4.9s						
SNY				LR	LR		
	comp=N,750nm,11.3s						
SNY				LR	LR		
	comp=Z,680nm,11.6s						
MJAR	Matsushiro Arr	18.97	45	P	P	09 48 58.2	-1.4
	comp=Z,0.3nm,0.3s,baz=230,slow=11,SNR=8.5						
BTO	Baotou	19.31	332	eP	P	09 49 06.6	+2.9
CN2	Changchun	20.06	8	eP	P	09 49 12.4	+0.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,500nm,11.0s,MS4.4						
CN2				LR	LR		
	comp=E,800nm,11.0s,MS4.4						
CN2				LR	LR		
	comp=Z,500nm,12.0s,MS4.1						
MDJ	Mudanjiang	21.62	15	P	P	09 49 26.4	-1.6
MDJ				AP		09 49 29.2	
MDJ				S	S	09 53 26.8	+4.4
MDJ				XS		09 53 31.6	

MDJ				PCS		09 57 05.8	
MDJ				SCS	ScS	10 00 48.4	-0.6
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,60nm,4.8s						
MDJ				LR	LR		
	comp=N,190nm,15.2s,MS4.1						
MDJ				LR	LR		
	comp=E,520nm,16.6s,MS4.1						
MDJ				LR	LR		
	comp=Z,340nm,13.0s,MS3.9						
CMAR	**Chiang Mai Arr**	**21.91**	**260**	P	**P**	**09 49 31.2**	**+0.2**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,120nm,19.7s						
CMAR	**Chiang Mai Arr**	**21.91**	**260**	P	**P**	**09 49 31.1**	**+0.1**
	comp=Z,4.8nm,0.8s,mb4.0,baz=69,slow=9.4,SNR=10						
CMAR				LR	LR	09 58 16.7	
	comp=Z,120nm,19.7s,MS3.3,baz=80,slow=38						
GTA	**Gaotai**	**24.11**	**315**	*e*P	**P**	**09 49 56.0**	**+3.5**
GTA				AP		09 49 59.4	
GTA				XP		09 50 01.9	
GTA				PCP	PcP	09 53 31.0	-4.3
GTA				S	**S**	**09 54 15.5**	**+8.5**
GTA				XS		09 54 21.8	
GTA				AMB	AMB		
	comp=Z,150nm,6.8s						
GTA				LR	LR		
	comp=N,330nm,8.4s						
GTA				LR	LR		
	comp=E,510nm,10.3s						
GTA				LR	LR		
	comp=Z,390nm,11.4s,MS4.1						
KSM	**Kuching**	**24.91**	**208**	*e*P	**P**	**09 49 59.3**	**-1.2**
ASAJ	**Asahikawa**	**26.42**	**35**	P	**P**	**09 50 14.9**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ASAJ	**Asahikawa**	**26.42**	**35**	P	**P**	**09 50 14.9**	**+0.6**
	comp=Z,2.9nm,0.5s,mb4.1,baz=230,slow=22,SNR=5.7						
KLR	**Kul'dur**	**26.46**	**15**	*e*P	**P**	**09 50 13.8**	**-0.8**
KLR				MLR	MLR		
	comp=N,500nm,16.0s,MS4.5						
KLR				MLR	MLR		
	comp=E,1µm,16.0s,MS4.5						
ULN	**Ulaanbaatar**	**26.58**	**338**	*e*P	**P**	**09 50 14.4**	**-1.4**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**26.58**	**338**	*e*P	**P**	**09 50 14.4**	**-1.4**
	comp=Z,6.5nm,0.8s,mb4.2						
SONM	**Songino Array**	**26.79**	**337**	P	**P**	**09 50 16.3**	**-1.4**
	comp=Z,2.3nm,0.7s,mb3.8,baz=155,slow=8.2,SNR=14						
SONM				LR	LR	10 01 54.7	
	comp=Z,251nm,20.7s,MS3.8,baz=341,slow=39						
SHL	**Shillong**	**27.12**	**280**	*e*P	**P**	**09 50 23.0**	**+2.1**
LSA	**Lhasa**	**27.83**	**289**	*e*P	**P**	**09 50 25.7**	**-1.7**
LSA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
LSA				MLR	MLR		
	comp=Z,155nm,21.0s,MS3.6						
LSA	**Lhasa**	**27.83**	**289**	*e*P	**P**	**09 50 25.7**	**-1.7**
	comp=Z,11nm,0.8s,mb4.5						
LSA				LR	LR		
	comp=Z,155nm,21.0s,MS3.6						
GUN	**Gumba**	**32.40**	**285**	*e*P	**P**	**09 51 11.1**	**+3.1**
	comp=Z,15nm,0.7s,mb4.9						
KKN	**Kakani**	**32.93**	**285**	*e*P	**P**	**09 51 15.0**	**+2.4**
	comp=Z,13nm,0.5s,mb5.1						
KKN	**Kakani**	**32.93**	**285**	*e*P	**P**	**09 51 15.0**	**+2.4**
KKN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
DMN	**Daman**	**33.09**	**284**	*e*P	**P**	**09 51 15.6**	**+1.6**
	comp=Z,6.1nm,0.3s,mb5.1						
GKN	**Gorkha**	**33.50**	**285**	*e*P	**P**	**09 51 18.4**	**+0.8**
	comp=Z,12nm,0.6s,mb5.0						
WMQ	**Urumqi**	**34.18**	**314**	*e*P	**P**	**09 51 22.0**	**-1.3**
WMQ				AP	pP	09 51 26.4	+0.3
WMQ				XP	sP	09 51 29.0	+1.7
WMQ				PP	PP	09 52 36.7	-1.2
WMQ				PPP	PPP	09 52 54.7	-1.2
WMQ				*e*S	**S**	**09 56 46.6**	**-2.1**
WMQ				SS	SS	09 58 55.8	-1.3
WMQ				SCS	ScS	10 01 43.6	-1.5
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,90nm,4.6s						
WMQ				LR	LR		
	comp=E,420nm,12.0s						
WMQ				LR	LR		
	comp=Z,550nm,13.0s,MS4.5						
KOLN	**Koldanda**	**34.42**	**285**	*e*P	**P**	**09 51 24.4**	**-1.2**
	comp=Z,16nm,0.9s,mb5.0						
MKAR	**Makanchi Array**	**38.86**	**316**	P	**P**	**09 52 01.4**	**-1.4**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,72nm,18.7s						
MKAR	**Makanchi Array**	**38.86**	**316**	P	**P**	**09 52 01.4**	**-1.5**
	comp=Z,2.5nm,0.6s,mb4.1,baz=104,slow=10.0,SNR=17						
MKAR				LR	LR	10 09 15.5	
	comp=Z,72nm,18.6s,MS3.5,baz=269,slow=38						
ZAL	**Zalesovo**	**40.73**	**327**	P	**P**	**09 52 16.3**	**-1.9**
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAL				MLR	MLR		
	comp=Z,84nm,20.8s						
ZAL	**Zalesovo**	**40.73**	**327**	P	**P**	**09 52 16.3**	**-1.9**
	comp=Z,3.2nm,0.7s,mb4.0,baz=359,slow=11,SNR=8.7						
ZAL				LR	LR	10 09 57.4	
	comp=Z,84nm,20.8s,MS3.6,baz=284,slow=37						
WRAB	**Tennant Creek**	**45.30**	**163**	*e*P	**P**	**09 52 54.1**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**45.30**	**163**	*e*P	**P**	**09 52 54.0**	**-1.8**
	comp=Z,8.0nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**45.31**	**163**	P	**P**	**09 52 53.9**	**-2.0**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**45.31**	**163**	P	**P**	**09 52 53.9**	**-1.9**
	comp=Z,4.4nm,0.8s,mb4.3,baz=344,slow=8.7,SNR=24						
BVAR	**Borovoye Array**	**48.18**	**321**	P	**P**	**09 53 16.2**	**-1.8**
	comp=Z,2.9nm,0.6s,mb4.5,baz=101,slow=7.6,SNR=14						
CHKZ	**Chkalovo**	**48.24**	**322**	*e*P	**P**	**09 53 16.2**	**-2.3**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
CHKZ	**Chkalovo**	**48.24**	**322**	*e*P	**P**	**09 53 16.2**	**-2.3**
	comp=Z,6.1nm,0.6s,mb4.8						
BILL	**Bilibino**	**51.76**	**20**	*e*P	**P**	**09 53 47.3**	**+2.0**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.0						
ARU	**Arti**	**55.60**	**323**	*e*P	**P**	**09 54 11.0**	**-2.8**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
ARU	**Arti**	**55.60**	**323**	*e*P	**P**	**09 54 11.0**	**-2.7**
	comp=Z,9.9nm,1.1s,mb4.8						
STKA	**Stephens Creek**	**58.66**	**160**	P	**P**	**09 54 34.3**	**-1.5**
	comp=Z,3.8nm,0.7s,mb4.5,baz=321,slow=17,SNR=7.1						
IMA	**Indian Mountai**	**66.22**	**26**	*e*P	**P**	**09 55 24.5**	**-1.1**
IMA				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.3						
IMA	**Indian Mountai**	**66.22**	**26**	*e*P	**P**	**09 55 24.4**	**-1.1**
	comp=Z,40nm,1.3s,mb5.3						
SPU	**Mount Spurr**	**67.55**	**32**	*e*P	**P**	**09 55 32.9**	**-1.2**
MCK	**McKinley**	**68.54**	**29**	*e*P	**P**	**09 55 39.3**	**-1.0**
MCK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
MCK	**McKinley**	**68.54**	**29**	*e*P	**P**	**09 55 39.3**	**-1.0**
	comp=Z,7.9nm,1.1s,mb4.6						
ILAR	**Eielson Array**	**69.22**	**27**	P	**P**	**09 55 42.8**	**-1.6**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	**69.22**	**27**	P	**P**	**09 55 42.8**	**-1.7**
	comp=Z,0.7nm,0.5s,mb3.9,baz=285,slow=6.1,SNR=12						
MALT	**Malatya**	**70.54**	**304**	*e*P	**P**	**09 55 52.8**	**-0.2**
MALT				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
MALT	**Malatya**	**70.54**	**304**	*e*P	**P**	**09 55 52.8**	**-0.2**
	comp=Z,2.9nm,0.6s,mb4.4						
FINES	**FINESS Array B**	**71.91**	**330**	P	**P**	**09 55 59.0**	**-1.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES				MLR	MLR		
	comp=Z,77nm,18.1s						
FINES	**FINESS Array B**	**71.91**	**330**	P	**P**	**09 55 59.0**	**-1.8**
	comp=Z,1.1nm,0.8s,mb3.8,baz=297,slow=4.3,SNR=4.0						
FINES				LR	LR	10 29 49.6	
	comp=Z,77nm,18.1s,MS4.0,baz=12,slow=38						
DAWY	**Dawson**	**72.54**	**27**	*e*P	**P**	**09 56 03.5**	**-1.0**
INK	**Inuvik**	**73.28**	**22**	*e*P	**P**	**09 56 06.9**	**-1.8**
INK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
INK	**Inuvik**	**73.28**	**22**	P	**P**	**09 56 07.0**	**-1.7**
	comp=Z,8.3nm,0.9s,mb4.7,baz=287,slow=7.0,SNR=15						
INK	**Inuvik**	**73.28**	**22**	*e*P	**P**	**09 56 06.9**	**-1.8**
	comp=Z,8.8nm,0.9s,mb4.7						
BRTR	**Keskin Array B**	**73.71**	**307**	P	**P**	**09 56 10.4**	**-1.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**73.71**	**307**	P	**P**	**09 56 10.4**	**-1.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=90,slow=4.9,SNR=4.0						
NOA	**NORSAR Array B**	**78.68**	**332**	P	**P**	**09 56 38.1**	**-1.2**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,57nm,18.3s						
NOA	**NORSAR Array B**	**78.68**	**332**	P	**P**	**09 56 38.1**	**-1.2**
	comp=Z,1.5nm,0.8s,mb4.0,baz=60,slow=5.6,SNR=3.7						
NOA				LR	LR	10 33 13.8	
	comp=Z,57nm,18.3s,MS3.9,baz=270,slow=37						
DLBC	**Dease Lake**	**78.92**	**31**	P	**P**	**09 56 40.2**	**-0.4**
	comp=Z,3.8nm,1.0s,mb4.3,baz=298,slow=5.7,SNR=4.2						
JMIC	**Jan Mayen**	**79.20**	**345**	P	**P**	**09 56 43.2**	**+1.1**
	comp=Z,10nm,0.5s,mb5.0,baz=95,slow=7.0,SNR=4.0						
YKW3	**Yellowknife Ar**	**82.97**	**23**	*e*P	**P**	**09 56 59.7**	**-2.3**
YKA	**Yellowknife Ar**	**83.02**	**23**	P	**P**	**09 57 00.9**	**-1.3**
YKA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YKA	**Yellowknife Ar**	**83.02**	**23**	P	**P**	**09 57 00.9**	**-1.3**
	comp=Z,4.1nm,0.7s,mb4.6,baz=313,slow=5.0,SNR=19						
YKA	**Yellowknife Ar**	**83.02**	**23**	P	**P**	**09 57 00.9**	**-1.3**
GERES	**GERESS Array B**	**83.35**	**321**	P	**P**	**09 57 03.3**	**-0.9**
	comp=Z,0.3nm,0.2s,mb3.9,baz=352,slow=6.9,SNR=3.7						
GERES				LR	LR	10 36 07.7	
	comp=Z,58nm,18.2s,MS4.0,baz=30,slow=37						
EDM	**Edmonton**	**89.59**	**30**	*e*P	**P**	**09 57 33.8**	**-0.9**
NEW	**Newport**	**90.94**	**35**	P	**P**	**09 57 41.3**	**+0.3**
NEW				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NEW	**Newport**	**90.94**	**35**	P	**P**	**09 57 41.3**	**+0.3**
	comp=Z,1.1nm,0.3s,mb4.7,baz=334,slow=8.3,SNR=4.8						
YBH	**Yreka Blue Hor**	**91.62**	**42**	*e*P	**P**	**09 57 44.9**	**+0.6**
YBH				pmax	pmax		
	comp=Z,7.0nm,1.4s						
YBH	**Yreka Blue Hor**	**91.62**	**42**	P	**P**	**09 57 45.1**	**+0.7**
	comp=Z,3.9nm,1.1s,mb4.7,baz=352,slow=1.1,SNR=6.9						
YBH	**Yreka Blue Hor**	**91.62**	**42**	*e*P	**P**	**09 57 44.9**	**+0.6**
	comp=Z,7.3nm,1.4s,mb4.8						
FCC	**Fort Churchill**	**92.44**	**18**	*e*P	**P**	**09 57 46.0**	**-1.7**
FCC				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.9						
FCC	**Fort Churchill**	**92.44**	**18**	*e*P	**P**	**09 57 46.0**	**-1.7**
	comp=Z,6.7nm,1.2s,mb4.8						
BMO	**Blue Mountains**	**92.95**	**38**	*e*P	**P**	**09 57 49.2**	**-1.2**
BMO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.3						
BMO	**Blue Mountains**	**92.95**	**38**	*e*P	**P**	**09 57 49.2**	**-1.2**
	comp=Z,1.3nm,0.7s,mb4.5						
FFC	**Flin Flon**	**93.17**	**24**	*e*P	**P**	**09 57 49.9**	**-1.2**
FFC				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
FFC	**Flin Flon**	**93.17**	**24**	*e*P	**P**	**09 57 49.9**	**-1.3**
	comp=Z,3.5nm,0.9s,mb4.8						
HLID	**Hailey**	**95.38**	**37**	*e*P	**P**	**09 58 00.8**	**-0.8**
	comp=Z,3.3nm,1.3s,mb4.6						
PPT	**Papeete**	**95.82**	**107**	*e*S	S	10 09 39.1	+20
	comp=Z,142nm,22.5s						
PPT				*e*LQ		10 25 21.4	
	comp=Z,200nm,22.5s						
PPT				*e*LR	LR	10 29 04.5	
	comp=Z,91nm,23.8s						
NVAR	**Mina Array Bea**	**96.29**	**43**	P	**P**	**09 58 06.5**	**+0.6**
	comp=Z,0.8nm,0.7s,mb4.3,baz=326,slow=1.9,SNR=6.1						
RKT	**Rikitea**	**110.58**	**107**	*e*S	tx	10 13 56.9	
	comp=Z,160nm,40.0s						
RKT				*e*LQ		10 31 27.6	
	comp=Z,170nm,28.2s						
RKT				*e*LR	LR	10 36 14.8	
	comp=Z,69nm,28.5s,baz=327						
SDV	**Santo Domingo**	**145.23**	**22**	PKPbc	PKPbc	10 04 14.3	-0.6
	comp=Z,8.8nm,0.9s,baz=40,slow=1.8,SNR=8.7						
SDV	**Santo Domingo**	**145.23**	**22**	*e*PKPbc	PKPbc	10 04 13.8	-1.1

PRE 10 09:46:15.5±1.6**, 26.39S**×**27.58E, h2**^{km}**, ML3.5, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	**Parys**	**0.56**	**200**	*e*P	Pg	09 46 25.7	-1.1
PRYS				*e*S	Sg	09 46 32.7	-1.6
PRYS				AML	AML	09 46 37.6	
	comp=Z,2µm,0.7s						
KSR	**Koster**	**0.81**	**311**	*e*P		09 45 19.1	
KSR				*e*S		09 45 29.3	
KSR				AML	AML	09 45 38.4	
	comp=Z,5µm,0.7s						
SLR	**Silverton**	**0.91**	**44**	*e*P	Pb	09 46 32.1	-1.6
SLR				*e*S	Sg	09 46 43.6	-2.2
SLR				AML	AML	09 46 51.0	
	comp=Z,313nm,0.4s						
SWZ	**Schweizer**	**2.15**	**248**	*e*P	Pn	09 46 52.6	-0.3
SWZ				*e*S	Sn	09 47 19.3	-1.2
SWZ				AML	AML	09 47 20.6	
	comp=Z,690nm,0.3s						
NWL	**Newcastle**	**2.50**	**123**	*e*P	Pn	09 46 56.7	-1.1
NWL				*e*S	Sn	09 47 27.4	-1.9
NWL				AML	AML	09 47 38.4	
	comp=Z,248nm,0.5s						
BOSA	**Boshof**	**3.02**	**222**	*e*P	Pn	09 47 02.6	-2.7
BOSA				*e*S	Sn	09 47 35.9	-6.7
POGA	**Pongola**	**3.73**	**106**	*e*P	Pn	09 47 13.7	-1.7

NIED ***10*** *09:48:00, 33.10N×132.00E, h35*^{km}*, Mw3.7 Best double couple: M*$_0$*4.39×10*^{14} *NP1:*ϕ_s*69°, δ80°, λ99°. NP2:*ϕ_s*206°, δ13°, λ48°.*

JMA 10 09:48:34.2, 33.07N×**132.02E, h46**^{km}±1^{km}**, M3.5, 5C-1D Broadband fault plane solution: P waves. NP1:**ϕ_s228°, δ60°**,** λ-26°. **NP2:**ϕ_s333°**,** δ67°**,** λ-147°. **Principal axes:** T Plg5°, Azm99°; N Plg51°, Azm3°; P Plg39°, Azm193°; **Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JUS	**Usuki**	**0.23**	**269**	⇑P	P	09 48 42.1	-0.2
OIT2	**Oita 2**	**0.52**	**294**	P	P	09 48 45.8	+0.3
OIT2				S	S	09 48 54.0	+0.5
UWA2	**Uwa jima 2**	**0.53**	**74**	⇑P	P	09 48 45.4	-0.2
UWA2				S	S	09 48 54.1	+0.4
JNA	**Nagahama**	**0.62**	**38**	⇓P	P	09 48 46.6	-0.2
JNA				S	S	09 48 56.1	+0.2
JTO	**Tosashimizu**	**0.69**	**107**	⇑P	P	09 48 47.2	-0.5
JTO				S	S	09 48 57.0	-0.6
JKU	**Kubokawa**	**0.91**	**74**	⇑P	P	09 48 50.1	-0.6
JKU				S	S	09 49 02.7	-0.2
JIU2	**Izumi 2**	**1.14**	**243**	⇑P	P	09 48 53.9	-0.1

NEIC ***10*** *09:52:34.3±0.9, 18.24S×67.88W, h199*^{km}*±14*^{km} *Error ellipse: s-maj=19.1km s-min=15.6km az=170.0*

IDC ***10*** *09:52:34.8±1.7, 18.23S×67.80W, h198*^{km}*±16*^{km}*, mb1 3.0/3, mb1mx2.9/18, mbtmp3.6/3, Error ellipse: s-maj=31.0km s-min=24.4km az=49.0*

ISC 10 09:52:33.4±0.9**, 18.1S**±0.2×**68.0W**±0.1**, h228**^{km}±22^{km}**, n7,** σ**1**$\overset{s}{.}$**02**/9**, 1C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.85**	**356**	P	**P**	**09 53 14.2**	**+1.2**
	38nm,0.3s,baz=165,slow=5.6,SNR=1100						
LPAZ				S	**S**	**09 53 43.6**	**+0.1**
	2.1nm,0.3s,baz=261,slow=25,SNR=7.9						
LPAZ	**La Paz**	**1.85**	**356**	⇑*i*Pn	**P**	**09 53 14.1**	**+1.2**
LPAZ				*e*Sn	**S**	**09 53 43.8**	**+0.3**
ARE	**Arequipa**	**3.73**	**296**	*e*P	**P**	**09 53 34.0**	**+0.5**
ARE				*e*S	**S**	**09 54 19.0**	**-1.1**
SIV	**San Ignacio**	**6.96**	**73**	P	**P**	**09 54 12.0**	**-2.0**
	0.8nm,0.3s,baz=262,slow=11,SNR=24						
CFAA	**Coronel Fontan**	**13.41**	**181**	P	**P**	**09 55 36.0**	**+0.1**
	0.1nm,0.3s,baz=5.7,slow=10,SNR=10						
BDFB	**Brasilia**	**19.29**	**86**	P	**P**	**09 56 43.6**	**+0.7**
	0.8nm,0.3s,baz=263,slow=8.2,SNR=3.7						
SONM	**Songino Array**	**150.03**	**8**	PKPbc	PKPdf	10 12 01.7	+10
	0.5nm,0.5s,baz=320,slow=2.8,SNR=6.1						

NEIC ***10*** *09:56:29.1, 35.01S×70.60W, h7*^{km}*, ML3.0(GUC), After GUC.*

GUC 10 09:56:29.1±1.0**, 35.01S**×**70.60W, h7**^{km}±3^{km}**, MD3.7, ML3.0, 6C-6D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NICH	**Los Niches**	**0.52**	**270**	⇓*i*P	Pg	09 56 39.8	+0.3
NICH				*i* S	Sg	09 56 47.6	+1.3
SFDO	**San Fernando**	**0.52**	**319**	⇑*i*P	Pg	09 56 39.5	0.0
SFDO				*i* S	Sg	09 56 47.4	+1.0
CICH	**Cipreses**	**0.70**	**12**	⇑*i*P	Pg	09 56 41.9	-1.2
CICH				*i* S	Sg	09 56 51.7	-0.8
CACH	**El Canelo**	**0.89**	**0**	⇓*i*P	Pb	09 56 45.5	-1.0
CACH				*i* S	Sb	09 56 58.2	-0.1
TALC	**Talca**	**0.93**	**245**	⇓*i*P	Pb	09 56 46.5	-0.7
TALC				*i* S	Sb	09 56 59.5	-0.1
TALC				AMP		09 57 00.1	
	comp=E,3µm,0.1s						
TALC				AMP		09 57 00.7	
	comp=N,2µm,0.1s						
CHCH	**Chadas Angostu**	**1.07**	**358**	⇑*i*P	Pb	09 56 48.9	-0.6
LNCH	**Linares**	**1.17**	**224**	⇑*i*P	Pb	09 56 50.3	-1.0
LNCH				*i* S	Sb	09 57 06.7	+0.2
LNCH				AMP		09 57 07.3	
	comp=N,458nm,0.5s						
LNCH				AMP		09 57 07.6	
	comp=E,426nm,0.7s						
LNV	**Longovilo**	**1.24**	**327**	⇓*i*P	Pb	09 56 51.8	-0.7
LNV				*i* S	Sb	09 57 08.5	0.0
TACH	**Talagante**	**1.38**	**348**	⇓*i*P	Pb	09 56 54.0	-0.8
TACH				*i* S	Sb	09 57 12.7	+0.3
PCH	**Pirque**	**1.38**	**3**	*e*P	Pb	09 56 54.0	-0.9
PCH				*i* S	Sb	09 57 13.3	+0.7
ANTU	**Antumapu**	**1.43**	**359**	*i* S	Sb	09 57 14.4	+0.3
ANTU				AMP		09 57 15.9	
	comp=N,182nm,0.4s						
ANTU				AMP		09 57 16.2	
	comp=E,410nm,0.2s						
ANTU	**Antumapu**	**1.43**	**359**	P	Pn	09 57 00.0	+4.4
ANTU				*i* S	Sb	09 57 14.4	+0.3
CLCH	**Cerro Calan**	**1.61**	**2**	⇑*i*P	Pn	09 56 58.5	+0.4
CLCH				*i* S	Sb	09 57 20.5	+1.4
CLCH				AMP		09 57 23.8	
	comp=N,137nm,0.6s						
CLCH				AMP		09 57 30.3	
	comp=E,135nm,0.2s						
FCH	**Farellones**	**1.69**	**9**	*e*P	Pn	09 56 59.5	+0.2
FCH				*i* S	Sn	09 57 21.9	+0.4
LCCH	**Las Cruces**	**1.72**	**332**	⇑*i*P	Pn	09 57 00.1	+0.4
LCCH				*i* S	Sn	09 57 23.0	+0.7
PEL	**Peldehue**	**1.86**	**358**	*i* S	Sn	09 57 27.5	+1.8
PEL				AMP		09 57 29.4	
	comp=N,305nm,0.5s						
PEL	**Peldehue**	**1.86**	**358**	P	Pn	09 57 00.0	-1.7
PEL				S	Sn	09 57 27.5	+1.8
ROCH	**El Roble**	**2.06**	**350**	⇓*i*P	Pn	09 57 05.2	+0.7
ROCH				*e*S	Sn	09 57 32.5	+1.7

NEIC ***10*** *09:59:43.8, 32.62S×72.93W, h26*^{km}*, ML3.2(GUC), After GUC.*

GUC 10 09:59:43.8±0.9**, 32.62S**×**72.93W, h26**^{km}±4^{km}**, MD3.6, ML3.2, 3C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	**1.27**	**87**	*e*P	Pn	10 00 06.3	+0.1
LCCH	**Las Cruces**	**1.43**	**127**	⇓*i*P	Pn	10 00 08.6	+0.2
LCCH				*i* S	Sn	10 00 27.0	+0.5
ROCH	**El Roble**	**1.66**	**103**	*i* S	Sn	10 00 33.8	+1.5
LNV	**Longovilo**	**1.84**	**137**	⇑*i*P	Pn	10 00 14.4	0.0
LNV				*i* S	Sn	10 00 36.9	-0.2
TACH	**Talagante**	**1.96**	**122**	⇓*i*P	Pn	10 00 16.8	+0.7
TACH				*i* S	Sn	10 00 42.0	+1.8
JACH	**Jahuel**	**1.98**	**92**	⇑*i*P	Pn	10 00 16.6	+0.4
JACH				*i* S	Sn	10 00 42.5	+2.1
CMCH	**Combarbala**	**2.19**	**49**	*i* P	Pn	10 00 18.1	-1.2
CMCH				*i* S	Sn	10 00 45.0	-0.9
CMCH				AMP		10 00 50.4	
	comp=E,205nm,0.5s						
PCH	**Pirque**	**2.26**	**117**	⇑*i*P	Pn	10 00 21.9	+1.5
PCH				*i* S	Sn	10 00 50.7	+3.0
CHCH	**Chadas Angostu**	**2.32**	**125**	⇓*i*P	Pn	10 00 22.0	+0.9
CHCH				*i* S	Sn	10 00 50.4	+1.3
FCH	**Farellones**	**2.33**	**108**	*i* P	Pn	10 00 23.0	+1.6
FCH				*i* S	Sn	10 00 52.0	+2.6
CACH	**El Canelo**	**2.46**	**128**	*i* S	Sn	10 00 55.1	+2.4
SFDO	**San Fernando**	**2.55**	**142**	⇓*i*P	Pn	10 00 24.9	+0.3
SFDO				*i* S	Sn	10 00 55.5	+0.5

ATH ***10*** *10:04:15.1, 38.26N×26.49E, h32*^{km}*±9*^{km}*, MD3.2/3*

ISK ***10*** *10:04:15.4, 38.24N×26.72E, h20*^{km}*, MD3.4*

NEIC ***10*** *10:04:15.1, 38.26N×26.49E, h32*^{km}*, MD3.2(ATH), MD3.2(ISK), After ATH.*

CSEM ***10*** *10:04:15.0±0.1, 38.29N×26.66E, h15*^{km}*, MD3.4, Error ellipse: s-maj=3.0km s-min=2.7km az=158.0*

ISC 10 10:04:14.2±0.8**, 38.26N**±0.03×**26.55E**±0.05**, h9**^{km}±4^{km}**, n24,** σ**0**$\overset{s}{.}$**88**/34**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.10**	**19**	*i* P	**Pg**	**10 04 17.7**	**+0.9**
URLA				*i* S	**Sg**	**10 04 19.2**	**+0.7**
BLCB	**Balcova**	**0.41**	**72**	*i* PG	**Pg**	**10 04 22.0**	**-0.4**
BLCB				*i* SG	**Sg**	**10 04 27.2**	**-0.7**
IZM	**Izmir**	**0.57**	**76**	*i* PG	**Pg**	**10 04 25.6**	**-0.2**
IZM				*i* SG	**Sg**	**10 04 32.1**	**-1.4**
KDAG	**Bornova**	**0.58**	**76**	*i* P	**Pg**	**10 04 25.9**	**0.0**
KDAG				*i* S	**Sg**	**10 04 33.8**	**+0.1**
SMG	**Samos**	**0.60**	**158**	*e*PN	**Pn**	**10 04 27.6**	**-1.0**
SMG				*e*SN	**Sn**	**10 04 37.3**	**-1.1**
PRK	**Paraskevi**	**1.01**	**348**	*e*PN	**Pn**	**10 04 33.8**	**-0.7**
PRK				*e*SN	**Sn**	**10 04 48.0**	**-0.8**
AYVA	**Ayvalik**	**1.05**	**6**	*i* P	**Pb**	**10 04 33.9**	**-0.3**
AYVA				*i* S	**Sb**	**10 04 49.7**	**+1.8**
BODT	**Bodrum**	**1.34**	**153**	PN	**Pn**	**10 04 38.4**	**-0.8**
MLSB	**Milas**	**1.37**	**134**	*e*PN	**Pn**	**10 04 39.5**	**-0.1**
BDRM	**Kayabasi**	**1.39**	**149**	*i* P	**Pn**	**10 04 44.2**	**+4.3**
BDRM				*i* S	**Sb**	**10 04 59.7**	**+2.1**
APE	**Apeiranthos**	**1.44**	**215**	*e*PN	**Pn**	**10 04 41.8**	**+1.1**
APE	**Apeiranthos**	**1.44**	**215**	*e*PN	**Pn**	**10 04 40.5**	**-0.2**
MANT	**Manisa**	**1.59**	**81**	*i* P	**Pn**	**10 04 44.5**	**+1.7**
MANT				*i* S	**Sb**	**10 05 04.6**	**+1.0**
BALB	**Balikesir**	**1.72**	**37**	*e*PN	**Pn**	**10 04 45.1**	**+0.4**
CANB	**Canakkale**	**1.80**	**13**	*e*PN	**Pn**	**10 04 45.7**	**-0.1**
LIA	**Limnos Island**	**1.95**	**327**	*e*PN	**Pn**	**10 04 47.9**	**-0.1**
DNZL	**Cakiroluk**	**2.05**	**105**	*i* P	**Pn**	**10 04 51.0**	**+1.5**
DNZL				*i* S	**Sn**	**10 05 21.1**	**+5.7**
DST	**Dursunbey**	**2.10**	**50**	*e*PN	**Pn**	**10 04 49.4**	**-0.7**
EDC	**Edincik**	**2.32**	**26**	*e*PN	**Pn**	**10 04 53.2**	**0.0**
BNT	**Bandirma**	**2.34**	**26**	*e*PN	**Pn**	**10 04 53.8**	**+0.2**
KCT	**Karacabey**	**2.44**	**34**	*e*PN	**Pn**	**10 04 55.0**	**0.0**
MRMT	**Marmara Adasi**	**2.47**	**19**	*e*PN	**Pn**	**10 04 55.0**	**-0.5**
ORLT	**Orhaneli**	**2.55**	**45**	*e*PN	**Pn**	**10 04 55.7**	**-0.8**
ISK	**Istanbul-Kandi**	**3.40**	**34**	*e*PN	**Pn**	**10 05 08.1**	**-0.6**

IDC ***10*** *10:12:58.4±8.0, 47.14N×152.56E, h150*^{km}*±100*^{km}*, mb3.5/6, mb1 3.6/7, mb1mx3.3/23, mbtmp3.9/7, Error ellipse: s-maj=117.8km s-min=30.9km az=15.0*

ISC 10 10:13:00.3±1.4**, 46.5N**±0.2×**152.5E**±0.2**, h212**^{km}±13^{km}**, n22,** σ**1**$\overset{s}{.}$**02**/31**, mb3.5**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**5.70**	**239**	P	**P**	**10 14 23.2**	**-1.4**
NEM2				*e*S	**S**	**10 15 29.6**	**-0.6**
JRA	**Rausu**	**5.78**	**246**	P	**P**	**10 14 25.9**	**+0.3**
JAK	**Akkeshi**	**6.54**	**241**	P	**P**	**10 14 34.5**	**-0.9**
JAK				*e*S	**S**	**10 15 50.2**	**+0.7**

JAR	Ashorobuto	6.95	246	P	P	10 14 41.3	+0.6
JOB	Onbets	7.12	243	P	P	10 14 43.2	+0.4
JOB				eS	S	10 16 05.3	+2.4
ASAJ	Asahikawa	7.35	255	P	P	10 14 46.5	+0.6
	0.7nm,0.3s,baz=85,slow=14,SNR=6.7						
JCH	Churui	7.56	242	P	P	10 14 48.7	0.0
JCH				eS	S	10 16 13.5	+0.1
JEM	Erimo	8.04	240	P	P	10 14 55.6	+0.8
JEM				eS	S	10 16 26.0	+1.7
JBT2	Biratori 2	8.10	246	P	P	10 14 56.4	+0.8
JNBK	Urakawa-nobuka	8.12	242	P	P	10 14 55.3	-0.7
JNBK				eS	S	10 16 27.3	+0.9
JKB	Kayabe	9.41	245	P	P	10 15 11.8	-0.7
JKB				eS	S	10 16 54.7	-1.3
JTM	Tenmabayashi	10.03	239	P	P	10 15 19.5	-1.0
JTM				eS	S	10 17 09.7	-0.6
JANG	Nango	10.03	236	P	P	10 15 19.1	-1.4
JANG				eS	S	10 17 08.7	-1.7
JRG	Rokugo	11.19	235	eS	S	10 17 36.1	-1.1
JIO	Ouri	11.47	230	eS	S	10 17 45.3	+1.6
MKAR	Makanchi Array	46.66	297	P	P	10 21 09.5	+0.6
	0.3nm,0.4s,mb3.0,baz=57,slow=9.6,SNR=4.6						
BVAR	Borovoye Array	50.68	309	P	P	10 21 39.7	+0.2
	0.9nm,0.3s,mb3.6,baz=51,slow=7.6,SNR=9.3						
FINES	FINESS Array B	64.09	335	P	P	10 23 11.9	-1.1
	0.9nm,0.5s,mb3.7,baz=34,slow=6.9,SNR=8.6						
NB2	NORSAR Subarra	68.33	341	P	P	10 23 39.4	-0.4
	1.3nm,0.6s,mb3.7,baz=27,slow=6.2						
NOA	NORSAR Array B	68.33	341	P	P	10 23 39.5	-0.4
	1.6nm,0.6s,mb3.8,baz=27,slow=6.2,SNR=5.3						
AKASG	Malin Array Be	71.52	326	P	P	10 23 59.3	+0.1
	0.4nm,0.3s,mb3.5,baz=32,slow=6.1,SNR=4.0						
TXAR	Lajitas Array	78.01	60	P	P	10 24 38.4	+1.8
	0.3nm,0.6s,mb3.1,baz=301,slow=4.7,SNR=6.2						

*MOS **10** 10:23:03.7±1.3, 5.16S×131.04E, h33^{km}, mb4.7/14, Error ellipse: s-maj=16.5km s-min=8.4km az=111.9*
*BJI **10** 10:23:06.5, 5.52S×131.49E, h94^{km}, mB5.2, mb5.0*
*IDC **10** 10:23:08.8±4.8, 5.06S×131.17E, h59^{km}±44^{km}, mb4.3/13, mb1 4.4/14, mb1mx4.4/17, mbtmp4.6/14, ML4.3/1, MS3.5/1, Ms1 3.4/1, ms1mx2.9/20, Error ellipse: s-maj=24.3km s-min=11.8km az=71.0*
*NEIC **10** 10:23:09.5±1.2, 5.10S×131.15E, h69^{km}±12^{km}, mb4.9/19, Error ellipse: s-maj=8.1km s-min=5.6km az=58.0*
ISC 10 10:23:01.7±3.1**, 5.18S**±0.05×**131.24E**±0.08**, h20**^{km}±22^{km}**, n85, σ0^{s}94**/87**, mb4.8**/39**, 6C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	7.58	171	⇓iP	Pn	10 24 57.5	+3.6
KAKA				eS	Sn	10 26 17.2	-2.9
WRAB	Tennant Creek	14.97	169	eP	P	10 26 33.1	-1.1
WRAB				pmax	pmax		
	comp=Z,193nm,0.8s						
WRAB	Tennant Creek	14.97	169	ePn	P	10 26 33.1	-1.1
	comp=Z,193nm,0.8s						
WRAB				eSn	S	10 29 10.9	-9.4
WRA	Warramunga Arr	14.98	169	P	P	10 26 33.3	-1.0
	comp=Z,3.2nm,0.3s,baz=342,slow=14,SNR=119						
WRA				S	S	10 29 11.5	-8.9
	comp=Z,23nm,0.3s,baz=352,slow=22,SNR=18						
WB2	Warramunga Arr	14.98	169	eP	P	10 26 33.3	-1.0
WB2				eS	S	10 29 11.5	-9.0
PMG	Port Moresby	16.33	106	eP	P	10 26 56.5	+4.7
PMG				pmax	pmax		
	comp=Z,212nm,1.5s						
PMG	Port Moresby	16.33	106	P	P	10 26 56.1	+4.4
	comp=Z,3.6nm,0.3s,baz=312,slow=7.5,SNR=13						
PMG				S	S	10 29 48.2	-3.8
	comp=Z,1.3nm,0.3s,baz=20,slow=22,SNR=4.5						
PMG	Port Moresby	16.33	106	eP	P	10 26 56.5	+4.7
	comp=Z,212nm,1.5s						
KKM	Kota Kinabalu	18.69	306	eP	P	10 27 23.1	+2.0
MBWA	Marble Bar	19.42	214	eP	P	10 27 29.9	+0.1
	comp=Z,25nm,0.8s						
CTA	Charters Tower	20.81	137	P	P	10 27 47.9	+3.4
	comp=Z,16nm,0.9s,baz=312,slow=12,SNR=7.5						
CTA				S	S	10 31 31.3	+0.5
	comp=Z,3.7nm,0.5s,baz=28,slow=19,SNR=2.8						
CTA	Charters Tower	20.81	137	P	P	10 27 47.9	+3.4
CTA				S	S	10 31 31.3	+0.5
CTAO	Charters Tower	20.81	137	eP	P	10 27 47.8	+3.3
CTAO				pmax	pmax		
	comp=Z,25nm,0.9s						
CTAO	Charters Tower	20.81	137	eP	P	10 27 47.8	+3.3
	comp=Z,25nm,0.9s						
KSM	Kuching	21.93	287	eP	P	10 27 55.6	-0.3
STKA	Stephens Creek	28.28	161	eP	P	10 28 56.4	+0.4
STKA	Stephens Creek	28.28	161	P	P	10 28 57.3	+1.3
	comp=Z,2.9nm,0.4s,mb4.3,baz=343,slow=9.4,SNR=11						
STKA				LR	LR	10 40 04.8	
	comp=Z,84nm,19.7s,baz=16,slow=36						
HNR	Honiara	28.77	100	eP	P	10 29 01.6	+1.0
	comp=Z,84nm,1.0s,mb5.4						
KLBR	Kellerberrin	29.16	204	⇑iP	P	10 29 04.4	+0.4
MUN	Mundaring	30.15	206	eP	P	10 29 12.9	+0.1
NWAO	Narrogin (SRO)	30.55	204	P	P	10 29 16.8	+0.5
	comp=Z,12nm,0.6s,mb4.9,baz=28,slow=8.4,SNR=15						
KULM	Kulim	32.27	288	eP	P	10 29 30.4	-1.2
JNU	Nakatsue	38.09	360	P	P	10 30 20.2	-0.8
	comp=Z,6.2nm,0.9s,mb4.3,baz=38,slow=40,SNR=2.8						
GYA	Guiyang	39.45	324	⇑iP	P	10 30 33.1	+0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
CMAR	Chiang Mai Arr	39.57	307	P	P	10 30 34.2	+0.7
	comp=Z,8.1nm,0.6s,mb4.6,baz=135,slow=7.8,SNR=30						
CHG	Chiang Mai	39.76	308	⇑P	P	10 30 35.5	+0.4
	comp=Z,20nm,1.0s,mb4.8						
KMI	Kunming	40.92	319	P	P	10 30 45.2	+0.6
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.3						
MAJO	Matsushiro	42.01	8	eP	P	10 30 52.9	-0.6
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
MAJO	Matsushiro	42.01	8	eP	P	10 30 52.9	-0.6
	comp=Z,5.5nm,0.6s,mb4.4						
MAT	Matsushiro	42.01	8	eP	P	10 30 53.0	-0.5
MAT				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
MAT	Matsushiro	42.01	8	eP	P	10 30 53.0	-0.5
	comp=Z,6.2nm,0.7s,mb4.3						
MAT	Matsushiro	42.01	8	P	P	10 30 52.9	-0.6
MJAR	Matsushiro Arr	42.01	8	P	P	10 30 52.7	-0.8
	comp=Z,3.3nm,0.7s,mb4.1,baz=183,slow=8.8,SNR=11						
MJAR	Matsushiro Arr	42.01	8	P	P	10 30 52.7	-0.8
XAN	Xi’an	44.35	333	P	P	10 31 13.5	+0.9
XAN				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
LZH	Lanzhou	48.42	330	⇑P	P	10 31 45.0	+0.3
LZH				AMB	AMB		
	comp=Z,40nm,1.5s,mb5.2						
CN2	Changchun	49.03	354	eP	P	10 31 51.1	+1.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
LSA	Lhasa	51.78	314	P	P	10 32 10.8	+0.4
LSA	Lhasa	51.78	314	eP	P	10 32 10.8	+0.4
LSA				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
LSA	Lhasa	51.78	314	eP	P	10 32 10.8	+0.3
	comp=Z,16nm,0.8s,mb5.0						
GTA	Gaotai	53.01	330	eP	P	10 32 19.8	+0.3
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
URZ	Urewera	53.04	135	P	P	10 32 21.7	+1.9
	comp=Z,9.3nm,0.3s,mb5.2,baz=290,slow=3.9,SNR=23						
GUN	Gumba	54.72	310	eP	P	10 32 31.6	-0.7
	comp=Z,55nm,0.6s,mb5.8						
KKN	Kakani	55.12	309	eP	P	10 32 34.3	-0.9
	comp=Z,32nm,0.7s,mb5.5						
KKN	Kakani	55.12	309	eP	P	10 32 34.3	-0.9
KKN				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.2						
DMN	Daman	55.17	309	eP	P	10 32 34.7	-0.9
	comp=Z,38nm,0.9s,mb5.5						
GKN	Gorkha	55.73	309	eP	P	10 32 38.5	-1.1
	comp=Z,48nm,0.7s,mb5.7						
KOLN	Koldanda	56.42	308	eP	P	10 32 43.9	-0.7
	comp=Z,46nm,0.6s,mb5.7						
ULN	Ulaanbaatar	56.94	341	eP	P	10 32 48.1	+0.1
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
ULN	Ulaanbaatar	56.94	341	eP	P	10 32 48.0	0.0
	comp=Z,4.0nm,0.6s,mb4.6						
SONM	Songino Array	57.13	340	P	P	10 32 49.4	0.0
	comp=Z,3.7nm,0.6s,mb4.6,baz=159,slow=6.7,SNR=19						
ZAK	Zakamensk	60.37	340	eP	P	10 33 11.0	-0.8
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
WMQ	Urumqi	62.57	326	P	P	10 33 27.0	+0.3
WMQ				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.7						
WMQ				AMB	AMB		
	comp=Z,130nm,3.4s						
MKAR	Makanchi Array	67.40	326	P	P	10 33 57.9	-0.1
	comp=Z,20nm,0.4s,mb5.5,baz=120,slow=8.2,SNR=315						
MKAR	Makanchi Array	67.40	326	P	P	10 33 57.9	-0.1
KZA	Kyzart	69.22	319	P	P	10 34 10.3	+1.0
	SNR=24						
TKM2	Tokmak 2	69.39	320	P	P	10 34 10.8	+0.4
	SNR=14						
KBK	Karagaybulak	69.68	319	P	P	10 34 12.7	+0.6
	SNR=5.1						
UCH	Uchtor	69.77	319	P	P	10 34 13.7	+1.0
	SNR=22						
USP	Ospenovka	70.26	320	P	P	10 34 15.8	+0.1
	SNR=22						
AML	Almayashu	70.27	318	P	P	10 34 16.8	+1.0
	SNR=29						
EKS2	Erkin-Say	70.45	319	P	P	10 34 17.6	+0.8
	SNR=8.0						
ZAL	Zalesovo	70.52	333	P	P	10 34 16.0	-1.1
	comp=Z,3.7nm,0.5s,mb4.6,baz=24,slow=5.9,SNR=18						
NVS	Novosibirsk	71.80	333	eP	P	10 34 22.8	-2.0
NVS				e		10 43 34.5	
NVS				pmax	pmax		
	comp=N,9.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
KKAR	Karatay Array	72.81	318	i P	P	10 34 30.6	-0.4
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
VNDA	Vanda	74.10	173	eP	P	10 34 37.9	0.0
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VNDA	Vanda	74.10	173	P	P	10 34 38.4	+0.5
	comp=Z,1.2nm,0.5s,mb4.1,baz=318,slow=5.8,SNR=14						
VNDA	Vanda	74.10	173	eP	P	10 34 37.9	0.0
	comp=Z,2.1nm,0.9s,mb4.1						
SBA	Scott Base	74.97	173	eP	P	10 34 43.8	+0.9
SBA				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
SBA	Scott Base	74.97	173	eP	P	10 34 43.8	+0.9
	comp=Z,1.2nm,0.4s,mb4.2						
MAW	Mawson	77.09	201	P	P	10 34 55.7	+0.8
	comp=Z,2.0nm,0.5s,mb4.3,baz=86,slow=7.4,SNR=4.4						
BVA0	Borovoye Array	77.20	327	P	P	10 34 55.2	-0.7
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
CHKZ	Chkalovo	77.37	328	P	P	10 34 56.0	-0.8
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
CHKZ	Chkalovo	77.37	328	eP	P	10 34 55.9	-1.0
	comp=Z,12nm,0.9s,mb4.8						
AB31	Akbulak array	81.86	321	P	P	10 35 20.3	-0.7
AB31				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
QSPA	South Pole Qui	84.79	180	eP	P	10 35 35.8	+0.4
	comp=Z,3.1nm,0.6s,mb4.6						
ARU	Arti	84.83	328	eP	P	10 35 35.2	-0.8
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
ARU	Arti	84.83	328	eP	P	10 35 35.2	-0.8
	comp=Z,2.9nm,0.6s,mb4.6						
SYO	Syowa Base	85.80	201	⇑P	P	10 35 40.5	-0.1
SYO	Syowa Base	85.80	201	⇑pP	Px	10 36 02.6	
ILAR	Eielson Array	91.18	25	P	P	10 36 04.9	-1.4
	comp=Z,0.5nm,0.7s,mb3.9,baz=279,slow=4.5,SNR=7.0						
TXAR	Lajitas Array	122.93	58	PKP	PKPdf	10 41 58.7	-2.7
	comp=Z,0.3nm,0.8s,baz=207,slow=2.8,SNR=3.6						
TXAR	Lajitas Array	122.93	58	PKP	PKPdf	10 41 58.7	-2.7
LPAZ	La Paz	151.32	138	PKPbc	PKPdf	10 42 58.2	+5.3
	comp=Z,1.4nm,0.7s,baz=22,slow=1.4,SNR=9.0						
LPAZ				PKPab	PKPab	10 43 08.1	+2.8
	comp=Z,0.9nm,0.4s,baz=280,slow=7.8,SNR=7.7						
LPAZ	La Paz	151.32	138	PKPbc	PKPdf	10 42 58.2	+5.3
LPAZ				PKPab	PKPab	10 43 08.1	+2.8

*NEIC **10** 10:29:15.3±1.9, 25.90S×177.22W, h115^{km}±16^{km}, mb4.5/10, Error ellipse: s-maj=13.9km s-min=12.3km az=50.0*
*IDC **10** 10:29:15.9±2.6, 25.89S×177.21W, h117^{km}±23^{km}, mb4.2/13, mb1 4.4/14, mb1mx4.3/18, mbtmp4.5/14, MS3.4/1, Ms1 3.4/1, ms1mx2.7/26, Error ellipse: s-maj=19.9km s-min=18.7km az=27.0*
ISC 10 10:29:15.1±1.8**, 25.91S**±0.09×**177.3W**±0.1**, h121**^{km}±16^{km}**, n56, σ0^{s}93**/36**, mb4.4**/21**, 3C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.37	189	P	P	10 30 06.5	-0.7
	70nm,0.3s,baz=96,slow=21,SNR=3.9						
RAO				S	S	10 30 47.7	+0.8
	536nm,0.3s,baz=77,slow=23,SNR=12						
RAO				LR	LR	10 31 09.6	
	comp=Z,513nm,18.7s,baz=64,slow=33						
RAO	Raoul Island	3.37	189	ePn	P	10 30 05.7	-1.6
DZM	Mont Dzumac	15.30	281	P	P	10 32 53.2	+7.4
	1.3nm,0.3s,baz=90,slow=18,SNR=12						
CTA	Charters Tower	33.93	272	P	P	10 35 50.4	+1.6
	35nm,0.6s,mb5.3,baz=96,slow=10,SNR=8.5						
CTAO	Charters Tower	33.93	272	eP	P	10 35 50.1	+1.4
	36nm,0.7s,mb5.3						
STKA	Stephens Creek	36.28	251	P	P	10 36 09.6	+1.1
	40nm,1.3s,mb5.2,baz=114,slow=12,SNR=2.6						
PMG	Port Moresby	37.43	290	P	P	10 36 18.6	+0.2
	13nm,0.8s,mb4.9,baz=153,slow=4.5,SNR=4.7						
WB2	Warramunga Arr	44.69	267	⇓iP	P	10 37 17.2	-0.6
WRAB	Tennant Creek	44.69	267	eP	P	10 37 17.4	-0.4
WRA	Warramunga Arr	44.70	267	P	P	10 37 17.3	-0.6
	14nm,0.5s,mb5.0,baz=103,slow=7.7,SNR=41						
SBA	Scott Base	52.54	184	eP	P	10 38 18.4	+0.8
	7.5nm,1.3s,mb4.6						
VNDA	Vanda	52.60	186	P	P	10 38 19.2	+1.1
	1.9nm,0.6s,mb4.3,baz=356,slow=8.6,SNR=9.1						
VNDA	Vanda	52.60	186	eP	P	10 38 19.4	+1.3
	1.6nm,0.8s,mb4.1						
MBWA	Marble Bar	57.41	261	eP	P	10 38 51.6	-1.9
	3.5nm,0.6s,mb4.6						
QSPA	South Pole Qui	64.18	180	eP	P	10 39 37.5	-1.0
	6.8nm,1.0s,mb4.4						
MJAR	Matsushiro Arr	74.92	324	P	P	10 40 43.8	-0.8
	3.1nm,0.8s,mb4.1,baz=162,slow=6.1,SNR=8.3						
MAJO	Matsushiro	74.92	324	P	P	10 40 44.0	-0.6
	7.2nm,0.8s,mb4.5						
MAT	Matsushiro	74.92	324	eP	P	10 40 44.0	-0.5
MAT	Matsushiro	74.92	324	P	P	10 40 43.7	-0.8
MAW	Mawson	76.70	200	P	P	10 40 53.7	-0.2
	5.0nm,0.6s,mb4.4,baz=113,slow=8.2,SNR=7.7						
ASAJ	Asahikawa	78.76	332	P	P	10 41 07.1	+1.4
	14nm,0.8s,mb4.8,baz=206,slow=8.5,SNR=16						
FX1	Attu Island--F	78.89	354	eP	P	10 41 05.5	-0.7
YSS	Yuzh-Sakhalins	80.99	334	eP	P	10 41 18.4	+0.8
	18nm,0.9s,mb4.9						
SYO	Syowa Base	81.60	193	⇑PcP	PcP	10 41 25.0	-1.2
SNAA	Sanae	82.61	178	eP	P	10 41 24.3	-1.2
	2.4nm,0.9s,mb4.0						
VNA3	Neumayer Olymp	82.73	176	e	P	10 41 29.9	+3.8
VNA3	Neumayer Olymp	82.73	176	e	pP	10 41 56.1	-1.2
VNA3	Neumayer Olymp	82.73	176	e	pP	10 41 59.3	+2.0
VNA3	Neumayer Olymp	82.73	176	⇑iP	P	10 41 24.6	-1.5
VNA3				e		10 41 29.9	
VNA3				e	pP	10 41 56.1	-1.2
VNA3				e	pP	10 41 59.3	+2.0
VNA2	Neumayer--Watz	83.17	177	e	P	10 41 32.3	+3.9
VNA2	Neumayer--Watz	83.17	177	e	pP	10 42 00.7	+1.2
VNA2	Neumayer--Watz	83.17	177	e	pP	10 42 03.9	+4.4
VNA2	Neumayer--Watz	83.17	177	⇑iP	P	10 41 28.1	-0.3
VNA2				e		10 41 32.3	
VNA2				e	pP	10 42 00.7	+1.2
VNA2				e	pP	10 42 03.9	+4.4
YBH	Yreka Blue Hor	84.15	38	P	P	10 41 34.5	+0.7
	0.6nm,0.7s,mb3.6,baz=134,slow=8.0,SNR=4.1						
NVAR	Mina Array Bea	84.56	43	P	P	10 41 36.1	+0.2
	0.7nm,0.7s,mb3.7,baz=229,slow=9.8,SNR=7.8						
TUC	Tucson	85.86	51	eP	P	10 41 43.3	+0.7
	1.2nm,0.6s,mb4.0						
ENH	Enshi	89.56	304	eP	P	10 42 01.1	+0.8
	4.0nm,0.6s,mb4.7						
CMAR	Chiang Mai Arr	92.47	289	P	P	10 42 15.0	+1.0
	2.7nm,0.9s,mb4.5,baz=143,slow=3.6,SNR=8.0						
PDAR	Pinedale Array	92.48	43	P	P	10 42 13.6	+0.1
	0.4nm,0.8s,mb3.7,baz=198,slow=4.7,SNR=4.0						
ILAR	Eielson Array	93.44	13	P	P	10 42 16.5	-0.9
	0.6nm,0.8s,mb4.0,baz=218,slow=6.0,SNR=6.0						
MKAR	Makanchi Array	115.29	312	PKP	PKPdf	10 47 41.6	-0.6
	1.1nm,0.5s,baz=157,slow=0.5,SNR=9.6						
BVAR	Borovoye Array	123.54	318	PKP	PKPdf	10 47 58.0	0.0
	2.8nm,0.6s,baz=85,slow=1.5,SNR=16						
ARCES	ARCESS Array B	134.33	349	PKP	PKPdf	10 48 18.2	+0.1
	2.2nm,0.7s,baz=90,slow=1.2,SNR=5.9						
ARCES	ARCESS Array B	134.33	349	PKP	PKPdf	10 48 18.2	+0.1
FINES	FINESS Array B	141.10	342	PKhKP		10 48 24.5	
	1.0nm,0.5s,baz=37,slow=3.8,SNR=8.4						
FINES				PKP	PKPdf	10 48 31.5	+0.9
	1.1nm,0.6s,baz=45,slow=2.7,SNR=5.3						
NB2	NORSAR Subarra	144.40	353	PKPabc	PKPdf	10 48 35.1	-1.1
	13nm,0.8s,baz=10.0,slow=3.4						
NOA	NORSAR Array B	144.40	353	PKP	PKPdf	10 48 35.6	-0.6
	10nm,0.8s,baz=11,slow=2.3,SNR=23						
AKASG	Malin Array Be	147.96	328	PKPbc	PKPdf	10 48 45.9	+3.3
	4.8nm,0.5s,baz=43,slow=3.7,SNR=35						
BRTR	Keskin Array B	150.71	306	PKPbc	PKPdf	10 48 53.2	+6.0
	2.6nm,0.6s,baz=136,slow=3.4,SNR=12						
BRTR				PKPab	PKPab	10 49 02.6	0.0
	3.6nm,0.6s,baz=90,slow=3.2,SNR=9.6						
UPC	Upice	153.38	341	ePKPAB	PKPab	10 49 13.0	-0.5
DPC	Dobruska-Polom	153.43	340	ePKPAB	PKPab	10 49 13.4	-0.2
CLL	Collm	153.44	345	i P	PKPdf	10 48 59.7	+9.0
CLL				e		10 49 04.0	
CLL				e		10 49 08.0	
CLL	Collm	153.44	345	i PKP1	PKPdf	10 48 59.7	+9.0
CLL				ePKP2	PKPab	10 49 08.0	-5.7
PRU	Pruhonice	154.27	342	ePKPAB	PKPab	10 49 16.9	-0.3
KHC	Kasperske Hory	155.31	343	ePKPAB	PKPab	10 49 21.1	-0.5
GERES	GERESS Array B	155.54	342	PKPab	PKPab	10 49 21.5	-1.1
	1.1nm,0.7s,baz=34,slow=4.8,SNR=7.7						

IDC 10 10:57:02.4±1.4**, 11.31N×138.97E, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.7**/20**, mbtmp3.6**/5**, Error ellipse: s-maj=54.4km s-min=27.2km az=83.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.39	188	P	P	11 03 25.4	-2.1
	0.5nm,1.0s,baz=12,slow=10.0,SNR=3.2						
SONM	Songino Array	45.50	329	P	P	11 05 24.3	-1.0
	0.2nm,0.4s,baz=146,slow=10,SNR=3.0						
MKAR	Makanchi Array	59.21	318	P	P	11 07 05.3	-2.5
	1.0nm,0.8s,baz=106,slow=8.8,SNR=6.5						
BVAR	Borovoye Array	68.18	323	P	P	11 08 04.1	-2.5
	1.2nm,0.6s,baz=112,slow=8.0,SNR=6.2						
ILAR	Eielson Array	73.09	26	P	P	11 08 34.4	-1.7
	0.3nm,0.7s,baz=250,slow=5.9,SNR=5.6						

*NEIC **10** 10:59:44.6, 49.33N×6.79E, h1^{km}, ML3.1(LDG), ML2.7(STR), ML2.3(SZGRF), After STR.*
*STR **10** 10:59:44.6±0.2, 49.33N×6.79E, h1^{km}±1^{km}, Ml2.7, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **10** 10:59:45.3±0.1, 49.32N×6.82E, h1^{km}, Md2.7/1, Ml3.1/17, Error ellipse: s-maj=2.5km s-min=2.0km az=178.0, Suspected Mining induced.*
*CSEM **10** 10:59:45.1±0.1, 49.32N×6.83E, h2^{km}, ML3.1/16, Error ellipse: s-maj=1.2km s-min=0.9km az=123.0*
*BGR **10** 10:59:45.0±0.2, 49.32N×6.79E, h1^{km}, ML2.3/3, Error ellipse: s-maj=2.2km s-min=2.2km az=80.0*
*BNS **10** 10:59:46.1±1.0, 49.37N×6.83E, h1^{km}, ML2.2*
ISC 10 10:59:42.9±0.2**, 49.30N**±0.01×**6.74E**±0.02**, n58, σ1^{s}14**/113**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.46	27	ePg	Pg	10 59 52.7	+0.7
	SNR=18						
RUP				eSg	Sg	10 59 58.7	+0.6
	SNR=3.4						
WLF	Walferdange	0.53	314	ePg	Pg	10 59 55.6	+2.2
	SNR=7.3						
WLF				eSg	Sg	11 00 02.3	+1.8
	SNR=4.5						
WLF	Walferdange	0.53	314	ePg	Pg	10 59 55.3	+1.8
LANF	Langenberg	0.77	114	Pg	Pg	10 59 58.3	+0.1
LANF	Langenberg	0.77	114	ePg	Pg	10 59 58.5	+0.3
	SNR=12						
KTD	Kalmit	0.88	88	ePg	Pg	11 00 01.4	+1.0
	SNR=7.0						
KTD				eSg	Sg	11 00 12.7	+0.4
	SNR=4.5						
KTD	Kalmit	0.88	88	Pg	Pg	11 00 00.8	+0.3
KTD				Sg	Sg	11 00 12.7	+0.5
	SNR=4.5						
CDF	Champ du Feu	0.95	158	ePg	Pg	11 00 02.3	+0.4
CDF				ePn	Pn	11 00 03.6	+0.3
CDF				eSg	Sg	11 00 15.8	+1.2
	130nm,0.2s						
CDF	Champ du Feu	0.95	158	ePn	Pn	11 00 03.6	+0.3
CDF				eSg	Sg	11 00 15.8	+1.2
	65nm,0.2s						
BGG	Burgeitz	0.99	23	ePg	Pg	11 00 02.9	+0.3
BGG				eSg	Sg	11 00 15.6	-0.2
	95nm,0.3s						
RFYF	Reffroy	1.07	232	ePg	Pg	11 00 06.6	+2.5
	baz=50						
RFYF				eSg	Sg	11 00 20.7	+2.3
	77nm,0.2s						
ECH	Echery	1.12	165	Pg	Pg	11 00 06.5	+1.3
ECH				Sg	Sg	11 00 22.1	+2.1
ECH				Sg	Sg	11 00 22.1	+2.1
ECH	Echery	1.12	165	ePg	Pg	11 00 06.3	+1.2
	SNR=30						
THEF	They Montfort	1.18	205	ePg	Pg	11 00 07.5	+1.1
	SNR=25						
THEF				eSg	Sg	11 00 24.3	+2.1
	SNR=5.9						
THEF	They Montfort	1.18	205	Pg	Pg	11 00 07.4	+1.0
THEF				Sg	Sg	11 00 24.2	+2.1
LIBD	Limburg	1.28	153	ePg	Pg	11 00 09.8	+1.3
	SNR=2.9						
STB	Steinbach	1.30	3	ePg	Pg	11 00 08.7	-0.1
STB				eSg	Sg	11 00 25.6	-0.6
HAU	Haudompre	1.32	191	ePg	Pg	11 00 09.2	+0.1
HAU				eSn	Sn	11 00 27.2	+0.2
	64nm,0.3s						
MEZF	Maizieres J’vi	1.37	235	ePg	Pg	11 00 10.7	+0.6
	baz=58						
MEZF				eSn	Sn	11 00 30.3	+2.0
	16nm,0.2s						
KLL	Kalltalsperre	1.38	349	ePg	Pg	11 00 10.0	-0.4
KLL				eSg	Sg	11 00 28.2	-0.6
	21nm,0.7s						
TOD	Tromm	1.39	76	Pn	Pn	11 00 08.7	-0.8
TOD				Sg	Sg	11 00 27.8	-1.2
	SNR=5.3						
MEM	Membach	1.40	341	P	Pb	11 00 10.0	+0.5
MEM				S	Sb	11 00 27.7	-0.1
BFO	Black Forest	1.43	132	ePn	Pn	11 00 10.4	+0.3
	SNR=3.1						
BFO				ePg	Pg	11 00 11.7	+0.3
	SNR=4.8						
BFO				eSg	Sg	11 00 30.1	-0.4
	SNR=7.5						
BFO	Black Forest	1.43	132	ePg	Pg	11 00 10.5	-0.9
BFO				eSg	Sg	11 00 30.4	-0.1
BFO	Black Forest	1.43	132	Pg	Pg	11 00 11.7	+0.3
	SNR=4.8						
BFO				Sg	Sg	11 00 30.1	-0.4
	SNR=7.5						
TNS	Taunus Mts	1.45	49	ePn	Pn	11 00 09.4	-1.0
	SNR=1.7						
TNS				ePg	Pg	11 00 11.2	-0.5
	SNR=6.2						
TNS				eSg	Sg	11 00 29.2	-1.8
	SNR=3.5						
TNS	Taunus Mts	1.45	49	ePg	Pg	11 00 09.3	-2.4
TNS				eSg	Sg	11 00 29.3	-1.7
TNS	Taunus Mts	1.45	49	Pg	Pg	11 00 11.2	-0.5
	SNR=6.2						
TNS				Sg	Sg	11 00 29.2	-1.8
	SNR=3.5						

MOF	Molkenrain	1.47	169	Pn	Pn	11 00 12.0	+1.3
MOF				Sg	Sg	11 00 32.9	+1.1
MOF	Molkenrain	1.47	169	ePg	Pg	11 00 13.1	+0.9
	SNR=22						
MOF				eSg	Sg	11 00 32.7	+1.0
	SNR=8.4						
MOF	Molkenrain	1.47	169	Pn	Pn	11 00 12.0	+1.3
MOF				Sg	Sg	11 00 32.7	+0.9
	SNR=8.4						
GIVF	Givet	1.48	304	ePn	Pn	11 00 12.0	+1.2
GIVF				eSg	Sg	11 00 33.4	+1.3
	23nm,0.2s						
HINF	Hinteralfeld	1.48	177	ePn	Pn	11 00 10.9	0.0
HINF				ePg	Pg	11 00 12.8	+0.3
HINF				eSn	Sn	11 00 30.9	-0.3
	74nm,0.2s						
HINF	Hinteralfeld	1.48	177	ePn	Pn	11 00 10.9	0.0
HINF				eSn	Sn	11 00 30.9	-0.3
	37nm,0.2s						
HGN	Heimansgroeve	1.56	341	ePg	Pg	11 00 12.5	-1.4
	6.6nm,0.1s,baz=160						
HGN				eSg	Sg	11 00 31.5	-3.2
HGN	Heimansgroeve	1.56	341	ePn	Pn	11 00 12.4	+0.4
	SNR=2.8						
HGN				ePg	Pg	11 00 14.1	+0.1
	SNR=4.2						
HGN				eSg	Sg	11 00 34.5	-0.3
	SNR=4.2						
SFTF	Sexfontaines	1.57	226	ePg	Pg	11 00 13.3	-0.8
	baz=45						
SFTF				eSg	Sg	11 00 36.4	+1.4
	22nm,0.2s						
FELD	Feldberg	1.65	149	ePg	Pg	11 00 15.9	0.0
	SNR=6.2						
FELD				eSg	Sg	11 00 37.1	-0.7
	SNR=4.6						
BAIF	Baives	1.81	296	ePn	Pn	11 00 17.2	+1.7
BAIF				eSg	Sg	11 00 43.8	+0.7
	32nm,0.5s						
LOMF	Lomont	1.95	178	Pn	Pn	11 00 17.9	+0.4
LOMF	Lomont	1.95	178	ePg	Pg	11 00 22.1	+0.4
	SNR=4.1						
CABF	La Chapelle	2.72	189	ePn	Pn	11 00 28.7	+0.1
CABF				ePg	Pg	11 00 37.4	+0.2
CABF				eSg	Sg	11 01 11.1	-2.4
	16nm,0.5s						
CABF	La Chapelle	2.72	189	ePn	Pn	11 00 28.7	+0.1
CABF				eSg	Sg	11 01 11.1	-2.4
	8.2nm,0.5s						
LOR	Lormes	2.79	225	ePn	Pn	11 00 29.5	-0.1
	baz=46						
LOR				eSn	Sn	11 01 02.5	-2.0
LOR				eSg	Sg	11 01 14.9	-1.0
	14nm,0.4s						
SSF	Saint Saulge	3.11	225	ePn	Pn	11 00 33.8	-0.3
SSF				eSn	Sn	11 01 10.6	-1.9
SSF				eSg	Sg	11 01 24.1	-2.3
	5.3nm,0.4s						
SMF	Signal de Mont	3.29	217	ePn	Pn	11 00 35.8	-0.9
SMF				eSn	Sn	11 01 13.6	-3.5
SMF				eSg	Sg	11 01 29.7	-2.6
	7.1nm,0.3s						
AVF	Avril sur Loir	3.38	223	ePn	Pn	11 00 37.0	-1.0
AVF				eSn	Sn	11 01 17.1	-2.3
	3.5nm,0.3s						
HYF	Humbligny	3.41	235	ePn	Pn	11 00 38.0	-0.3
BGF	Bois d’Agland	3.79	225	ePn	Pn	11 00 43.4	-0.3
BGF				eSg	Sg	11 01 45.9	-3.0
	9.0nm,0.4s						
LPG	La Plagne	3.80	180	ePn	Pn	11 00 43.4	-0.5
TCF	Toulx Ste Croi	4.29	227	ePn	Pn	11 00 50.4	-0.4
TCF				eSg	Sg	11 02 03.9	-1.6
	2.0nm,0.2s						
LDF	La Druitiere	4.57	264	ePn	Pn	11 00 55.0	+0.1
GEC2	GERESS Array S	4.60	93	ePn	Pn	11 00 54.3	-1.0
	SNR=3.7						
GEC2				eSn	Sn	11 01 44.2	-6.1
	SNR=2.0						
FLN	La Foliniere	4.78	266	ePn	Pn	11 00 57.5	-0.3
	baz=84						
FLN				ePg	Pg	11 01 14.9	-3.3
	baz=92						
FLN	La Foliniere	4.78	266	ePg	Pg	11 01 14.9	-3.3
GRR	Gorron	5.10	263	ePg	Pg	11 01 21.1	-3.5
GRR				eSn	Sn	11 01 58.3	-4.5
	4.1nm,0.3s						
MFF	Saint Martin d	5.35	242	ePn	Pn	11 01 05.5	-0.4
SGMF	Saint Gilles	6.23	264	ePn	Pn	11 01 17.6	-0.7

MOS ***10*** *11:14:17.7±1.2, 27.24N×140.39E, h413^{km}, mb4.2/18, Error ellipse: s-maj=14.9km s-min=10.5km az=106.4*

IDC ***10*** *11:14:25.8±0.5, 27.26N×140.31E, h491^{km}±5^{km}, mb3.6/19, mb1 3.8/24, mb1mx3.7/27, mbtmp4.5/24, Error ellipse: s-maj=11.7km s-min=10.1km az=70.0*

JMA ***10*** *11:14:26.2±0.3, 27.36N×140.72E, h507^{km}±5^{km}, M4.3*

BJI ***10*** *11:14:26.3, 27.10N×140.18E, h526^{km}, mB4.8, mb4.7*

NEIC ***10*** *11:14:27.0±0.7, 27.25N×140.24E, h504^{km}±6^{km}, mb4.1/30, Error ellipse: s-maj=7.4km s-min=5.2km az=142.0*

ISC 10 11:14:25.5±0.4, **27.22N**±0.04×**140.29E**±0.05, **h497**^{km}±3^{km}, **n132, σ0^{s}99**/137, **mb4.1**/53, **3C-4D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.69	94	P	P	11 15 29.6	+0.2
	152nm,0.3s,baz=287,slow=22,SNR=80						
CBIJ				S	S	11 16 19.3	-0.6
	206nm,0.3s,baz=299,slow=23,SNR=7.2						
CBIJ	Chichi jima	1.69	94	P	P	11 15 29.5	+0.2
CBIJ				eS	S	11 16 18.5	-1.4
JHHJ	Haha-jima-NKT	1.79	109	P	P	11 15 30.4	+0.6
JHHJ				eS	S	11 16 21.1	+0.4
JHJ2	Mitsune	5.88	356	P	P	11 16 01.1	-0.3
JHJ2				S	S	11 17 17.0	-0.4
JHJ	Hachijo jima 2	5.89	356	P	P	11 16 00.9	-0.6
	12nm,0.3s,baz=72,slow=21,SNR=4.1						
JHJ				S	S	11 17 15.8	-1.7
	26nm,0.3s,baz=260,slow=22,SNR=3.0						
BSO1	Boso 1	7.43	4	P	P	11 16 16.7	-0.3
BSO1				eS	S	11 17 45.2	-0.3
BSO3	Boso 3	7.56	1	P	P	11 16 18.0	-0.3
BSO3				eS	S	11 17 48.2	+0.3
BSO4	Boso 4	7.74	0	P	P	11 16 20.0	-0.2
JIE	Ise	7.78	338	P	P	11 16 22.7	+2.1
JKN2	Miekihoku	7.80	335	P	P	11 16 23.0	+2.2
JOD2	Odawara 2	8.08	353	P	P	11 16 25.0	+1.2
JAI	Aioi	8.26	324	P	P	11 16 26.8	+1.1
JHU	Hanno	8.64	355	P	P	11 16 28.0	-1.7
JHU				eS	S	11 18 06.9	-1.6
JRY	Ryogami san	8.85	353	P	P	11 16 31.9	0.0
UWA2	Uwa jima 2	8.92	314	P	P	11 16 34.1	+1.5
JYT	Yasato	8.98	360	P	P	11 16 32.6	-0.7
JYT				eS	S	11 18 13.3	-1.5
JET	Tanbara	9.04	318	P	P	11 16 35.2	+1.3
JAG	Ashikaga	9.20	356	P	P	11 16 33.9	-1.7
JNA	Nagahama	9.24	315	P	P	11 16 37.5	+1.5
JAD	Aida	9.31	327	P	P	11 16 38.4	+1.6
JAD				eS	S	11 18 23.6	+2.4
JHO	Hitachi	9.36	1	P	P	11 16 36.6	-0.7
JHO				eS	S	11 18 21.1	-1.1
MJAR	Matsushiro Arr	9.46	350	P	P	11 16 37.4	-0.9
	0.9nm,0.3s,baz=51,slow=26,SNR=11						
MJAR				S	S	11 18 24.5	+0.5
	0.5nm,0.3s,baz=161,slow=11,SNR=3.5						
MAJO	Matsushiro	9.46	350	eP	P	11 16 38.1	-0.2
MAT	Matsushiro	9.46	350	eP	P	11 16 38.0	-0.3
MAT				eS	S	11 18 25.0	+0.9
MAT	Matsushiro	9.46	350	P	P	11 16 37.5	-0.8
MAT				S	S	11 18 25.0	+0.9
JHM	Kurahashi	9.60	318	P	P	11 16 42.3	+2.5
JHT	Toyohira	10.03	320	P	P	11 16 44.9	+0.5
JNU	Nakatsue	10.04	308	P	P	11 16 44.5	0.0
	0.5nm,0.3s,baz=93,slow=7.7,SNR=4.9						
JOW	Kunigami	10.72	271	P	P	11 16 52.5	+0.8
	6.8nm,0.3s,baz=112,slow=13,SNR=7.6						
OFUJ	Ofunato	11.88	5	P	P	11 17 04.1	+0.4
JTB	Tobi-shima	11.96	357	P	P	11 17 04.8	+0.3
KS15	Wonju Array Si	14.61	317	eP	P	11 17 36.1	+4.2
ASAJ	Asahikawa	16.96	6	P	P	11 17 56.8	+1.4
	0.5nm,0.3s,baz=250,slow=16,SNR=5.3						
HIA	Hailar	27.12	330	eP	P	11 19 28.4	-0.7
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HIA	Hailar	27.12	330	eP	P	11 19 28.4	-0.8
	comp=Z,5.1nm,0.6s,mb4.1						
ENH	Enshi	27.14	284	eP	P	11 19 28.0	-1.5
	comp=Z,10nm,0.9s,mb4.2						
HHC	Hu-ho-hao-te	27.27	307	eP	P	11 19 30.2	-0.3
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
HHC				AMB	AMB		
	comp=Z,70nm,6.7s						
XAN	Xi’an	27.76	292	P	P	11 19 33.8	-1.1
GYA	Guiyang	29.96	276	⇓iP	P	11 19 53.6	-0.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
LZH	Lanzhou	32.11	295	eP	P	11 20 11.5	-0.7
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
ULN	Ulaanbaatar	33.08	317	eP	P	11 20 20.2	-0.1
ULN				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.1						
ULN	Ulaanbaatar	33.08	317	eP	P	11 20 20.2	-0.1
	comp=Z,9.9nm,1.2s,mb4.1						
SONM	Songino Array	33.46	317	P	P	11 20 23.3	-0.2
	comp=Z,3.0nm,0.5s,mb4.0,baz=130,slow=8.9,SNR=32						
SONM				PcP	PcP	11 22 50.4	-0.6
	comp=Z,0.7nm,0.7s,baz=126,slow=1.7,SNR=5.1						
SONM				ScP		11 25 47.2	
	comp=Z,0.3nm,0.5s,baz=144,slow=3.5,SNR=6.9						
FX1	Attu Island--F	35.39	35	eP	P	11 20 41.4	+1.8
GTA	Gaotai	35.66	300	eP	P	11 20 41.7	-0.3
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
ZAK	Zakamensk	36.41	320	⇓iP	P	11 20 47.9	-0.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.0						
CMAR	Chiang Mai Arr	38.95	266	P	P	11 21 08.9	-0.2
	comp=Z,4.3nm,0.9s,mb3.9,baz=57,slow=9.0,SNR=14						
CMAR				PcP	PcP	11 23 07.9	-0.1
	comp=Z,0.9nm,0.4s,baz=203,slow=2.0,SNR=4.1						
LSA	Lhasa	43.02	285	eP	P	11 21 43.0	+1.3
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.3						
LSA	Lhasa	43.02	285	eP	P	11 21 43.0	+1.3
	comp=Z,6.9nm,0.6s,mb4.3						
KULM	Kulim	43.57	247	eP	P	11 21 46.1	-0.2
BILL	Bilibino	43.72	14κ	iP	P	11 21 46.9	+0.2
BILL				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.4						
BILL	Bilibino	43.72	14	eP	P	11 21 46.5	-0.3
	comp=Z,12nm,0.8s,mb4.4						
WMQ	Urumqi	45.13	306	eP	P	11 21 58.5	+0.4
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,120nm,5.2s						
WRAB	Tennant Creek	47.23	188	eP	P	11 22 13.3	-1.2
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.2						
WRAB	Tennant Creek	47.23	188	eP	P	11 22 13.3	-1.2
	comp=Z,4.2nm,0.4s,mb4.2						
WRA	Warramunga Arr	47.24	188	P	P	11 22 13.5	-1.1
	comp=Z,3.4nm,0.3s,mb4.3,baz=5.5,slow=7.7,SNR=52						
WRA				PcP	PcP	11 23 35.9	-0.5
	comp=Z,1.1nm,0.5s,baz=358,slow=3.6,SNR=6.1						
WRA				ScP		11 26 40.8	
	comp=Z,1.3nm,0.7s,baz=7.3,slow=4.7,SNR=8.1						
GUN	Gumba	47.89	284	eP	P	11 22 19.9	+0.5
	comp=Z,87nm,0.8s,mb5.2						
ZAL	Zalesovo	48.30	319	P	P	11 22 20.5	-1.6
	comp=Z,3.4nm,0.7s,mb3.8						
ZAL	Zalesovo	48.30	319	P	P	11 22 20.5	-1.6
PKI	Pulchoki	48.38	284	eP	P	11 22 22.7	-0.4
	comp=Z,23nm,0.7s,mb4.6						
PKI	Pulchoki	48.38	284	eP	P	11 22 22.7	-0.4
PKI				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.3						
KKN	Kakani	48.44	284	eP	P	11 22 23.5	0.0
	comp=Z,45nm,0.9s,mb4.8						
KKN	Kakani	48.44	284	eP	P	11 22 23.5	0.0
KKN				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.5						
DMN	Daman	48.63	284	eP	P	11 22 24.8	-0.2
	comp=Z,33nm,0.8s,mb4.7						
GKN	Gorkha	48.95	285	eP	P	11 22 27.2	-0.1
	comp=Z,71nm,1.1s,mb4.9						
MKAR	Makanchi Array	49.09	310	P	P	11 22 27.5	-0.7
	comp=Z,2.7nm,0.6s,mb3.8,baz=90,slow=9.3,SNR=38						
MKAR				PcP	PcP	11 23 41.6	-1.3
	comp=Z,2.1nm,0.7s,baz=83,slow=6.0,SNR=8.0						
NVS	Novosibirsk	49.36	320	eP	P	11 22 27.3	-2.8
KOLN	Koldanda	49.89	284	eP	P	11 22 34.0	-0.4
	comp=Z,65nm,1.1s,mb4.9						
MBWA	Marble Bar	52.05	205	eP	P	11 22 48.8	-1.5
	comp=Z,5.4nm,0.7s,mb4.0						
ULHL	Ulahol	53.55	304	P	P	11 23 00.8	+0.1
	SNR=11						
TKM2	Tokmak 2	53.96	305	P	P	11 23 04.0	+0.3
	SNR=7.2						
KZA	Kyzart	54.30	304	P	P	11 23 07.2	+1.1
	SNR=14						
KBK	Karagaybulak	54.46	305	P	P	11 23 07.3	+0.1
	SNR=9.7						
UCH	Uchtor	54.83	304	P	P	11 23 10.6	+0.8
	SNR=19						
EKS2	Erkin-Say	55.32	305	P	P	11 23 13.0	-0.2
	SNR=5.4						
AML	Almayashu	55.44	304	P	P	11 23 14.9	+0.8
	SNR=16						
CHKZ	Chkalovo	56.65	318	eP	P	11 23 20.5	-1.8
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.1						
CHKZ	Chkalovo	56.65	318	eP	P	11 23 20.5	-1.8
	comp=Z,8.4nm,0.8s,mb4.1						
BVAR	Borovoye Array	56.81	317	P	P	11 23 22.5	-0.9
	comp=Z,12nm,0.5s,mb4.5,baz=94,slow=8.3,SNR=90						
BVAR				PcP	PcP	11 24 10.6	-1.7
	comp=Z,2.1nm,0.5s,baz=90,slow=4.4,SNR=4.0						
MCK	McKinley	57.45	30	eP	P	11 23 27.0	-0.6
MCK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.8						
MCK	McKinley	57.45	30	eP	P	11 23 27.0	-0.7
	comp=Z,3.9nm,0.8s,mb3.8						
SML	Sawmill	57.62	32	eP	P	11 23 27.3	-1.5
ILAR	Eielson Array	58.41	29	P	P	11 23 32.5	-1.6
	comp=Z,1.6nm,0.4s,mb3.7,baz=264,slow=5.4,SNR=28						
STKA	Stephens Creek	58.78	179	P	P	11 23 36.4	-0.7
	comp=Z,2.0nm,0.5s,mb3.7,baz=346,slow=7.0,SNR=3.6						
INK	Inuvik	63.62	24	eP	P	11 24 07.1	-1.0
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	Inuvik	63.62	24	P	P	11 24 07.3	-0.8
	comp=Z,1.1nm,0.4s,mb3.8,baz=309,slow=7.3,SNR=12						
INK	Inuvik	63.62	24	eP	P	11 24 07.0	-1.1
	comp=Z,1.7nm,0.6s,mb3.8						
YKA	Yellowknife Ar	72.83	28	P	P	11 25 03.5	-0.3
	comp=Z,1.9nm,0.5s,mb3.9,baz=291,slow=5.7,SNR=9.4						
ARCES	ARCESS Array B	72.86	340	P	P	11 25 04.0	0.0
	comp=Z,3.3nm,0.7s,mb4.0,baz=68,slow=8.1,SNR=12						
ARCES	ARCESS Array B	72.86	340	P	P	11 25 04.0	0.0
KAF	Kangasniemi	76.62	334	ep	P	11 25 24.0	-1.0
	comp=Z,7.7nm,0.5s,mb4.5,baz=55,slow=5.2						
KAF	Kangasniemi	76.62	334	eP	P	11 25 24.0	-1.0
KAF				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.5						
FINES	FINESS Array B	77.08	333	P	P	11 25 27.0	-0.5
	comp=Z,7.8nm,0.5s,mb4.5,baz=68,slow=5.2,SNR=104						
NEW	Newport	77.94	42	eP	P	11 25 32.5	0.0
NEW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NEW	Newport	77.94	42	eP	P	11 25 32.5	0.0
	comp=Z,3.8nm,0.8s,mb3.9						
WVOR	Wild Horse Val	79.67	48	eP	P	11 25 42.2	+0.5
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
WVOR	Wild Horse Val	79.67	48	eP	P	11 25 42.2	+0.5
	comp=Z,2.6nm,0.8s,mb3.8						
AKASG	Malin Array Be	81.51	323	P	P	11 25 50.5	-0.5
	comp=Z,7.0nm,0.6s,mb4.3,baz=51,slow=5.1,SNR=5.5						
NVAR	Mina Array Bea	81.76	51	P	P	11 25 53.5	+1.0
	comp=Z,1.5nm,0.6s,mb3.7,baz=293,slow=5.9,SNR=17						
HLID	Hailey	81.85	45	eP	P	11 25 54.1	+1.2
	comp=Z,1.8nm,0.7s,mb3.7						
MALT	Malatya	82.13	309	eP	P	11 25 55.5	+1.1
MALT				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.4						
MALT	Malatya	82.13	309	eP	P	11 25 55.5	+1.1
	comp=Z,12nm,0.9s,mb4.4						
BOZ	Bozeman (W)	82.51	42	eP	P	11 25 57.0	+0.9
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
BOZ	Bozeman (W)	82.51	42	eP	P	11 25 57.0	+0.8
	comp=Z,0.9nm,0.7s,mb3.4						
FFC	Flin Flon	82.52	31	eP	P	11 25 56.3	+0.3
FFC				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
FFC	Flin Flon	82.52	31	eP	P	11 25 56.3	+0.3
	comp=Z,2.4nm,0.9s,mb3.7						
ELK	Elko	82.72	48	eP	P	11 25 58.6	+1.3
ELK				pmax	pmax		
	comp=Z,13nm,1.7s						
ELK	Elko	82.72	48	eP	P	11 25 58.6	+1.3
	comp=Z,13nm,1.7s,mb4.2						
NB2	NORSAR Subarra	82.86	338	P	P	11 25 56.6	-1.0
	comp=Z,2.6nm,0.6s,mb3.9,baz=45,slow=4.8						
NOA	NORSAR Array B	82.86	338	P	P	11 25 56.9	-0.7
	comp=Z,4.2nm,0.7s,mb4.1,baz=46,slow=4.8,SNR=12						
FCC	Fort Churchill	83.22	25	eP	P	11 25 59.0	-0.5
FCC				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
FCC	Fort Churchill	83.22	25	eP	P	11 25 59.0	-0.5
	comp=Z,1.6nm,0.7s,mb3.7						
IMW	Indian Meadow	83.84	44	eP	P	11 26 04.4	+1.6
	comp=Z,2.3nm,0.9s,mb3.7						
RRI2	Red Ridge	83.90	44	eP	P	11 26 04.5	+1.3
	comp=Z,2.4nm,0.8s,mb3.8						
TPAW	Teton Pass	84.05	44	eP	P	11 26 05.0	+1.1
	comp=Z,2.3nm,0.7s,mb3.8						
HWUT	Hardware Ranch	84.66	46	eP	P	11 26 07.5	+0.6
BR131	Keskin Array S	84.67	312	eP	P	11 26 06.4	-0.6
	comp=Z,1.5nm,0.5s,mb3.9						
BRTR	Keskin Array B	84.67	312	P	P	11 26 06.8	-0.3
	comp=Z,2.3nm,0.7s,mb3.9,baz=98,slow=3.2,SNR=8.9						
PDAR	Pinedale Array	85.30	44	P	P	11 26 10.7	+0.7
	comp=Z,0.6nm,0.6s,mb3.4,baz=270,slow=3.0,SNR=5.2						
PV10	Paradox Valley	88.04	47	eP	P	11 26 23.5	+0.4
GERES	GERESS Array B	90.52	328	P	P	11 26 33.8	-0.6
	comp=Z,0.7nm,0.5s,mb3.8,baz=56,slow=4.8,SNR=9.6						
ANMO	Albuquerque	91.68	49	eP	P	11 26 41.4	+1.4
	comp=Z,1.8nm,1.0s,mb4.0						
TXAR	Lajitas Array	96.87	52	P	P	11 27 04.9	+1.1
	comp=Z,0.6nm,0.7s,mb3.9,baz=308,slow=1.4,SNR=8.1						
QSPA	South Pole Qui	116.99	180	ePKPdf	PKPdf	11 32 12.8	+0.7
SNAA	Sanae	131.07	195	ePKPdf	PKPdf	11 32 39.4	0.0
VNA2	Neumayer--Watz	132.62	194	e	PKPdf	11 32 52.1	+10
VNA2	Neumayer--Watz	132.62	194	⇑iP	PKPdf	11 32 44.5	+2.3
VNA2				e		11 32 52.1	
VNA3	Neumayer Olymp	132.84	193	e	PKPdf	11 32 51.1	+8.5
VNA3	Neumayer Olymp	132.84	193	⇑iP	PKPdf	11 32 43.9	+1.3
VNA3				e		11 32 51.1	
VNA1	Neumayer--Stat	133.02	194	e	PKPdf	11 32 53.8	+11
VNA1	Neumayer--Stat	133.02	194	⇑iP	PKPdf	11 32 45.5	+2.5
VNA1				e		11 32 53.8	
LPAZ	La Paz	151.52	73	ePKPdf	PKPdf	11 33 19.9	+3.7

NEIC ***10*** *11:29:49.4, 30.65S×72.05W, h21^{km}, mb3.7/1, ML4.2(GUC), After GUC.*

GUC ***10*** *11:29:49.8±0.7, 30.64S×72.05W, h28^{km}±3^{km}, MD4.3, ML4.2*

IDC ***10*** *11:29:58.6±3.5, 30.39S×71.72W, h71^{km}±35^{km}, mb3.4/2, mb1 3.6/6, mb1mx3.5/18, mbtmp3.7/6, ML3.8/2, MS3.3/2, Ms1 3.3/2, ms1mx2.8/10, Error ellipse: s-maj=31.4km s-min=27.8km az=33.0*

ISC 10 11:29:49.4±0.6, **30.67S**±0.02×**72.10W**±0.05, **h21**^{km}, **n42, σ1^{s}00**/59, **mb3.5**/3, **MS3.3**/1, **3C-6D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OVCH	Ovalle	0.78	86	eP	Pb	11 30 03.4	-0.7
OVCH				i S	Sb	11 30 12.8	-1.4
OVCH				AMP		11 30 16.8	
	comp=N,4µm,0.4s						
OVCH	Ovalle	0.78	86	⇓iP	Pb	11 30 03.5	-0.6
OVCH				i S	Sb	11 30 12.8	-1.4
LSCH	La Serena	1.06	45	eP	Pb	11 30 08.6	-0.2
LSCH				i S	Sb	11 30 21.7	-0.5
LSCH				AMP		11 30 27.2	
	comp=N,3µm,0.8s						
LSCH	La Serena	1.06	45	⇓iP	Pb	11 30 08.8	0.0
LSCH				i S	Sb	11 30 23.0	+0.7
TLL	Tololo Astrono	1.23	66	⇓iP	Pn	11 30 11.3	-0.2
TLL				i S	Sb	11 30 27.1	0.0
TLL				AMP		11 30 29.8	
	comp=N,6µm,0.7s						
TLL	Tololo Astrono	1.23	66	⇓iP	Pn	11 30 11.4	-0.1
TLL				i S	Sb	11 30 27.6	+0.5
ILCH	Illapel	1.25	141	⇓iP	Pn	11 30 11.4	-0.5
ILCH				i S	Sb	11 30 26.3	-1.7
ILCH				AMP		11 30 29.5	
	comp=N,5µm,0.5s						
ILCH	Illapel	1.25	141	⇑iP	Pn	11 30 11.4	-0.5
ILCH				i S	Sb	11 30 26.6	-1.4
PACH	Papudo	1.95	163	i P	Pn	11 30 21.6	-0.2
PACH	Papudo	1.95	163	P	Pn	11 30 21.6	-0.2
LCO	Las Campanas	2.05	37	⇑iP	Pn	11 30 23.6	+0.3
LCO				i S	Sn	11 30 49.3	+0.8
LCO				AMP		11 31 01.1	
	comp=N,1µm,0.5s						
LCO	Las Campanas	2.05	37	⇑iP	Pn	11 30 23.6	+0.3
LCO				i S	Sn	11 30 49.3	+0.8
IHA	Instituto Hidr	2.38	171	P	Pn	11 30 27.6	-0.5
JACH	Jahuel	2.39	148	i P	Pn	11 30 28.6	+0.5
JACH				i S	Sn	11 30 57.9	+0.9
JACH	Jahuel	2.39	148	⇓iP	Pn	11 30 28.8	+0.7
JACH				eS	Sn	11 30 58.6	+1.6
VACH	Vallenar	2.39	30	eP	Pn	11 30 27.6	-0.5
VACH				i S	Sn	11 30 56.8	-0.3
VACH	Vallenar	2.39	30	eP	Pn	11 30 28.2	+0.1
VACH				i S	Sn	11 30 56.8	-0.3
PEL	Peldehue	2.75	154	AMP		11 31 17.0	
	comp=N,2µm,0.5s						
LCCH	Las Cruces	2.84	171	P	Pn	11 30 33.9	-0.6
DSCH	Colegio Aleman	3.02	155	AMP		11 31 27.4	
	comp=N,2µm,0.5s						
CLCH	Cerro Calan	3.03	154	eP	Pn	11 30 37.5	+0.3
CLCH				i S	Sn	11 31 14.0	+0.8
CLCH				AMP		11 31 29.4	
	comp=N,2µm,0.6s						
CLCH				AMP		11 31 30.0	
	comp=N,2µm,0.6s						
ZON	Zonda	3.06	108	eP	Pn	11 30 40.5	+2.8
ZON				eS	Sn	11 31 25.5	+11
TACH	Talagante	3.14	162	eP	Pn	11 30 39.0	+0.2
ANTU	Antumapu	3.15	157	AMP		11 31 30.7	
	comp=E,947nm,0.7s						
PCH	Pirque	3.24	156	eP	Pn	11 30 40.6	+0.4
PCH				i S	Sn	11 31 19.0	+0.4
PCH	Pirque	3.24	156	eP	Pn	11 30 40.6	+0.4
PCH				i S	Sn	11 31 19.7	+1.1
CFAA	Coronel Fontan	3.44	107	P	Pn	11 30 46.5	+3.4
	comp=E,1.6nm,0.3s,baz=291,slow=12,SNR=72						
CFAA				S	Sn	11 31 25.2	+1.5
	comp=E,1.4nm,0.3s,baz=273,slow=13,SNR=4.3						
CFAA	Coronel Fontan	3.44	107	P	Pn	11 30 46.5	+3.4
CFAA				S	Sn	11 31 25.2	+1.5
CHCH	Chadas Angostu	3.48	160	eP	Pn	11 30 43.5	-0.1
CHCH	Chadas Angostu	3.48	160	eP	Pn	11 30 43.7	+0.1
CHCH				i S	Sn	11 31 24.5	-0.2
CACH	El Canelo	3.67	160	eP	Pn	11 30 47.0	+0.7
SFDO	San Fernando	4.04	167	eP	Pn	11 30 51.6	0.0
SFDO	San Fernando	4.04	167	eP	Pn	11 30 51.3	-0.3
SFDO				eS	Sn	11 31 37.9	-1.1
PLCA	Paso Flores	10.12	173	P	P	11 32 23.6	+6.9
	comp=E,0.2nm,0.3s,baz=337,slow=12,SNR=2.8						
PLCA				LR	LR	11 36 19.8	
	comp=E,153nm,18.8s,baz=357,slow=37						
TRQA	Tornquist	11.14	134	Pn	P	11 32 27.7	-3.0
LPAZ	La Paz	14.77	15	P	P	11 33 20.4	+1.4
	comp=E,0.1nm,0.3s,baz=190,slow=6.6,SNR=9.2						
SIV	San Ignacio	17.75	37	P	P	11 33 55.6	-1.4
	comp=E,0.3nm,0.3s,baz=234,slow=12,SNR=17						
SAML	Samuel	23.16	23	eP	P	11 34 55.0	-0.6
	comp=E,2.5nm,0.9s,mb3.6						
BDFB	Brasilia	26.64	61	P	P	11 35 26.1	-2.5
	comp=E,1.5nm,0.4s,mb3.9,baz=195,slow=12,SNR=4.0						
BDFB				LR	LR	11 46 24.3	
	comp=E,78nm,19.8s,MS3.3,baz=287,slow=38						
TXAR	Lajitas Array	66.81	330	P	P	11 40 42.6	+0.7
	comp=E,0.1nm,0.6s,mb3.0,baz=153,slow=8.1,SNR=2.2						
BVAR	Borovoye Array	144.82	40	PKP	PKPdf	11 49 25.7	-2.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,1.2nm,0.5s,baz=296,slow=2.5,SNR=9.5						
ZAL	Zalesovo	151.39	29	PKPbc	PKPdf	11 49 42.8	+3.7
	comp=E,2.4nm,0.5s,baz=133,slow=8.9,SNR=5.3						

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*MOS **10** 11:45:46.4±1.4, 51.16N×179.46E, h33^{km}, mb4.5/20, Error ellipse: s-maj=11.2km s-min=10.0km az=90.4*
*BJI **10** 11:45:48.0, 51.55N×179.00E, h25^{km}, mB4.9, mb4.8, Ms4.3, Msz4.2*
*IDC **10** 11:45:49.5±3.2, 51.22N×179.55E, h46^{km}±29^{km}, mb3.9/20, mb1 4.1/20, mb1mx4.0/26, mbtmp4.2/20, ML4.0/1, MS3.6/17, Ms1 3.6/17, ms1mx3.5/37, Error ellipse: s-maj=23.0km s-min=11.9km az=168.0*
*NEIC **10** 11:45:50.0±0.7, 51.18N×179.53E, h50^{km}±6^{km}, mb4.5/26, Error ellipse: s-maj=9.6km s-min=3.6km az=179.0*
ISC 10 11:45:48.4±1.0**, 51.21N**±0.09×**179.55E**±0.05**, h48**^{km}±8^{km}**, h46**^{km}±2.3^{km}**:pP-P, n127,** σ**1**^{s}**00**/119**, mb4.4**/48**, MS3.8**/22**,**
Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIWB	Kanaga Island	2.16	71	*e*P	P	11 46 23.0	+0.3
GSTR	Great Sitkin T	2.88	70	*e*P	P	11 46 33.4	+0.4
SMY	Shemya	3.69	296	*e*P	P	11 46 45.1	+0.6
FX1	Attu Island--F	4.28	295	P	P	11 46 52.6	-0.1
	28nm,0.3s,baz=148,slow=4.4,SNR=88						
FX1				S	S	11 47 52.7	+11
	39nm,0.3s,baz=88,slow=22,SNR=10.0						
FX1	Attu Island--F	4.28	295	*e*P	P	11 46 52.6	-0.1
NIKO	Nikolski	7.36	72	*e*P	P	11 47 34.7	-1.2
RSO	Redoubt South	17.97	48	*e*P	P	11 49 57.6	+1.6
BILL	Bilibino	18.09	344	*e*P	P	11 49 59.1	+1.7
BILL				pmax	pmax		
	comp=Z,14nm,1.0s						
BILL				MLR	MLR		
	comp=Z,200nm,17.0s						
BILL	Bilibino	18.09	344	*e*P	P	11 49 58.6	+1.2
	comp=Z,18nm,1.1s						
SPU	Mount Spurr	18.53	46	*e*P	P	11 50 03.5	+0.6
SLKM	Skilak Lake	19.18	49	*e*P	P	11 50 11.3	+0.8
DIV	Divide	21.45	49	*e*P	P	11 50 32.4	-1.8
COLA	College	21.68	39	*e*P	P	11 50 36.6	+0.1
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1						
COLA	College	21.68	39	*e*P	P	11 50 36.6	0.0
	comp=Z,6.1nm,0.8s,mb4.1						
ILAR	Eielson Array	22.03	39	P	P	11 50 38.6	-1.3
ILAR						11 54 35.9	
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	22.03	39	P	P	11 50 38.5	-1.4
	comp=Z,0.8nm,0.7s,baz=242,slow=8.8,SNR=17						
ILAR				PcP	PcP	11 54 35.9	-1.9
	comp=Z,0.5nm,0.7s,baz=260,slow=2.8,SNR=4.2						
YSS	Yuzh-Sakhalins	24.30	274	*e*P	P	11 51 02.6	+0.5
YSS				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.6						
YSS	Yuzh-Sakhalins	24.30	274	*e*P	P	11 51 02.5	+0.4
	comp=Z,28nm,1.1s,mb4.6						
DAWY	Dawson	24.94	43	*e*P	P	11 51 07.5	-0.6
ASAJ	Asahikawa	25.66	269	P	P	11 51 15.0	-0.2
ASAJ				pmax	pmax		
	comp=Z,31nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,98nm,18.7s						
ASAJ	Asahikawa	25.66	269	P	P	11 51 15.0	-0.2
	comp=Z,31nm,0.9s,mb4.8,baz=57,slow=6.4,SNR=22						
ASAJ				LR	LR	12 01 15.7	
	comp=Z,98nm,18.7s,MS3.4,baz=162,slow=36						
INK	Inuvik	28.19	35	P	P	11 51 37.2	-0.9
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	Inuvik	28.19	35	P	P	11 51 37.2	-0.9
	comp=Z,1.1nm,0.8s,mb3.5,baz=255,slow=5.1,SNR=4.4						
INK	Inuvik	28.19	35	*e*P	P	11 51 36.9	-1.1
DLBC	Dease Lake	29.31	56	LR	LR	12 01 06.4	
	comp=Z,71nm,21.8s,MS3.2,baz=284,slow=31						
KLR	Kul’dur	30.22	285	*e*P	P	11 51 52.8	-3.6
MJAR	Matsushiro Arr	32.73	260	P	P	11 52 18.1	-0.4
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MJAR	Matsushiro Arr	32.73	260	P	P	11 52 18.1	-0.4
	comp=Z,1.6nm,0.9s,mb4.0,baz=152,slow=12,SNR=5.0						
YKA	Yellowknife Ar	36.10	46	P	P	11 52 45.7	-1.4
YKA						11 55 11.8	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	36.10	46	P	P	11 52 45.7	-1.3
	comp=Z,1.1nm,0.5s,mb4.0,baz=281,slow=7.5,SNR=18						
YKA				PcP	PcP	11 55 11.8	-0.8
	comp=Z,0.8nm,0.7s,baz=293,slow=3.4,SNR=5.7						
YKA	Yellowknife Ar	36.10	46	P	P	11 52 45.7	-1.3
YKA				PcP	PcP	11 55 11.8	-0.8
CN2	Changchun	36.56	280	*e*P	P	11 52 50.7	-0.4
CN2				*e*S	S	11 58 35.3	+5.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,18.0s,MS4.1						
CN2				LR	LR		
	comp=E,200nm,18.0s,MS4.1						
NEW	Newport	39.91	69	P	P	11 53 18.4	-0.6
YBH	Yreka Blue Hor	39.93	80	P	P	11 53 22.1	+2.8
YBH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YBH	Yreka Blue Hor	39.93	80	P	P	11 53 22.1	+2.9
	comp=Z,4.0nm,1.1s,mb4.1						
BMO	Blue Mountains	41.54	73	*e*P	P	11 53 32.9	+0.5
	comp=Z,4.1nm,1.2s,mb3.9						
WVOR	Wild Horse Val	42.05	77	*e*P	P	11 53 37.7	+1.1
WVOR				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
WVOR	Wild Horse Val	42.05	77	*e*P	P	11 53 37.7	+1.0
	comp=Z,4.2nm,1.0s,mb4.0						
MSO	Missoula	42.50	69	*e*P	P	11 53 39.5	-0.8
	comp=Z,8.1nm,1.3s,mb4.2						
HRY	Holter Researc	43.79	68	*e*P	P	11 53 50.6	-0.2
HLID	Hailey	43.98	73	*e*P	P	11 53 52.8	+0.4
	comp=Z,9.4nm,1.3s,mb4.4						
MCMT	McKenzie Canyo	44.22	71	*e*P	P	11 53 53.8	-0.4
BOZ	Bozeman (W)	44.48	69	*e*P	P	11 53 56.4	0.0
BOZ				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
BOZ	Bozeman (W)	44.48	69	*e*P	P	11 53 56.4	0.0
	comp=Z,7.7nm,1.0s,mb4.4						
NVAR	Mina Array Bea	44.60	81	P	P	11 53 57.9	+0.5
	comp=Z,1.1nm,0.8s,mb3.7,baz=281,slow=10,SNR=6.6						
NVAR				LR	LR	12 10 41.3	
	comp=Z,71nm,18.5s,MS3.6,baz=150,slow=34						
NVAR	Mina Array Bea	44.60	81	P	P	11 53 57.9	+0.5
NVAR				LR	LR	12 10 41.3	
ELK	Elko	45.11	77	*e*P	P	11 54 02.6	+1.2
ELK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ELK	Elko	45.11	77	*e*P	P	11 54 02.6	+1.2
	comp=Z,4.9nm,1.1s,mb4.2						
TLY	Talaya	45.27	302	*e*P	P	11 54 02.7	+0.1
TLY				*e*		12 00 49.9	
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
TLY				MLR	MLR		
	comp=Z,167nm,17.0s,MS4.0						
ULN	Ulaanbaatar	45.40	296	*e*P	P	11 54 03.3	-0.3
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
ULN	Ulaanbaatar	45.40	296	*e*P	P	11 54 03.3	-0.4
	comp=Z,5.6nm,0.9s,mb4.4						
SONM	Songino Array	45.79	296	P	P	11 54 06.8	0.0
	comp=Z,2.6nm,0.8s,mb4.2,baz=60,slow=7.7,SNR=22						
SONM				LR	LR	12 14 56.0	
	comp=Z,183nm,18.2s,MS4.1,baz=58,slow=38						
IMW	Indian Meadow	45.87	71	*e*P	P	11 54 07.8	+0.3
	comp=Z,9.0nm,1.1s,mb4.6						
IMW				*e*pP	pP	11 54 21.4	+1.0
RRI2	Red Ridge	45.96	71	*e*P	P	11 54 08.7	+0.5
	comp=Z,15nm,1.3s,mb4.8						
HHC	Hu-ho-hao-te	46.73	285	*e*P	P	11 54 15.1	+0.8
HHC				PCP	PcP	11 55 50.2	+2.6
HHC				PP	PP	11 56 03.4	-0.8
HHC				SCP		11 59 39.7	
HHC				S	S	12 01 05.8	+6.0
HHC				XS		12 01 17.1	
HHC				SCS	ScS	12 04 01.9	-0.1
HHC				SS	SS	12 04 17.0	-2.2
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
HHC				AMB	AMB		
	comp=Z,90nm,4.7s						
HHC				LR	LR		
	comp=N,140nm,15.5s,MS4.2						
HHC				LR	LR		
	comp=E,190nm,17.8s,MS4.2						
HHC				LR	LR		
	comp=Z,100nm,14.3s,MS3.9						
FCC	Fort Churchill	46.82	45	P	P	11 54 13.7	-1.0
SSE	Sheshan	46.95	268	P	P	11 54 14.7	-1.4
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,60nm,3.8s						
BW06	Boulder Array	47.35	71	*e*P	P	11 54 18.7	-0.4
	comp=Z,7.5nm,0.9s,mb4.6						
PDAR	Pinedale Array	47.35	71	P	P	11 54 18.7	-0.4
	comp=Z,5.8nm,0.8s,mb4.5,baz=304,slow=5.3,SNR=36						
DAU	Daniels Canyon	47.73	75	P	P	11 54 23.6	+1.4
NJ2	Nanjing	47.78	271	*e*P	P	11 54 24.0	+1.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
MVU	Marysvale	48.32	77	*e*P	P	11 54 27.4	+0.6
	comp=Z,4.6nm,1.1s,mb4.4						
MSU	Marysvale	48.34	77	*e*P	P	11 54 27.9	+1.0
SRU	San Rafael	48.98	76	*e*P	P	11 54 34.5	+2.7
PV10	Paradox Valley	50.34	75	*e*P	P	11 54 42.1	-0.2
ULM	Lac du Bonnet	50.64	56	LR	LR	12 16 20.8	
	comp=Z,56nm,21.5s,MS3.5,baz=343,slow=36						
WUAZ	Wupatki	50.74	80	*e*P	P	11 54 46.0	+0.6
	comp=Z,2.5nm,0.8s,mb4.2						
PV01	Paradox Valley	50.78	75	*e*P	P	11 54 45.7	0.0
SDCO	Great Sand Dun	52.89	74	P	P	11 55 01.9	+0.4
ZAL	Zalesovo	53.40	313	P	P	11 55 04.0	-1.0
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZAL				MLR	MLR		
	comp=Z,111nm,18.3s						
ZAL	Zalesovo	53.40	313	P	P	11 55 04.0	-1.0
	comp=Z,1.3nm,0.8s,mb3.9,baz=52,slow=6.2,SNR=6.9						
ZAL				LR	LR	12 20 05.3	
	comp=Z,111nm,18.3s,MS4.0,baz=268,slow=38						
NVS	Novosibirsk	53.55	314	*e*P	P	11 55 03.7	-2.4
NVS				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
NVS				pmax	pmax		
	comp=N,3.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.9s						
SUMG	Summit	53.70	13	*e*P	P	11 55 06.4	-0.6
	comp=E,7.6nm,1.0s,mb4.6						
ANMO	Albuquerque	54.14	77	*e*P	P	11 55 11.0	+0.3
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ANMO	Albuquerque	54.14	77	LR	LR	12 15 01.1	
	comp=Z,70nm,19.7s,MS3.7,slow=32						
ANMO	Albuquerque	54.14	77	*e*P	P	11 55 11.0	+0.2
	comp=Z,3.9nm,1.4s,mb4.1						
GTA	Gaotai	54.66	291	*e*P	P	11 55 14.2	-0.3
GTA				AP	pP	11 55 26.2	-1.5
GTA				PP	PP	11 57 20.8	+2.1
GTA				PPP	PPP	11 58 30.7	-0.3
GTA				S	S	12 02 51.2	+2.0
GTA				SS	SS	12 06 33.2	+1.1
GTA				AMB	AMB		
	comp=Z,100nm,6.8s						
GTA				LR	LR		
	comp=N,100nm,17.1s,MS4.1						
GTA				LR	LR		
	comp=E,90nm,16.3s,MS4.1						
GTA				LR	LR		
	comp=Z,140nm,17.1s,MS4.1						
MNTX	Cornudas Mount	57.00	79	*e*P	P	11 55 31.0	-0.4
	comp=Z,5.0nm,1.0s,mb4.5						
JMIC	Jan Mayen	57.97	3	LR	LR	12 19 29.2	
	comp=Z,35nm,19.2s,MS3.5,baz=243,slow=35						
ARCES	ARCESS Array B	58.07	350	P	P	11 55 37.3	-1.1
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	ARCESS Array B	58.07	350	P	P	11 55 37.3	-1.1
	comp=Z,3.3nm,0.8s,mb4.4,slow=11,SNR=5.1						
WMQ	Urumqi	58.55	302	*e*P	P	11 55 43.7	+1.6
WMQ				AP	pP	11 55 56.4	+0.9
WMQ				PCP	PcP	11 56 33.3	+1.5
WMQ				PP	PP	11 57 55.3	+1.6
WMQ				PPP	PPP	11 59 19.6	+2.1
WMQ				S	S	12 03 42.7	+2.1
WMQ				SCS	ScS	12 05 25.9	+1.9
WMQ				SS	SS	12 07 37.5	+2.1
WMQ				AMB	AMB		
	comp=Z,70nm,5.5s						
WMQ				LR	LR		
	comp=N,210nm,20.0s,MS4.4						
WMQ				LR	LR		
	comp=E,200nm,21.8s,MS4.4						
WMQ				LR	LR		
	comp=Z,250nm,20.6s,MS4.3						
MKAR	Makanchi Array	59.32	308	P	P	11 55 45.8	-1.6
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,83nm,18.1s						
MKAR	Makanchi Array	59.32	308	P	P	11 55 45.8	-1.6
	comp=Z,3.8nm,0.7s,mb4.5,baz=59,slow=7.1,SNR=30						
MKAR				LR	LR	12 22 50.3	
	comp=Z,83nm,18.1s,MS3.9,baz=360,slow=37						
TXAR	Lajitas Array	59.71	80	P	P	11 55 49.4	-0.9
	comp=Z,0.2nm,0.6s,baz=288,slow=2.9,SNR=3.2						
TXAR	Lajitas Array	59.71	80	P	P	11 55 49.4	-0.9
CHKZ	Chkalovo	59.77	319	*e*P	P	11 55 49.6	-0.8
CHKZ				pmax	pmax		
	comp=Z,72nm,1.0s						
CHKZ	Chkalovo	59.77	319	*e*P	P	11 55 49.6	-0.8
	comp=Z,72nm,1.0s						
BVAR	Borovoye Array	60.34	319	P	P	11 55 53.5	-0.8
	comp=Z,13nm,0.7s,mb5.1,baz=53,slow=7.4,SNR=96						
SCHQ	Schefferville	60.77	37	P	P	11 55 56.0	-1.2
	comp=Z,2.6nm,0.9s,mb4.4,baz=282,slow=11,SNR=4.3						
HNR	Honiara	62.74	202	LR	LR	12 21 14.9	
	comp=Z,75nm,18.4s,MS3.9,baz=33,slow=34						
SADO	Sadowa	62.76	52	LR	LR	12 26 10.0	
	comp=Z,68nm,18.1s,MS3.9,baz=312,slow=39						
PLAL	Pickwick Lake	65.02	65	*e*P	P	11 56 24.7	-0.8
	comp=Z,3.7nm,0.6s,mb4.6						
TKM2	Tokmak 2	65.41	308	P	P	11 56 28.7	+0.8
	SNR=8.0						
USP	Ospenovka	65.69	309	P	P	11 56 30.3	+0.6
	SNR=12						
FINES	FINESS Array B	65.71	346	P	P	11 56 28.2	-1.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,47nm,18.3s						
FINES	FINESS Array B	65.71	346	P	P	11 56 28.2	-1.2
	comp=Z,0.9nm,0.7s,mb3.9,baz=37,slow=9.5,SNR=6.1						
FINES				LR	LR	12 27 28.5	
	comp=Z,47nm,18.3s,MS3.7,baz=360,slow=38						
KBK	Karagaybulak	65.93	309	P	P	11 56 26.5	-4.7
	SNR=5.9						
UCH	Uchtor	66.46	309	P	P	11 56 36.2	+1.6
	SNR=7.5						
EKS2	Erkin-Say	66.50	309	P	P	11 56 35.7	+0.9
	SNR=9.5						
AML	Almayashu	66.93	309	P	P	11 56 39.2	+1.7
	SNR=12						
NB2	NORSAR Subarra	67.71	354	P	P	11 56 41.3	-0.8
	comp=Z,3.0nm,0.7s,mb4.4,baz=7.0,slow=6.2						
NOA	NORSAR Array B	67.71	354	P	P	11 56 41.3	-0.8
	comp=Z,4.5nm,0.8s,mb4.5,baz=8.3,slow=6.3,SNR=12						
NOA				LR	LR	12 25 15.8	
	comp=Z,17nm,19.7s,MS3.3,slow=35						
CMAR	Chiang Mai Arr	69.99	275	P	P	11 56 56.0	-0.9
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	Chiang Mai Arr	69.99	275	P	P	11 56 56.0	-0.9
	comp=Z,2.5nm,0.8s,mb4.2,baz=27,slow=7.0,SNR=9.4						
GUN	Gumba	70.95	291	*e*P	P	11 57 03.4	+0.8
	comp=Z,73nm,1.0s						
KKN	Kakani	71.39	291	*e*P	P	11 57 05.8	+0.6
	comp=Z,17nm,0.5s,mb5.2						
KKN	Kakani	71.39	291	*e*P	P	11 57 05.8	+0.6
KKN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
PKI	Pulchoki	71.48	291	*e*P	P	11 57 06.1	+0.4
	comp=Z,38nm,1.1s,mb5.2						
PKI	Pulchoki	71.48	291	*e*P	P	11 57 06.1	+0.4
PKI				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
GKN	Gorkha	71.61	292	*e*P	P	11 57 06.8	+0.3
	comp=Z,21nm,0.7s,mb5.2						
DMN	Daman	71.63	291	*e*P	P	11 57 07.4	+0.8
	comp=Z,25nm,0.9s,mb5.2						
KOLN	Koldanda	72.39	292	*e*P	P	11 57 11.1	0.0
	comp=Z,23nm,1.0s,mb5.0						
PPT	Papeete	73.64	149	LR	LR	12 27 08.7	
	comp=Z,6.7nm,18.9s,MS3.0,baz=46,slow=34						
AKASG	Malin Array Be	75.38	341	P	P	11 57 26.9	-1.1
	comp=Z,0.2nm,0.3s,mb3.6,baz=19,slow=5.7,SNR=6.2						
AKASG	Malin Array Be	75.38	341	P	P	11 57 26.9	-1.1
CTA	Charters Tower	76.78	212	LR	LR	12 26 17.7	
	comp=Z,40nm,18.8s,MS3.8,baz=234,slow=32						
GNI	Garni	80.82	327	LR	LR	12 39 05.1	
	comp=Z,86nm,18.7s,MS4.1,baz=198,slow=40						
WRAB	Tennant Creek	81.17	222	P	P	11 57 57.9	-2.5
WRA	Warramunga Arr	81.18	223	P	P	11 57 58.9	-1.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	81.18	223	P	P	11 57 58.9	-1.6
	comp=Z,1.1nm,0.9s,mb3.8,baz=33,slow=6.2,SNR=11						
BRTR	Keskin Array B	84.66	334	P	P	11 58 18.8	+1.1
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	84.66	334	P	P	11 58 18.8	+1.0
	comp=Z,2.2nm,0.8s,mb4.4,baz=39,slow=2.3,SNR=10						
SJG	San Juan	90.34	60	LR	LR	12 41 23.4	
	comp=Z,38nm,20.1s,MS3.8,baz=255,slow=37						
TSUM	Tsumeb	145.02	329	*e*PKP	PKPdf	12 05 21.8	+1.5
BOSA	Boshof	150.30	310	PKIKP	PKPdf	12 05 36.3	+7.6
BOSA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BOSA	Boshof	150.30	310	PKPbc	PKPdf	12 05 36.3	+7.6
	comp=Z,7.1nm,1.0s,baz=7.0,slow=3.9,SNR=6.8						

ISC 10 12:00:46.0±8.9**, 46.1N**±0.2×**13.6E**±0.8**, n5,** σ**0**^{s}**29**/5**, 1C,**
Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRE	Drenchia	0.14	27	⇑*i*Pg	Pg	12 00 48.7	-0.1
CADS	Cadrg	0.22	36	*i* Pg	Pg	12 00 50.8	+0.3
	comp=Z,11nm,0.1s						
VOJS	Vojsko	0.23	94	*i* Pg	Pg	12 00 50.8	+0.1
JAVS	Javornik	0.39	113	*i* Pg	Pg	12 00 53.7	-0.1
	comp=Z,5.0nm,0.1s						
GORS	Gorjuse	0.41	49	*i* Pg	Pg	12 00 53.9	-0.3
	comp=Z,13nm,0.2s						

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*BJI **10** 12:06:06.2, 23.68N×121.76E, h20^{km}, mB4.4, mb4.2, ML3.9, Ms3.9, Msz3.5*
*IDC **10** 12:06:07.7±1.2, 23.86N×121.75E, mb3.7/5, mb1 4.0/6, mb1mx3.7/21, mbtmp3.8/6, ML3.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/28, Error ellipse: s-maj=36.2km s-min=25.4km az=65.0*
*NEIC **10** 12:06:09.4±0.7, 23.94N×121.66E, h10^{km}, mb4.2/2, ML4.3(TAP), Error ellipse: s-maj=16.1km s-min=10.1km az=56.0*
NEIC Recorded [3 TAP] in Hua-lien and [2 TAP] in Nan-t’ou Counties.
*JMA **10** 12:06:10.2±0.4, 23.89N×121.51E, h63^{km}, M3.3*
*TAP **10** 12:06:10.2, 23.94N×121.61E, h8^{km}, ML4.2*
TAP Felt IV J at Hualien, II J at Chiawan, III J at Shilin, II J at Hehuanshan, I J at Nanau, I J at Tachien, I J at Nanshan.
ISC 10 12:06:09.6±0.4**, 23.93N**±0.01×**121.69E**±0.02**, h5**^{km}±2^{km}**,**
n80, σ**1**^{s}**18**/123**, mb3.7**/7**, MS3.0**/1**, 17C-6D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.09	299	⇓*i*P	Pg	12 06 12.2	+0.7
TWD	Chiawan	0.17	330	⇑*i*P	Pg	12 06 13.6	+0.6
TWD				S	Sg	12 06 16.0	+0.7
ESF	Shoufeng Towns	0.18	249	P	Pg	12 06 13.1	-0.1
ESF				S	Sg	12 06 15.0	-0.6
NACB	Ninganchiao	0.25	340	*e*Pn	Pn	12 06 14.4	-5.0
ESL	Shilin	0.26	243	⇑*i*P	Pg	12 06 14.5	-0.4
ESL				S	Sg	12 06 17.2	-1.2
TEGC	Jichi Village	0.26	211	*e*P	Pg	12 06 16.2	+1.4
TEGC				S	Sg	12 06 21.2	+2.8
EHP	Heping Village	0.38	7	*e*P	Pg	12 06 19.0	+1.9
WHF	Hehuan Shan	0.44	299	⇑*i*P	Pg	12 06 17.8	-0.6
WHF				S	Sg	12 06 23.2	-1.1
ENA	Nanau	0.49	6	⇑*i*P	Pg	12 06 20.1	+0.6
ENA				S	Sg	12 06 26.8	+0.7
EHY	Hungye	0.54	218	⇓P	Pg	12 06 20.1	-0.3
EHY				S	Sg	12 06 27.5	-0.2
TWT	Tachien	0.57	304	⇑*i*P	Pg	12 06 20.6	-0.2
TWT				S	Sg	12 06 28.4	-0.1
NNS	Nan Shan	0.58	330	⇑*i*P	Pg	12 06 21.1	0.0
NNS				S	Sg	12 06 27.7	-1.2
TWF1	Yuli	0.68	212	*e*P	Pg	12 06 22.5	-0.7
TWC	Suao	0.69	12	⇑*i*P	Pg	12 06 23.9	+0.6
TWC				S	Sg	12 06 33.5	+1.0
ENTT	Nioudou	0.71	351	⇑*i*P	Pg	12 06 24.0	+0.2
ENTT				S	Sg	12 06 34.5	+1.3
SMLT	Sun Moon Lake	0.72	266	⇑*i*P	Pg	12 06 23.4	-0.7
SMLT				S	Sg	12 06 31.8	-1.9
TYC	Yuchr	0.76	268	⇑*i*P	Pg	12 06 23.9	-0.9
TYC				S	Sg	12 06 32.4	-2.5
TWE	Neicheng	0.78	359	⇑*i*P	Pg	12 06 25.6	+0.3
TWE				S	Sg	12 06 36.0	+0.3
YHNB	Yeheng	0.79	339	⇓*i*Pn	Pn	12 06 25.1	-2.0
NSK	Sanguang	0.80	338	⇑*i*P	Pg	12 06 25.5	0.0
NSK				S	Sg	12 06 35.2	-0.9
ILA	Ilan	0.83	4	*e*P	Pb	12 06 26.2	+0.1
CHKT	Chengkung	0.88	200	*e*P	Pb	12 06 26.6	-0.4
CHKT				S	Sb	12 06 40.3	+1.4
WNT	Mingjian	0.92	267	P	Pb	12 06 28.0	+0.4
WNT				S	Sb	12 06 40.0	0.0
TWQ1	Liyutan	0.93	296	⇑*i*P	Pb	12 06 28.1	+0.2
TWQ1				S	Sb	12 06 40.0	-0.4
NSTT	Nanjuang	0.94	318	⇑*i*P	Pb	12 06 28.0	+0.1
NSTT				S	Sb	12 06 39.5	-0.9
TCU	Taichung	0.95	283	⇑*i*P	Pb	12 06 28.8	+0.6
TCU				S	Sb	12 06 42.2	+1.4
ELDTW	Lidau	0.96	220	*e*P	Pb	12 06 26.8	-1.6
NSY	Sanyi	0.97	300	⇑*i*P	Pb	12 06 29.2	+0.6
NSY				S	Sb	12 06 42.4	+0.9
CHN5	Tsauling	0.98	250	⇑*i*P	Pb	12 06 28.9	+0.2
CHN5				S	Sb	12 06 43.3	+1.4
TWA	Mucha	1.05	355	*e*P	Pb	12 06 30.6	+0.8
TATO	Taipei	1.05	350	*e*Pn	Pn	12 06 29.7	-1.2
WGK	Gukeng	1.06	257	*e*P	Pb	12 06 30.7	+0.6
HSN	Hsinchu	1.08	323	*e*P	Pb	12 06 31.2	+0.7
TWB1	Santiao Chiao	1.10	14	*e*P	Pb	12 06 31.1	+0.4
TWB1				S	Sb	12 06 46.5	+1.1
TAP1	Taipei	1.11	352	*e*P	Pb	12 06 31.1	+0.2
TAP1				S	Sb	12 06 45.3	-0.2
TAP	Taipei	1.11	351	*e*P	Pb	12 06 31.1	+0.2
TAP				S	Sb	12 06 45.5	-0.1
NCU	National Centr	1.13	336	*e*P	Pb	12 06 32.4	+1.2
NCU				S	Sb	12 06 49.3	+3.3
NWF	Wu-fen Shan	1.14	4	*e*P	Pb	12 06 32.3	+1.0
NWF				S	Sb	12 06 47.4	+1.1
CHN4	Tsaushan	1.16	240	⇓*i*P	Pb	12 06 32.1	+0.4
CHN4				S	Sb	12 06 49.2	+2.2
CHN2	Minshiung	1.18	250	*e*P	Pb	12 06 32.5	+0.4
CHN2				S	Sb	12 06 49.2	+1.7
TWS1	Kuangyinshan	1.19	348	*e*P	Pb	12 06 33.3	+1.1
TWS1				S	Sb	12 06 51.6	+3.9
WTP	Ta-pu	1.20	235	⇓*i*P	Pb	12 06 32.5	+0.1
WTP				S	Sb	12 06 49.1	+1.0
CHY	Chiayi	1.24	250	*e*P	Pb	12 06 33.3	+0.2
CHY				S	Sb	12 06 49.8	+0.6
TWG	Pinlang	1.24	207	*e*P	Pb	12 06 30.7	-2.5
TWK	Hsinying	1.29	239	*e*P	Pb	12 06 33.9	0.0
TWK				S	Sb	12 06 52.1	+1.5
WTCT	Ta-ch’eng	1.29	267	*e*P	Pb	12 06 32.6	-1.3
CHN1	Nanshi	1.30	235	⇓P	Pb	12 06 34.3	+0.2

CHN1				S	**Sb**	**12 06 52.2**	**+1.2**
YOJ	**Yonaguni jima**	**1.32**	**66**	P	**Pb**	**12 06 35.1**	**+0.7**
YOJ				*e*S	**Sb**	**12 06 53.8**	**+2.3**
SGST	**Jiashian**	**1.32**	**230**	*e*P	**Pb**	**12 06 34.7**	**+0.2**
SGST				S	**Sb**	**12 06 54.1**	**+2.5**
TWY	**Chenhua**	**1.34**	**357**	*e*P	**Pb**	**12 06 35.2**	**+0.5**
WSF	**Szhu**	**1.38**	**258**	*e*P	**Pb**	**12 06 35.7**	**+0.3**
CHN8	**Yiju**	**1.48**	**247**	*e*P	**Pn**	**12 06 36.2**	**-0.7**
CHN8				S	**Sb**	**12 06 57.5**	**+1.4**
CHN3	**Shinhua**	**1.48**	**235**	*e*P	**Pn**	**12 06 38.9**	**+1.8**
ECL	**Taimali**	**1.49**	**207**	*e*P	**Pn**	**12 06 34.5**	**-2.6**
SSD	**Sandimen**	**1.53**	**220**	*e*P	**Pn**	**12 06 37.6**	**-0.1**
PCYT	**Pengchaiyu**	**1.72**	**12**	*e*P	**Pn**	**12 06 40.1**	**-0.3**
EAST	**Anshuo**	**1.73**	**207**	*e*P	**Pn**	**12 06 37.7**	**-2.8**
SCZT	**Fangliau**	**1.84**	**213**	*e*P	**Pn**	**12 06 43.0**	**+0.9**
IRIF	**Iriomote-Funau**	**1.91**	**78**	P	**Pn**	**12 06 43.5**	**+0.4**
IRIF				*e*S	**Sn**	**12 07 08.1**	**+0.3**
HATJ	**Hateruma jima**	**1.94**	**86**	*e*S	**Sn**	**12 07 08.2**	**-0.4**
WDGT	**Dungji**	**1.98**	**251**	*e*P	**Pn**	**12 06 43.1**	**-1.0**
WDGT				S	**Sn**	**12 07 10.4**	**+0.8**
PNG	**Penghu**	**1.99**	**260**	*e*P	**Pn**	**12 06 42.8**	**-1.5**
JKRS	**Kuro-shima**	**2.14**	**81**	P	**Pn**	**12 06 47.1**	**+0.6**
JKRS				*e*S	**Sn**	**12 07 14.6**	**+0.8**
JIJ	**Ishigaki jima**	**2.28**	**79**	P	**Pn**	**12 06 48.2**	**-0.3**
JIJ				*e*S	**Sn**	**12 07 16.7**	**-0.6**
JTJ	**Tarama**	**2.84**	**75**	*e*S	**Sn**	**12 07 31.7**	**+0.3**
QZH	**Quanzhou**	**3.00**	**290**	P	**Pn**	**12 06 56.9**	**-1.8**
QZH				S	**Sn**	**12 07 31.9**	**-3.5**
QZH				Smax			
	comp=N,290nm,0.5s						
QZH				Smax			
	comp=E,280nm,0.8s						
QZH				LR	LR		
	comp=N,900nm,5.9s						
QZH				LR	LR		
	comp=E,1µm,5.0s						
QZH				LR	LR		
	comp=Z,1µm,10.8s						
JOW	**Kunigami**	**6.62**	**63**	Pn	**Pn**	**12 07 47.2**	**-2.7**
	comp=Z,3.1nm,0.3s,baz=218,slow=24,SNR=4.8						
GZH	**Guangzhou**	**7.71**	**265**	P	**Pn**	**12 07 58.4**	**-6.8**
NJ2	**Nanjing**	**8.47**	**343**	*e*P	**P**	**12 08 14.1**	**-1.7**
NJ2				AP		12 08 17.3	
NJ2				XP		12 08 20.1	
NJ2				S	**Sn**	**12 09 50.0**	**-2.8**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s						
NJ2				Smax			
	comp=N,140nm,0.8s						
NJ2				Smax			
	comp=E,130nm,0.9s						
NJ2				LR	LR		
	comp=N,420nm,8.3s						
NJ2				LR	LR		
	comp=E,290nm,8.3s						
NJ2				LR	LR		
	comp=Z,350nm,6.8s						
MDJ	**Mudanjiang**	**21.62**	**15**	P	**P**	**12 10 59.5**	**-3.1**
MDJ				AMB	AMB		
	comp=Z,30nm,5.2s						
SONM	**Songino Array**	**26.78**	**337**	P	**P**	**12 11 49.9**	**-2.3**
	comp=Z,0.6nm,0.6s,mb3.3,baz=160,slow=9.5,SNR=5.4						
SONM				LR	LR	12 23 38.8	
	comp=Z,41nm,18.4s,MS3.0,baz=314,slow=39						
SONM	**Songino Array**	**26.78**	**337**	P	**P**	**12 11 49.9**	**-2.3**
SONM				LR	LR	12 23 38.8	
MKAR	**Makanchi Array**	**38.84**	**316**	P	**P**	**12 13 35.6**	**-1.7**
	comp=Z,1.2nm,0.7s,mb3.7,baz=110,slow=9.8,SNR=7.5						
WRA	**Warramunga Arr**	**45.32**	**163**	P	**P**	**12 14 26.9**	**-3.7**
	comp=Z,0.6nm,0.5s,mb3.7,baz=345,slow=8.7,SNR=8.7						
CHKZ	**Chkalovo**	**48.22**	**322**	*e*P	**P**	**12 14 49.9**	**-3.1**
	comp=Z,1.5nm,0.7s,mb4.1						
ILAR	**Eielson Array**	**69.22**	**27**	P	**P**	**12 17 16.0**	**-3.1**
	comp=Z,0.4nm,0.9s,mb3.4,baz=274,slow=5.9,SNR=6.9						
DAWY	**Dawson**	**72.55**	**27**	*e*P	**P**	**12 17 37.1**	**-2.0**
INK	**Inuvik**	**73.28**	**22**	*e*P	**P**	**12 17 40.7**	**-2.6**
	comp=Z,3.1nm,1.0s,mb4.2						
YKA	**Yellowknife Ar**	**83.02**	**23**	P	**P**	**12 18 35.0**	**-1.9**
	comp=Z,0.5nm,0.6s,mb3.7,baz=311,slow=4.9,SNR=6.5						
YKA	**Yellowknife Ar**	**83.02**	**23**	P	**P**	**12 18 35.0**	**-1.9**

TAP 10 12:09:20.6,24.04N×121.75E,h4^{km},ML3.6,Taiwan

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*WAR **10** 13:03:18.0,50.05N×18.47E,h0^{km},ML2.7,Mining Induced*

*PRU **10** 13:03:18.5,50.07N×18.43E*

*NEIC **10** 13:03:18.2±0.5,50.05N×18.49E,h5^{km},MG2.6(WAR), Error ellipse: s-maj=7.0km s-min=4.7km az=198.0*

ISC 10 13:03:16.8±0.5**,50.11N**±0.03×**18.43E**±0.03**,n21,**σ**0^{s}97**/41**,3D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.15**	**262**	⇓*i*PG	**Pg**	**13 03 22.7**	**+2.8**
RAC				⇓*e*SG	**Sg**	**13 03 26.7**	**+4.8**
RAC	**Raciborz**	**0.15**	**262**	⇓*i*Pg	**Pg**	**13 03 22.7**	**+2.8**
RAC				*e*Sg	**Sg**	**13 03 26.1**	**+4.2**
OKC	**Ostrava-Krasne**	**0.32**	**214**	*e*PG	**Pg**	**13 03 24.4**	**+1.1**
OKC				*e*SG	**Sg**	**13 03 28.8**	**+1.2**
	378nm,0.6s						
MORC	**Moravsky Berou**	**0.66**	**241**	*e*Pg	**Pg**	**13 03 30.6**	**+0.7**
MORC				*e*Sg	**Sg**	**13 03 40.2**	**+1.4**
OJC	**Ojcow**	**0.89**	**82**	*e*Pg	**Pg**	**13 03 34.6**	**+0.1**
OJC				*e*Sg	**Sg**	**13 03 47.2**	**+0.9**
DPC	**Dobruska-Polom**	**1.38**	**281**	*e*PG	**Pg**	**13 03 44.3**	**0.0**
DPC				*e*SG	**Sg**	**13 04 03.4**	**+0.8**
	136nm,0.6s						
NIE	**Niedzica**	**1.40**	**119**	*e*PG	**Pg**	**13 03 44.0**	**-0.7**
NIE				*e*SG	**Sg**	**13 04 04.0**	**+0.6**
KOLL	**Kolacno**	**1.53**	**181**	*e*PN	**Pn**	**13 03 46.0**	**+0.6**
KOLL				*e*SN	**Sn**	**13 04 06.2**	**-0.1**
KSP	**Ksiaz**	**1.55**	**299**	*e*Pg	**Pg**	**13 03 46.7**	**-1.1**
KSP				*e*		13 03 49.0	
KSP				*e*Sg	**Sg**	**13 04 08.3**	**-0.2**
KSP	**Ksiaz**	**1.55**	**299**	*e*PG	**Pg**	**13 03 47.0**	**-0.8**
KSP				*e*SG	**Sg**	**13 04 08.0**	**-0.5**
UPC	**Upice**	**1.60**	**285**	*e*PG	**Pg**	**13 03 48.8**	**0.0**
UPC				*e*SG	**Sg**	**13 04 10.5**	**+0.4**
VYHS	**Vyhne**	**1.63**	**170**	*e*PN	**Pn**	**13 03 46.5**	**-0.4**
VYHS				*e*SN	**Sn**	**13 04 08.3**	**-0.7**
SMOL	**Smolenice**	**1.72**	**203**	*i* PN	**Pn**	**13 03 48.1**	**-0.1**
SMOL				*e*SN	**Sn**	**13 04 10.8**	**-0.4**
ZST	**Bratislava**	**2.10**	**205**	*e*PN	**Pn**	**13 03 53.3**	**-0.3**
ZST				*e*SN	**Sn**	**13 04 18.2**	**-2.6**
KECS	**Kecovo**	**2.11**	**140**	*e*PN	**Pn**	**13 03 53.1**	**-0.6**
KECS				*e*PG	**Pg**	**13 03 59.0**	**+0.1**
KECS				*e*SN	**Sn**	**13 04 21.4**	**+0.4**
PSZ	**Piszkesteto**	**2.39**	**156**	*e*Pn	**Pn**	**13 03 57.6**	**-0.2**
PSZ				*e*Pg	**Pg**	**13 04 04.4**	**-0.1**
PRU	**Pruhonice**	**2.51**	**269**	*e*PG	**Pg**	**13 04 04.5**	**-2.4**
PRU				*e*SG	**Sg**	**13 04 37.4**	**-2.9**
KHC	**Kasperske Hory**	**3.30**	**255**	*e*PN	**Pn**	**13 04 10.5**	**-0.3**
KHC				*e*PG	**Pg**	**13 04 18.5**	**-4.2**
KHC				*e*SG	**Sg**	**13 05 02.3**	**-4.4**
MOA	**Molln**	**3.55**	**232**	*i*	**Pn**	**13 04 21.0**	**+6.7**
MOA	**Molln**	**3.55**	**232**	*i* SG	**Sg**	**13 05 10.1**	**-4.9**
	10nm,0.5s						
CLL	**Collm**	**3.66**	**291**	*e*SG	**Sg**	**13 05 19.0**	**+0.5**

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*BJI **10** 13:08:12.9,58.70S×25.20W,h9^{km},mB5.3,Ms5.3,Msz4.7*

*NEIC **10** 13:08:12.9±2.5,58.71S×25.21W,h10^{km}±14^{km},mb4.7/15, Error ellipse: s-maj=7.4km s-min=5.3km az=219.0*

*MOS **10** 13:08:15.7±0.9,58.78S×25.21W,h33^{km},mb5.0/21,Error ellipse: s-maj=32.4km s-min=13.8km az=98.5*

*IDC **10** 13:08:17.6±2.2,58.75S×25.30W,h38^{km}±17^{km},mb4.7/13, mb1 4.7/14,mb1mx4.6/18,mbtmp4.9/14,ML4.6/1,MS4.1/10, Ms1 4.0/10,ms1mx4.0/14,Error ellipse: s-maj=18.7km s-min=13.7km az=52.0*

ISC 10 13:08:11.5±0.4**,58.67S**±0.06×**25.2W**±0.1**,h10^{km},n169,** σ**0^{s}91**/59**,mb4.8**/22**,MS4.2**/10**,10C-1D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.97**	**156**	P	**P**	**13 11 29.9**	**-1.4**
VNA1	**Neumayer--Stat**	**13.97**	**156**		**P**	**13 11 33.7**	**+2.4**
VNA1	**Neumayer--Stat**	**13.97**	**156**	⇑*i*	**P**	**13 11 43.9**	**+13**
VNA3	**Neumayer Olymp**	**14.16**	**159**	⇑*i*P	**P**	**13 11 32.5**	**-1.4**
VNA3	**Neumayer Olymp**	**14.16**	**159**		**P**	**13 11 33.4**	**-0.5**
VNA3	**Neumayer Olymp**	**14.16**	**159**	⇑*i*	**P**	**13 11 36.2**	**+2.3**
VNA3	**Neumayer Olymp**	**14.16**	**159**		**P**	**13 11 43.2**	**+9.3**
VNA2	**Neumayer--Watz**	**14.36**	**156**	⇑*i*P	**P**	**13 11 35.2**	**-1.3**
VNA2	**Neumayer--Watz**	**14.36**	**156**	⇑*i*	**P**	**13 11 36.0**	**-0.5**
VNA2	**Neumayer--Watz**	**14.36**	**156**	⇑*i*	**P**	**13 11 46.0**	**+10**
SNAA	**Sanae**	**15.92**	**154**	*e*P	**P**	**13 11 55.4**	**-1.3**
SNAA				pmax	pmax		
	comp=Z,39nm,0.6s						
SNAA	**Sanae**	**15.92**	**154**	Pn	**P**	**13 11 55.7**	**-1.0**
	comp=Z,2.1nm,0.3s,baz=324,slow=14,SNR=306						
SNAA				Sn	**S**	**13 14 37.8**	**-16**
	comp=Z,0.3nm,0.3s,baz=308,slow=16,SNR=5.1						
SNAA				LR	LR	13 17 07.9	
	comp=Z,264nm,18.1s,baz=136,slow=33						
SNAA	**Sanae**	**15.92**	**154**	*e*Pn	**P**	**13 11 55.4**	**-1.4**
	comp=Z,39nm,0.6s						
SNAA				*e*Sn	**S**	**13 14 35.7**	**-18**
MAIT	**Maitri**	**19.48**	**143**	*e*P	**P**	**13 12 40.5**	**-0.4**
NVL	**N'lazarevskaya**	**19.51**	**143**	⇑*i*P	**P**	**13 12 51.3**	**+10**
NVL				*i* S	**S**	**13 16 16.0**	**+0.7**
NVL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NVL				MLR	MLR		
	comp=Z,70nm,17.0s						
USHA	**Ushuaia**	**23.68**	**260**	P	**P**	**13 13 24.3**	**+0.8**
	comp=Z,46nm,0.8s,mb5.0,baz=102,slow=7.5,SNR=23						
USHA				PcP	PcP	13 17 09.3	-0.3
	comp=Z,6.8nm,0.8s,baz=140,slow=2.7,SNR=4.6						
USHA				LR	LR	13 20 37.6	
	comp=Z,891nm,19.6s,MS4.2,baz=60,slow=31						
USHA	**Ushuaia**	**23.68**	**260**	P	**P**	**13 13 24.3**	**+0.8**
USHA				PcP	PcP	13 17 09.3	-0.3
USHA				LR	LR	13 20 37.6	
SYO	**Syowa Base**	**28.91**	**138**	⇓P	**P**	**13 14 11.4**	**-0.6**
SYO	**Syowa Base**	**28.91**	**138**	⇑pP	pP	13 14 21.8	+6.9
TRQA	**Tornquist**	**31.36**	**295**	*e*P	**P**	**13 14 34.0**	**-0.1**
	comp=Z,12nm,0.7s,mb4.8						
QSPA	**South Pole Qui**	**31.57**	**180**	⇑*i*P	**P**	**13 14 36.0**	**+0.3**
	comp=Z,38nm,0.8s,mb5.3						
PLCA	**Paso Flores**	**33.54**	**282**	P	**P**	**13 14 53.3**	**+0.1**
PLCA						13 17 33.1	
PLCA				pmax	pmax		
	comp=Z,12nm,0.7s						
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PLCA				MLR	MLR		
	comp=Z,263nm,18.0s						
PLCA	**Paso Flores**	**33.54**	**282**	P	**P**	**13 14 53.2**	**+0.1**
	comp=Z,12nm,0.7s,mb4.9,baz=143,slow=7.8,SNR=25						
PLCA				PcP	PcP	13 17 33.1	-0.9
	comp=Z,1.7nm,0.6s,baz=174,slow=4.2,SNR=3.0						
PLCA				LR	LR	13 28 29.2	
	comp=Z,263nm,18.0s,MS4.0,baz=138,slow=36						
PLCA	**Paso Flores**	**33.54**	**282**	*e*P	**P**	**13 14 52.5**	**-0.7**
	comp=Z,29nm,1.2s,mb5.1						
MAW	**Mawson**	**37.43**	**141**	*e*P	**P**	**13 15 25.3**	**-0.7**
MAW	**Mawson**	**37.43**	**141**	P	**P**	**13 15 25.6**	**-0.4**
MAW						13 17 44.4	
MAW				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MAW				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAW	**Mawson**	**37.43**	**141**	P	**P**	**13 15 25.6**	**-0.3**
	comp=Z,7.7nm,0.6s,mb4.7,baz=233,slow=9.3,SNR=23						
MAW				PcP	PcP	13 17 44.4	-0.7
	comp=Z,6.5nm,0.8s,baz=253,slow=2.4,SNR=6.5						
MAW				LR	LR	13 29 15.5	
	comp=Z,350nm,18.9s,MS4.2,baz=248,slow=34						
SBA	**Scott Base**	**43.53**	**184**	*e*P	**P**	**13 16 17.3**	**+1.2**
SBA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
SBA	**Scott Base**	**43.53**	**184**	*e*P	**P**	**13 16 17.3**	**+1.3**
	comp=Z,6.1nm,0.6s,mb4.5						
VNDA	**Vanda**	**44.00**	**182**	P	**P**	**13 16 20.9**	**+1.1**
VNDA						13 18 06.1	
VNDA				pmax	pmax		
	comp=Z,20nm,0.6s						
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VNDA	**Vanda**	**44.00**	**182**	P	**P**	**13 16 20.9**	**+1.1**
	comp=Z,20nm,0.6s,mb5.0,baz=187,slow=6.6,SNR=100						
VNDA				PcP	PcP	13 18 06.0	0.0
	comp=Z,5.4nm,0.8s,baz=252,slow=3.1,SNR=3.9						
VNDA				LR	LR	13 33 28.8	
	comp=Z,131nm,21.2s,MS3.8,baz=168,slow=34						
VNDA	**Vanda**	**44.00**	**182**	*e*P	**P**	**13 16 20.6**	**+0.7**
	comp=Z,21nm,0.7s,mb5.0						
VNDA				*e*		13 18 04.5	
BOSA	**Boshof**	**45.70**	**71**	P	**P**	**13 16 35.1**	**+1.0**
	comp=Z,3.6nm,0.7s,mb4.4,baz=252,slow=6.5,SNR=5.1						
BOSA				LR	LR	13 31 28.0	
	comp=Z,200nm,19.3s,MS4.1,baz=144,slow=30						
BOSA	**Boshof**	**45.70**	**71**	*e*P	**P**	**13 16 34.6**	**+0.5**
	comp=Z,3.5nm,0.4s,mb4.6						
BDFB	**Brasilia**	**46.16**	**329**	P	**P**	**13 16 39.3**	**+1.4**
BDFB						13 18 14.8	
BDFB				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BDFB				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BDFB	**Brasilia**	**46.16**	**329**	P	**P**	**13 16 39.2**	**+1.4**
	comp=Z,5.6nm,0.5s,mb4.7,baz=162,slow=6.6,SNR=7.2						
BDFB				PcP	PcP	13 18 14.8	+0.5
	comp=Z,9.0nm,0.6s,baz=207,slow=1.6,SNR=6.8						
BDFB				LR	LR	13 33 20.5	
	comp=Z,168nm,20.3s,MS4.0,baz=158,slow=32						
LBTB	**Lobatse**	**48.86**	**69**	*e*P	**P**	**13 16 59.9**	**+1.0**
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
LBTB	**Lobatse**	**48.86**	**69**	*e*P	**P**	**13 16 59.9**	**+1.0**
	comp=Z,4.8nm,0.7s,mb4.6						
LPAZ	**La Paz**	**52.75**	**305**	P	**P**	**13 17 28.4**	**-0.2**
LPAZ						13 18 38.6	
LPAZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
LPAZ	**La Paz**	**52.75**	**305**	P	**P**	**13 17 28.4**	**-0.2**
	comp=Z,5.1nm,0.6s,mb4.6,baz=156,slow=6.4,SNR=31						
LPAZ				PcP	PcP	13 18 38.5	+0.3
	comp=Z,2.0nm,0.5s,baz=153,slow=2.3,SNR=4.3						
LPAZ	**La Paz**	**52.75**	**305**	*e*P	**P**	**13 17 28.3**	**-0.3**
	comp=Z,5.4nm,0.7s,mb4.6						
SAML	**Samuel**	**57.39**	**314**	*e*P	**P**	**13 18 00.1**	**-2.3**
	comp=Z,7.3nm,0.7s,mb4.8						
LSZ	**Lusaka**	**58.42**	**65**	*e*P	**P**	**13 18 08.6**	**-0.9**
	comp=Z,5.3nm,0.8s,mb4.6						
DBIC	**Dimbokro**	**67.16**	**22**	P	**P**	**13 19 08.2**	**+0.6**
	comp=Z,9.5nm,0.6s,mb5.0,baz=170,slow=6.1,SNR=17						
DBIC				LR	LR	13 42 18.2	
	comp=Z,84nm,20.0s,MS4.0,baz=121,slow=30						
DBIC	**Dimbokro**	**67.16**	**22**	*e*P	**P**	**13 19 08.1**	**+0.5**
	comp=Z,11nm,0.7s,mb5.0						
OTAV	**Otavalo**	**71.97**	**303**	*e*P	**P**	**13 19 37.5**	**+0.3**
	comp=Z,2.5nm,0.6s,mb4.3						
MBAR	**Mbarara**	**72.47**	**60**	*e*P	**P**	**13 19 40.4**	**+0.3**
MBAR				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
MBAR	**Mbarara**	**72.47**	**60**	*e*P	**P**	**13 19 40.4**	**+0.3**
	comp=Z,4.2nm,1.2s,mb4.2						
ROSC	**El Rosal**	**74.38**	**309**	LR	LR	13 53 08.9	
	comp=Z,107nm,18.8s,MS4.2,baz=198,slow=36						
KMBO	**Kilima Mbogo**	**75.05**	**67**	LR	LR	13 50 20.1	
	comp=Z,309nm,18.0s,MS4.7,baz=100,slow=34						
SDV	**Santo Domingo**	**76.60**	**314**	*e*P	**P**	**13 20 02.6**	**-1.2**
	comp=Z,5.8nm,0.8s,mb4.6						
RPZ	**Rata Peaks**	**77.09**	**192**	P	**P**	**13 20 06.5**	**+0.6**
	comp=Z,15nm,1.0s,mb4.9,baz=321,slow=6.5,SNR=5.4						
URZ	**Urewera**	**81.64**	**198**	P	**P**	**13 20 30.7**	**+0.1**
	comp=Z,8.8nm,0.7s,mb4.8,baz=309,slow=4.6,SNR=7.2						
NWAO	**Narrogin (SRO)**	**83.53**	**149**	P	**P**	**13 20 39.9**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,11nm,0.7s						
NWAO	**Narrogin (SRO)**	**83.53**	**149**	P	**P**	**13 20 39.9**	**-0.5**
	comp=Z,11nm,0.7s,mb5.1,baz=153,slow=9.0,SNR=4.0						
STKA	**Stephens Creek**	**89.13**	**169**	⇑*i*P	**P**	**13 21 08.1**	**+0.2**
STKA	**Stephens Creek**	**89.13**	**169**	P	**P**	**13 21 08.2**	**+0.3**
	comp=Z,10nm,0.7s,mb5.3,baz=153,slow=4.8,SNR=20						
WRA	**Warramunga Arr**	**99.88**	**161**	P	**P**	**13 21 56.2**	**-1.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**99.88**	**161**	P	**P**	**13 21 56.2**	**-1.2**
	comp=Z,0.6nm,0.6s,mb4.2,baz=196,slow=4.3,SNR=8.1						
WRA				PKiKP		13 26 25.2	
	comp=Z,0.5nm,0.7s,baz=217,slow=1.5,SNR=5.8						
TXAR	**Lajitas Array**	**108.91**	**295**	PKiKP		13 26 42.6	
	comp=Z,0.7nm,0.6s,baz=180,slow=3.8,SNR=4.6						
BRTR	**Keskin Array B**	**109.54**	**44**	PKKPbc		13 37 47.1	
	comp=Z,0.6nm,0.5s,baz=64,slow=2.7,SNR=3.5						
BRTR				PKKP	PKKP	13 37 59.0	0.0
	comp=Z,0.7nm,0.8s,baz=62,slow=3.9,SNR=4.1						
MNTX	**Cornudas Mount**	**111.69**	**295**	*e*PKP	PKPdf	13 26 46.9	-1.8
AMTX	**Amarillo**	**112.62**	**300**	*e*PKP	PKPdf	13 26 49.0	-1.5
TUC	**Tucson**	**114.78**	**292**	*e*PKP	PKPdf	13 26 53.1	-1.7
SDCO	**Great Sand Dun**	**116.72**	**299**	*e*PKPdf	PKPdf	13 26 56.8	-1.7
AKASG	**Malin Array Be**	**117.70**	**36**	PKIKP	PKPdf	13 26 57.6	-2.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**117.70**	**36**	PKP	PKPdf	13 26 57.6	-2.4
	comp=Z,1.0nm,0.5s,baz=240,slow=1.4,SNR=11						
SCHQ	**Schefferville**	**117.99**	**334**	PKP	PKPdf	13 26 58.6	-1.8
	comp=Z,3.4nm,0.6s,baz=31,slow=1.8,SNR=14						
ISCO	**Idaho Springs**	**118.44**	**300**	*e*PKPdf	PKPdf	13 26 59.9	-1.9
PV10	**Paradox Valley**	**118.86**	**297**	*e*PKPdf	PKPdf	13 27 01.2	-1.5
NEN	**Nelson**	**119.46**	**291**	*e*PKPdf	PKPdf	13 27 01.6	-2.2
SRU	**San Rafael**	**120.15**	**296**	*e*PKPdf	PKPdf	13 27 03.0	-2.0
MSU	**Marysvale**	**120.45**	**295**	*e*PKPdf	PKPdf	13 27 04.6	-1.1
MVU	**Marysvale**	**120.46**	**295**	*e*PKPdf	PKPdf	13 27 04.9	-0.8
RWWY	**Rawlins**	**120.68**	**300**	*e*PKPdf	PKPdf	13 27 04.2	-1.9
RSSD	**Black Hills**	**121.22**	**304**	*e*PKPdf	PKPdf	13 27 04.7	-2.4
DAU	**Daniels Canyon**	**121.52**	**297**	*e*PKPdf	PKPdf	13 27 06.3	-1.5
NLU	**North Lily Min**	**121.55**	**296**	*e*PKPdf	PKPdf	13 27 06.5	-1.3
BW06	**Boulder Array**	**122.60**	**300**	*e*PKPdf	PKPdf	13 27 07.1	-2.6
PDAR	**Pinedale Array**	**122.60**	**300**	PKP	PKPdf	13 27 07.2	-2.4
	comp=Z,3.2nm,0.5s,baz=137,slow=5.2,SNR=40						
HWUT	**Hardware Ranch**	**122.61**	**297**	*e*PKPdf	PKPdf	13 27 07.9	-1.8
NB2	**NORSAR Subarra**	**122.70**	**20**	PKPdf	PKPdf	13 27 07.4	-2.0
	comp=Z,1.7nm,0.6s,baz=200,slow=1.9						
NOA	**NORSAR Array B**	**122.70**	**20**	PKIKP	PKPdf	13 27 07.7	-1.7
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**122.70**	**20**	PKP	PKPdf	13 27 07.7	-1.7
	comp=Z,2.3nm,0.6s,baz=199,slow=1.8,SNR=9.1						
ULM	**Lac du Bonnet**	**122.85**	**314**	PKP	PKPdf	13 27 07.5	-2.5
	comp=Z,9.9nm,0.6s,baz=134,slow=0.8,SNR=14						
ULM	**Lac du Bonnet**	**122.85**	**314**	PKP	PKPdf	13 27 07.5	-2.5
KOLN	**Koldanda**	**123.00**	**90**	*e*P	PKPdf	13 27 07.5	-3.3
	comp=Z,22nm,0.9s						
CMAR	**Chiang Mai Arr**	**123.16**	**110**	PKIKP	PKPdf	13 27 09.7	-1.6
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**123.16**	**110**	PKP	PKPdf	13 27 09.7	-1.7
	comp=Z,4.5nm,0.6s,baz=225,slow=3.6,SNR=27						
MNV	**Mina**	**123.27**	**290**	*e*PKPdf	PKPdf	13 27 10.1	-1.0
HVU	**Hansel Valley**	**123.31**	**297**	*e*PKPdf	PKPdf	13 27 09.1	-2.0
NVAR	**Mina Array Bea**	**123.34**	**290**	PKP	PKPdf	13 27 10.4	-0.8
	comp=Z,6.1nm,0.6s,baz=130,slow=3.4,SNR=56						
DMN	**Daman**	**123.66**	**92**	*e*P	PKPdf	13 27 10.0	-2.2
ELK	**Elko**	**123.66**	**294**	*e*PKIKP	PKPdf	13 27 10.5	-1.4
GKN	**Gorkha**	**123.73**	**91**	*e*P	PKPdf	13 27 09.9	-2.4
	comp=Z,19nm,0.7s						
LOHW	**Long Hollow**	**123.73**	**299**	*e*PKPdf	PKPdf	13 27 10.2	-1.7
WUWY	**Wally Ulrich**	**123.74**	**299**	*e*PKPdf	PKPdf	13 27 10.1	-1.8
PKI	**Pulchoki**	**123.79**	**92**	*e*P	PKPdf	13 27 10.1	-2.3
	comp=Z,15nm,0.6s						
TPAW	**Teton Pass**	**123.80**	**299**	*e*PKPdf	PKPdf	13 27 10.7	-1.4
RRI2	**Red Ridge**	**123.86**	**299**	*e*PKPdf	PKPdf	13 27 10.6	-1.6
KKN	**Kakani**	**123.90**	**92**	*e*P	PKPdf	13 27 10.5	-2.2
	comp=Z,11nm,0.6s						
MOOW	**Moose Ponds**	**123.91**	**299**	*e*PKPdf	PKPdf	13 27 10.5	-1.8
CMB	**Columbia Colle**	**124.06**	**288**	*e*PKIKP	PKPdf	13 27 11.0	-1.7
IMW	**Indian Meadow**	**124.11**	**299**	*e*PKPdf	PKPdf	13 27 11.4	-1.2
LAO	**LASA Array**	**124.20**	**305**	*e*PKPdf	PKPdf	13 27 10.7	-2.1
GUN	**Gumba**	**124.31**	**92**	*e*P	PKPdf	13 27 11.7	-1.7
	comp=Z,19nm,0.7s						
BMN	**Battle Mountai**	**124.37**	**292**	*e*PKPdf	PKPdf	13 27 11.8	-1.4
YFT	**Old Faithful**	**124.49**	**300**	*e*PKPdf	PKPdf	13 27 13.3	-0.1
YMR	**Madison River**	**124.72**	**300**	*e*PKPdf	PKPdf	13 27 12.8	-0.9
DGMT	**Dagmar**	**124.73**	**307**	*e*PKPdf	PKPdf	13 27 11.7	-2.0
QLMT	**Earthquake Lak**	**125.05**	**300**	*e*PKPdf	PKPdf	13 27 13.7	-0.6
HLID	**Hailey**	**125.45**	**297**	*e*PKPdf	PKPdf	13 27 14.1	-1.0
MCMT	**McKenzie Canyo**	**125.70**	**299**	*e*PKPdf	PKPdf	13 27 14.8	-0.8
BOZ	**Bozeman (W)**	**125.77**	**300**	*e*PKPdf	PKPdf	13 27 14.4	-1.3
LCCM	**Lewis and Clar**	**126.03**	**300**	P	PKPdf	13 27 15.6	-0.5
FINES	**FINESS Array B**	**126.21**	**28**	PKIKP	PKPdf	13 27 13.9	-2.1
FINES				pmax	pmax		
	comp=Z,6.0nm,0.5s						
FINES	**FINESS Array B**	**126.21**	**28**	PKP	PKPdf	13 27 13.9	-2.1
	comp=Z,5.9nm,0.5s,baz=160,slow=2.1,SNR=69						
WVOR	**Wild Horse Val**	**126.59**	**293**	*e*PKIKP	PKPdf	13 27 16.3	-0.9
HRY	**Holter Researc**	**126.67**	**301**	*e*PKPdf	PKPdf	13 27 16.2	-1.0
KAF	**Kangasniemi**	**126.85**	**27**	*e*p	PKPdf	13 27 14.8	-2.4
LTIM	**Timbered Crate**	**127.02**	**290**	P	PKPdf	13 27 17.3	-0.8
MSO	**Missoula**	**127.71**	**300**	*e*PKPdf	PKPdf	13 27 18.1	-1.3
BMO	**Blue Mountains**	**127.78**	**296**	*e*PKPdf	PKPdf	13 27 17.7	-1.9
YBH	**Yreka Blue Hor**	**128.04**	**290**	PKIKP	PKPdf	13 27 18.4	-1.8
YBH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YBH	**Yreka Blue Hor**	**128.04**	**290**	PKP	PKPdf	13 27 18.4	-1.8
	comp=Z,2.7nm,0.9s,baz=80,slow=6.1,SNR=9.6						
FFC	**Flin Flon**	**128.68**	**314**	*e*PKIKP	PKPdf	13 27 18.6	-2.4
FCC	**Fort Churchill**	**129.00**	**321**	*e*PKIKP	PKPdf	13 27 18.9	-2.6
NEW	**Newport**	**130.22**	**299**	*e*PKIKP	PKPdf	13 27 21.9	-2.3
NEW	**Newport**	**130.22**	**299**	PKP	PKPdf	13 27 22.3	-1.9
	comp=Z,2.8nm,0.7s,baz=199,slow=8.8,SNR=3.7						
SUMG	**Summit**	**131.28**	**355**	*e*PKPdf	PKPdf	13 27 23.8	-1.8
EDM	**Edmonton**	**132.13**	**306**	*e*PKPdf	PKPdf	13 27 25.2	-2.5
ARCES	**ARCESS Array B**	**132.99**	**22**	PKIKP	PKPdf	13 27 27.0	-1.9
ARCES				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ARCES				pmax	pmax		
	comp=E,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**132.99**	**22**	PKP	PKPdf	13 27 27.0	-1.8
	comp=E,7.7nm,0.6s,baz=193,slow=1.8,SNR=27						
ARCES				SKPab		13 30 55.1	
	comp=E,2.3nm,0.9s,baz=214,slow=4.4,SNR=3.9						
ARCES	**ARCESS Array B**	**132.99**	**22**	PKP	PKPdf	13 27 27.0	-1.8
ARCES				SKPab		13 30 55.1	
GYA	**Guiyang**	**133.69**	**113**	*e*PKP	PKPdf	13 27 27.0	-4.2
GYA				PP	PP		
	comp=Z,100nm,7.8s						
CHKZ	**Chkalovo**	**135.81**	**58**	*e*PKIKP	PKPdf	13 27 32.4	-2.0
MKAR	**Makanchi Array**	**136.69**	**73**	PKHKP		13 27 23.1	
MKAR						13 27 33.0	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR				pmax	pmax		
	comp=E,1.0nm,0.8s						
MKAR	**Makanchi Array**	**136.69**	**73**	PKhKP		13 27 23.1	
	comp=E,0.8nm,0.7s,baz=225,slow=3.4,SNR=7.1						
MKAR				PKP	PKPdf	13 27 33.0	-3.1
	comp=E,0.7nm,0.5s,baz=315,slow=1.7,SNR=5.2						
MKAR				SKPbc		13 31 03.1	
	comp=E,0.8nm,0.8s,baz=225,slow=3.4,SNR=5.1						
YKA	**Yellowknife Ar**	**138.80**	**315**	PKhKP		13 27 27.1	
	comp=E,0.6nm,0.6s,baz=121,slow=3.1,SNR=5.1						
YKA				PKP	PKPdf	13 27 38.4	-1.2
	comp=E,23nm,0.6s,baz=128,slow=2.4,SNR=115						
YKA				SKPbc		13 31 08.0	
	comp=E,0.4nm,0.5s,baz=134,slow=3.0,SNR=5.0						
YKA	**Yellowknife Ar**	**138.80**	**315**	PKP	PKPdf	13 27 27.1	-13
YKA				PKP	PKPdf	13 27 38.4	-1.2
YKA				SKPbc		13 31 08.0	
YKW3	**Yellowknife Ar**	**138.85**	**315**	*e*PKPdf	PKPdf	13 27 37.5	-2.3
GTA	**Gaotai**	**140.50**	**94**	*e*PKP	PKPdf	13 27 39.6	-3.7
GTA				XPKP		13 27 46.9	
RES	**Resolute Bay**	**140.69**	**337**	*e*PKIKP	PKPdf	13 27 39.5	-3.1
NVS	**Novosibirsk**	**142.31**	**64**	*e*PKHKP		13 27 38.7	
NVS				pmax	pmax		
	comp=N,1.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAL	**Zalesovo**	**142.51**	**66**	PKHKP		13 27 39.9	
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAL	**Zalesovo**	**142.51**	**66**	PKhKP		13 27 39.9	
	comp=Z,2.2nm,0.5s,baz=215,slow=2.6,SNR=4.8						
DLBC	**Dease Lake**	**142.68**	**303**	PKhKP		13 27 40.9	
	comp=Z,1.5nm,0.6s,baz=127,slow=9.8,SNR=5.6						
DLBC	**Dease Lake**	**142.68**	**303**	PKP	PKPdf	13 27 40.9	-5.5
DLBC				*e*PKPdf	PKPdf	13 27 44.9	-1.5
NJ2	**Nanjing**	**144.07**	**122**	*e*PKP	PKPdf	13 27 49.4	-0.2
HHC	**Hu-ho-hao-te**	**147.62**	**104**	*e*PKP	PKPdf	13 27 59.3	+3.9

HHC				PKS	PKS	13 31 33.3	+6.9
HHC				SKS	SKS	13 35 01.5	-1.7
HHC				PP	PP		
	comp=Z,120nm,5.4s						
HHC				LR	LR		
	comp=N,90nm,15.5s,MS4.9						
HHC				LR	LR		
	comp=E,130nm,16.7s,MS4.9						
HHC				LR	LR		
	comp=Z,100nm,20.2s,MS4.6						
INK	Inuvik	148.48	318	ePKP2	PKPab	13 27 57.8	-4.3
DAWY	Dawson	149.29	308	ePKPbc	PKPdf	13 27 59.7	+2.3
SONM	Songino Array	149.76	89	PKP	PKPdf	13 27 57.2	-1.4
	comp=Z,1.2nm,0.8s,baz=215,slow=2.9,SNR=7.9						
SONM				PKPbc	PKPdf	13 28 02.2	+3.6
	comp=Z,11nm,0.7s,baz=228,slow=3.1,SNR=70						
ULN	Ulaanbaatar	150.13	90	ePKPbc	PKPdf	13 28 02.7	+3.5
TLY	Talaya	150.62	81	ePKIKP	PKPdf	13 28 04.1	+4.3
TLY				e		13 28 14.2	
TLY				pmax	pmax		
	comp=Z,12nm,0.8s						
TLY	Talaya	150.62	81	ePKPbc	PKPdf	13 28 03.6	+3.8
EYAK	Cordova Ski Ar	150.73	299	ePKPbc	PKPdf	13 28 04.4	+4.7
DIV	Divide	150.96	301	ePKPbc	PKPdf	13 28 04.9	+4.9
THY	Trims Highway	151.74	305	ePKPbc	PKPdf	13 28 07.2	+6.0
SML	Sawmill	152.35	301	ePKIKP	PKPdf	13 28 07.3	+5.2
ILAR	Eielson Array	152.60	308	PKIKP	PKPdf	13 28 08.2	+5.9
ILAR				pmax	pmax		
	comp=Z,41nm,0.9s						
ILAR	Eielson Array	152.60	308	PKPbc	PKPdf	13 28 08.2	+5.9
	comp=Z,41nm,0.9s,baz=153,slow=2.0,SNR=266						
SLKM	Skilak Lake	152.77	298	ePKPbc	PKPdf	13 28 08.5	+5.8
COLA	College	153.03	308	ePKPbc	PKPdf	13 28 08.6	+5.6
MCK	McKinley	153.19	305	ePKPbc	PKPdf	13 28 09.7	+6.5
MAJO	Matsushiro	155.34	147	ePKPab	PKPab	13 28 30.9	-0.9
MJAR	Matsushiro Arr	155.34	147	PKP2	PKPab	13 28 31.0	-0.8
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	Matsushiro Arr	155.34	147	PKPab	PKPab	13 28 31.0	-0.8
	comp=Z,3.2nm,0.7s,baz=182,slow=4.6,SNR=9.2						
CN2	Changchun	156.63	117	ePKP	PKPdf	13 28 06.1	-2.3

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*NEIC **10** 13:26:42.7, 15.29N×95.64W, h16^{km}, MD3.8(MEX), After MEX.*

MEX 10 13:26:42.7±1.1**, 15.29N×95.64W, h16**^{km}±157^{km}**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.65	317	eP	Pb	13 26 53.3	-1.9
HUIG				eS	Sb	13 27 00.8	-3.1
CMIG	Matias Romero	1.93	22	i P	Pn	13 27 10.7	-4.6
CMIG				i S	Sn	13 27 34.8	-4.6
VHO	Vista Hermosa	2.06	329	eP	Pn	13 27 13.9	-3.3
VHO				i S	Sn	13 27 38.1	-4.5
OXX	Oaxaca	2.06	330	eP	Pn	13 27 16.5	-0.7
OXX				eS	Sn	13 27 38.5	-4.2

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*IDC **10** 13:35:54.1±3.7, 0.69S×96.32E, mb3.7/3, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=121.6km s-min=27.9km az=60.0*

*NEIC **10** 13:36:01.2±1.4, 0.28S×96.97E, h30^{km}, mb4.0/1, Error ellipse: s-maj=33.4km s-min=16.3km az=71.0*

ISC 10 13:35:59.7±1.8**, 0.3S**±0.2×**97.0E**±0.3**, h30**^{km}**, n6,** σ**1^{s}52**/6**, mb3.8**/4**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.61	33	ePn	Pn	13 37 36.7	-0.8
CMAR	Chiang Mai Arr	18.71	6	P	P	13 40 20.9	+2.5
	0.1nm,0.3s,baz=196,slow=11,SNR=3.9						
WRA	Warramunga Arr	41.44	120	P	P	13 43 46.1	+0.5
	0.8nm,1.0s,mb3.3,baz=290,slow=9.1,SNR=4.1						
WRAB	Tennant Creek	41.44	120	eP	P	13 43 45.5	-0.2
	2.9nm,0.9s,mb3.9						
SONM	Songino Array	48.61	8	P	P	13 44 42.7	+0.1
	0.8nm,0.7s,mb3.8,baz=195,slow=9.0,SNR=7.4						
MKAR	Makanchi Array	48.62	347	P	P	13 44 41.5	-1.2
	1.6nm,0.6s,mb4.2,baz=160,slow=9.1,SNR=14						

IDC 10 14:18:17.7±2.7**, 7.94N×91.86E, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.6**/20**, mbtmp3.6**/4**, ML3.8**/1**, Error ellipse: s-maj=81.2km s-min=27.8km az=66.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.52	33	Pn	P	14 21 16.9	-3.3
	0.2nm,0.3s,baz=230,slow=14,SNR=4.9						
MKAR	Makanchi Array	39.58	350	P	P	14 25 50.8	-1.6
	1.4nm,0.5s,baz=181,slow=8.4,SNR=7.1						
SONM	Songino Array	41.64	15	P	P	14 26 07.7	-1.6
	0.3nm,0.6s,baz=198,slow=9.1,SNR=3.0						
WRA	Warramunga Arr	50.15	124	P	P	14 27 15.3	-2.0
	0.8nm,0.7s,baz=302,slow=8.9,SNR=16						

IDC 10 14:18:23.9±2.6**, 8.01N×91.42E, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.6**/20**, mbtmp3.8**/4**, ML4.2**/1**, Error ellipse: s-maj=74.9km s-min=28.5km az=64.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.70	34	Pn	P	14 21 24.6	-4.1
	0.4nm,0.3s,baz=234,slow=14,SNR=13						
MKAR	Makanchi Array	39.43	350	P	P	14 25 56.5	-0.9
	1.5nm,0.5s,baz=172,slow=8.6,SNR=12						
SONM	Songino Array	41.68	15	P	P	14 26 14.1	-1.8
	1.2nm,0.8s,baz=204,slow=8.2,SNR=9.3						
WRA	Warramunga Arr	50.55	124	P	P	14 27 24.0	-2.6
	0.5nm,0.6s,baz=304,slow=8.4,SNR=7.7						

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*NEIC **10** 14:19:15.2, 17.17N×94.54W, h151^{km}, MD4.0(MEX), After MEX.*

MEX 10 14:19:15.2±0.9**, 17.17N×94.54W, h151**^{km}±8^{km}**, MD4.0, 2D, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.34	257	⇓iP	P	14 19 34.8	-1.7
CMIG				i S	S	14 19 49.4	-3.4
SCX	San Cristobal	1.88	103	eP	P	14 19 48.0	-1.3
SCX				eS	S	14 20 16.0	+0.5
HUIG	Huatulco	2.05	227	i P	P	14 19 48.8	-2.5
HUIG				i S	S	14 20 17.1	-1.9
OXX	Oaxaca	2.09	268	eP	P	14 19 50.5	-1.3
OXX				eS	S	14 20 18.5	-1.4
VHO	Vista Hermosa	2.10	268	⇓iP	P	14 19 50.4	-1.5
VHO				i S	S	14 20 18.1	-2.1
CCIG	Comitan	2.47	111	i P	P	14 19 56.6	+0.1
CCIG				eS	S	14 20 26.8	-1.4
PPM	Popocatepetl	4.32	297	i P	P	14 20 19.5	-1.1
PPM				eS	S	14 21 09.9	-0.9
PPM	Popocatepetl	4.32	297	i P	P	14 20 19.5	-1.1
PPM				eP		14 20 20.0	
PPM				eS	S	14 21 09.9	-0.9
PPM				eS	S	14 21 12.0	+1.2

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*IDC **10** 14:20:35.8±1.6, 0.58S×96.33E, mb3.9/6, mb1 4.1/7, mb1mx3.8/19, mbtmp3.9/7, ML3.7/1, MS2.9/1, Ms1 3.1/1, ms1mx2.7/17, Error ellipse: s-maj=54.1km s-min=27.2km az=52.0*

*NEIC **10** 14:20:41.1±1.1, 0.39S×96.59E, h30^{km}, mb4.1/1, Error ellipse: s-maj=22.8km s-min=17.3km az=211.0*

ISC 10 14:20:38.9±1.2**, 0.4S**±0.2×**96.6E**±0.1**, h30**^{km}**, n12,** σ**1^{s}06**/11**, mb4.0**/7**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.93	36	ePn	Pn	14 22 19.5	-1.7
CMAR	Chiang Mai Arr	18.85	7	P	P	14 25 00.3	+1.0
	0.1nm,0.3s,baz=210,slow=12,SNR=5.1						
CMAR				LR	LR	14 32 21.4	
	comp=Z,35nm,19.0s,baz=210,slow=37						
KKM	Kota Kinabalu	20.60	72	eP	P	14 25 18.9	+0.4
WRA	Warramunga Arr	41.75	120	P	P	14 28 27.5	0.0
	1.0nm,0.8s,mb3.5,baz=297,slow=9.1,SNR=4.7						

MKAR	Makanchi Array	48.62	347	P	P	14 29 23.2	+1.2
	2.7nm,0.8s,mb4.4,baz=151,slow=8.3,SNR=12						
MKAR	Makanchi Array	48.62	347	P	P	14 29 23.2	+1.2
SONM	Songino Array	48.77	9	P	P	14 29 24.6	+1.5
	0.9nm,0.6s,mb4.0,baz=195,slow=9.0,SNR=8.5						
ZAL	Zalesovo	55.00	352	P	P	14 30 08.9	-1.0
	1.6nm,0.3s,mb4.5,baz=185,slow=4.0,SNR=5.1						
BVAR	Borovoye Array	57.53	342	P	P	14 30 26.5	-1.5
	0.8nm,0.7s,mb3.8,baz=153,slow=9.9,SNR=5.2						
CHKZ	Chkalovo	58.02	342	eP	P	14 30 31.3	-0.1
	1.2nm,0.7s,mb4.0						
BRTR	Keskin Array B	69.72	313	P	P	14 31 48.0	-0.3
	0.4nm,0.5s,mb3.6,baz=117,slow=9.7,SNR=2.9						
TXAR	Lajitas Array	145.32	32	PKPbc	PKPbc	14 40 17.9	+2.8
	0.2nm,0.3s,baz=270,slow=1.3,SNR=5.0						

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*NEIC **10** 14:38:36.5, 38.76S×175.30E, h218^{km}, MG3.8(WEL), After WEL.*

WEL 10 14:38:36.5±0.3**, 38.80S×175.29E, h219**^{km}±2^{km}**, ML3.8**/17**, 6C-5D, Error ellipse: s-maj=4.1km s-min=4.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWVZ	Taurewa	0.30	158	P	P	14 39 05.1	-0.5
TWVZ	Taurewa	0.30	158	PN	P	14 39 05.1	-0.5
TWVZ				eSN	S	14 39 27.6	-0.4
CNZ	Chateau	0.45	154	⇓PN	P	14 39 05.7	-0.2
NGZ	Ngauruhoe	0.45	148	P	P	14 39 05.8	-0.1
NGZ	Ngauruhoe	0.45	148	⇓PN	P	14 39 05.8	-0.1
WPVZ	Whakapapa	0.45	154	P	P	14 39 05.7	-0.3
WPVZ	Whakapapa	0.45	154	PN	P	14 39 05.7	-0.2
WPVZ				SN	S	14 39 28.5	-0.3
FWVZ	Far West T-bar	0.50	156	P	P	14 39 05.9	-0.2
FWVZ				S	S	14 39 28.5	-0.6
FWVZ	Far West T-bar	0.50	156	PN	P	14 39 05.9	-0.2
FWVZ				SN	S	14 39 28.5	-0.5
TUVZ	Tukino	0.55	149	PN	P	14 39 06.2	-0.1
TUVZ				SN	S	14 39 28.8	-0.6
WNVZ	Wahianoa	0.58	156	P	P	14 39 06.2	-0.2
WNVZ	Wahianoa	0.58	156	PN	P	14 39 06.2	-0.1
WNVZ				SN	S	14 39 29.5	-0.1
MTVZ	Mangateitei	0.60	167	⇑PN	P	14 39 06.0	-0.4
MTVZ				SN	S	14 39 29.1	-0.7
MOVZ	Moawhango	0.71	150	P	P	14 39 06.3	-0.6
MOVZ	Moawhango	0.71	150	PN	P	14 39 06.3	-0.6
MOVZ				SN	S	14 39 29.0	-1.5
WAZ	Wanganui	0.99	194	P	P	14 39 07.6	-0.7
WAZ	Wanganui	0.99	194	⇑PN	P	14 39 07.5	-0.8
WAZ				SN	S	14 39 31.7	-1.3
BKZ	Black Stump Fm	1.00	112	eP	P	14 39 08.5	+0.1
BKZ	Black Stump Fm	1.00	112	⇓PN	P	14 39 08.5	0.0
BKZ				SN	S	14 39 32.9	-0.3
URZ	Urewera	1.52	70	P	P	14 39 11.7	-0.8
URZ	Urewera	1.52	70	⇓PN	P	14 39 11.7	-0.8
URZ				SN	S	14 39 38.6	-1.6
PWZ	Pawanui	1.73	136	eP	P	14 39 14.2	-0.1
PWZ	Pawanui	1.73	136	PN	P	14 39 14.0	-0.3
PWZ				SN	S	14 39 43.5	+0.1
MWZ	Matawai	1.81	76	P	P	14 39 14.6	-0.4
MWZ	Matawai	1.81	76	⇓PN	P	14 39 14.6	-0.5
MWZ				SN	S	14 39 43.6	-1.1
KNZ	Kokohu	1.87	98	P	P	14 39 15.6	0.0
KNZ	Kokohu	1.87	98	PN	P	14 39 15.7	+0.2
MRZ	Mangatainoka R	1.88	173	P	P	14 39 13.8	-1.8
MRZ	Mangatainoka R	1.88	173	PN	P	14 39 13.8	-1.8
MRZ				SN	S	14 39 43.1	-2.6
KIW	Kapiti Island	2.08	188	⇑PN	P	14 39 15.2	-2.4
DUWZ	D'Urville Isla	2.27	207	PN	P	14 39 16.3	-3.2
CAW	Cannon Point	2.32	184	P	P	14 39 17.4	-2.7
CAW	Cannon Point	2.32	184	⇑PN	P	14 39 17.4	-2.6
CAW				SN	S	14 39 49.6	-4.2
MTW	Mount Morrison	2.37	176	P	P	14 39 17.9	-2.7
MTW	Mount Morrison	2.37	176	⇑PN	P	14 39 17.9	-2.7
MTW				SN	S	14 39 51.4	-3.3
MRW	Makara Radio	2.47	190	PN	P	14 39 18.7	-3.0
MRW				eSN	S	14 39 52.3	-4.5
WEL	Wellington	2.52	189	P	P	14 39 19.2	-3.0
WEL	Wellington	2.52	189	PN	P	14 39 19.1	-3.1
TCW	Tory Channel	2.54	198	P	P	14 39 19.4	-3.0
TCW	Tory Channel	2.54	198	PN	P	14 39 19.4	-3.1
TCW				SN	S	14 39 53.1	-4.9
SNZO	South Karori	2.55	190	P	P	14 39 19.3	-3.3
SNZO	South Karori	2.55	190	PN	P	14 39 19.3	-3.3
SNZO				SN	S	14 39 53.5	-4.8
PAWZ	Paruwai Farm	2.58	178	PN	P	14 39 20.1	-2.8
MSWZ	Moikau Station	2.62	181	PN	P	14 39 20.3	-3.0
MSWZ				SN	S	14 39 54.9	-4.6
BHW	Baring Head	2.63	187	P	P	14 39 20.2	-3.2
BHW	Baring Head	2.63	187	PN	P	14 39 20.2	-3.2
MXZ	Matakaoa Point	2.67	64	P	P	14 39 23.2	-0.7
MXZ	Matakaoa Point	2.67	64	PN	P	14 39 23.1	-0.8
TUWZ	Tuamarina	2.83	201	PN	P	14 39 22.1	-3.6
TUWZ				SN	S	14 39 58.4	-5.3
NNZ	Nelson	2.83	211	P	P	14 39 21.5	-4.2
NNZ	Nelson	2.83	211	⇑PN	P	14 39 21.5	-4.2
NNZ				SN	S	14 39 57.4	-6.4
QRZ	Quartz Range	2.94	226	PN	P	14 39 21.7	-5.2
CMWZ	Cape Campbell	3.06	195	P	P	14 39 25.3	-3.0
CMWZ	Cape Campbell	3.06	195	PN	P	14 39 25.2	-3.1
BSWZ	Blackbirch Sta	3.11	200	P	P	14 39 25.4	-3.5
BSWZ	Blackbirch Sta	3.11	200	PN	P	14 39 25.4	-3.5
BSWZ				SN	S	14 40 04.7	-4.8
THZ	Tophouse	3.48	211	P	P	14 39 28.3	-5.0
THZ	Tophouse	3.48	211	PN	P	14 39 28.3	-5.0
THZ				SN	S	14 40 10.8	-6.5
LTZ	Lake Taylor	4.60	209	PN	P	14 39 41.4	-5.6
MQZ	McQueen's Vall	5.29	201	ePN	P	14 39 49.0	-6.7
MQZ				SN	S	14 40 47.0	-10
FOZ	Fox Glacier	6.37	220	eSN	S	14 41 07.1	-15
ODZ	Otahua Downs	7.14	208	eP	P	14 40 13.4	-6.0
ODZ	Otahua Downs	7.14	208	PN	P	14 40 13.4	-6.0

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*NEIC **10** 14:39:52.8, 46.70N×1.09W, h10^{km}, ML2.6(LDG), After STR.*

*STR **10** 14:39:52.8±0.4, 46.70N×1.09W, h10^{km}±1^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **10** 14:39:52.9±0.0, 46.69N×1.05W, h18^{km}, ML2.6/13, Error ellipse: s-maj=1.0km s-min=0.7km az=44.0*

LDG 10 14:39:53.0±0.1**, 46.69N×1.04W, h18**^{km}**, Md2.6**/1**, Ml2.6**/14**, Error ellipse: s-maj=1.1km s-min=0.7km az=40.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCHF	La Chataignera	0.21	97	Pg	Pb	14 39 58.7	+0.6
LCHF				Sg	Sb	14 40 01.7	+0.1
LRYF	La Roche-sur-Y	0.37	252	Pg	Pb	14 40 00.1	-0.6
LRYF				Sg	Sb	14 40 04.7	-1.2
MFF	Saint Martin d	0.62	98	ePg	Pb	14 40 05.2	+0.1
MFF				eSg	Sb	14 40 13.3	0.0
	47nm,0.2s						
OLEF	Ile d'Oleron	0.78	196	Pg	Pb	14 40 08.2	+0.5
OLEF				Sg	Sb	14 40 18.2	+0.4
GRR	Gorron	1.70	4	ePg	Pn	14 40 24.8	+2.6
GRR				eSg	Sn	14 40 47.0	+3.4
	11nm,0.3s						
SGMF	Saint Gilles	1.87	327	ePn	Pn	14 40 22.5	-2.1
SGMF				ePg	Pn	14 40 27.8	+3.2
SGMF				eSg	Sn	14 40 51.7	+3.8
	6.2nm,0.3s						
QUIF	Quistinic	1.89	311	ePn	Pn	14 40 22.8	-2.1
QUIF				ePg	Pn	14 40 28.2	+3.3
QUIF				eSg	Sn	14 40 53.7	+5.2
	4.6nm,0.2s						
LDF	La Druitiere	2.00	18	ePg	Pn	14 40 30.3	+3.8
LDF				eSg	Sn	14 40 56.2	+5.0
	5.5nm,0.3s						
FLN	La Foliniere	2.10	10	ePg	Pn	14 40 32.3	+4.3
FLN				eSg	Sn	14 40 58.8	+4.9
	7.5nm,0.2s						
LFF	La Frestale	2.15	144	ePn	Pn	14 40 26.4	-2.3
LFF				ePg	Pn	14 40 32.8	+4.1
LFF				eSg	Sn	14 41 01.0	+5.9
	9.3nm,0.4s						
ROSF	Rostrenen	2.23	318	ePn	Pn	14 40 27.3	-2.5
ROSF				eSg	Sn	14 41 03.4	+6.2
	4.3nm,0.4s						
RJF	Les Rejaudoux	2.26	127	eSg	Sn	14 41 04.4	+6.5

	7.5nm,0.2s						
TCF	Toulx Ste Croi	2.28	99	ePg	Pn	14 40 35.8	+5.3
TCF				eSg	Sn	14 41 04.7	+6.3
	5.4nm,0.2s						
BGF	Bois d'Agland	2.68	91	eSg	Sn	14 41 16.7	+8.1
	12nm,0.3s						
CAF	Calviac	2.80	128	eSg	Sn	14 41 21.1	+10
	4.0nm,0.2s						
AVF	Avril sur Loir	3.02	87	ePn	Pn	14 40 38.1	-3.0
AVF				ePg	Pn	14 40 49.1	+8.0
AVF				eSg	Sn	14 41 28.3	+11
	2.8nm,0.4s						
LOR	Lormes	3.41	78	eSg	Sn	14 41 40.2	+13
	1.9nm,0.3s						

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*NEIC **10** 15:01:18.2±1.2, 22.45S×68.39W, h102^{km}±12^{km}, mb4.1/3, Error ellipse: s-maj=20.8km s-min=9.5km az=99.0*

*IDC **10** 15:01:18.5±2.4, 22.48S×68.31W, h101^{km}±21^{km}, mb3.8/3, mb1 3.7/8, mb1mx3.5/20, mbtmp4.0/8, Error ellipse: s-maj=36.0km s-min=18.6km az=104.0*

ISC 10 15:01:17.1±1.4**, 22.48S**±0.08×**68.4W**±0.2**, h110**^{km}±19^{km}**, n13,** σ**1^{s}21**/15**, mb4.2**/3**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	6.16	2	P	P	15 02 48.6	+1.6
	1.0nm,0.3s,baz=191,slow=6.1,SNR=33						
CFAA	Coronel Fontan	9.09	179	P	P	15 03 25.2	-1.6
	0.2nm,0.3s,baz=356,slow=14,SNR=13						
CFAA				S	S	15 05 02.4	-5.6
	0.3nm,0.3s,baz=139,slow=12,SNR=7.7						
CFAA	Coronel Fontan	9.09	179	P	P	15 03 25.2	-1.6
CFAA				S	S	15 05 02.4	-5.6
SIV	San Ignacio	9.44	48	P	P	15 03 30.0	-1.4
	1.8nm,0.3s,baz=262,slow=7.9,SNR=36						
SIV				S	S	15 05 10.0	-6.4
	1.3nm,0.3s,baz=164,slow=20,SNR=5.1						
CPUP	Villa Florida	10.77	113	P	P	15 03 50.9	+1.6
	0.1nm,0.3s,baz=313,slow=15,SNR=7.0						
SAML	Samuel	14.35	21	eP	P	15 04 35.4	-0.8
	1.7nm,0.8s						
TRQA	Tornquist	16.47	162	eP	P	15 05 04.8	+1.9
	19nm,1.4s						
PLCA	Paso Flores	18.29	185	P	P	15 05 24.5	-0.3
	0.4nm,0.3s,baz=350,slow=11,SNR=5.4						
BDFB	Brasilia	20.40	74	P	P	15 05 47.2	-0.2
	7.7nm,0.4s,baz=252,slow=12,SNR=13						
RCBR	Riachuelo	35.44	67	eP	P	15 08 05.4	+0.6
	8.5nm,0.7s,mb4.7						
SNAA	Sanae	61.20	161	P	P	15 11 22.7	+0.5
	0.4nm,0.6s,mb3.6,baz=269,slow=7.0,SNR=9.0						
DBIC	Dimbokro	68.54	73	P	P	15 12 09.6	-0.8
	2.1nm,0.5s,mb4.2,baz=212,slow=9.1,SNR=5.0						
MKAR	Makanchi Array	146.12	37	PKPbc	PKPbc	15 20 46.2	+1.9
	2.3nm,1.0s,baz=319,slow=2.6,SNR=11						

ISC 10 15:03:30.3±1.1**, 40.54N**±0.04×**35.18E**±0.09**, h10**^{km}**, n7,** σ**1^{s}15**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTKT	Corum	0.30	286	i P	Pg	15 03 35.2	-1.5
CTKT				i S	Sg	15 03 39.2	-1.8
CORM	Corum	0.55	229	PG	Pg	15 03 41.7	+0.2
CORM				SG	Sg	15 03 49.6	+0.6
BOYT	Boyabat	0.90	347	i P	Pb	15 03 46.8	-0.9
BOYT				i S	Sb	15 04 00.8	+1.3
YOZ	Yozgat	0.91	173	ePG	Pg	15 03 48.1	-0.4
TOS	Tosya	1.00	300	ePG	Pg	15 03 44.9	-5.6
CDAG	Cicekdag	1.10	214	i P	Pb	15 03 50.2	-0.9
CDAG				i S	Sb	15 04 06.7	+1.4
BALT	Daday	1.68	307	i P	Pn	15 04 00.2	+0.2
BALT				i S	Sn	15 04 23.7	+1.9

WEL 10 15:23:06.6±0.1**, 39.46S×175.20E, h98**^{km}±1^{km}**, ML3.5**/14**, 12C-6D, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTVZ	Mangateitei	0.22	71	⇓PN	P	15 23 20.5	-0.2
MTVZ				SN	S	15 23 30.9	-0.4
WNVZ	Wahianoa	0.34	67	PN	P	15 23 21.3	+0.1
WNVZ				SN	S	15 23 31.7	-0.5
WNVZ				SN	S	15 23 31.9	-0.4
DRZ	Dome Shelter	0.34	57	SN	S	15 23 31.9	-0.4
FWVZ	Far West T-bar	0.34	53	⇓PN	P	15 23 21.2	0.0
FWVZ				SN	S	15 23 31.7	-0.6
WAZ	Wanganui	0.34	209	⇓PN	P	15 23 21.4	+0.2
WAZ				SN	S	15 23 32.6	+0.2
WPVZ	Whakapapa	0.37	47	⇑PN	P	15 23 21.3	-0.2
WPVZ				SN	S	15 23 31.8	-0.8
CNZ	Chateau	0.37	46	⇓PN	P	15 23 21.3	-0.2
TUVZ	Tukino	0.40	62	PN	P	15 23 21.7	0.0
TUVZ				SN	S	15 23 32.7	-0.2
NGZ	Ngauruhoe	0.42	48	⇑PN	P	15 23 21.5	-0.2
NGZ				SN	S	15 23 32.6	-0.6
TWVZ	Taurewa	0.43	26	⇑PN	P	15 23 21.3	-0.5
TWVZ				SN	S	15 23 32.0	-1.3
MOVZ	Moawhango	0.43	83	⇑PN	P	15 23 21.5	-0.4
MOVZ				SN	S	15 23 32.0	-1.3
WTVZ	West Tongariro	0.46	42	⇑PN	P	15 23 21.7	-0.3
WTVZ				SN	S	15 23 32.8	-0.8
OTVZ	Oturere	0.47	51	⇑PN	P	15 23 22.1	0.0
OTVZ				SN	S	15 23 33.5	-0.1
VRZ	Vera Road	0.48	314	⇓PN	P	15 23 21.5	-0.7
VRZ				SN	S	15 23 33.1	-0.8
KRVZ	Karewarewa	0.50	43	⇑PN	P	15 23 22.0	-0.4
KRVZ				SN	S	15 23 33.1	-1.0
KATZ	Kakaramea	0.62	39	PN	P	15 23 23.0	-0.3
KATZ				SN	S	15 23 35.1	-0.7
RAEZ	Rainy Point	0.65	285	⇓PN	P	15 23 23.5	-0.1
RITZ	Rihia Road	0.70	47	PN	P	15 23 23.9	-0.2
RATZ	Rangitukua	0.74	37	PN	P	15 23 23.8	-0.6
TSZ	Takapari Road	0.84	136	PN	P	15 23 25.5	+0.1
TSZ				SN	S	15 23 39.7	+0.2
WATZ	Wairara	0.86	29	PN	P	15 23 25.2	-0.4
WATZ				SN	S	15 23 39.2	-0.5
DFE	Dawson Falls	0.86	278	PN	P	15 23 25.5	-0.2
NEZ	North Egmont	0.88	282	⇑PN	P	15 23 25.7	-0.1
NRZ	Ngariki Road	0.99	277	⇑PN	P	15 23 26.4	-0.6
BKZ	Black Stump Fm	1.04	74	PN	P	15 23 27.1	-0.6
BKZ				SN	S	15 23 42.3	-1.2
MRZ	Mangatainoka R	1.24	167	PN	P	15 23 29.6	-0.5
MRZ				SN	S	15 23 45.6	-1.9
PWZ	Pawanui	1.40	114	PN	P	15 23 31.9	-0.1
PWZ				SN	S	15 23 49.8	-1.1
KIW	Kapiti Island	1.42	189	PN	P	15 23 31.6	-0.6
KIW				SN	S	15 23 49.0	-2.2
CAW	Cannon Point	1.65	183	PN	P	15 23 34.4	-0.7
DUWZ	D'Urville Isla	1.66	216	PN	P	15 23 34.4	-0.9
MTW	Mount Morrison	1.71	172	PN	P	15 23 35.0	-0.9
MRW	Makara Radio	1.81	192	⇑PN	P	15 23 36.2	-0.9
MRW				SN	S	15 23 57.2	-2.5
WEL	Wellington	1.85	190	PN	P	15 23 36.6	-1.1
SNZO	South Karori	1.89	191	⇑PN	P	15 23 36.9	-1.2
SNZO				SN	S	15 23 57.7	-3.7
TCW	Tory Channel	1.89	202	PN	P	15 23 37.0	-1.1
TCW				SN	S	15 23 59.3	-2.1
URZ	Urewera	1.91	52	PN	P	15 23 37.0	-1.4
URZ				SN	S	15 24 00.3	-1.7
PAWZ	Paruwai Farm	1.93	175	PN	P	15 23 37.6	-1.1
MSWZ	Moikau Station	1.96	179	⇑PN	P	15 23 37.9	-1.1
BHW	Baring Head	1.96	187	PN	P	15 23 37.9	-1.2
KNZ	Kokohu	1.97	78	PN	P	15 23 37.9	-1.3
TUWZ	Tuamarina	2.19	206	PN	P	15 23 40.3	-1.9
NNZ	Nelson	2.24	218	PN	P	15 23 40.9	-2.1
QRZ	Quartz Range	2.46	235	PN	P	15 23 44.0	-2.0
BSWZ	Blackbirch Sta	2.47	204	PN	P	15 23 44.0	-2.0

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*IDC **10** 15:39:30.4±1.7, 2.99N×93.18E, mb3.9/6, mb1 4.1/7, mb1mx3.8/21, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=61.6km s-min=25.2km az=56.0*

*NEIC **10** 15:39:35.1±0.7, 3.04N×93.28E, h30^{km}, mb4.3/3, Error ellipse: s-maj=16.1km s-min=9.8km az=225.0*

ISC 10 15:39:33.7±1.1**, 3.1N**±0.1×**93.3E**±0.1**, h33**^{km}**, n12,** σ**0^{s}79**/12**, mb4.0**/9**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**7.62**	**73**	*e*Pn	**Pn**	**15 41 24.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**16.23**	**19**	Pn	**P**	**15 43 21.8**	**+0.8**
	0.1nm,0.3s,baz=214,slow=11,SNR=7.0						
SHL	**Shillong**	**22.39**	**357**	*e*P	**P**	**15 44 29.0**	**-1.7**
LSA	**Lhasa**	**26.54**	**356**	*e*P	**P**	**15 45 11.5**	**+0.9**
	3.3nm,0.4s,mb4.2						
MKAR	**Makanchi Array**	**44.58**	**349**	P	**P**	**15 47 45.0**	**+0.5**
	1.8nm,0.6s,mb4.1,baz=169,slow=8.6,SNR=27						
SONM	**Songino Array**	**45.97**	**12**	P	**P**	**15 47 56.7**	**+1.0**
	0.4nm,0.8s,mb3.4,baz=190,slow=7.5,SNR=4.0						
WRA	**Warramunga Arr**	**46.31**	**121**	P	**P**	**15 47 58.9**	**+0.2**
	1.6nm,0.5s,mb4.2,baz=299,slow=8.7,SNR=36						
WRAB	**Tennant Creek**	**46.32**	**121**	*e*P	**P**	**15 47 58.7**	**0.0**
	2.9nm,0.5s,mb4.5						
ZAL	**Zalesovo**	**51.16**	**354**	P	**P**	**15 48 35.2**	**-0.4**
	1.6nm,0.4s,mb4.3,baz=313,slow=4.1,SNR=6.1						
BVAR	**Borovoye Array**	**53.26**	**343**	P	**P**	**15 48 50.8**	**-0.6**
	0.9nm,0.7s,mb3.8,baz=141,slow=9.5,SNR=5.4						
CHKZ	**Chkalovo**	**53.77**	**343**	*e*P	**P**	**15 48 54.3**	**-0.8**
	1.5nm,0.6s,mb4.1						
GERES	**GERESS Array B**	**80.85**	**319**	P	**P**	**15 51 46.6**	**+0.6**
	0.5nm,0.5s,mb3.7,baz=117,slow=3.0,SNR=4.4						

OTT 10 15:57:37.4±0.2,52.77N×67.36W,MN2.8/7,Blast, Mount Wright, Qc Mining explosion.,Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**2.09**	**8**	PN	Pn	15 58 13.3	-0.8
SCHQ				SN	Sn	15 58 40.5	-0.6
SCHQ				Trac		15 58 44.8	
	comp=Z,18nm,0.1s						
MNQ	**Manicouagan**	**2.41**	**202**	PN	Pn	15 58 16.5	-2.1
MNQ				SN	Sn	15 58 44.5	-4.7
MNQ				Trac		15 58 52.4	
	comp=Z,12nm,0.1s						
SMQ	**Clarke City**	**2.58**	**171**	PN	Pn	15 58 19.2	-1.9
SMQ				SN	Sn	15 58 55.1	+1.4
SMQ				Trac		15 58 57.8	
	comp=Z,26nm,0.3s						
ICQ	**Pointe Anglais**	**3.25**	**179**	PN	Pn	15 58 29.1	-1.6
ICQ				SN	Sn	15 59 08.0	-2.7
ICQ				Trac		15 59 20.1	
	comp=Z,8.6nm,0.2s						
CNQ	**Baie Comeau**	**3.50**	**188**	PN	Pn	15 58 32.4	-1.8
CNQ				SG	Sg	15 59 24.2	-10
CNQ				Trac		15 59 33.7	
	comp=Z,6.7nm,0.2s						
GSQ	**Grosses Roches**	**3.87**	**178**	PN	Pn	15 58 38.4	-1.0
GSQ				SN	Sn	15 59 20.7	-5.5
GSQ				Trac		15 59 42.3	
	comp=Z,0.9nm,0.0s						
LG4Q	**La Grande 4**	**4.14**	**285**	PN	Pn	15 58 41.1	-2.2
LG4Q				SN	Sn	15 59 29.6	-3.6
LG4Q				SG	Sg	15 59 44.9	-10
LG4Q				Trac		15 59 51.7	
	comp=Z,6.1nm,0.2s						
LMQ	**La Malbaie**	**5.56**	**201**	PN	Pn	15 59 00.2	-3.2
LMN	**Caledonia Moun**	**7.12**	**165**	PN	Pn	15 59 21.4	-4.0
DRLN	**Deer Lake**	**7.14**	**116**	PN	Pn	15 59 21.4	-4.2
DRLN				SN	Sn	16 00 40.9	-7.6
VLDQ	**Val d’Or**	**7.95**	**238**	PN	Pn	15 59 34.3	-2.7
MALO	**McAlpine Lake**	**8.23**	**255**	PN	P	15 59 36.2	-4.7
VIMO	**Victor Mine**	**9.93**	**277**	PN	P	15 59 58.6	-5.7
SILO	**Sutton Inlier**	**10.57**	**286**	PN	P	16 00 07.2	-5.9

IDC 10 16:06:09.1±2.1,22.33S×172.82E,mb3.9/3,mb1 4.1/4, mb1mx3.8/14,mbtmp3.8/4,ML3.2/1,MS3.4/6,Ms1 3.4/6, ms1mx3.2/19,Error ellipse: s-maj=88.8km s-min=28.2km az=157.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.91**	**271**	Pn	Pn	16 07 40.1	0.0
	0.7nm,0.3s,baz=107,slow=18,SNR=5.5						
DZM				Sn	Sn	16 08 46.4	-3.1
	1.8nm,0.3s,baz=149,slow=13,SNR=6.4						
URZ	**Urewera**	**16.30**	**168**	LR	LR	16 14 25.0	
	comp=Z,124nm,20.4s,baz=50,slow=30						
HNR	**Honiara**	**17.80**	**314**	LR	LR	16 15 52.6	
	comp=Z,100nm,20.4s,baz=159,slow=33						
CTA	**Charters Tower**	**24.86**	**270**	LR	LR	16 20 13.7	
	comp=Z,94nm,21.2s,baz=309,slow=34						
PMG	**Port Moresby**	**27.77**	**293**	LR	LR	16 21 21.3	
	comp=Z,106nm,19.2s,baz=331,slow=33						
STKA	**Stephens Creek**	**29.29**	**244**	P	P	16 12 12.8	-2.5
	2.1nm,0.8s,baz=92,slow=11,SNR=4.0						
PPT	**Papeete**	**35.60**	**89**	LR	LR	16 24 06.9	
	comp=Z,18nm,20.8s,baz=304,slow=30						
WRA	**Warramunga Arr**	**35.91**	**267**	P	P	16 13 10.7	-2.5
	0.8nm,0.9s,baz=96,slow=7.6,SNR=5.4						
ILAR	**Eielson Array**	**92.21**	**16**	P	P	16 19 19.6	-2.0
	0.9nm,1.0s,baz=207,slow=6.0,SNR=5.4						
TXAR	**Lajitas Array**	**95.32**	**61**	LR	LR	16 56 19.5	
	comp=Z,29nm,18.3s,baz=130,slow=32						
EKA	**Eskdalemuir Ar**	**146.90**	**356**	PKPbc	PKPbc	16 25 53.5	+0.9
	1.7nm,0.8s,slow=2.5,SNR=3.5						
GERES	**GERESS Array B**	**148.77**	**333**	PKPbc	PKPdf	16 25 58.0	+1.7
	0.7nm,0.8s,baz=27,slow=3.0,SNR=3.9						

JMA 10 16:22:20.8±0.2,22.69N×121.53E,h55^{km},M3.0

TAP 10 16:22:19.2,22.67N×121.40E,h16^{km}±1^{km},ML3.5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**2.32**	**39**	P	Pn	16 22 56.2	-1.2
YOJ				*e*S	Sn	16 23 22.8	-2.9
HATJ	**Hateruma jima**	**2.61**	**58**	*e*S	Sn	16 23 29.0	-4.0
IRIF	**Iriomote-Funau**	**2.71**	**52**	P	Pn	16 23 01.7	-1.2
IRIF				*e*S	Sn	16 23 32.4	-3.2
JKRS	**Kuro-shima**	**2.86**	**56**	*e*S	Sn	16 23 36.1	-3.4
JIJ	**Ishigaki jima**	**3.03**	**56**	P	Pn	16 23 06.0	-1.5
JIJ				*e*S	Sn	16 23 39.6	-4.2
JTJ	**Tarama**	**3.61**	**56**	P	Pn	16 23 14.1	-1.6
JTJ				*e*S	Sn	16 23 54.1	-4.3

ATH 10 16:22:54.5,40.08N×24.87E,h19^{km}±2^{km},MD3.2/4

THE 10 16:22:54.8,40.04N×24.90E,h13^{km},ML2.9

CSEM 10 16:22:55.1±0.1,40.08N×24.89E,h10^{km},ML2.9,Error ellipse: s-maj=2.9km s-min=1.5km az=25.0

ISC 10 16:22:53.9±0.7,40.11N±0.04×24.90E±0.04,h5^{km}±7^{km}, n10,σ0^{s}75/15,2D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOS	**Limnos**	**0.23**	**141**	*e*Pg	**Pg**	**16 22 59.2**	**+0.7**
LOS				*e*Sg	**Sg**	**16 23 01.7**	**+0.1**
LIA	**Limnos Island**	**0.31**	**134**	⇓*i*PB	**Pb**	**16 23 00.9**	**-0.6**
LIA				*e*SB	**Sb**	**16 23 05.3**	**-1.2**
OUR	**Ouranopolis**	**0.73**	**288**	*e*Pg	**Pg**	**16 23 08.9**	**+0.3**
	comp=Z,27nm,0.1s						
PAIG	**Paliouri**	**0.95**	**259**	*e*Pg	**Pg**	**16 23 12.6**	**-0.3**
PAIG				*e*Sg	**Sg**	**16 23 25.7**	**+0.1**
PLG	**Polygyros**	**1.14**	**284**	⇓*i*PN	**Pn**	**16 23 15.5**	**-1.0**
ALN	**Alexandroupoli**	**1.18**	**48**	*e*Pg	**Pg**	**16 23 16.2**	**-1.2**
ALN				*e*Sg	**Sg**	**16 23 33.4**	**+0.3**
PRK	**Paraskevi**	**1.37**	**129**	*e*PN	**Pn**	**16 23 20.6**	**+0.9**
PRK				*e*SN	**Sn**	**16 23 39.2**	**+0.8**
NVR	**Nevrokopi**	**1.47**	**328**	*e*PN	**Pn**	**16 23 22.2**	**+1.1**
XOR	**Xorichti**	**1.51**	**241**	*e*Pg	**Pg**	**16 23 19.9**	**-4.1**
GRG	**Griva**	**2.08**	**295**	*e*Pn	**Pn**	**16 23 29.8**	**-0.1**

IDC 10 16:24:13.1±2.0,2.44N×97.73E,mb4.1/6,mb1 4.3/6, mb1mx3.9/18,mbtmp4.1/6,Error ellipse: s-maj=86.5km s-min=24.8km az=54.0

NEIC 10 16:24:16.8±0.9,2.19N×97.48E,h30^{km},mb4.2/2,Error ellipse: s-maj=22.3km s-min=14.2km az=59.0

ISC 10 16:24:15.0±1.0,2.2N±0.1×97.5E±0.2,h30^{km},n10, σ0^{s}97/10,mb4.0/8,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**4.41**	**46**	*e*Pn	**Pn**	**16 25 21.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**16.21**	**5**	Pn	**P**	**16 28 04.7**	**+2.2**
	0.2nm,0.3s,baz=192,slow=11,SNR=8.2						
WRA	**Warramunga Arr**	**42.35**	**123**	P	**P**	**16 32 08.5**	**0.0**
	1.7nm,0.4s,mb4.0,baz=303,slow=9.1,SNR=66						
WRAB	**Tennant Creek**	**42.36**	**123**	*e*P	**P**	**16 32 08.9**	**+0.3**
	3.0nm,0.5s,mb4.2						
SONM	**Songino Array**	**46.10**	**8**	P	**P**	**16 32 37.0**	**-1.3**
	0.7nm,0.4s,mb4.0,baz=190,slow=9.1,SNR=11						
MKAR	**Makanchi Array**	**46.33**	**346**	P	**P**	**16 32 39.6**	**-0.5**
	0.6nm,0.4s,mb3.9,baz=155,slow=8.5,SNR=20						
ZAL	**Zalesovo**	**52.60**	**351**	P	**P**	**16 33 27.1**	**-1.2**
	2.5nm,0.3s,mb4.6,baz=326,slow=5.5,SNR=7.6						
CHKZ	**Chkalovo**	**55.86**	**341**	*e*P	**P**	**16 33 51.4**	**-0.7**
	1.8nm,0.8s,mb4.2						
FINES	**FINESS Array B**	**79.23**	**332**	P	**P**	**16 36 19.6**	**+0.9**
	0.3nm,0.4s,mb3.6,baz=90,slow=7.6,SNR=6.4						
ARCES	**ARCESS Array B**	**81.68**	**340**	P	**P**	**16 36 32.5**	**+0.9**
	2.2nm,1.0s,mb4.0,baz=90,slow=6.1,SNR=7.4						

MOS 10 17:09:47.3±2.4,55.61N×112.16E,h25^{km},mb4.7/2,Error ellipse: s-maj=15.1km s-min=9.1km az=62.9

BYKL 10 17:09:47.0±0.3,55.62N×112.08E,h17^{km}±14^{km},4C-5D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOA	**Uoyan**	**0.55**	**339**	⇑*i*PG	Pb	17 09 57.8	0.0
YOA				*e*		17 10 06.5	
YOA				pmax	pmax		
	comp=Z,2µm,0.4s						
YOA				smax			
	comp=N,7µm,0.5s						
YOA	**Uoyan**	**0.55**	**339**	*e*Pg	Pb	17 09 56.6	-1.2
YOA				*e*Pb	Pb	17 09 58.0	+0.2
YOA				max		17 09 58.6	
	comp=N,2µm,0.3s						
YOA				*e*Sg	Sb	17 10 05.5	+0.3
YOA				Smax		17 10 07.1	
	comp=N,19µm,0.7s						
KMO	**Kumora**	**0.56**	**299**	*e*PG	Pb	17 09 56.8	-1.2
KMO				*e*		17 10 05.1	
KMO				pmax	pmax		
	comp=Z,794nm,0.3s						
KMO				smax			
	comp=N,5µm,1.0s						
KMO	**Kumora**	**0.56**	**299**	⇑*i*Pg	Pb	17 09 56.7	-1.3
KMO				*e*Pb	Pb	17 09 58.1	+0.1
KMO				max		17 09 58.5	
	comp=N,791nm,0.7s						
KMO				*e*Sg	Sb	17 10 05.2	-0.4
KMO				Smax		17 10 07.3	
	comp=N,5µm,0.9s						
YLYR	**Ulyunkhan**	**0.91**	**216**	*e*PG	Pb	17 10 04.2	+0.2
YLYR				*e*		17 10 17.1	
YLYR				pmax	pmax		
	comp=Z,143nm,0.1s						
YLYR				smax			
	comp=E,1µm,0.1s						
YLYR	**Ulyunkhan**	**0.91**	**216**	*e*Pg	Pb	17 10 02.6	-1.4
YLYR				*e*Pb	Pb	17 10 04.2	+0.2
YLYR				max		17 10 04.5	
	comp=E,144nm,0.3s						
YLYR				*e*Sg	Sb	17 10 16.0	+0.4
YLYR				Smax		17 10 19.4	
	comp=E,1µm,0.1s						
SVKR	**Severomuysk**	**0.97**	**59**	*e*PG	Pb	17 10 05.1	+0.1
SVKR				*e*		17 10 17.6	
SVKR				pmax	pmax		
	comp=Z,391nm,0.5s						
SVKR				smax			
	comp=E,3µm,0.6s						
SVKR	**Severomuysk**	**0.97**	**59**	⇓*i*Pg	Pb	17 10 05.3	+0.3
SVKR				⇓*i*Pb	Pb	17 10 06.6	+1.6
SVKR				max		17 10 06.9	
	comp=E,536nm,0.2s						
SVKR				*e*Sg	Sb	17 10 18.5	+1.2
SVKR				*e*Sb	Sb	17 10 21.7	+4.4
SVKR				max		17 10 22.4	
	comp=E,3µm,0.6s						
NIZ	**Nizh Angarsk**	**1.45**	**277**	*e*PN	Pn	17 10 14.3	+1.7
NIZ				*e*		17 10 34.9	
NIZ				pmax	pmax		
	comp=Z,335nm,0.5s						
NIZ				smax			
	comp=E,1µm,0.8s						
NIZ	**Nizh Angarsk**	**1.45**	**277**	*e*Pg	Pn	17 10 12.5	-0.1
NIZ				⇓*i*		17 10 14.3	
NIZ				max		17 10 14.4	
	comp=E,405nm,0.6s						
NIZ				*e*Sg	Sb	17 10 32.7	+1.6
NIZ				Smax		17 10 35.5	
	comp=E,2µm,1.0s						
NLYR	**Nelyaty**	**2.21**	**65**	*e*	Pn	17 10 21.7	-1.9
NLYR				Pg	Pn	17 10 26.6	+3.0
NLYR				⇓*i*		17 10 32.1	
NLYR				max		17 10 32.8	
	comp=E,258nm,0.7s						
NLYR				*e*Sn	Sn	17 10 49.7	-1.0
NLYR				*e*Sg	Sn	17 10 55.6	+4.9
NLYR				Smax		17 11 04.4	
	comp=E,575nm,0.9s						
SYVR	**Suvo**	**2.31**	**212**	⇑*i*Pn	Pn	17 10 25.1	+0.1
SYVR				*e*Pg	Pn	17 10 28.5	+3.5
SYVR				*e*		17 10 33.9	
SYVR				max		17 10 34.5	
	comp=E,181nm,0.8s						
SYVR				*e*Sn	Sn	17 10 54.2	+1.0
SYVR				*e*Sg	Sn	17 10 59.0	+5.8
SYVR				Smax		17 11 06.4	
	comp=E,724nm,1.4s						
BOD	**Bodaibo**	**2.45**	**25**	*e*PN	Pn	17 10 29.3	+2.4
BOD	**Bodaibo**	**2.45**	**25**	*e*Pn	Pn	17 10 25.6	-1.3
BOD				*e*Pg	Pn	17 10 29.5	+2.6
BOD				Pmax		17 10 37.8	
	comp=E,66nm,0.4s						
BOD				*e*Sn	Sn	17 10 55.7	-1.0
BOD				*e*Sg	Sn	17 11 00.9	+4.2
BOD				Smax		17 11 01.5	
	comp=E,711nm,0.7s						
MXMB	**Maximikha**	**3.06**	**221**	*e*Pn	Pn	17 10 35.7	0.0
MXMB				*e*Pg	Pn	17 10 41.5	+5.8
MXMB				Pmax		17 10 59.1	
	comp=E,63nm,1.1s						
MXMB				*e*Sn	Sn	17 11 10.7	-1.6
MXMB				*e*Sg	Sn	17 11 22.8	+11
MXMB				Smax		17 11 30.3	
	comp=E,729nm,1.0s						
OGRR	**Ongureny**	**3.27**	**235**	*e*PN	Pn	17 10 44.9	+6.2
OGRR				*e*		17 11 28.6	
OGRR				pmax	pmax		
	comp=Z,40nm,1.0s						
OGRR				smax			
	comp=N,211nm,1.2s						
OGRR	**Ongureny**	**3.27**	**235**	*e*Pn	Pn	17 10 37.6	-1.1
OGRR				*e*Pg	Pn	17 10 44.8	+6.1
OGRR				Pmax		17 10 48.9	
	comp=N,39nm,0.9s						
OGRR				*e*Sn	Sn	17 11 18.3	+0.7
OGRR				*e*Sg	Sn	17 11 28.8	+11
OGRR				Smax		17 11 34.0	
	comp=N,210nm,1.1s						
CRS	**Chara**	**3.68**	**67**	*e*PN	Pn	17 10 53.5	+9.0
CRS				*e*		17 11 40.9	
CRS				pmax	pmax		
	comp=Z,112nm,0.7s						
CRS				smax			
	comp=E,213nm,0.7s						
CRS	**Chara**	**3.68**	**67**	*e*Pn	Pn	17 10 43.6	-0.9
CRS				*e*Pg	Pn	17 10 52.6	+8.1
CRS				Pmax		17 11 01.1	
	comp=E,114nm,0.9s						
CRS				*e*Sn	Sn	17 11 24.4	-3.6
CRS				*e*Sg	Sn	17 11 40.9	+13
CRS				Smax		17 11 50.3	
	comp=E,246nm,1.6s						
CIT	**Chita**	**3.71**	**166**	*e*Pn	Pn	17 10 44.9	0.0
CIT				*e*		17 10 51.9	
CIT				⇓*i*		17 10 53.9	
CIT				max		17 10 54.7	
	comp=E,78nm,1.2s						
CIT				*e*		17 11 00.1	
CIT				*e*Sn	Sn	17 11 26.2	-2.5
CIT				*e*Sg	Sn	17 11 41.2	+13
CIT				Smax		17 11 47.6	
	comp=E,522nm,1.2s						
ZRHB	**Zarechye**	**4.22**	**225**	*e*Sg	Sn	17 11 57.2	+15
ZRHB				Smax		17 12 26.4	
	comp=E,794nm,1.1s						
TRG	**Tyrgan**	**4.42**	**232**	*e*	Pn	17 10 51.1	-3.9
TRG				*e*		17 10 54.3	
TRG				*e*Pg	Pn	17 11 04.5	+9.5
TRG				Pmax		17 11 16.7	
	comp=E,24nm,1.6s						
TRG				*e*Sg	Sn	17 12 02.0	+15
TRG				Smax		17 12 10.0	
	comp=E,91nm,1.0s						
TUP	**Tupik**	**4.69**	**102**	*e*PN	Pn	17 11 10.0	+11
TUP				*e*		17 12 09.8	
TUP				pmax	pmax		
	comp=Z,37nm,0.5s						
TUP				smax			
	comp=N,261nm,0.5s						
TUP	**Tupik**	**4.69**	**102**	*e*	Pn	17 10 55.2	-3.6
TUP				⇑*i*Pn	Pn	17 10 56.6	-2.2
TUP				*e*Pg	Pn	17 11 10.4	+12
TUP				Pmax		17 11 16.8	
	comp=N,65nm,1.2s						
TUP				*e*Sn	Sn	17 11 47.6	-5.8
TUP				*e*Sg	Sn	17 12 12.0	+19
TUP				Smax		17 12 15.1	
	comp=N,259nm,0.5s						
FFNB	**Fofonovo**	**4.77**	**224**	*e*Pg	Pn	17 11 11.1	+11
FFNB				Pmax		17 11 21.9	
	comp=N,44nm,0.5s						
FFNB				*e*Sg	Sn	17 12 14.3	+19
FFNB				Smax		17 12 23.5	
	comp=N,262nm,1.1s						
KAB	**Kabansk**	**4.81**	**224**	*e*Sg	Sn	17 12 15.9	+19
KAB				Smax		17 12 44.8	
	comp=N,562nm,1.3s						
LSTR	**Listvyanka**	**5.71**	**232**	*e*Pg	Pn	17 11 29.0	+16
LSTR				Pmax		17 11 41.6	
	comp=N,8.0nm,0.7s						
LSTR				*e*Sg	Sn	17 12 43.9	+25
LSTR				Smax		17 12 50.1	
	comp=N,82nm,1.5s						
IRK	**Irkutsk**	**5.72**	**237**	*e*Sg	Sn	17 12 45.5	+26
IRK				Smax		17 12 53.0	
	comp=N,200nm,1.0s						
KPC	**Khapcheranga**	**5.93**	**178**	*e*	Pn	17 11 13.4	-2.9
KPC				*e*Pg	Pn	17 11 35.0	+19
KPC				Pmax		17 11 42.9	
	comp=N,31nm,1.5s						
KPC				*e*Sg	Sn	17 12 50.8	+26
KPC				Smax		17 12 55.1	
	comp=N,211nm,1.8s						
TLY	**Talaya**	**6.38**	**235**	*e*PN	Pn	17 11 18.8	-3.9
TLY	**Talaya**	**6.38**	**235**	*e*Pg	Pn	17 11 40.7	+18
TLY				Pmax		17 11 49.6	
	comp=N,7.0nm,1.0s						
TLY				*e*Sg	Sn	17 13 02.6	+27
TLY				Smax		17 13 12.7	
	comp=N,58nm,1.2s						
ARS	**Arshan**	**6.82**	**241**	*e*Pn	Pn	17 11 28.5	-0.3
ARS				max		17 11 56.2	
	comp=N,20nm,0.6s						
ARS				*e*Sg	Sn	17 13 16.8	+30
ARS				Smax		17 13 24.1	
	comp=N,192nm,1.0s						
TNDR	**Tynda**	**7.22**	**89**	*e*Pg	Pn	17 11 57.6	+23
TNDR				*e*Sg	Sn	17 13 30.5	+34
CLNS	**Chul’man**	**7.25**	**75**	*e*Pg	Pn	17 11 57.6	+23
CLNS				*e*Sg	Sn	17 13 32.2	+35
ZAK	**Zakamensk**	**7.46**	**229**	*e*PN	Pn	17 11 39.2	+1.4
ZAK				*e*		17 11 59.9	
ZAK				*e*S	Sn	17 13 39.3	+36
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ZAK				smax			
	comp=E,31nm,1.2s						
ZAK	**Zakamensk**	**7.46**	**229**	*e*	Pn	17 11 40.3	+2.5
ZAK				*e*Pg	Pn	17 12 01.0	+23
ZAK				Pmax		17 12 14.7	
	comp=E,3.0nm,0.5s						
ZAK				*e*Sg	Sn	17 13 38.9	+36
ZAK				Smax		17 14 00.2	
	comp=E,31nm,1.2s						
MOY	**Mondy**	**7.69**	**244**	*e*Pn	Pn	17 11 39.7	-1.3
MOY				*e*		17 11 47.6	
MOY				max		17 11 48.3	
	comp=E,26nm,1.6s						
MOY				*e*Sn	Sn	17 13 02.8	-5.7
MOY				*e*Sg	Sn	17 13 45.6	+37
MOY				Smax		17 14 01.9	
	comp=E,103nm,1.8s						
ORL	**Orlik**	**7.85**	**252**	*e*PN	Pn	17 11 41.5	-1.8
ORL				*e*		17 12 08.1	
ORL				*e*S	Sn	17 13 06.4	-6.2
ORL				*e*		17 13 50.7	
ORL				pmax	pmax		
	comp=Z,16nm,1.3s						
ORL				smax			
	comp=N,69nm,1.9s						
ORL	**Orlik**	**7.85**	**252**	*e*Pn	Pn	17 11 41.6	-1.7
ORL				max		17 11 50.6	
	comp=N,16nm,1.8s						
ORL				*e*Sn	Sn	17 13 06.6	-6.0
ORL				*e*Sg	Sn	17 13 51.0	+38
ORL				Smax		17 14 05.7	
	comp=N,68nm,1.5s						
ULN	**Ulaanbaatar**	**8.37**	**204**	*e*PN	P	17 11 48.5	-2.0
TDJR	**Todzha**	**9.94**	**258**	*e*Sg	Sn	17 14 55.2	+51
YAK	**Yakutsk**	**11.13**	**48**	*e*P	P	17 12 23.9	-4.5
ARDR	**Aradan**	**11.36**	**262**	*e*Sg	S	17 15 40.0	+61
TIXI	**Tiksi**	**17.61**	**18**	*e*P	P	17 13 51.2	-1.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,100nm,17.0s						
ARU	**Arti**	**29.29**	**294**	*e*P	P	17 15 46.1	-4.1
ARU				pmax	pmax		
	comp=Z,6.0nm,2.0s						
SOC	**Sochi**	**46.32**	**287**	*e*P	P	17 18 06.6	-6.7
SOC				*e*		17 19 46.8	
SOC				*e*S	S	17 24 56.0	-2.9
SOC				*e*SS	SS	17 28 09.1	-7.8
SOC				*e*SSS	SSS	17 29 25.0	+1.8
SOC				pmax	pmax		
	comp=N,14nm,1.2s						
SOC				pmax	pmax		
	comp=Z,16nm,1.2s						
SOC				pmax	pmax		
	comp=E,6.0nm,0.6s						

MAN 10 17:29:00.3,9.32N×122.40E,h90^{km},mb4.1,ML2.9,MS2.6, 1C,Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCPH	**Dipolog City**	**1.19**	**128**	⇑*e*P	P	17 29 22.8	+0.2
DCPH				*e*S	S	17 29 39.7	+0.5
GUIM	**Jordan**	**1.31**	**8**	*e*P	P	17 29 24.5	+0.3
GUIM				*e*S	S	17 29 40.7	-1.2
PAGZ	**Pagadian**	**1.75**	**146**	*e*P	P	17 29 33.2	+3.4
CUYO	**Cuyo Island**	**2.04**	**318**	*e*P	P	17 29 33.8	+0.2
BUSP	**Coron**	**3.44**	**321**	*e*P	P	17 29 52.9	0.0
ENPP	**El Nido**	**3.48**	**303**	*e*P	P	17 29 53.4	-0.1

CASC 10 17:30:02.1±2.2,15.86N×88.66W,h12^{km}±74^{km},MD3.9, ML3.6,3C-4D,Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRL	**Marmol**	**1.27**	**232**	⇑*e*P	Pb	17 30 21.6	-3.8
MRL				*e*S	Sb	17 30 37.4	-4.2
MRL				AML	AML	17 30 40.2	
	comp=E,802nm,0.2s						
MTO2	**Montecristo 2**	**1.60**	**205**	⇑*e*P	Pn	17 30 28.4	-2.0
MTO2				*e*S	Sn	17 30 52.5	+1.3
RBDL	**Robledal**	**2.00**	**210**	⇑*e*P	Pn	17 30 34.9	-1.2
RBDL				*e*S	Sn	17 31 01.1	-0.2
CAHU	**Cacacuatique**	**2.12**	**168**	*e*P	Pn	17 30 37.5	-0.3
CAHU				*e*S	Sn	17 31 03.1	-1.2
LFU	**La Fuente**	**2.15**	**192**	*e*P	Pn	17 30 37.5	-0.7
LFU				*e*S	Sn	17 31 04.0	-0.9
RTR	**El Retiro**	**2.17**	**206**	⇓*e*P	Pn	17 30 38.5	-0.1
RTR				*e*S	Sn	17 31 06.7	+1.1
SNJE	**San Jose**	**2.18**	**205**	*e*P	Pn	17 30 38.4	-0.3
SNJE				*e*S	Sn	17 31 06.3	+0.4

BOQS	**Boqueron**	**2.20**	**196**	⇓*e*P	Pn	17 30 39.5	+0.6
BOQS				*e*S	Sn	17 31 07.1	+0.9
LCBS	**La Ceiba**	**2.21**	**188**	⇓*e*P	Pn	17 30 37.4	-1.8
LCBS				*e*S	Sn	17 31 06.3	-0.4
SBLS	**San Blas**	**2.21**	**205**	*e*P	Pn	17 30 38.5	-0.7
SBLS				*e*S	Sn	17 31 07.8	+1.1
SNVI	**San Vicente**	**2.24**	**184**	*e*P	Pn	17 30 39.6	+0.1
SNVI				*e*S	Sn	17 31 07.6	+0.2
LFRS	**El Faro**	**2.26**	**190**	⇓*e*P	Pn	17 30 39.6	-0.2
LFRS				*e*S	Sn	17 31 08.1	+0.3
IXG	**Ixpaco**	**2.41**	**226**	*e*P	Pn	17 30 41.1	-0.9
IXG				AML	AML	17 31 18.5	
	comp=E,619nm,0.4s						
BLLM	**Bellamira**	**2.44**	**170**	*e*S	Sn	17 31 11.7	-0.7
VSM	**San Miguel**	**2.45**	**171**	*e*S	Sn	17 31 13.6	+1.0
CNCH	**Conchagua**	**2.69**	**163**	*e*S	Sn	17 31 19.9	+1.1

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*NEIC **10** 17:32:23.8±2.0, 5.09S×151.99E, h62^{km}±19^{km}, mb4.7/2, Error ellipse: s-maj=22.2km s-min=12.4km az=175.0*

*IDC **10** 17:32:24.8±2.4, 5.10S×152.05E, h68^{km}±22^{km}, mb4.0/4, mb1 4.2/7, mb1mx3.8/17, mbtmp4.4/7, MS3.3/1, Ms1 3.3/1, ms1mx2.8/29, Error ellipse: s-maj=24.8km s-min=16.0km az=142.0*

ISC 10 17:32:20.8±2.9**, 5.0S**±0.2×**152.05E**±0.09**, h57**^{km}±25^{km}**, n13, σ0^{s}95**/14**, mb4.4**/6**, 1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.57**	**227**	P	**P**	**17 33 56.7**	**-0.4**
	11nm,0.3s,baz=27,slow=9.5,SNR=33						
PMG				S	**S**	**17 35 12.3**	**+0.9**
	16nm,0.3s,baz=100,slow=19,SNR=11						
HNR	**Honiara**	**9.01**	**120**	P	**P**	**17 34 30.2**	**-0.6**
	4.0nm,0.3s,baz=286,slow=5.6,SNR=4.1						
CTA	**Charters Tower**	**16.07**	**200**	P	**P**	**17 36 05.6**	**+0.9**
	0.2nm,0.3s,baz=28,slow=16,SNR=3.0						
CTA				LR	LR	17 41 33.5	
	comp=Z,113nm,20.7s,baz=23,slow=34						
KAKA	**Kakadu**	**20.84**	**247**	*e*P	**P**	**17 36 58.6**	**-1.6**
DZM	**Mont Dzumac**	**22.00**	**142**	P	**P**	**17 37 12.7**	**+0.9**
	10nm,0.9s,mb4.2,baz=302,slow=19,SNR=4.9						
WRAB	**Tennant Creek**	**22.78**	**228**	*e*P	**P**	**17 37 19.3**	**-0.2**
	11nm,0.4s,mb4.7						
WB2	**Warramunga Arr**	**22.78**	**228**	⇓*i*P	**P**	**17 37 19.4**	**-0.2**
WRA	**Warramunga Arr**	**22.79**	**228**	P	**P**	**17 37 19.6**	**0.0**
	16nm,0.7s,mb4.6,baz=51,slow=10,SNR=132						
WRA				S	**S**	**17 41 25.1**	**+4.9**
	1.5nm,1.0s,baz=50,slow=15,SNR=5.8						
STKA	**Stephens Creek**	**28.53**	**199**	P	**P**	**17 38 12.8**	**-0.6**
	3.5nm,0.7s,mb4.2,baz=29,slow=13,SNR=5.2						
STKA	**Stephens Creek**	**28.53**	**199**	P	**P**	**17 38 12.8**	**-0.6**
MBWA	**Marble Bar**	**35.25**	**240**	*e*P	**P**	**17 39 11.2**	**-0.9**
	4.1nm,0.4s,mb4.7						
SONM	**Songino Array**	**66.05**	**328**	P	**P**	**17 43 06.1**	**+2.2**
	0.6nm,0.5s,mb3.9,baz=142,slow=4.5,SNR=7.0						
ILAR	**Eielson Array**	**82.58**	**22**	pP	pP	17 44 58.0	+2.9
	1.3nm,0.8s,baz=252,slow=5.9,SNR=8.2						

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*IDC **10** 17:42:37.4±0.4, 1.75N×97.17E, mb5.2/25, mb1 5.2/26, mb1mx5.1/27, mbtmp5.2/26, ML4.5/1, MS5.1/18, Ms1 5.1/18, ms1mx4.9/27, Error ellipse: s-maj=13.8km s-min=10.2km az=50.0*

*BJI **10** 17:42:39.4, 1.70N×97.21E, h29^{km}, mB5.7, mb5.4, Ms5.6, Msz5.6*

*MOS **10** 17:42:41.5±1.0, 1.94N×97.17E, h33^{km}, mb5.6/96, MS5.1/47, Error ellipse: s-maj=8.4km s-min=4.3km az=120.3*

*HRVD **10** 17:42:41.5±0.3, 1.48N×96.83E, h25^{km}, MW5.5/56, Centroid moment Tensor Solution. LP body waves: s56,c105;Mantle waves: s53,c86; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}0.84±.04; $M_{\theta\theta}$-0.55±.03; $M_{\phi\phi}$-0.29±.03; $M_{r\theta}$1.76±.07; $M_{\theta\phi}$0.63±.02; $M_{\phi r}$-1.41±.07; Best double couple: $M_0$2.448×10^{17} NP1: ϕ_s310°,δ11°,λ91°. NP2:ϕ_s129°,δ79°,λ90°. Principal axes: T 2.337, Plg56°, Azm38°; N .223, Plg0°, Azm129°; P -2.559, Plg34°, Azm219°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 17:42:41.5±0.1, 1.81N×97.09E, mb5.4/103, MS5.1/56, MW5.4 Error ellipse: s-maj=4.1km s-min=3.2km az=207.0, Moment Tensor Solution. s28 Moment tensor: Scale 10^{17} Nm; M_{rr}0.77; $M_{\theta\theta}$0.11; $M_{\phi\phi}$-0.88; $M_{r\theta}$1.27; $M_{\theta\phi}$0.46; $M_{\phi r}$-0.94; Best double couple: $M_0$1.8×10^{17} NP1:ϕ_s6°,δ22°, λ143°. NP2:ϕ_s131°,δ77°,λ72°. Principal axes: T 1.84, Plg55°, Azm19°; N .01, Plg17°, Azm135°; P -1.85, Plg30°, Azm236°;*

NEIC Felt [II] at Gunungsitoli.

ISC 10 17:42:40.0±0.2**, 1.79N**±0.03×**97.13E**±0.03**, h26**^{km}**, h26**^{km}±.7^{km}**:pP-P, n516, σ0^{s}94**/480**, mb5.4**/166**, MS5.2**/105**, 47C-16D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**4.78**	**54**	P	**Pn**	**17 43 54.1**	**+1.8**
KULM	**Kulim**	**4.94**	**45**	*e*P	**Pn**	**17 43 55.7**	**+1.1**
KGM	**Kluang**	**6.19**	**88**	P	**Pn**	**17 44 14.7**	**+2.5**
SNG	**Songkhla**	**6.38**	**33**	P	**Pn**	**17 44 15.0**	**+0.1**
	1µm,1.0s						
PBA	**Port Blair**	**10.72**	**336**	*e*x	x	17 46 22.0	
PBA				*e*x	x	17 47 56.5	
NNT	**Nongplab**	**11.04**	**13**	P	**P**	**17 45 18.5**	**-1.0**
KSM	**Kuching**	**13.18**	**91**	*e*P	**P**	**17 45 50.3**	**+2.1**
NST	**Nakhon Sawan**	**14.11**	**12**	P	**P**	**17 45 55.4**	**-5.2**
	68nm,1.2s						
UBT	**Ubonrachathani**	**15.47**	**30**	⇓P	**P**	**17 46 23.2**	**+4.8**
KKTK	**Khon Kaen**	**15.51**	**21**	P	**P**	**17 46 13.0**	**-5.8**
	1µm,0.6s						
CM31	**Chiang Mai Arr**	**16.66**	**6**	*e*P	**P**	**17 46 32.8**	**-0.7**
	60nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.66**	**6**	P	**P**	**17 46 32.5**	**-1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,8µm,20.3s						
CMAR	**Chiang Mai Arr**	**16.66**	**6**	Pn	**P**	**17 46 32.5**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=195,slow=13,SNR=37						
CMAR				LR	LR	17 53 25.3	
	comp=Z,8µm,20.3s,baz=185,slow=39						
CHG	**Chiang Mai**	**17.01**	**6**	⇑P	**P**	**17 46 36.9**	**-1.0**
	comp=Z,72nm,1.0s						
CHTO	**Chiang Mai**	**17.01**	**6**	Pn	**P**	**17 46 36.9**	**-1.1**
PALK	**Pallekele**	**17.25**	**289**	*e*P	**P**	**17 46 39.2**	**-1.8**
	comp=Z,102nm,1.0s						
NANT	**Nan**	**17.26**	**11**	⇓P	**P**	**17 46 41.5**	**+0.4**
	comp=Z,488nm,0.5s						
CHRT	**Chiangrai**	**18.16**	**8**	⇑P	**P**	**17 46 52.0**	**-0.3**
	comp=Z,324nm,1.1s						
KKM	**Kota Kinabalu**	**19.50**	**77**	*e*P	**P**	**17 47 07.3**	**-1.0**
KKM	**Kota Kinabalu**	**19.50**	**77**	P	**P**	**17 47 08.9**	**+0.6**
MDRS	**Chennai**	**20.12**	**305**	*e*x	**P**	**17 47 16.0**	**+1.0**
MDRS				*e*x	**S**	**17 51 03.0**	**+8.7**
MDRS				*e*x	x	17 52 19.0	
VIS	**Vishakhapatnam**	**20.84**	**320**	*e*P	**P**	**17 47 23.5**	**+1.1**
VIS				AMb	AMB	17 47 41.6	
	comp=Z,281nm,1.2s						
VIS				*e*x	x	17 51 01.4	
TSM	**Tawau**	**20.86**	**83**	P	**P**	**17 47 22.5**	**-0.2**
TRD	**Trivandrum**	**21.16**	**289**	*e*P	**P**	**17 47 26.5**	**+0.8**
TRD				*i* S	**S**	**17 51 22.5**	**+7.8**
QIZ	**Qiongzhong**	**21.18**	**35**	P	**P**	**17 47 25.6**	**-0.3**
QIZ				AP		17 47 35.9	
QIZ				PPP	PPP	17 47 57.6	-1.0
QIZ				S	**S**	**17 51 20.7**	**+5.6**
QIZ				XS		17 51 32.1	
QIZ				SS	SS	17 51 49.8	+0.8
QIZ				AMB	AMB		
	comp=Z,100nm,0.9s,mb5.2						
QIZ				LR	LR		
	comp=N,7µm,14.6s,MS5.3						
QIZ				LR	LR		
	comp=E,7µm,14.2s,MS5.3						
QIZ				LR	LR		
	comp=Z,10µm,13.3s,MS5.3						
QIZ	**Qiongzhong**	**21.18**	**35**	*e*P	**P**	**17 47 25.4**	**-0.5**
	comp=Z,62nm,0.7s,mb5.0						
BWNR	**Bhubaneshwar**	**21.46**	**330**	*e*x		17 47 33.8	
BWNR				AMb	AMB	17 47 48.3	
	comp=Z,144nm,1.0s,mb5.3						
BWNR				*e*S	**S**	**17 51 22.4**	**+2.1**
CAL	**Calcutta**	**22.33**	**338**	*e*x	x	17 51 31.1	
AGT	**Agartala**	**22.69**	**346**	*i* P	**P**	**17 47 41.0**	**0.0**
AGT				*i* x	x	17 49 53.0	
KMI	**Kunming**	**23.82**	**13**	P	**P**	**17 47 53.2**	**+1.2**
KMI				AP		17 48 00.2	
KMI				XP		17 48 02.8	
KMI				PP	PP	17 48 27.7	+2.1
KMI				PPP	PPP	17 48 38.2	+2.6
KMI				S	**S**	**17 52 06.5**	**+3.7**
KMI				XS		17 52 18.0	
KMI				SS	SS	17 52 59.0	+5.8
KMI				AMB	AMB		
	comp=Z,120nm,0.9s,mb5.3						
KMI				AMB	AMB		
	comp=Z,2µm,6.5s						
KMI				LR	LR		
	comp=Z,14µm,15.0s,MS5.6						
HYB	**Hyderabad**	**23.96**	**312**	*e*P	**P**	**17 47 55.5**	**+2.0**
HYB				*e*S	**S**	**17 52 12.0**	**+6.6**
HYB				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.1						
HYB	**Hyderabad**	**23.96**	**312**	*e*P	**P**	**17 47 55.5**	**+2.0**
	comp=Z,80nm,1.0s,mb5.1						
HYB				*e*S	**S**	**17 52 12.0**	**+6.6**
HYB	**Hyderabad**	**23.96**	**312**	*i* P	**P**	**17 47 54.0**	**+0.6**
	comp=Z,80nm,1.0s,mb5.1						
HYB				*e*SP		17 48 05.0	
HYB				*e*S	**S**	**17 52 12.0**	**+6.6**
HYB				LR	LR	17 52 12.0	
	comp=Z,4.1nm,18.0s						
SHL	**Shillong**	**24.17**	**348**	*e*P	**P**	**17 47 55.0**	**-0.4**
SHL				*e*S	**S**	**17 52 13.0**	**+4.1**
BOK	**Bokaro**	**24.43**	**334**	*i* P	**P**	**17 47 56.5**	**-1.5**
BOK				*i* S	**S**	**17 52 17.5**	**+4.2**
BLSP	**Bilaspur**	**24.93**	**325**	*e*P	**P**	**17 48 03.3**	**+0.5**
BLSP				*e*P		17 48 04.0	
BLSP				AMb	AMB	17 48 24.7	
	comp=Z,134nm,1.5s,mb5.2						
LATR	**Latur**	**26.07**	**311**	*e*P	**P**	**17 48 14.7**	**+1.2**
NGP	**Nagpur**	**26.09**	**319**	*e*P	**P**	**17 48 15.0**	**+1.3**
NGP				*e*x	x	17 53 03.5	
GYA	**Guiyang**	**26.18**	**20**	⇑*i*P	**P**	**17 48 13.7**	**-0.7**
GYA				AP	pP	17 48 23.8	+1.6
GYA				XP	sP	17 48 27.4	+1.7
GYA				AMB	AMB		
	comp=Z,40nm,1.4s,mb4.8						
GYA				AMB	AMB		
	comp=Z,750nm,8.7s						
GYA				LR	LR		
	comp=N,5µm,19.8s,MS5.1						
GYA				LR	LR		
	comp=E,3µm,19.1s,MS5.1						
GYA				LR	LR		
	comp=Z,6µm,19.1s,MS5.2						
DGAR	**Diego Garcia**	**26.26**	**249**	PFAKE		17 48 30.0	+15
DGAR				LR	LR		
	comp=Z,1µm,20.0s,MS4.5						
AKL	**Akola**	**27.18**	**315**	*e*x	pP	17 48 31.1	-0.2
AKL				AMb	AMB	17 48 44.6	
	comp=Z,138nm,1.2s,mb5.3						
AKL				*i* S	**S**	**17 53 03.6**	**+4.8**
PKI	**Pulchoki**	**27.98**	**337**	*e*P	**P**	**17 48 31.0**	**+0.1**
	comp=Z,107nm,0.9s,mb5.5						
PKI	**Pulchoki**	**27.98**	**337**	*e*P	**P**	**17 48 31.0**	**+0.1**
PKI				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.2						
GUN	**Gumba**	**28.11**	**339**	*e*P	**P**	**17 48 32.5**	**+0.5**
	comp=Z,258nm,0.6s,mb6.0						
DMN	**Daman**	**28.14**	**337**	*e*P	**P**	**17 48 32.4**	**+0.2**
	comp=Z,162nm,0.9s,mb5.7						
KKN	**Kakani**	**28.23**	**337**	*e*P	**P**	**17 48 33.0**	**-0.1**
	comp=Z,334nm,1.3s,mb5.8						
KKN	**Kakani**	**28.23**	**337**	*e*P	**P**	**17 48 33.0**	**-0.1**
KKN				pmax	pmax		
	comp=Z,167nm,1.3s,mb5.5						
POO	**Poona**	**28.24**	**308**	*e*P	**P**	**17 48 33.0**	**-0.3**
POO				*e*x	x	17 53 40.0	
LSA	**Lhasa**	**28.33**	**349**	P	**P**	**17 48 34.6**	**+0.6**
LSA				AP	pP	17 48 43.1	+1.4
LSA				S	**S**	**17 53 17.2**	**-0.2**
LSA				XS		17 53 36.7	
LSA				PCS		17 55 27.3	
LSA				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.1						
LSA				LR	LR		
	comp=N,1µm,18.5s,MS4.9						
LSA				LR	LR		
	comp=E,3µm,20.7s,MS4.9						
LSA				LR	LR		
	comp=Z,4µm,19.6s,MS5.0						
LSA	**Lhasa**	**28.33**	**349**	*e*P	**P**	**17 48 34.4**	**+0.4**
LSA				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.2						
LSA	**Lhasa**	**28.33**	**349**	*e*P	**P**	**17 48 34.4**	**+0.4**
	comp=Z,54nm,0.9s,mb5.2						
BHPL	**Bhopal**	**28.63**	**320**	*e*P	**P**	**17 48 37.6**	**+0.9**
BHPL				AMb	AMB	17 49 04.4	
	comp=Z,63nm,1.6s,mb5.1						
GKN	**Gorkha**	**28.67**	**337**	*e*P	**P**	**17 48 37.1**	**0.0**
	comp=Z,361nm,1.1s,mb6.0						
DAV	**Davao City (W)**	**28.84**	**79**	*e*P	**P**	**17 48 40.0**	**+1.3**
KOLN	**Koldanda**	**28.90**	**335**	*e*P	**P**	**17 48 39.4**	**+0.3**
	comp=Z,116nm,0.7s,mb5.7						
BOM	**Bombay**	**29.27**	**307**	*e*P	**P**	**17 48 44.3**	**+1.8**
CD2	**Chengdu**	**29.64**	**12**	⇑*i*P	**P**	**17 48 44.2**	**-1.5**
CD2				AP	pP	17 48 52.1	-1.4
CD2				XP	sP	17 48 56.2	-0.7
CD2				S	**S**	**17 53 33.4**	**-4.8**
CD2				XS		17 53 52.9	
CD2				AMB	AMB		
	comp=Z,60nm,0.7s,mb5.4						
CD2				AMB	AMB		
	comp=Z,650nm,4.4s						
CD2				LR	LR		
	comp=Z,10µm,14.4s,MS5.6						
ENH	**Enshi**	**30.66**	**21**	*e*P	**P**	**17 48 53.4**	**-1.3**
	comp=Z,103nm,0.7s,mb5.8						
QZH	**Quanzhou**	**30.97**	**40**	⇑*i*P	**P**	**17 48 56.2**	**-1.3**
QZH				S	**S**	**17 54 03.5**	**+4.2**
QZH				AMB	AMB		
	comp=Z,90nm,1.2s,mb5.5						
QZH				AMB	AMB		
	comp=Z,1µm,9.3s						
MBWA	**Marble Bar**	**31.77**	**137**	*e*P	**P**	**17 49 04.4**	**-0.2**
	comp=Z,62nm,1.2s,mb5.3						
MBWA				LR	LR		
	comp=Z,4µm,22.0s,MS5.0						
LGTI	**Lohaghat**	**31.85**	**331**	*i* P	**P**	**17 49 05.5**	**+0.2**
PTH	**Pithoragarh**	**31.95**	**331**	*e*P	**P**	**17 49 05.0**	**-1.1**
NACB	**Ninganchiao**	**32.48**	**45**	*e*P	**P**	**17 49 11.3**	**+0.5**
YHNB	**Yeheng**	**32.65**	**44**	*e*P	**P**	**17 49 12.3**	**0.0**
AJM	**Ajmer**	**32.70**	**321**	*i* P	**P**	**17 49 13.0**	**+0.3**
NDI	**New Delhi**	**32.80**	**326**	*e*P	**P**	**17 49 12.0**	**-1.5**
NDI				*e*S	**S**	**17 54 28.0**	**+0.1**
TATO	**Taipei**	**32.92**	**44**	*e*P	**P**	**17 49 15.1**	**+0.4**
	comp=Z,52nm,0.9s,mb5.5						
TATO				LR	LR		
	comp=Z,3µm,19.0s,MS5.0						
WHN	**Wuhan**	**32.93**	**28**	P	**P**	**17 49 14.5**	**-0.1**
WHN				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.7						
WHN				LR	LR		
	comp=Z,21µm,15.4s,MS6.0						
XAN	**Xi’an**	**33.93**	**18**	P	**P**	**17 49 21.8**	**-1.5**
XAN				S	**S**	**17 54 44.8**	**-0.4**
XAN				AMB	AMB		
	comp=Z,120nm,1.1s,mb5.7						
XAN				LR	LR		
	comp=N,6µm,15.3s,MS5.5						
XAN				LR	LR		
	comp=E,5µm,15.3s,MS5.5						
XAN				LR	LR		
	comp=Z,11µm,16.1s,MS5.7						
LZH	**Lanzhou**	**34.69**	**10**	⇑P	**P**	**17 49 29.5**	**-0.3**
LZH				AP	pP	17 49 38.5	+0.9
LZH				XP	sP	17 49 44.8	+3.8
LZH				PP	PP	17 50 51.0	+4.1
LZH				S	**S**	**17 54 55.3**	**-1.7**
LZH				XS		17 55 12.0	
LZH				SS	SS	17 57 13.0	+2.8
LZH				AMB	AMB		
	comp=Z,180nm,1.2s,mb5.9						
LZH				AMB	AMB		
	comp=Z,1µm,4.3s						
LZH				LR	LR		
	comp=E,10µm,16.2s						
LZH				LR	LR		
	comp=Z,10µm,17.8s,MS5.6						
SMLA	**Simla**	**34.75**	**329**	*i* P	**P**	**17 49 27.4**	**-3.0**
SMLA				*i* S	**S**	**17 55 01.3**	**+3.2**
SDNR	**Sundarnagar**	**35.15**	**329**	*e*P	**P**	**17 49 34.2**	**+0.4**
BHK	**Bhakra**	**35.37**	**329**	*e*x	x	17 49 54.5	
NJ2	**Nanjing**	**36.40**	**32**	*e*P	**P**	**17 49 45.2**	**+0.8**
NJ2				AP	pP	17 49 52.5	+0.2
NJ2				XP	sP	17 49 56.1	+0.5
NJ2				PP	PP	17 51 09.2	+0.9
NJ2				S	**S**	**17 55 26.0**	**+2.4**
NJ2				XS		17 55 41.0	
NJ2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,550nm,7.8s						
NJ2				LR	LR		
	comp=Z,13µm,25.5s,MS5.6						
THN	**Thein Dam**	**36.54**	**329**	*e*P	**P**	**17 49 44.4**	**-1.1**
	comp=Z,32nm,0.8s,mb5.2						
SSE	**Sheshan**	**36.98**	**36**	P	**P**	**17 49 50.2**	**+1.0**
SSE				AP	pP	17 49 58.4	+1.3
SSE				PP	PP	17 51 14.4	-1.3
SSE				S	**S**	**17 55 34.7**	**+2.4**
SSE				XS		17 55 49.8	
SSE				SCS	ScS	18 00 02.8	+2.6
SSE				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
SSE				AMB	AMB		
	comp=Z,360nm,8.0s						
SSE				LR	LR		
	comp=N,3µm,20.5s,MS5.1						
SSE				LR	LR		
	comp=E,2µm,20.5s,MS5.1						
SSE				LR	LR		
	comp=Z,5µm,17.2s,MS5.3						
GTA	**Gaotai**	**37.52**	**3**	⇑*i*P	**P**	**17 49 53.8**	**+0.1**
GTA				AP	pP	17 50 01.2	-0.4
GTA				XP	sP	17 50 04.4	-0.5
GTA				PP	PP	17 51 23.2	+1.0
GTA				PCP	PcP	17 52 11.9	-0.1
GTA				S	**S**	**17 55 39.5**	**-1.1**
GTA				XS		17 55 52.8	
GTA				SS	SS	17 58 12.3	-2.1
GTA				SCS	ScS	18 00 02.7	-0.5
GTA				AMB	AMB		
	comp=Z,70nm,1.2s,mb5.3						
GTA				AMB	AMB		
	comp=Z,730nm,9.5s						
GTA				LR	LR		
	comp=N,3µm,14.8s,MS5.5						
GTA				LR	LR		
	comp=E,4µm,14.8s,MS5.5						
GTA				LR	LR		
	comp=Z,3µm,17.1s,MS5.2						
KAKA	**Kakadu**	**37.90**	**113**	⇑*i*P	**P**	**17 49 55.5**	**-1.6**
JOW	**Kunigami**	**38.90**	**47**	P	**P**	**17 50 04.9**	**-0.5**
	comp=Z,36nm,0.6s,mb5.3,baz=218,slow=5.0,SNR=7.5						
JOW				LR	LR	18 05 42.6	
	comp=Z,2µm,21.7s,MS4.9,baz=289,slow=36						
TIA	**Tai’an**	**38.94**	**26**	*e*P	**P**	**17 50 05.0**	**-0.6**
TIA				*e*S	**S**	**17 56 10.0**	**+8.0**
TIA				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.1						
NWAO	**Narrogin (SRO)**	**39.41**	**153**	LR	LR	18 05 51.5	
	comp=Z,4µm,21.2s,MS5.2,baz=326,slow=35						
NWAO	**Narrogin (SRO)**	**39.41**	**153**	PFAKE		17 50 20.0	+10
NWAO				LR	LR		
	comp=Z,4µm,21.0s,MS5.2						
BTO	**Baotou**	**40.37**	**15**	*e*P	**P**	**17 50 17.6**	**+0.2**
BTO				S	**S**	**17 56 14.9**	**-8.6**
BTO				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.1						
BTO				LR	LR		
	comp=N,3µm,13.2s,MS5.5						
BTO				LR	LR		
	comp=E,4µm,13.6s,MS5.5						
HHC	**Hu-ho-hao-te**	**41.02**	**17**	*e*P	**P**	**17 50 24.2**	**+1.5**
HHC				AP	pP	17 50 33.8	+3.2
HHC				XP	sP	17 50 38.3	+4.4
HHC				PP	PP	17 52 02.1	+1.8
HHC				PCP	PcP	17 52 26.3	+3.3
HHC				SCP		17 56 09.5	
HHC				S	**S**	**17 56 34.7**	**+1.5**
HHC				XS		17 56 48.7	
HHC				SCS	ScS	18 00 19.9	-3.5
HHC				AMB	AMB		
	comp=Z,70nm,1.5s,mb5.1						
HHC				AMB	AMB		
	comp=Z,610nm,6.1s						
HHC				LR	LR		
	comp=Z,7µm,13.7s,MS5.7						
KSH	**Kashi**	**42.21**	**335**	P	**P**	**17 50 32.1**	**-0.4**
KSH				AP	pP	17 50 41.3	+0.8
KSH				XP	sP	17 50 46.2	+2.4
KSH				PP	PP	17 52 11.3	-2.0
KSH				PCP	PcP	17 52 25.6	-1.4
KSH				PPP	PPP	17 52 45.0	-0.7
KSH				*e*SCP		17 56 11.8	
KSH				PCS		17 56 16.4	
KSH				S	**S**	**17 56 50.7**	**-0.1**
KSH				XS		17 57 07.4	
KSH				SS	SS	17 59 55.0	+1.4
KSH				SCS	ScS	18 00 29.4	-1.3
KSH				AMB	AMB		
	comp=Z,860nm,4.3s						
KSH				LR	LR		
	comp=N,1µm,13.6s,MS5.4						
KSH				LR	LR		
	comp=E,4µm,18.3s,MS5.4						
WRA	**Warramunga Arr**	**42.41**	**122**	P	**P**	**17 50 33.9**	**-0.6**
WRA				S	**S**	**17 56 52.2**	**-1.9**
WRA				pmax	pmax		
	comp=Z,11nm,0.5s						
WRA				smax			
	comp=E,9.0nm,1.3s						
WRA	**Warramunga Arr**	**42.41**	**122**	P	**P**	**17 50 33.9**	**-0.5**
	comp=E,11nm,0.5s,mb4.7,baz=302,slow=9.1,SNR=89						
WRA				S	**S**	**17 56 52.2**	**-1.9**
	comp=E,8.6nm,1.3s,baz=295,slow=16,SNR=7.0						
WRAB	**Tennant Creek**	**42.41**	**122**	*e*P	**P**	**17 50 33.9**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.2						
WRAB				MLR	MLR		
	comp=Z,862nm,20.0s,MS4.6						
WRAB	**Tennant Creek**	**42.41**	**122**	*e*P	**P**	**17 50 33.9**	**-0.6**
	comp=Z,58nm,0.9s,mb5.2						
WRAB				LR	LR		
	comp=Z,862nm,20.0s,MS4.6						
WB2	**Warramunga Arr**	**42.42**	**122**	⇑*i*P	**P**	**17 50 33.9**	**-0.6**
WMQ	**Urumqi**	**42.68**	**350**	*e*P	**P**	**17 50 37.6**	**+1.2**
WMQ				AP	pP	17 50 45.0	+0.7
WMQ				XP	sP	17 50 48.4	+0.8
WMQ				PP	PP	17 52 19.5	+1.5
WMQ				PCP	PcP	17 52 29.6	+1.0
WMQ				PPP	PPP	17 52 53.1	+1.3
WMQ				S	**S**	**17 56 59.3**	**+1.5**
WMQ				SS	SS	18 00 03.6	+1.1
WMQ				SCS	ScS	18 00 34.9	+1.4
WMQ				AMB	AMB		
	comp=Z,110nm,1.4s,mb5.4						
WMQ				AMB	AMB		
	comp=Z,960nm,4.0s						
WMQ				LR	LR		
	comp=N,4µm,24.2s,MS5.3						
WMQ				LR	LR		
	comp=E,3µm,23.2s,MS5.3						
WMQ				LR	LR		
	comp=Z,3µm,24.0s,MS5.2						
DL2	**Dalian**	**43.19**	**28**	⇑P	**P**	**17 50 41.2**	**+0.6**
DL2				S	**S**	**17 57 08.2**	**+2.9**
DL2				AMB	AMB		
	comp=Z,130nm,1.0s,mb5.6						
DL2				AMB	AMB		
	comp=Z,480nm,6.9s						
DL2				LR	LR		
	comp=N,2µm,21.0s,MS5.2						
DL2				LR	LR		
	comp=E,2µm,16.2s,MS5.2						
DL2				LR	LR		
	comp=Z,2µm,19.4s,MS5.1						
JNU	**Nakatsue**	**44.41**	**42**	P	**P**	**17 50 50.4**	**-0.2**
	baz=12,slow=5.0						

ULHL	**Ulahol**	**44.42**	**338**	P	**P**	**17 50 51.8**	**+1.2**
	SNR=22						
KZA	**Kyzart**	**44.66**	**337**	P	**P**	**17 50 53.8**	**+1.3**
	SNR=32						
INCN	**Inchon**	**44.70**	**34**	*e*P	**P**	**17 50 52.3**	**-0.6**
	comp=Z,25nm,0.6s,mb5.2						
INCN				LR	LR		
	comp=Z,6µm,19.0s,MS5.5						
AAA	**Alma-Ata**	**45.05**	**339**	*e*P	**P**	**17 50 54.8**	**-0.8**
AAA				*e*S	**S**	**17 57 34.0**	**+1.9**
AAA				pmax	pmax		
	comp=Z,1µm,3.5s						
AAA				smax			
	comp=E,1µm,4.0s						
AAA				MLR	MLR		
	comp=Z,1µm,12.0s,MS5.0						
UCH	**Uchtor**	**45.08**	**336**	P	**P**	**17 50 57.0**	**+1.2**
	SNR=104						
TKM2	**Tokmak 2**	**45.25**	**338**	P	**P**	**17 50 58.1**	**+1.0**
	SNR=57						
KBK	**Karagaybulak**	**45.27**	**337**	P	**P**	**17 50 58.8**	**+1.5**
	SNR=81						
AML	**Almayashu**	**45.34**	**335**	P	**P**	**17 50 59.3**	**+1.5**
	SNR=5.9						
KS15	**Wonju Array Si**	**45.38**	**35**	*e*P	**P**	**17 50 58.4**	**+0.2**
AAK	**Ala-Archa**	**45.43**	**337**	P	**P**	**17 51 00.3**	**+1.8**
	SNR=7.7						
FRU	**Bishkek**	**45.55**	**337**	*e*P	**P**	**17 51 01.0**	**+1.5**
FRU				*e*S	**S**	**17 57 40.0**	**+0.7**
FRU				pmax	pmax		
	comp=Z,310nm,2.6s,mb5.8						
FRU				pmax	pmax		
	comp=Z,900nm,4.5s						
FRU				smax			
	comp=E,800nm,8.0s						
FRU				MLR	MLR		
	comp=N,2µm,22.0s,MS5.2						
FRU				MLR	MLR		
	comp=E,2µm,22.0s,MS5.2						
FRU				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.2						
CHMS	**Chumysh**	**45.64**	**337**	P	**P**	**17 51 00.7**	**+0.5**
	SNR=20						
EKS2	**Erkin-Say**	**45.74**	**336**	P	**P**	**17 51 02.3**	**+1.2**
	SNR=65						
USP	**Ospenovka**	**45.96**	**337**	P	**P**	**17 51 03.4**	**+0.7**
	SNR=94						
SNY	**Shenyang**	**46.41**	**27**	⇑P	**P**	**17 51 05.8**	**-0.5**
SNY				AP	pP	17 51 15.2	+0.9
SNY				XP	sP	17 51 22.1	+4.5
SNY				PP	PP	17 52 56.5	+1.2
SNY				S	**S**	**17 57 53.1**	**+1.5**
SNY				SS	SS	18 01 10.7	+0.9
SNY				AMB	AMB		
	comp=Z,60nm,1.3s,mb5.4						
SNY				AMB	AMB		
	comp=Z,580nm,5.7s						
SNY				LR	LR		
	comp=E,5µm,17.3s						
SNY				LR	LR		
	comp=Z,5µm,19.0s,MS5.5						
SONM	**Songino Array**	**46.56**	**9**	P	**P**	**17 51 07.9**	**+0.5**
	comp=Z,32nm,0.5s,mb5.5,baz=190,slow=9.4,SNR=232						
SONM				PcP	PcP	17 52 42.3	+0.5
	comp=Z,4.7nm,0.4s,baz=190,slow=3.7,SNR=8.2						
SONM				LR	LR	18 13 21.2	
	comp=Z,6µm,18.7s,MS5.6,baz=188,slow=40						
MKAR	**Makanchi Array**	**46.65**	**346**	P	**P**	**17 51 08.2**	**0.0**
MKAR				pmax	pmax		
	comp=Z,143nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,3µm,20.3s						
MKAR	**Makanchi Array**	**46.65**	**346**	P	**P**	**17 51 08.2**	**0.0**
	comp=Z,143nm,0.9s,mb5.9,baz=160,slow=6.6,SNR=335						
MKAR				LR	LR	18 14 24.8	
	comp=Z,3µm,20.3s,MS5.2,baz=172,slow=41						
ULN	**Ulaanbaatar**	**46.69**	**9**	*c* *i*P	**P**	**17 51 08.7**	**+0.2**
ULN	**Ulaanbaatar**	**46.69**	**9**	⇑*i*P	**P**	**17 51 08.8**	**+0.3**
	comp=Z,58nm,1.0s,mb5.5						
ULN				LR	LR		
	comp=Z,5µm,19.0s,MS5.5						
ZAK	**Zakamensk**	**48.70**	**5**	⇓*i*P	**P**	**17 51 23.6**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
CN2	**Changchun**	**48.81**	**27**	*e*P	**P**	**17 51 24.0**	**-1.1**
CN2				AP	pP	17 51 31.3	-1.8
CN2				XP	sP	17 51 34.8	-1.5
CN2				PP	PP	17 53 18.3	0.0
CN2				PPP	PPP	17 54 13.8	+2.3
CN2				*e*S	**S**	**17 58 26.8**	**+1.3**
CN2				SS	SS	18 01 52.4	+0.8
CN2				AMB	AMB		
	comp=Z,90nm,1.1s,mb5.7						
CN2				AMB	AMB		
	comp=Z,700nm,7.0s						
CN2				LR	LR		
	comp=N,5µm,15.0s,MS5.7						
CN2				LR	LR		
	comp=E,4µm,15.0s,MS5.7						
CN2				LR	LR		
	comp=Z,6µm,15.0s,MS5.7						
MOY	**Mondy**	**49.81**	**3**	*e*P	**P**	**17 51 32.9**	**+0.3**
MOY				pmax	pmax		
	comp=Z,124nm,3.1s						
CBIJ	**Chichi jima**	**49.95**	**56**	LR	LR	18 10 25.2	
	comp=Z,850nm,21.9s,MS4.7,baz=292,slow=33						
TLY	**Talaya**	**50.02**	**5**	*e*P	**P**	**17 51 34.4**	**+0.2**
TLY				*e*		17 52 53.8	
TLY				*e*		17 53 31.9	
TLY				*e*S	**S**	**17 58 43.1**	**+1.0**
TLY				*e*PS	PS	17 58 55.0	+1.2
TLY				pmax	pmax		
	comp=Z,49nm,0.7s,mb5.7						
TLY				MLR	MLR		
	comp=Z,5µm,18.0s,MS5.5						
TLY	**Talaya**	**50.02**	**5**	⇑*i*P	**P**	**17 51 34.9**	**+0.7**
	comp=Z,48nm,0.7s,mb5.6						
TLY				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
IRK	**Irkutsk**	**50.63**	**6**	*e*P	**P**	**17 51 38.7**	**-0.2**
IRK				*e*		17 53 40.8	
IRK				pmax	pmax		
	comp=Z,179nm,2.8s,mb5.5						
JHJ	**Hachijo jima 2**	**50.67**	**47**	P	**P**	**17 51 39.0**	**-0.5**
	comp=Z,283nm,1.0s,mb6.2,baz=248,slow=19,SNR=2.1						
PMG	**Port Moresby**	**51.06**	**104**	P	**P**	**17 51 42.7**	**0.0**
PMG				pmax	pmax		
	comp=Z,22nm,0.9s						
PMG	**Port Moresby**	**51.06**	**104**	P	**P**	**17 51 42.7**	**0.0**
	comp=Z,22nm,0.9s,mb5.1,baz=333,slow=4.5						
PMG	**Port Moresby**	**51.06**	**104**	*e*P	**P**	**17 51 42.0**	**-0.7**
	comp=Z,21nm,0.8s,mb5.1						
PMG				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
HIA	**Hailar**	**51.11**	**19**	*e*P	**P**	**17 51 39.4**	**-3.1**
HIA				pmax	pmax		
	comp=Z,41nm,0.7s						
HIA	**Hailar**	**51.11**	**19**	*e*P	**P**	**17 51 39.4**	**-3.2**
	comp=Z,41nm,0.7s,mb5.5						
HASS	**Wahat al Ahsa’**	**51.27**	**301**	P	**P**	**17 51 44.7**	**+0.7**
MAT	**Matsushiro**	**51.31**	**43**	*e*P	**P**	**17 51 43.0**	**-1.2**
MAT				*e*S	**S**	**17 59 13.0**	**+13**
MAT				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
MAT				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.2						
MAT	**Matsushiro**	**51.31**	**43**	*e*P	**P**	**17 51 43.0**	**-1.2**
	comp=Z,34nm,1.0s,mb5.2						
MAT				*e*S	**S**	**17 59 13.0**	**+13**
MAT				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
MAT	**Matsushiro**	**51.31**	**43**	S	**P**	**17 51 41.9**	**-2.3**
MAT	**Matsushiro**	**51.31**	**43**	P	**P**	**17 51 43.2**	**-1.0**
MAT				S	**S**	**17 59 06.4**	**+6.3**
MAJO	**Matsushiro**	**51.31**	**43**	*e*P	**P**	**17 51 43.1**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.3						
MAJO				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.2						
MAJO	**Matsushiro**	**51.31**	**43**	*e*P	**P**	**17 51 43.1**	**-1.2**
	comp=Z,36nm,0.8s,mb5.3						
MAJO				LR	LR		
	comp=Z,2µm,21.0s,MS5.2						
MJAR	**Matsushiro Arr**	**51.31**	**43**	P	**P**	**17 51 43.7**	**-0.5**
MJAR				pmax	pmax		
	comp=Z,28nm,0.8s						
MJAR				MLR	MLR		
	comp=Z,2µm,19.4s						
MJAR	**Matsushiro Arr**	**51.31**	**43**	P	**P**	**17 51 43.7**	**-0.6**
	comp=Z,28nm,0.8s,mb5.2,baz=221,slow=6.7,SNR=54						
MJAR				LR	LR	18 15 07.8	
	comp=Z,2µm,19.4s,MS5.1,baz=245,slow=38						
MDJ	**Mudanjiang**	**51.39**	**29**	P	**P**	**17 51 45.0**	**+0.2**
MDJ				AP	pP	17 51 54.2	+1.3
MDJ				XP	sP	17 51 57.9	+1.9
MDJ				PP	PP	17 53 41.7	-0.9
MDJ				PCS		17 56 53.8	
MDJ				S	**S**	**17 59 01.9**	**+0.7**
MDJ				XS		17 59 15.6	
MDJ				SCS	ScS	18 01 31.3	+1.1
MDJ				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,650nm,6.3s						
MDJ				LR	LR		
	comp=N,2µm,14.6s,MS5.5						
MDJ				LR	LR		
	comp=E,3µm,16.5s,MS5.5						
MDJ				LR	LR		
	comp=Z,5µm,16.5s,MS5.6						
MDJ	**Mudanjiang**	**51.39**	**29**	*e*P	**P**	**17 51 44.5**	**-0.2**
	comp=Z,44nm,1.3s,mb5.2						
CIT	**Chita**	**51.91**	**13**	*e*P	**P**	**17 51 49.5**	**+0.9**
CIT				*e*		17 59 14.0	
CIT				pmax	pmax		
	comp=Z,272nm,2.7s,mb5.7						
CTA	**Charters Tower**	**52.83**	**117**	P	**P**	**17 51 55.2**	**-0.7**
	baz=292,slow=10						
CTA				LR	LR	18 18 43.3	
	comp=Z,2µm,18.5s,MS5.2,baz=280,slow=41						
CTAO	**Charters Tower**	**52.83**	**117**	*e*P	**P**	**17 51 55.9**	**0.0**
CTAO				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
CTAO				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.2						
CTAO	**Charters Tower**	**52.83**	**117**	*e*P	**P**	**17 51 55.9**	**0.0**
	comp=Z,24nm,1.0s,mb5.1						
CTAO				LR	LR		
	comp=Z,2µm,22.0s,MS5.2						
ZAL	**Zalesovo**	**52.96**	**351**	P	**P**	**17 51 56.0**	**-0.4**
ZAL				pmax	pmax		
	comp=Z,119nm,0.7s						
ZAL	**Zalesovo**	**52.96**	**351**	P	**P**	**17 51 56.0**	**-0.5**
	comp=Z,119nm,0.7s,mb5.9,baz=307,slow=6.6,SNR=272						
ZAL	**Zalesovo**	**52.96**	**351**	P	**P**	**17 51 56.0**	**-0.5**
STKA	**Stephens Creek**	**53.80**	**132**	*e*P	**P**	**17 52 02.9**	**0.0**
STKA	**Stephens Creek**	**53.80**	**132**	P	**P**	**17 52 03.0**	**+0.1**
	comp=Z,16nm,1.0s,mb4.9,baz=314,slow=5.6,SNR=11						
STKA				LR	LR	18 17 09.1	
	comp=Z,2µm,20.9s,MS5.1,baz=308,slow=38						
NVS	**Novosibirsk**	**54.09**	**350**	*i* P	**P**	**17 52 02.8**	**-1.8**
NVS				*e**PP	pP	17 52 10.1	-2.6
NVS				*e*S	**S**	**17 59 32.1**	**-5.7**
NVS				pmax	pmax		
	comp=N,88nm,0.9s						
NVS				pmax	pmax		
	comp=E,55nm,0.9s						
NVS				pmax	pmax		
	comp=Z,123nm,0.9s,mb5.8						
NVS				smax			
	comp=E,131nm,2.2s						
NVS				smax			
	comp=N,78nm,1.9s						
KAMS	**Al Khamasin**	**54.47**	**294**	P	**P**	**17 52 07.2**	**-0.7**
MZLS	**Mizel**	**54.81**	**298**	P	**P**	**17 52 10.4**	**-0.1**
DJNS	**Zahran al Janu**	**54.90**	**290**	P	**P**	**17 52 11.5**	**+0.3**
TATS	**Tathlith**	**55.32**	**293**	P	**P**	**17 52 13.8**	**-0.3**
BVAR	**Borovoye Array**	**55.67**	**341**	P	**P**	**17 52 15.1**	**-1.2**
	comp=N,59nm,0.8s,mb5.7,baz=143,slow=7.4,SNR=178						
KLR	**Kul’dur**	**55.76**	**27**	κ *i*P	**P**	**17 52 14.5**	**-2.5**
KLR				*e*S	**S**	**18 00 00.0**	**-0.3**
KLR				pmax	pmax		
	comp=Z,1µm,7.0s						
KLR				pmax	pmax		
	comp=N,110nm,2.0s						
KLR				pmax	pmax		
	comp=E,130nm,2.0s						
KLR				pmax	pmax		
	comp=Z,180nm,2.0s,mb5.8						
KLR				MLR	MLR		
	comp=N,4µm,13.0s						
KLR				MLR	MLR		
	comp=Z,9µm,13.0s,MS6.0						
BLJS	**Baljurashi**	**57.12**	**292**	P	**P**	**17 52 27.5**	**+0.4**
BOD	**Bodaibo**	**57.45**	**11**	*e*P	**P**	**17 52 28.5**	**-0.4**
BOD				pmax	pmax		
	comp=Z,66nm,1.1s,mb5.6						
ASAJ	**Asahikawa**	**58.24**	**37**	P	**P**	**17 52 34.6**	**0.0**
ASAJ				pmax	pmax		
	comp=Z,35nm,0.7s						
ASAJ	**Asahikawa**	**58.24**	**37**	P	**P**	**17 52 34.6**	**0.0**
	comp=Z,35nm,0.7s,mb5.5,baz=256,slow=11,SNR=23						
BHD	**Baghdad**	**58.41**	**308**	*e*P	**P**	**17 52 33.0**	**-3.0**
BHD				*e*S	**S**	**18 00 32.0**	**-3.5**
HILS	**Ha’il**	**58.69**	**301**	P	**P**	**17 52 38.3**	**+0.4**
CLNS	**Chul’man**	**59.20**	**17**	*e*P	**P**	**17 52 41.2**	**+0.1**
CLNS				*e*		17 53 26.0	
CLNS				*e*		17 54 48.7	
CLNS				*e*S	**S**	**18 00 49.5**	**+4.1**
CLNS				pmax	pmax		
	comp=Z,109nm,0.9s,mb5.9						
CLNS				pmax	pmax		
	comp=N,61nm,1.0s						
CLNS				pmax	pmax		
	comp=E,44nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
CLNS				pmax	pmax		
	comp=N,13nm,1.2s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.8s						
CLNS				smax			
	comp=N,324nm,14.8s						
CLNS				smax			
	comp=Z,289nm,12.8s						
CLNS				smax			
	comp=E,77nm,12.4s						
CLNS				MLR	MLR		
	comp=Z,7µm,15.0s,MS5.9						
CLNS				MLR	MLR		
	comp=N,4µm,16.0s,MS5.7						
CLNS				MLR	MLR		
	comp=E,600nm,16.0s,MS5.7						
YSS	**Yuzh-Sakhalins**	**59.91**	**34**	α*e*P	**P**	**17 52 46.0**	**-0.1**
YSS				*e**PP	pP	17 52 54.0	-0.4
YSS				*e**SP	sP	17 53 00.0	+2.7
YSS				S	**S**	**18 01 01.0**	**+6.4**
YSS				*e*PS	PS	18 01 12.0	-1.4
YSS						18 02 28.0	
YSS				pmax	pmax		
	comp=N,80nm,1.1s						
YSS				pmax	pmax		
	comp=Z,280nm,1.1s,mb6.2						
YSS				pmax	pmax		
	comp=E,50nm,1.0s						
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.8						
YSS				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.5						
YSS				MLR	MLR		
	comp=N,2µm,14.0s,MS5.6						
YSS				MLR	MLR		
	comp=E,3µm,15.0s,MS5.6						
YSS	**Yuzh-Sakhalins**	**59.91**	**34**	⇑*i*P	**P**	**17 52 46.0**	**-0.1**
	comp=E,264nm,1.0s,mb6.2						
YSS				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
KMBO	**Kilima Mbogo**	**59.94**	**268**	P	**P**	**17 52 47.1**	**+0.3**
KMBO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KMBO				MLR	MLR		
	comp=Z,1µm,20.0s						
KMBO	**Kilima Mbogo**	**59.94**	**268**	P	**P**	**17 52 47.1**	**+0.3**
	comp=Z,6.0nm,0.7s,mb4.7,baz=62,slow=11,SNR=16						
KMBO				LR	LR	18 15 18.7	
	comp=Z,1µm,20.0s,MS5.1,baz=273,slow=33						
MAK	**Makhachkala**	**60.24**	**320**	*e*P	**P**	**17 52 48.0**	**-0.5**
MAK				*e*		17 54 58.0	
MAK				*e*PPP	PPP	17 56 29.0	-0.8
MAK				*e*S	**S**	**18 00 57.0**	**-1.9**
MAK				*e*PS	PS	18 01 12.0	-5.8
MAK				*e*		18 02 37.0	
MAK				pmax	pmax		
	comp=Z,400nm,4.0s						
MAK				smax			
	comp=N,800nm,4.0s						
MAK				smax			
	comp=E,400nm,4.0s						
KBRS	**Khaybar**	**60.48**	**299**	P	**P**	**17 52 50.8**	**+0.5**
MSL	**Mosul**	**60.49**	**311**	*e*P	**P**	**17 52 48.5**	**-1.8**
MSL				*e*S	**S**	**18 01 07.0**	**+4.7**
MSL				*e*ScS	ScS	18 02 38.5	+3.0
GNI	**Garni**	**60.82**	**316**	*c* *i*P	**P**	**17 52 51.7**	**-0.8**
GNI				pmax	pmax		
	comp=Z,20nm,1.0s						
GNI	**Garni**	**60.82**	**316**	*e*P	**P**	**17 52 51.6**	**-0.9**
	comp=Z,56nm,1.0s,mb5.7						
GNI				LR	LR		
	comp=Z,838nm,20.0s,MS4.9						
ARMA	**Armidale**	**60.94**	**126**	*e*P	**P**	**17 52 56.1**	**+2.7**
DGRG	**David-gareji**	**60.95**	**318**	P	**P**	**17 52 53.1**	**-0.2**
DGRG				S	S	18 01 29.5	+21
MTA	**Mtatsminda**	**61.45**	**318**	P	**P**	**17 52 55.7**	**-1.0**
TI2	**Plekhanov**	**61.49**	**318**	⇑*i*P	**P**	**17 52 52.8**	**-4.2**
TI2				*e*S	**S**	**18 01 12.2**	**-2.8**
TBLG	**Delisi**	**61.50**	**318**	P	**P**	**17 52 56.7**	**-0.4**
UMJS	**Umm Lajj**	**62.08**	**298**	P	**P**	**17 53 02.3**	**+1.1**
SVE	**Sverdlovsk**	**62.12**	**338**	*e*P	**P**	**17 53 00.0**	**-1.0**
SVE				*e*S	**S**	**18 01 18.0**	**-4.6**
SVE				*e*PS	PS	18 01 37.0	-6.0
SVE				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.8						
SVE				MLR	MLR		
	comp=N,500nm,16.0s,MS5.1						
SVE				MLR	MLR		
	comp=E,900nm,16.0s,MS5.1						
SVE				MLR	MLR		
	comp=Z,1µm,16.0s,MS5.2						
ZEI	**Tsey**	**62.51**	**318**	*e*P	**P**	**17 53 02.9**	**-0.9**
ZEI				*i* *PP	pP	17 53 17.7	+5.6
ZEI				*i*		17 55 22.7	
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
ARU	**Arti**	**62.61**	**337**	⇑*i*P	**P**	**17 53 02.8**	**-1.5**
ARU				*e*		17 53 40.5	
ARU				*e*		17 55 16.4	
ARU				*e*PPP	PPP	17 56 47.2	-6.9
ARU				*e*S	**S**	**18 01 33.0**	**+4.1**
ARU				*e*		18 02 52.7	
ARU				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.6						
ARU				MLR	MLR		
	comp=N,1µm,22.0s,MS5.2						
ARU				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.0						
ARU				MLR	MLR		
	comp=E,1µm,20.0s,MS5.2						
ARU	**Arti**	**62.61**	**337**	⇑*i*P	**P**	**17 53 02.8**	**-1.5**
	comp=E,56nm,1.0s,mb5.7						
ARU				LR	LR		
	comp=Z,285nm,22.0s,MS4.4						
ONI	**Oni**	**62.73**	**318**	P	**P**	**17 53 04.7**	**-0.5**
TBKS	**Tabuk**	**63.39**	**301**	P	**P**	**17 53 10.2**	**+0.4**
QURS	**Qurayyt al Mil**	**63.51**	**304**	P	**P**	**17 53 11.1**	**+0.4**
HNR	**Honiara**	**63.55**	**101**	*e*P	**P**	**17 53 09.6**	**-1.6**
HNR				pmax	pmax		
	comp=Z,154nm,1.0s,mb6.0						
HNR				MLR	MLR		
	comp=Z,628nm,21.0s,MS4.8						
HNR	**Honiara**	**63.55**	**101**	P	**P**	**17 53 10.5**	**-0.6**
	comp=Z,54nm,0.6s,mb5.7,baz=174,slow=8.2,SNR=6.6						
HNR	**Honiara**	**63.55**	**101**	*e*P	**P**	**17 53 09.6**	**-1.5**
	comp=Z,154nm,1.0s,mb6.0						
HNR				LR	LR		
	comp=Z,628nm,21.0s,MS4.8						
KIV	**Kislovodsk**	**63.81**	**319**	α*i*P	**P**	**17 53 11.2**	**-1.2**
KIV				*e*		17 53 29.7	
KIV				*i* S	**S**	**18 01 42.9**	**-1.3**
KIV				*e*		18 03 02.1	
KIV				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.4						
KIV	**Kislovodsk**	**63.81**	**319**	*e*P	**P**	**17 53 11.4**	**-1.0**
	comp=Z,35nm,0.9s,mb5.4						
KIV				LR	LR		
	comp=Z,178nm,20.0s,MS4.2						
GOF	**Gofitskoye**	**64.06**	**320**	⇓*i*P	**P**	**17 53 11.4**	**-2.6**
GOF				*i*		17 53 29.7	
GOF				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
JMQS	**Jabal Moqyreh**	**64.12**	**301**	P	**P**	**17 53 14.8**	**+0.1**
MALT	**Malatya**	**64.68**	**312**	*e*P	**P**	**17 53 17.7**	**-0.5**
MALT				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
MALT	**Malatya**	**64.68**	**312**	*e*P	**P**	**17 53 17.6**	**-0.5**
	comp=Z,22nm,1.1s,mb5.1						
JMOS	**Jabal al Moall**	**64.84**	**301**	P	**P**	**17 53 17.4**	**-2.0**
YAK	**Yakutsk**	**64.88**	**16**	*c* *i*P	**P**	**17 53 17.0**	**-2.0**
YAK				*e**PP	pP	17 53 24.9	-2.4
YAK				*e*		17 53 45.4	
YAK				*e*		17 55 39.7	
YAK				*i* S	**S**	**18 01 57.1**	**+0.2**
YAK				*e**SS		18 02 11.2	
YAK				*e*		18 03 05.4	
YAK				pmax	pmax		
	comp=Z,178nm,1.0s,mb6.0						
YAK				pmax	pmax		
	comp=N,75nm,1.1s						
YAK				pmax	pmax		
	comp=E,58nm,1.2s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
YAK				smax			
	comp=N,119nm,8.4s						
YAK				smax			
	comp=E,43nm,8.0s						
YAK				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.7						
YAK				MLR	MLR		
	comp=N,3µm,16.0s,MS5.6						
YAK				MLR	MLR		
	comp=E,2µm,14.0s,MS5.6						
YAK	**Yakutsk**	**64.88**	**16**	⇑*i*P	**P**	**17 53 18.0**	**-1.0**
	comp=E,304nm,1.0s,mb6.3						
YAK				LR	LR		
	comp=Z,5µm,19.0s,MS5.8						
ALWS	**Ilw as Safayha**	**64.91**	**302**	P	**P**	**17 53 19.0**	**-0.8**
HAQS	**Haql**	**64.97**	**301**	P	**P**	**17 53 20.0**	**-0.2**
EIL	**Elat**	**65.08**	**302**	*e*P	**P**	**17 53 20.5**	**-0.5**
	comp=Z,28nm,1.0s,mb5.2						
SOKR	**Solikamsk**	**65.51**	**339**	*c* *i*P	**P**	**17 53 20.9**	**-2.2**
SOKR				pmax	pmax		
	comp=Z,90nm,1.1s,mb5.7						
SOKR				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.1						
SOC	**Sochi**	**65.64**	**318**	*e*P	**P**	**17 53 21.0**	**-3.2**
SOC				*e*		17 55 43.7	
SOC				*e*S	S	18 02 03.6	-3.0
SOC				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.4						
SOC				pmax	pmax		
	comp=N,21nm,1.4s						
SOC				pmax	pmax		
	comp=E,14nm,1.2s						
SOC				pmax	pmax		
	comp=Z,232nm,3.2s						
MBAR	**Mbarara**	**66.42**	**269**	*e*P	**P**	**17 53 28.4**	**-1.3**
MBAR				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
MBAR				MLR	MLR		
	comp=Z,306nm,20.0s,MS4.5						
MBAR	**Mbarara**	**66.42**	**269**	*e*P	**P**	**17 53 28.4**	**-1.4**
	comp=Z,13nm,1.0s,mb4.9						
MBAR				LR	LR		
	comp=Z,306nm,20.0s,MS4.5						
MIR	**Mirnyy**	**68.25**	**182**	*e*P	**P**	**17 53 48.0**	**+7.6**
MIR				pmax	pmax		
	comp=Z,23nm,1.6s,mb5.0						
MIR				MLR	MLR		
	comp=N,590nm,16.0s,MS4.9						
MIR				MLR	MLR		
	comp=E,200nm,16.0s,MS4.9						
MIR				MLR	MLR		
	comp=Z,1µm,16.0s,MS5.3						
CASY	**Casey**	**68.59**	**174**	*e*P	**P**	**17 53 42.5**	**0.0**
	comp=Z,20nm,1.1s,mb5.0						

CASY				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
BR131	**Keskin Array S**	**68.66**	**312**	*e*P	**P**	**17 53 41.7**	**-1.7**
	comp=Z,22nm,1.1s,mb5.0						
BRTR	**Keskin Array B**	**68.66**	**312**	P	**P**	**17 53 41.9**	**-1.5**
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BRTR	**Keskin Array B**	**68.66**	**312**	P	**P**	**17 53 41.9**	**-1.5**
	comp=Z,9.7nm,0.9s,mb4.8,baz=127,slow=6.2,SNR=38						
VRSR	**Storozhevoye**	**69.03**	**325**	*e*P	**P**	**17 53 44.2**	**-1.3**
VRSR				pmax	pmax		
	comp=N,7.0nm,0.8s						
VRSR				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
VRSR				pmax	pmax		
	comp=E,30nm,1.1s						
VOR	**Voronezh**	**69.24**	**326**	*e*P	**P**	**17 53 45.7**	**-1.1**
VOR				*e**PP	pP	17 53 53.5	-1.5
VOR				pmax	pmax		
	comp=E,70nm,1.4s						
VOR				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.2						
SKR	**Severo-Kuril's**	**69.42**	**36**	*e*P	**P**	**17 53 46.0**	**-1.8**
SKR				*e*		17 54 10.0	
SKR				*e*		17 56 18.0	
SKR				*e*S	S	18 02 52.0	+0.1
SKR				*e*		18 03 39.0	
SKR				pmax	pmax		
	comp=Z,2μm,3.0s						
SKR				smax			
	comp=N,2μm,8.0s						
SKR				smax			
	comp=E,3μm,8.0s						
SKR				MLR	MLR		
	comp=Z,2μm,18.0s,MS5.5						
SKR				MLR	MLR		
	comp=N,3μm,16.0s,MS5.7						
SKR				MLR	MLR		
	comp=E,2μm,16.0s,MS5.7						
SIM	**Simferopol'**	**69.88**	**318**	c*e*P	**P**	**17 53 49.9**	**-0.9**
SIM				*e*		17 56 27.0	
SIM				*e*PPP	PPP	17 58 11.0	+4.0
SIM				*e*S	S	18 02 54.0	-3.4
SIM				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2						
LSZ	**Lusaka**	**70.21**	**253**	*e*P	**P**	**17 53 52.8**	**-0.4**
LSZ				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
LSZ				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.5						
LSZ	**Lusaka**	**70.21**	**253**	*e*P	**P**	**17 53 52.8**	**-0.5**
	comp=Z,9.0nm,1.2s,mb4.6						
LSZ				LR	LR		
	comp=Z,2μm,20.0s,MS5.5						
ISP	**Isparta**	**70.55**	**310**	d *i*P	**P**	**17 53 55.1**	**+0.1**
ISP	**Isparta**	**70.55**	**310**	*i* Pr		17 53 55.2	
MA2	**Magadan**	**70.83**	**26**	c*e*P	**P**	**17 53 56.4**	**+0.1**
MA2				*e*		17 56 28.9	
MA2				*e*PPP	PPP	17 58 17.8	+1.6
MA2				*i* S	S	18 03 11.5	+3.2
MA2				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.1						
MA2				pmax	pmax		
	comp=N,10.0nm,1.0s						
MA2				pmax	pmax		
	comp=E,9.0nm,1.1s						
MA2	**Magadan**	**70.83**	**26**	*e*P	**P**	**17 53 56.4**	**+0.1**
	comp=E,45nm,0.9s,mb5.4						
MA2				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
PET	**Petropavlovsk**	**71.78**	**34**	α*i*P	**P**	**17 54 01.7**	**-0.4**
PET				*e*PPP	PPP	17 58 29.0	+3.9
PET				*e*S	S	18 03 23.1	+3.7
PET				*e*PS	PS	18 04 01.0	+8.2
PET				pmax	pmax		
	comp=Z,500nm,6.7s						
PET				pmax	pmax		
	comp=Z,80nm,1.6s,mb5.4						
PET				pmax	pmax		
	comp=N,31nm,1.0s						
PET				pmax	pmax		
	comp=E,42nm,1.2s						
PET				pmax	pmax		
	comp=Z,300nm,16.5s						
PET				pmax	pmax		
	comp=E,100nm,15.9s						
PET				pmax	pmax		
	comp=N,100nm,15.5s						
PET				smax			
	comp=N,600nm,26.1s						
PET				smax			
	comp=E,700nm,25.7s						
PET				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.2						
PET				MLR	MLR		
	comp=N,1μm,16.0s,MS5.4						
PET				MLR	MLR		
	comp=E,1μm,19.0s,MS5.4						
PET	**Petropavlovsk**	**71.78**	**34**	*e*P	**P**	**17 54 01.5**	**-0.6**
	comp=E,50nm,0.7s,mb5.5						
PET				LR	LR		
	comp=Z,1μm,20.0s,MS5.1						
MOS	**Moscow**	**71.79**	**329**	*e*P	**P**	**17 53 59.4**	**-2.7**
MOS				*e*		17 54 18.8	
MOS				*e*		17 56 37.4	
MOS				*e*S	S	18 03 13.2	-6.2
MOS				MLR	MLR		
	comp=Z,3μm,24.6s,MS5.4						
MOS				MLR	MLR		
	comp=N,2μm,23.2s						
OBN	**Obninsk**	**72.08**	**328**	α*i*P	**P**	**17 54 02.7**	**-1.2**
OBN				*e*	pP	17 54 10.5	-1.6
OBN				*i*		17 54 28.2	
OBN				*e*S	S	18 03 17.5	-5.2
OBN				*e*PPS	PPS	18 04 14.3	+4.4
OBN				pmax	pmax		
	comp=Z,61nm,1.2s,mb5.4						
OBN				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.1						
OBN	**Obninsk**	**72.08**	**328**	*e*P	**P**	**17 54 03.1**	**-0.8**
	comp=Z,70nm,1.1s,mb5.5						
OBN				LR	LR		
	comp=Z,316nm,22.0s,MS4.5						
TIXI	**Tiksi**	**72.62**	**10**	⇓*i*P	**P**	**17 54 02.3**	**-4.5**
TIXI				*e*		17 56 44.9	
TIXI				*e*PPP	PPP	17 58 25.1	-7.8
TIXI				*e*S	S	18 03 20.7	-7.9
TIXI				*e*SS	SS	18 08 13.7	+3.5
TIXI				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.5						
TIXI	**Tiksi**	**72.62**	**10**	⇑*i*P	**P**	**17 54 05.5**	**-1.3**
SEY	**Seymchan**	**73.25**	**23**	*i* P	**P**	**17 54 09.8**	**-0.8**
SEY						17 54 25.4	
SEY				*e*		17 56 58.5	
SEY				*e*S	S	18 03 37.2	+1.4
SEY				*e*		18 04 17.4	
SEY				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.6						
SEY				pmax	pmax		
	comp=N,30nm,0.8s						
SEY				smax			
	comp=N,600nm,10.2s						
SEY				smax			
	comp=E,400nm,9.4s						
SEY				MLR	MLR		
	comp=Z,4μm,20.0s,MS5.7						
SEY				MLR	MLR		
	comp=E,3μm,22.0s						
MAW	**Mawson**	**73.27**	**193**	*e*P	**P**	**17 54 11.2**	**+0.6**
MAW	**Mawson**	**73.27**	**193**	P	**P**	**17 54 10.0**	**-0.6**
	comp=E,6.9nm,0.8s,mb4.7,baz=349,slow=7.1,SNR=13						
MAW				LR	LR	18 19 47.6	
	comp=E,1μm,21.5s,MS5.2,baz=32,slow=30						
KIS	**Kishinev**	**74.01**	**319**	*e*P	**P**	**17 54 13.0**	**-2.3**
KIS				*e*		18 04 30.0	
KIS				MLR	MLR		
	comp=Z,800nm,20.0s,MS5.0						
KIS				MLR	MLR		
	comp=Z,500nm,20.0s						
DRV	**Dumont d'Urvil**	**74.73**	**164**	P	pP	17 54 30.0	+2.6
DRV				S	S	18 03 55.0	+2.6
DRV				L		18 13 00.0	
AKASG	**Malin Array Be**	**74.75**	**322**	P	**P**	**17 54 18.2**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,21nm,0.8s						
AKASG	**Malin Array Be**	**74.75**	**322**	P	**P**	**17 54 18.2**	**-1.3**
	comp=Z,21nm,0.8s,mb5.1,baz=88,slow=4.5,SNR=54						
AKASG	**Malin Array Be**	**74.75**	**322**	P	**P**	**17 54 18.2**	**-1.3**
BOSA	**Boshof**	**75.01**	**240**	*e*P	**P**	**17 54 21.0**	**-0.5**
BOSA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
BOSA				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.2						
BOSA	**Boshof**	**75.01**	**240**	P	**P**	**17 54 21.2**	**-0.3**
	comp=Z,2.8nm,0.6s,mb4.4,baz=58,slow=5.6,SNR=8.5						
BOSA				LR	LR	18 23 36.3	
	comp=Z,1μm,18.0s,MS5.2,baz=60,slow=33						
BOSA	**Boshof**	**75.01**	**240**	*e*P	**P**	**17 54 20.9**	**-0.5**
	comp=Z,6.9nm,0.8s,mb4.6						
BOSA				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
VRI	**Vrincioaia**	**75.14**	**317**	P	**P**	**17 54 22.3**	**+0.4**
MLR	**Muntele Rosu**	**75.59**	**317**	P	**P**	**17 54 24.9**	**+0.5**
BURAR	**Bucovina Array**	**76.54**	**319**	P	**P**	**17 54 30.7**	**+0.9**
MNK	**Minsk**	**76.62**	**326**	*e*P	**P**	**17 54 29.0**	**-1.1**
PUL	**Pulkovo**	**76.94**	**331**	*i* P	**P**	**17 54 31.9**	**+0.2**
PUL				*i*		17 57 29.1	
PUL				*i* PPP	PPP	17 59 15.4	+1.0
PUL				*i* S	S	18 04 13.9	-2.8
PUL				pmax	pmax		
	comp=Z,98nm,0.8s,mb5.8						
PUL				pmax	pmax		
	comp=N,59nm,0.6s						
PUL				pmax	pmax		
	comp=E,63nm,0.6s						
PUL				smax			
	comp=N,199nm,8.1s						
PUL				smax			
	comp=Z,61nm,6.6s						
PUL				smax			
	comp=E,156nm,8.7s						
PUL	**Pulkovo**	**76.94**	**331**	*e*P	**P**	**17 54 31.9**	**+0.2**
VTS	**Vitosha**	**76.97**	**313**	P	**P**	**17 54 31.8**	**-0.5**
ZAPS	**Zavoj/Pirot**	**77.52**	**314**	*e*P	**P**	**17 54 34.1**	**-1.2**
LVV	**L'vov**	**77.77**	**321**	*i* P	**P**	**17 54 37.3**	**+0.8**
LVV				MLR	MLR		
	comp=Z,300nm,15.0s,MS4.7						
DRGR		**78.05**	**317**	P	**P**	**17 54 38.4**	**+0.3**
BOLS	**Boljevac**	**78.08**	**314**	⇑*i*P	**P**	**17 54 37.6**	**-0.7**
SKO	**Skopje**	**78.17**	**312**	*i* P	**P**	**17 54 37.5**	**-1.4**
VSU	**Vasula**	**78.31**	**330**	*e*P	**P**	**17 54 38.4**	**-0.8**
APA	**Apatity**	**78.55**	**339**	⇑*i*P	**P**	**17 54 40.4**	**0.0**
APA				*i*	pP	17 54 47.8	-1.0
APA				*e*S	S	18 04 25.0	-8.9
APA				*e*		18 04 41.0	
APA				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.3						
APA				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.4						
KWP	**Kalwaria**	**78.57**	**320**	*e*P	**P**	**17 54 41.6**	**+0.7**
BZS	**Buzias**	**78.60**	**316**	P	**P**	**17 54 41.3**	**+0.1**
UZH	**Uzhgorod**	**78.66**	**319**	*e*P	**P**	**17 54 42.0**	**+0.6**
UZH				*e*S	S	18 04 30.0	-5.4
KOLS	**Kolonicke sedl**	**78.72**	**320**	*e*P	**P**	**17 54 41.6**	**-0.2**
KOLS				*e*sP	sP	17 54 51.1	-1.9
GRUS	**Gruza**	**78.98**	**314**	*e*	**P**	**17 54 42.3**	**-0.9**
SUW	**Suwalki**	**79.15**	**325**	*e*P	**P**	**17 54 43.5**	**-0.5**
SUR	**Sutherland**	**79.42**	**237**	*e*P	**P**	**17 54 46.8**	**+0.8**
	comp=Z,16nm,0.8s,mb5.0						
SUR				LR	LR		
	comp=Z,655nm,20.0s,MS5.0						
FINES	**FINESS Array B**	**79.44**	**332**	P	**P**	**17 54 45.1**	**-0.3**
FINES				pmax	pmax		
	comp=Z,17nm,0.8s						
FINES				MLR	MLR		
	comp=Z,574nm,20.0s						
FINES	**FINESS Array B**	**79.44**	**332**	P	**P**	**17 54 45.0**	**-0.4**
	comp=Z,17nm,0.8s,mb5.0,baz=108,slow=6.0,SNR=56						
FINES				LR	LR	18 33 36.1	
	comp=Z,574nm,19.9s,MS4.9,baz=295,slow=38						
DIVS	**Divcibare**	**79.52**	**314**	⇓*i*P	**P**	**17 54 45.4**	**-0.8**
KAF	**Kangasniemi**	**79.53**	**333**	*e*p	**P**	**17 54 45.0**	**-0.8**
	comp=Z,40nm,1.0s,mb5.3,baz=103,slow=5.0						
KAF	**Kangasniemi**	**79.53**	**333**	*e*P	**P**	**17 54 45.0**	**-0.8**
KAF				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
RPZ	**Rata Peaks**	**79.67**	**135**	P	**P**	**17 54 46.8**	**-0.2**
	comp=Z,11nm,0.9s,mb4.8,baz=245,slow=4.0,SNR=4.0						
KECS	**Kecovo**	**79.82**	**319**	*e*P	**P**	**17 54 47.8**	**+0.1**
KECS				*e*		17 55 01.7	
BBLS	**Bajina Basta -**	**79.91**	**314**	⇓*i*P	**P**	**17 54 47.8**	**-0.5**
NIE	**Niedzica**	**80.07**	**320**	*e*P	**P**	**17 54 50.0**	**+1.0**
PSZ	**Piszkesteto**	**80.12**	**318**	*e*P	**P**	**17 54 49.5**	**+0.2**
PSZ				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
PSZ	**Piszkesteto**	**80.12**	**318**	*e*P	**P**	**17 54 49.5**	**+0.2**
	comp=Z,32nm,1.0s,mb5.2						
PSZ	**Piszkesteto**	**80.12**	**318**	⇑*e*P	**P**	**17 54 49.3**	**0.0**
FX1	**Attu Island--F**	**80.16**	**37**	*e*P	**P**	**17 54 49.9**	**+0.5**
OJC	**Ojcow**	**80.52**	**321**	*e*P	**P**	**17 54 52.0**	**+0.6**
SYO	**Syowa Base**	**80.54**	**198**	⇑P	**P**	**17 54 50.0**	**-1.1**
SYO	**Syowa Base**	**80.54**	**198**	⇓PcP	PcP	17 54 57.7	-0.7
BILL	**Bilibino**	**80.64**	**21**	α*i*P	**P**	**17 54 51.2**	**-0.5**
BILL				*i*	pP	17 54 59.5	-0.6
BILL				*i*		17 55 06.7	
BILL				*e*		18 05 05.3	
BILL				*e*PS	PS	18 05 50.8	+4.9
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
BILL				MLR	MLR		
	comp=Z,4μm,16.0s,MS5.9						
BILL	**Bilibino**	**80.64**	**21**	*e*P	**P**	**17 54 52.4**	**+0.7**
	comp=Z,22nm,1.2s,mb5.0						
SMY	**Shemya**	**80.70**	**37**	*e*P	**P**	**17 54 52.4**	**+0.1**
SMY				pmax	pmax		
	comp=Z,127nm,1.0s,mb5.8						
SMY				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.2						
SMY	**Shemya**	**80.70**	**37**	*e*P	**P**	**17 54 52.4**	**+0.2**
	comp=Z,128nm,1.0s,mb5.8						
SMY				LR	LR		
	comp=Z,1μm,21.0s,MS5.2						
TSUM	**Tsumeb**	**80.72**	**250**	LR	LR	18 25 57.3	
	comp=Z,598nm,19.6s,MS5.0,baz=68,slow=32						
TSUM	**Tsumeb**	**80.72**	**250**	*e*P	**P**	**17 54 53.8**	**+0.7**
	comp=Z,15nm,1.0s,mb4.9						
TSUM				LR	LR		
	comp=Z,928nm,19.0s,MS5.2						
VYHS	**Vyhne**	**80.90**	**319**	*e*P	**P**	**17 54 53.5**	**0.0**
VYHS				*e*pP	pP	17 55 01.5	-0.4
VYHS				*e*		18 04 25.4	
SRO	**Srobarova**	**81.16**	**318**	*e*P	**P**	**17 54 56.0**	**+1.2**
TIP	**Timpagrande**	**81.40**	**309**	*e*P	**P**	**17 54 56.0**	**-0.2**
KEV	**Kevo**	**81.52**	**341**	*e*P	**P**	**17 54 53.9**	**-2.4**
	comp=Z,28nm,1.1s,mb5.1						
KEV				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
OKC	**Ostrava-Krasne**	**81.53**	**320**	*e*P	**P**	**17 54 57.0**	**+0.3**
OKC				*e*pP	pP	17 55 05.4	+0.3
OKC				*e*S	S	18 05 03.8	-1.5
OKC				AMS	AMS	18 39 20.0	
	comp=Z,500nm,17.0s						
SNZO	**South Karori**	**81.86**	**132**	PFAKE		17 55 10.0	+11
SNZO				LR	LR		
	comp=Z,2μm,22.0s,MS5.4						
MORC	**Moravsky Berou**	**81.91**	**320**	*e*P	**P**	**17 54 58.3**	**-0.4**
MORC				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0						
MORC	**Moravsky Berou**	**81.91**	**320**	*e*P	**P**	**17 54 58.3**	**-0.4**
	comp=Z,22nm,1.0s,mb5.0						
ARCES	**ARCESS Array B**	**81.96**	**340**	P	**P**	**17 54 58.9**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,12nm,0.4s						
ARCES	**ARCESS Array B**	**81.96**	**340**	P	**P**	**17 54 58.9**	**+0.3**
	comp=Z,12nm,0.4s,mb5.1,baz=98,slow=4.5,SNR=83						
ZST	**Bratislava**	**82.02**	**318**	*e*P	**P**	**17 54 59.5**	**+0.2**
ZST				*e*pP	pP	17 55 07.1	-0.6
ZST				*e*		18 04 57.7	
DPC	**Dobruska-Polom**	**82.75**	**320**	*e*P	**P**	**17 55 03.7**	**+0.7**
DPC				*e*pP	pP	17 55 11.6	+0.1
DPC				*e*S	S	18 05 18.3	+0.4
DPC				AMS	AMS	18 43 00.0	
	comp=Z,700nm,16.7s						
KSP	**Ksiaz**	**82.82**	**321**	*e*P	**P**	**17 55 03.9**	**+0.5**
KSP				*e**PP	pP	17 55 12.8	+1.0
KSP				*e*S	S	18 05 18.0	-0.6
KSP				MLR	MLR		
	comp=Z,2μm,20.7s,MS5.4						
KSP	**Ksiaz**	**82.82**	**321**	*e*P	**P**	**17 55 04.1**	**+0.8**
UPC	**Upice**	**82.97**	**321**	*e*P	**P**	**17 55 04.5**	**+0.4**
UPC				*e*pP	pP	17 55 11.4	-1.2
ARSA	**Arzberg**	**82.98**	**317**	⇑*i*P	**P**	**17 55 04.6**	**+0.3**
	comp=Z,50nm,1.6s,mb5.3						
BOJS	**Bojanci**	**83.03**	**315**	*e*P	**P**	**17 55 04.6**	**+0.1**
URZ	**Urewera**	**83.24**	**129**	P	**P**	**17 55 05.7**	**-0.1**
	comp=Z,6.6nm,0.9s,mb4.7,baz=53,slow=15						
URZ				LR	LR	18 31 44.0	
	comp=Z,2μm,21.1s,MS5.4,baz=264,slow=35						
VISS	**Visnje**	**83.34**	**316**	*e*P	**P**	**17 55 05.9**	**-0.2**
LJU	**Ljubljana**	**83.57**	**316**	*e*P	**P**	**17 55 07.9**	**+0.5**
LJU				*e*	pP	17 55 15.7	-0.2
OBKA	**Obir**	**83.59**	**316**	⇑*i*P	**P**	**17 55 07.8**	**+0.3**
	comp=Z,64nm,1.6s,mb5.5						
PRU	**Pruhonice**	**83.86**	**320**	*e*P	**P**	**17 55 09.3**	**+0.6**
PRU				*e*pP	pP	17 55 17.0	-0.2
PRU				*e*S	S	18 05 27.1	-1.9
PRU				AMS	AMS	18 39 40.0	
	comp=Z,500nm,16.9s						
MOA	**Molln**	**83.88**	**318**	⇑*i*P	**P**	**17 55 08.7**	**-0.2**
	comp=Z,76nm,2.9s,mb5.3						
PVCC	**Panska Ves**	**83.89**	**320**	*e*P	**P**	**17 55 09.2**	**+0.4**
PVCC				*e*pP	pP	17 55 16.0	-1.3
PVCC				AMS	AMS	18 39 40.0	
	comp=Z,700nm,19.5s						
VOY	**Vojsko**	**84.01**	**316**	*e*P	**P**	**17 55 09.4**	**-0.2**
VOY				*e*		17 55 27.8	
AQU	**L'Aquila**	**84.16**	**312**	*e*P	**P**	**17 55 09.8**	**-0.6**
AQU				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.7						
AQU	**L'Aquila**	**84.16**	**312**	*e*P	**P**	**17 55 09.8**	**-0.6**
	comp=Z,62nm,1.0s,mb5.7						
TRO	**Tromso**	**84.22**	**340**	*e*P	**P**	**17 55 09.3**	**-0.9**
TRO				LR	LR		
	comp=Z,804μm,17.9s						
TRO	**Tromso**	**84.22**	**340**	*e*P	**P**	**17 55 09.3**	**-0.9**
TRO				*e*SKSa		18 05 26.0	
TRO				AMS	AMS	18 38 57.1	
	comp=Z,804nm,17.9s,MS5.2						
ROBS	**Robic**	**84.29**	**316**	*e*P	**P**	**17 55 09.8**	**-1.2**
BRG	**Berggiesshubel**	**84.31**	**321**	*e*P	**P**	**17 55 11.5**	**+0.5**
BRG				*e*	pP	17 55 19.9	+0.5
BRG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,470nm,17.9s,MS5.2						
BRG				MLR	MLR		
	comp=E,660nm,17.9s,MS5.2						
BRG				MLR	MLR		
	comp=Z,850nm,17.9s,MS5.2						
BRG	**Berggiesshubel**	**84.31**	**321**	*e*P	**P**	**17 55 11.5**	**+0.5**
	comp=Z,20nm,1.0s,mb5.2						
BRG				*e*	pP	17 55 19.9	+0.5
BRG				LR	LR		
	comp=Z,850nm,17.9s,MS5.2						
GEC2	**GERESS Array S**	**84.32**	**319**	*e*P	**P**	**17 55 11.6**	**+0.5**
GEC2				*e*S	S	18 05 35.1	+1.5
GEC2				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.5						
GEC2	**GERESS Array S**	**84.32**	**319**	*e*P	**P**	**17 55 11.6**	**+0.5**
	comp=Z,44nm,1.0s,mb5.5						
GEC2				*e*S	S	18 05 35.1	+1.5
GERES	**GERESS Array B**	**84.32**	**319**	P	**P**	**17 55 11.4**	**+0.3**
GERES				pmax	pmax		
	comp=Z,25nm,1.0s						
GERES	**GERESS Array B**	**84.32**	**319**	P	**P**	**17 55 11.4**	**+0.3**
	comp=Z,25nm,1.0s,mb5.3,baz=108,slow=4.2,SNR=97						
KHC	**Kasperske Hory**	**84.42**	**319**	*e*P	**P**	**17 55 11.5**	**-0.1**
KHC				*e*pP	pP	17 55 18.9	-1.2
KHC				*e*S	S	18 05 35.0	+0.4
KHC				AMS	AMS	18 41 10.0	
	comp=Z,500nm,18.4s						
KBA	**Koelnbreinsper**	**84.45**	**317**	⇑*i*P	**P**	**17 55 11.5**	**-0.3**
	comp=Z,21nm,1.3s,mb5.1						
KBA	**Koelnbreinsper**	**84.45**	**317**	⇑*i*P	**P**	**17 55 11.5**	**-0.3**
KBA				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.1						
RUE	**Ruedersdorf**	**84.53**	**322**	*e*P	**P**	**17 55 12.2**	**+0.2**
	comp=Z,55nm,1.0s,mb5.6						
CLL	**Collm**	**84.93**	**321**	*e*P	**P**	**17 55 15.0**	**+1.0**
CLL				*e**SP	sP	17 55 25.0	-0.3
CLL				*e*S	S	18 05 39.0	-0.6
CLL				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.2						
CLL	**Collm**	**84.93**	**321**	*e*P	**P**	**17 55 15.0**	**+1.0**
	comp=Z,17nm,0.9s,mb5.2						
CLL				*e*sP	sP	17 55 25.0	-0.3
CLL				*e*S	S	18 05 39.0	-0.6
CLL	**Collm**	**84.93**	**321**	P	**P**	**17 55 15.0**	**+1.0**
	comp=Z,logA/T=1.3,mb5.2						
CLL				*e**SP	sP	17 55 25.0	-0.3
CLL				*e*S	S	18 05 39.0	-0.6
CLL				*e*SP	SP	18 06 33.0	-2.0
CLL				*e*PPS	PPS	18 07 00.0	-3.0
CLL				*e*SSS	SSS	18 14 42.0	-1.5
CLL				*e*		18 17 42.0	
HFS	**Hagfors**	**85.18**	**330**	P	**P**	**17 55 15.7**	**+0.6**
HFS				pmax	pmax		
	comp=Z,19nm,1.0s						
HFS	**Hagfors**	**85.18**	**330**	P	**P**	**17 55 15.7**	**+0.6**
	comp=Z,19nm,1.0s,mb5.2,baz=153,slow=3.3,SNR=12						
MIDW	**Midway**	**85.20**	**62**	PFAKE		17 55 30.0	+14
MIDW				LR	LR		
	comp=Z,983nm,21.0s,MS5.2						
NKC	**Novy Kostel**	**85.22**	**320**	*e*P	**P**	**17 55 16.2**	**+0.7**
NKC				AMS	AMS	18 40 30.0	
	comp=Z,900nm,16.8s						
WTTA	**Wattenberg**	**85.63**	**317**	⇓*i*P	**P**	**17 55 17.1**	**-0.5**
	comp=Z,28nm,1.4s,mb5.3						
WTTA	**Wattenberg**	**85.63**	**317**	⇓*i*P	**P**	**17 55 17.1**	**-0.5**
WTTA				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.3						
MOX	**Moxa**	**85.77**	**320**	*e*P	**P**	**17 55 19.1**	**+0.8**
MOX				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.4						
MOX				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.8						
MOX	**Moxa**	**85.77**	**320**	*e*P	**P**	**17 55 19.1**	**+0.8**
	comp=Z,31nm,1.3s,mb5.4						
MOX				*e*pP	pP	17 55 32.0	+5.2
MOX				*e*S	S	18 05 50.0	+2.3
MOX				LR	LR		
	comp=Z,400nm,19.0s,MS4.8						
MOX	**Moxa**	**85.77**	**320**	*i* P	**P**	**17 55 19.1**	**+0.8**
	comp=Z,logA/T=1.4,mb5.4						
MOX				pP	pP	17 55 32.0	+5.2
MOX				S	S	18 05 50.0	+2.3
MOX				L		18 45 23.0	
FUR	**Furstenfeldbru**	**85.90**	**318**	*e*P	**P**	**17 55 18.8**	**-0.2**
FUR				*e*S	S	18 05 48.7	-0.4
FUR				pmax	pmax		
	comp=Z,27nm,0.5s,mb5.7						
FUR	**Furstenfeldbru**	**85.90**	**318**	*e*P	**P**	**17 55 18.8**	**-0.2**
	comp=Z,27nm,0.5s,mb5.7						
FUR				*e*S	S	18 05 48.7	-0.4
SQTA	**Sankt Quirin**	**85.92**	**317**	⇑*i*P	**P**	**17 55 18.7**	**-0.4**
	comp=Z,15nm,1.1s,mb5.1						
SQTA	**Sankt Quirin**	**85.92**	**317**	⇑*i*P	**P**	**17 55 18.7**	**-0.4**
SQTA				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.1						
GRA1	**Grafenberg Arr**	**85.99**	**320**	*e*P	**P**	**17 55 20.0**	**+0.6**
	comp=Z,35nm,0.9s,mb5.6						
GRA1				*e*pP	pP	17 55 28.7	+0.8
GRA1				*e*sP	sP	17 55 32.3	+1.7
GRA1				*e*S	S	18 05 52.6	+2.7
GRA1				LR	LR		
	comp=Z,900nm,20.7s,MS5.2						
GRF	**Grafenberg Arr**	**85.99**	**320**	*e*P	**P**	**17 55 20.0**	**+0.6**
GRF				*e**PP	pP	17 55 28.7	+0.8
GRF				*e**SP	sP	17 55 32.3	+1.7
GRF				*e*S	S	18 05 52.6	+2.7
GRF				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.6						
GRF				MLR	MLR		
	comp=Z,900nm,20.7s,MS5.2						
GRF	**Grafenberg Arr**	**85.99**	**320**	*e*P	**P**	**17 55 20.0**	**+0.6**
GRF				*e**PP	pP	17 55 28.7	+0.8
GRF				*e**SP	sP	17 55 32.3	+1.7
GRF				*e*S	S	18 05 52.6	+2.7
GRF				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.6						
GRF				MLR	MLR		
	comp=Z,900nm,20.7s,MS5.2						
GRF	**Grafenberg Arr**	**85.99**	**320**	*e*P	**P**	**17 55 20.0**	**+0.6**
	comp=Z,35nm,0.9s,mb5.6						

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GRF                                  epP      pP      17 55 28.7 +0.8
GRF                                  esP      sP      17 55 32.3 +1.7
GRF                                  eS       S       18 05 52.6 +2.7
GRF                                   LR      LR
      comp=Z,900nm,20.7s,MS5.2
MOTA  Moosalm            85.99 317⇑iP       P       17 55 18.8  -0.7
      comp=Z,21nm,1.0s,mb5.3
MOTA  Moosalm            85.99 317⇑iP       P       17 55 18.8  -0.7
MOTA                                  pmax    pmax
      comp=Z,21nm,1.0s,mb5.3
NSS   Namsos             86.31 334 eP       P       17 55 20.9 +0.4
NSS                                   AMS     AMS     18 40 48.9
      comp=Z,659nm,22.5s,MS5.0
VNDA  Vanda              86.41 169 eP       P       17 55 22.3 +1.4
VNDA                                  pmax    pmax
      comp=Z,10.0nm,1.2s
VNDA                                  MLR     MLR
      comp=Z,1µm,19.0s
VNDA  Vanda              86.41 169  P       P       17 55 21.1 +0.2
      comp=Z,1.4nm,0.8s,baz=294,slow=6.3,SNR=5.7
VNDA                                  LR      LR      18 31 33.1
      comp=Z,1µm,18.9s,MS5.3,baz=307,slow=34
VNDA  Vanda              86.41 169 eP       P       17 55 22.2 +1.3
      comp=Z,9.6nm,1.2s,mb4.9
VNDA                                  LR      LR
      comp=Z,1µm,19.0s,MS5.3
NB2   NORSAR Subarra     86.46 331  P       P       17 55 21.4   0.0
      comp=Z,1.2nm,0.7s,baz=94,slow=5.6
NB2   NORSAR Subarra     86.46 331  P       P       17 55 21.4   0.0
      baz=94,slow=5.9
NOA   NORSAR Array B     86.46 331  P       P       17 55 21.7 +0.3
NOA                                   pmax    pmax
      comp=Z,14nm,0.9s
NOA                                   MLR     MLR
      comp=Z,571nm,20.0s
NOA   NORSAR Array B     86.46 331  P       P       17 55 21.6 +0.2
      comp=Z,14nm,0.9s,mb5.2,baz=94,slow=5.0,SNR=22
NOA                                   LR      LR      18 41 36.4
      comp=Z,571nm,20.0s,MS5.0,baz=105,slow=41
CLZ   Clausthal          86.59 322 eP       P       17 55 22.7 +0.4
CLZ                                   pmax    pmax
      comp=Z,28nm,1.1s,mb5.4
CLZ   Clausthal          86.59 322 eP       P       17 55 22.7 +0.4
      comp=Z,28nm,1.1s,mb5.4
BSEG  Bad Segeberg       86.68 324 eP       P       17 55 23.4 +0.7
BSEG                                 eS       S       18 05 58.4 +2.0
BSEG                                  pmax    pmax
      comp=Z,44nm,1.1s,mb5.6
DAVA  Damuels            86.82 317⇑iP       P       17 55 23.9 +0.4
      comp=Z,51nm,1.3s,mb5.6
KONO  Kongsberg          87.21 329  PFAKE           17 55 40.0  +15
KONO                                  LR      LR
      comp=Z,563nm,20.0s,MS5.0
KBS   Kingsbay           87.33 349 eP       P       17 55 25.7 +0.4
KBS                                   LR      LR
      comp=Z,625µm,20.4s
KBS   Kingsbay           87.33 349 eP       P       17 55 22.2  -3.1
KBS                                  ePP      PP      17 58 50.5  -1.7
KBS                                  eSKSa            18 05 51.1
KBS                                   AMS     AMS     18 40 21.5
      comp=Z,625nm,20.4s,MS5.0
PGF   Pioggiola          87.42 312 eP       P       17 55 26.8 +0.3
      comp=Z,46nm,1.4s,mb5.2
PGF   Pioggiola          87.42 312 eP       P       17 55 26.8 +0.3
PGF                                   pmax    pmax
      comp=Z,23nm,1.4s,mb5.2
SBA   Scott Base         87.51 169 eP       P       17 55 27.8 +1.6
SBA                                   pmax    pmax
      comp=Z,59nm,1.9s,mb5.5
SBA                                   MLR     MLR
      comp=Z,1µm,20.0s,MS5.3
SBA   Scott Base         87.51 169 eP       P       17 55 27.8 +1.6
      comp=Z,59nm,1.9s,mb5.5
SBA                                   LR      LR
      comp=Z,1µm,20.0s,MS5.3
TNS   Taunus Mts         87.79 320 eP       P       17 55 28.7 +0.6
TNS                                  eS       S       18 06 12.8 +5.8
TNS                                   pmax    pmax
      comp=Z,16nm,0.9s,mb5.2
TNS   Taunus Mts         87.79 320 eP       P       17 55 28.7 +0.6
      comp=Z,16nm,0.9s,mb5.2
TNS                                  eS       S       18 06 12.8 +5.8
BFO   Black Forest       87.87 318 eP       P       17 55 28.4  -0.2
BFO                                   pmax    pmax
      comp=Z,14nm,1.1s,mb5.1
BFO   Black Forest       87.87 318 eP       P       17 55 28.4  -0.2
      comp=Z,14nm,1.1s,mb5.1
FELD  Feldberg           88.09 318 eP       P       17 55 29.0  -0.6
LANF  Langenberg         88.22 319 eP       P       17 55 30.3 +0.1
ABH   Alteburg           88.37 320 eP       P       17 55 31.3 +0.4
SBF   Sospel             88.55 314 eP       P       17 55 31.8  -0.1
      comp=Z,81nm,1.0s,mb5.7
SBF   Sospel             88.55 314 eP       P       17 55 31.8  -0.1
SBF                                   pmax    pmax
      comp=Z,40nm,1.0s,mb5.7
CDF   Champ du Feu       88.58 318 eP       P       17 55 31.8  -0.1
      comp=Z,21nm,1.2s,mb5.0
CDF   Champ du Feu       88.58 318 eP       P       17 55 31.8  -0.1
CDF                                   pmax    pmax
      comp=Z,10.0nm,1.2s,mb5.0
ECH   Echery             88.66 318 eP       P       17 55 32.3   0.0
WTSB  Winterswijk        88.81 322 eP       P       17 55 32.6  -0.3
      comp=Z,35nm,1.4s,mb5.5
LOMF  Lomont             88.90 317 eP       P       17 55 33.4  -0.1
LPG   La Plagne          89.00 315 eP       P       17 55 34.5 +0.5
      comp=Z,41nm,1.2s,mb5.3
LPG   La Plagne          89.00 315 eP       P       17 55 34.5 +0.5
LPG                                   pmax    pmax
      comp=Z,21nm,1.2s,mb5.3
MBDF  Montbardon         89.01 315 eP       P       17 55 33.8  -0.3
LPL   La Plagne          89.01 315 eP       P       17 55 34.5 +0.4
      comp=Z,78nm,1.2s,mb5.6
LPL   La Plagne          89.01 315 eP       P       17 55 34.5 +0.4
LPL                                   pmax    pmax
      comp=Z,39nm,1.2s,mb5.6
BNI   Bardonecchia       89.06 315 eP       P       17 55 33.9  -0.4
BNI                                   pmax    pmax
      comp=Z,18nm,1.3s,mb5.2
BNI   Bardonecchia       89.06 315 eP       P       17 55 33.9  -0.4
      comp=Z,18nm,1.3s,mb5.2
FRF   La Foret Royal     89.13 313 eP       P       17 55 35.1 +0.4
      comp=Z,80nm,1.3s,mb5.6
FRF   La Foret Royal     89.13 313 eP       P       17 55 35.1 +0.4
FRF                                   pmax    pmax
      comp=Z,40nm,1.3s,mb5.6
HAU   Haudompre          89.20 318 eP       P       17 55 34.9   0.0
      comp=Z,42nm,1.1s,mb5.4
HAU                                  eR
      comp=Z,677nm,22.3s
HAU   Haudompre          89.20 318 eP       P       17 55 34.9   0.0
HAU                                   pmax    pmax
      comp=Z,21nm,1.1s,mb5.4
HAU                                   MLR     MLR
      comp=Z,680nm,22.3s,MS5.0
LMR   La Mourre          89.23 313 eP       P       17 55 35.6 +0.4
      comp=Z,76nm,1.5s,mb5.5
LMR   La Mourre          89.23 313 eP       P       17 55 35.6 +0.4
LMR                                   pmax    pmax
      comp=Z,38nm,1.5s,mb5.5
WLF   Walferdange        89.28 319  P       P       17 55 36.6 +1.3
WLF                                  e        pP      17 55 45.3 +1.6
WLF                                   pmax    pmax
      comp=Z,36nm,1.2s,mb5.6
WLF   Walferdange        89.28 319 eP       P       17 55 36.5 +1.3
      comp=Z,27nm,1.1s,mb5.5
HGN   Heimansgroeve      89.39 321 eP       P       17 55 35.5  -0.2
      comp=Z,18nm,1.6s,mb5.1
HGN   Heimansgroeve      89.39 321 eS       S       18 06 21.0  -0.8
CABF  La Chapelle        89.43 316 eP       P       17 55 36.6 +0.6
      comp=Z,59nm,1.3s,mb5.5
CABF  La Chapelle        89.43 316 eP       P       17 55 36.6 +0.6
CABF                                  pmax    pmax
      comp=Z,30nm,1.3s,mb5.5
THEF  They Montfort      89.44 318 eP       P       17 55 33.9  -2.1
ORIF  Oris-en-Rattie     89.63 315 eP       P       17 55 37.5 +0.5
      comp=Z,37nm,1.2s,mb5.3
ORIF                                 eR
      comp=Z,702nm,22.0s
SMRF  Simiane la Rot     89.89 314 eP       P       17 55 39.1 +0.8
      comp=Z,38nm,1.2s,mb5.3
MEZF  Maizieres J'vi     90.05 318 eP       P       17 55 39.3 +0.4
NVL   N'lazarevskaya     90.12 199⇓iP       P       17 55 49.1  +10
NVL                                  i *SP    sP      17 56 00.2  +10
GIVF  Givet              90.12 320 eP       P       17 55 39.6 +0.4
      comp=Z,48nm,1.0s,mb5.5
GIVF  Givet              90.12 320 eP       P       17 55 39.6 +0.4
GIVF                                  pmax    pmax
      comp=Z,24nm,1.0s,mb5.5
MAIT  Maitri             90.15 199 eP       P       17 55 41.3 +2.4
TNA   Tin City           90.44  24  PFAKE           17 55 50.0  +10
TNA                                   LR      LR
      comp=Z,1µm,19.0s,MS5.3
VIVF  Saint-Julien-l     90.49 315 eP       P       17 55 41.4 +0.4
      comp=Z,41nm,1.3s,mb5.3
VIVF  Saint-Julien-l     90.49 315 eP       P       17 55 41.4 +0.4
VIVF                                  pmax    pmax
      comp=Z,21nm,1.3s,mb5.3
BAIF  Baives             90.52 320 eP       P       17 55 41.8 +0.8
      comp=Z,81nm,1.0s,mb5.7
BAIF  Baives             90.52 320 eP       P       17 55 41.8 +0.8
BAIF                                  pmax    pmax
      comp=Z,40nm,1.0s,mb5.7
LOR   Lormes             90.92 317 eP       P       17 55 43.3 +0.4
      comp=Z,106nm,1.3s,mb5.7
LOR                                  eR
      comp=Z,606nm,21.5s
LOR   Lormes             90.92 317 eP       P       17 55 43.3 +0.4
LOR                                   pmax    pmax
      comp=Z,53nm,1.3s,mb5.7
LOR                                   MLR     MLR
      comp=Z,610nm,21.5s,MS5.0
SMF   Signal de Mont     90.97 317 eP       P       17 55 43.4 +0.2
      comp=Z,91nm,1.2s,mb5.7
SMF   Signal de Mont     90.97 317 eP       P       17 55 43.4 +0.2
SMF                                   pmax    pmax
      comp=Z,46nm,1.2s,mb5.7
LASF  Ste Croix          91.12 314 eP       P       17 55 44.7 +0.8
      comp=Z,37nm,1.2s,mb5.3
PLDF  La Plantade        91.17 316 eP       P       17 55 44.8 +0.7
SSF   Saint Saulge       91.17 317 eP       P       17 55 44.7 +0.6
SSF                                   pmax    pmax
      comp=Z,43nm,1.3s,mb5.6
SSF   Saint Saulge       91.17 317 eP       P       17 55 44.7 +0.6
      comp=Z,43nm,1.3s,mb5.6
AVF   Avril sur Loir     91.30 317 eP       P       17 55 44.9 +0.2
      comp=Z,57nm,1.2s,mb5.5
AVF   Avril sur Loir     91.30 317 eP       P       17 55 44.9 +0.2
AVF                                   pmax    pmax
      comp=Z,28nm,1.2s,mb5.5
LBL   Lubilhac           91.48 315 eP       P       17 55 46.2 +0.7
AGO   Saint Agoulin      91.50 316 eP       P       17 55 46.4 +0.8
PYM   Petit Puy Mans     91.61 316 eP       P       17 55 46.7 +0.6
BGF   Bois d'Agland      91.66 316 eP       P       17 55 47.2 +0.9
      comp=Z,118nm,1.2s,mb5.8
BGF   Bois d'Agland      91.66 316 eP       P       17 55 47.2 +0.9
BGF                                   pmax    pmax
      comp=Z,59nm,1.2s,mb5.8
TCF   Toulx Ste Croi     92.12 316 eP       P       17 55 49.1 +0.6
      comp=Z,58nm,1.4s,mb5.4
TCF   Toulx Ste Croi     92.12 316 eP       P       17 55 49.1 +0.6
TCF                                   pmax    pmax
      comp=Z,29nm,1.4s,mb5.4
UNV   Unalaska Valle     92.33  36  PFAKE           17 56 00.0  +11
UNV                                   LR      LR
      comp=Z,2µm,21.0s,MS5.5
CAF   Calviac            92.34 315 eP       P       17 55 50.5 +1.0
      comp=Z,32nm,1.1s,mb5.3
CAF   Calviac            92.34 315 eP       P       17 55 50.5 +1.0
CAF                                   pmax    pmax
      comp=Z,16nm,1.1s,mb5.3
MTLF  Montolieu          92.36 313 eP       P       17 55 50.3 +0.7
      comp=Z,60nm,1.3s,mb5.5
MTLF  Montolieu          92.36 313 eP       P       17 55 50.3 +0.7
MTLF                                  pmax    pmax
      comp=Z,30nm,1.3s,mb5.5
RJF   Les Rejaudoux      92.69 315 eP       P       17 55 52.1 +1.0
      comp=Z,49nm,1.2s,mb5.5
RJF                                  eR
      comp=Z,428nm,21.8s
RJF   Les Rejaudoux      92.69 315 eP       P       17 55 52.1 +1.0
RJF                                   pmax    pmax
      comp=Z,25nm,1.2s,mb5.5
RJF                                   MLR     MLR
      comp=Z,430nm,21.8s,MS4.9
LFF   La Frestale        93.28 315 eP       P       17 55 54.9 +1.1
      comp=Z,80nm,1.3s,mb5.7
LFF   La Frestale        93.28 315 eP       P       17 55 54.9 +1.1
LFF                                   pmax    pmax
      comp=Z,40nm,1.3s,mb5.7
JMIC  Jan Mayen          93.38 342 eP       P       17 55 55.7 +2.0
JMIC                                  LR      LR
      comp=Z,643µm,18.6s
JMIC  Jan Mayen          93.38 342 e        P       17 55 55.7 +2.0
JMIC                                  AMS     AMS     18 44 01.1
      comp=Z,643nm,18.6s,MS5.1
LDF   La Druitiere       93.47 319 eP       P       17 55 55.0 +0.4
      comp=Z,43nm,1.2s,mb5.5
LDF   La Druitiere       93.47 319 eP       P       17 55 55.0 +0.4
LDF                                   pmax    pmax
      comp=Z,22nm,1.2s,mb5.5
FLN   La Foliniere       93.69 319 eP       P       17 55 55.0  -0.6
      comp=Z,63nm,1.3s,mb5.6
FLN                                  eR
      comp=Z,610nm,21.8s
FLN   La Foliniere       93.69 319 eP       P       17 55 55.0  -0.6
FLN                                   pmax    pmax
      comp=Z,31nm,1.3s,mb5.6
FLN                                   MLR     MLR
      comp=Z,610nm,21.8s,MS5.0
MFF   Saint Martin d     93.71 317 eP       P       17 55 56.2 +0.4
      comp=Z,58nm,1.2s,mb5.6
MFF   Saint Martin d     93.71 317 eP       P       17 55 56.2 +0.4
MFF                                   pmax    pmax
      comp=Z,29nm,1.2s,mb5.6
GRR   Gorron             93.98 319 eP       P       17 55 57.8 +0.8
      comp=Z,48nm,1.3s,mb5.5
GRR   Gorron             93.98 319 eP       P       17 55 57.8 +0.8
GRR                                   pmax    pmax
      comp=Z,24nm,1.3s,mb5.5
DAG   Danmarks Havn      94.01 348⇓iP       P       17 55 56.1  -0.4
DAG                                   pmax    pmax
      comp=Z,9.0nm,0.8s,mb5.2
DAG                                   MLR     MLR
      comp=Z,2µm,17.0s,MS5.6
DAG                                   MLR     MLR
      comp=N,960nm,18.0s
DAG   Danmarks Havn      94.01 348⇓iP       P       17 55 56.1  -0.4
      comp=N,9.0nm,0.8s,mb5.2
      comp=Z,2µm,17.0s
ESK   Eskdalemuir        94.42 326  PFAKE           17 56 10.0  +11
ESK                                   LR      LR
      comp=Z,147nm,21.0s,MS4.4
ETSF  Etsaut             94.43 313 eP       P       17 56 00.2 +1.0
      comp=Z,36nm,1.4s,mb5.3
ETSF  Etsaut             94.43 313 eP       P       17 56 00.2 +1.0
ETSF                                  pmax    pmax
      comp=Z,18nm,1.4s,mb5.3
SNAA  Sanae              94.83 198  P       P       17 56 01.1 +0.8
SNAA                                  pmax    pmax
      comp=Z,1.0nm,0.9s
SNAA  Sanae              94.83 198  P       P       17 56 01.1 +0.8
      comp=Z,0.5nm,0.9s,baz=77,slow=2.1,SNR=4.0
IMA   Indian Mountai     96.07  23 eP       P       17 56 07.5 +1.4
IMA                                   pmax    pmax
      comp=Z,5.0nm,0.9s,mb4.9
IMA   Indian Mountai     96.07  23 eP       P       17 56 07.5 +1.4
      comp=Z,4.7nm,0.9s,mb4.9
COLA  College            98.77  23 i P      P       17 56 15.9  -2.4
COLA  College            98.77  23  PFAKE           17 56 30.0  +12
COLA                                  LR      LR
      comp=Z,872nm,20.0s,MS5.2
MCK   McKinley           98.78  24  PFAKE           17 56 30.0  +12
MCK                                   LR      LR
      comp=Z,425nm,20.0s,MS4.9
KDAK  Kodiak Island      99.18  31  PFAKE           17 56 30.0  +10
KDAK                                  LR      LR
      comp=Z,315nm,21.0s,MS4.8
ILAR  Eielson Array      99.19  23  PP      PP      18 00 14.8  -10
      comp=Z,2.5nm,1.1s,baz=297,slow=9.6,SNR=7.6
ILAR                                  PKKP    PKKP    18 12 51.9  +10
      comp=Z,0.8nm,0.9s,baz=117,slow=3.2,SNR=4.9
ILAR                                  LR      LR      18 47 14.8
      comp=Z,715nm,18.0s,MS5.2,baz=170,slow=39
FIB   Fire Island        99.20  27  PFAKE           17 56 30.0  +10
FIB                                   LR      LR
      comp=Z,1µm,21.0s,MS5.3
DIV   Divide            101.18  26  PFAKE           17 56 40.0  +11
DIV                                   LR      LR
      comp=Z,3µm,21.0s,MS5.7
DBIC  Dimbokro          101.69 277  PFAKE           17 56 40.0 +7.2
DBIC                                  LR      LR
      comp=Z,706nm,19.0s,MS5.2
SIT   Sitka             107.87  27  PFAKE           18 01 20.0
SIT                                   LR      LR
      comp=Z,1µm,20.0s,MS5.4
YKA   Yellowknife Ar    111.55  15  PP      PP      18 01 40.7  -17
      comp=Z,0.8nm,0.8s,baz=320,slow=6.6,SNR=5.7
YKA                                   PKKPab          18 12 15.3
      comp=Z,0.5nm,0.8s,baz=135,slow=4.2,SNR=4.4
OCWA  Octopus Mounta    118.94  31  PFAKE           18 01 40.0 +8.8
OCWA                                  LR      LR
      comp=Z,745nm,22.0s,MS5.3
FCC   Fort Churchill    118.98   7 ePKIKP   PKPdf   18 01 27.2  -3.9
COR   Corvallis         121.46  33  PFAKE           18 01 40.0 +3.8
COR                                   LR      LR
      comp=Z,148nm,22.0s,MS4.6
NEW   Newport           121.94  26  PFAKE           18 01 50.0  +13
NEW                                   LR      LR
      comp=Z,745nm,19.0s,MS5.4
SCHQ  Schefferville     122.04 349  PKP     PKPdf   18 01 34.2  -2.8
      comp=Z,1.6nm,0.6s,baz=232,slow=3.3,SNR=4.6
SCHQ                                  PP      PP      18 03 03.3  -7.9
      comp=Z,9.0nm,1.1s,baz=23,slow=10,SNR=4.6
SCHQ  Schefferville     122.04 349  PKP     PKPdf   18 01 34.2  -2.8
SCHQ                                  PP      PP      18 03 03.3  -7.9
MSO   Missoula          124.42  25 ePKPdf   PKPdf   18 01 38.3  -3.6
CHMT  Chamberlain Mo    124.65  25 ePKPdf   PKPdf   18 01 38.7  -3.7
MOD   Modoc             124.88  34 ePKPdf   PKPdf   18 01 40.1  -2.9
WVOR  Wild Horse Val    125.42  32 ePKIKP   PKPdf   18 01 41.0  -3.0
BOZ   Bozeman (W)       126.34  25 ePKIKP   PKPdf   18 01 42.3  -3.3
HLID  Hailey            126.72  28 ePKPdf   PKPdf   18 01 43.7  -2.7
ULM   Lac du Bonnet     126.97  10  PKP     PKPdf   18 01 42.0  -4.6
      comp=Z,3.8nm,0.7s,baz=358,slow=3.8,SNR=3.7
RRI2  Red Ridge         128.31  26 ePKPdf   PKPdf   18 01 47.3  -2.2
NVAR  Mina Array Bea    128.35  35  PKP     PKPdf   18 01 46.9  -2.9
      comp=Z,4.0nm,1.0s,baz=286,slow=0.4,SNR=14
ELK   Elko              128.41  31  PKP     PKPdf   18 01 46.9  -2.9
      comp=Z,3.1nm,1.1s,baz=81,slow=0.9,SNR=8.1
ELK   Elko              128.41  31 ePKPdf   PKPdf   18 01 46.7  -3.1
LOHW  Long Hollow       128.41  26 ePKPdf   PKPdf   18 01 47.1  -2.6
MNV   Mina              128.43  35 ePKIKP   PKPdf   18 01 47.7  -2.2
HVU   Hansel Valley     128.86  29 ePKIKP   PKPdf   18 01 47.8  -2.8
BW06  Boulder Array     129.54  25 ePKPdf   PKPdf   18 01 48.1  -3.7
PDAR  Pinedale Array    129.54  25  PKP     PKPdf   18 01 49.0  -2.9
      comp=Z,1.9nm,0.8s,SNR=14
PDAR                                  PP      PP      18 04 06.3 +4.8
      comp=Z,1.7nm,1.0s,slow=5.9,SNR=5.1
HWUT  Hardware Ranch    129.57  28 ePKPdf   PKPdf   18 01 49.1  -2.9
EYMN  Ely               129.90   8 ePKPdf   PKPdf   18 01 50.2  -2.2
DAC   Darwin (Calif)    130.21  37 ePKIKP   PKPdf   18 01 50.5  -2.8
DAC                                  e                18 01 59.8
RSSD  Black Hills       130.53  20 ePKIKP   PKPdf   18 01 50.2  -3.5
MSU   Marysvale         131.65  31 ePKIKP   PKPdf   18 01 54.1  -1.9
PV10  Paradox Valley    133.31  28 ePKPdf   PKPdf   18 01 56.5  -2.7
WUAZ  Wupatki           134.32  33  PKPdf   PKPdf   18 01 58.0  -3.1
CBKS  Cedar Bluff       136.71  19 ePKIKP   PKPdf   18 02 02.4  -2.9
TUC   Tucson            137.01  36 ePKIKP   PKPdf   18 02 04.2  -1.8
ANMO  Albuquerque       137.29  29 ePKIKP   PKPdf   18 02 04.3  -2.2
ANMO  Albuquerque       137.29  29  PKP     PKPdf   18 02 05.5  -1.0
      comp=Z,2.9nm,0.9s,baz=272,slow=2.7,SNR=4.3
TRQA  Tornquist         139.13 205 ePKPdf   PKPdf   18 02 07.0  -2.8
PLCA  Paso Flores       139.66 195  PKIKP   PKPdf   18 02 09.3  -1.4
PLCA                                  pmax    pmax
      comp=Z,2.0nm,0.9s
PLCA  Paso Flores       139.66 195  PKP     PKPdf   18 02 09.3  -1.4
      comp=Z,2.1nm,0.9s,baz=211,slow=7.9,SNR=2.8
PLCA  Paso Flores       139.66 195  PKP     PKPdf   18 02 09.3  -1.4
MNTX  Cornudas Mount    140.43  31 ePKPpre          18 02 04.0
MNTX                                 ePKPdf   PKPdf   18 02 09.6  -2.7
BDFB  Brasilia          142.99 246  PKIKP   PKPdf   18 02 15.1  -2.1
BDFB                                  pmax    pmax
      comp=Z,2.0nm,0.5s
BDFB  Brasilia          142.99 246  PKP     PKPdf   18 02 15.1  -2.1
      comp=Z,1.8nm,0.5s,baz=241,slow=10,SNR=3.3
LTX   Lajitas           143.21  31 ePKIKP   PKPdf   18 02 11.5  -5.8
TXAR  Lajitas Array     143.21  31  PKIKP   PKPdf   18 02 12.3  -5.0
TXAR                                  pmax    pmax
      comp=Z,6.0nm,1.1s
TXAR  Lajitas Array     143.21  31  PKP     PKPdf   18 02 12.2  -5.0
      comp=Z,6.2nm,1.1s,baz=270,slow=2.5,SNR=17
NATX  Nacogdoches       144.81  18 ePKPdf   PKPdf   18 02 16.0  -4.0
LRAL  Lakeview Retre    145.15   6 ePKPbc   PKPbc   18 02 16.1   0.0
JATB  Jatai             145.29 241 eP       PKPbc   18 02 14.2  -2.7
JATB                                 i                18 02 16.4
JATB                                 i                18 02 19.3
JATB                                 i                18 02 26.4
JATB                                 i                18 02 36.7
JATB                                 i                18 03 21.1
JATB                                 i                18 03 44.0
JATB                                 i                18 04 19.9
JATB                                 e                18 04 28.8
CPUP  Villa Florida     145.39 223  PKPbc   PKPbc   18 02 18.0 +1.1
      comp=Z,15nm,0.9s,baz=134,slow=3.7,SNR=29
CPUP  Villa Florida     145.39 223 ePKPdf   PKPdf   18 02 17.7  -3.4
CFAA  Coronel Fontan    147.28 204  PKPbc   PKPdf   18 02 24.6 +0.4
      comp=Z,2.0nm,0.8s,baz=210,slow=2.1,SNR=16
TLL   Tololo Astrono    149.54 201 i P      PKPdf   18 02 29.6 +1.7
SIV   San Ignacio       154.30 235  PKP     PKPdf   18 02 32.3  -2.8
      comp=Z,0.4nm,0.3s,baz=142,slow=22,SNR=4.7
SIV                                   PKPbc   PKPdf   18 02 40.2 +5.0
      comp=Z,1.0nm,0.5s,baz=103,slow=6.7,SNR=5.7
SAML  Samuel            159.16 249 ePKPdf   PKPdf   18 02 38.9  -2.7
LPAZ  La Paz            159.55 224  PKP     PKPdf   18 02 39.8  -2.0
      comp=Z,1.7nm,1.0s,baz=337,slow=2.6,SNR=4.8
LPAZ  La Paz            159.55 224 ePKPdf   PKPdf   18 02 39.9  -1.9
JTS   JuntasAbangare    167.82  10  PKIKP   PKPdf   18 02 46.9  -2.6
JTS                                   pmax    pmax
      comp=Z,3.0nm,0.5s
JTS   JuntasAbangare    167.82  10  PKP     PKPdf   18 02 46.9  -2.6
      comp=Z,3.4nm,0.5s,baz=294,slow=20,SNR=5.3
OTAV  Otavalo           175.14 294 ePKPdf   PKPdf   18 02 50.4  -2.8
```

IDC 10 18:24:02.0±5.0**, 7.26N**×**91.86E, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.5**/20**, mbtmp3.5**/3**, ML3.6**/1**, Error ellipse: s-maj=133.6km s-min=36.8km az=76.0, Nicobar Islands region**

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Code  Station Name       Δ°   AZ°    Phase ID             Time     Res
                                    Op      ISC       h  m  s     ISC
CMAR  Chiang Mai Arr    13.09  31   Pn      P       18 27 08.8  -3.3
      0.1nm,0.3s,baz=230,slow=14,SNR=5.4
SONM  Songino Array     42.28  15   P       P       18 31 57.7  -1.2
      0.4nm,0.6s,baz=198,slow=7.8,SNR=4.5
WRA   Warramunga Arr    49.78 124   P       P       18 32 56.5  -2.2
      0.9nm,0.5s,baz=305,slow=8.6,SNR=4.8
```

MOS ***10*** *18:25:44.7±1.0, 12.36S×166.96E, h214^{km}, mb4.5/14, Error ellipse: s-maj=14.0km s-min=12.2km az=83.9*

IDC ***10*** *18:25:51.0±2.2, 12.55S×166.92E, h262^{km}±21^{km}, mb4.0/19, mb1 4.1/20, mb1mx4.1/22, mbtmp4.5/20, Error ellipse: s-maj=13.0km s-min=10.8km az=98.0*

BJI ***10*** *18:25:53.6, 12.50S×166.90E, h292^{km}, mb4.5*

NEIC ***10*** *18:25:53.7±2.7, 12.53S×166.91E, h292^{km}±25^{km}, mb4.4/21, Error ellipse: s-maj=11.8km s-min=9.2km az=80.0*

ISC 10 18:25:48.1±1.9**, 12.48S**±0.07×**166.91E**±0.08**, h248**^{km}±18^{km}**, n130, σ0^{s}95**/71**, mb4.3**/41**, 4C, Santa Cruz Islands**

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Code  Station Name       Δ°   AZ°    Phase ID             Time     Res
                                    Op      ISC       h  m  s     ISC
HNR   Honiara            7.48 293   P       P       18 27 48.3  +13
      8.6nm,0.3s,baz=93,slow=8.0,SNR=6.1
HNR   Honiara            7.48 293  ePn      P       18 27 48.2  +13
DZM   Mont Dzumac        9.54 183   P       P       18 28 02.0 +0.1
      1.0nm,0.3s,baz=74,slow=21,SNR=8.2
DZM                                 S       S       18 29 51.5 +4.7
      0.9nm,0.3s,baz=157,slow=21,SNR=3.7
CTA   Charters Tower    21.20 246   P       P       18 30 16.7 +1.5
      8.4nm,0.5s,mb4.5,baz=85,slow=13,SNR=21
CTAO  Charters Tower    21.20 246  eP       P       18 30 16.4 +1.2
CTAO                                pmax    pmax
      comp=Z,9.0nm,0.6s,mb4.5
CTAO  Charters Tower    21.20 246  eP       P       18 30 16.4 +1.2
      comp=Z,8.7nm,0.6s,mb4.5
URZ   Urewera           27.23 162   P       P       18 31 09.7  -1.7
      comp=Z,2.5nm,0.3s,mb4.3,baz=322,slow=1.3,SNR=6.4
STKA  Stephens Creek    30.23 226   P       P       18 31 38.4 +0.3
      comp=Z,2.3nm,0.5s,mb4.0,baz=56,slow=7.3,SNR=7.6
STKA                                PcP     PcP     18 34 30.6  -1.7
      comp=Z,3.6nm,1.0s,baz=22,slow=5.4,SNR=3.8
RPZ   Rata Peaks        31.32 174   P       P       18 31 46.4  -1.0
      comp=Z,9.1nm,0.5s,mb4.7,baz=60,slow=5.3,SNR=17
```

WRAB	Tennant Creek	32.09	252	*e*P	P	18 31 52.8	-1.5
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.2						
WRAB	Tennant Creek	32.09	252	*e*P	P	18 31 52.8	-1.4
	comp=Z,3.8nm,0.5s,mb4.2						
WRA	Warramunga Arr	32.10	252	P	P	18 31 53.3	-1.1
	comp=Z,2.4nm,0.4s,mb4.1,baz=84,slow=9.0,SNR=27						
WRA				S	S	18 36 45.6	-1.7
	comp=Z,0.9nm,0.7s,baz=82,slow=15,SNR=4.9						
MJAR	Matsushiro Arr	55.77	332	P	P	18 35 00.1	-1.3
	comp=Z,5.3nm,0.7s,mb4.2,baz=173,slow=8.3,SNR=13						
MAJO	Matsushiro	55.77	332	*e*P	P	18 34 58.7	-2.7
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.4						
MAJO	Matsushiro	55.77	332	*e*P	P	18 34 58.7	-2.7
	comp=Z,5.0nm,0.4s,mb4.4						
MAT	Matsushiro	55.77	332	*e*P	P	18 35 00.0	-1.4
MAT	Matsushiro	55.77	332	P	P	18 35 00.1	-1.3
JNU	Nakatsue	56.91	324	P	P	18 35 09.1	-0.4
	comp=Z,7.4nm,0.7s,mb4.4,baz=58,slow=15,SNR=3.9						
ASAJ	Asahikawa	60.52	340	P	P	18 35 34.7	+0.5
	comp=Z,10nm,0.5s,mb4.7,baz=216,slow=5.4,SNR=24						
YSS	Yuzh-Sakhalins	63.00	342	*e*P	P	18 35 51.1	+0.5
YSS				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.4						
YSS	Yuzh-Sakhalins	63.00	342	*e*P	P	18 35 51.1	+0.5
	comp=Z,7.5nm,0.7s,mb4.4						
VNDA	Vanda	65.08	181	*e*P	P	18 36 03.4	-0.2
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VNDA	Vanda	65.08	181	P	P	18 36 03.6	0.0
	comp=Z,2.0nm,0.8s,mb3.8,baz=342,slow=6.2,SNR=10						
VNDA	Vanda	65.08	181	*e*P	P	18 36 03.4	-0.2
	comp=Z,1.6nm,0.8s,mb3.7						
FX1	Attu Island--F	65.32	4	*e*P	P	18 36 05.4	0.0
SBA	Scott Base	65.37	180	*e*P	P	18 36 06.2	+0.8
SBA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
SBA	Scott Base	65.37	180	*e*P	P	18 36 06.2	+0.8
	comp=Z,4.5nm,0.8s,mb4.2						
CN2	Changchun	67.55	329	*e*P	P	18 36 18.6	-1.1
CN2				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.3						
KMI	Kunming	72.84	301	P	P	18 36 53.4	+1.4
CMAR	Chiang Mai Arr	73.73	294	P	P	18 36 58.5	+1.2
	comp=Z,3.6nm,0.8s,mb4.0,baz=121,slow=4.9,SNR=18						
HIA	Hailar	74.18	330	*e*P	P	18 36 59.3	0.0
HIA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
HIA	Hailar	74.18	330	*e*P	P	18 36 59.3	+0.1
	comp=Z,2.2nm,0.3s,mb4.3						
LZH	Lanzhou	76.56	312	*e*P	P	18 37 16.0	+3.0
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
YAK	Yakutsk	79.79	343	*e*P	P	18 37 29.6	-0.3
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
YAK	Yakutsk	79.79	343	*e*P	P	18 37 29.6	-0.3
	comp=Z,9.7nm,0.8s,mb4.5						
ULN	Ulaanbaatar	80.13	324	*e*P	P	18 37 32.8	+0.9
ULN				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.1						
ULN	Ulaanbaatar	80.13	324	*e*P	P	18 37 32.8	+0.9
	comp=Z,6.2nm,1.3s,mb4.1						
BILL	Bilibino	80.31	360	⇑*i*P	P	18 37 32.4	-0.1
BILL				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.6						
BILL	Bilibino	80.31	360	*e*P	P	18 37 32.3	-0.2
	comp=Z,13nm,1.0s,mb4.5						
SONM	Songino Array	80.49	324	P	P	18 37 34.4	+0.6
	comp=Z,0.6nm,0.3s,mb3.7,baz=137,slow=5.9,SNR=10.0						
SML	Sawmill	81.93	20	*e*P	P	18 37 40.8	-0.2
MCK	McKinley	83.14	18	*e*P	P	18 37 46.9	-0.3
ZAK	Zakamensk	83.53	325	*e*P	P	18 37 47.8	-1.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
MAW	Mawson	83.82	202	P	P	18 37 50.9	+0.4
	comp=Z,3.8nm,0.9s,mb4.1,baz=104,slow=6.9,SNR=4.3						
LSA	Lhasa	84.08	302	*e*P	P	18 37 54.6	+1.9
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
LSA	Lhasa	84.08	302	*e*P	P	18 37 54.6	+2.0
	comp=Z,2.6nm,0.6s,mb4.1						
YBH	Yreka Blue Hor	84.09	45	P	P	18 37 53.0	+0.5
	comp=Z,2.7nm,0.8s,mb4.0,baz=223,slow=6.4,SNR=7.3						
COLA	College	84.30	18	*e*P	P	18 37 52.2	-0.7
COLA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
COLA	College	84.30	18	*e*P	P	18 37 52.2	-0.7
	comp=Z,4.8nm,0.6s,mb4.4						
ILAR	Eielson Array	84.51	18	P	P	18 37 53.7	-0.3
	comp=Z,11nm,0.6s,mb4.7,baz=247,slow=5.0,SNR=86						
NVAR	Mina Array Bea	86.08	49	P	P	18 38 03.0	+0.7
	comp=Z,0.8nm,0.7s,mb3.5,baz=222,slow=5.1,SNR=5.2						
NVAR				pP	pP	18 39 00.6	-1.8
	comp=Z,1.1nm,0.9s,baz=243,slow=8.1,SNR=4.2						
GUN	Gumba	88.01	299	*e*P	P	18 38 12.1	+0.3
	comp=Z,11nm,0.6s,mb4.8						
PKI	Pulchoki	88.32	299	*e*P	P	18 38 13.8	+0.5
	comp=Z,33nm,1.0s,mb5.1						
KKN	Kakani	88.49	299	*e*P	P	18 38 14.3	+0.3
	comp=Z,16nm,0.7s,mb5.0						
DMN	Daman	88.59	299	*e*P	P	18 38 15.2	+0.7
	comp=Z,22nm,0.6s,mb5.2						
ELK	Elko	89.05	48	*e*P	P	18 38 17.1	+0.7
ELK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ELK	Elko	89.05	48	*e*P	P	18 38 17.1	+0.7
	comp=Z,0.8nm,0.5s,mb3.8						
GKN	Gorkha	89.09	299	*e*P	P	18 38 17.0	+0.1
	comp=Z,16nm,0.7s,mb4.9						
NEW	Newport	90.09	40	*e*P	P	18 38 21.2	+0.1
NEW				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NEW	Newport	90.09	40	*e*P	P	18 38 21.2	+0.2
	comp=Z,3.3nm,0.6s,mb4.3						
TUC	Tucson	90.20	57	*e*P	P	18 38 22.6	+0.7
	comp=Z,1.7nm,0.6s,mb4.0						
HLID	Hailey	90.46	45	*e*P	P	18 38 23.6	+0.7
	comp=Z,2.0nm,1.0s,mb3.9						
SYO	Syowa Base	90.75	197	⇑P	P	18 38 22.5	-1.1
MKAR	Makanchi Array	95.34	317	P	P	18 38 46.2	+1.0
	comp=Z,3.6nm,0.7s,mb4.6,baz=95,slow=6.4,SNR=31						
ZAL	Zalesovo	95.39	324	P	P	18 38 44.8	-0.4
	comp=Z,0.7nm,0.7s,mb3.9,baz=10,slow=13,SNR=3.8						
TXAR	Lajitas Array	95.52	61	P	P	18 38 45.6	-0.8
	comp=Z,0.6nm,0.7s,mb4.0,baz=218,slow=6.1,SNR=4.4						
YKA	Yellowknife Ar	95.72	27	P	P	18 38 45.4	-1.1
	comp=Z,0.8nm,0.6s,mb4.2,baz=250,slow=4.8,SNR=6.5						
VNA3	Neumayer Olymp	96.44	181	⇑*i*	P	18 38 49.9	+0.3
VNA2	Neumayer--Watz	96.70	182	⇑*i*	P	18 38 51.4	+0.6
ARCES	ARCESS Array B	118.00	346	PKP	PKPdf	18 44 06.0	+1.2
	comp=Z,3.2nm,0.4s,baz=80,slow=2.1,SNR=32						
LPAZ	La Paz	118.53	116	PKiKP		18 44 07.8	
	comp=Z,0.9nm,0.6s,baz=205,slow=5.0,SNR=5.2						
LPAZ	La Paz	118.53	116	PKPdf	PKPdf	18 44 07.8	+0.7
CPUP	Villa Florida	122.22	132	PKP	PKPdf	18 44 14.7	+0.7
	comp=Z,1.1nm,0.5s,baz=316,slow=2.3,SNR=4.8						
KAF	Kangasniemi	122.99	339	*e*pkp	PKPdf	18 44 15.2	+0.6
FINES	FINESS Array B	123.52	339	PKP	PKPdf	18 44 16.8	+1.1
	comp=Z,2.1nm,0.8s,baz=70,slow=2.6,SNR=12						
BOSA	Boshof	124.83	222	PKP	PKPdf	18 44 20.7	+1.6
	comp=Z,2.1nm,0.8s,baz=90,slow=8.1,SNR=2.8						
SAML	Samuel	125.86	111	*e*PKPdf	PKPdf	18 44 21.7	+0.3
NB2	NORSAR Subarra	128.38	345	PKPdf	PKPdf	18 44 26.5	+1.4
	comp=Z,4.8nm,1.1s,baz=31,slow=1.9						
NOA	NORSAR Array B	128.38	345	PKP	PKPdf	18 44 27.1	+2.0
	comp=Z,1.1nm,0.7s,baz=344,slow=2.0,SNR=3.7						
BDFB	Brasilia	135.56	128	PKP	PKPdf	18 44 41.3	+1.7
	comp=Z,3.3nm,0.7s,baz=143,slow=5.1,SNR=4.5						
GERES	GERESS Array B	137.49	334	PKP	PKPdf	18 44 44.2	+1.8
	comp=Z,0.3nm,0.5s,baz=63,slow=3.0,SNR=4.0						
CABF	La Chapelle	142.33	338	*e*PKP1	PKPdf	18 44 50.5	-0.5
	comp=Z,4.8nm,0.7s						
LDF	La Druitiere	142.42	346	*e*PKP1	PKPdf	18 44 50.1	-1.0
	comp=Z,4.8nm,0.6s						
LOR	Lormes	142.52	341	*e*PKP1	PKPdf	18 44 50.0	-1.3
GRR	Gorron	142.78	346	*e*PKP1	PKPdf	18 44 50.4	-1.3
SSF	Saint Saulge	142.81	341	*e*PKP1	PKPdf	18 44 50.6	-1.2
	comp=Z,5.4nm,0.6s						
LPG	La Plagne	143.02	337	*e*PKP1	PKPbc	18 44 51.8	+1.3
	comp=Z,6.5nm,0.6s						
SGMF	Saint Gilles	143.27	348	*e*PKP1	PKPbc	18 44 51.6	+0.4
	comp=Z,6.3nm,0.4s						
ROSF	Rostrenen	143.33	349	*e*PKP1	PKPbc	18 44 51.0	-0.3
BNI	Bardonecchia	143.42	336	*e*PKPdf	PKPdf	18 44 52.9	-0.1
BGF	Bois d’Agland	143.47	341	*e*PKP1	PKPbc	18 44 52.6	+0.8
	comp=Z,8.6nm,0.5s						
MBDF	Montbardon	143.65	336	*e*PKP1	PKPbc	18 44 53.1	+0.7
	comp=Z,9.7nm,0.6s						
QUIF	Quistinic	143.72	349	*e*PKP1	PKPbc	18 44 52.7	+0.2
	comp=Z,9.5nm,0.6s						
ORIF	Oris-en-Rattie	143.84	337	*e*PKP1	PKPbc	18 44 54.3	+1.3
	comp=Z,42nm,0.7s						
TCF	Toulx Ste Croi	143.90	342	*e*PKP1	PKPbc	18 44 54.0	+0.9
	comp=Z,16nm,0.8s						
SBF	Sospel	144.09	334	*e*PKP1	PKPbc	18 44 54.4	+0.7
	comp=Z,58nm,0.7s						
MFF	Saint Martin d	144.28	345	*e*PKP1	PKPbc	18 44 55.1	+0.9
	comp=Z,50nm,0.7s						
VIVF	Saint-Julien-l	144.34	338	*e*PKP1	PKPbc	18 44 55.8	+1.4
	comp=Z,30nm,0.8s						
PGF	Pioggiola	144.44	331	*e*PKP1	PKPbc	18 44 55.8	+1.1
	comp=Z,71nm,1.0s						
FRF	La Foret Royal	144.66	335	*e*PKP1	PKPbc	18 44 55.7	+0.4
	comp=Z,57nm,0.9s						
SMRF	Simiane la Rot	144.75	336	*e*PKP1	PKPbc	18 44 57.2	+1.6
	comp=Z,30nm,0.9s						
LMR	La Mourre	144.91	335	*e*PKP1	PKPbc	18 44 57.1	+1.1
	comp=Z,30nm,0.7s						
RJF	Les Rejaudoux	145.00	342	*e*PKP1	PKPbc	18 44 57.8	+1.6
CAF	Calviac	145.17	341	*e*PKP1	PKPbc	18 44 58.4	+1.7
	comp=Z,10nm,0.8s						
LASF	Ste Croix	145.31	338	*e*PKP1	PKPbc	18 44 58.9	+1.9
	comp=Z,15nm,0.7s						
LFF	La Frestale	145.56	343	*e*PKP1	PKPbc	18 44 59.4	+1.8
	comp=Z,27nm,0.6s						
MTLF	Montolieu	146.53	340	*e*PKP1	PKPbc	18 45 02.4	+2.4
	comp=Z,26nm,0.7s						
EPF	Esparros	147.42	342	*e*PKP1	PKPdf	18 45 04.4	+4.5
	comp=Z,4.4nm,0.7s						
EBIE	Bielsa	147.79	342	PKP	PKPdf	18 45 06.2	+5.7
SJPF	Ste Jean	147.80	344	*e*PKP1	PKPdf	18 45 05.6	+5.1
	comp=Z,28nm,1.2s						
ETSF	Etsaut	147.81	343	*e*PKP1	PKPdf	18 45 06.1	+5.6
	comp=Z,9.9nm,0.7s						
EPOB	Poblet	148.68	339	PKP	PKPdf	18 45 08.0	+6.0
EPON	Pontenova	148.84	352	PKP	PKPdf	18 45 08.4	+6.3
ESAC	San Caprasio	148.86	342	PKP	PKPdf	18 45 08.9	+6.7
ERTA	Horta de San J	149.29	340	PKP	PKPdf	18 45 09.2	+6.3
EMAZ	Mazaricos	149.44	354	PKP	PKPdf	18 45 09.7	+6.7
STS	Santiago	149.46	353	PKP	PKPdf	18 45 10.0	+6.9
ERUA	La Rua	149.76	351	PKP	PKPdf	18 45 09.5	+6.0
ECAL	Calabor	150.13	350	PKP	PKPdf	18 45 10.7	+6.5
ELOB	Lobios	150.40	352	PKP	PKPdf	18 45 12.0	+7.4
GUD	Guadarrama	150.87	346	PKP	PKPdf	18 45 14.2	+8.9
ESDC	Sonseca Array	151.74	345	PKPbc	PKPdf	18 45 15.7	+9.1
	comp=Z,3.0nm,0.7s,baz=20,slow=1.5,SNR=13						
ESDC				PKPab	PKPab	18 45 25.7	+0.2
	comp=Z,2.3nm,0.5s,baz=12,slow=3.7,SNR=10						
ESDC	Sonseca Array	151.74	345	PKP	PKPdf	18 45 15.3	+8.7
ESLA	Sonseca Array	151.74	345	*e*PKPbc	PKPdf	18 45 15.4	+8.7
ESLA				*e*PKPab	PKPab	18 45 25.4	-0.2
MTE	Manteigas	151.77	351	*e*PKPbc	PKPdf	18 45 15.6	+8.9
ETOB	Tobarra	152.00	341	PKP	PKPdf	18 45 15.8	+8.7
EVIA	Vianos	152.30	342	PKP	PKPdf	18 45 17.2	+10
CART	Cartagena	152.76	339	*e*PKPab	PKPab	18 45 28.8	-1.1
EQES	Quesada	153.24	342	PKP	PKPdf	18 45 17.7	+8.9
EMIN	Mina Concepcio	154.18	348	PKP	PKPdf	18 45 20.9	+11

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*NNC **10** 18:25:53.4±4.7, 41.67N×73.00E, mpv4.0, Error ellipse: s-maj=54.5km s-min=15.8km az=167.0*

*KNET **10** 18:25:56.1±0.6, 41.73N×73.20E, h7^{km}±3^{km}, ml3.6, Error ellipse: s-maj=5.3km s-min=3.3km az=108.0*

ISC 10 18:25:52.8±1.1**, 41.69N**±0.08×**72.75E**±0.06**, h10^{km}, n14, σ1^{s}47**/26**, 16C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	0.83	58	P	Pb	18 26 07.3	-1.5
	310nm,0.1s,SNR=752						
AML				⇑S	Sb	18 26 16.6	-3.2
	2μm,0.3s						
EKS2	Erkin-Say	1.23	38	⇓P	Pb	18 26 15.7	-0.1
	46nm,0.2s,SNR=114						
EKS2				⇓S	Sb	18 26 30.8	-0.7
	210nm,0.2s						
UCH	Uchtor	1.42	67	P	Pn	18 26 17.3	-1.5
	572nm,0.2s,SNR=1746						
AAK	Ala-Archa	1.60	53	⇑P	Pn	18 26 21.2	-0.2
	81nm,0.2s,SNR=111						
AAK				⇓S	Sb	18 26 40.5	-1.7
	244nm,0.2s						
AAK	Ala-Archa	1.60	53	⇑P	Pn	18 26 21.1	-0.3
	80nm,0.4s						
AAK				⇓S	Sb	18 26 40.2	-2.0
	126nm,0.5s						
KBK	Karagaybulak	1.90	59	⇑P	Pn	18 26 26.4	+0.8
	383nm,0.2s,SNR=626						
KBK				⇑S	Sn	18 26 49.5	-0.2
	459nm,0.2s						
KZA	Kyzart	1.90	77	P	Pn	18 26 25.5	-0.3
	647nm,0.2s,SNR=2349						
KZA				⇑S	Sn	18 26 48.1	-1.8
	314nm,0.3s						
CHMS	Chumysh	1.97	48	⇑P	Pn	18 26 28.2	+1.5
	127nm,0.2s,SNR=151						
CHMS				⇓S	Sn	18 26 53.0	+1.2
	426nm,0.2s						
USP	Ospenovka	2.04	39	⇑P	Pn	18 26 29.8	+2.2
	234nm,0.2s,SNR=296						
USP				⇓S	Sn	18 26 55.5	+2.2
	2μm,0.3s						
KK31	Karatay Array	2.18	311	⇑Pn	Pn	18 26 35.5	+5.8
	37nm,0.3s,baz=118,slow=13,SNR=1036						
KK31				⇑Lg		18 27 09.7	
	159nm,0.4s,baz=127,slow=28,SNR=16						
TKM2	Tokmak 2	2.44	59	⇑P	Pn	18 26 34.8	+1.4
	274nm,0.2s,SNR=459						
TKM2				⇓S	Sn	18 27 05.9	+2.3
	265nm,0.2s						
ULHL	Ulahol	2.66	77	⇑P	Pn	18 26 36.7	+0.2
	60nm,0.2s,SNR=60						
ULHL				⇑S	Sn	18 27 11.2	+2.1
	158nm,0.3s						
MK31	Makanchi Array	8.53	50	⇓Pn	P	18 27 58.2	-1.2
	2.8nm,0.6s,baz=232,slow=14,SNR=51						
MK31				⇑Sn	Sn	18 29 42.7	+6.0
	4.3nm,0.6s,baz=230,slow=20						
MK31				⇓Lg		18 30 15.0	
	11nm,0.7s,baz=254,slow=29						
AB31	Akbulak array	11.74	314	⇑Pn	P	18 28 43.1	-0.3
	3.4nm,0.6s						
AB31				⇑Sn	S	18 30 54.1	-1.3
	1.9nm,0.5s						

IDC 10 18:26:29.5±6.6**, 21.69N×144.08E, mb4.0**/5**, mb1 4.1**/5**, mb1mx3.7**/22**, mbtmp4.0**/5**, Error ellipse: s-maj=161.7km s-min=53.0km az=145.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	42.41	274	P	P	18 34 26.5	-1.3
	0.6nm,0.6s,baz=92,slow=6.1,SNR=7.8						
MKAR	Makanchi Array	55.31	313	P	P	18 36 04.0	-3.3
	0.4nm,0.6s,baz=90,slow=7.2,SNR=5.3						
BVAR	Borovoye Array	63.22	320	P	P	18 37 00.1	-1.7
	1.7nm,0.3s,baz=99,slow=8.1,SNR=21						
ARCES	ARCESS Array B	79.19	342	P	P	18 38 37.1	-0.3
	2.0nm,0.9s,baz=59,slow=7.1,SNR=4.7						
FINES	FINESS Array B	83.55	335	P	P	18 38 58.4	-2.0
	0.6nm,0.4s,baz=70,slow=5.7,SNR=14						

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*IDC **10** 19:05:19.4±3.2, 17.77S×178.67W, h630^{km}±43^{km}, mb3.8/11, mb1 3.9/12, mb1mx3.7/20, mbtmp4.7/12, Error ellipse: s-maj=24.2km s-min=19.3km az=10.0*

*NEIC **10** 19:05:20.1±2.1, 17.88S×178.66W, h646^{km}±27^{km}, mb4.1/21, Error ellipse: s-maj=17.0km s-min=11.9km az=165.0*

ISC 10 19:05:21.3±2.2**, 18.0S**±0.1×**178.8W**±0.1**, h685^{km}**±30^{km}**, n42, σ0^{s}75**/40**, mb4.1**/30**, 1C-3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.45	251	P	P	19 08 22.6	-0.6
	0.9nm,0.3s,baz=90,slow=19,SNR=9.1						
URZ	Urewera	20.51	189	P	P	19 09 19.5	+1.2
	8.9nm,0.6s,baz=311,slow=1.9,SNR=6.6						
HNR	Honiara	22.31	290	P	P	19 09 33.5	-1.0
	13nm,0.4s,mb4.7,baz=122,slow=13,SNR=3.0						
CTA	Charters Tower	33.07	261	P	P	19 11 06.5	+0.2
	17nm,0.7s,mb4.7,baz=98,slow=10,SNR=15						
CTAO	Charters Tower	33.07	261	*e*P	P	19 11 06.1	-0.2
	17nm,0.7s,mb4.7						
PMG	Port Moresby	34.11	280	P	P	19 11 16.4	+1.4
	57nm,0.8s,mb5.1,baz=67,slow=7.4,SNR=15						
PMG	Port Moresby	34.11	280	*e*P	P	19 11 16.2	+1.2
	66nm,0.9s,mb5.2						
STKA	Stephens Creek	38.26	241	⇓*i*P	P	19 11 49.2	+0.5
STKA	Stephens Creek	38.26	241	P	P	19 11 49.4	+0.7
	14nm,0.6s,mb4.6,baz=84,slow=7.2,SNR=31						
WB2	Warramunga Arr	44.24	260	⇓*i*P	P	19 12 35.3	-0.5
WRAB	Tennant Creek	44.24	260	*e*P	P	19 12 35.1	-0.7
	15nm,0.5s,mb4.6						
WRA	Warramunga Arr	44.25	260	P	P	19 12 35.7	-0.1
	11nm,0.5s,mb4.4,baz=95,slow=8.0,SNR=38						
KAKA	Kakadu	47.21	269	⇓*i*P	P	19 12 58.2	0.0
MBWA	Marble Bar	57.69	256	*e*P	P	19 14 11.9	-0.2
	7.3nm,0.4s,mb4.2						
NVAR	Mina Array Bea	79.74	44	P	P	19 16 22.6	+0.2
	3.8nm,0.8s,mb3.9,baz=212,slow=7.0,SNR=24						
MOD	Modoc	80.39	40	*e*P	P	19 16 25.2	-0.5
	4.4nm,0.6s,mb4.1						
BMN	Battle Mountai	81.52	43	*e*P	P	19 16 31.0	-0.5
	6.4nm,0.9s,mb4.2						
WVOR	Wild Horse Val	81.71	40	*e*P	P	19 16 32.3	-0.1
	7.4nm,0.9s,mb4.2						
TUC	Tucson	82.05	52	*e*P	P	19 16 34.5	+0.2
	1.2nm,0.4s,mb3.8						
ELK	Elko	82.97	43	*e*P	P	19 16 38.6	-0.1
	2.2nm,0.7s,mb3.8						
ENH	Enshi	84.01	304	*e*P	P	19 16 46.7	+2.5
	8.5nm,1.1s,mb4.2						
MCK	McKinley	84.71	13	*e*P	P	19 16 46.5	-0.2
	1.5nm,0.4s,mb4.0						
NEW	Newport	85.80	36	*e*P	P	19 16 51.1	-1.0
	1.9nm,0.5s,mb4.0						
MNTX	Cornudas Mount	85.93	55	*e*P	P	19 16 53.1	-0.1
	1.1nm,0.5s,mb3.7						
ILAR	Eielson Array	86.05	13	P	P	19 16 52.4	-0.6
	1.3nm,0.4s,mb3.9,baz=224,slow=5.1,SNR=16						
LTX	Lajitas	86.36	58	*e*P	P	19 16 55.7	+0.4
	7.6nm,1.1s,mb4.2						
TXAR	Lajitas Array	86.36	58	P	P	19 16 56.2	+1.0
	4.5nm,0.8s,mb4.2,baz=226,slow=6.8,SNR=38						
TXAR	Lajitas Array	86.36	58	P	P	19 16 56.2	+1.0
ANMO	Albuquerque	86.44	52	*e*P	P	19 16 55.0	-0.5
	1.4nm,0.8s,mb3.6						
MCMT	McKenzie Canyo	86.55	41	*e*P	P	19 16 56.1	+0.3
RRI2	Red Ridge	86.80	42	*e*P	P	19 16 57.7	+0.8
	7.6nm,0.8s,mb4.4						
MOOW	Moose Ponds	87.35	42	*e*P	P	19 16 59.8	+0.2
	1.3nm,0.8s,mb3.6						
LOHW	Long Hollow	87.38	42	*e*P	P	19 16 59.8	+0.1
	2.5nm,0.6s,mb4.0						
BW06	Boulder Array	87.67	44	*e*P	P	19 17 00.7	-0.4
	2.0nm,0.6s,mb3.9						
PDAR	Pinedale Array	87.67	44	P	P	19 17 01.4	+0.3
	2.3nm,0.6s,mb4.0,baz=232,slow=3.1,SNR=12						
BOZ	Bozeman (W)	87.70	40	*e*P	P	19 17 01.0	-0.1
	0.8nm,0.5s,mb3.6						
CMAR	Chiang Mai Arr	88.56	290	P	P	19 17 09.0	+3.2
	1.8nm,0.9s,mb3.8,baz=119,slow=2.6,SNR=7.5						
SYO	Syowa Base	88.99	193	⇑P	P	19 17 05.0	-1.6
SNAA	Sanae	90.52	179	*e*P	P	19 17 13.2	-0.4
	0.7nm,0.4s,mb3.8						
RSSD	Black Hills	91.88	44	*e*P	P	19 17 20.5	0.0
	1.7nm,0.6s,mb4.2						
BRTR	Keskin Array B	144.58	314	PKP	PKPdf	19 23 46.5	+4.2
	1.0nm,0.5s,baz=90,slow=2.9,SNR=4.5						
GERES	GERESS Array B	147.60	345	PKPbc	PKPdf	19 23 53.6	+6.5
	0.1nm,0.4s,slow=2.0,SNR=2.5						

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*IDC **10** 19:31:12.9±0.9, 14.73S×173.98W, mb4.0/9, mb1 4.3/9, mb1mx4.1/17, mbtmp4.0/9, MS4.0/13, Ms1 4.0/13, ms1mx3.9/21, Error ellipse: s-maj=47.6km s-min=23.4km az=141.0*

*NEIC **10** 19:31:19.6±6.2, 14.75S×174.04W, h47^{km}±52^{km}, mb4.3/1, Error ellipse: s-maj=27.1km s-min=13.4km az=140.0*

ISC 10 19:31:16.3±0.7**, 14.8S**±0.2×**174.1W**±0.2**, h33^{km}, n57, σ0^{s}52**/13**, mb3.9**/10**, MS4.1**/12**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	14.99	117	LR	LR	19 39 15.7	
	comp=Z,700nm,18.8s,baz=305,slow=32						
PPT	Papeete	23.66	100	LR	LR	19 43 06.7	
	comp=Z,229nm,19.1s,MS3.7,baz=295,slow=30						
HNR	Honiara	25.97	279	LR	LR	19 45 20.8	
	comp=Z,189nm,19.7s,MS3.6,baz=343,slow=33						
STKA	Stephens Creek	43.80	239	LR	LR	19 55 18.8	
	comp=Z,81nm,19.5s,MS3.6,baz=22,slow=33						
WRA	Warramunga Arr	49.38	256	P	P	19 40 05.3	+0.3
	1.9nm,0.7s,mb4.2,baz=89,slow=7.2,SNR=23						
VNDA	Vanda	63.91	186	P	P	19 41 47.4	-0.3
	0.7nm,0.9s,mb3.7,baz=346,slow=4.2,SNR=3.0						
VNDA	Vanda	63.91	186	P	P	19 41 47.4	-0.3
NWAO	Narrogin (SRO)	64.37	240	LR	LR	20 08 36.9	
	comp=Z,105nm,18.0s,MS4.1,baz=146,slow=35						
MJAR	Matsushiro Arr	68.08	320	LR	LR	20 06 36.3	
	comp=Z,142nm,19.7s,MS4.2,baz=115,slow=31						
YBH	Yreka Blue Hor	73.50	38	P	P	19 42 47.7	+0.1
	2.8nm,0.9s,mb4.2,baz=192,slow=3.9,SNR=6.0						
NVAR	Mina Array Bea	74.30	42	P	P	19 42 52.5	+0.2
	1.6nm,0.8s,mb4.0,baz=220,slow=7.5,SNR=7.9						
HLID	Hailey	79.56	40	*e*P	P	19 43 21.9	+0.3
	5.1nm,1.4s,mb4.3						
TXAR	Lajitas Array	80.80	56	P	P	19 43 28.6	+0.1
	1.2nm,0.9s,mb3.8,baz=231,slow=8.0,SNR=7.7						
TXAR				LR	LR	20 12 32.4	
	comp=Z,69nm,18.4s,MS4.0,baz=100,slow=31						
ANMO	Albuquerque	80.89	50	P	P	19 43 29.2	+0.3
	0.7nm,0.4s,mb3.9,baz=201,slow=8.6,SNR=3.5						
GDL2	Guadalupe Moun	81.36	54	P	P	19 43 32.0	+0.5
ILAR	Eielson Array	81.98	11	P	P	19 43 33.0	-1.0
	0.3nm,0.6s,mb3.4,baz=214,slow=5.2,SNR=5.5						
PDAR	Pinedale Array	82.23	42	P	P	19 43 34.8	-1.0
	0.3nm,0.4s,mb3.6,baz=256,slow=3.7,SNR=4.3						
PDAR				LR	LR	20 13 35.8	
	comp=Z,110nm,19.0s,MS4.2,baz=150,slow=31						
MAW	Mawson	88.16	199	LR	LR	20 23 19.3	
	comp=Z,124nm,18.7s,MS4.3,baz=69,slow=35						
YKA	Yellowknife Ar	89.79	24	P	P	19 44 13.0	+0.6
	0.5nm,0.4s,mb4.2,baz=223,slow=7.8,SNR=3.1						
YKA	Yellowknife Ar	89.79	24	P	P	19 44 13.0	+0.6
PLCA	Paso Flores	90.38	132	LR	LR	20 17 21.3	
	comp=Z,112nm,18.5s,MS4.3,baz=180,slow=31						
CMAR	Chiang Mai Arr	91.83	288	LR	LR	20 19 43.1	
	comp=Z,70nm,20.4s,MS4.1,baz=185,slow=32						
ULM	Lac du Bonnet	93.86	39	LR	LR	20 20 54.9	
	comp=Z,83nm,19.2s,MS4.2,baz=352,slow=32						
SONM	Songino Array	93.98	318	LR	LR	20 20 57.7	
	comp=Z,95nm,19.8s,MS4.3,baz=84,slow=32						
DPC	Dobruska-Polom	143.55	349	*e*PKP	PKPdf	19 50 49.8	+2.3
GIVF	Givet	144.78	1	*e*PKP1	PKPbc	19 50 52.1	+2.4
BAIF	Baives	144.80	2	*e*PKP1	PKPbc	19 50 50.5	+0.8
	17nm,1.0s						
GRA1	Grafenberg Arr	144.93	354	*e*PKP	PKPdf	19 50 52.2	+2.2
GRA1				*e*		19 51 00.5	
PSZ	Piszkesteto	145.01	344	*e*PKPdf	PKPdf	19 50 51.3	+1.1
KHC	Kasperske Hory	145.19	351	*e*PKP	PKPdf	19 50 53.1	+2.6
KHC				*e*pPKP		19 51 00.4	
WLF	Walferdange	145.23	360	*e*PKPdf	PKPdf	19 50 50.5	0.0
WLF				*e*PKPab	PKPab	19 51 02.0	+10
BR131	Keskin Array S	145.30	321	*e*PKPdf	PKPdf	19 50 52.4	+1.4
BRTR	Keskin Array B	145.30	321	PKPbc	PKPbc	19 50 51.6	+0.2
	2.1nm,0.9s,baz=90,slow=3.7,SNR=7.7						
GEC2	GERESS Array S	145.45	351	*e*PKP	PKPdf	19 51 02.2	+11
GERES	GERESS Array B	145.45	351	PKPbc	PKPbc	19 50 52.9	+1.4
	0.9nm,0.9s,baz=34,slow=4.8,SNR=7.6						
ROSF	Rostrenen	145.70	11	*e*PKP1	PKPbc	19 50 52.7	+0.6
	29nm,1.1s						
FLN	La Foliniere	145.72	8	*e*PKP1	PKPbc	19 50 52.9	+0.8
	48nm,1.2s						
LDF	La Druitiere	145.93	7	*e*PKP1	PKPbc	19 50 53.6	+0.9
	20nm,0.9s						
GRR	Gorron	146.03	8	*e*PKP1	PKPbc	19 50 54.1	+1.2
MEZF	Maizieres J’vi	146.38	1	*e*PKP1	PKPbc	19 50 55.6	+1.9
CDF	Champ du Feu	146.46	358	*e*PKP1	PKPbc	19 50 55.7	+1.8
	26nm,1.0s						
HAU	Haudompre	146.89	360	*e*PKP1	PKPbc	19 50 56.9	+2.0
LOR	Lormes	147.58	3	*e*PKP1	PKPdf	19 50 58.9	+4.4
	24nm,1.2s						
SSF	Saint Saulge	147.77	3	*e*PKP1	PKPdf	19 50 59.5	+4.7

	41nm,1.3s						
MFF	**Saint Martin d**	**147.88**	**8**	*e*PKP1	PKPdf	19 50 59.2	+4.2
	25nm,1.2s						
AVF	**Avril sur Loir**	**148.03**	**3**	*e*PKP1	PKPdf	19 50 59.6	+4.4
	21nm,1.2s						
SMF	**Signal de Mont**	**148.20**	**3**	*e*PKP1	PKPdf	19 51 00.3	+4.8
	28nm,1.2s						
BGF	**Bois d'Agland**	**148.23**	**4**	*e*PKP1	PKPdf	19 51 00.5	+4.9
	20nm,1.0s						
CABF	**La Chapelle**	**148.28**	**360**	*e*PKP1	PKPdf	19 51 00.2	+4.5
	36nm,1.2s						
TCF	**Toulx Ste Croi**	**148.45**	**5**	*e*PKP1	PKPdf	19 51 00.7	+4.8
RJF	**Les Rejaudoux**	**149.36**	**6**	*e*PKP1	PKPdf	19 51 03.2	+5.8
LPL	**La Plagne**	**149.37**	**359**	*e*PKP1	PKPdf	19 51 04.4	+7.0
	13nm,1.0s						
LPG	**La Plagne**	**149.39**	**359**	*e*PKP1	PKPdf	19 51 04.6	+7.1
	33nm,1.3s						
LFF	**La Frestale**	**149.63**	**7**	*e*PKP1	PKPdf	19 51 04.0	+6.1
VIVF	**Saint-Julien-l**	**150.02**	**2**	*e*PKP1	PKPdf	19 51 05.4	+6.9
	35nm,1.4s						
SMRF	**Simiane la Rot**	**150.92**	**1**	*e*PKP1	PKPdf	19 51 08.1	+8.2
	15nm,1.0s						
ETSF	**Etsaut**	**151.44**	**10**	*e*PKP1	PKPdf	19 51 08.8	+8.1
	20nm,1.2s						

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*BJI **10** 19:33:50.5,35.62N×94.80E,h10^{km},ML3.9,Ms3.3,Msz3.2*

*IDC **10** 19:33:53.7±1.8,35.82N×95.04E,mb3.8/5,mb1 3.9/9,mb1mx3.7/24,mbtmp3.7/9,ML3.7/3,MS3.1/1,Ms1 3.1/1,ms1mx2.7/27,Error ellipse: s-maj=49.1km s-min=28.2km az=70.0*

*NEIC **10** 19:33:55.3±0.7,35.84N×94.95E,h10^{km},Error ellipse: s-maj=16.7km s-min=10.7km az=75.0*

ISC 10 19:33:53.7±0.8,**35.85N**±0.10×**94.9E**±0.1,**h10**^{km}**,n11,** σ**0**^{s}.**75**/13,**mb3.9**/5,**Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**5.29**	**46**	P	**Pn**	**19 35 15.3**	**+0.6**
GTA				PG	**Pg**	**19 35 30.9**	**-8.3**
GTA				SG	**Sg**	**19 36 39.1**	**-11**
GTA				Smax			
	comp=N,10.0nm,1.0s						
GTA				Smax			
	comp=E,10.0nm,1.3s						
MKAR	**Makanchi Array**	**14.44**	**323**	Pn	**P**	**19 37 18.6**	**-1.4**
	comp=E,1.1nm,0.3s,baz=138,slow=13,SNR=66						
MKAR				Lg		19 41 35.6	
	baz=137,slow=28,SNR=2.6						
SONM	**Songino Array**	**14.71**	**32**	Pn	**P**	**19 37 23.1**	**-0.4**
	comp=E,0.3nm,0.3s,baz=216,slow=15,SNR=15						
SONM				LR	LR	19 43 35.8	
	comp=E,76nm,19.1s,baz=52,slow=40						
CMAR	**Chiang Mai Arr**	**17.69**	**167**	P	**P**	**19 38 01.3**	**-0.5**
	comp=E,0.0nm,0.3s,baz=341,slow=10,SNR=4.3						
ZAL	**Zalesovo**	**19.41**	**342**	P	**P**	**19 38 22.1**	**-0.5**
	comp=E,0.2nm,0.3s,baz=322,slow=13,SNR=3.9						
BVAR	**Borovoye Array**	**24.33**	**323**	P	**P**	**19 39 13.5**	**+1.2**
	comp=E,0.6nm,0.6s,mb3.2,baz=117,slow=9.9,SNR=6.1						
BRTR	**Keskin Array B**	**47.74**	**294**	P	**P**	**19 42 33.5**	**+0.9**
	comp=E,1.9nm,0.8s,mb4.2,baz=90,slow=7.4,SNR=8.1						
FINES	**FINESS Array B**	**49.28**	**324**	P	**P**	**19 42 44.1**	**0.0**
	comp=E,1.1nm,0.8s,mb4.0,baz=76,slow=7.9,SNR=6.5						
ARCES	**ARCESS Array B**	**49.73**	**334**	P	**P**	**19 42 47.4**	**-0.1**
	comp=E,2.8nm,0.9s,mb4.3,baz=96,slow=9.1,SNR=3.7						
ARCES	**ARCESS Array B**	**49.73**	**334**	P	**P**	**19 42 47.4**	**-0.1**
GERES	**GERESS Array B**	**58.67**	**310**	P	**P**	**19 43 53.6**	**+0.3**
	comp=E,0.6nm,0.8s,mb3.7,baz=56,slow=4.8,SNR=4.8						

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*IDC **10** 19:43:21.6±3.7,34.71N×71.34E,mb3.5/3,mb1 3.6/5,mb1mx3.4/22,mbtmp3.4/5,ML2.9/2,Error ellipse: s-maj=94.2km s-min=34.0km az=86.0*

*NNC **10** 19:43:26.8±15.0,35.04N×70.42E,mpv3.7,Error ellipse: s-maj=221.5km s-min=86.1km az=59.0*

ISC 10 19:43:27.8±2.3,**34.9N**±0.1×**71.0E**±0.2,**h71**^{km}±21^{km}**,n11,** σ**0**^{s}.**82**/12,**mb3.4**/3,**1C,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**4.63**	**121**	*e*P	**P**	**19 44 33.7**	**-3.2**
THN				*e*S	**S**	**19 45 48.3**	**+18**
	33nm,0.2s						
SDNR	**Sundarnagar**	**6.04**	**123**	*e*P	**P**	**19 44 57.0**	**+0.7**
SMLA	**Simla**	**6.39**	**125**	*i* P	x	19 44 58.1	
SMLA				*i* x	x	19 46 05.2	
KK31	**Karatay Array**	**8.18**	**357**	P	**P**	**19 45 26.1**	**+0.1**
	1.7nm,0.4s,baz=182,slow=11,SNR=48						
KK31				⇑S	**S**	**19 46 58.1**	**+0.3**
	2.6nm,0.5s						
MK31	**Makanchi Array**	**14.58**	**32**	P	**P**	**19 46 56.7**	**+5.2**
	1.8nm,0.8s,baz=207,slow=11,SNR=14						
MKAR	**Makanchi Array**	**14.58**	**32**	Pn	**P**	**19 46 50.4**	**-1.1**
	0.0nm,0.3s,baz=215,slow=18,SNR=3.1						
AB31	**Akbulak array**	**16.49**	**334**	P	**P**	**19 47 14.8**	**-0.9**
	2.4nm,0.7s,baz=164,slow=14,SNR=23						
BVAR	**Borovoye Array**	**18.10**	**359**	P	**P**	**19 47 37.1**	**+1.3**
	0.2nm,0.3s,baz=169,slow=11,SNR=4.5						
ZAL	**Zalesovo**	**21.33**	**23**	P	**P**	**19 48 10.6**	**+0.1**
	1.4nm,0.3s,mb3.8,baz=238,slow=8.6,SNR=6.2						
SONM	**Songino Array**	**29.24**	**53**	P	**P**	**19 49 24.8**	**-0.1**
	0.4nm,0.9s,mb3.0,baz=252,slow=4.6,SNR=3.3						
WRA	**Warramunga Arr**	**81.14**	**122**	P	**P**	**19 55 37.4**	**+0.1**
	0.7nm,1.2s,mb3.4,baz=328,slow=5.1,SNR=4.6						

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*IDC **10** 20:02:03.3±1.3,1.08N×97.09E,mb4.1/9,mb1 4.2/10,mb1mx4.0/20,mbtmp4.1/10,ML4.2/1,Error ellipse: s-maj=60.1km s-min=19.4km az=57.0*

*BJI **10** 20:02:06.0,0.72N×97.07E,h52^{km},mB4.9,mb4.6,Ms4.0,Msz3.8*

*NEIC **10** 20:02:08.2±0.5,1.15N×97.23E,h30^{km},mb4.4/8,Error ellipse: s-maj=12.1km s-min=7.4km az=53.0*

ISC 10 20:02:06.2±0.7,**1.13N**±0.09×**97.18E**±0.08,**h30**^{km}**,n29,** σ**0**^{s}.**90**/30,**mb4.3**/20,**MS3.8**/1,**1D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**5.15**	**48**	P	**Pn**	**20 03 24.2**	**+0.8**
KULM	**Kulim**	**5.39**	**40**	*e*Pn	**Pn**	**20 03 26.3**	**-0.5**
KGM	**Kluang**	**6.20**	**82**	P	**Pn**	**20 03 39.4**	**+1.2**
CM31	**Chiang Mai Arr**	**17.31**	**6**	*e*Pn	**P**	**20 06 07.6**	**0.0**
	5.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**17.31**	**6**	P	**P**	**20 06 06.7**	**-0.8**
	0.3nm,0.3s,baz=196,slow=11,SNR=12						
KKM	**Kota Kinabalu**	**19.61**	**75**	*e*P	**P**	**20 06 34.5**	**-0.8**
TSM	**Tawau**	**20.90**	**81**	P	**P**	**20 06 49.3**	**+0.4**
KMI	**Kunming**	**24.45**	**12**	P	**P**	**20 07 25.6**	**+1.7**
KMI				PP	PP	20 08 05.5	+5.7
KMI				S	**S**	**20 11 49.5**	**+10**
KMI				XS		20 12 00.1	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
KMI				LR	LR		
	comp=N,230nm,15.3s,MS3.8						
KMI				LR	LR		
	comp=E,140nm,16.2s,MS3.8						
KMI				LR	LR		
	comp=Z,260nm,14.9s,MS3.9						
GYA	**Guiyang**	**26.79**	**19**	⇓*i*P	**P**	**20 07 47.8**	**+2.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
GUN	**Gumba**	**28.75**	**339**	*e*P	**P**	**20 08 07.5**	**+4.0**
	comp=Z,18nm,0.6s,mb5.0						
KKN	**Kakani**	**28.86**	**338**	*e*P	**P**	**20 08 04.9**	**+0.4**
	comp=Z,17nm,0.9s,mb4.8						
LSA	**Lhasa**	**28.99**	**349**	*e*P	**P**	**20 08 06.1**	**+0.4**
	comp=Z,5.0nm,0.9s,mb4.2						
GKN	**Gorkha**	**29.30**	**337**	*e*P	**P**	**20 08 09.1**	**+0.6**
	comp=Z,14nm,0.9s,mb4.7						
KOLN	**Koldanda**	**29.52**	**335**	*e*P	**P**	**20 08 10.9**	**+0.5**
	comp=Z,11nm,0.8s,mb4.7						
ENH	**Enshi**	**31.25**	**21**	*e*P	**P**	**20 08 24.0**	**-1.7**
ENH				*e*pP	pP	20 08 30.9	-3.7
XAN	**Xi'an**	**34.54**	**17**	P	**P**	**20 08 52.5**	**-1.8**
GTA	**Gaotai**	**38.18**	**3**	*e*P	**P**	**20 09 25.0**	**0.0**
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
WRA	**Warramunga Arr**	**42.01**	**122**	P	**P**	**20 09 56.6**	**-0.4**
	comp=Z,1.9nm,0.6s,mb3.9,baz=302,slow=9.1,SNR=31						
WRAB	**Tennant Creek**	**42.02**	**122**	*e*P	**P**	**20 09 56.7**	**-0.3**
	comp=Z,2.9nm,0.6s,mb4.1						
SONM	**Songino Array**	**47.21**	**8**	P	**P**	**20 10 38.6**	**+0.3**
	comp=Z,1.4nm,0.5s,mb4.2,baz=191,slow=9.1,SNR=29						
SONM				PcP	PcP	20 12 09.3	-0.4
	comp=Z,0.9nm,0.7s,baz=198,slow=2.7,SNR=3.9						
MKAR	**Makanchi Array**	**47.31**	**346**	P	**P**	**20 10 39.3**	**+0.2**
	comp=Z,2.7nm,0.7s,mb4.3,baz=158,slow=8.9,SNR=37						
CN2	**Changchun**	**49.38**	**27**	*e*P	**P**	**20 10 54.2**	**-1.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**53.32**	**132**	P	**P**	**20 11 25.4**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.2,baz=315,slow=8.6,SNR=4.4						
ZAL	**Zalesovo**	**53.62**	**351**	P	**P**	**20 11 26.4**	**-0.6**
	comp=Z,2.9nm,0.5s,mb4.5						
BVAR	**Borovoye Array**	**56.31**	**341**	P	**P**	**20 11 45.6**	**-1.0**
	comp=Z,1.8nm,0.7s,mb4.2,baz=158,slow=8.0,SNR=12						
YAK	**Yakutsk**	**65.50**	**16**	P	**P**	**20 12 47.7**	**-1.0**
	comp=Z,3.6nm,0.3s,mb4.9						
FINES	**FINESS Array B**	**80.06**	**333**	P	**P**	**20 14 13.8**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.6,baz=117,slow=6.2,SNR=1.7						
ARCES	**ARCESS Array B**	**82.60**	**340**	P	**P**	**20 14 28.0**	**+0.4**
	comp=Z,1.9nm,0.8s,mb4.2,baz=72,slow=5.7,SNR=4.2						
GERES	**GERESS Array B**	**84.86**	**319**	P	**P**	**20 14 40.4**	**+0.9**
	comp=Z,0.1nm,0.4s,mb3.3,baz=101,slow=6.8,SNR=3.9						

IDC 10 20:25:03.6±1.4,**12.30N**×**143.55E,mb3.8**/3,**mb1 4.1**/3,**mb1mx3.6**/20,**mbtmp3.8**/3,**Error ellipse: s-maj=82.6km s-min=36.2km az=106.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**33.30**	**196**	P	P	20 31 43.2	-2.1
	0.4nm,0.7s,baz=22,slow=10,SNR=5.9						
NVAR	**Mina Array Bea**	**88.72**	**51**	P	P	20 38 00.1	-0.5
	0.8nm,0.7s,baz=260,slow=5.5,SNR=5.7						
FINES	**FINESS Array B**	**91.77**	**335**	P	P	20 38 12.6	-1.6
	0.6nm,0.5s,baz=90,slow=5.6,SNR=7.2						

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*BUG **10** 20:25:37.8,51.60N×7.04E,h1^{km},ML1.4*

*BNS **10** 20:25:37.8±0.8,51.64N×7.09E,h1^{km},ML1.9*

*CSEM **10** 20:25:38.6±0.1,51.58N×6.97E,h2^{km},ML2.7/6,Error ellipse: s-maj=2.2km s-min=1.7km az=139.0,Suspected Mining induced.*

*LDG **10** 20:25:39.0±0.2,51.57N×6.91E,h1^{km},Ml2.7/7,Error ellipse: s-maj=4.4km s-min=3.1km az=37.0,Suspected Mining induced.*

*BGR **10** 20:25:39.9±0.9,51.59N×7.12E,h1^{km},ML2.0,Error ellipse: s-maj=11.1km s-min=4.4km az=92.0*

*NEIC **10** 20:25:39.0,51.57N×6.91E,h1^{km},ML2.7(LDG),ML2.0(SZGRF),After LDG.*

ISC 10 20:25:35.6±0.4,**51.56N**±0.02×**6.88E**±0.04,**n30,** σ**1**^{s}.**34**/49,**1D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUG	**Bochum--Univer**	**0.27**	**116**	⇓*i*Pg	**Pg**	**20 25 42.9**	**+1.9**
BUG				Sg	**Sg**	**20 25 46.7**	**+2.1**
BUG	**Bochum--Univer**	**0.27**	**116**	*e*Pg	**Pg**	**20 25 42.8**	**+1.8**
BUG				*e*Sg	**Sg**	**20 25 46.7**	**+2.1**
WTSB	**Winterswijk**	**0.41**	**353**	*e*Pg	**Pg**	**20 25 44.6**	**+0.8**
WTSB				*e*Sg	**Sg**	**20 25 49.5**	**+0.3**
IBBN	**Ibbenburen**	**0.93**	**36**	*e*Pg	**Pg**	**20 25 55.2**	**+1.1**
IBBN				*e*Sg	**Sg**	**20 26 05.7**	**-0.7**
STB	**Steinbach**	**0.97**	**182**	*e*Pg	**Pg**	**20 25 57.6**	**+2.7**
STB				*e*Sg	**Sg**	**20 26 12.3**	**+4.5**
	39nm,0.4s						
KLL	**Kalltalsperre**	**0.98**	**202**	*e*Pg	**Pg**	**20 25 57.8**	**+2.6**
KLL				*e*Sg	**Sg**	**20 26 14.0**	**+5.8**
	22nm,0.4s						
HGN	**Heimansgroeve**	**0.99**	**217**	*e*Pg	**Pg**	**20 25 58.2**	**+2.8**
	23nm,0.2s,baz=30						
HGN				*e*Sg	**Sg**	**20 26 14.7**	**+6.0**
MEM	**Membach**	**1.10**	**210**	P	**Pb**	**20 25 59.5**	**+2.3**
MEM				S	**Sb**	**20 26 16.6**	**+4.7**
BGG	**Burgeitz**	**1.39**	**168**	*e*Pg	**Pg**	**20 26 04.0**	**+0.7**
BGG				*e*Sg	**Sg**	**20 26 22.4**	**+0.7**
TNS	**Taunus Mts**	**1.67**	**143**	*e*Pg	**Pg**	**20 26 07.9**	**-0.9**
TNS				*e*Sg	**Sg**	**20 26 30.7**	**-0.3**
GIVF	**Givet**	**1.96**	**223**	*e*Pn	**Pn**	**20 26 12.0**	**+1.6**
GIVF				*e*Sg	**Sg**	**20 26 40.6**	**-0.1**
	14nm,0.3s						
CLZ	**Clausthal**	**2.19**	**81**	*e*Pg	**Pg**	**20 26 17.0**	**-2.4**
CLZ				*e*Sg	**Sg**	**20 26 44.3**	**-4.2**
NRDL	**Niedersach Rie**	**2.20**	**64**	*e*Pg	**Pg**	**20 26 16.4**	**-3.1**
BAIF	**Baives**	**2.26**	**230**	*e*Pn	**Pn**	**20 26 16.2**	**+1.4**
BAIF				*e*Sn	**Sn**	**20 26 43.1**	**-0.7**
BAIF				*e*Sg	**Sg**	**20 26 50.7**	**-0.3**
	6.6nm,0.3s						
RFYF	**Reffroy**	**3.07**	**198**	*e*Pn	**Pn**	**20 26 27.1**	**+0.8**
CDF	**Champ du Feu**	**3.16**	**175**	*e*Pn	**Pn**	**20 26 28.0**	**+0.4**
CDF				*e*Sg	**Sg**	**20 27 18.9**	**-1.9**
	2.8nm,0.4s						
MEZF	**Maizieres J'vi**	**3.28**	**202**	*e*Pn	**Pn**	**20 26 30.2**	**+1.0**
MEZF				*e*Sg	**Sg**	**20 27 22.3**	**-2.5**
	5.3nm,0.5s						
SFTF	**Sexfontaines**	**3.56**	**200**	*e*Pn	**Pn**	**20 26 33.4**	**+0.1**
	baz=26						
BRG	**Berggiesshubel**	**4.49**	**96**	*e*Sg	**Sg**	**20 28 00.5**	**-4.7**
LOR	**Lormes**	**4.72**	**206**	*e*Pn	**Pn**	**20 26 49.3**	**-0.5**
	baz=30						
LOR				*e*Sn	**Sn**	**20 27 42.3**	**-3.8**
LOR				*e*Sg	**Sg**	**20 28 08.0**	**-4.9**
	1.9nm,0.3s						
CABF	**La Chapelle**	**4.98**	**186**	*e*Pn	**Pn**	**20 26 53.0**	**-0.4**
SSF	**Saint Saulge**	**5.01**	**207**	*e*Pn	**Pn**	**20 26 53.1**	**-0.8**
AVF	**Avril sur Loir**	**5.30**	**207**	*e*Pn	**Pn**	**20 26 56.8**	**-1.2**
SMF	**Signal de Mont**	**5.31**	**203**	*e*Pn	**Pn**	**20 26 57.4**	**-0.6**
LDF	**La Druitiere**	**5.40**	**239**	*e*Pn	**Pn**	**20 26 58.9**	**-0.4**
FLN	**La Foliniere**	**5.50**	**242**	*e*Pn	**Pn**	**20 27 00.0**	**-0.7**
	baz=66						
BGF	**Bois d'Agland**	**5.66**	**209**	*e*Pn	**Pn**	**20 27 02.1**	**-0.9**
GRR	**Gorron**	**5.92**	**241**	*e*Pn	**Pn**	**20 27 05.8**	**-0.8**
GRR				*e*Sn	**Sn**	**20 28 10.8**	**-5.2**
	3.1nm,0.3s						
TCF	**Toulx Ste Croi**	**6.11**	**212**	*e*Pn	**Pn**	**20 27 07.9**	**-1.4**
MFF	**Saint Martin d**	**6.77**	**226**	*e*Pn	**Pn**	**20 27 17.9**	**-0.8**

IDC 10 21:13:37.2±2.2,**0.77N**×**97.40E,mb4.0**/5,**mb1 4.1**/6,**mb1mx3.8**/18,**mbtmp3.9**/6,**ML3.6**/1,**MS3.6**/1,**Ms1 3.6**/1,**ms1mx2.9**/21,**Error ellipse: s-maj=84.9km s-min=26.5km az=57.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.64**	**5**	P	P	21 17 43.8	-2.4
	0.1nm,0.3s,baz=196,slow=12,SNR=4.5						
WRA	**Warramunga Arr**	**41.64**	**122**	P	P	21 21 27.5	-1.7
	0.4nm,0.5s,baz=304,slow=8.9,SNR=4.2						
SONM	**Songino Array**	**47.52**	**8**	P	P	21 22 14.4	-1.8
	0.4nm,0.3s,baz=188,slow=8.5,SNR=7.2						
MKAR	**Makanchi Array**	**47.70**	**346**	P	P	21 22 16.0	-1.6
	1.2nm,0.5s,baz=159,slow=9.3,SNR=42						
CBIJ	**Chichi jima**	**50.30**	**55**	LR	LR	21 41 31.6	
	comp=Z,66nm,21.4s,baz=131,slow=33						
ZAL	**Zalesovo**	**54.00**	**351**	P	P	21 23 02.8	-2.4
	1.3nm,0.3s,baz=268,slow=5.2,SNR=3.4						
FINES	**FINESS Array B**	**80.47**	**333**	P	P	21 25 50.4	-1.9
	0.3nm,0.4s,baz=117,slow=16,SNR=3.9						

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*IDC **10** 21:14:30.7±4.7,12.05S×167.87E,h340^{km}±51^{km},mb3.6/8,mb1 3.8/9,mb1mx3.6/16,mbtmp4.2/9,Error ellipse: s-maj=33.8km s-min=26.1km az=155.0*

*NEIC **10** 21:14:34.0±2.9,12.29S×167.90E,h385^{km}±30^{km},Error ellipse: s-maj=31.0km s-min=27.8km az=157.0*

ISC 10 21:14:28.9±3.7,**12.0S**±0.2×**167.7E**±0.2,**h331**^{km}±43^{km}**,n31,** σ**0**^{s}.**66**/9,**mb3.7**/8,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.12**	**187**	P	**P**	**21 16 49.6**	**+0.3**
	1.3nm,0.3s,baz=29,slow=19,SNR=12						
STKA	**Stephens Creek**	**31.17**	**226**	P	**P**	**21 20 19.1**	**-0.9**
	2.5nm,0.5s,mb3.7,baz=67,slow=8.1,SNR=11						
MJAR	**Matsushiro Arr**	**55.70**	**331**	P	**P**	**21 23 33.1**	**-0.8**
	1.3nm,0.7s,mb3.3,baz=165,slow=7.0,SNR=5.2						
CMAR	**Chiang Mai Arr**	**74.27**	**293**	P	**P**	**21 25 33.5**	**+0.9**
	1.7nm,0.9s,mb3.8,baz=120,slow=3.2,SNR=6.6						
SONM	**Songino Array**	**80.57**	**323**	P	**P**	**21 26 07.2**	**+0.9**
	0.8nm,0.8s,mb3.5,baz=116,slow=2.3,SNR=8.0						
ILAR	**Eielson Array**	**83.78**	**18**	P	**P**	**21 26 21.4**	**-0.9**
	3.3nm,0.8s,mb4.2,baz=240,slow=5.7,SNR=28						
NVAR	**Mina Array Bea**	**85.14**	**49**	P	**P**	**21 26 30.1**	**+0.5**
	0.2nm,0.4s,mb3.3,baz=217,slow=6.6,SNR=4.5						
TXAR	**Lajitas Array**	**94.56**	**61**	P	**P**	**21 27 13.8**	**-0.1**
	0.3nm,0.7s,mb3.5,baz=228,slow=4.4,SNR=4.6						
MKAR	**Makanchi Array**	**95.53**	**317**	P	**P**	**21 27 18.1**	**+0.1**
	3.1nm,0.7s,mb4.5,baz=91,slow=6.4,SNR=30						
ARCES	**ARCESS Array B**	**117.71**	**346**	PKP	PKPdf	21 32 35.0	-0.5
	1.1nm,0.6s,baz=45,slow=1.7,SNR=4.2						
GERES	**GERESS Array B**	**137.39**	**335**	PKP	PKPdf	21 33 15.3	+1.8
	0.3nm,0.5s,SNR=5.0						
CABF	**La Chapelle**	**142.15**	**339**	*e*PKP1	PKPdf	21 33 19.4	-2.6
	7.6nm,0.9s						
LOR	**Lormes**	**142.29**	**342**	*e*PKP1	PKPdf	21 33 19.8	-2.4
LOR				*e*R			
	55nm,17.2s						
SSF	**Saint Saulge**	**142.59**	**342**	*e*PKP1	PKPdf	21 33 20.5	-2.2
LPG	**La Plagne**	**142.87**	**338**	*e*PKP1	PKPdf	21 33 23.0	-0.3
BGF	**Bois d'Agland**	**143.24**	**343**	*e*PKP1	PKPbc	21 33 22.5	+0.1
	5.9nm,0.6s						
MBDF	**Montbardon**	**143.51**	**337**	*e*PKP1	PKPbc	21 33 23.2	-0.1
	8.9nm,0.9s						
TCF	**Toulx Ste Croi**	**143.66**	**343**	*e*PKP1	PKPbc	21 33 23.9	+0.2
	11nm,1.0s						
ORIF	**Oris-en-Rattie**	**143.68**	**338**	*e*PKP1	PKPbc	21 33 24.4	+0.6
	12nm,0.7s						
ORIF				*e*R			
	57nm,20.5s						
SBF	**Sospel**	**143.97**	**336**	*e*PKP1	PKPbc	21 33 23.9	-0.8
	29nm,0.8s						
MFF	**Saint Martin d**	**144.00**	**346**	*e*PKP1	PKPbc	21 33 24.9	+0.2
	16nm,0.8s						
VIVF	**Saint-Julien-l**	**144.16**	**339**	*e*PKP1	PKPbc	21 33 25.9	+0.7
PGF	**Pioggiola**	**144.37**	**333**	*e*PKP1	PKPbc	21 33 26.2	+0.4
	12nm,0.8s						
FRF	**La Foret Royal**	**144.54**	**336**	*e*PKP1	PKPbc	21 33 26.5	+0.2
	18nm,0.8s						
SMRF	**Simiane la Rot**	**144.60**	**338**	*e*PKP1	PKPbc	21 33 26.7	+0.3
	8.0nm,0.9s						
RJF	**Les Rejaudoux**	**144.76**	**343**	*e*PKP1	PKPbc	21 33 27.9	+1.1
	14nm,0.8s						
RJF				*e*R			
	60nm,22.4s						
LMR	**La Mourre**	**144.78**	**336**	*e*PKP1	PKPbc	21 33 26.4	-0.6
CAF	**Calviac**	**144.94**	**342**	*e*PKP1	PKPbc	21 33 27.6	+0.2
	4.1nm,0.7s						
LASF	**Ste Croix**	**145.13**	**340**	*e*PKP1	PKPbc	21 33 28.8	+0.9
	16nm,1.1s						
LFF	**La Frestale**	**145.31**	**344**	*e*PKP1	PKPbc	21 33 29.1	+0.8
	10nm,0.7s						
MTLF	**Montolieu**	**146.33**	**341**	*e*PKP1	PKPbc	21 33 32.2	+1.4
	9.4nm,1.0s						

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*IDC **10** 21:20:58.3±0.7,6.21S×147.04E,mb4.3/9,mb1 4.5/12,mb1mx4.5/16,mbtmp4.4/12,ML4.0/3,MS3.9/7,Ms1 3.9/7,ms1mx3.5/23,Error ellipse: s-maj=33.8km s-min=11.5km az=84.0*

*NEIC **10** 21:21:04.1±1.5,6.36S×146.89E,h39^{km}±14^{km},mb4.8/9,Error ellipse: s-maj=12.1km s-min=9.6km az=54.0*

ISC 10 21:21:02.7±2.8,**6.4S**±0.1×**146.9E**±0.1,**h43**^{km}±27^{km}**,n41,** σ**0**^{s}.**76**/30,**mb4.6**/17,**MS3.9**/6,**2C,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.02**	**175**	Pn	**P**	**21 21 50.0**	**+0.7**
	39nm,0.3s,baz=25,slow=4.9,SNR=58						
PMG				Pg	**P**	**21 21 57.7**	**+8.4**
	292nm,0.3s,baz=9.0,slow=13,SNR=67						
PMG				Sn	**S**	**21 22 31.4**	**+6.8**
	59nm,0.3s,baz=345,slow=20,SNR=3.6						
PMG				Lg		21 22 40.5	
	80nm,0.3s,baz=2.5,slow=23,SNR=7.6						
PMG	**Port Moresby**	**3.02**	**175**	*e*Pn	**P**	**21 21 49.8**	**+0.5**
CTA	**Charters Tower**	**13.64**	**183**	Pn	**P**	**21 24 15.8**	**-0.1**
	1.2nm,0.3s,baz=357,slow=13,SNR=15						
CTA				LR	LR	21 29 09.2	
	comp=Z,440nm,21.3s,baz=9.1,slow=36						
CTA	**Charters Tower**	**13.64**	**183**	Pn	**P**	**21 24 15.8**	**-0.1**
CTA				LR	LR	21 29 09.2	
KAKA	**Kakadu**	**15.57**	**245**	⇑*i*P	**P**	**21 24 41.4**	**+0.3**
WB2	**Warramunga Arr**	**18.17**	**221**	⇑*i*P	**P**	**21 25 13.2**	**-0.5**
WRA	**Warramunga Arr**	**18.18**	**221**	P	**P**	**21 25 13.0**	**-0.8**
	0.6nm,0.3s,baz=45,slow=12,SNR=53						
WRA				PcP	PcP	21 29 46.9	+0.8
	0.0nm,0.3s,baz=38,slow=2.0,SNR=3.6						
WRA				ScP		21 33 23.8	
	0.0nm,0.3s,baz=37,slow=2.3,SNR=7.7						
DZM	**Mont Dzumac**	**24.50**	**132**	LR	LR	21 34 41.0	
	comp=Z,163nm,18.3s,MS3.6,baz=22,slow=34						
STKA	**Stephens Creek**	**25.85**	**190**	P	**P**	**21 26 32.0**	**-0.2**
	3.4nm,0.6s,mb4.1,baz=360,slow=9.2,SNR=15						
STKA				LR	LR	21 37 28.9	
	comp=Z,273nm,18.6s,MS3.8,baz=19,slow=38						
NWAO	**Narrogin (SRO)**	**38.18**	**222**	LR	LR	21 45 24.0	
	comp=Z,390nm,19.3s,MS4.2,baz=3.5,slow=38						
JHJ	**Hachijo jima 2**	**39.85**	**351**	LR	LR	21 43 24.5	
	comp=Z,91nm,20.5s,MS3.6,baz=126,slow=34						
MJAR	**Matsushiro Arr**	**43.46**	**350**	P	**P**	**21 29 02.3**	**-1.4**
	1.8nm,0.8s,mb3.8,baz=180,slow=5.9,SNR=4.3						
KULM	**Kulim**	**47.59**	**283**	*e*P	**P**	**21 29 37.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**53.33**	**299**	P	**P**	**21 30 21.9**	**+1.5**
	2.5nm,0.6s,mb4.3,baz=123,slow=6.2,SNR=13						
HIA	**Hailar**	**60.27**	**340**	*e*P	**P**	**21 31 08.1**	**-1.2**
	12nm,1.0s,mb4.9						
FX1	**Attu Island--F**	**63.11**	**18**	*e*P	**P**	**21 31 29.2**	**+1.0**
LSA	**Lhasa**	**64.38**	**307**	*e*P	**P**	**21 31 36.8**	**-0.2**
	3.1nm,0.7s,mb4.5						
SONM	**Songino Array**	**64.68**	**331**	P	**P**	**21 31 38.3**	**-0.3**
	1.3nm,0.4s,mb4.3,baz=139,slow=5.5,SNR=25						
GUN	**Gumba**	**67.98**	**303**	*e*P	**P**	**21 32 00.6**	**+0.7**
	22nm,0.7s,mb5.3						
KKN	**Kakani**	**68.44**	**303**	*e*P	**P**	**21 32 02.9**	**+0.1**
	13nm,0.8s,mb5.0						
DMN	**Daman**	**68.53**	**303**	*e*P	**P**	**21 32 03.6**	**+0.3**
	13nm,0.7s,mb5.0						
GKN	**Gorkha**	**69.05**	**303**	*e*P	**P**	**21 32 06.8**	**+0.3**
	13nm,0.8s,mb4.9						
KOLN	**Koldanda**	**69.84**	**303**	*e*P	**P**	**21 32 11.2**	**-0.1**
	19nm,0.9s,mb5.0						
VNDA	**Vanda**	**71.54**	**177**	P	**P**	**21 32 21.3**	**+0.5**
	1.6nm,0.7s,mb4.1,baz=327,slow=5.8,SNR=10.0						
VNDA	**Vanda**	**71.54**	**177**	*e*P	**P**	**21 32 20.6**	**-0.2**
	3.0nm,1.0s,mb4.2						
MKAR	**Makanchi Array**	**77.72**	**321**	P	**P**	**21 32 56.8**	**-0.1**
	1.9nm,0.6s,mb4.2,baz=98,slow=8.5,SNR=37						
ZAL	**Zalesovo**	**79.28**	**328**	P	**P**	**21 33 04.0**	**-1.3**
	1.8nm,0.6s,mb4.2,baz=6.3,slow=4.1,SNR=13						
IMA	**Indian Mountai**	**83.95**	**21**	*e*P	**P**	**21 33 30.0**	**+0.6**
	6.3nm,0.6s,mb4.9						
ILAR	**Eielson Array**	**85.87**	**23**	P	**P**	**21 33 38.0**	**-0.9**
	4.0nm,0.6s,mb4.8,baz=254,slow=5.1,SNR=45						
BVAR	**Borovoye Array**	**87.01**	**324**	P	**P**	**21 33 44.3**	**-0.5**
	1.6nm,0.5s,mb4.5,baz=115,slow=6.5,SNR=9.1						
DAWY	**Dawson**	**88.66**	**25**	*e*P	**P**	**21 33 53.5**	**+1.1**
YBH	**Yreka Blue Hor**	**94.49**	**49**	LR	LR	22 07 51.3	
	comp=Z,64nm,20.1s,MS4.1,baz=348,slow=30						
ELK	**Elko**	**100.09**	**50**	LR	LR	22 13 59.5	
	comp=Z,43nm,19.3s,MS4.0,baz=115,slow=32						
GERES	**GERESS Array B**	**122.16**	**325**	PKP	PKPdf	21 39 53.7	+0.6
	0.4nm,0.5s,baz=90,slow=1.3,SNR=5.8						
LPAZ	**La Paz**	**138.67**	**123**	PKP	PKPdf	21 40 29.1	+3.9
	1.0nm,0.8s,baz=120,slow=3.2,SNR=5.3						
SDV	**Santo Domingo**	**142.74**	**84**	*e*PKPdf	PKPdf	21 40 34.3	+1.7
SJG	**San Juan**	**145.74**	**67**	PKPbc	PKPbc	21 40 40.5	+2.0
	6.8nm,0.3s,baz=331,slow=18,SNR=5.2						
SJG	**San Juan**	**145.74**	**67**	*e*PKPbc	PKPbc	21 40 39.9	+1.4
SAML	**Samuel**	**146.38**	**117**	*e*PKPbc	PKPbc	21 40 42.4	+2.3
DBIC	**Dimbokro**	**151.93**	**272**	PKPbc	PKPdf	21 40 56.9	+9.2
	6.2nm,1.0s,baz=130,slow=12,SNR=8.3						
BDFB	**Brasilia**	**153.61**	**146**	PKPbc	PKPdf	21 41 00.1	+10
	1.9nm,0.5s,baz=227,slow=5.8,SNR=3.7						

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*IDC **10** 21:36:05.8±0.9,12.17N×143.69E,mb4.0/7,mb1 4.3/7,mb1mx3.9/21,mbtmp4.0/7,Error ellipse: s-maj=49.0km s-min=22.9km az=98.0*

*NEIC **10** 21:36:07.3±0.7,12.18N×143.75E,h10^{km},Error ellipse: s-maj=34.7km s-min=14.8km az=113.0*

ISC 10 21:36:05.7±0.8,**12.1N**±0.1×**143.7E**±0.2,**h10**^{km}**,n8,** σ**1**^{s}.**00**/8,**mb4.0**/7,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.85**	**39**	*e*Pn	**Pn**	**21 36 37.5**	**-0.4**
WRA	**Warramunga Arr**	**33.18**	**196**	P	**P**	**21 42 44.5**	**-0.4**

	0.8nm,0.7s,mb3.8,baz=22,slow=9.8,SNR=9.0						
STKA	Stephens Creek	43.81	183	P	P	21 44 13.6	-0.1
	1.1nm,0.5s,mb3.9,slow=9.1,SNR=4.8						
BVAR	Borovoye Array	70.34	322	P	P	21 47 22.3	+0.7
	1.0nm,0.5s,mb4.0,baz=98,slow=8.3,SNR=7.5						
ILAR	Eielson Array	70.37	25	P	P	21 47 19.9	-1.6
	0.4nm,0.5s,mb3.6,baz=245,slow=6.5,SNR=4.1						
YKA	Yellowknife Ar	84.67	27	P	P	21 48 41.1	+0.5
	0.9nm,0.4s,mb4.2,baz=286,slow=5.1,SNR=4.7						
NVAR	Mina Array Bea	88.73	51	P	P	21 49 03.4	+2.3
	0.9nm,0.6s,mb4.2,baz=263,slow=7.1,SNR=4.6						
FINES	FINESS Array B	91.97	335	P	P	21 49 15.0	-0.6
	0.8nm,0.5s,mb4.3,baz=65,slow=5.6,SNR=18						

IDC 10 21:36:28.1±1.0**,12.19N×143.93E,mb4.0**/6**,mb1 4.2**/6**, mb1mx3.8**/21**,mbtmp4.0**/6**,Error ellipse: s-maj=52.2km s-min=25.9km az=98.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	33.30	197	P	P	21 43 08.3	-1.5
	0.9nm,1.0s,baz=20,slow=9.6,SNR=5.2						
STKA	Stephens Creek	43.87	183	P	P	21 44 35.8	-2.4
	2.3nm,1.0s,baz=348,slow=9.3,SNR=3.0						
BVAR	Borovoye Array	70.46	322	P	P	21 47 44.8	-1.5
	0.5nm,0.3s,baz=107,slow=8.2,SNR=4.1						
YKA	Yellowknife Ar	84.52	27	P	P	21 49 03.9	-0.1
	0.4nm,0.3s,baz=282,slow=5.0,SNR=3.1						
NVAR	Mina Array Bea	88.51	51	P	P	21 49 22.7	-1.4
	0.7nm,0.6s,baz=277,slow=7.3,SNR=3.2						
FINES	FINESS Array B	92.04	335	P	P	21 49 37.6	-2.4
	0.6nm,0.5s,baz=68,slow=5.0,SNR=7.8						

*NIED **10** 21:40:00,24.00N×123.60E,h35^{km},Mw4.3 Best double couple: $M_0$3.51×10^{15} NP1:ϕ_s55°,δ71°,λ82°. NP2:ϕ_s259°, δ20°,λ112°.*
*JMA **10** 21:40:00.8±0.1,23.97N×123.58E,h31^{km}±1^{km},M4.3*
JMA Felt I J1.
*BJI **10** 21:40:00.5,24.00N×123.50E,h56^{km},mB4.5,mb4.3, ML3.8,Ms4.0,Msz3.8*
*NEIC **10** 21:40:03.4±1.3,24.04N×123.48E,h57^{km}±10^{km},mb4.1/3, Error ellipse: s-maj=17.3km s-min=11.2km az=187.0*
NEIC Recorded [1 JMA] on Iriomote-jima.
*IDC **10** 21:40:03.5±4.3,24.04N×123.52E,h59^{km}±39^{km},mb3.7/13, mb1 3.9/14,mb1mx3.8/22,mbtmp4.0/14,ML3.3/1,MS3.4/5, Ms1 3.5/5,ms1mx3.2/25,Error ellipse: s-maj=32.5km s-min=19.8km az=59.0*
ISC 10 21:39:60.0±0.8**,23.97N**±0.09×**123.55E**±0.04**,h44**^{km}±5^{km}**, n34,**σ**1^{s}08**/40**,mb4.0**/15**,MS3.4**/5**,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	Hateruma jima	0.25	69	P	P	21 40 07.2	-0.9
HATJ				S	S	21 40 12.1	-1.7
IRIF	Iriomote-Funau	0.40	25	P	P	21 40 09.5	-0.2
IRIF				S	S	21 40 15.8	-0.7
JKRS	Kuro-shima	0.50	58	P	P	21 40 10.9	0.0
JKRS				S	S	21 40 17.8	-0.9
JIJ	Ishigaki jima	0.67	54	P	P	21 40 13.1	-0.1
JIJ				*e*S	S	21 40 21.8	-1.0
YOJ	Yonaguni jima	0.69	315	P	P	21 40 14.7	+1.3
YOJ				*e*S	S	21 40 24.2	+0.9
JTJ	Tarama	1.25	57	P	P	21 40 22.7	+1.4
JTJ				*e*S	S	21 40 38.6	+1.3
JMJ	Miyako jima 2	1.80	62	P	P	21 40 31.5	+2.3
JOGS	Gusukube	1.87	65	P	P	21 40 33.0	+2.8
TATO	Taipei	2.13	299	*e*Pn	P	21 40 34.6	+0.8
JKE	Kume jima 2	3.76	51	P	P	21 40 56.5	-0.5
QZH	Quanzhou	4.62	283	P	P	21 41 08.6	-0.5
QZH				S	S	21 41 57.7	-4.5
QZH				Smax			
	comp=N,150nm,1.3s						
QZH				Smax			
	comp=E,110nm,1.0s						
JOW	Kunigami	5.14	55	P	P	21 41 18.9	+2.4
	comp=E,2.2nm,0.3s,baz=144,slow=19,SNR=2.9						
LZH	Lanzhou	20.86	310	*e*P	P	21 44 40.0	-0.5
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s						
CMAR	Chiang Mai Arr	23.57	261	LR	LR	21 55 49.8	
	comp=Z,88nm,18.3s,MS3.3,baz=70,slow=40						
SONM	Songino Array	27.45	334	P	P	21 45 43.2	-0.6
	comp=Z,0.7nm,0.5s,mb3.5,baz=156,slow=12,SNR=7.8						
LSA	Lhasa	29.41	288	*e*P	P	21 46 03.3	+1.8
	comp=Z,2.8nm,0.7s,mb4.1						
MKAR	Makanchi Array	40.00	315	P	P	21 47 32.1	0.0
	comp=Z,2.1nm,0.6s,mb4.0,baz=101,slow=10,SNR=24						
MKAR				PcP	PcP	21 49 37.1	-0.1
	comp=Z,0.5nm,0.7s,baz=90,slow=6.1,SNR=3.8						
MKAR				LR	LR	22 05 23.0	
	comp=Z,46nm,21.6s,MS3.3,baz=182,slow=38						
ZAL	Zalesovo	41.62	326	P	P	21 47 43.8	-1.5
	comp=Z,1.7nm,0.7s,mb3.8,baz=26,slow=8.8,SNR=10.0						
ZAL				LR	LR	22 06 58.6	
	comp=Z,122nm,18.3s,MS3.8,baz=5.4,slow=39						
WRA	Warramunga Arr	44.89	166	P	P	21 48 12.4	+0.1
	comp=Z,1.6nm,0.7s,mb3.9,baz=347,slow=9.0,SNR=15						
BVAR	Borovoye Array	49.21	320	P	P	21 48 44.6	-1.1
	comp=Z,0.9nm,0.4s,mb4.1,baz=90,slow=7.4,SNR=4.7						
ARU	Arti	56.58	323	*e*P	P	21 49 39.3	-1.2
	comp=Z,3.6nm,0.6s,mb4.6						
ILAR	Eielson Array	68.41	27	P	P	21 50 58.2	-0.7
	comp=Z,0.2nm,0.6s,mb3.4,baz=301,slow=11,SNR=5.2						
ARCES	ARCESS Array B	70.54	338	P	P	21 51 10.7	-1.1
	comp=Z,1.1nm,0.7s,mb3.9,baz=53,slow=9.0,SNR=3.9						
KAF	Kangasniemi	72.41	331	*e*p	P	21 51 22.2	-0.9
FINES	FINESS Array B	72.72	330	P	P	21 51 24.6	-0.3
	comp=Z,4.7nm,1.1s,mb4.3,baz=53,slow=5.4,SNR=12						
FINES				LR	LR	22 23 05.0	
	comp=Z,17nm,20.4s,MS3.3,baz=21,slow=36						
AKASG	Malin Array Be	74.46	319	P	P	21 51 34.8	-0.5
	comp=Z,0.5nm,0.4s,mb3.8,baz=57,slow=6.1,SNR=8.7						
BR131	Keskin Array S	75.03	307	*e*P	P	21 51 39.6	+0.8
	comp=Z,1.7nm,0.8s,mb4.0						
BRTR	Keskin Array B	75.03	307	P	P	21 51 40.0	+1.2
	comp=Z,1.7nm,0.6s,mb4.2,baz=87,slow=4.8,SNR=8.0						
NB2	NORSAR Subarra	79.42	333	P	P	21 52 03.0	+0.1
	comp=Z,2.4nm,0.5s,mb4.4,baz=55,slow=5.6						
NOA	NORSAR Array B	79.42	333	P	P	21 52 02.9	+0.1
	comp=Z,2.8nm,0.7s,mb4.3,baz=57,slow=5.6,SNR=11						
NOA				LR	LR	22 28 02.2	
	comp=Z,16nm,18.6s,MS3.4,baz=65,slow=36						
NOA	NORSAR Array B	79.42	333	P	P	21 52 02.9	+0.1
NOA				LR	LR	22 28 02.2	
YKA	Yellowknife Ar	82.32	23	P	P	21 52 18.3	+0.2
	comp=Z,0.9nm,0.6s,mb3.9,baz=307,slow=5.1,SNR=5.4						
YKA	Yellowknife Ar	82.32	23	P	P	21 52 18.3	+0.2
GERES	GERESS Array B	84.37	321	P	P	21 52 30.0	+1.2
	comp=Z,0.8nm,0.6s,mb4.0,baz=53,slow=6.7,SNR=8.7						

*NNC **10** 22:00:43.5±7.9,37.13N×71.21E,h169^{km}±123^{km},mpv3.8, Error ellipse: s-maj=74.3km s-min=43.9km az=13.0*
ISC 10 22:00:36.8±1.8**,36.77N**±0.07×**71.4E**±0.2**,h104**^{km}±51^{km}**, n5,**σ**0^{s}92**/9**,3C-2D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	5.61	139	*e*P	P	22 01 58.8	-0.3
	32nm,0.3s						
THN				*e*S	S	22 03 02.4	-0.4
AAK	Ala-Archa	6.33	21	⇑P	P	22 02 10.2	+1.2
	2.4nm,0.3s						
AAK				⇑S	S	22 03 20.2	-0.2
	6.4nm,0.5s						
KK31	Karatay Array	6.36	354	⇑P	P	22 02 10.9	+1.4
	2.5nm,0.2s,baz=172,slow=12,SNR=136						
KK31				⇓S	S	22 03 19.5	-1.8
	2.5nm,0.3s,baz=179,slow=19,SNR=10						
MK31	Makanchi Array	12.89	36	P	P	22 03 37.4	+0.3
	0.2nm,0.4s,baz=215,slow=12,SNR=4.8						
AB31	Akbulak array	15.00	330	P	P	22 04 04.0	-0.2
	0.8nm,0.6s,baz=151,slow=12,SNR=20						
AB31				⇓S	S	22 06 41.7	-6.2
	0.6nm,0.6s,baz=151,slow=22,SNR=4.0						

*IDC **10** 22:06:53.8±1.4,25.77S×116.51W,mb4.0/8,mb1 4.4/8, mb1mx4.1/19,mbtmp4.0/8,MS4.1/16,Ms1 4.1/16, ms1mx4.0/25,Error ellipse: s-maj=53.3km s-min=22.4km az=51.0*
*NEIC **10** 22:06:55.5±0.8,25.80S×116.47W,h10^{km},mb4.8/13, Error ellipse: s-maj=27.7km s-min=11.5km az=56.0*
ISC 10 22:06:55.2±2.1**,25.6S**±0.3×**116.2W**±0.4**,h10**^{km}**,n47,** σ**0^{s}83**/31**,mb4.3**/22**,MS4.2**/16**,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPT	Papeete	31.95	278	LR	LR	22 22 27.6	
	comp=Z,1µm,20.4s,MS4.5,baz=122,slow=29						
PLCA	Paso Flores	40.67	123	P	P	22 14 37.5	+0.2
	2.9nm,0.8s,mb3.9,baz=260,slow=5.3,SNR=5.2						
PLCA				LR	LR	22 27 14.8	
	comp=Z,520nm,20.1s,MS4.4,baz=283,slow=30						
CFAA	Coronel Fontan	42.31	110	P	P	22 14 50.7	-0.2
	0.2nm,0.5s,mb3.0,baz=259,slow=8.1,SNR=3.1						
CFAA				LR	LR	22 28 12.7	
	comp=Z,56nm,21.7s,MS3.4,baz=179,slow=30						
CFAA	Coronel Fontan	42.31	110	P	P	22 14 50.7	-0.2
CFAA				LR	LR	22 28 12.7	
LPAZ	La Paz	45.65	88	P	P	22 15 18.0	-0.1
	1.4nm,0.6s,mb4.1,baz=345,slow=2.2,SNR=5.5						
LPAZ				LR	LR	22 29 42.9	
	comp=Z,186nm,21.2s,MS4.0,baz=93,slow=30						
CPUP	Villa Florida	52.55	105	LR	LR	22 34 24.9	
	comp=Z,361nm,20.9s,MS4.4,baz=98,slow=31						
TXAR	Lajitas Array	55.88	13	P	P	22 16 36.8	+1.2
	0.3nm,0.7s,mb3.5,baz=190,slow=7.6,SNR=3.9						
TXAR				LR	LR	22 36 47.5	
	comp=Z,117nm,18.1s,MS4.0,baz=230,slow=32						
TXAR	Lajitas Array	55.88	13	P	P	22 16 36.8	+1.2
TXAR				LR	LR	22 36 47.5	
SDV	Santo Domingo	56.02	58	LR	LR	22 37 27.2	
	comp=Z,67nm,18.4s,MS3.8,baz=232,slow=32						
TUC	Tucson	57.77	5	*e*P	P	22 16 48.4	-0.5
	1.7nm,1.0s,mb4.0						
MNTX	Cornudas Mount	57.86	11	*e*P	P	22 16 47.8	-1.8
	13nm,1.5s,mb4.7						
ANMO	Albuquerque	60.87	9	P	P	22 17 11.6	+1.2
	0.5nm,0.3s,mb4.0,baz=357,slow=4.1,SNR=4.3						
WUAZ	Wupatki	60.90	5	P	P	22 17 12.2	+1.6
	2.7nm,0.4s,mb4.7						
VNDA	Vanda	63.50	194	LR	LR	22 37 50.1	
	comp=Z,218nm,21.8s,MS4.3,baz=73,slow=29						
NVAR	Mina Array Bea	63.67	358	P	P	22 17 27.5	-1.6
	1.7nm,0.9s,mb4.1,baz=207,slow=10,SNR=8.4						
NVAR				LR	LR	22 38 59.0	
	comp=Z,245nm,19.2s,MS4.4,baz=20,slow=30						
BDFB	Brasilia	64.03	96	LR	LR	22 42 17.1	
	comp=Z,233nm,20.5s,MS4.3,baz=261,slow=33						
SRU	San Rafael	64.54	5	*e*P	P	22 17 34.1	-0.6
ISCO	Idaho Springs	65.76	9	*e*P	P	22 17 43.1	+0.6
	7.8nm,1.2s,mb4.6						
ELK	Elko	65.96	1	*e*P	P	22 17 44.5	+0.7
BGU	Big Grassy Mou	66.20	3	*e*P	P	22 17 45.5	+0.2
SPUT	South Promonto	66.61	3	*e*P	P	22 17 48.7	+0.8
BW06	Boulder Array	68.25	5	*e*P	P	22 17 57.8	-0.5
	12nm,1.4s,mb4.7						
PDAR	Pinedale Array	68.25	5	P	P	22 17 57.8	-0.5
	1.6nm,0.6s,mb4.2,baz=166,slow=6.1,SNR=12						
PDAR				LR	LR	22 42 24.1	
	comp=Z,106nm,19.5s,MS4.1,baz=357,slow=31						
RRI2	Red Ridge	68.70	4	*e*P	P	22 18 01.3	+0.2
	26nm,1.5s,mb4.9						
TPAW	Teton Pass	68.86	4	*e*P	P	22 18 02.6	+0.5
	8.6nm,0.9s,mb4.7						
LOHW	Long Hollow	69.01	4	*e*P	P	22 18 01.9	-1.1
	13nm,1.4s,mb4.7						
MOOW	Moose Ponds	69.14	4	*e*P	P	22 18 03.8	+0.1
	11nm,1.3s,mb4.6						
IMW	Indian Meadow	69.27	4	*e*P	P	22 18 04.4	-0.2
	3.3nm,0.6s,mb4.4						
BMO	Blue Mountains	70.06	359	*e*P	P	22 18 09.7	+0.3
	26nm,1.9s,mb4.8						
MCMT	McKenzie Canyo	70.10	3	*e*P	P	22 18 09.4	-0.2
RSSD	Black Hills	70.22	9	*e*P	P	22 18 08.7	-1.6
	4.8nm,1.0s,mb4.4						
CHMT	Chamberlain Mo	72.17	2	*e*P	P	22 18 21.4	-0.7
NEW	Newport	73.47	359	P	P	22 18 29.7	+0.1
	2.0nm,0.4s,mb4.4,baz=143,slow=5.1,SNR=3.0						
ULM	Lac du Bonnet	77.59	13	LR	LR	22 49 06.0	
	comp=Z,118nm,19.8s,MS4.2,baz=340,slow=32						
EDM	Edmonton	78.47	2	*e*P	P	22 18 59.1	+1.3
HNR	Honiara	80.47	264	LR	LR	22 47 49.5	
	comp=Z,95nm,18.6s,MS4.2,baz=124,slow=31						
FCC	Fort Churchill	85.98	11	*e*P	P	22 19 37.3	+0.7
	12nm,1.3s,mb5.0						
MAW	Mawson	87.13	180	LR	LR	22 54 27.2	
	comp=Z,232nm,21.0s,MS4.6,baz=330,slow=33						
YKA	Yellowknife Ar	87.74	1	P	P	22 19 44.6	-0.4
	0.3nm,0.3s,mb4.0,baz=169,slow=4.0,SNR=8.8						
YKA				LR	LR	22 54 27.7	
	comp=Z,136nm,19.2s,MS4.4,baz=160,slow=32						
SCHQ	Schefferville	90.55	26	LR	LR	22 59 56.0	
	comp=Z,62nm,20.2s,MS4.0,baz=152,slow=35						
ZAL	Zalesovo	147.61	337	PKPbc	PKPdf	22 26 39.7	-0.1
	0.8nm,0.4s,baz=18,slow=3.3,SNR=3.2						
ARU	Arti	148.91	6	*e*PKPbc	PKPdf	22 26 43.7	+1.9
ARU				*e*PKPab	PKPab	22 26 48.6	-0.3
BR131	Keskin Array S	151.11	53	*e*PKPab	PKPab	22 26 58.1	-0.5
BRTR	Keskin Array B	151.11	53	PKPbc	PKPdf	22 26 50.4	+4.7
	0.5nm,0.7s,baz=180,slow=4.3,SNR=2.2						
CHKZ	Chkalovo	151.44	351	*e*PKPbc	PKPdf	22 26 49.5	+3.7
BVAR	Borovoye Array	152.11	351	PKPbc	PKPdf	22 26 50.2	+3.4
	0.5nm,0.6s,baz=333,slow=3.2,SNR=4.6						
MKAR	Makanchi Array	154.18	330	PKPbc	PKPdf	22 26 56.3	+6.4
	0.2nm,0.7s,baz=19,slow=1.8,SNR=3.5						

*IDC **10** 22:12:11.7±3.0,35.95N×95.02E,mb1 3.9/3, mb1mx3.5/22,mbtmp3.8/3,ML3.8/3,Error ellipse: s-maj=72.0km s-min=36.3km az=78.0*
BJI 10 22:12:13.4,36.31N×94.90E,h15^{km}**,ML3.6,Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	Gaotai	4.97	50	P	Pn	22 13 31.2	+1.8
GTA				SG	Sg	22 14 56.1	-2.8
MKAR	Makanchi Array	14.08	322	Pn	P	22 15 33.3	-1.1
	1.7nm,0.3s,baz=131,slow=14,SNR=51						
SONM	Songino Array	14.31	33	Pn	P	22 15 39.4	+1.9
	0.3nm,0.3s,baz=216,slow=15,SNR=15						
CMAR	Chiang Mai Arr	18.14	168	P	P	22 16 20.4	-6.1
	0.1nm,0.3s,baz=341,slow=11,SNR=6.7						

*IDC **10** 22:46:02.9±1.5,32.99S×178.56W,mb4.5/2,mb1 4.7/3, mb1mx4.2/15,mbtmp4.5/3,ML4.3/1,MS3.5/5,Ms1 3.5/5, ms1mx3.3/17,Error ellipse: s-maj=49.9km s-min=30.9km az=132.0*
*NEIC **10** 22:46:05.5±0.9,32.83S×178.77W,h10^{km},mb4.5/2,Error ellipse: s-maj=24.1km s-min=20.5km az=84.0*
ISC 10 22:46:14.0±1.1**,33.24S**±0.07×**179.8W**±0.2**,h33**^{km}**,n34,** σ**1^{s}35**/30**,mb4.5**/3**,MS3.4**/4**,4C,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.57	199	PN	Pn	22 47 23.9	+1.2
MXZ				*e*SN	Sn	22 48 23.2	+7.9
PUZ	Puketiti	5.06	197	PN	Pn	22 47 30.5	+0.8
PUZ				*e*SN	Sn	22 48 35.0	+7.3
MWZ	Matawai	5.51	202	PN	Pn	22 47 37.8	+1.8
MWZ				*e*SN	Sn	22 48 47.5	+8.4
URZ	Urewera	5.59	205	Pn	Pn	22 47 37.9	+0.8
	6.1nm,0.3s,baz=293,slow=2.2,SNR=49						
URZ				Sn	Sn	22 48 49.3	+8.4
	8.9nm,0.3s,baz=139,slow=20,SNR=8.0						
URZ	Urewera	5.59	205	PN	Pn	22 47 38.0	+1.0
URZ				*e*SN	Sn	22 48 49.2	+8.3
BKZ	Black Stump Fm	6.61	206	PN	Pn	22 47 51.5	0.0
PWZ	Pawanui	7.27	200	PN	Pn	22 48 00.1	-0.7
BFZ	Birch Farm	8.06	202	PN	P	22 48 09.6	-1.8
MRZ	Mangatainoka R	8.26	205	PN	P	22 48 11.6	-2.7
MRZ				SN	Sn	22 49 47.1	-0.7
KIW	Kapiti Island	8.69	207	*e*PN	P	22 48 17.6	-2.5
KIW				SN	Sn	22 49 59.4	+1.2
MTW	Mount Morrison	8.73	204	*e*PN	P	22 48 18.9	-1.9
TCW	Tory Channel	9.23	209	SN	Sn	22 50 11.7	0.0
NNZ	Nelson	9.62	212	SN	Sn	22 50 22.1	+0.9
THZ	Tophouse	10.27	212	*e*SN	S	22 50 36.8	-0.3
MQZ	McQueen’s Vall	11.98	207	*e*SN	S	22 51 13.1	-5.8
DZM	Mont Dzumac	16.45	309	LR	LR	22 55 17.3	
	comp=Z,232nm,18.5s,baz=61,slow=32						
STKA	Stephens Creek	32.41	262	LR	LR	23 05 15.3	
	comp=Z,102nm,19.1s,MS3.5,baz=24,slow=34						
CTA	Charters Tower	32.85	285	P	P	22 52 48.4	+1.4
	4.5nm,0.6s,mb4.6,baz=110,slow=13,SNR=5.4						
CTAO	Charters Tower	32.85	285	*e*P	P	22 52 47.3	+0.3
	4.2nm,0.7s,mb4.5						
WRAB	Tennant Creek	42.73	276	*e*P	P	22 54 09.6	-0.3
	6.9nm,0.7s,mb4.5						
WRA	Warramunga Arr	42.74	276	P	P	22 54 09.6	-0.3
	7.4nm,0.9s,mb4.4,baz=114,slow=7.9,SNR=91						
VNDA	Vanda	45.12	186	LR	LR	23 11 21.5	
	comp=Z,84nm,18.3s,MS3.7,baz=236,slow=33						
MAW	Mawson	69.10	201	LR	LR	23 25 59.4	
	comp=Z,33nm,20.2s,MS3.6,baz=244,slow=34						
VNA3	Neumayer Olymp	75.58	177	⇑*i*	P	22 57 53.8	-2.6
VNA3	Neumayer Olymp	75.58	177	⇑*i*	P	22 57 59.0	+2.6
VNA2	Neumayer--Watz	75.99	177	⇑*i*	P	22 57 55.8	-2.9
VNA2	Neumayer--Watz	75.99	177	⇑*i*	P	22 58 01.5	+2.8
CFAA	Coronel Fontan	88.78	127	LR	LR	23 30 47.7	
	comp=Z,5.0nm,20.0s,MS2.9,baz=215,slow=30						
MKAR	Makanchi Array	118.37	309	PKP	PKPdf	23 04 52.1	-5.7
	0.3nm,0.7s,baz=90,slow=2.4,SNR=3.8						
BVAR	Borovoye Array	127.30	314	PKP	PKPdf	23 05 10.0	-5.0
	0.7nm,0.7s,baz=90,slow=1.5,SNR=5.3						
KAF	Kangasniemi	146.64	338	*e*pkp	PKPdf	23 05 45.0	-4.8
FINES	FINESS Array B	147.21	337	PKPbc	PKPdf	23 05 47.1	-3.6
	3.9nm,1.0s,baz=90,slow=1.4,SNR=23						
NB2	NORSAR Subarra	151.27	349	PKPabc	PKPdf	23 05 57.2	+0.1
	1.7nm,0.7s,baz=16,slow=2.6						
NOA	NORSAR Array B	151.27	349	PKPbc	PKPdf	23 05 57.6	+0.5
	2.3nm,0.7s,baz=12,slow=4.0,SNR=8.8						

IDC 10 23:07:11.2±4.0**,0.69N×98.58E,mb3.8**/4**,mb1 3.9**/4**, mb1mx3.6**/18**,mbtmp3.8**/4**,MS2.9**/1**,Ms1 3.1**/1**, ms1mx2.8**/20**,Error ellipse: s-maj=163.1km s-min=27.5km az=56.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	17.66	1	LR	LR	23 18 18.9	
	comp=Z,47nm,21.5s,baz=205,slow=38						
WRA	Warramunga Arr	40.60	122	P	P	23 14 52.7	-1.8
	0.6nm,0.7s,baz=304,slow=8.9,SNR=7.3						
SONM	Songino Array	47.45	7	P	P	23 15 48.8	-0.7
	0.6nm,0.8s,baz=191,slow=6.3,SNR=4.1						
MKAR	Makanchi Array	48.08	345	P	P	23 15 52.0	-2.4
	1.1nm,0.6s,baz=158,slow=8.3,SNR=17						
ZAL	Zalesovo	54.28	350	P	P	23 16 38.5	-2.7
	1.0nm,0.6s,baz=85,slow=8.8,SNR=5.4						

*NEIC **10** 23:10:16.5±1.6,20.26S×68.64W,h110^{km}±29^{km},mb3.8/1, Error ellipse: s-maj=21.4km s-min=18.3km az=110.0*
*IDC **10** 23:10:16.4±2.9,20.16S×68.72W,h117^{km}±56^{km},mb3.4/2, mb1 3.6/5,mb1mx3.4/17,mbtmp4.0/5,Error ellipse: s-maj=31.0km s-min=28.0km az=141.0*
ISC 10 23:10:15.2±1.9**,20.2S**±0.1×**68.7W**±0.1**,h124**^{km}±36^{km}**,n8,** σ**0^{s}76**/9**,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.95	8	P	P	23 11 16.5	+1.3
	3.5nm,0.3s,baz=206,slow=7.4,SNR=145						
LPAZ				S	S	23 12 00.4	-0.8
	1.1nm,0.3s,baz=176,slow=13,SNR=3.0						
SIV	San Ignacio	8.39	61	P	P	23 12 14.4	-0.8
	1.2nm,0.3s,baz=260,slow=11,SNR=41						
SIV				S	S	23 13 48.9	+0.2
	0.1nm,0.3s,baz=306,slow=15,SNR=4.2						
CPUP	Villa Florida	12.09	122	P	P	23 13 04.8	+0.4
	0.3nm,0.3s,baz=322,slow=14,SNR=12						
TRQA	Tornquist	18.70	163	*e*P	P	23 14 25.3	-1.2
	3.1nm,0.6s						
BDFB	Brasilia	20.20	80	P	P	23 14 42.6	+0.3
	3.5nm,0.6s,baz=268,slow=9.5,SNR=5.3						
PLCA	Paso Flores	20.50	184	P	P	23 14 45.7	+0.5
	3.2nm,0.8s,baz=352,slow=12,SNR=5.2						
PLCA	Paso Flores	20.50	184	P	P	23 14 45.7	+0.5
YKA	Yellowknife Ar	90.05	341	pP	pP	23 23 31.0	-2.9
	0.5nm,0.5s,baz=136,slow=5.2,SNR=5.9						

*NEIC **11** 00:12:17.5,38.24S×176.09E,h185^{km},MG4.3(WEL), After WEL.*
WEL 11 00:12:18.2±0.3**,38.31S×176.11E,h182**^{km}±2^{km}**,ML4.4**/19**, Error ellipse: s-maj=2.2km s-min=2.0km az=0.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PATZ	Paeroa	0.14	122	PN	P	00 12 42.5	-0.1
UTU	Utuhina	0.15	27	PN	P	00 12 42.8	+0.2
TAZ	Tarawera	0.32	77	PN	P	00 12 43.3	+0.3
WHTZ	Whakaora	0.38	198	PN	P	00 12 43.1	-0.1
WATZ	Wairara	0.50	216	PN	P	00 12 43.3	-0.4
EDRZ	Edgecumbe	0.54	68	PN	P	00 12 43.2	-0.5
MARZ	Manawahe	0.55	54	PN	P	00 12 43.5	-0.3
HATZ	Hinemaiaia	0.58	181	PN	P	00 12 43.6	-0.4
HATZ				SN	S	00 13 02.7	-1.1
RATZ	Rangitukua	0.62	205	PN	P	00 12 43.8	-0.3
RITZ	Rihia Road	0.70	196	PN	P	00 12 44.6	0.0
KATZ	Kakaramea	0.74	206	PN	P	00 12 44.6	-0.2
URZ	Urewera	0.79	87	PN	P	00 12 44.3	-0.7
URZ				SN	S	00 13 04.3	-1.4
URZ				SN	S	00 13 04.3	-1.4
BKZ	Black Stump Fm	0.91	161	P	P	00 12 45.8	+0.1
BKZ				S	S	00 13 08.1	+1.1
BKZ	Black Stump Fm	0.91	161	PN	P	00 12 45.8	+0.1
BKZ				SN	S	00 13 06.5	-0.5
OTVZ	Oturere	0.92	202	PN	P	00 12 45.8	0.0
OTVZ				SN	S	00 13 07.2	+0.1
HIZ	Hauiti	1.00	258	P	P	00 12 45.8	-0.5
HIZ	Hauiti	1.00	258	PN	P	00 12 45.8	-0.5
HIZ				SN	S	00 13 07.8	-0.3
TUVZ	Tukino	1.02	200	P	P	00 12 46.5	0.0
TUVZ	Tukino	1.02	200	PN	P	00 12 46.4	0.0
TUVZ				SN	S	00 13 08.1	-0.2
MYRZ	Mayor Island	1.03	6	PN	P	00 12 47.3	+0.7
WNVZ	Wahianoa	1.09	201	P	P	00 12 46.9	-0.2
WNVZ	Wahianoa	1.09	201	PN	P	00 12 46.9	-0.2
WNVZ				SN	S	00 13 10.0	+0.6
MWZ	Matawai	1.12	92	PN	P	00 12 47.0	-0.2
MWZ				SN	S	00 13 08.9	-0.8
MOVZ	Moawhango	1.13	194	P	P	00 12 46.9	-0.5
MOVZ	Moawhango	1.13	194	PN	P	00 12 46.9	-0.6
MOVZ				SN	S	00 13 08.3	-1.6
MTVZ	Mangateitei	1.19	205	PN	P	00 12 47.6	-0.3
MTVZ				SN	S	00 13 10.3	-0.5
VRZ	Vera Road	1.33	232	P	P	00 12 48.5	-0.7
VRZ	Vera Road	1.33	232	PN	P	00 12 48.4	-0.8
VRZ				SN	S	00 13 13.4	+0.2
KNZ	Kokohu	1.42	121	PN	P	00 12 50.3	+0.3
KNZ				SN	S	00 13 14.1	-0.4
WAZ	Wanganui	1.69	211	P	P	00 12 51.7	-0.9
WAZ	Wanganui	1.69	211	PN	P	00 12 51.6	-1.0
WAZ				SN	S	00 13 18.4	-0.7
PUZ	Puketiti	1.71	83	PN	P	00 12 52.0	-0.8
PUZ				SN	S	00 13 17.9	-1.6
TSZ	Takapari Road	1.75	184	PN	P	00 12 52.6	-0.6
TSZ				SN	S	00 13 19.3	-0.9
BFZ	Birch Farm	2.37	177	P	P	00 12 58.5	-1.6
BFZ	Birch Farm	2.37	177	PN	P	00 12 58.5	-1.5
BFZ				SN	S	00 13 29.7	-2.6
MRZ	Mangatainoka R	2.39	190	P	P	00 12 58.4	-1.8
MRZ	Mangatainoka R	2.39	190	PN	P	00 12 58.4	-1.8
MRZ				SN	S	00 13 29.2	-3.4
KIW	Kapiti Island	2.71	200	P	P	00 13 01.5	-2.6
KIW	Kapiti Island	2.71	200	PN	P	00 13 01.5	-2.6
KIW				SN	S	00 13 35.1	-4.3
MTW	Mount Morrison	2.88	189	P	P	00 13 03.4	-2.7
MTW	Mount Morrison	2.88	189	PN	P	00 13 03.4	-2.7
MTW				SN	S	00 13 38.7	-4.4
CAW	Cannon Point	2.91	196	P	P	00 13 03.8	-2.6
CAW	Cannon Point	2.91	196	PN	P	00 13 03.8	-2.6
DUWZ	D’Urville Isla	3.01	213	PN	P	00 13 04.5	-3.1
MRW	Makara Radio	3.11	200	P	P	00 13 06.0	-2.9
MRW	Makara Radio	3.11	200	PN	P	00 13 06.0	-2.9
MRW				SN	S	00 13 43.3	-4.7
PAWZ	Paruwai Farm	3.11	189	PN	P	00 13 05.9	-3.0
WEL	Wellington	3.15	199	PN	P	00 13 06.5	-2.9
MSWZ	Moikau Station	3.17	192	P	P	00 13 06.5	-3.2
MSWZ	Moikau Station	3.17	192	PN	P	00 13 06.5	-3.2

SNZO	**South Karori**	3.19	199	P	P	00 13 06.7	-3.1
SNZO	**South Karori**	3.19	199	PN	P	00 13 06.5	-3.3
TCW	**Tory Channel**	3.23	205	P	P	00 13 07.2	-3.1
TCW	**Tory Channel**	3.23	205	PN	P	00 13 07.1	-3.3
BHW	**Baring Head**	3.24	197	P	P	00 13 07.3	-3.2
BHW	**Baring Head**	3.24	197	PN	P	00 13 07.1	-3.4
NNZ	**Nelson**	3.59	215	P	P	00 13 10.9	-4.0
CMWZ	**Cape Campbell**	3.73	202	P	P	00 13 14.0	-2.7
QRZ	**Quartz Range**	3.74	227	*e*P	P	00 13 12.0	-4.8
BSWZ	**Blackbirch Sta**	3.81	206	P	P	00 13 14.1	-3.6
THZ	**Tophouse**	4.24	214	P	P	00 13 19.2	-3.9
KHZ	**Kahutara**	4.55	205	P	P	00 13 23.3	-3.8
LTZ	**Lake Taylor**	5.34	212	*e*P	P	00 13 32.4	-5.0

NEIC 11 00:12:46.2,31.03S×71.43W,h38^{km},MD3.8(GUC),After GUC.

GUC 11 00:12:46.0±0.9,31.03S×71.44W,h38^{km}±4^{km},MD3.9, ML3.2,2C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	**Combarbala**	0.41	111	⇓*i*P	P	00 12 55.6	+0.2
CMCH				*i*S	S	00 13 03.3	+1.3
CMCH				AMP		00 13 03.5	
	comp=N,3μm,0.1s						
ILCH	**Illapel**	0.65	159	⇑*i*P	P	00 12 58.7	-0.1
ILCH				*i*S	S	00 13 08.2	+0.2
ILCH				AMP		00 13 09.4	
	comp=N,3μm,0.2s						
TLL	**Tololo Astrono**	1.02	33	⇑*i*P	P	00 13 04.5	+0.6
TLL				*i*S	S	00 13 18.8	+1.5
TLL				AMP		00 13 19.5	
	comp=E,1μm,0.3s						
LSCH	**La Serena**	1.13	9	*i*P	P	00 13 06.3	+0.8
LSCH				*i*S	S	00 13 21.4	+1.3
LSCH				AMP		00 13 24.1	
	comp=N,248nm,0.1s						
LSCH	**La Serena**	1.13	9	*e*P	P	00 13 06.5	+1.0
LSCH				*i*S	S	00 13 21.8	+1.8
PACH	**Papudo**	1.51	180	*i*P	P	00 13 10.4	-0.6
PACH				*i*S	S	00 13 30.1	+0.4
PACH	**Papudo**	1.51	180	*i*P	P	00 13 10.4	-0.6
PACH				*i*S	S	00 13 30.9	+1.3
JACH	**Jahuel**	1.80	157	*e*P	P	00 13 14.8	-0.4
JACH				*i*S	S	00 13 37.3	+0.3
JACH	**Jahuel**	1.80	157	*e*P	P	00 13 14.9	-0.3
JACH				*i*S	S	00 13 37.3	+0.3
ROCH	**El Roble**	1.98	169	*e*P	P	00 13 18.9	+1.2
PEL	**Peldehue**	2.21	163	*i*S	S	00 13 48.5	+1.2
PEL				AMP		00 13 59.5	
	comp=N,212nm,0.2s						
ZON	**Zonda**	2.42	103	*e*P	P	00 13 24.5	+0.4
ZON				*e*S	S	00 13 54.5	+1.7
CLCH	**Cerro Calan**	2.48	162	*e*P	P	00 13 25.1	+0.2
CLCH				*i*S	S	00 13 55.5	+1.2
CLCH				AMP		00 14 07.0	
	comp=E,196nm,0.5s						
SFDO	**San Fernando**	3.60	174	*e*P	P	00 13 40.8	+0.1
SFDO	**San Fernando**	3.60	174	*e*P	P	00 13 41.1	+0.4

MAN 11 00:34:56.9,15.46N×122.00E,h1^{km},mb3.5,ML2.2,MS1.7, 1C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	**Baler**	0.50	305	*e*P	Pg	00 35 10.5	+3.7
BALP				*e*S	Sg	00 35 19.6	+6.1
POLP	**Polilio Island**	0.72	185	*e*P	Pg	00 35 10.9	-0.4
POLP				*e*S	Sg	00 35 19.9	-1.1
PCPH	**Palayan**	0.88	277	⇑*e*P	Pg	00 35 14.3	-0.2
PCPH				*e*S	Sg	00 35 27.2	+1.1
CAUP	**Cauayan**	1.49	353	*e*P	Pn	00 35 23.6	-1.2
CAUP				*e*S	Sb	00 35 49.5	+5.1
BOAC	**Boac**	1.99	184	*e*P	Pn	00 35 33.2	+1.2

NNC 11 00:38:50.8±3.0,37.64N×71.66E,h143^{km}±64^{km},mpv3.8, Error ellipse: s-maj=31.2km s-min=21.5km az=15.0

ISC 11 00:38:48.0±2.2,37.6N±0.1×71.6E±0.2,h100^{km},n9, σ0^{s}51/11,3C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	4.86	19	P	**P**	**00 40 00.5**	**+0.3**
	SNR=21						
UCH	**Uchtor**	5.19	25	P	**P**	**00 40 04.7**	**0.0**
	SNR=6.3						
KZA	**Kyzart**	5.33	31	P	**P**	**00 40 05.8**	**-0.8**
	SNR=6.5						
EKS2	**Erkin-Say**	5.38	18	P	**P**	**00 40 07.7**	**+0.5**
	SNR=6.8						
AAK	**Ala-Archa**	5.55	23	P	**P**	**00 40 10.0**	**+0.5**
	SNR=5.0						
AAK	**Ala-Archa**	5.55	23	⇑P	**P**	**00 40 09.6**	**+0.1**
	3.6nm,0.3s						
AAK				⇑S	**S**	**00 41 12.6**	**-0.1**
	2.7nm,0.5s						
KK31	**Karatay Array**	5.61	352	P	**P**	**00 40 11.4**	**+1.0**
	3.8nm,0.3s,baz=169,slow=11,SNR=122						
KK31				⇑S	**S**	**00 41 14.0**	**-0.2**
	1.0nm,0.4s,baz=166,slow=20,SNR=7.7						
CHMS	**Chumysh**	5.96	23	P	**P**	**00 40 14.8**	**-0.3**
	SNR=5.6						
AB31	**Akbulak array**	14.42	328	⇓P	**P**	**00 42 07.5**	**-0.7**
	0.2nm,0.5s,baz=132,slow=14,SNR=7.1						

NEIC 11 00:39:14.0,35.08S×70.59W,h3^{km},ML2.9(GUC),After GUC.

GUC 11 00:39:14.0±0.7,35.08S×70.59W,h3^{km}±4^{km},MD3.5, ML2.9,5C-2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	**San Fernando**	0.57	323	⇓*i*P	Pg	00 39 25.5	0.0
SFDO				*i*S	Sg	00 39 34.9	+1.7
CICH	**Cipreses**	0.77	11	⇓*i*P	Pg	00 39 27.3	-2.0
CICH				*i*S	Sg	00 39 38.8	-0.7
CACH	**El Canelo**	0.96	360	⇑*i*P	Pb	00 39 31.0	-1.9
CACH				*i*S	Sb	00 39 44.5	-1.2
CHCH	**Chadas Angostu**	1.14	358	⇑*i*P	Pb	00 39 34.6	-1.4
CHCH				*i*S	Sb	00 39 50.3	-0.7
LNV	**Longovilo**	1.30	329	⇑*i*P	Pb	00 39 37.7	-1.1
LNV				*i*S	Sb	00 39 56.3	+0.5
TACH	**Talagante**	1.45	349	⇑*i*P	Pn	00 39 39.9	-1.2
TACH				*i*S	Sb	00 39 59.9	0.0
ANTU	**Antumapu**	1.50	359	*i*S	Sb	00 40 01.8	+0.2
ANTU				AMP		00 40 01.9	
	comp=N,208nm,0.3s						
ANTU				AMP		00 40 03.0	
	comp=E,214nm,0.2s						
CLCH	**Cerro Calan**	1.68	2	⇑*i*P	Pn	00 39 43.8	-0.6
CLCH				*i*S	Sb	00 40 06.8	+0.2
CLCH				AMP		00 40 14.2	
	comp=E,211nm,0.4s						
CLCH				AMP		00 40 17.4	
	comp=N,166nm,0.5s						
FCH	**Farellones**	1.76	8	*i*P	Pn	00 39 45.8	+0.2
FCH				*i*S	Sn	00 40 09.8	+1.0
LCCH	**Las Cruces**	1.79	333	*i*S	Sn	00 40 09.2	-0.3
PEL	**Peldehue**	1.93	358	*i*S	Sn	00 40 13.9	+0.8
PEL				AMP		00 40 21.4	
	comp=N,344nm,0.3s						

IDC 11 01:11:39.8±3.6,15.36N×147.73E,mb4.0/4,mb1 4.2/4, mb1mx3.8/20,mbtmp4.0/4,Error ellipse: s-maj=144.7km s-min=29.7km az=86.0

NEIC 11 01:11:47.9±1.4,15.29N×147.01E,h40^{km},mb4.1/1,Error ellipse: s-maj=40.9km s-min=16.5km az=101.0

ISC 11 01:11:44.9±1.5,15.3N±0.1×147.1E±0.3,h33^{km},n8, σ0^{s}27/8,mb4.1/5,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	2.79	232	P	**P**	**01 12 28.1**	**-0.1**
WRAB	**Tennant Creek**	37.23	200	*e*P	**P**	**01 18 55.6**	**+0.2**
	2.1nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	37.24	200	P	**P**	**01 18 55.3**	**-0.1**
	1.1nm,0.7s,mb3.8,baz=25,slow=9.6,SNR=13						
ZAL	**Zalesovo**	61.52	323	P	**P**	**01 22 01.3**	**+0.4**
	1.5nm,0.3s,mb4.6,baz=36,slow=7.0,SNR=3.3						
ZAL	**Zalesovo**	61.52	323	P	**P**	**01 22 01.3**	**+0.4**
MKAR	**Makanchi Array**	61.79	315	P	**P**	**01 22 02.7**	**0.0**
	0.5nm,0.6s,mb3.8,baz=90,slow=6.1,SNR=4.4						
MKAR	**Makanchi Array**	61.79	315	P	**P**	**01 22 02.7**	**0.0**
FINES	**FINESS Array B**	90.50	336	P	**P**	**01 24 44.0**	**-0.4**
	1.1nm,0.9s,mb4.2,baz=79,slow=7.1,SNR=3.7						

ROM 11 01:31:31.4±0.1,40.52N×19.60E,h11^{km}±4^{km},Md3.3/5, Ml2.5/1,Error ellipse: s-maj=3.9km s-min=2.3km az=12.0

CSEM 11 01:31:31.6±0.1,40.55N×19.65E,h2^{km},MD3.3/5,Error ellipse: s-maj=2.3km s-min=1.8km az=32.0

NEIC 11 01:31:32.8±0.5,40.52N×19.55E,h5^{km},MD3.3(ATH), ML2.5(ROM),Error ellipse: s-maj=12.8km s-min=5.2km az=195.0

ATH 11 01:31:33.3,40.45N×19.57E,h15^{km},MD3.3/4

ISC 11 01:31:31.6±0.4,40.57N±0.03×19.61E±0.04,h10^{km},n28, σ1^{s}07/33,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	**Vlora**	0.13	220	*i*Pg	**Pg**	**01 31 33.9**	**-1.0**
VLO				*i*Sg	**Sg**	**01 31 37.0**	**0.0**
TPE	**Tepelena**	0.41	132	*i*Pg	**Pg**	**01 31 38.2**	**-1.9**
TPE				*i*Sg	**Sg**	**01 31 44.1**	**-1.6**
SRN	**Sarande**	0.75	156	*i*Pg	**Pg**	**01 31 47.0**	**+0.2**
SRN				*i*Sg	**Sg**	**01 31 57.7**	**+0.8**
TIR	**Tirane**	0.80	14	*i*Pg	**Pg**	**01 31 40.5**	**-7.2**
TIR	**Tirane**	0.80	14	Pn	**Pn**	**01 31 48.2**	**-0.5**
	164nm,0.6s						
LSK	**Leskovik**	0.87	119	*i*Pg	**Pg**	**01 31 44.8**	**-4.2**
LSK				*i*Sg	**Sg**	**01 32 00.6**	**0.0**
KEK	**Kerkira**	0.87	170	*e*PN	**Pn**	**01 31 47.8**	**-1.9**
KEK	**Kerkira**	0.87	170	Pn	**Pn**	**01 31 47.8**	**-1.9**
	88nm,0.3s						
LCI	**Lecce**	1.17	259	Pn	**Pn**	**01 31 53.8**	**-0.2**
	34nm,0.2s						
IGT	**Igoumenitsa**	1.18	152	*e*P	**Pb**	**01 31 54.1**	**+0.5**
JAN	**Janina**	1.32	133	*e*Pg	**Pg**	**01 31 56.9**	**-1.1**
JAN				*e*Sb	**Sb**	**01 32 17.6**	**+4.7**
FNA	**Florina**	1.36	80	*e*P	**Pb**	**01 31 57.3**	**+0.5**
MEV	**Metsovon**	1.47	122	*e*P	**Pn**	**01 31 59.4**	**+1.1**
PUK	**Puka**	1.48	8	*i*Pg	**Pg**	**01 32 00.4**	**-0.9**
KZN	**Kozani**	1.67	98	*e*PN	**Pn**	**01 32 04.5**	**+3.3**
BCI	**Bajram Curri**	1.83	11	*i*Pg	**Pg**	**01 32 05.5**	**-2.6**
SKO	**Skopje**	1.96	44	*e*Pn	**Pn**	**01 32 06.8**	**+1.4**
LTRZ	**Laterza**	2.12	272	Pn	**Pn**	**01 32 08.2**	**+0.5**
GRG	**Griva**	2.16	79	*e*P	**Pn**	**01 32 09.5**	**+1.4**
EVR	**Evrytania**	2.37	134	*e*PN	**Pn**	**01 32 13.0**	**+1.8**
AGG	**Agios Georgios**	2.61	126	*e*P	**Pn**	**01 32 15.1**	**+0.5**
SLCN	**Sala Consilina**	3.04	268	Pn	**Pn**	**01 32 21.0**	**+0.3**
	5.0nm,0.3s						
MRLC	**Muro Lucano**	3.14	275	Pn	**Pn**	**01 32 22.8**	**+0.6**
	11nm,0.8s						
SGO	**Sicignano**	3.28	271	Pn	**Pn**	**01 32 24.5**	**+0.4**
	3.0nm,0.4s						
SGG	**Gregorio Mates**	4.04	283	Pn	**Pn**	**01 32 35.5**	**+0.5**
CII	**Carovilli**	4.17	288	Pn	**Pn**	**01 32 37.1**	**+0.3**
	3.0nm,0.2s						
SDI	**San Donato**	4.52	286	Pn	**Pn**	**01 32 41.8**	**0.0**
	9.0nm,0.3s						
NRCA	**Norcia**	5.36	297	Pn	**Pn**	**01 32 52.7**	**-1.0**
	6.0nm,0.5s						

INMG 11 01:36:27.4±1.2,36.67N×12.87W,h10^{km},ML2.1,Error ellipse: s-maj=11.1km s-min=4.1km az=125.0

NEIC 11 01:36:27.1,36.93N×12.41W,MG3.6(MDD),After MDD.

IGIL 11 01:36:27.0,36.68N×12.88W,h0^{km},ML2.8

CSEM 11 01:36:28.0±1.1,37.04N×12.47W,h10^{km},ML3.0/11,Error ellipse: s-maj=19.3km s-min=15.7km az=72.0

MDD 11 01:36:27.2±2.8,36.86N×12.41W,mb2.5/5,Error ellipse: s-maj=24.9km s-min=17.9km az=103.0,PRXIMO, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	3.02	76	*e*Pn	Pn	01 37 15.0	-2.1
PTEO				*e*Sn	Sn	01 37 49.6	-4.9
	2.4nm,0.2s						
PTEO	**Sao Teotonio**	3.02	76	*e*Pn	Pn	01 37 15.0	-2.1
PTEO				*e*Sn	Sn	01 37 49.6	-4.9
	2.4nm,0.2s						
PLOU	**Loures**	3.27	51	*e*Sn	Sn	01 37 57.0	-4.0
	6.7nm,0.1s						
PLOU	**Loures**	3.27	51	*e*Sn	Sn	01 37 57.0	-4.0
	6.7nm,0.1s						
ALMR	**Almeirim**	3.79	52	*e*P	Pn	01 37 22.6	-5.6
ALMR				*e*S	Sn	01 38 09.2	-5.0
ALMR				*e*S	Sn	01 38 09.2	-5.0
ALMR				AML	AML	01 38 10.6	
	comp=E,19nm,0.2s						
PBEJ	**Beja**	3.80	71	*e*Pn	Pn	01 37 26.2	-2.0
PBEJ				*e*Sn	Sn	01 38 09.2	-5.0
	comp=E,2.0nm,0.2s						
PBEJ	**Beja**	3.80	71	*e*Pn	Pn	01 37 26.2	-2.0
PBEJ				*e*Sn	Sn	01 38 09.2	-5.0
	comp=E,2.0nm,0.2s						
PALC	**Alcoutim**	3.98	80	*e*Pn	Pn	01 37 28.4	-2.4
PALC				*e*Sn	Sn	01 38 13.1	-5.9
	comp=E,1.7nm,0.1s						
PALC	**Alcoutim**	3.98	80	*e*Pn	Pn	01 37 28.4	-2.4
PALC				*e*Sn	Sn	01 38 13.1	-5.9
	comp=E,1.7nm,0.1s						
EGRO	**El Granado**	3.99	79	Pn	Pn	01 37 28.2	-2.7
EGRO				Sn	Sn	01 38 11.4	-7.6
EGRO	**El Granado**	3.99	79	Pn	Pn	01 37 28.2	-2.7
	comp=E,0.0nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	01 38 13.8	-5.3
	comp=E,1.0nm,0.1s,SNR=7.9						
EGRO	**El Granado**	3.99	79	Pn	Pn	01 37 28.2	-2.7
	comp=E,0.3nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	01 38 11.4	-7.7
	comp=E,1.0nm,0.1s,SNR=7.9						
PTOM	**Tomar**	4.18	48	*e*Sn	Sn	01 38 19.2	-4.7
	comp=E,4.6nm,0.1s						
PTOM	**Tomar**	4.18	48	*e*Sn	Sn	01 38 19.2	-4.7
	comp=E,4.6nm,0.1s						
EMIN	**Mina Concepcio**	4.66	77	Pn	Pn	01 37 36.8	-3.7
	comp=E,0.0nm,0.0s,SNR=7.9						
EMIN				Sn	Sn	01 38 28.4	-7.7
	comp=E,0.5nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	4.66	77	Pn	Pn	01 37 36.8	-3.6
	comp=E,0.1nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	01 38 28.4	-7.7
	comp=E,0.5nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	4.67	64	Pn	Pn	01 37 37.9	-2.7
	comp=E,0.0nm,0.0s,SNR=7.9						
EBAD				Sn	Sn	01 38 29.1	-7.2
	comp=E,0.7nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	4.67	64	Pn	Pn	01 37 37.9	-2.7
	comp=E,0.3nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	01 38 29.1	-7.3
	comp=E,0.7nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	4.88	51	*e*Pn	Pn	01 37 40.7	-2.9
PCBR				*e*Sn	Sn	01 38 34.6	-7.2
MTE	**Manteigas**	5.19	46	*e*Sn	Sn	01 38 42.7	-6.8
	comp=E,1.7nm,0.2s						
MTE	**Manteigas**	5.19	46	Sn	Sn	01 38 42.7	-6.8
	comp=E,0.9nm,0.2s						
PVIS	**Viseu**	5.22	41	*e*Sn	Sn	01 38 42.2	-8.0
	comp=E,3.9nm,0.1s						
PVIS	**Viseu**	5.22	41	Sn	Sn	01 38 42.2	-8.0
	comp=E,1.9nm,0.1s						
ESPR	**Espera**	5.25	88	Pn	Pn	01 37 45.7	-3.1
	comp=E,0.0nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	01 38 44.2	-6.8
	comp=E,1.9nm,0.2s,SNR=7.9						
ESPR	**Espera**	5.25	88	Pn	Pn	01 37 45.7	-3.1
	comp=E,0.4nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	01 38 44.2	-6.8
	comp=E,1.9nm,0.2s,SNR=7.9						
PVRL	**Vila Real**	5.72	38	*e*Sn	Sn	01 38 53.8	-9.0
	comp=E,2.2nm,0.1s						
PVRL	**Vila Real**	5.72	38	Sn	Sn	01 38 53.8	-9.0
	comp=E,1.1nm,0.1s						
ELOB	**Lobios**	6.03	33	Sn	Sn	01 39 01.2	-9.3
	comp=E,1.0nm,0.1s,SNR=7.9						
ELOB	**Lobios**	6.03	33	Sn	Sn	01 39 01.2	-9.3
	comp=E,1.0nm,0.1s,SNR=7.9						
EADA	**Adamuz**	6.36	76	Pn	Pn	01 38 01.0	-3.4
	comp=E,3.3nm,2.6s,SNR=7.9						
EADA				Sn	Sn	01 39 10.2	-8.5
	comp=E,0.4nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	6.63	22	Sn	Sn	01 39 12.5	-13
	comp=E,1.2nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	6.63	22	Sn	Sn	01 39 12.5	-13
	comp=E,1.2nm,0.1s,SNR=7.9						
ECAL	**Calabor**	6.71	39	Sn	Sn	01 39 18.2	-9.2
	comp=E,0.7nm,0.2s,SNR=7.9						
ECAL	**Calabor**	6.71	39	Sn	Sn	01 39 18.2	-9.3
	comp=E,0.7nm,0.2s,SNR=7.9						

NEIC 11 01:47:26.9±0.9,29.65S×178.53W,h173^{km}±8^{km},mb4.4/2, Error ellipse: s-maj=18.5km s-min=16.1km az=196.0

IDC 11 01:47:26.9±1.0,29.57S×178.59W,h168^{km}±5^{km},mb4.1/6, mb1 4.3/6,mb1mx4.0/14,mbtmp4.5/6,Error ellipse: s-maj=56.5km s-min=19.6km az=161.0

ISC 11 01:47:24.5±0.6,30.16S±0.05×178.9W±0.1,h142^{km}±7^{km}, n36,σ1^{s}15/32,mb4.3/8,3D,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	1.23	43	P	**P**	**01 47 51.9**	**+1.0**
	809nm,0.3s,baz=93,slow=22,SNR=23						
RAO				S	**S**	**01 48 10.5**	**-0.7**
	2μm,0.3s,baz=127,slow=23,SNR=12						
RAO	**Raoul Island**	1.23	43	*e*P	**P**	**01 47 51.6**	**+0.6**
MXZ	**Matakaoa Point**	7.75	197	PN	**P**	**01 49 15.8**	**+0.2**
MXZ				SN	**S**	**01 50 44.1**	**+1.9**
PUZ	**Puketiti**	8.24	196	PN	**P**	**01 49 21.4**	**-0.8**
PUZ				SN	**S**	**01 50 53.0**	**-1.1**
MWZ	**Matawai**	8.68	199	PN	**P**	**01 49 27.6**	**-0.4**
MWZ				SN	**S**	**01 51 06.3**	**+1.8**
URZ	**Urewera**	8.74	201	P	**P**	**01 49 27.6**	**-1.2**
	0.4nm,0.3s,baz=231,slow=22,SNR=4.4						
URZ				S	**S**	**01 51 07.0**	**+1.2**
	1.4nm,0.3s,baz=122,slow=11,SNR=5.0						
URZ	**Urewera**	8.74	201	PN	**P**	**01 49 31.4**	**+2.6**
URZ				SN	**S**	**01 51 09.9**	**+4.0**
MRZ	**Mangatainoka R**	11.41	202	SN	**S**	**01 52 04.8**	**-4.4**
KIW	**Kapiti Island**	11.81	204	SN	**S**	**01 52 15.8**	**-2.9**
NNZ	**Nelson**	12.70	208	SN	**S**	**01 52 38.3**	**-1.1**
THZ	**Tophouse**	13.35	208	PN	**P**	**01 50 29.7**	**+0.5**
THZ				SN	**S**	**01 52 53.3**	**-1.3**
CTA	**Charters Tower**	33.02	279	P	**P**	**01 53 49.2**	**+0.9**
	9.6nm,0.9s,mb4.5,baz=105,slow=13,SNR=6.9						
CTA	**Charters Tower**	33.02	279	P	**P**	**01 53 49.2**	**+0.9**
STKA	**Stephens Creek**	33.80	257	P	**P**	**01 53 56.6**	**+1.8**
	4.3nm,0.9s,mb4.2,baz=153,slow=10.0,SNR=4.5						
WB2	**Warramunga Arr**	43.32	272	*e*P	**P**	**01 55 13.6**	**-0.5**
WRAB	**Tennant Creek**	43.33	272	*e*P	**P**	**01 55 13.4**	**-0.7**
	12nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	43.33	272	P	**P**	**01 55 13.9**	**-0.3**
	6.1nm,0.6s,mb4.4,baz=110,slow=8.1,SNR=66						
WRA				PcP	PcP	01 56 58.2	-2.7
	2.9nm,0.8s,baz=114,slow=3.3,SNR=13						
WRA				ScP		02 00 35.3	
	0.6nm,0.7s,baz=105,slow=3.6,SNR=4.8						
QSPA	**South Pole Qui**	59.95	180	*e*P	**P**	**01 57 18.5**	**+1.0**
	1.9nm,0.6s,mb4.1						
MJAR	**Matsushiro Arr**	77.62	326	P	**P**	**01 59 01.2**	**-5.3**
	4.7nm,0.9s,mb4.1,baz=164,slow=5.7,SNR=7.5						
SNAA	**Sanae**	78.42	179		**P**	**01 59 18.3**	**+8.1**
VNA3	**Neumayer Olymp**	78.59	176	⇓*i*	**P**	**01 59 11.1**	**-0.1**
VNA2	**Neumayer--Watz**	79.02	177	⇓*i*	**P**	**01 59 13.7**	**+0.2**
VNA1	**Neumayer--Stat**	79.25	177	⇓*i*	**P**	**01 59 15.3**	**+0.5**
NVAR	**Mina Array Bea**	88.58	43	P	**P**	**01 59 59.7**	**-2.6**
	2.2nm,0.7s,mb4.2,baz=216,slow=7.6,SNR=15						
CMAR	**Chiang Mai Arr**	92.61	290	P	**P**	**02 00 21.4**	**-0.1**
	0.9nm,0.5s,mb4.1,baz=139,slow=3.1,SNR=5.4						
MKAR	**Makanchi Array**	117.04	310	PKP	PKPdf	02 05 49.2	-3.1
	0.3nm,0.6s,baz=225,slow=3.4,SNR=4.6						
ARCES	**ARCESS Array B**	138.19	347	PKP	PKPdf	02 06 28.8	-3.1
	2.1nm,0.8s,slow=2.4,SNR=4.8						
KAF	**Kangasniemi**	144.07	340	*e*pkp	PKPdf	02 06 34.7	-7.6
FINES	**FINESS Array B**	144.66	339	PKP	PKPdf	02 06 40.1	-3.3
	7.3nm,0.5s,baz=61,slow=4.0,SNR=85						
MALT	**Malatya**	148.28	295	*e*PKPbc	PKPdf	02 06 53.8	+3.6
NB2	**NORSAR Subarra**	148.40	351	PKPabc	PKPdf	02 06 50.9	+1.3
	1.6nm,0.6s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	148.40	351	PKPbc	PKPdf	02 06 50.9	+1.2
	3.2nm,0.6s,baz=16,slow=4.3,SNR=11						
AKASG	**Malin Array Be**	150.65	322	PKPbc	PKPdf	02 06 56.8	+3.4
	4.1nm,0.6s,baz=45,slow=2.8,SNR=33						
BRTR	**Keskin Array B**	151.82	299	PKPbc	PKPdf	02 07 01.1	+5.6
	0.7nm,0.4s,baz=139,slow=5.4,SNR=6.9						
BRTR				PKPab	PKPab	02 07 10.6	-3.5
	1.4nm,0.7s,baz=121,slow=4.3,SNR=7.1						
KWP	**Kalwaria**	154.62	326	*e*PKPab	PKPab	02 07 22.4	-3.1
GERES	**GERESS Array B**	159.02	336	PKPab	PKPab	02 07 41.1	-3.3
	0.9nm,0.7s,baz=34,slow=4.8,SNR=6.4						

CASC 11 01:51:08.6±2.6,7.64N×82.04W,h1^{km}±7^{km},MD4.1, MW4.6,2C-1D,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTP1	**Petroterminal**	0.69	325	*e*P	Pg	01 51 28.1	+5.8
PTP1				*e*S	Sg	01 51 42.7	+11
BRU2	**Volcan**	1.32	331	⇑*i*P	Pb	01 51 35.1	+1.3
BRU2				*e*S	Sb	01 51 51.4	+0.2
ACR	**Cerro Adams**	1.51	312	⇓*e*P	Pn	01 51 35.0	-1.9
ACR				*e*S	Sb	01 51 57.7	+1.0
AZU2	**Pedas**	1.99	93	⇑*e*P	Pn	01 51 44.5	+0.6
AZU2				*e*S	Sn	01 52 08.3	-1.5
BUS	**Buena Vista**	2.56	318	*e*P	Pn	01 51 51.7	-0.2
BUS				*e*S	Sn	01 52 26.1	+2.0
UPA	**Univ. de Panam**	2.81	61	*e*P	Pn	01 51 53.4	-2.1
UPA				*e*S	Sn	01 52 32.1	+1.5
LCR2	**La Lucha 2**	2.86	317	*e*P	Pn	01 51 56.0	-0.2
LAJ	**Bijagual**	3.02	317	*e*P	Pn	01 51 59.7	+1.2
PRS1	**Puriscal**	3.24	316	*e*P	Pn	01 52 00.5	-1.1
TRTC	**Tortuguero**	3.36	331	*e*P	Pn	01 52 02.8	-0.4
CGA2	**Cerro Gallo 2**	3.37	315	*e*P	Pn	01 52 03.6	+0.2

NEIC 11 01:56:01.0±0.9,5.14N×76.10W,h115^{km}±11^{km},mb4.0/1, Error ellipse: s-maj=12.1km s-min=11.8km az=94.0

IDC 11 01:56:02.4±2.0,5.21N×76.03W,h119^{km}±19^{km},mb3.4/4, mb1 3.7/8,mb1mx3.5/23,mbtmp4.1/8,Error ellipse: s-maj=27.3km s-min=21.0km az=60.0

ISC 11 01:56:02.3±0.9,5.34N±0.07×75.98W±0.07,h150^{km}±9^{km}, n15,σ0^{s}99/16,mb3.5/4,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	**El Rosal**	1.71	106	P	**P**	**01 56 33.8**	**-0.6**
	34nm,0.3s,baz=104,slow=23,SNR=64						
ROSC				S	**S**	**01 56 59.9**	**+0.7**
	23nm,0.3s,baz=267,slow=23,SNR=16						
OTAV	**Otavalo**	5.64	206	*e*P	**P**	**01 57 18.4**	**-6.6**
SDV	**Santo Domingo**	6.37	56	P	**P**	**01 57 35.2**	**+0.4**
	8.0nm,0.3s,baz=245,slow=14,SNR=11						
SDV				S	**S**	**01 58 45.2**	**-1.5**
	3.7nm,0.3s,baz=89,slow=21,SNR=4.8						
JTS	**JuntasAbangare**	10.16	299	P	**P**	**01 58 24.9**	**-0.5**
	0.8nm,0.3s,baz=198,slow=6.9,SNR=4.1						
PCRV	**Puerto La Cruz**	12.22	66	P	**P**	**01 58 52.8**	**+0.5**
	0.7nm,0.3s,baz=135,slow=18,SNR=3.1						
PCRV				S	**S**	**02 01 05.9**	**+0.2**
	0.3nm,0.3s,baz=41,slow=21,SNR=2.5						
SJG	**San Juan**	15.91	36	P	**P**	**01 59 40.2**	**+0.9**
	2.5nm,0.3s,baz=315,slow=18,SNR=4.0						
SAML	**Samuel**	19.08	138	*e*P	**P**	**02 00 14.5**	**-1.3**
	2.9nm,0.3s						
LPAZ	**La Paz**	22.85	160	P	**P**	**02 00 54.6**	**+1.1**
	0.7nm,0.5s,mb3.4,baz=353,slow=8.1,SNR=7.8						
SIV	**San Ignacio**	25.82	145	P	**P**	**02 01 21.8**	**+0.1**
	1.6nm,1.0s,mb3.6,baz=312,slow=13,SNR=6.0						
BDFB	**Brasilia**	34.66	127	P	**P**	**02 02 40.5**	**+0.9**
	2.0nm,0.6s,mb3.9,baz=281,slow=6.6,SNR=4.3						
CPUP	**Villa Florida**	36.30	151	P	**P**	**02 02 50.5**	**-2.8**
MNTX	**Cornudas Mount**	38.02	317	P	**P**	**02 03 08.0**	**+0.3**
YKA	**Yellowknife Ar**	63.70	341	pP	pP	02 06 46.2	-9.5
	0.4nm,0.6s,baz=128,slow=7.2,SNR=1.8						
GERES	**GERESS Array B**	85.81	41	P	**P**	**02 08 30.3**	**+4.2**
	0.2nm,0.3s,mb3.3,baz=252,slow=3.1,SNR=3.7						
WRA	**Warramunga Arr**	147.14	241	PKPbc	PKPdf	02 15 31.9	+5.8
	0.6nm,0.8s,baz=109,slow=3.2,SNR=5.9						

CSEM 11 01:56:13.5±0.1,39.31N×29.65W,h30^{km},ML2.5,Error ellipse: s-maj=4.1km s-min=2.7km az=16.0

PDA 11 01:56:13.9±0.7,39.35N×29.77W,MD3.5,ML2.5,Error *ellipse: s-maj=8.8km s-min=7.6km az=45.0*

SVSA 11 01:56:13.9±0.7,39.35N×29.77W,MD3.5,ML2.5,Error ellipse: s-maj=8.8km s-min=7.6km az=45.0,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	Caldeira	1.14	132	eP	Pb	01 56 32.2	-3.9
CALA				eS	Sb	01 56 45.8	-5.5
HOR	Horta	1.21	132	eP	Pb	01 56 33.2	-4.2
HOR				eS	Sb	01 56 47.8	-5.7
PICO	Pico	1.35	129	i P	Pb	01 56 35.3	-4.5
PICO				eS	Sb	01 56 51.5	-6.0
PGRA	Graciosa	1.43	102	eS	Sb	01 56 53.1	-6.7
	21nm,0.4s						
PGRA	Graciosa	1.43	102	eS	Sb	01 56 53.1	-6.7
	21nm,0.4s						
PMAN	Manadas	1.50	118	eS	Sb	01 56 54.3	-7.4
	17nm,0.3s						

TIR 11 02:02:22.9,40.39N×19.21E,h16^{km}
THE 11 02:02:25.8,40.70N×19.20E,h20^{km},ML3.4
CSEM 11 02:02:27.6±0.1,40.52N×19.44E,h2^{km},ML3.4,Error ellipse: s-maj=2.7km s-min=2.1km az=78.0
ATH 11 02:02:36.2,39.48N×19.79E,h10^{km},MD3.3/3
ISC 11 02:02:26.6±0.8,40.43N±0.03×19.46E±0.07,h10^{km},n18,σ1^{s}22/26,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLO	Vlora	0.05	36	i Pg	Pg	02 02 28.3	-0.3
SRN	Sarande	0.69	143	i Pg	Pg	02 02 39.0	-1.4
SRN				i Sg	Sg	02 02 49.5	-0.2
KEK	Kerkira	0.76	160	ePG	Pg	02 02 41.0	-0.9
LSK	Leskovik	0.92	107	i pg?	Pg	02 02 40.2	-4.8
TIR	Tirane	0.97	18	i Pg	Pg	02 02 44.5	-1.5
IGT	Igoumenitsa	1.12	143	ePg	Pg	02 02 49.6	+0.6
IGT				eSg	Sg	02 03 08.0	+4.1
QSH	Qafa e Shtames	1.14	17	i pg?	Pg	02 02 51.0	+1.6
QSH				i Sg	Sg	02 03 05.0	+0.3
JAN	Janina	1.32	125	ePG	Pg	02 02 51.9	-1.0
FNA	Florina	1.50	76	ePb	Pb	02 02 52.0	-2.1
	comp=Z,6.6nm,0.2s						
FNA				eSb	Sb	02 03 14.7	+1.5
MEV	Metsovon	1.50	115	ePb	Pb	02 02 54.7	+0.6
	comp=Z,3.8nm,0.3s						
MEV				eSb	Sb	02 03 18.3	+5.1
PUK	Puka	1.65	11	i Pg	Pg	02 02 54.4	-5.0
LKD	Levkas	1.95	151	ePn	Pn	02 03 02.2	+2.1
	comp=Z,4.5nm,0.3s						
LKD				eSn	Sn	02 03 30.8	+6.0
SKO	Skopje	2.15	43	ePn	Pn	02 03 01.5	-1.4
SG1	Sgolgore (BA)	2.15	282	ePn	Pn	02 03 03.7	+0.7
GRG	Griva	2.30	76	ePn	Pn	02 03 04.7	-0.4
GRG				eSn	Sn	02 03 33.7	0.0
LIT	Litokhoron	2.34	97	ePn	Pn	02 03 06.8	+1.0
	comp=Z,2.4nm,0.4s						
EVR	Evrytania	2.36	129	ePB	Pb	02 03 07.5	-1.3
AGG	Agios Georgios	2.62	121	ePn	Pn	02 03 11.4	+1.6
AGG				eSn	Sn	02 03 46.4	+4.4

MAN 11 02:14:32.1,9.91N×123.87E,h13^{km},mb3.5,ML2.2,MS1.7,1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	Tagbilaran	0.22	183	eP	Pg	02 14 38.0	+0.9
TBP				eS	Sg	02 14 40.9	+0.4
LLP	Lapu-Lapu	0.41	13	⇓eP	Pg	02 14 41.2	+0.6
LLP				i S	Sg	02 14 47.8	+1.5
MSLP	Maasin	1.00	77	eP	Pb	02 14 50.0	-0.7
MSLP				eS	Sb	02 15 08.2	+4.7
GUIM	Jordan	1.45	299	eP	Pn	02 14 57.9	-0.2
GUIM				eS	Sb	02 15 16.9	+0.3

IDC 11 02:25:35.3±5.5,45.01N×146.44E,h166^{km}±38^{km},mb3.0/4,mb1 3.1/5,mb1mx2.9/22,mbtmp3.5/5,Error ellipse: s-maj=58.5km s-min=24.9km az=70.0
JMA 11 02:25:37.7±0.4,44.72N×146.28E,h174^{km}±4^{km},M2.8
ISC 11 02:25:36.5±1.2,44.7N±0.1×146.2E±0.2,h189^{km}±9^{km},n16,σ0^{s}92/21,mb3.4/4,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRA	Rausu	1.10	228	P	P	02 26 06.2	+0.2
NEM2	Nemuro 2	1.37	196	P	P	02 26 08.1	-0.3
NEM2				eS	S	02 26 31.4	-1.5
JNK	Nakash	1.55	226	P	P	02 26 10.7	+0.6
JTKR	Abashiri--Toko	1.82	248	eS	S	02 26 40.3	-0.3
JAK	Akkeshi	2.02	214	P	P	02 26 15.5	+0.7
JAK				eS	S	02 26 43.4	-0.9
JMP	Maruseppu	2.18	253	P	P	02 26 16.8	+0.3
JAR	Ashorobuto	2.26	233	P	P	02 26 18.8	+1.4
JOB	Onbets	2.49	225	P	P	02 26 21.4	+1.3
JOB				eS	S	02 26 53.6	-0.1
JSE	Soyaes	2.62	277	P	P	02 26 21.2	-0.4
ASAJ	Asahikawa	2.67	259	P	P	02 26 22.8	+0.5
	1.4nm,0.3s,baz=80,slow=10,SNR=7.1						
ASAJ				S	S	02 26 58.0	+0.5
	0.3nm,0.3s,baz=317,slow=30,SNR=4.0						
JCH	Churui	2.94	226	P	P	02 26 26.1	+0.7
JCH				eS	S	02 27 01.7	-1.4
JNBK	Urakawa-nobuka	3.50	228	P	P	02 26 32.2	0.0
SONM	Songino Array	27.52	291	P	P	02 31 06.9	-0.3
	0.2nm,0.4s,mb3.2,baz=81,slow=9.5,SNR=3.3						
MKAR	Makanchi Array	43.58	296	P	P	02 33 22.3	-0.7
	0.5nm,0.5s,mb3.4,baz=83,slow=8.1,SNR=4.3						
FINES	FINESS Array B	63.75	332	P	P	02 35 46.8	-2.7
	1.5nm,0.9s,mb3.8,baz=56,slow=5.0,SNR=4.8						
WRA	Warramunga Arr	65.22	192	P	P	02 36 00.9	+1.2
	0.1nm,0.4s,mb3.0,baz=8.2,slow=6.6,SNR=3.0						

NEIC 11 02:55:01.9,37.76S×177.56E,h54^{km},ML3.9(WEL),After WEL.
WEL 11 02:55:02.5±0.2,37.74S×177.57E,h45^{km}±2^{km},ML3.9/6,Error ellipse: s-maj=1.2km s-min=1.1km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	White Island	0.36	305	P*	P	02 55 11.8	-0.1
WIZ				S*	S	02 55 17.4	-1.0
MWZ	Matawai	0.60	183	P	P	02 55 14.1	-0.7
MWZ				S	S	02 55 23.3	-0.4
MWZ	Matawai	0.60	183	P*	P	02 55 14.0	-0.7
MWZ				S*	S	02 55 23.3	-0.3
MXZ	Matakaoa Point	0.61	74	P	P	02 55 14.5	-0.4
MXZ				S	S	02 55 24.4	+0.5
MXZ	Matakaoa Point	0.61	74	P*	P	02 55 14.5	-0.5
PUZ	Puketiti	0.64	122	P	P	02 55 15.1	-0.2
PUZ	Puketiti	0.64	122	PN	P	02 55 15.1	-0.2
PUZ				SN	S	02 55 25.4	+0.7
MARZ	Manawahe	0.75	250	P*	P	02 55 16.3	-0.5
EDRZ	Edgecumbe	0.75	240	P*	P	02 55 16.6	-0.2
TAZ	Tarawera	0.97	239	P*	P	02 55 19.8	-0.1
LIRZ	Lichensteins R	0.97	254	P*	P	02 55 19.7	-0.2
TGRZ	Tauranga	1.04	270	P	P	02 55 20.2	-0.6
TGRZ	Tauranga	1.04	270	P*	P	02 55 20.2	-0.6
MYRZ	Mayor Island	1.15	293	P*	P	02 55 21.8	-0.6
PATZ	Paeroa	1.22	238	P*	P	02 55 23.0	-0.3
KNZ	Kokohu	1.29	176	eP	P	02 55 23.0	-1.4
KNZ	Kokohu	1.29	176	PN	P	02 55 23.0	-1.4
TOZ	Tahuroa Road	1.64	270	P	P	02 55 28.5	-0.9
TOZ	Tahuroa Road	1.64	270	P*	P	02 55 28.4	-1.0
BKZ	Black Stump Fm	1.66	210	eP	P	02 55 28.5	-1.2
BKZ	Black Stump Fm	1.66	210	P*	P	02 55 28.4	-1.3
BKZ				S*	S	02 55 51.2	+1.3
KUZ	Kuaotunu	1.77	303	PN	P	02 55 30.0	-1.3
KUZ				SN	S	02 55 51.3	-1.5
RITZ	Rihia Road	1.83	227	P	P	02 55 31.6	-0.5
RITZ	Rihia Road	1.83	227	P*	P	02 55 31.4	-0.7
KATZ	Kakaramea	1.92	229	P	P	02 55 32.8	-0.6
KATZ	Kakaramea	1.92	229	P*	P	02 55 32.7	-0.7
OTVZ	Oturere	2.06	226	P*	P	02 55 34.8	-0.6
TUVZ	Tukino	2.14	224	P	P	02 55 37.0	+0.4
TUVZ	Tukino	2.14	224	P*	P	02 55 37.4	+0.8
MOVZ	Moawhango	2.19	220	P	P	02 55 35.8	-1.5
MOVZ	Moawhango	2.19	220	P*	P	02 55 35.8	-1.4
MOVZ				S*	S	02 56 01.3	-2.0
WNVZ	Wahianoa	2.22	224	P	P	02 55 36.7	-0.9
WNVZ	Wahianoa	2.22	224	P*	P	02 55 36.7	-0.9
WNVZ				S*	S	02 56 05.7	+1.8
HIZ	Hauiti	2.27	249	P	P	02 55 38.1	-0.3
HIZ	Hauiti	2.27	249	PN	P	02 55 38.1	-0.4
MTVZ	Mangateitei	2.33	224	P*	P	02 55 37.9	-1.3
MTVZ				S*	S	02 56 07.6	+0.8
PWZ	Pawanui	2.36	193	P	P	02 55 36.5	-3.1
PWZ	Pawanui	2.36	193	PN	P	02 55 36.3	-3.3
PWZ				SN	S	02 56 05.2	-2.2
TSZ	Takapari Road	2.64	208	P	P	02 55 40.9	-2.7
TSZ	Takapari Road	2.64	208	PN	P	02 55 40.8	-2.8
WAZ	Wanganui	2.85	224	P	P	02 55 46.3	-0.4
WAZ	Wanganui	2.85	224	PN	P	02 55 46.2	-0.5
MRZ	Mangatainoka R	3.31	207	P	P	02 55 48.9	-4.2
MRZ	Mangatainoka R	3.31	207	PN	P	02 55 48.9	-4.2
MRZ				SN	S	02 56 27.2	-4.4
KIW	Kapiti Island	3.74	213	P	P	02 55 55.1	-4.2
KIW	Kapiti Island	3.74	213	PN	P	02 55 55.1	-4.2
KIW				SN	S	02 56 37.7	-4.9
CAW	Cannon Point	3.88	209	PN	P	02 55 56.2	-5.1
CAW				SN	S	02 56 40.2	-6.0
PAWZ	Paruwai Farm	4.00	204	PN	P	02 55 57.6	-5.3
MSWZ	Moikau Station	4.09	205	P	P	02 55 58.8	-5.4
MSWZ	Moikau Station	4.09	205	PN	P	02 55 58.5	-5.6
MRW	Makara Radio	4.13	212	P	P	02 55 59.6	-5.2
MRW	Makara Radio	4.13	212	PN	P	02 55 59.6	-5.2
DUWZ	D'Urville Isla	4.17	222	PN	P	02 56 01.1	-4.2
SNZO	South Karori	4.20	211	P	P	02 56 00.3	-5.4
SNZO	South Karori	4.20	211	PN	P	02 56 00.1	-5.6
TCW	Tory Channel	4.31	215	P	P	02 56 02.0	-5.2
TCW	Tory Channel	4.31	215	PN	P	02 56 01.9	-5.4
TUWZ	Tuamarina	4.63	216	PN	P	02 56 06.3	-5.6
NNZ	Nelson	4.75	222	eP	P	02 56 08.7	-4.8
NNZ	Nelson	4.75	222	PN	P	02 56 08.4	-5.1
BSWZ	Blackbirch Sta	4.89	214	P	P	02 56 09.7	-5.7
BSWZ	Blackbirch Sta	4.89	214	PN	P	02 56 09.8	-5.6
QRZ	Quartz Range	4.98	230	eP	P	02 56 13.4	-3.3
QRZ	Quartz Range	4.98	230	PN	P	02 56 13.3	-3.4
THZ	Tophouse	5.39	220	P	P	02 56 17.0	-5.5
THZ	Tophouse	5.39	220	PN	P	02 56 17.0	-5.5
KHZ	Kahutara	5.60	212	eP	P	02 56 18.9	-6.5
KHZ	Kahutara	5.60	212	PN	P	02 56 18.9	-6.5
LTZ	Lake Taylor	6.47	217	eP	P	02 56 30.0	-7.5
LTZ	Lake Taylor	6.47	217	PN	P	02 56 30.1	-7.5
MQZ	McQueen's Vall	7.04	210	P	P	02 56 37.3	-8.2
MQZ	McQueen's Vall	7.04	210	PN	P	02 56 37.3	-8.2
RPZ	Rata Peaks	7.75	218	eP	P	02 56 49.0	-6.5
RPZ	Rata Peaks	7.75	218	PN	P	02 56 48.8	-6.6
FOZ	Fox Glacier	8.35	223	eP	P	02 56 56.5	-7.2
FOZ	Fox Glacier	8.35	223	PN	P	02 56 57.5	-6.2
LBZ	Lake Benmore	8.67	218	eP	P	02 57 01.4	-6.7
LBZ	Lake Benmore	8.67	218	PN	P	02 57 01.4	-6.7
ODZ	Otahua Downs	8.96	213	eP	P	02 57 03.4	-8.8
ODZ	Otahua Downs	8.96	213	PN	P	02 57 03.6	-8.6
TUZ	Tuapeka	10.12	213	eP	P	02 57 20.3	-7.7

ZUR 11 03:09:38.9,45.86N×7.31E,h10^{km}±8^{km},ML1.0/3
LDG 11 03:10:10.7±0.1,44.64N×6.85E,h2^{km},Md2.4/1,Ml2.2/7,Error ellipse: s-maj=1.6km s-min=0.8km az=69.0
NEIC 11 03:10:10.7,44.64N×6.85E,h2^{km},ML2.5(GEN),ML2.2(LDG),After LDG.
ISC 11 03:10:09.2±0.3,44.63N±0.02×6.86E±0.03,h13^{km}±3^{km},n26,σ0^{s}50/48,France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBDF	Montbardon	0.11	327	ePg	Pg	03 10 13.0	+0.6
MBDF				eSg	Sg	03 10 14.8	+0.3
	669nm,0.3s						
SURF	Saint Ours	0.15	192	Pg	Pg	03 10 13.5	+0.4
SURF				Sg	Sg	03 10 16.2	+0.6
PZZ	Prazzo	0.22	126	P	Pg	03 10 13.9	-0.2
PZZ				S	Sg	03 10 17.1	-0.3
RRL	Cesana Torines	0.29	350	P	Pg	03 10 16.0	+0.5
RRL				S	Sg	03 10 19.8	+0.2
BHB	Bricherasio	0.36	54	P	Pg	03 10 16.6	-0.1
BHB				S	Sg	03 10 20.8	-0.9
FENE	Fenestrelle	0.42	20	P	Pg	03 10 17.9	0.0
FENE				S	Sg	03 10 23.4	-0.5
STV	Sta Anna Valdi	0.51	139	P	Pb	03 10 19.4	-0.2
STV				S	Sb	03 10 26.2	-0.4
STV2	Anna di Valdie	0.51	139	P	Pb	03 10 19.3	-0.3
STV2				S	Sb	03 10 26.2	-0.4
ENR	Entracque	0.57	135	P	Pb	03 10 20.6	-0.1
ENR				S	Sb	03 10 28.1	-0.2
RSP	Reno Superiore	0.59	29	P	Pb	03 10 21.3	+0.4
RSP				S	Sb	03 10 28.4	-0.5
ORIF	Oris-en-Rattie	0.75	293	ePg	Pg	03 10 24.9	+0.5
ORIF				eSg	Sg	03 10 34.5	-0.1
	11nm,0.3s						
ROB	Roburent	0.80	115	P	Pb	03 10 24.7	+0.1
ROB				S	Sb	03 10 34.7	-0.3
MONE	Monesi	0.85	130	P	Pb	03 10 25.5	+0.1
MONE				S	Sb	03 10 36.6	+0.2
LSD	Ceresole Reale	0.85	14	P	Pb	03 10 25.7	+0.3
LSD				S	Sb	03 10 36.8	+0.3
LPG	La Plagne	0.87	355	eSg	Sg	03 10 38.6	+0.2
	5.7nm,0.2s						
SBF	Sospel	0.87	151	ePg	Pg	03 10 27.5	+0.7
SBF				eSg	Sg	03 10 38.5	-0.1
	3.7nm,0.2s						
LPL	La Plagne	0.89	354	eSg	Sg	03 10 38.9	-0.1
	6.7nm,0.2s						
NEGI	Negi	0.99	142	P	Pb	03 10 28.6	+0.7
NEGI				S	Sb	03 10 41.4	+0.8
IMI	Imperia	1.03	134	P	Pb	03 10 28.8	+0.3
IMI				S	Sb	03 10 41.6	-0.2
FIN	Finale Ligure	1.06	113	P	Pb	03 10 29.2	+0.3
FIN				S	Sb	03 10 42.1	-0.3
FRF	La Foret Royal	1.08	188	ePg	Pg	03 10 30.7	-0.3
FRF				ePn	Pn	03 10 31.4	+1.3
FRF				eSg	Sg	03 10 45.2	-0.3
	6.5nm,0.2s						
SMRF	Simiane la Rot	1.13	235	ePg	Pg	03 10 32.5	+0.6
SMRF				eSg	Sg	03 10 46.3	-0.8
	4.3nm,0.3s						
PCP	Pian Castagno	1.21	94	P	Pb	03 10 31.5	0.0
ORX	Oropa	1.28	38	P	Pb	03 10 32.2	-0.5
LMR	La Mourre	1.32	191	ePg	Pg	03 10 35.6	-0.1
LMR				eSg	Sg	03 10 52.6	-0.8
	5.0nm,0.2s						
VIVF	Saint-Julien-l	1.57	279	eSg	Sg	03 11 00.1	-1.6
	2.1nm,0.3s						

TAP 11 03:30:58.6,24.06N×122.84E,h16^{km}±1^{km},ML2.8
JMA 11 03:30:59.3±0.2,23.97N×122.85E,h5^{km},M2.4,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.51	17	P	Pg	03 31 09.4	-0.1
YOJ				S	Sg	03 31 16.3	-0.1
HATJ	Hateruma jima	0.88	84	P	Pb	03 31 16.0	-0.6
HATJ				eS	Sb	03 31 28.3	-0.1
IRIF	Iriomote-Funau	0.88	66	P	Pb	03 31 15.9	-0.8
IRIF				S	Sb	03 31 28.5	-0.1
JKRS	Kuro-shima	1.09	76	P	Pb	03 31 19.9	-0.4
JKRS				eS	Sb	03 31 34.8	+0.1
JIJ	Ishigaki jima	1.24	71	P	Pb	03 31 22.3	-0.6
JIJ				eS	Sb	03 31 38.9	-0.2

NEIC 11 03:32:08.1,31.54S×69.79W,h155^{km},MD3.6(GUC),After GUC.
GUC 11 03:32:08.1±0.8,31.54S×69.79W,h155^{km}±7^{km},MD3.6,ML4.1,6C-11D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	Combarbala	1.10	289	⇑iP	P	03 32 34.6	+0.3
CMCH				i S	S	03 32 55.2	+0.7
CMCH				AMP		03 32 56.5	
	comp=E,4μm,0.2s						
JACH	Jahuel	1.33	211	⇓iP	P	03 32 36.9	+0.4
JACH				i S	S	03 32 58.4	-0.1
TLL	Tololo Astrono	1.62	327	eP	P	03 32 40.1	+0.5
TLL				i S	S	03 33 03.7	-0.2
TLL				AMP		03 33 06.6	
	comp=E,944nm,0.4s						
PACH	Papudo	1.71	234	⇓iP	P	03 32 41.0	+0.4
PACH				i S	S	03 33 05.7	0.0
ROCH	El Roble	1.76	216	⇓iP	P	03 32 41.6	+0.5
ROCH				i S	S	03 33 06.9	+0.3
PEL	Peldehue	1.77	205	⇓iP	P	03 32 41.5	+0.3
PEL				i S	S	03 33 06.3	-0.4
PEL				AMP		03 33 07.6	
	comp=N,2μm,0.5s						
FCH	Farellones	1.83	193	⇑iP	P	03 32 42.8	+0.9
FCH				i S	S	03 33 09.1	+1.1
CLCH	Cerro Calan	1.96	199	⇑iP	P	03 32 43.7	+0.4
CLCH				i S	S	03 33 10.6	+0.2
CLCH				AMP		03 33 12.8	
	comp=E,2μm,0.4s						
CLCH				AMP		03 33 13.4	
	comp=E,2μm,0.5s						
DSCH	Colegio Aleman	1.97	199	⇓iP	P	03 32 43.9	+0.4
DSCH				i S	S	03 33 10.7	+0.1
DSCH				AMP		03 33 12.8	
	comp=E,2μm,0.5s						
STL	Santa Lucia	2.02	201	⇓iP	P	03 32 44.5	+0.4
STL				i S	S	03 33 11.6	-0.1
STL				AMP		03 33 13.7	
	comp=N,605nm,0.4s						
SAN	Santiago	2.04	201	i S	S	03 33 11.9	-0.3
SAN				AMP		03 33 19.5	
	comp=N,863nm,0.4s						
LSCH	La Serena	2.05	322	⇑iP	P	03 32 44.8	+0.4
LSCH				i S	S	03 33 11.6	-0.8
LSCH				AMP		03 33 12.7	
	comp=E,769nm,0.3s						
ANTU	Antumapu	2.14	199	⇓iP	P	03 32 45.8	+0.2
ANTU				i S	S	03 33 14.5	+0.1
ANTU				AMP		03 33 16.7	
	comp=E,997nm,0.8s						
SJCH	San Jose de Ma	2.15	193	i P	P	03 32 45.6	0.0
SJCH				i S	S	03 33 15.0	+0.6
SJCH				AMP		03 33 19.1	
	comp=E,412nm,0.4s						
IHA	Instituto Hidr	2.15	226	⇓iP	P	03 32 45.8	+0.1
PCH	Pirque	2.16	196	eP	P	03 32 46.0	+0.2
PCH				i S	S	03 33 15.8	+1.0
TACH	Talagante	2.32	204	⇑iP	P	03 32 47.5	-0.2
TACH				i S	S	03 33 17.4	-0.7
LCCH	Las Cruces	2.44	217	eP	P	03 32 49.1	-0.2
LCCH				i S	S	03 33 20.1	-0.8
CHCH	Chadas Angostu	2.49	197	⇓iP	P	03 32 49.8	-0.1
CHCH				i S	S	03 33 22.0	0.0
CACH	El Canelo	2.66	195	⇓iP	P	03 32 52.5	+0.5
CACH				i S	S	03 33 26.0	+0.4
LNV	Longovilo	2.77	209	⇑iP	P	03 32 52.4	-0.9
LNV				i S	S	03 33 27.0	-1.0
CICH	Cipreses	2.82	191	⇓iP	P	03 32 54.3	+0.2

PRU 11 03:38:48.6,40.25N×19.63E
ATH 11 03:38:50.4,40.61N×19.17E,h26^{km}±2^{km},MD4.1/14,ML4.4
LDG 11 03:38:52.4±0.3,41.13N×19.93E,h10^{km},Mb4.7/19,Ms2.5/6,Error ellipse: s-maj=13.1km s-min=7.5km az=21.0
THE 11 03:38:52.6,40.72N×19.06E,h20^{km},ML4.3
TIR 11 03:38:53.6,40.53N×19.72E,h9^{km},Ml3.6
PDG 11 03:38:53.0±0.6,40.57N×19.53E,h1^{km}
MOS 11 03:38:53.9±1.0,40.61N×19.52E,h10^{km},mb4.1/1,Error ellipse: s-maj=5.0km s-min=3.6km az=128.8
ROM 11 03:38:53.7±0.2,40.51N×19.66E,h14^{km}±2^{km},Md3.3/1,Ml3.9/13,Error ellipse: s-maj=3.1km s-min=2.5km az=175.0
NEIC 11 03:38:54.7±0.2,40.58N×19.62E,h5^{km},mb3.9/1,ML4.4(ATH),ML3.9(ROM),ML3.9(PDG),Error ellipse: s-maj=3.2km s-min=1.9km az=208.0
ZUR_RM 11 03:38:54,40.58N×19.62E,h6^{km},Mw4.1/23,Moment Tensor Solution. s23 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.46; $M_{\theta\theta}$1.49; $M_{\phi\phi}$-0.03; $M_{r\theta}$-0.01; $M_{\theta\phi}$-0.03; $M_{\phi r}$-0.56; Best double couple: $M_0$1.57×10^{15} NP1:ϕ_s289°, δ48°,λ-64°. NP2:ϕ_s73°,δ48°,λ-116°. Principal axes: T 1.489, Plg0°, Azm1°; N .166, Plg19°, Azm91°; P -1.656, Plg71°, Azm271°;
IDC 11 03:38:55.0±1.3,40.86N×19.78E,mb3.7/8,mb1 3.9/12,mb1mx3.8/27,mbtmp3.7/12,ML3.4/4,MS3.0/4,Ms1 3.1/4,ms1mx2.7/33 Error ellipse: s-maj=23.1km s-min=16.6km az=39.0
CSEM 11 03:38:55.3±0.0,40.48N×19.58E,h5^{km},ML4.4/1,Error ellipse: s-maj=1.6km s-min=0.8km az=25.0
ISC 11 03:38:54.2±0.3,40.59N±0.01×19.57E±0.02,h12^{km}±2^{km},n195,σ1^{s}45/263,mb3.8/10,MS3.0/2,20C-9D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLO	Vlora	0.13	205	i Pg	Pg	03 38 57.4	-0.2
VLO				i Sg	Sg	03 39 01.3	+1.5
TPE	Tepelena	0.45	130	i Pg	Pg	03 39 01.6	-1.8
TPE				i Sg	Sg	03 39 07.0	-2.5
SRN	Sarande	0.78	155	i Pg	Pg	03 39 07.1	-2.8
SRN				i Sg	Sg	03 39 19.6	-0.8
TIR	Tirane	0.79	16	i Pg	Pg	03 39 10.7	+0.5
TIR				i Sg	Sg	03 39 27.0	+6.1
TIR	Tirane	0.79	16	Pn	Pn	03 39 10.5	-0.5
	3μm,0.7s						
KEK	Kerkira	0.89	168	ePN	Pn	03 39 09.4	-3.0
KEK				eSN	Sn	03 39 24.5	-0.7
KEK	Kerkira	0.89	168	Pn	Pn	03 39 09.9	-2.5
	2μm,0.4s						
KEK				eSn	Sn	03 39 24.5	-0.7
LSK	Leskovik	0.90	119	i Pg	Pg	03 39 08.4	-3.9
LSK				i Sg	Sg	03 39 29.0	+4.6
KBN	Korca	0.93	87	i Pg	Pg	03 39 10.2	-2.7
KBN				i Sg	Sg	03 39 23.5	-1.9
QSH	Qafa e Shtames	0.97	15	i Pg	Pg	03 39 13.0	-0.7
QSH				i Sg	Sg	03 39 28.0	+1.3
OHR	Ohrid	1.07	60	i P	Pb	03 39 14.2	0.0
OHR				i		03 39 34.6	
OHR	Ohrid	1.07	60	i Pn	Pb	03 39 14.2	0.0
OHR				i		03 39 18.4	
OHR				i Sn	Sn	03 39 34.6	+4.8
LCI	Lecce	1.14	258	Pn	Pn	03 39 17.1	+1.2
LCI				Sn	Sn	03 39 34.8	+3.3
	528nm,0.3s						
IGT	Igoumenitsa	1.21	151	ePg	Pg	03 39 17.4	-1.0
IGT				eSg	Sg	03 39 36.2	+1.7
JAN	Janina	1.35	133	⇑iPB	Pb	03 39 18.5	-0.5
JAN				eSN	Sn	03 39 39.6	+2.6
FNA	Florina	1.39	81	ePb	Pb	03 39 20.1	+0.5
FNA				eSb	Sb	03 39 42.8	+5.6
ULC	Ulcinj	1.40	350	⇑iPg	Pg	03 39 20.8	-1.4
ULC				eSg	Sg	03 39 42.3	+1.4
PUK	Puka	1.48	9	i Pg	Pg	03 39 23.0	-0.8
PUK				i Sg	Sg	03 39 45.4	+1.9
MEV	Metsovon	1.50	122	ePb	Pb	03 39 22.4	+0.7
	comp=Z,53nm,0.1s						
MEV				eSb	Sb	03 39 46.5	+6.0
PE1	Pezze di Greco	1.65	278	ePn	Pn	03 39 24.3	+1.1
KZN	Kozani	1.71	99	ePB	Pb	03 39 24.7	-0.4
KZN				eSN	Sn	03 39 50.3	+4.4
BUM	Brajici-Budva	1.79	344	⇑iPn	Pn	03 39 26.7	+1.5
BUM				eSn	Sn	03 39 53.5	+5.5
BCI	Bajram Curri	1.82	12	i Pg	Pg	03 39 28.0	-2.6
BCI				i Sg	Sg	03 39 56.3	+1.4
BRT	Bari-Castellan	1.82	280	Pn	Pn	03 39 27.3	+1.6
	11nm,0.4s						
TTG	Podgorica	1.86	353	⇑iPn	Pn	03 39 27.4	+1.1
TTG				eSn	Sn	03 39 55.6	+5.9
SKO	Skopje	1.98	45	⇓iPn	Pn	03 39 29.9	+1.9
SKO				i		03 39 33.6	
SKO				i Sn	Sn	03 39 54.8	+2.0
SKO				i Sg	Sg	03 39 57.1	-3.0
SKO				Lg		03 40 05.0	
	comp=Z,0.2nm,0.7s						
SKO	Skopje	1.98	45	⇓iPn	Pn	03 39 29.9	+1.9
SKO				i Sn	Sn	03 39 54.8	+2.0
SKO				i Sg	Sg	03 39 57.1	-3.0
HCY	Herceg Novi	2.03	337	⇑iPn	Pn	03 39 29.0	+0.4
HCY				eSn	Sn	03 39 59.9	+5.8
PVY	Plav	2.03	9	⇑iPn	Pn	03 39 31.0	+2.3
PVY				eSn	Sn	03 39 59.7	+5.5
LTRZ	Laterza	2.09	271	Pn	Pn	03 39 30.2	+0.6

	comp=Z,700nm,0.9s						
BAI	**Bari**	**2.10**	**285**	*e*Pn	**Pn**	**03 39 31.1**	**+1.3**
GRG	**Griva**	**2.18**	**79**	*e*Pn	**Pn**	**03 39 32.1**	**+1.2**
GRG				*e*Sn	**Sn**	**03 40 02.2**	**+4.1**
SG1	**Sgolgore (BA)**	**2.21**	**278**	*e*Pn	**Pn**	**03 39 32.0**	**+0.7**
NKY	**Niksic**	**2.27**	**349**	⇑*i*Pn	**Pn**	**03 39 33.7**	**+1.6**
NKY				*e*Sn	**Sn**	**03 40 05.1**	**+4.9**
LIT	**Litokhoron**	**2.29**	**101**	*e*Pn	**Pn**	**03 39 33.8**	**+1.4**
	comp=Z,14nm,0.5s						
LIT				*e*Sn	**Sn**	**03 40 05.5**	**+4.9**
IVA	**Berane**	**2.30**	**6**	⇑*i*Pn	**Pn**	**03 39 34.6**	**+2.1**
IVA				*e*Sn	**Sn**	**03 40 06.1**	**+5.1**
TREB	**Trebinje**	**2.32**	**337**	Sn	**Sn**	**03 40 03.9**	**+2.4**
VAY	**Valandovo**	**2.39**	**71**	*i* Pn	**Pn**	**03 39 35.1**	**+1.2**
VAY				*i* Sn	**Sn**	**03 40 11.6**	**+8.3**
VAY				*i*		03 40 19.4	
EVR	**Evrytania**	**2.40**	**133**	*e*PB	**Pb**	**03 39 35.5**	**-1.5**
BRY	**Bratogost**	**2.44**	**342**	*e*Pn	**Pn**	**03 39 35.6**	**+1.1**
BRY				*e*Sn	**Sn**	**03 40 09.8**	**+5.3**
ORI	**Oriolo Calabro**	**2.44**	**259**	Pn	**Pn**	**03 39 35.1**	**+0.5**
	comp=Z,313nm,0.4s						
VLS	**Valsamata**	**2.53**	**161**	⇑*i*Pn	**Pn**	**03 39 34.4**	**-1.5**
VLS				*e*Sn	**Sn**	**03 40 04.8**	**-2.1**
TIP	**Timpagrande**	**2.58**	**238**	Pn	**Pn**	**03 39 36.7**	**+0.2**
	comp=Z,278nm,0.8s						
THE	**Thessaloniki**	**2.59**	**88**	*e*Pn	**Pn**	**03 39 37.9**	**+1.2**
THE				*e*Sn	**Sn**	**03 40 11.1**	**+2.8**
AGG	**Agios Georgios**	**2.64**	**125**	*e*Pn	**Pn**	**03 39 39.2**	**+1.8**
	comp=Z,17nm,0.4s						
AGG				*e*Sn	**Sn**	**03 40 13.6**	**+3.9**
UPM	**Unac-Piva**	**2.66**	**350**	*e*Pn	**Pn**	**03 39 38.8**	**+1.1**
UPM				*e*Sn	**Sn**	**03 40 14.6**	**+4.3**
STON	**Ston**	**2.68**	**329**	*i* Pn	**Pn**	**03 39 38.2**	**+0.2**
STON				*i* Sn	**Sn**	**03 40 11.2**	**+0.6**
PLE	**Pljevlja**	**2.75**	**357**	*e*Pn	**Pn**	**03 39 39.8**	**+0.9**
PLE				*e*Sn	**Sn**	**03 40 16.7**	**+4.4**
SOH	**Sokhos**	**2.89**	**84**	*e*Pn	**Pn**	**03 39 42.0**	**+1.0**
SOH				*e*Sn	**Sn**	**03 40 19.9**	**+3.9**
NVSS	**Nova Varos 2**	**2.92**	**2**	⇑*i*Pn	**Pn**	**03 39 42.2**	**+0.8**
RLS	**Riolos of Patr**	**2.92**	**149**	*e*PN	**Pn**	**03 39 41.1**	**-0.4**
MS1	**Monte Sant'Ang**	**2.96**	**293**	*e*Pn	**Pn**	**03 39 42.7**	**+0.7**
PLG	**Polygyros**	**2.97**	**93**	⇓*i*PN	**Pn**	**03 39 43.1**	**+1.0**
SLCN	**Sala Consilina**	**3.01**	**268**	Pn	**Pn**	**03 39 43.7**	**+1.0**
	comp=Z,194nm,0.6s						
XOR	**Xorichti**	**3.04**	**112**	*e*Pn	**Pn**	**03 39 43.8**	**+0.7**
XOR				*e*Sn	**Sn**	**03 40 25.0**	**+5.2**
NEO	**Neokhori**	**3.09**	**113**	*e*PN	**Pn**	**03 39 43.9**	**+0.1**
MGR	**Morigerati**	**3.10**	**263**	Pn	**Pn**	**03 39 45.1**	**+1.1**
	comp=Z,59nm,0.4s						
SRS	**Serrai**	**3.10**	**79**	*e*Pn	**Pn**	**03 39 44.7**	**+0.7**
SRS				*e*Sn	**Sn**	**03 40 24.2**	**+2.9**
MRLC	**Muro Lucano**	**3.11**	**274**	Pn	**Pn**	**03 39 44.8**	**+0.7**
FG4	**Candela**	**3.12**	**281**	Pn	**Pn**	**03 39 45.9**	**+1.6**
	comp=Z,400nm,0.9s						
RGNG	**Rignano Grg**	**3.20**	**291**	Pn	**Pn**	**03 39 45.8**	**+0.4**
PAIG	**Paliouri**	**3.21**	**100**	*e*Pn	**Pn**	**03 39 45.7**	**+0.1**
SGO	**Sicignano**	**3.24**	**271**	Pn	**Pn**	**03 39 46.6**	**+0.6**
	comp=Z,82nm,0.5s						
LKR	**Lokris**	**3.28**	**125**	*e*PN	**Pn**	**03 39 46.0**	**-0.5**
BBLS	**Bajina Basta -**	**3.28**	**358**	⇓*i*Pn	**Pn**	**03 39 47.5**	**+0.9**
BBLS				Sn	**Sn**	**03 40 26.0**	**0.0**
SNAL	**S. Angelo Dei**	**3.33**	**277**	Pn	**Pn**	**03 39 48.5**	**+1.3**
	comp=Z,742nm,1.0s						
FG5	**Orsara di Pugl**	**3.33**	**283**	Pn	**Pn**	**03 39 49.6**	**+2.3**
	comp=Z,308nm,0.6s						
NVR	**Nevrokopi**	**3.34**	**75**	*e*Pn	**Pn**	**03 39 49.6**	**+2.2**
OUR	**Ouranopolis**	**3.38**	**93**	*e*Pn	**Pn**	**03 39 48.5**	**+0.6**
	comp=Z,2.6nm,0.4s						
OUR				*e*Sn	**Sn**	**03 40 32.6**	**+4.3**
GRUS	**Gruza**	**3.41**	**14**	⇓*i*Pn	**Pn**	**03 39 48.4**	**0.0**
GRUS				Sn	**Sn**	**03 40 29.4**	**+0.3**
CSSN	**Cassano Irpino**	**3.46**	**276**	Pn	**Pn**	**03 39 50.1**	**+1.0**
	comp=Z,165nm,0.8s						
DIVS	**Divcibare**	**3.52**	**5**	⇑*i*Pn	**Pn**	**03 39 50.1**	**+0.1**
DIVS				Sn	**Sn**	**03 40 33.3**	**+1.3**
MRB1	**Monte Rocchett**	**3.53**	**280**	Pn	**Pn**	**03 39 51.9**	**+1.9**
	comp=Z,384nm,0.6s						
ZAPS	**Zavoj/Pirot**	**3.54**	**39**	⇑*i*Pn	**Pn**	**03 39 50.8**	**+0.6**
ZAPS				Sn	**Sn**	**03 40 34.3**	**+1.9**
IPES	**Pescosannita**	**3.65**	**282**	Pn	**Pn**	**03 39 52.3**	**+0.6**
BOLS	**Boljevac**	**3.70**	**28**	⇑*i*Pn	**Pn**	**03 39 52.6**	**+0.1**
BOLS				Sn	**Sn**	**03 40 36.4**	**-0.1**
SOI	**Samo**	**3.70**	**228**	Pn	**Pn**	**03 39 51.5**	**-1.0**
	comp=Z,94nm,0.5s						
SACR	**S. Croce Del S**	**3.77**	**284**	Pn	**Pn**	**03 39 55.0**	**+1.5**
	comp=Z,333nm,1.2s						
SCLL	**Scilla**	**3.78**	**233**	Pn	**Pn**	**03 39 54.9**	**+1.2**
ITM	**Ithomi**	**3.87**	**151**	*e*PN	**Pn**	**03 39 54.0**	**-0.9**
ITM	**Ithomi**	**3.87**	**151**	*e*Pn	**Pn**	**03 39 54.6**	**-0.3**
MGER	**Gerania Oros**	**3.87**	**131**	*e*PN	**Pn**	**03 39 54.5**	**-0.4**
BSSO	**Busso**	**3.88**	**286**	Pn	**Pn**	**03 39 56.3**	**+1.2**
	comp=Z,230nm,1.0s						
SVIS	**Svilajnac**	**3.91**	**18**	⇑*i*Pn	**Pn**	**03 39 55.4**	**0.0**
SVIS				Sn	**Sn**	**03 40 39.3**	**-2.4**
FRES	**Fresagrandinar**	**3.94**	**292**	Pn	**Pn**	**03 39 57.8**	**+1.9**
	comp=Z,334nm,0.8s						
MTTG	**Motta San Giov**	**3.96**	**231**	Pn	**Pn**	**03 39 54.7**	**-1.5**
	comp=Z,160nm,0.7s						
TRIV	**Trivento**	**3.97**	**289**	Pn	**Pn**	**03 39 57.1**	**+0.8**
SGG	**Gregorio Mates**	**4.01**	**283**	Pn	**Pn**	**03 39 58.6**	**+1.7**
NSAL	**Nisos Salamina**	**4.04**	**130**	*e*PN	**Pn**	**03 39 56.5**	**-0.8**
MPAR	**Parnis Oros**	**4.04**	**126**	*e*PN	**Pn**	**03 39 57.5**	**+0.1**
VAGA	**Valle Agricola**	**4.12**	**283**	Pn	**Pn**	**03 39 59.6**	**+1.1**
CII	**Carovilli**	**4.13**	**288**	Pn	**Pn**	**03 40 00.0**	**+1.4**
	comp=Z,66nm,0.4s						
ATH	**Athens Observa**	**4.14**	**128**	*e*PN	**Pn**	**03 39 59.0**	**+0.2**
MIDA	**Miranda**	**4.15**	**286**	Pn	**Pn**	**03 40 00.3**	**+1.4**
	comp=Z,88nm,0.5s						
NAIG	**Nisos Aigina**	**4.15**	**132**	*e*PN	**Pn**	**03 39 58.5**	**-0.5**
RNI2	**Rionero Sannit**	**4.24**	**287**	Pn	**Pn**	**03 40 01.7**	**+1.6**
	comp=Z,146nm,0.6s						
SDI	**San Donato**	**4.49**	**286**	Pn	**Pn**	**03 40 04.8**	**+1.1**
	comp=Z,44nm,0.3s						
INTR	**Introdacqua**	**4.50**	**290**	Pn	**Pn**	**03 40 05.1**	**+1.3**
	comp=Z,164nm,0.8s						
VVLD	**Villa Vallelon**	**4.66**	**288**	Pn	**Pn**	**03 40 07.0**	**+0.8**
VCEL	**Villa Celiera**	**4.67**	**295**	Pn	**Pn**	**03 40 07.1**	**+0.9**
	comp=Z,139nm,0.6s						
VLI	**Veliai**	**4.68**	**145**	*e*PN	**Pn**	**03 40 05.1**	**-1.3**
PTQR	**Pietraquaria**	**4.86**	**289**	Pn	**Pn**	**03 40 10.4**	**+1.4**
	comp=Z,20nm,0.5s						
TERO	**Teramo**	**4.91**	**296**	Pn	**Pn**	**03 40 10.2**	**+0.5**
	comp=Z,80nm,0.6s						
ALN	**Alexandroupoli**	**4.93**	**84**	*e*Pn	**Pn**	**03 40 09.8**	**-0.2**
AQU	**L'Aquila**	**4.96**	**293**	Pn	**Pn**	**03 40 11.4**	**+1.1**
	comp=Z,65nm,0.8s						
CAMP	**Campotosto**	**5.01**	**295**	Pn	**Pn**	**03 40 11.8**	**+0.7**
VAE	**Valguarnera**	**5.07**	**234**	Pn	**Pn**	**03 40 16.0**	**+4.1**
	comp=Z,0.5nm,0.3s,baz=44,slow=15,SNR=2.9						
VAE				Sn	**Sn**	**03 41 20.8**	**+10**
	comp=Z,1.4nm,0.3s,baz=254,slow=8.8,SNR=4.1						
CERT	**Cerreto**	**5.15**	**287**	Pn	**Pn**	**03 40 13.4**	**+0.4**
	comp=Z,51nm,0.5s						
NVLJ	**Novalja**	**5.27**	**320**	*i* Pn	**Pn**	**03 40 14.3**	**-0.5**
NVLJ				*i* Sn	**Sn**	**03 41 13.9**	**-2.4**
NRCA	**Norcia**	**5.33**	**297**	Pn	**Pn**	**03 40 16.1**	**+0.6**
	comp=Z,80nm,0.5s						
MNS	**Montasola**	**5.47**	**291**	Pn	**Pn**	**03 40 18.3**	**+0.7**
	comp=Z,17nm,0.4s						
RHK1	**Bakonya**	**5.61**	**349**	*e*P	**Pn**	**03 40 22.0**	**+2.4**
ASS	**Assisi**	**5.73**	**298**	Pn	**Pn**	**03 40 21.6**	**+0.4**
	comp=Z,5.0nm,0.4s						
APE	**Apeiranthos**	**5.83**	**125**	*i* P	**Pn**	**03 40 22.0**	**-0.7**
BOJS	**Bojanci**	**5.84**	**329**	*i* Pn	**Pn**	**03 40 22.0**	**-0.9**
BOJS				*e*Sn	**Sn**	**03 41 28.3**	**-2.3**
VAM	**Vamos**	**6.33**	**143**	*e*PN	**Pn**	**03 40 28.5**	**-1.2**
GROS	**Grobnik**	**6.57**	**335**	*e*Pn	**Pn**	**03 40 31.8**	**-1.4**
LJU	**Ljubljana**	**6.58**	**328**	*e*Pn	**Pn**	**03 40 31.8**	**-1.4**
LJU				*e*Sn	**Sn**	**03 41 48.0**	**-0.9**
IDI	**Anoyia**	**6.76**	**140**	Pn	**Pn**	**03 40 33.5**	**-2.2**
	comp=Z,1.5nm,0.3s,baz=322,slow=13,SNR=8.3						
IDI				Sn	**Sn**	**03 41 44.8**	**-8.5**
	comp=Z,2.3nm,0.3s,baz=74,slow=23,SNR=5.6						
IDI				LR	LR	03 43 00.8	
	comp=Z,59nm,21.4s,baz=90,slow=36						
MLR	**Muntele Rosu**	**6.77**	**42**	Pn	**Pn**	**03 40 37.0**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=230,slow=11,SNR=13						
VOY	**Vojsko**	**6.84**	**325**	*e*Pn	**Pn**	**03 40 34.8**	**-2.0**
VOY				*e*Sn	**Sn**	**03 41 52.8**	**-2.6**
OBKA	**Obir**	**6.95**	**330**	⇑*i*PN	**Pn**	**03 40 36.9**	**-1.6**
OBKA				*i* SN	**Sn**	**03 41 55.9**	**-2.4**
CADS	**Cadrg**	**7.06**	**325**	*i* Pn	**Pn**	**03 40 37.1**	**-2.8**
CADS				*i* Sn	**Sn**	**03 41 56.8**	**-4.1**
ARSA	**Arzberg**	**7.27**	**338**	⇓*i*PN	**Pn**	**03 40 40.7**	**-2.3**
ARSA				*i* SN	**Sn**	**03 42 03.0**	**-3.3**
SRO	**Srobarova**	**7.28**	**353**	*e*SG	**Sg**	**03 42 55.4**	**-1.3**
PSZ	**Piszkesteto**	**7.33**	**2**	*e*P	**Pn**	**03 40 38.6**	**-5.2**
PSZ	**Piszkesteto**	**7.33**	**2**	*e*Pn	**Pn**	**03 40 40.0**	**-3.8**
PSZ				*e*Sn	**Sn**	**03 42 02.8**	**-5.0**
PGF	**Pioggiola**	**8.16**	**287**	*e*P	**P**	**03 40 55.2**	**-0.2**
	comp=Z,36nm,1.2s						
MOA	**Molln**	**8.20**	**334**	⇑*i*PN	**P**	**03 40 53.8**	**-2.1**
MOA				*i* SN	**Sn**	**03 42 26.5**	**-2.9**
KOLS	**Kolonicke sedl**	**8.56**	**12**	*e*PN	**P**	**03 41 02.9**	**+1.9**
KOLS				*e*		03 41 44.8	
WTTA	**Wattenberg**	**8.79**	**322**	⇑*i*PN	**P**	**03 41 01.6**	**-2.5**
WTTA				*i* SN	**Sn**	**03 42 41.0**	**-3.1**
WATA	**Walderalm**	**8.87**	**322**	⇓*i*PN	**P**	**03 41 03.7**	**-1.5**
WATA				*i* SN	**Sn**	**03 42 43.2**	**-2.9**
SQTA	**Sankt Quirin**	**8.96**	**320**	⇑*i*PN	**P**	**03 41 05.3**	**-1.2**
SQTA				*i* SN	**Sn**	**03 42 45.8**	**-2.6**
MOTA	**Moosalm**	**9.10**	**321**	⇓*i*PN	**P**	**03 41 07.0**	**-1.4**
MOTA				*i* SN	**Sn**	**03 42 48.6**	**-3.2**
GERES	**GERESS Array B**	**9.25**	**335**	Pn	**P**	**03 41 07.7**	**-2.8**
	comp=Z,0.4nm,0.3s,baz=158,slow=13,SNR=12						
GERES				Sn	**Sn**	**03 42 49.1**	**-6.5**
	comp=Z,0.2nm,0.3s,baz=159,slow=23,SNR=2.6						
MORC	**Moravsky Berou**	**9.30**	**352**	P	**P**	**03 41 08.8**	**-2.4**
DAVOX	**Davos**	**9.36**	**315**	Pn	**P**	**03 41 11.0**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=120,slow=17,SNR=11						
DAVOX				Sn	**Sn**	**03 42 53.7**	**-4.4**
	comp=Z,0.2nm,0.3s,baz=302,slow=18,SNR=2.6						
KHC	**Kasperske Hory**	**9.54**	**336**	*e*PN	**P**	**03 41 11.5**	**-2.9**
KHC				*e*SN	**Sn**	**03 42 52.9**	**-10**
SBF	**Sospel**	**9.58**	**294**	*e*P	**P**	**03 41 14.3**	**-0.6**
	comp=Z,35nm,0.9s						
DAVA	**Damuels**	**9.67**	**317**	⇑*i*PN	**P**	**03 41 14.7**	**-1.6**
DAVA				*i* SN	**Sn**	**03 43 02.2**	**-3.7**
FRF	**La Foret Royal**	**10.06**	**291**	*e*P	**P**	**03 41 21.1**	**-0.4**
	comp=Z,7.8nm,0.7s						
FRF	**La Foret Royal**	**10.06**	**291**	*e*P	**P**	**03 41 21.1**	**-0.4**
FRF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LMR	**La Mourre**	**10.11**	**290**	*e*P	**P**	**03 41 21.6**	**-0.6**
	comp=Z,6.0nm,0.7s						
LMR	**La Mourre**	**10.11**	**290**	*e*P	**P**	**03 41 21.6**	**-0.6**
LMR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MBDF	**Montbardon**	**10.29**	**298**	*e*P	**P**	**03 41 19.3**	**-5.5**
	comp=Z,5.3nm,0.6s						
MBDF	**Montbardon**	**10.29**	**298**	*e*P	**P**	**03 41 19.3**	**-5.5**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LPG	**La Plagne**	**10.58**	**302**	*e*P	**P**	**03 41 26.5**	**-2.3**
	comp=Z,6.0nm,0.6s						
LPG	**La Plagne**	**10.58**	**302**	*e*P	**P**	**03 41 26.5**	**-2.3**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LPL	**La Plagne**	**10.60**	**302**	*e*P	**P**	**03 41 26.8**	**-2.2**
	comp=Z,5.9nm,0.6s						
LPL	**La Plagne**	**10.60**	**302**	*e*P	**P**	**03 41 26.8**	**-2.2**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SMRF	**Simiane la Rot**	**10.91**	**293**	*e*P	**P**	**03 41 32.7**	**-0.5**
	comp=Z,14nm,0.9s						
ORIF	**Oris-en-Rattie**	**10.95**	**298**	*e*P	**P**	**03 41 28.0**	**-5.8**
	comp=Z,6.3nm,0.8s						
ORIF				*e*R			
	comp=Z,73nm,22.0s						
CABF	**La Chapelle**	**11.47**	**306**	*e*P	**P**	**03 41 37.2**	**-3.7**
	comp=Z,5.3nm,0.7s						
CABF	**La Chapelle**	**11.47**	**306**	*e*P	**P**	**03 41 37.2**	**-3.7**
CABF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MOX	**Moxa**	**11.49**	**334**	*e*P	**P**	**03 41 39.6**	**-1.5**
MOX	**Moxa**	**11.49**	**334**	*i* P	**P**	**03 41 39.6**	**-1.5**
MOX				L		03 46 28.0	
HINF	**Hinteralfeld**	**11.63**	**313**	*e*P	**P**	**03 41 39.4**	**-3.6**
	comp=Z,3.8nm,0.4s						
HINF	**Hinteralfeld**	**11.63**	**313**	*e*P	**P**	**03 41 39.4**	**-3.6**
HINF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CDF	**Champ du Feu**	**11.75**	**316**	*e*P	**P**	**03 41 40.7**	**-3.9**
	comp=Z,2.5nm,0.5s						
CDF	**Champ du Feu**	**11.75**	**316**	*e*P	**P**	**03 41 40.7**	**-3.9**
CDF				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VIVF	**Saint-Julien-l**	**11.76**	**296**	*e*P	**P**	**03 41 44.3**	**-0.4**
HAU	**Haudompre**	**12.02**	**312**	*e*P	**P**	**03 41 44.6**	**-3.7**
	comp=Z,5.9nm,0.4s						
HAU				*e*R			
	comp=Z,44nm,19.8s						
SMF	**Signal de Mont**	**12.90**	**303**	*e*P	**P**	**03 41 58.2**	**-1.8**
	comp=Z,4.2nm,0.5s						
SMF	**Signal de Mont**	**12.90**	**303**	*e*P	**P**	**03 41 58.2**	**-1.8**
SMF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MEZF	**Maizieres J'vi**	**13.02**	**312**	*e*P	**P**	**03 41 58.0**	**-3.6**
LOR	**Lormes**	**13.13**	**306**	*e*P	**P**	**03 41 59.6**	**-3.6**
	comp=Z,2.1nm,0.4s						
LOR				*e*R			
	comp=Z,49nm,18.8s						
AVF	**Avril sur Loir**	**13.26**	**303**	*e*P	**P**	**03 42 02.8**	**-2.1**
	comp=Z,1.1nm,0.3s						
AVF	**Avril sur Loir**	**13.26**	**303**	*e*P	**P**	**03 42 02.8**	**-2.1**
AVF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SSF	**Saint Saulge**	**13.27**	**305**	*e*P	**P**	**03 42 03.1**	**-1.9**
CAF	**Calviac**	**13.57**	**294**	*e*P	**P**	**03 42 09.0**	**+0.1**
	comp=Z,9.3nm,1.1s						
CAF	**Calviac**	**13.57**	**294**	*e*P	**P**	**03 42 09.0**	**+0.1**
CAF				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SJPF	**Ste Jean**	**15.70**	**286**	*e*P	**P**	**03 42 38.3**	**+1.6**
OBN	**Obninsk**	**18.40**	**32**	⇑*e*P	**P**	**03 43 12.9**	**+2.2**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
OBN	**Obninsk**	**18.40**	**32**	*e*P	**P**	**03 43 12.9**	**+2.2**
	comp=Z,5.0nm,0.5s						
GNI	**Garni**	**19.18**	**83**	⇓*e*P	**P**	**03 43 19.2**	**-0.9**
GNI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GNI	**Garni**	**19.18**	**83**	*e*P	**P**	**03 43 19.2**	**-0.9**
	comp=Z,6.0nm,0.9s						
HFS	**Hagfors**	**19.91**	**351**	P	**P**	**03 43 27.2**	**-1.1**
	comp=Z,0.0nm,0.3s,baz=168,slow=14,SNR=4.7						
HFS				LR	LR	03 51 57.7	
	comp=Z,57nm,21.5s,baz=190,slow=40						
KONO	**Kongsberg**	**20.08**	**345**	P	**P**	**03 43 29.9**	**-0.3**
EKA	**Eskdalemuir Ar**	**21.06**	**322**	P	**P**	**03 43 39.9**	**-0.4**
	comp=Z,4.8nm,0.8s,mb3.9,baz=115,slow=10,SNR=9.9						
NB2	**NORSAR Subarra**	**21.11**	**349**	P	**P**	**03 43 41.6**	**+0.8**
	comp=Z,1.9nm,0.7s,mb3.5,baz=158,slow=9.3						
NOA	**NORSAR Array B**	**21.11**	**349**	P	**P**	**03 43 40.0**	**-0.8**
	comp=Z,1.7nm,0.6s,mb3.5,baz=154,slow=9.9,SNR=7.5						
NOA				LR	LR	03 52 29.4	
	comp=Z,47nm,19.0s,MS2.9,baz=175,slow=39						
FINES	**FINESS Array B**	**21.26**	**9**	*e*P	**P**	**03 43 39.8**	**-2.5**
FINES	**FINESS Array B**	**21.26**	**9**	P	**P**	**03 43 39.4**	**-2.9**
	comp=Z,0.7nm,0.5s,mb3.3,baz=176,slow=10.0,SNR=8.7						
FINES				LR	LR	03 52 57.3	
	comp=Z,79nm,19.0s,MS3.1,baz=212,slow=40						
EVO	**Evora**	**21.33**	**273**	*e*P	**P**	**03 43 46.3**	**+3.1**
	comp=Z,40nm,1.6s,mb4.2						
EVO				*e*R			
	comp=Z,42nm,21.9s						
KAF	**Kangasniemi**	**21.94**	**8**	*e*p	**P**	**03 43 45.3**	**-3.9**
CHKZ	**Chkalovo**	**36.32**	**51**	*e*P	**P**	**03 45 57.7**	**-1.7**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CHKZ	**Chkalovo**	**36.32**	**51**	*e*P	**P**	**03 45 57.7**	**-1.7**
	comp=Z,1.5nm,0.8s,mb4.0						
ZAL	**Zalesovo**	**44.66**	**50**	P	**P**	**03 47 06.2**	**-2.0**
	comp=Z,1.7nm,0.4s,mb4.3,baz=94,slow=13,SNR=4.3						
ZAL	**Zalesovo**	**44.66**	**50**	P	**P**	**03 47 06.2**	**-2.0**
MKAR	**Makanchi Array**	**44.71**	**60**	P	**P**	**03 47 07.0**	**-1.7**
	comp=Z,0.6nm,0.5s,mb3.6,baz=280,slow=7.4,SNR=7.0						
MKAR	**Makanchi Array**	**44.71**	**60**	P	**P**	**03 47 07.0**	**-1.7**
SONM	**Songino Array**	**59.52**	**51**	P	**P**	**03 48 57.9**	**-1.6**
	comp=Z,1.9nm,1.2s,mb4.0,baz=281,slow=6.3,SNR=5.9						
ULN	**Ulaanbaatar**	**59.89**	**51**	P	**P**	**03 48 59.4**	**-2.6**
YKA	**Yellowknife Ar**	**70.88**	**339**	P	**P**	**03 50 12.6**	**+0.1**
	comp=Z,0.7nm,1.1s,mb3.5,baz=29,slow=6.4,SNR=4.5						
TXAR	**Lajitas Array**	**92.79**	**313**	P	**P**	**03 52 09.5**	**+1.8**
	comp=Z,0.3nm,0.8s,mb3.8,baz=79,slow=4.6,SNR=4.2						

IDC 11 03:43:46.5±3.2**,27.04N**×**126.07E,mb3.8**/5**,mb1 3.8**/5**,mb1mx3.6**/21**,mbtmp3.8**/5**,MS2.5**/1**,Ms1 2.5**/1**, ms1mx2.4**/28**,Error ellipse: s-maj=117.8km s-min=27.0km az=22.0,Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**1.98**	**95**	Pn	Pn	03 44 21.4	-0.2
	5.4nm,0.3s,baz=187,slow=27,SNR=3.4						
JOW				Sn	Sn	03 44 53.1	+5.7
	7.9nm,0.3s,baz=158,slow=27,SNR=4.9						
JNU	**Nakatsue**	**7.35**	**33**	LR	LR	03 49 13.1	
	comp=Z,34nm,18.7s,baz=182,slow=44						
SONM	**Songino Array**	**25.84**	**329**	P	P	03 49 20.5	-0.6
	1.2nm,0.8s,baz=145,slow=8.4,SNR=12						
MKAR	**Makanchi Array**	**39.56**	**312**	P	P	03 51 18.6	-2.2
	0.6nm,0.6s,baz=101,slow=10,SNR=4.6						
ZAL	**Zalesovo**	**40.45**	**323**	P	P	03 51 25.5	-2.6
	1.2nm,0.3s,baz=8.9,slow=13,SNR=3.7						
FINES	**FINESS Array B**	**71.21**	**330**	P	P	03 55 06.7	-2.1
	0.4nm,0.6s,baz=76,slow=5.7,SNR=4.5						
BRTR	**Keskin Array B**	**75.01**	**307**	P	P	03 55 30.9	-0.7
	0.4nm,0.4s,baz=63,slow=3.2,SNR=3.5						

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*IDC **11** 03:47:40.5±0.4, 1.06N×97.50E, mb4.8/27, mb1 4.8/28, mb1mx4.7/31, mbtmp4.8/28, ML5.2/1, MS4.8/12, Ms1 4.8/12, ms1mx4.7/16, Error ellipse: s-maj=15.4km s-min=12.2km az=53.0*

*BJI **11** 03:47:41.7, 0.88N×97.60E, h29*^{km}*, mB5.3, mb5.0, Ms5.3, Msz5.2*

*MOS **11** 03:47:44.1±1.0, 1.12N×97.53E, h33*^{km}*, mb5.1/46, MS4.8/19, Error ellipse: s-maj=12.7km s-min=6.5km az=112.0*

*HRVD **11** 03:47:44.1±0.4, 0.80N×97.29E, h26*^{km}*, MW5.2/50, Centroid moment Tensor Solution. LP body waves: s43,c68;Mantle waves: s50,c89; Half duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*3.82±.20;* $M_{\theta\theta}$*-1.94±.14;* $M_{\phi\phi}$*-1.88±.19;* $M_{r\theta}$*5.08±.29;* $M_{\theta\phi}$*2.76±.11;* $M_{\phi r}$*-4.27±.38; Best double couple:* M_0*7.88×10*^{16} *NP1:*ϕ_s*321°,δ17°,λ100°. NP2:*ϕ_s*130°,δ74°,λ87°. Principal axes: T 7.468, Plg61°, Azm36°; N .824, Plg3°, Azm131°; P -8.292, Plg29°, Azm223°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **11** 03:47:44.1±0.2, 1.02N×97.51E, mb5.1/66, MS4.9/111 Error ellipse: s-maj=5.3km s-min=4.7km az=202.0*

NEIC Felt [II] at Gunungsitoli.

ISC 11 03:47:42.7±0.2**,1.03N**±0.04×**97.55E**±0.03**,h25**^{km}**, h25**^{km}±.6^{km}**:pP-P,n369,**σ**0**^{s}**97**/289**,mb5.0**/123**,MS5.0**/142**, 25C-8D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPM	**Ipoh**	**4.95**	**44**	P	**Pn**	**03 48 59.8**	**+2.3**
KULM	**Kulim**	**5.24**	**36**	*e*P	**Pn**	**03 49 02.5**	**+0.9**
KGM	**Kluang**	**5.85**	**80**	P	**Pn**	**03 49 13.0**	**+2.8**
SNG	**Songkhla**	**6.83**	**27**	P	**Pn**	**03 49 24.0**	**0.0**
	432nm,0.9s						
PBA	**Port Blair**	**11.58**	**336**	*e*x	x	03 52 08.1	
PBA				*e*x	x	03 54 15.7	
NST	**Nakhon Sawan**	**14.77**	**10**	P	**P**	**03 51 23.0**	**+11**
CM31	**Chiang Mai Arr**	**17.37**	**4**	*e*P	**P**	**03 51 45.0**	**-0.3**
	60nm,0.8s						
CMAR	**Chiang Mai Arr**	**17.37**	**4**	P	**P**	**03 51 44.6**	**-0.8**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,5µm,18.0s						
CMAR	**Chiang Mai Arr**	**17.37**	**4**	P	**P**	**03 51 44.6**	**-0.8**
	comp=Z,3.1nm,0.3s,baz=194,slow=12,SNR=39						
CMAR				LR	LR	03 59 15.4	
	comp=Z,5µm,18.0s,baz=195,slow=40						
CHG	**Chiang Mai**	**17.73**	**4**	⇑P	**P**	**03 51 48.8**	**-1.0**
	comp=Z,22nm,0.9s						
NANT	**Nan**	**17.93**	**10**	⇓P	**P**	**03 51 52.0**	**-0.3**
	comp=Z,202nm,0.9s						
KKM	**Kota Kinabalu**	**19.28**	**75**	*e*P	**P**	**03 52 07.3**	**-1.4**
KKM	**Kota Kinabalu**	**19.28**	**75**	P	**P**	**03 52 10.6**	**+1.9**
TSM	**Tawau**	**20.55**	**81**	P	**P**	**03 52 24.5**	**+2.1**
QIZ	**Qiongzhong**	**21.57**	**33**	⇑P	**P**	**03 52 31.8**	**-0.9**
QIZ				S	**S**	**03 56 24.7**	**-0.7**
QIZ				XS		03 56 41.2	
QIZ				LR	LR		
	comp=N,2µm,15.0s,MS4.8						
QIZ				LR	LR		
	comp=E,1µm,18.1s,MS4.8						
QIZ				LR	LR		
	comp=Z,2µm,11.9s						
QIZ	**Qiongzhong**	**21.57**	**33**	P	**P**	**03 52 32.7**	**0.0**
	comp=Z,29nm,0.3s,mb5.2						
QIZ				LR	LR		
	comp=Z,2µm,19.0s,MS4.5						
VIS	**Vishakhapatnam**	**21.69**	**321**	*e*P	**P**	**03 52 35.8**	**+1.8**
VIS				AMb	AMB	03 52 38.9	
	comp=Z,141nm,1.1s,mb5.3						
VIS				*e*S	**S**	**03 56 30.5**	**+2.7**
TRD	**Trivandrum**	**21.81**	**291**	*e*x		03 52 43.5	
TRD				*i* S	**S**	**03 56 37.5**	**+7.5**
BWNR	**Bhubaneshwar**	**22.33**	**330**	*e*x		03 52 46.0	
BWNR				AMb	AMB	03 52 48.6	
	comp=Z,56nm,0.7s,mb5.1						
CAL	**Calcutta**	**23.18**	**338**	*e*P	**P**	**03 52 50.5**	**+1.8**
CAL				*e*x	x	03 57 18.6	
CAL				*e*x	x	04 00 40.1	
KMI	**Kunming**	**24.47**	**11**	P	**P**	**03 53 02.7**	**+1.4**
KMI				AP		03 53 09.6	
KMI				XP		03 53 12.3	
KMI				PP	PP	03 53 39.2	+2.1
KMI				PPP	PPP	03 53 50.0	+2.4
KMI				S	**S**	**03 57 19.9**	**+2.9**
KMI				XS		03 57 31.4	
KMI				SS	SS	03 58 16.2	+3.9
KMI				SSS	SSS	03 58 32.5	+3.8
KMI				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.6						
KMI				AMB	AMB		
	comp=Z,670nm,6.7s						
KMI				LR	LR		
	comp=N,5µm,13.0s,MS5.3						
KMI				LR	LR		
	comp=E,5µm,13.9s,MS5.3						
KMI				LR	LR		
	comp=Z,6µm,13.9s,MS5.2						
KMI	**Kunming**	**24.47**	**11**	P	**P**	**03 53 02.7**	**+1.4**
	comp=Z,34nm,1.3s,mb4.6						
KMI				pP		03 53 09.6	
KMI				sP		03 53 12.3	
KMI				PP	PP	03 53 39.2	+2.1
KMI				PPP	PPP	03 53 50.0	+2.4
KMI				S	**S**	**03 57 19.9**	**+2.9**
KMI				sS		03 57 31.4	
KMI				SS	SS	03 58 16.2	+3.9
KMI				SSS	SSS	03 58 32.5	+3.8
KMI				LR	LR		
	comp=Z,6µm,13.9s,MS5.2						
HYB	**Hyderabad**	**24.78**	**312**	*e*P	**P**	**03 53 06.0**	**+1.6**
HYB				*e*S	**S**	**03 57 28.0**	**+5.6**
HYB	**Hyderabad**	**24.78**	**312**	*i* P	**P**	**03 53 06.0**	**+1.6**
HYB				*e*pP		03 53 12.5	
HYB				*e*S	**S**	**03 57 23.5**	**+1.1**
SHL	**Shillong**	**25.00**	**348**	*e*P	**P**	**03 53 05.0**	**-1.3**
SHL				*e*S	**S**	**03 57 30.0**	**+4.1**
BOK	**Bokaro**	**25.30**	**334**	*e*P	**P**	**03 53 11.2**	**+2.0**
BOK				AMb	AMB	03 53 12.8	
	comp=Z,66nm,1.8s,mb4.9						
BOK				*e*S	**S**	**03 57 32.3**	**+1.4**
BLSP	**Bilaspur**	**25.79**	**325**	*e*P	**P**	**03 53 14.3**	**+0.5**
BLSP				AMb	AMB	03 53 16.4	
	comp=Z,75nm,1.8s,mb4.9						
GYA	**Guiyang**	**26.76**	**18**	⇑*i*P	**P**	**03 53 22.2**	**-0.5**
GYA				AP	pP	03 53 29.7	-0.2
GYA				XP	sP	03 53 32.6	-0.6
GYA				PP	PP	03 54 12.2	+4.6
GYA				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.7						
GYA				AMB	AMB		
	comp=Z,330nm,10.2s						
GYA				LR	LR		
	comp=N,2µm,17.1s,MS5.1						
GYA				LR	LR		
	comp=E,4µm,14.7s,MS5.1						
GYA				LR	LR		
	comp=Z,4µm,14.1s,MS5.1						

KAD	Karad	28.11	306	ex	pP	03 53 41.4	-0.9
KAD				AMb	AMB	03 54 00.1	
	comp=Z,31nm,2.3s,mb4.5						
PKI	Pulchoki	28.84	337	eP	P	03 53 42.1	+0.5
GUN	Gumba	28.97	338	eP	P	03 53 43.0	+0.3
	comp=Z,94nm,0.6s,mb5.7						
DMN	Daman	29.00	337	eP	P	03 53 43.8	+0.9
	comp=Z,92nm,0.9s,mb5.5						
KKN	Kakani	29.09	337	eP	P	03 53 43.7	-0.1
	comp=Z,94nm,0.9s,mb5.5						
LSA	Lhasa	29.15	349	P	P	03 53 43.9	-0.5
LSA				AP	pP	03 53 52.8	+1.2
LSA				XP	sP	03 53 56.4	+1.5
LSA				PCP	PcP	03 56 47.3	-4.5
LSA				S	S	03 58 34.0	+0.3
LSA				XS		03 58 52.7	
LSA				SCP		04 00 27.1	
LSA				PCS		04 00 30.6	
LSA				SCS	ScS	04 04 24.3	+1.1
LSA				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.2						
LSA				LR	LR		
	comp=N,980nm,23.8s,MS4.7						
LSA				LR	LR		
	comp=E,2µm,22.1s,MS4.7						
LSA				LR	LR		
	comp=Z,2µm,23.8s,MS4.7						
LSA	Lhasa	29.15	349	eP	P	03 53 45.0	+0.6
	comp=Z,34nm,0.8s,mb5.1						
LSA				LR	LR		
	comp=Z,2µm,20.0s,MS4.7						
BHPL	Bhopal	29.48	320	eP	P	03 53 47.8	+0.5
BHPL				AMb	AMB	03 53 54.9	
	comp=Z,12nm,0.8s,mb4.6						
GKN	Gorkha	29.53	336	eP	P	03 53 47.6	-0.2
	comp=Z,80nm,0.9s,mb5.5						
KOLN	Koldanda	29.76	335	eP	P	03 53 49.9	+0.1
	comp=Z,97nm,0.9s,mb5.5						
BOM	Bombay	30.06	308	ex	x	03 54 10.7	
BOM				ex	x	03 58 23.5	
CD2	Chengdu	30.29	11	eP	P	03 53 53.9	-0.6
CD2				AP	pP	03 54 00.5	-1.3
CD2				XP	sP	03 54 05.0	0.0
CD2				S	S	03 58 50.0	-1.7
CD2				SS	SS	04 00 30.6	-0.6
CD2				AMB	AMB		
	comp=Z,20nm,0.4s,mb5.2						
CD2				LR	LR		
	comp=N,7µm,15.0s						
CD2				LR	LR		
	comp=Z,8µm,15.9s,MS5.5						
MBWA	Marble Bar	30.93	137	PFAKE		03 54 10.0	+10
MBWA				LR	LR		
	comp=Z,2µm,20.0s,MS4.7						
ENH	Enshi	31.21	20	eP	P	03 54 00.8	-1.8
	comp=Z,46nm,0.6s,mb5.5						
ENH				LR	LR		
	comp=Z,2µm,21.0s,MS4.8						
QZH	Quanzhou	31.28	39	P	P	03 54 01.0	-2.2
QZH				LR	LR		
	comp=N,5µm,13.5s,MS5.5						
QZH				LR	LR		
	comp=E,5µm,14.3s,MS5.5						
QZH				LR	LR		
	comp=Z,7µm,13.8s,MS5.5						
LGTI	Lohaghat	32.72	331	i P	P	03 54 16.8	+1.0
TATO	Taipei	33.19	42	PFAKE		03 54 30.0	+10
TATO				LR	LR		
	comp=Z,2µm,21.0s,MS4.7						
WHN	Wuhan	33.40	27	⇑P	P	03 54 20.0	-1.7
WHN				LR	LR		
	comp=Z,8µm,12.4s,MS5.6						
FITZ	Fitzroy Crossi	33.55	126	P	P	03 54 22.4	-0.7
	comp=Z,13nm,0.8s,mb4.9,baz=204,slow=4.7,SNR=12						
NDI	New Delhi	33.66	327	eP	P	03 54 22.5	-1.5
NDI				AMb	AMB	03 54 26.1	
	comp=Z,28nm,1.8s,mb4.9						
NDI				ex	x	04 02 14.0	
XAN	Xi’an	34.52	17	P	P	03 54 29.5	-1.8
XAN				PP	PP	03 55 52.3	+4.6
XAN				S	S	04 00 01.6	+4.0
XAN				SS	SS	04 02 13.3	+3.9
XAN				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
XAN				AMB	AMB		
	comp=Z,210nm,13.7s						
XAN				LR	LR		
	comp=N,950nm,14.9s,MS5.1						
XAN				LR	LR		
	comp=E,3µm,15.6s,MS5.1						
XAN				LR	LR		
	comp=Z,4µm,14.1s,MS5.3						
LZH	Lanzhou	35.37	9	⇑P	P	03 54 37.9	-0.6
LZH				AP	pP	03 54 45.0	-0.9
LZH				XP	sP	03 54 47.6	-1.4
LZH				PP	PP	03 55 58.5	+0.2
LZH				eS	S	04 00 11.0	+0.3
LZH				XS		04 00 22.0	
LZH				AMB	AMB		
	comp=Z,50nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,130nm,4.0s						
LZH				LR	LR		
	comp=E,5µm,15.0s						
LZH				LR	LR		
	comp=Z,6µm,16.5s,MS5.4						
LZH	Lanzhou	35.37	9	⇑P	P	03 54 37.9	-0.6
	comp=Z,53nm,1.5s,mb5.2						
LZH				pP	pP	03 54 45.0	-0.9
LZH				sP	sP	03 54 47.6	-1.4
LZH				PP	PP	03 55 58.5	+0.2
LZH				eS	S	04 00 11.0	+0.3
LZH				sS		04 00 22.0	
LZH				SS	SS	04 02 45.5	+17
LZH				LR	LR		
	comp=Z,6µm,16.5s,MS5.4						
SMLA	Simla	35.62	329	i x	x	03 54 36.2	
SMLA				i x	x	04 00 33.3	
SDNR	Sundarnagar	36.02	329	eP	P	03 54 44.0	-0.1
KAKA	Kakadu	37.21	113	eP	P	03 54 53.6	-0.7
	comp=Z,56nm,1.5s,mb5.2						
SSE	Sheshan	37.35	35	P	P	03 54 53.1	-2.2
SSE				AP	pP	03 55 01.9	-0.8
SSE				XP	sP	03 55 05.0	-0.8
SSE				PP	PP	03 56 18.1	-5.1
SSE				S	S	04 00 38.1	-3.1
SSE				XS		04 00 53.1	
SSE				SCS	ScS	04 05 06.0	+0.5
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,150nm,6.7s						
SSE				LR	LR		
	comp=N,720nm,15.1s,MS4.8						
SSE				LR	LR		
	comp=E,810nm,15.1s,MS4.8						
SSE				LR	LR		
	comp=Z,2µm,14.6s,MS4.9						
SSE	Sheshan	37.35	35	P	P	03 54 53.1	-2.2
	comp=Z,38nm,0.7s,mb5.3						
SSE				pP	pP	03 55 01.9	-0.8
SSE				sP	sP	03 55 05.0	-0.8
SSE				PP	PP	03 56 18.1	-5.1
SSE				S	S	04 00 38.1	-3.1
SSE				sS		04 00 53.1	
SSE				SS	SS	04 03 21.7	+8.2
SSE				ScS	ScS	04 05 06.0	+0.5
SSE				LR	LR		
	comp=Z,2µm,14.6s,MS4.9						
GTA	Gaotai	38.25	3	eP	P	03 55 03.1	+0.3
GTA				AP	pP	03 55 11.5	+1.3
GTA				XP	sP	03 55 14.1	+0.8
GTA				PP	PP	03 56 34.0	+0.2
GTA				PCP	PcP	03 57 17.5	+0.2
GTA				S	S	04 00 56.9	+2.1
GTA				SCP		04 01 00.8	
GTA				XS		04 01 08.8	
GTA				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.9						
GTA				AMB	AMB		
	comp=Z,220nm,6.5s						
GTA				LR	LR		
	comp=N,1µm,14.9s,MS5.0						
GTA				LR	LR		
	comp=E,1µm,13.7s,MS5.0						
GTA				LR	LR		
	comp=Z,1µm,14.1s,MS4.9						
NWAO	Narrogin (SRO)	38.55	153	P	P	03 55 06.3	+0.9
	comp=Z,16nm,1.0s,mb4.7,baz=51,slow=8.2,SNR=2.4						
NWAO	Narrogin (SRO)	38.55	153	P	P	03 55 06.3	+0.9
NWAO				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
JOW	Kunigami	39.10	46	P	P	03 55 11.1	+1.0
	comp=Z,24nm,0.6s,mb5.2,baz=136,slow=29,SNR=4.2						
HHC	Hu-ho-hao-te	41.62	16	eP	P	03 55 31.9	+1.2
HHC				AP	pP	03 55 39.7	+1.6
HHC				XP	sP	03 55 42.3	+1.1
HHC				PP	PP	03 57 11.1	+1.1
HHC				PCP	PcP	03 57 28.5	+0.4
HHC				PCS		04 01 20.5	
HHC				S	S	04 01 48.2	+2.9
HHC				XS		04 02 01.0	
HHC				SS	SS	04 04 45.7	0.0
HHC				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.5						
HHC				AMB	AMB		
	comp=Z,410nm,10.3s						
HHC				LR	LR		
	comp=N,4µm,16.7s,MS5.4						
HHC				LR	LR		
	comp=E,3µm,15.2s,MS5.4						
HHC				LR	LR		
	comp=Z,3µm,17.8s,MS5.2						
WRA	Warramunga Arr	41.65	122	P	P	03 55 30.4	-0.8
WRA				S	S	04 01 41.5	-4.5
WRA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WRA				smax			
	comp=N,5.0nm,1.2s						
WRA	Warramunga Arr	41.65	122	P	P	03 55 30.4	-0.8
	comp=N,7.6nm,0.8s,mb4.4,baz=301,slow=8.9,SNR=45						
WRA				S	S	04 01 41.5	-4.5
	comp=N,4.6nm,1.2s,baz=292,slow=15,SNR=4.6						
WRAB	Tennant Creek	41.65	122	eP	P	03 55 30.7	-0.6
	comp=N,24nm,0.8s,mb4.9						
WRAB				LR	LR		
	comp=Z,487nm,22.0s,MS4.3						
WB2	Warramunga Arr	41.66	122	eP	P	03 55 32.2	+0.9
KSH	Kashi	43.07	335	eP	P	03 55 39.0	-3.5
KSH				eAP	pP	03 55 48.3	-1.7
KSH				eXP	sP	03 55 52.4	-0.7
KSH				ePP	PP	03 57 21.0	-3.9
KSH				ePCP	PcP	03 57 30.5	-2.4
KSH				ePPP	PPP	03 57 55.0	-4.8
KSH				eSCP		04 01 17.2	
KSH				ePCS		04 01 21.3	
KSH				eS	S	04 02 00.1	-6.5
KSH				eSS	SS	04 05 15.3	+2.6
KSH				eSCS	ScS	04 05 35.1	-4.0
KSH				AMB	AMB		
	comp=Z,540nm,3.8s						
KSH				LR	LR		
	comp=N,3µm,18.9s,MS5.3						
KSH				LR	LR		
	comp=E,2µm,15.4s,MS5.3						
WMQ	Urumqi	43.50	350	P	P	03 55 47.0	+1.0
WMQ				AP	pP	03 55 54.5	+1.1
WMQ				XP	sP	03 55 57.8	+1.3
WMQ				PP	PP	03 57 30.5	+1.4
WMQ				PCP	PcP	03 57 34.8	+0.5
WMQ				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,120nm,5.8s						
WMQ				LR	LR		
	comp=N,1µm,23.5s,MS5.0						
WMQ				LR	LR		
	comp=E,1µm,22.4s,MS5.0						
WMQ				LR	LR		
	comp=Z,1µm,24.0s,MS4.8						
DL2	Dalian	43.66	27	P	P	03 55 47.9	+0.5
DL2				XP	sP	03 55 57.3	-0.6
DL2				S	S	04 02 19.2	+4.0
DL2				XS		04 02 31.2	
DL2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.2						
DL2				AMB	AMB		
	comp=Z,240nm,5.5s						
DL2				LR	LR		
	comp=N,700nm,17.8s,MS4.8						
DL2				LR	LR		
	comp=E,560nm,14.9s,MS4.8						
DL2				LR	LR		
	comp=Z,980nm,14.3s,MS4.9						
JNU	Nakatsue	44.70	41	P	P	03 55 56.5	+0.6
	comp=Z,36nm,1.3s,mb5.0,baz=219,slow=8.6,SNR=3.5						
INCN	Inchon	45.09	33	PFAKE		03 56 10.0	+11
INCN				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
KZA	Kyzart	45.52	337	P	P	03 56 03.0	+0.8
	SNR=12						
KS15	Wonju Array Si	45.76	34	eP	P	03 56 04.2	0.0
UCH	Uchtor	45.94	336	P	P	03 56 06.5	+0.9
	SNR=33						
TKM2	Tokmak 2	46.10	338	P	P	03 56 07.4	+0.5
	SNR=17						
KBK	Karagaybulak	46.13	337	P	P	03 56 08.3	+1.3
	SNR=19						
AML	Almayashu	46.20	335	P	P	03 56 08.5	+0.8
	SNR=20						
FRU	Bishkek	46.41	337	eP	P	03 56 10.0	+0.7
FRU				e		03 56 22.5	
FRU				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.9						
CHMS	Chumysh	46.50	337	P	P	03 56 10.3	+0.3
	SNR=6.1						
EKS2	Erkin-Say	46.61	336	P	P	03 56 11.6	+0.8
	SNR=19						
USP	Ospenovka	46.82	337	P	P	03 56 12.7	+0.2
	SNR=29						
SNY	Shenyang	46.89	27	⇑P	P	03 56 12.3	-0.8
SNY				AP	pP	03 56 21.4	+0.8
SNY				XP	sP	03 56 26.0	+2.4
SNY				S	S	04 02 56.3	-5.3
SNY				XS		04 03 15.6	
SNY				AMB	AMB		
	comp=Z,30nm,1.8s,mb4.9						
SNY				AMB	AMB		
	comp=Z,290nm,12.9s						
SNY				LR	LR		
	comp=N,1µm,16.5s,MS5.2						
SNY				LR	LR		
	comp=E,2µm,15.7s,MS5.2						
SNY				LR	LR		
	comp=Z,2µm,14.5s,MS5.3						
SONM	Songino Array	47.25	8	P	P	03 56 16.0	+0.2
	comp=Z,13nm,0.8s,mb4.9,baz=190,slow=9.9,SNR=100						
SONM				PcP	PcP	03 57 46.2	-1.0
	comp=Z,3.0nm,0.5s,baz=185,slow=3.9,SNR=7.5						
SONM				LR	LR	04 18 34.9	
	comp=Z,2µm,19.7s,MS5.2,baz=193,slow=39						
ULN	Ulaanbaatar	47.37	9	c iP	P	03 56 16.5	-0.3
ULN	Ulaanbaatar	47.37	9	eP	P	03 56 16.4	-0.4
	comp=Z,16nm,0.9s,mb5.0						
ULN				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
MKAR	Makanchi Array	47.49	346	P	P	03 56 17.5	-0.3
MKAR				pmax	pmax		
	comp=Z,29nm,0.5s						
MKAR				MLR	MLR		
	comp=Z,837nm,20.4s						
MKAR	Makanchi Array	47.49	346	P	P	03 56 17.5	-0.3
	comp=Z,29nm,0.5s,mb5.5,baz=160,slow=8.5,SNR=278						
MKAR				LR	LR	04 20 03.3	
	comp=Z,837nm,20.4s,MS4.7,baz=272,slow=41						
CN2	Changchun	49.30	27	eP	P	03 56 34.2	+2.4
CN2				AP	pP	03 56 40.7	+1.4
CN2				XP	sP	03 56 44.7	+2.4
CN2				eS	S	04 03 39.2	+3.8
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=N,2µm,14.0s,MS5.3						
CN2				LR	LR		
	comp=E,1µm,14.0s,MS5.3						
CN2				LR	LR		
	comp=Z,3µm,15.0s,MS5.4						
ZAK	Zakamensk	49.41	5	⇑iP	P	03 56 32.4	-0.2
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
PMG	Port Moresby	50.48	103	d iP	P	03 56 41.9	+0.7
PMG	Port Moresby	50.48	103	PFAKE		03 56 50.0	+8.8
PMG				LR	LR		
	comp=Z,738nm,22.0s,MS4.7						
MOY	Mondy	50.54	3	eP	P	03 56 41.5	+0.3
TLY	Talaya	50.73	5	eP	P	03 56 43.3	+0.7
TLY				e		03 58 42.4	
TLY				ePPP	PPP	03 59 44.6	+6.4
TLY				eS	S	04 04 02.1	+7.0
TLY				ePS	PS	04 04 11.6	+4.9
TLY				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
TLY				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.2						
TLY	Talaya	50.73	5	eP	P	03 56 42.8	+0.2
	comp=Z,13nm,0.9s,mb4.9						
TLY				e	pP	03 56 50.7	+0.5
TLY				LR	LR		
	comp=Z,634nm,19.0s,MS4.7						
IRK	Irkutsk	51.34	5	eP	P	03 56 47.4	+0.1
IRK				e		03 58 48.7	
IRK				pmax	pmax		
	comp=Z,42nm,2.3s,mb5.0						
MAJO	Matsushiro	51.58	42	PFAKE		03 57 00.0	+11
MAJO				LR	LR		
	comp=Z,910nm,21.0s,MS4.8						
MAT	Matsushiro	51.58	42	P	P	03 56 50.0	+0.7
MAT				eS	S	04 04 05.0	-2.0
MAT				LR	LR		
	comp=Z,710nm,20.0s,MS4.7						
MAT	Matsushiro	51.58	42	P	P	03 56 47.3	-2.0
MAT				S	S	04 04 06.6	-0.4
MJAR	Matsushiro Arr	51.58	42	P	P	03 56 48.6	-0.7
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MJAR				MLR	MLR		
	comp=Z,707nm,21.3s						
MJAR	Matsushiro Arr	51.58	42	P	P	03 56 48.6	-0.7
	comp=Z,3.7nm,0.7s,mb4.5,baz=220,slow=6.1,SNR=11						
MJAR				LR	LR	04 19 35.8	
	comp=Z,707nm,21.3s,MS4.7,baz=245,slow=37						
HIA	Hailar	51.69	18	eP	P	03 56 49.4	-0.6
	comp=Z,20nm,1.0s,mb5.0						
HIA				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
MDJ	Mudanjiang	51.84	29	P	P	03 56 51.6	+0.4
MDJ				AP	pP	03 56 57.9	-0.9
MDJ				XP	sP	03 57 00.5	-1.2
MDJ				PCP	PcP	03 58 00.3	-3.7
MDJ				PCS		04 01 59.2	
MDJ				S	S	04 04 14.8	+4.2
MDJ				XS		04 04 26.6	
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,310nm,7.5s						
MDJ				LR	LR		
	comp=N,2µm,17.0s,MS5.2						
MDJ				LR	LR		
	comp=E,930nm,16.2s,MS5.2						
MDJ				LR	LR		
	comp=Z,2µm,17.0s,MS5.3						
MDJ	Mudanjiang	51.84	29	eP	P	03 56 52.6	+1.4
	comp=Z,18nm,1.0s,mb5.0						
MDJ				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
CTAO	Charters Tower	52.11	117	PFAKE		03 57 10.0	+16
CTAO				LR	LR		
	comp=Z,946nm,20.0s,MS4.8						
CIT	Chita	52.56	12	eP	P	03 56 56.8	+0.4
CIT				e		03 57 12.6	
CIT				pmax	pmax		
	comp=Z,75nm,2.1s,mb5.2						
STKA	Stephens Creek	52.98	132	eP	P	03 57 01.1	+1.2
	comp=Z,11nm,0.7s,mb4.9						
STKA	Stephens Creek	52.98	132	P	P	03 57 00.0	+0.1
	comp=Z,16nm,0.9s,mb5.0,baz=317,slow=7.3,SNR=17						
STKA				LR	LR	04 21 35.3	
	comp=Z,1µm,21.2s,MS5.0,baz=291,slow=38						
ZAL	Zalesovo	53.77	351	P	P	03 57 04.3	-1.0
ZAL				pmax	pmax		
	comp=Z,23nm,0.5s						
ZAL	Zalesovo	53.77	351	P	P	03 57 04.3	-1.0
	comp=Z,23nm,0.5s,mb5.3,baz=314,slow=5.0,SNR=76						
ZAL	Zalesovo	53.77	351	P	P	03 57 04.3	-1.0
NVS	Novosibirsk	54.90	350	eP	P	03 57 11.2	-2.5
NVS				eS	S	04 05 00.2	+8.4
NVS				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
NVS				pmax	pmax		
	comp=N,11nm,0.7s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.6s						
NVS				smax			
	comp=N,19nm,2.0s						
NVS				smax			
	comp=E,6.0nm,1.4s						
KLR	Kul’dur	56.25	26	eP	P	03 57 20.0	-3.4
KLR				eS	S	04 05 10.5	+0.6
KLR				e		04 07 02.5	
KLR				e		04 08 52.0	
KLR				pmax	pmax		
	comp=E,35nm,1.8s						
KLR				pmax	pmax		
	comp=Z,50nm,1.8s,mb5.2						
KLR				MLR	MLR		
	comp=N,2µm,13.0s						
KLR				MLR	MLR		
	comp=Z,2µm,13.0s,MS5.4						
CHKZ	Chkalovo	57.00	341	eP	P	03 57 27.1	-1.7
ASAJ	Asahikawa	58.59	37	P	P	03 57 40.8	+0.8
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ASAJ	Asahikawa	58.59	37	P	P	03 57 40.8	+0.7
	comp=Z,2.6nm,0.4s,mb4.6,baz=161,slow=5.2,SNR=4.1						
YSS	Yuzh-Sakhalins	60.29	34	eP	P	03 57 51.8	+0.1
YSS				e		03 58 01.7	
YSS				e		04 06 23.0	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
YSS				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.8						
YSS				MLR	MLR		
	comp=N,1µm,18.0s,MS5.2						
YSS				MLR	MLR		
	comp=E,900nm,15.0s,MS5.2						
YSS	Yuzh-Sakhalins	60.29	34	eP	P	03 57 52.2	+0.5
	comp=E,12nm,0.7s,mb5.0						
YSS				e	pP	03 57 59.6	+0.1
YSS				LR	LR		
	comp=Z,469nm,21.0s,MS4.6						
KMBO	Kilima Mbogo	60.33	268	P	P	03 57 52.5	0.0
	comp=Z,2.0nm,0.8s,mb4.2,baz=54,slow=7.1,SNR=6.2						
KMBO				LR	LR	04 19 01.3	
	comp=Z,432nm,20.0s,MS4.6,baz=90,slow=31						
GNI	Garni	61.66	316	d iP	P	03 58 01.1	0.0
GNI				pmax	pmax		
	comp=Z,22nm,1.7s						
GNI				MLR	MLR		
	comp=Z,300nm,18.0s						
GNI	Garni	61.66	316	P	P	03 58 01.5	+0.3
	comp=Z,3.0nm,0.4s,mb4.8,baz=15,slow=16,SNR=4.1						
GNI	Garni	61.66	316	P	P	03 58 01.5	+0.3
GNI				LR	LR		
	comp=Z,369nm,22.0s,MS4.5						
MTA	Mtatsminda	62.29	318	P	P	03 58 04.5	-0.8
TI2	Plekhanov	62.34	318	i P	P	03 58 01.6	-4.0
TAU	Tasmania Unive	62.46	141	PFAKE		03 58 20.0	+14
TAU				LR	LR		
	comp=Z,194nm,19.0s,MS4.3						
SVE	Sverdlovsk	62.97	338	⇑eP	P	03 58 07.3	-2.3
SVE				e		03 58 22.1	
SVE				e		03 58 51.0	
SVE				e		04 00 30.0	
SVE				eS	S	04 06 50.0	+13
SVE				e		04 07 52.0	
SVE				pmax	pmax		
	comp=Z,76nm,2.2s,mb5.4						
HNR	Honiara	62.99	101	PFAKE		03 58 20.0	+10
HNR				LR	LR		
	comp=Z,307nm,20.0s,MS4.5						
ZEI	Tsey	63.35	318	eP	P	03 58 10.1	-2.2
ZEI				i *PP	pP	03 58 19.6	-0.5
ZEI				pmax	pmax		

	comp=Z,8.0nm,0.8s,mb4.9						
ARU	**Arti**	63.47	337	⇑iP	P	03 58 11.2	-1.7
ARU				e		03 58 46.9	
ARU				e		04 00 27.6	
ARU				eS	S	04 06 42.3	-0.6
ARU				e		04 08 01.6	
ARU				eSS	SS	04 10 51.5	-0.3
ARU				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.1						
ARU				MLR	MLR		
	comp=N,400nm,18.0s,MS4.8						
ARU				MLR	MLR		
	comp=Z,800nm,18.0s,MS4.9						
ARU				MLR	MLR		
	comp=E,400nm,19.0s,MS4.8						
ARU	**Arti**	63.47	337	eP	P	03 58 11.1	-1.8
	comp=E,31nm,1.3s,mb5.3						
ARU				LR	LR		
	comp=Z,177nm,20.0s,MS4.2						
KIV	**Kislovodsk**	64.66	319	⇑iP	P	03 58 20.4	-0.5
KIV				i	pP	03 58 28.5	-0.2
KIV				i S	S	04 07 01.3	+3.5
KIV				eSS	SS	04 11 15.6	+5.1
KIV				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
KIV	**Kislovodsk**	64.66	319	eP	P	03 58 19.9	-1.0
	comp=Z,22nm,1.0s,mb5.1						
KIV				LR	LR		
	comp=Z,76nm,19.0s,MS3.9						
ASF	**Jabal al Asfar**	64.85	305	P	P	03 58 22.7	+0.4
	comp=Z,7.2nm,1.0s,mb4.7,baz=311,slow=4.7,SNR=5.3						
YAK	**Yakutsk**	65.48	16	eP	P	03 58 24.7	-1.2
YAK				e*PP	pP	03 58 33.6	0.0
YAK				e		03 58 56.1	
YAK				e		04 00 50.8	
YAK				eS	S	04 07 09.5	+2.0
YAK				e		04 08 19.6	
YAK				eSS	SS	04 11 17.2	-5.7
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
YAK				smax			
	comp=N,85nm,10.9s						
YAK				smax			
	comp=E,18nm,5.9s						
YAK				MLR	MLR		
	comp=N,813nm,14.0s,MS5.2						
YAK				MLR	MLR		
	comp=Z,1μm,14.0s,MS5.2						
YAK				MLR	MLR		
	comp=E,540nm,12.0s,MS5.2						
YAK	**Yakutsk**	65.48	16	PFAKE		03 58 40.0	+14
YAK				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
MALT	**Malatya**	65.50	312	eP	P	03 58 25.7	-0.8
	comp=Z,13nm,1.4s,mb4.8						
MALT				epP	pP	03 58 33.2	-1.0
GZT	**Gaziantep**	65.84	311	i P	P	03 58 28.4	-0.2
EIL	**Elat**	65.84	302	P	P	03 58 29.0	+0.2
	comp=Z,10nm,0.8s,mb4.9,baz=81,slow=1.4,SNR=12						
EIL	**Elat**	65.84	302	eP	P	03 58 28.6	-0.2
	comp=Z,19nm,0.9s,mb5.1						
EIL				epP	pP	03 58 34.6	-1.8
SOKR	**Solikamsk**	66.36	339	⇑iP	P	03 58 28.2	-3.4
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,530nm,19.0s,MS4.8						
KAHT	**Ahir Dag**	66.44	311	i P	P	03 58 32.3	-0.2
SOC	**Sochi**	66.48	318	eP	P	03 58 30.5	-2.1
SOC				e		03 59 04.2	
SOC				e		04 00 55.5	
SOC				eS	S	04 07 14.3	-5.7
SOC				eSSS	SSS	04 14 38.3	+3.8
SOC				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
SOC				pmax	pmax		
	comp=N,8.0nm,0.7s						
SOC				pmax	pmax		
	comp=E,10.0nm,1.1s						
MBAR	**Mbarara**	66.83	269	eP	P	03 58 34.3	-1.1
	comp=E,9.4nm,1.4s,mb4.6						
MBAR				epP	pP	03 58 40.8	-2.3
MBAR				LR	LR		
	comp=Z,82nm,20.0s,MS3.9						
CASY	**Casey**	67.80	174	PFAKE		03 58 50.0	+9.4
CASY				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
BR131	**Keskin Array S**	69.48	312	eP	P	03 58 50.1	-1.3
	comp=Z,5.5nm,0.8s,mb4.5						
BRTR	**Keskin Array B**	69.48	312	P	P	03 58 50.1	-1.3
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRTR	**Keskin Array B**	69.48	312	P	P	03 58 50.1	-1.3
	comp=Z,4.8nm,0.7s,mb4.5,baz=130,slow=7.4,SNR=27						
VRSR	**Storozhevoye**	69.89	325	eP	P	03 58 52.2	-1.5
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
VRSR				pmax	pmax		
	comp=N,2.0nm,0.5s						
VRSR				pmax	pmax		
	comp=E,10.0nm,1.0s						
LSZ	**Lusaka**	70.40	253	PFAKE		03 59 10.0	+13
LSZ				LR	LR		
	comp=Z,662nm,20.0s,MS4.9						
SIM	**Simferopol’**	70.72	318	eP	P	03 58 58.0	-0.9
SIM				eS	S	04 08 08.0	-2.4
SIM				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
MA2	**Magadan**	71.33	25	eP	P	03 59 02.8	+0.5
MA2				e		03 59 29.3	
MA2				eS	S	04 08 17.2	0.0
MA2				i PS	PS	04 08 38.4	-11
MA2				e		04 09 02.9	
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
MA2				MLR	MLR		
	comp=Z,1μm,19.9s,MS5.2						
MA2	**Magadan**	71.33	25	eP	P	03 59 02.1	-0.2
	comp=Z,13nm,0.8s,mb4.9						
MA2				LR	LR		
	comp=Z,527nm,20.0s,MS4.8						
ESKT	**Eskisehir**	71.50	311	i P	P	03 59 03.0	-0.7
TKTP	**Tekketepe**	71.55	310	i P	P	03 59 03.0	-1.0
PET	**Petropavlovsk**	72.17	34	eP	P	03 59 06.9	-0.5
PET				eS	S	04 08 30.1	+3.1
PET				ePS	PS	04 09 02.4	+1.4
PET				eSS	SS	04 13 08.3	+1.8
PET				pmax	pmax		
	comp=Z,300nm,8.5s						
PET				pmax	pmax		
	comp=Z,200nm,17.9s						
PET				MLR	MLR		
	comp=Z,600nm,20.0s,MS4.9						
PET				MLR	MLR		
	comp=Z,600nm,19.0s						
PET	**Petropavlovsk**	72.17	34	PFAKE		03 59 20.0	+13
PET				LR	LR		
	comp=Z,568nm,19.0s,MS4.9						
MAW	**Mawson**	72.63	193	LR	LR	04 25 05.6	
	comp=Z,465nm,21.4s,MS4.7,baz=57,slow=31						
MOS	**Moscow**	72.66	329	eP	P	03 59 07.0	-3.2
MOS				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.5						
MOS				MLR	MLR		
	comp=Z,600nm,21.9s,MS4.8						
ULDT	**Uludag**	72.94	312	i P	P	03 59 11.1	-1.1
OBN	**Obninsk**	72.94	328	⇓iP	P	03 59 10.9	-1.0
OBN				e		03 59 28.5	
OBN				i S	S	04 08 37.2	+1.5
OBN				eSS	SS	04 13 21.5	+2.7
OBN				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
OBN				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.6						
OBN	**Obninsk**	72.94	328	PFAKE		03 59 20.0	+8.1
OBN				LR	LR		
	comp=Z,115nm,22.0s,MS4.1						
MANT	**Manisa**	73.00	310	i P	P	03 59 12.5	-0.1
TIXI	**Tiksi**	73.29	10	⇑iP	P	03 59 11.3	-2.4
TIXI				eS	S	04 08 33.5	-5.8
TIXI				eSS	SS	04 13 20.1	-3.7
TIXI				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,964nm,16.0s,MS5.2						
TIXI	**Tiksi**	73.29	10	PFAKE		03 59 30.0	+16
TIXI				LR	LR		
	comp=Z,716nm,19.0s,MS5.0						
BTOK	**Tokmak**	73.68	311	i P	P	03 59 15.6	-0.9
SEY	**Seymchan**	73.78	23	eP	P	03 59 16.7	+0.1
SEY						03 59 30.1	
SEY				e		04 02 07.1	
SEY				eS	S	04 08 44.8	-0.1
SEY						04 09 24.3	
SEY				eSS	SS	04 13 23.2	-8.0
SEY				eSSS	SSS	04 16 36.9	-5.9
SEY				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
SEY				pmax	pmax		
	comp=E,7.0nm,0.9s						
SEY				smax			
	comp=N,200nm,21.1s						
SEY				smax			
	comp=E,100nm,18.6s						
SEY				MLR	MLR		
	comp=Z,2μm,22.0s,MS5.3						
SEY				MLR	MLR		
	comp=N,900nm,15.0s						
SEY				MLR	MLR		
	comp=E,1μm,20.0s						
KDAG	**Bornova**	73.97	310	i P	P	03 59 18.2	-0.1
KIS	**Kishinev**	74.86	319	eP	P	03 59 23.0	-0.2
KIS				e		04 02 07.0	
KIS				e		04 09 02.0	
BOSA	**Boshof**	75.00	240	P	P	03 59 23.7	-0.7
	comp=E,4.2nm,1.0s,mb4.3,baz=75,slow=9.9,SNR=4.3						
BOSA				LR	LR	04 30 19.9	
	comp=E,559nm,18.1s,MS4.9,baz=70,slow=34						
AKASG	**Malin Array Be**	75.60	322	P	P	03 59 25.9	-1.5
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKASG	**Malin Array Be**	75.60	322	P	P	03 59 25.9	-1.5
	comp=Z,3.2nm,0.4s,mb4.6,baz=87,slow=4.6,SNR=31						
VRI	**Vrincioaia**	75.98	317	⇑iP	P	03 59 29.8	+0.2
VRI	**Vrincioaia**	75.98	317	⇑iP	P	03 59 29.8	+0.2
MLR	**Muntele Rosu**	76.43	317	⇑iP	P	03 59 31.5	-0.6
MLR	**Muntele Rosu**	76.43	317	⇑iP	P	03 59 31.5	-0.7
BURAR	**Bucovina Array**	77.38	319	⇑iP	P	03 59 37.9	+0.5
BURAR	**Bucovina Array**	77.38	319	⇑iP	P	03 59 37.9	+0.5
LVV	**L’vov**	78.62	321	eP	P	03 59 51.7	+7.6
SUR	**Sutherland**	79.37	237	P	P	03 59 50.2	+1.6
	comp=Z,8.5nm,0.9s,mb4.7,baz=76,slow=4.3,SNR=3.2						
SUR	**Sutherland**	79.37	237	P	P	03 59 50.2	+1.6
SUR				LR	LR		
	comp=Z,255nm,19.0s,MS4.6						
APA	**Apatity**	79.41	339	⇑iP	P	03 59 48.4	+0.3
APA				eS	S	04 09 43.0	-3.1
APA				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.2						
KWP	**Kalwaria**	79.42	320	eP	P	03 59 48.4	-0.2
KOLS	**Kolonicke sedl**	79.57	320	i P	P	03 59 50.1	+0.7
SUW	**Suwalki**	80.01	325	eP	P	03 59 51.1	-0.5
FINES	**FINESS Array B**	80.31	332	P	P	03 59 52.2	-0.9
	comp=Z,6.4nm,0.9s,mb4.6,baz=104,slow=5.8,SNR=39						
FINES				LR	LR	04 42 20.0	
	comp=Z,336nm,18.5s,MS4.7,baz=341,slow=41						
KAF	**Kangasniemi**	80.39	333	ep	P	03 59 53.0	-0.5
	comp=Z,10nm,0.9s,mb4.8,baz=101,slow=5.0						
KAF	**Kangasniemi**	80.39	333	eP	P	03 59 53.0	-0.5
KAF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KECS	**Kecovo**	80.66	319	eP	P	03 59 55.5	+0.3
BBLS	**Bajina Basta -**	80.74	314	⇓iP	P	03 59 55.1	-0.6
TSUM	**Tsumeb**	80.86	250	P	P	03 59 57.1	+0.3
	comp=Z,3.2nm,0.9s,mb4.2,baz=73,slow=4.9,SNR=4.1						
TSUM	**Tsumeb**	80.86	250	eP	P	03 59 56.9	+0.1
	comp=Z,7.9nm,0.9s,mb4.6						
TSUM				epP	pP	04 00 04.4	-0.3
TSUM				LR	LR		
	comp=Z,426nm,20.0s,MS4.8						
PSZ	**Piszkesteto**	80.97	318	eP	P	03 59 56.4	-0.4
	comp=Z,13nm,1.0s,mb4.8						
SNZO	**South Karori**	81.04	132	PFAKE		04 00 10.0	+13
SNZO				LR	LR		
	comp=Z,977nm,20.0s,MS5.2						
BILL	**Bilibino**	81.20	21	⇓iP	P	03 59 56.9	-0.7
BILL				e	pP	04 00 04.8	-0.7
BILL				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.5						
BILL				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.9						
BILL	**Bilibino**	81.20	21	PFAKE		04 00 10.0	+12
BILL				LR	LR		
	comp=Z,756nm,19.0s,MS5.1						
VYHS	**Vyhne**	81.75	319	i P	P	04 00 01.7	+0.8
VYHS				i		04 00 17.1	
KEV	**Kevo**	82.38	341	PFAKE		04 00 20.0	+16
KEV				LR	LR		
	comp=Z,657nm,20.0s,MS5.0						
OKC	**Ostrava-Krasne**	82.38	320	eP	P	04 00 04.5	+0.4
OKC				epP	pP	04 00 11.6	-0.4
OKC	**Ostrava-Krasne**	82.38	320	eP	P	04 00 04.5	+0.4
OKC				epP	pP	04 00 11.6	-0.4
OKC				AMS	AMS	04 47 50.0	
	comp=Z,300nm,19.9s						
MORC	**Moravsky Berou**	82.76	320	eP	P	04 00 06.2	+0.1
	comp=Z,20nm,1.3s,mb5.0						
MORC				epP	pP	04 00 13.6	-0.3
ARCES	**ARCESS Array B**	82.81	340	P	P	04 00 06.0	0.0
ARCES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARCES	**ARCESS Array B**	82.81	340	P	P	04 00 06.0	0.0
	comp=Z,7.1nm,0.8s,mb4.8,baz=96,slow=5.0,SNR=29						
ZST	**Bratislava**	82.86	318	i P	P	04 00 07.4	+0.8
ZST				i sP	sP	04 00 18.5	+1.4
DPC	**Dobruska-Polom**	83.60	320	eP	P	04 00 11.1	+0.7
DPC				epP	pP	04 00 18.7	+0.4
DPC				AMS	AMS	04 43 40.0	
	comp=Z,300nm,25.4s						
GOLS	**Golise**	83.64	316	eP	P	04 00 12.0	+1.2
CSSN	**Cassano Irpino**	83.67	311	P	P	04 00 11.1	+0.1
KSP	**Ksiaz**	83.67	321	eP	P	04 00 10.7	-0.1
KSP				e		04 10 30.0	
KSP	**Ksiaz**	83.67	321	eP	P	04 00 11.6	+0.8
GROS	**Grobnik**	83.77	316	eP	P	04 00 11.7	+0.3
UPC	**Upice**	83.82	321	eP	P	04 00 08.8	-2.7
ARSA	**Arzberg**	83.83	317	⇓iP	P	04 00 12.2	+0.6
	comp=Z,14nm,1.2s,mb5.0						
LJU	**Ljubljana**	84.41	316	i P	P	04 00 15.6	+1.0
LJU				e	pP	04 00 23.3	+0.7
PRU	**Pruhonice**	84.71	320	eP	P	04 00 16.1	+0.1
PRU				epP	pP	04 00 22.6	-1.3
PRU				AMS	AMS	04 44 30.0	
	comp=Z,300nm,20.0s						
MOA	**Molln**	84.72	318	⇑iP	P	04 00 16.3	+0.2
	comp=Z,5.2nm,0.9s,mb4.7						
PVCC	**Panska Ves**	84.74	320	eP	P	04 00 16.7	+0.6
PVCC				epP	pP	04 00 23.8	-0.2
PVCC				AMS	AMS	04 46 00.0	
	comp=Z,200nm,14.9s						
PTQR	**Pietraquaria**	84.96	312	P	P	04 00 18.3	+0.9
AQU	**L’Aquila**	84.98	312	eP	P	04 00 17.7	+0.2
	comp=Z,27nm,1.1s,mb5.3						
BRG	**Berggiesshubel**	85.16	321	eP	P	04 00 19.0	+0.8
BRG				e	pP	04 00 26.8	+0.6
BRG				i		04 10 48.0	
BRG				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.9						
BRG				MLR	MLR		
	comp=N,280nm,15.3s,MS4.9						
BRG				MLR	MLR		
	comp=E,200nm,15.3s,MS4.9						
BRG				MLR	MLR		
	comp=Z,270nm,15.3s,MS4.8						
BRG	**Berggiesshubel**	85.16	321	eP	P	04 00 19.0	+0.8
	comp=Z,12nm,1.3s,mb4.9						
BRG				e	pP	04 00 26.8	+0.6
BRG				i		04 10 48.0	
BRG				LR	LR		
	comp=Z,270nm,15.3s,MS4.8						
GEC2	**GERESS Array S**	85.17	319	eP	P	04 00 18.4	+0.1
GEC2				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.1						
GEC2	**GERESS Array S**	85.17	319	eP	P	04 00 18.4	+0.1
	comp=Z,18nm,1.1s,mb5.1						
GERES	**GERESS Array B**	85.17	319	P	P	04 00 18.2	-0.1
GERES				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GERES	**GERESS Array B**	85.17	319	P	P	04 00 18.2	-0.1
	comp=Z,7.4nm,0.9s,mb4.8,baz=90,slow=4.0,SNR=49						
CING	**Cingoli**	85.19	313	P	P	04 00 19.2	+0.7
	comp=Z,14nm,1.0s,mb5.1						
PTCC	**Patocco-Chiusa**	85.25	316	P	P	04 00 18.9	+0.1
KHC	**Kasperske Hory**	85.27	319	eP	P	04 00 18.8	0.0
KHC				epP	pP	04 00 25.9	-0.9
KHC				AMS	AMS	04 44 50.0	
	comp=Z,200nm,20.9s						
ARV	**Arcevia**	85.38	313	P	P	04 00 20.3	+0.8
	comp=Z,33nm,1.0s,mb5.4						
VNDA	**Vanda**	85.59	169	P	P	04 00 20.9	+1.1
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
VNDA				MLR	MLR		
	comp=Z,497nm,18.0s						
VNDA	**Vanda**	85.59	169	P	P	04 00 20.9	+1.1
	comp=Z,0.9nm,0.9s,mb4.0,baz=300,slow=6.2,SNR=3.0						
VNDA				LR	LR	04 37 42.2	
	comp=Z,497nm,18.0s,MS5.0,baz=309,slow=35						
VNDA	**Vanda**	85.59	169	P	P	04 00 20.9	+1.1
VNDA				LR	LR	04 37 42.2	
CLL	**Collm**	85.78	321	i P	P	04 00 22.2	+0.9
CLL				e*PP	pP	04 00 30.0	+0.7
CLL				eS	S	04 10 50.0	-1.0
CLL				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.9						
CLL	**Collm**	85.78	321	i P	P	04 00 22.2	+0.9
	comp=Z,10.0nm,1.3s,mb4.9						
CLL				epP	pP	04 00 30.0	+0.7
CLL				eS	S	04 10 50.0	-1.0
CLL	**Collm**	85.78	321	P	P	04 00 22.2	+0.9
	comp=Z,logA/T=0.9,mb4.9						
CLL				e*PP	pP	04 00 30.0	+0.7
CLL				i *SP	sP	04 00 33.0	+1.2
CLL				eS	S	04 10 50.0	-1.0
CLL				ePS	PS	04 11 54.0	+1.0
HFS	**Hagfors**	86.04	330	P	P	04 00 22.3	-0.1
HFS				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HFS	**Hagfors**	86.04	330	P	P	04 00 22.3	-0.1
	comp=Z,4.1nm,0.5s,mb4.9,baz=124,slow=5.3,SNR=27						
NKC	**Novy Kostel**	86.07	320	eP	P	04 00 23.8	+1.0
NKC				epP	pP	04 00 31.9	+1.2
NKC				AMS	AMS	04 45 40.0	
	comp=Z,200nm,20.0s						
SFI	**Santa Sofia**	86.19	314	P	P	04 00 25.3	+1.8
CTI	**Castel Tesino**	86.41	316	P	P	04 00 25.3	+0.8
WTTA	**Wattenberg**	86.47	317	⇑iP	P	04 00 24.0	-0.8
	comp=Z,11nm,1.0s,mb5.0						
MOX	**Moxa**	86.62	320	eP	P	04 00 26.2	+0.7
MOX				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.8						
MOX				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.5						
MOX	**Moxa**	86.62	320	eP	P	04 00 26.2	+0.7
	comp=Z,10.0nm,1.4s,mb4.8						
MOX				LR	LR		
	comp=Z,200nm,21.0s,MS4.5						
MOX	**Moxa**	86.62	320	i P	P	04 00 26.2	+0.7
	comp=Z,logA/T=0.8,mb4.8						
MOX				L		04 47 45.0	
SBA	**Scott Base**	86.69	169	PFAKE		04 00 40.0	+15
SBA				LR	LR		
	comp=Z,465nm,19.0s,MS4.9						
SQTA	**Sankt Quirin**	86.76	317	⇑iP	P	04 00 26.4	+0.2
	comp=Z,7.1nm,0.9s,mb4.9						
MOTA	**Moosalm**	86.83	317	⇑iP	P	04 00 26.2	-0.4
	comp=Z,8.2nm,1.0s,mb4.9						
GRA1	**Grafenberg Arr**	86.84	320	eP	P	04 00 26.9	+0.4
	comp=Z,16nm,1.1s,mb5.2						
GRA1				epP	pP	04 00 35.3	+0.8
GRA1				LR	LR		
	comp=Z,200nm,21.7s,MS4.5						
GRF	**Grafenberg Arr**	86.84	320	eP	P	04 00 26.9	+0.4
	comp=Z,16nm,1.1s,mb5.2						
GRF				epP	pP	04 00 35.3	+0.8
GRF				LR	LR		
	comp=Z,200nm,21.7s,MS4.5						
BRMO	**Bormio**	87.31	316	P	P	04 00 29.7	+0.8
NB2	**NORSAR Subarra**	87.32	331	P	P	04 00 28.7	+0.1
	comp=Z,7.9nm,0.8s,mb5.0,baz=96,slow=4.8						
NOA	**NORSAR Array B**	87.32	331	P	P	04 00 28.1	-0.5
	comp=Z,4.5nm,0.8s,mb4.8,baz=95,slow=4.9,SNR=18						
NOA				LR	LR	04 46 49.9	
	comp=Z,293nm,18.6s,MS4.7,baz=70,slow=41						
CLZ	**Clausthal**	87.45	322	eP	P	04 00 30.0	+0.6
	comp=Z,28nm,1.7s,mb5.2						
BSEG	**Bad Segeberg**	87.54	324	eP	P	04 00 30.8	+1.0
BSEG				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.2						
DAVA	**Damuels**	87.66	317	⇑iP	P	04 00 30.5	-0.1
	comp=Z,11nm,0.8s,mb5.2						
KONO	**Kongsberg**	88.08	329	PFAKE		04 00 40.0	+7.8
KONO				LR	LR		
	comp=Z,384nm,20.0s,MS4.8						
KBS	**Kingsbay**	88.15	349	PFAKE		04 00 40.0	+7.8
KBS				LR	LR		
	comp=Z,621nm,19.0s,MS5.0						
PGF	**Pioggiola**	88.24	312	eP	P	04 00 32.9	-0.6
	comp=Z,21nm,0.9s,mb5.0						
TNS	**Taunus Mts**	88.64	320	eP	P	04 00 36.4	+1.2
TNS				pmax	pmax		
	comp=Z,16nm,1.5s,mb5.1						
TNS	**Taunus Mts**	88.64	320	eP	P	04 00 36.4	+1.2
	comp=Z,16nm,1.5s,mb5.1						
BFO	**Black Forest**	88.72	318	eP	P	04 00 35.6	0.0
BFO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
BFO	**Black Forest**	88.72	318	eP	P	04 00 35.6	0.0
	comp=Z,6.0nm,1.0s,mb4.9						
SBF	**Sospel**	89.38	314	eP	P	04 00 38.3	-0.5
	comp=Z,48nm,0.9s,mb5.5						
CDF	**Champ du Feu**	89.42	318	eP	P	04 00 38.8	-0.1
NVL	**N’lazarevskaya**	89.55	199	⇓iP	P	04 00 48.2	+9.2
NVL				i *SP	sP	04 00 56.5	+7.0
NVL				i SP	SP	04 13 06.7	+33
NVL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.5						
NVL				MLR	MLR		
	comp=Z,120nm,19.4s,MS4.3						
LPG	**La Plagne**	89.83	315	eP	P	04 00 40.9	0.0
	comp=Z,21nm,0.9s,mb5.2						
MBDF	**Montbardon**	89.84	315	eP	P	04 00 40.0	-1.0
LPL	**La Plagne**	89.85	315	eP	P	04 00 40.9	-0.1
	comp=Z,27nm,0.9s,mb5.3						
FRF	**La Foret Royal**	89.95	313	eP	P	04 00 41.2	-0.4
	comp=Z,26nm,1.0s,mb5.2						
HAU	**Haudompre**	90.05	318	eP	P	04 00 41.2	-0.7
	comp=Z,25nm,1.0s,mb5.2						
HAU				eR			
	comp=Z,294nm,21.3s						
CABF	**La Chapelle**	90.27	316	eP	P	04 00 42.8	-0.1
	comp=Z,17nm,0.9s,mb5.1						
ORIF	**Oris-en-Rattie**	90.47	315	eP	P	04 00 43.9	0.0
ORIF				eR			
	comp=Z,324nm,20.8s						
SMRF	**Simiane la Rot**	90.72	314	eP	P	04 00 45.5	+0.4
	comp=Z,21nm,1.0s,mb5.1						
MEZF	**Maizieres J’vi**	90.90	318	eP	P	04 00 45.5	-0.3
	comp=Z,20nm,0.9s,mb5.1						
TNA	**Tin City**	90.95	25	PFAKE		04 01 00.0	+14
TNA				LR	LR		
	comp=Z,329nm,19.0s,MS4.8						
GIVF	**Givet**	90.97	320	eP	P	04 00 45.9	-0.2
QSPA	**South Pole Qui**	90.97	180	PFAKE		04 01 00.0	+15
QSPA				LR	LR		
	comp=Z,744nm,19.0s,MS5.1						
VIVF	**Saint-Julien-l**	91.33	315	eP	P	04 00 47.7	-0.1
	comp=Z,12nm,1.0s,mb4.9						
BAIF	**Baives**	91.37	320	eP	P	04 00 48.0	+0.1
	comp=Z,48nm,1.0s,mb5.5						
LOR	**Lormes**	91.76	317	eP	P	04 00 49.5	-0.3
	comp=Z,31nm,1.0s,mb5.3						
LOR				eR			
	comp=Z,274nm,22.0s						
SMF	**Signal de Mont**	91.81	317	eP	P	04 00 49.6	-0.4
	comp=Z,37nm,1.0s,mb5.4						
LASF	**Ste Croix**	91.95	314	eP	P	04 00 50.8	+0.1

	comp=Z,7.3nm,0.9s,mb4.7						
SSF	**Saint Saulge**	**92.02**	**317**	*e*P	**P**	**04 00 50.8**	**-0.1**
	comp=Z,30nm,1.3s,mb5.2						
AVF	**Avril sur Loir**	**92.14**	**317**	*e*P	**P**	**04 00 51.2**	**-0.3**
	comp=Z,26nm,1.0s,mb5.2						
BGF	**Bois d'Agland**	**92.50**	**316**	*e*P	**P**	**04 00 53.4**	**+0.2**
	comp=Z,31nm,0.9s,mb5.4						
UNV	**Unalaska Valle**	**92.69**	**36**	PFAKE		04 01 10.0	+16
UNV				LR	LR		
	comp=Z,930nm,21.0s,MS5.2						
TCF	**Toulx Ste Croi**	**92.96**	**316**	*e*P	**P**	**04 00 55.4**	**+0.1**
MTLF	**Montolieu**	**93.19**	**313**	*e*P	**P**	**04 00 56.5**	**+0.1**
	comp=Z,19nm,1.1s,mb5.1						
EKA	**Eskdalemuir Ar**	**95.25**	**326**	P	**P**	**04 01 05.7**	**+0.1**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**95.25**	**326**	P	**P**	**04 01 05.7**	**0.0**
	comp=Z,1.6nm,0.6s,mb4.7,baz=90,slow=4.9,SNR=8.3						
ESK	**Eskdalemuir**	**95.28**	**326**	PFAKE		04 01 20.0	+14
ESK				LR	LR		
	comp=Z,73nm,19.0s,MS4.2						
MCK	**McKinley**	**99.29**	**24**	PFAKE		04 01 40.0	+16
MCK				LR	LR		
	comp=Z,191nm,20.0s,MS4.6						
COLA	**College**	**99.30**	**23**	PFAKE		04 01 40.0	+16
COLA				LR	LR		
	comp=Z,383nm,21.0s,MS4.9						
FIB	**Fire Island**	**99.68**	**27**	PFAKE		04 01 40.0	+14
FIB				LR	LR		
	comp=Z,909nm,21.0s,MS5.2						
ILAR	**Eielson Array**	**99.72**	**23**	LR	LR	04 53 58.4	
	comp=Z,357nm,18.3s,MS4.9,baz=179,slow=40						
DIV	**Divide**	**101.67**	**26**	PFAKE		04 01 50.0	+15
DIV				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
DBIC	**Dimbokro**	**102.20**	**277**	PFAKE		04 01 50.0	+12
DBIC				LR	LR		
	comp=Z,289nm,19.0s,MS4.8						
SIT	**Sitka**	**108.34**	**27**	PFAKE		04 06 20.0	
SIT				LR	LR		
	comp=Z,531nm,19.0s,MS5.1						
YKA	**Yellowknife Ar**	**112.16**	**15**	PP	PP	04 07 03.1	-1.9
	comp=Z,0.3nm,0.5s,baz=333,slow=7.9,SNR=4.1						
OCWA	**Octopus Mounta**	**119.37**	**31**	PFAKE		04 06 40.0	+5.1
OCWA				LR	LR		
	comp=Z,437nm,22.0s,MS5.0						
COR	**Corvallis**	**121.86**	**33**	PFAKE		04 06 50.0	+10
COR				LR	LR		
	comp=Z,283nm,20.0s,MS4.9						
FFC	**Flin Flon**	**122.15**	**13**	PFAKE		04 06 50.0	+10
FFC				LR	LR		
	comp=Z,94nm,20.0s,MS4.4						
NEW	**Newport**	**122.42**	**27**	PFAKE		04 06 50.0	+9.2
NEW				LR	LR		
	comp=Z,296nm,20.0s,MS4.9						
YBH	**Yreka Blue Hor**	**124.00**	**36**	PFAKE		04 06 50.0	+5.9
YBH				LR	LR		
	comp=Z,248nm,20.0s,MS4.9						
WDC	**Whiskeytown Da**	**124.82**	**37**	PFAKE		04 06 50.0	+4.3
WDC				LR	LR		
	comp=Z,259nm,21.0s,MS4.9						
BMO	**Blue Mountains**	**124.82**	**30**	PFAKE		04 06 50.0	+4.4
BMO				LR	LR		
	comp=Z,241nm,21.0s,MS4.8						
MSO	**Missoula**	**124.92**	**26**	PFAKE		04 06 50.0	+4.3
MSO				LR	LR		
	comp=Z,269nm,20.0s,MS4.9						
MOD	**Modoc**	**125.27**	**34**	PFAKE		04 07 00.0	+13
MOD				LR	LR		
	comp=Z,234nm,20.0s,MS4.8						
WVOR	**Wild Horse Val**	**125.83**	**33**	PFAKE		04 07 00.0	+12
WVOR				LR	LR		
	comp=Z,352nm,19.0s,MS5.0						
BOZ	**Bozeman (W)**	**126.84**	**25**	PFAKE		04 07 00.0	+11
BOZ				LR	LR		
	comp=Z,291nm,21.0s,MS4.9						
HLID	**Hailey**	**127.18**	**29**	PFAKE		04 07 00.0	+10
HLID				LR	LR		
	comp=Z,477nm,22.0s,MS5.1						
DGMT	**Dagmar**	**127.21**	**18**	PFAKE		04 07 00.0	+10
DGMT				LR	LR		
	comp=Z,446nm,20.0s,MS5.1						
CMB	**Columbia Colle**	**127.71**	**38**	PFAKE		04 07 00.0	+8.6
CMB				LR	LR		
	comp=Z,206nm,19.0s,MS4.8						
SAO	**San Andreas Ge**	**127.83**	**40**	PFAKE		04 07 00.0	+8.4
SAO				LR	LR		
	comp=Z,301nm,19.0s,MS5.0						
BMN	**Battle Mountai**	**127.98**	**34**	PFAKE		04 07 00.0	+8.2
BMN				LR	LR		
	comp=Z,201nm,19.0s,MS4.8						
LAO	**LASA Array**	**128.09**	**21**	PFAKE		04 07 00.0	+8.2
LAO				LR	LR		
	comp=Z,335nm,19.0s,MS5.0						
LKWY	**Lake**	**128.23**	**25**	PFAKE		04 07 00.0	+7.8
LKWY				LR	LR		
	comp=Z,620nm,20.0s,MS5.3						
NVAR	**Mina Array Bea**	**128.71**	**36**	PKP	PKPdf	04 06 48.0	-5.3
	comp=Z,1.2nm,0.9s,baz=297,slow=2.0,SNR=6.6						
MNV	**Mina**	**128.80**	**36**	PFAKE		04 07 00.0	+6.6
MNV				LR	LR		
	comp=Z,262nm,21.0s,MS4.9						
ELK	**Elko**	**128.83**	**32**	PFAKE		04 07 00.0	+6.6
ELK				LR	LR		
	comp=Z,259nm,21.0s,MS4.9						
AHID	**Auburn Hatcher**	**129.35**	**27**	PFAKE		04 07 00.0	+5.6
AHID				LR	LR		
	comp=Z,349nm,21.0s,MS5.0						
TPH	**Tonopah**	**129.58**	**36**	PFAKE		04 07 00.0	+5.1
TPH				LR	LR		
	comp=Z,228nm,22.0s,MS4.8						
HWUT	**Hardware Ranch**	**130.03**	**28**	PFAKE		04 07 00.0	+4.3
HWUT				LR	LR		
	comp=Z,471nm,21.0s,MS5.2						
BW06	**Boulder Array**	**130.04**	**26**	PFAKE		04 07 00.0	+4.3
BW06				LR	LR		
	comp=Z,289nm,19.0s,MS5.0						
PDAR	**Pinedale Array**	**130.04**	**26**	PKP	PKPdf	04 06 53.0	-2.7
	comp=Z,0.5nm,0.7s,baz=292,slow=4.9,SNR=4.3						
DAC	**Darwin (Calif)**	**130.55**	**38**	PFAKE		04 07 10.0	+13
DAC				LR	LR		
	comp=Z,207nm,20.0s,MS4.8						
EYMN	**Ely**	**130.59**	**8**	PFAKE		04 07 00.0	+3.4
EYMN				LR	LR		
	comp=Z,322nm,20.0s,MS5.0						
PQI	**Presque Isle**	**130.83**	**347**	PFAKE		04 07 10.0	+13
PQI				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
RSSD	**Black Hills**	**131.09**	**21**	PFAKE		04 07 10.0	+12
RSSD				LR	LR		
	comp=Z,322nm,20.0s,MS5.0						
MVU	**Marysvale**	**132.06**	**32**	PFAKE		04 07 10.0	+10
MVU				LR	LR		
	comp=Z,262nm,21.0s,MS4.9						
MSU	**Marysvale**	**132.07**	**32**	*e*PKP	PKPdf	04 06 57.3	-2.3
PFO	**Pinyon Flat Ob**	**132.99**	**40**	PFAKE		04 07 10.0	+8.5
PFO				LR	LR		
	comp=Z,80nm,20.0s,MS4.4						
WVL	**Waterville**	**133.19**	**347**	PFAKE		04 07 10.0	+8.4
WVL				LR	LR		
	comp=Z,4µm,22.0s,MS6.1						
RCBR	**Riachuelo**	**133.31**	**263**	PFAKE		04 07 10.0	+7.4
RCBR				LR	LR		
	comp=Z,240nm,19.0s,MS4.9						
ISCO	**Idaho Springs**	**134.17**	**25**	PFAKE		04 07 10.0	+6.5
ISCO				LR	LR		
	comp=Z,557nm,22.0s,MS5.2						
WUAZ	**Wupatki**	**134.72**	**34**	PFAKE		04 07 10.0	+5.3
WUAZ				LR	LR		
	comp=Z,333nm,20.0s,MS5.1						
HRV	**Harvard--Oak R**	**135.56**	**348**	PFAKE		04 07 10.0	+4.0
HRV				LR	LR		
	comp=Z,251nm,19.0s,MS5.0						
WES	**Weston**	**135.63**	**348**	PFAKE		04 07 10.0	+3.9
WES				LR	LR		
	comp=Z,626nm,22.0s,MS5.3						
SDCO	**Great Sand Dun**	**135.92**	**27**	PFAKE		04 07 20.0	+13
SDCO				LR	LR		
	comp=Z,357nm,20.0s,MS5.1						
AAM	**Ann Arbor**	**136.85**	**1**	PFAKE		04 07 20.0	+12
AAM				LR	LR		
	comp=Z,395nm,20.0s,MS5.1						
CBKS	**Cedar Bluff**	**137.28**	**20**	PFAKE		04 07 20.0	+11
CBKS				LR	LR		
	comp=Z,334nm,19.0s,MS5.1						
TUC	**Tucson**	**137.37**	**36**	PFAKE		04 07 20.0	+10
TUC				LR	LR		
	comp=Z,213nm,22.0s,MS4.8						
ANMO	**Albuquerque**	**137.74**	**30**	⇑*i*PKIKP	PKPdf	04 07 09.3	-0.9
ANMO	**Albuquerque**	**137.74**	**30**	PFAKE		04 07 20.0	+10
ANMO				LR	LR		
	comp=Z,362nm,21.0s,MS5.1						
PLCA	**Paso Flores**	**139.03**	**194**	PFAKE		04 07 20.0	+7.6
PLCA				LR	LR		
	comp=Z,481nm,20.0s,MS5.2						
MCWV	**Mont Chateau**	**139.44**	**357**	PFAKE		04 07 20.0	+6.8
MCWV				LR	LR		
	comp=Z,449nm,19.0s,MS5.2						
AMTX	**Amarillo**	**139.99**	**25**	PFAKE		04 07 20.0	+5.7
AMTX				LR	LR		
	comp=Z,379nm,19.0s,MS5.2						
CBN	**Corbin**	**140.68**	**354**	PFAKE		04 07 20.0	+4.5
CBN				LR	LR		
	comp=Z,476nm,22.0s,MS5.2						
WCI	**Wyandotte Cave**	**140.77**	**5**	PFAKE		04 07 20.0	+4.3
WCI				LR	LR		
	comp=Z,508nm,21.0s,MS5.2						
BLA	**Blacksburg**	**141.90**	**357**	PFAKE		04 07 30.0	+12
BLA				LR	LR		
	comp=Z,384nm,19.0s,MS5.2						
WVT	**Waverly**	**142.69**	**7**	PFAKE		04 07 30.0	+11
WVT				LR	LR		
	comp=Z,367nm,20.0s,MS5.1						
BBSR	**BB Station**	**142.78**	**335**	PFAKE		04 07 30.0	+11
BBSR				LR	LR		
	comp=Z,212nm,19.0s,MS4.9						
BDFB	**Brasilia**	**143.06**	**245**	PKIKP	PKPdf	04 07 21.3	+1.1
BDFB				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BDFB	**Brasilia**	**143.06**	**245**	PKP	PKPdf	04 07 21.3	+1.1
	comp=Z,1.3nm,0.7s,baz=125,slow=3.9,SNR=3.4						
LTX	**Lajitas**	**143.62**	**32**	PFAKE		04 07 30.0	+15
LTX				LR	LR		
	comp=Z,368nm,19.0s,MS5.2						
TXAR	**Lajitas Array**	**143.62**	**32**	PKIKP	PKPdf	04 07 16.0	-4.8
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**143.62**	**32**	PKP	PKPdf	04 07 16.0	-4.8
	comp=Z,1.3nm,0.8s,baz=180,slow=1.8,SNR=14						
TXAR	**Lajitas Array**	**143.62**	**32**	PKP	PKPdf	04 07 16.0	-4.8
PLAL	**Pickwick Lake**	**143.79**	**8**	PFAKE		04 07 30.0	+15
PLAL				LR	LR		
	comp=Z,394nm,19.0s,MS5.2						
OXF	**Oxford**	**144.05**	**10**	PFAKE		04 07 30.0	+14
OXF				LR	LR		
	comp=Z,474nm,20.0s,MS5.3						
CPUP	**Villa Florida**	**145.12**	**222**	PKIKP	PKPdf	04 07 19.6	-3.9
CPUP				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CPUP	**Villa Florida**	**145.12**	**222**	PKPbc	PKPbc	04 07 19.6	+0.4
	comp=Z,9.9nm,1.0s,baz=162,slow=5.0,SNR=17						
CPUP	**Villa Florida**	**145.12**	**222**	*e*PKP	PKPdf	04 07 19.2	-4.4
CPUP				LR	LR		
	comp=Z,277nm,20.0s,MS5.0						
NATX	**Nacogdoches**	**145.39**	**18**	*e*PKP	PKPdf	04 07 21.3	-2.6
NATX				LR	LR		
	comp=Z,477nm,19.0s,MS5.3						
LRAL	**Lakeview Retre**	**145.85**	**7**	*e*PKP	PKPdf	04 07 21.0	-3.6
LRAL				LR	LR		
	comp=Z,460nm,20.0s,MS5.2						
NHSC	**New Hope**	**145.98**	**357**	PFAKE		04 07 30.0	+8.8
NHSC				LR	LR		
	comp=Z,412nm,20.0s,MS5.2						
SJG	**San Juan**	**155.12**	**321**	PFAKE		04 07 50.0	+11
SJG				LR	LR		
	comp=Z,201nm,21.0s,MS4.9						
SAML	**Samuel**	**159.27**	**247**	PFAKE		04 07 50.0	+5.5
SAML				LR	LR		
	comp=Z,361nm,19.0s,MS5.2						
LPAZ	**La Paz**	**159.29**	**222**	PFAKE		04 07 50.0	+5.6
LPAZ				LR	LR		
	comp=Z,280nm,20.0s,MS5.1						
SDV	**Santo Domingo**	**164.65**	**310**	PFAKE		04 08 00.0	+10
SDV				LR	LR		
	comp=Z,218nm,20.0s						
NNA	**Nana**	**167.78**	**207**	PFAKE		04 08 00.0	+7.7
NNA				LR	LR		
	comp=Z,78nm,21.0s						
JTS	**JuntasAbangare**	**168.48**	**12**	PFAKE		04 08 00.0	+7.3
JTS				LR	LR		
	comp=Z,53nm,20.0s						
OTAV	**Otavalo**	**175.81**	**287**	PFAKE		04 08 00.0	+3.7
OTAV				LR	LR		
	comp=Z,412nm,20.0s						

NIED ***11*** *03:57:00, 25.70N×128.40E, h11^{km}, Mw4.6 Best double couple: M₀7.78×10^{15} NP1:φs34°, δ77°, λ87°. NP2:φs227°, δ13°, λ103°.*

BJI ***11*** *03:57:42.4, 26.28N×128.44E, h5^{km}, mb4.7*

IDC ***11*** *03:57:43.9±0.8, 25.85N×128.22E, mb4.2/14, mb1 4.3/15, mb1mx4.2/24, mbtmp4.2/15, ML3.6/1, Error ellipse: s-maj=27.2km s-min=14.8km az=83.0*

NEIC ***11*** *03:57:44.2±3.1, 25.84N×128.22E, h3^{km}±20^{km}, mb4.6/10, MW4.5(NIED), Error ellipse: s-maj=8.0km s-min=6.8km az=99.0*

JMA ***11*** *03:57:45.0±0.3, 25.74N×128.41E, h46^{km}, M3.9*

ISC 11 03:57:46.1±0.4**, 25.81N**±0.03×**128.39E**±0.03**, h33^{km}, n46, σ1^{s}01**/56**, mb4.3**/25**, 1D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**0.66**	**299**	P	**P**	**03 57 59.0**	**+0.1**
JJT2				*e*S	**S**	**03 58 08.4**	**+0.1**
NAH1	**Naha**	**0.74**	**302**	P	**P**	**03 57 59.8**	**-0.3**
NAH1				*e*S	**S**	**03 58 11.8**	**+1.5**
JOW	**Kunigami**	**1.02**	**354**	Pn	**Pn**	**03 58 04.5**	**+0.3**
	337nm,0.3s,baz=152,slow=24,SNR=348						
JOW				Sn	**Sn**	**03 58 17.8**	**+0.3**
	445nm,0.3s,baz=349,slow=28,SNR=29						
JOW	**Kunigami**	**1.02**	**354**	P	**P**	**03 58 04.4**	**+0.4**
JOW				S	**Sn**	**03 58 17.8**	**+0.3**
JIH	**Iheya**	**1.27**	**343**	P	**P**	**03 58 08.3**	**+0.7**
JIH				*e*S	**S**	**03 58 24.2**	**+0.4**
JAGN	**Aguni-jima**	**1.29**	**307**	P	**P**	**03 58 08.0**	**+0.2**
JKE	**Kume jima 2**	**1.53**	**290**	P	**P**	**03 58 10.9**	**-0.5**
JKE				*e*S	**S**	**03 58 30.2**	**-0.1**
JTK	**Tokunoshima**	**2.03**	**14**	P	**P**	**03 58 18.6**	**+0.2**
JTK				*e*S	**S**	**03 58 43.2**	**+0.4**
JMZ	**Minamidaito 2**	**2.55**	**89**	P	**P**	**03 58 25.2**	**-0.7**
JMZ				*e*S	**S**	**03 58 53.7**	**-2.4**
JAM	**Amami Oshima**	**2.80**	**22**	P	**P**	**03 58 29.4**	**-0.2**
JAM				S	**S**	**03 59 00.8**	**-1.8**
JZK	**Kikaishima**	**2.86**	**29**	*e*S	**S**	**03 59 04.6**	**+0.6**
JOGS	**Gusukube**	**2.90**	**249**	*e*S	**S**	**03 59 03.4**	**-1.6**
YHNB	**Yeheng**	**6.46**	**261**	*e*P	**P**	**03 59 18.9**	**-2.3**
JNU	**Nakatsue**	**7.60**	**16**	Pn	**Pn**	**03 59 36.5**	**-0.9**
	0.8nm,0.3s,baz=238,slow=26,SNR=6.3						
JNU				Sn	**Sn**	**04 01 00.5**	**-2.8**
	0.7nm,0.3s,baz=126,slow=18,SNR=2.7						
MAJO	**Matsushiro**	**13.59**	**36**	P	**P**	**04 00 58.4**	**-0.5**
ASAJ	**Asahikawa**	**21.60**	**29**	P	**P**	**04 02 36.6**	**+1.7**
	2.3nm,0.5s,mb3.9,baz=177,slow=29,SNR=2.5						
YSS	**Yuzh-Sakhalins**	**23.98**	**25**	*e*P	**P**	**04 03 00.9**	**+2.6**
	24nm,1.0s,mb4.6						
YSS				*e*		04 03 08.6	
GTA	**Gaotai**	**27.50**	**307**	⇓P	**P**	**04 03 30.0**	**-1.4**
GTA				AP	pP	04 03 37.3	-3.6
GTA				XP	sP	04 03 40.3	-4.8
GTA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
ULN	**Ulaanbaatar**	**27.69**	**328**	*e*P	**P**	**04 03 33.2**	**+0.2**
	comp=Z,3.4nm,0.3s,mb4.5						
SONM	**Songino Array**	**27.98**	**327**	P	**P**	**04 03 37.3**	**+1.6**
	comp=Z,2.5nm,0.2s,mb4.4,baz=138,slow=9.9,SNR=60						
GUN	**Gumba**	**37.85**	**283**	*e*P	**P**	**04 05 01.4**	**-0.2**
	comp=Z,9.2nm,0.5s,mb4.8						
PKI	**Pulchoki**	**38.30**	**282**	*e*P	**P**	**04 05 04.7**	**-0.7**
	comp=Z,16nm,0.6s,mb5.0						
KKN	**Kakani**	**38.39**	**283**	*e*P	**P**	**04 05 05.2**	**-0.9**
DMN	**Daman**	**38.57**	**283**	*e*P	**P**	**04 05 06.8**	**-0.7**
	comp=Z,20nm,0.7s,mb5.0						
GKN	**Gorkha**	**38.93**	**283**	*e*P	**P**	**04 05 10.1**	**-0.4**
	comp=Z,23nm,0.7s,mb5.0						
KOLN	**Koldanda**	**39.87**	**283**	*e*P	**P**	**04 05 18.3**	**0.0**
	comp=Z,25nm,0.9s,mb5.0						
MKAR	**Makanchi Array**	**41.92**	**312**	P	**P**	**04 05 34.2**	**-0.8**
	comp=Z,3.2nm,0.6s,mb4.1,baz=98,slow=10,SNR=32						
MKAR	**Makanchi Array**	**41.92**	**312**	P	**P**	**04 05 34.2**	**-0.9**
ZAL	**Zalesovo**	**42.67**	**323**	P	**P**	**04 05 41.2**	**0.0**
	comp=Z,1.9nm,0.3s,mb4.3,baz=94,slow=14,SNR=3.0						
ZAL	**Zalesovo**	**42.67**	**323**	P	**P**	**04 05 41.2**	**0.0**
FITZ	**Fitzroy Crossi**	**43.73**	**184**	P	**P**	**04 05 51.6**	**+1.3**
	comp=Z,5.6nm,1.0s,mb4.3,baz=12,slow=5.6,SNR=3.2						
WRAB	**Tennant Creek**	**45.84**	**172**	*e*P	**P**	**04 06 07.7**	**+0.6**
	comp=Z,3.7nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**45.85**	**172**	P	**P**	**04 06 07.8**	**+0.6**
	comp=Z,2.3nm,0.7s,mb4.2,baz=353,slow=8.5,SNR=31						
WB2	**Warramunga Arr**	**45.85**	**172**	*e*P	**P**	**04 06 07.7**	**+0.5**
CHKZ	**Chkalovo**	**50.65**	**319**	*e*P	**P**	**04 06 43.1**	**-0.9**
	comp=Z,1.7nm,0.7s,mb4.1						
CHKZ				*e*		04 06 49.7	
BVAR	**Borovoye Array**	**50.68**	**319**	P	**P**	**04 06 43.8**	**-0.4**
	comp=Z,0.7nm,0.3s,mb4.1,baz=80,slow=9.0,SNR=10						
STKA	**Stephens Creek**	**58.73**	**167**	P	**P**	**04 07 44.5**	**+1.3**
	comp=Z,2.2nm,0.8s,mb4.2,baz=353,slow=8.1,SNR=3.1						
ILAR	**Eielson Array**	**64.73**	**28**	P	**P**	**04 08 23.7**	**+0.8**
	comp=Z,0.4nm,0.8s,mb3.5,baz=268,slow=7.4,SNR=5.7						
FINES	**FINESS Array B**	**73.30**	**331**	P	**P**	**04 09 15.9**	**+0.3**
	comp=Z,1.8nm,0.5s,mb4.2,baz=63,slow=6.2,SNR=22						
AKASG	**Malin Array Be**	**75.94**	**320**	P	**P**	**04 09 31.0**	**-0.1**
	comp=Z,0.5nm,0.2s,mb4.0,baz=58,slow=6.3,SNR=5.0						
BR131	**Keskin Array S**	**77.41**	**308**	*e*P	**P**	**04 09 40.3**	**+0.7**
	comp=Z,1.5nm,0.6s,mb4.1						
BRTR	**Keskin Array B**	**77.41**	**308**	P	**P**	**04 09 40.9**	**+1.2**
	comp=Z,2.7nm,0.8s,mb4.2,baz=108,slow=3.9,SNR=14						
NB2	**NORSAR Subarra**	**79.75**	**334**	P	**P**	**04 09 52.2**	**+0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=56,slow=5.6						
NOA	**NORSAR Array B**	**79.75**	**334**	P	**P**	**04 09 52.2**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.8,baz=55,slow=5.4,SNR=4.3						
CLL	**Collm**	**84.58**	**325**	P	**P**	**04 10 27.5**	**+10**
	comp=Z,logA/T=0.7,mb4.6						
GERES	**GERESS Array B**	**85.62**	**323**	P	**P**	**04 10 25.2**	**+3.0**
	comp=Z,0.6nm,0.6s,mb4.0,baz=31,slow=5.7,SNR=9.9						

MAN 11 03:59:47.3, 15.31N×121.85E, h11^{km}, mb3.8, ML2.6, MS2.2, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALP	**Baler**	**0.50**	**329**	*e*P	Pg	03 59 57.9	+0.4
BALP				*e*S	Sg	04 00 07.4	+3.1
POLP	**Polilio Island**	**0.58**	**171**	*e*P	Pb	03 59 58.0	-1.0
POLP				*e*S	Sg	04 00 07.3	+0.3
PCPH	**Palayan**	**0.77**	**289**	⇓*e*P	Pb	04 00 02.7	+0.5
PCPH				*e*S	Sb	04 00 15.2	+2.9
GQP	**Guinayangan**	**1.51**	**157**	⇓*e*P	Pn	04 00 14.4	0.0
GQP				*e*S	Sb	04 00 33.1	-0.9
CAUP	**Cauayan**	**1.63**	**359**	*e*P	Pn	04 00 15.0	-1.1
BOAC	**Boac**	**1.84**	**180**	*e*P	Pn	04 00 20.5	+1.4
BOAC				*e*S	Sn	04 00 46.5	+3.9
LUBP	**Lubang**	**2.20**	**225**	*e*P	Pn	04 00 24.7	+0.3
APYP	**Conner**	**2.60**	**347**	*e*P	Pn	04 00 29.1	-1.0
APYP				*e*S	Sn	04 00 58.8	-3.2
SJMP	**San Jose**	**2.92**	**194**	*e*P	Pn	04 00 39.6	+5.0

IDC 11 04:06:41.8±4.3**, 1.56N×97.80E, mb3.4**/1**, Error ellipse: s-maj=160.6km s-min=29.6km az=58.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.72**	**123**	P	P	04 14 32.7	-1.8
	0.4nm,0.6s,baz=302,slow=9.2,SNR=6.7						
SONM	**Songino Array**	**46.69**	**8**	P	P	04 15 12.8	-1.3
	baz=182,slow=9.6						
MKAR	**Makanchi Array**	**47.04**	**345**	P	P	04 15 14.6	-2.3
	baz=164,slow=8.6						

CSEM ***11*** *04:09:29.7±0.1, 39.44N×29.63W, ML2.0, Error ellipse: s-maj=16.5km s-min=2.3km az=44.0, After PDA*

PDA ***11*** *04:09:29.7±1.2, 39.44N×29.63W, MD3.3, ML2.0, Error ellipse: s-maj=27.9km s-min=11.5km az=50.0*

SVSA 11 04:09:29.7±1.2**, 39.44N×29.63W, MD3.3, ML2.0, Error ellipse: s-maj=27.9km s-min=11.5km az=50.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**1.12**	**140**	*e*P	Pb	04 09 48.4	-3.3
CALA				*e*S	Sb	04 10 01.2	-5.5
HOR	**Horta**	**1.20**	**139**	*e*P	Pb	04 09 48.4	-4.6
HOR				*e*S	Sb	04 10 03.0	-5.9
PICO	**Pico**	**1.33**	**135**	*e*P	Pb	04 09 50.4	-4.8
PICO				*e*S	Sb	04 10 06.7	-5.9
PGRA	**Graciosa**	**1.34**	**107**	*e*rx		04 10 20.9	
PMAN	**Manadas**	**1.45**	**123**	*e*S	Sb	04 10 09.1	-6.9
	21nm,0.4s						

ROM ***11*** *04:20:56.7±0.2, 40.47N×19.62E, h6^{km}, Ml2.8/1, Error ellipse: s-maj=3.0km s-min=2.2km az=89.0*

NEIC ***11*** *04:20:58.1±0.7, 40.44N×19.62E, h5^{km}, MD3.5(ATH), ML2.8(ROM), Error ellipse: s-maj=14.4km s-min=7.2km az=197.0*

CSEM ***11*** *04:20:59.1±0.1, 40.57N×19.65E, h8^{km}, MD3.5, Error ellipse: s-maj=3.6km s-min=3.1km az=83.0*

ATH ***11*** *04:21:09.7, 39.49N×19.96E, h10^{km}, MD3.5/3*

ISC 11 04:20:58.2±0.5**, 40.51N**±0.03×**19.58E**±0.05**, h10^{km}, n19, σ1^{s}16**/22**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRN	**Sarande**	**0.71**	**153**	*i* Pg	**Pg**	**04 21 10.3**	**-2.2**
SRN				*i* Sg	**Sg**	**04 21 22.8**	**+0.8**
KEK	**Kerkira**	**0.82**	**168**	*e*PG	**Pg**	**04 21 14.9**	**+0.3**
KEK	**Kerkira**	**0.82**	**168**	Pn	**Pn**	**04 21 12.5**	**-3.0**
	285nm,0.6s						
KEK	**Kerkira**	**0.82**	**168**	*e*Pg	**Pg**	**04 21 14.9**	**+0.3**
LSK	**Leskovik**	**0.86**	**115**	*i* Pg	**Pg**	**04 21 15.4**	**-0.1**
LSK				*i* Sg	**Sg**	**04 21 29.9**	**+2.9**
TIR	**Tirane**	**0.86**	**14**	*i* Pg	**Pg**	**04 21 16.3**	**+0.8**
TIR	**Tirane**	**0.86**	**14**	Pn	**Pn**	**04 21 14.9**	**-1.3**
	291nm,0.7s						
TIR	**Tirane**	**0.86**	**14**	*i* Pg	**Pg**	**04 21 16.3**	**+0.8**
QSH	**Qafa e Shtames**	**1.04**	**14**	*i* Pg	**Pg**	**04 21 18.0**	**-1.0**
QSH				*i* Sg	**Sg**	**04 21 33.0**	**+0.1**
LCI	**Lecce**	**1.13**	**261**	Pn	**Pn**	**04 21 19.5**	**-0.6**
	140nm,0.6s						
JAN	**Janina**	**1.30**	**131**	*e*PB	**Pb**	**04 21 23.0**	**+0.8**
PE1	**Pezze di Greco**	**1.67**	**281**	*e*Pn	**Pn**	**04 21 29.4**	**+1.7**
SKO	**Skopje**	**2.02**	**43**	*e*Pn	**Pn**	**04 21 33.0**	**+0.2**
LTRZ	**Laterza**	**2.10**	**273**	Pn	**Pn**	**04 21 35.5**	**+1.5**
EVR	**Evrytania**	**2.34**	**132**	*e*PB	**Pb**	**04 21 38.6**	**-1.5**
TIP	**Timpagrande**	**2.55**	**239**	*e*P	**Pn**	**04 21 39.6**	**-0.7**
SGO	**Sicignano**	**3.26**	**272**	Pn	**Pn**	**04 21 50.7**	**+0.3**
	5.0nm,0.4s						
SGG	**Gregorio Mates**	**4.03**	**284**	Pn	**Pn**	**04 22 01.9**	**+0.5**
CII	**Carovilli**	**4.16**	**289**	Pn	**Pn**	**04 22 02.8**	**-0.5**
	3.0nm,0.2s						

CSEM ***11*** *04:35:31.1±0.1, 35.85N×25.74E, h10^{km}, ML3.3, Error ellipse: s-maj=2.9km s-min=1.7km az=83.0*

HLW ***11*** *04:35:32.0, 36.17N×26.67E, h33^{km}, Mb3.3*

ATH ***11*** *04:35:33.6, 36.33N×26.40E, h10^{km}, MD3.0/3*

ISC 11 04:35:29.3±1.2**, 35.91N**±0.06×**26.3E**±0.1**, h10^{km}, n12, σ1^{s}17**/15**, 6C, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.82**	**116**	*e*PB	**Pb**	**04 35 52.4**	**+7.2**
NPS	**Neapolis**	**0.83**	**219**	*e*PB	**Sb**	**04 35 56.6**	**+0.1**
APE	**Apeiranthos**	**1.29**	**333**	*e*PB	**Pb**	**04 35 53.0**	**-0.4**
HMAT	**Matruh**	**4.86**	**171**	P	**Pn**	**04 36 45.7**	**+1.5**
HMAT	**Matruh**	**4.86**	**171**	P	**Pn**	**04 36 45.6**	**+1.4**
SWA1		**6.65**	**184**	⇑P	**Pn**	**04 37 10.2**	**+0.7**
SWA1				S	**Sn**	**04 38 23.3**	**-2.8**
SWA1		**6.65**	**184**	⇑P	**Pn**	**04 37 10.2**	**+0.7**
SWA1				S	**Sn**	**04 38 22.7**	**-3.4**
SWA1		**6.65**	**184**	P	**Pn**	**04 37 10.2**	**+0.7**
SWA1				S	**Sn**	**04 38 23.3**	**-2.8**
SWA2		**6.68**	**186**	⇑P	**Pn**	**04 37 10.7**	**+0.7**
SWA2		**6.68**	**186**	⇑P	**Pn**	**04 37 10.8**	**+0.8**
HFRF	**Wahat Farafira**	**8.91**	**168**	⇑P	**P**	**04 37 39.6**	**-1.5**
HFRF	**Wahat Farafira**	**8.91**	**168**	⇑P	**P**	**04 37 39.6**	**-1.5**

*NEIC **11** 04:39:04.7±0.7, 12.15N×94.70E, mb4.6/4, Error ellipse: s-maj=14.3km s-min=13.0km az=47.0*

*IDC **11** 04:39:05.0±0.8, 12.22N×94.72E, h15^{km}±3^{km}, mb3.9/10, mb1 4.1/11, mb1mx3.9/21, mbtmp4.0/11, ML4.0/1, Error ellipse: s-maj=26.0km s-min=16.4km az=47.0*

ISC 11 04:39:02.9±0.8, **12.2N**±0.1×**94.7E**±0.1, **h15^{km}, h15^{km}**±.3^{km}**:pP-P, n18,** σ0^{s}**92**/18, **mb4.2**/14, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**7.45**	**32**	P	**Pn**	**04 40 54.2**	**+0.5**
CMAR	**Chiang Mai Arr**	**7.45**	**32**	Pn	**Pn**	**04 40 52.5**	**-1.2**
	0.7nm,0.3s,baz=220,slow=14,SNR=8.0						
LZH	**Lanzhou**	**25.19**	**18**	eP	**P**	**04 44 32.0**	**+2.6**
	25nm,1.0s,mb4.7						
LZH				pP	pP	04 44 37.0	+3.1
LZH				sP	sP	04 44 41.1	+5.2
MKAR	**Makanchi Array**	**36.08**	**345**	P	**P**	**04 46 06.5**	**+0.7**
	1.3nm,0.7s,mb4.0,baz=150,slow=8.3,SNR=11						
MKAR				pP	pP	04 46 10.9	+0.5
	1.4nm,0.7s,baz=159,slow=9.0,SNR=7.7						
SONM	**Songino Array**	**36.87**	**13**	P	**P**	**04 46 12.9**	**+0.4**
	1.5nm,0.9s,mb3.8,baz=199,slow=6.6,SNR=9.8						
SONM				pP	pP	04 46 17.2	+0.1
	0.7nm,0.6s,baz=197,slow=8.5,SNR=5.7						
ZAL	**Zalesovo**	**42.40**	**351**	P	**P**	**04 46 59.0**	**+0.6**
	2.3nm,0.7s,mb3.9,baz=106,slow=20,SNR=7.3						
ZAL				pP	pP	04 47 03.3	+0.4
	2.3nm,0.7s,baz=269,slow=7.8,SNR=2.6						
BVAR	**Borovoye Array**	**45.16**	**339**	P	**P**	**04 47 21.1**	**+0.4**
	1.8nm,0.8s,mb3.9,baz=150,slow=12,SNR=7.1						
BVAR				pP	pP	04 47 26.1	+0.8
	1.1nm,0.8s,baz=153,slow=3.3,SNR=3.9						
CHKZ	**Chkalovo**	**45.63**	**340**	eP	**P**	**04 47 24.5**	**+0.1**
	9.3nm,1.1s,mb4.6						
MJAR	**Matsushiro Arr**	**45.92**	**50**	P	**P**	**04 47 25.5**	**-1.4**
	0.8nm,0.3s,mb4.2,baz=180,slow=7.3,SNR=2.9						
WRA	**Warramunga Arr**	**50.38**	**129**	P	**P**	**04 48 02.7**	**+0.9**
	1.6nm,0.6s,mb4.2,baz=308,slow=8.2,SNR=17						
WRA				pP	pP	04 48 07.5	+1.1
	1.8nm,0.8s,baz=307,slow=8.1,SNR=8.6						
WRAB	**Tennant Creek**	**50.38**	**129**	eP	**P**	**04 48 01.6**	**-0.2**
ARU	**Arti**	**52.22**	**335**	eP	**P**	**04 48 14.4**	**-0.9**
	5.6nm,0.6s,mb4.7						
BRTR	**Keskin Array B**	**60.14**	**309**	P	**P**	**04 49 11.6**	**-0.7**
	1.5nm,0.7s,mb4.2,baz=130,slow=6.9,SNR=7.8						
BRTR				pP	pP	04 49 16.2	-0.9
	2.3nm,0.9s,baz=121,slow=7.2,SNR=8.1						
FINES	**FINESS Array B**	**69.22**	**331**	P	**P**	**04 50 10.9**	**0.0**
	2.3nm,0.7s,mb4.2,baz=92,slow=5.2,SNR=20						
FINES				pP	pP	04 50 15.5	-0.2
	3.8nm,0.7s,baz=93,slow=7.1,SNR=8.4						
KAF	**Kangasniemi**	**69.27**	**332**	ep	**P**	**04 50 09.6**	**-1.6**
	1.5nm,0.7s,mb4.0,baz=102,slow=6.0						
GERES	**GERESS Array B**	**75.05**	**318**	P	**P**	**04 50 46.4**	**+0.6**
	0.8nm,0.7s,mb3.8,baz=90,slow=5.3,SNR=7.3						
GERES				pP	pP	04 50 50.8	+0.2
	0.3nm,0.5s,baz=186,slow=36,SNR=5.7						
NB2	**NORSAR Subarra**	**76.31**	**330**	P	**P**	**04 50 52.7**	**+0.1**
	2.1nm,0.8s,mb4.1,baz=88,slow=5.8						
NOA	**NORSAR Array B**	**76.31**	**330**	P	**P**	**04 50 52.6**	**0.0**
	1.3nm,0.7s,mb3.9,baz=96,slow=5.5,SNR=4.6						
NOA				pP	pP	04 50 57.8	+0.3
	2.3nm,0.8s,baz=89,slow=5.8,SNR=5.5						

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*IDC **11** 04:46:46.8±1.1, 12.21N×94.65E, h16^{km}±4^{km}, mb4.0/8, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, ML3.7/1, Error ellipse: s-maj=33.1km s-min=22.7km az=53.0*

*BJI **11** 04:46:47.2, 12.20N×94.70E, h18^{km}, mB4.9, mb4.8*

*NEIC **11** 04:46:47.2±0.5, 12.22N×94.70E, mb4.7/4, Error ellipse: s-maj=15.4km s-min=9.7km az=56.0*

ISC 11 04:46:45.2±0.7, **12.22N**±0.09×**94.7E**±0.1, **h18^{km}, h18^{km}**±1.4^{km}**:pP-P, n20,** σ0^{s}**80**/20, **mb4.3**/12, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.41**	**33**	Pn	**Pn**	**04 48 33.8**	**-1.5**
	0.3nm,0.3s,baz=222,slow=15,SNR=9.1						
LSA	**Lhasa**	**17.71**	**350**	P	**P**	**04 50 54.0**	**+1.3**
CD2	**Chengdu**	**20.38**	**23**	P	**P**	**04 51 23.0**	**-0.9**
CD2				AMB	AMB		
	comp=Z,30nm,0.7s						
LZH	**Lanzhou**	**25.14**	**18**	eP	**P**	**04 52 13.4**	**+2.4**
LZH				AP	pP	04 52 20.7	+4.5
LZH				XP	sP	04 52 23.6	+5.1
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
LZH				AMB	AMB		
	comp=Z,130nm,4.5s						
LZH	**Lanzhou**	**25.14**	**18**	eP	**P**	**04 52 13.4**	**+2.4**
	comp=Z,28nm,1.0s,mb4.8						
LZH				pP	pP	04 52 20.7	+4.5
LZH				sP	sP	04 52 23.6	+5.1
GTA	**Gaotai**	**27.45**	**9**	eP	**P**	**04 52 32.8**	**+0.5**
GTA				AP	pP	04 52 38.4	+0.9
GTA				XP	sP	04 52 41.2	+1.4
MKAR	**Makanchi Array**	**36.03**	**345**	P	**P**	**04 53 47.8**	**+0.4**
	comp=Z,2.1nm,0.8s,mb4.1,baz=157,slow=9.2,SNR=15						
MKAR				pP	pP	04 53 52.9	+0.2
	comp=Z,3.3nm,1.0s,baz=153,slow=8.1,SNR=7.5						
SONM	**Songino Array**	**36.82**	**13**	P	**P**	**04 53 54.3**	**+0.2**
	comp=Z,2.1nm,0.9s,mb4.0,baz=194,slow=6.2,SNR=14						
BVAR	**Borovoye Array**	**45.12**	**339**	P	**P**	**04 55 02.0**	**-0.3**
	comp=Z,1.5nm,0.8s,mb3.9,baz=135,slow=6.3,SNR=8.8						
BVAR				pP	pP	04 55 07.5	-0.2
	comp=Z,3.0nm,1.1s,baz=162,slow=4.7,SNR=4.1						
CHKZ	**Chkalovo**	**45.58**	**340**	eP	**P**	**04 55 05.8**	**-0.2**
	comp=Z,8.0nm,0.9s,mb4.7						
WRA	**Warramunga Arr**	**50.41**	**129**	P	**P**	**04 55 44.4**	**+0.4**
	comp=Z,4.6nm,0.9s,mb4.5,baz=307,slow=8.4,SNR=31						
WRAB	**Tennant Creek**	**50.41**	**129**	eP	**P**	**04 55 43.8**	**-0.2**
	comp=Z,5.0nm,0.7s,mb4.7						
WB2	**Warramunga Arr**	**50.41**	**129**	eP	**P**	**04 55 44.4**	**+0.3**
ARU	**Arti**	**52.17**	**335**	eP	**P**	**04 55 56.6**	**-0.3**
	comp=Z,9.5nm,0.8s,mb4.8						
BRTR	**Keskin Array B**	**60.12**	**309**	P	**P**	**04 56 53.2**	**-0.9**
	comp=Z,1.2nm,0.7s,mb4.1,baz=121,slow=6.2,SNR=7.3						
BRTR				pP	pP	04 56 58.0	-1.7
	comp=Z,1.8nm,0.8s,baz=121,slow=7.2,SNR=7.8						
FINES	**FINESS Array B**	**69.18**	**331**	P	**P**	**04 57 52.1**	**-0.5**
	comp=Z,2.1nm,0.7s,mb4.2,baz=96,slow=6.1,SNR=11						
FINES				pP	pP	04 57 57.0	-1.2
	comp=Z,2.8nm,0.7s,baz=103,slow=5.6,SNR=6.1						
KAF	**Kangasniemi**	**69.23**	**332**	ep	**P**	**04 57 52.4**	**-0.5**
GERES	**GERESS Array B**	**75.02**	**318**	P	**P**	**04 58 28.0**	**+0.5**
	comp=Z,0.7nm,0.8s,mb3.7,baz=90,slow=5.3,SNR=4.6						
GERES				pP	pP	04 58 33.6	+0.4
	comp=Z,0.7nm,0.7s,baz=90,slow=5.3,SNR=4.9						
NB2	**NORSAR Subarra**	**76.27**	**330**	P	**P**	**04 58 34.1**	**-0.3**
	comp=Z,2.3nm,0.8s,mb4.2,baz=89,slow=5.8						
NOA	**NORSAR Array B**	**76.27**	**330**	P	**P**	**04 58 34.2**	**-0.2**
	comp=Z,2.1nm,1.0s,mb4.0,baz=97,slow=5.5,SNR=4.6						
NOA				pP	pP	04 58 39.2	-0.8
	comp=Z,2.7nm,0.8s,baz=89,slow=6.0,SNR=6.4						

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*BJI **11** 05:06:34.8, 15.06N×122.46E, h39^{km}, mB4.8, mb4.5, Ms4.0, Msz3.9*

*MAN **11** 05:06:37.7, 15.34N×121.93E, h6^{km}, mb4.8, ML3.7, MS3.7*

MAN QUEZON CITY - INTENSITY I.

*MOS **11** 05:06:37.2±1.2, 15.21N×122.07E, h33^{km}, mb4.8/27, Error ellipse: s-maj=16.4km s-min=7.5km az=119.2*

*NEIC **11** 05:06:39.0±0.4, 15.22N×122.09E, mb4.7/13, Error ellipse: s-maj=14.6km s-min=9.3km az=52.0*

*IDC **11** 05:06:39.1±0.8, 15.27N×122.11E, h32^{km}±4^{km}, mb4.1/17, mb1 4.2/17, mb1mx4.1/22, mbtmp4.3/17, MS3.7/10, Ms1 3.8/10, ms1mx3.5/36, Error ellipse: s-maj=27.6km s-min=16.4km az=60.0*

ISC 11 05:06:38.6±0.2, **15.41N**±0.02×**122.01E**±0.04, **h32^{km}, h32^{km}**±.7^{km}**:pP-P, n121,** σ1^{s}**23**/138, **mb4.5**/40, **MS3.9**/13, **8C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	**Baler**	**0.53**	**308**	eP	**Pb**	**05 06 48.8**	**-0.7**
BALP				eS	**Sb**	**05 06 57.6**	**+0.5**
POLP	**Polilio Island**	**0.68**	**186**	eP	**Pn**	**05 06 49.3**	**-2.7**
POLP				eS	**Sb**	**05 06 58.4**	**-2.9**
PCPH	**Palayan**	**0.89**	**280⇑**	eP	**Pn**	**05 06 53.6**	**-1.4**
PCPH				eS	**Sn**	**05 07 05.7**	**-1.1**
CAUP	**Cauayan**	**1.53**	**353**	eP	**Pn**	**05 07 05.8**	**+1.6**
CAUP				eS	**Sn**	**05 07 28.3**	**+5.2**
GQP	**Guinayangan**	**1.56**	**164⇓**	iP	**Pn**	**05 07 04.1**	**-0.4**
GQP				eS	**Sn**	**05 07 24.1**	**+0.3**
TGY	**Tagaytay City**	**1.67**	**219⇑**	eP	**Pn**	**05 07 07.2**	**+1.2**
TGY				i S	**Sn**	**05 07 14.2**	**-12**
BCPH	**Baguio City Da**	**1.68**	**305⇑**	iP	**Pn**	**05 07 07.2**	**+1.0**
BCPH				i S	**Sn**	**05 07 31.1**	**+4.3**
BOAC	**Boac**	**1.95**	**185**	eP	**Pn**	**05 07 10.1**	**0.0**
BOAC				eS	**Sn**	**05 07 34.6**	**+0.9**
SCZP	**Santa Cruz**	**2.05**	**280**	eP	**Pn**	**05 07 12.0**	**+0.4**
PGP	**Puerto Galera**	**2.16**	**208**	eP	**Pn**	**05 07 12.6**	**-0.5**
AUQP	**San Andres**	**2.18**	**163**	eP	**Pn**	**05 07 15.0**	**+1.7**
AUQP				eS	**Sn**	**05 07 52.0**	**+13**
BOLP	**Bolinao**	**2.23**	**296**	eP	**Pn**	**05 07 15.2**	**+1.0**
BOLP				eS	**Sn**	**05 07 44.9**	**+3.9**
CVP	**Callao Caves**	**2.28**	**356⇑**	eP	**Pn**	**05 07 16.0**	**+1.1**
CVP				eS	**Sn**	**05 07 47.5**	**+5.3**
LUBP	**Lubang**	**2.39**	**226**	eP	**Pn**	**05 07 18.1**	**+1.7**
APYP	**Conner**	**2.54**	**343**	eP	**Pn**	**05 07 19.6**	**+1.0**
APYP				eS	**Sn**	**05 07 43.3**	**-5.5**
ABRA	**Dolores**	**2.55**	**331**	eP	**Pn**	**05 07 21.8**	**+3.1**
ABRA				eS	**Sn**	**05 07 53.4**	**+4.5**
PVCP	**Virac**	**2.75**	**131**	eP	**Pn**	**05 07 22.9**	**+1.3**
PVCP				eS	**Sn**	**05 08 00.9**	**+6.7**
SGCP	**Mt. Cagua**	**2.81**	**1**	eP	**Pn**	**05 07 24.0**	**+1.5**
SGCP				eS	**Sn**	**05 07 59.7**	**+4.0**
OTRP	**Odiongan**	**3.03**	**180**	eP	**Pn**	**05 07 25.3**	**-0.2**
OTRP				eS	**Sn**	**05 08 01.7**	**+0.6**
SJMP	**San Jose**	**3.06**	**197**	eP	**Pn**	**05 07 26.2**	**+0.3**
BUSP	**Coron**	**3.82**	**208**	eP	**Pn**	**05 07 36.2**	**-0.5**
CNP	**Catarman**	**3.87**	**138**	eP	**Pn**	**05 07 39.6**	**+2.2**
RCP	**Roxas**	**3.90**	**169⇑**	eP	**Pn**	**05 07 42.6**	**+4.8**
CUYO	**Cuyo Island**	**4.64**	**192**	eP	**Pn**	**05 07 53.0**	**+4.7**
ENPP	**El Nido**	**4.88**	**211**	eP	**Pn**	**05 07 50.2**	**-1.5**
BBP	**Basco**	**5.00**	**360**	eP	**Pn**	**05 07 52.0**	**-1.5**
JOW	**Kunigami**	**12.77**	**26**	LR	LR	05 14 43.0	
	comp=Z,258nm,18.1s,baz=293,slow=38						
SSE	**Sheshan**	**15.63**	**357**	P	**P**	**05 10 16.8**	**-1.5**
SSE				XP		05 10 28.9	
SSE				S	**S**	**05 13 08.5**	**-2.1**
SSE				AMB	AMB		
	comp=Z,40nm,0.8s						
SSE				AMB	AMB		
	comp=Z,70nm,5.3s						
SSE				LR	LR		
	comp=N,80nm,20.3s						
SSE				LR	LR		
	comp=E,110nm,20.3s						
SSE				LR	LR		
	comp=Z,120nm,19.8s						
SSE	**Sheshan**	**15.63**	**357**	P	**P**	**05 10 16.8**	**-1.5**
	comp=Z,49nm,0.8s						
SSE				sP		05 10 28.9	
SSE				S	**S**	**05 13 08.5**	**-2.1**
WHN	**Wuhan**	**16.62**	**336**	eP	**P**	**05 10 34.5**	**+3.6**
WHN				S	**S**	**05 13 42.0**	**+8.5**
WHN				LR	LR		
	comp=Z,800nm,17.6s						
NJ2	**Nanjing**	**16.81**	**351**	eP	**P**	**05 10 32.3**	**-1.0**
NJ2				AP		05 10 40.1	
NJ2				XP		05 10 44.1	
NJ2				PP	PP	05 10 46.2	-1.0
NJ2				S	**S**	**05 13 36.0**	**-1.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,230nm,5.2s						
NJ2				LR	LR		
	comp=N,490nm,16.6s						
NJ2				LR	LR		
	comp=E,490nm,12.6s						
ENH	**Enshi**	**18.73**	**324**	eP	**P**	**05 10 59.2**	**+2.0**
	comp=E,30nm,1.2s						
JNU	**Nakatsue**	**19.38**	**23**	LR	LR	05 19 31.4	
	comp=E,141nm,19.8s,baz=183,slow=40						
KMI	**Kunming**	**20.47**	**301**	P	**P**	**05 11 18.4**	**+2.0**
KMI				AP		05 11 28.3	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s						
KMI	**Kunming**	**20.47**	**301**	P	**P**	**05 11 18.4**	**+2.0**
	comp=Z,19nm,1.2s						
KMI				pP		05 11 28.3	
XAN	**Xi’an**	**21.99**	**330**	P	**P**	**05 11 32.3**	**+0.6**
XAN				AP		05 11 41.2	
XAN				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
CMAR	**Chiang Mai Arr**	**22.27**	**281**	P	**P**	**05 11 35.2**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,179nm,18.3s						
CMAR	**Chiang Mai Arr**	**22.27**	**281**	P	**P**	**05 11 35.1**	**+0.5**
	comp=Z,8.8nm,0.9s,mb4.2,baz=87,slow=8.3,SNR=30						
CMAR				LR	LR	05 20 46.0	
	comp=Z,179nm,18.3s,MS3.5,baz=100,slow=38						
CD2	**Chengdu**	**22.74**	**316**	P	**P**	**05 11 40.7**	**+1.5**
CD2				AMB	AMB		
	comp=Z,70nm,0.8s,mb5.1						
LZH	**Lanzhou**	**26.21**	**325**	eP	**P**	**05 12 12.6**	**+0.2**
LZH				AMB	AMB		
	comp=Z,40nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,190nm,4.0s						
LZH				LR	LR		
	comp=E,780nm,14.2s						
LZH				LR	LR		
	comp=Z,990nm,15.5s,MS4.5						
LZH	**Lanzhou**	**26.21**	**325**	eP	**P**	**05 12 12.6**	**+0.2**
	comp=Z,41nm,1.4s,mb4.8						
LZH				pP	pP	05 12 32.5	+11
LZH				sP	sP	05 12 45.5	+20
LZH				LR	LR		
	comp=Z,990nm,15.5s,MS4.5						
HHC	**Hu-ho-hao-te**	**26.92**	**342**	eP	**P**	**05 12 19.1**	**+0.2**
HHC				AMB	AMB		
	comp=Z,80nm,7.1s						
GTA	**Gaotai**	**30.81**	**325**	eP	**P**	**05 12 53.8**	**0.0**
GTA				AP	pP	05 13 02.5	-0.7
GTA				XP	sP	05 13 06.6	-0.8
ULN	**Ulaanbaatar**	**34.64**	**342⇓**	eP	**P**	**05 13 26.3**	**-0.7**
KLR	**Kul’dur**	**34.65**	**11**	eP	**P**	**05 13 22.0**	**-5.1**
SONM	**Songino Array**	**34.81**	**341**	P	**P**	**05 13 28.1**	**-0.4**
	comp=Z,3.1nm,0.7s,mb4.3,baz=160,slow=9.9,SNR=27						
SONM				LR	LR	05 29 04.0	
	comp=Z,155nm,18.9s,MS3.8,baz=157,slow=38						
GUN	**Gumba**	**35.67**	**297**	eP	**P**	**05 13 34.6**	**-1.4**
	comp=Z,41nm,1.1s,mb5.3						
YSS	**Yuzh-Sakhalins**	**35.88**	**24**	i P	**P**	**05 13 38.1**	**+0.5**
PKI	**Pulchoki**	**36.01**	**296**	eP	**P**	**05 13 37.6**	**-1.2**
	comp=Z,32nm,1.2s,mb5.1						
PKI	**Pulchoki**	**36.01**	**296**	eP	**P**	**05 13 37.6**	**-1.2**
PKI				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
KKN	**Kakani**	**36.16**	**296**	eP	**P**	**05 13 39.3**	**-0.9**
	comp=Z,49nm,1.3s,mb5.3						
KKN	**Kakani**	**36.16**	**296**	eP	**P**	**05 13 39.3**	**-0.9**
KKN				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.0						
DMN	**Daman**	**36.28**	**296**	eP	**P**	**05 13 40.4**	**-0.7**
	comp=Z,6.1nm,0.3s,mb5.0						
GKN	**Gorkha**	**36.76**	**296**	eP	**P**	**05 13 44.1**	**-1.1**
	comp=Z,37nm,1.1s,mb5.1						
WRAB	**Tennant Creek**	**37.16**	**161**	eP	**P**	**05 13 44.5**	**-4.1**
WRA	**Warramunga Arr**	**37.17**	**161**	P	**P**	**05 13 45.2**	**-3.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**37.17**	**161**	P	**P**	**05 13 45.2**	**-3.4**
	comp=Z,1.1nm,0.5s,mb3.9,baz=341,slow=9.2,SNR=17						
WB2	**Warramunga Arr**	**37.17**	**161**	eP	**P**	**05 13 45.0**	**-3.7**
KOLN	**Koldanda**	**37.62**	**296**	eP	**P**	**05 13 51.5**	**-0.9**
ZAK	**Zakamensk**	**38.03**	**341**	eP	**P**	**05 13 55.2**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
TLY	**Talaya**	**39.05**	**342**	eP	**P**	**05 14 04.3**	**+0.2**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TLY				MLR	MLR		
	comp=Z,111nm,17.0s,MS3.8						
MOY	**Mondy**	**39.88**	**340**	eP	**P**	**05 14 11.4**	**+0.4**
MKAR	**Makanchi Array**	**45.44**	**322**	P	**P**	**05 14 56.7**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,83nm,19.4s						
MKAR	**Makanchi Array**	**45.44**	**322**	P	**P**	**05 14 56.7**	**+0.4**
	comp=Z,10nm,0.9s,mb4.7,baz=124,slow=8.7,SNR=68						
MKAR				LR	LR	05 34 42.7	
	comp=Z,83nm,19.4s,MS3.7,baz=274,slow=37						
YAK	**Yakutsk**	**46.88**	**5**	i P	**P**	**05 15 07.3**	**-0.1**
YAK				MLR	MLR		
	comp=Z,100nm,13.0s,MS4.0						
KZA	**Kyzart**	**48.07**	**313**	P	**P**	**05 15 19.2**	**+2.1**
	SNR=6.5						
TKM2	**Tokmak 2**	**48.11**	**314**	P	**P**	**05 15 16.1**	**-1.3**
	SNR=5.8						
ZAL	**Zalesovo**	**48.15**	**331**	P	**P**	**05 15 17.1**	**-0.5**
ZAL				*PP	pP	05 15 27.4	+0.1
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZAL				MLR	MLR		
	comp=Z,93nm,19.3s						
ZAL	**Zalesovo**	**48.15**	**331**	P	**P**	**05 15 17.1**	**-0.5**
	comp=Z,4.2nm,0.5s,mb4.8,baz=352,slow=7.8,SNR=25						
ZAL				pP	pP	05 15 27.4	+0.1
	comp=Z,2.1nm,0.4s,baz=72,slow=20,SNR=2.9						
ZAL				LR	LR	05 36 27.3	
	comp=Z,92nm,19.3s,MS3.8,baz=178,slow=37						
KBK	**Karagaybulak**	**48.47**	**314**	P	**P**	**05 15 21.6**	**+1.5**
	SNR=5.9						
UCH	**Uchtor**	**48.63**	**313**	P	**P**	**05 15 23.1**	**+1.6**
	SNR=15						
CHMS	**Chumysh**	**48.72**	**314**	P	**P**	**05 15 22.8**	**+0.7**
	SNR=7.2						
FRU	**Bishkek**	**48.76**	**314**	eP	**P**	**05 15 23.0**	**+0.6**
FRU				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.2						
USP	**Ospenovka**	**48.98**	**314**	P	**P**	**05 15 24.4**	**+0.3**
	SNR=6.5						
AML	**Almayashu**	**49.18**	**313**	P	**P**	**05 15 26.6**	**+0.9**
	SNR=11						
EKS2	**Erkin-Say**	**49.29**	**313**	P	**P**	**05 15 27.2**	**+0.7**
	SNR=8.8						
NVS	**Novosibirsk**	**49.43**	**332**	eP	**P**	**05 15 24.9**	**-2.5**
NVS				pmax	pmax		
	comp=N,23nm,1.6s						
NVS				pmax	pmax		
	comp=E,25nm,1.6s						
NVS				pmax	pmax		
	comp=Z,37nm,1.6s,mb5.2						
STKA	**Stephens Creek**	**50.63**	**158**	P	**P**	**05 15 33.8**	**-3.1**
	comp=Z,3.5nm,0.8s,mb4.4,baz=326,slow=12,SNR=3.4						
BVAR	**Borovoye Array**	**55.10**	**325**	P	**P**	**05 16 09.3**	**-0.6**
	comp=Z,2.9nm,0.9s,mb4.3,baz=126,slow=13,SNR=19						
BVAR				pP	pP	05 16 19.5	-0.1
	comp=Z,2.0nm,0.6s,baz=112,slow=8.0,SNR=7.0						
CHKZ	**Chkalovo**	**55.23**	**326**	eP	**P**	**05 16 09.9**	**-0.9**
	comp=Z,18nm,1.7s,mb4.8						
TIXI	**Tiksi**	**56.37**	**3⇑**	eP	**P**	**05 16 17.2**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.0						
BILL	**Bilibino**	**59.70**	**18⇓**	iP	**P**	**05 16 41.8**	**-0.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
BILL	**Bilibino**	**59.70**	**18**	eP	**P**	**05 16 39.3**	**-2.9**
	comp=Z,1.7nm,0.6s,mb4.2						
SVE	**Sverdlovsk**	**61.66**	**327**	eP	**P**	**05 16 54.8**	**-0.8**
SVE				e		05 17 11.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
ARU	**Arti**	**62.67**	**326⇑**	iP	**P**	**05 17 00.9**	**-1.5**
ARU				e		05 17 33.6	
ARU				e		05 19 15.9	
ARU				ePPP	PPP	05 20 46.7	-5.6
ARU				eS	**S**	**05 25 27.6**	**+0.8**
ARU				eSS	SS	05 29 32.1	-1.3
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
ARU	**Arti**	**62.67**	**326**	eP	**P**	**05 17 00.6**	**-1.7**
	comp=Z,5.0nm,0.6s,mb4.8						
ARU				e	pP	05 17 10.8	-1.6
GNI	**Garni**	**70.57**	**308**	i P	**P**	**05 17 54.4**	**+1.6**
GNI				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ZEI	**Tsey**	**71.03**	**310**	eP	**P**	**05 17 55.1**	**-0.4**
ZEI				i *PP	pP	05 18 12.9	+7.4
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
KIV	**Kislovodsk**	**71.84**	**312**	i P	**P**	**05 18 00.2**	**-0.1**
KIV				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
IMA	**Indian Mountai**	**73.73**	**25**	eP	**P**	**05 18 12.1**	**+1.1**
IMA				e	pP	05 18 22.0	+0.9
IMA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
IMA	**Indian Mountai**	**73.73**	**25**	eP	**P**	**05 18 12.1**	**+1.1**
	comp=Z,4.3nm,0.9s,mb4.4						
IMA				e	pP	05 18 22.0	+0.9
SOC	**Sochi**	**74.01**	**311**	eP	**P**	**05 18 10.1**	**-2.9**
SOC				e		05 20 56.5	
SOC				ePPP	PPP	05 22 38.5	-6.5
SOC				eS	S	05 27 43.4	+1.5
SOC				pmax	pmax		
	comp=N,10.0nm,1.0s						
SOC				pmax	pmax		
	comp=E,12nm,1.0s						
SOC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
SOC				MLR	MLR		
	comp=N,43nm,15.0s,MS4.1						
SOC				MLR	MLR		
	comp=Z,138nm,15.0s,MS4.4						
SOC				MLR	MLR		
	comp=E,64nm,16.0s,MS4.1						
OBN	**Obninsk**	**74.92**	**324⇑**	eP	**P**	**05 18 17.4**	**-0.6**
OBN				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MCK	**McKinley**	**75.90**	**27**	eP	**P**	**05 18 21.8**	**-1.7**
MCK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
MCK	**McKinley**	**75.90**	**27**	eP	**P**	**05 18 21.8**	**-1.7**
	comp=Z,6.6nm,0.9s,mb4.6						
ILAR	**Eielson Array**	**76.66**	**26**	P	**P**	**05 18 27.5**	**-0.2**
ILAR				*PP	pP	05 18 37.9	0.0
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**76.66**	**26**	P	**P**	**05 18 27.5**	**-0.2**
	comp=Z,0.7nm,0.9s,mb3.6,baz=277,slow=6.0,SNR=5.7						
ILAR				pP	pP	05 18 37.9	0.0
	comp=Z,1.0nm,0.7s,baz=257,slow=4.5,SNR=7.0						
ASF	**Jabal al Asfar**	**77.90**	**300**	P	**P**	**05 18 35.7**	**+0.5**
	comp=Z,1.5nm,0.5s,mb4.2,baz=324,slow=8.0,SNR=3.1						
ARCES	**ARCESS Array B**	**77.95**	**339**	P	**P**	**05 18 34.4**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**77.95**	**339**	P	**P**	**05 18 34.4**	**-0.3**
	comp=Z,1.8nm,0.9s,mb4.0,baz=68,slow=6.5,SNR=5.8						
KAF	**Kangasniemi**	**79.16**	**332**	ep	**P**	**05 18 40.4**	**-1.1**
FINES	**FINESS Array B**	**79.41**	**331**	P	**P**	**05 18 42.0**	**-0.9**
FINES				*PP	pP	05 18 52.4	-0.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,37nm,18.3s						
FINES	**FINESS Array B**	**79.41**	**331**	P	**P**	**05 18 42.0**	**-0.9**
	comp=Z,1.6nm,0.7s,mb4.1,baz=53,slow=6.2,SNR=10						
FINES				pP	pP	05 18 52.4	-0.7
	comp=Z,1.5nm,0.7s,baz=45,slow=5.4,SNR=3.8						
FINES				LR	LR	05 58 11.0	
	comp=Z,37nm,18.3s,MS3.8,baz=169,slow=39						
AKASG	**Malin Array Be**	**79.98**	**320**	P	**P**	**05 18 45.2**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**79.98**	**320**	P	**P**	**05 18 45.2**	**-1.0**
	comp=Z,0.7nm,0.3s,mb4.0,baz=64,slow=5.1,SNR=12						
DAWY	**Dawson**	**79.99**	**26**	eP	**P**	**05 18 46.5**	**+0.5**
DAWY				e	pP	05 18 56.9	+0.8
MLR	**Muntele Rosu**	**83.33**	**315**	P	**P**	**05 19 04.4**	**+0.6**
MLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MLR	**Muntele Rosu**	**83.33**	**315**	P	**P**	**05 19 04.4**	**+0.6**
	comp=Z,3.5nm,0.8s,mb4.4,baz=160,slow=5.3,SNR=4.9						

KOLS	**Kolonicke sedl**	84.78	319	*e*P	P	05 19 13.1	+2.1
KMBO	**Kilima Mbogo**	85.24	268	P	P	05 19 16.0	+1.9
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMBO	**Kilima Mbogo**	85.24	268	P	P	05 19 16.0	+1.9
	comp=Z,0.9nm,0.3s,mb4.4,baz=49,slow=9.0,SNR=5.0						
KMBO	**Kilima Mbogo**	85.24	268	P	P	05 19 16.0	+1.9
DLBC	**Dease Lake**	86.09	30	LR	LR	05 56 40.6	
	comp=Z,47nm,18.7s,MS3.9,baz=256,slow=35						
NB2	**NORSAR Subarra**	86.33	333	P	P	05 19 17.7	-0.7
	comp=Z,1.4nm,0.6s,mb4.4,baz=62,slow=4.8						
NOA	**NORSAR Array B**	86.33	333	P	P	05 19 18.0	-0.4
NOA				*PP	pP	05 19 28.1	-0.6
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NOA	**NORSAR Array B**	86.33	333	P	P	05 19 18.0	-0.4
	comp=Z,3.3nm,0.8s,mb4.6,baz=66,slow=5.0,SNR=8.8						
NOA				pP	pP	05 19 28.1	-0.7
	comp=Z,4.4nm,0.9s,baz=65,slow=5.1,SNR=7.1						
NOA				LR	LR	06 02 30.4	
	comp=Z,46nm,18.8s,MS3.9,baz=45,slow=39						
GERES	**GERESS Array B**	90.11	321	P	P	05 19 36.4	-0.3
	comp=Z,0.2nm,0.3s,mb3.9,baz=68,slow=7.2,SNR=5.3						
YKA	**Yellowknife Ar**	90.72	23	P	P	05 19 40.2	+1.0
YKA				*PP	pP	05 19 49.7	+0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YKA	**Yellowknife Ar**	90.72	23	P	P	05 19 40.2	+1.0
	comp=Z,0.3nm,0.3s,mb4.1,baz=313,slow=4.4,SNR=5.7						
YKA				pP	pP	05 19 49.7	+0.2
	comp=Z,0.5nm,0.3s,baz=309,slow=4.6,SNR=2.5						
YKA	**Yellowknife Ar**	90.72	23	P	P	05 19 40.2	+1.0
YKA				pP	pP	05 19 49.7	+0.2
DAVOX	**Davos**	93.31	320	LR	LR	06 08 55.7	
	comp=Z,50nm,18.5s,MS4.0,baz=83,slow=40						

MAN 11 05:09:29.2, 13.67N×120.01E, h33^{km}, mb3.6, ML2.3, MS1.8, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	0.24	73	*e*P	P	05 09 37.6	+1.4
LUBP				*e*S	S	05 09 40.5	-0.6
SJMP	**San Jose**	1.61	138	*e*P	P	05 09 57.3	+1.7
SJMP				*e*S	S	05 10 14.4	-1.0
BUSP	**Coron**	1.66	174	*e*P	P	05 09 56.7	+0.3
BUSP				*e*S	S	05 10 15.8	-1.0
CUYO	**Cuyo Island**	2.96	161	*e*P	P	05 10 14.6	-0.4

BJI ***11*** *05:17:15.5, 6.93S×129.29E, h198^{km}, mB4.8, mb4.7*

NEIC ***11*** *05:17:17.9±2.4, 6.70S×129.04E, h179^{km}±27^{km}, mb4.5/8, Error ellipse: s-maj=21.0km s-min=14.2km az=221.0*

IDC ***11*** *05:17:19.5±4.6, 6.67S×129.12E, h194^{km}±51^{km}, mb4.0/9, mb1 4.1/10, mb1mx3.9/16, mbtmp4.5/10, Error ellipse: s-maj=32.0km s-min=18.6km az=44.0*

ISC 11 05:17:19.4±1.7**, 6.89S**±0.07×**129.13E**±0.10**, h217^{km}**±19^{km}**, n38, σ0^{s}95**/42**, mb4.4**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	6.64	151	*e*P	P	05 18 57.1	+1.3
	164nm,0.3s						
KAKA				*e*S	S	05 20 10.6	-0.5
FITZ	**Fitzroy Crossi**	11.65	197	*e*P	P	05 19 59.4	-1.0
	105nm,0.4s						
FITZ				*e*S	S	05 22 06.2	-0.8
FITZ	**Fitzroy Crossi**	11.65	197	P	P	05 20 00.9	+0.5
	29nm,0.3s,baz=20,slow=8.9,SNR=278						
FITZ				S	S	05 22 04.9	-2.0
	20nm,0.3s,baz=163,slow=17,SNR=6.8						
WRAB	**Tennant Creek**	13.92	159	*e*P	P	05 20 28.8	-0.1
	50nm,0.7s						
WRA	**Warramunga Arr**	13.93	159	P	P	05 20 29.6	+0.6
	2.9nm,0.3s,baz=337,slow=12,SNR=92						
WRA				S	S	05 22 57.1	-1.5
	5.1nm,0.3s,baz=328,slow=24,SNR=12						
WB2	**Warramunga Arr**	13.93	159	*e*P	P	05 20 29.1	+0.1
WB2				*e*S	S	05 22 58.9	+0.2
MBWA	**Marble Bar**	16.85	212	*e*P	P	05 21 05.5	+1.2
	7.9nm,0.6s						
PMG	**Port Moresby**	18.02	99	P	P	05 21 22.9	+6.1
	2.9nm,0.3s,baz=290,slow=7.2,SNR=18						
CTA	**Charters Tower**	21.17	130	P	P	05 21 53.1	+4.6
	6.1nm,0.6s,mb4.3,baz=301,slow=12,SNR=16						
CTAO	**Charters Tower**	21.17	130	*e*P	P	05 21 53.0	+4.5
	8.1nm,0.7s,mb4.4						
STKA	**Stephens Creek**	27.45	157	P	P	05 22 49.7	+2.3
	1.2nm,0.5s,mb3.8,baz=225,slow=9.5,SNR=3.1						
STKA	**Stephens Creek**	27.45	157	P	P	05 22 49.7	+2.3
CMAR	**Chiang Mai Arr**	39.00	311	P	P	05 24 27.6	+0.9
	1.1nm,0.4s,mb3.7,baz=135,slow=7.7,SNR=7.5						
ENH	**Enshi**	41.48	334	*e*P	P	05 24 45.5	-1.3
	3.9nm,0.3s,mb4.3						
MJAR	**Matsushiro Arr**	44.03	11	P	P	05 25 05.7	-1.8
	4.2nm,0.6s,mb4.0,baz=189,slow=10.0,SNR=9.3						
MJAR	**Matsushiro Arr**	44.03	11	P	P	05 25 05.7	-1.8
LSA	**Lhasa**	51.52	317	P	P	05 26 05.4	+0.2
LSA	**Lhasa**	51.52	317	*e*P	P	05 26 05.2	0.0
	5.5nm,0.5s,mb4.2						
GTA	**Gaotai**	53.46	332	*e*P	P	05 26 19.1	-0.3
GTA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
GUN	**Gumba**	54.23	312	*e*P	P	05 26 24.7	-0.4
	comp=Z,33nm,0.4s,mb5.2						
PKI	**Pulchoki**	54.40	311	*e*P	P	05 26 25.9	-0.4
	comp=Z,8.7nm,0.4s,mb4.6						
KKN	**Kakani**	54.61	311	*e*P	P	05 26 27.1	-0.8
	comp=Z,17nm,0.6s,mb4.8						
DMN	**Daman**	54.65	311	*e*P	P	05 26 27.5	-0.6
	comp=Z,23nm,0.7s,mb4.8						
GKN	**Gorkha**	55.21	311	*e*P	P	05 26 31.3	-0.8
	comp=Z,26nm,0.3s,mb5.2						
KOLN	**Koldanda**	55.87	310	*e*P	P	05 26 36.3	-0.5
	comp=Z,14nm,0.4s,mb4.8						
SONM	**Songino Array**	58.07	342	P	P	05 26 51.6	-0.5
	comp=Z,3.3nm,0.6s,mb4.1,baz=155,slow=6.5,SNR=28						
MKAR	**Makanchi Array**	67.66	327	P	P	05 27 54.7	-0.3
	comp=Z,15nm,0.4s,mb5.0,baz=119,slow=8.2,SNR=113						
KZA	**Kyzart**	69.14	320	P	P	05 28 05.8	+1.7
	SNR=5.9						
TKM2	**Tokmak 2**	69.35	321	P	P	05 28 06.3	+0.9
	SNR=7.1						
UCH	**Uchtor**	69.68	320	P	P	05 28 09.4	+1.9
	SNR=6.5						
AML	**Almayashu**	70.16	319	P	P	05 28 11.1	+0.7
	SNR=9.8						
USP	**Ospenovka**	70.22	321	P	P	05 28 11.4	+0.7
	SNR=6.1						
EKS2	**Erkin-Say**	70.37	320	P	P	05 28 12.6	+0.9
	SNR=6.8						
ZAL	**Zalesovo**	71.11	334	P	P	05 28 15.2	-0.6
	comp=Z,3.7nm,0.4s,mb4.3,baz=340,slow=3.8,SNR=20						
BVAR	**Borovoye Array**	77.51	328	P	P	05 28 52.4	-0.2
	comp=Z,1.8nm,0.4s,mb4.1,baz=123,slow=9.4,SNR=17						
CHKZ	**Chkalovo**	77.72	329	*e*P	P	05 28 53.2	-0.4
	comp=Z,2.1nm,0.5s,mb4.0						
ILAR	**Eielson Array**	93.62	25	P	P	05 30 11.2	-0.6
	comp=Z,0.8nm,0.7s,mb3.9,baz=239,slow=5.1,SNR=10						
ARCES	**ARCESS Array B**	101.17	340	P	P	05 30 44.8	-1.2
	comp=Z,0.6nm,0.6s,baz=67,slow=6.9,SNR=4.6						

CSEM ***11*** *06:04:01.7±0.2, 35.07N×2.65W, h20^{km}, MD3.4, Error ellipse: s-maj=3.9km s-min=3.1km az=100.0*

MDD ***11*** *06:04:03.8±0.4, 35.06N×2.63W, h15^{km}±3^{km}, mbLg3.2/2, Error ellipse: s-maj=4.3km s-min=3.0km az=46.0, PRXIMO*

CNRM ***11*** *06:04:03.9, 35.06N×2.66W, h7^{km}, MD3.4*

SFS ***11*** *06:04:03.0, 35.09N×2.52W*

INMG ***11*** *06:04:04.5±1.3, 35.09N×2.66W, h23^{km}±3^{km}, ML2.4, Error ellipse: s-maj=7.8km s-min=5.7km az=1.0*

NEIC ***11*** *06:04:04.6, 35.07N×2.75W, MG3.6(MDD), After MDD.*

ISC 11 06:04:01.6±0.3**, 35.08N**±0.02×**2.68W**±0.03**, h10^{km}, n65, σ1^{s}39**/109**, 1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAI	**Zaio**	0.12	209	Pg	Pg	06 04 04.5	-0.1
ZAI				Lg		06 04 07.0	
MELI	**Melilla**	0.30	316	Pg	Pg	06 04 10.1	+2.2
MELI				Lg		06 04 15.7	
MELI	**Melilla**	0.30	316	*i* P	Pg	06 04 10.1	+2.2
MELI				*e*S	Sg	06 04 15.7	+3.6
EMLI	**Melilla**	0.32	315	P	Pg	06 04 10.6	+2.5
	527nm,0.1s,SNR=18						
EMLI				S	Sg	06 04 16.4	+3.9
	3µm,0.3s,SNR=7.9						
EMEL	**Melilla**	0.32	314	⇓Pg	Pg	06 04 10.6	+2.3
	527nm,0.1s,SNR=18						
EMEL				Lg		06 04 16.4	
	3µm,0.3s,SNR=7.9						
TAF	**Taforalt**	0.34	141	P	Pg	06 04 10.0	+1.4
TAF				S	Sg	06 04 14.0	+0.8
OUJ	**Oujda**	0.76	123	*i* P	Pb	06 04 17.0	+0.6
OUJ				*i* S	Sb	06 04 27.0	+0.4
TOU	**Touzarine**	0.89	263	*i* P	Pb	06 04 20.5	+1.8
TOU				*i* S	Sb	06 04 34.0	+3.6
EALB	**Alboran**	0.91	341	P	Pb	06 04 20.7	+1.7
EALB				S	Sb	06 04 32.4	+1.5
EALB	**Alboran**	0.91	341	Pg	Pg	06 04 20.7	+0.9
	22nm,0.2s,SNR=13						
EALB				Lg		06 04 32.0	
	154nm,0.3s,SNR=7.9						
EALB	**Alboran**	0.91	341	P	Pb	06 04 20.7	+1.7
	22nm,0.2s,SNR=13						
EALB				S	Sb	06 04 32.4	+1.5
MPAL	**Palemas**	1.05	279	*e*P	Pb	06 04 22.5	+1.1
MPAL				*i* S	Sb	06 04 37.5	+2.6
TZK	**Tazeka**	1.59	232	*i* P	Pn	06 04 31.0	+1.1
TZK				*i* S	Sb	06 04 51.0	+0.4
EBER	**Berja**	1.83	355	Pn	Pn	06 04 34.9	+1.5
	0.6nm,0.2s,SNR=5.0						
EBER				Sn	Sn	06 04 55.2	-1.5
	74nm,0.5s,SNR=7.6						
EBER	**Berja**	1.83	355	P	Pn	06 04 34.9	+1.5
	0.6nm,0.2s,SNR=5.0						
EBER				S	Sn	06 04 55.2	-1.5
	74nm,0.5s,SNR=7.6						
ENIJ	**Nijar**	1.93	11	Pn	Pn	06 04 34.8	-0.1
	5.3nm,0.3s,SNR=7.9						
ENIJ				Sn	Sn	06 04 59.5	+0.2
	17nm,0.4s,SNR=5.0						
EMIJ	**Mijas**	2.26	312	Pn	Pn	06 04 38.9	-0.7
	2.3nm,0.3s,SNR=7.7						
EMIJ				Sn	Sn	06 05 05.6	-2.2
	20nm,0.3s						
ECOG	**Cogollos-Vega**	2.31	342	Sn	Sn	06 05 09.1	0.0
	12nm,0.2s,SNR=4.0						
ECOG	**Cogollos-Vega**	2.31	342	S	Sn	06 05 11.2	+2.1
	12nm,0.2s,SNR=4.0						
ELOJ	**Sierra Loja**	2.39	330	Sn	Sn	06 05 10.8	-0.2
	2.8nm,0.3s,SNR=4.0						
ELOJ	**Sierra Loja**	2.39	330	S	Sn	06 05 12.8	+1.8
	2.8nm,0.3s,SNR=4.0						
EJIF	**Jimena Fronter**	2.65	302	Pn	Pn	06 04 48.2	+3.0
	3.6nm,0.3s,SNR=7.2						
MIF	**Mishlifen**	2.69	233	*e*P	Pn	06 04 46.0	+0.3
MIF				*i* S	Sn	06 05 17.0	-1.7
EQES	**Quesada**	2.74	353	Pn	Pn	06 04 48.2	+1.8
	1.2nm,0.1s,SNR=12						
EQES				Sn	Sn	06 05 20.3	+0.4
	24nm,0.4s						
EQES	**Quesada**	2.74	353	P	Pn	06 04 48.2	+1.8
	1.2nm,0.1s,SNR=12						
EQES				S	Sn	06 05 20.3	+0.4
	24nm,0.4s						
ELUQ	**Luque**	2.79	333	Sn	Sn	06 05 20.8	-0.5
	5.6nm,0.2s,SNR=4.0						
CZD	**Col de Zad**	2.83	225	*i* P	Pn	06 04 49.0	+1.3
CZD				*i* S	Sn	06 05 20.0	-2.2
CART	**Cartagena**	2.85	28	Pn	Pn	06 04 46.0	-1.9
CART	**Cartagena**	2.85	28	*e*P	Pn	06 04 46.0	-2.0
LIJA	**Lijar**	2.87	310	Pn	Pn	06 04 55.0	+6.7
LIJA				Sn	Sn	06 05 29.0	+5.8
EMUR	**La Murta**	2.99	22	Pn	Pn	06 04 49.5	-0.5
	7.3nm,0.4s,SNR=10						
EMUR	**La Murta**	2.99	22	P	Pn	06 04 49.5	-0.5
	7.3nm,0.4s,SNR=10						
ESPR	**Espera**	3.14	306	P	Pn	06 04 54.3	+2.2
ESPR				S	Sn	06 05 31.4	+1.3
ESPR	**Espera**	3.14	306	Pn	Pn	06 04 54.3	+2.2
	0.9nm,0.2s,SNR=4.0						
ESPR				Sn	Sn	06 05 29.1	-1.0
	10nm,0.3s,SNR=4.0						
ESPR	**Espera**	3.14	306	S	Sn	06 05 31.4	+1.4
	10nm,0.3s,SNR=4.0						
ZFT	**Errachidia**	3.34	205	*i* P	Pn	06 04 54.0	-1.0
ZFT				*i* S	Sn	06 05 33.0	-2.2
EADA	**Adamuz**	3.44	334	Pn	Pn	06 04 57.6	+1.2
	0.3nm,0.1s,SNR=6.0						
EADA				Sn	Sn	06 05 35.3	-2.5
	4.0nm,0.2s,SNR=7.9						
EADA	**Adamuz**	3.44	334	P	Pn	06 04 57.6	+1.2
	0.3nm,0.1s,SNR=6.0						
EADA				S	Sn	06 05 35.3	-2.4
	4.0nm,0.2s,SNR=7.9						
EVIA	**Vianos**	3.56	2	Sn	Sn	06 05 39.2	-1.5
	SNR=7.9						
ETOB	**Tobarra**	3.67	14	Pn	Pn	06 04 58.5	-1.2
	1.9nm,0.3s,SNR=8.8						
ETOB				Sn	Sn	06 05 41.8	-1.8
	1.6nm,0.2s						
ETOB	**Tobarra**	3.67	14	P	Pn	06 04 58.5	-1.2
ETOB				S	Sn	06 05 41.8	-1.8
ECAB	**El Cabril**	3.72	324	Pn	Pn	06 04 60.0	-0.3
	0.2nm,0.1s,SNR=4.6						
ECAB				Sn	Sn	06 05 45.4	+0.6
	4.1nm,0.3s,SNR=5.3						
ECAB	**El Cabril**	3.72	324	P	Pn	06 05 00.0	-0.3
	0.2nm,0.1s,SNR=4.6						
ECAB				S	Sn	06 05 45.3	+0.6
KIB	**El Ksiba**	3.75	229	Pn	Pn	06 05 00.5	-0.3
KIB				Sn	Sn	06 05 42.0	-3.5
KIB	**El Ksiba**	3.75	229	*e*P	Pn	06 05 00.5	-0.3
EBEN	**Beniarda**	4.12	28	Pn	Pn	06 05 05.9	-0.2
	1.0nm,0.3s,SNR=4.0						
EBEN	**Beniarda**	4.12	28	P	Pn	06 05 05.9	-0.1
EMIN	**Mina Concepcio**	4.20	311	P	Pn	06 05 06.3	-0.8
EMIN				S	Sn	06 05 53.1	-3.7
EMIN	**Mina Concepcio**	4.20	311	Pn	Pn	06 05 06.3	-0.8
	0.5nm,0.1s,SNR=17						
EMIN				Sn	Sn	06 05 53.1	-3.7
	3.3nm,0.2s						
EMIN	**Mina Concepcio**	4.20	311	P	Pn	06 05 06.3	-0.8
EMIN				S	Sn	06 05 53.1	-3.7
PALC	**Alcoutim**	4.55	303	*e*Pn	Pn	06 05 11.5	-0.7
PALC				*e*Sn	Sn	06 06 01.4	-4.4
	5.7nm,0.5s						
PALC	**Alcoutim**	4.55	303	*e*Pn	Pn	06 05 11.5	-0.7
PALC				*e*Sn	Sn	06 06 01.4	-4.4
	5.7nm,0.5s						
EGRO	**El Granado**	4.59	304	Pn	Pn	06 05 11.5	-1.3
	1.3nm,0.1s,SNR=27						
EGRO				Sn	Sn	06 06 02.0	-4.8
	4.5nm,0.2s						
EGRO	**El Granado**	4.59	304	P	Pn	06 05 11.5	-1.3
EGRO				S	Sn	06 06 02.0	-4.8
EBAD	**Badajoz**	5.06	318	Pn	Pn	06 05 18.3	-1.0
	1.1nm,0.2s,SNR=5.9						
EBAD				Sn	Sn	06 06 13.1	-5.4
	1.5nm,0.4s						
EBAD	**Badajoz**	5.06	318	P	Pn	06 05 18.3	-1.0
EBAD				S	Sn	06 06 13.1	-5.4
PBEJ	**Beja**	5.11	307	*e*Pn	Pn	06 05 19.4	-0.7
PBEJ				*e*Sn	Sn	06 06 15.1	-4.8
	3.1nm,0.3s						
PBEJ	**Beja**	5.11	307	*e*Pn	Pn	06 05 19.4	-0.7
PBEJ				*e*Sn	Sn	06 06 15.1	-4.8
	3.1nm,0.3s						
PTEO	**Sao Teotonio**	5.47	299	*e*Sn	Sn	06 06 24.6	-4.3
	3.8nm,0.5s						
PTEO	**Sao Teotonio**	5.47	299	Sn	Sn	06 06 24.6	-4.3
	1.9nm,0.5s						
PCBR	**Castelo Branco**	6.10	323	*e*Pn	Pn	06 05 33.0	-1.0
PCBR				*e*Sn	Sn	06 06 37.1	-7.6
	3.3nm,0.4s						
PCBR	**Castelo Branco**	6.10	323	Pn	Pn	06 05 33.0	-1.0
PCBR				Sn	Sn	06 06 37.1	-7.6
	1.6nm,0.4s						
PTOM	**Tomar**	6.43	316	*e*Pn	Pn	06 05 37.7	-1.1
PTOM				*e*Sn	Sn	06 06 46.3	-6.8
	2.4nm,0.2s						
PTOM	**Tomar**	6.43	316	Pn	Pn	06 05 37.7	-1.1
PTOM				Sn	Sn	06 06 46.3	-6.8
	1.2nm,0.2s						
PVRL	**Vila Real**	7.35	329	*e*Pn	Pn	06 05 50.5	-1.1
PVRL				*e*Sn	Sn	06 07 09.4	-6.6

CSEM ***11*** *06:14:27.8±0.9, 36.91N×13.22W, h30^{km}, ML3.1/9, Error ellipse: s-maj=17.1km s-min=14.8km az=53.0*

INMG ***11*** *06:14:28.2±0.7, 36.54N×13.37W, h10^{km}, ML2.1, Error ellipse: s-maj=7.3km s-min=5.7km az=104.0*

MDD 11 06:14:26.4±2.8**, 36.77N×13.03W, mb3.4**/6**, Error ellipse: s-maj=24.7km s-min=22.9km az=164.0, PRXIMO, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	3.53	76	*e*Pn	Pn	06 15 20.9	-2.7
PTEO				*e*Sn	Sn	06 16 00.9	-5.7
	4.1nm,0.3s						
PTEO	**Sao Teotonio**	3.53	76	*e*Pn	Pn	06 15 20.9	-2.7
PTEO				*e*Sn	Sn	06 16 00.9	-5.7
	4.1nm,0.3s						
PLOU	**Loures**	3.73	54	*e*Sn	Sn	06 16 07.0	-4.7
PBEJ	**Beja**	4.30	71	*e*Sn	Sn	06 16 20.1	-6.1
PALC	**Alcoutim**	4.50	79	*e*Pn	Pn	06 15 34.5	-2.8
PALC				*e*Sn	Sn	06 16 24.5	-6.6
EGRO	**El Granado**	4.50	79	Pn	Pn	06 15 34.9	-2.5
	0.2nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	06 16 24.3	-6.9
	0.9nm,0.1s,SNR=7.9						
EGRO	**El Granado**	4.50	79	Pn	Pn	06 15 34.9	-2.5
	0.2nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	06 16 24.3	-6.9
	0.9nm,0.1s,SNR=7.9						
PTOM	**Tomar**	4.62	51	*e*Pn	Pn	06 15 37.0	-2.1
PTOM				*e*Sn	Sn	06 16 28.2	-6.1
EBAD	**Badajoz**	5.17	66	Pn	Pn	06 15 44.9	-1.9
	0.4nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	06 16 39.5	-8.5
	1.1nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	5.17	66	Pn	Pn	06 15 44.9	-1.9
	0.4nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	06 16 39.5	-8.5
	1.1nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	5.17	77	Pn	Pn	06 15 42.6	-4.3
	0.2nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	06 16 40.4	-7.7
	0.4nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	5.17	77	Pn	Pn	06 15 42.6	-4.3
	0.2nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	06 16 40.4	-7.7
	0.4nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	5.34	53	*e*Sn	Sn	06 16 45.1	-7.2
PVIS	**Viseu**	5.63	44	*e*Sn	Sn	06 16 52.4	-7.2
ESPR	**Espera**	5.76	87	Sn	Sn	06 16 55.0	-7.9
	6.0nm,0.3s,SNR=7.9						
ESPR	**Espera**	5.76	87	Sn	Sn	06 16 57.3	-5.6
	6.0nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	6.20	76	Pn	Pn	06 15 57.7	-3.7
	0.4nm,0.2s,SNR=7.9						
ECAB				Sn	Sn	06 17 05.3	-8.6
	0.5nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	6.20	76	Pn	Pn	06 15 57.7	-3.7
	0.4nm,0.2s,SNR=7.9						
ECAB				Sn	Sn	06 17 05.3	-8.6
	0.5nm,0.2s,SNR=7.9						
ELOB	**Lobios**	6.38	36	Pn	Pn	06 15 59.1	-4.9
	0.2nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	06 17 08.7	-10
	0.6nm,0.1s,SNR=7.9						
ELOB	**Lobios**	6.38	36	Pn	Pn	06 15 59.1	-4.9
	0.2nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	06 17 08.7	-10
	0.6nm,0.1s,SNR=7.9						
EADA	**Adamuz**	6.87	76	Pn	Pn	06 16 08.3	-2.5
	0.3nm,0.2s,SNR=7.9						
EADA				Sn	Sn	06 17 21.4	-9.3
	0.5nm,0.3s,SNR=7.9						
EADA	**Adamuz**	6.87	76	Pn	Pn	06 16 08.3	-2.5
	0.3nm,0.2s,SNR=7.9						
EADA				Sn	Sn	06 17 21.4	-9.3
	0.5nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	6.92	26	Sn	Sn	06 17 18.4	-13
	2.2nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	6.92	26	Sn	Sn	06 17 18.4	-13
	2.2nm,0.1s,SNR=7.9						
ZAI	**Zaio**	8.54	99	*i* P	P	06 16 33.5	-0.7

KRSC 11 06:44:57.2±1.5**, 53.61N×168.69E, h50^{km}**±19^{km}**, ML4.1, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	2.25	316	*e*P	P	06 45 32.3	-0.5
BKI				*e*S	S	06 45 59.1	-0.4
BKI				Smax			
	250nm,1.5s						
MKZ	**Mys Kozlova**	4.21	286	*e*P	P	06 46 00.1	-0.4
MKZ				*e*S	S	06 46 46.1	-2.8
KBTR	**Krutoberegovo**	4.27	310	*e*P	P	06 46 00.1	-1.3
KBTR				*e*S	S	06 46 49.3	-1.3
SPN	**Mys Shipunski**	5.22	268	*e*P	P	06 46 13.6	-1.1
SPN				*e*S	S	06 47 09.5	-4.8
TUMR	**Tumrok**	5.26	292	*e*P	P	06 46 16.4	+1.2
TUMR				*e*S	S	06 47 13.5	-1.9
KMNR	**Kamenistaya**	5.36	297	*e*P	P	06 46 16.7	+0.1
KMNR				*e*S	S	06 47 13.6	-4.1
KPT	**Kopyto**	5.44	299	*e*P	P	06 46 18.1	+0.4
KPT				*e*S	S	06 47 17.4	-2.4
KII	**Karymskiy**	5.49	278	*e*P	P	06 46 17.8	-0.7
KII				*e*S	S	06 47 17.3	-3.9
NLC	**Nalytchevo**	5.61	269	*e*P	P	06 46 19.8	-0.3
NLC				*e*S	S	06 47 19.9	-4.2
KOZ	**Kozyrevsk**	5.66	299	*e*P	P	06 46 20.0	-0.7
KOZ				*e*S	S	06 47 20.2	-5.0
SRDR	**Sredinnyy**	5.84	301	*e*P	P	06 46 23.9	+0.6
SRDR				*e*S	S	06 47 26.2	-3.6
UGLR	**Uglovaya**	5.92	270	*e*P	P	06 46 24.5	+0.1
UGLR				*e*S	S	06 47 26.6	-5.1
AVH	**Avacha**	5.96	271	*e*P	P	06 46 25.3	+0.3
AVH				*e*S	S	06 47 29.1	-3.7
KOK	**Koryaka**	6.02	271	*e*P	P	06 46 25.8	0.0
KOK				*e*S	S	06 47 29.5	-4.8
PET	**Petropavlovsk**	6.04	268	*e*P	P	06 46 25.9	-0.3
PET				*e*S	S	06 47 32.6	-2.4
PET				Smax			
	580nm,0.4s						
RUS	**Russkaya**	6.25	263	*e*P	P	06 46 29.0	-0.1
RUS				*e*S	S	06 47 35.2	-5.0
GNL	**Ganaly**	6.39	275	*e*P	P	06 46 31.8	+0.7
GNL				*e*S	S	06 47 38.9	-4.7
GRL	**Gorelyy**	6.49	265	*e*P	P	06 46 33.0	+0.6
GRL				*e*S	S	06 47 43.9	-2.0
APC	**Apacha**	6.95	269	*e*P	P	06 46 39.3	+0.3
APC				*e*S	S	06 47 52.8	-4.7
KAMR	**Kamenskoye**	8.97	353	*i* P	P	06 47 06.2	-0.6
KAMR				*e*S	S	06 48 40.7	-6.8
KAMR				Smax			
	10.0nm,1.1s						

ATH ***11*** *06:45:15.9, 34.60N×25.02E, h5^{km}±1^{km}, MD3.5/6*

NEIC ***11*** *06:45:16.5, 34.63N×25.03E, h5^{km}, MD3.5(ATH), After ATH.*

CSEM ***11*** *06:45:16.4±0.2, 34.59N×25.03E, h2^{km}, MD3.5, Error ellipse: s-maj=6.0km s-min=2.4km az=175.0*

ISC 11 06:45:17.5±1.5**, 34.7N**±0.1×**25.08E**±0.05**, h5^{km}, n11, σ1^{s}14**/15**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	**Khrisi**	0.55	68	*e*PB	Pg	06 45 28.0	-0.4
XRY				*e*SB	Sb	06 45 37.0	0.0
XRY	**Khrisi**	0.55	68	*e*Pg	Pg	06 45 28.0	-0.4
XRY				*e*Sb	Sb	06 45 36.5	-0.5
NPS	**Neapolis**	0.74	36	*e*PB	Pb	06 45 31.5	-0.9
NPS				*e*SB	Sb	06 45 42.6	+0.1
GVD	**Gavdhos**	0.83	282	*e*P	Pb	06 45 33.5	-0.6
GVD	**Gavdhos**	0.83	282	*e*P	Pb	06 45 33.5	-0.6
VAM	**Vamos**	1.03	316	*e*PN	Pn	06 45 36.0	-2.5
VAM				*e*SB	Sb	06 45 51.2	+0.1
KARP	**Karpathos**	1.92	62	*e*Pn	Pn	06 45 54.3	+3.2
KARP	**Karpathos**	1.92	62	*e*PN	Pn	06 45 53.0	+1.9
KYTH	**Kithira**	2.32	315	*e*PN	Pn	06 45 58.0	+1.1
KYTH	**Kithira**	2.32	315	*e*Pg	Pn	06 45 59.0	+2.1
VLI	**Veliai**	2.69	320	*e*PN	Pn	06 46 03.0	+0.8

NNC 11 06:52:16.4±1.9, 47.27N×82.28E, mpv3.6, Error ellipse: s-maj=28.2km s-min=7.7km az=76.0

IDC 11 06:52:16.2±0.9, 47.28N×82.47E, mb3.8/1, mb1 3.9/3, mb1mx3.5/21, mbtmp3.7/3, ML3.3/2, Error ellipse: s-maj=9.4km s-min=6.0km az=88.0

MOS 11 06:52:17.4±1.9, 47.01N×82.30E, h35^{km}, mb3.9/1, Error ellipse: s-maj=64.1km s-min=16.7km az=76.9

ISC 11 06:52:17.8±0.6**, 47.16N**±0.04×**82.08E**±0.07**, h33^{km}, n17, σ1^{s}44**/25**, mb3.4**/1**, 6C-4D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	0.40	159	⇓P	P	06 52 26.0	-0.9
	42nm,0.2s,baz=103,slow=8.1						
MK31				⇓S	S	06 52 32.4	-0.9
	660nm,0.3s						
MKAR	**Makanchi Array**	0.40	159	P	P	06 52 26.0	-0.9
MKAR						06 52 32.5	
MKAR				pmax	pmax		
	comp=Z,137nm,0.3s						
MKAR	**Makanchi Array**	0.40	159	Pg	P	06 52 26.0	-0.9
	comp=Z,137nm,0.3s,baz=18,slow=18,SNR=5776						
MKAR				Lg		06 52 32.5	
	comp=Z,324nm,0.3s,baz=12,slow=29,SNR=113						
KTNR	**Kaitanak**	3.73	36	ePN	Pn	06 53 15.7	+1.0
KTNR				eS	S	06 54 06.2	+8.2
UKR	**Ust'-Kan**	4.17	24	ePN	Pn	06 53 22.5	+1.6
UKR				eS	S	06 54 20.2	+11
ZAL	**Zalesovo**	7.00	13	Pn	Pn	06 53 58.0	-2.8
	comp=Z,1.4nm,0.3s,baz=270,slow=5.1,SNR=4.9						
ZAL				Sn	Sn	06 55 15.3	-4.7
	comp=Z,2.3nm,0.3s,baz=124,slow=12,SNR=5.9						
ZAL				Lg		06 55 54.3	
	comp=Z,2.7nm,0.3s,baz=231,slow=15,SNR=6.6						
AAK	**Ala-Archa**	7.04	233	⇑Pn	Pn	06 54 04.4	+3.0
	comp=Z,1.6nm,0.4s						
AAK				⇑Lg		06 56 05.3	
	comp=Z,28nm,0.8s						
NVS	**Novosibirsk**	7.72	5	eP	P	06 54 13.0	+2.3
KK31	**Karatay Array**	9.13	248	Pn	P	06 54 30.4	+0.1
	comp=Z,1.6nm,0.6s,baz=65,slow=11,SNR=21						
KK31				⇑Sn	Sn	06 56 14.6	+1.6
	comp=Z,1.6nm,0.5s,baz=56,slow=20,SNR=3.6						
KK31				⇑Lg		06 57 11.9	
	comp=Z,4.2nm,0.5s,baz=53,slow=29,SNR=5.0						
BVA0	**Borovoye Array**	9.53	312	Pn	P	06 54 35.0	-0.6
	comp=Z,0.1nm,0.4s,baz=121,slow=13,SNR=5.7						
BVA0				⇓Sn	Sn	06 56 23.2	+0.4
	comp=Z,0.4nm,0.5s						
BVA0				Lg		06 57 21.2	
	comp=Z,0.8nm,0.8s,baz=109,slow=27,SNR=14						
BVAR	**Borovoye Array**	9.53	312	Pn	P	06 54 35.0	-0.6
	comp=Z,0.4nm,0.3s,baz=117,slow=13,SNR=5.9						
BVAR				Sn	Sn	06 56 20.4	-2.4
	comp=Z,1.9nm,0.3s,baz=118,slow=24,SNR=9.8						
BVAR				Lg		06 57 23.9	
	comp=Z,1.6nm,0.3s,baz=130,slow=25,SNR=9.4						
CHKZ	**Chkalovo**	9.79	316	⇑Pn	P	06 54 39.2	0.0
	comp=Z,1.6nm,0.8s						
CHKZ				⇓Sn	Sn	06 56 27.7	-1.6
	comp=Z,2.6nm,0.5s						
CHKZ				⇑Lg		06 57 27.8	
	comp=Z,8.6nm,0.7s						
AB31	**Akbulak array**	14.90	286	Pn	P	06 55 51.3	+3.7
	comp=Z,0.3nm,0.5s,baz=87,slow=7.5,SNR=4.6						
FINES	**FINESS Array B**	34.47	315	eP	P	06 59 14.1	+10
NB2	**NORSAR Subarra**	41.63	316	P	P	07 00 08.5	+4.5
	comp=Z,0.6nm,0.7s,mb3.3,baz=75,slow=8.6						
NOA	**NORSAR Array B**	41.63	316	P	P	07 00 08.5	+4.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	41.63	316	P	P	07 00 08.5	+4.5
	comp=Z,0.9nm,0.8s,mb3.5,baz=75,slow=8.0,SNR=3.5						

ATH 11 06:57:04.2, 38.83N×23.99E, h26^{km}±1^{km}, MD3.1/9, ML3.2

THE 11 06:57:04.6, 38.79N×23.96E, h4^{km}, ML2.8

NEIC 11 06:57:04.1, 38.84N×24.00E, h25^{km}, ML3.2(ATH), After ATH.

CSEM 11 06:57:04.4±0.1, 38.81N×24.03E, h12^{km}, ML2.8, Error ellipse: s-maj=3.6km s-min=2.0km az=90.0

ISC 11 06:57:04.0±0.7**, 38.83N**±0.03×**23.97E**±0.05**, h14^{km}**±6^{km}**, n19, σ0^{s}98**/29**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	0.35	348	ePg	Pg	06 57 12.1	+0.6
AOS				eSg	Sg	06 57 17.3	+0.9
MPAR	**Parnis Oros**	0.70	196	ePN	Pn	06 57 18.2	-1.1
NEO	**Neokhori**	0.76	310	ePN	Pn	06 57 19.6	-0.4
NEO				eSN	Sn	06 57 29.9	-1.2
LKR	**Lokris**	0.78	257	ePB	Pb	06 57 19.2	+0.3
LKR				eSN	Sn	06 57 31.1	-0.7
PTL	**Penteli**	0.78	186	ePN	Pn	06 57 19.5	-0.9
XOR	**Xorichti**	0.81	312	ePg	Pg	06 57 21.0	+0.5
XOR				eSg	Sg	06 57 31.8	+0.4
ATH	**Athens Observa**	0.88	193	ePN	Pn	06 57 21.3	-0.5
ATH				eSN	Sn	06 57 34.1	-0.2
NSAL	**Nisos Salamina**	1.00	204	ePN	Pn	06 57 24.5	+0.9
NSAL				eSN	Sn	06 57 38.5	+1.1
MGER	**Gerania Oros**	1.01	214	ePN	Pn	06 57 23.4	-0.3
MGER				eSN	Sn	06 57 38.5	+0.9
PAIG	**Paliouri**	1.12	348	ePg	Pg	06 57 25.8	-0.8
PAIG				eSg	Sg	06 57 44.0	+2.4
NAIG	**Nisos Aigina**	1.13	200	ePN	Pn	06 57 25.8	+0.4
AGG	**Agios Georgios**	1.30	279	ePg	Pg	06 57 28.8	-1.3
	comp=Z,3.4nm,0.4s						
AGG				eSg	Sg	06 57 46.8	-0.6
LOS	**Limnos**	1.40	38	ePg	Pg	06 57 29.7	-2.4
LOS				eSg	Sg	06 57 51.1	+0.3
OUR	**Ouranopolis**	1.50	0	ePg	Pg	06 57 31.2	-3.0
	comp=Z,3.2nm,0.2s						
PLG	**Polygyros**	1.60	345	ePN	Pn	06 57 32.4	+0.3
LIT	**Litokhoron**	1.71	318	ePb	Pb	06 57 34.7	-0.1
	comp=Z,2.3nm,0.2s						
APE	**Apeiranthos**	2.15	144	ePN	Pn	06 57 40.5	+0.6
VLI	**Veliai**	2.26	202	ePN	Pn	06 57 42.5	+0.9
MEV	**Metsovon**	2.33	295	ePn	Pn	06 57 43.8	+1.2

NEIC 11 06:57:52.6, 61.31N×158.36W, h30^{km}, ML3.5(AEIC)**, After AEIC., Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVW2	**Sparrevohn**	1.36	98	P	Pn	06 58 14.6	-1.4
SVW2				S	Sn	06 58 31.7	-1.4
TT01	**Tatalina**	1.95	33	P	Pn	06 58 22.6	-1.6
TT01				S	Sn	06 58 45.1	-2.9
TTA	**Tatalina**	1.97	33	P	Pn	06 58 22.9	-1.8
NCT	**North Crescent**	2.75	103	P	Pn	06 58 33.7	-2.1
NCT				S	Sn	06 59 05.9	-2.6
RDN	**Redoubt North**	2.85	104	P	Pn	06 58 35.0	-2.2
RDN				S	Sn	06 59 09.3	-1.6
RSO	**Redoubt South**	2.87	105	P	Pn	06 58 35.3	-2.1
BGL	**Barrier Glacie**	2.88	88	P	Pn	06 58 36.0	-1.6
INE	**Iliamna NE**	2.89	113	P	Pn	06 58 35.3	-2.5
IVS	**Iliamna South**	2.91	114	P	Pn	06 58 36.1	-1.9
CKL	**Chakachamna La**	2.91	90	P	Pn	06 58 36.3	-1.8
MCNL	**McNeil River**	2.92	135	P	Pn	06 58 36.0	-2.3
ILIM	**Iliamna**	2.93	112	P	Pn	06 58 35.8	-2.5
RDT	**Redoubt**	3.00	102	P	Pn	06 58 37.8	-1.5
OPT	**Oil Point**	3.03	121	P	Pn	06 58 37.7	-2.1
OPT				S	Sn	06 59 14.1	-1.4
SPU	**Mount Spurr**	3.05	90	P	Pn	06 58 38.1	-2.0
AUW	**Augustine West**	3.11	126	P	Pn	06 58 38.8	-2.1
AUL	**Augustine Lava**	3.12	126	P	Pn	06 58 38.9	-2.0
AGU	**Augustine-Summ**	3.13	126	P	Pn	06 58 39.1	-2.1
AUP	**Augustine Pinn**	3.14	126	P	Pn	06 58 39.5	-1.8
KAHC	**Katmai Hardscr**	3.15	146	P	Pn	06 58 38.6	-2.8
KAPH	**Katmai Pasha**	3.38	142	P	Pn	06 58 44.4	-0.4
CAHL	**Cahill**	3.61	153	P	Pn	06 58 44.7	-3.3
KTH	**Kantishna Hill**	4.13	54	P	Pn	06 58 51.9	-3.5
IM3	**Indian Mountai**	5.13	22	P	Pn	06 59 07.2	-2.3
IMA	**Indian Mountai**	5.21	21	eP	Pn	06 59 07.7	-3.0

CNRM 11 07:08:28.8, 36.38N×9.96W, h30^{km}, MD3.6

CSEM 11 07:08:29.7±0.3, 36.24N×9.65W, h40^{km}, ML3.5/3, Error ellipse: s-maj=6.5km s-min=3.1km az=90.0

NEIC 11 07:08:30.6, 36.58N×9.97W, h28^{km}, MN2.8(MDD), After MDD.

INMG 11 07:08:31.7±0.8, 36.67N×9.71W, ML2.5, Error ellipse: s-maj=4.5km s-min=2.6km az=60.0

IGIL 11 07:08:31.0, 36.60N×9.70W, h0^{km}, ML3.2

MDD 11 07:08:31.0±1.5, 36.67N×9.71W, mb3.4/9, Error ellipse: s-maj=13.8km s-min=8.8km az=43.0, PRXIMO

ISC 11 07:08:25.8±0.7**, 36.45N**±0.03×**9.75W**±0.05**, h10^{km}, n44, σ1^{s}59**/84**, 1C-1D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTEO	**Sao Teotonio**	1.36	37	ePn	Pn	07 08 53.8	+2.8
PTEO				eSn	Sn	07 09 10.1	+0.9
PALC	**Alcoutim**	2.08	60	i Pn	Pn	07 09 04.4	+3.2
PALC				eSn	Sn	07 09 28.4	+1.0
	20nm,0.2s						
PALC	**Alcoutim**	2.08	60	⇓Pn	Pn	07 09 04.4	+3.2
PALC				Sn	Sn	07 09 28.4	+1.0
	10nm,0.2s						
EGRO	**El Granado**	2.11	59	Pn	Pn	07 09 04.5	+2.9
	2.2nm,0.1s,SNR=34						
EGRO				Sn	Sn	07 09 29.4	+1.3
	7.6nm,0.1s,SNR=12						
EGRO	**El Granado**	2.11	59	P	Pn	07 09 04.5	+2.9
	2.2nm,0.1s,SNR=34						
EGRO				S	Sn	07 09 29.4	+1.3
	7.6nm,0.1s,SNR=12						
PBEJ	**Beja**	2.17	43	ePn	Pn	07 09 04.8	+2.3
PBEJ				eSn	Sn	07 09 29.5	-0.2
	9.1nm,0.1s						
PBEJ	**Beja**	2.17	43	ePn	Pn	07 09 04.8	+2.3
PBEJ				eSn	Sn	07 09 29.5	-0.2
	9.1nm,0.1s						
LIS	**Lisbon**	2.31	12	eP	Pn	07 09 06.2	+1.7
LIS				eS	Sn	07 09 32.0	-1.3
LIS				eS	Sn	07 09 32.0	-1.2
LIS				AML	AML	07 09 33.8	
	comp=E,148nm,0.2s						
MOE	**Montemor**	2.35	28	ePn	Pn	07 09 07.0	+2.0
MOE				eSn	Sn	07 09 33.5	-0.6
PLOU	**Loures**	2.47	11	ePn	Pn	07 09 08.2	+1.3
PLOU				eSn	Sn	07 09 35.7	-1.7
	comp=E,44nm,0.1s						
PLOU	**Loures**	2.47	11	Pn	Pn	07 09 08.2	+1.3
PLOU				Sn	Sn	07 09 35.7	-1.7
	comp=E,22nm,0.1s						
EMIN	**Mina Concepcio**	2.79	61	Pn	Pn	07 09 13.6	+2.3
	comp=E,0.2nm,0.1s,SNR=27						
EMIN				Sn	Sn	07 09 45.8	+0.5
	comp=E,2.8nm,0.1s,SNR=10						
EMIN	**Mina Concepcio**	2.79	61	P	Pn	07 09 13.6	+2.3
	comp=E,0.6nm,0.1s,SNR=27						
EMIN				S	Sn	07 09 45.8	+0.5
	comp=E,2.8nm,0.1s,SNR=10						
ESPR	**Espera**	3.15	81	Pn	Pn	07 09 19.8	+3.3
	comp=E,0.3nm,0.0s,SNR=10						
ESPR				Sn	Sn	07 09 55.0	+0.4
	comp=E,27nm,0.2s,SNR=5.9						
ESPR	**Espera**	3.15	81	P	Pn	07 09 19.8	+3.3
	comp=E,1.7nm,0.1s,SNR=10						
ESPR				S	Sn	07 09 55.0	+0.4
	comp=E,27nm,0.2s,SNR=5.9						
EBAD	**Badajoz**	3.16	43	⇑Pn	Pn	07 09 18.0	+1.4
	comp=E,0.3nm,0.0s,SNR=18						
EBAD				Sn	Sn	07 09 53.7	-1.1
	comp=E,3.8nm,0.1s,SNR=9.1						
EBAD	**Badajoz**	3.16	43	P	Pn	07 09 18.0	+1.4
	comp=E,4.4nm,0.1s,SNR=18						
EBAD				S	Sn	07 09 53.7	-1.1
	comp=E,3.8nm,0.1s,SNR=9.1						
PTOM	**Tomar**	3.33	18	ePn	Pn	07 09 20.2	+1.1
PTOM				eSn	Sn	07 09 56.6	-2.5
	comp=E,21nm,0.1s						
PTOM	**Tomar**	3.33	18	Pn	Pn	07 09 20.2	+1.1
PTOM				Sn	Sn	07 09 56.6	-2.5
	comp=E,10nm,0.1s						
ECAB	**El Cabril**	3.81	64	Pn	Pn	07 09 28.1	+2.2
	comp=E,1.6nm,0.1s,SNR=18						
ECAB				Sn	Sn	07 10 10.1	-1.1
	comp=E,2.2nm,0.1s,SNR=5.7						
ECAB	**El Cabril**	3.81	64	P	Pn	07 09 28.1	+2.2
	comp=E,1.6nm,0.1s,SNR=18						
ECAB				S	Sn	07 10 10.1	-1.2
	comp=E,2.2nm,0.1s,SNR=5.7						
PCBR	**Castelo Branco**	3.83	27	ePn	Pn	07 09 27.4	+1.3
PCBR				eSn	Sn	07 10 08.3	-3.3
	comp=E,3.3nm,0.1s						
PCBR	**Castelo Branco**	3.83	27	ePn	Pn	07 09 27.4	+1.3
PCBR				eSn	Sn	07 10 08.3	-3.3
	comp=E,3.3nm,0.1s						
EMIJ	**Mijas**	4.01	87	Sn	Sn	07 10 16.5	+0.3
	comp=E,2.3nm,0.2s,SNR=7.9						
MTE	**Manteigas**	4.30	23	ePn	Pn	07 09 33.7	+0.8
MTE				eSn	Sn	07 10 21.3	-2.4
	comp=E,6.0nm,0.3s						
MTE	**Manteigas**	4.30	23	Pn	Pn	07 09 33.7	+0.8
MTE				Sn	Sn	07 10 21.3	-2.4
	comp=E,3.0nm,0.3s						
EADA	**Adamuz**	4.46	66	Pn	Pn	07 09 32.4	-2.7
	comp=E,0.0nm,0.0s,SNR=4.0						
EADA				Sn	Sn	07 10 25.0	-2.7
	comp=E,1.4nm,0.1s,SNR=5.4						
EADA	**Adamuz**	4.46	66	P	Pn	07 09 32.4	-2.7
	comp=E,2.5nm,0.1s,SNR=4.0						
EADA				S	Sn	07 10 25.0	-2.7
	comp=E,1.4nm,0.1s,SNR=5.4						
PVIS	**Viseu**	4.50	18	ePn	Pn	07 09 35.9	+0.3
PVIS				eSn	Sn	07 10 24.4	-4.2
	comp=E,11nm,0.1s						
PVIS	**Viseu**	4.50	18	Pn	Pn	07 09 35.9	+0.3
PVIS				Sn	Sn	07 10 24.4	-4.2
	comp=E,5.3nm,0.1s						
ELUQ	**Luque**	4.52	74	Sn	Sn	07 10 28.2	-1.1
	comp=E,1.6nm,0.4s,SNR=7.9						
KIB	**El Ksiba**	4.93	141	i P	Pn	07 09 41.0	-0.7
KIB				i S	Sn	07 10 34.0	-5.6
CIA	**Chichaoua**	4.94	170	i P	Pn	07 09 40.0	-1.9
CIA				i S	Sn	07 10 32.0	-7.9
PVRL	**Vila Real**	5.07	18	eSn	Sn	07 10 38.0	-5.1
	comp=E,10nm,0.2s						
PVRL	**Vila Real**	5.07	18	Sn	Sn	07 10 38.0	-5.1
	comp=E,5.1nm,0.2s						
CZD	**Col de Zad**	5.16	130	eP	Pn	07 09 45.0	0.0
CZD				i S	Sn	07 10 41.0	-4.3
OUK	**Oukaimeden**	5.46	163	i P	Pn	07 09 47.5	-1.7
OUK				i S	Sn	07 10 46.5	-6.3
EQES	**Quesada**	5.50	74	Pn	Pn	07 09 52.3	+2.5
	comp=E,0.8nm,0.2s,SNR=7.9						
EQES				Sn	Sn	07 10 52.4	-1.5
	comp=E,2.0nm,0.1s,SNR=6.0						
EQES	**Quesada**	5.50	74	S	Sn	07 10 52.4	-1.5
	comp=E,2.0nm,0.1s,SNR=6.0						
ELOB	**Lobios**	5.56	13	Pn	Pn	07 09 49.3	-1.4
	comp=E,0.4nm,0.1s,SNR=7.8						
ELOB				Sn	Sn	07 10 49.1	-6.4
	comp=E,1.3nm,0.1s,SNR=8.7						
ESDC	**Sonseca Array**	5.58	53	Pn	Pn	07 09 52.1	+1.2
	comp=E,8.2nm,0.1s,baz=240,slow=14,SNR=9.8						
ESDC				Sn	Sn	07 10 51.5	-4.4
	comp=E,1.5nm,0.1s,baz=242,slow=24,SNR=4.0						
ESDC	**Sonseca Array**	5.58	53	Pn	Pn	07 09 52.1	+1.2
ESDC				Sn	Sn	07 10 51.5	-4.4
ZFT	**Errachidia**	6.27	133	i P	Pn	07 10 00.0	-0.7
ZFT				i S	Sn	07 11 08.0	-5.2
EMAZ	**Mazaricos**	6.52	5	Pn	Pn	07 10 02.2	-1.9
	comp=E,0.0nm,0.1s,SNR=6.7						
EMAZ				Sn	Sn	07 11 08.1	-11
	comp=E,52nm,1.5s						

IDC 11 07:24:20.8±2.4, 15.49N×122.73E, mb3.7/3, mb1 3.9/3, mb1mx3.6/19, mbtmp3.7/3, Error ellipse: s-maj=243.0km s-min=26.1km az=64.0

MAN 11 07:24:24.4, 15.31N×121.96E, h3^{km}, mb4.2, ML3.0, MS2.8

ISC 11 07:24:25.3±0.9**, 15.34N**±0.03×**122.00E**±0.05**, h16^{km}**±8^{km}**, n25, σ1^{s}18**/36**, mb3.9**/3**, 2C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALP	**Baler**	0.57	314	eP	Pb	07 24 36.2	-0.2
BALP				eS	Sb	07 24 45.1	+1.2
POLP	**Polilio Island**	0.61	185	eP	Pb	07 24 36.1	-1.0
POLP				eS	Sb	07 24 45.4	+0.1
PCPH	**Palayan**	0.90	284	⇓eP	Pb	07 24 40.8	-1.2
PCPH				eS	Sb	07 24 53.6	+0.1
NZB	**Bigte**	0.99	241	eP	Pb	07 24 45.4	+1.8
QVPH	**Quezon City--P**	1.14	233	eP	Pb	07 24 45.7	-0.4
ARP	**Angono**	1.14	226	eP	Pb	07 24 45.0	-1.1
LBPH	**Los Banos**	1.42	214	eP	Pn	07 24 49.5	-1.1
GQP	**Guinayangan**	1.49	163	eP	Pn	07 24 51.8	+0.2
GQP				eS	Sb	07 25 11.2	+0.5
CAUP	**Cauayan**	1.60	354	eP	Pn	07 24 53.0	-0.3
CAUP				eS	Sn	07 25 15.8	+2.2
TGY	**Tagaytay City**	1.60	220	⇑eP	Pn	07 24 54.7	+1.4
TGY				eS	Sn	07 25 04.8	-8.9
NBP	**Mount Natib**	1.64	249	eP	Pn	07 24 53.8	0.0
BCPH	**Baguio City Da**	1.71	307	⇑iP	Pn	07 24 54.6	-0.2
BCPH				i S	Sn	07 25 17.5	+1.1
BOAC	**Boac**	1.88	185	eP	Pn	07 24 57.1	0.0
BOAC				eS	Sn	07 25 24.7	+4.1
SCZP	**Santa Cruz**	2.06	282	eP	Pn	07 24 57.4	-2.3
BOLP	**Bolinao**	2.26	298	eP	Pn	07 25 03.2	+0.6
BOLP				eS	Sn	07 25 33.6	+3.3
LUBP	**Lubang**	2.33	227	eP	Pn	07 25 02.9	-0.7
CVP	**Callao Caves**	2.35	356	eP	Pn	07 25 03.0	-1.0
CVP				eS	Sn	07 25 33.5	+0.8
ABRA	**Dolores**	2.60	332	eP	Pn	07 25 08.4	+0.8
APYP	**Conner**	2.61	344	eP	Pn	07 25 07.1	-0.5
APYP				eS	Sn	07 25 37.4	-1.8
PVCP	**Virac**	2.72	129	eP	Pn	07 25 12.6	+3.5
OTRP	**Odiongan**	2.96	180	eP	Pn	07 25 13.4	+0.7
SJMP	**San Jose**	2.99	197	eP	Pn	07 25 14.8	+1.7
WRA	**Warramunga Arr**	37.10	161	P	P	07 31 32.3	-4.8
	1.1nm,1.2s,mb3.6,baz=342,slow=9.2,SNR=3.9						
MKAR	**Makanchi Array**	45.49	322	P	P	07 32 44.4	-1.2
	1.0nm,0.9s,mb3.7,baz=116,slow=9.6,SNR=8.0						
ZAL	**Zalesovo**	48.21	331	P	P	07 33 04.5	-2.4
	1.0nm,0.3s,mb4.3,baz=197,slow=3.6,SNR=4.0						

CSEM 11 07:37:36.3±0.3, 35.29N×5.64W, h35^{km}, MD3.2, Error ellipse: s-maj=10.0km s-min=5.0km az=77.0

MDD 11 07:37:37.6±0.9, 35.24N×5.83W, h25^{km}±7^{km}, mb3.9/6, Error ellipse: s-maj=8.8km s-min=5.5km az=83.0, PRXIMO

INMG 11 07:37:38.5±1.1, 35.42N×5.83W, h10^{km}, ML2.2, Error ellipse: s-maj=6.9km s-min=4.2km az=1.0

NEIC 11 07:37:38.4, 35.50N×5.84W, MG3.6(MDD), After MDD.

CNRM 11 07:37:39.7, 35.11N×5.12W, h8^{km}, MD3.2

ISC 11 07:37:36.4±0.5**, 35.30N**±0.02×**5.83W**±0.05**, h35^{km}, n31, σ1^{s}28**/54**, 1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DKH	**Dar Kharkhour**	0.42	64	i P	P	07 37 46.0	+0.1
DKH				i S	S	07 37 54.0	+1.4
EMIJ	**Mijas**	1.52	34	Pn	P	07 38 03.5	+1.9
	1.4nm,0.2s,SNR=4.0						
EMIJ				Sn	S	07 38 21.8	+1.4
	6.6nm,0.4s,SNR=4.0						
TZK	**Tazeka**	1.81	131	Pn	P	07 38 03.0	-2.7
TZK				Sn	S	07 38 19.0	-8.7
TZK	**Tazeka**	1.81	131	i P	P	07 38 03.0	-2.7
MIF	**Mishlifen**	1.95	165	i P	P	07 38 08.0	+0.3
MIF				i S	S	07 38 29.0	-2.2
CZD	**Col de Zad**	2.35	164	i P	P	07 38 14.0	+0.6
CZD				i S	S	07 38 38.0	-3.4
PALC	**Alcoutim**	2.54	329	ePn	P	07 38 17.1	+1.0
PALC				eSn	S	07 38 47.3	+1.2
	9.1nm,0.3s						
PALC	**Alcoutim**	2.54	329	ePn	P	07 38 17.1	+1.0
PALC				eSn	S	07 38 47.3	+1.2
	9.1nm,0.3s						
EMIN	**Mina Concepcio**	2.56	345	⇓Pn	P	07 38 17.1	+0.8
	1.6nm,0.1s,SNR=18						
EMIN				Sn	S	07 38 46.1	-0.5
	0.0nm,0.1s,SNR=6.8						
EMIN	**Mina Concepcio**	2.56	345	P	P	07 38 17.1	+0.8
	1.6nm,0.1s,SNR=18						
EMIN				S	S	07 38 46.1	-0.5
	SNR=6.8						
ELUQ	**Luque**	2.58	29	Sn	S	07 38 45.3	-1.9
	5.2nm,0.2s,SNR=7.9						
EGRO	**El Granado**	2.60	330	P	P	07 38 17.8	+0.8
EGRO				S	S	07 38 48.2	+0.5
EGRO	**El Granado**	2.60	330	Pn	P	07 38 17.8	+0.8
	1.4nm,0.1s,SNR=9.3						
EGRO				Sn	S	07 38 48.2	+0.5
	9.0nm,0.1s,SNR=5.0						
EGRO	**El Granado**	2.60	330	P	P	07 38 17.8	+0.8
	1.4nm,0.1s,SNR=9.3						
EGRO				S	S	07 38 48.2	+0.5
	9.0nm,0.1s,SNR=5.0						
KIB	**El Ksiba**	2.72	184	Pn	P	07 38 22.0	+3.3
KIB				Sn	S	07 38 52.0	+1.2
KIB	**El Ksiba**	2.72	184	i S	S	07 38 52.0	+1.2
ECAB	**El Cabril**	2.79	7	Pn	P	07 38 18.9	-0.7
	0.2nm,0.1s,SNR=7.0						
ECAB				Sn	S	07 38 52.1	-0.4
	1.4nm,0.1s						
ECAB	**El Cabril**	2.79	7	P	P	07 38 19.0	-0.7
ECAB				S	S	07 38 52.1	-0.4
	1.4nm,0.1s						
EADA	**Adamuz**	3.03	19	Pn	P	07 38 24.0	+0.8
	0.7nm,0.1s,SNR=7.5						
EADA				Sn	S	07 38 57.7	-1.0
	3.9nm,0.1s,SNR=7.9						
EADA	**Adamuz**	3.03	19	P	P	07 38 24.0	+0.9
	0.7nm,0.1s,SNR=7.5						
EADA				S	S	07 38 57.7	-1.0
	3.9nm,0.1s,SNR=7.9						
PBEJ	**Beja**	3.18	330	eSn	S	07 39 02.3	-0.1
	4.2nm,0.3s						
PBEJ	**Beja**	3.18	330	eSn	S	07 39 02.3	-0.1
	4.2nm,0.3s						
PTEO	**Sao Teotonio**	3.24	315	ePn	P	07 38 25.9	-0.2
PTEO				eSn	S	07 39 03.1	-0.8
EQES	**Quesada**	3.34	41	Pn	P	07 38 29.8	+2.2
	0.6nm,0.1s,SNR=7.9						
EQES				Sn	S	07 39 05.8	-0.7
	2.4nm,0.2s,SNR=7.9						
EQES	**Quesada**	3.34	41	S	S	07 39 05.8	-0.7
	2.4nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	3.58	345	Pn	P	07 38 31.4	+0.5
	0.8nm,0.1s,SNR=7.3						
EBAD				Sn	S	07 39 10.5	-2.1
	1.3nm,0.1s,SNR=5.0						
EBAD	**Badajoz**	3.58	345	P	P	07 38 31.4	+0.5
	0.8nm,0.1s,SNR=7.3						
EBAD				S	S	07 39 10.5	-2.0
	1.3nm,0.1s,SNR=5.0						
PCBR	**Castelo Branco**	4.72	344	ePn	P	07 38 47.5	+0.4
PCBR				eSn	S	07 39 38.9	-2.4
	3.2nm,0.2s						
PCBR	**Castelo Branco**	4.72	344	Pn	P	07 38 47.5	+0.4
PCBR				Sn	S	07 39 38.9	-2.4
	1.6nm,0.2s						
ECAL	**Calabor**	6.67	354	Pn	P	07 39 14.0	-0.5
	1.7nm,0.2s,SNR=7.9						
ECAL	**Calabor**	6.67	354	P	P	07 39 14.0	-0.5
	1.7nm,0.2s,SNR=7.9						

WEL 11 07:46:37.2±0.3**, 38.13S×176.03E, h185^{km}**±2^{km}**, ML3.8**/19**, Error ellipse: s-maj=2.7km s-min=2.5km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	0.86	99	PN	P	07 47 04.3	-0.4
URZ				SN	S	07 47 25.2	-0.8
OTVZ	**Oturere**	1.08	195	PN	P	07 47 06.5	+0.3
BKZ	**Black Stump Fm**	1.10	161	PN	P	07 47 06.4	0.0
BKZ				SN	S	07 47 28.5	-0.5
TUVZ	**Tukino**	1.18	194	PN	P	07 47 07.1	0.0
MWZ	**Matawai**	1.20	101	PN	P	07 47 07.2	-0.1
MWZ				SN	S	07 47 29.9	-0.6
WNVZ	**Wahianoa**	1.25	196	PN	P	07 47 07.6	-0.1
WNVZ				SN	S	07 47 32.3	+1.0
MOVZ	**Moawhango**	1.30	190	PN	P	07 47 07.6	-0.6
MOVZ				SN	S	07 47 31.2	-0.9
MTVZ	**Mangateitei**	1.33	199	PN	P	07 47 08.1	-0.4
VRZ	**Vera Road**	1.41	225	PN	P	07 47 09.0	-0.2
KNZ	**Kokohu**	1.57	125	PN	P	07 47 10.5	-0.2
KNZ				SN	S	07 47 35.4	-1.0
PUZ	**Puketiti**	1.76	89	PN	P	07 47 11.7	-0.7
PUZ				SN	S	07 47 38.5	-1.2
WAZ	**Wanganui**	1.82	206	PN	P	07 47 12.2	-0.9

MXZ	Matakaoa Point	1.89	73	PN	P	07 47 13.0	-0.8
MXZ				SN	S	07 47 41.4	-0.6
TSZ	Takapari Road	1.93	182	PN	P	07 47 13.3	-1.0
TSZ				SN	S	07 47 41.2	-1.6
PWZ	Pawanui	2.01	161	PN	P	07 47 14.2	-0.8
PWZ				SN	S	07 47 42.8	-1.4
BFZ	Birch Farm	2.56	176	PN	P	07 47 19.2	-2.2
BFZ				SN	S	07 47 51.9	-3.5
MRZ	Mangatainoka R	2.56	188	PN	P	07 47 19.0	-2.4
MRZ				SN	S	07 47 52.3	-3.2
KIW	Kapiti Island	2.87	197	PN	P	07 47 22.1	-2.9
KIW				SN	S	07 47 57.3	-4.7
MTW	Mount Morrison	3.06	188	PN	P	07 47 24.0	-3.4
MTW				SN	S	07 48 01.3	-4.8
CAW	Cannon Point	3.07	194	PN	P	07 47 24.4	-3.1
CAW				SN	S	07 48 01.9	-4.4
DUWZ	D'Urville Isla	3.13	211	PN	P	07 47 24.9	-3.4
DUWZ				SN	S	07 48 04.4	-3.3
MRW	Makara Radio	3.27	198	PN	P	07 47 26.6	-3.3
MRW				SN	S	07 48 06.0	-4.6
PAWZ	Paruwai Farm	3.29	188	PN	P	07 47 26.8	-3.4
WEL	Wellington	3.30	197	PN	P	07 47 27.1	-3.3
MSWZ	Moikau Station	3.34	190	PN	P	07 47 27.2	-3.7
SNZO	South Karori	3.34	197	PN	P	07 47 27.3	-3.6
TCW	Tory Channel	3.37	203	PN	P	07 47 27.7	-3.5
BHW	Baring Head	3.40	195	PN	P	07 47 27.9	-3.7
TUWZ	Tuamarina	3.67	205	PN	P	07 47 30.9	-4.1
NNZ	Nelson	3.71	213	PN	P	07 47 31.1	-4.3
QRZ	Quartz Range	3.82	224	PN	P	07 47 32.1	-4.8
BSWZ	Blackbirch Sta	3.95	204	PN	P	07 47 34.6	-3.9
THZ	Tophouse	4.36	213	PN	P	07 47 38.8	-4.9
DSZ	Denniston Nort	4.86	221	PN	P	07 47 44.9	-5.3
LTZ	Lake Taylor	5.46	210	PN	P	07 47 52.8	-5.3
MQZ	McQueen's Vall	6.13	204	PN	P	07 48 00.6	-6.3
ODZ	Otahua Downs	8.00	209	PN	P	07 48 25.6	-5.8

MAN 11 08:21:18.3, 5.76N×125.96E, h111^{km}, mb3.8, ML2.6, MS2.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.21	14	*e*P	P	08 21 42.7	+0.4
MATI				*e*S	S	08 22 00.8	+0.5
BUKP	Musuan	2.28	337	*e*P	P	08 21 55.0	-0.6
BUKP				*e*S	S	08 22 24.0	+0.4

CASC 11 08:27:55.9±2.1**, 7.57N×82.33W, h25^{km}**±8^{km}**, MD4.0, MW4.6, 6C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTP1	Petroterminal	0.64	351	*e*S	Sb	08 28 23.1	+6.2
BRU2	Volcan	1.27	343	*e*P	Pn	08 28 18.7	+0.3
BRU2				*e*S	Sn	08 28 36.4	+1.7
SVTC	San Vito de Co	1.36	333	⇑*e*P	Pn	08 28 19.4	-0.2
ACR	Cerro Adams	1.36	322	⇑*e*P	Pn	08 28 18.2	-1.4
ACR				*e*S	Sn	08 28 35.8	-1.2
AZU2	Pedas	2.28	91	⇑*i*P	Pn	08 28 33.1	+0.3
AZU2				*e*S	Sn	08 28 59.2	-1.1
BUS	Buena Vista	2.43	324	⇑*e*P	Pn	08 28 34.8	-0.1
BUS				*e*S	Sn	08 29 04.2	+0.1
LCR2	La Lucha 2	2.72	323	⇑*e*P	Pn	08 28 38.6	-0.5
LCR2				*e*S	Sn	08 29 12.7	+1.1
LAJ	Bijagual	2.89	322	*e*P	Pn	08 28 42.2	+0.8
PRS1	Puriscal	3.10	321	⇑*e*P	Pn	08 28 42.9	-1.6
PRS1				*e*S	Sn	08 29 20.5	-0.7
TRTC	Tortuguero	3.29	335	*e*P	Pn	08 28 47.0	-0.2

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*ATH **11** 09:04:29.9, 37.40N×22.12E, h5^{km}±2^{km}, MD3.7/13, ML3.5*
*NEIC **11** 09:04:29.9, 37.40N×22.13E, h5^{km}, ML3.5(ATH), After ATH.*
*CSEM **11** 09:04:29.8±0.2, 37.26N×22.06E, h32^{km}±1^{km}, ML3.5, Error ellipse: s-maj=5.1km s-min=3.0km az=168.0*
*IDC **11** 09:04:37.1±2.7, 37.44N×22.12E, h70^{km}±33^{km}, mb3.5/6, mb1 3.6/8, mb1mx3.4/27, mbtmp3.7/8, ML3.5/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/23, Error ellipse: s-maj=43.5km s-min=19.7km az=52.0*
ISC 11 09:04:30.0±0.4**, 37.43N**±0.03×**22.08E**±0.04**, h5^{km}, n41, σ1^{s}.51**/50**, mb3.7**/6**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	0.28	206	*e*PG	Pg	09 04 35.5	-0.2
ITM				*e*SG	Sg	09 04 39.6	+0.1
RLS	Riolos of Patr	0.79	322	*e*PG	Pg	09 04 45.5	-0.4
RLS				*e*SB	Sb	09 04 58.0	+1.3
RLS	Riolos of Patr	0.79	322	*e*Pg	Pg	09 04 45.5	-0.4
RLS				*e*Sb	Sb	09 04 58.4	+1.7
VLI	Veliai	0.99	136	*e*PB	Pb	09 04 48.3	-0.9
MGER	Gerania Oros	1.08	59	*e*PN	Pn	09 04 50.5	-1.3
MGER	Gerania Oros	1.08	59	*e*Pb	Pb	09 04 51.0	+0.1
NAIG	Nisos Aigina	1.16	73	*e*PB	Pb	09 04 52.0	-0.2
NAIG	Nisos Aigina	1.16	73	*e*Pg	Pg	09 04 51.2	-2.1
NSAL	Nisos Salamina	1.19	66	*e*PB	Pb	09 04 52.5	-0.2
NSAL	Nisos Salamina	1.19	66	*e*Pn	Pn	09 04 51.6	-1.7
KYTH	Kithira	1.38	146	*e*Pb	Pb	09 04 56.0	0.0
KYTH	Kithira	1.38	146	*e*PB	Pb	09 04 55.5	-0.5
VLS	Valsamata	1.40	303	*e*PB	Pb	09 04 58.0	+1.8
ATH	Athens Observa	1.40	67	*e*PB	Pb	09 04 56.2	-0.1
ATH				*e*SB	Sb	09 05 15.7	+1.3
LKR	Lokris	1.42	30	*e*PG	Pg	09 04 56.5	-1.8
LKR				*e*SB	Sb	09 05 16.9	+2.1
LKR	Lokris	1.42	30	*e*Pg	Pg	09 04 56.5	-1.8
LKR				*e*Sb	Sb	09 05 16.6	+1.8
MPAR	Parnis Oros	1.49	61	*e*PB	Pb	09 04 58.0	+0.1
MPAR	Parnis Oros	1.49	61	*e*Pg	Pg	09 04 57.4	-2.4
EVR	Evrytania	1.50	352	*e*PB	Pb	09 04 59.7	+1.8
PTL	Penteli	1.54	66	*e*PB	Pb	09 04 58.5	-0.2
PTL				*e*SB	Sb	09 05 19.5	+1.1
PTL	Penteli	1.54	66	*e*Pb	Pb	09 04 59.5	+0.8
PTL				*e*Sb	Sb	09 05 19.5	+1.1
NEO	Neokhori	2.08	25	*e*PN	Pn	09 05 08.5	+2.6
NEO	Neokhori	2.08	25	*e*Pn	Pn	09 05 07.5	+1.6
JAN	Janina	2.42	337	*e*PN	Pn	09 05 14.5	+3.6
VAM	Vamos	2.65	139	*e*PN	Pn	09 05 16.0	+1.9
APE	Apeiranthos	2.77	96	*e*PN	Pn	09 05 17.5	+1.6
APE	Apeiranthos	2.77	96	*e*Pb	Pb	09 05 16.7	-3.1
IDI	Anoyia	3.12	133	P	Pn	09 05 23.3	+2.5
	3.0nm,0.3s,baz=340,slow=17,SNR=9.2						
IDI				S	Sn	09 06 00.3	+1.4
	4.4nm,0.3s,baz=305,slow=18,SNR=5.1						
KARP	Karpathos	4.50	113	*e*PN	Pn	09 05 42.0	+1.5
SKO	Skopje	4.56	354	*e*Pn	Pn	09 05 48.4	+7.1
MLR	Muntele Rosu	8.56	19	P	P	09 06 39.1	+1.7
	0.2nm,0.3s,baz=201,slow=3.6,SNR=3.5						
MLR				LR	LR	09 10 10.9	
	comp=Z,62nm,20.8s,baz=330,slow=39						
HFS	Hagfors	23.34	349	P	P	09 09 37.9	-1.8
	2.1nm,0.6s,mb3.8,baz=180,slow=12,SNR=8.6						
FINES	FINESS Array B	24.16	5	P	P	09 09 45.4	-2.3
	1.0nm,0.8s,mb3.3,baz=207,slow=8.5,SNR=4.0						
FINES	FINESS Array B	24.16	5	P	P	09 09 45.4	-2.3
NB2	NORSAR Subarra	24.60	347	P	P	09 09 50.0	-2.0
	3.2nm,1.1s,mb3.8,baz=160,slow=9.3						
NOA	NORSAR Array B	24.60	347	P	P	09 09 50.5	-1.4
	0.8nm,0.6s,mb3.4,baz=156,slow=8.7,SNR=3.8						
EKA	Eskdalemuir Ar	24.75	324	P	P	09 09 52.5	-0.9
	1.7nm,0.6s,mb3.8,baz=126,slow=9.5,SNR=6.8						
EKA	Eskdalemuir Ar	24.75	324	P	P	09 09 52.5	-1.0
ARCES	ARCESS Array B	32.22	2	P	P	09 10 58.9	-2.0
	2.9nm,0.9s,mb4.1,baz=195,slow=10,SNR=4.5						
ARCES	ARCESS Array B	32.22	2	P	P	09 10 58.8	-2.1
MKAR	Makanchi Array	44.64	58	P	P	09 12 42.5	-2.6
	0.9nm,0.7s,mb3.7,baz=277,slow=6.4,SNR=7.8						

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*NAO **11** 09:43:23.4±1.0, 67.24N×20.66E, ML2.1*
*IDC **11** 09:43:24.3±0.9, 67.17N×20.76E, mb1 2.8/4, mb1mx2.8/23, mbtmp2.8/4, ML2.6/4, Error ellipse: s-maj=15.2km s-min=7.4km az=117.0*
*BER **11** 09:43:26.4±4.4, 67.24N×20.59E, ML2.1, ML2.1(NAO), Suspected explosion*
HEL 11 09:43:25.0±0.1**, 67.18N×20.71E, ML2.3, ML2.1**(BER)**, ML2.1**(NAO)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIF	Kilpisjarvi	1.83	1	*e*P	Pn	09 43 57.3	-0.7
KIF				*e*S	Sn	09 44 21.7	-0.5
KTK1	Kautokeino	2.07	26	*e*P	Pn	09 44 02.1	+0.7
KTK1				*e*SG	Sg	09 44 29.8	-4.1
KTK1				AML	AML	09 44 31.5	
	comp=Z,58nm,0.5s						
SGF	Sodankyl	2.27	81	*e*PB	Pb	09 44 04.2	-2.5
SGF				*e*SB	Sb	09 44 33.4	-1.9
SGF				MSG		09 44 37.4	
	comp=Z,7.7nm,0.3s						
TRO	Tromso	2.55	346	*e*P	Pn	09 44 08.4	+0.2
TRO				*e*SG	Sg	09 44 43.9	-5.9
TRO				AML	AML	09 44 45.5	
	comp=Z,12nm,0.5s						
MOR8	Moi Rana	2.69	251	*e*SG	Sg	09 44 42.4	-12
MOR8				AML	AML	09 44 46.4	
	comp=Z,20nm,0.4s						
MELSS	Ber_school_2	2.76	267	*e*Sg	Sg	09 44 51.2	-5.6
LOF	Lofoten	2.90	292	*e*SG	Sg	09 44 54.0	-7.5
LOF				AML	AML	09 45 02.2	
	comp=Z,8.7nm,0.4s						
ARA0	ARCESS Array S	2.96	35	Pn	Pn	09 44 12.3	-1.8
	baz=209,slow=16						
ARA0				Sn	Sn	09 44 48.2	-2.6
	baz=212,slow=28						
ARA0				Lg		09 44 53.4	
	baz=221,slow=28						
ARA0	ARCESS Array S	2.96	35	*e*P	Pn	09 44 12.3	-1.8
ARA0				*e*S	Sn	09 44 48.2	-2.6
ARA0				*e*SB	Sb	09 44 53.4	-1.9
ARCES	ARCESS Array B	2.96	35	Pn	Pn	09 44 12.8	-1.2
	comp=Z,0.7nm,0.3s,baz=217,slow=13,SNR=33						
ARCES				Sn	Sn	09 44 48.7	-2.2
	comp=Z,1.8nm,0.3s,baz=216,slow=23,SNR=11						
ARCES				Lg		09 44 53.5	
	comp=Z,1.8nm,0.3s,baz=210,slow=27,SNR=10						
OUL	Oulu	2.98	133	*e*P	Pn	09 44 13.0	-1.4
OUL				*e*S	Sn	09 44 49.7	-1.7
STOK	Stokkvaagen	3.17	258	*e*SG	Sg	09 45 02.9	-7.6
KEV	Kevo	3.47	39	*e*P	Pn	09 44 19.3	-2.1
KEV				*e*S	Sn	09 45 00.9	-3.0
KEV				MSG		09 45 18.1	
	comp=Z,9.9nm,0.5s						
MSF	Maaselka	3.57	107	*e*P	Pn	09 44 20.9	-1.9
MSF				*e*SG	Sg	09 45 14.7	-9.1
MSF				MSG		09 45 20.3	
	comp=Z,7.5nm,0.5s						
KU4	Liikasenvaara	3.61	99	*e*P	Pn	09 44 22.3	-1.1
KU4				*e*S	Sn	09 45 05.4	-1.9
KU4				MSG		09 45 22.2	
	comp=Z,6.5nm,0.4s						
KJN	Kajaani	4.25	134	*e*P	Pn	09 44 30.6	-1.9
KJN				*e*S	Sn	09 45 20.4	-3.2
NSS	Namsos	4.47	238	*e*SG	Sg	09 45 43.5	-10
NSS				AML	AML	09 45 48.4	
	comp=Z,7.9nm,0.3s						
APA0	Apatity Array	4.76	79	Pn	Pn	09 44 37.2	-2.5
	baz=284,slow=8.6						
APA0				Sn	Sn	09 45 32.0	-4.4
	baz=266,slow=28						
APA0				Lg		09 45 54.7	
	baz=277,slow=37						
APA0	Apatity Array	4.76	79	*e*P	Pn	09 44 37.2	-2.5
APA0				*e*S	Sn	09 45 32.0	-4.4
APA0				*e*SG	Sg	09 45 54.7	-8.8
FIA0	FINESS Array S	6.21	155	Pn	Pn	09 44 57.7	-2.5
	baz=345,slow=12						
FIA0				Sn	Sn	09 46 08.2	-4.7
	baz=344,slow=28						
FIA0				Lg		09 46 37.0	
	baz=342,slow=37						
FIA0	FINESS Array S	6.21	155	*e*P	Pn	09 44 57.7	-2.5
FIA0				*e*S	Sn	09 46 08.2	-4.7
FIA0				*e*SG	Sg	09 46 37.0	-15
FINES	FINESS Array B	6.21	155	Pn	Pn	09 44 57.5	-2.8
	comp=Z,0.1nm,0.3s,baz=342,slow=12,SNR=4.6						
FINES				Sn	Sn	09 46 06.9	-6.0
	comp=Z,0.3nm,0.3s,baz=348,slow=24,SNR=8.6						
FINES				Lg		09 46 40.6	
	comp=Z,0.7nm,0.3s,baz=345,slow=28,SNR=8.1						
NB2	NORSAR Subarra	7.43	218	Pn	Pn	09 45 13.2	-4.1
	baz=27,slow=12						
NB2				Sn	Sn	09 46 39.0	-4.3
NB2				Lg		09 47 17.3	
NB2	NORSAR Subarra	7.43	218	*e*P	Pn	09 45 13.2	-4.1
NB2				*e*S	Sn	09 46 39.0	-4.3
NB2				*e*		09 47 17.3	
NOA	NORSAR Array B	7.43	218	Pn	Pn	09 45 12.5	-4.8
	comp=Z,0.1nm,0.3s,baz=224,slow=21,SNR=2.6						
NOA				Sn	Sn	09 46 33.7	-10
	comp=Z,0.2nm,0.3s,baz=245,slow=17,SNR=2.7						
NOA				Lg		09 47 14.8	
	comp=Z,0.3nm,0.3s,baz=118,slow=16,SNR=4.1						
HFS	Hagfors	7.73	207	Pn	Pn	09 45 16.1	-5.4
	baz=26,slow=14						
HFS				Sn	Sn	09 46 41.8	-9.0
	baz=31,slow=22						
HFS				Lg		09 47 26.7	
	baz=21,slow=28						
HFS	Hagfors	7.73	207	*e*P	Pn	09 45 16.1	-5.4
HFS				*e*S	Sn	09 46 41.8	-9.0
HFS				*e*		09 47 26.7	
HFS	Hagfors	7.73	207	Pn	Pn	09 45 16.5	-5.0
	comp=Z,0.0nm,0.3s,baz=27,slow=13,SNR=5.9						
HFS				Sn	Sn	09 46 41.9	-8.9
	comp=Z,0.1nm,0.3s,baz=52,slow=26,SNR=4.0						
HFS				Lg		09 47 25.2	
	comp=Z,0.1nm,0.3s,baz=29,slow=26,SNR=4.1						

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*MDD **11** 10:16:22.4±1.1, 34.98N×2.64W, h10^{km}±3^{km}, mbLg2.7/2, Error ellipse: s-maj=9.0km s-min=5.2km az=97.0, PRXIMO*
*CNRM **11** 10:16:22.2, 35.05N×2.61W, h1^{km}, MD2.9*
*CSEM **11** 10:16:23.0±0.3, 35.07N×2.77W, h16^{km}±2^{km}, MD2.9, Error ellipse: s-maj=7.6km s-min=5.2km az=98.0*
ISC 11 10:16:23.2±0.6**, 35.11N**±0.03×**2.75W**±0.05**, h10^{km}, n19, σ1^{s}.35**/31**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAI	Zaio	0.14	179	Pg	Pg	10 16 24.0	-2.5
ZAI				Lg		10 16 27.0	
EMLI	Melilla	0.25	319	P	Pg	10 16 30.2	+1.7
	53nm,0.1s,SNR=7.9						
EMLI				S	Sg	10 16 36.0	+3.9
	144nm,0.1s,SNR=7.9						
EMEL	Melilla	0.26	318	Pg	Pg	10 16 30.2	+1.6
	53nm,0.1s,SNR=7.9						
EMEL				Lg		10 16 36.0	
	144nm,0.1s,SNR=7.9						
TAF	Taforalt	0.40	137	P	Pg	10 16 32.0	+0.5
TAF				S	Sg	10 16 38.0	+1.0
TOU	Touzarine	0.84	260	*i* P	Pb	10 16 39.5	+0.1
TOU				*i* S	Sb	10 16 51.5	+1.0
EALB	Alboran	0.86	344	Pg	Pg	10 16 41.3	+0.9
	12nm,0.3s,SNR=7.9						
EALB				Lg		10 16 52.5	
	35nm,0.2s,SNR=5.7						
EALB	Alboran	0.86	344	P	Pb	10 16 41.3	+1.5
	12nm,0.3s,SNR=7.9						
EALB				S	Sb	10 16 51.7	+0.6
	35nm,0.2s,SNR=5.7						
MPAL	Palemas	0.98	277	*e*P	Pb	10 16 43.0	+1.1
MPAL				*i* S	Sb	10 16 57.0	+2.3
TZK	Tazeka	1.56	230	*e*P	Pn	10 16 50.0	-1.2
TZK				*i* S	Sb	10 17 11.0	-0.5
EBER	Berja	1.79	356	Sn	Sn	10 17 13.4	-3.9
	3.4nm,0.2s,SNR=4.5						
EBER	Berja	1.79	356	S	Sn	10 17 13.4	-4.0
	3.4nm,0.2s,SNR=4.5						
EMIJ	Mijas	2.19	312	Pn	Pn	10 16 58.5	-1.8
	0.7nm,0.1s,SNR=4.0						
EMIJ				Sn	Sn	10 17 26.1	-1.6
	3.3nm,0.3s,SNR=7.9						
EQES	Quesada	2.70	355	Pn	Pn	10 17 08.0	+0.5
	0.5nm,0.2s,SNR=7.9						
EQES				Sn	Sn	10 17 39.6	-1.0
	2.8nm,0.3s,SNR=4.8						
EQES	Quesada	2.70	355	P	Pn	10 17 08.0	+0.5
	0.5nm,0.2s,SNR=7.9						
EQES				S	Sn	10 17 39.6	-1.0
	2.8nm,0.3s,SNR=4.8						
EADA	Adamuz	3.39	335	Sn	Sn	10 17 57.2	-0.8
	0.5nm,0.2s,SNR=4.0						
EADA	Adamuz	3.39	335	S	Sn	10 17 57.2	-0.8
	0.5nm,0.2s,SNR=4.0						
EMIN	Mina Concepcio	4.13	311	Pn	Pn	10 17 26.3	-1.5
	0.3nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	10 18 12.7	-4.0
	0.4nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	4.13	311	P	Pn	10 17 26.3	-1.5
	0.3nm,0.2s,SNR=7.9						
EMIN				S	Sn	10 18 12.7	-4.0
	0.4nm,0.2s,SNR=7.9						
EGRO	El Granado	4.52	304	Pn	Pn	10 17 31.7	-1.7
	0.2nm,0.1s,SNR=7.2						
EGRO				Sn	Sn	10 18 22.5	-4.2
	0.7nm,0.3s,SNR=7.9						

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*IDC **11** 10:26:46.4±1.9, 15.43N×99.32W, mb3.8/5, mb1 4.2/6, mb1mx3.9/20, mbtmp3.9/6, ML3.8/1, MS3.4/8, Ms1 3.4/8, ms1mx3.2/22, Error ellipse: s-maj=69.3km s-min=34.8km az=61.0*
*MEX **11** 10:26:47.7±1.2, 15.76N×98.94W, h18^{km}±27^{km}, MD4.2*
*NEIC **11** 10:26:47.7, 15.76N×98.94W, h18^{km}, mb4.2/9, MD4.2(MEX), After MEX.*
ISC 11 10:26:49.5±1.3**, 16.11N**±0.06×**98.73W**±0.04**, h5^{km}**±9^{km}**, n40, σ0^{s}.96**/47**, mb4.0**/11**, MS3.4**/7**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.64	64	*e*P	Pg	10 27 03.2	+0.9
PNIG				*e*S	Sg	10 27 15.6	+4.7
ACX	Acapulco	1.37	304	*i* P	Pb	10 27 09.6	-5.6
ACX				*i* S	Sb	10 27 25.4	-7.5
CAIG	El Cayaco	1.75	302	*e*P	Pn	10 27 15.5	-5.2
CAIG				*e*S	Sn	10 27 36.3	-7.2
VHO	Vista Hermosa	2.14	63	*e*P	Pn	10 27 25.1	-1.1
VHO				*e*S	Sn	10 27 54.3	+0.9
OXX	Oaxaca	2.15	63	*i* P	Pn	10 27 25.4	-1.0
OXX				*e*S	Sn	10 27 52.5	-1.3
PLIG	Platanillo	2.39	342	*e*P	Pn	10 27 28.5	-1.4
PLIG				*e*S	Sn	10 27 59.4	-0.4
HUIG	Huatulco	2.54	97	*e*P	Pn	10 27 27.6	-4.4
HUIG				*i* S	Sn	10 27 57.4	-6.3
YAIG	Yautepec	2.76	353	*e*P	Pn	10 27 33.0	-2.1
YAIG				*e*S	Sn	10 28 08.2	-0.9
PPM	Popocatepetl	2.94	2	*e*P	Pn	10 27 38.5	+0.7
PPM				*e*P		10 27 38.9	
PPM				*e*S	Sn	10 28 15.2	+1.4
PPM				*e*S	Sn	10 28 17.9	+4.1
IISM	Ciudad Serdan	3.14	24	*i* P	Pn	10 27 40.2	-0.3
IISM				*e*S	Sn	10 28 18.9	+0.1
UNM	Universidad Na	3.23	352	*e*P	Pn	10 27 41.0	-0.9
UNM				*e*S	Sn	10 28 22.5	+1.3
TXAR	Lajitas Array	13.93	342	Pn	P	10 30 09.8	0.0
	0.0nm,0.3s,baz=155,slow=21,SNR=6.4						
TXAR				LR	LR	10 36 48.1	
	comp=Z,36nm,18.7s,baz=200,slow=42						
JTS	JuntasAbangare	14.60	112	Pn	P	10 30 19.5	+0.7
	0.4nm,0.3s,baz=356,slow=14,SNR=3.9						
CLNB	Carlsbad	16.75	345	*e*P	P	10 30 47.5	+1.1
GDL2	Guadalupe Moun	16.82	343	*e*P	P	10 30 48.2	+0.9
AMTX	Amarillo	18.88	352	*e*P	P	10 31 12.8	-0.2
	14nm,1.1s						
BNM	Barren Site	19.32	340	*e*P	P	10 31 18.6	+0.4
TUC	Tucson	19.49	328	*e*P	P	10 31 20.1	-0.1
	2.1nm,0.9s						
ANMO	Albuquerque	20.00	341	P	P	10 31 25.4	-0.4
	4.0nm,0.8s,baz=154,slow=11,SNR=20						
ANMO				LR	LR	10 39 52.1	
	comp=Z,229nm,19.7s,MS3.5,slow=38						
ANMO	Albuquerque	20.00	341	P	P	10 31 25.4	-0.4
ANMO				LR	LR	10 39 52.1	
WVT	Waverly	22.18	24	*e*P	P	10 31 49.2	+1.1
	34nm,1.6s,mb4.5						
SDCO	Great Sand Dun	22.37	346	*e*P	P	10 31 50.6	+0.7
	3.4nm,1.1s,mb3.7						
WUAZ	Wupatki	22.39	332	*e*P	P	10 31 53.0	+2.8
	8.7nm,1.0s,mb4.1						
NEN	Nelson	24.20	327	P	P	10 32 07.7	-0.2
ISCO	Idaho Springs	24.36	347	*e*P	P	10 32 11.3	+1.9
	8.8nm,1.4s,mb4.0						
WCI	Wyandotte Cave	24.60	24	*e*P	P	10 32 11.8	-0.1
	12nm,0.8s,mb4.5						
SRU	San Rafael	25.14	338	*e*P	P	10 32 16.6	-0.4
BLO	Bloomington	25.34	23	*e*P	P	10 32 19.4	+0.5
	4.6nm,0.4s,mb4.4						
NVAR	Mina Array Bea	28.12	326	P	P	10 32 43.2	-1.1
	0.7nm,0.8s,mb3.4,baz=148,slow=11,SNR=4.7						
PDAR	Pinedale Array	28.14	343	P	P	10 32 44.9	+0.3
	1.4nm,0.9s,mb3.6,baz=135,slow=8.4,SNR=10						
PDAR				LR	LR	10 45 08.3	
	comp=Z,176nm,18.9s,MS3.7,baz=166,slow=38						
PDAR	Pinedale Array	28.14	343	P	P	10 32 44.9	+0.3
PDAR				LR	LR	10 45 08.3	
ELK	Elko	28.42	333	LR	LR	10 46 39.0	
	comp=Z,60nm,18.1s,MS3.2,baz=147,slow=41						
YBH	Yreka Blue Hor	32.84	326	LR	LR	10 47 42.1	
	comp=Z,47nm,20.1s,MS3.2,baz=77,slow=38						
FFC	Flin Flon	38.62	357	*e*P	P	10 34 14.0	-1.3
	2.1nm,0.9s,mb3.9						
SCHQ	Schefferville	45.80	25	LR	LR	10 57 27.5	
	comp=Z,40nm,18.8s,MS3.4,baz=64,slow=40						
YKA	Yellowknife Ar	47.66	350	P	P	10 35 27.9	-0.5
	0.6nm,0.5s,mb3.9,baz=159,slow=7.1,SNR=5.6						
YKA				LR	LR	10 57 56.2	
	comp=Z,27nm,18.9s,MS3.2,baz=180,slow=39						
YKA	Yellowknife Ar	47.66	350	P	P	10 35 27.9	-0.5
YKA				LR	LR	10 57 56.2	
DLBC	Dease Lake	48.20	338	P	P	10 35 32.4	-0.3
	0.8nm,0.5s,mb4.0,baz=136,slow=10,SNR=3.4						
NOA	NORSAR Array B	85.33	27	LR	LR	11 15 25.8	
	comp=Z,22nm,19.9s,MS3.5,baz=300,slow=34						
WRA	Warramunga Arr	129.56	257	PKP	PKPdf	10 45 56.2	-6.8
	0.8nm,0.9s,baz=91,slow=2.7,SNR=7.0						

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*TAP **11** 10:34:19.7, 24.61N×122.60E, h108^{km}, ML3.5*
JMA 11 10:34:20.4±0.1**, 24.72N×122.63E, h96^{km}**±1^{km}**, M2.9, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.43	126	P	P	10 34 35.4	0.0
YOJ				S	S	10 34 46.6	-0.1
IRIF	Iriomote-Funau	1.07	111	P	P	10 34 41.4	-0.2
IRIF				S	S	10 34 57.0	-0.6
HATJ	Hateruma jima	1.26	121	P	P	10 34 43.7	-0.3
HATJ				S	S	10 35 01.7	+0.2
JKRS	Kuro-shima	1.34	111	P	P	10 34 45.0	+0.1
JKRS				S	S	10 35 03.6	+0.4
JIJ	Ishigaki jima	1.42	104	P	P	10 34 45.7	-0.2
JIJ				S	S	10 35 04.2	-0.6
JTJ	Tarama	1.89	92	P	P	10 34 52.2	+0.4
JTJ				S	S	10 35 15.6	+0.6
JMJ	Miyako jima 2	2.42	87	S	S	10 35 27.8	-0.2
JOGS	Gusukube	2.52	89	S	S	10 35 30.7	+0.2
JKE	Kume jima 2	4.08	66	P	P	10 35 22.1	+0.2
JKE				S	S	10 36 08.1	-0.7

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*NEIC **11** 10:39:00.9±0.8, 50.06N×18.50E, h5^{km}, MG2.5(WAR), Error ellipse: s-maj=11.2km s-min=7.6km az=177.0*
*PRU **11** 10:39:01.4, 50.08N×18.44E*
WAR 11 10:39:00.9, 50.04N×18.49E, h0^{km}, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.19	283	*e*Pg	Pg	10 39 05.7	+0.9
RAC				*e*Sg	Sg	10 39 09.4	+2.1
OKC	Ostrava-Krasne	0.30	227	*e*PG	Pg	10 39 07.2	+0.3
OKC				*e*SG	Sg	10 39 11.7	+0.9
	158nm,0.4s						
MORC	Moravsky Berou	0.66	247	*e*Pg	Pg	10 39 13.1	-1.1
OJC	Ojcow	0.86	77	*e*PG	Pg	10 39 17.0	-1.1
OJC				*e*SG	Sg	10 39 30.0	+0.3
NIE	Niedzica	1.34	117	*e*PG	Pg	10 39 27.0	-0.6
NIE				*e*SG	Sg	10 39 45.0	-0.5
DPC	Dobruska-Polom	1.43	283	*e*PG	Pg	10 39 26.1	-3.2
DPC				*e*SG	Sg	10 39 46.1	-2.2
	36nm,0.4s						
VYHS	Vyhne	1.56	171	*e*PN	Pn	10 39 29.4	-0.6
VYHS				*e*SN	Sn	10 39 50.9	-0.3
KSP	Ksiaz	1.62	301	*e*Pg	Pg	10 39 30.0	-3.2
KSP				*e*		10 39 31.1	
KSP				*e*Sg	Sg	10 39 51.1	-3.6

KSP	Ksiaz	1.62	301	ePG	Pg	10 39 30.0	-3.2
KSP				eSG	Sg	10 39 51.0	-3.7
KSP	Ksiaz	1.62	301	ePn	Pn	10 39 30.0	-0.7
KSP				ePg	Pg	10 39 32.1	-1.1
KSP				eSn	Sn	10 39 51.8	-0.7
KSP				eSg	Sg	10 39 55.1	+0.4
UPC	Upice	1.66	287	ePG	Pg	10 39 31.3	-2.6
UPC				eSG	Sg	10 39 52.7	-3.3
SMOL	Smolenice	1.68	205	eSN	Sn	10 39 52.2	-1.9
PRU	Pruhonice	2.54	270	ePG	Pg	10 39 47.9	-3.8
PRU				eSG	Sg	10 40 20.4	-5.2
KOLS	Kolonicke sedl	2.71	113	ePG	Pg	10 39 52.7	-2.2
BRG	Berggiesshubel	3.02	288	iPg	Pg	10 39 56.1	-5.1
BRG	Berggiesshubel	3.02	288	iSg	Sg	10 40 35.2	-6.3
KHC	Kasperske Hory	3.32	256	ePG	Pg	10 40 01.9	-5.3
KHC				eSG	Sg	10 40 44.3	-7.2
MOA	Molln	3.54	233	iSG	Sg	10 40 53.1	-5.7
	5.8nm,0.5s						
MOA	Molln	3.54	233	iP	Pn	10 39 57.9	-0.3
MOA				iSg	Sg	10 40 53.1	-5.7
CLL	Collm	3.71	292	ePG	Pg	10 40 11.0	-4.0
CLL				iSG	Sg	10 41 01.2	-3.3

MAN 11 10:54:13.0, 5.15N×126.90E, h302^{km}, mb4.2, ML3.0, MS2.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	Musuan	3.27	326	eP	P	10 55 11.9	-0.2
BUTP	Butuan	4.00	342	eP	P	10 55 20.9	+1.1
PLP	Palo	6.27	342	iP	P	10 55 47.5	+1.3
PLP				eS	S	10 56 58.3	-1.1
BESP	Borongan	6.57	347	eP	P	10 55 49.9	0.0
BESP				eS	S	10 57 03.5	-2.4
CNP	Catarman	7.64	343	eP	P	10 56 02.1	-0.9
CNP				eS	S	10 57 23.0	-6.3
PVCP	Virac	8.82	342	eP	P	10 56 17.2	-0.2
CAUP	Cauayan	12.73	337	eP	P	10 57 11.2	+5.5

NEIC 11 11:16:10.6±0.8, 42.27N×120.07W, h5^{km}, ML3.4, MW3.6(SLM), Error ellipse: s-maj=12.4km s-min=7.0km az=144.0, Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc	0.41	205	eP	Pg	11 16 18.6	-0.2
WVOR	Wild Horse Val	1.07	81	eP	Pb	11 16 31.0	-0.3
WVOR				eS	Sb	11 16 45.1	-0.3
YBH	Yreka Blue Hor	2.04	256	ePn	Pn	11 16 46.3	+0.3
BEKR	Beckwourth	2.41	185	ePn	Pn	11 16 50.4	-1.0
WDC	Whiskeytown Da	2.51	229	ePn	Pn	11 16 51.1	-1.7
BMN	Battle Mountai	2.83	130	ePn	Pn	11 16 56.6	-0.6
WCN	Washoe City	2.98	175	ePn	Pn	11 16 59.5	+0.1
KBO	Bosley Butte	3.09	270	P	Pn	11 17 01.0	0.0
KEBM	Edson Butte	3.21	282	Pn	Pn	11 17 01.7	-1.0
BMO	Blue Mountains	3.27	37	ePn	Pn	11 17 02.7	-0.8
BMO				ePg	Pg	11 17 12.9	-2.9
COR	Corvallis	3.30	316	Pn	Pn	11 17 02.5	-1.5
ELK	Elko	3.94	111	ePn	Pn	11 17 11.7	-1.3
ELK				S	Sn	11 17 53.6	-6.6
MNV	Mina	4.11	158	ePn	Pn	11 17 15.2	-0.3
CMB	Columbia Colle	4.24	183	Pn	Pn	11 17 16.4	-1.0
HLID	Hailey	4.35	71	ePn	Pn	11 17 17.1	-1.8
OMM	Old Mammoth Mi	4.72	170	Pn	Pn	11 17 22.9	-1.3
TPH	Tonopah	4.73	152	Pn	Pn	11 17 22.8	-1.5
TRCR	Troy Canyon	5.21	137	Pn	Pn	11 17 29.4	-1.6
TRCR				e		11 18 49.3	
HVU	Hansel Valley	5.46	93	Pn	Pn	11 17 33.6	-1.0
MCMT	McKenzie Canyo	5.83	62	Pn	Pn	11 17 39.2	-0.7
MSO	Missoula	6.32	42	Pn	Pn	11 17 45.2	-1.5
ARUT	Antelope Range	6.78	129	Pn	Pn	11 17 54.2	+1.0
WUWY	Wally Ulrich	6.96	76	Pn	Pn	11 17 55.0	-0.8

WEL 11 11:36:55.1±0.1, 43.10S×170.77E, h5^{km}, ML3.6/4, 1C, Error ellipse: s-maj=0.9km s-min=0.9km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOZ	Fox Glacier	0.91	239	P*	Pb	11 37 11.0	-2.1
FOZ				S*	Sb	11 37 22.2	-3.1
LTZ	Lake Taylor	1.15	74	⇑P*	Pb	11 37 17.1	0.0
LTZ				S*	Sb	11 37 31.7	-0.4
LBZ	Lake Benmore	1.35	198	PN	Pn	11 37 20.6	-0.2
LBZ				S*	Sb	11 37 38.1	0.0
CRLZ	Canterbury Las	1.43	110	PN	Pn	11 37 21.1	-0.7
CRLZ				SN	Sn	11 37 39.6	-1.7
MQZ	McQueen's Vall	1.50	114	PN	Pn	11 37 22.0	-0.9
JCZ	Jackson Bay	1.75	236	PN	Pn	11 37 24.6	-1.8
ODZ	Otahua Downs	1.95	183	PN	Pn	11 37 28.9	-0.3
ODZ				SN	Sn	11 37 53.5	-0.8
THZ	Tophouse	2.07	51	PN	Pn	11 37 30.0	-1.0
THZ				SN	Sn	11 37 56.8	-0.6
WKZ	Wanaka	2.14	216	PN	Pn	11 37 31.3	-0.6
KHZ	Kahutara	2.15	72	PN	Pn	11 37 31.5	-0.6
EAZ	Earnscleugh	2.38	206	PN	Pn	11 37 34.5	-0.8
EAZ				SN	Sn	11 38 03.5	-1.7
MSZ	Milford Sound	2.59	232	PN	Pn	11 37 37.4	-0.9
QRZ	Quartz Range	2.62	31	PN	Pn	11 37 36.9	-2.0
BSWZ	Blackbirch Sta	2.69	60	PN	Pn	11 37 39.9	+0.1
NNZ	Nelson	2.70	47	PN	Pn	11 37 38.9	-1.1
TUWZ	Tuamarina	2.89	56	PN	Pn	11 37 42.1	-0.5
MLZ	Mavora Lakes	2.92	219	PN	Pn	11 37 43.6	+0.5
TUZ	Tuapeka	2.97	195	PN	Pn	11 37 43.5	-0.3
TCW	Tory Channel	3.22	55	PN	Pn	11 37 46.5	-0.8
DUWZ	D'Urville Isla	3.29	47	PN	Pn	11 37 47.8	-0.5
MRW	Makara Radio	3.47	59	PN	Pn	11 37 49.3	-1.6
CAW	Cannon Point	3.77	60	PN	Pn	11 37 52.4	-2.7
KIW	Kapiti Island	3.81	55	PN	Pn	11 37 53.8	-2.0
MTW	Mount Morrison	4.02	63	PN	Pn	11 37 55.4	-3.3
MRZ	Mangatainoka R	4.34	57	PN	Pn	11 37 59.7	-3.6
WAZ	Wanganui	4.61	45	PN	Pn	11 38 05.9	-1.1
WNVZ	Wahianoa	5.24	46	PN	Pn	11 38 15.8	-0.2
FWVZ	Far West T-bar	5.27	45	PN	Pn	11 38 16.2	-0.3
NGZ	Ngauruhoe	5.36	45	PN	Pn	11 38 17.1	-0.5
WTVZ	West Tongariro	5.39	44	PN	Pn	11 38 18.3	+0.1
HIZ	Hauiti	5.53	35	PN	Pn	11 38 16.9	-3.2
OUZ	Omahuta	8.17	17	PN	P	11 38 53.4	-3.8

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*CSEM **11** 11:51:48.3±0.1, 43.38N×18.83E, h2^{km}, ML3.0, Error ellipse: s-maj=2.9km s-min=2.0km az=91.0*

*BEO **11** 11:51:49.3±0.4, 43.35N×18.91E, h8^{km}±1^{km}*

*NEIC **11** 11:51:49.4, 43.33N×18.91E, h11^{km}, ML3.0(PDG), ML3.0(ROM), After PDG.*

*PDG **11** 11:51:49.4±0.1, 43.33N×18.91E, h11^{km}*

*ROM **11** 11:51:57.7±0.1, 42.92N×18.38E, h12^{km}, Ml3.0/3, Error ellipse: s-maj=7.0km s-min=0.0km az=152.0*

ISC 11 11:51:48.8±0.3, 43.36N±0.01×18.90E±0.02, h10^{km}, n37, σ1^{s}21/66, 14C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPM	Unac-Piva	0.16	178	⇓iPg	Pg	11 51 52.4	0.0
UPM				eSg	Sg	11 51 54.7	-0.2
PLE	Pljevlja	0.36	95	⇑iPg	Pg	11 51 56.2	0.0
PLE				eSg	Sg	11 52 01.2	+0.1
BRY	Bratogost	0.53	210	⇓iPg	Pg	11 51 58.6	-0.9
BRY				eSg	Sg	11 52 06.9	+0.2
NKY	Niksic	0.55	173	⇓iPg	Pg	11 51 59.3	-0.7
NKY				eSg	Sg	11 52 07.5	+0.1
NVSS	Nova Varos 2	0.60	76	⇓iPg	Pg	11 52 02.1	+1.3
NVSS				Sg	Sg	11 52 10.8	+1.8
BBLS	Bajina Basta -	0.63	36	⇑iPg	Pg	11 52 01.1	-0.3
BBLS				Sg	Sg	11 52 09.3	-0.5
TREB	Trebinje	0.76	212	Pn	Pn	11 52 02.5	-2.8
TREB				Sn	Sn	11 52 15.7	-1.2
IVA	Berane	0.88	124	⇑iPg	Pg	11 52 05.3	-1.1
IVA				eSg	Sg	11 52 18.0	-0.1
HCY	Herceg Novi	0.96	198	⇑iPg	Pg	11 52 06.5	-1.6
HCY				eSg	Sg	11 52 21.4	+0.5
HCY	Herceg Novi	0.96	198	⇑iPg	Pg	11 52 06.4	-1.6
HCY				eSg	Sg	11 52 21.4	+0.5
TTG	Podgorica	0.97	164	⇑iPg	Pg	11 52 06.0	-2.2
TTG				eSg	Sg	11 52 20.8	-0.3
STON	Ston	1.01	241	iPg	Pg	11 52 07.2	-1.8
STON				iSg	Sg	11 52 22.8	+0.3
STON	Ston	1.01	241	iPg	Pg	11 52 07.1	-1.9
STON				iSg	Sg	11 52 22.8	+0.3
BUM	Brajici-Budva	1.06	180	⇑iPg	Pg	11 52 08.3	-1.7
BUM				eSg	Sg	11 52 24.4	+0.2
DIVS	Divcibare	1.08	47	⇑iPg	Pg	11 52 09.4	-1.0
DIVS				Sg	Sg	11 52 26.3	+1.5
PVY	Plav	1.10	134	⇑iPg	Pg	11 52 09.2	-1.6
PVY				eSg	Sg	11 52 26.3	+0.9
GRUS	Gruza	1.42	68	⇑iPg	Pg	11 52 15.6	-1.5
GRUS				Sg	Sg	11 52 35.7	-0.4
ULC	Ulcinj	1.42	170	⇑iPg	Pg	11 52 15.5	-1.6
ULC				eSg	Sg	11 52 36.8	+0.7
BEO	Belgrade	1.84	37	⇑iPn	Pn	11 52 24.8	+4.1
BEO				Sn	Sn	11 52 48.6	+4.4
SVIS	Svilajnac	1.92	60	⇓iPn	Pn	11 52 22.1	+0.2
SVIS				Sn	Sn	11 52 51.5	+5.2
QSH	Qafa e Shtames	1.98	158	iPg	Pg	11 52 27.0	-1.4
QSH				iSg	Sg	11 52 57.0	+2.2
BOLS	Boljevac	2.27	77	eP	Pn	11 52 31.6	+4.7
BOLS				Sn	Sn	11 53 00.4	+5.2
SKO	Skopje	2.33	126	ePn	Pg	11 52 36.8	+1.5
ZAPS	Zavoj/Pirot	2.71	90	e	Pg	11 52 49.3	+6.4
ZAPS				(Sn)	Sn	11 53 13.1	+6.7
RHK1	Bakonya	2.80	348	⇑iP	Pn	11 52 34.9	+0.5
RHK1				eS	Sn	11 53 07.3	-1.3
PKSM	Moragy	2.86	356	⇓eP	Pn	11 52 35.5	+0.2
PKSM				eS	Sn	11 53 09.7	-0.4
MRLC	Muro Lucano	3.64	225	Pn	Pn	11 52 47.5	+1.1
SGO	Sicignano	3.88	225	Pn	Pn	11 52 50.9	+1.1
	3.0nm,0.2s						
SGG	Gregorio Mates	3.89	241	Pn	Pn	11 52 51.8	+1.8
INTR	Introdacqua	3.92	252	Pn	Pn	11 52 52.7	+2.2
	28nm,0.7s						
VAGA	Valle Agricola	3.97	242	Pn	Pn	11 52 53.2	+2.1
VVLD	Villa Vallelon	4.17	251	Pn	Pn	11 52 55.9	+1.9
	33nm,0.7s						
LNSS	Leonessa	4.37	262	Pn	Pn	11 52 59.7	+2.9
	30nm,0.8s						
OBKA	Obir	4.41	317	⇓iPN	Pn	11 52 57.7	+0.3
OBKA				iSN	Sn	11 53 48.7	-0.8
VOY	Vojsko	4.46	309	ePn	Pn	11 53 00.4	+2.3
VOY				eSn	Sg	11 54 25.1	+7.8
ARSA	Arzberg	4.56	330	⇓iPN	Pn	11 53 00.1	+0.6
ARSA				iSN	Sn	11 53 52.2	-1.1
MOA	Molln	5.54	326	⇑iPN	Pn	11 53 13.0	-0.4
MOA				iSN	Sn	11 54 17.2	-0.7

IDC 11 11:57:02.4±6.8, 2.13N×99.34E, mb3.9/3, mb1 4.1/3, mb1mx3.7/18, mbtmp3.9/3, MS3.6/2, Ms1 3.7/2, ms1mx3.0/17, Error ellipse: s-maj=340.7km s-min=28.7km az=54.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.23	359	LR	LR	12 07 36.1	
	comp=Z,39nm,18.6s,baz=265,slow=39						
WRA	Warramunga Arr	40.75	124	P	P	12 04 45.4	-1.6
	0.5nm,0.6s,baz=303,slow=9.0,SNR=5.8						
MKAR	Makanchi Array	46.90	344	P	P	12 05 34.3	-2.1
	0.9nm,0.5s,baz=160,slow=8.3,SNR=13						
JHJ	Hachijo jima 2	48.83	46	LR	LR	12 25 30.6	
	comp=Z,418nm,20.6s,baz=104,slow=35						
ZAL	Zalesovo	53.00	349	P	P	12 06 21.0	-2.1
	1.4nm,0.5s,baz=320,slow=4.6,SNR=4.3						

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*IDC **11** 12:09:15.0±3.9, 36.63N×28.95E, mb3.6/2, mb1 3.7/4, mb1mx3.4/22, mbtmp3.6/4, ML4.1/1, MS2.6/1, Ms1 2.6/1, ms1mx1.6/22, Error ellipse: s-maj=70.9km s-min=28.8km az=146.0*

*CSEM **11** 12:09:23.8±0.1, 36.77N×28.21E, h89^{km}±1^{km}, MD3.6, Error ellipse: s-maj=2.4km s-min=1.6km az=140.0*

*ATH **11** 12:09:24.4, 36.83N×28.03E, h83^{km}±2^{km}*

*NEIC **11** 12:09:24.4, 36.83N×28.03E, h83^{km}, After ATH.*

*ISK **11** 12:09:25.8, 36.89N×28.03E, h74^{km}, MD3.6*

*HLW **11** 12:09:25.5, 36.81N×28.16E, h33^{km}, Mb3.9*

ISC 11 12:09:24.5±0.3, 36.77N±0.02×28.04E±0.03, h91^{km}±4^{km}, n63, σ1^{s}02/79, mb3.4/2, 7C-2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DALT	Dalyan (Mudla)	0.48	90	iPG	P	12 09 39.8	+0.4
DALT				iSG	S	12 09 49.7	-0.8
ARG	Arkhangelos	0.55	173	eP	P	12 09 40.6	+0.6
ARG				eS	S	12 09 51.8	+0.3
BDRM	Kayabasi	0.56	302	iP	P	12 09 39.5	-0.6
BDRM				iS	S	12 09 49.3	-2.4
MLSB	Milas	0.57	338	iPG	P	12 09 39.6	-0.6
BODT	Bodrum	0.66	297	iPG	P	12 09 40.5	-0.5
NISR	Nisiros	0.75	258	eP	P	12 09 41.8	-0.1
FETY	Fethiye	0.85	99	iPG	P	12 09 43.2	+0.4
DNZL	Cakiroluk	1.22	41	iP	P	12 09 47.4	+0.1
DNZL				iS	S	12 09 59.4	-4.9
DENT	Denizli	1.26	38	PN	P	12 09 47.8	0.0
SMG	Samos	1.35	315	eP	P	12 09 48.4	-0.4
SMG				eS	S	12 10 05.4	-1.5
AKAS	Kas	1.37	112	iP	P	12 09 50.1	+1.0
AKAS				iS	S	12 10 09.2	+1.9
KSL	Kastellorizon	1.39	116	eP	P	12 09 49.8	+0.5
KARP	Karpathos	1.41	211	eP	P	12 09 50.5	+0.9
KARP				eS	S	12 10 09.1	+0.8
ELL	Elmali	1.50	90	PN	P	12 09 52.3	+1.6
IZM	Izmir	1.74	339	PN	P	12 09 53.6	-0.3
KDAG	Bornova	1.75	340	iP	P	12 09 54.3	+0.4
KDAG				iS	S	12 10 15.0	-0.7
MANT	Manisa	1.77	13	iP	P	12 09 53.9	-0.3
MANT				iS	S	12 10 14.5	-1.6
KHL	Karahalli	1.95	37	PN	P	12 09 56.7	+0.1
APE	Apeiranthos	2.04	279	PN	P	12 09 58.3	+0.5
APE	Apeiranthos	2.04	279	eP	P	12 09 58.8	+1.0
THR4	Thira Island,	2.15	263	eP	P	12 10 01.1	+1.7
THR4	Thira Island,	2.15	263	eP	P	12 10 01.0	+1.6
THR3	Thira Island,	2.16	261	eP	P	12 10 01.0	+1.6
THR5	Thira Island,	2.20	262	eP	P	12 10 01.1	+1.1
TKTP	Tekketepe	2.21	54	iP	P	12 10 00.5	+0.2
TKTP				iS	S	12 10 22.6	-4.1
ISP	Isparta	2.24	61	PN	P	12 10 01.0	+0.4
ISP	Isparta	2.24	61	ePn	P	12 10 00.3	-0.3
NPS	Neapolis	2.48	233	eP	P	12 10 04.9	+1.0
GDZ	Gediz	2.58	26	iP	P	12 10 05.2	-0.2
GDZ				iS	S	12 10 35.8	0.0
XRY	Khrisi	2.69	226	eP	P	12 10 07.5	+0.7
ALT	Altintas	2.81	35	PN	P	12 10 08.6	+0.1
IDI	Anoyia	2.95	241	Pn	P	12 10 11.7	+1.2
	15nm,0.3s,baz=52,slow=11,SNR=40						
IDI				Sn	S	12 10 45.6	+0.7
	13nm,0.3s,baz=75,slow=21,SNR=7.6						
BTOK	Tokmak	2.99	360	iP	P	12 10 10.6	-0.4
BTOK				iS	S	12 10 41.3	-4.6
VAM	Vamos	3.40	248	eP	P	12 10 17.0	+0.4
ULDT	Uludag	3.48	14	iP	P	12 10 16.8	-0.9
ULDT				iS	S	12 11 09.0	+11
ESKT	Eskisehir	3.53	38	iP	P	12 10 17.9	-0.5
ESKT				iS	S	12 10 48.3	-11
ESKT	Eskisehir	3.53	38	ePn	P	12 10 18.6	+0.2
HDMB	Hadim	3.57	86	ePN	P	12 10 21.4	+2.5
KONT	Konya--Tatoy	3.63	70	ePN	P	12 10 20.9	+1.0
KIZT	Kizilcal	3.70	54	ePN	P	12 10 21.6	+0.9
LOD	Lodumlu	4.85	49	ePN	P	12 10 37.7	+1.2
ANTO	Ankara	4.85	49	ePN	P	12 10 37.2	+0.6
BR131	Keskin Array S	5.30	54	ePn	P	12 10 43.0	+0.3
	5.0nm,0.5s						
BRTR	Keskin Array B	5.30	54	Pg	P	12 10 43.4	+0.6
	1.6nm,0.3s,baz=231,slow=16,SNR=44						
BRTR	Keskin Array B	5.30	54	Pg	P	12 10 43.3	+0.6
HMAT	Matruh	5.71	188	P	P	12 10 48.4	+0.1
SLUM		5.76	205	⇑P	P	12 10 48.1	-0.9
HBRG	Burj al 'Arab	6.36	166	⇑P	P	12 10 56.4	-0.9
HBRG				S	S	12 12 03.2	-5.8
HBRG	Burj al 'Arab	6.36	166	P	P	12 10 56.3	-0.9
HNAT	Natroun	7.43	162	P	P	12 11 11.3	-0.8
AMAG	Maghara	7.47	143	⇑P	P	12 11 10.1	-2.5
KOT	Kottamia	7.52	154	⇑P	P	12 11 11.4	-1.8
KOT				S	S	12 12 30.5	-7.0
KOT	Kottamia	7.52	154	P	P	12 11 11.4	-1.9
HSAF	As Saff	7.71	157	⇓P	P	12 11 14.5	-1.4
SWA1		7.74	195	⇑P	P	12 11 15.1	-1.1
GLL	Jalalah	7.80	156	⇑P	P	12 11 15.7	-1.4
SWA2		7.81	197	⇑P	P	12 11 15.9	-1.3
SUZ		7.98	149	P	P	12 11 17.9	-1.7
HNKL	Nakhl	8.43	142	⇓P	P	12 11 23.7	-2.0
GERES	GERESS Array B	15.98	324	Pn	P	12 13 10.0	+5.1
	baz=140,slow=10,SNR=4.5						
DAVOX	Davos	16.81	312	LR	LR	12 20 52.2	
	comp=Z,17nm,18.4s,baz=90,slow=40						
FINES	FINESS Array B	24.73	358	P	P	12 14 39.3	+1.0
	0.3nm,0.4s,mb3.0,baz=166,slow=12,SNR=3.5						
ARCES	ARCESS Array B	32.86	358	P	P	12 15 51.3	+0.1
	1.2nm,0.8s,mb3.8,baz=146,slow=8.7,SNR=4.6						

JMA 11 12:11:35.7±0.1, 28.03N×141.12E, h244^{km}, M3.9, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.33	134	P	P	12 12 12.4	-0.1
CBIJ				eS	S	12 12 40.5	-0.5
JHHJ	Haha-jima-NKT	1.68	146	P	P	12 12 14.9	-0.3
JHHJ				eS	S	12 12 45.1	-0.8
BSO1	Boso 1	6.60	359	P	P	12 13 12.2	+0.3
BSO1				eS	S	12 14 25.8	-1.4
BSO3	Boso 3	6.77	356	P	P	12 13 14.0	-0.1
JOD2	Odawara 2	7.42	347	P	P	12 13 22.5	+0.2
JHU	Hanno	7.95	349	P	P	12 13 28.0	-1.1
JRY	Ryogami san	8.18	347	P	P	12 13 31.6	-0.4
JAG	Ashikaga	8.49	351	P	P	12 13 33.9	-2.0
JHO	Hitachi	8.57	357	P	P	12 13 36.3	-0.7
JMK	Ichinoseki	10.89	0	P	P	12 14 07.0	+0.6

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*IDC **11** 13:18:42.7±0.3, 8.92S×112.14E, mb5.4/25, mb1 5.3/25, mb1mx5.3/26, mbtmp5.3/25, MS4.5/20, Ms1 4.5/20, ms1mx4.5/20, Error ellipse: s-maj=14.0km s-min=10.9km az=75.0*

*MOS **11** 13:18:47.8±1.4, 8.79S×112.23E, h42^{km}, mb5.6/55, MS4.4/12, Error ellipse: s-maj=10.4km s-min=6.8km az=111.7*

*BJI **11** 13:18:50.1, 8.90S×112.20E, h60^{km}, mB5.3, mb5.4, Ms4.7, Msz4.5*

*HRVD **11** 13:18:51.2±0.2, 9.23S×112.17E, h74^{km}±1^{km}, MW5.4/65, Centroid moment Tensor Solution. LP body waves: s65,c117;Mantle waves: s65,c140; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.10±.03; $M_{\theta\theta}$0.27±.02; $M_{\phi\phi}$-1.36±.03; $M_{r\theta}$0.21±.02; $M_{\theta\phi}$0.08±.02; $M_{\phi r}$-0.70±.02; Best double couple: $M_0$1.439×10^{17} NP1:ϕ_s8°,δ31°,λ107°. NP2:ϕ_s168°,δ61°,λ80°. Principal axes: T 1.321, Plg72°, Azm54°; N .241, Plg9°, Azm173°; P -1.557, Plg15°, Azm266°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **11** 13:18:51.2±1.1, 8.92S×112.20E, h60^{km}±9^{km}, mb5.4/50, MW5.4 Error ellipse: s-maj=6.8km s-min=4.7km az=61.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{17} Nm; M_{rr}1.39; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-1.45; $M_{r\theta}$-0.05; $M_{\theta\phi}$0.04; $M_{\phi r}$-0.73; Best double couple: $M_0$1.6×10^{17} NP1:ϕ_s356°, δ32°,λ85°. NP2:ϕ_s181°,δ59°,λ93°. Principal axes: T 1.57, Plg76°, Azm99°; N .05, Plg2°, Azm360°; P -1.62, Plg14°, Azm269°;*

NEIC Felt [IV] at Sawahan and [III] at Karangkates.

ISC 11 13:18:49.5±0.2, 9.01S±0.03×112.15E±0.03, h63^{km}, h63^{km}±1.8^{km}:pP-P, n469, σ1^{s}13/309, mb5.4/107, 41C-6D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSM	Kuching	10.57	350	eP	P	13 21 22.6	+2.0
MBWA	Marble Bar	14.12	150	eP	P	13 22 00.4	-7.5
	5.2nm,1.3s						
KKM	Kota Kinabalu	15.49	15	P	P	13 22 26.4	+0.8
FITZ	Fitzroy Crossi	15.92	126	eP	P	13 22 27.0	-4.0
	152nm,0.9s						
FITZ				eS	S	13 25 09.5	-16
FITZ	Fitzroy Crossi	15.92	126	Pn	P	13 22 26.9	-4.2
	7.5nm,0.3s,baz=300,slow=3.5,SNR=118						
FITZ				Sn	S	13 25 11.5	-14
	24nm,0.3s,baz=174,slow=14,SNR=7.9						
FITZ				LR	LR	13 28 29.6	
	comp=Z,1µm,20.7s,baz=288,slow=37						
KULM	Kulim	18.25	321	eP	P	13 22 57.8	-2.3
BATP	Bataraza	18.56	18	eP	P	13 23 05.2	+1.5
IPIL	Ipil	19.65	32	eP	P	13 23 17.1	+1.2
SNG	Songkhla	19.76	324	P	P	13 23 21.0	+3.9
	164nm,0.8s						
PAGZ	Pagadian	20.14	34	eP	P	13 23 22.7	+1.6
KAKA	Kakadu	20.27	102	eP	P	13 23 20.3	-2.1
	125nm,0.5s						
KAKA				eS	S	13 27 01.7	+0.6
BUKP	Musuan	21.14	38	eP	P	13 23 31.4	+0.1
MATI	Mati	21.19	42	eP	P	13 23 34.5	+2.7
SNPH	Sibulan	21.31	31	⇑eP	P	13 23 34.7	+1.6
ENPP	El Nido	21.34	20	eP	P	13 23 34.4	+1.0
CUYO	Cuyo Island	21.61	24	eP	P	13 23 37.8	+1.8
TBP	Tagbilaran	21.93	32	eP	P	13 23 39.9	+0.7
GUIM	Jordan	22.10	28	eP	P	13 23 42.5	+1.6
BUSP	Coron	22.35	21	eP	P	13 23 47.8	+4.4
MSLP	Maasin	22.84	34	eP	P	13 23 48.8	+0.6
RCP	Roxas	22.99	27	⇓eP	P	13 23 51.8	+2.1
	82µm,1.0s						
KLBR	Kellerberrin	23.07	168	eP	P	13 23 49.5	-0.8
	94nm,1.3s,mb5.1						
KLBR				eS	S	13 27 54.2	+1.5
SJMP	San Jose	23.11	23	eP	P	13 23 53.3	+2.4
MUN	Mundaring	23.17	171	eP	P	13 23 51.4	+0.1
	25nm,0.9s,mb4.6						
MUN				eS	S	13 28 02.0	+7.6
OTRP	Odiongan	23.39	25	eP	P	13 23 55.0	+1.5
LUBP	Lubang	23.98	20	eP	P	13 24 01.5	+2.3
WRA	Warramunga Arr	24.05	119	P	P	13 23 59.2	-0.7
WRA				S	S	13 28 14.4	+4.7
WRA				pmax	pmax		
	comp=Z,122nm,0.9s						
WRA				smax			
	comp=N,5.0nm,0.9s						
WRA	Warramunga Arr	24.05	119	P	P	13 23 59.2	-0.6
	comp=N,122nm,0.9s,mb5.3,baz=294,slow=12,SNR=317						
WRA				S	S	13 28 14.4	+4.7
	comp=N,5.0nm,0.9s,baz=289,slow=20,SNR=6.1						
WRAB	Tennant Creek	24.05	119	eP	P	13 23 59.1	-0.8
WRAB				pmax	pmax		
	comp=Z,680nm,1.5s,mb5.9						
WRAB	Tennant Creek	24.05	119	eP	P	13 23 59.1	-0.8
	comp=Z,682nm,1.5s,mb5.9						
WB2	Warramunga Arr	24.06	119	⇑iP	P	13 23 59.4	-0.6
WB2				iS	S	13 28 09.0	-0.9
NWAO	Narrogin (SRO)	24.27	170	P	P	13 24 02.8	+0.9
NWAO				S	S	13 28 26.7	+13
NWAO				pmax	pmax		
	comp=Z,16nm,0.7s						
NWAO				smax			
	comp=N,35nm,0.9s						
NWAO				MLR	MLR		
	comp=Z,1µm,18.8s						
NWAO	Narrogin (SRO)	24.27	170	P	P	13 24 02.8	+0.9
	comp=Z,16nm,0.7s,mb4.6,baz=320,slow=6.3,SNR=5.3						
NWAO				S	S	13 28 26.7	+13
	comp=Z,35nm,0.9s,baz=288,slow=17,SNR=4.0						
NWAO				LR	LR	13 33 57.9	
	comp=Z,1µm,18.8s,baz=235,slow=38						
BOAC	Boac	24.30	23	eP	P	13 24 03.9	+1.5
BESP	Borongan	24.37	33	eP	P	13 24 04.5	+1.4
AUQP	San Andres	24.52	25	eP	P	13 24 06.8	+2.3
CNP	Catarman	24.73	30	eP	P	13 24 07.0	+0.4
NNT	Nongplab	24.75	330	P	P	13 24 10.5	+3.8
PVCP	Virac	25.42	28	eP	P	13 24 12.3	-0.8
BALP	Baler	26.30	21	eP	P	13 24 22.1	+0.9
KKTK	Khon Kaen	26.82	340	P	P	13 24 27.0	+1.0
NST	Nakhon Sawan	27.25	334	P	P	13 24 30.0	0.0
CAUP	Cauayan	27.50	20	eP	P	13 24 33.1	+0.8
QIZ	Qiongzhong	27.95	355	P	P	13 24 37.3	+1.0
QIZ				AP	pP	13 24 52.6	+1.0
QIZ				S	S	13 29 15.5	+1.5
QIZ				XS		13 29 39.9	
QIZ				LR	LR		
	comp=N,600nm,21.0s						
QIZ				LR	LR		
	comp=Z,840nm,31.4s						
APYP	Conner	28.17	19	eP	P	13 24 38.6	+0.4
NANT	Nan	29.85	338	⇓P	P	13 24 53.0	-0.2
	comp=Z,162nm,0.9s,mb5.8						

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CM31  Chiang Mai Arr    30.24 334  eP      P       13 24 57.5 +0.8
      comp=Z,15nm,0.5s,mb5.0
CMAR  Chiang Mai Arr    30.24 334   P      P       13 24 57.4 +0.7
CMAR                                               13 27 57.3
CMAR                                S      S       13 29 55.6 +5.2
CMAR                                pmax   pmax
      comp=Z,10.0nm,0.5s
CMAR                                pmax   pmax
      comp=Z,4.0nm,0.5s
CMAR                                smax
      comp=N,2.0nm,1.0s
CMAR                                MLR    MLR
      comp=Z,1µm,21.3s
CMAR  Chiang Mai Arr    30.24 334   P      P       13 24 57.4 +0.6
      comp=Z,9.8nm,0.5s,mb4.8,baz=168,slow=8.0,SNR=52
CMAR                                PcP    PcP     13 27 57.2 +1.0
      comp=Z,4.3nm,0.5s,baz=204,slow=3.4,SNR=4.7
CMAR                                S      S       13 29 55.6 +5.2
      comp=Z,2.0nm,1.0s,baz=162,slow=14,SNR=3.4
CMAR                                LR     LR      13 38 30.5
      comp=Z,1µm,21.3s,baz=160,slow=39
PMG   Port Moresby      34.56  94   P      P       13 25 34.5 +0.2
PMG                                 pmax   pmax
      comp=Z,20nm,0.7s
PMG   Port Moresby      34.56  94   P      P       13 25 34.5 +0.2
      comp=Z,20nm,0.7s,mb5.2,baz=312,slow=7.6,SNR=10
YHNB  Yeheng            34.66  15  eP      P       13 25 34.2 -0.9
CTA   Charters Tower    34.73 112⇑iP      P       13 25 35.6 -0.1
      comp=Z,51nm,1.0s,mb5.4
CTA                                epP     pP      13 25 52.8 +1.3
CTA                                i PCP   PcP     13 28 08.9 +0.4
CTA                                eS      S       13 31 01.4 +1.0
CTA   Charters Tower    34.73 112   P      P       13 25 35.7  0.0
CTA                                                13 28 09.0
CTA                                 pmax   pmax
      comp=Z,58nm,1.0s
CTA                                 pmax   pmax
      comp=Z,20nm,0.7s
CTA   Charters Tower    34.73 112   P      P       13 25 35.7  0.0
      comp=Z,58nm,1.0s,mb5.5,baz=284,slow=11,SNR=36
CTA                                 PcP    PcP     13 28 09.0 +0.5
      comp=Z,20nm,0.7s,baz=324,slow=3.5,SNR=3.7
CTAO  Charters Tower    34.73 112  eP      P       13 25 35.2 -0.5
CTAO                                pmax   pmax
      comp=Z,360nm,1.7s,mb6.0
CTAO  Charters Tower    34.73 112  eP      P       13 25 35.2 -0.5
      comp=Z,364nm,1.7s,mb6.0
KMI   Kunming           35.14 345   P      P       13 25 41.2 +2.0
KMI                                 AP     pP      13 25 52.1 -2.9
KMI                                 PP     PP      13 27 00.8 +1.3
KMI                                 PPP    PPP     13 27 19.8 +1.8
KMI                                 S      S       13 31 10.9 +4.3
KMI                                 XS             13 31 29.4
KMI                                 SS     SS      13 33 28.3 +2.5
KMI                                 SSS    SSS     13 33 56.3 +1.7
KMI                                 AMB    AMB
      comp=Z,20nm,1.4s,mb4.8
KMI                                 LR     LR
      comp=N,630nm,16.3s
KMI                                 LR     LR
      comp=E,910nm,17.7s
KMI                                 LR     LR
      comp=Z,870nm,19.8s
KMI   Kunming           35.14 345   P      P       13 25 41.2 +2.0
      comp=Z,21nm,1.4s,mb4.9
KMI                                 pP     pP      13 25 52.1 -2.9
KMI                                 sP     sP      13 25 56.4 -6.4
KMI                                 PP     PP      13 27 00.8 +1.3
KMI                                 PPP    PPP     13 27 19.8 +1.8
KMI                                 S      S       13 31 10.9 +4.3
KMI                                 sS             13 31 29.4
KMI                                 SS     SS      13 33 28.3 +2.5
KMI                                 SSS    SSS     13 33 56.3 +1.7
KMI                                 LR     LR
      comp=Z,880nm,19.8s
ADE   Adelaide          35.47 141  eP      P       13 25 41.9  0.0
STKA  Stephens Creek    35.55 134⇑iP      P       13 25 42.0 -0.7
      comp=Z,87nm,0.8s,mb5.7
STKA                               ePCP    PcP     13 28 10.8  0.0
STKA  Stephens Creek    35.55 134   P      P       13 25 42.0 -0.7
      comp=Z,108nm,0.8s,mb5.8,baz=308,slow=8.5,SNR=94
STKA                                PcP    PcP     13 28 11.3 +0.5
      comp=Z,24nm,0.6s,baz=286,slow=5.0,SNR=3.2
STKA                                LR     LR      13 41 31.6
      comp=Z,1µm,18.7s,baz=301,slow=38
GYA   Guiyang           35.65 352⇑iP      P       13 25 44.8 +1.3
GYA                                 AP     pP      13 26 02.4 +3.0
GYA                                 XP     sP      13 26 07.6 +0.4
GYA                                 PCP    PcP     13 28 11.9 +0.8
GYA                                 S      S       13 31 17.3 +2.8
GYA                                 SCS    ScS     13 35 55.8 +2.0
GYA                                 AMB    AMB
      comp=Z,30nm,0.6s,mb5.4
GYA                                 AMB    AMB
      comp=Z,400nm,6.9s
GYA                                 LR     LR
      comp=N,570nm,16.4s
GYA                                 LR     LR
      comp=E,710nm,16.8s
GYA                                 LR     LR
      comp=Z,840nm,17.0s
MDRS  Chennai           38.53 304  ex      S       13 31 56.0 -2.5
MDRS                               ex      x       13 37 38.0
JOW   Kunigami          38.91  23   P      P       13 26 11.0 +0.2
      comp=Z,94nm,0.6s,mb5.7,baz=222,slow=6.5,SNR=39
JOW                                 LR     LR      13 44 04.7
      comp=Z,270nm,20.1s,baz=222,slow=39
VIS   Vishakhapatnam    38.93 313  eP      P       13 26 10.2 -0.7
VIS                                 AMb    AMB     13 26 16.8
      comp=Z,33nm,1.4s,mb4.9
VIS                                ex      x       13 31 58.9
ENH   Enshi             39.13 356  eP      P       13 26 12.6  0.0
      comp=Z,38nm,0.6s,mb5.3
ENH                                ePcP    PcP     13 28 21.3 -0.5
WHN   Wuhan             39.38   3 ⇑P      P       13 26 15.4 +0.8
WHN                                 S      S       13 32 10.0 -1.2
WHN                                 LR     LR
      comp=Z,1µm,22.1s
GUMO  Guam              39.48  56  eP      P       13 26 13.0 -2.6
GUMO                                pmax   pmax
      comp=Z,58nm,0.5s,mb5.6
GUMO  Guam              39.48  56  eP      P       13 26 13.0 -2.6
      comp=Z,58nm,0.5s,mb5.6
SHL   Shillong          39.62 331  eP      P       13 26 17.0 +0.3
SHL                                ex      x       13 32 13.0
CD2   Chengdu           40.49 349   P      P       13 26 23.9 +0.1
CD2                                 AP     pP      13 26 39.5 -0.4
CD2                                 XP     sP      13 26 46.1 -1.3
CD2                                 S      S       13 32 28.5 +0.7
CD2                                 XS             13 32 55.3
CD2                                 SS     SS      13 35 25.2 +0.8
CD2                                 AMB    AMB
      comp=Z,20nm,0.4s,mb5.2
CD2                                 LR     LR
      comp=N,670nm,24.0s
CD2                                 LR     LR
      comp=Z,830nm,25.2s
SSE   Sheshan           40.80  12   P      P       13 26 25.1 -1.3
SSE                                 PP     PP      13 28 00.0 -4.3
SSE                                 PCP    PcP     13 28 24.9 -2.2
SSE                                 S      S       13 32 29.2 -3.2
SSE                                 SCS    ScS     13 36 19.5 -3.8
SSE                                 AMB    AMB
      comp=Z,30nm,0.8s,mb5.0
SSE                                 AMB    AMB
      comp=Z,110nm,5.7s
SSE                                 LR     LR
      comp=N,280nm,22.7s
SSE                                 LR     LR
      comp=E,270nm,23.0s
SSE                                 LR     LR
      comp=Z,380nm,24.9s
SSE   Sheshan           40.80  12   P      P       13 26 25.1 -1.3
      comp=Z,39nm,0.8s,mb5.1
SSE                                 sP     sP      13 26 56.8 +6.8
SSE                                 PP     PP      13 28 00.0 -4.3
SSE                                 PcP    PcP     13 28 24.9 -2.2
SSE                                 S      S       13 32 29.2 -3.2
SSE                                 sS             13 33 06.5
SSE                                 ScS    ScS     13 36 19.5 -3.8
SSE                                 LR     LR
      comp=Z,390nm,24.9s
NJ2   Nanjing           41.32   9  eP      P       13 26 31.9 +1.2
NJ2                                 AP     pP      13 26 47.4 +0.7
NJ2                                 XP     sP      13 26 54.3 +0.1
NJ2                                 PP     PP      13 28 11.3 +1.4
NJ2                                 S      S       13 32 41.0 +0.8
NJ2                                 XS             13 33 07.0
NJ2                                 AMB    AMB
      comp=Z,40nm,0.6s,mb5.2
NJ2                                 AMB    AMB
      comp=Z,580nm,4.8s
NJ2                                 LR     LR
      comp=N,780nm,24.1s
NJ2                                 LR     LR
      comp=E,970nm,24.2s
NJ2                                 LR     LR
      comp=Z,6µm,19.7s
TOO   Toolangi          41.40 139  eP      P       13 26 31.5 +0.3
      comp=Z,20nm,1.3s,mb4.6
HYB   Hyderabad         42.32 308  eP      P       13 26 38.0 -1.1
HYB                                eS      S       13 32 50.0 -5.1
HYB   Hyderabad         42.32 308  i P     P       13 26 40.5 +1.4
HYB                                eS      S       13 32 56.5 +1.4
ARMA  Armidale          42.53 126  eP      P       13 26 42.1 +1.4
ARMA                               epP     pP      13 27 03.3 +6.6
BLSP  Bilaspur          42.70 317  ex      x       13 26 26.7
XAN   Xi'an             42.91 356   P      P       13 26 43.4 -0.4
XAN                                 AMB    AMB
      comp=Z,40nm,0.8s,mb5.2
XAN                                 LR     LR
      comp=N,250nm,35.3s
XAN                                 LR     LR
      comp=E,150nm,15.5s
XAN                                 LR     LR
      comp=Z,490nm,24.1s
LSA   Lhasa             43.47 333   P      P       13 26 48.6 +0.3
LSA                                 PP     PP      13 28 29.6 -2.5
LSA                                 PCP    PcP     13 28 36.7 +0.7
LSA                                 SCP            13 32 25.2
LSA                                 PCS            13 32 30.0
LSA                                 S      S       13 33 10.5 -1.2
LSA                                 AMB    AMB
      comp=Z,50nm,1.2s,mb5.1
LSA                                 LR     LR
      comp=N,370nm,33.3s
LSA                                 LR     LR
      comp=E,650nm,35.7s
LSA                                 LR     LR
      comp=Z,920nm,33.3s
LSA   Lhasa             43.47 333  eP      P       13 26 49.5 +1.2
      comp=Z,50nm,0.8s,mb5.3
PKI   Pulchoki          44.64 325  eP      P       13 26 57.3 -0.5
GUN   Gumba             44.64 326  eP      P       13 26 57.8  0.0
DMN   Daman             44.84 325  eP      P       13 26 59.0 -0.4
      comp=Z,63nm,0.5s,mb5.7
KKN   Kakani            44.88 325  eP      P       13 26 59.3 -0.4
      comp=Z,72nm,0.9s,mb5.5
TIA   Tai'an            45.22   6  eP      P       13 27 00.9 -1.4
GKN   Gorkha            45.41 325  eP      P       13 27 03.2 -0.7
      comp=Z,72nm,0.3s,mb6.0
LZH   Lanzhou           45.52 351 ⇑P      P       13 27 05.6 +0.9
LZH                                 AP     pP      13 27 20.5 -0.4
LZH                                 XP     sP      13 27 27.0 -1.3
LZH                                 PCP    PcP     13 28 42.0 -1.0
LZH                                 PP     PP      13 28 53.5 +1.0
LZH                                 S      S       13 33 43.2 +1.9
LZH                                 XS             13 34 10.1
LZH                                 SS     SS      13 36 59.0 +1.6
LZH                                 AMB    AMB
      comp=Z,120nm,1.5s,mb5.6
LZH                                 AMB    AMB
      comp=Z,330nm,5.5s
LZH                                 LR     LR
      comp=E,1µm,17.4s
LZH                                 LR     LR
      comp=Z,2µm,18.6s
LZH   Lanzhou           45.52 351 ⇑P      P       13 27 05.6 +0.9
      comp=Z,125nm,1.5s,mb5.6
LZH                                 pP     pP      13 27 20.5 -0.4
LZH                                 sP     sP      13 27 27.0 -1.3
LZH                                 PcP    PcP     13 28 42.0 -1.0
LZH                                 PP     PP      13 28 53.5 +1.0
LZH                                 S      S       13 33 43.2 +1.9
LZH                                 sS             13 34 10.1
LZH                                 SS     SS      13 36 59.0 +1.6
LZH                                 LR     LR
      comp=Z,2µm,18.6s
JNU   Nakatsue          45.53  22   P      P       13 27 03.5 -1.4
      comp=Z,20nm,0.7s,mb5.1,baz=271,slow=3.8,SNR=24
JNU                                 PcP    PcP     13 28 42.8 -0.3
      comp=Z,7.8nm,0.7s,baz=79,slow=13,SNR=4.1
KAD   Karad             45.73 305  eP      P       13 27 05.6 -1.0
KAD                                 AMb    AMB     13 27 07.1
      comp=Z,28nm,0.8s,mb5.3
KOLN  Koldanda          45.82 324  eP      P       13 27 06.5 -0.7
      comp=Z,79nm,0.3s,mb6.1
CBIJ  Chichi jima       46.22  38   P      P       13 27 09.6 -0.7
      comp=Z,148nm,0.5s,mb6.2,baz=190,slow=7.4,SNR=15
POO   Poona             46.65 306  eP      P       13 27 13.5 -0.3
POO                                 AMb    AMB     13 27 14.5
      comp=Z,80nm,0.7s,mb5.8
BHPL  Bhopal            46.70 314  eP      P       13 27 13.1 -1.1
BHPL                                AMb    AMB     13 27 14.2
      comp=Z,55nm,0.6s,mb5.6
HNR   Honiara           47.16  95   P      P       13 27 17.4 -0.5
HNR                                 pmax   pmax
      comp=Z,171nm,0.7s,mb6.1
HNR   Honiara           47.16  95   P      P       13 27 17.4 -0.4
      comp=Z,171nm,0.7s,mb6.1,baz=215,slow=5.0,SNR=13
HNR   Honiara           47.16  95  eP      P       13 27 16.7 -1.2
      comp=Z,379nm,1.2s,mb6.2
INCN  Inchon            48.19  15  eP      P       13 27 25.4 -0.3
      comp=Z,21nm,0.5s,mb5.4
DL2   Dalian            48.47  10   P      P       13 27 26.5 -1.3
DL2                                 PCP    PcP     13 28 53.6 +0.1
DL2                                 S      S       13 34 20.4 -2.5
DL2                                 AMB    AMB
      comp=Z,20nm,0.6s,mb5.3
DL2                                 AMB    AMB
      comp=Z,280nm,5.3s
DL2                                 LR     LR
      comp=N,140nm,15.9s
DL2                                 LR     LR
      comp=E,100nm,17.1s
DL2                                 LR     LR
      comp=Z,240nm,23.7s
KS15  Wonju Array Si    48.50  17  eP      P       13 27 27.9 -0.1
BTO   Baotou            49.40 358  eP      P       13 27 34.0 -0.9
BTO                                 AMB    AMB
      comp=Z,30nm,0.7s,mb5.4
GTA   Gaotai            49.51 347⇑iP      P       13 27 36.8 +1.0
GTA                                 AP     pP      13 27 51.8 -0.3
GTA                                 XP     sP      13 27 58.7 -0.7
GTA                                 PCP    PcP     13 28 58.1 +0.9
GTA                                 PP     PP      13 29 33.1 +2.1
GTA                                 PPP    PPP     13 30 28.5 +1.6
GTA                                 SCP            13 32 46.6
GTA                                 PCS            13 32 52.9
GTA                                 S      S       13 34 39.2 +1.8
GTA                                 XS             13 35 06.0
GTA                                 SCS    ScS     13 37 19.0 +0.6
GTA                                 SS     SS      13 38 08.0 +1.9
GTA                                 AMB    AMB
      comp=Z,40nm,0.6s,mb5.6
GTA                                 AMB    AMB
      comp=Z,220nm,5.0s
GTA                                 LR     LR
      comp=N,390nm,24.1s
GTA                                 LR     LR
      comp=E,740nm,22.2s
GTA                                 LR     LR
      comp=Z,620nm,26.4s
HHC   Hu-ho-hao-te      49.61 359  i P     P       13 27 36.0 -0.5
HHC                                 AP     pP      13 27 51.9 -1.0
HHC                                 XP     sP      13 27 58.8 -1.3
HHC                                 PCP    PcP     13 28 57.7 +0.2
HHC                                 PP     PP      13 29 29.3 -2.6
HHC                                 SCP            13 32 50.3
HHC                                 S      S       13 34 31.2 -7.5
HHC                                 SCS    ScS     13 37 22.6 +3.5
HHC                                 AMB    AMB
      comp=Z,20nm,1.7s,mb4.9
HHC                                 AMB    AMB
      comp=Z,190nm,8.2s
HHC                                 LR     LR
      comp=N,210nm,19.0s
HHC                                 LR     LR
      comp=E,460nm,16.6s
HHC                                 LR     LR
      comp=Z,280nm,17.8s
NDI   New Delhi         50.41 319  ex      P       13 27 38.0 -4.8
NDI                                ex      S       13 34 42.0 -7.9
AJM   Ajmer             50.70 315  eP      P       13 27 43.2 -1.9
AJM                                 AMb    AMB     13 27 44.7
      comp=Z,21nm,0.5s,mb5.3
AJM                                ex      x       13 32 25.5
MAJO  Matsushiro        51.50  27  eP      P       13 27 48.2 -2.8
MAT   Matsushiro        51.50  27  eP      P       13 27 49.0 -2.0
      comp=Z,79nm,0.7s,mb5.8
MAT                                eS      S       13 35 03.0 -2.0
MAT                                 LR     LR
      comp=Z,350nm,20.0s
MAT   Matsushiro        51.50  27   P      P       13 27 48.5 -2.5
MAT                                 S      S       13 35 05.6 +0.6
MJAR  Matsushiro Arr    51.50  27   P      P       13 27 48.7 -2.3
      comp=Z,46nm,0.6s,mb5.6,baz=205,slow=8.4,SNR=70
MJAR                                LR     LR      13 48 49.7
      comp=Z,189nm,18.9s,baz=220,slow=35
SNY   Shenyang          51.66  11⇑iP      P       13 27 50.4 -1.7
SNY                                 XP     sP      13 28 15.2 -0.5
SNY                                 S      S       13 34 57.1  -10
SNY                                 XS             13 35 29.2
SNY                                 SCS    ScS     13 37 32.2 -0.9
SNY                                 AMB    AMB
      comp=Z,50nm,2.0s,mb5.1
SNY                                 AMB    AMB
      comp=Z,410nm,5.6s
SNY                                 LR     LR
      comp=N,260nm,22.5s
SNY                                 LR     LR
      comp=Z,270nm,23.5s
SMLA  Simla             52.11 321  i x     x       13 27 50.4
SMLA                               i x     x       13 35 05.3
SDNR  Sundarnagar       52.49 322  eP      P       13 27 57.6 -0.9
CN2   Changchun         53.93  12  eP      P       13 28 08.1 -0.8
CN2                                eAP     pP      13 28 23.9 -1.6
CN2                                 PCP    PcP     13 29 12.0 -1.5
CN2                                eS      S       13 35 38.0 +0.2
CN2                                 AMB    AMB
      comp=Z,50nm,0.9s,mb5.4
CN2                                 AMB    AMB
      comp=Z,400nm,3.0s
CN2                                 LR     LR
      comp=N,300nm,19.0s
CN2                                 LR     LR
      comp=E,200nm,19.0s
CN2                                 LR     LR
      comp=Z,300nm,21.0s
MDJ   Mudanjiang        55.65  15   P      P       13 28 19.9 -1.5
MDJ                                 AP     pP      13 28 36.4 -1.7
MDJ                                 XP     sP      13 28 43.6 -1.8
MDJ                                 PCP    PcP     13 29 19.0 -1.1
MDJ                                 PP     PP      13 30 24.7 -2.9
MDJ                                 PCS            13 33 19.5
MDJ                                 S      S       13 35 59.1 -1.8
MDJ                                 XS             13 36 27.2
MDJ                                 SCS    ScS     13 38 00.2 -0.9
MDJ                                 SS     SS      13 39 48.3 +1.5
MDJ                                 AMB    AMB
      comp=Z,60nm,1.3s,mb5.5
MDJ                                 AMB    AMB
      comp=Z,150nm,5.8s
MDJ                                 LR     LR
      comp=N,240nm,25.9s
MDJ                                 LR     LR
      comp=E,130nm,24.9s
MDJ                                 LR     LR
      comp=Z,230nm,27.0s
MDJ   Mudanjiang        55.65  15  eP      P       13 28 19.6 -1.8
      comp=Z,51nm,0.8s,mb5.6
ULN   Ulaanbaatar       56.80 356  eP      P       13 28 28.6 -1.0
ULN                                 pmax   pmax
      comp=Z,14nm,0.5s,mb5.2
ULN   Ulaanbaatar       56.80 356  eP      P       13 28 28.6 -1.0
      comp=Z,14nm,0.5s,mb5.2
SONM  Songino Array     56.82 355   P      P       13 28 28.9 -0.9
      comp=Z,13nm,0.5s,mb5.2,baz=174,slow=8.9,SNR=159
SONM                                PcP    PcP     13 29 24.6  0.0
      comp=Z,19nm,0.6s,baz=180,slow=3.6,SNR=8.6
SONM                                LR     LR      13 56 17.5
      comp=Z,334nm,19.5s,baz=190,slow=40
SONM                                PKPPKP         13 58 19.1
      comp=Z,0.6nm,0.8s,baz=315,slow=1.7,SNR=3.6
WMQ   Urumqi            57.07 339   P      P       13 28 31.3 -0.3
WMQ                                 AP     pP      13 28 47.2 -1.2
WMQ                                 XP     sP      13 28 54.3 -1.3
WMQ                                 PCP    PcP     13 29 25.6 -0.1
WMQ                                 PP     PP      13 30 40.0 -0.4
WMQ                                 S      S       13 36 19.9 +0.2
WMQ                                 SCS    ScS     13 38 11.3  0.0
WMQ                                 AMB    AMB
      comp=Z,20nm,0.8s,mb5.2
WMQ                                 AMB    AMB
      comp=Z,230nm,3.0s
WMQ                                 LR     LR
      comp=N,1µm,20.0s
WMQ                                 LR     LR
      comp=E,1µm,24.0s
WMQ                                 LR     LR
      comp=Z,1µm,20.0s
CASY  Casey             57.20 181⇓iP      P       13 28 30.5 -1.7
HIA   Hailar            58.40   6  eP      P       13 28 38.9 -1.9
      comp=Z,40nm,1.3s,mb5.3
KSH   Kashi             58.78 328  eP      P       13 28 43.0 -0.6
KSH                                eAP     pP      13 28 59.6 -0.8
KSH                                eXP     sP      13 29 06.7 -1.0
KSH                                ePP     PP      13 30 55.3 -0.6
KSH                                ePPP    PPP     13 32 19.1 -1.1
KSH                                eSCP            13 33 27.1
KSH                                ePCS            13 33 33.8
KSH                                eS      S       13 36 39.1 -3.0
KSH                                ePS     PS      13 37 02.7 -3.1
KSH                                eXS             13 37 07.0
KSH                                eSCS    ScS     13 38 24.2 +0.3
KSH                                eSS     SS      13 40 34.7 -3.2
KSH                                 AMB    AMB
      comp=Z,460nm,2.6s,mb6.0
KSH                                 LR     LR
      comp=N,370nm,6.0s
KSH                                 LR     LR
      comp=E,510nm,6.0s
MIR   Mirnyy            58.94 189d iP     P       13 28 43.0 -1.3
MIR                                 pmax   pmax
      comp=Z,148nm,1.6s,mb5.8
ASAJ  Asahikawa         59.63  25   P      P       13 28 47.9 -1.5
ASAJ                                pmax   pmax
      comp=Z,32nm,0.6s
ASAJ                                MLR    MLR
      comp=Z,267nm,21.6s
ASAJ  Asahikawa         59.63  25   P      P       13 28 47.9 -1.6
      comp=Z,32nm,0.6s,mb5.5,baz=246,slow=10,SNR=47
ASAJ                                LR     LR      13 54 51.4
      comp=Z,267nm,21.6s,baz=44,slow=36
ZAK   Zakamensk         59.64 353⇑iP      P       13 28 48.2 -1.2
ZAK                                e               13 29 35.8
ZAK                                 pmax   pmax
      comp=Z,10.0nm,1.5s,mb4.6
ZAK                                 pmax   pmax
      comp=Z,19nm,1.2s,mb5.0
KLR   Kul'dur           60.49  15⇓eP      P       13 28 49.5 -5.7
KLR                                eS      S       13 36 55.0 -9.0
KLR                                e               13 38 33.5
KLR                                 pmax   pmax
      comp=E,30nm,1.4s
KLR                                 pmax   pmax
      comp=Z,67nm,1.4s,mb5.5
DRV   Dumont d'Urvil    60.62 168   P      P       13 28 59.0 +3.1
DRV                                 S      S       13 37 07.0 +1.5
DRV                                 L              13 44 00.0
DRV                                 R              13 48 00.0
CIT   Chita             60.79   1⇑iP      P       13 28 56.6 -0.6
CIT                                e               13 29 40.8
CIT                                e               13 37 08.0
CIT                                 pmax   pmax
      comp=Z,219nm,1.8s,mb6.0
TLY   Talaya            60.88 354  eP      P       13 28 57.3 -0.5
TLY                                e               13 29 35.0
TLY                                eS      S       13 37 07.7 -1.3
TLY                                ePS     PS      13 37 18.7  -15
TLY                                e               13 38 41.1
TLY                                 pmax   pmax
      comp=Z,43nm,1.5s,mb5.4
TLY                                 MLR    MLR
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	comp=Z,258nm,16.0s						
TLY	Talaya	60.88	354	eP	P	13 28 56.4	-1.4
	comp=Z,12nm,0.6s,mb5.2						
KZA	Kyzart	61.03	329	P	P	13 28 59.1	+0.1
	SNR=5.8						
MOY	Mondy	61.19	352	eP	P	13 28 59.8	-0.1
MOY				pmax	pmax		
	comp=Z,92nm,1.9s,mb5.6						
IRK	Irkutsk	61.38	354	eP	P	13 28 59.8	-1.3
IRK				e		13 31 11.3	
IRK				pmax	pmax		
	comp=Z,82nm,1.7s,mb5.6						
JMDO	Jabal Madar	61.44	301	P	P	13 29 01.6	-0.4
	SNR=6.3						
TKM2	Tokmak 2	61.48	330	P	P	13 29 01.4	-0.6
	SNR=50						
UCH	Uchtor	61.52	329	P	P	13 29 02.0	-0.2
	SNR=35						
MKAR	Makanchi Array	61.60	337	P	P	13 29 01.7	-1.0
	comp=Z,101nm,0.5s,mb6.2,baz=148,slow=7.4,SNR=683						
MKAR				PKP2bc		13 58 20.0	
	comp=Z,1.4nm,1.0s,baz=297,slow=2.7,SNR=5.8						
MKAR				LR	LR	14 01 45.7	
	comp=Z,371nm,20.7s,baz=170,slow=42						
MKAR	Makanchi Array	61.60	337	P	P	13 29 01.7	-1.0
MKAR				⇑e		13 58 20.0	
MKAR				LR	LR	14 01 45.7	
KBK	Karagaybulak	61.61	330	P	P	13 29 02.8	-0.1
	SNR=88						
SMDO	Samad	61.77	302	P	P	13 29 04.1	-0.1
	SNR=7.0						
AAK	Ala-Archa	61.82	329	P	P	13 29 04.1	-0.2
	SNR=15						
AML	Almayashu	61.87	328	P	P	13 29 04.5	0.0
	SNR=13						
BIDO	Bidbid	61.90	303	P	P	13 29 04.9	-0.2
	SNR=10						
FRU	Bishkek	61.90	329	⇑iP	P	13 29 04.5	-0.3
FRU				e		13 37 22.0	
FRU				pmax	pmax		
	comp=Z,111nm,1.8s,mb5.7						
CHMS	Chumysh	61.96	330	P	P	13 29 04.5	-0.7
	SNR=9.6						
YSS	Yuzh-Sakhalins	62.02	23	αiP	P	13 29 04.0	-1.5
YSS				e		13 29 12.0	
YSS				e	pP	13 29 20.2	-2.3
YSS				pmax	pmax		
	comp=Z,110nm,0.8s,mb6.0						
YSS				pmax	pmax		
	comp=N,70nm,0.7s						
YSS	Yuzh-Sakhalins	62.02	23	eP	P	13 29 04.0	-1.5
	comp=N,96nm,0.6s,mb6.1						
EKS2	Erkin-Say	62.20	329	P	P	13 29 06.6	-0.2
	SNR=30						
USP	Ospenovka	62.28	330	P	P	13 29 06.4	-0.9
	SNR=19						
BSY	Bisya	62.35	301	P	P	13 29 07.9	-0.2
	SNR=5.9						
HOQ	Hoqain	62.60	302	P	P	13 29 09.5	-0.3
	SNR=8.4						
WHFO	Wadi Hawf	63.54	295	P	P	13 29 15.5	-0.6
	SNR=6.8						
SNZO	South Karori	63.56	132	P	P	13 29 12.5	-3.4
	comp=N,156nm,1.3s,mb5.9						
ABTO	Aybut	63.77	294	P	P	13 29 17.3	-0.3
	SNR=14						
ASHO	Ashiyiah	64.10	303	P	P	13 29 19.4	-0.3
	SNR=6.2						
BOD	Bodaibo	66.61	1	eP	P	13 29 32.9	-2.3
BOD				pmax	pmax		
	comp=Z,55nm,1.5s,mb5.4						
ZAL	Zalesovo	66.83	343	P	P	13 29 35.0	-1.7
ZAL				pmax	pmax		
	comp=Z,64nm,0.5s						
ZAL	Zalesovo	66.83	343	P	P	13 29 35.0	-1.6
	comp=Z,64nm,0.5s,mb5.9,baz=334,slow=4.1,SNR=224						
MAW	Mawson	67.01	198	eP	P	13 29 36.8	-0.7
	comp=Z,12nm,0.9s,mb4.9						
MAW	Mawson	67.01	198	P	P	13 29 37.4	-0.2
	comp=Z,14nm,0.9s,mb5.0,baz=46,slow=7.4,SNR=15						
MAW				LR	LR	13 54 01.7	
	comp=Z,572nm,18.6s,baz=51,slow=32						
MAW				PKP2bc		13 58 04.9	
	comp=Z,3.8nm,0.7s,baz=254,slow=4.7,SNR=6.3						
NVS	Novosibirsk	68.08	342	⇑iP	P	13 29 41.7	-2.7
NVS				i *PP	pP	13 30 09.2	+7.5
NVS				i S	S	13 38 28.7	-9.0
NVS				e*SS		13 39 06.8	
NVS				pmax	pmax		
	comp=Z,57nm,1.4s,mb5.4						
NVS				pmax	pmax		
	comp=N,47nm,1.5s						
NVS				pmax	pmax		
	comp=E,27nm,1.3s						
NVS				smax			
	comp=N,56nm,2.1s						
NVS				smax			
	comp=E,143nm,3.2s						
SKR	Severo-Kuril’s	70.59	28	eP	P	13 29 56.0	-3.9
SKR				e		13 34 24.1	
BVAR	Borovoye Array	71.26	335	P	P	13 30 02.9	-1.0
	comp=E,15nm,0.6s,mb5.1,baz=142,slow=8.7,SNR=158						
CHKZ	Chkalovo	71.64	335	eP	P	13 30 05.1	-1.0
	comp=E,27nm,0.6s,mb5.3						
YAK	Yakutsk	72.12	9	c iP	P	13 30 07.5	-1.4
YAK				e	pP	13 30 25.7	-0.6
YAK				e		13 32 50.3	
YAK				i S	S	13 39 20.6	-4.2
YAK				e		13 39 53.2	
YAK				e*SS		13 40 02.3	
YAK				pmax	pmax		
	comp=Z,75nm,0.9s,mb5.6						
YAK				pmax	pmax		
	comp=N,46nm,1.2s						
YAK				pmax	pmax		
	comp=E,14nm,1.2s						
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
YAK				smax			
	comp=E,10.0nm,1.2s						
YAK				smax			
	comp=N,4.0nm,0.9s						
YAK	Yakutsk	72.12	9	eP	P	13 30 07.3	-1.6
	comp=N,197nm,0.6s,mb6.2						
KAMS	Al Khamasin	72.53	295	P	P	13 30 11.3	-0.8
DJNS	Zahran al Janu	72.75	292	P	P	13 30 14.9	+1.5
VNDA	Vanda	73.10	170	P	P	13 30 13.8	-0.5
	comp=N,27nm,1.0s,mb5.1,baz=310,slow=6.1,SNR=71						
VNDA				LR	LR	13 59 13.9	
	comp=N,313nm,19.9s,baz=327,slow=33						
VNDA	Vanda	73.10	170	eP	P	13 30 13.6	-0.8
	comp=N,42nm,1.1s,mb5.3						
PET	Petropavlovsk	73.33	27	αiP	P	13 30 15.1	-1.0
PET				e	pP	13 30 32.0	-1.6
PET				e*PP	pP	13 30 35.0	+1.4
PET				eS	S	13 39 38.0	-0.6
PET				eSP	SP	13 40 08.1	-3.5
PET				ePS	PS	13 40 19.9	-0.3
PET				eSS	SS	13 44 23.4	-0.7
PET				eSSS	SSS	13 47 28.0	-7.2
PET				pmax	pmax		
	comp=Z,66nm,1.7s,mb5.3						
PET				pmax	pmax		
	comp=Z,300nm,5.3s						
PET				pmax	pmax		
	comp=Z,200nm,17.0s						
PET				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.3						
PET				MLR	MLR		
	comp=Z,200nm,19.0s						
PET				MLR	MLR		
	comp=Z,200nm,18.0s						
PET	Petropavlovsk	73.33	27	eP	P	13 30 14.9	-1.2
	comp=Z,81nm,1.3s,mb5.5						
SBA	Scott Base	74.15	170	eP	P	13 30 20.4	-0.1
SBA				pmax	pmax		
	comp=Z,49nm,1.5s,mb5.2						
SBA	Scott Base	74.15	170	eP	P	13 30 20.4	-0.1
	comp=Z,49nm,1.5s,mb5.2						
KMBO	Kilima Mbogo	74.91	271	P	P	13 30 28.4	+2.3
	comp=Z,12nm,0.8s,mb4.9,baz=229,slow=24,SNR=26						
KMBO				LR	LR	13 57 46.3	
	comp=Z,1µm,21.8s,baz=96,slow=31						
MA2	Magadan	74.99	19	c iP	P	13 30 25.5	-0.1
MA2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
MA2	Magadan	74.99	19	eP	P	13 30 25.4	-0.2
	comp=Z,30nm,0.6s,mb5.4						
ARSS	Ar Rass	75.36	300	P	P	13 30 28.7	+0.3
BHD	Baghdad	76.81	307	eP	P	13 30 30.0	-6.5
BHD				eS	S	13 40 11.0	-6.4
HILS	Ha’il	77.05	301	P	P	13 30 39.0	+1.1
SVE	Sverdlovsk	77.99	334	⇑iP	P	13 30 42.6	+0.1
SVE				eS	S	13 40 26.0	-3.6
SVE				pmax	pmax		
	comp=Z,164nm,1.7s,mb5.7						
SVE				MLR	MLR		
	comp=N,300nm,24.0s						
SVE				MLR	MLR		
	comp=E,100nm,24.0s						
SVE				MLR	MLR		
	comp=Z,400nm,24.0s						
SEY	Seymchan	78.07	18	i P	P	13 30 42.7	-0.1
SEY						13 30 51.7	
SEY						13 33 42.3	
SEY				PPP	PPP	13 35 34.2	+3.2
SEY				eS	S	13 40 31.9	+1.5
SEY						13 40 48.8	
SEY				*SS		13 41 13.5	
SEY				SS	SS	13 45 36.5	+0.8
SEY				pmax	pmax		
	comp=E,7.0nm,0.6s						
SEY				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.2						
SEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
SEY				smax			
	comp=N,90nm,7.0s						
SEY				smax			
	comp=E,160nm,7.3s						
ARU	Arti	78.67	333	⇓iP	P	13 30 45.0	-1.2
ARU				e		13 30 52.8	
ARU				e		13 33 43.9	
ARU				eS	S	13 40 35.4	-1.5
ARU				e		13 40 57.4	
ARU				eSS	SS	13 45 37.5	-7.2
ARU				pmax	pmax		
	comp=Z,72nm,1.4s,mb5.4						
ARU				MLR	MLR		
	comp=Z,300nm,22.0s						
ARU				MLR	MLR		
	comp=N,200nm,24.0s						
ARU				MLR	MLR		
	comp=E,100nm,20.0s						
ARU	Arti	78.67	333	eP	P	13 30 45.6	-0.6
	comp=E,25nm,0.6s,mb5.3						
MSL	Mosul	78.83	310	eP	P	13 30 47.5	-0.1
GNI	Garni	78.98	314	P	P	13 30 49.1	+0.8
GNI				pmax	pmax		
	comp=Z,19nm,0.7s						
GNI	Garni	78.98	314	eP	P	13 30 49.0	+0.6
	comp=Z,19nm,0.7s,mb5.1						
MTA	Mtatsminda	79.52	315	P	P	13 30 51.5	+0.3
TI2	Plekhanov	79.57	315	⇑iP	P	13 30 47.0	-4.5
TBLG	Delisi	79.58	315	P	P	13 30 52.2	+0.7
FX1	Attu Island--F	80.42	33	eP	P	13 30 54.8	-1.0
ZEI	Tsey	80.54	316	eP	P	13 30 56.7	+0.1
ZEI				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.2						
BEST	Besiri	80.74	311	i P	P	13 30 59.0	+1.3
QSPA	South Pole Qui	80.99	180	eP	P	13 30 58.6	+0.3
	comp=Z,131nm,1.2s,mb5.7						
MATP	Matopo	81.00	251	LR	LR	14 01 59.1	
	comp=Z,365nm,21.5s,baz=86,slow=32						
TIXI	Tiksi	81.25	5	eP	P	13 30 53.2	-6.6
TIXI				eS	S	13 41 02.8	-0.8
TIXI				pmax	pmax		
	comp=Z,75nm,0.9s,mb5.6						
TIXI	Tiksi	81.25	5	⇑iP	P	13 30 58.7	-1.1
SOKR	Solikamsk	81.25	335	⇑iP	P	13 30 58.1	-1.9
SOKR				pmax	pmax		
	comp=Z,80nm,1.7s,mb5.4						
SOKR				MLR	MLR		
	comp=Z,320nm,25.0s						
ERZM	Erzurum	81.33	313	i P	P	13 31 02.4	+1.6
MBAR	Mbarara	81.42	271	P	P	13 31 02.7	+0.9
MBAR				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
MBAR	Mbarara	81.42	271	eP	P	13 31 02.5	+0.7
	comp=Z,18nm,0.6s,mb5.2						
KIV	Kislovodsk	81.79	317	c iP	P	13 31 03.4	+0.2
KIV				e		13 41 08.8	
KIV				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.3						
KIV				MLR	MLR		
	comp=Z,100nm,19.0s						
KIV	Kislovodsk	81.79	317	eP	P	13 31 03.9	+0.8
	comp=Z,36nm,0.7s,mb5.4						
LSZ	Lusaka	81.89	256	P	P	13 31 05.7	+1.5
LSZ				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
LSZ	Lusaka	81.89	256	eP	P	13 31 05.6	+1.4
	comp=Z,9.4nm,0.6s,mb4.9						
GOF	Gofitskoye	81.95	318	⇑iP	P	13 31 03.0	-1.0
GOF				i S	S	13 41 11.0	-0.4
GOF				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.3						
GOF				smax			
	comp=N,66nm,1.7s						
ASF	Jabal al Asfar	82.48	304	LR	LR	14 06 44.5	
	comp=N,247nm,20.9s,baz=337,slow=35						
ELZG	Elazig	82.64	311	i P	P	13 31 10.8	+3.2
KELT	Kelkit	82.94	312	i P	P	13 31 11.3	+2.1
MALT	Malatya	83.00	310	P	P	13 31 11.1	+1.6
MALT				pmax	pmax		
	comp=Z,60nm,1.3s,mb5.5						
MALT	Malatya	83.00	310	eP	P	13 31 10.6	+1.1
	comp=Z,60nm,1.4s,mb5.4						
BOSA	Boshof	83.04	242	P	P	13 31 11.5	+1.6
BOSA				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.1						
BOSA	Boshof	83.04	242	P	P	13 31 11.1	+1.3
	comp=Z,14nm,0.9s,mb5.0,baz=113,slow=6.2,SNR=17						
BOSA				LR	LR	14 01 00.9	
	comp=Z,667nm,21.3s,baz=104,slow=31						
BOSA	Boshof	83.04	242	eP	P	13 31 11.1	+1.3
	comp=Z,22nm,1.0s,mb5.2						
GZT	Gaziantep	83.38	309	i P	P	13 31 12.9	+1.5
EIL	Elat	83.46	301	eP	P	13 31 12.6	+0.7
	comp=Z,72nm,1.3s,mb5.5						
SOC	Sochi	83.69	316	eP	P	13 31 12.5	-0.4
SOC				e*PP	pP	13 31 30.5	-0.1
SOC				e		13 34 24.9	
SOC				eS	S	13 41 25.0	-3.9
SOC				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.6						
SOC				pmax	pmax		
	comp=N,10.0nm,1.0s						
SOC				pmax	pmax		
	comp=E,15nm,1.1s						
SOC				pmax	pmax		
	comp=Z,190nm,1.5s,mb6.0						
SOC				MLR	MLR		
	comp=N,168nm,23.0s						
SOC				MLR	MLR		
	comp=Z,282nm,23.0s						
SOC				MLR	MLR		
	comp=E,70nm,19.0s						
KAHT	Ahir Dag	83.98	309	i P	P	13 31 12.0	-2.4
ANN	Anapa	85.63	316	c iP	P	13 31 22.2	-0.3
ANN				eS	S	13 41 38.9	-9.0
ANN				pmax	pmax		
	comp=Z,75nm,1.7s,mb5.6						
BILL	Bilibino	85.78	18	P	P	13 31 22.1	-0.5
BILL				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.0						
BILL	Bilibino	85.78	18	eP	P	13 31 22.0	-0.7
	comp=Z,6.3nm,0.6s,mb5.0						
MEST	Erdemli	85.81	308	i P	P	13 31 23.6	+0.1
AVNT	Avonos	85.82	310	i P	P	13 31 24.2	+0.6
CSS	Prodhromos	86.06	306	eP	P	13 31 25.2	+0.3
	comp=Z,38nm,0.8s,mb5.7						
SUR	Sutherland	86.36	238	LR	LR	14 03 17.5	
	comp=Z,506nm,19.0s,baz=104,slow=31						
CDAG	Cicekdag	86.40	311	i P	P	13 31 26.5	+0.1
BOYT	Boyabat	86.47	313	i P	P	13 31 28.3	+1.7
VRSR	Storozhevoye	86.49	323	eP	P	13 31 26.7	+0.2
VRSR				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.8						
VRSR				pmax	pmax		
	comp=N,9.0nm,0.8s						
VRSR				pmax	pmax		
	comp=E,40nm,0.8s						
VOR	Voronezh	86.65	323	eP	P	13 31 27.5	+0.2
VOR				eS	S	13 41 55.8	-1.8
VOR				pmax	pmax		
	comp=E,100nm,1.6s						
VOR				pmax	pmax		
	comp=Z,150nm,1.6s,mb6.0						
VOR				smax			
	comp=N,100nm,2.5s						
VOR				smax			
	comp=Z,70nm,2.5s						
BR131	Keskin Array S	86.97	311	eP	P	13 31 29.6	+0.4
	comp=Z,72nm,1.2s,mb5.8						
BRTR	Keskin Array B	86.97	311	P	P	13 31 29.8	+0.6
BRTR				pmax	pmax		
	comp=Z,23nm,0.9s						
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	86.97	311	P	P	13 31 29.8	+0.6
	comp=Z,23nm,0.9s,mb5.4,baz=135,slow=5.2,SNR=105						
BRTR				PKKPbc		13 49 22.2	
	comp=Z,0.9nm,0.6s,baz=270,slow=4.9,SNR=5.5						
ELDT	Eldivan	87.32	312	i P	P	13 31 31.6	+0.8
BALT	Daday	87.60	313	i P	P	13 31 33.7	+1.5
SIM	Simferopol’	87.94	316	eP	P	13 31 34.0	+0.3
SIM				e	pP	13 31 53.0	+1.4
SIM				e		13 41 54.0	
SIM				i S	S	13 42 11.0	+1.1
SIM				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
SGKT	Sivrigoynuk	88.35	311	i P	P	13 31 36.3	+0.5
MOS	Moscow	88.80	327	eP	P	13 31 38.4	+0.9
MOS				e	pP	13 31 57.2	+1.7
MOS				pmax	pmax		
	comp=Z,207nm,1.2s,mb6.3						
ISP	Isparta	88.92	308	⇑eP	P	13 31 38.2	-0.4
ISP	Isparta	88.92	308	⇑eP	P	13 31 38.3	-0.3
ESKT	Eskisehir	89.02	310	i P	P	13 31 40.0	+1.0
SNAA	Sanae	89.11	197	c iP	P	13 31 40.0	+1.3
SNAA	Sanae	89.11	197	P	P	13 31 39.9	+1.3
	comp=Z,12nm,0.9s,mb5.2,baz=116,slow=4.2,SNR=77						
SNAA				PKKPbc		13 49 15.8	
	comp=Z,0.5nm,0.5s,baz=251,slow=5.9,SNR=16						
SNAA				LR	LR	14 05 48.0	
	comp=Z,103nm,21.4s,baz=160,slow=32						
SNAA	Sanae	89.11	197	eP	P	13 31 39.6	+0.9
	comp=Z,75nm,1.3s,mb5.9						
TKTP	Tekketepe	89.11	309	i P	P	13 31 39.9	+0.5
OBN	Obninsk	89.19	326	c iP	P	13 31 39.9	+0.5
OBN				e		13 31 47.5	
OBN				e		13 42 07.9	
OBN				pmax	pmax		
	comp=Z,138nm,1.0s,mb6.2						
OBN				MLR	MLR		
	comp=Z,300nm,20.0s						
OBN	Obninsk	89.19	326	eP	P	13 31 39.9	+0.5
	comp=Z,109nm,0.8s,mb6.2						
HENT	Hendek	89.27	311	i P	P	13 31 40.2	+0.1
ULDT	Uludag	90.44	310	i P	P	13 31 46.0	+0.3
VNA2	Neumayer--Watz	90.76	197	⇑iP	P	13 31 49.1	+2.7
VNA2	Neumayer--Watz	90.76	197	⇑i	sP	13 32 13.4	+2.5
VNA2	Neumayer--Watz	90.76	197			13 36 43.4	
VNA1	Neumayer--Stat	91.15	197	⇑iP	P	13 31 51.1	+2.9
VNA1	Neumayer--Stat	91.15	197		P	13 32 07.5	+19
VNA3	Neumayer Olymp	91.22	196	⇑iP	P	13 31 50.9	+2.3
VNA3	Neumayer Olymp	91.22	196	⇑i	sP	13 32 13.8	+0.7
VNA3	Neumayer Olymp	91.22	196			13 36 43.4	
TSUM	Tsumeb	91.34	250	LR	LR	14 06 30.0	
	comp=Z,442nm,21.8s,baz=143,slow=31						
AKASG	Malin Array Be	92.44	321	P	P	13 31 54.0	-0.6
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKASG	Malin Array Be	92.44	321	P	P	13 31 54.0	-0.7
	comp=Z,6.1nm,0.7s,mb5.0,baz=83,slow=4.4,SNR=42						
PUL	Pulkovo	93.62	330	i P	P	13 31 58.3	-1.4
MLR	Muntele Rosu	93.70	315	P	P	13 32 00.9	+0.4
MLR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MLR	Muntele Rosu	93.70	315	P	P	13 32 00.8	+0.4
	comp=Z,4.8nm,0.6s,mb5.1,baz=170,slow=12,SNR=10.0						
PPT	Papeete	95.11	109	LR	LR	14 08 18.2	
	comp=Z,528nm,18.8s,baz=264,slow=31						
VSU	Vasula	95.21	328	c iP	P	13 32 07.4	+0.4
VSU	Vasula	95.21	328	⇑iP	P	13 32 07.5	+0.5
LVV	L’vov	95.59	319	eP	P	13 32 08.5	-0.5
SDPT	Sand Point	95.84	35	eP	P	13 32 09.7	-0.3
	comp=Z,96nm,0.6s,mb6.4						
KAF	Kangasniemi	95.94	332	ep	P	13 32 09.9	-0.4
	comp=Z,10nm,0.6s,mb5.4,baz=91,slow=4.1						
KAF	Kangasniemi	95.94	332	eP	P	13 32 09.9	-0.4
KAF				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.4						
FINES	FINESS Array B	95.96	331	P	P	13 32 10.9	+0.6
	comp=Z,4.4nm,0.6s,mb5.0,baz=118,slow=6.4,SNR=41						
FINES				PKKPbc		13 48 59.9	
	comp=Z,0.6nm,0.7s,baz=270,slow=1.9,SNR=3.9						
FINES				LR	LR	14 20 58.0	
	comp=Z,129nm,19.7s,baz=164,slow=39						
KOLS	Kolonicke sedl	96.63	318	eP	P	13 32 14.1	+0.4
ARCES	ARCESS Array B	97.19	339	P	P	13 32 15.3	-0.5
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	97.19	339	P	P	13 32 15.2	-0.6
	comp=Z,3.7nm,0.9s,mb4.8,baz=90,slow=7.3,SNR=13						
ARCES				PKiKP		13 36 49.9	
	comp=Z,1.0nm,0.6s,baz=90,slow=3.6,SNR=3.9						
IMA	Indian Mountai	99.86	24	P	P	13 32 28.4	+0.4
IMA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.3						
IMA	Indian Mountai	99.86	24	ePdif	P	13 32 27.7	-0.3
	comp=Z,8.4nm,0.6s,mb5.3						
HFS	Hagfors	101.96	330	P	P	13 32 38.0	+0.5
HFS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HFS	Hagfors	101.96	330	P	P	13 32 38.0	+0.4
	comp=Z,5.8nm,0.7s,baz=90,slow=7.4,SNR=17						
GERES	GERESS Array B	102.27	318	P	Pdif	13 32 40.4	+1.2
	comp=Z,0.2nm,0.4s,baz=90,slow=4.0,SNR=6.2						
GERES				PP	PP	13 36 53.4	-1.0
	comp=Z,0.6nm,0.7s,baz=106,slow=7.1,SNR=2.9						
GERES				PKKPbc		13 48 42.7	
	comp=Z,0.3nm,0.6s,baz=180,slow=2.7,SNR=5.3						
SML	Sawmill	102.38	29	Pdif	Pdif	13 32 39.3	-0.1
ILAR	Eielson Array	102.77	26	PP	PP	13 36 50.4	-7.6
	comp=Z,0.7nm,0.8s,baz=286,slow=7.5,SNR=5.5						
ILAR				PKKPbc		13 48 40.5	
	comp=Z,1.1nm,1.1s,baz=159,slow=0.4,SNR=6.9						
NB2	NORSAR Subarra	103.12	331	P	Pdif	13 32 42.4	-0.2
	comp=Z,0.8nm,0.7s,baz=90,slow=4.5						
NOA	NORSAR Array B	103.12	331	Pdiff	Pdif	13 32 42.4	-0.2
	comp=Z,0.8nm,0.7s,baz=112,slow=4.8,SNR=4.0						
NOA				PKKPbc		13 48 41.1	
	comp=Z,1.0nm,0.9s,baz=307,slow=9.5,SNR=3.3						
NOA	NORSAR Array B	103.12	331	Pdif	Pdif	13 32 42.4	-0.2
NOA				PKKPbc		13 48 41.1	
EKA	Eskdalemuir Ar	111.65	326	P	Pdif	13 33 19.5	-0.8
EKA				i		13 37 17.4	
EKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	Eskdalemuir Ar	111.65	326	Pdiff	Pdif	13 33 19.5	-0.8
	comp=Z,0.9nm,0.8s,baz=63,slow=9.3,SNR=3.5						
EKA				PKiKP		13 37 17.4	
	comp=Z,0.8nm,0.6s,baz=76,slow=3.4,SNR=3.7						
RES	Resolute Bay	112.56	8	eP	PKPdf	13 37 14.0	-4.1
ESDC	Sonseca Array	115.75	310	PKP	PKPdf	13 37 27.0	+1.9
	comp=Z,0.7nm,0.5s,baz=58,slow=2.9,SNR=7.2						
ESDC				PKKPbc		13 47 59.2	
	comp=Z,0.3nm,0.5s,baz=123,slow=16,SNR=3.6						
YKW3	Yellowknife Ar	116.83	22	ePKPdf	PKPdf	13 37 27.6	+1.1
YKA	Yellowknife Ar	116.87	22	PKP	PKPdf	13 37 28.1	+1.4
	comp=Z,3.5nm,0.6s,baz=316,slow=1.8,SNR=25						
YKA				PKKPbc		13 47 55.2	
	comp=Z,0.2nm,0.3s,baz=106,slow=3.2,SNR=5.0						
DBIC	Dimbokro	117.61	273	PKIKP	PKPdf	13 37 31.0	+1.8
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.4s						
DBIC	Dimbokro	117.61	273	PKP	PKPdf	13 37 31.0	+1.8
	comp=Z,2.4nm,0.4s,baz=58,slow=2.6,SNR=12						
DBIC	Dimbokro	117.61	273	PKP	PKPdf	13 37 31.0	+1.8
WPW	White Pass	121.02	40	P	PKPdf	13 37 37.9	+2.7

EBG	Ellensburg	121.57	40	P	PKPdf	13 37 38.8	+2.6
EDM	Edmonton	122.72	31	PKIKP	PKPdf	13 37 40.4	+2.2
EDM	Edmonton	122.72	31	ePKPdf	PKPdf	13 37 40.0	+1.7
NEW	Newport	123.12	37	PKIKP	PKPdf	13 37 41.2	+2.1
NEW	Newport	123.12	37	ePKPdf	PKPdf	13 37 41.0	+1.9
MOD	Modoc	123.57	45	ePKPdf	PKPdf	13 37 42.7	+2.5
BEKR	Beckwourth	124.20	48	ePKPdf	PKPdf	13 37 43.5	+2.1
BMO	Blue Mountains	124.48	41	PKIKP	PKPdf	13 37 43.1	+1.2
BMO	Blue Mountains	124.48	41	ePKPdf	PKPdf	13 37 42.9	+1.0
WVOR	Wild Horse Val	124.53	44	PKIKP	PKPdf	13 37 44.5	+2.4
WVOR	Wild Horse Val	124.53	44	ePKPdf	PKPdf	13 37 44.2	+2.1
CMB	Columbia Colle	124.74	50	PKIKP	PKPdf	13 37 45.0	+2.4
CMB	Columbia Colle	124.74	50	ePKPdf	PKPdf	13 37 44.6	+2.0
WCN	Washoe City	124.82	48	PKIKP	PKPdf	13 37 45.7	+3.0
WCN	Washoe City	124.82	48	ePKPdf	PKPdf	13 37 44.9	+2.2
MSO	Missoula	125.69	38	ePKPdf	PKPdf	13 37 45.6	+1.5
CHMT	Chamberlain Mo	126.07	37	ePKPdf	PKPdf	13 37 46.2	+1.3
NVAR	Mina Array Bea	126.18	49	PKP	PKPdf	13 37 48.5	+3.2
	comp=Z,4.2nm,0.7s,baz=327,slow=0.8,SNR=32						
NVAR				PP	PP	13 39 39.2	-5.4
	comp=Z,0.9nm,0.7s,baz=276,slow=5.8,SNR=4.4						
NVAR	Mina Array Bea	126.18	49	PKP	PKPdf	13 37 48.5	+3.2
NVAR				PP	PP	13 39 39.2	-5.4
MNV	Mina	126.29	49	PKIKP	PKPdf	13 37 48.6	+3.1
MNV	Mina	126.29	49	ePKPdf	PKPdf	13 37 47.8	+2.3
MTUM	Tungsten Hills	126.33	50	ePKPdf	PKPdf	13 37 48.4	+2.8
FCC	Fort Churchill	126.48	17	PKIKP	PKPdf	13 37 46.6	+1.3
FCC	Fort Churchill	126.48	17	ePKPdf	PKPdf	13 37 46.1	+0.8
HLID	Hailey	126.91	41	ePKPdf	PKPdf	13 37 49.3	+2.7
FFC	Flin Flon	126.94	24	ePKPdf	PKPdf	13 37 47.2	+0.9
HRY	Holter Researc	127.01	37	ePKPdf	PKPdf	13 37 48.1	+1.4
MCMT	McKenzie Canyo	127.33	39	ePKPdf	PKPdf	13 37 50.0	+2.7
ELK	Elko	127.54	45	PKIKP	PKPdf	13 37 50.9	+3.0
ELK	Elko	127.54	45	ePKPdf	PKPdf	13 37 50.4	+2.5
BOZ	Bozeman (W)	127.67	38	PKIKP	PKPdf	13 37 50.8	+2.8
BOZ	Bozeman (W)	127.67	38	ePKPdf	PKPdf	13 37 50.3	+2.2
QLMT	Earthquake Lak	128.21	39	ePKPdf	PKPdf	13 37 51.9	+2.8
TRCR	Troy Canyon	128.21	48	ePKPdf	PKPdf	13 37 52.6	+3.3
YMR	Madison River	128.57	39	ePKPdf	PKPdf	13 37 53.2	+3.4
YNR	Norris Junctio	128.72	38	ePKPdf	PKPdf	13 37 53.4	+3.4
YFT	Old Faithful	128.76	39	ePKPdf	PKPdf	13 37 53.5	+3.4
GCMT	Greycliff	128.77	37	ePKPdf	PKPdf	13 37 53.3	+3.2
HVU	Hansel Valley	128.78	43	PKIKP	PKPdf	13 37 53.2	+2.9
HVU	Hansel Valley	128.78	43	ePKPdf	PKPdf	13 37 52.8	+2.6
LKWY	Lake	128.97	38	PKIKP	PKPdf	13 37 55.7	+5.2
LKWY	Lake	128.97	38	ePKPdf	PKPdf	13 37 54.5	+3.9
RRI2	Red Ridge	129.00	40	ePKPdf	PKPdf	13 37 53.2	+2.5
PFO	Pinyon Flat Ob	129.11	54	PKIKP	PKPdf	13 37 54.2	+3.1
PFO	Pinyon Flat Ob	129.11	54	ePKPdf	PKPdf	13 37 54.9	+3.8
TPAW	Teton Pass	129.17	40	ePKPdf	PKPdf	13 37 53.5	+2.5
MOOW	Moose Ponds	129.17	40	ePKPdf	PKPdf	13 37 53.7	+2.7
WUWY	Wally Ulrich	129.28	40	ePKPdf	PKPdf	13 37 53.7	+2.5
SNOW	Snow King Moun	129.31	40	ePKPdf	PKPdf	13 37 54.0	+2.8
LOHW	Long Hollow	129.33	40	ePKPdf	PKPdf	13 37 53.8	+2.5
HWUT	Hardware Ranch	129.67	42	ePKPdf	PKPdf	13 37 53.7	+1.8
NEN	Nelson	129.72	51	ePKPdf	PKPdf	13 37 54.9	+2.7
CTU	Camp Tracy	129.96	43	ePKPdf	PKPdf	13 37 54.6	+2.0
TCUT	Toone Canyon	130.00	43	ePKPdf	PKPdf	13 37 56.1	+3.6
DGMT	Dagmar	130.21	31	ePKPdf	PKPdf	13 37 55.7	+2.9
LAO	LASA Array	130.24	34	ePKPdf	PKPdf	13 37 55.4	+2.5
MPU	Maple Canyon	130.34	44	ePKPdf	PKPdf	13 37 57.0	+3.8
PDAR	Pinedale Array	130.41	40	PKP	PKPdf	13 37 55.4	+2.0
	comp=Z,2.4nm,0.5s,slow=1.5,SNR=27						
PLCA	Paso Flores	130.45	177	PKIKP	PKPdf	13 37 56.9	+3.4
PLCA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PLCA	Paso Flores	130.45	177	PKP	PKPdf	13 37 56.9	+3.4
	comp=Z,8.8nm,1.2s,baz=160,slow=6.9,SNR=3.5						
MVU	Marysvale	130.58	46	ePKPdf	PKPdf	13 37 56.8	+3.0
MSU	Marysvale	130.60	46	PKIKP	PKPdf	13 37 57.2	+3.4
MSU	Marysvale	130.60	46	ePKPdf	PKPdf	13 37 57.0	+3.2
TMUT	Trail Mountain	130.95	45	ePKPdf	PKPdf	13 37 58.5	+4.1
SRU	San Rafael	131.51	45	PKIKP	PKPdf	13 37 55.0	-0.5
SRU	San Rafael	131.51	45	ePKPdf	PKPdf	13 37 57.5	+1.9
WUAZ	Wupatki	132.40	50	ePKPdf	PKPdf	13 38 01.2	+3.9
RWWY	Rawlins	132.46	40	ePKPdf	PKPdf	13 37 58.4	+1.2
ULM	Lac du Bonnet	132.77	24	PKP	PKPdf	13 38 00.2	+2.6
	comp=Z,4.1nm,0.5s,baz=355,slow=2.6,SNR=5.0						
ULM	Lac du Bonnet	132.77	24	PKP	PKPdf	13 38 00.2	+2.6
RSSD	Black Hills	133.01	36	PKIKP	PKPdf	13 37 51.7	-6.5
RSSD	Black Hills	133.01	36	ePKPdf	PKPdf	13 37 59.5	+1.3
TUC	Tucson	134.04	53	PKIKP	PKPdf	13 38 03.5	+3.0
TUC	Tucson	134.04	53	ePKPdf	PKPdf	13 38 02.2	+1.7
SCHQ	Schefferville	134.29	359	PKP	PKPdf	13 38 02.4	+2.1
	comp=Z,3.0nm,0.5s,baz=326,slow=1.3,SNR=18						
SCHQ				PP	PP	13 40 28.9	-7.8
	comp=Z,1.6nm,0.5s,baz=11,slow=15,SNR=4.3						
ISCO	Idaho Springs	134.49	41	PKIKP	PKPdf	13 38 04.0	+2.9
ISCO	Idaho Springs	134.49	41	ePKPdf	PKPdf	13 38 03.7	+2.6
SDCO	Great Sand Dun	135.63	44	ePKPdf	PKPdf	13 38 06.2	+2.9
LAZ	Ladron	136.03	49	ePKPdf	PKPdf	13 38 07.9	+3.8
ANMO	Albuquerque	136.29	48	i PKIKP	PKPdf	13 38 07.1	+2.6
ANMO	Albuquerque	136.29	48	ePKPpre		13 37 57.9	
ANMO				ePKPdf	PKPdf	13 38 07.1	+2.6
EYMN	Ely	136.34	23	ePKPdf	PKPdf	13 38 05.5	+1.3
BNM	Barren Site	136.52	49	ePKPdf	PKPdf	13 38 08.7	+3.7
MNTX	Cornudas Mount	138.51	52	ePKPpre		13 38 01.0	
MNTX				ePKPdf	PKPdf	13 38 10.7	+2.0
GDL2	Guadalupe Moun	139.08	50	ePKPpre		13 38 02.2	
CLNB	Carlsbad	139.42	50	ePKPdf	PKPdf	13 38 12.2	+2.0
CFAA	Coronel Fontan	139.62	179	PKhKP		13 38 07.8	
	comp=Z,0.2nm,0.4s,baz=229,slow=3.1,SNR=4.6						
CFAA				PP	PP	13 41 04.5	-5.6
	comp=Z,0.1nm,0.4s,baz=209,slow=9.9,SNR=5.2						
CFAA	Coronel Fontan	139.62	179	PKP	PKPdf	13 38 07.8	-2.9
CFAA				PP	PP	13 41 04.5	-5.6
KSU1	Kansas State U	140.49	36	ePKPpre		13 38 10.3	
LTX	Lajitas	140.83	54	PKHKP		13 38 09.2	
LTX	Lajitas	140.83	54	ePKPpre		13 38 08.7	
TXAR	Lajitas Array	140.83	54	PKHKP		13 38 08.9	
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TXAR	Lajitas Array	140.83	54	PKhKP		13 38 08.8	
	comp=Z,2.3nm,0.5s,baz=240,slow=3.2,SNR=41						
WMOK	Wichita Mounta	141.82	43	PKHKP		13 38 11.0	
WMOK	Wichita Mounta	141.82	43	ePKPpre		13 38 10.6	
CPUP	Villa Florida	143.42	196	PKIKP	PKPdf	13 38 17.0	-0.5
CPUP				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CPUP	Villa Florida	143.42	196	PKhKP		13 38 16.9	
	comp=Z,7.4nm,0.9s,baz=158,slow=3.0,SNR=14						
CPUP	Villa Florida	143.42	196	ePKPpre		13 38 16.5	
COLM	Colima	143.87	70	eP	PKPbc	13 38 17.4	-0.1
FRNY	Flat Rock	143.96	7	ePKPpre		13 38 16.7	
AAM	Ann Arbor	144.04	20	PKIKP	PKPdf	13 38 18.2	+0.1
AAM	Ann Arbor	144.04	20	ePKPpre		13 38 17.9	
SFJM	Santa Fe	144.19	67	eP	PKPbc	13 38 19.0	+0.6
SLM	Saint Louis	144.30	31	PKIKP	PKPdf	13 38 18.2	-0.5
SLM	Saint Louis	144.30	31	ePKPpre		13 38 18.1	
WVL	Waterville	144.54	2	ePKPpre		13 38 19.1	
FVM	French Village	144.69	32	PKIKP	PKPdf	13 38 19.7	+0.3
FVM	French Village	144.69	32	ePKPpre		13 38 19.6	
MIV	Mineville/With	144.72	7	ePKPpre		13 38 19.8	
NCB	Newcomb	144.73	8	ePKPpre		13 38 19.8	
RCBR	Riachuelo	144.91	246	ePKPdf	PKPdf	13 38 22.1	+1.7
HNH	Hanover	145.22	6	ePKPdf	PKPdf	13 38 23.1	+2.9
GENY	Geneseo	145.25	13	ePKPdf	PKPdf	13 38 21.5	+1.3
ACCN	Adirondack Com	145.38	7	ePKPdf	PKPdf	13 38 21.9	+1.5
FFD	Franklin Falls	145.51	5	ePKP	PKPdf	13 38 18.5	-2.1
BLO	Bloomington	145.62	26	PKIKP	PKPdf	13 38 23.0	+2.1
BLO	Bloomington	145.62	26	ePKPdf	PKPdf	13 38 22.9	+1.9
ALLY	Alegheny Colle	145.72	16	ePKPdf	PKPdf	13 38 23.1	+2.1
UALR	University of	145.93	38	ePKPdf	PKPdf	13 38 24.1	+2.5
PARMO	Parma	146.04	32	ePKPdf	PKPdf	13 38 24.3	+2.5
BINY	Binghamton	146.17	11	ePKPdf	PKPdf	13 38 24.3	+2.5
NATX	Nacogdoches	146.36	44	ePKPdf	PKPdf	13 38 24.7	+2.3
HBAR	Harrisburg	146.36	35	ePKPdf	PKPdf	13 38 25.2	+2.8
GNAR	Gosnell	146.42	34	ePKPdf	PKPdf	13 38 25.6	+3.2
HRV	Harvard--Oak R	146.47	5	PKP2	PKPab	13 38 25.3	-1.6
HRV	Harvard--Oak R	146.47	5	ePKPdf	PKPdf	13 38 25.4	+3.1
WCI	Wyandotte Cave	146.50	27	PKP2	PKPab	13 38 24.1	-3.1
WCI	Wyandotte Cave	146.50	27	ePKPdf	PKPdf	13 38 23.9	+1.5
GLAT	Glass	146.58	32	ePKPdf	PKPdf	13 38 25.3	+2.6
WES	Weston	146.61	5	PKP2	PKPab	13 38 26.2	-1.3
WES	Weston	146.61	5	ePKPdf	PKPdf	13 38 25.7	+3.1
QUA2	Belchertown	146.62	6	ePKPdf	PKPdf	13 38 25.4	+2.8
UTMT	University of	146.75	32	ePKPdf	PKPdf	13 38 25.6	+2.6
WVT	Waverly	147.45	31	PKIKP	PKPdf	13 38 26.1	+2.0
WVT	Waverly	147.45	31	ePKPdf	PKPdf	13 38 26.0	+1.9
WVT				ePKPbc	PKPdf	13 38 28.5	+4.4
CAIG	El Cayaco	147.46	72	eP	PKPdf	13 38 27.1	+2.5
CS6B	Jaguaretama	147.54	245	ceP	PKPdf	13 38 26.1	+1.2
CS6B				i		13 38 28.6	
CS6B				e		13 38 31.4	
CS6B				e		13 38 42.8	
CS6B				e		13 39 15.2	
MCWV	Mont Chateau	147.65	17	ePKPbc	PKPdf	13 38 28.9	+4.6
PAL	Palisades	147.68	9	PKP2	PKPab	13 38 29.1	-2.6
PAL	Palisades	147.68	9	ePKPbc	PKPdf	13 38 28.9	+4.6
OXF	Oxford	147.82	35	PKP2	PKPab	13 38 29.5	-3.0
OXF	Oxford	147.82	35	ePKPbc	PKPdf	13 38 29.3	+4.5
CPNY	Central Park	147.88	9	ePKPbc	PKPdf	13 38 29.4	+4.8
BRNJ	Basking Ridge	147.89	10	ePKPbc	PKPdf	13 38 30.6	+6.0
PLIG	Platanillo	147.92	70	eP	PKPdf	13 38 29.8	+4.4
PLAL	Pickwick Lake	148.20	33	ePKPdf	PKPdf	13 38 27.1	+1.7
PPM	Popocatepetl	148.57	68	eP	PKPdf	13 38 33.0	+6.6
PPM				⇑iP		13 38 33.1	
BAO	Brasilia Array	148.59	219	PKPdf	PKPdf	13 38 29.7	+3.2
BAO				PKPdf	PKPdf	13 38 37.0	+11
BDFB	Brasilia	148.60	219	PKIKP	PKPdf	13 38 29.6	+3.1
BDFB						13 38 33.4	
BDFB				pmax	pmax		
	comp=Z,23nm,1.0s						
BDFB				pmax	pmax		
	comp=Z,23nm,1.0s						
BDFB	Brasilia	148.60	219	PKP	PKPdf	13 38 29.6	+3.1
	comp=Z,23nm,1.0s,baz=84,slow=2.7,SNR=18						
BDFB				PKPbc	PKPdf	13 38 33.4	+6.9
	comp=Z,23nm,1.0s,baz=112,slow=2.6,SNR=17						
SDMD	Soldier's Deli	148.67	13	ePKPbc	PKPdf	13 38 31.3	+5.3
JATB	Jatai	148.77	211	eP	PKPdf	13 38 21.4	-5.3
JATB				e		13 38 28.5	
JATB				i		13 38 33.6	
JATB				e		13 38 54.4	
JATB				i		13 38 59.6	
JATB				i		13 39 05.6	
TZTN	Tazewell	149.10	25	ePKPdf	PKPdf	13 38 29.2	+2.4
TZTN				ePKPbc	PKPdf	13 38 32.8	+6.1
SWET	Sewanee	149.11	30	ePKPdf	PKPdf	13 38 28.1	+1.3
SWET				ePKPbc	PKPdf	13 38 32.2	+5.4
CPCT	Cooper Cave	149.59	28	ePKPbc	PKPdf	13 38 34.1	+6.6
CBN	Corbin	149.69	15	ePKPdf	PKPdf	13 38 29.9	+2.3
CBN				ePKPbc	PKPdf	13 38 33.8	+6.1
BLA	Blacksburg	149.70	20	PKP2	PKPab	13 38 34.6	-5.4
BLA	Blacksburg	149.70	20	ePKPbc	PKPdf	13 38 33.8	+6.1
LRAL	Lakeview Retre	150.26	34	ePKPdf	PKPdf	13 38 30.7	+2.0
LRAL				ePKPbc	PKPdf	13 38 35.8	+7.1
JSC	Jenkinsville	151.99	24	PKIKP	PKPdf	13 38 34.4	+3.1
JSC	Jenkinsville	151.99	24	ePKPbc	PKPdf	13 38 39.9	+8.7
COW	Cow Castle Cre	153.00	24	ePKPbc	PKPdf	13 38 41.8	+9.1
SIV	San Ignacio	154.27	195	PKP	PKPdf	13 38 38.1	+3.2
	comp=Z,7.6nm,1.1s,baz=189,slow=1.4,SNR=19						
SIV				PKPbc	PKPdf	13 38 45.6	+11
	comp=Z,5.5nm,1.0s,baz=194,slow=3.6,SNR=8.9						
SIV				PKPab	PKPab	13 39 00.2	+0.4
	comp=Z,8.1nm,1.1s,baz=190,slow=3.5,SNR=7.3						
SIV				PP	PP	13 42 32.5	-3.6
	comp=Z,1.2nm,0.5s,baz=151,slow=12,SNR=4.4						
LPAZ	La Paz	154.87	179	PKIKP	PKPdf	13 38 40.1	+4.5
LPAZ						13 38 48.7	
LPAZ						13 39 01.7	
LPAZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LPAZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LPAZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPAZ	La Paz	154.87	179	PKP	PKPdf	13 38 40.1	+4.5
	comp=Z,5.1nm,1.1s,baz=96,slow=2.1,SNR=15						
LPAZ				PKPbc	PKPdf	13 38 48.7	+13
	comp=Z,5.3nm,1.1s,baz=255,slow=1.5,SNR=7.6						
LPAZ				PKPab	PKPab	13 39 01.6	-0.6
	comp=Z,10nm,1.0s,baz=156,slow=3.9,SNR=11						
LPAZ	La Paz	154.87	179	ePKPdf	PKPdf	13 38 39.3	+3.6
SAML	Samuel	161.57	195	ePKPdf	PKPdf	13 38 46.0	+2.3
SAML				ePKPab	PKPab	13 39 31.1	-0.2
JTS	JuntasAbangare	163.09	84	PKP2	PKPab	13 39 38.2	+0.4
JTS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
JTS	JuntasAbangare	163.09	84	PKPab	PKPab	13 39 38.2	+0.3
	comp=Z,3.3nm,0.5s,baz=59,slow=23,SNR=4.2						
OTAV	Otavalo	166.32	129	ePKPdf	PKPdf	13 38 51.4	+3.0
ROSC	El Rosal	172.36	122	PKPab	PKPab	13 40 20.0	+1.5
	comp=Z,6.1nm,0.5s,baz=278,slow=23,SNR=6.8						
SDV	Santo Domingo	177.25	92	PKPab	PKPab	13 40 41.2	+1.0
	comp=Z,8.7nm,1.0s,baz=284,slow=3.8,SNR=11						

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*ATH **11** 13:22:26.6, 36.20N×29.61E, h41^{km}, MD3.1/3*
*ISK **11** 13:22:28.6, 36.07N×29.61E, h55^{km}, MD3.3*
*CSEM **11** 13:22:28.1±0.2, 36.06N×29.60E, h40^{km}, MD3.3, Error ellipse: s-maj=5.5km s-min=2.5km az=167.0*
ISC 11 13:22:24.6±0.9**, 35.78N**±0.05×**29.59E**±0.06**, h10^{km}, n19, σ1^{s}33**/30**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.38	359	eP	Pg	13 22 33.5	+1.2
KSL				eS	Sg	13 22 38.5	+1.0
AKAS	Kas	0.46	2	i P	Pg	13 22 34.6	+0.7
AKAS				i S	Sg	13 22 39.9	-0.3
FETY	Fethiye	0.95	335	PG	Pg	13 22 42.9	-0.8
FETY				SG	Sg	13 22 54.1	-2.4
ELL	Elmali	1.00	15	PG	Pg	13 22 43.4	-1.4
ELL				SG	Sg	13 22 53.5	-4.7
DALT	Dalyan (Mudla)	1.26	322	ePG	Pg	13 22 47.6	-2.2
ARG	Arkhangelos	1.27	291	eP	Pb	13 22 48.5	+0.4
GOLH	Golhisar	1.46	359	i P	Pn	13 22 51.8	+0.7
GOLH				i S	Sb	13 23 12.8	+2.8
DNZL	Cakiroluk	1.96	347	i P	Pn	13 23 15.1	+17
DNZL				i S	Sn	13 23 23.9	+0.7
KARP	Karpathos	1.99	264	eP	Pb	13 23 01.0	+0.5
KARP				eS	Sn	13 23 26.0	+2.0
KARP	Karpathos	1.99	264	ePb	Pb	13 23 01.0	+0.5
KARP				eSn	Sn	13 23 23.0	-0.9
DENT	Denizli	2.03	347	ePN	Pn	13 22 57.6	-1.7
MLSB	Milas	2.11	317	ePN	Pn	13 23 00.1	-0.3
BDRM	Kayabasi	2.16	307	i P	Pn	13 23 04.6	+3.4
BDRM				i S	Sn	13 23 32.4	+4.2
ISP	Isparta	2.19	19	ePN	Pn	13 22 59.2	-2.5
BODT	Bodrum	2.24	306	ePN	Pn	13 23 02.0	-0.4
TKTP	Tekketepe	2.34	14	i P	Pn	13 23 05.4	+1.7
TKTP				i S	Sn	13 23 32.8	+0.1
HDMB	Hadim	2.62	62	ePN	Pn	13 23 08.2	+0.4
MANT	Manisa	2.83	343	i P	Pn	13 23 14.4	+3.6
MANT				i S	Sn	13 23 45.2	-0.2
KIZT	Kizilcal	3.60	30	ePN	Pn	13 23 20.5	-1.2

JMA 11 13:33:12.8±0.6**, 45.72N×150.82E, h187^{km}, M3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	4.33	239	P	P	13 34 18.3	-0.7
NEM2				eS	S	13 35 10.2	+0.1
JRA	Rausu	4.43	248	P	P	13 34 20.5	+0.2
JNK	Nakash	4.85	246	P	P	13 34 25.7	0.0
JAK	Akkeshi	5.17	240	P	P	13 34 29.1	-0.7
JAK				eS	S	13 35 29.4	-0.1
JTKR	Abashiri--Toko	5.22	253	P	P	13 34 30.1	-0.3
JMP	Maruseppu	5.57	255	P	P	13 34 34.5	-0.6
JAR	Ashorobuto	5.59	247	P	P	13 34 36.0	+0.7
JOB	Onbets	5.75	243	P	P	13 34 37.1	-0.3
JOB				eS	S	13 35 42.8	-0.3
JKK2	Kamakawa 2	6.03	255	P	P	13 34 41.0	-0.1
ASAJ	Asahikawa	6.05	258	P	P	13 34 41.3	-0.1
JCH	Churui	6.20	243	P	P	13 34 42.4	-0.8
JCH				eS	S	13 35 52.3	-1.3
JFR	Furan	6.42	249	P	P	13 34 46.2	+0.1
JEM	Erimo	6.66	239	P	P	13 34 49.8	+0.5
JBT2	Biratori 2	6.75	247	P	P	13 34 49.7	-0.7
JNBK	Urakawa-nobuka	6.76	242	P	P	13 34 48.9	-1.7
JNBK				eS	S	13 36 03.4	-3.4
JEW	Eniwo	7.32	250	P	P	13 34 57.5	-0.4
JNB	Noboribetsu	7.75	249	P	P	13 35 01.9	-1.8
JNB				eS	S	13 36 29.2	-1.1
JKB	Kayabe	8.05	245	P	P	13 35 05.3	-2.2
JKB				eS	S	13 36 32.8	-4.4
JYM2	Yakumo 2	8.36	248	P	P	13 35 09.7	-1.9
JSR	Shiriuchi	8.63	245	P	P	13 35 13.2	-1.9
JSR				eS	S	13 36 47.8	-2.9
JTM	Tenmabayashi	8.65	239	P	P	13 35 13.0	-2.5
JTM				eS	S	13 36 46.5	-4.9
JANG	Nango	8.66	235	P	P	13 35 13.4	-2.1
JANG				eS	S	13 36 48.3	-3.1
JTH	Tanohata	8.75	232	P	P	13 35 15.0	-1.8
JTH				eS	S	13 36 51.5	-2.2
JOSM	Okushiri--Mats	8.96	250	P	P	13 35 18.2	-1.3
OFUJ	Ofunato	9.47	229	P	P	13 35 25.5	-0.7
JRG	Rokugo	9.81	234	P	P	13 35 29.9	-0.6
JIO	Ouri	10.11	227	P	P	13 35 33.8	-0.5
JYA	Atsumi	10.89	233	P	P	13 35 44.4	-0.1
JFK	Kawauchi	11.18	225	P	P	13 35 48.6	+0.4

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*IDC **11** 13:45:47.1±1.7, 1.59N×97.09E, mb4.0/6, mb1 4.1/7, mb1mx3.9/18, mbtmp4.0/7, ML3.9/1, MS3.5/1, Ms1 3.7/1, ms1mx3.2/14, Error ellipse: s-maj=64.9km s-min=26.1km az=55.0*
*NEIC **11** 13:45:51.9±0.9, 1.66N×97.16E, h30^{km}, mb4.3/1, Error ellipse: s-maj=18.7km s-min=16.3km az=53.0*
ISC 11 13:45:50.1±1.2**, 1.7N**±0.2×**97.2E**±0.2**, h30^{km}, n10, σ0^{s}76**/10**, mb4.1**/7**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.00	44	eP	Pn	13 47 05.4	+0.3
CMAR	Chiang Mai Arr	16.76	6	Pn	P	13 49 44.1	-0.4
	0.2nm,0.3s,baz=200,slow=12,SNR=7.4						
CMAR				LR	LR	13 57 29.4	
	comp=Z,163nm,18.7s,baz=150,slow=42						
WRA	Warramunga Arr	42.33	122	P	P	13 53 43.1	-0.4
	0.2nm,0.3s,mb3.2,baz=321,slow=11,SNR=8.0						
SONM	Songino Array	46.66	9	P	P	13 54 18.5	+0.7
	2.7nm,0.7s,mb4.3,baz=190,slow=8.8,SNR=21						
MKAR	Makanchi Array	46.76	346	P	P	13 54 19.1	+0.5
	7.0nm,0.8s,mb4.6,baz=160,slow=7.8,SNR=44						
BVAR	Borovoye Array	55.77	341	P	P	13 55 25.8	-0.9
	1.1nm,0.6s,mb4.1,baz=158,slow=8.0,SNR=7.2						
CHKZ	Chkalovo	56.25	341	eP	P	13 55 28.7	-1.4
	3.1nm,0.9s,mb4.3						
ARCES	ARCESS Array B	82.06	340	P	P	13 58 09.1	+0.4
	2.3nm,0.8s,mb4.2,baz=90,slow=3.6,SNR=5.7						
ARCES	ARCESS Array B	82.06	340	P	P	13 58 09.1	+0.4
GERES	GERESS Array B	84.42	319	P	P	13 58 22.3	+1.2
	0.4nm,0.7s,mb3.6,baz=108,slow=8.4,SNR=4.2						

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*NIED **11** 14:41:00, 23.90N×121.70E, h5^{km}, Mw4.1 Best double couple: $M_0$1.48×10^{15} NP1:ϕ_s48°, δ67°, λ95°. NP2:ϕ_s215°, δ24°, λ78°.*
*JMA **11** 14:41:51.6±0.3, 23.86N×121.72E, h6^{km}, M3.7*
*IDC **11** 14:41:51.5±1.3, 24.12N×121.97E, mb3.6/4, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, Error ellipse: s-maj=66.0km s-min=25.7km az=67.0*
*TAP **11** 14:41:52.8, 24.07N×121.69E, h8^{km}, ML4.4*
TAP Felt II J at Chiawan, II J at Hualien, I J at Shilin, I J at Nanau, I J at Nanshan.
*BJI **11** 14:41:55.1, 24.20N×121.67E, h15^{km}, mb4.7, ML3.8*
ISC 11 14:41:52.8±0.2**, 24.05N**±0.01×**121.78E**±0.02**, h6^{km}, n70, σ1^{s}10**/106**, mb3.4**/4**, 19C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan	0.17	280	P	Pg	14 41 55.1	-1.3
TWD				S	Sg	14 41 56.6	-2.0
HWA	Hwalien	0.17	245	⇑iP	Pg	14 41 56.0	-0.4
EHP	Heping Village	0.26	353	eP	Pg	14 41 57.9	-0.2
EHP				S	Sg	14 42 02.0	+0.4
ESF	Shoufeng Towns	0.30	234	eP	Pg	14 41 58.1	-0.9
ENA	Nanau	0.38	355	⇑iP	Pg	14 42 00.1	-0.3
ENA				S	Sg	14 42 05.5	0.0
ESL	Shilin	0.39	233	⇑iP	Pg	14 41 59.5	-1.2
ESL				S	Sg	14 42 05.5	-0.5
TEGC	Jichi Village	0.40	213	eP	Pg	14 42 01.6	+0.7
TEGC				S	Sg	14 42 08.9	+2.6
WHF	Hehuan Shan	0.48	281	⇑iP	Pg	14 42 00.8	-1.6
NNS	Nan Shan	0.54	316	⇑iP	Pg	14 42 02.3	-1.2
NNS				S	Sg	14 42 12.4	+1.7
TWC	Suao	0.56	7	⇑iP	Pg	14 42 03.8	-0.2
TWC				S	Sg	14 42 12.3	+0.8
ENTT	Nioudou	0.62	342	⇑iP	Pg	14 42 04.5	-0.7
ENTT				S	Sg	14 42 12.8	-0.7
TWE	Neicheng	0.68	351	⇑iP	Pg	14 42 05.8	-0.5
TWE				S	Sg	14 42 15.4	+0.1
EHY	Hungye	0.68	218	⇑P	Pg	14 42 05.4	-1.0
ILA	Ilan	0.71	358	eP	Pg	14 42 06.6	-0.5
NSK	Sanguang	0.73	329	⇑iP	Pg	14 42 06.5	-1.0
SMLT	Sun Moon Lake	0.82	258	⇑iP	Pb	14 42 07.7	-1.4
SMLT				S	Sb	14 42 19.8	-0.3
TWF1	Yuli	0.82	212	eP	Pb	14 42 07.4	-1.6
TYC	Yuchr	0.85	260	⇑iP	Pb	14 42 08.1	-1.5
TYC				S	Sb	14 42 19.6	-1.5
NSTT	Nanjuang	0.91	309	⇑iP	Pb	14 42 10.2	-0.4
NSTT				S	Sb	14 42 22.2	-0.7
TWA	Mucha	0.94	349	eP	Pb	14 42 10.8	-0.4
TWQ1	Liyutan	0.96	288	⇑iP	Pb	14 42 11.2	-0.2
TWQ1				S	Sb	14 42 25.1	+0.8
TWB1	Santiao Chiao	0.97	11	eP	Pb	14 42 11.6	-0.1
TWB1				S	Sb	14 42 25.5	+1.0
NSY	Sanyi	1.00	292	⇑iP	Pb	14 42 12.3	+0.3
TAP1	Taipei	1.01	347	eP	Pb	14 42 11.6	-0.7
TAP1				S	Sb	14 42 25.2	-0.5
TCU	Taichung	1.01	276	P	Pb	14 42 12.7	+0.4
TCU				S	Sb	14 42 27.2	+1.6
TAP	Taipei	1.01	346	eP	Pb	14 42 12.4	+0.1
TAP				S	Sb	14 42 25.5	-0.3
WNT	Mingjian	1.01	260	eP	Pb	14 42 12.5	+0.1
WNT				S	Sb	14 42 27.6	+1.8
NWF	Wu-fen Shan	1.02	0	⇑iP	Pb	14 42 12.5	+0.1
CHKT	Chengkung	1.02	202	eP	Pb	14 42 12.1	-0.4
HSN	Hsinchu	1.05	316	eP	Pb	14 42 13.5	+0.5
NCU	National Centr	1.06	330	eP	Pb	14 42 13.7	+0.5
NCU				S	Sb	14 42 29.4	+2.3
TWS1	Kuangyinshan	1.10	343	⇑P	Pb	14 42 14.4	+0.6
TWS1				S	Sb	14 42 30.3	+2.2
CHN5	Tsauling	1.10	246	⇑P	Pb	14 42 13.9	0.0
CHN5				S	Sb	14 42 30.3	+2.0
ELDTW	Lidau	1.11	219	eP	Pb	14 42 12.8	-1.1
WGK	Gukeng	1.17	252	eP	Pb	14 42 15.3	+0.3
YOJ	Yonaguni jima	1.20	70	P	Pb	14 42 16.2	+0.7
YOJ				S	Sb	14 42 33.7	+2.6
TWY	Chenhua	1.23	352	eP	Pb	14 42 16.5	+0.5
CHN4	Tsaushan	1.29	238	⇑iP	Pb	14 42 17.4	+0.4
CHN4				S	Sb	14 42 36.6	+2.8
CHN2	Minshiung	1.30	247	eP	Pb	14 42 17.7	+0.5
CHN2				S	Sb	14 42 36.1	+2.1
WTP	Ta-pu	1.33	233	⇓P	Pb	14 42 17.5	-0.3
WTP				S	Sb	14 42 37.0	+1.9
CHY	Chiayi	1.36	246	eP	Pb	14 42 17.9	-0.3
CHY				S	Sb	14 42 36.8	+1.1
WTCT	Ta-ch'eng	1.38	263	⇓P	Pb	14 42 18.2	-0.5
WTCT				S	Sb	14 42 37.4	+0.9
TWG	Pinlang	1.39	208	eP	Pb	14 42 16.1	-2.6
TWK	Hsinying	1.42	237	eP	Pn	14 42 19.2	0.0
TWK				S	Sb	14 42 38.9	+1.4
CHN1	Nanshi	1.43	233	eP	Pn	14 42 19.5	+0.1
CHN1				S	Sb	14 42 40.0	+2.1
SGST	Jiashian	1.46	229	eP	Pn	14 42 19.6	-0.2
SGST				S	Sb	14 42 41.1	+2.4
WSF	Szhu	1.48	254	eP	Pn	14 42 20.4	+0.2
WSF				S	Sb	14 42 40.4	+1.1
PCYT	Pengchaiyu	1.59	10	eP	Pn	14 42 21.9	+0.2
CHN8	Yiju	1.60	244	eP	Pn	14 42 21.5	-0.2
CHN3	Shinhua	1.62	233	eP	Pn	14 42 22.6	+0.5
ECL	Taimali	1.63	208	eP	Pn	14 42 20.0	-2.3
SSD	Sandimen	1.67	219	eP	Pn	14 42 22.6	-0.2
SCLT	Jiali	1.69	239	eP	Pn	14 42 22.7	-0.4
IRIF	Iriomote-Funau	1.81	81	P	Pn	14 42 24.9	+0.2
IRIF				eS	Sn	14 42 50.1	+1.9
HATJ	Hateruma jima	1.85	89	eS	Sn	14 42 49.7	+0.3
EAST	Anshuo	1.87	207	eP	Pn	14 42 23.8	-1.8
TAW	Tawu	1.87	206	eP	Pn	14 42 26.9	+1.2
SCZT	Fangliau	1.98	213	eP	Pn	14 42 27.7	+0.4
JKRS	Kuro-shima	2.05	84	P	Pn	14 42 28.6	+0.4
JKRS				eS	Sn	14 42 55.4	+1.1
PNG	Penghu	2.09	257	eP	Pn	14 42 27.4	-1.4
WDGT	Dungji	2.10	248	eP	Pn	14 42 28.2	-0.7
JIJ	Ishigaki jima	2.18	81	P	Pn	14 42 30.0	-0.1
JIJ				S	Sn	14 42 57.5	-0.2
JTJ	Tarama	2.73	77	P	Pn	14 42 38.2	+0.2

JTJ				eS	Sn	14 43 12.7	+1.0
QZH	Quanzhou	3.04	288	P	Pn	14 42 40.6	-1.7
QZH				S	Sn	14 43 15.3	-4.1
QZH				Smax			
	comp=N,410nm,0.7s						
QZH				Smax			
	comp=E,430nm,1.0s						
KNM	Kinmen	3.08	277	eP	Pn	14 42 42.8	0.0
JKE	Kume jima 2	5.07	62	P	Pn	14 43 11.0	-0.2
SONM	Songino Array	26.70	337	P	P	14 47 33.2	-1.3
	comp=E,0.7nm,0.9s,mb3.2,baz=146,slow=8.9,SNR=4.2						
MKAR	Makanchi Array	38.81	316	P	P	14 49 18.1	-1.9
	comp=E,0.4nm,0.5s,mb3.4,baz=102,slow=10,SNR=5.0						
WRA	Warramunga Arr	45.41	163	P	P	14 50 12.2	-2.1
	comp=E,0.6nm,0.6s,mb3.6,baz=345,slow=8.6,SNR=10.0						
YKA	Yellowknife Ar	82.88	23	P	P	14 54 16.8	-2.4
	comp=E,0.3nm,0.5s,mb3.6,baz=311,slow=4.9,SNR=3.0						

IDC 11 14:47:20.8±1.6**, 1.62N**×**97.00E, mb4.0**/6**, mb1 4.1**/7**, mb1mx3.9**/17**, mbtmp3.9**/7**, ML3.6**/1**, MS3.6**/2**, Ms1 3.6**/2**, ms1mx3.1**/25**, Error ellipse: s-maj=51.0km s-min=26.5km az=52.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.84	6	Pn	P	14 51 18.1	-1.6
	0.1nm,0.3s,baz=199,slow=10,SNR=6.6						
NWAO	Narrogin (SRO)	39.32	153	LR	LR	15 13 13.0	
	comp=Z,83nm,18.1s,baz=4.0,slow=40						
WRA	Warramunga Arr	42.42	122	P	P	14 55 18.0	-1.2
	0.5nm,0.3s,baz=304,slow=9.0,SNR=9.5						
JNU	Nakatsue	44.63	42	LR	LR	15 16 41.0	
	comp=Z,66nm,21.3s,baz=334,slow=39						
SONM	Songino Array	46.75	9	P	P	14 55 52.3	-1.3
	1.2nm,0.5s,baz=193,slow=9.3,SNR=11						
MKAR	Makanchi Array	46.79	346	P	P	14 55 53.0	-0.9
	5.1nm,0.7s,baz=147,slow=7.3,SNR=33						
MJAR	Matsushiro Arr	51.52	43	P	P	14 56 27.3	-3.3
	1.4nm,0.7s,baz=207,slow=5.6,SNR=4.8						
ARCES	ARCESS Array B	82.08	340	P	P	14 59 43.1	-1.0
	0.6nm,0.4s,baz=104,slow=5.0,SNR=8.8						
GERES	GERESS Array B	84.37	319	P	P	14 59 54.0	-2.3
	0.3nm,0.6s,baz=79,slow=6.8,SNR=5.9						

NIED **11** *14:48:00, 23.70N×121.80E, h5^{km}, Mw4.4 Best double couple: $M_0$4.45×10^{15} NP1:ϕ_s33°, δ70°, λ88°. NP2:ϕ_s219°, δ20°, λ96°.*

JMA **11** *14:48:18.6±0.7, 23.74N×121.80E, M4.0*

IDC **11** *14:48:18.1±1.1, 23.86N×121.58E, mb3.7/8, mb1 3.9/9, mb1mx3.8/20, mbtmp3.7/9, ML3.3/1, MS3.5/8, Ms1 3.5/8, ms1mx3.3/33, Error ellipse: s-maj=26.0km s-min=24.9km az=42.0*

NEIC **11** *14:48:19.7±0.7, 23.95N×121.57E, h10^{km}, mb4.3/2, Error ellipse: s-maj=15.3km s-min=9.8km az=93.0*

TAP **11** *14:48:20.5, 24.06N×121.70E, h7^{km}, ML4.5*

TAP Felt I J at Chiawan, II J at Hualien, I J at Shilin, I J at Nanau, I J at Nanshan.

BJI **11** *14:48:22.8, 24.21N×121.56E, h10^{km}, mB4.6, mb4.5, ML4.5, Ms4.3, Msz4.2*

ISC 11 14:48:20.0±0.4**, 24.05N**±0.01×**121.78E**±0.02**, h1**^{km}±2^{km}**, n96, σ1§16**/136**, mb3.8**/9**, MS3.6**/7**, 18C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan	0.17	279	eP	Pg	14 48 22.8	-0.6
TWD				S	Sg	14 48 24.8	-0.9
HWA	Hwalien	0.18	245	⇑iP	Pg	14 48 23.8	+0.3
NACB	Ninganchiao	0.21	305	eP	Pg	14 48 23.5	-0.6
EHP	Heping Village	0.26	351	eP	Pg	14 48 25.4	+0.2
EHP				S	Sg	14 48 29.8	+1.3
ESF	Shoufeng Towns	0.31	234	eP	Pg	14 48 25.8	-0.4
ENA	Nanau	0.37	354	⇑iP	Pg	14 48 28.0	+0.6
ENA				S	Sg	14 48 33.2	+0.8
ESL	Shilin	0.40	233	⇑iP	Pg	14 48 27.4	-0.5
ESL				S	Sg	14 48 33.2	0.0
TEGC	Jichi Village	0.41	213	eP	Pg	14 48 29.2	+1.1
TEGC				S	Sg	14 48 37.2	+3.6
WHF	Hehuan Shan	0.48	281	⇑iP	Pg	14 48 28.8	-0.8
NNS	Nan Shan	0.54	316	⇑iP	Pg	14 48 30.4	-0.3
NNS				S	Sg	14 48 37.6	-0.2
TWC	Suao	0.56	6	⇑iP	Pg	14 48 31.7	+0.6
ENTT	Nioudou	0.62	341	⇑iP	Pg	14 48 32.5	+0.2
ENTT				S	Sg	14 48 42.5	+2.0
TWE	Neicheng	0.67	351	⇑iP	Pg	14 48 33.8	+0.4
TWE				S	Sg	14 48 43.3	+1.0
EHY	Hungye	0.69	218	eP	Pg	14 48 33.4	-0.4
EHY				S	Sg	14 48 44.7	+1.8
ILA	Ilan	0.71	357	eP	Pg	14 48 34.3	+0.1
YHNB	Yeheng	0.72	329	eP	Pg	14 48 34.1	-0.2
NSK	Sanguang	0.73	328	⇑iP	Pg	14 48 34.5	0.0
NSK				S	Sg	14 48 45.5	+1.2
SMLT	Sun Moon Lake	0.83	258	⇑iP	Pg	14 48 35.8	-0.7
SMLT				S	Sg	14 48 47.7	+0.3
TWF1	Yuli	0.83	213	eP	Pg	14 48 35.4	-1.2
TYC	Yuchr	0.86	260	⇑iP	Pg	14 48 36.1	-1.0
TYC				S	Sg	14 48 47.0	-1.6
NSTT	Nanjuang	0.92	309	⇑iP	Pb	14 48 38.1	-0.2
NSTT				S	Sg	14 48 49.0	-1.5
TWA	Mucha	0.94	349	⇑iP	Pb	14 48 38.8	+0.1
TWA				S	Sb	14 48 50.5	-1.0
TATO	Taipei	0.96	344	eP	Pb	14 48 38.8	-0.2
TWB1	Santiao Chiao	0.97	11	eP	Pb	14 48 39.8	+0.6
TWQ1	Liyutan	0.97	288	⇑iP	Pb	14 48 39.1	0.0
TWQ1				S	Sb	14 48 53.3	+1.0
NSY	Sanyi	1.00	291	⇑iP	Pb	14 48 40.2	+0.4
TAP1	Taipei	1.01	346	eP	Pb	14 48 39.9	0.0
TAP1				S	Sb	14 48 52.8	-0.7
NWF	Wu-fen Shan	1.01	360	⇑iP	Pb	14 48 40.5	+0.6
TAP	Taipei	1.01	346	eP	Pb	14 48 40.3	+0.3
TAP				S	Sb	14 48 51.8	-1.8
TCU	Taichung	1.02	275	eP	Pb	14 48 40.4	+0.4
TCU				S	Sb	14 48 55.0	+1.3
WNT	Mingjian	1.02	260	⇓iP	Pb	14 48 40.6	+0.5
WNT				S	Sb	14 48 54.7	+0.9
CHKT	Chengkung	1.02	202	eP	Pb	14 48 39.1	-1.0
CHKT				S	Sb	14 48 54.5	+0.5
HSN	Hsinchu	1.05	315	eP	Pb	14 48 41.5	+0.8
HSN				S	Sb	14 48 58.1	+3.4
NCU	National Centr	1.06	329	eP	Pb	14 48 41.6	+0.8
NCU				S	Sb	14 48 58.2	+3.2
TWS1	Kuangyinshan	1.09	342	eP	Pb	14 48 42.4	+1.0
TWS1				S	Sb	14 48 58.3	+2.3
CHN5	Tsauling	1.11	246	⇓iP	Pb	14 48 41.9	+0.3
CHN5				S	Sb	14 48 57.6	+1.3
ELDTW	Lidau	1.11	219	eP	Pb	14 48 41.0	-0.7
ELDTW				S	Sb	14 48 56.0	-0.5
WGK	Gukeng	1.18	252	eP	Pb	14 48 42.7	0.0
YOJ	Yonaguni jima	1.19	70	P	Pb	14 48 43.9	+0.9
YOJ				S	Sb	14 49 01.3	+2.5
TWY	Chenhua	1.23	352	eP	Pb	14 48 43.7	0.0
CHN4	Tsaushan	1.30	238	⇑iP	Pb	14 48 45.2	+0.4
CHN4				S	Sb	14 49 02.9	+1.1
CHN2	Minshiung	1.31	247	eP	Pb	14 48 45.6	+0.6
CHN2				S	Sb	14 49 03.5	+1.4
WTP	Ta-pu	1.34	233	eP	Pb	14 48 45.3	-0.3
WTP				S	Sb	14 49 03.4	+0.3
CHY	Chiayi	1.36	246	eP	Pb	14 48 46.0	+0.1
CHY				S	Sb	14 49 05.1	+1.3
WTCT	Ta-ch'eng	1.39	262	eP	Pb	14 48 45.8	-0.5
WTCT				S	Sb	14 49 05.6	+1.1
TWG	Pinlang	1.39	208	eP	Pb	14 48 43.7	-2.7
TWK	Hsinying	1.42	237	eP	Pn	14 48 46.8	-0.2
TWK				S	Sb	14 49 06.8	+1.3
CHN1	Nanshi	1.44	233	eP	Pn	14 48 47.5	+0.3
CHN1				S	Sb	14 49 07.1	+1.1
SGST	Jiashian	1.47	229	eP	Pn	14 48 47.9	+0.3
SGST				S	Sb	14 49 08.6	+1.9
WSF	Szhu	1.49	254	eP	Pn	14 48 48.0	0.0
WSF				S	Sb	14 49 08.4	+1.0
PCYT	Pengchaiyu	1.59	9	eP	Pn	14 48 49.4	0.0
CHN8	Yiju	1.60	244	eP	Pn	14 48 48.9	-0.6
CHN3	Shinhua	1.62	233	eP	Pn	14 48 50.9	+1.0
ECL	Taimali	1.64	208	eP	Pn	14 48 47.3	-2.8
SSD	Sandimen	1.68	219	eP	Pn	14 48 50.0	-0.6
SSD				S	Sb	14 49 13.3	+0.5
IRIF	Iriomote-Funau	1.80	81	P	Pn	14 48 52.4	0.0
IRIF				eS	Sn	14 49 17.1	+1.0
HATJ	Hateruma jima	1.85	90	P	Pn	14 48 51.3	-1.8
HATJ				eS	Sn	14 49 17.7	+0.3
EAST	Anshuo	1.87	208	eP	Pn	14 48 51.1	-2.3
SCZT	Fangliau	1.99	213	eP	Pn	14 48 55.9	+0.9
JKRS	Kuro-shima	2.04	84	P	Pn	14 48 56.5	+0.7
JKRS				eS	Sn	14 49 23.7	+1.4
PNG	Penghu	2.10	257	eP	Pn	14 48 55.6	-1.0
WDGT	Dungji	2.10	248	eP	Pn	14 48 55.8	-0.8
WDGT				S	Sn	14 49 21.4	-2.4
JIJ	Ishigaki jima	2.18	81	P	Pn	14 48 57.2	-0.6
JIJ				S	Sn	14 49 25.0	-0.7
HEN	Hengchun	2.25	205	eP	Pn	14 49 01.1	+2.2
JTJ	Tarama	2.73	77	P	Pn	14 49 06.4	+0.8
JTJ				eS	Sn	14 49 41.5	+1.8
QZH	Quanzhou	3.04	288	P	Pn	14 49 07.8	-2.3
QZH				SG	Sg	14 49 59.0	-2.1
QZH				Smax			
	comp=N,700nm,0.7s						
QZH				Smax			
	comp=E,560nm,0.8s						
QZH				LR	LR		
	comp=N,2μm,9.5s						
QZH				LR	LR		
	comp=E,5μm,9.5s						
QZH				LR	LR		
	comp=Z,7μm,8.8s						
KNM	Kinmen	3.08	277	eP	Pn	14 49 09.7	-1.0
JKE	Kume jima 2	5.07	62	P	Pn	14 49 37.5	-1.3
GZH	Guangzhou	7.80	265	P	Pn	14 50 13.4	-4.0
GZH				Smax			
	comp=N,130nm,0.8s						
GZH				Smax			
	comp=E,110nm,0.9s						
NJ2	Nanjing	8.38	343	eP	P	14 50 21.2	-4.2
NJ2				AP		14 50 28.9	
NJ2				XP		14 50 33.7	
NJ2				S	Sn	14 51 51.2	-11
NJ2				XS		14 52 01.5	
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
NJ2				Smax			
	comp=N,350nm,0.9s						
NJ2				Smax			
	comp=E,340nm,1.1s						
NJ2				LR	LR		
	comp=N,2μm,9.9s						
NJ2				LR	LR		
	comp=E,560nm,7.8s						
NJ2				LR	LR		
	comp=Z,3μm,9.5s						
JNU	Nakatsue	12.05	39	LR	LR	14 56 45.0	
	comp=Z,106nm,19.2s,baz=188,slow=41						
ENH	Enshi	12.57	302	P	P	14 51 28.0	+5.2
KS15	Wonju Array Si	14.33	20	eP	P	14 51 53.2	+7.0
SNY	Shenyang	17.79	4	⇑P	P	14 52 28.9	-1.5
SNY				LR	LR		
	comp=N,480nm,11.9s						
SNY				LR	LR		
	comp=Z,530nm,10.3s						
JHJ	Hachijo jima 2	18.19	56	LR	LR	14 58 48.2	
	comp=Z,230nm,19.8s,baz=81,slow=34						
MJAR	Matsushiro Arr	18.84	45	P	P	14 52 43.8	+0.4
	comp=Z,0.1nm,0.3s,baz=232,slow=49,SNR=2.7						
LZH	Lanzhou	19.58	312	eP	P	14 52 55.9	+3.7
LZH				AP		14 53 01.0	
LZH				XP		14 53 05.0	
LZH				PP	PP	14 53 10.0	0.0
LZH				AMB	AMB		
	comp=Z,40nm,1.5s						
LZH				AMB	AMB		
	comp=Z,200nm,4.0s						
LZH				LR	LR		
	comp=N,380nm,7.2s						
LZH				LR	LR		
	comp=Z,410nm,7.5s						
CN2	Changchun	19.93	8	eP	P	14 53 00.3	+4.3
CN2				eS	S	14 56 28.1	-7.1
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,400nm,13.0s						
CN2				LR	LR		
	comp=E,200nm,13.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
CMAR	Chiang Mai Arr	21.99	260	P	P	14 53 11.2	-6.1
	comp=Z,0.5nm,0.8s,mb3.0,baz=84,slow=8.2,SNR=3.0						
CMAR				LR	LR	15 02 05.1	
	comp=Z,61nm,20.4s,MS3.0,baz=220,slow=38						
CMAR	Chiang Mai Arr	21.99	260	P	P	14 53 11.2	-6.1
CMAR				LR	LR	15 02 05.1	
GTA	Gaotai	24.07	315	eP	P	14 53 36.7	-0.9
GTA				AP		14 53 47.3	
GTA				AMB	AMB		
	comp=Z,70nm,5.4s						
GTA				LR	LR		
	comp=N,180nm,13.0s,MS4.2						
GTA				LR	LR		
	comp=E,420nm,10.7s,MS4.2						
GTA				LR	LR		
	comp=Z,430nm,11.1s,MS4.2						
ULN	Ulaanbaatar	26.49	337	eP	P	14 53 58.1	-2.4
	comp=Z,2.7nm,0.8s,mb3.9						
SONM	Songino Array	26.70	337	P	P	14 54 00.2	-2.2
	comp=Z,1.1nm,0.7s,mb3.7,baz=156,slow=8.8,SNR=8.0						
SONM				LR	LR	15 05 44.0	
	comp=Z,179nm,19.3s,MS3.6,baz=76,slow=39						
MKAR	Makanchi Array	38.81	316	P	P	14 55 45.6	-2.4
	comp=Z,1.4nm,0.7s,mb3.7,baz=105,slow=10,SNR=12						
MKAR				LR	LR	15 12 22.8	
	comp=Z,44nm,19.1s,MS3.3,slow=37						
MKAR	Makanchi Array	38.81	316	P	P	14 55 45.6	-2.4
MKAR				LR	LR	15 12 22.8	
WRA	Warramunga Arr	45.41	163	P	P	14 56 37.9	-4.3
	comp=Z,0.6nm,0.5s,mb3.8,baz=345,slow=8.7,SNR=5.7						
BVAR	Borovoye Array	48.12	321	P	P	14 56 59.4	-3.8
	comp=Z,2.0nm,0.8s,mb4.3,baz=127,slow=7.4,SNR=9.5						
CHKZ	Chkalovo	48.18	322	eP	P	14 56 59.3	-4.4
	comp=Z,96nm,1.0s						
CTA	Charters Tower	49.93	149	LR	LR	15 15 57.9	
	comp=Z,62nm,20.9s,MS3.6,baz=44,slow=33						
ILAR	Eielson Array	69.08	27	P	P	14 59 26.9	-2.3
	comp=Z,0.2nm,0.6s,mb3.6,baz=286,slow=7.6,SNR=4.7						
FINES	FINESS Array B	71.83	330	LR	LR	15 33 53.9	
	comp=Z,43nm,21.4s,MS3.7,baz=344,slow=38						
DAWY	Dawson	72.40	27	eP	P	14 59 45.2	-4.1
BRTR	Keskin Array B	73.69	307	P	P	14 59 54.1	-3.2
	comp=Z,1.0nm,0.9s,mb3.8,baz=63,slow=5.5,SNR=3.7						
NOA	NORSAR Array B	78.59	332	LR	LR	15 37 54.1	
	comp=Z,43nm,18.4s,MS3.8,baz=155,slow=38						
YKA	Yellowknife Ar	82.88	23	P	P	15 00 44.7	-2.4
	comp=Z,0.4nm,0.5s,mb3.9,baz=316,slow=5.1,SNR=7.1						
YKA	Yellowknife Ar	82.88	23	P	P	15 00 44.7	-2.4

TAP **11** *15:22:56.7, 24.90N×122.95E, h134^{km}±1^{km}, ML3.3*

JMA 11 15:22:56.9±0.4**, 24.99N**×**122.93E, h129**^{km}**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.53	172	P	P	15 23 16.0	-0.2
YOJ				eS	S	15 23 31.4	+0.6
IRIF	Iriomote-Funau	0.98	132	P	P	15 23 19.6	-0.1
HATJ	Hateruma jima	1.22	139	eS	S	15 23 41.0	-0.5
JKRS	Kuro-shima	1.23	127	P	P	15 23 22.5	+0.1
JKRS				S	S	15 23 41.0	-0.7
JIJ	Ishigaki jima	1.27	119	P	P	15 23 22.6	-0.1
JIJ				S	S	15 23 40.7	-1.6
JTJ	Tarama	1.65	102	eS	S	15 23 49.6	-0.4

MOS **11** *15:27:57.4±1.1, 36.55N×71.12E, h188^{km}, mb4.3/16, Error ellipse: s-maj=11.2km s-min=7.0km az=109.0*

BJI **11** *15:27:59.1, 36.87N×71.13E, h183^{km}, mB4.7, mb4.5*

NEIC **11** *15:27:59.8±0.3, 36.52N×71.21E, mb4.5/29, Error ellipse: s-maj=8.4km s-min=5.3km az=45.0*

NNC **11** *15:28:02.1±3.8, 37.01N×70.84E, h176^{km}±38^{km}, mpv4.8, Error ellipse: s-maj=32.2km s-min=20.0km az=11.0*

IDC **11** *15:28:02.5±3.7, 36.60N×71.25E, h220^{km}±36^{km}, mb3.8/11, mb1 4.0/13, mb1mx3.8/20, mbtmp4.4/13, MS2.7/1, Ms1 2.9/1, ms1mx2.4/24, Error ellipse: s-maj=13.8km s-min=11.1km az=110.0*

ISC 11 15:27:56.3±0.4**, 36.53N**±0.02×**71.12E**±0.05**, h176**^{km}±4^{km}**, n127, σ1§15**/145**, mb4.3**/35**, 15C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.77	166	⇓P	P	15 28 44.6	+2.1
CEP				S	S	15 29 20.0	+1.9
CHCP	Chirah Chowk	3.36	148	P	P	15 28 51.9	+2.1
THW	Thamme Wali	3.76	172	⇑P	P	15 28 55.9	+1.0
SBDP	Sheikh Budin	4.22	184	P	P	15 29 01.8	+1.0
KSH	Kashi	4.86	51	⇓iP	P	15 29 11.6	+2.5
KSH				S	S	15 30 06.2	+0.8
KSH				Smax			
	comp=N,790nm,0.6s						
KSH				Smax			
	comp=E,1μm,0.7s						
JMU	Jammu	4.92	140	ex	S	15 30 07.5	+0.8
THN	Thein Dam	5.58	136	eP	P	15 29 18.7	+0.3
	comp=E,71nm,0.5s						
THN				eS	S	15 30 19.9	-2.3
AML	Almayashu	5.94	19	P	P	15 29 23.2	0.0
	SNR=330						
PONG	Pong	6.07	137	eP	P	15 29 25.0	+0.1
PONG				eS	S	15 30 31.0	-2.8
UCH	Uchtor	6.27	24	P	P	15 29 27.6	0.0
	SNR=74						
KZA	Kyzart	6.40	29	P	P	15 29 28.8	-0.6
	SNR=35						
EKS2	Erkin-Say	6.46	18	P	P	15 29 30.0	-0.1
	SNR=46						
KK31	Karatay Array	6.59	356	P	P	15 29 30.9	-0.9
	comp=E,29nm,0.3s,baz=180,slow=13,SNR=549						
KK31				⇑S	S	15 30 40.2	-5.9
	comp=E,48nm,0.3s,baz=185,slow=21,SNR=14						
AAK	Ala-Archa	6.63	22	P	P	15 29 32.5	+0.1
	SNR=39						
AAK	Ala-Archa	6.63	22	⇑P	P	15 29 32.4	0.0
	comp=E,32nm,0.5s						
AAK				⇑S	S	15 30 44.2	-3.0
	comp=E,176nm,0.6s						
KBK	Karagaybulak	6.80	25	P	P	15 29 34.7	+0.1
	SNR=31						
FRU	Bishkek	6.85	22	⇑iPN	P	15 29 35.5	+0.2
FRU				pmax	pmax		
	comp=Z,63nm,1.2s						
ULHL	Ulahol	6.96	33	P	P	15 29 37.8	+1.2
	SNR=13						
SDNR	Sundarnagar	6.98	134	eP	P	15 29 36.4	-0.6
SDNR				eS	S	15 30 49.8	-5.6
CHMS	Chumysh	7.04	22	P	P	15 29 37.3	-0.5
	SNR=62						
USP	Ospenovka	7.22	20	P	P	15 29 39.2	-0.9
	SNR=19						
TKM2	Tokmak 2	7.26	27	P	P	15 29 40.4	-0.3
	SNR=67						
SMLA	Simla	7.37	135	i P	P	15 29 39.0	-3.1
SMLA				i S	S	15 30 58.2	-6.4
KHET	Khetri	9.31	153	eP	P	15 30 06.0	-1.6
KHET				ex	x	15 31 39.0	
NDI	New Delhi	9.36	145	eP	P	15 30 06.5	-1.8
NDI				eS	S	15 31 44.5	-7.0
AYAN	Aya Nagar	9.49	146	eP	P	15 30 09.2	-0.7
AYAN				eS	S	15 31 48.9	-5.6
AYAN				AMb	AMB	15 31 54.2	
	comp=Z,18nm,1.2s						
KUDL	Kundal	9.51	150	AMb	AMB	15 31 52.5	
	comp=Z,339nm,1.2s						
BISR	Bishrakh	9.56	144	AMb	AMB	15 31 55.4	
	comp=Z,256nm,0.9s						
JASL	Jaisalmer	9.57	181	eS	S	15 31 48.9	-7.7
SONA	Sohna	9.67	147	eP	P	15 30 12.0	-0.4
SONA				AMb	AMB	15 31 59.0	
	comp=Z,99nm,1.1s						
AJM	Ajmer	10.46	162	eP	P	15 30 21.4	-1.2
AJM				i P		15 30 22.4	
AJM				eS	S	15 32 11.4	-5.9
AGRA	Agra	10.93	146	eP	P	15 30 26.0	-2.8
MK31	Makanchi Array	13.22	36	⇓P	P	15 30 58.1	0.0
	comp=Z,4.8nm,0.6s						
MK31				⇑S	S	15 33 25.3	+4.0
	comp=Z,5.6nm,1.0s						
MKAR	Makanchi Array	13.22	36	P	P	15 30 58.5	+0.5
	comp=Z,0.3nm,0.3s,baz=222,slow=14,SNR=19						
KOLN	Koldanda	13.70	126	eP	P	15 31 03.0	-1.3
	comp=Z,28nm,0.3s						
GKN	Gorkha	14.24	123	eP	P	15 31 10.5	-0.5
	comp=Z,65nm,0.4s						
BHPL	Bhopal	14.32	156	eP	P	15 31 13.2	+1.1
BHPL				AMb	AMB	15 31 17.4	
	comp=Z,34nm,0.7s						
BHPL				ex	x	15 33 40.3	
WMQ	Urumqi	14.61	55	eP	P	15 31 20.6	+5.1
DMN	Daman	14.81	123	eP	P	15 31 18.6	+0.5
	comp=Z,42nm,0.4s						
KKN	Kakani	14.81	122	eP	P	15 31 18.5	+0.3
	comp=Z,127nm,0.7s						
PKI	Pulchoki	15.04	122	eP	P	15 31 21.8	+0.8
	comp=Z,87nm,0.5s						
PKI	Pulchoki	15.04	122	eP	P	15 31 21.8	+0.8
PKI				pmax	pmax		
	comp=Z,44nm,0.5s						
AB31	Akbulak array	15.11	331	⇓P	P	15 31 19.8	-1.9
	comp=Z,14nm,0.6s						
AB31				⇑S	S	15 34 00.4	-3.8
	comp=Z,8.2nm,0.5s						
GUN	Gumba	15.15	120	eP	P	15 31 23.0	+0.6
	comp=Z,45nm,0.4s						
BVA0	Borovoye Array	16.51	358	⇑P	P	15 31 38.3	-0.6
	comp=Z,1.8nm,0.8s,baz=168,slow=14,SNR=94						
BVAR	Borovoye Array	16.51	358	P	P	15 31 38.7	-0.3
	comp=Z,3.6nm,0.3s,baz=158,slow=9.1,SNR=65						
BVAR				S	S	15 34 35.7	0.0
	comp=Z,0.7nm,0.3s,baz=167,slow=23,SNR=6.4						
CHKZ	Chkalovo	17.15	359	⇑P	P	15 31 45.6	-1.0
	comp=Z,5.6nm,0.6s						
CHKZ	Chkalovo	17.15	359	eP	P	15 31 45.3	-1.3
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CHKZ	Chkalovo	17.15	359	eP	P	15 31 45.3	-1.3
	comp=Z,9.5nm,0.5s						
BLSP	Bilaspur	17.24	143	eP	P	15 31 49.2	+1.4
BLSP				AMb	AMB	15 31 53.2	
	comp=Z,18nm,1.2s						
BLSP				ex	x	15 34 55.7	
POO	Poona	18.09	172	eP	P	15 31 58.0	+0.8
LSA	Lhasa	18.09	106	P	P	15 32 00.8	+3.6
LSA	Lhasa	18.09	106	eP	P	15 32 00.7	+3.5
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LSA	Lhasa	18.09	106	eP	P	15 32 00.7	+3.5
	comp=Z,6.1nm,0.6s						
ZAL	Zalesovo	19.84	24	S	S	15 35 45.8	+2.1
	comp=Z,0.3nm,0.3s,baz=14,slow=22,SNR=4.1						
NVS	Novosibirsk	20.12	21	⇑iP	P	15 32 17.1	-0.9
NVS				i PPP		15 32 44.3	
NVS				e		15 33 09.8	
NVS				eS	S	15 35 50.6	+1.6
NVS				eSS	PcP	15 36 22.3	-4.0
NVS				pmax	pmax		
	comp=N,8.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NVS				smax			
	comp=N,12nm,1.8s						
NVS				smax			
	comp=E,10.0nm,1.6s						
HYB	Hyderabad	20.14	159	eP	P	15 32 19.0	+0.6
HYB				eS	S	15 35 58.0	+8.4
HYB	Hyderabad	20.14	159	i P	P	15 32 19.5	+1.1
HYB				eS	S	15 35 49.0	-0.6
SHL	Shillong	20.84	116	eP	P	15 32 29.0	+3.7
GNI	Garni	20.97	288	eP	P	15 32 27.9	+1.3
GNI				pmax	pmax		
	comp=Z,18nm,0.9s						
GNI	Garni	20.97	288	eP	P	15 32 27.9	+1.4
	comp=Z,18nm,0.9s						
TI2	Plekhanov	21.07	292	eP	P	15 32 25.0	-2.5
SVE	Sverdlovsk	21.50	344	⇑eP	P	15 32 32.7	+1.2
ARU	Arti	21.64	341	⇓iP	P	15 32 33.6	+0.7
ARU				e		15 33 06.4	
ARU				eS	S	15 36 21.1	+4.6
ARU				pmax	pmax		
	comp=Z,39nm,1.6s,mb4.6						
ARU	Arti	21.64	341	eP	P	15 32 33.7	+0.8
	comp=Z,15nm,0.6s,mb4.6						
ZEI	Tsey	21.81	295	eP	P	15 32 35.8	+1.1

ZEI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
KIV	**Kislovodsk**	22.86	298	*e*P	P	15 32 47.6	+2.7
KIV				pmax	pmax		
	comp=Z,6µm,0.9s						
KIV	**Kislovodsk**	22.86	298	P	P	15 32 45.4	+0.6
	comp=Z,12nm,0.8s,mb4.4						
SOC	**Sochi**	24.94	296	*e*P	P	15 33 04.8	+0.2
SOC				*e*		15 33 45.5	
SOC				*e*S	S	15 37 19.1	+6.4
SOC				pmax	pmax		
	comp=N,8.0nm,0.8s						
SOC				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4						
SOC				pmax	pmax		
	comp=E,6.0nm,0.7s						
SONM	**Songino Array**	28.24	55	P	P	15 33 35.4	+0.6
	comp=E,1.0nm,0.8s,mb3.6,baz=262,slow=8.7,SNR=7.1						
SONM				pP	pP	15 34 14.8	+4.0
	comp=E,0.9nm,0.8s,baz=262,slow=8.7,SNR=3.8						
ULN	**Ulaanbaatar**	28.69	55	P	P	15 33 38.7	0.0
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
ULN	**Ulaanbaatar**	28.69	55	P	P	15 33 38.7	+0.1
	comp=Z,0.8nm,0.7s,mb3.6						
BRTR	**Keskin Array B**	29.52	288	P	P	15 33 47.9	+1.7
	comp=Z,0.7nm,0.6s,mb3.6,baz=85,slow=8.9,SNR=3.4						
OBN	**Obninsk**	29.98	319	*e*P	P	15 33 50.0	-0.1
OBN				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.9						
OBN	**Obninsk**	29.98	319	*e*P	P	15 33 48.6	-1.5
	comp=Z,24nm,0.5s,mb5.2						
CMAR	**Chiang Mai Arr**	30.39	119	P	P	15 33 53.5	-0.6
	comp=Z,0.9nm,0.8s,mb3.6,baz=310,slow=8.1,SNR=4.5						
CMAR				pP	pP	15 34 35.3	+4.8
	comp=Z,1.0nm,0.7s,baz=311,slow=9.1,SNR=4.1						
CMAR				LR	LR	15 48 30.5	
	comp=Z,14nm,18.9s,baz=103,slow=40						
PALK	**Pallekele**	30.40	161	*e*P	P	15 33 55.0	+0.8
	comp=Z,44nm,1.2s,mb5.1						
HHC	**Hu-ho-hao-te**	31.67	70	*e*P	P	15 34 09.3	+4.3
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
HHC				AMB	AMB		
	comp=Z,60nm,5.3s						
SUW	**Suwalki**	37.17	314	P	P	15 34 51.4	-0.2
SUW				pmax	pmax		
	comp=Z,34nm,0.6s,mb5.2						
SUW	**Suwalki**	37.17	314	P	P	15 34 51.4	-0.2
	comp=Z,34nm,0.6s,mb5.2						
FINES	**FINESS Array B**	37.52	326	P	P	15 34 54.7	+0.3
	comp=Z,4.7nm,0.4s,mb4.5,baz=117,slow=8.7,SNR=74						
FINES	**FINESS Array B**	37.52	326	P	P	15 34 54.7	+0.3
KAF	**Kangasniemi**	37.66	327	*e*p	P	15 34 55.3	-0.3
NJ2	**Nanjing**	39.38	82	*e*P	P	15 35 12.9	+2.7
NJ2				XP	sP	15 36 10.8	+1.8
NJ2				PP	PP	15 36 50.9	+4.4
NJ2				S	S	15 40 51.0	-7.0
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,620nm,4.2s						
NJ2				LR	LR		
	comp=N,1µm,22.0s						
NJ2				LR	LR		
	comp=E,840nm,21.4s						
NJ2				LR	LR		
	comp=Z,2µm,24.0s						
KEV	**Kevo**	40.81	338	*e*p	P	15 35 21.3	-0.3
ARCES	**ARCESS Array B**	41.16	338	P	P	15 35 25.0	+0.6
	comp=Z,9.8nm,0.4s,mb4.8,baz=113,slow=8.4,SNR=126						
CN2	**Changchun**	41.51	63	*e*P	P	15 35 28.7	+1.2
SSE	**Sheshan**	41.58	82	P	P	15 35 27.1	-1.1
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,30nm,3.8s						
SSE	**Sheshan**	41.58	82	P	P	15 35 27.1	-1.1
	comp=Z,40nm,0.7s,mb5.2						
MDJ	**Mudanjiang**	44.31	61	P	P	15 35 49.4	-0.6
MDJ				AMB	AMB		
	comp=Z,40nm,4.7s						
NB2	**NORSAR Subarra**	44.42	323	P	P	15 35 50.4	-0.3
	comp=Z,9.8nm,0.5s,mb4.7,baz=94,slow=7.4						
NB2	**NORSAR Subarra**	44.42	323	P	P	15 35 50.4	-0.3
	baz=94,slow=7.9						
NOA	**NORSAR Array B**	44.42	323	P	P	15 35 50.5	-0.2
	comp=Z,7.2nm,0.4s,mb4.6,baz=97,slow=7.7,SNR=53						
NOA	**NORSAR Array B**	44.42	323	P	P	15 35 50.5	-0.2
TIXI	**Tiksi**	45.72	22	⇑*e*P	P	15 36 00.7	-0.2
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
KMBO	**Kilima Mbogo**	48.92	228	P	P	15 36 27.9	+1.4
	comp=Z,2.8nm,0.6s,mb4.1,baz=26,slow=14,SNR=7.5						
ESK	**Eskdalemuir**	52.36	316	P	P	15 36 49.4	-2.5
ESK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
ESK	**Eskdalemuir**	52.36	316	P	P	15 36 49.4	-2.5
	comp=Z,9.9nm,1.0s,mb4.4						
MBAR	**Mbarara**	52.60	235	*e*P	P	15 36 53.3	-0.9
MBAR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
MBAR	**Mbarara**	52.60	235	*e*P	P	15 36 53.2	-0.9
	comp=Z,3.8nm,0.6s,mb4.3						
DAG	**Danmarks Havn**	54.73	344	⇑*e*P	P	15 37 09.4	+0.4
DAG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
DAG	**Danmarks Havn**	54.73	344	⇑*e*P	P	15 37 09.4	+0.4
	comp=Z,4.7nm,0.6s,mb4.4						
DAG	**Danmarks Havn**	54.73	344	⇑*i*P	P	15 37 09.4	+0.4
	comp=Z,4.7nm,0.6s,mb4.4						
SUMG	**Summit**	61.07	341	*e*P	P	15 37 54.0	+0.8
	comp=Z,3.0nm,0.6s,mb4.3						
LSZ	**Lusaka**	65.54	226	*e*P	P	15 38 22.7	-0.5
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
LSZ	**Lusaka**	65.54	226	*e*P	P	15 38 22.7	-0.5
	comp=Z,2.9nm,0.6s,mb4.3						
INK	**Inuvik**	73.87	9	*e*P	P	15 39 12.3	-0.5
	comp=Z,3.8nm,0.7s,mb4.2						
ILAR	**Eielson Array**	74.73	16	P	P	15 39 16.4	-1.3
	comp=Z,0.9nm,0.9s,mb3.4,baz=297,slow=3.5,SNR=5.8						
DBIC	**Dimbokro**	74.79	267	P	P	15 39 17.3	-1.8
TSUM	**Tsumeb**	75.00	232	P	P	15 39 19.4	-0.8
	comp=Z,3.4nm,0.9s,mb4.0						
MCK	**McKinley**	75.15	17	P	P	15 39 18.3	-1.8
MCK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
MCK	**McKinley**	75.15	17	P	P	15 39 18.3	-1.9
	comp=Z,1.7nm,0.7s,mb3.8						
BOSA	**Boshof**	77.83	220	P	P	15 39 35.9	+0.1
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
BOSA	**Boshof**	77.83	220	P	P	15 39 35.9	+0.1
	comp=Z,2.1nm,0.4s,mb4.1,baz=32,slow=6.5,SNR=11						
BOSA	**Boshof**	77.83	220	*e*P	P	15 39 35.1	-0.7
	comp=Z,3.7nm,0.8s,mb4.1						
YKW3	**Yellowknife Ar**	81.15	3	*e*P	P	15 39 53.5	+0.7
YKA	**Yellowknife Ar**	81.22	3	P	P	15 39 54.0	+0.8
	comp=Z,2.5nm,0.5s,mb4.1,baz=349,slow=5.5,SNR=24						
YKA	**Yellowknife Ar**	81.22	3	P	P	15 39 54.0	+0.8
WRA	**Warramunga Arr**	81.92	122	P	P	15 39 57.1	-0.6
	comp=Z,1.6nm,0.5s,mb3.9,baz=324,slow=5.0,SNR=34						
WRAB	**Tennant Creek**	81.92	122	*e*P	P	15 39 57.1	-0.6
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4						
WRAB	**Tennant Creek**	81.92	122	*e*P	P	15 39 57.1	-0.6
	comp=Z,8.7nm,0.9s,mb4.4						
FCC	**Fort Churchill**	84.27	352	P	P	15 40 09.6	+0.9
FCC				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
FCC	**Fort Churchill**	84.27	352	P	P	15 40 09.6	+0.9
	comp=Z,1.4nm,0.6s,mb3.9						
PMG	**Port Moresby**	84.52	106	P	P	15 40 11.8	+0.8
PMG				pmax	pmax		
	comp=Z,35nm,1.3s						
PMG	**Port Moresby**	84.52	106	P	P	15 40 11.8	+0.8
	comp=Z,35nm,1.3s,mb4.9						
CTAO	**Charters Tower**	90.47	115	*e*P	P	15 40 38.9	-0.4
CTAO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
CTAO	**Charters Tower**	90.47	115	*e*P	P	15 40 38.9	-0.5
	comp=Z,2.2nm,0.7s,mb4.2						

CSEM ***11*** *15:34:44.0±0.2, 51.52N×16.29E, h1^{km}±1^{km}, ML3.1/5, Error ellipse: s-maj=2.9km s-min=1.7km az=44.0*

IPEC ***11*** *15:34:44.4±0.3, 51.51N×16.29E, ML1.9/3, Error ellipse: s-maj=1.8km s-min=1.3km az=27.0*

WAR ***11*** *15:34:45.9, 51.45N×16.17E, h1^{km}, ML2.8, Mining Induced*

PRU ***11*** *15:34:46.1, 51.43N×16.15E*

NEIC ***11*** *15:34:46.7±1.6, 51.38N×16.06E, h5^{km}, ML3.2(VIE), ML2.8(SZGRF), Error ellipse: s-maj=17.3km s-min=7.5km az=27.0*

UPP ***11*** *15:34:51.3, 51.91N×15.52E, h0^{km}, ML2.8, Suspected Mining explosion.*

ISC 11 15:34:43.1±0.5**, 51.47N**±0.03×**16.18E**±0.04**, n27, σ1^{s}44**/54**, 2C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.63	173	⇓*i*Pg	Pg	15 34 57.1	+1.4
KSP				*e*Sg	Sg	15 35 05.3	+1.2
KSP	**Ksiaz**	0.63	173	*e*PG	Pg	15 34 57.0	+1.3
KSP				*e*SG	Sg	15 35 05.0	+0.9
UPC	**Upice**	0.97	186	*e*PG	Pg	15 35 03.2	+0.8
DPC	**Dobruska-Polom**	1.12	175	*e*PG	Pg	15 35 05.9	+0.4
DPC				*e*SG	Sg	15 35 20.3	-0.2
	25nm,0.3s						
DPC	**Dobruska-Polom**	1.12	175	*e*Pg	Pg	15 35 05.9	+0.4
DPC				*e*Sg	Sg	15 35 20.8	+0.3
PVCC	**Panska Ves**	1.39	228	*e*PG	Pg	15 35 11.5	+0.8
PVCC	**Panska Ves**	1.39	228	Pg	Pg	15 35 11.5	+0.8
PVCC				*e*Sg	Sg	15 35 30.8	+1.6
BRG	**Berggiesshubel**	1.53	248	*i* Pn	Pn	15 35 13.3	+1.6
BRG				*i* Pg	Pg	15 35 13.9	+0.3
BRG				*i* Sg	Sg	15 35 34.3	+0.3
BRG	**Berggiesshubel**	1.53	248	*i* Pg	Pg	15 35 13.9	+0.3
PRU	**Pruhonice**	1.81	216	*e*PG	Pg	15 35 18.2	-1.0
PRU				*e*SG	Sg	15 35 41.1	-2.3
MORC	**Moravsky Berou**	1.90	152	*e*Pn	Pn	15 35 17.9	+0.8
MORC				*e*Sn	Sn	15 35 42.0	-0.1
MORC	**Moravsky Berou**	1.90	152	*e*Pn	Pn	15 35 17.9	+0.8
MORC				*e*Sn	Sn	15 35 42.0	-0.1
MORC				*e*Sg	Sg	15 35 44.5	-1.9
	9.5nm,0.2s						
CLL	**Collm**	2.00	267	*e*PN	Pn	15 35 19.0	+0.6
CLL				*i* PG	Pg	15 35 22.0	-0.9
CLL				*i* SG	Sg	15 35 49.2	-0.3
OKC	**Ostrava-Krasne**	2.06	142	*e*PN	Pn	15 35 22.5	+3.2
OKC				*e*PG	Pg	15 35 24.6	+0.4
OKC				*e*SG	Sg	15 35 49.0	-2.6
OKC	**Ostrava-Krasne**	2.06	142	*e*Pg	Pg	15 35 24.6	+0.4
OKC				*e*Sg	Sg	15 35 49.0	-2.6
VRAC	**Vranov**	2.18	173	*e*Pn	Pn	15 35 22.9	+1.9
VRAC				*e*Sg	Sg	15 35 53.5	-2.1
	5.2nm,0.2s						
KRUC	**Moravsky**	2.41	177	*e*Pn	Pn	15 35 26.2	+1.8
KRUC				*e*Sg	Sg	15 36 00.8	-2.6
	6.1nm,0.3s						
OJC	**Ojcow**	2.61	117	*e*PG	Pg	15 35 34.0	-1.2
OJC				*e*SG	Sg	15 36 10.0	-0.1
NKC	**Novy Kostel**	2.67	244	*e*PN	Pn	15 35 29.5	+1.5
NKC				*e*PG	Pg	15 35 35.4	-0.9
NKC				*e*SG	Sg	15 36 08.7	-3.2
	20nm,0.2s						
KHC	**Kasperske Hory**	2.87	216	*e*PN	Pn	15 35 31.9	+0.9
KHC				*e*PG	Pg	15 35 37.5	-2.9
KHC				*e*SG	Sg	15 36 14.8	-3.9
KHC	**Kasperske Hory**	2.87	216	*e*Pg	Pg	15 35 37.5	-2.9
KHC				*e*Sg	Sg	15 36 14.8	-3.9
MOX	**Moxa**	3.00	256	*e*Pg	Pg	15 35 41.9	-1.0
MOX				*e*Sg	Sg	15 36 21.1	-1.7
MOA	**Molln**	3.83	200	⇑*i*PN	Pn	15 35 46.8	+2.2
MOA				*i* SG	Sg	15 36 53.0	+2.4
	7.0nm,0.3s						
ARSA	**Arzberg**	4.24	186	⇑*i*PN	Pn	15 35 52.3	+1.9
ARSA				*i* SG	Sg	15 37 01.0	-3.4
	2.8nm,0.3s						
BLEU	**Blekinge**	4.85	358	P	Pn	15 35 57.9	-1.1
EKSU	**Eksjoe**	6.14	356	P	Pn	15 36 15.9	-1.3
VSTU	**Vaestervik**	6.21	2	P	Pn	15 36 18.0	-0.2

NEIC ***11*** *15:58:36.9±2.1, 37.65N×72.50E, h112^{km}±23^{km}, mb4.1/6, Error ellipse: s-maj=24.5km s-min=10.6km az=64.0*

MOS ***11*** *15:58:37.2±1.6, 37.63N×72.47E, h132^{km}, mb3.8/2, Error ellipse: s-maj=25.0km s-min=13.6km az=81.0*

BJI ***11*** *15:58:42.9, 38.04N×72.78E, h112^{km}*

IDC ***11*** *15:58:44.2±12.0, 38.21N×72.38E, h138^{km}±90^{km}, mb3.2/4, mb1 3.5/7, mb1mx3.2/23, mbtmp3.9/7, Error ellipse: s-maj=103.2km s-min=27.5km az=16.0*

NNC ***11*** *15:58:46.4±5.6, 38.44N×72.26E, h203^{km}±56^{km}, mpv4.4, Error ellipse: s-maj=56.3km s-min=28.0km az=8.0*

ISC 11 15:58:37.4±0.6**, 37.72N**±0.03×**72.4E**±0.1**, h139**^{km}±8^{km}**, n43, σ1^{s}43**/50**, mb3.5**/7**, 6C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	3.31	56	*e*P	P	15 59 32.2	+3.1
KSH				Smax			
	comp=N,470nm,0.6s						
KSH				Smax			
	comp=E,460nm,0.6s						
CEP	**Cherat**	3.91	186	P	P	15 59 40.5	+3.4
CEP				S	S	16 00 26.0	+3.1
CHCP	**Chirah Chowk**	4.11	170	⇑P	P	15 59 30.6	-9.1
AML	**Almayashu**	4.51	12	P	P	15 59 45.3	+0.1
	SNR=28						
UCH	**Uchtor**	4.78	19	P	P	15 59 49.3	+0.6
	SNR=43						
KZA	**Kyzart**	4.87	26	P	P	15 59 50.1	+0.3
	SNR=8.9						
THW	**Thamme Wali**	4.94	187	P	P	15 59 52.1	+1.3
EKS2	**Erkin-Say**	5.05	11	P	P	15 59 52.6	+0.4
	SNR=39						
AAK	**Ala-Archa**	5.16	17	P	P	15 59 54.5	+0.9
	SNR=26						
AAK	**Ala-Archa**	5.16	17	⇓P	P	15 59 54.3	+0.6
	comp=E,19nm,0.4s						
AAK				⇑S	S	16 00 50.7	-2.0
	comp=E,38nm,0.8s						
KBK	**Karagaybulak**	5.30	21	P	P	15 59 56.3	+0.7
	SNR=10						
ULHL	**Ulahol**	5.39	32	P	P	15 59 57.2	+0.4
	SNR=24						
CHMS	**Chumysh**	5.56	18	P	P	15 59 59.6	+0.5
	SNR=33						
KK31	**Karatay Array**	5.58	345	⇑P	P	15 59 58.1	-1.2
	comp=E,31nm,0.4s,baz=159,slow=12,SNR=373						
KK31				⇓S	S	16 00 56.0	-6.8
	comp=E,14nm,0.3s,baz=159,slow=22,SNR=15						
TKM2	**Tokmak 2**	5.73	24	P	P	16 00 03.1	+1.7
	SNR=11						
USP	**Ospenovka**	5.76	15	P	P	16 00 01.7	-0.1
	SNR=12						
THN	**Thein Dam**	5.92	152	*e*P	P	16 00 03.9	+0.1
	comp=E,89nm,0.2s						
THN				*e*S	S	16 01 09.1	-1.9
SMLA	**Simla**	7.65	148	*i* P	P	16 00 25.1	-2.0
SMLA				*i* S	S	16 01 44.7	-7.9
MK31	**Makanchi Array**	11.64	36	⇑P	P	16 01 20.5	+0.6
	comp=E,2.9nm,0.7s,baz=212,slow=11,SNR=29						
MKAR	**Makanchi Array**	11.64	36	P	P	16 01 20.8	+0.8
	comp=E,0.3nm,0.3s,baz=222,slow=15,SNR=38						
MKAR	**Makanchi Array**	11.64	36	P	P	16 01 20.8	+0.8
KOLN	**Koldanda**	13.65	133	*e*P	P	16 01 45.9	-0.2
	comp=E,7.5nm,0.5s						
GKN	**Gorkha**	14.10	130	*e*P	P	16 01 49.9	-1.9
	comp=E,8.2nm,0.3s						
KKN	**Kakani**	14.64	129	*e*P	P	16 01 57.5	-1.2
	comp=E,5.1nm,0.4s						
KKN	**Kakani**	14.64	129	*e*P	P	16 01 57.5	-1.2
KKN				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AB31	**Akbulak array**	14.65	326	P	P	16 01 56.5	-2.2
	comp=Z,0.8nm,0.5s,baz=126,slow=13,SNR=31						
AB31				S	S	16 04 30.2	-7.3
	comp=Z,1.6nm,0.5s,baz=145,slow=20,SNR=9.6						
DMN	**Daman**	14.67	130	*e*P	P	16 01 54.5	-4.5
GUN	**Gumba**	14.93	127	*e*P	P	16 02 05.7	+3.3
	comp=Z,5.5nm,0.3s						
BVA0	**Borovoye Array**	15.38	355	⇑P	P	16 02 04.4	-3.4
	comp=Z,0.3nm,0.5s,baz=160,slow=13,SNR=35						
BVAR	**Borovoye Array**	15.38	355	P	P	16 02 06.8	-1.0
	comp=Z,1.7nm,0.3s,baz=156,slow=12,SNR=27						
BVAR				S	S	16 04 52.4	-1.7
	comp=Z,0.2nm,0.3s,baz=168,slow=27,SNR=5.0						
CHKZ	**Chkalovo**	16.01	356	⇑P	P	16 02 13.7	-2.0
	comp=Z,1.8nm,0.6s						
ZAL	**Zalesovo**	18.32	24	P	P	16 02 43.4	+0.2
NVS	**Novosibirsk**	18.64	20	*e*P	P	16 02 45.5	-1.2
ARU	**Arti**	20.89	338	P	P	16 03 10.1	+0.3
ARU	**Arti**	20.89	338	P	P	16 03 10.1	+0.3
ZAK	**Zakamensk**	25.33	50	*e*P	P	16 03 55.5	+2.9
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.3						
SONM	**Songino Array**	26.71	57	P	P	16 04 08.6	+3.4
	comp=Z,0.5nm,0.9s,mb3.1,baz=254,slow=10,SNR=3.9						
HIA	**Hailar**	35.66	56	P	P	16 05 22.3	-1.2
HIA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HIA	**Hailar**	35.66	56	P	P	16 05 22.3	-1.2
	comp=Z,2.9nm,0.8s,mb4.0						
FINES	**FINESS Array B**	37.13	325	P	P	16 05 37.3	+1.5
	comp=Z,0.4nm,0.5s,mb3.3,baz=117,slow=9.3,SNR=3.3						
ARCES	**ARCESS Array B**	40.47	337	P	P	16 06 05.4	+2.0
	comp=Z,1.1nm,0.7s,mb3.6,baz=121,slow=7.1,SNR=5.0						
YAK	**Yakutsk**	42.31	36	P	P	16 06 19.1	+0.6
	comp=Z,8.0nm,0.7s,mb4.5						
YKA	**Yellowknife Ar**	79.97	3	P	P	16 10 34.3	+2.5
	comp=Z,0.3nm,0.6s,mb3.1,baz=342,slow=4.4,SNR=3.8						

BJI ***11*** *16:16:27.1, 0.88N×97.16E, h43^{km}, mB4.8, mb4.3, Ms4.1, Msz3.8*

IDC ***11*** *16:16:27.1±1.2, 1.30N×96.96E, mb4.1/10, mb1 4.3/11, mb1mx4.1/19, mbtmp4.1/11, ML3.8/1, MS3.5/4, Ms1 3.5/4, ms1mx3.2/26, Error ellipse: s-maj=56.8km s-min=17.6km az=55.0*

NEIC ***11*** *16:16:32.1±0.5, 1.39N×97.16E, h30^{km}, mb4.5/11, Error ellipse: s-maj=13.0km s-min=7.0km az=47.0*

ISC 11 16:16:30.3±0.7**, 1.42N**±0.09×**97.21E**±0.09**, h30**^{km}**, n34, σ0^{s}88**/32**, mb4.3**/21**, MS3.6**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	5.16	42	*e*Pn	Pn	16 17 48.0	+0.5
KSM	**Kuching**	13.09	90	P	P	16 19 36.9	-0.1
CMAR	**Chiang Mai Arr**	17.02	6	Pn	P	16 20 29.9	+1.9
	0.1nm,0.3s,baz=195,slow=11,SNR=15						
CMAR				LR	LR	16 27 12.8	
	comp=Z,115nm,20.2s,baz=185,slow=38						
PALK	**Pallekele**	17.45	290	P	P	16 20 28.4	-5.0
	16nm,1.0s						
KKM	**Kota Kinabalu**	19.51	76	*e*P	P	16 20 55.0	-3.3
KMI	**Kunming**	24.17	12	P	P	16 21 46.9	+1.7
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
KMI	**Kunming**	24.17	12	P	P	16 21 46.9	+1.7
	comp=Z,11nm,1.1s,mb4.2						
SHL	**Shillong**	24.55	348	*e*P	P	16 21 48.2	-0.8
PKI	**Pulchoki**	28.36	338	*e*P	P	16 22 25.0	+0.9
GUN	**Gumba**	28.49	339	*e*P	P	16 22 25.3	0.0
	comp=Z,45nm,1.3s,mb5.0						
DMN	**Daman**	28.51	337	*e*P	P	16 22 25.6	+0.2
KKN	**Kakani**	28.61	338	*e*P	P	16 22 26.4	+0.1
	comp=Z,15nm,1.0s,mb4.7						
GKN	**Gorkha**	29.05	337	*e*P	P	16 22 30.1	-0.2
	comp=Z,20nm,0.9s,mb4.8						
KOLN	**Koldanda**	29.27	335	*e*P	P	16 22 32.5	+0.2
	comp=Z,18nm,0.8s,mb4.8						
ENH	**Enshi**	30.98	21	*e*P	P	16 22 45.4	-2.0
	comp=Z,16nm,0.8s,mb4.9						
ENH				*e*	pP	16 22 52.3	-3.9
FITZ	**Fitzroy Crossi**	34.04	126	P	P	16 23 13.8	-0.4
	comp=Z,2.2nm,0.7s,mb4.2,baz=320,slow=6.4,SNR=3.2						
XAN	**Xi'an**	34.26	17	P	P	16 23 15.0	-0.9
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
GTA	**Gaotai**	37.89	3	*e*P	P	16 23 47.0	+0.4
GTA				AMB	AMB		
	comp=Z,80nm,5.0s						
GTA				LR	LR		
	comp=N,90nm,14.1s,MS3.9						
GTA				LR	LR		
	comp=E,100nm,15.2s,MS3.9						
GTA				LR	LR		
	comp=Z,100nm,14.5s,MS3.8						
WRA	**Warramunga Arr**	42.14	122	P	P	16 24 22.4	+0.3
	comp=Z,1.2nm,0.6s,mb3.7,baz=300,slow=9.6,SNR=15						
WRAB	**Tennant Creek**	42.14	122	*e*P	P	16 24 22.4	+0.3
	comp=Z,12nm,1.0s,mb4.5						
SONM	**Songino Array**	46.92	8	P	P	16 25 00.6	+0.6
	comp=Z,5.6nm,0.9s,mb4.5,baz=192,slow=8.2,SNR=37						
SONM				PcP	PcP	16 26 32.7	-0.1
	comp=Z,0.6nm,0.7s,baz=198,slow=4.6,SNR=2.9						
MKAR	**Makanchi Array**	47.04	346	P	P	16 25 01.1	+0.1
	comp=Z,5.5nm,0.9s,mb4.5,baz=159,slow=8.1,SNR=43						
MKAR				LR	LR	16 47 47.1	
	comp=Z,30nm,19.6s,MS3.3,baz=180,slow=40						
ULN	**Ulaanbaatar**	47.05	9	*e*P	P	16 25 00.4	-0.7
	comp=Z,4.9nm,1.0s,mb4.4						
MJAR	**Matsushiro Arr**	51.52	42	LR	LR	16 48 06.4	
	comp=Z,29nm,19.1s,MS3.3,baz=230,slow=37						
ZAL	**Zalesovo**	53.34	351	P	P	16 25 48.0	-1.0
	comp=Z,1.9nm,0.7s,mb4.1,baz=332,slow=4.6						
STKA	**Stephens Creek**	53.49	132	P	P	16 25 51.5	+1.1
	comp=Z,2.7nm,0.9s,mb4.2,baz=328,slow=15,SNR=4.9						
CHKZ	**Chkalovo**	56.53	341	*e*P	P	16 26 10.7	-1.5
	comp=Z,3.2nm,0.8s,mb4.4						
CASY	**Casey**	68.22	174	*e*P	P	16 27 35.1	+5.2
	comp=Z,1.9nm,0.9s,mb4.1						
RPZ	**Rata Peaks**	79.35	135	LR	LR	17 02 24.5	
	comp=Z,106nm,21.7s,MS4.1,baz=360,slow=35						
FINES	**FINESS Array B**	79.81	332	P	P	16 28 37.0	-0.2
	comp=Z,0.7nm,0.8s,mb3.6,baz=333,slow=4.3,SNR=4.1						
FINES	**FINESS Array B**	79.81	332	P	P	16 28 37.0	-0.2
ARCES	**ARCESS Array B**	82.34	340	P	P	16 28 50.1	-0.2
	comp=Z,1.1nm,0.7s,mb3.9,baz=63,slow=5.4,SNR=4.7						
GERES	**GERESS Array B**	84.66	319	P	P	16 29 03.3	+0.8
	comp=Z,0.4nm,0.7s,mb3.7,baz=108,slow=4.2,SNR=5.0						
NOA	**NORSAR Array B**	86.83	331	P	P	16 29 12.5	-0.5
	comp=Z,0.9nm,0.8s,mb4.0,baz=94,slow=5.0,SNR=3.4						

CASC 11 16:43:11.8±2.8**, 12.52N**×**88.11W, h72**^{km}±38^{km}**, MD4.2, ML3.8, 7C-4D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	0.92	350	*e*S	S	16 43 45.1	+2.2
BLLM	**Bellamira**	0.93	352	*e*S	S	16 43 44.9	+1.8
CRIN	**San Cristobal**	1.05	80	*e*P	P	16 43 30.4	-0.9
CRIN				*e*S	S	16 43 46.7	+0.9
LEON	**Leon**	1.19	95	*e*P	P	16 43 31.6	-1.6
TEL3	**Telica 3**	1.24	87	⇑*e*P	P	16 43 32.4	-1.3
TELN	**Telica**	1.25	86	⇑*e*P	P	16 43 32.7	-1.2
TELN				*e*S	S	16 43 50.9	+0.5
SNVI	**San Vicente**	1.30	327	⇑*e*P	P	16 43 36.5	+1.7
SNVI				*e*S	S	16 43 50.1	-1.6
MIRN	**Miramar**	1.37	93	⇓*e*P	P	16 43 34.4	-1.3
CNGN	**Cerro Negro**	1.38	90	*e*P	P	16 43 33.1	-2.7
CNGN				*e*S	S	16 43 53.8	+0.3
LCBS	**La Ceiba**	1.41	323	⇑*e*P	P	16 43 37.8	+1.6
LCBS				*e*S	S	16 43 53.4	-0.8
LFRS	**El Faro**	1.44	320	⇑*i*P	P	16 43 38.1	+1.5
LFRS				*e*S	S	16 43 53.8	-1.1
LBRS	**Las Brisas**	1.52	323	*e*P	P	16 43 39.8	+2.2
LBRS				*e*S	S	16 43 54.5	-2.1
MOMJ	**Momotombo**	1.54	94	*e*P	P	16 43 36.6	-1.3
LFU	**La Fuente**	1.57	322	⇓*e*P	P	16 43 40.4	+2.1
LFU				*e*S	S	16 43 56.9	-0.8
BOQS	**Boqueron**	1.66	317	⇑*e*P	P	16 43 41.3	+1.8
BOQS				*e*S	S	16 43 59.8	-0.2
APYN	**Apoyeque**	1.74	99	*e*P	P	16 43 39.9	-0.7
APYN				*e*S	S	16 44 04.4	+2.6
XAVN	**Gruta Xavier**	1.78	102	*e*P	P	16 43 40.6	-0.5
XAVN				*e*S	S	16 44 05.6	+2.9
CRUN	**El Crucero**	1.85	106	*e*P	P	16 43 41.1	-0.9
MGAN	**Managua**	1.86	101	*e*P	P	16 43 41.6	-0.6
MGAN				*e*S	S	16 44 05.8	+1.3
MGAN				*i*		16 44 07.6	
	comp=N,1µm,0.4s						
TICN	**Ticuantepe**	1.90	104	*e*P	P	16 43 42.2	-0.5
WILN	**Americas 2**	1.91	100	*e*P	P	16 43 42.6	-0.3
WILN				*e*S	S	16 44 06.8	+1.0
SBLS	**San Blas**	1.98	312	*e*P	P	16 43 45.5	+1.7
SBLS				*e*S	S	16 44 07.9	+0.6
SNJE	**San Jose**	1.98	313	⇓*e*P	P	16 43 45.8	+2.0
SNJE				*e*S	S	16 44 07.3	-0.2

PYTN	**Playitas**	**2.00**	**89**	⇑*e*P	P	16 43 42.6	-1.5
PYTN				*e*S	S	16 44 09.0	+0.9
PYTN				*e*S	S	16 44 09.9	+1.9
RTR	**El Retiro**	**2.03**	**313**	*e*P	P	16 43 46.7	+2.2
RTR				*e*S	S	16 44 08.1	-0.6
RBDL	**Robledal**	**2.21**	**316**	*e*P	P	16 43 49.2	+2.1
RBDL				*e*S	S	16 44 13.3	+0.1
CONN	**Concepcion**	**2.61**	**111**	*e*P	P	16 43 51.4	-1.3
IXG	**Ixpaco**	**2.81**	**306**	*e*P	P	16 43 55.8	+0.2
MRL	**Marmol**	**2.96**	**329**	*e*P	P	16 43 56.7	-1.0
JCR	**Jicaral**	**3.96**	**132**	*e*P	P	16 44 10.1	-1.4
JCR				*e*S	S	16 44 56.3	-0.7
PRS1	**Puriscal**	**4.50**	**124**	*e*P	P	16 44 19.2	+0.2
LAJ	**Bijagual**	**4.72**	**124**	*e*P	P	16 44 18.0	-4.1
LCR2	**La Lucha 2**	**4.88**	**124**	*e*P	P	16 44 24.8	+0.4
LCR2				*e*S	S	16 45 19.7	-0.5
BUS	**Buena Vista**	**5.19**	**124**	⇓*e*P	P	16 44 29.1	+0.5
ACR	**Cerro Adams**	**6.19**	**128**	*e*P	P	16 44 41.5	-1.0

NEIC 11 16:56:35.5, 54.84N×160.01W, h10^{km}, ML3.5(AEIC), After AEIC., Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDPT	**Sand Point**	**0.58**	**333**	P	Pg	16 56 46.2	-1.0
SDPT				S	Sg	16 56 55.0	0.0
DOL	**Dolgoi Island**	**1.11**	**287**	P	Pb	16 56 54.1	-2.3
DOL				S	Sb	16 57 09.2	-1.5
PS1A	**Pavlof South-1**	**1.15**	**301**	P	Pb	16 56 55.6	-1.5
PS1A				S	Sb	16 57 12.6	+0.6
PVV	**Pavlof Volcano**	**1.16**	**299**	P	Pb	16 56 55.1	-2.0
HAG	**Hague Volcano**	**1.19**	**295**	P	Pb	16 56 55.9	-1.8
HAG				S	Sb	16 57 13.6	+0.6
PN6	**Pavlof North-6**	**1.26**	**300**	P	Pb	16 56 57.7	-1.2
PN6				S	Sb	16 57 17.5	+2.6
DTNA	**Dutton South F**	**1.33**	**285**	P	Pb	16 56 57.8	-2.3
DT1	**Dutton Round H**	**1.34**	**283**	P	Pb	16 56 57.5	-2.7
DT1				S	Sb	16 57 15.3	-1.9
BLHA	**Black Hill**	**1.46**	**307**	P	Pn	16 56 59.7	-2.4
BALA	**Baldy Mountain**	**1.64**	**284**	P	Pn	16 57 03.5	-1.1
ANPB	**Aniakchak Plen**	**2.20**	**26**	P	Pn	16 57 10.9	-1.7
ANPK	**Aniakchak Peak**	**2.27**	**27**	P	Pn	16 57 11.9	-1.8
ANPK				S	Sn	16 57 41.5	-0.5
SSLW	**Shishaldin Wes**	**2.38**	**270**	P	Pn	16 57 13.3	-1.9
WESN	**West Dahl Nort**	**2.67**	**266**	P	Pn	16 57 17.5	-1.8
WFAR	**Faris Peak**	**2.78**	**266**	P	Pn	16 57 19.1	-1.9
AHB	**Akutan Harbor**	**3.46**	**260**	P	Pn	16 57 29.3	-1.3
CAHL	**Cahill**	**4.15**	**37**	P	Pn	16 57 37.1	-3.3

*MOS **11** 17:02:50.7±1.4, 51.61N×104.08E, h10^{km}, mb4.4/1, Error ellipse: s-maj=12.6km s-min=9.8km az=60.8*

MOS Felt (II-III) at Slyudyanka.

BYKL 11 17:02:52.1±0.2, 51.70N×103.94E, h19^{km}±3^{km}, 6C-6D, FELT I=III-IV MSK at Slyudyanka, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLY	**Talaya**	**0.18**	**264**	⇓*i*PG	Pb	17 02 56.7	-0.3
TLY				*e*		17 02 59.9	
TLY				pmax	pmax		
	comp=Z,2µm,0.1s						
TLY				smax			
	comp=E,6µm,0.1s						
TLY	**Talaya**	**0.18**	**264**	⇓*i*Pg	Pb	17 02 56.7	-0.3
TLY				*i* Sg	Sb	17 03 00.0	-0.2
TLY				Pmax			
	comp=E,2µm,0.1s						
TLY				Smax			
	comp=E,64µm,0.2s						
LSTR	**Listvyanka**	**0.58**	**73**	⇓*i*Pg	Pb	17 03 02.9	-0.5
LSTR				*e*Sg	Sb	17 03 10.8	-0.3
LSTR				Pmax			
	comp=E,216nm,0.3s						
LSTR				Smax			
	comp=E,1µm,0.7s						
IRK	**Irkutsk**	**0.58**	**21**	*e*PG	Pb	17 03 01.8	-1.6
IRK				*e*		17 03 10.1	
IRK				pmax	pmax		
	comp=Z,1µm,0.2s						
IRK				smax			
	comp=N,7µm,0.5s						
IRK	**Irkutsk**	**0.58**	**21**	⇓*i*Pg	Pb	17 03 03.3	-0.1
IRK				*e*Pb	Pb	17 03 04.6	+1.2
IRK				*i* Sg	Sb	17 03 11.2	0.0
IRK				Pmax			
	comp=N,1µm,0.3s						
IRK				Smax			
	comp=N,7µm,0.5s						
ARS	**Arshan**	**0.97**	**284**	*e*PG	Pb	17 03 10.0	0.0
ARS				*e*		17 03 23.8	
ARS				pmax	pmax		
	comp=Z,296nm,0.1s						
ARS				smax			
	comp=E,2µm,0.2s						
ARS	**Arshan**	**0.97**	**284**	⇑*i*Pg	Pb	17 03 09.8	-0.2
ARS				*e*		17 03 13.3	
ARS				*e*Sg	Sb	17 03 22.9	+0.5
ARS				max			
	comp=E,314nm,0.1s						
ARS				Smax			
	comp=E,2µm,0.6s						
BTMB	**Babushkin**	**1.18**	**89**	⇓*i*Pg	Pb	17 03 13.2	-0.4
BTMB				*e*Sg	Sb	17 03 29.2	+0.8
BTMB				Pmax			
	comp=E,204nm,0.2s						
BTMB				Smax			
	comp=E,2µm,0.5s						
ZAK	**Zakamensk**	**1.38**	**198**	*e*PG	Pn	17 03 16.9	+0.2
ZAK				*e*		17 03 34.3	
ZAK				pmax	pmax		
	comp=Z,417nm,0.1s						
ZAK				smax			
	comp=E,995nm,0.3s						
ZAK	**Zakamensk**	**1.38**	**198**	⇑*i*Pg	Pn	17 03 17.3	+0.6
	comp=E,58nm,0.2s						
ZAK				⇑*i*Pg	Pn	17 03 17.3	+0.6
	comp=E,35nm,0.2s						
ZAK				⇓*i*Pg	Pn	17 03 17.3	+0.6
	comp=E,82nm,0.2s						
ZAK				*e*Sg	Sb	17 03 35.2	+0.8
ZAK				Pmax			
	comp=E,414nm,0.1s						
ZAK				Smax			
	comp=E,884nm,0.3s						
KAB	**Kabansk**	**1.72**	**77**	*e*PN	Pn	17 03 23.3	+1.9
KAB				*e*		17 03 46.2	
KAB				pmax	pmax		
	comp=Z,282nm,0.5s						
KAB				smax			
	comp=N,2µm,0.7s						
KAB	**Kabansk**	**1.72**	**77**	⇑*i*Pg	Pn	17 03 23.4	+2.0
KAB				*e*Sg	Sn	17 03 46.7	+3.7
KAB				Pmax			
	comp=N,274nm,0.7s						
KAB				Smax			
	comp=N,2µm,1.0s						
FFNB	**Fofonovo**	**1.79**	**78**	*e*Pg	Pn	17 03 24.2	+1.8
FFNB				*e*Sg	Sn	17 03 47.4	+2.7
FFNB				Pmax			
	comp=N,375nm,0.2s						
FFNB				Smax			
	comp=N,1µm,0.9s						
TRG	**Tyrgan**	**1.82**	**53**	*e*PN	Pn	17 03 23.3	+0.4
TRG				*e*		17 03 24.5	
TRG				*e*		17 03 48.1	
TRG				pmax	pmax		
	comp=Z,120nm,0.1s						
TRG				smax			
	comp=N,986nm,0.2s						
TRG	**Tyrgan**	**1.82**	**53**	*e*Pn	Pn	17 03 23.3	+0.4
TRG				*e*Pg	Pn	17 03 24.6	+1.7
TRG				*e*Sn	Sn	17 03 46.8	+1.1
TRG				*e*Sg	Sn	17 03 48.1	+2.4
TRG				Pmax			
	comp=N,121nm,0.2s						
TRG				Smax			
	comp=N,988nm,0.3s						
MOY	**Mondy**	**1.83**	**270**	*e*PN	Pn	17 03 25.3	+2.2
MOY				*e*		17 03 49.1	
MOY				pmax	pmax		
	comp=Z,124nm,0.2s						
MOY				smax			
	comp=N,729nm,0.4s						
MOY	**Mondy**	**1.83**	**270**	*e*Pn	Pn	17 03 24.8	+1.7
MOY				*e*Pg	Pn	17 03 25.5	+2.4
MOY				*e*Sg	Sn	17 03 49.3	+3.3
MOY				Pmax			
	comp=N,124nm,0.2s						
MOY				Smax			
	comp=N,745nm,0.9s						
ZRHB	**Zarechye**	**2.16**	**65**	⇑*i*Pg	Pn	17 03 30.5	+2.8
ZRHB				*e*Sg	Sn	17 03 59.6	+5.4
ZRHB				Pmax			
	comp=N,156nm,1.0s						
ZRHB				Smax			
	comp=N,886nm,1.2s						
ORL	**Orlik**	**2.68**	**290**	*e*PN	Pn	17 03 39.2	+4.0
ORL				*e*		17 04 14.0	
ORL				pmax	pmax		
	comp=Z,69nm,0.3s						
ORL				smax			
	comp=N,313nm,1.2s						
ORL	**Orlik**	**2.68**	**290**	⇑*i*Pg	Pn	17 03 39.1	+3.9
ORL				*e*Sg	Sn	17 04 14.1	+6.6
ORL				Pmax			
	comp=N,51nm,0.5s						
ORL				Smax			
	comp=N,311nm,1.4s						
OGRR	**Ongureny**	**2.96**	**47**	*e*PN	Pn	17 03 39.8	+0.7
OGRR				*e*		17 03 44.5	
OGRR				*e*S	Sn	17 04 13.1	-1.4
OGRR				*e*		17 04 21.2	
OGRR				pmax	pmax		
	comp=Z,46nm,0.4s						
OGRR				smax			
	comp=N,358nm,0.8s						
OGRR	**Ongureny**	**2.96**	**47**	*e*Pn	Pn	17 03 38.8	-0.3
OGRR				*e*Pg	Pn	17 03 43.8	+4.7
OGRR				*e*Sn	Sn	17 04 13.9	-0.6
OGRR				*e*Sg	Sn	17 04 21.4	+6.9
OGRR				Pmax			
	comp=N,46nm,0.3s						
OGRR				Smax			
	comp=N,358nm,0.8s						
MXMB	**Maximikha**	**3.33**	**60**	*e*Pn	Pn	17 03 44.6	+0.2
MXMB				*e*Pg	Pn	17 03 51.6	+7.2
MXMB				*e*Sn	Sn	17 04 22.7	-1.2
MXMB				*e*Sg	Sn	17 04 35.8	+12
MXMB				Pmax			
	comp=N,31nm,0.9s						
MXMB				Smax			
	comp=N,232nm,1.0s						
SYVR	**Suvo**	**4.18**	**60**	*e*Pn	Pn	17 03 55.9	-0.6
SYVR				*e*Pg	Pn	17 04 06.7	+10
SYVR				*e*		17 04 47.0	
SYVR				*e*Sg	Sn	17 05 00.9	+16
ULN	**Ulaanbaatar**	**4.34**	**151**	*i* PN	Pn	17 03 58.7	0.0
NIZ	**Nizh Angarsk**	**5.26**	**37**	*e*PN	Pn	17 04 28.1	+16
NIZ	**Nizh Angarsk**	**5.26**	**37**	*e*Pn	Pn	17 04 09.4	-2.4
NIZ				*e*		17 04 14.6	
NIZ				*e*		17 04 21.7	
NIZ				*e*Pg	Pn	17 04 27.9	+16
NIZ				*e*Sn	Sn	17 05 07.5	-5.3
NIZ				*e*Sg	Sn	17 05 34.5	+22
NIZ				Pmax			
	comp=N,17nm,0.8s						
NIZ				Smax			
	comp=N,128nm,1.3s						
YLYR	**Ulyunkhan**	**5.37**	**51**	*e*PN	Pn	17 04 12.4	-1.0
YLYR				*e*		17 04 27.9	
YLYR				*e*S	Sn	17 05 11.9	-3.6
YLYR	**Ulyunkhan**	**5.37**	**51**	*e*Pn	Pn	17 04 12.3	-1.1
YLYR				*e*Pg	Pn	17 04 29.4	+16
YLYR				*e*Sn	Sn	17 05 11.9	-3.6
YLYR				*e*Sg	Sn	17 05 37.6	+22
YLYR				Pmax			
	comp=N,4.0nm,0.3s						
YLYR				Smax			
	comp=N,38nm,1.3s						
KPC	**Khapcheranga**	**5.72**	**107**	*e*PN	Pn	17 04 15.1	-3.2
KPC				*e*		17 04 34.2	
KPC				*e*		17 05 49.7	
KPC				pmax	pmax		
	comp=Z,5.0nm,0.2s						
KPC				smax			
	comp=N,52nm,1.0s						
KPC	**Khapcheranga**	**5.72**	**107**	*e*Pn	Pn	17 04 15.1	-3.2
KPC				*e*Pg	Pn	17 04 34.2	+16
KPC				*e*Sn	Sn	17 05 20.4	-3.9
KPC				*e*Sg	Sn	17 05 47.9	+24
KPC				Pmax			
	comp=N,4.0nm,0.3s						
KPC				Smax			
	comp=N,53nm,1.4s						
CIT	**Chita**	**5.96**	**83**	*e*PN	Pn	17 04 19.7	-2.0
CIT				*e*S	Sn	17 05 57.0	+27
CIT				smax			
	comp=N,51nm,1.2s						
CIT	**Chita**	**5.96**	**83**	*e*Pn	Pn	17 04 19.7	-2.0
CIT				*e*Pg	Pn	17 04 40.7	+19
CIT				*e*		17 05 27.6	
CIT				*e*Sg	Sn	17 05 58.3	+28
CIT				Pmax			
	comp=N,4.0nm,1.1s						
CIT				Smax			
	comp=N,51nm,1.3s						
KMO	**Kumora**	**6.01**	**43**	*e*Pn	Pn	17 04 21.1	-1.2
KMO				*e*Pg	Pn	17 04 41.5	+19
KMO				*e*		17 05 29.0	
KMO				*e*Sg	Sn	17 05 59.1	+28
KMO				Pmax			
	comp=N,9.0nm,0.5s						
KMO				Smax			
	comp=N,80nm,1.2s						
YOA	**Uoyan**	**6.39**	**43**	*e*Pg	Pn	17 04 49.0	+21
YOA				*e*Sg	Sn	17 06 10.8	+30
YOA				Pmax			
	comp=N,33nm,0.5s						
YOA				Smax			
	comp=N,290nm,1.3s						
UKT	**Uakit**	**6.90**	**53**	*e*Pn	Pn	17 04 33.8	-1.1
UKT				*e*Pg	Pn	17 04 56.2	+21
UKT				*e*Sg	Sn	17 06 23.9	+30
UKT				Pmax			
	comp=N,2.0nm,0.8s						
UKT				Smax			
	comp=N,34nm,1.9s						
NLYR	**Nelyaty**	**8.41**	**51**	*e*Sg	Sn	17 07 14.2	+43
NLYR				Smax			
	comp=N,35nm,1.6s						
BOD	**Bodaibo**	**8.45**	**40**	*e*Sg	Sn	17 07 12.2	+40
BOD				Smax			
	comp=N,29nm,2.0s						
CRS	**Chara**	**9.86**	**53**	*e*Sg	Sn	17 07 57.0	+50
CRS				Smax			
	comp=N,24nm,1.8s						
TUP	**Tupik**	**10.02**	**68**	*e*	P	17 05 19.8	+1.7
TUP				*e*Sg	S	17 08 00.7	+50
TUP				Smax			
	comp=N,16nm,1.6s						
SOC	**Sochi**	**42.74**	**285**	*e*P	P	17 10 45.5	-4.0
SOC				*e*S	S	17 17 14.1	+2.1
SOC				*e*SSS	SSS	17 20 59.3	-4.9

MAN 11 17:10:16.0, 12.11N×120.65E, h15^{km}, mb3.8, ML2.5, MS2.1, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUSP	**Coron**	**0.45**	**256**	*e*P	Pb	17 10 25.1	0.0
BUSP				*e*S	Sb	17 10 31.7	+0.3
SJMP	**San Jose**	**0.58**	**53**	*e*P	Pb	17 10 27.4	+0.1
SJMP				*e*S	Sb	17 10 35.1	+0.1
CUYO	**Cuyo Island**	**1.30**	**164**	*e*P	Pb	17 10 38.9	-0.8
CUYO				*e*S	Sb	17 10 56.0	0.0
OTRP	**Odiongan**	**1.36**	**79**	*e*P	Pn	17 10 40.1	-0.5
OTRP				*e*S	Sb	17 10 58.3	+0.5
PGP	**Puerto Galera**	**1.41**	**12**	*e*P	Pn	17 10 41.1	-0.3
PGP						17 10 56.9	
ENPP	**El Nido**	**1.50**	**233**	*e*P	Pn	17 10 42.2	-0.4
ENPP				*e*S	Sb	17 10 59.9	-1.8
LUBP	**Lubang**	**1.66**	**346**	*e*P	Pn	17 10 43.6	-1.3
BOAC	**Boac**	**1.78**	**41**	*e*P	Pn	17 10 45.8	-0.7
BOAC				*e*S	Sn	17 11 09.4	+0.5
LBPH	**Los Banos**	**2.10**	**14**	*e*P	Pn	17 10 51.6	+0.5
GUIM	**Jordan**	**2.41**	**128**	*e*P	Pn	17 10 56.4	+0.8
GUIM				*e*S	Sn	17 11 26.6	+1.6

*CSEM **11** 17:23:25.2±0.1, 31.87N×52.05E, h2^{km}, mb3.8/1, Error ellipse: s-maj=2.6km s-min=2.0km az=86.0*

*NEIC **11** 17:23:26.6, 31.94N×52.13E, h14^{km}, mb3.9/3, ML3.7(THR), MN3.9(TEH), After THR.*

*THR **11** 17:23:26.6±1.6, 31.94N×52.13E, h14^{km}±13^{km}, ML3.7*

*TEH **11** 17:23:27.7, 31.81N×51.92E, h2^{km}, Mn3.9*

*IDC **11** 17:23:29.1±3.4, 32.46N×51.66E, mb3.6/7, mb1 3.7/8, mb1mx3.5/22, mbtmp3.7/8, ML4.0/1, Error ellipse: s-maj=74.6km s-min=23.6km az=172.0*

ISC 11 17:23:25.9±0.9, 31.90N±0.03×51.94E±0.04, h5^{km}±7^{km}, n59, σ1$\overset{s}{.}$43/67, mb3.7/10, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGAR	**Garneh**	**0.41**	**32**	Pg	**Pg**	**17 23 33.7**	**-0.4**
IZEF	**Zefreh**	**1.05**	**18**	Pg	**Pg**	**17 23 43.5**	**-3.4**
NASN	**Na'in**	**1.16**	**39**	*e*Pg	**Pg**	**17 23 45.0**	**-4.1**
NASN				*e*Sg	**Sg**	**17 24 00.0**	**-4.6**
NASN	**Na'in**	**1.16**	**39**	*e*PG	**Pg**	**17 23 45.5**	**-3.6**
NASN				*e*SG	**Sg**	**17 24 00.4**	**-4.2**
NASN				AML	AML	17 24 01.8	
	comp=N,952nm,0.3s						
NASN	**Na'in**	**1.16**	**39**	*e*Pg	**Pg**	**17 23 45.5**	**-3.6**
	SNR=90						
NASN				*e*Sg	**Sg**	**17 24 00.0**	**-4.6**
IKLH	**Kalahroud**	**1.45**	**348**	Pn	**Pn**	**17 23 50.1**	**-2.7**
ICHK	**Chekchek**	**2.12**	**80**	Pn	**Pn**	**17 24 01.9**	**-0.6**
IPAR	**Pars**	**2.26**	**155**	Pn	**Pn**	**17 24 04.3**	**-0.1**
SHI	**Shiraz**	**2.30**	**167**	Pn	**Pn**	**17 24 11.1**	**+6.1**
IMEH	**Mehriz**	**2.33**	**102**	Pn	**Pn**	**17 24 07.1**	**+1.6**
SHGO	**Shushtar**	**2.67**	**275**	*e*PN	**Pn**	**17 24 13.6**	**+3.3**
SHGO				*e*SG	**Sg**	**17 24 54.6**	**-0.3**
SHGR	**Shooshtar-Gavs**	**2.67**	**275**	*e*PN	**Pn**	**17 24 13.7**	**+3.4**
SHGR				AML	AML	17 25 03.4	
	comp=N,301nm,0.6s						
SHGR	**Shooshtar-Gavs**	**2.67**	**275**	*e*Pn	**Pn**	**17 24 13.0**	**+2.6**
IMOK	**Mook**	**2.92**	**167**	Pn	**Pn**	**17 24 14.3**	**+0.5**
IQOM	**Qom**	**3.03**	**346**	Pn	**Pn**	**17 24 08.7**	**-6.7**
ASAO	**Ashtian**	**3.09**	**329**	*e*PN	**Pn**	**17 24 18.3**	**+2.0**
ASAO				AML	AML	17 25 06.3	
	comp=N,229nm,0.6s						
ASAO	**Ashtian**	**3.09**	**329**	*e*Pn	**Pn**	**17 24 18.0**	**+1.7**
IVRN	**Varamin**	**3.10**	**357**	Pn	**Pn**	**17 24 18.9**	**+2.5**
IBAF	**Bafgh**	**3.10**	**95**	Pn	**Pn**	**17 24 16.6**	**+0.1**
ILAS	**Lasjerd**	**3.58**	**13**	Pn	**Pn**	**17 24 25.6**	**+2.4**
IDMV	**Damavand**	**3.67**	**1**	Pn	**Pn**	**17 24 25.7**	**+1.2**
GHIR	**Ghir-Karzin**	**3.71**	**166**	*e*PN	**Pn**	**17 24 25.1**	**0.0**
GHIR				AML	AML	17 25 30.3	
	comp=N,104nm,0.7s						
GHIR	**Ghir-Karzin**	**3.71**	**166**	*e*Pn	**Pn**	**17 24 25.0**	**-0.1**
DAMV	**Damavand**	**3.73**	**0**	*e*Pn	**Pn**	**17 24 25.0**	**-0.3**
DAMV	**Damavand**	**3.73**	**0**	*e*PN	**Pn**	**17 24 25.9**	**+0.6**
DAMV				AML	AML	17 25 21.3	
	comp=N,191nm,0.6s						
IFIR	**Firoozkooh**	**3.80**	**10**	Pn	**Pn**	**17 24 28.1**	**+1.8**
IFIR				Sn	**Sn**	**17 25 12.2**	**+0.3**
IRAZ	**Razeghan**	**3.88**	**335**	Pn	**Pn**	**17 24 29.0**	**+1.5**
IRAZ				Lg		17 25 30.6	
IANJ	**Anjiloo**	**3.92**	**24**	Pn	**Pn**	**17 24 27.3**	**-0.8**
IAFJ	**Afjeh**	**3.96**	**357**	Pn	**Pn**	**17 24 29.5**	**+1.0**
IAFJ				Sn	**Sn**	**17 25 16.1**	**+0.2**
ISHM	**Shahmirzad**	**4.06**	**16**	Pn	**Pn**	**17 24 30.3**	**+0.3**
IKOM	**Komasi**	**4.36**	**303**	Pn	**Pn**	**17 24 34.4**	**+0.1**
KBD	**Kabd**	**4.56**	**235**	*e*P	**Pn**	**17 24 37.8**	**+0.7**
KRBR	**Kerman**	**4.56**	**113**	*e*PN	**Pn**	**17 24 36.6**	**-0.5**
KRBR	**Kerman**	**4.56**	**113**	*e*Pn	**Pn**	**17 24 36.0**	**-1.1**
IGZV	**Gazvin**	**4.70**	**343**	Pn	**Pn**	**17 24 40.9**	**+1.8**
IGZV				Sn	**Sn**	**17 25 31.8**	**-3.0**
RDF	**Al-Radifah**	**4.81**	**233**	*e*P	**Pn**	**17 24 40.9**	**+0.2**
NAY	**Al-Naaiem**	**4.83**	**238**	*e*P	**Pn**	**17 24 40.9**	**-0.1**
SNGE	**Sanandaj**	**4.99**	**311**	*e*Pn	**Pn**	**17 24 43.0**	**-0.2**
SNGE	**Sanandaj**	**4.99**	**311**	*e*PN	**Pn**	**17 24 43.9**	**+0.7**
SNGE				AML	AML	17 26 12.0	
	comp=N,69nm,0.6s						
IDHR	**Dehrash**	**5.43**	**303**	Pn	**Pn**	**17 24 48.8**	**-0.6**
ASF	**Jabal al Asfar**	**12.77**	**275**	Pn	**P**	**17 26 26.5**	**-4.3**
	comp=N,0.8nm,0.3s,baz=104,slow=14,SNR=4.9						
ASF				Sn	**S**	**17 28 42.2**	**-12**
	comp=N,0.4nm,0.3s,baz=155,slow=17,SNR=2.7						
EIL	**Elat**	**14.77**	**266**	P	**P**	**17 26 55.6**	**-1.7**
	comp=N,4.5nm,0.8s						
BR131	**Keskin Array S**	**16.76**	**303**	*e*P	**P**	**17 27 23.5**	**+0.7**
	comp=N,3.3nm,0.7s						
BR131	**Keskin Array S**	**16.76**	**303**	*e*P	**P**	**17 27 23.5**	**+0.7**
	comp=N,3.3nm,0.7s						
BRTR	**Keskin Array B**	**16.76**	**303**	Pn	**P**	**17 27 23.6**	**+0.8**
	comp=N,0.2nm,0.3s,baz=127,slow=13,SNR=12						
IDI	**Anoyia**	**22.76**	**286**	P	**P**	**17 28 29.3**	**-0.8**
	comp=N,7.2nm,0.6s,mb4.3,baz=150,slow=3.6,SNR=8.7						
GVD	**Gavdhos**	**23.42**	**285**	P	**P**	**17 28 34.6**	**-2.0**
	comp=N,113nm,0.7s						
MLR	**Muntele Rosu**	**24.28**	**311**	P	**P**	**17 28 46.2**	**+1.4**
	comp=N,3.1nm,0.4s,mb4.1,baz=107,slow=17,SNR=7.8						
MLR	**Muntele Rosu**	**24.28**	**311**	P	**P**	**17 28 46.2**	**+1.3**
BVAR	**Borovoye Array**	**24.98**	**27**	P	**P**	**17 28 49.8**	**-1.7**
	comp=N,0.7nm,0.7s,mb3.3,baz=231,slow=9.2,SNR=3.0						
AKASG	**Malin Array Be**	**25.21**	**325**	P	**P**	**17 28 51.6**	**-2.2**
	comp=N,0.3nm,0.3s,mb3.3,baz=133,slow=9.4,SNR=3.4						
MKAR	**Makanchi Array**	**27.58**	**49**	P	**P**	**17 29 15.9**	**+0.3**
	comp=N,0.3nm,0.6s,mb3.1,baz=236,slow=8.1,SNR=3.2						
CII	**Carovilli**	**31.47**	**299**	P	**P**	**17 29 44.6**	**-5.9**
FINES	**FINESS Array B**	**34.01**	**338**	P	**P**	**17 30 09.2**	**-3.2**
	comp=N,1.2nm,0.8s,mb3.9,baz=139,slow=9.7,SNR=4.3						
KONO	**Kongsberg**	**39.45**	**327**	P	**P**	**17 30 52.2**	**-6.2**
	comp=N,7.3nm,0.8s,mb4.5						
ARCES	**ARCESS Array B**	**40.53**	**346**	P	**P**	**17 31 04.0**	**-3.1**
	comp=N,0.8nm,0.6s,mb3.5,baz=162,slow=8.6,SNR=4.2						
SONM	**Songino Array**	**43.80**	**52**	P	**P**	**17 31 36.1**	**+2.0**
	comp=N,0.2nm,0.6s,mb3.0,baz=256,slow=5.9,SNR=2.5						
ULN	**Ulaanbaatar**	**44.25**	**52**	P	**P**	**17 31 36.1**	**-1.6**
	comp=N,2.1nm,1.1s,mb3.8						
ULN	**Ulaanbaatar**	**44.25**	**52**	P	**P**	**17 31 36.1**	**-1.6**
	comp=N,2.0nm,1.1s,mb3.8						

*IDC **11** 17:36:51.9±0.5, 2.12N×96.56E, mb4.9/22, mb1 5.0/23, mb1mx4.9/26, mbtmp4.9/23, ML4.6/1, MS4.2/14, Ms1 4.2/14, ms1mx4.1/19, Error ellipse: s-maj=17.6km s-min=12.6km az=48.0*

*BJI **11** 17:36:54.5, 1.98N×96.61E, h38^{km}, mB5.0, mb5.1, Ms4.8, Msz4.7*

*MOS **11** 17:36:55.8±0.9, 2.27N×96.66E, h33^{km}, mb5.2/45, MS4.2/19, Error ellipse: s-maj=12.8km s-min=6.3km az=111.8*

*HRVD **11** 17:36:55.9±1.0, 1.61N×96.29E, h40^{km}±2^{km}, MW5.0/37, Centroid moment Tensor Solution. LP body waves: s18,c28;Mantle waves: s37,c61; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.10±.27; $M_{\theta\theta}$-2.21±.20; $M_{\phi\phi}$2.11±.33; $M_{r\theta}$1.19±.20; $M_{\theta\phi}$2.66±.15; $M_{\phi r}$-1.05±.35; Best double couple: $M_0$3.741×10^{16} NP1:ϕ_s249°, δ70°, λ-9°. NP2:ϕ_s342°, δ82°, λ-159°. Principal axes: T 3.44, Plg8°, Azm114°; N .602, Plg68°, Azm3°; P -4.042, Plg20°, Azm207°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **11** 17:36:55.9±0.1, 2.12N×96.60E, mb5.1/62 Error ellipse: s-maj=4.5km s-min=3.4km az=28.0*

ISC 11 17:36:54.3±0.2, 2.12N±0.04×96.64E±0.03, h25^{km}, h25^{km}±.6^{km}:pP-P, n263, σ0$\overset{s}{.}$88/258, mb5.0/107, MS4.4/62, 26C-7D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**5.01**	**61**	P	**Pn**	**17 38 11.7**	**+1.7**
KULM	**Kulim**	**5.09**	**52**	*e*Pn	**Pn**	**17 38 12.5**	**+1.4**
SNG	**Songkhla**	**6.40**	**38**	P	**Pn**	**17 38 29.0**	**-0.5**
	674nm,1.0s						
KGM	**Kluang**	**6.67**	**91**	P	**Pn**	**17 38 34.8**	**+1.4**
NNT	**Nongplab**	**10.85**	**16**	P	**P**	**17 39 31.5**	**+0.2**
KSM	**Kuching**	**13.68**	**92**	*e*Pn	**P**	**17 40 10.7**	**+1.3**
KKTK	**Khon Kaen**	**15.38**	**23**	PG	**P**	**17 40 32.0**	**+0.3**
KKTK				SG	PP	17 40 36.5	-7.4
CM31	**Chiang Mai Arr**	**16.39**	**8**	*e*P	**P**	**17 40 43.8**	**-0.9**
	44nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.39**	**8**	P	**P**	**17 40 43.9**	**-0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						

CMAR				MLR	MLR		
	comp=Z,891nm,19.9s						
CMAR	**Chiang Mai Arr**	**16.39**	**8**	Pn	**P**	**17 40 43.9**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=199,slow=12,SNR=31						
CMAR				LR	LR	17 47 37.0	
	comp=Z,890nm,19.9s,baz=195,slow=39						
PALK	**Pallekele**	**16.68**	**288**	P	**P**	**17 40 51.9**	**+3.5**
	comp=Z,57nm,1.1s						
CHG	**Chiang Mai**	**16.74**	**8**	⇑P	**P**	**17 40 48.2**	**-0.8**
	comp=Z,33nm,0.8s						
NANT	**Nan**	**17.05**	**13**	⇑P	**P**	**17 40 52.0**	**-0.9**
	comp=Z,419nm,1.0s						
MDRS	**Chennai**	**19.54**	**305**	*e*x	x	17 46 34.0	
MDRS				*e*x	x	17 54 55.0	
KKM	**Kota Kinabalu**	**19.91**	**78**	*e*P	**P**	**17 41 27.1**	**-0.1**
KKM	**Kota Kinabalu**	**19.91**	**78**	P	**P**	**17 41 27.6**	**+0.3**
VIS	**Vishakhapatnam**	**20.28**	**321**	*e*S	**S**	**17 45 15.6**	**+3.5**
VIS				*e*x	x	17 47 38.6	
	comp=Z,263nm,3.3s						
VIS				*e*x	x	17 47 38.9	
VIS				AMb	AMB	17 48 54.5	
	comp=Z,142nm,20.7s						
QIZ	**Qiongzhong**	**21.20**	**37**	P	**P**	**17 41 40.9**	**+0.3**
QIZ				S	**S**	**17 45 32.1**	**+2.0**
QIZ				XS		17 45 41.7	
QIZ				LR	LR		
	comp=N,1µm,13.1s,MS4.7						
QIZ				LR	LR		
	comp=E,2µm,13.1s,MS4.7						
QIZ				LR	LR		
	comp=Z,3µm,13.1s,MS4.8						
QIZ	**Qiongzhong**	**21.20**	**37**	*e*P	**P**	**17 41 40.4**	**-0.2**
	comp=Z,76nm,1.4s,mb4.8						
QIZ				LR	LR		
	comp=Z,634nm,19.0s,MS4.0						
TSM	**Tawau**	**21.31**	**84**	P	**P**	**17 41 42.2**	**+0.6**
HYB	**Hyderabad**	**23.39**	**312**	⇓*e*P	**P**	**17 42 04.5**	**+2.2**
HYB	**Hyderabad**	**23.39**	**312**	⇓*i*P	**P**	**17 42 04.5**	**+2.2**
KMI	**Kunming**	**23.61**	**14**	P	**P**	**17 42 06.1**	**+1.6**
KMI				AP		17 42 13.1	
KMI				XP		17 42 15.7	
KMI				PP	PP	17 42 35.5	-1.7
KMI				S	**S**	**17 46 09.0**	**-4.8**
KMI				AMB	AMB		
	comp=Z,50nm,1.5s,mb4.7						
KMI				AMB	AMB		
	comp=Z,290nm,3.7s						
KMI				LR	LR		
	comp=N,580nm,15.5s,MS4.3						
KMI				LR	LR		
	comp=E,600nm,14.8s,MS4.3						
KMI				LR	LR		
	comp=Z,1µm,12.8s,MS4.5						
KMI	**Kunming**	**23.61**	**14**	P	**P**	**17 42 06.1**	**+1.6**
	comp=Z,50nm,1.5s,mb4.7						
KMI				pP		17 42 13.1	
KMI				sP		17 42 15.7	
KMI				PP	PP	17 42 35.5	-1.7
KMI				PPP	PPP	17 42 45.4	-1.8
KMI				S	**S**	**17 46 09.0**	**-4.8**
KMI				sS		17 46 20.3	
KMI				SS	SS	17 46 52.3	-10
KMI				SSS	SSS	17 47 07.4	-11
KMI				LR	LR		
	comp=Z,1µm,12.8s,MS4.5						
SHL	**Shillong**	**23.76**	**349**	*e*P	**P**	**17 42 04.8**	**-1.1**
SHL				*e*S	**S**	**17 46 19.0**	**+2.7**
MNGI	**Mangalore**	**24.12**	**298**	*e*x	x	17 49 51.6	
MNGI				*e*x	x	17 54 11.1	
GYA	**Guiyang**	**26.05**	**21**	⇑*i*P	**P**	**17 42 27.4**	**-0.2**
GYA				AP	pP	17 42 34.8	-0.2
GYA				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.7						
GYA				AMB	AMB		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,1µm,14.4s,MS4.7						
GYA				LR	LR		
	comp=E,1µm,13.9s,MS4.7						
GYA				LR	LR		
	comp=Z,2µm,13.8s,MS4.8						
GZH	**Guangzhou**	**26.40**	**37**	P	**P**	**17 42 35.9**	**+5.0**
GZH				LR	LR		
	comp=N,1µm,14.6s,MS4.6						
GZH				LR	LR		
	comp=E,670nm,15.5s,MS4.6						
GZH				LR	LR		
	comp=Z,2µm,14.6s,MS4.7						
PKI	**Pulchoki**	**27.50**	**338**	*e*P	**P**	**17 42 41.1**	**+0.2**
	comp=Z,104nm,1.2s,mb5.2						
GUN	**Gumba**	**27.63**	**339**	*e*P	**P**	**17 42 42.6**	**+0.4**
	comp=Z,155nm,0.7s,mb5.7						
DMN	**Daman**	**27.65**	**338**	*e*P	**P**	**17 42 42.5**	**+0.2**
	comp=Z,72nm,0.8s,mb5.3						
KKN	**Kakani**	**27.74**	**338**	*e*P	**P**	**17 42 43.2**	**0.0**
	comp=Z,88nm,0.9s,mb5.4						
LSA	**Lhasa**	**27.92**	**350**	P	**P**	**17 42 45.0**	**+0.2**
LSA				AP	pP	17 42 53.9	+1.7
LSA				XP	sP	17 42 56.9	+1.4
LSA				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.2						
LSA				LR	LR		
	comp=N,210nm,24.3s						
LSA				LR	LR		
	comp=E,460nm,32.0s						
LSA				LR	LR		
	comp=Z,440nm,25.9s,MS3.9						
LSA	**Lhasa**	**27.92**	**350**	*e*P	**P**	**17 42 45.3**	**+0.5**
	comp=Z,63nm,0.9s,mb5.2						
LSA				LR	LR		
	comp=Z,359nm,19.0s,MS4.0						
GKN	**Gorkha**	**28.18**	**337**	*e*P	**P**	**17 42 47.3**	**+0.2**
	comp=Z,158nm,0.9s,mb5.6						
KOLN	**Koldanda**	**28.39**	**335**	*e*P	**P**	**17 42 49.3**	**+0.3**
	comp=Z,108nm,0.8s,mb5.5						
CD2	**Chengdu**	**29.42**	**13**	P	**P**	**17 42 57.0**	**-1.2**
CD2				AP	pP	17 43 06.5	+0.8
CD2				XP	sP	17 43 11.4	+2.4
CD2				S	**S**	**17 47 42.3**	**-7.0**
CD2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.3						
CD2				LR	LR		
	comp=N,1µm,15.5s						
CD2				LR	LR		
	comp=Z,1µm,12.0s,MS4.8						
ENH	**Enshi**	**30.54**	**22**	*e*P	**P**	**17 43 06.6**	**-1.5**
	comp=Z,44nm,0.9s,mb5.3						
ENH				LR	LR		
	comp=Z,702nm,20.0s,MS4.3						
NDI	**New Delhi**	**32.26**	**327**	*e*P	**P**	**17 43 21.0**	**-2.3**
MBWA	**Marble Bar**	**32.34**	**137**	*e*P	**P**	**17 43 23.9**	**-0.2**
	comp=Z,15nm,0.9s,mb4.8						
XAN	**Xi’an**	**33.77**	**19**	P	**P**	**17 43 35.2**	**-1.2**
XAN				AMB	AMB		
	comp=Z,90nm,0.9s,mb5.7						
XAN				LR	LR		
	comp=N,290nm,15.3s,MS4.5						
XAN				LR	LR		
	comp=E,590nm,14.9s,MS4.5						
XAN				LR	LR		
	comp=Z,750nm,13.9s,MS4.6						
LZH	**Lanzhou**	**34.45**	**10**	⇑P	**P**	**17 43 41.5**	**-0.7**
LZH				AP	pP	17 43 49.1	-0.7
LZH				XP	sP	17 43 52.0	-1.0
LZH				AMB	AMB		
	comp=Z,120nm,1.2s,mb5.7						
LZH				AMB	AMB		
	comp=Z,360nm,4.0s						
LZH				LR	LR		
	comp=N,1µm,16.4s						
LZH				LR	LR		
	comp=Z,2µm,17.2s,MS4.9						
LZH	**Lanzhou**	**34.45**	**10**	⇑P	**P**	**17 43 41.5**	**-0.7**
	comp=Z,125nm,1.2s,mb5.7						
LZH				pP	pP	17 43 49.1	-0.7
LZH				sP	sP	17 43 52.0	-1.0
LZH				LR	LR		
	comp=Z,2µm,17.2s,MS4.9						
SDNR	**Sundarnagar**	**34.62**	**330**	*e*P	**P**	**17 43 43.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**34.92**	**126**	⇑*i*P	**P**	**17 43 45.4**	**-1.0**
	comp=Z,36nm,0.6s,mb5.5						
FITZ	**Fitzroy Crossi**	**34.92**	**126**	P	**P**	**17 43 45.5**	**-0.9**
	comp=Z,47nm,0.7s,mb5.5,baz=320,slow=4.0,SNR=51						
NJ2	**Nanjing**	**36.39**	**33**	*e*P	**P**	**17 43 58.1**	**-0.6**
NJ2				AP	pP	17 44 07.5	+1.2
NJ2				XP	sP	17 44 11.5	+2.0
NJ2				PP	PP	17 45 21.2	-1.3
NJ2				S	**S**	**17 49 35.0**	**-2.9**
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,1µm,4.8s						
NJ2				LR	LR		
	comp=N,860nm,20.6s,MS4.7						
NJ2				LR	LR		
	comp=E,1µm,23.6s,MS4.7						
NJ2				LR	LR		
	comp=Z,6µm,18.0s						
SSE	**Sheshan**	**37.00**	**36**	P	**P**	**17 44 01.9**	**-2.0**
SSE				XP	sP	17 44 13.7	-0.9
SSE				PP	PP	17 45 26.7	-3.8
SSE				S	**S**	**17 49 46.1**	**-1.1**
SSE				XS		17 50 01.4	
SSE				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
SSE				AMB	AMB		
	comp=Z,70nm,6.5s						
SSE				LR	LR		
	comp=N,590nm,20.7s,MS4.5						
SSE				LR	LR		
	comp=E,450nm,20.7s,MS4.5						
SSE				LR	LR		
	comp=Z,320nm,17.4s,MS4.2						
SSE	**Sheshan**	**37.00**	**36**	P	**P**	**17 44 01.9**	**-2.0**
	comp=Z,33nm,0.9s,mb5.2						
SSE				sP	sP	17 44 13.7	-0.9
SSE				PP	PP	17 45 26.7	-3.8
SSE				S	**S**	**17 49 46.1**	**-1.1**
SSE				sS		17 50 01.4	
SSE				SS	ScS	17 54 14.0	-1.0
SSE				LR	LR		
	comp=Z,320nm,17.4s,MS4.2						
GTA	**Gaotai**	**37.23**	**4**	⇑P	**P**	**17 44 05.7**	**0.0**
GTA				AP	pP	17 44 13.0	-0.3
GTA				XP	sP	17 44 16.4	-0.1
GTA				PP	PP	17 45 32.6	-0.6
GTA				SS	SS	17 52 22.9	+0.8
GTA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.2						
GTA				AMB	AMB		
	comp=Z,90nm,5.3s						
GTA				LR	LR		
	comp=N,260nm,16.0s,MS4.4						
GTA				LR	LR		
	comp=E,430nm,16.0s,MS4.4						
GTA				LR	LR		
	comp=Z,340nm,16.4s,MS4.2						
KAKA	**Kakadu**	**38.47**	**113**	⇑*i*P	**P**	**17 44 15.3**	**-1.1**
	comp=Z,59nm,0.5s,mb5.6						
JOW	**Kunigami**	**39.03**	**48**	P	**P**	**17 44 22.1**	**+1.1**
	comp=Z,31nm,0.5s,mb5.3,baz=280,slow=19,SNR=6.2						
BTO	**Baotou**	**40.18**	**16**	*e*P	**P**	**17 44 30.3**	**0.0**
HHC	**Hu-ho-hao-te**	**40.85**	**17**	*e*P	**P**	**17 44 37.1**	**+1.3**
HHC				AP	pP	17 44 44.2	+0.8
HHC				XP	sP	17 44 47.0	+0.4
HHC				PP	PP	17 46 15.7	+2.6
HHC				PCP	PcP	17 46 39.4	+2.4
HHC				SCP		17 50 21.6	
HHC				PCS		17 50 27.2	
HHC				S	**S**	**17 50 47.7**	**+2.5**
HHC				XS		17 50 59.4	
HHC				SS	SS	17 53 46.4	+4.2
HHC				SCS	ScS	17 54 39.4	+2.3
HHC				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.8						
HHC				LR	LR		
	comp=N,1µm,14.3s,MS4.9						
HHC				LR	LR		
	comp=E,750nm,14.2s,MS4.9						
HHC				LR	LR		
	comp=Z,820nm,14.3s,MS4.7						
KSH	**Kashi**	**41.71**	**336**	*e*P	**P**	**17 44 42.0**	**-0.9**
KSH				*e*AP	pP	17 44 49.3	-1.2
KSH				*e*PP	PP	17 46 21.0	-1.5
KSH				*e*PCP	PcP	17 46 39.1	-0.8
KSH				*e*SCP		17 50 26.1	
KSH				*e*PCS		17 50 29.1	
KSH				*e*S	**S**	**17 50 57.3**	**-0.8**
KSH				*e*SS	SS	17 53 56.0	-2.9
KSH				*e*SCS	ScS	17 54 41.7	-0.6
KSH				AMB	AMB		
	comp=Z,270nm,2.8s,mb5.4						
KSH				LR	LR		
	comp=N,350nm,5.0s						
KSH				LR	LR		
	comp=E,420nm,7.9s						
WMQ	**Urumqi**	**42.28**	**350**	P	**P**	**17 44 48.3**	**+0.7**
WMQ				AP	pP	17 44 55.7	+0.5
WMQ				XP	sP	17 44 59.1	+0.8
WMQ				PP	PP	17 46 29.8	+1.4
WMQ				PCP	PcP	17 46 42.3	+0.6
WMQ				S	**S**	**17 51 07.4**	**+1.0**
WMQ				SS	SS	17 54 10.3	+0.8
WMQ				SCS	ScS	17 54 46.6	+0.9
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,50nm,4.2s						
WMQ				LR	LR		
	comp=N,1µm,19.2s,MS4.9						
WMQ				LR	LR		
	comp=E,1µm,21.5s,MS4.9						
WMQ				LR	LR		
	comp=Z,1µm,22.8s,MS4.7						
WRA	**Warramunga Arr**	**42.99**	**122**	P	**P**	**17 44 53.5**	**-0.2**
WRA				pmax	pmax		
	comp=Z,22nm,0.7s						
WRA	**Warramunga Arr**	**42.99**	**122**	P	**P**	**17 44 53.5**	**-0.3**
	comp=Z,22nm,0.7s,mb5.0,baz=301,slow=9.1,SNR=135						
WRAB	**Tennant Creek**	**43.00**	**122**	*e*P	**P**	**17 44 53.3**	**-0.4**
	comp=Z,47nm,0.8s,mb5.3						
WRAB				LR	LR		
	comp=Z,228nm,21.0s,MS4.0						
WB2	**Warramunga Arr**	**43.01**	**122**	⇑*i*P	**P**	**17 44 53.5**	**-0.3**
DL2	**Dalian**	**43.14**	**29**	P	**P**	**17 44 55.3**	**+0.7**
DL2				*e*S	**S**	**17 51 21.7**	**+2.7**
DL2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.2						
DL2				LR	LR		
	comp=N,200nm,14.3s,MS4.3						
DL2				LR	LR		
	comp=E,150nm,13.3s,MS4.3						
DL2				LR	LR		
	comp=Z,310nm,21.6s						
ULHL	**Ulahol**	**43.94**	**338**	P	**P**	**17 45 02.2**	**+1.2**
	SNR=5.2						
KZA	**Kyzart**	**44.17**	**337**	P	**P**	**17 45 03.7**	**+0.7**
	SNR=10						
JNU	**Nakatsue**	**44.50**	**42**	P	**P**	**17 45 05.9**	**+0.1**
	comp=Z,23nm,1.0s,mb4.8,baz=206,slow=5.7,SNR=9.5						
JNU				LR	LR	18 05 45.5	
	comp=Z,254nm,19.3s,MS4.2,baz=178,slow=39						
UCH	**Uchtor**	**44.59**	**337**	P	**P**	**17 45 07.1**	**+0.7**
	SNR=52						
TKM2	**Tokmak 2**	**44.76**	**338**	P	**P**	**17 45 08.5**	**+0.8**
	SNR=19						
KBK	**Karagaybulak**	**44.78**	**337**	P	**P**	**17 45 09.2**	**+1.3**
	SNR=36						
AML	**Almayashu**	**44.84**	**336**	P	**P**	**17 45 09.6**	**+1.2**
	SNR=28						
AAK	**Ala-Archa**	**44.94**	**337**	P	**P**	**17 45 10.6**	**+1.4**
	SNR=9.2						
FRU	**Bishkek**	**45.06**	**337**	*e*P	**P**	**17 45 10.5**	**+0.4**
FRU				pmax	pmax		
	comp=Z,55nm,1.8s,mb5.1						
CHMS	**Chumysh**	**45.15**	**337**	P	**P**	**17 45 11.1**	**+0.3**
	SNR=13						
EKS2	**Erkin-Say**	**45.25**	**336**	P	**P**	**17 45 12.8**	**+1.2**
	SNR=14						
KS15	**Wonju Array Si**	**45.39**	**35**	*e*P	**P**	**17 45 12.8**	**+0.1**
USP	**Ospenovka**	**45.47**	**337**	P	**P**	**17 45 13.9**	**+0.5**
	SNR=34						
MKAR	**Makanchi Array**	**46.22**	**346**	P	**P**	**17 45 19.2**	**0.0**
MKAR				pmax	pmax		
	comp=Z,48nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,224nm,20.6s						
MKAR	**Makanchi Array**	**46.22**	**346**	P	**P**	**17 45 19.1**	**-0.1**
	comp=Z,48nm,0.8s,mb5.5,baz=162,slow=7.7,SNR=351						
MKAR				LR	LR	18 08 43.4	
	comp=Z,224nm,20.6s,MS4.1,baz=174,slow=41						
SONM	**Songino Array**	**46.31**	**9**	P	**P**	**17 45 20.0**	**+0.1**
	comp=Z,6.1nm,0.4s,mb4.9,baz=188,slow=8.7,SNR=80						
SONM				PcP	PcP	17 46 55.0	-0.4
	comp=Z,1.7nm,0.7s,baz=175,slow=5.2,SNR=2.5						
SONM				LR	LR	18 07 43.3	
	comp=Z,467nm,19.8s,MS4.4,baz=189,slow=40						
SNY	**Shenyang**	**46.35**	**28**	⇑P	**P**	**17 45 19.7**	**-0.6**
SNY				AP	pP	17 45 27.7	-0.3
SNY				XP	sP	17 45 31.8	+0.7
SNY				S	**S**	**17 52 09.2**	**+3.9**
SNY				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
SNY				LR	LR		
	comp=E,350nm,15.5s						
SNY				LR	LR		
	comp=Z,610nm,12.8s,MS4.7						
ULN	**Ulaanbaatar**	**46.45**	**10**	⇑*i*P	**P**	**17 45 21.2**	**+0.2**
ULN	**Ulaanbaatar**	**46.45**	**10**	*e*P	**P**	**17 45 20.8**	**-0.2**
	comp=Z,19nm,1.0s,mb5.0						
ULN				*e*pP	pP	17 45 29.2	+0.6
ULN				LR	LR		
	comp=Z,329nm,22.0s,MS4.2						
ZAK	**Zakamensk**	**48.42**	**6**	⇑*i*P	**P**	**17 45 36.2**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
CN2	**Changchun**	**48.75**	**28**	*e*P	**P**	**17 45 39.0**	**-0.1**
CN2				*e*AP	pP	17 45 46.5	-0.3
CN2				*e*S	**S**	**17 52 40.0**	**+0.8**
CN2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.3						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,500nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=E,400nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=Z,700nm,15.0s,MS4.8						
MOY	**Mondy**	**49.51**	**4**	*e*P	**P**	**17 45 45.4**	**+0.6**
TLY	**Talaya**	**49.74**	**6**	*e*P	**P**	**17 45 46.1**	**-0.5**
TLY				*e*		17 47 45.9	
TLY				*e*S	**S**	**17 52 48.2**	**-4.6**
TLY				*e*PS	PS	17 53 02.7	-1.7
TLY				*e*		17 55 30.1	
TLY				*e*SSS	SSS	17 57 47.0	-2.4
TLY				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
TLY				MLR	MLR		
	comp=Z,428nm,16.0s,MS4.5						
TLY	**Talaya**	**49.74**	**6**	P	**P**	**17 45 47.3**	**+0.7**
	comp=Z,8.5nm,0.7s,mb4.9						
TLY				*e*pP	pP	17 45 55.7	+1.3
TLY				LR	LR		
	comp=Z,94nm,20.0s,MS3.8						
IRK	**Irkutsk**	**50.36**	**6**	*e*P	**P**	**17 45 43.4**	**-7.9**
IRK				*e*		17 47 46.0	
IRK				pmax	pmax		
	comp=Z,44nm,1.9s,mb5.2						
HIA	**Hailar**	**50.96**	**19**	*e*P	**P**	**17 45 55.5**	**-0.4**
	comp=Z,37nm,1.1s,mb5.2						
HIA				LR	LR		
	comp=Z,297nm,20.0s,MS4.3						
MDJ	**Mudanjiang**	**51.35**	**30**	P	**P**	**17 45 59.3**	**+0.4**
MDJ				AP	pP	17 46 05.6	-1.1
MDJ				PCP	PcP	17 47 13.1	-0.6
MDJ				PP	PP	17 47 56.9	+0.1
MDJ				S	**S**	**17 53 18.9**	**+3.7**
MDJ				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,60nm,6.3s						
MDJ				LR	LR		
	comp=N,440nm,18.1s,MS4.7						
MDJ				LR	LR		
	comp=E,400nm,16.4s,MS4.7						
MDJ				LR	LR		
	comp=Z,320nm,17.2s,MS4.4						
MDJ	**Mudanjiang**	**51.35**	**30**	*e*P	**P**	**17 45 59.7**	**+0.8**
	comp=Z,20nm,1.0s,mb5.0						
MDJ				*e*pP	pP	17 46 07.1	+0.4
MDJ				LR	LR		
	comp=Z,189nm,20.0s,MS4.1						
MAJO	**Matsushiro**	**51.40**	**43**	PFAKE		17 46 10.0	+11
MAJO				LR	LR		
	comp=Z,341nm,20.0s,MS4.4						
MAT	**Matsushiro**	**51.40**	**43**	*e*P	**P**	**17 45 59.0**	**-0.4**
MAT	**Matsushiro**	**51.40**	**43**	P	**P**	**17 45 58.9**	**-0.5**
MJAR	**Matsushiro Arr**	**51.40**	**43**	P	**P**	**17 45 58.7**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MJAR				MLR	MLR		
	comp=Z,172nm,20.0s						
MJAR	**Matsushiro Arr**	**51.40**	**43**	P	**P**	**17 45 58.7**	**-0.8**
	comp=Z,8.1nm,1.1s,mb4.6,baz=229,slow=7.9,SNR=15						
MJAR				LR	LR	18 10 09.0	
	comp=Z,172nm,20.0s,MS4.1,baz=265,slow=39						
MJAR	**Matsushiro Arr**	**51.40**	**43**	P	**P**	**17 45 58.7**	**-0.8**
MJAR				LR	LR	18 10 09.0	
PMG	**Port Moresby**	**51.61**	**104**	P	**P**	**17 46 01.3**	**0.0**
	comp=Z,26nm,0.8s,mb5.2,baz=274,slow=9.6						
PMG	**Port Moresby**	**51.61**	**104**	*e*P	**P**	**17 46 01.0**	**-0.3**
	comp=Z,23nm,0.7s,mb5.2						
PMG				*e*pP	pP	17 46 07.6	-1.5
PMG				LR	LR		
	comp=Z,255nm,19.0s,MS4.3						
CIT	**Chita**	**51.71**	**13**	*e*P	**P**	**17 46 01.9**	**+0.4**
CIT				*e*		17 47 15.2	
CIT				*e*		17 47 52.4	
CIT				pmax	pmax		
	comp=Z,88nm,1.7s,mb5.4						
ZAL	**Zalesovo**	**52.56**	**351**	P	**P**	**17 46 07.1**	**-0.8**
ZAL				pmax	pmax		
	comp=Z,31nm,0.7s						
ZAL	**Zalesovo**	**52.56**	**351**	P	**P**	**17 46 07.0**	**-0.9**
	comp=Z,31nm,0.7s,mb5.3,baz=308,slow=6.2,SNR=162						
CTAO	**Charters Tower**	**53.41**	**117**	*e*P	**P**	**17 46 14.7**	**-0.1**
	comp=Z,91nm,1.8s,mb5.4						
CTAO				*e*pP	pP	17 46 23.2	+0.7
CTAO				LR	LR		
	comp=Z,458nm,20.0s,MS4.5						
NVS	**Novosibirsk**	**53.68**	**350**	⇑*i*P	**P**	**17 46 14.3**	**-1.9**
NVS				*e*S	**S**	**17 53 40.0**	**-6.9**
NVS				pmax	pmax		
	comp=Z,58nm,1.1s,mb5.4						
NVS				pmax	pmax		
	comp=N,41nm,1.3s						
NVS				pmax	pmax		
	comp=E,24nm,1.1s						
NVS				smax			
	comp=N,19nm,1.8s						
STKA	**Stephens Creek**	**54.38**	**132**	⇑*i*P	**P**	**17 46 21.5**	**-0.2**
	comp=N,9.7nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**54.38**	**132**	P	**P**	**17 46 21.4**	**-0.3**
	comp=N,14nm,0.8s,mb4.9,baz=299,slow=10,SNR=23						
BVAR	**Borovoye Array**	**55.20**	**341**	P	**P**	**17 46 26.1**	**-1.3**
	comp=N,18nm,0.8s,mb5.2,baz=143,slow=8.6,SNR=111						
KLR	**Kul’dur**	**55.69**	**27**	*e*P	**P**	**17 46 27.5**	**-3.5**
KLR				*e*	pP	17 46 35.8	-3.0
KLR				*e*S	**S**	**17 54 25.0**	**+11**
KLR				pmax	pmax		
	comp=Z,56nm,1.8s,mb5.3						
KLR				MLR	MLR		
	comp=E,400nm,15.0s						
KLR				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.1						
BOD	**Bodaibo**	**57.22**	**11**	*e*P	**P**	**17 46 40.8**	**-1.0**
BOD				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.8						
ASAJ	**Asahikawa**	**58.27**	**37**	P	**P**	**17 46 49.0**	**-0.3**
ASAJ				pmax	pmax		
	comp=Z,14nm,1.0s						
ASAJ				MLR	MLR		
	comp=Z,134nm,21.3s						
ASAJ	**Asahikawa**	**58.27**	**37**	P	**P**	**17 46 49.0**	**-0.4**
	comp=Z,14nm,1.0s,mb5.0,baz=208,slow=2.9,SNR=4.7						
ASAJ				LR	LR	18 10 15.1	
	comp=Z,134nm,21.3s,MS4.0,baz=67,slow=34						
KMBO	**Kilima Mbogo**	**59.47**	**267**	P	**P**	**17 47 02.9**	**+4.8**
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KMBO				MLR	MLR		
	comp=Z,296nm,18.1s						
KMBO	**Kilima Mbogo**	**59.47**	**267**	P	**P**	**17 47 02.9**	**+4.9**
	comp=Z,3.8nm,0.9s,mb4.4,baz=63,slow=12,SNR=6.5						
KMBO				LR	LR	18 09 38.7	
	comp=Z,296nm,18.1s,MS4.5,baz=93,slow=33						

KMBO	Kilima Mbogo	59.47	267	P	P	17 47 02.9	+4.9
KMBO				LR	LR	18 09 38.7	
YSS	Yuzh-Sakhalins	59.91	35⇑	eP	P	17 47 00.0	-0.7
YSS				e	pP	17 47 08.0	-0.6
YSS				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.4						
YSS	Yuzh-Sakhalins	59.91	35	eP	P	17 47 00.6	-0.1
	comp=Z,78nm,1.1s,mb5.7						
YSS				epP	pP	17 47 08.4	-0.2
YSS				LR	LR		
	comp=Z,165nm,21.0s,MS4.2						
GNI	Garni	60.25	316⇑	eP	P	17 47 02.3	-0.8
GNI				pmax	pmax		
	comp=Z,18nm,1.4s						
GNI				MLR	MLR		
	comp=Z,100nm,18.0s						
GNI	Garni	60.25	316	eP	P	17 47 02.1	-1.0
	comp=Z,23nm,1.0s,mb5.2						
GNI				LR	LR		
	comp=Z,154nm,19.0s,MS4.2						
TI2	Plekhanov	60.92	318	eP	P	17 47 06.0	-1.6
SVE	Sverdlovsk	61.63	338⇑	eP	P	17 47 11.0	-1.2
SVE				e		17 47 55.0	
SVE				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.5						
SVE				MLR	MLR		
	comp=N,200nm,18.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,100nm,18.0s,MS4.4						
SVE				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.3						
ZEI	Tsey	61.94	318	eP	P	17 47 13.9	-0.6
ZEI				i *PP	pP	17 47 22.3	-0.2
ZEI				i		17 49 38.4	
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
ARU	Arti	62.12	337⇑	iP	P	17 47 13.8	-1.7
ARU				e		17 47 53.2	
ARU				e		17 49 32.0	
ARU				ePPP	PPP	17 50 57.8	-5.9
ARU				eS	S	17 55 39.6	+2.2
ARU				eSS	SS	17 59 39.4	-2.7
ARU				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.1						
ARU	Arti	62.12	337	eP	P	17 47 13.7	-1.8
	comp=Z,18nm,0.9s,mb5.2						
ARU				LR	LR		
	comp=Z,66nm,20.0s,MS3.8						
KIV	Kislovodsk	63.25	319c	iP	P	17 47 22.1	-1.0
KIV				i	pP	17 47 29.8	-1.3
KIV				eS	S	17 55 58.6	+6.9
KIV				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
KIV				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.1						
KIV	Kislovodsk	63.25	319	eP	P	17 47 21.7	-1.5
	comp=Z,11nm,0.8s,mb5.0						
KIV				epP	pP	17 47 29.9	-1.1
KIV				LR	LR		
	comp=Z,28nm,19.0s,MS3.5						
HNR	Honiara	64.09	101	PFAKE		17 47 40.0	+11
HNR				LR	LR		
	comp=Z,169nm,20.0s,MS4.2						
MALT	Malatya	64.10	312	eP	P	17 47 27.4	-1.5
	comp=Z,7.9nm,1.0s,mb4.7						
MALT				epP	pP	17 47 34.7	-2.1
EIL	Elat	64.50	302	eP	P	17 47 31.4	-0.2
	comp=Z,7.4nm,0.8s,mb4.8						
YAK	Yakutsk	64.70	17c	iP	P	17 47 31.1	-1.3
YAK				e*PP	pP	17 47 39.0	-1.3
YAK				pmax	pmax		
	comp=N,18nm,1.0s						
YAK				pmax	pmax		
	comp=Z,52nm,1.0s,mb5.5						
YAK				pmax	pmax		
	comp=E,14nm,1.2s						
YAK	Yakutsk	64.70	17	eP	P	17 47 31.1	-1.2
	comp=E,113nm,1.0s,mb5.8						
YAK				LR	LR		
	comp=Z,363nm,21.0s,MS4.5						
SOKR	Solikamsk	65.03	339⇓	iP	P	17 47 32.7	-1.8
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,280nm,21.0s,MS4.4						
SOC	Sochi	65.07	318	eP	P	17 47 32.1	-3.0
SOC				eS	S	17 56 05.7	-8.5
SOC				pmax	pmax		
	comp=N,12nm,1.1s						
SOC				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2						
SOC				pmax	pmax		
	comp=E,5.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,174nm,19.0s,MS4.3						
SOC				MLR	MLR		
	comp=N,77nm,17.0s,MS4.2						
SOC				MLR	MLR		
	comp=E,145nm,22.0s,MS4.2						
BR131	Keskin Array S	68.08	312	eP	P	17 47 52.6	-1.7
	comp=E,3.4nm,0.7s,mb4.5						
BRTR	Keskin Array B	68.08	312	P	P	17 47 52.8	-1.5
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	Keskin Array B	68.08	312	P	P	17 47 52.8	-1.6
	comp=Z,3.9nm,0.8s,mb4.5,baz=129,slow=6.6,SNR=17						
VRSR	Storozhevoye	68.49	325	eP	P	17 47 55.0	-1.6
VRSR				e*SP	sP	17 48 06.0	-1.4
VRSR				e		17 48 20.8	
VRSR				e		17 50 24.1	
VRSR				eS	S	17 56 52.6	-2.8
VRSR				eSS	SS	18 01 17.7	-3.3
VRSR				eSSS	SSS	18 04 20.6	-1.4
VRSR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
VRSR				pmax	pmax		
	comp=N,3.0nm,0.5s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.9s						
VRSR				smax			
	comp=N,7.0nm,0.6s						
VRSR				smax			
	comp=Z,2.0nm,0.5s						
VRSR				smax			
	comp=E,6.0nm,0.8s						
CASY	Casey	68.97	174	eP	P	17 47 59.3	-0.1
	comp=E,4.9nm,0.9s,mb4.4						
CASY				epP	pP	17 48 04.9	-2.3
CASY				LR	LR		
	comp=Z,658nm,21.0s,MS4.8						
SIM	Simferopol’	69.31	318	P	P	17 47 51.0	-11
SIM				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
LSZ	Lusaka	69.84	253	PFAKE		17 48 20.0	+15
LSZ				LR	LR		
	comp=Z,276nm,20.0s,MS4.5						
MA2	Magadan	70.75	26c	iP	P	17 48 10.4	+0.1
MA2				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
MA2	Magadan	70.75	26	eP	P	17 48 09.7	-0.6
	comp=Z,69nm,1.3s,mb5.4						
MA2				LR	LR		
	comp=Z,227nm,20.0s,MS4.4						
MOS	Moscow	71.26	329	eP	P	17 48 12.9	-0.5
MOS				e		17 48 33.0	
MOS				e		17 50 52.7	
MOS				ePPP	PPP	17 52 37.4	+2.6
MOS				eS	S	17 57 31.4	+3.5
MOS				pmax	pmax		
	comp=Z,69nm,0.8s,mb5.6						
MOS				MLR	MLR		
	comp=Z,700nm,22.8s,MS4.9						
OBN	Obninsk	71.55	328c	iP	P	17 48 13.9	-1.3
OBN	Obninsk	71.55	328	eP	P	17 48 13.6	-1.5
	comp=Z,54nm,1.1s,mb5.4						
OBN				epP	pP	17 48 21.0	-2.1
OBN				LR	LR		
	comp=Z,42nm,19.0s,MS3.7						
PET	Petropavlovsk	71.79	34	eP	P	17 48 16.4	-0.2
PET				eS	S	17 57 35.9	+1.9
PET				eSS	SS	18 02 17.0	+5.0
PET				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
PET				pmax	pmax		
	comp=Z,100nm,12.8s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.5						
PET	Petropavlovsk	71.79	34⇑	eP	P	17 48 16.3	-0.3
TIXI	Tiksi	72.39	10⇑	iP	P	17 48 17.0	-2.9
TIXI				eS	S	17 57 44.8	+4.3
TIXI				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
TIXI	Tiksi	72.39	10⇑	iP	P	17 48 18.5	-1.4
SEY	Seymchan	73.14	23	eP	P	17 48 24.3	-0.1
SEY				e		17 48 38.5	
SEY						17 51 03.6	
SEY				PPP	PPP	17 52 45.4	-7.3
SEY				eS	S	17 57 53.9	+4.7
SEY				e		17 58 30.1	
SEY				eSS	SS	18 02 37.0	+3.9
SEY				eSSS	SSS	18 05 47.6	+4.2
SEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
SEY				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
SEY				pmax	pmax		
	comp=E,1.0nm,0.8s						
SEY				smax			
	comp=N,130nm,20.2s						
SEY				smax			
	comp=E,50nm,18.0s						
SEY				MLR	MLR		
	comp=Z,440nm,21.0s,MS4.7						
SEY				MLR	MLR		
	comp=N,400nm,28.0s						
SEY				MLR	MLR		
	comp=E,240nm,20.0s						
IDI	Anoyia	73.91	306	P	P	17 48 29.3	-0.1
	comp=E,6.0nm,0.7s,mb4.6,baz=117,slow=17,SNR=4.5						
AKASG	Malin Array Be	74.19	322	P	P	17 48 29.1	-1.7
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKASG	Malin Array Be	74.19	322	P	P	17 48 29.1	-1.7
	comp=Z,6.3nm,0.8s,mb4.6,baz=89,slow=4.7,SNR=27						
BOSA	Boshof	74.75	240	P	P	17 48 35.4	+0.9
BOSA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
BOSA				MLR	MLR		
	comp=Z,131nm,18.5s,MS4.3						
BOSA	Boshof	74.75	240	P	P	17 48 35.4	+0.9
	comp=Z,5.0nm,1.1s,mb4.3,baz=278,slow=20,SNR=5.2						
BOSA				LR	LR	18 18 00.6	
	comp=Z,131nm,18.5s,MS4.3,baz=70,slow=33						
MLR	Muntele Rosu	75.02	317	P	P	17 48 35.9	+0.2
MLR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MLR	Muntele Rosu	75.02	317	P	P	17 48 35.9	+0.2
	comp=Z,4.8nm,0.4s,mb4.7,baz=171,slow=4.6,SNR=8.9						
LVV	L’vov	77.21	321	eP	P	17 48 47.1	-0.8
KWP	Kalwaria	78.01	320	eP	P	17 48 52.7	+0.4
APA	Apatity	78.08	339⇑	iP	P	17 48 52.3	0.0
APA				i		17 48 57.2	
APA				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
APA				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.8						
KOLS	Kolonicke sedl	78.16	320	eP	P	17 48 54.0	+0.9
KOLS				esP	sP	17 49 05.5	+1.6
SUW	Suwalki	78.61	325	eP	P	17 48 54.8	-0.7
FINES	FINESS Array B	78.93	333	P	P	17 48 56.7	-0.4
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,163nm,20.8s						
FINES	FINESS Array B	78.93	333	P	P	17 48 56.6	-0.5
	comp=Z,6.0nm,0.7s,mb4.7,baz=108,slow=6.0,SNR=26						
FINES				LR	LR	18 28 34.1	
	comp=Z,163nm,20.8s,MS4.3,baz=153,slow=39						
KAF	Kangasniemi	79.02	333	ep	P	17 48 56.6	-1.0
	comp=Z,13nm,0.8s,mb4.9,baz=103,slow=5.1						
KAF	Kangasniemi	79.02	333	eP	P	17 48 56.6	-1.0
KAF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
KECS	Kecovo	79.25	319	eP	P	17 49 01.2	+2.1
PSZ	Piszkesteto	79.56	318	eP	P	17 49 00.5	-0.3
	comp=Z,10nm,1.0s,mb4.7						
PSZ				epP	pP	17 49 09.2	+0.3
OJC	Ojcow	79.96	321	eP	P	17 49 02.5	-0.4
VYHS	Vyhne	80.34	319	eP	P	17 49 05.2	+0.2
BILL	Bilibino	80.51	21⇓	eP	P	17 49 05.4	-0.1
BILL				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
BILL	Bilibino	80.51	21	eP	P	17 49 05.3	-0.1
	comp=Z,5.6nm,0.6s,mb4.7						
BILL				epP	pP	17 49 13.9	+0.3
BILL				LR	LR		
	comp=Z,232nm,20.0s,MS4.5						
SRO	Srobarova	80.59	318	eP	P	17 49 06.8	+0.5
TIP	Timpagrande	80.82	309	eP	P	17 49 07.5	-0.2
OKC	Ostrava-Krasne	80.96	320	eP	P	17 49 08.4	+0.2
MORC	Moravsky Berou	81.34	320	eP	P	17 49 09.9	-0.4
	comp=Z,34nm,1.8s,mb5.0						
MORC				epP	pP	17 49 16.9	-1.5
ZST	Bratislava	81.45	318	eP	P	17 49 11.1	+0.3
ARCES	ARCESS Array B	81.49	340	P	P	17 49 11.0	+0.4
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ARCES	ARCESS Array B	81.49	340	P	P	17 49 10.9	+0.4
	comp=Z,3.5nm,0.5s,mb4.6,baz=99,slow=6.0,SNR=35						
DPC	Dobruska-Polom	82.19	320	eP	P	17 49 15.3	+0.7
DPC				epP	pP	17 49 22.4	-0.3
DPC				AMS	AMS	18 31 50.0	
	comp=Z,100nm,20.4s						
KSP	Ksiaz	82.26	321	eP	P	17 49 14.8	-0.2
KSP	Ksiaz	82.26	321	eP	P	17 49 16.0	+1.0
GROS	Grobnik	82.36	316	eP	P	17 49 15.7	+0.1
UPC	Upice	82.41	321	eP	P	17 49 16.2	+0.5
BOJS	Bojanci	82.45	315	eP	P	17 49 15.7	-0.4
LJU	Ljubljana	83.00	316	eP	P	17 49 19.4	+0.5
PRU	Pruhonice	83.30	320	eP	P	17 49 21.0	+0.7
PRU				LR	LR		
	comp=Z,100nm,19.0s,MS4.2						
PRU	Pruhonice	83.30	320	eP	P	17 49 21.0	+0.7
PRU				AMS	AMS	18 35 30.0	
	comp=Z,100nm,19.0s						
PVCC	Panska Ves	83.32	320	eP	P	17 49 21.3	+0.8
GORS	Gorjuse	83.39	316	eP	P	17 49 20.9	+0.1
BRG	Berggiesshubel	83.75	321	eP	P	17 49 23.2	+0.6
BRG				e		17 49 34.8	
BRG				pmax	pmax		
	comp=Z,20nm,1.8s,mb5.0						
BRG	Berggiesshubel	83.75	321	eP	P	17 49 23.2	+0.6
	comp=Z,20nm,1.8s,mb5.0						
BRG				e		17 49 34.8	
GEC2	GERESS Array S	83.76	319	eP	P	17 49 23.2	+0.5
GEC2				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.1						
GEC2	GERESS Array S	83.76	319	eP	P	17 49 23.2	+0.5
	comp=Z,19nm,1.1s,mb5.1						
GERES	GERESS Array B	83.76	319	P	P	17 49 23.1	+0.4
GERES				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GERES	GERESS Array B	83.76	319	P	P	17 49 23.1	+0.3
	comp=Z,7.2nm,0.9s,mb4.8,baz=104,slow=5.5,SNR=58						
KHC	Kasperske Hory	83.86	319	eP	P	17 49 23.3	+0.1
CLL	Collm	84.37	321	eP	P	17 49 26.0	+0.2
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
CLL	Collm	84.37	321	eP	P	17 49 26.0	+0.2
	comp=Z,5.0nm,1.1s,mb4.6						
CLL	Collm	84.37	321	P	P	17 49 26.0	+0.2
	comp=Z,logA/T=0.7,mb4.6						
HFS	Hagfors	84.65	330	LR	LR	18 34 10.4	
	comp=Z,121nm,19.0s,MS4.3,baz=283,slow=41						
MOX	Moxa	85.21	320	eP	P	17 49 30.5	+0.5
MOX				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.8						
MOX	Moxa	85.21	320	eP	P	17 49 30.5	+0.5
	comp=Z,14nm,1.6s,mb4.8						
MOX	Moxa	85.21	320	i P	P	17 49 30.5	+0.5
	comp=Z,logA/T=0.9,mb4.8						
GRA1	Grafenberg Arr	85.42	320	eP	P	17 49 31.7	+0.6
	comp=Z,20nm,1.0s,mb5.2						
GRF	Grafenberg Arr	85.42	320	eP	P	17 49 31.7	+0.6
GRF				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.2						
GRF	Grafenberg Arr	85.42	320	eP	P	17 49 31.7	+0.6
	comp=Z,20nm,1.0s,mb5.2						
NB2	NORSAR Subarra	85.94	331	P	P	17 49 33.2	-0.1
	comp=Z,9.0nm,1.0s,mb5.0,baz=96,slow=4.8						
NOA	NORSAR Array B	85.94	331	P	P	17 49 33.2	-0.1
NOA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,142nm,20.6s						
NOA	NORSAR Array B	85.94	331	P	P	17 49 33.2	-0.2
	comp=Z,4.1nm,0.9s,mb4.7,baz=94,slow=5.0,SNR=10						
NOA				LR	LR	18 32 23.3	
	comp=Z,142nm,20.6s,MS4.3,baz=80,slow=39						
NOA	NORSAR Array B	85.94	331	P	P	17 49 33.2	-0.2
NOA				LR	LR	18 32 23.3	
CLZ	Clausthal	86.03	322	eP	P	17 49 34.4	+0.3
	comp=Z,11nm,1.0s,mb5.0						
BSEG	Bad Segeberg	86.13	324	eP	P	17 49 35.2	+0.7
BSEG				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
DAVOX	Davos	86.25	317	LR	LR	18 33 31.4	
	comp=Z,62nm,18.7s,MS4.0,baz=268,slow=39						
VNDA	Vanda	86.83	169	P	P	17 49 38.3	+0.9
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VNDA				MLR	MLR		
	comp=Z,88nm,19.5s						
VNDA	Vanda	86.83	169	P	P	17 49 38.2	+0.8
	comp=Z,0.8nm,0.8s,mb4.0,baz=284,slow=4.9,SNR=3.9						
VNDA				LR	LR	18 26 16.9	
	comp=Z,88nm,19.5s,MS4.2,baz=312,slow=34						
TNS	Taunus Mts	87.23	320	eP	P	17 49 40.4	+0.5
TNS				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.0						
TNS	Taunus Mts	87.23	320	eP	P	17 49 40.4	+0.5
	comp=Z,11nm,1.1s,mb5.0						
BFO	Black Forest	87.31	318	eP	P	17 49 40.0	-0.3
BFO				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.7						
BFO	Black Forest	87.31	318	eP	P	17 49 40.0	-0.3
	comp=Z,5.0nm,0.9s,mb4.7						
CDF	Champ du Feu	88.01	318	eP	P	17 49 43.4	-0.3
	comp=Z,4.5nm,0.8s,mb4.5						
LPG	La Plagne	88.43	315	eP	P	17 49 46.2	+0.4
	comp=Z,9.4nm,0.9s,mb4.7						
LPL	La Plagne	88.44	315	eP	P	17 49 46.2	+0.4
	comp=Z,14nm,1.0s,mb4.9						
FRF	La Foret Royal	88.55	313	eP	P	17 49 46.7	+0.3
HAU	Haudompre	88.64	318	eP	P	17 49 46.5	-0.2
LMR	La Mourre	88.66	313	eP	P	17 49 47.1	+0.2
CABF	La Chapelle	88.86	316	eP	P	17 49 47.3	-0.5
	comp=Z,39nm,1.3s,mb5.3						
ORIF	Oris-en-Rattie	89.06	315	eP	P	17 49 49.2	+0.4
	comp=Z,10.0nm,0.9s,mb4.9						
MEZF	Maizieres J’vi	89.48	318	eP	P	17 49 51.0	+0.3
GIVF	Givet	89.56	320	eP	P	17 49 51.5	+0.5
	comp=Z,8.6nm,0.8s,mb4.8						
BAIF	Baives	89.96	320	eP	P	17 49 53.6	+0.7
	comp=Z,42nm,1.0s,mb5.4						
LOR	Lormes	90.35	317	eP	P	17 49 55.0	+0.2
	comp=Z,34nm,1.3s,mb5.2						
SMF	Signal de Mont	90.40	317	eP	P	17 49 55.2	+0.1
SSF	Saint Saulge	90.61	317	eP	P	17 49 56.3	+0.3
AVF	Avril sur Loir	90.73	317	eP	P	17 49 56.8	+0.3
BGF	Bois d’Agland	91.09	316	eP	P	17 49 59.0	+0.8
TCF	Toulx Ste Croi	91.55	316	eP	P	17 50 01.0	+0.7
CAF	Calviac	91.77	315	eP	P	17 50 02.2	+0.8
MTLF	Montolieu	91.78	313	eP	P	17 50 02.1	+0.6
	comp=Z,20nm,1.1s,mb5.0						
QSPA	South Pole Qui	92.06	180	PFAKE		17 50 10.0	+8.1
QSPA				LR	LR		
	comp=Z,355nm,19.0s,MS4.8						
RJF	Les Rejaudoux	92.12	315	eP	P	17 50 03.1	+0.1
LFF	La Frestale	92.70	315	eP	P	17 50 05.8	+0.1
LDF	La Druitiere	92.90	319	eP	P	17 50 07.0	+0.5
	comp=Z,19nm,1.0s,mb5.2						
JMIC	Jan Mayen	92.92	342	LR	LR	18 37 09.3	
	comp=Z,82nm,19.4s,MS4.2,baz=264,slow=39						
FLN	La Foliniere	93.12	319	eP	P	17 50 07.9	+0.4
MFF	Saint Martin d	93.14	317	eP	P	17 50 08.1	+0.5
	comp=Z,21nm,1.0s,mb5.2						
DAG	Danmarks Havn	93.59	348⇓	eP	P	17 50 08.8	-0.3
DAG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb5.0						
DAG	Danmarks Havn	93.59	348⇓	eP	P	17 50 08.8	-0.3
	comp=Z,4.1nm,0.7s,mb5.0						
DAG	Danmarks Havn	93.59	348⇓	iP	P	17 50 08.8	-0.3
	comp=Z,4.1nm,0.7s,mb5.0						
IMA	Indian Mountai	95.96	23	eP	P	17 50 21.3	+1.1
	comp=Z,58nm,1.4s,mb5.8						
IMA				epP	pP	17 50 29.1	+0.8
DBIC	Dimbokro	101.16	277	PFAKE		17 51 00.0	+15
DBIC				LR	LR		
	comp=Z,158nm,19.0s,MS4.5						
NVAR	Mina Array Bea	128.36	35	PKP	PKPdf	17 56 01.8	-2.4
	comp=Z,0.7nm,0.5s,baz=360,slow=0.8,SNR=8.0						
PDAR	Pinedale Array	129.45	25	PKP	PKPdf	17 56 02.5	-3.6
	comp=Z,0.4nm,0.4s,baz=315,slow=2.1,SNR=9.5						
PV10	Paradox Valley	133.25	28	ePKPdf	PKPdf	17 56 11.5	-1.9
TXAR	Lajitas Array	143.17	30	PKIKP	PKPdf	17 56 25.5	-6.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR				pmax	pmax		
	comp=N,1.0nm,0.9s						
TXAR	Lajitas Array	143.17	30	PKhKP		17 56 25.5	
	comp=N,0.8nm,0.8s,baz=315,slow=1.8,SNR=5.4						
TXAR				SKP		18 00 03.6	
	comp=N,1.0nm,0.9s,slow=2.7,SNR=3.8						
CPUP	Villa Florida	145.29	224	PKIKP	PKPdf	17 56 31.8	-3.6
CPUP				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CPUP	Villa Florida	145.29	224	PKPbc	PKPbc	17 56 31.8	+0.6
	comp=Z,5.3nm,0.8s,baz=134,slow=6.5,SNR=11						
CPUP	Villa Florida	145.29	224	ePKPdf	PKPdf	17 56 31.5	-3.9
CPUP				epPKPdf		17 56 38.5	
SJG	San Juan	153.71	321	PFAKE		17 57 00.0	+11
SJG				LR	LR		
	comp=Z,158nm,20.0s,MS4.8						
SAML	Samuel	158.81	251	PFAKE		17 57 00.0	+4.5
SAML				LR	LR		
	comp=Z,150nm,19.0s,MS4.8						
LPAZ	La Paz	159.43	226	PKIKP	PKPdf	17 56 54.2	-1.9
LPAZ						17 57 30.5	
LPAZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LPAZ	La Paz	159.43	226	PKP	PKPdf	17 56 54.1	-2.0
	comp=Z,1.5nm,1.0s,baz=8.8,slow=25,SNR=5.4						
LPAZ				PKPab	PKPab	17 57 30.5	-1.1
	comp=Z,0.8nm,0.7s,baz=90,slow=4.0,SNR=3.7						
SDV	Santo Domingo	163.25	311	PFAKE		17 57 10.0	+10
SDV				LR	LR		
	comp=Z,125nm,20.0s						
JTS	JuntasAbangare	167.57	7	PFAKE		17 57 10.0	+6.2
JTS				LR	LR		
	comp=Z,66nm,20.0s						
OTAV	Otavalo	174.56	295	ePKPdf	PKPdf	17 57 05.4	-2.0
OTAV				LR	LR		
	comp=Z,139nm,19.0s						

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*IDC **11** 17:44:47.6±1.3, 6.79N×127.10E, mb4.1/6, mb1 4.2/6, mb1mx3.8/21, mbtmp4.1/6, Error ellipse: s-maj=78.4km s-min=19.5km az=73.0*

*MAN **11** 17:44:51.3, 6.10N×126.82E, h46^{km}, mb4.3, ML3.2, MS3.0*

ISC 11 17:44:54.2±0.7**, 6.31N**±0.06×**126.73E**±0.09**, h33^{km}, n17, σ1^{s}48**/23**, mb3.9**/6**, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.79	324	eP	P	17 45 08.9	+0.1
MATI				eS	S	17 45 17.2	-2.3
KCP	Kidapawan	1.77	293⇓	iP	P	17 45 23.5	+0.7
KCP				i S	S	17 45 46.0	+1.6
BUKP	Musuan	2.27	313	eP	P	17 45 30.3	+0.2
BUKP				eS	S	17 45 54.2	-3.0
BUTP	Butuan	2.86	338	eP	P	17 45 39.9	+1.4
BUTP				eS	S	17 46 15.5	+3.3
PAGZ	Pagadian	3.66	295	eP	P	17 45 50.1	+0.4
SCPH	Surigao	3.66	341⇓	eP	P	17 45 50.7	+0.8
SCPH				eS	S	17 46 35.0	+2.5
MSLP	Maasin	4.23	334	eP	P	17 45 54.9	-3.0
MSLP				eS	S	17 46 50.9	+4.1
IPIL	Ipil	4.38	290	eP	P	17 45 59.1	-0.9
BESP	Borongan	5.41	346	eP	P	17 46 13.2	-1.5
GUIM	Jordan	5.93	317	eP	P	17 46 19.8	-2.1
CUYO	Cuyo Island	7.23	309	eP	P	17 46 39.3	-0.8
FITZ	Fitzroy Crossi	24.28	183	P	P	17 50 11.3	+1.6

	2.8nm,0.4s,mb4.0,baz=10,slow=7.2,SNR=8.1						
WRA	**Warramunga Arr**	**27.14**	**164**	P	**P**	**17 50 35.8**	**-0.8**
	0.3nm,0.5s,mb3.1,baz=348,slow=10,SNR=5.3						
WRA				PcP	PcP	17 53 54.0	-3.1
	0.5nm,0.6s,baz=335,slow=2.3,SNR=7.4						
NWAO	**Narrogin (SRO)**	**40.05**	**192**	P	**P**	**17 52 28.6**	**+0.6**
	12nm,0.9s,mb4.6,baz=5.7,slow=10,SNR=4.4						
STKA	**Stephens Creek**	**40.53**	**160**	P	**P**	**17 52 32.0**	**0.0**
	1.0nm,0.5s,mb3.8,baz=339,slow=10,SNR=6.8						
MKAR	**Makanchi Array**	**55.46**	**324**	P	**P**	**17 54 22.7**	**-5.3**
	0.7nm,0.4s,mb4.0,baz=115,slow=7.8,SNR=16						
MKAR				PcP	PcP	17 55 23.9	-3.9
	0.6nm,0.8s,baz=118,slow=3.8,SNR=3.7						
FINES	**FINESS Array B**	**89.57**	**332**	P	**P**	**17 57 46.1**	**-3.3**
	0.4nm,0.7s,mb3.9,baz=59,slow=8.1,SNR=3.4						

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*CSEM **11** 17:50:57.1±0.1, 38.21N×26.63W, h0^{km}, ML2.5, Error ellipse: s-maj=25.7km s-min=1.6km az=35.0, After PDA*

*PDA **11** 17:50:57.1±1.0, 38.21N×26.63W, h0^{km}±3^{km}, MD3.3, ML2.5, Error ellipse: s-maj=5.1km s-min=1.0km az=41.0*

SVSA 11 17:50:57.1±1.0**, 38.21N×26.63W, h0^{km}**±3^{km}**, MD3.3, ML2.5, Error ellipse: s-maj=5.1km s-min=1.0km az=41.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFAV	**Pico das Favas**	**0.61**	**325**	*e*P	Pg	17 51 08.1	-1.2
PFAV				*e*S	Sg	17 51 16.5	-1.0
	66nm,0.3s						
RIB2	**Ribeirinha**	**0.63**	**317**	*e*P	Pg	17 51 08.1	-1.5
RIB2				*e*S	Sg	17 51 16.7	-1.3
	59nm,0.3s						
ADH	**Angra Heroismo**	**0.65**	**313**	*i*P	Pg	17 51 08.2	-1.9
ADH				*i*S	Sg	17 51 16.9	-1.8
PVNV	**Vila Nova**	**0.69**	**323**	*e*P	Pg	17 51 08.8	-2.0
PVNV				*e*S	Sg	17 51 17.7	-2.3
	54nm,0.1s						
PPAD	**Pico dos Padre**	**0.71**	**314**	*e*P	Pg	17 51 09.2	-2.1
PPAD				*e*S	Sg	17 51 18.7	-2.0
	48nm,0.2s						
PBIS	**Biscoitos**	**0.73**	**319**	*e*P	Pg	17 51 09.6	-2.2
PBIS				*e*S	Sg	17 51 19.3	-2.3
	40nm,0.2s						
SET4	**Mosteiros**	**0.74**	**117**	*e*P	Pg	17 51 10.0	-1.8
SET4				*e*S	Sg	17 51 19.4	-2.3
ASBA	**Santa Barbara**	**0.74**	**313**	*e*P	Pg	17 51 09.9	-2.1
ASBA				*e*S	Sg	17 51 19.7	-2.2
	104nm,0.3s						
SET2	**Ginetes**	**0.75**	**119**	*e*P	Pg	17 51 10.2	-1.8
SET2				*e*S	Sg	17 51 19.6	-2.4
PFET	**Feteiras**	**0.77**	**120**	*e*S	Sg	17 51 20.1	-2.7
PSBA	**Serra de Santa**	**0.78**	**316**	*i*P	Pg	17 51 10.1	-2.5
PSBA				*e*S	Sg	17 51 20.6	-2.4
	288nm,0.4s						
PSAN	**Santo Antonio**	**0.80**	**116**	*e*P	Pg	17 51 11.0	-2.1
PSAN				*e*S	Sg	17 51 20.9	-2.8
FAC	**Faja de Cima**	**0.89**	**119**	*e*P	Pg	17 51 11.7	-3.2
FAC				*e*S	Sg	17 51 23.1	-3.6
CML	**Cha da Macela**	**0.96**	**117**	*e*P	Pg	17 51 12.7	-3.6
CML				*e*S	Sg	17 51 25.1	-4.1
PVER	**Pico Vermelho**	**0.97**	**115**	*e*S	Sg	17 51 25.2	-4.3
PMAT	**Coroa da Mata**	**1.00**	**113**	*e*P	Pb	17 51 13.3	-3.6
PMAT				*e*S	Sg	17 51 25.4	-4.9
	120nm,0.1s						
PMAT	**Coroa da Mata**	**1.00**	**113**	*e*P	Pb	17 51 13.3	-3.6
PMAT				*e*S	Sg	17 51 25.4	-4.9
	120nm,0.1s						
LFA	**Lagoa do Fogo**	**1.01**	**115**	*e*P	Pb	17 51 13.9	-3.2
LFA				*e*S	Sg	17 51 25.9	-4.7
MESC	**Monte Escuro**	**1.02**	**114**	*e*P	Pb	17 51 13.3	-4.1
MESC				*e*S	Sg	17 51 26.5	-4.7
PRCH	**Ribeira Ch**	**1.03**	**118**	*e*S	Sb	17 51 26.3	-5.1
	76nm,0.3s						
PRCH	**Ribeira Ch**	**1.03**	**118**	*e*S	Sb	17 51 26.3	-5.1
	76nm,0.3s						
VIF	**Vila Franca**	**1.05**	**116**	*e*P	Pb	17 51 14.1	-3.7
VIF				*e*S	Sb	17 51 27.1	-4.9
	25nm,0.3s						
VIF	**Vila Franca**	**1.05**	**116**	*e*P	Pb	17 51 14.1	-3.7
VIF				*e*S	Sb	17 51 27.1	-4.9
	25nm,0.3s						
PCNG	**Congro**	**1.07**	**114**	*e*S	Sb	17 51 28.0	-4.6
	32nm,0.1s						
PFAD	**Fenais da Ajud**	**1.10**	**109**	*e*S	Sb	17 51 27.9	-5.5
MIRA	**Miradouro**	**1.15**	**111**	*e*P	Pb	17 51 15.8	-3.7
MIRA				*e*S	Sb	17 51 30.1	-4.8
PMAN	**Manadas**	**1.22**	**291**	*e*P	Pb	17 51 16.7	-4.0
PMAN				*e*S	Sb	17 51 30.8	-6.1
	33nm,0.2s						
PGRA	**Graciosa**	**1.34**	**308**	*e*S	Sb	17 51 34.0	-6.3
	42nm,0.4s						
PICO	**Pico**	**1.44**	**282**	*e*P	Pn	17 51 20.0	-4.5
PICO				*e*S	Sb	17 51 36.6	-6.7
CALA	**Caldeira**	**1.67**	**283**	*e*P	Pn	17 51 22.9	-4.9
CALA				*e*S	Sb	17 51 42.2	-7.7
PSMN	**Pico do Norte,**	**1.73**	**134**	*e*S	Sb	17 51 42.6	-9.2

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*JMA **11** 17:55:05.0±0.2, 26.32N×127.36E, h49^{km}±2^{km}, M3.2*

*IDC **11** 17:55:05.2±4.7, 26.21N×127.59E, h65^{km}±50^{km}, mb3.3/3, mb1 3.4/3, mb1mx3.2/20, mbtmp3.6/3, Error ellipse: s-maj=99.0km s-min=65.4km az=126.0*

ISC 11 17:55:04.3±0.7**, 26.34N**±0.06×**127.37E**±0.05**, h54^{km}**±5^{km}**, n14, σ0^{s}81**/25**, mb3.4**/3**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGN	**Aguni-jima**	**0.27**	**336**	P	**P**	**17 55 14.0**	**+0.4**
JAGN				S	**S**	**17 55 20.2**	**-0.1**
NAH1	**Naha**	**0.32**	**115**	P	**P**	**17 55 13.9**	**-0.1**
NAH1				S	**S**	**17 55 20.3**	**-0.8**
JJT2	**Tamagusuku 2**	**0.40**	**120**	P	**P**	**17 55 15.1**	**+0.3**
JJT2				S	**S**	**17 55 22.7**	**+0.3**
JKE	**Kume jima 2**	**0.52**	**269**	P	**P**	**17 55 16.2**	**+0.1**
JKE				S	**S**	**17 55 24.2**	**-0.5**
JIH	**Iheya**	**0.88**	**38**	P	**P**	**17 55 21.2**	**+0.6**
JIH				S	**S**	**17 55 32.4**	**-0.4**
JOW	**Kunigami**	**0.95**	**59**	P	**P**	**17 55 22.8**	**+1.2**
	75nm,0.3s,baz=188,slow=11,SNR=75						
JOW				S	**S**	**17 55 35.0**	**+0.5**
	152nm,0.3s,baz=121,slow=19,SNR=50						
JOW	**Kunigami**	**0.95**	**59**	P	**P**	**17 55 22.5**	**+0.9**
JOW				S	**S**	**17 55 34.7**	**+0.2**
JTK	**Tokunoshima**	**2.02**	**44**	P	**P**	**17 55 37.0**	**+0.4**
JTK				S	**S**	**17 55 59.7**	**-0.9**
JAM	**Amami Oshima**	**2.87**	**43**	P	**P**	**17 55 49.2**	**+0.5**
JAM				S	**S**	**17 56 21.1**	**-1.1**
JZK	**Kikaishima**	**3.04**	**49**	P	**P**	**17 55 52.0**	**+0.8**
JZK				*e*S	**S**	**17 56 26.9**	**+0.3**
JMZ	**Minamidaito 2**	**3.50**	**98**	P	**P**	**17 55 54.2**	**-3.5**
JMZ				S	**S**	**17 56 31.0**	**-7.3**
SONM	**Songino Array**	**27.05**	**328**	P	**P**	**18 00 45.3**	**+1.8**
	0.5nm,0.5s,mb3.3,baz=146,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**40.89**	**312**	P	**P**	**18 02 41.4**	**-1.2**
	0.3nm,0.5s,mb3.2,baz=117,slow=6.4,SNR=12						
FINES	**FINESS Array B**	**72.39**	**330**	P	**P**	**18 06 25.2**	**-0.9**
	1.0nm,0.9s,mb3.7,baz=79,slow=7.1,SNR=5.4						

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*CNRM **11** 18:36:24.5, 34.96N×2.62W, h21^{km}, MD3.2*

*MDD **11** 18:36:26.3±0.6, 34.89N×2.88W, mbLg2.1/1, Error ellipse: s-maj=5.0km s-min=3.2km az=157.0, PRXIMO*

*CSEM **11** 18:36:27.2±0.2, 34.90N×2.99W, h40^{km}, MD3.2, Error ellipse: s-maj=4.5km s-min=2.5km az=119.0*

ISC 11 18:36:25.4±0.6**, 34.90N**±0.03×**2.97W**±0.06**, h10^{km}, n32, σ1^{s}38**/56**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAI	**Zaio**	**0.19**	**69**	Pg	**Pg**	**18 36 28.0**	**-1.7**
ZAI				Lg		18 36 31.0	
MELI	**Melilla**	**0.39**	**4**	Pg	**Pg**	**18 36 34.1**	**+0.7**
MELI				Lg		18 36 38.1	
EMEL	**Melilla**	**0.40**	**1**	Pg	**Pg**	**18 36 34.7**	**+1.1**
	143nm,0.1s,SNR=7.9						
TOU	**Touzarine**	**0.65**	**275**	*i*P	**Pb**	**18 36 40.0**	**+1.6**
TOU				*i*S	**Sb**	**18 36 51.5**	**+4.3**
MPAL	**Palemas**	**0.86**	**292**	*e*P	**Pb**	**18 36 43.0**	**+1.0**
MPAL				*i*S	**Sb**	**18 36 57.0**	**+3.6**
EALB	**Alboran**	**1.04**	**357**	Pg	**Pg**	**18 36 45.9**	**-0.3**
	21nm,0.2s,SNR=7.5						
EALB				Lg		18 36 59.4	
	21nm,0.3s						
EALB	**Alboran**	**1.04**	**357**	P	**Pb**	**18 36 45.9**	**+0.9**
	21nm,0.2s,SNR=7.5						
EALB				S	**Sb**	**18 36 59.4**	**+0.9**
	21nm,0.3s						
TZK	**Tazeka**	**1.29**	**231**	Pn	**Pn**	**18 36 51.0**	**+1.4**
TZK				Sn	**Sn**	**18 37 09.0**	**+2.0**
TZK	**Tazeka**	**1.29**	**231**	*i*P	**Pn**	**18 36 51.0**	**+1.4**
EBER	**Berja**	**1.99**	**2**	Pn	**Pn**	**18 36 59.6**	**0.0**
	1.4nm,0.0s,SNR=4.7						
EBER				Sn	**Sn**	**18 37 23.8**	**-1.0**
	8.4nm,0.4s						
EBER	**Berja**	**1.99**	**2**	P	**Pn**	**18 36 59.6**	**0.0**
	1.4nm,0.0s,SNR=4.7						
EBER				S	**Sn**	**18 37 23.8**	**-1.0**
	8.4nm,0.4s						
EMIJ	**Mijas**	**2.22**	**319**	Pn	**Pn**	**18 37 02.4**	**-0.4**
	1.2nm,0.1s,SNR=8.3						
EMIJ				Sn	**Sn**	**18 37 27.8**	**-2.7**
	2.7nm,0.3s						
ERON	**Agron**	**2.22**	**342**	Pn	**Pn**	**18 37 02.3**	**-0.5**
	1.4nm,0.2s,SNR=6.4						
ERON				Sn	**Sn**	**18 37 27.2**	**-3.4**
	2.2nm,0.3s						
ELOJ	**Sierra Loja**	**2.44**	**337**	Pn	**Pn**	**18 37 07.3**	**+1.3**
	1.2nm,0.2s,SNR=7.9						
CZD	**Col de Zad**	**2.54**	**223**	*e*P	**Pn**	**18 37 07.0**	**-0.4**
CZD				*i*S	**Sn**	**18 37 37.0**	**-1.7**
EQES	**Quesada**	**2.90**	**358**	Pn	**Pn**	**18 37 14.2**	**+1.7**
	2.2nm,0.2s,SNR=14						
EQES				Sn	**Sn**	**18 37 48.3**	**+0.5**
	3.4nm,0.3s						
EQES	**Quesada**	**2.90**	**358**	P	**Pn**	**18 37 14.2**	**+1.7**
	2.2nm,0.2s,SNR=14						
EQES				S	**Sn**	**18 37 48.3**	**+0.6**
	3.4nm,0.3s						
ZFT	**Errachidia**	**3.09**	**202**	*e*P	**Pn**	**18 37 13.0**	**-2.2**
ZFT				*i*S	**Sn**	**18 37 49.0**	**-3.6**
EMUR	**La Murta**	**3.25**	**25**	Pn	**Pn**	**18 37 17.1**	**-0.4**
	1.7nm,0.3s,SNR=7.9						
EMUR				Sn	**Sn**	**18 37 51.6**	**-5.0**
	0.4nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**3.25**	**25**	P	**Pn**	**18 37 17.1**	**-0.4**
	1.7nm,0.3s,SNR=7.9						
EMUR				S	**Sn**	**18 37 51.6**	**-5.0**
	0.4nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**3.51**	**339**	Pn	**Pn**	**18 37 21.6**	**+0.4**
	2.0nm,0.2s,SNR=11						
EADA				Sn	**Sn**	**18 37 59.8**	**-3.4**
	0.6nm,0.3s						
EADA	**Adamuz**	**3.51**	**339**	P	**Pn**	**18 37 21.6**	**+0.4**
	2.0nm,0.2s,SNR=11						
EADA				S	**Sn**	**18 37 59.8**	**-3.4**
	0.6nm,0.3s						
ECAB	**El Cabril**	**3.73**	**329**	Pn	**Pn**	**18 37 25.6**	**+1.2**
	0.3nm,0.3s,SNR=4.0						
ECAB				Sn	**Sn**	**18 38 06.7**	**-2.2**
	0.3nm,0.4s,SNR=7.9						
ECAB	**El Cabril**	**3.73**	**329**	P	**Pn**	**18 37 25.6**	**+1.2**
	0.3nm,0.3s,SNR=4.0						
ECAB				S	**Sn**	**18 38 06.7**	**-2.2**
	0.3nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**3.91**	**17**	Pn	**Pn**	**18 37 28.7**	**+1.9**
	0.4nm,0.2s,SNR=7.9						
ETOB				Sn	**Sn**	**18 38 09.8**	**-3.5**
	1.0nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.91**	**17**	P	**Pn**	**18 37 28.7**	**+1.9**
	0.4nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**18 38 09.8**	**-3.5**
	1.0nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.14**	**315**	Pn	**Pn**	**18 37 29.9**	**-0.2**
	0.4nm,0.1s,SNR=7.6						
EMIN				Sn	**Sn**	**18 38 15.0**	**-4.2**
	0.4nm,0.2s						
EMIN	**Mina Concepcio**	**4.14**	**315**	P	**Pn**	**18 37 29.9**	**-0.3**
	0.4nm,0.1s,SNR=7.6						
EMIN				S	**Sn**	**18 38 15.0**	**-4.2**
	0.4nm,0.2s						
EGRO	**El Granado**	**4.50**	**307**	Pn	**Pn**	**18 37 34.8**	**-0.5**
	0.8nm,0.1s,SNR=4.9						
EGRO				Sn	**Sn**	**18 38 23.7**	**-4.6**
	0.0nm,0.0s						
EGRO	**El Granado**	**4.50**	**307**	P	**Pn**	**18 37 34.8**	**-0.5**
	0.8nm,0.1s,SNR=4.9						
ESDC	**Sonseca Array**	**4.83**	**351**	Pn	**Pn**	**18 37 40.5**	**+0.5**
	1.0nm,0.1s,baz=172,slow=13,SNR=5.6						
EBAD	**Badajoz**	**5.03**	**321**	Pn	**Pn**	**18 37 42.3**	**-0.6**
	0.2nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**18 38 37.0**	**-4.8**
	2.2nm,0.3s,SNR=7.9						

CASC 11 19:24:17.5±2.2**, 13.81N×86.98W, h14^{km}**±10^{km}**, MD4.0, ML3.2, 7C-4D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**1.10**	**183**⇑	*e*P	Pb	19 24 37.3	-0.6
CRIN				*e*S	Sb	19 24 52.6	+0.8
TELN	**Telica**	**1.21**	**173**⇑	*i*P	Pb	19 24 39.4	-0.2
TEL3	**Telica 3**	**1.24**	**174**⇓	*e*P	Pb	19 24 39.2	-0.9
TEL3				*e*S	Sb	19 24 56.6	+1.0
BLLM	**Bellamira**	**1.27**	**254**	*e*S	Sb	19 24 58.8	+2.1
VSM	**San Miguel**	**1.31**	**253**	*e*S	Sb	19 24 58.4	+0.6
CNGN	**Cerro Negro**	**1.33**	**168**⇓	*e*P	Pn	19 24 40.5	-1.2
MIRN	**Miramar**	**1.39**	**169**⇓	*e*P	Pn	19 24 40.8	-1.7
MOMJ	**Momotombo**	**1.46**	**163**⇑	*e*P	Pn	19 24 43.1	-0.4
MOMJ				*e*S	Sb	19 25 04.3	+2.2
APYN	**Apoyeque**	**1.68**	**158**⇑	*e*P	Pn	19 24 46.0	-0.7
APYN				*e*S	Sn	19 25 08.6	+0.5
XAVN	**Gruta Xavier**	**1.77**	**159**	*e*P	Pn	19 24 47.0	-1.0
MGAN	**Managua**	**1.80**	**156**	*e*P	Pn	19 24 48.3	-0.2
MGAN				*e*S	Sn	19 25 12.1	+0.9
MGAN				*i*		19 25 13.1	
	comp=E,240nm,0.3s						
SNVI	**San Vicente**	**1.81**	**264**	*e*P	Pn	19 24 48.8	+0.2
TICN	**Ticuantepe**	**1.91**	**157**	*e*P	Pn	19 24 48.2	-1.8
TICN				*e*S	Sn	19 25 12.9	-1.1
LCBS	**La Ceiba**	**1.94**	**266**⇑	*e*P	Pn	19 24 50.2	-0.3
LBRS	**Las Brisas**	**2.00**	**268**	*e*P	Pn	19 24 52.1	+0.8
LFRS	**El Faro**	**2.03**	**265**⇑	*e*P	Pn	19 24 50.2	-1.4
LFU	**La Fuente**	**2.07**	**269**⇓	*e*P	Pn	19 24 52.5	+0.2
BOQS	**Boqueron**	**2.23**	**268**⇑	*e*P	Pn	19 24 53.6	-1.0
SNJE	**San Jose**	**2.55**	**272**	*e*P	Pn	19 24 58.2	-1.0
SBLS	**San Blas**	**2.56**	**271**	*e*P	Pn	19 24 58.0	-1.4
RTR	**El Retiro**	**2.59**	**272**	*e*P	Pn	19 24 58.8	-0.9
RBDL	**Robledal**	**2.64**	**277**	*e*P	Pn	19 25 01.2	+0.8

MAN 11 19:27:30.5, 10.22N×125.22E, h7^{km}, mb3.7, ML2.5, MS2.0, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.37**	**256**	*e*P	Pg	19 27 39.0	+1.1
MSLP				*e*S	Sg	19 27 46.6	+3.8
SCPH	**Surigao**	**0.51**	**149**⇓	*e*P	Pg	19 27 40.6	-0.2
PLP	**Palo**	**0.97**	**346**	*e*P	Pb	19 27 48.8	-0.4
PLP				*e*S	Sb	19 28 03.3	+1.3
BUTP	**Butuan**	**1.31**	**162**	*e*P	Pb	19 27 54.8	-0.2
BESP	**Borongan**	**1.39**	**9**	*e*P	Pn	19 27 55.7	-0.7
BESP				*e*S	Sb	19 28 15.1	+1.0
BUKP	**Musuan**	**2.33**	**184**	*e*P	Pn	19 28 09.0	-0.9
CNP	**Catarman**	**2.34**	**347**	*e*P	Pn	19 28 05.8	-4.2
CNP				*e*S	Sn	19 28 40.7	+1.4
GUIM	**Jordan**	**2.62**	**279**	*e*P	Pn	19 28 13.5	-0.5
GUIM				*e*S	Sn	19 28 46.8	+0.4

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*NEIC **11** 19:43:48.9, 32.66S×71.67W, h27^{km}, ML3.0(GUC), After GUC.*

GUC 11 19:43:48.9±0.8**, 32.66S×71.67W, h27^{km}**±4^{km}**, MD3.6, ML3.0, 8C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	**0.23**	**59**⇓	*i*P	Pb	19 43 55.8	+0.7
PACH				*i*S	Sb	19 44 00.6	+1.2
IHA	**Instituto Hidr**	**0.37**	**176**⇓	*i*P	Pb	19 43 57.0	-0.1
IHA				*i*S	Sb	19 44 02.7	0.0
ROCH	**El Roble**	**0.64**	**120**⇑	*i*P	Pb	19 44 01.2	-0.1
ROCH				*i*S	Sb	19 44 10.2	+0.2
LCCH	**Las Cruces**	**0.82**	**174**⇓	*i*P	Pb	19 44 03.6	-0.8
LCCH				*i*S	Sb	19 44 15.2	+0.1
JACH	**Jahuel**	**0.91**	**92**⇑	*i*P	Pb	19 44 05.2	-0.8
JACH				*i*S	Sb	19 44 17.6	-0.1
PEL	**Peldehue**	**0.96**	**121**	*i*P	Pn	19 44 06.5	-0.2
PEL				*i*S	Sb	19 44 19.5	+0.3
PEL				AMP		19 44 20.6	
	comp=N,1µm,0.2s						
TACH	**Talagante**	**1.17**	**149**⇓	*i*P	Pn	19 44 09.5	-0.2
TACH				*i*S	Sn	19 44 24.4	-0.4
DSCH	**Colegio Aleman**	**1.18**	**129**⇑	*i*P	Pn	19 44 09.7	-0.2
DSCH				*i*S	Sn	19 44 25.4	+0.2
DSCH				AMP		19 44 25.9	
	comp=N,887nm,0.3s						
CLCH	**Cerro Calan**	**1.20**	**128**⇓	*i*P	Pn	19 44 10.0	-0.2
CLCH				*i*S	Sn	19 44 26.0	+0.3
CLCH				AMP		19 44 26.8	
	comp=N,461nm,0.5s						
ANTU	**Antumapu**	**1.26**	**137**	*e*P	Pn	19 44 11.1	+0.1
ANTU				*i*S	Sn	19 44 27.5	+0.4
ANTU				AMP		19 44 30.1	
	comp=E,244nm,0.5s						
LNV	**Longovilo**	**1.31**	**171**⇑	*i*P	Pn	19 44 11.6	-0.2
LNV				*i*S	Sn	19 44 28.7	+0.2
PCH	**Pirque**	**1.37**	**135**	*i*P	Pn	19 44 12.6	+0.1
PCH				*i*S	Sn	19 44 30.5	+0.7
CHCH	**Chadas Angostu**	**1.53**	**147**⇑	*i*P	Pn	19 44 15.7	+0.9
CMCH	**Combarbala**	**1.58**	**21**	*e*P	Pn	19 44 16.0	+0.4
CMCH				*i*S	Sn	19 44 36.5	+1.1
CMCH				AMP		19 44 40.8	
	comp=N,729nm,0.6s						
LMEL	**Las Melosas**	**1.71**	**134**⇑	*i*P	Pn	19 44 18.0	+0.6
LMEL				*i*S	Sn	19 44 41.1	+2.6
LMEL				AMP		19 44 44.2	
	comp=N,305nm,0.1s						
CACH	**El Canelo**	**1.71**	**149**⇑	*i*P	Pn	19 44 18.9	+1.5
CACH				*i*S	Sn	19 44 41.7	+3.1
CICH	**Cipreses**	**1.96**	**148**⇑	*i*P	Pn	19 44 21.8	+0.8
CICH				*i*S	Sn	19 44 47.9	+2.9

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*CSEM **11** 19:59:21.2±0.1, 34.94N×3.85W, h8^{km}, MD3.4, Error ellipse: s-maj=3.1km s-min=1.9km az=117.0*

*CNRM **11** 19:59:21.9, 35.01N×3.82W, h2^{km}, MD3.4*

*MDD **11** 19:59:22.4±0.4, 34.97N×3.87W, mbLg3.0/2, Error ellipse: s-maj=3.6km s-min=2.6km az=35.0, PRXIMO*

*NEIC **11** 19:59:24.6, 35.09N×3.88W, MG3.4(MDD), After MDD.*

*SFS **11** 19:59:24.0, 35.09N×3.87W*

ISC 11 19:59:20.9±0.3**, 35.01N**±0.02×**3.93W**±0.03**, h2^{km}, n49, σ1^{s}17**/83**, 1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOU	**Touzarine**	**0.15**	**106**	Pg	**Pg**	**19 59 23.0**	**-1.0**
TOU				Lg		19 59 25.0	
TOU	**Touzarine**	**0.15**	**106**	*i*P	**Pg**	**19 59 23.0**	**-1.0**
MPAL	**Palemas**	**0.22**	**358**	Pg	**Pg**	**19 59 26.0**	**+0.7**
MPAL				Lg		19 59 30.0	
MPAL	**Palemas**	**0.22**	**358**	*i*P	**Pg**	**19 59 26.0**	**+0.7**
EMEL	**Melilla**	**0.85**	**70**	⇓Pg	**Pg**	**19 59 38.2**	**+0.3**
	217nm,0.1s,SNR=18						
EMEL				Lg		19 59 50.5	
	688nm,0.2s,SNR=7.9						
EMLI	**Melilla**	**0.86**	**70**	P	**Pg**	**19 59 38.2**	**+0.2**
	217nm,0.1s,SNR=18						
EMLI				S	**Sg**	**19 59 50.5**	**+1.0**
	688nm,0.2s,SNR=7.9						
MELI	**Melilla**	**0.87**	**70**	Pg	**Pg**	**19 59 38.1**	**-0.1**
MELI				Lg		19 59 49.4	
MELI	**Melilla**	**0.87**	**70**	*i*P	**Pg**	**19 59 38.1**	**-0.1**
MELI				*e*S	**Sg**	**19 59 49.4**	**-0.4**
TZK	**Tazeka**	**0.94**	**193**	*i*P	**Pb**	**19 59 39.0**	**-0.5**
TZK				*i*S	**Sg**	**19 59 53.0**	**+0.9**
ZAI	**Zaio**	**0.98**	**92**	Pg	**Pb**	**19 59 38.0**	**-2.2**
ZAI				Lg		19 59 50.0	
ZAI	**Zaio**	**0.98**	**92**	*i*P	**Pb**	**19 59 38.0**	**-2.2**
EALB	**Alboran**	**1.19**	**38**	P	**Pb**	**19 59 44.9**	**+1.1**
EALB				S	**Sb**	**19 59 57.6**	**-1.8**
EALB	**Alboran**	**1.19**	**38**	Pg	**Pg**	**19 59 44.4**	**-0.2**
	7.8nm,0.1s,SNR=9.9						
EALB				Lg		19 59 59.8	
	28nm,0.2s,SNR=7.7						
EALB	**Alboran**	**1.19**	**38**	P	**Pb**	**19 59 44.4**	**+0.6**
	7.8nm,0.1s,SNR=9.9						
EALB				S	**Sb**	**19 59 57.6**	**-1.9**
DKH	**Dar Kharkhour**	**1.26**	**293**	*e*P	**Pb**	**19 59 47.0**	**+1.9**
EMIJ	**Mijas**	**1.70**	**337**	Pn	**Pn**	**19 59 53.3**	**+1.5**
	1.7nm,0.2s,SNR=9.3						
EMIJ				Sn	**Sn**	**20 00 13.0**	**-1.3**
	9.2nm,0.3s,SNR=6.0						
MIF	**Mishlifen**	**1.92**	**214**	*e*P	**Pn**	**19 59 56.0**	**+1.0**
MIF				*i*S	**Sn**	**20 00 20.0**	**0.0**
ERON	**Agron**	**2.01**	**3**	P	**Pn**	**19 59 58.8**	**+2.5**
ERON				S	**Sn**	**20 00 21.2**	**-1.1**
ERON	**Agron**	**2.01**	**3**	Pn	**Pn**	**19 59 57.2**	**+0.9**
	3.0nm,0.3s,SNR=4.0						
ERON				Sn	**Sn**	**20 00 21.2**	**-1.1**
	4.6nm,0.2s,SNR=4.0						
ERON	**Agron**	**2.01**	**3**	P	**Pn**	**19 59 58.8**	**+2.5**
	3.0nm,0.3s,SNR=4.0						
ERON				S	**Sn**	**20 00 21.2**	**-1.1**
	4.6nm,0.2s,SNR=4.0						
EBER	**Berja**	**2.07**	**24**	P	**Pn**	**19 59 57.7**	**+0.6**
EBER				S	**Sn**	**20 00 24.3**	**+0.5**
EBER	**Berja**	**2.07**	**24**	Pn	**Pn**	**19 59 57.7**	**+0.7**
	1.0nm,0.2s,SNR=6.7						
EBER				Sn	**Sn**	**20 00 23.5**	**-0.3**
	11nm,0.3s,SNR=5.4						
EBER	**Berja**	**2.07**	**24**	P	**Pn**	**19 59 57.7**	**+0.6**
	1.0nm,0.2s,SNR=6.7						
EBER				S	**Sn**	**20 00 24.3**	**+0.5**
ELOJ	**Sierra Loja**	**2.15**	**355**	Pn	**Pn**	**19 59 59.5**	**+1.3**
	0.6nm,0.2s,SNR=5.9						
ELOJ				Sn	**Sn**	**20 00 25.0**	**-0.7**
	2.0nm,0.3s,SNR=4.0						
CZD	**Col de Zad**	**2.17**	**205**	*e*P	**Pn**	**19 59 58.0**	**-0.6**
CZD				*i*S	**Sn**	**20 00 26.0**	**-0.4**
ECOG	**Cogollos-Vega**	**2.29**	**7**	Pn	**Pn**	**20 00 01.2**	**+1.0**
	2.7nm,0.1s,SNR=4.0						
ENIJ	**Nijar**	**2.41**	**35**	Pn	**Pn**	**20 00 02.9**	**+0.9**
	3.1nm,0.4s,SNR=4.0						
EQES	**Quesada**	**2.88**	**14**	P	**Pn**	**20 00 10.4**	**+1.8**
EQES				S	**Sn**	**20 00 43.3**	**-1.0**
EQES	**Quesada**	**2.88**	**14**	Pn	**Pn**	**20 00 10.4**	**+1.8**
	1.9nm,0.1s,SNR=13						
EQES				Sn	**Sn**	**20 00 44.3**	**0.0**
	6.1nm,0.3s						
EQES	**Quesada**	**2.88**	**14**	P	**Pn**	**20 00 10.4**	**+1.8**
	1.9nm,0.1s,SNR=13						
EQES				S	**Sn**	**20 00 44.3**	**0.0**
	6.1nm,0.3s						
ZFT	**Errachidia**	**2.98**	**187**	*e*P	**Pn**	**20 00 10.0**	**-0.2**
ZFT				*i*S	**Sn**	**20 00 45.0**	**-2.0**
KIB	**El Ksiba**	**2.99**	**216**	*e*P	**Pn**	**20 00 11.0**	**+0.7**
KIB				*i*S	**Sn**	**20 00 46.0**	**-1.2**
EADA	**Adamuz**	**3.20**	**351**	P	**Pn**	**20 00 14.0**	**+0.8**
EADA				S	**Sn**	**20 00 51.0**	**-1.4**
EADA	**Adamuz**	**3.20**	**351**	Pn	**Pn**	**20 00 14.0**	**+0.8**
	0.1nm,0.2s,SNR=10.0						
EADA				Sn	**Sn**	**20 00 51.0**	**-1.4**
	2.1nm,0.3s,SNR=6.0						
EADA	**Adamuz**	**3.20**	**351**	P	**Pn**	**20 00 14.0**	**+0.8**
	0.1nm,0.2s,SNR=10.0						
EADA				S	**Sn**	**20 00 51.0**	**-1.4**
	2.1nm,0.3s,SNR=6.0						
EMIN	**Mina Concepcio**	**3.53**	**322**	Pn	**Pn**	**20 00 18.5**	**+0.5**
	0.3nm,0.3s,SNR=11						
EMIN				Sn	**Sn**	**20 00 58.6**	**-2.3**
	0.3nm,0.4s						
EMIN	**Mina Concepcio**	**3.53**	**322**	P	**Pn**	**20 00 18.5**	**+0.5**
	0.3nm,0.3s,SNR=11						
EMIN				S	**Sn**	**20 00 58.6**	**-2.3**
	0.3nm,0.4s						
EMUR	**La Murta**	**3.57**	**37**	P	**Pn**	**20 00 20.4**	**+2.0**
EMUR				S	**Sn**	**20 00 57.3**	**-4.5**
EMUR	**La Murta**	**3.57**	**37**	Pn	**Pn**	**20 00 17.8**	**-0.6**
	SNR=4.0						
EMUR				Sn	**Sn**	**20 00 57.3**	**-4.5**
	1.5nm,0.3s,SNR=6.4						
EMUR	**La Murta**	**3.57**	**37**	P	**Pn**	**20 00 20.4**	**+1.9**
	SNR=4.0						
EMUR				S	**Sn**	**20 00 57.3**	**-4.5**
	1.5nm,0.3s,SNR=6.4						
EGRO	**El Granado**	**3.82**	**312**	P	**Pn**	**20 00 23.8**	**+1.8**
EGRO				S	**Sn**	**20 01 05.8**	**-2.4**
EGRO	**El Granado**	**3.82**	**312**	Pn	**Pn**	**20 00 22.9**	**+0.9**
	2.0nm,0.3s,SNR=4.0						

EGRO				Sn	Sn	20 01 05.8	-2.4
	3.4nm,0.3s,SNR=4.0						
EGRO	**El Granado**	3.82	312	P	Pn	20 00 22.9	+0.9
	2.0nm,0.3s,SNR=4.0						
EGRO				S	Sn	20 01 05.8	-2.4
	3.4nm,0.3s,SNR=4.0						
ETOB	**Tobarra**	4.11	27	Pn	Pn	20 00 26.5	+0.4
	1.5nm,0.2s,SNR=8.6						
ETOB				Sn	Sn	20 01 12.7	-2.7
	1.0nm,0.2s						
ETOB	**Tobarra**	4.11	27	P	Pn	20 00 26.5	+0.4
	1.5nm,0.2s,SNR=8.6						
ETOB				S	Sn	20 01 12.7	-2.7
	1.0nm,0.2s						
EBAD	**Badajoz**	4.48	327	Pn	Pn	20 00 32.1	+0.7
	0.1nm,0.2s,SNR=9.1						
EBAD				Sn	Sn	20 01 21.2	-3.8
	1.8nm,0.2s						
EBAD	**Badajoz**	4.48	327	P	Pn	20 00 32.2	+0.7
ESDC	**Sonseca Array**	4.66	360	Pn	Pn	20 00 33.8	-0.2
	1.5nm,0.2s,baz=173,slow=12,SNR=4.0						
ESDC	**Sonseca Array**	4.66	360	P	Pn	20 00 33.8	-0.2
	1.5nm,0.2s,slow=12,SNR=4.0						

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*CSEM **11** 20:27:12.1±0.1, 35.00N×2.71W, h20^{km}, MD3.5, Error ellipse: s-maj=2.3km s-min=1.7km az=129.0*
*CNRM **11** 20:27:12.1, 35.08N×2.61W, h7^{km}, MD3.5*
*SFS **11** 20:27:12.0, 34.88N×2.70W, h22^{km}*
*MDD **11** 20:27:13.2±0.5, 34.97N×2.67W, h13^{km}±2^{km}, mbLg2.6/1, Error ellipse: s-maj=4.8km s-min=3.6km az=86.0, PRXIMO*
*NEIC **11** 20:27:13.1, 34.90N×2.71W, h19^{km}, MG3.9(MDD), After MDD.*
ISC 11 20:27:11.7±0.4**, 35.02N**±0.02×**2.68W**±0.03**, h13^{km}, n60, σ1§35**/102**, 1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAI	**Zaio**	0.07	225	Pg	Pg	20 27 15.0	+0.6
ZAI				Lg		20 27 18.0	
ZAI	**Zaio**	0.07	225	iP	Pg	20 27 15.0	+0.6
MELI	**Melilla**	0.34	323	⇓Pg	Pg	20 27 20.4	+1.6
MELI				Lg		20 27 24.4	
MELI	**Melilla**	0.34	323	iP	Pg	20 27 20.4	+1.6
EMLI	**Melilla**	0.35	322	P	Pg	20 27 21.4	+2.3
	59nm,0.1s,SNR=7.9						
EMLI				S	Sg	20 27 28.1	+4.1
	SNR=7.9						
EMEL	**Melilla**	0.36	321	Pg	Pg	20 27 21.4	+2.2
	59nm,0.1s,SNR=7.9						
EMEL				Lg		20 27 28.1	
	SNR=7.9						
TOU	**Touzarine**	0.88	266	iP	Pb	20 27 29.0	+0.6
TOU				iS	Sb	20 27 41.5	+1.7
EALB	**Alboran**	0.96	343	P	Pb	20 27 32.0	+2.3
EALB				S	Sb	20 27 44.2	+2.2
EALB	**Alboran**	0.96	343	Pg	Pg	20 27 32.2	+1.3
	3.3nm,0.1s,SNR=20						
EALB				Lg		20 27 44.2	
	95nm,0.4s,SNR=5.8						
EALB	**Alboran**	0.96	343	P	Pb	20 27 32.0	+2.3
EALB				S	Sb	20 27 44.2	+2.1
	95nm,0.4s,SNR=5.8						
MPAL	**Palemas**	1.05	281	eP	Pb	20 27 32.0	+0.7
MPAL				eS	Sb	20 27 46.0	+1.2
OLHC	**Oulhaca**	1.06	77	P	Pb	20 27 31.0	-0.4
ODZI	**Dziouia**	1.22	77	P	Pb	20 27 34.0	-0.1
TZK	**Tazeka**	1.55	233	iP	Pn	20 27 40.0	+0.8
TZK				iS	Sb	20 27 58.0	-1.2
OTSS	**Djebel Tessala**	1.57	80	P	Pn	20 27 40.0	+0.5
EBER	**Berja**	1.88	355	P	Pn	20 27 46.7	+2.8
EBER				S	Sn	20 28 04.6	-3.0
EBER	**Berja**	1.88	355	Pn	Pn	20 27 44.1	+0.2
	5.8nm,0.4s,SNR=7.3						
EBER				Sn	Sn	20 28 04.6	-3.0
	29nm,0.5s,SNR=4.7						
EBER	**Berja**	1.88	355	P	Pn	20 27 46.5	+2.6
	5.8nm,0.4s,SNR=7.3						
EBER				S	Sn	20 28 04.6	-3.0
	29nm,0.5s,SNR=4.7						
USTO	**Oran**	1.88	67	P	Pn	20 27 57.0	+13
ENIJ	**Nijar**	1.98	11	P	Pn	20 27 45.5	+0.1
ENIJ				S	Sn	20 28 11.1	+0.8
ENIJ	**Nijar**	1.98	11	Pn	Pn	20 27 46.1	+0.7
	6.4nm,0.3s,SNR=7.4						
ENIJ				Sn	Sn	20 28 11.1	+0.8
	13nm,0.4s,SNR=4.6						
ENIJ	**Nijar**	1.98	11	P	Pn	20 27 45.5	+0.1
ENIJ				S	Sn	20 28 11.1	+0.8
	13nm,0.4s,SNR=4.6						
DKH	**Dar Kharkhour**	2.24	283	eP	Pn	20 27 50.0	+0.9
DKH				iS	Sn	20 28 16.5	-0.4
EMIJ	**Mijas**	2.29	313	P	Pn	20 27 48.6	-1.2
EMIJ				S	Sn	20 28 15.8	-2.3
EMIJ	**Mijas**	2.29	313	Pn	Pn	20 27 49.7	-0.2
	0.2nm,0.1s,SNR=6.8						
EMIJ				Sn	Sn	20 28 15.8	-2.3
	4.9nm,0.3s,SNR=5.5						
EMIJ	**Mijas**	2.29	313	P	Pn	20 27 48.8	-1.0
	0.2nm,0.1s,SNR=6.8						
EMIJ				S	Sn	20 28 15.8	-2.4
	4.9nm,0.3s,SNR=5.5						
ELOJ	**Sierra Loja**	2.43	331	Pn	Pn	20 27 51.8	0.0
	0.4nm,0.1s,SNR=4.0						
ELOJ				Sn	Sn	20 28 22.3	+0.6
	SNR=7.9						
MIF	**Mishlifen**	2.65	233	eP	Pn	20 27 54.0	-1.0
MIF				iS	Sn	20 28 27.5	+0.1
CZD	**Col de Zad**	2.79	225	eP	Pn	20 27 56.0	-1.0
CZD				iS	Sn	20 28 32.0	+1.2
EQES	**Quesada**	2.79	354	P	Pn	20 27 58.7	+1.7
EQES				S	Sn	20 28 30.0	-0.9
EQES	**Quesada**	2.79	354	Pn	Pn	20 27 58.7	+1.7
	0.4nm,0.1s,SNR=22						
EQES				Sn	Sn	20 28 30.8	0.0
	22nm,0.9s						
EQES	**Quesada**	2.79	354	S	Sn	20 28 30.8	0.0
	22nm,0.9s						
ELUQ	**Luque**	2.84	334	P	Pn	20 27 58.1	+0.5
ELUQ				S	Sn	20 28 33.2	+1.2
ELUQ	**Luque**	2.84	334	Pn	Pn	20 27 58.1	+0.5
	0.7nm,0.2s,SNR=4.0						
ELUQ				Sn	Sn	20 28 32.6	+0.6
	SNR=7.9						
ELUQ	**Luque**	2.84	334	P	Pn	20 27 58.1	+0.5
	0.7nm,0.2s,SNR=4.0						
ELUQ				S	Sn	20 28 33.2	+1.2
	SNR=7.9						
EMUR	**La Murta**	3.04	22	Pn	Pn	20 27 59.0	-1.5
	0.2nm,0.1s,SNR=18						
EMUR				Sn	Sn	20 28 32.6	-4.6
	3.7nm,0.4s						
EMUR	**La Murta**	3.04	22	P	Pn	20 27 59.0	-1.6
	0.2nm,0.1s,SNR=18						
ESPR	**Espera**	3.17	306	P	Pn	20 28 00.0	-2.3
ESPR				S	Sn	20 28 38.0	-2.3
ESPR	**Espera**	3.17	306	P	Pn	20 28 00.0	-2.3
	SNR=4.0						
ESPR				S	Sn	20 28 38.0	-2.3
	SNR=4.0						
ZFT	**Errachidia**	3.29	206	eP	Pn	20 28 04.0	-0.1
ZFT				iS	Sn	20 28 42.0	-1.5
EADA	**Adamuz**	3.49	335	Pn	Pn	20 28 06.9	0.0
	0.2nm,0.1s,SNR=5.6						
EADA				Sn	Sn	20 28 45.5	-3.0
	3.4nm,0.4s,SNR=5.9						
EADA	**Adamuz**	3.49	335	P	Pn	20 28 06.9	0.0
	0.2nm,0.1s,SNR=5.6						
EADA				S	Sn	20 28 45.5	-3.0
	3.4nm,0.4s,SNR=5.9						
EVIA	**Vianos**	3.61	2	Sn	Sn	20 28 50.3	-1.3
	SNR=4.0						
ETOB	**Tobarra**	3.73	14	P	Pn	20 28 11.3	+1.1
ETOB				S	Sn	20 28 52.4	-2.1
ETOB	**Tobarra**	3.73	14	Pn	Pn	20 28 10.2	-0.1
	2.1nm,0.3s,SNR=16						
ETOB				Sn	Sn	20 28 52.4	-2.1
	15nm,1.2s						
ETOB	**Tobarra**	3.73	14	P	Pn	20 28 10.2	-0.1
	2.1nm,0.3s,SNR=16						
ETOB				S	Sn	20 28 52.4	-2.1
	15nm,1.2s						
EBEN	**Beniarda**	4.17	27	Pn	Pn	20 28 16.8	+0.2
	0.3nm,0.1s,SNR=7.9						
EBEN				Sn	Sn	20 29 01.8	-3.9
	SNR=4.0						
EBEN	**Beniarda**	4.17	27	P	Pn	20 28 16.8	+0.3
	0.3nm,0.1s,SNR=7.9						
EBEN				S	Sn	20 29 01.8	-3.9
	SNR=4.0						
EMIN	**Mina Concepcio**	4.23	312	P	Pn	20 28 17.3	-0.1
EMIN				S	Sn	20 29 03.0	-4.1
EMIN	**Mina Concepcio**	4.23	312	Pn	Pn	20 28 17.2	-0.2
	0.4nm,0.1s,SNR=7.6						
EMIN				Sn	Sn	20 29 03.4	-3.7
	16nm,1.3s						
EMIN	**Mina Concepcio**	4.23	312	P	Pn	20 28 17.3	-0.1
EMIN				S	Sn	20 29 03.0	-4.2
PALC	**Alcoutim**	4.58	304	ePn	Pn	20 28 22.5	+0.2
PALC				eSn	Sn	20 29 12.9	-3.1
	4.2nm,0.4s						
EGRO	**El Granado**	4.62	304	Pn	Pn	20 28 22.9	0.0
	5.6nm,0.4s,SNR=8.2						
EGRO				Sn	Sn	20 29 11.9	-5.1
	61nm,1.6s						
EGRO	**El Granado**	4.62	304	P	Pn	20 28 22.9	0.0
	5.6nm,0.4s,SNR=8.2						
EGRO				S	Sn	20 29 11.9	-5.2
ESDC	**Sonseca Array**	4.75	348	Pn	Pn	20 28 25.6	+0.7
	0.3nm,0.3s,baz=171,slow=12,SNR=5.4						
ESDC	**Sonseca Array**	4.75	348	P	Pn	20 28 25.6	+0.8
EBAD	**Badajoz**	5.09	318	Pn	Pn	20 28 27.9	-1.7
	0.2nm,0.1s,SNR=4.0						
EBAD				Sn	Sn	20 29 23.8	-5.2
	SNR=7.9						
EBAD	**Badajoz**	5.09	318	P	Pn	20 28 27.9	-1.7
PBEJ	**Beja**	5.14	307	eSn	Sn	20 29 27.6	-2.6
PCBR	**Castelo Branco**	6.14	323	eSn	Sn	20 29 49.3	-5.9
	2.2nm,0.3s						

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*ROM **11** 20:40:40.2±0.2, 40.45N×19.60E, h14^{km}±5^{km}, Md2.9/2, Ml2.6/2, Error ellipse: s-maj=5.0km s-min=3.1km az=16.0*
*NEIC **11** 20:40:41.0±0.5, 40.47N×19.63E, h10^{km}, MD3.3(ATH), ML2.6(ROM), Error ellipse: s-maj=8.4km s-min=5.6km az=216.0*
*CSEM **11** 20:40:43.5±0.1, 40.52N×19.60E, h40^{km}, MD2.9/2, Error ellipse: s-maj=3.1km s-min=1.6km az=19.0*
*ATH **11** 20:40:52.6, 39.49N×19.98E, h10^{km}, MD3.3/3*
ISC 11 20:40:41.3±0.6**, 40.46N**±0.04×**19.53E**±0.05**, h11^{km}**±6^{km}**, n25, σ0§97**/26**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	**Vlora**	0.03	295	iPg	Pg	20 40 42.8	-0.6
KEK	**Kerkira**	0.77	164	ePG	Pg	20 40 57.9	+1.1
KEK	**Kerkira**	0.77	164	Pg	Pg	20 40 55.3	-1.5
	99nm,0.3s						
TIR	**Tirane**	0.93	16	iPg	Pg	20 40 59.6	-0.3
TIR	**Tirane**	0.93	16	Pg	Pg	20 40 58.3	-1.6
	296nm,1.0s						
LCI	**Lecce**	1.09	264	Pn	Pn	20 41 02.5	+0.1
	67nm,0.4s						
QSH	**Qafa e Shtames**	1.10	15	iPg	Pg	20 41 04.6	+1.2
QSH				iSg	Sg	20 41 19.2	+1.1
IGT	**Igoumenitsa**	1.11	146	eP	Pb	20 41 03.2	+1.1
JAN	**Janina**	1.29	128	ePB	Pb	20 41 05.8	+0.6
FNA	**Florina**	1.45	76	eP	Pn	20 41 05.8	-1.7
MEV	**Metsovon**	1.47	117	eP	Pn	20 41 08.3	+0.5
PUK	**Puka**	1.61	10	iPg	Pg	20 41 08.7	-4.8
SG1	**Sgolgore (BA)**	2.20	281	ePn	Pn	20 41 18.4	+0.1
GRG	**Griva**	2.24	76	eP	Pn	20 41 18.0	-0.9
EVR	**Evrytania**	2.34	130	ePB	Pb	20 41 21.4	-1.6
TIP	**Timpagrande**	2.49	240	ePn	Pn	20 41 23.0	+0.6
TIP	**Timpagrande**	2.49	240	ePn	Pn	20 41 23.0	+0.6
AGG	**Agios Georgios**	2.59	123	eP	Pn	20 41 25.3	+1.4
SLCN	**Sala Consilina**	2.97	270	Pn	Pn	20 41 29.3	-0.1
	7.0nm,0.4s						
MGR	**Morigerati**	3.06	265	Pn	Pn	20 41 31.1	+0.6
	77nm,1.8s						
MRLC	**Muro Lucano**	3.09	277	Pn	Pn	20 41 30.5	-0.5
	9.0nm,0.6s						
SGO	**Sicignano**	3.22	273	Pn	Pn	20 41 32.8	0.0
	3.0nm,0.4s						
SGG	**Gregorio Mates**	4.01	285	Pn	Pn	20 41 44.1	0.0
VAGA	**Valle Agricola**	4.12	285	Pn	Pn	20 41 46.3	+0.6
NRCA	**Norcia**	5.36	298	Pn	Pn	20 42 01.3	-1.9

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*CSEM **11** 20:59:38.9±0.3, 39.22N×10.15W, h30^{km}, ML1.5, Error ellipse: s-maj=8.9km s-min=3.3km az=71.0*
*NEIC **11** 20:59:39.2, 39.27N×10.06W, MG3.2(MDD), After MDD.*
*INMG **11** 20:59:40.5±1.0, 39.14N×10.38W, h31^{km}, ML1.5, Error ellipse: s-maj=6.0km s-min=2.6km az=77.0*
MDD 11 20:59:39.2±1.5**, 39.13N×10.41W, h32^{km}**±3^{km}**, mb3.4**/8**, Error ellipse: s-maj=14.9km s-min=7.3km az=77.0, PRXIMO, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOU	**Loures**	1.01	104	ePn	Pn	20 59 57.0	-0.3
PLOU				eSn	Sn	21 00 09.3	-1.2
	9.7nm,0.1s						
PLOU	**Loures**	1.01	104	eP	Pn	20 59 57.0	-0.3
PLOU				eS	Sn	21 00 09.3	-1.2
	9.7nm,0.1s						
PTOM	**Tomar**	1.62	72	ePn	Pn	21 00 05.8	-0.2
PTOM				eSn	Sn	21 00 24.1	-1.9
	5.4nm,0.2s						
PTOM	**Tomar**	1.62	72	Pg	Pn	21 00 05.8	-0.2
PTOM				Sn	Sn	21 00 24.1	-1.9
	2.7nm,0.2s						
PTEO	**Sao Teotonio**	2.07	140	ePn	Pn	21 00 11.0	-1.4
PTEO				eSn	Sn	21 00 33.2	-4.1
	3.1nm,0.5s						
PTEO	**Sao Teotonio**	2.07	140	eP	Pn	21 00 11.0	-1.4
PTEO				eS	Sn	21 00 33.2	-4.1
	3.1nm,0.5s						
PBEJ	**Beja**	2.28	118	eSn	Sn	21 00 38.9	-3.8
	0.8nm,0.1s						
PBEJ	**Beja**	2.28	118	eS	Sn	21 00 38.9	-3.8
	0.8nm,0.1s						
PCBR	**Castelo Branco**	2.38	72	ePn	Pn	21 00 15.5	-1.3
PCBR				eSn	Sn	21 00 41.7	-3.5
	1.5nm,0.2s						
PCBR	**Castelo Branco**	2.38	72	Pn	Pn	21 00 15.5	-1.3
PCBR				Sn	Sn	21 00 41.7	-3.5
	0.8nm,0.2s						
PVIS	**Viseu**	2.50	50	ePn	Pn	21 00 17.4	-1.2
PVIS				eSn	Sn	21 00 44.8	-3.4
	3.1nm,0.1s						
PVIS	**Viseu**	2.50	50	Pn	Pn	21 00 17.4	-1.2
PVIS				Sn	Sn	21 00 44.8	-3.4
	1.6nm,0.1s						
EBAD	**Badajoz**	2.67	97	Pn	Pn	21 00 19.8	-1.3
	0.4nm,0.0s,SNR=6.7						
EBAD				Sn	Sn	21 00 48.4	-4.4
	4.5nm,0.2s						
EBAD	**Badajoz**	2.67	97	P	Pn	21 00 19.8	-1.3
	0.4nm,0.0s,SNR=6.7						
EBAD				S	Sn	21 00 48.3	-4.4
	4.5nm,0.2s						
EGRO	**El Granado**	2.80	124	Pn	Pn	21 00 21.5	-1.4
	0.4nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	21 00 52.0	-4.0
	1.2nm,0.1s,SNR=7.9						
EGRO	**El Granado**	2.80	124	P	Pn	21 00 21.5	-1.4
	0.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	21 00 52.0	-3.9
	1.2nm,0.1s,SNR=7.9						
PALC	**Alcoutim**	2.85	125	eSn	Sn	21 00 52.9	-4.2
	1.5nm,0.1s						
PALC	**Alcoutim**	2.85	125	Sn	Sn	21 00 52.9	-4.2
	0.8nm,0.1s						
EMIN	**Mina Concepcio**	3.24	114	Pn	Pn	21 00 27.1	-2.0
	0.3nm,0.1s,SNR=6.0						
EMIN				Sn	Sn	21 01 02.3	-4.6
	0.6nm,0.2s						
EMIN	**Mina Concepcio**	3.24	114	P	Pn	21 00 27.1	-1.9
	0.3nm,0.1s,SNR=6.0						
EMIN				S	Sn	21 01 02.3	-4.6
	0.6nm,0.2s						
ELOB	**Lobios**	3.27	33	Pn	Pn	21 00 27.1	-2.4
	0.4nm,0.1s,SNR=5.3						
ELOB				Sn	Sn	21 01 02.5	-5.1
	1.1nm,0.1s						
ELOB	**Lobios**	3.27	33	P	Pn	21 00 27.1	-2.4
	0.4nm,0.1s,SNR=5.3						
ELOB				S	Sn	21 01 02.5	-5.1
	1.1nm,0.1s						
ECAL	**Calabor**	3.96	44	P	Pn	21 00 37.0	-2.4
ECAL				S	Sn	21 01 17.3	-8.0
ECAL	**Calabor**	3.96	44	Pn	Pn	21 00 37.0	-2.4
	0.6nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	21 01 19.6	-5.7
	0.9nm,0.2s,SNR=7.9						
ECAL	**Calabor**	3.96	44	P	Pn	21 00 37.0	-2.4
	0.6nm,0.2s,SNR=7.9						
ECAL				S	Sn	21 01 17.3	-8.0
	0.9nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	3.96	15	Pn	Pn	21 00 37.0	-2.3
	0.6nm,0.1s,SNR=5.2						
EMAZ				Sn	Sn	21 01 18.3	-7.0
	2.9nm,0.1s						
EMAZ	**Mazaricos**	3.96	15	P	Pn	21 00 37.0	-2.4
	0.6nm,0.1s,SNR=5.2						
EMAZ				S	Sn	21 01 18.3	-7.0
	2.9nm,0.1s						
ESPR	**Espera**	4.25	121	Pn	Pn	21 00 40.0	-3.5
	SNR=7.9						
ESPR	**Espera**	4.25	121	P	Pn	21 00 37.6	-5.8
	SNR=7.9						
EADA	**Adamuz**	4.67	100	Pn	Pn	21 00 46.9	-2.5
	0.2nm,0.1s,SNR=7.9						
EADA				Sn	Sn	21 01 36.0	-7.1
	0.7nm,0.1s,SNR=7.9						
EADA	**Adamuz**	4.67	100	P	Pn	21 00 46.9	-2.5
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	21 01 36.0	-7.1
	0.7nm,0.1s,SNR=7.9						
EPON	**Pontenova**	4.86	29	Pn	Pn	21 00 49.5	-2.6
	0.1nm,0.1s,SNR=7.9						
EPON				Sn	Sn	21 01 44.8	-3.1
	SNR=7.9						
EPON	**Pontenova**	4.86	29	P	Pn	21 00 49.5	-2.6
	0.1nm,0.1s,SNR=7.9						
EPON				S	Sn	21 01 39.2	-8.7
	SNR=7.9						
ESDC	**Sonseca Array**	5.02	82	Pn	Pn	21 00 51.3	-3.0
	1.3nm,0.2s,baz=268,slow=13,SNR=5.1						
ESDC				Sn	Sn	21 01 44.3	-7.7
	0.5nm,0.1s,baz=269,slow=23,SNR=3.6						
ESDC	**Sonseca Array**	5.02	82	P	Pn	21 00 51.3	-3.1
	1.3nm,0.2s,SNR=5.1						
ESDC				S	Sn	21 01 44.3	-7.7

MEX 11 21:20:17.2±0.8**, 16.66N×94.76W, h107^{km}**±12^{km}**, MD3.6, 2C-1D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	0.45	344	⇓iP	P	21 20 32.5	-1.1
CMIG				iS	S	21 20 43.6	-2.3
HUIG	**Huatulco**	1.57	236	⇑iP	P	21 20 43.0	-2.2
HUIG				iS	S	21 21 04.3	-1.8
OXX	**Oaxaca**	1.93	283	⇑iP	P	21 20 48.5	-1.1
OXX				iS	S	21 21 11.0	-2.9

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*BJI **11** 21:20:29.6, 0.86N×97.29E, h35^{km}, mB4.9, mb4.8, Ms4.2, Msz4.0*
*NEIC **11** 21:20:32.5±0.5, 1.21N×97.28E, mb4.5/13, Error ellipse: s-maj=14.9km s-min=9.5km az=61.0*
*IDC **11** 21:20:32.2±0.9, 1.18N×97.08E, h22^{km}±4^{km}, mb4.0/10, mb1 4.1/11, mb1mx3.9/21, mbtmp4.1/11, ML4.2/1, MS3.7/3, Ms1 3.7/3, ms1mx3.3/21, Error ellipse: s-maj=35.4km s-min=15.1km az=51.0*
ISC 11 21:20:30.4±0.7**, 1.19N**±0.08×**97.24E**±0.10**, h22^{km}, h22^{km}**±1.1^{km}**:pP-P, n38, σ0§96**/36**, mb4.5**/27**, MS4.1**/5**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	5.31	40	ePn	Pn	21 21 51.3	+0.9
CM31	**Chiang Mai Arr**	17.24	5	eP	P	21 24 30.6	-1.0
	7.3nm,0.9s						
CMAR	**Chiang Mai Arr**	17.24	5	P	P	21 24 30.1	-1.5
	0.3nm,0.3s,baz=196,slow=11,SNR=14						
CMAR				LR	LR	21 31 06.8	
	comp=Z,170nm,18.6s,baz=185,slow=37						
NANT	**Nan**	17.83	11	P	P	21 24 39.0	+0.1
SHL	**Shillong**	24.78	348	⇑iP	P	21 25 52.0	-0.2
GYA	**Guiyang**	26.71	19	P	P	21 26 10.6	+0.4
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
PKI	**Pulchoki**	28.57	338	eP	P	21 26 29.3	+2.2
	comp=Z,24nm,1.0s,mb4.9						
GUN	**Gumba**	28.71	339	eP	P	21 26 28.7	+0.4
	comp=Z,24nm,0.7s,mb5.1						
DMN	**Daman**	28.73	337	eP	P	21 26 29.7	+1.2
	comp=Z,24nm,1.2s,mb4.8						
KKN	**Kakani**	28.82	338	eP	P	21 26 29.7	+0.4
	comp=Z,35nm,1.2s,mb5.0						
LSA	**Lhasa**	28.94	349	P	P	21 26 33.4	+3.1
LSA	**Lhasa**	28.94	349	eP	P	21 26 31.7	+1.4
	comp=Z,6.6nm,0.8s,mb4.4						
GKN	**Gorkha**	29.26	337	eP	P	21 26 32.8	-0.5
	comp=Z,27nm,0.9s,mb5.0						
KOLN	**Koldanda**	29.48	335	eP	P	21 26 35.5	+0.2
	comp=Z,15nm,0.8s,mb4.8						
ENH	**Enshi**	31.17	21	eP	P	21 26 47.7	-2.5
	comp=Z,21nm,0.9s,mb5.0						
ENH				epP	pP	21 26 55.7	-1.1
FITZ	**Fitzroy Crossi**	33.89	126	P	P	21 27 14.1	+0.1
	comp=Z,3.2nm,0.8s,mb4.3,baz=320,slow=7.9,SNR=3.5						
XAN	**Xi'an**	34.46	17	P	P	21 27 17.9	-0.9
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
LZH	**Lanzhou**	35.26	9	eP	P	21 27 25.5	-0.1
LZH				AP	pP	21 27 32.5	+0.3
LZH				XP	sP	21 27 36.0	+0.9
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,80nm,4.0s						
LZH	**Lanzhou**	35.26	9	eP	P	21 27 25.5	-0.1
	comp=Z,28nm,1.5s,mb5.0						
LZH				pP	pP	21 27 32.5	+0.3
LZH				sP	sP	21 27 36.0	+0.9
GTA	**Gaotai**	38.11	3	eP	P	21 27 50.2	+0.6
GTA				AP	pP	21 27 56.6	+0.3
GTA				XP	sP	21 27 59.4	+0.3
GTA				PP	PP	21 29 22.4	+2.3
GTA				S	S	21 33 43.4	+2.6
GTA				SS	SS	21 36 24.2	+5.3
GTA				AMB	AMB		
	comp=Z,70nm,5.0s						
GTA				LR	LR		
	comp=N,160nm,14.9s,MS4.0						
GTA				LR	LR		
	comp=E,110nm,14.5s,MS4.0						
GTA				LR	LR		
	comp=Z,150nm,13.8s,MS4.0						
HHC	**Hu-ho-hao-te**	41.56	16	eP	P	21 28 19.4	+1.3
HHC				AP	pP	21 28 23.8	-1.0
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
HHC				AMB	AMB		
	comp=Z,70nm,5.9s						
WRA	**Warramunga Arr**	42.00	122	P	P	21 28 22.9	+0.9
	comp=Z,1.5nm,0.6s,mb3.8,baz=302,slow=9.1,SNR=20						
WRA				pP	pP	21 28 30.4	+1.6
	comp=Z,1.2nm,0.6s,baz=301,slow=9.0,SNR=6.8						
WRAB	**Tennant Creek**	42.01	122	eP	P	21 28 21.4	-0.6
	comp=Z,4.4nm,0.8s,mb4.1						
WMQ	**Urumqi**	43.29	350	P	P	21 28 31.3	-0.9
WMQ				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,230nm,3.0s						
WMQ				LR	LR		
	comp=N,1µm,20.0s,MS4.9						
WMQ				LR	LR		
	comp=E,1µm,24.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
SONM	**Songino Array**	47.13	8	P	P	21 29 03.2	+0.3
	comp=Z,3.1nm,0.7s,mb4.4,baz=188,slow=8.9,SNR=34						
SONM				pP	pP	21 29 10.0	+0.4
	comp=Z,4.4nm,0.9s,baz=190,slow=7.5,SNR=14						
SONM				PcP	PcP	21 30 35.0	+0.1
	comp=Z,0.5nm,0.5s,baz=184,slow=4.5,SNR=3.3						
MKAR	**Makanchi Array**	47.26	346	P	P	21 29 04.4	+0.5
	comp=Z,2.6nm,0.5s,mb4.4,baz=159,slow=9.1,SNR=57						

MKAR				LR	LR	21 53 03.8	
	comp=Z,33nm,20.6s,MS3.3,baz=166,slow=41						
ULN	**Ulaanbaatar**	**47.26**	**9**	*e*P	**P**	**21 29 03.9**	**0.0**
	comp=Z,3.8nm,1.0s,mb4.3						
ULN				*e*pP	pP	21 29 10.9	+0.2
CN2	**Changchun**	**49.30**	**27**	*e*P	**P**	**21 29 19.4**	**-0.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				LR	LR		
	comp=N,200nm,15.0s,MS4.4						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.4						
CN2				LR	LR		
	comp=Z,200nm,13.0s,MS4.3						
ZAL	**Zalesovo**	**53.56**	**351**	P	**P**	**21 29 50.9**	**-0.9**
	comp=Z,4.0nm,0.5s,mb4.6,baz=304,slow=5.8,SNR=20						
BVAR	**Borovoye Array**	**56.27**	**341**	P	**P**	**21 30 10.4**	**-1.1**
	comp=Z,2.5nm,0.6s,mb4.5,baz=143,slow=7.4,SNR=19						
CHKZ	**Chkalovo**	**56.74**	**341**	*e*P	**P**	**21 30 13.7**	**-1.3**
	comp=Z,1.3nm,1.4s,mb3.8						
BRTR	**Keskin Array B**	**69.14**	**312**	P	**P**	**21 31 36.3**	**-1.0**
	comp=Z,0.5nm,0.8s,mb3.5,baz=141,slow=9.2,SNR=3.2						
BRTR				pP	pP	21 31 42.9	-1.5
	comp=Z,0.7nm,0.6s,baz=147,slow=7.2,SNR=4.1						
RPZ	**Rata Peaks**	**79.17**	**135**	LR	LR	22 07 57.5	
	comp=Z,118nm,19.4s,MS4.2,baz=205,slow=36						
FINES	**FINESS Array B**	**80.02**	**332**	P	**P**	**21 32 39.3**	**-0.2**
	comp=Z,1.2nm,0.8s,mb3.9,baz=148,slow=18,SNR=3.6						
ARCES	**ARCESS Array B**	**82.56**	**340**	P	**P**	**21 32 52.9**	**+0.2**
	comp=Z,1.9nm,0.9s,mb4.1,baz=90,slow=4.9,SNR=6.5						
GERES	**GERESS Array B**	**84.84**	**319**	P	**P**	**21 33 05.2**	**+0.5**
	comp=Z,0.3nm,0.7s,mb3.5,baz=79,slow=6.8,SNR=5.3						
GERES				pP	pP	21 33 12.6	+0.7
	comp=Z,0.8nm,1.0s,baz=72,slow=4.2,SNR=4.0						
TXAR	**Lajitas Array**	**143.66**	**32**	PKP	PKPdf	21 40 04.7	-3.9
	comp=Z,0.2nm,0.6s,baz=309,slow=1.2,SNR=4.2						
CPUP	**Villa Florida**	**145.02**	**222**	PKP	PKPdf	21 40 08.8	-2.4
	comp=Z,2.6nm,1.0s,baz=166,slow=8.3,SNR=3.6						

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*NEIC **11** 21:59:51.2±0.8, 7.49N×93.73E, mb4.2/5, Error ellipse: s-maj=21.5km s-min=10.3km az=45.0*

*IDC **11** 21:59:51.2±1.1, 7.59N×93.73E, h22^{km}±4^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.5/20, mbtmp3.6/8, ML3.3/1, Error ellipse: s-maj=36.0km s-min=20.3km az=56.0*

ISC 11 21:59:49.4±1.0**, 7.5N**±0.1×**93.8E**±0.1**, h23**^{km}**, h23**^{km}±.5^{km}**:pP-P, n17,** σ**0**^{s}**81**/17**, mb3.9**/12**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**7.14**	**108**	*e*Pn	**Pn**	**22 01 35.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**11.96**	**24**	Pn	**P**	**22 02 42.0**	**+0.2**
	0.1nm,0.3s,baz=208,slow=15,SNR=3.6						
DMN	**Daman**	**21.62**	**339**	*e*P	**P**	**22 04 42.1**	**+2.0**
GUN	**Gumba**	**21.63**	**341**	*e*P	**P**	**22 04 40.2**	**0.0**
	14nm,0.5s,mb4.7						
KKN	**Kakani**	**21.72**	**339**	*e*P	**P**	**22 04 42.1**	**+0.9**
	9.4nm,0.5s,mb4.5						
GKN	**Gorkha**	**22.15**	**338**	*e*P	**P**	**22 04 45.4**	**0.0**
	9.8nm,0.5s,mb4.5						
LSA	**Lhasa**	**22.21**	**354**	*e*P	**P**	**22 04 45.0**	**-1.0**
	5.0nm,0.6s,mb4.1						
KOLN	**Koldanda**	**22.34**	**336**	*e*P	**P**	**22 04 48.0**	**+0.6**
	9.8nm,0.7s,mb4.3						
MKAR	**Makanchi Array**	**40.36**	**348**	P	**P**	**22 07 26.6**	**-0.6**
	0.2nm,0.4s,mb3.2,baz=160,slow=8.3,SNR=2.9						
MKAR				pP	pP	22 07 33.3	-0.8
	0.8nm,0.7s,baz=168,slow=7.9,SNR=7.7						
SONM	**Songino Array**	**41.58**	**13**	P	**P**	**22 07 36.9**	**-0.3**
	0.2nm,0.3s,mb3.2,baz=207,slow=6.4,SNR=3.4						
SONM				pP	pP	22 07 43.9	-0.1
	0.6nm,0.6s,baz=193,slow=8.0,SNR=5.2						
ZAL	**Zalesovo**	**46.85**	**353**	P	**P**	**22 08 18.9**	**-0.7**
	1.2nm,0.3s,mb4.3,baz=53,slow=5.1						
ZAL				pP	pP	22 08 24.9	-1.6
	3.5nm,0.3s,baz=288,slow=4.1,SNR=7.0						
WRA	**Warramunga Arr**	**48.32**	**125**	P	**P**	**22 08 31.9**	**+0.4**
	0.2nm,0.3s,mb3.6,baz=306,slow=8.6,SNR=6.3						
WRA				pP	pP	22 08 39.4	+0.9
	0.2nm,0.3s,baz=306,slow=8.4,SNR=2.4						
FINES	**FINESS Array B**	**72.87**	**332**	P	**P**	**22 11 16.9**	**-1.5**
	0.8nm,0.6s,mb3.8,baz=104,slow=7.9,SNR=8.0						
FINES				pP	pP	22 11 24.1	-1.4
	1.6nm,0.6s,baz=117,slow=4.3,SNR=4.0						
KAF	**Kangasniemi**	**72.96**	**333**	*e*p	**P**	**22 11 18.8**	**0.0**
GERES	**GERESS Array B**	**77.87**	**318**	P	**P**	**22 11 47.8**	**+0.7**
	0.3nm,0.5s,mb3.5,baz=108,slow=4.2,SNR=5.8						
GERES				pP	pP	22 11 55.1	+0.8
	0.8nm,0.6s,baz=76,slow=5.5,SNR=6.8						
NB2	**NORSAR Subarra**	**79.88**	**331**	P	**P**	**22 11 56.3**	**-1.4**
	0.3nm,0.6s,mb3.4,baz=97,slow=5.0						
NOA	**NORSAR Array B**	**79.88**	**331**	P	**P**	**22 11 57.5**	**-0.2**
	0.8nm,0.9s,mb3.6,baz=105,slow=8.0,SNR=2.6						
NOA				pP	pP	22 12 05.0	0.0
	0.9nm,0.6s,baz=91,slow=5.7,SNR=3.2						

GUC 11 22:00:12.2±0.4**, 28.93S**×**71.29W, h37**^{km}±12^{km}**, ML3.5, 1C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.52**	**99**	⇓*i*P	P	22 00 23.8	+0.8
LCO				*i* S	S	22 00 32.4	+1.6
LCO				AMP		22 00 33.5	
	comp=E,4µm,0.2s						
VACH	**Vallenar**	**0.58**	**53**	⇓*i*P	P	22 00 24.1	+0.1
VACH				*i* S	S	22 00 32.8	+0.3
VACH				AMP		22 00 33.7	
	comp=E,9µm,0.1s						
LSCH	**La Serena**	**0.97**	**178**	⇑*i*P	P	22 00 29.9	+0.3
LSCH				*i* S	S	22 00 43.1	+0.8
LSCH				AMP		22 00 45.1	
	comp=E,1µm,0.4s						
TLL	**Tololo Astrono**	**1.30**	**161**	⇓*i*P	P	22 00 35.5	+1.3
TLL				*i* S	S	22 00 53.1	+2.5
TLL				AMP		22 00 55.5	
	comp=E,1µm,0.4s						
CMCH	**Combarbala**	**2.25**	**174**	AMP		22 01 26.8	
	comp=E,1µm,0.5s						

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*MOS **11** 22:08:16.5±0.9, 6.41S×130.23E, h97^{km}, mb4.9/32, Error ellipse: s-maj=13.7km s-min=6.5km az=107.5*

*BJI **11** 22:08:21.8, 6.66S×130.42E, h166^{km}, mB4.8, mb4.9*

*HRVD **11** 22:08:24.3±0.8, 6.46S×130.03E, h126^{km}±10^{km}, MW4.9/41, Centroid moment Tensor Solution. LP body waves: s6,c6;Mantle waves: s41,c59; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.87±.27; M$_{\theta\theta}$-1.41±.20; M$_{\phi\phi}$2.28±.27; M$_{r\theta}$0.40±.12; M$_{\theta\phi}$-0.50±.26; M$_{\phi r}$1.70±.21; Best double couple: M$_0$2.57×10^{16} NP1: ϕ_s309°, δ41°, λ-162°. NP2: ϕ_s205°, δ78°, λ-51°. Principal axes: T 3.043, Plg23°, Azm266°; N -.945, Plg38°, Azm15°; P -2.097, Plg43°, Azm152°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **11** 22:08:24.3±1.0, 6.45S×130.27E, h157^{km}±9^{km}, mb5.1/40 Error ellipse: s-maj=7.7km s-min=4.4km az=66.0*

*IDC **11** 22:08:24.7±1.8, 6.47S×130.24E, h157^{km}±15^{km}, mb4.5/22, mb1 4.5/23, mb1mx4.5/25, mbtmp4.9/23, MS3.3/3, Ms1 3.4/3, ms1mx3.0/22, Error ellipse: s-maj=16.4km s-min=8.4km az=69.0*

ISC 11 22:08:22.7±0.2**, 6.46S**±0.04×**130.31E**±0.05**, h156**^{km}**, h156**^{km}±3.0^{km}**:pP-P, n230,** σ**1**^{s}**00**/190**, mb4.8**/70**, 9C-16D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.55**	**161**	⇓*i*P	**P**	**22 09 56.0**	**-1.8**
	898nm,0.2s						
KAKA				*e*S	**S**	**22 11 04.5**	**-7.2**
FITZ	**Fitzroy Crossi**	**12.43**	**201**	*e*P	**P**	**22 11 10.8**	**-4.5**
	120nm,0.2s						
FITZ				*e*S	**S**	**22 13 20.4**	**-10**
FITZ	**Fitzroy Crossi**	**12.43**	**201**	P	**P**	**22 11 12.0**	**-3.3**
	50nm,0.3s,baz=20,slow=9.1,SNR=181						
FITZ				S	**S**	**22 13 18.7**	**-12**
	182nm,0.3s,baz=64,slow=7.1,SNR=16						
FITZ				LR	LR	22 16 04.2	
	comp=Z,82nm,20.7s,baz=43,slow=37						
WRAB	**Tennant Creek**	**13.95**	**164**	*e*P	**P**	**22 11 30.4**	**-4.4**
WRAB				pmax	pmax		
	comp=Z,333nm,0.6s						
WRAB	**Tennant Creek**	**13.95**	**164**	*e*Pn	**P**	**22 11 30.4**	**-4.4**
	comp=Z,334nm,0.6s						
WRA	**Warramunga Arr**	**13.96**	**164**	P	**P**	**22 11 30.2**	**-4.7**
WRA				S	**S**	**22 13 58.3**	**-7.9**
WRA				pmax	pmax		
	comp=Z,27nm,0.3s						
WRA				smax			
	comp=E,36nm,0.3s						
WRA	**Warramunga Arr**	**13.96**	**164**	P	**P**	**22 11 30.2**	**-4.7**
	comp=E,27nm,0.3s,baz=348,slow=13,SNR=327						
WRA				S	**S**	**22 13 58.3**	**-7.9**
	comp=E,36nm,0.3s,baz=350,slow=22,SNR=12						
WB2	**Warramunga Arr**	**13.96**	**164**	⇓*i*P	**P**	**22 11 30.3**	**-4.6**
WB2				*e*S	**S**	**22 13 59.0**	**-7.3**
PMG	**Port Moresby**	**16.94**	**101**	*e*P	**P**	**22 12 14.4**	**+2.4**
PMG				*e*S	**S**	**22 15 11.0**	**-2.8**
PMG				pmax	pmax		
	comp=Z,56nm,0.6s						
PMG	**Port Moresby**	**16.94**	**101**	P	**P**	**22 12 13.8**	**+1.8**
	comp=Z,8.5nm,0.3s,baz=308,slow=5.7,SNR=18						
PMG				S	**S**	**22 15 10.9**	**-2.9**
	comp=Z,3.4nm,0.3s,baz=209,slow=21,SNR=5.2						
PMG	**Port Moresby**	**16.94**	**101**	*e*P	**P**	**22 12 14.3**	**+2.3**
	comp=Z,56nm,0.6s						
PMG				*e*S	**S**	**22 15 11.0**	**-2.8**
MBWA	**Marble Bar**	**17.84**	**214**	*e*P	**P**	**22 12 21.2**	**-1.3**
	comp=Z,26nm,0.5s						
MBWA				*e*S	**S**	**22 15 23.4**	**-10**
KKM	**Kota Kinabalu**	**18.77**	**311**	*e*P	**P**	**22 12 32.3**	**-0.1**
CTA	**Charters Tower**	**20.57**	**133**	⇓*i*P	**P**	**22 12 52.2**	**+1.3**
	comp=Z,56nm,0.8s						
CTA	**Charters Tower**	**20.57**	**133**	P	**P**	**22 12 52.3**	**+1.4**
CTA				pmax	pmax		
	comp=Z,90nm,0.9s						
CTA	**Charters Tower**	**20.57**	**133**	P	**P**	**22 12 52.3**	**+1.4**
	comp=Z,90nm,0.9s,baz=310,slow=12,SNR=53						
CTAO	**Charters Tower**	**20.57**	**133**	*e*P	**P**	**22 12 51.6**	**+0.7**
CTAO				*e*S	**S**	**22 16 38.4**	**+12**
CTAO				pmax	pmax		
	comp=Z,65nm,0.8s						
CTAO	**Charters Tower**	**20.57**	**133**	*e*P	**P**	**22 12 51.6**	**+0.8**
	comp=Z,65nm,0.8s						
CTAO				*e*S	**S**	**22 16 38.4**	**+12**
KSM	**Kuching**	**21.46**	**291**	*e*P	**P**	**22 13 00.1**	**+0.3**
GUMO	**Guam**	**24.62**	**36**	P	**P**	**22 13 28.1**	**-2.2**
GUMO				pmax	pmax		
	comp=Z,190nm,1.3s,mb5.5						
GUMO	**Guam**	**24.62**	**36**	P	**P**	**22 13 28.1**	**-2.2**
	comp=Z,190nm,1.3s,mb5.5						
STKA	**Stephens Creek**	**27.39**	**159**	⇓*i*P	**P**	**22 13 55.2**	**-0.5**
	comp=Z,31nm,0.4s,mb5.3						
STKA				*e*S		22 19 18.4	
STKA	**Stephens Creek**	**27.39**	**159**	P	**P**	**22 13 55.2**	**-0.5**
	comp=Z,41nm,0.4s,mb5.4,baz=334,slow=8.7,SNR=223						
MUN	**Mundaring**	**28.60**	**206**	*e*P	**P**	**22 14 06.7**	**+0.2**
	comp=Z,18nm,1.2s,mb4.7						
MUN				*e*S		22 19 38.4	
MUN	**Mundaring**	**28.60**	**206**	*e*P	**P**	**22 14 06.7**	**+0.2**
MUN				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.7						
NWAO	**Narrogin (SRO)**	**29.00**	**203**	P	**P**	**22 14 09.1**	**-1.1**
	comp=Z,6.0nm,0.3s,mb4.8,baz=331,slow=6.5,SNR=17						
NWAO	**Narrogin (SRO)**	**29.00**	**203**	*e*P	**P**	**22 14 09.0**	**-1.1**
NWAO				*e*S		22 19 39.8	
ADE	**Adelaide**	**29.40**	**166**	*e*P	**P**	**22 14 13.9**	**+0.2**
HNR	**Honiara**	**29.50**	**98**	*e*P	**P**	**22 14 08.6**	**-6.1**
HNR				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.3						
HNR	**Honiara**	**29.50**	**98**	*e*P	**P**	**22 14 08.6**	**-6.1**
	comp=Z,54nm,0.9s,mb5.3						
ARMA	**Armidale**	**31.13**	**143**	⇓*i*P	**P**	**22 14 29.2**	**+0.2**
KULM	**Kulim**	**31.82**	**291**	*e*P	**P**	**22 14 33.0**	**-2.2**
YHNB	**Yeheng**	**32.15**	**345**	*e*P	**P**	**22 14 36.6**	**-1.2**
QIZ	**Qiongzhong**	**32.38**	**322**	*e*P	**P**	**22 14 39.6**	**-0.3**
	comp=Z,32nm,1.2s,mb4.9						
JOW	**Kunigami**	**33.16**	**357**	P	**P**	**22 14 47.6**	**+1.1**
	comp=Z,23nm,0.6s,mb5.1,baz=198,slow=12,SNR=9.2						
CNB	**Canberra Magne**	**33.64**	**151**	⇓*i*P	**P**	**22 14 51.1**	**+0.5**
	comp=Z,11nm,0.2s,mb5.2						
TOO	**Toolangi**	**33.91**	**158**	⇓*i*P	**P**	**22 14 54.0**	**+1.2**
	comp=Z,17nm,0.8s,mb4.8						
TOO	**Toolangi**	**33.91**	**158**	⇓*i*P	**P**	**22 14 54.0**	**+1.2**
TOO				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.8						
KKTK	**Khon Kaen**	**35.40**	**310**	⇓P	**P**	**22 15 05.5**	**-0.1**
	comp=Z,926nm,0.5s						
DZM	**Mont Dzumac**	**38.17**	**118**	P	**P**	**22 15 29.5**	**+0.7**
	comp=Z,6.0nm,0.5s,mb4.5,baz=272,slow=5.1,SNR=7.6						
SSE	**Sheshan**	**38.35**	**347**	P	**P**	**22 15 30.0**	**-0.3**
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,60nm,4.4s						
SSE	**Sheshan**	**38.35**	**347**	P	**P**	**22 15 30.0**	**-0.3**
	comp=Z,30nm,0.8s,mb5.0						
TAU	**Tasmania Unive**	**39.28**	**160**	*e*P	**P**	**22 15 38.7**	**+0.9**
TAU				pmax	pmax		
	comp=Z,52nm,1.1s,mb5.1						
TAU	**Tasmania Unive**	**39.28**	**160**	*e*P	**P**	**22 15 38.7**	**+0.8**
	comp=Z,52nm,1.1s,mb5.1						
JNU	**Nakatsue**	**39.37**	**1**	P	**P**	**22 15 38.5**	**-0.2**
	comp=Z,6.0nm,0.7s,mb4.3,baz=142,slow=18,SNR=5.0						
CMAR	**Chiang Mai Arr**	**39.63**	**309**	P	**P**	**22 15 41.3**	**+0.4**
CMAR						22 17 45.1	
CMAR				pmax	pmax		
	comp=Z,31nm,0.7s						
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR				pmax	pmax		
	comp=E,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**39.63**	**309**	P	**P**	**22 15 41.2**	**+0.4**
	comp=E,31nm,0.7s,mb5.1,baz=134,slow=6.9,SNR=153						
CMAR				PcP	PcP	22 17 45.1	-0.2
	comp=E,2.6nm,0.8s,baz=170,slow=2.7,SNR=5.0						
CMAR				ScP		22 21 20.2	
	comp=E,1.3nm,0.9s,baz=156,slow=2.6,SNR=4.5						
NJ2	**Nanjing**	**39.83**	**345**	*e*P	**P**	**22 15 43.1**	**+0.7**
NJ2				PP	PP	22 17 22.3	+2.8
NJ2				S	**S**	**22 21 33.0**	**-1.7**
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,640nm,4.3s						
NJ2				LR	LR		
	comp=N,2µm,16.6s						
NJ2				LR	LR		
	comp=E,2µm,17.6s						
NJ2				LR	LR		
	comp=Z,3µm,18.0s						
CHG	**Chiang Mai**	**39.83**	**310**	⇑P	**P**	**22 15 42.8**	**+0.2**
	comp=Z,75nm,0.9s,mb5.3						
WHN	**Wuhan**	**39.85**	**338**	⇓P	**P**	**22 15 44.0**	**+1.4**
GYA	**Guiyang**	**39.96**	**326**	⇑*i*P	**P**	**22 15 43.8**	**+0.2**
GYA				AP	pP	22 16 16.2	-1.7
GYA				XP	sP	22 16 37.3	+0.9
GYA				PP	PP	22 17 21.8	+0.8
GYA				S	**S**	**22 21 35.6**	**-1.2**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,3.4s						
GYA				LR	LR		
	comp=N,420nm,17.2s						
GYA				LR	LR		
	comp=E,280nm,17.0s						
GYA				LR	LR		
	comp=Z,500nm,17.6s						
KMI	**Kunming**	**41.30**	**321**	P	**P**	**22 15 55.5**	**+1.0**
KMI				AP	pP	22 16 28.6	-0.4
KMI				S	**S**	**22 21 59.8**	**+3.3**
KMI				SS	SS	22 25 06.2	+5.6
KMI				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.6						
KMI				AMB	AMB		
	comp=Z,80nm,5.9s						
KMI				LR	LR		
	comp=N,60nm,13.4s						
KMI				LR	LR		
	comp=E,70nm,18.4s						
KMI				LR	LR		
	comp=Z,60nm,14.3s						
KMI	**Kunming**	**41.30**	**321**	P	**P**	**22 15 55.5**	**+1.0**
	comp=Z,28nm,1.2s,mb4.8						
KMI				pP	pP	22 16 28.6	-0.4
KMI				S	**S**	**22 21 59.8**	**+3.3**
KMI				sS		22 22 52.9	
KMI				SS	SS	22 25 06.2	+5.6
KMI				LR	LR		
	comp=Z,70nm,14.3s						
ENH	**Enshi**	**41.63**	**332**	*e*P	**P**	**22 15 56.6**	**-0.7**
	comp=Z,24nm,0.7s,mb4.9						
MAJO	**Matsushiro**	**43.42**	**9**	*e*P	**P**	**22 16 09.3**	**-2.4**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.5						
MAJO	**Matsushiro**	**43.42**	**9**	*e*P	**P**	**22 16 09.2**	**-2.4**
	comp=Z,7.6nm,0.7s,mb4.4						
MAT	**Matsushiro**	**43.42**	**9**	*e*P	**P**	**22 16 11.0**	**-0.7**
MAT	**Matsushiro**	**43.42**	**9**	P	**P**	**22 16 11.2**	**-0.5**
MJAR	**Matsushiro Arr**	**43.42**	**9**	P	**P**	**22 16 11.1**	**-0.6**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MJAR	**Matsushiro Arr**	**43.42**	**9**	P	**P**	**22 16 11.1**	**-0.6**
	comp=Z,2.3nm,0.6s,mb4.0,baz=186,slow=9.6,SNR=9.8						
KS15	**Wonju Array Si**	**43.74**	**357**	*e*P	**P**	**22 16 14.4**	**+0.2**
XAN	**Xi’an**	**45.09**	**335**	P	**P**	**22 16 24.2**	**-0.9**
XAN				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
SHL	**Shillong**	**49.07**	**312**	⇑*i*P	**P**	**22 16 55.0**	**-1.2**
LZH	**Lanzhou**	**49.08**	**331**	⇑P	**P**	**22 16 57.0**	**+0.8**
LZH				AP	pP	22 17 35.5	+3.9
LZH				XP	sP	22 17 53.0	+4.0
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,150nm,4.0s						
LZH	**Lanzhou**	**49.08**	**331**	⇑P	**P**	**22 16 57.0**	**+0.8**
LZH						22 17 18.6	
LZH				*PP	pP	22 17 35.5	+3.9
LZH				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.0						
HHC	**Hu-ho-hao-te**	**50.13**	**341**	*e*P	**P**	**22 17 04.5**	**+0.4**
HHC				AP	pP	22 17 40.9	+1.2
HHC				XP	sP	22 17 57.7	+0.7
HHC				PP	PP	22 19 01.7	+0.2
HHC				SCP		22 21 59.7	
HHC				PCS		22 22 15.6	
HHC				S	**S**	**22 24 00.2**	**-1.9**
HHC				SS	SS	22 27 34.3	-0.5
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,110nm,5.1s						
HHC				LR	LR		
	comp=N,80nm,17.8s						
HHC				LR	LR		
	comp=E,210nm,19.0s						
HHC				LR	LR		
	comp=Z,80nm,17.8s						
CN2	**Changchun**	**50.22**	**355**	*e*P	**P**	**22 17 04.4**	**-0.4**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
MDJ	**Mudanjiang**	**50.85**	**359**	P	**P**	**22 17 09.9**	**+0.4**
MDJ				AP	pP	22 17 45.8	+0.6
MDJ				XP	sP	22 18 04.4	+2.0
MDJ				PCP	PcP	22 18 23.8	-0.3
MDJ				PP	PP	22 19 07.5	-0.4
MDJ				S	**S**	**22 24 12.2**	**+0.2**
MDJ				SS	SS	22 27 50.2	+3.4
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,70nm,5.0s						
MDJ				LR	LR		
	comp=N,50nm,6.0s						
MDJ				LR	LR		
	comp=E,70nm,4.8s						
MDJ				LR	LR		
	comp=Z,60nm,5.2s						
MDJ	**Mudanjiang**	**50.85**	**359**	*e*P	**P**	**22 17 09.8**	**+0.3**
	comp=Z,10nm,0.8s,mb4.5						
PALK	**Pallekele**	**51.33**	**285**	*e*P	**P**	**22 17 11.6**	**-1.9**
	comp=Z,22nm,0.9s,mb4.8						
RPZ	**Rata Peaks**	**51.47**	**143**	P	**P**	**22 17 14.0**	**-0.3**
	comp=Z,20nm,0.8s,mb4.8,baz=308,slow=0.8,SNR=15						
ASAJ	**Asahikawa**	**51.55**	**11**	P	**P**	**22 17 14.6**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ASAJ	**Asahikawa**	**51.55**	**11**	P	**P**	**22 17 14.6**	**-0.2**
	comp=Z,5.0nm,0.5s,mb4.4,baz=230,slow=16,SNR=5.3						
LSA	**Lhasa**	**52.03**	**316**	P	**P**	**22 17 19.6**	**+1.0**
LSA				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.2						
LSA	**Lhasa**	**52.03**	**316**	*e*P	**P**	**22 17 19.0**	**+0.4**
LSA				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.1						
LSA	**Lhasa**	**52.03**	**316**	*e*P	**P**	**22 17 19.0**	**+0.4**
	comp=Z,36nm,0.7s,mb5.1						
VIS	**Vishakhapatnam**	**52.24**	**298**	*e*P	**P**	**22 17 18.2**	**-2.1**
VIS				AMb	AMB	22 17 20.3	
	comp=Z,101nm,0.9s,mb5.4						
URZ	**Urewera**	**52.81**	**134**	P	**P**	**22 17 23.4**	**-0.8**
	comp=Z,4.0nm,0.5s,mb4.4,baz=313,slow=16,SNR=5.4						
GTA	**Gaotai**	**53.65**	**331**	⇑P	**P**	**22 17 30.8**	**+0.4**
GTA				PCP	PcP	22 18 35.4	+0.8
GTA				PP	PP	22 19 36.2	+2.0
GTA				S	**S**	**22 24 49.7**	**-0.4**
GTA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,100nm,5.4s						
YSS	**Yuzh-Sakhalins**	**54.32**	**10**	*e*P	**P**	**22 17 35.1**	**-0.1**
YSS				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.9						
YSS	**Yuzh-Sakhalins**	**54.32**	**10**	*e*P	**P**	**22 17 35.1**	**-0.1**
	comp=Z,13nm,0.5s,mb4.9						
GUN	**Gumba**	**54.83**	**311**	*e*P	**P**	**22 17 39.0**	**-0.2**
	comp=Z,411nm,0.7s						
PKI	**Pulchoki**	**55.01**	**310**	*e*P	**P**	**22 17 40.0**	**-0.5**
	comp=Z,112nm,0.6s,mb5.8						
PKI	**Pulchoki**	**55.01**	**310**	*e*P	**P**	**22 17 40.0**	**-0.5**
PKI				pmax	pmax		
	comp=Z,56nm,0.6s,mb5.5						
KKN	**Kakani**	**55.22**	**310**	*e*P	**P**	**22 17 41.5**	**-0.5**
	comp=Z,153nm,0.6s						
KKN	**Kakani**	**55.22**	**310**	*e*P	**P**	**22 17 41.5**	**-0.5**
KKN				pmax	pmax		
	comp=Z,76nm,0.6s,mb5.6						
DMN	**Daman**	**55.26**	**310**	*e*P	**P**	**22 17 41.8**	**-0.5**
	comp=Z,181nm,0.8s						
KLR	**Kul’dur**	**55.48**	**1**	*e*P	**P**	**22 17 40.1**	**-3.4**
GKN	**Gorkha**	**55.82**	**310**	*e*P	**P**	**22 17 45.8**	**-0.5**
	comp=Z,264nm,0.5s						
HYB	**Hyderabad**	**56.36**	**296**	*e*P	**P**	**22 17 48.0**	**-2.2**
HYB				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.5						
HYB	**Hyderabad**	**56.36**	**296**	*e*P	**P**	**22 17 48.0**	**-2.2**
	comp=Z,70nm,1.0s,mb5.5						
HYB				*e*		22 17 53.5	
HYB	**Hyderabad**	**56.36**	**296**	*i* P	**P**	**22 17 48.0**	**-2.2**
	comp=Z,70nm,1.0s,mb5.5						
HYB				*e*		22 17 53.5	
KOLN	**Koldanda**	**56.50**	**309**	*e*P	**P**	**22 17 50.8**	**-0.3**
	comp=Z,235nm,0.9s						
ULN	**Ulaanbaatar**	**57.85**	**342**	*c* *i*P	**P**	**22 18 01.0**	**+0.7**
ULN	**Ulaanbaatar**	**57.85**	**342**	*e*P	**P**	**22 18 00.9**	**+0.6**
	comp=Z,42nm,0.6s,mb5.4						
SONM	**Songino Array**	**58.03**	**341**	P	**P**	**22 18 01.8**	**+0.2**
	comp=Z,10.0nm,0.5s,mb5.0,baz=160,slow=6.7,SNR=124						
BHPL	**Bhopal**	**59.49**	**302**	*e*P	**P**	**22 18 07.5**	**-4.5**
BHPL				AMb	AMB	22 18 12.2	
	comp=Z,31nm,1.7s,mb4.9						
KAD	**Karad**	**60.26**	**294**	*e*P	**P**	**22 18 15.8**	**-1.4**
KAD				AMb	AMB	22 18 21.7	
	comp=Z,60nm,1.1s,mb5.3						
POO	**Poona**	**60.95**	**295**	*e*P	**P**	**22 18 20.4**	**-1.5**
POO				AMb	AMB	22 18 21.3	
	comp=Z,22nm,0.7s,mb5.1						
POO				*e*x	x	22 26 20.5	
ZAK	**Zakamensk**	**61.26**	**341**	*e*P	**P**	**22 18 23.3**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CASY	**Casey**	**61.27**	**189**	⇓*i*P	**P**	**22 18 22.9**	**-0.6**
NDI	**New Delhi**	**61.90**	**307**	*e*P	**P**	**22 18 25.0**	**-3.3**
TLY	**Talaya**	**62.26**	**342**	*c* *i*P	**P**	**22 18 30.6**	**+0.3**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
TLY	**Talaya**	**62.26**	**342**	*e*P	**P**	**22 18 30.3**	**0.0**
	comp=Z,7.1nm,0.8s,mb4.5						
SMLA	**Simla**	**63.02**	**310**	*i* P	**P**	**22 18 32.0**	**-3.6**

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AJM   Ajmer              63.08 304  ex      x        22 18 27.4
AJM                                 AMb     AMB      22 18 27.4
      comp=Z,14nm,0.3s,mb5.3
WMQ   Urumqi             63.12 327  eP      P        22 18 37.5 +1.5
WMQ                                 PCP     PcP      22 19 13.6 +1.7
WMQ                                 AP      pP       22 19 15.5 +2.3
WMQ                                 XP      sP       22 19 33.1 +2.9
WMQ                                 AMB     AMB
      comp=Z,20nm,0.8s,mb5.0
WMQ                                 AMB     AMB
      comp=Z,140nm,5.0s
MOY   Mondy              63.12 340  eP      P        22 18 36.5 +0.6
MOY                                 pmax    pmax
      comp=Z,20nm,2.2s,mb4.6
SDNR  Sundarnagar        63.34 310  eP      P        22 18 37.4 -0.3
MA2   Magadan            67.82  11  P       P        22 19 06.6 +0.8
MA2                                 pmax    pmax
      comp=Z,10.0nm,0.8s,mb4.6
MA2   Magadan            67.82  11  P       P        22 19 06.6 +0.8
      comp=Z,9.8nm,0.8s,mb4.6
KSH   Kashi              67.83 317  eP      P        22 19 07.1 +0.8
KSH                                 ePCP    PcP      22 19 33.5 +1.9
KSH                                 eAP     pP       22 19 45.2 +1.3
KSH                                 eXP     sP       22 20 03.1 +2.2
KSH                                 ePP     PP       22 21 40.0 +0.9
KSH                                 eSCP             22 23 19.0
KSH                                 ePCS             22 23 35.0
KSH                                 eS      S        22 27 48.1 -2.0
KSH                                 eSCS    ScS      22 28 46.2 +0.2
KSH                                 eXS              22 28 57.0
KSH                                 eSS     SS       22 32 16.4 +0.3
KSH                                 AMB     AMB
      comp=Z,1µm,9.6s
KSH                                 LR      LR
      comp=N,250nm,4.3s
KSH                                 LR      LR
      comp=E,310nm,4.3s
MKAR  Makanchi Array     67.95 327  P       P        22 19 07.2 +0.3
MKAR                                S       S        22 27 52.3 +0.9
MKAR                                pmax    pmax
      comp=Z,51nm,0.5s
MKAR                                smax
      comp=E,1.0nm,1.0s
MKAR                                MLR     MLR
      comp=Z,18nm,18.5s
MKAR  Makanchi Array     67.95 327  P       P        22 19 07.2 +0.4
      comp=Z,51nm,0.5s,mb5.5,baz=114,slow=8.4,SNR=699
MKAR                                S       S        22 27 52.3 +0.9
      comp=Z,0.9nm,1.0s,baz=122,slow=11,SNR=4.3
MKAR                                LR      LR       22 51 56.0
      comp=Z,18nm,18.5s,baz=266,slow=38
MKAR  Makanchi Array     67.95 327  P       P        22 19 07.2 +0.4
MKAR                                S       S        22 27 52.3 +0.9
MKAR                                LR      LR       22 51 56.0
YAK   Yakutsk            68.29 360  eP      P        22 19 08.6 -0.1
YAK                                 pmax    pmax
      comp=Z,62nm,0.6s,mb5.5
YAK   Yakutsk            68.29 360  eP      P        22 19 08.6 -0.1
      comp=Z,62nm,0.6s,mb5.5
KZA   Kyzart             69.57 319  P       P        22 19 18.6 +1.7
      SNR=44
TKM2  Tokmak 2           69.77 320  P       P        22 19 18.9 +0.8
      SNR=30
KBK   Karagaybulak       70.05 320  P       P        22 19 20.9 +1.1
      SNR=7.1
UCH   Uchtor             70.12 319  P       P        22 19 21.8 +1.6
      SNR=38
AAK   Ala-Archa          70.33 320  P       P        22 19 22.7 +1.3
      SNR=15
CHMS  Chumysh            70.34 320  P       P        22 19 22.0 +0.5
      SNR=9.4
AML   Almayashu          70.61 319  P       P        22 19 24.6 +1.5
      SNR=8.5
USP   Ospenovka          70.64 320  P       P        22 19 23.9 +0.6
      SNR=31
EKS2  Erkin-Say          70.81 319  P       P        22 19 25.3 +1.0
      SNR=37
SEY   Seymchan           71.23  10  eP      P        22 19 27.3 +0.9
SEY                                 e                22 22 07.3
SEY                                 ePPP    PPP      22 23 57.2 +7.2
SEY                                 eS      S        22 28 28.0 -1.3
SEY                                                  22 29 08.3
SEY                                 eSS     SS       22 33 16.3 +7.8
SEY                                 pmax    pmax
      comp=Z,10.0nm,0.8s,mb4.6
SEY                                 pmax    pmax
      comp=E,10.0nm,2.0s
SEY                                 smax
      comp=N,60nm,19.4s
SEY                                 smax
      comp=E,20nm,14.6s
ZAL   Zalesovo           71.24 334  P       P        22 19 25.7 -1.0
ZAL                                 pmax    pmax
      comp=Z,8.0nm,0.8s
ZAL   Zalesovo           71.24 334  P       P        22 19 25.7 -1.0
      comp=Z,8.2nm,0.8s,mb4.5,baz=342,slow=5.0,SNR=43
ZAL   Zalesovo           71.24 334  P       P        22 19 25.7 -1.0
NVS   Novosibirsk        72.53 334⇑iP       P        22 19 32.9 -1.3
NVS                                 e       pP       22 20 09.5 -2.8
NVS                                 eS      S        22 28 42.1 -2.1
NVS                                 pmax    pmax
      comp=Z,13nm,0.9s,mb4.7
NVS                                 pmax    pmax
      comp=N,7.0nm,0.8s
NVS                                 pmax    pmax
      comp=E,6.0nm,0.7s
NVS                                 smax
      comp=N,13nm,1.7s
VNDA  Vanda              72.94 173  P       P        22 19 36.5 +0.2
VNDA                                pmax    pmax
      comp=Z,5.0nm,0.6s
VNDA                                MLR     MLR
      comp=Z,44nm,21.3s
VNDA  Vanda              72.94 173  P       P        22 19 36.5 +0.2
      comp=Z,4.8nm,0.6s,mb4.4,baz=320,slow=6.4,SNR=34
VNDA                                LR      LR       22 50 13.1
      comp=Z,44nm,21.3s,baz=100,slow=34
VNDA  Vanda              72.94 173  eP      P        22 19 36.2 -0.1
      comp=Z,6.1nm,0.8s,mb4.4
SBA   Scott Base         73.82 172  eP      P        22 19 42.4 +1.0
SBA                                 e                22 19 52.4
SBA                                 pmax    pmax
      comp=Z,3.0nm,0.3s,mb4.5
SBA   Scott Base         73.82 172  eP      P        22 19 42.4 +1.0
      comp=Z,3.1nm,0.3s,mb4.5
SBA                                 e                22 19 52.4
WBK   Wadi Bani Khal     75.46 295  P       P        22 19 52.9 +1.2
      SNR=6.6
MAW   Mawson             75.56 201  P       P        22 19 51.1 -0.3
MAW                                 pmax    pmax
      comp=Z,8.0nm,0.8s
MAW   Mawson             75.56 201  P       P        22 19 51.1 -0.4
      comp=Z,7.5nm,0.8s,mb4.4,baz=142,slow=4.3,SNR=6.0
JMDO  Jabal Madar        76.18 295  P       P        22 19 57.3 +1.5
      SNR=6.0
SMDO  Samad              76.39 295  P       P        22 19 58.0 +1.1
      SNR=8.0
BIDO  Bidbid             76.42 296  P       P        22 19 58.1 +1.0
      SNR=11
BSY   Bisya              77.08 295  P       P        22 20 01.1 +0.2
      SNR=7.3
BVAR  Borovoye Array     77.78 328  P       P        22 20 04.1  0.0
      comp=Z,14nm,0.9s,mb4.6,baz=135,slow=6.3,SNR=46
BRVK  Borovoye           77.85 328  P       P        22 19 56.7 -7.8
      comp=Z,0.3nm,0.8s
TIXI  Tiksi              77.96 360⇓eP       P        22 20 04.3 -0.4
TIXI                                pmax    pmax
      comp=Z,13nm,0.8s,mb4.6
CHKZ  Chkalovo           77.97 328  eP      P        22 20 04.8 -0.3
CHKZ                                e                22 20 16.8
CHKZ                                pmax    pmax
      comp=Z,13nm,0.9s,mb4.6
CHKZ  Chkalovo           77.97 328  eP      P        22 20 04.8 -0.3
      comp=Z,12nm,0.9s,mb4.5
CHKZ                                e                22 20 16.8
WHFO  Wadi Hawf          79.28 290  P       P        22 20 12.8 -0.1
      SNR=8.4
ABTO  Aybut              79.62 289  P       P        22 20 15.3 +0.6
      SNR=7.2
OPO   Ambohidratompo     81.47 252  P       P        22 20 24.8 +0.3
      comp=Z,2.8nm,0.7s,mb4.0,baz=14,slow=4.4,SNR=6.1
QSPA  South Pole Qui     83.51 180⇓iP       P        22 20 34.8 +1.1
      comp=Z,23nm,0.2s,mb5.6
SYO   Syowa Base         84.27 201 ⇓P       P        22 20 36.9 -0.8
SYO   Syowa Base         84.27 201 ⇓PcP     PcP      22 20 41.8 +0.4
HASS  Wahat al Ahsa'     84.29 296  P       P        22 20 39.1 +0.3
SVE   Sverdlovsk         84.47 329  eP      P        22 20 39.5 +0.6
SVE                                 e       pP       22 21 18.3 +0.2
SVE                                 pmax    pmax
      comp=Z,28nm,1.3s,mb4.8
ARU   Arti               85.42 328⇓iP       P        22 20 43.2 -0.4
ARU                                 e                22 24 05.2
ARU                                 eSS     SS       22 36 38.8 -2.7
ARU                                 pmax    pmax
      comp=Z,12nm,0.8s,mb4.7
ARU   Arti               85.42 328  eP      P        22 20 42.8 -0.8
      comp=Z,14nm,0.7s,mb4.8
KAMS  Al Khamasin        88.23 291  P       P        22 20 58.5 +0.5
TATS  Tathlith           89.16 290  P       P        22 21 04.0 +1.6
ARSS  Ar Rass            90.16 296  P       P        22 21 07.6 +0.6
HILS  Ha'il              91.62 297  P       P        22 21 14.6 +0.8
ILAR  Eielson Array      92.73  25  P       P        22 21 17.1 -0.8
      comp=Z,1.4nm,0.7s,mb4.2,baz=272,slow=4.3,SNR=16
KMBO  Kilima Mbogo       92.91 269  P       P        22 21 20.8 +0.8
KMBO                                pmax    pmax
      comp=Z,2.0nm,1.0s
KMBO  Kilima Mbogo       92.91 269  P       P        22 21 20.8 +0.7
      comp=Z,2.1nm,1.0s,mb4.2,baz=39,slow=14,SNR=3.7
SNAA  Sanae              96.25 193  eP      P        22 21 34.7 +0.9
SNAA                                pmax    pmax
      comp=Z,3.0nm,0.9s
SNAA  Sanae              96.25 193  eP      P        22 21 34.7 +0.9
      comp=Z,3.4nm,0.9s,mb4.7
ASF   Jabal al Asfar     96.28 302  P       P        22 21 34.4 -0.5
      comp=Z,0.8nm,0.3s,mb4.5,baz=84,slow=2.3,SNR=4.0
OBN   Obninsk            97.40 325  eP      P        22 21 38.5 -0.9
OBN                                 pmax    pmax
      comp=Z,4.0nm,0.6s,mb4.9
BRTR  Keskin Array B     99.22 309  P       P        22 21 47.8 -0.3
BRTR                                pmax    pmax
      comp=Z,1.0nm,0.8s
BRTR  Keskin Array B     99.22 309  P       P        22 21 47.8 -0.4
      comp=Z,0.7nm,0.8s,mb4.1,baz=117,slow=2.8,SNR=3.8
LSZ   Lusaka             99.91 253  P       P        22 21 51.7  0.0
LSZ                                 pmax    pmax
      comp=Z,6.0nm,1.3s,mb4.9
LSZ   Lusaka             99.91 253  P       P        22 21 51.7 -0.1
      comp=Z,5.8nm,1.3s,mb4.8
ARCES ARCESS Array B    101.19 340  P       P        22 21 55.6 -0.7
ARCES                               pmax    pmax
      comp=Z,1.0nm,0.5s
ARCES                               pmax    pmax
      comp=Z,1.0nm,0.6s
ARCES ARCESS Array B    101.19 340  P       P        22 21 55.6 -0.7
      comp=Z,1.4nm,0.5s,baz=76,slow=5.0,SNR=11
ARCES                               PKiKP            22 26 20.5
      comp=Z,0.6nm,0.6s,baz=98,slow=1.8,SNR=5.9
KAF   Kangasniemi       102.22 332  ep      Pdif     22 21 59.3 -1.7
FINES FINESS Array B    102.44 332  P       Pdif     22 22 00.5 -1.4
FINES                               i                22 26 22.4
FINES                               pmax    pmax
      comp=Z,1.0nm,0.6s
FINES                               pmax    pmax
      comp=Z,1.0nm,0.6s
FINES FINESS Array B    102.44 332  P       Pdif     22 22 00.5 -1.4
      comp=Z,0.6nm,0.6s,baz=63,slow=4.3,SNR=6.5
FINES                               PKiKP            22 26 22.4
      comp=Z,0.9nm,0.6s,baz=53,slow=3.1,SNR=6.4
FINES FINESS Array B    102.44 332  P       Pdif     22 22 00.5 -1.4
YKA   Yellowknife Ar    107.14  26  PKiKP            22 26 31.2
      comp=Z,0.6nm,0.5s,baz=289,slow=2.5,SNR=4.4
YKA   Yellowknife Ar    107.14  26  PKPdf            22 26 31.2
HFS   Hagfors           108.64 332  P       Pdif     22 22 28.5 -0.7
HFS                                 pmax    pmax
      comp=Z,1.0nm,0.4s
HFS   Hagfors           108.64 332  Pdiff   Pdif     22 22 28.5 -0.7
      comp=Z,0.6nm,0.4s,baz=127,slow=7.4,SNR=8.1
GERES GERESS Array B    112.21 320 i PKIKP  PKPdf    22 26 41.4 +1.8
GERES                                                22 27 26.4
GERES                               pmax    pmax
      comp=Z,1.0nm,0.5s
GERES GERESS Array B    112.21 320  PKiKP            22 26 41.4
      comp=Z,0.7nm,0.5s,baz=116,slow=1.2,SNR=12
GERES                               PP      PP       22 27 26.4 -4.6
      comp=Z,0.3nm,0.6s,baz=68,slow=7.2,SNR=3.6
DAVOX Davos             115.28 319  PKP     PKPdf    22 26 47.7 +1.9
      comp=Z,1.9nm,0.3s,baz=160,slow=4.1,SNR=9.6
HINF  Hinteralfeld      116.86 321  ePKIKP  PKPdf    22 26 49.4 +0.6
      comp=Z,2.2nm,0.5s
HAU   Haudompre         117.11 321  ePKIKP  PKPdf    22 26 50.1 +0.9
PGF   Pioggiola         117.19 315  ePKIKP  PKPdf    22 26 50.2 +0.7
GIVF  Givet             117.19 324  ePKIKP  PKPdf    22 26 50.6 +1.2
MEZF  Maizieres J'vi    117.71 322  ePKIKP  PKPdf    22 26 51.8 +1.4
LPG   La Plagne         117.76 319  ePKIKP  PKPdf    22 26 52.1 +1.5
      comp=Z,6.7nm,0.8s
LPG   La Plagne         117.76 319  eP      Pdif     22 23 13.2 +3.4
LPG                                 e                22 26 52.1
LPL   La Plagne         117.77 319  ePKIKP  PKPdf    22 26 51.9 +1.3
      comp=Z,2.7nm,0.4s
LPL   La Plagne         117.77 319  eP      Pdif     22 23 12.9 +3.1
LPL                                 e                22 26 51.9
CABF  La Chapelle       117.79 320  ePKIKP  PKPdf    22 26 51.9 +1.3
      comp=Z,6.9nm,0.6s
SBF   Sospel            117.86 317  ePKIKP  PKPdf    22 26 51.1 +0.3
MBDF  Montbardon        118.02 318  ePKIKP  PKPdf    22 26 51.4 +0.3
FRF   La Foret Royal    118.50 316  ePKIKP  PKPdf    22 26 52.9 +0.8
ORIF  Oris-en-Rattie    118.55 318  ePKIKP  PKPdf    22 26 53.1 +1.0
ORIF  Oris-en-Rattie    118.55 318  eP      Pdif     22 23 12.5 -0.7
      comp=Z,13nm,1.1s
ORIF                                eR
      comp=Z,132nm,18.2s
EKA   Eskdalemuir Ar    118.84 332  PKIKP   PKPdf    22 26 54.7 +2.3
EKA                                 pmax    pmax
      comp=Z,1.0nm,0.5s
EKA   Eskdalemuir Ar    118.84 332  PKP     PKPdf    22 26 54.6 +2.2
      comp=Z,0.7nm,0.5s,baz=35,slow=4.2,SNR=4.1
LOR   Lormes            118.94 321  ePKIKP  PKPdf    22 26 54.0 +1.1
      comp=Z,4.1nm,0.9s
SMRF  Simiane la Rot    119.09 317  ePKIKP  PKPdf    22 26 54.8 +1.6
      comp=Z,7.5nm,0.8s
SMF   Signal de Mont    119.21 321  ePKIKP  PKPdf    22 26 54.0 +0.6
      comp=Z,1.4nm,0.3s
SSF   Saint Saulge      119.25 321  ePKIKP  PKPdf    22 26 54.7 +1.3
      comp=Z,2.9nm,0.5s
AVF   Avril sur Loir    119.45 321  ePKIKP  PKPdf    22 26 54.5 +0.7
      comp=Z,1.3nm,0.3s
BGF   Bois d'Agland     119.87 321  ePKIKP  PKPdf    22 26 55.9 +1.3
      comp=Z,4.7nm,0.3s
TCF   Toulx Ste Croi    120.38 321  ePKIKP  PKPdf    22 26 56.9 +1.2
FRB   Frobisher Bay     121.23  10  PKIKP   PKPdf    22 26 58.3 +1.4
FRB                                 pmax    pmax
      comp=Z,2.0nm,0.4s
FRB   Frobisher Bay     121.23  10  PKP     PKPdf    22 26 58.3 +1.4
      comp=Z,2.0nm,0.4s,baz=19,slow=4.2,SNR=7.3
MTLF  Montolieu         121.58 318  ePKIKP  PKPdf    22 26 59.1 +1.0
MFF   Saint Martin d    121.71 322  ePKIKP  PKPdf    22 26 59.2 +1.0
      comp=Z,5.8nm,0.5s
SGMF  Saint Gilles      122.34 325  ePKIKP  PKPdf    22 27 00.2 +0.8
      comp=Z,4.6nm,0.5s
EPF   Esparros          122.96 318  ePKIKP  PKPdf    22 27 01.8 +1.1
TXAR  Lajitas Array     124.39  59  PKP     PKPdf    22 27 05.7 +1.8
      comp=Z,0.2nm,0.5s,baz=207,slow=2.8,SNR=4.1
ESDC  Sonseca Array     127.33 316  PP      PP       22 29 12.3 -2.6
      comp=Z,1.7nm,0.8s,baz=51,slow=7.9,SNR=6.5
PLCA  Paso Flores       129.27 160  SKPbc            22 30 22.9
      comp=Z,2.7nm,0.9s,baz=208,slow=11,SNR=2.8
SCHQ  Schefferville     129.84  13  PKP     PKPdf    22 27 15.9 +2.2
      comp=Z,1.3nm,0.5s,baz=206,slow=2.1,SNR=7.8
SCHQ                                SKPbc            22 30 23.1
      comp=Z,2.3nm,0.7s,baz=44,slow=1.2,SNR=4.9
EVO   Evora             130.65 317  ePKIKP  PKPdf    22 27 16.6 +0.9
      comp=Z,13nm,1.1s
DBIC  Dimbokro          135.47 273  PKIKP   PKPdf    22 27 27.8 +2.5
DBIC                                pmax    pmax
      comp=Z,3.0nm,0.6s
DBIC                                pmax    pmax
      comp=E,3.0nm,0.7s
DBIC  Dimbokro          135.47 273  PKP     PKPdf    22 27 27.8 +2.4
      comp=E,2.5nm,0.6s,baz=241,slow=3.3,SNR=7.4
DBIC                                SKPbc            22 30 42.6
      comp=E,2.7nm,0.7s,baz=11,slow=6.3,SNR=5.1
DBIC  Dimbokro          135.47 273  P       PKPdf    22 27 28.2 +2.8
CPUP  Villa Florida     146.57 167  PKIKP   PKPdf    22 27 46.5 +1.8
CPUP                                                 22 27 48.9
CPUP                                pmax    pmax
      comp=Z,3.0nm,0.6s
CPUP                                pmax    pmax
      comp=Z,3.0nm,0.6s
CPUP  Villa Florida     146.57 167  PKP     PKPdf    22 27 46.5 +1.8
      comp=Z,3.2nm,0.6s,baz=205,slow=2.8,SNR=12
CPUP                                PKPbc   PKPbc    22 27 48.9 +2.7
      comp=Z,3.2nm,0.6s,baz=209,slow=1.4,SNR=13
CPUP  Villa Florida     146.57 167  ePKPdf  PKPdf    22 27 45.5 +0.8
CPUP                                eSKP             22 31 12.4
LPAZ  La Paz            150.95 141  PKIKP   PKPdf    22 28 01.8  +10
LPAZ                                pmax    pmax
      comp=Z,6.0nm,0.4s
LPAZ  La Paz            150.95 141  PKPbc   PKPdf    22 28 01.8  +10
      comp=Z,6.3nm,0.4s,baz=43,slow=2.7,SNR=73
LPAZ  La Paz            150.95 141  ePKPbc  PKPdf    22 28 01.2 +9.4
```

IDC ***11*** *22:17:44.0±1.3, 61.80N×26.78W, mb3.7/11, mb1 3.9/12, mb1mx3.8/27, mbtmp3.7/12, ML3.5/1, MS3.3/14, Ms1 3.3/14, ms1mx3.2/28, Error ellipse: s-maj=43.1km s-min=16.3km az=6.0*

NEIC ***11*** *22:17:45.6±0.3, 61.78N×26.77W, h10km, mb4.3/28, Error ellipse: s-maj=11.2km s-min=4.9km az=30.0*

CSEM ***11*** *22:17:45.4±0.1, 61.74N×26.89W, h25km, mb4.3/18, Ms3.0, Error ellipse: s-maj=7.0km s-min=2.7km az=38.0*

ISC 11 22:17:43.9±0.4**, 61.77N**±0.08×**26.8W**±0.1**, h10km, n78, σ0.95**/69**, mb4.1**/32**, MS3.3**/10**, Iceland region**

```
Code  Station Name          Δ°  AZ°   Phase ID           Time       Res
                                      Op      ISC       h  m  s     ISC
SUMG  Summit             11.71 343  eP      P        22 20 29.6 -4.3
      8.0nm,1.1s
JMIC  Jan Mayen          11.74  30  LR      LR       22 23 48.4
      comp=Z,56nm,21.0s,baz=113,slow=31
EKA   Eskdalemuir Ar     13.88 107  Pn      P        22 21 02.5 -0.2
      0.1nm,0.3s,baz=320,slow=11,SNR=2.9
EKA   Eskdalemuir Ar     13.88 107  Pn      P        22 21 02.5 -0.2
NOA   NORSAR Array B     18.06  75  LR      LR       22 27 45.4
      comp=Z,60nm,21.7s,baz=295,slow=33
ROSF  Rostrenen          18.91 125  eP      P        22 22 06.4 -0.3
      36nm,1.3s
FRB   Frobisher Bay      18.95 294  LR      LR       22 28 42.8
      comp=Z,150nm,18.8s,baz=330,slow=35
SGMF  Saint Gilles       19.25 124  eP      P        22 22 10.8  0.0
      68nm,1.5s
QUIF  Quistinic          19.29 125  eP      P        22 22 11.1 -0.1
HFS   Hagfors            19.52  77  LR      LR       22 28 41.6
      comp=Z,74nm,19.1s,baz=159,slow=34
FLN   La Foliniere       19.69 119  eP      P        22 22 15.1 -0.7
      29nm,1.3s
FLN                                 eR
      133nm,18.2s
GRR   Gorron             19.83 121  eP      P        22 22 16.8 -0.6
      29nm,1.2s
LDF   La Druitiere       19.97 119  eP      P        22 22 19.0 +0.1
      40nm,1.4s
BAIF  Baives             20.74 110  eP      P        22 22 26.6 -0.3
      26nm,1.4s
MFF   Saint Martin d     21.55 123  eP      P        22 22 34.5 -0.7
      85nm,1.8s,mb4.6
SCHQ  Schefferville      21.83 270  LR      LR       22 30 27.0
      comp=Z,45nm,18.6s,MS2.9,baz=52,slow=35
MEZF  Maizieres J'vi     22.26 112  eP      P        22 22 41.2 -1.1
LOR   Lormes             22.69 116  eP      P        22 22 46.0 -0.3
LOR                                 eR
      154nm,18.2s
SSF   Saint Saulge       22.70 116  eP      P        22 22 45.2 -1.3
KEV   Kevo               22.72  47  eP      P        22 22 44.8 -1.7
      23nm,1.1s,mb4.5
TCF   Toulx Ste Croi     22.77 120  eP      P        22 22 46.9 -0.2
      15nm,1.1s,mb4.0
BGF   Bois d'Agland      22.82 118  eP      P        22 22 48.0 +0.4
AVF   Avril sur Loir     22.84 117  eP      P        22 22 48.0 +0.1
      9.1nm,1.0s,mb3.8
SMF   Signal de Mont     23.17 117  eP      P        22 22 51.5 +0.5
      19nm,1.2s,mb4.1
HAU   Haudompre          23.21 111  eP      P        22 22 51.3 -0.1
      29nm,1.3s,mb4.2
HAU                                 eR
      85nm,20.3s
LFF   La Frestale        23.27 124  eP      P        22 22 52.4 +0.3
      22nm,1.2s,mb4.2
RJF   Les Rejaudoux      23.28 122  eP      P        22 22 51.8 -0.4
RJF                                 eR
      75nm,18.5s
CDF   Champ du Feu       23.32 109  eP      P        22 22 52.9 +0.4
RUE   Ruedersdorf        23.54  95  P       P        22 22 56.7 +2.0
      22nm,1.0s,mb4.5
RUE   Ruedersdorf        23.54  95  P       P        22 22 56.7 +2.1
      22nm,1.0s,mb4.5
MOX   Moxa               23.73 100  eP      P        22 22 58.3 +1.8
MOX                                 pmax    pmax
      comp=Z,21nm,2.0s,mb4.2
MOX   Moxa               23.73 100 i P      P        22 22 58.3 +1.8
      comp=Z,logA/T=1.0,mb4.2
MOX   Moxa               23.73 100  eP      P        22 22 58.3 +1.8
      comp=Z,21nm,2.0s,mb4.2
CAF   Calviac            23.81 122  eP      P        22 22 57.7 +0.4
      comp=Z,36nm,1.5s,mb4.3
STU   Stuttgart          23.93 106  eP      P        22 22 59.2 +0.8
      comp=Z,25nm,1.6s,mb4.4
STU   Stuttgart          23.93 106  eP      P        22 22 59.2 +0.8
      comp=Z,25nm,1.6s,mb4.4
SJPF  Ste Jean           24.07 129  eP      P        22 22 58.9 -1.0
      comp=Z,32nm,1.3s,mb4.3
ETSF  Etsaut             24.50 128  eP      P        22 23 04.5 +0.4
FINES FINESS Array B     24.59  67  P       P        22 23 05.0 +0.2
      comp=Z,1.3nm,0.8s,mb3.5,baz=259,slow=14,SNR=3.1
FINES                               LR      LR       22 32 02.7
      comp=Z,29nm,19.2s,MS2.8,baz=351,slow=35
FINES FINESS Array B     24.59  67  P       P        22 23 05.0 +0.2
BRG   Berggiesshubel     24.67  97  P       P        22 23 07.8 +2.2
      comp=Z,4.8nm,1.1s,mb3.9
BRG                                 e                22 23 24.5
EPF   Esparros           24.73 127  eP      P        22 23 05.9 -0.3
      comp=Z,27nm,1.4s,mb4.3
VIVF  Saint-Julien-l     24.95 118  eP      P        22 23 08.1 -0.2
LASF  Ste Croix          25.24 120  eP      P        22 23 11.8 +0.7
KHC   Kasperske Hory     25.69 101  eP      P        22 23 16.5 +1.2
DAVOX Davos              25.71 109  LR      LR       22 32 04.3
      comp=Z,28nm,20.4s,MS2.8,baz=266,slow=34
GERES GERESS Array B     25.95 101  P       P        22 23 18.1 +0.3
      comp=Z,0.2nm,0.6s,baz=311,slow=12,SNR=4.2
GERES                               LR      LR       22 33 41.2
      comp=Z,59nm,19.7s,MS3.1,baz=144,slow=37
EVO   Evora              26.01 145  eP      P        22 23 16.7 -1.7
      comp=Z,18nm,1.2s,mb4.2
EVO                                 eR
      comp=Z,49nm,17.5s
SBF   Sospel             26.92 116  eP      P        22 23 27.6 +0.9
      comp=Z,63nm,1.1s,mb4.8
MORC  Moravsky Berou     27.11  96  eP      P        22 23 28.7 +0.4
      comp=Z,3.3nm,1.1s,mb3.8
MORC  Moravsky Berou     27.11  96  eP      P        22 23 28.7 +0.3
      comp=Z,3.3nm,1.1s,mb3.8
AKASG Malin Array Be     32.03  84  P       P        22 24 10.0 -2.3
      comp=Z,0.2nm,0.3s,mb3.5,baz=311,slow=8.7,SNR=6.7
AKASG Malin Array Be     32.03  84  P       P        22 24 10.0 -2.3
VAE   Valguarnera        35.17 114  LR      LR       22 38 56.2
      comp=Z,92nm,18.1s,MS3.6,baz=93,slow=36
EYMN  Ely                38.00 279  eP      P        22 25 05.3 +1.9
      comp=Z,10.0nm,1.3s,mb4.4
EYMN  Ely                38.00 279  eP      P        22 25 05.3 +2.0
      comp=Z,10.0nm,1.3s,mb4.4
YKA   Yellowknife Ar     38.02 311  P       P        22 25 02.9 -0.5
      comp=Z,0.4nm,0.6s,mb3.3,baz=52,slow=9.1,SNR=5.7
YKA                                 LR      LR       22 39 33.3
      comp=Z,53nm,21.9s,MS3.3,baz=80,slow=34
YKA   Yellowknife Ar     38.02 311  P       P        22 25 02.9 -0.5
ULM   Lac du Bonnet      38.40 285  LR      LR       22 41 14.4
      comp=Z,34nm,18.9s,MS3.2,baz=336,slow=37
DAWY  Dawson             44.77 325  eP      P        22 25 59.1 +0.4
DAWY  Dawson             44.77 325  eP      P        22 25 59.1 +0.5
ILAR  Eielson Array      46.15 329  P       P        22 26 10.0 +0.5
      comp=Z,0.5nm,0.8s,mb3.5,baz=32,slow=6.4,SNR=5.2
GNI   Garni              47.14  83  eP      P        22 26 19.8 +2.0
      comp=Z,12nm,1.5s,mb4.6
GNI   Garni              47.14  83  eP      P        22 26 19.8 +2.0
      comp=Z,12nm,1.5s,mb4.6
CHKZ  Chkalovo           47.90  53  eP      P        22 26 22.1 -1.4
      comp=Z,4.8nm,1.2s,mb4.4
CHKZ  Chkalovo           47.90  53  eP      P        22 26 22.1 -1.4
      comp=Z,4.8nm,1.2s,mb4.4
BVAR  Borovoye Array     48.32  53  P       P        22 26 27.3 +0.6
      comp=Z,0.7nm,0.6s,mb3.9,baz=288,slow=9.4,SNR=6.1
PDAR  Pinedale Array     50.24 288  P       P        22 26 41.6 -0.1
      comp=Z,1.7nm,0.9s,mb4.1,baz=48,slow=7.4,SNR=13
PDAR                                LR      LR       22 46 58.5
      comp=Z,44nm,19.1s,MS3.5,baz=209,slow=35
WMOK  Wichita Mounta     51.66 273  eP      P        22 26 53.0 +0.4
      comp=Z,1.9nm,0.8s,mb4.1
WMOK  Wichita Mounta     51.66 273  eP      P        22 26 53.0 +0.4
      comp=Z,1.9nm,0.8s,mb4.1
```

LAZ	Ladron	55.88	280	*e*P	P	22 27 22.7	-0.9
LAZ	Ladron	55.88	280	*e*P	P	22 27 22.7	-1.0
NVAR	Mina Array Bea	57.66	292	LR	LR	22 52 11.0	
	comp=Z,74nm,20.4s,MS3.8,baz=90,slow=36						
MKAR	Makanchi Array	57.85	50	P	P	22 27 36.5	-1.1
	comp=Z,1.5nm,1.1s,mb4.0,baz=333,slow=2.7,SNR=5.3						
TXAR	Lajitas Array	58.44	274	P	P	22 27 41.5	-0.4
	comp=Z,0.5nm,0.9s,mb3.5,baz=45,slow=7.1,SNR=4.0						
TXAR				LR	LR	22 52 42.5	
	comp=Z,55nm,18.3s,MS3.7,baz=350,slow=36						
SONM	Songino Array	64.49	33	P	P	22 28 20.9	-1.3
	comp=Z,1.5nm,1.1s,mb4.0,baz=338,slow=6.7,SNR=8.2						
ULN	Ulaanbaatar	64.63	32	*e*P	P	22 28 22.7	-0.5
	comp=Z,6.6nm,1.4s,mb4.5						
CMAR	Chiang Mai Arr	89.25	50	P	P	22 30 42.8	+1.6
	comp=Z,0.7nm,0.9s,mb4.0,baz=310,slow=5.7,SNR=4.9						

IDC 11 22:32:05.5±4.7,**1.61N**×**97.68E,mb3.4**/3,**mb1 3.5**/3,**mb1mx3.3**/17,**mbtmp3.4**/3,**Error ellipse: s-maj=180.5km s-min=30.0km az=58.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.84	123	P	P	22 39 57.4	-1.8
	0.3nm,0.6s,baz=303,slow=9.1,SNR=3.7						
SONM	Songino Array	46.66	8	P	P	22 40 36.3	-1.3
	0.3nm,0.7s,baz=190,slow=7.5,SNR=4.0						
MKAR	Makanchi Array	46.97	346	P	P	22 40 37.8	-2.3
	0.4nm,0.7s,baz=166,slow=8.3,SNR=5.1						

WEL 11 22:47:54.4±0.7,**37.48S**×**176.25E,h288**^{km}±14^{km},**ML3.6**/6,**Error ellipse: s-maj=30.2km s-min=23.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWZ	Matawai	1.33	131	PN	P	22 48 35.6	+0.1
MWZ				SN	S	22 49 06.9	-0.8
MXZ	Matakaoa Point	1.64	94	PN	P	22 48 37.1	-0.5
MXZ				SN	S	22 49 11.3	-0.1
BKZ	Black Stump Fm	1.70	174	PN	P	22 48 37.8	-0.3
BKZ				SN	S	22 49 11.1	-1.0
TUVZ	Tukino	1.85	194	PN	P	22 48 39.4	+0.3
TUVZ				SN	S	22 49 15.2	+1.2
KNZ	Kokohu	1.91	144	PN	P	22 48 40.3	+0.7
WNVZ	Wahianoa	1.92	195	PN	P	22 48 39.6	-0.1
WAZ	Wanganui	2.48	203	PN	P	22 48 44.1	-0.6
WAZ				SN	S	22 49 24.0	+0.2
KIW	Kapiti Island	3.54	197	PN	P	22 48 53.3	-2.1
KIW				SN	S	22 49 39.9	-3.0
CAW	Cannon Point	3.74	194	PN	P	22 48 55.3	-2.3
CAW				SN	S	22 49 44.8	-2.1
TCW	Tory Channel	4.03	202	PN	P	22 48 58.5	-2.3
TUWZ	Tuamarina	4.33	204	PN	P	22 49 01.5	-2.7
TUWZ				SN	S	22 49 55.6	-3.3
NNZ	Nelson	4.35	210	PN	P	22 49 01.3	-3.1
NNZ				SN	S	22 49 55.5	-3.6
QRZ	Quartz Range	4.42	220	PN	P	22 49 01.9	-3.4
THZ	Tophouse	5.00	210	PN	P	22 49 09.0	-3.0
LTZ	Lake Taylor	6.11	209	PN	P	22 49 21.4	-3.9

*IDC **11** 23:22:34.9±1.2, 19.32N×107.97W, mb4.0/13, mb1 4.2/15, mb1mx4.1/23, mbtmp4.0/15, ML3.9/2, MS3.7/13, Ms1 3.7/13, ms1mx3.5/29, Error ellipse: s-maj=41.3km s-min=14.7km az=64.0*

*MEX **11** 23:22:38.1±0.3, 18.93N×107.86W, h10^{km}, MD4.2*

*NEIC **11** 23:22:42.9±1.4, 19.40N×107.83W, h59^{km}±11^{km}, mb4.2/31, MD4.2(MEX), Error ellipse: s-maj=15.4km s-min=5.9km az=47.0*

ISC 11 23:22:34.3±0.6,**19.19N**±0.06×**107.96W**±0.05,**h10**^{km},**n79**,σ**1**^{s}**18**/76,**mb4.2**/34,**MS3.7**/11,**1C,Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	2.77	83	⇑*i*P	Pn	23 23 19.0	-0.5
CJM				*i* S	Sn	23 23 50.9	-2.4
SFJM	Santa Fe	4.80	74	*i* P	Pn	23 23 50.0	+1.5
ZAIG	Zacatecas	6.16	54	*i* P	Pn	23 24 08.6	+0.9
ZAIG				*i* S	Sn	23 25 19.4	+0.4
PPM	Popocatepetl	8.82	89	*e*P	P	23 24 50.0	+5.2
LTX	Lajitas	10.82	20	*e*P	P	23 25 11.1	-1.4
	13nm,1.1s						
TXAR	Lajitas Array	10.82	20	Pn	P	23 25 11.7	-0.8
	0.7nm,0.3s,baz=206,slow=14,SNR=34						
TXAR				LR	LR	23 28 56.7	
	comp=Z,282nm,19.4s,baz=285,slow=36						
MNTX	Cornudas Mount	12.67	10	*e*P	P	23 25 38.0	+0.6
	6.2nm,1.0s						
BNM	Barren Site	14.94	4	*e*P	P	23 26 07.3	-0.1
LAZ	Ladron	15.17	3	*e*P	P	23 26 12.2	+1.9
ANMO	Albuquerque	15.75	5	Pn	P	23 26 18.5	+0.6
	baz=168,slow=16,SNR=2.9						
ANMO				LR	LR	23 32 05.3	
	comp=Z,245nm,19.6s,slow=36						
ANMO	Albuquerque	15.75	5	*e*P	P	23 26 18.4	+0.4
	5.7nm,0.9s						
ANMO				LR	LR	23 32 05.3	
WUAZ	Wupatki	16.54	350	*e*P	P	23 26 28.8	+0.8
	59nm,1.5s						
LDFC	Landfair	17.05	340	*e*P	P	23 26 35.8	+1.4
NEN	Nelson	17.49	341	*e*P	P	23 26 40.6	+0.7
WMOK	Wichita Mounta	17.49	26	*e*P	P	23 26 40.5	+0.4
	8.6nm,1.0s						
SDCO	Great Sand Dun	18.61	6	*e*P	P	23 26 56.5	+2.7
	6.9nm,1.0s						
PV01	Paradox Valley	18.88	359	*e*P	P	23 26 57.9	+0.7
RW3	Ridgway	18.99	1	*e*P	P	23 27 00.8	+2.4
ARUT	Antelope Range	19.14	347	*e*P	P	23 27 01.0	+0.8
PV10	Paradox Valley	19.14	357	*e*P	P	23 26 60.0	-0.2
MVU	Marysvale	19.59	350	*e*P	P	23 27 04.5	-0.9
	4.1nm,0.9s						
MSU	Marysvale	19.60	350	*e*P	P	23 27 05.2	-0.3
SRU	San Rafael	19.97	354	*e*P	P	23 27 07.6	-2.1
TRCR	Troy Canyon	20.21	342	*e*P	P	23 27 11.3	-0.8
TPH	Tonopah	20.47	339	P	P	23 27 13.8	-1.1
	12nm,1.0s						
ISCO	Idaho Springs	20.64	5	*e*P	P	23 27 16.7	+0.1
	6.2nm,0.9s						
OMM	Old Mammoth Mi	20.73	335	*e*P	P	23 27 17.8	+0.2
MNV	Mina	21.12	337	*e*P	P	23 27 20.7	-0.9
	13nm,1.1s,mb4.2						
NVAR	Mina Array Bea	21.17	337	P	P	23 27 20.6	-1.6
	2.7nm,0.9s,mb3.6,baz=161,slow=14,SNR=11						
NVAR				LR	LR	23 34 37.4	
	comp=Z,233nm,21.8s,MS3.5,baz=165,slow=34						
DAU	Daniels Canyon	21.34	353	*e*P	P	23 27 23.8	0.0
CMB	Columbia Colle	21.67	333	*e*P	P	23 27 25.1	-2.1
	8.1nm,1.1s,mb4.1						
CTU	Camp Tracy	21.67	352	*e*P	P	23 27 27.5	+0.4
TCUT	Toone Canyon	22.05	353	*e*P	P	23 27 31.4	+0.5
KSU1	Kansas State U	22.14	24	P	P	23 27 34.7	+3.0
ELK	Elko	22.37	345	P	P	23 27 32.8	-1.3
	1.3nm,0.8s,mb3.4,baz=165,slow=9.5,SNR=7.4						
ELK	Elko	22.37	345	*e*P	P	23 27 33.8	-0.3
	6.5nm,1.0s,mb4.0						
SPUT	South Promonto	22.38	351	*e*P	P	23 27 34.2	+0.1
HWUT	Hardware Ranch	22.55	353	*e*P	P	23 27 36.9	+1.0
	11nm,1.1s,mb4.2						
PDAR	Pinedale Array	23.54	357	P	P	23 27 45.4	-0.1
	1.4nm,0.6s,mb3.6,baz=153,slow=6.6,SNR=9.7						
RRI2	Red Ridge	24.25	354	*e*P	P	23 27 51.7	-0.7
	32nm,1.3s,mb4.6						
SNOW	Snow King Moun	24.31	355	*e*P	P	23 27 54.2	+1.2
	35nm,1.4s,mb4.6						
TPAW	Teton Pass	24.36	355	*e*P	P	23 27 53.8	+0.4
	21nm,1.4s,mb4.4						
LOHW	Long Hollow	24.45	355	*e*P	P	23 27 55.1	+0.8
	24nm,1.2s,mb4.5						
WVT	Waverly	24.46	42	*e*P	P	23 27 53.8	-0.8
	4.4nm,0.8s,mb3.9						
MOOW	Moose Ponds	24.59	355	*e*P	P	23 27 56.2	+0.4
	4.2nm,0.8s,mb4.0						
IMW	Indian Meadow	24.76	355	*e*P	P	23 27 57.0	-0.3
	9.0nm,1.2s,mb4.2						
WVOR	Wild Horse Val	24.87	341	*e*P	P	23 27 58.1	-0.4
	8.0nm,1.0s,mb4.2						
HLID	Hailey	24.90	349	*e*P	P	23 27 59.0	+0.4
	7.6nm,1.0s,mb4.2						
RSSD	Black Hills	25.07	7	*e*P	P	23 28 01.4	+1.1
	3.4nm,0.9s,mb3.9						
YBH	Yreka Blue Hor	25.74	334	LR	LR	23 37 50.4	
	comp=Z,144nm,20.1s,MS3.5,baz=164,slow=36						
MCMT	McKenzie Canyo	25.89	352	*e*P	P	23 28 10.5	+2.5
CHMT	Chamberlain Mo	27.99	352	*e*P	P	23 28 26.7	-0.5
NEW	Newport	29.94	348	P	P	23 28 44.1	-0.7
	0.7nm,0.4s,mb3.7,baz=134,slow=9.5,SNR=3.7						
NEW				LR	LR	23 41 07.6	
	comp=Z,74nm,18.3s,MS3.4,baz=177,slow=37						
NEW	Newport	29.94	348	P	P	23 28 44.1	-0.7
NEW				LR	LR	23 41 07.6	
EYMN	Ely	31.65	21	*e*P	P	23 28 56.8	-3.1
	7.2nm,1.0s,mb4.5						
EYMN				*e*		23 29 05.0	
ULM	Lac du Bonnet	32.45	15	P	P	23 29 05.2	-1.6
	3.7nm,0.8s,mb4.3,baz=209,slow=9.3,SNR=2.4						
ULM				LR	LR	23 42 47.2	
	comp=Z,44nm,20.1s,MS3.1,baz=205,slow=38						
ULM	Lac du Bonnet	32.45	15	P	P	23 29 05.2	-1.6
ULM				LR	LR	23 42 47.2	
OTAV	Otavalo	34.52	120	*e*P	P	23 29 28.4	+3.2
	11nm,1.3s,mb4.6						
FFC	Flin Flon	35.76	6	*e*P	P	23 29 34.3	-1.0
	7.7nm,1.4s,mb4.4						
FFC				*e*		23 29 42.3	
SDV	Santo Domingo	37.55	101	P	P	23 29 53.3	+2.6
	4.6nm,0.6s,mb4.4,baz=350,slow=4.9,SNR=7.0						
SDV	Santo Domingo	37.55	101	*e*P	P	23 29 54.8	+4.0
	5.0nm,0.6s,mb4.4						
FCC	Fort Churchill	40.79	11	*e*P	P	23 30 15.4	-1.8
	3.8nm,0.7s,mb4.1						
YKA	Yellowknife Ar	43.51	356	P	P	23 30 38.1	-1.3
	0.2nm,0.4s,mb3.2,baz=168,slow=7.7,SNR=6.0						
YKA				LR	LR	23 49 08.6	
	comp=Z,168nm,18.0s,MS4.0,baz=150,slow=37						
SCHQ	Schefferville	47.28	31	P	P	23 31 08.2	-1.4
	1.1nm,0.5s,mb4.0,baz=203,slow=5.0,SNR=5.7						
INK	Inuvik	51.66	348	*e*P	P	23 31 42.8	-0.3
	8.2nm,0.9s,mb4.7						
SAML	Samuel	52.24	118	*e*P	P	23 31 45.9	-2.3
	2.9nm,0.8s,mb4.3						
ILAR	Eielson Array	52.39	340	P	P	23 31 49.2	+0.6
	2.1nm,0.5s,mb4.3,baz=159,slow=5.4,SNR=13						
ILAR				LR	LR	23 55 06.3	
	comp=Z,37nm,18.4s,MS3.5,slow=37						
LPAZ	La Paz	52.70	129	P	P	23 31 52.8	+1.2
	1.6nm,0.9s,mb4.0,baz=318,slow=11,SNR=6.3						
LPAZ				LR	LR	23 51 27.5	
	comp=Z,56nm,20.9s,MS3.6,baz=46,slow=33						
LPAZ	La Paz	52.70	129	*e*P	P	23 31 52.0	+0.4
	2.6nm,0.9s,mb4.2						
PPT	Papeete	54.83	231	LR	LR	23 49 06.5	
	comp=Z,211nm,19.7s,MS4.2,baz=354,slow=29						
TBI	Tubuai	58.55	226	*e*LR	LR	23 49 13.0	
SUMG	Summit	65.71	18	*e*P	P	23 33 17.8	-3.1
	3.3nm,0.8s,mb4.4						
CPUP	Villa Florida	66.80	131	*e*P	P	23 33 29.4	+0.8
	6.5nm,1.2s,mb4.5						
BDFB	Brasilia	68.38	116	P	P	23 33 38.2	-0.5
	1.0nm,0.3s,mb4.3,baz=74,slow=2.9,SNR=3.6						
PLCA	Paso Flores	69.02	150	P	P	23 33 43.2	+1.0
	1.5nm,0.7s,mb4.0,baz=325,slow=12,SNR=2.1						
PLCA				LR	LR	23 56 44.4	
	comp=Z,174nm,21.6s,MS4.3,baz=2.7,slow=30						
TRQA	Tornquist	71.46	143	P	P	23 34 00.9	+3.7
ARCES	ARCESS Array B	85.57	15	P	P	23 35 13.6	0.0
	1.6nm,0.9s,mb4.2,baz=354,slow=8.2,SNR=2.9						
NOA	NORSAR Array B	86.49	25	LR	LR	00 13 10.6	
	comp=Z,23nm,20.3s,MS3.6,baz=275,slow=35						
GERES	GERESS Array B	94.72	34	LR	LR	00 17 51.7	
	comp=Z,22nm,19.6s,MS3.6,baz=350,slow=35						

*IDC **11** 23:30:00.8±3.5, 23.02S×169.32E, mb4.0/4, mb1 4.3/4, mb1mx4.0/13, mbtmp4.0/4, MS2.6/1, Ms1 2.7/1, ms1mx2.4/17, Error ellipse: s-maj=156.6km s-min=38.8km az=162.0*

ISC 11 23:30:05.2±0.9,**22.9S**±0.2×**169.53E**±0.08,**h33**^{km},**n16**,σ**0**^{s}**74**/13,**mb4.0**/5,**MS2.7**/1,**4C,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.96	285	*e*P	P	23 30 50.8	-0.2
DZM				*e*S	S	23 31 25.9	+0.2
NOUC	Port Laguerre	3.08	284	*e*P	P	23 30 52.5	-0.1
NOUC				*e*S	S	23 31 28.2	-0.5
CTA	Charters Tower	21.83	273	*e*P	P	23 34 57.7	+1.1
	3.0nm,0.4s,mb4.1						
WRA	Warramunga Arr	32.84	268	P	P	23 36 34.0	-4.2
	0.3nm,0.3s,mb3.6,baz=101,slow=8.3,SNR=5.5						
VNDA	Vanda	54.83	182	LR	LR	23 57 29.5	
	comp=Z,6.1nm,20.7s,MS2.7,baz=94,slow=30						
VNA3	Neumayer Olymp	86.14	180	⇑*i*	P	23 42 43.1	-0.4
VNA3	Neumayer Olymp	86.14	180	⇑*i*	P	23 42 51.5	+8.0
VNA2	Neumayer--Watz	86.44	181	⇑*i*	P	23 42 44.3	-0.7
VNA2	Neumayer--Watz	86.44	181	⇑*i*	P	23 42 53.8	+8.8
SONM	Songino Array	90.27	323	P	P	23 43 04.2	+0.4
	1.0nm,0.9s,mb4.1,baz=135,slow=4.1,SNR=6.1						
NVAR	Mina Array Bea	91.00	48	P	P	23 43 08.4	+0.9
	1.0nm,0.7s,mb4.2,baz=223,slow=5.7,SNR=4.4						
ILAR	Eielson Array	93.60	17	P	P	23 43 17.5	-1.3
	0.5nm,0.8s,mb4.0,baz=231,slow=5.8,SNR=4.3						
VYHS	Vyhne	145.44	325	*e*PKP	PKPdf	23 49 42.5	+2.8
CLL	Collm	146.29	333	P	PKPdf	23 49 44.0	+3.0
MOX	Moxa	147.37	334	*e*P	PKPdf	23 49 48.0	+5.2
GERES	GERESS Array B	147.78	330	PKPbc	PKPdf	23 49 47.8	+4.3
	1.5nm,0.9s,baz=27,slow=3.0,SNR=13						

GUC 11 23:51:21.7±0.7,**27.11S**×**69.96W,h120**^{km}**,ML3.7,2C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRCH	Chaqaral	0.96	322	⇓*i*P	P	23 51 43.8	+0.1
CRCH				*i* S	S	23 51 59.5	-0.6
CRCH				AMP		23 52 00.1	
	comp=N,3µm,0.3s						
VACH	Vallenar	1.63	206	⇓*i*P	P	23 51 51.3	+0.3
VACH				*i* S	S	23 52 13.2	-0.1
LCO	Las Campanas	2.01	199	⇑*i*P	P	23 51 56.3	+0.6
LCO				*i* S	S	23 52 22.6	+1.2
LCO				AMP		23 52 23.4	
	comp=E,438nm,0.2s						
CPN1	Cerro Paranal	2.50	351	AMP		23 52 38.1	
	comp=E,241nm,0.4s						
TLL	Tololo Astrono	3.14	193	⇑*i*P	P	23 52 10.6	-0.1
TLL				AMP		23 53 23.8	
	comp=N,199nm,0.7s						

*BJI **12** 00:02:00.4, 37.70S×178.30E, h69^{km}*

*WEL **12** 00:02:00.5±0.2, 37.68S×178.33E, h69^{km}±1^{km}, ML4.4/17, Error ellipse: s-maj=1.7km s-min=1.1km az=90.0*

*NEIC **12** 00:02:00.4, 37.67S×178.33E, h69^{km}, mb4.5/2, ML4.4(WEL), After WEL.*

*IDC **12** 00:02:01.2±3.0, 38.12S×178.39E, h80^{km}±18^{km}, mb4.2/4, mb1 4.4/5, mb1mx4.0/15, mbtmp4.5/5, MS4.2/1, Ms1 4.2/1, ms1mx3.0/17, Error ellipse: s-maj=52.1km s-min=36.1km az=6.0*

ISC 12 00:01:56.3±1.0,**37.94S**±0.05×**178.7E**±0.1,**h73**^{km}±6^{km},**n113**,σ**1**^{s}**31**/121,**mb4.5**/5,**3C-7D,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.51	317	P	P	00 02 10.5	+0.9
MXZ				S	S	00 02 17.6	-1.8
MXZ	Matakaoa Point	0.51	317	⇑PN	P	00 02 10.5	+1.0
MXZ				SN	S	00 02 17.8	-1.6
MWZ	Matawai	1.03	247	P	P	00 02 18.1	+2.5
MWZ				S	S	00 02 30.6	+0.6
MWZ	Matawai	1.03	247	PN	P	00 02 18.1	+2.5
MWZ				SN	S	00 02 30.6	+0.6
WIZ	White Island	1.30	288	P	P	00 02 17.4	-1.7
WIZ	White Island	1.30	288	PN	P	00 02 17.9	-1.2
URZ	Urewera	1.33	256	P	P	00 02 20.4	+0.8
	512nm,0.3s,baz=23,slow=1.1,SNR=1319						
URZ				S	S	00 02 35.1	-1.7
	326nm,0.3s,baz=230,slow=20,SNR=43						
URZ	Urewera	1.33	256	P	P	00 02 20.4	+0.8
URZ	Urewera	1.33	256	⇓PN	P	00 02 20.4	+0.8
URZ				SN	S	00 02 34.9	-1.9
KNZ	Kokohu	1.36	218	P	P	00 02 24.1	+4.0
KNZ	Kokohu	1.36	218	PN	P	00 02 24.1	+4.0
KNZ				SN	S	00 02 41.7	+4.0
EDRZ	Edgecumbe	1.59	263	P	P	00 02 23.0	-0.1
EDRZ	Edgecumbe	1.59	263	PN	P	00 02 23.0	0.0
MARZ	Manawahe	1.64	268	PN	P	00 02 22.9	-0.7
TAZ	Tarawera	1.79	260	P	P	00 02 26.1	+0.4
TAZ	Tarawera	1.79	260	PN	P	00 02 25.8	+0.2
TAZ				SN	S	00 02 44.6	-2.7
LIRZ	Lichensteins R	1.86	267	P	P	00 02 26.3	-0.4
LIRZ	Lichensteins R	1.86	267	PN	P	00 02 26.3	-0.4
TGRZ	Tauranga	1.98	275	P	P	00 02 26.7	-1.5
TGRZ	Tauranga	1.98	275	PN	P	00 02 26.7	-1.5
TGRZ				SN	S	00 02 46.6	-5.2
PATZ	Paeroa	2.01	257	P	P	00 02 29.1	+0.4
PATZ	Paeroa	2.01	257	PN	P	00 02 29.1	+0.5
MYRZ	Mayor Island	2.09	288	PN	P	00 02 27.8	-2.1
MYRZ				SN	S	00 02 48.3	-6.4
BKZ	Black Stump Fm	2.15	235	P	P	00 02 32.9	+2.3
BKZ	Black Stump Fm	2.15	235	⇓PN	P	00 02 32.9	+2.2
BKZ				SN	S	00 02 57.2	+1.1
HATZ	Hinemaiaia	2.29	245	P	P	00 02 33.4	+0.8
HATZ	Hinemaiaia	2.29	245	PN	P	00 02 33.6	+1.0
HATZ				SN	S	00 02 58.0	-1.6
WHTZ	Whakaora	2.31	251	P	P	00 02 34.1	+1.2
WHTZ	Whakaora	2.31	251	PN	P	00 02 34.1	+1.2
WATZ	Wairara	2.49	251	P	P	00 02 35.8	+0.3
WATZ	Wairara	2.49	251	PN	P	00 02 36.1	+0.6
RITZ	Rihia Road	2.49	245	P	P	00 02 36.8	+1.3
RITZ	Rihia Road	2.49	245	PN	P	00 02 36.8	+1.3
RATZ	Rangitukua	2.51	247	P	P	00 02 36.8	+1.0
RATZ	Rangitukua	2.51	247	PN	P	00 02 36.8	+1.0
PWZ	Pawanui	2.55	215	P	P	00 02 38.4	+2.1
PWZ	Pawanui	2.55	215	⇓PN	P	00 02 38.4	+2.1
KATZ	Kakaramea	2.61	246	P	P	00 02 38.3	+1.2
KATZ	Kakaramea	2.61	246	PN	P	00 02 38.3	+1.1
KUZ	Kuaotunu	2.69	295	P	P	00 02 35.4	-2.9
KUZ	Kuaotunu	2.69	295	⇑PN	P	00 02 35.4	-2.8
KUZ				SN	S	00 03 01.9	-7.8
KRVZ	Karewarewa	2.69	244	⇓PN	P	00 02 39.3	+1.0
OTVZ	Oturere	2.70	242	⇓PN	P	00 02 39.6	+1.1
WTVZ	West Tongariro	2.74	244	P	P	00 02 39.9	+0.9
WTVZ	West Tongariro	2.74	244	PN	P	00 02 39.9	+1.0
NGZ	Ngauruhoe	2.75	242	P	P	00 02 40.2	+1.0
NGZ	Ngauruhoe	2.75	242	PN	P	00 02 40.2	+1.0
TUVZ	Tukino	2.76	240	P	P	00 02 40.3	+1.0
TUVZ	Tukino	2.76	240	PN	P	00 02 40.3	+1.1
MOVZ	Moawhango	2.76	237	P	P	00 02 40.2	+0.9
MOVZ	Moawhango	2.76	237	PN	P	00 02 40.2	+0.9
CNZ	Chateau	2.80	242	P	P	00 02 40.9	+1.0
CNZ	Chateau	2.80	242	⇑PN	P	00 02 40.9	+1.1
WPVZ	Whakapapa	2.81	242	P	P	00 02 40.9	+1.0
WPVZ	Whakapapa	2.81	242	PN	P	00 02 40.9	+1.0
FWVZ	Far West T-bar	2.82	241	P	P	00 02 41.1	+0.9
FWVZ	Far West T-bar	2.82	241	PN	P	00 02 41.1	+0.9
DRZ	Dome Shelter	2.82	241	P	P	00 02 41.6	+1.4
DRZ	Dome Shelter	2.82	241	PN	P	00 02 41.5	+1.3
WNVZ	Wahianoa	2.83	240	⇓PN	P	00 02 41.2	+1.0
TWVZ	Taurewa	2.83	245	P	P	00 02 40.9	+0.7
TWVZ	Taurewa	2.83	245	PN	P	00 02 40.9	+0.7
TRVZ	Turoa	2.85	241	PN	P	00 02 41.4	+0.9
MTVZ	Mangateitei	2.94	240	PN	P	00 02 42.6	+0.8
HIZ	Hauiti	3.11	258	P	P	00 02 44.5	+0.3
HIZ	Hauiti	3.11	258	PN	P	00 02 44.4	+0.2
VRZ	Vera Road	3.34	248	P	P	00 02 48.1	+0.7
VRZ	Vera Road	3.34	248	PN	P	00 02 48.1	+0.7
BFZ	Birch Farm	3.35	215	P	P	00 02 48.5	+1.0
BFZ	Birch Farm	3.35	215	⇓PN	P	00 02 48.5	+1.0
WAZ	Wanganui	3.45	237	PN	P	00 02 50.0	+1.1
MRZ	Mangatainoka R	3.66	221	P	P	00 02 51.5	-0.3
MRZ	Mangatainoka R	3.66	221	PN	P	00 02 51.9	0.0
MTW	Mount Morrison	4.07	217	P	P	00 02 57.1	-0.5
MTW	Mount Morrison	4.07	217	PN	P	00 02 57.1	-0.5
KIW	Kapiti Island	4.16	224	P	P	00 02 58.1	-0.7
KIW	Kapiti Island	4.16	224	PN	P	00 02 58.1	-0.7
CAW	Cannon Point	4.25	221	P	P	00 02 58.9	-1.2
CAW	Cannon Point	4.25	221	PN	P	00 02 58.9	-1.2
PAWZ	Paruwai Farm	4.28	216	PN	P	00 02 59.9	-0.6
MSWZ	Moikau Station	4.39	217	P	P	00 03 00.9	-1.1
MSWZ	Moikau Station	4.39	217	PN	P	00 03 00.9	-1.1
MRW	Makara Radio	4.53	222	P	P	00 03 02.9	-1.1
MRW	Makara Radio	4.53	222	PN	P	00 03 02.6	-1.4
WEL	Wellington	4.54	221	P	P	00 03 02.9	-1.1
WEL	Wellington	4.54	221	PN	P	00 03 03.0	-1.0
BHW	Baring Head	4.57	220	P	P	00 03 03.2	-1.3
SNZO	South Karori	4.58	222	P	P	00 03 03.1	-1.6
TCW	Tory Channel	4.75	225	P	P	00 03 05.1	-1.9
BSWZ	Blackbirch Sta	5.31	223	P	P	00 03 12.7	-2.0
MQZ	McQueen's Vall	7.38	217	*e*P	P	00 03 40.3	-3.1
WVZ	Waitaha Valley	7.97	227	*e*P	P	00 03 49.8	-1.7
RPZ	Rata Peaks	8.20	223	P	P	00 03 51.9	-2.7
	5.1nm,0.3s,baz=120,slow=2.4,SNR=50						
RPZ	Rata Peaks	8.20	223	*e*P	P	00 03 51.8	-2.8
FOZ	Fox Glacier	8.87	228	*e*P	P	00 03 59.4	-4.4
RAO	Raoul Island	9.10	19	LR	LR	00 06 43.0	
	comp=Z,1µm,21.6s,baz=148,slow=30						
LBZ	Lake Benmore	9.11	222	*e*P	P	00 04 04.3	-2.8
ODZ	Otahua Downs	9.34	218	*e*P	P	00 04 06.3	-3.9
JCZ	Jackson Bay	9.71	228	*e*P	P	00 04 11.0	-4.3
EAZ	Earnscleugh	10.14	221	P	P	00 04 18.1	-3.0
TUZ	Tuapeka	10.49	217	*e*P	P	00 04 23.2	-2.6
STKA	Stephens Creek	30.91	270	P	P	00 08 08.4	+0.3
	1.6nm,0.3s,mb4.2,baz=111,slow=8.6,SNR=3.2						
CTA	Charters Tower	33.29	293	P	P	00 08 29.4	+0.5
	2.2nm,0.6s,mb4.2,baz=116,slow=8.7,SNR=3.0						
CTAO	Charters Tower	33.29	293	*e*P	P	00 08 30.0	+1.0
	2.0nm,0.6s,mb4.1						
WB2	Warramunga Arr	42.34	282	*e*P	P	00 09 45.2	+0.5
WRAB	Tennant Creek	42.35	282	*e*P	P	00 09 45.1	+0.3
	8.4nm,0.5s,mb4.7						
WRA	Warramunga Arr	42.35	282	P	P	00 09 45.1	+0.3
	5.1nm,0.4s,mb4.6,baz=122,slow=7.9,SNR=113						
FITZ	Fitzroy Crossi	50.17	278	P	P	00 10 47.1	+0.5
	3.2nm,0.3s,mb4.7,baz=153,slow=7.1,SNR=19						
CN2	Changchun	94.60	324	*e*P	P	00 15 14.8	+5.1
ARCES	ARCESS Array B	145.23	344	PKPbc	PKPbc	00 21 28.1	+3.4
	1.1nm,0.5s,baz=45,slow=3.4,SNR=9.4						
FINES	FINESS Array B	150.98	333	PKPbc	PKPdf	00 21 43.7	+10
	1.6nm,0.9s,baz=63,slow=3.1,SNR=6.1						
FINES	FINESS Array B	150.98	333	PKPbc	PKPdf	00 21 43.7	+10
BRTR	Keskin Array B	152.86	285	PKPbc	PKPdf	00 21 47.9	+11
	1.1nm,0.8s,baz=142,slow=2.8,SNR=5.7						

IDC 12 00:12:27.3±7.3,**0.84S**×**100.72E,mb3.8**/3,**mb1 4.0**/3,**mb1mx3.5**/16,**mbtmp3.8**/3,**Error ellipse: s-maj=371.9km s-min=31.7km az=53.0,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	37.98	122	P	P	00 19 47.4	-1.5
	0.6nm,0.7s,baz=300,slow=9.4,SNR=3.2						
MKAR	Makanchi Array	50.12	344	P	P	00 21 24.6	-1.7
	0.6nm,0.5s,baz=146,slow=9.0,SNR=8.1						
ZAL	Zalesovo	56.16	349	P	P	00 22 08.3	-2.8
	1.3nm,0.4s,baz=322,slow=4.4,SNR=3.2						
TXAR	Lajitas Array	143.35	37	PKP	PKPdf	00 32 02.6	-3.6
	0.3nm,0.5s,baz=203,slow=1.5,SNR=7.5						

*CSEM **12** 00:18:51.7±0.2, 26.63N×55.15E, h10^{km}, ML3.5, Error ellipse: s-maj=6.5km s-min=2.6km az=143.0*

*THR **12** 00:18:53.2±0.3, 26.58N×55.21E, h33^{km}±6^{km}, ML3.5*

*IDC **12** 00:19:31.0±25.0, 31.41N×54.20E, mb3.7/3, mb1 3.8/4, mb1mx3.4/22, mbtmp3.7/4, Error ellipse: s-maj=466.8km s-min=47.2km az=172.0*

ISC 12 00:18:51.6±0.9,**26.6N**±0.1×**55.16E**±0.08,**h10**^{km},**n16**,σ**1**^{s}**11**/17,**mb3.5**/4,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	1.21	48	*e*PG	Pg	00 19 15.2	-0.6
BNDS				*e*SG	Sg	00 19 31.2	-0.7
BNDS				AML	AML	00 19 36.6	
	comp=N,1µm,0.5s						
GHIR	Ghir-Karzin	2.57	312	*e*PN	Pn	00 19 35.2	+1.2
GHIR				AML	AML	00 20 23.6	
	comp=N,254nm,0.5s						
KRBR	Kerman	3.66	22	*e*PN	Pn	00 19 49.9	+0.4
KRBR				AML	AML	00 20 52.6	
	comp=N,48nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RDF	**Al-Radifah**	7.13	291	*e*P	Pn	00 20 39.0	+0.4
NAY	**Al-Naaiem**	7.49	293	*e*P	Pn	00 20 43.0	-0.6
MZLS	**Mizel**	9.36	256	P	P	00 21 09.8	+0.2
ARSS	**Ar Rass**	10.73	269	P	P	00 21 27.2	-1.3
KAMS	**Al Khamasin**	11.55	239	P	P	00 21 40.1	+0.5
HILS	**Ha’il**	11.95	277	P	P	00 21 43.5	-1.6
TATS	**Tathlith**	12.83	239	P	P	00 21 57.5	+0.6
DJNS	**Zahran al Janu**	13.92	233	P	P	00 22 11.6	+0.3
KBRS	**Khaybar**	14.30	270	P	P	00 22 14.4	-1.9
BRTR	**Keskin Array B**	22.21	312	P	P	00 23 51.9	+2.2
	comp=N,0.1nm,0.3s,mb2.7,baz=120,slow=10.0,SNR=5.7						
BVAR	**Borovoye Array**	28.75	19	P	P	00 24 53.2	+1.9
	comp=N,0.7nm,0.8s,mb3.5,baz=217,slow=7.4,SNR=5.3						
FINES	**FINESS Array B**	39.97	339	P	P	00 26 26.3	-1.4
	comp=N,3.8nm,1.1s,mb4.0,baz=141,slow=8.9,SNR=3.2						
NOA	**NORSAR Array B**	45.36	332	P	P	00 27 12.3	+0.8
	comp=N,0.9nm,0.8s,mb3.6,baz=118,slow=8.0,SNR=3.5						

ATH ***12*** *00:19:52.7, 38.11N×23.92E, h17^{km}±1^{km}, MD3.1/14, ML3.0*

NEIC ***12*** *00:19:52.7, 38.11N×23.92E, h17^{km}, ML3.0(ATH), After ATH.*

CSEM ***12*** *00:19:53.2±0.1, 38.08N×23.97E, h2^{km}, ML3.0, Error ellipse: s-maj=2.3km s-min=1.6km az=115.0*

THE ***12*** *00:19:56.5, 38.14N×24.15E, h20^{km}, ML3.0*

ISC 12 00:19:52.4±0.9**, 38.10N**±0.02×**23.86E**±0.05**, h2**^{km}±7^{km}**, n26, σ1^{s}01**/38**, 2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTL	**Penteli**	0.05	176	⇓*i*PB	Pb	00 19 55.6	-0.2
PTL				*e*SB	Sb	00 19 58.2	+0.3
MPAR	**Parnis Oros**	0.11	298	⇓*i*PB	Pb	00 19 57.4	+0.6
ATH	**Athens Observa**	0.17	222	*e*PB	Pb	00 19 57.5	-0.3
ATH				*e*SB	Sb	00 20 00.5	-0.9
NSAL	**Nisos Salamina**	0.37	238	*e*PB	Pb	00 20 01.2	0.0
NAIG	**Nisos Aigina**	0.45	221	*e*PB	Pb	00 20 02.2	-0.4
NAIG				*e*SB	Sb	00 20 09.5	0.0
NAIG	**Nisos Aigina**	0.45	221	*e*Pb	Pb	00 20 02.2	-0.4
NAIG				*e*Sb	Sb	00 20 09.0	-0.5
MGER	**Gerania Oros**	0.49	257	*e*PN	Pn	00 20 04.0	-1.9
MGER				*e*SN	Sn	00 20 10.8	-4.2
LKR	**Lokris**	0.87	309	*e*PN	Pn	00 20 10.2	-1.2
LKR				*e*SN	Sn	00 20 22.8	-2.0
AOS	**Alonnisos**	1.07	1	*e*Pg	Pg	00 20 14.3	+0.6
AOS				*e*Sg	Sg	00 20 28.6	+0.7
NEO	**Neokhori**	1.30	338	*e*PN	Pn	00 20 17.9	+0.4
NEO				*e*SN	Sn	00 20 35.4	-0.3
XOR	**Xorichti**	1.37	338	*e*Pg	Pg	00 20 19.7	+0.1
XOR				*e*Sg	Sg	00 20 36.8	-1.1
AGG	**Agios Georgios**	1.51	308	*e*Pb	Pb	00 20 22.0	+1.2
	comp=Z,3.9nm,0.4s						
AGG				*e*Sb	Sb	00 20 44.7	+4.4
VLI	**Veliai**	1.56	208	*e*PB	Pb	00 20 21.3	-0.4
APE	**Apeiranthos**	1.68	127	*e*PN	Pn	00 20 22.6	-0.3
APE				*e*SN	Sn	00 20 46.0	+0.7
ITM	**Ithomi**	1.79	240	*e*PN	Pn	00 20 25.8	+1.3
EVR	**Evrytania**	1.80	298	*e*PN	Pn	00 20 26.4	+1.7
PAIG	**Paliouri**	1.83	356	*e*Pb	Pb	00 20 25.3	-0.9
KYTH	**Kithira**	1.93	200	*e*PN	Pn	00 20 27.5	+1.0
LIA	**Limnos Island**	2.07	29	*e*PB	Pb	00 20 27.9	-2.4
OUR	**Ouranopolis**	2.23	2	*e*Pn	Pn	00 20 30.8	0.0
	comp=Z,2.0nm,0.3s						
PLG	**Polygyros**	2.29	352	*e*PN	Pn	00 20 31.6	-0.1
MEV	**Metsovon**	2.65	310	*e*Pn	Pn	00 20 40.0	+3.1
MEV				*e*Sn	Sn	00 21 12.3	+2.3
SRS	**Serrai**	3.02	356	*e*Pn	Pn	00 20 42.0	-0.1
GRG	**Griva**	3.07	339	*e*Pn	Pn	00 20 42.9	+0.1
NVR	**Nevrokopi**	3.25	0	*e*PN	Pn	00 20 44.9	-0.4
FNA	**Florina**	3.30	325	*e*Pn	Pn	00 20 46.9	+0.8

IDC ***12*** *00:45:12.0±1.1, 6.17S×146.87E, mb3.9/5, mb1 4.1/8, mb1mx4.0/16, mbtmp4.0/8, ML3.5/3, MS3.6/2, Ms1 3.6/2, ms1mx3.0/23, Error ellipse: s-maj=36.9km s-min=16.2km az=88.0*

NEIC ***12*** *00:45:18.1±2.1, 6.27S×146.82E, h42^{km}±17^{km}, mb4.2/3, Error ellipse: s-maj=18.1km s-min=15.1km az=190.0*

ISC 12 00:45:16.2±3.7**, 6.3S**±0.2×**146.8E**±0.1**, h37**^{km}±30^{km}**, n15, σ0^{s}56**/17**, mb3.9**/6**, MS3.9**/1**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.12	174	Pn	P	00 46 04.7	+0.4
	20nm,0.3s,baz=151,slow=15,SNR=28						
PMG				Pg	P	00 46 11.3	+7.0
	60nm,0.3s,baz=16,slow=9.1,SNR=28						
PMG				Lg		00 46 54.5	
	14nm,0.3s,baz=318,slow=23,SNR=3.7						
PMG				LR	LR	00 47 33.2	
	comp=Z,352nm,18.1s,baz=48,slow=44						
PMG	**Port Moresby**	3.12	174	*e*P	P	00 46 03.7	-0.5
PMG				*e*		00 46 08.0	
PMG				*e*Pg	P	00 46 11.6	+7.3
PMG				*e*Sg	S	00 46 51.6	+11
PMG				Lg		00 46 54.5	
PMG				LR	LR	00 47 33.2	
CTA	**Charters Tower**	13.73	182	Pn	P	00 48 31.7	+0.8
	0.5nm,0.3s,baz=347,slow=14,SNR=5.2						
CTAO	**Charters Tower**	13.73	182	P	P	00 48 31.2	+0.3
KAKA	**Kakadu**	15.55	245	*e*P	P	00 48 55.5	+0.9
	24nm,1.4s						
WRAB	**Tennant Creek**	18.19	221	*e*P	P	00 49 27.3	-0.5
	4.9nm,0.8s						
WB2	**Warramunga Arr**	18.20	221	*e*P	P	00 49 27.2	-0.7
WRA	**Warramunga Arr**	18.21	221	P	P	00 49 27.2	-0.8
	0.1nm,0.3s,baz=46,slow=12,SNR=17						
FITZ	**Fitzroy Crossi**	23.77	239	P	P	00 50 27.1	+0.7
	1.9nm,0.4s,mb3.9,baz=87,slow=7.5,SNR=7.0						
STKA	**Stephens Creek**	25.93	190	P	P	00 50 47.1	+0.1
	1.2nm,0.5s,mb3.6,baz=17,slow=11,SNR=3.8						
NWAO	**Narrogin (SRO)**	38.20	222	LR	LR	01 10 12.3	
	comp=Z,173nm,19.2s,MS3.9,baz=180,slow=39						
VNDA	**Vanda**	71.64	177	P	P	00 56 35.5	-0.1
	1.1nm,0.7s,mb3.9,baz=321,slow=7.2,SNR=8.4						
MKAR	**Makanchi Array**	77.60	321	P	P	00 57 10.4	0.0
	0.2nm,0.5s,mb3.3,baz=85,slow=6.4,SNR=3.4						
QSPA	**South Pole Qui**	83.69	180	*e*P	P	00 57 42.3	+0.4
	2.9nm,0.5s,mb4.7						
ILAR	**Eielson Array**	85.81	23	P	P	00 57 52.4	-0.4
	0.9nm,0.6s,mb4.2,baz=257,slow=5.2,SNR=11						

BJI ***12*** *00:54:14.9, 1.82N×96.55E, h41^{km}, mB5.0, mb5.0, Ms4.5, Msz4.4*

MOS ***12*** *00:54:16.3±1.0, 2.12N×96.51E, h33^{km}, mb5.0/24, Error ellipse: s-maj=15.8km s-min=8.0km az=104.2*

NEIC ***12*** *00:54:17.2±0.3, 2.08N×96.47E, mb4.9/21, Error ellipse: s-maj=8.8km s-min=5.1km az=220.0*

IDC ***12*** *00:54:17.3±0.6, 2.13N×96.48E, h26^{km}±3^{km}, mb4.3/17, mb1 4.4/18, mb1mx4.3/23, mbtmp4.5/18, ML4.4/1, MS4.0/12, Ms1 4.0/12, ms1mx3.8/27, Error ellipse: s-maj=19.9km s-min=12.8km az=46.0*

ISC 12 00:54:15.4±0.4**, 2.09N**±0.05×**96.52E**±0.05**, h26**^{km}**, h26**^{km}±.6^{km}**:pP-P, n116, σ1^{s}02**/118**, mb4.7**/50**, MS4.2**/22**, 6C-3D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	5.13	61	P	Pn	00 55 33.6	+0.9
KULM	**Kulim**	5.21	52	⇑*i*P	Pn	00 55 34.5	+0.7
SNG	**Songkhla**	6.50	39	P	Pn	00 55 51.0	-0.9
	494nm,1.0s						
KGM	**Kluang**	6.80	91	P	Pn	00 55 57.2	+1.1
KSM	**Kuching**	13.80	92	*e*P	P	00 57 32.5	+0.5
KSM				*e*		00 57 42.1	
KKTK	**Khon Kaen**	15.46	23	P	P	00 57 54.0	+0.3
	988nm,0.6s						
CMAR	**Chiang Mai Arr**	16.44	8	P	P	00 58 05.4	-0.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,588nm,19.5s						
CMAR	**Chiang Mai Arr**	16.44	8	Pn	P	00 58 05.4	-0.8
	comp=Z,0.5nm,0.3s,baz=201,slow=12,SNR=25						
CMAR				LR	LR	01 04 59.8	
	comp=Z,588nm,19.5s,baz=190,slow=39						
CMAR				ScP		01 06 32.0	
	baz=214,slow=2.8,SNR=5.6						
PALK	**Pallekele**	16.58	289	*e*P	P	00 58 05.3	-2.7
	comp=Z,42nm,1.3s						
KKM	**Kota Kinabalu**	20.03	78	*e*P	P	00 58 49.8	+0.2
KKM	**Kota Kinabalu**	20.03	78	P	P	00 58 49.5	-0.1
QIZ	**Qiongzhong**	21.30	37	P	P	00 59 01.3	-1.3
QIZ				S	S	01 02 52.6	-0.3
QIZ				XS		01 03 07.3	
QIZ				LR	LR		
	comp=N,790nm,12.7s,MS4.5						
QIZ				LR	LR		
	comp=E,930nm,12.4s,MS4.5						
QIZ				LR	LR		
	comp=Z,2μm,12.6s,MS4.6						
TSM	**Tawau**	21.43	84	P	P	00 59 04.1	+0.1
HYB	**Hyderabad**	23.31	312	*e*P	P	00 59 26.0	+3.4
HYB	**Hyderabad**	23.31	312	*i* P	P	00 59 26.0	+3.4
KMI	**Kunming**	23.67	14	P	P	00 59 26.9	+0.9
KMI				AP		00 59 35.7	
KMI				XP		00 59 39.3	
KMI				PP	PP	01 00 02.0	+3.0
KMI				PCP	PcP	01 03 08.4	-3.3
KMI				S	S	01 03 40.6	+4.8
KMI				XS		01 03 55.3	
KMI				SCP		01 06 43.1	
KMI				PCS		01 06 46.7	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.0						
KMI				AMB	AMB		
	comp=Z,110nm,3.7s						
KMI				LR	LR		
	comp=N,330nm,17.6s,MS4.1						
KMI				LR	LR		
	comp=E,490nm,15.4s,MS4.1						
KMI				LR	LR		
	comp=Z,420nm,13.3s,MS4.1						
KMI	**Kunming**	23.67	14	P	P	00 59 26.9	+0.9
KMI				*PP		00 59 35.7	
KMI				*SP		00 59 39.3	
KMI						01 00 02.0	
KMI				PPP	PPP	01 00 12.6	+3.6
KMI						01 03 08.4	
KMI				S	S	01 03 40.6	+4.8
KMI				*SS		01 03 55.3	
KMI				SS	SS	01 04 34.1	+9.0
KMI				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.3						
KMI				MLR	MLR		
	comp=Z,430nm,13.3s,MS4.1						
KMI	**Kunming**	23.67	14	P	P	00 59 26.9	+0.9
	comp=Z,18nm,1.5s,mb4.3						
KMI				pP		00 59 35.7	
KMI				sP		00 59 39.3	
KMI				PP	PP	01 00 02.0	+3.0
KMI				PPP	PPP	01 00 12.6	+3.6
KMI				PcP	PcP	01 03 08.4	-3.3
KMI				S	S	01 03 40.6	+4.8
KMI				sS		01 03 55.3	
KMI				SS	SS	01 04 34.1	+9.0
KMI				SSS	SSS	01 04 50.2	+8.9
KMI				ScP		01 06 43.1	
KMI				PcS		01 06 46.7	
KMI				LR	LR		
	comp=Z,430nm,13.3s,MS4.1						
SHL	**Shillong**	23.76	350	*e*P	P	00 59 25.4	-1.5
SHL				*e*S	S	01 03 40.0	+2.6
GYA	**Guiyang**	26.11	21	P	P	00 59 48.4	-0.9
GYA				AP	pP	00 59 55.3	-1.5
GYA				XP	sP	00 59 59.6	-0.5
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
GYA				AMB	AMB		
	comp=Z,110nm,5.7s						
GYA				LR	LR		
	comp=N,670nm,14.7s,MS4.4						
GYA				LR	LR		
	comp=E,390nm,12.6s,MS4.4						
GYA				LR	LR		
	comp=Z,800nm,13.8s,MS4.4						
PKI	**Pulchoki**	27.48	338	*e*P	P	01 00 02.2	+0.4
	comp=Z,58nm,1.2s,mb5.0						
PKI	**Pulchoki**	27.48	338	*e*P	P	01 00 02.2	+0.4
PKI				pmax	pmax		
	comp=Z,29nm,1.2s,mb4.7						
GUN	**Gumba**	27.61	339	*e*P	P	01 00 03.7	+0.7
	comp=Z,130nm,0.8s,mb5.6						
DMN	**Daman**	27.62	338	*e*P	P	01 00 04.2	+1.1
	comp=Z,49nm,0.7s,mb5.2						
KKN	**Kakani**	27.72	338	*e*P	P	01 00 04.3	+0.3
	comp=Z,90nm,1.0s,mb5.4						
KKN	**Kakani**	27.72	338	*e*P	P	01 00 04.3	+0.3
KKN				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.0						
LSA	**Lhasa**	27.93	350	P	P	01 00 06.0	+0.2
LSA	**Lhasa**	27.93	350	*e*P	P	01 00 06.0	+0.2
LSA				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.0						
LSA	**Lhasa**	27.93	350	*e*P	P	01 00 06.0	+0.2
	comp=Z,36nm,1.0s,mb5.0						
GKN	**Gorkha**	28.16	337	*e*P	P	01 00 08.1	+0.2
	comp=Z,99nm,0.9s,mb5.4						
KOLN	**Koldanda**	28.37	335	*e*P	P	01 00 10.1	+0.3
	comp=Z,56nm,0.9s,mb5.2						
ENH	**Enshi**	30.61	22	*e*P	P	01 00 28.0	-1.8
	comp=Z,21nm,0.8s,mb5.0						
ENH				LR	LR		
	comp=Z,212nm,20.0s,MS3.8						
MBWA	**Marble Bar**	32.41	137	*e*P	P	01 00 45.9	+0.2
XAN	**Xi’an**	33.83	19	P	P	01 00 56.3	-1.6
XAN				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.4						
LZH	**Lanzhou**	34.50	11	⇑P	P	01 01 02.9	-0.8
LZH				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,160nm,4.0s						
LZH				LR	LR		
	comp=E,610nm,13.7s						
LZH				LR	LR		
	comp=Z,880nm,14.9s,MS4.6						
LZH	**Lanzhou**	34.50	11	⇑P	P	01 01 02.9	-0.8
	comp=Z,48nm,1.0s,mb5.4						
LZH				pP	pP	01 01 09.1	-2.2
LZH				sP	sP	01 01 11.5	-3.0
LZH				LR	LR		
	comp=Z,880nm,14.9s,MS4.6						
FITZ	**Fitzroy Crossi**	35.00	126	P	P	01 01 07.4	-0.7
	comp=Z,20nm,0.8s,mb5.1,baz=323,slow=5.2,SNR=14						
GTA	**Gaotai**	37.27	4	⇑P	P	01 01 26.8	-0.2
GTA				AP	pP	01 01 34.9	+0.2
GTA				XP	sP	01 01 39.1	+1.2
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
GTA				AMB	AMB		
	comp=Z,110nm,5.4s						
GTA				LR	LR		
	comp=N,180nm,16.8s,MS4.2						
GTA				LR	LR		
	comp=E,200nm,14.1s,MS4.2						
GTA				LR	LR		
	comp=Z,230nm,14.1s,MS4.1						
KAKA	**Kakadu**	38.58	113	⇓*i*P	P	01 01 37.5	-0.8
	comp=Z,16nm,0.6s,mb4.9						
JOW	**Kunigami**	39.15	48	P	P	01 01 43.6	+0.7
	comp=Z,24nm,0.7s,mb5.0,baz=329,slow=20,SNR=5.6						
HHC	**Hu-ho-hao-te**	40.91	18	*e*P	P	01 01 58.7	+1.4
HHC				AP	pP	01 02 05.5	+0.5
HHC				XP	sP	01 02 08.4	+0.2
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,180nm,5.9s						
HHC				LR	LR		
	comp=N,420nm,14.0s,MS4.6						
HHC				LR	LR		
	comp=E,480nm,16.7s,MS4.6						
HHC				LR	LR		
	comp=Z,380nm,13.1s,MS4.4						
WRA	**Warramunga Arr**	43.08	122	P	P	01 02 15.8	+0.3
WRA				*PP	pP	01 02 23.5	+0.4
WRA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WRA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WRA	**Warramunga Arr**	43.08	122	P	P	01 02 15.8	+0.3
	comp=Z,6.9nm,0.6s,mb4.5,baz=300,slow=9.3,SNR=47						
WRA				pP	pP	01 02 23.5	+0.4
	comp=Z,6.1nm,0.6s,baz=302,slow=9.3,SNR=12						
WRAB	**Tennant Creek**	43.09	122	*e*P	P	01 02 15.7	+0.2
WRAB				*e*	pP	01 02 23.5	+0.3
WRAB				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.7						
WRAB	**Tennant Creek**	43.09	122	*e*P	P	01 02 15.7	+0.2
	comp=Z,12nm,0.7s,mb4.7						
WRAB				*e*	pP	01 02 23.5	+0.4
WB2	**Warramunga Arr**	43.09	122	⇓*i*P	P	01 02 15.7	+0.2
DL2	**Dalian**	43.22	29	P	P	01 02 17.1	+0.8
DL2				AP	pP	01 02 24.3	+0.3
DL2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
DL2				LR	LR		
	comp=N,120nm,12.9s,MS4.2						
DL2				LR	LR		
	comp=E,140nm,12.2s,MS4.2						
DL2				LR	LR		
	comp=Z,210nm,18.4s						
UCH	**Uchtor**	44.56	337	P	P	01 02 28.4	+1.3
	SNR=26						
TKM2	**Tokmak 2**	44.74	338	P	P	01 02 29.8	+1.2
	SNR=8.3						
KBK	**Karagaybulak**	44.76	337	P	P	01 02 30.6	+1.8
	SNR=16						
AML	**Almayashu**	44.81	336	P	P	01 02 30.4	+1.2
	SNR=15						
FRU	**Bishkek**	45.04	337	*e*P	P	01 02 32.8	+1.8
EKS2	**Erkin-Say**	45.22	336	P	P	01 02 33.6	+1.1
	SNR=8.6						
USP	**Ospenovka**	45.45	337	P	P	01 02 35.0	+0.8
	SNR=16						
KS15	**Wonju Array Si**	45.48	36	*e*P	P	01 02 34.7	+0.1
MKAR	**Makanchi Array**	46.22	346	P	P	01 02 40.1	-0.1
MKAR				*PP	pP	01 02 48.4	+0.5
MKAR				pmax	pmax		
	comp=Z,20nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,30nm,0.8s						
MKAR	**Makanchi Array**	46.22	346	P	P	01 02 40.1	-0.1
	comp=Z,20nm,0.7s,mb5.1,baz=161,slow=8.0,SNR=155						
MKAR				pP	pP	01 02 48.4	+0.5
	comp=Z,30nm,0.8s,baz=160,slow=6.5,SNR=21						
MKAR				LR	LR	01 27 21.1	
	comp=Z,98nm,18.5s,MS3.8,baz=171,slow=43						
SONM	**Songino Array**	46.36	9	P	P	01 02 41.1	-0.2
	comp=Z,8.3nm,0.8s,mb4.7,baz=189,slow=8.2,SNR=37						
SONM				pP	pP	01 02 49.0	0.0
	comp=Z,8.3nm,0.8s,baz=192,slow=8.1,SNR=18						
ULN	**Ulaanbaatar**	46.50	10	*e*P	P	01 02 42.7	+0.3
ULN				*e*	pP	01 02 49.8	-0.3
ULN				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
ULN				MLR	MLR		
	comp=Z,189nm,19.0s,MS4.1						
ULN	**Ulaanbaatar**	46.50	10	*e*P	P	01 02 42.7	+0.3
	comp=Z,12nm,1.1s,mb4.7						
ULN				*e*	pP	01 02 49.8	-0.3
ULN				LR	LR		
	comp=Z,189nm,19.0s,MS4.1						
ZAK	**Zakamensk**	48.46	6	*e*P	P	01 02 57.0	-0.7
ZAK				*e*		01 04 30.6	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.7						
CN2	**Changchun**	48.83	28	*e*P	P	01 02 59.9	-0.8
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
TLY	**Talaya**	49.78	6	*e*P	P	01 03 16.1	+8.2
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
TLY				MLR	MLR		
	comp=Z,249nm,16.0s,MS4.3						
MJAR	**Matsushiro Arr**	51.50	43	P	P	01 03 21.7	+0.5
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR	**Matsushiro Arr**	51.50	43	P	P	01 03 21.6	+0.4
	comp=Z,1.5nm,0.7s,mb4.1,baz=343,slow=4.8,SNR=6.3						
CIT	**Chita**	51.76	13	*e*P	P	01 03 23.6	+0.6
CIT				*e*	pP	01 03 31.4	+0.6
ZAL	**Zalesovo**	52.57	351	P	P	01 03 28.0	-1.0
ZAL				*PP	pP	01 03 36.5	-0.3
ZAL				pmax	pmax		
	comp=Z,16nm,0.8s						
ZAL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZAL	**Zalesovo**	52.57	351	P	P	01 03 28.0	-1.0
	comp=Z,16nm,0.8s,mb5.0,baz=307,slow=5.9,SNR=86						
ZAL				pP	pP	01 03 36.5	-0.4
	comp=Z,10nm,0.8s,baz=304,slow=6.3,SNR=9.2						
ZAL	**Zalesovo**	52.57	351	P	P	01 03 28.0	-1.0
ZAL				pP	pP	01 03 36.5	-0.4
CTA	**Charters Tower**	53.51	117	*e*P	P	01 03 36.4	0.0
	comp=Z,4.3nm,0.8s,mb4.4						
CTA	**Charters Tower**	53.51	117	*e*P	P	01 03 36.4	0.0
CTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CTA	**Charters Tower**	53.51	117	LR	LR	01 26 58.1	
	comp=Z,130nm,19.4s,MS4.0,baz=49,slow=37						
CTAO	**Charters Tower**	53.51	117	P	P	01 03 35.9	-0.5
CTAO				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
CTAO	**Charters Tower**	53.51	117	P	P	01 03 35.9	-0.5
	comp=Z,15nm,1.2s,mb4.8						
NVS	**Novosibirsk**	53.69	351	⇑*i*P	P	01 03 35.0	-2.3
NVS				*e*S	S	01 11 07.3	-0.7
NVS				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
NVS				pmax	pmax		
	comp=N,19nm,1.3s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.8s						
NVS				smax			
	comp=E,10.0nm,1.7s						
STKA	**Stephens Creek**	54.46	132	*e*P	P	01 03 43.3	+0.1
	comp=E,4.5nm,0.9s,mb4.4						
STKA	**Stephens Creek**	54.46	132	P	P	01 03 43.5	+0.3
	comp=E,7.3nm,1.0s,mb4.5,baz=312,slow=9.8,SNR=4.3						
BVAR	**Borovoye Array**	55.19	341	P	P	01 03 47.0	-1.3
	comp=E,6.8nm,0.8s,mb4.8,baz=135,slow=8.4,SNR=52						
CHKZ	**Chkalovo**	55.67	342	*e*P	P	01 03 50.8	-1.0
CHKZ				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
CHKZ	**Chkalovo**	55.67	342	*e*P	P	01 03 50.8	-1.0
	comp=Z,15nm,0.8s,mb5.1						
KLR	**Kul’dur**	55.77	27	*e*P	P	01 03 49.2	-3.4
KLR				MLR	MLR		
	comp=Z,600nm,15.0s,MS4.8						
ASAJ	**Asahikawa**	58.37	38	P	P	01 04 10.9	-0.1
	comp=Z,10nm,0.8s,mb4.9,baz=207,slow=10.0,SNR=4.5						
ASAJ				LR	LR	01 28 13.0	
	comp=Z,71nm,20.7s,MS3.8,baz=180,slow=35						
KMBO	**Kilima Mbogo**	59.34	267	P	P	01 04 18.9	+0.7
KMBO				*PP	pP	01 04 27.6	+1.4
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KMBO	**Kilima Mbogo**	59.34	267	P	P	01 04 18.9	+0.7
	comp=Z,1.9nm,0.9s,mb4.1,baz=61,slow=11,SNR=3.7						
KMBO				pP	pP	01 04 27.6	+1.4
	comp=Z,2.6nm,0.9s,baz=32,slow=9.0,SNR=4.2						
KMBO				LR	LR	01 26 57.7	
	comp=Z,127nm,18.5s,MS4.1,baz=96,slow=33						
KMBO	**Kilima Mbogo**	59.34	267	P	P	01 04 18.9	+0.7
KMBO				pP	pP	01 04 27.6	+1.4
KMBO				LR	LR	01 26 57.7	
SVE	**Sverdlovsk**	61.61	339	*e*P	P	01 04 32.0	-1.1
SVE				*e*	pP	01 04 41.2	+0.1
SVE				*e*		01 05 11.5	
ARU	**Arti**	62.10	337	⇓*i*P	P	01 04 34.2	-2.2
ARU				*e*		01 05 14.6	
ARU				*e*		01 06 52.9	
ARU				*e*PPP	PPP	01 08 20.9	-3.6
ARU				*e*S	S	01 13 00.8	+2.7
ARU				*e*SS	SS	01 17 05.8	+3.0
ARU				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.1						
ARU	**Arti**	62.10	337	*e*P	P	01 04 34.3	-2.1
	comp=Z,21nm,1.2s,mb5.1						
KIV	**Kislovodsk**	63.19	319	*e*P	P	01 04 51.1	+7.3
KIV				*e*		01 05 07.8	
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
YAK	**Yakutsk**	64.76	17	*e*P	P	01 04 52.8	-1.0

YAK				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.2						
YAK	Yakutsk	64.76	17	eP	P	01 04 52.8	-0.9
	comp=Z,35nm,1.3s,mb5.2						
SOKR	Solikamsk	65.01	339	⇑iP	P	01 04 56.6	+1.2
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
BRTR	Keskin Array B	68.01	312	P	P	01 05 13.8	-1.1
BRTR				*PP	pP	01 05 21.4	-1.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	Keskin Array B	68.01	312	P	P	01 05 13.8	-1.1
	comp=Z,0.5nm,0.7s,mb3.7,baz=135,slow=5.2,SNR=3.6						
BRTR				pP	pP	01 05 21.4	-1.4
	comp=Z,2.2nm,0.8s,baz=124,slow=5.8,SNR=7.6						
VRSR	Storozhevoye	68.44	325	eP	P	01 05 22.6	+5.3
VRSR				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
VRSR				pmax	pmax		
	comp=N,10.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,10.0nm,1.0s						
MOS	Moscow	71.22	329	eP	P	01 05 35.9	+1.7
OBN	Obninsk	71.51	328	eP	P	01 05 34.8	-1.1
OBN				i	pP	01 05 42.0	-1.9
OBN				i		01 05 49.7	
OBN				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
TIXI	Tiksi	72.43	10	eP	P	01 05 37.1	-4.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
SEY	Seymchan	73.22	23	eP	P	01 05 45.9	0.0
SEY				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
SEY				pmax	pmax		
	comp=E,2.0nm,0.6s						
AKASG	Malin Array Be	74.14	322	P	P	01 05 50.3	-1.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	74.14	322	P	P	01 05 50.2	-1.2
	comp=Z,0.8nm,0.5s,mb3.9,baz=92,slow=4.3,SNR=6.4						
BOSA	Boshof	74.63	240	LR	LR	01 37 52.4	
	comp=Z,156nm,18.4s,MS4.3,baz=262,slow=35						
FINES	FINESS Array B	78.90	333	P	P	01 06 17.6	-0.3
	comp=Z,1.6nm,0.7s,mb4.0,baz=117,slow=4.3,SNR=7.6						
FINES				LR	LR	01 46 56.3	
	comp=Z,73nm,18.7s,MS4.0,baz=142,slow=40						
ARCES	ARCESS Array B	81.47	340	P	P	01 06 31.8	+0.3
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	81.47	340	P	P	01 06 31.8	+0.2
	comp=Z,3.0nm,0.9s,mb4.2,baz=56,slow=8.7,SNR=7.0						
ARCES	ARCESS Array B	81.47	340	P	P	01 06 31.8	+0.2
GERES	GERESS Array B	83.70	319	P	P	01 06 43.7	+0.3
GERES				*PP	pP	01 06 52.6	+1.0
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GERES				MLR	MLR		
	comp=Z,39nm,18.9s						
GERES	GERESS Array B	83.70	319	P	P	01 06 43.7	+0.2
	comp=Z,1.4nm,0.8s,mb4.2,baz=90,slow=4.0,SNR=13						
GERES				pP	pP	01 06 52.6	+1.0
	comp=Z,2.9nm,1.0s,baz=90,slow=5.3,SNR=9.4						
GERES				LR	LR	01 47 32.3	
	comp=Z,39nm,18.9s,MS3.8,baz=197,slow=38						
URZ	Urewera	83.90	129	LR	LR	01 44 49.6	
	comp=Z,136nm,19.9s,MS4.3,baz=233,slow=36						
GRA1	Grafenberg Arr	85.36	320	eP	P	01 07 00.6	+8.8
	comp=Z,4.0nm,1.0s,mb4.5						
GRF	Grafenberg Arr	85.36	320	eP	P	01 07 00.6	+8.8
GRF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
NB2	NORSAR Subarra	85.90	331	P	P	01 06 54.5	+0.3
	comp=Z,1.1nm,0.8s,mb4.1,baz=91,slow=4.8						
NOA	NORSAR Array B	85.90	331	P	P	01 06 54.1	-0.1
NOA				*PP	pP	01 07 02.3	-0.1
NOA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
NOA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NOA				MLR	MLR		
	comp=Z,58nm,20.9s						
NOA	NORSAR Array B	85.90	331	P	P	01 06 54.1	0.0
	comp=Z,1.1nm,1.0s,mb4.0,baz=134,slow=2.5,SNR=3.0						
NOA				pP	pP	01 07 02.3	-0.1
	comp=Z,2.8nm,1.0s,baz=92,slow=5.1,SNR=6.6						
NOA				LR	LR	01 49 31.7	
	comp=Z,58nm,20.9s,MS4.0,baz=90,slow=39						
VNDA	Vanda	86.83	169	LR	LR	01 44 57.8	
	comp=Z,55nm,18.3s,MS4.0,baz=125,slow=35						
ILAR	Eielson Array	99.15	23	LR	LR	02 02 36.1	
	comp=Z,68nm,18.1s,MS4.2,baz=358,slow=41						

*IDC **12** 01:26:02.4±0.7, 1.48S×134.16E, mb4.2/8, mb1 4.5/9, mb1mx4.3/16, mbtmp4.3/9, ML4.8/2, MS3.5/4, Ms1 3.5/4, ms1mx3.2/23, Error ellipse: s-maj=36.0km s-min=15.5km az=69.0*

*BJI **12** 01:26:08.8, 1.58S×134.22E, h64^{km}, mB5.0, mb5.0, Ms4.1, Msz4.0*

*NEIC **12** 01:26:10.8±2.1, 1.64S×134.03E, h61^{km}±20^{km}, mb4.6/11, Error ellipse: s-maj=16.0km s-min=9.7km az=57.0*

ISC 12 01:26:08.6±2.2**, 1.71S**±0.06×**134.0E**±0.1**, h57**^{km}±21^{km}**, n35, σ1^{s}29**/33**, mb4.4**/14**, MS3.7**/4**, 1D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	11.04	188	eP	P	01 28 46.2	0.0
	59nm,0.6s						
KAKA				eS	S	01 30 46.2	-2.8
PMG	Port Moresby	15.20	121	Pn	P	01 29 42.3	+1.0
	0.6nm,0.3s,baz=276,slow=10,SNR=5.2						
PMG	Port Moresby	15.20	121	eP	P	01 29 42.4	+1.1
	30nm,1.1s						
WRAB	Tennant Creek	18.12	179	eP	P	01 30 16.9	-1.0
	54nm,0.4s						
WB2	Warramunga Arr	18.13	179	eP	P	01 30 16.7	-1.4
WRA	Warramunga Arr	18.13	179	P	P	01 30 18.2	+0.1
	2.3nm,0.3s,baz=359,slow=12,SNR=89						
WRA				S	S	01 33 35.0	-0.1
	0.3nm,0.3s,baz=358,slow=22,SNR=3.4						
FITZ	Fitzroy Crossi	18.22	206	P	P	01 30 20.1	+0.9
	3.8nm,0.3s,baz=22,slow=11,SNR=55						
FITZ				S	S	01 33 33.7	-3.5
	2.9nm,0.3s,baz=178,slow=14,SNR=5.8						
FITZ				LR	LR	01 37 34.0	
	comp=Z,106nm,20.6s,baz=48,slow=37						
KKM	Kota Kinabalu	19.31	294	P	P	01 30 31.9	0.0
CTA	Charters Tower	21.87	147	eP	P	01 31 00.9	+2.7
	6.9nm,0.9s,mb4.1						
CTA	Charters Tower	21.87	147	P	P	01 30 59.8	+1.6
	4.6nm,0.6s,mb4.1,baz=333,slow=12,SNR=12						
CTAO	Charters Tower	21.87	147	eP	P	01 31 00.9	+2.6
	13nm,0.9s,mb4.4						
MBWA	Marble Bar	23.79	215	eP	P	01 31 19.9	+2.9
	24nm,0.9s,mb4.6						
KSM	Kuching	23.85	277	eP	P	01 31 21.4	+3.7
STKA	Stephens Creek	30.86	167	⇓iP	P	01 32 20.9	-0.9
	8.7nm,0.6s,mb4.8						
STKA	Stephens Creek	30.86	167	P	P	01 32 21.1	-0.7
	10nm,0.6s,mb4.8,baz=341,slow=6.9,SNR=26						
NWAO	Narrogin (SRO)	34.80	205	eP	P	01 32 58.0	+2.1
CMAR	Chiang Mai Arr	39.84	302	P	P	01 33 38.9	+0.5
	4.4nm,0.9s,mb4.2,baz=124,slow=6.5,SNR=16						
KMI	Kunming	40.32	313	P	P	01 33 43.3	+1.1
	8.0nm,0.6s,mb4.6						
LZH	Lanzhou	46.92	326	eP	P	01 34 36.1	+0.6
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
LZH	Lanzhou	46.92	326	eP	P	01 34 36.1	+0.6
	comp=Z,26nm,1.2s,mb5.0						
LZH				pP	pP	01 34 41.9	-8.5
LZH				sP	sP	01 34 43.5	-14
HHC	Hu-ho-hao-te	47.01	337	eP	P	01 34 36.3	+0.2
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,110nm,5.2s						
HHC				LR	LR		
	comp=N,90nm,19.0s,MS4.0						
HHC				LR	LR		
	comp=E,110nm,19.0s,MS4.0						
HHC				LR	LR		
	comp=Z,80nm,9.8s						
ULN	Ulaanbaatar	54.66	338	eP	P	01 35 33.2	-0.8
	comp=Z,1.6nm,0.5s,mb4.3						
SONM	Songino Array	54.89	338	P	P	01 35 34.3	-1.4
	comp=Z,1.7nm,1.0s,mb4.0,baz=143,slow=6.2,SNR=7.7						
SONM				PcP	PcP	01 36 36.2	-0.8
	comp=Z,0.8nm,0.6s,baz=146,slow=3.6,SNR=4.1						
MKAR	Makanchi Array	66.14	324	P	P	01 36 51.6	-0.6
	comp=Z,2.3nm,0.6s,mb4.4,baz=113,slow=8.2,SNR=29						
MKAR				LR	LR	02 05 15.8	
	comp=Z,29nm,18.5s,MS3.5,baz=5.3,slow=36						
ZAL	Zalesovo	68.74	331	P	P	01 37 06.3	-2.0
	comp=Z,0.9nm,0.3s,mb4.2,baz=175,slow=11,SNR=3.6						
ZAL	Zalesovo	68.74	331	P	P	01 37 06.3	-2.0
VNDA	Vanda	77.23	174	P	P	01 37 58.2	+0.4
	comp=Z,1.4nm,1.0s,mb3.9,baz=315,slow=5.0,SNR=4.8						
VNDA	Vanda	77.23	174	eP	P	01 37 58.0	+0.1
	comp=Z,1.4nm,0.9s,mb3.9						
ILAR	Eielson Array	86.92	25	P	P	01 38 46.4	-1.8
	comp=Z,0.8nm,0.8s,mb4.0,baz=259,slow=5.7,SNR=7.8						
QSPA	South Pole Qui	88.23	180	eP	P	01 38 55.5	+1.3
	comp=Z,9.8nm,1.3s,mb4.9						
KMBO	Kilima Mbogo	96.66	269	LR	LR	02 16 09.2	
	comp=Z,37nm,21.3s,MS3.8,baz=130,slow=31						
FINES	FINESS Array B	99.98	332	LR	LR	02 24 53.7	
	comp=Z,23nm,19.6s,MS3.7,baz=174,slow=35						
ROSC	El Rosal	151.60	83	PKPbc	PKPdf	01 45 59.5	+8.3
	comp=Z,2.5nm,0.4s,baz=303,slow=6.1,SNR=3.2						
LPAZ	La Paz	151.80	130	PKPbc	PKPdf	01 46 02.0	+11
	comp=Z,2.9nm,0.8s,baz=288,slow=2.7,SNR=15						
LPAZ	La Paz	151.80	130	ePKPbc	PKPdf	01 46 01.6	+10

*CSEM **12** 01:28:19.0±0.4, 35.48N×1.25W, h30^{km}, mb3.2/7, Error ellipse: s-maj=13.7km s-min=6.4km az=30.0*

*MDD **12** 01:28:21.6±0.6, 35.69N×1.41W, mb3.2/7, Error ellipse: s-maj=8.4km s-min=5.2km az=49.0, PRXIMO*

*NEIC **12** 01:28:21.9±0.7, 35.71N×1.41W, h10^{km}, ML2.7(ALG), Error ellipse: s-maj=11.9km s-min=7.6km az=61.0*

*CRAAG **12** 01:28:27.3, 35.56N×1.22W, Ml2.7*

ISC 12 01:28:21.3±0.7**, 35.73N**±0.04×**1.38W**±0.05**, h10**^{km}**, n18, σ1^{s}46**/29**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ODZI	Dziouia	0.45	165	P	Pg	01 28 29.0	-1.4
OLHC	Oulhaca	0.48	184	P	Pg	01 28 32.0	+1.1
USTO	Oran	0.67	89	P	Pb	01 28 36.0	+1.4
EALB	Alboran	1.36	279	S	Sb	01 29 05.6	+1.8
	7.1nm,0.2s,SNR=4.0						
EALB	Alboran	1.36	279	S	Sb	01 29 05.6	+1.8
	7.1nm,0.2s,SNR=4.0						
ENIJ	Nijar	1.41	332	P	Pn	01 28 47.3	+0.1
	2.7nm,0.2s,SNR=12						
ENIJ				S	Sb	01 29 05.9	+0.7
	7.6nm,0.2s,SNR=13						
EBER	Berja	1.69	314	P	Pn	01 28 52.6	+1.5
	1.3nm,0.2s,SNR=7.9						
EBER				S	Sn	01 29 13.3	+0.3
	4.0nm,0.2s,SNR=4.9						
EBER	Berja	1.69	314	P	Pn	01 28 52.6	+1.5
	1.3nm,0.2s,SNR=7.9						
EBER				S	Sn	01 29 13.3	+0.3
	4.0nm,0.2s,SNR=4.9						
EMUR	La Murta	2.12	3	P	Pn	01 28 56.1	-1.1
	0.4nm,0.1s,SNR=6.5						
EMUR				S	Sn	01 29 18.9	-4.9
	3.7nm,0.2s,SNR=10						
EMUR	La Murta	2.12	3	P	Pn	01 28 56.1	-1.1
	0.4nm,0.1s,SNR=6.5						
EQES	Quesada	2.48	327	P	Pn	01 29 04.3	+1.9
	2.1nm,0.1s,SNR=23						
EQES				S	Sn	01 29 36.0	+3.0
	2.8nm,0.2s,SNR=10						
EQES	Quesada	2.48	327	P	Pn	01 29 04.3	+1.9
	2.1nm,0.1s,SNR=23						
EQES				S	Sn	01 29 36.0	+3.0
	2.8nm,0.2s,SNR=10						
EMIJ	Mijas	2.87	288	P	Pn	01 29 07.1	-1.0
	0.4nm,0.1s,SNR=7.9						
EMIJ				S	Sn	01 29 40.8	-2.2
	0.7nm,0.2s,SNR=7.9						
ETOB	Tobarra	2.92	357	P	Pn	01 29 08.7	0.0
	0.4nm,0.1s,SNR=13						
ETOB				S	Sn	01 29 41.9	-2.2
	2.0nm,0.2s,SNR=7.1						
ETOB	Tobarra	2.92	357	P	Pn	01 29 08.7	+0.1
	0.4nm,0.1s,SNR=13						
EBEN	Beniarda	3.11	17	P	Pn	01 29 11.5	+0.1
	SNR=7.9						
EBEN				S	Sn	01 29 44.7	-4.3
	0.5nm,0.3s,SNR=7.9						
ESPR	Espera	3.79	289	P	Pn	01 29 19.5	-1.6
	0.5nm,0.1s,SNR=7.9						
ESPR				S	Sn	01 30 03.4	-3.0
	0.8nm,0.3s,SNR=7.9						
ESPR	Espera	3.79	289	P	Pn	01 29 19.5	-1.6
ESPR				S	Sn	01 30 03.4	-2.9

*IDC **12** 01:47:03.7±1.4, 1.59N×98.66E, mb4.3/9, mb1 4.5/9, mb1mx4.1/20, mbtmp4.3/9, Error ellipse: s-maj=67.4km s-min=18.2km az=51.0*

*NEIC **12** 01:47:07.3±0.6, 1.27N×98.35E, h30^{km}, mb4.5/3, Error ellipse: s-maj=17.9km s-min=9.4km az=59.0*

ISC 12 01:47:05.6±0.7**, 1.24N**±0.10×**98.3E**±0.1**, h33**^{km}**, n20, σ0^{s}95**/19**, mb4.4**/11**, 1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	4.67	31	⇓iP	P	01 48 16.6	+1.0
CM31	Chiang Mai Arr	17.12	2	eP	P	01 51 04.3	+0.3
	7.0nm,0.3s						
CMAR	Chiang Mai Arr	17.12	2	Pn	P	01 51 04.3	+0.2
	1.2nm,0.3s,baz=190,slow=10,SNR=28						
LSA	Lhasa	29.10	347	eP	P	01 53 06.0	+0.4
	5.1nm,0.4s,mb4.6						
FITZ	Fitzroy Crossi	33.09	127	P	P	01 53 40.2	-0.7
	8.0nm,0.7s,mb4.8,baz=321,slow=3.3,SNR=12						
WRA	Warramunga Arr	41.15	123	P	P	01 54 49.2	+0.5
	7.4nm,0.4s,mb4.7,baz=302,slow=9.0,SNR=54						
WRAB	Tennant Creek	41.16	123	eP	P	01 54 48.4	-0.3
WB2	Warramunga Arr	41.16	123	eP	P	01 54 49.2	+0.4
SONM	Songino Array	46.94	7	P	P	01 55 33.1	-1.9
	0.8nm,0.4s,mb4.0,baz=187,slow=8.7,SNR=4.7						
MKAR	Makanchi Array	47.47	345	P	P	01 55 38.7	-0.5
	3.1nm,0.4s,mb4.6,baz=157,slow=8.3,SNR=55						
ZAL	Zalesovo	53.68	350	P	P	01 56 24.9	-1.5
	3.0nm,0.4s,mb4.6,baz=313,slow=6.6,SNR=19						
BVAR	Borovoye Array	56.57	340	P	P	01 56 46.4	-0.9
	2.6nm,0.6s,mb4.5,baz=153,slow=9.9,SNR=13						
CHKZ	Chkalovo	57.03	341	eP	P	01 56 50.1	-0.6
KIV	Kislovodsk	64.98	319	eP	P	01 57 44.3	-0.3
	5.0nm,0.8s,mb4.6						
BR131	Keskin Array S	69.88	312	P	P	01 58 17.7	+2.4
BRTR	Keskin Array B	69.88	312	P	P	01 58 17.4	+2.1
	0.4nm,0.7s,mb3.5,baz=153,slow=8.3,SNR=3.7						
FINES	FINESS Array B	80.46	332	P	P	01 59 16.4	+0.8
	2.8nm,0.9s,mb4.2,baz=108,slow=5.4,SNR=11						
ARCES	ARCESS Array B	82.86	340	P	P	01 59 28.9	+1.1
	1.2nm,0.8s,mb4.0,baz=108,slow=3.8,SNR=4.2						
ARCES	ARCESS Array B	82.86	340	P	P	01 59 28.9	+1.1
TXAR	Lajitas Array	143.06	33	PKhKP		02 06 36.1	
	0.3nm,0.7s,SNR=2.7						

*IDC **12** 01:47:38.5±5.0, 2.50N×98.47E, mb4.0/9, mb1 4.1/9, mb1mx3.9/19, mbtmp4.0/9, Error ellipse: s-maj=156.4km s-min=39.2km az=114.0*

*NEIC **12** 01:47:43.6±3.1, 2.56N×98.41E, h30^{km}, mb4.1/1, Error ellipse: s-maj=98.8km s-min=22.1km az=113.0*

ISC 12 01:47:43.3±4.5**, 2.7N**±0.4×**98.2E**±0.9**, h30**^{km}**, n14, σ0^{s}59**/14**, mb3.9**/10**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	46.02	345	P	P	01 56 05.7	-0.3
	1.4nm,0.8s,mb4.0,baz=150,slow=9.9,SNR=2.8						
ZAL	Zalesovo	52.21	350	P	P	01 56 53.2	-0.5
	1.4nm,0.5s,mb4.2,baz=324,slow=3.4,SNR=3.3						
ZAL	Zalesovo	52.21	350	P	P	01 56 53.2	-0.5
CHKZ	Chkalovo	55.61	341	eP	P	01 57 17.7	-0.9
	1.5nm,0.7s,mb4.1						
BRTR	Keskin Array B	68.81	312	P	P	01 58 47.7	+0.5
	0.4nm,0.5s,mb3.6,baz=130,slow=8.5,SNR=2.6						
MATP	Matopo	71.99	248	P	P	01 59 06.0	-0.8
	2.6nm,0.9s,mb4.2,baz=94,slow=8.8,SNR=4.4						
MATP	Matopo	71.99	248	P	P	01 59 06.0	-0.8
AKASG	Malin Array Be	74.65	322	P	P	01 59 22.1	+0.3
	1.6nm,0.8s,mb4.0,baz=91,slow=4.7,SNR=6.0						
FINES	FINESS Array B	79.10	332	P	P	01 59 46.1	-0.3
	1.5nm,0.7s,mb4.0,baz=127,slow=9.5,SNR=6.6						
FINES	FINESS Array B	79.10	332	P	P	01 59 46.1	-0.3
ARCES	ARCESS Array B	81.44	340	P	P	01 59 59.1	+0.5
	0.7nm,0.5s,mb3.9,baz=104,slow=5.0,SNR=6.0						
GERES	GERESS Array B	84.31	319	P	P	02 00 14.4	+0.5
	0.1nm,0.5s,mb3.2,baz=108,slow=4.2,SNR=4.5						
NB2	NORSAR Subarra	86.15	331	P	P	02 00 23.7	+1.0
	1.1nm,0.7s,mb4.2,baz=93,slow=4.8						
NOA	NORSAR Array B	86.15	331	P	P	02 00 23.4	+0.7
	1.4nm,0.7s,mb4.3,baz=94,slow=4.9,SNR=6.9						

JMA 12 01:48:12.7±0.1**, 27.18N**×**130.41E, h68**^{km}**, M3.7, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	1.20	341	P	P	01 48 34.1	+0.2
JZK				S	S	01 48 50.0	+0.3
JAM	Amami Oshima	1.42	330	P	P	01 48 36.6	-0.5
JAM				eS	S	01 48 53.3	-1.8
JTK	Tokunoshima	1.43	295	P	P	01 48 37.0	-0.2
JTK				S	S	01 48 55.1	-0.2
JMZ	Minamidaito 2	1.54	152	P	P	01 48 38.6	-0.1
JMZ				S	S	01 48 57.1	-0.7
JOW	Kunigami	1.94	260	P	P	01 48 44.4	+0.3
JOW				eS	S	01 49 06.9	-0.3
JIH	Iheya	2.18	267	P	P	01 48 47.5	0.0
JIH				eS	S	01 49 13.5	+0.2
JJT2	Tamagusuku 2	2.60	247	eS	S	01 49 23.8	0.0
NAH1	Naha	2.62	249	P	P	01 48 53.6	-0.1
NAH1				eS	S	01 49 24.3	-0.1
JNN	Nakanoshima	2.69	350	eS	S	01 49 23.3	-2.9
JAGN	Aguni-jima	2.89	259	P	P	01 48 57.4	-0.1
JAGN				eS	S	01 49 30.5	-0.7
JKC	Kuchinoerabu	3.28	357	eS	S	01 49 37.7	-3.2
JKE	Kume jima 2	3.35	256	P	P	01 49 03.2	-0.8
JKE				eS	S	01 49 41.7	-1.0

*THE **12** 02:11:36.0, 38.71N×22.79E, h7^{km}, ML2.5*

*ATH **12** 02:11:36.6, 38.72N×22.82E, h8^{km}±6^{km}, MD2.6/6*

*NEIC **12** 02:11:36.6, 38.72N×22.81E, h6^{km}, MD2.6(ATH), After ATH.*

*CSEM **12** 02:11:36.2±0.1, 38.70N×22.77E, h5^{km}, MD2.6, Error ellipse: s-maj=2.2km s-min=1.5km az=70.0*

ISC 12 02:11:35.6±0.6**, 38.71N**±0.03×**22.80E**±0.04**, h7**^{km}±6^{km}**, n12, σ0^{s}78**/18**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKR	Lokris	0.17	112	ePG	Pg	02 11 39.5	+0.2
LKR				eSG	Sg	02 11 42.7	+1.0
AGG	Agios Georgios	0.48	310	ePg	Pg	02 11 44.8	-0.4
	comp=Z,6.9nm,0.3s						
AGG				eSg	Sg	02 11 52.2	+0.6
NEO	Neokhori	0.68	29	ePB	Pb	02 11 49.5	+0.2
NEO				eSB	Sb	02 11 58.6	0.0
XOR	Xorichti	0.72	25	ePg	Pg	02 11 50.3	+0.3
XOR				eSg	Sg	02 12 00.1	+0.4
EVR	Evrytania	0.80	285	ePG	Pg	02 11 52.0	+0.4
EVR				eSB	Sb	02 12 03.5	+1.4
MGER	Gerania Oros	0.81	153	ePG	Pg	02 11 51.5	-0.4
MPAR	Parnis Oros	0.93	127	ePN	Pn	02 11 54.5	-0.3
AOS	Alonnisos	0.96	61	ePg	Pg	02 11 54.3	-0.5
AOS				eSg	Sg	02 12 07.9	+0.3
NSAL	Nisos Salamina	0.96	147	ePG	Pg	02 11 54.0	-0.8
NAIG	Nisos Aigina	1.10	150	ePN	Pn	02 11 58.0	+0.7
LIT	Litokhoron	1.41	350	ePg	Pg	02 12 01.6	-2.1
IGT	Igoumenitsa	2.08	294	ePn	Pn	02 12 10.2	-1.2

IDC 12 02:19:37.2±3.4**, 1.94N**×**96.16E, mb3.9**/3**, mb1 4.1**/4**, mb1mx3.7**/19**, mbtmp3.9**/4**, ML4.4**/1**, MS2.8**/1**, Ms1 3.0**/1**, ms1mx2.7**/22**, Error ellipse: s-maj=131.8km s-min=31.2km az=58.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.64	9	Pn	P	02 23 32.4	-1.1
	0.5nm,0.3s,baz=197,slow=12,SNR=4.2						
CMAR				LR	LR	02 31 14.9	
	comp=Z,34nm,18.4s,baz=195,slow=42						
WRA	Warramunga Arr	43.30	122	P	P	02 27 41.1	-1.7
	0.4nm,0.6s,baz=300,slow=9.2,SNR=2.8						
MKAR	Makanchi Array	46.28	347	P	P	02 28 04.4	-1.9
	0.8nm,0.4s,baz=158,slow=8.8,SNR=16						
ZAL	Zalesovo	52.66	352	P	P	02 28 52.9	-2.5
	1.7nm,0.4s,baz=328,slow=3.1,SNR=5.6						

*IDC **12** 02:27:47.7±0.8, 55.61S×123.99W, mb4.3/4, mb1 4.6/4, mb1mx4.1/15, mbtmp4.3/4, MS4.8/15, Ms1 4.8/15, ms1mx4.7/17, Error ellipse: s-maj=43.1km s-min=28.9km az=155.0, Incorrectly calculated travel-time residual on T phase at H03N*

*NEIC **12** 02:27:48.4±0.3, 55.24S×123.84W, h10^{km}, mb4.5/5, MS4.6/1, Error ellipse: s-maj=18.4km s-min=13.9km az=143.0*

ISC 12 02:27:48.3±0.8**, 55.5S**±0.1×**123.9W**±0.3**, h10**^{km}**, n60, σ1^{s}16**/15**, mb4.2**/9**, MS4.8**/16**, 4C, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USHA	Ushuaia	30.99	112	LR	LR	02 43 01.6	
	comp=Z,2μm,21.7s,MS4.7,baz=222,slow=30						
VNDA	Vanda	33.27	202	eP	P	02 34 28.6	+1.4
	2.2nm,1.0s,mb4.0						
RKT	Rikitea	33.35	341	eP	Px	02 34 09.1	
	142nm,25.2s						
RKT				eS	Sx	02 39 33.6	
	772nm,28.8s						
RKT				eLR	LR	02 43 01.0	
	6μm,29.2s,baz=169						
TBI	Tubuai	37.25	319	eP	Px	02 34 40.1	
	150nm,27.8s						
TBI				eS	Sx	02 40 30.9	
	717nm,28.0s						
TBI				eLR	LR	02 44 39.3	
	4μm,29.8s,baz=162						
RPZ	Rata Peaks	42.24	258	LR	LR	02 49 09.0	
	comp=Z,1μm,18.2s,MS4.8,baz=287,slow=30						
URZ	Urewera	42.45	269	LR	LR	02 49 02.2	
	comp=Z,2μm,19.4s,MS4.9,baz=192,slow=30						
PPT	Papeete	42.60	322	eP	Px	02 35 21.2	
	158nm,25.5s						
PPT				eS	Sx	02 41 53.5	
	943nm,25.2s						
PPT				eLR	LR	02 47 08.0	
	5μm,26.2s,baz=164						
PPT	Papeete	42.60	322	LR	LR	02 48 15.0	
	comp=Z,2μm,21.8s,MS5.0,baz=154,slow=29						
RAR	Rarotonga	43.44	307	LR	LR	02 48 37.9	
	comp=Z,2μm,19.6s,MS5.0,baz=153,slow=29						
VNA3	Neumayer Olymp	45.38	156	e	pP	02 36 13.1	+2.2
VNA3	Neumayer Olymp	45.38	156	e	sP	02 36 23.1	+11
VNA3	Neumayer Olymp	45.38	156	⇑iP	P	02 36 08.0	+0.1
VNA3				e		02 36 13.1	
VNA3				e		02 36 23.1	
VNA1	Neumayer--Stat	46.13	155	e	pP	02 36 21.3	+4.5
VNA1	Neumayer--Stat	46.13	155	e	sP	02 36 30.3	+12
VNA1	Neumayer--Stat	46.13	155	⇑iP	P	02 36 15.2	+1.4
VNA1				e		02 36 21.3	
VNA1				e		02 36 30.3	
VNA2	Neumayer--Watz	46.14	156	⇑i	P	02 36 07.1	-6.7
VNA2	Neumayer--Watz	46.14	156	e	pP	02 36 12.5	-4.3
VNA2	Neumayer--Watz	46.14	156	e	sP	02 36 19.6	+1.5
VNA2	Neumayer--Watz	46.14	156	P	P	02 36 07.1	-6.7
VNA2				e		02 36 12.5	
VNA2				e		02 36 19.6	
SNAA	Sanae	46.61	158	⇑i	pP	02 36 21.3	+0.8
SNAA	Sanae	46.61	158	e	sP	02 36 36.4	+15
SNAA	Sanae	46.61	158	P	P	02 36 16.3	-1.2
	0.3nm,0.6s,mb3.4,baz=230,slow=7.8,SNR=3.3						

SNAA	**Sanae**	46.61	158	P	P	02 36 16.3	-1.2
SNAA				e		02 36 36.4	
CASY	**Casey**	51.83	205	eP	P	02 36 57.2	-0.7
	3.1nm,0.9s,mb4.2						
CPUP	**Villa Florida**	55.54	87	LR	LR	02 57 26.8	
	comp=Z,556nm,20.8s,MS4.6,baz=245,slow=32						
MAW	**Mawson**	57.13	183	LR	LR	02 59 39.5	
	comp=Z,2µm,20.3s,MS5.2,baz=166,slow=34						
LPAZ	**La Paz**	57.54	70	P	P	02 37 40.0	-0.2
	3.1nm,1.2s,mb4.2,baz=195,slow=5.8,SNR=5.9						
LPAZ	**La Paz**	57.54	70	eP	P	02 37 39.2	-1.0
	9.0nm,1.2s,mb4.7						
SAML	**Samuel**	66.29	70	eP	P	02 38 35.1	-3.8
	6.7nm,1.3s,mb4.5						
SAML				LR	LR		
	comp=Z,375nm,20.0s,MS4.6						
STKA	**Stephens Creek**	66.79	247	LR	LR	03 03 16.7	
	comp=Z,697nm,18.3s,MS4.9,baz=94,slow=32						
BDFB	**Brasilia**	69.27	88	LR	LR	03 06 45.1	
	comp=Z,818nm,19.8s,MS5.0,baz=216,slow=34						
ROSC	**El Rosal**	72.62	53	LR	LR	03 05 51.9	
	comp=Z,235nm,19.0s,MS4.5,baz=192,slow=31						
WRA	**Warramunga Arr**	80.23	249	P	P	02 39 59.7	-0.8
	comp=Z,3.7nm,1.1s,mb4.2,baz=145,slow=4.9,SNR=8.1						
WRAB	**Tennant Creek**	80.23	249	eP	P	02 40 00.7	+0.3
	comp=Z,6.8nm,0.9s,mb4.6						
PMG	**Port Moresby**	81.73	266	LR	LR	03 12 39.0	
	comp=Z,455nm,18.0s,MS4.9,baz=25,slow=33						
TXAR	**Lajitas Array**	86.23	18	P	P	02 40 32.9	+2.0
	comp=Z,0.1nm,0.3s,mb3.5,baz=197,slow=9.4,SNR=2.9						
TXAR				LR	LR	03 10 59.9	
	comp=Z,235nm,20.6s,MS4.6,baz=60,slow=30						
FITZ	**Fitzroy Crossi**	86.29	243	P	P	02 40 30.6	-0.8
	comp=Z,6.6nm,0.9s,mb4.9,baz=204,slow=4.1,SNR=4.2						
BOSA	**Boshof**	92.18	153	LR	LR	03 15 03.4	
	comp=Z,512nm,21.3s,MS4.9,baz=201,slow=31						
NVAR	**Mina Array Bea**	93.67	4	LR	LR	03 14 19.7	
	comp=Z,493nm,19.6s,MS5.0,baz=170,slow=30						
PDAR	**Pinedale Array**	98.63	11	LR	LR	03 18 19.0	
	comp=Z,426nm,18.8s,MS5.0,baz=208,slow=31						
ILAR	**Eielson Array**	121.21	349	PKP	PKPdf	02 46 39.0	-4.4
	comp=Z,0.2nm,0.5s,baz=198,slow=2.9,SNR=3.0						
RJF	**Les Rejaudoux**	144.62	83	ePKIKP	PKPdf	02 47 23.7	-3.4
	comp=Z,21nm,1.3s						
FLN	**La Foliniere**	145.48	77	ePKIKP	PKPdf	02 47 25.3	-3.2
TCF	**Toulx Ste Croi**	145.59	82	ePKIKP	PKPdf	02 47 25.3	-3.5
BGF	**Bois d'Agland**	146.11	83	ePKIKP	PKPdf	02 47 26.4	-3.2
	comp=Z,15nm,1.0s						
AVF	**Avril sur Loir**	146.53	83	ePKIKP	PKPdf	02 47 26.8	-3.5
	comp=Z,12nm,1.1s						
SMF	**Signal de Mont**	146.72	83	ePKIKP	PKPdf	02 47 26.6	-4.1
	comp=Z,41nm,1.6s						
SSF	**Saint Saulge**	146.77	82	ePKIKP	PKPdf	02 47 27.2	-3.5
	comp=Z,31nm,1.6s						
ORIF	**Oris-en-Rattie**	146.86	87	ePKIKP	PKPdf	02 47 28.3	-2.7
LOR	**Lormes**	147.08	82	ePKIKP	PKPdf	02 47 29.1	-2.2
	comp=Z,17nm,1.2s						
SBF	**Sospel**	147.11	90	ePKIKP	PKPdf	02 47 27.7	-3.7
	comp=Z,46nm,1.0s						
PGF	**Pioggiola**	147.17	93	ePKIKP	PKPdf	02 47 28.9	-2.7
	comp=Z,23nm,1.1s						
LPG	**La Plagne**	147.70	87	ePKIKP	PKPdf	02 47 30.0	-2.3
	comp=Z,20nm,1.2s						
CABF	**La Chapelle**	147.97	85	ePKIKP	PKPdf	02 47 30.4	-2.3
	comp=Z,21nm,1.3s						
ULN	**Ulaanbaatar**	148.13	278	PKPbc	PKPdf	02 47 34.8	+1.8
SONM	**Songino Array**	148.49	277	PKPbc	PKPdf	02 47 35.4	+1.9
	comp=Z,0.3nm,0.3s,baz=63,slow=6.4,SNR=3.5						
GRA1	**Grafenberg Arr**	152.52	83	ePKP	PKPdf	02 47 51.3	+12
GRF	**Grafenberg Arr**	152.52	83	ePKP	PKPdf	02 47 51.3	+12
GERES	**GERESS Array B**	153.50	87	PKPbc	PKPdf	02 47 47.4	+6.5
	comp=Z,0.3nm,0.5s,baz=135,slow=1.9,SNR=5.0						
MKAR	**Makanchi Array**	161.50	253	PKPab	PKPab	02 48 34.2	-0.6
	comp=Z,0.7nm,0.9s,baz=113,slow=5.5,SNR=3.3						

*MOS **12** 03:19:27.5±1.6, 43.07N×44.92E, h7^{km}, mb3.6/1, Error ellipse: s-maj=18.4km s-min=13.3km az=6.6*
*TIF **12** 03:19:28.6, 43.09N×44.89E, h5^{km}± 1^{km}*
ISC 12 03:19:29.0±1.3**, 43.18N**±0.06×**45.02E**±0.09**, h5**^{km}**, n10, σ1^{s}09**/16**, 1C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARNR	**Ardon**	0.54	271	ePG	Pg	03 19 40.2	+0.4
ARNR				i S	Sg	03 19 48.4	+1.4
ZEI	**Tsey**	0.92	244	ePG	Pg	03 19 43.4	-3.9
ZEI				i		03 19 54.8	
DUS	**Dusheti**	1.11	192	P	Pb	03 19 49.6	-0.7
ONI	**Oni**	1.30	243	P	Pb	03 19 51.4	-2.1
ONI				S	Sb	03 20 09.2	-1.2
TI2	**Plekhanov**	1.46	188	ePG	Pg	03 19 50.0	-8.1
TBLG	**Delisi**	1.46	188	P	Pn	03 19 55.9	-0.2
MTA	**Mtatsminda**	1.49	186	P	Pn	03 19 56.0	-0.5
MTA				S	Sb	03 20 18.0	+2.0
DGRG	**David-gareji**	1.75	171	P	Pn	03 20 01.4	+1.2
DGRG				S	Sn	03 20 28.3	+5.2
SHAR	**Shatzhatmas**	1.80	289	⇑ePN	Pn	03 20 00.2	-0.8
SHAR				i S	Sn	03 20 24.9	+0.4
KIV	**Kislovodsk**	1.86	295	⇓iPN	Pn	03 20 01.9	0.0
KIV				i S	Sn	03 20 26.6	+0.5

*NAO **12** 03:29:43.6±1.2, 67.67N×33.69E, ML2.3*
*IDC **12** 03:29:44.1±2.5, 67.80N×33.85E, mb1 3.3/4, mb1mx3.1/23, mbtmp3.3/4, ML2.8/4, Error ellipse: s-maj=25.5km s-min=9.6km az=75.0*
HEL 12 03:29:44.6±0.4**, 67.84N×33.08E, ML1.9, ML2.3**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	0.24	188	i P	Pg	03 29 48.5	-0.8
APA0				i S	Sg	03 29 52.7	+0.2
APA0				eRG		03 29 54.4	
APA0	**Apatity Array**	0.24	188	Pg	Pg	03 29 48.5	-0.8
	baz=76,slow=16						
APA0				Lg		03 29 52.7	
	baz=50,slow=37						
APA0				Rg		03 29 54.4	
KU4	**Liikasenvaara**	2.02	224	ePG	Pg	03 30 20.3	-4.5
KU4				eS	Sn	03 30 45.5	-1.0
MSF	**Maaselka**	2.51	221	eP	Pn	03 30 27.0	-0.2
MSF				eSG	Sg	03 31 01.1	-7.0
MSF				MSG		03 31 06.6	
	comp=Z,4.5nm,0.1s						
SGF	**Sodankyl**	2.54	264	ePB	Pb	03 30 28.6	-2.1
SGF				eSG	Sg	03 31 02.5	-6.6
SGF				MSG		03 31 10.2	
	comp=Z,3.7nm,0.2s						
KEV	**Kevo**	2.93	314	ePB	Pb	03 30 35.6	-1.9
KEV				eSB	Sb	03 31 12.1	-1.9
ARA0	**ARCESS Array S**	3.25	305	Pn	Pn	03 30 39.4	+1.6
	baz=122,slow=14						
ARA0				Sn	Sn	03 31 20.4	+2.6
	baz=118,slow=28						
ARA0				Lg		03 31 35.1	
	baz=103,slow=37						
ARA0	**ARCESS Array S**	3.25	305	ePB	Pb	03 30 39.4	-3.5
ARA0				eSB	Sb	03 31 20.4	-2.9
ARA0				e		03 31 35.1	
ARCES	**ARCESS Array B**	3.25	305	Pn	Pn	03 30 39.3	+1.5
	comp=Z,1.7nm,0.3s,baz=113,slow=14,SNR=93						
ARCES				Pg	Pg	03 30 47.3	-2.1
	comp=Z,1.4nm,0.3s,baz=115,slow=15,SNR=13						
ARCES				Sn	Sn	03 31 20.9	+3.2
	comp=Z,2.8nm,0.3s,baz=119,slow=25,SNR=20						
ARCES				Lg		03 31 32.7	
	comp=Z,6.0nm,0.3s,baz=114,slow=30,SNR=16						
OUL	**Oulu**	3.99	230	eP	Pn	03 30 46.9	-1.5
OUL				eSB	Sb	03 31 43.3	-1.6
KJN	**Kajaani**	4.36	213	eP	Pn	03 30 50.8	-2.8
KJN				eS	Sn	03 31 40.8	-5.2
KIF	**Kilpisjarvi**	4.68	290	eP	Pn	03 30 57.7	-0.5
KIF				eS	Sn	03 31 50.0	-4.1
FIA0	**FINESS Array S**	7.08	208	Pn	Pn	03 31 26.9	-5.2
	baz=20,slow=16						
FIA0				Sn	Sn	03 32 45.4	-8.9
	baz=42,slow=28						
FIA0				Lg		03 33 22.4	
	baz=23,slow=28						
FIA0	**FINESS Array S**	7.08	208	eP	Pn	03 31 26.9	-5.2
FIA0				eS	Sn	03 32 45.4	-8.9
FIA0				eSG	Sg	03 33 22.4	-18
FINES	**FINESS Array B**	7.08	208	Pn	Pn	03 31 26.9	-5.2
	comp=Z,0.1nm,0.3s,baz=23,slow=14,SNR=6.0						
FINES				Sn	Sn	03 32 48.0	-6.3
	comp=Z,0.3nm,0.3s,baz=27,slow=24,SNR=7.6						
FINES				Lg		03 33 19.0	
	comp=Z,0.9nm,0.3s,baz=39,slow=24,SNR=9.3						
SPA0	**Spitsbergen Ar**	11.40	343	Pn	P	03 32 27.3	-4.2
	baz=140,slow=14						
SPA0	**Spitsbergen Ar**	11.40	343	eP	P	03 32 27.3	-4.2
HFS	**Hagfors**	11.44	237	Pn	P	03 32 27.8	-4.4
	baz=54,slow=18						
HFS				Sn	S	03 34 32.3	-10
	baz=61,slow=28						
HFS				Lg		03 35 43.1	
	baz=36,slow=22						
HFS	**Hagfors**	11.44	237	eP	P	03 32 27.8	-4.4
HFS				eS	S	03 34 32.3	-10
HFS				e		03 35 43.1	
HFS	**Hagfors**	11.44	237	Pn	P	03 32 27.8	-4.3
	comp=Z,0.0nm,0.3s,baz=50,slow=11,SNR=2.8						
HFS				Sn	S	03 34 32.4	-9.4
	comp=Z,0.0nm,0.3s,baz=54,slow=25,SNR=3.2						
HFS				Lg		03 35 45.4	
	comp=Z,0.0nm,0.3s,baz=58,slow=27,SNR=3.4						
NB2	**NORSAR Subarra**	11.59	244	Pn	P	03 32 30.4	-3.7
	baz=49,slow=11						
NB2				Sn	S	03 34 47.1	+1.8
	baz=30,slow=28						
NB2				Lg		03 35 52.0	
	baz=50,slow=28						
NB2	**NORSAR Subarra**	11.59	244	eP	P	03 32 30.4	-3.7
NB2				e		03 34 47.1	
NB2				e		03 35 52.0	
NOA	**NORSAR Array B**	11.59	244	Pn	P	03 32 30.8	-3.2
	comp=Z,0.1nm,0.3s,baz=46,slow=11,SNR=2.7						

*BJI **12** 03:42:33.3, 26.57N×96.20E, h88^{km}, mb4.9*
*NEIC **12** 03:42:33.4±1.0, 26.45N×96.25E, h91^{km}±9^{km}, mb4.1/2, Error ellipse: s-maj=13.3km s-min=9.0km az=55.0*
*IDC **12** 03:42:35.6±3.6, 26.41N×96.26E, h114^{km}±35^{km}, mb3.7/13, mb1 3.9/14, mb1mx3.7/23, mbtmp4.0/14, Error ellipse: s-maj=28.9km s-min=14.3km az=59.0*
ISC 12 03:42:32.2±0.6**, 26.46N**±0.05×**95.98E**±0.05**, h94**^{km}±5^{km}**, n32, σ1^{s}31**/41**, mb4.0**/14**, 1D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKP	**Lekhapani**	0.88	5	eP	P	03 42 52.0	+0.9
LKP				eS	S	03 43 04.0	-1.2
IMP	**Imphal**	2.49	228	ePG	P	03 43 13.0	+1.2
IMP				ex	x	03 43 19.0	
IMP				eSG	S	03 43 42.0	+0.7
SHL	**Shillong**	3.79	257	⇓iP	P	03 43 31.0	+1.3
SHL				i S	S	03 44 13.5	+0.1
LSA	**Lhasa**	5.35	308	P	P	03 43 55.0	+3.9
LSA				S	S	03 44 56.0	+4.1
LSA				Smax			
	comp=N,80nm,0.9s						
LSA				Smax			
	comp=E,170nm,0.9s						
LSA	**Lhasa**	5.35	308	eP	P	03 43 54.9	+3.8
LSA				eS	S	03 44 52.0	+0.1
CMAR	**Chiang Mai Arr**	8.42	160	P	P	03 44 33.5	+0.3
	comp=E,1.0nm,0.3s,baz=336,slow=13,SNR=32						
GUN	**Gumba**	9.11	281	eP	P	03 44 43.4	+1.0
	comp=E,83nm,0.3s						
GUN				eS	S	03 46 22.2	-1.8
PKI	**Pulchoki**	9.49	279	eP	P	03 44 47.6	0.0
	comp=E,66nm,0.5s						
PKI				eS	S	03 46 29.3	-3.9
KKN	**Kakani**	9.62	280	eP	P	03 44 49.6	+0.1
	comp=E,178nm,0.8s						
KKN				eS	S	03 46 33.9	-2.6
DMN	**Daman**	9.76	279	eP	P	03 44 51.0	-0.3
	comp=E,20nm,0.3s						
GKN	**Gorkha**	10.21	281	eP	P	03 44 57.4	0.0
	comp=E,102nm,0.4s						
GKN				eS	S	03 46 47.4	-3.2
KOLN	**Koldanda**	11.11	280	eP	P	03 45 08.1	-1.3
	comp=E,36nm,0.5s						
KOLN				eS	S	03 47 07.0	-5.1
LZH	**Lanzhou**	11.71	33	eP	P	03 45 14.5	-3.0
LZH				AP		03 45 20.5	
LZH				AMB	AMB		
	comp=Z,20nm,1.0s						
LZH	**Lanzhou**	11.71	33	eP	P	03 45 14.5	-3.0
	comp=Z,28nm,1.0s						
LZH				pP		03 45 20.5	
LZH				sP		03 45 23.5	
SONM	**Songino Array**	22.85	18	P	P	03 47 27.8	0.0
	comp=Z,0.9nm,0.4s,mb3.4,baz=198,slow=11,SNR=4.9						
MKAR	**Makanchi Array**	23.01	335	P	P	03 47 32.7	+3.3
	comp=Z,1.3nm,0.4s,mb3.6,baz=140,slow=10.0,SNR=27						
BVAR	**Borovoye Array**	32.70	331	P	P	03 48 59.2	+1.7
	comp=Z,0.6nm,0.4s,mb3.7,baz=135,slow=10,SNR=5.1						
CHKZ	**Chkalovo**	33.06	332	eP	P	03 49 02.2	+1.6
FITZ	**Fitzroy Crossi**	52.84	144	P	P	03 51 37.6	-2.9
	comp=Z,5.4nm,1.1s,mb4.5,baz=349,slow=15,SNR=4.4						
BR131	**Keskin Array S**	52.91	301	eP	P	03 51 41.1	+0.3
	comp=Z,0.5nm,0.4s,mb3.9						
BRTR	**Keskin Array B**	52.91	301	P	P	03 51 41.5	+0.6
	comp=Z,0.9nm,0.7s,mb3.9,baz=116,slow=8.2,SNR=6.4						
AKASG	**Malin Array Be**	55.46	315	P	P	03 51 58.9	-0.4
	comp=Z,3.0nm,0.5s,mb4.6,baz=78,slow=6.7,SNR=23						
FINES	**FINESS Array B**	57.54	328	P	P	03 52 13.9	0.0
	comp=Z,1.6nm,0.7s,mb4.2,baz=117,slow=4.3,SNR=8.3						
MLR	**Muntele Rosu**	57.97	309	P	P	03 52 18.6	+1.5
	comp=Z,2.7nm,0.6s,mb4.5,baz=322,slow=4.9,SNR=6.2						
ARCES	**ARCESS Array B**	58.65	337	P	P	03 52 22.6	+1.1
	comp=Z,1.2nm,0.9s,mb3.9,baz=76,slow=3.7,SNR=3.1						
WRA	**Warramunga Arr**	59.27	137	P	P	03 52 24.4	-2.0
	comp=Z,1.0nm,0.5s,mb4.1,baz=327,slow=7.5,SNR=8.5						
WRAB	**Tennant Creek**	59.27	137	eP	P	03 52 23.8	-2.6
	comp=Z,1.7nm,0.5s,mb4.3						
KMBO	**Kilima Mbogo**	62.83	254	P	P	03 52 51.0	+0.4
	comp=Z,0.8nm,0.5s,mb3.9,baz=49,slow=13,SNR=4.9						
NB2	**NORSAR Subarra**	64.73	328	P	P	03 53 02.1	-0.2
	comp=Z,1.1nm,0.5s,mb3.9,baz=82,slow=6.5						
NOA	**NORSAR Array B**	64.73	328	P	P	03 53 02.4	+0.1
	comp=Z,1.2nm,0.5s,mb4.0,baz=81,slow=6.5,SNR=6.4						
GERES	**GERESS Array B**	65.65	314	P	P	03 53 09.3	+0.9
	comp=Z,1.6nm,0.7s,mb4.0,baz=69,slow=5.8,SNR=17						
BDFB	**Brasilia**	144.82	281	PKPbc	PKPbc	04 02 00.3	+1.5
	comp=Z,1.5nm,0.7s,baz=346,slow=4.4,SNR=3.0						

*NIED **12** 04:07:00, 31.30N×131.50E, h32^{km}, Mw3.8 Best double couple: M$_0$6.37×10^{14} NP1:ϕ_s61°, δ81°, λ25°. NP2:ϕ_s326°, δ65°, λ170°.*
*JMA **12** 04:07:08.5, 31.27N×131.50E, h38^{km}±1^{km}, M3.9*
JMA Felt I J1.
*IDC **12** 04:07:09.5±2.6, 31.05N×131.72E, h86^{km}±53^{km}, mb3.4/2, mb1 3.4/4, mb1mx3.1/22, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=92.0km s-min=20.9km az=129.0*
ISC 12 04:07:07.1±0.9**, 31.21N**±0.04×**131.58E**±0.08**, h38**^{km}**, n13, σ0^{s}92**/19**, mb3.6**/2**, 4C-5D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNAR	**Kushima--Naru**	0.41	320	⇓P	P	04 07 16.8	+0.2
JNAR				S	S	04 07 22.5	-0.7
JTSR	**Tashiro 2**	0.57	266	⇑P	P	04 07 19.2	+0.5
JTSR				S	S	04 07 27.0	0.0
JTN	**Tanegashima 3**	0.76	223	⇓P	P	04 07 23.3	+2.0
JTZ	**Takazaki**	0.81	329	⇓P	P	04 07 22.4	+0.4
JTZ				S	S	04 07 32.8	-0.2
JSU	**Suzuyama**	1.01	287	⇑P	P	04 07 25.3	+0.4
JTSN	**Tsuno**	1.03	356	⇓P	P	04 07 25.6	+0.4
JTSN				S	S	04 07 38.5	-0.2
JZO	**Okuchi**	1.25	318	⇑P	P	04 07 28.6	+0.3
JZO				S	S	04 07 44.3	+0.1
JKC	**Kuchinoerabu**	1.41	238	⇓P	P	04 07 31.7	+1.1
JIU2	**Izumi 2**	1.48	334	⇑P	P	04 07 32.2	+0.5
JOW	**Kunigami**	5.24	214	P	P	04 08 24.2	-0.7
	11nm,0.3s,baz=88,slow=18,SNR=17						
JOW				S	S	04 09 23.6	-1.4
	3.7nm,0.3s,baz=137,slow=28,SNR=2.7						
MJAR	**Matsushiro Arr**	7.66	44	P	P	04 08 59.1	+0.3
	0.2nm,0.3s,baz=212,slow=16,SNR=3.2						
SONM	**Songino Array**	25.39	318	P	P	04 12 30.3	-2.1
	1.5nm,0.8s,mb3.5,baz=136,slow=9.3,SNR=7.3						
FINES	**FINESS Array B**	69.99	330	P	P	04 18 13.0	-3.2
	0.4nm,0.5s,mb3.6,baz=72,slow=6.0,SNR=5.1						

*ISK **12** 04:11:08.5, 39.08N×25.42E, h32^{km}, MD3.4*
*ATH **12** 04:11:09.4, 39.02N×25.62E, h23^{km}±5^{km}, MD3.2/5*
*NEIC **12** 04:11:09.8, 39.04N×25.65E, h26^{km}, MD3.2(ATH), After ATH.*
*CSEM **12** 04:11:10.4±0.2, 39.08N×25.67E, h40^{km}, MD3.2, Error ellipse: s-maj=4.9km s-min=3.2km az=74.0*
ISC 12 04:11:09.4±0.6**, 39.05N**±0.03×**25.61E**±0.04**, h20**^{km}±7^{km}**, n23, σ1^{s}05**/29**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	0.55	69	ePN	Pn	04 11 20.3	-1.7
PRK				eSN	Sn	04 11 29.2	-1.4
AYVA	**Ayvalik**	0.88	73	i P	Pb	04 11 26.5	+0.7
AYVA				i S	Sb	04 11 39.0	+1.9
LIA	**Limnos Island**	0.91	339	ePN	Pn	04 11 27.0	-0.1
EZN	**Ezine**	0.95	35	PG	Pb	04 11 26.9	-0.1
EZN				SG	Sb	04 11 40.3	+1.1
URLA	**Izmir**	1.03	132	i P	Pb	04 11 27.0	-1.5
URLA				i S	Sb	04 11 41.4	-0.2
IZM	**Izmir**	1.45	116	ePN	Pn	04 11 35.7	+0.8
IZM				eSN	Sn	04 11 54.3	+0.9
KDAG	**Bornova**	1.45	116	i P	Pn	04 11 38.3	+3.5
KDAG				i S	Sn	04 11 53.6	+0.3
CANB	**Canakkale**	1.48	49	ePN	Pn	04 11 35.0	-0.2
LPK	**Lapseki**	1.59	33	ePN	Pn	04 11 36.3	-0.6
SMG	**Samos**	1.65	144	ePN	Pn	04 11 38.3	+0.6
BALB	**Balikesir**	1.85	71	ePN	Pn	04 11 41.3	+0.6
APE	**Apeiranthos**	1.98	182	ePN	Pn	04 11 40.6	-1.9
APE	**Apeiranthos**	1.98	182	ePb	Pb	04 11 42.8	-1.8
NSAL	**Nisos Salamina**	2.04	237	ePN	Pn	04 11 45.0	+1.7
NSAL	**Nisos Salamina**	2.04	237	ePb	Pb	04 11 45.8	+0.2
RDO	**Rodhopi**	2.09	358	ePB	Pb	04 11 45.7	-0.8
NAIG	**Nisos Aigina**	2.11	233	ePN	Pn	04 11 46.0	+1.7
NAIG	**Nisos Aigina**	2.11	233	ePb	Pb	04 11 47.0	+0.2
MRMT	**Marmara Adasi**	2.18	44	ePN	Pn	04 11 44.4	-0.8
BNT	**Bandirma**	2.21	53	ePN	Pn	04 11 45.0	-0.7
KCT	**Karacabey**	2.44	59	ePN	Pn	04 11 49.4	+0.4
ORLT	**Orhaneli**	2.73	68	PN	Pn	04 11 52.5	-0.6
YLV	**Yalova**	3.27	61	ePN	Pn	04 12 01.3	+0.5

*SKHL **12** 04:17:08.1±0.5, 52.86N×144.18E, h14^{km}±4^{km}, mb5.5/12, Ms5.5/6, msh5.7/2, (II-III) at Vostochnoe; (II) at Ehabi, Moskalvo, Nogliki, Nysh*
SKHL Felt (IV-V) at Val; (III-IV) at Okha, Sabo, Piltun; (III) at Lagury;.
*BJI **12** 04:17:12.4, 52.65N×143.85E, h14^{km}, mB5.8, mb5.4, Ms5.9, Msz5.8*
*MOS **12** 04:17:12.7±0.8, 52.77N×143.84E, h16^{km}, mb5.8/143, MS5.3/56, Error ellipse: s-maj=6.5km s-min=3.1km az=101.5*
MOS Felt (IV-V) at Val; (III-IV) at Okha, Sabo, Pil'tun; (III) at Laguri; (II-III) at Vostochnyy; (II) at Moskal'vo, Nysh, Nogliki, Ekhabi.
*BGS **12** 04:17:13.8, 52.79N×143.87E, h10^{km}, mb5.5*
*HRVD **12** 04:17:13.5±0.1, 52.85N×143.92E, h15^{km}, MW5.5/65, Centroid moment Tensor Solution. LP body waves: s61,c117; Mantle waves: s65,c146; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.32±.03; M$_{\theta\theta}$0.35±.03; M$_{\phi\phi}$-1.67±.02; M$_{r\theta}$0.45±.08; M$_{\theta\phi}$0.23±.02; M$_{\phi r}$1.09±.07; Best double couple: M$_0$1.936×10^{17} NP1:ϕ_s151°, δ32°, λ53°. NP2:ϕ_s13°, δ65°, λ110°. Principal axes: T 1.845, Plg64°, Azm317°; N .184, Plg18°, Azm184°; P -2.028, Plg18°, Azm88°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **12** 04:17:13.5±0.1, 52.79N×143.87E, h10^{km}, mb5.6/220, MS5.1/113, MW5.6 Error ellipse: s-maj=3.1km s-min=2.0km az=172.0, Moment Tensor Solution. s32 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.86; M$_{\theta\theta}$-0.42; M$_{\phi\phi}$-0.45; M$_{r\theta}$0.54; M$_{\theta\phi}$-0.95; M$_{\phi r}$2.81; Best double couple: M$_0$3.1×10^{17} NP1:ϕ_s256°, δ18°, λ152°. NP2:ϕ_s13°, δ82°, λ74°. Principal axes: T 3.1, Plg51°, Azm265°; N .01, Plg16°, Azm16°; P -3.12, Plg35°, Azm117°;*
NEIC Felt [V] at Val; [IV] at Okha, Pil'tun and Sabo; [III] at Laguri and Vostochnyy; [II] at Ekhabi, Moskal'vo, Nogliki and Nysh.
*IDC **12** 04:17:13.9±3.9, 52.79N×143.88E, h13^{km}±24^{km}, mb5.1/22, mb1 5.2/26, mb1mx5.2/27, mbtmp5.2/26, ML4.7/4, MS5.1/19, Ms1 5.1/19, ms1mx5.1/21 Error ellipse: s-maj=13.5km s-min=11.1km az=121.0*
ISC 12 04:17:12.8±0.1**, 52.76N**±0.02×**143.89E**±0.03**, h17**^{km}**, h17**^{km}±1.7^{km}**:pP-P, n1096, σ0^{s}86**/1097**, mb5.5**/292**, MS5.2**/166**, 304C-26D, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKH	**Okha**	0.98	324	⇑iPg	Pb	04 17 29.0	-1.9
OKH				eSg	Sb	04 17 43.0	-0.3
OKH				eSg	Sb	04 17 43.8	+0.5
NKL	**Nikolayevsk**	1.98	283	⇑iPn	Pn	04 17 42.0	-4.1
NKL				⇑iPn	Pn	04 17 42.0	-4.1
NKL				AMB	AMB	04 17 46.0	
	3µm,4.0s						
NKL				AMB	AMB	04 17 46.0	
	18µm,4.0s						
NKL				AMB	AMB	04 17 46.0	
	19µm,4.0s						
NKL				ePg	Pn	04 17 50.6	+4.5
NKL				AMB	AMB	04 17 50.8	
	56µm,0.6s						
NKL				eSn	Sn	04 18 08.0	-2.7
NKL				eSg	Sn	04 18 20.0	+9.3
TYV	**Tymovskoe**	2.05	202	⇑iPn	Pn	04 17 43.7	-3.4
TYV				⇑iPn	Pn	04 17 43.7	-3.4
TYV				AMB	AMB	04 17 46.5	
	9µm,5.0s						
TYV				ePb	Pb	04 17 47.5	-1.8
TYV				ePb	Pb	04 17 48.0	-1.3
TYV				ePg	Pn	04 17 51.5	+4.4
TYV				AMB	AMB	04 17 57.5	
	10µm,2.0s						
TYV				eSg	Sn	04 18 22.0	+9.5
UGL	**Uglegorsk**	3.87	198	⇑iPN	Pn	04 18 12.5	-0.5
UGL				e		04 19 09.0	
UGL				pmax	pmax		
	comp=Z,2µm,1.0s						
UGL				pmax	pmax		
	comp=N,823nm,0.9s						
UGL				pmax	pmax		
	comp=Z,1µm,0.9s						
UGL				pmax	pmax		
	comp=E,554nm,0.8s						
UGL	**Uglegorsk**	3.87	198	⇑iPn	Pn	04 18 12.5	-0.5
UGL				⇑iPn	Pn	04 18 12.5	-0.5
UGL				AMB	AMB	04 18 18.0	
	comp=E,2µm,1.0s						
UGL				AMB	AMB	04 18 18.5	
	comp=E,820nm,0.8s						
UGL				AMB	AMB	04 18 18.5	
	comp=E,550nm,0.8s						
UGL				AMB	AMB	04 18 18.5	
	comp=E,1µm,0.8s						
UGL				ePb	Pb	04 18 20.0	-0.2
UGL				ePg	Pn	04 18 28.0	+15
UGL				⇑iPg	Pn	04 18 29.0	+16
UGL				AMB	AMB	04 18 35.0	
	comp=E,2µm,0.8s						
UGL				AMB	AMB	04 18 35.0	
	comp=E,2µm,0.8s						
UGL				AMB	AMB	04 18 35.0	
	comp=E,2µm,0.8s						
UGL				AMB	AMB	04 18 36.0	
	comp=E,4µm,2.0s						
UGL				AMB	AMB	04 18 36.0	
	comp=E,6µm,2.0s						
UGL				AMB	AMB	04 18 36.0	
	comp=E,9µm,2.0s						
UGL				erx	rx	04 18 45.0	
UGL				erx	rx	04 18 48.0	
UGL				eSn	Sn	04 18 57.5	-1.0
UGL				A		04 19 02.0	
	comp=E,113nm,0.6s						
UGL				A		04 19 02.0	
	comp=E,5µm,0.6s						

UGL				A		04 19 02.0	
	comp=E,2µm,0.9s						
UGL				A		04 19 04.0	
	comp=E,10µm,2.0s						
UGL				A		04 19 04.0	
	comp=E,16µm,2.0s						
UGL				A		04 19 04.0	
	comp=E,11µm,2.0s						
UGL				*i* Sb	**Sb**	**04 19 07.2**	**+0.1**
UGL				*i* Sg	Sn	04 19 24.0	+25
UGL				A		04 19 30.0	
	comp=E,13µm,1.1s						
UGL				A		04 19 30.0	
	comp=E,7µm,1.1s						
GRNR	**Gornyy**	**5.05**	**250**	*e*Pn	**Pn**	**04 18 24.6**	**-5.2**
GRNR				AMB	AMB	04 18 26.1	
	comp=E,160nm,1.0s						
GRNR				AMB	AMB	04 18 26.1	
	comp=E,170nm,1.0s						
GRNR				pP		04 18 28.4	
GRNR				*e*Pg	Pn	04 18 51.0	+21
GRNR				AMB	AMB	04 18 52.5	
	comp=E,680nm,1.0s						
GRNR				AMB	AMB	04 18 52.5	
	comp=E,2µm,1.0s						
GRNR				AMB	AMB	04 18 52.5	
	comp=E,1µm,1.0s						
GRNR				*e*Sn	**Sn**	**04 19 27.0**	**-1.4**
GRNR				A		04 19 34.0	
	comp=E,3µm,1.0s						
GRNR				*e*Sb	**Sb**	**04 19 37.5**	**-3.8**
GRNR				*e*Sg	Sn	04 20 03.0	+35
YSS	**Yuzh-Sakhalins**	**5.86**	**188**	⇓*i*PN	**Pn**	**04 18 39.9**	**-1.3**
YSS				pmax	pmax		
	comp=Z,160nm,0.6s						
YSS				MLR	MLR		
	comp=Z,44µm,12.0s						
YSS				MLR	MLR		
	comp=N,41µm,11.0s						
YSS				MLR	MLR		
	comp=E,24µm,13.0s						
YSS	**Yuzh-Sakhalins**	**5.86**	**188**	*e*P	**Pn**	**04 18 39.0**	**-2.2**
	comp=E,999nm,1.0s						
YSS	**Yuzh-Sakhalins**	**5.86**	**188**	⇓*i*Pn	**Pn**	**04 18 39.9**	**-1.3**
YSS				⇑*e*Pn	**Pn**	**04 18 39.9**	**-1.3**
YSS				AMB	AMB	04 18 42.0	
	comp=E,160nm,0.6s						
YSS				AMB	AMB	04 18 44.0	
	comp=E,1µm,6.0s						
YSS				AMB	AMB	04 18 44.0	
	comp=E,500nm,6.0s						
YSS				pP		04 18 44.3	
YSS				sP		04 18 49.9	
YSS				*e*Pb	**Pb**	**04 18 56.0**	**+1.7**
YSS				⇑*i*Pg	Pn	04 19 06.9	+26
YSS				AMB	AMB	04 19 07.8	
	comp=E,1µm,1.0s						
YSS				*e*Sn	**Sn**	**04 19 47.2**	**-1.6**
YSS				A		04 19 48.0	
	comp=E,1µm,0.8s						
YSS				A		04 19 57.0	
	comp=E,4µm,4.0s						
YSS				*i* Sb	**Sb**	**04 20 03.5**	**-1.3**
YSS				*i* Sg	Sn	04 20 28.4	+40
YSS				A		04 20 35.0	
	comp=E,680nm,1.0s						
YSS				A		04 20 35.0	
	comp=E,1µm,1.0s						
YSS				A		04 20 35.6	
	comp=E,18µm,4.0s						
YSS				AMS	AMS	04 22 15.0	
	comp=E,41µm,12.0s						
YSS				AMS	AMS	04 22 15.0	
	comp=E,24µm,12.0s						
YSS				AMS	AMS	04 22 15.0	
	comp=E,44µm,12.0s						
YSS				AMS	AMS	04 22 15.0	
	comp=E,40µm,12.0s						
YSS				AMS	AMS	04 22 15.0	
	comp=E,26µm,12.0s						
YSS				AMS	AMS	04 22 15.0	
	comp=E,59µm,12.0s						
EKMR	**Ekimchan**	**6.63**	**277**	⇑*i*Pn	**Pn**	**04 18 49.0**	**-3.0**
EKMR				*e*Pg	Pn	04 19 23.1	+31
EKMR				*e*Sn	**Sn**	**04 20 06.0**	**-1.9**
EKMR				*e*Sg	Sn	04 20 54.0	+46
MA2	**Magadan**	**7.83**	**27**	*de*PN	**Pn**	**04 19 08.1**	**-0.7**
MA2				pmax	pmax		
	comp=Z,20nm,0.6s						
MA2	**Magadan**	**7.83**	**27**	*e*P	**Pn**	**04 19 05.4**	**-3.4**
	comp=Z,74nm,0.6s						
SKR	**Severo-Kuril's**	**7.87**	**100**	*e*PN	**Pn**	**04 19 03.0**	**-6.4**
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				MLR	MLR		
	comp=N,22µm,16.0s						
SKR				MLR	MLR		
	comp=Z,22µm,16.0s						
SKR				MLR	MLR		
	comp=E,11µm,14.0s						
SKR	**Severo-Kuril's**	**7.87**	**100**	*e*P	**Pn**	**04 19 03.0**	**-6.4**
SKR				AMB	AMB	04 19 04.5	
	comp=E,50nm,0.5s						
SKR				AMB	AMB	04 19 04.5	
	comp=E,80nm,0.5s						
SKR				*e*rx	rx	04 19 06.1	
SKR				AMS	AMS	04 21 44.0	
	comp=E,17µm,18.0s						
SKR				AMS	AMS	04 21 44.0	
	comp=E,21µm,18.0s						
SKR				AMS	AMS	04 21 44.0	
	comp=E,16µm,18.0s						
SKR				AMS	AMS	04 21 44.0	
	comp=E,17µm,19.0s						
SKR				AMS	AMS	04 21 44.0	
	comp=E,21µm,19.0s						
SKR				AMS	AMS	04 21 44.0	
	comp=E,16µm,19.0s						
SKR				AMS	AMS	04 22 54.0	
	comp=E,22µm,15.0s						
SKR				AMS	AMS	04 22 54.0	
	comp=E,11µm,15.0s						
SKR				AMS	AMS	04 22 54.0	
	comp=E,22µm,15.0s						
SKR				AMS	AMS	04 22 54.0	
	comp=E,11µm,15.0s						
KUR	**Kuril'sk**	**7.97**	**159**	*e*P	**Pn**	**04 19 03.0**	**-7.9**
KUR				AMB	AMB	04 19 16.3	
	comp=E,90nm,0.7s						
KUR				AMB	AMB	04 19 16.3	
	comp=E,40nm,0.7s						
KUR				AMB	AMB	04 19 16.3	
	comp=E,120nm,0.7s						
KUR				AMS	AMS	04 22 53.0	
	comp=E,35µm,14.0s						
KUR				AMS	AMS	04 22 53.0	
	comp=E,24µm,14.0s						
KLR	**Kul'dur**	**8.44**	**250**	*e*P	**P**	**04 19 14.4**	**-2.9**
KLR				AMB	AMB	04 19 17.2	
	comp=E,10.0nm,1.2s						
KLR				AMB	AMB	04 19 17.2	
	comp=E,60nm,1.2s						
KLR				AMB	AMB	04 19 28.0	
	comp=E,700nm,8.0s						
KLR				AMB	AMB	04 19 28.0	
	comp=E,1µm,8.0s						
KLR				AMB	AMB	04 19 28.0	
	comp=E,2µm,8.0s						
KLR				AMS	AMS	04 22 47.0	
	comp=E,103µm,9.0s						
ASAJ	**Asahikawa**	**8.70**	**186**	PN	**P**	**04 19 20.4**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,18nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,9µm,18.7s						
ASAJ	**Asahikawa**	**8.70**	**186**	Pn	**P**	**04 19 20.4**	**-0.6**
	comp=Z,18nm,0.3s,baz=24,slow=13,SNR=105						
ASAJ				LR	LR	04 23 14.0	
	comp=Z,9µm,18.6s,baz=172,slow=41						
YUK	**Yuzh-Kuril'sk**	**8.83**	**171**	PN	**P**	**04 19 18.5**	**-4.3**
YUK				pmax	pmax		
	comp=Z,140nm,0.5s						
YUK				pmax	pmax		
	comp=N,190nm,0.6s						
YUK				pmax	pmax		
	comp=E,130nm,0.6s						
YUK				pmax	pmax		
	comp=Z,2µm,1.2s						
YUK				MLR	MLR		
	comp=Z,19µm,13.0s						
YUK				MLR	MLR		
	comp=N,10µm,14.0s						
YUK				MLR	MLR		
	comp=E,24µm,14.0s						
YUK	**Yuzh-Kuril'sk**	**8.83**	**171**	*e*P	**P**	**04 19 19.0**	**-3.8**
YUK				AMB	AMB	04 19 24.5	
	comp=E,140nm,0.5s						
YUK				AMB	AMB	04 19 24.5	
	comp=E,190nm,0.6s						
YUK				AMB	AMB	04 19 24.5	
	comp=E,130nm,0.6s						
YUK				AMB	AMB	04 19 52.0	
	comp=E,2µm,1.2s						
YUK				*e*S	**Sn**	**04 20 56.5**	**-6.4**
YUK				A		04 21 02.6	
	comp=E,820nm,0.8s						
YUK				A		04 21 02.6	
	comp=E,520nm,0.8s						
YUK				AMS	AMS	04 24 38.0	
	comp=E,10µm,14.0s						
YUK				AMS	AMS	04 24 38.0	
	comp=E,24µm,14.0s						
YUK				AMS	AMS	04 24 38.0	
	comp=E,19µm,14.0s						
PET	**Petropavlovsk**	**8.93**	**82**	*e*PN	**P**	**04 19 21.3**	**-2.8**
PET				pmax	pmax		
	comp=Z,352nm,0.7s						
PET	**Petropavlovsk**	**8.93**	**82**	*e*P	**P**	**04 19 21.3**	**-2.9**
	comp=Z,352nm,0.7s						
PET	**Petropavlovsk**	**8.93**	**82**	⇑*i*P	**P**	**04 19 21.3**	**-2.8**
PET				AMB	AMB	04 19 22.6	
	comp=Z,460nm,0.5s						
PET				*e*S	**Sn**	**04 21 02.6**	**-2.7**
PET				AMS	AMS	04 23 28.4	
	comp=Z,460nm,16.0s						
TEY	**Ternei**	**9.10**	**215**	*e*P	**P**	**04 19 24.0**	**-2.5**
TEY				AMB	AMB	04 19 38.0	
	comp=Z,181nm,1.1s						
TEY				*e*S	**Sn**	**04 21 15.0**	**+5.5**
TEY				A		04 22 37.0	
	comp=Z,2µm,1.0s						
TEY				A		04 22 37.0	
	comp=Z,946nm,1.0s						
TEY				AMS	AMS	04 22 45.0	
	comp=Z,28µm,17.0s						
TEY				AMS	AMS	04 22 45.0	
	comp=Z,43µm,17.0s						
BMKR	**Bomnak**	**9.13**	**288**	*e*P	**P**	**04 19 22.2**	**-4.7**
BMKR				AMB	AMB	04 19 31.5	
	comp=Z,220nm,1.1s						
BMKR				*i* S	**Sn**	**04 21 14.0**	**+3.6**
YASR	**Yasnyy**	**9.61**	**279**	*e*P	**P**	**04 19 28.8**	**-4.6**
YASR				pP		04 19 34.0	
YASR				AMB	AMB	04 19 40.5	
	comp=Z,40nm,1.2s						
YASR				AMB	AMB	04 19 40.5	
	comp=Z,410nm,1.2s						
YASR				AMB	AMB	04 19 40.5	
	comp=Z,510nm,1.2s						
YASR				*e*rx	rx	04 20 57.5	
ZEA	**Zeya**	**10.03**	**282**	⇑*e*P	**P**	**04 19 36.8**	**-2.3**
ZEA				*e*P		04 19 36.8	
ZEA				sP		04 19 42.3	
ZEA				AMB	AMB	04 19 43.0	
	comp=Z,400nm,2.0s						
ZEA				AMB	AMB	04 19 43.0	
	comp=Z,2µm,2.0s						
ZEA				AMB	AMB	04 19 43.0	
	comp=Z,2µm,2.0s						
ZEA				AMB	AMB	04 19 43.1	
	comp=Z,350nm,1.4s						
ZEA				AMB	AMB	04 19 43.1	
	comp=Z,740nm,1.4s						
ZEA				AMB	AMB	04 19 43.1	
	comp=Z,780nm,1.4s						
ZEA				*e*S	**S**	**04 21 34.5**	**+2.3**
ZEA				A		04 21 39.0	
	comp=Z,1µm,7.0s						
ZEA				AMS	AMS	04 23 46.0	
	comp=Z,35µm,10.0s						
ZEA				AMS	AMS	04 23 46.0	
	comp=Z,60µm,10.0s						
SEY	**Seymchan**	**11.14**	**20**	*e*PN	**P**	**04 19 53.7**	**-0.6**
SEY				pmax	pmax		
	comp=N,70nm,1.0s						
SEY				pmax	pmax		
	comp=E,60nm,1.0s						
SEY				pmax	pmax		
	comp=Z,130nm,1.0s						
SEY				MLR	MLR		
	comp=Z,20µm,14.0s						
SEY				MLR	MLR		
	comp=N,16µm,13.0s						
SEY				MLR	MLR		
	comp=E,23µm,12.0s						
CLNS	**Chul'man**	**11.69**	**298**	*e*PN	**P**	**04 20 03.8**	**+2.0**
CLNS				*e*S	**S**	**04 22 24.9**	**+12**
CLNS				pmax	pmax		
	comp=N,603nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,729nm,1.2s						
CLNS				pmax	pmax		
	comp=E,580nm,1.3s						
CLNS				smax			
	comp=N,330nm,1.1s						
CLNS				smax			
	comp=Z,162nm,1.0s						
CLNS				smax			
	comp=E,212nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,37µm,11.0s						
CLNS				MLR	MLR		
	comp=N,6µm,9.0s						
CLNS				MLR	MLR		
	comp=E,25µm,12.0s						
YAK	**Yakutsk**	**12.01**	**326*c***	*i*PN	**P**	**04 20 03.1**	**-3.0**
YAK				pmax	pmax		
	comp=E,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,41nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,0.8s						
YAK				MLR	MLR		
	comp=Z,10µm,13.0s						
YAK	**Yakutsk**	**12.01**	**326**	*e*P	**P**	**04 20 02.5**	**-3.6**
	comp=Z,361nm,1.1s						
MDJ	**Mudanjiang**	**12.46**	**235**	P	**P**	**04 20 12.5**	**+0.2**
MDJ				S	**S**	**04 22 35.0**	**+3.3**
MDJ				PCP	PcP	04 25 48.9	-2.7
MDJ				SCP		04 29 20.5	
MDJ				PCS		04 29 24.3	
MDJ				SCS	ScS	04 32 59.5	+2.0
MDJ				AMB	AMB		
	comp=Z,30nm,1.6s						
MDJ				AMB	AMB		
	comp=Z,1µm,9.3s						
MDJ				LR	LR		
	comp=N,37µm,11.2s						
MDJ				LR	LR		
	comp=E,27µm,9.9s						
MDJ				LR	LR		
	comp=Z,55µm,10.9s						
MDJ	**Mudanjiang**	**12.46**	**235**	⇑*e*P	**P**	**04 20 13.8**	**+1.5**
	comp=Z,65nm,1.0s						
MDJ				*e*S	**S**	**04 22 50.8**	**+19**
CN2	**Changchun**	**15.17**	**241**	⇑P	**P**	**04 20 48.5**	**+0.7**
CN2				*e*XP		04 20 53.0	
CN2				*e*S	**S**	**04 23 36.5**	**+0.5**
CN2				AMB	AMB		
	comp=Z,40nm,1.1s						
CN2				AMB	AMB		
	comp=Z,1µm,6.0s						
CN2				LR	LR		
	comp=N,24µm,12.0s						
CN2				LR	LR		
	comp=E,18µm,12.0s						
CN2				LR	LR		
	comp=Z,28µm,13.0s						
HIA	**Hailar**	**15.57**	**267**	⇑*e*P	**P**	**04 20 52.6**	**-0.4**
HIA				pmax	pmax		
	comp=Z,583nm,1.4s						
HIA	**Hailar**	**15.57**	**267**	⇑*e*P	**P**	**04 20 52.6**	**-0.5**
	comp=Z,583nm,1.4s						
MAJO	**Matsushiro**	**16.71**	**196**	*e*P	**P**	**04 21 08.3**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,176nm,1.4s						
MAJO	**Matsushiro**	**16.71**	**196**	*e*P	**P**	**04 21 08.3**	**+0.7**
	comp=Z,176nm,1.4s						
MAT	**Matsushiro**	**16.71**	**196**	*e*P	**P**	**04 21 07.0**	**-0.6**
MAT				*e*S	**S**	**04 24 08.0**	**-3.9**
MAT				pmax	pmax		
	comp=Z,20nm,1.0s						
MAT	**Matsushiro**	**16.71**	**196**	*e*P	**P**	**04 21 07.0**	**-0.6**
	comp=Z,20nm,1.0s						
MAT				*e*S	**S**	**04 24 08.0**	**-3.9**
MAT	**Matsushiro**	**16.71**	**196**	P	**P**	**04 21 07.0**	**-0.6**
MAT				S	**S**	**04 24 10.0**	**-1.9**
MJAR	**Matsushiro Arr**	**16.71**	**196**	Pn	**P**	**04 21 07.9**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=4.7,slow=12,SNR=32						
MJAR				ScP		04 29 30.9	
	baz=247,slow=2.5,SNR=7.0						
SNY	**Shenyang**	**17.53**	**239**	⇑P	**P**	**04 21 19.8**	**+1.9**
SNY				AP		04 21 27.2	
SNY				XP		04 21 30.7	
SNY				PP	PP	04 21 35.5	+3.0
SNY				AMB	AMB		
	comp=Z,300nm,1.2s						
SNY				AMB	AMB		
	comp=Z,3µm,8.2s						
SNY				LR	LR		
	comp=N,26µm,10.0s						
SNY				LR	LR		
	comp=E,24µm,10.2s						
SNY				LR	LR		
	comp=Z,41µm,10.5s						
FX1	**Attu Island--F**	**17.64**	**78**	P	**P**	**04 21 20.6**	**+1.5**
	comp=Z,12nm,0.3s,baz=298,slow=5.2,SNR=23						
FX1				LR	LR	04 28 11.7	
	comp=Z,144nm,18.5s,baz=298,slow=37						
FX1	**Attu Island--F**	**17.64**	**78**	*e*P	**P**	**04 21 20.4**	**+1.3**
BOD	**Bodaibo**	**17.67**	**299**	*e*P	**P**	**04 21 18.6**	**-0.9**
BOD				pmax	pmax		
	comp=Z,245nm,1.8s						
SMY	**Shemya**	**18.23**	**78**	P	**P**	**04 21 28.7**	**+2.2**
SMY				pmax	pmax		
	comp=Z,290nm,0.9s						
SMY	**Shemya**	**18.23**	**78**	*e*P	**P**	**04 21 28.4**	**+1.9**
	comp=Z,291nm,0.8s						
CIT	**Chita**	**18.47**	**280**	*e*P	**P**	**04 21 30.1**	**+0.6**
CIT				pmax	pmax		
	comp=Z,997nm,3.0s						
BILL	**Bilibino**	**18.70**	**27*c***	*i*P	**P**	**04 21 31.8**	**-0.4**
BILL				pmax	pmax		
	comp=Z,29nm,1.1s						
BILL				MLR	MLR		
	comp=Z,14µm,14.0s						
BILL	**Bilibino**	**18.70**	**27**	*e*P	**P**	**04 21 30.9**	**-1.3**
	comp=Z,57nm,0.8s						
KS15	**Wonju Array Si**	**18.97**	**222**	*e*P	**P**	**04 21 35.7**	**+0.1**
INCN	**Inchon**	**19.46**	**225**	*e*P	**P**	**04 21 40.4**	**-1.0**
	comp=Z,199nm,1.1s						
JHJ	**Hachijo jima 2**	**19.86**	**190**	P	**P**	**04 21 45.3**	**-0.5**
	comp=Z,8.4nm,0.3s,baz=42,slow=4.2,SNR=5.9						
JHJ				LR	LR	04 30 29.0	
	comp=Z,4µm,20.0s,baz=102,slow=40						
TIXI	**Tiksi**	**20.09**	**346**	*e*P	**P**	**04 21 39.5**	**-8.5**
TIXI				*e*		04 22 22.4	
TIXI				*e*S	**S**	**04 25 26.0**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,239nm,1.5s						
TIXI				MLR	MLR		
	comp=Z,9µm,12.0s,MS5.3						
TIXI	**Tiksi**	**20.09**	**346**	⇑*i*P	**P**	**04 21 46.5**	**-1.5**
TIXI				LR	LR		
	comp=Z,6µm,19.0s,MS5.0						
DL2	**Dalian**	**20.69**	**237**	⇑*i*P	**P**	**04 21 54.1**	**-0.4**
DL2				S	**S**	**04 25 47.9**	**+8.0**
DL2				AMB	AMB		
	comp=Z,130nm,1.2s						
DL2				AMB	AMB		
	comp=Z,240nm,4.8s						
DL2				LR	LR		
	comp=N,13µm,10.6s,MS5.7						
DL2				LR	LR		
	comp=E,13µm,10.0s,MS5.7						
DL2				LR	LR		
	comp=Z,22µm,10.6s,MS5.8						
JNU	**Nakatsue**	**21.76**	**211**	P	**P**	**04 22 05.2**	**-0.2**
	comp=Z,51nm,0.9s,mb5.0,baz=41,slow=11						
JNU				LR	LR	04 30 17.8	
	comp=Z,5µm,19.7s,MS4.9,baz=136,slow=36						
ULN	**Ulaanbaatar**	**23.85**	**273**	P	**P**	**04 22 27.2**	**+1.5**
ULN	**Ulaanbaatar**	**23.85**	**273**	*e*P	**P**	**04 22 27.0**	**+1.3**
ULN				pmax	pmax		
	comp=Z,168nm,1.1s,mb5.4						
ULN				MLR	MLR		
	comp=Z,4µm,19.0s,MS4.9						
ULN	**Ulaanbaatar**	**23.85**	**273**	*e*P	**P**	**04 22 27.0**	**+1.3**
	comp=Z,168nm,1.1s,mb5.4						
ULN				LR	LR		
	comp=Z,4µm,19.0s,MS4.9						
IRK	**Irkutsk**	**23.92**	**285**	*e*P	**P**	**04 22 28.2**	**+1.9**
IRK				*e*		04 22 57.9	
IRK				pmax	pmax		
	comp=Z,1µm,2.6s,mb5.8						
SONM	**Songino Array**	**24.26**	**273**	P	**P**	**04 22 31.0**	**+1.3**
	comp=Z,25nm,0.8s,mb4.7,baz=64,slow=8.3,SNR=90						
SONM				PcP	PcP	04 26 10.4	-0.8
	comp=Z,8.4nm,0.9s,baz=90,slow=2.5,SNR=3.6						
SONM				LR	LR	04 32 15.7	
	comp=Z,8µm,20.8s,MS5.2,baz=71,slow=37						
TLY	**Talaya**	**24.46**	**284*c***	*i*P	**P**	**04 22 33.4**	**+1.8**
TLY				pmax	pmax		
	comp=Z,460nm,1.6s,mb5.7						
TLY				MLR	MLR		
	comp=Z,14µm,13.0s,MS5.7						
TLY	**Talaya**	**24.46**	**284**	*e*P	**P**	**04 22 33.4**	**+1.8**
	comp=Z,192nm,0.9s,mb5.5						
TLY				LR	LR		
	comp=Z,1µm,19.0s,MS4.5						
HHC	**Hu-ho-hao-te**	**24.91**	**254**	*i* P	**P**	**04 22 37.0**	**+0.9**
HHC				PP	PP	04 23 14.5	+1.1
HHC				PCP	PcP	04 26 14.5	+1.9
HHC				S	**S**	**04 27 02.0**	**+6.3**
HHC				SS	SS	04 27 55.5	+1.3
HHC				AMB	AMB		
	comp=Z,130nm,1.1s,mb5.4						
HHC				AMB	AMB		
	comp=Z,1µm,5.9s						
TIA	**Tai'an**	**25.05**	**239**	⇓P	**P**	**04 22 38.0**	**+0.5**
TIA				S	**S**	**04 27 05.0**	**+6.8**
TIA				AMB	AMB		
	comp=Z,100nm,1.4s,mb5.2						
TIA				AMB	AMB		
	comp=Z,2µm,4.0s						
TIA				LR	LR		
	comp=N,10µm,14.0s,MS5.7						
TIA				LR	LR		
	comp=E,10µm,11.0s,MS5.7						
ZAK	**Zakamensk**	**25.12**	**281**	⇓*i*P	**P**	**04 22 39.2**	**+1.3**
ZAK				pmax	pmax		
	comp=Z,184nm,1.2s,mb5.5						
CBIJ	**Chichi jima**	**25.67**	**184**	P	**P**	**04 22 42.9**	**-0.5**
	comp=Z,39nm,0.6s,mb5.1,baz=233,slow=20,SNR=2.5						
CBIJ				LR	LR	04 34 56.4	
	comp=Z,2µm,18.5s,MS4.7,baz=358,slow=41						
BTO	**Baotou**	**25.97**	**256**	*e*P	**P**	**04 22 46.5**	**+0.5**
MOY	**Mondy**	**26.03**	**285**	*e*P	**P**	**04 22 41.7**	**-4.7**
MOY				pmax	pmax		
	comp=Z,363nm,2.3s,mb5.5						
TIY	**Taiyuan**	**26.51**	**248**	⇓P	**P**	**04 22 46.8**	**-4.2**
TIY				S	**S**	**04 27 24.0**	**+1.6**
TIY				LR	LR		
	comp=N,24µm,13.0s						
TNA	**Tin City**	**27.03**	**43**	*e*P	**P**	**04 22 56.3**	**+0.8**
	comp=N,44nm,1.0s,mb4.9						
TNA				LR	LR		
	comp=Z,3µm,19.0s,MS4.9						
SSE	**Sheshan**	**27.25**	**226**	P	**P**	**04 22 58.2**	**+0.3**
SSE				AP	pP	04 23 01.2	-1.6
SSE				XP	sP	04 23 02.5	-2.5
SSE				S	**S**	**04 27 38.1**	**+3.7**
SSE				XS		04 27 42.4	
SSE				PCS		04 29 57.6	
SSE				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.2						

SSE				AMB	AMB		
	comp=Z,680nm,10.4s						
SSE				LR	LR		
	comp=N,4µm,17.3s,MS5.1						
SSE				LR	LR		
	comp=E,3µm,17.2s,MS5.1						
SSE				LR	LR		
	comp=Z,2µm,14.1s,MS4.8						
SSE	**Sheshan**	**27.25**	**226**	P	**P**	**04 22 58.2**	**+0.3**
	comp=Z,90nm,1.0s,mb5.2						
SSE				pP	pP	04 23 01.2	-1.6
SSE				sP	sP	04 23 02.5	-2.5
SSE				S	**S**	**04 27 38.1**	**+3.7**
SSE				sS		04 27 42.4	
SSE				PcS		04 29 57.6	
SSE				LR	LR		
	comp=Z,2µm,14.1s,MS4.8						
NJ2	**Nanjing**	**27.51**	**231**	*e*P	**P**	**04 22 59.8**	**-0.4**
NJ2				AP	pP	04 23 04.0	-1.2
NJ2				XP	sP	04 23 06.6	-0.8
NJ2				PP	PP	04 23 49.1	+0.9
NJ2				PPP	PPP	04 24 00.0	-0.2
NJ2				S	**S**	**04 27 36.0**	**-2.6**
NJ2				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,740nm,11.4s						
NJ2				LR	LR		
	comp=Z,18µm,11.2s,MS5.9						
UNV	**Unalaska Valle**	**29.18**	**68**	PFAKE		04 23 30.0	+15
UNV				LR	LR		
	comp=Z,9µm,21.0s,MS5.4						
WHN	**Wuhan**	**30.94**	**236**	⇑P	**P**	**04 23 30.0**	**-1.0**
WHN				S	**S**	**04 28 38.0**	**+4.6**
WHN				LR	LR		
	comp=Z,24µm,11.5s,MS6.1						
XAN	**Xi’an**	**31.13**	**247**	P	**P**	**04 23 31.9**	**-0.7**
XAN				PP	PP	04 24 30.0	-5.3
XAN				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
XAN				LR	LR		
	comp=N,7µm,11.6s,MS5.8						
XAN				LR	LR		
	comp=E,10µm,12.7s,MS5.8						
XAN				LR	LR		
	comp=Z,10µm,13.2s,MS5.7						
TTA	**Tatalina**	**32.35**	**48**	*e*P	**P**	**04 23 42.5**	**-0.5**
TATO	**Taipei**	**32.50**	**220**	PFAKE		04 24 00.0	+15
TATO				LR	LR		
	comp=Z,4µm,21.0s,MS5.0						
LZH	**Lanzhou**	**32.59**	**255**	⇑P	**P**	**04 23 46.2**	**+0.8**
LZH				AP	pP	04 23 49.2	-1.2
LZH				XP	sP	04 23 50.9	-1.6
LZH				PP	PP	04 24 54.1	-0.2
LZH				S	**S**	**04 29 02.0**	**+2.9**
LZH				XS		04 29 08.2	
LZH				SS	SS	04 30 55.2	-1.0
LZH				AMB	AMB		
	comp=Z,230nm,1.3s,mb6.0						
LZH				AMB	AMB		
	comp=Z,540nm,4.0s						
LZH	**Lanzhou**	**32.59**	**255**	⇑P	**P**	**04 23 46.2**	**+0.8**
	comp=Z,230nm,1.3s,mb6.0						
LZH				pP	pP	04 23 49.2	-1.2
LZH				sP	sP	04 23 50.9	-1.6
LZH				PP	PP	04 24 54.1	-0.2
LZH				S	**S**	**04 29 02.0**	**+2.9**
LZH				sS		04 29 08.2	
LZH				SS	SS	04 30 55.2	-1.0
LZH				LR	LR		
	comp=Z,44µm,14.0s,MS6.3						
GTA	**Gaotai**	**32.82**	**264**	⇑*i*P	**P**	**04 23 48.6**	**+1.3**
GTA				AP	pP	04 23 58.8	+6.5
GTA				PCP	PcP	04 26 29.7	-2.6
GTA				S	**S**	**04 29 07.5**	**+4.9**
GTA				SCP		04 30 10.8	
GTA				PCS		04 30 17.3	
GTA				AMB	AMB		
	comp=Z,150nm,1.5s,mb5.7						
GTA				AMB	AMB		
	comp=Z,1µm,4.6s						
YHNB	**Yeheng**	**32.82**	**220**	*e*P	**P**	**04 23 48.1**	**+0.6**
IMA	**Indian Mountai**	**32.88**	**42**	*e*P	**P**	**04 23 48.4**	**+0.9**
IMA				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
IMA	**Indian Mountai**	**32.88**	**42**	*e*P	**P**	**04 23 48.4**	**+0.9**
	comp=Z,23nm,0.8s,mb5.2						
SVW2	**Sparrevohn**	**32.92**	**51**	*e*P	**P**	**04 23 47.9**	**0.0**
ENH	**Enshi**	**33.69**	**242**	*e*P	**P**	**04 23 53.8**	**-1.2**
	comp=Z,320nm,1.5s,mb6.0						
ENH				LR	LR		
	comp=Z,6µm,20.0s,MS5.3						
QZH	**Quanzhou**	**33.72**	**224**	P	**P**	**04 23 49.9**	**-5.3**
QZH				S	**S**	**04 29 22.9**	**+6.3**
QZH				LR	LR		
	comp=N,9µm,11.0s,MS5.9						
QZH				LR	LR		
	comp=E,11µm,12.9s,MS5.9						
QZH				LR	LR		
	comp=Z,15µm,13.2s,MS5.9						
ZAL	**Zalesovo**	**34.41**	**296**	P	**P**	**04 24 00.0**	**-0.9**
	comp=Z,13nm,0.8s,mb4.9,baz=46,slow=7.7,SNR=66						
ZAL				PcP	PcP	04 26 34.8	-1.8
	comp=Z,6.6nm,0.8s,baz=336,slow=3.6,SNR=3.1						
ZAL				LR	LR	04 39 26.8	
	comp=Z,4µm,19.1s,MS5.2,baz=48,slow=39						
RSO	**Redoubt South**	**34.42**	**52**	*e*P	**P**	**04 24 02.2**	**+1.2**
SPU	**Mount Spurr**	**34.56**	**50**	*e*P	**P**	**04 24 02.9**	**+0.7**
MCK	**McKinley**	**35.30**	**45**	P	**P**	**04 24 09.3**	**+0.8**
MCK				pmax	pmax		
	comp=Z,120nm,0.9s,mb5.8						
MCK	**McKinley**	**35.30**	**45**	*e*P	**P**	**04 24 08.6**	**+0.1**
	comp=Z,122nm,0.9s,mb5.8						
MCK				LR	LR		
	comp=Z,1µm,20.0s,MS4.6						
KDAK	**Kodiak Island**	**35.34**	**56**	*e*P	**P**	**04 24 08.1**	**-0.7**
	comp=Z,42nm,0.9s,mb5.4						
KDAK				LR	LR		
	comp=Z,965nm,19.0s,MS4.6						
PWA	**Palmer West**	**35.43**	**49**	*e*P	**P**	**04 24 09.5**	**-0.1**
PWA				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.3						
PWA	**Palmer West**	**35.43**	**49**	*e*P	**P**	**04 24 09.5**	**-0.1**
	comp=Z,25nm,0.6s,mb5.3						
FIB	**Fire Island**	**35.44**	**50**	PFAKE		04 24 20.0	+10
FIB				LR	LR		
	comp=Z,2µm,19.0s,MS4.9						
SLKM	**Skilak Lake**	**35.61**	**51**	P	**P**	**04 24 11.6**	**+0.5**
SLKM	**Skilak Lake**	**35.61**	**51**	*e*P	**P**	**04 24 11.4**	**+0.3**
PMR	**Palmer**	**35.79**	**49**	*e*P	**P**	**04 24 12.8**	**+0.2**
PMR				pmax	pmax		
	comp=Z,31nm,0.7s,mb5.3						
PMR	**Palmer**	**35.79**	**49**	*e*P	**P**	**04 24 12.8**	**+0.2**
	comp=Z,31nm,0.7s,mb5.3						
SML	**Sawmill**	**36.09**	**48**	P	**P**	**04 24 15.3**	**+0.1**
SML	**Sawmill**	**36.09**	**48**	*e*P	**P**	**04 24 15.0**	**-0.1**
CD2	**Chengdu**	**36.37**	**249**	P	**P**	**04 24 18.0**	**+0.2**
CD2				PP	PP	04 25 43.8	+2.4
CD2				S	**S**	**04 29 59.2**	**+1.6**
CD2				AMB	AMB		
	comp=Z,180nm,1.0s,mb6.0						
CD2				LR	LR		
	comp=N,14µm,12.0s						
CD2				LR	LR		
	comp=Z,15µm,12.6s,MS6.0						
THY	**Trims Highway**	**36.76**	**45**	*e*P	**P**	**04 24 20.6**	**-0.1**
DIV	**Divide**	**37.48**	**49**	*e*P	**P**	**04 24 26.7**	**-0.1**
	comp=Z,410nm,1.2s,mb6.1						
DIV				LR	LR		
	comp=Z,6µm,20.0s,MS5.4						
WMQ	**Urumqi**	**37.56**	**279**	*e*P	**P**	**04 24 29.0**	**+1.3**
WMQ				AP	pP	04 24 33.4	+0.6
WMQ				XP	sP	04 24 36.0	+1.1
WMQ				PP	PP	04 25 56.8	+0.5
WMQ				PCP	PcP	04 26 48.0	+1.9
WMQ				S	**S**	**04 30 17.0**	**+1.2**
WMQ				SS	SS	04 32 49.0	-0.5
WMQ				SCS	ScS	04 34 42.0	+3.6
WMQ				AMB	AMB		
	comp=Z,100nm,0.9s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,1µm,4.5s						
WMQ				LR	LR		
	comp=N,4µm,13.6s,MS5.5						
WMQ				LR	LR		
	comp=E,4µm,14.2s,MS5.5						
WMQ				LR	LR		
	comp=Z,5µm,14.2s,MS5.4						
MIDW	**Midway**	**37.64**	**115**	PFAKE		04 24 40.0	+11
MIDW				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
EYAK	**Cordova Ski Ar**	**37.69**	**50**	*e*P	**P**	**04 24 29.4**	**+0.8**
MENT	**Mentasta**	**37.78**	**45**	*e*P	**P**	**04 24 30.8**	**+1.4**
GYA	**Guiyang**	**38.22**	**241**	⇑*i*P	**P**	**04 24 33.9**	**+0.5**
GYA				AP	pP	04 24 37.8	-0.7
GYA				XP	sP	04 24 41.2	+0.6
GYA				PP	PP	04 26 01.6	-2.6
GYA				S	**S**	**04 30 21.8**	**-4.1**
GYA				AMB	AMB		
	comp=Z,180nm,1.2s,mb5.7						
GYA				AMB	AMB		
	comp=Z,550nm,5.1s						
GYA				LR	LR		
	comp=N,4µm,12.3s,MS5.6						
GYA				LR	LR		
	comp=E,3µm,12.6s,MS5.6						
GYA				LR	LR		
	comp=Z,4µm,13.5s,MS5.4						
MKAR	**Makanchi Array**	**39.14**	**287**	P	**P**	**04 24 41.0**	**+0.1**
	comp=Z,75nm,0.8s,mb5.5,baz=61,slow=8.0,SNR=455						
MKAR				LR	LR	04 40 34.0	
	comp=Z,3µm,19.8s,MS5.1,baz=28,slow=36						
MKAR	**Makanchi Array**	**39.14**	**287**	P	**P**	**04 24 41.0**	**0.0**
MKAR				LR	LR	04 40 34.0	
DAWY	**Dawson**	**39.22**	**43**	*e*P	**P**	**04 24 41.0**	**-0.4**
INK	**Inuvik**	**39.97**	**35**	P	**P**	**04 24 47.8**	**+0.2**
INK						04 26 52.6	
INK				pmax	pmax		
	comp=Z,27nm,0.7s						
INK	**Inuvik**	**39.97**	**35**	P	**P**	**04 24 47.8**	**+0.2**
	comp=Z,27nm,0.7s,mb5.1,baz=305,slow=7.3,SNR=28						
INK				PcP	PcP	04 26 52.5	-0.8
	comp=Z,18nm,0.9s,baz=274,slow=2.7,SNR=4.3						
INK	**Inuvik**	**39.97**	**35**	*e*P	**P**	**04 24 47.4**	**-0.2**
	comp=Z,26nm,0.7s,mb5.1						
BALP	**Baler**	**40.93**	**214**	*e*P	**P**	**04 24 56.4**	**+0.4**
KMI	**Kunming**	**41.40**	**244**	P	**P**	**04 25 00.5**	**+0.7**
KMI				AP	pP	04 25 06.7	+1.9
KMI				XP	sP	04 25 09.1	+2.2
KMI				PP	PP	04 26 36.6	-2.0
KMI				PCS		04 30 50.6	
KMI				S	**S**	**04 31 14.9**	**+1.3**
KMI				AMB	AMB		
	comp=Z,140nm,1.8s,mb5.3						
KMI				AMB	AMB		
	comp=Z,1µm,3.8s						
KMI				LR	LR		
	comp=N,8µm,16.7s,MS5.8						
KMI				LR	LR		
	comp=E,7µm,19.5s,MS5.8						
KMI				LR	LR		
	comp=Z,9µm,11.2s						
KMI	**Kunming**	**41.40**	**244**	P	**P**	**04 25 00.5**	**+0.7**
KMI				*PP	pP	04 25 06.7	+1.9
KMI				*SP	sP	04 25 09.1	+2.2
KMI						04 26 36.6	
KMI				S	**S**	**04 31 14.9**	**+1.3**
KMI				SS	SS	04 34 19.1	+6.1
KMI				pmax	pmax		
	comp=Z,147nm,1.8s,mb5.3						
KMI				MLR	MLR		
	comp=Z,9µm,11.2s,MS5.9						
KMI	**Kunming**	**41.40**	**244**	P	**P**	**04 25 00.5**	**+0.7**
	comp=Z,147nm,1.8s,mb5.3						
KMI				pP	pP	04 25 06.7	+1.9
KMI				sP	sP	04 25 09.1	+2.2
KMI				PP	PP	04 26 36.6	-2.0
KMI				PcS		04 30 50.6	
KMI				S	**S**	**04 31 14.9**	**+1.3**
KMI				SS	SS	04 34 19.1	+6.1
KMI				LR	LR		
	comp=Z,9µm,11.2s,MS5.9						
CHKZ	**Chkalovo**	**42.07**	**302**	*e*P	**P**	**04 25 04.3**	**-0.5**
CHKZ				*e*		04 26 40.6	
CHKZ				pmax	pmax		
	comp=Z,167nm,1.3s,mb5.5						
CHKZ	**Chkalovo**	**42.07**	**302**	*e*P	**P**	**04 25 04.3**	**-0.5**
	comp=Z,167nm,1.3s,mb5.5						
CHKZ				*e*PP	PP	04 26 40.6	-4.8
QIZ	**Qiongzhong**	**42.80**	**231**	P	**P**	**04 25 12.5**	**+1.2**
QIZ				S	**S**	**04 31 36.4**	**+2.1**
QIZ				XS		04 31 45.8	
QIZ				SS	SS	04 34 43.4	+4.0
QIZ				AMB	AMB		
	comp=Z,80nm,1.6s,mb5.2						
QIZ				AMB	AMB		
	comp=Z,520nm,6.0s						
QIZ				LR	LR		
	comp=N,4µm,17.8s,MS5.8						
QIZ				LR	LR		
	comp=E,10µm,17.8s,MS5.8						
QIZ				LR	LR		
	comp=Z,8µm,13.2s,MS5.8						
QIZ	**Qiongzhong**	**42.80**	**231**	P	**P**	**04 25 12.8**	**+1.5**
QIZ	**Qiongzhong**	**42.80**	**231**	PFAKE		04 25 20.0	+8.7
QIZ				LR	LR		
	comp=Z,4µm,19.0s,MS5.3						
CNP	**Catarman**	**43.01**	**208**	*e*P	**P**	**04 25 14.7**	**+1.7**
OTRP	**Odiongan**	**43.95**	**212**	*e*P	**P**	**04 25 21.8**	**+1.1**
SIT	**Sitka**	**44.08**	**51**	*e*P	**P**	**04 25 22.6**	**+1.4**
SIT				*e*	pP	04 25 27.2	+1.0
SIT				pmax	pmax		
	comp=Z,122nm,1.3s,mb5.5						
SIT				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.3						
SIT	**Sitka**	**44.08**	**51**	*e*P	**P**	**04 25 22.6**	**+1.5**
	comp=Z,122nm,1.3s,mb5.5						
SIT				*e*	pP	04 25 27.2	+1.0
SIT				LR	LR		
	comp=Z,3µm,20.0s,MS5.3						
SJMP	**San Jose**	**44.15**	**213**	*e*P	**P**	**04 25 22.2**	**0.0**
AAA	**Alma-Ata**	**44.26**	**286**	*e*P	**P**	**04 25 23.0**	**+0.2**
AAA				*e*SS	SS	04 35 21.0	+16
AAA				pmax	pmax		
	comp=Z,800nm,4.0s						
AAA				MLR	MLR		
	comp=N,16µm,11.0s,MS6.3						
AAA				MLR	MLR		
	comp=E,9µm,11.0s,MS6.3						
AAA				MLR	MLR		
	comp=Z,16µm,11.0s,MS6.2						
RCP	**Roxas**	**44.48**	**210**	⇓*e*P	**P**	**04 25 26.0**	**+1.0**
LSA	**Lhasa**	**44.64**	**260**	P	**P**	**04 25 26.2**	**+0.1**
LSA				AP	pP	04 25 35.5	+4.4
LSA				XP	sP	04 25 39.4	+6.2
LSA				PCP	PcP	04 27 06.1	-3.1
LSA				PP	PP	04 27 13.6	+2.1
LSA				SCP		04 30 56.0	
LSA				PCS		04 30 59.8	
LSA				S	**S**	**04 32 03.8**	**+3.0**
LSA				AMB	AMB		
	comp=Z,140nm,0.8s,mb5.8						
LSA				LR	LR		
	comp=N,3µm,11.2s,MS5.8						
LSA				LR	LR		
	comp=E,6µm,11.0s,MS5.8						
LSA				LR	LR		
	comp=Z,9µm,11.0s,MS6.0						
LSA	**Lhasa**	**44.64**	**260**	*e*P	**P**	**04 25 27.9**	**+1.8**
LSA				pmax	pmax		
	comp=Z,131nm,0.9s,mb5.8						
LSA				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.1						
LSA	**Lhasa**	**44.64**	**260**	*e*P	**P**	**04 25 27.9**	**+1.9**
	comp=Z,131nm,0.9s,mb5.8						
LSA				LR	LR		
	comp=Z,3µm,20.0s,MS5.1						
BUSP	**Coron**	**44.88**	**214**	*e*P	**P**	**04 25 27.6**	**-0.7**
TKM2	**Tokmak 2**	**45.26**	**286**	P	**P**	**04 25 31.6**	**+0.8**
	SNR=50						
ULHL	**Ulahol**	**45.29**	**285**	P	**P**	**04 25 32.3**	**+1.3**
	SNR=8.3						
SVE	**Sverdlovsk**	**45.36**	**310**	α*e*P	**P**	**04 25 32.7**	**+1.3**
SVE				*e*		04 27 20.5	
SVE				*e*S	**S**	**04 32 20.0**	**+9.2**
SVE				pmax	pmax		
	comp=Z,284nm,2.1s,mb5.7						
GUIM	**Jordan**	**45.41**	**210**	*e*P	**P**	**04 25 32.6**	**+0.2**
KBS	**Kingsbay**	**45.52**	**348**	P	**P**	**04 25 32.7**	**+0.2**
KBS				pmax	pmax		
	comp=Z,85nm,1.1s,mb5.6						
KBS	**Kingsbay**	**45.52**	**348**	⇑*i*P	**P**	**04 25 32.5**	**0.0**
KBS				LR	LR		
	comp=Z,1139µm,18.2s						
KBS	**Kingsbay**	**45.52**	**348**	⇑*i*P	**P**	**04 25 32.5**	**0.0**
KBS				*e*PP	PP	04 27 19.6	-0.1
KBS				*e*S	**S**	**04 32 13.8**	**+0.9**
KBS				*e*SS	SS	04 35 42.8	+14
KBS				AMS	AMS	04 46 34.2	
	comp=Z,1µm,18.2s,MS4.8						
SOKR	**Solikamsk**	**45.64**	**315**	*c* *i*P	**P**	**04 25 32.4**	**-1.2**
SOKR				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.1						
USP	**Ospenovka**	**45.69**	**287**	P	**P**	**04 25 35.0**	**+0.8**
	SNR=70						
CHMS	**Chumysh**	**45.70**	**287**	P	**P**	**04 25 34.9**	**+0.6**
	SNR=27						
DLBC	**Dease Lake**	**45.79**	**47**	*e*P	**P**	**04 25 36.5**	**+1.7**
KBK	**Karagaybulak**	**45.80**	**286**	P	**P**	**04 25 35.9**	**+0.8**
	SNR=46						
FRU	**Bishkek**	**45.88**	**287**	⇑*i*P	**P**	**04 25 36.0**	**+0.3**
FRU				*e*		04 32 34.0	
FRU				pmax	pmax		
	comp=Z,280nm,2.0s,mb5.8						
KZA	**Kyzart**	**45.98**	**285**	P	**P**	**04 25 38.1**	**+1.7**
	SNR=73						
AAK	**Ala-Archa**	**46.08**	**286**	P	**P**	**04 25 38.0**	**+0.7**
	SNR=28						
UCH	**Uchtor**	**46.31**	**286**	P	**P**	**04 25 40.2**	**+1.1**
	SNR=20						
EKS2	**Erkin-Say**	**46.48**	**287**	P	**P**	**04 25 41.2**	**+0.8**
	SNR=50						
HSP	**Hornsund**	**46.51**	**346**	*e*P	**P**	**04 25 39.8**	**-0.5**
ARU	**Arti**	**46.54**	**310**	⇑*i*P	**P**	**04 25 40.4**	**-0.4**
ARU				*i*		04 27 10.5	
ARU				*i*		04 27 28.5	
ARU				*e*PPP	PPP	04 28 11.4	-3.9
ARU				*e*S	**S**	**04 32 31.0**	**+3.3**
ARU				*e*		04 35 33.2	
ARU				*e*SSS	SSS	04 36 54.5	+0.3
ARU				pmax	pmax		
	comp=Z,61nm,0.9s,mb5.5						
ARU				MLR	MLR		
	comp=N,600nm,14.0s,MS5.0						
ARU				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.1						
ARU				MLR	MLR		
	comp=E,900nm,13.0s,MS5.0						
ARU	**Arti**	**46.54**	**310**	*e*P	**P**	**04 25 40.2**	**-0.6**
	comp=E,92nm,1.0s,mb5.7						
ARU				LR	LR		
	comp=Z,578nm,19.0s,MS4.5						
IMP	**Imphal**	**46.65**	**253**	*i* P	**P**	**04 25 41.0**	**-1.1**
AML	**Almayashu**	**46.85**	**286**	P	**P**	**04 25 44.5**	**+1.1**
	SNR=22						
RES	**Resolute Bay**	**47.01**	**18**	P	**P**	**04 25 44.5**	**+0.3**
RES				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.4						
RES	**Resolute Bay**	**47.01**	**18**	*e*P	**P**	**04 25 43.6**	**-0.6**
	comp=Z,46nm,0.8s,mb5.5						
KSH	**Kashi**	**47.16**	**282**	⇑*i*P	**P**	**04 25 47.0**	**+1.1**
KSH				*e*AP	pP	04 25 51.0	0.0
KSH				*e*XP	sP	04 25 54.4	+1.3
KSH				*e*PCP	PcP	04 27 18.3	+0.4
KSH				PP	PP	04 27 37.0	+0.6
KSH				*e*PPP	PPP	04 28 24.3	+0.8
KSH				*e*SCP		04 31 10.1	
KSH				*e*PCS		04 31 12.5	
KSH				*e*S	**S**	**04 32 38.5**	**+1.8**
KSH				*e*XS		04 32 47.5	
KSH				*e*SCS	ScS	04 35 38.0	+1.1
KSH				*e*SS	SS	04 35 58.2	+1.0
KSH				AMB	AMB		
	comp=Z,1µm,3.0s						
SHL	**Shillong**	**47.26**	**256**	*e*P	**P**	**04 25 47.2**	**+0.3**
SHL				*i* S	**S**	**04 32 40.0**	**+1.7**
NANT	**Nan**	**47.62**	**241**	⇑P	**P**	**04 25 48.0**	**-1.8**
	comp=Z,1µm,1.0s						
KWAJ	**Kwajalein Atol**	**47.88**	**148**	PFAKE		04 26 00.0	+8.1
KWAJ				LR	LR		
	comp=Z,381nm,20.0s,MS4.4						
CHG	**Chiang Mai**	**48.55**	**243**	⇑P	**P**	**04 25 57.5**	**+0.5**
	comp=Z,90nm,1.0s,mb5.8						
KKTK	**Khon Kaen**	**48.56**	**237**	⇓P	**P**	**04 25 58.0**	**+0.9**
	comp=Z,1µm,0.7s						
CMAR	**Chiang Mai Arr**	**48.84**	**243**	P	**P**	**04 25 59.9**	**+0.6**
	comp=Z,25nm,1.0s,mb5.2,baz=21,slow=7.3,SNR=68						
CMAR				LR	LR	04 46 24.2	
	comp=Z,2µm,18.4s,MS5.1,baz=35,slow=36						
AGT	**Agartala**	**48.91**	**255**	*i* P	**P**	**04 25 59.0**	**-0.7**
AGT				*i* x	x	04 27 28.0	
GUN	**Gumba**	**49.11**	**263**	*e*P	**P**	**04 26 01.7**	**+0.5**
	comp=Z,251nm,0.9s,mb6.3						
APA	**Apatity**	**49.33**	**332**	*e*P	**P**	**04 26 00.0**	**-2.4**
APA				*i*		04 26 07.3	
APA				*i*		04 27 25.0	
APA				*i*		04 27 55.0	
APA				*i* S	**S**	**04 33 06.0**	**-0.9**
APA				*e*		04 35 53.0	
APA				pmax	pmax		
	comp=Z,52nm,1.0s,mb5.5						
APA				MLR	MLR		
	comp=Z,7µm,15.0s,MS5.8						
KEV	**Kevo**	**49.55**	**336**	*e*p	**P**	**04 26 02.4**	**-1.6**
	comp=Z,35nm,1.1s,mb5.3						
KEV	**Kevo**	**49.55**	**336**	P	**P**	**04 26 03.1**	**-0.9**
KEV				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
KKN	**Kakani**	**49.56**	**264**	*e*P	**P**	**04 26 05.2**	**+0.5**
	comp=Z,266nm,0.9s,mb6.3						
KKN	**Kakani**	**49.56**	**264**	*e*P	**P**	**04 26 05.2**	**+0.5**
KKN				pmax	pmax		
	comp=Z,133nm,0.9s,mb6.0						
YKW3	**Yellowknife Ar**	**49.63**	**37**	*e*P	**P**	**04 26 04.1**	**-0.6**
PKI	**Pulchoki**	**49.64**	**263**	*e*P	**P**	**04 26 05.7**	**+0.4**
	comp=Z,216nm,1.0s,mb6.1						
PKI	**Pulchoki**	**49.64**	**263**	*e*P	**P**	**04 26 05.7**	**+0.4**
PKI				pmax	pmax		
	comp=Z,108nm,1.0s,mb5.8						
YKA	**Yellowknife Ar**	**49.67**	**37**	P	**P**	**04 26 04.7**	**-0.3**
	comp=Z,6.9nm,0.7s,mb4.8,baz=306,slow=7.4,SNR=58						
YKA				LR	LR	04 50 59.9	
	comp=Z,1µm,19.2s,MS4.9,baz=305,slow=41						
YKA	**Yellowknife Ar**	**49.67**	**37**	P	**P**	**04 26 04.7**	**-0.3**
YKA				LR	LR	04 50 59.9	
GKN	**Gorkha**	**49.79**	**264**	*e*P	**P**	**04 26 07.0**	**+0.6**
	comp=Z,1µm,1.1s						
DMN	**Daman**	**49.79**	**264**	*e*P	**P**	**04 26 07.2**	**+0.7**
	comp=Z,875nm,1.6s,mb6.5						
ARCES	**ARCESS Array B**	**50.07**	**336**	P	**P**	**04 26 07.4**	**-0.7**
	comp=Z,14nm,0.9s,mb5.0,baz=45,slow=8.6,SNR=24						
ARCES				PcP	PcP	04 27 27.5	-0.5
	comp=Z,17nm,0.9s,slow=3.6,SNR=6.4						
DAG	**Danmarks Havn**	**50.26**	**355**	*j* *i*P	**P**	**04 26 08.2**	**-1.2**
DAG				pmax	pmax		
	comp=Z,62nm,0.7s,mb5.8						
DAG				MLR	MLR		
	comp=N,1µm,17.0s,MS5.4						
DAG				MLR	MLR		
	comp=E,3µm,17.0s,MS5.4						
DAG				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.0						
DAG	**Danmarks Havn**	**50.26**	**355**	*i* Pdu	**P**	**04 26 08.2**	**-1.2**
	comp=Z,62nm,0.7s,mb5.8						
DAG				LR	LR		
	comp=Z,1µm,17.0s,MS5.0						
DAG	**Danmarks Havn**	**50.26**	**355**	*j* *i*P	**P**	**04 26 08.2**	**-1.2**
	comp=Z,62nm,0.7s,mb5.8						
	comp=Z,1µm,17.0s						
NST	**Nakhon Sawan**	**50.51**	**240**	P	**P**	**04 26 12.0**	**-0.1**
	comp=Z,83nm,1.2s,mb5.5						
KOLN	**Koldanda**	**50.59**	**265**	*e*P	**P**	**04 26 13.3**	**+0.8**
	comp=Z,686nm,1.1s,mb6.5						
KTK1	**Kautokeino**	**51.01**	**336**	*e*P	**P**	**04 26 14.8**	**-0.4**
PTH	**Pithoragarh**	**51.36**	**269**	*e*P	**P**	**04 26 17.4**	**-0.9**
PTH				*e*x	x	04 27 14.8	
LGTI	**Lohaghat**	**51.41**	**269**	*e*P	**P**	**04 26 20.0**	**+1.2**
TRO	**Tromso**	**51.54**	**339**	⇑*i*P	**P**	**04 26 17.4**	**-1.8**
TRO				LR	LR		
	comp=Z,2882µm,17.1s						
TRO	**Tromso**	**51.54**	**339**	⇑*i*P	**P**	**04 26 17.4**	**-1.8**
TRO				*e*S	**S**	**04 33 39.8**	**+2.4**
TRO				AMS	AMS	04 54 46.7	

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      comp=Z,3µm,17.1s,MS5.4
CAL   Calcutta          51.66 256  eP      P      04 26 21.0 +0.3
KKM   Kota Kinabalu     51.81 216  eP      P      04 26 22.2 +0.2
KKM   Kota Kinabalu     51.81 216   P      P      04 26 22.7 +0.7
SMLA  Simla             52.09 273  i P     P      04 26 20.3 -3.6
BOK   Bokaro            52.16 260  eP      P      04 26 23.3 -1.2
BOK                                 AMb    AMB    04 26 26.1
      comp=Z,124nm,1.1s,mb5.7
TSM   Tawau             52.87 213   P      P      04 26 29.6 -0.3
PECR  Pechory           53.00 317  i P     P      04 26 29.6 -0.8
PECR                               e              04 28 31.2
PECR                               eS      S      04 34 09.6 +12
PECR                               eSS     SS     04 37 39.2 +3.0
PECR                                pmax   pmax
      comp=Z,440nm,2.0s,mb6.0
PECR                                MLR    MLR
      comp=N,5µm,13.0s,MS6.0
PECR                                MLR    MLR
      comp=E,8µm,14.0s,MS6.0
NDI   New Delhi         53.80 271  eP      P      04 26 35.6 -0.9
NDI                                 AMb    AMB    04 26 38.8
      comp=Z,357nm,1.4s,mb6.1
NDI                                ex      x      04 34 20.0
LOF   Lofoten           53.92 339  eP      P      04 26 36.4 -0.5
      comp=Z,83nm,1.7s,mb5.4
LOF   Lofoten           53.92 339  eP      P      04 26 36.4 -0.5
LOF                                 AMb    AMB    04 26 40.9
      comp=Z,83nm,1.7s,mb5.4
KIP   Kipapa            54.01 102   PFAKE         04 26 50.0 +12
KIP                                 LR     LR
      comp=Z,940nm,20.0s,MS4.8
BWNR  Bhubaneshwar      54.87 257  eP      P      04 26 47.4 +2.8
BWNR                                AMb    AMB    04 26 53.0
      comp=Z,136nm,1.6s,mb5.7
SUMG  Summit            54.95   1  eP      P      04 26 44.5 +0.1
      comp=Z,221nm,0.9s,mb6.2
JMIC  Jan Mayen         54.98 349  eP      P      04 26 44.2 -0.6
JMIC                                LR     LR
      comp=Z,784µm,18.6s
JMIC  Jan Mayen         54.98 349  eP      P      04 26 44.2 -0.6
JMIC                               eS      S      04 34 28.5 +4.3
JMIC                                AMS    AMS    04 50 18.6
      comp=Z,784nm,18.6s,MS4.8
OCWA  Octopus Mounta    55.09  55   PFAKE         04 27 00.0 +14
OCWA                                LR     LR
      comp=Z,2µm,20.0s,MS5.1
MOR8  Moi Rana          55.34 338⇑iP      P      04 26 44.9 -2.5
      comp=Z,48nm,1.6s,mb5.3
MOR8  Moi Rana          55.34 338⇑iP      P      04 26 44.9 -2.5
MOR8                                AMb    AMB    04 26 47.4
      comp=Z,48nm,1.6s,mb5.3
KAF   Kangasniemi       55.35 330  ep      P      04 26 45.4 -2.1
      comp=Z,39nm,0.9s,mb5.4,baz=40,slow=6.7
KAF   Kangasniemi       55.35 330  eP      P      04 26 45.4 -2.1
KAF                                 pmax   pmax
      comp=Z,39nm,0.9s,mb5.4
CMW   Cultus Mountai    55.65  54   P      P      04 26 50.5 +0.6
BLSP  Bilaspur          55.66 262  eP      P      04 26 49.3 -1.0
BLSP                                AMb    AMB    04 26 50.6
      comp=Z,300nm,1.2s,mb6.2
BLSP                               ex      x      04 26 51.0
PUL   Pulkovo           55.81 326  eP      P      04 26 47.2 -3.6
PUL                                eS      S      04 34 33.5 -1.8
PUL                                 pmax   pmax
      comp=E,34nm,0.4s
PUL                                 pmax   pmax
      comp=Z,43nm,0.4s,mb5.8
PUL                                 pmax   pmax
      comp=N,33nm,0.6s
PUL                                 pmax   pmax
      comp=N,27nm,0.4s
PUL                                 pmax   pmax
      comp=Z,72nm,0.4s,mb6.1
PUL                                 pmax   pmax
      comp=E,85nm,0.9s
PUL                                 MLR    MLR
      comp=N,2µm,14.0s,MS5.4
PUL                                 MLR    MLR
      comp=E,1µm,14.0s,MS5.4
PUL                                 MLR    MLR
      comp=Z,3µm,14.0s,MS5.5
PUL   Pulkovo           55.81 326  i P     P      04 26 50.5 -0.3
JCW   Jim Creek         55.90  54   P      P      04 26 52.0 +0.4
FINES FINESS Array B    55.93 329   P      P      04 26 50.7 -0.9
      comp=Z,50nm,0.9s,mb5.5,baz=45,slow=8.1,SNR=98
FINES                               PcP    PcP    04 27 49.1 -1.0
      comp=Z,19nm,0.8s,baz=63,slow=4.6,SNR=5.5
FINES                               LR     LR     04 53 26.3
      comp=Z,2µm,19.6s,MS5.3,baz=23,slow=39
FINES FINESS Array B    55.93 329   P      P      04 26 50.7 -0.9
FINES                               PcP    PcP    04 27 49.1 -1.0
FINES                               LR     LR     04 53 26.3
RPW   Rockport          55.93  53   P      P      04 26 51.8  0.0
MOS   Moscow            56.04 319  eP      P      04 26 51.9 -0.6
MOS                                e              04 27 49.5
MOS                                e              04 28 56.9
MOS                                ePPP    PPP    04 30 13.4 -1.3
MOS                                eS      S      04 34 39.6 +1.2
MOS                                eSSS    SSS    04 40 38.3 +6.3
MOS                                 pmax   pmax
      comp=Z,600nm,2.3s,mb6.2
MOS                                 pmax   pmax
      comp=Z,166nm,1.7s,mb5.8
MOS                                 MLR    MLR
      comp=Z,3µm,15.0s,MS5.5
MOS                                 MLR    MLR
      comp=N,2µm,14.4s,MS5.5
MOS                                 MLR    MLR
      comp=E,2µm,14.8s,MS5.5
PNT   Penticton         56.25  51   P      P      04 26 53.5 -0.6
EDM   Edmonton          56.37  45  eP      P      04 26 54.0 -0.9
EDM                                e       pP     04 26 58.6 -1.5
SCO   Scoresbysund      56.64 354  i P     P      04 26 56.2 -0.4
SCO                                 pmax   pmax
      comp=Z,32nm,1.0s,mb5.3
SCO   Scoresbysund      56.64 354  i P     P      04 26 56.2 -0.4
      comp=Z,32nm,1.0s,mb5.3
FMW   Mount Fremont     56.90  55   P      P      04 26 59.1 +0.3
OBN   Obninsk           56.91 319αiP      P      04 26 57.3 -1.5
OBN                                e              04 27 47.4
OBN                                eS      S      04 34 48.5 -1.4
OBN                                e              04 36 49.4
OBN                                 pmax   pmax
      comp=Z,140nm,2.2s,mb5.6
OBN                                 pmax   pmax
      comp=Z,400nm,2.3s,mb6.0
OBN                                 MLR    MLR
      comp=Z,5µm,13.0s,MS5.8
OBN   Obninsk           56.91 319  eP      P      04 26 57.2 -1.6
      comp=Z,56nm,1.1s,mb5.5
OBN                                 LR     LR
      comp=Z,398nm,20.0s,MS4.5
TWW   Teanaway          57.15  54   P      P      04 27 01.2 +0.6
NSS   Namsos            57.28 338  eP      P      04 27 00.7 -0.6
NSS                                 AMS    AMS    04 54 45.0
      comp=Z,3µm,17.6s,MS5.4
EBG   Ellensburg        57.46  54   P      P      04 27 03.1 +0.3
SNG   Songkhla          57.48 234   P      P      04 27 04.0 +0.6
      comp=Z,292nm,0.8s,mb6.4
BHPL  Bhopal            57.67 266  i P     P      04 27 04.0 -0.6
BHPL                                AMb    AMB    04 27 08.3
      comp=Z,317nm,1.3s,mb6.2
COR   Corvallis         57.70  58   PFAKE         04 27 20.0 +15
COR                                 LR     LR
      comp=Z,1µm,21.0s,MS4.9
PBA   Port Blair        57.80 244  eP      P      04 27 05.0 -0.6
PBA                                 AMb    AMB    04 27 08.3
      comp=Z,392nm,1.5s,mb6.2
VSU   Vasula            58.01 327c iP      P      04 27 05.6 -0.8
VSU   Vasula            58.01 327⇑iP      P      04 27 05.7 -0.7
OD2   Odessa Site #2    58.02  53   P      P      04 27 06.3 -0.4
NEW   Newport           58.17  51   P      P      04 27 07.5 -0.2
NEW                                 pmax   pmax
      comp=Z,100nm,1.7s
NEW   Newport           58.17  51  eP      P      04 27 06.8 -0.9
      comp=Z,103nm,1.8s,mb5.6
NEW                                 LR     LR
      comp=Z,1µm,19.0s,MS5.0
KSM   Kuching           58.24 221  eP      P      04 27 08.6 -0.1
VOR   Voronezh          58.26 315  eP      P      04 27 07.0 -1.3
VOR                                 pmax   pmax
      comp=N,50nm,1.7s
VOR                                 pmax   pmax
      comp=E,100nm,1.7s
VOR                                 pmax   pmax
      comp=Z,170nm,1.7s,mb5.8
NGP   Nagpur            58.27 263  eP      P      04 27 08.0 -0.7
NGP                                ex      x      04 27 10.2
VIS   Vishakhapatnam    58.34 257  i P     P      04 27 07.3 -2.0
KEBM  Edson Butte       58.36  60  eP      P      04 27 09.8 +0.7
CROR  Criterion Ridg    58.60  56   P      P      04 27 11.0 +0.2
VRSR  Storozhevoye      58.64 315  i P     P      04 27 09.8 -1.2
VRSR                               e*PP    pP     04 27 10.2 -6.0
VRSR                               e              04 28 00.3
VRSR                                pmax   pmax
      comp=N,150nm,0.9s
VRSR                                pmax   pmax
      comp=Z,120nm,0.9s,mb5.9
VRSR                                pmax   pmax
      comp=E,40nm,1.0s
VRSR                                MLR    MLR
      comp=Z,660nm,15.0s,MS4.9
VRSR                                MLR    MLR
      comp=N,430nm,14.0s,MS4.7
VRSR                                MLR    MLR
      comp=E,250nm,17.0s,MS4.7
KBO   Bosley Butte      58.88  60  eP      P      04 27 14.3 +1.5
KULM  Kulim             59.10 233  eP      P      04 27 14.4 -0.3
BBOR  Butler Butte      59.22  59   P      P      04 27 16.1 +1.0
FCC   Fort Churchill    59.34  31   P      P      04 27 14.3 -1.5
FCC                                 pmax   pmax
      comp=Z,98nm,1.2s,mb5.7
FCC   Fort Churchill    59.34  31  eP      P      04 27 13.9 -1.8
      comp=Z,98nm,1.3s,mb5.7
IPM   Ipoh              59.54 232   P      P      04 27 17.8 +0.1
FFC   Flin Flon         59.81  38   P      P      04 27 18.3 -0.8
FFC                                 pmax   pmax
      comp=Z,97nm,1.0s,mb5.8
FFC   Flin Flon         59.81  38  eP      P      04 27 18.1 -1.0
      comp=Z,96nm,1.0s,mb5.8
FFC                                 LR     LR
      comp=Z,409nm,19.0s,MS4.6
AKL   Akola             59.83 265  eP      P      04 27 21.3 +1.6
YBH   Yreka Blue Hor    60.02  60   P      P      04 27 21.9 +1.2
YBH                                 pmax   pmax
      comp=Z,110nm,1.5s
YBH   Yreka Blue Hor    60.02  60  eP      P      04 27 21.4 +0.8
      comp=Z,110nm,1.5s,mb5.7
YBH                                 LR     LR
      comp=Z,1µm,22.0s,MS5.0
SFJD  Kangerlussuaq     60.06   7⇑iP      P      04 27 19.3 -1.3
SFJD                               i S     S      04 35 32.1 +1.2
SFJD                                pmax   pmax
      comp=Z,58nm,0.7s,mb5.7
SFJD                                MLR    MLR
      comp=Z,2µm,18.0s,MS5.3
SFJD  Kangerlussuaq     60.06   7⇑iP      P      04 27 19.3 -1.3
      comp=Z,58nm,0.7s,mb5.7
SFJD                               i S     S      04 35 32.1 +1.2
      comp=Z,2µm,18.0s
KHMM  Horse Mountain    60.09  61  eP      P      04 27 22.6 +1.5
LHEM  Herd Peak         60.35  59   P      P      04 27 23.5 +0.6
NB2   NORSAR Subarra    60.45 336   P      P      04 27 22.2 -1.1
      comp=Z,56nm,1.1s,mb5.5,baz=32,slow=6.5
NB2   NORSAR Subarra    60.45 336   P      P      04 27 22.1 -1.2
NB2   NORSAR Subarra    60.45 336   P      P      04 27 22.2 -1.1
      baz=32,slow=6.9
NOA   NORSAR Array B    60.45 336   P      P      04 27 22.2 -1.0
      comp=Z,26nm,0.8s,mb5.3,baz=32,slow=6.5,SNR=74
NOA                                 LR     LR     04 56 24.6
      comp=Z,2µm,18.8s,MS5.3,baz=15,slow=39
BMO   Blue Mountains    60.52  54  eP      P      04 27 23.7 -0.3
      comp=Z,7.2nm,1.4s,mb4.6
BMO                                 LR     LR
      comp=Z,1µm,21.0s,MS5.1
MAK   Makhachkala       60.68 303  eP      P      04 27 26.0 +0.8
MAK                                ePPP    PPP    04 31 06.0 -2.4
MAK                                 S      S      04 35 52.0 +13
MAK                                 pmax   pmax
      comp=Z,2µm,7.0s
NAO01 NORSAR Array S    60.70 336  eP      P      04 27 23.5 -1.5
      comp=Z,18nm,0.8s,mb5.2
NAO01                               LR     LR
      comp=Z,3µm,20.0s,MS5.4
MSO   Missoula          60.70  50  eP      P      04 27 24.7 -0.5
      comp=Z,38nm,1.2s,mb5.4
MSO                                 LR     LR
      comp=Z,1µm,20.0s,MS5.0
MNK   Minsk             60.70 323  eP      P      04 27 24.0 -1.1
LASM  Arnica Sink       60.71  59   P      P      04 27 26.4 +1.0
KGM   Kluang            60.72 228   P      P      04 27 26.3 +0.5
WDC   Whiskeytown Da    60.93  60   P      P      04 27 27.6 +0.7
WDC                                 pmax   pmax
      comp=Z,49nm,1.2s,mb5.5
WDC   Whiskeytown Da    60.93  60  eP      P      04 27 26.7 -0.2
      comp=Z,49nm,1.3s,mb5.5
WDC                                 LR     LR
      comp=Z,816nm,19.0s,MS4.9
CHMT  Chamberlain Mo    60.95  50  eP      P      04 27 26.3 -0.6
MOD   Modoc             61.15  58  eP      P      04 27 28.7 +0.3
      comp=Z,114nm,1.6s,mb5.8
MOD                                 LR     LR
      comp=Z,2µm,22.0s,MS5.2
GOF   Gofitskoye        61.37 308⇓iP      P      04 27 29.0 -0.8
GOF                                 pmax   pmax
      comp=Z,124nm,0.8s,mb6.1
HYB   Hyderabad         61.42 261⇑eP      P      04 27 29.0 -1.5
HYB   Hyderabad         61.42 261⇑iP      P      04 27 29.0 -1.5
WVOR  Wild Horse Val    61.61  57  eP      P      04 27 31.4 -0.1
WVOR                                pmax   pmax
      comp=Z,114nm,1.3s,mb5.8
WVOR                                MLR    MLR
      comp=Z,1µm,19.0s,MS5.0
WVOR  Wild Horse Val    61.61  57  eP      P      04 27 31.4 -0.1
      comp=Z,114nm,1.3s,mb5.8
WVOR                                LR     LR
      comp=Z,1µm,19.0s,MS5.0
HRY   Holter Researc    61.76  49  eP      P      04 27 32.7 +0.2
HOPS  Hopland           61.80  62   PFAKE         04 27 40.0 +7.2
HOPS                                LR     LR
      comp=Z,949nm,19.0s,MS5.0
LATR  Latur             61.85 264  eP      P      04 27 33.8 +0.4
PMG   Port Moresby      61.98 176   PFAKE         04 27 50.0 +16
PMG                                 LR     LR
      comp=Z,589nm,20.0s,MS4.7
BHV   Bhavnagar         62.00 270  eP      P      04 27 34.0 -0.4
KONO  Kongsberg         62.05 336   PFAKE         04 27 50.0 +16
KONO                                LR     LR
      comp=Z,3µm,19.0s,MS5.4
KIV   Kislovodsk        62.35 307αiP      P      04 27 36.6 +0.2
KIV                                i              04 28 12.3
KIV                                i              04 29 52.1
KIV                                ePPP    PPP    04 31 22.4 -3.0
KIV                                i S     S      04 36 05.7 +5.3
KIV                                i              04 36 15.9
KIV                                i              04 36 24.2
KIV                                e              04 37 25.5
KIV                                 SS     SS     04 40 02.0 -4.0
KIV                                 pmax   pmax
      comp=Z,600nm,1.6s,mb6.5
KIV                                 pmax   pmax
      comp=Z,273nm,1.4s,mb6.2
KIV                                 MLR    MLR
      comp=Z,3µm,14.0s,MS5.7
KIV   Kislovodsk        62.35 307  eP      P      04 27 36.2 -0.2
      comp=Z,161nm,0.9s,mb6.2
KIV                                 LR     LR
      comp=Z,641nm,19.0s,MS4.8
BER   Bergen            62.42 338  eP      P      04 27 37.1 +0.5
BER                                 LR     LR
      comp=Z,1118µm,14.8s
BER   Bergen            62.42 338  eP      P      04 27 37.1 +0.5
BER                                eS      S      04 36 05.2 +4.2
BER                                 AMS    AMS    05 01 52.3
      comp=Z,1µm,14.8s,MS5.2
BEKR  Beckwourth        62.60  60  eP      P      04 27 37.6 -0.5
      comp=Z,84nm,1.5s,mb5.7
ZEI   Tsey              62.63 305  eP      P      04 27 36.7 -1.6
ZEI                                i *PP   pP     04 27 42.7 -0.9
ZEI                                i              04 29 52.9
ZEI                                 pmax   pmax
      comp=Z,40nm,1.2s,mb5.4
BOZ   Bozeman (W)       62.65  50   P      P      04 27 38.6 +0.2
BOZ                                 pmax   pmax
      comp=Z,73nm,1.2s,mb5.7
BOZ   Bozeman (W)       62.65  50  eP      P      04 27 38.3  0.0
      comp=Z,73nm,1.2s,mb5.7
BOZ                                 LR     LR
      comp=Z,1µm,21.0s,MS5.1
MCMT  McKenzie Canyo    62.69  51  eP      P      04 27 38.2 -0.5
DUS   Dusheti           62.74 304   P      P      04 27 38.5 -0.5
SUW   Suwalki           62.75 325⇑eP      P      04 27 37.5 -1.4
SUW                                 MLR    MLR    04 57 34.4
      comp=Z,4µm,16.4s,MS5.6
DGRG  David-gareji      62.87 303   P      P      04 27 39.0 -0.8
HLID  Hailey            62.88  53  eP      P      04 27 39.7 -0.2
      comp=Z,121nm,1.8s,mb5.7
HLID                                LR     LR
      comp=Z,1µm,20.0s,MS5.1
TI2   Plekhanov         62.98 304αiP      P      04 27 35.0 -5.5
TI2                                eS      S      04 36 19.4 +11
MTA   Mtatsminda        62.98 304   P      P      04 27 40.6  0.0
TBLG  Delisi            62.98 304   P      P      04 27 40.7 +0.1
ONI   Oni               63.00 305   P      P      04 27 40.5 -0.1
BCHG  Becho             63.09 306   P      P      04 27 41.5 +0.2
AKASG Malin Array Be    63.15 320   P      P      04 27 40.1 -1.5
      comp=Z,41nm,0.8s,mb5.6,baz=37,slow=7.4,SNR=187
AKASG                               PKPPKP        04 56 38.8
      comp=Z,0.3nm,0.3s,baz=246,slow=3.1,SNR=4.3
KIEV  Kiev              63.16 320   P      P      04 27 41.0 -0.7
WCN   Washoe City       63.33  60   P      P      04 27 43.7 +0.8
WCN                                 pmax   pmax
      comp=Z,120nm,1.5s,mb5.8
WCN   Washoe City       63.33  60  eP      P      04 27 42.8 -0.2
      comp=Z,117nm,1.6s,mb5.8
QLMT  Earthquake Lak    63.36  50  eP      P      04 27 43.3 +0.3
POO   Poona             63.41 266⇑iP      P      04 27 41.0 -2.7
HNR   Honiara           63.45 162   PFAKE         04 28 00.0 +16
HNR                                 LR     LR
      comp=Z,993nm,20.0s,MS5.0
YMR   Madison River     63.70  50  eP      P      04 27 45.5 +0.4
DGMT  Dagmar            63.78  43  eP      P      04 27 45.2 -0.4
      comp=Z,64nm,1.0s,mb5.6
DGMT                                LR     LR
      comp=Z,2µm,19.0s,MS5.2
YNR   Norris Junctio    63.79  50  eP      P      04 27 47.2 +1.4
BMN   Battle Mountai    63.81  57   P      P      04 27 46.9 +0.9
BMN                                 pmax   pmax
      comp=Z,12nm,0.8s,mb5.0
BMN   Battle Mountai    63.81  57  eP      P      04 27 46.4 +0.4
      comp=Z,12nm,0.8s,mb5.0
BMN                                 LR     LR
      comp=Z,889nm,19.0s,MS5.0
YFT   Old Faithful      63.92  50  eP      P      04 27 47.7 +1.1
CMB   Columbia Colle    63.93  61   P      P      04 27 45.8 -1.0
CMB                                 pmax   pmax
      comp=Z,83nm,1.4s,mb5.6
CMB   Columbia Colle    63.93  61  eP      P      04 27 45.3 -1.5
      comp=Z,83nm,1.5s,mb5.5
CMB                                 LR     LR
      comp=Z,1µm,19.0s,MS5.0
LKWY  Lake              64.04  50   P      P      04 27 49.7 +2.3
LKWY                                pmax   pmax
      comp=Z,110nm,1.4s,mb5.7
LKWY  Lake              64.04  50  eP      P      04 27 49.5 +2.0
      comp=Z,110nm,1.4s,mb5.7
LKWY                                LR     LR
      comp=Z,3µm,21.0s,MS5.5
SOC   Sochi             64.06 308  eP      P      04 27 46.7 -0.9
KAD   Karad             64.14 265  eP      P      04 27 48.0 -0.5
KAD                                 AMb    AMB    04 27 49.1
      comp=Z,191nm,0.8s,mb6.2
GNI   Garni             64.15 303  eP      P      04 27 49.1 +0.9
GNI   Garni             64.15 303c iP      P      04 27 49.1 +0.9
GNI                                 pmax   pmax
      comp=Z,231nm,1.8s
GNI                                 MLR    MLR
      comp=Z,2µm,15.0s
GNI   Garni             64.15 303  eP      P      04 27 49.2 +0.9
      comp=Z,138nm,1.1s,mb5.9
GNI                                 LR     LR
      comp=Z,1µm,20.0s,MS5.1
ANN   Anapa             64.21 311⇑iP      P      04 27 47.8 -0.7
ANN                                e*PP    pP     04 27 55.5 +1.7
ANN                                i              04 28 16.7
ANN                                e              04 30 11.1
ANN                                i PPP   PPP    04 31 40.0 -4.1
ANN                                eS      S      04 36 27.3 +3.8
ANN                                e              04 37 42.1
ANN                                eSS     SS     04 40 38.6 +4.0
ANN                                 pmax   pmax
      comp=Z,124nm,1.6s,mb5.7
IMW   Indian Meadow     64.29  51  eP      P      04 27 50.3 +1.3
      comp=Z,117nm,1.6s,mb5.7
LAO   LASA Array        64.29  46  eP      P      04 27 49.0 -0.1
      comp=Z,113nm,1.5s,mb5.7
LAO                                 LR     LR
      comp=Z,1µm,19.0s,MS5.2
SAO   San Andreas Ge    64.30  63   PFAKE         04 28 00.0 +11
SAO                                 LR     LR
      comp=Z,965nm,20.0s,MS5.0
MOOW  Moose Ponds       64.50  51  eP      P      04 27 50.8 +0.4
      comp=Z,108nm,1.5s,mb5.7
BSD   Bornholm Skovb    64.51 330⇓iP      P      04 27 49.8 -0.5
BSD                                 pmax   pmax
      comp=Z,24nm,1.1s,mb5.1
BSD   Bornholm Skovb    64.51 330⇓iP      P      04 27 49.8 -0.5
      comp=Z,24nm,1.1s,mb5.2
RRI2  Red Ridge         64.53  51  eP      P      04 27 51.3 +0.7
      comp=Z,38nm,0.8s,mb5.5
ELK   Elko              64.58  56   P      P      04 27 51.6 +0.6
ELK                                 pmax   pmax
      comp=Z,100nm,1.6s
ELK   Elko              64.58  56  eP      P      04 27 51.5 +0.5
      comp=Z,103nm,1.6s,mb5.6
ELK                                 LR     LR
      comp=Z,1µm,21.0s,MS5.0
TPAW  Teton Pass        64.60  51  eP      P      04 27 51.8 +0.7
      comp=Z,159nm,1.5s,mb5.8
WUWY  Wally Ulrich      64.66  51  eP      P      04 27 51.9 +0.4
LOHW  Long Hollow       64.67  51  eP      P      04 27 52.2 +0.7
      comp=Z,128nm,1.4s,mb5.8
SNOW  Snow King Moun    64.71  51  eP      P      04 27 52.9 +1.1
      comp=Z,136nm,1.6s,mb5.7
NVAR  Mina Array Bea    64.74  59   P      P      04 27 52.5 +0.4
      comp=Z,8.8nm,0.8s,mb4.8,baz=321,slow=4.7,SNR=37
NVAR                                LR     LR     04 56 22.3
      comp=Z,1µm,18.3s,MS5.1,baz=320,slow=36
NVAR                                PKPPKP        04 56 42.5
      comp=Z,1.3nm,0.9s,baz=116,slow=3.3,SNR=3.9
COP   Copenhagen        64.74 332  i P     P      04 27 52.0 +0.2
COP                                i S     S      04 36 36.2 +6.3
COP                                 pmax   pmax
      comp=Z,26nm,1.0s,mb5.2
COP                                 MLR    MLR
      comp=Z,820nm,15.0s,MS5.0
COP   Copenhagen        64.74 332  i P     P      04 27 52.0 +0.2
      comp=Z,26nm,1.0s,mb5.2
COP                                i              04 32 02.1
COP                                i S     S      04 36 36.2 +6.3
COP                                e              04 43 51.8
      comp=Z,820nm,15.0s
LRV   Little Rabbit     64.78  63  eP      P      04 27 53.8 +1.4
MNV   Mina              64.81  59  eP      P      04 27 52.3 -0.3
MNV                                 pmax   pmax
      comp=Z,99nm,1.8s,mb5.5
MNV                                 MLR    MLR
      comp=Z,1µm,19.0s,MS5.1
MNV   Mina              64.81  59  eP      P      04 27 52.3 -0.3
      comp=Z,100nm,1.8s,mb5.5
MNV                                 LR     LR
      comp=Z,1µm,19.0s,MS5.1
WAR   Warsaw            64.95 325  eP      P      04 27 53.4 +0.2
WAR                                ePP     PP     04 30 13.3 -4.9
WAR                                 MLR    MLR    05 02 45.1
      comp=Z,2µm,18.8s,MS5.4
MUD   Monsted U'grnd    64.97 334⇑iP      P      04 27 53.1 -0.1
MUD                                i              04 32 00.8
MUD                                i S     S      04 36 39.8 +7.2
MUD                                 pmax   pmax
      comp=Z,25nm,0.9s,mb5.2
MUD                                 MLR    MLR
      comp=Z,2µm,17.0s,MS5.4
MUD   Monsted U'grnd    64.97 334⇑iP      P      04 27 53.1 -0.1
      comp=Z,25nm,0.9s,mb5.2
MUD                                i              04 32 00.8
MUD                                i S     S      04 36 39.8 +7.2
MUD                                i              04 42 13.7
      comp=Z,2µm,17.0s
HVU   Hansel Valley     65.02  53   P      P      04 27 56.5 +2.7
HVU   Hansel Valley     65.02  53  eP      P      04 27 54.4 +0.6
AHID  Auburn Hatcher    65.08  52  eP      P      04 27 54.2  0.0
      comp=Z,45nm,1.4s,mb5.3
AHID                                LR     LR
      comp=Z,1µm,20.0s,MS5.1
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CLDR	**Caldiran**	**65.33**	**303**	*e*P	**P**	**04 27 57.0**	**+1.1**
CLDR	**Caldiran**	**65.33**	**303**	P	**P**	**04 27 57.5**	**+1.6**
GKP	**Gorka Klasztor**	**65.35**	**328**	⇑*e*P	**P**	**04 27 55.5**	**-0.2**
GKP				*e*PP	PP	04 30 16.6	-5.1
GKP				MLR	MLR	05 00 59.7	
	comp=Z,6µm,16.2s,MS5.9						
MTUM	**Tungsten Hills**	**65.40**	**60**	*e*P	**P**	**04 27 57.5**	**+1.1**
TPH	**Tonopah**	**65.57**	**59**	P	**P**	**04 27 58.2**	**+0.8**
TPH				pmax	pmax		
	comp=Z,140nm,1.8s,mb5.7						
TPH	**Tonopah**	**65.57**	**59**	*e*P	**P**	**04 27 57.4**	**0.0**
	comp=Z,136nm,1.9s,mb5.7						
TPH				LR	LR		
	comp=Z,722nm,20.0s,MS4.9						
SIM	**Simferopol'**	**65.60**	**313**	*e*P	**P**	**04 27 56.7**	**-0.8**
SIM				*e*S	S	04 36 36.0	-4.5
SIM				*e*PS	PS	04 36 56.0	-7.9
SIM				SS	SS	04 41 02.0	+5.8
SIM				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.5						
SIM				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.4						
SIM	**Simferopol'**	**65.60**	**313**	⇑*e*P	**P**	**04 27 56.8**	**-0.7**
ULM	**Lac du Bonnet**	**65.64**	**38**	P	**P**	**04 27 56.5**	**-1.1**
	comp=Z,38nm,1.0s,mb5.4,baz=325,slow=7.6,SNR=23						
ULM				LR	LR	04 59 13.7	
	comp=Z,2µm,19.1s,MS5.2,baz=164,slow=38						
HWUT	**Hardware Ranch**	**65.74**	**53**	*e*P	**P**	**04 27 58.3**	**-0.1**
	comp=Z,35nm,0.9s,mb5.4						
HWUT				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
BW06	**Boulder Array**	**65.81**	**51**	*e*P	**P**	**04 27 58.5**	**-0.3**
	comp=Z,74nm,1.3s,mb5.5						
BW06				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
PDAR	**Pinedale Array**	**65.81**	**51**	P	**P**	**04 27 59.0**	**+0.1**
	comp=Z,16nm,0.7s,mb5.2,baz=7.8,slow=1.8,SNR=63						
PDAR				PKPPKP		04 56 33.6	
	comp=Z,1.6nm,1.2s,baz=90,slow=4.4,SNR=4.5						
PDAR				LR	LR	04 57 56.5	
	comp=Z,823nm,18.3s,MS5.0,baz=345,slow=37						
LVV	**L'vov**	**65.86**	**322**	⇑*i*P	**P**	**04 27 58.5**	**-0.5**
LVV				*e*		04 28 27.9	
LVV				*e*PPP	PPP	04 32 02.7	+1.5
LVV				*e*S	S	04 36 36.9	-6.7
LVV				*e*		04 37 46.9	
LVV				MLR	MLR		
	comp=E,730nm,16.0s,MS5.0						
LVV				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.9						
LVV				MLR	MLR		
	comp=N,270nm,17.0s,MS5.0						
VANB	**Van**	**66.01**	**303**	*e*P	**P**	**04 28 01.3**	**+1.0**
ERZM	**Erzurum**	**66.04**	**305**	*i* P	**P**	**04 27 58.3**	**-2.1**
EZM	**Erzurum**	**66.05**	**305**	*e*P	**P**	**04 28 01.2**	**+0.8**
EZM	**Erzurum**	**66.05**	**305**	P	**P**	**04 28 02.4**	**+2.0**
TCUT	**Toone Canyon**	**66.19**	**53**	*e*P	**P**	**04 28 02.0**	**+0.7**
NOQ	**North Oquirrh**	**66.19**	**54**	*e*P	**P**	**04 28 01.9**	**+0.5**
TRCR	**Troy Canyon**	**66.20**	**58**	*e*P	**P**	**04 28 02.0**	**+0.5**
KIS	**Kishinev**	**66.25**	**317**	*e*P	**P**	**04 27 59.0**	**-2.6**
KIS				*e*S	S	04 36 45.0	-3.5
KIS				*e*PS	PS	04 37 30.0	+17
KIS				MLR	MLR		
	comp=N,500nm,15.0s,MS5.8						
KIS				MLR	MLR		
	comp=E,5µm,15.0s,MS5.8						
KIS				MLR	MLR		
	comp=Z,8µm,15.0s,MS6.0						
KIS				MLR	MLR		
	comp=Z,6µm,16.0s						
CTU	**Camp Tracy**	**66.34**	**54**	P	**P**	**04 28 01.6**	**-0.7**
KWP	**Kalwaria**	**66.50**	**323**	⇑*e*P	**P**	**04 28 03.4**	**+0.3**
KWP				*e*PP	PP	04 30 25.9	-5.8
KWP				MLR	MLR	04 59 12.1	
	comp=Z,4µm,19.4s,MS5.6						
GUMT	**Gumushane**	**66.55**	**306**	*e*P	**P**	**04 28 03.4**	**-0.3**
GUMT	**Gumushane**	**66.55**	**306**	P	**P**	**04 28 02.2**	**-1.5**
HKR	**Hakkari**	**66.60**	**302**	*e*P	**P**	**04 28 04.3**	**+0.3**
HKR	**Hakkari**	**66.60**	**302**	P	**P**	**04 28 04.6**	**+0.6**
DAU	**Daniels Canyon**	**66.80**	**53**	P	**P**	**04 28 06.4**	**+1.1**
DAU	**Daniels Canyon**	**66.80**	**53**	*e*P	**P**	**04 28 05.8**	**+0.6**
BSEG	**Bad Segeberg**	**66.87**	**332**	*e*P	**P**	**04 28 05.4**	**-0.1**
BSEG				*e*		04 30 34.1	
MPU	**Maple Canyon**	**66.92**	**54**	*e*P	**P**	**04 28 06.3**	**+0.2**
OJC	**Ojcow**	**67.06**	**325**	⇑*i*P	**P**	**04 28 06.3**	**-0.4**
OJC				*e*PP	PP	04 30 31.7	-4.5
OJC				*e*S	S	04 37 00.9	+2.7
OJC				MLR	MLR	04 59 28.8	
	comp=Z,2µm,20.3s,MS5.3						
RUE	**Ruedersdorf**	**67.12**	**329**	*e*P	**P**	**04 28 06.9**	**-0.2**
	comp=Z,67nm,0.9s,mb5.7						
MNGI	**Mangalore**	**67.15**	**261**	*i* x	x	04 29 53.4	
MNGI				AMb	AMB	04 29 56.6	
	comp=Z,237nm,1.5s,mb6.0						
BURAR	**Bucovina Array**	**67.20**	**320**	P	**P**	**04 28 07.5**	**-0.1**
KOLS	**Kolonicke sedl**	**67.24**	**322**	*e*P	**P**	**04 28 07.6**	**-0.3**
KOLS				*e*PP	PP	04 30 35.0	-2.8
RSSD	**Black Hills**	**67.26**	**46**	P	**P**	**04 28 07.9**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2						
RSSD	**Black Hills**	**67.26**	**46**	*e*P	**P**	**04 28 07.7**	**-0.5**
	comp=Z,22nm,0.8s,mb5.2						
RSSD				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
UZH	**Uzhgorod**	**67.48**	**322**	*i* P	**P**	**04 28 10.0**	**+0.6**
NIE	**Niedzica**	**67.55**	**324**	*e*P	**P**	**04 28 10.1**	**+0.3**
BEST	**Besiri**	**67.63**	**303**	*i* P	**P**	**04 28 10.7**	**+0.2**
TMUT	**Trail Mountain**	**67.68**	**54**	*e*P	**P**	**04 28 11.2**	**+0.4**
KSP	**Ksiaz**	**67.72**	**327**	⇑*e*P	**P**	**04 28 10.8**	**-0.1**
KSP				*e*PPP	PPP	04 32 14.5	-4.7
KSP				*e*S	S	04 37 03.0	-3.2
KSP				*e*		04 38 06.0	
KSP				MLR	MLR		
	comp=Z,6µm,17.3s,MS5.8						
KSP	**Ksiaz**	**67.72**	**327**	⇑*e*P	**P**	**04 28 10.9**	**0.0**
KSP				*e*PP	PP	04 30 36.2	-6.0
KSP				MLR	MLR	05 01 37.7	
	comp=Z,6µm,15.9s,MS5.9						
ARUT	**Antelope Range**	**67.73**	**57**	*e*P	**P**	**04 28 11.6**	**+0.4**
RAC	**Raciborz**	**67.73**	**326**	*e*P	**P**	**04 28 11.2**	**+0.2**
RAC				*e*S	S	04 37 10.2	+3.9
RAC				MLR	MLR		
	comp=Z,3µm,16.4s,MS5.5						
RAC	**Raciborz**	**67.73**	**326**	*e*P	**P**	**04 28 11.2**	**+0.2**
RAC				*e*S	S	04 37 10.2	+3.9
RAC				LMN		04 54 47.7	
RAC				LME		04 58 23.7	
RAC				MLR	MLR	05 04 53.8	
	comp=Z,3µm,16.4s,MS5.5						
RWWY	**Rawlins**	**67.74**	**50**	*e*P	**P**	**04 28 10.7**	**-0.5**
	comp=Z,22nm,0.7s,mb5.3						
MVU	**Marysvale**	**67.80**	**55**	*e*P	**P**	**04 28 12.1**	**+0.5**
	comp=Z,47nm,1.3s,mb5.4						
MVU				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
MSU	**Marysvale**	**67.81**	**55**	P	**P**	**04 28 12.4**	**+0.7**
MSU	**Marysvale**	**67.81**	**55**	*e*P	**P**	**04 28 12.2**	**+0.5**
MSL	**Mosul**	**67.92**	**301**	*e*P	**P**	**04 28 12.5**	**+0.1**
MSL				*e*pP	pP	04 28 17.0	-0.7
MSL				*e*S	S	04 37 11.5	+2.8
MSL				*e*sS		04 37 21.5	
OKC	**Ostrava-Krasne**	**67.95**	**325**	⇑*e*P	**P**	**04 28 12.0**	**-0.4**
OKC				*e*S	S	04 37 08.4	-0.5
OKC				AMS	AMS	05 06 20.0	
	comp=Z,3µm,12.0s						
BOYT	**Boyabat**	**68.00**	**310**	*i* P	**P**	**04 28 11.7**	**-1.1**
VRI	**Vrincioaia**	**68.02**	**318**	P	**P**	**04 28 13.2**	**+0.3**
VRI	**Vrincioaia**	**68.02**	**318**	⇑*i*P	**P**	**04 28 13.4**	**+0.6**
VRI	**Vrincioaia**	**68.02**	**318**	⇑*i*P	**P**	**04 28 13.4**	**+0.5**
UPC	**Upice**	**68.10**	**327**	⇑*i*P	**P**	**04 28 13.1**	**-0.2**
DPC	**Dobruska-Polom**	**68.14**	**327**	⇑*i*P	**P**	**04 28 13.7**	**+0.2**
DPC				*e*x	x	04 30 50.0	
DPC				*e*S	S	04 37 13.4	+2.3
DPC				AMS	AMS	05 01 00.0	
	comp=Z,4µm,14.6s						
SRU	**San Rafael**	**68.16**	**54**	P	**P**	**04 28 13.7**	**-0.2**
SRU	**San Rafael**	**68.16**	**54**	*e*P	**P**	**04 28 13.2**	**-0.7**
PALK	**Pallekele**	**68.17**	**253**	PFAKE		04 28 30.0	+16
PALK				LR	LR		
	comp=Z,269nm,22.0s,MS4.4						
MORC	**Moravsky Berou**	**68.21**	**326**	*e*P	**P**	**04 28 13.8**	**-0.2**
MORC				pmax	pmax		
	comp=Z,79nm,0.9s,mb5.7						
MORC	**Moravsky Berou**	**68.21**	**326**	*e*P	**P**	**04 28 13.8**	**-0.1**
	comp=Z,79nm,0.9s,mb5.8						
KECS	**Kecovo**	**68.27**	**323**	*e*P	**P**	**04 28 14.2**	**-0.1**
CLL	**Collm**	**68.38**	**329**	⇑*i*P	**P**	**04 28 14.5**	**-0.5**
CLL				*e*S	S	04 37 17.0	+3.1
CLL				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.9						
CLL	**Collm**	**68.38**	**329**	⇑*i*P	**P**	**04 28 14.5**	**-0.5**
	comp=Z,120nm,1.0s,mb5.9						
CLL				*e*S	S	04 37 17.0	+3.1
CLL	**Collm**	**68.38**	**329**	⇑P	**P**	**04 28 14.5**	**-0.5**
	comp=Z,logA/T=2.1,mb5.9						
CLL				*e*PP	PP	04 30 43.0	-5.0
CLL				*e*PPP	PPP	04 32 29.0	+3.6
CLL				*e*S	S	04 37 17.0	+3.1
CLL				*e*SCS	ScS	04 38 14.0	+3.9
CLL				*e*SS	SS	04 42 03.0	+24
BANOM	**Banah**	**68.39**	**285**	P	**P**	**04 28 15.0**	**-0.5**
	SNR=7.4						
BRG	**Berggiesshubel**	**68.46**	**329**	*i* P	**P**	**04 28 15.3**	**-0.2**
BRG				*e*		04 30 50.0	
BRG				*i* S	S	04 37 19.0	+4.1
BRG				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.4						
BRG				MLR	MLR		
	comp=N,4µm,21.5s,MS6.0						
BRG				MLR	MLR		
	comp=E,8µm,21.5s,MS6.0						
BRG				MLR	MLR		
	comp=Z,3µm,15.7s						
BRG	**Berggiesshubel**	**68.46**	**329**	*i* P	**P**	**04 28 15.3**	**-0.2**
	comp=Z,48nm,1.1s,mb5.4						
BRG				*e*		04 30 36.2	
BRG				*e*PP	PP	04 30 50.0	+1.2
BRG				*i* S	S	04 37 19.0	+4.1
BRG				*e*SS	SS	04 41 50.0	+10
BRG				LR	LR		
	comp=Z,3µm,15.7s,MS5.7						
TIRR	**Tirgusor**	**68.46**	**316**	⇓*i*P	**P**	**04 28 15.3**	**-0.3**
PVCC	**Panska Ves**	**68.56**	**328**	⇑*i*P	**P**	**04 28 16.2**	**+0.1**
PVCC				*e*S	S	04 37 19.2	+3.1
PVCC				AMS	AMS	05 01 20.0	
	comp=Z,4µm,15.7s						
BALT	**Daday**	**68.61**	**311**	*i* P	**P**	**04 28 16.5**	**-0.1**
MLR	**Muntele Rosu**	**68.65**	**318**	⇑*i*P	**P**	**04 28 17.0**	**+0.3**
NEN	**Nelson**	**68.65**	**59**	*e*P	**P**	**04 28 16.9**	**0.0**
CTKT	**Corum**	**68.67**	**309**	*i* P	**P**	**04 28 18.4**	**+1.4**
CLZ	**Clausthal**	**68.70**	**331**	*e*P	**P**	**04 28 17.0**	**0.0**
CLZ				*e*S	S	04 37 24.5	+6.7
CLZ				pmax	pmax		
	comp=Z,104nm,1.0s,mb5.7						
CLZ	**Clausthal**	**68.70**	**331**	*e*P	**P**	**04 28 17.0**	**0.0**
	comp=Z,104nm,1.0s,mb5.7						
CLZ				*e*S	S	04 37 24.5	+6.7
TOS	**Tosya**	**68.71**	**310**	*e*P	**P**	**04 28 17.8**	**+0.6**
TOS	**Tosya**	**68.71**	**310**	P	**P**	**04 28 18.8**	**+1.6**
MALT	**Malatya**	**68.73**	**306**	*e*P	**P**	**04 28 18.1**	**+0.7**
MALT	**Malatya**	**68.73**	**306**	*e*P	**P**	**04 28 17.9**	**+0.5**
MALT				pmax	pmax		
	comp=Z,132nm,1.6s,mb5.6						
MALT	**Malatya**	**68.73**	**306**	*e*P	**P**	**04 28 17.9**	**+0.6**
	comp=Z,132nm,1.6s,mb5.6						
DRGR		**68.85**	**321**	P	**P**	**04 28 17.9**	**-0.1**
DRGR		**68.85**	**321**	⇑*i*P	**P**	**04 28 18.2**	**+0.2**
DRGR		**68.85**	**321**	⇑*i*P	**P**	**04 28 18.2**	**+0.2**
VYHS	**Vyhne**	**68.85**	**324**	*i* P	**P**	**04 28 18.2**	**+0.2**
VYHS				*e*PP	PP	04 30 50.0	-2.4
VYHS				*e*S	S	04 37 19.5	-0.1
ESK	**Eskdalemuir**	**68.90**	**341**	PFAKE		04 28 30.0	+12
ESK				LR	LR		
	comp=Z,284nm,19.0s,MS4.5						
ESK	**Eskdalemuir**	**68.90**	**341**	*e*P	**P**	**04 28 17.9**	**-0.2**
ESK				AMb	AMB	04 28 23.7	
	comp=Z,71nm,2.1s,mb5.2						
SNX	**Sinaia**	**68.93**	**318**	P	**P**	**04 28 28.1**	**+10**
KOLL	**Kolacno**	**68.93**	**325**	*i* P	**P**	**04 28 18.7**	**+0.2**
VRAC	**Vranov**	**68.94**	**326**	P	**P**	**04 28 18.9**	**+0.4**
LDFC	**Landfair**	**68.94**	**60**	*e*P	**P**	**04 28 18.1**	**-0.6**
JAVC	**Velka Javorina**	**68.95**	**325**	P	**P**	**04 28 19.7**	**+1.1**
PSZ	**Piszkesteto**	**68.96**	**323**	*e*P	**P**	**04 28 18.5**	**-0.1**
PSZ				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.4						
PSZ	**Piszkesteto**	**68.96**	**323**	*e*P	**P**	**04 28 18.5**	**-0.1**
	comp=Z,55nm,1.1s,mb5.4						
PSZ	**Piszkesteto**	**68.96**	**323**	*i* Pc		04 28 19.0	
PRA	**Prague**	**69.00**	**328**	⇑AMS	AMS	05 06 20.0	
PRU	**Pruhonice**	**69.03**	**328**	⇑*i*P	**P**	**04 28 19.0**	**0.0**
PRU				*e*PP	PP	04 30 52.3	-1.6
PRU				*e*S	S	04 37 22.7	+0.9
PRU				AMS	AMS	05 02 20.0	
	comp=Z,3µm,14.8s						
VOIR		**69.05**	**319**	⇑*i*P	**P**	**04 28 19.7**	**+0.5**
CORM	**Corum**	**69.10**	**309**	*e*P	**P**	**04 28 20.0**	**+0.3**
EYMN	**Ely**	**69.16**	**36**	*e*P	**P**	**04 28 18.3**	**-1.6**
	comp=Z,64nm,1.2s,mb5.4						
EYMN				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
SAFT	**Safranbolu**	**69.16**	**311**	*e*P	**P**	**04 28 20.0**	**0.0**
SAFT	**Safranbolu**	**69.16**	**311**	P	**P**	**04 28 20.4**	**+0.4**
URFA	**Urfa**	**69.21**	**305**	*e*P	**P**	**04 28 20.9**	**+0.6**
KRUC	**Moravsky**	**69.22**	**326**	P	**P**	**04 28 20.1**	**-0.1**
CANT	**Cankiri**	**69.23**	**310**	*e*P	**P**	**04 28 21.2**	**+0.8**
WBK	**Wadi Bani Khal**	**69.31**	**280**	P	**P**	**04 28 21.7**	**+0.5**
	SNR=6.5						
PFO	**Pinyon Flat Ob**	**69.36**	**62**	P	**P**	**04 28 21.9**	**+0.6**
PFO				pmax	pmax		
	comp=Z,53nm,1.6s,mb5.2						
PFO	**Pinyon Flat Ob**	**69.36**	**62**	*e*P	**P**	**04 28 21.3**	**0.0**
	comp=Z,53nm,1.6s,mb5.2						
PFO				LR	LR		
	comp=Z,240nm,19.0s,MS4.5						
MOX	**Moxa**	**69.38**	**330**	*e*P	**P**	**04 28 21.2**	**0.0**
MOX				*e*S	S	04 37 35.0	+9.1
MOX				pmax	pmax		
	comp=Z,176nm,1.9s,mb5.7						
MOX				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.3						
MOX	**Moxa**	**69.38**	**330**	*e*P	**P**	**04 28 21.2**	**0.0**
	comp=Z,176nm,1.9s,mb5.7						
MOX				*e*S	S	04 37 35.0	+9.1
MOX				*e*SS	SS	04 41 40.0	-15
MOX				*e*SSS	SSS	04 45 08.0	+10
MOX				LR	LR		
	comp=Z,2µm,21.0s,MS5.3						
MOX	**Moxa**	**69.38**	**330**	*i* P	**P**	**04 28 21.2**	**0.0**
	comp=Z,logA/T=2.0,mb5.7						
MOX				S	S	04 37 35.0	+9.1
MOX				SS	SS	04 41 40.0	-15
MOX				SSS	SSS	04 45 08.0	+10
MOX				QM		04 57 29.0	
MOX				RM		05 01 46.0	
ELDT	**Eldivan**	**69.42**	**310**	*i* P	**P**	**04 28 22.2**	**+0.7**
ASHO	**Ashiyiah**	**69.47**	**284**	P	**P**	**04 28 21.6**	**-0.5**
	SNR=7.7						
NKC	**Novy Kostel**	**69.49**	**329**	⇑*i*P	**P**	**04 28 21.7**	**-0.1**
NKC				*e*S	S	04 37 24.7	-2.4
NKC				AMS	AMS	05 01 40.0	
	comp=Z,2µm,16.5s						
SMDO	**Samad**	**69.52**	**281**	P	**P**	**04 28 22.4**	**-0.1**
	SNR=7.1						
BHD	**Baghdad**	**69.55**	**298**	*i* P	**P**	**04 28 20.0**	**-2.5**
BHD				*e*pP	pP	04 28 27.0	-0.8
BHD				*e*S	S	04 37 41.0	+13
BUC1	**Bucharest**	**69.55**	**317**	P	**P**	**04 28 22.6**	**+0.3**
HOQ	**Hoqain**	**69.56**	**282**	P	**P**	**04 28 22.2**	**-0.5**
	SNR=16						
BNN	**Bunyan**	**69.56**	**308**	*e*P	**P**	**04 28 22.4**	**-0.1**
BNN	**Bunyan**	**69.56**	**308**	P	**P**	**04 28 23.4**	**+0.9**
WTSB	**Winterswijk**	**69.60**	**333**	⇑*e*P	**P**	**04 28 22.2**	**-0.3**
	comp=Z,136nm,1.0s,mb5.8						
SRO	**Srobarova**	**69.61**	**324**	*i* P	**P**	**04 28 23.3**	**+0.7**
SRO				*e*		04 30 56.9	
SRO	**Srobarova**	**69.61**	**324**	*i* P	**P**	**04 28 23.3**	**+0.7**
SRO				*e*		04 28 38.5	
SRO				*e*PP	PP	04 30 56.9	-1.7
SRO2	**Moca**	**69.63**	**324**	*e*P	**P**	**04 28 23.4**	**+0.7**
CDAG	**Cicekdag**	**69.66**	**309**	*i* P	**P**	**04 28 13.6**	**-9.5**
SRO1	**Iza**	**69.69**	**324**	*e*P	**P**	**04 28 23.6**	**+0.5**
SRO1				*e*		04 28 36.5	
ZST	**Bratislava**	**69.71**	**325**	*e*P	**P**	**04 28 23.9**	**+0.7**
ZST				*e*		04 28 35.0	
ZST				*e*PP	PP	04 31 06.5	+7.1
ZST				*e*S	S	04 37 45.2	+15
SCHQ	**Schefferville**	**69.79**	**18**	P	**P**	**04 28 22.4**	**-1.1**
	comp=Z,14nm,0.7s,mb5.0,baz=354,slow=6.0,SNR=45						
SCHQ				LR	LR	04 59 04.8	
	comp=Z,1µm,21.9s,MS5.1,baz=346,slow=36						
GZT	**Gaziantep**	**69.90**	**305**	*i* P	**P**	**04 28 24.1**	**-0.4**
BRTR	**Keskin Array B**	**69.92**	**310**	P	**P**	**04 28 24.8**	**+0.1**
	comp=Z,16nm,0.8s,mb5.0,baz=65,slow=4.2,SNR=70						
VKA	**Vienna**	**69.92**	**326**	⇑*i*P	**P**	**04 28 25.3**	**+0.8**
	comp=Z,373nm,2.5s,mb5.9						
VKA	**Vienna**	**69.92**	**326**	⇑*i*P	**P**	**04 28 25.3**	**+0.8**
VKA				pmax	pmax		
	comp=Z,373nm,2.5s,mb5.9						
BAR	**Barrett**	**69.95**	**62**	*e*P	**P**	**04 28 24.3**	**-0.7**
ISCO	**Idaho Springs**	**69.97**	**50**	P	**P**	**04 28 26.0**	**+1.0**
ISCO				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
ISCO	**Idaho Springs**	**69.97**	**50**	*e*P	**P**	**04 28 25.0**	**0.0**
	comp=Z,34nm,1.2s,mb5.2						
ISCO				LR	LR		
	comp=Z,2µm,21.0s,MS5.3						
SGKT	**Sivrigoynuk**	**69.98**	**311**	*i* P	**P**	**04 28 18.4**	**-6.6**
JMDO	**Jabal Madar**	**70.01**	**281**	P	**P**	**04 28 25.3**	**-0.2**
	SNR=16						
KHC	**Kasperske Hory**	**70.09**	**328**	⇑*i*P	**P**	**04 28 25.7**	**+0.2**
KHC				*e*		04 31 05.1	
KHC				*e*S	S	04 37 37.1	+2.9
KHC				MLR	MLR		
	comp=Z,3µm,16.3s,MS5.7						
KHC	**Kasperske Hory**	**70.09**	**328**	⇑*i*P	**P**	**04 28 25.7**	**+0.2**
KHC				x	x	04 28 31.5	
KHC				*e*PP	PP	04 31 05.1	+2.6
KHC				*e*S	S	04 37 37.1	+2.9
KHC				AMS	AMS	05 02 10.0	
	comp=Z,3µm,16.3s						
KAMT	**Kaman**	**70.17**	**309**	*e*P	**P**	**04 28 24.5**	**-1.7**
KAMT	**Kaman**	**70.17**	**309**	P	**P**	**04 28 25.2**	**-1.0**
ANTO	**Ankara**	**70.20**	**310**	*e*P	**P**	**04 28 25.2**	**-1.1**
ANTO	**Ankara**	**70.20**	**310**	P	**P**	**04 28 27.4**	**+1.1**
GAZ	**Gaziantep**	**70.22**	**306**	*e*P	**P**	**04 28 26.8**	**+0.3**
GAZ	**Gaziantep**	**70.22**	**306**	P	**P**	**04 28 27.6**	**+1.1**
ARQ	**Araqi**	**70.22**	**283**	P	**P**	**04 28 26.4**	**-0.4**
	SNR=13						
BZS	**Buzias**	**70.25**	**321**	P	**P**	**04 28 26.3**	**-0.2**
BZS	**Buzias**	**70.25**	**321**	⇓*i*P	**P**	**04 28 26.8**	**+0.3**
BZS	**Buzias**	**70.25**	**321**	⇓*i*P	**P**	**04 28 26.8**	**+0.3**
BSY	**Bisya**	**70.27**	**282**	P	**P**	**04 28 26.6**	**-0.5**
	SNR=23						
LHO	**Holmfirth**	**70.28**	**339**	⇑*i*P	**P**	**04 28 26.3**	**-0.2**
GEC2	**GERESS Array S**	**70.30**	**328**	*e*P	**P**	**04 28 26.5**	**-0.3**
GEC2				*e*S	S	04 37 43.3	+6.6
GEC2				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.3						
GEC2	**GERESS Array S**	**70.30**	**328**	*e*P	**P**	**04 28 26.5**	**-0.3**
	comp=Z,45nm,1.2s,mb5.3						
GEC2				*e*S	S	04 37 43.3	+6.6
GERES	**GERESS Array B**	**70.30**	**328**	P	**P**	**04 28 26.7**	**-0.1**
	comp=Z,10nm,0.7s,mb4.8,baz=33,slow=5.0,SNR=110						
GERES				LR	LR	05 03 03.9	
	comp=Z,2µm,18.2s,MS5.5,baz=214,slow=39						
HENT	**Hendek**	**70.31**	**312**	*i* P	**P**	**04 28 22.2**	**-4.7**
GRA1	**Grafenberg Arr**	**70.34**	**330**	*e*P	**P**	**04 28 27.2**	**+0.2**
	comp=Z,131nm,1.0s,mb5.8						
GRA1				*e*PP	PP	04 31 01.7	-3.1
GRA1				*e*S	S	04 37 44.5	+7.3
GRA1				LR	LR		
	comp=Z,2µm,18.2s,MS5.4						
GRF	**Grafenberg Arr**	**70.34**	**330**	*e*P	**P**	**04 28 27.2**	**+0.2**
GRF				*e*		04 31 01.7	
GRF				*e*S	S	04 37 44.5	+7.3
GRF				pmax	pmax		
	comp=Z,131nm,1.0s,mb5.8						
GRF				MLR	MLR		
	comp=Z,2µm,18.2s,MS5.4						
GRF	**Grafenberg Arr**	**70.34**	**330**	*e*P	**P**	**04 28 27.2**	**+0.2**
GRF				*e*		04 31 01.7	
GRF				*e*S	S	04 37 44.5	+7.3
GRF				pmax	pmax		
	comp=Z,131nm,1.0s,mb5.8						
GRF				MLR	MLR		
	comp=Z,2µm,18.2s,MS5.4						
GRF	**Grafenberg Arr**	**70.34**	**330**	*e*P	**P**	**04 28 27.2**	**+0.2**
	comp=Z,131nm,1.0s,mb5.8						
GRF				*e*PP	PP	04 31 01.7	-3.1
GRF				*e*S	S	04 37 44.5	+7.3
GRF				LR	LR		
	comp=Z,2µm,18.2s,MS5.4						
SOP	**Sopron**	**70.34**	**325**	⇑*i*P	**P**	**04 28 28.0**	**+0.9**
MDU	**Mudurnu**	**70.45**	**312**	*e*P	**P**	**04 28 27.9**	**0.0**
MDU	**Mudurnu**	**70.45**	**312**	P	**P**	**04 28 28.3**	**+0.4**
CRAR	**CRAIOVA**	**70.47**	**319**	P	**P**	**04 28 28.4**	**+0.5**
SZH	**Strazhica**	**70.47**	**317**	*e*P	**P**	**04 28 27.0**	**-0.9**
KBI1	**Birley Grange**	**70.48**	**339**	⇑*e*P	**P**	**04 28 27.6**	**-0.2**
WUAZ	**Wupatki**	**70.53**	**57**	*e*P	**P**	**04 28 28.6**	**+0.1**
	comp=Z,36nm,1.1s,mb5.2						
WUAZ				LR	LR		
	comp=Z,1µm,22.0s,MS5.2						
TNS	**Taunus Mts**	**70.70**	**331**	*e*P	**P**	**04 28 29.1**	**-0.1**
TNS				*e*S	S	04 37 46.5	+5.1
TNS				pmax	pmax		
	comp=Z,69nm,1.1s,mb5.5						
TNS	**Taunus Mts**	**70.70**	**331**	*e*P	**P**	**04 28 29.1**	**-0.1**
	comp=Z,69nm,1.1s,mb5.5						
TNS				*e*S	S	04 37 46.5	+5.1
KWE	**Weaver Farm**	**70.77**	**339**	⇑*e*P	**P**	**04 28 29.2**	**-0.3**
HGN	**Heimansgroeve**	**70.92**	**333**	*e*P	**P**	**04 28 27.8**	**-2.7**
	comp=Z,98nm,2.1s,mb5.4						
HGN				*e*PcP	PcP	04 28 44.0	-7.2
HGN				*e*S	S	04 37 54.2	+10
MOA	**Molln**	**70.98**	**327**	⇑*i*P	**P**	**04 28 31.1**	**+0.2**
	comp=Z,297nm,2.6s,mb5.8						
GBZT	**Gebze**	**70.98**	**313**	P	**P**	**04 28 30.8**	**-0.3**
ARSA	**Arzberg**	**71.07**	**326**	⇑*i*P	**P**	**04 28 32.0**	**+0.5**
	comp=Z,389nm,2.6s,mb5.9						
SIND	**Sindeldorf**	**71.14**	**330**	P	**P**	**04 28 32.0**	**+0.1**
SIND	**Sindeldorf**	**71.14**	**330**	⇑*e*P	**P**	**04 28 31.6**	**-0.3**
TOD	**Tromm**	**71.15**	**331**	⇑*e*P	**P**	**04 28 31.1**	**-0.8**
TOD	**Tromm**	**71.15**	**331**	⇑*e*P	**P**	**04 28 32.0**	**+0.1**
SBD1	**Bryn Du**	**71.18**	**340**	⇑*e*P	**P**	**04 28 32.2**	**+0.1**
SBD1				AMb	AMB	04 28 38.7	
	comp=Z,169nm,1.6s,mb5.7						
YLV	**Yalova**	**71.20**	**313**	*e*P	**P**	**04 28 31.3**	**-1.1**
YLV	**Yalova**	**71.20**	**313**	P	**P**	**04 28 31.8**	**-0.6**
COBT	**Iskenderun**	**71.20**	**306**	*i* P	**P**	**04 28 23.2**	**-9.3**
ABH	**Alteburg**	**71.27**	**332**	⇑*e*P	**P**	**04 28 31.7**	**-0.9**
ABH	**Alteburg**	**71.27**	**332**	⇑*e*P	**P**	**04 28 32.7**	**+0.1**
SWS	**Schriesheim**	**71.29**	**331**	P	**P**	**04 28 33.2**	**+0.4**
SWS	**Schriesheim**	**71.29**	**331**	⇑*e*P	**P**	**04 28 32.6**	**-0.2**
EDRB	**Edirne**	**71.30**	**315**	*e*P	**P**	**04 28 32.5**	**-0.5**
EDRB	**Edirne**	**71.30**	**315**	P	**P**	**04 28 33.0**	**0.0**
ESKT	**Eskisehir**	**71.38**	**311**	*e*P	**P**	**04 28 32.5**	**-1.0**
ESKT	**Eskisehir**	**71.38**	**311**	*i* P	**P**	**04 28 26.1**	**-7.4**
KIZT	**Kizilcal**	**71.42**	**310**	*e*P	**P**	**04 28 33.4**	**-0.3**
KIZT	**Kizilcal**	**71.42**	**310**	P	**P**	**04 28 33.9**	**+0.1**
HLM1	**Long Mynd**	**71.46**	**339**	⇑*i*P	**P**	**04 28 33.8**	**0.0**
HLM1				AMb	AMB	04 28 37.2	
	comp=Z,100nm,2.3s,mb5.3						
DLF	**Lyons Farm**	**71.46**	**342**	⇑*i*P	**P**	**04 28 33.3**	**-0.5**
DSB	**Dublin**	**71.48**	**342**	*e*P	**P**	**04 28 33.6**	**-0.2**
	comp=Z,34nm,1.1s,mb5.2						
SVIS	**Svilajnac**	**71.51**	**320**	⇑*i*P	**P**	**04 28 31.1**	**-3.1**
DCN	**Croghan**	**71.56**	**342**	⇑*i*P	**P**	**04 28 33.7**	**-0.6**
RUP	**Ruppelstein**	**71.57**	**332**	⇑*e*P	**P**	**04 28 33.4**	**-1.0**
RUP	**Ruppelstein**	**71.57**	**332**	⇑*e*P	**P**	**04 28 34.3**	**-0.1**
KDHN	**Kadinhani**	**71.60**	**310**	*i* P	**P**	**04 28 27.0**	**-7.8**
SSP1	**Stoney Pound**	**71.60**	**339**	⇑*i*P	**P**	**04 28 34.8**	**+0.2**
SSP1				AMb	AMB	04 28 38.1	
	comp=Z,82nm,2.3s,mb5.3						
BOLS	**Boljevac**	**71.61**	**320**	⇓*i*P	**P**	**04 28 33.6**	**-1.2**
KTD	**Kalmit**	**71.61**	**331**	*e*P	**P**	**04 28 34.5**	**-0.2**
KTD	**Kalmit**	**71.61**	**331**	*e*P	**P**	**04 28 34.3**	**-0.4**
HDH	**Heidenheim**	**71.63**	**330**	P	**P**	**04 28 35.0**	**+0.1**
HDH	**Heidenheim**	**71.63**	**330**	⇑*e*P	**P**	**04 28 34.7**	**-0.2**
DIM	**Dimitrovgrad**	**71.64**	**316**	*e*P	**P**	**04 28 35.0**	**0.0**
ULDT	**Uludag**	**71.65**	**313**	*i* P	**P**	**04 28 33.7**	**-1.4**
SDCO	**Great Sand Dun**	**71.67**	**51**	*e*P	**P**	**04 28 35.1**	**-0.1**
	comp=Z,29nm,1.1s,mb5.1						
SDCO				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
FUR	**Furstenfeldbru**	**71.67**	**329**	*e*P	**P**	**04 28 35.0**	**-0.1**
FUR				*e*		04 31 13.2	
FUR				pmax	pmax		
	comp=Z,169nm,1.4s,mb5.8						
FUR	**Furstenfeldbru**	**71.67**	**329**	*e*P	**P**	**04 28 35.0**	**-0.1**
	comp=Z,169nm,1.4s,mb5.8						
FUR				*e*PP	PP	04 31 13.2	-2.9

PERS	Pernice	71.74	326	eP	P	04 28 35.8	+0.2
STU	Stuttgart	71.78	330	P	P	04 28 35.8	+0.1
STU				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3						
STU	Stuttgart	71.78	330	eP	P	04 28 35.6	-0.1
	comp=Z,41nm,1.0s,mb5.3						
PGB	Panagyurishte	71.80	318	eP	P	04 28 36.0	0.0
ZAPS	Zavoj/Pirot	71.80	319	⇑iP	P	04 28 35.1	-0.9
GIVF	Givet	71.83	334	⇑iP	P	04 28 35.5	-0.5
	comp=Z,123nm,1.1s,mb5.4						
GIVF	Givet	71.83	334	⇑iP	P	04 28 35.5	-0.5
GIVF				pmax	pmax		
	comp=Z,62nm,1.1s,mb5.5						
HAE	Alders End	71.84	339	⇑iP	P	04 28 36.0	-0.1
HAE				AMb	AMB	04 28 37.6	
	comp=Z,102nm,1.1s,mb5.7						
WLF	Walferdange	71.86	333	eP	P	04 28 36.0	-0.2
WLF				pmax	pmax		
	comp=Z,56nm,1.3s,mb5.3						
WLF	Walferdange	71.86	333	eP	P	04 28 36.0	-0.2
	comp=Z,56nm,1.3s,mb5.3						
MRMT	Marmara Adasi	71.95	314	eP	P	04 28 35.9	-1.0
MRMT	Marmara Adasi	71.95	314	P	P	04 28 36.4	-0.5
HTR	Trewern Hill	71.95	339	⇑iP	P	04 28 36.5	-0.2
HTR				AMb	AMB	04 28 41.2	
	comp=Z,163nm,2.0s,mb5.6						
KBA	Koelnbreinsper	71.96	327	⇑iP	P	04 28 37.7	+0.9
	comp=Z,557nm,2.4s,mb6.1						
KBA	Koelnbreinsper	71.96	327	⇑iP	P	04 28 37.7	+0.9
KBA				pmax	pmax		
	comp=Z,557nm,2.4s,mb6.1						
MCH1	Michaelchurch	71.97	339	⇑iP	P	04 28 36.7	-0.1
MCH1				AMb	AMB	04 28 40.1	
	comp=Z,82nm,2.4s,mb5.2						
LBG	Lerchenberg	71.99	331	P	P	04 28 37.3	+0.3
LBG	Lerchenberg	71.99	331	⇑eP	P	04 28 36.9	-0.1
LANF	Langenberg	72.00	331	⇑eP	P	04 28 37.2	+0.2
BNT	Bandirma	72.01	314	P	P	04 28 36.9	-0.4
BNT	Bandirma	72.01	314	P	P	04 28 38.1	+0.8
BUCH	Bad Urach	72.01	330	P	P	04 28 37.6	+0.5
BUCH	Bad Urach	72.01	330	⇑eP	P	04 28 37.4	+0.3
KDZ	Kurdzhali	72.02	316	eP	P	04 28 37.5	+0.2
BAIF	Baives	72.03	334	⇑iP	P	04 28 36.9	-0.3
	comp=Z,117nm,1.1s,mb5.4						
BAIF	Baives	72.03	334	⇑iP	P	04 28 36.9	-0.3
BAIF				pmax	pmax		
	comp=Z,58nm,1.1s,mb5.4						
OBKA	Obir	72.05	326	⇓iP	P	04 28 37.7	+0.3
	comp=Z,533nm,2.5s,mb6.0						
GRUS	Gruza	72.05	320	⇓iP	P	04 28 36.9	-0.5
MENF	Mencas	72.10	335	⇑eP	P	04 28 37.4	-0.2
DIVS	Divcibare	72.15	321	⇓iP	P	04 28 37.5	-0.6
VTS	Vitosha	72.15	318	iP	P	04 28 38.0	-0.1
VTS	Vitosha	72.15	318	P	P	04 28 38.4	+0.3
HGH	Gray Hill	72.27	339	⇑iP	P	04 28 38.5	-0.1
HGH				AMb	AMB	04 28 42.0	
	comp=Z,116nm,2.2s,mb5.4						
RZN	Rozhen	72.28	317	iP	P	04 28 38.0	-0.9
WATA	Walderalm	72.31	328	⇑iP	P	04 28 39.4	+0.5
	comp=Z,65nm,1.2s,mb5.4						
WATA	Walderalm	72.31	328	⇑iP	P	04 28 39.4	+0.5
WATA				pmax	pmax		
	comp=Z,65nm,1.2s,mb5.4						
WTTA	Wattenberg	72.35	328	⇑iP	P	04 28 39.9	+0.7
	comp=Z,689nm,2.5s,mb6.1						
WTTA	Wattenberg	72.35	328	⇑iP	P	04 28 39.9	+0.7
WTTA				pmax	pmax		
	comp=Z,689nm,2.5s,mb6.1						
ALN	Alexandroupoli	72.38	315	eP	P	04 28 39.2	-0.2
RDO	Rodhopi	72.39	316	P	P	04 28 39.8	+0.3
GUT	Gutenstein	72.42	330	P	P	04 28 39.8	+0.2
GUT	Gutenstein	72.42	330	⇑eP	P	04 28 39.7	+0.1
BFO	Black Forest	72.43	331	eP	P	04 28 39.1	-0.5
BFO				eS	S	04 38 05.9	+4.6
BFO				pmax	pmax		
	comp=Z,72nm,1.1s,mb5.5						
BFO	Black Forest	72.43	331	eP	P	04 28 39.1	-0.5
	comp=Z,72nm,1.1s,mb5.5						
BFO				eS	S	04 38 05.9	+4.6
MOTA	Moosalm	72.45	328	⇑iP	P	04 28 40.1	+0.4
	comp=Z,67nm,1.1s,mb5.5						
MOTA	Moosalm	72.45	328	⇑iP	P	04 28 40.1	+0.4
MOTA				pmax	pmax		
	comp=Z,67nm,1.1s,mb5.5						
LJU	Ljubljana	72.46	326	eP	P	04 28 39.6	-0.2
UBR	Uberruh	72.47	329	P	P	04 28 40.2	+0.4
UBR	Uberruh	72.47	329	⇑eP	P	04 28 39.8	0.0
SPAK	Spaichingen	72.50	330	P	P	04 28 40.7	+0.7
SPAK	Spaichingen	72.50	330	⇑eP	P	04 28 40.3	+0.3
SQTA	Sankt Quirin	72.53	328	⇓iP	P	04 28 40.9	+0.8
	comp=Z,96nm,1.2s,mb5.6						
SQTA	Sankt Quirin	72.53	328	⇓iP	P	04 28 40.9	+0.8
SQTA				pmax	pmax		
	comp=Z,96nm,1.2s,mb5.6						
PTCC	Patocco-Chiusa	72.54	327	P	P	04 28 39.8	-0.4
FVI	Forni Avoltri	72.57	327	P	P	04 28 40.1	-0.2
FVI				pmax	pmax		
	comp=Z,56nm,1.4s,mb5.3						
FVI	Forni Avoltri	72.57	327	P	P	04 28 40.1	-0.2
	comp=Z,56nm,1.4s,mb5.3						
BBLS	Bajina Basta -	72.57	321	⇓iP	P	04 28 40.3	-0.1
CTA	Charters Tower	72.57	178	eP	P	04 28 40.4	-0.5
	comp=Z,16nm,1.1s,mb4.9						
CTA	Charters Tower	72.57	178	eP	P	04 28 40.4	-0.5
CTA				pmax	pmax		
	comp=Z,16nm,1.1s						
CTAO	Charters Tower	72.57	178	P	P	04 28 41.0	+0.1
CTAO				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
CTAO	Charters Tower	72.57	178	eP	P	04 28 40.2	-0.7
	comp=Z,27nm,1.0s,mb5.1						
CTAO				LR	LR		
	comp=Z,535nm,19.0s,MS4.8						
SEST	Monte Rota	72.62	327	P	P	04 28 41.0	+0.4
	comp=Z,389nm,2.6s,mb5.9						
WLS	Welschbruch	72.64	331	P	P	04 28 41.2	+0.5
CANB	Canakkale	72.66	314	eP	P	04 28 40.8	-0.3
CDF	Champ du Feu	72.67	331	⇑iP	P	04 28 40.8	-0.1
	comp=Z,210nm,1.2s,mb5.7						
CDF	Champ du Feu	72.67	331	⇑iP	P	04 28 40.8	-0.1
CDF				pmax	pmax		
	comp=Z,105nm,1.2s,mb5.6						
BOJS	Bojanci	72.68	325	eP	P	04 28 40.6	-0.4
BOJS				e	pP	04 28 47.6	+1.3
BOJS				eS	S	04 38 19.5	+15
VOY	Vojsko	72.69	326	eP	P	04 28 40.2	-0.9
VOY				e		04 28 55.7	
GMNA	Gemona	72.70	327	P	P	04 28 40.7	-0.4
HASS	Wahat al Ahsa’	72.79	289	P	P	04 28 40.6	-1.5
LIBD	Limburg	72.81	331	⇑eP	P	04 28 41.8	+0.1
LIBD	Limburg	72.81	331	eP	P	04 28 42.0	+0.3
KKB	Krupnik	72.81	318	eP	P	04 28 41.0	-0.9
SISB	Singen-Sch Ber	72.81	330	P	P	04 28 42.3	+0.5
STEIN	Stein am Rhein	72.86	330	⇑iP	P	04 28 42.2	+0.2
WRAB	Tennant Creek	72.86	189	eP	P	04 28 41.5	-1.1
WRAB				pmax	pmax		
	comp=Z,57nm,1.0s,mb5.5						
WRAB				MLR	MLR		
	comp=Z,294nm,21.0s,MS4.5						
WRAB	Tennant Creek	72.86	189	eP	P	04 28 41.5	-1.1
	comp=Z,57nm,1.0s,mb5.5						
WRAB				LR	LR		
	comp=Z,294nm,21.0s,MS4.5						
WB2	Warramunga Arr	72.87	189	eP	P	04 28 41.7	-1.0
WRA	Warramunga Arr	72.87	189	P	P	04 28 41.8	-0.9
	comp=Z,25nm,1.1s,mb5.1,baz=6.8,slow=6.1,SNR=62						
ECH	Echery	72.88	331	⇑eP	P	04 28 42.2	+0.1
SLE	Schleitheim	72.88	330	⇑iP	P	04 28 41.8	-0.4
KIZ	Kirchzarten	72.89	331	P	P	04 28 42.3	+0.1
KIZ	Kirchzarten	72.89	331	⇑eP	P	04 28 41.8	-0.4
DAVA	Damuels	72.89	329	⇑iP	P	04 28 42.6	+0.4
	comp=Z,356nm,2.6s,mb5.8						
ISP	Isparta	72.89	311	eP	P	04 28 41.4	-1.0
ISP	Isparta	72.89	311	P	P	04 28 42.3	-0.1
FELD	Feldberg	72.93	331	⇑eP	P	04 28 42.5	0.0
FELD	Feldberg	72.93	331	⇑eP	P	04 28 42.4	-0.1
WEIN	Weingarten	72.95	330	⇑iP	P	04 28 42.8	+0.2
LIENZ	Alp Oberkamor	73.00	329	⇑eP	P	04 28 42.9	0.0
HEX	Exmoor	73.02	339	⇑eP	P	04 28 42.9	0.0
PLE	Pljevlja	73.03	321	⇑iP	P	04 28 43.9	+0.8
FLACH	Flaach	73.04	330	⇑iP	P	04 28 43.1	0.0
WILA	Wila	73.07	330	⇑iP	P	04 28 43.4	+0.1
EZN	Ezine	73.14	314	eP	P	04 28 55.8	+12
APPI	Appiano	73.18	328	P	P	04 28 43.9	0.0
	comp=Z,118nm,1.9s,mb5.5						
THEF	They Montfort	73.20	332	P	P	04 28 44.6	+0.6
MOF	Molkenrain	73.21	331	⇑eP	P	04 28 44.1	0.0
SULZ	Sulz-Cheisache	73.21	330	⇑iP	P	04 28 44.0	-0.1
ZUR	Zurich	73.21	330	⇑iP	P	04 28 44.1	0.0
MEZF	Maizieres J’vi	73.22	333	⇑iP	P	04 28 44.2	+0.1
	comp=Z,301nm,1.4s,mb5.7						
SRS	Serrai	73.23	317	eP	P	04 28 44.6	+0.3
IVA	Berane	73.23	320	⇑iP	P	04 28 44.2	-0.1
HTL	Hartland	73.23	340	⇑eP	P	04 28 44.1	0.0
PLONS	Plons	73.25	329	⇑iP	P	04 28 44.5	+0.1
HAU	Haudompre	73.30	332	⇑iP	P	04 28 44.2	-0.4
	comp=Z,74nm,1.0s,mb5.3						
HAU				eR			
	comp=Z,3μm,18.5s						
HAU	Haudompre	73.30	332	⇑iP	P	04 28 44.2	-0.4
HAU				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.3						
HAU				MLR	MLR		
	comp=Z,3μm,18.5s,MS5.5						
UPM	Unac-Piva	73.32	321	⇑iP	P	04 28 44.9	0.0
HINF	Hinteralfeld	73.33	331	⇑iP	P	04 28 44.3	-0.4
	comp=Z,82nm,1.1s,mb5.3						
HINF	Hinteralfeld	73.33	331	⇑iP	P	04 28 44.3	-0.4
HINF				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.3						
DAVOX	Davos	73.34	329	⇑iP	P	04 28 45.6	+0.8
TUC	Tucson	73.35	58	P	P	04 28 45.0	-0.3
TUC				pmax	pmax		
	comp=Z,37nm,1.8s,mb5.0						
TUC				MLR	MLR		
	comp=Z,698nm,21.0s,MS4.9						
TUC	Tucson	73.35	58	P	P	04 28 45.0	-0.3
	comp=Z,37nm,1.8s,mb5.0						
TUC				LR	LR		
	comp=Z,698nm,21.0s,MS4.9						
FUORN	Ofenpass	73.36	329	⇑iP	P	04 28 45.9	+0.9
SKO	Skopje	73.38	319	⇑iP	P	04 28 45.5	+0.3
CTI	Castel Tesino	73.42	327	P	P	04 28 44.7	-0.6
CTI				pmax	pmax		
	comp=Z,55nm,1.3s,mb5.3						
CTI	Castel Tesino	73.42	327	P	P	04 28 44.7	-0.6
	comp=Z,55nm,1.3s,mb5.3						
VAL	Valentia	73.43	344	eP	P	04 28 44.0	-1.3
PVY	Plav	73.43	320	⇑iP	P	04 28 45.4	-0.1
ANMO	Albuquerque	73.44	54	P	P	04 28 46.7	+1.0
ANMO				pmax	pmax		
	comp=Z,34nm,1.4s						
ANMO	Albuquerque	73.44	54	eP	P	04 28 46.1	+0.4
	comp=Z,34nm,1.4s,mb5.1						
ANMO				LR	LR		
	comp=Z,623nm,20.0s,MS4.9						
CBKS	Cedar Bluff	73.45	47	PFAKE		04 29 00.0	+14
CBKS				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
BBS	Basel-Blauen	73.45	331	⇑eP	P	04 28 44.7	-0.8
BBS	Basel-Blauen	73.45	331	⇑eP	P	04 28 45.7	+0.2
BRMO	Bormio	73.45	328	P	P	04 28 46.5	+1.0
VAY	Valandovo	73.48	318	⇑iP	P	04 28 46.2	+0.4
BALST	Balsthal	73.51	331	⇑iP	P	04 28 45.9	+0.1
LLS	Linth-Limmern	73.55	330	⇑iP	P	04 28 46.3	+0.2
MUO	Muotathal	73.56	330	⇑iP	P	04 28 46.4	+0.3
BOURR	Bourrignon	73.60	331	⇑iP	P	04 28 46.3	0.0
BERNI	Berninapass	73.62	329	⇑iP	P	04 28 47.1	+0.6
NKY	Niksic	73.62	321	⇑iP	P	04 28 45.9	-0.7
BNALP	Bannalp	73.71	330	⇑iP	P	04 28 47.2	+0.2
OUR	Ouranopolis	73.72	316	eP	P	04 28 47.2	0.0
BRY	Bratogost	73.72	321	⇑iP	P	04 28 46.3	-0.8
VDL	Val di Lei	73.73	329	⇑P	P	04 28 48.0	+0.9
LOMF	Lomont	73.75	331	P	P	04 28 48.0	+0.8
LENM	Lemitar	73.81	55	eP	P	04 28 49.0	+1.1
GOLH	Golhisar	73.82	311	iP	P	04 28 40.5	-7.4
TTG	Podgorica	73.85	321	⇑iP	P	04 28 47.2	-0.7
GRG	Griva	73.85	318	eP	P	04 28 48.4	+0.5
CSS	Prodhromos	73.88	307	eP	P	04 28 47.5	-0.7
	comp=Z,48nm,1.0s,mb5.4						
HASLI	Hasliberg	73.89	330	⇑eP	P	04 28 47.7	-0.4
JFWS	Jewell Farm	73.90	38	P	P	04 28 46.8	-1.4
JFWS				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.2						
JFWS	Jewell Farm	73.90	38	eP	P	04 28 46.2	-2.0
	comp=Z,45nm,1.3s,mb5.2						
JFWS				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
IZM	Izmir	73.91	313	eP	P	04 28 47.6	-0.7
IZM	Izmir	73.91	313	P	P	04 28 48.6	+0.3
CSA1	St Austell	73.93	340	⇑eP	P	04 28 48.0	-0.1
SALA	Sala	73.98	303	⇑P	P	04 28 53.9	+5.0
BNM	Barren Site	74.00	54	eP	P	04 28 49.2	+0.3
FUSIO	Fusio	74.01	330	⇑iP	P	04 28 49.1	+0.4
ELL	Elmali	74.06	310	eP	P	04 28 47.7	-1.5
ELL	Elmali	74.06	310	P	P	04 28 48.2	-1.0
BUM	Brajici-Budva	74.10	321	⇑iP	P	04 28 48.6	-0.8
HCY	Herceg Novi	74.13	321	⇑iP	P	04 28 48.1	-1.4
WIMIS	Wimmis	74.13	330	⇑iP	P	04 28 49.5	0.0
CCA1	Carnmenellis	74.15	340	⇑eP	P	04 28 49.6	+0.2
CRQ2	Rosemanowes 2	74.16	340	⇑iP	P	04 28 49.5	0.0
CRQ2				AMb	AMB	04 28 51.9	
	comp=Z,143nm,2.2s,mb5.5						
SAL	Salo	74.18	328	P	P	04 28 49.5	-0.2
SAL				pmax	pmax		
	comp=Z,104nm,1.0s,mb5.7						
SAL	Salo	74.18	328	P	P	04 28 49.5	-0.2
	comp=Z,104nm,1.0s,mb5.7						
PAIG	Paliouri	74.19	316	eP	P	04 28 49.7	-0.2
BRANT	Les Verrieres	74.23	331	⇑iP	P	04 28 50.2	+0.2
CMA1	Manaccan	74.23	340	⇑iP	P	04 28 50.1	+0.2
CGW	Gweek	74.23	340	⇑eP	P	04 28 50.0	+0.1
URLA	Izmir	74.23	313	iP	P	04 28 45.2	-5.0
TORNY	Torny	74.23	331	⇑iP	P	04 28 50.2	+0.2
ULC	Ulcinj	74.25	320	⇑iP	P	04 28 50.4	+0.2
CPZ	Penzance	74.26	340	⇑iP	P	04 28 49.9	-0.2
CPZ				AMb	AMB	04 28 51.8	
	comp=Z,112nm,1.3s,mb5.6						
CGH1	Goonhilly	74.27	340	⇑iP	P	04 28 49.9	-0.2
MUGIO	Muggio	74.37	329	⇑iP	P	04 28 50.4	-0.4
OHR	Ohrid	74.37	319	⇑iP	P	04 28 50.6	-0.3
QSH	Qafa e Shtames	74.37	320	ip	P	04 28 52.0	+1.0
LKBD	Leukerbad	74.38	330	⇑P	P	04 28 51.2	+0.3
FNA	Florina	74.41	318	eP	P	04 28 51.3	+0.1
FLN	La Foliniere	74.42	336	⇑iP	P	04 28 50.8	-0.3
	comp=Z,195nm,1.2s,mb5.6						
FLN				eR			
	comp=Z,2μm,21.2s						
FLN	La Foliniere	74.42	336	⇑iP	P	04 28 50.8	-0.3
FLN				pmax	pmax		
	comp=Z,98nm,1.2s,mb5.6						
FLN				MLR	MLR		
	comp=Z,2μm,21.3s,MS5.4						
LDF	La Druitiere	74.49	336	⇑iP	P	04 28 51.2	-0.3
	comp=Z,198nm,1.3s,mb5.6						
LDF	La Druitiere	74.49	336	⇑iP	P	04 28 51.2	-0.3
LDF				pmax	pmax		
	comp=Z,99nm,1.3s,mb5.6						
FETY	Fethiye	74.53	311	eP	P	04 28 50.8	-1.2
FETY	Fethiye	74.53	311	P	P	04 28 53.0	+1.0
LIT	Litokhoron	74.53	317	eP	P	04 28 51.0	-0.9
TIR	Tirane	74.54	320	P	P	04 28 52.0	+0.1
TIR	Tirane	74.54	320	ip	P	04 28 50.0	-1.9
KSU1	Kansas State U	74.57	45	eP	P	04 28 51.1	-1.1
MMK	Mattmark	74.58	330	⇑iP	P	04 28 52.8	+0.7
MLSB	Milas	74.58	312	eP	P	04 28 51.3	-1.0
MLSB	Milas	74.58	312	P	P	04 28 52.2	-0.1
CABF	La Chapelle	74.64	331	⇑iP	P	04 28 52.4	0.0
	comp=Z,129nm,1.2s,mb5.4						
CABF	La Chapelle	74.64	331	⇑iP	P	04 28 52.4	0.0
CABF				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.4						
GRYON	Gryon	74.66	330	⇑iP	P	04 28 52.7	+0.2
LOR	Lormes	74.67	333	⇑iP	P	04 28 52.2	-0.4
	comp=Z,228nm,1.1s,mb5.7						
LOR				eR			
	comp=Z,3μm,19.0s						
LOR	Lormes	74.67	333	⇑iP	P	04 28 52.2	-0.4
LOR				pmax	pmax		
	comp=Z,114nm,1.1s,mb5.7						
LOR				MLR	MLR		
	comp=Z,3μm,19.0s,MS5.7						
OG01	Vacheresse	74.72	331	⇑eP	P	04 28 52.9	+0.1
DIX	Grande Dixence	74.72	330	⇑iP	P	04 28 53.7	+0.8
GRR	Gorron	74.86	337	⇑iP	P	04 28 53.6	0.0
	comp=Z,247nm,1.1s,mb5.8						
GRR	Gorron	74.86	337	⇑iP	P	04 28 53.6	0.0
GRR				pmax	pmax		
	comp=Z,124nm,1.1s,mb5.8						
EMV	Vieux Emosson	74.89	331	⇑iP	P	04 28 54.0	+0.1
ORX	Oropa	74.95	330	P	P	04 28 54.6	+0.4
SSF	Saint Saulge	74.96	333	⇑iP	P	04 28 53.9	-0.3
SSF				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.4						
SSF	Saint Saulge	74.96	333	⇑iP	P	04 28 53.9	-0.3
	comp=Z,51nm,1.0s,mb5.4						
HYF	Humbligny	75.00	334	⇑iP	P	04 28 54.6	+0.1
RSM	Repubblica di	75.02	326	P	P	04 28 55.5	+0.8
RSM				pmax	pmax		
	comp=Z,281nm,1.8s,mb5.9						
RSM	Repubblica di	75.02	326	P	P	04 28 55.5	+0.8
	comp=Z,281nm,1.8s,mb5.9						
TRAV		75.13	330	P	P	04 28 53.6	-1.7
ZCCA	Zocca	75.14	327	P	P	04 28 57.1	+1.7
ARV	Arcevia	75.23	325	P	P	04 28 56.1	+0.2
	comp=Z,47nm,0.9s,mb5.4						
SMF	Signal de Mont	75.25	333	⇑iP	P	04 28 55.6	-0.3
	comp=Z,244nm,1.2s,mb5.7						
SMF	Signal de Mont	75.25	333	⇑iP	P	04 28 55.6	-0.3
SMF				pmax	pmax		
	comp=Z,122nm,1.2s,mb5.7						
AVF	Avril sur Loir	75.25	333	⇑iP	P	04 28 55.7	-0.2
	comp=Z,166nm,1.1s,mb5.6						
AVF	Avril sur Loir	75.25	333	⇑iP	P	04 28 55.7	-0.2
AVF				pmax	pmax		
	comp=Z,83nm,1.1s,mb5.6						
SFI	Santa Sofia	75.25	326	P	P	04 28 57.0	+1.0
SFI				pmax	pmax		
	comp=Z,2μm,3.4s						
SFI	Santa Sofia	75.25	326	P	P	04 28 57.0	+1.0
	comp=Z,2μm,3.4s						
RSL	Roselend	75.31	331	⇑eP	P	04 28 56.6	+0.3
GRAM		75.32	328	P	P	04 28 56.4	0.0
MEV	Metsovon	75.32	318	eP	P	04 28 56.9	+0.5
LSD	Ceresole Reale	75.36	330	P	P	04 28 57.3	+0.7
VALM		75.39	328	P	P	04 28 56.6	-0.1
SGMF	Saint Gilles	75.39	338	⇑iP	P	04 28 56.9	+0.2
	comp=Z,197nm,1.0s,mb5.7						
SGMF	Saint Gilles	75.39	338	⇑iP	P	04 28 56.9	+0.2
SGMF				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.7						
LPL	La Plagne	75.44	330	⇑iP	P	04 28 57.8	+0.8
	comp=Z,206nm,1.4s,mb5.6						
LPL	La Plagne	75.44	330	⇑iP	P	04 28 57.8	+0.8
LPL				pmax	pmax		
	comp=Z,103nm,1.4s,mb5.6						
LPG	La Plagne	75.45	330	⇑iP	P	04 28 57.9	+0.8
	comp=Z,214nm,1.3s,mb5.6						
LPG	La Plagne	75.45	330	⇑iP	P	04 28 57.9	+0.8
LPG				pmax	pmax		
	comp=Z,107nm,1.3s,mb5.6						
ROSF	Rostrenen	75.47	338	⇑iP	P	04 28 57.5	+0.3
	comp=Z,233nm,1.1s,mb5.7						
ROSF	Rostrenen	75.47	338	⇑iP	P	04 28 57.5	+0.3
ROSF				pmax	pmax		
	comp=Z,117nm,1.1s,mb5.7						
CODM		75.48	328	P	P	04 28 57.7	+0.4
SARO	Sassorosso	75.48	327	P	P	04 28 57.4	+0.1
BACM		75.51	328	P	P	04 28 57.5	+0.1
VLC	Villacollemand	75.51	327	eP	P	04 28 58.2	+0.8
	comp=Z,50nm,0.9s,mb5.5						
AGG	Agios Georgios	75.51	317	eP	P	04 28 56.0	-1.6
HILS	Ha’il	75.52	296	P	P	04 28 58.5	+0.7
JAN	Janina	75.58	318	eP	P	04 28 58.3	+0.3
BGF	Bois d’Agland	75.60	333	⇑iP	P	04 28 57.7	-0.2
	comp=Z,71nm,1.0s,mb5.2						
BGF	Bois d’Agland	75.60	333	⇑iP	P	04 28 57.7	-0.2
BGF				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
VINC	Vinca	75.60	328	P	P	04 28 57.7	-0.3
RSP	Reno Superiore	75.61	330	P	P	04 28 57.2	-0.8
MAIM		75.69	327	P	P	04 28 57.8	-0.7
GENL	Genova Univers	75.75	328	P	P	04 28 58.5	-0.3
PCP	Pian Castagno	75.76	329	P	P	04 28 59.3	+0.4
APE	Apeiranthos	75.77	313	eP	P	04 28 49.4	-10
FENE	Fenestrelle	75.78	330	P	P	04 28 59.7	+0.7
AMTX	Amarillo	75.79	51	eP	P	04 28 59.1	-0.1
	comp=Z,73nm,1.2s,mb5.5						
AMTX				LR	LR		
	comp=Z,798nm,19.0s,MS5.0						
EVR	Evrytania	75.82	317	eP	P	04 28 58.0	-1.3
QUIF	Quistinic	75.84	338	⇑iP	P	04 28 59.5	+0.2
	comp=Z,226nm,1.1s,mb5.7						
QUIF	Quistinic	75.84	338	⇑iP	P	04 28 59.5	+0.2
QUIF				pmax	pmax		
	comp=Z,113nm,1.1s,mb5.7						
BNI	Bardonecchia	75.88	330	eP	P	04 28 59.7	+0.2
BNI				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
BNI	Bardonecchia	75.88	330	eP	P	04 28 59.7	+0.2
	comp=Z,16nm,0.8s,mb5.0						
BHB	Bricherasio	75.89	330	P	P	04 28 58.0	-1.6
IGT	Igoumenitsa	75.90	318	eP	P	04 28 59.7	-0.1
ARSS	Ar Rass	75.91	294	P	P	04 28 59.9	-0.2
GDM	Grand’Maison	75.91	331	⇑eP	P	04 29 00.4	+0.7
PLDF	La Plantade	75.93	333	⇑eP	P	04 29 01.4	+1.6
RRL	Cesana Torines	75.96	330	P	P	04 29 00.5	+0.5
GRN	Grenoble	75.98	331	⇑eP	P	04 29 01.1	+1.0
AGO	Saint Agoulin	75.99	333	⇑eP	P	04 29 01.9	+1.8
OG22	Abries	76.00	330	⇑eP	P	04 29 01.8	+1.6
TCF	Toulx Ste Croi	76.02	334	⇑iP	P	04 29 00.4	+0.1
	comp=Z,172nm,1.2s,mb5.6						
TCF	Toulx Ste Croi	76.02	334	⇑iP	P	04 29 00.4	+0.1
TCF				pmax	pmax		
	comp=Z,86nm,1.2s,mb5.6						
AQU	L’Aquila	76.08	324	P	P	04 29 01.2	+0.5
AQU				pmax	pmax		
	comp=Z,65nm,0.9s,mb5.6						
AQU	L’Aquila	76.08	324	P	P	04 29 01.4	+0.7
	comp=Z,224nm,2.0s,mb5.8						
MBDF	Montbardon	76.14	330	⇑iP	P	04 29 01.0	0.0
	comp=Z,63nm,0.9s,mb5.2						
MBDF	Montbardon	76.14	330	⇑iP	P	04 29 01.0	0.0
MBDF				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.2						
FIN	Finale Ligure	76.16	329	P	P	04 29 00.1	-1.0
ROB	Roburent	76.19	329	P	P	04 29 00.9	-0.4
ORIF	Oris-en-Rattie	76.23	331	⇑iP	P	04 29 02.1	+0.6
	comp=Z,121nm,0.9s,mb5.5						
ORIF				eR			
	comp=Z,3μm,21.8s						
PZZ	Prazzo	76.24	330	P	P	04 29 00.6	-1.0
CPRX	Cap Rock	76.25	53	eP	P	04 29 02.3	+0.4
MZLS	Mizel	76.25	291	P	P	04 29 02.1	0.0
PYM	Petit Puy Mans	76.30	333	⇑eP	P	04 29 03.7	+1.8
CII	Carovilli	76.31	324	eP	P	04 29 02.1	+0.1
	comp=Z,166nm,1.6s,mb5.7						
COLF	Collangettes	76.32	332	⇑eP	P	04 29 02.6	+0.6
MFF	Saint Martin d	76.35	335	⇑iP	P	04 29 02.6	+0.5
	comp=Z,254nm,1.2s,mb5.7						
MFF	Saint Martin d	76.35	335	⇑iP	P	04 29 02.6	+0.5
MFF				pmax	pmax		
	comp=Z,127nm,1.2s,mb5.7						
SURF	Saint Ours	76.35	330	⇑eP	P	04 29 02.9	+0.7
ENR	Entracque	76.39	329	P	P	04 29 00.3	-2.1
STV2	Anna di Valdie	76.41	329	P	P	04 29 00.5	-2.0
STV	Sta Anna Valdi	76.41	329	P	P	04 29 00.5	-2.0
MONE	Monesi	76.42	329	P	P	04 29 01.9	-0.7
LCHF	La Chataignera	76.43	336	⇑eP	P	04 29 03.5	+0.9
LKD	Levkas	76.47	318	eP	P	04 29 02.6	-0.4
IMI	Imperia	76.53	329	P	P	04 29 03.1	-0.1
SAOF	Saorge	76.57	329	⇑eP	P	04 29 03.2	-0.2
MNTX	Cornudas Mount	76.59	55	eP	P	04 29 03.8	0.0
	comp=Z,17nm,0.9s,mb5.0						
AUTN	L’Aution	76.60	329	⇑eP	P	04 29 04.1	+0.5
TOUF	Mont Tournerai	76.64	329	⇑eP	P	04 29 03.7	-0.1
VIVF	Saint-Julien-l	76.65	331	⇑iP	P	04 29 04.2	+0.4
	comp=Z,233nm,1.3s,mb5.6						
VIVF	Saint-Julien-l	76.65	331	⇑iP	P	04 29 04.2	+0.4
VIVF				pmax	pmax		
	comp=Z,117nm,1.3s,mb5.7						
OG25	Le Caire	76.67	330	⇑eP	P	04 29 04.5	+0.5
LBL	Lubilhac	76.71	333	⇑eP	P	04 29 06.1	+1.9
OCF	Saint Nazaire	76.72	331	⇑eP	P	04 29 05.0	+0.8
OG26	St.-Nazaire-De	76.72	331	⇑eP	P	04 29 05.0	+0.8
LRYF	La Roche-sur-Y	76.72	336	⇑eP	P	04 29 05.0	+0.8
SBF	Sospel	76.72	329	⇑iP	P	04 29 03.8	-0.5
	comp=Z,160nm,1.2s,mb5.5						
SBF	Sospel	76.72	329	⇑iP	P	04 29 03.8	-0.5
SBF				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.5						

MVIF	Mont Vial	76.78	329	⇑*e*P	P	04 29 04.6	0.0
AAM	Ann Arbor	76.81	34	PFAKE		04 29 20.0	+15
AAM				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
REVF	Revere	76.85	329	⇑*e*P	P	04 29 05.0	0.0
VLS	Valsamata	76.95	317	*e*P	P	04 29 05.0	-0.7
CALN	Calern	76.99	330	*e*P	P	04 29 06.0	+0.2
STOF	St-Etienne Org	77.06	330	⇑*e*P	P	04 29 06.8	+0.6
MSNY	Massena	77.09	27	*e*P	P	04 29 05.8	-0.5
RJF	Les Rejaudoux	77.12	334	⇑*i*P	P	04 29 06.8	+0.4
	comp=Z,204nm,1.4s,mb5.6						
RJF				*e*R			
	comp=Z,4µm,19.8s						
RJF	Les Rejaudoux	77.12	334	⇑*i*P	P	04 29 06.8	+0.4
RJF				pmax	pmax		
	comp=Z,102nm,1.4s,mb5.6						
RJF				MLR	MLR		
	comp=Z,4µm,19.8s,MS5.7						
SMRF	Simiane la Rot	77.18	331	⇑*i*P	P	04 29 07.3	+0.5
	comp=Z,122nm,1.4s,mb5.3						
VLI	Veliai	77.20	315	*e*P	P	04 29 05.1	-2.0
FRF	La Foret Royal	77.23	330	⇑*i*P	P	04 29 06.7	-0.4
	comp=Z,109nm,1.4s,mb5.3						
FRF	La Foret Royal	77.23	330	⇑*i*P	P	04 29 06.7	-0.4
FRF				pmax	pmax		
	comp=Z,54nm,1.4s,mb5.3						
ITM	Ithomi	77.24	316	P	P	04 29 06.6	-0.7
ITM	Ithomi	77.24	316	*e*P	P	04 29 06.5	-0.8
NPS	Neapolis	77.24	312	*e*P	P	04 29 05.0	-2.4
WMOK	Wichita Mounta	77.25	49	*e*P	P	04 29 06.9	-0.5
WMOK				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
WMOK				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.3						
WMOK	Wichita Mounta	77.25	49	*e*P	P	04 29 06.8	-0.5
	comp=Z,28nm,0.9s,mb5.2						
WMOK				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
VILF	Villemus	77.25	330	⇑*e*P	P	04 29 07.8	+0.6
PQI	Presque Isle	77.25	22	PFAKE		04 29 20.0	+13
PQI				LR	LR		
	comp=Z,12µm,19.0s,MS6.2						
CAF	Calviac	77.32	333	⇑*i*P	P	04 29 08.4	+0.8
	comp=Z,167nm,1.2s,mb5.5						
CAF	Calviac	77.32	333	⇑*i*P	P	04 29 08.4	+0.8
CAF				pmax	pmax		
	comp=Z,84nm,1.2s,mb5.5						
EIL	Elat	77.33	302	*e*P	P	04 29 08.0	0.0
	comp=Z,33nm,0.8s,mb5.3						
TAVF	Tavernes	77.36	330	*e*P	P	04 29 08.2	+0.4
PGF	Pioggiola	77.40	328	⇑*i*P	P	04 29 07.8	-0.3
	comp=Z,64nm,1.2s,mb5.1						
PGF	Pioggiola	77.40	328	⇑*i*P	P	04 29 07.8	-0.3
PGF				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1						
PRAF	Pradon	77.46	331	*e*P	P	04 29 09.4	+1.0
JMQS	Jabal Moqyreh	77.48	301	P	P	04 29 09.5	+0.7
LMR	La Mourre	77.48	330	⇑*i*P	P	04 29 08.3	-0.2
	comp=Z,202nm,1.4s,mb5.5						
LMR	La Mourre	77.48	330	⇑*i*P	P	04 29 08.3	-0.2
LMR				pmax	pmax		
	comp=Z,101nm,1.4s,mb5.6						
IDI	Anoyia	77.55	313	P	P	04 29 08.5	-0.5
PUYF	Puyloubier	77.55	330	*e*P	P	04 29 09.8	+0.9
ALWS	Ilw as Safayha	77.56	302	P	P	04 29 09.7	+0.5
TREF	Trevaresse	77.56	330	*e*P	P	04 29 09.4	+0.5
FRNY	Flat Rock	77.59	26	*e*P	P	04 29 07.5	-1.6
LASF	Ste Croix	77.60	332	⇑*i*P	P	04 29 09.8	+0.7
	comp=Z,149nm,1.3s,mb5.5						
TIP	Timpagrande	77.61	321	*e*P	P	04 29 09.4	+0.1
JMOS	Jabal al Moall	77.65	302	P	P	04 29 10.1	+0.4
TBKS	Tabuk	77.66	300	P	P	04 29 10.6	+0.8
LFF	La Frestale	77.66	334	⇑*i*P	P	04 29 10.2	+0.7
	comp=Z,284nm,1.3s,mb5.7						
LFF	La Frestale	77.66	334	⇑*i*P	P	04 29 10.2	+0.7
LFF				pmax	pmax		
	comp=Z,142nm,1.3s,mb5.7						
VAM	Vamos	77.75	313	*e*P	P	04 29 09.9	-0.3
GELF	Grande-Etoile	77.77	330	*e*P	P	04 29 10.4	+0.3
HAQS	Haql	77.83	302	P	P	04 29 11.1	+0.4
FVM	French Village	78.07	41	*e*P	P	04 29 11.1	-0.8
FVM				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.2						
FVM	French Village	78.07	41	*e*P	P	04 29 11.1	-0.8
	comp=Z,37nm,1.1s,mb5.2						
NCB	Newcomb	78.21	27	*e*P	P	04 29 11.5	-1.0
	comp=Z,20nm,0.8s,mb5.1						
GENY	Geneseo	78.27	30	*e*P	P	04 29 11.4	-1.4
MIV	Mineville/With	78.31	27	*e*P	P	04 29 11.7	-1.4
AYUS	‘Aynunah	78.35	301	P	P	04 29 14.0	+0.4
BLO	Bloomington	78.55	38	*e*P	P	04 29 13.8	-0.6
BLO				pmax	pmax		
	comp=Z,184nm,1.9s,mb5.7						
BLO	Bloomington	78.55	38	*e*P	P	04 29 13.8	-0.6
	comp=Z,184nm,1.9s,mb5.7						
ALLY	Alegheny Colle	78.56	32	*e*P	P	04 29 13.7	-0.7
MTLF	Montolieu	78.74	333	⇑*i*P	P	04 29 16.2	+0.8
	comp=Z,119nm,1.3s,mb5.4						
MTLF	Montolieu	78.74	333	⇑*i*P	P	04 29 16.2	+0.8
MTLF				pmax	pmax		
	comp=Z,60nm,1.3s,mb5.4						
WVL	Waterville	78.85	24	PFAKE		04 29 30.0	+14
WVL				LR	LR		
	comp=Z,8µm,20.0s,MS6.0						
ACCN	Adirondack Com	78.91	27	*e*P	P	04 29 15.5	-0.8
HNH	Hanover	78.98	26	*e*P	P	04 29 17.8	+1.0
	comp=Z,2.7nm,1.2s						
LRDF	Laroque-de-Fa	79.02	332	⇑*e*P	P	04 29 18.0	+1.1
LPEF	Le Peyrat	79.19	333	⇑*e*P	P	04 29 18.7	+0.8
SJAF	Saint Jean de	79.34	332	⇑*e*P	P	04 29 19.2	+0.5
BINY	Binghamton	79.34	29	*e*P	P	04 29 17.5	-1.2
	comp=Z,37nm,1.4s,mb5.1						
FILF	Fillols	79.36	332	⇑*e*P	P	04 29 20.0	+1.2
LTX	Lajitas	79.37	55	*e*P	P	04 29 20.0	+0.9
LTX				pmax	pmax		
	comp=Z,71nm,1.4s,mb5.4						
LTX				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.3						
LTX	Lajitas	79.37	55	*e*P	P	04 29 19.9	+0.8
	comp=Z,71nm,1.4s,mb5.4						
LTX				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
TXAR	Lajitas Array	79.37	55	P	P	04 29 19.8	+0.7
	comp=Z,11nm,0.8s,mb4.8,baz=296,slow=4.4,SNR=52						
TXAR				PKKP	PKKP	04 47 52.8	+1.9
	comp=Z,0.1nm,0.4s,baz=180,slow=1.3,SNR=3.5						
TXAR				LR	LR	05 06 28.6	
	comp=Z,1µm,19.0s,MS5.2,baz=5.0,slow=37						
EJON	La Jonquera	79.37	332	P	P	04 29 18.3	-0.5
	comp=Z,68nm,1.3s,mb5.4						
FFD	Franklin Falls	79.37	26	*e*P	P	04 29 14.4	-4.4
	comp=Z,35nm,0.9s,mb5.3						
MLS	Moulis	79.40	333	⇑*e*P	P	04 29 20.0	+1.0
PARMO	Parma	79.48	41	*e*P	P	04 29 19.7	+0.1
EPF	Esparros	79.54	334	⇑*i*P	P	04 29 20.0	+0.2
	comp=Z,123nm,1.4s,mb5.3						
EPF	Esparros	79.54	334	⇑*i*P	P	04 29 20.0	+0.2
EPF				pmax	pmax		
	comp=Z,61nm,1.4s,mb5.3						
LABF	Labassere	79.60	334	⇑*e*P	P	04 29 20.5	+0.4
UMJS	Umm Lajj	79.65	298	P	P	04 29 21.3	+0.6
VALF	Valcebollere	79.66	332	⇑*e*P	P	04 29 21.7	+1.3
RESF	Ens	79.75	334	⇑*e*P	P	04 29 22.5	+1.6
OSSF	Osses	79.75	335	⇑*e*P	P	04 29 20.8	-0.1
VIEF	Viey	79.76	334	⇑*e*P	P	04 29 22.2	+1.2
EALK	Alkurruntz	79.85	335	P	P	04 29 19.9	-1.6
	comp=Z,111nm,1.6s,mb5.5						
SJPF	Ste Jean	79.88	335	⇑*i*P	P	04 29 21.7	+0.1
	comp=Z,67nm,1.3s,mb5.1						
SJPF	Ste Jean	79.88	335	⇑*i*P	P	04 29 21.7	+0.1
SJPF				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.1						
LARF	Larrau	79.89	335	*e*P	P	04 29 23.0	+1.4
ETSF	Etsaut	79.90	334	⇑*i*P	P	04 29 22.9	+1.2
	comp=Z,126nm,1.2s,mb5.4						
ETSF	Etsaut	79.90	334	⇑*i*P	P	04 29 22.9	+1.2
ETSF				pmax	pmax		
	comp=Z,63nm,1.2s,mb5.4						
ELIZ	Elizondo	79.91	335	P	P	04 29 20.4	-1.3
ELIZ				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
ELIZ	Elizondo	79.91	335	P	P	04 29 20.4	-1.3
	comp=Z,34nm,1.1s,mb5.2						
EBIE	Bielsa	79.92	334	P	P	04 29 21.3	-0.5
	comp=Z,85nm,1.4s,mb5.5						
FDAF	Les Forges d’A	79.98	334	⇑*e*P	P	04 29 23.6	+1.5
GNAR	Gosnell	79.98	42	*e*P	P	04 29 22.2	-0.1
UALR	University of	80.04	44	P	P	04 29 22.8	+0.1
	comp=Z,26nm,1.3s,mb5.0						
HBAR	Harrisburg	80.08	42	*e*P	P	04 29 23.7	+0.9
EMIR	Miracle	80.25	332	P	P	04 29 22.3	-1.3
	comp=Z,188nm,2.3s,mb5.6						
HRV	Harvard--Oak R	80.30	26	*e*P	P	04 29 23.9	+0.1
HRV				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.3						
HRV				MLR	MLR		
	comp=Z,966nm,19.0s,MS5.2						
HRV	Harvard--Oak R	80.30	26	*e*P	P	04 29 23.9	+0.1
	comp=Z,48nm,1.3s,mb5.3						
HRV				LR	LR		
	comp=Z,966nm,19.0s,MS5.2						
HALT	Halls	80.30	41	*e*P	P	04 29 23.9	-0.2
ELAN	Lanestosa	80.32	336	P	P	04 29 22.9	-1.0
	comp=Z,151nm,1.3s,mb5.8						
MCWV	Mont Chateau	80.45	33	PFAKE		04 29 40.0	+15
MCWV				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
WES	Weston	80.47	26	*e*P	P	04 29 24.7	-0.1
WES				pmax	pmax		
	comp=Z,128nm,1.3s,mb5.7						
WES				MLR	MLR		
	comp=Z,934nm,21.0s,MS5.1						
WES	Weston	80.47	26	*e*P	P	04 29 24.7	-0.1
	comp=Z,128nm,1.3s,mb5.7						
WES				LR	LR		
	comp=Z,934nm,21.0s,MS5.1						
EARI	Arriondas	80.68	338	P	P	04 29 24.5	-1.3
	comp=Z,166nm,1.2s,mb5.8						
ECRI	Cripan	80.68	336	P	P	04 29 25.6	-0.2
ECRI				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
ECRI	Cripan	80.68	336	P	P	04 29 25.6	-0.2
	comp=Z,36nm,1.0s,mb5.3						
WVT	Waverly	80.71	40	*e*P	P	04 29 25.8	-0.4
WVT				pmax	pmax		
	comp=Z,47nm,1.1s,mb5.3						
WVT				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.3						
WVT	Waverly	80.71	40	*e*P	P	04 29 25.8	-0.4
	comp=Z,47nm,1.1s,mb5.3						
WVT				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
TATS	Tathlith	80.77	290	P	P	04 29 27.5	+0.7
BRYW	Bryant College	80.85	26	*e*P	P	04 29 26.4	-0.3
	comp=Z,33nm,0.8s,mb5.3						
BRYW				*e*	pP	04 29 31.6	-0.6
EPOB	Poblet	80.90	333	P	P	04 29 25.8	-1.2
	comp=Z,91nm,1.5s,mb5.5						
ESAC	San Caprasio	80.98	334	P	P	04 29 26.8	-0.7
	comp=Z,253nm,1.3s,mb6.0						
PAL	Palisades	81.04	28	*e*P	P	04 29 27.2	-0.6
PAL				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
PAL	Palisades	81.04	28	*e*P	P	04 29 27.2	-0.6
	comp=Z,24nm,0.8s,mb5.2						
EPON	Pontenova	81.09	339	P	P	04 29 26.9	-1.0
	comp=Z,211nm,1.3s,mb5.9						
CPNY	Central Park	81.23	28	*e*P	P	04 29 28.8	0.0
OXF	Oxford	81.49	42	PFAKE		04 29 40.0	+10
OXF				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
EBR	Ebro Roquetas	81.55	333	*e*P	P	04 29 31.0	+0.5
BLJS	Baljurashi	81.56	292	P	P	04 29 32.0	+1.0
NATX	Nacogdoches	81.61	47	*e*P	P	04 29 31.3	+0.3
	comp=Z,195nm,1.4s,mb5.8						
NATX				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
PLAL	Pickwick Lake	81.61	41	*e*P	P	04 29 30.4	-0.5
	comp=Z,50nm,1.1s,mb5.4						
PLAL				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
SDMD	Soldier’s Deli	81.64	31	*e*P	P	04 29 30.4	-0.5
STS	Santiago	81.81	340	P	P	04 29 31.8	+0.1
STS				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
STS	Santiago	81.81	340	P	P	04 29 31.8	0.0
	comp=Z,28nm,0.9s,mb5.2						
EMAZ	Mazaricos	81.83	340	P	P	04 29 32.4	+0.6
	comp=Z,145nm,2.0s,mb5.6						
TZTN	Tazewell	81.96	37	*e*P	P	04 29 32.3	-0.4
ERUA	La Rua	81.98	339	P	P	04 29 33.1	+0.5
ERUA				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.5						
ERUA	La Rua	81.98	339	P	P	04 29 33.1	+0.5
	comp=Z,62nm,1.0s,mb5.5						
FWV	Forest Hill	82.00	34	*e*P	P	04 29 33.0	+0.2
DJNS	Zahran al Janu	82.18	289	P	P	04 29 35.7	+1.5
SWET	Sewanee	82.25	39	*e*P	P	04 29 33.7	-0.5
ECAL	Calabor	82.32	338	P	P	04 29 34.2	-0.2
	comp=Z,147nm,2.5s,mb5.5						
ELN	Prospectdale	82.34	34	*e*P	P	04 29 33.9	-0.7
BLA	Blacksburg	82.47	34	*e*P	P	04 29 34.9	-0.4
BLA				pmax	pmax		
	comp=Z,71nm,1.4s,mb5.4						
BLA				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.3						
BLA	Blacksburg	82.47	34	*e*P	P	04 29 34.9	-0.4
	comp=Z,71nm,1.4s,mb5.4						
BLA				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
EZAM	Zamans	82.54	340	P	P	04 29 36.4	+0.8
EZAM				pmax	pmax		
	comp=Z,73nm,1.1s,mb5.6						
EZAM	Zamans	82.54	340	P	P	04 29 36.4	+0.8
	comp=Z,72nm,1.1s,mb5.6						
CBN	Corbin	82.57	32	*e*P	P	04 29 35.8	0.0
	comp=Z,44nm,0.7s,mb5.6						
CBN				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
CPCT	Cooper Cave	82.57	38	*e*P	P	04 29 35.5	-0.4
ELOB	Lobios	82.68	339	P	P	04 29 35.8	-0.5
	comp=Z,262nm,2.4s,mb5.8						
GUD	Guadarrama	82.94	336	P	P	04 29 38.3	+0.6
GUD				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.2						
GUD	Guadarrama	82.94	336	P	P	04 29 38.3	+0.6
	comp=Z,30nm,1.1s,mb5.2						
ECHE	Chera	83.10	333	P	P	04 29 39.3	+0.8
PVRL	Vila Real	83.17	339	*e*P	P	04 29 39.7	+0.9
	comp=Z,121nm,1.2s,mb5.8						
PVRL				*i* -		04 29 56.4	
EBEN	Beniarda	83.72	333	P	P	04 29 44.0	+2.4
	comp=Z,90nm,1.9s,mb5.6						
PVIS	Viseu	83.74	339	*e*P	P	04 29 42.5	+0.8
	comp=Z,128nm,1.5s,mb5.8						
PVIS				*i* -		04 29 58.5	
LRAL	Lakeview Retre	83.75	41	*e*P	P	04 29 40.7	-1.2
	comp=Z,35nm,1.3s,mb5.3						
LRAL				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
ESDC	Sonseca Array	83.81	336	P	P	04 29 42.9	+0.9
	comp=Z,20nm,0.9s,mb5.3,baz=14,slow=4.9,SNR=80						
ESDC	Sonseca Array	83.81	336	P	P	04 29 41.3	-0.7
	comp=Z,78nm,1.3s,mb5.7						
MTE	Manteigas	83.97	338	*i* P	P	04 29 43.6	+0.8
	comp=Z,139nm,1.4s,mb5.9						
MTE	Manteigas	83.97	338	*e*PP	PP	04 32 45.2	-13
MTE				*e*S	S	04 40 07.5	+2.9
MTE	Manteigas	83.97	338	*e*LQ		05 02 33.1	
MTE				*e*LR	LR	05 06 37.0	
	comp=Z,956nm,19.8s						
MTE	Manteigas	83.97	338	*e*P	P	04 29 43.6	+0.8
	comp=Z,52nm,0.9s,mb5.7						
PAB	San Pablo	84.03	336	P	P	04 29 44.0	+0.8
PAB				SKSac		04 40 09.8	
ETOB	Tobarra	84.14	333	P	P	04 29 43.2	-0.5
	comp=Z,173nm,2.2s,mb5.8						
STKA	Stephens Creek	84.31	182	*e*P	P	04 29 45.1	+0.4
	comp=Z,12nm,1.1s,mb4.9						
STKA	Stephens Creek	84.31	182	P	P	04 29 45.0	+0.2
	comp=Z,14nm,1.2s,mb5.0,baz=284,slow=2.4,SNR=6.0						
STKA				LR	LR	05 03 57.5	
	comp=Z,532nm,21.8s,MS4.9,baz=108,slow=33						
EVIA	Vianos	84.41	334	P	P	04 29 44.6	-0.5
EVIA				pmax	pmax		
	comp=Z,141nm,1.5s,mb5.9						
EVIA	Vianos	84.41	334	P	P	04 29 44.6	-0.5
	comp=Z,141nm,1.5s,mb5.9						
PCBR	Castelo Branco	84.49	338	*e*P	P	04 29 46.0	+0.5
	comp=Z,89nm,1.5s,mb5.7						
EMUR	La Murta	84.81	333	P	P	04 29 44.6	-2.5
	comp=Z,83nm,1.5s,mb5.6						
JSC	Jenkinsville	84.81	36	*e*P	P	04 29 47.0	-0.2
PTOM	Tomar	84.91	339	*e*P	P	04 29 47.9	+0.3
	comp=Z,68nm,1.5s,mb5.5						
EQES	Quesada	85.34	334	P	P	04 29 49.6	-0.2
	comp=Z,167nm,1.4s,mb6.0						
EADA	Adamuz	85.39	336	P	P	04 29 48.3	-1.7
	comp=Z,273nm,2.1s,mb6.0						
EBAD	Badajoz	85.42	338	P	P	04 29 47.0	-3.1
	comp=Z,145nm,2.1s,mb5.7						
PLOU	Loures	85.77	339	*e*P	P	04 29 52.1	+0.2
	comp=Z,89nm,2.0s,mb5.7						
COW	Cow Castle Cre	85.82	36	*e*P	P	04 29 52.5	+0.2
EVO	Evora	85.86	338	⇑*i*P	P	04 29 52.4	+0.1
	comp=Z,318nm,1.9s,mb5.9						
EVO				*e*R			
	comp=Z,2µm,17.8s						
ENIJ	Nijar	85.89	333	P	P	04 29 51.9	-0.7
ENIJ				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.7						
ENIJ	Nijar	85.89	333	P	P	04 29 51.9	-0.6
	comp=Z,51nm,1.0s,mb5.7						
ECOG	Cogollos-Vega	85.97	335	P	P	04 29 54.1	+1.2
ECOG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.5						
ECOG	Cogollos-Vega	85.97	335	P	P	04 29 54.1	+1.2
	comp=Z,2.1nm,0.6s,mb4.5						
EBER	Berja	86.15	334	P	P	04 29 51.2	-2.6
	comp=Z,57nm,1.3s,mb5.6						
ELOJ	Sierra Loja	86.24	335	P	P	04 29 54.5	+0.2
ELOJ				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.6						
ELOJ	Sierra Loja	86.24	335	P	P	04 29 54.5	+0.2
	comp=Z,44nm,1.1s,mb5.6						
NHSC	New Hope	86.26	36	PFAKE		04 30 10.0	+16
NHSC				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
ERON	Agron	86.28	335	P	P	04 29 54.7	+0.2
	comp=Z,18nm,0.8s,mb5.3						
EMIN	Mina Concepcio	86.28	337	P	P	04 29 53.1	-1.4
	comp=Z,137nm,2.3s,mb5.8						
PBEJ	Beja	86.31	338	*e*P	P	04 29 54.7	+0.1
	comp=Z,56nm,1.8s,mb5.5						
EGRO	El Granado	86.69	338	P	P	04 29 56.2	-0.3
	comp=Z,56nm,1.3s,mb5.6						
PALC	Alcoutim	86.75	338	*e*P	P	04 29 57.4	+0.6
	comp=Z,31nm,1.1s,mb5.5						
ESPR	Espera	86.94	336	P	P	04 29 58.6	+1.0
	comp=Z,53nm,1.4s,mb5.6						
EMIJ	Mijas	86.95	335	P	P	04 29 55.5	-2.3
	comp=Z,60nm,1.7s,mb5.5						
PTEO	Sao Teotonio	86.96	339	*e*P	P	04 29 58.1	+0.3
	comp=Z,54nm,1.1s,mb5.7						
TAOE	Nuku Hiva Isla	88.61	106	*e*LR	LR	04 57 41.0	
	comp=Z,4µm,23.8s						
CMLA	Cha da Macela	89.38	352	PFAKE		04 30 20.0	+11
CMLA				LR	LR		
	comp=Z,204nm,19.0s,MS4.6						
DWPF	Disney	90.30	39	PFAKE		04 30 30.0	+16
DWPF				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
PPT	Papeete	90.42	119	*e*S	S	04 41 11.2	+5.0
	comp=Z,265nm,24.5s						
PPT				*e*LR	LR	04 58 32.2	
	comp=Z,877nm,22.0s						
PPT	Papeete	90.42	119	LR	LR	05 04 23.4	
	comp=Z,739nm,19.9s,MS5.1,baz=327,slow=31						
BBSR	BB Station	91.63	24	PFAKE		04 30 30.0	+10
BBSR				LR	LR		
	comp=Z,682nm,20.0s,MS5.1						
TEIG	Tepich	94.42	48	PFAKE		04 30 40.0	+7.0
TEIG				LR	LR		
	comp=Z,912nm,21.0s,MS5.2						
TBI	Tubuai	95.25	122	*e*S	tx	04 42 39.3	
	comp=Z,252nm,27.2s						
TBI				*e*LR	LR	05 00 48.5	
	comp=Z,1µm,32.5s						
SNZO	South Karori	97.42	157	PFAKE		04 31 00.0	+14
SNZO				LR	LR		
	comp=Z,641nm,20.0s,MS5.1						
RKT	Rikitea	102.93	111	*e*SS	SS	04 49 46.8	-20
	comp=Z,391nm,30.8s						
RKT				*e*LR	LR	05 04 01.4	
	comp=Z,1µm,34.5s						
MBAR	Mbarara	104.31	288	PFAKE		04 31 30.0	+12
MBAR				LR	LR		
	comp=Z,147nm,20.0s,MS4.5						
JTS	JuntasAbangare	104.63	50	PFAKE		04 31 30.0	+11
JTS				LR	LR		
	comp=Z,158nm,19.0s,MS4.6						
SJG	San Juan	104.77	30	PFAKE		04 31 30.0	+10
SJG				LR	LR		
	comp=Z,617nm,20.0s,MS5.1						
PAYG	Puerto Ayora	111.40	61	PFAKE		04 36 00.0	+10
PAYG				LR	LR		
	comp=Z,318nm,20.0s,MS4.9						
SDV	Santo Domingo	111.89	37	PFAKE		04 36 00.0	+9.4
SDV				LR	LR		
	comp=Z,449nm,20.0s,MS5.0						
DBIC	Dimbokro	115.11	325	PFAKE		04 36 10.0	+13
DBIC				LR	LR		
	comp=Z,793nm,21.0s,MS5.3						
OTAV	Otavalo	116.48	49	PFAKE		04 36 10.0	+10
OTAV				LR	LR		
	comp=Z,296nm,20.0s,MS4.9						
LSZ	Lusaka	117.54	281	PFAKE		04 36 10.0	+8.3
LSZ				LR	LR		
	comp=Z,735nm,21.0s,MS5.3						
CASY	Casey	121.39	195	PFAKE		04 36 20.0	+12
CASY				LR	LR		
	comp=Z,567nm,19.0s,MS5.2						
TSUM	Tsumeb	126.85	288	*e*PKPdf	PKPdf	04 36 16.6	-2.9
TSUM				LR	LR		
	comp=Z,806nm,21.0s,MS5.4						
BOSA	Boshof	129.38	273	PKP	PKPdf	04 36 21.9	-2.4
	comp=Z,3.2nm,0.7s,baz=135,slow=5.7,SNR=6.9						
BOSA	Boshof	129.38	273	PKP	PKPdf	04 36 21.9	-2.4
BOSA				LR	LR		
	comp=Z,637nm,21.0s,MS5.3						
VNDA	Vanda	130.50	175	PKP	PKPdf	04 36 21.4	-3.7
	comp=Z,1.9nm,0.9s,baz=322,slow=5.2,SNR=8.2						
VNDA	Vanda	130.50	175	PKP	PKPdf	04 36 21.4	-3.7
VNDA				LR	LR		
	comp=Z,214nm,19.0s,MS4.9						
SAML	Samuel	131.09	37	*e*PKPdf	PKPdf	04 36 24.8	-3.1
SAML				LR	LR		
	comp=Z,572nm,20.0s,MS5.3						
RCBR	Riachuelo	133.21	360	PFAKE		04 36 40.0	+8.1
RCBR				LR	LR		
	comp=Z,520nm,19.0s,MS5.3						
SUR	Sutherland	134.74	273	PFAKE		04 36 40.0	+5.7
SUR				LR	LR		
	comp=Z,188nm,19.0s,MS4.8						
LPAZ	La Paz	135.74	47	*e*PKIKP	PKPdf	04 36 33.3	-3.2
LPAZ				MLR	MLR		
	comp=Z,458nm,21.0s						
LPAZ	La Paz	135.74	47	PKP	PKPdf	04 36 35.1	-1.4
	comp=Z,2.5nm,0.8s,baz=22,slow=8.3,SNR=13						
BAO	Brasilia Array	141.78	19	PKPdf	PKPdf	04 36 46.5	-0.8
BDFB	Brasilia	141.78	19	PKhKP		04 36 38.6	
	comp=Z,3.6nm,0.7s,baz=235,slow=6.9,SNR=3.6						
QSPA	South Pole Qui	142.50	180	⇓*i*P	PKPdf	04 36 41.5	-5.3
SYO	Syowa Base	142.65	215	⇓P	PKPdf	04 36 39.0	-8.3
CPUP	Villa Florida	149.17	39	PKP	PKPdf	04 36 56.7	-2.8
	comp=Z,13nm,1.0s,baz=32,slow=4.5,SNR=4.6						
CPUP				PKPbc	PKPdf	04 37 01.5	+1.9
	comp=Z,31nm,1.1s,baz=3.2,slow=2.4,SNR=31						
CPUP	Villa Florida	149.17	39	PKP	PKPdf	04 36 56.7	-2.8
CPUP				PKPbc	PKPdf	04 37 01.5	+1.9
CPUP				*e*PKPbc	PKPdf	04 37 01.6	+2.0
CPUP				*e*PKPab	PKPab	04 37 06.4	-0.2
CPUP				LR	LR		
	comp=Z,509nm,19.0s,MS5.3						
CAM4	Nova Friburgo	149.24	12	⇑*i*P	PKPdf	04 37 01.8	+2.0
CAM4				*i*		04 37 06.1	
CAM4				*i*		04 37 18.0	
CAM4				*i*		04 37 32.8	
NVL	N’lazarevskaya	152.15	212	⇑*i*PKIKP	PKPdf	04 37 06.6	+3.8
NVL				*i* *PP		04 37 11.9	
NVL				*i* *SP		04 37 15.1	
NVL				pmax	pmax		
	comp=Z,13nm,1.2s						
MAIT	Maitri	152.18	212	⇓*i*PKP	PKPdf	04 37 07.5	+4.7
PLCA	Paso Flores	153.77	77	PKP	PKPdf	04 37 02.7	-3.2
	comp=Z,3.4nm,1.1s,baz=329,slow=4.6,SNR=2.9						
PLCA				PKPbc	PKPdf	04 37 11.6	+5.7

	comp=Z,8.9nm,1.0s,baz=296,slow=3.4,SNR=6.5						
PLCA	**Paso Flores**	153.77	77	PKP	PKPdf	04 37 02.7	-3.2
PLCA				PKPbc	PKPdf	04 37 11.6	+5.7
SNAA	**Sanae**	156.08	205	PKP	PKPdf	04 37 04.8	-3.2
	comp=Z,1.7nm,1.1s,baz=113,slow=2.1,SNR=7.6						
SNAA				PKPab	PKPab	04 37 34.0	-0.3
	comp=Z,4.2nm,1.1s,baz=139,slow=4.7,SNR=8.9						
SNAA	**Sanae**	156.08	205	*e*PKPdf	PKPdf	04 37 04.8	-3.3
VNA2	**Neumayer--Watz**	157.71	205	*e*	PKPdf	04 37 12.5	+2.3
VNA2	**Neumayer--Watz**	157.71	205	*e*	PKPab	04 37 39.7	-1.6
VNA2	**Neumayer--Watz**	157.71	205	*e*		04 37 42.9	
VNA2	**Neumayer--Watz**	157.71	205	⇑*i*PKPdf	PKPdf	04 37 07.3	-2.9
VNA2				*e*		04 37 12.5	
VNA2				*e*		04 37 39.7	
VNA2				*e*		04 37 42.9	
VNA2				*e*		04 38 03.1	
VNA2				*e*		04 41 20.3	
VNA3	**Neumayer Olymp**	158.05	203	*e*	PKPdf	04 37 12.2	+1.5
VNA3	**Neumayer Olymp**	158.05	203	*e*	PKPab	04 37 39.8	-3.0
VNA3	**Neumayer Olymp**	158.05	203	*e*		04 37 42.2	
VNA3	**Neumayer Olymp**	158.05	203	⇑*i*PKPdf	PKPdf	04 37 07.3	-3.4
VNA3				*e*		04 37 12.2	
VNA3				*e*		04 37 39.8	
VNA3				*e*		04 37 42.2	
VNA3				*e*		04 38 02.2	
VNA3				*e*		04 41 18.8	
VNA1	**Neumayer--Stat**	158.10	205	⇑*i*PKPdf	PKPdf	04 37 07.3	-3.5
VNA1				*e*		04 37 39.3	
VNA1				*e*		04 41 23.8	

JMA 12 04:19:20.3±0.5, 46.04N×147.70E, h307^{km}, M4.5, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	3.02	208	P	P	04 20 17.0	-0.1
NEM2				*e*S	S	04 21 01.0	-0.4
JNK	**Nakash**	3.24	222	P	P	04 20 19.6	+0.2
JAK	**Akkeshi**	3.73	216	P	P	04 20 24.0	-0.4
JAK				*e*S	S	04 21 13.7	-0.8
JAR	**Ashorobuto**	3.92	227	P	P	04 20 26.9	+0.4
JCH	**Churui**	4.63	224	P	P	04 20 33.1	-1.2
JCH				*e*S	S	04 21 28.5	-3.8
JFR	**Furan**	4.64	234	P	P	04 20 34.8	+0.3
JNBK	**Urakawa-nobuka**	5.18	225	P	P	04 20 38.7	-1.9
JKB	**Kayabe**	6.35	232	P	P	04 20 51.7	-2.9
JKB				*e*S	S	04 22 01.1	-7.6
JOT	**Ohata**	6.70	228	P	P	04 20 55.9	-2.9
JOSM	**Okushiri--Mats**	7.12	239	P	P	04 21 00.7	-3.3
JANG	**Nango**	7.24	221	P	P	04 21 03.1	-2.3

SKHL 12 04:33:04.6±0.5, 52.67N×143.68E, h11^{km}±1^{km}, mb4.7/3, 1C-1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKH	**Okha**	0.99	333	⇓*i*Pg	Pg	04 33 25.0	+0.5
OKH				AMB	AMB	04 33 25.1	
	1μm,0.1s						
OKH				pP		04 33 29.0	
OKH				*i* Sg	Sg	04 33 40.0	+2.3
OKH				A		04 33 41.8	
	3μm,0.5s						
OKH				A		04 33 41.8	
	4μm,0.5s						
NKL	**Nikolayevsk**	1.88	286	⇑*i*Pb	Pb	04 33 38.0	-0.5
NKL				*e*Pg	Pg	04 33 42.0	-0.2
NKL				AMB	AMB	04 33 44.0	
	44nm,0.3s						
NKL				AMB	AMB	04 33 44.0	
	130nm,0.3s						
NKL				pP		04 33 45.5	
NKL				sP		04 33 49.0	
NKL				*e*Sb	Sb	04 34 01.6	-0.3
NKL				*e*Sg	Sg	04 34 07.8	+0.5
NKL				A		04 34 09.0	
	190nm,0.3s						
NKL				A		04 34 09.0	
	360nm,0.3s						
TYV	**Tymovskoe**	1.92	200	*e*Pb	Pb	04 33 40.0	+0.8
TYV				*e*Pg	Pg	04 33 43.0	+0.1
TYV				AMB	AMB	04 33 50.4	
	27nm,0.3s						
TYV				*e*Sb	Sb	04 34 03.0	-0.1
TYV				*e*Sg	Sg	04 34 09.0	+0.4
TYV				A		04 34 20.5	
	108nm,0.7s						
UGL	**Uglegorsk**	3.74	196	*e*Sn	Sn	04 34 47.0	-1.1
GRNR	**Gornyy**	4.90	250	*e*Sg	Sg	04 35 50.0	+2.3
GRNR				A		04 35 57.0	
	21nm,0.6s						
EKMR	**Ekimchan**	6.51	278	*e*Pb	Pb	04 34 56.0	-1.7
EKMR				*e*Pg	Pg	04 35 13.5	-1.1
EKMR				*e*Sn	Sn	04 35 57.5	-0.3
EKMR				*e*Sg	Sg	04 36 43.5	+2.1
EKMR				A		04 36 46.5	
	18nm,0.8s						
KLR	**Kul'dur**	8.28	250	*e*S	Sg	04 38 45.0	+65
BMKR	**Bomnak**	9.04	289	*e*S	Sn	04 37 28.5	+28
YASR	**Yasnyy**	9.49	280	*e*P	P	04 35 25.4	+1.1
YASR				*e*S	Sn	04 37 20.9	+8.8

IDC 12 04:40:30.6±3.2, 4.37N×94.14E, mb3.6/2, mb1 4.0/3, mb1mx3.5/19, mbtmp3.7/3, ML4.2/1, Error ellipse: s-maj=113.4km s-min=30.7km az=60.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	14.77	18	Pn	P	04 44 00.0	-2.8
	0.4nm,0.3s,baz=212,slow=12,SNR=4.5						
MKAR	**Makanchi Array**	43.49	348	P	P	04 48 35.8	-1.6
	0.2nm,0.4s,baz=170,slow=8.6,SNR=2.9						
WRA	**Warramunga Arr**	46.31	123	P	P	04 48 58.5	-1.9
	0.7nm,0.5s,baz=298,slow=9.2,SNR=8.6						

NNC 12 04:41:16.7±3.6, 37.36N×71.48E, h157^{km}±40^{km}, mpv4.1, 4C-1D, Error ellipse: s-maj=44.0km s-min=24.4km az=21.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	5.75	23	⇓P	P	04 42 40.2	-0.9
	11nm,0.6s						
AAK				⇑S	S	04 43 46.9	+0.4
	7.0nm,0.6s						
KK31	**Karatay Array**	5.79	353	⇑P	P	04 42 40.6	-0.9
	7.6nm,0.3s,baz=178,slow=13,SNR=350						
KK31				S	S	04 43 47.3	0.0
	4.7nm,0.5s,baz=172,slow=17,SNR=7.6						
AB31	**Akbulak array**	14.54	329	⇑P	P	04 44 35.0	-0.8
	0.5nm,0.3s						
AB31				⇑S	S	04 47 11.5	-1.6
	1.0nm,0.7s,baz=157,slow=18,SNR=4.1						

*NEIC **12** 04:54:40.5, 16.15N×98.21W, h8^{km}, MD3.6(MEX), After MEX.*

MEX 12 04:54:40.5±0.9, 16.15N×98.21W, h8^{km}±8^{km}, MD3.6, 1D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	0.25	18	⇓*i*P	Pg	04 54 44.8	-1.0
PNIG				*i* S	Sg	04 54 49.5	+0.3
VHO	**Vista Hermosa**	1.69	57	*e*P	Pn	04 55 07.3	-3.2
VHO				*e*S	Sn	04 55 27.3	-5.2
ACX	**Acapulco**	1.79	294	*e*P	Pn	04 55 09.0	-3.0
ACX				*e*S	Sn	04 55 29.0	-6.1
PLIG	**Platanillo**	2.55	331	*e*P	Pn	04 55 21.4	-1.5
PLIG				*i* S	Sn	04 55 50.3	-4.2
PPM	**Popocatepetl**	2.93	352	*e*P	Pn	04 55 24.9	-3.4
PPM				*e*S	Sn	04 55 59.1	-4.9
PPM				*i* S	Sn	04 56 03.0	-1.1
PPM	**Popocatepetl**	2.93	352	*e*P	Pn	04 55 24.9	-3.4
PPM				*e*P		04 55 25.0	
PPM				*e*S	Sn	04 55 59.1	-4.9
PPM				*i* S	Sn	04 56 03.0	-1.1

MAN 12 04:59:17.6, 11.23N×124.66E, h17^{km}, mb4.2, ML3.0, MS2.7, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	0.32	102	*i* P	Pb	04 59 25.2	+0.7
BESP	**Borongan**	0.85	64	*e*P	Pb	04 59 34.1	+0.7
BESP				*e*S	Sb	04 59 47.6	+3.2
LLP	**Lapu-Lapu**	1.14	217	*e*P	Pb	04 59 38.3	-0.1
LLP				*e*S	Sb	04 59 54.0	+1.2
CNP	**Catarman**	1.27	0	*e*P	Pb	04 59 39.9	-0.9
CNP				*e*S	Sb	04 59 57.5	+0.9

*NEIC **12** 05:14:45.7, 30.99S×71.39W, h49^{km}, MD3.7(GUC), After GUC.*

GUC 12 05:14:45.7±0.9, 30.99S×71.39W, h49^{km}±9^{km}, MD3.7, ML3.5, 5C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	0.38	119	⇓*i*P	P	05 14 55.9	+0.3
CMCH				*i* S	S	05 15 03.9	+1.3
CMCH				AMP		05 15 04.2	
	comp=E,15μm,0.1s						
ILCH	**Illapel**	0.67	163	⇓*i*P	P	05 14 59.2	+0.1
ILCH				*i* S	S	05 15 09.4	+0.5
ILCH				AMP		05 15 10.2	
	comp=E,4μm,0.2s						
TLL	**Tololo Astrono**	0.96	32	*i* P	P	05 15 03.8	+0.8
TLL				*i* S	S	05 15 17.6	+1.7
TLL				AMP		05 15 19.3	
	comp=N,844nm,0.6s						
LSCH	**La Serena**	1.08	7	⇑*i*P	P	05 15 04.7	-0.1
LSCH				*i* S	S	05 15 19.9	+0.9
LSCH				AMP		05 15 20.9	
	comp=E,614nm,0.3s						
PACH	**Papudo**	1.54	181	⇑*i*P	P	05 15 11.9	+0.6
JACH	**Jahuel**	1.82	158	⇓*i*P	P	05 15 15.3	+0.1
PEL	**Peldehue**	2.23	165	*i* S	S	05 15 47.9	+0.5
ZON	**Zonda**	2.39	104	*e*P	P	05 15 24.5	+1.2
ZON				*e*S	S	05 15 42.5	-9.0
DSCH	**Colegio Aleman**	2.50	164	⇑*i*P	P	05 15 24.5	-0.4
DSCH				*i* S	S	05 15 54.0	-0.4
DSCH				AMP		05 16 08.3	
	comp=N,307nm,0.6s						
CLCH	**Cerro Calan**	2.51	163	⇑*i*P	P	05 15 25.3	+0.3
CLCH				*i* S	S	05 15 54.2	-0.3
CLCH				AMP		05 16 10.1	
	comp=E,198nm,0.7s						
TACH	**Talagante**	2.69	172	⇑*i*P	P	05 15 26.4	-1.1
LMEL	**Las Melosas**	3.02	161	*i* P	P	05 15 32.1	-0.2
LMEL				*i* S	S	05 16 07.6	0.0
LMEL				AMP		05 16 09.7	
	comp=N,343nm,0.1s						

*NEIC **12** 05:29:07.8, 37.30S×176.80E, h311^{km}, MG4.2(WEL), After WEL.*

WEL 12 05:29:07.4±0.3, 37.21S×176.75E, h309^{km}±2^{km}, ML4.1/14, Error ellipse: s-maj=5.0km s-min=4.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MWZ	**Matawai**	1.28	151	P	P	05 29 50.8	+0.4
MWZ				S	S	05 30 24.0	-0.1
MWZ	**Matawai**	1.28	151	PN	P	05 29 50.5	+0.1
MWZ				SN	S	05 30 23.7	-0.3
MXZ	**Matakaoa Point**	1.29	106	PN	P	05 29 50.3	-0.2
MXZ				SN	S	05 30 23.3	-0.9
BKZ	**Black Stump Fm**	1.96	186	P	P	05 29 54.6	-0.3
BKZ	**Black Stump Fm**	1.96	186	PN	P	05 29 54.6	-0.3
BKZ				SN	S	05 30 32.0	-0.1
TWVZ	**Taurewa**	2.12	209	P	P	05 29 56.2	-0.1
TWVZ	**Taurewa**	2.12	209	PN	P	05 29 56.2	0.0
OTVZ	**Oturere**	2.13	203	PN	P	05 29 56.5	+0.2
NGZ	**Ngauruhoe**	2.16	204	P	P	05 29 56.8	+0.2
NGZ	**Ngauruhoe**	2.16	204	PN	P	05 29 56.8	+0.3
TUVZ	**Tukino**	2.23	202	P	P	05 29 57.1	0.0
TUVZ	**Tukino**	2.23	202	PN	P	05 29 57.2	+0.1
FWVZ	**Far West T-bar**	2.25	204	PN	P	05 29 57.1	-0.2
TRVZ	**Turoa**	2.29	204	PN	P	05 29 57.9	+0.2
WNVZ	**Wahianoa**	2.30	203	P	P	05 29 57.6	-0.1
WNVZ	**Wahianoa**	2.30	203	PN	P	05 29 57.6	-0.2
MOVZ	**Moawhango**	2.33	199	P	P	05 29 57.4	-0.6
MOVZ	**Moawhango**	2.33	199	PN	P	05 29 57.4	-0.6
PKVZ	**Pokaka**	2.35	208	PN	P	05 29 58.0	-0.2
MTVZ	**Mangateitei**	2.39	205	PN	P	05 29 58.5	0.0
PWZ	**Pawanui**	2.81	178	PN	P	05 30 02.4	+0.1
WAZ	**Wanganui**	2.89	208	*e*P	P	05 30 02.7	-0.4
WAZ	**Wanganui**	2.89	208	PN	P	05 30 02.6	-0.6
TSZ	**Takapari Road**	2.91	192	P	P	05 30 02.7	-0.6
TSZ	**Takapari Road**	2.91	192	PN	P	05 30 02.7	-0.6
KIW	**Kapiti Island**	3.92	201	P	P	05 30 12.0	-1.6
KIW	**Kapiti Island**	3.92	201	PN	P	05 30 12.0	-1.6
MTW	**Mount Morrison**	4.06	193	P	P	05 30 13.4	-1.8
MTW	**Mount Morrison**	4.06	193	PN	P	05 30 13.4	-1.8
CAW	**Cannon Point**	4.10	198	P	P	05 30 14.2	-1.5
CAW	**Cannon Point**	4.10	198	PN	P	05 30 14.0	-1.6
DUWZ	**D'Urville Isla**	4.21	211	PN	P	05 30 14.9	-1.9
PAWZ	**Paruwai Farm**	4.29	193	PN	P	05 30 16.3	-1.5
MRW	**Makara Radio**	4.31	201	P	P	05 30 16.3	-1.7
MRW	**Makara Radio**	4.31	201	PN	P	05 30 16.3	-1.7
MSWZ	**Moikau Station**	4.35	195	P	P	05 30 16.7	-1.8
MSWZ	**Moikau Station**	4.35	195	PN	P	05 30 16.7	-1.8
SNZO	**South Karori**	4.39	201	P	P	05 30 17.0	-1.8
SNZO	**South Karori**	4.39	201	PN	P	05 30 17.0	-1.8
TCW	**Tory Channel**	4.43	205	P	P	05 30 17.7	-1.6
NNZ	**Nelson**	4.78	212	*e*P	P	05 30 20.6	-2.6
QRZ	**Quartz Range**	4.88	221	P	P	05 30 21.1	-3.3
BSWZ	**Blackbirch Sta**	5.01	205	P	P	05 30 24.4	-1.5
THZ	**Tophouse**	5.43	212	*e*P	P	05 30 27.9	-2.9
KHZ	**Kahutara**	5.75	204	*e*P	P	05 30 32.8	-1.8

*NEIC **12** 05:30:14.4±1.9, 28.81S×74.24E, h10^{km}, mb4.3/1, Error ellipse: s-maj=60.3km s-min=18.5km az=224.0*

*IDC **12** 05:30:14.1±3.4, 28.56S×74.35E, mb3.9/5, mb1 4.1/5, mb1mx3.8/18, mbtmp3.9/5, MS4.0/3, Ms1 4.0/3, ms1mx3.5/24, Error ellipse: s-maj=105.4km s-min=40.4km az=42.0*

ISC 12 05:30:13.6±3.0, 28.7S±0.5×74.4E±0.5, h10^{km}, n12, σ0^{s}41/7, mb3.9/6, MS4.0/3, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	36.83	108	*e*P	**P**	**05 37 23.5**	**-0.2**
FITZ	**Fitzroy Crossi**	47.86	89	LR	LR	05 57 10.7	
	comp=Z,115nm,19.7s,MS3.9,baz=346,slow=34						
TSUM	**Tsumeb**	52.39	267	LR	LR	05 57 55.2	
	comp=Z,259nm,20.2s,MS4.3,baz=315,slow=32						
CMAR	**Chiang Mai Arr**	52.51	30	P	**P**	**05 39 29.4**	**+0.1**
	0.6nm,0.4s,mb3.9,baz=203,slow=6.9,SNR=3.5						
WRA	**Warramunga Arr**	54.81	95	P	**P**	**05 39 46.5**	**+0.2**
	2.6nm,0.9s,mb4.2,baz=253,slow=7.3,SNR=10						
CTA	**Charters Tower**	65.13	100	LR	LR	06 07 31.8	
	comp=Z,99nm,19.3s,MS4.0,baz=230,slow=34						
MKAR	**Makanchi Array**	75.45	6	P	**P**	**05 41 58.6**	**-0.8**
	0.6nm,0.9s,mb3.5,baz=180,slow=2.9,SNR=3.1						
SONM	**Songino Array**	81.41	21	P	**P**	**05 42 31.9**	**0.0**
	0.3nm,0.5s,mb3.5,baz=194,slow=5.9,SNR=2.5						
BVAR	**Borovoye Array**	81.43	358	P	**P**	**05 42 31.9**	**0.0**
	1.0nm,0.5s,mb4.0,baz=162,slow=9.4,SNR=5.5						
CHKZ	**Chkalovo**	82.08	358	*e*P	**P**	**05 42 35.9**	**+0.6**
	1.2nm,0.5s,mb4.1						
YKA	**Yellowknife Ar**	145.66	7	PKPbc	PKPbc	05 49 53.0	+0.7
	0.3nm,0.4s,baz=344,slow=4.0,SNR=6.1						
YKA	**Yellowknife Ar**	145.66	7	PKPbc	PKPbc	05 49 53.0	+0.7

*IDC **12** 05:43:53.4±3.2, 28.59S×74.03E, mb4.1/6, mb1 4.3/6, mb1mx3.9/19, mbtmp4.1/6, MS3.6/2, Ms1 3.7/2, ms1mx3.3/17, Error ellipse: s-maj=97.9km s-min=32.8km az=40.0*

*NEIC **12** 05:43:54.2±2.2, 28.77S×73.97E, h10^{km}, mb4.6/1, Error ellipse: s-maj=69.9km s-min=20.9km az=220.0*

ISC 12 05:43:54.3±2.9, 28.5S±0.4×74.3E±0.5, h10^{km}, n11, σ0^{s}99/9, mb4.1/7, MS3.6/2, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDRS	**Chennai**	41.69	9	*e*x	**P**	**05 51 44.0**	**-1.0**
FITZ	**Fitzroy Crossi**	47.96	89	P	**P**	**05 52 36.1**	**+0.8**
	2.8nm,0.7s,mb4.4,baz=266,slow=13,SNR=3.4						
CMAR	**Chiang Mai Arr**	52.38	30	P	**P**	**05 53 09.9**	**+0.9**
	0.9nm,0.4s,mb4.0,baz=233,slow=7.1,SNR=4.2						
CMAR				LR	LR	06 11 50.0	
	comp=Z,43nm,21.3s,MS3.5,baz=180,slow=32						
WRA	**Warramunga Arr**	54.94	95	P	**P**	**05 53 27.6**	**-0.3**
	2.8nm,0.9s,mb4.3,baz=252,slow=7.2,SNR=10						
WRAB	**Tennant Creek**	54.95	95	*e*P	**P**	**05 53 27.1**	**-0.9**
MKAR	**Makanchi Array**	75.25	6	P	**P**	**05 55 36.9**	**-2.1**
	0.8nm,0.8s,mb3.7,baz=180,slow=6.1,SNR=6.1						
MKAR				LR	LR	06 24 45.5	
	comp=Z,51nm,19.3s,MS3.8,baz=180,slow=32						
BVAR	**Borovoye Array**	81.21	358	P	**P**	**05 56 12.1**	**+0.6**
	3.8nm,0.8s,mb4.4,baz=166,slow=5.9,SNR=21						
SONM	**Songino Array**	81.25	21	P	**P**	**05 56 12.6**	**+0.8**
	1.0nm,0.9s,mb3.8,baz=202,slow=6.7,SNR=4.9						
CHKZ	**Chkalovo**	81.86	358	*e*P	**P**	**05 56 15.7**	**+0.8**
	4.2nm,0.8s,mb4.4						
YKA	**Yellowknife Ar**	145.47	7	PKPbc	PKPbc	06 03 32.7	+0.3
	0.3nm,0.4s,baz=342,slow=3.6,SNR=12						
YKA	**Yellowknife Ar**	145.47	7	PKPbc	PKPbc	06 03 32.7	+0.3

*NEIC **12** 06:13:37.8±1.1, 31.76S×69.57W, h120^{km}±17^{km}, MD3.5(GUC), Error ellipse: s-maj=10.5km s-min=4.3km az=90.0*

*GUC **12** 06:13:37.2±0.8, 31.77S×69.85W, h149^{km}±5^{km}, MD3.5, ML3.8*

ISC 12 06:13:37.2±0.7, 31.75S±0.02×69.60W±0.06, h126^{km}±7^{km}, n28, σ0^{s}83/56, 17C-10D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	0.81	76	⇑*i*P	**P**	**06 13 57.2**	**-1.0**
ZON				*e*S	**S**	**06 14 12.2**	**-1.9**
JACH	**Jahuel**	1.26	222	⇑*i*P	**P**	**06 14 03.2**	**+0.4**
JACH				*i* S	**S**	**06 14 22.9**	**+0.9**
CMCH	**Combarbala**	1.33	295	⇓*i*P	**P**	**06 14 03.8**	**+0.2**
CMCH				*i* S	**S**	**06 14 23.7**	**+0.2**
CMCH				AMP		06 14 25.2	
	comp=N,4μm,0.5s						
ILCH	**Illapel**	1.34	274	⇑*i*P	**P**	**06 14 03.9**	**+0.1**
ILCH				*i* S	**S**	**06 14 23.5**	**-0.4**
ILCH				AMP		06 14 23.9	
	comp=E,2μm,0.2s						
PEL	**Peldehue**	1.67	213	⇑*i*P	**P**	**06 14 07.5**	**+0.1**
PEL				⇑*i*P		06 14 07.5	
PEL				*i* S	**S**	**06 14 30.1**	**-0.3**
PEL				AMP		06 14 32.0	
	comp=N,674nm,0.4s						
PEL	**Peldehue**	1.67	213	⇑*i*P	**P**	**06 14 07.5**	**+0.1**
PEL				*i* S	**S**	**06 14 30.1**	**-0.3**
ROCH	**El Roble**	1.71	224	⇑*i*P	**P**	**06 14 07.9**	**0.0**
ROCH				*i* S	**S**	**06 14 31.3**	**+0.1**
PACH	**Papudo**	1.75	243	⇑*i*P	**P**	**06 14 07.8**	**-0.5**
PACH				*i* S	**S**	**06 14 30.6**	**-1.4**
CLCH	**Cerro Calan**	1.83	205	⇓*i*P	**P**	**06 14 09.7**	**+0.4**
CLCH				*i* S	**S**	**06 14 34.1**	**+0.4**
CLCH				AMP		06 14 35.9	
	comp=E,903nm,0.3s						
DSCH	**Colegio Aleman**	1.84	206	⇑*i*P	**P**	**06 14 09.7**	**+0.3**
DSCH				*i* S	**S**	**06 14 34.0**	**+0.1**
DSCH				AMP		06 14 37.7	
	comp=N,809nm,0.4s						
TLL	**Tololo Astrono**	1.88	326	⇑*i*P	**P**	**06 14 11.1**	**+1.1**
TLL				*i* S	**S**	**06 14 36.2**	**+1.4**
TLL				AMP		06 14 38.6	
	comp=E,1μm,0.6s						
FSR	**Penalolen**	1.90	204	⇓*i*P	**P**	**06 14 10.7**	**+0.6**
FSR				*i* S	**S**	**06 14 36.0**	**+0.9**
FSR				AMP		06 14 37.4	
	comp=E,517nm,0.4s						
STL	**Santa Lucia**	1.90	207	⇓*i*P	**P**	**06 14 10.3**	**+0.1**
STL				*i* S	**S**	**06 14 35.5**	**+0.2**
PUEX	**Pudahuel**	1.95	210	⇑*i*P	**P**	**06 14 11.0**	**+0.2**
PUEX				*i* S	**S**	**06 14 36.2**	**-0.1**
PUEX				AMP		06 14 37.4	
	comp=E,789nm,0.5s						
SJCH	**San Jose de Ma**	2.00	198	⇓*i*P	**P**	**06 14 11.5**	**+0.2**
SJCH				*i* S	**S**	**06 14 38.6**	**+1.4**
SJCH				AMP		06 14 42.2	
	comp=E,180nm,0.4s						
ANTU	**Antumapu**	2.02	205	⇑*i*P	**P**	**06 14 11.8**	**+0.2**
ANTU				*i* S	**S**	**06 14 37.8**	**+0.1**
ANTU				AMP		06 14 39.0	
	comp=E,416nm,0.3s						
PCH	**Pirque**	2.02	202	⇓*i*P	**P**	**06 14 12.5**	**+0.8**
PCH				*i* S	**S**	**06 14 38.5**	**+0.7**
LMEL	**Las Melosas**	2.16	194	⇓*i*P	**P**	**06 14 13.9**	**+0.5**
LMEL				*i* S	**S**	**06 14 42.5**	**+1.5**
LMEL				AMP		06 14 49.3	
	comp=N,237nm,0.2s						
TACH	**Talagante**	2.21	210	⇑*i*P	**P**	**06 14 13.5**	**-0.6**
TACH				*i* S	**S**	**06 14 41.3**	**-0.9**
LSCH	**La Serena**	2.31	322	*i* P	**P**	**06 14 15.4**	**-0.1**
LSCH				*i* S	**S**	**06 14 43.6**	**-0.9**
LSCH				AMP		06 14 44.9	
	comp=N,1μm,0.3s						
CHCH	**Chadas Angostu**	2.36	202	⇓*i*P	**P**	**06 14 16.1**	**+0.1**
CHCH				*i* S	**S**	**06 14 45.4**	**-0.1**
LCCH	**Las Cruces**	2.40	223	⇑*i*P	**P**	**06 14 15.8**	**-0.8**
LCCH				*i* S	**S**	**06 14 44.7**	**-1.7**
CACH	**El Canelo**	2.51	199	⇑*i*P	**P**	**06 14 18.5**	**+0.4**
CACH				*i* S	**S**	**06 14 50.2**	**+1.1**
CICH	**Cipreses**	2.66	195	⇑*i*P	**P**	**06 14 20.5**	**+0.5**
CICH				*i* S	**S**	**06 14 52.5**	**0.0**
LNV	**Longovilo**	2.68	214	⇓*i*P	**P**	**06 14 18.8**	**-1.6**
LNV				*i* S	**S**	**06 14 51.1**	**-2.0**
LCO	**Las Campanas**	2.89	340	⇑*i*P	**P**	**06 14 23.4**	**+0.4**
LCO				*i* S	**S**	**06 14 59.3**	**+1.5**
LCO				AMP		06 15 00.2	
	comp=E,465nm,0.4s						
SFDO	**San Fernando**	3.10	202	⇓*i*P	**P**	**06 14 24.7**	**-1.2**
SFDO				*i* S	**S**	**06 15 01.5**	**-1.4**
VACH	**Vallenar**	3.31	342	*i* P	**P**	**06 14 28.5**	**-0.2**
VACH				*i* S	**S**	**06 15 07.3**	**-0.7**

CASC 12 06:33:03.8±2.1, 8.97N×84.20W, h20^{km}, MD3.8, 6D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUS	**Buena Vista**	0.73	37	⇓*e*P	Pb	06 33 16.7	-0.9
BUS				*e*S	Sb	06 33 27.8	+0.7
LCR2	**La Lucha 2**	0.79	14	⇓*e*P	Pb	06 33 17.9	-0.8
LCR2				*e*S	Sb	06 33 30.3	+1.3
LAJ	**Bijagual**	0.89	5	⇓*e*P	Pb	06 33 18.6	-1.8
LAJ				*e*S	Sb	06 33 31.8	-0.1
SJS	**Escuela Geolog**	0.97	8	⇓*e*P	Pb	06 33 21.3	-0.6
SJS				*e*S	Sb	06 33 35.9	+1.6
PRS1	**Puriscal**	1.01	354	*e*P	Pb	06 33 20.3	-2.2
ACR	**Cerro Adams**	1.07	107	*e*P	Pb	06 33 22.2	-1.2
ACR				*e*S	Sb	06 33 36.9	0.0
CGA2	**Cerro Gallo 2**	1.07	346	*e*P	Pb	06 33 22.8	-0.7
CGA2				*e*S	Sb	06 33 39.0	+1.9
VPS2	**Volcan Poas 2**	1.21	358	⇓*e*P	Pn	06 33 25.4	-0.4
VPS2				*e*S	Sb	06 33 44.1	+2.9
SVTC	**San Vito de Co**	1.24	98	⇓*e*P	Pn	06 33 25.5	-0.7
SVTC				*e*S	Sb	06 33 45.7	+3.8
BRU2	**Volcan**	1.50	97	*e*S	Sn	06 33 50.6	+1.5
TRTC	**Tortuguero**	1.67	17	*e*P	Pn	06 33 32.3	0.0

CASC 12 07:14:09.7±1.7, 10.61N×87.06W, h35^{km}±17^{km}, MD4.0, ML3.8, 3C-4D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUN	**El Crucero**	1.56	28	*e*P	P	07 14 35.6	+0.2
APON	**Apoyo**	1.63	37	*e*P	P	07 14 36.1	-0.3
TICN	**Ticuantepe**	1.63	30	*e*P	P	07 14 36.5	0.0
XAVN	**Gruta Xavier**	1.69	25	⇓*e*P	P	07 14 37.2	-0.1
CONN	**Concepcion**	1.70	56	*e*P	P	07 14 36.9	-0.5
MGAN	**Managua**	1.73	27	⇓*e*P	P	07 14 37.8	0.0
MGAN				*e*S	S	07 14 59.4	+0.6
MGAN				*i*		07 15 00.5	
	comp=E,1μm,0.5s						
APYN	**Apoyeque**	1.76	23	⇓*e*P	P	07 14 38.0	-0.3
APYN				*e*S	S	07 14 59.9	+0.2
WILN	**Americas 2**	1.77	29	*e*P	P	07 14 37.2	-1.1

WILN				eS	S	07 15 00.6	+0.8
LEON	Leon	1.81	5	eP	P	07 14 38.7	-0.2
LEON				eS	S	07 15 01.4	+0.5
MIRN	Miramar	1.85	10	eP	P	07 14 39.2	-0.4
MOMJ	Momotombo	1.86	16	eP	P	07 14 39.1	-0.7
MOMJ				eS	S	07 15 03.2	+0.9
CNGN	Cerro Negro	1.92	11	eP	P	07 14 40.0	-0.5
TEL3	Telica 3	1.97	6	⇑eP	P	07 14 40.8	-0.4
TELN	Telica	2.00	6	⇑eP	P	07 14 40.6	-1.1
TELN				eS	S	07 15 04.5	-1.2
JCR	Jicaral	2.06	111	eP	P	07 14 41.6	-0.9
JCR				eS	S	07 15 06.2	-1.0
CRIN	San Cristobal	2.08	0	eP	P	07 14 42.5	-0.4
PYTN	Playitas	2.16	27	⇑eP	P	07 14 43.1	-0.8
CGA2	Cerro Gallo 2	2.62	103	eP	P	07 14 50.9	+0.3
CGA2				eS	S	07 15 20.2	-1.2
PRS1	Puriscal	2.77	103	eP	P	07 14 53.3	+0.6
PRS1				eS	S	07 15 23.2	-2.2
LAJ	Bijagual	2.98	104	eP	P	07 14 50.6	-5.1
SJS	Escuela Geolog	3.03	102	eS	S	07 15 32.8	+0.9
LCR2	La Lucha 2	3.13	106	⇓eP	P	07 14 58.0	+0.2
LCR2				eS	S	07 15 34.8	+0.4
TRTC	Tortuguero	3.29	90	eP	P	07 14 59.1	-1.0
TRTC				eS	S	07 15 37.5	-1.0
BUS	Buena Vista	3.41	108	eP	P	07 15 02.1	+0.3
BUS				eS	S	07 15 42.1	+0.5

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*HLW **12** 07:34:48.3, 36.01N×23.96E, h25^{km}, Mb4.0*

*CSEM **12** 07:34:50.2±0.1, 36.76N×23.65E, h92^{km}, ML4.0, Error ellipse: s-maj=1.8km s-min=1.2km az=38.0*

*IDC **12** 07:34:51.7±1.4, 36.90N×23.85E, h90^{km}±20^{km}, mb3.5/9, mb1 3.6/12, mb1mx3.4/26, mbtmp3.9/12, Error ellipse: s-maj=18.5km s-min=15.6km az=36.0*

*ATH **12** 07:34:52.2, 36.86N×23.70E, h88^{km}±4^{km}, ML3.9*

*NEIC **12** 07:34:52.4, 36.87N×23.71E, h85^{km}, mb4.1/1, After ATH.*

*PDG **12** 07:34:53.2±0.2, 37.12N×23.00E, h11^{km}±1^{km}*

*THE **12** 07:34:54.4, 36.95N×23.65E, h20^{km}, ML4.1*

ISC 12 07:34:50.3±0.2, **36.79N**±0.02×**23.61E**±0.03, **h116**^{km}±3^{km}, **n142**, σ1^{s}26/173, **mb3.6**/9, **32C-14D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	Veliai	0.55	263	⇓iP	P	07 35 08.6	+0.4
VLI				eS	S	07 35 19.6	-2.2
KYTH	Kithira	0.69	223	eP	P	07 35 10.8	+1.6
NAIG	Nisos Aigina	0.97	354	eP	P	07 35 11.5	-0.5
NSAL	Nisos Salamina	1.12	354	eP	P	07 35 13.3	-0.3
ATH	Athens Observa	1.19	4	⇑iP	P	07 35 14.1	-0.2
MGER	Gerania Oros	1.23	347	eP	P	07 35 14.5	-0.3
PTL	Penteli	1.27	9	⇑iP	P	07 35 14.8	-0.5
MPAR	Parnis Oros	1.36	4	eP	P	07 35 16.1	-0.2
ITM	Ithomi	1.40	287	⇓iP	P	07 35 19.2	+2.4
THR5	Thira Island,	1.45	104	ePg	P	07 35 18.3	+1.0
VAM	Vamos	1.46	161	⇑iP	P	07 35 19.2	+1.8
VAM				eS	S	07 35 37.9	0.0
THR3	Thira Island,	1.49	104	ePg	P	07 35 19.0	+1.2
SANT	Santorini	1.54	105	ePn	P	07 35 19.1	+0.7
SANT	Santorini	1.54	105	ePn	P	07 35 19.1	+0.7
THR1	Thera Island	1.54	105	ePg	P	07 35 19.5	+1.1
APE	Apeiranthos	1.56	79	i PN	P	07 35 18.1	-0.5
APE				i SN	S	07 35 36.9	-3.1
APE	Apeiranthos	1.56	79	⇓iP	P	07 35 19.1	+0.5
APE				eS	S	07 35 38.2	-1.9
APE	Apeiranthos	1.56	79	⇓iP	P	07 35 19.1	+0.5
APE				i Sn	S	07 35 36.9	-3.2
APE				eS	S	07 35 38.2	-1.9
IDI	Anoyia	1.82	145	P	P	07 35 22.6	+0.8
	19nm,0.3s,baz=323,slow=14,SNR=111						
IDI				S	S	07 35 44.4	-1.1
	44nm,0.3s,baz=341,slow=18,SNR=19						
LKR	Lokris	1.92	346	⇑iP	P	07 35 23.7	+0.7
GVD	Gavdhos	1.98	169	eP	P	07 35 26.0	+2.3
NPS	Neapolis	2.22	133	⇑iP	P	07 35 28.3	+1.3
NPS				eS	S	07 35 54.5	-0.1
AOS	Alonnisos	2.39	5	ePn	P	07 35 29.2	+0.1
AGG	Agios Georgios	2.45	336	ePn	P	07 35 31.2	+1.2
	comp=Z,13nm,0.2s						
AGG				eSn	S	07 35 58.5	-1.5
NEO	Neokhori	2.53	353	⇑iP	P	07 35 32.0	+0.9
XRY	Khrisi	2.55	138	eP	P	07 35 33.0	+1.7
EVR	Evrytania	2.56	327	eP	P	07 35 32.8	+1.3
XOR	Xorichti	2.60	353	ePn	P	07 35 32.6	+0.7
SMG	Samos	2.73	69	⇓iP	P	07 35 34.6	+0.8
VLS	Valsamata	2.77	301	⇓iP	P	07 35 35.0	+0.7
BODT	Bodrum	2.98	84	PN	P	07 35 38.2	+1.2
LKD	Levkas	3.03	310	ePn	P	07 35 39.2	+1.4
	comp=Z,18nm,0.1s						
KARP	Karpathos	3.13	112	eP	P	07 35 40.5	+1.4
PAIG	Paliouri	3.13	1	ePn	P	07 35 39.3	+0.1
PRK	Paraskevi	3.23	40	⇓iP	P	07 35 40.6	+0.1
IZM	Izmir	3.32	60	PN	P	07 35 40.8	-0.8
LIA	Limnos Island	3.34	21	⇑iP	P	07 35 41.5	-0.5
LOS	Limnos	3.35	20	ePn	P	07 35 42.0	-0.1
MLSB	Milas	3.37	80	ePN	P	07 35 43.3	+0.9
LIT	Litokhoron	3.42	345	ePn	P	07 35 44.0	+0.9
	comp=Z,3.6nm,0.3s						
LIT				eSn	S	07 36 22.5	-0.7
MEV	Metsovon	3.53	329	ePn	P	07 35 46.3	+1.8
	comp=Z,9.4nm,0.3s						
OUR	Ouranopolis	3.55	5	ePn	P	07 35 45.3	+0.5
	comp=Z,9.7nm,0.2s						
PLG	Polygyros	3.58	358	eP	P	07 35 45.2	0.0
JAN	Janina	3.60	324	⇓iP	P	07 35 46.9	+1.5
ARG	Arkhangelos	3.68	98	⇓iP	P	07 35 48.8	+2.3
EZN	Ezine	3.71	34	ePN	P	07 35 43.9	-3.0
IGT	Igoumenitsa	3.77	318	ePn	P	07 35 48.4	+0.7
IGT				eSn	S	07 36 31.2	-0.3
THE	Thessaloniki	3.87	353	ePn	P	07 35 49.6	+0.5
SOH	Sokhos	4.03	357	ePn	P	07 35 52.4	+1.1
DALT	Dalyan (Mudla)	4.04	89	ePN	P	07 35 53.1	+1.8
SRN	Sarande	4.19	319	i Pg	P	07 35 53.7	+0.2
SRN				i Sg	S	07 36 38.0	-3.9
CANB	Canakkale	4.21	39	ePN	P	07 35 51.0	-2.7
GRG	Griva	4.27	348	ePn	P	07 35 54.5	+0.1
GRG				eSn	S	07 36 42.6	-1.0
GRG	Griva	4.27	348	ePn	P	07 35 54.5	0.0
GRG				eSn	S	07 36 42.6	-1.1
SRS	Serrai	4.32	360	ePn	P	07 35 55.9	+0.7
FNA	Florina	4.36	337	ePn	P	07 35 55.9	+0.2
	comp=Z,10nm,0.2s						
FETY	Fethiye	4.40	90	ePN	P	07 35 59.6	+3.4
BALB	Balikesir	4.41	48	ePN	P	07 35 54.7	-1.7
ALN	Alexandroupoli	4.52	24	ePn	P	07 35 57.5	-0.4
RDO	Rodhopi	4.60	18	⇑iP	P	07 35 58.6	-0.4
MMB	Musomiste	4.80	1	i P	P	07 36 01.5	-0.1
BNT	Bandirma	4.91	42	ePN	P	07 36 01.1	-2.0
MRMT	Marmara Adasi	4.92	38	ePN	P	07 36 01.7	-1.6
RZN	Rozhen	4.97	10	i P	P	07 36 05.0	+1.1
KDZ	Kurdzhali	5.05	16	i P	P	07 36 04.5	-0.6
ELL	Elmali	5.06	89	ePN	P	07 36 07.4	+2.3
KKB	Krupnik	5.09	356	i P	P	07 36 06.5	+1.0
PLD	Plovdiv	5.38	9	eP	P	07 36 11.2	+1.8
SLUM		5.45	165	P	P	07 36 10.4	+0.1
SLUM				S	S	07 37 08.4	-3.9
DIM	Dimitrovgrad	5.46	15	eP	P	07 36 11.0	+0.4
LCI	Lecce	5.58	311	Pn	P	07 36 11.9	-0.2
	58nm,0.3s						
ISP	Isparta	5.60	77	ePn	P	07 36 15.1	+2.7
	16nm,0.6s						
ISP	Isparta	5.60	77	ePn	P	07 36 15.1	+2.7
	16nm,0.6s						
CTT	Catalca	5.75	39	ePN	P	07 36 13.6	-0.9
TIP	Timpagrande	5.92	296	Pn	P	07 36 16.9	+0.2
	33nm,0.4s						
GRI	Girifalco	6.04	292	Pn	P	07 36 19.4	+0.9
	32nm,0.3s						
SOI	Samo	6.15	284	Pn	P	07 36 20.0	+0.1
ULC	Ulcinj	6.17	328	⇑iPn	P	07 36 18.9	-1.3
ULC				eSn	S	07 37 22.8	-7.3
PE1	Pezze di Greco	6.28	312	⇓iPn	P	07 36 20.9	-0.8
HMAT	Matruh	6.37	152	P	P	07 36 21.5	-1.5
MTTG	Motta San Giov	6.42	283	Pn	P	07 36 23.9	+0.3
PVY	Plav	6.44	335	⇑iPn	P	07 36 22.8	-1.2
PVY				eSn	S	07 37 30.3	-6.3
SCLL	Scilla	6.45	286	Pn	P	07 36 24.0	0.0
ORI	Oriolo Calabro	6.50	302	Pn	P	07 36 25.2	+0.4
	69nm,0.3s						
LTRZ	Laterza	6.54	308	Pn	P	07 36 24.6	-0.7
TTG	Podgorica	6.56	331	⇑iPn	P	07 36 23.7	-1.8
TTG				eSn	S	07 37 32.6	-6.8
BUM	Brajici-Budva	6.60	328	⇑iPn	P	07 36 24.5	-1.6
BUM				eSn	S	07 37 33.4	-7.0
IVA	Berane	6.71	336	⇑iPn	P	07 36 26.8	-0.9
IVA				eSn	S	07 37 36.8	-6.4
SG1	Sgolgore (BA)	6.76	309	⇓iPn	P	07 36 27.6	-0.7
BAI	Bari	6.79	311	⇑iPn	P	07 36 27.8	-0.9
SSY	Sortino	6.85	276	Pn	P	07 36 28.4	-1.1
	65nm,0.1s						
HCY	Herceg Novi	6.89	327	⇑iPn	P	07 36 28.2	-1.9
HCY				eSn	S	07 37 40.0	-7.5
PZI	Palazzolo	6.95	275	P	P	07 36 30.1	-0.8
	180nm,0.1s						
NKY	Niksic	6.99	331	⇑iPn	P	07 36 30.1	-1.3
NKY				eSn	S	07 37 43.0	-6.8
CDT	Castel del Mon	7.15	309	⇓iPn	P	07 36 32.9	-0.7
MGR	Morigerati	7.15	300	P	P	07 36 33.7	0.0
	18nm,0.2s						
SLCN	Sala Consilina	7.21	302	Pn	P	07 36 35.7	+1.3
BRY	Bratogost	7.24	329	⇑iPn	P	07 36 33.6	-1.2
BRY				eSn	S	07 37 48.9	-7.2
PLE	Pljevlja	7.29	335	⇑iPn	P	07 36 34.0	-1.5
PLE				eSn	S	07 37 50.4	-6.9
PLE	Pljevlja	7.29	335	⇑iPn	P	07 36 34.0	-1.5
PLE				eSn	S	07 37 50.3	-6.9
UPM	Unac-Piva	7.35	332	⇑iPn	P	07 36 35.1	-1.2
UPM				eSn	S	07 37 51.6	-7.2
VAE	Valguarnera	7.38	278	P	P	07 36 40.3	+3.5
	3.4nm,0.3s,baz=282,slow=7.0,SNR=7.8						
VAE				S	S	07 37 55.1	-4.4
	7.3nm,0.3s,baz=95,slow=9.7,SNR=6.7						
MRLC	Muro Lucano	7.48	304	Pn	P	07 36 38.0	-0.1
SGO	Sicignano	7.51	303	Pn	P	07 36 38.8	+0.3
	21nm,0.3s						
STON	Ston	7.59	325	i Pn	P	07 36 36.4	-3.2
STON				i Sn	S	07 37 54.3	-10
SWA2		7.68	168	⇑P	P	07 36 40.3	-0.5
SWA1		7.71	166	⇑P	P	07 36 40.9	-0.2
MS1	Monte Sant'Ang	7.71	312	⇑iPn	P	07 36 40.1	-1.2
GIB	Gibilmanna	7.72	282	Pn	P	07 36 42.1	+0.7
	37nm,1.0s						
HBRG	Burj al 'Arab	8.08	138	P	P	07 36 43.7	-2.5
BRTR	Keskin Array B	8.42	67	P	P	07 36 53.9	+3.2
	0.1nm,0.3s,baz=258,slow=12,SNR=7.1						
SGG	Gregorio Mates	8.52	305	Pn	P	07 36 52.2	+0.1
CII	Carovilli	8.74	307	ePn	P	07 36 56.0	+1.0
	21nm,0.6s						
CII	Carovilli	8.74	307	ePn	P	07 36 56.0	+1.0
	21nm,0.6s						
FYM	Al Fayyum	9.42	137	⇑P	P	07 37 02.3	-1.8
FYM				S	S	07 38 40.5	-8.2
AYT	Al 'Ayyat	9.47	136	⇑P	P	07 37 02.9	-1.9
KOT	Kottamia	9.69	133	⇑P	P	07 37 05.8	-2.1
KOT				S	S	07 38 46.2	-9.1
HSAF	As Saff	9.76	135	⇑P	P	07 37 06.9	-1.9
HHAG	Hagoal	9.84	131	⇑P	P	07 37 07.5	-2.2
HHAG				S	S	07 38 49.7	-9.0
GLL	Jalalah	9.88	134	⇓P	P	07 37 08.5	-1.9
AMAG	Maghara	10.07	125	⇑P	P	07 37 10.1	-2.7
SUZ		10.36	129	⇑P	P	07 37 14.2	-2.5
HFRF	Wahat Farafira	10.40	156	P	P	07 37 17.5	+0.2
HNKL	Nakhl	11.04	125	⇓P	P	07 37 23.7	-2.0
EIL	Elat	11.85	124	P	P	07 37 34.5	-2.0
	1.4nm,0.3s,baz=42,slow=33,SNR=15						
AKRG	Al Kharijah	12.70	150	⇑P	P	07 37 48.5	+0.9
HHRG	Al Ghardaqah	12.73	136	⇑P	P	07 37 48.1	0.0
GERES	GERESS Array B	14.06	332	P	P	07 38 08.1	+3.1
	0.1nm,0.3s,baz=129,slow=13,SNR=3.9						
HFS	Hagfors	24.22	348	P	P	07 39 58.4	+1.5
	0.4nm,0.3s,mb3.2,baz=157,slow=11,SNR=6.3						
FINES	FINESS Array B	24.73	3	P	P	07 40 01.5	-0.2
	0.7nm,0.6s,mb3.3,baz=167,slow=12,SNR=7.0						
NOA	NORSAR Array B	25.51	346	P	P	07 40 10.1	+0.9
	0.3nm,0.7s,mb2.8,baz=140,slow=11,SNR=2.5						
EKA	Eskdalemuir Ar	25.99	324	P	P	07 40 16.0	+2.4
	0.8nm,0.4s,mb3.5,baz=123,slow=8.9,SNR=6.1						
ARCES	ARCESS Array B	32.82	1	P	P	07 41 15.6	+1.3
	0.7nm,0.8s,mb3.5,baz=180,slow=9.0,SNR=2.9						
DBIC	Dimbokro	39.66	228	P	P	07 42 16.3	+3.9
	4.0nm,0.5s,mb4.5,baz=35,slow=9.4,SNR=12						
DBIC	Dimbokro	39.66	228	eP	P	07 42 16.3	+3.9
	2.0nm,0.7s,mb4.1						
DBIC	Dimbokro	39.66	228	eP	P	07 42 16.3	+3.9
MKAR	Makanchi Array	43.95	58	P	P	07 42 48.4	+1.4
	0.8nm,0.3s,mb3.9,baz=269,slow=7.9,SNR=29						
MKAR				pP	pP	07 43 10.4	-3.4
	0.6nm,0.4s,baz=273,slow=7.7,SNR=3.5						
MKAR	Makanchi Array	43.95	58	P	P	07 42 48.4	+1.4
MKAR				pP	pP	07 43 10.4	-3.4
MKAR	Makanchi Array	43.95	58	P	P	07 42 48.4	+1.4
MKAR				pP	pP	07 43 10.4	-3.5
ZAL	Zalesovo	44.80	47	P	P	07 42 54.7	+1.0
	0.9nm,0.5s,mb3.8,baz=249,slow=5.2						
ZAL	Zalesovo	44.80	47	P	P	07 42 54.7	+1.0
SCHQ	Schefferville	61.14	319	P	P	07 44 57.3	+3.0
	0.9nm,0.4s,mb4.2,baz=57,slow=5.5,SNR=9.2						

OTT 12 07:54:39.9±0.7, **72.31N**×**66.40W**, **h18**^{km}, **ML3.5**/5, **Baffin Bay Seismic Zone. 220km northeast from Clyde River, Nu, Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINU	Pond Inlet	3.52	282	PN	Pn	07 55 34.2	-0.8
PINU				SN	Sn	07 56 12.3	-4.3
PINU				Trac		07 56 15.1	
	comp=Z,24nm,0.1s						
TULEG	Thule	4.30	352	PN	Pn	07 55 39.9	-6.3
TULEG				SN	Sn	07 56 22.7	-14
RES	Resolute Bay	8.40	300	PN	P	07 56 39.1	-4.5
RES				SN	Sn	07 58 07.6	-11
RES				Trac		07 58 12.2	
	comp=Z,0.7nm,0.1s						
FRB	Frobisher Bay	8.64	186	PN	P	07 56 42.0	-5.0
FRB				PN	P	07 56 42.0	-5.0
FRB				SN	Sn	07 58 14.7	-10
FRB				Trac		07 58 18.7	
	comp=Z,2.6nm,0.3s						
QILN	Qililugaq Expl	8.97	241	PN	P	07 56 47.8	-3.9
QILN				SN	Sn	07 58 23.6	-10
QILN				Trac		07 58 29.8	
	comp=Z,2.1nm,0.1s						
YRTN	Rankin Inlet	13.53	238	PN	P	07 57 49.0	-4.0
YRTN				SN	S	08 00 11.8	-12
YRTN				Trac		08 00 30.5	
	comp=Z,0.8nm,0.2s						
KUQ	Kuujjuuaa	14.28	184	PN	P	07 58 01.9	-1.0
KUQ				SN	S	08 00 27.4	-14
KUQ				Trac		08 00 33.1	
	comp=Z,2.0nm,0.5s						
LUPN	Lupin Mine	16.95	270	PN	P	07 58 32.7	-4.5
LUPN				SN	S	08 01 30.8	-13
SCHQ	Schefferville	17.55	181	PN	P	07 58 40.3	-4.4
SCHQ				SN	S	08 01 46.4	-11
LG4Q	La Grande 4	19.04	194	PN	P	07 58 57.9	-5.3
LG4Q				SN	S	08 02 17.0	-15
SILO	Sutton Inlier	19.55	214	PN	P	07 59 05.0	-4.0
SILO				SN	S	08 02 33.5	-9.4
VIMO	Victor Mine	20.96	210	PN	P	07 59 23.6	-0.3
VIMO				SN	S	08 03 06.0	-5.9

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*THR **12** 08:51:03.9±0.4, 35.61N×48.92E, h14^{km}±9^{km}, ML3.1*

*CSEM **12** 08:51:04.5±0.1, 35.59N×48.91E, h20^{km}, ML3.2, Error ellipse: s-maj=4.2km s-min=2.5km az=178.0*

*TEH **12** 08:51:10.4, 35.82N×49.10E, h25^{km}, Mn3.2*

ISC 12 08:51:07.5±0.7, **35.69N**±0.08×**48.92E**±0.04, **h39**^{km}±45^{km}, **n17**, σ1^{s}25/20, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRAZ	Razeghan	0.88	109	Pg	P	08 51 26.7	+3.3
IRAZ				Sg	S	08 51 36.0	+0.9
SNGE	Sanandaj	1.42	245	ePG	P	08 51 29.5	-1.7
SNGE				eSG	S	08 51 48.4	-0.5
SNGE				AML	AML	08 51 50.0	
	comp=E,282nm,0.5s						
IMHD	Mahdasht	1.43	90	Pg	P	08 51 28.3	-3.0
ASAO	Ashtian	1.46	141	ePG	P	08 51 29.7	-2.2
ILIN	Laeen	1.78	245	Pn	P	08 51 36.6	+0.3
IKOM	Komasi	1.90	218	Pn	P	08 51 38.3	+0.2
IVIS	Veys	2.06	236	Pn	P	08 51 41.9	+1.6
IAFJ	Afjeh	2.28	85	Pn	P	08 51 44.0	+0.5
IAFJ				Sn	S	08 52 09.2	-1.4
IDHR	Dehrash	2.30	245	Pn	P	08 51 49.1	+5.3
IVRN	Varamin	2.40	106	Pn	P	08 51 46.6	+1.4
IVRN				Sn	S	08 52 13.5	-0.2
DAMV	Damavand	2.49	91	ePN	P	08 51 46.2	-0.3
DAMV				AML	AML	08 52 22.9	
	comp=N,173nm,0.4s						
IDMV	Damavand	2.54	92	Pn	P	08 51 47.1	-0.1
IFIR	Firoozkooh	3.12	90	Pn	P	08 51 55.9	+0.3
IFIR	Firoozkooh	3.12	90	Lg		08 52 43.5	
GRMI	Germi	3.21	346	ePN	P	08 51 57.2	+0.3
GRMI				AML	AML	08 52 52.9	
	comp=N,22nm,0.4s						
IKLH	Kalahroud	3.23	136	Pn	P	08 51 53.8	-3.3
IZEF	Zefreh	3.97	134	Pn	P	08 52 09.0	+1.5

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*IDC **12** 08:57:08.9±0.8, 3.85N×95.68E, mb4.2/11, mb1 4.3/12, mb1mx4.1/22, mbtmp4.2/12, ML4.1/1, MS3.5/9, Ms1 3.5/9, ms1mx3.4/22, Error ellipse: s-maj=31.2km s-min=18.0km az=60.0*

*NEIC **12** 08:57:13.6±0.6, 3.84N×95.65E, h30^{km}, mb4.6/4, Error ellipse: s-maj=16.4km s-min=10.1km az=224.0*

ISC 12 08:57:11.8±0.6, **3.87N**±0.09×**95.73E**±0.06, **h30**^{km}, **n30**, σ0^{s}88/27, **mb4.5**/19, **MS3.5**/8, **1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim	5.10	74	⇓eP	Pn	08 58 31.8	+3.5
KULM				eS	Sn	08 59 27.3	+0.4
CMAR	Chiang Mai Arr	14.84	12	Pn	P	09 00 39.9	-1.6
	0.3nm,0.3s,baz=187,slow=14,SNR=3.0						
CMAR				LR	LR	09 07 14.2	
	comp=Z,162nm,18.1s,baz=200,slow=41						
CMAR	Chiang Mai Arr	14.84	12	Pn	P	09 00 39.9	-1.6
CMAR				LR	LR	09 07 14.2	
HYB	Hyderabad	21.57	310	eP	P	09 02 03.0	+1.9
HYB	Hyderabad	21.57	310	i P	P	09 02 03.0	+1.9
PKI	Pulchoki	25.55	338	eP	P	09 02 39.6	-0.3
	11nm,0.5s,mb4.7						
GUN	Gumba	25.69	340	eP	P	09 02 42.1	+0.9
	37nm,0.5s,mb5.2						
DMN	Daman	25.70	338	eP	P	09 02 41.8	+0.5
KKN	Kakani	25.80	338	eP	P	09 02 42.3	+0.1
	24nm,0.8s,mb4.8						
GKN	Gorkha	26.23	337	eP	P	09 02 46.6	+0.4
	48nm,0.6s,mb5.2						
KOLN	Koldanda	26.44	335	eP	P	09 02 48.8	+0.7
	44nm,0.7s,mb5.1						
FITZ	Fitzroy Crossi	36.68	127	P	P	09 04 17.7	-0.5
	2.7nm,0.6s,mb4.2,baz=12,slow=4.6,SNR=5.2						
FITZ				LR	LR	09 22 09.9	
	comp=Z,50nm,18.6s,MS3.3,baz=279,slow=41						
JNU	Nakatsue	43.86	44	LR	LR	09 24 05.6	
	comp=Z,51nm,18.9s,MS3.5,baz=186,slow=37						
MKAR	Makanchi Array	44.32	347	P	P	09 05 20.4	-0.5
	3.2nm,0.5s,mb4.3,baz=166,slow=7.3,SNR=46						
MKAR				LR	LR	09 25 29.4	
	comp=Z,48nm,21.9s,MS3.4,baz=173,slow=38						
WRA	Warramunga Arr	44.70	123	P	P	09 05 24.4	0.0
	1.6nm,0.6s,mb4.0,baz=300,slow=9.3,SNR=22						
WRAB	Tennant Creek	44.70	123	eP	P	09 05 24.5	+0.1
	10nm,0.5s,mb4.9						
SONM	Songino Array	44.76	10	P	P	09 05 24.5	+0.1
	1.2nm,0.5s,mb4.0,baz=184,slow=10,SNR=6.6						
ZAL	Zalesovo	50.71	352	P	P	09 06 09.9	-0.8
	4.7nm,0.4s,mb4.8,baz=318,slow=4.4,SNR=15						
MJAR	Matsushiro Arr	50.78	45	LR	LR	09 28 47.5	
	comp=Z,31nm,18.6s,MS3.4,baz=160,slow=37						
BVAR	Borovoye Array	53.27	341	P	P	09 06 29.2	-0.8
	3.6nm,0.6s,mb4.5,baz=147,slow=10.0,SNR=26						
CHKZ	Chkalovo	53.75	342	eP	P	09 06 32.8	-0.7
	8.2nm,0.5s,mb4.9						
KMBO	Kilima Mbogo	58.65	266	LR	LR	09 27 20.3	
	comp=Z,45nm,18.7s,MS3.6,baz=127,slow=31						
AKASG	Malin Array Be	72.27	322	P	P	09 08 35.1	-1.2
	1.3nm,0.5s,mb4.1,baz=89,slow=5.4,SNR=8.6						
BOSA	Boshof	74.86	239	P	P	09 08 51.6	-0.2
	1.3nm,0.7s,mb4.0,baz=39,slow=6.5,SNR=3.2						
BOSA				LR	LR	09 39 30.6	
	comp=Z,36nm,18.2s,MS3.7,baz=92,slow=34						
FINES	FINESS Array B	76.97	332	P	P	09 09 03.1	0.0
	2.1nm,0.9s,mb4.1,baz=103,slow=5.4,SNR=15						
FINES				LR	LR	09 47 41.3	
	comp=Z,18nm,18.9s,MS3.4,baz=161,slow=39						
ARCES	ARCESS Array B	79.55	340	P	P	09 09 17.9	+0.8
	0.8nm,0.5s,mb3.9,baz=101,slow=6.2,SNR=8.8						
ARCES	ARCESS Array B	79.55	340	P	P	09 09 17.9	+0.8
GERES	GERESS Array B	81.86	319	P	P	09 09 31.1	+1.4
	0.9nm,0.5s,mb4.0,baz=118,slow=5.8,SNR=14						
LPG	La Plagne	86.56	315	eP	P	09 09 52.2	-1.3
	8.7nm,1.0s,mb4.7						
VNDA	Vanda	88.71	169	LR	LR	09 46 34.4	
	comp=Z,51nm,18.3s,MS4.0,baz=237,slow=33						

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*IDC **12** 09:37:48.3±1.8, 13.01N×87.41W, mb3.7/3, mb1 4.0/4, mb1mx3.6/19, mbtmp3.7/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/24, Error ellipse: s-maj=67.1km s-min=14.8km az=53.0*

*NEIC **12** 09:37:51.7±0.8, 13.30N×87.45W, h10^{km}, mb3.7/3, Error ellipse: s-maj=42.5km s-min=11.5km az=53.0*

CASC 12 09:37:59.3±2.9, **12.25N**×**87.33W**, **h0**^{km}±5^{km}, **MD4.1, ML3.5, mb3.7**(NEIC), **9C-7D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	Leon	0.46	69	⇓eP	Pg	09 38 09.9	+1.5
LEON				eS	Sg	09 38 17.0	+2.6
CRIN	San Cristobal	0.52	31	⇓eP	Pg	09 38 09.3	-0.4
CRIN				eS	Sg	09 38 21.1	+4.5
TEL3	Telica 3	0.57	56	⇓iP	Pg	09 38 11.0	+0.3
TELN	Telica	0.60	54	⇓eP	Pg	09 38 11.1	-0.1
TELN				eS	Sg	09 38 21.8	+2.6
CNGN	Cerro Negro	0.66	68	⇓eP	Pg	09 38 12.8	+0.2
APYN	Apoyeque	0.96	91	⇑eP	Pg	09 38 17.9	-0.5
XAVN	Gruta Xavier	0.98	96	eP	Pb	09 38 18.5	-0.5
XAVN				eS	Sg	09 38 33.2	+1.2
MGAN	Managua	1.06	96	⇓eP	Pb	09 38 19.3	-0.9
MGAN				eS	Sb	09 38 37.3	+2.8
MGAN				i		09 38 42.9	
	comp=E,1µm,0.4s						
TICN	Ticuantepe	1.09	101	eP	Pb	09 38 20.2	-0.6
WILN	Americas 2	1.12	95	⇑eP	Pb	09 38 20.1	-1.1
WILN				eS	Sb	09 38 36.8	+0.7
CNCH	Conchagua	1.13	334	eS	Sb	09 38 36.5	0.0
PYTN	Playitas	1.27	77	⇑eP	Pb	09 38 21.3	-2.6
PYTN				eS	Sb	09 38 42.4	+1.7
APON	Apoyo	1.28	105	⇑eP	Pb	09 38 22.3	-1.6
APON				eS	Sb	09 38 43.0	+2.2
BLLM	Bellamira	1.48	323	⇑eP	Pn	09 38 28.7	+1.5
VSM	San Miguel	1.49	322	⇑eP	Pn	09 38 28.8	+1.5
VSM				eS	Sb	09 38 48.8	+1.9
CAHU	Cacacuatique	1.74	330	eP	Pn	09 38 32.4	+1.5
CONN	Concepcion	1.80	112	⇑eP	Pn	09 38 30.0	-1.8
SNVI	San Vicente	2.00	313	eP	Pn	09 38 35.2	+0.6
LCBS	La Ceiba	2.13	311	⇓eP	Pn	09 38 36.4	-0.2
LFRS	El Faro	2.17	309	⇑eP	Pn	09 38 36.7	-0.4
LBRS	Las Brisas	2.23	312	eP	Pn	09 38 37.9	-0.1
BOQS	Boqueron	2.41	308	eP	Pn	09 38 40.6	+0.1
SBLS	San Blas	2.74	305	eP	Pn	09 38 45.3	+0.1
SNJE	San Jose	2.74	306	eP	Pn	09 38 44.9	-0.3
RTR	El Retiro	2.79	306	⇑eP	Pn	09 38 45.8	-0.2
JTS	JuntasAbangare	3.04	130	Pn	Pn	09 38 47.1	-2.5
	baz=315,slow=13,SNR=13						
JTS				Pg	Pg	09 38 53.5	-6.5
	comp=E,35nm,0.3s,baz=316,slow=18,SNR=67						
JTS				Sn	Sn	09 39 29.6	+2.4
	comp=E,4.8nm,0.3s,baz=263,slow=14,SNR=4.0						
JTS				Lg		09 39 42.9	
	comp=E,23nm,0.3s,baz=150,slow=23,SNR=19						
JTS	JuntasAbangare	3.04	130	eP	Pn	09 38 51.3	+1.8
JTS				S	Sn	09 39 28.4	+1.2
JTS				Lg		09 39 42.9	
JCR	Jicaral	3.23	137	eP	Pn	09 38 49.2	-3.0
PRS1	Puriscal	3.72	127	eP	Pn	09 38 59.5	+0.3
LAJ	Bijagual	3.94	127	eP	Pn	09 39 00.4	-2.0
LCR2	La Lucha 2	4.11	127	eP	Pn	09 39 04.8	+0.1
BUS	Buena Vista	4.41	127	eP	Pn	09 39 07.7	-1.4
TXAR	Lajitas Array	22.80	321	P	P	09 42 46.3	-19
	comp=E,1.8nm,0.7s,baz=134,slow=11,SNR=22						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANMO	**Albuquerque**	28.49	326	LR	LR	09 55 06.1	
	comp=E,33nm,21.7s,slow=37						
PDAR	**Pinedale Array**	36.00	332	P	P	09 44 45.1	-19
	comp=E,0.3nm,0.4s,baz=130,slow=12,SNR=4.1						
AHID	**Auburn Hatcher**	36.73	330	*e*P	P	09 44 51.4	-19
	comp=E,1.7nm,0.5s						
HLID	**Hailey**	38.97	328	P	P	09 45 09.6	-19
	comp=E,0.7nm,0.7s						
BOZ	**Bozeman (W)**	39.17	333	*e*P	P	09 45 11.1	-20
	comp=E,0.8nm,0.7s						
SCHQ	**Schefferville**	45.43	17	P	P	09 46 03.2	-18
	comp=E,1.6nm,0.5s,baz=235,slow=11,SNR=7.4						

IDC 12 09:43:24.0±1.9**, 17.20N**×**146.05E, mb3.7**/3**, mb1 4.1**/3**, mb1mx3.6**/20**, mbtmp3.7**/3**, Error ellipse: s-maj=198.2km s-min=26.9km az=114.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	38.66	198	P	P	09 50 49.5	-1.8
	0.7nm,0.4s,baz=30,slow=8.8,SNR=24						
ILAR	**Eielson Array**	64.83	26	P	P	09 54 04.5	-2.3
	0.2nm,0.5s,baz=250,slow=6.2,SNR=8.6						
NVAR	**Mina Array Bea**	83.79	52	P	P	09 55 56.0	-0.8
	0.1nm,0.4s,baz=275,slow=4.8,SNR=6.0						

*LDG **12** 09:45:28.4±0.0, 48.18N×7.42E, h11^{km}, Md3.3/2, Ml2.8/19, Error ellipse: s-maj=0.8km s-min=0.7km az=171.0*
*NEIC **12** 09:45:28.4, 48.18N×7.42E, h11^{km}, ML2.8(LDG), ML2.6(STR), ML2.2(SZGRF), After LDG.*
*ZUR **12** 09:45:28.1, 48.14N×7.43E, h1^{km}±2^{km}, ML2.5/7*
*LEDBW **12** 09:45:28.3±0.1, 48.17N×7.43E, h10^{km}, ML2.3, Error ellipse: s-maj=2.0km s-min=2.0km az=27.0*
*CSEM **12** 09:45:28.0±0.0, 48.18N×7.43E, h15^{km}, ML2.8/18*
*BGR **12** 09:45:29.0±0.6, 48.26N×7.47E, h10^{km}, ML2.4/8, Error ellipse: s-maj=6.7km s-min=3.3km az=28.0*
STR 12 09:45:27.9±0.2**, 48.18N**×**7.40E, h7^{km}**±**1^{km}, Ml2.6, 5C-10D, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIBD	**Limburg**	0.14	102	⇓*i*Pg	Pg	09 45 31.8	+0.8
LIBD	**Limburg**	0.14	102	Pg	Pg	09 45 31.5	+0.6
LIBD	**Limburg**	0.14	102	⇓*i*P	Pg	09 45 31.8	+0.9
ECH	**Echery**	0.17	283	Pg	Pg	09 45 32.2	+0.8
ECH				Sg	Sg	09 45 34.8	+1.0
ECH	**Echery**	0.17	283	⇑*i*Pg	Pg	09 45 32.3	+0.9
ECH				*e*Sg	Sg	09 45 35.0	+1.2
WLS	**Welschbruch**	0.24	352	Pg	Pg	09 45 33.4	+0.6
WLS	**Welschbruch**	0.24	352	⇓*i*Pg	Pg	09 45 33.5	+0.7
WLS				Sg	Sg	09 45 37.2	+1.2
CDF	**Champ du Feu**	0.25	340	*e*Pg	Pg	09 45 33.5	+0.5
CDF				*e*Sg	Sg	09 45 37.0	+0.6
	243nm,0.3s						
FBB	**Freiburg**	0.35	120	*e*Pg	Pg	09 45 35.1	+0.1
FBB				Sg	Sg	09 45 39.7	-0.1
MOF	**Molkenrain**	0.37	209	Pg	Pg	09 45 35.7	+0.2
MOF				Sg	Sg	09 45 40.9	+0.4
MOF	**Molkenrain**	0.37	209	⇑*i*Pg	Pg	09 45 35.8	+0.4
MOF				*i* Sg	Sg	09 45 41.1	+0.5
MOF	**Molkenrain**	0.37	209	Pg	Pg	09 45 35.8	+0.3
MOF				Sg	Sg	09 45 40.9	+0.4
KIZ	**Kirchzarten**	0.41	123	⇓*i*Pg	Pg	09 45 36.0	-0.2
KIZ				*i* Sg	Sg	09 45 41.2	-0.6
KIZ	**Kirchzarten**	0.41	123	⇓*i*P	Pg	09 45 36.0	-0.2
KIZ				⇓*e*P		09 45 36.0	
KIZ				*i* S	Sg	09 45 41.2	-0.6
KIZ				*e*S	Sg	09 45 41.3	-0.5
FELD	**Feldberg**	0.51	127	*e*P	Pg	09 45 37.8	-0.3
FELD				⇓*i*P		09 45 37.8	
FELD				*e*S	Sg	09 45 44.4	-0.5
FELD	**Feldberg**	0.51	127	⇓*i*P	Pg	09 45 37.8	-0.3
FELD	**Feldberg**	0.51	127	Pg	Pg	09 45 37.7	-0.4
HINF	**Hinteralfeld**	0.52	225	*e*Pg	Pg	09 45 38.2	-0.1
HINF				*e*Sg	Sg	09 45 44.8	-0.4
	113nm,0.2s						
BFO	**Black Forest**	0.64	76	⇑*i*Pg	Pg	09 45 40.1	-0.6
BFO				PmP		09 45 40.5	
BFO				*e*Sg	Sg	09 45 48.3	-1.0
	SNR=150						
BFO	**Black Forest**	0.64	76	*e*Pg	Pg	09 45 40.2	-0.5
BFO				*e*Sg	Sg	09 45 49.2	-0.1
BFO	**Black Forest**	0.64	76	Pg	Pg	09 45 40.1	-0.6
BFO				*e*Sg	Sg	09 45 49.2	-0.1
BBS	**Basel-Blauen**	0.72	174	Pg	Pg	09 45 42.1	-0.3
HAU	**Haudompre**	0.73	256	*e*Pg	Pg	09 45 42.3	-0.2
HAU				*e*Sg	Sg	09 45 51.9	-0.3
	135nm,0.4s						
BOURR	**Bourrignon**	0.80	188	⇑*i*P	Pb	09 45 43.5	-0.1
BOURR				*e*S	Sb	09 45 54.3	-0.1
SULZ	**Sulz-Cheisache**	0.81	143	⇓*i*P	Pb	09 45 43.3	-0.6
SULZ				*e*S	Sb	09 45 54.1	-0.7
SLE	**Schleitheim**	0.84	119	⇑*i*P	Pb	09 45 43.6	-0.9
LANF	**Langenberg**	0.84	18	Pg	Pg	09 45 43.5	-1.3
LANF	**Langenberg**	0.84	18	P	Pb	09 45 43.7	-0.8
BALST	**Balsthal**	0.87	167	*e*P	Pb	09 45 44.5	-0.4
LOMF	**Lomont**	0.92	205	Pg	Pg	09 45 45.6	-0.6
LOMF				Sg	Sg	09 45 57.1	-1.3
LOMF	**Lomont**	0.92	205	⇓*i*Pn	Pn	09 45 45.8	-1.2
LOMF	**Lomont**	0.92	205	Pn	Pn	09 45 45.8	-1.2
LOMF				Sg	Sg	09 45 57.1	-1.3
SPAK	**Spaichingen**	0.93	94	Pn	Pn	09 45 45.8	-1.5
THEF	**They Montfort**	0.95	273	Pg	Pg	09 45 46.1	-0.7
THEF				Sg	Sg	09 45 59.0	-0.5
THEF	**They Montfort**	0.95	273	P	Pb	09 45 46.4	+0.2
FLACH	**Flaach**	0.99	127	*i* P	Pb	09 45 46.9	-0.1
LBG	**Lerchenberg**	1.05	62	Pn	Pn	09 45 46.2	-2.7
LBG				Pg	Pg	09 45 47.8	-1.1
STEIN	**Stein am Rhein**	1.11	117	*e*P	Pb	09 45 48.9	-0.2
GUT	**Gutenstein**	1.15	95	Pn	Pn	09 45 48.2	-2.3
GUT				Pg	Pg	09 45 50.0	-1.0
GUT				Sg	Sg	09 46 04.7	-1.6
GUT	**Gutenstein**	1.15	95	Pg	Pg	09 45 50.0	-1.0
GUT				Sg	Sg	09 46 04.7	-1.7
SISB	**Singen-Sch Ber**	1.16	115	Pg	Pg	09 45 50.5	-0.6
SISB				Sg	Sg	09 46 05.1	-1.5
SISB	**Singen-Sch Ber**	1.16	115	S	Sb	09 46 05.1	+0.1
TUBL	**Tuebingen Lnz**	1.17	72	Pg	Pg	09 45 50.1	-1.3
TUBL				Sg	Sg	09 46 05.4	-1.6
TUBL	**Tuebingen Lnz**	1.17	72	S	Sb	09 46 05.4	0.0
BUCH	**Bad Urach**	1.33	78	Pn	Pn	09 45 50.5	-2.5
BUCH				Sg	Sg	09 46 10.3	-1.9
STU	**Stuttgart**	1.33	63	*e*Pg	Pg	09 45 53.0	-1.6
	SNR=1.5						
STU				*e*Sg	Sg	09 46 10.0	-2.3
	SNR=3.8						
RFYF	**Reffroy**	1.36	290	*e*Pg	Pg	09 45 54.1	-1.0
	baz=114						
RFYF				*e*Sg	Sg	09 46 12.2	-1.0
	80nm,0.2s,baz=112						
RUP	**Ruppelstein**	1.54	352	Pg	Pg	09 45 57.3	-1.4
SWS	**Schriesheim**	1.56	33	Pg	Pg	09 45 57.4	-1.7
SWS				Sg	Sg	09 46 18.6	-1.4
SFTF	**Sexfontaines**	1.58	272	*e*Pn	Pn	09 45 55.2	-1.3
SFTF				*e*P		09 45 57.2	
SFTF				*e*Pg	Pg	09 45 58.2	-1.3
SFTF				*e*Sn	Sn	09 46 14.6	-2.8
	baz=86						
SFTF				*e*Sg	Sg	09 46 18.9	-1.7
	32nm,0.2s,baz=94						
SFTF	**Sexfontaines**	1.58	272	*e*P	Pn	09 45 57.2	+0.7
SFTF				*e*Pg	Pg	09 45 58.2	-1.3
SFTF				*e*Sn	Sn	09 46 14.6	-2.8
SFTF				*e*Sg	Sg	09 46 18.9	-1.7
SFTF	**Sexfontaines**	1.58	272	*e*Pg	Pg	09 45 58.2	-1.3
SFTF				*e*Sn	Sn	09 46 14.6	-2.8
SFTF				*e*Sg	Sg	09 46 18.9	-1.7
	16nm,0.2s						
MEZF	**Maizieres J'vi**	1.60	282	*e*Pn	Pn	09 45 55.5	-1.3
	baz=106						
MEZF				*e*Pg	Pg	09 45 58.5	-1.4
MEZF				*e*Sn	Sn	09 46 15.1	-2.8
MEZF				*e*Sg	Sg	09 46 19.4	-1.8
	28nm,0.3s						
WLF	**Walferdange**	1.70	331	*e*Pg	Pg	09 45 59.9	-1.9
	SNR=2.7						
WLF				*e*Sg	Sg	09 46 22.1	-2.4
	SNR=5.6						
CABF	**La Chapelle**	1.81	210	*e*Pn	Pn	09 45 57.5	-2.2
CABF				*e*Pg	Pg	09 46 01.9	-2.1
CABF				*e*Sg	Sg	09 46 25.5	-2.5
	9.9nm,0.2s						
SIND	**Sindeldorf**	1.87	50	Pg	Pg	09 46 03.6	-1.6
SIND				Sg	Sg	09 46 27.1	-3.1
SIND	**Sindeldorf**	1.87	50	S	Sn	09 46 27.1	+2.3
UBR	**Uberruh**	1.89	104	Pg	Pg	09 46 04.2	-1.4
HDH	**Heidenheim**	1.91	77	Pg	Pg	09 46 04.1	-2.0
HDH				Sg	Sg	09 46 27.3	-4.4
HDH	**Heidenheim**	1.91	77	S	Sn	09 46 27.3	+1.4
TNS	**Taunus Mts**	2.16	18	*e*Sn	Sn	09 46 28.2	-3.8
TNS				Sg	Sg	09 46 35.2	-4.5
TNS	**Taunus Mts**	2.16	18	S	Sn	09 46 35.2	+3.2
LOR	**Lormes**	2.56	250	*e*Pn	Pn	09 46 07.8	-2.7
	baz=64						
LOR				*e*Pg	Pg	09 46 16.2	-2.8
	baz=73						
LOR				*e*Sg	Sg	09 46 48.5	-4.6
	14nm,0.2s,baz=66						
LOR	**Lormes**	2.56	250	*e*Pg	Pg	09 46 16.2	-2.8
LOR				*e*Sg	Sg	09 46 48.5	-4.6
	6.8nm,0.2s						
GIVF	**Givet**	2.56	320	*e*Pn	Pn	09 46 08.1	-2.5
GIVF				*e*Pg	Pg	09 46 15.8	-3.3
GIVF				*e*Sg	Sg	09 46 49.2	-4.0
	6.3nm,0.2s						
FUR	**Furstenfeldbru**	2.59	89	*e*Sn	Sn	09 46 40.4	-2.8
FUR				*e*Sg	Sg	09 46 50.7	-3.6
	SNR=4.2						
LPL	**La Plagne**	2.70	190	*e*Pn	Pn	09 46 10.2	-2.4
LPL				*e*Sg	Sg	09 46 53.3	-4.6
	3.5nm,0.5s						
LPG	**La Plagne**	2.72	190	*e*Pn	Pn	09 46 10.3	-2.5
LPG				*e*Pg	Pg	09 46 21.0	-1.2
LPG				*e*Sg	Sg	09 46 53.9	-4.6
	4.9nm,0.4s						
BAIF	**Baives**	2.82	313	*e*Pn	Pn	09 46 11.8	-2.4
BAIF				*e*Pg	Pg	09 46 19.0	-5.1
BAIF				*e*Sg	Sg	09 46 56.8	-4.9
	4.2nm,0.3s						
SSF	**Saint Saulge**	2.86	248	*e*Pn	Pn	09 46 12.2	-2.6
SSF				*e*Pg	Pg	09 46 22.0	-3.0
SSF				*e*Sg	Sg	09 46 58.4	-4.8
	6.1nm,0.3s						
SMF	**Signal de Mont**	2.86	239	*e*Pn	Pn	09 46 12.3	-2.6
SMF				*e*P		09 46 15.3	
SMF				*e*Pg	Pg	09 46 21.4	-3.7
SMF				*e*Sg	Sg	09 46 58.5	-4.7
	9.2nm,0.2s						
SMF	**Signal de Mont**	2.86	239	*e*P	Pn	09 46 15.3	+0.4
SMF				*e*Pg	Pg	09 46 21.4	-3.7
SMF				*e*Sg	Sg	09 46 58.5	-4.7
GRF	**Grafenberg Arr**	2.94	58	*e*Sg	Sg	09 46 59.8	-5.9
AVF	**Avril sur Loir**	3.08	245	*e*Pn	Pn	09 46 15.3	-2.6
AVF				*e*P		09 46 18.4	
AVF				*e*Pg	Pg	09 46 26.0	-3.3
AVF				*e*Sg	Sg	09 47 05.3	-5.0
	3.0nm,0.3s						
AVF	**Avril sur Loir**	3.08	245	*e*P	Pn	09 46 18.4	+0.5
AVF				*e*Pg	Pg	09 46 26.0	-3.3
AVF				*e*Sg	Sg	09 47 05.3	-5.0
HYF	**Humbligny**	3.34	256	*e*Pn	Pn	09 46 18.9	-2.7
HYF				*e*P		09 46 22.4	
HYF				*e*Pg	Pg	09 46 31.1	-3.5
HYF	**Humbligny**	3.34	256	*e*Pn	Pn	09 46 18.9	-2.7
HYF				*e*Pg	Pg	09 46 31.1	-3.5
ORIF	**Oris-en-Rattie**	3.43	198	*e*Pn	Pn	09 46 19.9	-3.0
ORIF				*e*Sn	Sn	09 46 58.4	-5.8
ORIF				*e*Sg	Sg	09 47 15.8	-6.2
	3.0nm,0.3s						
BGF	**Bois d'Agland**	3.49	244	*e*Pn	Pn	09 46 21.1	-2.7
BGF				*e*P		09 46 24.6	
BGF				*e*Pg	Pg	09 46 34.1	-3.6
BGF				*e*Sg	Sg	09 47 18.3	-5.9
	11nm,0.3s						
BGF	**Bois d'Agland**	3.49	244	*e*Pn	Pn	09 46 21.1	-2.7
BGF				*e*Pg	Pg	09 46 34.1	-3.6
BGF				*e*Sg	Sg	09 47 18.3	-5.9
MOX	**Moxa**	3.70	47	*e*Pg	Pg	09 46 37.3	-4.4
	SNR=1.7						
MOX				*e*Sg	Sg	09 47 23.9	-7.1
	SNR=3.5						
VIVF	**Saint-Julien-l**	3.82	211	*e*Sg	Sg	09 47 28.0	-7.1
	3.7nm,0.3s						
GUNZ	**Gunzen**	3.90	54	*e*Pg	Pg	09 46 41.1	-4.6
	SNR=1.7						
GUNZ				*e*Sg	Sg	09 47 29.2	-8.5
	SNR=2.6						
WERD	**Werda**	3.93	53	*e*Pg	Pg	09 46 41.0	-5.3
	SNR=2.0						
WERD				*e*Sg	Sg	09 47 30.0	-8.7
	SNR=5.0						
TANN	**Tannenbergstha**	4.00	54	*e*Pg	Pg	09 46 42.9	-4.8
	SNR=2.0						
TANN				*e*Sg	Sg	09 47 32.9	-8.0
	SNR=2.9						
TCF	**Toulx Ste Croi**	4.01	244	*e*Pg	Pg	09 46 43.1	-4.9
TCF				*e*Sg	Sg	09 47 34.5	-6.9
	2.2nm,0.2s						
GEC2	**GERESS Array S**	4.24	79	*e*Pn	Pn	09 46 32.1	-2.3
	SNR=1.0						
GEC2				*e*Pg	Pg	09 46 46.7	-5.8
	SNR=2.4						
GEC2				*e*Sn	Sn	09 47 19.1	-5.7
GEC2				*e*Sg	Sg	09 47 41.0	-8.2
	SNR=4.0						
FLN	**La Foliniere**	5.28	279	*e*Sg	Sg	09 48 14.1	-9.4
	1.8nm,0.2s						
MFF	**Saint Martin d**	5.36	256	*e*Pn	Pn	09 46 46.6	-3.7

*BJI **12** 09:48:37.6, 4.20N×127.90E, h113^{km}, mB4.7, mb4.6*
*IDC **12** 09:48:37.9±5.2, 4.22N×127.88E, h107^{km}±49^{km}, mb4.1/15, mb1 4.3/15, mb1mx4.1/22, mbtmp4.5/15, MS3.6/3, Ms1 3.6/3, ms1mx3.0/26, Error ellipse: s-maj=23.8km s-min=10.5km az=76.0*
*NEIC **12** 09:48:38.6±2.2, 4.21N×127.94E, h113^{km}±21^{km}, mb4.7/8, Error ellipse: s-maj=11.7km s-min=5.4km az=75.0*
*MAN **12** 09:48:42.6, 4.33N×127.12E, h1^{km}, mb4.8, ML3.7, MS3.7*
ISC 12 09:48:38.1±0.9**, 4.22N**±0.05×**127.95E**±0.09**, h123^{km}**±8^{km}**, n60, σ0^{s}93**/60**, mb4.5**/24**, 1C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	3.19	328	*e*P	P	09 49 28.6	+0.6
MATI				*e*S	S	09 50 02.8	-3.1
KCP	**Kidapawan**	3.98	314	⇓*e*P	P	09 49 39.4	+1.0
KCP				*i* S	S	09 50 26.0	+1.4
BUKP	**Musuan**	4.64	322	*e*P	P	09 49 48.1	+0.8
BUKP				*e*S	S	09 50 36.2	-4.4
BUTP	**Butuan**	5.26	334	*e*P	P	09 49 57.3	+1.6
BUTP				*e*S	S	09 50 50.6	-5.1
PAGZ	**Pagadian**	5.80	309	*e*P	P	09 50 01.9	-1.1
IPIL	**Ipil**	6.42	304	*e*P	P	09 50 10.3	-1.2
BALP	**Baler**	13.06	332	*e*P	P	09 51 47.4	+7.4
KAKA	**Kakadu**	17.40	165	⇓*i*P	P	09 52 33.1	-1.7
	24nm,0.6s						
KAKA				*e*S	S	09 55 42.6	+0.4
KSM	**Kuching**	17.83	262	*e*P	P	09 52 39.7	-0.3
FITZ	**Fitzroy Crossi**	22.29	186	*e*P	P	09 53 25.3	-0.8
	28nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	22.29	186	P	P	09 53 25.5	-0.6
	28nm,0.5s,mb4.8,baz=9.4,slow=7.5,SNR=46						
PMG	**Port Moresby**	23.44	125	LR	LR	10 03 24.1	
	comp=Z,55nm,18.7s,baz=244,slow=38						
WRAB	**Tennant Creek**	24.81	166	*e*P	P	09 53 50.1	-0.2
	64nm,0.8s,mb5.1						
WRA	**Warramunga Arr**	24.81	166	P	P	09 53 50.1	-0.4
	24nm,0.7s,mb4.7,baz=338,slow=10,SNR=126						
WB2	**Warramunga Arr**	24.82	166	⇑*i*P	P	09 53 50.1	-0.4
MBWA	**Marble Bar**	26.47	197	*e*P	P	09 54 05.0	-0.8
JNU	**Nakatsue**	28.89	5	P	P	09 54 27.1	-0.4
	3.6nm,0.5s,mb4.3,baz=162,slow=9.6						
CTA	**Charters Tower**	30.11	144	P	P	09 54 38.0	-0.6
	4.7nm,0.8s,mb4.2,baz=304,slow=11,SNR=3.2						
CTA	**Charters Tower**	30.11	144	P	P	09 54 38.0	-0.6
CTAO	**Charters Tower**	30.11	144	*e*P	P	09 54 37.9	-0.7
CMAR	**Chiang Mai Arr**	31.69	299	P	P	09 54 51.4	-1.1
	1.6nm,0.6s,mb3.9,baz=114,slow=7.3,SNR=8.5						
KS15	**Wonju Array Si**	33.07	360	*e*P	P	09 55 04.1	-0.1
MJAR	**Matsushiro Arr**	33.53	15	P	P	09 55 07.0	-1.1
	2.9nm,0.6s,mb4.3,baz=179,slow=10,SNR=15						
MAT	**Matsushiro**	33.53	15	*e*P	P	09 55 07.0	-1.1
MAT	**Matsushiro**	33.53	15	P	P	09 55 06.5	-1.6
MAT				S	pP	09 55 27.8	-7.7
XAN	**Xi'an**	34.55	331	P	P	09 55 17.0	+0.1
XAN				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.5						
HNR	**Honiara**	34.65	113	LR	LR	10 07 41.2	
	comp=Z,48nm,21.1s,baz=139,slow=33						
STKA	**Stephens Creek**	38.17	161	*e*P	P	09 55 47.5	+0.2
	comp=Z,37nm,0.4s,mb5.6						
STKA	**Stephens Creek**	38.17	161	P	P	09 55 47.7	+0.4
	comp=Z,46nm,0.4s,mb5.7,baz=338,slow=8.2,SNR=278						
STKA	**Stephens Creek**	38.17	161	*e*P	P	09 55 47.2	-0.1
NWAO	**Narrogin (SRO)**	38.31	195	P	P	09 55 48.5	0.0
	comp=Z,25nm,0.9s,mb5.0,baz=358,slow=9.6,SNR=4.5						
NWAO	**Narrogin (SRO)**	38.31	195	*e*P	P	09 55 48.5	0.0
LZH	**Lanzhou**	38.72	328	*e*P	P	09 55 53.5	+1.7
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
LZH	**Lanzhou**	38.72	328	*e*P	P	09 55 53.5	+1.7
	comp=Z,25nm,1.0s,mb5.0						
LZH				pP	pP	09 56 09.0	-11
LZH				sP	sP	09 56 14.5	-20
SHL	**Shillong**	40.58	305	*e*P	P	09 56 07.0	-0.3
GTA	**Gaotai**	43.32	328	*e*P	P	09 56 30.3	+0.7
GTA				AMB	AMB		
	comp=Z,50nm,4.2s						
GTA				LR	LR		
	comp=N,430nm,20.9s						
GTA				LR	LR		
	comp=E,810nm,17.9s						
GTA				LR	LR		
	comp=Z,500nm,18.3s						
CNB	**Canberra Magne**	44.17	155	*e*P	P	09 56 37.6	+1.2
	comp=Z,26nm,1.0s,mb4.9						
TOO	**Toolangi**	44.66	160	*e*P	P	09 56 41.5	+1.2
	comp=Z,14nm,0.8s,mb4.8						
DZM	**Mont Dzumac**	45.83	126	P	P	09 56 50.7	+0.9
	comp=Z,6.3nm,0.8s,mb4.4,baz=245,slow=14,SNR=5.1						
ULN	**Ulaanbaatar**	47.05	341	*e*P	P	09 56 59.5	+0.5
	comp=Z,3.5nm,0.5s,mb4.3						
SONM	**Songino Array**	47.24	340	P	P	09 57 00.7	+0.2
	comp=Z,1.1nm,0.4s,mb3.9,baz=153,slow=9.2,SNR=9.9						
MKAR	**Makanchi Array**	57.86	325	P	P	09 58 18.7	-0.6
	comp=Z,4.8nm,0.5s,mb4.8,baz=121,slow=8.3,SNR=58						
KZA	**Kyzart**	60.09	317	P	P	09 58 35.6	+0.8
	SNR=6.5						
TKM2	**Tokmak 2**	60.20	318	P	P	09 58 35.5	0.0
	SNR=5.0						
UCH	**Uchtor**	60.65	317	P	P	09 58 39.4	+0.9
	SNR=6.2						
ZAL	**Zalesovo**	60.72	332	P	P	09 58 37.2	-1.7
	comp=Z,0.7nm,0.4s,mb4.0,baz=331,slow=10,SNR=4.7						
ZAL	**Zalesovo**	60.72	332	P	P	09 58 37.2	-1.7
USP	**Ospenovka**	61.07	318	P	P	09 58 40.9	-0.6
	SNR=6.5						
AML	**Almayashu**	61.17	316	P	P	09 58 42.6	+0.5
	SNR=7.3						
CASY	**Casey**	71.44	187	*e*P	P	09 59 46.6	-0.1
VNDA	**Vanda**	83.75	173	P	P	10 00 54.2	0.0
	comp=Z,5.7nm,0.9s,mb4.4,baz=316,slow=6.2,SNR=29						
ILAR	**Eielson Array**	84.14	25	P	P	10 00 56.6	+0.3
	comp=Z,0.7nm,0.9s,mb3.5,baz=253,slow=6.4,SNR=7.6						
MAW	**Mawson**	84.63	200	P	P	10 00 59.2	+0.5
	comp=Z,6.3nm,0.8s,mb4.6,baz=58,slow=3.3,SNR=7.7						
SBA	**Scott Base**	84.65	172	*e*P	P	10 01 00.1	+1.5
	comp=Z,1.9nm,0.7s,mb4.1						
ASF	**Jabal al Asfar**	88.67	302	LR	LR	10 45 19.4	
	comp=Z,152nm,18.7s,baz=162,slow=38						
ARCES	**ARCESS Array B**	90.42	340	P	P	10 01 24.9	-1.5
	comp=Z,1.9nm,0.9s,mb4.2,baz=99,slow=5.6,SNR=3.1						
ARCES	**ARCESS Array B**	90.42	340	P	P	10 01 24.9	-1.5
QSPA	**South Pole Qui**	94.12	180	*e*P	P	10 01 43.9	+0.6
	comp=Z,4.9nm,1.0s,mb4.8						
TRQA	**Tornquist**	145.12	166	*e*PKP	PKPdf	10 08 02.5	+1.1
CFAA	**Coronel Fontan**	148.79	153	PKPbc	PKPdf	10 08 14.1	+6.5
	comp=Z,0.2nm,0.5s,baz=226,slow=3.8,SNR=4.9						

*KNET **12** 09:52:16.4±0.6, 41.77N×73.07E, h12^{km}±2^{km}, ml2.1, Error ellipse: s-maj=4.3km s-min=3.2km az=128.0*
*NNC **12** 09:52:17.4±2.9, 41.82N×73.07E, mpv2.6, Error ellipse: s-maj=32.2km s-min=9.3km az=172.0*
ISC 12 09:52:17.3±1.2**, 41.70N**±0.08×**73.04E**±0.06**, h10^{km}, n11, σ1^{s}21**/22**, 11C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	0.65	49	P	Pb	09 52 28.2	-2.1
	44nm,0.2s,SNR=184						
AML				⇓S	Sb	09 52 37.9	-1.2
	50nm,0.2s						
EKS2	**Erkin-Say**	1.10	30	⇑P	Pb	09 52 35.9	-2.1
	2.7nm,0.1s,SNR=7.6						
EKS2				⇓S	Sb	09 52 51.0	-1.3
	7.7nm,0.1s						
UCH	**Uchtor**	1.22	64	⇑P	Pb	09 52 38.4	-1.6
	8.4nm,0.1s,SNR=75						
UCH				⇓S	Sb	09 52 56.6	+1.0
	12nm,0.1s						
AAK	**Ala-Archa**	1.43	49	⇑P	Pn	09 52 42.6	-0.8
	8.0nm,0.1s,SNR=6.7						
AAK				⇓S	Sb	09 53 01.5	-0.1
	9.8nm,0.2s						
AAK	**Ala-Archa**	1.43	49	⇓P	Pn	09 52 42.2	-1.2
	2.9nm,0.2s						
AAK				⇓S	Sb	09 53 01.4	-0.3
	3.7nm,0.3s						
KZA	**Kyzart**	1.69	77	⇑P	Pn	09 52 47.0	-0.2
	8.6nm,0.2s,SNR=46						
KZA				⇓S	Sn	09 53 10.7	+1.6
	24nm,0.3s						
KBK	**Karagaybulak**	1.71	56	⇑P	Pn	09 52 47.4	0.0
	5.2nm,0.1s,SNR=9.2						
KBK				⇓S	Sn	09 53 11.0	+1.5
	17nm,0.2s						
CHMS	**Chumysh**	1.81	44	⇑P	Pn	09 52 48.8	0.0
	13nm,0.3s,SNR=7.2						
CHMS				⇑S	Sn	09 53 13.3	+1.2
	8.4nm,0.2s						
USP	**Ospenovka**	1.90	34	⇓P	Pn	09 52 50.0	-0.1
	3.7nm,0.2s,SNR=9.0						
USP				⇑S	Sn	09 53 16.2	+1.9
	25nm,0.2s						
TKM2	**Tokmak 2**	2.25	56	⇑P	Pn	09 52 56.0	+0.8
	5.3nm,0.1s,SNR=7.8						
TKM2				⇓S	Sn	09 53 27.5	+4.2
	7.0nm,0.1s						
KK31	**Karatay Array**	2.33	308	⇑P	Pn	09 52 56.2	-0.2
	0.6nm,0.3s,baz=125,slow=16,SNR=25						
KK31				⇑S	Sn	09 53 26.8	+1.5
	4.2nm,0.4s,baz=121,slow=32,SNR=15						

*IDC **12** 10:01:30.7±1.1, 62.04N×26.89W, mb3.5/10, mb1 3.8/11, mb1mx3.7/25, mbtmp3.6/11, MS3.0/7, Ms1 3.0/7, ms1mx2.8/28, Error ellipse: s-maj=37.5km s-min=16.2km az=4.0*
*CSEM **12** 10:01:30.2±0.1, 61.99N×26.84W, h15^{km}, mb4.1/1, Error ellipse: s-maj=9.0km s-min=3.8km az=26.0*
*NEIC **12** 10:01:32.0±0.6, 61.95N×26.85W, h10^{km}, mb4.2/1, Error ellipse: s-maj=16.6km s-min=8.8km az=193.0*
ISC 12 10:01:30.1±7.0**, 62.0N**±0.1×**26.9W**±0.2**, h9^{km}**±45^{km}**, n23, σ0^{s}92**/17**, mb3.6**/11**, MS3.0**/4**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUMG	**Summit**	11.52	342	*e*P	P	10 04 17.6	0.0
SUMG	**Summit**	11.52	342	*e*P	P	10 04 17.6	+0.1
JMIC	**Jan Mayen**	11.57	31	LR	LR	10 07 33.3	
	comp=Z,38nm,21.8s,baz=270,slow=32						
EKA	**Eskdalemuir Ar**	13.95	108	Pn	P	10 04 48.5	-1.3
	0.1nm,0.3s,baz=315,slow=12,SNR=4.5						
EKA	**Eskdalemuir Ar**	13.95	108	Pn	P	10 04 48.5	-1.4
NOA	**NORSAR Array B**	18.01	76	LR	LR	10 11 42.1	
	comp=Z,38nm,20.3s,baz=300,slow=34						
HFS	**Hagfors**	19.48	77	LR	LR	10 12 37.3	
	comp=Z,46nm,18.6s,baz=326,slow=34						
SCHQ	**Schefferville**	21.83	269	P	P	10 06 25.3	+1.1
	2.3nm,0.9s,mb3.6,baz=59,slow=7.2,SNR=4.2						
ARCES	**ARCESS Array B**	22.09	48	P	P	10 06 27.4	+0.6
	2.1nm,0.9s,mb3.6,baz=280,slow=15,SNR=3.8						
DAVOX	**Davos**	25.78	109	LR	LR	10 16 11.3	
	comp=Z,26nm,18.2s,MS2.8,baz=272,slow=34						
GERES	**GERESS Array B**	26.00	102	P	P	10 07 06.7	+2.2
	0.3nm,0.7s,mb2.9,baz=329,slow=7.8,SNR=3.9						
GERES				LR	LR	10 18 09.2	

	comp=Z,33nm,18.2s,MS2.9,baz=23,slow=38						
YKA	Yellowknife Ar	37.88	311	P	P	10 08 48.5	0.0
	0.4nm,0.8s,mb3.2,baz=50,slow=9.3,SNR=7.6						
YKA				LR	LR	10 23 40.6	
	comp=Z,29nm,18.6s,MS3.1,slow=35						
YKA	Yellowknife Ar	37.88	311	P	P	10 08 48.5	0.0
YKA				LR	LR	10 23 40.6	
ULM	Lac du Bonnet	38.34	285	LR	LR	10 23 01.6	
	comp=Z,36nm,19.1s,MS3.2,baz=249,slow=34						
BRTR	Keskin Array B	42.22	93	P	P	10 09 24.9	+0.4
	1.1nm,0.8s,mb3.5,baz=329,slow=7.2,SNR=4.0						
ILAR	Eielson Array	45.97	329	P	P	10 09 54.6	+0.2
	0.5nm,0.9s,mb3.4,baz=21,slow=6.4,SNR=5.3						
ILAR				PcP	PcP	10 11 30.6	-1.2
	0.7nm,0.8s,baz=315,slow=8.1,SNR=5.7						
ILAR	Eielson Array	45.97	329	PcP	PcP	10 11 30.5	-1.2
BW06	Boulder Array	50.17	288	*e*P	P	10 10 27.4	-0.1
	3.3nm,1.2s,mb4.2						
BW06	Boulder Array	50.17	288	*e*P	P	10 10 27.4	-0.1
	3.3nm,1.2s,mb4.2						
PDAR	Pinedale Array	50.17	288	P	P	10 10 27.7	+0.2
	1.8nm,0.8s,mb4.1,baz=60,slow=6.8,SNR=15						
MKAR	Makanchi Array	57.72	50	P	P	10 11 22.6	-0.3
	0.6nm,0.8s,mb3.7,baz=346,slow=5.0,SNR=4.9						
TXAR	Lajitas Array	58.42	274	P	P	10 11 26.6	-1.5
	0.4nm,0.9s,mb3.5,baz=63,slow=5.6,SNR=4.6						
SONM	Songino Array	64.32	33	P	P	10 12 06.4	-1.1
	0.5nm,0.6s,mb3.7,baz=333,slow=8.3,SNR=4.1						

BJI **12** 10:05:14.9, 0.10N×97.60E, h14^{km}, mB5.0, mb4.8, Ms5.0, Msz4.6

NEIC **12** 10:05:15.0±0.3, 0.08N×97.64E, mb4.9/17, Error ellipse: s-maj=10.5km s-min=6.9km az=52.0

IDC **12** 10:05:14.7±0.5, 0.08N×97.65E, h14^{km}±2^{km}, mb4.4/20, mb1 4.5/21, mb1mx4.4/25, mbtmp4.5/21, ML4.6/1, MS4.2/10, Ms1 4.2/10, ms1mx4.0/17, Error ellipse: s-maj=25.1km s-min=10.0km az=43.0

MOS **12** 10:05:15.9±1.2, 0.08N×97.65E, h33^{km}, mb5.0/17, MS4.3/7, Error ellipse: s-maj=17.2km s-min=9.4km az=102.8

HRVD **12** 10:05:15.0±0.5, 0.02S×97.55E, h12^{km}, MW4.8/42, Centroid moment Tensor Solution. LP body waves: s6,c8; Mantle waves: s42,c61; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.03±.08; $M_{\theta\theta}$0.43±.06; $M_{\phi\phi}$-0.40±.08; $M_{r\theta}$1.08±.19; $M_{\theta\phi}$1.32±.05; $M_{\phi r}$0.09±.22; Best double couple: $M_0$1.745×10^{16} NP1:ϕ_s7°, δ53°, λ177°. NP2:ϕ_s98°, δ88°, λ37°. Principal axes: T 1.872, Plg27°, Azm329°; N -.255, Plg53°, Azm101°; P -1.618, Plg23°, Azm226°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

ISC 12 10:05:13.6±0.4, **0.10N**±0.06×**97.74E**±0.06, **h15**^{km}, **h15**^{km}±.8^{km}**:pP-P, n111,** σ1.05/109, **mb4.8**/51, **MS4.4**/20, **3C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.92	29	⇑*e*P	Pn	10 06 43.1	+0.2
CMAR	Chiang Mai Arr	18.28	4	P	P	10 09 28.0	-0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,807nm,18.9s						
CMAR	Chiang Mai Arr	18.28	4	P	P	10 09 27.9	-0.6
	comp=Z,0.8nm,0.3s,baz=191,slow=11,SNR=23						
CMAR				LR	LR	10 16 55.2	
	comp=Z,806nm,18.9s,baz=190,slow=38						
KKM	Kota Kinabalu	19.37	72	*e*P	P	10 09 42.3	+0.6
VIS	Vishakhapatnam	22.52	322	*e*x	P	10 10 15.0	+0.5
KMI	Kunming	25.34	11	P	P	10 10 42.8	+1.1
KMI				XP	sP	10 10 48.2	+0.1
KMI				PP	PP	10 11 24.1	+3.6
KMI				S	S	10 15 13.2	+8.6
KMI				XS		10 15 20.5	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
KMI				AMB	AMB		
	comp=Z,70nm,3.1s						
KMI				LR	LR		
	comp=N,1µm,14.1s,MS4.9						
KMI				LR	LR		
	comp=E,3µm,14.1s,MS4.9						
KMI				LR	LR		
	comp=Z,1µm,15.3s,MS4.5						
KMI	Kunming	25.34	11	P	P	10 10 42.8	+1.1
	comp=Z,18nm,1.1s,mb4.5						
KMI				sP	sP	10 10 48.2	+0.1
KMI				PP	PP	10 11 24.1	+3.6
KMI				S	S	10 15 13.2	+8.6
KMI				sS		10 15 20.5	
KMI				SS	SS	10 16 15.0	+8.7
KMI				LR	LR		
	comp=Z,1µm,15.3s,MS4.5						
HYB	Hyderabad	25.54	313	*e*P	P	10 10 46.0	+2.3
HYB	Hyderabad	25.54	313	*i* P	P	10 10 44.0	+0.3
HYB				*e*S	S	10 15 08.5	+0.4
SHL	Shillong	25.94	348	⇑*i*P	P	10 10 47.0	-0.3
SHL				*e*S	S	10 15 23.0	+8.4
GYA	Guiyang	27.58	17	P	P	10 11 02.4	+0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
GUN	Gumba	29.89	339	*e*P	P	10 11 23.5	+0.3
	comp=Z,40nm,0.7s,mb5.2						
KKN	Kakani	30.01	338	*e*P	P	10 11 24.4	+0.2
	comp=Z,59nm,1.3s,mb5.2						
LSA	Lhasa	30.09	349	P	P	10 11 24.8	-0.1
LSA				AP	pP	10 11 32.5	+3.1
LSA				XP	sP	10 11 37.7	+6.4
LSA				LR	LR		
	comp=N,350nm,24.8s,MS4.0						
LSA				LR	LR		
	comp=E,350nm,24.8s,MS4.0						
LSA				LR	LR		
	comp=Z,850nm,22.5s,MS4.3						
LSA	Lhasa	30.09	349	*e*P	P	10 11 25.1	+0.1
	comp=Z,39nm,1.2s,mb5.0						
MBWA	Marble Bar	30.14	136	*e*P	P	10 11 28.9	+3.5
GKN	Gorkha	30.45	337	*e*P	P	10 11 28.4	+0.3
	comp=Z,102nm,1.3s,mb5.4						
KOLN	Koldanda	30.67	335	*e*P	P	10 11 30.3	+0.3
	comp=Z,27nm,0.7s,mb5.2						
ENH	Enshi	32.02	19	*e*P	P	10 11 40.5	-1.3
	comp=Z,23nm,0.7s,mb5.1						
FITZ	Fitzroy Crossi	32.86	125	P	P	10 11 48.4	-0.9
	comp=Z,12nm,0.7s,mb4.9,baz=336,slow=5.6,SNR=8.9						
XAN	Xi'an	35.35	16	P	P	10 12 10.2	-0.4
XAN				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
XAN				LR	LR		
	comp=N,440nm,18.0s,MS4.7						
XAN				LR	LR		
	comp=E,1µm,16.2s,MS4.7						
XAN				LR	LR		
	comp=Z,800nm,18.3s,MS4.5						
LZH	Lanzhou	36.25	8	*e*P	P	10 12 18.6	+0.4
LZH				AP	pP	10 12 21.5	-1.2
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.0						
LZH	Lanzhou	36.25	8	*e*P	P	10 12 18.6	+0.4
	comp=Z,32nm,1.5s,mb5.0						
LZH				pP	pP	10 12 21.5	-1.2
LZH				sP	sP	10 12 23.4	-1.2
NJ2	Nanjing	37.52	30	*e*P	P	10 12 28.1	-0.9
NJ2				AP	pP	10 12 38.1	+4.6
NJ2				XP	sP	10 12 42.1	+6.7
NJ2				S	S	10 18 11.0	-5.9
NJ2				XS		10 18 28.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,290nm,11.6s						
SSE	Sheshan	38.01	34	P	P	10 12 33.8	+0.8
SSE				XP	sP	10 12 46.5	+7.0
SSE				S	S	10 18 22.0	-2.3
SSE				XS		10 18 37.2	
SSE				PCS		10 18 39.6	
SSE				SS	SS	10 21 06.8	+5.5
SSE				SCS	ScS	10 22 43.9	+1.1
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,30nm,4.1s						
SSE				LR	LR		
	comp=N,740nm,17.5s,MS4.7						
SSE				LR	LR		
	comp=E,560nm,17.4s,MS4.7						
SSE				LR	LR		
	comp=Z,240nm,15.3s,MS4.1						
SSE	Sheshan	38.01	34	P	P	10 12 33.8	+0.8
	comp=Z,35nm,0.7s,mb5.2						
SSE				sP	sP	10 12 46.5	+7.0
SSE				S	S	10 18 22.0	-2.3
SSE				sS		10 18 37.2	
SSE				PcS		10 18 39.6	
SSE				SS	SS	10 21 06.8	+5.5
SSE				ScS	ScS	10 22 43.9	+1.1
SSE				LR	LR		
	comp=Z,250nm,15.3s,MS4.1						
GTA	Gaotai	39.16	3	*e*P	P	10 12 43.2	+0.6
GTA				AP	pP	10 12 48.1	+0.9
GTA				XP	sP	10 12 50.9	+1.9
GTA				AMB	AMB		
	comp=Z,70nm,5.3s						
GTA				LR	LR		
	comp=N,430nm,21.3s,MS4.6						
GTA				LR	LR		
	comp=E,810nm,18.3s,MS4.6						
GTA				LR	LR		
	comp=Z,500nm,18.2s,MS4.4						
WRA	Warramunga Arr	41.01	121	P	P	10 12 57.4	-0.6
WRA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WRA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WRA	Warramunga Arr	41.01	121	P	P	10 12 57.4	-0.6
	comp=Z,8.4nm,0.5s,mb4.6,baz=303,slow=9.0,SNR=32						
WRA				pP	pP	10 13 01.7	-0.8
	comp=Z,8.4nm,0.5s,baz=303,slow=9.0,SNR=22						
WRAB	Tennant Creek	41.01	121	*e*P	P	10 12 58.1	0.0
	comp=Z,16nm,0.6s,mb4.8						
WB2	Warramunga Arr	41.02	121	*e*P	P	10 12 57.7	-0.4
BTO	Baotou	41.83	14	*e*P	P	10 13 03.4	-1.2
HHC	Hu-ho-hao-te	42.46	16	*e*P	P	10 13 14.4	+4.7
HHC				AP	pP	10 13 17.6	+3.3
HHC				XP	sP	10 13 20.7	+4.5
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
HHC				AMB	AMB		
	comp=Z,120nm,5.6s						
HHC				LR	LR		
	comp=N,780nm,14.3s,MS5.0						
HHC				LR	LR		
	comp=E,1µm,14.6s,MS5.0						
HHC				LR	LR		
	comp=Z,500nm,13.2s,MS4.6						
JNU	Nakatsue	45.28	40	pP	pP	10 13 36.6	-0.6
	comp=Z,5.5nm,0.7s,baz=187,slow=5.6,SNR=3.9						
JNU				LR	LR	10 33 04.4	
	comp=Z,308nm,19.0s,MS4.3,baz=191,slow=37						
KS15	Wonju Array Si	46.42	33	*e*P	P	10 13 41.7	0.0
UCH	Uchtor	46.86	336	P	P	10 13 46.2	+1.2
	SNR=11						
TKM2	Tokmak 2	47.03	338	P	P	10 13 46.2	-0.1
	SNR=9.3						
KBK	Karagaybulak	47.05	337	P	P	10 13 48.2	+1.7
	SNR=6.3						
AML	Almayashu	47.11	336	P	P	10 13 47.4	+0.3
	SNR=11						
FRU	Bishkek	47.33	337	*e*P	P	10 13 50.0	+1.2
EKS2	Erkin-Say	47.52	336	P	P	10 13 50.7	+0.4
	SNR=5.3						
USP	Ospenovka	47.74	337	P	P	10 13 52.5	+0.5
	SNR=13						
SONM	Songino Array	48.13	8	P	P	10 13 55.3	+0.3
	comp=Z,4.7nm,0.7s,mb4.6,baz=188,slow=8.7,SNR=17						
ULN	Ulaanbaatar	48.26	8	*i* P	P	10 13 54.7	-1.2
ULN	Ulaanbaatar	48.26	8	*e*P	P	10 13 56.7	+0.8
	comp=Z,13nm,1.1s,mb4.9						
MKAR	Makanchi Array	48.43	346	P	P	10 13 56.8	-0.5
MKAR				pmax	pmax		
	comp=Z,16nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,16nm,0.7s						
MKAR	Makanchi Array	48.43	346	P	P	10 13 56.8	-0.4
	comp=Z,16nm,0.6s,mb5.2,baz=158,slow=8.1,SNR=126						
MKAR				pP	pP	10 14 01.6	-0.2
	comp=Z,16nm,0.7s,baz=160,slow=7.3,SNR=22						
PMG	Port Moresby	50.09	102	P	P	10 14 10.5	0.0
PMG				pmax	pmax		
	comp=Z,17nm,0.7s						
PMG				pmax	pmax		
	comp=Z,17nm,0.7s						
PMG	Port Moresby	50.09	102	P	P	10 14 10.5	0.0
	comp=Z,16nm,0.7s,mb5.2,baz=282,slow=13,SNR=4.5						
PMG				pP	pP	10 14 14.4	-0.8
	comp=Z,16nm,0.7s,baz=351,slow=8.8,SNR=3.8						
ZAK	Zakamensk	50.31	5	*e*P	P	10 14 11.9	+0.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
CTA	Charters Tower	51.54	116	P	P	10 14 21.7	+0.3
CTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CTA	Charters Tower	51.54	116	P	P	10 14 21.6	+0.2
	comp=Z,4.2nm,0.8s,mb4.4,baz=268,slow=9.2,SNR=3.2						
CTA				pP	pP	10 14 26.0	-0.1
	comp=Z,4.2nm,0.8s,baz=311,slow=6.7,SNR=3.3						
CTAO	Charters Tower	51.54	116	P	P	10 14 21.1	-0.3
	comp=Z,6.2nm,0.8s,mb4.6						
TLY	Talaya	51.63	5	*i* P	P	10 14 20.6	-1.1
TLY				pmax	pmax		
	comp=Z,8µm,1.5s						
MJAR	Matsushiro Arr	52.14	41	LR	LR	10 37 30.4	
	comp=Z,187nm,20.2s,MS4.1,baz=260,slow=37						
STKA	Stephens Creek	52.23	132	*e*P	P	10 14 28.9	+2.4
	comp=Z,4.1nm,0.6s,mb4.5						
STKA	Stephens Creek	52.23	132	P	P	10 14 26.5	0.0
	comp=Z,4.5nm,0.5s,mb4.7,baz=325,slow=8.3,SNR=19						
STKA				pP	pP	10 14 30.7	-0.5
	comp=Z,4.5nm,0.5s,baz=318,slow=8.4,SNR=5.6						
STKA				LR	LR	10 38 33.7	
	comp=Z,488nm,19.9s,MS4.5,baz=112,slow=38						
IRK	Irkutsk	52.24	5	*e*P	P	10 14 22.6	-3.7
IRK				*e*		10 15 38.6	
IRK				pmax	pmax		
	comp=Z,32nm,2.4s,mb4.8						
CIT	Chita	53.42	12	*e*P	P	10 14 36.0	+0.9
CIT				*e*		10 14 49.2	
ZAL	Zalesovo	54.71	351	P	P	10 14 43.5	-1.0
ZAL				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ZAL				pmax	pmax		
	comp=Z,18nm,0.4s						
ZAL				MLR	MLR		
	comp=Z,261nm,21.9s						
ZAL	Zalesovo	54.71	351	P	P	10 14 43.5	-1.0
	comp=Z,6.5nm,0.5s,mb4.9,baz=316,slow=6.0,SNR=37						
ZAL				pP	pP	10 14 48.3	-0.8
	comp=Z,18nm,0.4s,baz=308,slow=5.2,SNR=25						
ZAL				LR	LR	10 40 43.6	
	comp=Z,261nm,21.9s,MS4.3,baz=171,slow=39						
NVS	Novosibirsk	55.84	350	*e*P	P	10 14 50.7	-2.0
NVS				*e*S	S	10 22 40.4	+2.9
NVS				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
NVS				pmax	pmax		
	comp=N,12nm,1.2s						
NVS				pmax	pmax		
	comp=E,12nm,1.1s						
NVS				smax			
	comp=N,24nm,2.0s						
NVS				smax			
	comp=E,18nm,1.9s						
KLR	Kul'dur	56.99	26	*e*P	P	10 15 02.2	+1.1
KLR				MLR	MLR		
	comp=N,1µm,13.0s,MS5.2						
KLR				MLR	MLR		
	comp=E,500nm,13.0s,MS5.2						
KLR				MLR	MLR		
	comp=Z,1µm,13.0s,MS5.2						
ASAJ	Asahikawa	59.22	36	LR	LR	10 43 59.8	
	comp=Z,175nm,18.2s,MS4.2,baz=5.1,slow=39						
KMBO	Kilima Mbogo	60.49	269	P	P	10 15 25.9	+0.1
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KMBO	Kilima Mbogo	60.49	269	P	P	10 15 25.9	+0.1
	comp=Z,2.1nm,0.9s,mb4.2,baz=86,slow=13,SNR=3.0						
YSS	Yuzh-Sakhalins	60.95	34	*e*P	P	10 15 29.5	+1.0
YSS				*e*		10 15 45.8	
YSS				pmax	pmax		
	comp=Z,90nm,1.2s,mb5.8						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.7						
YSS				MLR	MLR		
	comp=N,500nm,16.0s,MS4.9						
YSS				MLR	MLR		
	comp=E,400nm,15.0s,MS4.9						
SVE	Sverdlovsk	63.90	338	*e*P	P	10 15 47.0	-1.0
SVE				*e*	pP	10 15 52.5	-0.2
SVE				*e*		10 24 51.0	
SVE				MLR	MLR		
	comp=N,100nm,16.0s,MS4.2						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.2						
SVE				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.4						
ARU	Arti	64.39	337	⇑*i*P	P	10 15 49.1	-2.1
ARU				*e*		10 16 24.9	
ARU				*e*		10 18 08.2	
ARU				*e*S	S	10 24 20.4	-7.0
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
KIV	Kislovodsk	65.48	319	*e*P	P	10 15 58.2	-0.3
KIV				*e*	pP	10 16 04.6	+1.4
KIV						10 16 36.0	
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
YAK	Yakutsk	66.32	16	*i* P	P	10 16 05.8	+2.3
YAK				pmax	pmax		
	comp=Z,56nm,1.5s,mb5.4						
SOC	Sochi	67.29	318	*e*P	P	10 16 15.7	+5.7
SOC				*e*		10 16 35.5	
SOC				*e*S	S	10 25 02.7	-0.2
SOC				*e*		10 26 01.4	
SOC				*e*SS	SS	10 29 20.3	-4.2
SOC				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.3						
SOC				pmax	pmax		
	comp=N,43nm,1.1s						
SOC				pmax	pmax		
	comp=E,14nm,1.0s						
SOKR	Solikamsk	67.29	339	⇓*i*P	P	10 16 23.8	+14
SOKR				pmax	pmax		
	comp=Z,50nm,2.1s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,190nm,20.0s,MS4.3						
BRTR	Keskin Array B	70.24	313	P	P	10 16 26.4	-1.9
BRTR				*PP	pP	10 16 31.6	-1.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRTR	Keskin Array B	70.24	313	P	P	10 16 26.4	-1.9
	comp=Z,1.0nm,0.8s,mb3.8,baz=135,slow=5.2,SNR=5.8						
BRTR				pP	pP	10 16 31.6	-1.4
	comp=Z,1.5nm,0.6s,baz=130,slow=7.4,SNR=7.1						
BR131	Keskin Array S	70.24	313	P	P	10 16 26.2	-2.1
	comp=Z,1.4nm,0.6s,mb4.1						
MATP	Matopo	70.62	248	pP	pP	10 16 35.2	-0.4
	comp=Z,2.0nm,0.8s,baz=105,slow=7.7,SNR=2.8						
MA2	Magadan	72.08	25	*e*P	P	10 16 36.1	-3.0
MA2				*e*		10 19 24.0	
MA2				*e*		10 26 46.5	
PET	Petropavlovsk	72.84	34	*e*P	P	10 16 47.7	+4.0
PET				pmax	pmax		
	comp=Z,41nm,0.6s,mb5.5						
MOS	Moscow	73.54	329	*e*P	P	10 16 53.8	+6.1
MOS				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.3						
OBN	Obninsk	73.83	328	*e*P	P	10 16 53.9	+4.6
OBN				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.8						
TIXI	Tiksi	74.17	10	*i* P	P	10 16 52.0	+1.0
TIXI				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.9						
BOSA	Boshof	74.70	240	LR	LR	10 43 34.4	
	comp=Z,143nm,19.2s,MS4.3,baz=41,slow=31						
KIS	Kishinev	75.67	319	*e*P	P	10 17 03.0	+2.9
IDI	Anoyia	75.97	306	P	P	10 17 01.3	-0.8
	comp=Z,5.1nm,0.5s,mb4.8,baz=79,slow=16,SNR=4.6						
IDI				pP	pP	10 17 06.1	-0.8
	comp=Z,7.1nm,0.5s,baz=87,slow=6.3,SNR=6.4						
AKASG	Malin Array Be	76.45	323	P	P	10 17 02.8	-1.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKASG	Malin Array Be	76.45	323	P	P	10 17 02.8	-1.7
	comp=Z,1.6nm,0.5s,mb4.2,baz=88,slow=5.2,SNR=12						
AKASG				pP	pP	10 17 07.2	-2.0
	comp=Z,3.5nm,0.6s,baz=88,slow=5.1,SNR=7.2						
MLR	Muntele Rosu	77.23	317	P	P	10 17 09.2	+0.3
MLR				*PP	pP	10 17 13.8	+0.1
MLR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MLR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MLR	Muntele Rosu	77.23	317	P	P	10 17 09.2	+0.3
	comp=Z,2.1nm,0.5s,mb4.3,baz=144,slow=18,SNR=5.5						
MLR				pP	pP	10 17 13.8	+0.1
	comp=Z,2.6nm,0.5s,baz=93,slow=6.4,SNR=3.9						
MLR	Muntele Rosu	77.23	317	P	P	10 17 09.2	+0.3
MLR				pP	pP	10 17 13.8	+0.1
FINES	FINESS Array B	81.21	333	P	P	10 17 29.3	-0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES				MLR	MLR		
	comp=Z,158nm,21.4s						
FINES	FINESS Array B	81.21	333	P	P	10 17 29.3	-0.8
	comp=Z,2.2nm,0.6s,mb4.2,baz=124,slow=6.9,SNR=14						
FINES				pP	pP	10 17 34.1	-0.8
	comp=Z,2.3nm,0.6s,baz=101,slow=6.0,SNR=5.5						
FINES				LR	LR	10 56 35.8	
	comp=Z,158nm,21.4s,MS4.3,baz=342,slow=38						
KAF	Kangasniemi	81.30	333	*e*p	P	10 17 29.7	-0.8
	comp=Z,3.3nm,0.5s,mb4.5						
KAF	Kangasniemi	81.30	333	*e*P	P	10 17 29.7	-0.8
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
ARCES	ARCESS Array B	83.74	340	P	P	10 17 43.4	+0.4
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	ARCESS Array B	83.74	340	P	P	10 17 43.4	+0.4
	comp=Z,1.5nm,0.8s,mb4.2,baz=117,slow=2.7,SNR=4.9						
ARCES				pP	pP	10 17 47.9	0.0
	comp=Z,2.5nm,0.7s,baz=103,slow=3.3,SNR=5.2						
SBA	Scott Base	85.75	169	*e*P	P	10 17 55.7	+2.7
	comp=Z,13nm,1.6s,mb4.9						
GERES	GERESS Array B	85.98	319	P	P	10 17 54.8	+0.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	GERESS Array B	85.98	319	P	P	10 17 54.8	+0.1
	comp=Z,0.7nm,0.8s,mb3.9,baz=101,slow=6.8,SNR=6.4						
GERES				pP	pP	10 17 59.7	+0.2
	comp=Z,0.7nm,0.5s,baz=117,slow=6.0,SNR=6.8						
HFS	Hagfors	86.93	330	P	P	10 17 59.2	+0.1
HFS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	Hagfors	86.93	330	P	P	10 17 59.2	+0.2
	comp=Z,2.7nm,0.8s,mb4.5,baz=84,slow=13,SNR=3.1						
HFS				pP	pP	10 18 03.8	-0.2
	comp=Z,0.9nm,0.5s,baz=117,slow=9.9,SNR=1.6						
NOA	NORSAR Array B	88.22	331	P	P	10 18 05.0	-0.3
	comp=Z,0.7nm,0.8s,mb4.0,baz=97,slow=5.5,SNR=2.7						
NOA				LR	LR	11 07 07.8	
	comp=Z,84nm,18.2s,MS4.2,baz=260,slow=42						
DAVOX	Davos	88.45	317	P	P	10 18 06.9	+0.2
	comp=Z,2.7nm,0.5s,mb4.7,baz=107,slow=17,SNR=3.1						
DAVOX				pP	pP	10 18 11.7	+0.1
	comp=Z,3.5nm,0.5s,baz=146,slow=4.5,SNR=6.0						
LPG	La Plagne	90.62	315	*e*P	P	10 18 14.7	-2.2
	comp=Z,7.5nm,0.7s,mb4.8						
SNAA	Sanae	93.43	198	LR	LR	10 56 00.7	
	comp=Z,26nm,18.7s,MS3.7,baz=239,slow=33						

ESDC	Sonseca Array	98.94	310	P	P	10 18 54.6	-0.4
	comp=Z,0.3nm,0.3s,mb4.3,baz=352,slow=32,SNR=4.4						
ESDC				pP	pP	10 18 58.0	-2.0
	comp=Z,0.4nm,0.3s,baz=184,slow=37,SNR=3.5						
NVAR	Mina Array Bea	129.34	37	PKP	PKPdf	10 24 24.6	-1.3
	comp=Z,0.2nm,0.4s,baz=323,slow=4.5,SNR=2.8						
TXAR	Lajitas Array	144.30	33	PKIKP	PKPdf	10 24 50.0	-3.5
TXAR						10 24 54.7	
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TXAR	Lajitas Array	144.30	33	PKP	PKPdf	10 24 50.0	-3.5
	comp=Z,1.1nm,0.7s,baz=188,slow=0.8,SNR=16						
TXAR				pPKP		10 24 54.7	
	comp=Z,3.0nm,0.7s,baz=338,slow=0.6,SNR=25						
TXAR	Lajitas Array	144.30	33	PKP	PKPdf	10 24 50.0	-3.5
TXAR				pPKP		10 24 54.7	
CFAA	Coronel Fontan	145.97	202	PKPbc	PKPbc	10 24 55.1	+1.4
	comp=Z,0.2nm,0.6s,baz=138,slow=1.7,SNR=4.3						

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*BJI **12** 10:08:26.4,16.91S×73.78W,h31^{km},mB5.4,Ms4.6, Msz4.4*

*NEIC **12** 10:08:28.7±0.3,17.08S×72.95W,mb4.6/18,Error ellipse: s-maj=9.4km s-min=6.2km az=68.0*

*IDC **12** 10:08:29.0±0.6,17.13S×72.96W,h30^{km}±3^{km},mb4.1/13, mb1 4.2/14,mb1mx4.2/19,mbtmp4.3/14,MS3.5/6, Ms1 3.5/6,ms1mx3.4/18,Error ellipse: s-maj=21.3km s-min=14.8km az=66.0,Incorrectly calculated travel-time residual on T phase at H03N*

ISC 12 10:08:26.9±0.3**,17.10S**±0.05×**73.23W**±0.06**,h32**^{km}**, h32**^{km}±.5^{km}**:pP-P,n64,**σ1^{s}**16**/51**,mb4.4**/30**,MS3.7**/5**,5C, Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	Arequipa	1.78	69	⇑iP	Pn	10 08 55.4	-0.6
ARE				eS	Sn	10 09 22.0	+4.3
LPAZ	La Paz	4.95	81	Pn	Pn	10 09 42.2	+1.1
	5.5nm,0.3s,baz=253,slow=11,SNR=202						
LPAZ				Lg		10 10 49.8	
	baz=48,slow=23,SNR=1.2						
LPAZ				LR	LR	10 11 45.8	
	comp=Z,912nm,19.3s,baz=252,slow=42						
LPAZ	La Paz	4.95	81	⇑iPn	Pn	10 09 42.0	+0.9
LPAZ				e		10 09 49.1	
SIV	San Ignacio	11.71	86	Pn	P	10 11 09.7	-5.2
	2.9nm,0.3s,baz=271,slow=11,SNR=33						
SIV				Sn	S	10 13 27.6	+2.1
	0.0nm,0.3s,baz=212,slow=19,SNR=3.0						
SAML	Samuel	12.70	52	ePn	P	10 11 22.9	-5.3
	18nm,0.8s						
CFAA	Coronel Fontan	15.14	163	Pn	P	10 11 59.5	-0.8
	0.0nm,0.3s,baz=342,slow=12,SNR=8.2						
CFAA				LR	LR	10 17 36.9	
	comp=Z,29nm,18.9s,baz=89,slow=36						
ROSC	El Rosal	21.84	357	P	P	10 13 21.8	+3.1
	6.5nm,0.6s,mb4.3,baz=100,slow=23,SNR=5.0						
TRQA	Tornquist	23.10	157	P	P	10 13 30.1	-0.9
	6.7nm,0.9s,mb4.1						
PLCA	Paso Flores	23.67	175	P	P	10 13 37.6	+1.2
	4.4nm,0.9s,mb3.9,baz=331,slow=14,SNR=7.3						
PLCA	Paso Flores	23.67	175	eP	P	10 13 37.0	+0.5
	12nm,1.0s,mb4.3						
BDFB	Brasilia	24.23	90	P	P	10 13 41.1	-1.1
	8.8nm,0.8s,mb4.3,baz=270,slow=10,SNR=9.6						
BDFB				LR	LR	10 24 45.6	
	comp=Z,123nm,21.9s,MS3.4,baz=78,slow=41						
BAO	Brasilia Array	24.25	90	P	P	10 13 39.5	-2.9
SDV	Santo Domingo	25.94	6	P	P	10 14 00.3	+1.8
	9.2nm,0.2s,mb4.9,baz=236,slow=2.6,SNR=5.1						
JTS	JuntasAbangare	29.58	336	LR	LR	10 25 01.2	
	comp=Z,127nm,21.1s,MS3.5,baz=69,slow=33						
USHA	Ushuaia	37.84	175	P	P	10 15 42.5	+0.2
	13nm,0.8s,mb4.7,baz=355,slow=5.7,SNR=3.9						
LRAL	Lakeview Retre	51.56	345	eP	P	10 17 31.3	-0.9
	62nm,2.0s,mb5.2						
LRAL				e	pP	10 17 41.0	-1.0
NATX	Nacogdoches	52.75	337	P	P	10 17 40.8	-0.5
	23nm,1.1s,mb5.0						
SWET	Sewanee	53.41	347	eP	P	10 17 44.2	-1.8
SWET				e	pP	10 17 53.5	-2.3
WVT	Waverly	54.71	346	eP	P	10 17 53.7	-1.9
	7.3nm,0.7s,mb4.8						
WVT				e	pP	10 18 03.0	-2.3
TXAR	Lajitas Array	54.72	327	P	P	10 17 57.7	+1.9
	0.3nm,0.6s,mb3.5,baz=151,slow=9.3,SNR=3.4						
WMOK	Wichita Mounta	56.99	335	eP	P	10 18 11.5	-0.6
	1.0nm,0.6s,mb4.0						
FVM	French Village	57.12	344	P	P	10 18 11.5	-1.5
	8.0nm,0.8s,mb4.8						
FVM				e	pP	10 18 22.1	-0.7
BLO	Bloomington	57.34	348	eP	P	10 18 12.6	-1.9
	4.9nm,0.6s,mb4.7						
BLO				e	pP	10 18 22.6	-1.7
MNTX	Cornudas Mount	57.50	327	eP	P	10 18 16.4	+0.7
	2.4nm,1.0s,mb4.2						
BRYW	Bryant College	58.74	1	eP	P	10 18 23.4	-0.8
BRYW				e	pP	10 18 33.4	-0.6
BINY	Binghamton	59.05	358	eP	P	10 18 26.2	-0.2
	21nm,1.4s,mb5.0						
BINY				epP	pP	10 18 35.7	-0.6
GENY	Geneseo	59.71	356	eP	P	10 18 30.1	-0.9
GENY				epP	pP	10 18 40.3	-0.5
FRNY	Flat Rock	61.63	360	eP	P	10 18 43.6	-0.4
FRNY				epP	pP	10 18 52.8	-1.0
SDCO	Great Sand Dun	62.43	331	eP	P	10 18 49.9	+0.5
	6.9nm,0.8s,mb4.8						
SDCO				epP	pP	10 19 00.3	+1.0
VNA3	Neumayer Olymp	65.53	161	⇑iP	P	10 19 08.9	-0.2
VNA3				e	pP	10 19 20.3	+1.3
VNA3				e		10 19 23.8	
VNA3				e		10 22 52.8	
VNA1	Neumayer--Stat	65.77	161	⇑iP	P	10 19 10.8	+0.1
VNA1				e	pP	10 19 21.4	+0.8
VNA1				e		10 19 24.8	
VNA1				e		10 23 00.3	
VNA2	Neumayer--Watz	66.13	161	⇑iP	P	10 19 12.7	-0.2
VNA2				e	pP	10 19 23.0	+0.1
VNA2				e		10 19 26.5	
VNA2				e		10 22 58.4	
MVU	Marysvale	66.29	327	P	P	10 19 15.4	+0.9
	3.1nm,1.0s,mb4.3						
SNAA	Sanae	67.74	161	eP	P	10 19 22.4	-0.8
	3.8nm,0.8s,mb4.5						
SNAA				epP	pP	10 19 32.6	-0.4
PDAR	Pinedale Array	68.31	332	P	P	10 19 27.1	0.0
	0.3nm,0.7s,mb3.4,baz=141,slow=5.8,SNR=3.7						
PDAR				LR	LR	10 50 49.5	
	comp=Z,54nm,20.0s,MS3.8,baz=309,slow=37						
NVAR	Mina Array Bea	69.54	324	P	P	10 19 35.7	+0.8
	1.2nm,1.0s,mb3.8,baz=135,slow=9.0,SNR=4.5						
NVAR	Mina Array Bea	69.54	324	P	P	10 19 35.7	+0.8
RRI2	Red Ridge	69.56	331	eP	P	10 19 36.0	+1.2
	4.1nm,0.8s,mb4.4						
ULM	Lac du Bonnet	69.97	345	LR	LR	10 51 23.1	
	comp=Z,60nm,20.1s,MS3.8,baz=332,slow=37						
HLID	Hailey	71.18	330	eP	P	10 19 46.2	+1.4
	1.6nm,0.8s,mb4.0						
HLID				epP	pP	10 19 54.2	-0.5
DBIC	Dimbokro	71.55	77	P	P	10 19 44.9	-2.5
	5.0nm,0.9s,mb4.5,baz=227,slow=5.3,SNR=5.7						
DBIC				pP	pP	10 19 54.8	-2.6
	7.7nm,0.9s,baz=192,slow=5.7,SNR=3.9						
DBIC	Dimbokro	71.55	77	eP	P	10 19 45.4	-2.0
	9.9nm,0.9s,mb4.7						
SCHQ	Schefferville	71.85	4	P	P	10 19 48.3	-0.2
	2.8nm,1.0s,mb4.1,baz=209,slow=7.5,SNR=4.2						
SCHQ				pP	pP	10 19 58.3	-0.2
	4.1nm,0.9s,baz=160,slow=4.8,SNR=7.2						
PPT	Papeete	72.37	257	eS		10 29 47.1	
	57nm,26.5s						
PPT				eLR	LR	10 56 02.3	
	113nm,25.5s,baz=235						
QSPA	South Pole Qui	73.07	180	eP	P	10 19 56.4	+1.1
	3.5nm,0.7s,mb4.4						
FCC	Fort Churchill	77.50	349	eP	P	10 20 20.6	-0.2
	6.3nm,1.1s,mb4.5						
FCC				epP	pP	10 20 30.1	-0.8
EDM	Edmonton	78.10	337	P	P	10 20 23.2	-1.0
TSUM	Tsumeb	85.25	109	P	P	10 21 03.7	+1.3
	5.0nm,0.9s,mb4.7,baz=263,slow=3.5,SNR=6.3						
ESDC	Sonseca Array	85.67	46	P	P	10 21 04.9	+0.9
	2.0nm,0.8s,mb4.4,baz=256,slow=5.6,SNR=9.6						
ESDC				pP	pP	10 21 15.4	+1.2
	2.3nm,0.7s,baz=248,slow=5.7,SNR=7.9						
YKA	Yellowknife Ar	85.73	342	P	P	10 21 04.5	+0.8
	1.4nm,0.6s,mb4.4,baz=137,slow=5.0,SNR=24						
YKA				pP	pP	10 21 14.1	+0.1
	2.8nm,0.9s,baz=137,slow=5.0,SNR=5.5						
DLBC	Dease Lake	88.46	334	eP	P	10 21 18.9	+1.8
MAW	Mawson	89.67	165	P	P	10 21 23.4	+0.8
	3.3nm,0.7s,mb4.8,baz=210,slow=7.4,SNR=5.3						
WRA	Warramunga Arr	134.31	217	PKP	PKPdf	10 27 44.9	-2.9
	0.7nm,0.8s,baz=128,slow=1.6,SNR=7.3						
WRA				pPKP		10 27 55.5	
	1.5nm,0.8s,baz=137,slow=1.9,SNR=8.0						
ZAL	Zalesovo	139.47	20	PKP	PKPdf	10 27 53.0	-3.4
	1.4nm,0.3s,baz=41,slow=2.1,SNR=5.4						
MKAR	Makanchi Array	144.13	29	PKP	PKPdf	10 27 59.0	-5.7
	0.8nm,0.8s,baz=307,slow=6.1,SNR=4.6						
MKAR				pPKP		10 28 09.8	
	1.2nm,0.7s,baz=326,slow=2.5,SNR=6.9						
MKAR	Makanchi Array	144.13	29	PKP	PKPdf	10 27 59.0	-5.7
MKAR				pPKP		10 28 09.8	
MJAR	Matsushiro Arr	146.14	311	PKPbc	PKPbc	10 28 06.7	+2.4
	1.5nm,0.7s,baz=75,slow=1.6,SNR=8.2						
MJAR				pPKPbc		10 28 16.4	
	3.9nm,0.9s,baz=120,slow=1.6,SNR=8.8						
MAJO	Matsushiro	146.14	311	ePKP	PKPdf	10 28 07.2	-1.4
MAT	Matsushiro	146.14	311	ePKP	PKPdf	10 28 06.0	-2.5
MAT	Matsushiro	146.14	311	PKP	PKPdf	10 28 06.3	-2.2
MDJ	Mudanjiang	146.52	330	PKP	PKPdf	10 28 03.2	-5.7
WMQ	Urumqi	148.85	27	ePKP	PKPdf	10 28 08.0	-4.7
WMQ				LR	LR		
	comp=N,40nm,22.0s,MS4.2						
WMQ				LR	LR		
	comp=E,30nm,23.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,40nm,21.0s,MS4.2						
SONM	Songino Array	149.35	1	PKPbc	PKPdf	10 28 15.4	+2.1
	comp=Z,1.7nm,0.8s,baz=342,slow=3.9,SNR=8.2						
SONM				pPKPbc		10 28 25.6	
	comp=Z,2.6nm,0.7s,baz=319,slow=1.3,SNR=9.4						
LZH	Lanzhou	160.91	7	ePKP	PKPdf	10 28 24.5	-4.6
LZH				XPKP		10 28 39.5	

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*NIED **12** 10:12:00,40.10N×142.00E,h65^{km},Mw3.9 Best double couple: $M_0$7.99×10^{14} NP1:ϕ_s170°,δ74°,λ69°. NP2:ϕ_s43°, δ26°,λ141°.*

*MOS **12** 10:12:36.9±0.7,40.24N×141.91E,h70^{km},mb4.2/3,Error ellipse: s-maj=20.1km s-min=10.2km az=67.7*

*JMA **12** 10:12:38.2±0.1,40.10N×142.05E,h65^{km}±1^{km},M3.9 Broadband fault plane solution: P waves. NP1:ϕ_s42°,δ26°, λ119°. NP2:ϕ_s190°,δ67°,λ77°. Principal axes: T Plg65°, Azm77°; N Plg12°, Azm195°; P Plg21°, Azm290°;*

JMA Felt II J1.

*NEIC **12** 10:12:38.2,40.10N×142.05E,h55^{km},mb4.3/3,After JMA.*

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

*IDC **12** 10:12:39.9±2.3,40.24N×141.90E,h74^{km}±20^{km},mb3.6/8, mb1 3.8/10,mb1mx3.6/24,mbtmp3.9/10,Error ellipse: s-maj=22.8km s-min=14.7km az=118.0*

ISC 12 10:12:36.9±0.5**,40.14N**±0.04×**142.05E**±0.08**,h74**^{km}±3^{km}**, n35,**σ0^{s}**80**/46**,mb3.9**/11**,5C-4D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.24	216	⇑P	P	10 12 48.6	+0.3
JTH				S	S	10 12 56.0	-0.7
JANG	Nango	0.47	300	⇑P	P	10 12 50.4	+0.5
JANG				S	S	10 12 59.6	-0.1
JKZ	Kuzumaki	0.57	255	⇑P	P	10 12 51.4	+0.4
JKZ				S	S	10 13 00.9	-0.4
MIYJ	Miyakonagasawa	0.58	198	P	P	10 12 51.0	-0.1
JOM	Ohasama	0.88	222	⇑P	P	10 12 54.5	+0.1
JOM				S	S	10 13 06.8	-0.6
JTM	Tenmabayashi	0.99	311	⇓P	P	10 12 56.4	+0.6
JTM				S	S	10 13 10.0	+0.1
JAH	Hinai	1.09	273	⇓P	P	10 12 57.5	+0.6
JAH				S	S	10 13 12.3	+0.4
JMK	Ichinoseki	1.34	209	⇑P	P	10 13 00.4	-0.1
JOT	Ohata	1.46	329	⇓P	P	10 13 02.4	+0.4
JIW	Iwasaki	1.63	287	⇓P	P	10 13 05.0	+0.8
ASAJ	Asahikawa	4.00	6	P	P	10 13 37.4	+0.2
ASAJ				S	S	10 14 23.0	-0.2
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ	Asahikawa	4.00	6	P	P	10 13 37.4	+0.2
	comp=N,5.4nm,0.3s,baz=230,slow=8.9,SNR=32						
ASAJ				S	S	10 14 23.0	-0.2
	comp=N,2.5nm,0.3s,baz=18,slow=30,SNR=6.3						
MAJO	Matsushiro	4.69	221	eP	P	10 13 47.2	+0.4
MAT	Matsushiro	4.69	221	eP	P	10 13 47.0	+0.2
MAT				eS	S	10 14 37.0	-3.4
MAT	Matsushiro	4.69	221	P	P	10 13 47.0	+0.2
MAT				S	S	10 14 36.7	-3.7
MJAR	Matsushiro Arr	4.69	221	P	P	10 13 47.5	+0.7
	comp=N,2.8nm,0.3s,baz=33,slow=13,SNR=63						
YUK	Yuzh-Kuril'sk	4.82	35	P	P	10 13 46.6	-2.0
YUK				i S	S	10 14 38.7	-4.9
YUK				pmax	pmax		
	comp=Z,180nm,0.4s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,2μm,0.8s						
YUK				smax			
	comp=N,710nm,0.4s						
YUK				smax			
	comp=E,660nm,0.6s						
JHJ	Hachijo jima 2	7.24	195	P	P	10 14 18.6	-3.5
	comp=E,6.5nm,0.3s,baz=18,slow=16,SNR=3.4						
MA2	Magadan	20.22	13	eP	P	10 17 07.4	-0.6
MA2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MA2	Magadan	20.22	13	eP	P	10 17 07.4	-0.6
	comp=Z,8.8nm,0.7s						
ULN	Ulaanbaatar	26.16	299	P	P	10 18 04.5	-1.3
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
ULN	Ulaanbaatar	26.16	299	P	P	10 18 04.5	-1.3
	comp=Z,1.7nm,0.5s,mb3.7						
SONM	Songino Array	26.60	299	P	P	10 18 10.3	+0.4
	comp=Z,1.0nm,0.5s,mb3.6,baz=92,slow=8.4,SNR=5.3						
ZAK	Zakamensk	28.85	304	eP	P	10 18 29.0	-1.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.7						
ZAL	Zalesovo	40.27	310	P	P	10 20 08.1	+0.3
	comp=Z,1.4nm,0.4s,mb4.1,baz=13,slow=8.8,SNR=5.1						
MKAR	Makanchi Array	42.96	299	P	P	10 20 29.9	-0.1
	comp=Z,2.1nm,0.5s,mb4.1,baz=85,slow=11,SNR=26						
ILAR	Eielson Array	46.63	34	P	P	10 20 60.0	+0.9
	comp=Z,1.5nm,0.7s,mb3.9,baz=268,slow=6.0,SNR=21						
ILAR				pP	pP	10 21 09.5	-7.9
	comp=Z,1.1nm,0.7s,baz=283,slow=8.9,SNR=9.3						
GUN	Gumba	47.42	273	eP	P	10 21 05.8	+0.1
	comp=Z,33nm,0.8s,mb5.1						
KKN	Kakani	47.94	273	eP	P	10 21 09.6	-0.2
PKI	Pulchoki	47.95	273	eP	P	10 21 08.8	-1.1
GKN	Gorkha	48.32	274	eP	P	10 21 12.0	-0.7
BVAR	Borovoye Array	48.90	310	P	P	10 21 16.4	-0.4
	comp=Z,2.1nm,0.5s,mb4.3,baz=51,slow=7.6,SNR=2.7						
WRA	Warramunga Arr	60.20	188	P	P	10 22 41.3	+1.8
	comp=Z,0.3nm,0.4s,mb3.6,baz=5.5,slow=7.2,SNR=5.8						
YKA	Yellowknife Ar	60.89	31	P	P	10 22 43.6	-0.1
	comp=Z,0.5nm,0.6s,mb3.7,baz=299,slow=6.4,SNR=3.3						
NVAR	Mina Array Bea	72.75	54	P	P	10 24 00.6	+1.9
	comp=Z,0.3nm,0.6s,mb3.3,baz=284,slow=2.5,SNR=3.8						

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*IDC **12** 10:23:38.9±1.3,17.07S×73.01W,mb3.7/4,mb1 3.8/6, mb1mx3.7/18,mbtmp3.6/6,Error ellipse: s-maj=36.8km s-min=30.6km az=77.0,Incorrectly calculated travel-time residual on T phase at H03N*

*NEIC **12** 10:23:43.5±8.0,17.12S×73.03W,h30^{km}±55^{km},Error ellipse: s-maj=41.0km s-min=15.4km az=110.0*

ISC 12 10:23:42.4±1.2**,17.1S**±0.1×**73.2W**±0.1**,h33**^{km}**,n12,** σ1^{s}**00**/11**,mb3.6**/4**,2C,Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	Arequipa	1.73	68	⇑iP	P	10 24 10.2	-0.4
ARE				i S	S	10 24 40.2	+8.4
LPAZ	La Paz	4.90	81	Pn	Pn	10 24 56.7	+0.9
	1.8nm,0.3s,baz=258,slow=10,SNR=76						
LPAZ				Lg		10 26 04.4	
	baz=177,slow=10,SNR=1.3						
LPAZ	La Paz	4.90	81	⇑iP	P	10 24 56.7	+1.0
LPAZ				e		10 25 03.4	
LPAZ				Lg		10 26 04.4	
SIV	San Ignacio	11.65	86	Pn	P	10 26 24.4	-5.0
	0.6nm,0.3s,baz=269,slow=13,SNR=5.6						
SAML	Samuel	12.67	51	eP	P	10 26 39.8	-3.2
	4.3nm,0.7s						
CFAA	Coronel Fontan	15.10	164	Pn	P	10 27 14.5	-0.5
	0.0nm,0.3s,baz=348,slow=9.3,SNR=2.6						
PLCA	Paso Flores	23.64	175	P	P	10 28 52.0	+0.5
	1.3nm,0.7s,mb3.5,baz=23,slow=12,SNR=3.4						
BDFB	Brasilia	24.18	90	P	P	10 28 55.3	-1.6
	1.5nm,0.8s,mb3.5,baz=304,slow=11,SNR=1.8						
ESDC	Sonseca Array	85.64	46	P	P	10 36 19.9	+0.8
	0.1nm,0.3s,mb3.5,baz=252,slow=4.2,SNR=4.2						
YKA	Yellowknife Ar	85.77	342	P	P	10 36 19.1	0.0
	1.0nm,0.8s,mb4.1,baz=139,slow=4.8,SNR=13						
WRA	Warramunga Arr	134.32	217	PKP	PKPdf	10 43 00.0	+2.0
	0.3nm,0.8s,baz=136,slow=1.9,SNR=4.9						
MKAR	Makanchi Array	144.12	29	pPKP		10 43 22.4	
	0.6nm,0.8s,baz=304,slow=4.4,SNR=4.0						

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*NEIC **12** 10:45:07.8±0.8,22.17S×65.97W,h255^{km}±9^{km},mb3.7/1, Error ellipse: s-maj=13.5km s-min=9.7km az=94.0*

*IDC **12** 10:45:07.9±1.5,22.15S×65.98W,h259^{km}±17^{km},mb2.7/2, mb1 3.1/7,mb1mx3.0/19,mbtmp3.5/7,Error ellipse: s-maj=25.3km s-min=15.2km az=86.0,Incorrectly calculated travel-time residual on T phase at H03N*

ISC 12 10:45:06.9±0.8**,22.23S**±0.05×**65.9W**±0.1**,h263**^{km}±12^{km}**, n13,**σ0^{s}**95**/16**,mb3.2**/3**,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	6.26	340	P	P	10 46 40.3	+1.2
	0.7nm,0.3s,baz=149,slow=8.2,SNR=16						
LPAZ				S	S	10 47 51.8	+0.4
	0.3nm,0.3s,baz=32,slow=11,SNR=13						
LPAZ	La Paz	6.26	340	eP	P	10 46 40.1	+1.0
LPAZ				S	S	10 47 51.8	+0.4
SIV	San Ignacio	7.72	37	P	P	10 46 57.0	-0.4
	0.5nm,0.3s,baz=223,slow=12,SNR=11						
ARE	Arequipa	7.76	317	eP	P	10 46 57.0	-1.0
ARE				eS	S	10 48 21.0	-4.1
CFAA	Coronel Fontan	9.56	192	P	P	10 47 21.4	+0.8
	0.1nm,0.3s,baz=36,slow=12,SNR=22						
CFAA				S	S	10 49 05.1	-0.7
	0.1nm,0.3s,baz=107,slow=20,SNR=8.5						
CFAA	Coronel Fontan	9.56	192	P	P	10 47 21.4	+0.8
CFAA				S	S	10 49 05.1	-0.7
BDFB	Brasilia	18.17	72	P	P	10 49 02.1	-0.5
	0.3nm,0.3s,baz=248,slow=11,SNR=2.5						
PLCA	Paso Flores	18.86	191	P	P	10 49 10.0	+0.6
	0.3nm,0.3s,baz=9.9,slow=11,SNR=8.2						
TXAR	Lajitas Array	62.83	323	P	P	10 55 05.3	-1.5
	0.3nm,0.9s,mb2.9,baz=135,slow=5.1,SNR=3.2						
PDAR	Pinedale Array	76.14	328	P	P	10 56 27.7	+0.2
	0.3nm,0.5s,mb3.1,baz=117,slow=6.0,SNR=3.3						
HLID	Hailey	79.14	326	eP	P	10 56 45.2	+1.4
	1.0nm,0.7s,mb3.6						
WRA	Warramunga Arr	133.64	207	PKP	PKPdf	11 03 55.0	+2.1
	0.3nm,0.3s,baz=153,slow=1.9,SNR=15						
MKAR	Makanchi Array	144.54	39	PKP	PKPdf	11 04 12.7	+1.0
	0.8nm,0.7s,baz=315,slow=4.6,SNR=8.5						

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*NEIC **12** 10:51:19.0,30.80S×117.11E,h2^{km},ML4.3(AUST),After AUST.*

AUST 12 10:51:19.6,30.80S×117.11E,h2^{km},ML4.3,2D,Western Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLDU	Ballidu	0.39	299	⇓iP	Pg	10 51 26.5	-1.0
BLDU				i S	Sg	10 51 31.4	-1.3
	82nm,0.2s						
KLBR	Kellerberrin	0.96	145	⇓iP	Pb	10 51 37.4	-1.3
KLBR				eS	Sb	10 51 49.3	-2.3
	928nm,0.2s						
MORW	Morawa	1.96	331	eP	Pn	10 51 53.3	-0.9
MORW				eS	Sn	10 52 17.7	-2.0
	5μm,0.4s						
NWAO	Narrogin (SRO)	2.12	177	eP	Pn	10 51 53.9	-2.6
NWAO				eS	Sn	10 52 23.5	-0.3
	3μm,0.2s						
RKGY	Rocky Gully	3.80	182	eP	Pn	10 52 17.2	-3.2
KMBL	Kambalda	4.13	99	eP	Pn	10 52 21.1	-4.1
KMBL				eS	Sn	10 53 07.3	-7.5
	59nm,0.3s						
MEEK	Meekatharra	4.36	18	eP	Pn	10 52 25.1	-3.2
MEEK				eS	Sn	10 53 12.2	-8.2

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*NEIC **12** 11:01:21.5±1.0,23.96S×66.67W,h192^{km}±13^{km},mb3.4/1, Error ellipse: s-maj=18.6km s-min=11.2km az=103.0*

*IDC **12** 11:01:21.6±2.0,23.97S×66.69W,h190^{km}±21^{km},mb3.6/1, mb1 3.5/4,mb1mx3.2/16,mbtmp3.8/4,Error ellipse: s-maj=33.8km s-min=21.7km az=107.0,Incorrectly calculated travel-time residual on T phase at H03N*

ISC 12 11:01:20.1±1.1**,24.05S**±0.07×**66.6W**±0.2**,h193**^{km}±20^{km}**, n10,**σ0^{s}**92**/11**,mb3.5**/1**,Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFAA	Coronel Fontan	7.67	190	P	P	11 03 11.3	+1.4
	0.1nm,0.3s,baz=8.0,slow=8.1,SNR=18						
CFAA				S	S	11 04 34.4	-1.1
	0.2nm,0.3s,baz=275,slow=19,SNR=9.9						
CFAA	Coronel Fontan	7.67	190	P	P	11 03 11.3	+1.4
CFAA				S	S	11 04 34.4	-1.1
LPAZ	La Paz	7.85	349	P	P	11 03 13.2	+1.0
	0.3nm,0.3s,baz=154,slow=9.7,SNR=8.3						
LPAZ	La Paz	7.85	349	eP	P	11 03 13.0	+0.8
SIV	San Ignacio	9.56	34	P	P	11 03 33.8	-0.8
	0.3nm,0.3s,baz=221,slow=9.2,SNR=10						
SAML	Samuel	15.37	13	eP	P	11 04 47.2	-1.2
	1.1nm,0.7s						
BDFB	Brasilia	19.38	68	P	P	11 05 34.1	+0.9
	0.5nm,0.3s,baz=243,slow=12,SNR=13						
BAO	Brasilia Array	19.40	68	P	P	11 05 33.5	+0.1
YKA	Yellowknife Ar	94.29	340	P	P	11 14 17.8	-0.2
	0.2nm,0.4s,mb3.5,baz=127,slow=3.9,SNR=4.6						
MKAR	Makanchi Array	146.34	40	PKPbc	PKPbc	11 20 39.3	+1.6
	0.6nm,0.6s,baz=291,slow=3.4,SNR=7.2						

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*NEIC **12** 11:10:33.6,37.35S×177.55E,h92^{km},ML3.9(WEL),After WEL.*

WEL 12 11:10:34.2±0.2**,37.34S**×**177.54E,h82**^{km}±1^{km}**,ML3.9**/10**, 3C-2D,Error ellipse: s-maj=1.1km s-min=1.0km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	White Island	0.34	236	eP	P	11 10 46.6	-0.5
WIZ				S	S	11 10 56.1	-0.6
WIZ	White Island	0.34	236	P*	P	11 10 47.2	+0.1
WIZ				S*	S	11 10 56.1	-0.6
MXZ	Matakaoa Point	0.65	111	⇑P	P	11 10 49.4	-0.3
MXZ				S	S	11 11 02.2	+1.0
MXZ	Matakaoa Point	0.65	111	⇑P*	P	11 10 49.4	-0.3
MXZ				S*	S	11 11 01.4	+0.2
MARZ	Manawahe	0.94	227	P	P	11 10 52.6	-0.4
MARZ	Manawahe	0.94	227	P*	P	11 10 52.6	-0.4
MWZ	Matawai	0.99	181	P	P	11 10 53.2	-0.4
MWZ				S	S	11 11 08.0	-0.1
MWZ	Matawai	0.99	181	P*	P	11 10 53.2	-0.3
MWZ				S*	S	11 11 08.2	0.0
EDRZ	Edgecumbe	1.00	220	P	P	11 10 53.4	-0.2
EDRZ	Edgecumbe	1.00	220	⇑P*	P	11 10 53.4	-0.2
MYRZ	Mayor Island	1.04	273	P*	P	11 10 54.2	+0.1
TGRZ	Tauranga	1.09	249	P	P	11 10 54.4	-0.3
TGRZ	Tauranga	1.09	249	P*	P	11 10 54.4	-0.3
LIRZ	Lichensteins R	1.14	234	P*	P	11 10 55.0	-0.3
TAZ	Tarawera	1.21	222	P*	P	11 10 56.2	-0.1
PATZ	Paeroa	1.46	224	P	P	11 10 59.2	-0.3
PATZ	Paeroa	1.46	224	P*	P	11 10 59.4	-0.1

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KUZ   Kuaotunu          1.57 291 ⇓P     P       11 11 00.4 -0.7
KUZ   Kuaotunu          1.57 291 ⇓PN    P       11 11 00.4 -0.6
HATZ  Hinemaiaia        1.93 216  P     P       11 11 05.1 -0.7
HATZ  Hinemaiaia        1.93 216  PN    P       11 11 05.1 -0.6
WATZ  Wairara           1.98 226  P     P       11 11 06.1 -0.3
WATZ  Wairara           1.98 226  PN    P       11 11 06.2 -0.2
BKZ   Black Stump Fm    2.00 204 eP     P       11 11 05.1 -1.7
BKZ   Black Stump Fm    2.00 204  PN    P       11 11 05.9 -0.8
RITZ  Rihia Road        2.11 219  P     P       11 11 08.2 -0.1
RITZ  Rihia Road        2.11 219  PN    P       11 11 08.4 +0.1
KATZ  Kakaramea         2.19 221  P     P       11 11 09.4  0.0
KATZ  Kakaramea         2.19 221  PN    P       11 11 09.0 -0.4
OTVZ  Oturere           2.35 218  PN    P       11 11 11.2 -0.4
NGZ   Ngauruhoe         2.39 219  P     P       11 11 10.4 -1.8
NGZ   Ngauruhoe         2.39 219  PN    P       11 11 11.3 -0.9
TWVZ  Taurewa           2.40 223  P     P       11 11 12.2 -0.1
TWVZ  Taurewa           2.40 223  PN    P       11 11 12.2 -0.1
HIZ   Hauiti            2.43 240  P     P       11 11 12.6 -0.1
HIZ   Hauiti            2.43 240  PN    P       11 11 11.1 -1.6
CNZ   Chateau           2.43 220  P     P       11 11 12.6 -0.2
CNZ   Chateau           2.43 220  PN    P       11 11 12.6 -0.2
TUVZ  Tukino            2.43 217  P     P       11 11 11.9 -0.9
TUVZ  Tukino            2.43 217  PN    P       11 11 12.0 -0.8
FWVZ  Far West T-bar    2.47 219  P     P       11 11 12.7 -0.7
FWVZ  Far West T-bar    2.47 219  PN    P       11 11 12.7 -0.7
MOVZ  Moawhango         2.50 214  P     P       11 11 12.0 -1.7
MOVZ  Moawhango         2.50 214  PN    P       11 11 12.0 -1.8
WNVZ  Wahianoa          2.51 217  P     P       11 11 12.8 -1.0
WNVZ  Wahianoa          2.51 217  PN    P       11 11 12.7 -1.2
MTVZ  Mangateitei       2.61 218  PN    P       11 11 14.0 -1.3
PWZ   Pawanui           2.74 191  P     P       11 11 13.3 -3.8
PWZ   Pawanui           2.74 191  PN    P       11 11 13.3 -3.8
WAZ   Wanganui          3.14 219  P     P       11 11 21.0 -1.6
WAZ   Wanganui          3.14 219  PN    P       11 11 21.0 -1.7
MRZ   Mangatainoka R    3.65 204  P     P       11 11 24.7 -5.1
KIW   Kapiti Island     4.07 209  P     P       11 11 30.6 -4.9
MTW   Mount Morrison    4.13 202  P     P       11 11 30.5 -5.9
CAW   Cannon Point      4.23 206  P     P       11 11 32.0 -5.7
MSWZ  Moikau Station    4.44 203  P     P       11 11 34.3 -6.4
MRW   Makara Radio      4.47 209  P     P       11 11 35.7 -5.3
SNZO  South Karori      4.54 208  P     P       11 11 35.5 -6.5
TCW   Tory Channel      4.62 212  P     P       11 11 37.5 -5.7
BSWZ  Blackbirch Sta    5.21 212  P     P       11 11 45.0 -6.2
QRZ   Quartz Range      5.23 227 eP     P       11 11 46.7 -4.8
DSZ   Denniston Nort    6.25 223 eP     P       11 11 59.2 -6.4
LTZ   Lake Taylor       6.78 215 eP     P       11 12 03.2  -10
MQZ   McQueen’s Vall    7.37 209 eP     P       11 12 12.5 -8.6
ODZ   Otahua Downs      9.29 212 eP     P       11 12 38.3 -8.9
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BJI ***12*** *11:17:57.9, 49.45N×155.97E, h59^{km}, mB4.6, mb4.6, Ms4.0, Msz3.7*

MOS ***12*** *11:17:59.9±0.8, 48.76N×155.26E, h38^{km}, mb4.9/36, Error ellipse: s-maj=10.6km s-min=5.4km az=90.9*

SKHL ***12*** *11:18:03.0±2.9, 48.75N×155.44E, h64^{km}±27^{km}, mb4.9/1, msh4.5/1*

NEIC ***12*** *11:18:03.8±0.2, 48.76N×155.24E, mb4.6/48, Error ellipse: s-maj=7.1km s-min=4.0km az=147.0*

IDC ***12*** *11:18:04.2±0.6, 48.89N×155.11E, h60^{km}±5^{km}, mb4.0/21, mb1 4.2/22, mb1mx4.2/26, mbtmp4.3/22, MS3.3/11, Ms1 3.3/11, ms1mx3.1/34, Error ellipse: s-maj=15.5km s-min=10.6km az=143.0*

ISC 12 11:18:02.7±0.3**, 48.81N**±0.04×**155.26E**±0.06**, h62^{km}, h62^{km}**±3.2^{km}**:pP-P, n189,** σ1^{s}**07**/195**, mb4.5**/66**, 16C-9D, Kuril Islands**

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Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                    Op     ISC       h  m  s    ISC
SKR   Severo-Kuril’s    1.95  16  ePN    P       11 18 31.5 -2.7
SKR                               eS     S       11 18 56.0 -1.4
SKR                                pmax   pmax
      comp=Z,380nm,0.6s
SKR                                pmax   pmax
      comp=N,310nm,0.5s
SKR                                pmax   pmax
      comp=E,230nm,0.5s
SKR                                smax
      comp=N,200nm,0.2s
SKR                                smax
      comp=E,3μm,0.2s
SKR                                smax
      comp=N,2μm,2.0s
SKR                                smax
      comp=E,2μm,2.0s
SKR   Severo-Kuril’s    1.95  16  eP     P       11 18 31.5 -2.7
SKR                                AMB    AMB    11 18 38.6
      comp=E,310nm,0.6s
SKR                                AMB    AMB    11 18 38.6
      comp=E,230nm,0.6s
SKR                               eS     S       11 18 56.0 -1.4
SKR                                A             11 18 57.0
      comp=E,2μm,0.4s
SKR                                A             11 18 57.0
      comp=E,3μm,0.4s
SKR                                A             11 18 57.0
      comp=E,390nm,0.4s
SKR                                A             11 19 10.0
      comp=E,2μm,2.0s
PAU   Pauzhetka         2.84  20  i P    P       11 18 47.4 +0.7
PAU                               i S    S       11 19 19.7 -0.1
PET   Petropavlovsk     4.73  26  ePN    P       11 19 12.8 -0.4
PET                               eS     S       11 20 05.9 -1.5
PET                                pmax   pmax
      comp=Z,200nm,4.1s
PET                                smax
      comp=E,167nm,0.6s
PET                                smax
      comp=N,256nm,0.5s
PET                                smax
      comp=E,300nm,2.7s
PET                                MLR    MLR
      comp=Z,100nm,16.0s
PET   Petropavlovsk     4.73  26  eP     P       11 19 12.4 -0.8
PET                               eS     S       11 20 06.3 -1.0
PET   Petropavlovsk     4.73  26  eP     P       11 19 12.8 -0.4
PET                                AMB    AMB    11 19 32.0
      comp=Z,190nm,4.1s
PET                               eS     S       11 20 05.9 -1.5
PET                                A             11 20 11.7
      comp=Z,260nm,0.6s
PET                                A             11 20 11.7
      comp=Z,170nm,0.6s
PET                                A             11 20 15.2
      comp=Z,310nm,2.7s
PET                                AMS    AMS    11 21 22.5
      comp=Z,130nm,16.0s
KUR   Kuril’sk          6.20 237  eP     P       11 19 34.0 +0.4
KUR                                AMB    AMB    11 19 58.5
      comp=Z,40nm,0.5s
KUR                                AMB    AMB    11 19 58.5
      comp=Z,60nm,0.5s
KUR                               eS     S       11 20 40.5 -3.4
KUR                                A             11 20 46.5
      comp=Z,50nm,0.5s
KUR                                A             11 20 46.5
      comp=Z,30nm,0.5s
YUK   Yuzh-Kuril’sk     8.06 237  eP     P       11 19 57.0 -2.5
YUK                                AMB    AMB    11 20 02.3
      comp=Z,180nm,0.3s
YUK                               eS     S       11 21 22.0 -8.0
YUK                                A             11 21 28.3
      comp=Z,140nm,0.5s
TYV   Tymovskoe         8.40 289  eP     P       11 20 04.8 +0.6
YSS   Yuzh-Sakhalins    8.61 262  eP     P       11 20 09.0 +1.9
      comp=Z,30nm,0.3s
YSS   Yuzh-Sakhalins    8.61 262⇑iP     P       11 20 09.2 +2.2
YSS                                AMB    AMB    11 20 10.0
      comp=Z,50nm,0.3s
YSS                               eS     S       11 21 39.5 -4.2
YSS                                A             11 21 44.0
      comp=Z,40nm,0.6s
YSS                                A             11 21 44.0
      comp=Z,50nm,0.6s
UGL   Uglegorsk         8.69 277  eP     P       11 20 10.0 +1.8
UGL                                AMB    AMB    11 20 12.5
      comp=Z,50nm,0.8s
ASAJ  Asahikawa         9.92 246   PN    P       11 20 25.7 +0.9
ASAJ                               pmax   pmax
      comp=Z,5.0nm,0.3s
ASAJ                               MLR    MLR
      comp=Z,91nm,19.4s
ASAJ  Asahikawa         9.92 246   P     P       11 20 25.7 +0.9
      comp=Z,5.1nm,0.3s,baz=87,slow=14,SNR=30
ASAJ                               LR     LR     11 23 56.9
      comp=Z,91nm,19.4s,baz=6.6,slow=36
MA2   Magadan          11.10 348  ePN    P       11 20 41.4 +0.6
MA2                                pmax   pmax
      comp=Z,14nm,0.6s
MA2   Magadan          11.10 348  eP     P       11 20 41.4 +0.6
      comp=Z,14nm,0.6s
FX1   Attu Island--F   12.02  63   PN    P       11 20 51.0 -2.2
FX1                                pmax   pmax
      comp=Z,3.0nm,0.3s
FX1   Attu Island--F   12.02  63   P     P       11 20 51.0 -2.1
      comp=Z,3.4nm,0.3s,baz=1.1,slow=5.7,SNR=7.1
FX1   Attu Island--F   12.02  63  eP     P       11 20 50.1 -3.1
BMKR  Bomnak           17.33 300  eP     P       11 22 02.5 +1.0
MAJO  Matsushiro       17.49 232  eP     P       11 22 02.6 -1.1
MAJO                               pmax   pmax
      comp=Z,13nm,0.8s
MAJO  Matsushiro       17.49 232  eP     P       11 22 02.6 -1.1
      comp=Z,13nm,0.8s
MAT   Matsushiro       17.49 232   P     P       11 22 01.0 -2.7
MAT   Matsushiro       17.49 232   P     P       11 22 01.4 -2.3
MJAR  Matsushiro Arr   17.49 232   P     P       11 22 03.2 -0.5
      comp=Z,0.4nm,0.3s,baz=20,slow=11,SNR=9.0
YASR  Yasnyy           17.68 295  eP     P       11 22 03.9 -2.0
YASR                               AMB    AMB    11 22 06.4
      comp=Z,7.0nm,0.5s
MDJ   Mudanjiang       18.06 266  eP     P       11 22 10.4 -0.3
      comp=Z,7.4nm,0.6s
ZEA   Zeya             18.14 296  eP     P       11 22 10.8 -0.8
YAK   Yakutsk          19.47 322d iP     P       11 22 25.3 -1.4
YAK                               eS     S       11 25 58.5 +0.6
YAK                                pmax   pmax
      comp=Z,8.0nm,0.8s
YAK                                smax
      comp=N,7.0nm,0.9s
YAK                                smax
      comp=E,6.0nm,1.3s
YAK   Yakutsk          19.47 322  eP     P       11 22 25.4 -1.3
      comp=E,27nm,0.7s
JHJ   Hachijo jima 2   19.50 222   LR     LR     11 28 41.2
      comp=E,56nm,20.0s,baz=131,slow=33
BILL  Bilibino         20.06  12  i P    P       11 22 31.1 -2.0
BILL                               pmax   pmax
      comp=Z,7.0nm,1.1s
BILL  Bilibino         20.06  12  eP     P       11 22 29.9 -3.2
      comp=Z,5.6nm,0.3s
KS15  Wonju Array Si   22.86 250  eP     P       11 23 02.9 +1.7
HIA   Hailar           23.16 285  eP     P       11 23 03.6 -0.5
HIA                                pmax   pmax
      comp=Z,5.0nm,0.4s
HIA   Hailar           23.16 285  eP     P       11 23 03.6 -0.5
      comp=Z,4.9nm,0.4s,mb4.3
JNU   Nakatsue         24.03 238   P     P       11 23 13.4 +0.8
      comp=Z,3.2nm,0.5s,mb4.0,baz=35,slow=12,SNR=5.9
JNU                                LR     LR     11 32 44.4
      comp=Z,44nm,20.0s,baz=181,slow=37
TIXI  Tiksi            25.94 341⇓iP     P       11 23 28.1 -2.3
TIXI                               pmax   pmax
      comp=Z,5.0nm,0.7s,mb4.2
SSE   Sheshan          31.21 248   P     P       11 24 20.9 +2.7
SSE                                AMB    AMB
      comp=Z,40nm,0.7s,mb5.4
SSE                                AMB    AMB
      comp=Z,60nm,4.0s
SSE   Sheshan          31.21 248   P     P       11 24 20.9 +2.7
      comp=Z,43nm,0.7s,mb5.4
SSE                                LR     LR
      comp=Z,30nm,20.0s
NJ2   Nanjing          32.00 252  eP     P       11 24 28.5 +3.4
NJ2                                AP     pP     11 24 46.4 +6.0
NJ2                                PP     PP     11 25 36.6 +3.8
NJ2                                S      S      11 29 35.0 +3.8
NJ2                                XS            11 30 05.0
NJ2                                AMB    AMB
      comp=Z,10.0nm,0.9s,mb4.7
NJ2                                AMB    AMB
      comp=Z,270nm,3.9s
NJ2                                LR     LR
      comp=N,230nm,20.0s
NJ2                                LR     LR
      comp=E,270nm,16.2s
NJ2                                LR     LR
      comp=Z,180nm,14.0s
SONM  Songino Array    32.06 287   P     P       11 24 24.1 -1.4
      comp=Z,0.3nm,0.4s,mb3.5,baz=78,slow=8.6,SNR=3.7
SONM                               PcP    PcP    11 27 13.5 -0.4
      comp=Z,1.6nm,0.9s,baz=80,slow=1.7,SNR=8.4
SONM                               LR     LR     11 38 23.9
      comp=Z,69nm,19.9s,baz=239,slow=38
TLY   Talaya           32.57 295  i P    P       11 24 29.6 -0.3
TLY                                pmax   pmax
      comp=Z,4.0nm,1.0s,mb4.3
TLY                                MLR    MLR
      comp=Z,100nm,23.0s
MCK   McKinley         33.14  42  eP     P       11 24 34.1 -0.6
ILAR  Eielson Array    34.03  40   P     P       11 24 41.6 -0.7
      comp=Z,2.3nm,0.8s,mb4.2,baz=246,slow=6.5,SNR=33
ILAR                               pP     pP     11 24 55.3 -2.5
      comp=Z,1.2nm,0.7s,baz=258,slow=6.6,SNR=5.3
INK   Inuvik           39.13  34   P     P       11 25 25.8 +0.6
INK                                pmax   pmax
      comp=Z,1.0nm,0.5s
INK   Inuvik           39.13  34   P     P       11 25 25.8 +0.6
      comp=Z,1.4nm,0.5s,mb3.9,baz=278,slow=13,SNR=5.9
INK   Inuvik           39.13  34  eP     P       11 25 25.7 +0.5
      comp=Z,3.2nm,0.7s,mb4.2
ZAL   Zalesovo         42.62 305   P     P       11 25 53.2 -0.8
      comp=Z,1.1nm,0.3s,mb4.0,baz=112,slow=3.4,SNR=2.1
ZAL                                PcP    PcP    11 27 45.1 -0.7
      comp=Z,1.5nm,0.5s,baz=95,slow=1.9,SNR=8.4
ZAL                                LR     LR     11 44 54.0
      comp=Z,52nm,20.1s,baz=326,slow=38
ZAL   Zalesovo         42.62 305   P     P       11 25 53.2 -0.8
ZAL                                PcP    PcP    11 27 45.1 -0.7
ZAL                                LR     LR     11 44 54.0
BBB   Bella Bella      46.73  55   LR     LR     11 43 05.9
      comp=Z,61nm,19.7s,baz=259,slow=32
KMI   Kunming          47.05 259   P     P       11 26 28.9 -0.9
KMI                                pmax   pmax
      comp=Z,11nm,1.1s,mb4.7
KMI                                MLR    MLR
      comp=Z,30nm,33.4s
KMI   Kunming          47.05 259   P     P       11 26 28.9 -0.9
      comp=Z,11nm,1.1s,mb4.7
KMI                                LR     LR
      comp=Z,30nm,33.4s
MKAR  Makanchi Array   47.30 297   P     P       11 26 30.6 -0.9
      comp=Z,3.9nm,0.7s,mb4.5,baz=68,slow=8.3,SNR=36
MKAR                               PcP    PcP    11 28 01.5 -0.5
      comp=Z,1.6nm,0.8s,baz=56,slow=4.4,SNR=4.7
MKAR                               LR     LR     11 47 58.7
      comp=Z,59nm,18.5s,baz=1.0,slow=38
MKAR  Makanchi Array   47.30 297   P     P       11 26 30.6 -0.9
MKAR                               PcP    PcP    11 28 01.5 -0.5
MKAR                               LR     LR     11 47 58.7
YKA   Yellowknife Ar   48.40  38   P     P       11 26 40.0 +0.2
      comp=Z,3.3nm,0.8s,mb4.4,baz=298,slow=7.6,SNR=30
YKA   Yellowknife Ar   48.40  38   P     P       11 26 40.0 +0.2
RES   Resolute Bay     48.41  20  eP     P       11 26 40.2 +0.4
RES                                pmax   pmax
      comp=Z,3.0nm,0.5s,mb4.6
RES   Resolute Bay     48.41  20  eP     P       11 26 40.2 +0.4
      comp=Z,3.4nm,0.5s,mb4.6
BVAR  Borovoye Array   50.68 309   P     P       11 26 55.7 -1.7
      comp=Z,1.2nm,0.5s,mb4.1,baz=62,slow=8.0,SNR=12
BVAR                               PcP    PcP    11 28 13.5 -0.7
      comp=Z,2.3nm,0.7s,baz=64,slow=2.5,SNR=7.6
EDM   Edmonton         53.85  48  eP     P       11 27 20.5 -0.6
CMAR  Chiang Mai Arr   54.26 257   P     P       11 27 24.2 -0.4
      comp=Z,8.1nm,0.7s,mb4.8,baz=34,slow=7.5,SNR=38
CMAR                               pP     pP     11 27 38.5 -2.3
      comp=Z,2.1nm,0.8s,baz=32,slow=10,SNR=3.5
CMAR                               LR     LR     11 53 37.1
      comp=Z,3.2nm,18.1s,baz=305,slow=39
ARU   Arti             54.47 317⇓iP     P       11 27 23.7 -2.0
ARU                               e              11 28 25.8
ARU                               eS     S       11 34 53.5 -4.6
ARU                               eSSS   SSS     11 40 36.6 -4.7
ARU                                pmax   pmax
      comp=Z,6.0nm,0.7s,mb4.6
GUN   Gumba            56.26 275  eP     P       11 27 38.8 -0.2
      comp=Z,6.1nm,0.3s,mb5.2
ARCES ARCESS Array B   56.38 341   P     P       11 27 36.6 -2.6
      comp=Z,0.6nm,0.3s,mb4.1,baz=44,slow=8.1,SNR=14
KKN   Kakani           56.74 275  eP     P       11 27 41.6 -0.8
      comp=Z,21nm,0.6s,mb5.3
KKN   Kakani           56.74 275  eP     P       11 27 41.6 -0.8
KKN                                pmax   pmax
      comp=Z,10.0nm,0.6s,mb5.0
PKI   Pulchoki         56.80 275  eP     P       11 27 41.9 -0.9
      comp=Z,14nm,0.5s,mb5.2
PKI   Pulchoki         56.80 275  eP     P       11 27 41.9 -0.9
PKI                                pmax   pmax
      comp=Z,7.0nm,0.5s,mb5.0
DMN   Daman            56.97 275  eP     P       11 27 42.0 -2.1
      comp=Z,32nm,0.7s,mb5.5
GKN   Gorkha           57.02 276  eP     P       11 27 42.2 -2.2
      comp=Z,13nm,0.4s,mb5.3
SUMG  Summit           58.53   5  eP     P       11 27 54.3 -0.1
      comp=Z,8.2nm,0.8s,mb4.8
FCC   Fort Churchill   58.74  35  eP     P       11 27 55.1 -0.9
FCC                                pmax   pmax
      comp=Z,4.0nm,0.7s,mb4.6
FCC   Fort Churchill   58.74  35  eP     P       11 27 55.1 -0.8
      comp=Z,4.0nm,0.7s,mb4.6
BOZ   Bozeman (W)      59.36  54  eP     P       11 28 00.6 +0.2
BOZ                                pmax   pmax
      comp=Z,17nm,1.9s,mb4.8
BOZ   Bozeman (W)      59.36  54  eP     P       11 28 00.6 +0.1
      comp=Z,17nm,1.9s,mb4.7
NVAR  Mina Array Bea   60.22  65   P     P       11 28 07.2 +0.8
      comp=Z,0.4nm,0.4s,mb3.8,baz=287,slow=8.3,SNR=3.9
LAO   LASA Array       61.52  51  eP     P       11 28 15.3 +0.2
      comp=Z,2.7nm,0.7s,mb4.5
BW06  Boulder Array    62.37  56  eP     P       11 28 20.7 -0.2
      comp=Z,3.1nm,1.1s,mb4.3
PDAR  Pinedale Array   62.37  56   P     P       11 28 21.1 +0.2
      comp=Z,2.3nm,1.0s,mb4.3,baz=333,slow=3.3,SNR=14
PDAR                               pP     pP     11 28 37.5  0.0
      comp=Z,0.7nm,0.7s,baz=315,slow=2.1,SNR=3.3
FINES FINESS Array B   62.78 335   P     P       11 28 21.2 -2.2
      comp=Z,1.2nm,0.4s,mb4.4,baz=37,slow=6.4,SNR=20
FINES                              pP     pP     11 28 39.2 -0.8
      comp=Z,0.9nm,0.7s,baz=39,slow=9.8,SNR=2.0
FINES                              LR     LR     11 58 44.8
      comp=Z,32nm,19.4s,baz=338,slow=39
FINES FINESS Array B   62.78 335   P     P       11 28 21.2 -2.2
FINES                              pP     pP     11 28 39.2 -0.8
FINES                              LR     LR     11 58 44.8
SRU   San Rafael       64.30  59  eP     P       11 28 33.8 +0.2
RSSD  Black Hills      64.40  52  eP     P       11 28 34.0 -0.1
RSSD                               pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.7
RSSD  Black Hills      64.40  52  eP     P       11 28 34.0 -0.1
      comp=Z,6.9nm,0.8s,mb4.7
ISCO  Idaho Springs    66.57  56  eP     P       11 28 45.9 -2.2
ISCO                               pmax   pmax
      comp=Z,3.0nm,0.9s,mb4.3
ISCO  Idaho Springs    66.57  56  eP     P       11 28 45.9 -2.2
      comp=Z,3.2nm,0.9s,mb4.3
NB2   NORSAR Subarra   66.73 342   P     P       11 28 45.6 -3.1
      comp=Z,1.7nm,0.6s,mb4.2,baz=29,slow=6.2
NOA   NORSAR Array B   66.73 342   P     P       11 28 47.3 -1.5
      comp=Z,1.6nm,0.6s,mb4.2,baz=25,slow=6.4,SNR=9.2
NOA                                LR     LR     12 02 00.2
      comp=Z,26nm,21.2s,baz=150,slow=40
AKASG Malin Array Be   70.62 327   P     P       11 29 11.3 -1.6
      comp=Z,1.7nm,0.3s,mb4.4,baz=35,slow=6.2,SNR=16
SCHQ  Schefferville    70.84  24   P     P       11 29 14.3 +0.2
      comp=Z,1.2nm,0.6s,mb4.0,baz=329,slow=5.0,SNR=5.9
SCHQ                               pP     pP     11 29 30.0 -1.1
      comp=Z,1.5nm,0.4s,baz=320,slow=7.0,SNR=3.9
WRA   Warramunga Arr   70.95 201   P     P       11 29 14.0 -1.3
      comp=Z,3.1nm,0.6s,mb4.4,baz=16,slow=6.2,SNR=30
WRA                                pP     pP     11 29 32.4  0.0
      comp=Z,1.2nm,0.6s,baz=16,slow=6.2,SNR=4.4
FITZ  Fitzroy Crossi   71.65 210   P     P       11 29 19.1 -0.6
      comp=Z,9.0nm,0.7s,mb4.8,baz=189,slow=12,SNR=19
SOC   Sochi            72.04 316  eP     P       11 29 20.7 -0.8
SOC                               e              11 32 07.8
SOC                               ePPP   PPP     11 33 39.7 -6.3
SOC                                pmax   pmax
      comp=N,101nm,1.4s
SOC                                pmax   pmax
      comp=E,50nm,1.4s
SOC                                pmax   pmax
      comp=Z,65nm,1.4s,mb5.4
OJC   Ojcow            74.19 332  eP     P       11 29 33.7 -0.2
KOLS  Kolonicke sedl   74.52 330  eP     P       11 29 35.6 -0.3
UPC   Upice            75.07 334  eP     P       11 29 39.2 +0.3
DPC   Dobruska-Polom   75.12 334  eP     P       11 29 39.8 +0.6
CLL   Collm            75.17 337⇑iP     P       11 29 39.3 -0.2
CLL                                pmax   pmax
      comp=Z,10.0nm,0.8s,mb4.8
CLL   Collm            75.17 337⇑iP     P       11 29 39.3 -0.2
      comp=Z,10.0nm,0.8s,mb4.8
CLL   Collm            75.17 337 ⇑P     P       11 29 39.3 -0.2
      comp=Z,logA/T=1.1,mb4.8
TXAR  Lajitas Array    75.23  62   P     P       11 29 40.6 +0.3
      comp=Z,2.5nm,0.8s,mb4.2,baz=298,slow=4.3,SNR=26
BRG   Berggiesshubel   75.31 336  eP     P       11 29 40.5 +0.2
BRG                                pmax   pmax
      comp=Z,4.0nm,0.8s,mb4.4
BRG                                pmax   pmax
      comp=Z,7.0nm,0.6s,mb4.8
BRG   Berggiesshubel   75.31 336  eP     P       11 29 40.5 +0.2
      comp=Z,3.6nm,0.8s,mb4.3
CLZ   Clausthal        75.34 338  eP     P       11 29 41.4 +0.9
CLZ                                pmax   pmax
      comp=Z,16nm,1.2s,mb4.8
CLZ   Clausthal        75.34 338  eP     P       11 29 41.4 +0.9
      comp=Z,16nm,1.2s,mb4.8
PVCC  Panska Ves       75.45 335  eP     P       11 29 41.7 +0.6
KECS  Kecovo           75.50 331  eP     P       11 29 37.3 -4.1
PRU   Pruhonice        75.95 335  eP     P       11 29 43.6 -0.4
VYHS  Vyhne            76.01 332  eP     P       11 29 44.9 +0.5
TIRR  Tirgusor         76.12 324⇓iP     P       11 29 44.1 -1.0
MOX   Moxa             76.13 337  eP     P       11 29 45.0  0.0
MLR   Muntele Rosu     76.19 326⇑iP     P       11 29 46.1 +0.7
NKC   Novy Kostel      76.29 336  eP     P       11 29 46.0 +0.1
VOIR                   76.56 326⇓iP     P       11 29 48.6 +1.0
VOIR                   76.56 326⇓iP     P       11 29 48.5 +0.9
KHC   Kasperske Hory   76.99 335  eP     P       11 29 50.6 +0.7
GRA1  Grafenberg Arr   77.11 337  eP     P       11 29 50.9 +0.4
      comp=Z,16nm,1.0s,mb4.9
GRF   Grafenberg Arr   77.11 337  eP     P       11 29 50.9 +0.4
GRF                                pmax   pmax
      comp=Z,16nm,1.0s,mb4.9
GRF   Grafenberg Arr   77.11 337  eP     P       11 29 50.9 +0.4
GRF                                pmax   pmax
      comp=Z,16nm,1.0s,mb4.9
GRF   Grafenberg Arr   77.11 337  eP     P       11 29 50.9 +0.4
      comp=Z,16nm,1.0s,mb4.9
GEC2  GERESS Array S   77.22 335  eP     P       11 29 51.6 +0.5
GEC2                               pmax   pmax
      comp=Z,4.0nm,0.6s,mb4.5
GEC2  GERESS Array S   77.22 335  eP     P       11 29 51.6 +0.5
      comp=Z,4.0nm,0.6s,mb4.5
GERES GERESS Array B   77.22 335   P     P       11 29 51.5 +0.4
      comp=Z,3.0nm,0.5s,mb4.5,baz=36,slow=5.6,SNR=39
GERES                              LR     LR     12 07 13.4
      comp=Z,49nm,18.5s,baz=5.3,slow=38
TNS   Taunus Mts       77.31 339  eP     P       11 29 52.2 +0.6
TNS                                pmax   pmax
      comp=Z,10.0nm,0.8s,mb4.8
TNS   Taunus Mts       77.31 339  eP     P       11 29 52.2 +0.6
      comp=Z,10.0nm,0.8s,mb4.8
BZS   Buzias           77.63 329⇓iP     P       11 29 53.4 -0.1
BR131 Keskin Array S   77.86 318  eP     P       11 29 55.7 +0.8
      comp=Z,5.0nm,0.9s,mb4.4
BRTR  Keskin Array B   77.86 318   P     P       11 29 55.2 +0.4
      comp=Z,5.3nm,0.8s,mb4.5,baz=72,slow=3.9,SNR=22
GIVF  Givet            78.24 341  eP     P       11 29 57.0 +0.3
BAIF  Baives           78.41 341  eP     P       11 29 58.0 +0.3
      comp=Z,8.0nm,0.8s,mb4.4
BAIF  Baives           78.41 341  eP     P       11 29 58.0 +0.3
BAIF                               pmax   pmax
      comp=Z,4.0nm,0.8s,mb4.4
KBA   Koelnbreinsper   78.92 335⇑iP     P       11 30 02.1 +1.5
      comp=Z,28nm,1.0s,mb5.1
KBA   Koelnbreinsper   78.92 335⇑iP     P       11 30 02.1 +1.5
KBA                                pmax   pmax
      comp=Z,28nm,1.0s,mb5.2
BFO   Black Forest     79.10 338  eP     P       11 30 01.0 -0.5
BFO                                pmax   pmax
      comp=Z,3.0nm,1.0s,mb4.2
BFO   Black Forest     79.10 338  eP     P       11 30 01.0 -0.5
      comp=Z,3.0nm,1.0s,mb4.2
WATA  Walderalm        79.18 336⇑iP     P       11 30 03.1 +1.1
      comp=Z,7.5nm,1.1s,mb4.5
WATA  Walderalm        79.18 336⇑iP     P       11 30 03.1 +1.1
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WATA				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
WTTA	Wattenberg	79.23	336	⇑iP	P	11 30 03.4	+1.2
	comp=Z,15nm,0.8s,mb5.0						
WTTA	Wattenberg	79.23	336	⇑iP	P	11 30 03.4	+1.2
WTTA				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
CDF	Champ du Feu	79.27	339	eP	P	11 30 02.8	+0.3
	comp=Z,8.7nm,0.9s,mb4.4						
CDF	Champ du Feu	79.27	339	eP	P	11 30 02.8	+0.3
CDF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
MOTA	Moosalm	79.30	336	⇓iP	P	11 30 03.5	+0.9
	comp=Z,12nm,1.0s,mb4.8						
MOTA	Moosalm	79.30	336	⇓iP	P	11 30 03.5	+0.9
MOTA				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
SQTA	Sankt Quirin	79.38	336	⇑iP	P	11 30 04.2	+1.1
	comp=Z,11nm,1.1s,mb4.7						
SQTA	Sankt Quirin	79.38	336	⇑iP	P	11 30 04.2	+1.1
SQTA				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
MEZF	Maizieres J'vi	79.70	340	eP	P	11 30 05.4	+0.6
HAU	Haudompre	79.87	339	eP	P	11 30 05.9	+0.2
HINF	Hinteralfeld	79.93	339	eP	P	11 30 06.1	+0.1
FLN	La Foliniere	80.57	344	eP	P	11 30 10.5	+1.1
LDF	La Druitiere	80.67	344	eP	P	11 30 10.8	+0.9
GRR	Gorron	81.00	344	eP	P	11 30 12.2	+0.5
LOR	Lormes	81.13	341	eP	P	11 30 12.1	-0.3
	comp=Z,3.2nm,0.5s,mb4.2						
LOR	Lormes	81.13	341	eP	P	11 30 12.1	-0.3
LOR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
CABF	La Chapelle	81.24	339	eP	P	11 30 13.0	0.0
	comp=Z,9.5nm,0.9s,mb4.4						
CABF	La Chapelle	81.24	339	eP	P	11 30 13.0	0.0
CABF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
SSF	Saint Saulge	81.40	341	eP	P	11 30 14.1	+0.3
SGMF	Saint Gilles	81.43	345	eP	P	11 30 14.9	+1.0
	comp=Z,13nm,0.7s,mb4.7						
SGMF	Saint Gilles	81.43	345	eP	P	11 30 14.9	+1.0
SGMF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
ROSF	Rostrenen	81.47	346	eP	P	11 30 14.7	+0.6
AVF	Avril sur Loir	81.69	341	eP	P	11 30 15.8	+0.5
	comp=Z,3.9nm,0.6s,mb4.2						
AVF	Avril sur Loir	81.69	341	eP	P	11 30 15.8	+0.5
AVF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
SMF	Signal de Mont	81.72	341	eP	P	11 30 16.0	+0.5
	comp=Z,4.1nm,0.6s,mb4.3						
SMF	Signal de Mont	81.72	341	eP	P	11 30 16.0	+0.5
SMF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BGF	Bois d'Agland	82.02	341	eP	P	11 30 17.8	+0.8
LPL	La Plagne	82.12	338	eP	P	11 30 18.9	+1.4
	comp=Z,6.0nm,0.5s,mb4.5						
LPL	La Plagne	82.12	338	eP	P	11 30 18.9	+1.4
LPL				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
LPG	La Plagne	82.13	338	eP	P	11 30 19.1	+1.5
	comp=Z,5.9nm,0.5s,mb4.5						
LPG	La Plagne	82.13	338	eP	P	11 30 19.1	+1.5
LPG				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
TCF	Toulx Ste Croi	82.42	342	eP	P	11 30 19.6	+0.6
MFF	Saint Martin d	82.59	343	eP	P	11 30 20.6	+0.7
MBDF	Montbardon	82.85	338	eP	P	11 30 22.0	+0.7
	comp=Z,4.3nm,0.6s,mb4.4						
MBDF	Montbardon	82.85	338	eP	P	11 30 22.0	+0.7
MBDF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ORIF	Oris-en-Rattie	82.89	339	eP	P	11 30 21.9	+0.4
	comp=Z,3.3nm,0.5s,mb4.3						
ORIF	Oris-en-Rattie	82.89	339	eP	P	11 30 21.9	+0.4
ORIF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
VIVF	Saint-Julien-l	83.23	339	eP	P	11 30 24.3	+1.1
RJF	Les Rejaudoux	83.50	342	eP	P	11 30 25.4	+0.9
CAF	Calviac	83.75	341	eP	P	11 30 26.8	+1.1
LFF	La Frestale	84.01	342	eP	P	11 30 27.9	+0.9
PGF	Pioggiola	84.30	336	eP	P	11 30 29.2	+0.6
	comp=Z,9.4nm,0.7s,mb4.8						
PGF	Pioggiola	84.30	336	eP	P	11 30 29.2	+0.6
PGF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
MTLF	Montolieu	85.22	341	eP	P	11 30 35.1	+2.0
	comp=Z,8.7nm,0.9s,mb4.6						
MTLF	Montolieu	85.22	341	eP	P	11 30 35.1	+2.0
MTLF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
EPF	Esparros	85.92	342	eP	P	11 30 37.4	+0.8
ETSF	Etsaut	86.23	342	eP	P	11 30 39.7	+1.6
PLCA	Paso Flores	146.91	93	PKPbc	PKPbc	11 37 38.9	+1.8
	comp=Z,1.8nm,0.7s,baz=279,slow=3.5,SNR=5.1						
VNA2	Neumayer--Watz	156.36	194	⇑iPKPdf	PKPab	11 38 18.7	-0.8
VNA2				e		11 38 36.3	
VNA2				e		11 38 40.9	
VNA2				e		11 38 45.0	
VNA3	Neumayer Olymp	156.42	192	⇑iPKPdf	PKPab	11 38 18.7	-1.0
VNA3				e		11 38 36.3	
VNA3				e		11 38 41.2	
VNA3				e		11 38 44.9	
VNA1	Neumayer--Stat	156.74	194	⇑iPKPdf	PKPab	11 38 19.8	-1.3
VNA1				e		11 38 37.3	
VNA1				e		11 38 42.4	
VNA1				e		11 38 46.3	

NEIC ***12*** *11:32:32.7±1.0, 23.35S×179.70W, h512^{km}±12^{km}, mb4.2/8, Error ellipse: s-maj=15.8km s-min=11.0km az=128.0*

IDC ***12*** *11:32:36.9±3.2, 23.36S×179.77W, h555^{km}±34^{km}, mb3.6/10, mb1 3.9/10, mb1mx3.7/16, mbtmp4.5/10, Error ellipse: s-maj=19.9km s-min=14.5km az=86.0*

ISC 12 11:32:31.8±1.1**, 23.41S**±0.07×**179.7W**±0.1**, h504**^{km}±13^{km}**, n46, σ0^{s}76**/27**, mb4.1**/15**, 2C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	6.04	165	P	P	11 34 09.4	-0.2
	2µm,0.5s						
AFI	Afiamalu	12.09	40	P	P	11 35 12.1	-0.1
	58nm,0.7s						
URZ	Urewera	15.04	190	P	P	11 35 42.3	-0.2
	2.5nm,0.3s,baz=324,slow=9.0,SNR=22						
URZ				S	S	11 38 15.8	-0.8
	1.5nm,0.3s,baz=68,slow=23,SNR=15						
SNZO	South Karori	18.45	193	eP	P	11 36 16.8	+0.8
RPZ	Rata Peaks	21.63	198	P	P	11 36 46.3	+0.4
	16nm,0.6s,mb4.7,baz=26,slow=3.2,SNR=16						
RPZ				S	S	11 40 10.9	+0.6
	3.1nm,0.7s,baz=31,slow=12,SNR=2.7						
CTA	Charters Tower	31.72	269	P	P	11 38 16.1	+1.0
	19nm,0.3s,mb5.0,baz=95,slow=11,SNR=83						
STKA	Stephens Creek	35.13	247	eP	P	11 38 44.5	+0.9
	4.9nm,0.7s,mb4.0						
STKA	Stephens Creek	35.13	247	P	P	11 38 44.5	+0.9
	5.4nm,0.6s,mb4.2,baz=85,slow=8.6,SNR=9.3						
WB2	Warramunga Arr	42.67	266	eP	P	11 39 44.4	-0.7
WRA	Warramunga Arr	42.69	266	P	P	11 39 44.5	-0.6
	3.5nm,0.3s,mb4.2,baz=96,slow=8.4,SNR=208						
WRA				S	S	11 45 25.8	-6.4
	1.7nm,0.9s,baz=108,slow=13,SNR=6.1						
KAKA	Kakadu	46.51	275	⇑iP	P	11 40 13.9	-1.1
	3.1nm,0.3s,mb4.2						
SBA	Scott Base	54.88	183	eP	P	11 41 16.9	+1.3
	10nm,0.9s,mb4.2						
VNDA	Vanda	54.88	185	P	P	11 41 16.0	+0.4
	3.0nm,0.5s,mb3.9,baz=359,slow=7.5,SNR=27						
VNDA				PcP	PcP	11 42 08.3	-1.8
	2.1nm,0.6s,baz=350,slow=5.2,SNR=6.5						
VNDA	Vanda	54.88	185	eP	P	11 41 15.3	-0.3
	2.6nm,0.5s,mb3.8						
QSPA	South Pole Qui	66.67	180	⇓iP	P	11 42 33.0	+0.1
	16nm,0.8s,mb4.7						
MAW	Mawson	78.29	200	P	P	11 43 39.2	-0.6
	3.2nm,0.5s,mb4.0,baz=111,slow=7.3,SNR=10						
SYO	Syowa Base	83.54	193	⇑P	P	11 44 03.6	-3.0
NVAR	Mina Array Bea	84.23	44	P	P	11 44 10.4	-0.3
	0.7nm,0.6s,mb3.4,baz=199,slow=5.9,SNR=4.8						
KMI	Kunming	89.25	298	P	P	11 44 45.4	+10
HLID	Hailey	89.57	41	eP	P	11 44 36.4	+0.5
	3.8nm,1.5s,mb4.0						
CMAR	Chiang Mai Arr	89.59	290	P	P	11 44 37.1	+0.6
	2.3nm,0.9s,mb4.0,baz=161,slow=5.0,SNR=8.0						
TXAR	Lajitas Array	89.97	58	P	P	11 44 38.7	+0.6
	1.5nm,0.7s,mb3.9,baz=216,slow=6.9,SNR=20						
PDAR	Pinedale Array	92.17	44	P	P	11 44 47.5	-0.4
	0.4nm,0.4s,mb3.7,baz=207,slow=3.3,SNR=5.5						
BOZ	Bozeman (W)	92.36	41	eP	P	11 44 48.5	-0.2
	1.0nm,0.9s,mb3.8						
MKAR	Makanchi Array	112.00	313	PKiKP		11 50 07.6	
	0.5nm,0.6s,baz=211,slow=1.0,SNR=6.3						
MKAR	Makanchi Array	112.00	313	PKPdf	PKPdf	11 50 07.6	-1.3
FRB	Frobisher Bay	120.10	29	PKP	PKPdf	11 50 22.8	-1.5
	1.9nm,0.6s,baz=304,slow=5.4,SNR=5.0						
BOSA	Boshof	122.94	206	PKP	PKPdf	11 50 30.4	-0.2
	3.3nm,0.9s,baz=46,slow=3.5,SNR=3.3						
BOSA	Boshof	122.94	206	PKP	PKPdf	11 50 30.4	-0.2
ARCES	ARCESS Array B	131.46	348	PKP	PKPdf	11 50 44.6	-1.3
	1.3nm,0.6s,slow=1.2,SNR=9.2						
AKASG	Malin Array Be	144.69	328	PKP	PKPdf	11 51 09.3	-0.8
	3.7nm,0.6s,baz=43,slow=4.0,SNR=18						
AKASG	Malin Array Be	144.69	328	PKP	PKPdf	11 51 09.3	-0.8
BRTR	Keskin Array B	147.48	308	PKPbc	PKPdf	11 51 18.2	+3.2
	1.6nm,0.7s,baz=137,slow=3.1,SNR=6.6						
BRTR				PKPab	PKPab	11 51 23.4	-1.2
	1.6nm,0.7s,baz=108,slow=3.9,SNR=5.6						
OJC	Ojcow	149.20	335	ePKP	PKPdf	11 51 22.1	+4.6
KSP	Ksiaz	149.92	340	eP	PKPdf	11 51 24.4	+5.8
OKC	Ostrava-Krasne	150.13	336	ePKP	PKPdf	11 51 24.8	+5.8
UPC	Upice	150.30	340	ePKP	PKPdf	11 51 24.6	+5.4
DPC	Dobruska-Polom	150.34	339	ePKP	PKPdf	11 51 25.4	+6.1
CLL	Collm	150.46	344	i PKP	PKPdf	11 51 25.3	+5.9
CLL				i PKP	PKPdf	11 51 34.0	+15
CLZ	Clausthal	150.57	347	ePKPbc	PKPdf	11 51 26.0	+6.4
BRG	Berggiesshubel	150.60	342	i P	PKPdf	11 51 26.0	+6.4
PVCC	Panska Ves	150.73	341	ePKP	PKPdf	11 51 26.2	+6.4
PRU	Pruhonice	151.22	341	ePKP	PKPdf	11 51 27.2	+6.6
KHC	Kasperske Hory	152.27	341	ePKP	PKPdf	11 51 29.3	+7.2
GRA1	Grafenberg Arr	152.40	345	ePKPbc	PKPdf	11 51 31.2	+9.0
GERES	GERESS Array B	152.48	341	PKPbc	PKPdf	11 51 29.5	+7.1
	0.9nm,0.8s,baz=45,slow=3.8,SNR=8.6						

NEIC ***12*** *11:42:47.0, 71.59N×136.49W, h35^{km}, ML3.1(AEIC), ML2.6(PGC), After PGC.*

PGC 12 11:42:47.3, 71.59N×136.45W, h35^{km}**, MLSn3.3**/6**, Beaufort Sea., Beaufort Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INK	Inuvik	3.45	162	eP	P	11 43 36.9	-3.2
INK	Inuvik	3.45	162	P	P	11 43 37.4	-2.6
INK				S	S	11 44 14.7	-5.6
INK				Trac		11 44 18.2	
	comp=Z,6.0nm,0.1s						
INK	Inuvik	3.45	162	Pn	P	11 43 37.4	-2.6
INK				Sn	S	11 44 14.7	-5.6
INK				Trac		11 44 18.2	
	comp=Z,6.0nm,0.1s						
BM3	Burnt Mountain	5.08	218	P	P	11 43 58.9	-4.2
BM3				S	S	11 44 52.7	-8.6
COLD	Coldfoot	6.53	235	P	P	11 44 19.1	-4.3
COLD				S	S	11 45 26.4	-11
DAWY	Dawson	7.64	190	P	P	11 44 33.5	-5.6
DAWY				S	S	11 45 54.2	-11
DAWY	Dawson	7.64	190	P	P	11 44 33.5	-5.6
DAWY				S	S	11 45 54.1	-11
DAWY				Trac		11 45 59.0	
	comp=Z,6.0nm,0.1s						
DAWY	Dawson	7.64	190	Pn	P	11 44 33.5	-5.6
DAWY				Sn	S	11 45 54.1	-11
DAWY				Trac		11 45 59.0	
	comp=Z,6.0nm,0.1s						
IL1	Eielson Array	7.86	215	P	P	11 44 36.0	-6.1
CCB	Clear Creek Bu	8.15	217	P	P	11 44 40.0	-6.1
IM3	Indian Mountai	8.40	236	P	P	11 44 43.8	-5.7
BCA3	Beaver Creek A	8.81	196	P	P	11 44 49.1	-6.1
PAX	Paxson	9.32	206	P	P	11 44 55.9	-6.4
HYT	Haines Junctio	10.82	183	P	P	11 45 18.3	-4.5
HYT				S	S	11 47 10.4	-13
HYT				Trac		11 47 14.6	
HYT	Haines Junctio	10.82	183	Pn	P	11 45 18.3	-4.5
HYT				Sn	S	11 47 10.4	-13
HYT				Trac		11 47 14.6	
RES	Resolute Bay	12.23	56	P	P	11 45 36.4	-5.4
RES				S	S	11 47 41.3	-17
RES				Trac		11 47 51.8	
	comp=Z,1.0nm,0.2s						
RES	Resolute Bay	12.23	56	Pn	P	11 45 36.4	-5.4
RES				Sn	S	11 47 41.3	-17
RES				Trac		11 47 51.8	
	comp=Z,1.0nm,0.2s						
YKW3	Yellowknife Ar	12.33	126	P	P	11 45 39.1	-4.0
YKW3				S	S	11 47 44.1	-16
YKW3				S	S	11 47 45.0	-15
YKW3				Trac		11 47 50.3	
	comp=Z,1.0nm,0.1s						
YKW3	Yellowknife Ar	12.33	126	Pn	P	11 45 39.1	-4.0
YKW3				Sn	S	11 47 44.1	-16
YKW3				Sn	S	11 47 45.0	-15
YKW3				Trac		11 47 50.3	
	comp=Z,1.0nm,0.1s						
DLBC	Dease Lake	13.47	165	P	P	11 45 51.1	-7.1
DLBC	Dease Lake	13.47	165	Pn	P	11 45 51.1	-7.1

CASC 12 12:24:29.9±2.2**, 7.52N×82.39W, h24**^{km}±10^{km}**, MD4.0, MW4.6, 4C-1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTP1	Petroterminal	0.68	357	⇑iP	Pb	12 24 46.4	+3.4
BRU2	Volcan	1.30	347	⇑eP	Pn	12 24 52.8	0.0
BRU2				eS	Sn	12 25 11.6	+2.2
ACR	Cerro Adams	1.36	326	⇑eP	Pn	12 24 52.5	-1.2
ACR				eS	Sn	12 25 10.0	-1.1
SVTC	San Vito de Co	1.38	336	eP	Pn	12 24 53.5	-0.4
AZU2	Pedas	2.34	90	⇓eP	Pn	12 25 07.6	-0.1
BUS	Buena Vista	2.43	326	⇑eP	Pn	12 25 08.7	-0.3
BUS				eS	Sn	12 25 38.7	+0.5
LCR2	La Lucha 2	2.72	324	eP	Pn	12 25 13.0	-0.1
LCR2				eS	Sn	12 25 46.8	+1.2
LAJ	Bijagual	2.89	324	eP	Pn	12 25 16.3	+0.8
SJS	Escuela Geolog	2.91	326	eS	Sn	12 25 51.4	+1.0
PRS1	Puriscal	3.10	322	eP	Pn	12 25 17.0	-1.5
PRS1				eS	Sn	12 25 53.9	-1.2
TRTC	Tortuguero	3.30	337	eP	Pn	12 25 21.0	-0.3
JCR	Jicaral	3.55	311	eP	Pn	12 25 23.9	-0.9

BJI ***12*** *12:35:00.8, 5.70S×152.10E, h77^{km}, mB5.0, mb4.6, Ms4.0, Msz3.9*

NEIC ***12*** *12:35:02.9±2.4, 5.70S×152.09E, h78^{km}±22^{km}, mb4.8/11, Error ellipse: s-maj=13.9km s-min=13.6km az=138.0*

IDC ***12*** *12:35:02.0±4.0, 5.77S×152.15E, h72^{km}±36^{km}, mb4.2/17, mb1 4.4/18, mb1mx4.4/20, mbtmp4.5/18, ML3.9/1, MS3.7/9, Ms1 3.7/9, ms1mx3.5/26, Error ellipse: s-maj=21.0km s-min=18.2km az=63.0*

ISC 12 12:35:01.0±2.9**, 5.77S**±0.10×**152.1E**±0.1**, h77**^{km}±26^{km}**, n41, σ0^{s}85**/40**, mb4.4**/23**, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.10	233	P	P	12 36 30.3	0.0
	17nm,0.3s,baz=50,slow=6.8,SNR=45						
PMG				S	S	12 37 40.3	+0.9
	19nm,0.3s,baz=228,slow=18,SNR=8.9						
PMG	Port Moresby	6.10	233	eP	P	12 36 29.6	-0.7
	100nm,0.6s						
PMG				eS	S	12 37 40.5	+1.0
HNR	Honiara	8.57	116	LR	LR	12 39 58.6	
	comp=Z,308nm,22.0s,baz=277,slow=35						
CTA	Charters Tower	15.34	201	P	P	12 38 38.4	+4.0
	0.3nm,0.3s,baz=28,slow=14,SNR=5.1						
CTA				LR	LR	12 44 08.6	
	comp=Z,209nm,18.1s,baz=120,slow=36						
CTA	Charters Tower	15.34	201	P	P	12 38 38.4	+4.0
CTA				LR	LR	12 44 08.6	
CTAO	Charters Tower	15.34	201	eP	P	12 38 38.4	+4.0
	12nm,1.0s						
KAKA	Kakadu	20.60	249	⇑iP	P	12 39 35.4	-0.8
	32nm,0.6s						
DZM	Mont Dzumac	21.32	141	P	P	12 39 41.8	-1.6
	8.4nm,0.6s,mb4.3,baz=288,slow=20,SNR=8.2						
DZM				LR	LR	12 47 14.7	
	comp=Z,298nm,18.4s,baz=192,slow=34						
WRAB	Tennant Creek	22.29	229	eP	P	12 39 53.4	+0.4
	16nm,0.6s,mb4.5						
WB2	Warramunga Arr	22.29	229	eP	P	12 39 53.5	+0.5
WRA	Warramunga Arr	22.30	229	P	P	12 39 53.6	+0.5
	7.8nm,0.6s,mb4.2,baz=54,slow=10.0,SNR=73						
STKA	Stephens Creek	27.78	199	P	P	12 40 44.6	-0.3
	3.5nm,0.9s,mb3.9,baz=345,slow=8.4,SNR=3.3						
FITZ	Fitzroy Crossi	28.61	242	eP	P	12 40 52.0	-0.4
	30nm,0.7s,mb5.0						
FITZ	Fitzroy Crossi	28.61	242	P	P	12 40 51.8	-0.6
	9.5nm,0.6s,mb4.6,baz=36,slow=5.8,SNR=18						
MBWA	Marble Bar	34.91	241	eP	P	12 41 47.3	-0.1
JOW	Kunigami	39.79	326	LR	LR	12 57 04.4	
	comp=Z,152nm,19.4s,baz=203,slow=33						
MJAR	Matsushiro Arr	44.05	344	P	P	12 43 03.8	+0.7
	0.5nm,0.4s,mb3.6,baz=173,slow=8.3,SNR=5.1						
MJAR				LR	LR	12 59 10.1	
	comp=Z,50nm,18.4s,baz=190,slow=33						
KMI	Kunming	56.97	305	P	P	12 44 40.8	-0.4
	6.0nm,0.6s,mb4.8						
CMAR	Chiang Mai Arr	57.67	296	P	P	12 44 45.1	-1.1
	1.7nm,0.9s,mb4.1,baz=124,slow=3.4,SNR=5.3						
ULN	Ulaanbaatar	66.45	329	eP	P	12 45 43.9	-0.6
	2.6nm,0.6s,mb4.2						
SONM	Songino Array	66.78	328	P	P	12 45 46.0	-0.4
	3.3nm,0.8s,mb4.2,baz=135,slow=5.2,SNR=15						
SONM				LR	LR	13 12 30.9	
	comp=Z,36nm,18.3s,baz=67,slow=34						
VNDA	Vanda	71.90	178	P	P	12 46 16.9	-0.4
	1.5nm,0.8s,mb3.9,baz=332,slow=8.8,SNR=7.3						
VNDA				LR	LR	13 15 51.5	
	comp=Z,38nm,18.9s,baz=170,slow=34						
VNDA	Vanda	71.90	178	eP	P	12 46 17.5	+0.1
	2.2nm,1.0s,mb3.9						
SLKM	Skilak Lake	79.83	25	eP	P	12 47 01.6	-0.8
MKAR	Makanchi Array	80.60	319	P	P	12 47 07.1	+0.2
	2.9nm,1.0s,mb4.1,baz=107,slow=5.3,SNR=14						
MKAR	Makanchi Array	80.60	319	P	P	12 47 07.1	+0.2
ZAL	Zalesovo	81.58	327	P	P	12 47 12.2	+0.4
	1.3nm,0.3s,mb4.3,baz=352,slow=1.9,SNR=6.1						
IMA	Indian Mountai	81.59	20	eP	P	12 47 11.5	-0.1
	64nm,1.0s,mb5.4						
IMA				e		12 47 21.0	
MCK	McKinley	82.01	23	eP	P	12 47 12.7	-1.2
	16nm,0.9s,mb4.8						
MCK				e		12 47 21.9	
DIV	Divide	82.03	26	eP	P	12 47 14.5	+0.5
	43nm,1.0s,mb5.2						
DIV				e		12 47 23.5	
ILAR	Eielson Array	83.30	22	P	P	12 47 19.0	-1.4
	13nm,0.9s,mb4.7,baz=263,slow=6.0,SNR=74						
ILAR				LR	LR	13 25 49.8	
	comp=Z,39nm,18.6s,baz=359,slow=37						
DAWY	Dawson	85.94	24	eP	P	12 47 34.3	+0.8
DLBC	Dease Lake	88.55	31	P	P	12 47 47.2	+1.0
	3.8nm,1.0s,mb4.4,baz=255,slow=6.5,SNR=7.0						
DLBC	Dease Lake	88.55	31	P	P	12 47 47.2	+0.9
INK	Inuvik	89.59	21	P	P	12 47 51.1	+0.2
	7.7nm,1.1s,mb4.8,baz=247,slow=5.0,SNR=5.8						
INK	Inuvik	89.59	21	eP	P	12 47 51.3	+0.4
	10nm,1.2s,mb4.8						
INK				e		12 47 59.9	
BVAR	Borovoye Array	89.60	323	P	P	12 47 50.4	-0.8
	3.5nm,0.7s,mb4.6,baz=104,slow=6.1,SNR=22						
NVAR	Mina Array Bea	93.21	52	P	P	12 48 10.2	+1.8
	0.8nm,0.7s,mb4.2,baz=250,slow=3.2,SNR=5.9						
YKA	Yellowknife Ar	96.59	28	P	P	12 48 23.9	+0.8
	0.9nm,0.8s,mb4.2,baz=270,slow=4.8,SNR=15						
PDAR	Pinedale Array	100.00	48	P	P	12 48 40.9	+1.8
	0.4nm,0.7s,mb4.2,baz=315,slow=2.1,SNR=3.7						
PDAR				LR	LR	13 32 36.2	
	comp=Z,65nm,19.1s,baz=85,slow=35						
GERES	GERESS Array B	124.51	328	PKP	PKPdf	12 53 55.3	+3.6
	0.3nm,0.6s,SNR=4.1						

NEIC ***12*** *12:43:46.1, 38.01N×27.61E, h5^{km}, MD3.6(ISK), MD3.5(ATH), After ATH.*

ISK ***12*** *12:43:47.8, 38.01N×27.33E, h26^{km}, MD3.5*

CSEM ***12*** *12:43:47.2±0.1, 38.06N×27.50E, h10^{km}, MD3.5, Error ellipse: s-maj=3.0km s-min=1.7km az=88.0*

ATH ***12*** *12:43:48.9, 38.01N×27.40E, h12^{km}, MD3.4/3*

ISC 12 12:43:48.0±0.3**, 38.02N**±0.02×**27.50E**±0.03**, h10**^{km}**, n55, σ1^{s}23**/73**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZM	Izmir	0.42	334	i PG	Pg	12 43 57.2	+0.7
IZM				i SG	Sg	12 44 03.3	+1.2
KDAG	Bornova	0.42	335	i P	Pg	12 43 57.1	+0.6
KDAG				i S	Sg	12 44 02.9	+0.7
SMG	Samos	0.61	239	ePB	Pb	12 43 59.3	-0.9
SMG				eSB	Sb	12 44 07.0	-1.6
SMG	Samos	0.61	239	ePb	Pb	12 43 59.5	-0.7
SMG				eSb	Sb	12 44 09.4	+0.8
MLSB	Milas	0.76	163	PG	Pg	12 44 02.7	-0.6
URLA	Izmir	0.78	296	i P	Pb	12 44 03.7	+0.5
URLA				i S	Sb	12 44 14.9	+1.3
BDRM	Kayabasi	0.96	182	i P	Pb	12 44 05.4	-0.8
BDRM				i S	Sb	12 44 19.8	+1.1
MANT	Manisa	0.96	61	i P	Pb	12 44 06.9	+0.7
MANT				i S	Sb	12 44 18.8	+0.1
BODT	Bodrum	0.97	189	PG	Pg	12 44 05.3	-2.2
DENT	Denizli	1.25	102	PN	Pn	12 44 11.4	-0.1
DNZL	Cakiroluk	1.27	105	i P	Pb	12 44 12.1	+0.5
DNZL				i S	Sb	12 44 32.1	+4.3
AYVA	Ayvalik	1.43	334	i P	Pn	12 44 16.3	+2.2
AYVA				i S	Sb	12 44 35.1	+2.7
NISR	Nisiros	1.44	192	ePG	Pb	12 44 14.5	0.0
NISR	Nisiros	1.44	192	ePg	Pn	12 44 13.0	-1.2
DALT	Dalyan (Mudla)	1.55	144	PN	Pn	12 44 15.7	-0.1
PRK	Paraskevi	1.55	322	ePB	Pb	12 44 17.5	+1.1
PRK	Paraskevi	1.55	322	ePg	Pg	12 44 16.3	-2.7
PRK				eSb	Sb	12 44 39.9	+4.0
KHL	Karahalli	1.63	79	ePN	Pn	12 44 17.7	+0.8
BALB	Balikesir	1.64	10	PN	Pn	12 44 16.1	-1.0
BTOK	Tokmak	1.79	13	i P	Pn	12 44 19.8	+0.6
BTOK				i S	Sn	12 44 43.9	+1.9
GOLH	Golhisar	1.82	115	i P	Pn	12 44 21.5	+1.9
GOLH				i S	Sn	12 44 47.4	+4.5
APE	Apeiranthos	1.83	239	PN	Pn	12 44 17.1	-2.7
APE	Apeiranthos	1.83	239	ePn	Pn	12 44 22.0	+2.2
APE	Apeiranthos	1.83	239	ePN	Pn	12 44 21.5	+1.7
ARG	Arkhangelos	1.87	164	ePB	Pb	12 44 22.5	+0.6
ARG				eSB	Sb	12 44 47.0	+1.7
ARG	Arkhangelos	1.87	164	ePn	Pn	12 44 21.9	+1.5
FETY	Fethiye	1.88	137	PN	Pn	12 44 19.9	-0.6
GDZ	Gediz	1.89	55	i P	Pg	12 44 24.4	-1.3
GDZ				i S	Sg	12 44 50.9	+0.1
CANB	Canakkale	2.02	351	ePN	Pn	12 44 20.5	-2.0
TKTP	Tekketepe	2.23	89	i P	Pn	12 44 23.1	-2.5
ALT	Altintas	2.29	63	ePN	Pn	12 44 26.4	-0.1
ORLT	Orhaneli	2.29	28	ePN	Pn	12 44 26.4	-0.1
ELL	Elmali	2.31	123	ePN	Pn	12 44 26.8	+0.2
KCT	Karacabey	2.34	16	ePN	Pn	12 44 26.4	-0.7
EDC	Edincik	2.34	7	ePN	Pn	12 44 25.4	-1.7
BNT	Bandirma	2.35	8	ePN	Pn	12 44 26.3	-1.0
LPK	Lapseki	2.41	347	ePN	Pn	12 44 26.4	-1.8
AKAS	Kas	2.46	136	i P	Pn	12 44 30.7	+1.9
ULDT	Uludag	2.47	31	i P	Pg	12 44 34.4	-2.9
ULDT				i S	Sg	12 45 06.6	-3.7
KARP	Karpathos	2.49	186	ePB	Pb	12 44 31.0	-1.4
KARP	Karpathos	2.49	186	ePn	Pn	12 44 29.7	+0.5
MRMT	Marmara Adasi	2.58	2	ePN	Pn	12 44 29.7	-0.8
LIA	Limnos Island	2.60	317	ePn	Pn	12 44 32.5	+1.7
LIA				eSn	Sg	12 45 14.0	-0.5
MFT	Murefte	2.76	357	ePN	Pn	12 44 31.8	-1.4
YLV	Yalova	2.93	29	ePN	Pn	12 44 35.1	-0.4
ESKT	Eskisehir	3.02	59	ePN	Pn	12 44 37.2	+0.4
ESKT	Eskisehir	3.02	59	i P	Pg	12 44 43.9	-4.4
ESKT				i S	Sg	12 45 33.4	+4.9
BADT	Buyukada	3.09	23	ePN	Pn	12 44 37.2	-0.6
GPA	Golpazari	3.15	43	ePN	Pn	12 44 39.5	+0.9
CTT	Catalca	3.20	13	ePN	Pn	12 44 39.3	-0.1
HRT	Hereke	3.26	30	ePN	Pn	12 44 40.3	0.0
ISK	Istanbul-Kandi	3.27	21	ePN	Pn	12 44 39.4	-1.0
EYL	Eskiyayla	3.27	38	ePN	Pn	12 44 40.7	+0.3
EDRB	Edirne	3.86	352	ePN	Pn	12 44 47.2	-1.6
SGKT	Sivrigoynuk	4.36	53	i P	Pg	12 45 11.2	-3.8
SGKT				i S	Sg	12 46 15.3	+2.2

ISC 12 12:58:16.8±0.7,**37.99N**±0.03×**27.40E**±0.09,**h12**^{km}±9^{km}, **n6**,σ**0^{s}73**/12,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZM	**Izmir**	**0.42**	**346**	*e*PG	**Pg**	**12 58 25.5**	**0.0**
IZM				*e*SG	**Sg**	**12 58 31.3**	**-0.1**
KDAG	**Bornova**	**0.43**	**346**	*i* P	**Pg**	**12 58 25.7**	**+0.1**
KDAG				*i* S	**Sg**	**12 58 31.7**	**+0.2**
MLSB	**Milas**	**0.75**	**156**	*e*PG	**Pg**	**12 58 32.1**	**+0.1**
MLSB				*e*SG	**Sg**	**12 58 41.6**	**-0.5**
BDRM	**Kayabasi**	**0.92**	**178**	*i* P	**Pb**	**12 58 34.3**	**+0.1**
BDRM				*i* S	**Sb**	**12 58 45.8**	**-0.3**
MANT	**Manisa**	**1.04**	**61**	*i* P	**Pb**	**12 58 36.7**	**+0.4**
MANT				*i* S	**Sb**	**12 58 47.1**	**-2.6**
DNZL	**Cakiroluk**	**1.34**	**102**	*i* P	**Pb**	**12 58 41.7**	**+0.3**
DNZL				*i* S	**Sb**	**12 58 59.5**	**+1.2**

ISC 12 13:17:54.9±0.6,**37.97N**±0.03×**27.44E**±0.05,**h10**^{km},**n9**, σ**1^{s}07**/16,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZM	**Izmir**	**0.45**	**342**	*i* PG	**Pg**	**13 18 03.4**	**-0.6**
IZM				*i* SG	**Sg**	**13 18 09.2**	**-0.9**
KDAG	**Bornova**	**0.45**	**342**	*i* P	**Pg**	**13 18 04.1**	**0.0**
KDAG				*i* S	**Sg**	**13 18 09.5**	**-0.7**
MLSB	**Milas**	**0.73**	**158**	PG	**Pg**	**13 18 09.2**	**-0.3**
URLA	**Izmir**	**0.77**	**300**	*i* P	**Pb**	**13 18 11.0**	**+1.1**
URLA				*i* S	**Sb**	**13 18 21.6**	**+1.4**
BDRM	**Kayabasi**	**0.91**	**180**	*i* P	**Pb**	**13 18 12.2**	**0.0**
BDRM				*i* S	**Sb**	**13 18 23.7**	**-0.4**
BODT	**Bodrum**	**0.92**	**187**	*e*PG	**Pg**	**13 18 11.8**	**-1.5**
MANT	**Manisa**	**1.02**	**59**	*i* P	**Pb**	**13 18 14.5**	**+0.3**
MANT				*i* S	**Sb**	**13 18 24.9**	**-2.5**
DNZL	**Cakiroluk**	**1.30**	**102**	*i* P	**Pb**	**13 18 20.1**	**+1.1**
DNZL				*i* S	**Sb**	**13 18 36.8**	**+1.1**
ULDT	**Uludag**	**2.54**	**31**	*i* P	**Pn**	**13 18 41.3**	**+4.4**
ULDT				*i* S	**Sn**	**13 19 11.9**	**+3.8**

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*IDC **12** 13:30:19.2±1.1,34.35N×89.70E,mb3.6/5,mb1 3.9/8, mb1mx3.7/21,mbtmp3.6/8,ML3.3/3,MS3.3/6,Ms1 3.3/6, ms1mx3.1/28,Error ellipse: s-maj=44.0km s-min=20.9km az=54.0*

*NEIC **12** 13:30:20.9±0.6,34.47N×89.77E,h10^{km},Error ellipse: s-maj=31.2km s-min=9.7km az=66.0*

ISC 12 13:30:21.9±0.7,**34.5N**±0.1×**89.8E**±0.3,**h33**^{km},**n15**, σ**1^{s}30**/11,**mb3.5**/5,**MS3.3**/4,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**4.89**	**166**	*e*P	**P**	**13 31 36.3**	**+1.1**
SHL	**Shillong**	**9.06**	**168**	*e*P	**P**	**13 32 30.0**	**-3.3**
MKAR	**Makanchi Array**	**13.56**	**337**	Pn	**P**	**13 33 32.1**	**-2.1**
	0.1nm,0.3s,baz=159,slow=12,SNR=3.9						
CMAR	**Chiang Mai Arr**	**17.90**	**151**	P	**P**	**13 34 28.8**	**-1.2**
	0.1nm,0.3s,baz=328,slow=11,SNR=14						
SONM	**Songino Array**	**18.21**	**38**	LR	LR	13 42 04.3	
	comp=Z,74nm,18.4s,baz=249,slow=38						
ZAL	**Zalesovo**	**19.77**	**351**	P	**P**	**13 34 51.3**	**-0.6**
	0.2nm,0.3s,baz=315,slow=12,SNR=10						
ZAL				LR	LR	13 43 35.2	
	comp=Z,125nm,18.3s,baz=24,slow=40						
BVAR	**Borovoye Array**	**23.13**	**329**	P	**P**	**13 35 26.1**	**+0.4**
	0.6nm,0.5s,mb3.3,baz=121,slow=8.4,SNR=4.4						
BRTR	**Keskin Array B**	**44.51**	**294**	P	**P**	**13 38 31.9**	**0.0**
	0.7nm,0.5s,mb3.8,baz=76,slow=12,SNR=3.4						
EIL	**Elat**	**46.28**	**280**	LR	LR	14 01 29.8	
	comp=Z,30nm,20.1s,MS3.2,baz=299,slow=40						
HFS	**Hagfors**	**54.06**	**323**	LR	LR	14 02 56.1	
	comp=Z,20nm,20.9s,MS3.1,baz=72,slow=36						
GERES	**GERESS Array B**	**56.37**	**310**	P	**P**	**13 40 03.1**	**+1.1**
	0.2nm,0.6s,mb3.3,baz=51,slow=8.5,SNR=3.4						
GERES				LR	LR	14 07 04.9	
	comp=Z,28nm,18.5s,MS3.4,baz=85,slow=39						
DAVOX	**Davos**	**59.44**	**308**	LR	LR	14 08 06.5	
	comp=Z,44nm,20.2s,MS3.6,baz=82,slow=38						
WRA	**Warramunga Arr**	**68.70**	**135**	P	**P**	**13 41 24.6**	**+0.1**
	0.7nm,0.9s,mb3.6,baz=327,slow=6.7,SNR=4.7						
ILAR	**Eielson Array**	**71.65**	**22**	P	**P**	**13 41 43.7**	**+2.2**
	0.3nm,0.5s,mb3.4,baz=290,slow=6.3,SNR=4.4						
ILAR	**Eielson Array**	**71.65**	**22**	P	**P**	**13 41 43.7**	**+2.2**

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*NIED **12** 13:40:00,30.20N×139.10E,h440^{km},Mw4.3 Best double couple: M$_0$3.28×10^{15} NP1:φ$_s$217°,δ68°,λ-107°. NP2: φ$_s$76°,δ28°,λ-54°.*

*JMA **12** 13:40:56.5±0.3,30.23N×139.05E,h456^{km}±4^{km},M4.3*

*BJI **12** 13:40:57.9,30.19N×138.67E,h455^{km},mB4.7,mb4.8*

*IDC **12** 13:40:57.6±0.8,30.22N×138.60E,h422^{km}±7^{km},mb3.7/23, mb1 3.9/27,mb1mx3.8/30,mbtmp4.5/27,Error ellipse: s-maj=11.0km s-min=10.1km az=105.0*

*MOS **12** 13:40:57.1±0.9,30.25N×138.53E,h430^{km},mb4.4/15, Error ellipse: s-maj=13.2km s-min=7.3km az=92.3*

*NEIC **12** 13:40:58.9±0.3,30.25N×138.62E,mb4.3/24,Error ellipse: s-maj=7.4km s-min=5.3km az=158.0*

ISC 12 13:40:57.7±0.5,**30.26N**±0.05×**138.62E**±0.05,**h437**^{km}±3^{km}, **h440**^{km}±6.0^{km}**:pP-P,n141,**σ**1^{s}08**/155,**mb4.2**/55,**7C-5D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**3.01**	**19**	P	**P**	**13 42 04.4**	**0.0**
	269nm,0.3s,baz=154,slow=6.7,SNR=222						
JHJ				S	**S**	**13 42 55.9**	**-1.1**
	236nm,0.3s,baz=70,slow=23,SNR=12						
JHJ2	**Mitsune**	**3.02**	**19**	P	**P**	**13 42 04.4**	**0.0**
TK02	**Tokai 2**	**3.75**	**349**	P	**P**	**13 42 12.7**	**+2.3**
TK03	**Tokai 3**	**3.93**	**352**	*e*S	**S**	**13 43 14.5**	**+3.9**
JKO	**Kozu shima**	**3.94**	**6**	P	**P**	**13 42 12.5**	**+0.4**
JWZ	**Kozaga**	**4.09**	**324**	P	**P**	**13 42 15.4**	**+1.9**
JIE	**Ise**	**4.42**	**339**	P	**P**	**13 42 19.1**	**+2.5**
JIE				*e*S	**S**	**13 43 22.6**	**+3.9**
CBIJ	**Chichi jima**	**4.45**	**134**	P	**P**	**13 42 13.8**	**-3.0**
	62nm,0.3s,baz=294,slow=22,SNR=30						
CBIJ				S	**S**	**13 43 13.8**	**-5.3**
	237nm,0.3s,baz=284,slow=22,SNR=30						
CBIJ	**Chichi jima**	**4.45**	**134**	P	**P**	**13 42 13.9**	**-2.9**
CBIJ				*e*S	**S**	**13 43 13.7**	**-5.4**
BSO1	**Boso 1**	**4.81**	**24**	P	**P**	**13 42 19.0**	**-1.3**
BSO1				S	**S**	**13 43 24.1**	**-1.2**
JOD2	**Odawara 2**	**5.00**	**4**	P	**P**	**13 42 21.7**	**-0.5**
JTO	**Tosashimizu**	**5.60**	**299**	P	**P**	**13 42 30.5**	**+2.2**
JTO				*e*S	**S**	**13 43 44.3**	**+4.8**
JRY	**Ryogami san**	**5.74**	**2**	P	**P**	**13 42 29.4**	**-0.3**
JRY				*e*S	**S**	**13 43 40.2**	**-2.0**
MJAR	**Matsushiro Arr**	**6.27**	**357**	P	**P**	**13 42 34.4**	**-0.9**
	8.7nm,0.3s,baz=167,slow=11,SNR=132						
MJAR				S	**S**	**13 43 47.7**	**-4.6**
	3.2nm,0.3s,baz=157,slow=16,SNR=5.2						
MAJO	**Matsushiro**	**6.27**	**357**	⇑*i*P	**P**	**13 42 34.7**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,81nm,0.5s						
MAJO	**Matsushiro**	**6.27**	**357**	⇑*i*P	**P**	**13 42 34.6**	**-0.7**
	comp=Z,81nm,0.5s						
MAT	**Matsushiro**	**6.27**	**357**	*e*P	**P**	**13 42 35.0**	**-0.3**
MAT				*e*S	**S**	**13 43 52.0**	**-0.3**
MAT				pmax	pmax		
	comp=Z,86nm,0.7s						
MAT	**Matsushiro**	**6.27**	**357**	*e*P	**P**	**13 42 35.0**	**-0.3**
	comp=Z,86nm,0.7s						
MAT				*e*S	**S**	**13 43 52.0**	**-0.3**
MAT	**Matsushiro**	**6.27**	**357**	P	**P**	**13 42 34.5**	**-0.8**
MAT				S	**S**	**13 43 52.1**	**-0.2**
MAT	**Matsushiro**	**6.27**	**357**	P	**P**	**13 42 34.5**	**-0.8**
MAT				*e*S	**S**	**13 43 52.3**	**0.0**
JHS	**Saijyo**	**6.62**	**317**	P	**P**	**13 42 41.2**	**+2.2**
JNU	**Nakatsue**	**7.19**	**295**	P	**P**	**13 42 47.5**	**+2.3**
	comp=Z,1.5nm,0.3s,baz=87,slow=10,SNR=14						
JSJ	**Shimokoshiki**	**7.78**	**283**	P	**P**	**13 42 53.7**	**+2.0**
JTU	**Tsushima**	**8.88**	**301**	P	**P**	**13 43 05.3**	**+1.3**
JMK	**Ichinoseki**	**8.93**	**13**	P	**P**	**13 43 04.0**	**-0.6**
JMK				*e*S	**S**	**13 44 42.1**	**-2.8**
JOW	**Kunigami**	**9.72**	**252**	P	**P**	**13 43 14.8**	**+1.3**
	comp=Z,4.1nm,0.3s,baz=124,slow=16,SNR=8.3						
JOW	**Kunigami**	**9.72**	**252**	P	**P**	**13 43 16.0**	**+2.6**
JOT	**Ohata**	**11.27**	**9**	P	**P**	**13 43 30.6**	**-0.1**
KS15	**Wonju Array Si**	**11.44**	**312**	*e*P	**P**	**13 43 32.3**	**-0.3**
JKB	**Kayabe**	**11.76**	**9**	P	**P**	**13 43 35.5**	**-0.6**
JOSM	**Okushiri--Mats**	**11.81**	**3**	P	**P**	**13 43 36.2**	**-0.5**
ASAJ	**Asahikawa**	**14.18**	**12**	P	**P**	**13 44 02.8**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ	**Asahikawa**	**14.18**	**12**	P	**P**	**13 44 02.8**	**+0.7**
	comp=Z,3.9nm,0.3s,baz=242,slow=11,SNR=23						
JTKR	**Abashiri--Toko**	**14.31**	**16**	P	**P**	**13 44 04.2**	**+0.8**
SSE	**Sheshan**	**15.03**	**278**	P	**P**	**13 44 12.2**	**+1.3**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s						
SSE				AMB	AMB		
	comp=Z,70nm,4.7s						
SSE	**Sheshan**	**15.03**	**278**	P	**P**	**13 44 12.2**	**+1.3**
	comp=Z,30nm,0.7s						
MDJ	**Mudanjiang**	**16.00**	**336**	*e*P	**P**	**13 44 20.9**	**+0.3**
	comp=Z,10nm,0.9s						
YSS	**Yuzh-Sakhalins**	**16.97**	**10**	⇑*e*P	**P**	**13 44 31.0**	**+0.6**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**16.97**	**10**	*e*P	**P**	**13 44 31.1**	**+0.7**
	comp=Z,34nm,0.8s						
NJ2	**Nanjing**	**17.02**	**281**	*e*P	**P**	**13 44 31.3**	**+0.3**
NJ2				S	**S**	**13 47 21.0**	**-2.5**
NJ2				PCP	PcP	13 48 48.0	-4.5
NJ2				PCS		13 52 29.0	
NJ2				AMB	AMB		
	comp=Z,50nm,1.2s						
NJ2				AMB	AMB		
	comp=Z,270nm,4.2s						
KLR	**Kul'dur**	**19.65**	**347**	*e*P	**P**	**13 44 55.7**	**-1.0**
HHC	**Hu-ho-hao-te**	**24.33**	**303**	*e*P	**P**	**13 45 40.5**	**+0.3**
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
HHC				AMB	AMB		
	comp=Z,90nm,7.3s						
ENH	**Enshi**	**25.14**	**277**	*e*P	**P**	**13 45 46.6**	**-1.0**
	comp=Z,28nm,0.3s,mb5.2						
XAN	**Xi'an**	**25.38**	**286**	P	**P**	**13 45 49.4**	**-0.4**
XAN				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.9						
PET	**Petropavlovsk**	**27.05**	**27**	*e*P	**P**	**13 46 04.1**	**-0.3**
PET				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.5						
PET				MLR	MLR		
	comp=N,100nm,21.0s						
GYA	**Guiyang**	**28.33**	**270**	⇑*i*P	**P**	**13 46 15.9**	**0.0**
GYA				AMB	AMB		
	comp=Z,30nm,0.3s,mb5.1						
LZH	**Lanzhou**	**29.58**	**291**	*e*P	**P**	**13 46 26.5**	**-0.2**
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.6						
LZH	**Lanzhou**	**29.58**	**291**	*e*P	**P**	**13 46 26.5**	**-0.2**
	comp=Z,38nm,1.0s,mb4.7						
LZH				pP		13 46 53.0	
ULN	**Ulaanbaatar**	**29.88**	**315**	*e*P	**P**	**13 46 29.5**	**+0.3**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb3.9						
ULN	**Ulaanbaatar**	**29.88**	**315**	*e*P	**P**	**13 46 29.5**	**+0.3**
	comp=Z,5.5nm,0.9s,mb3.9						
CD2	**Chengdu**	**29.95**	**280**	⇓*i*P	**P**	**13 46 29.0**	**-1.0**
SONM	**Songino Array**	**30.27**	**315**	P	**P**	**13 46 32.9**	**+0.3**
	comp=Z,2.1nm,0.4s,mb3.8,baz=124,slow=9.3,SNR=13						
MA2	**Magadan**	**30.45**	**12**	*de*P	**P**	**13 46 34.5**	**+0.6**
MA2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
MA2	**Magadan**	**30.45**	**12**	*e*P	**P**	**13 46 34.3**	**+0.3**
KMI	**Kunming**	**32.09**	**270**	P	**P**	**13 46 48.3**	**-0.1**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.0						
KMI	**Kunming**	**32.09**	**270**	P	**P**	**13 46 48.3**	**-0.1**
	comp=Z,10.0nm,1.2s,mb4.0						
YAK	**Yakutsk**	**32.31**	**352**	*e*P	**P**	**13 46 49.1**	**-0.8**
YAK				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.4						
YAK	**Yakutsk**	**32.31**	**352**	*e*P	**P**	**13 46 49.1**	**-0.7**
	comp=Z,15nm,0.7s,mb4.4						
ZAK	**Zakamensk**	**33.17**	**317**	*e*P	**P**	**13 46 57.0**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.5						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s						
FX1	**Attu Island--F**	**33.82**	**38**	*e*P	**P**	**13 47 04.5**	**+1.7**
KKTK	**Khon Kaen**	**35.52**	**255**	P	**P**	**13 47 17.0**	**-0.3**
NANT	**Nan**	**36.18**	**260**	⇑P	**P**	**13 47 21.0**	**-1.9**
	comp=Z,188nm,0.8s						
CHG	**Chiang Mai**	**37.67**	**262**	⇑P	**P**	**13 47 35.5**	**+0.3**
	comp=Z,34nm,0.8s,mb4.7						
CMAR	**Chiang Mai Arr**	**37.83**	**261**	P	**P**	**13 47 36.9**	**+0.4**
	comp=Z,6.7nm,0.7s,mb4.1,baz=63,slow=5.4,SNR=59						
CMAR				PcP	PcP	13 49 43.1	+0.2
	comp=Z,0.7nm,0.5s,baz=32,slow=2.1,SNR=4.1						
CMAR				ScP		13 52 49.0	
	comp=Z,1.1nm,0.9s,baz=34,slow=5.1,SNR=5.4						
NST	**Nakhon Sawan**	**38.10**	**256**	P	**P**	**13 47 38.0**	**-0.7**
BILL	**Bilibino**	**41.16**	**15**	⇓*i*P	**P**	**13 48 03.6**	**+0.5**
BILL				*i*		13 49 51.3	
BILL				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.3						
BILL	**Bilibino**	**41.16**	**15**	*e*P	**P**	**13 48 03.4**	**+0.3**
	comp=Z,21nm,1.1s,mb4.4						
SHL	**Shillong**	**41.34**	**275**	*e*P	**P**	**13 48 05.0**	**0.0**
TIXI	**Tiksi**	**41.78**	**355**	⇓*i*P	**P**	**13 48 07.7**	**-0.3**
TIXI				*i* *PP	pP	13 49 34.3	+2.7
TIXI				*i*		13 49 56.5	
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.0						
ZAL	**Zalesovo**	**45.06**	**318**	P	**P**	**13 48 32.5**	**-1.6**
	comp=Z,2.1nm,0.3s,mb4.0,baz=5.8,slow=6.3,SNR=10						
GUN	**Gumba**	**45.81**	**281**	*e*P	**P**	**13 48 41.1**	**+0.8**
	comp=Z,82nm,0.4s						
MKAR	**Makanchi Array**	**46.06**	**307**	P	**P**	**13 48 41.8**	**-0.2**
	comp=Z,3.0nm,0.5s,mb3.9,baz=92,slow=9.3,SNR=39						
MKAR				PcP	PcP	13 50 09.6	-0.7
	comp=Z,0.9nm,0.5s,baz=90,slow=5.8,SNR=6.3						
MKAR				ScP		13 53 20.0	
	comp=Z,1.1nm,0.8s,baz=90,slow=6.1,SNR=5.4						
PKI	**Pulchoki**	**46.31**	**280**	*e*P	**P**	**13 48 43.5**	**-0.7**
	comp=Z,20nm,0.5s,mb4.7						
PKI	**Pulchoki**	**46.31**	**280**	*e*P	**P**	**13 48 43.5**	**-0.7**
PKI				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.4						
KKN	**Kakani**	**46.35**	**281**	*e*P	**P**	**13 48 44.6**	**+0.1**
	comp=Z,43nm,0.5s,mb5.0						
KKN	**Kakani**	**46.35**	**281**	*e*P	**P**	**13 48 44.6**	**+0.1**
KKN				pmax	pmax		
	comp=Z,22nm,0.5s,mb4.7						
DMN	**Daman**	**46.55**	**281**	*e*P	**P**	**13 48 46.1**	**0.0**
	comp=Z,34nm,0.4s,mb5.0						
GKN	**Gorkha**	**46.84**	**281**	*e*P	**P**	**13 48 48.3**	**0.0**
	comp=Z,36nm,0.3s,mb5.2						
KOLN	**Koldanda**	**47.79**	**281**	*e*P	**P**	**13 48 55.2**	**-0.3**
	comp=Z,67nm,0.7s,mb5.1						
WB2	**Warramunga Arr**	**50.08**	**185**	⇓*i*P	**P**	**13 49 11.2**	**-1.7**
WRA	**Warramunga Arr**	**50.08**	**185**	P	**P**	**13 49 11.3**	**-1.5**
	comp=Z,7.3nm,0.6s,mb4.2,baz=2.8,slow=7.9,SNR=197						
WRA				PcP	PcP	13 50 24.5	-0.7
	comp=Z,0.8nm,0.4s,baz=358,slow=4.0,SNR=7.1						
KLP	**Kalpa**	**51.23**	**288**	*e*x	x	13 49 24.4	
BISR	**Bishrakh**	**52.74**	**284**	*e*P	**P**	**13 49 31.8**	**-0.5**
BISR				AMb	AMB	13 49 32.8	
	comp=Z,95nm,0.4s						
NDI	**New Delhi**	**52.90**	**285**	*e*P	**P**	**13 49 31.0**	**-2.4**
NDI				*e*x	x	13 55 18.0	
AYAN	**Aya Nagar**	**53.03**	**284**	*e*P	**P**	**13 49 33.4**	**-1.0**
AYAN				AML	AML	13 49 34.1	
	comp=Z,1.0nm,0.5s						
AYAN				AMb	AMB	13 49 34.8	
	comp=Z,2.3nm,1.1s,mb3.3						
SONA	**Sohna**	**53.14**	**284**	*e*P	**P**	**13 49 34.3**	**-0.9**
BVAR	**Borovoye Array**	**53.60**	**316**	P	**P**	**13 49 37.5**	**-0.6**
	comp=Z,5.5nm,0.4s,mb4.1,baz=96,slow=7.2,SNR=77						
BVAR				PcP	PcP	13 50 36.4	-1.5
	comp=Z,0.9nm,0.4s,baz=90,slow=4.4,SNR=5.5						
KUDL	**Kundal**	**53.67**	**284**	*e*P	**P**	**13 49 37.7**	**-1.3**
KUDL				AMb	AMB	13 49 39.3	
	comp=Z,13nm,0.7s,mb4.3						
RSO	**Redoubt South**	**53.71**	**35**	*e*P	**P**	**13 49 38.3**	**-0.5**
IMA	**Indian Mountai**	**53.72**	**28**	*e*P	**P**	**13 49 39.0**	**+0.2**
IMA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
IMA	**Indian Mountai**	**53.72**	**28**	*e*P	**P**	**13 49 39.0**	**+0.2**
	comp=Z,9.9nm,0.7s,mb4.2						
KHET	**Khetri**	**54.27**	**284**	*e*P	**P**	**13 49 42.6**	**-0.6**
KHET				AMb	AMB	13 49 43.4	
	comp=Z,30nm,0.5s,mb4.8						
MCK	**McKinley**	**55.58**	**31**	*e*P	**P**	**13 49 51.3**	**-0.8**
MCK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.0						
MCK	**McKinley**	**55.58**	**31**	*e*P	**P**	**13 49 51.3**	**-0.8**
	comp=Z,7.9nm,1.0s,mb4.0						
SML	**Sawmill**	**55.87**	**33**	*e*P	**P**	**13 49 53.4**	**-0.7**
ILAR	**Eielson Array**	**56.48**	**30**	P	**P**	**13 49 57.0**	**-1.3**
	comp=Z,3.1nm,0.6s,mb3.8,baz=261,slow=4.6,SNR=31						
DAWY	**Dawson**	**59.77**	**30**	*e*P	**P**	**13 50 20.7**	**+0.2**
ARU	**Arti**	**60.01**	**321**	⇑*i*P	**P**	**13 50 21.1**	**-1.0**
ARU				*e*		13 51 01.5	
ARU				*e*		13 52 39.4	
ARU				*e*S	**S**	**13 57 51.0**	**-8.6**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
ARU	**Arti**	**60.01**	**321**	*e*P	**P**	**13 50 21.4**	**-0.7**
BOM	**Bombay**	**60.19**	**276**	*e*P	**P**	**13 50 25.2**	**+1.3**
INK	**Inuvik**	**61.48**	**25**	P	**P**	**13 50 31.3**	**-0.4**
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK	**Inuvik**	**61.48**	**25**	P	**P**	**13 50 31.2**	**-0.5**
	comp=Z,3.3nm,0.5s,mb4.0,baz=353,slow=4.8,SNR=3.1						
INK	**Inuvik**	**61.48**	**25**	*e*P	**P**	**13 50 31.1**	**-0.6**
	comp=Z,3.7nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**61.86**	**177**	*e*P	**P**	**13 50 34.0**	**-0.8**
	comp=Z,2.2nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**61.86**	**177**	P	**P**	**13 50 33.9**	**-0.8**
	comp=Z,2.5nm,0.5s,mb4.0,baz=341,slow=7.9,SNR=7.9						
DLBC	**Dease Lake**	**65.43**	**35**	P	**P**	**13 50 58.2**	**+1.0**
	comp=Z,3.2nm,0.9s,mb3.9,baz=303,slow=8.5,SNR=6.0						
ARCES	**ARCESS Array B**	**69.52**	**340**	P	**P**	**13 51 22.5**	**+0.5**
	comp=Z,0.7nm,0.4s,mb3.5,baz=73,slow=8.0,SNR=8.4						
YKA	**Yellowknife Ar**	**70.84**	**28**	P	**P**	**13 51 29.9**	**-0.1**
	comp=Z,2.9nm,0.7s,mb3.9,baz=297,slow=5.8,SNR=30						
OBN	**Obninsk**	**72.14**	**324**	P	**P**	**13 51 38.0**	**+0.3**
KAF	**Kangasniemi**	**73.26**	**333**	*e*p	**P**	**13 51 43.6**	**-0.4**
	comp=Z,0.6nm,0.3s,mb3.6						
KAF	**Kangasniemi**	**73.26**	**333**	*e*P	**P**	**13 51 43.6**	**-0.4**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
KIV	**Kislovodsk**	**73.61**	**312**	*e*P	**P**	**13 51 47.7**	**+1.3**
KIV				*e*		13 54 33.9	
KIV				*i*		14 00 38.8	
KIV				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.5						
FINES	**FINESS Array B**	**73.72**	**332**	P	**P**	**13 51 46.4**	**-0.2**
	comp=Z,1.0nm,0.3s,mb3.9,baz=74,slow=5.0,SNR=23						
FINES	**FINESS Array B**	**73.72**	**332**	P	**P**	**13 51 46.4**	**-0.2**
SOC	**Sochi**	**75.69**	**312**	*e*P	**P**	**13 51 56.5**	**-1.6**
SOC				*e*S	S	14 01 00.6	-2.2
SOC				*e*		14 01 42.8	
SOC				*e*SSS	SSS	14 09 23.8	-5.5
SOC				pmax	pmax		
	comp=N,37nm,1.1s						
SOC				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.0						
SOC				pmax	pmax		
	comp=E,37nm,0.8s						
EDM	**Edmonton**	**76.13**	**36**	*e*P	**P**	**13 52 00.6**	**+0.3**
NEW	**Newport**	**76.66**	**42**	P	**P**	**13 52 04.5**	**+1.2**
NEW				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NEW	**Newport**	**76.66**	**42**	P	**P**	**13 52 04.5**	**+1.2**
	comp=Z,5.1nm,0.8s,mb4.2,baz=299,slow=5.2,SNR=8.0						
NEW	**Newport**	**76.66**	**42**	*e*P	**P**	**13 52 04.0**	**+0.7**
	comp=Z,4.3nm,1.1s,mb4.0						
AKASG	**Malin Array Be**	**78.21**	**322**	P	**P**	**13 52 11.4**	**-0.3**
	comp=Z,1.1nm,0.3s,mb3.9,baz=53,slow=5.4,SNR=10						
NOA	**NORSAR Array B**	**79.50**	**337**	P	**P**	**13 52 18.4**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.4,baz=50,slow=4.4,SNR=2.7						
NOA	**NORSAR Array B**	**79.50**	**337**	P	**P**	**13 52 18.4**	**+0.1**
HLID	**Hailey**	**80.75**	**45**	*e*P	**P**	**13 52 25.9**	**+0.8**
	comp=Z,0.9nm,0.9s,mb3.5						
NVAR	**Mina Array Bea**	**80.99**	**51**	P	**P**	**13 52 27.9**	**+1.4**
	comp=Z,2.2nm,0.7s,mb4.0,baz=286,slow=6.1,SNR=20						
NVAR				pP	pP	13 54 05.8	+1.2
	comp=Z,0.2nm,0.5s,baz=278,slow=6.3,SNR=3.5						
BOZ	**Bozeman (W)**	**81.24**	**42**	*e*P	**P**	**13 52 28.1**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
BOZ	**Bozeman (W)**	**81.24**	**42**	*e*P	**P**	**13 52 28.1**	**+0.5**
	comp=Z,4.0nm,0.7s,mb4.3						
BR131	**Keskin Array S**	**81.56**	**311**	*e*P	**P**	**13 52 30.2**	**+0.8**
	comp=Z,4.0nm,0.8s,mb4.2						
BRTR	**Keskin Array B**	**81.56**	**311**	P	**P**	**13 52 30.2**	**+0.8**
	comp=Z,4.9nm,0.8s,mb4.3,baz=90,slow=3.7,SNR=19						
ELK	**Elko**	**81.76**	**48**	P	**P**	**13 52 32.0**	**+1.6**
	comp=Z,1.0nm,0.6s,mb3.7,baz=12,slow=5.6,SNR=6.9						
IMW	**Indian Meadow**	**82.64**	**43**	*e*P	**P**	**13 52 36.9**	**+2.1**
	comp=Z,2.2nm,0.7s,mb4.0						
FRB	**Frobisher Bay**	**83.87**	**12**	P	**P**	**13 52 41.2**	**+0.7**
	comp=Z,5.8nm,0.6s,mb4.5,baz=342,slow=6.2,SNR=15						
FRB	**Frobisher Bay**	**83.87**	**12**	P	**P**	**13 52 41.2**	**+0.7**
BW06	**Boulder Array**	**84.12**	**43**	*e*P	**P**	**13 52 43.1**	**+0.9**
PDAR	**Pinedale Array**	**84.12**	**43**	P	**P**	**13 52 43.3**	**+1.1**
	comp=Z,1.3nm,0.6s,mb3.8,baz=322,slow=3.1,SNR=13						
MSU	**Marysvale**	**84.97**	**48**	*e*P	**P**	**13 52 48.4**	**+1.9**
ULM	**Lac du Bonnet**	**86.45**	**32**	P	**P**	**13 52 51.9**	**-1.4**
	comp=Z,3.2nm,0.6s,mb4.2,baz=325,slow=4.5,SNR=3.1						
ANMO	**Albuquerque**	**90.77**	**48**	*i* P	**P**	**13 53 15.9**	**+2.0**
ANMO				*i*		13 56 58.9	
ANMO	**Albuquerque**	**90.77**	**48**	P	**P**	**13 53 15.6**	**+1.7**
	comp=Z,2.1nm,0.7s,mb4.0,baz=314,slow=4.0,SNR=9.4						
ANMO	**Albuquerque**	**90.77**	**48**	P	**P**	**13 53 15.6**	**+1.7**
TXAR	**Lajitas Array**	**96.14**	**51**	P	**P**	**13 53 39.9**	**+1.3**
	comp=Z,0.6nm,0.6s,mb3.9,baz=292,slow=2.0,SNR=9.4						
TXAR				pP	pP	13 55 19.8	+0.6
	comp=Z,1.0nm,0.8s,baz=295,slow=3.0,SNR=8.4						
TXAR	**Lajitas Array**	**96.14**	**51**	P	**P**	**13 53 39.9**	**+1.3**
TXAR				pP	pP	13 55 19.8	+0.6

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*NEIC **12** 13:43:59.4,16.94N×100.16W,h6^{km},MD4.1(MEX),After MEX.*

MEX 12 13:43:59.4±0.8,**16.94N**×**100.16W**,**h6**^{km}±4^{km},**MD4.1**, **1C-2D,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.15**	**318**	⇓*i*P	Pg	13 44 02.0	-0.6
CAIG				*i* S	Sg	13 44 04.5	-0.3
ACX	**Acapulco**	**0.24**	**106**	⇓*i*P	Pg	13 44 03.6	-0.8
ACX				*e*S	Sg	13 44 07.7	-0.1
ZIIG	**Zihuatanejo**	**1.41**	**298**	⇑*e*P	Pn	13 44 22.6	-3.1
ZIIG				*i* S	Sb	13 44 39.0	-5.0
PLIG	**Platanillo**	**1.58**	**23**	*e*P	Pn	13 44 24.5	-3.6
PLIG				*i* S	Sb	13 44 44.2	-4.6
PNIG	**Pinotepa**	**2.02**	**105**	*e*P	Pn	13 44 30.3	-4.2
PNIG				*e*S	Sn	13 44 54.8	-5.5
IIZ	**Mezontepec**	**2.40**	**21**	*e*P	Pn	13 44 37.0	-2.9
UNM	**Universidad Na**	**2.56**	**21**	*e*P	Pn	13 44 39.9	-2.2
UNM				*e*S	Sn	13 45 07.8	-6.1
UNM				*i* S	Sn	13 45 08.0	-5.9
UNM	**Universidad Na**	**2.56**	**21**	*e*P	Pn	13 44 39.9	-2.2
UNM				*e*P		13 44 40.0	
UNM				*e*S	Sn	13 45 07.8	-6.1
UNM				*i* S	Sn	13 45 08.0	-5.9
PPM	**Popocatepetl**	**2.57**	**34**	*e*P	Pn	13 44 39.1	-3.2
PPM				*i* S	Sn	13 45 11.0	-3.3
PPM				*e*S	Sn	13 45 11.7	-2.6
PPM	**Popocatepetl**	**2.57**	**34**	*e*P	Pn	13 44 39.1	-3.2
PPM				*e*P		13 44 39.2	
PPM				*i* S	Sn	13 45 11.0	-3.3
PPM				*e*S	Sn	13 45 11.7	-2.6
MOIG	**Morelia**	**2.90**	**340**	*e*P	Pn	13 44 43.1	-3.8
MOIG				*e*S	Sn	13 45 14.9	-7.6
VHO	**Vista Hermosa**	**3.28**	**87**	*e*P	Pn	13 44 49.6	-2.9
VHO				*e*S	Sn	13 45 28.1	-4.2
OXX	**Oaxaca**	**3.29**	**87**	*e*P	Pn	13 44 49.2	-3.4
OXX				*i* S	Sn	13 45 26.7	-5.8
IISM	**Ciudad Serdan**	**3.34**	**52**	*e*P	Pn	13 44 49.6	-3.7
IISM				*i* S	Sn	13 45 28.3	-5.5
SFJM	**Santa Fe**	**4.46**	**323**	*e*P	Pn	13 45 07.7	-1.5
SFJM				*i* S	Sn	13 45 59.2	-3.0
ZAIG	**Zacatecas**	**6.23**	**339**	*e*P	Pn	13 45 39.8	+5.7
ZAIG				*i* S	Sn	13 46 37.2	-9.3

MOS 12 14:17:56.9±1.5,**43.19N**×**47.84E**,**h14**^{km},**mb3.8**/1,**Error ellipse: s-maj=20.9km s-min=11.8km az=72.5,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNSR	**Manas**	**0.49**	**190**	*e*PG	Pg	14 18 07.2	+0.1

MNSR				*i* S	Sb	14 18 13.0	-0.6
MNSR				pmax	pmax		
	comp=Z,117nm,0.2s						
BUJR	**Buynaksk**	0.65	236	*e*PG	Pg	14 18 12.2	+2.1
BUJR				*i* S	Sb	14 18 23.2	+5.1
BUJR				pmax	pmax		
	comp=Z,65nm,0.2s						
BUJR	**Buynaksk**	0.65	236	*e*Pg	Pg	14 18 12.2	+2.1
	comp=Z,65nm,0.2s						
BUJR				*i* Sg	Sg	14 18 23.2	+4.3
DBC	**Dubki**	0.76	257	*i* PG	Pg	14 18 12.5	+0.2
DBC				*e*S	Sb	14 18 23.5	+2.2
KRNR	**Karanay**	0.78	242	*e*PG	Pg	14 18 12.2	-0.4
KRNR				*i* S	Sb	14 18 23.2	+1.5
KRNR				pmax	pmax		
	comp=Z,50nm,0.2s						
KRNR	**Karanay**	0.78	242	*e*Pg	Pg	14 18 12.2	-0.4
	comp=Z,50nm,0.2s						
KRNR				*i* Sg	Sg	14 18 23.2	+0.2
DRN	**Derbent**	1.21	163	PG	Pg	14 18 21.5	+0.2
DRN				*i* S	Sb	14 18 37.5	+3.0
BTLR	**Botlikh**	1.30	247	*e*PG	Pg	14 18 22.5	-0.5
BTLR				*e*S	Sb	14 18 41.0	+4.0
KSMR	**Kasumkent**	1.60	172	*e*PG	Pg	14 18 27.0	-1.9
KSMR				*i* S	Sn	14 18 48.0	+2.5
AKT	**Akhty**	1.71	183	*e*PN	Pn	14 18 29.0	+2.4
AKT				*i* S	Sn	14 18 50.5	+2.2
AKT				pmax	pmax		
	comp=Z,36nm,0.3s						

IGQ 12 14:19:14.3, 1.63S×77.93W, h197^{km}±4^{km}, mb4.1, 2C-14D, Error ellipse: s-maj=5.5km s-min=3.0km az=58.1, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULBA	**Ulba**	0.51	290	⇓P	P	14 19 41.6	+0.1
RUN5	**Runtun**	0.54	293	⇓P	P	14 19 41.6	0.0
ARRY	**Arrayan**	0.54	283	P	P	14 19 41.6	+0.1
ARRY				S	S	14 20 01.5	-1.2
JUIV	**Juive**	0.58	291	P	P	14 19 41.9	+0.2
JUIV				S	S	14 20 02.2	-0.7
CUSU	**Cusua**	0.58	288	P	P	14 19 42.6	+0.8
IGUA	**Igualata**	0.73	281	P	P	14 19 43.5	+1.1
PISA	**Pisayambo**	0.73	321	P	P	14 19 43.0	+0.6
TAMB	**Tambo**	1.03	335	⇓P	P	14 19 45.0	+0.8
VC1	**Cotopaxi 1**	1.09	334	⇓P	P	14 19 45.5	+0.9
CAMI	**Rancho Maria**	1.11	329	⇓P	P	14 19 46.0	+1.2
ANTI	**Antisana**	1.20	349	⇓P	P	14 19 46.1	+0.6
JUA2	**San Juan 2**	1.56	334	⇓P	P	14 19 49.3	+0.6
GGP	**Refugio Guagua**	1.59	335	P	P	14 19 49.8	+0.8
ELAGU	**Cayambe Volc**	1.60	358	⇓P	P	14 19 49.7	+0.7
TERV	**Terraza Guagua**	1.60	335	⇑P	P	14 19 50.1	+1.1
PINO	**Pino**	1.61	335	⇓P	P	14 19 50.1	+0.9
YANA	**Yana**	1.63	337	⇓P	P	14 19 50.1	+0.7
CAYR	**Refugio Cayamb**	1.64	357	⇓P	P	14 19 50.3	+0.9
CAYA	**Cayambe**	1.69	358	⇓P	P	14 19 50.9	+1.0
JOR1	**San Jorge 1**	1.77	336	⇓P	P	14 19 49.4	-1.3
COTA	**Cotacachi**	1.99	348	⇓P	P	14 19 54.1	+1.2
MAGD	**Magdalena**	2.41	310	P	P	14 19 59.1	+1.6
ECEN	**Cerro Negro**	2.44	359	P	P	14 19 59.2	+1.4
JAMA	**Jama**	2.65	301	P	P	14 20 01.3	+1.1
HOJA	**Cerro de Hojas**	2.68	282	⇑P	P	14 19 59.9	-0.7
HOJA				S	S	14 20 32.0	-4.4

IDC 12 14:31:44.3±1.6, 8.70S×130.43E, mb3.8/3, mb1 4.0/5, mb1mx3.8/15, mbtmp3.8/5, ML3.4/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/19, Error ellipse: s-maj=54.9km s-min=27.9km az=91.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	10.45	206	Pn	P	14 34 16.0	-2.5
	0.5nm,0.3s,baz=14,slow=11,SNR=5.8						
FITZ				Sn	S	14 36 08.5	-9.0
	0.8nm,0.3s,baz=194,slow=12,SNR=6.4						
WRA	**Warramunga Arr**	11.80	162	Pn	P	14 34 33.2	-3.8
	0.2nm,0.3s,baz=338,slow=13,SNR=10						
WRA				Sn	S	14 36 42.4	-8.3
	0.5nm,0.3s,baz=332,slow=22,SNR=7.9						
CTA	**Charters Tower**	19.04	128	LR	LR	14 43 56.5	
	comp=Z,64nm,19.4s,baz=48,slow=38						
MJAR	**Matsushiro Arr**	45.59	9	P	P	14 40 04.7	-3.4
	1.1nm,0.8s,baz=188,slow=9.3,SNR=5.2						
MKAR	**Makanchi Array**	69.87	327	P	P	14 42 57.8	-1.2
	1.6nm,0.6s,baz=126,slow=7.9,SNR=21						
BVAR	**Borovoye Array**	79.72	328	P	P	14 43 54.0	-1.4
	0.7nm,0.9s,baz=158,slow=8.0,SNR=4.1						

MAN 12 14:59:05.5, 9.77N×126.84E, h23^{km}, mb4.0, ML2.8, MS2.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	1.34	270	*e*P	Pn	14 59 28.0	-1.1
SCPH				*e*S	Sn	14 59 41.1	-5.1
BUTP	**Butuan**	1.45	237	*e*P	Pn	14 59 30.5	-0.1
BUTP				*e*S	Sn	14 59 49.1	+0.1
MSLP	**Maasin**	1.99	281	*e*P	Pn	14 59 40.4	+2.0
MSLP				*e*S	Sn	15 00 02.0	-0.8
BUKP	**Musuan**	2.58	223	*e*P	Pn	14 59 50.2	+3.4
BUKP				*e*S	Sn	15 00 20.8	+3.0
MATI	**Mati**	2.87	192	*e*P	Pn	14 59 50.5	-0.4
PAGZ	**Pagadian**	3.92	241	*e*P	Pn	15 00 07.8	+1.9

MAN 12 15:31:13.5, 8.84N×123.13E, h2^{km}, mb3.6, ML2.4, MS1.9, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCPH	**Dipolog City**	0.34	139	⇓*i*P	Pg	15 31 20.4	+0.2
DCPH				*i* S	Sg	15 31 25.1	+0.4
PAGZ	**Pagadian**	1.02	166	*e*P	Pb	15 31 33.2	-0.3
PAGZ				*e*S	Sb	15 31 48.0	+0.8
IPIL	**Ipil**	1.18	208	*e*P	Pb	15 31 36.9	+0.6
IPIL				*e*S	Sb	15 31 53.6	+1.7
GUIM	**Jordan**	1.85	343	*e*P	Pn	15 31 46.1	-0.4
GUIM				*e*S	Sn	15 32 05.5	-5.3

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*IDC **12** 15:31:39.3±0.5, 7.64S×107.56E, mb4.5/17, mb1 4.5/17, mb1mx4.4/23, mbtmp4.5/17, MS3.7/8, Ms1 3.7/8, ms1mx3.5/22, Error ellipse: s-maj=22.5km s-min=13.5km az=48.0*

*BJI **12** 15:31:51.1, 7.70S×107.60E, h98^{km}, mb4.4*

*NEIC **12** 15:31:51.1±2.5, 7.66S×107.61E, h99^{km}±22^{km}, mb4.6/13, Error ellipse: s-maj=20.7km s-min=8.4km az=48.0*

NEIC Felt [IV] at Cianjur, [III] at Cimahi and [II] at Bandung.

ISC 12 15:31:45.4±4.5, 7.6S±0.1×107.6E±0.1, h61^{km}±41^{km}, n50, σ1^{s}15/37, mb4.5/26, 1C, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSM	**Kuching**	9.43	16	*e*P	**P**	**15 34 06.9**	**+6.0**
KKM	**Kota Kinabalu**	16.05	32	*e*P	**P**	**15 35 36.8**	**+8.1**
MBWA	**Marble Bar**	17.81	140	*e*P	**P**	**15 35 46.5**	**-4.3**
FITZ	**Fitzroy Crossi**	20.38	122	P	**P**	**15 36 19.3**	**-0.4**
	17nm,0.7s,baz=231,slow=3.3,SNR=33						
FITZ				S	**S**	**15 39 53.1**	**-6.4**
	6.2nm,0.8s,baz=180,slow=20,SNR=3.7						
FITZ				LR	LR	15 42 17.4	
	comp=Z,83nm,21.3s,baz=281,slow=31						
KAKA	**Kakadu**	24.91	104	*e*P	**P**	**15 37 04.3**	**-0.2**
	10.0nm,0.5s,mb4.6						
NWAO	**Narrogin (SRO)**	26.70	162	LR	LR	15 46 41.2	
	comp=Z,244nm,20.8s,baz=304,slow=34						
CMAR	**Chiang Mai Arr**	27.31	342	P	**P**	**15 37 26.0**	**-0.6**
	1.2nm,0.6s,mb3.6,baz=178,slow=8.9,SNR=8.7						
CMAR				PcP	PcP	15 40 46.8	+1.7
	1.6nm,0.7s,baz=202,slow=2.8,SNR=10.0						
CMAR				LR	LR	15 49 46.0	
	comp=Z,80nm,18.4s,baz=155,slow=40						
WRA	**Warramunga Arr**	28.61	118	P	**P**	**15 37 37.4**	**-1.0**
	0.8nm,0.4s,mb3.8,baz=290,slow=12,SNR=18						
WRA				PcP	PcP	15 40 47.6	-0.7
	1.3nm,0.5s,baz=300,slow=2.1,SNR=9.9						
WRAB	**Tennant Creek**	28.62	118	*e*P	**P**	**15 37 38.0**	**-0.4**
WB2	**Warramunga Arr**	28.62	118	*e*P	**P**	**15 37 37.5**	**-1.0**
KMI	**Kunming**	32.90	352	P	**P**	**15 38 22.1**	**+6.0**
	5.0nm,1.3s,mb4.3						
CTA	**Charters Tower**	39.37	112	P	**P**	**15 39 12.7**	**+1.9**
	4.3nm,0.9s,mb4.2,baz=272,slow=10.0,SNR=3.6						
CTA				PcP	PcP	15 41 19.1	+0.2
	2.2nm,0.6s,baz=49,slow=1.3,SNR=4.8						
CTAO	**Charters Tower**	39.37	112	P	**P**	**15 39 12.5**	**+1.7**
	20nm,1.5s,mb4.6						
STKA	**Stephens Creek**	39.75	132	*e*P	**P**	**15 39 13.8**	**0.0**
	8.7nm,0.6s,mb4.7						
STKA	**Stephens Creek**	39.75	132	P	**P**	**15 39 14.1**	**+0.2**
	11nm,0.7s,mb4.7,baz=303,slow=9.1,SNR=24						
STKA				PcP	PcP	15 41 19.7	-0.3
	5.2nm,0.7s,baz=330,slow=3.4,SNR=5.3						
STKA				LR	LR	15 55 21.2	
	comp=Z,128nm,22.0s,baz=206,slow=36						
GUN	**Gumba**	41.12	330	*e*P	**P**	**15 39 24.8**	**-0.4**
	6.6nm,0.3s,mb4.8						
DMN	**Daman**	41.27	329	*e*P	**P**	**15 39 25.2**	**-1.2**
	5.4nm,0.4s,mb4.5						
KKN	**Kakani**	41.32	329	*e*P	**P**	**15 39 26.5**	**-0.4**
	6.3nm,0.6s,mb4.4						
GKN	**Gorkha**	41.83	329	*e*P	**P**	**15 39 29.7**	**-1.4**
	8.1nm,0.3s,mb4.9						
KOLN	**Koldanda**	42.18	327	*e*P	**P**	**15 39 32.6**	**-1.4**
	18nm,0.7s,mb4.8						
MJAR	**Matsushiro Arr**	52.47	31	P	**P**	**15 40 54.4**	**0.0**
	0.6nm,0.5s,mb3.8,baz=209,slow=7.9,SNR=5.8						
MJAR				PcP	PcP	15 42 05.9	+1.5
	1.7nm,0.7s,baz=194,slow=4.6,SNR=7.3						
SONM	**Songino Array**	55.23	359	P	**P**	**15 41 16.2**	**+1.6**
	1.3nm,0.4s,mb4.3,baz=180,slow=7.4,SNR=3.5						
SONM				PcP	PcP	15 42 15.6	+1.0
	4.9nm,0.4s,baz=173,slow=3.8,SNR=9.7						
ULN	**Ulaanbaatar**	55.26	360	*e*P	**P**	**15 41 14.8**	**+0.1**
	1.8nm,0.4s,mb4.5						
MKAR	**Makanchi Array**	58.69	340	P	**P**	**15 41 38.0**	**-1.1**
	4.0nm,0.5s,mb4.7,baz=158,slow=7.7,SNR=81						
ASAJ	**Asahikawa**	60.42	28	LR	LR	16 04 08.8	
	comp=Z,39nm,21.9s,baz=166,slow=32						
ZAL	**Zalesovo**	64.29	345	P	**P**	**15 42 14.2**	**-2.3**
	4.1nm,0.3s,mb4.9,baz=316,slow=3.2,SNR=14						
ZAL				PcP	PcP	15 42 51.2	+0.6
	1.2nm,0.5s,baz=311,slow=2.5,SNR=3.5						
RPZ	**Rata Peaks**	65.64	135	LR	LR	16 08 10.2	
	comp=Z,132nm,21.5s,baz=1.9,slow=33						
BVAR	**Borovoye Array**	68.19	337	P	**P**	**15 42 41.0**	**-0.4**
	7.7nm,0.4s,mb5.0,baz=145,slow=8.3,SNR=81						
URZ	**Urewera**	69.20	128	LR	LR	16 10 38.5	
	comp=Z,94nm,20.2s,baz=165,slow=34						
KMBO	**Kilima Mbogo**	70.42	272	LR	LR	16 07 54.1	
	comp=Z,53nm,20.8s,baz=112,slow=31						
SYO	**Syowa Base**	75.13	200	⇑X		15 43 16.0	
ARU	**Arti**	75.46	334	*e*P	**P**	**15 43 24.4**	**-0.2**
	8.8nm,0.6s,mb4.9						
MATP	**Matopo**	77.24	251	P	**P**	**15 43 35.9**	**+0.6**
	4.6nm,0.6s,mb4.6,baz=98,slow=4.9,SNR=22						
LSZ	**Lusaka**	77.90	256	*e*P	**P**	**15 43 38.8**	**-0.2**
	3.3nm,0.5s,mb4.5						
ASF	**Jabal al Asfar**	78.03	305	P	**P**	**15 43 41.6**	**+2.1**
	5.0nm,0.6s,mb4.7,baz=16,slow=5.5						
BOSA	**Boshof**	79.73	242	P	**P**	**15 43 49.1**	**+0.3**
	1.1nm,0.4s,mb4.1,baz=130,slow=5.1,SNR=7.5						
BR131	**Keskin Array S**	82.72	312	*e*P	**P**	**15 44 04.8**	**+0.6**
	1.8nm,0.5s,mb4.4						
BRTR	**Keskin Array B**	82.72	312	P	**P**	**15 44 05.1**	**+0.9**
	2.7nm,0.7s,mb4.4,baz=141,slow=6.5,SNR=14						
AKASG	**Malin Array Be**	88.58	321	P	**P**	**15 44 33.2**	**+0.4**
	0.7nm,0.4s,mb4.4,baz=88,slow=5.0,SNR=12						
FINES	**FINESS Array B**	92.63	332	P	**P**	**15 44 52.6**	**+1.2**
	1.5nm,0.7s,mb4.5,baz=108,slow=6.0,SNR=6.7						
ARCES	**ARCESS Array B**	94.35	340	P	**P**	**15 44 59.9**	**+0.9**
	1.0nm,0.5s,mb4.5,baz=90,slow=7.3,SNR=9.7						
ARCES	**ARCESS Array B**	94.35	340	P	**P**	**15 44 59.9**	**+0.9**
TXAR	**Lajitas Array**	143.50	50	PKP	PKPdf	15 51 14.8	+1.0
	0.7nm,0.4s,baz=189,slow=1.0,SNR=7.0						
TXAR	**Lajitas Array**	143.50	50	PKP	PKPdf	15 51 14.8	+1.0
BINY	**Binghamton**	145.42	5	*e*PKP	PKPdf	15 51 19.3	+2.5
BDFB	**Brasilia**	146.59	226	PKPbc	PKPbc	15 51 23.3	+2.4
	4.6nm,0.5s,baz=112,slow=2.2,SNR=15						
PARMO	**Parma**	147.04	26	*e*PKPbc	PKPdf	15 51 24.5	+4.8
WVT	**Waverly**	148.30	24	*e*PKPbc	PKPdf	15 51 28.2	+6.5
WVT				*e*PKPab	PKPab	15 51 32.3	+1.7
SWET	**Sewanee**	149.85	22	*e*PKPbc	PKPdf	15 51 31.3	+7.0
LRAL	**Lakeview Retre**	151.31	26	*e*PKPbc	PKPdf	15 51 34.8	+8.3

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*MOS **12** 15:41:45.0±1.0, 33.56N×116.51W, h10^{km}, mb5.1/40, MS4.8/29, Error ellipse: s-maj=6.0km s-min=4.3km az=86.8*

*BJI **12** 15:41:46.5, 33.50N×116.60W, h14^{km}, mB5.6, mb5.0, Ms5.2, Msz4.8*

*ECX **12** 15:41:46.7±0.4, 33.54N×116.56W, h12^{km}±2^{km}, MD5.0*

*HRVD **12** 15:41:46.5±0.3, 33.63N×116.59W, h14^{km}, MW5.2/61, Centroid moment Tensor Solution. LP body waves: s42,c64;Mantle waves: s61,c118; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.03±.02; M$_{\theta\theta}$-0.60±.02; M$_{\phi\phi}$0.62±.02; M$_{r\theta}$0.28±.04; M$_{\theta\phi}$-0.24±.02; M$_{\phi r}$0.41±.04; Best double couple: M$_{0}$.825×10^{17} NP1: ϕ_s305°, δ53°, λ-179°. NP2: ϕ_s214°, δ89°, λ-37°. Principal axes: T .831, Plg24°, Azm266°; N -.012, Plg53°, Azm32°; P -.819, Plg26°, Azm163°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **12** 15:41:46.5, 33.53N×116.57W, h14^{km}, mb5.1/49, MS5.0/10, MW5.2(PAS), After PAS.*

NEIC Slight damage [VI] at Anza, Coachella and La Quinta. Felt [V] at Aguanga, Borrego Springs, Cathedral City, Hemet, Homeland, Idyllwild, Indian Wells, India, Menifee, Mountain Center, Nuevo, Palm Desert, Palm Springs, Rancho Mirage, San Jacinto and Warner Springs; [IV] at Aliso Viejo, Banning, Bloomington, Bonita, Bonsall, Carlsbad, Chino, Chino Hills, Colton, Corona, Descanso, Desert Hot Springs, Diamond Bar, El Cajon, El Centro, Escondido, Fallbrook, Grand Terrace, Imperial, Jamul, Joshua Tree, Julian, Lake Elsinore, Lakeside, Loma Linda, Mecca, Mentone, Mira Loma, Moreno Valley, Morongo Valley, Murrieta, Norco, Ontario, Pala, Perris, Pine Valley, Ramona, Riverside, San Marcos, Spring Valley, Sun City, Temecula, Thermal, Thousand Palms, Valley Center, Vista, Wildomar and Winchester. Felt throughout southern California and as far as Arizona, Nevada and Baja California. Several small rockslides occurred on Highway 74.

*IDC **12** 15:41:47.7±0.7, 33.52N×116.50W, h14^{km}±3^{km}, mb4.3/18, mb1 4.4/25, mb1mx4.4/31, mbtmp4.4/25, ML4.4/6, MS4.6/20, Ms1 4.6/20, ms1mx4.5/26, Error ellipse: s-maj=14.6km s-min=8.3km az=64.0*

ISC 12 15:41:45.7±0.2, 33.57N±0.01×116.52W±0.02, h15^{km}, h15^{km}±.7^{km}:pP-P, n372, σ1^{s}23/355, mb4.8/84, MS4.8/44, 12D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFO	**Pinyon Flat Ob**	0.07	56	P	**Pb**	**15 41 48.8**	**0.0**
PFO	**Pinyon Flat Ob**	0.07	56	*e*P	**Pb**	**15 41 48.7**	**-0.1**
PSP	**Palm Springs**	0.22	354	⇓*i*P	**Pb**	**15 41 51.5**	**+0.6**
POB	**Polly Butte**	0.36	289	⇑*i*P	**Pb**	**15 41 53.0**	**-0.2**
PLM	**Palomar**	0.36	233	⇑*i*P	**Pb**	**15 41 52.8**	**-0.5**
YAQ	**Yaqui Meadows**	0.43	161	⇑*i*P	**Pb**	**15 41 54.4**	**-0.1**
PEC	**Perris**	0.62	301	⇓*i*P	**Pb**	**15 41 57.6**	**-0.2**
TPC	**Twentynine Pal**	0.66	36	⇓*i*P	**Pb**	**15 41 59.6**	**+1.2**
BAR	**Barrett**	0.90	188	⇑*i*P	**Pb**	**15 42 01.8**	**-0.6**
BAR	**Barrett**	0.90	188	*e*P	**Pb**	**15 42 01.2**	**-1.3**
BAR				*e*S	**Sb**	**15 42 12.6**	**-1.4**
RMX	**La Rumorosa**	1.04	159	⇓*e*P	**Pb**	**15 42 04.5**	**-0.3**
RMX				*e*S	**Sb**	**15 42 18.3**	**+0.4**
CBX	**Cerro Bola**	1.26	186	⇓*i*P	**Pb**	**15 42 08.2**	**-0.4**
CBX				*e*S	**Sb**	**15 42 24.5**	**+0.1**
MWC	**Mount Wilson**	1.44	297	*e*P	**Pn**	**15 42 10.8**	**-0.5**
CPBX	**Cerro Prieto**	1.54	138	*e*P	**Pn**	**15 42 11.7**	**-1.1**
ENX	**Ensenada**	1.69	184	⇓*e*PN	**Pn**	**15 42 14.6**	**-0.3**
RDX	**Rancho Dowling**	1.71	163	⇓*e*PN	**Pn**	**15 42 14.5**	**-0.7**
RDX				*e*S	**Sn**	**15 42 36.7**	**-0.1**
PBX	**Punta Banda**	1.83	185	⇓*e*PN	**Pn**	**15 42 17.1**	**+0.1**
PBX				*e*S	**Sn**	**15 42 40.6**	**+0.5**
LDFC	**Landfair**	1.90	37	*e*Pn	**Pn**	**15 42 18.6**	**+0.6**
ECNX	**Esteban Cantu**	1.91	182	⇓*e*PN	**Pn**	**15 42 17.7**	**-0.4**
ECNX				⇓*e*PN	**Pn**	**15 42 14.9**	**-3.2**
EMX	**El Mayor**	1.91	145	*e*PN	**Pn**	**15 42 16.5**	**-1.7**
ECBX	**El Chinero**	2.43	149	*e*PN	**Pn**	**15 42 23.6**	**-2.1**
NEN	**Nelson**	2.49	33	*e*Pn	**Pn**	**15 42 26.6**	**+0.2**
SPX	**San Pedro Mart**	2.67	160	*e*PN	**Pn**	**15 42 28.4**	**-0.7**
MTUM	**Tungsten Hills**	4.12	337	*e*Pn	**Pn**	**15 42 50.0**	**+0.3**
OMM	**Old Mammoth Mi**	4.51	334	*e*Pn	**Pn**	**15 42 56.2**	**+1.1**
TPH	**Tonopah**	4.53	353	P	**Pn**	**15 42 56.0**	**+0.6**
TPH	**Tonopah**	4.53	353	*e*Pn	**Pn**	**15 42 55.9**	**+0.5**
LRV	**Little Rabbit**	4.66	309	*e*Pn	**Pn**	**15 42 55.9**	**-1.4**
WUAZ	**Wupatki**	4.67	64	*e*Pn	**Pn**	**15 42 57.6**	**+0.2**
TRCR	**Troy Canyon**	4.83	9	*e*Pn	**Pn**	**15 42 59.9**	**+0.2**
ARUT	**Antelope Range**	4.90	30	*e*P	**Pn**	**15 43 00.9**	**+0.3**
ARUT	**Antelope Range**	4.90	30	*e*Pn	**Pn**	**15 43 00.4**	**-0.2**
TUC	**Tucson**	4.98	103	P	**Pn**	**15 42 59.6**	**-2.3**
TUC				pmax	pmax		
	comp=Z,530nm,0.7s						
TUC	**Tucson**	4.98	103	*e*Pn	**Pn**	**15 42 59.5**	**-2.4**
	comp=Z,532nm,0.7s						
MNV	**Mina**	5.03	345	P	**Pn**	**15 43 02.8**	**+0.3**
MNV				pmax	pmax		
	comp=Z,1µm,0.9s						
MNV	**Mina**	5.03	345	*e*Pn	**Pn**	**15 43 02.7**	**+0.2**
NVAR	**Mina Array Bea**	5.06	344	Pn	**Pn**	**15 43 03.4**	**+0.5**
	comp=Z,20nm,0.3s,baz=170,slow=15,SNR=234						
NVAR				Lg		15 44 31.2	
	baz=201,slow=23,SNR=1.6						
NVAR				LR	LR	15 45 28.1	
	comp=Z,6µm,18.1s,baz=155,slow=43						
SAO	**San Andreas Ge**	5.14	310	P	**Pn**	**15 43 03.4**	**-0.7**
SAO				pmax	pmax		
	comp=Z,400nm,0.8s						
SAO	**San Andreas Ge**	5.14	310	*e*Pn	**Pn**	**15 43 02.5**	**-1.6**
CMB	**Columbia Colle**	5.45	326	P	**Pn**	**15 43 07.7**	**-0.7**
CMB				pmax	pmax		
	comp=Z,470nm,0.9s						
CMB	**Columbia Colle**	5.45	326	*e*Pn	**Pn**	**15 43 07.5**	**-0.9**
MVU	**Marysvale**	6.03	34	*e*Pn	**Pn**	**15 43 17.0**	**+0.4**
MSU	**Marysvale**	6.05	34	P	**Pn**	**15 43 17.6**	**+0.6**
MSU	**Marysvale**	6.05	34	*e*Pn	**Pn**	**15 43 17.3**	**+0.4**
SAC	**San Andreas**	6.25	311	*e*P	**Pn**	**15 43 19.9**	**+0.2**
WCN	**Washoe City**	6.28	336	*e*P	**Pn**	**15 43 19.8**	**-0.4**
BMN	**Battle Mountai**	6.87	356	P	**Pn**	**15 43 28.8**	**+0.4**
BMN				pmax	pmax		
	comp=Z,680nm,1.4s						
BMN	**Battle Mountai**	6.87	356	*e*Pn	**Pn**	**15 43 27.5**	**-0.9**
NSHM	**Saint Helena R**	6.98	317	*e*Pn	**Pn**	**15 43 27.8**	**-2.1**
BEKR	**Beckwourth**	7.00	335	*e*Pn	**Pn**	**15 43 30.6**	**+0.3**
TMUT	**Trail Mountain**	7.14	35	Pn	**Pn**	**15 43 30.5**	**-1.7**
ELK	**Elko**	7.23	8	P	**Pn**	**15 43 33.9**	**+0.4**
ELK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ELK	**Elko**	7.23	8	Pn	**Pn**	**15 43 33.9**	**+0.4**
	comp=Z,4.2nm,0.3s,baz=189,slow=12,SNR=72						
ELK				Lg		15 45 36.2	
	baz=54,slow=19,SNR=2.1						
ELK	**Elko**	7.23	8	*e*Pn	**Pn**	**15 43 33.5**	**-0.1**
NLU	**North Lily Min**	7.30	28	*e*Pn	**Pn**	**15 43 34.8**	**+0.3**
SRU	**San Rafael**	7.34	39	*e*P	**Pn**	**15 43 35.6**	**+0.5**
MPU	**Maple Canyon**	7.53	30	*e*Pn	**Pn**	**15 43 36.3**	**-1.4**
HOPS	**Hopland**	7.56	318	Pn	**Pn**	**15 43 35.8**	**-2.4**
LAZ	**Ladron**	7.83	81	*e*Pn	**Pn**	**15 43 41.0**	**-0.9**
BGU	**Big Grassy Mou**	7.85	20	*e*Pn	**Pn**	**15 43 40.2**	**-1.9**
NOQ	**North Oquirrh**	7.89	25	*e*Pn	**Pn**	**15 43 39.4**	**-3.4**
LENM	**Lemitar**	7.96	83	*e*Pn	**Pn**	**15 43 42.4**	**-1.4**
DAU	**Daniels Canyon**	8.02	30	P	**P**	**15 43 44.7**	**+0.2**
CTU	**Camp Tracy**	8.06	27	Pn	**P**	**15 43 45.8**	**+0.7**
BNM	**Barren Site**	8.25	83	*e*Pn	**P**	**15 43 46.5**	**-1.2**
LPM	**Los Pinos Moun**	8.25	82	Pn	**P**	**15 43 44.4**	**-3.3**
SPUT	**South Promonto**	8.37	22	*e*Pn	**P**	**15 43 47.6**	**-1.8**
ANMO	**Albuquerque**	8.44	78	P	**P**	**15 43 50.1**	**-0.3**
ANMO				MLR	MLR		
	comp=Z,4µm,21.9s						
ANMO	**Albuquerque**	8.44	78	Pn	**P**	**15 43 50.1**	**-0.2**
	baz=266,slow=12,SNR=73						
ANMO				Lg		15 46 09.9	
	slow=20,SNR=3.7						
ANMO				LR	LR	15 47 07.8	
	comp=Z,4µm,21.9s,slow=38						
ANMO	**Albuquerque**	8.44	78	*e*Pn	**P**	**15 43 49.6**	**-0.8**
WDC	**Whiskeytown Da**	8.49	327	P	**P**	**15 43 54.8**	**+3.8**
WDC				pmax	pmax		
	comp=Z,43nm,1.0s						
WDC	**Whiskeytown Da**	8.49	327	*e*Pn	**P**	**15 43 48.8**	**-2.2**
RW3	**Ridgway**	8.55	54	*e*P	**P**	**15 43 52.3**	**+0.4**
TCUT	**Toone Canyon**	8.56	27	*e*Pn	**P**	**15 43 50.8**	**-1.2**
HVU	**Hansel Valley**	8.71	19	P	**P**	**15 43 55.6**	**+1.4**
HVU	**Hansel Valley**	8.71	19	*e*Pn	**P**	**15 43 53.4**	**-0.7**
MOD	**Modoc**	8.84	341	*e*Pn	**P**	**15 43 56.2**	**+0.3**
HWUT	**Hardware Ranch**	8.93	25	*e*Pn	**P**	**15 43 56.6**	**-0.6**
WVOR	**Wild Horse Val**	9.00	350	*e*P	**P**	**15 43 56.4**	**-1.8**
KHMM	**Horse Mountain**	9.28	324	Pn	**P**	**15 43 59.1**	**-2.9**
YBH	**Yreka Blue Hor**	9.51	331	*e*P	**P**	**15 44 05.5**	**+0.4**
YBH	**Yreka Blue Hor**	9.51	331	Pn	**P**	**15 44 08.4**	**+3.3**
	comp=Z,0.3nm,0.3s,baz=172,slow=9.4,SNR=6.6						
YBH				Lg		15 46 42.5	
	comp=Z,0.3nm,0.3s,baz=216,slow=19,SNR=3.5						
YBH				LR	LR	15 47 26.2	
	comp=Z,4µm,20.2s,baz=161,slow=35						
MNTX	**Cornudas Mount**	9.58	98	*e*Pn	**P**	**15 44 03.8**	**-2.3**
SDCO	**Great Sand Dun**	9.88	62	*e*Pn	**P**	**15 44 10.1**	**-0.2**
HLID	**Hailey**	10.11	9	*e*Pn	**P**	**15 44 13.6**	**+0.2**
AHID	**Auburn Hatcher**	10.12	23	*e*Pn	**P**	**15 44 14.4**	**+0.9**
RRI2	**Red Ridge**	10.57	21	*e*Pn	**P**	**15 44 19.2**	**-0.5**
CPRX	**Cap Rock**	10.60	89	*e*Pn	**P**	**15 44 20.1**	**-0.1**
PDAR	**Pinedale Array**	10.69	29	Pn	**P**	**15 44 24.4**	**+3.1**
	comp=Z,0.2nm,0.3s,baz=228,slow=12,SNR=22						
PDAR				Lg		15 47 25.3	
	baz=192,slow=25,SNR=2.1						
PDAR				LR	LR	15 48 06.2	
	comp=Z,1µm,19.2s,baz=230,slow=35						
CLNB	**Carlsbad**	10.71	94	*e*Pn	**P**	**15 44 21.0**	**-0.6**
ISCO	**Idaho Springs**	10.73	52	P	**P**	**15 44 22.6**	**+0.7**
ISCO				pmax	pmax		
	comp=Z,51nm,0.9s						
ISCO	**Idaho Springs**	10.73	52	*e*Pn	**P**	**15 44 21.1**	**-0.8**
TPAW	**Teton Pass**	10.82	22	*e*Pn	**P**	**15 44 21.9**	**-1.2**
SNOW	**Snow King Moun**	10.85	23	Pn	**P**	**15 44 23.1**	**-0.5**
WUWY	**Wally Ulrich**	10.93	23	*e*Pn	**P**	**15 44 21.7**	**-2.9**
RWWY	**Rawlins**	10.95	40	*e*Pn	**P**	**15 44 22.7**	**-2.2**
LOHW	**Long Hollow**	11.04	23	Pn	**P**	**15 44 26.4**	**+0.3**
MOOW	**Moose Ponds**	11.11	22	*e*Pn	**P**	**15 44 26.2**	**-1.0**
IMW	**Indian Meadow**	11.19	21	Pn	**P**	**15 44 28.8**	**+0.6**
HBO	**Huckleberry Mo**	11.21	338	P	**P**	**15 44 34.0**	**+5.5**
BMO	**Blue Mountains**	11.28	357	Pn	**P**	**15 44 29.0**	**-0.4**
VIPM	**Ingram Point**	11.37	345	P	**P**	**15 44 36.3**	**+5.6**
MCMT	**McKenzie Canyo**	11.59	13	Pn	**P**	**15 44 32.2**	**-1.5**
PHWY	**Pilot Hill**	11.69	46	Pn	**P**	**15 44 32.3**	**-2.7**
YFT	**Old Faithful**	11.72	20	Pn	**P**	**15 44 33.0**	**-2.4**
LTX	**Lajitas**	11.76	108	P	**P**	**15 44 35.3**	**-0.6**
LTX				pmax	pmax		
	comp=Z,150nm,1.4s						
LTX	**Lajitas**	11.76	108	*e*Pn	**P**	**15 44 34.2**	**-1.8**
TXAR	**Lajitas Array**	11.76	108	Pn	**P**	**15 44 35.2**	**-0.7**
	comp=Z,4.6nm,0.3s,baz=290,slow=13,SNR=250						
TXAR				Lg		15 48 05.2	
	comp=Z,0.9nm,0.3s,baz=292,slow=36,SNR=5.0						
TXAR				LR	LR	15 49 51.8	
	comp=Z,4µm,18.7s,baz=265,slow=41						
YMR	**Madison River**	11.88	20	Pn	**P**	**15 44 35.8**	**-1.8**
CROR	**Criterion Ridg**	11.91	344	P	**P**	**15 44 44.1**	**+6.2**
QLMT	**Earthquake Lak**	11.91	18	Pn	**P**	**15 44 39.4**	**+1.5**
YNR	**Norris Junctio**	12.01	20	Pn	**P**	**15 44 38.8**	**-0.5**
COR	**Corvallis**	12.19	336	P	**P**	**15 44 45.3**	**+3.6**
AMTX	**Amarillo**	12.35	80	Pn	**P**	**15 44 42.3**	**-1.7**
BOZ	**Bozeman (W)**	12.63	16	*e*P	**P**	**15 44 46.5**	**-1.1**
GCMT	**Greycliff**	13.29	21	Pn	**P**	**15 44 59.3**	**+3.0**
MSO	**Missoula**	13.39	8	*e*Pn	**P**	**15 44 55.3**	**-2.3**
CHMT	**Chamberlain Mo**	13.56	10	Pn	**P**	**15 45 02.2**	**+2.4**
HRY	**Holter Researc**	13.60	14	Pn	**P**	**15 44 59.1**	**-1.3**
RSSD	**Black Hills**	14.32	39	P	**P**	**15 45 11.4**	**+1.5**
RSSD				pmax	pmax		
	comp=Z,15nm,0.9s						
RSSD	**Black Hills**	14.32	39	*e*Pn	**P**	**15 45 09.2**	**-0.7**
	comp=Z,15nm,0.8s						
CBKS	**Cedar Bluff**	14.52	64	P	**P**	**15 45 12.0**	**-0.6**
CBKS				pmax	pmax		
	comp=Z,77nm,0.9s						
CBKS	**Cedar Bluff**	14.52	64	P	**P**	**15 45 12.0**	**-0.6**
	comp=Z,76nm,0.9s						
NEW	**Newport**	14.68	358	P	**P**	**15 45 16.1**	**+1.5**
NEW				pmax	pmax		
	comp=Z,95nm,1.0s						
NEW	**Newport**	14.68	358	Pn	**P**	**15 45 17.2**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=173,slow=11,SNR=19						
NEW				Lg		15 49 33.2	

	comp=Z,0.1nm,0.3s,baz=242,slow=11,SNR=3.4						
NEW	**Newport**	**14.68**	**358**	P	**P**	**15 45 16.1**	**+1.5**
	comp=Z,95nm,1.0s						
WMOK	**Wichita Mounta**	**14.74**	**81**	eP	**P**	**15 45 15.1**	**-0.3**
WMOK				pmax	pmax		
	comp=Z,77nm,1.3s						
WMOK	**Wichita Mounta**	**14.74**	**81**	eP	**P**	**15 45 15.1**	**-0.4**
	comp=Z,77nm,1.3s						
LAO	**LASA Array**	**15.27**	**28**	P	**P**	**15 45 22.4**	**+0.1**
	comp=Z,58nm,1.0s						
OCWA	**Octopus Mounta**	**15.29**	**340**	P	**P**	**15 45 23.6**	**+1.0**
	comp=Z,211nm,1.5s						
PGC	**Sidney**	**15.93**	**343**	P	**P**	**15 45 29.2**	**-1.6**
	comp=Z,304nm,1.3s						
KSU1	**Kansas State U**	**16.95**	**65**	eP	**P**	**15 45 44.3**	**+0.4**
DGMT	**Dagmar**	**17.51**	**28**	P	**P**	**15 45 51.7**	**+0.9**
	comp=Z,48nm,0.9s						
SFJM	**Santa Fe**	**17.70**	**134**	i P	**P**	**15 45 56.0**	**+2.7**
NATX	**Nacogdoches**	**18.49**	**90**	P	**P**	**15 46 03.1**	**0.0**
	comp=Z,454nm,1.4s						
MOIG	**Morelia**	**19.44**	**132**	eP	**P**	**15 46 16.4**	**+2.0**
EDM	**Edmonton**	**19.77**	**6**	eP	**P**	**15 46 18.2**	**+0.2**
UALR	**University of**	**20.03**	**80**	P	**P**	**15 46 20.7**	**-0.2**
	comp=Z,49nm,1.0s						
BBB	**Bella Bella**	**20.40**	**339**	LR	LR	15 55 48.3	
	comp=Z,861nm,18.5s,MS4.1,baz=165,slow=41						
UNM	**Universidad Na**	**20.99**	**128**	eP	**P**	**15 46 33.0**	**+2.1**
YAIG	**Yautepec**	**21.39**	**129**	i P	**P**	**15 46 36.1**	**+1.1**
PLIG	**Platanillo**	**21.46**	**131**	eP	**P**	**15 46 36.8**	**+1.1**
FVM	**French Village**	**21.59**	**71**	P	**P**	**15 46 37.1**	**+0.2**
FVM				pmax	pmax		
	comp=Z,118nm,1.3s,mb5.2						
FVM	**French Village**	**21.59**	**71**	P	**P**	**15 46 37.1**	**+0.2**
	comp=Z,118nm,1.3s,mb5.2						
SLM	**Saint Louis**	**21.80**	**69**	eP	**P**	**15 46 38.1**	**-0.8**
SLM				pmax	pmax		
	comp=Z,102nm,1.0s,mb5.2						
SLM	**Saint Louis**	**21.80**	**69**	eP	**P**	**15 46 38.1**	**-0.8**
	comp=Z,102nm,1.0s,mb5.2						
MET	**Memphis--Engin**	**21.99**	**78**	P	**P**	**15 46 41.0**	**+0.2**
CAIG	**El Cayaco**	**22.01**	**134**	eP	**P**	**15 46 42.0**	**+0.8**
PARMO	**Parma**	**22.09**	**74**	eP	**P**	**15 46 42.2**	**+0.3**
HALT	**Halls**	**22.43**	**76**	eP	**P**	**15 46 44.1**	**-1.2**
OXF	**Oxford**	**22.46**	**80**	P	**P**	**15 46 46.4**	**+0.8**
OXF				pmax	pmax		
	comp=Z,413nm,1.3s,mb5.7						
OXF	**Oxford**	**22.46**	**80**	P	**P**	**15 46 46.4**	**+0.8**
	comp=Z,413nm,1.3s,mb5.7						
ULM	**Lac du Bonnet**	**22.54**	**36**	P	**P**	**15 46 48.5**	**+2.2**
	comp=Z,23nm,0.9s,mb4.6,baz=234,slow=9.3,SNR=9.1						
ULM				LR	LR	15 55 39.8	
	comp=Z,952nm,19.4s,MS4.2,baz=233,slow=37						
ULM	**Lac du Bonnet**	**22.54**	**36**	P	**P**	**15 46 48.5**	**+2.2**
ULM				LR	LR	15 55 39.8	
JFWS	**Jewell Farm**	**22.57**	**58**	P	**P**	**15 46 47.9**	**+1.3**
JFWS				pmax	pmax		
	comp=Z,73nm,1.2s,mb5.0						
JFWS	**Jewell Farm**	**22.57**	**58**	P	**P**	**15 46 47.9**	**+1.3**
	comp=Z,73nm,1.2s,mb5.0						
UTMT	**University of**	**22.80**	**75**	P	**P**	**15 46 51.6**	**+2.6**
	comp=Z,78nm,0.6s,mb5.3						
FFC	**Flin Flon**	**23.49**	**21**	eP	**P**	**15 46 56.2**	**+0.8**
FFC				pmax	pmax		
	comp=Z,25nm,0.8s,mb4.7						
FFC	**Flin Flon**	**23.49**	**21**	eP	**P**	**15 46 56.2**	**+0.8**
	comp=Z,25nm,0.8s,mb4.7						
PLAL	**Pickwick Lake**	**23.52**	**79**	P	**P**	**15 46 56.5**	**+0.6**
	comp=Z,138nm,1.5s,mb5.2						
EYMN	**Ely**	**23.64**	**45**	P	**P**	**15 47 00.2**	**+3.2**
WVT	**Waverly**	**23.65**	**76**	eP	**P**	**15 46 58.8**	**+1.6**
WVT				pmax	pmax		
	comp=Z,393nm,2.2s,mb5.5						
WVT	**Waverly**	**23.65**	**76**	eP	**P**	**15 46 58.8**	**+1.6**
	comp=Z,394nm,2.2s,mb5.5						
OXX	**Oaxaca**	**24.21**	**128**	i P	**P**	**15 47 05.0**	**+2.1**
VHO	**Vista Hermosa**	**24.21**	**128**	i P	**P**	**15 47 05.5**	**+2.6**
LRAL	**Lakeview Retre**	**24.65**	**83**	eP	**P**	**15 47 08.4**	**+1.5**
	comp=Z,56nm,1.1s,mb5.0						
BLO	**Bloomington**	**24.73**	**68**	eP	**P**	**15 47 08.5**	**+0.9**
BLO				pmax	pmax		
	comp=Z,147nm,1.3s,mb5.3						
BLO	**Bloomington**	**24.73**	**68**	eP	**P**	**15 47 08.5**	**+0.9**
	comp=Z,147nm,1.3s,mb5.3						
SWET	**Sewanee**	**25.25**	**78**	eP	**P**	**15 47 13.8**	**+1.2**
CMIG	**Matias Romero**	**25.45**	**125**	eP	**P**	**15 47 16.0**	**+1.4**
CPCT	**Cooper Cave**	**26.38**	**77**	eP	**P**	**15 47 22.2**	**-0.9**
DLBC	**Dease Lake**	**26.48**	**344**	P	**P**	**15 47 25.2**	**+1.5**
	comp=Z,21nm,1.0s,mb4.6,baz=170,slow=7.8,SNR=20						
DLBC				LR	LR	15 57 56.8	
	comp=Z,3µm,19.8s,MS4.8,baz=171,slow=36						
DLBC	**Dease Lake**	**26.48**	**344**	eP	**P**	**15 47 24.1**	**+0.3**
TZTN	**Tazewell**	**27.08**	**74**	P	**P**	**15 47 28.4**	**-1.1**
AAM	**Ann Arbor**	**27.21**	**62**	P	**P**	**15 47 32.0**	**+1.3**
AAM				pmax	pmax		
	comp=Z,39nm,1.1s,mb4.8						
AAM	**Ann Arbor**	**27.21**	**62**	P	**P**	**15 47 32.0**	**+1.3**
	comp=Z,39nm,1.1s,mb4.8						
YKA	**Yellowknife Ar**	**28.96**	**2**	P	**P**	**15 47 46.2**	**-0.1**
YKA				*PP	pP	15 47 50.7	-0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**28.96**	**2**	P	**P**	**15 47 46.2**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=179,slow=8.9,SNR=5.7						
YKA				pP	pP	15 47 50.7	-0.1
	comp=Z,2.9nm,0.8s,baz=181,slow=8.9,SNR=5.7						
YKA	**Yellowknife Ar**	**28.96**	**2**	P	**P**	**15 47 46.2**	**-0.1**
YKA				pP	pP	15 47 50.7	-0.1
YKW3	**Yellowknife Ar**	**29.03**	**2**	P	**P**	**15 47 46.4**	**-0.6**
JSC	**Jenkinsville**	**29.18**	**79**	P	**P**	**15 47 47.1**	**-1.5**
FCC	**Fort Churchill**	**29.32**	**24**	eP	**P**	**15 47 47.5**	**-2.0**
FCC				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
FCC	**Fort Churchill**	**29.32**	**24**	eP	**P**	**15 47 47.5**	**-2.1**
	comp=Z,11nm,1.2s,mb4.5						
BLA	**Blacksburg**	**29.54**	**73**	eP	**P**	**15 47 51.0**	**-0.8**
BLA				pmax	pmax		
	comp=Z,90nm,1.4s,mb5.3						
BLA	**Blacksburg**	**29.54**	**73**	eP	**P**	**15 47 51.0**	**-0.8**
	comp=Z,90nm,1.4s,mb5.3						
ALLY	**Alegheny Colle**	**29.75**	**64**	P	**P**	**15 47 54.4**	**+0.8**
SADO	**Sadowa**	**30.81**	**58**	LR	LR	15 59 45.7	
	comp=Z,1µm,20.3s,MS4.5,baz=272,slow=35						
GENY	**Geneseo**	**31.55**	**62**	P	**P**	**15 48 08.6**	**-0.9**
CBN	**Corbin**	**31.89**	**70**	P	**P**	**15 48 11.7**	**-0.8**
BINY	**Binghamton**	**32.88**	**63**	eP	**P**	**15 48 20.8**	**-0.3**
	comp=Z,59nm,1.2s,mb5.4						
DIV	**Divide**	**33.41**	**334**	P	**P**	**15 48 26.2**	**+0.7**
	comp=Z,95nm,1.3s,mb5.6						
DAWY	**Dawson**	**33.63**	**342**	eP	**P**	**15 48 26.9**	**-0.6**
NCB	**Newcomb**	**34.24**	**60**	eP	**P**	**15 48 32.1**	**-0.7**
	comp=Z,15nm,0.9s,mb4.9						
CPNY	**Central Park**	**34.40**	**65**	eP	**P**	**15 48 33.3**	**-1.0**
ACCN	**Adirondack Com**	**34.62**	**61**	eP	**P**	**15 48 36.1**	**0.0**
SLKM	**Skilak Lake**	**34.72**	**331**	P	**P**	**15 48 36.1**	**-0.7**
MIV	**Mineville/With**	**34.74**	**60**	P	**P**	**15 48 38.4**	**+1.2**
FRNY	**Flat Rock**	**34.74**	**58**	eP	**P**	**15 48 36.3**	**-0.9**
SML	**Sawmill**	**34.78**	**334**	P	**P**	**15 48 37.7**	**+0.3**
PMR	**Palmer**	**34.94**	**333**	eP	**P**	**15 48 39.8**	**+1.1**
PMR				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.5						
PMR	**Palmer**	**34.94**	**333**	eP	**P**	**15 48 39.8**	**+1.1**
	comp=Z,80nm,1.2s,mb5.5						
THY	**Trims Highway**	**34.98**	**337**	eP	**P**	**15 48 39.2**	**+0.1**
RSO	**Redoubt South**	**35.73**	**330**	eP	**P**	**15 48 46.0**	**+0.6**
SPU	**Mount Spurr**	**35.84**	**331**	eP	**P**	**15 48 42.4**	**-3.9**
INK	**Inuvik**	**36.12**	**349**	P	**P**	**15 48 47.9**	**-0.8**
INK				pmax	pmax		
	comp=Z,61nm,1.4s						
INK	**Inuvik**	**36.12**	**349**	P	**P**	**15 48 50.5**	**+1.8**
	comp=Z,19nm,1.1s,mb5.0,baz=155,slow=9.1,SNR=14						
INK	**Inuvik**	**36.12**	**349**	P	**P**	**15 48 47.9**	**-0.8**
	comp=Z,61nm,1.4s,mb5.3						
HRV	**Harvard--Oak R**	**36.16**	**62**	P	**P**	**15 48 48.4**	**-0.9**
HRV				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
HRV	**Harvard--Oak R**	**36.16**	**62**	P	**P**	**15 48 48.4**	**-0.8**
	comp=Z,34nm,1.2s,mb5.2						
MCK	**McKinley**	**36.24**	**336**	eP	**P**	**15 48 50.2**	**+0.5**
MCK				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.1						
MCK	**McKinley**	**36.24**	**336**	eP	**P**	**15 48 50.1**	**+0.4**
	comp=Z,35nm,1.3s,mb5.1						
ILAR	**Eielson Array**	**36.29**	**339**	P	**P**	**15 48 50.9**	**+0.8**
ILAR				*PP	pP	15 48 55.4	+0.7
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ILAR				pmax	pmax		
	comp=Z,29nm,1.2s						
ILAR				MLR	MLR		
	comp=Z,689nm,18.2s						
ILAR	**Eielson Array**	**36.29**	**339**	P	**P**	**15 48 50.9**	**+0.8**
	comp=Z,2.7nm,0.7s,mb4.3,baz=153,slow=7.6,SNR=28						
ILAR				pP	pP	15 48 55.4	+0.7
	comp=Z,29nm,1.2s,baz=151,slow=7.0,SNR=35						
ILAR				LR	LR	16 03 56.4	
	comp=Z,689nm,18.2s,MS4.5,baz=165,slow=37						
ILAR	**Eielson Array**	**36.29**	**339**	P	**P**	**15 48 50.9**	**+0.8**
ILAR				pP	pP	15 48 55.4	+0.7
ILAR				LR	LR	16 03 56.4	
JTS	**JuntasAbangare**	**37.08**	**121**	P	**P**	**15 48 57.5**	**+0.2**
JTS				*PP	pP	15 49 01.9	0.0
JTS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JTS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
JTS	**JuntasAbangare**	**37.08**	**121**	P	**P**	**15 48 57.5**	**+0.2**
	comp=Z,9.2nm,0.8s,mb4.7,baz=295,slow=20,SNR=4.6						
JTS				pP	pP	15 49 01.9	0.0
	comp=Z,7.9nm,0.7s,baz=294,slow=9.2,SNR=5.7						
IMA	**Indian Mountai**	**39.29**	**337**	eP	**P**	**15 49 16.4**	**+1.1**
IMA				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
IMA	**Indian Mountai**	**39.29**	**337**	eP	**P**	**15 49 16.4**	**+1.1**
	comp=Z,1.0nm,0.4s,mb3.9						
SCHQ	**Schefferville**	**40.41**	**43**	P	**P**	**15 49 26.4**	**+1.8**
	comp=Z,7.3nm,0.9s,mb4.4,baz=296,slow=8.2,SNR=9.2						
SCHQ				LR	LR	16 06 02.7	
	comp=Z,970nm,20.9s,MS4.6,baz=266,slow=36						
RES	**Resolute Bay**	**42.53**	**8**	eP	**P**	**15 49 40.2**	**-1.6**
RES				pmax	pmax		
	comp=Z,41nm,1.5s,mb4.9						
RES	**Resolute Bay**	**42.53**	**8**	eP	**P**	**15 49 40.2**	**-1.5**
	comp=Z,41nm,1.5s,mb4.9						
SJG	**San Juan**	**47.43**	**96**	pP	pP	15 50 26.3	-0.1
	comp=Z,10nm,0.6s,baz=62,slow=24,SNR=1.6						
TAOE	**Nuku Hiva Isla**	**47.80**	**212**	eS	**S**	**15 57 01.9**	**-18**
	comp=Z,2µm,34.9s						
TAOE				eLQ		16 01 37.6	
	comp=Z,3µm,25.3s						
TAOE				eLR	LR	16 03 38.7	
	comp=Z,1µm,24.7s,baz=35						
ROSC	**El Rosal**	**48.49**	**117**	P	**P**	**15 50 32.3**	**+2.2**
	comp=Z,8.3nm,0.4s,mb5.1,baz=113,slow=14,SNR=4.3						
ROSC				LR	LR	16 13 54.5	
	comp=Z,324nm,18.2s,MS4.3,baz=6.4,slow=40						
OTAV	**Otavalo**	**48.73**	**125**	eP	**P**	**15 50 31.7**	**-0.2**
	comp=Z,16nm,1.1s,mb5.0						
SDV	**Santo Domingo**	**48.80**	**109**	pP	pP	15 50 36.9	-0.1
	comp=Z,9.3nm,0.2s,baz=236,slow=3.5,SNR=1.2						
SDV	**Santo Domingo**	**48.80**	**109**	eP	**P**	**15 50 32.1**	**-0.3**
	comp=Z,7.0nm,0.4s,mb5.0						
SFJD	**Kangerlussuaq**	**50.20**	**28**	i P	**P**	**15 50 49.2**	**+6.8**
SFJD				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
SFJD				MLR	MLR		
	comp=Z,430nm,17.0s,MS4.5						
SFJD	**Kangerlussuaq**	**50.20**	**28**	i P	**P**	**15 50 49.2**	**+6.8**
	comp=Z,23nm,1.0s,mb5.2						
	comp=Z,420nm,17.0s						
BILL	**Bilibino**	**54.58**	**333**	eP	**P**	**15 51 13.6**	**-1.6**
BILL				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.1						
BILL	**Bilibino**	**54.58**	**333**	eP	**P**	**15 51 13.6**	**-1.6**
	comp=Z,24nm,1.3s,mb5.1						
SUMG	**Summit**	**54.77**	**21**	P	**P**	**15 51 15.6**	**-0.9**
	comp=Z,20nm,1.0s,mb5.1						
RKT	**Rikitea**	**59.05**	**200**	eLQ		16 06 32.2	
	comp=Z,798nm,36.2s						
RKT				eLR	LR	16 08 10.7	
DAG	**Danmarks Havn**	**59.38**	**15**	eP	**P**	**15 51 52.0**	**+2.8**
DAG	**Danmarks Havn**	**59.38**	**15**	i P	**P**	**15 51 52.0**	**+2.8**
PPT	**Papeete**	**59.84**	**217**	eS	**S**	**15 59 46.0**	**-16**
	comp=Z,370nm,29.0s						
PPT				eLQ		16 06 43.6	
	comp=Z,469nm,25.5s						
PPT				eLR	LR	16 08 06.1	
	comp=Z,558nm,25.8s,baz=24						
PET	**Petropavlovsk**	**61.05**	**317**	eP	**P**	**15 52 03.1**	**+2.2**
PET				eS	**S**	**16 00 20.7**	**+3.5**
PET				eSS	SS	16 04 17.5	-1.0
PET				pmax	pmax		
	comp=Z,200nm,11.8s						
PET				smax			
	comp=E,100nm,23.4s						
PET				smax			
	comp=N,100nm,25.5s						
SEY	**Seymchan**	**61.18**	**329**	eP	**P**	**15 52 06.3**	**+4.7**
SEY						15 52 43.2	
SEY				eS	**S**	**16 00 30.2**	**+11**
SEY				SS	SS	16 04 20.6	+0.1
SEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
SEY				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.8						
SEY				smax			
	comp=N,200nm,24.7s						
SEY				smax			
	comp=E,170nm,20.8s						
MA2	**Magadan**	**63.02**	**325**	eP	**P**	**15 52 15.9**	**+1.9**
MA2				eS	**S**	**16 00 46.6**	**+4.5**
MA2				pmax	pmax		
	comp=Z,20nm,1.7s,mb5.0						
MA2				MLR	MLR		
	comp=N,500nm,21.0s						
KBS	**Kingsbay**	**63.92**	**10**	e	**P**	**15 52 24.2**	**+4.6**
KBS				eS	**S**	**16 01 07.0**	**+14**
KBS				AMS	AMS	16 17 57.9	
	comp=Z,405nm,21.6s,MS4.6						
JMIC	**Jan Mayen**	**64.19**	**20**	eS	**S**	**16 01 01.4**	**+5.0**
JMIC				AMS	AMS	16 21 13.1	
	comp=Z,383nm,20.1s,MS4.6						
TBI	**Tubuai**	**64.72**	**214**	eLQ		16 08 33.9	
	comp=Z,641nm,37.8s						
TBI				eLR	LR	16 10 18.1	
	baz=25						
TIXI	**Tiksi**	**65.67**	**342**	eP	**P**	**15 52 27.7**	**-3.3**
TIXI				eS	S	16 01 11.0	-3.7
TIXI				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,366nm,17.0s,MS4.7						
LPAZ	**La Paz**	**67.72**	**129**	P	**P**	**15 52 44.4**	**-0.5**
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LPAZ	**La Paz**	**67.72**	**129**	P	**P**	**15 52 44.4**	**-0.5**
	comp=Z,1.9nm,0.8s,mb4.2,baz=344,slow=9.1,SNR=10						
LPAZ	**La Paz**	**67.72**	**129**	eP	**P**	**15 52 43.7**	**-1.3**
	comp=Z,5.1nm,1.0s,mb4.5						
YAK	**Yakutsk**	**70.94**	**333**	eP	**P**	**15 53 07.4**	**+3.5**
YAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
YAK				pmax	pmax		
	comp=N,4.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				MLR	MLR		
	comp=Z,328nm,19.0s,MS4.6						
YAK				MLR	MLR		
	comp=N,194nm,20.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,216nm,19.0s,MS4.5						
TRO	**Tromso**	**72.11**	**15**	eS	S	16 02 37.8	+6.9
TRO				AMS	AMS	16 27 04.0	
	comp=Z,251nm,21.8s,MS4.4						
YSS	**Yuzh-Sakhalins**	**72.87**	**315**	eP	**P**	**15 53 17.4**	**+1.7**
YSS				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.3						
YSS				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.6						
YSS	**Yuzh-Sakhalins**	**72.87**	**315**	eP	**P**	**15 53 14.3**	**-1.3**
	comp=Z,35nm,1.2s,mb5.2						
EKA	**Eskdalemuir Ar**	**74.78**	**33**	P	**P**	**15 53 26.7**	**+0.2**
EKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**74.78**	**33**	P	**P**	**15 53 26.7**	**+0.2**
	comp=Z,2.6nm,0.8s,mb4.2,baz=309,slow=5.3,SNR=5.6						
BER	**Bergen**	**75.00**	**26**	AMS	AMS	16 23 55.8	
	comp=Z,455nm,22.9s,MS4.7						
NB2	**NORSAR Subarra**	**76.58**	**23**	P	**P**	**15 53 37.0**	**+0.3**
	comp=Z,7.6nm,1.2s,mb4.5,baz=317,slow=5.3						
NB2	**NORSAR Subarra**	**76.58**	**23**	P	**P**	**15 53 37.0**	**+0.3**
	baz=316,slow=5.6						
NOA	**NORSAR Array B**	**76.58**	**23**	pP	pP	15 53 42.5	+1.0
	comp=Z,2.3nm,0.9s,baz=318,slow=5.5,SNR=5.2						
NOA				LR	LR	16 27 32.5	
	comp=Z,329nm,19.2s,MS4.7,baz=315,slow=36						
APA	**Apatity**	**76.64**	**11**	⇓iP	**P**	**15 53 43.0**	**+6.1**
APA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
APA				MLR	MLR		
	comp=Z,600nm,17.0s,MS5.0						
KLR	**Kul'dur**	**77.70**	**321**	eP	**P**	**15 53 44.0**	**+0.9**
HFS	**Hagfors**	**78.07**	**23**	P	**P**	**15 53 46.3**	**+1.4**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HFS	**Hagfors**	**78.07**	**23**	P	**P**	**15 53 46.3**	**+1.4**
	comp=Z,2.8nm,0.7s,mb4.3,baz=270,slow=7.4,SNR=4.5						
ROSF	**Rostrenen**	**79.04**	**39**	eP	**P**	**15 53 56.3**	**+5.8**
QUIF	**Quistinic**	**79.36**	**39**	eP	**P**	**15 53 58.1**	**+5.9**
SGMF	**Saint Gilles**	**79.47**	**38**	eP	**P**	**15 53 58.4**	**+5.6**
FLN	**La Foliniere**	**80.20**	**37**	eP	**P**	**15 54 03.0**	**+6.3**
	comp=Z,10nm,0.7s,mb4.6						
FLN				eR			
	comp=Z,551nm,20.2s						
GRR	**Gorron**	**80.25**	**38**	eP	**P**	**15 54 03.4**	**+6.4**
	comp=Z,12nm,0.7s,mb4.6						
LDF	**La Druitiere**	**80.49**	**37**	eP	**P**	**15 54 04.4**	**+6.1**
	comp=Z,7.2nm,0.7s,mb4.4						
FINES	**FINESS Array B**	**80.56**	**17**	P	**P**	**15 53 58.9**	**+0.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**80.56**	**17**	P	**P**	**15 53 58.9**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.8,baz=333,slow=6.2,SNR=4.8						
PVRL	**Vila Real**	**80.86**	**46**	eP	**P**	**15 54 01.9**	**+1.5**
	comp=Z,14nm,1.1s,mb4.8						
PVIS	**Viseu**	**81.08**	**47**	eP	**P**	**15 54 04.5**	**+2.9**
MJAR	**Matsushiro Arr**	**81.42**	**308**	P	**P**	**15 54 02.7**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MJAR				MLR	MLR		
	comp=Z,221nm,21.2s						
MJAR	**Matsushiro Arr**	**81.42**	**308**	P	**P**	**15 54 02.7**	**-0.8**
	comp=Z,2.9nm,0.9s,mb4.2,baz=44,slow=4.6,SNR=11						
MJAR				LR	LR	16 23 38.5	
	comp=Z,221nm,21.2s,MS4.5,baz=80,slow=31						
MAJO	**Matsushiro**	**81.42**	**308**	eP	**P**	**15 54 02.4**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
MAJO	**Matsushiro**	**81.42**	**308**	eP	**P**	**15 54 02.4**	**-1.0**
	comp=Z,9.7nm,1.0s,mb4.7						
MAT	**Matsushiro**	**81.42**	**308**	eP	**P**	**15 54 02.0**	**-1.4**
MAT				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
MAT	**Matsushiro**	**81.42**	**308**	eP	**P**	**15 54 02.0**	**-1.4**
	comp=Z,8.2nm,0.8s,mb4.7						
MAT	**Matsushiro**	**81.42**	**308**	P	**P**	**15 54 02.2**	**-1.2**
MTE	**Manteigas**	**81.49**	**47**	eP	**P**	**15 54 05.4**	**+1.7**
	comp=Z,13nm,1.6s,mb4.6						
MTE	**Manteigas**	**81.49**	**47**	eLR	LR	16 20 52.7	
	comp=Z,269nm,12.9s						
BDFB	**Brasilia**	**81.53**	**115**	P	**P**	**15 54 04.0**	**-0.4**
BDFB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BDFB				MLR	MLR		
	comp=Z,246nm,18.5s						
BDFB	**Brasilia**	**81.53**	**115**	P	**P**	**15 54 04.0**	**-0.4**
	comp=Z,4.3nm,0.9s,mb4.4,baz=233,slow=1.0,SNR=3.6						
BDFB				LR	LR	16 31 31.9	
	comp=Z,246nm,18.5s,MS4.6,baz=55,slow=37						
BAIF	**Baives**	**81.61**	**34**	eP	**P**	**15 54 11.5**	**+7.4**
	comp=Z,25nm,1.1s,mb4.7						
MDJ	**Mudanjiang**	**81.73**	**319**	P	**P**	**15 54 04.1**	**-0.8**
MDJ				PP	PP	15 57 15.8	+1.7
MDJ				S	S	16 04 12.9	-2.8
MDJ				SS	SS	16 09 36.3	-0.5
MDJ				AMB	AMB		
	comp=Z,80nm,6.3s						
MDJ				LR	LR		
	comp=N,140nm,46.5s,MS4.0						
MDJ				LR	LR		
	comp=E,70nm,47.9s,MS4.0						
MDJ				LR	LR		
	comp=Z,180nm,32.4s						
MFF	**Saint Martin d**	**81.78**	**39**	eP	**P**	**15 54 11.4**	**+6.3**
	comp=Z,39nm,1.3s,mb4.9						
PCBR	**Castelo Branco**	**81.87**	**47**	eP	**P**	**15 54 07.5**	**+1.8**
	comp=Z,7.6nm,1.4s,mb4.4						
GIVF	**Givet**	**81.87**	**34**	eP	**P**	**15 54 12.1**	**+6.7**
EVO	**Evora**	**82.32**	**49**	eP	**P**	**15 54 13.0**	**+5.0**
	comp=Z,13nm,0.9s,mb4.5						
EVO				eR			
	comp=Z,511nm,19.0s						
MEZF	**Maizieres J'vi**	**83.09**	**35**	eP	**P**	**15 54 18.3**	**+6.5**
TCF	**Toulx Ste Croi**	**83.21**	**38**	eP	**P**	**15 54 18.7**	**+6.2**
	comp=Z,7.5nm,0.7s,mb4.5						
TCF	**Toulx Ste Croi**	**83.21**	**38**	eP	**P**	**15 54 18.7**	**+6.2**
TCF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
LFF	**La Frestale**	**83.35**	**39**	eP	**P**	**15 54 19.4**	**+6.2**
	comp=Z,7.8nm,0.5s,mb4.7						
BGF	**Bois d'Agland**	**83.35**	**37**	eP	**P**	**15 54 19.5**	**+6.3**
LOR	**Lormes**	**83.37**	**36**	eP	**P**	**15 54 19.9**	**+6.6**
	comp=Z,12nm,0.7s,mb4.8						
LOR				eR			
	comp=Z,609nm,18.8s						
LOR	**Lormes**	**83.37**	**36**	eP	**P**	**15 54 19.9**	**+6.6**
LOR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
LOR				MLR	MLR		
	comp=Z,610nm,18.8s,MS5.0						
AVF	**Avril sur Loir**	**83.44**	**37**	eP	**P**	**15 54 19.8**	**+6.1**
	comp=Z,9.6nm,0.7s,mb4.6						
AVF	**Avril sur Loir**	**83.44**	**37**	eP	**P**	**15 54 19.8**	**+6.1**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
RJF	**Les Rejaudoux**	**83.51**	**39**	eP	**P**	**15 54 20.3**	**+6.3**
	comp=Z,12nm,0.9s,mb4.7						
RJF				eR			
	comp=Z,783nm,19.2s						
RJF	**Les Rejaudoux**	**83.51**	**39**	eP	**P**	**15 54 20.3**	**+6.3**
RJF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
RJF				MLR	MLR		
	comp=Z,780nm,19.3s,MS5.1						
SMF	**Signal de Mont**	**83.79**	**37**	eP	**P**	**15 54 21.5**	**+6.1**
CAF	**Calviac**	**84.05**	**39**	eP	**P**	**15 54 23.2**	**+6.4**
HAU	**Haudompre**	**84.06**	**35**	eP	**P**	**15 54 23.2**	**+6.5**
HAU				eR			
	comp=Z,1µm,19.3s						
CIT	**Chita**	**84.17**	**332**	eP	**P**	**15 54 16.0**	**-1.2**
CDF	**Champ du Feu**	**84.20**	**34**	eP	**P**	**15 54 23.9**	**+6.5**
HINF	**Hinteralfeld**	**84.43**	**34**	eP	**P**	**15 54 24.9**	**+6.3**
	comp=Z,13nm,0.9s,mb4.7						
HINF	**Hinteralfeld**	**84.43**	**34**	eP	**P**	**15 54 24.9**	**+6.3**
HINF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
MOX	**Moxa**	**84.48**	**30**	eP	**P**	**15 54 25.3**	**+6.5**
MOX				eS	S	16 04 54.0	+11
MOX				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.7						
MOX				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.9						
MOX	**Moxa**	**84.48**	**30**	eP	**P**	**15 54 25.3**	**+6.5**
	comp=Z,8.0nm,1.4s,mb4.7						
MOX				eS	S	16 04 54.0	+11
MOX				LR	LR		
	comp=Z,500nm,18.0s,MS4.9						
MOX	**Moxa**	**84.48**	**30**	i P	**P**	**15 54 25.3**	**+6.5**
	comp=Z,logA/T=0.8,mb4.7						
MOX				S	S	16 04 54.0	+11
MOX				L		16 31 56.0	
CN2	**Changchun**	**84.52**	**320**	eP	**P**	**15 54 18.6**	**-0.5**
CN2				eXP	sP	15 54 26.0	+0.4
CN2				eS	S	16 04 42.3	-1.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.1						
CN2				AMB	AMB		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=E,200nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=Z,600nm,19.0s,MS5.0						
CLL	**Collm**	**84.55**	**29**	eP	**P**	**15 54 19.0**	**-0.1**
CLL				i *SP	sP	15 54 25.2	-0.4

CLL				MLR	MLR		
	comp=Z,900nm,17.5s,MS5.2						
CLL	**Collm**	**84.55**	**29**	*e*P	**P**	**15 54 19.0**	**-0.1**
CLL				*i* sP	sP	15 54 25.2	-0.4
CLL				S	S	16 04 58.0	+14
CLL				LR	LR		
	comp=Z,900nm,17.5s,MS5.2						
CLL	**Collm**	**84.55**	**29**	P	**P**	**15 54 19.0**	**-0.1**
CLL				*i* *SP	sP	15 54 25.2	-0.4
CLL				*e*		15 54 50.0	
CLL				*e*S	S	16 04 58.0	+14
CABF	**La Chapelle**	**84.92**	**36**	*e*P	**P**	**15 54 26.8**	**+5.7**
	comp=Z,33nm,1.1s,mb5.1						
GRA1	**Grafenberg Arr**	**85.03**	**31**	*e*P	**P**	**15 54 29.4**	**+7.9**
	comp=Z,18nm,1.9s,mb4.9						
GRA1				*e*		15 54 56.0	
GRA1				*e*S	S	16 05 04.9	+16
GRA1				LR	LR		
	comp=Z,1µm,18.8s,MS5.3						
GRF	**Grafenberg Arr**	**85.03**	**31**	*e*P	**P**	**15 54 29.4**	**+7.9**
GRF				pmax	pmax		
	comp=Z,18nm,1.9s,mb4.9						
GRF				MLR	MLR		
	comp=Z,1µm,18.8s,MS5.3						
NKC	**Novy Kostel**	**85.14**	**30**	AMS	AMS	16 31 30.0	
	comp=Z,500nm,18.0s						
MTLF	**Montolieu**	**85.21**	**40**	*e*P	**P**	**15 54 29.3**	**+6.7**
	comp=Z,34nm,1.3s,mb5.0						
PLCA	**Paso Flores**	**85.23**	**147**	P	**P**	**15 54 24.4**	**+1.7**
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PLCA				MLR	MLR		
	comp=Z,270nm,18.9s						
PLCA	**Paso Flores**	**85.23**	**147**	P	**P**	**15 54 24.4**	**+1.7**
	comp=Z,3.8nm,0.9s,mb4.5,baz=294,slow=8.3,SNR=3.4						
PLCA				LR	LR	16 26 11.1	
	comp=Z,270nm,18.9s,MS4.7,baz=121,slow=31						
PLCA	**Paso Flores**	**85.23**	**147**	P	**P**	**15 54 24.4**	**+1.7**
PLCA				LR	LR	16 26 11.2	
BRG	**Berggiesshubel**	**85.27**	**29**	*e*P	**P**	**15 54 29.6**	**+6.9**
BRG				pmax	pmax		
	comp=Z,22nm,1.7s,mb5.0						
BRG				MLR	MLR		
	comp=Z,540nm,21.2s,MS4.9						
BRG	**Berggiesshubel**	**85.27**	**29**	*e*P	**P**	**15 54 29.6**	**+6.9**
	comp=Z,22nm,1.7s,mb5.0						
BRG				*e*		15 55 02.5	
BRG				LR	LR		
	comp=Z,540nm,21.2s,MS4.9						
VIVF	**Saint-Julien-l**	**85.45**	**38**	*e*P	**P**	**15 54 30.5**	**+6.8**
LASF	**Ste Croix**	**85.57**	**39**	*e*P	**P**	**15 54 30.3**	**+5.9**
PVCC	**Panska Ves**	**85.78**	**29**	*e*P	**P**	**15 54 30.5**	**+5.2**
PVCC				AMS	AMS	16 32 10.0	
	comp=Z,500nm,18.0s						
LPL	**La Plagne**	**86.01**	**36**	*e*P	**P**	**15 54 33.8**	**+7.3**
ORIF	**Oris-en-Rattie**	**86.02**	**37**	*e*P	**P**	**15 54 33.1**	**+6.5**
	comp=Z,9.6nm,0.8s,mb4.8						
ORIF				*e*R			
	comp=Z,469nm,19.5s						
LPG	**La Plagne**	**86.04**	**36**	*e*P	**P**	**15 54 34.0**	**+7.3**
PRU	**Pruhonice**	**86.19**	**29**	*e*P	**P**	**15 54 34.9**	**+7.6**
PRU				AMS	AMS	16 32 30.0	
	comp=Z,500nm,18.1s						
KHC	**Kasperske Hory**	**86.46**	**30**	*e*P	**P**	**15 54 35.2**	**+6.6**
KHC				LR	LR		
	comp=Z,600nm,18.9s,MS5.0						
KHC	**Kasperske Hory**	**86.46**	**30**	*e*P	**P**	**15 54 31.5**	**+2.9**
KHC				*e*pP	pP	15 54 35.2	+1.6
KHC				AMS	AMS	16 31 00.0	
	comp=Z,600nm,18.9s						
MBDF	**Montbardon**	**86.60**	**37**	*e*P	**P**	**15 54 35.8**	**+6.4**
	comp=Z,7.2nm,0.7s,mb4.7						
MBDF	**Montbardon**	**86.60**	**37**	*e*P	**P**	**15 54 35.8**	**+6.4**
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
DPC	**Dobruska-Polom**	**86.62**	**28**	*e*P	**P**	**15 54 37.1**	**+7.7**
DPC				AMS	AMS	16 33 00.0	
	comp=Z,500nm,16.0s						
GERES	**GERESS Array B**	**86.73**	**30**	pP	pP	15 54 36.2	+1.3
	comp=Z,0.8nm,0.7s,baz=315,slow=3.8,SNR=6.2						
IRK	**Irkutsk**	**87.40**	**336**	*e*P	**P**	**15 54 38.2**	**+5.1**
IRK				pmax	pmax		
	comp=Z,57nm,2.5s,mb5.4						
OKC	**Ostrava-Krasne**	**87.74**	**27**	*e*P	**P**	**15 54 38.0**	**+3.2**
OKC				AMS	AMS	16 32 40.0	
	comp=Z,400nm,18.5s						
TLY	**Talaya**	**88.08**	**336**	*e*P	**P**	**15 54 38.3**	**+1.9**
TLY				*e*S	S	16 05 07.3	-10
TLY				*e*SS	SS	16 11 08.9	-0.9
TLY				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.2						
TLY				MLR	MLR		
	comp=Z,467nm,19.0s,MS4.9						
TLY	**Talaya**	**88.08**	**336**	*e*P	**P**	**15 54 36.4**	**0.0**
	comp=Z,6.5nm,0.8s,mb4.9						
OBN	**Obninsk**	**88.70**	**15**	P	**P**	**15 54 41.0**	**+1.7**
OBN				*e*	pP	15 54 47.2	+3.0
MOY	**Mondy**	**88.96**	**338**	*e*P	**P**	**15 54 47.3**	**+6.7**
ZAK	**Zakamensk**	**89.30**	**336**	*e*P	**P**	**15 54 32.3**	**-10**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.7						
HNR	**Honiara**	**89.82**	**259**	LR	LR	16 30 19.2	
	comp=Z,509nm,18.1s,MS5.0,baz=323,slow=32						
SVE	**Sverdlovsk**	**89.92**	**2**	*e*P	**P**	**15 54 51.8**	**+6.8**
SVE				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.6						
SVE				MLR	MLR		
	comp=N,300nm,12.0s,MS5.0						
SVE				MLR	MLR		
	comp=E,100nm,12.0s,MS5.0						
SVE				MLR	MLR		
	comp=Z,400nm,12.0s,MS5.1						
ULN	**Ulaanbaatar**	**90.02**	**332**	*i* P	**P**	**15 54 47.5**	**+1.8**
ARU	**Arti**	**90.25**	**3**	⇓*i*P	**P**	**15 54 52.5**	**+5.9**
ARU				*e*		15 58 28.6	
ARU				*e*S		16 05 21.3	
ARU				*e*SP	SP	16 06 43.4	-3.7
ARU				*e*PS	PS	16 06 51.4	+2.0
ARU				*e*SS	SS	16 11 46.2	+5.1
ARU				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.1						
ARU				MLR	MLR		
	comp=Z,400nm,22.5s,MS4.8						
ARU				MLR	MLR		
	comp=N,200nm,24.0s,MS4.7						
ARU				MLR	MLR		
	comp=E,200nm,19.0s,MS4.7						
ARU	**Arti**	**90.25**	**3**	*e*P	**P**	**15 54 45.4**	**-1.2**
	comp=E,23nm,1.4s,mb5.3						
SONM	**Songino Array**	**90.30**	**333**	LR	LR	16 40 55.6	
	comp=E,349nm,20.1s,MS4.8,baz=240,slow=39						
NVS	**Novosibirsk**	**90.32**	**349**	*e*P	**P**	**15 54 46.2**	**-0.7**
NVS				*e*S		16 05 24.3	
NVS				pmax	pmax		
	comp=Z,35nm,2.1s,mb5.3						
NVS				pmax	pmax		
	comp=N,14nm,2.2s						
NVS				pmax	pmax		
	comp=E,16nm,2.2s						
NVS				pmax	pmax		
	comp=Z,16nm,2.0s,mb5.0						
NVS				smax			
	comp=N,28nm,2.6s						
ZAL	**Zalesovo**	**90.92**	**348**	P	**P**	**15 54 50.3**	**+0.6**
ZAL				*PP	pP	15 54 55.8	+1.2
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL				MLR	MLR		
	comp=Z,460nm,18.1s						
ZAL	**Zalesovo**	**90.92**	**348**	P	**P**	**15 54 50.3**	**+0.6**
	comp=Z,1.1nm,0.6s,mb4.4,baz=114,slow=5.0,SNR=4.9						
ZAL				pP	pP	15 54 55.8	+1.2
	comp=Z,1.5nm,0.3s,baz=110,slow=5.4,SNR=3.5						
ZAL				LR	LR	16 39 30.8	
	comp=Z,460nm,18.1s,MS5.0,baz=84,slow=38						
BVAR	**Borovoye Array**	**93.56**	**356**	P	**P**	**15 55 03.2**	**+1.4**
	comp=Z,1.4nm,0.8s,mb4.5,baz=63,slow=3.3,SNR=7.6						
BVAR				pP	pP	15 55 08.0	+1.3
	comp=Z,3.1nm,0.7s,slow=3.0,SNR=13						
HHC	**Hu-ho-hao-te**	**93.70**	**326**	*e*P	**P**	**15 55 00.4**	**-2.4**
HHC				XP	sP	15 55 10.0	+0.7
HHC				SKS	SKS	16 05 38.0	-3.3
HHC				S	S	16 06 04.5	-3.8
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
HHC				AMB	AMB		
	comp=Z,140nm,5.5s						
HHC				LR	LR		
	comp=N,190nm,21.4s,MS4.9						
HHC				LR	LR		
	comp=E,400nm,22.6s,MS4.9						
HHC				LR	LR		
	comp=Z,270nm,21.4s,MS4.7						
SSE	**Sheshan**	**95.73**	**313**	P	**P**	**15 55 10.5**	**-1.9**
SSE				S	S	16 06 27.4	+1.6
SSE				AMB	AMB		
	comp=Z,80nm,4.3s						
SSE				LR	LR		
	comp=N,30nm,23.3s,MS4.2						
SSE				LR	LR		
	comp=E,100nm,23.3s,MS4.2						
SSE				LR	LR		
	comp=Z,120nm,22.4s,MS4.3						
SSE	**Sheshan**	**95.73**	**313**	P	**P**	**15 55 10.5**	**-1.9**
	comp=Z,39nm,0.7s						
SSE				S	S	16 06 27.4	+1.6
SSE				LR	LR		
	comp=Z,120nm,22.4s,MS4.3						
NJ2	**Nanjing**	**96.44**	**315**	*e*P	**P**	**15 55 16.0**	**+0.4**
NJ2				AP	pP	15 55 20.8	+0.3
NJ2				XP	sP	15 55 23.9	+1.8
NJ2				SKS	SKS	16 05 52.0	-4.4
NJ2				S	S	16 06 26.0	-5.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,240nm,4.4s						
NJ2				LR	LR		
	comp=N,360nm,17.9s,MS5.0						
NJ2				LR	LR		
	comp=E,300nm,17.6s,MS5.0						
NJ2				LR	LR		
	comp=Z,240nm,25.9s						
MKAR	**Makanchi Array**	**98.23**	**347**	P	**P**	**15 55 24.9**	**+1.6**
	comp=Z,0.1nm,0.3s,mb3.8,baz=45,slow=4.1,SNR=2.3						
MKAR				LR	LR	16 44 03.9	
	comp=Z,326nm,18.3s,MS4.9,baz=1.8,slow=38						
ANN	**Anapa**	**98.48**	**18**	*e*P	**P**	**15 55 28.4**	**+3.9**
ANN				pmax	pmax		
	comp=Z,180nm,1.2s						
ANN				MLR	MLR		
	comp=N,471nm,21.0s,MS5.1						
ANN				MLR	MLR		
	comp=E,408nm,21.0s,MS5.1						
ANN				MLR	MLR		
	comp=Z,458nm,21.0s,MS5.0						
WMQ	**Urumqi**	**99.87**	**342**	*e*P	**P**	**15 55 31.6**	**+0.8**
WMQ				AP	pP	15 55 36.4	+0.6
WMQ				XP	sP	15 55 38.6	+1.3
WMQ				PP	PP	15 59 39.2	+1.0
WMQ				*e*S	S	16 07 01.6	+1.2
WMQ				SS	SS	16 13 58.6	+1.6
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,150nm,5.6s						
WMQ				LR	LR		
	comp=N,530nm,22.5s,MS5.2						
WMQ				LR	LR		
	comp=E,590nm,22.2s,MS5.2						
WMQ				LR	LR		
	comp=Z,620nm,24.6s,MS5.0						
SOC	**Sochi**	**100.20**	**17**	*e*P	P	15 55 21.7	-11
SOC				*e*SS	SS	16 14 17.4	+16
SOC				*e*SSS	SSS	16 17 51.7	-0.4
SOC				pmax	pmax		
	comp=Z,38nm,1.2s						
SOC				pmax	pmax		
	comp=N,35nm,1.1s						
SOC				pmax	pmax		
	comp=E,30nm,0.9s						
LZH	**Lanzhou**	**101.10**	**328**	*e*P	P	15 55 37.4	+0.8
LZH				AP		15 55 42.0	
LZH				XP		15 55 44.4	
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s						
LZH				AMB	AMB		
	comp=Z,50nm,4.0s						
LZH				LR	LR		
	comp=N,710nm,17.5s						
LZH				LR	LR		
	comp=Z,950nm,19.0s,MS5.3						
LZH	**Lanzhou**	**101.10**	**328**	*e*P	P	15 55 37.4	+0.8
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				MLR	MLR		
	comp=Z,950nm,19.0s,MS5.3						
LZH	**Lanzhou**	**101.10**	**328**	*e*P	P	15 55 37.4	+0.8
	comp=Z,13nm,1.0s						
LZH				pP		15 55 42.0	
LZH				sP		15 55 44.4	
LZH				LR	LR		
	comp=Z,950nm,19.0s,MS5.3						
KMI	**Kunming**	**110.71**	**322**	PKP	PKPdf	16 00 19.4	-2.3
KMI				XPKP		16 00 26.0	
KMI				PP	PP	16 00 58.6	-1.0
KMI				SS	SS	16 16 23.1	-2.4
KMI				PP	PP		
	comp=Z,60nm,6.2s						
KMI				LR	LR		
	comp=N,170nm,16.7s,MS4.9						
KMI				LR	LR		
	comp=E,240nm,16.7s,MS4.9						
KMI				LR	LR		
	comp=Z,220nm,16.7s,MS4.8						
KMI	**Kunming**	**110.71**	**322**	PKP	PKPdf	16 00 19.4	-2.3
KMI				sPKP		16 00 26.0	
KMI				PP	PP	16 00 58.6	-1.0
KMI				PS	PS	16 10 20.1	-4.7
KMI				SS	SS	16 16 23.1	-2.4
KMI				LR	LR		
	comp=Z,220nm,16.7s,MS4.8						
QIZ	**Qiongzhong**	**111.51**	**313**	*e*PKP	PKPdf	16 00 15.9	-7.4
QIZ				PP	PP	16 01 03.5	-1.9
QIZ				SS	SS	16 16 31.4	-4.6
QIZ				LR	LR		
	comp=Z,220nm,26.1s,MS4.6						
WRA	**Warramunga Arr**	**116.37**	**263**	PKIKP	PKPdf	16 00 29.6	-3.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**116.37**	**263**	PKP	PKPdf	16 00 29.6	-3.3
	comp=Z,0.6nm,0.8s,baz=60,slow=2.1,SNR=5.8						
MAW	**Mawson**	**145.93**	**180**	PKP2	PKPab	16 01 26.3	+0.1
MAW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAW	**Mawson**	**145.93**	**180**	PKPbc	PKPbc	16 01 26.3	+2.4
	comp=Z,3.4nm,0.7s,baz=161,slow=8.6,SNR=7.4						
BOSA	**Boshof**	**147.02**	**92**	PKP2	PKPab	16 01 31.0	-0.7
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BOSA	**Boshof**	**147.02**	**92**	PKPbc	PKPdf	16 01 30.9	+1.3
	comp=Z,4.9nm,0.7s,baz=280,slow=4.1,SNR=10						

CSEM 12 15:50:12.0±0.3**, 61.64N**×**25.28W, h10^{km}, ML4.0, Error ellipse: s-maj=15.0km s-min=5.0km az=127.0, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
INYL	**Nylenda**	**2.62**	**25**	P	Pn	15 50 55.2	0.0
IKRI	**Krysuvik**	**2.69**	**32**	P	Pn	15 50 55.8	-0.4
IKRI				S	Sn	15 51 28.4	-0.7
IVOG	**Vogar**	**2.69**	**28**	P	Pn	15 50 56.4	+0.2
IVOS	**Vogsosar**	**2.77**	**35**	P	Pn	15 50 57.0	-0.3
IVOS				S	Sn	15 51 30.7	-0.4
IBJA	**Bjarnastaoir**	**2.95**	**36**	P	Pn	15 50 59.9	0.0
IBJA				S	Sn	15 51 35.4	-0.3
ISAN	**Sandskeio**	**2.97**	**33**	P	Pn	15 51 00.2	+0.1
ISAN				S	Sn	15 51 36.7	+0.6
ISOL	**Solvholt**	**3.04**	**39**	P	Pn	15 51 01.1	-0.1
ISOL				S	Sn	15 51 38.7	+0.6
IASM	**Asmuli**	**3.08**	**42**	P	Pn	15 51 02.1	+0.4
IASM				S	Sn	15 51 38.5	-0.4
IKUD	**Kuludalsa**	**3.11**	**28**	P	Pn	15 51 02.5	+0.4
IKUD				S	Sn	15 51 41.1	+1.3
IKRO	**Krokur**	**3.12**	**36**	P	Pn	15 51 02.7	+0.4
IKRO				S	Sn	15 51 40.0	0.0
IHEI	**Heioarbar**	**3.17**	**34**	P	Pn	15 51 03.1	+0.1
ISAU	**Saurbar**	**3.25**	**41**	P	Pn	15 51 04.3	+0.2
ISAU				S	Sn	15 51 44.4	+1.1
IHAU	**Haukadalur**	**3.38**	**44**	P	Pn	15 51 06.3	+0.3
IHAU				S	Sn	15 51 46.5	-0.1
IGYG	**Gygjarholskot**	**3.52**	**39**	P	Pn	15 51 08.3	+0.3
IGYG				S	Sn	15 51 51.6	+1.5
IASB	**`sbjarnarst**	**3.60**	**28**	P	Pn	15 51 10.1	+1.0
IASB				S	Sn	15 51 53.2	+1.0

IDC 12 15:50:45.2±15.0**, 17.94S**×**178.55W, h469^{km}**±183^{km}**, mb3.1**/4**, mb1 3.4**/4**, mb1mx3.1**/15**, mbtmp3.9**/4**, Error ellipse: s-maj=94.2km s-min=53.0km az=166.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.50**	**241**	P	P	15 57 26.1	-1.1
	6.7nm,0.9s,baz=87,slow=11,SNR=7.3						
WRA	**Warramunga Arr**	**44.50**	**260**	P	P	15 58 13.8	-1.5
	0.5nm,0.5s,baz=99,slow=6.2,SNR=22						
ILAR	**Eielson Array**	**85.94**	**13**	P	P	16 02 34.0	-1.1
	0.3nm,0.4s,baz=220,slow=5.1,SNR=11						
TXAR	**Lajitas Array**	**86.12**	**58**	P	P	16 02 36.5	-0.3
	0.4nm,0.7s,baz=231,slow=8.0,SNR=5.0						
GERES	**GERESS Array B**	**147.60**	**345**	PKPbc	PKPdf	16 09 35.5	+3.4
	0.3nm,0.6s,baz=45,slow=3.8,SNR=3.9						

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*NEIC **12** 16:24:34.5±2.6, 1.88N×126.69E, h48^{km}±26^{km}, mb4.2/4, Error ellipse: s-maj=28.6km s-min=9.8km az=68.0*

*IDC **12** 16:24:34.5±3.7, 1.91N×126.62E, h47^{km}±36^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.7/18, mbtmp4.0/7, Error ellipse: s-maj=48.5km s-min=13.5km az=74.0*

ISC 12 16:24:33.2±4.5**, 1.9N**±0.1×**126.6E**±0.2**, h53^{km}**±44^{km}**, n14, σ0^{s}63**/15**, mb4.0**/8**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**11.15**	**292**	*e*Pn	**P**	**16 27 12.6**	**0.0**
KAKA	**Kakadu**	**15.64**	**158**	*e*P	**P**	**16 28 16.9**	**+5.1**
	16nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.91**	**183**	P	**P**	**16 29 03.1**	**-0.2**
	0.3nm,0.3s,baz=29,slow=6.5,SNR=7.8						
WRAB	**Tennant Creek**	**23.00**	**161**	*e*P	**P**	**16 29 34.0**	**-0.4**
	8.4nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**23.01**	**161**	P	**P**	**16 29 34.8**	**+0.3**
	4.5nm,0.7s,mb4.0,baz=339,slow=11,SNR=82						
WRA				S	**S**	**16 33 43.7**	**+6.6**
	0.7nm,0.8s,baz=344,slow=17,SNR=5.0						
WB2	**Warramunga Arr**	**23.01**	**161**	*e*P	**P**	**16 29 34.5**	**0.0**
MBWA	**Marble Bar**	**23.90**	**196**	*e*P	**P**	**16 29 43.3**	**+0.2**
	3.3nm,0.7s,mb3.9						
MJAR	**Matsushiro Arr**	**36.08**	**16**	P	**P**	**16 31 31.8**	**-0.1**
	1.5nm,0.7s,mb4.0,baz=184,slow=9.5,SNR=9.5						
STKA	**Stephens Creek**	**36.49**	**158**	*e*P	**P**	**16 31 35.9**	**+0.6**
	2.6nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**36.49**	**158**	P	**P**	**16 31 35.6**	**+0.3**
	2.3nm,0.5s,mb4.3,baz=333,slow=11,SNR=7.2						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**16 34 28.4**	**-1.2**
	1.7nm,0.5s,mb4.3,baz=122,slow=8.4,SNR=25						
BVAR	**Borovoye Array**	**68.77**	**327**	P	**P**	**16 35 35.1**	**+1.5**
	0.4nm,0.4s,mb3.7,baz=135,slow=8.2,SNR=4.2						
VNDA	**Vanda**	**81.65**	**173**	P	**P**	**16 36 46.6**	**-0.2**
	0.9nm,0.8s,mb3.8,baz=309,slow=6.0,SNR=4.6						
VNDA	**Vanda**	**81.65**	**173**	*e*P	**P**	**16 36 46.1**	**-0.6**

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*INMG **12** 16:30:52.2±0.8, 36.37N×9.87W, h10^{km}, ML1.8, Error ellipse: s-maj=6.1km s-min=3.9km az=71.0*

MDD 12 16:30:51.5±2.1**, 36.43N**×**9.80W, mb2.8**/4**, Error ellipse: s-maj=18.2km s-min=14.4km az=85.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	**1.41**	**37**	*e*P	Pb	16 31 17.4	-0.9
PTEO				*e*S	Sb	16 31 36.1	-0.6
	5.0nm,0.1s						
PTEO	**Sao Teotonio**	**1.41**	**37**	Pg	Pg	16 31 17.4	-2.1
PTEO				Lg		16 31 36.1	
	2.5nm,0.1s						
PALC	**Alcoutim**	**2.13**	**60**	*e*Pn	Pn	16 31 27.2	-1.5
PALC				*e*Sn	Sn	16 31 53.6	-2.6
	3.0nm,0.1s						
PALC	**Alcoutim**	**2.13**	**60**	Pn	Pn	16 31 27.2	-1.5
PALC				Sn	Sn	16 31 53.6	-2.6
	1.5nm,0.1s						
EGRO	**El Granado**	**2.16**	**59**	Pn	Pn	16 31 27.4	-1.7
	0.1nm,0.1s,SNR=14						
EGRO				Sn	Sn	16 31 54.0	-2.9
	2.1nm,0.1s						
PBEJ	**Beja**	**2.22**	**43**	*e*Pn	Pn	16 31 28.5	-1.5
PBEJ				*e*Sn	Sn	16 31 55.6	-2.9
	2.5nm,0.1s						
PBEJ	**Beja**	**2.22**	**43**	Pn	Pn	16 31 28.5	-1.5
PBEJ				Sn	Sn	16 31 55.6	-2.9
	1.2nm,0.1s						
MOE	**Montemor**	**2.39**	**28**	*e*Sn	Sn	16 31 59.6	-3.2
PLOU	**Loures**	**2.50**	**12**	*e*Sn	Sn	16 32 02.4	-3.4
	7.4nm,0.1s						
PLOU	**Loures**	**2.50**	**12**	Sn	Sn	16 32 02.4	-3.4
	3.7nm,0.1s						
EMIN	**Mina Concepcio**	**2.83**	**61**	Pn	Pn	16 31 36.5	-2.3
	0.1nm,0.1s,SNR=12						
EMIN				Sn	Sn	16 32 10.2	-3.9
	0.6nm,0.1s						
EBAD	**Badajoz**	**3.21**	**43**	Pn	Pn	16 31 41.5	-2.6
	0.1nm,0.1s,SNR=8.7						
EBAD				Sn	Sn	16 32 20.2	-3.3
	2.5nm,0.1s,SNR=7.4						
PTOM	**Tomar**	**3.37**	**19**	*e*Sn	Sn	16 32 22.2	-5.4
	2.6nm,0.1s						
PTOM	**Tomar**	**3.37**	**19**	Sn	Sn	16 32 22.2	-5.4
	1.3nm,0.1s						
ECAB	**El Cabril**	**3.86**	**64**	Pn	Pn	16 31 50.6	-2.8
	0.7nm,0.2s,SNR=7.6						
ECAB				Sn	Sn	16 32 34.1	-6.0
	0.5nm,0.1s						
PCBR	**Castelo Branco**	**3.87**	**28**	*e*Pn	Pn	16 31 51.0	-2.4
EADA	**Adamuz**	**4.51**	**66**	Sn	Sn	16 32 51.0	-5.6
	0.5nm,0.2s						
PVRL	**Vila Real**	**5.10**	**18**	*e*Sn	Sn	16 33 04.4	-7.2
	6.8nm,0.1s						
PVRL	**Vila Real**	**5.10**	**18**	Sn	Sn	16 33 04.4	-7.2
	3.4nm,0.1s						
ELOB	**Lobios**	**5.59**	**13**	Sn	Sn	16 33 15.7	-8.2
	0.5nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**5.63**	**53**	Pn	Pn	16 32 15.1	-3.4
	1.7nm,0.1s,baz=239,slow=14,SNR=7.0						
ESDC				Sn	Sn	16 33 17.0	-7.8
	0.8nm,0.1s,baz=241,slow=24,SNR=4.0						
ETOB	**Tobarra**	**6.92**	**69**	Pn	Pn	16 32 31.6	-5.0
	SNR=7.9						
ETOB				Sn	Sn	16 33 46.7	-10
	SNR=7.9						

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*IDC **12** 16:56:39.3±0.9, 12.93N×92.56E, mb3.8/11, mb1 4.0/12, mb1mx3.8/22, mbtmp3.8/12, ML3.4/1, Error ellipse: s-maj=31.7km s-min=16.9km az=56.0*

*NEIC **12** 16:56:43.6±0.6, 12.88N×92.54E, h30^{km}, mb3.9/7, Error ellipse: s-maj=17.0km s-min=8.3km az=53.0*

ISC 12 16:56:40.4±3.8**, 12.89N**±0.09×**92.62E**±0.07**, h20^{km}**±27^{km}**, n22, σ1^{s}09**/25**, mb3.7**/13**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.23**	**47**	Pn	**P**	**16 58 41.6**	**-0.1**
	0.1nm,0.3s,baz=237,slow=15,SNR=4.9						
CMAR				Sn	**Sn**	**17 00 13.8**	**-1.3**
	0.1nm,0.3s,baz=230,slow=27,SNR=2.6						
VIS	**Vishakhapatnam**	**10.16**	**299**	*i* P	**P**	**16 59 05.9**	**-2.7**
VIS				*i* S	**S**	**17 00 48.1**	**-15**
PKI	**Pulchoki**	**16.09**	**336**	*e*P	**P**	**17 00 27.4**	**+0.2**
	5.8nm,0.3s						
DMN	**Daman**	**16.24**	**335**	*e*P	**P**	**17 00 29.4**	**+0.2**
	11nm,0.5s						
KKN	**Kakani**	**16.33**	**336**	*e*P	**P**	**17 00 29.6**	**-0.8**
GKN	**Gorkha**	**16.78**	**335**	*e*P	**P**	**17 00 35.9**	**-0.1**
	12nm,0.3s						
LSA	**Lhasa**	**16.78**	**356**	*e*P	**P**	**17 00 38.2**	**+2.2**
	3.1nm,0.4s						

KOLN	**Koldanda**	17.03	332	*e*P	P	17 00 40.9	+1.7
	9.3nm,0.5s						
KOLN				*e*S	S	17 03 36.1	-11
MKAR	**Makanchi Array**	34.89	348	P	P	17 03 33.3	+0.6
	2.0nm,0.8s,mb4.1,baz=167,slow=7.9,SNR=14						
SONM	**Songino Array**	36.69	16	P	P	17 03 46.5	-1.3
	0.5nm,0.3s,mb3.8,baz=339,slow=12,SNR=3.2						
ULN	**Ulaanbaatar**	36.89	16	*e*P	P	17 03 51.1	+1.6
	1.8nm,0.8s,mb4.0						
ZAL	**Zalesovo**	41.41	353	P	P	17 04 26.5	-0.5
	1.0nm,0.4s,mb3.8,baz=305,slow=7.7,SNR=5.3						
BVAR	**Borovoye Array**	43.78	341	P	P	17 04 46.9	+0.5
	0.2nm,0.4s,mb3.2,baz=141,slow=9.2,SNR=3.5						
BRVK	**Borovoye**	43.85	341	*e*P	P	17 04 51.0	+4.0
	0.2nm,0.5s,mb3.1						
FITZ	**Fitzroy Crossi**	44.83	133	P	P	17 04 56.0	+0.6
	3.1nm,0.6s,mb4.3,baz=352,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	52.44	128	P	P	17 05 54.4	+0.1
	0.2nm,0.4s,mb3.4,baz=299,slow=9.9,SNR=11						
WRA				PcP	PcP	17 07 05.4	+0.4
	0.5nm,0.5s,baz=317,slow=3.1,SNR=15						
WRAB	**Tennant Creek**	52.45	128	P	P	17 05 53.8	-0.6
AKASG	**Malin Array Be**	63.33	320	P	P	17 07 08.3	-2.1
	0.1nm,0.3s,mb3.4,baz=86,slow=6.0,SNR=5.3						
FINES	**FINESS Array B**	67.61	332	P	P	17 07 37.2	-0.5
	1.6nm,0.9s,mb4.0,baz=104,slow=7.9,SNR=4.4						
ARCES	**ARCESS Array B**	70.07	340	P	P	17 07 52.9	+0.1
	2.3nm,0.9s,mb4.1,baz=39,slow=5.8,SNR=3.4						
GERES	**GERESS Array B**	73.12	317	P	P	17 08 11.7	+0.3
	0.4nm,0.7s,mb3.4,baz=90,slow=5.3,SNR=5.8						
ILAR	**Eielson Array**	90.67	22	P	P	17 09 43.9	+1.2
	0.3nm,0.6s,mb3.8,baz=293,slow=4.5,SNR=5.3						

NNC 12 17:02:08.1±34.0,35.12N×75.25E,mpv3.6,1C-1D,Error ellipse: s-maj=2661.6km s-min=338.7km az=66.0, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	2.71	172	*e*PN	Pn	17 02 51.2	-2.4
	25nm,0.3s						
THN				*e*SN	Sn	17 03 27.3	-0.3
SMLA	**Simla**	4.29	157	*i* P	Pn	17 03 15.8	-0.3
SMLA				*i* S	Sn	17 04 02.4	-5.4
KK31	**Karatay Array**	8.78	337	⇓Pn	P	17 04 18.8	-0.3
	1.5nm,0.6s,baz=141,slow=12,SNR=13						
KK31				⇑Sn	Sn	17 06 02.3	+2.3
	0.5nm,0.3s,baz=158,slow=22,SNR=5.7						

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*LDG **12** 17:02:09.8±0.1,45.56N×6.19E,h3^{km},Md3.1/1,Ml3.0/26, Error ellipse: s-maj=1.2km s-min=0.9km az=118.0*

*NEIC **12** 17:02:09.8,45.56N×6.19E,h3^{km},ML3.0(LDG), ML2.8(STR),ML2.6(GEN),After LDG.*

*ZUR **12** 17:02:09.4,45.55N×6.23E,h15^{km}±4^{km},ML2.3/10*

*CSEM **12** 17:02:09.2±0.0,45.53N×6.26E,h5^{km},ML3.0/22,Error ellipse: s-maj=0.9km s-min=0.7km az=86.0*

*GEN **12** 17:02:11.1,45.54N×6.34E,h2^{km},ML2.6*

STR 12 17:02:09.4±0.2,45.52N×6.27E,h5^{km}±1^{km},Ml2.8,4C-5D, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0,France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSL	**Roselend**	0.30	56	Pg	Pg	17 02 15.9	+0.4
GDM	**Grand'Maison**	0.33	199	Pg	Pg	17 02 16.3	+0.2
GDM				Sg	Sg	17 02 20.6	0.0
GRN	**Grenoble**	0.46	233	Pg	Pg	17 02 18.4	-0.3
GRN				Sg	Sg	17 02 24.6	-0.3
BNI	**Bardonecchia**	0.55	148	Pg	Pg	17 02 20.6	+0.2
BNI				Sg	Sg	17 02 29.0	+1.2
LSD	**Ceresole Reale**	0.63	95	P	Pg	17 02 22.3	+0.4
LSD				S	Sg	17 02 29.9	-0.4
LSD	**Ceresole Reale**	0.63	95	P	Pg	17 02 22.3	+0.4
ORIF	**Oris-en-Rattie**	0.66	205	*e*Pg	Pg	17 02 21.8	-0.8
ORIF				*e*Sg	Sg	17 02 30.0	-1.5
	80nm,0.2s						
EMV	**Vieux Emosson**	0.70	39	⇓*i*P	Pg	17 02 23.0	-0.4
RRL	**Cesana Torines**	0.70	149	P	Pg	17 02 24.6	+1.2
RRL				S	Sg	17 02 34.1	+1.3
RRL	**Cesana Torines**	0.70	149	P	Pg	17 02 24.6	+1.2
RRL				S	Sg	17 02 34.1	+1.3
FENE	**Fenestrelle**	0.74	131	P	Pg	17 02 25.0	+0.7
FENE				S	Sg	17 02 34.3	+0.1
FENE	**Fenestrelle**	0.74	131	P	Pg	17 02 25.0	+0.7
FENE				S	Sg	17 02 34.3	+0.1
RSP	**Reno Superiore**	0.79	118	P	Pg	17 02 25.8	+0.7
RSP				S	Sg	17 02 35.8	+0.2
RSP	**Reno Superiore**	0.79	118	P	Pg	17 02 25.8	+0.6
RSP				S	Sg	17 02 35.8	+0.1
SALAN	**Lac Salanfe**	0.80	38	⇓*i*P	Pg	17 02 24.7	-0.6
OG01	**Vacheresse**	0.86	19	Pg	Pg	17 02 26.3	-0.3
MBDF	**Montbardon**	0.87	156	*e*Pg	Pg	17 02 27.1	+0.3
MBDF				*e*Pn	Pn	17 02 27.9	-0.2
MBDF				*e*Sg	Sg	17 02 38.9	+0.5
	32nm,0.5s						
MBDF	**Montbardon**	0.87	156	*e*Pn	Pn	17 02 27.9	-0.2
MBDF				*e*Sg	Sg	17 02 38.9	+0.5
	16nm,0.5s						
GRYON	**Gryon**	0.94	39	⇓*i*P	Pb	17 02 27.3	-0.5
AIGLE	**Aigle**	0.95	30	⇑*i*P	Pb	17 02 27.6	-0.4
DIX	**Grande Dixence**	0.97	55	Pg	Pg	17 02 28.2	-0.7
DIX	**Grande Dixence**	0.97	55	⇓*i*P	Pb	17 02 28.1	-0.3
BHB	**Bricherasio**	0.98	134	P	Pb	17 02 29.2	+0.8
BHB				S	Sb	17 02 41.5	+0.1
BHB	**Bricherasio**	0.98	134	P	Pb	17 02 29.2	+0.8
BHB				S	Sb	17 02 41.5	+0.1
GIMEL	**Gimel**	1.01	360	⇑*i*P	Pb	17 02 28.4	-0.7
TRAV		1.04	90	P	Pb	17 02 30.0	+0.5
TRAV				S	Sb	17 02 42.5	-0.7
TRAV		1.04	90	P	Pb	17 02 30.0	+0.5
TRAV				S	Sb	17 02 42.5	-0.7
CABF	**La Chapelle**	1.10	353	*e*Pg	Pg	17 02 29.6	-1.8
CABF				*e*P		17 02 31.1	
CABF				*e*Sg	Sg	17 02 42.9	-3.1
	35nm,0.3s						
SENIN	**Lac Senin**	1.11	40	⇓*i*P	Pb	17 02 30.4	-0.3
OCF	**Saint Nazaire**	1.17	216	Pg	Pg	17 02 32.1	-0.6
OG26	**St.-Nazaire-De**	1.17	216	Pg	Pg	17 02 32.1	-0.6
PZZ	**Prazzo**	1.17	150	P	Pb	17 02 32.8	+1.0
PZZ				S	Sb	17 02 47.6	+0.5
PZZ	**Prazzo**	1.17	150	P	Pb	17 02 32.8	+1.0
PZZ				S	Sb	17 02 47.6	+0.5
ORO	**Oropa**	1.21	84	Pg	Pg	17 02 30.9	-2.6
ORX	**Oropa**	1.21	84	P	Pb	17 02 32.7	+0.3
ORX				S	Sb	17 02 47.3	-0.8
ORX	**Oropa**	1.21	84	P	Pb	17 02 32.7	+0.3
ORX				S	Sb	17 02 47.3	-0.8
MCGN	**Macugnaga**	1.28	69	Pg	Pg	17 02 33.5	-1.5
MMK	**Mattmark**	1.30	65	*e*P	Pb	17 02 34.0	+0.1
VIVF	**Saint-Julien-l**	1.31	240	*e*Pn	Pn	17 02 33.1	-1.3
VIVF				*e*Pg	Pg	17 02 34.0	-1.6
VIVF				*e*Sn	Sn	17 02 49.4	-3.0
VIVF				*e*Sg	Sg	17 02 50.6	-2.4
	45nm,0.3s						
BRANT	**Les Verrieres**	1.43	6	⇑*i*P	Pn	17 02 34.9	-1.1
STV2	**Anna di Valdie**	1.48	149	P	Pn	17 02 37.1	+0.4
STV2	**Anna di Valdie**	1.48	149	P	Pn	17 02 37.1	+0.3
STV	**Sta Anna Valdi**	1.48	149	P	Pn	17 02 37.1	+0.3
STV	**Sta Anna Valdi**	1.48	149	P	Pn	17 02 37.1	+0.3
ENR	**Entracque**	1.53	147	P	Pn	17 02 37.8	+0.2
ENR	**Entracque**	1.53	147	P	Pn	17 02 37.8	+0.3
SMRF	**Simiane la Rot**	1.62	198	*e*Pn	Pn	17 02 38.3	-0.5
SMRF				*e*Pg	Pg	17 02 40.6	-1.2
SMRF				*e*Sg	Sg	17 03 02.0	-1.4
	6.8nm,0.3s						
ROB	**Roburent**	1.67	137	P	Pn	17 02 39.9	+0.3
ROB	**Roburent**	1.67	137	P	Pn	17 02 39.9	+0.4
MONE	**Monesi**	1.79	143	P	Pn	17 02 41.6	+0.4
MONE	**Monesi**	1.79	143	P	Pn	17 02 41.6	+0.4
COLF	**Collangettes**	1.81	271	Pn	Pn	17 02 39.3	-2.2
SBF	**Sospel**	1.85	153	*e*Pn	Pn	17 02 41.7	-0.4
SBF				*e*Sg	Sg	17 03 11.2	+0.1
	21nm,0.4s						
FIN	**Finale Ligure**	1.90	133	P	Pn	17 02 41.6	-1.2
FIN	**Finale Ligure**	1.90	133	P	Pn	17 02 41.6	-1.2
PLDF	**La Plantade**	1.91	285	Pn	Pn	17 02 42.1	-0.8
NEGI	**Negi**	1.96	148	P	Pn	17 02 43.7	+0.1
NEGI	**Negi**	1.96	148	P	Pn	17 02 43.7	0.0
FRF	**La Foret Royal**	1.98	172	*e*Pn	Pn	17 02 43.0	-0.9
FRF				*e*Pg	Pg	17 02 47.8	-1.1
FRF				*e*Sn	Sn	17 03 07.1	-2.3
FRF				*e*Sg	Sg	17 03 13.8	-1.5
	8.4nm,0.4s						
IMI	**Imperia**	1.98	144	P	Pn	17 02 43.4	-0.6
IMI	**Imperia**	1.98	144	P	Pn	17 02 43.4	-0.6
SMF	**Signal de Mont**	2.03	305	*e*Pn	Pn	17 02 42.2	-2.5
SMF				*e*Pg	Pg	17 02 46.2	-3.8
SMF				*e*Sn	Sn	17 03 05.2	-5.5
SMF				*e*Sg	Sg	17 03 10.8	-6.2
	50nm,0.2s						
BALST	**Balsthal**	2.07	28	*e*P	Pn	17 02 43.8	-1.4
BALST	**Balsthal**	2.07	28	*e*P	Pn	17 02 43.9	-1.3
LBL	**Lubilhac**	2.15	263	Pn	Pn	17 02 45.5	-0.9
LMR	**La Mourre**	2.19	175	*e*Pn	Pn	17 02 46.4	-0.6
LMR				*e*Sn	Sn	17 03 11.8	-3.0
LMR				*e*Sg	Sg	17 03 20.6	-1.8
	1.6nm,0.2s						
LASF	**Ste Croix**	2.24	231	*e*Pn	Pn	17 02 45.5	-2.2
LASF				*e*Pg	Pg	17 02 51.0	-3.2
LASF				*e*Sn	Sn	17 03 12.1	-4.0
LASF				*e*Sg	Sg	17 03 20.1	-4.0
	9.8nm,0.3s						
HINF	**Hinteralfeld**	2.33	10	*e*Pn	Pn	17 02 46.4	-2.6
HINF				*e*Pg	Pg	17 02 52.5	-3.5
HINF				*e*Sn	Sn	17 03 14.0	-4.4
HINF				*e*Sg	Sg	17 03 21.3	-5.8
HINF	**Hinteralfeld**	2.33	10	*e*Pg	Pg	17 02 52.5	-3.5
HINF				*e*Sn	Sn	17 03 14.0	-4.4
HINF				*e*Sg	Sg	17 03 21.3	-5.8
	11nm,0.2s						
AVF	**Avril sur Loir**	2.39	303	*e*Pn	Pn	17 02 47.2	-2.7
AVF				*e*Pg	Pg	17 02 53.2	-4.0
AVF				*e*Sg	Sg	17 03 22.1	-7.0
	21nm,0.4s						
MOF	**Molkenrain**	2.41	14	Pn	Pn	17 02 47.4	-2.7
LOR	**Lormes**	2.42	317	*e*Pn	Pn	17 02 47.8	-2.4
	baz=127						
LOR				*e*Sn	Sn	17 03 14.6	-5.9
LOR				*e*Sg	Sg	17 03 21.7	-8.2
	20nm,0.2s						
SSF	**Saint Saulge**	2.46	310	*e*Pn	Pn	17 02 48.9	-1.9
SSF				*e*Pg	Pg	17 02 55.0	-3.5
SSF				*e*Sn	Sn	17 03 15.3	-6.3
SSF				*e*Sg	Sg	17 03 23.8	-7.5
	16nm,0.2s						
SSF	**Saint Saulge**	2.46	310	*e*Pg	Pg	17 02 55.0	-3.5
SSF				*e*Sn	Sn	17 03 15.3	-6.3
SSF				*e*Sg	Sg	17 03 23.8	-7.5
	7.8nm,0.2s						
HAU	**Haudompre**	2.49	1	*e*Pn	Pn	17 02 48.7	-2.5
HAU				*e*Pg	Pg	17 02 55.1	-4.0
HAU				*e*Sn	Sn	17 03 17.1	-5.2
HAU				*e*Sg	Sg	17 03 26.5	-5.7
	26nm,0.2s						
BGF	**Bois d'Agland**	2.60	295	*e*Pn	Pn	17 02 50.7	-2.1
BGF				*e*Pg	Pg	17 02 57.2	-4.1
BGF				*e*Sg	Sg	17 03 28.2	-7.8
	69nm,0.4s						
THEF	**They Montfort**	2.71	356	Pn	Pn	17 02 51.5	-3.0
ECH	**Echery**	2.77	12	Pn	Pn	17 02 52.1	-3.1
SFTF	**Sexfontaines**	2.82	343	*e*Pn	Pn	17 02 54.3	-1.6
SFTF				*e*Sg	Sg	17 03 36.1	-7.1
	11nm,0.2s						
TCF	**Toulx Ste Croi**	2.94	287	*e*Pn	Pn	17 02 52.7	-4.9
TCF				*e*Pg	Pg	17 03 02.5	-5.5
TCF				*e*Sn	Sn	17 03 27.3	-6.4
TCF				*e*Sg	Sg	17 03 39.0	-8.2
	12nm,0.2s						
CDF	**Champ du Feu**	2.97	13	*e*Pn	Pn	17 02 54.9	-3.3
CDF				*e*Pg	Pg	17 03 04.5	-4.3
CDF				*e*Sn	Sn	17 03 29.7	-5.0
CDF				*e*Sg	Sg	17 03 42.6	-5.8
	10nm,0.3s						
CAF	**Calviac**	3.03	260	*e*Pn	Pn	17 02 56.8	-2.2
CAF				*e*Pg	Pg	17 03 05.2	-4.7
CAF				*e*Sg	Sg	17 03 41.2	-9.1
	6.1nm,0.4s						
DAVA	**Damuels**	3.06	53	⇑*i*PN	Pn	17 03 05.1	+5.7
DAVA				*i* SN	Sn	17 03 43.6	+6.8
HYF	**Humbligny**	3.06	306	*e*Pn	Pn	17 02 56.3	-3.1
HYF				*e*Sg	Sg	17 03 43.5	-7.8
MEZF	**Maizieres J'vi**	3.10	345	*e*Pn	Pn	17 02 58.0	-1.9
MEZF				*e*Pg	Pg	17 03 06.6	-4.6
	baz=168						
MEZF				*e*Sg	Sg	17 03 44.8	-7.7
	11nm,0.3s						
MEZF	**Maizieres J'vi**	3.10	345	*e*Pg	Pg	17 03 06.6	-4.6
MEZF				*e*Sg	Sg	17 03 44.8	-7.7
	5.3nm,0.3s						
RFYF	**Reffroy**	3.16	350	*e*Pn	Pn	17 02 57.9	-2.9
RFYF				*e*Sg	Sg	17 03 47.2	-7.3
	18nm,0.2s						
RJF	**Les Rejaudoux**	3.35	268	*e*Pn	Pn	17 03 00.7	-2.9
RJF				*e*Pg	Pg	17 03 11.5	-4.9
RJF				*e*Sg	Sg	17 03 53.3	-7.8
	6.9nm,0.3s						
MTLF	**Montolieu**	3.63	235	*e*Pn	Pn	17 03 04.5	-3.0
MTLF				*e*Pg	Pg	17 03 16.3	-5.6
MTLF				*e*Sn	Sn	17 03 45.2	-6.0
MTLF				*e*Sg	Sg	17 04 02.9	-7.3
	2.7nm,0.3s						
MFF	**Saint Martin d**	4.59	286	*e*Pn	Pn	17 03 17.4	-3.8
MFF				*e*Sn	Sn	17 04 06.9	-8.8
MFF				*e*Sg	Sg	17 04 31.7	-11
	4.9nm,0.3s						
GIVF	**Givet**	4.69	349	*e*Pn	Pn	17 03 20.1	-2.4
BAIF	**Baives**	4.75	344	*e*Pn	Pn	17 03 20.5	-2.9

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*KRSC **12** 17:15:21.0±1.6,49.95N×152.08E,h395^{km}±10^{km},ML3.9*

*NEIC **12** 17:15:22.3±1.4,50.31N×151.29E,h356^{km}±21^{km},Error ellipse: s-maj=30.0km s-min=17.3km az=124.0*

*IDC **12** 17:15:27.2±5.0,50.27N×151.17E,h415^{km}±61^{km},mb2.7/5, mb1 2.9/6,mb1mx2.7/23,mbtmp3.5/6,Error ellipse: s-maj=28.8km s-min=21.7km az=109.0*

ISC 12 17:15:23.4±0.8,50.5N±0.1×152.3E±0.3,h412^{km}±13^{km}, n23,σ1§39/37,mb2.9/5,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALID	**Alaid**	2.12	77	*e*P	**P**	**17 16 19.6**	**-2.0**
PAU	**Pauzhetka**	3.04	69	*e*P	**P**	**17 16 26.5**	**-1.7**
PAU				*e*S	**S**	**17 17 13.9**	**-5.4**
APC	**Apacha**	3.92	49	*e*P	**P**	**17 16 37.6**	**+1.7**
APC				*e*S	**S**	**17 17 33.8**	**+0.8**
GRL	**Gorelyy**	4.19	58	*e*P	**P**	**17 16 40.2**	**+1.7**
GRL				*e*S	**S**	**17 17 38.1**	**+0.6**
RUS	**Russkaya**	4.38	61	*e*P	**P**	**17 16 40.3**	**-0.1**
RUS				*e*S	**S**	**17 17 38.6**	**-2.2**
PET	**Petropavlovsk**	4.73	54	*e*Pn	**P**	**17 16 45.1**	**+1.3**
PET	**Petropavlovsk**	4.73	54	*e*P	**P**	**17 16 44.7**	**+0.9**
PET				*e*S	**S**	**17 17 45.8**	**-1.1**
GNL	**Ganaly**	4.77	45	*e*P	**P**	**17 16 44.9**	**+0.6**
GNL				*e*S	**S**	**17 17 45.6**	**-2.1**
KOK	**Koryaka**	4.86	52	*e*P	**P**	**17 16 47.1**	**+1.9**
KOK				*e*S	**S**	**17 17 49.1**	**-0.2**
AVH	**Avacha**	4.90	52	*e*P	**P**	**17 16 47.0**	**+1.5**
AVH				*e*S	**S**	**17 17 49.9**	**-0.1**
UGLR	**Uglovaya**	4.91	53	*e*P	**P**	**17 16 47.9**	**+2.2**
UGLR				*e*S	**S**	**17 17 50.9**	**+0.7**
NLC	**Nalytchevo**	5.16	55	*e*P	**P**	**17 16 48.0**	**-0.2**
NLC				*e*S	**S**	**17 17 52.3**	**-2.5**
SPN	**Mys Shipunski**	5.49	58	*e*P	**P**	**17 16 51.8**	**+0.2**
SPN				*e*S	**S**	**17 17 57.7**	**-3.2**
MKZ	**Mys Kozlova**	7.08	51	*i* P	**P**	**17 17 11.1**	**+2.0**
KMNR	**Kamenistaya**	7.15	39	*e*P	**P**	**17 17 12.2**	**+2.4**
KMNR				*e*S	**S**	**17 18 32.8**	**-1.1**
KBTR	**Krutoberegovo**	8.54	43	*e*P	**P**	**17 17 26.8**	**+1.2**
KBTR				*e*S	**S**	**17 19 02.0**	**-0.2**
BKI	**Bering**	9.55	55	*e*P	**P**	**17 17 35.8**	**-1.3**
BKI				*e*S	**S**	**17 19 14.1**	**-8.9**
MJAR	**Matsushiro Arr**	17.20	221	P	**P**	**17 18 55.6**	**-4.0**
	0.3nm,0.3s,baz=20,slow=11,SNR=7.9						
ILAR	**Eielson Array**	34.08	42	P	**P**	**17 21 39.7**	**+7.7**
	0.1nm,0.6s,mb2.4,baz=254,slow=6.6,SNR=3.9						
MKAR	**Makanchi Array**	44.84	294	P	**P**	**17 22 58.2**	**-1.6**
	0.1nm,0.3s,mb2.6,baz=60,slow=8.3,SNR=3.9						
BVAR	**Borovoye Array**	48.14	307	P	**P**	**17 23 24.3**	**-0.8**
	0.5nm,0.4s,mb3.2,baz=76,slow=5.9,SNR=3.7						
FINES	**FINESS Array B**	60.47	334	P	**P**	**17 24 52.8**	**+0.1**
	0.7nm,0.4s,mb3.4,baz=35,slow=8.0,SNR=17						
WRA	**Warramunga Arr**	71.85	198	P	**P**	**17 26 04.3**	**0.0**
	0.2nm,0.5s,mb3.0,baz=12,slow=6.4,SNR=4.8						

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*BJI **12** 17:27:01.4,50.41N×87.31E,h18^{km},mB4.4,mb4.3,ML4.6, Msz3.8*

*IDC **12** 17:27:02.0±0.7,50.20N×87.75E,mb3.9/12,mb1 4.2/15, mb1mx4.1/24,mbtmp4.0/15,ML4.2/3,Error ellipse: s-maj=12.0km s-min=9.3km az=96.0*

*MOS **12** 17:27:03.0±1.8,50.11N×87.52E,h11^{km},mb4.2/5,Error ellipse: s-maj=14.1km s-min=7.4km az=95.3*

*NEIC **12** 17:27:04.9±4.7,50.26N×87.58E,h14^{km}±30^{km},mb4.2/11, Error ellipse: s-maj=12.2km s-min=7.6km az=65.0*

*NNC **12** 17:27:06.5±5.2,50.28N×86.99E,h18^{km}±27^{km},mpv4.7, Error ellipse: s-maj=52.4km s-min=29.1km az=88.0*

ISC 12 17:27:03.0±0.8,50.29N±0.03×87.38E±0.05,h11^{km}±5^{km}, n62,σ1§47/73,mb4.1/20,5C-7D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAR	**Aktash**	0.16	79	*i* PG	**Pg**	**17 27 07.2**	**+0.4**
UKR	**Ust'-Kan**	1.78	292	*e*PN	**Pg**	**17 27 39.3**	**+0.7**
UKR				*i* S	**Sg**	**17 28 04.5**	**+2.1**
TASR	**Tashtagol**	2.49	7	*e*PN	**Pg**	**17 27 52.0**	**-0.8**
TASR				*e*S	**Sg**	**17 28 25.6**	**-0.5**
ELT	**Yel'tsovka**	3.06	347	*i* PN	**Pn**	**17 27 58.0**	**+5.7**
ELT				*e*S	**Sg**	**17 28 43.8**	**-1.1**
CERR	**Cheremushki**	3.60	43	*i* PN	**Pn**	**17 28 04.4**	**+4.5**
CERR				*i*		17 28 11.2	
CERR				*i* S	**Sg**	**17 28 57.5**	**-5.3**
ZAL	**Zalesovo**	3.98	337	Pn	**Pn**	**17 28 07.7**	**+2.3**
	17nm,0.3s,baz=319,slow=9.5,SNR=97						
ZAL				Sn	**Sn**	**17 28 57.9**	**+5.3**
	41nm,0.3s,baz=259,slow=8.7,SNR=5.7						
ZAL				Lg		17 29 13.1	
	27nm,0.3s,baz=51,slow=23,SNR=11						
ZAL	**Zalesovo**	3.98	337	Pn	**Pn**	**17 28 07.7**	**+2.3**
ZAL				Sn	**Sn**	**17 28 57.9**	**+5.3**
ZAL				Lg		17 29 13.1	
MK31	**Makanchi Array**	4.86	226	⇑Pn	**Pn**	**17 28 19.8**	**+1.8**
	57nm,0.5s,baz=52,slow=12,SNR=2674						
MK31				⇓Pg	**Pg**	**17 28 33.1**	**-7.1**
MK31				⇑Sn	**Sn**	**17 29 16.5**	**+1.6**
	54nm,0.5s,baz=46,slow=18,SNR=6.1						
MK31				⇓Lg		17 29 35.7	
	157nm,0.5s,baz=277,slow=13,SNR=7.5						
MKAR	**Makanchi Array**	4.86	226	Pn	**Pn**	**17 28 19.7**	**+1.8**
	31nm,0.3s,baz=47,slow=13,SNR=1409						
MKAR				Sn	**Sn**	**17 29 16.4**	**+1.5**
	48nm,0.3s,baz=56,slow=26,SNR=10						
MKAR				Lg		17 29 38.0	
	65nm,0.3s,baz=48,slow=29,SNR=15						
NVS	**Novosibirsk**	5.21	333	*e*PN	**Pn**	**17 28 25.8**	**+3.0**
NVS				*e*		17 28 42.3	
NVS				*e*		17 29 28.8	
BVA0	**Borovoye Array**	10.90	291	⇑Pn	**P**	**17 29 41.3**	**-0.6**
	1.5nm,1.0s						
BVA0				⇑Sn	**S**	**17 31 41.5**	**-3.5**
	2.9nm,0.7s						
BVAR	**Borovoye Array**	10.90	291	Pn	**P**	**17 29 41.1**	**-0.9**
	3.0nm,0.3s,baz=105,slow=14,SNR=26						
BVAR				Sn	**S**	**17 31 43.0**	**-1.9**
	2.0nm,0.3s,baz=98,slow=22,SNR=7.1						
TKM2	**Tokmak 2**	10.95	232	P	**P**	**17 29 40.8**	**-1.8**
	SNR=6.3						
ULHL	**Ulahol**	11.13	228	P	**P**	**17 29 45.5**	**+0.3**
	SNR=7.9						
USP	**Ospenovka**	11.27	236	P	**P**	**17 29 44.8**	**-2.3**
	SNR=10						
KBK	**Karagaybulak**	11.47	233	P	**P**	**17 29 48.6**	**-1.1**
	SNR=13						
AAK	**Ala-Archa**	11.72	234	⇓Pn	**P**	**17 29 51.1**	**-2.0**
	5.5nm,0.8s						
AAK				⇓Lg		17 33 12.8	
	34nm,0.9s						
KZA	**Kyzart**	11.74	230	P	**P**	**17 29 53.5**	**+0.1**
	SNR=8.0						
EKS2	**Erkin-Say**	12.07	236	P	**P**	**17 29 55.5**	**-2.4**
	SNR=6.1						
AML	**Almayashu**	12.49	234	P	**P**	**17 30 03.4**	**-0.1**
	SNR=6.0						
SONM	**Songino Array**	12.71	94	Lg		17 33 42.5	
	0.3nm,0.3s,baz=267,slow=27,SNR=6.9						
KK31	**Karatay Array**	13.61	245	⇑Pn	**P**	**17 30 15.6**	**-2.6**
	1.8nm,0.3s,baz=50,slow=12,SNR=58						
KK31				⇓Sn	**S**	**17 32 48.1**	**-2.3**
	6.2nm,0.8s,baz=57,slow=25,SNR=3.6						
SVE	**Sverdlovsk**	17.11	303	*e*P	**P**	**17 30 58.0**	**-5.4**
AB31	**Akbulak array**	17.72	277	Pn	**P**	**17 31 09.4**	**-1.7**
	3.0nm,0.5s,baz=75,slow=12,SNR=61						
ARU	**Arti**	18.17	301	⇓*i*P	**P**	**17 31 12.0**	**-4.7**
ARU				*e*SS	SS	17 34 45.0	-15
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARU	**Arti**	18.17	301	*e*P	**P**	**17 31 16.3**	**-0.4**
	comp=Z,14nm,0.8s						
LSA	**Lhasa**	20.76	171	P	**P**	**17 31 47.0**	**+0.7**
LSA	**Lhasa**	20.76	171	*e*P	**P**	**17 31 46.9**	**+0.6**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LSA	**Lhasa**	20.76	171	*e*P	**P**	**17 31 46.9**	**+0.5**
	comp=Z,2.9nm,0.7s						
HIA	**Hailar**	20.84	80	P	**P**	**17 31 44.5**	**-2.5**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HIA	**Hailar**	20.84	80	P	**P**	**17 31 44.5**	**-2.5**
	comp=Z,5.3nm,0.8s						
GKN	**Gorkha**	22.36	186	*e*P	**P**	**17 32 01.5**	**-0.9**
	comp=Z,6.5nm,0.5s,mb4.3						
GUN	**Gumba**	22.38	183	*e*P	**P**	**17 32 03.7**	**+1.1**
	comp=Z,17nm,0.4s,mb4.8						
KKN	**Kakani**	22.53	185	*e*P	**P**	**17 32 04.3**	**+0.2**
	comp=Z,9.0nm,0.6s,mb4.4						
KKN	**Kakani**	22.53	185	*e*P	**P**	**17 32 04.3**	**+0.2**
KKN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
KOLN	**Koldanda**	22.67	189	*e*P	**P**	**17 32 03.5**	**-2.0**
	comp=Z,11nm,0.9s,mb4.3						
DMN	**Daman**	22.72	185	*e*P	**P**	**17 32 06.6**	**+0.7**
	comp=Z,15nm,0.9s,mb4.4						
YAK	**Yakutsk**	25.81	47	⇓*i*P	**P**	**17 32 36.0**	**+0.6**
KMI	**Kunming**	27.80	149	P	**P**	**17 32 57.4**	**+3.4**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
KMI	**Kunming**	27.80	149	P	**P**	**17 32 57.4**	**+3.4**
	comp=Z,6.0nm,1.0s,mb4.2						
OBN	**Obninsk**	30.59	299	*e*P	**P**	**17 33 19.3**	**+0.6**
OBN						17 34 18.0	
OBN	**Obninsk**	30.59	299	*e*P	**P**	**17 33 18.3**	**-0.4**
	comp=Z,6.7nm,0.4s,mb4.8						
KIV	**Kislovodsk**	30.69	276	*e*P	**P**	**17 33 21.0**	**+1.4**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.4						
CMAR	**Chiang Mai Arr**	33.08	160	P	**P**	**17 33 38.0**	**-2.9**
	comp=Z,1.6nm,0.8s,mb4.0,baz=339,slow=9.2,SNR=9.8						
FINES	**FINESS Array B**	34.83	312	P	**P**	**17 33 56.1**	**+0.5**
	comp=Z,0.8nm,0.5s,mb3.9,baz=65,slow=11,SNR=13						
AKASG	**Malin Array Be**	36.17	294	P	**P**	**17 34 07.5**	**+0.5**
	comp=Z,1.4nm,0.5s,mb4.2,baz=56,slow=8.8,SNR=13						
BR131	**Keskin Array S**	38.65	275	*e*P	**P**	**17 34 29.1**	**+1.1**
	comp=Z,3.0nm,0.5s,mb4.3						
BRTR	**Keskin Array B**	38.65	275	P	**P**	**17 34 29.6**	**+1.6**
	comp=Z,3.8nm,0.5s,mb4.4,baz=78,slow=5.8,SNR=18						
ASF	**Jabal al Asfar**	41.18	264	P	**P**	**17 34 50.4**	**+1.4**
	comp=Z,1.6nm,0.5s,mb3.9,baz=305,slow=5.8,SNR=3.4						
NB2	**NORSAR Subarra**	41.85	315	P	**P**	**17 34 55.0**	**+1.0**
	comp=Z,4.8nm,1.2s,mb4.0,baz=68,slow=7.9						
NOA	**NORSAR Array B**	41.85	315	P	**P**	**17 34 54.7**	**+0.7**
	comp=Z,1.6nm,0.8s,mb3.7,baz=67,slow=7.9,SNR=5.0						
NOA	**NORSAR Array B**	41.85	315	P	**P**	**17 34 54.7**	**+0.7**
CLL	**Collm**	45.12	301	P	**P**	**17 35 22.0**	**+1.3**
GERES	**GERESS Array B**	45.97	298	P	**P**	**17 35 29.7**	**+2.3**
	comp=Z,0.4nm,0.7s,mb3.5,baz=76,slow=5.5,SNR=3.5						
ILAR	**Eielson Array**	57.82	24	P	**P**	**17 36 54.4**	**-1.8**
	comp=Z,0.4nm,0.7s,mb3.5,baz=334,slow=5.2,SNR=5.0						
YKA	**Yellowknife Ar**	66.22	11	P	**P**	**17 37 51.7**	**-0.5**
	comp=Z,0.7nm,0.6s,mb3.9,baz=340,slow=6.9,SNR=6.2						
YKA	**Yellowknife Ar**	66.22	11	P	**P**	**17 37 51.7**	**-0.5**
WRAB	**Tennant Creek**	81.27	136	P	**P**	**17 39 21.5**	**+0.9**
WRA	**Warramunga Arr**	81.27	136	P	**P**	**17 39 17.8**	**-2.8**
	comp=Z,0.6nm,0.6s,mb3.7,baz=341,slow=5.9,SNR=12						
DBIC	**Dimbokro**	86.35	276	P	**P**	**17 39 47.0**	**+0.5**
	comp=Z,2.0nm,0.6s,mb4.5,baz=84,slow=9.2,SNR=4.4						
DBIC	**Dimbokro**	86.35	276	P	**P**	**17 39 47.0**	**+0.5**
NVAR	**Mina Array Bea**	88.81	20	P	**P**	**17 39 59.5**	**+1.7**
	comp=Z,0.7nm,0.8s,mb4.1,baz=7.6,slow=2.5,SNR=4.9						

IDC 12 17:51:54.0±2.7,29.63N×68.07E,mb3.6/5,mb1 3.8/5,mb1mx3.5/23,mbtmp3.6/5,MS3.3/1,Ms1 3.3/1,ms1mx2.6/16,Error ellipse: s-maj=89.4km s-min=33.7km az=80.0

ISC 12 17:52:03.7±2.1**,29.71N**±0.07×**68.55E**±0.10**,h78**^{km}±21^{km}**,n15,**σ**1**^{s}**33**/19**,mb3.4**/4**,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JASL	Jaisalmer	3.46	143	eS	S	17 53 36.7	+0.1
AJM	Ajmer	6.27	119	ex	S	17 54 46.0	-0.3
KHET	Khetri	6.57	103	i P	P	17 53 40.7	+1.1
KHET				eS	S	17 54 52.8	-0.9
KHET				AML	AML	17 54 55.8	
	comp=E,24nm,0.3s						
KHET				AML	AML	17 54 55.9	
	comp=N,30nm,0.3s						
KUDL	Kundal	7.13	101	eP	P	17 53 44.1	-3.3
KUDL				eS	S	17 55 08.1	+0.5
SDNR	Sundarnagar	7.48	74	eP	P	17 53 51.0	-1.1
SDNR				eS	S	17 55 17.0	+0.9
SMLA	Simla	7.58	77	i P	P	17 53 54.4	+0.9
SMLA				i S	S	17 55 16.9	-1.7
SONA	Sohna	7.62	99	eS	S	17 55 19.5	0.0
NDI	New Delhi	7.65	96	eS	S	17 55 17.2	-3.1
NDI				AML	AML	17 55 21.8	
	comp=N,21nm,0.3s						
NDI				AML	AML	17 55 22.9	
	comp=E,25nm,0.3s						
KLP	Kalpa	8.56	75	eP	P	17 54 09.3	+2.5
KLP				eS	S	17 55 44.6	+1.9
KLP				AML	AML	17 56 06.7	
	comp=N,49nm,0.4s						
KLP				AML	AML	17 56 08.6	
	comp=E,63nm,1.1s						
MKAR	Makanchi Array	20.14	28	P	P	17 56 31.4	-2.4
	comp=E,2.2nm,0.7s,baz=217,slow=11,SNR=17						
BVAR	Borovoye Array	23.34	3	P	P	17 57 04.2	-1.1
	comp=E,1.3nm,0.8s,mb3.3,baz=180,slow=10,SNR=12						
ZAL	Zalesovo	26.94	21	P	P	17 57 40.7	+1.3
	comp=E,0.7nm,0.4s,mb3.5,baz=215,slow=10,SNR=3.7						
FINES	FINESS Array B	42.20	331	LR	LR	18 21 24.6	
	comp=E,39nm,18.0s,baz=126,slow=42						
WRA	Warramunga Arr	80.30	119	P	P	18 04 08.9	+0.9
	comp=E,0.7nm,0.9s,mb3.5,baz=322,slow=4.8,SNR=4.8						
YKA	Yellowknife Ar	88.09	1	P	P	18 04 46.2	+0.1
	comp=E,0.3nm,0.6s,mb3.5,baz=350,slow=4.7,SNR=4.3						

IDC 12 18:09:07.3±1.8,43.63N×105.28W,mb3.8/2,mb1 3.7/6,mb1mx3.5/23,mbtmp3.5/6,ML3.4/3,Error ellipse: s-maj=46.8km s-min=9.5km az=151.0

NEIC 12 18:09:09.2±0.5,43.72N×105.25W,ML3.2,Error ellipse: s-maj=9.0km s-min=6.7km az=128.0,Suspected Mining explosion.

NEIC 65 km [40 miles] SSE of Gillette.

ISC 12 18:09:07.9±0.5**,43.74N**±0.04×**105.27W**±0.07**,n31,**σ**1**^{s}**10**/36**,mb3.9**/2**,Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.97	66	ePg	Pg	18 09 28.0	+0.7
PHWY	Pilot Hill	2.44	183	ePn	Pn	18 09 49.7	+0.2
PHWY				eS	Sn	18 10 20.8	+0.3
RWWY	Rawlins	2.49	216	ePn	Pn	18 09 51.6	+1.2
RWWY				eS	Sn	18 10 24.2	+2.2
LAO	LASA Array	3.03	348	eP	Pn	18 09 59.5	+1.5
PDAR	Pinedale Array	3.28	254	Pn	Pn	18 10 02.1	+0.6
	3.9nm,0.3s,baz=75,slow=14,SNR=37						
PDAR				Lg		18 10 48.2	
	8.1nm,0.3s,baz=76,slow=31,SNR=14						
LOHW	Long Hollow	3.87	270	eP	Pn	18 10 10.5	+0.5
ISCO	Idaho Springs	3.94	184	eP	Pn	18 10 11.6	+0.6
MOOW	Moose Ponds	3.97	272	eP	Pn	18 10 11.3	-0.1
SNOW	Snow King Moun	3.99	268	ePn	Pn	18 10 12.8	+1.0
YFT	Old Faithful	4.07	282	ePg	Pg	18 10 23.5	-5.7
IMW	Indian Meadow	4.11	274	eP	Pn	18 10 14.2	+0.9
TPAW	Teton Pass	4.13	269	ePn	Pn	18 10 14.7	+1.0
TPAW				eP		18 10 24.1	
RRI2	Red Ridge	4.41	267	ePn	Pn	18 10 17.9	+0.2
QLMT	Earthquake Lak	4.56	286	ePg	Pg	18 10 31.6	-7.3
DGMT	Dagmar	4.79	9	ePn	Pn	18 10 24.4	+1.3
BOZ	Bozeman (W)	4.92	295	ePn	Pn	18 10 22.0	-2.9
HWUT	Hardware Ranch	5.10	248	ePn	Pn	18 10 27.1	-0.4
	10.0nm,0.5s						
DAU	Daniels Canyon	5.55	235	ePn	Pn	18 10 33.3	-0.6
SDCO	Great Sand Dun	5.99	182	ePn	Pn	18 10 39.5	-0.4
	1.0nm,0.5s						
SRU	San Rafael	6.08	222	ePn	Pn	18 10 39.5	-1.7
SRU				eP	Pb	18 10 53.8	-0.9
SRU				e	Pg	18 11 05.1	-4.1
SRU				eSg	Sb	18 12 15.0	+6.3
CHMT	Chamberlain Mo	6.46	302	ePn	Pn	18 10 46.1	-0.6
HLID	Hailey	6.63	272	ePn	Pn	18 10 49.8	+0.7
	0.8nm,0.4s						
MSU	Marysvale	7.37	227	ePn	Pn	18 10 58.1	-1.4
MVU	Marysvale	7.40	227	ePn	Pn	18 10 58.5	-1.3
	1.3nm,0.5s						
ELK	Elko	7.97	251	Pn	Pn	18 11 07.4	-0.5
	0.1nm,0.3s,baz=200,slow=15,SNR=3.4						
ULM	Lac du Bonnet	9.14	41	Pn	P	18 11 18.8	-5.4
	2.1nm,0.3s,baz=229,slow=13,SNR=2.9						
WUAZ	Wupatki	9.46	212	P	P	18 11 23.7	-4.7
	5.4nm,0.6s						
YKA	Yellowknife Ar	19.57	347	P	P	18 13 38.5	-1.3
	0.1nm,0.3s,baz=157,slow=12,SNR=5.4						
YKA	Yellowknife Ar	19.57	347	P	P	18 13 38.5	-1.3
ARCES	ARCESS Array B	61.42	18	P	P	18 19 25.1	-2.6
	1.2nm,0.5s,mb4.3,baz=333,slow=8.1,SNR=8.5						
MKAR	Makanchi Array	89.61	355	P	P	18 22 08.2	-0.1
	0.2nm,0.7s,mb3.5,baz=12,slow=6.1,SNR=3.9						

ROM 12 18:54:17.7±0.4,44.07N×7.43E,h10^{km},Md2.3/3,Error ellipse: s-maj=6.3km s-min=2.3km az=44.0

LDG 12 18:54:17.6±0.1,44.03N×7.44E,h2^{km},Md2.8/1,Ml2.4/8,Error ellipse: s-maj=2.5km s-min=1.3km az=87.0

STR 12 18:54:18.0±0.5,44.04N×7.42E,h5^{km}±1^{km},Ml2.4,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0

ISC 12 18:54:17.1±0.3**,44.04N**±0.02×**7.36E**±0.03**,h12**^{km}±3^{km}**,n23,**σ**0**^{s}**83**/43**,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAOF	Saorge	0.15	112	Pg	Pg	18 54 20.4	-0.4
SAOF				Sg	Sg	18 54 23.2	0.0
SBF	Sospel	0.19	164	ePg	Pg	18 54 20.8	-0.6
SBF				eSg	Sg	18 54 23.6	-0.7
	271nm,0.5s						
REVF	Revere	0.30	179	Pg	Pg	18 54 23.6	+0.1
REVF				Sg	Sg	18 54 29.3	+1.5
IMI	Imperia	0.40	109	Pg	Pg	18 54 25.7	+0.3
IMI				Sg	Sg	18 54 31.4	+0.4
	34nm,0.4s						
CALN	Calern	0.45	230	Pg	Pg	18 54 26.8	+0.5
DOI	San Damiano	0.47	350	Pg	Pg	18 54 27.5	+0.8
DOI				Sg	Sg	18 54 34.0	+0.9
	36nm,0.2s						
FIN	Finale Ligure	0.63	75	Pg	Pg	18 54 29.9	0.0
FIN				Sg	Sg	18 54 38.7	+0.3
	16nm,0.5s						
FRF	La Foret Royal	0.71	227	ePg	Pg	18 54 31.1	-0.3
FRF				eSg	Sg	18 54 40.4	-0.6
	12nm,0.2s						
FRF				eSn	Sn	18 54 44.6	+1.0
MBDF	Montbardon	0.80	328	ePg	Pg	18 54 33.8	+0.5
MBDF				ePn	Pn	18 54 34.9	+0.8
MBDF				eSg	Sg	18 54 45.0	+0.9
	14nm,0.3s						
LMR	La Mourre	0.94	221	ePg	Pg	18 54 35.3	-0.7
LMR				eSg	Sg	18 54 48.0	-0.7
	24nm,0.2s						
TAVF	Tavernes	1.04	246	Pg	Pg	18 54 38.0	+0.1
STOF	St-Etienne Org	1.05	268	Pg	Pg	18 54 40.9	+2.7
VILF	Villemus	1.21	261	Pg	Pg	18 54 41.7	+0.4
SMRF	Simiane la Rot	1.29	268	ePg	Pg	18 54 42.9	-0.1
SMRF				eSg	Sg	18 55 00.4	+0.1
	24nm,0.4s						
PUYF	Puyloubier	1.31	248	Pg	Pg	18 54 42.5	-0.8
ORIF	Oris-en-Rattie	1.38	310	ePn	Pn	18 54 43.1	+0.8
ORIF				ePg	Pg	18 54 44.5	-0.1
ORIF				eSg	Sg	18 55 03.1	+0.1
	9.7nm,0.4s						
LPG	La Plagne	1.52	344	ePg	Pg	18 54 46.9	-0.6
LPG				eSg	Sg	18 55 06.5	-1.3
	17nm,0.6s						
LPL	La Plagne	1.54	343	ePn	Pn	18 54 44.8	+0.2
LPL				ePg	Pg	18 54 46.9	-1.0
LPL				eSg	Sg	18 55 07.1	-1.4
	14nm,0.6s						
GELF	Grande-Etoile	1.55	245	Pn	Pn	18 54 46.7	+1.9
PGF	Pioggiola	1.91	141	ePn	Pn	18 54 48.2	-1.8
PGF				eSn	Sn	18 55 09.6	-4.6
	3.1nm,0.3s						
VIVF	Saint-Julien-l	2.09	294	ePn	Pn	18 54 52.9	+0.4
VIVF				eSn	Sn	18 55 18.3	-0.4
	2.2nm,0.3s						
LASF	Ste Croix	2.53	272	ePn	Pn	18 54 58.6	-0.2
LASF				eSn	Sn	18 55 28.7	-1.1
	1.5nm,0.4s						
MTLF	Montolieu	3.80	261	ePn	Pn	18 55 16.0	-0.8

IDC 12 18:57:05.1±1.2,1.85N×97.64E,mb4.1/8,mb1 4.3/9,mb1mx4.0/19,mbtmp4.1/9,ML4.2/1,MS2.6/1,Ms1 2.8/1,ms1mx2.6/30,Error ellipse: s-maj=57.1km s-min=21.9km az=55.0

NEIC 12 18:57:09.9±0.7,1.84N×97.75E,h30^{km},mb4.3/6,Error ellipse: s-maj=17.2km s-min=10.8km az=50.0

ISC 12 18:57:08.2±0.8**,1.8N**±0.1×**97.71E**±0.09**,h30**^{km}**,n20,**σ**0**^{s}**77**/20**,mb4.3**/14**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	Ipoh	4.29	50	P	Pn	18 58 13.7	+0.5
KULM	Kulim	4.51	40	eP	Pn	18 58 16.3	-0.1
KGM	Kluang	5.61	88	P	Pn	18 58 31.9	+0.1
CMAR	Chiang Mai Arr	16.56	4	Pn	P	19 00 59.6	-0.5
	0.3nm,0.3s,baz=192,slow=11,SNR=17						
CMAR				LR	LR	19 06 44.5	
	comp=Z,25nm,21.7s,baz=67,slow=35						
PKI	Pulchoki	28.17	336	eP	P	19 03 01.9	+1.6
	20nm,1.3s,mb4.6						
GUN	Gumba	28.29	337	eP	P	19 03 01.1	-0.3
	15nm,0.6s,mb4.8						
DMN	Daman	28.33	336	eP	P	19 03 03.0	+1.3
KKN	Kakani	28.42	336	eP	P	19 03 02.3	-0.2
	5.3nm,0.5s,mb4.4						
GKN	Gorkha	28.87	336	eP	P	19 03 06.9	+0.3
	4.6nm,0.3s,mb4.7						
KOLN	Koldanda	29.11	334	eP	P	19 03 08.7	-0.1
	7.5nm,0.6s,mb4.6						
WRA	Warramunga Arr	41.94	123	P	P	19 04 58.1	-0.2
	0.7nm,0.4s,mb3.7,baz=322,slow=11,SNR=17						
WRA				PcP	PcP	19 06 54.2	+0.1
	0.4nm,0.4s,baz=315,slow=2.7,SNR=6.6						
WRAB	Tennant Creek	41.95	123	eP	P	19 04 58.6	+0.2
	2.0nm,0.4s,mb4.1						
SONM	Songino Array	46.43	8	P	P	19 05 33.7	-0.4
	1.2nm,0.3s,mb4.2,baz=189,slow=9.3,SNR=9.0						
MKAR	Makanchi Array	46.75	345	P	P	19 05 36.4	-0.3
	2.2nm,0.4s,mb4.4,baz=158,slow=8.1,SNR=25						
MKAR	Makanchi Array	46.75	345	P	P	19 05 36.4	-0.3
ZAL	Zalesovo	53.01	350	P	P	19 06 22.1	-2.4
	6.7nm,0.4s,mb4.9,baz=314,slow=5.0,SNR=38						
AKASG	Malin Array Be	75.07	322	P	P	19 08 48.0	-1.1
	1.0nm,0.6s,mb3.9,baz=88,slow=5.0,SNR=6.3						
FINES	FINESS Array B	79.67	332	P	P	19 09 14.2	-0.1
	1.0nm,0.7s,mb3.9,baz=108,slow=6.0,SNR=8.4						
ARCES	ARCESS Array B	82.11	340	P	P	19 09 27.4	+0.4
	1.3nm,0.7s,mb4.0,baz=90,slow=3.6,SNR=8.1						
NOA	NORSAR Array B	86.70	331	P	P	19 09 50.9	+0.6
	1.0nm,0.8s,mb4.1,baz=176,slow=8.5,SNR=2.9						

IDC 12 19:00:55.2±3.2**,0.29N**×**97.76E,mb3.8**/4**,mb1 3.9**/5**,mb1mx3.6**/18**,mbtmp3.7**/5**,ML3.9**/1**,Error ellipse: s-maj=115.0km s-min=27.1km az=59.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	18.09	4	P	P	19 05 07.8	-2.0
	0.1nm,0.3s,baz=194,slow=11,SNR=7.1						
WRA	Warramunga Arr	41.09	121	P	P	19 08 40.9	-1.6
	0.4nm,0.4s,baz=303,slow=9.0,SNR=7.0						
SONM	Songino Array	47.95	8	P	P	19 09 36.5	-1.0
	0.6nm,0.5s,baz=180,slow=7.2,SNR=4.1						
MKAR	Makanchi Array	48.25	346	P	P	19 09 37.9	-2.0
	0.7nm,0.6s,baz=164,slow=8.0,SNR=5.4						
ZAL	Zalesovo	54.53	351	P	P	19 10 24.1	-3.1
	1.5nm,0.4s,baz=285,slow=3.5,SNR=4.8						

IDC 12 19:14:53.1±0.5,16.21S×173.89W,mb4.2/16,mb1 4.4/16,mb1mx4.3/22,mbtmp4.2/16,MS3.9/2,Ms1 3.9/2,ms1mx3.4/35,Error ellipse: s-maj=24.5km s-min=14.6km az=128.0

NEIC 12 19:15:00.5±1.1,16.24S×173.95W,h52^{km}±9^{km},mb4.4/8,Error ellipse: s-maj=11.4km s-min=6.0km az=130.0

ISC 12 19:14:59.4±1.8**,16.19S**±0.09×**174.0W**±0.1**,h56**^{km}±16^{km}**,n96,**σ**0**^{s}**71**/30**,mb4.2**/21**,MS3.9**/2**,1C-1D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.13	44	⇓eP	P	19 15 47.5	-0.1
AFI				eS	S	19 16 19.2	-4.8
URZ	Urewera	23.33	198	P	P	19 20 03.4	0.0
	19nm,0.5s,mb4.8,baz=21,slow=4.0,SNR=21						
TBI	Tubuai	24.16	111	eLR	LR	19 25 26.9	
	237nm,31.5s						
HNR	Honiara	26.25	282	LR	LR	19 28 31.2	
	comp=Z,70nm,18.9s,MS3.2,baz=122,slow=31						
SNZO	South Karori	26.86	199	P	P	19 20 39.1	+2.2
RPZ	Rata Peaks	30.23	202	P	P	19 21 06.6	-0.5
	2.3nm,0.4s,mb4.3,baz=294,slow=3.7,SNR=5.4						
TAOE	Nuku Hiva Isla	33.82	82	eLR	LR	19 31 19.0	
	888nm,37.3s						
CTA	Charters Tower	37.90	258	P	P	19 22 14.4	+1.3
	2.0nm,0.7s,mb4.0,baz=79,slow=16,SNR=2.2						
STKA	Stephens Creek	43.13	241	eP	P	19 22 55.8	-0.5
	6.4nm,1.5s,mb4.1						
STKA	Stephens Creek	43.13	241	P	P	19 22 55.9	-0.4
	3.2nm,0.7s,mb4.2,baz=153,slow=22,SNR=8.0						
WB2	Warramunga Arr	49.08	257	eP	P	19 23 42.8	-0.7
WRAB	Tennant Creek	49.08	257	eP	P	19 23 43.2	-0.3
WRA	Warramunga Arr	49.09	257	P	P	19 23 42.6	-0.9
	0.8nm,0.4s,mb4.1,baz=98,slow=6.0,SNR=18						
FITZ	Fitzroy Crossi	57.47	259	eP	P	19 24 45.3	-0.2
	8.4nm,2.0s,mb4.4						
FITZ	Fitzroy Crossi	57.47	259	P	P	19 24 45.2	-0.3
	2.9nm,0.8s,mb4.4,baz=145,slow=9.9,SNR=5.8						
SBA	Scott Base	62.42	185	eP	P	19 25 18.8	+0.2
	4.0nm,0.8s,mb4.6						
VNDA	Vanda	62.53	186	P	P	19 25 18.9	-0.4
	1.9nm,0.8s,mb4.3,baz=11,slow=6.2,SNR=11						
VNDA	Vanda	62.53	186	eP	P	19 25 18.6	-0.7
	1.5nm,0.7s,mb4.2						
NVAR	Mina Array Bea	75.31	42	P	P	19 26 38.6	0.0
	1.8nm,0.7s,mb4.1,baz=217,slow=8.3,SNR=13						
MSU	Marysvale	79.40	45	eP	P	19 27 02.0	+0.6
TXAR	Lajitas Array	81.54	56	P	P	19 27 12.9	0.0
	1.3nm,0.8s,mb3.9,baz=217,slow=6.3,SNR=12						
ANMO	Albuquerque	81.76	50	LR	LR	19 56 26.6	
	comp=Z,234nm,21.0s,MS4.5,slow=30						
MCK	McKinley	82.01	11	eP	P	19 27 14.4	-0.2
	3.2nm,0.9s,mb4.2						
IMW	Indian Meadow	82.93	41	eP	P	19 27 20.1	+0.3
	3.9nm,0.9s,mb4.4						
BW06	Boulder Array	83.25	42	eP	P	19 27 20.9	-0.5
	5.0nm,1.0s,mb4.5						
PDAR	Pinedale Array	83.25	42	P	P	19 27 21.2	-0.2
	3.2nm,0.8s,mb4.4,baz=225,slow=2.0,SNR=22						
ILAR	Eielson Array	83.33	11	P	P	19 27 21.1	-0.2
	1.0nm,0.7s,mb3.9,baz=230,slow=6.5,SNR=12						
BOZ	Bozeman (W)	83.40	39	eP	P	19 27 22.0	-0.2
	5.5nm,1.3s,mb4.4						
MAW	Mawson	86.86	199	P	P	19 27 38.5	-0.2
	1.8nm,0.6s,mb4.5,baz=161,slow=9.1,SNR=4.1						
YKA	Yellowknife Ar	91.05	24	P	P	19 27 59.1	+0.3
	0.3nm,0.4s,mb4.0,baz=239,slow=4.2,SNR=3.9						
SNAA	Sanae	92.15	177	P	P	19 28 02.5	-1.1
	0.6nm,0.8s,mb4.0,baz=200,slow=3.0,SNR=7.1						
CMAR	Chiang Mai Arr	92.30	288	P	P	19 28 07.2	+1.6
	0.8nm,0.8s,mb4.1,baz=100,slow=2.9,SNR=4.9						
CFAA	Coronel Fontan	94.50	125	P	P	19 28 15.6	+0.4
	0.4nm,1.0s,mb3.8,baz=211,slow=4.1,SNR=5.5						
MKAR	Makanchi Array	110.96	314	PKiKP		19 33 27.3	
	0.4nm,0.4s,baz=156,slow=0.7,SNR=7.6						
BVAR	Borovoye Array	118.14	322	PKP	PKPdf	19 33 41.0	+0.9
	0.6nm,0.6s,baz=207,slow=3.3,SNR=5.5						
ARCES	ARCESS Array B	125.31	352	PKP	PKPdf	19 33 54.4	+0.8
	2.0nm,0.6s,baz=315,slow=1.7,SNR=7.2						
FINES	FINESS Array B	132.58	347	PKP	PKPdf	19 34 09.7	+2.0
	0.3nm,0.3s,baz=27,slow=3.1,SNR=6.9						
CLZ	Clausthal	144.26	355	ePKPbc	PKPbc	19 34 29.7	+1.2
CLL	Collm	144.52	352	ePKIKP	PKPdf	19 34 29.0	-0.5
	logA/T=0.9						
KMBO	Kilima Mbogo	144.66	244	PKP	PKPdf	19 34 31.8	+0.9
	6.3nm,0.9s,baz=64,slow=6.8,SNR=11						
KOLS	Kolonicke sedl	144.74	341	ePKP		19 34 53.3	
BRG	Berggiesshubel	144.82	351	eP	PKPdf	19 34 30.9	+0.9
UPC	Upice	144.83	349	ePKP	PKPdf	19 34 31.2	+1.1
DPC	Dobruska-Polom	144.92	348	ePKP	PKPdf	19 34 31.6	+1.4
OKC	Ostrava-Krasne	145.02	346	eP	PKPdf	19 34 31.5	+1.1
PVCC	Panska Ves	145.06	350	ePKP	PKPdf	19 34 32.3	+1.9
MOX	Moxa	145.34	354	ePKP	PKPdf	19 34 33.1	+2.2
MOX	Moxa	145.34	354	i P	PKPdf	19 34 33.1	+2.2
	logA/T=1.2						
PRU	Pruhonice	145.58	350	ePKP	PKPdf	19 34 33.2	+1.8
TNS	Taunus Mts	146.00	357	ePKPbc	PKPbc	19 34 35.3	+2.2
GIVF	Givet	146.16	1	ePKP1	PKPbc	19 34 35.2	+1.7
BAIF	Baives	146.19	2	ePKP1	PKPbc	19 34 35.4	+1.8
	20nm,0.8s						
GRA1	Grafenberg Arr	146.32	354	ePKPbc	PKPbc	19 34 36.2	+2.3
MLR	Muntele Rosu	146.33	334	PKPbc	PKPbc	19 34 35.2	+1.2
	2.6nm,0.8s,baz=333,slow=6.3,SNR=5.0						
MLR	Muntele Rosu	146.33	334	PKPbc	PKPbc	19 34 35.2	+1.2
BR131	Keskin Array S	146.39	320	eP	PKPdf	19 34 35.9	+2.8
BRTR	Keskin Array B	146.39	320	PKPbc	PKPbc	19 34 36.6	+2.2
	3.1nm,0.8s,baz=117,slow=2.8,SNR=17						
KHC	Kasperske Hory	146.57	351	ePKP	PKPdf	19 34 36.6	+3.5
KHC				x	x	19 35 04.0	
WLF	Walferdange	146.61	360	eP	PKPdf	19 34 36.8	+3.7
GEC2	GERESS Array S	146.83	351	ePKPbc	PKPbc	19 34 37.6	+2.5
GERES	GERESS Array B	146.83	351	PKPbc	PKPbc	19 34 37.0	+2.0
	1.8nm,0.7s,baz=20,slow=2.7,SNR=21						
ROSF	Rostrenen	147.05	11	ePKP1	PKPdf	19 34 37.1	+3.2
	28nm,1.0s						
FLN	La Foliniere	147.09	8	ePKP1	PKPdf	19 34 37.4	+3.4
	23nm,0.7s						
SGMF	Saint Gilles	147.26	11	ePKP1	PKPdf	19 34 37.7	+3.4
	25nm,0.7s						
LDF	La Druitiere	147.30	8	ePKP1	PKPdf	19 34 37.9	+3.6
	12nm,0.6s						
GRR	Gorron	147.40	8	ePKP1	PKPdf	19 34 38.4	+3.9
	30nm,0.7s						
QUIF	Quistinic	147.48	11	ePKP1	PKPdf	19 34 38.3	+3.7
	13nm,0.9s						
MEZF	Maizieres J’vi	147.77	1	ePKP1	PKPdf	19 34 39.9	+4.8
	10nm,0.7s						
ASF	Jabal al Asfar	147.78	305	PKPbc	PKPdf	19 34 40.8	+5.2
	0.9nm,0.3s,baz=27,slow=2.3,SNR=3.9						
CDF	Champ du Feu	147.85	358	ePKP1	PKPdf	19 34 40.1	+4.9
	22nm,0.9s						
BFO	Black Forest	147.89	357	ePKPbc	PKPdf	19 34 40.5	+5.2
HAU	Haudompre	148.27	360	ePKP1	PKPdf	19 34 41.2	+5.3
	28nm,1.0s						
HINF	Hinteralfeld	148.46	359	ePKP1	PKPdf	19 34 41.3	+5.1
	5.8nm,0.8s						
WTTA	Wattenberg	148.66	353	⇑iP	PKPdf	19 34 42.2	+5.7
LOR	Lormes	148.96	3	ePKP1	PKPdf	19 34 43.0	+6.0
	25nm,1.0s						
SSF	Saint Saulge	149.15	3	ePKP1	PKPdf	19 34 43.5	+6.2
	32nm,1.1s						
MFF	Saint Martin d	149.25	8	ePKP1	PKPdf	19 34 43.2	+5.7
	12nm,0.8s						
DAVOX	Davos	149.33	355	PKPbc	PKPdf	19 34 44.3	+6.7
	5.7nm,0.6s,baz=309,slow=2.7,SNR=14						
AVF	Avril sur Loir	149.41	4	ePKP1	PKPdf	19 34 43.8	+6.0
	15nm,1.0s						
SMF	Signal de Mont	149.58	3	ePKP1	PKPdf	19 34 44.3	+6.3
	20nm,1.1s						
BGF	Bois d’Agland	149.61	4	ePKP1	PKPdf	19 34 44.4	+6.3
	33nm,1.0s						
CABF	La Chapelle	149.67	360	ePKP1	PKPdf	19 34 45.2	+7.0
	56nm,1.1s						
TCF	Toulx Ste Croi	149.83	5	ePKP1	PKPdf	19 34 44.7	+6.3
	18nm,1.1s						
EIL	Elat	150.24	302	PKPbc	PKPdf	19 34 47.1	+7.5
	8.6nm,0.8s,baz=354,slow=4.3,SNR=11						
EIL	Elat	150.24	302	eP	PKPdf	19 34 47.0	+7.4
RJF	Les Rejaudoux	150.73	6	ePKP1	PKPdf	19 34 46.9	+7.0
LPL	La Plagne	150.76	359	ePKP1	PKPdf	19 34 48.2	+8.3
	22nm,1.1s						
LPG	La Plagne	150.78	359	ePKP1	PKPdf	19 34 48.4	+8.5
	16nm,0.9s						
LFF	La Frestale	151.00	8	ePKP1	PKPdf	19 34 47.6	+7.3
	18nm,0.8s						
CAF	Calviac	151.16	6	ePKP1	PKPdf	19 34 48.1	+7.6
ORIF	Oris-en-Rattie	151.36	0	ePKP1	PKPdf	19 34 48.9	+8.1
	14nm,1.0s						
VIVF	Saint-Julien-l	151.40	2	ePKP1	PKPdf	19 34 49.1	+8.2
	12nm,0.9s						
MBDF	Montbardon	151.55	359	ePKP1	PKPdf	19 34 49.4	+8.3
	10nm,0.8s						
LASF	Ste Croix	152.15	3	ePKP1	PKPdf	19 34 50.9	+8.9
	18nm,1.0s						
SMRF	Simiane la Rot	152.30	1	ePKP1	PKPdf	19 34 51.4	+9.2
	18nm,1.1s						
ETSF	Etsaut	152.80	11	ePKP1	PKPdf	19 34 52.1	+9.2
	3.5nm,0.5s						

NEIC 12 19:16:51.8±2.3,36.36N×71.72E,h90^{km}±28^{km},mb3.9/3,Error ellipse: s-maj=19.2km s-min=8.5km az=66.0

MOS 12 19:16:56.5±1.4,36.38N×71.93E,h163^{km},mb4.3/2,Error ellipse: s-maj=17.5km s-min=11.0km az=120.7

IDC 12 19:16:56.9±9.1,36.42N×71.92E,h150^{km}±96^{km},mb3.8/7,mb1 3.9/8,mb1mx3.5/22,mbtmp4.2/8,Error ellipse: s-maj=46.5km s-min=24.4km az=69.0

NNC 12 19:17:03.2±7.0,37.31N×71.27E,h217^{km}±98^{km},mpv4.5,Error ellipse: s-maj=88.1km s-min=48.6km az=34.0

ISC 12 19:16:53.5±0.9**,36.38N**±0.04×**71.92E**±0.10**,h130**^{km}±12^{km}**,n54,**σ**1**^{s}**23**/65**,mb4.0**/10**,4C-1D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	5.04	140	eP	P	19 18 09.8	+1.6
THN				eS	S	19 19 09.1	+3.4
AML	Almayashu	5.90	13	P	P	19 18 19.6	-0.2
	SNR=60						
UCH	Uchtor	6.17	18	P	P	19 18 24.1	+0.7
	SNR=16						
BHK	Bhakra	6.21	142	eS	S	19 19 34.7	+0.7
KZA	Kyzart	6.25	23	P	P	19 18 25.5	+1.1
	SNR=14						
SDNR	Sundarnagar	6.43	138	eP	P	19 18 28.4	+1.5
SDNR				eS	S	19 19 39.0	-0.4
EKS2	Erkin-Say	6.43	12	P	P	19 18 26.5	-0.5
	SNR=29						
AAK	Ala-Archa	6.55	17	P	P	19 18 28.9	+0.3
	SNR=19						
AAK	Ala-Archa	6.55	17	⇑P	P	19 18 28.9	+0.3
	20nm,0.3s						
AAK				⇑S	S	19 19 40.1	-2.3
	12nm,0.3s						
KBK	Karagaybulak	6.69	20	P	P	19 18 31.2	+0.8
	SNR=8.6						
KK31	Karatay Array	6.80	351	⇓P	P	19 18 28.1	-3.9
	14nm,0.3s,baz=181,slow=12,SNR=430						
KK31				⇑S	S	19 19 39.2	-9.2
	9.3nm,0.4s,baz=181,slow=25,SNR=7.6						
SMLA	Simla	6.82	139	i P	P	19 18 29.8	-2.5
SMLA				i S	S	19 19 46.8	-2.1
CHMS	Chumysh	6.96	17	P	P	19 18 33.8	-0.3
	SNR=14						
TKM2	Tokmak 2	7.12	22	P	P	19 18 37.2	+0.9
	SNR=20						
KLP	Kalpa	7.14	131	eP	P	19 18 38.5	+1.9
KLP				eS	S	19 19 55.4	-1.3
KLP				AML	AML	19 20 02.0	
	comp=E,188nm,0.5s						
KLP				AML	AML	19 20 05.3	
	comp=N,184nm,0.5s						
USP	Ospenovka	7.16	15	P	P	19 18 35.9	-1.0
	SNR=10						
KHET	Khetri	8.91	157	eP	P	19 18 57.0	-3.3
KHET				eS	S	19 20 30.6	-8.8
KHET				AML	AML	19 20 36.8	
	comp=N,20nm,0.3s						
KHET				AML	AML	19 20 37.9	

	comp=E,19nm,0.2s						
KUDL	Kundal	9.08	154	eP	P	19 19 00.7	-1.9
KUDL				eS	S	19 20 36.1	-7.3
SONA	Sohna	9.21	150	eP	P	19 19 03.9	-0.4
SONA				eS	S	19 20 40.0	-6.5
SONA				AML	AML	19 20 45.5	
	comp=N,14nm,0.4s						
SONA				AML	AML	19 20 46.1	
	comp=E,22nm,0.5s						
LGTI	Lohaghat	9.83	132	eP	P	19 19 13.0	+0.4
MKAR	Makanchi Array	12.96	33	P	P	19 19 55.0	+1.2
	comp=E,0.0nm,0.3s,baz=219,slow=14,SNR=6.1						
MKAR	Makanchi Array	12.96	33	P	P	19 19 55.0	+1.2
KOLN	Koldanda	13.10	128	eP	P	19 19 55.7	+0.2
	comp=E,34nm,0.4s						
KOLN				eS	S	19 22 15.7	-2.8
GKN	Gorkha	13.62	124	eP	P	19 20 02.6	+0.4
	comp=E,57nm,0.4s						
KKN	Kakani	14.19	123	eP	P	19 20 09.8	+0.3
	comp=E,26nm,0.5s						
KKN	Kakani	14.19	123	eP	P	19 20 09.8	+0.3
KKN				pmax	pmax		
	comp=Z,13nm,0.5s						
DMN	Daman	14.19	124	eP	P	19 20 10.5	+1.0
	comp=Z,24nm,0.4s						
PKI	Pulchoki	14.42	124	eP	P	19 20 12.9	+0.5
	comp=Z,32nm,0.6s						
PKI	Pulchoki	14.42	124	eP	P	19 20 12.9	+0.5
PKI				pmax	pmax		
	comp=Z,16nm,0.6s						
GUN	Gumba	14.52	122	eP	P	19 20 14.9	+1.2
	comp=Z,30nm,0.5s						
AB31	Akbulak array	15.55	330	P	P	19 20 20.6	-6.0
	comp=Z,2.6nm,0.3s,baz=135,slow=12,SNR=192						
AB31				⇑S	S	19 22 58.0	-17
	comp=Z,0.8nm,0.4s,baz=153,slow=22,SNR=4.1						
BVAR	Borovoye Array	16.68	357	P	P	19 20 38.1	-2.4
	comp=Z,0.4nm,0.3s,baz=158,slow=14,SNR=11						
LSA	Lhasa	17.43	107	eP	P	19 20 53.3	+3.3
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	Lhasa	17.43	107	eP	P	19 20 53.3	+3.3
	comp=Z,4.9nm,0.8s						
ZAL	Zalesovo	19.71	23	P	P	19 21 14.2	-0.4
	comp=Z,0.8nm,0.3s,baz=257,slow=4.6,SNR=4.6						
NVS	Novosibirsk	20.04	19	eP	P	19 21 17.6	-0.5
GNI	Garni	21.63	288	P	P	19 21 34.8	+0.7
GNI				pmax	pmax		
	comp=Z,12nm,0.9s						
GNI	Garni	21.63	288	P	P	19 21 34.8	+0.7
	comp=Z,12nm,0.9s,mb4.3						
ARU	Arti	21.99	340	eP	P	19 21 37.1	-0.4
ARU	Arti	21.99	340	eP	P	19 21 37.3	-0.2
	comp=Z,4.2nm,0.8s,mb3.9						
ZEI	Tsey	22.46	295	eP	P	19 21 43.3	+1.1
ZEI				i *PP		19 22 30.9	
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.0						
GOF	Gofitskoye	23.45	301	eP	P	19 22 03.0	+11
AKASG	Malin Array Be	33.60	309	P	P	19 23 21.4	-1.7
	comp=Z,1.0nm,0.5s,mb3.8,baz=80,slow=7.1,SNR=11						
MLR	Muntele Rosu	35.48	299	P	P	19 23 39.9	+0.8
	comp=Z,1.7nm,0.8s,mb3.8,baz=164,slow=8.7,SNR=6.5						
MLR	Muntele Rosu	35.48	299	P	P	19 23 39.9	+0.8
FINES	FINESS Array B	37.99	326	P	P	19 23 59.8	-0.3
	comp=Z,1.0nm,0.3s,mb3.9,baz=120,slow=8.8,SNR=31						
KAF	Kangasniemi	38.13	327	ep	P	19 24 03.0	+1.9
ARCES	ARCESS Array B	41.54	337	P	P	19 24 29.3	+0.2
	comp=Z,2.4nm,0.7s,mb3.9,baz=112,slow=6.5,SNR=6.0						
ARCES	ARCESS Array B	41.54	337	P	P	19 24 29.3	+0.2
NB2	NORSAR Subarra	44.92	323	P	P	19 24 55.7	-0.8
	comp=Z,2.0nm,0.5s,mb4.0,baz=97,slow=7.4						
NOA	NORSAR Array B	44.92	323	P	P	19 24 55.5	-1.0
	comp=Z,1.8nm,0.5s,mb4.0,baz=96,slow=7.7,SNR=15						
NOA	NORSAR Array B	44.92	323	P	P	19 24 55.5	-1.0
MATP	Matopo	69.83	223	P	P	19 27 51.6	-0.4
	comp=Z,3.2nm,0.5s,mb4.3,baz=23,slow=6.5,SNR=18						
BOSA	Boshof	78.14	221	P	P	19 28 39.5	-0.3
	comp=Z,3.6nm,0.9s,mb4.0,baz=78,slow=5.7,SNR=3.5						

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*NEIC **12** 19:21:38.6±3.5, 36.51N×70.83E, h215^{km}±43^{km}, mb4.3/7, Error ellipse: s-maj=30.9km s-min=8.5km az=70.0*

*IDC **12** 19:21:40.0±17.0, 36.46N×71.04E, h241^{km}±138^{km}, mb3.3/3, mb1 3.4/6, mb1mx3.0/22, mbtmp4.0/6, Error ellipse: s-maj=181.4km s-min=69.3km az=167.0*

*MOS **12** 19:21:42.0±0.7, 36.44N×71.01E, h284^{km}, mb3.9/1, Error ellipse: s-maj=27.5km s-min=16.2km az=102.1*

*NNC **12** 19:21:42.8±3.1, 36.97N×70.52E, h204^{km}±58^{km}, mpv4.2, Error ellipse: s-maj=33.0km s-min=27.0km az=165.0*

ISC 12 19:21:36.6±1.1**, 36.48N**±0.06×**70.7E**±0.1**, h206**^{km}±13^{km}**, n32, σ0^{s}87**/38**, mb3.5**/4**, 4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	Thein Dam	5.76	133	eP	P	19 23 01.8	+0.3
	222nm,0.2s						
THN				eS	S	19 24 05.6	-2.1
AML	Almayashu	6.09	21	P	P	19 23 06.0	+0.2
	SNR=52						
UCH	Uchtor	6.44	26	P	P	19 23 10.9	+0.6
	SNR=29						
KZA	Kyzart	6.59	31	P	P	19 23 12.7	+0.4
	SNR=11						
EKS2	Erkin-Say	6.61	20	P	P	19 23 12.9	+0.4
	SNR=14						
KK31	Karatay Array	6.62	359	⇓P	P	19 23 11.6	-1.0
	3.9nm,0.2s,baz=173,slow=10,SNR=197						
KK31				S	S	19 24 22.3	-5.2
	11nm,0.3s,baz=181,slow=21,SNR=13						
AAK	Ala-Archa	6.79	24	P	P	19 23 15.2	+0.3
	SNR=10.0						
AAK	Ala-Archa	6.79	24	⇑P	P	19 23 15.4	+0.5
	15nm,0.4s						
AAK				⇑S	S	19 24 30.1	-1.5
	25nm,0.4s						
KBK	Karagaybulak	6.97	26	P	P	19 23 17.9	+0.6
	SNR=9.1						
SDNR	Sundarnagar	7.17	132	eP	P	19 23 19.0	-0.8
SDNR				eS	S	19 24 36.0	-4.4
CHMS	Chumysh	7.21	24	P	P	19 23 20.8	+0.5
	SNR=7.5						
TKM2	Tokmak 2	7.44	29	P	P	19 23 24.1	+0.7
	SNR=23						
MK31	Makanchi Array	13.43	36	⇑P	P	19 24 40.6	+0.6
	2.5nm,0.6s,baz=219,slow=13,SNR=23						
MKAR	Makanchi Array	13.43	36	P	P	19 24 40.2	+0.2
	0.4nm,0.3s,baz=217,slow=12,SNR=19						
MKAR	Makanchi Array	13.43	36	P	P	19 24 40.2	+0.2
KOLN	Koldanda	13.92	125	eP	P	19 24 46.3	+0.1
	5.7nm,0.3s						
GKN	Gorkha	14.47	122	eP	P	19 24 52.8	-0.2
	20nm,0.5s						
GKN				eS	S	19 27 24.1	-4.3
AB31	Akbulak array	15.00	332	⇓P	P	19 25 00.3	+0.9
	0.5nm,0.2s,baz=138,slow=12,SNR=37						
AB31				⇑S	S	19 27 36.8	-3.3
	0.5nm,0.5s						
DMN	Daman	15.04	122	eP	P	19 25 01.0	+0.9
	8.8nm,0.4s						
KKN	Kakani	15.05	121	eP	P	19 25 00.3	+0.2
	18nm,0.5s						
KKN	Kakani	15.05	121	eP	P	19 25 00.3	+0.2
KKN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PKI	Pulchoki	15.27	121	eP	P	19 25 03.2	+0.3
	comp=Z,23nm,0.6s						
PKI	Pulchoki	15.27	121	eP	P	19 25 03.2	+0.3
PKI				pmax	pmax		
	comp=Z,12nm,0.6s						
GUN	Gumba	15.39	119	eP	P	19 25 05.4	+1.0
	comp=Z,9.8nm,0.4s						
BVAR	Borovoye Array	16.55	359	P	P	19 25 17.0	-1.2
	comp=Z,0.8nm,0.3s,baz=160,slow=7.5,SNR=10						
ZAL	Zalesovo	20.00	25	P	P	19 25 53.4	-1.3
	comp=Z,1.4nm,0.3s,baz=249,slow=5.0,SNR=11						
NVS	Novosibirsk	20.28	21	eP	P	19 25 56.9	-0.5
ARU	Arti	21.58	341	P	P	19 26 11.7	+1.5
ARU				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
ARU	Arti	21.58	341	P	P	19 26 11.7	+1.5
	comp=Z,1.3nm,0.4s,mb3.8						
FINES	FINESS Array B	37.38	326	P	P	19 28 30.3	-0.4
	comp=Z,1.1nm,0.6s,mb3.6,baz=119,slow=9.8,SNR=9.1						
ARCES	ARCESS Array B	41.08	338	P	P	19 29 01.1	-0.1
	comp=Z,2.3nm,0.6s,mb3.8,baz=104,slow=7.9,SNR=13						
NOA	NORSAR Array B	44.27	323	P	P	19 29 26.5	-0.3
	comp=Z,0.6nm,0.6s,mb3.1,baz=90,slow=7.1,SNR=3.2						

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*CRAAG **12** 19:26:16.5, 56.24S×26.99W, Mb6.1*

*MOS **12** 19:26:18.8±1.0, 56.36S×27.16W, h48^{km}, mb5.9/25, MS5.4/24, Error ellipse: s-maj=20.1km s-min=9.0km az=103.5*

*BJI **12** 19:26:23.0, 56.30S×27.10W, h94^{km}, mB5.7*

*HRVD **12** 19:26:24.8±0.1, 56.40S×26.70W, h98^{km}, MW6.0/72, Centroid moment Tensor Solution. LP body waves: s71,c182;Mantle waves: s72,c230; Half duration: 2^{s}4 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.61±.01; M$_{\theta\theta}$-0.42±.01; M$_{\phi\phi}$-0.19±.01; M$_{r\theta}$-0.84±.01; M$_{\theta\phi}$0.29±.01; M$_{\phi r}$0.70±.01; Best double couple: M$_0$1.259×10^{18} NP1: φ$_s$120°, δ15°, λ81°. NP2:φ$_s$309°, δ75°, λ92°. Principal axes: T 1.258, Plg60°, Azm222°; N .002, Plg2°, Azm129°; P -1.261, Plg30°, Azm37°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **12** 19:26:24.8±0.1, 56.29S×27.08W, mb5.8/35, MW6.0 Error ellipse: s-maj=6.2km s-min=4.3km az=39.0, Moment Tensor Solution. s18 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.00; M$_{\theta\theta}$0.00; M$_{\phi\phi}$0.00; M$_{r\theta}$0.00; M$_{\theta\phi}$0.00; M$_{\phi r}$0.00; Best double couple: M$_0$1.3×10^{18} NP1:φ$_s$148°, δ19°, λ106°. NP2:φ$_s$311°, δ72°, λ85°. Principal axes: T 1.24, Plg63°, Azm213°; N .16, Plg5°, Azm313°; P -1.39, Plg27°, Azm46°;*

*IDC **12** 19:26:25.2±0.5, 56.31S×27.09W, h95^{km}±3^{km}, mb5.4/23, mb1 5.4/24, mb1mx5.4/26, mbtmp5.7/24, MS5.2/15, Ms1 5.2/15, ms1mx5.1/16 Error ellipse: s-maj=11.7km s-min=8.7km az=28.0*

*CASC **12** 19:26:25.3±3.5, 56.29S×27.08W, h94^{km}, mb5.8(NEIC)*

ISC 12 19:26:23.9±0.2**, 56.32S**±0.04×**27.19W**±0.08**, h92**^{km}**, h92**^{km}±2.4^{km}**:pP-P, n520, σ1^{s}05**/174**, mb5.7**/39**, 87C-27D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.54	158	⇑iP	P	19 30 12.0	+0.9
VNA1	Neumayer--Stat	16.54	158	⇑i	P	19 30 16.0	+4.9
VNA1	Neumayer--Stat	16.54	158	⇑i	P	19 30 28.5	+17
VNA1	Neumayer--Stat	16.54	158		PcP	19 34 55.8	-2.2
VNA3	Neumayer Olymp	16.73	160	⇑iP	P	19 30 14.7	+1.3
VNA3	Neumayer Olymp	16.73	160	⇑i	P	19 30 16.1	+2.7
VNA3	Neumayer Olymp	16.73	160	⇑i		19 30 40.8	
VNA3	Neumayer Olymp	16.73	160	⇑i	PcP	19 34 56.8	-1.5
VNA2	Neumayer--Watz	16.94	158	⇑iP	P	19 30 16.6	+0.6
VNA2	Neumayer--Watz	16.94	158	⇑i	P	19 30 18.3	+2.3
VNA2	Neumayer--Watz	16.94	158	⇑i		19 30 44.0	
VNA2	Neumayer--Watz	16.94	158	S	S	19 33 27.1	+7.2
VNA2	Neumayer--Watz	16.94	158	⇑i	PcP	19 34 57.5	-1.1
SNAA	Sanae	18.49	156	⇑eP	P	19 30 32.8	-2.0
SNAA				eS	S	19 33 56.0	+1.5
SNAA				pmax	pmax		
	comp=Z,101nm,2.5s						
SNAA	Sanae	18.49	156	P	P	19 30 33.1	-1.6
	comp=Z,6.5nm,0.3s,baz=313,slow=8.9,SNR=373						
SNAA				PcP	PcP	19 34 59.8	-1.3
	comp=Z,2.9nm,0.3s,baz=236,slow=3.1,SNR=5.8						
SNAA				LR	LR	19 36 10.7	
	comp=Z,3µm,21.5s,baz=324,slow=32						
SNAA				ScP		19 38 24.7	
	comp=Z,1.0nm,0.3s,baz=242,slow=2.0,SNR=13						
SNAA	Sanae	18.49	156	⇑eP	P	19 30 32.8	-1.9
	comp=Z,101nm,2.5s						
SNAA				epP		19 30 55.3	
SNAA				eS	S	19 33 56.0	+1.5
SNAA				ePcP	PcP	19 34 59.0	-2.1
SNAA				eScP		19 38 23.7	
PMSA	Palmer Station	19.72	230	⇑iP	P	19 30 50.0	+1.9
	comp=Z,991nm,0.8s						
PMSA				epP		19 31 08.1	
TRIS	Tristan da Cun	21.71	34	eP	P	19 31 08.4	-0.1
	comp=Z,851nm,1.1s,mb6.0						
NVL	N'lazarevskaya	22.04	146	⇓iP	P	19 31 11.6	+0.1
NVL				i		19 31 25.5	
NVL				i S	S	19 35 03.9	+0.3
NVL				pmax	pmax		
	comp=Z,17nm,1.0s						
NVL				MLR	MLR		
	comp=Z,590nm,14.6s						
USHA	Ushuaia	23.12	256	P	P	19 31 22.8	+0.9
	comp=Z,114nm,0.9s,mb5.2,baz=96,slow=9.8,SNR=52						
USHA				PcP	PcP	19 35 08.8	-1.0
	comp=Z,24nm,0.8s,baz=82,slow=3.9,SNR=7.2						
USHA				LR	LR	19 37 21.7	
	comp=Z,4µm,19.0s,baz=93,slow=28						
USHA				ScP		19 38 35.8	
	comp=Z,14nm,0.6s,baz=87,slow=6.5,SNR=12						
TRQA	Tornquist	29.43	294	eP	P	19 32 19.7	-1.0
	comp=Z,72nm,0.6s,mb5.5						
LPA	La Plata	29.93	303	ceP	P	19 32 25.0	-0.2
LPA				epP	pP	19 32 45.0	-1.1
LPA				esP	sP	19 32 55.0	-1.7
LPA				ePP	PP	19 33 33.0	+6.9
LPA				eS	S	19 37 13.0	-1.6
LPA				esS		19 37 50.0	
LPA				ePCS		19 39 06.0	
LPA				eSS	SS	19 39 27.0	+30
LPA				eSCS	ScS	19 42 49.0	-3.2
	comp=Z,3µm,18.0s						
SYO	Syowa Base	31.37	140	⇓P	P	19 32 34.0	-3.5
SYO	Syowa Base	31.37	140	⇓sP	sP	19 33 06.0	-3.4
PLCA	Paso Flores	32.05	281	P	P	19 32 41.7	-2.0
PLCA				PcP	PcP	19 35 30.4	-0.9
PLCA				ScP		19 39 02.1	
PLCA	Paso Flores	32.05	281	P	P	19 32 41.8	-1.8
PLCA						19 35 30.6	
PLCA				pmax	pmax		
	comp=Z,46nm,1.0s						
PLCA				pmax	pmax		
	comp=Z,51nm,1.0s						
PLCA				pmax	pmax		
	comp=N,20nm,0.9s						
PLCA				MLR	MLR		
	comp=Z,2µm,19.8s						
PLCA	Paso Flores	32.05	281	P	P	19 32 41.8	-1.8
	comp=Z,46nm,1.0s,mb5.2,baz=139,slow=8.3,SNR=40						
PLCA				PcP	PcP	19 35 30.6	-0.7
	comp=Z,51nm,1.0s,baz=106,slow=3.4,SNR=9.8						
PLCA				ScP		19 39 02.1	
	comp=Z,20nm,0.9s,baz=148,slow=3.3,SNR=9.4						
PLCA				LR	LR	19 44 23.2	
	comp=Z,2µm,19.8s,baz=133,slow=34						
PLCA	Paso Flores	32.05	281	eP	P	19 32 41.1	-2.5
	comp=Z,73nm,1.1s,mb5.3						
QSPA	South Pole Qui	33.93	180	eP	P	19 33 00.0	+0.5
	comp=Z,252nm,0.8s,mb6.1						
CAM4	Nova Friburgo	35.77	335	⇑iP	P	19 33 17.6	+1.8
CAM4				i		19 33 19.8	
CAM4				i		19 33 24.7	
CICH	Cipreses	36.68	288	i P	P	19 33 23.1	-0.1
SFDO	San Fernando	36.77	287	i P	P	19 33 21.6	-2.4
CACH	El Canelo	36.93	288	i P	P	19 33 25.0	-0.4
MDZ	Mendoza	36.97	292	eP	P	19 33 25.0	-0.8
MDZ				e		19 35 13.1	
MDZ				S	PcP	19 35 45.4	-0.1
CPUP	Villa Florida	36.99	312	P	P	19 33 25.7	-0.3
CPUP				PcP	PcP	19 35 44.9	-0.7
CPUP				ScP		19 39 20.4	
CHCH	Chadas Angostu	37.10	289	i P	P	19 33 26.3	-0.5
PCH	Pirque	37.26	289	⇑iP	P	19 33 28.4	+0.2
FCH	Farellones	37.37	290	i P	P	19 33 29.4	+0.3
CLCH	Cerro Calan	37.45	289	⇑iP	P	19 33 28.5	-1.3
TACH	Talagante	37.46	289	⇑iP	P	19 33 28.5	-1.4
LNV	Longovilo	37.48	288	i P	P	19 33 28.3	-1.7
CFAA	Coronel Fontan	37.67	294	P	P	19 33 31.4	-0.1
	comp=Z,12nm,0.4s,mb5.0,baz=145,slow=8.0,SNR=197						
CFAA				PcP	PcP	19 35 48.2	+0.5
	comp=Z,21nm,0.7s,baz=165,slow=1.9,SNR=18						
CFAA				ScP		19 39 24.2	
	comp=Z,2.0nm,0.5s,baz=182,slow=5.6,SNR=7.8						
CFAA				LR	LR	19 46 23.0	
	comp=Z,342nm,20.3s,baz=146,slow=32						
CFAA	Coronel Fontan	37.67	294	P	P	19 33 31.4	-0.1
CFAA				PcP	PcP	19 35 48.2	+0.5
CFAA				ScP		19 39 24.2	
CFAA				LR	LR	19 46 23.0	
PEL	Peldehue	37.72	289	⇓iP	P	19 33 30.2	-1.8
PEL				⇑iP		19 33 31.4	
LCCH	Las Cruces	37.93	288	⇑iP	P	19 33 32.9	-0.9
ZON	Zonda	37.94	293	eP	P	19 33 32.5	-1.3
ROCH	El Roble	38.03	289	⇑iP	P	19 33 34.3	-0.3
JACH	Jahuel	38.03	290	⇓iP	P	19 33 34.3	-0.3
PACH	Papudo	38.59	289	⇓iP	P	19 33 38.5	-0.7
CMCH	Combarbala	39.44	291	⇓iP	P	19 33 45.5	-0.8
MAW	Mawson	39.93	143	eP	P	19 33 49.4	-0.6
	comp=Z,62nm,0.7s,mb5.5						
MAW				eSCP		19 39 32.3	
MAW				eS	S	19 39 46.9	-1.1
MAW				e		19 40 20.1	
MAW				eSCS	ScS	19 43 44.4	-1.1
MAW	Mawson	39.93	143	eP	P	19 33 49.4	-0.6
MAW				eS	S	19 39 46.9	-1.1
MAW				e		19 43 44.4	
MAW				pmax	pmax		
	comp=Z,63nm,0.7s						
MAW	Mawson	39.93	143	P	P	19 33 49.6	-0.4
	comp=Z,37nm,0.3s,mb5.6,baz=233,slow=8.3,SNR=138						
MAW				PcP	PcP	19 35 53.2	-1.2
	comp=Z,29nm,0.7s,baz=201,slow=3.2,SNR=4.8						
MAW				ScP		19 39 32.5	
	comp=Z,43nm,1.0s,baz=238,slow=2.5,SNR=9.5						
TLL	Tololo Astrono	40.13	292	⇑iP	P	19 33 51.6	-0.5
SUR	Sutherland	40.71	75	P	P	19 33 56.8	0.0
	comp=Z,51nm,0.8s,mb5.4,baz=215,slow=7.2,SNR=20						
SUR				LR	LR	19 47 24.2	
	comp=Z,6µm,19.1s,baz=211,slow=31						
SUR	Sutherland	40.71	75	eP	P	19 33 57.1	+0.4
	comp=Z,349nm,1.5s,mb6.0						
JATB	Jatai	42.52	325	c iP	P	19 34 12.6	+0.9
JATB				i		19 34 13.9	
JATB				e		19 34 23.5	
JATB				i		19 34 26.3	
JATB				i	pP	19 34 34.6	+1.1
JATB				e		19 35 55.9	
JATB				i		19 43 54.5	
JATB				e		19 44 33.5	
BDFB	Brasilia	43.60	330	P	P	19 34 21.8	+1.3
	comp=Z,121nm,0.6s,mb5.8,baz=162,slow=8.7,SNR=122						
BDFB				PcP	PcP	19 36 06.8	-0.3
	comp=Z,30nm,0.7s,baz=173,slow=6.5,SNR=2.5						
BDFB				ScP		19 39 46.9	
	comp=Z,7.6nm,0.9s,baz=158,slow=4.4,SNR=2.6						
BDFB				LR	LR	19 51 26.8	
	comp=Z,5µm,18.3s,baz=160,slow=34						
SBA	Scott Base	45.81	184	⇑eP	P	19 34 37.9	+0.5
SBA				pmax	pmax		
	comp=Z,234nm,1.1s,mb5.8						
SBA	Scott Base	45.81	184	⇑eP	P	19 34 37.9	+0.6
	comp=Z,234nm,1.1s,mb5.8						
BOSA	Boshof	46.04	76	P	P	19 34 38.6	-1.2
BOSA				pmax	pmax		
	comp=Z,43nm,0.8s,mb5.2						
BOSA				pmax	pmax		
	comp=N,40nm,1.2s						
BOSA				MLR	MLR		
	comp=Z,7µm,18.6s						
BOSA	Boshof	46.04	76	P	P	19 34 38.6	-1.2
	comp=Z,43nm,0.8s,mb5.2,baz=218,slow=8.0,SNR=58						
BOSA				ScP		19 39 57.7	
	comp=Z,40nm,1.2s,baz=219,slow=6.0,SNR=6.1						
BOSA				LR	LR	19 51 04.7	
	comp=Z,7µm,18.6s,baz=221,slow=32						
BOSA	Boshof	46.04	76	eP	P	19 34 38.4	-1.5
	comp=Z,376nm,1.7s,mb5.8						
VNDA	Vanda	46.30	183	⇑iP	P	19 34 41.7	+0.4
VNDA				pmax	pmax		
	comp=Z,247nm,0.7s						
VNDA	Vanda	46.30	183	P	P	19 34 41.8	+0.5
	comp=Z,240nm,0.6s,mb6.1,baz=186,slow=6.8,SNR=344						
VNDA				ScP		19 39 59.1	
	comp=Z,25nm,0.7s,baz=225,slow=4.2,SNR=8.6						
VNDA	Vanda	46.30	183	⇑iP	P	19 34 41.7	+0.4
	comp=Z,247nm,0.7s,mb6.0						
VNDA				eScP		19 39 58.7	
SIV	San Ignacio	47.76	314	P	P	19 34 53.0	-0.5
	comp=Z,120nm,0.7s,mb5.8,baz=162,slow=7.9,SNR=373						
SIV				pP	pP	19 35 14.6	-1.1
	comp=Z,34nm,0.8s,baz=190,slow=14,SNR=3.0						
SIV				PcP	PcP	19 36 20.8	-0.8
	comp=Z,52nm,0.8s,baz=143,slow=4.7,SNR=5.0						
SIV				ScP		19 40 04.0	
	comp=Z,37nm,0.9s,baz=192,slow=3.8,SNR=7.8						
CAUB	Caruaru	48.52	348	ceP	P	19 34 59.6	+0.2
CAUB				e		19 35 02.8	
CAUB				e		19 35 09.2	
CAUB				e		19 35 35.0	
CAUB				i		19 41 36.8	
CAUB				i		19 41 53.2	
CAUB				e		19 42 54.6	
MIR	Mirnyy	49.54	153	c iP	P	19 35 04.0	-2.6
MIR				i *PP	pP	19 35 21.0	-7.9
MIR				eS	S	19 42 02.0	-4.1
MIR				eSS	ScS	19 44 46.0	0.0
MIR				pmax	pmax		
	comp=Z,750nm,2.4s,mb6.2						
MIR				pmax	pmax		
	comp=Z,2µm,5.0s						
MIR				pmax	pmax		
	comp=N,909nm,4.0s						
MIR				pmax	pmax		
	comp=E,600nm,5.0s						
MIR				smax			
	comp=N,1µm,6.0s						
MIR				smax			
	comp=E,1µm,12.0s						
MIR				MLR	MLR		
	comp=N,1µm,18.0s						
MIR				MLR	MLR		
	comp=E,1µm,18.0s						
MIR				MLR	MLR		
	comp=Z,2µm,18.0s						
TSUM	Tsumeb	49.82	61	P	P	19 35 08.1	-1.3
	comp=Z,61nm,0.9s,mb5.5,baz=200,slow=7.2,SNR=41						
TSUM				LR	LR	19 52 52.4	
	comp=Z,3µm,19.2s,baz=209,slow=32						
TSUM	Tsumeb	49.82	61	eP	P	19 35 08.1	-1.2
	comp=Z,249nm,1.4s,mb6.0						
TSUM				epP	pP	19 35 32.0	+0.4
LPAZ	La Paz	50.53	305	⇑iP	P	19 35 15.7	+0.9
LPAZ				pmax	pmax		
	comp=Z,512nm,0.8s						
LPAZ	La Paz	50.53	305	P	P	19 35 15.7	+0.9
	comp=Z,411nm,0.8s,mb6.5,baz=140,slow=5.6,SNR=1362						
LPAZ				PcP	PcP	19 36 31.4	-0.3
	comp=Z,37nm,0.4s,baz=204,slow=3.8,SNR=7.2						
LPAZ				ScP		19 40 17.1	
	comp=Z,5.5nm,0.6s,baz=142,slow=6.9,SNR=3.8						
LPAZ				LR	LR	19 55 43.1	
	comp=Z,1µm,21.1s,baz=12,slow=35						
LPAZ	La Paz	50.53	305	⇑iP	P	19 35 15.7	+0.9
	comp=Z,512nm,0.8s,mb6.6						
CS6B	Jaguaretama	51.50	345	c iP	P	19 35 20.4	-1.8
CS6B				i		19 35 22.5	
CS6B				e		19 35 29.0	
CS6B				e		19 35 37.3	
CS6B				i		19 35 55.9	
CS6B				e		19 36 07.5	
CS6B				e		19 36 16.7	
CS6B				e		19 36 32.7	
CS6B				e		19 36 56.8	
CS6B				e		19 37 10.0	
CS6B				e		19 42 31.9	
CS6B				e		19 43 14.0	
CS6B				i		19 44 50.0	
ARE	Arequipa	51.94	302	⇑iP	P	19 35 24.9	-0.5
CASY	Casey	53.65	160	eP	P	19 35 36.6	-0.9
CASY				epP	pP	19 36 01.1	+1.0
CASY				ePCP	PcP	19 36 44.4	+1.8
CASY				eSCP		19 40 32.0	
CASY				eS	S	19 43 03.2	+0.9
CASY				eSCS	ScS	19 45 17.5	+3.2
MATP	Matopo	54.37	72	P	P	19 35 41.1	-2.2
	comp=Z,31nm,0.5s,mb5.6,baz=210,slow=7.6,SNR=80						
MATP				LR	LR	19 55 58.2	
	comp=Z,2µm,19.1s,baz=211,slow=33						
SAML	Samuel	54.99	315	⇑eP	P	19 35 46.7	-1.3
	comp=Z,0.5nm,0.5s						
SAML				epP	pP	19 36 08.8	-1.9
DRV	Dumont d'Urvil	56.95	174	P	P	19 36 00.0	-1.3
DRV				S	S	19 43 44.0	-2.3
DRV				L		19 49 00.0	
DRV				R		19 53 00.0	

LSZ	Lusaka	58.47	69	eP	P	19 36 09.1	-3.5
LSZ				pmax	pmax		
	comp=Z,233nm,1.4s,mb6.0						
LSZ	Lusaka	58.47	69	eP	P	19 36 09.1	-3.5
	comp=Z,233nm,1.4s,mb6.0						
DBIC	Dimbokro	65.42	25	⇓eP	P	19 36 57.4	-1.6
DBIC				e*PP	pP	19 37 17.6	-4.8
DBIC				pmax	pmax		
	comp=Z,86nm,1.0s						
DBIC	Dimbokro	65.42	25	P	P	19 36 57.7	-1.3
	comp=Z,38nm,0.7s,mb5.3,baz=168,slow=7.1,SNR=63						
DBIC				LR	LR	19 59 40.5	
	comp=Z,5µm,19.6s,baz=181,slow=30						
DBIC	Dimbokro	65.42	25	⇓eP	P	19 36 57.4	-1.6
	comp=Z,86nm,1.0s,mb5.5						
DBIC				epP	pP	19 37 17.6	-4.7
OPO	Ambohidratompo	66.10	88	P	P	19 37 02.4	-0.8
	comp=Z,18nm,0.9s,mb4.9,baz=206,slow=6.6,SNR=13						
OPO				PcP	PcP	19 37 30.7	-2.1
	comp=Z,39nm,1.0s,baz=219,slow=6.3,SNR=9.3						
OTAV	Otavalo	69.81	304	⇑iP	P	19 37 27.0	+0.7
	comp=Z,668nm,1.0s,mb6.4						
ROSC	El Rosal	72.08	310	P	P	19 37 39.9	-0.1
	comp=Z,113nm,0.7s,mb5.8,baz=108,slow=1.7,SNR=81						
ROSC				LR	LR	20 07 58.9	
	comp=Z,922nm,20.6s,baz=186,slow=35						
MBAR	Mbarara	72.28	63	eP	P	19 37 41.2	0.0
MBAR				pmax	pmax		
	comp=Z,181nm,1.4s,mb5.7						
MBAR	Mbarara	72.28	63	eP	P	19 37 41.2	0.0
	comp=Z,182nm,1.4s,mb5.7						
SDV	Santo Domingo	74.20	315	P	P	19 37 52.3	-0.1
	comp=Z,493nm,0.9s,mb6.2,baz=183,slow=3.1,SNR=9.3						
SDV	Santo Domingo	74.20	315	⇑eP	P	19 37 52.3	-0.1
	comp=Z,397nm,0.8s,mb6.2						
SDV				epP	pP	19 38 15.4	-1.0
PAYG	Puerto Ayora	74.82	292	eP	P	19 37 55.7	-0.2
	comp=Z,128nm,0.9s,mb5.7						
KMBO	Kilima Mbogo	75.14	69	LR	LR	20 09 23.2	
	comp=Z,2µm,18.4s,baz=272,slow=34						
BIM	Bigot	76.05	326	⇑eP	P	19 38 03.0	+0.2
CRM	Caravelle	76.22	326	⇑eP	P	19 38 05.0	+1.2
FDF	Fort de France	76.28	326	⇑eP	P	19 38 04.6	+0.5
BBL	Barber's Block	77.12	326	eP	P	19 38 08.9	+0.1
MGG	Marie-Galante	77.44	326	eP	P	19 38 11.2	+0.6
DEG	La Desirade	77.74	327	eP	P	19 38 12.7	+0.4
SEG	Port Louis	77.96	326	eP	P	19 38 13.9	+0.5
UPA	Univ. de Panam	78.03	307	⇑iP	P	19 38 15.0	+1.2
PTP1	Petroterminal	78.66	304	⇑eP	P	19 38 20.8	+3.4
BPA	Boggy Peak	78.67	326	eP	P	19 38 17.0	-0.3
SKTB	Turtle Beach	79.06	326	eP	P	19 38 19.0	-0.5
RPZ	Rata Peaks	79.15	193	P	P	19 38 19.3	-0.2
	comp=Z,138nm,0.9s,mb5.8,baz=192,slow=3.7,SNR=61						
SKI	Saint Kitts	79.22	326	eP	P	19 38 19.2	-1.1
CPB	Codrington	79.22	327	eP	P	19 38 21.0	+0.7
SKDB	Saint Kitts 2	79.30	326	eP	P	19 38 21.8	+1.0
ACR	Cerro Adams	79.39	304	eP	P	19 38 22.1	+0.7
SVTC	San Vito de Co	79.41	304	eP	P	19 38 22.3	+0.8
SABS	Saba	79.65	325	eP	P	19 38 24.2	+1.5
SABT	Saba	79.65	325	eP	P	19 38 24.2	+1.5
RKT	Rikitea	80.35	243	eP	P	19 38 14.0	-12
	comp=Z,739nm,25.5s						
RKT				eS	S	19 48 56.5	+33
	comp=Z,940nm,31.0s						
RKT				eLR	LR	20 03 41.5	
	comp=Z,4µm,36.0s,baz=152						
BUS	Buena Vista	80.46	303	⇑eP	P	19 38 28.0	+0.9
LCR2	La Lucha 2	80.73	303	⇑eP	P	19 38 29.1	+0.6
LAJ	Bijagual	80.90	303	⇓eP	P	19 38 30.6	+1.2
SJS	Escuela Geolog	80.93	303	⇓iP	P	19 38 30.9	+1.3
SNZO	South Karori	80.98	197	⇑eP	P	19 38 29.0	-0.4
	comp=Z,250nm,1.1s,mb6.0						
SNZO				epP	pP	19 38 53.9	+0.3
TAU	Tasmania Unive	81.03	176	⇑eP	P	19 38 28.6	-0.9
TAU				pmax	pmax		
	comp=Z,213nm,0.7s,mb6.1						
TAU	Tasmania Unive	81.03	176	⇑eP	P	19 38 28.6	-0.9
	comp=Z,213nm,0.7s,mb6.1						
TAU				epP	pP	19 38 54.3	+0.5
SJG	San Juan	81.06	323	P	P	19 38 29.2	-1.0
SJG				pmax	pmax		
	comp=Z,114nm,1.0s						
SJG	San Juan	81.06	323	P	P	19 38 29.2	-1.0
	comp=Z,114nm,1.0s,mb5.7,baz=115,slow=2.6,SNR=24						
SJG	San Juan	81.06	323	⇑eP	P	19 38 28.8	-1.3
	comp=Z,103nm,1.0s,mb5.6						
PRS1	Puriscal	81.09	303	eP	P	19 38 30.9	+0.5
TRTC	Tortuguero	81.33	304	⇓eP	P	19 38 32.1	+0.4
JCR	Jicaral	81.35	302	⇓eP	P	19 38 32.6	+0.8
JTS	JuntasAbangare	81.66	303	⇑iP	P	19 38 34.1	+0.7
JTS	JuntasAbangare	81.66	303	P	P	19 38 34.0	+0.6
	comp=Z,378nm,0.9s,mb6.2,baz=113,slow=1.2,SNR=105						
JTS	JuntasAbangare	81.66	303	⇑iP	P	19 38 33.7	+0.4
	comp=Z,626nm,1.1s,mb6.4						
FORC	Fortuna	81.68	303	⇑eP	P	19 38 34.3	+0.8
CONN	Concepcion	83.08	303	⇑eP	P	19 38 39.6	-1.1
URZ	Urewera	83.55	199	P	P	19 38 42.5	0.0
	comp=Z,37nm,0.7s,mb5.4,baz=182,slow=2.9,SNR=16						
APON	Apoyo	83.60	303	eP	P	19 38 42.8	-0.4
CRUN	El Crucero	83.77	302	eP	P	19 38 43.8	-0.2
WILN	Americas 2	83.87	303	eP	P	19 38 43.6	-1.0
MGAN	Managua	83.89	302	eP	P	19 38 44.5	-0.1
XAVN	Gruta Xavier	83.92	302	eP	P	19 38 44.1	-0.7
PYTN	Playitas	84.14	303	⇑eP	P	19 38 45.6	-0.3
MOMJ	Momotombo	84.25	302	eP	P	19 38 45.3	-1.1
MIRN	Miramar	84.36	302	eP	P	19 38 45.5	-1.5
CNGN	Cerro Negro	84.41	302	eP	P	19 38 45.4	-1.8
TEL3	Telica 3	84.54	302	eP	P	19 38 46.8	-1.1
YHJ	Yallahs	84.70	314	⇑iP	P	19 38 50.3	+1.7
CRIN	San Cristobal	84.75	302	eP	P	19 38 48.7	-0.2
PCJ	Portland Cotta	84.84	313	⇑eP	P	19 38 50.8	+1.5
HOJ	Hope	84.91	313	⇑eP	P	19 38 51.1	+1.4
GWJ	Greenwich	84.96	313	⇑iP	P	19 38 51.6	+1.7
STH	Stony Hill	85.00	313	⇑eP	P	19 38 51.8	+1.7
MCJ	Malvern	85.22	313	⇑iP	P	19 38 53.2	+2.0
BBJ	Bamboo Saint A	85.46	313	⇑iP	P	19 38 53.8	+1.4
CNCH	Conchagua	85.62	302	eP	Px	19 39 14.9	
BLLM	Bellamira	85.95	301	⇑eP	Px	19 39 16.5	
BLLM				eP		19 39 16.8	
BLLM				eP		19 39 17.3	
VSM	San Miguel	85.96	301	eP	Px	19 39 17.1	
NWAO	Narrogin (SRO)	86.09	151	eP	P	19 38 55.0	-0.2
NWAO				pmax	pmax		
	comp=Z,28nm,0.8s						
NWAO	Narrogin (SRO)	86.09	151	P	P	19 38 55.0	-0.2
	comp=Z,28nm,0.7s,mb5.3,baz=103,slow=16,SNR=22						
NWAO	Narrogin (SRO)	86.09	151	eP	P	19 38 55.0	-0.2
	comp=Z,28nm,0.8s,mb5.2						
TOO	Toolangi	86.26	174	⇑iP	P	19 38 56.0	+0.1
	comp=Z,45nm,0.8s,mb5.5						
TOO	Toolangi	86.26	174	⇑iP	P	19 38 56.0	+0.1
TOO				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.5						
SNVI	San Vicente	86.39	301	⇑eP	Px	19 39 18.9	
LCBS	La Ceiba	86.49	301	⇑eP	Px	19 39 18.7	
LFRS	El Faro	86.50	301	⇑eP	Px	19 39 19.2	
LBRS	Las Brisas	86.59	301	eP	Px	19 39 19.5	
BOQS	Boqueron	86.70	301	⇓eP	Px	19 39 20.5	
TBI	Tubuai	86.91	231	eP	P	19 38 46.7	-13
	comp=Z,587nm,25.5s						
TBI				ePP	PP	19 42 07.1	-18
	comp=Z,254nm,23.8s						
TBI				eS	S	19 49 22.8	-5.4
	comp=Z,1µm,25.8s						
TBI				eLR	LR	20 06 55.4	
	baz=156						
SBLS	San Blas	86.96	300	⇑eP	Px	19 39 21.6	
RTR	El Retiro	87.02	300	⇑eP	Px	19 39 22.1	
RBDL	Robledal	87.22	301	⇓eP	Px	19 39 22.9	
MTO2	Montecristo 2	87.32	301	⇑eP	Px	19 39 23.1	
KLBR	Kellerberrin	87.49	151	eP	P	19 39 01.6	-0.4
	comp=Z,80nm,0.7s,mb5.8						
KLBR				epP	pP	19 39 25.9	-0.8
ADE	Adelaide	88.28	168	⇑iP	P	19 39 06.6	+0.9
CNB	Canberra Magne	88.67	177	eP	P	19 39 07.8	+0.2
	comp=Z,75nm,0.7s,mb5.8						
RIV	Riverview	90.19	179	eP	P	19 39 14.7	0.0
RIV				epP	pP	19 39 40.8	+1.3
STKA	Stephens Creek	91.63	170	eP	P	19 39 21.5	0.0
	comp=Z,27nm,0.6s,mb5.7						
STKA				ePP	PP	19 42 59.1	-4.0
STKA	Stephens Creek	91.63	170	P	P	19 39 21.5	0.0
	comp=Z,30nm,0.6s,mb5.7,baz=164,slow=4.6,SNR=64						
STKA				PP	PP	19 43 01.0	-2.1
	comp=Z,14nm,0.7s,baz=169,slow=6.8,SNR=6.3						
STKA				PKKPbc		19 56 39.4	
	comp=Z,2.3nm,0.5s,baz=67,slow=5.0,SNR=17						
STKA				LR	LR	20 19 26.8	
	comp=Z,1µm,19.2s,baz=192,slow=35						
HUIG	Huatulco	91.79	296	⇑iP	P	19 39 23.0	+0.5
TEIG	Tepich	91.86	305	⇑eP	P	19 39 23.4	+0.6
	comp=Z,228nm,0.6s,mb6.6						
PPT	Papeete	92.03	234	eP	P	19 39 11.1	-13
	comp=Z,405nm,23.8s						
PPT				ePP	PP	19 42 48.6	-18
	comp=Z,469nm,25.8s						
PPT				eS	tx	19 51 54.6	
	comp=Z,3µm,35.0s						
PPT				eLQ		20 05 07.6	
	comp=Z,1µm,26.0s						
PPT				eLR	LR	20 09 18.1	
	baz=162						
PPT	Papeete	92.03	234	LR	LR	20 14 49.4	
	comp=Z,1µm,19.5s,baz=186,slow=32						
CMIG	Matias Romero	92.31	298	⇑iP	P	19 39 24.6	-0.3
OXX	Oaxaca	93.22	296	eP	P	19 39 30.0	+1.0
TAOE	Nuku Hiva Isla	95.03	246	eLR	LR	20 10 53.4	
PPM	Popocatepetl	95.85	296	eP	P	19 39 42.0	+1.1
PPM				⇑iP		19 39 43.0	
EVO	Evora	95.88	15	eP	P	19 39 42.4	+1.7
	comp=Z,114nm,1.3s,mb5.8						
CKHR	Kef el Ahmar	96.09	26	P	Px	19 40 11.0	
DFRA	Djebel Bou Aff	96.68	26	P	Px	19 40 13.0	
CKFL	Kef-Lekhel	96.76	27	P	Px	19 40 15.0	
CMAH	Djebel Manchou	97.15	27	P	Px	19 40 15.5	
ESDC	Sonseca Array	97.64	18	P	P	19 39 50.0	+1.3
	comp=Z,1.4nm,0.7s,mb4.6,baz=178,slow=3.9,SNR=9.6						
ESDC				PP	PP	19 43 44.6	-5.4
	comp=Z,0.5nm,0.7s,baz=183,slow=12,SNR=4.1						
ESDC				PKKPbc		19 56 24.4	
	comp=Z,1.4nm,0.6s,baz=4.3,slow=3.1,SNR=12						
MOIG	Morelia	97.66	294	eP	P	19 39 50.5	+1.4
ETSF	Etsaut	101.38	20	eP	P	19 40 07.5	+2.0
	comp=Z,37nm,1.4s						
ETSF	Etsaut	101.38	20	eP	P	19 40 07.5	+2.0
ETSF				pmax	pmax		
	comp=Z,19nm,1.4s						
SJPF	Ste Jean	101.46	19	eP	P	19 40 07.9	+2.1
	comp=Z,30nm,1.3s						
SJPF	Ste Jean	101.46	19	eP	P	19 40 07.9	+2.1
SJPF				pmax	pmax		
	comp=Z,15nm,1.3s						
EPF	Esparros	101.68	20	eP	P	19 40 09.5	+2.7
	comp=Z,19nm,1.0s						
MTLF	Montolieu	102.35	22	eP	Pdif	19 40 11.3	+1.6
FITZ	Fitzroy Crossi	102.41	154	eP	Pdif	19 40 13.5	+2.9
	comp=Z,5.0nm,0.5s						
FITZ				ePKIKP		19 44 33.1	
FITZ				eSKS	SKS	19 50 39.5	-0.8
FITZ				esSKS		19 51 25.9	
FITZ	Fitzroy Crossi	102.41	154	P	Pdif	19 40 11.6	+1.0
	comp=Z,6.5nm,0.5s,baz=191,slow=8.1,SNR=16						
FITZ				PKiKP		19 44 31.1	
	comp=Z,8.3nm,0.6s,baz=108,slow=1.3,SNR=7.5						
FITZ				PKKPbc		19 56 10.5	
	comp=Z,4.8nm,0.7s,baz=308,slow=0.7,SNR=5.8						
FITZ				PKKPab		19 56 32.9	
	comp=Z,16nm,0.9s,baz=351,slow=2.7,SNR=7.2						
LRAL	Lakeview Retre	102.43	312	ePdif	Pdif	19 40 09.8	-0.5
	comp=Z,7.3nm,0.6s						
WRA	Warramunga Arr	102.45	162	P	Pdif	19 40 09.5	-1.2
	comp=Z,3.8nm,0.5s,baz=196,slow=4.2,SNR=27						
WRA				PP	PP	19 44 21.4	-5.5
	comp=Z,5.7nm,0.8s,baz=184,slow=6.3,SNR=6.0						
WRA				PKKPbc		19 56 10.4	
	comp=Z,6.7nm,0.3s,baz=358,slow=2.8,SNR=69						
WRA				PKKPab		19 56 33.2	
	comp=Z,5.7nm,0.8s,baz=8.9,slow=4.6,SNR=11						
WRA				SKKPbc		19 59 41.2	
	comp=Z,1.3nm,0.9s,baz=355,slow=3.0,SNR=5.1						
WB2	Warramunga Arr	102.45	162	eP	Pdif	19 40 09.4	-1.3
WB2				ePKIKP		19 44 25.2	
WB2				eSKS	SKS	19 50 35.7	-4.7
WRAB	Tennant Creek	102.46	162	P	Pdif	19 40 09.4	-1.3
WRAB				pmax	pmax		
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	102.46	162	eP	Pdif	19 40 08.9	-1.8
	comp=Z,12nm,0.6s						
CPCT	Cooper Cave	103.53	315	ePdif	Pdif	19 40 14.9	-0.2
CTA	Charters Tower	103.69	174	Pdiff	Pdif	19 40 15.6	-0.6
	comp=Z,4.7nm,0.6s,baz=204,slow=6.0,SNR=8.6						
CTA				PKiKP		19 44 34.1	
	comp=Z,7.0nm,0.9s,baz=192,slow=4.4,SNR=5.2						
SWET	Sewanee	103.89	314	ePdif	Pdif	19 40 14.1	-2.6
PLAL	Pickwick Lake	104.56	312	ePdif	Pdif	19 40 19.0	-0.6
	comp=Z,5.6nm,0.9s						
ORIF	Oris-en-Rattie	104.64	24	eP	Pdif	19 40 22.6	+2.8
WVT	Waverly	105.45	313	P	Pdif	19 40 23.0	-0.5
WVT				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WVT	Waverly	105.45	313	ePdif	Pdif	19 40 22.8	-0.8
	comp=Z,4.2nm,0.6s						
SKO	Skopje	106.19	36	ePKP		19 44 50.0	
SKO				i		19 45 22.0	
TXAR	Lajitas Array	106.92	297	Pdiff	Pdif	19 40 30.9	+0.7
	comp=Z,3.0nm,0.8s,baz=137,slow=4.9,SNR=22						
TXAR				PKiKP		19 44 39.2	
	comp=Z,1.6nm,0.5s,baz=132,slow=3.3,SNR=15						
TXAR				PKKPbc		19 55 57.5	
	comp=Z,0.7nm,0.7s,baz=328,slow=1.8,SNR=6.2						
TXAR				PKKPab		19 56 10.9	
	comp=Z,0.4nm,0.5s,baz=270,slow=2.5,SNR=3.9						
TXAR	Lajitas Array	106.92	297	Pdif	Pdif	19 40 30.9	+0.7
TXAR				PKPdf		19 44 39.2	
TXAR				PKKPbc		19 55 57.5	
TXAR				PKKPab		19 56 10.9	
DAVOX	Davos	107.33	26	PKiKP		19 44 39.8	
	comp=Z,2.1nm,0.6s,slow=1.0,SNR=5.0						
DAVOX				PKKPab		19 56 09.6	
	comp=Z,5.8nm,0.6s,baz=13,slow=2.4,SNR=11						
DAVOX	Davos	107.33	26	PKPdf		19 44 39.8	
DAVOX				PKKPab		19 56 09.6	
GENY	Geneseo	107.55	323	ePP	PP	19 45 02.4	-2.2
FRNY	Flat Rock	108.07	327	PKPdf		19 44 39.8	
BFO	Black Forest	108.42	24	ePdif		19 41 00.3	
BFO				ePP	PP	19 45 05.3	-5.6
BFO				eSKSac		19 51 05.4	
BFO				eSP	SP	19 54 15.8	-5.0
BRTR	Keskin Array B	108.62	45	PKiKP		19 44 41.7	
	comp=Z,2.5nm,1.1s,baz=180,slow=5.8,SNR=3.8						
BRTR				PKKPbc		19 55 50.5	
	comp=Z,0.9nm,0.7s,baz=92,slow=1.3,SNR=4.1						
BRTR				PKKPab		19 56 03.4	
	comp=Z,1.3nm,0.7s,baz=50,slow=2.5,SNR=4.3						
FUR	Furstenfeldbru	108.96	26	ePdif		19 41 01.7	
FUR				ePP	PP	19 45 06.7	-8.6
FUR				eSKSac		19 51 07.8	
FUR				eSP	SP	19 54 32.1	+6.4
WMOK	Wichita Mounta	109.03	304	P	Pdif	19 40 40.3	+0.9
WMOK	Wichita Mounta	109.03	304	ePdif	Pdif	19 40 39.3	-0.1
AAM	Ann Arbor	109.18	319	ePKiKP		19 44 42.0	
BZS	Buzias	109.51	34	⇓iP		19 44 43.8	
BZS	Buzias	109.51	34	⇓iP		19 44 43.8	
MNTX	Cornudas Mount	109.70	298	ePKPdf		19 44 44.0	
SADO	Sadowa	109.77	323	PKiKP		19 44 43.5	
	comp=Z,1.8nm,0.4s,baz=185,slow=3.8,SNR=4.4						
GEC2	GERESS Array S	110.20	27	ePdif		19 41 06.7	
GEC2				ePP	PP	19 45 15.3	-8.7
GEC2				eSKSac		19 51 14.4	
GEC2				eSP	SP	19 54 40.6	+2.6
GEC2				LR	LR		
	comp=Z,1µm,18.8s						
GERES	GERESS Array B	110.20	27	PKiKP		19 44 44.3	
	comp=Z,1.9nm,0.7s,baz=193,slow=3.1,SNR=12						
GERES				PKKPbc		19 55 46.5	
	comp=Z,0.9nm,0.6s,baz=10,slow=3.4,SNR=8.5						
GERES				PKKPab		19 55 55.4	
	comp=Z,0.7nm,0.6s,baz=45,slow=3.8,SNR=5.3						
TNS	Taunus Mts	110.22	24	ePdif		19 41 08.4	
TNS				ePP	PP	19 45 20.9	-3.2
TNS				eSKSac		19 51 17.8	
TNS				eSP	SP	19 54 41.1	+2.9
GRA1	Grafenberg Arr	110.36	25	ePdif		19 41 09.1	
GRA1				ePP	PP	19 45 17.2	-7.9
GRA1				eSKSac		19 51 16.0	
GRA1				eSP	SP	19 54 41.4	+1.7
GRA1				eSS	SS	20 00 42.3	-0.4
GRA1				eSSS	SSS	20 05 00.6	+8.7
GRA1				LR	LR		
	comp=Z,800nm,19.2s						
KHC	Kasperske Hory	110.43	27	ePKIKP	PKPdf	19 44 31.3	-13
KHC				e		19 51 14.4	
KHC				MLR	MLR		
	comp=Z,1µm,18.7s						
KHC	Kasperske Hory	110.43	27	PKP	PKPdf	19 44 44.0	-0.3
KHC				ePP	PP	19 45 22.0	-3.6
KHC				eSKS	SKS	19 51 14.4	-0.4
KHC				ex	x	19 55 39.5	
KHC				PKKP	PKKP	19 55 47.0	-3.3
KHC				ex	x	19 55 56.0	
KHC				AMS	AMS	20 27 30.0	
	comp=Z,1µm,18.7s						
MDRS	Chennai	110.44	97	ex	x	19 45 43.0	
MLR	Muntele Rosu	110.80	37	PKiKP		19 44 45.6	
	comp=Z,2.4nm,0.7s,baz=185,slow=0.3,SNR=8.2						
MLR				PKKPab		19 55 54.9	
	comp=Z,1.9nm,0.8s,baz=171,slow=12,SNR=3.8						
MLR	Muntele Rosu	110.80	37	⇓iP	PKPdf	19 44 45.6	+0.5
MLR	Muntele Rosu	110.80	37	⇓iP	PKPdf	19 44 45.6	+0.4
NKC	Novy Kostel	111.17	26	eSKS	SKS	19 51 17.5	-0.2
NKC				AMS	AMS	20 28 00.0	
	comp=Z,1µm,18.5s						
VYHS	Vyhne	111.27	31	⇑ePKIKP	PKPdf	19 44 46.7	+0.7
VYHS				e		19 51 17.8	
VYHS				e		19 54 49.9	
VYHS	Vyhne	111.27	31	ePKP	PKPdf	19 44 46.7	+0.7
VYHS				e		19 45 44.1	
MOX	Moxa	111.34	25	PKIKP	PKPdf	19 44 44.9	-1.2
MOX				MLR	MLR		
	comp=Z,800nm,21.0s						
MOX	Moxa	111.34	25	P	PKPdf	19 44 44.9	-1.2
MOX				e		19 45 52.5	
MOX				LR	LR		
	comp=Z,800nm,21.0s						
MOX	Moxa	111.34	25	i P		19 41 18.4	
MOX				PKP	PKPdf	19 44 44.0	-2.1
MOX				PP	PP	19 45 52.0	+20
MOX				SKS	SKS	19 51 20.0	+1.5
MOX				PS	PS	19 54 56.0	-3.6
MOX				SS	SS	20 01 11.0	+16
MOX				L		20 29 15.0	
VRAC	Vranov	111.38	29	PKKPab		19 55 51.5	
	comp=Z,4.3nm,0.7s,baz=17,slow=7.6,SNR=6.2						
PRU	Pruhonice	111.47	27	ePKP	PKPdf	19 44 32.9	-13
PRU				eSKS	SKS	19 51 20.3	+1.3
PRU				eSP	SP	19 54 55.7	+5.5
PRU				AMS	AMS	20 28 10.0	
	comp=Z,2µm,18.6s						
KECS	Kecovo	111.74	32	e	PP	19 45 43.7	+8.9
PVCC	Panska Ves	111.97	27	ePKP	PKPdf	19 44 47.7	+0.4
PVCC				AMS	AMS	20 28 30.0	
	comp=Z,2µm,19.7s						
BRG	Berggiesshubel	112.13	27	ePKIKP	PKPdf	19 44 48.7	+1.1
BRG				i		19 45 00.0	
BRG				e		19 45 41.6	
BRG				i		19 55 02.0	
BRG				i SS	SS	20 01 06.0	+0.5
BRG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRG				MLR	MLR		
	comp=N,1µm,18.8s						
BRG				MLR	MLR		
	comp=E,770nm,18.8s						
BRG				MLR	MLR		
	comp=Z,1µm,19.8s						
BRG	Berggiesshubel	112.13	27	ePdif	Pdif	19 41 04.0	+11
CLZ	Clausthal	112.17	24	eP		19 41 12.1	
CLZ				e		19 45 34.3	
CLZ				e		19 51 22.4	
CLZ				eSP	SP	19 54 57.5	+0.8
CLZ				MLR	MLR		
	comp=Z,3µm,19.7s						
DPC	Dobruska-Polom	112.26	28	ePKP	PKPdf	19 44 48.7	+0.9
DPC				ex	x	19 51 23.0	
DPC				ex	x	19 55 05.1	
DPC				AMS	AMS	20 29 40.0	
	comp=Z,1µm,18.8s						
OKC	Ostrava-Krasne	112.29	30	eSKS	SKS	19 51 23.8	+1.5
OKC				AMS	AMS	20 29 20.0	
	comp=Z,1µm,19.0s						
CLL	Collm	112.29	26	⇓iPKIKP	PKPdf	19 44 48.6	+0.7
CLL				MLR	MLR		
	comp=Z,1µm,18.4s						
CLL	Collm	112.29	26	⇓iPKP	PKPdf	19 44 48.6	+0.7
CLL				eSKS	SKS	19 51 16.0	-6.2
CLL				i PKKP	PKKP	19 55 39.1	-7.4
CLL				ePKKP	PKKP	19 55 47.0	+0.5
CLL				LR	LR		
	comp=Z,1µm,18.4s						
CLL	Collm	112.29	26	e		19 41 18.0	
CLL				i		19 44 48.6	
CLL				ePP	PP	19 45 34.0	-4.9
CLL				i *PPP		19 45 56.8	
CLL				e		19 51 16.0	
CLL				e		19 52 25.0	
CLL				eSP	SP	19 55 03.0	+5.1
CLL				ePS	PS	19 55 20.0	+12
CLL				i PKKP	PKKP	19 55 39.1	-7.4
CLL				ePKKP	PKKP	19 55 47.0	+0.5
CLL				ePPS	PPS	19 56 14.0	-8.4
CLL				eSS	SS	20 01 06.0	-1.8
CLL				eSSS	SSS	20 05 17.0	-4.0
UPC	Upice	112.32	28	ePKP	PKPdf	19 44 45.4	-2.6
BURAR	Bucovina Array	112.43	35	⇑iP	PKPdf	19 44 49.7	+1.5
BURAR	Bucovina Array	112.43	35	⇑iP	PKPdf	19 44 49.7	+1.4
KSP	Ksiaz	112.70	28	ePKP	PKPdf	19 44 36.5	-12
KSP				ePP	PP	19 45 44.1	+2.0
KSP				eSP	SP	19 55 08.3	+6.3
KSP				ePS	PS	19 55 24.9	+12
KSP				eSS	SS	20 01 33.8	+20
KSP				MLR	MLR	20 21 22.1	
	comp=Z,5µm,39.1s						
LAZ	Ladron	112.75	298	ePKiKP		19 44 50.1	
ANMO	Albuquerque	112.85	299	PKIKP	PKPdf	19 44 50.2	+0.8
ANMO	Albuquerque	112.85	299	PKiKP		19 44 49.2	
	comp=Z,2.9nm,0.9s,baz=185,slow=3.5,SNR=5.5						
ANMO				PKKPbc		19 55 39.2	
	comp=Z,3.8nm,0.6s,baz=332,slow=4.9,SNR=12						
ANMO	Albuquerque	112.85	299	ePKiKP		19 44 49.1	
TUC	Tucson	112.90	294	PKIKP	PKPdf	19 44 51.2	+1.6
TUC	Tucson	112.90	294	ePKiKP		19 44 50.7	
EKA	Eskdalemuir Ar	113.00	15	PKiKP		19 44 48.6	
	comp=Z,1.6nm,0.5s,baz=216,slow=2.1,SNR=7.7						
EKA				PKKPbc		19 55 36.6	
	comp=Z,2.2nm,0.4s,baz=350,slow=2.8,SNR=17						
EKA				PKKPab		19 55 44.0	
	comp=Z,2.7nm,0.8s,baz=1.4,slow=1.5,SNR=4.0						
HYB	Hyderabad	113.04	93	ePKIKP	PKPdf	19 44 50.0	-0.2
HYB	Hyderabad	113.04	93	i PKP	PKPdf	19 44 50.0	-0.2
HYB				epPKP		19 45 15.0	
HYB				eSKS	SP	19 55 08.0	+1.9
HYB				ePKKPbc		19 55 37.0	
HYB				ePKKPab		19 55 45.0	
HYB				eSS	SS	20 01 16.0	-2.9
KIS	Kishinev	113.09	38	ePKIKP	PKPdf	19 44 46.0	-3.6
KIS				ePS	PS	19 55 19.0	+2.6
KIS				MLR	MLR		
	comp=Z,600nm,20.0s						
KIS				MLR	MLR		
	comp=Z,500nm,20.0s						
OJC	Ojcow	113.10	31	ePKIKP	PKPdf	19 44 50.3	+0.8
OJC				e		19 51 25.0	
OJC				ePS	PS	19 55 21.0	+4.6
OJC				MLR	MLR		
	comp=Z,1µm,20.1s						
OJC	Ojcow	113.10	31	ePKiKP		19 44 50.3	
OJC				⇑eSKSa		19 51 25.0	
OJC				⇑eSKKSa		19 52 33.4	
OJC				ePS	PS	19 55 21.0	+4.6
OJC				MLR	MLR	20 30 02.0	
	comp=Z,1µm,20.1s						
KWP	Kalwaria	113.43	33	ePKP	PKPdf	19 44 50.7	+0.5
KWP				ePP	PP	19 45 44.1	-3.5
KWP				ePS	PS	19 55 21.4	+2.1
KWP				MLR	MLR	20 21 27.3	
	comp=Z,3µm,41.7s						
LVV	L'vov	114.00	34	i PKIKP	PKPdf	19 44 52.5	+1.2
LVV				e		19 45 45.9	
LVV				e		19 51 27.1	
LVV				ePS	PS	19 55 14.7	-10
LVV				MLR	MLR		
	comp=Z,1µm,20.0s						

LVV				MLR	MLR		
	comp=N,430nm,21.0s						
LVV				MLR	MLR		
	comp=E,1µm,20.0s						
BSEG	**Bad Segeberg**	**114.11**	**23**	*e*Pdif	Pdif	19 41 25.6	+24
BSEG				*e*PP	PP	19 45 47.0	-5.2
BSEG				*e*SKSac		19 51 28.9	
BSEG				*e*SP	SP	19 55 05.6	-9.4
PMG	**Port Moresby**	**114.34**	**174**	PKP	PKPdf	19 44 52.3	-0.5
	comp=E,22nm,1.0s,baz=167,slow=1.1,SNR=3.2						
SDCO	**Great Sand Dun**	**114.63**	**301**	*e*PKiKP		19 44 53.6	
ZEI	**Tsey**	**115.40**	**50**	*e*PKIKP	PKPdf	19 44 53.4	-0.9
ZEI				*i*		19 46 09.4	
SCHQ	**Schefferville**	**115.41**	**336**	PKP	PKPdf	19 44 53.9	-0.1
	comp=E,11nm,0.7s,baz=136,slow=1.2,SNR=27						
SCHQ				SKP		19 48 19.7	
	comp=E,4.9nm,0.8s,baz=96,slow=4.8,SNR=5.3						
SCHQ				PKKPbc		19 55 28.9	
	comp=E,1.7nm,0.4s,baz=265,slow=7.3,SNR=12						
SCHQ	**Schefferville**	**115.41**	**336**	PKP	PKPdf	19 44 53.9	-0.1
SCHQ				SKP		19 48 19.7	
SCHQ				PKKPbc		19 55 28.9	
WUAZ	**Wupatki**	**115.73**	**296**	*e*PKPdf	PKPdf	19 44 56.3	+1.2
KIV	**Kislovodsk**	**115.85**	**49**	κ *i*PKIKP	PKPdf	19 44 55.4	+0.3
KIV				*e*		19 48 24.9	
KIV				*i*		19 51 34.1	
KIV				*i* PS	PS	19 55 33.4	-8.9
KIV				*e*SS	SS	20 02 05.2	+11
KIV				SSS	SSS	20 06 25.0	+10
KIV				pmax	pmax		
	comp=Z,21nm,1.6s						
KIV				MLR	MLR		
	comp=Z,900nm,19.0s						
KIV	**Kislovodsk**	**115.85**	**49**	*e*PKPdf	PKPdf	19 44 55.5	+0.4
RW3	**Ridgway**	**116.08**	**300**	PKIKP	PKPdf	19 44 57.7	+2.0
RW3	**Ridgway**	**116.08**	**300**	*e*PKPdf	PKPdf	19 44 55.3	-0.4
COP	**Copenhagen**	**116.19**	**24**	*i* P	PP	19 45 50.6	-16
COP				*i* S	SKS	19 51 39.2	+2.2
COP				*i*		19 52 58.0	
COP				*i*		19 55 43.4	
COP				*i*		20 01 58.2	
COP				*i*		20 06 16.3	
	comp=Z,500nm,18.0s						
BAR	**Barrett**	**116.23**	**290**	*e*PKPdf	PKPdf	19 44 56.9	+0.8
ISCO	**Idaho Springs**	**116.31**	**303**	PKIKP	PKPdf	19 44 57.5	+1.4
AKASG	**Malin Array Be**	**116.42**	**36**	PKP	PKPdf	19 44 55.4	-0.6
	comp=Z,4.3nm,0.6s,baz=246,slow=1.9,SNR=20						
AKASG				PKKPbc		19 55 25.1	
	comp=Z,1.9nm,0.6s,baz=32,slow=4.2,SNR=5.6						
PFO	**Pinyon Flat Ob**	**116.84**	**291**	PKIKP	PKPdf	19 44 58.8	+1.5
PFO	**Pinyon Flat Ob**	**116.84**	**291**	*e*PKPdf	PKPdf	19 44 58.3	+1.1
EYMN	**Ely**	**116.89**	**317**	*e*PKPdf	PKPdf	19 44 56.4	-0.6
EYMN				*e*PP	PP	19 46 08.2	-3.7
PHWY	**Pilot Hill**	**117.43**	**304**	*e*PKPdf	PKPdf	19 44 58.4	+0.2
SUW	**Suwalki**	**117.43**	**31**	*e*P	Pdif	19 41 27.0	+11
SUW				*e*		19 44 58.2	
SUW				*e*		19 46 15.9	
SUW				*e*		19 51 45.4	
SUW				*e*PS	PS	19 56 01.1	+4.8
SUW				*e*SS	SS	20 02 35.0	+20
SUW	**Suwalki**	**117.43**	**31**	*e*Pdif	Pdif	19 41 27.0	+11
SUW				*e*PKP	PKPdf	19 44 58.2	+0.4
SUW				*e*PP	PP	19 46 15.9	+0.4
SUW				*e*SKS	SKS	19 51 45.4	+3.8
SUW				*e*SP	SP	19 55 39.9	-5.9
SUW				*e*PS	PS	19 56 01.1	+4.8
SUW				*e*SS	SS	20 02 35.0	+20
SUW	**Suwalki**	**117.43**	**31**	*e*Pdiff	Pdif	19 41 27.0	+11
SUW				*e*PKP	PKPdf	19 44 58.2	+0.4
SUW				*e*PP	PP	19 46 15.9	+0.4
SUW				*e*SKS	SKS	19 51 45.4	+3.9
SUW				*e*SP	SP	19 55 39.9	-5.9
SUW				*e*PS	PS	19 56 01.1	+4.8
SUW				*e*SS	SS	20 02 35.0	+20
SUW				MLR	MLR	20 23 44.2	
	comp=Z,2µm,38.6s						
NEN	**Nelson**	**117.60**	**293**	*e*PKPdf	PKPdf	19 44 59.3	+0.7
SRU	**San Rafael**	**118.13**	**299**	*e*PKIKP	PKPdf	19 44 59.8	+0.2
MVU	**Marysvale**	**118.48**	**297**	*e*PKPdf	PKPdf	19 45 01.9	+1.6
ARUT	**Antelope Range**	**118.54**	**296**	*e*PKIKP	PKPdf	19 45 01.8	+1.4
RWWY	**Rawlins**	**118.55**	**303**	*e*PKPdf	PKPdf	19 45 00.8	+0.5
TMUT	**Trail Mountain**	**118.60**	**298**	*e*PKPdf	PKPdf	19 45 01.9	+1.4
RSSD	**Black Hills**	**119.00**	**307**	*e*PKIKP	PKPdf	19 45 00.9	-0.3
BER	**Bergen**	**119.17**	**18**	*e*P	PKPdf	19 45 00.7	-0.4
BER				*e*PP	PP	19 46 25.9	-1.4
BER				*e*SKSa		19 51 48.4	
BER				*e*		20 02 36.5	
BER				AMS	AMS	20 34 47.5	
	comp=Z,1µm,18.3s						
MPU	**Maple Canyon**	**119.37**	**299**	*e*PKPdf	PKPdf	19 45 02.8	+0.8
MPU				*e*PP	PP	19 46 26.8	-2.2
MPU				*e*SKPdf		19 48 28.3	
DAU	**Daniels Canyon**	**119.49**	**299**	PKIKP	PKPdf	19 45 04.0	+1.8
DAU	**Daniels Canyon**	**119.49**	**299**	*e*PKPdf	PKPdf	19 45 03.4	+1.2
NLU	**North Lily Min**	**119.54**	**298**	*e*PKPdf	PKPdf	19 45 03.9	+1.6
CTU	**Camp Tracy**	**119.95**	**299**	*e*PKPdf	PKPdf	19 45 04.0	+0.9
TRCR	**Troy Canyon**	**120.06**	**295**	*e*PKPdf	PKPdf	19 45 04.7	+1.4
NOQ	**North Oquirrh**	**120.09**	**299**	*e*PKPdf	PKPdf	19 45 04.5	+1.1
TCUT	**Toone Canyon**	**120.11**	**300**	*e*PKPdf	PKPdf	19 45 04.5	+1.1
TCUT				*e*pPKPdf		19 45 30.6	
TCUT				*e*PP	PP	19 46 32.7	-0.8
TCUT				*e*SKPdf		19 48 28.7	
VRSR	**Storozhevoye**	**120.35**	**42**	*e*PKIKP	PKPdf	19 45 03.6	0.0
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VRSR				pmax	pmax		
	comp=N,4.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,2.0nm,0.5s						
ULM	**Lac du Bonnet**	**120.44**	**316**	PKP	PKPdf	19 45 03.1	-0.7
	comp=E,26nm,0.5s,baz=140,slow=1.7,SNR=41						
ULM				PP	PP	19 46 30.5	-5.1
	comp=E,34nm,0.9s,baz=156,slow=5.3,SNR=9.5						
ULM				SKP		19 48 28.6	
	comp=E,8.7nm,0.7s,baz=197,slow=1.0,SNR=3.9						
ULM				PKKPbc		19 55 10.6	
	comp=E,4.0nm,0.6s,baz=277,slow=4.7,SNR=4.1						
ULM	**Lac du Bonnet**	**120.44**	**316**	PKP	PKPdf	19 45 03.1	-0.7
ULM				PP	PP	19 46 30.5	-5.1
ULM				SKP		19 48 28.6	
ULM				PKKPbc		19 55 10.6	
PDAR	**Pinedale Array**	**120.49**	**302**	PKhKP		19 44 53.5	
	comp=E,1.4nm,0.6s,baz=109,slow=3.2,SNR=6.3						
PDAR				PKP	PKPdf	19 45 04.0	-0.1
	comp=E,9.7nm,0.5s,baz=135,slow=4.9,SNR=54						
PDAR				SKP		19 48 29.8	
	comp=E,2.7nm,0.6s,baz=142,slow=3.1,SNR=3.7						
PDAR				PKKPbc		19 55 10.6	
	comp=E,1.4nm,0.6s,baz=88,slow=0.6,SNR=8.4						
HWUT	**Hardware Ranch**	**120.56**	**300**	*e*PKPdf	PKPdf	19 45 04.8	+0.5
HWUT				*e*PP	PP	19 46 31.3	-5.3
HWUT				*e*SKPdf		19 48 29.9	
NAO01	**NORSAR Array S**	**120.62**	**21**	*e*PKPdf	PKPdf	19 45 03.7	-0.2
TPH	**Tonopah**	**120.68**	**293**	PKIKP	PKPdf	19 45 06.5	+1.9
TPH	**Tonopah**	**120.68**	**293**	*e*PKPdf	PKPdf	19 45 05.1	+0.5
SPUT	**South Promonto**	**120.76**	**299**	*e*PKPdf	PKPdf	19 45 03.1	-1.5
VOR	**Voronezh**	**120.77**	**42**	*e*PKIKP	PKPdf	19 45 04.5	+0.1
VOR						19 46 33.0	
VOR				pmax	pmax		
	comp=Z,40nm,1.1s						
VOR				pmax	pmax		
	comp=Z,50nm,2.0s						
MTUM	**Tungsten Hills**	**120.82**	**292**	*e*PKPdf	PKPdf	19 45 06.2	+1.3
NB2	**NORSAR Subarra**	**120.86**	**21**	PKPdf	PKPdf	19 45 04.2	-0.2
	comp=Z,11nm,1.0s,baz=202,slow=1.9						
NB2	**NORSAR Subarra**	**120.86**	**21**	PKPd		19 45 04.2	
	baz=202,slow=1.9						
NOA	**NORSAR Array B**	**120.86**	**21**	PKP	PKPdf	19 45 04.3	0.0
	comp=Z,9.9nm,0.7s,baz=202,slow=1.9,SNR=36						
NOA				SKP		19 48 31.4	
	comp=Z,1.4nm,0.6s,baz=110,slow=0.9,SNR=4.3						
NOA				PKKPbc		19 55 08.7	
	comp=Z,5.4nm,0.6s,baz=24,slow=3.4,SNR=25						
AHID	**Auburn Hatcher**	**121.22**	**301**	*e*PKPdf	PKPdf	19 45 05.2	-0.3
NDI	**New Delhi**	**121.22**	**84**	*e*P	PKPdf	19 45 05.0	-0.9
OMM	**Old Mammoth Mi**	**121.24**	**292**	*e*PKPdf	PKPdf	19 45 06.5	+0.8
OMM				pPKPdf		19 45 31.6	
OMM				*e*PP	PP	19 46 37.9	-3.6
HVU	**Hansel Valley**	**121.27**	**299**	PKIKP	PKPdf	19 45 06.9	+1.2
HVU	**Hansel Valley**	**121.27**	**299**	*e*PKPdf	PKPdf	19 45 06.2	+0.6
MNV	**Mina**	**121.43**	**293**	PKIKP	PKPdf	19 45 07.7	+1.7
MNV	**Mina**	**121.43**	**293**	*e*PKPdf	PKPdf	19 45 07.4	+1.4
NVAR	**Mina Array Bea**	**121.50**	**293**	PKP	PKPdf	19 45 08.0	+1.8
	comp=Z,6.6nm,0.4s,baz=127,slow=3.7,SNR=36						
NVAR				PP	PP	19 46 46.0	+2.6
	comp=Z,7.4nm,1.0s,baz=137,slow=8.1,SNR=3.8						
NVAR				SKP		19 48 33.2	
	comp=Z,2.5nm,0.8s,baz=116,slow=3.1,SNR=3.6						
NVAR				PKKPbc		19 55 08.2	
	comp=Z,1.9nm,0.7s,baz=278,slow=5.1,SNR=10						
NVAR	**Mina Array Bea**	**121.50**	**293**	PKP	PKPdf	19 45 08.0	+1.8
NVAR				PP	PP	19 46 46.0	+2.6
NVAR				SKP		19 48 33.2	
NVAR				PKKPbc		19 55 08.2	
SNOW	**Snow King Moun**	**121.58**	**302**	*e*PKPdf	PKPdf	19 45 06.8	+0.6
MOL	**Molde**	**121.60**	**18**	*e*P	PKPdf	19 45 11.8	+6.0
LOHW	**Long Hollow**	**121.63**	**302**	*e*PKPdf	PKPdf	19 45 06.2	-0.1
WUWY	**Wally Ulrich**	**121.64**	**302**	*e*PKPdf	PKPdf	19 45 07.1	+0.8
TPAW	**Teton Pass**	**121.70**	**302**	*e*PKPdf	PKPdf	19 45 06.2	-0.2
ELK	**Elko**	**121.70**	**297**	*e*PKIKP	PKPdf	19 45 07.7	+1.2
ELK				*e*		19 46 41.3	
ELK	**Elko**	**121.70**	**297**	PKP	PKPdf	19 45 08.0	+1.5
	comp=Z,6.2nm,0.4s,baz=212,slow=1.7,SNR=26						
ELK				PP	PP	19 46 45.2	+0.5
	comp=Z,7.6nm,1.0s,baz=119,slow=7.9,SNR=5.3						
ELK				SKP		19 48 33.7	
	comp=Z,3.5nm,0.8s,baz=79,slow=4.6,SNR=4.1						
ELK				PKKPbc		19 55 07.2	
	comp=Z,0.9nm,0.5s,baz=288,slow=3.8,SNR=5.3						
RRI2	**Red Ridge**	**121.76**	**301**	*e*PKPdf	PKPdf	19 45 07.3	+0.7
MOOW	**Moose Ponds**	**121.80**	**302**	*e*PKPdf	PKPdf	19 45 07.1	+0.5
MOOW				*e*SKPdf		19 48 32.5	
LAO	**LASA Array**	**121.96**	**307**	*e*PKPdf	PKPdf	19 45 06.3	-0.6
IMW	**Indian Meadow**	**122.00**	**302**	*e*PKPdf	PKPdf	19 45 07.2	+0.2
CMB	**Columbia Colle**	**122.28**	**291**	*e*PKPdf	PKPdf	19 45 08.3	+0.7
CMB				*e*SKPdf		19 48 34.8	
VSU	**Vasula**	**122.28**	**30**	*e*PKIKP	PKPdf	19 45 07.2	+0.1
YFT	**Old Faithful**	**122.37**	**303**	*e*PKPdf	PKPdf	19 45 07.8	+0.2
DGMT	**Dagmar**	**122.44**	**310**	*e*PKPdf	PKPdf	19 45 08.3	+0.6
BMN	**Battle Mountai**	**122.46**	**295**	*e*PKPdf	PKPdf	19 45 08.6	+0.7
BMN				*e*pPKPdf		19 45 34.8	
OBN	**Obninsk**	**122.56**	**38**	*c i*PKIKP	PKPdf	19 45 07.5	-0.3
OBN				*i*		19 46 51.2	
OBN				*e*		19 51 59.1	
OBN				*e*PS	PS	19 56 40.8	-1.6
OBN				pmax	pmax		
	comp=Z,26nm,0.7s						
OBN				MLR	MLR		
	comp=Z,700nm,17.0s						
OBN	**Obninsk**	**122.56**	**38**	*e*PKPdf	PKPdf	19 45 07.5	-0.2
WCN	**Washoe City**	**122.90**	**293**	PKIKP	PKPdf	19 45 11.2	+2.4
WCN	**Washoe City**	**122.90**	**293**	PKPdf	PKPdf	19 45 08.5	-0.4
QLMT	**Earthquake Lak**	**122.94**	**302**	*e*PKPdf	PKPdf	19 45 09.8	+1.1
NST	**Nakhon Sawan**	**123.25**	**114**	P	PKPdf	19 45 09.5	-0.5
HLID	**Hailey**	**123.41**	**300**	*e*PKPdf	PKPdf	19 45 11.0	+1.3
MOS	**Moscow**	**123.42**	**38**	*e*PKIKP	PKPdf	19 45 10.3	+0.9
MOS				*e*		19 52 00.4	
MOS				pmax	pmax		
	comp=Z,65nm,1.0s						
MCMT	**McKenzie Canyo**	**123.60**	**302**	*e*PKPdf	PKPdf	19 45 11.1	+1.0
BEKR	**Beckwourth**	**123.63**	**293**	*e*PKPdf	PKPdf	19 45 11.5	+1.2
BEKR				*e*SKPdf		19 48 38.0	
BOZ	**Bozeman (W)**	**123.64**	**303**	*e*PKIKP	PKPdf	19 45 11.0	+0.9
FRB	**Frobisher Bay**	**123.91**	**339**	PKP	PKPdf	19 45 10.2	0.0
	comp=Z,46nm,0.7s,baz=138,slow=3.4,SNR=83						
FRB				PP	PP	19 47 00.8	+1.2
	comp=Z,15nm,1.0s,baz=148,slow=8.4,SNR=3.2						
FRB				SKP		19 48 37.0	
	comp=Z,9.5nm,0.8s,baz=81,slow=2.7,SNR=4.1						
FRB				PKKPbc		19 54 56.3	
	comp=Z,2.4nm,0.2s,baz=344,slow=11,SNR=4.2						
FRB	**Frobisher Bay**	**123.91**	**339**	PKP	PKPdf	19 45 10.2	0.0
FRB				PP	PP	19 47 00.8	+1.2
FRB				SKP		19 48 37.0	
FRB				PKKPbc		19 54 56.3	
NSS	**Namsos**	**124.19**	**19**	*e*P	PKPdf	19 45 10.1	-0.7
SFJD	**Kangerlussuaq**	**124.24**	**349**	*i* PKIKP	PKPdf	19 45 11.3	+0.5
SFJD				pmax	pmax		
	comp=Z,52nm,0.7s						
SFJD	**Kangerlussuaq**	**124.24**	**349**	*i* P	PKPdf	19 45 11.3	+0.5
	comp=Z,52nm,0.7s						
HRY	**Holter Researc**	**124.52**	**304**	*e*PKPdf	PKPdf	19 45 12.8	+1.2
FINES	**FINESS Array B**	**124.62**	**28**	PKIKP	PKPdf	19 45 10.7	-0.8
FINES						19 58 35.1	
FINES	**FINESS Array B**	**124.62**	**28**	PKP	PKPdf	19 45 10.7	-0.8
	comp=Z,26nm,0.4s,baz=181,slow=0.9,SNR=166						
FINES				SKP		19 48 38.4	
	comp=Z,7.6nm,0.8s,baz=117,slow=4.3,SNR=5.2						
FINES				PKKPbc		19 54 53.8	
	comp=Z,2.2nm,0.6s,baz=48,slow=3.6,SNR=11						
FINES				SKKPbc		19 58 35.1	
	comp=Z,0.8nm,0.5s,baz=59,slow=3.3,SNR=7.2						
WVOR	**Wild Horse Val**	**124.66**	**296**	*e*PKIKP	PKPdf	19 45 13.5	+1.4
WVOR				*e*		19 47 02.0	
WVOR	**Wild Horse Val**	**124.66**	**296**	*e*PKPdf	PKPdf	19 45 13.5	+1.4
WVOR				*e*pPKPdf		19 45 40.0	
WVOR				*e*PP	PP	19 47 01.9	-2.7
WVOR				*e*SKPdf		19 48 39.5	
LBCM	**Butte Creek Ri**	**124.86**	**293**	P	PKPdf	19 45 13.8	+1.3
CMAR	**Chiang Mai Arr**	**124.97**	**111**	PKIKP	PKPdf	19 45 13.7	+0.4
CMAR						19 58 33.3	
CMAR	**Chiang Mai Arr**	**124.97**	**111**	PKP	PKPdf	19 45 13.7	+0.4
	comp=Z,14nm,0.7s,baz=230,slow=4.3,SNR=79						
CMAR				pPKP		19 45 38.5	
	comp=Z,35nm,0.9s,baz=244,slow=4.1,SNR=13						
CMAR				PKKPbc		19 54 55.5	
	comp=Z,2.7nm,0.6s,baz=4.6,slow=2.1,SNR=21						
CMAR				SKKPbc		19 58 33.2	
	comp=Z,2.7nm,1.0s,baz=4.8,slow=2.4,SNR=4.3						
MOD	**Modoc**	**125.11**	**294**	*e*PKPdf	PKPdf	19 45 14.2	+1.3
MOD				*e*SKPdf		19 48 39.0	
KKTK	**Khon Kaen**	**125.17**	**116**	P	PKPdf	19 45 14.0	+0.3
	comp=Z,247nm,1.0s						
KAF	**Kangasniemi**	**125.25**	**28**	*e*p	PKPdf	19 45 12.1	-0.5
	comp=Z,18nm,0.3s						
WDC	**Whiskeytown Da**	**125.29**	**292**	PKIKP	PKPdf	19 45 14.4	+1.1
WDC	**Whiskeytown Da**	**125.29**	**292**	*e*PKPdf	PKPdf	19 45 13.3	-0.1
CHMT	**Chamberlain Mo**	**125.33**	**303**	*e*PKPdf	PKPdf	19 45 13.7	+0.5
CHMT				*e*pPKPdf		19 45 39.5	
CHMT				*e*SKP		19 48 42.1	
MSO	**Missoula**	**125.59**	**303**	*e*PKPdf	PKPdf	19 45 14.4	+0.6
MSO				*e*pPKPdf		19 45 40.0	
MSO				*e*PP	PP	19 47 08.9	-1.8
MSO				*e*SKPdf		19 48 42.1	
BMO	**Blue Mountains**	**125.77**	**299**	PKIKP	PKPdf	19 45 15.0	+0.9
BMO	**Blue Mountains**	**125.77**	**299**	*e*PKPdf	PKPdf	19 45 14.6	+0.5
KHMM	**Horse Mountain**	**126.12**	**291**	*e*PKPdf	PKPdf	19 45 13.9	-1.0
MOR8	**Moi Rana**	**126.13**	**20**	*e*P	PKPdf	19 45 14.6	+0.4
MOR8				AMb	AMB	19 45 15.4	
	comp=Z,23nm,1.1s						
NANT	**Nan**	**126.17**	**112**	⇓P	PKPdf	19 45 14.0	-1.5
	comp=Z,144nm,1.0s						
YBH	**Yreka Blue Hor**	**126.21**	**293**	PKIKP	PKPdf	19 45 16.1	+1.1
YBH	**Yreka Blue Hor**	**126.21**	**293**	PKP	PKPdf	19 45 15.6	+0.6
	comp=Z,16nm,0.8s,baz=84,slow=2.6,SNR=25						
YBH	**Yreka Blue Hor**	**126.21**	**293**	*e*PKPdf	PKPdf	19 45 14.8	-0.2
FFC	**Flin Flon**	**126.27**	**316**	*e*PKPdf	PKPdf	19 45 14.6	-0.2
FFC				*e*PP	PP	19 47 08.0	-6.9
FFC				SKPdf		19 48 42.5	
FCC	**Fort Churchill**	**126.50**	**323**	PKIKP	PKPdf	19 45 14.4	-0.7
FCC	**Fort Churchill**	**126.50**	**323**	*e*PKPdf	PKPdf	19 45 13.4	-1.7
SCO	**Scoresbysund**	**126.56**	**2**	*i* PKIKP	PKPdf	19 45 16.4	+1.5
SCO				pmax	pmax		
	comp=Z,12nm,1.0s						
SCO	**Scoresbysund**	**126.56**	**2**	*i* P	PKPdf	19 45 16.4	+1.5
	comp=Z,12nm,1.0s						
MELSS	**Ber_school_2**	**126.62**	**19**	*e*P	PKPdf	19 45 15.8	+0.7
SHL	**Shillong**	**126.94**	**99**	*e*P	PKPdf	19 45 17.5	+0.6
JMIC	**Jan Mayen**	**127.71**	**8**	*e*P	PKPdf	19 45 17.9	+0.7
JMIC				*e*SS	SS	20 04 30.9	+6.1
JMIC				AMS	AMS	20 40 04.4	
	comp=Z,716nm,20.7s						
LOF	**Lofoten**	**127.72**	**18**	*e*P	PKPdf	19 45 18.5	+1.2
NEW	**Newport**	**128.13**	**302**	PKIKP	PKPdf	19 45 18.8	+0.2
NEW						19 47 25.5	
NEW				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NEW				pmax	pmax		
	comp=Z,12nm,0.9s						
NEW				pmax	pmax		
	comp=N,12nm,0.9s						
NEW	**Newport**	**128.13**	**302**	PKP	PKPdf	19 45 18.8	+0.2
	comp=N,9.4nm,0.5s,baz=161,slow=1.6,SNR=14						
NEW				PP	PP	19 47 25.4	-1.9
	comp=N,12nm,0.9s,baz=119,slow=5.0,SNR=5.5						
NEW				SKPbc		19 48 27.1	
	comp=N,12nm,0.9s,baz=167,slow=1.6,SNR=3.4						
NEW	**Newport**	**128.13**	**302**	*e*PKPdf	PKPdf	19 45 18.5	-0.1
NEW				*e*PP	PP	19 47 25.1	-2.2
COR	**Corvallis**	**128.56**	**295**	*e*PKIKP	PKPdf	19 45 20.6	+1.1
KSH	**Kashi**	**128.64**	**75**	*e*PKP	PKPdf	19 45 20.0	+0.2
KSH				*e*XPKP		19 45 57.6	
KSH				*e*PKS	PKS	19 48 55.6	+0.2
KSH				*e*SS	SS	20 04 33.3	-4.2
KSH				PP	PP		
	comp=Z,290nm,4.3s						
KSH				LR	LR		
	comp=N,1µm,16.0s						
KSH				LR	LR		
	comp=E,410nm,5.9s						
SUMG	**Summit**	**128.85**	**356**	*e*PKPdf	PKPdf	19 45 20.4	+1.0
AML	**Almayashu**	**129.29**	**71**	P	PKPdf	19 45 21.9	+0.9
	SNR=26						
LON	**Longmire**	**129.33**	**298**	PKIKP	PKPdf	19 45 21.6	+0.7
EKS2	**Erkin-Say**	**129.71**	**70**	P	PKPdf	19 45 22.5	+0.7
	SNR=43						
LSA	**Lhasa**	**129.75**	**95**	PKP	PKPdf	19 45 23.6	+1.4
LSA				PP	PP	19 47 39.6	+1.1
LSA				LR	LR		
	comp=N,370nm,22.4s						
LSA				LR	LR		
	comp=E,460nm,20.0s						
LSA				LR	LR		
	comp=Z,730nm,24.0s						
LSA	**Lhasa**	**129.75**	**95**	*e*PKPdf	PKPdf	19 45 23.5	+1.3
LSA				*e*SKP		19 48 34.5	
UCH	**Uchtor**	**129.79**	**71**	P	PKPdf	19 45 23.6	+1.6
	SNR=22						
EDM	**Edmonton**	**129.87**	**309**	*e*PKIKP	PKPdf	19 45 21.8	0.0
TRO	**Tromso**	**129.99**	**19**	*e*P	PKPdf	19 45 23.4	+1.9
TRO	**Tromso**	**129.99**	**19**	*e*P	PKPdf	19 45 20.4	-1.2
TRO				*e*SKSa		19 52 20.2	
TRO				*e*SS	SS	20 04 51.2	-2.1
TRO				AMS	AMS	20 40 53.4	
	comp=Z,1µm,2.5s						
AAK	**Ala-Archa**	**130.07**	**71**	P	PKPdf	19 45 23.4	+1.0
	SNR=13						
KZA	**Kyzart**	**130.08**	**72**	P	PKPdf	19 45 24.0	+1.5
	SNR=14						
FRU	**Bishkek**	**130.27**	**71**	*e*PKIKP	PKPdf	19 45 23.0	+0.2
FRU				pmax	pmax		
	comp=Z,80nm,2.0s						
FRU				MLR	MLR		
	comp=Z,500nm,16.0s						
KTK1	**Kautokeino**	**130.30**	**21**	*e*P	PKPdf	19 45 22.1	-0.1
KTK1				AMb	AMB	19 45 24.1	
	comp=Z,77nm,1.4s						
KBK	**Karagaybulak**	**130.32**	**71**	P	PKPdf	19 45 23.7	+0.7
	SNR=7.9						
GNW	**Green Mountain**	**130.40**	**298**	P	PKPdf	19 45 23.9	+0.9
USP	**Ospenovka**	**130.51**	**70**	P	PKPdf	19 45 23.9	+0.6
	SNR=9.6						
TKM2	**Tokmak 2**	**130.85**	**71**	P	PKPdf	19 45 23.6	-0.3
	SNR=6.1						
QIZ	**Qiongzhong**	**130.91**	**121**	PKP	PKPdf	19 45 24.9	+0.3
QIZ				XPKP		19 45 59.3	
QIZ				PP	PP	19 47 42.7	-3.8
QIZ				SS	SS	20 05 04.8	-0.8
QIZ				LR	LR		
	comp=E,390nm,24.8s						
QIZ				LR	LR		
	comp=Z,780nm,25.7s						
OCWA	**Octopus Mounta**	**131.19**	**297**	PKPpre		19 45 19.9	
ARCES	**ARCESS Array B**	**131.20**	**22**	PKhKP		19 45 07.2	
	comp=Z,2.6nm,0.8s,baz=216,slow=2.4,SNR=9.1						
ARCES				PKP	PKPdf	19 45 23.8	-0.1
	comp=Z,41nm,0.6s,baz=202,slow=1.6,SNR=77						
ARCES				SKPbc		19 48 38.8	
	comp=Z,14nm,0.7s,baz=224,slow=2.3,SNR=6.8						
ARCES				SKKPbc		19 58 12.3	
	comp=Z,2.0nm,0.7s,baz=22,slow=4.9,SNR=3.8						
ARCES	**ARCESS Array B**	**131.20**	**22**	PKP	PKPdf	19 45 07.2	-17
ARCES				PKP	PKPdf	19 45 23.8	-0.1
ARCES				SKPbc		19 48 38.8	
ARCES				SKKPbc		19 58 12.3	
PGC	**Sidney**	**131.44**	**298**	*e*PKPdf	PKPdf	19 45 25.6	+0.7
APA	**Apatity**	**131.44**	**26**	⇑*i*PKIKP	PKPdf	19 45 24.6	+0.2
APA				*e*		19 47 50.0	
APA				pmax	pmax		
	comp=Z,31nm,1.0s						
APA				pmax	pmax		
	comp=Z,500nm,5.0s						
APA				MLR	MLR		
	comp=Z,2µm,19.0s						
KEV	**Kevo**	**131.69**	**22**	*e*p	PKPdf	19 45 24.1	-0.7
	comp=Z,10nm,0.5s						
ARU	**Arti**	**131.88**	**48**	*i* PKIKP	PKPdf	19 45 26.0	+0.5
ARU				MLR	MLR		
	comp=Z,1µm,24.0s						
ARU				MLR	MLR		
	comp=N,800nm,23.0s						
ARU				MLR	MLR		
	comp=E,700nm,25.0s						
ARU	**Arti**	**131.88**	**48**	*e*PKPdf	PKPdf	19 45 25.3	-0.2
KMI	**Kunming**	**132.44**	**110**	PKP	PKPdf	19 45 26.0	-1.4
KMI				XPKP		19 46 03.5	
KMI				SKKS		19 54 36.1	
KMI				PP	PP		
	comp=Z,240nm,5.3s						
KMI				LR	LR		
	comp=N,310nm,30.2s						
KMI				LR	LR		
	comp=E,460nm,26.1s						
KMI				LR	LR		
	comp=Z,880nm,30.2s						
KMI	**Kunming**	**132.44**	**110**	PKIKP	PKPdf	19 45 26.4	-1.0
KMI						19 47 50.9	
KMI				MLR	MLR		
	comp=Z,890nm,30.2s						
KMI	**Kunming**	**132.44**	**110**	PKP	PKPdf	19 45 26.4	-1.0
KMI				pPKP		19 45 53.8	
KMI				sPKP		19 46 03.5	
KMI				PP	PP	19 47 50.9	-4.6
KMI				PKS	PKS	19 48 56.6	-6.1
KMI				SKKS		19 54 36.1	
KMI				SS	SS	20 05 18.6	-6.2
KMI				SSS	SSS	20 10 14.0	-7.1
KMI				LR	LR		
	comp=Z,890nm,30.2s						
DAG	**Danmarks Havn**	**132.94**	**3**	⇑*e*PKIKP	PKPdf	19 45 25.2	-1.9
DAG				pmax	pmax		
	comp=Z,32nm,1.0s						
DAG	**Danmarks Havn**	**132.94**	**3**	⇑*i*P	PKPdf	19 45 25.2	-1.9
	comp=Z,32nm,1.0s						
SVE	**Sverdlovsk**	**133.01**	**49**	⇑*i*PKIKP	PKPdf	19 45 28.2	+0.6
SVE				*e*		19 47 56.0	
SVE				*e*		19 59 52.0	
SVE				*e*SS	SS	20 06 06.0	+35
SVE				pmax	pmax		
	comp=Z,120nm,2.5s						
SOKR	**Solikamsk**	**133.24**	**44**	⇑*i*PKIKP	PKPdf	19 45 27.3	-0.7
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s						
BVAR	**Borovoye Array**	**134.93**	**58**	PKhKP		19 45 17.7	
	comp=Z,1.8nm,0.7s,baz=219,slow=3.5,SNR=11						
BVAR				PKP	PKPdf	19 45 31.4	+0.2
	comp=Z,11nm,0.6s,baz=225,slow=2.0,SNR=30						
BVAR				pPKP		19 45 57.2	
	comp=Z,24nm,0.8s,baz=230,slow=2.3,SNR=4.7						
BVAR				SKPbc		19 48 51.5	
	comp=Z,12nm,1.0s,baz=236,slow=5.3,SNR=4.5						
BVAR				SKKPbc		19 57 57.5	
	comp=Z,3.9nm,0.5s,baz=50,slow=2.1,SNR=19						
GYA	**Guiyang**	**135.56**	**113**	⇓*i*PKP	PKPdf	19 45 33.0	-0.2
GYA				XPKP		19 46 10.4	
GYA				PKS	PKS	19 49 11.8	+3.3
GYA				PP	PP		
	comp=Z,680nm,11.4s						
GYA				LR	LR		
	comp=N,480nm,23.1s						
GYA				LR	LR		
	comp=E,570nm,23.8s						
GYA				LR	LR		
	comp=Z,710nm,22.4s						
BBB	**Bella Bella**	**136.00**	**300**	PKP	PKPdf	19 45 34.3	+1.1
	comp=Z,32nm,1.0s,baz=267,slow=0.6,SNR=7.0						
BBB				SKPbc		19 48 54.9	
	comp=Z,27nm,0.8s,baz=88,slow=3.1,SNR=9.1						
YKA	**Yellowknife Ar**	**136.37**	**318**	PKhKP		19 45 20.3	
	comp=Z,3.3nm,0.5s,baz=120,slow=3.3,SNR=14						
YKA				PKP	PKPdf	19 45 34.0	+0.4

	comp=Z,30nm,0.5s,baz=126,slow=2.4,SNR=92						
YKA				PP	PP	19 48 15.1	-3.6
	comp=Z,26nm,0.8s,baz=118,slow=6.7,SNR=22						
YKA				SKPbc		19 48 54.7	
	comp=Z,27nm,0.9s,baz=129,slow=2.4,SNR=18						
YKA				SKKPbc		19 57 54.6	
	comp=Z,2.4nm,1.0s,baz=318,slow=4.9,SNR=4.4						
YKA	**Yellowknife Ar**	**136.37**	**318**	PKP	PKPdf	19 45 20.3	-13
YKA				PKP	PKPdf	19 45 34.0	+0.4
YKA				PP	PP	19 48 15.2	-3.6
YKA				SKPbc		19 48 54.7	
YKA				SKKPbc		19 57 54.6	
YKW3	**Yellowknife Ar**	**136.42**	**318**	*e*PKPpre		19 45 19.4	
YKW3				*e*PKPdf	PKPdf	19 45 33.7	0.0
YKW3				*e*PP	PP	19 48 17.1	-1.9
YKW3				*e*SKP		19 48 54.8	
MKAR	**Makanchi Array**	**136.97**	**72**	PKhKP		19 45 24.8	
	comp=Z,2.4nm,0.6s,baz=222,slow=3.0,SNR=15						
MKAR				PKP	PKPdf	19 45 34.5	-0.7
	comp=Z,5.5nm,0.8s,baz=214,slow=2.1,SNR=15						
MKAR				SKPbc		19 48 57.9	
	comp=Z,5.9nm,0.6s,baz=238,slow=3.6,SNR=12						
MKAR				SKKPbc		19 57 50.1	
	comp=Z,1.0nm,0.6s,baz=58,slow=5.7,SNR=5.5						
MKAR	**Makanchi Array**	**136.97**	**72**	PKP	PKPdf	19 45 24.8	-10
MKAR				PKP	PKPdf	19 45 34.5	-0.7
MKAR				SKPbc		19 48 57.9	
MKAR				SKKPbc		19 57 50.1	
KBS	**Kingsbay**	**136.99**	**10**	*e*P	PKPdf	19 45 34.5	+0.1
KBS				*e*SS	SS	20 06 20.4	+2.3
KBS				AMS	AMS	20 37 55.8	
	comp=Z,558nm,17.4s						
CD2	**Chengdu**	**137.59**	**106**	PKP	PKPdf	19 45 33.0	-3.8
WMQ	**Urumqi**	**137.96**	**79**	*e*PKP	PKPdf	19 45 38.1	+1.0
WMQ				XPKP		19 46 15.5	
WMQ				PP	PP	19 48 30.6	+1.0
WMQ				SS	SS	20 06 29.6	-0.9
WMQ				PP	PP		
	comp=Z,1µm,8.0s						
WMQ				LR	LR		
	comp=N,890nm,23.0s						
WMQ				LR	LR		
	comp=E,900nm,23.0s						
WMQ				LR	LR		
	comp=Z,810nm,23.0s						
RES	**Resolute Bay**	**138.11**	**338**	PKHKP		19 45 29.7	
RES	**Resolute Bay**	**138.11**	**338**	*e*PKPpre		19 45 26.8	
RES				*e*PKPdf	PKPdf	19 45 37.1	+0.5
RES				*e*SKP		19 49 01.7	
ENH	**Enshi**	**140.10**	**112**	*e*PKPpre		19 45 31.5	
ENH				*e*PKPdf	PKPdf	19 45 42.1	+0.7
DLBC	**Dease Lake**	**140.48**	**306**	PKhKP		19 45 34.1	
	comp=Z,32nm,0.9s,baz=158,slow=3.3,SNR=16						
DLBC				SKPbc		19 49 08.3	
	comp=Z,18nm,0.6s,baz=112,slow=3.1,SNR=11						
DLBC	**Dease Lake**	**140.48**	**306**	*e*PKPpre		19 45 33.9	
LZH	**Lanzhou**	**141.56**	**101**	*e*PKP	PKPdf	19 45 40.5	-3.2
LZH				XPKP		19 46 17.3	
LZH				PP	PP	19 48 49.0	-2.2
LZH				SKKS		19 55 28.0	
LZH				SS	SS	20 07 08.5	-4.4
LZH				PP	PP		
	comp=Z,320nm,5.6s						
LZH				LR	LR		
	comp=N,1µm,20.0s						
LZH				LR	LR		
	comp=Z,2µm,21.0s						
LZH	**Lanzhou**	**141.56**	**101**	*e*PKIKP	PKPdf	19 45 40.5	-3.2
LZH						19 48 49.0	
LZH				MLR	MLR		
	comp=Z,2µm,21.0s						
LZH	**Lanzhou**	**141.56**	**101**	*e*PKP	PKPdf	19 45 40.5	-3.2
LZH				pPKP		19 46 04.5	
LZH				sPKP		19 46 17.3	
LZH				PP	PP	19 48 49.0	-2.2
LZH				PKS	PKS	19 49 13.0	-5.4
LZH				SKKS		19 55 28.0	
LZH				SS	SS	20 07 08.5	-4.4
LZH				LR	LR		
	comp=Z,2µm,21.0s						
GTA	**Gaotai**	**141.71**	**93**	*e*PKP	PKPdf	19 45 38.7	-5.1
GTA				SKS	SKS	19 52 39.2	-3.4
GTA				PP	PP		
	comp=Z,600nm,9.2s						
GTA				LR	LR		
	comp=N,400nm,27.5s						
GTA				LR	LR		
	comp=E,390nm,27.5s						
GTA				LR	LR		
	comp=Z,970nm,32.1s						
NVS	**Novosibirsk**	**142.17**	**62**	⇓*i*PKHKP		19 45 39.8	
NVS				*i*		19 48 51.0	
NVS				pmax	pmax		
	comp=Z,53nm,1.0s						
SIT	**Sitka**	**142.21**	**302**	PKIKP	PKPdf	19 45 41.5	-2.6
SIT	**Sitka**	**142.21**	**302**	*e*PKPpre		19 45 40.6	
ZAL	**Zalesovo**	**142.47**	**64**	PKhKP		19 45 39.3	
	comp=Z,8.0nm,0.5s,baz=230,slow=2.2,SNR=21						
XAN	**Xi'an**	**142.76**	**108**	PKP	PKPdf	19 45 41.9	-3.9
MIDW	**Midway**	**144.80**	**230**	*e*PKP	PKPdf	19 45 49.5	0.0
JOW	**Kunigami**	**145.66**	**139**	PKPbc	PKPbc	19 45 52.8	+0.9
	comp=Z,95nm,0.6s,baz=220,slow=6.1,SNR=28						
INK	**Inuvik**	**146.01**	**320**	PKP	PKPdf	19 45 49.0	-1.3
	comp=Z,227nm,0.6s,baz=92,slow=2.8,SNR=68						
INK				PKPbc	PKPbc	19 45 52.6	+1.1
	comp=Z,434nm,0.7s,baz=88,slow=2.9,SNR=142						
INK				SKPbc		19 49 20.2	
	comp=Z,60nm,1.0s,baz=115,slow=1.6,SNR=6.0						
INK	**Inuvik**	**146.01**	**320**	*e*PKPdf	PKPdf	19 45 49.8	-0.6
INK				*e*PKP	PKPdf	19 45 52.5	+2.1
NJ2	**Nanjing**	**146.20**	**122**	*e*PKP	PKPdf	19 45 53.9	+2.1
NJ2				PKP2	PKPab	19 45 59.4	+3.4
NJ2				APKP		19 46 18.6	
NJ2				XPKP		19 46 29.3	
NJ2				PP	PP	19 49 21.0	+1.8
NJ2				PKS	PKS	19 49 29.0	+2.8
NJ2				PP	PP		
	comp=Z,250nm,12.0s						
NJ2				LR	LR		
	comp=N,1µm,22.5s						
NJ2				LR	LR		
	comp=E,800nm,18.4s						
NJ2				LR	LR		
	comp=Z,960nm,18.8s						
SSE	**Sheshan**	**146.48**	**125**	PKP	PKPdf	19 45 54.5	+2.2
SSE				SS	SS	20 08 10.4	+1.3
SSE				LR	LR		
	comp=N,180nm,20.0s						
SSE				LR	LR		
	comp=E,370nm,20.0s						
SSE				LR	LR		
	comp=Z,540nm,20.0s						
DAWY	**Dawson**	**146.97**	**312**	*e*PKPbc	PKPbc	19 45 54.9	+1.1
BTO	**Baotou**	**148.18**	**101**	*e*PKP	PKPdf	19 45 54.5	-0.3
EYAK	**Cordova Ski Ar**	**148.60**	**304**	*e*PKPdf	PKPdf	19 45 54.1	-0.7
EYAK				*e*PKPbc	PKPdf	19 45 59.9	+5.1
TIA	**Tai'an**	**148.69**	**115**	⇓PKP	PKPdf	19 45 56.2	+0.5
DIV	**Divide**	**148.81**	**305**	*e*PKPdf	PKPdf	19 45 54.1	-1.0
DIV				*e*PKPbc	PKPdf	19 46 00.8	+5.7
HHC	**Hu-ho-hao-te**	**149.19**	**102**	*e*PKP	PKPdf	19 45 56.7	+0.3
HHC				PKP2	PKPab	19 46 07.1	-0.5
HHC				APKP		19 46 23.5	
HHC				XPKP		19 46 34.9	
HHC				PKS	PKS	19 49 30.9	+0.6
HHC				PP	PP	19 49 34.3	-1.5
HHC				SKS	SKS	19 52 51.8	-1.6
HHC				SKKS		19 56 11.1	
HHC				SS	SS	20 08 37.7	-1.3
HHC				PP	PP		
	comp=Z,380nm,8.8s						
HHC				LR	LR		
	comp=N,360nm,20.2s						
HHC				LR	LR		
	comp=E,660nm,23.5s						
HHC				LR	LR		
	comp=Z,530nm,34.5s						
THY	**Trims Highway**	**149.48**	**309**	*e*PKPbc	PKPdf	19 46 02.8	+6.7
MOY	**Mondy**	**149.79**	**77**	*e*PKHKP		19 45 58.0	
MOY				pmax	pmax		
	comp=Z,214nm,2.2s						
SML	**Sawmill**	**150.19**	**305**	*e*PKIKP	PKPdf	19 45 55.6	-1.7
SML				*e*		19 46 10.5	
SML	**Sawmill**	**150.19**	**305**	*e*PKPdf	PKPdf	19 45 55.5	-1.7
SML				*e*PKPbc	PKPdf	19 46 03.9	+6.6
SML				*e*PKPab	PKPab	19 46 10.5	-0.5
ILAR	**Eielson Array**	**150.29**	**311**	PKIKP	PKPdf	19 46 03.9	+6.5
ILAR				pmax	pmax		
	comp=Z,349nm,1.0s						
ILAR				pmax	pmax		
	comp=Z,176nm,0.9s						
ILAR	**Eielson Array**	**150.29**	**311**	PKP	PKPdf	19 45 56.2	-1.2
	comp=Z,18nm,1.0s,baz=324,slow=2.0,SNR=33						
ILAR				PKPbc	PKPdf	19 46 03.9	+6.5
	comp=Z,349nm,1.0s,baz=140,slow=2.5,SNR=276						
ILAR				pPKPbc		19 46 28.8	
	comp=Z,176nm,0.9s,baz=27,slow=1.1,SNR=5.4						
ZAK	**Zakamensk**	**150.40**	**80**	*e*PKIKP	PKPdf	19 45 58.1	+0.1
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,40nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,79nm,1.2s						
SLKM	**Skilak Lake**	**150.68**	**302**	*e*PKPbc	PKPdf	19 46 05.2	+7.1
SLKM				*e*PKPab	PKPab	19 46 12.8	-0.4
SONM	**Songino Array**	**150.74**	**87**	PKP	PKPdf	19 45 58.4	-0.1
	comp=Z,77nm,0.6s,baz=180,slow=2.5,SNR=34						
SONM				PKPbc	PKPdf	19 46 04.9	+6.3
	comp=Z,79nm,0.6s,baz=229,slow=3.0,SNR=208						
SONM				pPKPbc		19 46 29.7	
	comp=Z,82nm,1.0s,baz=243,slow=2.8,SNR=4.5						
FIB	**Fire Island**	**150.85**	**303**	*e*PKPbc	PKPdf	19 46 06.2	+7.9
FIB				*e*PKPab	PKPab	19 46 14.1	+0.3
KDAK	**Kodiak Island**	**150.94**	**296**	*e*PKPbc	PKPdf	19 46 05.4	+6.9
KDAK				*e*PKPab	PKPab	19 46 14.1	-0.2
MCK	**McKinley**	**150.94**	**309**	*e*PKIKP	PKPdf	19 45 56.3	-2.1
MCK				*e*		19 46 05.6	
ULN	**Ulaanbaatar**	**151.13**	**87**	*e*PKPdf	PKPdf	19 45 59.0	-0.1
ULN				*e*PKPbc	PKPdf	19 46 05.5	+6.3
TLY	**Talaya**	**151.24**	**78**	*i* PKIKP	PKPdf	19 46 02.8	+3.6
TLY				pmax	pmax		
	comp=Z,58nm,1.1s						
TLY				MLR	MLR		
	comp=Z,1µm,20.0s						
TLY	**Talaya**	**151.24**	**78**	*e*PKPbc	PKPdf	19 46 05.9	+6.7
SPU	**Mount Spurr**	**151.73**	**303**	*e*PKPdf	PKPdf	19 45 56.8	-2.8
SPU				*e*PKPbc	PKPdf	19 46 06.9	+7.3
IRK	**Irkutsk**	**151.85**	**78**	*e*PKIKP	PKPdf	19 46 05.4	+5.3
IRK				pmax	pmax		
	comp=Z,124nm,2.2s						
RSO	**Redoubt South**	**151.87**	**301**	*e*PKPdf	PKPdf	19 45 59.2	-0.7
RSO				*e*PKPbc	PKPdf	19 46 07.3	+7.5
DL2	**Dalian**	**153.04**	**117**	PKP	PKPdf	19 46 02.2	0.0
DL2				PKP2	PKPab	19 46 22.3	-1.5
DL2				XPKP		19 46 35.1	
DL2				PP	PP	19 49 54.8	-3.2
DL2				SS	SS	20 09 23.4	+2.2
DL2				PP	PP		
	comp=Z,280nm,6.3s						
DL2				LR	LR		
	comp=N,220nm,22.6s						
DL2				LR	LR		
	comp=E,170nm,18.0s						
DL2				LR	LR		
	comp=Z,430nm,19.6s						
IMA	**Indian Mountai**	**153.30**	**313**	*e*PKIKP	PKPdf	19 45 59.6	-2.1
IMA				*e*		19 46 11.0	
KS15	**Wonju Array Si**	**154.80**	**128**	*e*PKPdf	PKPdf	19 46 04.6	0.0
KS15				*e*PKPbc	PKPdf	19 46 14.5	+10
SNY	**Shenyang**	**156.22**	**115**	⇑PKP	PKPdf	19 46 01.9	-4.4
SNY				SS	SS	20 09 51.1	-4.5
SNY				LR	LR		
	comp=E,390nm,27.0s						
SNY				LR	LR		
	comp=Z,460nm,24.0s						
UNV	**Unalaska Valle**	**156.82**	**281**	*e*PKPdf	PKPdf	19 46 06.2	-0.5
UNV				*e*PKPab	PKPab	19 46 37.7	-1.7
CIT	**Chita**	**156.85**	**84**	*e*PKIKP	PKPdf	19 46 06.9	+0.1
CIT				*e*		19 46 32.7	
MAJO	**Matsushiro**	**157.89**	**147**	PKIKP	PKPdf	19 46 08.7	0.0
MAJO	**Matsushiro**	**157.89**	**147**	*e*PKPdf	PKPdf	19 46 08.5	-0.2
MAT	**Matsushiro**	**157.89**	**147**	*e*PKP	PKPdf	19 46 09.0	+0.3
MAT				LR	LR		
	comp=Z,710nm,20.0s						
MAT	**Matsushiro**	**157.89**	**147**	PKP	PKPdf	19 46 08.7	0.0
MJAR	**Matsushiro Arr**	**157.89**	**147**	PKP	PKPdf	19 46 08.7	0.0
	comp=Z,5.1nm,1.0s,baz=162,slow=1.8,SNR=15						
MJAR				PKPab	PKPab	19 46 43.2	-1.4
	comp=Z,5.8nm,0.7s,baz=185,slow=3.6,SNR=9.1						
MJAR				pPKPab		19 47 07.6	
	comp=Z,20nm,1.0s,baz=193,slow=4.9,SNR=8.2						
MJAR	**Matsushiro Arr**	**157.89**	**147**	PKP	PKPdf	19 46 08.7	0.0
MJAR				PKPab	PKPab	19 46 43.2	-1.4
MJAR				pPKPab		19 47 07.6	
CN2	**Changchun**	**158.60**	**114**	PKP	PKPdf	19 46 09.6	+0.3
CN2				*e*XPKP		19 46 47.0	
CN2				PP	PP	19 50 28.9	+0.3
CN2				*e*SS	SS	20 10 20.6	-0.1
CN2				PP	PP		
	comp=Z,300nm,7.0s						
CN2				LR	LR		
	comp=N,500nm,25.0s						
CN2				LR	LR		
	comp=E,700nm,25.0s						
CN2				LR	LR		
	comp=Z,600nm,25.0s						
HIA	**Hailar**	**158.95**	**96**	*e*PKIKP	PKPdf	19 46 09.3	-0.2
BOD	**Bodaibo**	**159.04**	**70**	*e*PKIKP	PKPdf	19 46 08.4	-1.0
BOD				pmax	pmax		
	comp=Z,20nm,1.3s						
BOD				pmax	pmax		
	comp=Z,44nm,1.2s						
MDJ	**Mudanjiang**	**161.25**	**119**	PKP	PKPdf	19 46 14.0	+1.9
MDJ				APKP		19 46 37.8	
MDJ				XPKP		19 46 49.1	
MDJ				PKS	PKS	19 49 47.6	+3.0
MDJ				PP	PP	19 50 41.0	-1.8
MDJ				SKS	SKS	19 53 10.2	+3.9
MDJ				SS	SS	20 10 49.2	+1.5
MDJ				LR	LR		
	comp=N,630nm,26.3s						
MDJ				LR	LR		
	comp=E,420nm,39.5s						
MDJ				LR	LR		
	comp=Z,950nm,33.6s						
MDJ	**Mudanjiang**	**161.25**	**119**	*e*PKPdf	PKPdf	19 46 11.7	-0.5
MDJ				*e*pPKPdf		19 46 38.2	
KLR	**Kul'dur**	**165.45**	**110**	*e*PKIKP	PKPdf	19 46 13.2	-2.9
KLR				*e*		19 55 03.5	
KLR				MLR	MLR		
	comp=Z,600nm,13.0s						
BILL	**Bilibino**	**166.72**	**338**	PKIKP	PKPdf	19 46 12.6	-4.0
BILL				*e*		19 47 21.8	
BILL	**Bilibino**	**166.72**	**338**	PKPdf	PKPdf	19 46 12.6	-4.0
BILL				*e*PKPab	PKPab	19 47 21.8	0.0
YAK	**Yakutsk**	**166.88**	**55***c*	*i*PKIKP	PKPdf	19 46 15.2	-1.6
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK	**Yakutsk**	**166.88**	**55**	*e*PKPdf	PKPdf	19 46 15.1	-1.8
FX1	**Attu Island--F**	**167.72**	**262**	PKP2	PKPab	19 47 25.7	-0.9
FX1				pmax	pmax		
	comp=Z,66nm,0.5s						
FX1	**Attu Island--F**	**167.72**	**262**	PKPab	PKPab	19 47 25.7	-0.8
	comp=Z,66nm,0.5s,baz=275,slow=8.1,SNR=16						
YSS	**Yuzh-Sakhalins**	**168.74**	**142**	*e*PKIKP	PKPdf	19 46 19.0	+0.6
SEY	**Seymchan**	**173.37**	**2**	*e*PKIKP	PKPdf	19 46 18.3	-2.2
SEY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SEY				pmax	pmax		
	comp=E,3.0nm,0.8s						
SKR	**Severo-Kuril's**	**174.01**	**201**	*e*PKIKP	PKPdf	19 46 18.0	-3.1
PET	**Petropavlovsk**	**175.26**	**228**	*e*PKIKP	PKPdf	19 46 22.3	+0.9
PET				*e*		19 47 57.4	

MAN 12 19:57:10.1, 13.48N×121.31E, h7^{km}, mb4.0, ML2.7, MS2.4, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.34**	**274**	⇑*e*P	Pg	19 57 17.8	+0.8
PGP				*e*S	Sg	19 57 26.0	+4.3
BOAC	**Boac**	**0.52**	**92**	*e*P	Pg	19 57 20.6	-0.1
BOAC				*e*S	Sg	19 57 30.1	+2.4
LBPH	**Los Banos**	**0.68**	**350**	*e*P	Pg	19 57 23.1	-0.6
SJMP	**San Jose**	**1.03**	**190**	*e*P	Pb	19 57 31.5	+1.7
SJMP				*e*S	Sb	19 57 47.5	+4.1
ARP	**Angono**	**1.06**	**352**	*e*P	Pb	19 57 29.8	-0.6
LUBP	**Lubang**	**1.06**	**284**	*e*P	Pb	19 57 30.3	0.0
LUBP				*e*S	Sb	19 57 45.5	+1.2
OTRP	**Odiongan**	**1.31**	**148**	*e*P	Pb	19 57 31.9	-2.8
OTRP				*e*S	Sb	19 57 47.1	-4.4
POLP	**Polilio Island**	**1.38**	**26**	*e*P	Pb	19 57 34.5	-1.3
POLP				*e*S	Sb	19 57 51.7	-1.9
NZB	**Bigte**	**1.39**	**352**	*e*P	Pn	19 57 35.2	-0.7
NBP	**Mount Natib**	**1.52**	**326**	*e*P	Pn	19 57 37.5	-0.3
BUSP	**Coron**	**1.82**	**216**	*e*P	Pn	19 57 42.1	-0.1
BUSP				*e*S	Sn	19 58 07.3	+1.5
BALP	**Baler**	**2.26**	**7**	*e*P	Pn	19 57 49.4	+0.9
BALP				*e*S	Sn	19 58 19.9	+3.0
CUYO	**Cuyo Island**	**2.63**	**186**	*e*P	Pn	19 57 52.9	-0.9
CUYO				*e*S	Sn	19 58 26.7	+0.5
PVCP	**Virac**	**2.77**	**87**	*e*P	Pn	19 57 57.8	+2.0
ENPP	**El Nido**	**2.91**	**219**	*e*P	Pn	19 57 58.1	+0.4
ENPP				*e*S	Sn	19 58 26.7	-6.7

IDC 12 20:19:45.5±3.9**, 10.30N×91.49E, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/19**, mbtmp3.7**/3**, Error ellipse: s-maj=143.5km s-min=28.1km az=64.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.20**	**350**	P	P	20 26 58.6	-1.7
	0.7nm,0.5s,baz=169,slow=8.4,SNR=8.6						
MKAR				pP	pP	20 27 05.1	+4.9
	0.7nm,0.6s,baz=172,slow=8.6,SNR=6.2						
SONM	**Songino Array**	**39.46**	**16**	P	P	20 27 17.3	-1.9
	0.4nm,0.4s,baz=211,slow=7.2,SNR=4.0						
WRA	**Warramunga Arr**	**51.79**	**125**	P	P	20 28 55.5	-2.1
	0.5nm,0.3s,baz=300,slow=10.0,SNR=29						

*NEIC **12** 20:22:59.8±0.9, 10.43N×91.70E, mb4.0/2, Error ellipse: s-maj=25.9km s-min=12.2km az=69.0*

*IDC **12** 20:22:59.5±1.6, 10.43N×91.69E, h24^{km}±5^{km}, mb3.7/7, mb1 3.8/8, mb1mx3.5/21, mbtmp3.8/8, ML3.5/1, Error ellipse: s-maj=59.5km s-min=16.5km az=63.0*

ISC 12 20:22:58.6±0.8**, 10.5N**±0.1×**91.92E**±0.08**, h25^{km}, h25^{km}**±2.5^{km}**:pP-P, n13, σ0^{s}72**/14**, mb3.9**/8**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.44**	**40**	Pn	**P**	**20 25 30.1**	**+0.2**
	0.1nm,0.3s,baz=238,slow=14,SNR=4.6						
HYB	**Hyderabad**	**14.68**	**299**	*i* P	**P**	**20 26 27.5**	**+0.7**
HYB				*e*S	**S**	**20 29 09.5**	**0.0**
LSA	**Lhasa**	**19.13**	**358**	*e*P	**P**	**20 27 23.9**	**+1.3**
	3.0nm,0.6s						
MKAR	**Makanchi Array**	**37.09**	**349**	P	**P**	**20 30 08.3**	**-0.5**
	1.1nm,0.5s,mb3.9,baz=154,slow=8.2,SNR=10						
MKAR				pP	pP	20 30 14.9	-1.3
	0.9nm,0.6s,baz=171,slow=8.7,SNR=6.0						
SONM	**Songino Array**	**39.17**	**15**	P	**P**	**20 30 26.7**	**+0.5**
	1.2nm,0.7s,mb3.7,baz=162,slow=3.9,SNR=6.1						
ZAL	**Zalesovo**	**43.70**	**354**	P	**P**	**20 31 02.2**	**-1.1**
	0.7nm,0.4s,mb3.7,baz=297,slow=4.5,SNR=2.6						
ZAL				pP	pP	20 31 11.0	+0.2
	0.6nm,0.5s,baz=206,slow=4.5,SNR=1.8						
ZAL	**Zalesovo**	**43.70**	**354**	P	**P**	**20 31 02.2**	**-1.1**
ZAL				pP	pP	20 31 11.0	+0.2
BVAR	**Borovoye Array**	**45.83**	**342**	P	**P**	**20 31 18.8**	**-1.5**
	0.2nm,0.5s,mb3.3,baz=180,slow=4.4,SNR=3.6						
WRA	**Warramunga Arr**	**51.56**	**126**	P	**P**	**20 32 05.0**	**-0.1**
	0.9nm,0.4s,mb4.0,baz=307,slow=8.1,SNR=18						
WRA				pP	pP	20 32 12.1	-0.6
	1.0nm,0.5s,baz=305,slow=8.5,SNR=6.8						
WRAB	**Tennant Creek**	**51.56**	**126**	*e*P	**P**	**20 32 05.6**	**+0.4**
	2.1nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**63.49**	**134**	P	**P**	**20 33 29.3**	**+0.1**
	2.3nm,0.8s,mb4.4,baz=321,slow=6.5,SNR=4.2						
STKA	**Stephens Creek**	**63.49**	**134**	P	**P**	**20 33 29.3**	**+0.1**
ILAR	**Eielson Array**	**93.15**	**22**	P	**P**	**20 36 11.3**	**-0.1**
	0.2nm,0.6s,mb3.8,baz=301,slow=3.2,SNR=4.3						

JSN 12 20:26:38.4±0.7**, 19.71N×74.49W, MD4.2, 1C-2D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YHJ	**Yallahs**	**2.62**	**227**	*e*P	Pn	20 27 24.4	+1.7
GWJ	**Greenwich**	**2.67**	**233**	*e*P	Pn	20 27 21.5	-1.9
HOJ	**Hope**	**2.73**	**232**	*e*S	Sn	20 27 55.5	-2.9
STH	**Stony Hill**	**2.73**	**234**	⇑*e*P	Pn	20 27 22.0	-2.2
STH				*e*S	Sn	20 27 54.9	-3.6
BBJ	**Bamboo Saint A**	**2.94**	**244**	⇓*e*P	Pn	20 27 25.3	-1.9
PCJ	**Portland Cotta**	**3.19**	**233**	⇓*e*P	Pn	20 27 29.2	-1.6
PCJ				*e*S	Sn	20 28 07.4	-2.8
MCJ	**Malvern**	**3.51**	**240**	*e*P	Pn	20 27 33.5	-1.8
MCJ				*e*S	Sn	20 28 14.5	-3.7

*NEIC **12** 20:36:44.0, 30.56S×117.03E, h8^{km}, ML4.5(AUST), After AUST.*

AUST 12 20:36:44.6, 30.56S×117.03E, h8^{km}, ML4.5, 1D, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLDU	**Ballidu**	**0.28**	**259**	⇓*i*P	Pg	20 36 49.6	-0.8
BLDU				*e*S	Sg	20 36 53.2	-1.0
	5µm,0.8s						
KLBR	**Kellerberrin**	**1.20**	**149**	*e*P	Pb	20 37 06.5	-0.7
KLBR				*e*S	Sb	20 37 21.7	-1.1
	3µm,0.2s						
MORW	**Morawa**	**1.72**	**330**	*e*P	Pn	20 37 13.9	-1.2
MORW				*e*S	Sn	20 37 35.2	-2.2
	8µm,0.3s						
NWAO	**Narrogin (SRO)**	**2.37**	**176**	*e*P	Pn	20 37 22.7	-1.7
NWAO				*e*S	Sn	20 37 49.9	-4.1
	2µm,0.2s						
RKGY	**Rocky Gully**	**4.04**	**181**	*e*P	Pn	20 37 46.4	-1.8
RKGY				*e*S	Sn	20 38 32.7	-3.6
	120nm,0.2s						
MEEK	**Meekatharra**	**4.15**	**20**	*e*P	Pn	20 37 46.0	-3.7
MEEK				*e*S	Sn	20 38 31.9	-7.1
KMBL	**Kambalda**	**4.25**	**102**	*e*P	Pn	20 37 47.4	-3.7
KMBL				*e*S	Sn	20 38 33.8	-7.7
	810nm,0.6s						
GIRL	**Giralia**	**8.07**	**350**	*e*P	P	20 38 43.2	-1.8
FITZ	**Fitzroy Crossi**	**14.66**	**34**	*e*P	P	20 40 06.8	-7.6
WB2	**Warramunga Arr**	**18.87**	**60**	*e*P	P	20 40 58.2	-10
STKA	**Stephens Creek**	**21.04**	**100**	*e*P	P	20 41 29.4	-2.0
STKA				*e*S	S	20 45 05.6	-15

BJI 12 20:46:32.3, 37.08N×103.90E, h11^{km}, ML3.5, 1D, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**0.99**	**183**	⇓PG	Pg	20 46 48.7	-3.5
LZH				SG	Sg	20 47 01.9	-3.6
LZH				Smax			
	comp=N,930nm,0.6s						
LZH				Smax			
	comp=E,1µm,0.5s						
GTA	**Gaotai**	**3.97**	**307**	P	Pn	20 47 30.8	-3.7
GTA				PG	Pg	20 47 40.2	-11
GTA				S	Sn	20 48 17.8	-3.8
GTA				SG	Sg	20 48 29.2	-15
GTA				Smax			
	comp=N,120nm,0.6s						
GTA				Smax			
	comp=E,80nm,0.7s						

CASC 12 20:49:45.1±3.2**, 15.04N×89.48W, MD3.7, 3C-2D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.21**	**277**	⇑*e*P	Pg	20 49 48.9	-0.3
MRL				*e*S	Sg	20 49 53.6	+1.7
RBDL	**Robledal**	**0.94**	**192**	*e*P	Pg	20 50 24.2	+20
RBDL				*e*S	Sg	20 50 38.4	+22

RTR	**El Retiro**	1.15	188	*e*P	Pb	20 50 28.2	+21
RTR				*e*S	Sb	20 50 44.7	+22
SNJE	**San Jose**	1.17	186	*e*P	Pb	20 50 28.5	+21
SBLS	**San Blas**	1.20	187	⇑*e*P	Pb	20 50 29.1	+21
SBLS				*e*S	Sb	20 50 45.9	+21
IXG	**Ixpaco**	1.28	228	⇑*e*P	Pb	20 50 08.8	-0.9
IXG				*e*S	Sb	20 50 29.5	+2.9
BOQS	**Boqueron**	1.31	171	*e*P	Pb	20 50 30.5	+20
BOQS				*e*S	Sb	20 50 50.4	+23
LBRS	**Las Brisas**	1.36	162	*e*P	Pb	20 50 31.1	+20
LBRS				*e*S	Sb	20 50 50.8	+22
LCBS	**La Ceiba**	1.46	160	⇓*e*P	Pn	20 50 32.6	+20
LCBS				*e*S	Sb	20 50 53.3	+21
LFRS	**El Faro**	1.47	164	*e*P	Pn	20 50 32.8	+20
LFRS				*e*S	Sb	20 50 54.0	+22
TP2	**Tecpan 2**	1.51	260	⇓*e*P	Pn	20 50 13.4	-0.1
TP2				*e*S	Sb	20 50 36.9	+3.5
CAHU	**Cacacuatique**	1.76	136	*e*P	Pn	20 50 36.0	+19
CAHU				*e*S	Sn	20 51 01.5	+21
BLLM	**Bellamira**	1.99	143	*e*P	Pn	20 51 08.3	+48

JMA ***12*** *20:57:05.3±0.3, 24.21N×122.06E, h61^{km}, M2.3*

TAP 12 20:57:05.3, 24.04N×122.18E, h26^{km}, ML3.1, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	0.87	61	P	Pb	20 57 22.2	+0.6
YOJ				*e*S	Sb	20 57 35.0	+2.2
IRIF	**Iriomote-Funau**	1.45	78	P	Pn	20 57 31.2	+1.1
IRIF				*e*S	Sn	20 57 49.5	+1.2
HATJ	**Hateruma jima**	1.49	89	*e*S	Sn	20 57 51.0	+1.7
JKRS	**Kuro-shima**	1.68	83	*e*S	Sn	20 57 55.8	+1.5
JIJ	**Ishigaki jima**	1.82	79	P	Pn	20 57 36.1	+0.7
JIJ				*e*S	Sn	20 57 57.6	-0.3
JTJ	**Tarama**	2.38	75	*e*S	Sn	20 58 12.2	+0.2

IDC 12 20:58:34.0±11.0**, 5.44N×125.71E, h517^{km}**±147^{km}**, mb3.2**/6**, mb1 3.3**/6**, mb1mx2.9**/20**, mbtmp4.1**/6**, Error ellipse: s-maj=123.2km s-min=33.1km az=61.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	23.39	180	P	P	21 03 02.4	-1.4
	6.0nm,1.0s,baz=360,slow=6.1,SNR=5.3						
WRA	**Warramunga Arr**	26.61	162	P	P	21 03 30.8	-1.6
	0.5nm,1.0s,baz=340,slow=11,SNR=5.9						
MKAR	**Makanchi Array**	55.58	325	P	P	21 07 19.9	-2.2
	1.5nm,0.4s,baz=116,slow=6.7,SNR=6.6						
BVAR	**Borovoye Array**	65.34	327	P	P	21 08 25.3	-1.1
	1.0nm,0.5s,baz=135,slow=8.4,SNR=5.7						
ARCES	**ARCESS Array B**	88.50	340	P	P	21 10 30.3	-1.2
	0.8nm,0.6s,baz=80,slow=5.5,SNR=4.2						
FINES	**FINESS Array B**	89.86	332	P	P	21 10 37.4	-0.6
	1.3nm,0.9s,baz=68,slow=7.5,SNR=4.4						

IDC 12 21:13:02.5±6.5**, 14.21S×174.32W, mb3.4**/2**, mb1 3.8**/2**, mb1mx3.6**/15**, mbtmp3.4**/2**, Error ellipse: s-maj=307.7km s-min=44.1km az=141.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	49.26	256	P	P	21 21 53.3	-2.0
	0.1nm,0.4s,baz=92,slow=7.0,SNR=4.7						
ILAR	**Eielson Array**	81.46	12	P	P	21 25 21.1	-1.5
	0.3nm,0.7s,baz=227,slow=6.3,SNR=6.2						
BRTR	**Keskin Array B**	144.67	321	PKP	PKPdf	21 32 41.4	-2.0
	1.3nm,1.1s,baz=77,slow=3.0,SNR=3.9						

ROM ***12*** *21:16:14.2±0.2, 45.13N×7.28E, h30^{km}±3^{km}, Md3.0/9, Ml3.0/5, Error ellipse: s-maj=4.8km s-min=3.4km az=69.0*
CSEM ***12*** *21:16:14.8±0.1, 45.10N×7.44E, ML3.5/16, Error ellipse: s-maj=2.1km s-min=1.4km az=114.0*
GEN ***12*** *21:16:14.7, 45.11N×7.33E, h12^{km}*
ZUR ***12*** *21:16:15.1, 45.12N×7.31E, h1^{km}, ML2.9/11*
LDG ***12*** *21:16:16.2±0.1, 45.10N×7.41E, h2^{km}, Md3.4/5, Ml3.3/28, Error ellipse: s-maj=2.2km s-min=1.8km az=112.0*
STR ***12*** *21:16:16.4±0.2, 45.08N×7.34E, h5^{km}±1^{km}, Ml3.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
NEIC ***12*** *21:16:16.4, 45.08N×7.34E, h5^{km}, ML3.3(LDG), ML3.1(STR), ML3.0(SZGRF), After STR.*

ISC 12 21:16:14.9±0.2**, 45.109N**±0.010×**7.34E**±0.02**, h12^{km}**±1^{km}**, n156, σ1§18**/247**, 18C-8D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSP	**Reno Superiore**	0.07	305	P	**Pg**	**21 16 18.0**	**+0.6**
FENE	**Fenestrelle**	0.21	248	P	**Pg**	**21 16 20.2**	**+0.6**
FENE				S	**Sg**	**21 16 23.2**	**+0.5**
FENE	**Fenestrelle**	0.21	248	P	**Pg**	**21 16 20.2**	**+0.6**
BHB	**Bricherasio**	0.27	192	P	**Pg**	**21 16 21.5**	**+0.7**
BHB				S	**Sg**	**21 16 24.8**	**+0.1**
BHB	**Bricherasio**	0.27	192	P	**Pg**	**21 16 21.5**	**+0.8**
LSD	**Ceresole Reale**	0.37	339	P	**Pg**	**21 16 23.3**	**+0.7**
LSD				S	**Sg**	**21 16 28.6**	**+0.9**
OG22	**Abries**	0.40	225	Pg	**Pg**	**21 16 23.8**	**+0.6**
OG22				Sg	**Sg**	**21 16 29.9**	**+1.2**
MONC	**Moncucco Torin**	0.42	95	⇑*e*Pg	**Pg**	**21 16 25.2**	**+1.7**
MONC				Sg	**Sg**	**21 16 33.4**	**+4.2**
	4μm,0.8s						
RRL	**Cesana Torines**	0.44	245	P	**Pg**	**21 16 24.2**	**+0.4**
RRL				S	**Sg**	**21 16 30.2**	**+0.3**
RRL	**Cesana Torines**	0.44	245	P	**Pg**	**21 16 24.2**	**+0.3**
BNI	**Bardonecchia**	0.47	263	⇓*e*Pg	**Pg**	**21 16 25.1**	**+0.5**
BNI				Sg	**Sg**	**21 16 31.2**	**+0.2**
	681nm,0.2s						
TRAV		0.49	35	P	**Pg**	**21 16 25.0**	**0.0**
TRAV				S	**Sg**	**21 16 31.3**	**-0.4**
TRAV		0.49	35	P	**Pg**	**21 16 25.0**	**0.0**
MBDF	**Montbardon**	0.56	227	*e*Pg	**Pg**	**21 16 26.7**	**+0.5**
MBDF				*e*Sg	**Sg**	**21 16 34.5**	**+0.7**
	600nm,0.2s						
LPG	**La Plagne**	0.57	313	*e*Pg	**Pg**	**21 16 26.7**	**+0.2**
LPG				*e*Sg	**Sg**	**21 16 34.6**	**+0.4**
	604nm,0.2s						
LPL	**La Plagne**	0.59	314	*e*Pg	**Pg**	**21 16 27.2**	**+0.3**
LPL				*e*Sg	**Sg**	**21 16 35.6**	**+0.7**
	727nm,0.3s						
DOI	**San Damiano**	0.61	186	⇑*e*Pg	**Pg**	**21 16 26.5**	**-0.7**
	861nm,0.2s						
PZZ	**Prazzo**	0.63	196	P	**Pb**	**21 16 27.0**	**-0.3**
PZZ				S	**Sb**	**21 16 35.4**	**-0.4**
PZZ	**Prazzo**	0.63	196	P	**Pb**	**21 16 27.0**	**-0.3**
ORO	**Oropa**	0.69	41	⇓*e*Pg	**Pg**	**21 16 27.9**	**-0.9**
	473nm,0.2s						
ORX	**Oropa**	0.69	41	P	**Pb**	**21 16 28.4**	**0.0**
ORX				S	**Sb**	**21 16 37.4**	**-0.2**
ORX	**Oropa**	0.69	41	P	**Pb**	**21 16 28.4**	**0.0**
SURF	**Saint Ours**	0.73	211	Pg	**Pg**	**21 16 29.8**	**+0.1**
SURF				Sg	**Sg**	**21 16 39.8**	**+0.3**
RSL	**Roselend**	0.77	319	Pg	**Pg**	**21 16 30.4**	**0.0**
STV2	**Anna di Valdie**	0.86	181	P	**Pb**	**21 16 30.5**	**-0.9**
STV2				S	**Sb**	**21 16 42.5**	**-0.1**
STV2	**Anna di Valdie**	0.86	181	P	**Pb**	**21 16 30.5**	**-0.9**
STV	**Sta Anna Valdi**	0.86	181	P	**Pb**	**21 16 30.6**	**-0.8**
STV				S	**Sb**	**21 16 42.6**	**-0.1**
STV	**Sta Anna Valdi**	0.86	181	P	**Pb**	**21 16 30.6**	**-0.8**
GDM	**Grand'Maison**	0.87	277	Pg	**Pg**	**21 16 33.0**	**+0.6**
GDM				Sg	**Sg**	**21 16 44.7**	**+0.6**
ENR	**Entracque**	0.88	176	P	**Pb**	**21 16 31.0**	**-0.8**
ENR				S	**Sb**	**21 16 42.4**	**-0.9**
ENR	**Entracque**	0.88	176	P	**Pb**	**21 16 31.0**	**-0.7**
ROB	**Roburent**	0.90	155	P	**Pb**	**21 16 32.3**	**+0.4**
ROB				S	**Sb**	**21 16 43.2**	**-0.4**
ROB	**Roburent**	0.90	155	P	**Pb**	**21 16 32.3**	**+0.4**
MCGN	**Macugnaga**	0.96	28	Pg	**Pg**	**21 16 32.6**	**-1.6**
DIX	**Grande Dixence**	0.97	3	Pg	**Pg**	**21 16 33.7**	**-0.7**
DIX	**Grande Dixence**	0.97	3	*i* P*P	**Pg**	**21 16 33.6**	**-0.8**
EMV	**Vieux Emosson**	1.00	342	⇑*e*Pg	**Pg**	**21 16 34.9**	**-0.1**
EMV				Sg	**Sg**	**21 16 47.8**	**-0.7**
EMV	**Vieux Emosson**	1.00	342	*e*S*S	**Sg**	**21 16 47.7**	**-0.8**
EMV	**Vieux Emosson**	1.00	342	⇑*i*P*P	**Pg**	**21 16 34.9**	**-0.1**
PCP	**Pian Castagno**	1.03	123	P	**Pb**	**21 16 34.9**	**+0.8**
PCP				S	**Sb**	**21 16 46.9**	**-0.5**
PCP	**Pian Castagno**	1.03	123	P	**Pb**	**21 16 34.9**	**+0.7**
MMK	**Mattmark**	1.04	25	Pg	**Pg**	**21 16 34.1**	**-1.6**
MMK	**Mattmark**	1.04	25	*e*S*S	**Sg**	**21 16 47.8**	**-1.9**
MMK	**Mattmark**	1.04	25	⇑*i*P*P	**Pg**	**21 16 34.1**	**-1.6**
ORIF	**Oris-en-Rattie**	1.05	260	*e*Pg	**Pg**	**21 16 35.9**	**-0.1**
ORIF				*e*Sg	**Sg**	**21 16 49.9**	**-0.3**
	292nm,0.3s						
SALAN	**Lac Salanfe**	1.07	346	⇑*i*P*P	**Pg**	**21 16 36.1**	**-0.2**
SALAN	**Lac Salanfe**	1.07	346	⇑*i*P	**Pg**	**21 16 36.1**	**-0.2**
MONE	**Monesi**	1.07	164	P	**Pb**	**21 16 34.8**	**-0.1**
MONE	**Monesi**	1.07	164	P	**Pb**	**21 16 34.8**	**-0.1**
FIN	**Finale Ligure**	1.09	145	⇑*e*Pg	**Pg**	**21 16 35.9**	**-0.9**
	182nm,0.2s						
GRN	**Grenoble**	1.14	277	Pg	**Pg**	**21 16 38.7**	**+1.0**
GRYON	**Gryon**	1.15	352	⇓*i*P*P	**Pg**	**21 16 37.6**	**-0.4**
GRYON	**Gryon**	1.15	352	⇓*i*P	**Pg**	**21 16 37.6**	**-0.4**
OG25	**Le Caire**	1.17	231	Pg	**Pg**	**21 16 38.5**	**+0.2**
SBF	**Sospel**	1.25	177	*e*Pn	**Pn**	**21 16 37.0**	**-1.2**
SBF				*e*Pg	**Pg**	**21 16 37.9**	**-2.0**
SBF				*e*Sg	**Sg**	**21 16 55.8**	**-0.8**
	234nm,0.4s						
SBF	**Sospel**	1.25	177	*e*Pg	**Pg**	**21 16 37.9**	**-2.0**
SBF				*e*Sg	**Sg**	**21 16 55.8**	**-0.8**
	117nm,0.4s						
SENIN	**Lac Senin**	1.25	359	*e*Pn	**Pn**	**21 16 39.0**	**+0.7**
SENIN	**Lac Senin**	1.25	359	*e*Pn	**Pn**	**21 16 39.0**	**+0.7**
IMI	**Imperia**	1.26	162	Pg	**Pg**	**21 16 38.1**	**-2.1**
	41nm,0.2s						
IMI	**Imperia**	1.26	162	P	**Pb**	**21 16 38.0**	**-0.2**
AIGLE	**Aigle**	1.26	348	*e*Pn	**Pn**	**21 16 39.7**	**+1.3**
AIGLE	**Aigle**	1.26	348	*e*Pn	**Pn**	**21 16 39.7**	**+1.3**
NEGI	**Negi**	1.29	168	P	**Pb**	**21 16 38.0**	**-0.6**
NEGI	**Negi**	1.29	168	P	**Pb**	**21 16 38.0**	**-0.6**
LKBD	**Leukerbad**	1.29	9	*e*Pn	**Pn**	**21 16 39.5**	**+0.6**
LKBD	**Leukerbad**	1.29	9	*e*Pn	**Pn**	**21 16 39.5**	**+0.6**
OG01	**Vacheresse**	1.30	340	Pn	**Pn**	**21 16 40.5**	**+1.5**
GENL	**Genova Univers**	1.36	121	P	**Pn**	**21 16 37.8**	**-2.0**
GENL	**Genova Univers**	1.36	121	P	**Pn**	**21 16 37.8**	**-2.0**
REVF	**Revere**	1.37	179	Pn	**Pn**	**21 16 39.7**	**-0.3**
CALN	**Calern**	1.40	194	Pn	**Pn**	**21 16 40.4**	**+0.1**
MUGIO	**Muggio**	1.45	55	Pg	**Pg**	**21 16 40.5**	**-3.3**
MUGIO	**Muggio**	1.45	55	⇑*i*Pn	**Pn**	**21 16 40.4**	**-0.6**
MUGIO	**Muggio**	1.45	55	⇑*i*Pn	**Pn**	**21 16 40.4**	**-0.6**
WIMIS	**Wimmis**	1.57	7	⇓*i*Pn	**Pn**	**21 16 44.8**	**+2.0**
WIMIS	**Wimmis**	1.57	7	⇓*i*Pn	**Pn**	**21 16 44.8**	**+2.0**
GIMEL	**Gimel**	1.61	333	*e*Pn	**Pn**	**21 16 46.2**	**+2.8**
GIMEL	**Gimel**	1.61	333	*e*Pn	**Pn**	**21 16 46.2**	**+2.8**
FRF	**La Foret Royal**	1.63	198	*e*Pn	**Pn**	**21 16 44.5**	**+0.9**
FRF				*e*P		21 16 46.6	
FRF				*e*Pg	**Pg**	**21 16 47.4**	**0.0**
FRF				*e*Sn	**Sn**	**21 17 05.3**	**+0.7**
FRF				*e*Sg	**Sg**	**21 17 09.0**	**-0.2**
	117nm,0.2s						
TORNY	**Torny**	1.69	351	*e*Pn	**Pn**	**21 16 47.8**	**+3.3**
TORNY	**Torny**	1.69	351	*e*Pn	**Pn**	**21 16 47.8**	**+3.3**
SMRF	**Simiane la Rot**	1.70	229	*e*Pn	**Pn**	**21 16 46.6**	**+2.0**
SMRF				*e*P		21 16 48.1	
SMRF				*e*Pg	**Pg**	**21 16 49.0**	**+0.2**
SMRF				*e*Sn	**Sn**	**21 17 07.4**	**+1.0**
SMRF				*e*Sg	**Sg**	**21 17 11.7**	**+0.2**
	64nm,0.3s						
CABF	**La Chapelle**	1.74	330	*e*Pn	**Pn**	**21 16 45.8**	**+0.6**
CABF				*e*P		21 16 47.9	
CABF				*e*Pg	**Pg**	**21 16 48.8**	**-0.9**
CABF				*e*Sn	**Sn**	**21 17 07.1**	**-0.4**
CABF				*e*Sg	**Sg**	**21 17 11.9**	**-1.0**
	113nm,0.5s						
HASLI	**Hasliberg**	1.74	19	*e*Pn	**Pn**	**21 16 47.5**	**+2.2**
HASLI	**Hasliberg**	1.74	19	*e*Pn	**Pn**	**21 16 47.5**	**+2.2**
MDI	**Monti di Nese**	1.80	67	Pg	**Pg**	**21 16 45.6**	**-5.2**
	110nm,0.3s						
LMR	**La Mourre**	1.87	199	*e*Pn	**Pn**	**21 16 47.8**	**+0.6**
LMR				*e*P		21 16 50.0	
LMR				*e*Pg	**Pg**	**21 16 51.5**	**-0.8**
LMR				*e*Sn	**Sn**	**21 17 11.4**	**+0.5**
	107nm,0.3s						
VIVF	**Saint-Julien-l**	1.91	263	*e*Pn	**Pn**	**21 16 49.9**	**+2.2**
VIVF				*e*Pg	**Pg**	**21 16 52.7**	**-0.4**
VIVF				*e*Sn	**Sn**	**21 17 12.0**	**+0.1**
VIVF				*e*Sg	**Sg**	**21 17 17.8**	**-0.8**
	73nm,0.4s						
BNALP	**Bannalp**	1.92	23	*e*Pn	**Pn**	**21 16 49.3**	**+1.5**
BNALP	**Bannalp**	1.92	23	*e*Pn	**Pn**	**21 16 49.3**	**+1.5**
BRANT	**Les Verrieres**	1.93	342	*e*Pn	**Pn**	**21 16 50.6**	**+2.7**
BRANT	**Les Verrieres**	1.93	342	*e*Pn	**Pn**	**21 16 50.6**	**+2.7**
TUE	**Stuetta**	1.96	45	Pg	**Pg**	**21 16 48.4**	**-5.6**
	33nm,0.3s						
BBS	**Basel-Blauen**	2.36	3	Pn	**Pn**	**21 16 54.5**	**+0.4**
MABI	**Malga Bissina**	2.42	66	Pg	**Pg**	**21 16 54.2**	**-9.0**
WILA	**Wila**	2.55	25	*e*Pn	**Pn**	**21 16 58.3**	**+1.5**
WILA	**Wila**	2.55	25	*e*Pn	**Pn**	**21 16 58.3**	**+1.5**
LASF	**Ste Croix**	2.69	249	*e*Pn	**Pn**	**21 16 59.7**	**+0.8**
LASF				*e*Sn	**Sn**	**21 17 31.5**	**-0.3**
	16nm,0.3s						
HINF	**Hinteralfeld**	2.73	353	*e*Pn	**Pn**	**21 17 00.2**	**+0.8**
HINF				*e*Pg	**Pg**	**21 17 06.6**	**-2.8**
HINF				*e*Sn	**Sn**	**21 17 29.4**	**-3.3**
HINF				*e*Sg	**Sg**	**21 17 41.5**	**-4.3**
	48nm,0.4s						
MOF	**Molkenrain**	2.75	357	Pn	**Pn**	**21 17 00.7**	**+1.0**
STEIN	**Stein am Rhein**	2.77	22	⇑*i*Pn	**Pn**	**21 17 00.8**	**+0.8**
STEIN	**Stein am Rhein**	2.77	22	⇑*i*Pn	**Pn**	**21 17 00.8**	**+0.8**
SLE	**Schleitheim**	2.77	16	⇓*i*Pn	**Pn**	**21 17 00.4**	**+0.3**
SLE	**Schleitheim**	2.77	16	⇓*i*Pn	**Pn**	**21 17 00.4**	**+0.3**
DAVA	**Damuels**	2.80	38	⇑*i*PN	**Pn**	**21 17 02.1**	**+1.7**
DAVA				*i* SN	**Sn**	**21 17 39.7**	**+5.2**
DAVA	**Damuels**	2.80	38	*e*Pn	**Pn**	**21 17 02.0**	**+1.6**
DAVA				*i* Sn	**Sn**	**21 17 39.7**	**+5.2**
DAVA				*e*Sg	**Sg**	**21 17 42.4**	**-5.8**
FELD	**Feldberg**	2.81	9	Pn	**Pn**	**21 17 01.1**	**+0.6**
PGF	**Pioggiola**	2.83	154	*e*Pn	**Pn**	**21 16 59.1**	**-1.7**
PGF				*e*Sn	**Sn**	**21 17 30.4**	**-4.7**
	5.6nm,0.2s						
SMF	**Signal de Mont**	2.89	303	*e*Pn	**Pn**	**21 17 03.5**	**+1.8**
SMF				*e*Sn	**Sn**	**21 17 34.9**	**-1.8**
SMF				*e*Sg	**Sg**	**21 17 48.0**	**-3.1**
	28nm,0.4s						
HAU	**Haudompre**	2.98	347	*e*Pn	**Pn**	**21 17 03.9**	**+1.0**
HAU				*e*Pg	**Pg**	**21 17 11.0**	**-3.4**
HAU				*e*Sn	**Sn**	**21 17 35.7**	**-3.2**
HAU				*e*Sg	**Sg**	**21 17 49.2**	**-4.9**
	32nm,0.3s						
ECH	**Echery**	3.11	358	Pn	**Pn**	**21 17 05.5**	**+0.7**
LOR	**Lormes**	3.24	313	*e*Pn	**Pn**	**21 17 08.5**	**+1.8**
	baz=132						
LOR				*e*Pg	**Pg**	**21 17 16.9**	**-2.8**
	baz=133						
LOR				*e*Sn	**Sn**	**21 17 43.0**	**-2.6**
LOR				*e*Sg	**Sg**	**21 17 57.5**	**-5.4**
	20nm,0.3s						
LOR	**Lormes**	3.24	313	*e*Pg	**Pg**	**21 17 16.9**	**-2.8**
LOR				*e*Sn	**Sn**	**21 17 43.0**	**-2.6**
LOR				*e*Sg	**Sg**	**21 17 57.5**	**-5.4**
	9.9nm,0.3s						
AVF	**Avril sur Loir**	3.25	303	*e*Pn	**Pn**	**21 17 08.5**	**+1.7**
AVF				*e*Sn	**Sn**	**21 17 43.9**	**-2.0**
AVF				*e*Sg	**Sg**	**21 17 58.0**	**-5.2**
	17nm,0.4s						
BFO	**Black Forest**	3.29	12	*e*Pn	**Pn**	**21 17 07.0**	**-0.4**
CDF	**Champ du Feu**	3.31	359	*e*Pn	**Pn**	**21 17 07.8**	**+0.2**
CDF				*e*Sg	**Sg**	**21 17 58.0**	**-7.0**
	18nm,0.4s						
WLS	**Welschbruch**	3.31	0	Pn	**Pn**	**21 17 07.6**	**0.0**
SSF	**Saint Saulge**	3.31	308	*e*Pn	**Pn**	**21 17 09.7**	**+2.1**
SSF				*e*Pg	**Pg**	**21 17 18.0**	**-2.9**
SSF				*e*Sn	**Sn**	**21 17 45.5**	**-1.8**
SSF				*e*Sg	**Sg**	**21 18 01.1**	**-3.9**
	12nm,0.3s						
SSF	**Saint Saulge**	3.31	308	*e*Pg	**Pg**	**21 17 18.0**	**-2.9**
SSF				*e*Sn	**Sn**	**21 17 45.5**	**-1.8**
SSF				*e*Sg	**Sg**	**21 18 01.1**	**-3.9**
	6.2nm,0.3s						
SQTA	**Sankt Quirin**	3.42	50	⇑*i*PN	**Pn**	**21 17 09.8**	**+0.6**
SQTA				*i* SN	**Sn**	**21 17 54.2**	**+4.1**
MOTA	**Moosalm**	3.44	48	⇑*i*PN	**Pn**	**21 17 09.5**	**0.0**
MOTA				*i* SN	**Sn**	**21 17 54.5**	**+3.9**
BGF	**Bois d'Agland**	3.46	296	*e*Pn	**Pn**	**21 17 11.3**	**+1.5**
BGF				*e*Sn	**Sn**	**21 17 48.5**	**-2.7**
BGF				*e*Sg	**Sg**	**21 18 04.5**	**-5.6**
	39nm,0.4s						
SFTF	**Sexfontaines**	3.48	334	*e*Pn	**Pn**	**21 17 11.3**	**+1.2**
	baz=140						
SFTF				*e*Sg	**Sg**	**21 18 05.5**	**-5.3**
	25nm,0.3s						
WTTA	**Wattenberg**	3.68	53	⇑*i*PN	**Pn**	**21 17 13.6**	**+0.7**
WTTA				*i* SN	**Sn**	**21 17 59.9**	**+3.2**
WATA	**Walderalm**	3.69	51	⇑*i*PN	**Pn**	**21 17 13.1**	**+0.1**
WATA				*i* SN	**Sn**	**21 18 00.7**	**+3.8**
MEZF	**Maizieres J'vi**	3.74	336	*e*Pn	**Pn**	**21 17 15.6**	**+1.8**
	baz=148						
MEZF				*e*Pg	**Pg**	**21 17 25.3**	**-4.3**
	baz=157						
MEZF				*e*Sg	**Sg**	**21 18 12.7**	**-6.8**
	42nm,0.5s						
MEZF	**Maizieres J'vi**	3.74	336	*e*Pg	**Pg**	**21 17 25.3**	**-4.3**
MEZF				*e*Sg	**Sg**	**21 18 12.7**	**-6.8**
	21nm,0.5s						
CAF	**Calviac**	3.75	269	*e*Pn	**Pn**	**21 17 14.6**	**+0.7**
RFYF	**Reffroy**	3.75	341	*e*Pn	**Pn**	**21 17 15.1**	**+1.2**
	baz=156						
RFYF				*e*Sn	**Sn**	**21 17 55.1**	**-3.3**
RFYF				*e*Sg	**Sg**	**21 18 13.6**	**-6.1**
	24nm,0.3s						
TCF	**Toulx Ste Croi**	3.78	290	*e*Pn	**Pn**	**21 17 16.0**	**+1.6**
TCF				*e*Sn	**Sn**	**21 17 57.1**	**-2.2**
TCF				*e*Sg	**Sg**	**21 18 16.6**	**-4.3**
	28nm,0.5s						
HYF	**Humbligny**	3.92	305	*e*Pn	**Pn**	**21 17 15.9**	**-0.4**
HYF				*e*P		21 17 18.2	
HYF				*e*Sg	**Sg**	**21 18 19.5**	**-5.8**
HYF	**Humbligny**	3.92	305	*e*P	**Pn**	**21 17 18.2**	**+1.9**
HYF				*e*Sg	**Sg**	**21 18 19.5**	**-5.8**
MTLF	**Montolieu**	4.08	246	*e*Pn	**Pn**	**21 17 18.7**	**0.0**
MTLF				*e*P		21 17 21.9	
MTLF				*e*Sn	**Sn**	**21 18 04.0**	**-3.0**
	5.2nm,0.3s						
MTLF	**Montolieu**	4.08	246	*e*Pn	**Pn**	**21 17 18.7**	**0.0**
MTLF				*e*Sn	**Sn**	**21 18 04.0**	**-3.0**
	2.6nm,0.3s						
RJF	**Les Rejaudoux**	4.12	275	*e*Pn	**Pn**	**21 17 20.5**	**+1.3**
RJF				*e*Sn	**Sn**	**21 18 05.7**	**-2.2**
RJF				*e*Sg	**Sg**	**21 18 27.1**	**-5.1**
	9.9nm,0.4s						
KBA	**Koelnbreinsper**	4.62	63	*e*Pn	**Pn**	**21 17 26.8**	**+0.6**
LFF	**La Frestale**	4.68	270	*e*Pn	**Pn**	**21 17 27.4**	**+0.2**
LFF				*e*Sg	**Sg**	**21 18 44.8**	**-6.0**
	12nm,0.6s						
TNS	**Taunus Mts**	5.17	8	*e*Pn	**Pn**	**21 17 33.5**	**-0.6**
GIVF	**Givet**	5.28	342	*e*Pn	**Pn**	**21 17 34.8**	**-0.8**
GRA1	**Grafenberg Arr**	5.29	28	*e*Sg	**Sg**	**21 19 04.6**	**-6.3**
DOU	**Dourbes**	5.32	341	P	**Pn**	**21 17 37.3**	**+1.1**
BAIF	**Baives**	5.39	338	*e*Pn	**Pn**	**21 17 36.6**	**-0.5**
MFF	**Saint Martin d**	5.44	289	*e*Pn	**Pn**	**21 17 39.1**	**+1.3**
MFF				*e*Sg	**Sg**	**21 19 08.5**	**-7.5**
	7.5nm,0.5s						
EPF	**Esparros**	5.46	250	*e*Pn	**Pn**	**21 17 36.4**	**-1.7**
MOA	**Molln**	5.51	58	⇑*i*PN	**Pn**	**21 17 38.0**	**-0.9**
MOA				*i* SN	**Sn**	**21 18 44.3**	**+1.4**
GEC2	**GERESS Array S**	5.74	47	*e*Pn	**Pn**	**21 17 39.8**	**-2.2**
KHC	**Kasperske Hory**	5.86	44	*e*PN	**Pn**	**21 17 41.7**	**-2.0**
KHC				*e*SN	**Sn**	**21 18 45.3**	**-6.3**
KHC				*e*SG	**Sg**	**21 19 25.0**	**-4.9**
ETSF	**Etsaut**	6.11	252	*e*Pn	**Pn**	**21 17 47.8**	**+0.5**
LDF	**La Druitiere**	6.19	307	*e*Pn	**Pn**	**21 17 47.1**	**-1.4**
LDF				*e*Sg	**Sg**	**21 19 31.2**	**-10**
	1.7nm,0.3s						
SJPF	**Ste Jean**	6.48	255	*e*Pn	**Pn**	**21 17 51.8**	**-0.8**
FLN	**La Foliniere**	6.48	307	*e*Pn	**Pn**	**21 17 52.3**	**-0.3**
GRR	**Gorron**	6.52	303	*e*Pn	**Pn**	**21 17 53.4**	**+0.3**
CLL	**Collm**	7.26	29	*e*SG	**Sg**	**21 20 12.0**	**-4.7**
SGMF	**Saint Gilles**	7.50	298	*e*Pn	**Pn**	**21 18 06.0**	**-0.8**
QUIF	**Quistinic**	7.77	295	*e*Pn	**Pn**	**21 18 10.1**	**-0.6**
ROSF	**Rostrenen**	7.98	298	*e*Pn	**Pn**	**21 18 12.7**	**-0.8**

IDC ***12*** *22:21:11.8±0.5, 55.02N×161.35E, mb4.6/29, mb1 4.8/30, mb1mx4.8/31, mbtmp4.6/30, ML4.2/1, MS4.1/21, Ms1 4.1/21, ms1mx4.1/22, Error ellipse: s-maj=16.0km s-min=10.4km az=164.0*
BJI ***12*** *22:21:12.3, 55.28N×161.45E, h16^{km}, mB5.0, mb4.7, Ms5.0, Msz4.9*
MOS ***12*** *22:21:13.4±1.1, 54.94N×161.50E, h21^{km}, mb5.1/58, MS4.4/25, Error ellipse: s-maj=8.6km s-min=4.3km az=81.9*
MOS Felt (II-III) at Klyuche.
KRSC ***12*** *22:21:13.3±0.9, 54.80N×161.94E, h18^{km}±2^{km}, ML5.5*
HRVD ***12*** *22:21:14.3±0.3, 54.87N×161.96E, h17^{km}, MW5.0/60, Centroid moment Tensor Solution. LP body waves: s35,c50;Mantle waves: s60,c117; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.70±.21; $M_{\theta\theta}$2.79±.15; $M_{\phi\phi}$1.91±.14; $M_{r\theta}$-1.19±.40; $M_{\theta\phi}$-1.63±.09; $M_{\phi r}$1.00±.39; Best double couple: $M_0$4.637×10^{16} NP1: ϕ_s307°, δ35°, λ-91°. NP2: ϕ_s128°, δ55°, λ-89°. Principal axes: T 4.305, Plg10°, Azm218°; N .662, Plg1°, Azm308°; P -4.968, Plg80°, Azm41°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***12*** *22:21:14.3±0.2, 54.97N×161.44E, mb5.1/91, MS4.2/10 Error ellipse: s-maj=5.6km s-min=3.3km az=170.0*
NEIC Felt [III] at Klyuchi.

ISC 12 22:21:12.9±0.1**, 54.86N**±0.02×**161.79E**±0.03**, h16^{km}, h16^{km}**±.5^{km}**:pP-P, n405, σ1§31**/441**, mb4.9**/127**, MS4.3**/44**, 17C-3D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	0.30	186	P	**Pb**	**22 21 20.6**	**+1.2**
MKZ	**Mys Kozlova**	0.30	186	*i* P	**Pb**	**22 21 20.5**	**+1.1**
TUMR	**Tumrok**	1.04	295	*i* P	**Pb**	**22 21 34.1**	**+2.2**
TUMR				*e*S	**Sb**	**22 21 49.5**	**+4.4**
KMNR	**Kamenistaya**	1.27	316	*i* P	**Pb**	**22 21 38.1**	**+2.3**
KMNR				*e*S	**Sb**	**22 21 56.4**	**+4.7**
ZLN	**Zelenaya**	1.29	335	*i* P	**Pb**	**22 21 38.8**	**+2.5**
LGNR	**Loginova**	1.38	334	*i* P	**Pn**	**22 21 40.3**	**+2.6**
LGNR				*e*S	**Sb**	**22 21 59.3**	**+4.2**
CIRR	**Tsirk**	1.40	335	*i* P	**Pn**	**22 21 40.3**	**+2.4**
CIRR				*e*S	**Sb**	**22 21 59.6**	**+4.1**
KPT	**Kopyto**	1.43	322	*i* P	**Pn**	**22 21 40.6**	**+2.3**
KPT				*e*S	**Sb**	**22 22 00.7**	**+4.3**
KBTR	**Krutoberegovo**	1.48	23	P	**Pn**	**22 21 39.4**	**+0.3**
KBTR				S	**Sb**	**22 21 58.1**	**+0.2**
KBTR	**Krutoberegovo**	1.48	23	*i* P	**Pn**	**22 21 39.1**	**+0.1**
KBTR				*e*S	**Sb**	**22 21 58.0**	**+0.1**
KRSR	**Krestovskiy**	1.53	334	*i* P	**Pn**	**22 21 41.7**	**+1.9**
KRSR				*e*S	**Sb**	**22 22 00.9**	**+1.5**
KII	**Karymskiy**	1.59	240	P	**Pn**	**22 21 41.6**	**+0.9**
KII	**Karymskiy**	1.59	240	*e*P	**Pn**	**22 21 41.5**	**+0.8**
KII				*e*S	**Sn**	**22 22 02.3**	**+1.3**
KLY	**Klyuchi**	1.60	337	P	**Pn**	**22 21 42.1**	**+1.3**
KLY				S	**Sn**	**22 22 01.7**	**+0.6**
KLY	**Klyuchi**	1.60	337	*i* P	**Pn**	**22 21 42.0**	**+1.2**
KLY				*e*S	**Sn**	**22 22 03.4**	**+2.3**
KOZ	**Kozyrevsk**	1.63	319	*i* P	**Pn**	**22 21 43.8**	**+2.6**
KOZ				*e*S	**Sn**	**22 22 06.2**	**+4.3**
SRDR	**Sredinnyy**	1.88	322	*i* P	**Pn**	**22 21 46.8**	**+2.0**
SRDR				*e*S	**Sn**	**22 22 11.6**	**+3.3**
SPN	**Mys Shipunski**	2.04	211	P	**Pn**	**22 21 46.0**	**-1.2**
SPN				S	**Sn**	**22 22 09.7**	**-2.8**
SPN	**Mys Shipunski**	2.04	211	*i* P	**Pn**	**22 21 45.8**	**-1.4**
SPN				*e*S	**Sn**	**22 22 10.5**	**-2.0**
ESO	**Esso**	2.06	303	*e*P	**Pn**	**22 21 49.7**	**+2.3**
NLC	**Nalytchevo**	2.22	221	P	**Pn**	**22 21 49.5**	**-0.1**
NLC				S	**Sn**	**22 22 15.2**	**-1.7**
NLC	**Nalytchevo**	2.22	221	*i* P	**Pn**	**22 21 49.7**	**+0.1**
NLC				*e*S	**Sn**	**22 22 15.5**	**-1.4**
SDLR	**Sedlovina**	2.33	228	*e*P	**Pn**	**22 21 52.4**	**+1.2**
SDLR				*e*S	**Sn**	**22 22 19.8**	**+0.1**
SMAR	**Somma**	2.38	229	*e*P	**Pn**	**22 21 53.5**	**+1.6**
SMAR				*e*S	**Sn**	**22 22 21.5**	**+0.6**
AVH	**Avacha**	2.40	230	*i* P	**Pn**	**22 21 53.5**	**+1.2**
AVH				*e*S	**Sn**	**22 22 21.3**	**-0.3**
UGLR	**Uglovaya**	2.40	228	*i* P	**Pn**	**22 21 53.5**	**+1.2**
UGLR				*e*S	**Sn**	**22 22 22.2**	**+0.6**
KOK	**Koryaka**	2.43	231	*e*P	**Pn**	**22 21 54.2**	**+1.6**
KOK				*e*S	**Sn**	**22 22 24.0**	**+1.7**
BKI	**Bering**	2.44	80	*i* P	**Pn**	**22 21 51.8**	**-0.9**
BKI				*i* S	**Sn**	**22 22 19.7**	**-2.7**
BKI				Smax			
	2μm,1.2s						
GNL	**Ganaly**	2.54	244	*i* P	**Pn**	**22 21 55.7**	**+1.5**
GNL				*e*S	**Sn**	**22 22 26.8**	**+1.8**
PET	**Petropavlovsk**	2.61	227	P	**Pn**	**22 21 56.2**	**+1.0**
PET				S	**Sn**	**22 22 26.3**	**-0.5**

PET	**Petropavlovsk**	**2.61**	**227**	⇑*i*P	**Pn**	**22 21 56.1**	**+0.9**
PET				*e*S	**Sn**	**22 22 27.7**	**+0.9**
PET	**Petropavlovsk**	**2.61**	**227**	*i* P	**Pn**	**22 21 56.2**	**+1.0**
PET				*i* S	**Sn**	**22 22 26.2**	**-0.6**
RUS	**Russkaya**	**3.11**	**220**	P	**Pn**	**22 22 02.2**	**-0.2**
RUS				S	**Sn**	**22 22 37.5**	**-2.1**
RUS	**Russkaya**	**3.11**	**220**	*i* P	**Pn**	**22 22 02.1**	**-0.3**
RUS				*i* S	**Sn**	**22 22 37.5**	**-2.1**
GRL	**Gorelyy**	**3.19**	**225**	*e*P	**Pn**	**22 22 04.9**	**+1.4**
GRL				*e*S	**Sn**	**22 22 41.1**	**-0.5**
APC	**Apacha**	**3.35**	**237**	*e*P	**Pn**	**22 22 07.8**	**+2.0**
APC				*e*S	**Sn**	**22 22 47.7**	**+2.0**
APC				Smax			
	4µm,1.1s						
OSSR	**Ossora**	**4.46**	**8**	*e*P	**Pn**	**22 22 21.3**	**-0.3**
OSSR				*e*S	**Sn**	**22 23 10.9**	**-2.9**
OSSR				Smax			
	650nm,0.9s						
PAU	**Pauzhetka**	**4.53**	**223**	*i* P	**Pn**	**22 22 24.5**	**+2.0**
PAU				*e*S	**Sn**	**22 23 15.4**	**+0.1**
PAU				Smax			
	4µm,1.1s						
SKR	**Severo-Kuril's**	**5.41**	**222**	*e*PN	**Pn**	**22 22 32.4**	**-2.6**
SKR				pmax	pmax		
	comp=N,40nm,0.5s						
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				MLR	MLR		
	comp=N,8µm,14.0s						
SKR				MLR	MLR		
	comp=Z,5µm,14.0s						
SKR				MLR	MLR		
	comp=E,9µm,12.0s						
SKR	**Severo-Kuril's**	**5.41**	**222**	*e*P	**Pn**	**22 22 32.4**	**-2.6**
SKR				*i* S	**Sn**	**22 23 33.8**	**-3.9**
ALID	**Alaid**	**5.50**	**226**	*e*P	**Pn**	**22 22 37.6**	**+1.4**
ALID				*e*S	**Sn**	**22 23 39.2**	**-0.5**
FX1	**Attu Island--F**	**7.01**	**102**	Pn	**Pn**	**22 22 55.1**	**-2.5**
	comp=E,48nm,0.3s,baz=315,slow=6.6,SNR=87						
FX1				Sn	**Sn**	**22 24 08.1**	**-10**
	comp=E,36nm,0.3s,baz=156,slow=23,SNR=6.5						
FX1	**Attu Island--F**	**7.01**	**102**	*e*P	**Pn**	**22 22 54.8**	**-2.7**
FX1				*e*S	**Sn**	**22 24 08.9**	**-8.8**
MA2	**Magadan**	**7.62**	**313**	*e*PN	**Pn**	**22 23 09.1**	**+3.0**
MA2				*e*S	**Sn**	**22 24 37.9**	**+4.9**
MA2				pmax	pmax		
	comp=E,10.0nm,0.9s						
MA2				pmax	pmax		
	comp=Z,20nm,0.9s						
MA2				MLR	MLR		
	comp=Z,1µm,14.0s						
MA2	**Magadan**	**7.62**	**313**	P	**Pn**	**22 23 07.9**	**+1.9**
	comp=Z,80nm,1.2s						
KAMR	**Kamenskoye**	**7.96**	**15**	*i* P	**Pn**	**22 23 12.4**	**+1.6**
KAMR				*e*S	**Sn**	**22 24 38.6**	**-2.9**
KAMR				Smax			
	comp=Z,160nm,1.4s						
SEY	**Seymchan**	**9.44**	**333**	*e*PN	**P**	**22 23 34.0**	**+2.7**
SEY				*e*S	**Sn**	**22 25 24.2**	**+6.1**
SEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
SEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
SEY				pmax	pmax		
	comp=Z,20nm,1.3s						
BILL	**Bilibino**	**13.40**	**7**	*e*PN	**P**	**22 24 26.8**	**+2.1**
BILL				pmax	pmax		
	comp=Z,207nm,1.4s						
BILL	**Bilibino**	**13.40**	**7**	*e*P	**P**	**22 24 26.8**	**+2.1**
	comp=Z,207nm,1.4s						
UGL	**Uglegorsk**	**13.44**	**253**	*i* PN	**P**	**22 24 28.5**	**+3.1**
UGL				*e*S	**S**	**22 27 05.0**	**+10**
UGL				pmax	pmax		
	comp=Z,360nm,1.3s						
UGL				pmax	pmax		
	comp=N,500nm,2.0s						
UGL				pmax	pmax		
	comp=E,1µm,2.0s						
UGL				pmax	pmax		
	comp=Z,2µm,2.0s						
UGL				smax			
	comp=N,700nm,6.0s						
UGL				smax			
	comp=E,1µm,4.0s						
UGL				MLR	MLR		
	comp=Z,3µm,13.0s						
UGL				MLR	MLR		
	comp=N,2µm,12.0s						
UGL				MLR	MLR		
	comp=E,4µm,12.0s						
YSS	**Yuzh-Sakhalins**	**14.34**	**244**	⇑*i*P	**P**	**22 24 39.1**	**+2.0**
YSS				*e*S	**S**	**22 27 18.0**	**+1.3**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				MLR	MLR		
	comp=E,3µm,14.0s						
YSS				MLR	MLR		
	comp=Z,3µm,14.0s						
YSS	**Yuzh-Sakhalins**	**14.34**	**244**	*e*P	**P**	**22 24 38.2**	**+1.1**
	comp=Z,75nm,1.0s						
YUK	**Yuzh-Kuril'sk**	**14.94**	**230**	P	**P**	**22 24 45.0**	**0.0**
YUK				S	**S**	**22 27 28.0**	**-2.9**
YUK				pmax	pmax		
	comp=Z,2µm,1.5s						
YUK				MLR	MLR		
	comp=E,3µm,12.0s						
YUK				MLR	MLR		
	comp=Z,3µm,12.0s						
ASAJ	**Asahikawa**	**16.40**	**237**	P	**P**	**22 25 03.2**	**-0.6**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,966nm,21.6s						
ASAJ	**Asahikawa**	**16.40**	**237**	Pn	**P**	**22 25 03.2**	**-0.6**
	comp=Z,1.6nm,0.3s,baz=17,slow=5.8,SNR=18						
ASAJ				LR	LR	22 30 31.4	
	comp=Z,966nm,21.6s,baz=268,slow=34						
ERM	**Erimo**	**17.75**	**231**	P	**P**	**22 25 23.6**	**+2.8**
ERM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YAK	**Yakutsk**	**18.12**	**306**	*e*P	**P**	**22 25 25.1**	**-0.1**
YAK				*e*S	**S**	**22 28 44.8**	**+0.7**
YAK				pmax	pmax		
	comp=Z,32nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,23nm,1.3s						
YAK				smax			
	comp=N,5.0nm,0.8s						
YAK				smax			
	comp=Z,4.0nm,0.8s						
YAK				smax			
	comp=E,5.0nm,0.9s						
YAK				MLR	MLR		
	comp=E,778nm,11.0s						
YAK				MLR	MLR		
	comp=Z,909nm,11.0s						
YAK				MLR	MLR		
	comp=N,208nm,9.0s						
YAK	**Yakutsk**	**18.12**	**306**	*e*P	**P**	**22 25 24.7**	**-0.5**
	comp=N,76nm,0.8s						
KLR	**Kul'dur**	**19.22**	**265**	*e*P	**P**	**22 25 35.2**	**-3.4**
KLR				*e*S	**S**	**22 29 11.0**	**+1.9**
KLR				pmax	pmax		
	comp=Z,700nm,10.0s						
KLR				MLR	MLR		
	comp=N,1µm,11.0s						
KLR				MLR	MLR		
	comp=E,1µm,11.0s						
KLR				MLR	MLR		
	comp=Z,2µm,11.0s						
CLNS	**Chul'man**	**20.65**	**291**	*e*P	**P**	**22 25 57.3**	**+3.2**
CLNS				*e*		22 26 08.2	
CLNS				*e*PPP	PPP	22 26 15.8	-8.9
CLNS				*e*S	**S**	**22 29 38.5**	**-0.8**
CLNS				*e*SS	SS	22 30 05.7	-4.6
CLNS				*e*		22 30 08.9	
CLNS				*e*SSS	SSS	22 30 17.8	-6.6
CLNS				*e*		22 37 20.6	
CLNS				pmax	pmax		
	comp=Z,71nm,1.0s						
CLNS				pmax	pmax		
	comp=N,18nm,0.9s						
CLNS				pmax	pmax		
	comp=E,67nm,1.1s						
CLNS				smax			
	comp=N,23nm,1.3s						
CLNS				smax			
	comp=Z,12nm,1.8s						
CLNS				smax			
	comp=E,14nm,1.9s						
CLNS				MLR	MLR		
	comp=N,200nm,12.0s,MS3.9						
CLNS				MLR	MLR		
	comp=E,200nm,12.0s,MS3.9						
CLNS				MLR	MLR		
	comp=Z,1µm,12.0s,MS4.4						
TIXI	**Tiksi**	**21.94**	**333**	*e*P	**P**	**22 26 03.7**	**-3.4**
TIXI				*e*S	**S**	**22 30 02.8**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,1µm,11.0s,MS4.5						
TTA	**Tatalina**	**22.86**	**52**	*e*P	**P**	**22 26 18.8**	**+2.7**
MDJ	**Mudanjiang**	**22.99**	**257**	P	**P**	**22 26 17.5**	**-0.1**
MDJ				S	**S**	**22 30 24.7**	**+1.8**
MDJ				AMB	AMB		
	comp=Z,160nm,9.9s						
MDJ				LR	LR		
	comp=N,420nm,19.6s,MS4.0						
MDJ				LR	LR		
	comp=E,380nm,20.8s,MS4.0						
MDJ				LR	LR		
	comp=Z,620nm,12.9s						
MDJ	**Mudanjiang**	**22.99**	**257**	P	**P**	**22 26 13.7**	**-3.9**
SVW2	**Sparrevohn**	**23.11**	**57**	*e*P	**P**	**22 26 20.6**	**+2.1**
IMA	**Indian Mountai**	**24.07**	**45**	*e*P	**P**	**22 26 29.3**	**+1.5**
IMA				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.5						
IMA	**Indian Mountai**	**24.07**	**45**	*e*P	**P**	**22 26 29.3**	**+1.5**
	comp=Z,18nm,0.8s,mb4.6						
MAJO	**Matsushiro**	**24.43**	**231**	P	**P**	**22 26 31.1**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,110nm,0.9s,mb5.3						
MAJO	**Matsushiro**	**24.43**	**231**	*e*P	**P**	**22 26 31.0**	**-0.6**
	comp=Z,105nm,0.8s,mb5.3						
MAJO				LR	LR		
	comp=Z,505nm,21.0s,MS4.0						
MAT	**Matsushiro**	**24.43**	**231**	*e*P	**P**	**22 26 31.0**	**-0.6**
MAT				*e*S	**S**	**22 30 47.0**	**-0.9**
MAT				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.2						
MAT				MLR	MLR		
	comp=Z,710nm,20.0s,MS4.2						
MAT	**Matsushiro**	**24.43**	**231**	*e*P	**P**	**22 26 31.0**	**-0.6**
	comp=Z,110nm,1.0s,mb5.2						
MAT				*e*S	**S**	**22 30 47.0**	**-0.9**
MAT				LR	LR		
	comp=Z,710nm,20.0s,MS4.2						
MAT	**Matsushiro**	**24.43**	**231**	P	**P**	**22 26 31.1**	**-0.5**
MAT				S	**S**	**22 30 47.0**	**-0.9**
MJAR	**Matsushiro Arr**	**24.43**	**231**	P	**P**	**22 26 31.2**	**-0.5**
	comp=Z,31nm,0.7s,mb4.8,baz=27,slow=8.1,SNR=150						
MJAR				PcP	PcP	22 30 10.1	-1.8
	comp=Z,5.1nm,1.1s,baz=314,slow=1.4,SNR=6.2						
MJAR				LR	LR	22 35 30.4	
	comp=Z,326nm,21.6s,MS3.8,baz=50,slow=35						
MJAR	**Matsushiro Arr**	**24.43**	**231**	P	**P**	**22 26 31.2**	**-0.5**
MJAR				PcP	PcP	22 30 10.1	-1.8
MJAR				LR	LR	22 35 30.4	
RSO	**Redoubt South**	**24.55**	**58**	*e*P	**P**	**22 26 35.1**	**+2.6**
SPU	**Mount Spurr**	**24.80**	**56**	*e*P	**P**	**22 26 37.0**	**+2.0**
KDAK	**Kodiak Island**	**25.11**	**65**	*e*P	**P**	**22 26 38.4**	**+0.6**
	comp=Z,42nm,1.0s,mb4.9						
KDAK				LR	LR		
	comp=Z,197nm,19.0s,MS3.6						
CN2	**Changchun**	**25.84**	**260**	*e*P	**P**	**22 26 45.0**	**0.0**
CN2				*e*S	**S**	**22 31 06.3**	**-5.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,1µm,14.0s,MS5.0						
CN2				LR	LR		
	comp=E,3µm,14.0s,MS5.0						
CN2				LR	LR		
	comp=Z,3µm,15.0s,MS5.0						
MCK	**McKinley**	**26.04**	**50**	*e*P	**P**	**22 26 45.8**	**-0.8**
MCK				pmax	pmax		
	comp=Z,54nm,1.5s,mb4.9						
MCK	**McKinley**	**26.04**	**50**	*e*P	**P**	**22 26 45.8**	**-0.8**
	comp=Z,54nm,1.5s,mb4.8						
HIA	**Hailar**	**26.14**	**275**	*e*P	**P**	**22 26 45.5**	**-2.1**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HIA				MLR	MLR		
	comp=Z,626nm,19.0s						
HIA	**Hailar**	**26.14**	**275**	*e*P	**P**	**22 26 45.5**	**-2.1**
	comp=Z,4.2nm,0.5s,mb4.2						
HIA				LR	LR		
	comp=Z,626nm,19.0s,MS4.2						
BOD	**Bodaibo**	**26.22**	**296**	*e*P	**P**	**22 26 56.9**	**+8.6**
BOD				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.5						
SML	**Sawmill**	**26.50**	**54**	*e*P	**P**	**22 26 50.5**	**-0.3**
ILAR	**Eielson Array**	**26.88**	**48**	P	**P**	**22 26 53.5**	**-0.7**
	comp=Z,3.3nm,0.6s,mb4.0,baz=252,slow=5.4,SNR=52						
ILAR				PcP	PcP	22 30 15.1	-2.0
	comp=Z,1.8nm,0.6s,baz=291,slow=3.3,SNR=16						
ILAR				LR	LR	22 37 12.7	
	comp=Z,300nm,19.7s,MS3.9,baz=93,slow=36						
THY	**Trims Highway**	**27.48**	**51**	P	**P**	**22 27 02.2**	**+2.3**
DIV	**Divide**	**27.82**	**56**	*e*P	**P**	**22 27 01.4**	**-1.5**
	comp=Z,219nm,1.7s,mb5.5						
KS15	**Wonju Array Si**	**28.85**	**247**	*e*P	**P**	**22 27 11.8**	**-0.5**
INK	**Inuvik**	**31.87**	**40**	P	**P**	**22 27 38.5**	**-0.4**
INK						22 30 29.0	
INK				pmax	pmax		
	comp=Z,14nm,1.1s						
INK				MLR	MLR		
	comp=Z,316nm,21.7s						
INK	**Inuvik**	**31.87**	**40**	P	**P**	**22 27 38.5**	**-0.4**
	comp=Z,14nm,1.1s,mb4.7,baz=300,slow=8.0,SNR=8.6						
INK				PcP	PcP	22 30 29.0	-0.7
	comp=Z,3.2nm,0.6s,baz=98,slow=2.0,SNR=4.9						
INK				LR	LR	22 41 35.3	
	comp=Z,316nm,21.7s,MS4.0,baz=95,slow=38						
INK	**Inuvik**	**31.87**	**40**	*e*P	**P**	**22 27 38.1**	**-0.7**
	comp=Z,153nm,1.9s,mb5.5						
ULN	**Ulaanbaatar**	**34.11**	**281**	*e*P	**P**	**22 27 52.8**	**-5.8**
SONM	**Songino Array**	**34.50**	**282**	PcP	PcP	22 30 36.1	-1.0
	comp=Z,5.7nm,0.8s,baz=70,slow=1.2,SNR=14						
SONM				ScP		22 34 21.1	
	comp=Z,1.5nm,0.8s,baz=45,slow=1.7,SNR=5.0						
SONM				LR	LR	22 43 19.2	
	comp=Z,234nm,18.5s,MS4.0,baz=242,slow=39						
ZAK	**Zakamensk**	**34.90**	**287**	*e*P	**P**	**22 27 54.7**	**-11**
ZAK				*e*		22 30 37.0	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
DLBC	**Dease Lake**	**36.21**	**56**	P	**P**	**22 28 17.8**	**+1.4**
	comp=Z,9.7nm,1.1s,mb4.7,baz=270,slow=8.6,SNR=6.6						
DLBC	**Dease Lake**	**36.21**	**56**	*e*P	**P**	**22 28 17.5**	**+1.1**
NJ2	**Nanjing**	**37.78**	**251**	*e*P	**P**	**22 28 30.3**	**+0.5**
NJ2				PP	PP	22 29 59.4	+0.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,230nm,5.9s						
NJ2				LR	LR		
	comp=Z,880nm,15.0s,MS4.7						
YKW3	**Yellowknife Ar**	**41.16**	**44**	*e*P	**P**	**22 28 57.6**	**+0.1**
YKA	**Yellowknife Ar**	**41.20**	**44**	P	**P**	**22 28 57.9**	**+0.1**
	comp=Z,4.4nm,0.6s,mb4.3,baz=299,slow=8.3,SNR=24						
YKA				PcP	PcP	22 30 57.0	-0.6
	comp=Z,2.4nm,0.7s,baz=315,slow=2.9,SNR=8.9						
YKA				LR	LR	22 49 01.4	
	comp=Z,236nm,18.1s,MS4.1,baz=280,slow=40						
YKA	**Yellowknife Ar**	**41.20**	**44**	P	**P**	**22 28 57.9**	**+0.1**
YKA				PcP	PcP	22 30 57.0	-0.6
YKA				LR	LR	22 49 01.4	
RES	**Resolute Bay**	**41.31**	**23**	*e*P	**P**	**22 28 57.6**	**-1.1**
ZAL	**Zalesovo**	**42.70**	**302**	P	**P**	**22 29 06.0**	**-4.1**
	comp=Z,1.1nm,0.5s,mb3.9,baz=38,slow=6.5,SNR=5.0						
ZAL				PcP	PcP	22 30 59.5	-3.0
	comp=Z,3.0nm,0.4s,baz=94,slow=1.7,SNR=3.0						
ZAL				LR	LR	22 48 18.7	
	comp=Z,216nm,18.2s,MS4.1,baz=52,slow=38						
ZAL	**Zalesovo**	**42.70**	**302**	P	**P**	**22 29 06.0**	**-4.1**
ZAL				PcP	PcP	22 30 59.5	-3.0
ZAL				LR	LR	22 48 18.8	
NVS	**Novosibirsk**	**42.95**	**304**	*e*P	**P**	**22 29 07.7**	**-4.5**
NVS				*e**SS		22 35 36.3	
NVS				pmax	pmax		
	comp=Z,32nm,1.7s,mb4.8						
NVS				pmax	pmax		
	comp=N,12nm,1.6s						
NVS				pmax	pmax		
	comp=E,26nm,1.4s						
LZH	**Lanzhou**	**43.36**	**269**	*e*P	**P**	**22 29 16.5**	**+0.7**
LZH				PP	PP	22 30 59.8	+1.0
LZH				*e*S	**S**	**22 35 37.2**	**-5.3**
LZH				SS	SS	22 38 46.0	-3.6
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.6						
LZH				AMB	AMB		
	comp=Z,120nm,4.6s						
LZH	**Lanzhou**	**43.36**	**269**	*e*P	**P**	**22 29 16.5**	**+0.7**
	comp=Z,28nm,1.5s,mb4.8						
LZH				pP	pP	22 29 31.2	+11
LZH				sP	sP	22 29 37.5	+15
LZH				PP	PP	22 30 59.8	+1.0
LZH				*e*S	**S**	**22 35 37.2**	**-5.3**
LZH				sS		22 36 04.4	
LZH				SS	SS	22 38 46.0	-3.6
LZH				LR	LR		
	comp=Z,3µm,13.7s,MS5.4						
GTA	**Gaotai**	**43.42**	**276**	*e*P	**P**	**22 29 14.3**	**-1.9**
GTA				PP	PP	22 30 58.2	-1.1
GTA				PCP	PcP	22 31 04.1	-1.0
GTA				PCS		22 34 56.8	
GTA				S	**S**	**22 35 36.8**	**-6.4**
GTA				SS	SS	22 38 43.9	-6.6
GTA				AMB	AMB		
	comp=Z,130nm,5.7s						
GTA				LR	LR		
	comp=N,1µm,13.3s,MS5.1						
GTA				LR	LR		
	comp=E,1µm,13.7s,MS5.1						
GTA				LR	LR		
	comp=Z,2µm,14.4s,MS5.1						
EDM	**Edmonton**	**46.92**	**55**	*e*P	**P**	**22 29 44.5**	**+0.5**
EDM				*e*	pP	22 29 49.4	+0.7
WMQ	**Urumqi**	**47.34**	**289**	*e*P	**P**	**22 29 46.6**	**-0.8**
WMQ				AP	pP	22 29 51.1	-1.1
WMQ				XP	sP	22 29 53.6	-0.5
WMQ				PCP	PcP	22 31 17.6	-1.1
WMQ				PP	PP	22 31 37.7	-0.4
WMQ				*e*S	**S**	**22 36 38.0**	**-1.5**
WMQ				SS	SS	22 39 58.4	-2.4
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,210nm,6.2s						
WMQ				LR	LR		
	comp=N,1µm,18.2s,MS5.1						
WMQ				LR	LR		
	comp=E,1µm,18.4s,MS5.1						
WMQ				LR	LR		
	comp=Z,1µm,23.0s,MS4.8						
NEW	**Newport**	**48.18**	**62**	P	**P**	**22 29 54.1**	**+0.2**
NEW						22 31 21.7	
NEW				pmax	pmax		
	comp=Z,12nm,1.1s						
NEW	**Newport**	**48.18**	**62**	P	**P**	**22 29 54.1**	**+0.2**
	comp=Z,12nm,1.1s,mb4.9,baz=303,slow=6.3,SNR=10						
NEW				PcP	PcP	22 31 21.7	+0.1
	comp=Z,3.6nm,0.7s,baz=270,slow=4.0,SNR=3.3						
NEW	**Newport**	**48.18**	**62**	*e*P	**P**	**22 29 54.2**	**+0.3**
	comp=Z,19nm,1.1s,mb5.0						
NEW				*e*	pP	22 29 58.9	+0.2
NEW				LR	LR		
	comp=Z,401nm,21.0s,MS4.4						
MKAR	**Makanchi Array**	**48.30**	**295**	P	**P**	**22 29 51.0**	**-3.9**
	comp=Z,2.7nm,0.6s,mb4.5,baz=43,slow=6.4,SNR=38						
MKAR				PcP	PcP	22 31 20.1	-2.0
	comp=Z,1.4nm,0.7s,baz=63,slow=2.7,SNR=3.9						
MKAR				LR	LR	22 50 17.3	
	comp=Z,184nm,20.7s,MS4.0,baz=20,slow=36						
DAG	**Danmarks Havn**	**48.64**	**0**	⇑*e*P	**P**	**22 29 55.0**	**-2.1**
DAG				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
DAG	**Danmarks Havn**	**48.64**	**0**	⇑*e*P	**P**	**22 29 55.0**	**-2.1**
	comp=Z,2.0nm,1.0s,mb4.1						
DAG	**Danmarks Havn**	**48.64**	**0**	⇑*i*P	**P**	**22 29 55.0**	**-2.1**
	comp=Z,2.0nm,1.0s,mb4.1						
YBH	**Yreka Blue Hor**	**49.51**	**72**	P	**P**	**22 30 05.9**	**+1.7**
YBH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YBH	**Yreka Blue Hor**	**49.51**	**72**	P	**P**	**22 30 05.9**	**+1.7**
	comp=Z,5.8nm,0.9s,mb4.6,baz=356,slow=1.4,SNR=7.5						
YBH	**Yreka Blue Hor**	**49.51**	**72**	*e*P	**P**	**22 30 05.5**	**+1.3**
	comp=Z,73nm,1.9s,mb5.4						
BVAR	**Borovoye Array**	**50.08**	**308**	P	**P**	**22 30 05.8**	**-2.7**
	comp=Z,4.1nm,0.5s,mb4.8,baz=63,slow=7.7,SNR=46						
BVAR				PcP	PcP	22 31 26.4	-2.0
	comp=Z,2.5nm,0.4s,baz=90,slow=3.0,SNR=12						
BVAR				ScP		22 35 22.0	
	comp=Z,1.4nm,0.8s,baz=72,slow=4.7,SNR=5.6						
WDC	**Whiskeytown Da**	**50.38**	**73**	P	**P**	**22 30 13.1**	**+2.1**
WDC				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
WDC	**Whiskeytown Da**	**50.38**	**73**	P	**P**	**22 30 13.1**	**+2.1**
	comp=Z,12nm,1.2s,mb4.8						
MOD	**Modoc**	**50.71**	**71**	*e*P	**P**	**22 30 14.8**	**+1.4**
	comp=Z,28nm,1.1s,mb5.1						
MSO	**Missoula**	**50.75**	**62**	*e*P	**P**	**22 30 13.4**	**-0.3**
	comp=Z,28nm,1.4s,mb5.0						
CHMT	**Chamberlain Mo**	**51.04**	**61**	*e*P	**P**	**22 30 16.2**	**+0.4**
FFC	**Flin Flon**	**51.09**	**48**	*e*P	**P**	**22 30 16.0**	**-0.1**
FFC				*e*	pP	22 30 20.9	0.0
FFC				*e*		22 31 36.4	
FFC				pmax	pmax		
	comp=Z,37nm,1.4s,mb5.1						
FFC	**Flin Flon**	**51.09**	**48**	*e*P	**P**	**22 30 16.0**	**-0.2**
	comp=Z,37nm,1.4s,mb5.1						
FFC				*e*	pP	22 30 20.9	0.0
FFC				*e*		22 31 36.4	
WVOR	**Wild Horse Val**	**51.25**	**69**	*e*P	**P**	**22 30 18.1**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
WVOR	**Wild Horse Val**	**51.25**	**69**	*e*P	**P**	**22 30 18.1**	**+0.6**
	comp=Z,12nm,1.1s,mb4.8						
KEV	**Kevo**	**51.46**	**342**	*e*p	**P**	**22 30 17.2**	**-1.6**
FCC	**Fort Churchill**	**51.48**	**40**	*e*P	**P**	**22 30 18.0**	**-1.1**
FCC				*e*	pP	22 30 23.0	-0.9
FCC				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.3						
FCC	**Fort Churchill**	**51.48**	**40**	*e*P	**P**	**22 30 18.0**	**-1.0**
	comp=Z,42nm,1.1s,mb5.3						
FCC				*e*	pP	22 30 23.0	-0.9
SVE	**Sverdlovsk**	**51.68**	**317**	*e*P	**P**	**22 30 18.7**	**-1.9**
SVE				*e*		22 31 28.8	
SVE				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.0						
HRY	**Holter Researc**	**51.90**	**61**	*e*P	**P**	**22 30 23.0**	**+0.7**
ARCES	**ARCESS Array B**	**51.92**	**342**	P	**P**	**22 30 20.8**	**-1.4**
	comp=Z,1.5nm,0.7s,mb4.1,baz=28,slow=8.2,SNR=10						
ARCES				PcP	PcP	22 31 33.8	-1.2
	comp=Z,2.2nm,0.7s,baz=27,slow=5.4,SNR=6.3						
BEKR	**Beckwourth**	**52.08**	**73**	*e*P	**P**	**22 30 24.5**	**+0.6**
	comp=Z,5.3nm,1.1s,mb4.4						
BEKR				*e*	pP	22 30 29.4	+0.8
SUMG	**Summit**	**52.09**	**8**	*e*P	**P**	**22 30 23.1**	**-0.3**
	comp=Z,30nm,1.2s,mb5.1						
KMI	**Kunming**	**52.12**	**260**	P	**P**	**22 30 23.9**	**-0.4**
KMI				PP	PP	22 32 23.8	+0.3
KMI				S	**S**	**22 37 45.2**	**-1.0**
KMI				SS	SS	22 41 22.2	+0.4
KMI				AMB	AMB		
	comp=Z,110nm,5.4s						
KMI				LR	LR		
	comp=N,580nm,19.2s,MS4.7						
KMI				LR	LR		
	comp=E,370nm,20.0s,MS4.7						
KMI				LR	LR		
	comp=Z,530nm,17.6s,MS4.6						
KMI	**Kunming**	**52.12**	**260**	P	**P**	**22 30 23.9**	**-0.4**
KMI						22 32 23.8	
KMI				S	**S**	**22 37 45.2**	**-1.0**
KMI				*SS		22 38 06.5	
KMI				SS	SS	22 41 22.2	+0.4
KMI				pmax	pmax		

	comp=Z,6.0nm,1.0s,mb4.5						
KMI				MLR	MLR		
	comp=Z,540nm,17.6s,MS4.6						
KMI	**Kunming**	**52.12**	**260**	P	**P**	**22 30 23.9**	**-0.4**
	comp=Z,6.0nm,1.0s,mb4.5						
KMI				pP	pP	22 30 38.7	+10
KMI				PP	PP	22 32 23.8	+0.3
KMI				S	**S**	**22 37 45.2**	**-1.0**
KMI				sS		22 38 06.5	
KMI				SS	SS	22 41 22.2	+0.4
KMI				LR	LR		
	comp=Z,540nm,17.6s,MS4.6						
MCMT	**McKenzie Canyo**	**52.67**	**63**	*e*P	**P**	**22 30 28.4**	**+0.2**
HLID	**Hailey**	**52.72**	**65**	*e*P	**P**	**22 30 28.9**	**+0.3**
	comp=Z,9.6nm,1.1s,mb4.6						
HLID				*e*	pP	22 30 33.9	+0.5
HLID				LR	LR		
	comp=Z,329nm,21.0s,MS4.3						
BOZ	**Bozeman (W)**	**52.73**	**62**	*e*P	**P**	**22 30 28.5**	**-0.1**
BOZ				pmax	pmax		
	comp=Z,84nm,1.7s,mb5.4						
BOZ	**Bozeman (W)**	**52.73**	**62**	*e*P	**P**	**22 30 28.5**	**-0.1**
	comp=Z,84nm,1.7s,mb5.4						
ARU	**Arti**	**52.78**	**317⇑**	*i*P	**P**	**22 30 25.2**	**-3.7**
ARU				*e*		22 31 34.5	
ARU				*e*		22 32 24.1	
ARU				*e*PPP	PPP	22 33 31.4	-3.3
ARU				*e*S	**S**	**22 37 49.2**	**-5.6**
ARU				*e*SS	SS	22 41 29.6	-3.1
ARU				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
ARU				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.4						
ARU				MLR	MLR		
	comp=N,200nm,21.0s,MS4.2						
ARU				MLR	MLR		
	comp=E,100nm,16.0s,MS4.2						
ARU	**Arti**	**52.78**	**317**	*e*P	**P**	**22 30 25.5**	**-3.4**
	comp=E,9.7nm,0.5s,mb5.0						
ARU				*e*PcP	PcP	22 31 36.4	-1.9
WCN	**Washoe City**	**52.81**	**73**	P	**P**	**22 30 31.0**	**+1.7**
WCN				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.1						
WCN	**Washoe City**	**52.81**	**73**	*e*P	**P**	**22 30 30.7**	**+1.3**
	comp=Z,35nm,1.3s,mb5.1						
WCN				*e*	pP	22 30 35.1	+1.0
QIZ	**Qiongzhong**	**53.01**	**249**	*e*P	**P**	**22 30 31.3**	**+0.2**
QIZ				S	**S**	**22 38 03.6**	**+5.1**
QIZ				SS	SS	22 41 36.7	-0.5
QIZ				LR	LR		
	comp=N,310nm,12.4s,MS4.8						
QIZ				LR	LR		
	comp=E,370nm,12.3s,MS4.8						
QIZ				LR	LR		
	comp=Z,510nm,11.5s,MS4.8						
CMB	**Columbia Colle**	**53.35**	**74**	P	**P**	**22 30 34.6**	**+1.2**
CMB				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
CMB	**Columbia Colle**	**53.35**	**74**	*e*P	**P**	**22 30 34.3**	**+0.9**
	comp=Z,30nm,1.5s,mb5.0						
CMB				LR	LR		
	comp=Z,256nm,20.0s,MS4.3						
QLMT	**Earthquake Lak**	**53.39**	**62**	*e*P	**P**	**22 30 34.4**	**+0.8**
QLMT				*e*	pP	22 30 39.1	+0.8
BMN	**Battle Mountai**	**53.41**	**70**	P	**P**	**22 30 35.2**	**+1.5**
BMN				pmax	pmax		
	comp=Z,95nm,2.0s,mb5.4						
BMN	**Battle Mountai**	**53.41**	**70**	*e*P	**P**	**22 30 33.9**	**+0.2**
	comp=Z,95nm,2.0s,mb5.4						
GCMT	**Greycliff**	**53.62**	**60**	*e*P	**P**	**22 30 35.0**	**-0.2**
YMR	**Madison River**	**53.74**	**62**	*e*P	**P**	**22 30 36.2**	**+0.1**
YNR	**Norris Junctio**	**53.86**	**62**	*e*P	**P**	**22 30 39.3**	**+2.4**
YFT	**Old Faithful**	**53.96**	**62**	*e*P	**P**	**22 30 39.9**	**+2.2**
NVAR	**Mina Array Bea**	**54.23**	**72**	P	**P**	**22 30 41.1**	**+1.4**
	comp=Z,6.0nm,0.6s,mb4.7,baz=315,slow=6.2,SNR=35						
NVAR				PcP	PcP	22 31 45.4	+1.3
	comp=Z,3.7nm,0.8s,baz=307,slow=4.5,SNR=2.4						
NVAR				LR	LR	22 51 47.1	
	comp=Z,189nm,18.9s,MS4.2,baz=310,slow=34						
ELK	**Elko**	**54.26**	**68**	P	**P**	**22 30 41.1**	**+1.2**
ELK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ELK				MLR	MLR		
	comp=Z,146nm,21.5s						
ELK	**Elko**	**54.26**	**68**	P	**P**	**22 30 41.1**	**+1.2**
	comp=Z,4.4nm,0.9s,mb4.4,baz=298,slow=8.3,SNR=13						
ELK				LR	LR	22 51 05.6	
	comp=Z,146nm,21.4s,MS4.0,baz=100,slow=33						
ELK	**Elko**	**54.26**	**68**	*e*P	**P**	**22 30 40.8**	**+0.9**
	comp=Z,18nm,1.2s,mb4.9						
IMW	**Indian Meadow**	**54.30**	**63**	*e*P	**P**	**22 30 41.3**	**+1.1**
	comp=Z,48nm,1.1s,mb5.3						
MNV	**Mina**	**54.31**	**72**	P	**P**	**22 30 41.5**	**+1.2**
MNV				pmax	pmax		
	comp=Z,84nm,1.6s,mb5.4						
MNV	**Mina**	**54.31**	**72**	*e*P	**P**	**22 30 41.4**	**+1.1**
	comp=Z,84nm,1.6s,mb5.4						
DGMT	**Dagmar**	**54.41**	**55**	*e*P	**P**	**22 30 41.0**	**+0.1**
	comp=Z,69nm,1.3s,mb5.4						
DGMT				*e*	pP	22 30 45.8	0.0
OMM	**Old Mammoth Mi**	**54.42**	**74**	*e*P	**P**	**22 30 42.9**	**+1.7**
RRI2	**Red Ridge**	**54.49**	**63**	*e*P	**P**	**22 30 42.7**	**+1.1**
	comp=Z,50nm,1.5s,mb5.2						
MOOW	**Moose Ponds**	**54.50**	**63**	*e*P	**P**	**22 30 42.5**	**+0.8**
	comp=Z,29nm,1.2s,mb5.2						
MOOW				*e*	pP	22 30 47.5	+1.0
TPAW	**Teton Pass**	**54.58**	**63**	*e*P	**P**	**22 30 43.4**	**+1.2**
	comp=Z,51nm,1.4s,mb5.4						
WUWY	**Wally Ulrich**	**54.65**	**63**	P	**P**	**22 30 44.3**	**+1.5**
LOHW	**Long Hollow**	**54.67**	**63**	*e*P	**P**	**22 30 43.5**	**+0.6**
	comp=Z,39nm,1.2s,mb5.3						
LAO	**LASA Array**	**54.70**	**57**	*e*P	**P**	**22 30 43.8**	**+0.7**
	comp=Z,44nm,1.0s,mb5.5						
LAO				*e*	pP	22 30 48.6	+0.7
SNOW	**Snow King Moun**	**54.70**	**63**	*e*P	**P**	**22 30 44.7**	**+1.5**
	comp=Z,23nm,1.1s,mb5.1						
HVU	**Hansel Valley**	**54.84**	**66**	P	**P**	**22 30 47.0**	**+2.8**
HVU	**Hansel Valley**	**54.84**	**66**	*e*P	**P**	**22 30 44.2**	**0.0**
MTUM	**Tungsten Hills**	**54.85**	**73**	*e*P	**P**	**22 30 44.0**	**-0.4**
AHID	**Auburn Hatcher**	**55.01**	**64**	*e*P	**P**	**22 30 46.2**	**+0.7**
	comp=Z,29nm,1.2s,mb5.2						
AHID				*e*	pP	22 30 51.0	+0.7
TPH	**Tonopah**	**55.08**	**72**	P	**P**	**22 30 47.1**	**+1.1**
TPH				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.4						
TPH	**Tonopah**	**55.08**	**72**	*e*P	**P**	**22 30 46.1**	**+0.1**
	comp=Z,42nm,1.1s,mb5.4						
LSA	**Lhasa**	**55.32**	**273**	P	**P**	**22 30 45.0**	**-2.9**
FRB	**Frobisher Bay**	**55.49**	**25**	P	**P**	**22 30 46.5**	**-2.1**
	comp=Z,15nm,0.4s,mb5.3,baz=327,slow=7.6,SNR=48						
HWUT	**Hardware Ranch**	**55.59**	**65**	*e*P	**P**	**22 30 50.5**	**+0.8**
	comp=Z,57nm,1.3s,mb5.4						
TRCR	**Troy Canyon**	**55.77**	**71**	*e*P	**P**	**22 30 52.2**	**+1.2**
TRCR				*e*	pP	22 30 56.9	+1.0
PDAR	**Pinedale Array**	**55.81**	**63**	P	**P**	**22 30 51.8**	**+0.6**
	comp=Z,2.7nm,0.5s,mb4.5,baz=325,slow=3.1,SNR=33						
PDAR				LR	LR	22 55 38.5	
	comp=Z,117nm,18.6s,MS4.0,baz=174,slow=37						
NOQ	**North Oquirrh**	**55.98**	**66**	*e*P	**P**	**22 30 53.3**	**+0.8**
CTU	**Camp Tracy**	**56.15**	**66**	*e*P	**P**	**22 30 54.4**	**+0.7**
CTU				*e*	pP	22 30 59.4	+0.8
NLU	**North Lily Min**	**56.51**	**67**	*e*P	**P**	**22 30 58.1**	**+1.8**
NLU				*e*	pP	22 31 02.7	+1.5
DAU	**Daniels Canyon**	**56.61**	**66**	P	**P**	**22 30 59.6**	**+2.6**
DAU	**Daniels Canyon**	**56.61**	**66**	*e*P	**P**	**22 30 58.5**	**+1.5**
MPU	**Maple Canyon**	**56.70**	**67**	*e*P	**P**	**22 30 59.4**	**+1.7**
ULM	**Lac du Bonnet**	**56.89**	**48**	P	**P**	**22 30 58.1**	**-0.8**
	comp=Z,12nm,0.9s,mb4.9,baz=317,slow=7.2,SNR=3.0						
ULM				LR	LR	22 57 44.6	
	comp=Z,140nm,18.0s,MS4.1,baz=311,slow=38						
MWC	**Mount Wilson**	**57.41**	**76**	*e*P	**P**	**22 31 03.4**	**+0.6**
MWC				*e*	pP	22 31 08.4	+0.8
TMUT	**Trail Mountain**	**57.45**	**67**	*e*P	**P**	**22 31 04.0**	**+1.0**
MVU	**Marysvale**	**57.49**	**68**	*e*P	**P**	**22 31 04.5**	**+1.3**
	comp=Z,113nm,2.1s,mb5.5						
MSU	**Marysvale**	**57.50**	**68**	P	**P**	**22 31 05.0**	**+1.6**
MSU	**Marysvale**	**57.50**	**68**	*e*P	**P**	**22 31 04.5**	**+1.2**
RSSD	**Black Hills**	**57.61**	**58**	*e*P	**P**	**22 31 04.0**	**-0.1**
RSSD				*e*	pP	22 31 09.1	+0.2
RSSD				pmax	pmax		
	comp=Z,76nm,1.3s,mb5.6						
RSSD	**Black Hills**	**57.61**	**58**	*e*P	**P**	**22 31 04.0**	**-0.1**
	comp=Z,76nm,1.3s,mb5.6						
RSSD				*e*	pP	22 31 09.1	+0.1
RWWY	**Rawlins**	**57.79**	**62**	*e*P	**P**	**22 31 03.8**	**-1.6**
	comp=Z,42nm,0.9s,mb5.5						
SRU	**San Rafael**	**57.95**	**67**	P	**P**	**22 31 07.8**	**+1.3**
SRU	**San Rafael**	**57.95**	**67**	*e*P	**P**	**22 31 07.4**	**+1.0**
NEN	**Nelson**	**58.15**	**72**	*e*P	**P**	**22 31 08.6**	**+0.7**
KAF	**Kangasniemi**	**58.25**	**337**	*e*p	**P**	**22 31 05.9**	**-2.4**
	comp=Z,1.8nm,0.3s,mb4.6,baz=28,slow=6.5						
KAF	**Kangasniemi**	**58.25**	**337**	*e*P	**P**	**22 31 05.9**	**-2.4**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.6						
PFO	**Pinyon Flat Ob**	**58.76**	**75**	P	**P**	**22 31 12.4**	**+0.2**
PFO				*e*	pP	22 31 17.5	+0.4
PFO				pmax	pmax		
	comp=Z,58nm,1.8s,mb5.3						
PFO	**Pinyon Flat Ob**	**58.76**	**75**	*e*P	**P**	**22 31 12.3**	**0.0**
	comp=Z,9.0nm,1.1s,mb4.7						
PFO				*e*	pP	22 31 16.9	-0.2
FINES	**FINESS Array B**	**58.90**	**337**	P	**P**	**22 31 10.2**	**-2.6**
	comp=Z,4.0nm,0.4s,mb4.8,baz=34,slow=7.3,SNR=65						
FINES				LR	LR	23 01 38.4	
	comp=Z,208nm,19.1s,MS4.3,baz=129,slow=41						
CMAR	**Chiang Mai Arr**	**59.52**	**259**	P	**P**	**22 31 16.1**	**-1.6**
	comp=Z,5.7nm,0.7s,mb4.7,baz=26,slow=6.7,SNR=33						
CMAR				LR	LR	22 59 43.4	
	comp=Z,314nm,18.1s,MS4.5,baz=35,slow=39						
GUN	**Gumba**	**59.70**	**276**	*e*P	**P**	**22 31 17.6**	**-1.2**
	comp=Z,15nm,0.5s,mb5.2						
ISCO	**Idaho Springs**	**60.00**	**63**	P	**P**	**22 31 22.4**	**+1.7**
ISCO				pmax	pmax		
	comp=Z,100nm,1.7s,mb5.6						
ISCO	**Idaho Springs**	**60.00**	**63**	*e*P	**P**	**22 31 22.2**	**+1.5**
	comp=Z,104nm,1.8s,mb5.6						
RW3	**Ridgway**	**60.08**	**65**	*e*P	**P**	**22 31 22.0**	**+0.7**
KKN	**Kakani**	**60.14**	**277**	*e*P	**P**	**22 31 19.1**	**-2.7**
WUAZ	**Wupatki**	**60.14**	**70**	*e*P	**P**	**22 31 23.0**	**+1.3**
	comp=Z,52nm,1.3s,mb5.4						
WUAZ				*e*	pP	22 31 27.9	+1.2
PKI	**Pulchoki**	**60.23**	**276**	*e*P	**P**	**22 31 18.0**	**-4.5**
GKN	**Gorkha**	**60.35**	**277**	*e*P	**P**	**22 31 23.2**	**0.0**
	comp=Z,18nm,0.9s,mb5.1						
DMN	**Daman**	**60.38**	**277**	*e*P	**P**	**22 31 19.2**	**-4.2**
EYMN	**Ely**	**60.52**	**48**	*e*P	**P**	**22 31 23.3**	**-0.8**
	comp=Z,20nm,1.4s,mb5.0						
KOLN	**Koldanda**	**61.12**	**278**	*e*P	**P**	**22 31 25.7**	**-2.8**
	comp=Z,5.3nm,0.4s,mb5.0						
OBN	**Obninsk**	**61.56**	**328**	*i* P	**P**	**22 31 29.9**	**-1.2**
OBN				*i*		22 32 11.0	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
OBN				MLR	MLR		
	comp=Z,400nm,21.0s,MS4.5						
SDCO	**Great Sand Dun**	**61.60**	**64**	*e*P	**P**	**22 31 32.4**	**+0.8**
	comp=Z,33nm,1.4s,mb5.3						
SDCO				LR	LR		
	comp=Z,322nm,20.0s,MS4.5						
NB2	**NORSAR Subarra**	**62.12**	**344**	P	**P**	**22 31 32.4**	**-2.4**
	comp=Z,2.2nm,0.6s,mb4.5,baz=20,slow=7.0						
NOA	**NORSAR Array B**	**62.12**	**344**	P	**P**	**22 31 32.2**	**-2.6**
	comp=Z,1.5nm,0.5s,mb4.4,baz=20,slow=6.9,SNR=9.8						
NOA				LR	LR	23 02 42.3	
	comp=Z,91nm,18.2s,MS4.0,baz=350,slow=40						
NOA	**NORSAR Array B**	**62.12**	**344**	P	**P**	**22 31 32.2**	**-2.6**
NOA				LR	LR	23 02 42.3	
ANMO	**Albuquerque**	**63.21**	**67**	*e*P	**P**	**22 31 42.9**	**+0.5**
ANMO				*e*	pP	22 31 48.0	+0.7
ANMO				pmax	pmax		
	comp=Z,12nm,1.1s						
ANMO	**Albuquerque**	**63.21**	**67**	P	**P**	**22 31 43.0**	**+0.6**
	comp=Z,2.3nm,0.8s,mb4.3,baz=320,slow=6.4,SNR=9.3						
ANMO	**Albuquerque**	**63.21**	**67**	*e*P	**P**	**22 31 42.9**	**+0.5**
	comp=Z,12nm,1.1s,mb4.9						
ANMO				*e*	pP	22 31 48.0	+0.8
LAZ	**Ladron**	**63.26**	**68**	*e*P	**P**	**22 31 43.5**	**+0.8**
LAZ				*e*	pP	22 31 49.0	+1.3
LENM	**Lemitar**	**63.53**	**68**	*e*P	**P**	**22 31 44.8**	**+0.4**
LENM				*e*	pP	22 31 50.4	+1.0
SCHQ	**Schefferville**	**63.62**	**29**	P	**P**	**22 31 43.2**	**-1.4**
	comp=Z,5.4nm,0.5s,mb4.8,baz=352,slow=7.4,SNR=18						
SCHQ				LR	LR	23 04 28.0	
	comp=Z,96nm,18.5s,MS4.0,baz=337,slow=41						
BNM	**Barren Site**	**63.73**	**68**	*e*P	**P**	**22 31 47.0**	**+1.3**
BNM				*e*	pP	22 31 51.9	+1.2
VRSR	**Storozhevoye**	**64.00**	**324**	*e*P	**P**	**22 31 46.1**	**-1.1**
VRSR				pmax	pmax		
	comp=N,6.0nm,0.7s						
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
VRSR				pmax	pmax		
	comp=E,5.0nm,0.6s						
HNR	**Honiara**	**64.06**	**182**	LR	LR	22 59 16.0	
	comp=E,164nm,19.0s,MS4.2,baz=349,slow=36						
KSU1	**Kansas State U**	**65.04**	**57**	*e*P	**P**	**22 31 53.7**	**-0.5**
CPRX	**Cap Rock**	**66.06**	**66**	*e*P	**P**	**22 32 00.3**	**-0.5**
MNTX	**Cornudas Mount**	**66.28**	**68**	*e*P	**P**	**22 32 02.4**	**+0.2**
	comp=E,43nm,1.3s,mb5.3						
CLNB	**Carlsbad**	**66.65**	**67**	P	**P**	**22 32 05.3**	**+0.8**
CLNB				*e*	pP	22 32 10.0	+0.6
WMOK	**Wichita Mounta**	**67.37**	**62**	P	**P**	**22 32 09.3**	**+0.1**
WMOK				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.3						
WMOK	**Wichita Mounta**	**67.37**	**62**	*e*P	**P**	**22 32 08.9**	**-0.3**
	comp=Z,38nm,1.2s,mb5.3						
WMOK				*e*	pP	22 32 13.4	-0.7
AKASG	**Malin Array Be**	**67.61**	**330**	P	**P**	**22 32 08.2**	**-2.2**
	comp=Z,3.6nm,0.4s,mb4.7,baz=28,slow=7.1,SNR=27						
KSM	**Kuching**	**67.61**	**238**	*e*P	**P**	**22 32 10.4**	**-0.6**
GOF	**Gofitskoye**	**67.77**	**318**	*e*P	**P**	**22 32 08.0**	**-3.4**
GOF				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.1						
SLM	**Saint Louis**	**68.44**	**53**	*e*P	**P**	**22 32 07.7**	**-8.0**
KIV	**Kislovodsk**	**68.83**	**317**	*e*P	**P**	**22 32 17.0**	**-1.0**
KIV				*e*		22 32 40.6	
KIV				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
KIV	**Kislovodsk**	**68.83**	**317**	*e*P	**P**	**22 32 15.5**	**-2.6**
	comp=Z,7.6nm,0.8s,mb4.7						
FVM	**French Village**	**68.87**	**54**	P	**P**	**22 32 17.4**	**-1.0**
FVM				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.1						
FVM	**French Village**	**68.87**	**54**	*e*P	**P**	**22 32 16.2**	**-2.2**
	comp=Z,29nm,1.1s,mb5.1						
LTX	**Lajitas**	**69.05**	**69**	*e*P	**P**	**22 32 20.3**	**+0.6**
LTX				*e*	pP	22 32 25.1	+0.5
LTX				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.2						
LTX	**Lajitas**	**69.05**	**69**	*e*P	**P**	**22 32 20.3**	**+0.6**
	comp=Z,41nm,1.2s,mb5.2						
LTX				*e*	pP	22 32 25.1	+0.5
TXAR	**Lajitas Array**	**69.05**	**69**	P	**P**	**22 32 19.9**	**+0.2**
	comp=Z,5.5nm,0.7s,mb4.6,baz=299,slow=4.7,SNR=56						
TXAR				LR	LR	23 04 53.1	
	comp=Z,108nm,20.3s,MS4.1,baz=150,slow=38						
ZEI	**Tsey**	**69.34**	**316**	*e*P	**P**	**22 32 18.8**	**-2.4**
ZEI				*i* *PP	pP	22 32 28.7	+2.6
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
KULM	**Kulim**	**69.35**	**249**	*e*P	**P**	**22 32 20.7**	**-1.1**
LVV	**L'vov**	**69.86**	**332**	*e*P	**P**	**22 32 16.0**	**-8.3**
LVV				*e*		22 32 46.6	
LVV				*e*		22 42 17.4	
LVV				MLR	MLR		
	comp=Z,240nm,17.0s,MS4.5						
LVV				MLR	MLR		
	comp=N,230nm,16.0s,MS4.6						
LVV				MLR	MLR		
	comp=E,140nm,16.0s,MS4.6						
PARMO	**Parma**	**70.26**	**54**	*e*P	**P**	**22 32 28.1**	**+1.1**
PARMO				*e*	pP	22 32 31.2	-0.6
SOC	**Sochi**	**70.28**	**319**	*e*P	**P**	**22 32 23.0**	**-4.0**
SOC				*e*PPP	PPP	22 36 44.5	-0.3
SOC				*e*S	S	22 41 31.8	-5.1
SOC				*e*		22 42 27.1	
SOC				*e*SSS	SSS	22 49 03.8	-11
SOC				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
SOC				pmax	pmax		
	comp=N,50nm,1.4s						
SOC				pmax	pmax		
	comp=E,12nm,1.2s						
SOC				MLR	MLR		
	comp=E,203nm,18.0s,MS4.6						
SOC				MLR	MLR		
	comp=Z,421nm,18.0s,MS4.7						
SOC				MLR	MLR		
	comp=N,263nm,21.0s,MS4.6						
GENY	**Geneseo**	**70.34**	**42**	*e*P	**P**	**22 32 26.8**	**-0.5**
KWP	**Kalwaria**	**70.38**	**333**	*e*P	**P**	**22 32 27.6**	**+0.2**
OJC	**Ojcow**	**70.57**	**335⇑**	*e*P	**P**	**22 32 28.2**	**-0.4**
NCB	**Newcomb**	**70.67**	**39**	*e*P	**P**	**22 32 27.6**	**-1.7**
	comp=N,28nm,1.9s,mb4.9						
KSP	**Ksiaz**	**70.80**	**338**	*e*P	**P**	**22 32 30.0**	**0.0**
UTMT	**University of**	**70.93**	**54**	*e*P	**P**	**22 32 31.1**	**0.0**
UTMT				*e*	pP	22 32 36.1	+0.2
CLL	**Collm**	**71.05**	**340⇓**	*i*P	**P**	**22 32 31.3**	**-0.2**
CLL				*e*		22 32 42.0	
CLL				pmax	pmax		
	comp=Z,27nm,1.5s,mb5.0						
CLL	**Collm**	**71.05**	**340⇓**	*i*P	**P**	**22 32 31.3**	**-0.2**
	comp=Z,27nm,1.5s,mb5.0						
CLL				*e*		22 32 42.0	
CLL	**Collm**	**71.05**	**340**	⇓P	**P**	**22 32 31.3**	**-0.2**
	comp=Z,logA/T=1.3,mb5.0						
CLL				*e**SP	sP	22 32 37.0	-1.2
KOLS	**Kolonicke sedl**	**71.14**	**333**	*i* P	**P**	**22 32 32.4**	**+0.4**
KOLS				*e*pP	pP	22 32 41.7	+4.7
UPC	**Upice**	**71.18**	**338⇑**	*i*P	**P**	**22 32 31.9**	**-0.4**
GNI	**Garni**	**71.19**	**314**	P	**P**	**22 32 32.1**	**-0.5**
	comp=Z,2.9nm,0.5s,mb4.5,baz=333,slow=9.0,SNR=3.1						
DPC	**Dobruska-Polom**	**71.26**	**337**	*e*P	**P**	**22 32 33.5**	**+0.7**
DPC				AMS	AMS	23 10 20.0	
	comp=Z,200nm,14.1s						
BRG	**Berggiesshubel**	**71.28**	**339**	*e*P	**P**	**22 32 33.7**	**+0.9**
BRG				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
BRG				MLR	MLR		
	comp=N,260nm,12.1s,MS4.8						
BRG				MLR	MLR		
	comp=Z,260nm,12.1s,MS4.7						
BRG				MLR	MLR		
	comp=E,110nm,12.0s,MS4.8						
BRG	**Berggiesshubel**	**71.28**	**339**	*e*P	**P**	**22 32 33.7**	**+0.9**
	comp=E,8.9nm,1.1s,mb4.6						
BRG				LR	LR		
	comp=Z,260nm,12.1s,MS4.7						
OKC	**Ostrava-Krasne**	**71.32**	**336⇑**	*i*P	**P**	**22 32 32.9**	**-0.2**
ACCN	**Adirondack Com**	**71.38**	**39**	*e*P	**P**	**22 32 32.4**	**-1.2**
PVCC	**Panska Ves**	**71.47**	**339⇑**	*e*P	**P**	**22 32 34.4**	**+0.4**
PVCC				*e*pP	sP	22 32 52.3	+12
PVCC				AMS	AMS	23 09 10.0	
	comp=Z,400nm,11.0s						
MORC	**Moravsky Berou**	**71.52**	**336**	*e*P	**P**	**22 32 33.2**	**-1.1**
MORC				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
MORC	**Moravsky Berou**	**71.52**	**336**	*e*P	**P**	**22 32 33.2**	**-1.1**
	comp=Z,14nm,1.3s,mb4.7						
WVT	**Waverly**	**71.59**	**53**	*e*P	**P**	**22 32 34.0**	**-1.0**
WVT				*e*	pP	22 32 38.9	-1.0
WVT				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.0						
WVT	**Waverly**	**71.59**	**53**	*e*P	**P**	**22 32 34.0**	**-1.0**
	comp=Z,28nm,1.3s,mb5.0						
WVT				*e*	pP	22 32 38.9	-1.0
KAKA	**Kakadu**	**71.73**	**210**	*e*P	**P**	**22 32 35.0**	**-1.2**
	comp=Z,44nm,1.4s,mb5.2						
MOX	**Moxa**	**71.96**	**341**	*e*P	**P**	**22 32 36.0**	**-0.9**
PRU	**Pruhonice**	**71.99**	**338⇑**	*e*P	**P**	**22 32 36.7**	**-0.4**
PRU				AMS	AMS	23 08 40.0	
	comp=Z,300nm,13.7s						
OXF	**Oxford**	**72.17**	**55**	*e*P	**P**	**22 32 39.2**	**+0.7**
OXF				*e*	pP	22 32 42.6	-0.8
OXF				pmax	pmax		
	comp=Z,75nm,1.3s,mb5.5						
OXF	**Oxford**	**72.17**	**55**	*e*P	**P**	**22 32 39.2**	**+0.7**
	comp=Z,75nm,1.3s,mb5.5						
OXF				*e*	pP	22 32 42.6	-0.8
NKC	**Novy Kostel**	**72.19**	**340**	*e*P	**P**	**22 32 38.7**	**+0.4**
VYHS	**Vyhne**	**72.41**	**335**	*i* P	**P**	**22 32 40.2**	**+0.5**
PLAL	**Pickwick Lake**	**72.41**	**54**	*e*P	**P**	**22 32 39.1**	**-0.9**
	comp=Z,27nm,1.1s,mb5.1						
PLAL				*e*	pP	22 32 43.6	-1.2
PSZ	**Piszkesteto**	**72.69**	**334**	*e*P	**P**	**22 32 42.0**	**+0.8**
PSZ				pmax	pmax		
	comp=Z,29nm,1.7s,mb4.9						
PSZ	**Piszkesteto**	**72.69**	**334**	*e*P	**P**	**22 32 42.0**	**+0.8**
	comp=Z,30nm,1.7s,mb4.9						
GRA1	**Grafenberg Arr**	**72.94**	**340**	*e*P	**P**	**22 32 42.4**	**-0.2**
	comp=Z,43nm,2.2s,mb5.0						
GRF	**Grafenberg Arr**	**72.94**	**340**	*e*P	**P**	**22 32 42.4**	**-0.2**
GRF				pmax	pmax		
	comp=Z,43nm,2.2s,mb5.0						
GRF	**Grafenberg Arr**	**72.94**	**340**	*e*P	**P**	**22 32 42.4**	**-0.2**
GRF				pmax	pmax		
	comp=Z,43nm,2.2s,mb5.0						
GRF	**Grafenberg Arr**	**72.94**	**340**	*e*P	**P**	**22 32 42.4**	**-0.2**
	comp=Z,43nm,2.2s,mb5.0						
KHC	**Kasperske Hory**	**73.00**	**339**	*e*P	**P**	**22 32 41.8**	**-1.2**
KHC				*e*pP	pP	22 32 57.7	+10
KHC				AMS	AMS	23 09 20.0	
	comp=Z,200nm,13.2s						
ZST	**Bratislava**	**73.10**	**336**	*i* P	**P**	**22 32 44.5**	**+0.9**
TZTN	**Tazewell**	**73.18**	**50**	*e*P	**P**	**22 32 44.0**	**-0.3**
SWET	**Sewanee**	**73.21**	**52**	*e*P	**P**	**22 32 43.7**	**-0.8**
SWET				*e*	pP	22 32 48.2	-1.3
GERES	**GERESS Array B**	**73.25**	**339**	P	**P**	**22 32 43.7**	**-0.8**
	comp=Z,1.1nm,0.5s,mb4.1,baz=37,slow=5.7,SNR=19						
GERES				LR	LR	23 10 04.0	
	comp=Z,132nm,20.0s,MS4.2,baz=200,slow=40						
MLR	**Muntele Rosu**	**73.26**	**329⇑**	*i*P	**P**	**22 32 44.6**	**0.0**
MLR	**Muntele Rosu**	**73.26**	**329⇑**	*i*P	**P**	**22 32 44.5**	**-0.1**
TIRR	**Tirgusor**	**73.44**	**327⇑**	*i*P	**P**	**22 32 45.2**	**-0.4**
FWV	**Forest Hill**	**73.50**	**47**	P	**P**	**22 32 46.6**	**+0.4**
FWV				*e*	pP	22 32 50.5	-0.6
GIVF	**Givet**	**73.65**	**345**	*e*P	**P**	**22 32 44.5**	**-2.2**
BAIF	**Baives**	**73.78**	**345**	*e*P	**P**	**22 32 45.1**	**-2.4**
BLA	**Blacksburg**	**73.98**	**47**	P	**P**	**22 32 49.9**	**+1.0**
BLA				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
BLA	**Blacksburg**	**73.98**	**47**	*e*P	**P**	**22 32 48.2**	**-0.7**
	comp=Z,19nm,1.0s,mb5.0						
ARSA	**Arzberg**	**74.36**	**337⇑**	*i*P	**P**	**22 32 51.8**	**+0.9**
LRAL	**Lakeview Retre**	**74.52**	**54**	*e*P	**P**	**22 32 50.7**	**-1.4**
	comp=Z,4.5nm,0.5s,mb4.7						
CDF	**Champ du Feu**	**74.89**	**343**	*e*P	**P**	**22 32 52.1**	**-1.9**
KBA	**Koelnbreinsper**	**75.00**	**338⇑**	*i*P	**P**	**22 32 55.9**	**+1.3**
MEZF	**Maizieres J'vi**	**75.17**	**344**	*e*P	**P**	**22 32 53.8**	**-1.8**
HAU	**Haudompre**	**75.44**	**343**	*e*P	**P**	**22 32 56.1**	**-1.0**
HAU				*e*R			
	comp=Z,107nm,19.4s						
LDF	**La Druitiere**	**75.81**	**348**	*e*P	**P**	**22 32 57.0**	**-2.2**
CTA	**Charters Tower**	**75.81**	**195**	*e*P	**P**	**22 32 59.5**	**-0.3**
	comp=Z,15nm,0.9s,mb4.9						
CTA	**Charters Tower**	**75.81**	**195**	*e*P	**P**	**22 32 59.5**	**-0.3**
CTA				pmax	pmax		
	comp=Z,15nm,0.9s						
BRTR	**Keskin Array B**	**75.89**	**321**	P	**P**	**22 32 58.6**	**-1.2**
	comp=Z,1.7nm,0.5s,mb4.3,baz=40,slow=3.3,SNR=15						
GRR	**Gorron**	**76.10**	**348**	*e*P	**P**	**22 32 59.8**	**-1.0**
ROSF	**Rostrenen**	**76.42**	**350**	*e*P	**P**	**22 33 00.8**	**-1.8**
	comp=Z,35nm,1.2s,mb4.9						
ROSF	**Rostrenen**	**76.42**	**350**	*e*P	**P**	**22 33 00.8**	**-1.8**
ROSF				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
SGMF	**Saint Gilles**	**76.42**	**349**	*e*P	**P**	**22 33 00.7**	**-2.0**
LOR	**Lormes**	**76.56**	**345**	*e*P	**P**	**22 33 01.4**	**-2.0**
	comp=Z,5.1nm,0.7s,mb4.3						
LOR				*e*R			
	comp=Z,153nm,18.5s						
LOR	**Lormes**	**76.56**	**345**	*e*P	**P**	**22 33 01.4**	**-2.0**
LOR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
LOR				MLR	MLR		
	comp=Z,150nm,18.5s,MS4.3						
SSF	**Saint Saulge**	**76.81**	**345**	*e*P	**P**	**22 33 03.2**	**-1.7**
SSF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
SSF	**Saint Saulge**	**76.81**	**345**	*e*P	**P**	**22 33 03.2**	**-1.7**
	comp=Z,2.3nm,0.7s,mb4.2						
CABF	**La Chapelle**	**76.84**	**343**	*e*P	**P**	**22 33 03.7**	**-1.3**
	comp=Z,10nm,0.9s,mb4.5						
CABF	**La Chapelle**	**76.84**	**343**	*e*P	**P**	**22 33 03.7**	**-1.3**
CABF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**77.10**	**345**	*e*P	**P**	**22 33 04.5**	**-2.0**
	comp=Z,25nm,1.3s,mb4.7						
AVF	**Avril sur Loir**	**77.10**	**345**	*e*P	**P**	**22 33 04.5**	**-2.0**
AVF				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
SMF	**Signal de Mont**	**77.17**	**345**	*e*P	**P**	**22 33 04.8**	**-2.1**
	comp=Z,34nm,1.4s,mb4.8						
SMF	**Signal de Mont**	**77.17**	**345**	*e*P	**P**	**22 33 04.8**	**-2.1**
SMF				pmax	pmax		

	comp=Z,17nm,1.4s,mb4.8						
BGF	**Bois d'Agland**	**77.40**	**345**	*e*P	**P**	**22 33 06.2**	**-1.9**
	comp=Z,4.7nm,0.5s,mb4.4						
BGF	**Bois d'Agland**	**77.40**	**345**	*e*P	**P**	**22 33 06.2**	**-1.9**
BGF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
TCF	**Toulx Ste Croi**	**77.76**	**346**	*e*P	**P**	**22 33 08.3**	**-1.8**
MFF	**Saint Martin d**	**77.77**	**347**	*e*P	**P**	**22 33 08.4**	**-1.8**
SKO	**Skopje**	**77.78**	**331**	*e*P	**P**	**22 33 09.0**	**-1.3**
LPL	**La Plagne**	**77.79**	**342**	*e*P	**P**	**22 33 09.8**	**-0.5**
	comp=Z,16nm,0.9s,mb4.7						
LPL	**La Plagne**	**77.79**	**342**	*e*P	**P**	**22 33 09.8**	**-0.5**
LPL				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
LPG	**La Plagne**	**77.80**	**342**	*e*P	**P**	**22 33 09.9**	**-0.5**
	comp=Z,30nm,1.2s,mb4.8						
LPG	**La Plagne**	**77.80**	**342**	*e*P	**P**	**22 33 09.9**	**-0.5**
LPG				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
WRAB	**Tennant Creek**	**78.09**	**206**	*e*P	**P**	**22 33 11.8**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,105nm,1.5s,mb5.5						
WRAB	**Tennant Creek**	**78.09**	**206**	*e*P	**P**	**22 33 11.8**	**-0.6**
	comp=Z,105nm,1.5s,mb5.5						
WB2	**Warramunga Arr**	**78.10**	**206**	*e*P	**P**	**22 33 12.1**	**-0.4**
WRA	**Warramunga Arr**	**78.10**	**206**	P	**P**	**22 33 11.8**	**-0.7**
	comp=Z,8.7nm,0.6s,mb4.9,baz=20,slow=5.9,SNR=85						
ORIF	**Oris-en-Rattie**	**78.52**	**343**	*e*P	**P**	**22 33 13.6**	**-0.7**
	comp=Z,22nm,1.0s,mb4.7						
ORIF				*e*R			
	comp=Z,116nm,17.0s						
MBDF	**Montbardon**	**78.55**	**342**	*e*P	**P**	**22 33 13.6**	**-0.9**
	comp=Z,13nm,0.8s,mb4.6						
MBDF	**Montbardon**	**78.55**	**342**	*e*P	**P**	**22 33 13.6**	**-0.9**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
ISP	**Isparta**	**78.67**	**323**	P	**P**	**22 33 14.3**	**-1.0**
ISP				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ISP	**Isparta**	**78.67**	**323**	P	**P**	**22 33 14.3**	**-1.0**
	comp=Z,2.6nm,0.6s,mb4.3						
VIVF	**Saint-Julien-l**	**78.78**	**344**	*e*P	**P**	**22 33 14.6**	**-1.1**
	comp=Z,14nm,1.1s,mb4.5						
VIVF	**Saint-Julien-l**	**78.78**	**344**	*e*P	**P**	**22 33 14.6**	**-1.1**
VIVF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
RJF	**Les Rejaudoux**	**78.82**	**346**	*e*P	**P**	**22 33 14.6**	**-1.4**
RJF				*e*R			
	comp=Z,153nm,17.0s						
CAF	**Calviac**	**79.11**	**345**	*e*P	**P**	**22 33 16.4**	**-1.2**
	comp=Z,17nm,1.1s,mb4.6						
CAF	**Calviac**	**79.11**	**345**	*e*P	**P**	**22 33 16.4**	**-1.2**
CAF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
SBF	**Sospel**	**79.26**	**341**	*e*P	**P**	**22 33 17.1**	**-1.3**
LFF	**La Frestale**	**79.29**	**346**	*e*P	**P**	**22 33 17.3**	**-1.2**
LASF	**Ste Croix**	**79.67**	**344**	*e*P	**P**	**22 33 20.4**	**-0.2**
	comp=Z,14nm,1.1s,mb4.5						
FRF	**La Foret Royal**	**79.70**	**342**	*e*P	**P**	**22 33 19.3**	**-1.5**
TAOE	**Nuku Hiva Isla**	**79.78**	**122**	*e*PP	PP	22 36 51.5	+27
	comp=Z,713nm,39.9s						
TAOE				*e*LR	LR	22 58 17.5	
	comp=Z,439nm,25.7s,baz=342						
LMR	**La Mourre**	**79.94**	**342**	*e*P	**P**	**22 33 21.1**	**-1.0**
	comp=Z,17nm,1.0s,mb4.6						
LMR	**La Mourre**	**79.94**	**342**	*e*P	**P**	**22 33 21.1**	**-1.0**
LMR				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
PGF	**Pioggiola**	**80.23**	**340**	*e*P	**P**	**22 33 22.2**	**-1.4**
MTLF	**Montolieu**	**80.64**	**345**	*e*P	**P**	**22 33 25.1**	**-0.7**
EPF	**Esparros**	**81.21**	**346**	*e*P	**P**	**22 33 27.4**	**-1.4**
SJPF	**Ste Jean**	**81.34**	**348**	*e*P	**P**	**22 33 28.0**	**-1.5**
ETSF	**Etsaut**	**81.46**	**347**	*e*P	**P**	**22 33 29.7**	**-0.4**
HASS	**Wahat al Ahsa'**	**81.47**	**302**	P	**P**	**22 33 28.4**	**-2.1**
TIP	**Timpagrande**	**81.66**	**333**	*e*P	**P**	**22 33 30.8**	**-0.4**
QURS	**Qurayyt al Mil**	**81.78**	**315**	P	**P**	**22 33 32.2**	**+0.2**
PPT	**Papeete**	**83.12**	**134**	*e*LR	LR	22 59 56.7	
	comp=Z,140nm,23.5s						
PPT	**Papeete**	**83.12**	**134**	LR	LR	23 06 46.5	
	comp=Z,148nm,19.2s,MS4.4,baz=3.8,slow=33						
HILS	**Ha'il**	**83.33**	**309**	P	**P**	**22 33 39.7**	**-0.4**
ARSS	**Ar Rass**	**83.96**	**307**	P	**P**	**22 33 42.5**	**-0.8**
EIL	**Elat**	**84.26**	**316**	*e*P	**P**	**22 33 43.7**	**-1.0**
	comp=Z,61nm,1.7s,mb5.5						
ALWS	**Ilw as Safayha**	**84.53**	**315**	P	**P**	**22 33 46.2**	**+0.2**
JMQS	**Jabal Moqyreh**	**84.57**	**314**	P	**P**	**22 33 46.3**	**0.0**
MZLS	**Mizel**	**84.62**	**305**	P	**P**	**22 33 45.5**	**-1.2**
JMOS	**Jabal al Moall**	**84.63**	**315**	P	**P**	**22 33 47.5**	**+0.9**
MTE	**Manteigas**	**84.68**	**352**	*e*P	**P**	**22 33 46.7**	**+0.1**
	comp=Z,12nm,1.0s,mb5.0						
HAQS	**Haql**	**84.81**	**315**	P	**P**	**22 33 47.5**	**+0.1**
TBKS	**Tabuk**	**84.87**	**314**	P	**P**	**22 33 47.7**	**-0.1**
ESDC	**Sonseca Array**	**85.05**	**349**	P	**P**	**22 33 48.2**	**-0.3**
	comp=Z,2.9nm,0.6s,mb4.6,baz=4.3,slow=4.8,SNR=27						
AFFS	**'Afif**	**85.74**	**306**	P	**P**	**22 33 51.2**	**-1.1**
KBRS	**Khaybar**	**85.83**	**310**	P	**P**	**22 33 52.9**	**+0.3**
STKA	**Stephens Creek**	**88.11**	**197**	*e*P	**P**	**22 34 04.0**	**+0.4**
	comp=Z,8.3nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**88.11**	**197**	P	**P**	**22 34 04.2**	**+0.6**
	comp=Z,9.1nm,0.9s,mb5.0,baz=26,slow=11,SNR=6.5						
STKA				LR	LR	23 10 48.0	
	comp=Z,131nm,20.6s,MS4.3,baz=202,slow=34						
TBI	**Tubuai**	**88.34**	**136**	*e*LR	LR	23 02 36.5	
	comp=Z,148nm,30.0s						
RIV	**Riverview**	**88.80**	**189**	*e*P	**P**	**22 34 08.6**	**+1.8**
DBIC	**Dimbokro**	**117.69**	**345**	PKP	PKPdf	22 39 58.2	-3.8
	comp=Z,2.3nm,0.6s,baz=283,slow=5.3,SNR=5.6						
LPAZ	**La Paz**	**125.80**	**65**	PKP	PKPdf	22 40 16.0	-1.7
	comp=Z,3.7nm,1.0s,baz=16,slow=9.6,SNR=7.0						
LPAZ	**La Paz**	**125.80**	**65**	*e*P	PKPdf	22 40 15.8	-1.9
MATP	**Matopo**	**130.91**	**295**	PKP	PKPdf	22 40 24.1	-3.3
	comp=Z,4.0nm,0.9s,baz=45,slow=7.5,SNR=4.9						
VNDA	**Vanda**	**132.11**	**180**	PKP	PKPdf	22 40 25.8	-2.5
	comp=Z,2.1nm,0.8s,baz=312,slow=4.0,SNR=14						
VNDA	**Vanda**	**132.11**	**180**	PKP	PKPdf	22 40 25.8	-2.5
BDFB	**Brasilia**	**134.59**	**42**	PKP	PKPdf	22 40 32.2	-2.2
	comp=Z,2.7nm,0.6s,baz=14,slow=6.0,SNR=4.4						
CFAA	**Coronel Fontan**	**137.94**	**77**	PKP	PKPdf	22 40 39.5	-0.7
	comp=Z,0.3nm,0.7s,baz=359,slow=3.4,SNR=4.4						
BOSA	**Boshof**	**139.26**	**292**	PKP	PKPdf	22 40 40.0	-2.6
	comp=Z,6.0nm,1.1s,baz=21,slow=9.3,SNR=5.5						
CPUP	**Villa Florida**	**139.69**	**61**	PKhKP		22 40 37.6	
	comp=Z,3.8nm,1.1s,baz=45,slow=4.3,SNR=5.0						
MAW	**Mawson**	**141.99**	**218**	PKP	PKPdf	22 40 42.4	-3.8
	comp=Z,4.9nm,0.9s,baz=9.2,slow=5.0,SNR=7.3						
PLCA	**Paso Flores**	**143.02**	**90**	PKhKP		22 40 43.6	
	comp=Z,5.5nm,0.9s,baz=2.6,slow=3.7,SNR=4.9						
QSPA	**South Pole Qui**	**144.60**	**180**	*e*P	PKPbc	22 40 46.5	-0.1
TRQA	**Tornquist**	**146.15**	**79**	*e*P	PKPbc	22 40 52.7	+0.9
TRQA				*e*		22 40 58.1	
SYO	**Syowa Base**	**150.70**	**219**	⇑PKPdf	PKPdf	22 41 02.5	+1.8
VNA3	**Neumayer Olymp**	**163.13**	**190**	P	PKPdf	22 41 14.0	-2.1
VNA3	**Neumayer Olymp**	**163.13**	**190**		PKPab	22 42 03.6	-1.3
VNA2	**Neumayer--Watz**	**163.18**	**192**	PKPdf	PKPdf	22 41 13.4	-2.7
VNA1	**Neumayer--Stat**	**163.55**	**192**	P	PKPdf	22 41 15.1	-1.4

MOS ***12*** *22:24:34.0±0.7,54.72N×162.00E,h20^{km},mb4.2/1,Error ellipse: s-maj=37.5km s-min=12.4km az=68.6*

KRSC 12 22:24:34.6±0.6**,54.76N×161.94E,h21**^{km}±3^{km}**,ML4.3, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.24**	**211**	*i* P	Pb	22 24 41.1	+0.7
MKZ				*i* S	Sb	22 24 45.3	+1.0
TUMR	**Tumrok**	**1.16**	**298**	*e*P	Pn	22 24 55.6	-0.2
TUMR				*e*S	Sb	22 25 10.8	+0.4
KMNR	**Kamenistaya**	**1.40**	**316**	*i* P	Pn	22 24 59.1	-0.1
KMNR				*i* S	Sn	22 25 17.8	+0.7
ZLN	**Zelenaya**	**1.42**	**333**	*e*P	Pn	22 24 59.7	+0.2
ZLN				*e*S	Sn	22 25 17.6	0.0
LGNR	**Loginova**	**1.50**	**332**	*e*P	Pn	22 25 01.6	+0.9
LGNR				*e*S	Sn	22 25 21.4	+1.5
CIRR	**Tsirk**	**1.52**	**334**	*i* P	Pn	22 25 01.4	+0.5
CIRR				*e*S	Sn	22 25 20.8	+0.6
KBTR	**Krutoberegovo**	**1.54**	**19**	P	Pn	22 25 01.6	+0.4
KBTR				S	Sn	22 25 21.7	+1.1
KBTR	**Krutoberegovo**	**1.54**	**19**	*e*P	Pn	22 25 01.5	+0.3
KBTR				*e*S	Sn	22 25 21.7	+1.1
KPT	**Kopyto**	**1.56**	**322**	*e*P	Pn	22 25 02.7	+1.2
KPT				*e*S	Sn	22 25 23.0	+1.8
KII	**Karymskiy**	**1.63**	**245**	P	Pn	22 25 02.9	+0.4
KII				S	Sn	22 25 23.5	+0.5
KII	**Karymskiy**	**1.63**	**245**	*e*P	Pn	22 25 02.8	+0.3
KII				*e*S	Sn	22 25 23.4	+0.4
KRSR	**Krestovskiy**	**1.66**	**332**	*e*P	Pn	22 25 02.8	-0.1
KRSR				*e*S	Sn	22 25 23.7	0.0
KLY	**Klyuchi**	**1.72**	**335**	*e*P	Pn	22 25 03.0	-0.8
KLY				*e*S	Sn	22 25 23.8	-1.5
KOZ	**Kozyrevsk**	**1.75**	**319**	*e*P	Pn	22 25 04.6	+0.3
KOZ				*e*S	Sn	22 25 26.7	+0.5
SRDR	**Sredinnyy**	**2.01**	**322**	*e*P	Pn	22 25 08.6	+0.7
SRDR				*e*S	Sn	22 25 34.2	+1.6
SPN	**Mys Shipunski**	**2.01**	**215**	P	Pn	22 25 06.9	-1.1
SPN				S	Sn	22 25 29.8	-3.0
SPN	**Mys Shipunski**	**2.01**	**215**	*e*P	Pn	22 25 07.0	-1.0
SPN				*e*S	Sn	22 25 30.6	-2.2
NLC	**Nalytchevo**	**2.21**	**225**	P	Pn	22 25 10.5	-0.3
NLC				S	Sn	22 25 36.6	-1.2
NLC	**Nalytchevo**	**2.21**	**225**	*i* P	Pn	22 25 10.4	-0.4
NLC				*i* S	Sn	22 25 36.6	-1.2
SDLR	**Sedlovina**	**2.34**	**232**	*e*P	Pn	22 25 12.9	+0.3
SDLR				*e*S	Sn	22 25 40.5	-0.5
BKI	**Bering**	**2.37**	**78**	*e*S	Sn	22 25 40.0	-1.7
UGLR	**Uglovaya**	**2.41**	**231**	*e*P	Pn	22 25 14.3	+0.6
UGLR				*e*S	Sn	22 25 42.4	-0.4
AVH	**Avacha**	**2.41**	**233**	*e*P	Pn	22 25 14.6	+0.9
AVH				*e*S	Sn	22 25 43.5	+0.6
KOK	**Koryaka**	**2.44**	**234**	*e*P	Pn	22 25 14.9	+0.8
KOK				*e*S	Sn	22 25 43.9	+0.2
GNL	**Ganaly**	**2.58**	**247**	*e*P	Pn	22 25 16.3	+0.2
GNL				*e*S	Sn	22 25 46.6	-0.5
PET	**Petropavlovsk**	**2.61**	**230**	P	Pn	22 25 17.0	+0.5
PET				S	Sn	22 25 48.0	+0.1
PET	**Petropavlovsk**	**2.61**	**230**	*e*P	Pn	22 25 17.0	+0.5
PET				*e*S	Sn	22 25 47.9	0.0
RUS	**Russkaya**	**3.10**	**223**	P	Pn	22 25 23.4	-0.1
RUS				S	Sn	22 25 58.5	-1.8
RUS	**Russkaya**	**3.10**	**223**	*e*P	Pn	22 25 23.4	-0.1
RUS				*e*S	Sn	22 25 58.4	-1.9
GRL	**Gorelyy**	**3.19**	**228**	*e*P	Pn	22 25 26.0	+1.2
GRL				*e*S	Sn	22 26 03.3	+0.7
APC	**Apacha**	**3.38**	**239**	*e*S	Sn	22 26 08.6	+1.3
OSSR	**Ossora**	**4.54**	**7**	*e*P	Pn	22 25 43.2	-0.8

MAN 12 22:43:05.7,13.61N×120.60E,h80^{km},mb3.7,ML2.4, MS1.9,2C,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.35**	**107**	⇑*e*P	P	22 43 20.2	+1.8
PGP				*e*S	S	22 43 30.8	+2.9
LUBP	**Lubang**	**0.37**	**290**	*e*P	P	22 43 20.5	+2.1
LUBP				*e*S	S	22 43 30.7	+2.6
TGY	**Tagaytay City**	**0.59**	**33**	⇑*i*P	P	22 43 22.4	+1.9
TGY				*e*S	S	22 43 32.8	+1.5
BOAC	**Boac**	**1.22**	**97**	*e*P	P	22 43 27.2	-0.4
BOAC				*e*S	S	22 43 46.3	+2.1
SJMP	**San Jose**	**1.25**	**156**	*e*P	P	22 43 29.4	+1.3
SJMP				*e*S	S	22 43 46.0	+1.2
BUSP	**Coron**	**1.64**	**194**	*e*P	P	22 43 32.2	-1.2
BUSP				*e*S	S	22 43 54.9	+1.1
BALP	**Baler**	**2.32**	**24**	*e*P	P	22 43 43.0	+0.4
ENPP	**El Nido**	**2.65**	**206**	*e*P	P	22 43 47.0	-0.3
ENPP				*e*S	S	22 44 17.6	-0.7

NEIC ***12*** *23:32:41.4±2.0,28.65S×176.34W,h58^{km}±17^{km},mb4.5/4, Error ellipse: s-maj=16.4km s-min=15.8km az=85.0*

IDC ***12*** *23:32:41.4±3.6,28.62S×176.21W,h56^{km}±30^{km},mb4.1/7, mb1 4.3/7,mb1mx4.2/15,mbtmp4.3/7,MS3.6/3,Ms1 3.6/3, ms1mx3.3/18,Error ellipse: s-maj=29.5km s-min=24.9km az=155.0*

ISC 12 23:32:42.5±2.0**,28.7S**±0.1×**176.4W**±0.1**,h78**^{km}±16^{km}**,n30, σ0$\overset{s}{.}$94**/21**,mb4.3**/10**,1C,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.45**	**248**	P	**P**	**23 33 05.8**	**-1.8**
	360nm,0.3s,baz=82,slow=20,SNR=6.4						
RAO				S	**S**	**23 33 27.7**	**+1.6**
	3μm,0.3s,baz=163,slow=19,SNR=19						
RAO				LR	LR	23 33 44.0	
	comp=Z,1μm,20.4s,baz=45,slow=39						
RAO	**Raoul Island**	**1.45**	**248**	P	**P**	**23 33 05.8**	**-1.8**
RAO				S	**S**	**23 33 27.7**	**+1.5**
RAO				LR	LR	23 33 44.0	
RPZ	**Rata Peaks**	**18.06**	**211**	P	**P**	**23 36 39.7**	**-10**
	0.4nm,0.3s,baz=261,slow=3.0,SNR=4.2						
HNR	**Honiara**	**29.35**	**306**	LR	LR	23 48 06.8	
	comp=Z,102nm,19.8s,baz=132,slow=31						
CTA	**Charters Tower**	**34.98**	**276**	P	**P**	**23 39 30.8**	**+1.6**
	5.1nm,0.7s,mb4.5,baz=105,slow=11,SNR=8.2						
CTA	**Charters Tower**	**34.98**	**276**	P	**P**	**23 39 30.8**	**+1.6**
STKA	**Stephens Creek**	**36.26**	**254**	LR	LR	23 52 23.4	
	comp=Z,132nm,19.4s,baz=200,slow=32						
WB2	**Warramunga Arr**	**45.47**	**270**	*e*P	**P**	**23 40 55.0**	**-0.8**
WRAB	**Tennant Creek**	**45.48**	**270**	*e*P	**P**	**23 40 55.0**	**-0.8**
	23nm,1.1s,mb4.8						
WRA	**Warramunga Arr**	**45.48**	**270**	P	**P**	**23 40 54.9**	**-0.9**
	5.5nm,0.9s,mb4.3,baz=110,slow=6.2,SNR=67						
WRA				pP	pP	23 41 06.9	-8.1
	6.8nm,0.8s,baz=108,slow=7.9,SNR=11						
SBA	**Scott Base**	**49.83**	**185**	*e*P	**P**	**23 41 29.4**	**+0.4**
	4.5nm,1.0s,mb4.3						
VNDA	**Vanda**	**49.92**	**186**	P	**P**	**23 41 29.6**	**-0.2**
	2.0nm,1.0s,mb4.0,baz=9.8,slow=7.0,SNR=6.5						
VNDA				LR	LR	23 56 17.8	
	comp=Z,61nm,21.0s,baz=343,slow=28						
VNDA	**Vanda**	**49.92**	**186**	*e*P	**P**	**23 41 29.2**	**-0.6**
	2.7nm,1.0s,mb4.1						
MAW	**Mawson**	**74.38**	**200**	P	**P**	**23 44 13.9**	**+0.9**
	7.3nm,1.1s,mb4.3,baz=53,slow=6.1,SNR=5.5						
VNA3	**Neumayer Olymp**	**79.89**	**176**		**P**	**23 44 43.0**	**-0.6**
VNA2	**Neumayer--Watz**	**80.34**	**176**		**P**	**23 44 45.9**	**-0.1**
NVAR	**Mina Array Bea**	**86.04**	**42**	P	**P**	**23 45 15.6**	**+0.1**
	2.2nm,1.0s,mb4.1,baz=206,slow=6.6,SNR=9.0						
TUC	**Tucson**	**86.95**	**51**	*e*P	**P**	**23 45 21.6**	**+1.4**
	5.6nm,1.3s,mb4.3						
TXAR	**Lajitas Array**	**90.28**	**56**	P	**P**	**23 45 36.2**	**+0.2**
	1.5nm,1.1s,mb4.0,baz=211,slow=7.3,SNR=6.7						
TXAR	**Lajitas Array**	**90.28**	**56**	P	**P**	**23 45 36.2**	**+0.2**
PDAR	**Pinedale Array**	**93.94**	**43**	P	**P**	**23 45 52.0**	**-0.5**
	0.3nm,0.4s,mb4.0,baz=243,slow=6.0,SNR=2.1						
ZAL	**Zalesovo**	**117.71**	**319**	PKP	PKPdf	23 51 19.6	+0.3
	0.7nm,0.4s,baz=1.0,slow=16,SNR=3.4						
MKAR	**Makanchi Array**	**117.76**	**310**	PKP	PKPdf	23 51 21.1	+1.6
	1.4nm,0.9s,baz=133,slow=0.5,SNR=7.7						
FINES	**FINESS Array B**	**144.01**	**342**	PKP	PKPdf	23 52 08.0	-0.1
	10nm,0.7s,baz=27,slow=4.3,SNR=43						
FINES	**FINESS Array B**	**144.01**	**342**	PKP	PKPdf	23 52 08.0	-0.1
NB2	**NORSAR Subarra**	**147.26**	**353**	PKPabc	PKPdf	23 52 18.4	+4.7
	12nm,0.8s,baz=9.0,slow=2.9						
NOA	**NORSAR Array B**	**147.26**	**353**	PKPbc	PKPdf	23 52 18.1	+4.3
	7.3nm,0.8s,baz=14,slow=4.4,SNR=23						
AKASG	**Malin Array Be**	**150.75**	**326**	PKPbc	PKPdf	23 52 26.9	+7.3
	6.3nm,0.8s,baz=45,slow=3.0,SNR=4.7						
BRTR	**Keskin Array B**	**152.97**	**302**	PKPbc	PKPdf	23 52 32.9	+10
	1.0nm,0.9s,baz=153,slow=2.8,SNR=6.8						
BRTR				PKPab	PKPab	23 52 44.4	-0.1
	0.9nm,0.9s,baz=143,slow=6.2,SNR=4.0						
CLL	**Collm**	**156.34**	**345**	⇑*i*PKP2	PKPab	23 52 59.2	+0.8

IDC 12 23:42:19.6±2.1**,3.89N×63.59E,mb3.8**/5**,mb1 4.0**/5**, mb1mx3.7**/19**,mbtmp3.8**/5**,MS3.0**/2**,Ms1 3.1**/2**, ms1mx2.8**/21**,Error ellipse: s-maj=67.9km s-min=34.0km az=52.0,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**26.79**	**260**	LR	LR	23 56 22.0	
	comp=Z,46nm,21.5s,baz=256,slow=31						
CMAR	**Chiang Mai Arr**	**37.47**	**65**	LR	LR	00 04 27.2	
	comp=Z,19nm,21.5s,baz=204,slow=35						
BRTR	**Keskin Array B**	**44.79**	**327**	P	P	23 50 36.8	-0.4
	0.3nm,0.4s,baz=145,slow=17,SNR=3.7						
MKAR	**Makanchi Array**	**45.71**	**18**	P	P	23 50 43.5	-0.7
	0.3nm,0.6s,baz=218,slow=11,SNR=4.3						
ZAL	**Zalesovo**	**52.82**	**16**	P	P	23 51 35.8	-3.2
	1.3nm,0.2s,baz=264,slow=8.6,SNR=7.1						
ARCES	**ARCESS Array B**	**70.16**	**347**	P	P	23 53 32.7	-3.1
	1.9nm,0.9s,baz=169,slow=6.2,SNR=3.5						
WRA	**Warramunga Arr**	**73.34**	**112**	P	P	23 53 54.4	-1.4
	0.6nm,0.8s,baz=290,slow=5.3,SNR=4.6						
TXAR	**Lajitas Array**	**144.77**	**340**	PKP	PKPdf	00 01 57.8	-3.3
	0.4nm,0.9s,baz=135,slow=1.8,SNR=3.6						

BJI ***13*** *00:11:20.4,20.46S×69.65W,h114^{km},mB4.2*

NEIC ***13*** *00:11:20.4±0.4,20.32S×68.67W,mb4.4/9,Error ellipse: s-maj=10.5km s-min=7.9km az=52.0*

IDC ***13*** *00:11:20.6±0.6,20.43S×68.68W,h115^{km}±4^{km},mb3.7/10, mb1 4.0/13,mb1mx3.9/18,mbtmp4.2/13,MS2.9/1, Ms1 3.0/1,ms1mx2.5/17,Error ellipse: s-maj=17.3km s-min=12.1km az=82.0,Incorrectly calculated travel-time residual on T phase at H03N*

ISC 13 00:11:18.5±0.4**,20.32S**±0.04×**68.69W**±0.06**,h114**^{km}**, h114**^{km}±1.1^{km}**:pP-P,n54,σ1$\overset{s}{.}$23**/42**,mb4.1**/13**,5C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	**2.62**	**170**	*e*P	**P**	**00 12 01.8**	**+1.4**
ANCH	**Antofagasta**	**3.71**	**205**	*e*P	**P**	**00 12 14.2**	**-1.0**
LPAZ	**La Paz**	**4.04**	**8**	P	**P**	**00 12 24.2**	**+4.5**
	7.5nm,0.3s,baz=205,slow=7.7,SNR=133						
LPAZ				S	**S**	**00 13 11.4**	**+5.0**
	5.2nm,0.3s,baz=261,slow=13,SNR=2.6						
LPAZ	**La Paz**	**4.04**	**8**	*e*P	**P**	**00 12 24.1**	**+4.4**
LPAZ				*e*		00 12 34.0	
CPN1	**Cerro Paranal**	**4.57**	**200**	*e*P	**P**	**00 12 23.9**	**-2.9**
ARE	**Arequipa**	**4.67**	**325**	*e*P	**P**	**00 12 27.0**	**-1.1**
ARE				*e*S	**S**	**00 13 19.0**	**-2.6**
SIV	**San Ignacio**	**8.42**	**60**	P	**P**	**00 13 19.4**	**+0.3**
	5.9nm,0.3s,baz=252,slow=12,SNR=185						
SIV				S	**S**	**00 14 50.8**	**-2.3**
	baz=320,slow=22,SNR=6.4						
CFAA	**Coronel Fontan**	**11.25**	**178**	P	**P**	**00 13 55.1**	**-1.8**
	0.1nm,0.3s,baz=356,slow=14,SNR=9.6						
CFAA				S	**S**	**00 15 51.9**	**-8.9**
	0.2nm,0.3s,baz=161,slow=16,SNR=8.4						
CPUP	**Villa Florida**	**12.03**	**122**	P	**P**	**00 14 07.7**	**+0.5**
	0.7nm,0.3s,baz=319,slow=16,SNR=73						
CPUP				LR	LR	00 19 37.0	
	comp=Z,70nm,21.8s,baz=14,slow=42						
CPUP	**Villa Florida**	**12.03**	**122**	*e*P	**P**	**00 14 07.3**	**+0.1**
	30nm,0.8s						
SAML	**Samuel**	**12.49**	**26**	P	**P**	**00 14 13.1**	**-0.3**
	7.0nm,0.9s						
BDFB	**Brasilia**	**20.20**	**80**	P	**P**	**00 15 46.7**	**+0.2**
	19nm,0.6s,baz=261,slow=12,SNR=31						
BAO	**Brasilia Array**	**20.23**	**80**	P	**P**	**00 15 46.0**	**-0.7**
PLCA	**Paso Flores**	**20.41**	**184**	P	**P**	**00 15 48.1**	**-0.3**
	13nm,0.9s,baz=3.6,slow=12,SNR=13						
PLCA	**Paso Flores**	**20.41**	**184**	*e*P	**P**	**00 15 48.5**	**0.0**
	23nm,1.0s						
SJG	**San Juan**	**38.27**	**4**	P	**P**	**00 18 27.9**	**-1.7**
	17nm,0.7s,mb5.0,baz=205,slow=3.0,SNR=8.3						
SJG	**San Juan**	**38.27**	**4**	P	**P**	**00 18 27.9**	**-1.7**
WVT	**Waverly**	**58.99**	**342**	*e*pP	pP	00 21 34.6	-1.7
	6.5nm,0.6s						
WVT				*e*		00 21 47.9	
TXAR	**Lajitas Array**	**59.78**	**325**	P	**P**	**00 21 13.3**	**-0.9**
	0.3nm,0.8s,mb3.4,baz=155,slow=8.6,SNR=3.4						
TXAR				pP	pP	00 21 41.3	-0.7
	0.6nm,0.7s,baz=156,slow=8.4,SNR=6.8						
VNA3	**Neumayer Olymp**	**61.12**	**162**	⇑*i*P	**P**	**00 21 25.8**	**+3.1**
VNA3				*e*	pP	00 21 52.2	+1.6
VNA3				*e*		00 22 04.7	
VNA1	**Neumayer--Stat**	**61.32**	**161**	⇑*i*P	**P**	**00 21 27.8**	**+3.7**
VNA1				*e*	pP	00 21 54.7	+2.7
VNA1				*e*		00 22 08.2	
FVM	**French Village**	**61.49**	**341**	*e*P	**P**	**00 21 24.5**	**-1.1**
	4.8nm,0.8s,mb4.6						
FVM				*e*pP	pP	00 21 52.5	-1.1
VNA2	**Neumayer--Watz**	**61.69**	**161**	⇑*i*P	**P**	**00 21 27.1**	**+0.6**
VNA2				*e*	pP	00 21 55.7	+1.2
VNA2				*e*		00 22 07.4	
MNTX	**Cornudas Mount**	**62.55**	**325**	*e*pP	pP	00 21 59.4	-1.4
	6.5nm,1.2s						
SNAA	**Sanae**	**63.32**	**161**	P	**P**	**00 21 36.6**	**-0.8**
	0.5nm,0.8s,mb3.5,baz=287,slow=6.6,SNR=5.3						
SNAA	**Sanae**	**63.32**	**161**	⇑*i*P	**P**	**00 21 36.5**	**-0.9**
SNAA				*e*	pP	00 22 07.3	+1.9
SNAA				*e*		00 22 17.6	
LAZ	**Ladron**	**65.57**	**326**	*e*pP	pP	00 22 21.4	+0.7
DBIC	**Dimbokro**	**68.20**	**74**	P	**P**	**00 22 09.0**	**-0.3**
	21nm,0.7s,mb5.1,baz=221,slow=7.9,SNR=31						
MSU	**Marysvale**	**71.33**	**325**	P	**P**	**00 22 28.8**	**+0.9**
MSU				*e*pP	pP	00 22 57.3	+0.8
PDAR	**Pinedale Array**	**73.20**	**330**	P	**P**	**00 22 41.1**	**+2.4**
	0.2nm,0.3s,mb3.4,baz=144,slow=7.8,SNR=2.8						
PDAR				pP	pP	00 23 09.3	+1.7
	0.7nm,0.7s,baz=135,slow=4.2,SNR=3.4						
ELK	**Elko**	**74.58**	**325**	*e*pP	pP	00 23 16.5	+0.7
	4.1nm,1.1s						
NVAR	**Mina Array Bea**	**74.70**	**322**	P	**P**	**00 22 48.7**	**+1.1**
	1.6nm,1.0s,mb3.7,baz=143,slow=8.7,SNR=4.4						
NVAR				pP	pP	00 23 17.4	+0.8
	3.9nm,1.0s,baz=134,slow=7.7,SNR=9.1						
SCHQ	**Schefferville**	**74.86**	**1**	P	**P**	**00 22 48.2**	**+0.1**
	2.1nm,1.0s,mb3.8,baz=209,slow=7.9,SNR=4.6						
SCHQ				pP	pP	00 23 18.6	+1.5
	1.9nm,0.8s,baz=173,slow=2.3,SNR=3.2						
MCMT	**McKenzie Canyo**	**76.31**	**329**	*e*P	**P**	**00 22 58.6**	**+2.0**
MCMT				*e*pP	pP	00 23 27.2	+1.6
SYO	**Syowa Base**	**77.53**	**159**	⇑PcP	PcP	00 23 12.5	-0.6
BMO	**Blue Mountains**	**78.54**	**327**	*e*P	**P**	**00 23 10.1**	**+1.2**
	2.1nm,0.8s,mb4.0						
BMO				*e*pP	pP	00 23 39.0	+0.9
FCC	**Fort Churchill**	**81.53**	**347**	*e*P	**P**	**00 23 24.9**	**+0.3**
	2.5nm,0.9s,mb4.0						
FCC				*e*pP	pP	00 23 54.4	+0.5
EDM	**Edmonton**	**82.78**	**335**	*e*P	**P**	**00 23 31.0**	**-0.1**
EDM				*e*pP	pP	00 24 00.1	-0.5
EDM				*e*sP	sP	00 24 13.8	+0.7
BOSA	**Boshof**	**83.82**	**118**	P	**P**	**00 23 37.0**	**+0.1**
	3.8nm,0.8s,mb4.2,baz=270,slow=1.0,SNR=3.0						
ESDC	**Sonseca Array**	**84.85**	**44**	P	**P**	**00 23 43.2**	**+1.4**
	3.1nm,1.1s,mb4.1,baz=251,slow=4.4,SNR=6.6						
YKA	**Yellowknife Ar**	**90.15**	**341**	P	**P**	**00 24 07.5**	**+0.9**
	2.7nm,0.9s,mb4.4,baz=131,slow=4.8,SNR=23						
YKA				pP	pP	00 24 37.0	+0.5
	3.6nm,0.7s,baz=134,slow=4.7,SNR=10						
YKA				sP	sP	00 24 50.0	+1.1
	2.7nm,0.7s,baz=135,slow=4.7,SNR=5.1						
YKA	**Yellowknife Ar**	**90.15**	**341**	P	**P**	**00 24 07.5**	**+0.9**
YKA				pP	pP	00 24 37.0	+0.5
YKA				sP	sP	00 24 50.0	+1.1
YKW3	**Yellowknife Ar**	**90.20**	**341**	*e*P	**P**	**00 24 07.3**	**+0.5**
YKW3				*e*pP	pP	00 24 37.5	+0.7
YKW3				*e*sP	sP	00 24 48.9	-0.2
WRA	**Warramunga Arr**	**134.07**	**211**	PKP	PKPdf	00 30 25.3	+1.9
	0.6nm,0.7s,baz=167,slow=1.8,SNR=9.7						
ZAL	**Zalesovo**	**140.80**	**25**	PKP	PKPdf	00 30 36.9	+2.1
	0.8nm,0.3s,baz=172,slow=5.1,SNR=3.2						
ZAL				pPKP		00 31 08.1	
	1.3nm,0.9s,baz=216,slow=1.5,SNR=2.8						
ZAL	**Zalesovo**	**140.80**	**25**	PKP	PKPdf	00 30 36.9	+2.1
ZAL				pPKP		00 31 08.1	
MKAR	**Makanchi Array**	**144.56**	**35**	PKP	PKPdf	00 30 43.0	+1.6
	3.3nm,0.9s,baz=315,slow=3.4,SNR=15						
MKAR				pPKP		00 31 15.1	
	1.1nm,0.6s,baz=321,slow=4.9,SNR=4.5						
WMQ	**Urumqi**	**149.39**	**35**	*e*PKP	PKPdf	00 30 53.0	+3.5
WMQ				LR	LR		
	comp=N,40nm,22.4s						
WMQ				LR	LR		
	comp=E,60nm,22.0s						
WMQ				LR	LR		
	comp=Z,40nm,21.3s						
MJAR	**Matsushiro Arr**	**151.49**	**310**	PKPbc	PKPdf	00 31 01.3	+8.3
	comp=Z,0.8nm,0.3s,baz=35,slow=2.4,SNR=4.1						
MJAR	**Matsushiro Arr**	**151.49**	**310**	PKPbc	PKPdf	00 31 01.3	+8.3
CN2	**Changchun**	**153.78**	**336**	*e*PKP	PKPdf	00 30 59.4	+3.5
LZH	**Lanzhou**	**162.98**	**21**	*e*PKP	PKPdf	00 31 14.0	+6.9
LZH				XPKP		00 31 56.2	
LZH	**Lanzhou**	**162.98**	**21**	*e*PKP	PKPdf	00 31 14.0	+6.9
LZH				pPKP		00 31 54.5	
LZH				sPKP		00 31 56.2	
SSE	**Sheshan**	**166.07**	**322**	PKP	PKPdf	00 31 11.2	+1.0

IDC 13 00:29:59.4±2.8**,2.18N×96.68E,mb3.7**/4**,mb1 4.0**/5**, mb1mx3.7**/20**,mbtmp3.8**/5**,ML4.2**/1**,MS2.9**/1**,Ms1 3.1**/1**, ms1mx2.6**/27**,Error ellipse: s-maj=118.5km s-min=27.5km az=56.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.32	8	Pn	P	00 33 51.5	-0.3
	0.3nm,0.3s,baz=197,slow=10,SNR=13						
CMAR				LR	LR	00 40 14.2	
	comp=Z,38nm,18.7s,baz=130,slow=38						
WRA	Warramunga Arr	43.00	123	P	P	00 38 00.9	-1.7
	0.1nm,0.3s,baz=301,slow=9.1,SNR=5.7						
MKAR	Makanchi Array	46.17	346	P	P	00 38 26.6	-1.0
	2.3nm,0.8s,baz=162,slow=7.7,SNR=8.7						
ZAL	Zalesovo	52.50	351	P	P	00 39 12.8	-3.6
	1.2nm,0.6s,baz=332,slow=6.0,SNR=6.5						
BVAR	Borovoye Array	55.16	341	P	P	00 39 33.6	-2.3
	0.5nm,0.5s,baz=134,slow=10,SNR=4.1						

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*IDC **13** 01:01:12.5±1.5, 15.93S×172.79W, mb4.0/6, mb1 4.4/6, mb1mx4.2/16, mbtmp4.0/6, MS3.7/3, Ms1 3.7/3, ms1mx3.3/21, Error ellipse: s-maj=91.8km s-min=21.8km az=148.0*

*NEIC **13** 01:01:14.8±1.4, 15.34S×173.09W, h10^{km}, mb4.3/3, Error ellipse: s-maj=85.9km s-min=15.4km az=146.0*

ISC 13 01:01:16.1±1.2**, 15.7S**±0.5×**173.1W**±0.3**, h33^{km}, n18, σ0^{s}40**/11**, mb3.9**/9**, MS3.8**/3**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.19	35	eP	P	01 01 44.3	-6.4
HNR	Honiara	27.05	280	LR	LR	01 16 26.6	
	comp=Z,156nm,19.0s,MS3.6,baz=162,slow=33						
STKA	Stephens Creek	44.16	240	P	P	01 09 24.2	+0.6
	2.6nm,0.8s,mb4.0,baz=83,slow=8.1,SNR=3.1						
WRAB	Tennant Creek	50.08	257	eP	P	01 10 09.5	-0.6
WRA	Warramunga Arr	50.08	257	P	P	01 10 10.1	-0.1
	0.3nm,0.3s,mb3.8,baz=94,slow=6.8,SNR=14						
NVAR	Mina Array Bea	74.35	42	P	P	01 12 52.4	+0.1
	1.1nm,0.8s,mb3.8,baz=219,slow=7.8,SNR=5.6						
HLID	Hailey	79.67	39	eP	P	01 13 22.4	+0.3
	2.0nm,1.0s,mb4.0						
TXAR	Lajitas Array	80.52	56	P	P	01 13 26.2	-0.7
	1.5nm,1.0s,mb3.9,baz=243,slow=5.6,SNR=9.1						
ANMO	Albuquerque	80.76	50	LR	LR	01 46 34.0	
	comp=Z,40nm,18.3s,MS3.8,slow=34						
MCK	McKinley	81.37	11	P	P	01 13 30.7	0.0
	2.3nm,0.8s,mb4.2						
PDAR	Pinedale Array	82.29	42	P	P	01 13 36.1	+0.3
	0.6nm,0.7s,mb3.6,baz=225,slow=2.1,SNR=7.6						
BOZ	Bozeman (W)	82.46	38	eP	P	01 13 36.5	-0.2
	4.8nm,1.4s,mb4.2						
ILAR	Eielson Array	82.69	11	P	P	01 13 37.6	+0.2
	1.1nm,0.8s,mb3.9,baz=223,slow=5.8,SNR=11						
ULM	Lac du Bonnet	93.97	39	LR	LR	01 49 23.4	
	comp=Z,35nm,18.9s,MS3.8,baz=305,slow=31						
MLR	Muntele Rosu	146.29	336	PKPbc	PKPbc	01 20 55.9	+2.5
	1.1nm,0.9s,baz=78,slow=6.8,SNR=3.7						
BR131	Keskin Array S	146.60	321	ePKP	PKPdf	01 20 57.8	+4.9
BRTR	Keskin Array B	146.60	321	PKPbc	PKPbc	01 20 57.8	+3.5
	2.0nm,0.9s,baz=90,slow=1.2,SNR=12						
ASF	Jabal al Asfar	148.24	306	PKPbc	PKPdf	01 21 02.7	+6.9
	1.0nm,0.4s,baz=128,slow=5.2,SNR=3.7						

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*ROM **13** 01:03:28.3±0.2, 45.12N×7.29E, h28^{km}±3^{km}, Md2.8/12, Ml2.4/3, Error ellipse: s-maj=4.5km s-min=4.3km az=104.0*

*CSEM **13** 01:03:28.4±0.1, 45.09N×7.47E, h0^{km}, ML2.8/23, Error ellipse: s-maj=1.8km s-min=1.2km az=97.0*

*GEN **13** 01:03:28.7, 45.11N×7.33E, h12^{km}*

*LDG **13** 01:03:29.8±0.1, 45.11N×7.46E, h2^{km}, Md3.2/1, Ml2.8/26, Error ellipse: s-maj=3.0km s-min=1.8km az=96.0*

*NEIC **13** 01:03:29.8, 45.11N×7.46E, h2^{km}, ML3.1(STR), ML2.8(LDG), After LDG.*

*STR **13** 01:03:31.6±0.7, 44.94N×7.44E, h10^{km}±1^{km}, Ml2.7, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*ZUR **13** 01:03:32.0, 45.24N×7.54E, h2^{km}±10^{km}, ML2.2/7*

ISC 13 01:03:28.8±0.2**, 45.09N**±0.01×**7.34E**±0.02**, h10^{km}, n95, σ1^{s}21**/162**, 4C-3D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSP	Reno Superiore	0.08	315	P	Pg	01 03 32.1	+0.9
RSP				S	Sg	01 03 33.4	+0.5
RSP	Reno Superiore	0.08	315	P	Pg	01 03 32.1	+0.8
FENE	Fenestrelle	0.21	252	P	Pg	01 03 34.1	+0.8
FENE				S	Sg	01 03 37.3	+0.9
FENE	Fenestrelle	0.21	252	P	Pg	01 03 34.1	+0.8
BHB	Bricherasio	0.26	192	P	Pg	01 03 35.6	+1.3
BHB				S	Sg	01 03 39.2	+1.3
BHB	Bricherasio	0.26	192	P	Pg	01 03 35.6	+1.3
LSD	Ceresole Reale	0.39	340	P	Pg	01 03 37.2	+0.4
LSD				S	Sg	01 03 42.4	+0.3
LSD	Ceresole Reale	0.39	340	P	Pg	01 03 37.2	+0.4
MONC	Moncucco Torin	0.42	92	Pg	Pg	01 03 39.1	+1.8
MONC				Sg	Sg	01 03 47.2	+4.2
	881nm,0.6s						
RRL	Cesana Torines	0.43	247	P	Pg	01 03 38.4	+0.8
RRL				S	Sg	01 03 44.2	+0.8
RRL	Cesana Torines	0.43	247	P	Pg	01 03 38.4	+0.8
BNI	Bardonecchia	0.47	265	Pg	Pg	01 03 39.1	+0.7
BNI				Sg	Sg	01 03 45.2	+0.4
	169nm,0.3s						
TRAV		0.51	34	P	Pg	01 03 39.1	-0.1
TRAV				S	Sg	01 03 45.8	-0.2
TRAV		0.51	34	P	Pg	01 03 39.1	0.0
MBDF	Montbardon	0.55	228	ePg	Pg	01 03 40.6	+0.7
MBDF				eSg	Sg	01 03 48.2	+1.0
	161nm,0.2s						
DOI	San Damiano	0.59	187	Pg	Pg	01 03 40.5	-0.3
	97nm,0.2s						
LPL	La Plagne	0.60	315	eSg	Sg	01 03 49.2	+0.1
	202nm,0.4s						
PZZ	Prazzo	0.61	196	P	Pb	01 03 41.6	+0.5
PZZ				S	Sg	01 03 49.5	+0.1
PZZ	Prazzo	0.61	196	P	Pb	01 03 41.6	+0.5
ORO	Oropa	0.70	40	Pg	Pg	01 03 42.0	-0.9
	75nm,0.2s						
ORX	Oropa	0.70	40	P	Pb	01 03 42.3	-0.4
ORX				S	Sb	01 03 51.1	-1.1
ORX	Oropa	0.70	40	P	Pb	01 03 42.3	-0.4
SURF	Saint Ours	0.72	212	Pg	Pg	01 03 43.9	+0.6
SURF				Sg	Sg	01 03 53.7	+0.8
STV2	Anna di Valdie	0.85	181	P	Pb	01 03 44.5	-0.6
STV2	Anna di Valdie	0.85	181	P	Pb	01 03 44.5	-0.7
STV	Sta Anna Valdi	0.85	181	P	Pb	01 03 44.1	-1.0
ENR	Entracque	0.87	176	P	Pb	01 03 45.0	-0.5
ENR				S	Sb	01 03 56.4	-0.6
ENR	Entracque	0.87	176	P	Pb	01 03 45.0	-0.5
ROB	Roburent	0.88	154	P	Pb	01 03 46.3	+0.5
ROB	Roburent	0.88	154	P	Pb	01 03 46.3	+0.5
MCGN	Macugnaga	0.98	28	Pg	Pg	01 03 46.7	-1.7
	35nm,0.4s						
DIX	Grande Dixence	0.99	3	Pg	Pg	01 03 47.8	-0.9
DIX	Grande Dixence	0.99	3	⇓iP	Pb	01 03 47.7	+0.1
EMV	Vieux Emosson	1.02	342	⇑iP	Pb	01 03 49.1	+1.0
EMV				eS	Sb	01 04 01.6	+0.3
PCP	Pian Castagno	1.02	122	P	Pb	01 03 48.8	+0.6
PCP	Pian Castagno	1.02	122	P	Pb	01 03 48.8	+0.7
ORIF	Oris-en-Rattie	1.05	261	ePg	Pg	01 03 49.8	-0.1
ORIF				eSg	Sg	01 04 03.5	-0.4
	79nm,0.2s						
MMK	Mattmark	1.05	24	Pg	Pg	01 03 48.6	-1.4
MMK	Mattmark	1.05	24	⇑iP	Pb	01 03 48.5	-0.2
MONE	Monesi	1.05	164	P	Pb	01 03 49.0	+0.2
MONE	Monesi	1.05	164	P	Pb	01 03 49.0	+0.3
FIN	Finale Ligure	1.08	145	Pg	Pg	01 03 50.1	-0.3
	44nm,0.2s						
TOUF	Mont Tournerai	1.08	184	Pg	Pg	01 03 50.3	-0.2
SALAN	Lac Salanfe	1.08	346	eP	Pb	01 03 50.1	+0.9
AUTN	L'Aution	1.10	177	Pg	Pg	01 03 48.9	-1.9
AUTN				Sg	Sg	01 04 03.2	-2.3
SAOF	Saorge	1.12	172	Pg	Pg	01 03 49.1	-2.1
SAOF				Sg	Sg	01 04 03.1	-3.0
GRYON	Gryon	1.17	352	eP	Pb	01 03 51.9	+1.2
MVIF	Mont Vial	1.20	186	Pg	Pg	01 03 51.0	-1.9
SBF	Sospel	1.23	177	ePn	Pn	01 03 50.9	-1.2
SBF				ePg	Pg	01 03 51.8	-1.7
SBF				eSg	Sg	01 04 09.6	-0.3
	62nm,0.4s						
IMI	Imperia	1.25	161	Pg	Pg	01 03 52.2	-1.6
	30nm,0.3s						
SENIN	Lac Senin	1.27	359	eP	Pb	01 03 53.2	+0.8
NEGI	Negi	1.27	168	P	Pb	01 03 52.3	-0.1
NEGI	Negi	1.27	168	P	Pb	01 03 52.3	-0.1
AIGLE	Aigle	1.28	348	⇓iP	Pb	01 03 54.0	+1.5
CALN	Calern	1.38	194	Pg	Pg	01 03 56.4	0.0
MUGIO	Muggio	1.46	55	Pg	Pg	01 03 54.9	-3.0
STOF	St-Etienne Org	1.50	224	Pg	Pg	01 03 59.6	+0.8
OCF	Saint Nazaire	1.54	251	Pg	Pg	01 04 00.4	+0.8
OG26	St.-Nazaire-De	1.54	251	Pg	Pg	01 04 00.4	+0.8
FRF	La Foret Royal	1.61	198	ePn	Pn	01 03 58.4	+0.9
FRF				eP		01 04 00.4	
FRF				ePg	Pg	01 04 01.3	+0.3
FRF				eSn	Sn	01 04 19.1	+0.6
FRF				eSg	Sg	01 04 22.9	+0.4
	25nm,0.2s						
SMRF	Simiane la Rot	1.69	229	ePn	Pn	01 04 00.5	+1.9
SMRF				eP		01 04 02.0	
SMRF				ePg	Pg	01 04 02.9	+0.4
SMRF				eSg	Sg	01 04 25.5	+0.5
	25nm,0.5s						
VILF	Villemus	1.70	224	Pg	Pg	01 04 03.6	+0.8
TAVF	Tavernes	1.74	212	Pg	Pg	01 04 03.3	-0.3
CABF	La Chapelle	1.75	330	eP	Pn	01 04 01.8	+2.2
CABF				ePg	Pg	01 04 02.7	-1.2
CABF				eSn	Sn	01 04 21.1	-1.0
CABF				eSg	Sg	01 04 25.5	-1.8
	25nm,0.4s						
MDI	Monti di Nese	1.80	67	Pg	Pg	01 03 59.7	-5.2
LMR	La Mourre	1.86	199	ePn	Pn	01 04 01.7	+0.6
LMR				ePg	Pg	01 04 05.3	-0.6
LMR				eSn	Sn	01 04 25.4	+0.6
	20nm,0.2s						
VIVF	Saint-Julien-l	1.91	264	ePn	Pn	01 04 04.0	+2.2
VIVF				ePg	Pg	01 04 06.6	-0.4
VIVF				eSn	Sn	01 04 26.0	-0.1
VIVF				eSg	Sg	01 04 31.5	-0.9
	11nm,0.3s						
PUYF	Puyloubier	1.95	218	Pg	Pg	01 04 07.1	-0.8
PUYF				Sg	Sg	01 04 31.9	-2.1
TUE	Stuetta	1.97	45	Pg	Pg	01 04 02.7	-5.5
PRAF	Pradon	2.02	231	Pg	Pg	01 04 09.0	-0.2
LASF	Ste Croix	2.69	249	ePn	Pn	01 04 13.6	+0.6
LASF				eSn	Sn	01 04 45.6	-0.3
	3.5nm,0.2s						
HINF	Hinteralfeld	2.75	353	ePn	Pn	01 04 14.1	+0.3
HINF				ePg	Pg	01 04 20.9	-2.8
HINF				eSg	Sg	01 04 55.2	-5.1
	9.4nm,0.4s						
PGF	Pioggiola	2.81	154	ePn	Pn	01 04 13.0	-1.7
PGF				eSn	Sn	01 04 44.4	-4.6
	4.4nm,0.5s						
DAVA	Damuels	2.82	38	⇓iPN	Pn	01 04 16.5	+1.7
DAVA				i SN	Sn	01 04 49.0	-0.1
SMF	Signal de Mont	2.90	304	ePn	Pn	01 04 16.0	+0.1
SMF				ePg	Pg	01 04 22.9	-3.8
SMF				eSn	Sn	01 04 49.0	-2.2
SMF				eSg	Sg	01 05 01.4	-3.9
	8.6nm,0.4s						
HAU	Haudompre	2.99	347	ePn	Pn	01 04 18.0	+0.7
HAU				eSn	Sn	01 04 50.7	-2.9
HAU				eSg	Sg	01 05 03.2	-5.3
	7.6nm,0.4s						
LOR	Lormes	3.25	313	ePn	Pn	01 04 22.5	+1.5
	baz=130						
LOR				ePg	Pg	01 04 30.8	-3.0
	baz=131						
LOR				eSn	Sn	01 04 57.4	-2.8
LOR				eSg	Sg	01 05 11.1	-6.1
	4.9nm,0.3s						
LOR	Lormes	3.25	313	ePg	Pg	01 04 30.8	-3.0
LOR				eSn	Sn	01 04 57.4	-2.8
LOR				eSg	Sg	01 05 11.1	-6.1
	2.5nm,0.3s						
AVF	Avril sur Loir	3.26	303	ePn	Pn	01 04 21.9	+0.8
AVF				eSn	Sn	01 04 57.8	-2.5
AVF				eSg	Sg	01 05 12.3	-5.1
	4.7nm,0.4s						
SSF	Saint Saulge	3.32	308	ePn	Pn	01 04 22.8	+0.9
SSF				ePg	Pg	01 04 32.0	-3.1
SSF				eSg	Sg	01 05 14.8	-4.5
	3.5nm,0.4s						
CDF	Champ du Feu	3.32	359	ePn	Pn	01 04 21.6	-0.4
CDF				eSn	Sn	01 05 00.0	-1.9
CDF				eSg	Sg	01 05 13.1	-6.3
	5.4nm,0.4s						
SQTA	Sankt Quirin	3.43	50	⇑iPN	Pn	01 04 24.7	+1.2
SQTA				i SN	Sn	01 05 06.4	+1.8
BGF	Bois d'Agland	3.47	297	ePn	Pn	01 04 25.5	+1.5
BGF				eSg	Sg	01 05 18.5	-5.8
	12nm,0.5s						
SFTF	Sexfontaines	3.49	334	ePn	Pn	01 04 25.7	+1.3
	baz=148						
SFTF				eSg	Sg	01 05 19.3	-5.9
	7.6nm,0.4s						
WTTA	Wattenberg	3.69	52	⇑iPN	Pn	01 04 28.0	+0.8
WTTA				i SN	Sn	01 05 13.6	+2.4
CAF	Calviac	3.75	269	ePn	Pn	01 04 29.3	+1.3
CAF				eSn	Sn	01 05 11.8	-0.8
CAF				eSg	Sg	01 05 32.4	-1.2
	2.9nm,0.5s						
MEZF	Maizieres J'vi	3.75	336	ePn	Pn	01 04 29.5	+1.4
	baz=150						
MEZF				eSg	Sg	01 05 26.8	-7.1
	12nm,0.5s						
RFYF	Reffroy	3.76	341	ePn	Pn	01 04 29.0	+0.8
	baz=158						
RFYF				eSg	Sg	01 05 27.6	-6.5
	6.9nm,0.3s						
TCF	Toulx Ste Croi	3.79	290	ePn	Pn	01 04 30.1	+1.5
TCF				eSn	Sn	01 05 10.3	-3.4
TCF				eSg	Sg	01 05 30.4	-4.6
	5.7nm,0.5s						
HYF	Humbligny	3.92	305	eP	Pn	01 04 32.2	+1.7
MTLF	Montolieu	4.08	246	ePn	Pn	01 04 32.6	-0.1
MTLF				eP		01 04 35.8	
MTLF				eSn	Sn	01 05 18.1	-3.0
	1.8nm,0.4s						
RJF	Les Rejaudoux	4.12	275	ePn	Pn	01 04 34.6	+1.3
RJF				eSg	Sg	01 05 41.2	-4.9
	4.3nm,0.5s						
LFF	La Frestale	4.68	270	eSg	Sg	01 05 58.8	-6.0
	1.6nm,0.4s						
BAIF	Baives	5.40	338	ePn	Pn	01 04 50.4	-1.0
BAIF				ePg	Pg	01 05 07.8	-8.9
MFF	Saint Martin d	5.44	289	ePn	Pn	01 04 52.8	+0.8

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*CSEM **13** 01:10:09.9±0.1, 37.30N×3.44W, h5^{km}, ML2.5/2, Error ellipse: s-maj=1.9km s-min=1.3km az=167.0*

*NEIC **13** 01:10:10.0, 37.30N×3.41W, h2^{km}, ML2.5(LDG), MN2.3(MDD), After MDD.*

*SFS **13** 01:10:10.0, 37.30N×3.41W, h1^{km}*

*LDG **13** 01:10:13.1±0.6, 37.40N×3.55W, h10^{km}, Ml2.5/4, Error ellipse: s-maj=14.9km s-min=4.8km az=157.0*

MDD 13 01:10:10.0±0.2**, 37.30N×3.41W, mbLg2.3**/22**, 3C-1D, Error ellipse: s-maj=2.1km s-min=1.3km az=149.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECOG	Cogollos-Vega	0.12	258	⇓Pg	Pg	01 10 12.3	-0.3
	SNR=18						
ECOG				Lg		01 10 14.5	
	169nm,0.1s,SNR=7.9						
ERON	Agron	0.42	228	⇑Pg	Pg	01 10 17.8	-0.7
	27nm,0.2s,SNR=18						
ERON				Lg		01 10 24.1	
	45nm,0.2s,SNR=14						
EQES	Quesada	0.57	29	⇑Pg	Pg	01 10 20.2	-1.2
	21nm,0.3s,SNR=18						
EQES				Lg		01 10 29.2	
	65nm,0.2s,SNR=21						
EQES	Quesada	0.57	29	Pg	Pg	01 10 20.2	-1.1
	21nm,0.3s,SNR=18						
EBER	Berja	0.58	134	⇑Pg	Pg	01 10 20.7	-0.9
	15nm,0.3s,SNR=18						
EBER				Lg		01 10 28.6	
	69nm,0.3s,SNR=16						
EBER	Berja	0.58	134	Pg	Pg	01 10 20.7	-0.9
	15nm,0.3s,SNR=18						
ELOJ	Sierra Loja	0.61	255	Pg	Pg	01 10 19.3	-2.9
	28nm,0.2s,SNR=4.0						
ELOJ				Lg		01 10 30.9	
	24nm,0.2s,SNR=9.9						
ENIJ	Nijar	1.02	109	Pg	Pg	01 10 28.5	-1.9
ENIJ				Lg		01 10 41.8	
ENIJ	Nijar	1.02	109	Pg	Pg	01 10 28.5	-1.9
	20nm,0.3s,SNR=24						
ENIJ				Lg		01 10 42.6	
	15nm,0.4s,SNR=7.9						
EADA	Adamuz	1.26	313	Pn	Pn	01 10 32.6	-2.3
	0.5nm,0.1s,SNR=82						
EADA				Pg	Pg	01 10 33.5	-1.7
	5.1nm,0.1s,SNR=7.9						
EADA				Lg		01 10 50.2	
	6.8nm,0.1s,SNR=7.9						
EADA	Adamuz	1.26	313	Pn	Pn	01 10 32.6	-2.3
	0.5nm,0.1s,SNR=82						
EADA	Adamuz	1.26	313	Pg	Pg	01 10 33.5	-1.7
	5.1nm,0.1s,SNR=7.9						
EMIJ	Mijas	1.32	236	Pn	Pn	01 10 33.7	-2.0
EMIJ				Lg		01 10 57.1	
EMIJ	Mijas	1.32	236	Pn	Pn	01 10 33.7	-2.0
	13nm,0.4s,SNR=25						
EMIJ				Lg		01 10 57.2	
	31nm,0.4s,SNR=7.9						
EVIA	Vianos	1.51	28	Pn	Pn	01 10 36.4	-2.1
	21nm,0.3s,SNR=20						
EVIA				Lg		01 10 56.6	
	35nm,0.3s,SNR=20						
LIJA	Lijar	1.64	257	Pg	Pg	01 10 41.0	-1.7
LIJA				Lg		01 11 04.1	
LIJA	Lijar	1.64	257	i P	Pn	01 10 41.0	+0.7
LIJA				eS	Sb	01 11 04.1	+2.1
REAL	Reales	1.66	241	Pg	Pg	01 10 42.9	-0.1
REAL				Lg		01 11 06.6	
EMUR	La Murta	1.81	72	Pn	Pn	01 10 41.9	-0.7
	11nm,0.4s,SNR=17						
EMUR				Sn	Sn	01 11 03.9	-2.8
	3.5nm,0.3s,SNR=4.0						
EMUR				Lg		01 11 08.2	
	33nm,0.6s,SNR=4.0						
EMUR	La Murta	1.81	72	Pn	Pn	01 10 41.9	-0.8
	11nm,0.4s,SNR=17						
EMUR				Sn	Sn	01 11 03.9	-2.7
	3.5nm,0.3s,SNR=4.0						
ETOB	Tobarra	1.99	47	Pn	Pn	01 10 43.5	-1.8
	4.2nm,0.3s,SNR=20						
ETOB				Lg		01 11 12.8	
	18nm,0.3s,SNR=8.8						
ETOB	Tobarra	1.99	47	Pn	Pn	01 10 43.5	-1.8
	4.2nm,0.3s,SNR=20						
ESPR	Espera	2.00	258	Pn	Pn	01 10 44.9	-0.5
	7.8nm,0.3s,SNR=4.0						
ESPR				Lg		01 11 16.6	
	5.7nm,0.2s,SNR=4.0						
ESPR	Espera	2.00	258	Pn	Pn	01 10 44.9	-0.5
	7.8nm,0.3s,SNR=4.0						
ESDC	Sonseca Array	2.41	350	Pn	Pn	01 10 50.4	-0.8
	1.5nm,0.3s,baz=169,slow=14,SNR=4.0						
ESDC				Pg	Pg	01 10 53.2	-4.8
	baz=169,slow=18,SNR=7.9						
ESDC				Lg		01 11 26.5	
	13nm,0.6s,baz=169,slow=32,SNR=17						
ESDC	Sonseca Array	2.41	350	Pn	Pn	01 10 50.4	-0.8
	1.5nm,0.3s,baz=169,slow=14,SNR=4.0						
ESDC	Sonseca Array	2.41	350	Pg	Pg	01 10 53.2	-4.8
	baz=169,slow=18,SNR=7.9						
ESLA	Sonseca Array	2.41	350	ePn	Pn	01 10 50.3	-0.9
ESLA				eSg	Sg	01 11 23.5	-6.6
ESLA	Sonseca Array	2.41	350	ePn	Pn	01 10 50.3	-0.9
ESLA				eSg	Sg	01 11 23.5	-6.6
EMIN	Mina Concepcio	2.63	281	Pn	Pn	01 10 51.4	-3.1
	1.5nm,0.4s,SNR=9.5						
EMIN				Lg		01 11 32.6	
	1.8nm,0.2s,SNR=6.1						
EMIN	Mina Concepcio	2.63	281	Pn	Pn	01 10 51.3	-3.2
	1.5nm,0.4s,SNR=9.5						
EBEN	Beniarda	2.88	60	Pn	Pn	01 10 56.1	-1.9
EBEN				Pg	Pg	01 11 04.2	-3.3
EBEN				Lg		01 11 42.4	
EBEN	Beniarda	2.88	60	Pn	Pn	01 10 56.2	-1.9
	0.3nm,0.1s,SNR=4.0						
EBEN				Pg	Pg	01 11 04.2	-3.3
	3.4nm,0.3s,SNR=7.7						
EBEN				Sn	Sn	01 11 29.5	-4.4
	SNR=7.9						
EBEN				Lg		01 11 42.4	
	2.6nm,0.3s,SNR=7.9						
EBEN	Beniarda	2.88	60	Pn	Pn	01 10 56.2	-1.8
	SNR=4.0						
EBEN	Beniarda	2.88	60	Pg	Pg	01 11 04.2	-3.3
	3.4nm,0.3s,SNR=7.7						
ECHE	Chera	2.98	39	Pn	Pn	01 10 56.9	-2.6
ECHE				Pg	Pg	01 11 06.4	-3.2
ECHE				Lg		01 11 45.4	
ECHE	Chera	2.98	39	Pn	Pn	01 10 56.9	-2.6
	0.1nm,0.2s,SNR=4.0						
ECHE				Pg	Pg	01 11 06.4	-3.2
	4.8nm,0.6s,SNR=7.3						
ECHE				Sn	Sn	01 11 32.0	-4.5
	SNR=7.9						
ECHE				Lg		01 11 45.4	
	3.1nm,0.3s,SNR=6.1						
EBAD	Badajoz	3.19	298	Pg	Pg	01 11 07.4	-6.3
EBAD				Lg		01 11 48.8	
EBAD	Badajoz	3.19	298	Pn	Pn	01 10 59.1	-3.3
	1.2nm,0.3s,SNR=7.9						
EBAD				Pg	Pg	01 11 07.4	-6.3
	2.2nm,0.3s,SNR=7.4						
EBAD				Sn	Sn	01 11 36.9	-4.8
	SNR=7.9						
EBAD				Lg		01 11 48.8	
	5.5nm,0.2s,SNR=4.0						
EBAD	Badajoz	3.19	298	Pg	Pg	01 11 07.4	-6.3
	2.2nm,0.3s,SNR=7.4						
EGRO	El Granado	3.25	275	Pn	Pn	01 10 59.8	-3.5
EGRO				Pg	Pg	01 11 10.6	-4.3
EGRO				Sn	Sn	01 11 37.5	-5.7
EGRO				Lg		01 11 53.3	
EGRO	El Granado	3.25	275	Pn	Pn	01 10 59.8	-3.5
	1.0nm,0.4s,SNR=7.8						
EGRO				Pg	Pg	01 11 10.6	-4.3
	0.7nm,0.1s,SNR=6.1						
EGRO				Sn	Sn	01 11 37.5	-5.7
	SNR=7.9						
EGRO				Lg		01 11 53.3	
	4.6nm,0.3s,SNR=5.8						
EGRO	El Granado	3.25	275	Pn	Pn	01 10 59.8	-3.5
	1.0nm,0.4s,SNR=7.8						
EGRO	El Granado	3.25	275	Pg	Pg	01 11 10.6	-4.3
	0.7nm,0.1s,SNR=6.1						
EGRO				Sn	Sn	01 11 37.5	-5.7
	SNR=7.9						
GUD	Guadarrama	3.38	350	Pn	Pn	01 11 04.0	-1.1
GUD				Pg	Pg	01 11 13.4	-4.2
GUD				Lg		01 11 54.8	
GUD	Guadarrama	3.38	350	Pn	Pn	01 11 02.9	-2.3
	0.2nm,0.2s,SNR=4.0						
GUD				Pg	Pg	01 11 13.4	-4.2
	1.7nm,0.4s,SNR=8.9						
GUD				Lg		01 11 54.8	
	3.4nm,0.2s,SNR=7.9						
GUD	Guadarrama	3.38	350	Pn	Pn	01 11 04.0	-1.2
	SNR=4.0						
EMOS	Mosqueruela	3.82	36	Pn	Pn	01 11 08.8	-2.6
EMOS				Pg	Pg	01 11 21.4	-4.9
EMOS				Lg		01 12 08.5	
EMOS	Mosqueruela	3.82	36	Pn	Pn	01 11 08.8	-2.6
	0.1nm,0.1s,SNR=4.0						
EMOS				Pg	Pg	01 11 21.4	-4.9
	4.8nm,0.7s,SNR=7.1						
EMOS				Sn	Sn	01 11 51.5	-6.2
	SNR=7.9						
EMOS				Lg		01 12 08.5	
	1.6nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	3.82	36	Pn	Pn	01 11 08.8	-2.6
	SNR=4.0						
EMOS	Mosqueruela	3.82	36	Pg	Pg	01 11 21.4	-4.9
	4.8nm,0.7s,SNR=7.1						
EVO	Evora	3.84	290	ePn	Pn	01 11 09.7	-1.9
EVO				eSn	Sn	01 11 55.2	-2.9
EVO				eSg	Sg	01 12 11.3	-6.5
	11nm,0.4s						
ERTA	Horta de San J	4.67	37	Pn	Pn	01 11 20.5	-2.9
ERTA				Lg		01 12 35.5	
ERTA	Horta de San J	4.67	37	Pn	Pn	01 11 20.5	-2.9
	1.6nm,0.3s,SNR=7.9						
ERTA				Lg		01 12 35.5	
	2.1nm,0.3s,SNR=7.9						
ESAC	San Caprasio	4.96	26	Lg		01 12 48.6	
	32nm,0.4s,SNR=4.0						

ECAL	**Calabor**	**5.29**	**332**	Sn	Sn	01 12 25.9	-9.0
	1.0nm,0.2s,SNR=7.9						
ECAL				Lg		01 12 55.2	
	4.6nm,0.4s,SNR=7.9						
EPOB	**Poblet**	**5.33**	**39**	Pn	Pn	01 11 29.8	-3.0
	0.9nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.33**	**39**	Pn	Pn	01 11 29.8	-3.0
ELOB	**Lobios**	**5.80**	**323**	Pn	Pn	01 11 36.1	-3.3
	0.4nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	01 12 38.8	-8.8
	SNR=7.9						
ELOB				Lg		01 13 14.4	
	1.1nm,0.3s,SNR=5.2						
ELOB	**Lobios**	**5.80**	**323**	Pn	Pn	01 11 36.1	-3.3
ELOB				Sn	Sn	01 12 38.8	-8.8
ETSF	**Etsaut**	**6.00**	**20**	*e*Pn	Pn	01 11 39.1	-3.1
ETSF				*e*Sn	Sn	01 12 43.4	-9.2
	0.5nm,0.3s						
SJPF	**Ste Jean**	**6.04**	**15**	*e*Pn	Pn	01 11 39.8	-3.0
SJPF				*e*Sn	Sn	01 12 44.0	-10
	0.4nm,0.2s						
EALK	**Alkurruntz**	**6.09**	**13**	Pn	Pn	01 11 39.9	-3.5
	SNR=7.9						
EPF	**Esparros**	**6.40**	**26**	*e*Pn	Pn	01 11 44.1	-3.8
EPF				*e*Sn	Sn	01 12 53.5	-9.1
	0.9nm,0.4s						

MAN 13 02:15:55.0,7.32N×125.80E,h12^{km},mb4.1,ML2.9,MS2.6, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.58**	**129**	*e*P	Pb	02 16 07.1	+0.4
KCP	**Kidapawan**	**0.77**	**247**	⇓*e*P	Pb	02 16 10.4	+0.6
KCP				*i* S	Sb	02 16 24.0	+4.1
BUKP	**Musuan**	**0.92**	**307**	*e*P	Pb	02 16 13.1	+0.7
BUKP				*e*S	Sb	02 16 27.6	+3.2

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*IDC **13** 02:26:47.0±0.6,2.74N×95.63E,mb4.6/20,mb1 4.7/21, mb1mx4.6/26,mbtmp4.6/21,ML4.9/1,MS3.9/7,Ms1 3.9/7, ms1mx3.8/15,Error ellipse: s-maj=22.6km s-min=13.6km az=41.0*

*BJI **13** 02:26:48.1,2.69N×95.78E,h20^{km},mB5.2,mb5.1,Ms4.6, Msz4.4*

*MOS **13** 02:26:50.2±0.9,2.83N×95.76E,h33^{km},mb4.9/23,Error ellipse: s-maj=15.8km s-min=8.2km az=105.1*

*NEIC **13** 02:26:50.5±0.3,2.74N×95.64E,mb5.0/22,Error ellipse: s-maj=7.7km s-min=5.1km az=222.0*

ISC 13 02:26:48.8±0.4,2.71N±0.05×95.69E±0.05,h23^{km}, h23^{km}±1.4^{km}:pP-P,n138,$\sigma 1^{s}02$/140,mb4.9/65,MS4.2/21, 11C-6D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.57**	**63**	⇑*i*P	**Pn**	**02 28 13.6**	**+1.1**
SNG	**Songkhla**	**6.62**	**48**	P	**Pn**	**02 28 27.5**	**+0.2**
	436nm,0.9s						
KSM	**Kuching**	**14.66**	**95**	P	**P**	**02 30 22.1**	**+5.1**
KKTK	**Khon Kaen**	**15.25**	**27**	P	**P**	**02 30 30.0**	**+5.3**
	1µm,0.9s						
CMAR	**Chiang Mai Arr**	**15.97**	**11**	P	**P**	**02 30 33.6**	**-0.3**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,379nm,19.3s						
CMAR	**Chiang Mai Arr**	**15.97**	**11**	Pn	**P**	**02 30 33.6**	**-0.4**
	comp=Z,1.8nm,0.3s,baz=200,slow=11,SNR=104						
CMAR				LR	LR	02 36 42.9	
	comp=Z,379nm,19.2s,baz=200,slow=37						
CHG	**Chiang Mai**	**16.31**	**11**	⇓P	**P**	**02 30 37.8**	**-0.5**
	comp=Z,35nm,1.1s						
NANT	**Nan**	**16.72**	**17**	⇓P	**P**	**02 30 45.5**	**+2.0**
	comp=Z,175nm,0.9s						
KKM	**Kota Kinabalu**	**20.73**	**80**	*e*P	**P**	**02 31 30.5**	**-0.1**
QIZ	**Qiongzhong**	**21.32**	**40**	P	**P**	**02 31 36.4**	**-0.2**
QIZ				*e*S	**S**	**02 35 28.0**	**+0.6**
QIZ				LR	LR		
	comp=N,630nm,16.5s,MS4.2						
QIZ				LR	LR		
	comp=E,340nm,14.8s,MS4.2						
QIZ				LR	LR		
	comp=Z,490nm,16.5s,MS4.0						
QIZ	**Qiongzhong**	**21.32**	**40**	*e*P	**P**	**02 31 36.1**	**-0.4**
	comp=Z,32nm,0.9s,mb4.6						
HYB	**Hyderabad**	**22.28**	**312**	*e*P	**P**	**02 31 45.0**	**-1.2**
HYB	**Hyderabad**	**22.28**	**312**	*i* P	**P**	**02 31 47.0**	**+0.8**
SHL	**Shillong**	**23.01**	**351**	*e*P	**P**	**02 31 49.2**	**-4.2**
KMI	**Kunming**	**23.29**	**16**	P	**P**	**02 31 57.9**	**+1.8**
KMI				AP		02 32 04.7	
KMI				XP		02 32 07.5	
KMI				PP	PP	02 32 29.9	+2.5
KMI				PCP	PcP	02 35 45.3	+0.5
KMI				S	**S**	**02 36 06.5**	**+3.3**
KMI				XS		02 36 17.9	
KMI				SS	SS	02 36 54.3	+4.3
KMI				SCP		02 39 20.4	
KMI				PCS		02 39 23.2	
KMI				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.0						
KMI				AMB	AMB		
	comp=Z,230nm,5.0s						
KMI				LR	LR		
	comp=N,900nm,13.2s,MS4.4						
KMI				LR	LR		
	comp=E,380nm,16.4s,MS4.4						
KMI				LR	LR		
	comp=Z,1µm,14.1s,MS4.5						
KMI	**Kunming**	**23.29**	**16**	P	**P**	**02 31 57.9**	**+1.8**
	comp=Z,66nm,1.0s,mb5.0						
KMI				pP		02 32 04.7	
KMI				sP		02 32 07.5	
KMI				PP	PP	02 32 29.9	+2.5
KMI				PPP	PPP	02 32 40.2	+2.8
KMI				PcP	PcP	02 35 45.3	+0.5
KMI				S	**S**	**02 36 06.5**	**+3.3**
KMI				sS		02 36 17.9	
KMI				SS	SS	02 36 54.3	+4.3
KMI				SSS	SSS	02 37 09.8	+4.1
KMI				ScP		02 39 20.4	
KMI				PcS		02 39 23.2	
KMI				LR	LR		
	comp=Z,1µm,14.1s,MS4.5						
GYA	**Guiyang**	**25.85**	**23**	⇓*i*P	**P**	**02 32 20.6**	**-0.1**
GYA				AP	pP	02 32 29.8	+2.5
GYA				XP	sP	02 32 33.9	+3.6
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.9						
GYA				LR	LR		
	comp=N,440nm,13.8s,MS4.3						
GYA				LR	LR		
	comp=E,400nm,15.0s,MS4.3						
GYA				LR	LR		
	comp=Z,650nm,16.2s,MS4.2						
PKI	**Pulchoki**	**26.60**	**339**	*e*P	**P**	**02 32 27.9**	**+0.3**
	comp=Z,40nm,0.7s,mb5.1						
DMN	**Daman**	**26.74**	**339**	*e*P	**P**	**02 32 29.7**	**+0.8**
	comp=Z,39nm,0.6s,mb5.1						
GUN	**Gumba**	**26.75**	**340**	*e*P	**P**	**02 32 29.5**	**+0.6**
	comp=Z,141nm,0.7s,mb5.6						
KKN	**Kakani**	**26.85**	**339**	*e*P	**P**	**02 32 29.9**	**+0.1**
	comp=Z,102nm,0.9s,mb5.3						
LSA	**Lhasa**	**27.18**	**351**	P	**P**	**02 32 33.0**	**+0.1**
LSA	**Lhasa**	**27.18**	**351**	*e*P	**P**	**02 32 33.5**	**+0.6**
	comp=Z,36nm,0.8s,mb5.0						
GKN	**Gorkha**	**27.27**	**338**	*e*P	**P**	**02 32 34.0**	**+0.3**
	comp=Z,120nm,0.8s,mb5.5						
KOLN	**Koldanda**	**27.46**	**336**	*e*P	**P**	**02 32 35.5**	**+0.1**
	comp=Z,80nm,0.7s,mb5.3						
CD2	**Chengdu**	**29.06**	**14**	P	**P**	**02 32 48.7**	**-1.1**
ENH	**Enshi**	**30.37**	**24**	*e*P	**P**	**02 32 59.6**	**-1.9**
	comp=Z,18nm,0.8s,mb4.9						
WHN	**Wuhan**	**32.83**	**31**	⇑P	**P**	**02 33 23.0**	**-0.1**
MBWA	**Marble Bar**	**33.43**	**136**	P	**P**	**02 33 29.8**	**+1.4**
XAN	**Xi’an**	**33.52**	**20**	P	**P**	**02 33 27.7**	**-1.4**
XAN				AP	pP	02 33 33.3	-2.5
XAN				XP	sP	02 33 36.2	-2.5
XAN				AMB	AMB		
	comp=Z,80nm,0.8s,mb5.7						
LZH	**Lanzhou**	**34.05**	**12**	⇑P	**P**	**02 33 32.9**	**-0.7**
LZH				AP	pP	02 33 39.6	-0.8
LZH				XP	sP	02 33 43.0	-0.3
LZH				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
LZH				AMB	AMB		
	comp=Z,190nm,4.0s						
LZH				LR	LR		
	comp=E,730nm,16.0s						
LZH				LR	LR		
	comp=Z,960nm,17.3s,MS4.6						
LZH	**Lanzhou**	**34.05**	**12**	⇑P	**P**	**02 33 32.9**	**-0.7**
	comp=Z,63nm,1.0s,mb5.5						
LZH				pP	pP	02 33 39.6	-0.8
LZH				sP	sP	02 33 43.0	-0.3
LZH				LR	LR		
	comp=Z,970nm,17.3s,MS4.6						
FITZ	**Fitzroy Crossi**	**36.03**	**126**	P	**P**	**02 33 49.6**	**-1.1**
	comp=Z,11nm,0.8s,mb4.8,baz=246,slow=2.7,SNR=9.7						
NJ2	**Nanjing**	**36.42**	**34**	*e*P	**P**	**02 33 53.6**	**-0.2**
NJ2				AP	pP	02 34 03.3	+2.7
NJ2				XP	sP	02 34 07.3	+3.9
NJ2				PP	PP	02 35 18.6	+0.9
NJ2				S	**S**	**02 39 33.0**	**-0.5**
NJ2				XS		02 39 50.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,2µm,3.9s						
NJ2				LR	LR		
	comp=N,1µm,16.3s,MS4.9						
NJ2				LR	LR		
	comp=E,630nm,17.7s,MS4.9						
NJ2				LR	LR		
	comp=Z,390nm,18.8s,MS4.2						
GTA	**Gaotai**	**36.72**	**5**	*e*P	**P**	**02 33 56.1**	**-0.1**
GTA				AP	pP	02 33 59.4	-3.6
GTA				XP	sP	02 34 02.3	-3.6
GTA				PP	PP	02 35 17.4	-4.1
GTA				S	**S**	**02 39 31.2**	**-6.7**
GTA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.2						
GTA				AMB	AMB		
	comp=Z,160nm,4.2s						
GTA				LR	LR		
	comp=N,190nm,12.6s,MS4.2						
GTA				LR	LR		
	comp=E,210nm,15.7s,MS4.2						
GTA				LR	LR		
	comp=Z,350nm,15.7s,MS4.2						
SSE	**Sheshan**	**37.10**	**38**	P	**P**	**02 33 59.6**	**+0.1**
SSE				XP	sP	02 34 12.3	+3.2
SSE				PP	PP	02 35 24.5	-2.0
SSE				S	**S**	**02 39 45.6**	**+1.8**
SSE				XS		02 40 00.8	
SSE				PCS		02 40 07.0	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,20nm,4.5s						
SSE				LR	LR		
	comp=N,140nm,20.3s,MS3.9						
SSE				LR	LR		
	comp=E,120nm,20.3s,MS3.9						
SSE				LR	LR		
	comp=Z,240nm,16.4s,MS4.1						
SSE	**Sheshan**	**37.10**	**38**	P	**P**	**02 33 59.6**	**+0.1**
	comp=Z,37nm,0.7s,mb5.3						
SSE				sP	sP	02 34 12.3	+3.2
SSE				PP	PP	02 35 24.5	-2.0
SSE				S	**S**	**02 39 45.6**	**+1.8**
SSE				sS		02 40 00.8	
SSE				PcS		02 40 07.0	
SSE				SS	SS	02 42 29.6	+15
SSE				LR	LR		
	comp=Z,250nm,16.4s,MS4.1						
TIA	**Tai’an**	**38.77**	**28**	*e*P	**P**	**02 34 13.0**	**-0.5**
BTO	**Baotou**	**39.88**	**17**	*e*P	**P**	**02 34 22.0**	**-0.7**
HHC	**Hu-ho-hao-te**	**40.58**	**19**	*e*P	**P**	**02 34 30.0**	**+1.6**
HHC				AP	pP	02 34 36.0	+0.8
HHC				XP	sP	02 34 38.3	+0.3
HHC				PP	PP	02 36 09.8	+4.5
HHC				PCP	PcP	02 36 35.6	+4.6
HHC				PCS		02 40 21.3	
HHC				S	**S**	**02 40 36.2**	**-0.1**
HHC				XS		02 40 47.8	
HHC				SS	SS	02 43 30.9	-0.5
HHC				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.1						
HHC				AMB	AMB		
	comp=Z,130nm,3.7s						
HHC				LR	LR		
	comp=N,630nm,16.6s						
HHC				LR	LR		
	comp=E,690nm,28.5s						
HHC				LR	LR		
	comp=Z,530nm,16.7s,MS4.5						
WMQ	**Urumqi**	**41.54**	**351**	P	**P**	**02 34 37.1**	**+0.8**
WMQ				AP	pP	02 34 43.0	-0.1
WMQ				XP	sP	02 34 46.0	+0.1
WMQ				PP	PP	02 36 16.6	+1.1
WMQ				PCP	PcP	02 36 35.1	+0.9
WMQ				SS	SS	02 43 51.1	+0.4
WMQ				SCS	ScS	02 44 37.6	+1.2
WMQ				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,230nm,4.6s						
WMQ				LR	LR		
	comp=N,1µm,22.6s,MS4.9						
WMQ				LR	LR		
	comp=E,1µm,22.2s,MS4.9						
WMQ				LR	LR		
	comp=Z,1µm,22.4s,MS4.7						
ULHL	**Ulahol**	**43.04**	**339**	P	**P**	**02 34 50.0**	**+1.4**
	SNR=6.6						
DL2	**Dalian**	**43.09**	**30**	P	**P**	**02 34 50.3**	**+1.2**
DL2				AMB	AMB		
	comp=Z,50nm,0.6s,mb5.4						
KZA	**Kyzart**	**43.26**	**338**	P	**P**	**02 34 51.9**	**+1.4**
	SNR=9.6						
UCH	**Uchtor**	**43.67**	**337**	P	**P**	**02 34 55.2**	**+1.4**
	SNR=23						
TKM2	**Tokmak 2**	**43.86**	**339**	P	**P**	**02 34 56.3**	**+1.1**
	SNR=12						
KBK	**Karagaybulak**	**43.87**	**338**	P	**P**	**02 34 56.6**	**+1.3**
	SNR=20						
AML	**Almayashu**	**43.91**	**336**	P	**P**	**02 34 57.0**	**+1.3**
	SNR=27						
WRA	**Warramunga Arr**	**44.11**	**122**	P	**P**	**02 34 57.8**	**+0.2**
WRA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WRA	**Warramunga Arr**	**44.11**	**122**	P	**P**	**02 34 57.8**	**+0.2**
	comp=Z,6.9nm,0.7s,mb4.5,baz=299,slow=9.4,SNR=42						
WRA	**Warramunga Arr**	**44.11**	**122**	P	**P**	**02 34 57.8**	**+0.2**
WRAB	**Tennant Creek**	**44.12**	**122**	*e*P	**P**	**02 34 57.8**	**+0.1**
	comp=Z,26nm,1.0s,mb4.9						
WB2	**Warramunga Arr**	**44.12**	**122**	⇓*i*P	**P**	**02 34 58.1**	**+0.4**
FRU	**Bishkek**	**44.15**	**338**	*e*P	**P**	**02 34 59.0**	**+1.4**
CHMS	**Chumysh**	**44.24**	**338**	P	**P**	**02 34 59.0**	**+0.6**
	SNR=5.2						
EKS2	**Erkin-Say**	**44.33**	**337**	P	**P**	**02 35 00.5**	**+1.4**
	SNR=7.2						
USP	**Ospenovka**	**44.56**	**338**	P	**P**	**02 35 01.8**	**+0.8**
	SNR=23						
JNU	**Nakatsue**	**44.71**	**43**	P	**P**	**02 35 02.4**	**+0.1**
	comp=Z,5.5nm,0.8s,mb4.4,baz=261,slow=13,SNR=3.3						
MKAR	**Makanchi Array**	**45.43**	**347**	P	**P**	**02 35 08.0**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,33nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,127nm,21.5s						
MKAR	**Makanchi Array**	**45.43**	**347**	P	**P**	**02 35 08.0**	**+0.2**
	comp=Z,33nm,0.7s,mb5.3,baz=162,slow=7.7,SNR=229						
MKAR				LR	LR	02 56 56.3	
	comp=Z,127nm,21.5s,MS3.8,baz=164,slow=40						
KS15	**Wonju Array Si**	**45.47**	**37**	*e*P	**P**	**02 35 08.1**	**-0.2**
SONM	**Songino Array**	**45.89**	**10**	P	**P**	**02 35 11.2**	**-0.2**
	comp=Z,11nm,0.7s,mb4.9,baz=192,slow=8.8,SNR=32						
SONM				PcP	PcP	02 36 49.1	+0.3
	comp=Z,5.6nm,0.6s,baz=189,slow=3.3,SNR=7.9						
SONM				LR	LR	02 56 30.0	
	comp=Z,221nm,18.6s,MS4.1,baz=63,slow=39						
SONM	**Songino Array**	**45.89**	**10**	P	**P**	**02 35 11.2**	**-0.2**
SONM				PcP	PcP	02 36 49.1	+0.3
SONM				LR	LR	02 56 30.0	
ULN	**Ulaanbaatar**	**46.04**	**11**	⇓*i*P	**P**	**02 35 13.1**	**+0.5**
ULN	**Ulaanbaatar**	**46.04**	**11**	*e*P	**P**	**02 35 11.9**	**-0.6**
	comp=Z,12nm,0.8s,mb4.9						
ULN				*e*	pP	02 35 18.2	-1.2
KKAR	**Karatay Array**	**46.04**	**334**	*i* P	**P**	**02 35 13.1**	**+0.4**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
SNY	**Shenyang**	**46.28**	**29**	⇑P	**P**	**02 35 14.2**	**-0.4**
SNY				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.4						
SNY				LR	LR		
	comp=N,350nm,17.3s						
SNY				LR	LR		
	comp=Z,360nm,15.9s,MS4.4						
ZAK	**Zakamensk**	**47.93**	**7**	*e*P	**P**	**02 35 27.0**	**-0.5**
ZAK				*e*		02 36 53.5	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
CN2	**Changchun**	**48.67**	**29**	*e*P	**P**	**02 35 33.4**	**+0.1**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
HIA	**Hailar**	**50.72**	**20**	*e*P	**P**	**02 35 49.1**	**+0.1**
	comp=Z,11nm,0.9s,mb4.8						
HIA				*e*	pP	02 35 56.1	+0.3
MDJ	**Mudanjiang**	**51.32**	**31**	P	**P**	**02 35 54.3**	**+0.8**
MDJ				AP	pP	02 36 00.5	+0.1
MDJ				XP	sP	02 36 05.0	+1.9
MDJ				PP	PP	02 37 51.4	+0.1
MDJ				S	**S**	**02 43 13.4**	**+3.6**
MDJ				XS		02 43 23.0	
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,110nm,5.3s						
MDJ				LR	LR		
	comp=N,60nm,22.0s,MS4.0						
MDJ				LR	LR		
	comp=E,120nm,18.6s,MS4.0						
MDJ				LR	LR		
	comp=Z,90nm,19.4s,MS3.8						
CIT	**Chita**	**51.35**	**14**	*e*P	**P**	**02 35 53.0**	**-0.7**
CIT				*e*	pP	02 36 00.6	0.0
CIT				pmax	pmax		
	comp=Z,26nm,1.7s,mb4.9						
MJAR	**Matsushiro Arr**	**51.63**	**44**	P	**P**	**02 35 55.6**	**-0.4**
MJAR						02 37 09.5	
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR				MLR	MLR		
	comp=Z,94nm,18.0s						
MJAR	**Matsushiro Arr**	**51.63**	**44**	P	**P**	**02 35 55.6**	**-0.4**
	comp=Z,0.8nm,0.3s,mb4.1,baz=231,slow=7.8,SNR=3.9						
MJAR				PcP	PcP	02 37 09.4	-0.3
	comp=Z,1.1nm,0.4s,baz=270,slow=2.5,SNR=4.9						
MJAR				LR	LR	03 00 44.6	
	comp=Z,94nm,18.0s,MS3.9,baz=190,slow=39						
ZAL	**Zalesovo**	**51.84**	**352**	P	**P**	**02 35 55.3**	**-2.0**
ZAL				pmax	pmax		
	comp=Z,18nm,0.7s						
ZAL	**Zalesovo**	**51.84**	**352**	P	**P**	**02 35 55.3**	**-2.1**
	comp=Z,18nm,0.7s,mb5.1,baz=312,slow=7.0						
PMG	**Port Moresby**	**52.67**	**104**	P	**P**	**02 36 03.9**	**-0.3**
PMG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PMG	**Port Moresby**	**52.67**	**104**	P	**P**	**02 36 03.9**	**-0.3**
	comp=Z,8.2nm,0.7s,mb4.8,baz=333,slow=9.0,SNR=3.2						
NVS	**Novosibirsk**	**52.95**	**351**	*i* P	**P**	**02 36 03.8**	**-1.8**
NVS				pmax	pmax		
	comp=N,12nm,0.8s						
NVS				pmax	pmax		
	comp=E,11nm,0.8s						
NVS				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
BVA0	**Borovoye Array**	**54.34**	**341**	P	**P**	**02 36 14.8**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
BVAR	**Borovoye Array**	**54.34**	**341**	P	**P**	**02 36 14.8**	**-1.0**
	comp=Z,16nm,0.7s,mb5.1,baz=143,slow=8.8,SNR=94						
CTA	**Charters Tower**	**54.53**	**117**	P	**P**	**02 36 18.1**	**+0.4**
CTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CTA	**Charters Tower**	**54.53**	**117**	P	**P**	**02 36 18.1**	**+0.4**
	comp=Z,6.5nm,1.0s,mb4.6,baz=299,slow=8.4,SNR=8.5						
CTAO	**Charters Tower**	**54.53**	**117**	*e*P	**P**	**02 36 17.9**	**+0.2**
	comp=Z,7.5nm,0.8s,mb4.8						
AB31	**Akbulak array**	**55.48**	**332**	*i* P	**P**	**02 36 23.5**	**-0.8**
AB31				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.3						
STKA	**Stephens Creek**	**55.48**	**132**	*e*P	**P**	**02 36 31.6**	**+7.0**
	comp=Z,6.4nm,0.9s,mb4.7						
KLR	**Kul’dur**	**55.61**	**28**	*e*P	**P**	**02 36 22.3**	**-2.9**
KLR				MLR	MLR		
	comp=Z,600nm,14.0s,MS4.8						
CLNS	**Chul’man**	**58.77**	**18**	*e*P	**P**	**02 36 44.4**	**-3.1**
CLNS				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.2						
CLNS				pmax	pmax		
	comp=N,13nm,0.8s						
CLNS				pmax	pmax		
	comp=E,12nm,0.7s						
SVE	**Sverdlovsk**	**60.73**	**339**	*e*P	**P**	**02 37 00.0**	**-1.0**
SVE				*e*	pP	02 37 07.0	-1.0
ARU	**Arti**	**61.21**	**338**	⇑*i*P	**P**	**02 37 02.9**	**-1.3**
ARU				*e*		02 39 18.4	
ARU				*e*S	**S**	**02 45 23.6**	**+2.7**
ARU				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.1						
ARU	**Arti**	**61.21**	**338**	*e*P	**P**	**02 37 03.1**	**-1.1**
	comp=Z,18nm,0.9s,mb5.2						
ARU				*e*	pP	02 37 09.5	-1.7
KIV	**Kislovodsk**	**62.18**	**319**	*e*P	**P**	**02 37 10.5**	**-0.5**
KIV				*e*S	**S**	**02 45 29.4**	**-4.0**
KIV				*e*SS	SS	02 49 39.8	+1.5
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
KIV				MLR	MLR		
	comp=N,11nm,20.0s						
KIV				MLR	MLR		
	comp=Z,33nm,20.0s,MS3.5						
SOC	**Sochi**	**63.99**	**318**	*e*P	**P**	**02 37 16.8**	**-6.1**
SOC				*e*		02 37 58.8	
SOC				*e*		02 39 38.3	
SOC				*e*S	**S**	**02 45 45.7**	**-10**
SOC				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
SOC				pmax	pmax		
	comp=N,32nm,1.4s						
SOC				pmax	pmax		
	comp=E,17nm,1.0s						
SOKR	**Solikamsk**	**64.14**	**339**	⇑*i*P	**P**	**02 37 21.0**	**-2.6**
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
YAK	**Yakutsk**	**64.41**	**17**	*e*P	**P**	**02 37 24.2**	**-1.1**
YAK				*e**PP	pP	02 37 33.2	+0.8
YAK				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.3						
YAK				pmax	pmax		
	comp=N,10.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				MLR	MLR		
	comp=Z,274nm,20.0s,MS4.4						
YAK				MLR	MLR		
	comp=N,178nm,19.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,114nm,21.0s,MS4.3						
YAK	**Yakutsk**	**64.41**	**17**	*e*P	**P**	**02 37 23.7**	**-1.7**
	comp=E,37nm,0.6s,mb5.6						
ANN	**Anapa**	**65.97**	**318**	*e*P	**P**	**02 37 33.2**	**-2.5**
ANN				pmax	pmax		
	comp=Z,83nm,1.1s,mb5.7						
BRTR	**Keskin Array B**	**66.98**	**312**	P	**P**	**02 37 41.1**	**-1.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**66.98**	**312**	P	**P**	**02 37 41.1**	**-1.1**
	comp=Z,1.0nm,0.7s,mb4.0,baz=129,slow=7.9,SNR=7.6						
OBN	**Obninsk**	**70.55**	**328**	*c* *i*P	**P**	**02 38 02.9**	**-1.1**
OBN				*e*		02 40 40.6	
OBN				*e*S	S	02 47 06.8	-7.9

OBN				*e*SS	SS	02 51 52.3	+4.3
OBN				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.0						
OBN	**Obninsk**	**70.55**	**328**	⇓*i*P	**P**	**02 38 02.0**	**-2.0**
MA2	**Magadan**	**70.64**	**26**	*e*P	**P**	**02 38 04.7**	**+0.2**
MA2				*e*		02 47 14.9	
MA2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
MA2	**Magadan**	**70.64**	**26**	*e*P	**P**	**02 38 04.0**	**-0.5**
	comp=Z,9.9nm,0.7s,mb4.8						
TIXI	**Tiksi**	**71.97**	**11**	⇑*i*P	**P**	**02 38 10.9**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,26nm,1.5s,mb4.9						
TIXI	**Tiksi**	**71.97**	**11**	⇑*i*P	**P**	**02 38 10.0**	**-2.3**
AKASG	**Malin Array Be**	**73.14**	**322**	P	**P**	**02 38 18.3**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**73.14**	**322**	P	**P**	**02 38 18.3**	**-1.2**
	comp=Z,2.3nm,0.7s,mb4.2,baz=91,slow=4.6,SNR=15						
MAW	**Mawson**	**73.84**	**192**	LR	LR	03 05 06.3	
	comp=Z,89nm,18.9s,MS4.1,baz=240,slow=31						
MLR	**Muntele Rosu**	**73.94**	**317**	P	**P**	**02 38 24.1**	**-0.2**
MLR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MLR	**Muntele Rosu**	**73.94**	**317**	P	**P**	**02 38 24.1**	**-0.2**
	comp=Z,4.6nm,0.9s,mb4.4,baz=66,slow=5.5						
BOSA	**Boshof**	**74.23**	**239**	P	**P**	**02 38 26.8**	**+0.4**
	comp=Z,2.6nm,0.8s,mb4.2,baz=52,slow=12,SNR=2.7						
BOSA				LR	LR	03 06 12.0	
	comp=Z,144nm,18.2s,MS4.3,baz=254,slow=32						
SUW	**Suwalki**	**77.57**	**325**	*e*P	**P**	**02 38 44.6**	**-0.1**
FINES	**FINESS Array B**	**77.97**	**333**	P	**P**	**02 38 46.7**	**0.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	**FINESS Array B**	**77.97**	**333**	P	**P**	**02 38 46.7**	**0.0**
	comp=Z,3.4nm,0.7s,mb4.4,baz=124,slow=6.9,SNR=13						
KAF	**Kangasniemi**	**78.06**	**333**	*e*p	**P**	**02 38 46.5**	**-0.7**
	comp=Z,6.7nm,0.9s,mb4.6,baz=103,slow=5.2						
KAF	**Kangasniemi**	**78.06**	**333**	*e*P	**P**	**02 38 46.5**	**-0.7**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
OJC	**Ojcow**	**78.90**	**321**	*e*P	**P**	**02 38 53.0**	**+0.9**
BILL	**Bilibino**	**80.30**	**21**	*e*P	**P**	**02 38 49.4**	**-10**
BILL				*e*S	S	02 48 55.9	-6.1
BILL				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.4						
ARCES	**ARCESS Array B**	**80.61**	**340**	P	**P**	**02 39 01.4**	**+0.5**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	**ARCESS Array B**	**80.61**	**340**	P	**P**	**02 39 01.4**	**+0.5**
	comp=Z,2.9nm,0.7s,mb4.3,baz=90,slow=4.3,SNR=17						
SYO	**Syowa Base**	**80.97**	**198**	⇑P	**P**	**02 39 04.3**	**+1.5**
GERES	**GERESS Array B**	**82.69**	**319**	P	**P**	**02 39 12.7**	**+0.6**
	comp=Z,2.1nm,0.9s,mb4.2,baz=90,slow=5.3,SNR=13						
GERES				LR	LR	03 22 24.3	
	comp=Z,38nm,20.6s,MS3.8,baz=28,slow=40						
CLL	**Collm**	**83.31**	**321**	*e**SP	sP	02 39 24.0	-0.9
HFS	**Hagfors**	**83.66**	**330**	P	**P**	**02 39 17.2**	**+0.4**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HFS	**Hagfors**	**83.66**	**330**	P	**P**	**02 39 17.2**	**+0.4**
	comp=Z,2.6nm,0.7s,mb4.5,baz=90,slow=7.4,SNR=7.1						
NB2	**NORSAR Subarra**	**84.96**	**331**	P	**P**	**02 39 23.3**	**0.0**
	comp=Z,0.8nm,0.7s,mb4.0,baz=93,slow=5.3						
NOA	**NORSAR Array B**	**84.96**	**331**	P	**P**	**02 39 23.1**	**-0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**84.96**	**331**	P	**P**	**02 39 23.1**	**-0.2**
	comp=Z,1.3nm,0.8s,mb4.1,baz=95,slow=5.1,SNR=3.8						
DAVOX	**Davos**	**85.16**	**317**	P	**P**	**02 39 25.6**	**+1.0**
	comp=Z,2.7nm,0.6s,mb4.6,baz=106,slow=6.6,SNR=8.8						
IMA	**Indian Mountai**	**95.78**	**23**	*e*P	**P**	**02 40 14.8**	**+0.6**
	comp=Z,5.9nm,0.8s,mb5.1						
TBI	**Tubuai**	**113.85**	**114**	*e*LR	LR	03 20 26.6	
	comp=Z,155nm,41.2s						
PPT	**Papeete**	**114.38**	**108**	*e*LR	LR	03 18 36.3	
	comp=Z,16nm,19.5s						
TAOE	**Nuku Hiva Isla**	**124.16**	**99**	*e*LR	LR	03 23 42.7	
	comp=Z,11µm,33.0s						
NVAR	**Mina Array Bea**	**128.41**	**34**	PKP	PKPdf	02 45 57.5	-1.4
	comp=Z,0.2nm,0.3s,baz=1.9,slow=2.1,SNR=3.7						
NVAR	**Mina Array Bea**	**128.41**	**34**	PKP	PKPdf	02 45 57.5	-1.4
TXAR	**Lajitas Array**	**143.13**	**29**	PKIKP	PKPdf	02 46 20.2	-6.0
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**143.13**	**29**	PKhKP		02 46 20.2	
	comp=Z,0.7nm,0.7s,baz=297,slow=1.3,SNR=12						
LRAL	**Lakeview Retre**	**144.35**	**4**	*e*PKPdf	PKPdf	02 46 23.6	-4.5

WEL 13 02:55:11.9±0.6**,37.59S×177.32E,h129**^{km}±7^{km}**,ML3.6**/8**, 2D,Error ellipse: s-maj=10.8km s-min=9.8km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.69**	**194**	⇓PN	P	02 55 32.1	-0.1
URZ				SN	S	02 55 47.0	-0.7
MWZ	**Matawai**	**0.76**	**168**	⇓PN	P	02 55 32.9	+0.2
MWZ				SN	S	02 55 49.0	+0.3
MXZ	**Matakaoa Point**	**0.78**	**89**	PN	P	02 55 32.8	-0.1
MXZ				SN	S	02 55 48.0	-0.9
BKZ	**Black Stump Fm**	**1.71**	**202**	*e*PN	P	02 55 41.5	-1.2
OTVZ	**Oturere**	**2.04**	**219**	PN	P	02 55 47.6	+0.8
NGZ	**Ngauruhoe**	**2.08**	**220**	PN	P	02 55 48.0	+0.7
TUVZ	**Tukino**	**2.13**	**217**	PN	P	02 55 48.1	+0.2
MOVZ	**Moawhango**	**2.20**	**214**	PN	P	02 55 48.2	-0.6
WNVZ	**Wahianoa**	**2.20**	**217**	PN	P	02 55 49.0	+0.1

CASC 13 03:11:33.9±3.0**,12.48N×87.84W,h70**^{km}±55^{km}**,MD3.9, ML3.4,4C-8D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.79**	**1**	⇓*e*P	P	03 12 14.0	+24
CNCH				*e*S	S	03 12 26.1	+24
CRIN	**San Cristobal**	**0.80**	**74**	⇓*e*P	P	03 11 50.8	+0.6
CRIN				*e*S	S	03 12 04.5	+2.2
LEON	**Leon**	**0.93**	**94**	⇓*e*P	P	03 11 51.3	-0.4
LEON				*e*S	S	03 12 04.5	-0.5
TEL3	**Telica 3**	**0.98**	**85**	⇓*e*P	P	03 11 52.5	+0.1
TELN	**Telica**	**0.99**	**83**	⇓*e*P	P	03 11 52.5	-0.1
TELN				*e*S	S	03 12 08.4	+1.9
BLLM	**Bellamira**	**1.03**	**338**	*e*P	P	03 12 17.1	+24
BLLM				*e*S	S	03 12 30.6	+23
MIRN	**Miramar**	**1.10**	**92**	⇓*e*P	P	03 11 54.1	+0.1
MIRN				*e*S	S	03 12 07.5	-1.5
CNGN	**Cerro Negro**	**1.12**	**89**	*e*P	P	03 11 51.2	-3.0
CNGN				*e*S	S	03 12 08.9	-0.3
MOMJ	**Momotombo**	**1.27**	**93**	*e*P	P	03 11 56.5	+0.2
MOMJ				*e*S	S	03 12 12.7	-0.2
APYN	**Apoyeque**	**1.48**	**99**	⇑*e*P	P	03 11 59.3	+0.2
SNVI	**San Vicente**	**1.48**	**319**	*e*P	P	03 12 24.1	+25
SNVI				*e*S	S	03 12 43.4	+26
XAVN	**Gruta Xavier**	**1.52**	**102**	*e*P	P	03 11 59.8	+0.1
XAVN				*e*S	S	03 12 19.0	+0.4
CRUN	**El Crucero**	**1.59**	**108**	⇓*e*P	P	03 12 01.7	+1.1
MGAN	**Managua**	**1.59**	**102**	⇑*e*P	P	03 12 00.5	-0.2
MGAN				*e*S	S	03 12 19.8	-0.6
MGAN				*i*		03 12 21.1	
	comp=N,435nm,0.3s						
LCBS	**La Ceiba**	**1.61**	**317**	⇑*e*P	P	03 12 25.0	+24
LCBS				*e*S	S	03 12 44.7	+24
TICN	**Ticuantepe**	**1.64**	**106**	⇓*e*P	P	03 12 01.7	+0.5
TICN				*e*S	S	03 12 21.7	+0.3
LFRS	**El Faro**	**1.64**	**314**	⇑*e*P	P	03 12 25.4	+24
LFRS				*e*S	S	03 12 45.5	+24
WILN	**Americas 2**	**1.65**	**101**	*e*P	P	03 12 01.8	+0.4
WILN				*e*S	S	03 12 21.7	+0.1
PYTN	**Playitas**	**1.74**	**88**	*e*P	P	03 12 02.4	-0.3
APON	**Apoyo**	**1.82**	**108**	*e*P	P	03 12 03.9	+0.2
APON				*e*S	S	03 12 25.6	-0.2
BOQS	**Boqueron**	**1.88**	**312**	*e*P	P	03 12 29.2	+25
BOQS				*e*S	S	03 12 52.4	+25
SBLS	**San Blas**	**2.20**	**308**	*e*P	P	03 12 33.8	+25
SBLS				*e*S	S	03 13 00.6	+26
RTR	**El Retiro**	**2.25**	**309**	*e*P	P	03 12 34.4	+25

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*NEIC **13** 03:18:28.3, 37.87S×176.74E, h8*^{km}*, ML4.2(WEL), After WEL.*

NEIC Felt at Edgecumbe, Kawerau, Matata and Whakatane.

WEL 13 03:18:28.6±0.1**,37.88S×176.73E,h9**^{km}**,ML4.1**/13**,4C-1D, Error ellipse: s-maj=1.0km s-min=0.9km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.11**	**203**	⇓PG	Pg	03 18 31.3	0.0
MKRZ	**Makatiti**	**0.33**	**219**	P	Pg	03 18 36.0	+0.6
MKRZ	**Makatiti**	**0.33**	**219**	⇑PG	Pg	03 18 36.0	+0.7
MKRZ				SG	Sg	03 18 41.4	+1.5
TAZ	**Tarawera**	**0.39**	**207**	PG	Pg	03 18 36.9	+0.3
TGRZ	**Tauranga**	**0.40**	**292**	P	Pg	03 18 36.5	-0.3
TGRZ	**Tauranga**	**0.40**	**292**	⇑PG	Pg	03 18 36.5	-0.3
TGRZ				SG	Sg	03 18 42.6	+0.3
URZ	**Urewera**	**0.48**	**142**	P	Pg	03 18 37.9	-0.4
URZ	**Urewera**	**0.48**	**142**	⇑PG	Pg	03 18 37.9	-0.5
URZ				SG	Sg	03 18 45.5	+0.7
WIZ	**White Island**	**0.51**	**46**	P*	Pb	03 18 38.9	-0.4
WIZ				S*	Sb	03 18 46.2	-0.2
PATZ	**Paeroa**	**0.62**	**217**	P*	Pb	03 18 41.8	+0.6
MWZ	**Matawai**	**0.77**	**126**	⇑P*	Pb	03 18 43.3	-0.5
MWZ				S*	Sb	03 18 53.7	-0.5
TOZ	**Tahuroa Road**	**0.98**	**278**	P*	Pb	03 18 46.0	-1.4
MXZ	**Matakaoa Point**	**1.29**	**76**	P*	Pb	03 18 51.4	-1.2
BKZ	**Black Stump Fm**	**1.30**	**188**	P	Pb	03 18 51.3	-1.4
BKZ	**Black Stump Fm**	**1.30**	**188**	P*	Pb	03 18 51.2	-1.5
KNZ	**Kokohu**	**1.36**	**147**	PN	Pn	03 18 53.7	-0.1
KUZ	**Kuaotunu**	**1.39**	**324**	*e*P	Pn	03 18 53.5	-0.8
KUZ	**Kuaotunu**	**1.39**	**324**	PN	Pn	03 18 53.4	-0.9
MKAZ	**Moumakai**	**1.46**	**301**	PN	Pn	03 18 55.3	-0.1
HIZ	**Hauiti**	**1.61**	**246**	*e*P	Pn	03 18 55.7	-1.7
HIZ	**Hauiti**	**1.61**	**246**	PN	Pn	03 18 55.7	-1.7
TUVZ	**Tukino**	**1.62**	**211**	P*	Pb	03 18 57.0	-1.3
WNVZ	**Wahianoa**	**1.69**	**211**	P*	Pb	03 18 57.9	-1.7
MOVZ	**Moawhango**	**1.71**	**206**	P*	Pb	03 18 57.3	-2.4
MTAZ	**Motutapu**	**1.82**	**306**	PN	Pn	03 19 00.1	-0.3

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*NIED **13** 03:18:00, 31.80N×141.20E, h32*^{km}*, Mw4.1 Best double couple:* M_0*1.52×10*^{15} *NP1:*ϕ_s*133°, δ76°, λ-31°. NP2:* ϕ_s*231°, δ60°, λ-164°.*

*IDC **13** 03:18:30.1±0.7, 31.40N×140.99E, mb4.0/13, mb1 4.2/15, mb1mx4.1/22, mbtmp4.0/15, ML3.8/2, MS3.4/5, Ms1 3.5/5, ms1mx3.2/26, Error ellipse: s-maj=23.9km s-min=16.9km az=70.0*

*JMA **13** 03:18:35.6±0.2, 31.81N×141.17E, h10*^{km}*, M4.6*

*MOS **13** 03:18:35.4±1.2, 31.33N×140.85E, h53*^{km}*, mb4.4/4, Error ellipse: s-maj=27.9km s-min=9.9km az=107.1*

*NEIC **13** 03:18:37.9±1.5, 31.37N×140.88E, h58*^{km}*±12*^{km}*, mb4.0/4, Error ellipse: s-maj=16.1km s-min=11.6km az=81.0*

ISC 13 03:18:35.1±0.9**,31.55N**±0.05×**141.08E**±0.09**,h43**^{km}±8^{km}**, n52,σ1**^{s}**37**/62**,mb4.0**/17**,MS3.7**/2**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.89**	**326**	P	**P**	**03 19 06.5**	**+1.0**
JHJ2				S	**S**	**03 19 28.7**	**+0.6**
JHJ	**Hachijo jima 2**	**1.91**	**325**	Pn	**P**	**03 19 06.3**	**+0.5**
	124nm,0.3s,baz=164,slow=14,SNR=110						
JHJ				Sn	**S**	**03 19 27.2**	**-1.5**
	290nm,0.3s,baz=38,slow=19,SNR=12						
JHJ				LR	LR	03 19 31.6	
	comp=Z,656nm,19.5s,baz=228,slow=31						
BSO1	**Boso 1**	**3.09**	**358**	P	**P**	**03 19 21.8**	**-0.9**
BSO1				S	**S**	**03 19 58.1**	**-0.7**
JKO	**Kozu shima**	**3.09**	**329**	P	**P**	**03 19 23.2**	**+0.5**
JKO				*e*S	**S**	**03 19 58.4**	**-0.4**
NJJJ	**Nii jima 2**	**3.22**	**332**	P	**P**	**03 19 23.9**	**-0.5**
NJJJ				S	**S**	**03 20 02.8**	**+0.9**
BSO3	**Boso 3**	**3.27**	**352**	P	**P**	**03 19 25.4**	**+0.2**
BSO3				S	**S**	**03 20 02.2**	**-1.2**
JIM2	**Oshima 3**	**3.44**	**337**	P	**P**	**03 19 28.1**	**+0.4**
JIM2				S	**S**	**03 20 05.3**	**-2.4**
JOD2	**Odawara 2**	**4.06**	**336**	P	**P**	**03 19 36.9**	**+0.6**
JOD2				S	**S**	**03 20 20.8**	**-2.4**
JYN	**Shimob**	**4.47**	**332**	P	**P**	**03 19 44.9**	**+2.8**
CBIJ	**Chichi jima**	**4.55**	**167**	Pn	**P**	**03 19 40.4**	**-2.9**
	8.2nm,0.3s,baz=6.0,slow=19,SNR=7.8						
CBIJ				Sn	**S**	**03 20 29.9**	**-5.6**
	27nm,0.3s,baz=107,slow=19,SNR=5.3						
CBIJ				LR	LR	03 21 07.3	
	comp=Z,185nm,18.9s,baz=226,slow=36						
JIE	**Ise**	**4.64**	**309**	P	**P**	**03 19 46.7**	**+2.2**
JRY	**Ryogami san**	**4.81**	**338**	P	**P**	**03 19 48.2**	**+1.3**
JRY				S	**S**	**03 20 41.0**	**-1.0**
JWZ	**Kozaga**	**4.94**	**295**	P	**P**	**03 19 49.1**	**+0.3**
JAG	**Ashikaga**	**5.04**	**345**	P	**P**	**03 19 50.3**	**+0.1**
JAG				S	**S**	**03 20 45.4**	**-2.6**
MJAR	**Matsushiro Arr**	**5.52**	**335**	Pn	**P**	**03 19 58.8**	**+2.0**
	5.3nm,0.3s,baz=161,slow=14,SNR=84						
MJAR				Sn	**S**	**03 20 59.2**	**-0.6**
	2.5nm,0.3s,baz=197,slow=20,SNR=4.8						
MAJO	**Matsushiro**	**5.52**	**335**	*e*P	**P**	**03 19 59.2**	**+2.4**
MAJO				pmax	pmax		
	comp=Z,32nm,0.6s						
MAJO	**Matsushiro**	**5.52**	**335**	*e*P	**P**	**03 19 59.2**	**+2.4**
	comp=Z,32nm,0.6s						
MAT	**Matsushiro**	**5.52**	**335**	*e*P	**P**	**03 19 59.0**	**+2.2**
MAT				*e*S	**S**	**03 21 00.0**	**+0.1**
MAT				pmax	pmax		
	comp=Z,25nm,1.0s						
MAT	**Matsushiro**	**5.52**	**335**	*e*P	**P**	**03 19 59.0**	**+2.2**
	comp=Z,25nm,1.0s						
MAT				*e*S	**S**	**03 21 00.0**	**+0.1**
MAT	**Matsushiro**	**5.52**	**335**	P	**P**	**03 19 59.3**	**+2.5**
MAT				S	**S**	**03 21 00.1**	**+0.2**
JNU	**Nakatsue**	**8.77**	**283**	LR	LR	03 23 49.7	
	comp=Z,231nm,21.6s,baz=177,slow=37						
JOW	**Kunigami**	**12.13**	**250**	LR	LR	03 25 35.0	
	comp=Z,190nm,20.5s,baz=120,slow=35						
ASAJ	**Asahikawa**	**12.60**	**5**	P	**P**	**03 21 31.5**	**-2.7**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**12.60**	**5**	Pn	**P**	**03 21 31.5**	**-2.8**
	comp=Z,0.7nm,0.3s,baz=253,slow=11,SNR=3.9						
ULN	**Ulaanbaatar**	**30.52**	**312**	P	**P**	**03 24 45.7**	**-0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	**30.52**	**312**	P	**P**	**03 24 45.6**	**-0.7**
	comp=Z,1.9nm,0.8s,mb4.0						
CMAR	**Chiang Mai Arr**	**40.11**	**261**	LR	LR	03 44 46.2	
	comp=Z,40nm,18.4s,MS3.3,baz=65,slow=39						
ZAL	**Zalesovo**	**45.56**	**316**	P	**P**	**03 26 50.6**	**-1.7**
	comp=Z,1.1nm,0.4s,mb4.2,baz=35,slow=2.3,SNR=3.2						
ZAL	**Zalesovo**	**45.56**	**316**	P	**P**	**03 26 50.6**	**-1.7**
MKAR	**Makanchi Array**	**46.98**	**307**	P	**P**	**03 27 02.4**	**-1.1**
	comp=Z,0.7nm,0.4s,mb4.0,baz=92,slow=9.6,SNR=14						
CTAO	**Charters Tower**	**51.59**	**174**	P	**P**	**03 27 38.4**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
CTAO	**Charters Tower**	**51.59**	**174**	P	**P**	**03 27 38.4**	**-0.9**
	comp=Z,7.4nm,1.1s,mb4.5						
WRAB	**Tennant Creek**	**51.60**	**188**	*e*P	**P**	**03 27 35.8**	**-3.6**
WRA	**Warramunga Arr**	**51.61**	**188**	P	**P**	**03 27 36.3**	**-3.2**
	comp=Z,2.2nm,0.7s,mb4.2,baz=5.4,slow=7.6,SNR=28						
ILAR	**Eielson Array**	**54.31**	**30**	P	**P**	**03 27 58.7**	**-0.3**
	comp=Z,1.2nm,0.9s,mb3.8,baz=272,slow=5.0,SNR=10						
NWAO	**Narrogin (SRO)**	**67.97**	**202**	LR	LR	03 55 14.3	
	comp=Z,148nm,20.9s,MS4.2,baz=228,slow=32						
YKA	**Yellowknife Ar**	**68.70**	**29**	P	**P**	**03 29 35.5**	**-0.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=297,slow=6.9,SNR=3.4						
YKA	**Yellowknife Ar**	**68.70**	**29**	P	**P**	**03 29 35.5**	**-0.2**
ARCES	**ARCESS Array B**	**69.03**	**340**	P	**P**	**03 29 38.4**	**+0.7**
	comp=Z,3.2nm,1.0s,mb4.2,baz=78,slow=8.3,SNR=3.7						
KAF	**Kangasniemi**	**73.06**	**333**	*e*p	**P**	**03 30 00.6**	**-1.3**
	comp=Z,2.4nm,0.7s,mb4.2,baz=51,slow=5.6						
KAF	**Kangasniemi**	**73.06**	**333**	*e*P	**P**	**03 30 00.6**	**-1.3**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
FINES	**FINESS Array B**	**73.54**	**333**	P	**P**	**03 30 05.7**	**+0.9**
	comp=Z,0.8nm,0.4s,mb4.0,baz=54,slow=4.5,SNR=13						
AKASG	**Malin Array Be**	**78.48**	**323**	P	**P**	**03 30 33.2**	**+0.3**
	comp=Z,1.4nm,0.5s,mb4.1,baz=51,slow=5.4,SNR=8.2						
NVAR	**Mina Array Bea**	**78.53**	**52**	P	**P**	**03 30 34.8**	**+1.3**
	comp=Z,0.9nm,0.5s,mb3.9,baz=296,slow=6.2,SNR=6.4						
BOZ	**Bozeman (W)**	**78.87**	**43**	*e*P	**P**	**03 30 36.8**	**+1.6**
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
BOZ	**Bozeman (W)**	**78.87**	**43**	*e*P	**P**	**03 30 36.8**	**+1.6**
	comp=Z,0.7nm,0.6s,mb3.8						
NB2	**NORSAR Subarra**	**79.13**	**338**	P	**P**	**03 30 37.0**	**+0.7**
	comp=Z,1.1nm,0.6s,mb4.0,baz=43,slow=5.6						
NOA	**NORSAR Array B**	**79.13**	**338**	P	**P**	**03 30 37.1**	**+0.8**
	comp=Z,0.9nm,0.6s,mb3.9,baz=42,slow=5.4,SNR=5.9						
PDAR	**Pinedale Array**	**81.73**	**45**	P	**P**	**03 30 51.2**	**+0.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=225,slow=4.2,SNR=4.0						
BRTR	**Keskin Array B**	**82.29**	**312**	P	**P**	**03 30 54.9**	**+1.4**
	comp=Z,0.5nm,0.5s,mb3.7,baz=135,slow=3.5,SNR=3.9						
TXAR	**Lajitas Array**	**93.68**	**52**	P	**P**	**03 31 50.4**	**+1.9**
	comp=Z,0.9nm,0.6s,mb4.4,baz=302,slow=2.9,SNR=20						
LPAZ	**La Paz**	**149.40**	**67**	PKPbc	PKPdf	03 38 23.5	+8.0
	comp=Z,0.9nm,0.6s,baz=38,slow=10,SNR=7.1						

IDC 13 03:29:14.4±10.0**,16.52S×173.55W,h695**^{km}±137^{km}**, mb2.4**/3**,mb1 2.8**/3**,mb1mx2.7**/15**,mbtmp3.4**/3**,Error ellipse: s-maj=122.9km s-min=42.0km az=159.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.45**	**258**	P	P	03 37 05.3	-1.9
	0.4nm,0.7s,baz=96,slow=7.7,SNR=5.3						
TXAR	**Lajitas Array**	**81.36**	**56**	P	P	03 40 22.1	-1.1
	0.4nm,0.9s,baz=236,slow=4.5,SNR=3.8						
ILAR	**Eielson Array**	**83.57**	**11**	P	P	03 40 32.2	-1.2
	0.5nm,0.8s,baz=226,slow=6.8,SNR=6.6						
GERES	**GERESS Array B**	**147.22**	**351**	PKPbc	PKPdf	03 47 42.0	+3.3
	0.7nm,0.8s,baz=27,slow=2.2,SNR=4.5						

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*IDC **13** 03:39:05.7±0.8, 4.63N×126.83E, mb4.3/10, mb1 4.4/10, mb1mx4.2/16, mbtmp4.2/10, MS3.1/2, Ms1 3.2/2, ms1mx3.0/16, Error ellipse: s-maj=47.1km s-min=17.7km az=70.0*

*NEIC **13** 03:39:08.9±0.4, 4.59N×126.74E, h20*^{km}*, mb4.6/4, Error ellipse: s-maj=24.8km s-min=8.1km az=73.0*

*MAN **13** 03:39:14.5, 4.17N×126.26E, h80*^{km}*, mb4.8, ML3.7, MS3.7*

ISC 13 03:39:16.4±1.1**,4.37N**±0.08×**126.4E**±0.1**,h95**^{km}±10^{km}**, n24,σ0**^{s}**90**/26**,mb4.2**/12**,1C-1D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**2.56**	**357**	*e*P	**P**	**03 39 54.9**	**-2.1**
KCP	**Kidapawan**	**2.92**	**334**	⇓*e*P	**P**	**03 40 02.1**	**+0.1**
BUKP	**Musuan**	**3.73**	**339**	*e*P	**P**	**03 40 13.1**	**+0.1**
BUKP				*e*S	**S**	**03 40 58.0**	**+2.0**
BUTP	**Butuan**	**4.63**	**350**	*e*P	**P**	**03 40 26.6**	**+1.2**
BUTP				*e*S	**S**	**03 41 27.7**	**+9.3**
IPIL	**Ipil**	**5.10**	**312**	*e*P	**P**	**03 40 30.6**	**-1.2**
IPIL				*e*S	**S**	**03 41 29.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**22.34**	**182**	*e*P	**P**	**03 44 08.8**	**+1.5**
	12nm,0.9s,mb4.2						
FITZ	**Fitzroy Crossi**	**22.34**	**182**	P	**P**	**03 44 08.9**	**+1.6**
	11nm,0.6s,mb4.3,baz=12,slow=9.0,SNR=17						
WRAB	**Tennant Creek**	**25.39**	**162**	*e*P	**P**	**03 44 36.4**	**-0.3**
	21nm,0.9s,mb4.6						
WB2	**Warramunga Arr**	**25.40**	**162**	⇑*i*P	**P**	**03 44 36.5**	**-0.2**
MBWA	**Marble Bar**	**26.20**	**194**	*e*P	**P**	**03 44 44.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**30.27**	**300**	P	**P**	**03 45 21.6**	**+0.9**
	0.8nm,0.4s,mb3.7,baz=117,slow=6.0,SNR=4.3						
CMAR				LR	LR	03 57 58.2	
	comp=Z,24nm,19.9s,baz=125,slow=37						
STKA	**Stephens Creek**	**38.84**	**159**	*e*P	**P**	**03 46 33.5**	**-0.4**
	5.1nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**38.84**	**159**	P	**P**	**03 46 33.5**	**-0.4**
	3.3nm,0.6s,mb4.4,baz=314,slow=8.1,SNR=7.1						
MKAR	**Makanchi Array**	**56.84**	**325**	P	**P**	**03 48 52.3**	**-1.1**
	2.2nm,0.5s,mb4.5,baz=117,slow=8.1,SNR=16						
MKAR				PcP	PcP	03 49 48.0	+0.3
	1.9nm,0.8s,baz=117,slow=5.4,SNR=4.9						
MKAR				LR	LR	04 14 37.7	
	comp=Z,25nm,20.6s,slow=38						
BVAR	**Borovoye Array**	**66.60**	**327**	P	**P**	**03 49 57.4**	**-1.3**
	2.9nm,0.6s,mb4.3,baz=135,slow=8.4,SNR=15						
ARU	**Arti**	**74.22**	**328**	*e*P	**P**	**03 50 44.8**	**+0.3**
	9.1nm,0.6s,mb4.7						
VNDA	**Vanda**	**84.10**	**173**	P	**P**	**03 51 38.1**	**+0.8**
	0.5nm,0.6s,mb3.5,baz=340,slow=6.1,SNR=3.5						
ILAR	**Eielson Array**	**84.67**	**25**	P	**P**	**03 51 40.0**	**-0.4**
	0.7nm,1.0s,mb3.6,baz=256,slow=5.4,SNR=5.3						
ARCES	**ARCESS Array B**	**89.73**	**340**	P	**P**	**03 52 05.0**	**+0.3**
	2.0nm,0.7s,mb4.4,baz=81,slow=6.6,SNR=6.4						
KAF	**Kangasniemi**	**90.88**	**332**	*e*p	**P**	**03 52 09.6**	**-0.7**
FINES	**FINESS Array B**	**91.11**	**332**	P	**P**	**03 52 11.7**	**+0.3**
	2.0nm,0.7s,mb4.4,baz=65,slow=5.6,SNR=18						
FINES	**FINESS Array B**	**91.11**	**332**	P	**P**	**03 52 11.7**	**+0.3**
NOA	**NORSAR Array B**	**98.07**	**334**	P	**P**	**03 52 43.6**	**+0.5**
	0.7nm,0.8s,mb4.2,baz=68,slow=3.0,SNR=3.3						
GERES	**GERESS Array B**	**101.38**	**322**	P	P	03 52 59.6	+1.2
	0.4nm,0.6s,baz=63,slow=4.4,SNR=3.9						

MAN 13 03:47:39.6,17.41N×120.26E,h28^{km}**,mb3.8,ML2.5, MS2.1,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.49**	**61**	*e*P	Pb	03 47 50.6	+0.9
ABRA				*e*S	Sb	03 47 59.4	+2.7
APYP	**Conner**	**1.04**	**64**	*e*P	Pn	03 47 58.1	-0.3
APYP				*e*S	Sn	03 48 12.2	+0.1
CVP	**Callao Caves**	**1.52**	**79**	*e*P	Pn	03 48 05.0	-0.3
CVP				*e*S	Sn	03 48 26.0	+1.8
CAUP	**Cauayan**	**1.56**	**107**	*e*P	Pn	03 48 05.9	-0.1
SCZP	**Santa Cruz**	**1.66**	**192**	*e*P	Pn	03 48 21.9	+15
SCZP				*e*S	Sn	03 48 24.6	-3.4
BALP	**Baler**	**2.09**	**143**	*e*P	Pn	03 48 13.7	+0.3
BALP				*e*S	Sn	03 48 38.5	-0.2
LUBP	**Lubang**	**3.66**	**180**	*e*P	Pn	03 48 35.3	-0.5

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*IDC **13** 03:49:56.6±3.6, 16.01N×97.89W, mb3.4/5, mb1 3.8/6, mb1mx3.6/21, mbtmp3.4/6, ML3.4/1, Error ellipse: s-maj=124.8km s-min=56.4km az=68.0*

*MEX **13** 03:49:59.8±1.0, 15.98N×99.28W, h6*^{km}*±16*^{km}*, MD4.2*

*NEIC **13** 03:49:59.8, 15.98N×99.28W, h6*^{km}*, mb3.9/1, MD4.2(MEX), After MEX.*

ISC 13 03:49:57.8±1.5**,16.00N**±0.07×**99.24W**±0.04**,h10**^{km}±12^{km}**, n23,σ1**^{s}**30**/41**,mb3.5**/5**,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**1.07**	**323**	*i* P	**Pb**	**03 50 17.1**	**-0.8**
ACX				*e*S	**Sb**	**03 50 31.7**	**-0.1**
PNIG	**Pinotepa**	**1.14**	**70**	*i* P	**Pb**	**03 50 18.6**	**-0.5**
PNIG				*e*S	**Sb**	**03 50 34.7**	**+1.0**
CAIG	**El Cayaco**	**1.43**	**317**	*i* P	**Pn**	**03 50 23.5**	**-0.4**
CAIG				*i* S	**Sb**	**03 50 39.1**	**-3.1**
PLIG	**Platanillo**	**2.39**	**354**	*i* P	**Pn**	**03 50 37.3**	**-0.2**
PLIG				*i* S	**Sn**	**03 51 04.8**	**-2.3**
VHO	**Vista Hermosa**	**2.63**	**66**	*i* P	**Pn**	**03 50 40.8**	**-0.2**
VHO				*i* S	**Sn**	**03 51 13.4**	**+0.2**
OXX	**Oaxaca**	**2.64**	**66**	*i* P	**Pn**	**03 50 40.6**	**-0.6**
OXX				*i* S	**Sn**	**03 51 09.2**	**-4.4**
ZIIG	**Zihuatanejo**	**2.66**	**307**	*e*P	**Pn**	**03 50 40.1**	**-1.3**
ZIIG				*i* S	**Sn**	**03 51 10.9**	**-3.1**
HUIG	**Huatulco**	**3.02**	**94**	*e*P	**Pn**	**03 50 46.6**	**0.0**
HUIG				*i* S	**Sn**	**03 51 22.6**	**-0.7**
PPM	**Popocatepetl**	**3.10**	**11**	*e*P	**Pn**	**03 50 50.8**	**+3.0**
PPM				*i* S	**Sn**	**03 51 25.0**	**-0.2**
PPM				*i* S	**Sn**	**03 51 27.9**	**+2.7**
PPM	**Popocatepetl**	**3.10**	**11**	*e*P	**Pn**	**03 50 47.5**	**-0.2**
PPM				*e*P		03 50 50.8	
PPM				*i* S	**Sn**	**03 51 25.0**	**-0.2**
PPM				*i* S	**Sn**	**03 51 27.9**	**+2.7**
UNM	**Universidad Na**	**3.31**	**1**	*e*P	**Pn**	**03 50 52.0**	**+1.4**
UNM				*i* S	**Sn**	**03 51 29.4**	**-1.1**
UNM	**Universidad Na**	**3.31**	**1**	*e*P	**Pn**	**03 50 49.9**	**-0.7**
UNM				*e*P		03 50 52.0	
UNM				*i* S	**Sn**	**03 51 29.4**	**-1.1**
IISM	**Ciudad Serdan**	**3.46**	**31**	*e*P	**Pn**	**03 50 52.1**	**-0.8**
IISM				*i* S	**Sn**	**03 51 36.2**	**+1.9**
MOIG	**Morelia**	**4.10**	**333**	*e*P	**Pn**	**03 51 03.7**	**+1.9**
MOIG				*i* S	**Sn**	**03 51 52.1**	**+1.7**
CMIG	**Matias Romero**	**4.32**	**75**	*e*P	**Pn**	**03 51 03.2**	**-1.8**
CMIG				*i* S	**Sn**	**03 51 54.9**	**-1.1**
SFJM	**Santa Fe**	**5.74**	**322**	*e*P	**Pn**	**03 51 26.5**	**+1.5**
SFJM				*i* S	**Sn**	**03 52 30.3**	**-1.4**
TXAR	**Lajitas Array**	**13.88**	**344**	Pn	**P**	**03 53 24.2**	**+7.2**
	0.0nm,0.3s,baz=160,slow=15,SNR=5.9						
TXAR				Lg		03 57 29.1	
	0.1nm,0.3s,baz=151,slow=13,SNR=3.0						
ANMO	**Albuquerque**	**19.95**	**342**	P	**P**	**03 54 34.0**	**+1.2**
	0.4nm,0.4s,baz=135,slow=5.7,SNR=3.0						

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WUAZ  Wupatki            22.25 333  eP     P        03 55 00.0 +3.6
      4.4nm,1.0s,mb3.8
NVAR  Mina Array Bea     27.93 327   P     P        03 55 55.4 +5.2
      0.3nm,0.4s,mb3.3,baz=160,slow=11,SNR=3.2
PDAR  Pinedale Array     28.10 344   P     P        03 55 53.4 +1.8
      0.5nm,0.8s,mb3.2,baz=146,slow=11,SNR=5.0
YKA   Yellowknife Ar     47.68 350   P     P        03 58 36.6 +0.5
      0.4nm,0.5s,mb3.7,baz=159,slow=7.6,SNR=4.0
ILAR  Eielson Array      58.31 338   P     P        03 59 56.6 +1.7
      0.3nm,0.9s,mb3.3,baz=158,slow=4.9,SNR=3.5
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SSS ***13*** *03:57:06.7, 20.32N×71.17W, h26^{km}*

IDC ***13*** *03:58:00.7±0.5, 18.27N×77.42W, mb4.7/21, mb1 4.8/24, mb1mx4.8/25, mbtmp4.7/24, ML5.2/2, MS4.6/13, Ms1 4.6/13, ms1mx4.4/22, Error ellipse: s-maj=16.3km s-min=10.8km az=58.0*

BJI ***13*** *03:58:01.2, 18.30N×77.40W, h5^{km}, mB5.5, Ms5.3, Msz5.0*

MOS ***13*** *03:58:01.7±1.9, 18.16N×77.63W, h10^{km}, mb5.0/22, MS4.7/13, Error ellipse: s-maj=13.5km s-min=8.7km az=68.4*

HRVD ***13*** *03:58:01.3±0.2, 18.39N×77.40W, h15^{km}±1^{km}, MW5.2/66, Centroid moment Tensor Solution. LP body waves: s42,c68;Mantle waves: s66,c130; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.64±.18; $M_{\theta\theta}$2.20±.17; $M_{\phi\phi}$-1.56±.19; $M_{r\theta}$1.81±.37; $M_{\theta\phi}$6.76±.19; $M_{\phi r}$1.12±.37; Best double couple: $M_0$7.284×10^{16} NP1:ϕ_s7°, δ79°, λ171°. NP2:ϕ_s99°, δ82°, λ11°. Principal axes: T 7.864, Plg14°, Azm323°; N -1.165, Plg76°, Azm134°; P -6.704, Plg2°, Azm232°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***13*** *03:58:01.3±0.5, 18.32N×77.44W, h2^{km}±3^{km}, mb5.1/148, MS4.6/91, MD5.1(JSN) Error ellipse: s-maj=3.1km s-min=2.3km az=194.0*

NEIC One house destroyed and 6 houses and a church damaged [VII] at Top Alston. Some buildings also damaged [VII] at Aenon Town and Silent Hill. Ten houses damaged at Coleyville, two at Coffee Ridge and one in Mount Moriah. A landslide blocked Penfield Road at Gordon Town. Felt [V] at Mandeville, Ocho Rios and Port Maria; [IV] at Kingston, Montego Bay, Portmore and Savanna-la-Mar. Felt throughout Jamaica.

SSNC ***13*** *03:58:01.3±6.8, 18.35N×77.49W, h25^{km}±999^{km}, MD4.6, ML5.5*

JSN ***13*** *03:58:02.4±0.9, 18.24N×77.42W, h17^{km}, MD5.1, Fault plane solution: NP1:ϕ_s301.5°, δ60.5°, λ5.7°.*

ISC 13 03:58:01.8±0.1**, 18.31N**±0.02×**77.44W**±0.02**, h17**^{km}**, (h40**^{km}±2.2^{km}**:pP-P), n470, σ1**^{s}**11**/420**, mb5.0**/161**, MS4.6**/102**, 81C-16D, Jamaica region**

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Code  Station Name        Δ°   AZ°    Phase ID              Time     Res
                                      Op       ISC        h  m  s    ISC
BBJ   Bamboo Saint A     0.18  67⇓iP     Pb        03 58 06.7 +0.2
MBJ   Montego Bay        0.41 283⇓eP     Pb        03 58 10.2 +0.1
MBJ                               i S     Sb        03 58 17.9 +2.0
MCJ   Malvern            0.45 211⇓iP     Pb        03 58 09.8 -1.0
BNJ   Bonny Gate         0.47  89⇓iP     Pb        03 58 11.1  0.0
PCJ   Portland Cotta     0.63 154⇑iP     Pb        03 58 12.6 -1.3
STH   Stony Hill         0.65 111⇓eP     Pb        03 58 13.5 -0.7
GWJ   Greenwich          0.72 109⇓eP     Pb        03 58 14.8 -0.6
HOJ   Hope               0.73 115⇓eP     Pb        03 58 14.9 -0.7
YHJ   Yallahs            1.00 115⇑eP     Pb        03 58 19.5 -0.7
LMGC  Las Mercedes       1.79  13 i PG    Pn        03 58 29.8 -2.5
      baz=205
LMGC                              i SG    Sn        03 58 49.1 -5.7
      comp=N,494μm,0.1s
      comp=E,429μm,0.1s
RCC   Rio Carpintero     2.35  44⇓iPG    Pn        03 58 39.5 -0.9
      baz=228
RCC                               i SG    Sn        03 59 06.4 -2.7
      comp=N,74μm,0.2s
      comp=E,71μm,0.2s
HLGC  Holguin            2.88  27 ePG    Pn        03 58 46.0 -1.9
      baz=201
HLGC                              eSG    Sn        03 59 16.7 -5.7
      comp=N,44μm,0.3s
      comp=E,45μm,0.3s
MOAC  Moa                3.31  45 i PG    Pn        03 58 52.1 -1.9
      baz=222
MOAC                              i SG    Sn        03 59 29.6 -3.7
      comp=N,105μm,0.7s
      comp=E,103μm,0.7s
MASC  Masc               3.56  58 ePG    Pn        03 58 56.7 -0.8
      baz=227
MASC                              eSG    Sn        03 59 29.6  -10
      comp=N,21μm,0.4s
      comp=E,22μm,0.4s
MGV   Manicaragua        4.47 328 i PG    Pn        03 59 08.2 -2.2
      baz=142
MGV                               i SG    Sn        03 59 58.2 -4.4
      comp=N,46μm,0.6s
      comp=E,38μm,0.6s
SOR   Soroa              6.86 311 i PG    Pn        03 59 41.3 -2.9
      baz=132
SOR                               i SG    Sn        04 01 01.2 -1.4
      comp=N,12μm,0.3s
      comp=E,16μm,0.6s
UPA   Univ. de Panam     9.49 193⇑eP     P         04 00 18.0 -2.8
TRTC  Tortuguero         9.79 219 eP     P         04 00 22.4 -2.7
TRTC  Tortuguero         9.79 219⇓eP     P         04 00 22.3 -2.8
PYTN  Playitas          10.09 237 eP     P         04 00 28.4 -0.8
CONN  Concepcion        10.37 231⇓eP     P         04 00 32.6 -0.3
TEIG  Tepich            10.41 282⇑eP     P         04 00 29.2 -4.2
      comp=E,34nm,1.2s
WILN  Americas 2        10.42 235 eP     P         04 00 33.3 -0.4
DWPF  Disney            10.42 340⇑eP     P         04 00 29.8 -3.8
      comp=E,284nm,0.8s
APON  Apoyo             10.47 234⇑iP     P         04 00 35.3 +0.9
MGAN  Managua           10.47 235⇑eP     P         04 00 34.7 +0.3
MGAN                              i                04 04 03.5
      comp=N,197nm,0.8s
APYN  Apoyeque          10.50 236 eP     P         04 00 34.9 +0.2
SJS   Escuela Geolog    10.50 218 eP     P         04 00 33.1 -1.7
SJS   Escuela Geolog    10.50 218 eP     P         04 00 33.2 -1.5
XAVN  Gruta Xavier      10.53 236 eP     P         04 00 35.8 +0.6
MOMJ  Momotombo         10.55 237 eP     P         04 00 34.8 -0.7
LAJ   Bijagual          10.60 219 eP     P         04 00 40.6 +4.4
LAJ   Bijagual          10.60 219⇓eP     P         04 00 40.9 +4.7
CRUN  El Crucero        10.61 235 eP     P         04 00 37.5 +1.2
PRS1  Puriscal          10.62 220 eP     P         04 00 35.6 -0.8
PRS1  Puriscal          10.62 220⇑eP     P         04 00 36.8 +0.4
CNGN  Cerro Negro       10.63 238 eP     P         04 00 36.5  0.0
LCR2  La Lucha 2        10.63 218 eP     P         04 00 34.5 -2.1
LCR2  La Lucha 2        10.63 218⇑eP     P         04 00 34.5 -2.1
BUS   Buena Vista       10.64 216 eP     P         04 00 34.8 -1.9
BUS   Buena Vista       10.64 216⇓eP     P         04 00 34.6 -2.1
MIRN  Miramar           10.67 238 eP     P         04 00 37.5 +0.4
TELN  Telica            10.68 239 eP     P         04 00 37.6 +0.4
TEL3  Telica 3          10.71 239⇓eP     P         04 00 37.8 +0.2
SJG   San Juan          10.74  89  Pn    P         04 00 34.0 -4.0
      comp=N,6.6nm,0.3s,baz=280,slow=9.3,SNR=12
SJG                                Sn    S         04 02 31.6 -7.1
      comp=N,1.9nm,0.3s,baz=331,slow=19,SNR=2.0
SJG                                Lg              04 03 39.3
      baz=356,slow=19,SNR=1.2
JTS   JuntasAbangare    10.79 223⇓iP     P         04 00 39.6 +0.9
JTS   JuntasAbangare    10.79 223  Pn    P         04 00 37.0 -1.7
      comp=N,6.3nm,0.3s,baz=37,slow=15,SNR=22
JTS                                Lg              04 03 56.1
      comp=N,0.5nm,0.3s,baz=276,slow=19,SNR=1.8
JTS                                LR    LR        04 05 08.8
      comp=N,2μm,18.4s,baz=49,slow=40
JTS   JuntasAbangare    10.79 223 eP     P         04 00 36.2 -2.5
      comp=N,150nm,1.0s
CRIN  San Cristobal     10.81 240 eP     P         04 00 38.0 -1.0
LEON  Leon              10.83 239 eP     P         04 00 38.7 -0.6
SVTC  San Vito de Co    10.88 210 eP     P         04 00 38.2 -1.8
ACR   Cerro Adams       11.09 211 eP     P         04 00 40.6 -2.3
ACR   Cerro Adams       11.09 211 eP     P         04 00 40.7 -2.2
PTP1  Petroterminal     11.15 206 eP     P         04 00 44.5 +0.8
JCR   Jicaral           11.22 222⇑eP     P         04 00 44.1 -0.6
SDV   Santo Domingo     11.47 144  Pn    P         04 00 45.5 -2.4
      comp=N,50nm,0.3s,baz=358,slow=6.0,SNR=150
SDV                                Sn    S         04 02 46.3  -10
      comp=N,22nm,0.3s,baz=23,slow=20,SNR=6.8
SDV                                LR    LR        04 05 23.2
      comp=N,2μm,20.4s,baz=159,slow=39
SDV   Santo Domingo     11.47 144 eP     P         04 00 44.4 -3.6
      comp=N,492nm,0.8s
SDV                               eS     S         04 02 43.2  -13
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SABS  Saba              13.53  91 eP     P         04 01 23.5 +7.9
SABT  Saba              13.53  91 eP     P         04 01 23.5 +7.9
ROSC  El Rosal          13.71 167  Pn    P         04 01 17.8 -0.3
      comp=N,3.4nm,0.3s,baz=90,slow=8.7,SNR=17
ROSC                               Sn    S         04 03 44.2 -6.8
      comp=N,2.6nm,0.3s,baz=270,slow=20,SNR=5.1
ROSC  El Rosal          13.71 167  Pn    P         04 01 17.8 -0.3
ROSC                               Sn    S         04 03 44.1 -6.8
CPB   Codrington        14.88  90 eP     P         04 01 30.3 -3.0
BPA   Boggy Peak        14.91  92 eP     P         04 01 32.9 -0.8
NHSC  New Hope          14.94 351 eP     P         04 01 28.2 -5.7
      comp=N,281nm,1.2s
COW   Cow Castle Cre    15.29 350 eP     P         04 01 31.6 -7.0
SEG   Port Louis        15.34  95 eP     P         04 01 38.2 -1.1
BBL   Barber's Block    15.53  98 eP     P         04 01 40.4 -1.4
JSC   Jenkinsville      16.27 349 eP     P         04 01 45.9 -5.2
CMIG  Matias Romero     16.66 269⇑iP     P         04 01 56.4 +0.1
LRAL  Lakeview Retre    16.99 332⇑eP     P         04 01 57.4 -2.9
      comp=N,61nm,1.0s
TRN   Trinidad (W)      17.29 114 eP     P         04 02 05.8 +1.6
TPP   Pointe-a-Pierr    17.41 115 eP     P         04 02 07.2 +1.5
TPR   Prospect          17.60 111 eP     P         04 02 06.3 -1.7
TBH   Brigand Hill      17.66 114 eP     P         04 02 09.8 +1.0
OTAV  Otavalo           17.99 183 eP     P         04 02 14.7 +1.8
      comp=N,88nm,1.1s
BBSR  BB Station        18.11  37 eP     P         04 02 11.4 -2.9
      comp=N,194nm,1.4s
CPCT  Cooper Cave       18.19 341⇑iP     P         04 02 14.2 -1.1
OXX   Oaxaca            18.41 269 eP     P         04 02 20.0 +1.9
VHO   Vista Hermosa     18.42 269 eP     P         04 02 18.7 +0.4
SWET  Sewanee           18.45 338⇑eP     P         04 02 17.2 -1.3
TZTN  Tazewell          18.95 345⇑eP     P         04 02 23.0 -1.4
BLA   Blacksburg        19.01 353 eP     P         04 02 23.6 -1.6
      comp=N,128nm,1.0s
PLAL  Pickwick Lake     19.11 332⇑eP     P         04 02 24.6 -1.8
      comp=N,88nm,0.9s
OXF   Oxford            19.34 329⇑eP     P         04 02 27.8 -1.4
      comp=N,506nm,1.1s
CBN   Corbin            19.82   0 eP     P         04 02 33.4 -1.1
      comp=N,68nm,0.8s
WVT   Waverly           19.98 335⇑eP     P         04 02 34.9 -1.5
      comp=N,37nm,0.7s
PPM   Popocatepetl      20.08 276 eP     P         04 02 40.0 +2.6
MET   Memphis--Engin    20.09 329  P     P         04 02 35.8 -1.6
NATX  Nacogdoches       20.52 314⇑eP     P         04 02 41.0 -0.9
      comp=N,185nm,0.9s
NATX                              LR     LR
      comp=Z,561nm,21.0s,MS3.9
UNM   Universidad Na    20.60 276 eP     P         04 02 48.0 +5.2
UTMT  University of     20.60 333 eP     P         04 02 42.3 -0.4
      comp=Z,850nm,1.0s
GLAT  Glass             20.72 332 eP     P         04 02 43.1 -0.9
GNAR  Gosnell           20.81 330⇑eP     P         04 02 44.3 -0.6
PLIG  Platanillo        20.94 274 i P    P         04 02 48.4 +2.1
PVMO  Portageville      21.03 331  P     P         04 02 46.6 -0.5
SDMD  Soldier's Deli    21.03   1⇑eP     P         04 02 47.1  0.0
UALR  University of     21.09 324⇑eP     P         04 02 46.9 -0.9
      comp=Z,340nm,1.4s,mb5.5
PARMO Parma             21.26 332 eP     P         04 02 48.5 -0.9
MCWV  Mont Chateau      21.37 355⇑eP     P         04 02 51.3 +0.7
      comp=Z,131nm,1.2s,mb5.1
MCWV                              LR     LR
      comp=Z,3μm,19.0s,MS4.7
BLO   Bloomington       22.23 341⇑eP     P         04 02 59.5 +0.3
      comp=Z,218nm,1.2s,mb5.5
BRNJ  Basking Ridge     22.43   6 eP     P         04 03 02.7 +1.5
MOIG  Morelia           22.49 277 eP     P         04 03 04.3 +2.4
FVM   French Village    22.65 333 eP     P         04 03 03.3 -0.1
      comp=Z,82nm,0.9s,mb5.2
PAYG  Puerto Ayora      22.70 215 PFAKE            04 03 20.0  +16
PAYG                              LR     LR
      comp=Z,1μm,19.0s,MS4.4
PAL   Palisades         22.82   7  P     P         04 03 03.6 -1.4
      comp=Z,24nm,1.0s,mb4.6
ZIIG  Zihuatanejo       22.86 272 eP     P         04 03 11.2 +5.5
SLM   Saint Louis       23.12 334 eP     P         04 03 07.0 -1.0
      comp=Z,76nm,0.9s,mb5.1
BINY  Binghamton        23.84   3 eP     P         04 03 16.1 +1.2
      comp=Z,44nm,1.1s,mb4.8
BRYW  Bryant College    24.07  11  P     P         04 03 14.9 -2.2
      comp=Z,22nm,0.7s,mb4.7
SFJM  Santa Fe          24.23 279 eP     P         04 03 20.0 +1.0
QUA2  Belchertown       24.28   9  P     P         04 03 19.7 +0.4
      comp=Z,32nm,0.9s,mb4.8
GENY  Geneseo           24.38 359 eP     P         04 03 21.6 +1.4
AAM   Ann Arbor         24.49 349 eP     P         04 03 20.7 -0.6
      comp=Z,107nm,1.1s,mb5.2
AAM                               LR     LR
      comp=Z,2μm,21.0s,MS4.7
WES   Weston            24.56  11 eP     P         04 03 21.4 -0.5
      comp=Z,96nm,1.3s,mb5.2
WES                               LR     LR
      comp=Z,617nm,21.0s,MS4.1
HRV   Harvard--Oak R    24.63  10  P     P         04 03 21.8 -0.8
      comp=Z,14nm,0.9s,mb4.5
HRV                               LR     LR
      comp=Z,623nm,19.0s,MS4.1
WMOK  Wichita Mounta    25.06 315 eP     P         04 03 26.2 -0.5
      comp=Z,124nm,1.0s,mb5.4
WMOK                              LR     LR
      comp=Z,515nm,21.0s,MS4.0
ACCN  Adirondack Com    25.20   6 eP     P         04 03 28.7 +0.7
FFD   Franklin Falls    25.55  10  P     P         04 03 28.9 -2.5
      comp=Z,35nm,0.9s,mb4.9
HNH   Hanover           25.69   9  P     P         04 03 33.4 +0.8
      comp=Z,7.4nm,1.2s,mb4.1
NCB   Newcomb           25.73   5 eP     P         04 03 33.5 +0.5
      comp=Z,59nm,1.2s,mb5.0
MIV   Mineville/With    25.90   6 eP     P         04 03 35.7 +1.1
LTX   Lajitas           26.32 300 eP     P         04 03 37.3 -1.3
      comp=Z,42nm,0.9s,mb5.0
LTX                               LR     LR
      comp=Z,465nm,22.0s,MS4.0
TXAR  Lajitas Array     26.32 300  P     P         04 03 38.8 +0.2
TXAR                                               04 07 03.8
TXAR                              pmax   pmax
      comp=Z,11nm,0.9s
TXAR                              pmax   pmax
      comp=Z,2.0nm,0.7s
TXAR  Lajitas Array     26.32 300  P     P         04 03 38.8 +0.1
      comp=Z,11nm,0.9s,mb4.4,baz=119,slow=6.1,SNR=60
TXAR                              PcP    PcP       04 07 03.8 -1.3
      comp=Z,1.7nm,0.7s,baz=149,slow=5.3,SNR=4.5
SADO  Sadowa            26.42 357  P     P         04 03 39.8 +0.4
      comp=Z,20nm,1.1s,mb4.6,baz=195,slow=9.4,SNR=9.8
KSU1  Kansas State U    26.57 325⇑eP     P         04 03 40.0 -0.8
FRNY  Flat Rock         26.64   6 eP     P         04 03 39.1 -2.4
MSNY  Massena           26.70   4  P     P         04 03 40.3 -1.6
JFWS  Jewell Farm       26.82 339⇑eP     P         04 03 42.4 -0.7
      comp=Z,32nm,0.7s,mb5.0
JFWS                              LR     LR
      comp=Z,3μm,20.0s,MS4.8
WVL   Waterville        26.98  12 PFAKE            04 04 00.0  +16
WVL                               LR     LR
      comp=Z,6μm,22.0s,MS5.1
AMTX  Amarillo          27.13 312⇑eP     P         04 03 45.7 -0.4
      comp=Z,118nm,1.0s,mb5.4
AMTX                              LR     LR
      comp=Z,379nm,19.0s,MS4.0
CLNB  Carlsbad          27.55 305  P     P         04 03 50.2 +0.3
CPRX  Cap Rock          27.86 307 eP     P         04 03 51.6 -1.0
CBKS  Cedar Bluff       28.16 321⇑eP     P         04 03 54.9 -0.4
      comp=Z,214nm,1.1s,mb5.7
CBKS                              LR     LR
      comp=Z,980nm,21.0s,MS4.4
MNTX  Cornudas Mount    28.52 303⇑iP     P         04 03 58.2 -0.4
      comp=Z,23nm,1.0s,mb4.9
PQI   Presque Isle      29.33  13 PFAKE            04 04 20.0  +14
PQI                               LR     LR
      comp=Z,4μm,21.0s,MS5.1
BNM   Barren Site       30.42 307 eP     P         04 04 15.7 +0.1
LPM   Los Pinos Moun    30.49 307  P     P         04 04 17.3 +1.1
SAML  Samuel            30.52 151⇑eP     P         04 04 15.1 -1.5
      comp=Z,42nm,1.4s,mb5.1
SAML                              LR     LR
      comp=Z,2μm,19.0s,MS4.7
ANMO  Albuquerque       30.63 309  P     P         04 04 18.0 +0.6
ANMO                              pmax   pmax
      comp=Z,14nm,0.9s
ANMO  Albuquerque       30.63 309  P     P         04 04 18.0 +0.6
      comp=Z,14nm,0.9s,mb4.8,baz=144,slow=7.2,SNR=39
ANMO  Albuquerque       30.63 309⇑eP     P         04 04 17.6 +0.2
      comp=Z,25nm,1.1s,mb5.0
ANMO                              e                04 04 32.6
ANMO                              LR     LR
      comp=Z,734nm,20.0s,MS4.3
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LENM  Lemitar           30.69 307 eP     P         04 04 16.8 -1.1
SDCO  Great Sand Dun    31.25 314⇑iP     P         04 04 23.7 +0.9
      comp=Z,59nm,1.1s,mb5.3
SDCO                              LR     LR
      comp=Z,540nm,20.0s,MS4.2
EYMN  Ely               31.71 342⇑iP     P         04 04 25.9 -0.8
      comp=Z,14nm,0.8s,mb4.8
EYMN                              LR     LR
      comp=Z,3μm,20.0s,MS5.0
ISCO  Idaho Springs     32.41 317⇑iP     P         04 04 33.2 +0.3
      comp=Z,89nm,1.3s,mb5.4
ISCO                              LR     LR
      comp=Z,853nm,20.0s,MS4.4
TUC   Tucson            33.05 301 eP     P         04 04 37.9 -0.8
      comp=Z,16nm,1.1s,mb4.8
TUC                               LR     LR
      comp=Z,621nm,19.0s,MS4.3
RSSD  Black Hills       34.06 325⇑eP     P         04 04 46.5 -0.8
      comp=Z,26nm,1.0s,mb5.1
RSSD                              LR     LR
      comp=Z,1μm,20.0s,MS4.5
RWWY  Rawlins           34.46 319⇑iP     P         04 04 50.9 +0.2
      comp=Z,74nm,1.0s,mb5.6
WUAZ  Wupatki           34.55 307⇑eP     P         04 04 52.6 +1.0
      comp=Z,78nm,1.2s,mb5.5
WUAZ                              LR     LR
      comp=Z,570nm,20.0s,MS4.3
ULM   Lac du Bonnet     35.11 339  P     P         04 04 54.8 -1.5
      comp=Z,23nm,0.9s,mb5.1,baz=146,slow=8.9,SNR=22
ULM                               LR     LR        04 19 37.9
      comp=Z,2μm,19.4s,MS4.8,baz=140,slow=37
SRU   San Rafael        35.37 313⇑iP     P         04 04 59.2 +0.7
LPAZ  La Paz            35.58 165  P     P         04 04 59.4 -1.2
LPAZ                              pmax   pmax
      comp=Z,10.0nm,0.8s
LPAZ                              MLR    MLR
      comp=Z,1μm,22.0s
LPAZ  La Paz            35.58 165  P     P         04 04 59.4 -1.2
      comp=Z,10nm,0.8s,mb4.8,baz=340,slow=10,SNR=27
LPAZ                              LR     LR        04 20 47.9
      comp=Z,1μm,22.0s,MS4.7,baz=200,slow=38
LPAZ  La Paz            35.58 165 eP     P         04 04 59.2 -1.4
      comp=Z,13nm,0.8s,mb4.9
LPAZ                              LR     LR
      comp=Z,2μm,22.0s,MS4.7
TMUT  Trail Mountain    35.92 313⇑eP     P         04 05 04.1 +0.8
MSU   Marysvale         36.28 311 eP     P         04 05 07.4 +1.2
MVU   Marysvale         36.30 311⇑iP     P         04 05 07.9 +1.5
      comp=Z,50nm,1.3s,mb5.3
MVU                               LR     LR
      comp=Z,549nm,20.0s,MS4.3
DAU   Daniels Canyon    36.45 314 eP     P         04 05 08.5 +0.8
BW06  Boulder Array     36.51 319 eP     P         04 05 07.3 -0.8
      comp=Z,34nm,1.3s,mb5.0
BW06                              LR     LR
      comp=Z,920nm,19.0s,MS4.6
PDAR  Pinedale Array    36.51 319  P     P         04 05 07.7 -0.4
      comp=Z,10nm,0.8s,mb4.7,baz=117,slow=9.9,SNR=79
PDAR                              PcP    PcP       04 07 31.3 -0.8
      comp=Z,1.9nm,0.7s,SNR=3.8
PDAR                              LR     LR        04 22 40.8
      comp=Z,590nm,18.9s,MS4.4,baz=124,slow=40
MPU   Maple Canyon      36.53 314⇑eP     P         04 05 09.1 +0.7
JLU   Jordanelle        36.67 315⇑iP     P         04 05 10.3 +0.8
NLU   North Lily Min    36.81 313⇑iP     P         04 05 12.1 +1.4
TCUT  Toone Canyon      36.88 315⇑eP     P         04 05 11.7 +0.4
LAO   LASA Array        36.90 326 eP     P         04 05 10.4 -1.0
      comp=Z,57nm,1.3s,mb5.2
LAO                               LR     LR
      comp=Z,2μm,22.0s,MS4.7
CTU   Camp Tracy        36.92 314⇑iP     P         04 05 12.3 +0.7
ARUT  Antelope Range    36.92 309 eP     P         04 05 12.4 +0.8
DGMT  Dagmar            37.10 330 eP     P         04 05 12.6 -0.4
      comp=Z,46nm,0.8s,mb5.4
DGMT                              LR     LR
      comp=Z,1μm,19.0s,MS4.7
NOQ   North Oquirrh     37.15 314⇑eP     P         04 05 14.0 +0.5
HWUT  Hardware Ranch    37.22 316⇑iP     P         04 05 13.8 -0.3
      comp=Z,31nm,0.9s,mb5.1
HWUT                              LR     LR
      comp=Z,531nm,20.0s,MS4.3
NEN   Nelson            37.26 305 eP     P         04 05 15.2 +0.6
LDFC  Landfair          37.30 304 eP     P         04 05 16.5 +1.6
SCHQ  Schefferville     37.35  10  P     P         04 05 15.7 +0.6
      comp=Z,17nm,1.1s,mb4.8,baz=202,slow=7.9,SNR=16
AHID  Auburn Hatcher    37.48 318 eP     P         04 05 15.6 -0.7
      comp=Z,33nm,1.3s,mb5.0
AHID                              LR     LR
      comp=Z,866nm,21.0s,MS4.5
LOHW  Long Hollow       37.60 319⇑eP     P         04 05 16.9 -0.4
      comp=Z,91nm,1.7s,mb5.2
SNOW  Snow King Moun    37.62 319⇑eP     P         04 05 17.3 -0.1
      comp=Z,13nm,0.6s,mb4.8
WUWY  Wally Ulrich      37.65 319 eP     P         04 05 17.5 -0.2
TPAW  Teton Pass        37.75 319⇑iP     P         04 05 18.8 +0.2
      comp=Z,23nm,0.8s,mb5.0
MOOW  Moose Ponds       37.76 319⇑eP     P         04 05 18.4 -0.2
      comp=Z,34nm,0.8s,mb5.1
BGU   Big Grassy Mou    37.89 314⇑eP     P         04 05 20.4 +0.6
RRI2  Red Ridge         37.91 319⇑iP     P         04 05 19.9  0.0
      comp=Z,28nm,0.7s,mb5.1
IMW   Indian Meadow     37.96 320⇑iP     P         04 05 20.2  0.0
      comp=Z,30nm,0.8s,mb5.1
LKWY  Lake              37.98 321⇑eP     P         04 05 20.9 +0.4
      comp=Z,21nm,1.3s,mb4.7
LKWY                              LR     LR
      comp=Z,2μm,20.0s,MS5.0
PFO   Pinyon Flat Ob    37.99 301 eP     P         04 05 22.6 +1.9
      comp=Z,16nm,1.1s,mb4.7
HVU   Hansel Valley     38.10 315⇑eP     P         04 05 21.5  0.0
YFT   Old Faithful      38.19 320 eP     P         04 05 23.3 +1.1
GCMT  Greycliff         38.24 323 eP     P         04 05 22.6 -0.1
YMR   Madison River     38.38 321 eP     P         04 05 23.7 -0.1
TRCR  Troy Canyon       38.70 309 eP     P         04 05 27.9 +1.3
QLMT  Earthquake Lak    38.75 321 eP     P         04 05 27.7 +0.8
BOZ   Bozeman (W)       39.30 322⇑iP     P         04 05 31.1 -0.4
      comp=Z,32nm,1.3s,mb4.9
BOZ                               LR     LR
      comp=Z,537nm,19.0s,MS4.4
ELK   Elko              39.34 313  P     P         04 05 33.1 +1.2
ELK                               pmax   pmax
      comp=Z,26nm,0.8s
ELK   Elko              39.34 313  P     P         04 05 33.1 +1.2
      comp=Z,26nm,0.8s,mb5.0,baz=105,slow=6.0,SNR=128
ELK   Elko              39.34 313⇑iP     P         04 05 32.5 +0.6
      comp=Z,42nm,1.0s,mb5.1
ELK                               LR     LR
      comp=Z,850nm,19.0s,MS4.6
MCMT  McKenzie Canyo    39.61 320 eP     P         04 05 34.9 +0.8
TPH   Tonopah           39.83 308 eP     P         04 05 37.1 +1.1
      comp=Z,29nm,1.1s,mb4.9
TPH                               LR     LR
      comp=Z,657nm,19.0s,MS4.5
HLID  Hailey            39.99 317⇑eP     P         04 05 37.4 +0.2
      comp=Z,33nm,1.1s,mb5.0
HLID                              LR     LR
      comp=Z,706nm,20.0s,MS4.5
HRY   Holter Researc    40.00 323 eP     P         04 05 37.2 -0.1
BMN   Battle Mountai    40.62 311 eP     P         04 05 43.0 +0.5
      comp=Z,37nm,1.3s,mb4.9
BMN                               LR     LR
      comp=Z,371nm,20.0s,MS4.2
MNV   Mina              40.64 308 eP     P         04 05 43.4 +0.8
      comp=Z,13nm,0.8s,mb4.6
MNV                               LR     LR
      comp=Z,560nm,20.0s,MS4.4
NVAR  Mina Array Bea    40.75 308  P     P         04 05 44.8 +1.3
      comp=Z,10.0nm,1.0s,mb4.4,baz=109,slow=10.0,SNR=20
FFC   Flin Flon         40.91 338⇑eP     P         04 05 44.0 -0.7
      comp=Z,25nm,1.0s,mb4.8
FFC                               LR     LR
      comp=Z,304nm,20.0s,MS4.2
CHMT  Chamberlain Mo    40.93 322 eP     P         04 05 44.7 -0.2
OMM   Old Mammoth Mi    41.03 307  P     P         04 05 47.5 +1.7
MSO   Missoula          41.29 322  P     P         04 05 46.7 -1.2
      comp=Z,4.7nm,1.1s,mb4.0
MSO                               LR     LR
      comp=Z,396nm,20.0s,MS4.3
WCN   Washoe City       42.09 309 eP     P         04 05 55.8 +1.2
      comp=Z,56nm,1.7s,mb4.9
FCC   Fort Churchill    42.20 347 eP     P         04 05 53.4 -1.7
      comp=Z,9.3nm,0.9s,mb4.4
CMB   Columbia Colle    42.21 307  P     P         04 05 55.6 +0.1
      comp=Z,6.6nm,0.9s,mb4.3
CMB                               LR     LR
      comp=Z,547nm,22.0s,MS4.4
WVOR  Wild Horse Val    42.34 314 eP     P         04 05 57.0 +0.4
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	comp=Z,38nm,1.1s,mb4.9						
BMO	Blue Mountains	42.42	317⇑	eP	P	04 05 55.9	-1.3
	comp=Z,18nm,1.5s,mb4.5						
BMO				LR	LR		
	comp=Z,721nm,19.0s,MS4.6						
SAO	San Andreas Ge	42.71	305	PFAKE		04 06 10.0	+10
SAO				LR	LR		
	comp=Z,707nm,19.0s,MS4.6						
MOD	Modoc	43.31	312⇑	iP	P	04 06 04.2	-0.3
	comp=Z,39nm,1.1s,mb5.0						
MOD				LR	LR		
	comp=Z,513nm,19.0s,MS4.5						
NEW	Newport	43.87	322⇑	eP	P	04 06 07.2	-1.8
	comp=Z,32nm,1.4s,mb4.8						
NEW				LR	LR		
	comp=Z,852nm,20.0s,MS4.7						
JATB	Jatai	44.11	143c	eP	P	04 06 11.5	+0.2
JATB				i	pP	04 06 14.8	-1.5
JATB				e		04 06 23.4	
BDFB	Brasilia	44.48	137	P	P	04 06 14.0	-0.3
BDFB				pmax	pmax		
	comp=Z,61nm,0.9s						
BDFB				MLR	MLR		
	comp=Z,1µm,20.3s						
BDFB	Brasilia	44.48	137	P	P	04 06 14.0	-0.3
	comp=Z,60nm,0.9s,mb5.3,baz=313,slow=8.7,SNR=38						
BDFB				LR	LR	04 26 10.7	
	comp=Z,1µm,20.3s,MS4.8,baz=320,slow=38						
HOPS	Hopland	44.49	307	PFAKE		04 06 30.0	+16
HOPS				LR	LR		
	comp=Z,440nm,22.0s,MS4.3						
BAO	Brasilia Array	44.49	137	P	P	04 06 14.0	-0.4
WDC	Whiskeytown Da	44.51	310	PFAKE		04 06 30.0	+16
WDC				LR	LR		
	comp=Z,493nm,19.0s,MS4.5						
EDM	Edmonton	44.59	330⇑	eP	P	04 06 14.0	-0.6
YBH	Yreka Blue Hor	44.97	311	eP	P	04 06 16.4	-1.5
	comp=Z,4.7nm,0.8s,mb4.4						
YBH				LR	LR		
	comp=Z,538nm,21.0s,MS4.5						
WIFE	Three Sisters-	45.09	315	P	P	04 06 20.6	+1.7
BBOR	Butler Butte	45.30	313	P	P	04 06 20.4	-0.1
TDH	Tom, Dick, Har	45.51	316	P	P	04 06 23.1	+1.0
TWW	Teanaway	45.64	319	P	P	04 06 24.4	+1.2
COR	Corvallis	46.27	315	PFAKE		04 06 40.0	+12
COR				LR	LR		
	comp=Z,365nm,21.0s,MS4.3						
KEBM	Edson Butte	46.45	312⇑	eP	P	04 06 30.2	+0.6
RCBR	Riachuelo	47.48	116	PFAKE		04 06 50.0	+12
RCBR				LR	LR		
	comp=Z,565nm,20.0s,MS4.5						
OCWA	Octopus Mounta	47.95	319	eP	P	04 06 41.8	+0.5
	comp=Z,58nm,1.1s,mb5.5						
OCWA				LR	LR		
	comp=Z,734nm,22.0s,MS4.6						
OBC	Olympics--Boni	47.99	319	P	P	04 06 42.6	+1.0
CPUP	Villa Florida	48.49	156	P	P	04 06 45.0	-0.8
CPUP				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CPUP				MLR	MLR		
	comp=Z,983nm,20.1s						
CPUP	Villa Florida	48.49	156	P	P	04 06 45.0	-0.8
	comp=Z,5.2nm,1.0s,mb4.5,baz=0.9,slow=9.7,SNR=9.0						
CPUP				LR	LR	04 29 04.0	
	comp=Z,983nm,20.1s,MS4.8,baz=359,slow=38						
YKA	Yellowknife Ar	51.09	339	P	P	04 07 04.2	-1.0
YKA				pmax	pmax		
	comp=Z,15nm,1.0s						
YKA				MLR	MLR		
	comp=Z,1µm,18.4s						
YKA	Yellowknife Ar	51.09	339	P	P	04 07 04.2	-1.1
	comp=Z,15nm,1.0s,mb4.9,baz=131,slow=7.7,SNR=80						
YKA				LR	LR	04 29 26.2	
	comp=Z,1µm,18.4s,MS5.0,baz=115,slow=37						
YKW3	Yellowknife Ar	51.14	339	eP	P	04 07 04.3	-1.3
CAM4	Nova Friburgo	52.89	138	eP	P	04 07 20.0	+0.6
CAM4				i		04 07 21.9	
CAM4				i		04 07 28.5	
DLBC	Dease Lake	55.31	329⇑	eP	P	04 07 36.6	0.0
EGOM	La Gomera	55.73	68	P	P	04 07 43.2	+3.1
	comp=Z,110nm,1.4s,mb5.7						
RES	Resolute Bay	57.19	355	eP	P	04 07 48.0	-2.0
	comp=Z,15nm,0.8s,mb5.1						
SIT	Sitka	57.49	327	PFAKE		04 08 00.0	+7.8
SIT				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
TRQA	Tornquist	57.92	166	PFAKE		04 08 10.0	+15
TRQA				LR	LR		
	comp=Z,564nm,19.0s,MS4.7						
SUMG	Summit	58.65	13	eP	P	04 07 59.6	-0.6
	comp=Z,37nm,1.2s,mb5.3						
PLCA	Paso Flores	59.09	174	P	P	04 08 01.8	-1.8
	comp=Z,9.8nm,0.7s,mb4.9,baz=354,slow=8.1,SNR=13						
PLCA	Paso Flores	59.09	174	P	P	04 08 01.8	-1.8
PLCA				LR	LR		
	comp=Z,499nm,21.0s,MS4.6						
INK	Inuvik	60.86	339	eP	P	04 08 13.2	-2.2
	comp=Z,47nm,1.6s,mb5.4						
DAWY	Dawson	61.52	334⇑	eP	P	04 08 18.5	-1.4
EMAZ	Mazaricos	62.10	51	P	P	04 08 27.6	+3.5
	comp=Z,134nm,1.8s,mb5.8						
EZAM	Zamans	62.30	52	P	P	04 08 25.7	+0.3
	comp=Z,14nm,0.9s,mb5.1						
STS	Santiago	62.41	51	P	P	04 08 26.2	+0.1
	comp=Z,6.3nm,0.6s,mb4.9						
ELOB	Lobios	62.78	52	P	P	04 08 28.5	-0.1
	comp=Z,12nm,1.1s,mb5.0						
EVO	Evora	62.90	56	eP	P	04 08 28.9	-0.6
	comp=Z,43nm,0.8s,mb5.3						
EVO				eR			
	comp=Z,671nm,20.2s						
MENT	Mentasta	63.09	332	eP	P	04 08 30.5	+0.1
MTE	Manteigas	63.20	53	eP	P	04 08 31.1	-0.3
	comp=Z,23nm,0.9s,mb5.3						
EGRO	El Granado	63.37	57	P	P	04 08 36.0	+3.4
	comp=Z,59nm,1.5s,mb5.5						
EPON	Pontenova	63.43	50	P	P	04 08 32.9	0.0
	comp=Z,37nm,1.4s,mb5.3						
ERUA	La Rua	63.45	51	P	P	04 08 33.0	0.0
	comp=Z,2.3nm,0.5s,mb4.6						
EYAK	Cordova Ski Ar	63.58	329⇑	eP	P	04 08 34.1	+0.5
EBAD	Badajoz	63.67	55	P	P	04 08 37.8	+3.2
	comp=Z,3.9nm,0.8s,mb4.5						
DIV	Divide	63.69	330⇑	eP	P	04 08 34.5	+0.2
	comp=Z,221nm,1.0s						
DIV				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
DCN	Croghan	63.70	39	eP	P	04 08 50.0	+16
ECAL	Calabor	63.76	52	P	P	04 08 35.6	+0.4
	comp=Z,12nm,0.8s,mb5.0						
EMIN	Mina Concepcio	64.00	56	P	P	04 08 40.4	+3.7
	comp=Z,9.1nm,0.6s,mb5.0						
THY	Trims Highway	64.10	332	eP	P	04 08 36.9	-0.1
DLF	Lyons Farm	64.14	39	eP	P	04 08 50.0	+13
ESPR	Espera	64.71	57	P	P	04 08 45.4	+4.0
	comp=Z,13nm,1.0s,mb4.9						
ILAR	Eielson Array	64.84	334	P	P	04 08 40.9	-0.9
ILAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ILAR				MLR	MLR		
	comp=Z,585nm,18.8s						
ILAR	Eielson Array	64.84	334	P	P	04 08 40.9	-0.9
	comp=Z,5.3nm,1.0s,mb4.5,baz=102,slow=4.2,SNR=41						
ILAR				LR	LR	04 37 53.8	
	comp=Z,585nm,18.8s,MS4.8,baz=109,slow=37						
EARI	Arriondas	64.85	50	P	P	04 08 46.6	+4.4
	comp=Z,90nm,1.8s,mb5.5						
SML	Sawmill	65.01	330⇑	eP	P	04 08 42.8	-0.1
DAG	Danmarks Havn	65.34	13⇑	eP	P	04 08 43.9	-0.9
DAG				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
DAG	Danmarks Havn	65.34	13⇑	eP	P	04 08 43.9	-0.9
	comp=Z,7.6nm,1.1s,mb4.6						
DAG	Danmarks Havn	65.34	13⇑	iP	P	04 08 43.9	-0.9
	comp=Z,7.6nm,1.1s,mb4.6						
EMIJ	Mijas	65.61	58	P	P	04 08 51.0	+3.9
EADA	Adamuz	65.62	56	P	P	04 08 48.7	+1.5
	comp=Z,9.4nm,0.7s,mb4.9						
PWA	Palmer West	65.72	330	eP	P	04 08 47.6	+0.2
	comp=Z,58nm,1.0s,mb5.6						
SLKM	Skilak Lake	65.76	329	eP	P	04 08 47.7	0.0
GUD	Guadarrama	65.77	53	P	P	04 08 47.9	-0.3
	comp=Z,4.3nm,0.8s,mb4.5						
ESDC	Sonseca Array	65.98	54	P	P	04 08 49.6	+0.1
	comp=Z,7.2nm,0.8s,mb4.8,baz=284,slow=6.0,SNR=15						
ESDC	Sonseca Array	65.98	54	P	P	04 08 48.8	-0.7
	comp=Z,3.9nm,0.8s,mb4.5						
ELOJ	Sierra Loja	66.05	57	P	P	04 08 55.0	+5.0
	comp=Z,6.5nm,0.6s,mb4.8						
ROSF	Rostrenen	66.08	45	eP	P	04 08 50.0	0.0
	comp=Z,107nm,1.5s,mb5.4						
ELAN	Lanestosa	66.15	50	P	P	04 08 55.2	+4.7
	comp=Z,9.0nm,0.7s,mb4.9						
QUIF	Quistinic	66.16	45	eP	P	04 08 50.5	0.0
	comp=Z,41nm,1.1s,mb5.1						
ESK	Eskdalemuir	66.19	37	PFAKE		04 09 00.0	+9.5
ESK				LR	LR		
	comp=Z,66nm,20.0s,MS3.8						
ERON	Agron	66.33	57	P	P	04 08 56.5	+4.7
ECOG	Cogollos-Vega	66.50	57	P	P	04 08 57.3	+4.4
SGMF	Saint Gilles	66.56	45	eP	P	04 08 53.0	0.0
	comp=Z,18nm,0.8s,mb4.8						
SPU	Mount Spurr	66.71	329	eP	P	04 08 54.0	+0.2
KDAK	Kodiak Island	66.78	326	eP	P	04 08 54.1	-0.2
	comp=Z,46nm,1.0s,mb5.5						
KDAK				LR	LR		
	comp=Z,296nm,19.0s,MS4.5						
EQES	Quesada	66.84	56	P	P	04 09 01.3	+6.2
	comp=Z,9.6nm,1.0s,mb4.8						
RSO	Redoubt South	67.01	329	eP	P	04 08 55.5	-0.2
EBER	Berja	67.08	57	P	P	04 08 59.6	+3.1
	comp=Z,17nm,0.6s,mb5.2						
EVIA	Vianos	67.20	55	P	P	04 08 58.2	+0.9
ENIJ	Nijar	67.61	57	P	P	04 09 00.3	+0.3
GRR	Gorron	67.69	44	eP	P	04 08 59.5	-0.7
	comp=Z,19nm,0.8s,mb4.9						
SJPF	Ste Jean	67.77	50	eP	P	04 09 01.3	+0.5
	comp=Z,54nm,0.8s,mb5.3						
IMA	Indian Mountai	67.83	335	eP	P	04 09 01.0	+0.2
	comp=Z,8.4nm,0.9s,mb4.8						
FLN	La Foliniere	67.92	44	eP	P	04 09 01.5	-0.1
	comp=Z,46nm,1.0s,mb5.2						
FLN				eR			
	comp=Z,307nm,21.8s						
ETOB	Tobarra	67.95	55	P	P	04 09 05.7	+3.7
	comp=Z,8.4nm,0.9s,mb4.8						
LARF	Larrau	67.95	50	eP	P	04 09 02.2	+0.3
LDF	La Druitiere	68.17	44	eP	P	04 09 02.9	-0.3
	comp=Z,50nm,0.9s,mb5.2						
ETSF	Etsaut	68.27	50	eP	P	04 09 04.5	+0.5
	comp=Z,22nm,0.9s,mb4.9						
MFF	Saint Martin d	68.27	46	eP	P	04 09 03.6	-0.3
	comp=Z,47nm,1.1s,mb5.1						
EMUR	La Murta	68.28	56	P	P	04 09 03.5	-0.6
ECHE	Chera	68.29	54	P	P	04 09 08.2	+4.1
	comp=Z,5.8nm,0.5s,mb4.9						
REYF	Montagne du Re	68.38	50	eP	P	04 09 05.5	+0.9
SVW2	Sparrevohn	68.42	329	eP	P	04 09 03.9	-0.6
ESAC	San Caprasio	68.45	52	P	P	04 09 09.3	+4.2
	comp=Z,35nm,0.7s,mb5.5						
EMOS	Mosqueruela	68.59	53	P	P	04 09 07.3	+1.4
	comp=Z,16nm,0.7s,mb5.1						
TTA	Tatalina	68.67	331	eP	P	04 09 05.2	-0.8
VIEF	Viey	68.70	50	eP	P	04 09 07.3	+0.7
LABF	Labassere	68.72	50	eP	P	04 09 09.5	+2.8
EBIE	Bielsa	68.81	51	P	P	04 09 09.9	+2.7
	comp=Z,9.6nm,0.6s,mb4.9						
EPF	Esparros	68.92	50	eP	P	04 09 08.5	+0.6
	comp=Z,122nm,1.3s,mb5.4						
RESF	Ens	68.94	50	eP	P	04 09 09.2	+1.1
EBEN	Beniarda	68.97	55	P	P	04 09 13.1	+4.8
	comp=Z,19nm,0.6s,mb5.2						
LFF	La Frestale	69.02	48	eP	P	04 09 08.6	0.0
	comp=Z,48nm,0.7s,mb5.2						
ERTA	Horta de San J	69.13	52	P	P	04 09 13.3	+4.0
	comp=Z,10.0nm,0.7s,mb4.8						
MLS	Moulis	69.48	50	eP	P	04 09 11.9	+0.5
RJF	Les Rejaudoux	69.54	48	eP	P	04 09 11.7	0.0
	comp=Z,24nm,0.9s,mb4.8						
RJF				eR			
	comp=Z,296nm,21.5s						
SALF	Salau	69.57	50	eP	P	04 09 12.8	+0.9
EPOB	Poblet	69.64	52	P	P	04 09 15.3	+2.8
	comp=Z,7.8nm,0.7s,mb4.8						
RKT	Rikitea	69.66	236	eS	S	04 18 31.3	+12
	comp=Z,279nm,33.5s						
RKT				eLR	LR	04 30 26.2	
	comp=Z,569nm,26.8s,baz=44						
EMIR	Miracle	69.91	51	P	P	04 09 18.0	+3.9
	comp=Z,9.3nm,0.8s,mb4.8						
TCF	Toulx Ste Croi	69.92	47	eP	P	04 09 13.9	-0.1
CAF	Calviac	69.96	48	eP	P	04 09 14.4	+0.1
	comp=Z,38nm,0.9s,mb5.0						
HYF	Humbligny	70.12	46	eP	P	04 09 15.6	+0.4
VALF	Valcebollere	70.22	51	eP	P	04 09 16.6	+0.7
MTLF	Montolieu	70.25	50	eP	P	04 09 16.4	+0.3
	comp=Z,41nm,1.2s,mb5.0						
BGF	Bois d'Agland	70.33	46	eP	P	04 09 16.4	-0.1
	comp=Z,36nm,0.8s,mb5.0						
PYM	Petit Puy Mans	70.53	47	eP	P	04 09 21.9	+4.2
AVF	Avril sur Loir	70.65	46	eP	P	04 09 18.0	-0.5
	comp=Z,27nm,0.9s,mb4.9						
SSF	Saint Saulge	70.73	46	eP	P	04 09 18.7	-0.2
	comp=Z,36nm,0.9s,mb5.0						
LBL	Lubilhac	70.76	48	eP	P	04 09 18.8	-0.3
EJON	La Jonquera	70.85	51	P	P	04 09 24.7	+5.0
	comp=Z,9.8nm,0.8s,mb4.8						
BAIF	Baives	70.87	42	eP	P	04 09 19.0	-0.7
LOR	Lormes	70.94	45	eP	P	04 09 20.1	-0.1
	comp=Z,56nm,1.4s,mb5.0						
LOR				eR			
	comp=Z,371nm,22.5s						
SMF	Signal de Mont	71.00	46	eP	P	04 09 20.4	-0.2
	comp=Z,36nm,0.9s,mb5.0						
GIVF	Givet	71.26	42	eP	P	04 09 21.2	-0.9
LASF	Ste Croix	71.34	49	eP	P	04 09 22.6	-0.1
	comp=Z,23nm,1.0s,mb4.8						
DBIC	Dimbokro	71.43	89	P	P	04 09 23.0	-0.7
	comp=Z,24nm,1.0s,mb5.1,baz=282,slow=7.2,SNR=12						
DBIC				LR	LR	04 35 42.7	
	comp=Z,493nm,22.0s,MS4.7,baz=256,slow=32						
DBIC	Dimbokro	71.43	89	eP	P	04 09 23.5	-0.2
	comp=Z,28nm,1.0s,mb5.1						
DBIC				LR	LR		
	comp=Z,581nm,22.0s,MS4.8						
MEZF	Maizieres J'vi	71.60	44	eP	P	04 09 24.3	+0.2
VIVF	Saint-Julien-l	71.81	48	eP	P	04 09 25.5	0.0
KBS	Kingsbay	72.04	12	PFAKE		04 09 40.0	+14
KBS				LR	LR		
	comp=Z,402nm,20.0s,MS4.7						
HAU	Haudompre	72.52	44	eP	P	04 09 29.7	+0.1
HAU				eR			
	comp=Z,362nm,20.9s						
CABF	La Chapelle	72.54	46	eP	P	04 09 30.0	+0.2
	comp=Z,24nm,1.0s,mb4.8						
SMRF	Simiane la Rot	72.58	49	eP	P	04 09 29.9	-0.2
ORIF	Oris-en-Rattie	72.65	48	eP	P	04 09 30.5	0.0
	comp=Z,19nm,0.9s,mb4.7						
ORIF				eR			
	comp=Z,406nm,23.0s						
RUP	Ruppelstein	72.75	43	eP	P	04 09 34.2	+3.3
HINF	Hinteralfeld	72.88	45	eP	P	04 09 31.7	-0.1
KONO	Kongsberg	72.91	32	PFAKE		04 09 40.0	+8.3
KONO				LR	LR		
	comp=Z,386nm,20.0s,MS4.7						
ECH	Echery	73.03	44	eP	P	04 09 33.2	+0.6
CDF	Champ du Feu	73.08	44	eP	P	04 09 33.0	+0.1
WLS	Welschbruch	73.13	44	eP	P	04 09 35.1	+1.9
LPL	La Plagne	73.15	47	eP	P	04 09 33.6	+0.2
LPG	La Plagne	73.17	47	eP	P	04 09 33.7	+0.2
MBDF	Montbardon	73.31	48	eP	P	04 09 34.3	0.0
LANF	Langenberg	73.34	43	eP	P	04 09 34.3	-0.1
LMR	La Mourre	73.35	49	eP	P	04 09 34.6	0.0
FRF	La Foret Royal	73.41	49	eP	P	04 09 34.9	0.0
NB2	NORSAR Subarra	73.53	30	P	P	04 09 35.8	+0.6
	comp=Z,2.7nm,0.9s,mb4.2,baz=278,slow=5.8						
NOA	NORSAR Array B	73.53	30	P	P	04 09 35.7	+0.5
	comp=Z,1.0nm,0.8s,baz=303,slow=7.0,SNR=4.2						
NOA				LR	LR	04 40 53.1	
	comp=Z,196nm,19.3s,MS4.4,baz=290,slow=35						
CALN	Calern	73.55	49	eP	P	04 09 37.7	+2.0
TNS	Taunus Mts	73.56	42	eP	P	04 09 39.0	+3.4
TNS				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.9						
TNS	Taunus Mts	73.56	42	eP	P	04 09 39.0	+3.4
	comp=Z,23nm,1.4s,mb4.9						
FELD	Feldberg	73.64	44	eP	P	04 09 36.6	+0.4
TNA	Tin City	73.70	334	PFAKE		04 09 50.0	+14
TNA				LR	LR		
	comp=Z,440nm,19.0s,MS4.8						
TOUF	Mont Tournerai	73.76	48	eP	P	04 09 39.0	+2.0
BFO	Black Forest	73.78	44	eP	P	04 09 40.8	+3.8
BFO				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
BFO	Black Forest	73.78	44	eP	P	04 09 40.8	+3.8
	comp=Z,17nm,1.2s,mb4.8						
SAOF	Saorge	73.99	48	eP	P	04 09 40.3	+2.1
BSEG	Bad Segeberg	74.11	38	eP	P	04 09 41.6	+2.8
BSEG				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.1						
CLZ	Clausthal	74.49	40	eP	P	04 09 46.1	+5.1
	comp=Z,24nm,1.3s,mb5.0						
UNV	Unalaska Valle	74.88	322	eP	P	04 09 43.5	+0.3
	comp=Z,70nm,0.8s,mb5.6						
UNV				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
DAVA	Damuels	75.00	45⇑	iP	P	04 09 47.6	+3.6
	comp=Z,8.5nm,0.9s,mb4.7						
PGF	Pioggiola	75.29	50	eP	P	04 09 45.6	-0.2
	comp=Z,22nm,0.9s,mb4.8						
GRA1	Grafenberg Arr	75.42	42	eP	P	04 09 49.9	+3.5
	comp=Z,12nm,1.2s,mb4.7						
GRA1				epP	pP	04 10 02.6	+11
GRA1				LR	LR		
	comp=Z,400nm,21.9s,MS4.7						
GRF	Grafenberg Arr	75.42	42	eP	P	04 09 49.9	+3.5
	comp=Z,12nm,1.2s,mb4.7						
GRF				epP	pP	04 10 02.6	+11
GRF				LR	LR		
	comp=Z,400nm,21.9s,MS4.7						
MOX	Moxa	75.48	41	eP	P	04 09 50.7	+4.0
MOX				e		04 10 02.3	
MOX				pmax	pmax		
	comp=Z,35nm,1.8s,mb5.0						
MOX				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.5						
MOX	Moxa	75.48	41	eP	P	04 09 50.7	+4.0
	comp=Z,35nm,1.8s,mb5.0						
MOX				epP	pP	04 10 02.3	+10
MOX				eS	S	04 19 33.0	+8.1
MOX				LR	LR		
	comp=Z,200nm,18.0s,MS4.5						
MOX	Moxa	75.48	41	i P	P	04 09 50.7	+4.0
MOX				pP	pP	04 10 02.0	+10
MOX				S	S	04 19 33.0	+8.1
MOX				L		04 48 02.0	
NKC	Novy Kostel	76.08	41	eP	P	04 09 53.6	+3.4
NKC				ex	x	04 10 06.7	
CLL	Collm	76.21	40	i P	P	04 09 54.1	+3.3
CLL				i *PP	pP	04 10 07.7	+12
CLL				pmax	pmax		
	comp=Z,21nm,1.8s,mb4.8						
CLL	Collm	76.21	40	i P	P	04 09 54.1	+3.3
	comp=Z,21nm,1.8s,mb4.8						
CLL				i pP	pP	04 10 07.7	+12
CLL	Collm	76.21	40	P	P	04 09 54.1	+3.3
	comp=Z,logA/T=1.1,mb4.8						
CLL				i		04 10 07.7	
CLL				ePP	PP	04 12 59.0	+15
KHC	Kasperske Hory	77.04	42	eP	P	04 09 56.0	+0.5
KHC				e		04 10 11.7	
KHC				MLR	MLR		
	comp=Z,300nm,18.4s,MS4.6						
KHC	Kasperske Hory	77.04	42	eP	P	04 09 56.0	+0.5
KHC				ex	x	04 10 11.7	
KHC				ex	x	04 10 27.5	
KHC				AMS	AMS	04 51 50.0	
	comp=Z,300nm,18.4s						
GEC2	GERESS Array S	77.18	43	eP	P	04 09 59.8	+3.5
GEC2				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.9						
GEC2	GERESS Array S	77.18	43	eP	P	04 09 59.8	+3.5
	comp=Z,22nm,1.5s,mb4.9						
GERES	GERESS Array B	77.18	43	P	P	04 09 57.1	+0.8
	comp=Z,2.0nm,0.8s,mb4.1,baz=270,slow=4.0,SNR=14						
GERES				LR	LR	04 37 41.0	
	comp=Z,247nm,21.9s,MS4.5,baz=127,slow=31						
PVCC	Panska Ves	77.34	41	AMS	AMS	04 46 50.0	
	comp=Z,200nm,17.1s						
KBA	Koelnbreinsper	77.35	44⇑	iP	P	04 10 01.1	+3.8
	comp=Z,19nm,1.4s,mb4.8						
ARCES	ARCESS Array B	77.44	21	P	P	04 09 57.0	-0.3
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	ARCESS Array B	77.44	21	P	P	04 09 57.0	-0.4
	comp=Z,3.2nm,0.7s,mb4.4,baz=284,slow=4.4,SNR=9.1						
PRU	Pruhonice	77.45	41	eP	P	04 10 00.4	+2.6
PRU				ex	x	04 10 14.1	
PRU				AMS	AMS	04 48 40.0	
	comp=Z,400nm,17.5s						
MOA	Molln	77.78	44⇑	iP	P	04 10 03.4	+3.8
	comp=Z,6.4nm,1.0s,mb4.5						
CADS	Cadrg	77.81	45	eP	P	04 10 02.8	+3.0
KEV	Kevo	77.87	20	PFAKE		04 10 10.0	+10
KEV				LR	LR		
	comp=Z,184nm,20.0s,MS4.4						
UPC	Upice	78.24	41	eP	P	04 10 07.1	+5.0
UPC				ex	x	04 10 19.0	
DPC	Dobruska-Polom	78.48	41	eP	P	04 10 04.1	+0.7
DPC				AMS	AMS	04 49 20.0	
	comp=Z,300nm,17.3s						
PPT	Papeete	79.38	247	LR	LR	04 35 50.8	
	comp=Z,19nm,20.2s,baz=328,slow=29						
MORC	Moravsky Berou	79.39	41	eP	P	04 10 07.8	-0.6
	comp=Z,24nm,1.6s,mb4.9						
ZST	Bratislava	79.53	43	e	P	04 10 13.8	+4.6
OKC	Ostrava-Krasne	79.75	41	AMS	AMS	04 50 10.0	
	comp=Z,400nm,17.5s						
KAF	Kangasniemi	80.25	28	ep	P	04 10 17.3	+4.6
FINES	FINESS Array B	80.38	28	P	P	04 10 14.0	+0.6
	comp=Z,2.6nm,0.6s,mb4.3,baz=298,slow=4.5,SNR=11						
FINES				LR	LR	04 40 23.0	
	comp=Z,242nm,21.9s,MS4.5,baz=107,slow=32						
VYHS	Vyhne	80.56	42	e	P	04 10 19.1	+4.4
OJC	Ojcow	80.66	40	eP	P	04 10 19.8	+4.6
APA	Apatity	80.88	21⇓	eP	P	04 10 21.5	+5.5
APA				pmax	pmax		
	comp=Z,51nm,1.5s,mb5.2						
APA				MLR	MLR		
	comp=Z,400nm,15.0s,MS4.9						
PSZ	Piszkesteto	81.41	42	eP	P	04 10 19.2	+0.1
	comp=Z,14nm,1.4s,mb4.7						
PSZ	Piszkesteto	81.41	42⇑	epP	pP	04 10 24.1	-0.5
TBI	Tubuai	81.58	242	eS	S	04 20 38.5	+8.2
	comp=Z,292nm,38.0s						
TBI				eLQ		04 32 33.3	
	comp=Z,114nm,37.0s						
TBI				eLR	LR	04 35 59.8	
	comp=Z,468nm,30.8s						
VSU	Vasula	81.76	31	i P	P	04 10 21.2	+0.5
BILL	Bilibino	82.47	340c	iP	P	04 10 24.9	+0.7
BILL				eS	S	04 20 44.7	+6.1
BILL				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
BILL				MLR	MLR		
	comp=Z,600nm,20.0s,MS5.0						
BILL	Bilibino	82.47	340⇑	eP	P	04 10 24.0	-0.3
	comp=Z,8.8nm,0.8s,mb4.7						
KOLS	Kolonicke sedl	82.59	41	eP	P	04 10 27.6	+2.3
LVV	L'vov	83.37	40	eP	P	04 10 35.0	+5.7
LVV				eS	S	04 20 45.2	-2.9
LVV				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.2						
AKASG	Malin Array Be	86.12	38	P	P	04 10 43.2	+0.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	86.12	38	P	P	04 10 43.2	+0.2
	comp=Z,1.8nm,0.8s,mb4.3,baz=283,slow=3.8,SNR=10						
MLR	Muntele Rosu	86.15	43⇑	iP	P	04 10 45.3	+2.0
OBN	Obninsk	88.08	32⇓	eP	P	04 10 55.4	+3.0
OBN				eS		04 21 19.8	
OBN				ePS	PS	04 22 40.3	-0.2
OBN				eSS	SS	04 27 28.9	+3.3
OBN				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.4						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.6						
OBN	Obninsk	88.08	32	PFAKE		04 11 00.0	+7.6
OBN				LR	LR		
	comp=Z,66nm,19.0s,MS4.1						
TIXI	Tiksi	88.48	352	eP	P	04 10 52.9	-1.1
TIXI				eS	S	04 21 28.6	-8.4
TIXI				eSS	SS	04 27 40.2	+9.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,521nm,17.0s,MS5.0						

TIXI	**Tiksi**	**88.48**	**352**	PFAKE		04 11 10.0	+16
TIXI				LR	LR		
	comp=Z,550nm,20.0s,MS5.0						
SEY	**Seymchan**	**90.15**	**340**	*e*P	**P**	**04 11 02.9**	**+0.9**
SEY				*e*		04 21 27.5	
SEY				*e*S	S	04 21 54.0	+1.5
SEY				*e*SS	SS	04 27 58.9	+3.4
SEY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
SEY				pmax	pmax		
	comp=E,3.0nm,0.8s						
SIM	**Simferopol’**	**91.61**	**41**	P	**P**	**04 11 13.6**	**+4.4**
SIM				S		04 21 42.0	
MA2	**Magadan**	**93.06**	**338**	PFAKE		04 11 30.0	+15
MA2				LR	LR		
	comp=Z,439nm,20.0s,MS4.9						
BRTR	**Keskin Array B**	**93.72**	**46**	P	**P**	**04 11 20.4**	**+1.4**
	comp=Z,0.3nm,0.4s,mb4.0,baz=333,slow=3.2,SNR=3.1						
ANN	**Anapa**	**93.74**	**40**	*e*P	**P**	**04 11 13.1**	**-5.9**
ANN				pmax	pmax		
	comp=Z,60nm,0.9s,mb6.0						
PET	**Petropavlovsk**	**94.09**	**330**	PFAKE		04 11 30.0	+10
PET				LR	LR		
	comp=Z,305nm,20.0s,MS4.8						
ARU	**Arti**	**96.89**	**23**	PFAKE		04 11 50.0	+17
ARU				LR	LR		
	comp=Z,104nm,20.0s,MS4.3						
YAK	**Yakutsk**	**97.08**	**347**	PFAKE		04 11 50.0	+16
YAK				LR	LR		
	comp=Z,410nm,19.0s,MS4.9						
KIV	**Kislovodsk**	**97.38**	**39**	PFAKE		04 11 50.0	+14
KIV				LR	LR		
	comp=Z,57nm,20.0s,MS4.1						
TSUM	**Tsumeb**	**100.42**	**107**	PFAKE		04 12 00.0	+10
TSUM				LR	LR		
	comp=Z,522nm,19.0s,MS5.1						
GNI	**Garni**	**100.80**	**41**	PFAKE		04 12 00.0	+8.8
GNI				LR	LR		
	comp=Z,201nm,22.0s,MS4.6						
YSS	**Yuzh-Sakhalins**	**105.64**	**333**	PFAKE		04 16 40.0	
YSS				LR	LR		
	comp=Z,472nm,22.0s,MS5.0						
MBAR	**Mbarara**	**107.44**	**85**	PFAKE		04 16 40.0	
MBAR				LR	LR		
	comp=Z,98nm,20.0s,MS4.4						
LSZ	**Lusaka**	**109.20**	**100**	PFAKE		04 16 50.0	
LSZ				LR	LR		
	comp=Z,292nm,21.0s,MS4.8						
TLY	**Talaya**	**110.31**	**359**	PFAKE		04 16 50.0	+14
TLY				LR	LR		
	comp=Z,68nm,20.0s,MS4.2						
HIA	**Hailar**	**111.01**	**348**	PFAKE		04 16 50.0	+12
HIA				LR	LR		
	comp=Z,390nm,21.0s,MS5.0						
MKAR	**Makanchi Array**	**112.67**	**15**	*i* PKIKP	PKPdf	04 16 40.9	-0.3
MKAR	**Makanchi Array**	**112.67**	**15**	PKiKP		04 16 40.9	
	comp=Z,0.3nm,0.6s,baz=356,slow=2.7,SNR=3.7						
MDJ	**Mudanjiang**	**112.69**	**339**	PKP	PKPdf	04 16 39.4	-1.9
MDJ				PP	PP	04 17 29.5	-0.3
MDJ				SKS		04 23 47.6	
MDJ				SS	SS	04 33 09.9	+2.5
MDJ				PP	PP		
	comp=Z,40nm,4.3s						
MDJ				LR	LR		
	comp=N,270nm,27.2s,MS5.0						
MDJ				LR	LR		
	comp=E,460nm,27.2s,MS5.0						
MDJ				LR	LR		
	comp=Z,460nm,23.4s,MS5.0						
MDJ	**Mudanjiang**	**112.69**	**339**	PFAKE		04 16 50.0	+8.7
MDJ				LR	LR		
	comp=Z,514nm,21.0s,MS5.1						
ULN	**Ulaanbaatar**	**114.01**	**357**	PFAKE		04 16 50.0	+6.1
ULN				LR	LR		
	comp=Z,431nm,21.0s,MS5.0						
VNDA	**Vanda**	**114.22**	**192**	PFAKE		04 16 50.0	+6.4
VNDA				LR	LR		
	comp=Z,198nm,19.0s,MS4.7						
MAJO	**Matsushiro**	**115.89**	**329**	PFAKE		04 17 00.0	+12
MAJO				LR	LR		
	comp=Z,273nm,20.0s,MS4.9						
WMQ	**Urumqi**	**116.69**	**12**	*e*PDIF	Pdif	04 13 02.0	+0.8
WMQ				PP	PP	04 17 58.8	+0.6
WMQ				SKS	SKS	04 23 57.2	+16
WMQ				SS	SS	04 34 01.8	+2.0
WMQ				PP	PP		
	comp=Z,90nm,5.8s						
INCN	**Inchon**	**120.05**	**338**	PFAKE		04 17 10.0	+14
INCN				LR	LR		
	comp=Z,420nm,19.0s,MS5.1						
MAW	**Mawson**	**124.65**	**163**	PKIKP	PKPdf	04 17 03.3	-0.7
MAW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAW	**Mawson**	**124.65**	**163**	PKP	PKPdf	04 17 03.3	-0.7
	comp=Z,2.5nm,0.7s,baz=229,slow=16,SNR=5.4						
LZH	**Lanzhou**	**125.89**	**359**	*e*PKP	PKPdf	04 16 59.8	-7.4
LZH				XPKP		04 17 04.5	
LZH				PP	PP		
	comp=Z,240nm,5.3s						
LZH	**Lanzhou**	**125.89**	**359**	*e*PKP	PKPdf	04 16 59.7	-7.5
LZH				sPKP		04 17 04.5	
LZH				PP	PP	04 18 56.0	-4.8
LZH				SKKS		04 25 43.0	
LZH				SS	SS	04 35 48.0	-10
LZH				LR	LR		
	comp=Z,2µm,20.8s,MS5.7						
NJ2	**Nanjing**	**127.55**	**343**	*e*PKP	PKPdf	04 17 06.5	-4.0
NJ2				PP	PP	04 19 11.0	-0.5
NJ2				PKS	PKS	04 20 42.0	-0.2
NJ2				SKS	SKS	04 24 13.0	-4.1
NJ2				LR	LR		
	comp=Z,150nm,29.0s,MS4.5						
SSE	**Sheshan**	**127.72**	**340**	PKP	PKPdf	04 17 08.1	-2.8
SSE				SS	SS	04 36 22.0	+1.2
SSE				LR	LR		
	comp=N,160nm,22.5s,MS5.1						
SSE				LR	LR		
	comp=E,440nm,22.6s,MS5.1						
SSE				LR	LR		
	comp=Z,220nm,24.9s,MS4.7						
LSA	**Lhasa**	**131.02**	**13**	PFAKE		04 17 30.0	+13
LSA				LR	LR		
	comp=Z,283nm,19.0s,MS5.0						
ENH	**Enshi**	**131.24**	**352**	PFAKE		04 17 30.0	+12
ENH				LR	LR		
	comp=Z,324nm,20.0s,MS5.0						
PMG	**Port Moresby**	**135.90**	**275**	PFAKE		04 17 40.0	+13
PMG				LR	LR		
	comp=Z,131nm,20.0s,MS4.7						
KMI	**Kunming**	**136.83**	**360**	PKP	PKPdf	04 17 22.3	-5.7
KMI				PP	PP	04 20 07.8	-3.0
KMI				PP	PP		
	comp=Z,140nm,6.0s						
KMI				LR	LR		
	comp=N,240nm,18.8s,MS5.1						
KMI				LR	LR		
	comp=E,210nm,18.8s,MS5.1						
KMI				LR	LR		
	comp=Z,230nm,20.4s,MS4.9						
KMI	**Kunming**	**136.83**	**360**	PKP	PKPdf	04 17 22.3	-5.7
KMI				pPKP		04 17 32.9	
KMI				sPKP		04 17 37.4	
KMI				PP	PP	04 20 07.8	-3.0
KMI				SS	SS	04 38 08.5	-3.4
KMI				SSS	SSS	04 43 10.9	-7.0
KMI				LR	LR		
	comp=Z,230nm,20.4s,MS4.9						
QIZ	**Qiongzhong**	**142.21**	**349**	PFAKE		04 17 50.0	+12
QIZ				LR	LR		
	comp=Z,374nm,21.0s,MS5.1						
STKA	**Stephens Creek**	**142.36**	**241**	*e*P	PKPdf	04 17 34.6	-3.3
	comp=Z,10nm,0.6s						
STKA	**Stephens Creek**	**142.36**	**241**	PKP	PKPdf	04 17 34.0	-3.9
	comp=Z,12nm,0.7s,baz=63,slow=3.5,SNR=15						
CMAR	**Chiang Mai Arr**	**143.29**	**6**	PKIKP	PKPdf	04 17 36.6	-3.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**143.29**	**6**	PKP	PKPdf	04 17 36.5	-3.2
	comp=Z,1.2nm,0.4s,baz=331,slow=3.6,SNR=7.6						
WB2	**Warramunga Arr**	**149.94**	**262**	*e*P	PKPdf	04 17 47.5	-3.4
WRAB	**Tennant Creek**	**149.94**	**262**	*e*PKPdf	PKPdf	04 17 47.5	-3.4
WRAB				*e*PKPbc	PKPdf	04 17 52.7	+1.8
KAKA	**Kakadu**	**150.69**	**277**	*e*P	PKPdf	04 17 53.9	+1.7
	comp=Z,8.1nm,0.6s						

IGQ 13 04:22:39.0, 1.05S×78.85W, h11^{km}±4^{km}, mb4.3, 3C-10D, Error ellipse: s-maj=1.6km s-min=1.1km az=33.2, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PISA	**Pisayambo**	**0.46**	**91**	⇓P	Pg	04 22 48.2	-0.2
IGUA	**Igualata**	**0.48**	**155**	⇓P	Pg	04 22 49.5	+0.7
CAMI	**Rancho Maria**	**0.50**	**43**	⇑P	Pg	04 22 49.7	+0.5
JUIV	**Juive**	**0.53**	**134**	P	Pg	04 22 49.2	-0.6
CUSU	**Cusua**	**0.54**	**137**	⇓P	Pg	04 22 49.9	+0.1
RUN5	**Runtun**	**0.56**	**131**	⇓P	Pb	04 22 50.0	-0.2
RETU	**Refugio**	**0.56**	**135**	P	Pb	04 22 50.8	+0.5
ULBA	**Ulba**	**0.59**	**132**	⇓P	Pb	04 22 50.5	-0.3
ARRY	**Arrayan**	**0.60**	**139**	⇓P	Pb	04 22 50.8	-0.1
VC1	**Cotopaxi 1**	**0.60**	**48**	⇑P	Pb	04 22 51.2	+0.2
JUA2	**San Juan 2**	**0.86**	**16**	P	Pb	04 22 56.0	+0.5
TERV	**Terraza Guagua**	**0.90**	**16**	P	Pb	04 22 56.9	+0.7
GGP	**Refugio Guagua**	**0.91**	**16**	⇑P	Pb	04 22 56.6	+0.5
PINO	**Pino**	**0.92**	**15**	P	Pb	04 22 57.2	+0.8
YANA	**Yana**	**0.96**	**17**	⇓P	Pb	04 22 57.5	+0.3
JOR1	**San Jorge 1**	**1.06**	**11**	⇓P	Pb	04 22 55.7	-3.2
ELAGU	**Cayambe Volc**	**1.33**	**40**	P	Pb	04 23 04.2	+0.7
CAYR	**Refugio Cayamb**	**1.35**	**38**	P	Pb	04 23 04.7	+0.9
CAYA	**Cayambe**	**1.41**	**38**	P	Pn	04 23 05.7	+1.2
COTA	**Cotacachi**	**1.47**	**20**	P	Pn	04 23 08.9	+3.5
LAV3	**Lava3-Reventad**	**1.54**	**52**	P	Pn	04 23 07.9	+1.4
CONE	**Cono NE Rev Vo**	**1.55**	**51**	P	Pn	04 23 08.8	+2.1
JAMA	**Jama**	**1.57**	**300**	P	Pn	04 23 07.9	+1.0
HOJA	**Cerro de Hojas**	**1.70**	**270**	⇓P	Pn	04 23 09.7	+0.9
ECEN	**Cerro Negro**	**2.06**	**25**	P	Pn	04 23 20.1	+6.2
LORE	**San Lorenzo**	**2.33**	**0**	⇓P	Pn	04 23 21.1	+3.2
LORE				S	Sn	04 23 50.6	+3.9

CASC 13 04:28:29.3±2.2, 8.90N×82.84W, h34^{km}±28^{km}, MD3.0, MW3.7, 3C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVTC	**San Vito de Co**	**0.16**	**228**	⇑*e*P	P	04 28 35.5	-0.1
SVTC				*e*S	S	04 28 41.7	+1.6
BRU2	**Volcan**	**0.17**	**125**	⇑*e*P	P	04 28 36.6	+0.8
BRU2				*e*P		04 28 37.0	
BRU2				*e*S	S	04 28 41.4	+1.1
LCR2	**La Lucha 2**	**1.43**	**306**	*e*P	P	04 28 54.9	+1.8
LAJ	**Bijagual**	**1.59**	**307**	⇓*e*P	P	04 28 58.0	+2.6
PRS1	**Puriscal**	**1.81**	**307**	⇑*i*P	P	04 28 58.6	0.0
CGA2	**Cerro Gallo 2**	**1.96**	**305**	*e*S	S	04 29 23.7	-0.5

MOS ***13*** *04:49:35.0±0.8, 36.35N×71.19E, h104^{km}, mb3.8/1, Error ellipse: s-maj=25.6km s-min=13.3km az=103.2*

NEIC ***13*** *04:49:44.9±0.9, 36.62N×72.08E, h200^{km}, mb4.1/2, Error ellipse: s-maj=27.2km s-min=8.8km az=52.0*

NNC ***13*** *04:49:45.6±8.3, 37.06N×71.17E, h174^{km}±102^{km}, mpv4.4, Error ellipse: s-maj=77.9km s-min=46.1km az=22.0*

IDC ***13*** *04:49:56.4±18.0, 37.43N×72.20E, h265^{km}±181^{km}, mb3.4/3, mb1 3.3/5, mb1mx3.0/19, mbtmp3.9/5, MS4.1/1, Ms1 4.1/1, ms1mx3.1/11, Error ellipse: s-maj=170.2km s-min=144.7km az=172.0*

ISC 13 04:49:38.6±0.5, 36.51N±0.03×71.52E±0.09, h140^{km}±9^{km}, n37, σ1^{s}04/41, mb3.8/3, 4C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.70**	**173**	⇓P	**P**	**04 50 23.2**	**+0.8**
CEP				S	**S**	**04 50 55.0**	**-0.9**
CHCP	**Chirah Chowk**	**3.18**	**153**	⇑P	**P**	**04 50 30.6**	**+1.9**
THW	**Thamme Wali**	**3.71**	**177**	P	**P**	**04 50 36.2**	**+0.5**
SBDP	**Sheikh Budin**	**4.24**	**188**	P	**P**	**04 50 42.1**	**-0.6**
DRP	**Derazinda**	**4.88**	**193**	P	**P**	**04 50 51.4**	**+0.2**
AML	**Almayashu**	**5.86**	**16**	P	**P**	**04 51 04.3**	**+0.1**
	SNR=76						
UCH	**Uchtor**	**6.16**	**21**	P	**P**	**04 51 08.8**	**+0.5**
	SNR=45						
KZA	**Kyzart**	**6.26**	**26**	P	**P**	**04 51 10.0**	**+0.3**
	SNR=36						
EKS2	**Erkin-Say**	**6.38**	**15**	P	**P**	**04 51 11.5**	**+0.2**
	SNR=13						
AAK	**Ala-Archa**	**6.53**	**20**	P	**P**	**04 51 13.7**	**+0.4**
	SNR=28						
AAK	**Ala-Archa**	**6.53**	**20**	⇓P	**P**	**04 51 13.6**	**+0.3**
	15nm,0.4s						
AAK				⇓S	**S**	**04 52 24.6**	**-2.4**
	20nm,0.8s						
AAK	**Ala-Archa**	**6.53**	**20**	PN	**P**	**04 51 13.5**	**+0.2**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KK31	**Karatay Array**	**6.63**	**354**	⇓P	**P**	**04 51 13.3**	**-1.4**
	comp=Z,14nm,0.3s,baz=180,slow=14,SNR=299						
KK31				⇑S	**S**	**04 52 23.4**	**-5.9**
	comp=Z,5.6nm,0.3s						
KKAR	**Karatay Array**	**6.63**	**354**	*e*PN	**P**	**04 51 13.4**	**-1.3**
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
KBK	**Karagaybulak**	**6.68**	**22**	P	**P**	**04 51 17.0**	**+1.6**
	SNR=5.6						
SDNR	**Sundarnagar**	**6.74**	**136**	*e*PN	**P**	**04 51 34.0**	**+18**
SDNR				*e*SN	**S**	**04 52 29.0**	**-3.0**
ULHL	**Ulahol**	**6.79**	**31**	P	**P**	**04 51 17.2**	**+0.3**
	SNR=8.4						
CHMS	**Chumysh**	**6.94**	**20**	P	**P**	**04 51 19.3**	**+0.5**
	SNR=10						
USP	**Ospenovka**	**7.12**	**18**	P	**P**	**04 51 22.0**	**+0.6**
	SNR=11						
TKM2	**Tokmak 2**	**7.13**	**25**	P	**P**	**04 51 21.6**	**+0.2**
	SNR=14						
MK31	**Makanchi Array**	**13.04**	**35**	⇓P	**P**	**04 52 40.4**	**+1.0**
	comp=Z,2.5nm,0.9s,baz=194,slow=7.7,SNR=8.5						
MKAR	**Makanchi Array**	**13.04**	**35**	P	**P**	**04 52 39.3**	**0.0**
	comp=Z,0.1nm,0.3s,baz=229,slow=13,SNR=8.2						
KOLN	**Koldanda**	**13.43**	**127**	*e*P	**P**	**04 52 44.1**	**-0.3**
	comp=Z,2.8nm,0.3s						
GKN	**Gorkha**	**13.96**	**124**	*e*P	**P**	**04 52 51.4**	**+0.2**
	comp=Z,7.5nm,0.3s						
DMN	**Daman**	**14.53**	**124**	*e*P	**P**	**04 52 56.2**	**-2.2**
KKN	**Kakani**	**14.53**	**123**	*e*P	**P**	**04 52 59.1**	**+0.7**
PKI	**Pulchoki**	**14.76**	**123**	*e*P	**P**	**04 53 00.5**	**-0.8**
AB31	**Akbulak array**	**15.28**	**330**	⇑P	**P**	**04 53 05.9**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=130,slow=14,SNR=40						
AB31				⇑S	**S**	**04 55 43.3**	**-10**
	comp=Z,0.8nm,0.4s,baz=149,slow=23,SNR=6.8						
AB31	**Akbulak array**	**15.28**	**330**	P	**P**	**04 53 05.8**	**-2.0**
BVA0	**Borovoye Array**	**16.53**	**358**	P	**P**	**04 53 24.6**	**+1.3**
	slow=0.1,SNR=6.1						
BVAR	**Borovoye Array**	**16.53**	**358**	P	**P**	**04 53 22.2**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=161,slow=13,SNR=6.2						
SONM	**Songino Array**	**27.98**	**55**	LR	LR	05 06 38.2	
	comp=Z,443nm,21.4s,baz=242,slow=37						
FINES	**FINESS Array B**	**37.71**	**326**	P	**P**	**04 56 42.9**	**+1.1**
	comp=Z,3.4nm,1.1s,mb3.9,baz=121,slow=8.1,SNR=5.5						
ARCES	**ARCESS Array B**	**41.30**	**337**	P	**P**	**04 57 10.5**	**-0.8**
	comp=Z,1.8nm,0.9s,mb3.7,baz=112,slow=9.7,SNR=4.4						
NB2	**NORSAR Subarra**	**44.62**	**323**	P	**P**	**04 57 38.9**	**+0.7**
	comp=Z,1.0nm,0.5s,mb3.7,baz=95,slow=7.4						
NOA	**NORSAR Array B**	**44.62**	**323**	P	**P**	**04 57 39.2**	**+1.0**
	comp=Z,1.5nm,0.6s,mb3.8,baz=96,slow=7.8,SNR=8.3						
NOA	**NORSAR Array B**	**44.62**	**323**	P	**P**	**04 57 39.2**	**+1.0**

IDC ***13*** *05:21:28.0±2.9, 14.78S×171.69E, h651^{km}±37^{km}, mb3.1/8, mb1 3.2/9, mb1mx3.1/18, mbtmp4.1/9, Error ellipse: s-maj=27.8km s-min=17.2km az=44.0*

NEIC ***13*** *05:21:28.3±1.1, 14.78S×171.61E, h656^{km}±14^{km}, mb4.3/9, Error ellipse: s-maj=14.1km s-min=10.1km az=194.0*

ISC 13 05:21:27.1±1.4, 14.8S±0.1×171.61E±0.10, h659^{km}±21^{km}, n23, σ0^{s}88/22, mb3.9/13, 2D, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.72**	**213**	P	**P**	**05 23 37.2**	**+2.2**
	0.8nm,0.3s,baz=73,slow=21,SNR=6.6						
AFI	**Afiamalu**	**16.12**	**89**	P	**P**	**05 24 44.6**	**-0.4**
	19nm,0.6s						
URZ	**Urewera**	**23.85**	**169**	P	**P**	**05 25 53.8**	**-0.8**
	3.3nm,0.3s,mb4.2,baz=51,slow=0.8,SNR=6.9						
PMG	**Port Moresby**	**24.49**	**280**	P	**P**	**05 26 00.7**	**+0.3**
	6.6nm,0.6s,mb4.2,baz=122,slow=18,SNR=3.9						
PMG	**Port Moresby**	**24.49**	**280**	P	**P**	**05 26 00.8**	**+0.3**
CTA	**Charters Tower**	**24.73**	**254**	*e*P	**P**	**05 26 01.9**	**-0.6**
	4.4nm,0.4s,mb4.3						
CTA	**Charters Tower**	**24.73**	**254**	P	**P**	**05 26 02.0**	**-0.4**
	3.0nm,0.5s,mb4.1,baz=90,slow=9.3,SNR=7.3						
CTAO	**Charters Tower**	**24.73**	**254**	*e*P	**P**	**05 26 01.9**	**-0.6**
	3.7nm,0.6s,mb4.1						
SNZO	**South Karori**	**26.53**	**175**	*e*P	**P**	**05 26 16.3**	**-1.6**
RPZ	**Rata Peaks**	**28.80**	**181**	P	**P**	**05 26 36.6**	**-0.6**
	3.4nm,0.5s,mb4.2,baz=295,slow=3.2,SNR=6.4						
STKA	**Stephens Creek**	**32.21**	**233**	P	**P**	**05 27 07.0**	**+0.9**
	1.4nm,0.3s,mb3.9,baz=64,slow=10,SNR=11						
WB2	**Warramunga Arr**	**35.87**	**256**	⇓*i*P	**P**	**05 27 35.5**	**-0.9**
WRAB	**Tennant Creek**	**35.87**	**256**	*e*P	**P**	**05 27 35.6**	**-0.7**
	6.9nm,0.7s,mb4.3						
KAKA	**Kakadu**	**38.07**	**268**	⇓*i*P	**P**	**05 27 54.0**	**-0.4**
	7.3nm,0.4s,mb4.5						
FITZ	**Fitzroy Crossi**	**44.12**	**259**	*e*P	**P**	**05 28 41.8**	**-0.4**
	7.9nm,0.5s,mb4.3						
FITZ	**Fitzroy Crossi**	**44.12**	**259**	P	**P**	**05 28 42.5**	**+0.3**
	baz=78,slow=4.8						
VNDA	**Vanda**	**62.91**	**182**	P	**P**	**05 30 53.4**	**+0.5**
	0.8nm,0.5s,mb3.2,baz=357,slow=6.1,SNR=6.3						
VNDA	**Vanda**	**62.91**	**182**	*e*P	**P**	**05 30 52.9**	**0.0**
	0.9nm,0.5s,mb3.3						
SBA	**Scott Base**	**63.09**	**181**	*e*P	**P**	**05 30 55.4**	**+1.3**
	3.2nm,0.8s,mb3.6						
QSPA	**South Pole Qui**	**75.21**	**180**	*e*P	**P**	**05 32 06.3**	**+0.9**
	14nm,1.4s,mb4.3						
NVAR	**Mina Array Bea**	**84.18**	**48**	P	**P**	**05 32 53.3**	**+0.6**
	0.7nm,0.8s,mb3.2,baz=229,slow=8.3,SNR=4.6						
ILAR	**Eielson Array**	**85.36**	**17**	P	**P**	**05 32 57.6**	**-0.1**
	0.4nm,0.7s,mb3.1,baz=237,slow=5.5,SNR=5.9						
ARCES	**ARCESS Array B**	**121.35**	**347**	PKP	PKPdf	05 39 08.0	+1.0
	0.6nm,0.4s,baz=59,slow=2.9,SNR=11						

TAP 13 05:24:37.5, 24.43N×122.34E, h65^{km}±1^{km}, ML3.8, Taiwan region

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IDC ***13*** *05:31:34.2±4.5, 6.25S×130.54E, h63^{km}±40^{km}, mb4.2/10, mb1 4.3/10, mb1mx4.2/13, mbtmp4.5/10, ML5.7/1, Error ellipse: s-maj=30.7km s-min=13.7km az=73.0*

NEIC ***13*** *05:31:38.9±1.4, 6.32S×130.38E, h108^{km}±14^{km}, mb4.8/11, Error ellipse: s-maj=12.2km s-min=7.6km az=49.0*

MOS ***13*** *05:31:39.3±0.9, 6.25S×130.43E, h127^{km}, mb4.1/10, Error ellipse: s-maj=22.2km s-min=13.7km az=121.3*

ISC 13 05:31:38.5±1.6, 6.63S±0.06×130.24E±0.07, h132^{km}±17^{km}, n58, σ1^{s}20/57, mb4.4/20, 4C-3D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.42**	**160**	⇓*i*P	**P**	**05 33 13.1**	**+1.3**
	186nm,0.2s						
KAKA				*e*S	**S**	**05 34 23.4**	**-0.8**
FITZ	**Fitzroy Crossi**	**12.25**	**201**	⇑*i*P	**P**	**05 34 30.3**	**+0.8**
	64nm,0.3s						
FITZ				*e*S	**S**	**05 36 42.4**	**-1.3**
FITZ	**Fitzroy Crossi**	**12.25**	**201**	P	**P**	**05 34 30.4**	**+0.9**
	30nm,0.3s,baz=22,slow=11,SNR=111						
FITZ				S	**S**	**05 36 42.5**	**-1.2**
	35nm,0.3s,baz=196,slow=10,SNR=7.9						
WRAB	**Tennant Creek**	**13.81**	**164**	⇑*e*Pn	**P**	**05 34 48.7**	**-1.1**
	74nm,0.6s						
WRAB				*e*Sn	**S**	**05 37 13.5**	**-6.8**
WB2	**Warramunga Arr**	**13.82**	**164**	⇓*i*P	**P**	**05 34 48.2**	**-1.7**
WB2				*e*S	**S**	**05 37 16.8**	**-3.6**
PMG	**Port Moresby**	**16.98**	**100**	P	**P**	**05 35 29.5**	**0.0**
PMG				S	**S**	**05 38 25.6**	**-6.8**
PMG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PMG				smax			
	comp=N,2.0nm,0.3s						
PMG	**Port Moresby**	**16.98**	**100**	P	**P**	**05 35 29.5**	**0.0**
	comp=N,0.8nm,0.3s,baz=297,slow=14,SNR=2.5						
PMG				S	**S**	**05 38 25.6**	**-6.7**
	comp=N,2.2nm,0.3s,baz=184,slow=20,SNR=7.6						
MBWA	**Marble Bar**	**17.67**	**214**	*e*P	**P**	**05 35 40.6**	**+2.8**
MBWA				*e*S	**S**	**05 38 47.1**	**-0.6**
KKM	**Kota Kinabalu**	**18.83**	**312**	*e*P	**P**	**05 35 50.9**	**+0.2**
CTA	**Charters Tower**	**20.51**	**132**	*e*P	**P**	**05 36 10.0**	**+2.0**
	comp=N,12nm,0.8s						
CTA	**Charters Tower**	**20.51**	**132**	P	**P**	**05 36 09.9**	**+1.9**
CTA				pmax	pmax		
	comp=Z,14nm,0.8s						
CTA	**Charters Tower**	**20.51**	**132**	P	**P**	**05 36 09.9**	**+1.9**
	comp=Z,14nm,0.8s,baz=310,slow=12,SNR=22						
CTAO	**Charters Tower**	**20.51**	**132**	*e*P	**P**	**05 36 10.2**	**+2.2**
	comp=Z,19nm,0.9s						
CTAO				S	**S**	**05 39 47.4**	**+2.5**
STKA	**Stephens Creek**	**27.27**	**159**	⇓*i*P	**P**	**05 37 15.2**	**+2.7**
	comp=Z,8.0nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**27.27**	**159**	P	**P**	**05 37 15.2**	**+2.7**
	comp=Z,5.3nm,0.4s,mb4.6,baz=333,slow=8.3,SNR=24						
NWAO	**Narrogin (SRO)**	**28.82**	**203**	P	**P**	**05 37 30.6**	**+4.1**
NWAO				pmax	pmax		
	comp=Z,19nm,1.0s						
NWAO	**Narrogin (SRO)**	**28.82**	**203**	P	**P**	**05 37 30.6**	**+4.1**
	comp=Z,19nm,1.0s,mb4.8,baz=53,slow=5.1,SNR=4.2						
KULM	**Kulim**	**31.82**	**291**	*e*P	**P**	**05 37 53.4**	**+0.3**
NANT	**Nan**	**38.56**	**311**	⇑P	**P**	**05 38 51.0**	**+0.9**
	comp=Z,250nm,0.5s						
CMAR	**Chiang Mai Arr**	**39.68**	**309**	P	**P**	**05 39 01.0**	**+1.6**
CMAR						05 41 06.4	
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**39.68**	**309**	P	**P**	**05 39 00.9**	**+1.5**
	comp=Z,5.4nm,0.6s,mb4.3,baz=136,slow=7.5,SNR=27						
CMAR				PcP	PcP	05 41 06.4	+2.2
	comp=Z,1.3nm,0.5s,baz=178,slow=3.6,SNR=4.4						
CHG	**Chiang Mai**	**39.89**	**310**	⇑P	**P**	**05 39 02.3**	**+1.2**
	comp=Z,16nm,0.6s,mb4.8						
MJAR	**Matsushiro Arr**	**43.59**	**9**	P	**P**	**05 39 29.3**	**-1.9**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**43.59**	**9**	P	**P**	**05 39 29.3**	**-1.9**
	comp=Z,1.0nm,0.3s,mb3.9,baz=208,slow=18,SNR=7.1						
RPZ	**Rata Peaks**	**51.38**	**143**	P	**P**	**05 40 33.8**	**+2.0**
	comp=Z,1.6nm,0.4s,mb4.0,baz=223,slow=3.6,SNR=4.2						
GUN	**Gumba**	**54.89**	**311**	*e*P	**P**	**05 40 57.4**	**-0.5**
	comp=Z,41nm,0.8s,mb5.2						
PKI	**Pulchoki**	**55.07**	**310**	*e*P	**P**	**05 40 58.0**	**-1.2**
	comp=Z,11nm,0.6s,mb4.7						
KKN	**Kakani**	**55.28**	**310**	*e*P	**P**	**05 41 00.4**	**-0.3**
	comp=Z,29nm,0.9s,mb5.0						
GKN	**Gorkha**	**55.88**	**310**	*e*P	**P**	**05 41 05.1**	**+0.1**
	comp=Z,16nm,0.3s,mb5.3						
KOLN	**Koldanda**	**56.55**	**309**	*e*P	**P**	**05 41 10.2**	**+0.4**
	comp=Z,32nm,0.9s,mb5.2						
ULN	**Ulaanbaatar**	**57.99**	**342**	*e*P	**P**	**05 41 19.6**	**+0.1**
SONM	**Songino Array**	**58.17**	**341**	P	**P**	**05 41 21.0**	**+0.1**
	comp=Z,2.5nm,0.5s,mb4.3,baz=159,slow=6.9,SNR=10						
ZAK	**Zakamensk**	**61.40**	**341**	*e*P	**P**	**05 41 42.7**	**-0.2**
ZAK				*e*		05 42 22.1	
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.6						
MKAR	**Makanchi Array**	**68.05**	**327**	P	**P**	**05 42 26.6**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
MKAR	**Makanchi Array**	**68.05**	**327**	P	**P**	**05 42 26.6**	**+0.7**
	comp=Z,8.9nm,0.4s,mb4.8,baz=115,slow=8.7,SNR=116						
ZAL	**Zalesovo**	**71.36**	**334**	P	**P**	**05 42 44.2**	**-1.6**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZAL	**Zalesovo**	**71.36**	**334**	P	**P**	**05 42 44.2**	**-1.6**
	comp=Z,1.9nm,0.6s,mb4.0,baz=1.2,slow=6.2,SNR=14						
ZAL	**Zalesovo**	**71.36**	**334**	P	**P**	**05 42 44.2**	**-1.6**
NVS	**Novosibirsk**	**72.64**	**334**	*e*P	**P**	**05 42 52.3**	**-1.1**
MAW	**Mawson**	**75.38**	**201**	P	**P**	**05 43 13.4**	**+4.5**
MAW				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAW	**Mawson**	**75.38**	**201**	P	**P**	**05 43 13.4**	**+4.5**
	comp=Z,1.8nm,0.6s,mb3.9,baz=32,slow=9.8,SNR=8.4						
BVA0	**Borovoye Array**	**77.88**	**328**	*i* P	**P**	**05 43 23.3**	**+0.2**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.2s						
CHKZ	**Chkalovo**	**78.07**	**328**	P	**P**	**05 43 24.5**	**+0.4**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
CHKZ	**Chkalovo**	**78.07**	**328**	*e*P	**P**	**05 43 23.7**	**-0.5**
	comp=Z,7.4nm,1.2s,mb4.2						
TIXI	**Tiksi**	**78.12**	**360**	*e*P	**P**	**05 43 22.2**	**-1.9**

TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
AB31	Akbulak array	82.37	322	*i* P	P	05 43 47.8	+0.7
AB31				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
ILAR	Eielson Array	92.91	25	P	P	05 44 36.3	-1.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	92.91	25	P	P	05 44 36.2	-1.1
	comp=Z,0.9nm,0.8s,mb4.0,baz=265,slow=4.0,SNR=9.1						
ARCES	ARCESS Array B	101.32	340	P	P	05 45 16.8	+1.4
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	101.32	340	P	P	05 45 16.8	+1.4
	comp=Z,0.6nm,0.5s,baz=50,slow=7.0,SNR=7.6						
TXAR	Lajitas Array	124.53	59	PKP	PKPdf	05 50 25.0	+2.1
	comp=Z,0.1nm,0.6s,baz=207,slow=2.0,SNR=3.4						
TXAR	Lajitas Array	124.53	59	PKP	PKPdf	05 50 25.0	+2.1
CPUP	Villa Florida	146.42	168	PKP2	PKPab	05 51 09.0	+0.9
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CPUP	Villa Florida	146.42	168	PKPbc	PKPbc	05 51 09.0	+4.4
	comp=Z,1.4nm,0.8s,baz=157,slow=1.3,SNR=4.5						
CPUP	Villa Florida	146.42	168	*e*PKPbc	PKPbc	05 51 09.0	+4.4
LPAZ	La Paz	150.86	142	PKIKP	PKPdf	05 51 21.9	+11
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
LPAZ	La Paz	150.86	142	PKPbc	PKPdf	05 51 21.9	+11
	comp=Z,1.0nm,0.4s,baz=182,slow=25,SNR=15						
LPAZ	La Paz	150.86	142	*e*PKPbc	PKPdf	05 51 21.5	+11

BJI ***13*** *05:48:17.7, 8.56N×92.64E, h39^{km}, mB5.0, mb4.8, Ms4.3, Msz3.9*

MOS ***13*** *05:48:19.4±0.8, 8.86N×92.66E, h33^{km}, mb4.7/14, Error ellipse: s-maj=22.9km s-min=9.3km az=100.6*

NEIC ***13*** *05:48:20.1±0.9, 8.73N×92.72E, mb4.5/12, Error ellipse: s-maj=17.4km s-min=13.3km az=176.0*

IDC ***13*** *05:48:25.1±8.3, 9.16N×92.50E, h48^{km}±60^{km}, mb3.8/10, mb1 4.0/11, mb1mx3.9/18, mbtmp4.1/11, ML4.4/1, MS3.3/4, Ms1 3.4/4, ms1mx3.1/23, Error ellipse: s-maj=68.1km s-min=37.8km az=3.0*

ISC 13 05:48:18.9±2.6, **8.9N**±0.1×**92.70E**±0.07, **h25**^{km}±14^{km}, **h31**^{km}±1.0^{km}**:pP-P, n71,** σ**1^{s}06**/71, **mb4.4**/24, **MS3.5**/5, **3C-2D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	Port Blair	2.75	1	*e*P	Pn	05 49 01.1	-1.3
PBA				*i* x	x	05 49 16.8	
PBA				*e*x	x	05 49 25.6	
CMAR	Chiang Mai Arr	11.28	32	P	P	05 51 02.2	+0.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,76nm,18.2s						
CMAR	Chiang Mai Arr	11.28	32	P	P	05 51 02.1	+0.5
	comp=Z,0.7nm,0.3s,baz=224,slow=14,SNR=11						
CMAR				LR	LR	05 56 20.5	
	comp=Z,76nm,18.2s,baz=210,slow=43						
VIS	Vishakhapatnam	12.65	315	*e*P	P	05 51 17.3	-2.9
VIS				*e*x	x	05 53 20.8	
VIS				AML	AML	05 53 26.0	
	comp=E,80nm,0.5s						
VIS				AML	AML	05 53 27.2	
	comp=N,50nm,0.4s						
MDRS	Chennai	12.91	290	*e*P	P	05 51 24.6	+0.9
MDRS				AMb	AMB	05 51 26.6	
	comp=Z,137nm,0.1s						
BWNR	Bhubaneshwar	13.15	330	*i* P	P	05 51 26.6	-0.2
BWNR				*e*x	x	05 53 36.2	
BWNR				AML	AML	05 53 42.4	
	comp=E,149nm,0.6s						
BWNR				AML	AML	05 53 42.8	
	comp=N,69nm,0.3s						
HYB	Hyderabad	16.16	303	*i* P	P	05 52 07.5	+1.3
HYB				*e*		05 55 06.5	
BOK	Bokaro	16.19	337	*e*P	P	05 52 09.6	+3.1
BLSP	Bilaspur	16.63	324	*e*P	P	05 52 09.7	-2.4
BLSP				*e*x	x	05 54 59.6	
PKI	Pulchoki	19.82	341	*e*P	P	05 52 51.1	+0.4
	comp=N,18nm,0.5s						
PKI	Pulchoki	19.82	341	*e*P	P	05 52 51.1	+0.4
PKI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
DMN	Daman	19.95	340	*e*P	P	05 52 52.3	+0.1
GUN	Gumba	19.98	342	*e*P	P	05 52 52.2	-0.3
	comp=Z,22nm,0.6s						
KKN	Kakani	20.06	341	*e*P	P	05 52 53.1	-0.2
BHPL	Bhopal	20.44	316	*i* P	P	05 52 57.6	+0.4
GKN	Gorkha	20.48	339	*e*P	P	05 52 57.2	-0.4
	comp=Z,37nm,0.8s						
POO	Poona	20.65	300	*e*x	x	05 53 09.0	
KOLN	Koldanda	20.65	337	*e*P	P	05 52 59.2	-0.2
	comp=Z,25nm,0.8s						
LSA	Lhasa	20.75	356	P	P	05 53 01.0	+0.6
LSA	Lhasa	20.75	356	*e*P	P	05 52 59.8	-0.6
LSA				pmax	pmax		
	comp=Z,12nm,0.6s						
LSA	Lhasa	20.75	356	*e*P	P	05 52 59.8	-0.6
	comp=Z,12nm,0.6s						
GYA	Guiyang	21.92	35	⇑*i*P	P	05 53 13.3	+1.0
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
NDI	New Delhi	24.49	326	*e*P	P	05 53 37.5	0.0
ENH	Enshi	26.43	34	*e*P	P	05 53 55.5	-0.2
	comp=Z,19nm,1.0s,mb4.6						
LZH	Lanzhou	28.91	19	*e*P	P	05 54 18.0	-0.1
LZH				AP	pP	05 54 27.1	+1.5
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LZH	Lanzhou	28.91	19	*e*P	P	05 54 18.0	-0.1
	comp=Z,25nm,1.0s,mb4.9						
LZH				pP	pP	05 54 27.1	+1.5
NJ2	Nanjing	33.46	43	*e*P	P	05 54 58.1	-0.1
NJ2				AP	pP	05 55 07.8	+2.1
NJ2				XP	sP	05 55 11.8	+2.8
NJ2				PP	PP	05 56 11.0	+0.5
NJ2				S	S	06 00 18.0	+0.9
NJ2				XS		06 00 34.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,600nm,4.9s						
NJ2				LR	LR		
	comp=N,460nm,20.4s,MS4.2						
NJ2				LR	LR		
	comp=E,130nm,19.1s,MS4.2						
NJ2				LR	LR		
	comp=Z,290nm,24.8s						
SSE	Sheshan	34.52	46	P	P	05 55 05.0	-2.4
SSE				AP	pP	05 55 13.8	-1.1
SSE				XP	sP	05 55 17.8	-0.4
SSE				S	S	06 00 34.3	+0.8
SSE				XS		06 00 49.3	
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
SSE				AMB	AMB		
	comp=Z,80nm,4.3s						
SSE	Sheshan	34.52	46	P	P	05 55 05.0	-2.4
	comp=Z,18nm,0.8s,mb5.0						
SSE				pP	pP	05 55 13.8	-1.1
SSE				sP	sP	05 55 17.7	-0.5
SSE				S	S	06 00 34.3	+0.8
SSE				sS		06 00 49.2	
SSE				SS	SS	06 03 06.6	+21
SSE				LR	LR		
	comp=Z,30nm,17.7s,MS3.1						
KZA	Kyzart	36.46	338	P	P	05 55 25.5	+1.8
	SNR=6.6						
UCH	Uchtor	36.86	337	P	P	05 55 28.8	+1.6
	SNR=6.4						
TKM2	Tokmak 2	37.06	339	P	P	05 55 28.6	-0.2
	SNR=5.4						
AML	Almayashu	37.10	336	P	P	05 55 30.9	+1.8
	SNR=30						
AAK	Ala-Archa	37.22	338	P	P	05 55 31.9	+1.8
	SNR=5.3						
AAK	Ala-Archa	37.22	338	*e*P	P	05 55 30.6	+0.5
AAK				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
AAK	Ala-Archa	37.22	338	*e*P	P	05 55 30.6	+0.5
	comp=Z,15nm,1.1s,mb4.7						
EKS2	Erkin-Say	37.52	337	P	P	05 55 34.5	+1.9
	SNR=6.7						
USP	Ospenovka	37.76	338	P	P	05 55 35.7	+1.0
	SNR=19						
MKAR	Makanchi Array	38.80	349	P	P	05 55 43.0	-0.4
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	38.80	349	P	P	05 55 43.0	-0.3
	comp=Z,4.8nm,0.8s,mb4.3,baz=168,slow=8.1,SNR=34						
SONM	Songino Array	40.51	14	P	P	05 55 58.2	+0.8
	comp=Z,3.3nm,0.6s,mb4.2,baz=199,slow=9.2,SNR=12						
SONM				PcP	PcP	05 58 01.9	+1.6
	comp=Z,1.4nm,0.7s,baz=214,slow=5.2,SNR=3.1						
SONM				LR	LR	06 15 13.9	
	comp=Z,38nm,19.9s,MS3.2,baz=258,slow=40						
ULN	Ulaanbaatar	40.70	15	⇓*e*P	P	05 55 59.2	+0.2
ULN	Ulaanbaatar	40.70	15	*e*P	P	05 55 54.1	-4.9
	comp=Z,3.7nm,0.8s,mb4.1						
FITZ	Fitzroy Crossi	42.15	130	LR	LR	06 14 24.9	
	comp=Z,80nm,19.3s,MS3.6,baz=266,slow=37						
ZAK	Zakamensk	42.28	10	*e*P	P	05 56 12.0	0.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.7						
JNU	Nakatsue	42.66	50	LR	LR	06 18 01.9	
	comp=Z,34nm,18.6s,MS3.3,baz=183,slow=42						
ZAL	Zalesovo	45.37	353	P	P	05 56 34.8	-2.1
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAL	Zalesovo	45.37	353	P	P	05 56 34.8	-2.1
	comp=Z,1.6nm,0.5s,mb4.1,baz=306,slow=10.0,SNR=7.7						
CHKZ	Chkalovo	48.07	343	*e*P	P	05 56 58.1	-0.1
CHKZ				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
CHKZ	Chkalovo	48.07	343	*e*P	P	05 56 58.1	-0.1
	comp=Z,11nm,1.2s,mb4.8						
ARU	Arti	54.41	337	⇑*i*P	P	05 57 45.4	-0.6
ARU				*e*		05 59 45.2	
ARU				*e*PPP	PPP	06 00 57.2	-3.4
ARU				*e*S	S	06 05 25.7	+4.6
ARU				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
KIV	Kislovodsk	55.61	318	*i* P	P	05 57 55.5	+0.5
KIV				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
BRTR	Keskin Array B	60.69	311	P	P	05 58 30.0	-0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	60.69	311	P	P	05 58 29.9	-0.6
	comp=Z,1.4nm,0.8s,mb4.2,baz=124,slow=8.9,SNR=7.8						
OBN	Obninsk	63.76	328	⇓*i*P	P	05 58 50.2	-0.7
OBN				*e*		06 01 06.6	
OBN				*e*S	S	06 07 20.5	-1.9
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
AKASG	Malin Array Be	66.48	322	P	P	05 59 07.1	-1.4
	comp=Z,0.2nm,0.3s,mb3.7,baz=89,slow=4.9,SNR=4.6						
AKASG	Malin Array Be	66.48	322	P	P	05 59 07.1	-1.4
TIXI	Tiksi	66.53	12	⇑*e*P	P	05 59 08.0	-0.4
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
FINES	FINESS Array B	71.15	332	P	P	05 59 37.1	-0.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	71.15	332	P	P	05 59 37.1	-0.1
	comp=Z,2.7nm,0.7s,mb4.3,baz=127,slow=9.5,SNR=7.7						
KAF	Kangasniemi	71.24	333	*e*p	P	05 59 35.2	-2.5
	comp=Z,1.7nm,0.7s,mb4.1,baz=105,slow=5.8						
KAF	Kangasniemi	71.24	333	*e*P	P	05 59 35.2	-2.5
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
ARCES	ARCESS Array B	73.83	340	P	P	05 59 53.1	+0.3
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARCES	ARCESS Array B	73.83	340	P	P	05 59 53.1	+0.3
	comp=Z,3.6nm,1.0s,mb4.2,baz=102,slow=7.4,SNR=5.3						
GERES	GERESS Array B	76.12	318	P	P	06 00 05.9	-0.5
	comp=Z,0.4nm,0.2s,mb3.9,baz=135,slow=5.7,SNR=4.3						
CLL	Collm	76.68	321	*e**SP	sP	06 00 24.0	+3.8
NB2	NORSAR Subarra	78.15	331	P	P	06 00 17.6	+0.3
	comp=Z,1.6nm,0.8s,mb4.0,baz=91,slow=5.8						
NOA	NORSAR Array B	78.15	331	P	P	06 00 17.6	+0.3
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	NORSAR Array B	78.15	331	P	P	06 00 17.6	+0.3
	comp=Z,1.8nm,0.9s,mb4.0,baz=94,slow=6.0,SNR=4.6						
ILAR	Eielson Array	94.34	22	P	P	06 01 37.6	+0.4
	comp=Z,0.3nm,0.8s,mb3.8,baz=296,slow=3.6,SNR=3.7						
PDAR	Pinedale Array	124.72	20	PKP	PKPdf	06 07 18.9	-2.6
	comp=Z,0.3nm,0.6s,baz=326,slow=3.3,SNR=3.5						

ATH ***13*** *06:54:47.3, 38.89N×23.30E, h29^{km}, MD3.2/8, ML3.2*

NEIC ***13*** *06:54:47.3, 38.89N×23.29E, h31^{km}, ML3.2(ATH), After ATH.*

CSEM ***13*** *06:54:48.2±0.1, 38.89N×23.41E, h25^{km}, ML3.2, Error ellipse: s-maj=3.0km s-min=1.6km az=86.0*

THE ***13*** *06:54:49.4, 38.97N×23.35E, h12^{km}, ML3.0*

ISC 13 06:54:47.9±0.7, **38.89N**±0.03×**23.39E**±0.07, **h20**^{km}±9^{km}, **n24,** σ**0^{s}71**/30, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKR	Lokris	0.39	233	*e*PB	Pb	06 54 55.9	-0.1
LKR				*e*SB	Sb	06 55 01.4	-0.1
NEO	Neokhori	0.44	343	*e*PB	Pb	06 54 56.7	-0.2
MPAR	Parnis Oros	0.78	160	*e*PN	Pn	06 55 03.2	-0.5
MPAR				*e*SN	Sn	06 55 15.0	+0.2
AGG	Agios Georgios	0.84	280	*e*Pg	Pb	06 55 04.2	+0.5
AGG				*e*Sg	Sb	06 55 16.2	+1.7
AGG	Agios Georgios	0.84	280	*e*Pg	Pb	06 55 04.2	+0.6
AGG				*e*Sg	Sb	06 55 16.2	+1.7
MGER	Gerania Oros	0.90	187	*e*PN	Pn	06 55 04.5	-1.0
PTL	Penteli	0.91	156	*e*PN	Pn	06 55 05.7	+0.1
ATH	Athens Observa	0.95	164	*e*PN	Pn	06 55 06.2	+0.1
ATH				*e*SN	Sn	06 55 19.6	+0.6
NSAL	Nisos Salamina	0.98	177	*e*PN	Pn	06 55 06.0	-0.5
PAIG	Paliouri	1.06	12	*e*Pg	Pb	06 55 07.6	+0.2
PAIG				*e*Sg	Sb	06 55 22.0	+1.1
NAIG	Nisos Aigina	1.13	176	*e*PN	Pn	06 55 09.0	+0.3
LIT	Litokhoron	1.40	330	*e*Pg	Pn	06 55 12.6	0.0
PLG	Polygyros	1.49	2	*e*PN	Pn	06 55 13.5	-0.3
OUR	Ouranopolis	1.52	17	*e*Pg	Pn	06 55 14.3	+0.1
MEV	Metsovon	1.91	299	*e*Pb	Pb	06 55 19.4	-2.4
SOH	Sokhos	1.94	359	*e*Pb	Pb	06 55 21.1	-1.2
SOH	Sokhos	1.94	359	*e*Pb	Pb	06 55 21.1	-1.2
VLI	Veliai	2.19	190	*e*PN	Pn	06 55 23.6	-0.3
GRG	Griva	2.21	340	*e*Pn	Pn	06 55 24.2	+0.1
SRS	Serrai	2.23	4	*e*Pn	Pn	06 55 24.6	+0.1
APE	Apeiranthos	2.48	136	*e*PN	Pn	06 55 29.0	+1.0
MMB	Musomiste	2.71	5	*e*P	Pn	06 55 31.0	-0.3
KKB	Krupnik	2.99	356	*e*P	Pn	06 55 35.0	-0.3
VTS	Vitosha	3.71	358	*e*P	Pn	06 55 46.0	+0.6

IDC ***13*** *07:02:31.4±0.4, 2.10N×126.59E, mb5.4/27, mb1 5.4/27, mb1mx5.4/28, mbtmp5.3/27, MS5.1/1, Ms1 5.3/1, ms1mx4.7/6, Error ellipse: s-maj=17.6km s-min=9.5km az=67.0*

BJI ***13*** *07:02:33.0, 2.10N×126.60E, h10^{km}, mB5.7, mb5.4, Ms5.5, Msz5.3*

HRVD ***13*** *07:02:33.1±0.1, 2.26N×126.58E, h41^{km}, MW5.9/74, Centroid moment Tensor Solution. LP body waves: s73,c173;Mantle waves: s74,c259; Half duration: 2^{s}3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.93±.01; M$_{\theta\theta}$-0.10±.01; M$_{\phi\phi}$-0.82±.01; M$_{r\theta}$-0.08±.01; M$_{\theta\phi}$-0.44±.01; M$_{\phi r}$-0.23±.01; Best double couple: M$_0$1.013×10^{18} NP1: ϕ_s27°, δ38°, λ93°. NP2: ϕ_s204°, δ52°, λ88°. Principal axes: T .959, Plg83°, Azm102°; N .107, Plg2°, Azm205°; P -1.067, Plg7°, Azm295°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***13*** *07:02:33.1±0.1, 2.09N×126.57E, h10^{km}, mb5.7/56, MS5.3/126, MW5.8 Error ellipse: s-maj=7.3km s-min=4.3km az=70.0, Moment Tensor Solution. s30 Moment tensor: Scale 10^{17}Nm; M$_{rr}$5.43; M$_{\theta\theta}$-1.86; M$_{\phi\phi}$-3.57; M$_{r\theta}$-1.00; M$_{\theta\phi}$-5.96; M$_{\phi r}$0.24; Best double couple: M$_0$7.3×10^{17} NP1: ϕ_s21°, δ47°, λ62°. NP2: ϕ_s240°, δ50°, λ117°. Principal axes: T 5.78, Plg70°, Azm216°; N 2.97, Plg20°, Azm42°; P -8.75, Plg2°, Azm311°;*

NEIC Felt [III] at Tondano; felt at Manado, Indonesia.

MOS ***13*** *07:02:35.4±1.2, 2.13N×126.58E, h33^{km}, mb5.9/45, MS5.3/52 Error ellipse: s-maj=10.1km s-min=4.8km az=114.0*

ISC 13 07:02:36.8±0.5, **2.04N**±0.02×**126.65E**±0.03, **h49**^{km}±4^{km}, **h33**^{km}±4.5^{km}**:pP-P, n570,** σ**1^{s}20**/415, **mb5.6**/118, **MS5.3**/165, **61C-17D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	4.89	355	*e*P	P	07 03 50.0	+0.3
DAV	Davao City (W)	5.11	348	*e*P	P	07 03 54.0	+1.2
KCP	Kidapawan	5.17	343	⇓*e*P	P	07 03 57.1	+3.5
BUKP	Musuan	6.01	345	*e*P	P	07 04 06.1	+0.8
BUKP				*e*S	S	07 05 13.8	0.0
PAGZ	Pagadian	6.62	331	*e*P	P	07 04 13.2	-0.8
CGP	Cagayan de Oro	6.66	343	⇓*e*P	P	07 04 16.6	+2.1
ZMPH	Zamboanga City	6.69	317	⇓*i*P	P	07 04 12.9	-2.0
BUTP	Butuan	6.96	352	*e*P	P	07 04 18.6	-0.1
BUTP				*e*S	S	07 05 40.5	+3.2
IPIL	Ipil	7.01	325	*e*P	P	07 04 17.4	-2.0
DCPH	Dipolog City	7.28	333	⇑*e*P	P	07 04 26.6	+3.5
SCPH	Surigao	7.78	352	*e*P	P	07 04 30.7	+0.7
SNPH	Sibulan	8.01	335	⇓*e*P	P	07 04 35.4	+2.1
TBP	Tagbilaran	8.09	340	*e*P	P	07 04 34.2	-0.1
MSLP	Maasin	8.24	348	*e*P	P	07 04 38.9	+2.6
LLP	Lapu-Lapu	8.64	342	*e*P	P	07 04 41.0	-1.0
TSM	Tawau	9.05	285	P	P	07 04 46.6	-0.9
GUIM	Jordan	9.44	335	*e*P	P	07 04 53.2	+0.3
BESP	Borongan	9.57	353	*e*P	P	07 04 56.4	+1.5
RCP	Roxas	10.22	338	⇑*e*P	P	07 05 08.4	+4.6
CUYO	Cuyo Island	10.39	328	*e*P	P	07 05 06.5	+0.4
CNP	Catarman	10.59	349	*e*P	P	07 05 09.0	+0.2
PPR	Puerto Princes	11.00	315	⇑*i*P	P	07 05 16.1	+1.7
BATP	Bataraza	11.07	308	*e*P	P	07 05 16.6	+1.3
KKM	Kota Kinabalu	11.14	291	⇓*e*P	P	07 05 16.7	+0.4
KKM	Kota Kinabalu	11.14	291	P	P	07 05 17.1	+0.8
SJMP	San Jose	11.71	332	*e*P	P	07 05 24.2	+0.2
PVCP	Virac	11.74	348	*e*P	P	07 05 26.6	+2.2
BUSP	Coron	11.79	327	*e*P	P	07 05 31.4	+6.4
LUBP	Lubang	13.23	332	*e*P	P	07 05 43.9	-0.3
BALP	Baler	14.50	340	*e*P	P	07 06 00.7	-0.2
SCZP	Santa Cruz	15.18	334	*e*P	P	07 06 11.1	+1.4
BCPH	Baguio City Da	15.45	338	⇓*i*P	P	07 06 16.5	+3.3
CAUP	Cauayan	15.55	343	*e*P	P	07 06 14.7	+0.2
BOLP	Bolinao	15.72	335	*e*P	P	07 06 18.2	+1.6
KAKA	Kakadu	15.74	159	*e*P	P	07 06 16.0	-0.9
	234nm,0.6s						
CVP	Callao Caves	16.27	343	*e*P	P	07 06 25.0	+1.4
KSM	Kuching	16.34	268	⇓*e*P	P	07 06 26.8	+2.2
KSM				*e*S	S	07 09 26.4	+2.6
FITZ	Fitzroy Crossi	20.04	183	*e*P	P	07 07 06.7	-1.9
	101nm,0.3s						
FITZ				*e*S	S	07 10 52.1	+6.0
FITZ	Fitzroy Crossi	20.04	183	P	P	07 07 06.9	-1.6
	49nm,0.3s,baz=8.4,slow=9.0,SNR=135						
FITZ				S	S	07 10 47.0	+0.9
	20nm,0.8s,baz=204,slow=18,SNR=1.8						
GUMO	Guam	21.36	57	PFAKE		07 07 30.0	+7.9
GUMO				LR	LR		
	comp=Z,6µm,22.0s,MS5.0						
NACB	Ninganchiao	22.54	348	P	P	07 07 31.6	-2.3
YHNB	Yeheng	23.07	348	*e*P	P	07 07 36.1	-2.9
WRAB	Tennant Creek	23.11	161	*e*P	P	07 07 38.9	-0.5
WRAB				pmax	pmax		
	comp=Z,199nm,0.6s,mb5.7						
WRAB				MLR	MLR		
	comp=Z,2µm,22.0s,MS4.6						
WRAB	Tennant Creek	23.11	161	*e*P	P	07 07 38.9	-0.5
	comp=Z,199nm,0.6s,mb5.7						
WRAB				LR	LR		
	comp=Z,2µm,22.0s,MS4.6						
WRA	Warramunga Arr	23.11	161	P	P	07 07 39.1	-0.3
	comp=Z,154nm,0.7s,mb5.5,baz=335,slow=11,SNR=360						
WRA				S	S	07 11 50.0	+6.8
	comp=Z,34nm,0.9s,baz=341,slow=17,SNR=7.4						
WB2	Warramunga Arr	23.12	161	⇑*i*P	P	07 07 39.2	-0.3
WB2				*e*S	S	07 11 49.6	+6.3
WB2				*e*		07 12 55.6	
WB2				*e*SCS	ScS	07 18 50.1	+4.3
KGM	Kluang	23.32	270	P	P	07 07 42.6	+1.1
TATO	Taipei	23.34	348	PFAKE		07 07 50.0	+8.4
TATO				LR	LR		
	comp=Z,6µm,21.0s,MS5.0						
PMG	Port Moresby	23.38	119	P	P	07 07 41.5	-0.6
PMG				pmax	pmax		
	comp=Z,6.0nm,0.4s						
PMG	Port Moresby	23.38	119	P	P	07 07 41.5	-0.7
	comp=Z,5.6nm,0.4s,baz=319,slow=9.5,SNR=5.2						
PMG	Port Moresby	23.38	119	*e*P	P	07 07 41.0	-1.2
	comp=Z,90nm,1.1s,mb5.1						
PMG				LR	LR		
	comp=Z,13µm,22.0s,MS5.4						
HKC	Hong Kong	23.51	330	⇑*i*P	P	07 07 44.0	+0.7
HKC				*i* S	S	07 11 50.0	-0.2
QIZ	Qiongzhong	23.58	317	P	P	07 07 43.3	-0.7
QIZ				PP	PP	07 08 15.8	-1.7
QIZ				S	S	07 11 51.6	+0.2
QIZ				AMB	AMB		
	comp=Z,110nm,1.6s,mb5.0						
QIZ				LR	LR		
	comp=N,6µm,19.5s,MS5.1						
QIZ				LR	LR		
	comp=E,3µm,21.8s,MS5.1						
QIZ				LR	LR		
	comp=Z,12µm,27.8s						
QIZ	Qiongzhong	23.58	317	*e*P	P	07 07 43.0	-1.0
	comp=Z,168nm,1.3s,mb5.3						
QIZ				LR	LR		
	comp=Z,6µm,22.0s,MS5.0						
MBWA	Marble Bar	24.03	196	*e*P	P	07 07 48.6	+0.2
	comp=Z,54nm,0.8s,mb5.0						
MBWA				LR	LR		
	comp=Z,2µm,22.0s,MS4.6						
QZH	Quanzhou	24.06	342	⇑*i*P	P	07 07 47.0	-1.6
QZH				AMB	AMB		
	comp=Z,190nm,1.0s,mb5.5						
QZH				LR	LR		
	comp=N,19µm,22.5s,MS5.6						
QZH				LR	LR		
	comp=E,6µm,17.5s,MS5.6						
QZH				LR	LR		
	comp=Z,40µm,28.7s						
GZH	Guangzhou	24.58	329	P	P	07 07 56.4	+2.6
GZH				S	S	07 12 11.9	+3.4
GZH				AMB	AMB		
	comp=Z,340nm,1.4s,mb5.7						
GZH				LR	LR		
	comp=N,6µm,24.4s						
GZH				LR	LR		
	comp=E,5µm,18.8s						
GZH				LR	LR		
	comp=Z,10µm,22.2s,MS5.3						
JOW	Kunigami	24.70	3	P	P	07 07 55.1	+0.3
	comp=Z,290nm,0.9s,mb5.8,baz=208,slow=7.4,SNR=21						
IPM	Ipoh	25.70	276	P	P	07 08 04.2	-0.3
KULM	Kulim	26.14	278	*e*P	P	07 08 07.3	-1.3
SNG	Songkhla	26.44	282	P	P	07 08 10.0	-1.3
	comp=Z,120nm,1.0s,mb5.4						
KKTK	Khon Kaen	27.42	303	⇓P	P	07 08 19.5	-0.8
	comp=Z,926nm,0.8s,mb6.4						
CBIJ	Chichi jima	29.02	29	P	P	07 08 33.0	-1.5
	comp=Z,96nm,0.4s,mb5.9,baz=297,slow=3.8,SNR=14						
CTA	Charters Tower	29.21	140	*e*P	P	07 08 36.0	-0.3
	comp=Z,48nm,1.6s,mb5.0						
CTA	Charters Tower	29.21	140	P	P	07 08 36.1	-0.2
CTA				S	S	07 13 30.4	+6.4
CTA				pmax	pmax		
	comp=Z,15nm,0.9s						
CTA				smax			
	comp=N,6.0nm,0.8s						
CTA	Charters Tower	29.21	140	P	P	07 08 36.0	-0.2
	comp=N,15nm,0.9s,mb4.7,baz=318,slow=9.3,SNR=16						
CTA				S	S	07 13 30.4	+6.4
	comp=N,6.1nm,0.8s,baz=270,slow=20,SNR=1.7						
CTAO	Charters Tower	29.21	140	P	P	07 08 36.1	-0.2
CTAO				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.1						
CTAO	Charters Tower	29.21	140	*e*P	P	07 08 35.9	-0.4
	comp=Z,34nm,0.8s,mb5.1						
CTAO				LR	LR		
	comp=Z,12µm,22.0s,MS5.5						
SSE	Sheshan	29.36	350	P	P	07 08 38.6	+1.1
SSE				XP	sP	07 08 43.0	-13
SSE				S	S	07 13 34.3	+8.1
SSE				XS		07 13 39.4	

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SSE                              PCS              07 15 26.5
SSE                              AMB     AMB
      comp=Z,70nm,1.1s,mb5.3
SSE                              AMB     AMB
      comp=Z,620nm,8.2s
SSE                              LR      LR
      comp=N,5µm,20.0s,MS5.2
SSE                              LR      LR
      comp=E,3µm,20.0s,MS5.2
SSE                              LR      LR
      comp=Z,7µm,20.0s,MS5.2
SSE   Sheshan           29.36 350  P     P        07 08 38.6 +1.1
      comp=Z,75nm,1.1s,mb5.3
SSE                              sP      sP       07 08 43.0  -13
SSE                              S       S        07 13 34.2 +8.0
SSE                              sS               07 13 39.4
SSE                              PcS              07 15 26.5
SSE                              LR      LR
      comp=Z,7µm,20.0s,MS5.2
NST   Nakhon Sawan      29.44 299  P     P        07 08 29.0 -9.3
NANT  Nan               30.39 305 ⇑P     P        07 08 45.5 -1.3
      comp=Z,500nm,0.4s,mb6.6
WHN   Wuhan             30.65 339  P     P        07 08 48.5 -0.5
WHN                              LR      LR
      comp=Z,15µm,31.1s,MS5.5
NJ2   Nanjing           30.74 347 eP     P        07 08 50.1 +0.3
NJ2                              AP      pP       07 08 54.5 -8.1
NJ2                              XP      sP       07 08 57.1  -12
NJ2                              PP      PP       07 09 50.6 -1.2
NJ2                              S       S        07 13 50.0 +2.0
NJ2                              AMB     AMB
      comp=Z,30nm,0.8s,mb5.2
NJ2                              AMB     AMB
      comp=Z,420nm,4.8s
NJ2                              LR      LR
      comp=N,11µm,16.5s,MS5.7
NJ2                              LR      LR
      comp=E,9µm,19.9s,MS5.7
NJ2                              LR      LR
      comp=Z,6µm,23.6s,MS5.2
GYA   Guiyang           30.95 323⇓iP     P        07 08 50.9 -0.8
GYA                              AMB     AMB
      comp=Z,60nm,1.2s,mb5.3
GYA                              AMB     AMB
      comp=Z,320nm,3.6s
GYA                              LR      LR
      comp=N,4µm,20.3s,MS5.3
GYA                              LR      LR
      comp=E,4µm,18.5s,MS5.3
GYA                              LR      LR
      comp=Z,6µm,19.7s,MS5.2
CMAR  Chiang Mai Arr    31.68 303  P     P        07 08 56.7 -1.5
      comp=Z,16nm,0.8s,mb4.9,baz=117,slow=7.2,SNR=41
CMAR                             PcP     PcP      07 11 51.9 +2.7
      comp=Z,7.9nm,0.9s,baz=200,slow=1.0,SNR=5.0
CMAR                             ScP              07 15 32.2
      comp=Z,0.9nm,0.3s,baz=135,slow=1.3,SNR=4.2
CMAR                             LR      LR       07 22 26.7
      comp=Z,3µm,18.6s,MS5.0,baz=125,slow=38
CHG   Chiang Mai        31.85 303 ⇑P     P        07 08 58.2 -1.4
      comp=Z,59nm,1.0s,mb5.4
ENH   Enshi             32.46 332 eP     P        07 09 02.8 -2.0
      comp=Z,160nm,0.9s,mb5.8
ENH                              LR      LR
      comp=Z,7µm,21.0s,MS5.3
KMI   Kunming           32.53 317  P     P        07 09 04.8 -0.7
KMI                              AP      pP       07 09 15.0 -3.4
KMI                              PP      PP       07 10 11.5 -3.5
KMI                              XS               07 14 30.9
KMI                              AMB     AMB
      comp=Z,80nm,1.4s,mb5.5
KMI                              AMB     AMB
      comp=Z,590nm,6.5s
KMI                              LR      LR
      comp=N,4µm,19.6s,MS5.3
KMI                              LR      LR
      comp=E,6µm,22.5s,MS5.3
KMI                              LR      LR
      comp=Z,10µm,26.5s,MS5.4
KMI   Kunming           32.53 317  P     P        07 09 04.7 -0.8
KMI                              *PP     pP       07 09 15.0 -3.4
KMI                              *SP     sP       07 09 22.3 -2.3
KMI                                               07 10 11.5
KMI                                               07 11 53.3
KMI                              S       S        07 14 10.3 -5.8
KMI                              *SS              07 14 30.9
KMI                              pmax    pmax
      comp=Z,84nm,1.4s,mb5.5
KMI                              MLR     MLR
      comp=Z,10µm,26.5s,MS5.4
KMI   Kunming           32.53 317  P     P        07 09 04.7 -0.8
      comp=Z,84nm,1.4s,mb5.5
KMI                              pP      pP       07 09 15.0 -3.4
KMI                              sP      sP       07 09 22.3 -2.3
KMI                              PP      PP       07 10 11.5 -3.5
KMI                              PcP     PcP      07 11 53.3 +1.9
KMI                              S       S        07 14 10.3 -5.8
KMI                              sS               07 14 30.9
KMI                              SS      SS       07 16 27.1  +12
KMI                              LR      LR
      comp=Z,10µm,26.5s,MS5.4
JHJ   Hachijo jima 2    33.28  20  P     P        07 09 13.8 +1.8
      comp=Z,86nm,0.8s,mb5.8,baz=218,slow=17,SNR=3.2
KLBR  Kellerberrin      34.50 193 eP     P        07 09 21.8 -0.6
      comp=Z,128nm,1.0s,mb5.8
KLBR                             e                07 10 28.9
HNR   Honiara           35.07 110  PFAKE          07 09 40.0  +13
HNR                              LR      LR
      comp=Z,3µm,19.0s,MS5.1
TIA   Tai'an            35.13 347 ⇑P     P        07 09 26.5 -1.2
TIA                              S       S        07 14 54.5 -1.7
TIA                              AMB     AMB
      comp=Z,20nm,0.8s,mb5.1
TIA                              LR      LR
      comp=N,2µm,19.0s,MS5.0
TIA                              LR      LR
      comp=E,2µm,19.0s,MS5.0
KS15  Wonju Array Si    35.25   2 eP     P        07 09 28.0 -0.8
INCN  Inchon            35.27 360  PFAKE          07 09 40.0  +11
INCN                             LR      LR
      comp=Z,3µm,20.0s,MS5.0
XAN   Xi'an             35.89 334  P     P        07 09 32.9 -1.3
XAN                              AMB     AMB
      comp=Z,80nm,1.2s,mb5.5
XAN                              LR      LR
      comp=N,4µm,28.4s
XAN                              LR      LR
      comp=E,3µm,36.6s
XAN                              LR      LR
      comp=Z,7µm,26.5s,MS5.3
NWAO  Narrogin (SRO)    35.90 194 eP     P        07 09 34.6 +0.3
NWAO                             pmax    pmax
      comp=Z,93nm,1.1s
NWAO                             MLR     MLR
      comp=Z,2µm,22.0s
NWAO  Narrogin (SRO)    35.90 194 eP     P        07 09 34.6 +0.3
      comp=Z,93nm,1.1s,mb5.6
NWAO                             LR      LR
      comp=Z,2µm,22.0s,MS4.9
MJAR  Matsushiro Arr    35.95  16  P     P        07 09 32.9 -1.8
      comp=Z,66nm,0.8s,mb5.6,baz=188,slow=8.9,SNR=62
MAJO  Matsushiro        35.96  16  P     P        07 09 33.1 -1.7
MAJO                             pmax    pmax
      comp=Z,140nm,1.0s,mb5.8
MAJO  Matsushiro        35.96  16⇑iP     P        07 09 32.8 -2.0
      comp=Z,136nm,0.9s,mb5.9
MAJO                             LR      LR
      comp=Z,3µm,20.0s,MS5.1
MAT   Matsushiro        35.96  16 eP     P        07 09 33.0 -1.8
MAT                              eS      S        07 15 03.0 -6.0
MAT                              pmax    pmax
      comp=Z,705nm,1.8s,mb6.3
MAT                              MLR     MLR
      comp=Z,2µm,20.0s,MS5.0
MAT   Matsushiro        35.96  16 eP     P        07 09 33.0 -1.8
      comp=Z,704nm,1.8s,mb6.3
MAT                              eS      S        07 15 03.0 -6.0
MAT                              LR      LR
      comp=Z,2µm,20.0s,MS5.0
MAT   Matsushiro        35.96  16  P     P        07 09 33.1 -1.7
MAT                              S       S        07 15 03.0 -6.0
CD2   Chengdu           35.97 325  P     P        07 09 32.9 -2.0
CD2                              PP      PP       07 10 52.8 -4.8
CD2                              S       S        07 15 09.4 +0.2
CD2                              AMB     AMB
      comp=Z,130nm,1.2s,mb5.7
CD2                              LR      LR
      comp=N,6µm,20.4s
CD2                              LR      LR
      comp=Z,6µm,25.2s,MS5.2
STKA  Stephens Creek    36.59 158 eP     P        07 09 39.5 -0.7
      comp=Z,54nm,0.8s,mb5.4
STKA  Stephens Creek    36.59 158  P     P        07 09 39.8 -0.4
      comp=Z,30nm,0.5s,mb5.4,baz=336,slow=7.6,SNR=38
DL2   Dalian            36.98 353⇑iP     P        07 09 43.8 +0.5
DL2                              S       S        07 15 25.5 +0.9
DL2                              AMB     AMB
      comp=Z,90nm,1.3s,mb5.4
DL2                              AMB     AMB
      comp=Z,650nm,6.6s
DL2                              LR      LR
      comp=E,3µm,20.6s
DL2                              LR      LR
      comp=Z,3µm,16.3s,MS5.2
ADE   Adelaide          38.51 164  P     P        07 09 56.7 +0.6
SNY   Shenyang          39.71 356 ⇑P     P        07 10 05.8 -0.2
SNY                              AP      pP       07 10 15.8 -3.4
SNY                              XP      sP       07 10 19.8 -5.4
SNY                              AMB     AMB
      comp=Z,930nm,7.8s
SNY                              LR      LR
      comp=N,2µm,21.8s,MS5.2
SNY                              LR      LR
      comp=E,3µm,24.5s,MS5.2
SNY                              LR      LR
      comp=Z,6µm,27.0s,MS5.3
LZH   Lanzhou           39.92 331 ⇑P     P        07 10 07.0 -0.8
LZH                              PP      PP       07 11 43.3 -0.6
LZH                              S       S        07 16 12.0 +2.8
LZH                              AMB     AMB
      comp=Z,380nm,1.5s,mb5.9
LZH                              AMB     AMB
      comp=Z,1µm,4.0s
LZH                              LR      LR
      comp=E,13µm,18.5s
LZH                              LR      LR
      comp=Z,24µm,20.0s,MS6.0
LZH   Lanzhou           39.92 331 ⇑P     P        07 10 07.0 -0.8
LZH                                               07 11 43.2
LZH                              S       S        07 16 12.0 +2.8
LZH                              pmax    pmax
      comp=Z,389nm,1.5s,mb5.9
LZH                              MLR     MLR
      comp=Z,24µm,20.0s,MS6.0
LZH   Lanzhou           39.92 331 ⇑P     P        07 10 07.0 -0.8
      comp=Z,389nm,1.5s,mb5.9
LZH                              pP      pP       07 10 09.0  -12
LZH                              sP      sP       07 10 10.0  -17
LZH                              PP      PP       07 11 43.2 -0.7
LZH                              S       S        07 16 12.0 +2.8
LZH                              sS               07 16 15.5
LZH                              SS      SS       07 19 16.5  +15
LZH                              LR      LR
      comp=Z,24µm,20.0s,MS6.0
AGT   Agartala          40.54 305 i P    P        07 10 12.0 -1.1
AGT                              i x     x        07 10 47.0
SHL   Shillong          40.83 308 eP     P        07 10 14.0 -1.5
SHL                              ex      x        07 16 21.0
HHC   Hu-ho-hao-te      40.97 342 eP     P        07 10 16.1 -0.4
HHC                              AP      pP       07 10 20.6 -9.1
HHC                              XP      sP       07 10 23.9  -12
HHC                              PP      PP       07 11 52.4 -2.0
HHC                              SCP              07 16 06.5
HHC                              SCS     ScS      07 20 19.6 +5.0
HHC                              AMB     AMB
      comp=Z,60nm,1.1s,mb5.1
HHC                              AMB     AMB
      comp=Z,500nm,5.5s
HHC                              LR      LR
      comp=N,6µm,27.4s,MS5.3
HHC                              LR      LR
      comp=E,3µm,28.5s,MS5.3
HHC                              LR      LR
      comp=Z,11µm,27.4s,MS5.6
BTO   Baotou            41.24 341 eP     P        07 10 15.8 -2.9
KWAJ  Kwajalein Atol    41.30  79  PFAKE          07 10 30.0  +11
KWAJ                             LR      LR
      comp=Z,1µm,22.0s,MS4.7
CN2   Changchun         41.60 359 eP     P        07 10 20.9 -0.7
CN2                              eAP     pP       07 10 25.0  -10
CN2                              eS      S        07 16 37.8 +3.7
CN2                              eSS     SS       07 19 37.5 +2.2
CN2                              AMB     AMB
      comp=Z,20nm,1.0s,mb4.7
CN2                              AMB     AMB
      comp=Z,1µm,9.0s
CN2                              LR      LR
      comp=N,3µm,21.0s,MS5.3
CN2                              LR      LR
      comp=E,4µm,21.0s,MS5.3
CN2                              LR      LR
      comp=Z,2µm,23.0s,MS4.9
MDJ   Mudanjiang        42.48   3  P     P        07 10 28.9 +0.1
MDJ                              AP      pP       07 10 39.8 -2.3
MDJ                              XP      sP       07 10 43.8 -4.2
MDJ                              PP      PP       07 12 07.8 -2.6
MDJ                              S       S        07 16 44.3 -2.7
MDJ                              XS               07 17 04.4
MDJ                              SCS     ScS      07 20 28.1 +4.4
MDJ                              AMB     AMB
      comp=Z,80nm,1.5s,mb5.1
MDJ                              AMB     AMB
      comp=Z,960nm,5.3s
MDJ                              LR      LR
      comp=N,5µm,25.8s
MDJ                              LR      LR
      comp=E,2µm,31.4s
MDJ                              LR      LR
      comp=Z,7µm,29.5s,MS5.3
MDJ   Mudanjiang        42.48   3⇑eP     P        07 10 28.6 -0.3
      comp=Z,74nm,1.0s,mb5.3
MDJ                              LR      LR
      comp=Z,3µm,20.0s,MS5.1
WAKE  Wake Island       42.72  64  PFAKE          07 10 40.0 +8.9
WAKE                             LR      LR
      comp=Z,2µm,22.0s,MS5.0
CNB   Canberra Magne    42.81 152 eP     P        07 10 33.0 +1.3
      comp=Z,59nm,1.1s,mb5.2
TOO   Toolangi          43.11 158 eP     P        07 10 33.3 -0.8
      comp=Z,27nm,1.4s,mb4.8
TOO   Toolangi          43.11 158 eP     P        07 10 33.3 -0.8
TOO                              pmax    pmax
      comp=Z,27nm,1.4s,mb4.8
LSA   Lhasa             43.51 313  P     P        07 10 36.3 -1.2
LSA                              AP      pP       07 10 47.5 -3.2
LSA                              SCP              07 16 16.3
LSA                              XS               07 17 16.9
LSA                              SCS     ScS      07 20 34.8 +4.6
LSA                              AMB     AMB
      comp=Z,100nm,1.7s,mb5.3
LSA                              LR      LR
      comp=N,3µm,31.8s,MS5.2
LSA                              LR      LR
      comp=E,3µm,27.7s,MS5.2
LSA                              LR      LR
      comp=Z,5µm,36.7s
LSA   Lhasa             43.51 313⇑eP     P        07 10 37.3 -0.2
LSA                              pmax    pmax
      comp=Z,341nm,1.5s,mb5.9
LSA                              MLR     MLR
      comp=Z,1µm,22.0s,MS4.8
LSA   Lhasa             43.51 313⇑eP     P        07 10 37.3 -0.2
      comp=Z,341nm,1.5s,mb5.9
LSA                              LR      LR
      comp=Z,1µm,22.0s,MS4.8
ASAJ  Asahikawa         44.22  16  P     P        07 10 43.5 +0.5
ASAJ                             pmax    pmax
      comp=Z,20nm,0.5s
ASAJ  Asahikawa         44.22  16  P     P        07 10 43.5 +0.5
      comp=Z,20nm,0.5s,mb5.1,baz=236,slow=14,SNR=14
GTA   Gaotai            44.50 330 eP     P        07 10 44.5 -0.9
GTA                              AP      pP       07 10 48.3  -10
GTA                              XP      sP       07 10 50.4  -14
GTA                              PP      PP       07 12 30.0 -0.8
GTA                              SCP              07 16 21.0
GTA                              S       S        07 17 14.4 -2.1
GTA                              XS               07 17 27.4
GTA                              SCS     ScS      07 20 39.4 +3.1
GTA                              AMB     AMB
      comp=Z,30nm,1.8s,mb4.8
GTA                              AMB     AMB
      comp=Z,370nm,6.9s
GTA                              LR      LR
      comp=N,4µm,25.5s,MS5.5
GTA                              LR      LR
      comp=E,5µm,22.1s,MS5.5
GTA                              LR      LR
      comp=Z,10µm,26.2s,MS5.6
YUK   Yuzh-Kuril'sk     45.16  20 eP     P        07 10 49.0 -1.5
YUK                              e                07 12 25.0
YUK                              e                07 12 40.0
YUK                              eS      S        07 17 24.0 -1.8
YUK                              pmax    pmax
      comp=Z,2µm,3.0s
YUK                              smax
      comp=E,2µm,6.0s
YUK                              MLR     MLR
      comp=Z,3µm,14.0s,MS5.3
VIS   Vishakhapatnam    45.28 293 eP     P        07 10 51.0 -0.8
VIS                              AMb     AMB      07 10 54.3
      comp=Z,82nm,1.3s,mb5.4
GUN   Gumba             46.67 307 eP     P        07 11 01.5 -1.2
      comp=Z,688nm,1.0s,mb6.5
YSS   Yuzh-Sakhalins    46.88  15αeP     P        07 11 03.6 -0.5
YSS                              e                07 12 38.3
YSS                              ePPP    PPP      07 13 42.7 +1.3
YSS                              eS      S        07 17 52.0 +1.6
YSS                              MLR     MLR
      comp=N,2µm,21.0s,MS5.0
YSS                              MLR     MLR
      comp=Z,2µm,21.0s,MS5.0
YSS                              MLR     MLR
      comp=E,1µm,23.0s,MS5.0
YSS   Yuzh-Sakhalins    46.88  15⇑eP     P        07 11 03.4 -0.7
      comp=E,96nm,0.9s,mb5.7
YSS                              LR      LR
      comp=Z,2µm,22.0s,MS5.0
PKI   Pulchoki          46.89 307 eP     P        07 11 02.6 -1.9
      comp=Z,218nm,1.1s,mb6.0
PKI   Pulchoki          46.89 307 eP     P        07 11 02.6 -1.9
PKI                              pmax    pmax
      comp=Z,109nm,1.1s,mb5.7
KKN   Kakani            47.09 307 eP     P        07 11 03.8 -2.2
      comp=Z,385nm,1.1s,mb6.2
KKN   Kakani            47.09 307 eP     P        07 11 03.8 -2.2
KKN                              pmax    pmax
      comp=Z,192nm,1.1s,mb5.9
DMN   Daman             47.15 307 eP     P        07 11 04.7 -1.8
      comp=Z,288nm,1.0s,mb6.2
MDRS  Chennai           47.20 286 ex     x        07 11 19.0
MDRS                             ex      x        07 13 01.0
MDRS                             ex      x        07 18 09.0
KLR   Kul'dur           47.22   5⇓eP     P        07 11 03.2 -3.5
KLR                              e       pP       07 11 21.5 +1.5
KLR                              eS      S        07 17 51.0 -4.1
KLR                              pmax    pmax
      comp=N,28nm,1.2s
KLR                              pmax    pmax
      comp=E,43nm,1.2s
KLR                              pmax    pmax
      comp=Z,77nm,1.2s,mb5.5
KLR                              pmax    pmax
      comp=N,700nm,8.0s
KLR                              pmax    pmax
      comp=Z,1µm,8.0s
KLR                              MLR     MLR
      comp=E,1µm,20.0s
KLR                              MLR     MLR
      comp=Z,1µm,20.0s,MS4.9
HIA   Hailar            47.42 354⇑eP     P        07 11 07.6 -0.7
HIA                              pmax    pmax
      comp=Z,165nm,1.3s
HIA                              MLR     MLR
      comp=Z,3µm,21.0s
HIA   Hailar            47.42 354⇑eP     P        07 11 07.6 -0.7
      comp=Z,165nm,1.3s,mb5.8
HIA                              LR      LR
      comp=Z,3µm,21.0s,MS5.2
GKN   Gorkha            47.70 307 eP     P        07 11 09.1 -1.7
      comp=Z,368nm,1.1s,mb6.3
KOLN  Koldanda          48.43 306 eP     P        07 11 15.1 -1.4
      comp=Z,410nm,0.8s,mb6.5
TAU   Tasmania Unive    48.47 160  PFAKE          07 11 30.0  +13
TAU                              LR      LR
      comp=Z,1µm,21.0s,MS4.8
ULN   Ulaanbaatar       48.69 343⇑iP     P        07 11 17.5 -0.7
ULN   Ulaanbaatar       48.69 343⇑iP     P        07 11 17.4 -0.8
      comp=Z,106nm,1.3s,mb5.7
ULN                              LR      LR
      comp=Z,2µm,20.0s,MS5.1
SONM  Songino Array     48.87 342  P     P        07 11 18.2 -1.3
      comp=Z,32nm,1.0s,mb5.3,baz=158,slow=8.5,SNR=32
HYB   Hyderabad         49.63 291 eP     P        07 11 24.0 -1.8
HYB                              eS      S        07 18 28.0 -1.3
HYB                              pmax    pmax
      comp=Z,110nm,1.0s,mb5.8
HYB   Hyderabad         49.63 291 eP     P        07 11 24.0 -1.8
      comp=Z,110nm,1.0s,mb5.8
HYB                              eS      S        07 18 28.0 -1.3
HYB   Hyderabad         49.63 291 i P    P        07 11 24.0 -1.8
      comp=Z,110nm,1.0s,mb5.8
HYB                              ePcP    PcP      07 12 48.5 +1.5
HYB                              eS      S        07 18 32.5 +3.2
TRD   Trivandrum        49.86 279 ex     x        07 13 42.5
TRD                              i x     x        07 18 08.5
CIT   Chita             51.00 350 eP     P        07 11 36.0 +0.2
CIT                              pmax    pmax
      comp=Z,517nm,1.9s,mb6.1
LATR  Latur             51.70 292 eP     P        07 11 41.0 -0.5
LGTI  Lohaghat          51.80 307 i P    P        07 11 41.7 -0.5
ZAK   Zakamensk         52.09 341 eP     P        07 11 42.7 -1.3
ZAK                              e                07 12 56.2
ZAK                              pmax    pmax
      comp=Z,11nm,1.4s,mb4.6
ZAK                              pmax    pmax
      comp=Z,22nm,1.0s,mb5.0
BHPL  Bhopal            52.11 298 eP     P        07 11 42.4 -2.1
BHPL                             AMb     AMB      07 11 45.7
      comp=Z,136nm,1.2s,mb5.8
TLY   Talaya            53.10 342 eP     P        07 11 51.1 -0.5
TLY                              eS      S        07 19 09.4 -7.2
TLY                              eSS     SS       07 22 54.6 -1.0
TLY                              pmax    pmax
      comp=Z,98nm,1.5s,mb5.5
TLY   Talaya            53.10 342⇑iP     P        07 11 50.9 -0.6
      comp=Z,115nm,1.4s,mb5.6
TLY                              LR      LR
      comp=Z,593nm,22.0s,MS4.6
IRK   Irkutsk           53.41 343 eP     P        07 11 53.6 -0.2
IRK                              pmax    pmax
      comp=Z,233nm,3.6s
KAD   Karad             53.70 290 eP     P        07 11 54.4 -2.1
KAD                              AMb     AMB      07 11 56.9
      comp=Z,59nm,1.4s,mb5.3
MOY   Mondy             53.94 341 eP     P        07 11 57.9 +0.2
MOY                              pmax    pmax
      comp=Z,245nm,2.0s,mb5.8
NDI   New Delhi         53.99 304 eP     P        07 11 54.0 -4.5
NDI                              ex      x        07 13 02.0
      comp=Z,133nm,0.4s
NDI                              ex      x        07 19 25.0
SKR   Severo-Kuril's    54.49  23 eP     P        07 12 19.0  +17
SKR                              e                07 19 33.0
CLNS  Chul'man          54.65 359c iP    P        07 12 02.9  0.0
CLNS                             e*PP    pP       07 12 09.0 -7.5
CLNS                             e                07 13 06.3
CLNS                             e                07 14 01.7
CLNS                             eS      S        07 19 38.0 +0.6
CLNS                             ePS     PS       07 20 01.0 +5.3
CLNS                             e                07 21 50.1
CLNS                             pmax    pmax
      comp=Z,84nm,1.2s,mb5.7
CLNS                             pmax    pmax
      comp=N,62nm,1.4s
CLNS                             pmax    pmax
      comp=E,23nm,1.6s
CLNS                             pmax    pmax
      comp=Z,24nm,1.2s,mb5.1
CLNS                             pmax    pmax
      comp=N,24nm,1.1s
CLNS                             pmax    pmax
      comp=E,10.0nm,0.8s
CLNS                             smax
      comp=N,10.0nm,0.8s
CLNS                             smax
      comp=Z,3.0nm,0.5s
CLNS                             smax
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	comp=E,10.0nm,0.9s						
DGAR	**Diego Garcia**	**54.88**	**260**	PFAKE		07 12 20.0	+15
DGAR				LR	LR		
	comp=Z,569nm,20.0s,MS4.6						
SMLA	**Simla**	**54.90**	**307**	*i* P	**P**	**07 12 00.6**	**-4.5**
SMLA				*i* x	x	07 19 33.2	
SDNR	**Sundarnagar**	**55.20**	**308**	*e*P	**P**	**07 12 06.2**	**-1.0**
AJM	**Ajmer**	**55.45**	**301**	*e*P	**P**	**07 12 07.2**	**-1.9**
AJM				*e*x	x	07 12 09.5	
AJM				AMb	AMB	07 12 09.9	
	comp=Z,85nm,1.1s,mb5.7						
BHK	**Bhakra**	**55.61**	**307**	*e*P	**P**	**07 12 07.5**	**-2.7**
PONG	**Pong**	**56.17**	**308**	*e*P	**P**	**07 12 12.0**	**-2.2**
THN	**Thein Dam**	**56.53**	**308**	*e*P	**P**	**07 12 14.6**	**-2.2**
	comp=Z,39nm,0.7s,mb5.5						
PET	**Petropavlovsk**	**57.31**	**22**	*c i*P	**P**	**07 12 21.2**	**-0.8**
PET				*e*	pP	07 12 35.9	+0.2
PET				*e*		07 14 31.7	
PET				*e*S	**S**	**07 20 16.0**	**+3.2**
PET				*e*SS	SS	07 24 05.9	+2.0
PET				pmax	pmax		
	comp=Z,1µm,7.8s						
PET				pmax	pmax		
	comp=Z,96nm,1.3s,mb5.7						
PET				pmax	pmax		
	comp=Z,400nm,13.0s						
PET				pmax	pmax		
	comp=Z,1µm,7.3s						
PET				pmax	pmax		
	comp=Z,300nm,12.9s						
PET				smax			
	comp=E,800nm,19.2s						
PET				MLR	MLR		
	comp=Z,800nm,18.0s,MS4.9						
PET				MLR	MLR		
	comp=Z,1µm,22.0s						
PET	**Petropavlovsk**	**57.31**	**22**	PFAKE		07 12 30.0	+8.0
PET				LR	LR		
	comp=Z,829nm,21.0s,MS4.8						
MKAR	**Makanchi Array**	**58.90**	**326**	P	**P**	**07 12 31.4**	**-1.7**
	comp=Z,24nm,0.4s,mb5.6,baz=123,slow=7.3,SNR=94						
MKAR				ScP		07 17 22.9	
	comp=Z,3.2nm,0.8s,baz=104,slow=5.9,SNR=5.3						
MKAR				PKPPKP		07 42 05.5	
	comp=Z,0.9nm,1.0s,baz=270,slow=2.9,SNR=4.3						
MKAR				PKP2bc		07 42 15.6	
	comp=Z,1.3nm,0.9s,baz=289,slow=2.5,SNR=5.5						
MKAR	**Makanchi Array**	**58.90**	**326**	P	**P**	**07 12 31.4**	**-1.7**
MKAR				ScP		07 17 22.9	
MKAR				P'P'		07 42 05.5	
MKAR				⇑*e*		07 42 15.6	
KSH	**Kashi**	**59.18**	**316**	*i* PR	**P**	**07 12 35.0**	**-0.3**
KSH				*e*AP	pP	07 12 39.5	-10
KSH				*e*XP	sP	07 12 42.3	-12
KSH				*e*PCP	PcP	07 13 23.3	+0.2
KSH				*e*PP	PP	07 14 47.0	-1.1
KSH				*e*SCP		07 17 21.3	
KSH				*e*PCS		07 17 23.3	
KSH				S	**S**	**07 20 39.4**	**+1.9**
KSH				XS		07 20 48.3	
KSH				*e*SCS	ScS	07 22 20.1	+2.9
KSH				SS	SS	07 24 36.3	+2.3
KSH				AMB	AMB		
	comp=Z,1µm,2.9s,mb6.3						
KSH				LR	LR		
	comp=N,6µm,19.3s,MS5.8						
KSH				LR	LR		
	comp=E,3µm,17.0s,MS5.8						
MIDW	**Midway**	**59.33**	**58**	PFAKE		07 12 50.0	+14
MIDW				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
YAK	**Yakutsk**	**59.89**	**2**	*c i*P	**P**	**07 12 39.3**	**-0.5**
YAK				*e**PP	pP	07 12 49.4	-4.2
YAK				*e*		07 13 27.6	
YAK				*e*S	**S**	**07 20 47.2**	**+1.0**
YAK				*e*		07 22 27.1	
YAK				*e*SS	SS	07 24 40.7	-3.5
YAK				*e*SSS	SSS	07 27 19.1	+2.8
YAK				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.7						
YAK				pmax	pmax		
	comp=N,37nm,1.2s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.0s						
YAK				smax			
	comp=N,15nm,1.2s						
YAK				smax			
	comp=E,5.0nm,1.2s						
YAK				MLR	MLR		
	comp=Z,1µm,24.0s,MS5.0						
YAK				MLR	MLR		
	comp=N,1µm,22.0s,MS5.2						
YAK				MLR	MLR		
	comp=E,2µm,25.0s,MS5.2						
YAK	**Yakutsk**	**59.89**	**2**	⇑*e*P	**P**	**07 12 38.3**	**-1.5**
	comp=E,155nm,0.9s,mb6.0						
YAK				LR	LR		
	comp=Z,2µm,21.0s,MS5.1						
ULHL	**Ulahol**	**60.23**	**319**	P	**P**	**07 12 42.6**	**+0.2**
	SNR=26						
MA2	**Magadan**	**60.35**	**14**	*ce*P	**P**	**07 12 43.0**	**0.0**
MA2				*e*		07 13 35.1	
MA2				*e*		07 14 54.0	
MA2				*e*S	**S**	**07 20 52.7**	**+0.5**
MA2				*e*SS	SS	07 24 49.4	-2.1
MA2				pmax	pmax		
	comp=Z,80nm,0.9s,mb5.8						
MA2				pmax	pmax		
	comp=N,40nm,1.0s						
MA2				MLR	MLR		
	comp=Z,6µm,24.0s,MS5.7						
MA2	**Magadan**	**60.35**	**14**	*e*P	**P**	**07 12 42.2**	**-0.8**
	comp=Z,113nm,0.9s,mb5.9						
MA2				LR	LR		
	comp=Z,894nm,21.0s,MS4.9						
KZA	**Kyzart**	**60.81**	**318**	P	**P**	**07 12 46.0**	**-0.4**
	SNR=62						
TKM2	**Tokmak 2**	**60.96**	**319**	P	**P**	**07 12 46.0**	**-1.4**
	SNR=34						
KBK	**Karagaybulak**	**61.27**	**319**	P	**P**	**07 12 49.7**	**+0.3**
	SNR=16						
SNZO	**South Karori**	**61.31**	**140**	*e*P	**P**	**07 12 48.3**	**-1.5**
	comp=Z,70nm,0.9s,mb5.8						
SNZO				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
UCH	**Uchtor**	**61.36**	**318**	P	**P**	**07 12 49.7**	**-0.4**
	SNR=90						
CHMS	**Chumysh**	**61.55**	**319**	P	**P**	**07 12 50.9**	**-0.5**
	SNR=12						
AAK	**Ala-Archa**	**61.55**	**318**	P	**P**	**07 12 50.4**	**-1.0**
	SNR=16						
AAK	**Ala-Archa**	**61.55**	**318**	*c i*P	**P**	**07 12 49.8**	**-1.6**
AAK				*i* *PP	pP	07 12 59.9	-5.3
AAK				*i* *SP	sP	07 13 04.0	-6.9
AAK				pmax	pmax		
	comp=Z,73nm,1.7s,mb5.5						
AAK				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.5						
AAK	**Ala-Archa**	**61.55**	**318**	⇑*e*P	**P**	**07 12 49.3**	**-2.1**
	comp=Z,49nm,1.1s,mb5.5						
AAK				LR	LR		
	comp=Z,719nm,20.0s,MS4.8						
FRU	**Bishkek**	**61.56**	**319**	⇑*e*P	**P**	**07 12 50.5**	**-0.9**
FRU				*e*S	**S**	**07 21 10.0**	**+2.1**
FRU				*e*		07 22 38.0	
FRU				pmax	pmax		
	comp=Z,190nm,2.3s,mb5.8						
FRU				MLR	MLR		
	comp=Z,4µm,24.0s,MS5.5						
USP	**Ospenovka**	**61.83**	**319**	P	**P**	**07 12 53.0**	**-0.2**
	SNR=44						
AML	**Almayashu**	**61.87**	**318**	P	**P**	**07 12 52.9**	**-0.6**
	SNR=86						
EKS2	**Erkin-Say**	**62.04**	**318**	P	**P**	**07 12 53.7**	**-0.9**
	SNR=52						
AFI	**Afiamalu**	**63.03**	**107**	PFAKE		07 13 10.0	+8.4
AFI				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
NVS	**Novosibirsk**	**63.34**	**334**	*i* P	**P**	**07 13 00.3**	**-2.8**
NVS				*e*S	**S**	**07 21 24.7**	**-5.3**
NVS				pmax	pmax		
	comp=Z,172nm,2.2s,mb5.8						
NVS				pmax	pmax		
	comp=N,77nm,1.5s						
NVS				pmax	pmax		
	comp=E,98nm,1.9s						
NVS				smax			
	comp=N,26nm,1.8s						
NVS				smax			
	comp=E,40nm,1.8s						
FX1	**Attu Island--F**	**63.58**	**29**	*e*P	**P**	**07 13 04.8**	**+0.1**
SEY	**Seymchan**	**63.69**	**13**	*i* P	**P**	**07 13 05.8**	**+0.6**
SEY						07 13 40.4	
SEY						07 15 26.9	
SEY				*e*S	**S**	**07 21 39.5**	**+5.3**
SEY						07 22 55.9	
SEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
SEY				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
SEY				pmax	pmax		
	comp=N,40nm,1.1s						
SEY				smax			
	comp=N,1µm,10.7s						
SEY				smax			
	comp=E,1µm,8.8s						
SEY				MLR	MLR		
	comp=N,1µm,21.0s,MS5.2						
SEY				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.4						
SEY				MLR	MLR		
	comp=E,940nm,20.0s,MS5.2						
SMY	**Shemya**	**63.95**	**30**	PFAKE		07 13 20.0	+13
SMY				LR	LR		
	comp=Z,3µm,22.0s,MS5.5						
KKAR	**Karatay Array**	**64.41**	**318**	P	**P**	**07 13 09.0**	**-1.3**
KKAR				pmax	pmax		
	comp=Z,105nm,1.2s,mb5.7						
BVA0	**Borovoye Array**	**68.69**	**327**	*i* P	**P**	**07 13 36.1**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,32nm,1.6s,mb5.0						
BVAR	**Borovoye Array**	**68.69**	**327**	P	**P**	**07 13 35.8**	**-1.4**
	comp=Z,32nm,0.9s,mb5.2,baz=136,slow=8.9,SNR=92						
BRVK	**Borovoye**	**68.76**	**327**	*e*P	**P**	**07 13 37.0**	**-0.6**
CHKZ	**Chkalovo**	**68.86**	**328**	P	**P**	**07 13 37.0**	**-1.2**
CHKZ				pmax	pmax		
	comp=Z,159nm,1.6s,mb5.7						
CASY	**Casey**	**69.14**	**187**	*e*P	**P**	**07 13 40.1**	**+0.4**
DRV	**Dumont d'Urvil**	**69.21**	**174**	P	**P**	**07 13 44.0**	**+3.8**
DRV				S	S	07 22 45.0	+3.9
TIXI	**Tiksi**	**69.52**	**1**	*e*P	**P**	**07 13 36.3**	**-5.7**
TIXI				pmax	pmax		
	comp=Z,62nm,1.2s,mb5.4						
TIXI	**Tiksi**	**69.52**	**1**	⇑*i*P	**P**	**07 13 40.6**	**-1.4**
TIXI				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
BILL	**Bilibino**	**71.20**	**15**	*c i*P	**P**	**07 13 51.9**	**-0.3**
BILL				*e*		07 16 38.1	
BILL				*i* SS	S	07 23 00.3	-3.9
BILL				pmax	pmax		
	comp=Z,79nm,2.0s,mb5.3						
BILL				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.3						
BILL	**Bilibino**	**71.20**	**15**	*e*P	**P**	**07 13 51.0**	**-1.2**
	comp=Z,9.8nm,0.6s,mb4.9						
BILL				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
MIR	**Mirnyy**	**72.51**	**193**	⇑*i*P	**P**	**07 14 00.0**	**0.0**
MIR				pmax	pmax		
	comp=Z,99nm,1.2s,mb5.6						
MIR				pmax	pmax		
	comp=Z,1µm,5.6s						
AB31	**Akbulak array**	**73.40**	**321**	*i* P	**P**	**07 14 04.6**	**-1.0**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
UNV	**Unalaska Valle**	**74.85**	**34**	*e*P	**P**	**07 14 15.3**	**+1.4**
	comp=Z,220nm,1.1s,mb6.0						
UNV				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
SVE	**Sverdlovsk**	**75.35**	**329**	⇑*i*P	**P**	**07 14 16.0**	**-0.7**
SVE				*e*	pP	07 14 32.0	+1.1
SVE				*e*PS	S	07 23 46.0	-5.2
SVE				pmax	pmax		
	comp=N,200nm,4.0s						
SVE				pmax	pmax		
	comp=E,500nm,4.0s						
SVE				pmax	pmax		
	comp=Z,1µm,4.0s						
SVE				MLR	MLR		
	comp=N,900nm,25.0s,MS5.2						
SVE				MLR	MLR		
	comp=E,1µm,25.0s,MS5.2						
SVE				MLR	MLR		
	comp=Z,2µm,25.0s,MS5.3						
KIP	**Kipapa**	**75.61**	**69**	PFAKE		07 14 30.0	+11
KIP				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
ARU	**Arti**	**76.31**	**328**	⇑*i*P	**P**	**07 14 21.2**	**-1.0**
ARU				*e*	pP	07 14 33.1	-3.3
ARU				*e*		07 17 13.0	
ARU				*e*PPP	PPP	07 19 01.9	-1.2
ARU				*i* S	S	07 24 00.5	-1.3
ARU				*e*		07 24 31.2	
ARU				*e*SS	SS	07 28 59.9	+0.4
ARU				pmax	pmax		
	comp=Z,167nm,1.0s,mb5.9						
ARU				MLR	MLR		
	comp=Z,2µm,26.0s,MS5.4						
ARU				MLR	MLR		
	comp=N,1µm,20.5s						
ARU				MLR	MLR		
	comp=E,2µm,26.0s						
ARU	**Arti**	**76.31**	**328**	⇑*i*P	**P**	**07 14 21.0**	**-1.2**
	comp=E,302nm,1.3s,mb6.1						
ARU				LR	LR		
	comp=Z,352nm,20.0s,MS4.7						
HASS	**Wahat al Ahsa'**	**77.33**	**295**	P	**P**	**07 14 29.1**	**+0.5**
POHA	**Pohakuloa**	**77.85**	**70**	PFAKE		07 14 40.0	+8.5
POHA				LR	LR		
	comp=Z,20µm,21.0s,MS6.4						
SOKR	**Solikamsk**	**78.14**	**331**	*c i*P	**P**	**07 14 30.3**	**-1.9**
SOKR				pmax	pmax		
	comp=Z,140nm,1.4s,mb5.7						
SOKR				MLR	MLR		
	comp=Z,2µm,24.0s,MS5.3						
TNA	**Tin City**	**78.17**	**23**	PFAKE		07 14 40.0	+7.7
TNA				LR	LR		
	comp=Z,528nm,22.0s,MS4.8						
RYDS	**Riyadh**	**80.05**	**294**	P	**P**	**07 14 43.5**	**+0.1**
MAK	**Makhachkala**	**80.67**	**313**	*e*P	**P**	**07 14 48.0**	**+1.7**
MAK				*e*	pP	07 15 04.0	+3.4
MAK				*e*		07 17 54.0	
MAK				*i* S	S	07 24 48.0	-0.4
MAK				*e*PS	PS	07 25 37.0	-4.7
MAK				pmax	pmax		
	comp=Z,1µm,4.0s						
MAK				smax			
	comp=N,600nm,8.0s						
MAK				smax			
	comp=E,3µm,8.0s						
MZLS	**Mizel**	**81.36**	**294**	P	**P**	**07 14 50.8**	**+0.5**
VNDA	**Vanda**	**81.77**	**173**	⇑*e*P	**P**	**07 14 51.6**	**+0.2**
VNDA				pmax	pmax		
	comp=Z,14nm,0.6s						
VNDA				MLR	MLR		
	comp=Z,1µm,19.0s						
VNDA	**Vanda**	**81.77**	**173**	P	**P**	**07 14 52.0**	**+0.6**
	comp=Z,12nm,0.5s,mb5.0,baz=311,slow=6.5,SNR=40						
VNDA	**Vanda**	**81.77**	**173**	⇑*e*P	**P**	**07 14 51.6**	**+0.2**
	comp=Z,14nm,0.6s,mb5.0						
VNDA				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
KAMS	**Al Khamasin**	**81.86**	**290**	P	**P**	**07 14 53.7**	**+0.8**
MAW	**Mawson**	**82.15**	**200**	⇑*i*P	**P**	**07 14 54.5**	**+1.0**
	comp=Z,22nm,0.9s,mb5.1						
MAW	**Mawson**	**82.15**	**200**	⇑*i*P	**P**	**07 14 54.5**	**+1.0**
MAW				pmax	pmax		
	comp=Z,22nm,0.9s						
MAW	**Mawson**	**82.15**	**200**	P	**P**	**07 14 54.5**	**+0.9**
	comp=Z,26nm,0.9s,mb5.2,baz=58,slow=6.1,SNR=25						
SVW2	**Sparrevohn**	**82.31**	**29**	*e*P	**P**	**07 14 55.9**	**+1.4**
TTA	**Tatalina**	**82.43**	**27**	*e*P	**P**	**07 14 56.0**	**+0.9**
GNI	**Garni**	**82.50**	**310**	⇑*e*P	**P**	**07 14 56.7**	**+0.8**
GNI				pmax	pmax		
	comp=Z,91nm,1.1s						
GNI				MLR	MLR		
	comp=Z,660nm,22.0s						
GNI	**Garni**	**82.50**	**310**	P	**P**	**07 14 58.6**	**+2.7**
	comp=Z,5.1nm,0.4s,mb4.8,baz=359,slow=2.2,SNR=11						
GNI	**Garni**	**82.50**	**310**	⇑*e*P	**P**	**07 14 56.7**	**+0.8**
	comp=Z,91nm,1.1s,mb5.6						
GNI				LR	LR		
	comp=Z,660nm,22.0s,MS5.0						
TI2	**Plekhanov**	**82.60**	**312**	*e*P	**P**	**07 14 46.8**	**-10**
TI2				*e*S	S	07 25 03.0	-5.2
TBLG	**Delisi**	**82.61**	**312**	P	**P**	**07 14 57.7**	**+1.3**
SBA	**Scott Base**	**82.68**	**172**	*e*P	**P**	**07 14 57.3**	**+1.2**
SBA				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.4						
SBA				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
SBA	**Scott Base**	**82.68**	**172**	*e*P	**P**	**07 14 57.3**	**+1.2**
	comp=Z,45nm,1.1s,mb5.4						
SBA				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
DJNS	**Zahran al Janu**	**82.82**	**287**	P	**P**	**07 14 59.0**	**+1.0**
TATS	**Tathlith**	**82.89**	**289**	P	**P**	**07 14 59.5**	**+1.3**
CLDR	**Caldiran**	**83.08**	**309**	*e*P	**P**	**07 14 59.6**	**+0.7**
HKR	**Hakkari**	**83.14**	**307**	*e*P	**P**	**07 15 00.2**	**+1.0**
ARSS	**Ar Rass**	**83.19**	**296**	P	**P**	**07 15 00.8**	**+1.2**
ZEI	**Tsey**	**83.30**	**313**	*e*P	**P**	**07 14 59.8**	**-0.1**
ZEI				*i*		07 18 16.2	
ZEI				pmax	pmax		
	comp=Z,112nm,1.2s,mb5.8						
KDAK	**Kodiak Island**	**83.35**	**32**	*e*P	**P**	**07 15 01.7**	**+1.9**
AFFS	**'Afif**	**83.37**	**294**	P	**P**	**07 15 01.9**	**+1.3**
RSO	**Redoubt South**	**83.59**	**29**	*e*P	**P**	**07 15 01.0**	**+0.1**
MSL	**Mosul**	**83.61**	**306**	*e*P	**P**	**07 15 01.5**	**-0.1**
MSL	**Mosul**	**83.61**	**306**	*e*S	S	07 25 18.0	-0.5
ONI	**Oni**	**83.61**	**312**	P	**P**	**07 15 02.5**	**+1.0**
IMA	**Indian Mountai**	**83.95**	**24**	*e*P	**P**	**07 15 04.5**	**+1.8**
IMA				pmax	pmax		
	comp=Z,420nm,1.0s,mb6.5						
IMA	**Indian Mountai**	**83.95**	**24**	*e*P	**P**	**07 15 04.8**	**+2.1**
	comp=Z,46nm,0.7s,mb5.7						
SPU	**Mount Spurr**	**84.02**	**29**	*e*P	**P**	**07 15 02.6**	**-0.5**
GOF	**Gofitskoye**	**84.05**	**315**	⇓*i*P	**P**	**07 14 59.8**	**-3.9**
GOF				*e*		07 25 24.3	
GOF				pmax	pmax		
	comp=Z,300nm,1.9s,mb6.1						
PECR	**Pechory**	**84.18**	**326**	*i* P	**P**	**07 15 03.4**	**-0.6**
PECR				pmax	pmax		
	comp=Z,5.0nm,1.6s						
KIV	**Kislovodsk**	**84.24**	**314**	*c i*P	**P**	**07 15 05.2**	**+0.6**
KIV				*e*		07 18 18.7	
KIV				*e*PPP	PPP	07 20 11.4	-5.3
KIV				*e*		07 25 25.7	
KIV				pmax	pmax		
	comp=E,28nm,1.0s						
KIV				pmax	pmax		
	comp=Z,69nm,1.0s,mb5.7						
KIV	**Kislovodsk**	**84.24**	**314**	⇑*i*P	**P**	**07 15 05.0**	**+0.3**
	comp=Z,86nm,1.1s,mb5.8						
KIV				LR	LR		
	comp=Z,232nm,21.0s,MS4.5						
HILS	**Ha'il**	**84.50**	**297**	P	**P**	**07 15 07.2**	**+0.9**
BLJS	**Baljurashi**	**84.66**	**290**	P	**P**	**07 15 08.6**	**+1.3**
PPT	**Papeete**	**84.67**	**108**	*e*P	**P**	**07 14 48.3**	**-19**
	comp=Z,616nm,26.5s						
PPT				*e*S	S	07 25 21.2	-8.3
	comp=Z,1µm,26.2s						
PPT				*e*LR	LR	07 42 05.6	
	comp=Z,5µm,27.2s						
SLKM	**Skilak Lake**	**84.84**	**30**	*e*P	**P**	**07 15 07.3**	**+0.1**
FIB	**Fire Island**	**84.92**	**29**	P	**P**	**07 15 09.9**	**+2.3**
FIB				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
BTMT	**Batman**	**84.94**	**308**	*e*P	**P**	**07 15 09.8**	**+1.5**
EZM	**Erzurum**	**85.08**	**310**	*e*P	**P**	**07 15 10.4**	**+1.4**
TBI	**Tubuai**	**85.19**	**113**	*e*P	**P**	**07 14 50.7**	**-19**
	comp=Z,437nm,26.8s						
TBI				*e*SS	SS	07 31 00.2	-12
	comp=Z,1µm,37.0s						
TBI				*e*LR	LR	07 42 17.9	
	comp=Z,5µm,30.2s						
PMR	**Palmer**	**85.46**	**29**	*e*P	**P**	**07 15 10.7**	**+0.4**
PMR				pmax	pmax		
	comp=Z,113nm,1.1s,mb5.9						
PMR	**Palmer**	**85.46**	**29**	*e*P	**P**	**07 15 10.7**	**+0.4**
	comp=Z,113nm,1.1s,mb5.9						
BINT	**Bingol**	**85.74**	**309**	*e*P	**P**	**07 15 13.9**	**+1.8**
SML	**Sawmill**	**85.85**	**28**	P	**P**	**07 15 12.0**	**-0.2**
SML	**Sawmill**	**85.85**	**28**	*e*P	**P**	**07 15 12.6**	**+0.4**
SOC	**Sochi**	**86.38**	**313**	*c i*P	**P**	**07 15 15.1**	**-0.1**
SOC				*e*		07 18 30.3	
SOC				*e*S	S	07 25 37.5	-8.0
SOC				pmax	pmax		
	comp=Z,184nm,1.4s,mb6.1						
SOC				pmax	pmax		
	comp=N,59nm,1.7s						
SOC				pmax	pmax		
	comp=E,70nm,2.0s						
SOC				pmax	pmax		
	comp=Z,632nm,2.1s,mb6.5						
SOC				MLR	MLR		
	comp=Z,2µm,26.0s,MS5.5						
SOC				MLR	MLR		
	comp=N,1µm,27.0s,MS5.4						
SOC				MLR	MLR		
	comp=E,2µm,27.0s,MS5.4						
SOC	**Sochi**	**86.38**	**313**	⇑*i*P	**P**	**07 15 15.2**	**0.0**
GUMT	**Gumushane**	**86.53**	**310**	*e*P	**P**	**07 15 17.9**	**+1.9**
ILAR	**Eielson Array**	**86.65**	**25**	P	**P**	**07 15 14.9**	**-1.1**
	comp=E,6.8nm,1.0s,mb4.8,baz=277,slow=4.0,SNR=46						
ILAR				PKKPbc		07 33 13.4	
	comp=E,0.7nm,0.8s,baz=100,slow=1.4,SNR=4.5						
KBRS	**Khaybar**	**86.77**	**296**	P	**P**	**07 15 18.7**	**+1.1**
VRSR	**Storozhevoye**	**86.83**	**321**	⇓*i*P	**P**	**07 15 17.1**	**-0.1**
VRSR				*e*S	S	07 25 52.6	+3.0
VRSR				pmax	pmax		
	comp=Z,280nm,1.8s,mb6.2						
VRSR				pmax	pmax		
	comp=N,30nm,0.8s						
VRSR				pmax	pmax		
	comp=E,100nm,1.1s						
VRSR				smax			
	comp=N,30nm,1.1s						
VRSR				smax			
	comp=Z,2.0nm,0.4s						
VRSR				smax			
	comp=E,8.0nm,0.8s						
ELZG	**Elazig**	**86.91**	**308**	*i* P	**P**	**07 15 20.1**	**+2.1**
URFA	**Urfa**	**87.05**	**307**	*e*P	**P**	**07 15 19.0**	**+0.3**
DIV	**Divide**	**87.05**	**29**	⇑*e*P	**P**	**07 15 18.7**	**+0.6**
	comp=E,190nm,1.1s,mb6.2						
DIV				LR	LR		
	comp=Z,3µm,21.0s,MS5.6						
THY	**Trims Highway**	**87.11**	**27**	*e*P	**P**	**07 15 19.2**	**+0.9**
MYA	**Malataya**	**87.35**	**308**	*e*P	**P**	**07 15 21.8**	**+1.7**
MOS	**Moscow**	**87.78**	**326**	*e*P	**P**	**07 15 22.4**	**+0.7**
MOS				*e*		07 25 47.3	
MOS				*e*S	S	07 25 59.2	+0.8
MOS				*e*PS	PS	07 26 57.9	-11
MOS				pmax	pmax		
	comp=Z,800nm,2.2s,mb6.6						
MOS				pmax	pmax		
	comp=Z,242nm,1.4s,mb6.2						
MOS				MLR	MLR		
	comp=Z,2µm,21.2s,MS5.5						
ANN	**Anapa**	**88.02**	**315**	*c i*P	**P**	**07 15 21.7**	**-1.4**
ANN				*i* S	S	07 25 46.4	-15
ANN				pmax	pmax		
	comp=Z,319nm,1.5s,mb6.3						
ANN				MLR	MLR		
	comp=N,1µm,29.0s,MS5.7						
ANN				MLR	MLR		
	comp=E,4µm,29.0s,MS5.7						
ANN				MLR	MLR		
	comp=Z,4µm,29.0s,MS5.7						
GZT	**Gaziantep**	**88.05**	**307**	*i* P	**P**	**07 15 24.2**	**+0.7**
GAZ	**Gaziantep**	**88.33**	**307**	*e*P	**P**	**07 15 26.1**	**+1.2**
QURS	**Qurayyt al Mil**	**88.38**	**301**	P	**P**	**07 15 27.0**	**+1.9**
OBN	**Obninsk**	**88.39**	**325**	*ce*P	**P**	**07 15 23.9**	**-0.7**
OBN				*i* S		07 25 49.4	
OBN				pmax	pmax		
	comp=Z,256nm,1.6s,mb6.2						
OBN				MLR	MLR		
	comp=Z,2µm,23.0s,MS5.5						
OBN	**Obninsk**	**88.39**	**325**	*e*P	**P**	**07 15 22.6**	**-2.0**
	comp=Z,92nm,0.8s,mb6.1						
OBN				LR	LR		

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       comp=Z,418nm,22.0s,MS4.8
UMJS  Umm Lajj           88.54 295   P        P       07 15 28.4 +2.3
ASF   Jabal al Asfar     88.72 302   P        P       07 15 27.8 +1.0
       comp=Z,155nm,1.1s,mb6.2,baz=346,slow=0.8,SNR=87
TOKT  Tokat              88.78 310  eP        P       07 15 28.4 +1.5
COBT  Iskenderun         89.12 306  i P       P       07 15 29.4 +0.9
KVT   Kavak              89.13 311  eP        P       07 15 29.2 +0.7
TBKS  Tabuk              89.14 298   P        P       07 15 31.0 +2.2
HTY   Hatay              89.23 306  eP        P       07 15 30.1 +1.0
BNN   Bunyan             89.36 309  eP        P       07 15 30.0 +0.4
APA   Apatity            89.37 337⇑iP        P       07 15 33.0 +4.0
APA                                 i                 07 25 50.0
APA                                 i S       S       07 26 17.0 +4.0
APA                                 i SP      SP      07 27 17.0  -3.5
APA                                  pmax     pmax
       comp=Z,30nm,1.1s,mb5.5
APA                                  MLR      MLR
       comp=Z,2µm,20.0s,MS5.5
CEYT  Ceyhan             89.51 307  eP        P       07 15 31.5 +1.1
JMQS  Jabal Moqyreh      89.70 299   P        P       07 15 33.4 +1.9
BHL   Bhannes            89.70 304  eP        P       07 15 32.4 +1.0
BOYT  Boyabat            89.98 311  i P       P       07 15 33.3 +0.8
CTKT  Corum              90.10 310  i P       P       07 15 33.9 +0.8
AVNT  Avonos             90.14 309  i P       P       07 15 32.8  -0.5
CORM  Corum              90.25 310  eP        P       07 15 33.3  -0.5
NIG   Nigde              90.36 308  eP        P       07 15 35.7 +1.4
JMOS  Jabal al Moall     90.36 299   P        P       07 15 36.3 +1.7
SIM   Simferopol’        90.37 315c iP        P       07 15 35.5 +1.3
SIM                                 i S       S       07 26 26.3 +3.7
SIM                                  pmax     pmax
       comp=Z,44nm,0.8s,mb5.8
SIM                                  MLR      MLR
       comp=Z,5µm,26.0s,MS5.8
ALWS  Ilw as Safayha     90.40 299   P        P       07 15 36.2 +1.5
BDAS  Al Bad‘            90.40 298   P        P       07 15 36.0 +1.2
CDAG  Cicekdag           90.47 309  i P       P       07 15 34.5  -0.4
EIL   Elat               90.48 300   P        P       07 15 35.5 +0.3
       comp=Z,23nm,0.8s,mb5.5,baz=68,slow=6.7,SNR=20
EIL   Elat               90.48 300⇑eP        P       07 15 35.2 +0.1
       comp=Z,77nm,1.4s,mb5.8
HAQS  Haql               90.53 299   P        P       07 15 37.0 +1.7
TOS   Tosya              90.66 311  eP        P       07 15 36.8 +1.1
SYO   Syowa Base         90.83 201  ⇓P        P       07 15 34.8  -1.0
SYO   Syowa Base         90.83 201  ⇑PcP      PcP     07 15 35.0  -2.1
KAMT  Kaman              91.00 309  eP        P       07 15 36.5  -0.8
BRTR  Keskin Array B     91.03 310   P        P       07 15 36.4  -1.1
       comp=Z,2.3nm,0.4s,mb4.9,baz=153,slow=2.8,SNR=26
BRTR                                 PP       PP      07 19 11.7  -5.0
       comp=Z,1.5nm,0.8s,baz=117,slow=9.7,SNR=3.7
BALT  Daday              91.11 311  i P       P       07 15 39.2 +1.5
ELDT  Eldivan            91.15 310  i P       P       07 15 37.9  -0.1
IKL   Isikli             91.20 306  eP        P       07 15 39.2 +0.8
KEV   Kevo               91.44 340  ep        P       07 15 36.7  -1.9
PUL   Pulkovo            91.45 330  eP        P       07 15 27.3   -12
PUL                                 eS        S       07 26 28.3  -3.5
PUL                                  MLR      MLR
       comp=Z,2µm,24.0s,MS5.5
PUL                                  MLR      MLR
       comp=N,1µm,22.0s
CSS   Prodhromos         91.57 305  eP        P       07 15 39.0  -1.0
       comp=N,56nm,1.1s,mb5.8
SAFT  Safranbolu         91.66 311  eP        P       07 15 40.8 +0.5
ANTO  Ankara             91.67 310  eP        P       07 15 36.5  -3.9
INK   Inuvik             91.75  22  eP        P       07 15 39.8  -0.3
INK                                  pmax     pmax
       comp=Z,53nm,1.4s
INK   Inuvik             91.75  22   P        P       07 15 40.0  -0.1
       comp=Z,18nm,1.0s,mb5.4,baz=271,slow=4.1,SNR=17
INK   Inuvik             91.75  22  eP        P       07 15 39.8  -0.3
       comp=Z,53nm,1.4s,mb5.7
QSPA  South Pole Qui     91.96 180  eP        P       07 15 43.5 +2.7
       comp=Z,76nm,1.6s,mb5.8
ARCES ARCESS Array B     92.00 340   P        P       07 15 40.8  -0.4
       comp=Z,22nm,0.8s,mb5.5,baz=76,slow=5.0,SNR=46
ARCES                                PKKPbc           07 33 01.6
       comp=Z,0.7nm,0.5s,baz=260,slow=5.5,SNR=6.2
HDMB  Hadim              92.12 307  eP        P       07 15 40.2  -2.3
SGKT  Sivrigoynuk        92.18 311  i P       P       07 15 43.5 +0.7
KIZT  Kizilcal           92.45 309  eP        P       07 15 43.6  -0.4
KBS   Kingsbay           92.64 350   PFAKE            07 16 00.0  +16
KBS                                  LR       LR
       comp=Z,1µm,21.0s,MS5.4
KBS   Kingsbay           92.64 350  eP        P       07 15 39.7  -4.4
KBS                                 ePP       PP      07 19 29.9 +1.2
KBS                                 eSKSa             07 26 18.5
KBS                                  AMS      AMS     07 58 29.7
       comp=Z,796nm,22.2s,MS5.1
SIT   Sitka              92.67  33   PFAKE            07 16 00.0  +15
SIT                                  LR       LR
       comp=Z,1µm,19.0s,MS5.5
HENT  Hendek             93.04 311  i P       P       07 15 46.7   0.0
KAF   Kangasniemi        93.05 332  ep        P       07 15 46.1  -0.1
AKASG Malin Array Be     93.14 321   P        P       07 15 46.6  -0.2
       comp=Z,6.7nm,0.8s,mb5.1,baz=71,slow=3.9,SNR=42
ESKT  Eskisehir          93.19 310  eP        P       07 15 46.9  -0.5
ESKT  Eskisehir          93.19 310  i P       P       07 15 47.5 +0.1
FINES FINESS Array B     93.27 332   P        P       07 15 46.7  -0.5
       comp=Z,4.4nm,0.5s,mb5.1,baz=63,slow=4.2,SNR=19
FINES FINESS Array B     93.27 332   P        P       07 15 46.7  -0.5
VSU   Vasula             93.46 329  eP        P       07 15 52.9 +4.8
MNK   Minsk              93.48 325⇑eP        P       07 15 48.0  -0.3
TKTP  Tekketepe          93.75 308  i P       P       07 15 48.4  -1.6
KIS   Kishinev           93.87 317  eP        P       07 15 47.0  -3.2
KIS                                 e                 07 19 38.0
KIS                                 e                 07 26 17.0
KIS                                 eS        S       07 26 50.0  -3.1
KIS                                 ePS       PS      07 28 16.0  -3.3
ELL   Elmali             94.20 307  eP        P       07 15 52.5 +0.5
TRO   Tromso             94.21 340  eP        P       07 15 38.8   -12
TRO                                 ePP       PP      07 19 36.9  -4.3
TRO                                 eSKSa             07 26 24.2
TRO                                 eSKSa             07 26 25.8
TRO                                  AMS      AMS     08 05 00.1
       comp=Z,968nm,21.0s,MS5.2
YLV   Yalova             94.22 311  eP        P       07 15 47.8  -4.2
ULDT  Uludag             94.44 310  i P       P       07 15 53.4 +0.3
TIRR  Tirgusor           94.47 315  ⇓P        P       07 15 52.7  -0.3
FETY  Fethiye            94.87 307  eP        P       07 15 50.5  -4.6
DLBC  Dease Lake         95.22  31   P        P       07 15 57.4 +1.2
       comp=Z,6.6nm,0.8s,mb5.1,baz=301,slow=5.9,SNR=14
DLBC  Dease Lake         95.22  31  eP        P       07 15 56.9 +0.8
PRD   Provadia           95.36 314  eP        P       07 15 58.0 +0.8
VRI   Vrincioaia         95.45 316  ⇓P        P       07 15 58.0 +0.5
MBAR  Mbarara            95.93 270  eP        P       07 16 00.9 +0.5
MBAR                                 pmax     pmax
       comp=Z,8.0nm,1.0s,mb5.1
MBAR                                 MLR      MLR
       comp=Z,239nm,21.0s,MS4.7
MBAR  Mbarara            95.93 270  eP        P       07 16 00.9 +0.5
       comp=Z,7.8nm,1.0s,mb5.1
MBAR                                 LR       LR
       comp=Z,239nm,21.0s,MS4.7
CANB  Canakkale          96.04 310  eP        P       07 15 59.4  -0.9
MLR   Muntele Rosu       96.05 316   P        P       07 16 00.2   0.0
       comp=Z,21nm,1.1s,mb5.5,baz=59,slow=1.4,SNR=19
MLR                                  PP       PP      07 19 53.7  -2.0
       comp=Z,25nm,1.3s,baz=25,slow=7.5,SNR=4.5
MLR   Muntele Rosu       96.05 316   P        P       07 16 00.2   0.0
MLR                                  PP       PP      07 19 53.7  -2.0
MLR   Muntele Rosu       96.05 316⇓iP        P       07 16 00.7 +0.5
BURAR Bucovina Array     96.20 318  ⇑P        P       07 16 01.9 +1.1
SUW   Suwalki            96.25 325  eP        P       07 16 02.1 +1.2
SUW                                 e                 07 26 34.6
SUW                                 e                 07 27 12.2
SUW                                  MLR      MLR     08 03 13.3
       comp=Z,2µm,23.3s,MS5.5
LVV   L’vov              96.58 320  eP        P       07 16 04.2 +1.7
LVV                                 e                 07 20 02.6
LVV                                 ePPP      PPP     07 21 58.8  -6.8
LVV                                 eS        S       07 27 20.0 +3.9
LVV                                 eSS       SS      07 33 47.8  -7.1
KWP   Kalwaria           97.45 320  eP        P       07 16 06.3  -0.2
KWP                                  MLR      MLR     08 01 14.6
       comp=Z,2µm,26.7s,MS5.6
RZN   Rozhen             97.55 312  eP        P       07 16 06.0  -1.2
PGB   Panagyurishte      97.81 313  eP        P       07 16 09.0 +0.7
KOLS  Kolonicke sedl     97.88 320  ePdif     P       07 16 10.0 +1.6
KOLS                                ePP       PP      07 20 17.4 +7.2
KOLS  Kolonicke sedl     97.88 320   PDIF     P       07 16 10.0 +1.6
KOLS                                e                 07 20 17.4
UZH   Uzhgorod           97.93 320  eP        P       07 16 09.0 +0.3
UZH                                 e                 07 26 44.0
UZH                                 eS        S       07 27 23.0  -4.5
DRGR                     98.03 318  ⇑P        P       07 16 09.3 +0.1
MMB   Musomiste          98.30 312  eP        P       07 16 10.0  -0.5
MATP  Matopo             98.35 250   P        P       07 16 11.2  -0.1
       comp=Z,7.8nm,0.9s,mb5.2,baz=102,slow=3.4,SNR=7.8
IDI   Anoyia             98.41 306   P        P       07 16 10.2  -1.1
       comp=Z,3.8nm,0.6s,mb5.1,slow=6.1,SNR=3.0
VTS   Vitosha            98.50 313  eP        P       07 16 11.5 +0.1
RKT   Rikitea            98.50 113  eP        P       07 15 52.6   -19
       comp=Z,240nm,32.8s
RKT                                 eLR       LR      07 48 33.2
       comp=Z,3µm,34.2s
NSS   Namsos             98.55 337   AMS      AMS     08 07 22.5
       comp=Z,1µm,21.2s,MS5.4
LSZ   Lusaka             98.70 255  eP        P       07 16 13.4 +0.5
LSZ                                  pmax     pmax
       comp=Z,47nm,1.5s,mb5.8
LSZ                                  MLR      MLR
       comp=Z,2µm,22.0s,MS5.6
LSZ   Lusaka             98.70 255  eP        P       07 16 13.4 +0.5
       comp=Z,47nm,1.5s,mb5.8
LSZ                                  LR       LR
       comp=Z,2µm,22.0s,MS5.6
KKB   Krupnik            98.72 313  eP        P       07 16 12.0  -0.4
ZAPS  Zavoj/Pirot        98.79 314⇓iP        P       07 16 13.1 +0.3
DAG   Danmarks Havn      98.91 352  eP        P       07 16 11.0  -1.5
DAG                                  pmax     pmax
       comp=Z,7.0nm,0.7s,mb5.3
DAG   Danmarks Havn      98.91 352  eP        P       07 16 11.0  -1.5
       comp=Z,6.8nm,0.7s,mb5.3
DAG   Danmarks Havn      98.91 352  i P       P       07 16 11.0  -1.5
       comp=Z,6.8nm,0.7s,mb5.3
DAG   Danmarks Havn      98.91 352  i P       PP      07 20 08.0  -8.9
NIE   Niedzica           99.02 321  eP        P       07 16 16.0 +2.4
KECS  Kecovo             99.13 320  ePdif     P       07 16 15.4 +1.3
KECS  Kecovo             99.13 320   PDIF     P       07 16 15.4 +1.3
OJC   Ojcow              99.15 321  eP        P       07 16 15.3 +1.1
OJC                                 ePP       PP      07 20 16.9  -2.4
OJC                                 eS        S       07 27 43.5 +5.7
OJC                                  MLR      MLR     08 04 48.5
       comp=Z,1µm,24.1s,MS5.3
VAY   Valandovo          99.20 312  i P       P       07 16 13.8  -0.8
HFS   Hagfors            99.47 332   P        P       07 16 15.0  -0.4
       comp=Z,4.8nm,0.8s,mb5.1,baz=90,slow=4.4,SNR=13
RES   Resolute Bay       99.48  10  eP        P       07 16 16.8 +1.6
VYHS  Vyhne             100.19 320  eP        P       07 16 20.0 +1.0
VYHS                                e                 07 20 29.7
VYHS                                eSS       SS      07 35 05.4  +20
VYHS  Vyhne             100.19 320  ePdif     P       07 16 20.0 +1.0
VYHS                                ePP       PP      07 20 29.7 +2.0
VYHS                                eSdif             07 29 09.7
VYHS                                eSS       SS      07 35 05.4  +20
VYHS  Vyhne             100.19 320   PDIF     P       07 16 20.0 +1.0
VYHS                                ePP       PP      07 20 29.7 +2.0
VYHS                                e                 07 29 09.7
VYHS                                eSS       SS      07 35 05.4  +20
NB2   NORSAR Subarra    100.25 333   P        P       07 16 17.3  -1.6
       comp=Z,12nm,0.9s,baz=69,slow=4.5
NB2   NORSAR Subarra    100.25 333   P        P       07 16 17.3  -1.6
       baz=69,slow=4.4
NOA   NORSAR Array B    100.25 333   P        P       07 16 17.6  -1.3
       comp=Z,6.1nm,0.8s,baz=67,slow=4.6,SNR=15
OKC   Ostrava-Krasne    100.28 321   AMS      AMS     08 02 30.0
       comp=Z,1µm,24.1s
NAO01 NORSAR Array S    100.48 333   PFAKE            07 16 30.0  +10
NAO01                                LR       LR
       comp=Z,2µm,20.0s,MS5.6
BOSA  Boshof            100.98 241   PFAKE            07 16 30.0 +7.0
BOSA                                 LR       LR
       comp=Z,3µm,19.0s,MS5.8
YKW3  Yellowknife Ar    101.02  24  eP        P       07 16 24.1 +1.7
YKA   Yellowknife Ar    101.06  25   P        P       07 16 22.6 +0.1
       comp=Z,2.4nm,0.7s,baz=300,slow=4.7,SNR=22
YKA                                  PP       PP      07 20 36.8 +2.6
       comp=Z,1.7nm,0.9s,baz=297,slow=7.6,SNR=4.1
YKA                                  PKiKP            07 20 49.9
       comp=Z,1.0nm,0.5s,baz=292,slow=1.7,SNR=16
YKA                                  PKKPbc           07 32 31.6
       comp=Z,0.7nm,0.8s,baz=106,slow=2.7,SNR=6.0
YKA   Yellowknife Ar    101.06  25   P        P       07 16 22.6 +0.1
YKA                                  PP       PP      07 20 36.9 +2.6
KSP   Ksiaz             101.13 323  eP        P       07 16 23.6 +0.5
KSP                                 e                 07 26 59.0
KSP                                 eS        S       07 28 00.0 +5.6
KSP                                 eSS       SS      07 34 54.0  -4.7
KSP                                  MLR      MLR
       comp=Z,4µm,27.4s,MS5.8
KSP   Ksiaz             101.13 323  eP        P       07 16 23.6 +0.5
KSP                                 eSKS      SKS     07 26 59.0 +2.3
KSP                                 eS        S       07 28 00.0 +5.6
KSP                                 eSP       SP      07 29 23.0  -6.9
KSP                                 eSS       SS      07 34 54.0  -4.7
KSP                                  LR       LR
       comp=Z,4µm,27.4s,MS5.8
KSP   Ksiaz             101.13 323  eP        P       07 16 23.8 +0.7
KSP                                 e                 07 27 00.5
KSP                                 e                 07 27 54.2
KSP                                  MLR      MLR     08 02 41.8
       comp=Z,3µm,27.4s,MS5.7
DPC   Dobruska-Polom    101.26 322  ePdif     P       07 16 24.6 +0.9
DPC                                 e                 07 26 56.2
DPC                                  LR       LR
       comp=Z,2µm,27.2s,MS5.4
DPC   Dobruska-Polom    101.26 322  ePDIF     P       07 16 24.6 +0.9
DPC                                 ex        x       07 26 56.2
DPC                                  AMS      AMS     08 00 50.0
       comp=Z,2µm,27.2s
OCWA  Octopus Mounta    101.27  41   PFAKE            07 16 40.0  +16
OCWA                                 LR       LR
       comp=Z,2µm,22.0s,MS5.5
VRAC  Vranov            101.40 321   P        P       07 16 26.2 +1.9
       comp=Z,1.3nm,0.3s,baz=104,slow=19,SNR=4.4
UPC   Upice             101.40 322  ePdif     P       07 16 25.6 +1.3
JMIC  Jan Mayen         101.47 346  eP        P       07 16 19.4  -4.8
JMIC                                eSKSa             07 27 00.7
JMIC                                 AMS      AMS     08 00 44.6
       comp=Z,554nm,23.0s,MS5.0
KONO  Kongsberg         101.56 333   PFAKE            07 16 40.0  +15
KONO                                 LR       LR
       comp=Z,1µm,21.0s,MS5.3
PVCC  Panska Ves        102.27 323  ePDIF     Pdif    07 16 30.1 +1.9
PVCC                                 AMS      AMS     08 03 00.0
       comp=Z,2µm,25.4s
PRU   Pruhonice         102.46 322  ePDIF     Pdif    07 16 30.5 +1.4
PRU                                 ex        x       07 27 05.5
PRU                                  AMS      AMS     08 02 50.0
       comp=Z,1µm,24.5s
BRG   Berggiesshubel    102.54 323  i P       Pdif    07 16 31.0 +1.6
BRG                                 i                 07 27 06.0
BRG                                 i                 07 28 12.7
BRG                                 e                 07 29 39.6
BRG                                  pmax     pmax
       comp=Z,14nm,1.0s
BRG                                  pmax     pmax
       comp=Z,10.0nm,1.1s
BRG                                  MLR      MLR
       comp=Z,2µm,24.6s,MS5.5
BRG                                  MLR      MLR
       comp=N,2µm,26.0s,MS5.6
BRG                                  MLR      MLR
       comp=E,2µm,26.0s,MS5.6
BRG   Berggiesshubel    102.54 323  i P       Pdif    07 16 31.0 +1.6
       comp=E,14nm,1.0s
BRG                                 e                 07 16 36.4
BRG                                 i                 07 27 06.0
BRG                                 i                 07 28 12.7
BRG                                 e                 07 29 39.6
BRG                                  LR       LR
       comp=Z,2µm,24.6s,MS5.5
COR   Corvallis         102.71  43   PFAKE            07 16 40.0  +10
COR                                  LR       LR
       comp=Z,1µm,20.0s,MS5.4
CLL   Collm             102.95 324  eP        Pdif    07 16 32.0 +0.8
CLL                                 e                 07 27 05.0
CLL                                 eS        S       07 28 15.0 +5.5
CLL                                  MLR      MLR
       comp=Z,2µm,22.1s,MS5.5
CLL   Collm             102.95 324  ePDIF     Pdif    07 16 32.0 +0.8
CLL                                 e                 07 19 49.0
CLL                                 e*SPP             07 20 56.0
CLL                                 e                 07 27 05.0
CLL                                 e                 07 28 15.0
CLL                                 ePS       PS      07 29 40.0   -15
CLL                                 ePPS      PPS     07 30 24.0   -24
CLL                                 eSS       SS      07 35 18.0  -6.1
BER   Bergen            103.14 334  e                 07 20 52.0
BER                                  AMS      AMS     08 09 29.3
       comp=Z,1µm,20.3s,MS5.4
KHC   Kasperske Hory    103.33 322  eP        Pdif    07 16 33.6 +0.7
KHC                                 e                 07 27 10.4
KHC                                  MLR      MLR
       comp=Z,2µm,28.3s,MS5.5
KHC   Kasperske Hory    103.33 322  ePdif     Pdif    07 16 33.6 +0.7
KHC                                 e                 07 16 39.0
KHC                                 e                 07 27 10.4
KHC                                  LR       LR
       comp=Z,2µm,28.3s,MS5.5
KHC   Kasperske Hory    103.33 322  ePDIF     Pdif    07 16 33.6 +0.7
KHC                                  x        x       07 16 39.0
KHC                                 ex        x       07 27 10.4
KHC                                  AMS      AMS     08 02 10.0
       comp=Z,2µm,28.3s
GEC2  GERESS Array S    103.35 321  eP        Pdif    07 16 35.1 +2.1
GEC2                                e                 07 27 13.7
GEC2                                eSP       SP      07 29 46.8  -6.3
GERES GERESS Array B    103.35 321   Pdiff    Pdif    07 16 33.8 +0.8
       comp=Z,13nm,1.4s,baz=90,slow=2.7,SNR=9.2
GERES                                PP       PP      07 20 47.5  -4.1
       comp=Z,0.6nm,0.7s,baz=98,slow=6.9,SNR=3.2
BOJS  Bojanci           103.37 318  ePdiff    Pdif    07 16 33.3 +0.1
PDKS  Podkum            103.38 318  ePdiff    Pdif    07 16 33.4 +0.2
BSEG  Bad Segeberg      103.51 327  eP        Pdif    07 16 36.1 +2.5
BSEG                                e                 07 27 13.3
BSEG                                eSP       SP      07 29 48.6  -6.0
SNAA  Sanae             103.57 195   Pdiff    Pdif    07 16 36.3 +2.8
       comp=Z,0.4nm,0.6s,baz=63,slow=6.6,SNR=6.9
SNAA                                 PP       PP      07 20 50.6  -2.0
       comp=Z,1.5nm,0.9s,baz=151,slow=10,SNR=2.8
NKC   Novy Kostel       103.65 323   AMS      AMS     08 04 00.0
       comp=Z,2µm,27.4s
YBH   Yreka Blue Hor    103.90  46   PFAKE            07 16 50.0  +14
YBH                                  LR       LR
       comp=Z,816nm,20.0s,MS5.3
MOX   Moxa              104.00 324  eP        Pdif    07 16 37.7 +1.9
MOX                                  MLR      MLR
       comp=Z,800nm,20.0s,MS5.2
MOX   Moxa              104.00 324  eP        Pdif    07 16 37.7 +1.9
MOX                                 ePP       PP      07 20 56.0  -0.1
MOX                                 eSKS      SKS     07 27 16.0 +5.8
MOX                                 eS        S       07 28 20.0 +1.7
MOX                                 ePS       PS      07 30 00.0  -5.7
MOX                                 eSS       SS      07 35 40.0 +2.1
MOX                                 eLQ               07 45 00.0
MOX                                  LR       LR
       comp=Z,800nm,20.0s,MS5.2
MOX   Moxa              104.00 324  i P       Pdif    07 16 37.7 +1.9
MOX                                  PP       PP      07 20 56.0  -0.1
MOX                                  SKS      SKS     07 27 16.0 +5.8
MOX                                  S        S       07 28 20.0 +1.7
MOX                                  PS       PS      07 30 00.0  -5.7
MOX                                  SS       SS      07 35 40.0 +2.1
MOX                                  LQ               07 45 00.0
MOX                                  L                08 09 34.0
CLZ   Clausthal         104.29 325  eP        Pdif    07 16 38.2 +1.1
CLZ                                 eSP       SP      07 29 56.9  -5.5
WDC   Whiskeytown Da    104.33  47   PFAKE            07 16 50.0  +12
WDC                                  LR       LR
       comp=Z,2µm,22.0s,MS5.6
HOPS  Hopland           104.34  49   PFAKE            07 16 50.0  +12
HOPS                                 LR       LR
       comp=Z,1µm,20.0s,MS5.4
SUR   Sutherland        104.46 237   PFAKE            07 16 50.0  +12
SUR                                  LR       LR
       comp=Z,379nm,19.0s,MS5.0
GRA1  Grafenberg Arr    104.58 323  ePdif     Pdif    07 16 38.0  -0.4
GRA1                                ePP       PP      07 21 03.5 +2.7
GRA1                                eSKSac            07 27 15.9
GRA1                                eSP       SP      07 30 00.3  -5.1
GRA1                                 LR       LR
       comp=Z,1µm,21.4s,MS5.4
GRF   Grafenberg Arr    104.58 323  eP        Pdif    07 16 38.0  -0.4
GRF                                 e                 07 21 03.5
GRF                                 e                 07 27 15.9
GRF                                 eSP       SP      07 30 00.3  -5.1
GRF                                  MLR      MLR
       comp=Z,1µm,21.4s,MS5.4
FUR   Furstenfeldbru    105.10 321  eP        Pdif    07 16 42.0 +1.3
FUR                                 e                 07 27 15.9
FUR                                 eSP       SP      07 30 06.6  -4.0
VNA2  Neumayer--Watz    105.18 194  e         Pdif    07 16 49.4 +8.8
VNA2  Neumayer--Watz    105.18 194  e         Px      07 20 56.3
VNA2  Neumayer--Watz    105.18 194  e         Px      07 21 00.2
VNA2  Neumayer--Watz    105.18 194  e         Px      07 21 04.5
VNA2  Neumayer--Watz    105.18 194   Pdif     Pdif    07 16 44.5 +3.9
VNA2                                e                 07 16 49.4
VNA2                                e                 07 17 17.3
VNA2                                e                 07 20 56.3
VNA2                                e                 07 21 00.2
VNA2                                e                 07 21 04.5
VNA2                                e                 07 32 21.4
VNA2                                e                 07 32 38.5
VNA3  Neumayer Olymp    105.50 193  e         Pdif    07 16 50.9 +8.9
VNA3  Neumayer Olymp    105.50 193  e         Px      07 20 57.1
VNA3  Neumayer Olymp    105.50 193  e         Px      07 21 01.8
VNA3  Neumayer Olymp    105.50 193  e         Px      07 21 06.0
VNA3  Neumayer Olymp    105.50 193   Pdif     Pdif    07 16 46.5 +4.5
VNA3                                e                 07 16 50.9
VNA3                                e                 07 17 18.4
VNA3                                e                 07 20 57.1
VNA3                                e                 07 21 01.8
VNA3                                e                 07 21 06.0
VNA3                                e                 07 32 19.7
VNA3                                e                 07 32 36.4
MOD   Modoc             105.58  45   PFAKE            07 21 10.0
MOD                                  LR       LR
       comp=Z,540nm,20.0s,MS5.1
VNA1  Neumayer--Stat    105.58 194  e                 07 21 07.3
VNA1  Neumayer--Stat    105.58 194  eP        PP      07 21 03.6  -4.1
VNA1                                e                 07 21 07.3
NEW   Newport           105.59  38   PFAKE            07 21 10.0
NEW                                  LR       LR
       comp=Z,923nm,22.0s,MS5.3
TNS   Taunus Mts        106.04 324  eP        Pdif    07 16 45.2 +0.4
TNS                                 e                 07 27 26.1
TNS                                 eSP       SP      07 30 17.2  -2.8
SAO   San Andreas Ge    106.16  51   PFAKE            07 21 10.0
SAO                                  LR       LR
       comp=Z,1µm,19.0s,MS5.5
WVOR  Wild Horse Val    106.59  45   PFAKE            07 21 10.0
WVOR                                 LR       LR
       comp=Z,1µm,22.0s,MS5.4
CMB   Columbia Colle    106.63  49   PFAKE            07 21 10.0
CMB                                  LR       LR
       comp=Z,942nm,20.0s,MS5.3
BMO   Blue Mountains    106.69  42   PFAKE            07 21 10.0
BMO                                  LR       LR
       comp=Z,722nm,20.0s,MS5.2
BFO   Black Forest      106.86 322  ePdif     Pdif    07 16 50.0 +1.5
BFO                                 eSKSac            07 27 25.3
BFO                                 eSP       SP      07 30 26.6  -1.6
NVAR  Mina Array Bea    108.08  48   Pdiff    Pdif    07 16 57.5 +3.4
       comp=Z,0.7nm,0.8s,baz=257,slow=7.5,SNR=4.4
NVAR                                 PP       PP      07 21 21.8  -5.3
       comp=Z,1.6nm,1.1s,baz=274,slow=3.8,SNR=5.3
NVAR                                 PKKP     PKKP    07 32 29.2  +11
       comp=Z,1.3nm,0.7s,baz=111,slow=7.6,SNR=9.7
NVAR  Mina Array Bea    108.08  48   Pdif     Pdif    07 16 57.5 +3.4
NVAR                                 PP       PP      07 21 21.8  -5.3
NVAR                                 PKKP     PKKP    07 32 29.2  +11
MSO   Missoula          108.13  39   PFAKE            07 21 10.0
MSO                                  LR       LR
       comp=Z,518nm,20.0s,MS5.1
MNV   Mina              108.19  48   PFAKE            07 21 10.0
MNV                                  LR       LR
       comp=Z,1µm,22.0s,MS5.4
BMN   Battle Mountai    108.25  46   PFAKE            07 21 10.0
BMN                                  LR       LR
       comp=Z,866nm,20.0s,MS5.3
TSUM  Tsumeb            108.67 251   PFAKE            07 21 20.0
TSUM                                 LR       LR
       comp=Z,2µm,22.0s,MS5.7
TPH   Tonopah           109.00  49   PFAKE            07 21 20.0
TPH                                  LR       LR
       comp=Z,854nm,20.0s,MS5.3
HLID  Hailey            109.10  42  ePKiKP            07 21 04.2
HLID                                 LR       LR
       comp=Z,967nm,21.0s,MS5.3
ELK   Elko              109.56  45   PFAKE            07 21 20.0
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ELK				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
ESK	**Eskdalemuir**	**109.70**	**332**	PFAKE		07 21 20.0	
ESK				LR	LR		
	comp=Z,335nm,20.0s,MS4.9						
BOZ	**Bozeman (W)**	**110.08**	**39**	*e*PKIKP	PKPdf	07 21 06.0	+3.1
BOZ				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.4						
SMF	**Signal de Mont**	**110.33**	**322**	*e*PKIKP	PKPdf	07 21 03.0	-0.4
AVF	**Avril sur Loir**	**110.57**	**322**	*e*PKIKP	PKPdf	07 21 03.3	-0.6
FFC	**Flin Flon**	**110.75**	**28**	PFAKE		07 21 20.0	+16
FFC				LR	LR		
	comp=Z,175nm,22.0s,MS4.6						
PFO	**Pinyon Flat Ob**	**110.96**	**53**	PFAKE		07 21 20.0	+15
PFO				LR	LR		
	comp=Z,320nm,20.0s,MS4.9						
LKWY	**Lake**	**111.33**	**40**	PFAKE		07 21 20.0	+15
LKWY				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
SNOW	**Snow King Moun**	**111.58**	**41**	*e*PKiKP		07 21 10.9	
AHID	**Auburn Hatcher**	**111.64**	**42**	PFAKE		07 21 20.0	+14
AHID				LR	LR		
	comp=Z,766nm,22.0s,MS5.2						
HWUT	**Hardware Ranch**	**111.80**	**43**	PFAKE		07 21 20.0	+14
HWUT				LR	LR		
	comp=Z,941nm,20.0s,MS5.4						
MVU	**Marysvale**	**112.55**	**47**	PFAKE		07 21 20.0	+12
MVU				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
BW06	**Boulder Array**	**112.67**	**42**	PFAKE		07 21 20.0	+12
BW06				LR	LR		
	comp=Z,669nm,20.0s,MS5.2						
PDAR	**Pinedale Array**	**112.67**	**42**	PKiKP		07 21 12.8	
	comp=Z,0.5nm,0.6s,baz=243,slow=3.3,SNR=12						
PDAR				PKKPbc		07 31 58.6	
	comp=Z,0.6nm,0.7s,baz=108,slow=4.7,SNR=5.3						
LAO	**LASA Array**	**112.93**	**37**	*e*PKiKP		07 21 11.1	
LAO				LR	LR		
	comp=Z,747nm,22.0s,MS5.2						
DGMT	**Dagmar**	**113.17**	**34**	PFAKE		07 21 20.0	+11
DGMT				LR	LR		
	comp=Z,795nm,22.0s,MS5.3						
WUAZ	**Wupatki**	**114.28**	**49**	PFAKE		07 21 30.0	+18
WUAZ				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
RSSD	**Black Hills**	**115.56**	**38**	*e*PKIKP	PKPdf	07 21 14.9	+1.1
RSSD				MLR	MLR		
	comp=Z,874nm,20.0s,MS5.4						
TUC	**Tucson**	**115.89**	**52**	PFAKE		07 21 30.0	+15
TUC				LR	LR		
	comp=Z,803nm,21.0s,MS5.3						
ULM	**Lac du Bonnet**	**116.47**	**29**	PKP	PKPdf	07 21 17.6	+2.3
	comp=Z,6.5nm,0.8s,baz=10,slow=4.7,SNR=6.3						
ULM				PP	PP	07 22 22.1	-5.3
	comp=Z,2.5nm,0.7s,baz=307,slow=5.1,SNR=3.6						
ISCO	**Idaho Springs**	**116.66**	**43**	PKIKP	PKPdf	07 21 09.8	-6.2
ISCO	**Idaho Springs**	**116.66**	**43**	PFAKE		07 21 30.0	+14
ISCO				LR	LR		
	comp=Z,718nm,20.0s,MS5.3						
PMSA	**Palmer Station**	**116.92**	**175**	PFAKE		07 21 30.0	+14
PMSA				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
SDCO	**Great Sand Dun**	**117.68**	**45**	PFAKE		07 21 30.0	+12
SDCO				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
ANMO	**Albuquerque**	**118.20**	**48**	PKP	PKPdf	07 21 21.5	+2.4
	comp=Z,3.2nm,1.0s,baz=219,slow=3.3,SNR=8.3						
ANMO				PKKPab		07 31 45.6	
	comp=Z,0.4nm,0.4s,baz=130,slow=6.6,SNR=4.1						
ANMO	**Albuquerque**	**118.20**	**48**	*e*PKPdf	PKPdf	07 21 21.4	+2.4
ANMO				LR	LR		
	comp=Z,728nm,20.0s,MS5.3						
EYMN	**Ely**	**120.15**	**29**	PFAKE		07 21 40.0	+17
EYMN				LR	LR		
	comp=Z,787nm,22.0s,MS5.3						
MNTX	**Cornudas Mount**	**120.37**	**51**	*e*PKPdf	PKPdf	07 21 23.5	+0.1
CBKS	**Cedar Bluff**	**121.10**	**41**	PFAKE		07 21 40.0	+15
CBKS				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
CLNB	**Carlsbad**	**121.29**	**50**	*e*PKPdf	PKPdf	07 21 28.4	+3.2
AMTX	**Amarillo**	**121.74**	**46**	PFAKE		07 21 40.0	+14
AMTX				LR	LR		
	comp=Z,981nm,22.0s,MS5.4						
EVO	**Evora**	**121.94**	**319**	*e*PKIKP	PKPdf	07 21 28.3	+2.1
	comp=Z,43nm,1.3s						
SCHQ	**Schefferville**	**122.24**	**9**	PKP	PKPdf	07 21 28.2	+1.8
	comp=Z,5.0nm,0.5s,baz=22,slow=1.8,SNR=26						
SCHQ				PKKPbc		07 31 24.5	
	comp=Z,1.6nm,1.0s,baz=180,slow=4.0,SNR=3.6						
SCHQ	**Schefferville**	**122.24**	**9**	PKP	PKPdf	07 21 28.2	+1.8
SCHQ				PKKPbc		07 31 24.5	
LTX	**Lajitas**	**122.68**	**53**	PFAKE		07 21 40.0	+12
LTX				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
TXAR	**Lajitas Array**	**122.68**	**53**	PKP	PKPdf	07 21 30.2	+2.3
	comp=Z,1.8nm,0.7s,baz=214,slow=1.3,SNR=20						
TXAR				PKKPbc		07 31 24.7	
	comp=Z,0.7nm,0.9s,baz=112,slow=4.9,SNR=4.5						
KSU1	**Kansas State U**	**122.96**	**39**	*e*PKPdf	PKPdf	07 21 29.6	+1.4
WMOK	**Wichita Mounta**	**123.88**	**45**	*e*PKIKP	PKPdf	07 21 31.8	+1.7
WMOK				MLR	MLR		
	comp=Z,749nm,20.0s,MS5.3						
JFWS	**Jewell Farm**	**124.27**	**32**	*e*PKIKP	PKPdf	07 21 31.2	+0.5
USHA	**Ushuaia**	**125.95**	**169**	PKP	PKPdf	07 21 38.5	+5.0
	comp=Z,15nm,0.9s,baz=98,slow=4.0,SNR=4.4						
FVM	**French Village**	**127.47**	**37**	*e*PKIKP	PKPdf	07 21 38.0	+1.0
AAM	**Ann Arbor**	**128.05**	**28**	*e*PKIKP	PKPdf	07 21 38.8	+0.8
AAM				MLR	MLR		
	comp=Z,836nm,21.0s,MS5.4						
NATX	**Nacogdoches**	**128.38**	**46**	PFAKE		07 21 50.0	+11
NATX				LR	LR		
	comp=Z,571nm,20.0s,MS5.3						
BLO	**Bloomington**	**128.90**	**33**	PKIKP	PKPdf	07 21 41.8	+2.1
BLO	**Bloomington**	**128.90**	**33**	*e*PKPdf	PKPdf	07 21 41.7	+2.0
GNAR	**Gosnell**	**129.02**	**39**	*e*PKPdf	PKPdf	07 21 43.3	+3.3
PQI	**Presque Isle**	**129.80**	**13**	PFAKE		07 21 50.0	+8.8
PQI				LR	LR		
	comp=Z,3µm,22.0s,MS6.0						
WVT	**Waverly**	**130.25**	**37**	*e*PKIKP	PKPdf	07 21 43.1	+0.7
WVT				MLR	MLR		
	comp=Z,574nm,21.0s,MS5.2						
OXF	**Oxford**	**130.33**	**40**	*e*PKIKP	PKPdf	07 21 45.0	+2.4
OXF				MLR	MLR		
	comp=Z,594nm,21.0s,MS5.3						
NCB	**Newcomb**	**130.52**	**20**	*e*PKPdf	PKPdf	07 21 45.1	+2.5
PPM	**Popocatepetl**	**130.82**	**63**	*e*P	Pdif	07 18 40.2	+5.5
DBIC	**Dimbokro**	**130.83**	**281**	PKP	PKPdf	07 21 51.4	+7.4
	comp=Z,12nm,0.9s,baz=9.0,slow=2.3,SNR=8.5						
DBIC	**Dimbokro**	**130.83**	**281**	PKP	PKPdf	07 21 51.4	+7.4
DBIC				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
PLAL	**Pickwick Lake**	**130.87**	**38**	*e*PKPdf	PKPdf	07 21 43.9	+0.3
PLAL				LR	LR		
	comp=Z,853nm,22.0s,MS5.4						
WVL	**Waterville**	**131.37**	**16**	PFAKE		07 22 00.0	+16
WVL				LR	LR		
	comp=Z,5µm,22.0s,MS6.2						
BINY	**Binghamton**	**131.43**	**22**	*e*PKPdf	PKPdf	07 21 46.6	+2.2
MCWV	**Mont Chateau**	**131.91**	**28**	*e*PKPdf	PKPdf	07 21 48.0	+2.6
MCWV				LR	LR		
	comp=Z,785nm,20.0s,MS5.4						
SWET	**Sewanee**	**132.01**	**36**	*e*PKPdf	PKPdf	07 21 47.3	+1.6
TZTN	**Tazewell**	**132.42**	**33**	*e*PKPdf	PKPdf	07 21 49.1	+2.6
CPCT	**Cooper Cave**	**132.67**	**35**	PKPdf	PKPdf	07 21 49.4	+2.4
HRV	**Harvard--Oak R**	**132.70**	**18**	PFAKE		07 22 00.0	+13
HRV				LR	LR		
	comp=Z,664nm,22.0s,MS5.3						
CMLA	**Cha da Macela**	**132.76**	**330**	PFAKE		07 22 00.0	+13
CMLA				LR	LR		
	comp=Z,253nm,20.0s,MS4.9						
LRAL	**Lakeview Retre**	**132.82**	**39**	*e*PKPdf	PKPdf	07 21 49.1	+1.8
LRAL				LR	LR		
	comp=Z,905nm,22.0s,MS5.4						
WES	**Weston**	**132.89**	**18**	PFAKE		07 22 00.0	+13
WES				LR	LR		
	comp=Z,829nm,19.0s,MS5.5						
BLA	**Blacksburg**	**133.56**	**30**	*e*PKIKP	PKPdf	07 21 50.8	+2.2
BLA				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.5						
CBN	**Corbin**	**134.22**	**27**	PKPdf	PKPdf	07 21 51.9	+2.2
CBN				LR	LR		
	comp=Z,703nm,21.0s,MS5.4						
NHSC	**New Hope**	**136.83**	**34**	PFAKE		07 22 10.0	+15
NHSC				LR	LR		
	comp=Z,800nm,20.0s,MS5.5						
PLCA	**Paso Flores**	**138.46**	**160**	PKhKP		07 21 53.8	
	comp=Z,1.5nm,0.9s,baz=243,slow=4.5,SNR=2.8						
PLCA				PKP	PKPdf	07 22 00.2	+2.7
	comp=Z,9.1nm,0.9s,baz=194,slow=8.3,SNR=9.4						
PLCA	**Paso Flores**	**138.46**	**160**	PKP	PKPdf	07 21 53.8	-3.7
PLCA				PKP	PKPdf	07 22 00.2	+2.7
PLCA				LR	LR		
	comp=Z,899nm,21.0s,MS5.5						
TEIG	**Tepich**	**139.23**	**55**	PFAKE		07 22 10.0	+11
TEIG				LR	LR		
	comp=Z,978nm,20.0s,MS5.5						
DWPF	**Disney**	**139.67**	**40**	PFAKE		07 22 10.0	+10
DWPF				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
PAYG	**Puerto Ayora**	**143.05**	**88**	PFAKE		07 22 20.0	+16
PAYG				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
TRQA	**Tornquist**	**143.29**	**169**	*e*PKPpre		07 22 05.0	
TRQA				LR	LR		
	comp=Z,937nm,20.0s,MS5.5						
BBSR	**BB Station**	**144.13**	**17**	PFAKE		07 22 20.0	+13
BBSR				LR	LR		
	comp=Z,480nm,22.0s,MS5.2						
CLCH	**Cerro Calan**	**144.89**	**155**	*i* P	PKPdf	07 22 09.8	+0.8
PEL	**Peldehue**	**145.05**	**154**	*i* P	PKPdf	07 22 11.1	+1.8
MDZ	**Mendoza**	**146.04**	**156**	*e*PKP2	PKPab	07 22 15.6	+1.0
JTS	**JuntasAbangare**	**146.24**	**68**	*e*PKP2	PKPab	07 22 14.9	-1.0
JTS				MLR	MLR		
	comp=Z,305nm,22.0s						
LPA	**La Plata**	**147.02**	**173**	*ce*PKP	PKPdf	07 22 16.0	+3.4
CFAA	**Coronel Fontan**	**147.41**	**156**	PKPbc	PKPdf	07 22 16.9	+3.6
	comp=Z,5.2nm,0.8s,baz=244,slow=2.7,SNR=36						
OTAV	**Otavalo**	**154.80**	**85**	*e*PKPdf	PKPdf	07 22 27.0	+2.1
OTAV				LR	LR		
	comp=Z,978nm,22.0s,MS5.6						
CPUP	**Villa Florida**	**155.55**	**171**	PKIKP	PKPdf	07 22 28.5	+3.0
CPUP						07 22 39.1	
CPUP				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CPUP				pmax	pmax		
	comp=Z,13nm,1.0s						
CPUP	**Villa Florida**	**155.55**	**171**	PKP	PKPdf	07 22 28.4	+3.0
	comp=Z,5.4nm,1.1s,baz=202,slow=1.7,SNR=5.7						
CPUP				PKPbc	PKPdf	07 22 39.1	+14
	comp=Z,13nm,0.9s,baz=182,slow=1.6,SNR=17						
CPUP	**Villa Florida**	**155.55**	**171**	PKPdf	PKPdf	07 22 28.4	+3.0
CPUP				LR	LR		
	comp=Z,750nm,20.0s,MS5.5						
SJG	**San Juan**	**156.34**	**32**	PKP	PKPdf	07 22 29.1	+2.4
	baz=28,slow=4.2						
SJG	**San Juan**	**156.34**	**32**	PKP	PKPdf	07 22 29.1	+2.4
SJG				LR	LR		
	comp=Z,594nm,22.0s,MS5.4						
ROSC	**El Rosal**	**157.95**	**72**	PKP	PKPdf	07 22 31.9	+2.9
	comp=Z,3.2nm,0.5s,baz=281,slow=5.2,SNR=8.7						
SDV	**Santo Domingo**	**159.64**	**58**	PKP	PKPdf	07 22 33.8	+2.8
	comp=Z,14nm,0.9s,baz=280,slow=1.3,SNR=19						
SDV				PKPab	PKPab	07 23 12.2	+0.3
	comp=Z,9.0nm,0.8s,baz=243,slow=2.3,SNR=2.3						
SDV	**Santo Domingo**	**159.64**	**58**	*e*PKPdf	PKPdf	07 22 33.5	+2.5
SDV				LR	LR		
	comp=Z,601nm,21.0s,MS5.4						
LPAZ	**La Paz**	**159.69**	**135**	PKP	PKPdf	07 22 34.7	+3.8
	comp=Z,5.0nm,0.9s,baz=138,slow=1.2,SNR=18						
LPAZ	**La Paz**	**159.69**	**135**	*e*PKPdf	PKPdf	07 22 34.4	+3.5
LPAZ				LR	LR		
	comp=Z,695nm,21.0s,MS5.5						
RCBR	**Riachuelo**	**162.19**	**257**	PFAKE		07 22 50.0	+16
RCBR				LR	LR		
	comp=Z,1µm,22.0s						
JATB	**Jatai**	**164.14**	**186**	*e*P	PKPdf	07 22 37.9	+2.6
JATB				*e*		07 22 58.2	
JATB				*e*		07 23 16.8	
SIV	**San Ignacio**	**164.19**	**152**	PKP	PKPdf	07 22 38.3	+2.9
	comp=Z,4.5nm,0.9s,baz=195,slow=1.7,SNR=16						
SIV				PKPab	PKPab	07 23 32.1	+0.5
	comp=Z,5.8nm,0.7s,baz=225,slow=6.9,SNR=5.1						
BAO	**Brasilia Array**	**165.50**	**201**	PKPdf	PKPdf	07 22 40.0	+3.3
BDFB	**Brasilia**	**165.50**	**201**	PKP	PKPdf	07 22 39.4	+2.7
	comp=Z,5.2nm,0.9s,baz=129,slow=1.5,SNR=6.7						
BDFB				PKPab	PKPab	07 23 38.2	+0.9
	comp=Z,8.4nm,1.0s,baz=123,slow=4.0,SNR=5.2						
SAML	**Samuel**	**168.05**	**125**	*e*PKPdf	PKPdf	07 22 40.7	+2.2
SAML				LR	LR		
	comp=Z,937nm,21.0s						

*IDC **13** 07:03:38.5±0.6, 2.12N×126.73E, mb5.1/17, mb1 5.2/17, mb1mx5.1/21, mbtmp5.1/17, MS5.1/6, Ms1 5.1/6, ms1mx4.9/11, Error ellipse: s-maj=28.7km s-min=12.8km az=75.0*

*NEIC **13** 07:03:40.1±0.4, 2.15N×126.83E, h10^{km}, mb5.3/3, Error ellipse: s-maj=15.3km s-min=7.9km az=71.0*

ISC 13 07:03:42.0±3.1**, 2.13N**±0.07×**126.8E**±0.1**, h35**^{km}±28^{km}**, n35, σ0^{s}83**/27**, mb5.1**/20**, MS4.9**/7**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**11.21**	**291**	P	**P**	**07 06 23.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**20.14**	**183**	P	**P**	**07 08 14.2**	**-1.9**
	119nm,0.8s,baz=349,slow=7.0,SNR=2.1						
WRAB	**Tennant Creek**	**23.16**	**162**	*e*P	**P**	**07 08 47.0**	**+0.4**
	140nm,0.5s,mb5.7						
WRA	**Warramunga Arr**	**23.17**	**162**	P	**P**	**07 08 47.9**	**+1.3**
	82nm,0.7s,mb5.3,baz=337,slow=10,SNR=3.1						
WRA				S	**S**	**07 12 58.4**	**+6.7**
	7.1nm,0.8s,baz=323,slow=21,SNR=2.4						
PMG	**Port Moresby**	**23.34**	**120**	LR	LR	07 18 48.6	
	comp=Z,13µm,20.5s,MS5.4,baz=333,slow=39						
MBWA	**Marble Bar**	**24.15**	**196**	*e*P	**P**	**07 08 55.6**	**-0.4**
	41nm,0.8s,mb4.9						
CBIJ	**Chichi jima**	**28.89**	**29**	P	**P**	**07 09 39.1**	**-0.8**
	118nm,0.8s,mb5.7,baz=131,slow=11,SNR=1.8						
CBIJ				LR	LR	07 20 38.9	
	comp=Z,2µm,21.4s,MS4.7,baz=233,slow=35						
CTA	**Charters Tower**	**29.22**	**140**	LR	LR	07 22 08.6	
	comp=Z,11µm,21.2s,MS5.5,baz=325,slow=38						
CMAR	**Chiang Mai Arr**	**31.72**	**303**	P	**P**	**07 10 05.3**	**+0.2**
	13nm,0.9s,mb4.8,baz=98,slow=5.5,SNR=4.3						
JHJ	**Hachijo jima 2**	**33.16**	**20**	P	**P**	**07 10 17.6**	**+0.1**
	48nm,0.6s,mb5.6,baz=243,slow=18,SNR=2.0						
MJAR	**Matsushiro Arr**	**35.84**	**16**	P	**P**	**07 10 39.8**	**-0.6**
	35nm,0.9s,mb5.3,baz=188,slow=9.2,SNR=4.5						
NWAO	**Narrogin (SRO)**	**36.01**	**194**	P	**P**	**07 10 41.2**	**-0.7**
STKA	**Stephens Creek**	**36.64**	**159**	P	**P**	**07 10 47.9**	**+0.7**
	31nm,0.7s,mb5.3,baz=330,slow=7.2,SNR=2.0						
STKA				LR	LR	07 27 57.9	
	comp=Z,3µm,18.6s,MS5.1,baz=341,slow=40						
STKA	**Stephens Creek**	**36.64**	**159**	P	**P**	**07 10 47.9**	**+0.7**
STKA				LR	LR	07 27 57.9	
LSA	**Lhasa**	**43.52**	**313**	*e*P	**P**	**07 11 45.0**	**+0.7**
	37nm,0.6s,mb5.3						
ULN	**Ulaanbaatar**	**48.64**	**342**	*e*P	**P**	**07 12 24.8**	**+0.4**
	35nm,1.1s,mb5.3						
SONM	**Songino Array**	**48.81**	**342**	P	**P**	**07 12 26.6**	**+0.8**
	17nm,0.9s,mb5.1,baz=162,slow=7.7,SNR=3.2						
MKAR	**Makanchi Array**	**58.88**	**326**	P	**P**	**07 13 38.0**	**-1.8**
	10.0nm,0.4s,mb5.2,baz=120,slow=7.1,SNR=9.9						
FX1	**Attu Island--F**	**63.45**	**29**	LR	LR	07 37 54.5	
	comp=Z,47nm,21.4s,MS3.6,baz=252,slow=32						
BVAR	**Borovoye Array**	**68.67**	**327**	P	**P**	**07 14 44.2**	**+0.3**
	6.1nm,0.4s,mb4.9,baz=46,slow=6.2,SNR=6.7						
VNDA	**Vanda**	**81.85**	**173**	P	**P**	**07 15 59.1**	**+0.5**
	8.3nm,0.5s,mb4.9,baz=338,slow=4.5,SNR=2.4						
ILAR	**Eielson Array**	**86.53**	**25**	P	**P**	**07 16 22.2**	**-0.1**
	1.7nm,0.6s,mb4.5,baz=270,slow=2.7,SNR=3.2						
ILAR				LR	LR	07 54 51.8	
	comp=Z,368nm,21.2s,MS4.8,baz=265,slow=36						
ASF	**Jabal al Asfar**	**88.76**	**302**	P	**P**	**07 16 34.9**	**+1.0**
	39nm,1.0s,mb5.7,baz=343,slow=1.8,SNR=3.8						
ASF				LR	LR	08 03 14.3	
	comp=Z,1µm,21.2s,MS5.2,baz=155,slow=40						
BRTR	**Keskin Array B**	**91.05**	**310**	P	**P**	**07 16 43.7**	**-0.8**
	5.0nm,0.9s,mb4.8,baz=96,slow=14,SNR=2.3						
INK	**Inuvik**	**91.63**	**22**	P	**P**	**07 16 45.8**	**-0.6**
	8.6nm,1.0s,mb5.0,baz=285,slow=1.8,SNR=2.1						
ARCES	**ARCESS Array B**	**91.95**	**340**	P	**P**	**07 16 47.2**	**-0.7**
	6.7nm,0.8s,mb5.0,baz=90,slow=4.5,SNR=2.7						
ARCES	**ARCESS Array B**	**91.95**	**340**	P	**P**	**07 16 47.2**	**-0.7**
DLBC	**Dease Lake**	**95.09**	**31**	P	**P**	**07 17 03.7**	**+1.3**
	3.0nm,0.7s,mb4.8,baz=231,slow=11,SNR=3.1						
DLBC	**Dease Lake**	**95.09**	**31**	P	**P**	**07 17 03.7**	**+1.3**
SCHQ	**Schefferville**	**122.13**	**9**	PKP	PKPdf	07 22 35.0	+1.9
	4.1nm,0.6s,baz=357,slow=6.4,SNR=3.1						
TXAR	**Lajitas Array**	**122.54**	**53**	PKP	PKPdf	07 22 38.5	+3.9
	0.7nm,0.5s,baz=243,slow=2.0,SNR=4.0						
TXAR				PKKPbc		07 32 34.0	
	0.4nm,0.7s,baz=106,slow=6.6,SNR=3.0						
CFAA	**Coronel Fontan**	**147.45**	**156**	PKPbc	PKPdf	07 23 26.5	+6.1
	2.7nm,0.6s,baz=251,slow=5.0,SNR=4.1						
CFAA	**Coronel Fontan**	**147.45**	**156**	PKPbc	PKPdf	07 23 26.5	+6.1
SIV	**San Ignacio**	**164.22**	**151**	PKPab	PKPab	07 24 39.0	+0.4
	3.3nm,0.7s,baz=225,slow=2.7,SNR=1.8						
CS6B	**Jaguaretama**	**165.08**	**257**	*e*P	PKPdf	07 23 35.3	-8.1
CS6B				*e*		07 23 36.3	
CS6B				*e*		07 23 37.8	
CS6B				*e*		07 23 40.6	

MAN 13 07:25:21.0, 10.93N×126.31E, h36^{km}, mb4.3, ML3.2, MS3.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.09**	**308**	*e*P	P	07 25 40.5	+0.6
PLP	**Palo**	**1.33**	**280**	*e*P	P	07 25 43.8	+0.3
PLP				*i* S	S	07 25 59.1	-1.0
SCPH	**Surigao**	**1.40**	**215**	*e*P	P	07 25 44.2	-0.2
SCPH				*e*S	S	07 25 59.4	-2.4
MSLP	**Maasin**	**1.63**	**241**	*e*P	P	07 25 48.3	+0.6
MSLP				*e*S	S	07 26 07.8	+0.1
CNP	**Catarman**	**2.25**	**314**	*e*P	P	07 25 56.9	+0.3
CNP				*e*S	S	07 26 23.8	+0.3
TBP	**Tagbilaran**	**2.70**	**243**	*e*P	P	07 26 04.6	+1.5
TBP				*e*S	S	07 26 35.0	+0.1
BUKP	**Musuan**	**3.27**	**202**	*e*P	P	07 26 08.6	-2.6
PVCP	**Virac**	**3.39**	**322**	*e*P	P	07 26 11.6	-1.2
GUIM	**Jordan**	**3.67**	**266**	*e*P	P	07 26 16.2	-0.6
PAGZ	**Pagadian**	**4.21**	**224**	*e*P	P	07 26 24.4	-0.1

*NEIC **13** 07:38:40.1±0.9, 2.11N×126.76E, h10^{km}, mb4.2/2, Error ellipse: s-maj=48.6km s-min=13.9km az=80.0*

IDC 13 07:38:38.6±1.3**, 2.10N×126.48E, mb3.9**/4**, mb1 4.2**/4**, mb1mx3.9**/15**, mbtmp4.0**/4**, Error ellipse: s-maj=63.4km s-min=22.3km az=80.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.09**	**182**	*e*P	P	07 43 15.7	-1.1
	7.6nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.09**	**182**	P	P	07 43 15.7	-1.1
	5.5nm,0.7s,slow=8.1,SNR=6.1						
WRAB	**Tennant Creek**	**23.21**	**161**	*e*P	P	07 43 47.0	-1.4
	14nm,1.0s						
WRA	**Warramunga Arr**	**23.22**	**161**	P	P	07 43 46.5	-2.0
	1.8nm,0.5s,baz=337,slow=11,SNR=22						
WB2	**Warramunga Arr**	**23.22**	**161**	*e*P	P	07 43 45.9	-2.6
MJAR	**Matsushiro Arr**	**35.95**	**16**	P	P	07 45 41.0	-2.0
	0.8nm,0.3s,baz=183,slow=11,SNR=4.0						
MKAR	**Makanchi Array**	**58.75**	**326**	P	P	07 48 38.4	-2.4
	0.4nm,0.3s,baz=120,slow=7.8,SNR=7.5						

*NNC **13** 07:38:49.8±3.5, 36.90N×70.82E, h148^{km}±56^{km}, mpv3.4, Error ellipse: s-maj=38.1km s-min=16.0km az=38.0*

ISC 13 07:38:43.3±2.1**, 36.50N**±0.09×**71.1E**±0.2**, h146**^{km}±34^{km}**, n10, σ0^{s}93**/14**, 3C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.61**	**357**	P	**P**	**07 40 19.8**	**+0.6**
	0.8nm,0.2s,baz=178,slow=11,SNR=38						
KK31				⇑S	**S**	**07 41 29.5**	**-4.1**
	2.6nm,0.3s,baz=173,slow=15,SNR=13						
AAK	**Ala-Archa**	**6.68**	**22**	⇑P	**P**	**07 40 21.5**	**+1.5**
	1.8nm,0.4s						
AAK				⇑S	**S**	**07 41 34.4**	**-0.9**
	9.0nm,0.6s						
SMLA	**Simla**	**7.38**	**135**	*i* P	**P**	**07 40 28.9**	**-0.7**
SMLA				*i* S	**S**	**07 41 48.6**	**-3.6**
KOLN	**Koldanda**	**13.73**	**126**	*e*P	**P**	**07 41 52.4**	**-0.4**
	6.0nm,0.2s						
GKN	**Gorkha**	**14.27**	**123**	*e*P	**P**	**07 41 59.4**	**-0.2**
	16nm,0.3s						
DMN	**Daman**	**14.84**	**123**	*e*P	**P**	**07 42 06.6**	**-0.2**
	6.7nm,0.2s						
KKN	**Kakani**	**14.84**	**122**	*e*P	**P**	**07 42 06.5**	**-0.4**
PKI	**Pulchoki**	**15.07**	**122**	*e*P	**P**	**07 42 10.6**	**+0.9**
	9.5nm,0.3s						
AB31	**Akbulak array**	**15.11**	**331**	P	**P**	**07 42 10.0**	**-0.1**
	1.3nm,0.6s,baz=140,slow=12,SNR=14						
AB31				⇓S	**S**	**07 44 52.9**	**-0.6**
	0.5nm,0.5s,baz=156,slow=22,SNR=3.2						
GUN	**Gumba**	**15.18**	**120**	*e*P	**P**	**07 42 12.7**	**+1.6**
	14nm,0.4s						

IDC 13 07:48:10.6±3.3**, 1.83N×96.98E, mb3.6**/4**, mb1 3.7**/4**, mb1mx3.6**/17**, mbtmp3.6**/4**, Error ellipse: s-maj=128.7km s-min=27.6km az=55.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.55**	**122**	P	P	07 56 08.4	-1.8
	0.7nm,1.2s,baz=301,slow=9.1,SNR=3.6						
SONM	**Songino Array**	**46.54**	**9**	P	P	07 56 40.1	-1.7
	0.4nm,0.4s,baz=202,slow=7.8,SNR=3.6						
MKAR	**Makanchi Array**	**46.58**	**346**	P	P	07 56 40.2	-1.9
	0.4nm,0.6s,baz=155,slow=9.0,SNR=6.4						
BVAR	**Borovoye Array**	**55.58**	**341**	P	P	07 57 47.7	-2.6
	0.4nm,0.4s,baz=149,slow=8.6,SNR=4.4						

MAN 13 07:54:28.2, 14.06N×122.55E, h1^{km}, mb4.1, ML2.9, MS2.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.75**	**171**	*e*P	Pg	07 54 42.5	-0.5
AUQP				*e*S	Sg	07 54 56.4	+3.3
POLP	**Polilio Island**	**0.89**	**318**	*e*P	Pg	07 54 45.1	-0.8
POLP				*e*S	Sg	07 54 56.7	-1.0
BOAC	**Boac**	**0.91**	**229**	*e*P	Pg	07 54 45.8	-0.6
BOAC				*e*S	Sg	07 54 58.2	-0.3
LBPH	**Los Banos**	**1.33**	**274**	*i* P	Pb	07 54 53.2	-0.5
ARP	**Angono**	**1.43**	**289**	*e*P	Pn	07 54 54.9	-0.5
NZB	**Bigte**	**1.61**	**300**	*e*P	Pn	07 54 57.9	0.0
PVCP	**Virac**	**1.63**	**106**	*e*P	Pn	07 54 55.6	-2.5
PVCP				*e*S	Sb	07 55 16.3	-3.3
OTRP	**Odiongan**	**1.77**	**197**	*e*P	Pn	07 54 58.2	-1.9
OTRP				*e*S	Sn	07 55 21.6	-2.0
BALP	**Baler**	**1.92**	**331**	*e*P	Pn	07 55 02.2	-0.1
BALP				*e*S	Sn	07 55 26.6	-0.8
PCPH	**Palayan**	**2.05**	**317**	⇓*e*P	Pn	07 55 04.4	+0.2
PCPH				*e*S	Sn	07 55 32.9	+2.2
SJMP	**San Jose**	**2.12**	**221**	*e*P	Pn	07 55 05.5	+0.4
LUBP	**Lubang**	**2.26**	**262**	*e*P	Pn	07 55 07.5	+0.3
LUBP				*e*S	Sn	07 55 36.6	+0.5
CNP	**Catarman**	**2.57**	**127**	*e*P	Pn	07 55 12.4	+0.8
CNP				*e*S	Sn	07 55 12.4	-32
CVP	**Callao Caves**	**3.69**	**349**	*e*P	Pn	07 55 29.0	+1.5

SKHL 13 08:56:15.3±0.3**, 52.80N×144.01E, h10**^{km}**, mb4.2**/3**, Sea of Okhotsk**

*WAR **13** 08:59:04, 49.31N×19.87E, ML2.6, Mining Induced*

*PRU **13** 08:59:08.8, 49.46N×19.80E*

ISC 13 08:59:06.4±0.6**, 49.40N**±0.03×**19.93E**±0.05**, n7, σ0^{s}89**/13**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIE	**Niedzica**	**0.25**	**85**	*e*PG	**Pg**	**08 59 12.0**	**+0.6**
NIE				*e*SG	**Sg**	**08 59 16.0**	**+1.3**
OJC	**Ojcow**	**0.83**	**354**	*e*PG	**Pg**	**08 59 23.0**	**+0.1**
OJC				*e*SG	**Sg**	**08 59 34.0**	**+0.1**
KECS	**Kecovo**	**0.99**	**158**	*e*PG	**Pg**	**08 59 25.1**	**-0.9**
KECS				*e*SG	**Sg**	**08 59 38.4**	**-0.8**
VYHS	**Vyhne**	**1.16**	**219**	*e*PG	**Pg**	**08 59 29.9**	**+0.4**
VYHS				*e*SG	**Sg**	**08 59 46.6**	**+1.7**
OKC	**Ostrava-Krasne**	**1.24**	**291**	*e*PG	**Pg**	**08 59 30.4**	**-0.7**
OKC				*e*SG	**Sg**	**08 59 47.3**	**-0.4**
KOLS	**Kolonicke sedl**	**1.61**	**106**	*e*PG	**Pg**	**08 59 37.2**	**-1.2**
DPC	**Dobruska-Polom**	**2.52**	**294**	*e*PG	**Pg**	**08 59 52.0**	**-4.7**
DPC				*e*SG	**Sg**	**09 00 24.0**	**-6.3**

*IDC **13** 09:07:12.8±0.8, 2.15N×126.66E, mb4.0/8, mb1 4.3/8, mb1mx4.1/15, mbtmp4.1/8, Error ellipse: s-maj=50.4km s-min=17.2km az=77.0*
*NEIC **13** 09:07:14.8±0.6, 2.13N×126.91E, h10^{km}, mb4.5/3, Error ellipse: s-maj=24.5km s-min=9.8km az=77.0*
ISC 13 09:07:16.1±0.6**, 2.14N**±0.08×**126.6E**±0.2**, h33^{km}, n17, σ0^{s}51**/17**, mb4.0**/9**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**15.86**	**159**	*e*P	**P**	**09 11 02.5**	**+3.8**
	9.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.14**	**183**	*e*P	**P**	**09 11 49.3**	**-1.0**
	11nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.14**	**183**	P	**P**	**09 11 49.3**	**-0.9**
	14nm,0.4s,baz=7.3,slow=8.1,SNR=28						
WRAB	**Tennant Creek**	**23.23**	**161**	*e*P	**P**	**09 12 21.8**	**+0.3**
	16nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**23.23**	**161**	P	**P**	**09 12 21.1**	**-0.4**
	8.0nm,0.7s,mb4.2,baz=340,slow=11,SNR=71						
WB2	**Warramunga Arr**	**23.24**	**161**	*e*P	**P**	**09 12 21.6**	**+0.1**
MBWA	**Marble Bar**	**24.11**	**196**	*e*P	**P**	**09 12 30.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**31.57**	**303**	P	**P**	**09 13 42.6**	**+4.5**
	0.5nm,0.3s,mb3.8,baz=128,slow=6.9,SNR=4.5						
MJAR	**Matsushiro Arr**	**35.88**	**16**	P	**P**	**09 14 14.7**	**-0.3**
	1.8nm,0.6s,mb4.2,baz=181,slow=10,SNR=5.6						
NWAO	**Narrogin (SRO)**	**35.98**	**193**	*e*P	**P**	**09 14 16.2**	**+0.2**
STKA	**Stephens Creek**	**36.71**	**158**	P	**P**	**09 14 21.9**	**-0.2**
	2.5nm,0.6s,mb4.2,baz=352,slow=14,SNR=4.6						
STKA	**Stephens Creek**	**36.71**	**158**	P	**P**	**09 14 21.7**	**-0.4**
MKAR	**Makanchi Array**	**58.77**	**326**	P	**P**	**09 17 13.2**	**-0.2**
	0.9nm,0.3s,mb4.2,baz=110,slow=9.5,SNR=11						
MKAR				PcP	PcP	09 18 02.2	-0.3
	0.6nm,0.6s,baz=117,slow=5.4,SNR=3.8						
BVAR	**Borovoye Array**	**68.56**	**327**	P	**P**	**09 18 17.5**	**0.0**
	1.0nm,0.6s,mb3.9,baz=141,slow=9.5,SNR=5.3						
VNDA	**Vanda**	**81.88**	**173**	P	**P**	**09 19 33.6**	**+0.4**
	1.0nm,0.8s,mb3.8,baz=292,slow=6.1,SNR=4.2						
VNDA	**Vanda**	**81.88**	**173**	P	**P**	**09 19 33.6**	**+0.4**
ILAR	**Eielson Array**	**86.59**	**25**	P	**P**	**09 19 57.4**	**+0.4**
	0.2nm,0.5s,mb3.6,baz=253,slow=4.1,SNR=4.7						

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*IDC **13** 09:20:44.4±1.1, 25.28S×116.03W, mb4.4/12, mb1 4.6/12, mb1mx4.4/19, mbtmp4.4/12, MS4.0/16, Ms1 4.0/16, ms1mx4.0/20, Error ellipse: s-maj=38.1km s-min=18.1km az=51.0*
*BJI **13** 09:20:45.3, 25.40S×116.10W, h11^{km}, mB5.3, Ms5.0, Msz4.9*
*HRVD **13** 09:20:45.3±0.7, 25.41S×116.17W, h16^{km}±3^{km}, MW4.8/49, Centroid moment Tensor Solution. LP body waves: s12,c15;Mantle waves: s49,c67; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.38±.20; $M_{\theta\theta}$-1.26±.16; $M_{\phi\phi}$1.63±.20; $M_{r\theta}$-0.36±.46; $M_{\theta\phi}$1.76±.13; $M_{\phi r}$0.02±.49; Best double couple: $M_0$2.313×10^{16} NP1:ϕ_s161°,δ80°, λ-174°. NP2:ϕ_s70°,δ84°,λ-10°. Principal axes: T 2.469, Plg3°, Azm116°; N -.318, Plg79°, Azm220°; P -2.156, Plg11°, Azm25°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **13** 09:20:45.3±0.3, 25.39S×116.12W, mb5.0/41, MS4.2/5 Error ellipse: s-maj=12.8km s-min=6.8km az=74.0*
ISC 13 09:20:43.8±0.5**, 25.32S**±0.08×**116.1W**±0.1**, h12^{km}, h12^{km}**±.3^{km}**:pP-P, n117, σ0^{s}88**/88**, mb4.8**/48**, MS4.2**/24**, 3C-1D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	**Papeete**	**32.00**	**277**	LR	LR	09 36 25.4	
	comp=Z,844nm,18.3s,MS4.5,baz=108,slow=29						
PLCA	**Paso Flores**	**40.73**	**124**	P	**P**	**09 28 27.4**	**+1.3**
	6.7nm,0.8s,mb4.3,baz=271,slow=8.8,SNR=16						
PLCA				LR	LR	09 41 11.8	
	comp=Z,193nm,18.6s,MS4.0,baz=286,slow=30						
PLCA	**Paso Flores**	**40.73**	**124**	*e*P	**P**	**09 28 27.2**	**+1.1**
	16nm,0.9s,mb4.7						
CFAA	**Coronel Fontan**	**42.31**	**110**	LR	LR	09 42 01.8	
	comp=Z,42nm,20.7s,MS3.3,baz=86,slow=30						
OTAV	**Otavalo**	**44.41**	**61**	P	**P**	**09 28 57.7**	**+1.3**
	5.1nm,1.0s,mb4.2						
LPAZ	**La Paz**	**45.57**	**88**	P	**P**	**09 29 06.3**	**+0.7**
	4.4nm,0.9s,mb4.4,baz=280,slow=7.6,SNR=14						
LPAZ				LR	LR	09 43 31.1	
	comp=Z,137nm,20.9s,MS3.9,baz=226,slow=30						
LPAZ	**La Paz**	**45.57**	**88**	*e*P	**P**	**09 29 05.9**	**+0.3**
	5.8nm,0.9s,mb4.5						
LPAZ				LR	LR		
	comp=Z,151nm,20.0s,MS3.9						
USHA	**Ushuaia**	**45.63**	**143**	LR	LR	09 43 51.5	
	comp=Z,384nm,18.2s,MS4.4,baz=179,slow=30						
JTS	**JuntasAbangare**	**46.65**	**44**	LR	LR	09 43 27.6	
	comp=Z,162nm,21.9s,MS3.9,baz=18,slow=29						
CPUP	**Villa Florida**	**52.54**	**105**	P	**P**	**09 29 59.1**	**-0.3**
	comp=Z,2.9nm,0.9s,mb4.2,baz=288,slow=12,SNR=3.4						
CPUP				LR	LR	09 49 07.9	
	comp=Z,286nm,18.3s,MS4.3,baz=91,slow=32						
SAML	**Samuel**	**52.82**	**82**	P	**P**	**09 30 01.1**	**-0.5**
	comp=Z,7.8nm,1.4s,mb4.5						
SAML				*e*	pP	09 30 04.5	-0.8
SAML				LR	LR		
	comp=Z,212nm,20.0s,MS4.2						
TXAR	**Lajitas Array**	**55.65**	**13**	P	**P**	**09 30 22.4**	**+0.2**
	comp=Z,1.2nm,0.9s,mb3.9,baz=198,slow=7.9,SNR=6.6						
TXAR				PcP	PcP	09 31 24.2	+2.6
	comp=Z,1.0nm,1.0s,baz=270,slow=1.3,SNR=4.4						
TXAR				LR	LR	09 50 34.7	
	comp=Z,88nm,19.1s,MS3.9,baz=195,slow=32						
SDV	**Santo Domingo**	**55.84**	**58**	*e*P	**P**	**09 30 23.5**	**-0.2**
	comp=Z,19nm,1.2s,mb5.0						
SDV				*e*	pP	09 30 27.7	+0.2
TUC	**Tucson**	**57.53**	**5**	*e*P	**P**	**09 30 35.9**	**+0.3**
	comp=Z,9.2nm,1.1s,mb4.7						
TUC				*e*	pP	09 30 39.4	0.0
CPRX	**Cap Rock**	**59.19**	**12**	*e*P	**P**	**09 30 45.5**	**-1.7**
LENM	**Lemitar**	**59.80**	**9**	*e*P	**P**	**09 30 52.0**	**+0.7**
BNM	**Barren Site**	**59.83**	**9**	*e*P	**P**	**09 30 52.2**	**+0.7**
LDFC	**Landfair**	**60.08**	**1**	*e*P	**P**	**09 30 54.1**	**+0.9**
ANMO	**Albuquerque**	**60.64**	**9**	P	**P**	**09 30 58.3**	**+1.2**
	comp=Z,3.6nm,1.1s,mb4.4,baz=178,slow=9.4,SNR=5.8						
NEN	**Nelson**	**60.65**	**1**	*e*pP	pP	09 31 00.9	0.0
WUAZ	**Wupatki**	**60.67**	**4**	*e*P	**P**	**09 30 57.3**	**0.0**
	comp=Z,23nm,1.3s,mb5.2						
AMTX	**Amarillo**	**61.42**	**14**	*e*P	**P**	**09 31 01.5**	**-0.9**
	comp=Z,13nm,1.2s,mb5.0						
ARUT	**Antelope Range**	**62.82**	**2**	*e*P	**P**	**09 31 12.3**	**+0.6**
ARUT				*e*	pP	09 31 16.2	+0.8
CMB	**Columbia Colle**	**63.14**	**356**	*e*P	**P**	**09 31 11.5**	**-2.3**
	comp=Z,16nm,1.2s,mb5.0						
CMB				LR	LR		
	comp=Z,120nm,19.0s,MS4.1						
TRCR	**Troy Canyon**	**63.34**	**0**	P	**P**	**09 31 16.2**	**+1.2**
TRCR				*e*	pP	09 31 19.9	+1.1
NVAR	**Mina Array Bea**	**63.45**	**358**	P	**P**	**09 31 15.6**	**-0.2**
	comp=Z,11nm,0.9s,mb5.0,baz=197,slow=9.3,SNR=39						
NVAR				LR	LR	09 52 26.4	
	comp=Z,132nm,18.1s,MS4.2,slow=30						
SDCO	**Great Sand Dun**	**63.52**	**9**	*e*P	**P**	**09 31 16.1**	**-0.2**
	comp=Z,19nm,1.1s,mb5.0						
SDCO				*e*	pP	09 31 19.8	-0.2
MSU	**Marysvale**	**63.60**	**3**	*e*pP	pP	09 31 20.7	+0.1
VNDA	**Vanda**	**63.73**	**194**	LR	LR	09 52 18.3	
	comp=Z,187nm,18.6s,MS4.3,baz=41,slow=30						
BDFB	**Brasilia**	**63.97**	**96**	P	**P**	**09 31 18.1**	**-1.5**
	comp=Z,5.7nm,1.0s,mb4.5,baz=226,slow=1.8,SNR=4.0						
BDFB				LR	LR	09 55 55.4	
	comp=Z,180nm,21.8s,MS4.2,baz=264,slow=33						
SRU	**San Rafael**	**64.31**	**5**	*e*P	**P**	**09 31 21.2**	**-0.2**
SRU				*e*	pP	09 31 24.9	-0.3
LRAL	**Lakeview Retre**	**64.33**	**27**	*e*pP	pP	09 31 23.8	-1.7
	comp=Z,5.6nm,0.8s						
WCN	**Washoe City**	**64.37**	**357**	*e*P	**P**	**09 31 20.8**	**-1.1**
	comp=Z,18nm,1.3s,mb5.0						
QSPA	**South Pole Qui**	**64.84**	**180**	*e*P	**P**	**09 31 24.3**	**+0.1**
	comp=Z,10nm,1.1s,mb4.8						
QSPA				LR	LR		
	comp=Z,277nm,20.0s,MS4.5						
NLU	**North Lily Min**	**65.05**	**3**	*e*P	**P**	**09 31 26.6**	**+0.3**
NLU				*e*	pP	09 31 31.0	+1.0
MPU	**Maple Canyon**	**65.13**	**4**	*e*P	**P**	**09 31 26.3**	**-0.4**
MPU				*e*	pP	09 31 30.7	+0.2
ISCO	**Idaho Springs**	**65.52**	**9**	*e*P	**P**	**09 31 30.0**	**+0.8**
	comp=Z,19nm,1.3s,mb5.0						
DAU	**Daniels Canyon**	**65.55**	**4**	P	**P**	**09 31 30.4**	**+1.0**
DAU				*e*	pP	09 31 33.8	+0.6
PLAL	**Pickwick Lake**	**65.61**	**25**	*e*P	**P**	**09 31 28.4**	**-1.5**
	comp=Z,8.5nm,1.2s,mb4.7						
PLAL				*e*	pP	09 31 31.8	-1.8
JLU	**Jordanelle**	**65.73**	**4**	*e*P	**P**	**09 31 31.1**	**+0.5**
JLU				*e*	pP	09 31 34.5	+0.1
ELK	**Elko**	**65.73**	**1**	P	**P**	**09 31 31.8**	**+1.2**
	comp=Z,3.4nm,1.0s,mb4.3,baz=187,slow=8.0,SNR=7.6						
ELK	**Elko**	**65.73**	**1**	*e*P	**P**	**09 31 31.3**	**+0.7**
	comp=Z,6.6nm,1.1s,mb4.6						
CTU	**Camp Tracy**	**65.80**	**4**	*e*P	**P**	**09 31 31.9**	**+0.9**
CTU				*e*	pP	09 31 35.2	+0.5
WDC	**Whiskeytown Da**	**65.83**	**355**	*e*P	**P**	**09 31 30.9**	**-0.3**
	comp=Z,20nm,1.2s,mb5.0						
WDC				*e*	pP	09 31 34.6	-0.4
TCUT	**Toone Canyon**	**66.24**	**4**	P	**P**	**09 31 34.6**	**+0.8**
TCUT				*e*	pP	09 31 37.7	+0.1
KSU1	**Kansas State U**	**66.64**	**16**	*e*P	**P**	**09 31 36.4**	**-0.1**
KSU1				*e*	pP	09 31 39.5	-0.7
SWET	**Sewanee**	**66.66**	**27**	*e*P	**P**	**09 31 35.4**	**-1.2**
SWET				*e*	pP	09 31 39.1	-1.2
HWUT	**Hardware Ranch**	**66.72**	**4**	P	**P**	**09 31 35.8**	**-1.1**
	comp=Z,7.6nm,1.0s,mb4.7						
MOD	**Modoc**	**66.99**	**357**	*e*P	**P**	**09 31 38.9**	**+0.3**
	comp=Z,29nm,1.2s,mb5.2						
MOD				*e*	pP	09 31 42.6	+0.2
WVOR	**Wild Horse Val**	**67.45**	**358**	P	**P**	**09 31 41.2**	**-0.4**
	comp=Z,12nm,1.0s,mb4.9						
WVOR				*e*	pP	09 31 45.6	+0.3
AHID	**Auburn Hatcher**	**67.90**	**4**	*e*P	**P**	**09 31 43.4**	**-1.0**
	comp=Z,12nm,1.0s,mb4.9						
AHID				*e*	pP	09 31 46.9	-1.3
PDAR	**Pinedale Array**	**68.02**	**5**	P	**P**	**09 31 44.1**	**-0.9**
	comp=Z,8.6nm,1.1s,mb4.7,baz=177,slow=4.7,SNR=24						
PDAR				LR	LR	09 57 23.4	
	comp=Z,60nm,19.1s,MS3.8,baz=170,slow=32						
RRI2	**Red Ridge**	**68.47**	**4**	*e*P	**P**	**09 31 47.5**	**-0.3**
	comp=Z,30nm,1.2s,mb5.2						
RRI2				*e*	pP	09 31 51.4	-0.2
HLID	**Hailey**	**68.56**	**1**	*e*P	**P**	**09 31 49.0**	**+0.6**
	comp=Z,16nm,1.0s,mb4.9						
HLID				*e*	pP	09 31 52.5	+0.3
SNOW	**Snow King Moun**	**68.62**	**4**	*e*P	**P**	**09 31 47.0**	**-1.8**
	comp=Z,12nm,1.0s,mb4.8						
SNOW				*e*	pP	09 31 51.6	-0.9
TPAW	**Teton Pass**	**68.63**	**4**	*e*P	**P**	**09 31 48.8**	**-0.1**
	comp=Z,24nm,0.9s,mb5.1						
TPAW				*e*	pP	09 31 52.2	-0.4
WUWY	**Wally Ulrich**	**68.70**	**4**	*e*P	**P**	**09 31 48.6**	**-0.7**
WUWY				*e*	pP	09 31 52.4	-0.7
LOHW	**Long Hollow**	**68.78**	**4**	*e*P	**P**	**09 31 49.3**	**-0.5**
	comp=Z,19nm,1.1s,mb4.9						
LOHW				*e*	pP	09 31 52.8	-0.8
TZTN	**Tazewell**	**68.78**	**28**	*e*P	**P**	**09 31 49.5**	**-0.4**
MOOW	**Moose Ponds**	**68.91**	**4**	*e*P	**P**	**09 31 50.2**	**-0.3**
	comp=Z,21nm,1.3s,mb4.9						
MOOW				*e*	pP	09 31 53.9	-0.4
IMW	**Indian Meadow**	**69.04**	**4**	*e*P	**P**	**09 31 50.3**	**-1.1**
	comp=Z,23nm,1.1s,mb5.0						
IMW				*e*	pP	09 31 54.8	-0.4
LKWY	**Lake**	**69.74**	**4**	P	**P**	**09 31 56.8**	**+1.1**
	comp=Z,11nm,1.0s,mb4.7						
YMR	**Madison River**	**69.81**	**4**	*e*P	**P**	**09 31 57.0**	**+0.9**
YMR				*e*	pP	09 32 00.1	+0.2
BMO	**Blue Mountains**	**69.84**	**359**	*e*P	**P**	**09 31 56.7**	**+0.5**
	comp=Z,7.8nm,1.0s,mb4.6						
MCMT	**McKenzie Canyo**	**69.87**	**2**	*e*P	**P**	**09 31 56.5**	**+0.1**
MCMT				*e*	pP	09 32 00.7	+0.5
QLMT	**Earthquake Lak**	**69.94**	**4**	*e*P	**P**	**09 31 57.7**	**+0.9**
QLMT				*e*	pP	09 32 01.6	+0.9
RSSD	**Black Hills**	**69.98**	**9**	*e*P	**P**	**09 31 57.0**	**-0.1**
	comp=Z,14nm,1.1s,mb4.8						
RSSD				*e*	pP	09 32 00.4	-0.5
VNA3	**Neumayer Olymp**	**71.37**	**161**	*e*	**P**	**09 32 07.8**	**+2.7**
VNA3	**Neumayer Olymp**	**71.37**	**161**	*e*	**P**	**09 32 09.5**	**+4.4**
VNA3	**Neumayer Olymp**	**71.37**	**161**	*e*	PcP	09 32 21.3	-3.7
VNA3	**Neumayer Olymp**	**71.37**	**161**	⇑*i*P	**P**	**09 32 04.4**	**-0.7**
VNA3				*e*	pP	09 32 07.8	-1.1
VNA3				*e*	pP	09 32 09.5	+0.6
VNA3				*e*		09 32 21.3	
HRY	**Holter Researc**	**71.80**	**3**	*e*P	**P**	**09 32 08.5**	**+0.4**
HRY				*e*	pP	09 32 11.8	0.0
MSO	**Missoula**	**71.83**	**2**	*e*P	**P**	**09 32 08.4**	**+0.1**
	comp=Z,7.4nm,1.1s,mb4.5						
MSO				*e*	pP	09 32 12.0	0.0
CHMT	**Chamberlain Mo**	**71.94**	**2**	*e*P	**P**	**09 32 09.4**	**+0.5**
VNA1	**Neumayer--Stat**	**72.04**	**161**	*e*	**P**	**09 32 10.7**	**+1.6**
VNA1	**Neumayer--Stat**	**72.04**	**161**	*e*	**P**	**09 32 12.3**	**+3.2**
VNA1	**Neumayer--Stat**	**72.04**	**161**	*e*	PcP	09 32 25.9	-2.0
VNA1	**Neumayer--Stat**	**72.04**	**161**	⇑*i*P	**P**	**09 32 07.3**	**-1.8**
VNA1				*e*	pP	09 32 10.7	-2.2
VNA1				*e*	pP	09 32 12.3	-0.6
VNA1				*e*		09 32 25.9	
VNA2	**Neumayer--Watz**	**72.18**	**161**	*e*	**P**	**09 32 12.1**	**+2.1**
VNA2	**Neumayer--Watz**	**72.18**	**161**	*e*	**P**	**09 32 14.2**	**+4.2**
VNA2	**Neumayer--Watz**	**72.18**	**161**	*e*	PcP	09 32 24.9	-3.6
VNA2	**Neumayer--Watz**	**72.18**	**161**	⇑*i*P	**P**	**09 32 08.4**	**-1.6**
VNA2				*e*	pP	09 32 12.1	-1.6
VNA2				*e*		09 32 14.2	
VNA2				*e*		09 32 24.9	
LAO	**LASA Array**	**72.23**	**7**	*e*P	**P**	**09 32 10.8**	**+0.1**
	comp=Z,20nm,0.9s,mb5.0						
LAO				*e*	pP	09 32 13.7	-0.7
SNAA	**Sanae**	**73.13**	**162**	*e*P	**P**	**09 32 14.1**	**-1.3**
	comp=Z,7.3nm,1.3s,mb4.5						
NEW	**Newport**	**73.25**	**359**	P	**P**	**09 32 17.2**	**+0.6**
	comp=Z,9.8nm,1.0s,mb4.7,baz=170,slow=8.5,SNR=10						
NEW	**Newport**	**73.25**	**359**	*e*P	**P**	**09 32 16.4**	**-0.2**
	comp=Z,16nm,1.2s,mb4.8						
NEW				*e*	pP	09 32 20.0	-0.4
DGMT	**Dagmar**	**74.23**	**8**	*e*P	**P**	**09 32 22.5**	**+0.2**
	comp=Z,48nm,1.2s,mb5.3						
DGMT				*e*	pP	09 32 26.2	+0.2
EYMN	**Ely**	**76.22**	**17**	*e*P	**P**	**09 32 32.9**	**-0.8**
	comp=Z,11nm,0.9s,mb4.8						
EYMN				*e*	pP	09 32 36.7	-0.7
BINY	**Binghamton**	**76.74**	**29**	*e*pP	pP	09 32 40.4	-0.1
	comp=Z,13nm,1.0s						
ULM	**Lac du Bonnet**	**77.35**	**13**	P	**P**	**09 32 39.9**	**0.0**
	comp=Z,5.4nm,0.7s,mb4.6,baz=222,slow=6.2,SNR=6.3						
EDM	**Edmonton**	**78.25**	**2**	*e*P	**P**	**09 32 43.7**	**-1.0**
EDM				*e*	pP	09 32 48.6	0.0
ACCN	**Adirondack Com**	**78.72**	**30**	P	**P**	**09 32 49.0**	**+1.4**
NCB	**Newcomb**	**78.93**	**29**	*e*P	**P**	**09 32 49.3**	**+0.6**
	comp=Z,15nm,1.2s,mb4.8						
FRNY	**Flat Rock**	**79.89**	**29**	P	**P**	**09 32 54.9**	**+1.0**
FFC	**Flin Flon**	**80.64**	**8**	*e*P	**P**	**09 32 57.6**	**-0.1**
	comp=Z,13nm,1.1s,mb4.8						
FFC				*e*	pP	09 33 01.0	-0.5
DLBC	**Dease Lake**	**84.24**	**353**	*e*P	**P**	**09 33 17.2**	**+1.1**
DLBC				*e*	pP	09 33 20.9	+0.9
SYO	**Syowa Base**	**84.29**	**171**	⇓sP	sP	09 33 23.7	+2.4
FCC	**Fort Churchill**	**85.75**	**11**	*e*P	**P**	**09 33 22.0**	**-1.7**
	comp=Z,19nm,1.1s,mb5.2						
FCC				*e*	pP	09 33 27.3	-0.2
MAW	**Mawson**	**87.36**	**180**	LR	LR	10 08 07.0	
	comp=Z,133nm,21.4s,MS4.3,baz=247,slow=32						
YKA	**Yellowknife Ar**	**87.51**	**1**	P	**P**	**09 33 32.9**	**+0.7**
	comp=Z,6.1nm,1.0s,mb4.8,baz=173,slow=4.8,SNR=28						
YKA				LR	LR	10 08 33.8	
	comp=Z,82nm,18.2s,MS4.2,baz=155,slow=33						
YKW3	**Yellowknife Ar**	**87.58**	**1**	*e*P	**P**	**09 33 32.7**	**+0.1**
YKW3				*e*	pP	09 33 36.5	+0.1
SCHQ	**Schefferville**	**90.31**	**26**	LR	LR	10 09 19.5	
	comp=Z,56nm,20.4s,MS4.0,baz=76,slow=32						
ILAR	**Eielson Array**	**92.92**	**347**	P	**P**	**09 34 01.8**	**+4.4**
	comp=Z,0.8nm,1.1s,mb4.1,baz=194,slow=3.7,SNR=3.8						
ILAR				LR	LR	10 05 17.4	
	comp=Z,45nm,19.1s,MS3.9,baz=175,slow=29						
CN2	**Changchun**	**127.24**	**307**	*e*PKP	PKPdf	09 39 52.0	+0.3
SSE	**Sheshan**	**129.62**	**290**	PKP	PKPdf	09 39 56.4	-0.3
SSE				SS	SS	09 59 32.5	+4.8
SSE				LR	LR		
	comp=N,50nm,27.6s,MS4.2						
SSE				LR	LR		
	comp=E,40nm,27.7s,MS4.2						
SSE				LR	LR		
	comp=Z,60nm,22.4s						
CLL	**Collm**	**133.61**	**42**	*i* PKIKP	PKPdf	09 40 01.5	-2.0
LZH	**Lanzhou**	**144.21**	**297**	*e*PKP	PKPdf	09 40 15.8	-7.2
LZH				XPKP		09 40 20.8	
LZH				PP	PP		
	comp=Z,220nm,5.2s						
LZH	**Lanzhou**	**144.21**	**297**	*e*PKP	PKPdf	09 40 15.7	-7.3
LZH				sPKP		09 40 20.7	
LZH				PP	PP	09 43 28.2	-10
LZH				*e*SKKS		09 50 20.0	
LZH				SS	SS	10 02 16.0	-5.0
LZH				LR	LR		
	comp=Z,430nm,19.8s,MS5.2						
KMI	**Kunming**	**144.91**	**278**	PKP	PKPdf	09 40 21.3	-3.3
KMI				LR	LR		
	comp=Z,80nm,33.9s,MS4.3						
GTA	**Gaotai**	**146.77**	**304**	*e*PKP	PKPdf	09 40 26.3	-1.1
GTA				APKP		09 40 32.4	
GTA				XPKP		09 40 35.4	
GTA				PP	PP	09 43 55.4	+1.6
GTA				SKS	SKS	09 47 33.8	-1.5
GTA				SKKS		09 50 46.9	
GTA				PP	PP		
	comp=Z,120nm,5.7s						
GTA				LR	LR		
	comp=N,60nm,19.5s,MS4.8						
GTA				LR	LR		
	comp=E,160nm,22.2s,MS4.8						
GTA				LR	LR		
	comp=Z,240nm,21.8s,MS4.9						
CMAR	**Chiang Mai Arr**	**146.81**	**265**	PKPbc	PKPbc	09 40 29.4	+3.2
	comp=Z,3.0nm,1.0s,baz=139,slow=1.4,SNR=6.6						
ZAL	**Zalesovo**	**147.44**	**337**	PKPbc	PKPdf	09 40 27.7	-0.3
	comp=Z,3.6nm,1.0s,baz=73,slow=2.8,SNR=7.9						
ARU	**Arti**	**148.68**	**6**	*e*PKPbc	PKPdf	09 40 32.4	+2.5
ARU				*e*		09 40 36.1	
BRTR	**Keskin Array B**	**150.91**	**53**	PKPbc	PKPdf	09 40 37.5	+3.6
	comp=Z,7.9nm,0.9s,baz=243,slow=2.8,SNR=19						
WMQ	**Urumqi**	**153.21**	**320**	*e*PKP	PKPdf	09 40 35.1	-2.0
WMQ				LR	LR		
	comp=N,150nm,24.0s,MS4.9						
WMQ				LR	LR		
	comp=E,170nm,23.2s,MS4.9						
WMQ				LR	LR		
	comp=Z,190nm,22.8s,MS4.8						
MKAR	**Makanchi Array**	**154.02**	**330**	PKP	PKPdf	09 40 39.5	+1.4
	comp=Z,0.6nm,0.9s,baz=27,slow=3.2,SNR=3.6						
MKAR				PKPbc	PKPdf	09 40 44.8	+6.6
	comp=Z,1.3nm,0.8s,baz=45,slow=2.0,SNR=5.6						
MKAR	**Makanchi Array**	**154.02**	**330**	PKP	PKPdf	09 40 39.5	+1.3
MKAR				PKPbc	PKPdf	09 40 44.8	+6.6

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*IDC **13** 09:30:00.0±2.7, 25.35S×116.68W, mb3.9/4, mb1 4.3/4, mb1mx3.9/17, mbtmp3.9/4, MS3.6/1, Ms1 3.6/1, ms1mx3.0/19, Error ellipse: s-maj=91.7km s-min=40.0km az=41.0*
NEIC 13 09:30:01.4±2.4**, 25.32S**×**116.66W, h10^{km}, mb4.4**/7**, Error ellipse: s-maj=80.1km s-min=34.2km az=224.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**41.12**	**124**	LR	LR	09 50 20.4	
	comp=Z,85nm,19.4s,baz=325,slow=30						
LPAZ	**La Paz**	**46.04**	**89**	P	P	09 38 27.2	-0.2
	0.8nm,0.6s,baz=270,slow=9.1,SNR=5.3						
LPAZ	**La Paz**	**46.04**	**89**	*e*P	P	09 38 27.0	-0.4
	0.7nm,0.6s						
NVAR	**Mina Array Bea**	**63.43**	**359**	P	P	09 40 32.5	-1.2
	1.7nm,0.8s,baz=187,slow=7.3,SNR=9.9						
BW06	**Boulder Array**	**68.06**	**6**	*e*P	P	09 41 01.4	-1.9
	1.4nm,0.9s						
PDAR	**Pinedale Array**	**68.06**	**6**	P	P	09 41 00.1	-3.2
	0.9nm,0.8s,baz=166,slow=6.1,SNR=7.1						
HLID	**Hailey**	**68.57**	**2**	*e*P	P	09 41 04.8	-1.7
	2.9nm,0.9s						
TPAW	**Teton Pass**	**68.67**	**4**	*e*P	P	09 41 03.6	-3.5
	4.4nm,1.2s						
LOHW	**Long Hollow**	**68.82**	**5**	*e*P	P	09 41 08.6	+0.6
	2.3nm,1.0s						
MOOW	**Moose Ponds**	**68.94**	**5**	*e*P	P	09 41 09.4	+0.7
	3.4nm,1.1s						
IMW	**Indian Meadow**	**69.08**	**4**	*e*P	P	09 41 10.8	+1.2
	2.9nm,1.0s						
YKA	**Yellowknife Ar**	**87.52**	**1**	P	P	09 42 50.9	+0.7
	0.3nm,0.4s,baz=177,slow=4.8,SNR=7.2						
YKA	**Yellowknife Ar**	**87.52**	**1**	P	P	09 42 50.9	+0.7
BRTR	**Keskin Array B**	**151.29**	**53**	PKPbc	PKPdf	09 49 53.8	+1.5
	1.3nm,0.9s,baz=243,slow=2.8,SNR=3.8						
BVAR	**Borovoye Array**	**151.83**	**351**	PKPbc	PKPdf	09 49 56.8	+4.2
	0.5nm,0.6s,baz=61,slow=5.8,SNR=3.3						

KRSC 13 09:31:00.9±0.4**, 50.99N**×**158.07E, h40^{km}**±33^{km}**, ML3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.92**	**302**	*i* P	P	09 31 17.7	+0.2
PAU				*i* S	S	09 31 30.2	+0.4
PAU				Smax			
	570nm,0.1s						
RUS	**Russkaya**	**1.47**	**11**	*i* P	P	09 31 24.6	-0.8
RUS				*i* S	S	09 31 41.9	-1.7
GRL	**Gorelyy**	**1.56**	**0**	*i* P	P	09 31 26.7	0.0
GRL				*i* S	S	09 31 45.4	-0.6
ALID	**Alaid**	**1.60**	**267**	*e*P	P	09 31 27.2	0.0
ALID				*e*S	S	09 31 46.5	-0.3
APC	**Apacha**	**2.02**	**344**	*i* P	P	09 31 33.6	+0.4
APC				*e*S	S	09 31 57.6	+0.3
APC				Smax			
	70nm,0.7s						
PET	**Petropavlovsk**	**2.07**	**10**	*e*P	P	09 31 33.8	-0.1
PET				*i* S	S	09 31 57.7	-0.9
UGLR	**Uglovaya**	**2.27**	**12**	*e*P	P	09 31 37.4	+0.6
UGLR				*e*S	S	09 32 03.8	+0.1
AVH	**Avacha**	**2.32**	**10**	*e*P	P	09 31 38.2	+0.8
AVH				*e*S	S	09 32 05.3	+0.4
NLC	**Nalytchevo**	**2.32**	**19**	*e*P	P	09 31 37.1	-0.4
NLC				*i* S	S	09 32 03.3	-1.7
KOK	**Koryaka**	**2.33**	**8**	*e*P	P	09 31 38.4	+0.8
KOK				*e*S	S	09 32 05.8	+0.5
SPN	**Mys Shipunski**	**2.43**	**29**	*e*P	P	09 31 39.2	+0.1
SPN				*e*S	S	09 32 07.1	-0.7
GNL	**Ganaly**	**2.71**	**358**	*e*P	P	09 31 43.3	+0.2
GNL				*e*S	S	09 32 14.3	-0.6
KII	**Karymskiy**	**3.17**	**15**	*e*P	P	09 31 51.6	+2.1
KII				*e*S	S	09 32 27.5	+1.0
MKZ	**Mys Kozlova**	**4.21**	**30**	*e*P	P	09 32 03.5	-0.8
MKZ				*e*S	S	09 32 49.8	-3.0
KBTR	**Krutoberegovo**	**5.94**	**27**	*e*P	P	09 32 27.2	-1.4
BKI	**Bering**	**6.36**	**45**	*e*P	P	09 32 32.2	-2.3
BKI				*e*S	S	09 33 39.1	-7.7

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*CSEM **13** 09:57:23.0±0.2, 29.29N×58.45E, h16^{km}, ML4.1/1, Error ellipse: s-maj=8.9km s-min=3.8km az=178.0*
THR 13 09:57:22.9±0.5**, 29.26N**×**58.44E, h14^{km}**±15^{km}**, ML3.3, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	**Kerman**	**1.63**	**297**	*e*PG	Pg	09 57 52.8	-2.8
KRBR				*e*SG	Sg	09 58 15.0	-2.4
ZHSF	**Zahedan**	**2.07**	**80**	*e*PG	Pg	09 58 00.4	-3.9
ZHSF				*e*SG	Sg	09 58 28.3	-3.6
ZHSF				AML	AML	09 58 31.4	
	comp=N,101nm,0.3s						
ZHSF	**Zahedan**	**2.07**	**80**	*e*Pg	Pg	09 58 00.4	-3.9
	SNR=90						
ZHSF				*e*Sg	Sg	09 58 28.3	-3.6
	comp=N,101nm,0.3s,SNR=90						
BNDS	**Bandar-Abbas**	**2.72**	**228**	*e*PN	Pn	09 58 08.3	+1.2
BNDS				AML	AML	09 59 00.6	
	comp=N,130nm,0.5s						
GHIR	**Ghir-Karzin**	**4.88**	**260**	*e*PN	Pn	09 58 38.3	+0.6
GHIR				AML	AML	09 59 47.0	
	comp=N,31nm,0.5s						

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*BJI **13** 10:12:39.1, 23.20S×177.70W, h198^{km}, mB4.8, mb4.6*
*NEIC **13** 10:12:39.1±1.6, 23.22S×177.67W, h198^{km}±15^{km}, mb4.2/25, Error ellipse: s-maj=12.1km s-min=7.1km az=136.0*
*IDC **13** 10:12:53.2±5.5, 23.76S×177.67W, h342^{km}±55^{km}, mb3.8/9, mb1 4.1/11, mb1mx3.8/19, mbtmp4.6/11, Error ellipse: s-maj=27.1km s-min=19.9km az=5.0*
ISC 13 10:12:35.1±1.5**, 23.46S**±0.05×**177.64W**±0.08**, h174^{km}**±13^{km}**, n70, σ0^{s}96**/63**, mb4.2**/30**, 5C-1D, South of**

Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	10.99	31	*e*Pn	P	10 15 08.3	-0.2
	81nm,0.9s						
DZM	Mont Dzumac	14.75	272	P	P	10 16 06.0	+10
	1.1nm,0.3s,baz=85,slow=18,SNR=11						
MWZ	Matawai	15.40	194	PN	P	10 16 04.6	+0.2
MWZ				SN	S	10 18 48.4	-1.5
URZ	Urewera	15.43	196	P	P	10 16 08.4	+3.6
	12nm,0.3s,baz=4.3,slow=1.4,SNR=63						
URZ				S	S	10 18 51.2	+0.6
	5.1nm,0.3s,baz=314,slow=22,SNR=20						
URZ	Urewera	15.43	196	PN	P	10 16 05.8	+1.0
KNZ	Kokohu	16.02	193	SN	S	10 19 00.2	-3.8
KIW	Kapiti Island	18.45	198	PN	P	10 16 38.8	-1.2
MTW	Mount Morrison	18.57	196	PN	P	10 16 40.5	-0.6
CAW	Cannon Point	18.64	197	PN	P	10 16 40.9	-1.0
MRW	Makara Radio	18.85	198	PN	P	10 16 43.1	-1.0
TCW	Tory Channel	18.96	199	PN	P	10 16 44.0	-1.2
TCW				SN	S	10 20 05.0	-1.5
QRZ	Quartz Range	19.20	203	PN	P	10 16 48.5	+0.9
NNZ	Nelson	19.25	201	PN	P	10 16 47.2	-1.0
TUWZ	Tuamarina	19.26	200	PN	P	10 16 47.1	-1.2
THZ	Tophouse	19.90	201	PN	P	10 16 55.0	+0.1
RPZ	Rata Peaks	22.25	202	P	P	10 17 19.5	+1.4
	7.9nm,0.5s,mb4.4,baz=46,slow=6.1,SNR=24						
FOZ	Fox Glacier	22.62	205	PN	P	10 17 22.3	+0.6
LBZ	Lake Benmore	23.15	203	PN	P	10 17 27.2	+0.5
TUZ	Tuapeka	24.70	202	PN	P	10 17 43.6	+2.1
CTA	Charters Tower	33.65	269	⇓*i*P	P	10 19 03.0	+1.7
	5.4nm,0.4s,mb4.6						
CTA	Charters Tower	33.65	269	P	P	10 19 03.1	+1.8
	6.0nm,0.4s,mb4.7,baz=96,slow=10,SNR=32						
CTAO	Charters Tower	33.65	269	*e*P	P	10 19 02.8	+1.4
	5.4nm,0.4s,mb4.6						
PMG	Port Moresby	36.42	287	P	P	10 19 25.1	+0.3
	22nm,0.9s,mb4.8						
STKA	Stephens Creek	36.90	248	*e*P	P	10 19 30.3	+1.6
	3.4nm,0.6s,mb4.2						
STKA	Stephens Creek	36.90	248	P	P	10 19 30.7	+2.1
	3.5nm,0.5s,mb4.2,baz=94,slow=9.6,SNR=7.1						
WB2	Warramunga Arr	44.59	265	⇑*i*P	P	10 20 31.5	-0.3
WRAB	Tennant Creek	44.59	265	*e*P	P	10 20 31.1	-0.7
	5.1nm,0.6s,mb4.3						
WRA	Warramunga Arr	44.60	265	P	P	10 20 31.8	-0.1
	1.7nm,0.3s,mb4.2,baz=90,slow=5.9,SNR=238						
FITZ	Fitzroy Crossi	53.03	264	P	P	10 21 35.1	-1.3
	4.6nm,0.5s,mb4.5,baz=158,slow=5.5,SNR=9.9						
SBA	Scott Base	54.96	184	*e*P	P	10 21 52.8	+3.0
	1.0nm,0.6s,mb3.7						
VNDA	Vanda	55.01	185	*e*P	P	10 21 52.2	+2.0
	0.9nm,0.7s,mb3.6						
MBWA	Marble Bar	57.58	259	*e*P	P	10 22 07.8	-1.3
	5.8nm,0.8s,mb4.5						
QSPA	South Pole Qui	66.63	180	*e*P	P	10 23 09.8	+1.4
	3.4nm,0.6s,mb4.3						
NVAR	Mina Array Bea	82.94	43	P	P	10 24 42.0	+0.2
	2.6nm,0.8s,mb4.0,baz=218,slow=8.2,SNR=16						
MDJ	Mudanjiang	83.12	325	P	P	10 24 43.3	+0.7
MDJ				AMB	AMB		
	comp=Z,20nm,3.3s						
MOD	Modoc	83.88	39	*e*P	P	10 24 46.5	0.0
	comp=Z,5.5nm,1.0s,mb4.2						
TUC	Tucson	84.54	51	*e*P	P	10 24 50.8	+0.7
	comp=Z,4.0nm,1.1s,mb4.1						
CN2	Changchun	84.84	322	*e*P	P	10 24 51.4	+0.2
WVOR	Wild Horse Val	85.17	40	*e*P	P	10 24 52.5	-0.4
	comp=Z,3.3nm,1.1s,mb4.0						
VNA3	Neumayer Olymp	85.19	176	⇑*i*	P	10 24 52.8	+0.5
VNA2	Neumayer--Watz	85.63	177	⇑*i*	P	10 24 55.9	+1.4
VNA1	Neumayer--Stat	85.86	176	⇑*i*	P	10 24 57.2	+1.6
MNTX	Cornudas Mount	88.19	54	*e*P	P	10 25 07.7	0.0
	comp=Z,2.8nm,0.7s,mb4.2						
SRU	San Rafael	88.33	46	*e*P	P	10 25 08.1	-0.1
HLID	Hailey	88.34	40	*e*P	P	10 25 07.9	-0.3
	comp=Z,0.8nm,0.8s,mb3.6						
TXAR	Lajitas Array	88.36	57	P	P	10 25 09.1	+0.5
	comp=Z,0.6nm,0.7s,mb3.6,baz=223,slow=6.7,SNR=9.1						
ANMO	Albuquerque	88.98	51	*e*P	P	10 25 11.7	+0.3
	comp=Z,2.3nm,1.2s,mb4.0						
HWUT	Hardware Ranch	89.00	43	*e*P	P	10 25 10.8	-0.5
	comp=Z,1.7nm,0.8s,mb4.0						
CPRX	Cap Rock	89.95	54	*e*P	P	10 25 15.9	-0.1
MCMT	McKenzie Canyo	89.98	40	*e*P	P	10 25 15.7	-0.1
TPAW	Teton Pass	90.39	42	*e*P	P	10 25 17.8	0.0
	comp=Z,1.3nm,0.6s,mb4.0						
SNOW	Snow King Moun	90.50	42	*e*P	P	10 25 18.2	-0.1
	comp=Z,3.2nm,0.8s,mb4.3						
IMW	Indian Meadow	90.62	42	*e*P	P	10 25 18.6	-0.2
	comp=Z,4.4nm,0.9s,mb4.5						
MOOW	Moose Ponds	90.66	42	*e*P	P	10 25 18.5	-0.5
	comp=Z,1.0nm,0.7s,mb4.0						
LOHW	Long Hollow	90.67	42	*e*P	P	10 25 18.8	-0.3
	comp=Z,1.3nm,0.6s,mb4.1						
BW06	Boulder Array	90.88	43	*e*P	P	10 25 19.1	-1.0
	comp=Z,1.5nm,1.0s,mb4.0						
PDAR	Pinedale Array	90.88	43	P	P	10 25 19.8	-0.3
	comp=Z,1.7nm,0.8s,mb4.1,baz=232,slow=2.2,SNR=12						
ILAR	Eielson Array	91.11	13	P	P	10 25 18.9	-1.6
	comp=Z,2.7nm,1.2s,mb4.1,baz=236,slow=4.7,SNR=7.0						
BOZ	Bozeman (W)	91.15	40	*e*P	P	10 25 20.9	-0.4
	comp=Z,2.9nm,0.8s,mb4.4						
RSSD	Black Hills	95.04	44	*e*P	P	10 25 38.5	-0.6
	comp=Z,2.4nm,0.9s,mb4.4						
ARCES	ARCESS Array B	131.87	349	PKhKP		10 31 22.3	
	comp=Z,2.0nm,0.7s,baz=307,slow=6.1,SNR=2.9						
ARCES				PKP	PKPdf	10 31 26.6	-0.5
	comp=Z,2.0nm,0.7s,slow=3.6,SNR=5.1						
ARCES	ARCESS Array B	131.87	349	PKP	PKPdf	10 31 22.3	-4.8
ARCES				PKP	PKPdf	10 31 26.6	-0.5
FINES	FINESS Array B	138.69	343	PKP	PKPdf	10 31 37.8	-2.1
	comp=Z,0.8nm,0.7s,baz=159,slow=19,SNR=5.1						
NB2	NORSAR Subarra	141.94	353	PKPabc	PKPdf	10 31 39.6	-6.0
	comp=Z,0.3nm,0.8s,baz=27,slow=3.6						
NOA	NORSAR Array B	141.94	353	PKhKP		10 31 40.6	
	comp=Z,1.6nm,0.8s,baz=21,slow=2.5,SNR=6.1						
AKASG	Malin Array Be	145.73	329	PKPbc	PKPbc	10 31 52.2	-1.2
	comp=Z,5.2nm,0.6s,baz=40,slow=3.8,SNR=41						
AKASG	Malin Array Be	145.73	329	PKPbc	PKPbc	10 31 52.2	-1.2
BRTR	Keskin Array B	149.01	309	PKPbc	PKPdf	10 32 02.2	+4.0
	comp=Z,2.8nm,0.7s,baz=134,slow=4.8,SNR=14						
CLL	Collm	151.00	346	⇑*i*PKP1	PKPdf	10 32 06.9	+6.1
CLL				*i* PKP2	PKPab	10 32 14.7	-2.6
GERES	GERESS Array B	153.12	343	PKPbc	PKPdf	10 32 09.5	+5.5
	comp=Z,0.6nm,0.7s,slow=2.7,SNR=3.9						

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*IDC **13** 10:17:09.7±4.0, 4.89S×151.65E, h178^{km}±38^{km}, mb3.7/7, mb1 3.8/8, mb1mx3.6/17, mbtmp4.2/8, Error ellipse: s-maj=27.7km s-min=23.9km az=18.0*

*NEIC **13** 10:17:10.4±2.2, 4.92S×151.66E, h185^{km}±20^{km}, mb4.4/3, Error ellipse: s-maj=17.8km s-min=16.1km az=140.0*

ISC 13 10:17:09.3±3.0**, 4.9S**±0.2×**151.6E**±0.1**, h184**^{km}±27^{km}**, n12, σ0^{s}70**/13**, mb4.0**/9**, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.31	224	P	P	10 18 41.6	+0.4
	0.6nm,0.3s,baz=197,slow=11,SNR=2.9						
PMG				S	S	10 19 52.1	-0.6
	2.0nm,0.3s,baz=271,slow=3.4,SNR=3.5						
DZM	Mont Dzumac	22.36	141	P	P	10 21 52.7	0.0
	6.9nm,0.9s,mb4.1,baz=222,slow=16,SNR=4.5						
WRAB	Tennant Creek	22.51	227	*e*P	P	10 21 54.7	+0.5
	5.7nm,0.5s,mb4.3						
WB2	Warramunga Arr	22.51	227	⇑*i*P	P	10 21 55.0	+0.7
WRA	Warramunga Arr	22.52	227	P	P	10 21 55.1	+0.7
	4.2nm,0.3s,mb4.3,baz=50,slow=9.9,SNR=54						
FITZ	Fitzroy Crossi	28.58	240	P	P	10 22 50.0	-0.6
	5.2nm,0.4s,mb4.6,baz=47,slow=4.7,SNR=20						
MBWA	Marble Bar	34.90	239	*e*P	P	10 23 44.5	-0.9
	4.7nm,0.6s,mb4.3						
SONM	Songino Array	65.72	328	P	P	10 27 37.0	+0.7
	1.0nm,0.4s,mb4.0,baz=146,slow=5.2,SNR=3.9						
MKAR	Makanchi Array	79.57	319	P	P	10 28 58.2	+0.9
	0.4nm,0.3s,mb3.5,baz=117,slow=6.4,SNR=3.8						
MKAR	Makanchi Array	79.57	319	P	P	10 28 58.2	+0.9
ZAL	Zalesovo	80.53	327	P	P	10 29 01.1	-1.1
	0.9nm,0.4s,mb3.8,baz=185,slow=14,SNR=2.4						
ILAR	Eielson Array	82.66	22	P	P	10 29 12.3	-0.7
	0.2nm,0.7s,mb3.0,baz=253,slow=5.6,SNR=4.8						

MAN 13 11:01:46.5, 10.31N×122.18E, h93^{km}**, mb4.2, ML3.1, MS2.8, 1C, Panay**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAP	Anini-y	0.26	295	*e*P	P	11 02 03.0	+2.9
GUIM	Jordan	0.51	52	*e*P	P	11 01 55.6	-6.2
GUIM				*e*S	S	11 02 01.9	-11
CUYO	Cuyo Island	1.27	295	*e*P	P	11 02 09.2	-0.8
CUYO				*e*S	S	11 02 25.9	-1.6
RCP	Roxas	1.36	24	⇑*e*P	P	11 02 10.9	-0.2
RCP				*e*S	S	11 02 10.9	-18
KALP	Kalibo	1.37	6	*e*P	P	11 02 11.0	-0.2
SNPH	Sibulan	1.41	133	*e*P	P	11 02 10.1	-1.6
SNPH				*e*S	S	11 02 31.4	+1.0
OTRP	Odiongan	2.05	356	*e*P	P	11 02 19.6	-0.3
OTRP				*e*S	S	11 02 51.3	+6.6
DCPH	Dipolog City	2.07	146	*e*P	P	11 02 19.7	-0.5
SJMP	San Jose	2.38	334	*e*P	P	11 02 22.0	-2.6
IPIL	Ipil	2.53	171	*e*P	P	11 02 22.9	-3.8
BUSP	Coron	2.58	311	*e*P	P	11 02 27.2	-0.1
MSLP	Maasin	2.64	94	*e*P	P	11 02 28.1	-0.1
MSLP				*e*S	S	11 02 59.6	+0.4
PAGZ	Pagadian	2.72	154	*e*P	P	11 02 29.7	+0.5
PAGZ				*e*S	S	11 03 03.4	+2.2
ENPP	El Nido	2.85	288	*e*P	P	11 02 31.5	+0.4
CNP	Catarman	3.27	48	*e*P	P	11 02 37.7	+0.9
LUBP	Lubang	3.90	331	*e*P	P	11 02 46.0	+0.5

JSN 13 11:21:59.1±0.6**, 18.27N×77.45W, h16**^{km}±11^{km}**, MD3.5, MW3.0, 3C-5D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBJ	Bamboo Saint A	0.20	57	⇓*i*P	Pb	11 22 03.5	-0.5
MCJ	Malvern	0.41	214	⇓*e*P	Pb	11 22 06.9	-0.7
MCJ				*i* S	Sb	11 22 13.2	-0.1
BNJ	Bonny Gate	0.47	84	⇓*i*P	Pb	11 22 08.1	-0.5
PCJ	Portland Cotta	0.59	153	⇑*i*P	Pb	11 22 09.6	-1.0
PCJ				*e*S	Sb	11 22 17.9	-0.7
STH	Stony Hill	0.64	108	⇓*i*P	Pb	11 22 10.5	-0.8
STH				*i* S	Sb	11 22 19.4	-0.3
GWJ	Greenwich	0.71	106	⇓*e*P	Pb	11 22 11.8	-0.8
HOJ	Hope	0.71	112	⇑*i*P	Pb	11 22 12.0	-0.7
YHJ	Yallahs	0.98	113	⇑*e*P	Pb	11 22 16.5	-0.7

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*CSEM **13** 11:26:34.7±0.5, 42.59N×1.74W, h2^{km}, ML2.6, Error ellipse: s-maj=9.2km s-min=7.4km az=29.0*

*NEIC **13** 11:26:36.1, 42.68N×1.72W, h10^{km}, ML2.6(STR), After STR.*

*STR **13** 11:26:36.1±1.0, 42.68N×1.72W, h10^{km}±1^{km}, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*MDD **13** 11:27:27.2±0.4, 42.88N×7.22W, mbLg1.0/6, Error ellipse: s-maj=6.3km s-min=1.9km az=93.0, PRXIMO*

ISC 13 11:26:33.5±0.9**, 42.6N**±0.1×**1.79W**±0.06**, h10**^{km}**, n12, σ0^{s}95**/16**, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LARF	Larrau	0.72	55	Pg	Pg	11 26 47.9	-0.2
LARF				Sg	Sg	11 26 58.0	+0.2
OSSF	Osses	0.74	32	Pg	Pg	11 26 49.2	+0.8
ORDF	Ordiarp	0.86	47	Pg	Pg	11 26 50.5	-0.3
FDAF	Les Forges d'A	0.92	78	Pg	Pg	11 26 52.1	0.0
FDAF				Sg	Sg	11 27 05.2	+0.7
REYF	Montagne du Re	1.12	66	Pg	Pg	11 26 55.2	-0.8
REYF				Sg	Sg	11 27 11.2	+0.2
LABF	Labassere	1.44	72	Pn	Pn	11 27 01.2	+1.4
LABF				Sg	Sg	11 27 19.7	-1.8
EARI	Arriondas	2.60	286	Pg	Sn	11 27 54.5	+6.2
	0.3nm,0.1s,SNR=4.0						
EARI				Lg		11 28 16.2	
	0.5nm,0.3s,SNR=4.0						
ECAL	Calabor	3.73	261	Pg	Pg	11 27 47.3	-0.8
	1.8nm,0.2s,SNR=6.5						
ECAL				Lg		11 28 01.0	
	4.6nm,0.2s,SNR=7.7						
ERUA	La Rua	3.96	268	Pg	Pn	11 27 35.7	0.0
	1.5nm,0.2s,SNR=7.9						
ERUA				Lg		11 27 42.2	
	2.5nm,0.3s,SNR=7.9						
EPON	Pontenova	3.99	282	Pg	Pn	11 27 35.6	-0.6
	0.6nm,0.1s,SNR=6.7						
EPON				Lg		11 27 41.8	
	8.8nm,0.4s,SNR=18						
ELOB	Lobios	4.71	263	Pg	Pn	11 27 49.4	+3.0
	0.4nm,0.1s,SNR=7.9						
ELOB				Lg		11 28 05.4	
	1.1nm,0.2s,SNR=5.2						
EMAZ	Mazaricos	5.30	276	Pg	Pn	11 27 50.7	-4.0
	0.5nm,0.1s,SNR=7.9						
EMAZ				Lg		11 28 08.1	
	0.7nm,0.1s,SNR=7.9						

IGQ 13 11:51:40.2, 1.14S×81.12W, h5^{km}±4^{km}**, mb4.0, 4D, Error ellipse: s-maj=8.6km s-min=4.8km az=111.2, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.58	81	⇓P	Pg	11 51 51.5	-0.4
HOJA				S	Sg	11 51 58.2	-1.5
IGUA	Igualata	2.51	98	P	Pn	11 52 23.5	+1.3
IGUA				S	Sn	11 52 55.1	+1.5
CAMI	Rancho Maria	2.66	80	P	Pn	11 52 25.6	+1.2
ARRY	Arrayan	2.69	98	⇓P	Pn	11 52 26.0	+1.1
ARRY				S	Sn	11 52 59.2	+1.0
TERV	Terraza Guagua	2.70	69	P	Pn	11 52 27.6	+2.6
PINO	Pino	2.70	69	⇓P	Pn	11 52 25.5	+0.5
GGP	Refugio Guagua	2.71	69	P	Pn	11 52 26.2	+1.1
RUN5	Runtun	2.71	96	P	Pn	11 52 26.8	+1.7
ULBA	Ulba	2.73	96	P	Pn	11 52 27.5	+2.0
ULBA				S	Sn	11 53 01.8	+2.6
PISA	Pisayambo	2.74	88	P	Pn	11 52 27.8	+2.2
YANA	Yana	2.75	68	P	Pn	11 52 26.4	+0.7
VC1	Cotopaxi 1	2.77	80	P	Pn	11 52 29.1	+3.2
TAMB	Tambo	2.79	81	P	Pn	11 52 29.1	+2.8
ANTI	Antisana	3.04	77	P	Pn	11 52 32.2	+2.4
CAYR	Refugio Cayamb	3.32	70	⇓P	Pn	11 52 36.8	+2.9
CAYA	Cayambe	3.36	69	P	Pn	11 52 36.7	+2.3
ECEN	Cerro Negro	3.71	58	P	Pn	11 52 41.5	+2.1

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*NIED **13** 12:00:00, 32.80N×131.20E, h122^{km}, Mw3.8 Best double couple: M$_0$5.28×10^{14} NP1:ϕ_s254°, δ57°, λ108°. NP2:ϕ_s43°, δ38°, λ64°.*

JMA 13 12:00:46.8, 32.75N×131.20E, h127^{km}±1^{km}**, M3.6, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKIT	Kitakata	0.25	120	P	P	12 01 04.6	+0.2
JKIT				S	S	12 01 18.0	0.0
JIU2	Izumi 2	0.38	238	P	P	12 01 05.0	-0.1
JIU2				S	S	12 01 18.6	-0.3
JTZ	Takazaki	0.85	186	P	P	12 01 08.0	-0.2
JTZ				S	S	12 01 24.0	-0.5
JSJ	Shimokoshiki	1.65	230	P	P	12 01 16.4	-0.4

SKHL 13 12:09:56.2±0.2**, 52.71N×142.83E, h10**^{km}**, mb3.9**/2**, Sakhalin Island**

IDC 13 12:23:01.9±3.0**, 48.76N×156.63E, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/19**, mbtmp3.7**/4**, ML3.9**/1**, Error ellipse: s-maj=107.1km s-min=27.3km az=150.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAJ	Asahikawa	10.74	250	Pn	P	12 25 35.8	-4.1
	1.2nm,0.3s,baz=80,slow=13,SNR=13						
ILAR	Eielson Array	33.49	40	P	P	12 29 42.2	-2.2
	0.3nm,1.0s,baz=248,slow=9.7,SNR=2.9						
MKAR	Makanchi Array	48.13	297	P	P	12 31 43.2	-1.8
	0.3nm,0.5s,baz=53,slow=6.1,SNR=4.3						
CMAR	Chiang Mai Arr	55.13	258	P	P	12 32 36.2	-2.0
	1.1nm,0.6s,baz=32,slow=7.8,SNR=5.7						

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*BER **13** 12:32:57.5±4.8, 59.27N×27.42E, ML2.4(NAO), Suspected explosion*

*NAO **13** 12:32:59.5±2.2, 59.36N×27.06E, ML2.4*

*IDC **13** 12:32:59.5±1.0, 59.45N×27.23E, mb1 3.2/5, mb1mx3.1/22, mbtmp3.2/5, ML2.9/5, Error ellipse: s-maj=11.2km s-min=6.8km az=85.0*

*CSEM **13** 12:32:59.7±0.2, 59.31N×27.12E, h20^{km}, ML1.9, Error ellipse: s-maj=5.8km s-min=1.9km az=109.0*

*HEL **13** 12:32:59.2, 59.39N×27.07E, ML1.9(FIA0), Explosion*

ISC 13 12:32:53.5±1.2**, 59.37N**±0.06×**27.3E**±0.2**, n17, σ0^{s}50**/29**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FIA0	FINESS Array S	2.17	344	*e*P	Pn	12 33 36.0	+4.7
FIA0				*e*SG	Sg	12 34 05.4	-0.4
FIA0				*e*RG		12 34 21.0	
FIA0	FINESS Array S	2.17	344	Pn	Pn	12 33 36.3	+5.0
	baz=161,slow=18						
FIA0				Lg		12 34 07.0	
	baz=167,slow=37						
FIA0				Rg		12 34 22.6	
	baz=161,slow=37						
FIA0	FINESS Array S	2.17	344	Pn	Pn	12 33 36.3	+5.0
	baz=161,slow=16,SNR=50						
FIA0				Sg	Sg	12 34 05.4	-0.4
FINES	FINESS Array B	2.17	344	Pn	Pn	12 33 36.1	+4.8
	2.9nm,0.3s,baz=163,slow=15,SNR=76						
FINES				Pg	Pg	12 33 37.3	+0.5
	2.9nm,0.3s,baz=166,slow=16,SNR=76						
FINES				Lg		12 34 05.9	
	4.6nm,0.3s,baz=160,slow=28,SNR=19						
FINES				Rg		12 34 19.3	
	13nm,0.8s,baz=158,slow=30,SNR=4.7						
HFS	Hagfors	6.92	282	Pn	Pn	12 34 38.2	-0.4
	baz=85,slow=12						
HFS				Sn	Sn	12 35 54.0	-5.1
	baz=86,slow=28						
HFS				Lg		12 36 30.2	
	baz=97,slow=28						
HFS	Hagfors	6.92	282	*e*P	Pn	12 34 38.2	-0.4
HFS				*e*S	Sn	12 35 54.0	-5.1
HFS				*e*SG		12 36 30.2	
HFS	Hagfors	6.92	282	Pn	Pn	12 34 38.2	-0.4
	0.0nm,0.3s,baz=95,slow=17,SNR=2.9						
HFS				Sn	Sn	12 35 54.2	-4.9
	0.1nm,0.3s,baz=97,slow=25,SNR=6.2						
HFS				Lg		12 36 32.7	
	0.2nm,0.3s,baz=93,slow=31,SNR=5.4						
HFS	Hagfors	6.92	282	Pn	Pn	12 34 38.2	-0.5
	baz=85,slow=11,SNR=50						
NB2	NORSAR Subarra	8.19	289	Pn	P	12 34 55.9	-0.5
	baz=90,slow=14						
NB2				Sn	Sn	12 36 31.7	+1.0
	baz=75,slow=16						
NB2	NORSAR Subarra	8.19	289	*e*P	P	12 34 55.9	-0.5
NB2				*e*		12 36 31.7	
NB2	NORSAR Subarra	8.19	289	Pn	P	12 34 55.9	-0.5
	baz=90,slow=13,SNR=50						
NOA	NORSAR Array B	8.19	289	Pn	P	12 34 56.6	+0.2
	0.2nm,0.3s,baz=90,slow=12,SNR=2.5						
NOA				Sn	Sn	12 36 23.4	-7.4
	0.2nm,0.3s,baz=117,slow=25,SNR=2.4						
NOA				Lg		12 37 10.7	
	0.4nm,0.3s,baz=1.6,slow=20,SNR=3.1						
AKASG	Malin Array Be	8.76	172	Pn	P	12 35 04.3	0.0
	0.7nm,0.3s,baz=355,slow=10,SNR=4.5						
AKASG				Sn	Sn	12 36 38.9	-6.0
	0.3nm,0.3s,baz=307,slow=23,SNR=3.0						
AKASG				Lg		12 37 33.8	
	0.6nm,0.3s,baz=347,slow=30,SNR=4.8						
ARA0	ARCESS Array S	10.24	356	Pn	P	12 35 24.8	+0.2
	baz=178,slow=14						
ARA0				Sn	S	12 37 15.8	-5.6
	baz=171,slow=28						
ARA0				Lg		12 38 15.1	
	baz=158,slow=37						
ARA0	ARCESS Array S	10.24	356	*e*P	P	12 35 24.8	+0.2
ARA0				*e*S	S	12 37 15.8	-5.6
ARA0				*e*SG		12 38 15.1	
ARA0	ARCESS Array S	10.24	356	Pn	P	12 35 24.8	+0.2
	baz=178,slow=13,SNR=50						
ARCES	ARCESS Array B	10.24	356	Pn	P	12 35 20.2	-4.4
	0.1nm,0.3s,baz=168,slow=17,SNR=2.4						
ARCES				Sn	S	12 37 11.8	-10
	0.1nm,0.3s,baz=167,slow=24,SNR=2.7						
ARCES				Lg		12 38 16.2	
	0.3nm,0.3s,baz=172,slow=31,SNR=4.3						

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*NNC **13** 12:33:38.2±7.3, 36.97N×70.32E, h226^{km}±141^{km}, mpv3.8, Error ellipse: s-maj=99.6km s-min=55.8km az=20.0*

ISC 13 12:33:34.9±2.1**, 36.8N**±0.1×**70.2E**±0.2**, h200**^{km}**, n12, σ0^{s}34**/14**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.99	26	P	P	12 35 02.9	+0.2
	SNR=135						
KK31	Karatay Array	6.32	2	⇑P	P	12 35 07.5	+0.4
	0.9nm,0.2s,baz=169,slow=7.4,SNR=43						
KK31				⇓S	S	12 36 18.8	-0.1
	4.0nm,0.4s						
UCH	Uchtor	6.38	30	P	P	12 35 08.0	+0.2
	SNR=67						
EKS2	Erkin-Say	6.49	24	P	P	12 35 09.6	+0.4
	SNR=12						
KZA	Kyzart	6.57	35	P	P	12 35 09.5	-0.8
	SNR=15						
AAK	Ala-Archa	6.71	28	P	P	12 35 12.3	+0.2
	SNR=7.5						
AAK	Ala-Archa	6.71	28	⇓P	P	12 35 12.1	0.0
	6.9nm,0.6s						
AAK				⇑S	S	12 36 27.9	-0.1
	12nm,0.6s						
KBK	Karagaybulak	6.91	30	P	P	12 35 15.0	+0.3
	SNR=9.4						
CHMS	Chumysh	7.12	28	P	P	12 35 17.8	+0.3
	SNR=5.3						
USP	Ospenovka	7.27	26	P	P	12 35 19.0	-0.3
	SNR=7.7						
TKM2	Tokmak 2	7.40	32	P	P	12 35 20.9	-0.2
	SNR=35						
AB31	Akbulak array	14.54	332	⇑P	P	12 36 52.0	-0.3
	0.2nm,0.4s,baz=157,slow=12,SNR=14						

WEL 13 12:45:59.8±0.4**, 37.17S×176.75E, h241**^{km}±4^{km}**, ML3.6**/11**, Error ellipse: s-maj=6.0km s-min=5.6km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	1.12	165	PN	P	12 46 34.7	-0.2
URZ				SN	S	12 47 01.4	-0.7
MWZ	Matawai	1.31	152	PN	P	12 46 36.0	-0.2
MWZ				SN	S	12 47 04.4	-0.1
KNZ	Kokohu	1.98	159	PN	P	12 46 41.6	-0.1
KNZ				SN	S	12 47 13.3	-0.8
BKZ	Black Stump Fm	2.00	186	PN	P	12 46 41.5	-0.4
BKZ				SN	S	12 47 14.1	-0.3
WNVZ	Wahianoa	2.33	202	PN	P	12 46 45.3	+0.2
WAZ	Wanganui	2.93	208	PN	P	12 46 51.2	-0.2
TSZ	Takapari Road	2.95	192	PN	P	12 46 50.5	-1.1
KIW	Kapiti Island	3.95	201	PN	P	12 47 00.9	-2.2

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*NEIC **13** 13:17:07.3, 36.05N×21.96E, h5^{km}, MD3.5(ATH), After ATH.*

*CSEM **13** 13:17:07.3±0.3, 36.05N×21.96E, h5^{km}, MD3.5, Error ellipse: s-maj=8.3km s-min=4.3km az=71.0, After ATH*

ATH 13 13:17:07.4, 36.05N×21.96E, h5^{km}±2^{km}**, MD3.5**/9**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KYTH	Kithira	0.90	75	*e*PG	Pg	13 17 24.5	-0.9
KYTH				*e*SB	Sb	13 17 37.5	+0.3
VLI	Veliai	1.03	49	*e*PG	Pg	13 17 27.0	-1.0
VLI				*e*SB	Sb	13 17 42.0	+1.0
ITM	Ithomi	1.13	359	*e*PN	Pn	13 17 28.8	-1.0
ITM				*e*SB	Sb	13 17 45.0	+1.2
VAM	Vamos	1.93	109	*e*PN	Pn	13 17 43.8	+2.5
VAM				*e*SN	Sn	13 18 11.0	+4.8

NAIG	Nisos Aigina	2.10	35	ePG	Pg	13 17 46.5	-2.8
MGER	Gerania Oros	2.19	28	ePG	Pg	13 17 48.0	-3.2
NSAL	Nisos Salamina	2.21	33	ePG	Pg	13 17 48.1	-3.4
MPAR	Parnis Oros	2.53	34	ePN	Pn	13 17 51.5	+1.6
EVR	Evrytania	2.86	358	ePN	Pn	13 17 56.4	+1.8

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*IDC **13** 13:26:29.3±0.9, 55.74S×143.74W, mb4.1/6, mb1 4.3/6, mb1mx4.3/12, mbtmp4.1/6, MS3.8/10, Ms1 3.8/10, ms1mx3.7/15, Error ellipse: s-maj=37.0km s-min=23.8km az=154.0*

*NEIC **13** 13:26:31.1±0.6, 55.93S×143.70W, h10^{km}, mb4.6/6, Error ellipse: s-maj=19.5km s-min=14.7km az=120.0*

ISC 13 13:26:29.8±0.8, 56.0S±0.1×143.7W±0.3, h10^{km}, n33, σ1^{s}04/21, mb4.2/10, MS3.9/10, 5C, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	28.56	202	P	P	13 32 27.6	+0.5
	0.9nm,0.8s,mb3.5,baz=70,slow=8.4,SNR=3.5						
VNDA				LR	LR	13 40 43.5	
	comp=Z,187nm,21.1s,MS3.7,baz=352,slow=30						
VNDA	Vanda	28.56	202	eP	P	13 32 27.1	0.0
	1.1nm,0.9s,mb3.6						
URZ	Urewera	31.45	288	LR	LR	13 42 12.9	
	comp=Z,177nm,18.4s,MS3.8,baz=16,slow=30						
TBI	Tubuai	32.86	350	eLR	LR	13 41 20.9	
	418nm,30.0s,baz=178						
RKT	Rikitea	33.44	15	eLR	LR	13 41 45.7	
	383nm,30.8s,baz=178						
PPT	Papeete	38.59	351	eLR	LR	13 43 59.3	
	432nm,28.0s,baz=186						
PPT	Papeete	38.59	351	LR	LR	13 44 57.2	
	comp=Z,351nm,20.8s,MS4.2,baz=156,slow=29						
VNA3	Neumayer Olymp	49.00	162		P	13 35 16.3	-1.4
VNA3	Neumayer Olymp	49.00	162	⇑i	P	13 35 19.2	+1.5
VNA3	Neumayer Olymp	49.00	162	⇑i	P	13 35 23.4	+5.7
VNA2	Neumayer--Watz	49.66	163	⇑i	P	13 35 23.3	+0.5
VNA2	Neumayer--Watz	49.66	163	⇑i	P	13 35 24.9	+2.1
VNA2	Neumayer--Watz	49.66	163	⇑i	P	13 35 28.7	+5.9
SNAA	Sanae	49.72	165	LR	LR	13 53 03.8	
	comp=Z,22nm,19.4s,MS3.2,baz=265,slow=32						
SNAA	Sanae	49.72	165	eP	P	13 35 21.3	-2.0
	11nm,1.2s,mb4.8						
VNA1	Neumayer--Stat	49.75	162		P	13 35 24.0	+0.5
VNA1	Neumayer--Stat	49.75	162		P	13 35 30.2	+6.7
MAW	Mawson	55.16	192	P	P	13 36 05.1	+1.1
	2.0nm,0.9s,mb4.1,baz=126,slow=11,SNR=3.5						
MAW				LR	LR	13 57 27.0	
	comp=Z,80nm,18.8s,MS3.8,baz=245,slow=34						
STKA	Stephens Creek	55.88	262	P	P	13 36 08.9	-0.8
	3.9nm,0.8s,mb4.5,baz=115,slow=10,SNR=4.8						
CPUP	Villa Florida	66.64	103	P	P	13 37 21.2	-1.2
	2.6nm,0.9s,mb4.2,baz=278,slow=8.9,SNR=4.1						
CPUP				LR	LR	14 03 43.8	
	comp=Z,44nm,18.6s,MS3.7,baz=195,slow=34						
LPAZ	La Paz	68.60	87	P	P	13 37 35.6	+0.7
	0.6nm,0.4s,mb3.9,baz=210,slow=5.5,SNR=6.5						
LPAZ	La Paz	68.60	87	eP	P	13 37 35.5	+0.7
	7.3nm,1.4s,mb4.4						
OTAV	Otavalo	76.60	69	eP	P	13 38 22.1	-0.1
	15nm,1.8s,mb4.6						
SAML	Samuel	77.34	87	eP	P	13 38 26.2	-0.1
	2.9nm,0.7s,mb4.3						
BDFB	Brasilia	80.34	103	LR	LR	14 10 10.0	
	comp=Z,61nm,18.3s,MS4.0,baz=358,slow=33						
TXAR	Lajitas Array	91.56	34	P	P	13 39 36.9	-0.7
	0.1nm,0.3s,mb3.6,baz=127,slow=4.5,SNR=3.8						
TXAR				LR	LR	14 10 58.6	
	comp=Z,74nm,19.6s,MS4.1,baz=280,slow=29						
TXAR	Lajitas Array	91.56	34	P	P	13 39 36.9	-0.7
TXAR				LR	LR	14 10 58.6	
MNTX	Cornudas Mount	93.24	32	eP	P	13 39 46.7	+1.5
	1.5nm,1.0s,mb4.4						
BOSA	Boshof	95.23	170	LR	LR	14 18 23.0	
	comp=Z,69nm,21.5s,MS4.1,baz=351,slow=33						
NVAR	Mina Array Bea	96.49	20	LR	LR	14 12 44.7	
	comp=Z,59nm,20.2s,MS4.1,slow=29						
CMAR	Chiang Mai Arr	120.35	258	PKP	PKPdf	13 45 21.4	-2.9
	0.4nm,0.5s,baz=199,slow=3.3,SNR=4.7						
ESDC	Sonseca Array	148.99	105	PKPbc	PKPdf	13 46 18.1	+2.0
	0.2nm,0.3s,baz=180,slow=3.0,SNR=5.8						
MKAR	Makanchi Array	150.36	272	PKPbc	PKPdf	13 46 21.2	+3.3
	5.8nm,0.8s,baz=108,slow=3.8,SNR=36						

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*NEIC **13** 13:45:38.8±1.1, 22.33S×66.97W, h164^{km}±13^{km}, Error ellipse: s-maj=23.1km s-min=12.4km az=105.0*

IDC 13 13:45:37.2±1.7, 22.35S×66.92W, h144^{km}±19^{km}, mb2.9/1, mb1 3.3/5, mb1mx3.2/18, mbtmp3.7/5, Error ellipse: s-maj=27.9km s-min=14.3km az=98.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	6.14	349	P	P	13 47 08.1	+1.4
	1.9nm,0.3s,baz=174,slow=9.0,SNR=18						
LPAZ				S	S	13 48 15.1	-1.0
	baz=229,slow=20,SNR=0.9						
SIV	San Ignacio	8.39	42	P	P	13 47 36.7	-0.2
	3.4nm,0.3s,baz=225,slow=11,SNR=43						
SIV				S	S	13 49 06.3	-4.1
	0.7nm,0.3s,baz=130,slow=23,SNR=6.4						
CFAA	Coronel Fontan	9.29	187	P	P	13 47 49.7	+0.9
	0.1nm,0.3s,baz=354,slow=12,SNR=5.6						
CFAA				S	S	13 49 29.0	-2.8
	0.1nm,0.3s,baz=267,slow=18,SNR=5.4						
BDFB	Brasilia	19.07	73	P	P	13 49 50.2	-0.7
	0.4nm,0.3s,baz=250,slow=8.9,SNR=4.0						
SNAA	Sanae	60.88	161	P	P	13 55 33.6	-2.8
	0.3nm,0.8s,baz=270,slow=10,SNR=4.8						
WRA	Warramunga Arr	133.12	208	PKP	PKPdf	14 04 34.9	-1.6
	0.1nm,0.4s,baz=154,slow=1.7,SNR=5.5						
MKAR	Makanchi Array	145.19	38	PKPbc	PKPbc	14 04 57.4	-0.5
	0.4nm,0.3s,baz=315,slow=4.1,SNR=3.3						

MEX 13 14:04:29.4±1.0, 18.96N×103.37W, h4^{km}±9^{km}, MD3.7, 1C-1D, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COLM	Colima	0.38	306	⇓iP	Pg	14 04 36.4	-0.7
COLM				iS	Sg	14 04 42.1	0.0
SFJM	Santa Fe	1.55	11	iP	Pn	14 04 54.0	-4.0
SFJM				iS	Sb	14 05 14.5	-3.9
CJM	Chamela	1.67	289	⇑eP	Pn	14 04 57.5	-2.2
CJM				iS	Sb	14 05 15.9	-5.9

IDC 13 14:10:22.1±1.9, 1.91N×127.39E, mb4.0/3, mb1 4.3/3, mb1mx3.8/14, mbtmp4.1/3, Error ellipse: s-maj=143.4km s-min=27.4km az=65.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.76	163	P	P	14 15 26.6	-0.9
	4.8nm,0.5s,baz=342,slow=11,SNR=95						
STKA	Stephens Creek	36.20	159	P	P	14 17 26.1	-2.6
	3.2nm,0.9s,baz=358,slow=8.6,SNR=6.4						
MKAR	Makanchi Array	59.42	326	P	P	14 20 27.0	-2.0
	0.4nm,0.4s,baz=124,slow=8.7,SNR=3.5						

ISC 13 14:35:53.9±0.6, 41.02N±0.03×33.40E±0.05, h10^{km}, n8, σ0^{s}61/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CANT	Cankiri	0.44	158	PG	Pg	14 36 02.8	-0.2
TOS	Tosya	0.47	88	PG	Pg	14 36 02.6	-0.9
TOS				SG	Sg	14 36 10.0	+0.1
BALT	Daday	0.52	359	iP	Pg	14 36 04.6	+0.2
BALT				iS	Sg	14 36 10.8	-0.6
ELDT	Eldivan	0.53	178	iP	Pg	14 36 04.6	0.0
ELDT				iS	Sg	14 36 11.3	-0.4
SAFT	Safranbolu	0.58	293	PG	Pg	14 36 05.7	0.0
SGKT	Sivrigoynuk	1.11	247	iP	Pb	14 36 15.8	+1.0
SGKT				iS	Sb	14 36 33.8	+4.6
CTKT	Corum	1.13	110	iP	Pb	14 36 15.1	0.0
CTKT				iS	Sb	14 36 29.7	+0.2
BOYT	Boyabat	1.20	70	iP	Pb	14 36 15.7	-0.6
BOYT				iS	Sb	14 36 33.2	+1.4

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*NEIC **13** 14:39:47.8±0.9, 5.97S×154.52E, h416^{km}±13^{km}, mb4.2/10, Error ellipse: s-maj=10.8km s-min=8.2km az=145.0*

*IDC **13** 14:39:47.8±1.9, 5.99S×154.59E, h415^{km}±23^{km}, mb3.5/9, mb1 3.7/13, mb1mx3.6/18, mbtmp4.3/13, Error ellipse: s-maj=16.2km s-min=15.8km az=78.0*

ISC 13 14:39:46.9±1.1, 5.97S±0.09×154.47E±0.09, h422^{km}±15^{km}, n30, σ0^{s}88/31, mb3.9/16, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.43	123	P	P	14 41 24.7	-0.9
	5.6nm,0.3s,baz=229,slow=9.2,SNR=5.2						
PMG	Port Moresby	8.01	244	P	P	14 41 44.8	+1.5
	4.3nm,0.3s,baz=33,slow=4.2,SNR=22						
PMG	Port Moresby	8.01	244	ePn	P	14 41 44.4	+1.1
CTA	Charters Tower	16.15	209	⇑iP	P	14 43 13.2	+0.8
	11nm,0.8s						
CTA	Charters Tower	16.15	209	P	P	14 43 13.2	+0.9
	1.2nm,0.3s,baz=34,slow=10,SNR=25						
CTAO	Charters Tower	16.15	209	eP	P	14 43 12.9	+0.5
	11nm,0.7s						
DZM	Mont Dzumac	19.76	145	P	P	14 43 48.8	+0.6
	0.9nm,0.3s,baz=280,slow=22,SNR=9.6						
KAKA	Kakadu	22.74	251	eP	P	14 44 17.6	+1.2
	4.3nm,0.4s,mb4.2						
WRAB	Tennant Creek	23.98	233	eP	P	14 44 27.1	-0.5
	7.7nm,0.2s,mb4.8						
WB2	Warramunga Arr	23.99	233	eP	P	14 44 27.5	-0.2
WB2				eS	S	14 48 11.2	-2.0
WRA	Warramunga Arr	24.00	233	P	P	14 44 27.7	-0.1
	1.5nm,0.4s,mb3.8,baz=58,slow=9.6,SNR=42						
WRA				PcP	PcP	14 47 57.0	0.0
	0.5nm,0.4s,baz=62,slow=2.4,SNR=5.6						
STKA	Stephens Creek	28.45	203	eP	P	14 45 06.3	-1.1
	5.0nm,1.5s,mb3.6						
STKA	Stephens Creek	28.45	203	P	P	14 45 06.6	-0.8
	1.6nm,0.3s,mb3.8,baz=150,slow=20,SNR=9.1						
FITZ	Fitzroy Crossi	30.61	244	eP	P	14 45 25.1	-1.1
	4.2nm,0.6s,mb4.0						
KKM	Kota Kinabalu	40.01	287	P	P	14 46 45.2	+0.4
KSM	Kuching	44.71	278	eP	P	14 47 22.0	-0.6
MJAR	Matsushiro Arr	44.95	341	P	P	14 47 23.4	-0.7
	2.3nm,0.6s,mb3.7,baz=164,slow=7.9,SNR=10						
MAJO	Matsushiro	44.95	341	eP	P	14 47 23.2	-1.0
	4.5nm,0.7s,mb3.9						
MAT	Matsushiro	44.95	341	eP	P	14 47 23.0	-1.1
MAT	Matsushiro	44.95	341	P	P	14 47 23.3	-0.8
YSS	Yuzh-Sakhalins	53.70	350	eP	P	14 48 29.0	-0.7
	4.2nm,0.6s,mb3.9						
CMAR	Chiang Mai Arr	59.88	295	P	P	14 49 13.7	+1.1
	2.4nm,0.7s,mb3.7,baz=126,slow=5.7,SNR=19						
MA2	Magadan	65.40	358	eP	P	14 49 47.6	-0.2
	3.2nm,0.6s,mb4.1						
SONM	Songino Array	68.19	327	P	P	14 50 06.2	+0.9
	1.6nm,0.5s,mb3.9,baz=144,slow=6.5,SNR=12						
BILL	Bilibino	74.30	5	eP	P	14 50 41.2	+0.4
	2.7nm,0.4s,mb4.2						
MKAR	Makanchi Array	82.29	319	P	P	14 51 24.8	+0.8
	2.3nm,0.7s,mb4.0,baz=107,slow=5.7,SNR=21						
ILAR	Eielson Array	82.61	22	P	P	14 51 24.6	-0.7
	2.0nm,0.7s,mb4.0,baz=252,slow=4.8,SNR=23						
NVAR	Mina Array Bea	91.50	52	P	P	14 52 09.8	+1.5
	0.5nm,0.7s,mb3.4,baz=249,slow=3.7,SNR=4.1						
NVAR	Mina Array Bea	91.50	52	P	P	14 52 09.8	+1.5
YKA	Yellowknife Ar	95.67	28	P	P	14 52 27.5	+0.7
	0.2nm,0.5s,mb3.5,baz=270,slow=4.9,SNR=3.9						

IDC 13 15:34:24.3±2.3, 12.65N×92.42E, mb3.5/2, mb1 3.6/3, mb1mx3.4/18, mbtmp3.3/3, ML3.3/1, Error ellipse: s-maj=66.1km s-min=30.3km az=64.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	8.53	47	Pn	P	15 36 27.9	-4.1
	0.1nm,0.3s,baz=239,slow=16,SNR=3.3						
MKAR	Makanchi Array	35.09	348	P	P	15 41 19.5	-1.7
	0.1nm,0.5s,baz=172,slow=6.7,SNR=5.9						
WRA	Warramunga Arr	52.45	128	P	P	15 43 39.2	-2.2
	0.5nm,0.4s,baz=301,slow=9.7,SNR=27						

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*NIED **13** 15:52:00, 23.90N×121.60E, h20^{km}, Mw4.1 Best double couple: M$_0$1.62×10^{15} NP1:φ$_s$31°, δ74°, λ78°. NP2:φ$_s$249°, δ19°, λ126°.*

*BJI **13** 15:52:56.7, 24.01N×121.69E, h15^{km}, ML4.3*

*JMA **13** 15:52:59.9±0.3, 23.95N×121.59E, h72^{km}, M3.9*

*NEIC **13** 15:52:59.1±1.2, 23.89N×121.72E, h22^{km}±8^{km}, mb4.1/3, Error ellipse: s-maj=11.4km s-min=9.3km az=70.0*

*TAP **13** 15:53:00.7, 23.91N×121.63E, h23^{km}, ML4.6*

TAP Felt II J at Hualien, II J at Chiawan, III J at Shilin, I J at Hungye, II J at Nanau, I J at Tachien, II J at Nanshan, I J at Ryuetan, I J at Nioudou, I J at Chenggung, I J at Taichung.

*IDC **13** 15:53:00.3±7.7, 23.88N×121.66E, h31^{km}±58^{km}, mb3.8/10, mb1 4.0/11, mb1mx3.9/20, mbtmp4.0/11, ML4.3/1, MS3.4/8, Ms1 3.4/8, ms1mx3.2/31, Error ellipse: s-maj=23.7km s-min=16.7km az=63.0*

ISC 13 15:52:59.8±0.2, 23.90N±0.02×121.67E±0.02, h26^{km}±2^{km}, n102, σ1^{s}08/139, mb3.9/13, MS3.4/6, 11C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien	0.10	322	⇓iP	Pb	15 53 05.1	+0.5
ESF	Shoufeng Towns	0.15	261	P	Pb	15 53 05.1	0.0
ESF				S	Sb	15 53 08.7	+0.1
TWD	Chiawan	0.20	339	⇓iP	Pb	15 53 05.8	+0.2
TWD				S	Sb	15 53 10.1	+0.6
TEGC	Jichi Village	0.22	213	eP	Pb	15 53 06.3	+0.4
ESL	Shilin	0.23	250	⇑iP	Pb	15 53 05.8	-0.2
ESL				S	Sb	15 53 09.5	-0.8
NACB	Ninganchiao	0.29	346	ePg	Pb	15 53 05.9	-0.8
NACB				eSg	Sb	15 53 11.2	-0.2
WHF	Hehuan Shan	0.45	304	⇑iP	Pb	15 53 08.7	-0.5
EHY	Hungye	0.50	220	⇓P	Pb	15 53 09.3	-0.8
ENA	Nanau	0.53	7	⇑P	Pb	15 53 10.9	+0.3
ENA				S	Sb	15 53 18.2	+0.3
TWT	Tachien	0.58	308	⇑iP	Pb	15 53 11.3	0.0
TWT				S	Sb	15 53 18.5	-0.6
NNS	Nan Shan	0.61	333	⇑iP	Pb	15 53 11.7	-0.1
NNS				S	Sb	15 53 19.6	-0.4
TWF1	Yuli	0.64	213	⇓iP	Pb	15 53 11.4	-1.0
SMLT	Sun Moon Lake	0.71	269	⇑iP	Pb	15 53 13.1	-0.4
SMLT				S	Sb	15 53 22.3	-0.6
TWC	Suao	0.73	13	eP	Pb	15 53 14.1	+0.3
ENTT	Nioudou	0.75	353	⇑P	Pb	15 53 13.9	-0.2
ENTT				S	Sb	15 53 24.1	+0.1
TYC	Yuchr	0.75	271	⇑iP	Pb	15 53 13.6	-0.6
TYC				S	Sb	15 53 22.6	-1.4
YHNB	Yeheng	0.82	341	ePg	Pb	15 53 14.8	-0.5
YHNB				eSg	Sb	15 53 24.2	-1.8
TWE	Neicheng	0.82	360	eP	Pb	15 53 15.3	-0.1
NSK	Sanguang	0.83	340	⇑iP	Pb	15 53 15.3	-0.2
NSK				S	Sb	15 53 25.4	-0.9
CHKT	Chengkung	0.84	200	eP	Pb	15 53 15.3	-0.4
CHKT				S	Sb	15 53 29.0	+2.3
ILA	Ilan	0.87	5	eP	Pb	15 53 17.3	+1.1
WNT	Mingjian	0.91	269	⇓iP	Pb	15 53 17.1	+0.3
WNT				S	Sb	15 53 29.0	+0.5
ELDTW	Lidau	0.93	221	eP	Pb	15 53 15.9	-1.2
TWQ1	Liyutan	0.94	299	⇑iP	Pb	15 53 17.6	+0.3
TWQ1				S	Sb	15 53 29.4	0.0
TCU	Taichung	0.94	286	⇓P	Pb	15 53 18.0	+0.6
TCU				S	Sb	15 53 30.4	+0.8
NSTT	Nanjuang	0.95	320	⇑iP	Pb	15 53 17.8	+0.1
NSTT				S	Sb	15 53 29.2	-0.6
NSY	Sanyi	0.98	302	P	Pn	15 53 18.9	+0.8
NSY				S	Sb	15 53 31.2	+0.6
WGK	Gukeng	1.04	259	eP	Pn	15 53 19.1	+0.2
WGK				S	Sb	15 53 33.3	+1.0
TWA	Mucha	1.08	356	eP	Pn	15 53 20.1	+0.6
TATO	Taipei	1.09	351	ePn	Pn	15 53 19.6	+0.1
HSN	Hsinchu	1.11	325	eP	Pn	15 53 21.3	+1.4
HSN				S	Sb	15 53 36.1	+1.9
CHN4	Tsaushan	1.13	241	⇓iP	Pn	15 53 20.6	+0.4
CHN4				S	Sn	15 53 36.0	+1.1
TWB1	Santiao Chiao	1.14	14	eP	Pn	15 53 21.6	+1.2
TWB1				S	Sn	15 53 36.9	+1.6
TAP1	Taipei	1.15	353	eP	Pn	15 53 20.9	+0.5
TAP	Taipei	1.15	352	eP	Pn	15 53 21.5	+1.1
TAP				S	Sn	15 53 35.0	-0.4
CHN2	Minshiung	1.16	252	eP	Pn	15 53 21.1	+0.5
NCU	National Centr	1.16	338	eP	Pn	15 53 21.3	+0.7
NCU				S	Sn	15 53 37.2	+1.6
WTP	Ta-pu	1.17	237	⇓P	Pn	15 53 21.2	+0.5
WTP				S	Sn	15 53 36.6	+0.7
NWF	Wu-fen Shan	1.17	5	eP	Pn	15 53 21.1	+0.2
TWG	Pinlang	1.20	207	eP	Pn	15 53 19.2	-2.0
CHY	Chiayi	1.21	251	eP	Pn	15 53 21.8	+0.5
CHY				S	Sn	15 53 36.8	-0.2
TWS1	Kuangyinshan	1.22	349	eP	Pn	15 53 21.8	+0.3
TWS1				S	Sn	15 53 38.6	+1.3
TTN	Taitung	1.23	203	eP	Pn	15 53 20.2	-1.5
TWK	Hsinying	1.25	240	⇓P	Pn	15 53 22.4	+0.4
TWK				S	Sn	15 53 39.4	+1.2
CHN1	Nanshi	1.27	236	eP	Pn	15 53 22.5	+0.4
CHN1				S	Sn	15 53 40.4	+2.0
WTCT	Ta-ch'eng	1.27	269	eP	Pn	15 53 22.4	+0.2
WTCT				S	Sn	15 53 38.5	-0.1
SGST	Jiashian	1.29	231	eP	Pn	15 53 23.1	+0.6
SGST				S	Sn	15 53 40.2	+1.3
YOJ	Yonaguni jima	1.35	65	P	Pn	15 53 23.9	+0.6
YOJ				S	Sn	15 53 42.1	+1.7
WSF	Szhu	1.35	259	eP	Pn	15 53 23.9	+0.5
WSF				S	Sn	15 53 42.1	+1.5
TWY	Chenhua	1.38	357	eP	Pn	15 53 21.7	-2.0
CHN8	Yiju	1.45	248	eP	Pn	15 53 23.5	-1.2
CHN3	Shinhua	1.45	236	eP	Pn	15 53 26.2	+1.4
ECL	Taimali	1.45	207	eP	Pn	15 53 24.1	-0.7
SSD	Sandimen	1.49	220	eP	Pn	15 53 25.1	-0.3
TWM1	Shoushan	1.57	227	eP	Pn	15 53 28.4	+2.0
SGLT	Jiouru	1.59	223	eP	Pn	15 53 29.0	+2.2
EAST	Anshuo	1.69	207	eP	Pn	15 53 26.3	-1.8
TAW	Tawu	1.69	205	eP	Pn	15 53 30.8	+2.6
PCYT	Pengchaiyu	1.76	12	eP	Pn	15 53 30.6	+1.4
SCZT	Fangliau	1.80	213	eP	Pn	15 53 30.0	+0.2
IRIF	Iriomote-Funau	1.93	77	P	Pn	15 53 32.1	+0.5
IRIF				S	Sn	15 53 56.3	+1.0
WDGT	Dungji	1.95	251	eP	Pn	15 53 31.4	-0.6
WDGT				S	Sn	15 53 54.5	-1.3
HATJ	Hateruma jima	1.96	85	P	Pn	15 53 32.4	+0.4
HATJ				S	Sn	15 53 56.7	+0.8
PNG	Penghu	1.97	261	eP	Pn	15 53 31.4	-0.7
PNG				S	Sn	15 53 56.0	-0.2
HEN	Hengchun	2.07	205	eP	Pn	15 53 34.0	+0.3
TSEB	Hengchuen, Pin	2.11	200	eP	Pn	15 53 35.5	+1.3
JKRS	Kuro-shima	2.16	80	P	Pn	15 53 35.9	+0.9
JKRS				S	Sn	15 54 02.8	+1.6
JIJ	Ishigaki jima	2.30	78	P	Pn	15 53 37.0	0.0
JIJ				S	Sn	15 54 04.4	-0.4
JTJ	Tarama	2.86	74	P	Pn	15 53 45.2	+0.3
JTJ				S	Sn	15 54 18.7	-0.2
QZH	Quanzhou	3.00	291	⇓iP	Pn	15 53 44.8	-2.0
QZH				S	Sn	15 54 17.3	-5.0
QZH				Smax			
	comp=N,1μm,0.4s						
QZH				Smax			
	comp=E,970nm,0.4s						
KNM	Kinmen	3.00	281	eP	Pn	15 53 46.2	-0.7
JMJ	Miyako jima 2	3.43	74	eS	Sn	15 54 33.5	+0.3
JOGS	Gusukube	3.51	75	eS	Sn	15 54 36.0	+0.6
JKE	Kume jima 2	5.23	61	P	Pn	15 54 17.3	-1.2
JAGN	Aguni-jima	5.71	61	P	Pn	15 54 25.8	+0.5
JAGN				eS	Sn	15 55 29.8	-1.0
JIH	Iheya	6.49	60	P	Pn	15 54 34.1	-2.2
JOW	Kunigami	6.65	63	Pn	Pn	15 54 35.4	-3.2
	comp=E,14nm,0.3s,baz=224,slow=14,SNR=25						
JOW	Kunigami	6.65	63	P	Pn	15 54 35.5	-3.0
JTK	Tokunoshima	7.61	58	P	Pn	15 54 48.5	-3.5
JAM	Amami Oshima	8.43	56	P	P	15 54 59.4	-3.9
JNU	Nakatsue	12.24	39	LR	LR	16 01 19.4	
	comp=E,77nm,19.1s,baz=180,slow=41						
JHJ	Hachijo jima 2	18.36	56	LR	LR	16 04 21.9	
	comp=E,76nm,20.1s,baz=127,slow=37						
CMAR	Chiang Mai Arr	21.86	260	P	P	15 57 52.2	-0.3
	comp=E,1.3nm,0.7s,mb3.5,baz=66,slow=8.6,SNR=8.9						
CMAR				LR	LR	16 06 50.1	
	comp=E,74nm,18.0s,MS3.1,baz=70,slow=38						
GTA	Gaotai	24.11	315	eP	P	15 58 09.6	-4.8
GTA				AP		15 58 15.8	
GTA				XP		15 58 18.5	
KSM	Kuching	24.86	208	eP	P	15 58 20.4	-1.6
ASAJ	Asahikawa	26.47	35	LR	LR	16 10 35.3	
	comp=E,46nm,18.8s,MS3.0,baz=338,slow=40						
ULN	Ulaanbaatar	26.60	338	eP	P	15 58 36.1	-1.7
	comp=E,3.5nm,0.8s,mb3.9						
SONM	Songino Array	26.81	337	P	P	15 58 37.9	-1.9
	comp=E,1.7nm,0.6s,mb3.7,baz=158,slow=9.9,SNR=19						
SONM				LR	LR	16 10 31.2	
	comp=E,105nm,18.1s,MS3.4,baz=268,slow=39						
LSA	Lhasa	27.80	289	eP	P	15 58 48.3	-0.7
	comp=E,1.9nm,0.6s,mb3.9						
MKAR	Makanchi Array	38.85	316	P	P	16 00 22.8	-1.8
	comp=E,1.7nm,0.6s,mb3.9,baz=105,slow=10,SNR=22						
ZAL	Zalesovo	40.73	327	P	P	16 00 36.3	-3.7
	comp=E,1.4nm,0.7s,mb3.7,baz=17,slow=7.6,SNR=7.2						
ZAL				LR	LR	16 19 27.5	
	comp=E,52nm,20.2s,MS3.4,baz=66,slow=39						
WRAB	Tennant Creek	45.28	163	eP	P	16 01 14.9	-2.5
	comp=E,2.2nm,0.5s,mb4.2						
WRA	Warramunga Arr	45.29	163	P	P	16 01 14.5	-3.0
	comp=E,1.5nm,0.6s,mb4.0,baz=345,slow=8.7,SNR=24						
BVAR	Borovoye Array	48.18	321	P	P	16 01 37.5	-2.4
	comp=E,0.6nm,0.4s,mb4.0,baz=96,slow=7.8,SNR=6.7						
BVAR				PcP	PcP	16 03 03.9	-3.4
	comp=E,0.5nm,0.6s,baz=135,slow=2.1,SNR=3.7						
STKA	Stephens Creek	58.64	160	P	P	16 02 54.4	-3.0
	comp=E,1.2nm,0.4s,mb4.2,baz=336,slow=18,SNR=6.6						
STKA	Stephens Creek	58.64	160	P	P	16 02 54.4	-3.0
ILAR	Eielson Array	69.26	27	P	P	16 04 06.0	-0.4
	comp=E,1.1nm,0.7s,mb3.9,baz=296,slow=8.8,SNR=12						
FINES	FINESS Array B	71.92	330	P	P	16 04 19.9	-2.6
	comp=E,0.4nm,0.4s,mb3.7,baz=63,slow=4.3,SNR=6.2						
HFS	Hagfors	78.03	331	LR	LR	16 42 59.5	
	comp=E,53nm,18.8s,MS3.9,baz=42,slow=38						
NOA	NORSAR Array B	78.69	332	LR	LR	16 43 04.0	
	comp=E,28nm,20.7s,MS3.6,baz=190,slow=38						
YKA	Yellowknife Ar	83.06	23	P	P	16 05 22.2	-1.9
	comp=E,1.3nm,0.7s,mb4.1,baz=317,slow=4.8,SNR=14						
YKA	Yellowknife Ar	83.06	23	P	P	16 05 22.2	-1.9

OTT 13 15:58:42.6±0.2, 52.79N×67.27W, MN3.0/8, Blast, Mount Wright, Qc Mining explosion., Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	Schefferville	2.06	7	PN	Pn	15 59 19.0	+0.1
SCHQ				SG	Sg	15 59 46.2	-4.9
SCHQ				Trac		15 59 47.9	
	comp=Z,53nm,0.2s						
MNQ	Manicouagan	2.45	203	PN	Pn	15 59 23.9	-0.5
MNQ				SN	Sn	15 59 54.2	-1.3
MNQ				Trac		16 00 00.2	
	comp=Z,26nm,0.2s						
SMQ	Clarke City	2.60	172	PN	Pn	15 59 25.2	-1.4
SMQ				SN	Sn	16 00 00.3	+1.0
SMQ				Trac		16 00 04.2	
	comp=Z,18nm,0.1s						
ICQ	Pointe Anglais	3.27	180	PN	Pn	15 59 34.1	-2.1
ICQ				SN	Sn	16 00 12.2	-4.2
ICQ				Trac		16 00 24.4	
	comp=Z,12nm,0.2s						
CNQ	Baie Comeau	3.53	189	PN	Pn	15 59 37.8	-2.0
CNQ				SN	Sn	16 00 19.4	-3.5
CNQ				SG	Sg	16 00 29.0	-11
CNQ				Trac		16 00 37.2	
	comp=Z,12nm,0.2s						
GSQ	Grosses Roches	3.89	178	PN	Pn	15 59 42.9	-2.0
GSQ				SN	Sn	16 00 28.2	-3.8
GSQ				Trac		16 00 46.6	
	comp=Z,8.7nm,0.2s						
LG4Q	La Grande 4	4.19	284	PN	Pn	15 59 47.0	-2.1
LG4Q				SN	Sn	16 00 33.2	-6.4
LG4Q				LG		16 00 52.3	
LG4Q				Trac		16 00 55.8	
	comp=Z,10nm,0.2s						
LMQ	La Malbaie	5.60	202	PN	Pn	16 00 05.9	-3.3
LMQ				SN	Sn	16 01 09.6	-5.6
LMQ				Trac		16 01 14.9	
	comp=Z,7.5nm,0.2s						
DRLN	Deer Lake	7.10	116	PN	Pn	16 00 27.4	-2.9

DRLN				SN	Sn	16 01 46.0	-6.7
LMN	**Caledonia Moun**	**7.13**	**166**	PN	Pn	16 00 26.6	-4.2
VLDQ	**Val d'Or**	**8.01**	**238**	PN	P	16 00 40.2	-2.7
MALO	**McAlpine Lake**	**8.29**	**255**	PN	P	16 00 41.5	-5.4
MALO				SN	Sn	16 02 09.6	-13
VIMO	**Victor Mine**	**9.98**	**277**	PN	P	16 01 04.1	-6.1
VIMO				SN	Sn	16 02 49.6	-15
SILO	**Sutton Inlier**	**10.61**	**286**	PN	P	16 01 12.1	-6.8
SILO				SN	S	16 03 04.0	-16
FRB	**Frobisher Bay**	**11.01**	**357**	PN	P	16 01 16.9	-7.3

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*NEIC **13** 16:05:52.2±0.7, 10.98N×140.92E, mb4.3/2, Error ellipse: s-maj=23.0km s-min=17.8km az=63.0*

*IDC **13** 16:05:52.2±0.8, 11.01N×140.94E, h41^{km}±5^{km}, mb3.9/12, mb1 4.1/12, mb1mx3.9/21, mbtmp4.1/12, MS3.0/2, Ms1 3.1/2, ms1mx2.8/24, Error ellipse: s-maj=23.5km s-min=18.2km az=75.0*

ISC 13 16:05:50.1±0.8**, 10.9N**±0.1×**140.9E**±0.2**, h43^{km}, h43^{km}**±1.9^{km}**:pP-P, n18, σ1^{s}12**/16**, mb4.1**/14**, MS3.0**/2**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**23.96**	**339**	P	**P**	**16 11 01.6**	**+0.1**
	6.4nm,0.8s,mb4.1,baz=121,slow=23,SNR=4.1						
JNU				LR	LR	16 18 25.3	
	comp=Z,17nm,20.3s,MS2.5,baz=358,slow=32						
WRA	**Warramunga Arr**	**31.32**	**192**	P	**P**	**16 12 08.1**	**-0.7**
	1.6nm,0.9s,mb3.8,baz=12,slow=9.9,SNR=7.1						
WRA				pP	pP	16 12 21.0	+0.6
	1.0nm,0.6s,baz=11,slow=9.9,SNR=5.6						
ENH	**Enshi**	**34.98**	**308**	*e*P	**P**	**16 12 41.1**	**+0.6**
	3.9nm,0.4s,mb4.7						
CMAR	**Chiang Mai Arr**	**41.20**	**286**	P	**P**	**16 13 34.4**	**+1.8**
	1.6nm,0.9s,mb3.6,baz=91,slow=6.1,SNR=6.5						
CMAR				pP	pP	16 13 45.7	+1.3
	1.5nm,0.9s,baz=94,slow=6.6,SNR=5.0						
ULN	**Ulaanbaatar**	**46.52**	**329**	*e*P	**P**	**16 14 15.2**	**0.0**
	0.9nm,0.7s,mb3.8						
SONM	**Songino Array**	**46.83**	**328**	P	**P**	**16 14 17.2**	**-0.5**
	0.7nm,0.6s,mb3.8,baz=134,slow=6.1,SNR=7.9						
SONM				pP	pP	16 14 29.9	+0.3
	0.4nm,0.7s,baz=153,slow=8.3,SNR=3.4						
SONM				PcP	PcP	16 15 50.7	+0.1
	0.7nm,0.6s,baz=154,slow=3.2,SNR=6.6						
SONM				pPcP		16 16 03.0	
	0.6nm,0.6s,baz=155,slow=3.7,SNR=6.0						
MKAR	**Makanchi Array**	**60.79**	**318**	P	**P**	**16 16 00.2**	**-0.1**
	1.1nm,0.8s,mb4.0,baz=103,slow=7.5,SNR=8.3						
MKAR				pP	pP	16 16 12.3	-0.2
	0.7nm,0.7s,baz=90,slow=11,SNR=5.6						
MKAR	**Makanchi Array**	**60.79**	**318**	P	**P**	**16 16 00.2**	**-0.1**
MKAR				pP	pP	16 16 12.3	-0.2
ZAL	**Zalesovo**	**61.62**	**326**	P	**P**	**16 16 03.5**	**-2.2**
	0.7nm,0.3s,mb4.2,baz=158,slow=20,SNR=4.3						
BVAR	**Borovoye Array**	**69.66**	**323**	P	**P**	**16 16 57.3**	**+0.1**
	2.1nm,0.5s,mb4.3,baz=107,slow=7.5,SNR=7.2						
ILAR	**Eielson Array**	**72.65**	**25**	P	**P**	**16 17 13.4**	**-1.5**
	1.0nm,0.7s,mb3.9,baz=250,slow=6.2,SNR=9.7						
ILAR				LR	LR	16 45 00.5	
	comp=Z,25nm,19.7s,MS3.5,baz=181,slow=32						
YKA	**Yellowknife Ar**	**87.01**	**27**	P	**P**	**16 18 33.2**	**+1.4**
	1.4nm,0.7s,mb4.3,baz=291,slow=5.3,SNR=13						
YKA				pP	pP	16 18 44.8	+0.1
	0.4nm,0.6s,baz=291,slow=5.0,SNR=4.0						
YKA	**Yellowknife Ar**	**87.01**	**27**	P	**P**	**16 18 33.2**	**+1.3**
YKA				pP	pP	16 18 44.8	+0.1
ARCES	**ARCESS Array B**	**88.42**	**341**	P	**P**	**16 18 38.8**	**+0.3**
	1.4nm,0.8s,mb4.2,baz=63,slow=5.4,SNR=6.6						
NVAR	**Mina Array Bea**	**91.62**	**51**	P	**P**	**16 18 56.3**	**+2.0**
	1.4nm,0.7s,mb4.4,baz=270,slow=4.4,SNR=7.7						
FINES	**FINESS Array B**	**91.92**	**334**	P	**P**	**16 18 53.9**	**-1.2**
	2.1nm,0.7s,mb4.6,baz=60,slow=6.5,SNR=13						
FINES				pP	pP	16 19 06.8	-1.2
	1.7nm,0.6s,baz=18,slow=6.0,SNR=3.8						
LPAZ	**La Paz**	**151.30**	**104**	PKPbc	PKPdf	16 25 44.5	+11
	2.4nm,0.7s,baz=295,slow=1.7,SNR=10						
LPAZ	**La Paz**	**151.30**	**104**	PKPbc	PKPdf	16 25 44.5	+11

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*IDC **13** 16:13:51.8±1.3, 11.17N×94.91E, mb3.8/8, mb1 3.9/9, mb1mx3.8/20, mbtmp3.7/9, ML3.5/1, MS3.2/2, Ms1 3.3/2, ms1mx2.9/20, Error ellipse: s-maj=41.9km s-min=23.8km az=56.0*

*NEIC **13** 16:13:56.9±0.6, 11.28N×95.10E, h30^{km}, mb4.1/5, Error ellipse: s-maj=15.2km s-min=7.7km az=55.0*

ISC 13 16:13:55.0±0.6**, 11.31N**±0.08×**95.12E**±0.09**, h30^{km}, n21, σ0^{s}90**/22**, mb3.8**/9**, MS3.4**/1**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNT	**Nongplab**	**4.69**	**74**	P	**Pn**	**16 15 05.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**8.01**	**27**	Pn	**P**	**16 15 50.9**	**-1.5**
	0.2nm,0.3s,baz=216,slow=15,SNR=8.5						
CMAR				LR	LR	16 18 55.5	
	comp=Z,96nm,21.0s,baz=210,slow=37						
KULM	**Kulim**	**8.10**	**137**	*e*Pn	**P**	**16 15 52.5**	**-1.1**
KULM				*e*Sn	**Sn**	**16 17 26.2**	**+1.0**
KMI	**Kunming**	**15.52**	**27**	P	**P**	**16 17 34.4**	**+0.8**
	6.0nm,1.3s						
PKI	**Pulchoki**	**18.57**	**332**	*e*P	**P**	**16 18 11.4**	**-0.5**
GUN	**Gumba**	**18.65**	**334**	*e*P	**P**	**16 18 14.7**	**+1.8**
LSA	**Lhasa**	**18.67**	**349**	P	**P**	**16 18 12.9**	**-0.2**
DMN	**Daman**	**18.75**	**331**	*e*P	**P**	**16 18 13.7**	**-0.3**
	23nm,0.9s						
KKN	**Kakani**	**18.82**	**332**	*e*P	**P**	**16 18 15.4**	**+0.6**
GKN	**Gorkha**	**19.30**	**331**	*e*P	**P**	**16 18 20.7**	**+0.2**
	7.4nm,0.4s						
KOLN	**Koldanda**	**19.62**	**328**	*e*P	**P**	**16 18 23.5**	**-0.7**
	14nm,0.6s						
MKAR	**Makanchi Array**	**37.00**	**345**	P	**P**	**16 21 04.6**	**+0.9**
	1.5nm,0.8s,mb3.9,baz=164,slow=8.8,SNR=14						
MKAR	**Makanchi Array**	**37.00**	**345**	P	**P**	**16 21 04.6**	**+0.9**
SONM	**Songino Array**	**37.62**	**12**	P	**P**	**16 21 10.4**	**+1.5**
	0.5nm,0.9s,mb3.3,baz=207,slow=8.3,SNR=4.4						
SONM				LR	LR	16 38 08.5	
	comp=Z,58nm,18.7s,MS3.4,baz=70,slow=38						
ZAL	**Zalesovo**	**43.31**	**351**	P	**P**	**16 21 55.4**	**-0.3**
	1.0nm,1.0s,mb3.5,baz=335,slow=19,SNR=2.9						
BVAR	**Borovoye Array**	**46.10**	**339**	P	**P**	**16 22 18.4**	**+0.2**
	1.6nm,0.8s,mb4.0,baz=135,slow=8.4,SNR=9.4						
WRA	**Warramunga Arr**	**49.55**	**129**	P	**P**	**16 22 45.4**	**-0.1**
	0.8nm,0.7s,mb3.9,baz=306,slow=8.5,SNR=14						
WRAB	**Tennant Creek**	**49.55**	**129**	P	**P**	**16 22 45.9**	**+0.4**
	1.7nm,0.7s,mb4.2						
BRTR	**Keskin Array B**	**60.98**	**309**	P	**P**	**16 24 05.7**	**-2.3**
	0.6nm,0.7s,mb3.9,baz=121,slow=7.2,SNR=3.8						
ARCES	**ARCESS Array B**	**72.39**	**340**	P	**P**	**16 25 19.9**	**0.0**
	3.2nm,1.1s,mb4.2,baz=90,slow=6.1,SNR=3.5						
GERES	**GERESS Array B**	**75.94**	**318**	P	**P**	**16 25 40.8**	**0.0**
	0.3nm,0.4s,mb3.6,baz=63,slow=4.4,SNR=3.2						

IDC 13 16:16:37.9±4.3**, 1.49N×97.11E, mb3.7**/4**, mb1 3.8**/4**, mb1mx3.6**/16**, mbtmp3.7**/4**, Error ellipse: s-maj=168.2km s-min=28.0km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.27**	**122**	P	P	16 24 33.4	-1.7
	0.3nm,0.4s,baz=308,slow=8.8,SNR=7.1						
SONM	**Songino Array**	**46.86**	**9**	P	P	16 25 10.1	-1.5
	0.4nm,0.4s,baz=191,slow=8.8,SNR=7.4						
MKAR	**Makanchi Array**	**46.94**	**346**	P	P	16 25 10.9	-1.4
	1.0nm,0.6s,baz=160,slow=8.5,SNR=8.8						
ZAL	**Zalesovo**	**53.25**	**351**	P	P	16 25 57.0	-3.5
	0.9nm,0.5s,baz=274,slow=3.7,SNR=4.1						

DHMR 13 16:23:00.8±0.5**, 11.86N×43.55E, h11^{km}**±5^{km}**, MD3.5, ML3.2, 6C-1D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRBA	**At Turbah**	**1.47**	**22**	⇑*i*P	Pn	16 23 27.8	+0.4
TRBA				*i* S	Sb	16 23 48.7	+2.4
TRBA				AML	AML	16 23 49.2	
	comp=N,614nm,0.3s						
UDYN	**Al 'Udayn**	**2.13**	**11**	⇑*i*P	Pn	16 23 37.9	+1.0
UDYN				*i* S	Sn	16 24 07.3	+3.7
UDYN	**Al 'Udayn**	**2.13**	**11**	⇑*i*P	Pn	16 23 37.9	+1.0
UDYN				*i* S	Sn	16 24 07.3	+3.7
	comp=N,75nm,0.3s						
LBOS		**2.60**	**39**	⇑*i*P	Pn	16 23 45.5	+2.0
LBOS				*i* S	Sn	16 24 20.6	+5.3
DHBB	**Dhamar BB**	**2.82**	**17**	⇑*i*P	Pn	16 23 49.0	+2.3
DHBB				*i* S	Sn	16 24 26.4	+5.5
DHBB	**Dhamar BB**	**2.82**	**17**	⇑*i*P	Pn	16 23 49.0	+2.3
DHBB				*i* S	Sn	16 24 26.2	+5.2
BDHA	**Al Bayda'**	**2.88**	**43**	⇓*i*P	Pn	16 23 49.8	+2.3
BDHA				*i* S	Sn	16 24 27.7	+5.2
	comp=N,56nm,0.5s						

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*HEL **13** 16:31:39.7±0.2, 67.10N×20.89E, ML1.9(UPP), Explosion*

*IDC **13** 16:31:40.2±1.0, 67.09N×21.16E, mb1 2.9/4, mb1mx2.8/22, mbtmp2.9/4, ML2.4/4, Error ellipse: s-maj=18.0km s-min=7.1km az=108.0*

ISC 13 16:31:38.3±0.4**, 67.05N**±0.03×**20.96E**±0.09**, n22, σ1^{s}18**/27**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.17**	**296**	*i* P	**Pg**	**16 31 41.2**	**-0.5**
MASU	**Masugnsbyn**	**0.58**	**44**	*i* P	**Pg**	**16 31 49.6**	**-0.2**
ERTU	**Ertsjaerv**	**0.69**	**135**	*i* P	**Pg**	**16 31 51.6**	**-0.5**
PAJU	**Pajala**	**0.85**	**91**	*i* P	**Pg**	**16 31 54.6**	**-0.5**
KUA	**Kurravaara**	**0.94**	**346**	*e*P	**Pg**	**16 31 55.7**	**-1.4**
SALU	**Saltoluokta**	**1.01**	**290**	*e*P	**Pb**	**16 31 57.4**	**-1.0**
LANU	**Lannavaara**	**1.08**	**21**	*e*P	**Pb**	**16 31 58.2**	**-1.4**
LILU	**Lilltraesk**	**1.83**	**195**	*e*P	**Pn**	**16 32 12.3**	**+1.1**
KIF	**Kilpisjarvi**	**1.97**	**358**	*e*P	**Pn**	**16 32 14.6**	**+1.4**
KTK1	**Kautokeino**	**2.15**	**22**	*e*P	**Pn**	**16 32 17.8**	**+1.9**
TRO	**Tromso**	**2.71**	**345**	*e*SG	**Sn**	**16 33 02.0**	**+4.3**
MOR8	**Moi Rana**	**2.75**	**254**	*e*SG	**Sn**	**16 33 00.0**	**+1.3**
OUL	**Oulu**	**2.82**	**132**	*e*P	**Pn**	**16 32 27.0**	**+1.6**
OUL				*e*SG	**Sg**	**16 33 09.5**	**-2.5**
ARCES	**ARCESS Array B**	**3.02**	**32**	Pn	**Pn**	**16 32 28.0**	**-0.2**
	0.4nm,0.3s,baz=214,slow=14,SNR=28						
ARCES				Sn	**Sn**	**16 33 05.7**	**+0.1**
	0.5nm,0.3s,baz=209,slow=23,SNR=6.8						
ARCES				Lg		16 33 12.3	
	0.8nm,0.3s,baz=213,slow=28,SNR=9.4						
KU4	**Liikasenvaara**	**3.49**	**97**	*e*P	**Pn**	**16 32 36.0**	**+1.1**
KEV	**Kevo**	**3.52**	**37**	*e*P	**Pn**	**16 32 34.8**	**-0.6**
KJN	**Kajaani**	**4.09**	**134**	*e*P	**Pn**	**16 32 44.9**	**+1.5**
SUF	**Sumiainen**	**4.88**	**151**	*e*P	**Pn**	**16 32 55.6**	**+1.0**
SUF				*e*S	**Sn**	**16 33 53.0**	**+0.4**
FIA0	**FINESS Array S**	**6.05**	**156**	*e*P	**Pn**	**16 33 12.8**	**+1.6**
FIA0				*e*S	**Sn**	**16 34 20.6**	**-1.5**
FINES	**FINESS Array B**	**6.05**	**156**	Pn	**Pn**	**16 33 11.1**	**0.0**
	0.1nm,0.3s,baz=345,slow=13,SNR=6.9						
FINES				Sn	**Sn**	**16 34 21.0**	**-1.1**
	0.1nm,0.3s,baz=343,slow=22,SNR=3.9						
FINES				Lg		16 34 50.7	
	0.2nm,0.3s,baz=332,slow=27,SNR=2.7						
NOA	**NORSAR Array B**	**7.38**	**220**	Pn	**Pn**	**16 33 28.7**	**-1.3**
	0.1nm,0.3s,baz=19,slow=17,SNR=2.5						
HFS	**Hagfors**	**7.65**	**208**	Pn	**Pn**	**16 33 32.1**	**-1.6**
	0.0nm,0.3s,baz=27,slow=13,SNR=4.6						

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*NEIC **13** 16:42:17.3±2.0, 5.32S×80.29W, h68^{km}±18^{km}, mb4.3/11, Error ellipse: s-maj=23.2km s-min=7.9km az=58.0*

*IDC **13** 16:42:18.7±5.9, 5.33S×80.20W, h84^{km}±57^{km}, mb3.5/5, mb1 3.8/7, mb1mx3.6/19, mbtmp3.9/7, ML3.6/2, MS3.6/4, Ms1 3.7/4, ms1mx3.2/25, Error ellipse: s-maj=40.8km s-min=19.9km az=68.0*

ISC 13 16:42:16.4±2.6**, 5.29S**±0.08×**80.3W**±0.1**, h75^{km}**±24^{km}**, n30, σ1^{s}04**/29**, mb4.2**/16**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTAV	**Otavalo**	**5.79**	**19**	*e*Pn	**P**	**16 43 40.5**	**-0.9**
	8.2nm,0.5s						
OTAV				*e*Sn	**S**	**16 44 47.7**	**+0.5**
JTS	**JuntasAbangare**	**16.15**	**343**	P	**P**	**16 46 02.2**	**+2.0**
	0.4nm,0.3s,baz=139,slow=10,SNR=3.7						
JTS				LR	LR	16 50 51.8	
	comp=Z,158nm,18.2s,baz=206,slow=32						
LPAZ	**La Paz**	**16.20**	**133**	P	**P**	**16 45 59.9**	**-0.9**
	0.1nm,0.3s,baz=315,slow=12,SNR=7.6						
LPAZ				LR	LR	16 52 53.1	
	comp=Z,291nm,21.1s,baz=297,slow=39						
SAML	**Samuel**	**17.38**	**103**	*e*P	**P**	**16 46 16.9**	**+1.3**
	15nm,1.3s						
SIV	**San Ignacio**	**21.67**	**121**	P	**P**	**16 47 01.8**	**-0.8**
	2.0nm,0.7s,mb3.5,baz=303,slow=13,SNR=12						
SJG	**San Juan**	**27.12**	**31**	P	**P**	**16 47 54.0**	**-0.6**
	11nm,0.2s,mb5.0,baz=321,slow=17,SNR=4.5						
CPUP	**Villa Florida**	**30.34**	**136**	LR	LR	17 03 23.6	
	comp=Z,104nm,18.9s,baz=357,slow=42						
PLCA	**Paso Flores**	**36.37**	**167**	P	**P**	**16 49 14.2**	**-1.0**
	5.0nm,1.0s,mb4.4,baz=333,slow=11,SNR=5.9						
WMOK	**Wichita Mounta**	**43.45**	**338**	*e*P	**P**	**16 50 14.3**	**+0.4**
	3.0nm,1.1s,mb3.9						
MNTX	**Cornudas Mount**	**43.86**	**329**	*e*P	**P**	**16 50 16.6**	**-0.7**
	9.9nm,1.7s,mb4.3						
CPRX	**Cap Rock**	**44.18**	**331**	*e*P	**P**	**16 50 20.3**	**+0.6**
ANMO	**Albuquerque**	**46.99**	**330**	*e*P	**P**	**16 50 41.6**	**-0.4**
	3.0nm,0.9s,mb4.0						
SDCO	**Great Sand Dun**	**48.81**	**333**	*e*P	**P**	**16 50 56.5**	**+0.4**
	3.4nm,1.0s,mb4.2						
PDAR	**Pinedale Array**	**54.69**	**334**	P	**P**	**16 51 39.1**	**-1.1**
	0.7nm,0.5s,mb4.0,baz=127,slow=7.4,SNR=7.3						
HWUT	**Hardware Ranch**	**54.70**	**332**	*e*P	**P**	**16 51 39.7**	**-0.5**
	4.7nm,0.9s,mb4.5						
MOOW	**Moose Ponds**	**56.00**	**334**	*e*P	**P**	**16 51 49.1**	**-0.6**
	0.7nm,0.7s,mb3.8						
HLID	**Hailey**	**57.55**	**331**	*e*P	**P**	**16 52 00.6**	**0.0**
	4.5nm,1.0s,mb4.5						
BOZ	**Bozeman (W)**	**57.89**	**335**	*e*P	**P**	**16 51 59.3**	**-3.7**
	1.9nm,0.6s,mb4.3						
WVOR	**Wild Horse Val**	**58.88**	**328**	*e*P	**P**	**16 52 09.2**	**-0.7**
	26nm,1.9s,mb4.9						
YKA	**Yellowknife Ar**	**72.48**	**344**	P	**P**	**16 53 38.0**	**+1.4**
	0.2nm,0.4s,mb3.3,baz=135,slow=5.5,SNR=3.6						
YKA	**Yellowknife Ar**	**72.48**	**344**	P	**P**	**16 53 38.0**	**+1.4**
VNA3	**Neumayer Olymp**	**78.85**	**162**		**P**	**16 54 06.7**	**-5.9**
VNA3	**Neumayer Olymp**	**78.85**	**162**		**P**	**16 54 15.4**	**+2.8**
VNA3	**Neumayer Olymp**	**78.85**	**162**	P	**P**	**16 54 15.4**	**+2.8**
VNA2	**Neumayer--Watz**	**79.48**	**161**		**P**	**16 54 09.0**	**-7.0**
VNA2	**Neumayer--Watz**	**79.48**	**161**		**P**	**16 54 18.6**	**+2.6**
VNA2	**Neumayer--Watz**	**79.48**	**161**	P	**P**	**16 54 18.6**	**+2.6**
SNAA	**Sanae**	**81.08**	**162**	*e*P	**P**	**16 54 25.8**	**+1.3**
	5.0nm,0.9s,mb4.3						
ESDC	**Sonseca Array**	**82.92**	**49**	P	**P**	**16 54 33.8**	**-0.8**
	0.3nm,0.3s,mb3.6,baz=268,slow=5.0,SNR=4.8						
ILAR	**Eielson Array**	**85.01**	**337**	LR	LR	17 33 26.2	
	comp=Z,38nm,21.0s,baz=359,slow=36						

IDC 13 16:52:16.8±1.8**, 1.61N×125.64E, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/15**, mbtmp4.0**/3**, Error ellipse: s-maj=186.9km s-min=25.3km az=63.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.05**	**159**	P	P	16 57 23.7	-1.4
	3.7nm,0.6s,baz=338,slow=11,SNR=39						
WB2	**Warramunga Arr**	**23.06**	**159**	*e*P	P	16 57 23.6	-1.5
STKA	**Stephens Creek**	**36.58**	**157**	P	P	16 59 24.9	-1.5
	1.7nm,0.7s,baz=18,slow=9.6,SNR=3.8						
MKAR	**Makanchi Array**	**58.69**	**326**	P	P	17 02 16.1	-2.4
	0.4nm,0.4s,baz=117,slow=8.6,SNR=7.0						

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*IDC **13** 17:14:12.6±0.8, 13.46N×92.64E, mb4.2/14, mb1 4.3/15, mb1mx4.2/21, mbtmp4.2/15, ML4.4/1, MS3.3/3, Ms1 3.4/3, ms1mx3.0/25, Error ellipse: s-maj=29.6km s-min=14.8km az=57.0*

*BJI **13** 17:14:15.6, 13.40N×92.95E, h29^{km}, mB4.8, mb4.5, Ms4.4, Msz3.9*

*NEIC **13** 17:14:17.7±0.6, 13.58N×92.75E, h30^{km}, mb4.6/10, Error ellipse: s-maj=16.8km s-min=6.8km az=52.0*

ISC 13 17:14:16.2±1.2**, 13.54N**±0.06×**92.67E**±0.05**, h36^{km}**±12^{km}**, n50, σ1^{s}17**/56**, mb4.3**/21**, MS3.7**/4**, 2C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNT	**Nongplab**	**6.95**	**97**	P	**P**	**17 15 59.6**	**+1.4**
NST	**Nakhon Sawan**	**7.53**	**73**	P	**P**	**17 16 06.5**	**+0.2**
	292nm,0.4s						
CMAR	**Chiang Mai Arr**	**7.76**	**50**	Pn	**P**	**17 16 07.2**	**-2.3**
	1.4nm,0.3s,baz=241,slow=15,SNR=54						
CMAR				Sn	**S**	**17 17 32.5**	**-4.6**
	2.2nm,0.3s,baz=238,slow=28,SNR=10						
CMAR				LR	LR	17 19 44.6	
	comp=Z,163nm,20.3s,baz=235,slow=42						
NANT	**Nan**	**9.32**	**55**	P	**P**	**17 16 35.0**	**+3.9**
VIS	**Vishakhapatnam**	**9.91**	**296**	*i* P	**P**	**17 16 36.3**	**-3.1**
VIS				*i* S	**S**	**17 18 18.8**	**-12**
KULM	**Kulim**	**11.36**	**135**	Pn	**P**	**17 17 00.0**	**+0.8**
SHL	**Shillong**	**11.98**	**357**	*e*P	**P**	**17 17 02.0**	**-5.6**
SHL				*e*S	**S**	**17 19 09.0**	**-12**
HYB	**Hyderabad**	**14.14**	**288**	*e*P	**P**	**17 17 45.0**	**+8.7**
HYB				*e*S	**S**	**17 20 13.0**	**+0.1**
HYB	**Hyderabad**	**14.14**	**288**	*i* P	**P**	**17 17 45.0**	**+8.7**
HYB				*e*S	**S**	**17 20 16.0**	**+3.1**
KMI	**Kunming**	**14.92**	**38**	P	**P**	**17 17 53.8**	**+7.3**
	12nm,1.0s						
KMI				pP		17 18 00.1	
KMI				sP		17 18 04.5	
KMI				PP	PP	17 18 04.7	+6.5
KMI				PPP	PPP	17 18 12.3	+7.0
KMI				S	**S**	**17 20 29.0**	**-2.3**
KMI				sS		17 20 38.9	
KMI				SS	SS	17 20 45.4	-3.5
KMI				SSS	SSS	17 20 57.3	-5.2
KMI				PcP	PcP	17 23 14.3	+19
PKI	**Pulchoki**	**15.52**	**335**	*e*P	**P**	**17 17 57.6**	**+3.4**
GUN	**Gumba**	**15.64**	**337**	*e*P	**P**	**17 17 55.6**	**-0.1**
DMN	**Daman**	**15.68**	**334**	*e*P	**P**	**17 17 58.7**	**+2.5**
	28nm,0.6s						
KKN	**Kakani**	**15.76**	**335**	*e*P	**P**	**17 17 58.3**	**+1.0**
LSA	**Lhasa**	**16.14**	**355**	P	**P**	**17 18 06.0**	**+3.9**
LSA	**Lhasa**	**16.14**	**355**	*e*P	**P**	**17 18 05.8**	**+3.8**
	8.8nm,0.7s						
GKN	**Gorkha**	**16.22**	**334**	*e*P	**P**	**17 18 01.2**	**-1.9**
	20nm,0.3s						
KOLN	**Koldanda**	**16.49**	**331**	*e*P	**P**	**17 18 05.4**	**-1.1**
	26nm,0.6s						
POO	**Poona**	**18.75**	**288**	*e*S	**S**	**17 21 58.0**	**-1.1**
CD2	**Chengdu**	**20.08**	**29**	P	**P**	**17 18 49.8**	**+0.3**
KSM	**Kuching**	**21.18**	**123**	*e*P	**P**	**17 19 01.4**	**+0.5**
ENH	**Enshi**	**22.77**	**40**	*e*P	**P**	**17 19 16.2**	**-0.5**
	19nm,0.7s,mb4.6						
KKM	**Kota Kinabalu**	**24.35**	**106**	*e*P	**P**	**17 19 32.4**	**+0.1**
LZH	**Lanzhou**	**24.59**	**22**	*e*P	**P**	**17 19 35.0**	**+0.6**
LZH				AP		17 19 45.0	
LZH				XP		17 19 48.9	
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.5						
LZH				AMB	AMB		
	comp=Z,80nm,4.0s						
LZH	**Lanzhou**	**24.59**	**22**	*e*P	**P**	**17 19 35.0**	**+0.6**
	comp=Z,26nm,1.2s,mb4.6						
LZH				pP		17 19 45.0	
LZH				sP		17 19 48.9	
XAN	**Xi'an**	**25.18**	**33**	P	**P**	**17 19 39.5**	**-0.6**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
GTA	**Gaotai**	**26.53**	**12**	*e*P	**P**	**17 19 54.0**	**+1.4**
WMQ	**Urumqi**	**30.48**	**353**	*e*P	**P**	**17 20 33.4**	**+5.4**
WMQ				AP	pP	17 20 42.8	+4.7
WMQ				XP	sP	17 20 47.0	+4.2
WMQ				PP	PP	17 21 33.2	+4.9
WMQ				*e*S	**S**	**17 25 30.0**	**+4.5**
WMQ				AMB	AMB		
	comp=Z,150nm,4.5s						
WMQ				LR	LR		
	comp=N,760nm,18.0s						
WMQ				LR	LR		
	comp=E,790nm,24.0s						
WMQ				LR	LR		
	comp=Z,750nm,17.0s,MS4.4						
HHC	**Hu-ho-hao-te**	**31.83**	**28**	*e*P	**P**	**17 20 41.8**	**+1.8**
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,110nm,6.5s						
HHC				LR	LR		
	comp=N,100nm,16.6s,MS4.0						
HHC				LR	LR		
	comp=E,260nm,17.8s,MS4.0						
HHC				LR	LR		
	comp=Z,90nm,17.8s,MS3.5						
MKAR	**Makanchi Array**	**34.28**	**347**	P	**P**	**17 21 01.3**	**+0.2**
	comp=Z,2.4nm,0.7s,mb4.2,baz=160,slow=8.9,SNR=20						
SONM	**Songino Array**	**36.05**	**16**	P	**P**	**17 21 16.8**	**+0.6**
	comp=Z,2.1nm,1.0s,mb4.0,baz=203,slow=6.8,SNR=12						
JNU	**Nakatsue**	**39.84**	**54**	LR	LR	17 40 21.4	
	comp=Z,48nm,18.1s,MS3.4,baz=184,slow=39						
ZAL	**Zalesovo**	**40.78**	**353**	P	**P**	**17 21 54.9**	**-0.7**
	comp=Z,3.3nm,0.6s,mb4.1						
BVAR	**Borovoye Array**	**43.20**	**340**	P	**P**	**17 22 15.1**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.5,baz=141,slow=9.5,SNR=3.7						
FITZ	**Fitzroy Crossi**	**45.23**	**133**	⇑*i*P	**P**	**17 22 31.0**	**-1.3**
	comp=Z,7.6nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**45.23**	**133**	P	**P**	**17 22 31.2**	**-1.1**
	comp=Z,9.4nm,0.6s,mb4.8,baz=341,slow=4.9,SNR=14						
MJAR	**Matsushiro Arr**	**46.64**	**52**	P	**P**	**17 22 43.9**	**+0.8**
	comp=Z,1.0nm,0.6s,mb4.0,baz=260,slow=9.8,SNR=6.4						
MJAR				LR	LR	17 45 00.5	
	comp=Z,30nm,18.3s,MS3.3,baz=170,slow=40						
ASAJ	**Asahikawa**	**52.24**	**44**	P	**P**	**17 23 27.6**	**+1.5**
	comp=Z,2.8nm,0.6s,mb4.4,baz=227,slow=7.3,SNR=4.5						
WRA	**Warramunga Arr**	**52.80**	**128**	P	**P**	**17 23 29.4**	**-1.1**
	comp=Z,6.7nm,0.6s,mb4.8,baz=310,slow=7.8,SNR=207						
WRA				PcP	PcP	17 24 39.5	-0.2
	comp=Z,1.0nm,0.5s,baz=319,slow=3.0,SNR=12						
WRAB	**Tennant Creek**	**52.80**	**128**	*e*P	**P**	**17 23 29.5**	**-1.1**
	comp=Z,6.2nm,0.4s,mb4.9						
WB2	**Warramunga Arr**	**52.81**	**128**	⇑*i*P	**P**	**17 23 29.6**	**-1.0**
YSS	**Yuzh-Sakhalins**	**53.34**	**41**	*e*P	**P**	**17 23 33.6**	**-0.6**
	comp=Z,3.5nm,0.4s,mb4.6						
YAK	**Yakutsk**	**55.16**	**20**	*e*P	**P**	**17 23 46.0**	**-1.3**
	comp=Z,4.5nm,0.6s,mb4.7						
YAK				*e*pP	pP	17 23 52.9	-5.1
STKA	**Stephens Creek**	**65.08**	**135**	P	**P**	**17 24 55.5**	**-0.2**
	comp=Z,3.3nm,1.0s,mb4.3,baz=100,slow=10,SNR=7.3						
FINES	**FINESS Array B**	**67.06**	**331**	P	**P**	**17 25 07.7**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.9,baz=90,slow=7.6,SNR=6.6						
ARCES	**ARCESS Array B**	**69.48**	**340**	P	**P**	**17 25 23.2**	**+0.6**
	comp=Z,1.5nm,0.8s,mb4.0,baz=100,slow=7.4,SNR=4.5						
GERES	**GERESS Array B**	**72.69**	**317**	P	**P**	**17 25 43.8**	**+1.6**
	comp=Z,0.5nm,0.6s,mb3.6,baz=90,slow=6.7,SNR=6.5						
NB2	**NORSAR Subarra**	**74.12**	**330**	P	**P**	**17 25 50.3**	**-0.1**
	comp=Z,1.7nm,1.0s,mb3.9,baz=91,slow=5.8						
NOA	**NORSAR Array B**	**74.12**	**330**	P	**P**	**17 25 50.8**	**+0.3**
	comp=Z,0.7nm,0.7s,mb3.7,baz=92,slow=5.9,SNR=3.1						
ILAR	**Eielson Array**	**90.06**	**22**	P	**P**	**17 27 13.9**	**+0.6**
	comp=Z,0.6nm,0.6s,mb4.1,baz=300,slow=4.6,SNR=7.1						

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*NIED **13** 17:26:00, 41.90N×144.10E, h11^{km}, Mw3.7 Best double couple: M$_0$3.61×10^{14} NP1:φ$_s$294°, δ72°, λ24°. NP2:φ$_s$196°, δ67°, λ160°.*

*NEIC **13** 17:26:52.6±6.8, 41.78N×144.37E, h1^{km}±43^{km}, Error ellipse: s-maj=26.7km s-min=13.8km az=105.0*

*IDC **13** 17:26:52.5±1.3, 41.76N×144.34E, mb3.6/6, mb1 3.8/8, mb1mx3.7/22, mbtmp3.6/8, ML3.1/2, Error ellipse: s-maj=31.2km s-min=22.6km az=86.0*

*JMA **13** 17:26:55.4, 41.94N×144.12E, h28^{km}±3^{km}, M3.5*

ISC 13 17:26:53.9±1.8**, 41.86N**±0.07×**144.2E**±0.1**, h21^{km}**±11^{km}**, n17, σ0^{s}85**/20**, mb3.5**/6**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEM	**Erimo**	**0.77**	**282**	P	**Pb**	**17 27 08.7**	**+0.2**
JEM				*e*S	**Sb**	**17 27 18.0**	**-0.5**
JCH	**Churui**	**0.96**	**322**	P	**Pb**	**17 27 11.6**	**-0.1**
JOB	**Onbets**	**1.07**	**347**	P	**Pb**	**17 27 14.1**	**+0.5**
JNBK	**Urakawa-nobuka**	**1.13**	**292**	P	**Pb**	**17 27 15.0**	**+0.3**
JAK	**Akkeshi**	**1.20**	**19**	P	**Pn**	**17 27 15.1**	**-0.5**
JAR	**Ashorobuto**	**1.47**	**349**	P	**Pn**	**17 27 18.9**	**-0.5**
JAR				*e*S	**Sn**	**17 27 36.6**	**-1.5**
JBT2	**Biratori 2**	**1.62**	**305**	P	**Pn**	**17 27 21.0**	**-0.6**
JFR	**Furan**	**1.75**	**319**	P	**Pn**	**17 27 23.3**	**-0.1**
ASAJ	**Asahikawa**	**2.53**	**333**	Pn	**Pn**	**17 27 35.8**	**+1.1**
	2.7nm,0.3s,baz=161,slow=13,SNR=19						
ASAJ				Sn	**Sn**	**17 28 11.1**	**+5.9**
	8.9nm,0.3s,baz=236,slow=31,SNR=5.5						
YSS	**Yuzh-Sakhalins**	**5.19**	**349**	*e*Pn	**Pn**	**17 28 12.4**	**0.0**
MJAR	**Matsushiro Arr**	**7.04**	**223**	Pn	**Pn**	**17 28 37.9**	**-0.6**
	0.3nm,0.3s,baz=34,slow=14,SNR=4.9						
SONM	**Songino Array**	**27.24**	**296**	P	**P**	**17 32 38.7**	**+0.5**
	0.5nm,0.7s,mb3.2,baz=76,slow=5.1,SNR=3.9						

ZAL	**Zalesovo**	40.43	308	P	P	17 34 35.4	+3.3
	1.0nm,0.3s,mb4.0,baz=126,slow=5.4,SNR=3.6						
MKAR	**Makanchi Array**	43.53	298	P	P	17 34 58.8	+1.3
	0.1nm,0.4s,mb2.9,baz=85,slow=8.7,SNR=3.2						
ILAR	**Eielson Array**	44.30	35	P	P	17 35 03.9	+0.5
	0.7nm,0.7s,mb3.5,baz=290,slow=9.2,SNR=6.0						
WRA	**Warramunga Arr**	62.16	190	P	P	17 37 14.4	-1.6
	0.4nm,0.9s,mb3.5,baz=12,slow=6.9,SNR=4.5						
FINES	**FINESS Array B**	65.54	332	P	P	17 37 37.9	+0.5
	1.3nm,0.7s,mb4.0,baz=72,slow=6.0,SNR=4.1						

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*IDC **13** 17:27:00.8±3.1, 1.17N×97.21E, mb3.8/4, mb1 3.9/5, mb1mx3.7/17, mbtmp3.7/5, ML3.4/1, MS3.5/2, Ms1 3.6/2, ms1mx3.1/21, Error ellipse: s-maj=110.9km s-min=26.6km az=59.0*

*NEIC **13** 17:27:05.2±1.4, 1.14N×97.18E, h30^{km}, mb4.3/1, Error ellipse: s-maj=28.5km s-min=18.3km az=67.0*

ISC 13 17:27:03.3±1.6, 1.1N±0.2×97.2E±0.2, h30^{km}, n8, σ0^{s}86/7, mb3.8/5, MS3.7/2, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	5.40	40	*e*Pn	Pn	17 28 23.6	-0.4
CMAR	**Chiang Mai Arr**	17.30	6	P	P	17 31 04.2	-0.4
	0.1nm,0.3s,baz=196,slow=13,SNR=4.4						
CMAR				LR	LR	17 38 42.2	
	comp=Z,51nm,21.4s,baz=185,slow=41						
KMI	**Kunming**	24.45	12	P	P	17 32 22.4	+1.5
	10.0nm,1.2s,mb4.1						
KMI				LR	LR		
	comp=Z,70nm,15.5s,MS3.3						
WRA	**Warramunga Arr**	42.03	122	P	P	17 34 54.2	0.0
	comp=Z,0.9nm,0.8s,mb3.5,baz=300,slow=9.0,SNR=7.8						
SONM	**Songino Array**	47.20	8	P	P	17 35 35.4	+0.1
	comp=Z,1.0nm,0.8s,mb3.8,baz=198,slow=7.8,SNR=7.3						
MKAR	**Makanchi Array**	47.30	346	P	P	17 35 36.7	+0.7
	comp=Z,1.1nm,0.8s,mb3.8,baz=143,slow=6.1,SNR=8.5						
ZAL	**Zalesovo**	53.61	351	P	P	17 36 22.4	-1.6
	comp=Z,1.3nm,0.7s,mb3.9,baz=296,slow=6.6,SNR=7.4						
URZ	**Urewera**	82.80	129	LR	LR	18 19 22.8	
	comp=Z,91nm,20.9s,MS4.1,baz=83,slow=38						

PGC 13 17:49:06.3, 50.82N×130.62W, h10^{km}, Mw3.5, South of Moresby Island, British Columbia, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	**Holberg**	1.59	95	P	Pn	17 49 32.5	-2.2
HOLB				S	Sb	17 49 51.1	-4.2
HOLB				Trac		17 49 51.7	
	comp=Z,78nm,0.4s						
BNB	**Barry Inlet**	1.90	339	P	Pn	17 49 37.1	-2.0
BNB				S	Sn	17 49 58.6	-4.7
BNB				Sg	Sg	17 50 01.9	-7.7
BNB				Trac		17 50 03.1	
	comp=Z,67nm,0.2s						
BPBC	**Brooks Peninsu**	1.93	109	P	Pn	17 49 36.9	-2.7
BPBC				S	Sn	17 49 57.6	-6.5
BPBC				Trac		17 50 00.4	
	comp=Z,16nm,0.2s						
PHC	**Port Hardy**	2.03	92	P	Pn	17 49 38.8	-2.2
PHC				S	Sn	17 50 02.1	-4.5
PHC				Trac		17 50 03.6	
	comp=Z,27nm,0.3s						
BBB	**Bella Bella**	2.08	48	P	Pn	17 49 39.6	-2.2
BBB				Trac		17 50 07.2	
	comp=Z,11nm,0.2s						
MAYB	**Maynard**	2.23	99	P	Pn	17 49 41.4	-2.6
MAYB				S	Sn	17 50 07.1	-4.7
MAYB				Trac		17 50 12.6	
	comp=Z,9.0nm,0.3s						
MOBC	**Moresby Island**	2.51	342	P	Pn	17 49 45.9	-2.0
MOBC				S	Sn	17 50 14.2	-4.6
MOBC				Trac		17 50 16.1	
	comp=Z,1.0nm,0.3s						
WOSB	**Woss**	2.67	103	P	Pn	17 49 48.3	-1.8
VIB	**Van Inlet**	2.71	335	P	Pn	17 49 48.1	-2.7
VIB				Trac		17 50 27.0	
	comp=Z,3.0nm,0.4s						
NDB	**Naden**	3.45	337	P	Pn	17 49 59.6	-1.7

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*THE **13** 18:11:23.0, 37.67N×22.11E, h20^{km}, ML3.2*

*ATH **13** 18:11:23.0, 37.86N×21.93E, h75^{km}±3^{km}, ML3.3*

*NEIC **13** 18:11:23.6, 37.84N×21.95E, h70^{km}, After ATH.*

*CSEM **13** 18:11:23.2±0.1, 37.80N×21.97E, h60^{km}, ML3.2, Error ellipse: s-maj=2.5km s-min=2.3km az=48.0*

ISC 13 18:11:23.8±0.8, 37.81N±0.04×21.97E±0.06, h75^{km}±10^{km}, n34, σ0^{s}82/43, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	0.47	302	*e*P	P	18 11 35.6	-1.3
RLS				*e*S	S	18 11 46.0	-0.8
ITM	**Ithomi**	0.63	183	*e*P	P	18 11 38.5	0.0
ITM				*e*S	S	18 11 50.5	+1.1
ITM	**Ithomi**	0.63	183	*e*P	P	18 11 38.2	-0.3
ITM				*e*S	S	18 11 50.4	+1.0
MGER	**Gerania Oros**	1.03	80	*e*P	P	18 11 43.0	-0.2
MGER	**Gerania Oros**	1.03	80	*e*P	P	18 11 42.5	-0.7
EVR	**Evrytania**	1.11	353	*e*P	P	18 11 44.0	-0.3
EVR	**Evrytania**	1.11	353	*e*P	P	18 11 45.8	+1.5
VLS	**Valsamata**	1.15	289	*e*P	P	18 11 44.0	-0.7
LKR	**Lokris**	1.17	44	*e*P	P	18 11 44.6	-0.3
NSAL	**Nisos Salamina**	1.18	85	*e*P	P	18 11 45.0	-0.2
NSAL	**Nisos Salamina**	1.18	85	*e*P	P	18 11 44.8	-0.4
NAIG	**Nisos Aigina**	1.20	92	*e*P	P	18 11 45.0	-0.4
AGG	**Agios Georgios**	1.25	13	*e*Pg	P	18 11 46.0	0.0
AGG				*e*Sg	S	18 12 02.8	+0.3
VLI	**Veliai**	1.33	144	*e*P	P	18 11 48.0	+0.7
VLI	**Veliai**	1.33	144	*e*P	P	18 11 48.4	+1.1
LKD	**Levkas**	1.38	311	*e*Pg	P	18 11 47.9	+0.1
ATH	**Athens Observa**	1.39	83	*e*P	P	18 11 48.0	0.0
ATH	**Athens Observa**	1.39	83	*e*P	P	18 11 49.0	+1.0
MPAR	**Parnis Oros**	1.44	76	*e*P	P	18 11 48.2	-0.4
PTL	**Penteli**	1.52	80	*e*P	P	18 11 50.0	+0.3
PTL	**Penteli**	1.52	80	*e*P	P	18 11 50.5	+0.8
KYTH	**Kithira**	1.75	150	*e*P	P	18 11 54.0	+1.3
NEO	**Neokhori**	1.79	33	*e*P	P	18 11 53.0	-0.3
XOR	**Xorichti**	1.83	31	*e*Pb	P	18 11 53.1	-0.7
XOR				*e*Sb	S	18 12 16.6	+0.7
MEV	**Metsovon**	2.06	344	*e*Pn	P	18 11 57.8	+0.8
MEV				*e*Sn	S	18 12 24.4	+2.9
IGT	**Igoumenitsa**	2.15	324	*e*Pn	P	18 11 58.9	+0.6
LIT	**Litokhoron**	2.33	10	*e*Pn	P	18 12 00.3	-0.4
LIT				*e*Sn	S	18 12 29.7	+1.5
PAIG	**Paliouri**	2.50	32	*e*Pn	P	18 12 02.4	-0.8
PAIG				*e*Sn	S	18 12 32.7	0.0
OUR	**Ouranopolis**	2.97	31	*e*Pn	P	18 12 08.8	-1.0
FNA	**Florina**	3.01	351	*e*Pn	P	18 12 10.0	-0.3
GRG	**Griva**	3.16	6	*e*Pn	P	18 12 11.9	-0.6
SOH	**Sokhos**	3.19	19	*e*Pn	P	18 12 12.8	-0.2
SRS	**Serrai**	3.54	20	*e*Pn	P	18 12 17.1	-0.5
SRS				*e*Sn	S	18 12 59.3	+0.9
ALN	**Alexandroupoli**	4.41	44	*e*Pn	P	18 12 28.3	-1.6

NNC 13 18:18:03.7±14.0, 36.94N×70.23E, mpv3.0, 1C-2D, Error ellipse: s-maj=120.8km s-min=86.1km az=152.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.16	2	⇓P	Pn	18 19 37.4	-0.7
	0.3nm,0.2s,baz=177,slow=12,SNR=8.8						
KK31				⇑S	Sn	18 20 48.4	-1.9
	2.6nm,0.5s						
AAK	**Ala-Archa**	6.56	29	⇓S	Sn	18 20 58.1	-2.3
	6.5nm,0.8s						
AB31	**Akbulak array**	14.40	332	P	P	18 21 25.6	-5.1
	0.2nm,0.3s,baz=138,slow=11,SNR=16						

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*NIED **13** 19:18:00, 37.30N×135.30E, h360^{km}, Mw4.7 Best double couple: M$_0$1.44×10^{16} NP1: ϕ_s190°, δ81°, λ122°. NP2: ϕ_s294°, δ33°, λ16°.*

*MOS **13** 19:18:19.9±0.7, 37.56N×135.04E, h349^{km}, mb4.5/30, Error ellipse: s-maj=8.6km s-min=6.5km az=103.1*

*JMA **13** 19:18:20.6±0.1, 37.29N×135.32E, h377^{km}±1^{km}, M4.6*

*BJI **13** 19:18:20.2, 37.31N×135.18E, h382^{km}, mB4.8, mb5.0*

*NEIC **13** 19:18:21.0±0.1, 37.32N×135.12E, mb4.5/57, MW4.7(NIED), Error ellipse: s-maj=3.8km s-min=2.8km az=148.0*

*IDC **13** 19:18:21.3±0.5, 37.30N×135.08E, h363^{km}±5^{km}, mb3.9/28, mb1 4.1/31, mb1mx4.1/33, mbtmp4.7/31, Error ellipse: s-maj=8.3km s-min=7.0km az=77.0*

ISC 13 19:18:20.7±0.1, 37.31N±0.03×135.16E±0.03, h368^{km}±1^{km}, h358^{km}±2.9^{km}:pP-P, n269, σ1^{s}01/310, mb4.4/90, 25C-19D, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJH	**Hakui**	1.35	106	P	P	19 19 10.3	0.0
JJH				S	S	19 19 49.2	0.0
JKG	**Kaga**	1.40	137	P	P	19 19 10.5	0.0
JKG				S	S	19 19 49.2	-0.3
JHG	**Hegura jima**	1.50	68	P	P	19 19 11.2	+0.1
JHG				S	S	19 19 51.1	+0.6
JKY	**Yasaka**	1.68	181	P	P	19 19 12.7	+0.6
JKY				S	S	19 19 53.1	+0.8
JKSM	**Kasumi**	1.76	193	P	P	19 19 13.1	+0.5
JKSM				S	S	19 19 54.0	+0.8
JSZ	**Suzu**	1.76	85	P	P	19 19 12.6	0.0
JSZ				S	S	19 19 53.3	+0.1
SAI	**Saigo**	1.83	233	P	P	19 19 14.2	+1.2
SAI				S	S	19 19 55.9	+1.9
JTT	**Ttatey**	1.88	111	P	P	19 19 13.1	-0.2
JTT				S	S	19 19 54.8	+0.3
JWT	**Wachi**	2.03	174	P	P	19 19 14.9	+0.6
JWT				S	S	19 19 56.7	+0.4
JGM	**Miyama**	2.04	141	P	P	19 19 14.2	-0.2
JGM				S	S	19 19 55.9	-0.5
JNG	**Nsakai**	2.53	110	P	P	19 19 17.7	-0.3
JNG				S	S	19 20 04.1	+1.2
MAJO	**Matsushiro**	2.56	106	*e*P	P	19 19 17.3	-0.9
MAT	**Matsushiro**	2.56	106	*e*P	P	19 19 18.0	-0.2
MAT				*e*S	S	19 20 04.0	+0.7
MAT	**Matsushiro**	2.56	106	P	P	19 19 17.9	-0.3
MAT				S	S	19 20 03.5	+0.2
MAT	**Matsushiro**	2.56	106	P	P	19 19 17.9	-0.3
MAT				S	S	19 20 03.8	+0.5
MJAR	**Matsushiro Arr**	2.56	106	P	P	19 19 18.3	+0.1
	195nm,0.3s,baz=283,slow=8.9,SNR=3920						
MJAR				S	S	19 20 05.4	+2.0
	baz=284,slow=15,SNR=2.1						
JSD	**Sado**	2.57	73	P	P	19 19 17.6	-0.7
JHS	**Saijyo**	2.83	216	P	P	19 19 21.6	+1.2
JHS				S	S	19 20 09.2	+1.9
JHK	**Hiroka**	3.08	90	P	P	19 19 21.6	-1.0
JWY	**Kouya**	3.10	173	P	P	19 19 23.3	+0.5
JWY				S	S	19 20 11.2	-0.3
JIE	**Ise**	3.17	156	P	P	19 19 24.0	+0.6
JIE				S	S	19 20 12.3	-0.3
JRY	**Ryogami san**	3.27	112	P	P	19 19 23.0	-1.3
JYN	**Shimob**	3.28	122	P	P	19 19 23.4	-0.9
JAW	**Awa shima**	3.44	69	P	P	19 19 24.8	-1.0
JOD2	**Odawara 2**	3.77	122	P	P	19 19 28.1	-1.0
JOD2				S	S	19 20 22.3	-0.4
JWZ	**Kozaga**	3.80	173	P	P	19 19 29.5	+0.2
JFT	**Otama**	4.13	86	P	P	19 19 31.1	-1.5
JOG2	**Oga 2**	4.47	53	P	P	19 19 35.8	-0.3
JMM	**Marumori**	4.51	81	P	P	19 19 34.9	-1.7
JFK	**Kawauchi**	4.56	88	P	P	19 19 34.8	-2.3
JRG	**Rokugo**	4.78	62	P	P	19 19 38.4	-1.1
JTO	**Tosashimizu**	4.84	204	P	P	19 19 41.2	+1.2
JMK	**Ichinoseki**	5.05	69	P	P	19 19 40.6	-1.7
BSO1	**Boso 1**	5.41	118	P	P	19 19 43.9	-2.3
JTU	**Tsushima**	5.43	241	P	P	19 19 46.6	+0.1
JNU	**Nakatsue**	5.45	221	P	P	19 19 48.0	+1.3
	16nm,0.3s,baz=51,slow=11,SNR=151						
JNU				S	S	19 20 52.8	-1.3
	baz=56,slow=43,SNR=1.4						
JHJ	**Hachijo jima 2**	5.64	136	P	P	19 19 49.0	+0.2
	31nm,0.3s,baz=184,slow=14,SNR=31						
JHJ				S	S	19 20 58.0	+0.1
	143nm,0.3s,baz=64,slow=20,SNR=12						
KS15	**Wonju Array Si**	5.79	274	*e*Pn	P	19 19 51.9	+1.5
JOSM	**Okushiri--Mats**	5.82	34	P	P	19 19 50.4	-0.3
INCN	**Inchon**	6.79	274	*e*Pn	P	19 20 01.9	0.0
	34nm,0.6s						
MDJ	**Mudanjiang**	8.43	332	P	P	19 20 21.6	+0.6
MDJ				XP		19 21 30.8	
MDJ				S	S	19 21 58.4	+2.6
MDJ				SCP		19 29 09.8	
MDJ				PCS		19 29 44.8	
MDJ				AMB	AMB		
	comp=Z,190nm,0.8s						
MDJ				AMB	AMB		
	comp=Z,120nm,3.2s						
MDJ	**Mudanjiang**	8.43	332	⇑*i*Pn	P	19 20 21.6	+0.6
	comp=Z,152nm,0.7s						
ASAJ	**Asahikawa**	8.84	37	P	P	19 20 22.9	-3.0
ASAJ				S	S	19 21 56.8	-7.8
ASAJ				pmax	pmax		
	comp=Z,132nm,0.3s						
ASAJ				smax			
	comp=N,11nm,0.3s						
ASAJ	**Asahikawa**	8.84	37	P	P	19 20 22.9	-3.0
	comp=N,132nm,0.3s,baz=248,slow=11,SNR=562						
ASAJ				S	S	19 21 56.8	-7.9
	comp=N,11nm,0.3s,baz=315,slow=32,SNR=18						
CN2	**Changchun**	9.83	314	⇑P	P	19 20 38.3	+0.8
CN2				*e*XP		19 21 50.9	
CN2				*e*S	S	19 22 27.4	+1.6
CN2				AMB	AMB		
	comp=Z,120nm,0.7s						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
SNY	**Shenyang**	10.01	300	⇑P	P	19 20 41.3	+1.5
SNY				AMB	AMB		
	comp=Z,70nm,0.7s						
YUK	**Yuzh-Kuril'sk**	10.54	47	⇑*i*P	P	19 20 42.9	-3.2
YUK				*i* S	S	19 22 32.5	-8.6
YUK				pmax	pmax		
	comp=Z,200nm,0.5s						
YUK				smax			
	comp=N,2μm,0.5s						
YUK				smax			
	comp=E,1μm,0.5s						
YUK				smax			
	comp=N,4μm,2.0s						
YUK				smax			
	comp=E,6μm,2.0s						
DL2	**Dalian**	10.78	283	P	P	19 20 50.5	+1.5
DL2				*e*XP		19 22 05.0	
DL2				S	S	19 22 54.0	+7.7
DL2				AMB	AMB		
	comp=Z,60nm,0.5s						
DL2				AMB	AMB		
	comp=Z,480nm,3.0s						
YSS	**Yuzh-Sakhalins**	11.16	28	⇑*i*P	P	19 20 50.7	-2.7
YSS				*i* S	S	19 22 46.8	-7.6
YSS				pmax	pmax		
	comp=N,60nm,0.3s						
YSS				pmax	pmax		
	comp=Z,80nm,0.3s						
YSS				smax			
	comp=N,190nm,0.9s						
YSS				smax			
	comp=E,140nm,0.9s						
YSS	**Yuzh-Sakhalins**	11.16	28	*e*Pn	P	19 20 50.8	-2.6
	comp=E,89nm,0.3s						
CBIJ	**Chichi jima**	11.79	148	P	P	19 20 54.0	-6.9
	comp=E,67nm,0.3s,baz=278,slow=13,SNR=35						
CBIJ				S	S	19 22 58.5	-9.4
	comp=E,86nm,0.3s,baz=291,slow=21,SNR=12						
JOW	**Kunigami**	11.96	211	P	P	19 21 00.5	-2.4
	comp=E,13nm,0.3s,baz=322,slow=30,SNR=17						
KLR	**Kul'dur**	12.17	349	*e*P	P	19 21 00.0	-5.3
KLR				*e*S	S	19 23 15.0	-1.0
KLR				smax			
	comp=N,56nm,1.8s						
KLR				smax			
	comp=E,71nm,1.8s						
KUR	**Kuril'sk**	12.40	46	⇑*i*P	P	19 21 03.4	-4.6
KUR				*e*S	S	19 23 15.6	-5.3
KUR				pmax	pmax		
	comp=E,90nm,0.8s						
KUR				pmax	pmax		
	comp=Z,180nm,0.8s						
KUR				smax			
	comp=N,80nm,0.6s						
KUR				smax			
	comp=E,90nm,0.6s						
SSE	**Sheshan**	13.11	246	P	P	19 21 14.9	-1.4
SSE				S	S	19 23 38.3	+2.4
SSE				AMB	AMB		
	comp=Z,140nm,3.8s						
SSE				LR	LR		
	comp=N,20nm,17.9s						
SSE				LR	LR		
	comp=E,10.0nm,17.8s						
SSE				LR	LR		
	comp=Z,10.0nm,15.5s						
SSE	**Sheshan**	13.11	246	P	P	19 21 14.9	-1.4
	comp=Z,248nm,0.9s						
SSE				S	S	19 23 38.3	+2.4
NJ2	**Nanjing**	14.40	253	*e*P	P	19 21 29.8	-0.7
NJ2				S	S	19 23 57.0	-5.5
NJ2				PCP	PcP	19 26 19.6	+0.6
NJ2				AMB	AMB		
	comp=Z,420nm,4.5s						
NJ2				LR	LR		
	comp=N,4μm,15.4s						
NJ2				LR	LR		
	comp=Z,1μm,14.4s						
TIA	**Tai'an**	14.50	271	⇓P	P	19 21 30.5	-1.1
TIA				AMB	AMB		
	comp=Z,60nm,0.8s						
HIA	**Hailar**	16.36	322	*e*P	P	19 21 48.7	-2.1
HIA				pmax	pmax		
	comp=Z,29nm,0.7s						
HIA	**Hailar**	16.36	322	*e*P	P	19 21 48.7	-2.1
	comp=Z,29nm,0.7s						
TATO	**Taipei**	16.95	227	*e*P	P	19 21 56.5	-0.6
	comp=Z,222nm,0.8s						
YHNB	**Yeheng**	17.25	227	*e*P	P	19 21 58.4	-1.7
WHN	**Wuhan**	18.52	255	⇓P	P	19 22 11.5	-1.4
HHC	**Hu-ho-hao-te**	18.64	288	*e*P	P	19 22 13.0	-1.0
HHC				S	S	19 25 20.5	-2.2
HHC				PCP	PcP	19 26 24.4	-1.2
HHC				SCP		19 29 26.1	
HHC				AMB	AMB		
	comp=Z,150nm,1.6s						
HHC				LR	LR		
	comp=N,140nm,20.2s						
HHC				LR	LR		
	comp=E,290nm,17.8s						
BTO	**Baotou**	19.80	287	*e*P	P	19 22 23.0	-2.4
CIT	**Chita**	21.16	321	*e*P	P	19 22 38.1	-0.3
CIT				*e*		19 26 01.5	
CIT				pmax	pmax		
	comp=Z,22nm,2.0s,mb4.0						
XAN	**Xi'an**	21.54	269	P	P	19 22 41.3	-0.9
XAN				AMB	AMB		
	comp=Z,80nm,0.8s,mb5.0						
ENH	**Enshi**	22.42	259	⇓*i*P	P	19 22 49.7	-0.8
	comp=Z,117nm,0.5s,mb5.4						
ULN	**Ulaanbaatar**	23.11	306	⇓*e*P	P	19 22 56.0	-0.7
ULN				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.3						
ULN	**Ulaanbaatar**	23.11	306	⇓*e*P	P	19 22 56.0	-0.7
	comp=Z,11nm,0.6s,mb4.3						
ULN				*e*ScP		19 29 35.6	
SONM	**Songino Array**	23.52	306	P	P	19 22 59.9	-0.6
	comp=Z,8.2nm,0.5s,mb4.2,baz=108,slow=8.5,SNR=78						
SONM				ScP		19 29 36.7	
	comp=Z,0.8nm,0.7s,baz=90,slow=2.5,SNR=4.3						
MA2	**Magadan**	24.45	19	*e*P	P	19 23 07.6	-1.2
MA2				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb3.8						
MA2	**Magadan**	24.45	19	*e*P	P	19 23 07.9	-0.8
YAK	**Yakutsk**	24.98	354	*e*P	P	19 23 12.4	-1.2
YAK				*e*S	S	19 27 10.0	+0.6
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.7						
YAK				smax			
	comp=E,8.0nm,0.9s						
YAK				smax			
	comp=Z,6.0nm,1.0s						
YAK				smax			
	comp=N,6.0nm,0.9s						
YAK	**Yakutsk**	24.98	354	*e*P	P	19 23 13.7	+0.1
	comp=N,24nm,0.5s,mb4.7						
LZH	**Lanzhou**	25.08	277	*e*P	P	19 23 13.9	-0.8
LZH				PCP	PcP	19 26 39.8	+1.2
LZH				S	S	19 27 13.0	+1.8
LZH				SCP		19 29 43.0	
LZH				SCS	ScS	19 33 29.9	+0.9
LZH				AMB	AMB		
	comp=Z,90nm,1.1s,mb4.9						
LZH				AMB	AMB		
	comp=Z,300nm,4.0s						
LZH	**Lanzhou**	25.08	277	*e*P	P	19 23 13.9	-0.8
LZH				*PP		19 24 18.0	
LZH				*SP	sP	19 25 00.6	-3.0
LZH						19 26 39.8	
LZH				S	S	19 27 13.0	+1.8
LZH						19 33 29.9	
LZH				pmax	pmax		
	comp=Z,90nm,1.1s,mb4.9						
LZH	**Lanzhou**	25.08	277	*e*P	P	19 23 13.9	-0.8
	comp=Z,90nm,1.1s,mb4.9						
LZH				pP		19 24 18.0	
LZH				sP	sP	19 25 00.6	-3.0
LZH				PcP	PcP	19 26 39.8	+1.2
LZH				S	S	19 27 13.0	+1.8
LZH				ScP		19 29 43.0	
LZH				ScS	ScS	19 33 29.9	+0.9
ZAK	**Zakamensk**	26.22	310	⇓*i*P	P	19 23 23.6	-1.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb3.6						
GYA	**Guiyang**	26.41	254	⇓*i*P	P	19 23 25.5	-1.3
GYA				PCP	PcP	19 26 40.8	-0.9
GYA				S	S	19 27 31.8	-0.7
GYA				AMB	AMB		
	comp=Z,130nm,0.7s,mb5.3						
TLY	**Talaya**	26.43	313	*i* P	P	19 23 25.1	-1.6
TLY				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.2						
CD2	**Chengdu**	26.69	266	P	P	19 23 27.8	-1.5
CD2				LR	LR		
	comp=N,2μm,9.0s						
CD2				LR	LR		
	comp=Z,880nm,9.6s						
GTA	**Gaotai**	27.69	285	⇓P	P	19 23 37.3	-0.8
GTA				AP		19 24 45.1	
GTA				S	S	19 27 53.5	+0.9
GTA				SCP		19 29 49.6	
GTA				SCS	ScS	19 33 40.8	+0.5
GTA				AMB	AMB		
	comp=Z,70nm,0.6s,mb5.1						
GTA				AMB	AMB		
	comp=Z,180nm,6.5s						
QIZ	**Qiongzhong**	28.66	238	P	P	19 23 47.6	+0.8
KMI	**Kunming**	30.12	256	P	P	19 23 58.9	-0.6
KMI				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.7						
KMI	**Kunming**	30.12	256	P	P	19 23 58.9	-0.6
	comp=Z,43nm,0.8s,mb4.7						
NANT	**Nan**	35.30	248	⇓P	P	19 24 44.0	+0.3
	comp=Z,900nm,0.5s						
BILL	**Bilibino**	35.32	20	*e*P	P	19 24 43.4	+0.1
BILL				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.1						
BILL	**Bilibino**	35.32	20	*e*P	P	19 24 43.4	+0.1
	comp=Z,9.8nm,0.8s,mb4.1						
WMQ	**Urumqi**	36.23	296	*e*P	P	19 24 53.7	+2.4
WMQ				AP	pP	19 26 01.7	-0.9
WMQ				XP	sP	19 26 41.0	-2.9
WMQ				AMB	AMB		
	comp=Z,30nm,4.6s						
CMAR	**Chiang Mai Arr**	36.82	249	P	P	19 24 56.5	+0.2
	comp=Z,17nm,0.6s,mb4.5,baz=45,slow=7.3,SNR=98						
CMAR				ScP		19 30 21.1	
	comp=Z,5.0nm,0.7s,baz=26,slow=1.4,SNR=28						
LSA	**Lhasa**	37.20	271	P	P	19 25 00.6	+1.1
LSA	**Lhasa**	37.20	271	*e*P	P	19 25 00.2	+0.7
LSA				pmax	pmax		
	comp=Z,29nm,0.6s,mb4.7						
LSA	**Lhasa**	37.20	271	*e*P	P	19 25 00.2	+0.7
	comp=Z,29nm,0.6s,mb4.7						
NST	**Nakhon Sawan**	37.72	245	P	P	19 25 02.0	-1.8
NVS	**Novosibirsk**	39.04	314	*i* P	P	19 25 12.3	-1.9
NVS				*e*		19 26 50.6	

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NVS                                   pmax     pmax
      comp=E,8.0nm,1.0s
NVS                                   pmax     pmax
      comp=Z,11nm,1.0s,mb4.0
MKAR  Makanchi Array   39.72 301      P        P          19 25 19.4 -0.5
      comp=Z,7.6nm,0.6s,mb4.1,baz=88,slow=9.9,SNR=112
MKAR                                  ScP                 19 30 30.9
      comp=Z,2.6nm,0.7s,baz=78,slow=5.3,SNR=12
GUN   Gumba            42.15 272    eP        P          19 25 40.4 +0.6
      comp=Z,202nm,0.4s
KSM   Kuching          42.38 219⇓iP        P          19 25 42.1 +0.3
PKI   Pulchoki         42.67 272    eP        P          19 25 43.9 -0.1
      comp=Z,80nm,0.6s,mb5.0
PKI   Pulchoki         42.67 272    eP        P          19 25 43.9 -0.1
PKI                                   pmax     pmax
      comp=Z,40nm,0.6s,mb4.7
KKN   Kakani           42.68 272    eP        P          19 25 44.3 +0.2
      comp=Z,117nm,0.6s,mb5.2
KKN   Kakani           42.68 272    eP        P          19 25 44.3 +0.2
KKN                                   pmax     pmax
      comp=Z,58nm,0.6s,mb4.9
DMN   Daman            42.90 272    eP        P          19 25 46.0 +0.2
      comp=Z,77nm,0.6s,mb5.0
GKN   Gorkha           43.10 273    eP        P          19 25 47.6 +0.2
      comp=Z,265nm,0.6s,mb5.5
KOLN  Koldanda         44.03 273    eP        P          19 25 55.0 +0.2
      comp=Z,146nm,0.9s,mb5.1
ULHL  Ulahol           44.77 295     P        P          19 26 00.8 +0.3
      SNR=9.7
KULM  Kulim            44.80 233⇓iP        P          19 26 01.2 +0.1
TKM2  Tokmak 2         45.07 297     P        P          19 26 03.7 +0.8
      SNR=40
KZA   Kyzart           45.53 295     P        P          19 26 08.0 +1.6
      SNR=50
KBK   Karagaybulak     45.60 296     P        P          19 26 07.6 +0.6
      SNR=31
CHMS  Chumysh          45.65 297     P        P          19 26 07.5 +0.1
      SNR=13
KSH   Kashi            45.70 292    eP        P          19 26 08.0 +0.2
KSH                                 ePCP      PcP        19 27 40.1 +0.9
KSH                                 ePP       PP         19 28 00.6 +1.3
KSH                                 ePCS                 19 31 33.0
KSH                                 eS        S          19 32 21.4 -0.9
KSH                                   AMB      AMB
      comp=Z,480nm,5.4s
KSH                                   LR       LR
      comp=N,1µm,9.0s
USP   Ospenovka        45.77 297     P        P          19 26 08.3  0.0
      SNR=8.5
FRU   Bishkek          45.79 297⇓iP        P          19 26 09.0 +0.5
FRU                                   pmax     pmax
      comp=Z,60nm,1.6s,mb4.5
AAK   Ala-Archa        45.93 296     P        P          19 26 09.9 +0.3
      SNR=15
AAK   Ala-Archa        45.93 296     P        P          19 26 09.7 +0.2
AAK                                   pmax     pmax
      comp=Z,9.0nm,0.6s,mb4.1
AAK   Ala-Archa        45.93 296⇓iP        P          19 26 08.6 -1.0
      comp=Z,26nm,0.8s,mb4.4
UCH   Uchtor           46.02 296     P        P          19 26 11.4 +1.1
      SNR=29
EKS2  Erkin-Say        46.43 297     P        P          19 26 13.5 +0.1
      SNR=26
AML   Almayashu        46.63 296     P        P          19 26 16.1 +1.2
      SNR=35
BVA0  Borovoye Array   46.66 311    i P       P          19 26 14.1 -1.0
BVA0                                  pmax     pmax
      comp=Z,2.0nm,1.0s
BVAR  Borovoye Array   46.66 311     P        P          19 26 14.2 -0.9
      comp=Z,4.6nm,0.4s,mb4.1,baz=101,slow=7.6,SNR=47
BVAR                                  ScP                 19 30 58.6
      comp=Z,1.4nm,0.6s,baz=96,slow=4.5,SNR=4.9
BVAR                                  S        S          19 32 32.8 -2.9
      comp=Z,1.8nm,0.9s,baz=90,slow=15,SNR=5.8
KKAR  Karatay Array    48.62 298    i P       P          19 26 29.8 -0.4
KKAR                                  pmax     pmax
      comp=Z,17nm,0.8s,mb4.3
IMA   Indian Mountai   49.00  31    eP        P          19 26 32.9 +0.1
IMA                                 e         pP         19 27 50.6 +2.6
IMA                                   pmax     pmax
      comp=Z,51nm,1.0s,mb4.7
IMA   Indian Mountai   49.00  31    eP        P          19 26 32.9 +0.2
      comp=Z,51nm,1.0s,mb4.7
IMA                                 ePcP      PcP        19 27 50.6 -0.1
RSO   Redoubt South    49.78  38    eP        P          19 26 38.4 -0.3
KAKA  Kakadu           49.82 183    eP        P          19 26 37.9 -1.7
      comp=Z,13nm,0.6s,mb4.3
SPU   Mount Spurr      50.04  37    eP        P          19 26 40.4 -0.2
SPU                                   pP       pP         19 27 53.4 -2.9
MCK   McKinley         51.18  34    eP        P          19 26 48.3 -0.7
MCK                                   pmax     pmax
      comp=Z,3.0nm,0.4s,mb3.9
MCK   McKinley         51.18  34    eP        P          19 26 48.3 -0.8
      comp=Z,3.0nm,0.4s,mb3.9
SVE   Sverdlovsk       51.60 317    eP        P          19 26 51.9 -0.3
SVE                                 e         pP         19 28 06.6 -1.8
ILAR  Eielson Array    51.93  32     P        P          19 26 53.5 -1.0
      comp=Z,4.3nm,0.7s,mb3.9,baz=280,slow=6.2,SNR=51
ILAR                                  pP       pP         19 28 08.4 -2.5
      comp=Z,1.5nm,0.8s,baz=277,slow=5.7,SNR=1.9
ARU   Arti             52.81 317⇑iP        P          19 26 59.8 -1.3
ARU                                 e                    19 28 01.5
ARU                                 e                    19 29 06.3
ARU                                   pmax     pmax
      comp=Z,41nm,0.8s,mb4.8
ARU   Arti             52.81 317⇓iP        P          19 26 59.7 -1.4
      comp=Z,35nm,0.7s,mb4.8
DIV   Divide           53.06  37    eP        P          19 27 02.7 -0.1
      comp=Z,141nm,1.5s,mb5.1
HYB   Hyderabad        53.23 264    eP        P          19 27 03.0 -1.7
HYB   Hyderabad        53.23 264    i P       P          19 27 05.0 +0.3
AB31  Akbulak array    53.90 308    i P       P          19 27 07.9 -1.2
AB31                                  pmax     pmax
      comp=Z,4.0nm,0.5s,mb4.0
FITZ  Fitzroy Crossi   55.84 191    eP        P          19 27 22.0 -1.2
      comp=Z,14nm,0.5s,mb4.5
FITZ  Fitzroy Crossi   55.84 191     P        P          19 27 22.2 -1.0
      comp=Z,13nm,0.8s,mb4.3,baz=25,slow=6.5,SNR=12
INK   Inuvik           56.40  27    eP        P          19 27 25.9 -0.6
WRAB  Tennant Creek    56.94 181⇑iP        P          19 27 29.5 -1.3
WRAB                                  pmax     pmax
      comp=Z,43nm,0.6s,mb5.0
WRAB  Tennant Creek    56.94 181⇑iP        P          19 27 29.5 -1.3
      comp=Z,43nm,0.6s,mb5.0
WB2   Warramunga Arr   56.95 181⇑iP        P          19 27 29.7 -1.2
WRA   Warramunga Arr   56.95 181     P        P          19 27 29.7 -1.2
WRA                                   S        S          19 34 53.7 -1.1
WRA   Warramunga Arr   56.95 181     P        P          19 27 29.7 -1.2
      comp=Z,33nm,0.5s,mb4.9,baz=357,slow=7.5,SNR=285
WRA                                   ScP                 19 31 46.0
      comp=Z,0.6nm,0.7s,baz=357,slow=4.8,SNR=4.5
WRA                                   S        S          19 34 53.7 -1.0
      comp=Z,0.5nm,0.7s,baz=358,slow=13,SNR=5.2
CTA   Charters Tower   58.04 168    eP        P          19 27 37.7 -0.7
      comp=Z,8.5nm,1.0s,mb4.0
CTA   Charters Tower   58.04 168    eP        P          19 27 37.7 -0.7
CTA                                   pmax     pmax
      comp=Z,9.0nm,1.0s
CTA   Charters Tower   58.04 168     P        P          19 27 37.7 -0.7
      comp=Z,11nm,0.9s,mb4.2,baz=358,slow=6.7,SNR=14
DLBC  Dease Lake       61.44  37     P        P          19 28 01.5 +0.8
      comp=Z,3.6nm,0.7s,mb3.9,baz=272,slow=7.7,SNR=12
DLBC  Dease Lake       61.44  37    eP        P          19 28 00.9 +0.2
ARCES ARCESS Array B   61.92 338     P        P          19 28 03.2 -0.5
      comp=Z,2.9nm,0.8s,mb3.9,baz=63,slow=8.1,SNR=6.5
ARCES ARCESS Array B   61.92 338     P        P          19 28 03.2 -0.5
RES   Resolute Bay     63.53  13    eP        P          19 28 13.0 -0.9
OBN   Obninsk          64.81 321deP        P          19 28 21.4 -1.0
OBN                                 e                    19 30 46.5
OBN                                 eS        S          19 36 32.2 -0.7
OBN                                 eSS       SS         19 40 47.7 -6.6
OBN                                   pmax     pmax
      comp=Z,12nm,0.8s,mb4.6
KAF   Kangasniemi      65.70 331    ep        P          19 28 26.6 -1.3
      comp=Z,1.2nm,0.5s,mb3.9,baz=54,slow=6.0
KAF   Kangasniemi      65.70 331    eP        P          19 28 26.6 -1.3
KAF                                   pmax     pmax
      comp=Z,1.0nm,0.5s,mb3.8
YKW3  Yellowknife Ar   65.98  28    eP        P          19 28 28.8 -0.8
DZM   Mont Dzumac      66.01 148    eP        P          19 28 31.4 +0.9
DZM   Mont Dzumac      66.01 148    eP        P          19 28 31.4 +0.9
YKA   Yellowknife Ar   66.02  28     P        P          19 28 29.5 -0.4
      comp=Z,2.0nm,0.8s,mb3.9,baz=301,slow=7.0,SNR=14
FINES FINESS Array B   66.17 330     P        P          19 28 30.2 -0.7
      comp=Z,4.6nm,0.7s,mb4.3,baz=78,slow=5.7,SNR=34
FINES FINESS Array B   66.17 330     P        P          19 28 30.2 -0.7
BIDO  Bidbid           66.19 282 ⇑P        P          19 28 32.3 +0.7
SMDO  Samad            66.49 282     P        P          19 28 34.3 +0.8
      SNR=9.6
HOQ   Hoqain           66.79 283     P        P          19 28 35.6 +0.1
      SNR=6.5
JMDO  Jabal Madar      66.81 281     P        P          19 28 35.6  0.0
      SNR=7.8
KIV   Kislovodsk       66.88 308d iP        P          19 28 35.6 -0.1
KIV                                 e                    19 28 59.5
KIV                                 e*PP      pP         19 29 54.8 -2.4
KIV                                 eS        S          19 36 59.3 +1.4
KIV                                   pmax     pmax
      comp=N,13nm,0.9s
KIV                                   pmax     pmax
      comp=E,9.0nm,0.9s
KIV                                   pmax     pmax
      comp=Z,19nm,0.9s,mb4.8
KIV   Kislovodsk       66.88 308    eP        P          19 28 35.5 -0.1
      comp=Z,19nm,0.8s,mb4.9
KIV                                 epP       pP         19 29 53.7 -3.5
ASHO  Ashiyiah         67.18 284     P        P          19 28 37.8  0.0
      SNR=8.5
BSY   Bisya            67.32 282     P        P          19 28 38.9 +0.2
      SNR=14
ARQ   Araqi            67.53 283     P        P          19 28 40.3 +0.3
      SNR=8.8
SOC   Sochi            68.92 309    eP        P          19 28 45.1 -3.0
SOC                                 e*PP      pP         19 29 58.9  -11
SOC                                 ePPP      PPP        19 33 02.9 -5.6
SOC                                 eS        S          19 37 25.3 +3.4
SOC                                 eSS       SS         19 41 53.8 -4.0
SOC                                   pmax     pmax
      comp=N,21nm,0.9s
SOC                                   pmax     pmax
      comp=Z,26nm,0.9s,mb5.0
SOC                                   pmax     pmax
      comp=E,43nm,1.0s
STKA  Stephens Creek   69.09 174    eP        P          19 28 49.2 -0.1
      comp=E,2.7nm,0.4s,mb4.3
STKA  Stephens Creek   69.09 174     P        P          19 28 49.3  0.0
      comp=E,4.0nm,0.6s,mb4.3,baz=326,slow=8.1,SNR=12
ARMA  Armidale         69.12 165⇓iP        P          19 28 50.3 +0.8
SUMG  Summit           70.32 358    eP        P          19 28 56.9 +0.8
      comp=E,7.3nm,0.9s,mb4.4
AKASG Malin Array Be   70.94 320     P        P          19 28 59.5 -0.7
      comp=E,2.7nm,0.4s,mb4.3,baz=48,slow=6.4,SNR=43
AKASG                                 pP       pP         19 30 20.1 -2.6
      comp=E,1.3nm,0.6s,baz=48,slow=6.9,SNR=1.7
AKASG Malin Array Be   70.94 320     P        P          19 28 59.5 -0.7
AKASG                                 pP       pP         19 30 20.1 -2.6
HFS   Hagfors          71.69 333     P        P          19 29 03.8 -0.6
      comp=E,4.1nm,0.5s,mb4.4,baz=56,slow=5.3,SNR=25
NB2   NORSAR Subarra   71.91 335     P        P          19 29 05.1 -0.6
      comp=E,2.7nm,0.7s,mb4.1,baz=44,slow=5.8
NOA   NORSAR Array B   71.91 335     P        P          19 29 05.4 -0.3
      comp=E,3.2nm,0.7s,mb4.2,baz=43,slow=6.0,SNR=14
EDM   Edmonton         72.15  36⇑iP        P          19 29 07.2  0.0
RBK   Rabkut           72.54 279 ⇑P        P          19 29 08.7 -1.4
NEW   Newport          73.33  42    eP        P          19 29 13.8 -0.4
NEW                                   pmax     pmax
      comp=Z,5.0nm,0.6s
NEW   Newport          73.33  42     P        P          19 29 13.9 -0.3
      comp=Z,6.5nm,0.8s,mb4.4,baz=297,slow=2.3,SNR=4.8
NEW   Newport          73.33  42    eP        P          19 29 13.8 -0.4
      comp=Z,5.1nm,0.6s,mb4.4
WDC   Whiskeytown Da   74.83  50    eP        P          19 29 23.1 +0.2
WDC                                   pmax     pmax
      comp=Z,8.0nm,1.1s,mb4.4
WDC   Whiskeytown Da   74.83  50    eP        P          19 29 23.1 +0.2
      comp=Z,8.2nm,1.1s,mb4.4
BRTR  Keskin Array B   74.85 308     P        P          19 29 22.9 -0.1
      comp=Z,1.6nm,0.4s,mb4.1,baz=90,slow=4.9,SNR=16
BRTR  Keskin Array B   74.85 308     P        P          19 29 22.9 -0.1
BURAR Bucovina Array   74.91 319 ⇑P        P          19 29 14.2 -9.0
VRI   Vrincioaia       75.19 317 ⇓P        P          19 29 26.5 +1.7
BMO   Blue Mountains   75.33  45    eP        P          19 29 26.0 +0.4
      comp=Z,4.5nm,0.7s,mb4.3
MLR   Muntele Rosu     75.85 317     P        P          19 29 29.0 +0.5
      comp=Z,1.5nm,0.4s,mb4.0,baz=346,slow=2.4,SNR=6.3
MLR   Muntele Rosu     75.85 317 ⇓P        P          19 29 29.6 +1.1
FCC   Fort Churchill   75.89  24⇑eP        P          19 29 28.2 -0.2
OJC   Ojcow            75.93 323    eP        P          19 29 28.8  0.0
WVOR  Wild Horse Val   76.06  47    eP        P          19 29 30.5 +0.8
WVOR                                  pmax     pmax
      comp=Z,1.0nm,0.4s,mb3.9
WVOR  Wild Horse Val   76.06  47    eP        P          19 29 30.5 +0.7
      comp=Z,1.2nm,0.4s,mb4.0
FFC   Flin Flon        76.08  30⇑iP        P          19 29 29.2 -0.4
FFC                                 e*PP      pP         19 30 50.7 -2.4
FFC                                   pmax     pmax
      comp=Z,9.0nm,0.8s,mb4.5
FFC   Flin Flon        76.08  30⇑iP        P          19 29 29.2 -0.3
      comp=Z,8.7nm,0.8s,mb4.5
FFC                                 epP       pP         19 30 50.7 -2.4
HRY   Holter Researc   77.09  41    eP        P          19 29 35.8 +0.5
ASF   Jabal al Asfar   77.14 301     P        P          19 29 36.0 +0.1
      comp=Z,6.6nm,0.8s,mb4.4,baz=221,slow=2.3,SNR=8.2
MORC  Moravsky Berou   77.30 324    eP        P          19 29 36.9 +0.5
DPC   Dobruska-Polom   77.47 325    eP        P          19 29 38.2 +0.9
UPC   Upice            77.50 325    eP        P          19 29 37.5 +0.1
CMB   Columbia Colle   77.70  52⇑eP        P          19 29 39.3 +0.5
CMB                                   pmax     pmax
      comp=Z,5.0nm,0.6s,mb4.4
CMB   Columbia Colle   77.70  52⇑eP        P          19 29 39.2 +0.5
      comp=Z,4.6nm,0.6s,mb4.4
HLID  Hailey           77.75  44    eP        P          19 29 39.8 +0.9
      comp=Z,7.3nm,0.9s,mb4.4
MCMT  McKenzie Canyo   77.79  42    eP        P          19 29 39.6 +0.5
BOZ   Bozeman (W)      77.90  41    eP        P          19 29 40.3 +0.6
BOZ                                   pmax     pmax
      comp=Z,5.0nm,0.6s,mb4.4
BOZ   Bozeman (W)      77.90  41    eP        P          19 29 40.3 +0.6
      comp=Z,4.6nm,0.6s,mb4.4
PVCC  Panska Ves       78.13 326    eP        P          19 29 41.3 +0.5
BMN   Battle Mountai   78.14  48⇑eP        P          19 29 42.2 +1.1
BMN                                   pmax     pmax
      comp=Z,3.0nm,0.8s,mb4.1
BMN   Battle Mountai   78.14  48⇑eP        P          19 29 42.2 +1.1
      comp=Z,2.8nm,0.8s,mb4.0
CLL   Collm            78.26 327    i P       P          19 29 41.6 +0.1
CLL                                   pmax     pmax
      comp=Z,7.0nm,0.9s,mb4.4
CLL   Collm            78.26 327    i P       P          19 29 41.6 +0.1
      comp=Z,7.0nm,0.9s,mb4.4
CLL                                 epP       pP         19 30 56.0  -10
CLL   Collm            78.26 327     P        P          19 29 41.6 +0.1
      comp=Z,logA/T=0.9,mb4.4
CLL                                 e                    19 30 56.0
PRU   Pruhonice        78.53 325    eP        P          19 29 39.5 -3.5
NVAR  Mina Array Bea   78.74  50     P        P          19 29 45.5 +1.2
      comp=Z,5.3nm,0.7s,mb4.4,baz=296,slow=4.6,SNR=36
NVAR                                  pP       pP         19 31 08.4 -0.1
      comp=Z,1.7nm,0.9s,baz=297,slow=4.9,SNR=4.7
ELK   Elko             79.10  47    eP        P          19 29 47.4 +1.2
ELK                                   pmax     pmax
      comp=Z,2.0nm,0.7s
ELK   Elko             79.10  47    eP        P          19 29 47.4 +1.2
      comp=Z,2.3nm,0.7s,mb4.0
IMW   Indian Meadow    79.43  42⇑eP        P          19 29 49.8 +1.9
      comp=Z,20nm,1.2s,mb4.7
KHC   Kasperske Hory   79.58 325    eP        P          19 29 49.0 +0.4
RRI2  Red Ridge        79.59  43⇑eP        P          19 29 50.4 +1.6
      comp=Z,11nm,0.9s,mb4.6
MOOW  Moose Ponds      79.64  42⇑eP        P          19 29 50.2 +1.2
      comp=Z,12nm,1.4s,mb4.4
TPAW  Teton Pass       79.70  43    eP        P          19 29 51.0 +1.7
      comp=Z,5.7nm,0.8s,mb4.3
GERES GERESS Array B   79.73 325     P        P          19 29 49.5 +0.1
      comp=Z,1.4nm,0.6s,mb3.9,baz=40,slow=5.5,SNR=13
LOHW  Long Hollow      79.80  42    eP        P          19 29 51.4 +1.5
      comp=Z,3.2nm,0.9s,mb4.0
SNOW  Snow King Moun   79.82  42     P        P          19 29 51.5 +1.6
      comp=Z,8.5nm,0.6s,mb4.7
GRA1  Grafenberg Arr   80.22 327    eP        P          19 29 52.5 +0.6
      comp=Z,5.0nm,1.0s,mb4.2
GRF   Grafenberg Arr   80.22 327    eP        P          19 29 52.5 +0.6
GRF                                   pmax     pmax
      comp=Z,5.0nm,1.0s,mb4.2
GRF   Grafenberg Arr   80.22 327    eP        P          19 29 52.5 +0.6
GRF                                   pmax     pmax
      comp=Z,5.0nm,1.0s,mb4.2
GRF   Grafenberg Arr   80.22 327    eP        P          19 29 52.5 +0.6
      comp=Z,5.0nm,1.0s,mb4.2
HWUT  Hardware Ranch   80.62  44    eP        P          19 29 55.4 +1.2
      comp=Z,16nm,1.2s,mb4.6
BW06  Boulder Array    80.94  42    eP        P          19 29 56.2 +0.4
      comp=Z,6.9nm,0.9s,mb4.4
PDAR  Pinedale Array   80.94  42     P        P          19 29 56.4 +0.5
      comp=Z,5.3nm,0.8s,mb4.3,baz=314,slow=2.1,SNR=39
EKA   Eskdalemuir Ar   81.08 337     P        P          19 29 55.1 -1.2
      comp=Z,1.0nm,0.7s,mb3.6,baz=30,slow=4.9,SNR=4.2
ULM   Lac du Bonnet    81.91  30     P        P          19 30 00.6 -0.1
      comp=Z,9.6nm,0.8s,mb4.7,baz=325,slow=6.8,SNR=8.1
MSU   Marysvale        82.35  47    eP        P          19 30 04.9 +1.8
NEN   Nelson           82.64  51    eP        P          19 30 05.3 +0.6
RSSD  Black Hills      82.84  39    eP        P          19 30 06.1 +0.6
RSSD                                  pmax     pmax
      comp=Z,7.0nm,0.7s,mb4.6
RSSD  Black Hills      82.84  39    eP        P          19 30 06.1 +0.5
      comp=Z,6.8nm,0.7s,mb4.6
SRU   San Rafael       82.89  46    eP        P          19 30 06.8 +0.9
PFO   Pinyon Flat Ob   82.96  53    eP        P          19 30 07.0 +0.7
PFO                                   pmax     pmax
      comp=Z,6.0nm,1.0s,mb4.4
PFO   Pinyon Flat Ob   82.96  53    eP        P          19 30 07.0 +0.7
      comp=Z,5.9nm,1.0s,mb4.4
IDI   Anoyia           83.04 309     P        P          19 30 07.2 +0.5
      comp=Z,3.2nm,0.5s,mb4.4,baz=11,slow=22,SNR=8.5
PV10  Paradox Valley   84.24  45    eP        P          19 30 14.2 +1.5
PV01  Paradox Valley   84.68  45    eP        P          19 30 15.9 +1.1
TIP   Timpagrande      85.13 317    eP        P          19 30 17.7 +0.8
EYMN  Ely              85.48  29⇑eP        P          19 30 18.7 +0.2
      comp=Z,6.9nm,0.7s,mb4.6
SCHQ  Schefferville    86.30  13     P        P          19 30 23.1 +0.8
      comp=Z,5.2nm,0.8s,mb4.4,baz=348,slow=5.3,SNR=8.0
SDCO  Great Sand Dun   86.67  44    eP        P          19 30 25.4 +1.0
      comp=Z,1.4nm,0.6s,mb4.0
TUC   Tucson           87.38  51    eP        P          19 30 29.1 +1.2
TUC                                   pmax     pmax
      comp=Z,2.0nm,1.0s,mb3.9
TUC   Tucson           87.38  51    eP        P          19 30 29.1 +1.2
      comp=Z,2.4nm,1.0s,mb4.0
ANMO  Albuquerque      88.12  46    eP        P          19 30 32.7 +1.3
ANMO                                  pmax     pmax
      comp=Z,2.0nm,0.7s
ANMO  Albuquerque      88.12  46    eP        P          19 30 32.7 +1.4
      comp=Z,1.8nm,0.7s,mb4.0
BNM   Barren Site      88.59  47    eP        P          19 30 35.0 +1.4
MNTX  Cornudas Mount   91.07  48    eP        P          19 30 45.8 +0.6
      comp=Z,1.7nm,0.7s,mb4.1
LTX   Lajitas          93.80  48    eP        P          19 30 58.7 +0.9
LTX                                   pmax     pmax
      comp=Z,2.0nm,0.6s,mb4.3
LTX   Lajitas          93.80  48    eP        P          19 30 58.7 +0.9
      comp=Z,2.5nm,0.6s,mb4.4
TXAR  Lajitas Array    93.80  48     P        P          19 30 58.8 +1.0
      comp=Z,4.6nm,0.7s,mb4.6,baz=294,slow=3.5,SNR=29
SDV   Santo Domingo   128.09  33    ePKPdf    PKPdf      19 36 45.3 +1.3
SAML  Samuel          147.25  35    ePKPdf    PKPdf      19 37 20.0 +1.5
SAML                                ePKPbc    PKPdf      19 37 22.5 +4.0
LPAZ  La Paz          150.64  51     PKPbc    PKPdf      19 37 32.0 +8.1
      comp=Z,4.3nm,0.6s,baz=328,slow=2.2,SNR=6.5
LPAZ  La Paz          150.64  51    ePKPbc    PKPdf      19 37 32.0 +8.1
PLCA  Paso Flores     159.76 108     PKPab    PKPab      19 38 18.5  0.0
      comp=Z,1.4nm,0.7s,baz=183,slow=3.9,SNR=3.9
```

*NEIC **13** 19:23:20.6, 19.04N×65.10W, h25^{km}, MD3.6(RSPR), After RSPR.*

RSPR 13 19:23:20.6, 19.04N×65.10W, h25^{km}±25^{km}, MD3.6/14, **MD3.6**/14**, 7C-7D, Puerto Rico region**

```
Code  Station Name        Δ°   AZ°    Phase ID             Time      Res
                                      Op        ISC        h  m  s   ISC
MTP   Monte Pirata       1.04 205⇓eP        Pn         19 23 36.8 -2.9
MTP                                 eS        Sb         19 23 50.2 -2.8
HUMP  Col San Antoni     1.14 218⇑eP        Pn         19 23 38.5 -2.7
HUMP                                eS        Sb         19 23 52.8 -3.2
CPD   Cerro la Pandu     1.26 218⇑eP        Pn         19 23 40.6 -2.3
CPD                                 eS        Sn         19 23 56.1 -3.0
CDVI  St. Croix          1.32 166   eS        Sn         19 23 57.9 -2.8
SJG   San Juan           1.36 227⇓eP        Pn         19 23 41.6 -2.6
SJG                                 eS        Sn         19 23 58.2 -3.4
SJG   San Juan           1.36 227⇓eP        Pn         19 23 41.4 -2.9
SJG                                 eS        Sn         19 23 58.1 -3.5
CELP  Cerrillos          1.70 236⇓eP        Pn         19 23 46.7 -2.4
CELP                                eS        Sn         19 24 06.9 -3.3
AOPR  Arecibo Observ     1.71 246⇓eP        Pn         19 23 46.8 -2.5
AOPR                                eS        Sn         19 24 07.2 -3.3
PORP  Portuguez          1.76 236⇑eP        Pn         19 23 47.6 -2.4
PORP                                eS        Sn         19 24 08.8 -2.9
ICM   Isla Caja Muer     1.77 230⇑eP        Pn         19 23 48.1 -2.0
ICM                                 eS        Sn         19 24 07.6 -4.4
LRS   Lares              1.81 246⇑eP        Pn         19 23 48.2 -2.5
LRS                                 eS        Sn         19 24 10.1 -3.0
AGPR  Aguadilla, PR      1.99 254⇓eP        Pn         19 23 50.7 -2.6
AGPR                                eS        Sn         19 24 14.2 -3.4
LSP   Las Mesas          2.07 246⇑eP        Pn         19 23 51.3 -3.2
LSP                                 eS        Sn         19 24 17.1 -2.6
MGP   Maguayo            2.15 242⇑eP        Pn         19 23 53.3 -2.3
MGP                                 eS        Sn         19 24 18.4 -3.2
CRPR  Cabo Rojo, PR      2.17 242⇓eP        Pn         19 23 53.6 -2.3
CRPR                                eS        Sn         19 24 18.4 -3.8
```

IDC 13 19:27:32.3±13.0**, 51.14N×168.98W, mb4.2**/4**, mb1 4.1**/5**, mb1mx3.7**/24**, mbtmp4.0**/5**, ML3.6**/1**, Error ellipse: s-maj=313.8km s-min=60.7km az=154.0, Fox Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID             Time      Res
                                      Op        ISC        h  m  s   ISC
ILAR  Eielson Array     17.85  32     P         P          19 31 41.9 -1.5
      0.1nm,0.3s,baz=233,slow=10,SNR=4.8
ARCES ARCESS Array B    59.17 354     P         P          19 37 34.1 -2.5
      3.2nm,0.9s,baz=6.3,slow=8.2,SNR=2.4
BVAR  Borovoye Array    64.85 325     P         P          19 38 12.9 -1.8
      3.3nm,0.7s,baz=54,slow=6.4,SNR=5.9
FINES FINESS Array B    67.12 352     P         P          19 38 26.8 -2.3
      1.0nm,0.7s,baz=18,slow=8.8,SNR=4.4
HFS   Hagfors           69.06 359     P         P          19 38 39.5 -1.7
      0.7nm,0.4s,baz=18,slow=4.6,SNR=5.7
```

*BJI **13** 19:28:12.1, 7.48N×93.40E, h38^{km}, mB5.3, mb4.7, Ms5.3, Msz5.1*

*HRVD **13** 19:28:13.1±0.2, 7.68N×94.06E, h12^{km}, MW5.3/52, Centroid moment Tensor Solution. LP body waves: s42,c78;Mantle waves: s52,c107; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.59±.02; $M_{\theta\theta}$-0.08±.02; $M_{\phi\phi}$0.66±.02; $M_{r\theta}$0.48±.05; $M_{\theta\phi}$0.46±.02; $M_{\phi r}$-0.62±.05; Best double couple: $M_0$1.095×10^{17} NP1: ϕ_s235°, δ41°, λ-32°. NP2: ϕ_s350°, δ69°, λ-126°. Principal axes: T .993, Plg16°, Azm106°; N .204, Plg34°, Azm5°; P -1.197, Plg51°, Azm218°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **13** 19:28:13.1±0.1, 7.65N×93.93E, mb5.1/99, MS4.6/8 Error ellipse: s-maj=5.5km s-min=3.5km az=42.0*

*IDC **13** 19:28:13.8±1.6, 7.73N×93.96E, h21^{km}±9^{km}, mb4.6/28, mb1 4.7/28, mb1mx4.7/28, mbtmp4.7/28, MS4.6/17, Ms1 4.6/17, ms1mx4.4/34, Error ellipse: s-maj=17.5km s-min=10.0km az=53.0*

*MOS **13** 19:28:14.3±1.2, 7.78N×93.78E, h33^{km}, mb5.2/45, MS4.8/24, Error ellipse: s-maj=11.6km s-min=5.6km az=113.1*

ISC 13 19:28:11.6±0.2**, 7.62N**±0.03×**93.93E**±0.02**, h21^{km}, h21^{km}**±1.1^{km}**:pP-P, n409,** σ1^s**13**/400**, mb5.0**/146**, MS4.8**/53**, 20C-20D, Nicobar Islands region**

```
Code  Station Name        Δ°   AZ°    Phase ID             Time      Res
                                      Op        ISC        h  m  s   ISC
SNG   Songkhla           6.65  93     P         Pn         19 29 50.0 -0.7
      650nm,0.9s
KULM  Kulim              7.07 109    eP         Pn         19 29 54.8 -1.8
NNT   Nongplab           7.55  49     P         Pn         19 30 03.1 -0.3
IPM   Ipoh               7.67 113     P         Pn         19 30 04.2 -0.9
NST   Nakhon Sawan      10.05  37     P         P          19 30 37.9 -0.2
      87nm,0.5s
KGM   Kluang            10.88 120     P         P          19 30 53.6 +4.1
CMAR  Chiang Mai Arr    11.83  24     Pn        P          19 31 04.0 +1.6
      1.2nm,0.3s,baz=210,slow=14,SNR=46
CMAR                                  LR        LR         19 35 33.1
      comp=Z,2µm,18.4s,baz=205,slow=38
CMAR                                  ScP                  19 40 19.8
      0.1nm,0.3s,baz=217,slow=2.5,SNR=5.3
KKTK  Khon Kaen         12.28  44     P         P          19 31 10.0 +1.6
      370nm,0.5s
PALK  Pallekele         13.12 269    ePn        P          19 31 22.0 +2.4
      35nm,0.8s
```

VIS	**Vishakhapatnam**	**14.41**	**315**	*e*P	**P**	**19 31 36.0**	**-0.7**
VIS				AMb	AMB	19 31 38.3	
	comp=Z,43nm,0.5s						
VIS				*e*x	x	19 34 04.6	
VIS				AML	AML	19 34 12.4	
	comp=N,31nm,0.3s						
VIS				AML	AML	19 34 12.6	
	comp=E,48nm,0.3s						
MDRS	**Chennai**	**14.51**	**293**	*e*P	**P**	**19 31 39.0**	**+1.0**
MDRS				*e*x	x	19 34 58.0	
BWNR	**Bhubaneshwar**	**14.86**	**329**	*e*x	**P**	**19 31 47.3**	**+4.8**
BWNR				*e*x	**S**	**19 34 20.4**	**-6.9**
CAL	**Calcutta**	**15.78**	**341**	*e*x	x	19 32 27.7	
CAL				*e*x	x	19 35 47.6	
AGT	**Agartala**	**16.38**	**351**	*i* P	**P**	**19 32 03.0**	**+0.9**
AGT				*i* x	x	19 32 31.0	
TRD	**Trivandrum**	**16.83**	**274**	*e*P	**P**	**19 32 07.5**	**-0.4**
TRD				*i* S	**S**	**19 35 15.5**	**+2.3**
IMP	**Imphal**	**17.07**	**0**	*e*x	x	19 32 15.0	
KSM	**Kuching**	**17.43**	**110**	*e*P	**P**	**19 32 17.4**	**+2.0**
HYB	**Hyderabad**	**17.88**	**304**	*e*P	**P**	**19 32 22.0**	**+1.0**
	comp=E,40nm,1.0s						
HYB				*e*S	**S**	**19 35 32.0**	**-5.1**
HYB	**Hyderabad**	**17.88**	**304**	*i* P	**P**	**19 32 22.0**	**+1.0**
	comp=E,40nm,1.0s						
HYB				*e*S	**S**	**19 35 38.0**	**+0.9**
SHL	**Shillong**	**17.96**	**354**	*e*P	**P**	**19 32 19.8**	**-2.1**
SHL				*e*x	x	19 35 57.0	
BLSP	**Bilaspur**	**18.37**	**323**	*e*P	**P**	**19 32 26.5**	**-0.6**
BLSP				AMb	AMB	19 32 43.9	
	comp=Z,144nm,1.0s						
BLSP				*e*S	**S**	**19 35 49.4**	**+1.1**
QIZ	**Qiongzhong**	**19.18**	**52**	P	**P**	**19 32 37.9**	**+1.1**
QIZ				S	**S**	**19 36 07.9**	**+1.3**
QIZ				AMB	AMB		
	comp=Z,600nm,5.2s						
QIZ				LR	LR		
	comp=N,9µm,13.4s						
QIZ				LR	LR		
	comp=E,2µm,13.1s						
QIZ				LR	LR		
	comp=Z,4µm,10.5s						
QIZ	**Qiongzhong**	**19.18**	**52**	*e*P	**P**	**19 32 35.9**	**-0.9**
	comp=Z,280nm,1.8s						
KMI	**Kunming**	**19.34**	**25**	P	**P**	**19 32 40.8**	**+2.2**
KMI				AP		19 32 46.3	
KMI				PP	PP	19 33 02.4	+6.4
KMI				S	**S**	**19 36 20.6**	**+10**
KMI				XS		19 36 32.1	
KMI				AMB	AMB		
	comp=Z,970nm,4.1s						
KMI				LR	LR		
	comp=N,3µm,12.4s						
KMI				LR	LR		
	comp=E,4µm,9.8s						
KMI				LR	LR		
	comp=Z,3µm,13.3s						
KMI	**Kunming**	**19.34**	**25**	P	**P**	**19 32 40.7**	**+2.1**
	comp=Z,8.0nm,1.2s						
KMI				pP		19 32 46.3	
KMI				sP		19 32 48.9	
KMI				PP	PP	19 33 02.4	+6.4
KMI				S	**S**	**19 36 20.6**	**+10**
KMI				sS		19 36 32.1	
KMI				SS	SS	19 36 53.3	+17
MNGI	**Mangalore**	**19.52**	**287**	*i* P	**P**	**19 32 43.4**	**+2.6**
MNGI				*i* S	**S**	**19 36 25.7**	**+11**
NGP	**Nagpur**	**19.69**	**315**	*e*x	**P**	**19 32 45.0**	**+2.3**
NGP				*e*x	x	19 36 37.8	
LATR	**Latur**	**20.02**	**304**	*e*P	**P**	**19 32 46.5**	**+0.3**
LATR				*e*x	x	19 36 24.0	
GOA	**Goa**	**21.18**	**293**	*e*x	**P**	**19 32 51.0**	**-7.2**
PKI	**Pulchoki**	**21.42**	**339**	*e*P	**P**	**19 33 00.2**	**-0.4**
	comp=Z,180nm,0.7s,mb5.5						
KAD	**Karad**	**21.53**	**298**	*e*P	**P**	**19 33 02.7**	**+1.0**
KAD				AMb	AMB	19 33 17.4	
	comp=Z,81nm,1.6s,mb4.9						
KAD				*e*x	x	19 36 53.2	
KAD				*e*S	**S**	**19 36 57.6**	**+3.1**
DMN	**Daman**	**21.57**	**338**	*e*P	**P**	**19 33 01.7**	**-0.4**
	comp=Z,194nm,0.8s,mb5.6						
GUN	**Gumba**	**21.57**	**340**	*e*P	**P**	**19 33 01.6**	**-0.5**
	comp=Z,330nm,0.8s,mb5.8						
KKN	**Kakani**	**21.67**	**339**	*e*P	**P**	**19 33 02.2**	**-0.9**
	comp=Z,126nm,0.7s,mb5.4						
GKN	**Gorkha**	**22.10**	**338**	*e*P	**P**	**19 33 06.7**	**-0.7**
	comp=Z,236nm,0.7s,mb5.7						
LSA	**Lhasa**	**22.12**	**354**	P	**P**	**19 33 06.6**	**-1.0**
LSA				AP		19 33 15.5	
LSA				XP		19 33 18.9	
LSA				PCP	PcP	19 36 59.3	-6.2
LSA				S	**S**	**19 37 04.9**	**-0.4**
LSA				SCP		19 40 35.1	
LSA				PCS		19 40 38.4	
LSA				SCS	ScS	19 44 19.9	-3.9
LSA				AMB	AMB		
	comp=Z,340nm,4.0s						
LSA				LR	LR		
	comp=N,930nm,22.4s						
LSA				LR	LR		
	comp=E,2µm,29.2s						
LSA				LR	LR		
	comp=Z,2µm,21.3s,MS4.6						
LSA	**Lhasa**	**22.12**	**354**	*e*P	**P**	**19 33 07.1**	**-0.5**
	comp=Z,106nm,0.6s,mb5.5						
KKM	**Kota Kinabalu**	**22.18**	**93**	*e*P	**P**	**19 33 07.8**	**-0.6**
BHPL	**Bhopal**	**22.19**	**316**	*e*P	**P**	**19 33 09.6**	**+1.3**
BHPL				AMb	AMB	19 33 21.0	
	comp=Z,138nm,0.9s,mb5.4						
BHPL				*e*x	x	19 37 06.5	
KOLN	**Koldanda**	**22.30**	**335**	*e*P	**P**	**19 33 09.3**	**-0.1**
	comp=Z,176nm,0.7s,mb5.6						
GYA	**Guiyang**	**22.31**	**31**	⇓*i*P	**P**	**19 33 11.0**	**+1.5**
GYA				PP	PP	19 33 39.8	+3.2
GYA				S	**S**	**19 37 12.6**	**+3.8**
GYA				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,390nm,4.2s						
GYA				LR	LR		
	comp=N,9µm,12.0s,MS5.4						
GYA				LR	LR		
	comp=E,3µm,11.4s,MS5.4						
GYA				LR	LR		
	comp=Z,3µm,13.5s,MS4.9						
POO	**Poona**	**22.34**	**301**	*e*P	**P**	**19 33 09.9**	**+0.1**
BOM	**Bombay**	**23.38**	**301**	*e*P	**P**	**19 33 23.3**	**+3.2**
BOM				*e*x	x	19 33 51.4	
BOM				*e*x	x	19 37 37.5	
TSM	**Tawau**	**24.04**	**97**	P	**P**	**19 33 29.8**	**+3.2**
GZH	**Guangzhou**	**24.18**	**48**	P	**P**	**19 33 33.6**	**+5.7**
GZH				LR	LR		
	comp=N,3µm,13.7s,MS5.2						
GZH				LR	LR		
	comp=E,5µm,13.7s,MS5.2						
GZH				LR	LR		
	comp=Z,8µm,14.0s,MS5.4						
CD2	**Chengdu**	**24.93**	**20**	P	**P**	**19 33 36.3**	**+1.2**
CD2				AP		19 33 41.5	
CD2				PP	PP	19 34 17.5	+5.0
CD2				S	**S**	**19 37 55.5**	**+1.0**
CD2				SS	SS	19 38 58.8	+5.4
CD2				AMB	AMB		
	comp=Z,350nm,3.9s						
CD2				LR	LR		
	comp=N,4µm,10.0s						
CD2				LR	LR		
	comp=Z,5µm,10.2s,MS5.3						
LGTI	**Lohaghat**	**25.25**	**331**	*i* P	**P**	**19 33 39.0**	**+1.0**
PTH	**Pithoragarh**	**25.34**	**331**	*e*P	**P**	**19 33 41.0**	**+2.0**
PTH				*e*x	x	19 36 08.0	
NDI	**New Delhi**	**26.22**	**325**	*e*P	**P**	**19 33 46.0**	**-1.1**
NDI				*e*x	x	19 38 25.0	
AJM	**Ajmer**	**26.23**	**318**	*i* P	**P**	**19 33 49.0**	**+1.8**
ENH	**Enshi**	**26.85**	**31**	*e*P	**P**	**19 33 54.0**	**+1.1**
	comp=Z,14nm,0.6s,mb4.7						
BHJ	**Bhuj**	**28.02**	**306**	*e*x	x	19 34 34.2	
BHJ				*e*x	x	19 39 14.4	
QZH	**Quanzhou**	**29.19**	**51**	*e*P	**P**	**19 34 21.0**	**+6.9**
QZH				S	**S**	**19 39 06.0**	**+2.0**
XAN	**Xi’an**	**29.71**	**26**	P	**P**	**19 34 17.9**	**-0.9**
XAN				S	**S**	**19 39 09.0**	**-3.3**
XAN				AMB	AMB		
	comp=Z,150nm,5.1s						
XAN				LR	LR		
	comp=N,3µm,14.9s,MS5.1						
XAN				LR	LR		
	comp=E,1µm,12.2s,MS5.1						
XAN				LR	LR		
	comp=Z,4µm,14.3s,MS5.2						
LZH	**Lanzhou**	**29.75**	**16**	⇑P	**P**	**19 34 19.3**	**+0.2**
LZH				PP	PP	19 35 16.3	+0.2
LZH				S	**S**	**19 39 11.0**	**-1.9**
LZH				SS	SS	19 40 48.5	+0.4
LZH				AMB	AMB		
	comp=Z,60nm,1.8s,mb5.0						
LZH				AMB	AMB		
	comp=Z,210nm,4.0s						
LZH				LR	LR		
	comp=E,4µm,13.5s						
LZH				LR	LR		
	comp=Z,4µm,14.2s,MS5.2						
LZH	**Lanzhou**	**29.75**	**16**	⇑P	**P**	**19 34 19.2**	**+0.1**
	comp=Z,68nm,1.8s,mb5.1						
LZH				pP	pP	19 34 24.5	-0.6
LZH				sP	sP	19 34 27.5	-0.3
LZH				PP	PP	19 35 16.2	+0.1
LZH				S	**S**	**19 39 11.0**	**-1.9**
LZH				sS		19 39 20.0	
LZH				SS	SS	19 40 48.5	+0.4
LZH				LR	LR		
	comp=Z,4µm,14.2s,MS5.2						
WHN	**Wuhan**	**29.77**	**37**	P	**P**	**19 34 24.4**	**+5.1**
WHN				S	**S**	**19 39 17.3**	**+4.1**
WHN				LR	LR		
	comp=Z,6µm,13.0s,MS5.4						
GTA	**Gaotai**	**32.09**	**9**	⇓P	**P**	**19 34 39.4**	**-0.2**
GTA				PP	PP	19 35 46.3	-0.2
GTA				PCP	PcP	19 37 28.8	-0.1
GTA				S	**S**	**19 39 50.3**	**+0.7**
GTA				SCP		19 41 10.9	
GTA				PCS		19 41 13.6	
GTA				SS	SS	19 41 42.0	-1.2
GTA				SCS	ScS	19 45 06.8	-0.6
GTA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
GTA				AMB	AMB		
	comp=Z,280nm,4.0s						
GTA				LR	LR		
	comp=N,620nm,17.6s,MS4.7						
GTA				LR	LR		
	comp=E,1µm,13.8s,MS4.7						
GTA				LR	LR		
	comp=Z,900nm,14.5s,MS4.6						
NJ2	**Nanjing**	**33.60**	**40**	*e*P	**P**	**19 34 53.1**	**+0.3**
NJ2				PP	PP	19 36 05.6	+0.1
NJ2				S	**S**	**19 40 13.0**	**-0.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,420nm,4.5s						
NJ2				LR	LR		
	comp=Z,2µm,9.6s						
SSE	**Sheshan**	**34.55**	**44**	P	**P**	**19 35 00.5**	**-0.6**
SSE				PP	PP	19 36 19.3	+1.8
SSE				S	**S**	**19 40 30.4**	**+2.5**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
SSE				AMB	AMB		
	comp=Z,110nm,10.6s						
SSE				LR	LR		
	comp=N,940nm,24.4s,MS4.6						
SSE				LR	LR		
	comp=E,820nm,24.4s,MS4.6						
SSE				LR	LR		
	comp=Z,900nm,14.1s						
SSE	**Sheshan**	**34.55**	**44**	P	**P**	**19 35 00.5**	**-0.6**
	comp=Z,17nm,0.8s,mb5.0						
SSE				pP	pP	19 35 06.7	-0.5
SSE				PP	PP	19 36 19.3	+1.8
SSE				S	**S**	**19 40 30.4**	**+2.5**
SSE				sS		19 40 40.6	
SSE				SS	SS	19 43 01.8	+22
SSE				LR	LR		
	comp=Z,910nm,14.1s,MS4.7						
KSH	**Kashi**	**35.62**	**336**	*e*P	**P**	**19 35 06.1**	**-4.0**
KSH				*e*AP	pP	19 35 15.6	-0.6
KSH				*e*XP	sP	19 35 18.5	-0.3
KSH				*e*PP	PP	19 36 31.3	+0.6
KSH				*e*PPP	PPP	19 36 50.4	+0.5
KSH				*e*PCP	PcP	19 37 39.1	+0.3
KSH				*e*S	**S**	**19 40 37.3**	**-7.0**
KSH				*e*XS		19 40 53.3	
KSH				*e*PCS		19 41 25.1	
KSH				*e*SS	SS	19 43 05.0	+0.8
KSH				AMB	AMB		
	comp=Z,250nm,4.0s						
KSH				LR	LR		
	comp=N,4µm,13.1s,MS5.5						
KSH				LR	LR		
	comp=E,4µm,13.9s,MS5.5						
BTO	**Baotou**	**35.85**	**21**	*e*P	**P**	**19 35 10.3**	**-1.7**
BTO				S	**S**	**19 40 52.3**	**+4.4**
BTO				LR	LR		
	comp=N,2µm,10.6s,MS5.2						
BTO				LR	LR		
	comp=E,2µm,12.4s,MS5.2						
WMQ	**Urumqi**	**36.47**	**352**	P	**P**	**19 35 18.0**	**+0.8**
WMQ				AP	pP	19 35 22.4	-0.9
WMQ				PP	PP	19 36 41.6	+0.3
WMQ				PCP	PcP	19 37 42.5	+1.2
WMQ				S	**S**	**19 40 58.4**	**+1.0**
WMQ				SS	SS	19 43 23.3	0.0
WMQ				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.6						
WMQ				AMB	AMB		
	comp=Z,310nm,3.5s						
WMQ				LR	LR		
	comp=N,2µm,20.8s,MS5.0						
WMQ				LR	LR		
	comp=E,2µm,20.8s,MS5.0						
WMQ				LR	LR		
	comp=Z,2µm,23.2s,MS4.8						
HHC	**Hu-ho-hao-te**	**36.63**	**23**	*e*P	**P**	**19 35 20.0**	**+1.4**
HHC				PP	PP	19 36 46.0	+2.5
HHC				PCP	PcP	19 37 42.8	+1.0
HHC				S	**S**	**19 40 59.8**	**-0.1**
HHC				SS	SS	19 43 28.3	+1.3
HHC				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
HHC				AMB	AMB		
	comp=Z,240nm,5.1s						
HHC				LR	LR		
	comp=N,2µm,16.7s,MS5.1						
HHC				LR	LR		
	comp=E,2µm,13.2s,MS5.1						
HHC				LR	LR		
	comp=Z,1µm,15.5s,MS4.8						
MBWA	**Marble Bar**	**38.21**	**139**	*e*P	**P**	**19 35 30.6**	**-1.5**
MBWA				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
UCH	**Uchtor**	**38.50**	**337**	P	**P**	**19 35 41.0**	**+6.7**
	SNR=7.4						
TKM2	**Tokmak 2**	**38.69**	**338**	P	**P**	**19 35 42.0**	**+6.1**
	SNR=7.4						
KBK	**Karagaybulak**	**38.70**	**337**	P	**P**	**19 35 36.9**	**+0.9**
	SNR=11						
AML	**Almayashu**	**38.75**	**336**	P	**P**	**19 35 36.8**	**+0.4**
	SNR=23						
AAK	**Ala-Archa**	**38.85**	**337**	P	**P**	**19 35 43.7**	**+6.4**
	SNR=7.3						
AAK	**Ala-Archa**	**38.85**	**337**	P	**P**	**19 35 38.5**	**+1.3**
AAK				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.0						
AAK	**Ala-Archa**	**38.85**	**337**	*e*P	**P**	**19 35 37.0**	**-0.3**
	comp=Z,21nm,0.8s,mb4.9						
FRU	**Bishkek**	**38.98**	**337**	*e*P	**P**	**19 35 39.5**	**+1.2**
FRU				*e*		19 37 10.5	
FRU				pmax	pmax		
	comp=Z,200nm,2.6s,mb5.4						
FRU				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.0						
CHMS	**Chumysh**	**39.07**	**338**	P	**P**	**19 35 44.8**	**+5.8**
	SNR=6.8						
EKS2	**Erkin-Say**	**39.16**	**336**	P	**P**	**19 35 40.6**	**+0.8**
	SNR=14						
USP	**Ospenovka**	**39.39**	**337**	P	**P**	**19 35 41.0**	**-0.7**
	SNR=13						
MKAR	**Makanchi Array**	**40.29**	**348**	P	**P**	**19 35 48.4**	**-0.7**
MKAR						19 37 53.1	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR				pmax	pmax		
	comp=N,1.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,895nm,19.4s						
MKAR	**Makanchi Array**	**40.29**	**348**	P	**P**	**19 35 48.4**	**-0.7**
	comp=Z,1.8nm,0.5s,mb4.0,baz=164,slow=6.7,SNR=27						
MKAR				PcP	PcP	19 37 53.1	-0.1
	comp=Z,1.9nm,0.8s,baz=197,slow=3.8,SNR=2.3						
MKAR				ScP		19 41 39.5	
	comp=Z,1.0nm,0.8s,baz=127,slow=6.1,SNR=4.3						
MKAR				LR	LR	19 55 49.0	
	comp=Z,895nm,19.4s,MS4.6,baz=175,slow=41						
MKAR	**Makanchi Array**	**40.29**	**348**	P	**P**	**19 35 48.4**	**-0.7**
MKAR				PcP	PcP	19 37 53.1	-0.1
MKAR				ScP		19 41 39.5	
MKAR				LR	LR	19 55 49.0	
FITZ	**Fitzroy Crossi**	**40.41**	**130**	*e*P	**P**	**19 35 49.6**	**-0.7**
	comp=Z,26nm,0.9s,mb5.0						
FITZ	**Fitzroy Crossi**	**40.41**	**130**	P	**P**	**19 35 49.8**	**-0.5**
	comp=Z,40nm,0.8s,mb5.2,baz=312,slow=2.8,SNR=24						
FITZ				PcP	PcP	19 37 54.2	+0.3
	comp=Z,8.4nm,0.5s,baz=352,slow=6.0,SNR=4.6						
KKAR	**Karatay Array**	**40.90**	**334**	*i* P	**P**	**19 35 54.1**	**0.0**
KKAR				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.6						
SONM	**Songino Array**	**41.46**	**13**	P	**P**	**19 35 58.8**	**+0.2**
	comp=Z,6.1nm,0.7s,mb4.3,baz=194,slow=9.7,SNR=31						
SONM				PcP	PcP	19 37 57.4	+0.5
	comp=Z,2.4nm,0.5s,baz=199,slow=3.5,SNR=4.8						
SONM				ScP		19 41 43.8	
	comp=Z,1.5nm,0.7s,baz=207,slow=2.8,SNR=7.6						
SONM				LR	LR	19 54 29.2	
	comp=Z,1µm,18.6s,MS4.8,baz=191,slow=38						
ULN	**Ulaanbaatar**	**41.63**	**13**	⇑*e*P	**P**	**19 36 00.5**	**+0.4**
ULN	**Ulaanbaatar**	**41.63**	**13**	*e*P	**P**	**19 35 59.2**	**-0.9**
	comp=Z,13nm,0.9s,mb4.5						
ULN				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
SNY	**Shenyang**	**43.00**	**33**	⇓P	**P**	**19 36 11.9**	**+0.5**
SNY				S	**S**	**19 42 28.9**	**-6.5**
SNY				AMB	AMB		
	comp=Z,180nm,4.3s						
SNY				LR	LR		
	comp=N,1µm,16.5s,MS5.1						
SNY				LR	LR		
	comp=E,2µm,14.6s,MS5.1						
SNY				LR	LR		
	comp=Z,1µm,17.2s,MS4.9						
KAKA	**Kakadu**	**43.27**	**118**	*e*P	**P**	**19 36 16.9**	**+3.0**
	comp=Z,7.2nm,0.8s,mb4.5						
ZAK	**Zakamensk**	**43.33**	**9**	⇓*i*P	**P**	**19 36 13.9**	**-0.1**
ZAK				*e*		19 38 06.6	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.2						
MOY	**Mondy**	**44.30**	**6**	*e*P	**P**	**19 36 23.0**	**+1.2**
MOY				pmax	pmax		
	comp=Z,40nm,2.6s,mb4.7						
TLY	**Talaya**	**44.65**	**9**	*e*P	**P**	**19 36 31.3**	**+6.7**
TLY				*e*		19 46 20.3	
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
TLY				MLR	MLR		
	comp=Z,472nm,18.0s,MS4.5						
TLY	**Talaya**	**44.65**	**9**	*e*P	**P**	**19 36 24.4**	**-0.2**
	comp=Z,7.0nm,0.8s,mb4.5						
KLBR	**Kellerberrin**	**45.15**	**151**	*e*P	**P**	**19 36 28.2**	**-0.7**
	comp=Z,38nm,1.3s,mb5.1						
IRK	**Irkutsk**	**45.29**	**9**	*e*P	**P**	**19 36 29.5**	**-0.2**
IRK				*e*		19 38 09.9	
IRK				pmax	pmax		
	comp=Z,45nm,2.3s,mb4.9						
CN2	**Changchun**	**45.36**	**32**	*e*P	**P**	**19 36 30.9**	**+0.5**
CN2				*e*S	**S**	**19 43 08.4**	**-1.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
CN2				AMB	AMB		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=N,1µm,15.0s,MS5.2						
CN2				LR	LR		
	comp=E,2µm,15.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1µm,14.0s,MS4.9						
NWAO	**Narrogin (SRO)**	**46.02**	**152**	P	**P**	**19 36 37.0**	**+1.3**
NWAO				pmax	pmax		
	comp=Z,27nm,0.8s						
NWAO	**Narrogin (SRO)**	**46.02**	**152**	P	**P**	**19 36 37.0**	**+1.2**
	comp=Z,27nm,0.8s,mb5.2,baz=330,slow=7.8,SNR=22						
NWAO	**Narrogin (SRO)**	**46.02**	**152**	*e*P	**P**	**19 36 35.9**	**+0.2**
	comp=Z,28nm,0.6s,mb5.4						
HIA	**Hailar**	**46.84**	**23**	*e*P	**P**	**19 36 42.3**	**+0.3**
	comp=Z,20nm,0.6s,mb5.2						
HIA				LR	LR		
	comp=Z,889nm,22.0s,MS4.7						
CIT	**Chita**	**47.12**	**16**	*e*P	**P**	**19 36 44.2**	**+0.1**
CIT				*e*		19 38 16.2	
CIT				pmax	pmax		
	comp=Z,89nm,2.5s,mb5.2						
NVS	**Novosibirsk**	**47.87**	**352**	⇓*i*P	**P**	**19 36 48.0**	**-2.0**
NVS				*e*		19 38 47.8	
NVS				*i* S	**S**	**19 43 41.6**	**-3.3**
NVS				*e*		19 46 38.2	
NVS				pmax	pmax		
	comp=Z,117nm,2.3s,mb5.5						
NVS				pmax	pmax		
	comp=N,105nm,2.1s						
NVS				pmax	pmax		
	comp=E,40nm,2.1s						
NVS				pmax	pmax		
	comp=Z,34nm,2.4s,mb5.0						
NVS				pmax	pmax		
	comp=E,16nm,2.0s						
NVS				smax			
	comp=N,33nm,2.5s						
NVS				smax			
	comp=E,70nm,2.7s						
MDJ	**Mudanjiang**	**48.14**	**34**	P	**P**	**19 36 51.9**	**-0.4**
MDJ				PP	PP	19 38 44.0	0.0
MDJ				SCP		19 42 13.9	
MDJ				PCS		19 42 15.3	
MDJ				S	**S**	**19 43 51.0**	**+2.1**
MDJ				AMB	AMB		
	comp=Z,140nm,3.8s						
MDJ				LR	LR		
	comp=N,510nm,13.6s,MS5.1						
MDJ				LR	LR		
	comp=E,1µm,13.6s,MS5.1						
MDJ				LR	LR		
	comp=Z,1µm,13.9s,MS5.1						
MDJ	**Mudanjiang**	**48.14**	**34**	*e*P	**P**	**19 36 52.1**	**-0.2**
	comp=Z,14nm,1.0s,mb4.9						
WRA	**Warramunga Arr**	**48.28**	**125**	P	**P**	**19 36 52.6**	**-1.1**
WRA						19 38 20.4	
WRA				pmax	pmax		
	comp=Z,13nm,0.4s						
WRA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRA				pmax	pmax		
	comp=N,2.0nm,0.8s						
WRA	**Warramunga Arr**	**48.28**	**125**	P	**P**	**19 36 52.6**	**-1.1**
	comp=N,13nm,0.4s,mb5.3,baz=305,slow=8.6,SNR=288						
WRA				PcP	PcP	19 38 20.4	-0.4
	comp=N,4.1nm,0.7s,baz=314,slow=2.8,SNR=4.8						
WRA				ScP		19 42 12.6	
	comp=N,1.5nm,0.8s,baz=319,slow=3.9,SNR=6.4						
WRAB	**Tennant Creek**	**48.29**	**125**	*e*P	**P**	**19 36 52.2**	**-1.5**
	comp=N,29nm,0.6s,mb5.5						
WB2	**Warramunga Arr**	**48.30**	**125**	⇓*i*P	**P**	**19 36 52.5**	**-1.3**
BVA0	**Borovoye Array**	**49.16**	**341**	*i* P	**P**	**19 36 57.5**	**-2.5**
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
BVAR	**Borovoye Array**	**49.16**	**341**	P	**P**	**19 36 59.2**	**-0.9**
	comp=Z,0.8nm,0.4s,mb4.1,baz=133,slow=9.2,SNR=10						
BVAR				PcP	PcP	19 38 23.5	-0.1
	comp=Z,7.2nm,0.5s,baz=128,slow=4.2,SNR=3.8						
BVAR				ScP		19 42 16.3	
	comp=Z,2.4nm,0.7s,baz=153,slow=6.6,SNR=9.4						
JHJ	**Hachijo jima 2**	**49.38**	**52**	LR	LR	19 56 25.7	
	comp=Z,540nm,20.8s,MS4.5,baz=96,slow=34						
MAT	**Matsushiro**	**49.49**	**48**	*e*P	**P**	**19 37 03.0**	**+0.2**
MAT				*e*S	**S**	**19 44 10.0**	**+2.0**

MAT	**Matsushiro**	**49.49**	**48**	P	**P**	**19 37 02.8**	**0.0**
MAT				S	**S**	**19 44 09.0**	**+1.0**
MJAR	**Matsushiro Arr**	**49.49**	**48**	P	**P**	**19 37 03.9**	**+1.1**
MJAR						19 38 25.0	
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR				pmax	pmax		
	comp=N,2.0nm,0.9s						
MJAR				MLR	MLR		
	comp=Z,555nm,18.2s						
MJAR	**Matsushiro Arr**	**49.49**	**48**	P	**P**	**19 37 03.9**	**+1.1**
	comp=Z,0.5nm,0.4s,mb3.9,baz=260,slow=7.4,SNR=2.9						
MJAR				PcP	PcP	19 38 25.0	0.0
	comp=Z,4.4nm,0.8s,baz=243,slow=5.5,SNR=5.9						
MJAR				ScP		19 42 16.7	
	comp=Z,1.8nm,0.9s,baz=250,slow=4.9,SNR=4.4						
MJAR				LR	LR	20 00 22.1	
	comp=Z,555nm,18.1s,MS4.6,baz=240,slow=39						
CBIJ	**Chichi jima**	**49.61**	**61**	LR	LR	19 55 48.7	
	comp=Z,274nm,19.8s,MS4.3,baz=179,slow=33						
AB31	**Akbulak array**	**50.35**	**332**	eP	**P**	**19 37 08.8**	**-0.4**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
BLJS	**Baljurashi**	**52.07**	**289**	P	**P**	**19 37 26.0**	**+3.4**
KLR	**Kul’dur**	**52.21**	**31**	eP	**P**	**19 37 21.2**	**-2.1**
KLR				MLR	MLR		
	comp=Z,2µm,12.0s,MS5.3						
BOD	**Bodaibo**	**52.45**	**13**	eP	**P**	**19 37 27.4**	**+2.4**
BOD				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.7						
HILS	**Ha’il**	**53.04**	**299**	P	**P**	**19 37 31.4**	**+1.6**
CLNS	**Chul’man**	**54.75**	**20**d	iP	**P**	**19 37 42.3**	**+0.4**
CLNS				e*PP	pP	19 37 49.4	+1.2
CLNS				ePPP	PPP	19 40 59.4	+1.4
CLNS				e		19 47 27.5	
CLNS				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.2						
CLNS				pmax	pmax		
	comp=N,11nm,0.9s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.6s						
CLNS				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
CLNS				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.2						
CLNS				MLR	MLR		
	comp=N,1µm,14.0s,MS5.1						
CLNS				MLR	MLR		
	comp=E,200nm,16.0s,MS5.1						
KBRS	**Khaybar**	**54.98**	**296**	P	**P**	**19 37 45.9**	**+1.8**
SVE	**Sverdlovsk**	**55.56**	**339**	eP	**P**	**19 37 47.4**	**-0.4**
SVE				e		19 38 49.0	
SVE				eS	**S**	**19 45 28.0**	**-2.4**
SVE				e		19 47 35.0	
SVE				pmax	pmax		
	comp=Z,40nm,3.4s						
SVE				MLR	MLR		
	comp=N,1µm,18.0s,MS5.0						
SVE				MLR	MLR		
	comp=E,300nm,18.0s,MS5.0						
SVE				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.1						
PMG	**Port Moresby**	**55.66**	**107**⇓	eP	**P**	**19 37 49.0**	**-0.1**
PMG	**Port Moresby**	**55.66**	**107**	P	**P**	**19 37 49.0**	**-0.1**
	comp=Z,19nm,0.7s,mb5.2,baz=300,slow=8.5,SNR=9.0						
PMG	**Port Moresby**	**55.66**	**107**	eP	**P**	**19 37 46.5**	**-2.7**
	comp=Z,17nm,0.8s,mb5.1						
ARU	**Arti**	**56.04**	**337**⇓	iP	**P**	**19 37 49.8**	**-1.5**
ARU				e		19 38 46.7	
ARU				e		19 39 55.6	
ARU				eS	**S**	**19 45 37.9**	**+1.0**
ARU				e		19 47 35.5	
ARU				pmax	pmax		
	comp=Z,43nm,1.9s,mb5.2						
ARU				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.0						
ARU				MLR	MLR		
	comp=N,900nm,19.0s,MS4.9						
ARU				MLR	MLR		
	comp=E,500nm,19.0s,MS4.9						
ARU	**Arti**	**56.04**	**337**	eP	**P**	**19 37 49.4**	**-1.9**
	comp=E,47nm,1.3s,mb5.4						
ARU				LR	LR		
	comp=Z,313nm,20.0s,MS4.4						
ZEI	**Tsey**	**56.08**	**317**	eP	**P**	**19 37 51.9**	**+0.1**
ZEI				i *PP	pP	19 37 57.1	-1.0
ZEI				i		19 39 52.0	
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						
UMJS	**Umm Lajj**	**56.64**	**295**	P	**P**	**19 37 58.1**	**+2.0**
YSS	**Yuzh-Sakhalins**	**57.11**	**38**	eP	**P**	**19 38 00.0**	**+0.9**
YSS				e*SP	sP	19 38 07.0	-0.8
YSS				e		19 38 47.0	
YSS				eS	**S**	**19 45 53.0**	**+1.9**
YSS	**Yuzh-Sakhalins**	**57.11**	**38**	eP	**P**	**19 37 59.2**	**+0.1**
	comp=Z,13nm,0.6s,mb5.1						
KIV	**Kislovodsk**	**57.37**	**318**	eP	**P**	**19 38 00.1**	**-0.8**
KIV				e		19 38 54.8	
KIV				e		19 40 07.3	
KIV				ePPP	PPP	19 41 24.8	-5.8
KIV				eS	**S**	**19 45 54.5**	**0.0**
KIV				pmax	pmax		
	comp=N,14nm,1.1s						
KIV				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
KIV				MLR	MLR		
	comp=N,225nm,21.0s,MS4.6						
KIV				MLR	MLR		
	comp=E,401nm,21.0s,MS4.6						
KIV				MLR	MLR		
	comp=Z,476nm,21.0s,MS4.6						
KIV	**Kislovodsk**	**57.37**	**318**	eP	**P**	**19 37 59.2**	**-1.8**
	comp=Z,22nm,0.7s,mb5.3						
GOF	**Gofitskoye**	**57.58**	**319**	eP	**P**	**19 38 00.4**	**-2.1**
GOF				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
QURS	**Qurayyt al Mil**	**57.66**	**302**	P	**P**	**19 38 04.5**	**+1.3**
TBKS	**Tabuk**	**57.76**	**299**	P	**P**	**19 38 05.7**	**+1.8**
ELZG	**Elazig**	**58.10**	**311**	i P	**P**	**19 38 05.2**	**-0.9**
ASF	**Jabal al Asfar**	**58.18**	**303**	P	**P**	**19 38 07.5**	**+0.7**
	comp=Z,4.2nm,0.8s,mb4.5,baz=30,slow=6.9,SNR=3.6						
ASF				LR	LR	20 05 29.8	
	comp=Z,423nm,19.1s,MS4.6,baz=310,slow=38						
CTA	**Charters Tower**	**58.37**	**119**	eP	**P**	**19 38 07.1**	**-1.1**
	comp=Z,5.5nm,1.6s,mb4.3						
CTAO	**Charters Tower**	**58.37**	**119**	eP	**P**	**19 38 06.3**	**-2.0**
CTAO				LR	LR		
	comp=Z,731nm,19.0s,MS4.8						
JMQS	**Jabal Moqyreh**	**58.45**	**299**	P	**P**	**19 38 10.4**	**+1.7**
GZT	**Gaziantep**	**58.86**	**309**	i P	**P**	**19 38 08.5**	**-3.0**
SOKR	**Solikamsk**	**58.96**	**339**c	iP	**P**	**19 38 11.6**	**-0.3**
SOKR				i S	**S**	**19 46 15.3**	**0.0**
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.1						
BDAS	**Al Bad‘**	**59.05**	**299**	P	**P**	**19 38 14.3**	**+1.4**
SOC	**Sochi**	**59.22**	**317**	eP	**P**	**19 38 11.6**	**-2.3**
SOC				eS	**S**	**19 46 14.8**	**-4.1**
SOC				e		19 47 50.3	
SOC				eSSS	SSS	19 52 37.4	-4.1
SOC				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.5						
SOC				pmax	pmax		
	comp=N,30nm,0.8s						
SOC				pmax	pmax		
	comp=E,34nm,0.9s						
SOC				MLR	MLR		
	comp=Z,510nm,21.0s,MS4.6						
SOC				MLR	MLR		
	comp=N,425nm,28.0s						
SOC				MLR	MLR		
	comp=E,489nm,22.0s						
EIL	**Elat**	**59.37**	**300**	P	**P**	**19 38 15.6**	**+0.5**
	comp=E,6.5nm,0.8s,mb4.7,baz=85,slow=4.6,SNR=7.3						
EIL	**Elat**	**59.37**	**300**	eP	**P**	**19 38 14.3**	**-0.8**
	comp=E,41nm,1.3s,mb5.3						
STKA	**Stephens Creek**	**60.08**	**133**	eP	**P**	**19 38 18.4**	**-1.6**
	comp=E,11nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**60.08**	**133**	P	**P**	**19 38 19.4**	**-0.6**
	comp=E,6.3nm,0.4s,mb5.0,baz=311,slow=7.8,SNR=24						
STKA				LR	LR	20 06 55.8	
	comp=E,507nm,20.0s,MS4.7,baz=106,slow=39						
YAK	**Yakutsk**	**60.30**	**18**	eP	**P**	**19 38 19.4**	**-1.7**
YAK				e*PP	pP	19 38 30.3	+2.8
YAK				e		19 39 05.5	
YAK				e		19 40 31.6	
YAK				eS	**S**	**19 46 29.2**	**-3.3**
YAK				e		19 48 01.2	
YAK				eSS	SS	19 50 26.9	-4.4
YAK				eSSS	SSS	19 53 09.2	+4.4
YAK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				smax			
	comp=N,2.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,161nm,21.0s,MS4.1						
YAK				MLR	MLR		
	comp=N,138nm,14.0s						
YAK				MLR	MLR		
	comp=E,347nm,18.0s						
YAK	**Yakutsk**	**60.30**	**18**	eP	**P**	**19 38 19.4**	**-1.7**
	comp=E,35nm,0.6s,mb5.6						
YAK				LR	LR		
	comp=Z,740nm,20.0s,MS4.8						
BOYT	**Boyabat**	**61.93**	**313**	i P	**P**	**19 38 28.6**	**-3.9**
BR131	**Keskin Array S**	**62.44**	**311**	eP	**P**	**19 38 33.6**	**-2.1**
	comp=Z,7.2nm,0.6s,mb5.0						
BR131				epP	pP	19 38 40.3	-1.9
BRTR	**Keskin Array B**	**62.44**	**311**	P	**P**	**19 38 33.8**	**-2.0**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRTR	**Keskin Array B**	**62.44**	**311**	P	**P**	**19 38 33.8**	**-2.0**
	comp=Z,4.0nm,0.6s,mb4.7,baz=130,slow=7.4,SNR=20						
VRSR	**Storozhevoye**	**62.46**	**325**	eP	**P**	**19 38 35.8**	**0.0**
VRSR				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb5.0						
VRSR				pmax	pmax		
	comp=N,5.0nm,0.8s						
VRSR				pmax	pmax		
	comp=E,3.0nm,0.8s						
VOR	**Voronezh**	**62.67**	**325**	P	**P**	**19 38 36.0**	**-1.1**
VOR				e*SP	sP	19 38 42.0	-3.9
VOR				pmax	pmax		
	comp=Z,30nm,2.0s,mb5.1						
BALT	**Daday**	**63.06**	**313**	i P	**P**	**19 38 36.9**	**-3.0**
SIM	**Simferopol’**	**63.47**	**317**	eP	**P**	**19 38 35.9**	**-6.6**
SIM				eS	**S**	**19 47 07.0**	**-5.8**
SIM				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
SIM				MLR	MLR		
	comp=Z,600nm,22.0s,MS4.7						
MBAR	**Mbarara**	**63.53**	**266**	eP	**P**	**19 38 43.9**	**+0.4**
	comp=Z,15nm,1.1s,mb4.9						
SGKT	**Sivrigoynuk**	**63.81**	**312**	i P	**P**	**19 38 39.7**	**-5.2**
SGKT	**Sivrigoynuk**	**63.81**	**312**	i P	**P**	**19 38 39.7**	**-5.2**
ESKT	**Eskisehir**	**64.49**	**310**	i P	**P**	**19 38 52.4**	**+3.1**
TKTP	**Tekketepe**	**64.61**	**308**	i P	**P**	**19 38 48.4**	**-1.8**
TKTP	**Tekketepe**	**64.61**	**308**	i P	**P**	**19 38 48.4**	**-1.7**
GOLH	**Golhisar**	**65.06**	**307**	i P	**P**	**19 38 54.6**	**+1.5**
MOS	**Moscow**	**65.19**	**329**	eP	**P**	**19 38 52.4**	**-1.1**
MOS				e	pP	19 38 58.6	-1.4
MOS				e		19 41 22.6	
MOS				eS	SP	19 47 51.8	-2.4
MOS				pmax	pmax		
	comp=Z,200nm,2.4s,mb5.7						
OBN	**Obninsk**	**65.48**	**328**d	iP	**P**	**19 38 54.0**	**-1.4**
OBN				e		19 41 13.8	
OBN				i S	S	19 47 30.8	-6.7
OBN				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
OBN				MLR	MLR		
	comp=Z,300nm,7.0s						
OBN	**Obninsk**	**65.48**	**328**	eP	**P**	**19 38 53.9**	**-1.5**
	comp=Z,71nm,1.3s,mb5.5						
TOO	**Toolangi**	**65.81**	**137**⇑	iP	**P**	**19 38 59.2**	**+1.3**
	comp=Z,22nm,0.8s,mb5.2						
ULDT	**Uludag**	**65.91**	**311**	i P	**P**	**19 38 57.0**	**-1.4**
ULDT	**Uludag**	**65.91**	**311**	i P	**P**	**19 38 57.0**	**-1.4**
ARMA	**Armidale**	**66.97**	**127**	eP	**P**	**19 39 07.0**	**+1.6**
MA2	**Magadan**	**67.09**	**28**d	iP	**P**	**19 39 05.5**	**-0.1**
MA2				e	pP	19 39 11.2	-0.8
MA2				e		19 39 36.1	
MA2				e		19 41 39.3	
MA2				ePPP	PPP	19 43 18.3	+6.1
MA2				eS	S	19 47 54.8	-2.1
MA2				e		19 49 00.0	
MA2				eSS	SS	19 52 12.0	-5.8
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
MA2				MLR	MLR		
	comp=Z,1µm,26.0s,MS5.1						
MA2	**Magadan**	**67.09**	**28**	eP	**P**	**19 39 05.2**	**-0.4**
	comp=Z,43nm,0.8s,mb5.5						
MA2				LR	LR		
	comp=Z,286nm,19.0s,MS4.5						
TIRR	**Tirgusor**	**67.29**	**315**	⇑P	**P**	**19 39 06.2**	**-1.0**
CNB	**Canberra Magne**	**67.41**	**133**	eP	**P**	**19 39 08.3**	**+0.2**
	comp=Z,31nm,0.7s,mb5.5						
HNR	**Honiara**	**67.91**	**103**	LR	LR	20 06 41.8	
	comp=Z,244nm,19.9s,MS4.4,baz=64,slow=34						
HNR	**Honiara**	**67.91**	**103**	eP	**P**	**19 39 11.4**	**-0.1**
AKASG	**Malin Array Be**	**68.22**	**322**	P	**P**	**19 39 10.9**	**-2.0**
AKASG						19 41 43.0	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**68.22**	**322**	P	**P**	**19 39 10.8**	**-2.1**
	comp=Z,0.7nm,0.3s,mb4.2,baz=88,slow=4.8,SNR=12						
AKASG				PP	PP	19 41 43.0	-2.6
	comp=Z,0.2nm,0.3s,baz=90,slow=6.8,SNR=4.2						
ALN	**Alexandroupoli**	**68.36**	**311**	eP	**P**	**19 39 18.8**	**+4.9**
IDI	**Anoyia**	**68.54**	**305**	P	**P**	**19 39 14.4**	**-0.7**
	comp=Z,10.0nm,0.6s,mb4.9,baz=93,slow=9.1,SNR=15						
VRI	**Vrincioaia**	**68.74**	**316**⇑	iP	**P**	**19 39 15.8**	**-0.4**
KDZ	**Kurdzhali**	**68.94**	**312**	eP	**P**	**19 39 16.0**	**-1.5**
LSZ	**Lusaka**	**68.98**	**250**	eP	**P**	**19 39 18.7**	**+0.5**
	comp=Z,15nm,0.6s,mb5.1						
MLR	**Muntele Rosu**	**69.21**	**316**	P	**P**	**19 39 19.0**	**-0.1**
MLR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MLR				MLR	MLR		
	comp=Z,778nm,20.1s						
MLR	**Muntele Rosu**	**69.21**	**316**	P	**P**	**19 39 19.0**	**-0.1**
	comp=Z,7.6nm,0.6s,mb4.8,baz=189,slow=1.5,SNR=18						
MLR				LR	LR	20 11 47.3	
	comp=Z,778nm,20.1s,MS4.9,baz=278,slow=38						
MLR	**Muntele Rosu**	**69.21**	**316**⇓	iP	**P**	**19 39 19.0**	**-0.1**
RZN	**Rozhen**	**69.47**	**312**	eP	**P**	**19 39 19.0**	**-1.7**
OUR	**Ouranopolis**	**69.83**	**310**	eP	**P**	**19 39 22.0**	**-1.0**
PAIG	**Paliouri**	**70.01**	**310**	eP	**P**	**19 39 22.8**	**-1.3**
MNK	**Minsk**	**70.05**	**325**	eP	**P**	**19 39 23.0**	**-1.0**
BURAR	**Bucovina Array**	**70.09**	**318**	⇑P	**P**	**19 39 24.1**	**-0.3**
MMB	**Musomiste**	**70.19**	**311**	eP	**P**	**19 39 24.0**	**-1.1**
SRS	**Serrai**	**70.23**	**311**	eP	**P**	**19 39 23.6**	**-1.8**
KKB	**Krupnik**	**70.70**	**312**	eP	**P**	**19 39 26.0**	**-2.2**
VTS	**Vitosha**	**70.70**	**312**	eP	**P**	**19 39 27.0**	**-1.2**
LIT	**Litokhoron**	**70.94**	**310**	eP	**P**	**19 39 28.2**	**-1.6**
AGG	**Agios Georgios**	**70.95**	**309**	eP	**P**	**19 39 27.0**	**-2.8**
GRG	**Griva**	**71.10**	**311**	eP	**P**	**19 39 28.8**	**-1.9**
LVV	**L’vov**	**71.28**	**320**	eP	**P**	**19 39 28.0**	**-3.6**
LVV				e		19 48 41.0	
LVV				e		19 49 17.6	
VSU	**Vasula**	**71.70**	**329**c	iP	**P**	**19 39 34.9**	**+0.9**
BOLS	**Boljevac**	**71.76**	**314**⇓	iP	**P**	**19 39 32.8**	**-1.8**
FNA	**Florina**	**71.86**	**310**	eP	**P**	**19 39 33.5**	**-1.8**
APA	**Apatity**	**72.01**	**339**⇓	eP	**P**	**19 39 35.5**	**-0.2**
APA				i S	S	19 48 53.0	-1.7
APA				i PS	PS	19 49 38.0	+10
APA				eSS	SS	19 53 25.0	-8.6
APA				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.2						
APA				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
KWP	**Kalwaria**	**72.09**	**320**	eP	**P**	**19 39 38.0**	**+1.6**
KWP	**Kalwaria**	**72.09**	**320**	eP	**P**	**19 39 38.0**	**+1.5**
LKD	**Levkas**	**72.23**	**308**	eP	**P**	**19 39 36.1**	**-1.4**
KOLS	**Kolonicke sedl**	**72.26**	**319**	eP	**P**	**19 39 38.5**	**+1.0**
KOLS				epP	pP	19 39 43.6	-0.3
IGT	**Igoumenitsa**	**72.54**	**309**	eP	**P**	**19 39 37.5**	**-1.9**
SUW	**Suwalki**	**72.59**	**324**	eP	**P**	**19 39 38.5**	**-0.8**
FINES	**FINESS Array B**	**72.84**	**332**	P	**P**	**19 39 39.8**	**-0.8**
FINES				pmax	pmax		
	comp=Z,9.0nm,0.6s						
FINES				MLR	MLR		
	comp=Z,317nm,18.0s						
FINES	**FINESS Array B**	**72.84**	**332**	P	**P**	**19 39 39.8**	**-0.9**
	comp=Z,9.0nm,0.6s,mb4.8,baz=105,slow=5.8,SNR=56						
FINES				LR	LR	20 17 42.5	
	comp=Z,317nm,18.0s,MS4.6,baz=281,slow=41						
KAF	**Kangasniemi**	**72.92**	**333**	ep	**P**	**19 39 40.3**	**-0.8**
	comp=Z,15nm,0.6s,mb5.1,baz=105,slow=5.7						
KAF	**Kangasniemi**	**72.92**	**333**	eP	**P**	**19 39 40.3**	**-0.8**
KAF				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.1						
KEK	**Kerkira**	**72.97**	**309**	P	**P**	**19 39 40.9**	**-1.0**
KECS	**Kecovo**	**73.36**	**318**	e	**P**	**19 39 39.6**	**-4.4**
KECS				epP	pP	19 39 48.4	-2.0
BBLS	**Bajina Basta -**	**73.60**	**313**⇓	iP	**P**	**19 39 44.6**	**-0.9**
PSZ	**Piszkesteto**	**73.69**	**318**	eP	**P**	**19 39 45.1**	**-0.8**
	comp=Z,5.1nm,0.6s,mb4.6						
OJC	**Ojcow**	**74.03**	**320**	eP	**P**	**19 39 47.5**	**-0.3**
VYHS	**Vyhne**	**74.46**	**318**	e	**P**	**19 39 53.7**	**+3.4**
CASY	**Casey**	**74.70**	**173**	eP	**P**	**19 39 52.4**	**+1.1**
KEV	**Kevo**	**75.01**	**341**	ep	**P**	**19 39 53.6**	**+0.5**
	comp=Z,15nm,0.8s,mb5.0						
KEV	**Kevo**	**75.01**	**341**	eP	**P**	**19 39 53.6**	**+0.5**
KEV				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
OKC	**Ostrava-Krasne**	**75.05**	**319**	eP	**P**	**19 39 52.7**	**-1.0**
OKC				epP	pP	19 39 59.4	-0.8
OKC				eS	S	19 49 30.7	+1.5
BOSA	**Boshof**	**75.27**	**238**	P	**P**	**19 39 56.7**	**+1.3**
BOSA				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.2						
BOSA	**Boshof**	**75.27**	**238**	P	**P**	**19 39 56.7**	**+1.3**
	comp=Z,14nm,0.5s,mb5.2,baz=81,slow=4.8,SNR=44						
BOSA	**Boshof**	**75.27**	**238**	eP	**P**	**19 39 56.4**	**+0.9**
	comp=Z,18nm,0.7s,mb5.1						
TIP	**Timpagrande**	**75.29**	**308**	P	**P**	**19 39 55.6**	**+0.3**
	comp=Z,39nm,2.1s,mb5.0						
MORC	**Moravsky Berou**	**75.43**	**319**	eP	**P**	**19 39 54.6**	**-1.3**
	comp=Z,16nm,1.1s,mb4.9						
ARCES	**ARCESS Array B**	**75.43**	**340**	P	**P**	**19 39 55.9**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES	**ARCESS Array B**	**75.43**	**340**	P	**P**	**19 39 55.9**	**+0.4**
	comp=Z,2.3nm,0.5s,mb4.4,baz=105,slow=6.7,SNR=18						
GRI	**Girifalco**	**75.54**	**308**	P	**P**	**19 39 59.9**	**+3.2**
ZST	**Bratislava**	**75.58**	**318**	eP	**P**	**19 39 57.4**	**+0.6**
ZST				epP	pP	19 40 02.8	-0.4
SOI	**Samo**	**75.81**	**307**	P	**P**	**19 39 58.6**	**+0.3**
	comp=Z,27nm,1.3s,mb5.0						
DPC	**Dobruska-Polom**	**76.27**	**320**	eP	**P**	**19 40 00.6**	**0.0**
DPC				epP	pP	19 40 07.0	-0.1
DPC				eS	S	19 49 38.8	-3.8
DPC				AMS	AMS	20 19 50.0	
	comp=Z,500nm,15.9s						
KSP	**Ksiaz**	**76.33**	**320**	eP	**P**	**19 40 00.8**	**-0.1**
KSP				e*PP	pP	19 40 06.6	-0.8
KSP				eS	S	19 49 40.0	-3.2
KSP	**Ksiaz**	**76.33**	**320**	eP	**P**	**19 40 01.2**	**+0.3**
BILL	**Bilibino**	**76.40**	**22**d	iP	**P**	**19 40 01.1**	**+0.1**
BILL				eS	tx	19 50 25.0	
BILL				eSS	SS	19 54 39.8	-1.6
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
BILL				MLR	MLR		
	comp=Z,900nm,14.0s,MS5.2						
BILL	**Bilibino**	**76.40**	**22**	eP	**P**	**19 40 00.7**	**-0.3**
	comp=Z,11nm,0.5s,mb5.0						
UPC	**Upice**	**76.48**	**320**	eP	**P**	**19 40 01.7**	**-0.1**
UPC				epP	pP	19 40 09.9	+1.6
ARSA	**Arzberg**	**76.58**	**317**⇑	iP	**P**	**19 40 02.5**	**+0.1**
	comp=Z,13nm,1.5s,mb4.6						
PERS	**Pernice**	**76.82**	**316**	eP	**P**	**19 40 02.9**	**-0.9**
PERS				i	pP	19 40 09.8	-0.5
PDKS	**Podkum**	**76.88**	**315**	eP	**P**	**19 40 03.4**	**-0.7**
VISS	**Visnje**	**76.98**	**315**	eP	**P**	**19 40 04.5**	**-0.2**
PRU	**Pruhonice**	**77.38**	**319**	eP	**P**	**19 40 04.3**	**-2.5**
PRU				epP	pP	19 40 09.6	-3.7
PRU				eS	S	19 49 48.8	-5.9
PRU				AMS	AMS	20 20 30.0	
	comp=Z,300nm,22.8s						
PVCC	**Panska Ves**	**77.40**	**320**	eP	**P**	**19 40 06.9**	**0.0**
PVCC				AMS	AMS	20 20 40.0	
	comp=Z,500nm,16.0s						
MOA	**Molln**	**77.46**	**317**⇑	iP	**P**	**19 40 05.9**	**-1.4**
	comp=Z,8.4nm,1.4s,mb4.5						
VOY	**Vojsko**	**77.64**	**315**	eP	**P**	**19 40 08.0**	**-0.3**
VOY				e	pP	19 40 14.2	-0.6
TRO	**Tromso**	**77.69**	**340**	eS	S	19 49 55.8	-1.9
TRO				AMS	AMS	20 17 43.1	
	comp=Z,853nm,24.2s,MS5.0						
BRG	**Berggiesshubel**	**77.81**	**320**	i P	**P**	**19 40 09.6**	**+0.4**
BRG				e	pP	19 40 16.6	+0.9
BRG				eS	S	19 49 58.1	-1.2
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
BRG				pmax	pmax		
	comp=Z,68nm,2.1s,mb5.2						
BRG				MLR	MLR		
	comp=N,400nm,19.3s,MS4.9						
BRG				MLR	MLR		
	comp=E,310nm,19.3s,MS4.9						
BRG				MLR	MLR		
	comp=Z,610nm,14.4s,MS5.1						
BRG	**Berggiesshubel**	**77.81**	**320**	i P	**P**	**19 40 09.6**	**+0.4**
BRG				e	pP	19 40 16.6	+1.0
BRG				eS	S	19 49 58.1	-1.2
BRG				LR	LR		
	comp=Z,610nm,14.4s,MS5.1						
GEC2	**GERESS Array S**	**77.88**	**318**	eP	**P**	**19 40 09.2**	**-0.3**
GEC2				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
GEC2	**GERESS Array S**	**77.88**	**318**	eP	**P**	**19 40 09.2**	**-0.3**
	comp=Z,15nm,0.9s,mb4.9						
GERES	**GERESS Array B**	**77.88**	**318**	P	**P**	**19 40 09.6**	**+0.1**
GERES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GERES				MLR	MLR		
	comp=Z,201nm,21.5s						
GERES	**GERESS Array B**	**77.88**	**318**	P	**P**	**19 40 09.6**	**0.0**
	comp=Z,4.8nm,0.6s,mb4.6,baz=84,slow=5.6,SNR=47						
GERES				LR	LR	20 18 48.8	
	comp=Z,201nm,21.5s,MS4.4,baz=227,slow=39						
KHC	**Kasperske Hory**	**77.97**	**319**	eP	**P**	**19 40 09.6**	**-0.4**
KHC				epP	pP	19 40 16.4	-0.2
KHC				eS	S	19 49 56.9	-4.1
PTCC	**Patocco-Chiusa**	**78.03**	**316**	P	**P**	**19 40 10.6**	**+0.2**
KBA	**Koelnbreinsper**	**78.06**	**316**⇑	iP	**P**	**19 40 09.8**	**-0.8**
	comp=Z,15nm,1.1s,mb4.8						
MAW	**Mawson**	**78.24**	**192**	P	**P**	**19 40 13.1**	**+1.9**
MAW				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAW	**Mawson**	**78.24**	**192**	P	**P**	**19 40 13.1**	**+1.9**
	comp=Z,5.1nm,0.6s,mb4.6,baz=18,slow=4.8,SNR=27						
ARV	**Arcevia**	**78.27**	**313**	P	**P**	**19 40 12.1**	**+0.3**
	comp=Z,155nm,2.1s,mb5.6						
CLL	**Collm**	**78.42**	**321**⇓	iP	**P**	**19 40 14.3**	**+1.8**
CLL				e		19 40 24.0	
CLL				eS	S	19 50 06.0	+0.1
CLL	**Collm**	**78.42**	**321**⇓	iP	**P**	**19 40 14.3**	**+1.8**
CLL				i pP	pP	19 40 18.6	-0.4
CLL				e		19 40 24.0	
CLL				eS	S	19 50 06.0	+0.1
CLL	**Collm**	**78.42**	**321**	⇓P	**P**	**19 40 14.3**	**+1.8**
CLL				i *PP	pP	19 40 18.6	-0.4
CLL				e		19 40 24.0	
CLL				eS	S	19 50 06.0	+0.1
CLL				e		19 50 24.0	
FVI	**Forni Avoltri**	**78.43**	**316**	P	**P**	**19 40 12.3**	**-0.3**
	comp=Z,12nm,0.7s,mb5.0						
HFS	**Hagfors**	**78.57**	**330**	P	**P**	**19 40 13.0**	**-0.1**
HFS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HFS	**Hagfors**	**78.57**	**330**	P	**P**	**19 40 13.0**	**-0.1**
	comp=Z,6.6nm,0.6s,mb4.7,baz=116,slow=3.0,SNR=41						
SFI	**Santa Sofia**	**79.06**	**313**	P	**P**	**19 40 17.2**	**+1.0**
	comp=Z,41nm,0.9s,mb5.4						
PGD	**Poggio Sodo**	**79.15**	**313**	P	**P**	**19 40 18.0**	**+1.3**
	comp=Z,24nm,0.6s,mb5.3						

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CTI   Castel Tesino     79.21 315   P        P        19 40 17.4 +0.5
      comp=Z,75nm,1.9s,mb5.3
WTTA  Wattenberg        79.22 317⇑iP       P        19 40 16.4 -0.6
      comp=Z,16nm,0.5s,mb5.2
WATA  Walderalm         79.27 317⇓iP       P        19 40 16.6 -0.6
      comp=Z,5.8nm,0.7s,mb4.6
MOX   Moxa              79.28 320  eP       P        19 40 17.6 +0.4
MOX                                 pmax     pmax
      comp=Z,32nm,1.9s,mb4.9
MOX                                 MLR      MLR
      comp=Z,200nm,18.0s,MS4.5
MOX   Moxa              79.28 320  eP       P        19 40 17.6 +0.4
      comp=Z,32nm,1.9s,mb4.9
MOX                                eS       S        19 50 21.0 +6.0
MOX                                 LR       LR
      comp=Z,200nm,18.0s,MS4.5
MOX   Moxa              79.28 320  i P      P        19 40 17.6 +0.4
      comp=Z,logA/T=1.2,mb4.9
MOX                                 S        S        19 50 21.0 +6.0
MOX                                 L                 20 22 15.0
VMG   Vicchio           79.28 313   P        P        19 40 18.4 +1.0
FUR   Furstenfeldbru    79.47 318  eP       P        19 40 17.7 -0.6
FUR                                 pmax     pmax
      comp=Z,18nm,0.7s,mb5.1
FUR   Furstenfeldbru    79.47 318  eP       P        19 40 17.7 -0.6
      comp=Z,18nm,0.7s,mb5.1
SQTA  Sankt Quirin      79.51 317⇑iP       P        19 40 18.0 -0.5
      comp=Z,7.3nm,0.8s,mb4.7
GRA1  Grafenberg Arr    79.52 319  eP       P        19 40 18.7 +0.2
      comp=Z,27nm,1.3s,mb5.0
GRF   Grafenberg Arr    79.52 319  eP       P        19 40 18.7 +0.2
GRF                                 pmax     pmax
      comp=Z,27nm,1.3s,mb5.0
GRF   Grafenberg Arr    79.52 319  eP       P        19 40 18.7 +0.2
      comp=Z,27nm,1.3s,mb5.0
FNVD  Fontana Vidola    79.58 313   P        P        19 40 20.5 +1.5
      comp=Z,150nm,1.9s,mb5.6
ZCCA  Zocca             79.69 314   P        P        19 40 21.1 +1.6
GRFL  Gerfalco          79.70 312   P        P        19 40 18.9 -0.7
TSUM  Tsumeb            79.74 249   LR       LR       20 12 42.8
      comp=Z,680nm,19.0s,MS5.0,baz=274,slow=33
TSUM  Tsumeb            79.74 249  eP       P        19 40 22.0 +1.7
      comp=Z,9.8nm,0.9s,mb4.7
NB2   NORSAR Subarra    79.85 331   P        P        19 40 19.7 -0.4
      comp=Z,6.8nm,0.9s,mb4.6,baz=97,slow=4.8
NOA   NORSAR Array B    79.85 331   P        P        19 40 19.6 -0.5
NOA                                 pmax     pmax
      comp=Z,8.0nm,0.7s
NOA                                 MLR      MLR
      comp=Z,327nm,18.9s
NOA   NORSAR Array B    79.85 331   P        P        19 40 19.6 -0.4
      comp=Z,7.7nm,0.7s,mb4.7,baz=95,slow=5.2,SNR=16
NOA                                 LR       LR       20 20 59.9
      comp=Z,327nm,18.9s,MS4.7,baz=125,slow=40
GSCL  Gusciola          79.97 314   P        P        19 40 22.2 +1.2
MABI  Malga Bissina     80.00 315   P        P        19 40 22.2 +1.0
      comp=Z,17nm,1.1s,mb4.9
NAO01 NORSAR Array S    80.00 330  eP       P        19 40 20.4 -0.5
      comp=Z,16nm,0.9s,mb5.0
SUR   Sutherland        80.01 235  eP       P        19 40 23.1 +1.6
      comp=Z,44nm,0.8s,mb5.4
CLZ   Clausthal         80.08 321  eP       P        19 40 21.2 -0.3
      comp=Z,12nm,0.9s,mb4.8
BRMO  Bormio            80.09 316   P        P        19 40 22.1 +0.4
BSEG  Bad Segeberg      80.13 323  eP       P        19 40 21.7  0.0
BSEG                                pmax     pmax
      comp=Z,34nm,1.1s,mb5.2
FUORN Ofenpass          80.17 316   P        P        19 40 21.9 -0.1
DAVA  Damuels           80.42 317⇑iP       P        19 40 22.6 -0.8
      comp=Z,16nm,0.6s,mb5.1
DAVOX Davos             80.43 316   P        P        19 40 24.0 +0.5
      comp=Z,6.3nm,0.4s,mb4.9,baz=104,slow=5.9,SNR=14
DAVOX Davos             80.43 316   P        P        19 40 23.6 +0.2
TUE   Stuetta           80.80 316   P        P        19 40 26.5 +1.1
      comp=Z,16nm,0.8s,mb5.0
MUGIO Muggio            81.03 315   P        P        19 40 29.0 +2.4
KBS   Kingsbay          81.03 349  eS       S        19 50 25.4 -7.3
PGF   Pioggiola         81.17 312  eP       P        19 40 27.2 -0.2
      comp=Z,16nm,0.7s,mb4.8
TNS   Taunus Mts        81.31 320  eP       P        19 40 27.5 -0.5
TNS                                 pmax     pmax
      comp=Z,9.0nm,1.1s,mb4.6
TNS   Taunus Mts        81.31 320  eP       P        19 40 27.5 -0.5
      comp=Z,9.0nm,1.1s,mb4.6
BFO   Black Forest      81.44 318  eP       P        19 40 27.7 -1.0
BFO                                 pmax     pmax
      comp=Z,10.0nm,1.3s,mb4.6
BFO   Black Forest      81.44 318  eP       P        19 40 27.7 -1.0
      comp=Z,10.0nm,1.3s,mb4.6
CDF   Champ du Feu      82.14 318  eP       P        19 40 31.7 -0.6
      comp=Z,13nm,0.8s,mb4.6
DIX   Grande Dixence    82.16 315   P        P        19 40 31.5 -1.0
SBF   Sospel            82.25 313  eP       P        19 40 32.8 -0.2
      comp=Z,85nm,1.0s,mb5.3
LPG   La Plagne         82.65 315  eP       P        19 40 35.3 +0.2
      comp=Z,34nm,0.7s,mb5.2
LPL   La Plagne         82.66 315  eP       P        19 40 35.3 +0.2
      comp=Z,34nm,0.6s,mb5.3
MBDF  Montbardon        82.68 314  eP       P        19 40 34.5 -0.7
      comp=Z,22nm,0.7s,mb5.0
BNI   Bardonecchia      82.73 314  eP       P        19 40 36.5 +1.0
      comp=Z,9.6nm,0.8s,mb4.9
BER   Bergen            82.74 330  eS       S        19 50 51.1 +0.5
HAU   Haudompre         82.78 317  eP       P        19 40 35.1 -0.6
      comp=Z,25nm,0.7s,mb5.0
FRF   La Foret Royal    82.84 313  eP       P        19 40 36.0 -0.1
      comp=Z,25nm,0.7s,mb5.1
LMR   La Mourre         82.96 313  eP       P        19 40 36.4 -0.3
      comp=Z,31nm,1.1s,mb4.9
CABF  La Chapelle       83.04 316  eP       P        19 40 37.1  0.0
      comp=Z,20nm,0.8s,mb4.9
ORIF  Oris-en-Rattie    83.30 314  eP       P        19 40 37.9 -0.5
      comp=Z,10nm,0.6s,mb4.7
SMRF  Simiane la Rot    83.59 313  eP       P        19 40 40.2 +0.2
      comp=Z,11nm,0.7s,mb4.8
MEZF  Maizieres J'vi    83.61 318  eP       P        19 40 38.8 -1.2
GIVF  Givet             83.64 320  eP       P        19 40 39.7 -0.4
BAIF  Baives            84.04 320  eP       P        19 40 41.5 -0.6
      comp=Z,11nm,0.7s,mb4.8
VIVF  Saint-Julien-l    84.16 314  eP       P        19 40 42.8  0.0
      comp=Z,31nm,1.1s,mb5.0
LOR   Lormes            84.51 317  eP       P        19 40 44.2 -0.3
      comp=Z,18nm,0.7s,mb5.0
SMF   Signal de Mont    84.58 316  eP       P        19 40 44.4 -0.5
      comp=Z,12nm,0.6s,mb4.9
SSF   Saint Saulge      84.77 317  eP       P        19 40 46.0 +0.2
      comp=Z,5.2nm,0.6s,mb4.5
LASF  Ste Croix         84.81 314  eP       P        19 40 46.4 +0.3
AVF   Avril sur Loir    84.90 316  eP       P        19 40 46.0 -0.5
      comp=Z,16nm,1.0s,mb4.8
SYO   Syowa Base        85.10 197 ⇑P        P        19 40 47.6 +0.6
SYO   Syowa Base        85.10 197 ⇑PcP      PcP      19 40 50.0 -0.7
BGF   Bois d'Agland     85.27 316  eP       P        19 40 48.4 +0.1
TCF   Toulx Ste Croi    85.74 316  eP       P        19 40 50.6 -0.1
      comp=Z,5.2nm,0.6s,mb4.6
CAF   Calviac           86.00 315  eP       P        19 40 51.6 -0.4
      comp=Z,6.5nm,0.8s,mb4.6
RPZ   Rata Peaks        86.02 135   LR       LR       20 18 60.0
      comp=Z,707nm,20.8s,MS5.0,baz=233,slow=35
MTLF  Montolieu         86.07 313  eP       P        19 40 52.5 +0.1
      comp=Z,17nm,1.0s,mb4.9
JMIC  Jan Mayen         86.88 341   LR       LR       20 22 21.2
      comp=Z,378nm,19.8s,MS4.8,baz=84,slow=37
LFF   La Frestale       86.93 315  eP       P        19 40 56.8 +0.2
LDF   La Druitiere      87.02 318  eP       P        19 40 56.8 -0.1
FLN   La Foliniere      87.23 319  eP       P        19 40 57.7 -0.2
MFF   Saint Martin d    87.32 316  eP       P        19 40 58.2 -0.2
      comp=Z,16nm,0.9s,mb4.9
EPF   Esparros          87.47 313  eP       P        19 40 59.2 -0.1
DAG   Danmarks Havn     87.68 348⇑eP       P        19 41 05.3 +5.8
DAG                                 pmax     pmax
      comp=Z,2.0nm,0.5s,mb4.6
DAG   Danmarks Havn     87.68 348⇑eP       P        19 41 05.3 +5.8
      comp=Z,2.1nm,0.5s,mb4.6
DAG   Danmarks Havn     87.68 348⇑iP       P        19 41 05.3 +5.8
      comp=Z,2.1nm,0.5s,mb4.6
EKA   Eskdalemuir Ar    87.81 325   P        P        19 41 01.2 +0.7
EKA                                 pmax     pmax
      comp=Z,3.0nm,0.7s
EKA   Eskdalemuir Ar    87.81 325   P        P        19 41 01.2 +0.7
      comp=Z,2.5nm,0.7s,mb4.6,baz=104,slow=6.6,SNR=6.9
ETSF  Etsaut            88.15 313  eP       P        19 41 03.0 +0.5
      comp=Z,14nm,0.6s,mb5.1
SJPF  Ste Jean          88.60 313  eP       P        19 41 04.7 +0.1
SGMF  Saint Gilles      88.67 318  eP       P        19 41 04.7 -0.2
ROSF  Rostrenen         89.13 319  eP       P        19 41 07.0  0.0
QUIF  Quistinic         89.14 318  eP       P        19 41 07.2 +0.1
ESDC  Sonseca Array     91.22 310   P        P        19 41 18.0 +1.1
      comp=Z,1.7nm,0.4s,mb4.7,baz=64,slow=4.2,SNR=16
IMA   Indian Mountai    91.94  22  eP       P        19 41 21.3 +1.7
      comp=Z,54nm,0.6s,mb6.1
VNDA  Vanda             92.72 168   P        P        19 41 24.7 +1.7
VNDA                                pmax     pmax
      comp=Z,3.0nm,0.8s
VNDA  Vanda             92.72 168   P        P        19 41 24.6 +1.6
      comp=Z,3.0nm,0.8s,mb4.8,baz=302,slow=6.3,SNR=12
VNDA  Vanda             92.72 168  eP       P        19 41 24.2 +1.2
      comp=Z,3.8nm,0.7s,mb4.9
SBA   Scott Base        93.83 168  eP       P        19 41 29.6 +1.5
      comp=Z,7.8nm,0.8s,mb5.2
SUMG  Summit            94.34 347  eP       P        19 41 30.8 +0.3
      comp=Z,18nm,1.3s,mb5.3
RSO   Redoubt South     94.59  27   P        P        19 41 33.3 +1.4
SPU   Mount Spurr       94.61  26   P        P        19 41 32.0 +0.1
ILAR  Eielson Array     95.06  22   P        P        19 41 35.7 +1.7
ILAR                                pmax     pmax
      comp=Z,1.0nm,0.6s
ILAR  Eielson Array     95.06  22   P        P        19 41 35.7 +1.7
      comp=Z,0.7nm,0.6s,mb4.3,baz=296,slow=4.9,SNR=5.1
SML   Sawmill           95.92  25   P        P        19 41 37.7 -0.3
RES   Resolute Bay      97.67   2  eP       P        19 41 46.5 +0.9
DBIC  Dimbokro          97.77 278   P        P        19 41 48.6 +1.1
DBIC                                pmax     pmax
      comp=Z,4.0nm,0.9s
DBIC  Dimbokro          97.77 278   P        P        19 41 48.6 +1.1
      comp=Z,4.0nm,0.9s,mb4.9,baz=58,slow=8.2,SNR=4.6
SNAA  Sanae             99.31 199   LR       LR       20 21 17.8
      comp=Z,72nm,18.6s,MS4.2,baz=90,slow=32
YKA   Yellowknife Ar   106.72  13   PP       PP       19 46 50.6 -4.4
      comp=Z,0.4nm,0.5s,baz=287,slow=10,SNR=3.6
YKA                                 PKKPbc            19 57 55.3
      comp=Z,0.5nm,0.5s,baz=100,slow=5.6,SNR=3.5
FFC   Flin Flon        116.47  10   PKPdf    PKPdf    19 46 56.1 -2.2
MOD   Modoc            121.61  30  ePKPdf   PKPdf    19 47 05.8 -2.7
WVOR  Wild Horse Val   122.00  28   PKPdf    PKPdf    19 47 05.5 -3.7
LOHW  Long Hollow      124.37  21  ePKPdf   PKPdf    19 47 11.9 -1.9
EYMN  Ely              124.47   4  ePKPdf   PKPdf    19 47 11.3 -2.6
PDAR  Pinedale Array   125.48  21   PKP      PKPdf    19 47 13.8 -2.2
      comp=Z,1.6nm,1.0s,slow=3.0,SNR=8.2
RSSD  Black Hills      126.00  16  ePKPdf   PKPdf    19 47 13.4 -3.5
TCUT  Toone Canyon     126.20  24  ePKPdf   PKPdf    19 47 15.5 -1.9
NEN   Nelson           129.15  30   PKPdf    PKPdf    19 47 19.5 -3.7
SDCO  Great Sand Dun   131.36  21  ePKPdf   PKPdf    19 47 25.1 -2.3
ANMO  Albuquerque      133.49  23   PKIKP    PKPdf    19 47 29.5 -1.9
ANMO                                pmax     pmax
      comp=Z,1.0nm,0.5s
ANMO                                pmax     pmax
      comp=N,3.0nm,0.8s
ANMO  Albuquerque      133.49  23   PKP      PKPdf    19 47 29.5 -1.9
      comp=N,0.9nm,0.5s,baz=284,slow=4.2,SNR=2.5
ANMO                                SKPbc             19 50 57.4
      comp=N,3.3nm,0.8s,baz=343,slow=5.0,SNR=7.6
ANMO  Albuquerque      133.49  23  ePKPdf   PKPdf    19 47 29.4 -2.0
BNM   Barren Site      134.12  24   PKPdf    PKPdf    19 47 30.6 -2.0
WMOK  Wichita Mounta   136.19  15  ePKPdf   PKPdf    19 47 33.3 -3.1
MNTX  Cornudas Mount   136.77  24  ePKPpre            19 47 31.6
TXAR  Lajitas Array    139.54  24   PKIKP    PKPdf    19 47 40.7 -2.0
TXAR                                pmax     pmax
      comp=Z,1.0nm,0.3s
TXAR  Lajitas Array    139.54  24   PKP      PKPdf    19 47 40.6 -2.1
      comp=Z,0.5nm,0.3s,SNR=4.7
BAO   Brasilia Array   141.91 254   PKPdf    PKPdf    19 47 45.0 -2.3
BDFB  Brasilia         141.93 254   PKIKP    PKPdf    19 47 42.5 -4.8
BDFB                                pmax     pmax
      comp=Z,4.0nm,0.8s
BDFB                                pmax     pmax
      comp=N,2.0nm,0.4s
BDFB  Brasilia         141.93 254   PKP      PKPdf    19 47 42.5 -4.8
      comp=N,4.0nm,0.8s,baz=48,slow=3.9,SNR=3.3
BDFB                                SKPbc             19 51 22.1
      comp=N,2.4nm,0.4s,baz=194,slow=4.2,SNR=5.0
PLCA  Paso Flores      144.24 200   PKIKP    PKPdf    19 47 47.8 -2.8
PLCA                                pmax     pmax
      comp=Z,4.0nm,0.7s
PLCA                                pmax     pmax
      comp=N,4.0nm,1.2s
PLCA  Paso Flores      144.24 200   PKP      PKPdf    19 47 47.8 -2.8
      comp=N,4.1nm,0.7s,baz=185,slow=4.3,SNR=9.5
PLCA                                SKPbc             19 51 26.8
      comp=N,3.5nm,1.2s,baz=139,slow=2.1,SNR=4.1
PLCA  Paso Flores      144.24 200  ePKPdf   PKPdf    19 47 48.1 -2.5
CPUP  Villa Florida    146.94 232   PKP2     PKPab    19 47 54.7 -2.3
CPUP                                pmax     pmax
      comp=Z,10.0nm,0.7s
CPUP  Villa Florida    146.94 232   PKPbc    PKPbc    19 47 54.7 +1.6
      comp=Z,9.5nm,0.7s,baz=136,slow=3.4,SNR=22
CPUP  Villa Florida    146.94 232  ePKPbc   PKPbc    19 47 55.4 +2.3
MDZ   Mendoza          150.21 210  eP       PKPdf    19 48 05.8 +5.0
SAML  Samuel           157.31 265  ePKPdf   PKPdf    19 48 09.1 -2.0
SDV   Santo Domingo    157.52 317  ePKPab   PKPab    19 48 40.8 -0.7
LPAZ  La Paz           160.46 242   PKIKP    PKPdf    19 48 13.9 -0.8
LPAZ                                pmax     pmax
      comp=Z,2.0nm,0.6s
LPAZ                                pmax     pmax
      comp=Z,4.0nm,0.9s
LPAZ  La Paz           160.46 242   PKP      PKPdf    19 48 13.9 -0.8
      comp=Z,1.6nm,0.6s,baz=27,slow=3.6,SNR=7.9
LPAZ                                PKPab    PKPab    19 48 55.8 +1.7
      comp=Z,3.6nm,0.9s,baz=34,slow=10,SNR=5.6
LPAZ  La Paz           160.46 242  ePKPdf   PKPdf    19 48 13.8 -0.9
LPAZ                               ePKPab   PKPab    19 48 54.5 +0.4
OTAV  Otavalo          169.11 315   PKPdf    PKPdf    19 48 21.4 -0.8
OTAV                               ePKPab   PKPab    19 49 31.9  0.0
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IDC ***13*** *19:55:47.8±0.7, 11.07N×140.94E, mb4.7/15, mb1 4.8/15, mb1mx4.7/21, mbtmp4.7/15, MS4.3/1, Ms1 4.3/1, ms1mx3.4/24, Error ellipse: s-maj=23.2km s-min=19.1km az=49.0*

MOS ***13*** *19:55:50.2±1.3, 10.96N×140.92E, h33km, mb4.9/17, Error ellipse: s-maj=15.2km s-min=8.2km az=106.2*

BJI ***13*** *19:55:52.6, 11.00N×140.90E, h55km, mB5.3, mb4.8, Ms4.8, Msz4.7*

NEIC ***13*** *19:55:54.6±0.4, 10.98N×140.91E, h55km, mb4.7/26, Error ellipse: s-maj=11.3km s-min=9.5km az=37.0*

ISC 13 19:55:50.7±0.4**, 10.98N**±0.08×**140.89E**±0.07**, h33km, n87, σ1§19**/78**, mb4.7**/42**, MS4.4**/2**, 1C-1D, Western Caroline Islands**

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Code  Station Name        Δ°   AZ°    Phase ID             Time      Res
                                    Op       ISC       h  m  s     ISC
JNU   Nakatsue          23.89 339   P        P        20 01 02.6 +0.4
      12nm,0.7s,mb4.4,baz=128,slow=5.0,SNR=10
MJAR  Matsushiro Arr    25.57 355   P        P        20 01 16.5 -1.9
      2.6nm,0.7s,mb3.9,baz=176,slow=9.7,SNR=6.9
MJAR  Matsushiro Arr    25.57 355   P        P        20 01 16.5 -1.9
MAJO  Matsushiro        25.57 355  eP       P        20 01 16.7 -1.8
MAJO                                pmax     pmax
      comp=Z,6.0nm,0.8s,mb4.2
MAJO  Matsushiro        25.57 355  eP       P        20 01 16.7 -1.8
      comp=Z,6.1nm,0.8s,mb4.2
MAT   Matsushiro        25.57 355   P        P        20 01 17.0 -1.5
MAT   Matsushiro        25.57 355   P        P        20 01 16.9 -1.6
HNR   Honiara           27.75 136  eP       P        20 01 35.9 -2.9
HNR                                 pmax     pmax
      comp=Z,42nm,0.8s,mb5.1
HNR   Honiara           27.75 136  eP       P        20 01 35.9 -2.9
      comp=Z,42nm,0.8s,mb5.1
WRAB  Tennant Creek     31.38 192  eP       P        20 02 09.3 -1.7
WRAB                                pmax     pmax
      comp=Z,15nm,1.1s,mb4.7
WRAB  Tennant Creek     31.38 192  eP       P        20 02 09.3 -1.7
      comp=Z,15nm,1.1s,mb4.7
WRA   Warramunga Arr    31.39 192   P        P        20 02 10.0 -1.1
      comp=Z,5.0nm,0.9s,mb4.4,baz=10,slow=9.5,SNR=21
MDJ   Mudanjiang        34.91 346   P        P        20 02 40.6 -0.7
MDJ                                 AMB      AMB
      comp=Z,470nm,7.9s
ENH   Enshi             34.92 308  eP       P        20 02 42.2 +0.6
      comp=Z,10nm,1.0s,mb4.7
GYA   Guiyang           35.74 300⇑iP       P        20 02 50.9 +2.3
GYA                                 AMB      AMB
      comp=Z,10.0nm,0.6s,mb4.9
KLR   Kul'dur           38.89 350  eP       P        20 03 11.6 -3.1
CMAR  Chiang Mai Arr    41.17 285   P        P        20 03 36.1 +2.2
      comp=Z,8.4nm,1.0s,mb4.3,baz=92,slow=6.4,SNR=20
DZM   Mont Dzumac       41.32 143   LR       LR       20 19 27.8
      comp=Z,364nm,18.9s,MS4.3,baz=218,slow=34
HIA   Hailar            42.03 339  eP       P        20 03 40.8 +0.1
HIA                                 pmax     pmax
      comp=Z,5.0nm,1.0s
HIA   Hailar            42.03 339  eP       P        20 03 40.8 +0.1
      comp=Z,4.9nm,1.0s,mb4.1
GTA   Gaotai            46.12 315  eP       P        20 04 14.3 +0.4
GTA                                 AP       pP       20 04 26.6 +2.9
GTA                                 XP       sP       20 04 31.6 +3.7
GTA                                 PCP      PcP      20 05 51.1 +1.1
GTA                                 AMB      AMB
      comp=Z,10.0nm,0.8s,mb4.8
ULN   Ulaanbaatar       46.44 329  eP       P        20 04 16.5 +0.3
ULN                                 pmax     pmax
      comp=Z,5.0nm,1.0s,mb4.4
ULN   Ulaanbaatar       46.44 329  eP       P        20 04 16.5 +0.3
      comp=Z,5.5nm,1.0s,mb4.4
CIT   Chita             46.55 337  eP       P        20 04 17.4 +0.4
SONM  Songino Array     46.76 328   P        P        20 04 19.3 +0.6
      comp=Z,2.7nm,0.7s,mb4.3,baz=139,slow=7.2,SNR=19
SONM                                PcP      PcP      20 05 51.9 -0.2
      comp=Z,3.1nm,0.6s,baz=146,slow=3.5,SNR=14
LSA   Lhasa             49.80 300  eP       P        20 04 44.3 +1.7
LSA                                 pmax     pmax
      comp=Z,7.0nm,1.0s,mb4.7
LSA   Lhasa             49.80 300  eP       P        20 04 44.3 +1.7
      comp=Z,6.5nm,1.0s,mb4.6
ZAK   Zakamensk         49.96 329⇓iP       P        20 04 43.7 +0.2
ZAK                                e                  20 06 03.6
ZAK                                 pmax     pmax
      comp=Z,9.0nm,1.0s,mb4.8
ZAK                                 pmax     pmax
      comp=Z,2.0nm,1.0s,mb4.1
YAK   Yakutsk           51.62 353  eP       P        20 04 54.8 -1.1
YAK                                 pmax     pmax
      comp=Z,18nm,0.4s,mb5.3
YAK   Yakutsk           51.62 353  eP       P        20 04 54.8 -1.1
      comp=Z,18nm,0.4s,mb5.3
GUN   Gumba             54.10 296  eP       P        20 05 15.0 +0.1
      comp=Z,41nm,0.9s,mb5.4
PKI   Pulchoki          54.47 296  eP       P        20 05 17.5 -0.1
      comp=Z,6.2nm,0.6s,mb4.7
PKI   Pulchoki          54.47 296  eP       P        20 05 17.5 -0.1
PKI                                 pmax     pmax
      comp=Z,3.0nm,0.6s,mb4.4
KKN   Kakani            54.61 296  eP       P        20 05 18.7 +0.1
DMN   Daman             54.74 296  eP       P        20 05 19.5 -0.1
      comp=Z,7.3nm,0.5s,mb5.0
GKN   Gorkha            55.20 296  eP       P        20 05 22.8 -0.1
WMQ   Urumqi            56.20 316  eP       P        20 05 31.3 +1.5
WMQ                                 AP       pP       20 05 46.3 +6.3
WMQ                                 XP       sP       20 05 52.3 +8.5
WMQ                                 PCP      PcP      20 06 28.3 +1.1
WMQ                                 AMB      AMB
      comp=Z,20nm,4.0s
WMQ                                 LR       LR
      comp=N,330nm,22.8s,MS4.4
WMQ                                 LR       LR
      comp=E,110nm,18.0s,MS4.4
WMQ                                 LR       LR
      comp=Z,440nm,21.8s,MS4.5
BILL  Bilibino          59.41  11  eP       P        20 05 50.3 -1.8
BILL                                pmax     pmax
      comp=Z,5.0nm,0.8s,mb4.6
BILL  Bilibino          59.41  11  eP       P        20 05 50.2 -1.9
      comp=Z,5.0nm,0.8s,mb4.6
MKAR  Makanchi Array    60.73 318   P        P        20 06 01.3 -0.1
      comp=Z,2.4nm,0.5s,mb4.6,baz=99,slow=9.2,SNR=44
NVS   Novosibirsk       62.73 327  i P      P        20 06 13.5 -1.3
BVAR  Borovoye Array    69.59 323   P        P        20 06 58.3 -0.1
      comp=Z,7.7nm,0.6s,mb4.8,baz=106,slow=8.0,SNR=101
ILAR  Eielson Array     72.58  25   P        P        20 07 14.2 -1.9
      comp=Z,3.3nm,0.7s,mb4.4,baz=247,slow=6.0,SNR=34
PPT   Papeete           74.29 112  eS       S        20 16 33.1  -24
PPT                                eLR      LR       20 29 54.6
      comp=Z,323nm,24.8s,baz=252
ARU   Arti              76.70 326  eP       P        20 07 39.5 -0.6
ARU                                 pmax     pmax
      comp=Z,4.0nm,0.4s,mb4.7
ARU   Arti              76.70 326  eP       P        20 07 39.5 -0.6
      comp=Z,3.8nm,0.4s,mb4.7
INK   Inuvik            78.25  22  eP       P        20 07 47.7 -0.8
INK                                 pmax     pmax
      comp=Z,7.0nm,1.1s
INK   Inuvik            78.25  22  eP       P        20 07 47.7 -0.8
      comp=Z,6.6nm,1.1s,mb4.5
DLBC  Dease Lake        80.26  32  eP       P        20 08 00.4 +0.8
YKW3  Yellowknife Ar    86.92  27  eP       P        20 08 33.9 +0.7
YKA   Yellowknife Ar    86.94  27   P        P        20 08 34.2 +1.0
      comp=Z,6.4nm,0.8s,mb4.9,baz=293,slow=5.3,SNR=35
YKA   Yellowknife Ar    86.94  27   P        P        20 08 34.2 +1.0
YBH   Yreka Blue Hor    87.51  48   P        P        20 08 38.4 +1.8
      comp=Z,6.8nm,0.7s,mb5.0,baz=293,slow=1.8,SNR=17
KEV   Kevo              87.77 341  ep       P        20 08 36.1 -1.0
      comp=Z,5.8nm,0.6s,mb5.0
KEV   Kevo              87.77 341  eP       P        20 08 36.1 -1.0
KEV                                 pmax     pmax
      comp=Z,6.0nm,0.6s,mb5.0
RES   Resolute Bay      87.96  13  eP       P        20 08 38.2 +0.2
RES                                 pmax     pmax
      comp=Z,5.0nm,0.9s,mb4.7
RES   Resolute Bay      87.96  13  eP       P        20 08 38.2 +0.3
      comp=Z,5.0nm,0.9s,mb4.7
ARCES ARCESS Array B    88.34 341   P        P        20 08 39.8  0.0
      comp=Z,5.9nm,0.6s,mb5.0,baz=72,slow=7.7,SNR=27
BEKR  Beckwourth        89.67  50  eP       P        20 08 48.2 +1.3
      comp=Z,8.1nm,0.9s,mb5.0
NEW   Newport           89.75  41  eP       P        20 08 47.5 +0.5
NEW                                 pmax     pmax
      comp=Z,3.0nm,0.8s
NEW   Newport           89.75  41   P        P        20 08 47.4 +0.3
      comp=Z,3.0nm,0.5s,mb4.8,baz=323,slow=5.1,SNR=4.0
NEW   Newport           89.75  41  eP       P        20 08 47.5 +0.5
      comp=Z,2.9nm,0.8s,mb4.7
WVOR  Wild Horse Val    90.29  47  eP       P        20 08 50.6 +0.9
WVOR                                pmax     pmax
      comp=Z,6.0nm,0.8s,mb5.0
WVOR  Wild Horse Val    90.29  47  eP       P        20 08 50.6 +0.9
      comp=Z,5.9nm,0.8s,mb5.0
KAF   Kangasniemi       91.44 335  ep       P        20 08 52.7 -1.9
      comp=Z,7.0nm,0.6s,mb5.2,baz=60,slow=4.4
KAF   Kangasniemi       91.44 335  eP       P        20 08 52.7 -1.9
KAF                                 pmax     pmax
      comp=Z,7.0nm,0.6s,mb5.2
NVAR  Mina Array Bea    91.58  51   P        P        20 08 58.0 +2.1
      comp=Z,5.7nm,0.8s,mb5.0,baz=263,slow=4.2,SNR=29
NVAR  Mina Array Bea    91.58  51   P        P        20 08 58.0 +2.1
FINES FINESS Array B    91.84 334   P        P        20 08 55.5 -0.9
      comp=Z,8.2nm,0.7s,mb5.2,baz=64,slow=5.4,SNR=68
BMN   Battle Mountai    91.85  48  eP       P        20 08 58.0 +1.0
BMN                                 pmax     pmax
      comp=Z,2.0nm,0.6s,mb4.6
BMN   Battle Mountai    91.85  48  eP       P        20 08 58.0 +0.9
      comp=Z,2.5nm,0.6s,mb4.7
HLID  Hailey            92.94  45  eP       P        20 09 03.4 +1.4
      comp=Z,2.7nm,0.8s,mb4.7
ELK   Elko              93.20  48   P        P        20 09 05.0 +1.8
ELK                                 pmax     pmax
      comp=Z,3.0nm,0.8s
ELK   Elko              93.20  48   P        P        20 09 05.0 +1.8
      comp=Z,2.7nm,0.8s,mb4.7,baz=284,slow=5.1,SNR=14
ELK   Elko              93.20  48  eP       P        20 09 04.9 +1.6
      comp=Z,2.3nm,0.8s,mb4.7
BOZ   Bozeman (W)       94.14  42   P        P        20 09 08.2 +0.9
BOZ                                 pmax     pmax
      comp=Z,2.0nm,0.6s,mb4.7
BOZ   Bozeman (W)       94.14  42   P        P        20 09 08.2 +0.9
      comp=Z,2.0nm,0.6s,mb4.7
AKASG Malin Array Be    94.85 324   P        P        20 09 08.7 -1.7
      comp=Z,0.3nm,0.2s,mb4.3,baz=52,slow=3.5,SNR=4.3
FFC   Flin Flon         96.07  31  eP       P        20 09 15.9  0.0
FFC                                 pmax     pmax
      comp=Z,5.0nm,1.1s,mb4.9
FFC   Flin Flon         96.07  31  eP       P        20 09 15.9 +0.1
      comp=Z,4.7nm,1.1s,mb4.8
GERES GERESS Array B   104.48 327   Pdiff    Pdif     20 09 53.2 -0.7
      comp=Z,0.4nm,0.6s,baz=53,slow=6.7,SNR=4.7
AQU   L'Aquila         108.42 322   P                 20 14 16.2
SDV   Santo Domingo    142.95  59   PKP      PKPdf    20 15 24.4 +2.4
      comp=Z,1.7nm,0.4s,baz=13,slow=2.8,SNR=4.2
LPAZ  La Paz           151.33 104   PKPbc    PKPdf    20 15 45.8  +10
      comp=Z,5.9nm,0.6s,baz=259,slow=2.9,SNR=33
LPAZ  La Paz           151.33 104  ePKPbc   PKPdf    20 15 45.1 +9.3
SAML  Samuel           156.21  87  ePKPab   PKPab    20 16 12.0 -1.0
SIV   San Ignacio      158.08 106   PKPab    PKPab    20 16 21.4 +0.5
      comp=Z,1.6nm,0.8s,baz=244,slow=7.1,SNR=8.5
```

NEIC ***13*** *19:56:37.2±2.5, 23.56S×179.59W, h488km±24km, mb4.9/9,*

Error ellipse: s-maj=21.5km s-min=12.6km az=49.0

*IDC **13** 19:56:41.2±2.5, 23.66S×179.83W, h518^{km}±21^{km}, mb4.0/10, mb1 4.1/10, mb1mx3.8/18, mbtmp4.9/10, Error ellipse: s-maj=25.0km s-min=16.7km az=83.0*

ISC 13 19:56:38.8±3.5**, 23.6S**±0.1×**179.8W**±0.2**, h508**^{km}±36^{km}**, n46,** σ**0^{s}90**/27**, mb4.7**/17**, 2C-10D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.82**	**190**	P	**P**	**19 59 45.6**	**-1.5**
	6.4nm,0.3s,baz=292,slow=1.5,SNR=22						
URZ				S	**S**	**20 02 19.8**	**+0.6**
	5.5nm,0.3s,baz=57,slow=23,SNR=14						
RPZ	**Rata Peaks**	**21.40**	**198**	P	**P**	**20 00 51.3**	**+0.7**
	5.7nm,0.5s,mb4.4,baz=89,slow=0.9,SNR=12						
ARMA	**Armidale**	**26.30**	**249**	*e*P	**P**	**20 01 36.2**	**+1.4**
CNB	**Canberra Magne**	**29.16**	**239**	*e*P	**P**	**20 02 00.7**	**+0.9**
	38nm,0.9s,mb4.8						
CTA	**Charters Tower**	**31.67**	**270**	⇓*i*P	**P**	**20 02 22.2**	**+0.7**
	75nm,0.3s,mb5.6						
TOO	**Toolangi**	**32.76**	**237**	⇓*i*P	**P**	**20 02 31.1**	**+0.7**
	21nm,0.5s,mb4.8						
TAU	**Tasmania Unive**	**33.26**	**227**	*e*P	**P**	**20 02 34.9**	**+0.3**
	20nm,0.6s,mb4.7						
PMG	**Port Moresby**	**34.60**	**289**	P	**P**	**20 02 46.6**	**+0.5**
	35nm,0.8s,mb4.9,baz=97,slow=6.6,SNR=11						
STKA	**Stephens Creek**	**35.01**	**248**	⇓*i*P	**P**	**20 02 49.9**	**+0.6**
	9.9nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**35.01**	**248**	P	**P**	**20 02 50.0**	**+0.6**
	12nm,0.5s,mb4.6,baz=93,slow=8.7,SNR=55						
WB2	**Warramunga Arr**	**42.61**	**266**	⇓*i*P	**P**	**20 03 50.7**	**-0.6**
WRAB	**Tennant Creek**	**42.62**	**266**	*e*P	**P**	**20 03 50.5**	**-0.9**
	75nm,0.6s,mb5.3						
WRA	**Warramunga Arr**	**42.62**	**266**	P	**P**	**20 03 50.7**	**-0.7**
	46nm,0.5s,mb5.2,baz=102,slow=8.3,SNR=807						
KAKA	**Kakadu**	**46.48**	**275**	⇓*i*P	**P**	**20 04 20.5**	**-1.0**
	21nm,0.4s,mb4.9						
FITZ	**Fitzroy Crossi**	**51.05**	**265**	⇓*i*P	**P**	**20 04 54.9**	**-0.7**
	44nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**51.05**	**265**	P	**P**	**20 04 55.2**	**-0.4**
	42nm,0.6s,mb5.0,baz=150,slow=4.3,SNR=43						
KLBR	**Kellerberrin**	**55.27**	**247**	⇓*i*P	**P**	**20 05 24.3**	**-1.3**
	36nm,0.8s,mb4.8						
NWAO	**Narrogin (SRO)**	**55.52**	**245**	P	**P**	**20 05 26.2**	**-1.2**
	4.3nm,0.4s,mb4.2,baz=117,slow=9.0,SNR=10						
CASY	**Casey**	**60.43**	**206**	⇓*i*P	**P**	**20 05 58.9**	**-1.2**
MJAR	**Matsushiro Arr**	**71.79**	**325**	P	**P**	**20 07 10.4**	**-0.5**
	2.3nm,0.8s,mb3.8,baz=160,slow=5.4,SNR=6.3						
KSM	**Kuching**	**72.26**	**280**	*e*P	**P**	**20 07 13.3**	**-0.6**
ASAJ	**Asahikawa**	**75.72**	**333**	P	**P**	**20 07 34.2**	**+1.3**
	4.6nm,0.8s,mb4.1,baz=194,slow=8.3,SNR=6.0						
MAW	**Mawson**	**78.06**	**200**	*e*P	**P**	**20 07 45.6**	**+0.4**
	2.9nm,0.6s,mb3.9						
MAW	**Mawson**	**78.06**	**200**	P	**P**	**20 07 45.8**	**+0.6**
	3.8nm,0.6s,mb4.0,baz=121,slow=6.7,SNR=16						
KULM	**Kulim**	**82.60**	**279**	*e*P	**P**	**20 08 10.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**89.62**	**290**	P	**P**	**20 08 44.7**	**+1.3**
	7.9nm,1.0s,mb4.5,baz=160,slow=2.4,SNR=5.1						
MKAR	**Makanchi Array**	**112.12**	**313**	PKiKP		20 14 16.0	
	0.9nm,0.6s,baz=202,slow=1.3,SNR=6.8						
MKAR	**Makanchi Array**	**112.12**	**313**	PKPdf	PKPdf	20 14 16.0	+0.3
BVAR	**Borovoye Array**	**120.37**	**319**	PKP	PKPdf	20 14 32.0	+0.4
	1.8nm,0.4s,baz=121,slow=2.0,SNR=18						
MATP	**Matopo**	**128.25**	**214**	PKP	PKPdf	20 14 48.6	+1.0
	2.8nm,0.9s,baz=5.9,slow=20,SNR=4.2						
ARCES	**ARCESS Array B**	**131.67**	**348**	PKP	PKPdf	20 14 53.4	+0.5
	5.6nm,0.9s,baz=52,slow=2.1,SNR=8.2						
FINES	**FINESS Array B**	**138.26**	**342**	PKhKP		20 14 59.1	
	1.9nm,0.8s,baz=50,slow=3.3,SNR=3.9						
FINES				PKP	PKPdf	20 15 06.5	+1.4
	0.8nm,0.4s,baz=51,slow=1.8,SNR=7.0						
FINES				SKPbc		20 17 51.2	
	1.8nm,0.7s,baz=63,slow=4.3,SNR=4.9						
FINES	**FINESS Array B**	**138.26**	**342**	PKP	PKPdf	20 14 59.1	-6.1
FINES				PKP	PKPdf	20 15 06.5	+1.4
FINES				SKPbc		20 17 51.2	
NB2	**NORSAR Subarra**	**141.85**	**351**	PKPabc	PKPdf	20 15 08.3	-3.2
	1.0nm,0.6s,baz=6.0,slow=3.0						
NOA	**NORSAR Array B**	**141.85**	**351**	PKhKP		20 15 08.7	
	1.2nm,0.6s,baz=16,slow=4.4,SNR=4.8						
AKASG	**Malin Array Be**	**144.86**	**328**	PKP	PKPdf	20 15 17.9	+1.0
	7.1nm,0.5s,baz=42,slow=4.3,SNR=22						
AKASG				SKPbc		20 18 08.9	
	0.5nm,0.5s,baz=45,slow=3.3,SNR=4.4						
ASF	**Jabal al Asfar**	**146.62**	**293**	PKPbc	PKPbc	20 15 25.1	+2.6
	7.5nm,0.7s,baz=349,slow=3.7,SNR=9.1						
BRTR	**Keskin Array B**	**147.58**	**308**	PKPbc	PKPdf	20 15 26.4	+4.6
	2.8nm,0.7s,baz=147,slow=4.6,SNR=7.1						
EIL	**Elat**	**148.46**	**289**	PKPbc	PKPdf	20 15 29.9	+6.3
	7.1nm,0.7s,baz=341,slow=18,SNR=6.4						
BURAR	**Bucovina Array**	**148.86**	**326**	⇓P	PKPdf	20 15 31.1	+7.5
TIRR	**Tirgusor**	**148.99**	**319**	⇑P	PKPdf	20 15 29.4	+5.5
KOLS	**Kolonicke sedl**	**149.34**	**331**	*e*PKP	PKPdf	20 15 30.5	+6.1
MLR	**Muntele Rosu**	**149.83**	**323**	PKPbc	PKPdf	20 15 31.6	+6.3
	1.8nm,0.6s,baz=1.8,slow=5.4,SNR=3.9						
MLR	**Muntele Rosu**	**149.83**	**323**	⇑P	PKPdf	20 15 31.2	+6.0
CLL	**Collm**	**150.66**	**344**	⇓*i*PKP1	PKPdf	20 15 34.0	+7.7
CLL				*i* PKP2	PKPab	20 15 43.2	-0.7
GERES	**GERESS Array B**	**152.68**	**340**	PKPbc	PKPdf	20 15 38.3	+9.0
	9.9nm,1.3s,baz=45,slow=1.9,SNR=4.5						
GERES				PKPab	PKPab	20 15 52.2	-0.2
	0.6nm,0.5s,baz=56,slow=3.5,SNR=3.2						

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*IDC **13** 19:59:49.1±0.5, 2.62N×93.97E, mb4.5/26, mb1 4.5/27, mb1mx4.5/29, mbtmp4.5/27, ML5.0/1, MS5.1/16, Ms1 5.1/16, ms1mx5.0/23, Error ellipse: s-maj=17.6km s-min=12.5km az=47.0*

*BJI **13** 19:59:51.4, 2.69N×93.95E, h22^{km}, mB5.7, mb5.0, Ms5.9, Msz5.7*

*HRVD **13** 19:59:52.7±0.2, 2.75N×94.07E, h12^{km}, MW5.8/70, Centroid moment Tensor Solution. LP body waves: s65,c143;Mantle waves: s70,c176; Half duration: 2^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}6.93±.08; $M_{\theta\theta}$-3.25±.08; $M_{\phi\phi}$-3.68±.09; $M_{r\theta}$-1.31±.22; $M_{\theta\phi}$3.77±.07; $M_{\phi r}$0.74±.23; Best double couple: $M_0$7.245×10^{17} NP1: ϕ_s140°, δ39°, λ96°. NP2: ϕ_s313°, δ51°, λ85°. Principal axes: T 7.103, Plg83°, Azm194°; N .283, Plg4°, Azm316°; P -7.386, Plg6°, Azm46°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **13** 19:59:52.7±3.6, 2.74N×94.17E, h19^{km}±21^{km}, mb5.5/105, MS5.4/118, MW5.8 Error ellipse: s-maj=8.3km s-min=5.4km az=209.0, Moment Tensor Solution. s17 Moment tensor: Scale 10^{17}Nm; M_{rr}3.78; $M_{\theta\theta}$-2.17; $M_{\phi\phi}$-1.61; $M_{r\theta}$-2.85; $M_{\theta\phi}$2.87; $M_{\phi r}$2.49; Best double couple: $M_0$5.7×10^{17} NP1: ϕ_s133°, δ24°, λ92°. NP2: ϕ_s311°, δ66°, λ89°. Principal axes: T 5.22, Plg69°, Azm220°; N .99, Plg1°, Azm312°; P -6.21, Plg21°, Azm42°;*

*MOS **13** 19:59:53.3±1.5, 2.71N×94.19E, h35^{km}, mb5.6/80, MS5.2/39 Error ellipse: s-maj=8.5km s-min=4.5km az=118.1*

*CRAAG **13** 19:59:59.5, 4.12N×93.94E, Mb5.6*

ISC 13 19:59:52.8±0.2**, 2.74N**±0.03×**94.20E**±0.03**, h30**^{km}**, h30**^{km}±.7^{km}**:pP-P, n596,** σ**1^{s}37**/437**, mb5.2**/158**, MS5.3**/150**, 31C-9D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.92**	**68**	*e*P	**Pn**	**20 01 33.2**	**-1.7**
IPM	**Ipoh**	**7.05**	**75**	P	**Pn**	**20 01 35.6**	**-1.2**
SNG	**Songkhla**	**7.77**	**55**	P	**Pn**	**20 01 45.0**	**-1.8**
	2µm,1.0s						
KGM	**Kluang**	**9.14**	**94**	P	**P**	**20 02 04.8**	**-1.0**
NNT	**Nongplab**	**11.22**	**29**	P	**P**	**20 02 41.0**	**+6.6**
NST	**Nakhon Sawan**	**14.12**	**24**	P	**P**	**20 03 11.5**	**-1.7**
	117nm,0.9s						
PALK	**Pallekele**	**14.18**	**289**	*e*Pn	**P**	**20 03 11.0**	**-2.9**
	82nm,0.8s						
KKTK	**Khon Kaen**	**15.96**	**32**	P	**P**	**20 03 40.3**	**+3.2**
	1µm,0.9s						
KSM	**Kuching**	**16.15**	**94**	*e*P	**P**	**20 03 39.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**16.30**	**16**	P	**P**	**20 03 43.4**	**+2.0**
CMAR	**Chiang Mai Arr**	**16.30**	**16**	Pn	**P**	**20 03 43.4**	**+2.0**
	2.0nm,0.3s,baz=211,slow=12,SNR=70						
CMAR				LR	LR	20 09 42.8	
	comp=Z,7µm,21.6s,baz=195,slow=36						
CMAR	**Chiang Mai Arr**	**16.30**	**16**	Pn	**P**	**20 03 43.4**	**+2.0**
CMAR				LR	LR	20 09 42.8	
NANT	**Nan**	**17.18**	**21**	PN	**P**	**20 03 54.0**	**+1.4**
NANT	**Nan**	**17.18**	**21**	PG	**P**	**20 04 00.0**	**+7.4**
MDRS	**Chennai**	**17.20**	**307**	*e*P	**P**	**20 03 52.5**	**-0.3**
TRD	**Trivandrum**	**18.08**	**289**	*e*P	**P**	**20 04 04.0**	**+0.2**
TRD				AMb	AMB	20 04 16.0	
	comp=Z,156nm,1.7s						
VIS	**Vishakhapatnam**	**18.31**	**325**	*e*P	**P**	**20 04 06.7**	**+0.1**
VIS				AMb	AMB	20 04 25.2	
	comp=Z,344nm,1.5s						
VIS				*e*x	x	20 07 24.4	
BWNR	**Bhubaneshwar**	**19.27**	**335**	*e*P	**P**	**20 04 19.4**	**+1.3**
BWNR				*e*x	x	20 07 49.7	
HYB	**Hyderabad**	**21.18**	**315**	*i* P	**P**	**20 04 39.0**	**+0.7**
	comp=Z,375nm,1.4s,mb5.5						
HYB				*e*S	**S**	**20 08 29.0**	**+1.8**
HYB				LR	LR	20 26 20.0	
	comp=Z,10nm,18.0s						
AGT	**Agartala**	**21.21**	**353**	*i* P	**P**	**20 04 37.0**	**-1.5**
AGT				*i* x	x	20 05 12.0	
MNGI	**Mangalore**	**21.68**	**299**	*i* x	**P**	**20 04 47.6**	**+4.3**
MNGI				*i* x	x	20 09 00.1	
IMP	**Imphal**	**21.92**	**359**	*e*P	**P**	**20 04 45.0**	**-0.6**
KKM	**Kota Kinabalu**	**22.19**	**81**	P	**P**	**20 04 48.4**	**0.0**
KKM	**Kota Kinabalu**	**22.19**	**81**	P	**P**	**20 04 51.9**	**+3.4**
QIZ	**Qiongzhong**	**22.28**	**42**	P	**P**	**20 04 50.3**	**+1.0**
QIZ				AP		20 04 57.1	
QIZ				S	**S**	**20 08 48.5**	**+0.9**
QIZ				AMB	AMB		
	comp=Z,3µm,10.7s						
QIZ				LR	LR		
	comp=E,15µm,16.4s						
QIZ				LR	LR		
	comp=Z,15µm,10.9s						
QIZ	**Qiongzhong**	**22.28**	**42**	*e*P	**P**	**20 04 50.1**	**+0.9**
	comp=Z,105nm,0.9s,mb5.3						
BOK	**Bokaro**	**22.42**	**340**	*i* P	**P**	**20 04 50.7**	**0.0**
BOK				*i* S	**S**	**20 08 57.7**	**+7.5**
BLSP	**Bilaspur**	**22.56**	**330**	*e*P	**P**	**20 04 53.3**	**+1.2**
BLSP				AMb	AMB	20 05 13.3	
	comp=Z,587nm,1.5s,mb5.8						
BLSP				*e*x	x	20 08 53.5	
SHL	**Shillong**	**22.80**	**355**	*e*x	x	20 05 04.0	
SHL				*e*S	**S**	**20 09 05.0**	**+7.9**
LATR	**Latur**	**23.27**	**313**	*e*x	x	20 05 03.0	
NGP	**Nagpur**	**23.50**	**322**	*e*x	x	20 05 19.6	
NGP				*e*x	x	20 09 44.4	
TSM	**Tawau**	**23.68**	**86**	P	**P**	**20 05 05.6**	**+2.5**
KMI	**Kunming**	**23.73**	**20**	P	**P**	**20 05 04.0**	**+0.5**
KMI				AP		20 05 13.1	
KMI				XP		20 05 19.4	
KMI				S	**S**	**20 09 21.0**	**+7.7**
KMI				AMB	AMB		
	comp=Z,880nm,4.9s						
KMI				LR	LR		
	comp=N,16µm,9.3s						
KMI				LR	LR		
	comp=E,13µm,10.9s						
KMI				LR	LR		
	comp=Z,14µm,10.9s,MS5.7						
KMI	**Kunming**	**23.73**	**20**	P	**P**	**20 05 04.0**	**+0.5**
	comp=Z,27nm,2.0s,mb4.3						
KMI				pP		20 05 13.1	
KMI				sP		20 05 19.4	
KMI				S	**S**	**20 09 21.0**	**+7.7**
KMI				sS		20 09 37.4	
KMI				SS	SS	20 10 18.1	+15
KMI				LR	LR		
	comp=Z,14µm,10.9s,MS5.7						
GOA	**Goa**	**23.74**	**304**	*e*P	**P**	**20 05 03.0**	**-0.6**
DGAR	**Diego Garcia**	**23.93**	**245**	PFAKE		20 05 20.0	+14
DGAR				LR	LR		
	comp=Z,2µm,20.0s,MS4.6						
KAD	**Karad**	**24.41**	**308**	*e*P	**P**	**20 05 10.2**	**0.0**
KAD				AMb	AMB	20 05 22.7	
	comp=Z,97nm,0.9s,mb5.2						
KAD				*e*x	x	20 09 25.3	
KAD				*e*x	x	20 09 26.6	
POO	**Poona**	**25.37**	**310**	*e*P	**P**	**20 05 19.7**	**+0.4**
POO				AMb	AMB	20 05 32.7	
	comp=Z,36nm,1.0s,mb4.8						
BHPL	**Bhopal**	**26.06**	**323**	*e*P	**P**	**20 05 26.3**	**+0.5**
BHPL				AMb	AMB	20 05 40.0	
	comp=Z,97nm,1.6s,mb5.1						
BOM	**Bombay**	**26.38**	**309**	*e*x	**P**	**20 05 32.5**	**+3.8**
BOM				*e*x	x	20 10 10.9	
GYA	**Guiyang**	**26.44**	**26**	⇑*i*P	**P**	**20 05 29.3**	**+0.1**
GYA				AP	pP	20 05 38.0	+0.1
GYA				XP	sP	20 05 42.5	+0.6
GYA				PP	PP	20 06 18.8	+6.1
GYA				S	**S**	**20 10 08.8**	**+10**
GYA				AMB	AMB		
	comp=Z,80nm,1.0s,mb5.2						
GYA				AMB	AMB		
	comp=Z,2µm,8.3s						
GYA				LR	LR		
	comp=N,14µm,11.4s,MS5.8						
GYA				LR	LR		
	comp=E,7µm,12.4s,MS5.8						
GYA				LR	LR		
	comp=Z,17µm,10.8s,MS5.8						
KOLN	**Koldanda**	**26.87**	**339**	*e*P	**P**	**20 05 29.2**	**-3.9**
	comp=Z,13nm,0.8s,mb4.5						
LSA	**Lhasa**	**26.97**	**354**	P	**P**	**20 05 35.1**	**+1.1**
LSA				AP	pP	20 05 42.9	+0.2
LSA				S	**S**	**20 10 14.8**	**+7.3**
LSA				SCS	ScS	20 16 18.9	-3.1
LSA				AMB	AMB		
	comp=Z,4µm,8.5s						
LSA				LR	LR		
	comp=N,3µm,13.6s,MS5.3						
LSA				LR	LR		
	comp=E,4µm,12.7s,MS5.3						
LSA				LR	LR		
	comp=Z,6µm,13.6s,MS5.3						
LSA	**Lhasa**	**26.97**	**354**	P	**P**	**20 05 31.4**	**-2.6**
LSA				pmax	pmax		
	comp=Z,231nm,0.8s,mb5.8						
LSA	**Lhasa**	**26.97**	**354**	P	**P**	**20 05 31.4**	**-2.6**
	comp=Z,231nm,0.8s,mb5.8						
CD2	**Chengdu**	**29.44**	**17**	P	**P**	**20 05 59.1**	**+2.8**
CD2				S	**S**	**20 10 55.8**	**+8.7**
CD2				AMB	AMB		
	comp=Z,2µm,9.6s						
CD2				LR	LR		
	comp=N,11µm,9.0s						
CD2				LR	LR		
	comp=Z,13µm,10.2s,MS5.8						
LGTI	**Lohaghat**	**29.69**	**335**	*e*x	**P**	**20 06 01.5**	**+2.9**
NDI	**New Delhi**	**30.45**	**330**	*e*P	**P**	**20 06 03.0**	**-2.3**
NDI				*e*S	**S**	**20 11 06.0**	**+2.8**
ENH	**Enshi**	**30.98**	**26**	*e*P	**P**	**20 06 08.8**	**-1.1**
	comp=Z,45nm,1.0s,mb5.2						
BHJ	**Bhuj**	**31.32**	**313**	*e*x	x	20 06 36.5	
BHJ				*e*x	x	20 11 47.8	
DAV	**Davao City (W)**	**31.55**	**81**	*e*P	**P**	**20 06 24.0**	**+8.9**
BHK	**Bhakra**	**33.09**	**331**	*e*x	x	20 06 42.5	
WHN	**Wuhan**	**33.59**	**32**	*e*P	**P**	**20 06 37.1**	**+4.4**
WHN				S	**S**	**20 12 00.3**	**+8.2**
WHN				LR	LR		
	comp=Z,38µm,10.7s,MS6.4						
XAN	**Xi'an**	**34.04**	**22**	P	**P**	**20 06 34.6**	**-2.0**
XAN				S	**S**	**20 12 00.8**	**+1.8**
XAN				LR	LR		
	comp=N,8µm,12.3s,MS5.8						
XAN				LR	LR		
	comp=E,6µm,10.9s,MS5.8						
XAN				LR	LR		
	comp=Z,14µm,11.9s,MS5.9						
THN	**Thein Dam**	**34.26**	**332**	*e*x	pP	20 06 45.4	-2.0
TATO	**Taipei**	**34.35**	**48**	PFAKE		20 06 50.0	+11
TATO				LR	LR		
	comp=Z,8µm,19.0s,MS5.5						
LZH	**Lanzhou**	**34.36**	**14**	*e*P	**P**	**20 06 39.6**	**+0.3**
LZH				AP	pP	20 06 47.0	-1.2
LZH				XP	sP	20 06 50.5	-1.5
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,110nm,4.0s						
LZH	**Lanzhou**	**34.36**	**14**	*e*P	**P**	**20 06 39.6**	**+0.3**
LZH				*SP	sP	20 06 50.5	-1.5
LZH				pmax	pmax		
	comp=Z,36nm,1.5s,mb5.1						
LZH	**Lanzhou**	**34.36**	**14**	*e*P	**P**	**20 06 39.6**	**+0.3**
	comp=Z,36nm,1.5s,mb5.1						
LZH				pP	pP	20 06 47.0	-1.2
LZH				sP	sP	20 06 50.5	-1.5
MBWA	**Marble Bar**	**34.49**	**135**	PFAKE		20 06 50.0	+9.4
MBWA				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
GTA	**Gaotai**	**36.86**	**7**	⇑P	**P**	**20 06 59.4**	**-1.1**
GTA				AP	pP	20 07 08.9	-0.4
GTA				XP	sP	20 07 13.1	0.0
GTA				PP	PP	20 08 25.8	-0.7
GTA				PCP	PcP	20 09 20.3	-1.9
GTA				S	**S**	**20 12 42.8**	**+0.3**
GTA				XS		20 12 57.6	
GTA				SS	SS	20 15 11.6	+0.2
GTA				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
GTA				AMB	AMB		
	comp=Z,1µm,9.2s						
GTA				LR	LR		
	comp=N,4µm,11.5s,MS5.6						
GTA				LR	LR		
	comp=E,4µm,11.5s,MS5.6						
GTA				LR	LR		
	comp=Z,3µm,11.8s,MS5.3						
NJ2	**Nanjing**	**37.25**	**36**	*e*P	**P**	**20 07 08.9**	**+5.0**
NJ2				AP	pP	20 07 18.6	+5.8
NJ2				PP	PP	20 08 36.4	+4.9
NJ2				S	**S**	**20 12 57.0**	**+8.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,420nm,4.7s						
NJ2				LR	LR		
	comp=Z,15µm,10.6s,MS6.1						
FITZ	**Fitzroy Crossi**	**37.26**	**125**	*e*P	**P**	**20 07 06.1**	**+2.1**
	comp=Z,23nm,0.9s,mb5.0						
FITZ	**Fitzroy Crossi**	**37.26**	**125**	LR	LR	20 25 17.0	
	comp=Z,773nm,18.7s,MS4.5,baz=293,slow=41						
SSE	**Sheshan**	**38.01**	**39**	P	**P**	**20 07 08.5**	**-1.7**
SSE				XP	sP	20 07 21.3	-1.5
SSE				S	**S**	**20 13 00.9**	**+0.8**
SSE				SCS	ScS	20 17 17.8	-0.1
SSE				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
SSE				AMB	AMB		
	comp=Z,980nm,9.3s						
SSE				LR	LR		
	comp=N,4µm,20.3s,MS5.2						
SSE				LR	LR		
	comp=E,1µm,20.3s,MS5.2						
SSE				LR	LR		
	comp=Z,5µm,15.7s,MS5.4						
SSE	**Sheshan**	**38.01**	**39**	P	**P**	**20 07 08.5**	**-1.7**
	comp=Z,22nm,0.6s,mb5.1						
SSE				sP	sP	20 07 21.3	-1.5
SSE				S	**S**	**20 13 00.9**	**+0.8**
SSE				sS		20 13 16.1	
SSE				SS	SS	20 15 49.2	+11
SSE				ScS	ScS	20 17 17.8	-0.1
SSE				LR	LR		
	comp=Z,5µm,15.7s,MS5.4						
TIY	**Taiyuan**	**38.62**	**23**	PR	**P**	**20 07 17.0**	**+1.7**
TIY				S	**S**	**20 13 11.0**	**+1.7**
TIY				LR	LR		
	comp=N,14µm,17.0s						
TIY				LR	LR		
	comp=Z,3µm,10.0s						
KSH	**Kashi**	**40.18**	**338**	*e*P	**P**	**20 07 28.3**	**+0.1**
KSH				*e*AP	pP	20 07 38.1	+0.9
KSH				*e*XP	sP	20 07 41.8	+0.9
KSH				*e*PP	PP	20 09 05.3	+1.0
KSH				*e*PCP	PcP	20 09 32.8	+0.1
KSH				*e*SCP		20 13 17.1	
KSH				*e*PCS		20 13 21.0	
KSH				*e*S	**S**	**20 13 32.5**	**-0.3**
KSH				*e*XS		20 13 48.1	
KSH				*e*SS	SS	20 16 25.3	-0.2
KSH				*e*SCS	ScS	20 17 29.0	-1.4
KSH				AMB	AMB		
	comp=Z,700nm,5.6s						
KSH				LR	LR		
	comp=N,4µm,11.7s,MS5.8						
KSH				LR	LR		
	comp=E,8µm,11.3s,MS5.8						
BTO	**Baotou**	**40.32**	**19**	*e*P	**P**	**20 07 29.1**	**-0.2**
BTO				S	**S**	**20 13 35.8**	**+1.0**
BTO				LR	LR		
	comp=N,9µm,13.8s						
JOW	**Kunigami**	**40.48**	**50**	P	**P**	**20 07 33.7**	**+2.9**
	comp=N,17nm,0.7s,mb4.9,baz=188,slow=14,SNR=3.1						
JOW				LR	LR	20 26 36.1	
	comp=N,4µm,19.1s,MS5.2,baz=127,slow=39						
KAKA	**Kakadu**	**40.96**	**113**	*e*P	**P**	**20 07 35.6**	**+0.8**
	comp=N,32nm,0.8s,mb5.0						
HHC	**Hu-ho-hao-te**	**41.05**	**20**	*e*P	**P**	**20 07 36.3**	**+1.0**
HHC				XP	sP	20 07 45.8	-2.2
HHC				PP	PP	20 09 15.0	+2.0
HHC				PCP	PcP	20 09 31.0	-4.4
HHC				PCS		20 13 23.6	
HHC				S	**S**	**20 13 48.6**	**+2.9**
HHC				SCS	ScS	20 17 38.1	+2.6
HHC				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.9						
HHC				AMB	AMB		
	comp=Z,2µm,9.6s						
HHC				LR	LR		
	comp=N,5µm,22.6s,MS5.7						
HHC				LR	LR		
	comp=E,10µm,20.2s,MS5.7						
HHC				LR	LR		
	comp=Z,7µm,21.4s,MS5.5						
WMQ	**Urumqi**	**41.31**	**353**	*e*P	**P**	**20 07 37.5**	**+0.1**
WMQ				AP	pP	20 07 47.3	+0.9
WMQ				XP	sP	20 07 51.3	+1.2
WMQ				PP	PP	20 09 16.2	+0.4
WMQ				PCP	PcP	20 09 37.1	+0.8
WMQ				S	**S**	**20 13 49.2**	**-0.4**
WMQ				SS	SS	20 16 48.1	-0.8
WMQ				SCS	ScS	20 17 38.0	+0.9
WMQ				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,1µm,4.0s						
WMQ				LR	LR		
	comp=N,8µm,24.0s						
WMQ				LR	LR		
	comp=Z,8µm,23.0s,MS5.5						
NWAO	**Narrogin (SRO)**	**41.63**	**150**	LR	LR	20 24 16.6	
	comp=Z,1µm,18.1s,MS4.8,baz=333,slow=35						
NWAO	**Narrogin (SRO)**	**41.63**	**150**	PFAKE		20 07 50.0	+10
NWAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
ULHL	**Ulahol**	**42.49**	**340**	P	**P**	**20 07 46.9**	**-0.3**
	SNR=11						
KZA	**Kyzart**	**42.69**	**339**	P	pP	20 07 58.9	+1.2
	SNR=5.9						
UCH	**Uchtor**	**43.09**	**339**	P	pP	20 08 02.6	+1.6
	SNR=5.5						
KBK	**Karagaybulak**	**43.30**	**339**	P	**P**	**20 07 54.2**	**+0.4**
	SNR=7.7						
AML	**Almayashu**	**43.31**	**338**	P	**P**	**20 07 54.1**	**+0.3**
	SNR=10						
TKM2	**Tokmak 2**	**43.31**	**340**	P	**P**	**20 07 53.9**	**+0.1**
	SNR=8.6						
AAK	**Ala-Archa**	**43.45**	**339**	P	**P**	**20 07 54.6**	**-0.3**
AAK				pmax	pmax		
	comp=Z,125nm,1.6s,mb5.4						
AAK	**Ala-Archa**	**43.45**	**339**	*e*P	**P**	**20 07 53.7**	**-1.2**
	comp=Z,124nm,1.6s,mb5.4						
AAK				LR	LR		
	comp=Z,673nm,20.0s,MS4.5						
FRU	**Bishkek**	**43.58**	**339**	*e*P	**P**	**20 07 57.0**	**+1.0**
FRU				pmax	pmax		
	comp=Z,310nm,2.3s,mb5.6						
CHMS	**Chumysh**	**43.67**	**339**	P	pP	20 08 05.9	+0.2
	SNR=5.6						
EKS2	**Erkin-Say**	**43.73**	**338**	P	**P**	**20 07 57.5**	**+0.2**
	SNR=11						
USP	**Ospenovka**	**44.00**	**339**	P	**P**	**20 07 59.0**	**-0.4**
	SNR=11						
MKAR	**Makanchi Array**	**45.09**	**348**	P	**P**	**20 08 07.2**	**-0.9**
	comp=Z,13nm,0.6s,mb4.9,baz=167,slow=7.7,SNR=56						
KKAR	**Karatay Array**	**45.39**	**336**	P	**P**	**20 08 09.5**	**-1.1**
KKAR				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.3						
WRA	**Warramunga Arr**	**45.39**	**122**	P	**P**	**20 08 09.8**	**-1.1**
	comp=Z,19nm,1.1s,mb4.8,baz=300,slow=8.9,SNR=16						
WRAB	**Tennant Creek**	**45.40**	**122**	*e*P	**P**	**20 08 10.3**	**-0.6**
WRAB				pmax	pmax		

	comp=Z,281nm,1.5s,mb5.9						
WRAB				MLR	MLR		
	comp=Z,351nm,21.0s,MS4.3						
WRAB	**Tennant Creek**	**45.40**	**122**	*e*P	**P**	**20 08 10.3**	**-0.6**
	comp=Z,282nm,1.5s,mb5.9						
WRAB				LR	LR		
	comp=Z,351nm,21.0s,MS4.3						
WB2	**Warramunga Arr**	**45.40**	**122**	*e*P	**P**	**20 08 12.4**	**+1.4**
WB2				*i*	pP	20 08 22.4	+2.5
INCN	**Inchon**	**45.62**	**37**	PFAKE		20 08 20.0	+7.5
INCN				LR	LR		
	comp=Z,3µm,20.0s,MS5.3						
JNU	**Nakatsue**	**45.73**	**44**	P	**P**	**20 08 15.2**	**+1.8**
	comp=Z,3.3nm,0.5s,mb4.5,baz=198,slow=3.2,SNR=3.4						
JNU				LR	LR	20 30 11.8	
	comp=Z,8µm,18.2s,MS5.7,baz=59,slow=40						
JNU	**Nakatsue**	**45.73**	**44**	P	**P**	**20 08 15.2**	**+1.8**
JNU				LR	LR	20 30 11.8	
SONM	**Songino Array**	**46.14**	**11**	P	**P**	**20 08 15.9**	**-0.5**
	comp=Z,11nm,0.7s,mb4.9,baz=192,slow=8.7,SNR=23						
SONM				LR	LR	20 28 34.9	
	comp=Z,2µm,19.8s,MS5.1,baz=189,slow=37						
ULN	**Ulaanbaatar**	**46.30**	**12**	*i* P	**P**	**20 08 17.3**	**-0.4**
ULN	**Ulaanbaatar**	**46.30**	**12**	*e*P	**P**	**20 08 16.7**	**-1.0**
	comp=Z,82nm,1.2s,mb5.5						
ULN				LR	LR		
	comp=Z,4µm,19.0s,MS5.4						
KS15	**Wonju Array Si**	**46.35**	**38**	*e*P	**P**	**20 08 17.7**	**-0.5**
SNY	**Shenyang**	**46.99**	**30**	⇑P	**P**	**20 08 22.3**	**-1.0**
SNY				PP	PP	20 10 15.8	+2.4
SNY				S	**S**	**20 15 12.8**	**+0.9**
SNY				AMB	AMB		
	comp=Z,1µm,10.0s						
SNY				LR	LR		
	comp=N,5µm,18.0s,MS5.6						
SNY				LR	LR		
	comp=E,3µm,15.9s,MS5.6						
SNY				LR	LR		
	comp=Z,5µm,19.4s,MS5.4						
ZAK	**Zakamensk**	**48.09**	**8**	*e*P	**P**	**20 08 31.0**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0						
HASS	**Wahat al Ahsa’**	**48.28**	**302**	P	**P**	**20 08 33.2**	**-0.3**
MOY	**Mondy**	**49.09**	**6**	*e*P	**P**	**20 08 41.6**	**+2.2**
CN2	**Changchun**	**49.38**	**30**	*e*P	**P**	**20 08 42.1**	**+0.3**
CN2				*e*XP	sP	20 08 57.1	+2.7
CN2				*e*S	**S**	**20 15 48.3**	**+2.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
CN2				AMB	AMB		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=N,5µm,13.0s,MS5.8						
CN2				LR	LR		
	comp=E,4µm,13.0s,MS5.8						
CN2				LR	LR		
	comp=Z,5µm,14.0s,MS5.7						
TLY	**Talaya**	**49.41**	**8**	*e*P	**P**	**20 08 44.8**	**+2.9**
TLY				*e*S	**S**	**20 15 55.8**	**+10**
TLY				pmax	pmax		
	comp=Z,69nm,2.0s,mb5.3						
TLY				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.4						
TLY	**Talaya**	**49.41**	**8**	*e*P	**P**	**20 08 40.8**	**-1.1**
	comp=Z,45nm,1.0s,mb5.5						
IRK	**Irkutsk**	**50.05**	**8**	*e*P	**P**	**20 08 46.1**	**-0.7**
IRK				*e*		20 16 04.8	
IRK				pmax	pmax		
	comp=Z,126nm,1.4s,mb5.8						
GUMO	**Guam**	**51.20**	**75**	PFAKE		20 09 10.0	+14
GUMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
HIA	**Hailar**	**51.23**	**21**	*e*P	**P**	**20 08 54.6**	**-1.2**
HIA				pmax	pmax		
	comp=Z,90nm,1.1s						
HIA	**Hailar**	**51.23**	**21**	*e*P	**P**	**20 08 54.6**	**-1.2**
	comp=Z,90nm,1.1s,mb5.6						
CIT	**Chita**	**51.70**	**15**	*e*P	**P**	**20 08 59.7**	**+0.3**
CIT				*e*		20 16 25.8	
CIT				pmax	pmax		
	comp=Z,264nm,1.3s,mb6.0						
DJNS	**Zahran al Janu**	**51.83**	**290**	P	**P**	**20 09 01.4**	**+0.6**
CBIJ	**Chichi jima**	**51.87**	**57**	LR	LR	20 31 54.2	
	comp=Z,989nm,18.1s,MS4.9,baz=256,slow=37						
MDJ	**Mudanjiang**	**52.06**	**32**	P	**P**	**20 09 01.6**	**-0.6**
MDJ				AP	pP	20 09 10.4	-0.9
MDJ				XP	sP	20 09 13.6	-1.2
MDJ				PP	PP	20 10 59.0	-2.1
MDJ				S	**S**	**20 16 23.3**	**+0.8**
MDJ				XS		20 16 40.8	
MDJ				SCS	ScS	20 18 48.0	+1.3
MDJ				SS	SS	20 20 02.5	+4.7
MDJ				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,940nm,6.9s						
MDJ				LR	LR		
	comp=N,4µm,17.4s,MS5.7						
MDJ				LR	LR		
	comp=E,4µm,14.7s,MS5.7						
MDJ				LR	LR		
	comp=Z,5µm,14.2s,MS5.7						
MDJ	**Mudanjiang**	**52.06**	**32**	*e*P	**P**	**20 09 01.1**	**-1.1**
	comp=Z,3.9nm,0.8s,mb4.4						
MDJ				*e*pP	pP	20 09 09.1	-2.3
JHJ	**Hachijo jima 2**	**52.23**	**49**	LR	LR	20 33 39.8	
	comp=Z,1µm,18.2s,MS4.9,baz=302,slow=39						
MAJO	**Matsushiro**	**52.65**	**45**	*e*P	**P**	**20 09 05.1**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,72nm,1.5s,mb5.4						
MAJO				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.5						
MAJO	**Matsushiro**	**52.65**	**45**	*e*P	**P**	**20 09 05.1**	**-1.6**
	comp=Z,72nm,1.5s,mb5.4						
MAJO				LR	LR		
	comp=Z,4µm,19.0s,MS5.5						
MAT	**Matsushiro**	**52.65**	**45**	*e*P	**P**	**20 09 06.0**	**-0.7**
MAT				*e*S	**S**	**20 16 33.0**	**+2.5**
MAT				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
MAT	**Matsushiro**	**52.65**	**45**	P	**P**	**20 09 05.5**	**-1.2**
MAT				S	**S**	**20 16 32.0**	**+1.5**
MJAR	**Matsushiro Arr**	**52.65**	**45**	P	**P**	**20 09 06.7**	**0.0**
	comp=Z,0.3nm,0.3s,baz=252,slow=3.8,SNR=3.8						
MJAR				LR	LR	20 33 49.5	
	comp=Z,4µm,19.3s,MS5.5,baz=235,slow=39						
NVS	**Novosibirsk**	**52.70**	**352**	*e*P	**P**	**20 09 04.5**	**-2.3**
NVS				*e*		20 10 20.9	
NVS				*i* S	**S**	**20 16 32.5**	**+1.5**
NVS				*e*		20 18 52.1	
NVS				*e*SS	SS	20 20 10.6	+2.1
NVS				pmax	pmax		
	comp=Z,129nm,1.4s,mb5.7						
NVS				pmax	pmax		
	comp=N,145nm,1.6s						
NVS				pmax	pmax		
	comp=E,69nm,1.5s						
NVS				smax			
	comp=N,52nm,1.7s						
NVS				smax			
	comp=E,73nm,1.8s						
AFFS	**‘Afif**	**53.71**	**298**	P	**P**	**20 09 14.4**	**-0.2**
BVA0	**Borovoye Array**	**53.85**	**342**	*i* P	**P**	**20 09 13.1**	**-2.2**
BVA0				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
BVAR	**Borovoye Array**	**53.85**	**342**	P	**P**	**20 09 13.0**	**-2.3**
	comp=Z,4.4nm,0.7s,mb4.5,baz=141,slow=9.5,SNR=15						
BLJS	**Baljurashi**	**54.05**	**293**	P	**P**	**20 09 18.7**	**+1.5**
PMG	**Port Moresby**	**54.13**	**104**	PFAKE		20 09 30.0	+12
PMG				LR	LR		
	comp=Z,542nm,19.0s,MS4.6						
AB31	**Akbulak array**	**54.77**	**333**	*e*P	**P**	**20 09 19.5**	**-2.7**
AB31				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.3						
BHD	**Baghdad**	**55.54**	**309**	*e*P	**P**	**20 09 27.0**	**-0.9**
BHD				*e*S	**S**	**20 17 15.0**	**+5.5**
HILS	**Ha’il**	**55.70**	**301**	P	**P**	**20 09 29.8**	**+0.6**
CTA	**Charters Tower**	**55.87**	**116**	*e*P	**P**	**20 09 29.3**	**-1.2**
	comp=Z,9.6nm,1.9s,mb4.5						
CTA				*i*	pP	20 09 38.6	-1.0
CTA	**Charters Tower**	**55.87**	**116**	*e*P	**P**	**20 09 29.3**	**-1.2**
CTA				*i*	pP	20 09 38.6	-1.0
CTA				pmax	pmax		
	comp=Z,10.0nm,1.9s						
CTAO	**Charters Tower**	**55.87**	**116**	*e*P	**P**	**20 09 28.3**	**-2.2**
CTAO				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.4						
CTAO				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.0						
CTAO	**Charters Tower**	**55.87**	**116**	*e*P	**P**	**20 09 28.3**	**-2.1**
	comp=Z,46nm,1.1s,mb5.4						
CTAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
KLR	**Kul’dur**	**56.29**	**29**	*e*P	**P**	**20 09 29.1**	**-4.0**
KLR				*e*		20 09 47.8	
KLR				*e*		20 11 42.0	
KLR				*e*S	**S**	**20 17 15.0**	**-4.3**
KLR				pmax	pmax		
	comp=Z,130nm,2.6s,mb5.5						
KLR				smax			
	comp=N,1µm,10.0s						
KLR				smax			
	comp=E,1µm,10.0s						
KLR				MLR	MLR		
	comp=E,3µm,12.0s						
KLR				MLR	MLR		
	comp=Z,6µm,12.0s,MS5.9						
STKA	**Stephens Creek**	**56.61**	**131**	*e*P	**P**	**20 09 34.8**	**-0.9**
	comp=Z,13nm,1.7s,mb4.7						
STKA				*i*		20 09 46.5	
STKA				*i*		20 09 56.3	
STKA	**Stephens Creek**	**56.61**	**131**	P	**P**	**20 09 34.0**	**-1.7**
	comp=Z,7.2nm,0.8s,mb4.7,baz=307,slow=7.2,SNR=8.2						
STKA				LR	LR	20 36 33.5	
	comp=Z,682nm,20.1s,MS4.7,baz=120,slow=39						
BOD	**Bodaibo**	**57.11**	**12**	*e*P	**P**	**20 09 42.0**	**+3.2**
BOD				pmax	pmax		
	comp=Z,65nm,1.1s,mb5.6						
MAK	**Makhachkala**	**57.64**	**321**	*e*P	sP	20 09 56.0	+0.6
MAK				pmax	pmax		
	comp=Z,1µm,8.0s						
MSL	**Mosul**	**57.68**	**312**	*e*P	**P**	**20 09 41.5**	**-1.6**
MSL				*e*	pP	20 09 52.0	-0.4
MSL				*e*S	**S**	**20 17 41.0**	**+3.2**
GNI	**Garni**	**58.12**	**317**	P	**P**	**20 09 44.4**	**-1.8**
	comp=Z,15nm,1.1s,mb4.9,baz=271,slow=7.4,SNR=3.8						
GNI	**Garni**	**58.12**	**317**	P	**P**	**20 09 44.4**	**-1.8**
DGRG	**David-gareji**	**58.29**	**318**	P	**P**	**20 09 47.7**	**+0.4**
UMJS	**Umm Lajj**	**59.05**	**298**	P	**P**	**20 09 53.2**	**+0.4**
CLNS	**Chul’man**	**59.22**	**19**	*e*P	**P**	**20 09 52.8**	**-0.8**
CLNS				*e**PP	pP	20 09 59.4	-3.5
CLNS				*e*		20 10 37.4	
CLNS				*e*PPP	PPP	20 13 27.0	-4.0
CLNS				*e*S	**S**	**20 18 07.8**	**+10**
CLNS				*e*PS	PS	20 18 22.6	+6.5
CLNS				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.3s						
CLNS				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
CLNS				pmax	pmax		
	comp=N,8.0nm,1.0s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.8s						
CLNS				smax			
	comp=N,10.0nm,1.0s						
CLNS				smax			
	comp=E,5.0nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,9µm,18.0s,MS6.0						
CLNS				MLR	MLR		
	comp=N,4µm,15.0s,MS5.7						
CLNS				MLR	MLR		
	comp=E,1µm,14.0s,MS5.7						
ASAJ	**Asahikawa**	**59.30**	**39**	P	**P**	**20 09 55.6**	**+1.3**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,4µm,21.5s						
ASAJ	**Asahikawa**	**59.30**	**39**	P	**P**	**20 09 55.6**	**+1.3**
	comp=Z,4.3nm,0.9s,mb4.5,baz=285,slow=12,SNR=3.3						
ASAJ				LR	LR	20 35 10.2	
	comp=Z,4µm,21.5s,MS5.5,baz=250,slow=36						
ZEI	**Tsey**	**59.87**	**319**	*e*P	**P**	**20 09 57.8**	**-0.5**
ZEI				*i* *PP	pP	20 10 05.8	-1.8
ZEI				*i*		20 12 05.6	
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
SVE	**Sverdlovsk**	**60.18**	**339**	*e*P	**P**	**20 09 58.0**	**-2.2**
SVE				*e*	pP	20 10 07.5	-2.0
SVE				*e*		20 10 13.8	
TBKS	**Tabuk**	**60.40**	**301**	P	**P**	**20 10 02.9**	**+0.8**
QURS	**Qurayyt al Mil**	**60.56**	**305**	P	**P**	**20 10 03.5**	**+0.3**
ARU	**Arti**	**60.63**	**338**	⇑*i*P	**P**	**20 10 00.2**	**-3.0**
ARU				*e*		20 10 52.9	
ARU				*e*PPP	PPP	20 13 41.1	-5.1
ARU				*e*S	**S**	**20 18 15.8**	**0.0**
ARU				*e*		20 19 44.6	
ARU				*e*SS	SS	20 22 15.7	+0.1
ARU				pmax	pmax		
	comp=Z,62nm,1.2s,mb5.6						
ARU				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.1						
ARU				MLR	MLR		
	comp=N,1µm,20.5s,MS5.2						
ARU				MLR	MLR		
	comp=E,700nm,17.0s,MS5.2						
ARU	**Arti**	**60.63**	**338**	*e*P	**P**	**20 10 00.4**	**-2.8**
	comp=E,133nm,1.5s,mb5.8						
ARU				LR	LR		
	comp=Z,450nm,20.0s,MS4.6						
YSS	**Yuzh-Sakhalins**	**60.82**	**36**	⇑*i*P	**P**	**20 10 12.0**	**+7.3**
YSS				*e**PP	pP	20 10 20.2	+6.2
YSS				*e*		20 10 51.0	
YSS				*e*S	**S**	**20 18 30.0**	**+12**
YSS				*e*PS	PS	20 18 38.0	+0.2
YSS				*e*PPS	PPS	20 18 51.0	+4.3
YSS				*e*SSS	SSS	20 24 53.0	-2.7
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
YSS				pmax	pmax		
	comp=Z,120nm,1.2s,mb5.9						
YSS				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.4						
YSS				MLR	MLR		
	comp=N,1µm,12.0s						
YSS				MLR	MLR		
	comp=E,3µm,17.0s						
YSS	**Yuzh-Sakhalins**	**60.82**	**36**	*e*P	**P**	**20 10 03.1**	**-1.6**
	comp=E,140nm,1.3s,mb5.9						
YSS				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
JMQS	**Jabal Moqyreh**	**61.13**	**302**	P	**P**	**20 10 07.3**	**+0.3**
ASF	**Jabal al Asfar**	**61.13**	**305**	P	**P**	**20 10 06.7**	**-0.3**
	comp=Z,2.3nm,0.5s,mb4.5,baz=330,slow=4.6,SNR=4.5						
ASF				LR	LR	20 36 17.8	
	comp=Z,1µm,18.8s,MS5.1,baz=203,slow=36						
KIV	**Kislovodsk**	**61.20**	**320**	*e*P	**P**	**20 10 05.7**	**-1.6**
KIV				pmax	pmax		
	comp=N,5.0nm,0.8s						
KIV				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.3						
KIV	**Kislovodsk**	**61.20**	**320**	*e*P	**P**	**20 10 04.6**	**-2.7**
	comp=Z,101nm,1.4s,mb5.8						
KIV				LR	LR		
	comp=Z,141nm,21.0s						
YUK	**Yuzh-Kuril’sk**	**61.33**	**40**	*e*P	**P**	**20 10 10.0**	**+1.8**
YUK				*e*		20 10 57.0	
YUK				*e*		20 12 20.0	
YUK				*e*S	**S**	**20 18 23.0**	**-1.9**
YUK				*e*PS	PS	20 18 38.0	-6.7
YUK				*e*		20 19 55.0	
YUK				smax			
	comp=E,2.0nm,4.0s						
YUK				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.7						
YUK				MLR	MLR		
	comp=E,4µm,15.0s						
GOF	**Gofitskoye**	**61.48**	**321**	⇓*i*P	**P**	**20 10 15.2**	**+6.0**
GOF				pmax	pmax		
	comp=Z,50nm,1.7s,mb5.4						
BDAS	**Al Bad‘**	**61.69**	**301**	P	**P**	**20 10 11.0**	**+0.2**
EIL	**Elat**	**62.10**	**302**	P	**P**	**20 10 13.3**	**-0.3**
	comp=Z,8.4nm,0.9s,mb4.8,baz=59,slow=6.5,SNR=5.4						
EIL	**Elat**	**62.10**	**302**	*e*P	**P**	**20 10 13.4**	**-0.2**
	comp=Z,59nm,1.3s,mb5.6						
TOO	**Toolangi**	**62.13**	**135**	*e*P	pP	20 10 23.1	+0.1
	comp=Z,17nm,0.9s						
BHL	**Bhannes**	**62.62**	**307**	*e*P	**P**	**20 10 19.3**	**+2.3**
SOC	**Sochi**	**62.98**	**318**	*i* P	**P**	**20 10 24.7**	**+5.5**
SOC				*e*S	**S**	**20 18 42.7**	**-3.0**
SOC				*e*SSS	SSS	20 25 39.0	+0.8
SOC				pmax	pmax		
	comp=Z,88nm,1.6s,mb5.6						
SOC				pmax	pmax		
	comp=N,39nm,1.1s						
SOC				pmax	pmax		
	comp=E,35nm,1.1s						
SOC				pmax	pmax		
	comp=Z,342nm,2.7s,mb6.0						
MBAR	**Mbarara**	**63.52**	**268**	*e*P	**P**	**20 10 21.6**	**-1.7**
MBAR				pmax	pmax		
	comp=Z,47nm,1.4s,mb5.3						
MBAR				MLR	MLR		
	comp=Z,273nm,19.0s,MS4.5						
MBAR	**Mbarara**	**63.52**	**268**	*e*P	**P**	**20 10 21.6**	**-1.8**
	comp=Z,47nm,1.4s,mb5.3						
MBAR				LR	LR		
	comp=Z,273nm,19.0s,MS4.5						
SOKR	**Solikamsk**	**63.59**	**340**	⇑*i*P	**P**	**20 10 25.1**	**+2.1**
SOKR				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
SOKR				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.1						
CSS	**Prodhromos**	**64.75**	**308**	*e*P	**P**	**20 10 28.7**	**-2.3**
	comp=Z,119nm,1.5s,mb5.7						
YAK	**Yakutsk**	**64.83**	**18**	*e*P	**P**	**20 10 28.8**	**-2.2**
YAK				*e**PP	pP	20 10 40.9	+0.6
YAK				*e*		20 11 02.6	
YAK				*e*		20 12 50.8	
YAK				*e*S	**S**	**20 19 06.1**	**-2.2**
YAK				*e*		20 20 13.5	
YAK				*e*SS	SS	20 23 17.8	-3.9
YAK				*e*SSS	SSS	20 26 20.2	+7.5
YAK				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.5						
YAK				pmax	pmax		
	comp=N,15nm,1.1s						
YAK				pmax	pmax		
	comp=E,12nm,0.9s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				smax			
	comp=N,2.0nm,1.6s						
YAK				smax			
	comp=E,2.0nm,1.0s						
YAK				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.4						
YAK				MLR	MLR		
	comp=N,3µm,14.0s						
YAK				MLR	MLR		
	comp=E,2µm,13.0s						
YAK	**Yakutsk**	**64.83**	**18**	*e*P	**P**	**20 10 28.7**	**-2.3**
	comp=E,116nm,1.1s,mb5.8						
YAK				LR	LR		
	comp=Z,4µm,20.0s,MS5.6						
ANN	**Anapa**	**64.97**	**319**	*e*P	sP	20 10 44.9	0.0
ANN				*e*S		20 19 40.4	
ANN				pmax	pmax		
	comp=Z,56nm,2.0s,mb5.2						
CDAG	**Cicekdag**	**65.30**	**313**	*i* P	**P**	**20 10 25.7**	**-8.8**
CTKT	**Corum**	**65.31**	**314**	*i* P	**P**	**20 10 35.1**	**+0.6**
BOYT	**Boyabat**	**65.49**	**315**	*i* P	**P**	**20 10 38.6**	**+3.0**
BR131	**Keskin Array S**	**65.86**	**313**	*e*P	**P**	**20 10 36.4**	**-1.6**
	comp=Z,11nm,0.8s,mb5.0						
BRTR	**Keskin Array B**	**65.86**	**313**	P	**P**	**20 10 36.1**	**-1.9**
	comp=Z,2.1nm,0.7s,mb4.3,baz=134,slow=6.1,SNR=10						
ELDT	**Eldivan**	**66.25**	**313**	*i* P	**P**	**20 10 40.2**	**-0.3**
VRSR	**Storozhevoye**	**66.60**	**326**	*e*P	**P**	**20 10 40.8**	**-1.7**
VRSR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
VRSR				pmax	pmax		
	comp=N,6.0nm,1.2s						
VRSR				pmax	pmax		
	comp=E,5.0nm,0.8s						
BALT	**Daday**	**66.60**	**314**	*i* P	pP	20 10 51.0	-1.0
HNR	**Honiara**	**66.61**	**101**	P	**P**	**20 10 41.3**	**-1.9**
HNR				pmax	pmax		
	comp=Z,144nm,1.0s,mb6.0						
HNR				MLR	MLR		
	comp=Z,568nm,20.0s,MS4.8						
HNR	**Honiara**	**66.61**	**101**	P	**P**	**20 10 43.3**	**+0.1**
	comp=Z,36nm,0.5s,mb5.7,baz=189,slow=13,SNR=3.3						
HNR				LR	LR	20 39 42.5	
	comp=Z,394nm,19.5s,MS4.6,baz=276,slow=36						
HNR	**Honiara**	**66.61**	**101**	P	**P**	**20 10 41.3**	**-1.9**
	comp=Z,144nm,1.0s,mb6.0						
HNR				LR	LR		
	comp=Z,568nm,20.0s,MS4.8						
PECR	**Pechory**	**66.65**	**332**	*e*P	**P**	**20 10 41.5**	**-1.3**
VOR	**Voronezh**	**66.83**	**326**	P	**P**	**20 10 43.0**	**-1.0**
VOR				*e**PP	pP	20 10 50.5	-2.8
VOR				*e*		20 19 54.0	
VOR				pmax	pmax		
	comp=Z,30nm,2.0s,mb5.0						
SIM	**Simferopol’**	**67.22**	**318**	*c* *i*P	**P**	**20 10 44.5**	**-2.1**
SIM				*e*S	S	20 19 44.0	+6.2
SIM				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.5						
SGKT	**Sivrigoynuk**	**67.28**	**313**	*i* P	**P**	**20 10 49.8**	**+2.8**
LSZ	**Lusaka**	**67.70**	**252**	*e*P	**P**	**20 10 50.1**	**0.0**
LSZ				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.2						
LSZ				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.4						
LSZ	**Lusaka**	**67.70**	**252**	*e*P	**P**	**20 10 50.0**	**0.0**
	comp=Z,31nm,1.4s,mb5.2						
LSZ				LR	LR		
	comp=Z,3µm,22.0s,MS5.4						
ESKT	**Eskisehir**	**67.87**	**312**	*i* P	**P**	**20 10 49.1**	**-1.7**
TKTP	**Tekketepe**	**67.89**	**310**	*i* P	**P**	**20 10 52.9**	**+1.9**
AKAS	**Kas**	**68.01**	**308**	*i* P	**P**	**20 10 49.0**	**-2.7**
GOLH	**Golhisar**	**68.28**	**309**	*i* P	**P**	**20 10 55.0**	**+1.6**
MIR	**Mirnyy**	**69.14**	**181**	*e*P	**P**	**20 11 04.0**	**+5.8**
MIR				pmax	pmax		
	comp=Z,57nm,1.6s,mb5.2						
MIR				MLR	MLR		
	comp=N,1µm,20.0s,MS5.2						
MIR				MLR	MLR		
	comp=E,660nm,20.0s,MS5.2						
MIR				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.4						
ULDT	**Uludag**	**69.31**	**312**	*i* P	**P**	**20 10 58.1**	**-1.5**
MOS	**Moscow**	**69.49**	**330**	*e*P	**P**	**20 10 59.0**	**-1.5**
MOS				*e*	pP	20 11 08.7	-1.1
MOS				*e*		20 11 13.9	
MOS				*e*S	S	20 19 59.9	-4.7
OBN	**Obninsk**	**69.75**	**329**	*d**e*P	**P**	**20 11 00.3**	**-1.8**
OBN				*e*		20 13 43.0	
OBN				*i* S	S	20 20 02.3	-5.4
OBN				*e*SS	SS	20 24 31.0	-6.8
OBN				pmax	pmax		
	comp=Z,14nm,1.8s,mb4.6						
OBN	**Obninsk**	**69.75**	**329**	*e*P	**P**	**20 11 00.1**	**-2.0**
	comp=Z,12nm,0.7s,mb4.9						
OBN				LR	LR		
	comp=Z,343nm,22.0s,MS4.5						
CASY	**Casey**	**69.86**	**173**	*e*P	**P**	**20 11 06.3**	**+3.7**
CASY	**Casey**	**69.86**	**173**	*e*P	**P**	**20 11 02.4**	**-0.1**
	comp=Z,61nm,1.4s,mb5.3						
CASY				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
URLA	**Izmir**	**70.82**	**310**	*i* P	**P**	**20 11 08.4**	**-0.5**
MA2	**Magadan**	**71.28**	**27**	*i* P	**P**	**20 11 11.6**	**+0.3**
MA2				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
MA2	**Magadan**	**71.28**	**27**	*e*P	**P**	**20 11 11.1**	**-0.2**
	comp=Z,62nm,1.1s,mb5.5						
MA2				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
SANT	**Santorini**	**71.31**	**307**	P	**P**	**20 11 09.7**	**-2.3**
CFR	**Carcaliu**	**71.32**	**317**	⇑*i*P	**P**	**20 11 10.7**	**-1.1**
PRD	**Provadia**	**71.33**	**315**	*e*P	**P**	**20 11 10.0**	**-1.9**
KIS	**Kishinev**	**71.37**	**319**	*e*P	**P**	**20 11 19.0**	**+6.9**
KIS				*e*	pP	20 11 27.0	+5.6
KIS				*e*S	S	20 20 35.0	+8.3
KIS				MLR	MLR		
	comp=Z,400nm,15.0s,MS4.8						

KIS				MLR	MLR		
	comp=Z,500nm,15.0s						
IDI	**Anoyia**	**71.58**	**306**	P	**P**	**20 11 10.9**	**-2.7**
	comp=Z,9.8nm,0.7s,mb4.9,baz=93,slow=8.6,SNR=9.8						
JMB	**Yambol**	**71.73**	**314**	*e*P	**P**	**20 11 14.0**	**-0.4**
ALN	**Alexandroupoli**	**71.77**	**312**	*e*P	**P**	**20 11 15.7**	**+1.0**
AKASG	**Malin Array Be**	**72.22**	**323**	P	**P**	**20 11 15.7**	**-1.4**
	comp=Z,2.7nm,0.7s,mb4.3,baz=87,slow=5.1,SNR=9.9						
KDZ	**Kurdzhali**	**72.40**	**313**	*e*P	**P**	**20 11 16.0**	**-2.3**
VRI	**Vrincioaia**	**72.46**	**317**	⇑*i*P	**P**	**20 11 18.2**	**-0.4**
WAKE	**Wake Island**	**72.54**	**71**	PFAKE		20 11 30.0	+10
WAKE				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
PET	**Petropavlovsk**	**72.66**	**35**	*e*P	**P**	**20 11 18.7**	**-0.9**
PET				*e*		20 14 03.1	
PET				*e*S	S	20 20 41.5	+0.1
PET				pmax	pmax		
	comp=Z,700nm,9.2s						
PET				pmax	pmax		
	comp=Z,500nm,16.9s						
PET				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.5						
PET	**Petropavlovsk**	**72.66**	**35**	PFAKE		20 11 30.0	+10
PET				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
MLR	**Muntele Rosu**	**72.90**	**317**	P	**P**	**20 11 19.6**	**-1.6**
	comp=Z,3.2nm,0.6s,mb4.4,baz=353,slow=2.4,SNR=12						
MLR	**Muntele Rosu**	**72.90**	**317**	⇓*i*P	**P**	**20 11 20.4**	**-0.8**
MLR	**Muntele Rosu**	**72.90**	**317**	⇓*i*P	**P**	**20 11 20.4**	**-0.8**
RZN	**Rozhen**	**72.92**	**313**	*e*P	**P**	**20 11 17.0**	**-4.4**
BOSA	**Boshof**	**72.97**	**239**	*e*P	**P**	**20 11 20.8**	**-1.2**
BOSA				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
BOSA				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.4						
BOSA	**Boshof**	**72.97**	**239**	P	**P**	**20 11 20.2**	**-1.7**
	comp=Z,4.3nm,0.7s,mb4.5,baz=73,slow=7.0,SNR=9.5						
BOSA				LR	LR	20 39 56.9	
	comp=Z,2µm,19.1s,MS5.4,baz=71,slow=33						
BOSA	**Boshof**	**72.97**	**239**	*e*P	**P**	**20 11 20.8**	**-1.2**
	comp=Z,23nm,1.0s,mb5.1						
BOSA				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
AOS	**Alonnisos**	**73.06**	**310**	*e*P	pP	20 11 30.9	-0.7
KWAJ	**Kwajalein Atol**	**73.20**	**82**	PFAKE		20 11 40.0	+16
KWAJ				LR	LR		
	comp=Z,221nm,22.0s,MS4.4						
PAIG	**Paliouri**	**73.35**	**311**	*e*P	**P**	**20 11 26.3**	**+2.3**
PGB	**Panagyurishte**	**73.50**	**314**	*e*P	**P**	**20 11 23.0**	**-1.8**
SEY	**Seymchan**	**73.55**	**24**	*e*P	**P**	**20 11 30.3**	**+5.7**
SEY				*e*S	S	20 20 58.8	+7.6
SEY						20 21 32.2	
SEY				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0						
SEY				pmax	pmax		
	comp=E,6.0nm,1.1s						
SEY				smax			
	comp=N,430nm,20.7s						
SEY				smax			
	comp=E,460nm,19.1s						
SEY				MLR	MLR		
	comp=Z,4µm,25.0s,MS5.6						
SEY				MLR	MLR		
	comp=N,4µm,21.0s,MS5.7						
SEY				MLR	MLR		
	comp=E,2µm,23.0s,MS5.7						
MAW	**Mawson**	**73.55**	**192**	*e*P	**P**	**20 11 27.9**	**+3.3**
	comp=E,8.4nm,1.0s,mb4.6						
MAW	**Mawson**	**73.55**	**192**	P	**P**	**20 11 22.2**	**-2.4**
MAW				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MAW				MLR	MLR		
	comp=Z,743nm,18.4s						
MAW	**Mawson**	**73.55**	**192**	P	**P**	**20 11 22.2**	**-2.4**
	comp=Z,0.7nm,0.5s,baz=25,slow=14,SNR=1.8						
MAW				LR	LR	20 40 14.8	
	comp=Z,743nm,18.4s,MS5.0,baz=26,slow=33						
MAW	**Mawson**	**73.55**	**192**	*e*P	**P**	**20 11 27.9**	**+3.3**
MAW				LR	LR	20 40 14.8	
SRS	**Serrai**	**73.64**	**312**	*e*P	**P**	**20 11 22.7**	**-2.9**
SOH	**Sokhos**	**73.76**	**312**	*e*P	**P**	**20 11 24.0**	**-2.3**
BURAR	**Bucovina Array**	**73.90**	**319**	⇑P	**P**	**20 11 29.5**	**+2.6**
THE	**Thessaloniki**	**74.02**	**311**	*e*P	**P**	**20 11 25.8**	**-2.0**
KKB	**Krupnik**	**74.15**	**313**	*e*P	**P**	**20 11 25.0**	**-3.6**
VTS	**Vitosha**	**74.20**	**313**	*e*P	**P**	**20 11 27.0**	**-1.8**
MNK	**Minsk**	**74.21**	**326**	*e*P	**P**	**20 11 27.0**	**-1.6**
AGG	**Agios Georgios**	**74.22**	**310**	*e*P	**P**	**20 11 27.7**	**-1.3**
LIT	**Litokhoron**	**74.28**	**311**	*e*P	**P**	**20 11 28.2**	**-1.2**
VAY	**Valandovo**	**74.43**	**312**	⇓*i*P	**P**	**20 11 37.1**	**+6.9**
GRG	**Griva**	**74.49**	**312**	*e*P	**P**	**20 11 30.0**	**-0.5**
DZM	**Mont Dzumac**	**74.64**	**114**	P	**P**	**20 11 31.4**	**-0.4**
	comp=Z,2.3nm,0.6s,mb4.3,baz=260,slow=18,SNR=2.5						
ZAPS	**Zavoj/Pirot**	**74.76**	**314**	⇓*i*P	**P**	**20 11 29.2**	**-2.9**
LVV	**L’vov**	**75.19**	**321**	*e*P	pP	20 11 42.8	-0.9
LVV				*e*	S	20 21 11.8	+2.1
FNA	**Florina**	**75.23**	**311**	*e*P	**P**	**20 11 41.5**	**+6.7**
BOLS	**Boljevac**	**75.33**	**315**	⇑*i*P	**P**	**20 11 33.5**	**-1.8**
SKO	**Skopje**	**75.38**	**313**	*e*P	**P**	**20 11 39.0**	**+3.4**
IGT	**Igoumenitsa**	**75.83**	**310**	*e*P	**P**	**20 11 39.8**	**+1.5**
SVIS	**Svilajnac**	**75.93**	**315**	*e*P	**P**	**20 11 39.1**	**+0.3**
KWP	**Kalwaria**	**75.98**	**321**	*e*P	**P**	**20 11 39.3**	**+0.4**
KWP				*e*	pP	20 11 48.7	+0.4
KWP				*e*		20 11 55.1	
VSU	**Vasula**	**76.02**	**330**	*i* P	**P**	**20 11 40.2**	**+1.3**
KOLS	**Kolonicke sedl**	**76.11**	**320**	*e*P	**P**	**20 11 39.0**	**-0.6**
KOLS				*e*	pP	20 11 49.7	+0.7
DRV	**Dumont d’Urvil**	**76.48**	**163**	S	S	20 21 39.0	+15
APA	**Apatity**	**76.65**	**340**	⇑*e*P	**P**	**20 11 46.0**	**+3.7**
APA				*i*		20 11 51.0	
APA				*i*		20 11 59.0	
APA				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1						
APA				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.7						
SUW	**Suwalki**	**76.70**	**325**	*e*P	**P**	**20 11 41.1**	**-1.7**
SUW				*e*	pP	20 11 51.7	-0.5
SUW				*e*		20 12 00.1	
DIVS	**Divcibare**	**76.77**	**315**	⇑*i*P	**P**	**20 11 42.1**	**-1.4**
BBLS	**Bajina Basta -**	**77.15**	**314**	⇑*i*P	**P**	**20 11 39.9**	**-5.7**
KECS	**Kecovo**	**77.18**	**319**	*e*P	**P**	**20 11 45.5**	**-0.1**
KECS				*e*	pP	20 11 55.1	+0.1
KECS				*e*PP	PP	20 14 12.5	-29
FINES	**FINESS Array B**	**77.26**	**333**	P	**P**	**20 11 44.0**	**-1.8**
	comp=Z,3.2nm,0.7s,mb4.3,baz=146,slow=14,SNR=7.3						
FINES	**FINESS Array B**	**77.26**	**333**	P	**P**	**20 11 44.0**	**-1.8**
KAF	**Kangasniemi**	**77.37**	**333**	*e*p	**P**	**20 11 46.2**	**-0.2**
	comp=Z,24nm,0.9s,mb5.1,baz=106,slow=5.2						
KAF	**Kangasniemi**	**77.37**	**333**	*e*P	**P**	**20 11 46.2**	**-0.2**
KAF				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
NIE	**Niedzica**	**77.47**	**320**	*e*P	**P**	**20 11 48.0**	**+0.8**
PSZ	**Piszkesteto**	**77.47**	**318**	*e*P	**P**	**20 11 46.2**	**-1.0**
PSZ				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.2						
PSZ	**Piszkesteto**	**77.47**	**318**	*e*P	**P**	**20 11 46.2**	**-1.0**
	comp=Z,42nm,1.2s,mb5.2						
PSZ	**Piszkesteto**	**77.47**	**318**	*e*P	**P**	**20 11 46.4**	**-0.8**
SUR	**Sutherland**	**77.50**	**236**	*e*P	**P**	**20 11 46.6**	**-1.2**
	comp=Z,36nm,1.0s,mb5.2						
SUR				LR	LR		
	comp=Z,836nm,20.0s,MS5.1						
OJC	**Ojcow**	**77.94**	**321**	*e*P	**P**	**20 11 50.0**	**+0.3**
OJC				*e*PcP	PcP	20 11 59.1	-0.7
OJC				*e*S	S	20 21 41.8	+2.1
OJC				MLR	MLR	20 52 34.9	
	comp=Z,600nm,19.3s,MS4.9						
VYHS	**Vyhne**	**78.27**	**319**	*e*P	**P**	**20 11 50.1**	**-1.5**
VYHS				*e*	pP	20 12 01.1	+0.1
TSUM	**Tsumeb**	**78.29**	**250**	*e*P	**P**	**20 11 51.4**	**-0.8**
	comp=Z,7.6nm,0.9s,mb4.6						
TSUM				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
SRO	**Srobarova**	**78.51**	**318**	*e*P	Px	20 12 11.9	
SRO	**Srobarova**	**78.51**	**318**	*e*	Px	20 12 11.9	
TIP	**Timpagrande**	**78.54**	**309**	P	**P**	**20 11 51.8**	**-1.5**
OKC	**Ostrava-Krasne**	**78.92**	**320**	*e*P	**P**	**20 11 55.1**	**-0.1**
OKC				*e*pP	pP	20 12 04.0	-0.6
OKC				*e*S	S	20 21 52.4	+2.2
OKC				AMS	AMS	20 53 00.0	
	comp=Z,400nm,16.6s						
SMOL	**Smolenice**	**79.19**	**319**	*e*P	pP	20 12 04.2	-1.9
SMOL	**Smolenice**	**79.19**	**319**	*e*	pP	20 12 04.2	-1.9
MORC	**Moravsky Berou**	**79.30**	**320**	*e*P	**P**	**20 11 56.4**	**-0.8**
MORC				pmax	pmax		
	comp=Z,78nm,1.5s,mb5.4						
MORC	**Moravsky Berou**	**79.30**	**320**	*e*P	**P**	**20 11 56.4**	**-0.9**
	comp=Z,78nm,1.5s,mb5.4						
ZST	**Bratislava**	**79.36**	**318**	*e*P	**P**	**20 11 57.1**	**-0.5**
ZST				*e*	pP	20 12 07.8	+0.7
ZST				*e*S	S	20 21 44.4	-11
SISC	**Sisak**	**79.52**	**316**	*i* P	pP	20 12 06.2	-1.8
MGR	**Morigerati**	**79.56**	**310**	P	**P**	**20 12 02.1**	**+3.3**
	comp=Z,22nm,1.0s,mb5.0						
SOP	**Sopron**	**79.66**	**318**	*e*PcP	PcP	20 12 06.8	-0.5
MRLC	**Muro Lucano**	**79.66**	**311**	P	**P**	**20 12 00.4**	**+1.0**
KEV	**Kevo**	**79.67**	**341**	PFAKE		20 12 10.0	+11
KEV				LR	LR		
	comp=Z,996nm,22.0s,MS5.1						
SGO	**Sicignano**	**79.78**	**311**	P	**P**	**20 12 01.0**	**+1.0**
SGO				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
SGO	**Sicignano**	**79.78**	**311**	P	**P**	**20 12 01.0**	**+1.0**
	comp=Z,21nm,1.1s,mb5.0						
ARCES	**ARCESS Array B**	**80.09**	**341**	P	**P**	**20 11 59.4**	**-1.6**
	comp=Z,2.4nm,1.0s,baz=79,slow=4.6,SNR=4.8						
ARCES	**ARCESS Array B**	**80.09**	**341**	P	**P**	**20 11 59.4**	**-1.6**
GOLS	**Golise**	**80.10**	**316**	*e*P	**P**	**20 12 03.0**	**+1.4**
GOLS				*e*		20 15 23.9	
DPC	**Dobruska-Polom**	**80.16**	**321**	*e*P	**P**	**20 12 02.2**	**+0.4**
DPC				*e*pP	pP	20 12 12.2	+0.9
DPC				*e*SKS	SKS	20 22 09.4	-11
DPC				AMS	AMS	20 52 20.0	
	comp=Z,500nm,19.5s						
KSP	**Ksiaz**	**80.25**	**321**	*e*P	**P**	**20 12 02.7**	**+0.5**
KSP				*e**PP	pP	20 12 11.0	-0.7
KSP	**Ksiaz**	**80.25**	**321**	*e*P	**P**	**20 12 03.1**	**+0.8**
KSP				*e*	pP	20 12 11.9	+0.2
KSP				*e*		20 12 20.6	
ARSA	**Arzberg**	**80.31**	**317**	⇑*i*P	**P**	**20 12 01.6**	**-1.0**
	comp=Z,76nm,1.3s,mb5.5						
UPC	**Upice**	**80.38**	**321**	*e*P	**P**	**20 12 02.5**	**-0.5**
UPC				*e*pP	pP	20 12 11.0	-1.4
PERS	**Pernice**	**80.52**	**317**	*e*P	**P**	**20 12 03.0**	**-0.8**
SYO	**Syowa Base**	**80.55**	**197**	⇑P	**P**	**20 12 05.6**	**+2.1**
SYO	**Syowa Base**	**80.55**	**197**	⇑PcP	PcP	20 12 09.2	-1.5
CII	**Carovilli**	**80.64**	**312**	P	**P**	**20 12 03.9**	**-0.6**
	comp=Z,17nm,0.9s,mb5.0						
BILL	**Bilibino**	**80.81**	**21**	*c* *i*P	**P**	**20 12 05.3**	**+0.4**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
BILL				MLR	MLR		
	comp=Z,5µm,16.0s,MS6.0						
BILL	**Bilibino**	**80.81**	**21**	*e*P	**P**	**20 12 04.2**	**-0.7**
	comp=Z,47nm,1.4s,mb5.2						
BILL				LR	LR		
	comp=Z,5µm,19.0s,MS5.8						
RFI	**Roccamonfina**	**80.84**	**311**	P	**P**	**20 12 06.6**	**+1.0**
CEY	**Cerknica**	**80.90**	**316**	*e*P	**P**	**20 12 04.6**	**-1.2**
INTR	**Introdacqua**	**80.96**	**312**	P	**P**	**20 12 05.8**	**-0.4**
	comp=Z,55nm,0.9s,mb5.5						
MOA	**Molln**	**81.22**	**318**	⇑*i*P	**P**	**20 12 07.3**	**-0.1**
	comp=Z,20nm,1.2s,mb4.9						
PRU	**Pruhonice**	**81.25**	**320**	*e*P	**P**	**20 12 07.9**	**+0.3**
PRU				*e*pP	pP	20 12 16.4	-0.7
PRU				*e*SKS	SKS	20 22 18.8	-10
PRU				AMS	AMS	21 00 00.0	
	comp=Z,900nm,14.5s						
PVCC	**Panska Ves**	**81.30**	**321**	*e*P	**P**	**20 12 08.0**	**+0.2**
PVCC				*e*pP	pP	20 12 18.1	+0.8
PVCC				AMS	AMS	21 01 40.0	
	comp=Z,700nm,15.7s						
VOY	**Vojsko**	**81.30**	**316**	*e*P	**P**	**20 12 08.1**	**+0.2**
VOY				*e*		20 12 11.5	
VOY				*e*	pP	20 12 17.2	-0.2
VOY				*e*		20 12 25.3	
VOY				*e*		20 12 38.8	
PTQR	**Pietraquaria**	**81.33**	**312**	P	**P**	**20 12 08.1**	**-0.1**
AQU	**L’Aquila**	**81.36**	**312**	*e*P	**P**	**20 12 07.8**	**-0.5**
AQU				pmax	pmax		
	comp=Z,128nm,1.2s,mb5.7						
AQU	**L’Aquila**	**81.36**	**312**	*e*P	**P**	**20 12 07.8**	**-0.5**
	comp=Z,128nm,1.2s,mb5.7						
FIAM	**Fiamignano**	**81.56**	**312**	P	**P**	**20 12 10.4**	**+1.1**
	comp=Z,53nm,0.9s,mb5.5						
CING	**Cingoli**	**81.58**	**313**	P	**P**	**20 12 10.1**	**+0.7**
	comp=Z,71nm,1.3s,mb5.4						
ROBS	**Robic**	**81.58**	**316**	*e*P	**P**	**20 12 09.5**	**+0.1**
NRCA	**Norcia**	**81.60**	**313**	P	**P**	**20 12 08.9**	**-0.6**
GEC2	**GERESS Array S**	**81.69**	**319**	*e*P	pP	20 12 19.1	-0.3
GEC2				pmax	pmax		
	comp=Z,83nm,1.3s,mb5.5						
GEC2	**GERESS Array S**	**81.69**	**319**	*e*P	pP	20 12 19.1	-0.3
	comp=Z,83nm,1.3s						
GERES	**GERESS Array B**	**81.69**	**319**	P	**P**	**20 12 09.5**	**-0.4**
	comp=Z,2.6nm,0.8s,mb4.2,baz=112,slow=7.2,SNR=16						
PTCC	**Patocco-Chiusa**	**81.71**	**316**	P	**P**	**20 12 08.8**	**-1.2**
SMY	**Shemya**	**81.71**	**37**	PFAKE		20 12 20.0	+10
SMY				LR	LR		
	comp=Z,5µm,21.0s,MS5.8						
BRG	**Berggiesshubel**	**81.73**	**321**	*i* P	**P**	**20 12 10.3**	**+0.3**
BRG				*i*	pP	20 12 19.9	+0.4
BRG				*e*		20 12 25.9	
BRG				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.7						
BRG				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
BRG				pmax	pmax		
	comp=Z,59nm,1.4s,mb5.3						
BRG	**Berggiesshubel**	**81.73**	**321**	*i* P	**P**	**20 12 10.3**	**+0.3**
	comp=Z,17nm,1.7s,mb4.7						
BRG				*i*	pP	20 12 20.0	+0.5
BRG				*e*		20 12 26.0	
KBA	**Koelnbreinsper**	**81.77**	**317**	⇑*i*P	**P**	**20 12 07.4**	**-2.9**
	comp=Z,30nm,1.3s,mb5.1						
KBA	**Koelnbreinsper**	**81.77**	**317**	⇑*i*P	**P**	**20 12 07.4**	**-2.9**
KBA				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
ARV	**Arcevia**	**81.78**	**313**	P	**P**	**20 12 10.2**	**-0.2**
ARV				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.6						
ARV	**Arcevia**	**81.78**	**313**	P	**P**	**20 12 10.2**	**-0.2**
	comp=Z,60nm,0.8s,mb5.6						
KHC	**Kasperske Hory**	**81.79**	**319**	*e*P	**P**	**20 12 10.7**	**+0.3**
KHC				*e**PP	pP	20 12 18.7	-1.2
KHC				*e*		20 12 28.5	
KHC				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.9						
KHC	**Kasperske Hory**	**81.79**	**319**	*e*P	**P**	**20 12 10.7**	**+0.3**
KHC				*e*pP	pP	20 12 18.7	-1.2
KHC				*e*x	x	20 12 28.5	
KHC				*e*SKS	SKS	20 22 30.6	-1.6
KHC				AMS	AMS	20 54 00.0	
	comp=Z,500nm,20.0s						
MTCE	**Montecelio**	**81.82**	**312**	P	**P**	**20 12 12.4**	**+1.7**
	comp=Z,68nm,1.4s,mb5.4						
MNS	**Montasola**	**81.89**	**312**	P	**P**	**20 12 09.8**	**-1.2**
MURB	**Monte Urbino**	**82.06**	**313**	P	**P**	**20 12 12.9**	**+1.0**
	comp=Z,85nm,1.1s,mb5.6						
FVI	**Forni Avoltri**	**82.11**	**316**	P	**P**	**20 12 11.3**	**-0.8**
CLL	**Collm**	**82.36**	**321**	*i* P	pP	20 12 22.8	0.0
CLL				*i* *PP	Px	20 12 30.9	
CLL				*e*S	S	20 22 24.0	-1.8
CLL				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
CLL	**Collm**	**82.36**	**321**	*i* P	pP	20 12 22.8	0.0
	comp=Z,22nm,1.3s						
CLL				*i* pP	Px	20 12 30.9	
CLL				*e*S	S	20 22 24.0	-1.8
CLL	**Collm**	**82.36**	**321**	*i* *SP	pP	20 12 22.8	0.0
CLL				*e*SCS	ScS	20 22 42.9	+3.3
CLL				*e*		21 14 43.0	
TOLF	**Tolfa**	**82.38**	**312**	P	**P**	**20 12 14.1**	**+0.5**
RPZ	**Rata Peaks**	**82.42**	**135**	P	**P**	**20 12 14.6**	**+0.8**
	comp=Z,8.2nm,0.7s,mb4.8,baz=63,slow=2.3,SNR=3.5						
SFI	**Santa Sofia**	**82.59**	**314**	P	**P**	**20 12 16.4**	**+1.7**
PGD	**Poggio Sodo**	**82.68**	**314**	P	**P**	**20 12 16.3**	**+1.2**
CTI	**Castel Tesino**	**82.86**	**316**	P	**P**	**20 12 14.7**	**-1.3**
CTI				pmax	pmax		
	comp=Z,129nm,2.1s,mb5.6						
CTI	**Castel Tesino**	**82.86**	**316**	P	**P**	**20 12 14.7**	**-1.3**
	comp=Z,129nm,2.1s,mb5.6						
WTTA	**Wattenberg**	**82.94**	**317**	⇑*i*P	**P**	**20 12 15.8**	**-0.6**
	comp=Z,53nm,0.9s,mb5.6						
WTTA	**Wattenberg**	**82.94**	**317**	⇑*i*P	**P**	**20 12 15.8**	**-0.6**
WTTA				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.6						
WATA	**Walderalm**	**82.99**	**317**	⇑*i*P	**P**	**20 12 14.7**	**-1.9**
	comp=Z,30nm,1.2s,mb5.2						
WATA	**Walderalm**	**82.99**	**317**	⇑*i*P	**P**	**20 12 14.7**	**-1.9**
WATA				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.2						
FNVD	**Fontana Vidola**	**83.13**	**314**	P	**P**	**20 12 18.4**	**+1.0**
MOX	**Moxa**	**83.18**	**321**	*e*P	pP	20 12 26.4	-0.7
MOX				pmax	pmax		
	comp=Z,81nm,1.9s,mb5.4						
MOX				MLR	MLR		
	comp=Z,500nm,22.0s,MS4.8						
MOX	**Moxa**	**83.18**	**321**	*e*P	pP	20 12 26.4	-0.7
	comp=Z,81nm,1.9s						
MOX				LR	LR		
	comp=Z,500nm,22.0s,MS4.8						
MOX	**Moxa**	**83.18**	**321**	*i* P	pP	20 12 26.4	-0.7
	comp=Z,logA/T=1.6						
MOX				L		20 55 22.0	
GRFL	**Gerfalco**	**83.19**	**313**	P	**P**	**20 12 16.8**	**-0.9**
SQTA	**Sankt Quirin**	**83.23**	**317**	⇑*i*P	**P**	**20 12 18.0**	**+0.1**
	comp=Z,22nm,1.1s,mb5.1						
SQTA	**Sankt Quirin**	**83.23**	**317**	⇑*i*P	**P**	**20 12 18.0**	**+0.1**
SQTA				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
FUR	**Furstenfeldbru**	**83.24**	**318**	*e*P	pP	20 12 26.5	-1.0
FUR				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.3						
FUR	**Furstenfeldbru**	**83.24**	**318**	*e*P	pP	20 12 26.5	-1.0
	comp=Z,43nm,1.3s						
MOTA	**Moosalm**	**83.31**	**317**	⇓*i*P	**P**	**20 12 16.8**	**-1.5**
	comp=Z,37nm,1.1s,mb5.3						
MOTA	**Moosalm**	**83.31**	**317**	⇓*i*P	**P**	**20 12 16.8**	**-1.5**
MOTA				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.3						
GRA1	**Grafenberg Arr**	**83.37**	**320**	*e*P	pP	20 12 28.0	-0.1
	comp=Z,76nm,1.4s						
GRA1				*e*pP	Px	20 12 36.5	
GRA1				LR	LR		
	comp=Z,700nm,18.0s,MS5.1						
GRF	**Grafenberg Arr**	**83.37**	**320**	*e*P	pP	20 12 28.0	-0.1
GRF				*e**PP	Px	20 12 36.5	
GRF				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.5						
GRF				MLR	MLR		
	comp=Z,700nm,18.0s,MS5.1						
GRF	**Grafenberg Arr**	**83.37**	**320**	*e*P	pP	20 12 28.0	-0.1
GRF				*e**PP	Px	20 12 36.5	
GRF				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.5						
GRF				MLR	MLR		
	comp=Z,700nm,18.0s,MS5.1						
GRF	**Grafenberg Arr**	**83.37**	**320**	*e*P	pP	20 12 28.0	-0.1
	comp=Z,76nm,1.4s						
GRF				*e*pP	Px	20 12 36.5	
GRF				LR	LR		
	comp=Z,700nm,18.0s,MS5.1						
GRFO	**Grafenberg**	**83.37**	**320**	*e*P	pP	20 12 28.0	-0.1
GRFO				pmax	pmax		
	comp=Z,1µm,1.4s						
GRFO	**Grafenberg**	**83.37**	**320**	*e*P	pP	20 12 28.0	-0.1
	comp=Z,1µm,1.4s						
SAL	**Salo**	**83.62**	**315**	P	**P**	**20 12 22.3**	**+2.4**
MABI	**Malga Bissina**	**83.65**	**316**	P	**P**	**20 12 21.4**	**+1.3**
BRMO	**Bormio**	**83.77**	**316**	P	**P**	**20 12 19.5**	**-1.2**
FUORN	**Ofenpass**	**83.85**	**316**	P	**P**	**20 12 23.5**	**+2.4**
CLZ	**Clausthal**	**84.04**	**322**	*e*P	pP	20 12 30.9	-0.5
CLZ				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.5						
CLZ	**Clausthal**	**84.04**	**322**	*e*P	pP	20 12 30.9	-0.5
	comp=Z,45nm,1.2s						
DAVA	**Damuels**	**84.14**	**317**	⇑*i*P	**P**	**20 12 22.7**	**+0.2**
	comp=Z,53nm,1.1s,mb5.6						
BSEG	**Bad Segeberg**	**84.19**	**324**	*e*P	pP	20 12 31.6	-0.6
NB2	**NORSAR Subarra**	**84.21**	**331**	P	**P**	**20 12 21.3**	**-1.2**
	comp=Z,6.1nm,1.2s,mb4.6,baz=94,slow=5.6						
NOA	**NORSAR Array B**	**84.21**	**331**	P	**P**	**20 12 22.7**	**+0.1**
	comp=Z,1.7nm,0.9s,mb4.2,baz=102,slow=5.1,SNR=5.4						
VSL	**Villasalto**	**84.27**	**309**	P	**P**	**20 12 21.1**	**-2.3**
	comp=Z,66nm,1.2s,mb5.6						
NAO01	**NORSAR Array S**	**84.35**	**331**	*e*P	**P**	**20 12 21.6**	**-1.7**
	comp=Z,20nm,1.0s,mb5.2						
TUE	**Stuetta**	**84.47**	**316**	P	**P**	**20 12 25.0**	**+0.8**
PGF	**Pioggiola**	**84.62**	**312**	*e*P	**P**	**20 12 26.6**	**+1.6**
	comp=Z,68nm,1.2s,mb5.3						
PGF	**Pioggiola**	**84.62**	**312**	*e*P	**P**	**20 12 26.6**	**+1.6**
PGF				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.3						
MUGIO	**Muggio**	**84.67**	**316**	P	**P**	**20 12 28.1**	**+2.9**
SNZO	**South Karori**	**84.67**	**132**	PFAKE		20 12 40.0	+15
SNZO				LR	LR		
	comp=Z,962nm,20.0s,MS5.2						
KONO	**Kongsberg**	**84.91**	**329**	PFAKE		20 12 40.0	+14
KONO				LR	LR		
	comp=Z,828nm,20.0s,MS5.1						
TOD	**Tromm**	**84.94**	**319**	*e*P	pP	20 12 34.8	-1.2
TNS	**Taunus Mts**	**85.19**	**320**	*e*P	pP	20 12 36.8	-0.4
TNS				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.4						
TNS	**Taunus Mts**	**85.19**	**320**	*e*P	pP	20 12 36.8	-0.4
	comp=Z,37nm,1.1s						
BFO	**Black Forest**	**85.22**	**318**	*e*P	pP	20 12 36.4	-1.0
BFO				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.2						
BFO	**Black Forest**	**85.22**	**318**	*e*P	pP	20 12 36.4	-1.0
	comp=Z,25nm,1.3s						
FELD	**Feldberg**	**85.43**	**318**	*e*P	pP	20 12 39.2	+0.7
SAOF	**Saorge**	**85.69**	**314**	*e*P	pP	20 12 40.2	+0.3
LIBD	**Limburg**	**85.70**	**318**	*e*P	pP	20 12 40.1	+0.2
ABSA	**Djebel Ababsia**	**85.75**	**306**	P	pP	20 12 43.0	+2.6
BBS	**Basel-Blauen**	**85.75**	**317**	*e*P	pP	20 12 39.0	-1.2
ABH	**Alteburg**	**85.76**	**320**	*e*P	pP	20 12 39.0	-1.1
SBF	**Sospel**	**85.78**	**314**	*e*P	**P**	**20 12 32.1**	**+1.3**
	comp=Z,128nm,1.3s,mb5.7						
SBF	**Sospel**	**85.78**	**314**	*e*P	**P**	**20 12 32.1**	**+1.3**
SBF				pmax	pmax		
	comp=Z,64nm,1.3s,mb5.7						
CMAH	**Djebel Manchou**	**85.79**	**306**	P	pP	20 12 40.0	-0.6
KBS	**Kingsbay**	**85.84**	**349**	PFAKE		20 12 40.0	+10
KBS				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
WLS	**Welschbruch**	**85.87**	**318**	*e*P	pP	20 12 40.4	-0.3
TOUF	**Mont Tournerai**	**85.92**	**314**	*e*P	pP	20 12 41.8	+0.8
CDF	**Champ du Feu**	**85.92**	**318**	*e*P	**P**	**20 12 32.3**	**+0.9**
	comp=Z,18nm,1.1s,mb4.9						
CDF	**Champ du Feu**	**85.92**	**318**	*e*P	**P**	**20 12 32.3**	**+0.9**
CDF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.9						
MVIF	**Mont Vial**	**85.98**	**314**	*e*P	pP	20 12 42.2	+0.8
ECH	**Echery**	**86.00**	**318**	*e*P	pP	20 12 40.6	-0.7
URZ	**Urewera**	**86.11**	**128**	P	**P**	**20 12 33.7**	**+1.1**
	comp=Z,12nm,0.8s,mb5.2,slow=2.0,SNR=3.7						
CALN	**Calern**	**86.17**	**313**	*e*P	pP	20 12 42.2	-0.1
HINF	**Hinteralfeld**	**86.20**	**318**	*e*P	**P**	**20 12 33.5**	**+0.7**
WTSB	**Winterswijk**	**86.25**	**322**	*e*P	pP	20 12 41.7	-0.8
	comp=Z,41nm,1.8s						
LPG	**La Plagne**	**86.27**	**315**	*e*P	**P**	**20 12 34.9**	**+1.7**
	comp=Z,56nm,1.0s,mb5.4						
LPG	**La Plagne**	**86.27**	**315**	*e*P	**P**	**20 12 34.9**	**+1.7**
LPG				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.5						
LPL	**La Plagne**	**86.28**	**315**	*e*P	**P**	**20 12 34.9**	**+1.6**
	comp=Z,89nm,1.1s,mb5.6						
LPL	**La Plagne**	**86.28**	**315**	*e*P	**P**	**20 12 34.9**	**+1.6**
LPL				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.6						
BNI	**Bardonecchia**	**86.32**	**315**	P	**P**	**20 12 33.3**	**-0.2**
BNI				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.3						
BNI	**Bardonecchia**	**86.32**	**315**	P	**P**	**20 12 33.3**	**-0.1**
	comp=Z,22nm,1.1s,mb5.3						
FRF	**La Foret Royal**	**86.35**	**313**	*e*P	**P**	**20 12 35.2**	**+1.6**
	comp=Z,181nm,1.6s,mb5.8						
FRF	**La Foret Royal**	**86.35**	**313**	*e*P	**P**	**20 12 35.2**	**+1.6**
FRF				pmax	pmax		
	comp=Z,91nm,1.6s,mb5.8						
CKFL	**Kef-Lekhel**	**86.36**	**306**	P	pP	20 12 46.0	+2.6
LMR	**La Mourre**	**86.45**	**313**	*e*P	**P**	**20 12 35.7**	**+1.6**
	comp=Z,62nm,1.2s,mb5.4						
LMR	**La Mourre**	**86.45**	**313**	*e*P	**P**	**20 12 35.7**	**+1.6**
LMR				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.4						
HAU	**Haudompre**	**86.54**	**318**	*e*P	**P**	**20 12 35.3**	**+0.9**
	comp=Z,56nm,1.2s,mb5.4						
HAU				*e*R			
	comp=Z,605nm,20.8s						
HAU	**Haudompre**	**86.54**	**318**	*e*P	**P**	**20 12 35.3**	**+0.9**
HAU				pmax	pmax		

	comp=Z,28nm,1.2s,mb5.4						
HAU				MLR	MLR		
	comp=Z,610nm,20.8s,MS5.0						
CASM	**Ain Smara**	**86.55**	**306**	P	pP	20 12 46.0	+1.7
CTEI	**Djebel Teioual**	**86.62**	**306**	P	pP	20 12 47.0	+2.3
WLF	**Walferdange**	**86.66**	**319**	*e*P	**P**	**20 12 35.0**	**0.0**
WLF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
WLF	**Walferdange**	**86.66**	**319**	*e*P	**P**	**20 12 35.0**	**0.0**
	comp=Z,10nm,1.0s,mb5.0						
CABF	**La Chapelle**	**86.73**	**316**	*e*P	**P**	**20 12 37.0**	**+1.6**
	comp=Z,112nm,1.5s,mb5.6						
CABF	**La Chapelle**	**86.73**	**316**	*e*P	**P**	**20 12 37.0**	**+1.6**
CABF				pmax	pmax		
	comp=Z,56nm,1.5s,mb5.6						
HGN	**Heimansgroeve**	**86.80**	**321**	*e*P	**P**	**20 12 33.7**	**-2.0**
	comp=Z,25nm,2.7s,mb5.0						
ORIF	**Oris-en-Rattie**	**86.89**	**315**	*e*P	**P**	**20 12 37.9**	**+1.7**
	comp=Z,22nm,0.9s,mb5.1						
ORIF				*e*R			
	comp=Z,447nm,21.9s						
DFRA	**Djebel Bou Aff**	**87.03**	**306**	P	pP	20 12 49.0	+2.3
SMRF	**Simiane la Rot**	**87.12**	**314**	*e*P	**P**	**20 12 39.6**	**+2.2**
	comp=Z,74nm,1.5s,mb5.4						
MIDW	**Midway**	**87.34**	**62**	PFAKE	pP	20 12 50.0	+1.6
MIDW				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
MEZF	**Maizieres J'vi**	**87.40**	**318**	*e*P	**P**	**20 12 39.8**	**+1.2**
	comp=Z,36nm,1.2s,mb5.2						
SET	**Setif**	**87.43**	**306**	P	pP	20 12 55.0	+6.4
GIVF	**Givet**	**87.52**	**320**	*e*P	**P**	**20 12 40.4**	**+1.3**
VIVF	**Saint-Julien-l**	**87.75**	**315**	*e*P	**P**	**20 12 42.0**	**+1.6**
	comp=Z,78nm,1.6s,mb5.4						
VIVF	**Saint-Julien-l**	**87.75**	**315**	*e*P	**P**	**20 12 42.0**	**+1.6**
VIVF				pmax	pmax		
	comp=Z,39nm,1.6s,mb5.4						
BAIF	**Baives**	**87.91**	**320**	*e*P	**P**	**20 12 42.6**	**+1.6**
	comp=Z,138nm,1.7s,mb5.6						
BAIF	**Baives**	**87.91**	**320**	*e*P	**P**	**20 12 42.6**	**+1.6**
BAIF				pmax	pmax		
	comp=Z,69nm,1.7s,mb5.6						
VNDA	**Vanda**	**87.92**	**168**	P	**P**	**20 12 38.7**	**-1.8**
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
VNDA	**Vanda**	**87.92**	**168**	P	**P**	**20 12 38.7**	**-1.8**
	comp=Z,2.3nm,1.1s,mb4.3,baz=318,slow=3.7,SNR=4.7						
VNDA	**Vanda**	**87.92**	**168**	*e*P	**P**	**20 12 41.4**	**+0.9**
	comp=Z,152nm,0.9s,mb6.2						
VNDA				LR	LR		
	comp=Z,944nm,19.0s,MS5.2						
LOR	**Lormes**	**88.24**	**317**	*e*P	**P**	**20 12 43.9**	**+1.3**
	comp=Z,94nm,1.4s,mb5.5						
LOR				*e*R			
	comp=Z,544nm,18.5s						
LOR	**Lormes**	**88.24**	**317**	*e*P	**P**	**20 12 43.9**	**+1.3**
LOR				pmax	pmax		
	comp=Z,47nm,1.4s,mb5.5						
LOR				MLR	MLR		
	comp=Z,540nm,18.5s,MS5.0						
SMF	**Signal de Mont**	**88.27**	**316**	*e*P	**P**	**20 12 44.0**	**+1.2**
	comp=Z,51nm,1.1s,mb5.4						
SMF	**Signal de Mont**	**88.27**	**316**	*e*P	**P**	**20 12 44.0**	**+1.2**
SMF				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.4						
LASF	**Ste Croix**	**88.36**	**314**	*e*P	**P**	**20 12 45.2**	**+1.9**
	comp=Z,79nm,1.4s,mb5.4						
PLDF	**La Plantade**	**88.45**	**316**	*e*P	pP	20 12 54.8	+1.5
SSF	**Saint Saulge**	**88.49**	**317**	*e*P	**P**	**20 12 45.4**	**+1.6**
SSF				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.3						
SSF	**Saint Saulge**	**88.49**	**317**	*e*P	**P**	**20 12 45.4**	**+1.6**
	comp=Z,28nm,1.4s,mb5.3						
AVF	**Avril sur Loir**	**88.60**	**317**	*e*P	**P**	**20 12 45.6**	**+1.2**
	comp=Z,55nm,1.3s,mb5.4						
AVF	**Avril sur Loir**	**88.60**	**317**	*e*P	**P**	**20 12 45.6**	**+1.2**
AVF				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.4						
LBL	**Lubilhac**	**88.75**	**315**	*e*P	pP	20 12 56.7	+2.0
PYM	**Petit Puy Mans**	**88.89**	**316**	*e*P	pP	20 12 56.9	+1.5
BGF	**Bois d'Agland**	**88.96**	**316**	*e*P	**P**	**20 12 48.0**	**+1.9**
	comp=Z,86nm,1.3s,mb5.6						
BGF	**Bois d'Agland**	**88.96**	**316**	*e*P	**P**	**20 12 48.0**	**+1.9**
BGF				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.6						
SBA	**Scott Base**	**89.03**	**168**	*e*P	**P**	**20 12 46.1**	**+0.3**
SBA				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.5						
SBA				MLR	MLR		
	comp=Z,845nm,20.0s,MS5.2						
SBA	**Scott Base**	**89.03**	**168**	*e*P	**P**	**20 12 46.1**	**+0.3**
	comp=Z,26nm,1.1s,mb5.5						
SBA				LR	LR		
	comp=Z,845nm,20.0s,MS5.2						
TCF	**Toulx Ste Croi**	**89.42**	**316**	*e*P	**P**	**20 12 49.9**	**+1.6**
	comp=Z,73nm,1.7s,mb5.4						
TCF	**Toulx Ste Croi**	**89.42**	**316**	*e*P	**P**	**20 12 49.9**	**+1.6**
TCF				pmax	pmax		
	comp=Z,36nm,1.7s,mb5.4						
MTLF	**Montolieu**	**89.58**	**313**	*e*P	**P**	**20 12 51.0**	**+1.9**
	comp=Z,96nm,1.5s,mb5.6						
MTLF	**Montolieu**	**89.58**	**313**	*e*P	**P**	**20 12 51.0**	**+1.9**
MTLF				pmax	pmax		
	comp=Z,48nm,1.5s,mb5.6						
CAF	**Calviac**	**89.60**	**315**	*e*P	**P**	**20 12 51.1**	**+1.9**
	comp=Z,50nm,1.4s,mb5.3						
CAF	**Calviac**	**89.60**	**315**	*e*P	**P**	**20 12 51.1**	**+1.9**
CAF				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.3						
NVL	**N'lazarevskaya**	**90.05**	**199**⇓	*i*P	**P**	**20 13 02.1**	**+11**
NVL				*i* *PP	pP	20 13 12.5	+12
NVL				*i* *SP	sP	20 13 16.6	+13
NVL				*i* S	S	20 23 21.6	-18
NVL				*i*		20 23 47.6	
NVL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
LFF	**La Frestale**	**90.54**	**315**	*e*P	**P**	**20 12 55.8**	**+2.3**
	comp=Z,82nm,1.4s,mb5.6						
LFF	**La Frestale**	**90.54**	**315**	*e*P	**P**	**20 12 55.8**	**+2.3**
LFF				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.6						
TNA	**Tin City**	**90.79**	**24**	PFAKE		20 13 10.0	+16
TNA				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
LDF	**La Druitiere**	**90.83**	**319**	*e*P	**P**	**20 12 56.3**	**+1.5**
	comp=Z,100nm,1.4s,mb5.6						
LDF	**La Druitiere**	**90.83**	**319**	*e*P	**P**	**20 12 56.3**	**+1.5**
LDF				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.7						
MFF	**Saint Martin d**	**91.02**	**317**	*e*P	**P**	**20 12 57.3**	**+1.6**
	comp=Z,119nm,1.7s,mb5.6						
MFF	**Saint Martin d**	**91.02**	**317**	*e*P	**P**	**20 12 57.3**	**+1.6**
MFF				pmax	pmax		
	comp=Z,59nm,1.7s,mb5.6						
EBR	**Ebro Roquetas**	**91.03**	**311**	*e*PCP	PcP	20 12 57.0	-0.1
FLN	**La Foliniere**	**91.05**	**319**	*e*P	**P**	**20 12 57.3**	**+1.5**
	comp=Z,74nm,1.3s,mb5.6						
FLN				*e*R			
	comp=Z,505nm,19.2s						
FLN	**La Foliniere**	**91.05**	**319**	*e*P	**P**	**20 12 57.3**	**+1.5**
FLN				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.5						
FLN				MLR	MLR		
	comp=Z,510nm,19.3s,MS5.0						
GRR	**Gorron**	**91.33**	**318**	*e*P	**P**	**20 12 58.8**	**+1.7**
	comp=Z,58nm,1.3s,mb5.5						
GRR	**Gorron**	**91.33**	**318**	*e*P	**P**	**20 12 58.8**	**+1.7**
GRR				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.5						
ESK	**Eskdalemuir**	**91.98**	**325**	PFAKE		20 13 10.0	+10
ESK				LR	LR		
	comp=Z,120nm,22.0s,MS4.3						
SJPF	**Ste Jean**	**92.11**	**313**	*e*P	**P**	**20 13 03.2**	**+2.4**
	comp=Z,48nm,1.3s,mb5.4						
SJPF	**Ste Jean**	**92.11**	**313**	*e*P	**P**	**20 13 03.2**	**+2.4**
SJPF				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.4						
DAG	**Danmarks Havn**	**92.47**	**348**⇑	*e*P	pP	20 13 11.5	+0.2
DAG				pmax	pmax		
	comp=Z,23nm,1.6s,mb5.3						
DAG	**Danmarks Havn**	**92.47**	**348**⇑	*e*P	pP	20 13 11.5	+0.2
	comp=Z,23nm,1.6s						
DAG	**Danmarks Havn**	**92.47**	**348**⇑	*i*P	pP	20 13 11.5	+0.2
	comp=Z,23nm,1.6s						
SGMF	**Saint Gilles**	**92.48**	**318**	*e*P	**P**	**20 13 04.1**	**+1.8**
	comp=Z,96nm,1.5s,mb5.6						
SGMF	**Saint Gilles**	**92.48**	**318**	*e*P	**P**	**20 13 04.1**	**+1.8**
SGMF				pmax	pmax		
	comp=Z,48nm,1.5s,mb5.6						
QUIF	**Quistinic**	**92.92**	**318**	*e*P	**P**	**20 13 05.8**	**+1.4**
ROSF	**Rostrenen**	**92.94**	**319**	*e*P	**P**	**20 13 06.2**	**+1.7**
	comp=Z,66nm,1.3s,mb5.6						
ROSF	**Rostrenen**	**92.94**	**319**	*e*P	**P**	**20 13 06.2**	**+1.7**
ROSF				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.6						
SNAA	**Sanae**	**94.81**	**198**	P	**P**	**20 13 13.2**	**+0.7**
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SNAA	**Sanae**	**94.81**	**198**	P	**P**	**20 13 13.2**	**+0.7**
	comp=Z,8.5nm,1.4s,mb5.0						
SCO	**Scoresbysund**	**95.92**	**342**	*i* P	pP	20 13 28.5	+1.2
IMA	**Indian Mountai**	**96.32**	**22**	P	**P**	**20 13 21.6**	**+2.0**
IMA				pmax	pmax		
	comp=Z,138nm,0.8s						
IMA	**Indian Mountai**	**96.32**	**22**	P	**P**	**20 13 21.6**	**+2.0**
	comp=Z,138nm,0.8s						
DBIC	**Dimbokro**	**98.67**	**277**	LR	LR	20 53 46.3	
	comp=Z,1µm,21.6s,MS5.4,baz=74,slow=33						
DBIC	**Dimbokro**	**98.67**	**277**	PFAKE		20 13 40.0	+8.6
DBIC				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
SPU	**Mount Spurr**	**98.82**	**27**	P	**P**	**20 13 30.0**	**-0.9**
MCK	**McKinley**	**99.11**	**24**	PFAKE		20 13 40.0	+7.8
MCK				LR	LR		
	comp=Z,575nm,20.0s,MS5.1						
ILAR	**Eielson Array**	**99.44**	**22**	PP	PP	20 17 39.4	-0.2
	comp=Z,1.8nm,1.0s,baz=299,slow=7.5,SNR=6.1						
FIB	**Fire Island**	**99.67**	**26**	PFAKE		20 13 50.0	+15
FIB				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
KDAK	**Kodiak Island**	**99.84**	**30**	PFAKE		20 13 50.0	+14
KDAK				LR	LR		
	comp=Z,433nm,22.0s,MS4.9						
DIV	**Divide**	**101.60**	**25**	PFAKE		20 14 00.0	+16
DIV				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
KIP	**Kipapa**	**105.49**	**67**	PFAKE		20 18 30.0	
KIP				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
POHA	**Pohakuloa**	**108.06**	**68**	PFAKE		20 18 30.0	
POHA				LR	LR		
	comp=Z,8µm,21.0s,MS6.2						
SIT	**Sitka**	**108.33**	**26**	PFAKE		20 18 30.0	
SIT				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
YKA	**Yellowknife Ar**	**111.37**	**14**	PP	PP	20 19 06.1	-2.6
	comp=Z,0.4nm,0.6s,baz=337,slow=8.0,SNR=3.1						
TBI	**Tubuai**	**115.22**	**114**	*e*P	PP	20 19 24.5	-13
	comp=Z,140nm,28.2s						
TBI				*e*LR	LR	20 54 18.5	
	comp=Z,371nm,31.5s						
PMSA	**Palmer Station**	**116.14**	**190**	PFAKE		20 18 50.0	+12
PMSA				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
OCWA	**Octopus Mounta**	**119.57**	**29**	PFAKE		20 18 50.0	+5.0
OCWA				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
FFC	**Flin Flon**	**121.19**	**11**	PKIKP	PKPdf	20 18 44.6	-3.5
FFC				MLR	MLR		
	comp=Z,340nm,22.0s,MS5.0						
COR	**Corvallis**	**122.21**	**31**	PFAKE		20 19 00.0	+10
COR				LR	LR		
	comp=Z,219nm,21.0s,MS4.8						
NEW	**Newport**	**122.33**	**24**	PFAKE		20 19 00.0	+10
NEW				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
YBH	**Yreka Blue Hor**	**124.50**	**33**	PFAKE		20 19 00.0	+5.2
YBH				LR	LR		
	comp=Z,691nm,19.0s,MS5.3						
MSO	**Missoula**	**124.77**	**23**	PFAKE		20 19 00.0	+4.8
MSO				LR	LR		
	comp=Z,773nm,21.0s,MS5.3						
BMO	**Blue Mountains**	**124.92**	**27**	PFAKE		20 19 00.0	+4.5
BMO				LR	LR		
	comp=Z,813nm,22.0s,MS5.3						
WDC	**Whiskeytown Da**	**125.37**	**34**	PFAKE		20 19 00.0	+3.5
WDC				LR	LR		
	comp=Z,666nm,21.0s,MS5.3						
MOD	**Modoc**	**125.66**	**31**	PFAKE		20 19 10.0	+13
MOD				LR	LR		
	comp=Z,657nm,20.0s,MS5.3						
WVOR	**Wild Horse Val**	**126.12**	**30**	*e*PKIKP	PKPdf	20 18 54.3	-3.6
WVOR				MLR	MLR		
	comp=Z,781nm,21.0s,MS5.4						
HOPS	**Hopland**	**126.14**	**36**	PFAKE		20 19 10.0	+12
HOPS				LR	LR		
	comp=Z,666nm,20.0s,MS5.3						
ULM	**Lac du Bonnet**	**126.51**	**8**	PKP	PKPdf	20 18 53.2	-5.1
	comp=Z,1.7nm,0.5s,baz=225,slow=2.9,SNR=2.0						
DGMT	**Dagmar**	**126.54**	**15**	PFAKE		20 19 10.0	+12
DGMT				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
BOZ	**Bozeman (W)**	**126.64**	**22**	PFAKE		20 19 10.0	+11
BOZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
HLID	**Hailey**	**127.22**	**26**	PKPdf	PKPdf	20 18 55.8	-4.2
HLID				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
LAO	**LASA Array**	**127.59**	**18**	PFAKE		20 19 10.0	+9.4
LAO				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
LKWY	**Lake**	**128.03**	**22**	PFAKE		20 19 10.0	+8.5
LKWY				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
RKT	**Rikitea**	**128.30**	**117**	*e*P	Px	20 19 56.9	
	comp=Z,73nm,31.5s						
RKT				*e*LR	LR	21 00 22.9	
	comp=Z,410nm,40.5s						
BMN	**Battle Mountai**	**128.32**	**30**	PFAKE		20 19 10.0	+7.8
BMN				LR	LR		
	comp=Z,563nm,20.0s,MS5.2						
CMB	**Columbia Colle**	**128.33**	**35**	PFAKE		20 19 10.0	+7.7
CMB				LR	LR		
	comp=Z,578nm,22.0s,MS5.2						
PQI	**Presque Isle**	**128.36**	**344**	PFAKE		20 19 10.0	+7.9
PQI				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
SAO	**San Andreas Ge**	**128.58**	**37**	PFAKE		20 19 10.0	+7.2
SAO				LR	LR		
	comp=Z,715nm,21.0s,MS5.3						
ELK	**Elko**	**129.06**	**29**	PKIKP	PKPdf	20 18 59.1	-4.5
ELK				MLR	MLR		
	comp=Z,859nm,22.0s						
ELK	**Elko**	**129.06**	**29**	PKP	PKPdf	20 19 01.3	-2.3
	comp=Z,1.0nm,0.7s,baz=194,slow=4.2,SNR=3.4						
NVAR	**Mina Array Bea**	**129.22**	**33**	PKP	PKPdf	20 19 02.2	-1.7
	comp=Z,0.5nm,0.7s,baz=207,slow=4.0,SNR=3.6						
AHID	**Auburn Hatcher**	**129.27**	**24**	PFAKE		20 19 10.0	+6.0
AHID				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
EYMN	**Ely**	**129.28**	**5**	PFAKE		20 19 10.0	+6.2
EYMN				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
MNV	**Mina**	**129.30**	**33**	PKIKP	PKPdf	20 19 12.3	+8.2
MNV	**Mina**	**129.30**	**33**	PFAKE		20 19 10.0	+5.9
MNV				LR	LR		
	comp=Z,665nm,19.0s,MS5.3						
HVU	**Hansel Valley**	**129.37**	**26**	PKHKP		20 18 45.5	
BW06	**Boulder Array**	**129.88**	**23**	PFAKE		20 19 10.0	+4.9
BW06				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
HWUT	**Hardware Ranch**	**130.03**	**25**	PFAKE		20 19 10.0	+4.6
HWUT				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
TPH	**Tonopah**	**130.06**	**33**	PFAKE		20 19 10.0	+4.4
TPH				LR	LR		
	comp=Z,614nm,21.0s,MS5.3						
RCBR	**Riachuelo**	**130.16**	**265**	PFAKE		20 19 10.0	+3.6
RCBR				LR	LR		
	comp=Z,719nm,21.0s,MS5.3						
RSSD	**Black Hills**	**130.57**	**17**	PFAKE		20 19 10.0	+3.6
RSSD				LR	LR		
	comp=Z,329nm,20.0s,MS5.0						
WVL	**Waterville**	**130.74**	**345**	PFAKE		20 19 10.0	+3.3
WVL				LR	LR		
	comp=Z,4µm,21.0s,MS6.1						
ISA	**Isabella**	**131.08**	**36**	PFAKE		20 19 20.0	+12
ISA				LR	LR		
	comp=Z,4.0nm,22.0s						
DAU	**Daniels Canyon**	**131.15**	**26**	PKHKP		20 18 41.2	
DAC	**Darwin (Calif)**	**131.15**	**34**	PFAKE		20 19 20.0	+12
DAC				LR	LR		
	comp=Z,545nm,20.0s,MS5.2						
MVU	**Marysvale**	**132.26**	**28**	*e*PKPdf	PKPdf	20 19 06.1	-3.7
MVU				LR	LR		
	comp=Z,532nm,19.0s,MS5.3						
MSU	**Marysvale**	**132.27**	**28**	PKIKP	PKPdf	20 19 15.6	+5.8
SRU	**San Rafael**	**132.54**	**26**	*e*PKHKP		20 18 50.8	
HRV	**Harvard--Oak R**	**133.15**	**346**	PFAKE		20 19 20.0	+8.7
HRV				LR	LR		
	comp=Z,588nm,19.0s,MS5.3						
WES	**Weston**	**133.21**	**345**	PFAKE		20 19 20.0	+8.6
WES				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
PFO	**Pinyon Flat Ob**	**133.71**	**36**	PFAKE		20 19 20.0	+7.4
PFO				LR	LR		
	comp=Z,157nm,21.0s,MS4.7						
ISCO	**Idaho Springs**	**133.93**	**21**	PFAKE		20 19 20.0	+7.2
ISCO				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
JFWS	**Jewell Farm**	**134.38**	**5**	PFAKE		20 19 20.0	+6.4
JFWS				LR	LR		
	comp=Z,961nm,19.0s,MS5.5						
RW3	**Ridgway**	**134.47**	**24**	PKHKP		20 18 52.7	
WUAZ	**Wupatki**	**135.04**	**30**	PFAKE		20 19 20.0	+5.0
WUAZ				LR	LR		
	comp=Z,846nm,21.0s,MS5.4						
AAM	**Ann Arbor**	**135.13**	**358**	PFAKE		20 19 20.0	+5.0
AAM				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
SDCO	**Great Sand Dun**	**135.77**	**23**	PFAKE		20 19 20.0	+3.7
SDCO				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
CBKS	**Cedar Bluff**	**136.70**	**16**	PFAKE		20 19 30.0	+12
CBKS				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
ANMO	**Albuquerque**	**137.79**	**26**	PKIKP	PKPdf	20 19 15.3	-4.8
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ANMO	**Albuquerque**	**137.79**	**26**	PKP	PKPdf	20 19 15.2	-4.8
	comp=Z,0.6nm,0.4s,baz=306,slow=8.7,SNR=2.5						
ANMO	**Albuquerque**	**137.79**	**26**	*e*PKPdf	PKPdf	20 19 15.5	-4.6
ANMO				LR	LR		
	comp=Z,779nm,19.0s,MS5.5						
TUC	**Tucson**	**137.85**	**32**	PFAKE		20 19 30.0	+10
TUC				LR	LR		
	comp=Z,699nm,21.0s,MS5.4						
BNM	**Barren Site**	**138.39**	**26**	PKPdf	PKPdf	20 19 17.4	-3.9
CBN	**Corbin**	**138.52**	**350**	PFAKE		20 19 30.0	+8.7
CBN				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
TRQA	**Tornquist**	**138.63**	**209**	PFAKE		20 19 30.0	+8.5
TRQA				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
AMTX	**Amarillo**	**139.71**	**20**	PFAKE		20 19 30.0	+6.4
AMTX				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
PLCA	**Paso Flores**	**139.75**	**198**	PKP	PKPdf	20 19 16.5	-7.0
	comp=Z,1.2nm,1.0s,baz=252,slow=6.4,SNR=2.8						
PLCA	**Paso Flores**	**139.75**	**198**	PKP	PKPdf	20 19 16.5	-7.0
PLCA				LR	LR		
	comp=Z,964nm,20.0s,MS5.5						
BBSR	**BB Station**	**139.75**	**332**	PFAKE		20 19 30.0	+6.3
BBSR				LR	LR		
	comp=Z,663nm,22.0s,MS5.3						
BLA	**Blacksburg**	**139.94**	**353**	PFAKE		20 19 30.0	+6.1
BLA				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
BDFB	**Brasilia**	**140.65**	**249**	PKP	PKPdf	20 19 20.0	-5.8
	comp=Z,1.7nm,0.4s,baz=194,slow=4.2,SNR=2.5						
WMOK	**Wichita Mounta**	**140.78**	**17**	PKIKP	PKPdf	20 19 17.8	-7.8
WMOK	**Wichita Mounta**	**140.78**	**17**	PFAKE		20 19 30.0	+4.4
WMOK				LR	LR		
	comp=Z,991nm,22.0s,MS5.5						
MNTX	**Cornudas Mount**	**141.02**	**27**	PKPdf	PKPdf	20 19 21.4	-4.7
WVT	**Waverly**	**141.29**	**3**	PFAKE		20 19 30.0	+3.6
WVT				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
CPCT	**Cooper Cave**	**141.99**	**358**	*e*PKPdf	PKPdf	20 19 23.7	-3.9
PLAL	**Pickwick Lake**	**142.42**	**3**	PFAKE		20 19 40.0	+12
PLAL				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
OXF	**Oxford**	**142.79**	**5**	PFAKE		20 19 40.0	+11
OXF				LR	LR		
	comp=Z,732nm,20.0s,MS5.4						
LTX	**Lajitas**	**143.80**	**27**	*e*PKIKP	PKPdf	20 19 26.8	-4.1
LTX				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.6						
TXAR	**Lajitas Array**	**143.80**	**27**	PKP	PKPdf	20 19 26.8	-4.1
	comp=Z,0.8nm,0.4s,baz=270,slow=1.3,SNR=5.8						
NHSC	**New Hope**	**143.95**	**352**	PFAKE		20 19 40.0	+15
NHSC				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
CPUP	**Villa Florida**	**143.99**	**227**	*e*PKIKP	PKPdf	20 19 26.5	-4.8
CPUP				MLR	MLR		
	comp=Z,1µm,21.0s						
LRAL	**Lakeview Retre**	**144.40**	**2**	PFAKE		20 19 40.0	+14
LRAL				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
NATX	**Nacogdoches**	**144.67**	**13**	PKPdf	PKPdf	20 19 27.5	-4.9
NATX				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
CFAA	**Coronel Fontan**	**146.86**	**208**	PKPbc	PKPbc	20 19 34.3	+1.8
	comp=Z,1.3nm,0.8s,baz=150,slow=2.4,SNR=12						
DWPF	**Disney**	**149.04**	**352**	PFAKE		20 19 50.0	+10
DWPF				LR	LR		
	comp=Z,307nm,21.0s,MS5.1						
SJG	**San Juan**	**151.64**	**318**	PFAKE		20 19 50.0	+6.0
SJG				LR	LR		
	comp=Z,648nm,22.0s,MS5.4						
SAML	**Samuel**	**156.68**	**254**	*e*PKPdf	PKPdf	20 19 47.1	-3.9
SAML				LR	LR		
	comp=Z,890nm,19.0s,MS5.6						
TEIG	**Tepich**	**157.05**	**6**	PFAKE		20 20 00.0	+8.7
TEIG				LR	LR		
	comp=Z,972nm,22.0s,MS5.6						
LPAZ	**La Paz**	**158.01**	**231**	*e*PKIKP	PKPdf	20 19 48.0	-4.6
LPAZ				MLR	MLR		
	comp=Z,1µm,19.0s						
SDV	**Santo Domingo**	**160.97**	**308**	PFAKE		20 20 00.0	+4.0
SDV				LR	LR		
	comp=Z,822nm,21.0s						
JTS	**JuntasAbangare**	**167.03**	**356**	PFAKE		20 20 10.0	+8.4
JTS				LR	LR		
	comp=Z,241nm,22.0s						
OTAV	**Otavalo**	**172.08**	**292**	*e*PKPdf	PKPdf	20 20 01.3	-3.5
OTAV				LR	LR		
	comp=Z,1µm,20.0s						
PAYG	**Puerto Ayora**	**175.07**	**65**	PFAKE		20 20 10.0	+4.2
PAYG				LR	LR		
	comp=Z,1µm,21.0s						

IDC 13 20:12:56.8±1.9**,2.42N**×**127.44E,mb3.7**/3**,mb1 3.9**/3**,**
mb1mx3.6/13**,mbtmp3.8**/3**,MS4.2**/1**,Ms1 4.2**/1**,**
ms1mx3.6/21**,Error ellipse: s-maj=155.4km**
s-min=26.1km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.23**	**163**	P	P	20 18 05.1	-1.7
	0.8nm,0.3s,baz=343,slow=10,SNR=36						
CTA	**Charters Tower**	**29.00**	**141**	LR	LR	20 30 59.9	
	comp=Z,482nm,21.2s,baz=102,slow=37						
STKA	**Stephens Creek**	**36.66**	**160**	P	P	20 20 05.6	-1.6
	2.7nm,0.9s,baz=332,slow=11,SNR=5.3						
MKAR	**Makanchi Array**	**59.03**	**325**	P	P	20 22 58.8	-2.1
	0.2nm,0.4s,baz=129,slow=7.8,SNR=5.1						

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*IDC **13** 20:14:40.8±0.8, 11.05N×140.96E, mb4.2/14, mb1 4.4/14,*
mb1mx4.3/21, mbtmp4.2/14, Error ellipse: s-maj=24.3km
s-min=21.9km az=59.0
*NEIC **13** 20:14:42.3±0.5, 11.02N×140.92E, h10^{km}, mb4.3/1, Error*
ellipse: s-maj=17.5km s-min=13.1km az=97.0
ISC 13 20:14:44.0±0.6**,10.97N**±0.10×**140.9E**±0.1**,h33^{km},n20,**
σ**1$\overset{s}{.}$10**/19**,mb4.2**/16**,Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**23.88**	**339**	P	**P**	**20 19 55.0**	**-0.5**
	4.2nm,0.6s,mb4.0,baz=224,slow=7.5,SNR=4.9						
MJAR	**Matsushiro Arr**	**25.57**	**355**	P	**P**	**20 20 10.1**	**-1.7**
	1.1nm,0.7s,mb3.5,baz=172,slow=8.8,SNR=4.5						
WRAB	**Tennant Creek**	**31.36**	**192**	P	**P**	**20 21 03.9**	**-0.3**
	2.8nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**31.37**	**192**	P	**P**	**20 21 03.0**	**-1.2**
	2.5nm,0.9s,mb4.0,baz=12,slow=9.8,SNR=8.6						

KULM	Kulim	40.17	265	P	P	20 22 19.4	+0.3
CMAR	Chiang Mai Arr	41.13	285	P	P	20 22 29.4	+2.4
	2.5nm,1.0s,mb3.8,baz=89,slow=5.6,SNR=8.7						
SONM	Songino Array	46.75	328	P	P	20 23 12.4	+0.5
	0.8nm,0.6s,mb3.9,baz=134,slow=8.1,SNR=8.1						
SONM				PcP	PcP	20 24 45.2	-0.3
	1.3nm,0.6s,baz=147,slow=3.5,SNR=9.9						
MKAR	Makanchi Array	60.71	318	P	P	20 24 54.5	-0.1
	1.1nm,0.6s,mb4.2,baz=101,slow=9.0,SNR=18						
MKAR				PcP	PcP	20 25 37.8	-0.4
	0.5nm,0.6s,baz=103,slow=5.5,SNR=2.8						
BVAR	Borovoye Array	69.57	323	P	P	20 25 51.6	-0.1
	2.8nm,0.6s,mb4.4,baz=107,slow=8.2,SNR=32						
ILAR	Eielson Array	72.61	25	P	P	20 26 07.8	-1.9
	1.1nm,0.7s,mb3.9,baz=251,slow=5.4,SNR=12						
DLBC	Dease Lake	80.29	32	P	P	20 26 53.6	+0.6
	1.0nm,0.5s,mb4.0,baz=278,slow=11,SNR=4.7						
YKA	Yellowknife Ar	86.97	27	P	P	20 27 27.6	+0.8
	2.2nm,0.7s,mb4.5,baz=295,slow=5.3,SNR=12						
YKA	Yellowknife Ar	86.97	27	P	P	20 27 27.6	+0.8
YBH	Yreka Blue Hor	87.54	48	P	P	20 27 31.2	+1.2
	2.7nm,0.7s,mb4.6,baz=168,slow=4.6,SNR=5.5						
ARCES	ARCESS Array B	88.33	341	P	P	20 27 33.1	-0.1
	1.8nm,0.5s,mb4.5,baz=53,slow=6.1,SNR=11						
KAF	Kangasniemi	91.43	335	*e*p	P	20 27 40.3	-7.6
	2.0nm,0.6s,mb4.6,baz=60,slow=4.4						
NVAR	Mina Array Bea	91.61	51	P	P	20 27 51.2	+1.8
	2.3nm,0.8s,mb4.6,baz=264,slow=4.7,SNR=15						
FINES	FINESS Array B	91.83	334	P	P	20 27 48.7	-1.1
	3.2nm,0.6s,mb4.8,baz=65,slow=4.6,SNR=24						
FINES	FINESS Array B	91.83	334	P	P	20 27 48.7	-1.1
LPAZ	La Paz	151.36	104	PKPbc	PKPdf	20 34 38.6	+9.4
	2.9nm,0.5s,baz=293,slow=3.6,SNR=18						

IDC 13 20:21:27.9±1.6, 21.50S×67.48W, h178^{km}±25^{km}, mb1 3.2/4, mb1mx3.1/17, mbtmp3.6/4, Error ellipse: s-maj=34.4km s-min=15.1km az=84.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	5.22	353	P	P	20 22 46.9	+1.4
	0.8nm,0.3s,baz=168,slow=9.0,SNR=7.9						
LPAZ				S	S	20 23 45.5	-0.1
	0.3nm,0.3s,baz=68,slow=23,SNR=9.4						
CFAA	Coronel Fontan	10.09	184	P	P	20 23 50.0	+0.6
	0.1nm,0.3s,baz=16,slow=10,SNR=6.2						
CFAA				S	S	20 25 38.2	-2.0
	0.1nm,0.3s,baz=256,slow=11,SNR=5.7						
CPUP	Villa Florida	10.45	119	P	P	20 23 53.1	-1.1
	0.6nm,0.3s,baz=314,slow=14,SNR=9.0						
BDFB	Brasilia	19.34	76	P	P	20 25 40.3	-1.5
	1.0nm,0.3s,baz=249,slow=7.4,SNR=5.7						
MKAR	Makanchi Array	144.84	37	PKP	PKPdf	20 40 42.6	-0.9
	0.5nm,0.6s,baz=306,slow=3.7,SNR=6.0						

IDC 13 20:35:40.1±32.0, 33.96N×71.58E, mb3.7/2, mb1 3.7/3, mb1mx3.4/18, mbtmp3.5/3, ML3.1/1, Error ellipse: s-maj=590.9km s-min=60.8km az=156.0

NEIC 13 20:35:57.0±1.1, 35.83N×70.79E, h10^{km}, Error ellipse: s-maj=22.5km s-min=9.4km az=54.0

NNC 13 20:36:13.6±10.0, 36.99N×71.18E, h202^{km}±189^{km}, mpv3.6, Error ellipse: s-maj=125.6km s-min=78.6km az=33.0

ISC 13 20:36:05.5±1.6, 36.43N±0.07×71.5E±0.2, h147^{km}±27^{km}, n17, σ1.^{s}06/25, mb3.5/2, 1C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	5.28	138	*e*P	P	20 37 23.8	+0.4
	78nm,0.2s						
THN				*e*S	S	20 38 23.5	-0.3
AAK	Ala-Archa	6.61	19	⇓P	P	20 37 43.1	+1.8
	2.7nm,0.5s						
AAK				⇓S	S	20 38 55.1	-0.6
	7.9nm,0.8s						
AAK	Ala-Archa	6.61	19	*e*Pn	P	20 37 43.2	+1.9
	4.4nm,0.4s						
KK31	Karatay Array	6.71	354	P	P	20 37 42.1	-0.6
	1.7nm,0.3s,baz=185,slow=14,SNR=78						
KK31				⇑S	S	20 38 53.8	-4.4
	2.9nm,0.4s						
KK31				⇓Lg		20 39 33.1	
	4.6nm,0.7s,baz=177,slow=30,SNR=6.2						
SMLA	Simla	7.07	137	*i* P	P	20 37 43.2	-4.3
SMLA				*i* S	S	20 39 00.1	-6.7
MKAR	Makanchi Array	13.11	34	Pn	P	20 39 16.2	+9.3
	0.1nm,0.3s,baz=209,slow=12,SNR=6.6						
KOLN	Koldanda	13.38	127	*e*P	P	20 39 10.2	-0.3
	3.6nm,0.3s						
KOLN				*e*S	S	20 41 31.8	-4.3
GKN	Gorkha	13.91	123	*e*P	P	20 39 16.8	-0.4
	4.5nm,0.3s						
GKN				*e*S	S	20 41 42.1	-6.2
DMN	Daman	14.48	124	*e*P	P	20 39 24.8	+0.3
	3.9nm,0.3s						
DMN				*e*S	S	20 41 56.8	-4.7
KKN	Kakani	14.48	123	*e*P	P	20 39 24.7	+0.2
	27nm,1.2s						
PKI	Pulchoki	14.71	123	*e*P	P	20 39 27.6	+0.2
	9.6nm,0.6s						
AB31	Akbulak array	15.35	330	P	P	20 39 34.3	-1.0
	0.3nm,0.4s,baz=130,slow=13,SNR=12						
AB31				⇓S	S	20 42 13.0	-8.2
	0.2nm,0.3s,baz=139,slow=27,SNR=4.6						
FINES	FINESS Array B	37.78	326	P	P	20 43 14.8	+6.2
	0.6nm,0.5s,mb3.5,baz=129,slow=9.0,SNR=8.0						
FINES	FINESS Array B	37.78	326	P	P	20 43 14.8	+6.2
NB2	NORSAR Subarra	44.69	323	P	P	20 44 10.8	+5.8
	0.5nm,0.4s,mb3.5,baz=94,slow=7.4						
NOA	NORSAR Array B	44.69	323	P	P	20 44 10.7	+5.7
	0.6nm,0.4s,mb3.5,baz=96,slow=7.7,SNR=5.7						
NOA	NORSAR Array B	44.69	323	P	P	20 44 10.7	+5.7

IDC 13 20:43:12.7±0.9, 6.25S×147.01E, mb4.0/8, mb1 4.3/11, mb1mx4.2/16, mbtmp4.1/11, ML3.5/3, Error ellipse: s-maj=34.6km s-min=12.7km az=84.0

NEIC 13 20:43:18.6±2.2, 6.36S×146.89E, h41^{km}±20^{km}, mb4.2/4, Error ellipse: s-maj=17.7km s-min=16.7km az=72.0

ISC 13 20:43:18.7±3.2, 6.4S±0.1×146.8E±0.1, h55^{km}±29^{km}, n19, σ0.^{s}94/20, mb4.0/8, 1C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.05	174	Pn	P	20 44 05.3	-0.4
	26nm,0.3s,baz=9.9,slow=5.4,SNR=28						
PMG				Pg	P	20 44 09.1	+3.3
	48nm,0.3s,baz=42,slow=7.0,SNR=56						
PMG				Sn	S	20 44 42.3	+1.0
	20nm,0.3s,baz=12,slow=18,SNR=6.3						
PMG				Lg		20 44 53.7	
	32nm,0.3s,baz=328,slow=24,SNR=5.3						
CTA	Charters Tower	13.66	182	Pn	P	20 46 28.6	-2.9
	0.2nm,0.3s,baz=346,slow=12,SNR=2.5						
KAKA	Kakadu	15.51	245	⇑*i*P	P	20 46 56.0	+0.4
	13nm,0.6s						
WRAB	Tennant Creek	18.13	221	*e*P	P	20 47 27.6	-0.8
	8.6nm,0.8s						
WB2	Warramunga Arr	18.14	221	*e*P	P	20 47 28.0	-0.5
WRA	Warramunga Arr	18.14	221	P	P	20 47 27.7	-0.8
	0.2nm,0.3s,baz=46,slow=12,SNR=32						
WRA				PcP	PcP	20 52 01.6	+1.1
	0.1nm,0.3s,baz=24,slow=1.8,SNR=6.4						
FITZ	Fitzroy Crossi	23.72	239	*e*P	P	20 48 27.2	+0.4
	9.8nm,1.0s,mb4.2						
FITZ	Fitzroy Crossi	23.72	239	P	P	20 48 27.5	+0.7
	10nm,0.8s,mb4.3,baz=109,slow=3.8,SNR=9.4						
STKA	Stephens Creek	25.86	190	*e*P	P	20 48 47.0	-0.1
	5.0nm,0.9s,mb4.0						
STKA	Stephens Creek	25.86	190	P	P	20 48 47.3	+0.2
	5.3nm,0.8s,mb4.1,baz=41,slow=3.7,SNR=7.1						
CMAR	Chiang Mai Arr	53.25	299	P	P	20 52 36.2	+1.8
	1.7nm,0.6s,mb4.1,baz=122,slow=5.9,SNR=12						
SONM	Songino Array	64.62	331	P	P	20 53 52.6	-0.2
	0.4nm,0.8s,mb3.5,baz=158,slow=7.8,SNR=4.5						
VNDA	Vanda	71.57	177	P	P	20 54 36.2	+0.6
	1.8nm,0.6s,mb4.2,baz=321,slow=5.1,SNR=8.2						
VNDA	Vanda	71.57	177	P	P	20 54 36.2	+0.6
MKAR	Makanchi Array	77.65	321	P	P	20 55 11.3	+0.2
	0.3nm,0.6s,mb3.4,baz=97,slow=7.6,SNR=6.5						
MKAR	Makanchi Array	77.65	321	P	P	20 55 11.3	+0.2
ILAR	Eielson Array	85.88	23	P	P	20 55 52.8	-0.7
	1.0nm,0.7s,mb4.2,baz=253,slow=5.1,SNR=8.6						
BVAR	Borovoye Array	86.94	324	P	P	20 55 58.6	-0.3
	0.4nm,0.6s,mb3.9,baz=135,slow=8.2,SNR=3.5						
DBIC	Dimbokro	151.85	272	PKPbc	PKPdf	21 03 10.2	+8.3
	4.0nm,0.7s,baz=200,slow=1.6,SNR=4.4						

ROM 13 20:48:40.2±0.3, 45.11N×7.27E, h32^{km}±5^{km}, Md2.3/5, Ml2.0/3, Error ellipse: s-maj=7.8km s-min=4.3km az=122.0

NEIC 13 20:48:41.8, 45.11N×7.34E, h9^{km}, ML2.7(GEN), ML2.4(STR), ML2.3(LDG), After GEN.

LDG 13 20:48:42.6±0.2, 45.09N×7.39E, h2^{km}, Md2.7/3, Ml2.3/12, Error ellipse: s-maj=5.3km s-min=2.9km az=86.0

STR 13 20:48:42.0±0.7, 45.14N×7.23E, h10^{km}±1^{km}, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0

ISC 13 20:48:41.1±0.3, 45.10N±0.01×7.35E±0.03, h10^{km}±2^{km}, n45, σ0.^{s}86/75, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSP	Reno Superiore	0.08	306	P	Pg	20 48 44.1	+0.7
FENE	Fenestrelle	0.22	251	P	Pg	20 48 46.5	+0.7
FENE				S	Sg	20 48 49.4	+0.5
BHB	Bricherasio	0.27	194	P	Pg	20 48 47.7	+1.0
LSD	Ceresole Reale	0.38	339	P	Pg	20 48 49.5	+0.6
LSD				S	Sg	20 48 54.3	+0.2
OG22	Abries	0.40	226	Pg	Pg	20 48 49.8	+0.5
OG22				Sg	Sg	20 48 55.1	+0.3
MONC	Moncucco Torin	0.41	94	Pg	Pg	20 48 51.3	+1.9
MONC				Sg	Sg	20 48 59.5	+4.6
	168nm,0.3s						
RRL	Cesana Torines	0.44	246	P	Pg	20 48 49.9	-0.1
BNI	Bardonecchia	0.48	264	Pg	Pg	20 48 51.2	+0.4
BNI				Sg	Sg	20 48 57.3	0.0
	41nm,0.3s						
TRAV		0.50	34	P	Pg	20 48 51.2	0.0
TRAV				S	Sg	20 48 57.8	0.0
MBDF	Montbardon	0.56	228	*e*Pg	Pg	20 48 52.7	+0.3
MBDF				*e*Sg	Sg	20 49 00.3	+0.4
	43nm,0.2s						
LPG	La Plagne	0.58	313	*e*Pg	Pg	20 48 52.8	0.0
LPG				*e*Sg	Sg	20 49 00.6	0.0
	27nm,0.2s						
DOI	San Damiano	0.60	187	Pg	Pg	20 48 52.7	-0.5
	56nm,0.5s						
LPL	La Plagne	0.60	314	*e*Pg	Pg	20 48 53.3	+0.1
LPL				*e*Sg	Sg	20 49 01.6	+0.3
	32nm,0.3s						
PZZ	Prazzo	0.62	197	P	Pb	20 48 53.7	0.0
ORO	Oropa	0.69	40	Pg	Pg	20 48 54.5	-0.4
ORX	Oropa	0.69	40	P	Pb	20 48 54.6	-0.2
SURF	Saint Ours	0.73	212	Pg	Pg	20 48 56.1	+0.3
SURF				Sg	Sg	20 49 06.3	+0.7
STV2	Anna di Valdie	0.86	181	P	Pb	20 48 56.6	-1.0
STV	Sta Anna Valdi	0.86	181	P	Pb	20 48 57.1	-0.5
ENR	Entracque	0.88	177	P	Pb	20 48 57.1	-0.9
ROB	Roburent	0.89	155	P	Pb	20 48 58.8	+0.6
DIX	Grande Dixence	0.98	2	Pg	Pg	20 49 00.0	-0.7
DIX				Sg	Sg	20 49 13.4	-0.4
MMK	Mattmark	1.04	24	Pg	Pg	20 49 00.9	-1.0
ORIF	Oris-en-Rattie	1.06	261	*e*Pg	Pg	20 49 02.4	+0.1
ORIF				*e*Sg	Sg	20 49 15.6	-0.9
	20nm,0.2s						
MONE	Monesi	1.06	164	P	Pb	20 49 01.3	+0.2
MONE				S	Sb	20 49 14.7	-0.2
FIN	Finale Ligure	1.08	145	P	Pb	20 49 02.2	+0.8
TOUF	Mont Tournerai	1.09	184	Pg	Pg	20 49 03.2	+0.3
SBF	Sospel	1.24	177	*e*Pn	Pn	20 49 02.9	-1.6
SBF				*e*Pg	Pg	20 49 04.0	-1.9
SBF				*e*Sg	Sg	20 49 21.7	-0.8
	14nm,0.3s						
IMI	Imperia	1.25	162	P	Pb	20 49 05.0	+0.6
FRF	La Foret Royal	1.62	198	*e*Pn	Pn	20 49 10.7	+0.7
FRF				*e*P		20 49 12.6	
FRF				*e*Pg	Pg	20 49 13.3	-0.2
FRF				*e*Sn	Sn	20 49 31.3	+0.2
FRF				*e*Sg	Sg	20 49 35.0	-0.2
	7.4nm,0.2s						
SMRF	Simiane la Rot	1.70	229	*e*Pn	Pn	20 49 12.6	+1.5
SMRF				*e*P		20 49 14.2	
SMRF				*e*Pg	Pg	20 49 15.1	+0.1
SMRF				*e*Sg	Sg	20 49 37.4	-0.3
	4.4nm,0.3s						
CABF	La Chapelle	1.75	330	*e*P	Pn	20 49 13.0	+1.2
CABF				*e*Pg	Pg	20 49 15.0	-1.0
CABF				*e*Sn	Sn	20 49 33.2	-1.2
CABF				*e*Sg	Sg	20 49 37.8	-1.6
	5.6nm,0.3s						
LMR	La Mourre	1.87	199	*e*Pn	Pn	20 49 13.9	+0.4
LMR				*e*Pg	Pg	20 49 16.0	-2.4
LMR				*e*Sg	Sg	20 49 39.3	-4.1
	4.9nm,0.2s						
VIVF	Saint-Julien-l	1.92	264	*e*Sn	Sn	20 49 38.1	-0.6
VIVF				*e*Sg	Sg	20 49 43.7	-1.3
	2.0nm,0.2s						
LASF	Ste Croix	2.70	249	*e*Pn	Pn	20 49 26.2	+0.8
LASF				*e*Sn	Sn	20 49 57.7	-0.8
	1.8nm,0.4s						
HINF	Hinteralfeld	2.74	353	*e*Sg	Sg	20 50 07.5	-4.7
	2.8nm,0.3s						
PGF	Pioggiola	2.82	154	*e*Pn	Pn	20 49 25.5	-1.6
SMF	Signal de Mont	2.90	303	*e*Pn	Pn	20 49 29.7	+1.4
SMF				*e*Sg	Sg	20 50 14.0	-3.6
	1.6nm,0.2s						
LOR	Lormes	3.25	313	*e*Pn	Pn	20 49 34.5	+1.2
LOR				*e*Sg	Sg	20 50 23.5	-5.9
	2.5nm,0.5s						
AVF	Avril sur Loir	3.26	303	*e*Pn	Pn	20 49 34.3	+0.9
CDF	Champ du Feu	3.31	359	*e*Pn	Pn	20 49 33.8	-0.3
SSF	Saint Saulge	3.32	308	*e*Pn	Pn	20 49 35.7	+1.5
SSF				*e*Sg	Sg	20 50 27.2	-4.4
	1.2nm,0.3s						
BGF	Bois d’Agland	3.47	296	*e*Pn	Pn	20 49 37.3	+0.9
CAF	Calviac	3.75	269	*e*Pn	Pn	20 49 40.7	+0.3
LFF	La Frestale	4.69	270	*e*Pg	Pg	20 50 09.7	-5.1

IDC 13 20:52:46.0±10.0, 2.20N×94.07E, mb3.5/2, mb1 3.6/3, mb1mx3.4/17, mbtmp3.5/3, ML3.5/1, Error ellipse: s-maj=205.9km s-min=109.4km az=157.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.85	16	Pn	P	20 56 44.1	-0.9
	0.1nm,0.3s,baz=213,slow=12,SNR=7.1						
MKAR	Makanchi Array	45.59	349	P	P	21 01 08.6	-1.1
	0.3nm,0.4s,baz=167,slow=8.3,SNR=8.9						
SONM	Songino Array	46.69	11	P	P	21 01 15.7	-2.7
	0.3nm,0.6s,baz=191,slow=7.3,SNR=3.4						

IDC 13 20:57:29.6±17.0, 23.04N×141.60E, h300^{km}±170^{km}, mb3.2/6, mb1 3.4/6, mb1mx3.2/18, mbtmp3.9/6, Error ellipse: s-maj=111.2km s-min=14.8km az=75.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	37.38	320	P	P	21 04 13.6	-1.8
	0.3nm,0.5s,baz=135,slow=6.1,SNR=3.2						
WB2	Warramunga Arr	43.30	190	*e*P	P	21 05 02.4	-1.7
WRA	Warramunga Arr	43.30	190	P	P	21 05 02.5	-1.7
	1.0nm,0.3s,baz=7.7,slow=8.5,SNR=84						
FITZ	Fitzroy Crossi	43.76	202	*e*P	P	21 05 06.0	-1.8
	7.4nm,1.8s						
FITZ	Fitzroy Crossi	43.76	202	P	P	21 05 06.1	-1.7
	1.5nm,0.3s,baz=12,slow=12,SNR=12						
MKAR	Makanchi Array	52.72	312	P	P	21 06 14.7	-1.0
	0.1nm,0.4s,baz=89,slow=8.5,SNR=3.6						
STKA	Stephens Creek	54.60	180	P	P	21 06 27.5	-2.0
	1.5nm,0.7s,baz=357,slow=13,SNR=4.3						
FINES	FINESS Array B	81.34	334	P	P	21 09 12.3	-1.4
	1.1nm,0.7s,baz=56,slow=5.0,SNR=6.2						

IDC 13 21:00:05.4±5.3, 29.93S×177.64W, h55^{km}±41^{km}, mb4.2/2, mb1 4.3/2, mb1mx3.6/13, mbtmp4.4/2, Error ellipse: s-maj=72.6km s-min=54.8km az=150.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.71	340	P	P	21 00 20.0	+0.5
	254nm,0.3s,baz=110,slow=22,SNR=3.8						
RAO				S	S	21 00 31.4	+1.2
	543nm,0.3s,baz=88,slow=22,SNR=8.0						
STKA	Stephens Creek	34.89	256	P	P	21 06 51.8	-1.8
	1.7nm,0.6s,baz=104,slow=13,SNR=5.4						
WB2	Warramunga Arr	44.38	271	*e*P	P	21 08 10.4	-2.0
WRA	Warramunga Arr	44.39	271	P	P	21 08 10.5	-2.0
	1.5nm,0.3s,baz=110,slow=8.1,SNR=70						
FINES	FINESS Array B	144.81	340	PKP	PKPdf	21 19 34.8	-0.5
	0.6nm,0.4s,baz=58,slow=3.5,SNR=10						

NEIC 13 21:02:05.9, 43.01N×17.77E, h8^{km}, ML3.2(ROM), ML2.9(PDG), After PDG.

PDG 13 21:02:05.9±0.0, 43.01N×17.77E, h8^{km}

CSEM 13 21:02:05.2±0.1, 43.14N×17.82E, h2^{km}, ML3.6/4, Error ellipse: s-maj=1.9km s-min=1.3km az=32.0

ROM 13 21:02:07.4±0.7, 43.08N×17.52E, h12^{km}, Md3.2/21, Ml3.2/5, Error ellipse: s-maj=11.6km s-min=4.4km az=119.0

ISC 13 21:02:04.9±0.2, 43.07N±0.02×17.72E±0.02, h2^{km}, n65, σ1.^{s}14/101, 19C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STON	Ston	0.20	183	*i* Pg	Pg	21 02 08.8	-0.1
STON				*i* Sg	Sg	21 02 11.8	+0.3
STON	Ston	0.20	183	*i* Pg	Pg	21 02 08.8	-0.1
STON				*i* Sg	Sg	21 02 11.8	+0.2
TREB	Trebinje	0.58	127	Pg	Pg	21 02 15.6	-1.0
TREB				Sg	Sg	21 02 24.8	+0.4
BRY	Bratogost	0.63	105	⇑*i*Pg	Pg	21 02 16.4	-1.1
BRY				*e*Sg	Sg	21 02 25.7	-0.3
HCY	Herceg Novi	0.85	137	⇑*i*Pg	Pg	21 02 20.2	-1.6
HCY				*e*Sg	Sg	21 02 32.4	-0.8
UPM	Unac-Piva	0.88	81	⇑*i*Pg	Pg	21 02 21.7	-0.9
UPM				*e*Sg	Sg	21 02 35.1	+0.8
NKY	Niksic	0.98	105	⇑*i*Pg	Pg	21 02 23.0	-1.4
NKY				*e*Sg	Sg	21 02 37.4	0.0
BUM	Brajici-Budva	1.16	131	⇑*i*Pg	Pg	21 02 26.1	-2.0
BUM				*e*Sg	Sg	21 02 43.2	-0.4
PLE	Pljevlja	1.25	78	⇓*i*Pg	Pg	21 02 28.6	-1.4
PLE				*e*Sg	Sg	21 02 47.9	+1.2
TTG	Podgorica	1.31	119	⇑*i*Pg	Pg	21 02 28.8	-2.1
TTG				*e*Sg	Sg	21 02 48.2	-0.1
BBLS	Bajina Basta -	1.47	57	⇑*i*Pn	Pn	21 02 32.8	+0.3
BBLS				Sn	Sn	21 02 55.3	+2.8
ULC	Ulcinj	1.58	134	⇑*i*Pg	Pg	21 02 33.7	-2.8
ULC				*e*Sg	Sg	21 02 57.2	-0.5
IVA	Berane	1.61	96	⇑*i*Pg	Pg	21 02 34.8	-2.3
IVA				*e*Sg	Sg	21 02 58.5	-0.2
BLY	Banja Luka	1.72	347	Pn	Pn	21 02 37.6	+1.5
PVY	Plav	1.73	105	⇑*i*Pn	Pn	21 02 36.5	+0.4
PVY				*e*Sn	Sn	21 03 01.0	+1.9
MS1	Monte Sant’Ang	1.90	225	*e*Pn	Pn	21 02 39.9	+1.3
PUK	Puka	1.91	122	*i* Pn	Pn	21 02 40.4	+1.6
PUK				*i* Sn	Sg	21 03 09.9	+1.5
RGNG	Rignano Grg	2.11	229	Pn	Pn	21 02 43.3	+1.7
QSH	Qafa e Shtames	2.24	133	*i* Pn	Pg	21 02 54.0	+4.3
QSH				*i* Sn	Sg	21 03 19.0	-0.6
QSH	Qafa e Shtames	2.24	133	*i* Sg	Sg	21 03 19.0	-0.6
CDT	Castel del Mon	2.26	209	*e*Pn	Pn	21 02 46.1	+2.3
PE1	Pezze di Greco	2.27	186	*e*Pn	Pn	21 02 43.0	-1.0
GRUS	Gruza	2.33	68	*e*Pn	Pn	21 02 48.2	+3.4
GRUS				Sn	Sn	21 03 17.0	+2.5
SG1	Sgolgore (BA)	2.36	199	*e*Pn	Pn	21 02 44.1	-1.1
NVLJ	Novalja	2.54	307	*i* Pn	Pn	21 02 48.2	+0.4
NVLJ				*i* Sn	Sn	21 03 24.6	+4.8
LTRZ	Laterza	2.56	196	Pn	Pn	21 02 52.0	+4.0
MRLC	Muro Lucano	2.85	216	Pn	Pn	21 02 52.2	0.0
	25nm,0.7s						
CII	Carovilli	2.86	243	Pn	Pn	21 02 53.3	+0.9
	32nm,0.8s						
SKO	Skopje	2.96	110	*e*Pn	Pg	21 03 01.0	-3.1
CSSN	Cassano Irpino	2.98	223	Pn	Pn	21 02 55.2	+1.0
	9.0nm,0.4s						
SGG	Gregorio Mates	3.00	237	Pn	Pn	21 02 55.4	+1.1
BOJS	Bojanci	3.01	325	*e*Pn	Pn	21 02 56.0	+1.5
BOJS				*e*Sn	Sn	21 03 34.2	+2.6
RHK1	Bakonya	3.03	5	⇓*e*P	Pn	21 02 55.3	+0.4
RHK1				*e*S	Sn	21 03 32.1	-0.2
VAGA	Valle Agricola	3.07	239	Pn	Pn	21 02 55.4	0.0
SGO	Sicignano	3.09	216	Pn	Pn	21 02 56.7	+1.1
	8.0nm,0.4s						
SLCN	Sala Consilina	3.10	211	Pn	Pn	21 02 56.5	+0.7
	16nm,0.5s						
FAGN	Fagnano	3.15	257	Pn	Pn	21 02 58.4	+1.9
	54nm,0.4s						
SDI	San Donato	3.20	246	Pn	Pn	21 02 57.1	-0.1
	13nm,0.3s						
PKSM	Moragy	3.21	12	⇓*i*P	Pn	21 02 56.7	-0.6
PKSM				*e*S	Sn	21 03 32.8	-3.9
VVLD	Villa Vallelon	3.26	250	Pn	Pn	21 02 57.2	-0.8
CING	Cingoli	3.32	277	Pn	Pn	21 02 58.8	-0.1
CING				Sn	Sn	21 03 38.5	-1.0
	38nm,0.6s						
PTQR	Pietraquaria	3.36	253	Pn	Pn	21 03 00.1	+0.7
	5.0nm,0.3s						
NRCA	Norcia	3.39	268	Pn	Pn	21 02 59.7	-0.2
	5.0nm,0.4s						
LNSS	Leonessa	3.47	264	Pn	Pn	21 03 00.9	-0.2
	31nm,0.4s						
ARV	Arcevia	3.51	279	Pn	Pn	21 03 01.4	-0.3
ARV				Sn	Sn	21 03 43.9	-0.5
	3.0nm,0.2s						
ISOR	Termini	3.54	227	Pn	Pn	21 03 01.1	-1.0
PDKS	Podkum	3.56	328	*i* Pn	Pn	21 03 03.8	+1.4
PDKS				*e*Sn	Sn	21 03 46.0	+0.3
ASS	Assisi	3.71	272	Pn	Pn	21 03 04.2	-0.3
	11nm,0.2s						
MNS	Montasola	3.77	261	Pn	Pn	21 03 05.2	-0.1
	7.0nm,0.4s						
BZS	Buzias	3.78	46	⇑P	Pn	21 03 05.3	-0.2
MURB	Monte Urbino	3.80	275	Pn	Pn	21 03 06.0	+0.2
MURB				Sn	Sn	21 03 52.3	+0.6
	83nm,0.3s						
PERS	Pernice	4.01	333	*i* Pn	Pn	21 03 09.5	+0.7
PERS				*i* Sn	Sn	21 03 56.3	-0.8
VOY	Vojsko	4.03	319	*e*Pn	Pn	21 03 09.2	+0.2
VOY				*e*Sn	Sn	21 03 58.7	+1.3
VTS	Vitosha	4.07	95	⇑P	Pn	21 03 11.8	+2.3
OBKA	Obir	4.11	328	⇑*i*PN	Pn	21 03 10.8	+0.6
OBKA				*i* SN	Sn	21 03 58.5	-1.0
ARSA	Arzberg	4.46	340	⇑*i*PN	Pn	21 03 15.0	-0.1
ARSA				*i* SN	Sn	21 04 07.0	-1.3
FVI	Forni Avoltri	4.97	317	Pn	Pn	21 03 22.1	-0.3
	8.0nm,0.6s						
KBA	Koelnbreinsper	5.06	324	⇑*i*PN	Pn	21 03 24.0	+0.3
KBA				*i* SN	Sn	21 04 23.0	-0.6
DRGR		5.14	42	⇑P	Pn	21 03 27.1	+2.4
CTI	Castel Tesino	5.26	307	Pn	Pn	21 03 25.4	-1.0
CTI				Sn	Sn	21 04 26.4	-2.1
	21nm,0.7s						
MOA	Molln	5.36	334	⇑*i*PN	Pn	21 03 27.6	-0.2
MOA				*i* SN	Sn	21 04 29.8	-1.2
WTTA	Wattenberg	6.00	316	⇑*i*PN	Pn	21 03 37.0	+0.1
WTTA				*i* SN	Sn	21 04 46.0	-1.2
SQTA	Sankt Quirin	6.20	314	⇑*i*PN	Pn	21 03 39.7	+0.1
SQTA				*i* SN	Sn	21 04 51.1	-0.9
MOTA	Moosalm	6.33	315	⇓*i*PN	Pn	21 03 41.3	-0.2
MOTA				*i* SN	Sn	21 04 54.1	-1.2
KHC	Kasperske Hory	6.71	336	*e*PN	Pn	21 03 41.0	-5.9
KHC				*e*x	x	21 04 02.0	
KHC				*e*x	x	21 04 14.5	
KHC				*e*SG	Sn	21 05 01.1	-3.7

MAN 13 21:05:10.0, 11.68N×124.32E, h141^{km}, mb4.0, ML2.8, MS2.5, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	Catarman	0.89	22	*e*P	P	21 05 29.7	-3.6
CNP				*e*S	S	21 05 42.5	-8.6
MMPH	Masbate	0.95	315	*e*P	P	21 05 39.0	+5.2
BESP	Borongan	1.10	94	*e*P	P	21 05 35.7	+0.6
RCP	Roxas	1.54	266	⇑*e*P	P	21 05 57.1	+17
MSLP	Maasin	1.63	161	*e*P	P	21 05 47.1	+6.5
PVCP	Virac	1.91	355	*e*P	P	21 05 43.6	-0.2
PVCP				*e*S	S	21 06 09.9	+0.1
GUIM	Jordan	1.99	238	*e*P	P	21 05 44.4	-0.5
GUIM				*e*S	S	21 06 11.4	-0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTRP	**Odiongan**	2.35	287	*e*P	P	21 05 50.4	+1.0
OTRP				*e*S	S	21 06 17.0	-2.4

IDC 13 21:13:12.6±11.0, 2.58N×93.92E, mb3.4/2, mb1 3.6/3, mb1mx3.4/17, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=213.3km s-min=112.4km az=156.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	16.53	17	Pn	P	21 17 06.4	-1.2
	0.1nm,0.3s,baz=212,slow=13,SNR=6.6						
MKAR	**Makanchi Array**	45.19	349	P	P	21 21 31.7	-1.3
	0.5nm,0.6s,baz=180,slow=9.7,SNR=5.6						
SONM	**Songino Array**	46.35	12	P	P	21 21 39.9	-2.4
	0.4nm,0.7s,baz=187,slow=12,SNR=3.4						

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*MOS **13** 21:23:41.4±0.8, 51.72N×101.47E, h10^{km}, mb4.1/1, Error ellipse: s-maj=32.8km s-min=25.5km az=172.0*

BYKL 13 21:23:41.7±0.4, 51.71N×101.42E, 5C-2D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOY	**Mondy**	0.27	261	⇑*i*Pg	Pg	21 23 46.5	-0.6
MOY				*i* Sg	Sg	21 23 50.4	-0.3
MOY				Pmax			
	810nm,0.3s						
MOY				Smax			
	3μm,0.6s						
ARS	**Arshan**	0.66	71	*e*PG	Pg	21 23 54.0	-0.8
ARS				*e*		21 24 03.1	
ARS				pmax	pmax		
	comp=Z,59nm,0.1s						
ARS				smax			
	comp=N,2μm,0.3s						
ARS	**Arshan**	0.66	71	*e*Pg	Pg	21 23 54.1	-0.7
ARS				*e*Pb	Pb	21 23 56.0	+0.3
ARS				*e*Sg	Sg	21 24 03.1	-0.5
ARS				max			
	comp=N,108nm,0.2s						
ARS				Smax			
	comp=N,2μm,0.6s						
ORL	**Orlik**	1.29	311	*e*PG	Pg	21 24 04.2	-3.3
ORL				*e*		21 24 21.7	
ORL				pmax	pmax		
	comp=Z,123nm,0.4s						
ORL				smax			
	comp=E,156nm,0.6s						
ORL	**Orlik**	1.29	311	⇑*i*Pg	Pg	21 24 04.1	-3.4
	comp=E,35nm,1.1s						
ORL				⇓*i*Pg	Pg	21 24 04.1	-3.4
	comp=E,57nm,1.1s						
ORL				⇑*i*Pg	Pg	21 24 04.1	-3.4
	comp=E,64nm,1.1s						
ORL				*e*Pb	Pb	21 24 06.1	-0.5
ORL				*e*Sg	Sg	21 24 21.8	-3.0
ORL				Pmax			
	comp=E,121nm,0.6s						
ORL				Smax			
	comp=E,166nm,0.7s						
TLY	**Talaya**	1.38	90	⇑*i*Pg	Pg	21 24 05.9	-3.4
TLY				*e*Sg	Sg	21 24 25.2	-2.6
TLY				Pmax			
	comp=E,28nm,0.1s						
TLY				Smax			
	comp=E,372nm,0.3s						
ZAK	**Zakamensk**	1.77	138	⇑*i*Pg	Pg	21 24 13.3	-3.8
ZAK				*e*		21 24 17.5	
ZAK				*e*Sg	Sg	21 24 38.2	-2.6
ZAK				max			
	comp=E,44nm,0.5s						
ZAK				Smax			
	comp=E,180nm,0.6s						
IRK	**Irkutsk**	1.84	72	*e*PN	Pn	21 24 14.6	-0.2
IRK				*e*		21 24 37.8	
IRK				pmax	pmax		
	comp=Z,83nm,0.2s						
IRK				smax			
	comp=N,647nm,0.5s						
IRK	**Irkutsk**	1.84	72	*e*Pg	Pg	21 24 14.9	-3.6
IRK				*e*Sg	Sg	21 24 38.9	-4.1
IRK				Pmax			
	comp=N,117nm,0.2s						
IRK				Smax			
	comp=N,636nm,0.6s						
LSTR	**Listvyanka**	2.12	84	⇓*i*Pg	Pg	21 24 19.4	-4.7
LSTR				*e*Sg	Sg	21 24 47.1	-5.3
LSTR				Pmax			
	comp=N,19nm,0.5s						
LSTR				Smax			
	comp=N,134nm,1.2s						
STDB	**Stepnoy Dvoret**	3.10	80	*e*Sg	Sg	21 25 16.0	-8.8
STDB				Smax			
	comp=N,321nm,0.8s						
TRG	**Tyrgan**	3.21	69	*e*Pn	Pn	21 24 34.2	-0.1
TRG				*e*Pg	Pg	21 24 38.4	-7.3
TRG				*e*Sn	Sn	21 25 12.2	-1.6
TRG				*e*Sg	Sg	21 25 18.8	-10
TRG				Pmax			
	comp=N,17nm,0.4s						
TRG				Smax			
	comp=N,106nm,0.7s						
KAB	**Kabansk**	3.26	82	*e*PN	Pn	21 24 41.6	+6.5
KAB				*e*		21 25 22.0	
KAB				pmax	pmax		
	comp=Z,52nm,0.4s						
KAB				smax			
	comp=E,360nm,1.1s						
KAB	**Kabansk**	3.26	82	*e*Sg	Sg	21 25 22.3	-8.0
KAB				Smax			
	comp=E,323nm,1.0s						
FFNB	**Fofonovo**	3.33	82	*e*Pg	Pg	21 24 40.5	-7.7
FFNB				*e*Sg	Sg	21 25 24.3	-8.2
FFNB				Pmax			
	comp=E,30nm,0.2s						
FFNB				Smax			
	comp=E,201nm,0.5s						
ZRHB	**Zarechye**	3.63	74	*e*Pg	Pg	21 24 48.8	-5.4
ZRHB				*e*Sg	Sg	21 25 35.7	-6.9
ZRHB				Pmax			
	comp=E,13nm,1.0s						
ZRHB				Smax			
	comp=E,49nm,1.3s						
OGRR	**Ongureny**	4.23	60	*e*PN	Pn	21 24 47.5	-1.3
OGRR				*e*		21 24 58.1	
OGRR				*e*S	Sn	21 25 35.9	-3.8
OGRR				*e*		21 25 51.0	
OGRR				pmax	pmax		
	comp=Z,12nm,0.5s						
OGRR				smax			
	comp=E,157nm,1.2s						
OGRR	**Ongureny**	4.23	60	*e*Pn	Pn	21 24 47.5	-1.3
OGRR				*e*Pg	Pg	21 24 58.1	-8.0
OGRR				*e*Sn	Sn	21 25 36.6	-3.1
OGRR				*e*Sg	Sg	21 25 50.8	-12
OGRR				Pmax			
	comp=E,12nm,0.4s						
OGRR				Smax			
	comp=E,156nm,1.1s						
MXMB	**Maximikha**	4.74	68	*e*Pg	Pg	21 25 07.6	-8.7
MXMB				*e*		21 25 50.8	
MXMB				*e*Sg	Sg	21 26 08.7	-11
MXMB				Pmax			
	comp=E,8.0nm,0.8s						
MXMB				Smax			
	comp=E,114nm,1.0s						
ULN	**Ulaanbaatar**	5.30	134	*i* PN	Pn	21 25 18.3	+14
NIZ	**Nizh Angarsk**	6.31	47	*e*Pn	Pn	21 25 17.8	-0.4
NIZ				*e*Sn	Sn	21 26 24.9	-7.1
NIZ				*e*Sg	Sg	21 26 56.4	-15
NIZ				max			
	comp=E,4.0nm,0.3s						
NIZ				Smax			
	comp=E,79nm,1.2s						
YLYR	**Ulyunkhan**	6.64	58	*e*Pn	Pn	21 25 21.5	-1.5
YLYR				*e*Sn	Sn	21 26 36.0	-4.4
YLYR				*e*Sg	Sg	21 27 05.9	-17
YLYR				Smax			
	comp=E,52nm,2.0s						
KMO	**Kumora**	7.14	50	*e*Sg	Sg	21 27 24.2	-15
KMO				Smax			
	comp=E,47nm,1.2s						
UKT	**Uakit**	8.19	58	*e*Pn	P	21 25 41.3	-3.3
UKT				*e*Sg	Sg	21 27 54.3	-20
UKT				Smax			
	comp=E,17nm,1.6s						
BOD	**Bodaibo**	9.50	45	*e*Sg	Sg	21 28 36.6	-21
BOD				Smax			
	comp=E,17nm,2.3s						
NLYR	**Nelyaty**	9.65	55	*e*Sg	Sg	21 28 38.3	-25
NLYR				Smax			
	comp=E,20nm,1.1s						
TUP	**Tupik**	11.47	69	*e*Sg	S	21 29 35.9	+56

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*IDC **13** 21:31:44.2±3.2, 2.80N×94.18E, mb3.9/3, mb1 4.2/4, mb1mx3.8/17, mbtmp4.0/4, Error ellipse: s-maj=105.6km s-min=28.4km az=62.0*

*NEIC **13** 21:31:49.3±1.4, 2.86N×94.29E, h30^{km}, mb3.8/1, Error ellipse: s-maj=26.6km s-min=16.4km az=47.0*

ISC 13 21:31:47.6±1.9, 2.9N±0.2×94.3E±0.2, h30^{km}, n6, σ0^{s}76/6, mb3.8/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	6.74	69	*e*P	Pn	21 33 27.2	+0.1
CMAR	**Chiang Mai Arr**	16.14	16	Pn	P	21 35 33.7	-0.4
	0.2nm,0.3s,baz=203,slow=14,SNR=16						
LSA	**Lhasa**	26.86	354	P	P	21 37 28.6	+0.9
	1.4nm,0.5s,mb3.8						
MKAR	**Makanchi Array**	44.99	348	P	P	21 40 01.3	-0.8
	1.4nm,0.7s,mb3.9,baz=165,slow=8.3,SNR=16						
WRA	**Warramunga Arr**	45.34	122	P	P	21 40 05.1	-0.1
	1.1nm,0.9s,mb3.7,baz=298,slow=9.2,SNR=3.9						
SONM	**Songino Array**	45.99	11	P	P	21 40 10.2	+0.3
	1.0nm,0.6s,mb3.9,baz=195,slow=8.6,SNR=14						

WEL 13 21:33:08.1±0.2, 37.73S×177.06E, h131^{km}±1^{km}, ML3.6/6, 2C, Error ellipse: s-maj=2.4km s-min=1.9km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	0.53	176	⇑PN	P	21 33 27.5	-0.1
URZ				SN	S	21 33 42.1	-0.4
MWZ	**Matawai**	0.71	149	⇑PN	P	21 33 28.6	-0.2
MWZ				SN	S	21 33 44.6	0.0
KNZ	**Kokohu**	1.38	160	PN	P	21 33 34.9	-0.4
KNZ				SN	S	21 33 54.5	-1.6
TUVZ	**Tukino**	1.90	215	PN	P	21 33 41.4	+0.1
TUVZ				*e*SN	S	21 34 06.6	+0.1
FWVZ	**Far West T-bar**	1.93	217	PN	P	21 33 42.2	+0.4
MOVZ	**Moawhango**	1.97	211	PN	P	21 33 41.6	-0.6
MOVZ				SN	S	21 34 06.8	-1.2
WNVZ	**Wahianoa**	1.97	215	PN	P	21 33 42.4	+0.3
KIW	**Kapiti Island**	3.55	207	PN	P	21 33 59.8	-3.1
KIW				SN	S	21 34 40.7	-4.0
MTW	**Mount Morrison**	3.63	199	PN	P	21 34 00.4	-3.6
SNZO	**South Karori**	4.02	206	SN	S	21 34 51.0	-4.8
TCW	**Tory Channel**	4.10	211	SN	S	21 34 52.8	-5.0
TUWZ	**Tuamarina**	4.42	212	SN	S	21 35 00.2	-5.2

WEL 13 21:51:51.5±0.7, 38.86S×175.36E, h164^{km}±5^{km}, ML3.8/8, 2C, Error ellipse: s-maj=9.0km s-min=3.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FWVZ	**Far West T-bar**	0.42	159	PN	P	21 52 14.5	-0.1
TUVZ	**Tukino**	0.47	151	PN	P	21 52 14.5	-0.3
TUVZ				SN	S	21 52 32.8	+0.1
WNVZ	**Wahianoa**	0.50	159	PN	P	21 52 14.9	-0.1
WNVZ				SN	S	21 52 33.0	0.0
HIZ	**Hauiti**	0.53	311	PN	P	21 52 14.1	-1.0
MOVZ	**Moawhango**	0.62	151	⇑PN	P	21 52 14.9	-0.6
MOVZ				SN	S	21 52 32.4	-1.6
WAZ	**Wanganui**	0.94	198	PN	P	21 52 17.9	+0.5
KIW	**Kapiti Island**	2.03	190	PN	P	21 52 27.4	-0.8
DUWZ	**D'Urville Isla**	2.23	209	PN	P	21 52 29.7	-1.0
CAW	**Cannon Point**	2.26	186	PN	P	21 52 30.0	-1.0
MTW	**Mount Morrison**	2.30	177	PN	P	21 52 30.0	-1.5
MRW	**Makara Radio**	2.42	192	PN	P	21 52 31.9	-1.1
TCW	**Tory Channel**	2.49	199	PN	P	21 52 32.7	-1.2
SNZO	**South Karori**	2.50	191	PN	P	21 52 32.4	-1.5
SNZO				SN	S	21 53 05.1	-1.4
PAWZ	**Paruwai Farm**	2.52	179	PN	P	21 52 32.5	-1.6
PAWZ				*e*SN	S	21 53 04.3	-2.6
MSWZ	**Moikau Station**	2.55	182	⇑PN	P	21 52 33.0	-1.6
BHW	**Baring Head**	2.57	188	PN	P	21 52 33.2	-1.6
TUWZ	**Tuamarina**	2.79	203	PN	P	21 52 36.2	-1.3
QRZ	**Quartz Range**	2.93	227	PN	P	21 52 36.8	-2.5
THZ	**Tophouse**	3.46	212	PN	P	21 52 43.8	-2.2

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*IDC **13** 22:08:42.8±1.5, 2.48N×94.05E, mb3.9/5, mb1 4.2/6, mb1mx3.9/17, mbtmp4.0/6, ML4.1/1, Error ellipse: s-maj=55.4km s-min=27.3km az=54.0*

*NEIC **13** 22:08:47.3±0.9, 2.49N×94.11E, h30^{km}, mb4.3/2, Error ellipse: s-maj=19.7km s-min=12.5km az=212.0*

*BJI **13** 22:08:48.2, 2.50N×94.10E, h30^{km}, mB5.2, mb4.3*

ISC 13 22:08:47.3±8.2, 2.6N±0.3×94.2E±0.4, h39^{km}±64^{km}, n14, σ0^{s}82/13, mb3.9/7, MS3.0/1, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	6.97	67	*e*P	P	22 10 28.1	-1.5
KSM	**Kuching**	16.13	94	P	P	22 12 34.0	+1.0
CMAR	**Chiang Mai Arr**	16.45	16	Pn	P	22 12 38.5	+1.5
	0.3nm,0.3s,baz=211,slow=11,SNR=19						
KMI	**Kunming**	23.88	19	P	P	22 14 06.6	+8.3
	8.0nm,1.3s,mb4.0						
KMI				LR	LR		
	comp=Z,40nm,14.4s,MS3.0						
LSA	**Lhasa**	27.13	354	P	P	22 14 28.4	-0.6
LSA	**Lhasa**	27.13	354	P	P	22 14 28.7	-0.3
	comp=Z,11nm,0.9s,mb4.4						
GTA	**Gaotai**	37.02	7	*e*P	P	22 15 55.3	+0.1
MKAR	**Makanchi Array**	45.25	348	P	P	22 17 02.6	-0.2
	comp=Z,2.2nm,0.6s,mb4.2,baz=166,slow=8.2,SNR=19						
WRA	**Warramunga Arr**	45.30	121	P	P	22 17 03.5	0.0
	comp=Z,0.7nm,0.6s,mb3.6,baz=299,slow=9.0,SNR=8.2						
SONM	**Songino Array**	46.30	11	P	P	22 17 10.7	-0.4
	comp=Z,1.4nm,0.9s,mb3.9,baz=196,slow=9.0,SNR=8.1						
ULN	**Ulaanbaatar**	46.46	12	P	P	22 17 12.2	-0.1
FINES	**FINESS Array B**	77.41	333	P	P	22 20 39.0	-0.9
	comp=Z,0.7nm,0.7s,mb3.7,baz=108,slow=13,SNR=3.1						
GERES	**GERESS Array B**	81.81	319	P	P	22 21 04.7	+0.8
	comp=Z,0.8nm,0.8s,mb3.7,baz=80,slow=8.1,SNR=5.9						
TXAR	**Lajitas Array**	143.94	27	PKP	PKPdf	22 28 19.6	+0.4
	comp=Z,0.3nm,0.6s,baz=297,slow=2.8,SNR=3.5						

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*CSEM **13** 22:33:33.4±0.2, 41.81N×15.91E, h30^{km}, ML3.7/9, Error ellipse: s-maj=3.8km s-min=1.6km az=29.0*

*ROM **13** 22:33:34.0±0.3, 41.71N×15.82E, h27^{km}±2^{km}, Md3.0/32, Ml2.7/10, Error ellipse: s-maj=3.4km s-min=2.1km az=179.0*

*NEIC **13** 22:33:34.0, 41.71N×15.82E, h27^{km}, ML2.7(ROM), After ROM.*

ISC 13 22:33:34.0±0.7, 41.81N±0.04×15.93E±0.03, h21^{km}±4^{km}, n38, σ1^{s}09/57, 2C, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MS1	**Monte Sant'Ang**	0.10	176	⇑*i*Pg	Pb	22 33 38.5	+0.3
MS1				*e*Sg	Sb	22 33 41.3	+0.3
RGNG	**Rignano Grg**	0.29	243	Pg	Pb	22 33 40.0	-0.7
RGNG				Sg	Sb	22 33 43.3	-1.9
FG2	**Serracapriola**	0.58	270	Pg	Pb	22 33 45.0	-0.4
FG2				Sg	Sb	22 33 52.3	-0.8
	758nm,0.2s						
FG5	**Orsara di Pugl**	0.72	224	⇑*i*Pg	Pb	22 33 47.5	-0.4
	163nm,0.2s						
FG4	**Candela**	0.74	205	Pg	Pb	22 33 47.7	-0.5
FG4				Sg	Sb	22 33 57.1	-0.8
	275nm,0.2s						
CDT	**Castel del Mon**	0.77	160	*e*Pg	Pb	22 33 48.0	-0.6
CDT				*e*Sg	Sb	22 33 59.4	+0.8
FRES	**Fresagrandinar**	0.96	280	Pg	Pb	22 33 51.8	0.0
FRES				Sg	Sb	22 34 04.8	+0.7
	292nm,0.4s						
MRB1	**Monte Rocchett**	0.99	227	Pg	Pb	22 33 52.2	-0.2
	154nm,0.6s						
BAI	**Bari**	1.00	134	*e*Pg	Pb	22 33 52.1	-0.4
BAI				*e*Sg	Sb	22 34 07.0	+1.8
IPES	**Pescosannita**	1.00	236	Pg	Pb	22 33 51.8	-0.8
IPES				Sg	Sb	22 34 06.7	+1.3
SACR	**S. Croce Del S**	1.01	246	Pg	Pb	22 33 52.1	-0.6
SACR				Sg	Sb	22 34 06.5	+1.0
	124nm,0.3s						
PSB1	**Pescosannita**	1.02	236	Pg	Pb	22 33 51.9	-1.1
PSB1				Sg	Sb	22 34 07.5	+1.5
	82nm,0.5s						
TRIV	**Trivento**	1.03	268	Pg	Pb	22 33 53.3	+0.2
TRIV				Sg	Sb	22 34 08.4	+2.1
SNAL	**S. Angelo Dei**	1.04	212	Pg	Pb	22 33 51.9	-1.2
SNAL				Sg	Sb	22 34 06.5	+0.2
	205nm,0.3s						
BSSO	**Busso**	1.04	256	Pg	Pb	22 33 52.9	-0.3
BSSO				Sg	Sb	22 34 07.2	+0.9
	110nm,0.3s						
MRLC	**Muro Lucano**	1.10	198	Pg	Pb	22 33 52.6	-1.7
MRLC				Sg	Sb	22 34 09.5	+1.3
SG1	**Sgolgore (BA)**	1.12	150	*e*Pg	Pb	22 33 53.5	-1.0
SG1				*e*Sg	Sb	22 34 10.3	+1.6
CSSN	**Cassano Irpino**	1.17	216	Pg	Pn	22 33 54.0	-1.3
CSSN				Sg	Sb	22 34 11.0	+0.9
	53nm,0.3s						
CII	**Carovilli**	1.22	267	Pg	Pn	22 33 56.1	0.0
	53nm,0.3s						
SGG	**Gregorio Mates**	1.24	251	Pg	Pn	22 33 55.5	-0.8
MIDA	**Miranda**	1.27	263	Pg	Pn	22 33 56.1	-0.6
MIDA				Sg	Sb	22 34 13.7	+0.7
	104nm,0.2s						
SGO	**Sicignano**	1.33	201	Pg	Pn	22 33 55.9	-1.8
	44nm,0.3s						
VAGA	**Valle Agricola**	1.33	253	Pg	Pn	22 33 57.1	-0.6
RNI2	**Rionero Sannit**	1.34	266	Pg	Pn	22 33 57.5	-0.2
LTRZ	**Laterza**	1.38	151	Pg	Pn	22 33 58.8	+0.5
	50nm,0.2s						
SLCN	**Sala Consilina**	1.43	189	Pg	Pn	22 33 59.8	+0.7
	32nm,0.2s						
PE1	**Pezze di Greco**	1.50	131	*e*Pg	Pn	22 33 59.2	-0.9
PE1				*e*Sg	Sn	22 34 21.2	+2.0
INTR	**Introdacqua**	1.53	278	Pg	Pn	22 34 01.0	+0.5
INTR				Sg	Sn	22 34 21.8	+2.0
	178nm,0.5s						
RFI	**Roccamonfina**	1.55	252	Pg	Pn	22 34 00.6	-0.1
	8.0nm,0.8s						
SDI	**San Donato**	1.59	267	Pg	Pn	22 34 01.5	+0.1
	42nm,0.3s						
MSC	**Monte Massico**	1.60	248	Pg	Pn	22 34 00.3	-1.1
VCEL	**Villa Celiera**	1.66	291	Pg	Pn	22 34 04.7	+2.3
	132nm,0.4s						
MGR	**Morigerati**	1.69	190	Pg	Pn	22 34 02.1	-0.7
	14nm,0.2s						
ISOR	**Termini**	1.72	225	Pg	Pn	22 34 01.0	-2.2
VVLD	**Villa Vallelon**	1.73	273	Pg	Pn	22 34 03.4	+0.1
ORI	**Oriolo Calabro**	1.79	167	Pg	Pn	22 34 05.0	+0.9
	48nm,0.4s						
FAGN	**Fagnano**	1.81	285	Pg	Pn	22 34 06.7	+2.2
	188nm,0.4s						
VENT	**Ventotene**	2.15	243	Pg	Pn	22 34 06.7	-2.6

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*IDC **13** 22:36:41.7±1.3, 2.59N×94.01E, mb4.2/7, mb1 4.4/8, mb1mx4.2/18, mbtmp4.2/8, ML4.2/1, MS3.1/1, Ms1 3.3/1, ms1mx3.3/30, Error ellipse: s-maj=43.7km s-min=26.4km az=46.0*

*BJI **13** 22:36:44.1, 2.28N×94.17E, h44^{km}, mB5.2, mb4.6*

*NEIC **13** 22:36:46.6±0.7, 2.69N×94.18E, h30^{km}, mb4.2/3, Error ellipse: s-maj=15.4km s-min=9.8km az=213.0*

ISC 13 22:36:45.3±0.8, 2.7N±0.1×94.25E±0.09, h30^{km}, n20, σ0^{s}84/20, mb4.1/10, MS3.4/1, 1C-2D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	6.89	68	*e*P	Pn	22 38 26.6	-0.4
KSM	**Kuching**	16.10	94	P	P	22 40 31.4	+0.1
CMAR	**Chiang Mai Arr**	16.32	16	Pn	P	22 40 33.0	-1.2
	0.4nm,0.3s,baz=214,slow=12,SNR=35						
CMAR				LR	LR	22 47 03.1	
	comp=Z,66nm,18.9s,baz=175,slow=38						
KMI	**Kunming**	23.75	19	P	P	22 41 56.9	+0.8
	10.0nm,1.5s,mb4.0						
KMI				pP		22 42 08.6	
KMI				LR	LR		
	comp=Z,110nm,16.2s,MS3.4						
LSA	**Lhasa**	27.01	354	P	P	22 42 28.3	+1.4
LSA	**Lhasa**	27.01	354	*e*P	P	22 42 27.8	+0.9
	comp=Z,9.6nm,0.9s,mb4.3						
GTA	**Gaotai**	36.89	7	*e*P	P	22 43 53.6	+0.4
GTA				AP	pP	22 44 04.3	+2.2
GTA				XP	sP	22 44 07.9	+2.0
MKAR	**Makanchi Array**	45.13	348	P	P	22 45 01.2	+0.2
	comp=Z,7.3nm,0.7s,mb4.6,baz=165,slow=8.3,SNR=84						
WRA	**Warramunga Arr**	45.33	122	P	P	22 45 03.0	+0.2
	comp=Z,6.5nm,1.3s,mb4.3,baz=298,slow=9.0,SNR=8.2						
WRAB	**Tennant Creek**	45.34	122	P	P	22 45 02.9	0.0
SONM	**Songino Array**	46.17	11	P	P	22 45 09.5	+0.4
	comp=Z,3.9nm,0.9s,mb4.3,baz=192,slow=8.8,SNR=22						
ULN	**Ulaanbaatar**	46.33	12	*e*P	P	22 45 10.3	-0.1
	comp=Z,2.0nm,1.0s,mb4.0						
BRTR	**Keskin Array B**	65.93	313	P	P	22 47 29.4	-1.5
	comp=Z,1.4nm,0.8s,mb4.0,baz=117,slow=5.5,SNR=8.3						
AKASG	**Malin Array Be**	72.28	323	P	P	22 48 07.8	-2.1
	comp=Z,0.2nm,0.2s,mb3.6,baz=97,slow=3.8,SNR=5.2						
AKASG	**Malin Array Be**	72.28	323	P	P	22 48 07.8	-2.1
VRI	**Vrincioaia**	72.52	317	⇓P	P	22 48 11.8	+0.4
MLR	**Muntele Rosu**	72.96	317	⇑P	P	22 48 14.8	+0.8
BURAR	**Bucovina Array**	73.96	319	⇓P	P	22 48 21.0	+1.2
GERES	**GERESS Array B**	81.75	319	P	P	22 49 02.7	+0.1
	comp=Z,1.8nm,0.8s,mb4.1,baz=90,slow=2.9,SNR=12						
NOA	**NORSAR Array B**	84.27	331	P	P	22 49 14.6	-0.7
	comp=Z,1.1nm,0.9s,mb4.0,baz=101,slow=5.2,SNR=3.1						

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*CRAAG **13** 22:44:27.8, 18.85S×69.33W, Mw7.9*

*MOS **13** 22:44:30.9±1.1, 19.90S×69.28W, h99^{km}, mb6.9/70, Error ellipse: s-maj=7.9km s-min=4.8km az=85.7 Broadband fault plane solution: P waves. NP1:ϕ_s236°, δ16°, λ-24°. NP2:ϕ_s349°, δ84°, λ-104°. Principal axes: T Plg37°, Azm92°; N Plg14°, Azm351°; P Plg49°, Azm243°;*

*GUC **13** 22:44:30.9±0.7, 20.05S×69.33W, h115^{km}±4^{km}, ML7.9, mb6.9(NEIC), MW7.8(NEIC)*

*LDG **13** 22:44:32.2±0.2, 19.52S×69.15W, h103^{km}, Mb6.7/44, Ms7.1/8, Error ellipse: s-maj=12.9km s-min=7.9km az=34.0*

*IDC **13** 22:44:32.8±0.3, 19.90S×69.12W, h110^{km}±2^{km}, mb6.2/29, mb1 6.3/30, mb1mx6.3/30, mbtmp6.6/30, MS7.2/23, Ms1 7.2/23, ms1mx7.1/34, Error ellipse: s-maj=7.4km s-min=5.1km az=61.0, - Incorrectly calculated travel-time residual on T phase at H03N*

*BJI **13** 22:44:33.5, 19.41S×69.11W, h115^{km}, mB7.8*

*HRVD **13** 22:44:33.9±0.1, 20.02S×69.23W, h94^{km}, MW7.8/78, Centroid moment Tensor Solution. LP body waves: s76,c213; Mantle waves: s78,c365; Half duration: 18^{s}3 Moment tensor: Scale 10^{20}Nm; M_{rr}-3.70±.02; $M_{\theta\theta}$-0.27±.01; $M_{\phi\phi}$3.97±.01; $M_{r\theta}$0.61±.02; $M_{\theta\phi}$-0.24±.01; $M_{\phi r}$-3.63±.02; Best double couple: $M_0$5.322×10^{20} NP1: ϕ_s182°, δ23°, λ-81°. NP2:ϕ_s352°, δ67°, λ-94°. Principal axes: T 5.451, Plg22°, Azm85°; N -.259, Plg4°, Azm354°; P -5.193, Plg68°, Azm255°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s.*

*NEIC **13** 22:44:33.9±0.1, 19.99S×69.20W, mb6.8/214, ME7.6, MW7.8 Error ellipse: s-maj=3.9km s-min=2.8km az=207.0 Broadband fault plane solution: P waves. NP1:ϕ_s355°, δ70°, λ-90°. NP2:ϕ_s175°, δ20°, λ-90°. Principal axes: T Plg25°, Azm85°; N Plg0°, Azm0°; P Plg65°, Azm265°; Moment Tensor Solution. s55 Moment tensor: Scale 10^{20} Nm; M_{rr}-2.83; $M_{\theta\theta}$-1.35; $M_{\phi\phi}$4.19; $M_{r\theta}$1.20; $M_{\theta\phi}$1.99; $M_{\phi r}$-4.86; Best double couple: $M_0$6.5×10^{20} NP1:ϕ_s231°, δ30°, λ-33°. NP2:ϕ_s350°, δ75°, λ-116°. Principal axes: T 6.86, Plg25°, Azm100°; N -.71, Plg25°, Azm357°; P -6.16, Plg53°, Azm229°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Five people killed by collapsed buildings and 6 people killed when their vehicle was struck by a boulder near Iquique. At least 200 people injured, 544 houses destroyed and 8,691 damaged [VII], power and telephone services interrupted, roads damaged and landslides occurred in the Iquique area. A rock fell from El Morro near Arica. Felt [VI] at Calama and Tocopilla; [V] at Arica, Chanaral and El Salvador; [IV] at Antofagasta, Caldera and Copiapo. Felt throughout northern Chile. Also felt [V] at Arequipa, Ilo, Moquega, Punta de Bombon and Tacna, Peru. Felt [III] at La Paz, Bolivia. Felt as far away as Santiago, Chile and in Distrito Federal, Goias, Mato Grosso, Minas Gerais, Parana, Rio Grande do Sul, Santa Catarina and Sao Paulo, Brazil.

*BGS **13** 22:44:38.8, 18.79S×68.11W, h99^{km}, mb6.2*
*ORF **13** 22:44:58.0, 13.77S×65.05W, h30^{km}, mb6.5*
ISC 13 22:44:32.4±0.1, **19.92S**±0.02×**69.22W**±0.02, **h112**^{km}, **h112**^{km}±1.1^{km}**:pP-P, n1591,** σ**1**^{s}**11**/1070, **mb6.7**/251, **151C-180D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	San Pedro de A	3.12	163	eP	P	22 45 19.5	-1.6
SPCH				iS	S	22 45 56.4	-1.5
LPAZ	La Paz	3.75	16	P	P	22 45 32.7	+3.1
LPAZ				pmax	pmax		
	comp=Z,707nm,0.3s						
LPAZ				MLR	MLR		
	comp=Z,394µm,21.0s						
LPAZ	La Paz	3.75	16	P	P	22 45 32.6	+3.0
	comp=Z,707nm,0.3s,baz=193,slow=7.2,SNR=1833						
LPAZ				LR	LR	22 47 18.0	
	comp=Z,2394µm,21.0s,baz=328,slow=44						
LPAZ				P3KPbc		23 23 41.9	
	baz=243,slow=20,SNR=2.5						
LPAZ	La Paz	3.75	16	⇓iP	P	22 45 32.8	+3.2
ANCH	Antofagasta	3.91	196	⇓eP	P	22 45 26.7	-5.0
ANCH				iS	S	22 46 08.6	-8.3
ANCH				AMP		22 46 37.8	
	comp=N,896µm,0.6s						
ARE	Arequipa	4.06	327	⇑iP	P	22 45 32.7	-1.1
ARE				eS	S	22 46 20.0	-0.7
CPN1	Cerro Paranal	4.81	193	iP	P	22 45 38.1	-5.9
CPN1				iS	S	22 46 31.6	-7.4
SIV	San Ignacio	8.68	65	P	P	22 46 33.4	-3.0
	comp=N,656nm,0.3s,baz=254,slow=12,SNR=3104						
SIV				S	S	22 48 08.8	-4.4
	baz=331,slow=17,SNR=1.5						
LCO	Las Campanas	9.15	188	eP	P	22 46 34.4	-8.5
CFAA	Coronel Fontan	11.67	176	P	P	22 47 10.2	-6.2
	comp=N,11nm,0.3s,baz=352,slow=13,SNR=131						
CFAA				S	S	22 49 13.0	-12
	comp=N,35nm,0.3s,baz=283,slow=16,SNR=3.6						
CFAA				P3KPbc		23 23 28.8	
	comp=N,0.1nm,0.3s,baz=271,slow=5.5,SNR=1.9						
SAML	Samuel	12.37	29	Pn	P	22 47 22.7	-3.0
SAML				Sn	S	22 49 33.7	-7.7
SAML	Samuel	12.37	29	⇑iP	P	22 47 22.5	-3.2
	comp=N,1µm,0.9s						
CPUP	Villa Florida	12.66	122	P	P	22 47 24.5	-5.0
CPUP				P3KPbc		23 23 24.0	
	comp=N,0.2nm,0.3s,baz=289,slow=9.5,SNR=1.5						
CPUP	Villa Florida	12.66	122	⇑iP	P	22 47 24.2	-5.2
	comp=N,7µm,1.8s						
MDZ	Mendoza	12.92	179	eP	P	22 47 27.9	-5.0
MDZ				i		22 47 32.2	
JATB	Jatai	16.89	86	c iP	P	22 48 21.4	-2.0
JATB				i		22 48 29.6	
JATB				e		22 48 59.7	
JATB				e		22 53 48.9	
LPA	La Plata	17.96	149	⇓iP	P	22 48 32.9	-3.4
	comp=N,9µm,1.0s						
LPA	La Plata	17.96	149	eP	P	22 48 42.4	+6.1
TRQA	Tornquist	19.14	162	P	P	22 48 43.8	-5.5
TRQA				S	S	22 52 08.2	-6.7
TRQA	Tornquist	19.14	162	⇑iP	P	22 48 43.7	-5.6
	comp=N,8µm,1.0s						
TRQA				iS	S	22 52 06.5	-8.4
BDFB	Brasilia	20.63	82	P	P	22 49 01.1	-3.7
	comp=N,1µm,0.5s,baz=258,slow=12,SNR=336						
BDFB				S	S	22 52 45.8	+1.9
	comp=N,1µm,1.0s,baz=228,slow=16,SNR=1.8						
BDFB				P3KP		23 23 46.2	
	comp=N,5.7nm,0.6s,baz=127,slow=22,SNR=1.4						
BAO	Brasilia Array	20.65	81	P	P	22 49 01.8	-3.3
PLCA	Paso Flores	20.78	183	P	P	22 49 03.4	-2.8
PLCA				P		22 49 03.5	
PLCA				S	S	22 52 49.8	+3.2
PLCA	Paso Flores	20.78	183	P	P	22 49 03.5	-2.7
PLCA				S	S	22 52 49.4	+2.8
PLCA				smax			
	comp=N,228nm,1.0s						
PLCA	Paso Flores	20.78	183	P	P	22 49 03.5	-2.7
	comp=N,2µm,0.8s,baz=5.0,slow=12,SNR=248						
PLCA				S	S	22 52 49.4	+2.8
	comp=N,228nm,1.0s,baz=82,slow=9.8,SNR=2.6						
PLCA	Paso Flores	20.78	183	⇓iP	P	22 49 03.6	-2.7
	comp=N,121nm,0.4s						
PLCA				LR	LR		
	comp=Z,509µm,19.0s						
OTAV	Otavalo	21.98	335	⇓iP	P	22 49 19.9	+1.6
	comp=Z,29µm,1.8s,mb7.3						
OTAV				LR	LR		
	comp=Z,2267µm,20.0s						
CAM4	Nova Friburgo	24.96	100	⇑iP	P	22 49 44.0	-3.1
CAM4				i		22 49 45.6	
CAM4				i		22 49 46.8	
CAM4				i		22 49 48.0	
CAM4				i		22 49 49.5	
ROSC	El Rosal	25.13	348	P	P	22 49 49.2	+0.5
	comp=Z,398nm,0.6s,mb6.0,baz=151,slow=3.6,SNR=98						
ROSC				S	S	22 54 07.6	+5.0
	comp=Z,142nm,0.8s,baz=271,slow=21,SNR=1.8						
ROSC				LR	LR	23 00 57.4	
	comp=Z,1627µm,20.4s,baz=187,slow=39						
ROSC				P3KPbc		23 22 45.5	
	comp=Z,2.8nm,0.3s,baz=98,slow=22,SNR=2.3						
ROSC	El Rosal	25.13	348	P	P	22 49 49.2	+0.5
ROSC				S	S	22 54 07.7	+5.0
ROSC				LR	LR	23 00 57.4	
ROSC				e		23 22 45.5	
PAYG	Puerto Ayora	28.13	310	P	P	22 50 16.6	+0.3
PAYG				P		22 50 16.6	
PAYG	Puerto Ayora	28.13	310	eP	P	22 50 15.8	-0.4
	comp=Z,1µm,0.8s,mb6.4						
PAYG				LR	LR		
	comp=Z,337µm,20.0s						
SDV	Santo Domingo	28.66	357	P	P	22 50 18.9	-2.1
SDV				S	S	22 54 57.1	-2.9
SDV	Santo Domingo	28.66	357	P	P	22 50 19.0	-1.9
	comp=Z,618nm,0.8s,mb6.3,baz=208,slow=6.7,SNR=137						
SDV				S	S	22 54 57.2	-2.7
	comp=Z,164nm,0.7s,baz=44,slow=11,SNR=1.6						
SDV				LR	LR	23 03 07.6	
	comp=Z,1183µm,18.4s,baz=296,slow=39						
SDV				P3KPbc		23 22 31.4	
	comp=Z,4.2nm,0.6s,baz=281,slow=20,SNR=2.8						
SDV	Santo Domingo	28.66	357	eP	P	22 50 18.8	-2.2
	comp=Z,412nm,1.0s,mb6.0						
SDV				LR	LR		
	comp=Z,285µm,20.0s						
UPA	Univ. de Panam	30.46	340	⇓eP	P	22 50 37.6	+0.6
ALNG	Atlantic LNG	30.81	15	eP	P	22 50 41.4	+1.3
PTP1	Petroterminal	30.82	334	⇓eP	P	22 50 42.9	+2.7
TPP	Pointe-a-Pierr	31.00	15	⇑iP	P	22 50 43.2	+1.5
TBH	Brigand Hill	31.26	16	⇑eP	P	22 50 45.1	+1.1
TRN	Trinidad (W)	31.33	15	eP	P	22 50 44.6	0.0
BRU2	Volcan	31.46	334	⇓iP	P	22 50 47.6	+1.8
ACR	Cerro Adams	31.54	333	eP	P	22 50 47.5	+1.1
ACR	Cerro Adams	31.54	333	⇓eP	P	22 50 47.4	+0.9
SVTC	San Vito de Co	31.57	333	⇓eP	P	22 50 48.3	+1.6
BOT	Bacolet	32.00	16	eP	P	22 50 50.9	+0.5
TPR	Prospect	32.00	16	⇑eP	P	22 50 51.0	+0.6
BUS	Buena Vista	32.60	333	eP	P	22 50 57.3	+1.7
BUS	Buena Vista	32.60	333	⇓eP	P	22 50 57.2	+1.6
GRW	Mount Saint Ca	32.73	14	eP	P	22 50 58.5	+1.7
GRHS	Sauteurs	32.80	14	iP	P	22 50 56.9	-0.4
URSC	Urasca	32.86	333	eP	P	22 50 59.0	+1.2
URSC	Urasca	32.86	333	⇓eP	P	22 50 59.1	+1.3
GRIC	Isle de Caille	32.87	14	eP	P	22 50 57.5	-0.5
GRSS	Sisters	32.88	14	⇓eP	P	22 50 57.5	-0.5
CS6B	Jaguaretama	32.98	68	c iP	P	22 50 53.9	-5.0
CS6B				i		22 51 02.5	
CS6B				i	pP	22 51 20.5	-3.5
CS6B				e		22 52 11.1	
LAJ	Bijagual	33.03	332	eP	P	22 51 01.1	+1.7
LAJ	Bijagual	33.03	332	⇑eP	P	22 51 01.1	+1.7
SJS	Escuela Geolog	33.07	332	⇑eP	P	22 51 01.4	+1.7
SJS	Escuela Geolog	33.07	332	⇑eP	P	22 51 01.4	+1.7
SJS				eP		22 51 02.2	
PRS1	Puriscal	33.22	332	eP	P	22 51 02.6	+1.6
PRS1	Puriscal	33.22	332	eP	P	22 51 03.7	+2.7
CGA2	Cerro Gallo 2	33.32	332	eP	P	22 51 03.2	+1.4
CGA2	Cerro Gallo 2	33.32	332	⇑eP	P	22 51 04.8	+3.0
VPS2	Volcan Poas 2	33.37	332	eP	P	22 51 05.2	+3.0
VPS2	Volcan Poas 2	33.37	332	eP	P	22 51 05.3	+3.1
JCR	Jicaral	33.47	331	eP	P	22 51 02.8	-0.3
JCR	Jicaral	33.47	331	eP	P	22 51 05.0	+1.9
TRTC	Tortuguero	33.49	334	eP	P	22 51 04.5	+1.2
TRTC	Tortuguero	33.49	334	⇑iP	P	22 51 04.4	+1.1
JTS	JuntasAbangare	33.78	331	P	P	22 51 06.4	+0.6
	comp=Z,5.5nm,0.3s,baz=162,slow=6.1,SNR=55						
JTS				S	S	22 56 20.7	+0.5
	comp=Z,33nm,0.8s,baz=219,slow=18,SNR=1.9						
JTS				P3KP		23 23 15.9	
	comp=Z,3.0nm,0.7s,baz=347,slow=18,SNR=2.5						
JTS	JuntasAbangare	33.78	331	eP	P	22 51 06.7	+0.9
	comp=Z,8µm,1.8s,mb7.3						
JTS				LR	LR		
	comp=Z,298µm,20.0s						
FCV	Fort Charlotte	33.79	14	eP	P	22 51 04.8	-1.1
FORC	Fortuna	33.81	332	eP	P	22 51 08.5	+2.4
FORC	Fortuna	33.81	332	eP	P	22 51 09.4	+3.3
SVB	Belmont	33.90	14	eP	P	22 51 06.0	-0.8
VCR	Vista de Mar	33.95	330	eP	P	22 51 08.0	+0.8
VCR	Vista de Mar	33.95	330	⇓eP	P	22 51 08.1	+0.8
BHS	Barnard House	33.95	14	eP	P	22 51 07.0	-0.3
SFAN	Fancy Village	34.02	14	eP	P	22 51 06.1	-1.7
CAUB	Caruaru	34.19	75	c iP	P	22 51 06.2	-3.0
CAUB				e		22 51 14.8	
CAUB				e	pP	22 51 33.0	-1.5
CAUB				e		22 51 45.1	
CAUB				i		22 52 30.7	
CAUB				e		22 56 24.8	
BBSP	Saint Philip	34.19	17	e	S	22 56 25.4	-1.0
SLB	Belfond	34.48	14	eP	P	22 51 10.3	-1.5
SLW	Petit Monier	34.69	14	eP	P	22 51 12.9	-0.7
USHA	Ushuaia	34.86	179	P	P	22 51 12.4	-2.2
	comp=Z,567nm,0.9s,mb6.4,baz=351,slow=5.2,SNR=64						
USHA				S	S	22 56 35.4	-1.0
	comp=Z,31nm,0.8s,baz=57,slow=5.7,SNR=1.7						
USHA				sS		22 57 15.8	
	comp=Z,28nm,0.9s,baz=84,slow=23,SNR=3.2						
USHA				SS	SS	22 59 09.7	+12
	comp=Z,37nm,1.0s,baz=171,slow=12,SNR=2.1						
BIM	Bigot	35.14	14	⇑eP	P	22 51 15.3	-2.1
CONN	Concepcion	35.21	331	eP	P	22 51 18.3	+0.4
MVM	Montagne Vaucl	35.22	14	eP	P	22 51 15.6	-2.4
RCBR	Riachuelo	35.27	71	⇑eP	P	22 51 16.0	-2.5
	comp=Z,4µm,0.8s,mb7.3						
RCBR				LR	LR		
	comp=Z,996µm,20.0s						
FDF	Fort de France	35.33	14	eP	P	22 51 16.7	-2.3
APON	Apoyo	35.72	331	⇓eP	P	22 51 22.5	+0.3
MASN	Masaya	35.82	331	⇑eP	P	22 51 23.7	+0.6
MASN				eP		22 51 24.6	
CRUN	El Crucero	35.88	331	eP	P	22 51 24.5	+0.9
TICN	Ticuantepe	35.90	331	⇑eP	P	22 51 25.9	+2.1
WILN	Americas 2	35.99	331	⇓eP	P	22 51 24.7	+0.2
MGAN	Managua	36.00	331	eP	P	22 51 25.3	+0.6
BBL	Barber's Block	36.03	13	eP	P	22 51 22.2	-2.7
XAVN	Gruta Xavier	36.04	331	⇑eP	P	22 51 25.5	+0.5
DWS	Wesley	36.11	13	eP	P	22 51 22.1	-3.4
APYN	Apoyeque	36.13	331	eP	P	22 51 26.0	+0.3
PYTN	Playitas	36.26	331	⇓eP	P	22 51 26.9	+0.1
MOMJ	Momotombo	36.37	331	⇓eP	P	22 51 27.5	-0.2
MGG	Marie-Galante	36.45	13	eP	P	22 51 25.2	-3.2
MIRN	Miramar	36.48	330	⇑eP	P	22 51 28.2	-0.4
CNGN	Cerro Negro	36.52	330	⇑eP	P	22 51 28.7	-0.3
LEON	Leon	36.54	330	⇓eP	P	22 51 28.8	-0.3
TEL3	Telica 3	36.65	330	eP	P	22 51 30.0	-0.1
TELN	Telica	36.67	330	eP	P	22 51 30.0	-0.2
CRIN	San Cristobal	36.86	330	eP	P	22 51 32.9	+1.0
SEG	Port Louis	36.88	12	eP	P	22 51 28.3	-3.7
DEG	La Desirade	36.88	13	eP	P	22 51 28.2	-3.9
BPA	Boggy Peak	37.44	12	eP	P	22 51 32.4	-4.2
BPA	Boggy Peak	37.44	12	e	S	22 57 15.2	-1.0
SKTB	Turtle Beach	37.46	10	eP	P	22 51 33.1	-3.7
SKI	Saint Kitts	37.56	10	eP	P	22 51 35.1	-2.6
SKDB	Saint Kitts 2	37.61	10	eP	P	22 51 36.0	-2.1
CNCH	Conchagua	37.73	329	⇓eP	P	22 51 41.3	+2.2
SABT	Saba	37.76	9	eP	P	22 51 37.9	-1.4
SABT	Saba	37.76	9	e	S	22 57 17.8	-3.3
SJG	San Juan	37.91	5	P	P	22 51 38.2	-2.4
	comp=Z,2µm,0.6s,mb7.2,baz=188,slow=3.8,SNR=314						
SJG				S	S	22 57 18.1	-5.3
	comp=Z,1µm,1.1s,baz=279,slow=22,SNR=20						
SJG				SS	SS	23 00 09.9	+3.7
	comp=Z,110nm,1.2s,baz=44,slow=14,SNR=1.9						
SJG				P3KP		23 23 19.3	
	comp=Z,3.0nm,0.3s,baz=320,slow=19,SNR=3.2						
SJG	San Juan	37.91	5	eP	P	22 51 38.0	-2.6
	comp=Z,5µm,1.0s,mb7.3						
SJG				LR	LR		
	comp=Z,404µm,22.0s						
CPB	Codrington	38.02	11	eP	P	22 51 36.8	-4.7
BLLM	Bellamira	38.07	329	⇓eP	P	22 51 44.3	+2.4
VSM	San Miguel	38.08	329	⇓eP	P	22 51 44.6	+2.6
STMA	St. Maarten, A	38.20	9	eP	P	22 51 40.7	-2.2
PCJ	Portland Cotta	38.23	348	⇓eP	P	22 51 42.3	-0.9
YHJ	Yallahs	38.25	349	⇓eP	P	22 51 42.5	-0.9
HOJ	Hope	38.40	348	⇓eP	P	22 51 43.5	-1.2
GWJ	Greenwich	38.47	348	⇓eP	P	22 51 43.9	-1.3
STH	Stony Hill	38.48	348	⇓eP	P	22 51 44.4	-1.0
SNVI	San Vicente	38.51	328	⇑eP	P	22 51 50.2	+4.6
MCJ	Malvern	38.51	347	⇓eP	P	22 51 45.1	-0.5
LCBS	La Ceiba	38.62	328	⇓eP	P	22 51 49.1	+2.6
LFRS	El Faro	38.63	328	⇓eP	P	22 51 49.2	+2.7
LBRS	Las Brisas	38.72	328	eP	P	22 51 50.8	+3.5
BOQS	Boqueron	38.83	328	⇑eP	P	22 51 52.4	+4.1
BBJ	Bamboo Saint A	38.87	348	⇓eP	P	22 51 47.4	-1.2
SBLS	San Blas	39.09	328	⇓eP	P	22 51 53.5	+3.1
SNJE	San Jose	39.11	328	⇓eP	P	22 51 53.6	+3.1
RTR	El Retiro	39.16	328	⇓eP	P	22 51 54.1	+3.2
RBDL	Robledal	39.36	328	⇑eP	P	22 51 56.1	+3.5
MTO2	Montecristo 2	39.44	328	⇓eP	P	22 51 56.4	+3.1
IXG	Ixpaco	39.80	327	⇓eP	P	22 51 57.1	+0.8
MASC	Masc	40.15	353	eP	P	22 51 58.7	-0.4
MASC				eS	S	22 57 53.0	-3.9
	comp=N,124µm,3.6s						
	comp=E,137µm,3.6s						
RCC	Rio Carpintero	40.17	351	⇓iP	P	22 52 02.2	+2.9
RCC				iS	S	22 57 40.0	-17
	comp=N,137µm,9.7s						
	comp=E,250µm,9.7s						
MRL	Marmol	40.17	328	⇓eP	P	22 52 00.1	+0.8
TP2	Tecpan 2	40.61	326	⇓eP	P	22 52 04.4	+1.5
MOAC	Moa	40.72	352	⇓iP	P	22 52 02.5	-1.2
MOAC				iS	S	22 57 59.3	-6.1
	comp=N,236µm,12.3s						
	comp=E,330µm,10.2s						
CCCC	Cccc	41.71	348	eP	P	22 52 11.7	-0.3
CCIG	Comitan	42.44	326	⇓iP	P	22 52 18.1	0.0
TEIG	Tepich	44.05	334	⇓eP	P	22 52 30.0	-1.0
	comp=E,2µm,1.1s,mb6.7						
TEIG				LR	LR		
	comp=Z,169µm,20.0s						
HUIG	Huatulco	44.23	321	⇓iP	P	22 52 33.2	+0.7
SOR	Soroa	44.53	342	eP	P	22 52 34.1	-0.8
SOR				eS	S	22 59 01.5	+0.4
	comp=N,361µm,3.8s						
	comp=E,351µm,3.8s						
CMIG	Matias Romero	44.59	324	⇓iP	P	22 52 35.6	+0.2
PMSA	Palmer Station	44.96	177	ScS	ScS	23 02 23.2	+2.5
PMSA	Palmer Station	44.96	177	P	P	22 52 36.6	-1.2
PMSA				sP	sP	22 53 13.8	-2.8
PMSA				S	S	22 59 09.9	+3.1
PMSA	Palmer Station	44.96	177	eP	P	22 52 35.9	-1.8
	comp=E,2µm,1.2s,mb6.6						
PMSA				LR	LR		
	comp=Z,210µm,22.0s						
VHO	Vista Hermosa	45.62	322	⇓iP	P	22 52 44.6	+1.0
OXX	Oaxaca	45.63	322	⇓eP	P	22 52 45.4	+1.8
PNIG	Pinotepa	45.92	320	⇓iP	P	22 52 46.3	+0.4
EVV	El Vigia	45.95	324	eP	P	22 52 46.0	-0.1
ACX	Acapulco	47.39	318	⇓iP	P	22 52 57.4	-0.1
IISM	Ciudad Serdan	47.51	323	eP	P	22 52 58.2	-0.2
LVIG	Laguna Verde	47.56	324	⇓iP	P	22 52 58.3	-0.5
CAIG	El Cayaco	47.74	318	⇓iP	P	22 53 00.3	+0.1
PLIG	Platanillo	48.29	320	⇓iP	P	22 53 05.4	+0.9
PPM	Popocatepetl	48.30	322	⇑iP	P	22 53 06.2	+1.7
PPM				⇓iP		22 53 06.4	
PPM				iP		22 53 07.6	
CHVM	Chichinautzin	48.62	321	⇓iP	P	22 53 07.7	+0.7
IIO	Organos	48.76	322	⇓iP	P	22 53 09.0	+0.9
UNM	Universidad Na	48.82	321	⇓iP	P	22 53 10.2	+1.6
ZIIG	Zihuatanejo	48.92	318	⇓iP	P	22 53 09.3	+0.1
SZVM	Salazar	48.94	321	⇓iP	P	22 53 10.2	+0.8
PTVM	Pico Tres Padr	48.99	321	⇓eP	P	22 53 10.2	+0.4
MDVM	Presa Madin	49.03	321	⇓iP	P	22 53 10.8	+0.7
DWPF	Disney	49.19	346	P	P	22 53 10.4	-0.8
DWPF				S	S	23 00 06.7	-0.1
DWPF				sS		23 00 49.0	
DWPF	Disney	49.19	346	eP	P	22 53 10.2	-1.0
	comp=Z,2µm,0.8s,mb7.2						
DWPF				epP	pP	22 53 37.5	-0.2
DWPF				LR	LR		
	comp=Z,321µm,20.0s						
IIC	Rita Coyotepec	49.21	321	⇓eP	P	22 53 12.0	+0.4
IIJ	Jocotitlan	49.47	321	⇓eP	P	22 53 10.8	-2.6
MOIG	Morelia	50.30	320	⇓iP	P	22 53 20.8	+1.0
COLM	Colima	51.50	317	⇑iP	P	22 53 29.2	+0.2
SFJM	Santa Fe	52.05	319	⇓iP	P	22 53 33.2	+0.2
TRIS	Tristan da Cun	52.10	122	P	P	22 53 31.2	-2.1
TRIS				S	S	23 00 50.1	+3.2
TRIS	Tristan da Cun	52.10	122	eP	P	22 53 30.7	-2.6
	comp=Z,3µm,0.9s,mb7.3						
TRIS				epP	pP	22 53 60.0	0.0
TRIS				LR	LR		
	comp=Z,145µm,21.0s						
BBSR	BB Station	52.17	5	P	P	22 53 31.4	-2.5
BBSR				SPn		23 00 29.7	
BBSR				S	S	23 00 46.2	-1.7
BBSR	BB Station	52.17	5	eP	P	22 53 31.4	-2.4
	comp=Z,2µm,0.8s,mb7.1						
BBSR				LR	LR		
	comp=Z,153µm,20.0s						
CJM	Chamela	52.60	316	⇓iP	P	22 53 36.7	-0.5
RGRS	Roger Stewart	53.56	349	eP	P	22 53 43.1	-1.0
CSU	Charleston Sou	53.62	349	⇓eP	P	22 53 43.7	-0.8
TWB	Tillmans-White	53.75	349	eP	P	22 53 44.4	-1.1
NHSC	New Hope	53.75	349	eP	P	22 53 44.6	-0.9
	comp=Z,24nm,0.3s,mb5.7						
NHSC				LR	LR		
	comp=Z,268µm,20.0s						
COW	Cow Castle Cre	54.12	348	eP	P	22 53 47.0	-1.2
JSC	Jenkinsville	55.10	348	⇓eP	P	22 53 53.9	-1.4
LRAL	Lakeview Retre	55.33	342	⇓iP	P	22 53 54.7	-2.3
	comp=Z,1µm,1.1s,mb6.8						
LRAL				epP	pP	22 54 23.3	-0.7
LRAL				LR	LR		
	comp=Z,375µm,21.0s						
PTCN	Pitcairn Islan	56.09	253	eP	P	22 54 02.4	-0.2
	comp=Z,11µm,1.3s,mb7.7						
PTCN				LR	LR		
	comp=Z,376µm,19.0s						
MAIG	Mazatlaan	56.15	318	⇓iP	P	22 54 02.9	-0.1
NATX	Nacogdoches	56.88	334	eP	P	22 54 07.3	-0.7
	comp=Z,5µm,1.1s,mb7.5						
NATX				LR	LR		
	comp=Z,164µm,20.0s						
CPCT	Cooper Cave	56.94	345	⇓eP	P	22 54 06.3	-2.1
SWET	Sewanee	57.08	344	⇓iP	P	22 54 07.2	-2.2
SWET				epP	pP	22 54 36.1	-0.4
OXF	Oxford	57.44	340	eP	P	22 54 08.9	-3.0
	comp=Z,1µm,1.1s,mb6.9						
OXF				LR	LR		
	comp=Z,165µm,20.0s						
PLAL	Pickwick Lake	57.46	342	⇓eP	P	22 54 09.2	-2.9
	comp=Z,3µm,1.1s,mb7.2						
PLAL				epP	pP	22 54 38.2	-1.0
PLAL				LR	LR		
	comp=Z,321µm,21.0s						
TZTN	Tazewell	57.77	346	⇓eP	P	22 54 12.0	-2.2
BLA	Blacksburg	57.79	349	eP	P	22 54 13.4	-1.0
BLA				pmax	pmax		
	comp=Z,2µm,3.2s						
BLA				MLR	MLR		
	comp=Z,205µm,21.0s						
BLA	Blacksburg	57.79	349	eP	P	22 54 13.4	-1.0
	comp=Z,2µm,3.2s						
BLA				LR	LR		
	comp=Z,205µm,21.0s						
ELN	Prospectdale	57.87	349	eP	P	22 54 14.0	-0.9
MET	Memphis--Engin	58.16	340	eP	P	22 54 16.0	-1.0
FWV	Forest Hill	58.22	349	eP	P	22 54 16.2	-1.1
CBN	Corbin	58.32	352	eP	P	22 54 16.2	-1.8
	comp=Z,6µm,1.7s,mb7.4						
CBN				LR	LR		
	comp=Z,415µm,21.0s						
WVT	Waverly	58.46	342	eP	P	22 54 15.5	-3.5
	comp=Z,2µm,0.6s,mb7.3						
WVT				LR	LR		
	comp=Z,196µm,22.0s						
WVT	Waverly	58.46	342	P	P	22 54 16.2	-2.8
UALR	University of	58.66	338	eP	P	22 54 18.1	-2.4
	comp=Z,3µm,1.3s,mb7.2						
HALT	Halls	58.70	341	eP	P	22 54 18.1	-2.6
HBAR	Harrisburg	58.80	340	eP	P	22 54 19.3	-2.1
UTMT	University of	58.96	342	eP	P	22 54 20.1	-2.4
	comp=Z,8µm,1.2s,mb7.6						
GNAR	Gosnell	58.97	340	eP	P	22 54 20.4	-2.1
GLAT	Glass	59.02	341	eP	P	22 54 20.5	-2.4
LTX	Lajitas	59.17	325	eP	P	22 54 22.5	-1.6
LTX				e*PP	pP	22 54 49.2	-2.2
LTX				pmax	pmax		
	comp=Z,264nm,0.7s,mb6.4						
LTX				MLR	MLR		
	comp=Z,238µm,21.0s						
LTX	Lajitas	59.17	325	eP	P	22 54 22.5	-1.6
	comp=Z,264nm,0.7s,mb6.4						
LTX				epP	pP	22 54 49.2	-2.2
LTX				LR	LR		
	comp=Z,238µm,21.0s						
TXAR	Lajitas Array	59.17	325	P	P	22 54 22.4	-1.7
	comp=Z,145nm,0.7s,mb6.1,baz=148,slow=7.8,SNR=170						
TXAR				pP	pP	22 54 48.9	-2.5
	comp=Z,157nm,0.8s,baz=104,slow=31,SNR=5.5						
TXAR				sP	sP	22 55 01.7	-2.2
	comp=Z,136nm,0.9s,baz=85,slow=14,SNR=1.6						
TXAR				S	S	23 02 21.7	+0.8
	comp=Z,10nm,1.0s,baz=238,slow=44,SNR=2.7						
TXAR				PKP2bc		23 23 58.8	
	comp=Z,16nm,1.2s,slow=1.3,SNR=5.3						
TXAR				P4KPbc		23 31 31.8	
	comp=Z,2.4nm,0.9s,baz=135,slow=3.5,SNR=9.7						
TXAR	Lajitas Array	59.17	325	P	P	22 54 22.4	-1.7
TXAR				pP	pP	22 54 48.9	-2.5
TXAR				sP	sP	22 55 01.7	-2.2
TXAR				S	S	23 02 21.7	+0.8
TXAR				⇑e		23 23 58.8	
PVMO	Portageville	59.28	341	eP	P	22 54 22.8	-1.9
SDMD	Soldier's Deli	59.44	353	eP	P	22 54 23.8	-2.0
PARMO	Parma	59.52	341	eP	P	22 54 24.5	-1.9
BRNJ	Basking Ridge	60.49	355	eP	P	22 54 31.7	-1.2
CPNY	Central Park	60.55	356	eP	P	22 54 31.1	-2.2
PAL	Palisades	60.77	356	eP	P	22 54 32.6	-2.2
PAL				pmax	pmax		
	comp=Z,413nm,0.5s,mb6.7						
PAL	Palisades	60.77	356	eP	P	22 54 32.6	-2.2
	comp=Z,413nm,0.5s,mb6.7						
RKT	Rikitea	60.80	254	eP	P	22 54 19.6	-16
	comp=Z,415µm,27.8s						
RKT				eS	S	23 02 50.6	+8.8
	comp=Z,1241µm,24.5s						
RKT				eLQ		23 09 57.4	
	comp=Z,502µm,27.8s						
RKT				eLR	LR	23 12 30.3	
FVM	French Village	60.95	341	⇓eP	P	22 54 34.0	-2.1
FVM				pmax	pmax		
	comp=Z,4µm,0.8s,mb7.5						
FVM	French Village	60.95	341	⇓eP	P	22 54 34.0	-2.1
	comp=Z,4µm,0.8s,mb7.5						
BLO	Bloomington	60.97	345	eP	P	22 54 33.6	-2.6
BLO				pmax	pmax		
	comp=Z,2µm,0.6s,mb7.4						
BLO	Bloomington	60.97	345	eP	P	22 54 33.6	-2.6
	comp=Z,2µm,0.6s,mb7.4						

WMOK	Wichita Mounta	61.19	332	⇓eP	P	22 54 35.2	-2.5
WMOK				pmax	pmax		
	comp=Z,1µm,2.7s,mb6.5						
WMOK	Wichita Mounta	61.19	332	⇓eP	P	22 54 35.2	-2.6
	comp=Z,1µm,2.7s,mb6.5						
WMOK				epP	pP	22 55 05.0	-0.2
WMOK				LR	LR		
	comp=Z,120µm,19.0s						
SLM	Saint Louis	61.49	341	eP	P	22 54 37.1	-2.6
SLM				eS	S	23 02 50.4	0.0
SLM				pmax	pmax		
	comp=Z,3µm,1.3s,mb7.2						
SLM	Saint Louis	61.49	341	eP	P	22 54 37.1	-2.6
	comp=Z,3µm,1.3s,mb7.2						
SLM				eS	S	23 02 50.4	+0.1
BRYW	Bryant College	61.56	358	eP	P	22 54 38.6	-1.5
	comp=Z,4µm,0.9s,mb7.4						
BRYW				epP	pP	22 55 07.0	-0.6
CLNB	Carlsbad	61.59	327	⇓eP	P	22 54 39.6	-0.9
VNA3	Neumayer Olymp	61.66	162		pP	22 55 05.4	-2.5
VNA3	Neumayer Olymp	61.66	162	⇑i	sP	22 55 18.4	-2.0
VNA3	Neumayer Olymp	61.66	162	P	P	22 54 39.3	-1.1
VNA3				P	pP	22 55 05.4	-2.5
GDL2	Guadalupe Moun	61.79	326	P	P	22 54 41.5	-0.3
VNA1	Neumayer--Stat	61.87	161	P	P	22 54 40.8	-1.0
MNTX	Cornudas Mount	61.94	325	⇓eP	P	22 54 40.5	-2.3
	comp=Z,210nm,0.7s,mb6.3						
MNTX				LR	LR		
	comp=Z,90µm,20.0s						
QUA2	Belchertown	61.95	357	eP	P	22 54 40.7	-2.0
	comp=Z,733nm,0.5s,mb7.0						
WES	Weston	62.02	358	P	P	22 54 41.6	-1.6
WES				pmax	pmax		
	comp=Z,3µm,1.2s,mb7.1						
WES	Weston	62.02	358	eP	P	22 54 41.3	-1.9
	comp=Z,733nm,0.5s,mb7.0						
ALLY	Alegheny Colle	62.08	351	eP	P	22 54 42.1	-1.6
BINY	Binghamton	62.12	354	eP	P	22 54 42.7	-1.2
	comp=Z,1µm,1.1s,mb6.9						
BINY				LR	LR		
	comp=Z,289µm,22.0s						
HRV	Harvard--Oak R	62.15	358	P	P	22 54 42.7	-1.3
HRV				S	S	23 02 58.8	+0.2
HRV	Harvard--Oak R	62.15	358	PnS		23 03 43.6	
HRV	Harvard--Oak R	62.15	358	eP	P	22 54 42.4	-1.6
	comp=Z,3µm,1.2s,mb7.2						
HRV				LR	LR		
	comp=Z,77µm,21.0s						
CPRX	Cap Rock	62.19	327	eP	P	22 54 43.0	-1.5
VNA2	Neumayer--Watz	62.23	161	⇑i	pP	22 55 09.1	-2.7
VNA2	Neumayer--Watz	62.23	161	⇑i	sP	22 55 22.1	-2.1
VNA2	Neumayer--Watz	62.23	161	P	P	22 54 43.2	-1.0
VNA2				⇑iP	pP	22 55 09.1	-2.7
AMTX	Amarillo	62.62	330	eP	P	22 54 45.0	-2.3
	comp=Z,4µm,1.0s,mb7.3						
AMTX				LR	LR		
	comp=Z,243µm,21.0s						
GENY	Geneseo	62.87	353	eP	P	22 54 47.4	-1.5
FFD	Franklin Falls	63.11	358	eP	P	22 54 44.8	-5.6
	comp=Z,4µm,1.3s,mb7.2						
ACCN	Adirondack Com	63.12	356	eP	P	22 54 49.0	-1.4
BUF	Buffalo	63.16	352	i P	P	22 54 49.8	-0.9
AAM	Ann Arbor	63.33	348	eP	P	22 54 49.4	-2.5
AAM				pmax	pmax		
	comp=Z,2µm,1.1s,mb7.0						
AAM				MLR	MLR		
	comp=Z,328µm,21.0s						
AAM	Ann Arbor	63.33	348	eP	P	22 54 49.4	-2.5
	comp=Z,2µm,1.1s,mb7.0						
AAM				LR	LR		
	comp=Z,328µm,21.0s						
HNH	Hanover	63.37	358	eP	P	22 54 52.0	-0.1
	comp=Z,59nm,0.5s,mb5.8						
MDV	Middlebury	63.70	357	P	P	22 54 53.8	-0.6
NCB	Newcomb	63.74	356	⇓eP	P	22 54 53.2	-1.3
	comp=Z,296nm,0.8s,mb6.2						
NCB				LR	LR		
	comp=Z,209µm,22.0s						
MIV	Mineville/With	63.80	357	eP	P	22 54 53.4	-1.5
SNAA	Sanae	63.86	161	P	P	22 54 52.8	-2.1
SNAA				S	S	23 03 20.6	+1.1
SNAA				SSS	SSS	23 10 28.7	+7.4
SNAA				pmax	pmax		
	comp=Z,439nm,0.8s						
SNAA				smax			
	comp=N,6.0nm,1.1s						
SNAA	Sanae	63.86	161	P	P	22 54 52.8	-2.1
	comp=N,439nm,0.8s,mb6.3,baz=283,slow=6.9,SNR=538						
SNAA				S	S	23 03 20.6	+1.1
	comp=N,6.4nm,1.1s,baz=29,slow=21,SNR=3.5						
SNAA				SS	SS	23 07 20.4	-11
	comp=N,3.8nm,1.1s,baz=179,slow=12,SNR=1.9						
SNAA				SSS	SSS	23 10 28.7	+7.4
	comp=N,2.0nm,1.1s,baz=220,slow=21,SNR=1.3						
SNAA				PKP2bc		23 23 50.2	
	comp=N,50nm,1.1s,baz=98,slow=6.5,SNR=3.1						
SNAA				P4KPbc		23 31 50.2	
	comp=N,1.1nm,1.0s,baz=56,slow=15,SNR=3.0						
SNAA	Sanae	63.86	161	⇓eP	P	22 54 52.7	-2.2
	comp=N,1µm,0.9s,mb6.7						
SNAA				epP	pP	22 55 22.6	+0.1
KSU1	Kansas State U	64.07	337	eP	P	22 54 54.5	-2.3
WVL	Waterville	64.17	360	eP	P	22 54 55.9	-1.4
	comp=N,10µm,1.6s,mb7.4						
WVL				LR	LR		
	comp=Z,537µm,21.0s						
BNM	Barren Site	64.50	326	eP	P	22 54 58.9	-0.7
FRNY	Flat Rock	64.56	357	⇓eP	P	22 54 58.6	-1.2
LPM	Los Pinos Moun	64.62	326	eP	P	22 54 59.6	-0.8
LENM	Lemitar	64.69	326	eP	P	22 55 00.2	-0.7
MSNY	Massena	64.80	356	eP	P	22 54 60.0	-1.5
LAZ	Ladron	64.96	326	eP	P	22 55 02.0	-0.6
ANMO	Albuquerque	65.03	327	P	P	22 55 02.4	-0.6
ANMO				S	S	23 03 36.7	+2.2
ANMO	Albuquerque	65.03	327	P	P	22 55 02.4	-0.7
	comp=Z,224nm,0.8s,mb6.0,baz=144,slow=8.0,SNR=142						
ANMO				S	S	23 03 37.6	+3.1
	comp=Z,14nm,1.2s,baz=133,slow=12,SNR=2.0						
ANMO				sS		23 04 18.8	
	comp=Z,10nm,1.1s,baz=17,slow=7.3,SNR=2.5						
ANMO				SS	SS	23 07 42.1	-8.3
	comp=Z,3.7nm,0.9s,baz=8.9,slow=19,SNR=2.8						
ANMO				PKPPKP		23 23 42.3	
	comp=Z,11nm,1.0s,baz=336,slow=4.3,SNR=6.8						
ANMO				LR	LR	23 24 34.9	
	comp=Z,139µm,21.2s,baz=295,slow=37						
ANMO				P4KPbc		23 31 56.9	
	comp=Z,4.4nm,0.8s,baz=138,slow=8.2,SNR=9.0						
ANMO	Albuquerque	65.03	327	eP	P	22 55 02.1	-1.0
	comp=Z,95nm,2.7s						
ANMO				LR	LR		
	comp=Z,84µm,19.0s						
CBKS	Cedar Bluff	65.05	334	P	P	22 55 02.0	-1.1
CBKS				pmax	pmax		
	comp=Z,4µm,1.0s,mb7.2						
CBKS	Cedar Bluff	65.05	334	eP	P	22 55 01.6	-1.6
	comp=Z,4µm,1.0s,mb7.2						
CBKS				LR	LR		
	comp=Z,175µm,20.0s						
TUC	Tucson	65.42	322	P	P	22 55 05.0	-0.7
TUC				S	S	23 03 43.6	+4.3
TUC	Tucson	65.42	322	pP	pP	22 55 41.4	+8.0
TUC				PP	Px	22 58 12.0	
TUC	Tucson	65.42	322	eP	P	22 55 05.1	-0.5
TUC				pmax	pmax		
	comp=Z,4µm,1.5s,mb7.0						
TUC				MLR	MLR		
	comp=Z,153µm,19.0s						
TUC	Tucson	65.42	322	eP	P	22 55 05.1	-0.6
	comp=Z,4µm,1.5s,mb7.0						
TUC				LR	LR		
	comp=Z,153µm,19.0s						
JFWS	Jewell Farm	65.45	343	eP	P	22 55 03.5	-2.1
JFWS				pmax	pmax		
	comp=Z,386nm,0.8s,mb6.3						
JFWS				MLR	MLR		
	comp=Z,363µm,22.0s						
JFWS	Jewell Farm	65.45	343	eP	P	22 55 03.5	-2.2
	comp=Z,386nm,0.8s,mb6.3						
JFWS				LR	LR		
	comp=Z,363µm,22.0s						
PQI	Presque Isle	66.28	1	eP	P	22 55 09.2	-1.7
	comp=Z,32nm,1.1s						
PQI				LR	LR		
	comp=Z,754µm,20.0s						
SDCO	Great Sand Dun	66.75	329	⇓eP	P	22 55 13.5	-0.4
	comp=Z,910nm,0.6s,mb6.8						
SDCO				epP	pP	22 55 42.6	+0.8
SDCO				LR	LR		
	comp=Z,237µm,22.0s						
WUAZ	Wupatki	68.09	324	⇓eP	P	22 55 22.7	+0.3
	comp=Z,4µm,0.7s,mb7.3						
WUAZ				LR	LR		
	comp=Z,352µm,22.0s						
RW3	Ridgway	68.21	328	eP	P	22 55 22.6	-0.4
MAIT	Maitri	68.38	159	⇓iP	P	22 55 20.3	-3.2
MAIT				eS	S	23 04 15.3	+1.1
NVL	N'lazarevskaya	68.41	159	⇓iP	P	22 55 22.4	-1.3
NVL				i	pP	22 55 51.1	-0.6
NVL				i		22 57 56.6	
NVL				i PPP	PPP	22 59 35.6	-0.2
NVL				i S	S	23 04 14.5	-0.1
NVL				i		23 05 17.0	
NVL				pmax	pmax		
	comp=Z,432nm,1.2s,mb6.2						
NVL				MLR	MLR		
	comp=Z,9µm,15.6s						
ISCO	Idaho Springs	68.43	331	P	P	22 55 24.2	-0.2
ISCO				pmax	pmax		
	comp=Z,2µm,1.1s,mb6.9						
ISCO	Idaho Springs	68.43	331	⇓eP	P	22 55 24.0	-0.3
	comp=Z,461nm,0.6s,mb6.5						
ISCO				epP	pP	22 55 52.5	+0.1
ISCO				LR	LR		
	comp=Z,250µm,22.0s						
PV01	Paradox Valley	68.56	328	eP	P	22 55 25.0	-0.2
DBIC	Dimbokro	68.57	74	P	P	22 55 23.1	-2.5
DBIC				pP	pP	22 55 51.3	-2.4
DBIC				S	S	23 04 12.2	-5.3
DBIC	Dimbokro	68.57	74	P	P	22 55 23.1	-2.5
	comp=Z,3µm,0.8s,mb7.1,baz=225,slow=6.9,SNR=243						
DBIC				pP	pP	22 55 51.0	-2.6
	comp=Z,3µm,1.0s,baz=217,slow=11,SNR=2.6						
DBIC				sP	sP	22 56 03.5	-2.3
	comp=Z,3µm,0.9s,baz=217,slow=6.6,SNR=3.1						
DBIC				S	S	23 04 15.6	-1.9
	comp=Z,156nm,1.2s,baz=261,slow=14,SNR=15						
DBIC				LR	LR	23 23 21.8	
	comp=Z,298µm,20.9s,baz=296,slow=34						
DBIC				PKPPKP		23 23 34.8	
	comp=Z,40nm,1.2s,baz=116,slow=2.7,SNR=4.2						
DBIC	Dimbokro	68.57	74	eP	P	22 55 23.1	-2.6
	comp=Z,1.5nm,0.5s						
DBIC				LR	LR		
	comp=Z,80µm,22.0s						
CHIE	El Hierro	68.57	48	P	P	22 55 26.1	+0.7
	comp=Z,2µm,1.5s,mb6.8						
PV10	Paradox Valley	68.98	327	eP	P	22 55 26.8	-1.0
TAOE	Nuku Hiva Isla	69.17	268	eP	P	22 55 29.4	+0.1
TAOE				eLR	LR	23 15 43.9	
EHIG	Higuera	69.19	47	⇑P	P	22 55 28.3	-1.0
	comp=Z,24µm,3.4s						
BAR	Barrett	69.23	318	eP	P	22 55 29.5	+0.1
EGOM	La Gomera	69.36	48	P	P	22 55 28.9	-1.4
	comp=Z,8µm,1.9s,mb7.2						
HOR	Horta	69.49	33	eP	P	22 55 32.9	+2.0
CALA	Caldeira	69.49	33	e		23 04 23.3	
PHWY	Pilot Hill	69.57	332	eP	P	22 55 30.9	-0.5
PICO	Pico	69.57	33	eP	P	22 55 33.4	+2.0
PICO				eS	S	23 04 41.0	+12
PFO	Pinyon Flat Ob	69.72	319	P	P	22 55 32.5	+0.1
PFO				pmax	pmax		
	comp=Z,2µm,1.1s,mb6.9						
PFO	Pinyon Flat Ob	69.72	319	eP	P	22 55 32.4	0.0
	comp=Z,2µm,1.1s,mb6.9						
PFO				LR	LR		
	comp=Z,27µm,22.0s						
CCAN	Las Canadas	69.83	48	P	P	22 55 33.4	+0.3
	comp=Z,425nm,0.8s,mb6.3						
PMAN	Manadas	69.84	33	eP	P	22 55 33.8	+0.8
	comp=Z,3µm,1.4s,mb6.9						
PMAN				eS	S	23 04 39.4	+7.3
LDFC	Landfair	69.92	321	⇓iP	P	22 55 34.4	+0.8
LDFC				eS	S	23 04 41.9	+8.9
NEN	Nelson	70.16	322	eP	P	22 55 35.0	0.0
PGRA	Graciosa	70.20	33	eP	P	22 55 35.2	0.0
	comp=Z,3µm,1.1s,mb7.0						
PGRA				eS	S	23 04 38.8	+2.6
EBAJ	Bajamar	70.20	48	P	P	22 55 34.0	-1.4
	comp=Z,34µm,4.3s						
STGR	Santa Cruz	70.23	33	eP	P	22 55 37.7	+2.4
	comp=Z,1µm,1.2s,mb6.7						
QSPA	South Pole Qui	70.27	180	eP	P	22 55 34.3	-0.6
	comp=Z,3µm,1.1s,mb7.0						
QSPA				LR	LR		
	comp=Z,138µm,22.0s						
SRU	San Rafael	70.30	327	⇓eP	P	22 55 35.6	-0.2
ADH	Angra Heroismo	70.31	34	eP	P	22 55 37.9	+2.1
ADH				i		22 56 00.0	
ADH				i S	x	23 04 00.0	
ASBA	Santa Barbara	70.31	34	eP	P	22 55 37.8	+2.0
	comp=Z,1µm,1.1s,mb6.7						
PPAD	Pico dos Padre	70.31	34	eP	P	22 55 37.6	+1.7
	comp=Z,1µm,1.1s,mb6.6						
PSBA	Serra de Santa	70.34	34	eP	P	22 55 36.5	+0.4
	comp=Z,3µm,1.0s,mb7.1						
PSBA				eS	S	23 04 43.7	+5.9
RIB2	Ribeirinha	70.35	34	eP	P	22 55 37.8	+1.7
	comp=Z,1µm,1.1s,mb6.6						
PBIS	Biscoitos	70.38	34	eP	P	22 55 37.2	+0.9
PSCM	Serra do Cume	70.40	34	eP	P	22 55 37.1	+0.7
	comp=Z,2µm,1.3s,mb6.9						
PFAV	Pico das Favas	70.43	34	eP	P	22 55 38.9	+2.3
	comp=Z,880nm,1.1s,mb6.5						
PVNV	Vila Nova	70.43	34	eP	P	22 55 38.5	+1.9
	comp=Z,919nm,1.2s,mb6.5						
EYMN	Ely	70.45	344	⇓eP	P	22 55 34.4	-2.1
	comp=Z,19nm,0.4s						
EYMN				LR	LR		
	comp=Z,244µm,21.0s						
PFET	Feteiras	70.46	35	eP	P	22 55 38.9	+2.1
SET2	Ginetes	70.47	35	eP	P	22 55 38.7	+1.9
EOSO	Osorio	70.48	49	P	P	22 55 35.6	-1.4
	comp=Z,30µm,4.3s						
PDA	Ponta Delgada	70.48	35	i P	P	22 55 37.5	+0.6
SET4	Mosteiros	70.50	35	eP	P	22 55 39.1	+2.1
CML	Cha da Macela	70.56	35	eP	P	22 55 39.4	+2.0
CMLA	Cha da Macela	70.57	35	eP	P	22 55 36.3	-1.2
	comp=Z,1µm,0.9s,mb6.7						
CMLA				LR	LR		
	comp=Z,38µm,20.0s						
LFA	Lagoa do Fogo	70.60	36	eP	P	22 55 39.5	+1.9
PVER	Pico Vermelho	70.60	35	eP	P	22 55 39.6	+2.0
VIF	Vila Franca	70.60	36	eP	P	22 55 39.4	+1.8
	comp=Z,478nm,1.3s,mb6.2						
MESC	Monte Escuro	70.63	36	eP	P	22 55 39.5	+1.7
PCNG	Congro	70.64	36	eP	P	22 55 38.8	+0.9
	comp=Z,2µm,1.2s,mb6.9						
RWWY	Rawlins	70.67	331	eP	P	22 55 37.6	-0.3
	comp=Z,12µm,1.8s,mb7.4						
MSU	Marysvale	70.72	325	eP	P	22 55 38.8	+0.5
MVU	Marysvale	70.73	325	eP	P	22 55 38.8	+0.4
	comp=Z,4µm,1.2s,mb7.2						
MVU				LR	LR		
	comp=Z,186µm,19.0s						
PFAD	Fenais da Ajud	70.73	36	eP	P	22 55 39.2	+0.8
TMUT	Trail Mountain	70.79	327	eP	P	22 55 38.9	+0.2
ARUT	Antelope Range	70.88	324	eP	P	22 55 39.5	+0.2
MWC	Mount Wilson	71.12	319	⇓eP	P	22 55 41.2	+0.4
RSSD	Black Hills	71.25	334	P	P	22 55 41.0	-0.4
RSSD				pmax	pmax		
	comp=Z,1µm,0.9s,mb6.7						
RSSD	Black Hills	71.25	334	⇓eP	P	22 55 40.9	-0.5
	comp=Z,706nm,0.7s,mb6.6						
RSSD				LR	LR		
	comp=Z,184µm,20.0s						
MPU	Maple Canyon	71.54	327	eP	P	22 55 43.2	0.0
DAU	Daniels Canyon	71.65	327	eP	P	22 55 44.1	+0.3
NLU	North Lily Min	71.73	327	eP	P	22 55 45.1	+0.8
CFTV	Fuerteventura	71.73	50	P	P	22 55 44.8	+0.3
	comp=Z,735nm,1.4s,mb6.3						
JLU	Jordanelle	71.89	327	⇓eP	P	22 55 45.5	+0.3
CTU	Camp Tracy	72.11	327	eP	P	22 55 46.4	-0.2
DAC	Darwin (Calif)	72.21	321	⇓eP	P	22 55 47.6	+0.4
DAC				pmax	pmax		
	comp=Z,161nm,0.7s,mb6.0						
DAC				MLR	MLR		
	comp=Z,213µm,21.0s						
DAC	Darwin (Calif)	72.21	321	⇓eP	P	22 55 47.6	+0.4
	comp=Z,161nm,0.7s,mb6.0						
DAC				LR	LR		
	comp=Z,213µm,21.0s						
TCUT	Toone Canyon	72.25	328	eP	P	22 55 47.5	+0.1
NOQ	North Oquirrh	72.26	327	eP	P	22 55 47.3	-0.2
DUG	Dugway	72.29	326	⇓iP	P	22 55 48.0	+0.4
DUG				pmax	pmax		
	comp=Z,3µm,1.2s,mb7.0						
DUG	Dugway	72.29	326	⇓iP	P	22 55 48.0	+0.4
	comp=Z,3µm,1.2s,mb7.0						
TRCR	Troy Canyon	72.47	323	eP	P	22 55 49.5	+0.8
EFAM	Famara	72.54	49	P	P	22 55 48.9	-0.4
	comp=Z,34µm,4.5s						
PDAR	Pinedale Array	72.60	330	P	P	22 55 48.6	-0.8
	comp=Z,347nm,1.1s,mb6.1,baz=153,slow=6.6,SNR=114						
PDAR				S	S	23 05 06.0	+2.4
	comp=Z,4.3nm,0.7s,baz=58,slow=47,SNR=6.7						
PDAR				sS		23 05 44.8	
	comp=Z,12nm,1.1s,baz=67,slow=11,SNR=3.7						
PDAR				SS	SS	23 09 58.9	+12
	comp=Z,1.5nm,1.0s,baz=135,slow=52,SNR=2.1						
PDAR				PKPPKP		23 23 30.1	
	comp=Z,4.4nm,1.0s,baz=45,slow=2.1,SNR=5.7						
PDAR				LR	LR	23 31 12.4	
	comp=Z,131µm,19.2s,baz=146,slow=38						
PDAR				P4KPbc		23 32 25.7	
	comp=Z,17nm,1.3s,baz=135,slow=8.4,SNR=16						
BW06	Boulder Array	72.60	330	eP	P	22 55 48.6	-0.8
	comp=Z,338nm,0.3s,mb6.7						
BW06				LR	LR		
	comp=Z,175µm,19.0s						
HWUT	Hardware Ranch	72.69	328	⇓eP	P	22 55 49.7	-0.3
	comp=Z,290nm,0.6s,mb6.3						
HWUT				LR	LR		
	comp=Z,221µm,21.0s						
SPUT	South Promonto	72.92	327	eP	P	22 55 50.9	-0.3
BGU	Big Grassy Mou	72.93	327	eP	P	22 55 51.4	0.0
PMPS	Porto Santo	72.96	44	eP	P	22 55 51.4	-0.3
	comp=Z,2µm,1.4s,mb6.7						
PMPS				epP	pP	22 56 20.4	+0.3
TPH	Tonopah	73.21	322	⇓eP	P	22 55 53.5	+0.4
TPH				pmax	pmax		
	comp=Z,8µm,1.8s,mb7.2						
TPH				MLR	MLR		
	comp=Z,126µm,19.0s						
TPH	Tonopah	73.21	322	⇓eP	P	22 55 53.5	+0.5
	comp=Z,8µm,1.8s,mb7.2						
TPH				LR	LR		
	comp=Z,126µm,19.0s						
AHID	Auburn Hatcher	73.33	329	eP	P	22 55 53.2	-0.4
	comp=Z,305nm,0.6s,mb6.3						
AHID				LR	LR		
	comp=Z,111µm,20.0s						
HVU	Hansel Valley	73.43	327	⇓eP	P	22 55 54.0	-0.3
SNOW	Snow King Moun	73.70	330	eP	P	22 55 55.9	+0.1
	comp=Z,2µm,0.7s,mb7.0						
ULM	Lac du Bonnet	73.73	343	P	P	22 55 54.2	-1.6
	comp=Z,797nm,0.7s,mb6.6,baz=152,slow=5.9,SNR=77						
ULM				S	S	23 05 14.2	-1.9
	comp=Z,14nm,0.8s,baz=341,slow=11,SNR=2.8						
ULM				sS		23 05 55.6	
	comp=Z,28nm,0.9s,baz=71,slow=20,SNR=2.2						
ULM				SS	SS	23 10 03.5	-0.8
	comp=Z,7.1nm,0.9s,baz=124,slow=9.4,SNR=1.5						
ULM				PKPPKP		23 23 29.6	
	comp=Z,8.4nm,1.0s,baz=342,slow=4.3,SNR=6.8						
ULM				LR	LR	23 30 51.6	
	comp=Z,235µm,21.6s,baz=146,slow=38						
ULM				P4KPbc		23 32 34.1	
	comp=Z,14nm,1.1s,baz=158,slow=2.4,SNR=7.7						
ULM	Lac du Bonnet	73.73	343	P	P	22 55 54.2	-1.6
ULM				S	S	23 05 14.2	-1.9
ULM				sS		23 05 55.6	
ULM				SS	SS	23 10 03.5	-0.8
ULM				P'P'		23 23 29.6	
ULM				LR	LR	23 30 51.6	
LOHW	Long Hollow	73.74	330	⇓eP	P	22 55 56.0	-0.1
	comp=Z,2µm,0.7s,mb7.0						
TBI	Tubuai	73.74	251	eP	P	22 55 39.6	-17
	comp=Z,307µm,28.5s						
TBI				ePP	PP	22 58 33.8	-10
	comp=Z,102µm,29.2s						
TBI				eS	S	23 05 18.2	+1.4
	comp=Z,1108µm,27.0s						
TBI				eLQ		23 15 24.6	
	comp=Z,275µm,31.2s						
TBI				eLR	LR	23 18 28.5	
WUWY	Wally Ulrich	73.75	330	eP	P	22 55 56.0	-0.1
TPAW	Teton Pass	73.81	330	eP	P	22 55 56.6	+0.1
	comp=Z,8µm,0.6s,mb7.6						
RRI2	Red Ridge	73.88	329	eP	P	22 55 57.0	+0.2
	comp=Z,167nm,0.6s,mb5.9						
MOOW	Moose Ponds	73.91	330	⇓eP	P	22 55 56.9	-0.2
	comp=Z,530nm,0.5s,mb6.5						
OMM	Old Mammoth Mi	73.94	321	⇓eP	P	22 55 57.9	+0.5
ELK	Elko	73.96	325	⇓eP	P	22 55 57.5	+0.1
ELK				e*PP	pP	22 56 27.5	+1.6
ELK				pmax	pmax		
	comp=Z,152nm,0.6s						
ELK				MLR	MLR		
	comp=Z,161µm,22.0s						
ELK	Elko	73.96	325	⇓eP	P	22 55 57.5	+0.1
	comp=Z,152nm,0.6s,mb5.9						
ELK				epP	pP	22 56 27.5	+1.6
ELK				LR	LR		
	comp=Z,161µm,22.0s						
MNV	Mina	73.99	322	⇓eP	P	22 55 57.9	+0.3
MNV				pmax	pmax		
	comp=Z,157nm,0.7s,mb5.8						
MNV				MLR	MLR		
	comp=Z,114µm,20.0s						
MNV	Mina	73.99	322	⇓eP	P	22 55 57.9	+0.3
	comp=Z,157nm,0.7s,mb5.8						
MNV				LR	LR		
	comp=Z,114µm,20.0s						
NVAR	Mina Array Bea	74.08	322	P	P	22 55 58.6	+0.5
	comp=Z,494nm,0.8s,mb6.3,baz=139,slow=6.0,SNR=349						
NVAR				sP	sP	22 56 38.0	-0.7
	comp=Z,117nm,0.7s,baz=144,slow=5.5,SNR=1.3						
NVAR				S	S	23 05 25.6	+5.4
	comp=Z,4.0nm,0.9s,baz=179,slow=2.0,SNR=2.2						
NVAR				SS	SS	23 10 12.3	+2.7
	comp=Z,0.3nm,0.5s,baz=168,slow=21,SNR=2.8						
NVAR				PKKPbc		23 15 30.1	
	comp=Z,4.3nm,0.8s,baz=272,slow=4.6,SNR=3.8						
NVAR				PKPPKP		23 23 27.2	
	comp=Z,5.2nm,1.1s,baz=264,slow=2.9,SNR=4.2						
NVAR				P4KPbc		23 32 37.4	
	comp=Z,5.2nm,1.1s,baz=139,slow=4.3,SNR=13						
NVAR	Mina Array Bea	74.08	322	P	P	22 55 58.6	+0.5
NVAR				sP	sP	22 56 38.0	-0.8
NVAR				S	S	23 05 25.6	+5.4
NVAR				SS	SS	23 10 12.3	+2.7
NVAR				PKKPbc		23 15 30.1	
NVAR				P'P'		23 23 27.2	
IMW	Indian Meadow	74.11	330	⇓eP	P	22 55 58.4	+0.2
	comp=Z,1µm,0.8s,mb6.6						
IMW				epP	pP	22 56 26.2	-0.5
LAO	LASA Array	74.24	334	eP	P	22 55 58.3	-0.5
	comp=Z,198nm,0.4s,mb6.2						
LAO				LR	LR		
	comp=Z,181µm,22.0s						
LKWY	Lake	74.37	331	eP	P	22 56 00.9	+1.2
LKWY				pmax	pmax		
	comp=Z,4µm,1.3s,mb7.0						
LKWY				MLR	MLR		
	comp=Z,292µm,21.0s						
LKWY	Lake	74.37	331	eP	P	22 56 00.9	+1.2
	comp=Z,4µm,1.3s,mb7.0						
LKWY				LR	LR		
	comp=Z,292µm,21.0s						
SCHQ	Schefferville	74.47	1	P	P	22 55 58.8	-1.2
	comp=Z,412nm,0.9s,mb6.2,baz=174,slow=4.4,SNR=80						
SCHQ				pP	pP	22 56 26.5	-2.1
	comp=Z,527nm,0.9s,baz=58,slow=4.5,SNR=2.1						
SCHQ				S	S	23 05 23.9	-0.3
	comp=Z,56nm,1.2s,baz=282,slow=15,SNR=9.6						
SCHQ				PKPPKP		23 23 23.8	
	comp=Z,4.8nm,0.8s,baz=324,slow=1.4,SNR=4.7						
SCHQ				LR	LR	23 24 45.5	
	comp=Z,115µm,22.0s,baz=190,slow=32						
SCHQ	Schefferville	74.47	1	P	P	22 55 58.8	-1.2
SCHQ				pP	pP	22 56 26.5	-2.1
SCHQ				S	S	23 05 23.9	-0.3
SCHQ				P'P'		23 23 23.8	
SCHQ				LR	LR	23 24 45.5	
YFT	Old Faithful	74.49	330	eP	P	22 56 01.6	+1.3
YNR	Norris Junctio	74.62	331	eP	P	22 56 01.5	+0.4

YMR	**Madison River**	**74.71**	**330**	*e*P	**P**	**22 56 02.4**	**+0.8**
BMN	**Battle Mountai**	**74.82**	**324**	*e*P	**P**	**22 56 01.6**	**-0.8**
BMN				pmax	pmax		
	comp=Z,1µm,1.4s,mb6.4						
BMN				MLR	MLR		
	comp=Z,238µm,22.0s						
BMN	**Battle Mountai**	**74.82**	**324**	*e*P	**P**	**22 56 01.6**	**-0.8**
	comp=Z,1µm,1.4s,mb6.4						
BMN				LR	LR		
	comp=Z,238µm,22.0s						
SAO	**San Andreas Ge**	**74.87**	**319**	*e*P	**P**	**22 56 02.4**	**-0.3**
SAO				pmax	pmax		
	comp=Z,3µm,1.4s,mb6.8						
SAO				MLR	MLR		
	comp=Z,79µm,20.0s						
SAO	**San Andreas Ge**	**74.87**	**319**	*e*P	**P**	**22 56 02.4**	**-0.3**
	comp=Z,3µm,1.4s,mb6.8						
SAO				LR	LR		
	comp=Z,79µm,20.0s						
DGMT	**Dagmar**	**74.91**	**337**	*e*P	**P**	**22 56 02.5**	**-0.2**
	comp=Z,1µm,1.0s,mb6.6						
DGMT				LR	LR		
	comp=Z,143µm,19.0s						
GCMT	**Greycliff**	**74.99**	**332**	*e*P	**P**	**22 56 03.1**	**-0.1**
CMB	**Columbia Colle**	**75.04**	**320**	⇓*e*P	**P**	**22 56 03.5**	**-0.1**
CMB				pmax	pmax		
	comp=Z,2µm,1.5s,mb6.6						
CMB				MLR	MLR		
	comp=Z,86µm,20.0s						
CMB	**Columbia Colle**	**75.04**	**320**	⇓*e*P	**P**	**22 56 03.5**	**-0.1**
	comp=Z,2µm,1.5s,mb6.6						
CMB				LR	LR		
	comp=Z,86µm,20.0s						
QLMT	**Earthquake Lak**	**75.05**	**330**	*e*P	**P**	**22 56 04.4**	**+0.8**
TVO	**Taravao**	**75.05**	**256**	*e*P	**P**	**22 56 04.8**	**+0.7**
PAE	**Paea**	**75.39**	**256**	*e*P	**P**	**22 56 06.4**	**+0.4**
PPT	**Papeete**	**75.41**	**256**	*e*P	**P**	**22 55 48.5**	**-18**
	comp=Z,413µm,26.2s						
PPT				*e*PP	PP	22 58 45.2	-13
	comp=Z,155µm,26.2s						
PPT				*e*S	S	23 05 36.1	+0.8
	comp=Z,1529µm,25.2s						
PPT				*e*LQ		23 16 26.5	
	comp=Z,930µm,31.0s						
PPT				*e*LR	LR	23 19 29.9	
	comp=Z,1441µm,28.8s						
PPT	**Papeete**	**75.41**	**256**	*e*P	**P**	**22 56 07.0**	**+0.9**
PPT	**Papeete**	**75.41**	**256**	P	**P**	**22 56 06.3**	**+0.2**
	comp=Z,2µm,1.2s,mb6.7,baz=105,slow=7.2,SNR=26						
PPT				S	S	23 05 35.6	+0.2
	comp=Z,20nm,0.3s,baz=36,slow=19,SNR=2.1						
PPT				LR	LR	23 20 09.2	
	comp=Z,103µm,21.9s,baz=95,slow=28						
PPT				PKPPKP		23 23 26.1	
	comp=Z,10nm,0.3s,baz=183,slow=22,SNR=1.5						
WCN	**Washoe City**	**75.50**	**322**	*e*P	**P**	**22 56 07.0**	**+0.8**
WCN				pmax	pmax		
	comp=Z,1µm,0.3s,mb7.1						
WCN	**Washoe City**	**75.50**	**322**	*e*P	**P**	**22 56 07.0**	**+0.7**
	comp=Z,1µm,0.3s,mb7.1						
HLID	**Hailey**	**75.56**	**328**	⇓*e*P	**P**	**22 56 07.1**	**+0.7**
	comp=Z,6µm,1.4s,mb7.2						
HLID				LR	LR		
	comp=Z,135µm,22.0s						
MCMT	**McKenzie Canyo**	**75.72**	**330**	P	**P**	**22 56 08.1**	**+0.8**
BOZ	**Bozeman (W)**	**75.76**	**331**	*e*P	**P**	**22 56 06.9**	**-0.6**
BOZ				pmax	pmax		
	comp=Z,214nm,0.4s,mb6.2						
BOZ				MLR	MLR		
	comp=Z,124µm,20.0s						
BOZ	**Bozeman (W)**	**75.76**	**331**	*e*P	**P**	**22 56 06.9**	**-0.6**
	comp=Z,214nm,0.4s,mb6.2						
BOZ				LR	LR		
	comp=Z,124µm,20.0s						
LCCM	**Lewis and Clar**	**76.02**	**331**	P	**P**	**22 56 09.1**	**+0.1**
BEKR	**Beckwourth**	**76.22**	**322**	⇓*e*P	**P**	**22 56 10.8**	**+0.5**
	comp=Z,1µm,2.0s,mb6.3						
HRY	**Holter Researc**	**76.66**	**331**	*e*P	**P**	**22 56 12.5**	**-0.1**
WVOR	**Wild Horse Val**	**76.97**	**325**	*e*P	**P**	**22 56 14.2**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,966nm,0.7s,mb6.6						
WVOR				MLR	MLR		
	comp=Z,239µm,22.0s						
WVOR	**Wild Horse Val**	**76.97**	**325**	*e*P	**P**	**22 56 14.2**	**-0.3**
	comp=Z,966nm,0.7s,mb6.6						
WVOR				LR	LR		
	comp=Z,239µm,22.0s						
HOPS	**Hopland**	**77.28**	**320**	⇓*e*P	**P**	**22 56 16.4**	**+0.2**
	comp=Z,4µm,1.4s,mb6.9						
HOPS				LR	LR		
	comp=Z,159µm,20.0s						
SBA	**Scott Base**	**77.33**	**190**	⇓*e*P	**P**	**22 56 15.6**	**-0.1**
SBA				pmax	pmax		
	comp=Z,124nm,0.8s,mb5.7						
SBA				MLR	MLR		
	comp=Z,45µm,19.0s						
SBA	**Scott Base**	**77.33**	**190**	⇓*e*P	**P**	**22 56 15.6**	**-0.2**
	comp=Z,124nm,0.8s,mb5.7						
SBA				LR	LR		
	comp=Z,45µm,19.0s						
LBCM	**Butte Creek Ri**	**77.43**	**322**	P	**P**	**22 56 17.0**	**0.0**
CHMT	**Chamberlain Mo**	**77.46**	**331**	P	**P**	**22 56 17.3**	**+0.3**
MOD	**Modoc**	**77.53**	**323**	⇓*e*P	**P**	**22 56 17.8**	**+0.3**
	comp=Z,8µm,0.6s,mb7.6						
MOD				LR	LR		
	comp=Z,119µm,20.0s						
MSO	**Missoula**	**77.71**	**330**	*e*P	**P**	**22 56 18.8**	**+0.4**
	comp=Z,2µm,0.6s,mb7.0						
MSO				LR	LR		
	comp=Z,147µm,21.0s						
LTIM	**Timbered Crate**	**77.73**	**322**	P	**P**	**22 56 18.9**	**+0.2**
BMO	**Blue Mountains**	**77.94**	**327**	*e*P	**P**	**22 56 19.7**	**0.0**
	comp=Z,5µm,0.8s,mb7.3						
BMO				LR	LR		
	comp=Z,153µm,21.0s						
WDC	**Whiskeytown Da**	**77.96**	**321**	⇓*e*P	**P**	**22 56 18.5**	**-1.4**
	comp=Z,13µm,0.6s						
WDC				LR	LR		
	comp=Z,66µm,20.0s						
LASM	**Arnica Sink**	**78.05**	**323**	P	**P**	**22 56 20.7**	**+0.3**
SYO	**Syowa Base**	**78.08**	**160**	⇑P	**P**	**22 56 17.5**	**-2.5**
VNDA	**Vanda**	**78.35**	**190**	⇓*e*P	**P**	**22 56 21.3**	**-0.1**
VNDA				MLR	MLR		
	comp=Z,81µm,22.0s						
VNDA	**Vanda**	**78.35**	**190**	P	**P**	**22 56 21.3**	**0.0**
	comp=Z,238nm,1.2s,mb5.8,baz=136,slow=4.8,SNR=104						
VNDA				S	S	23 06 09.3	+3.2
	comp=Z,8.4nm,0.9s,baz=350,slow=9.3,SNR=2.3						
VNDA				SS	SS	23 11 21.1	+7.4
	comp=Z,1.7nm,0.9s,baz=254,slow=5.4,SNR=1.6						
VNDA				PKKPbc		23 15 16.1	
	comp=Z,9.4nm,0.8s,baz=316,slow=3.5,SNR=13						
VNDA				LR	LR	23 27 46.8	
	comp=Z,52µm,21.3s,baz=34,slow=33						
VNDA	**Vanda**	**78.35**	**190**	⇓*e*P	**P**	**22 56 21.3**	**-0.1**
	comp=Z,54nm,0.6s						
VNDA				*e*PKKPbc		23 15 16.8	
VNDA				LR	LR		
	comp=Z,81µm,22.0s						
LHEM	**Herd Peak**	**78.44**	**322**	P	**P**	**22 56 22.7**	**+0.2**
HOG	**Hogback Mounta**	**78.54**	**323**	P	**P**	**22 56 23.6**	**+0.5**
LAMM	**Antelope Mount**	**78.66**	**322**	P	**P**	**22 56 23.0**	**-0.7**
YBH	**Yreka Blue Hor**	**78.79**	**322**	⇓*e*P	**P**	**22 56 23.3**	**-1.1**
YBH				pmax	pmax		
	comp=Z,678nm,0.9s						
YBH				MLR	MLR		
	comp=Z,77µm,19.0s						
YBH	**Yreka Blue Hor**	**78.79**	**322**	P	**P**	**22 56 23.4**	**-1.0**
	comp=Z,560nm,1.1s,mb6.3,baz=116,slow=3.7,SNR=93						
YBH				S	S	23 06 14.0	+2.7
	comp=Z,7.3nm,1.1s,baz=161,slow=12,SNR=2.5						
YBH				SS	SS	23 11 23.3	+2.5
	comp=Z,0.6nm,0.4s,baz=225,slow=23,SNR=1.6						
YBH				PKPPKP		23 23 18.9	
	comp=Z,4.5nm,1.0s,baz=63,slow=1.3,SNR=3.8						
YBH	**Yreka Blue Hor**	**78.79**	**322**	⇓*e*P	**P**	**22 56 23.3**	**-1.1**
	comp=Z,678nm,0.9s,mb6.5						
YBH				LR	LR		
	comp=Z,77µm,19.0s						
BUOR	**Burton Butte**	**78.87**	**323**	P	**P**	**22 56 24.8**	**-0.1**
NCOR	**Newberry Crate**	**79.18**	**324**	P	**P**	**22 56 27.4**	**+0.9**
VIPM	**Ingram Point**	**79.43**	**325**	P	**P**	**22 56 28.8**	**+0.9**
FFC	**Flin Flon**	**79.45**	**341**	*e*P	**P**	**22 56 26.4**	**-1.2**
	comp=Z,49nm,1.5s						
BBOR	**Butler Butte**	**79.51**	**323**	P	**P**	**22 56 27.7**	**-0.6**
KSXB	**Camp Six Broad**	**79.53**	**322**	P	**P**	**22 56 29.2**	**+0.8**
GMO	**Grizzlie Mount**	**79.57**	**325**	P	**P**	**22 56 29.5**	**+0.9**
SUR	**Sutherland**	**79.62**	**121**	P	**P**	**22 56 28.8**	**-0.4**
	comp=Z,988nm,0.9s,mb6.6,baz=256,slow=6.6,SNR=89						
SUR				pP	pP	22 56 57.1	-0.8
	comp=Z,521nm,0.7s,baz=287,slow=4.4,SNR=3.8						
SUR				PP	PP	22 59 26.9	-5.4
	comp=Z,100nm,0.9s,baz=200,slow=21,SNR=1.3						
SUR				S	S	23 06 23.0	+2.6
	comp=Z,28nm,1.1s,baz=264,slow=23,SNR=31						
SUR	**Sutherland**	**79.62**	**121**	*e*P	**P**	**22 56 28.6**	**-0.5**
	comp=Z,2µm,1.1s,mb6.8						
SUR				LR	LR		
	comp=Z,45µm,20.0s						
JBO	**Jordan Butte**	**79.66**	**326**	P	**P**	**22 56 29.9**	**+0.9**
HUOR	**Husband**	**79.84**	**324**	P	**P**	**22 56 31.0**	**+0.9**
VTHM	**Trough**	**79.85**	**326**	P	**P**	**22 56 31.0**	**+0.9**
BKCOR	**Black Crater**	**79.88**	**325**	P	**P**	**22 56 30.9**	**+0.7**
HBO	**Huckleberry Mo**	**79.92**	**324**	P	**P**	**22 56 30.6**	**+0.1**
IRO	**Indian Ridge**	**79.99**	**324**	P	**P**	**22 56 31.0**	**+0.1**
FRIS	**Frissel Point**	**80.04**	**324**	P	**P**	**22 56 31.6**	**+0.5**
H2OWA	**Water**	**80.08**	**327**	P	**P**	**22 56 31.5**	**+0.2**
RSW	**Rattlesnake Hi**	**80.16**	**327**	P	**P**	**22 56 32.4**	**+0.7**
NEW	**Newport**	**80.24**	**330**	P	**P**	**22 56 31.5**	**-0.6**
NEW				S	S	23 06 29.8	+3.3
NEW				pmax	pmax		
	comp=Z,465nm,1.1s						
NEW				smax			
	comp=N,10.0nm,1.0s						
NEW				MLR	MLR		
	comp=Z,171µm,21.0s						
NEW	**Newport**	**80.24**	**330**	P	**P**	**22 56 31.5**	**-0.6**
	comp=Z,465nm,1.1s,mb6.2,baz=137,slow=6.3,SNR=69						
NEW				S	S	23 06 29.8	+3.3
	comp=Z,9.9nm,1.0s,baz=260,slow=4.5,SNR=2.1						
NEW				PKPPKP		23 23 15.9	
	comp=Z,2.6nm,0.7s,baz=133,slow=4.6,SNR=4.0						
NEW				LR	LR	23 36 33.0	
	comp=Z,171µm,21.0s,baz=129,slow=39						
NEW	**Newport**	**80.24**	**330**	*e*P	**P**	**22 56 31.2**	**-0.9**
	comp=Z,3µm,0.3s,mb7.5						
NEW				LR	LR		
	comp=Z,192µm,22.0s						
BROR	**Big Rock Looko**	**80.27**	**324**	P	**P**	**22 56 32.2**	**-0.2**
MDW	**Midway**	**80.39**	**327**	P	**P**	**22 56 33.4**	**+0.4**
OD2	**Odessa Site #2**	**80.40**	**328**	P	**P**	**22 56 33.3**	**+0.3**
GL2	**New Goldendale**	**80.50**	**326**	P	**P**	**22 56 34.1**	**+0.6**
PTEO	**Sao Teotonio**	**80.62**	**45**	*e*P	**P**	**22 56 34.6**	**+0.2**
	comp=Z,2µm,1.3s,mb6.8						
PTEO				*e*pP	pP	22 57 04.0	+0.8
PTEO				*e*S	S	23 06 32.0	+1.3
RNO	**Roman Nose**	**80.76**	**323**	P	**P**	**22 56 35.6**	**+0.7**
TSUM	**Tsumeb**	**80.77**	**107**	P	**P**	**22 56 34.8**	**-0.7**
TSUM				S	S	23 06 32.3	-0.2
TSUM	**Tsumeb**	**80.77**	**107**	P	**P**	**22 56 34.7**	**-0.7**
	comp=Z,287nm,0.8s,mb6.1,baz=237,slow=6.0,SNR=168						
TSUM				pP	pP	22 57 03.3	-1.1
	comp=Z,1µm,1.1s,baz=240,slow=6.0,SNR=9.2						
TSUM				S	S	23 06 35.2	+2.6
	comp=Z,6.6nm,0.8s,baz=103,slow=19,SNR=10						
TSUM				sS		23 07 15.0	
	comp=Z,12nm,0.9s,baz=318,slow=23,SNR=1.7						
TSUM				LR	LR	23 31 53.3	
	comp=Z,103µm,18.7s,baz=328,slow=35						
TSUM	**Tsumeb**	**80.77**	**107**	⇑*e*P	**P**	**22 56 34.8**	**-0.7**
	comp=Z,817nm,0.8s,mb6.6						
TSUM				*e*pP	pP	22 57 04.5	+0.2
TSUM				LR	LR		
	comp=Z,91µm,20.0s						
VLMM	**Larch Mountain**	**80.87**	**325**	P	**P**	**22 56 35.9**	**+0.4**
COR	**Corvallis**	**80.94**	**324**	P	**P**	**22 56 36.8**	**+0.9**
COR				S	S	23 06 39.0	+5.3
COR	**Corvallis**	**80.94**	**324**	*e*P	**P**	**22 56 35.7**	**-0.2**
COR				pmax	pmax		
	comp=Z,10µm,1.4s,mb7.5						
COR				MLR	MLR		
	comp=Z,30µm,20.0s						
COR	**Corvallis**	**80.94**	**324**	*e*P	**P**	**22 56 35.7**	**-0.1**
	comp=Z,10µm,1.4s,mb7.5						
COR				LR	LR		
	comp=Z,30µm,20.0s						
EBG	**Ellensburg**	**81.00**	**327**	P	**P**	**22 56 36.9**	**+0.7**
LIS	**Lisbon**	**81.00**	**43**	*e*P	**P**	**22 56 35.2**	**-1.2**
LIS				*e*S	S	23 06 35.0	+0.5
LIS				*e*S	S	23 06 35.3	+0.7
LIS				AMS	AMS	23 31 42.0	
	comp=Z,139µm,19.4s						
NAC	**Naches**	**81.02**	**327**	P	**P**	**22 56 36.8**	**+0.6**
MPOR	**Mary's Peak**	**81.03**	**324**	P	**P**	**22 56 37.3**	**+0.9**
ASR	**Mount Adams--S**	**81.03**	**326**	P	**P**	**22 56 37.0**	**+0.7**
FCC	**Fort Churchill**	**81.03**	**347**	P	**P**	**22 56 35.3**	**-0.8**
FCC				pmax	pmax		
	comp=Z,2µm,1.1s,mb6.8						
FCC	**Fort Churchill**	**81.03**	**347**	*e*P	**P**	**22 56 35.1**	**-1.0**
	comp=Z,6.5nm,0.8s						
INMG	**Instituto de M**	**81.05**	**43**	*e*P	**P**	**22 56 38.9**	**+2.3**
PLOU	**Loures**	**81.10**	**43**	*e*P	**P**	**22 56 37.1**	**+0.3**
	comp=Z,542nm,1.1s,mb6.3						
PLOU				*e*pP	pP	22 57 05.1	-0.6
PLOU				*e*S	S	23 06 39.9	+4.4
PLOU	**Loures**	**81.10**	**43**	*e*P	**P**	**22 56 37.0**	**+0.2**
WTV	**Waterville**	**81.22**	**328**	P	**P**	**22 56 37.5**	**+0.2**
ETW	**Entiat**	**81.35**	**328**	P	**P**	**22 56 38.4**	**+0.5**
WPW	**White Pass**	**81.37**	**327**	P	**P**	**22 56 38.2**	**+0.1**
PALC	**Alcoutim**	**81.41**	**45**	*e*P	**P**	**22 56 38.6**	**+0.1**
	comp=Z,1µm,1.2s,mb6.6						
PALC				*e*pP	pP	22 57 07.5	+0.1
PALC				*e*S	S	23 06 40.9	+2.1
PALC	**Alcoutim**	**81.41**	**45**	*e*P	**P**	**22 56 38.5**	**0.0**
MOE	**Montemor**	**81.41**	**44**	*e*P	**P**	**22 56 38.6**	**+0.1**
EGRO	**El Granado**	**81.44**	**45**	P	**P**	**22 56 38.2**	**-0.5**
	comp=Z,19µm,5.4s						
PBEJ	**Beja**	**81.46**	**44**	*e*P	**P**	**22 56 39.1**	**+0.4**
	comp=Z,625nm,1.1s,mb6.3						
PBEJ				*e*pP	pP	22 57 07.8	+0.2
PBEJ				*e*S	S	23 06 43.5	+4.3
ALMR	**Almeirim**	**81.62**	**43**	*e*P	**P**	**22 56 39.1**	**-0.5**
EVO	**Evora**	**81.64**	**44**	⇑*i*P	**P**	**22 56 38.7**	**-1.0**
	comp=Z,698nm,0.5s,mb6.4						
EVO				*e*R			
	comp=Z,71µm,18.5s						
SFS	**San Fernando**	**81.73**	**47**	P	**P**	**22 56 39.8**	**-0.4**
	comp=Z,1µm,0.9s,mb6.8						
RVC	**Mount Rainier-**	**81.75**	**327**	P	**P**	**22 56 39.9**	**-0.1**
GSM	**Grass Mountain**	**81.83**	**327**	P	**P**	**22 56 40.2**	**-0.2**
PTOM	**Tomar**	**81.98**	**43**	*e*P	**P**	**22 56 41.6**	**+0.2**
	comp=Z,1µm,1.2s,mb6.6						
PTOM				*e*pP	pP	22 57 10.8	+0.4
PTOM				*e*S	S	23 06 48.3	+3.7
PTOM	**Tomar**	**81.98**	**43**	*e*P	**P**	**22 56 41.7**	**+0.3**
RMW	**Rattlesnake Mo**	**82.00**	**327**	P	**P**	**22 56 40.8**	**-0.5**
BMW	**Boistfort Moun**	**82.11**	**326**	P	**P**	**22 56 42.4**	**+0.5**
EMIN	**Mina Concepcio**	**82.11**	**45**	P	**P**	**22 56 41.7**	**-0.4**
	comp=Z,4µm,1.8s,mb7.0						
ESPR	**Espera**	**82.18**	**46**	P	**P**	**22 56 42.5**	**0.0**
	comp=Z,21µm,5.9s						
EDM	**Edmonton**	**82.21**	**335**	⇓*e*P	**P**	**22 56 41.2**	**-1.1**
EBAD	**Badajoz**	**82.42**	**44**	P	**P**	**22 56 43.7**	**0.0**
	comp=Z,15µm,5.4s						
RPW	**Rockport**	**82.50**	**328**	P	**P**	**22 56 43.4**	**-0.5**
JCW	**Jim Creek**	**82.55**	**328**	P	**P**	**22 56 43.6**	**-0.6**
PCBR	**Castelo Branco**	**82.71**	**43**	*e*P	**P**	**22 56 44.8**	**-0.3**
	comp=Z,553nm,1.6s,mb6.1						
PCBR				*e*pP	pP	22 57 14.4	+0.3
PCBR				*e*S	S	23 06 53.3	+1.4
PCBR	**Castelo Branco**	**82.71**	**43**	*e*P	**P**	**22 56 44.6**	**-0.5**
EMIJ	**Mijas**	**82.76**	**47**	P	**P**	**22 56 45.3**	**-0.2**
	comp=Z,12µm,5.2s						
MBW	**Mount Baker**	**82.92**	**328**	P	**P**	**22 56 45.7**	**-0.3**
PVIS	**Viseu**	**82.92**	**42**	*e*P	**P**	**22 56 46.1**	**-0.1**
	comp=Z,1µm,1.4s,mb6.5						
PVIS				*e*pP	pP	22 57 14.9	-0.3
PVIS				*e*S	S	23 06 56.7	+2.7
PVIS	**Viseu**	**82.92**	**42**	*e*P	**P**	**22 56 46.0**	**-0.2**
MTE	**Manteigas**	**82.97**	**43**	*e*P	**P**	**22 56 46.4**	**0.0**
	comp=Z,1µm,1.5s,mb6.4						
MTE				*e*pP	pP	22 57 13.8	-1.6
MTE	**Manteigas**	**82.97**	**43**	*e*PP	PP	22 59 56.2	-3.7
MTE	**Manteigas**	**82.97**	**43**	*e*PP	PP	22 59 58.4	-1.5
MTE				*e*S	S	23 06 58.3	+3.8
MTE	**Manteigas**	**82.97**	**43**	*e*LQ		23 18 40.5	
MTE				*e*LR	LR	23 23 31.6	
	comp=Z,150µm,18.0s						
MTE	**Manteigas**	**82.97**	**43**	*e*P	**P**	**22 56 45.7**	**-0.8**
	comp=Z,767nm,0.9s,mb6.5						
OSR	**Olympics--Salm**	**83.15**	**326**	P	**P**	**22 56 47.7**	**+0.6**
EZAM	**Zamans**	**83.23**	**41**	P	**P**	**22 56 48.4**	**+0.7**
EZAM				pmax	pmax		
	comp=Z,2µm,2.1s,mb6.5						
EZAM	**Zamans**	**83.23**	**41**	P	**P**	**22 56 48.4**	**+0.7**
	comp=Z,2µm,2.1s,mb6.5						
PVRL	**Vila Real**	**83.35**	**42**	*e*P	**P**	**22 56 48.4**	**+0.1**
	comp=Z,1µm,1.5s,mb6.5						
PVRL				*e*pP	pP	22 57 17.8	+0.5
PVRL				*e*S	S	23 06 59.2	+0.9
PVRL	**Vila Real**	**83.35**	**42**	*e*P	**P**	**22 56 48.6**	**+0.3**
STW	**Striped Peak**	**83.41**	**327**	P	**P**	**22 56 49.2**	**+0.7**
OCWA	**Octopus Mounta**	**83.42**	**326**	*e*P	**P**	**22 56 48.9**	**+0.4**
	comp=Z,12µm,2.0s,mb7.4						
OCWA				LR	LR		
	comp=Z,177µm,22.0s						
ELOB	**Lobios**	**83.46**	**41**	P	**P**	**22 56 48.9**	**0.0**
	comp=Z,2µm,1.8s,mb6.7						
ELOJ	**Sierra Loja**	**83.49**	**47**	P	**P**	**22 56 50.5**	**+1.4**
ELOJ				pmax	pmax		
	comp=Z,904nm,1.1s,mb6.5						
ELOJ	**Sierra Loja**	**83.49**	**47**	P	**P**	**22 56 50.5**	**+1.4**
	comp=Z,904nm,1.1s,mb6.5						
RAR	**Rarotonga**	**83.50**	**250**	*e*P	**P**	**22 56 49.2**	**-0.3**
RAR				pmax	pmax		
	comp=Z,498nm,1.0s						
RAR				MLR	MLR		
	comp=Z,44µm,20.0s						
RAR	**Rarotonga**	**83.50**	**250**	*e*P	**P**	**22 56 49.2**	**-0.2**
	comp=Z,498nm,1.0s,mb6.3						
RAR				LR	LR		
	comp=Z,44µm,20.0s						
EMAZ	**Mazaricos**	**83.51**	**40**	P	**P**	**22 56 48.8**	**-0.4**
	comp=Z,3µm,2.2s,mb6.7						
PGC	**Sidney**	**83.61**	**327**	*e*P	**P**	**22 56 49.8**	**+0.3**
	comp=Z,4µm,0.9s,mb7.2						
EALB	**Alboran**	**83.66**	**48**	P	**P**	**22 56 49.3**	**-0.7**
	comp=Z,4µm,1.7s,mb7.0						
ERON	**Agron**	**83.66**	**47**	P	**P**	**22 56 51.8**	**+1.8**
	comp=Z,128nm,0.8s,mb5.8						
EADA	**Adamuz**	**83.73**	**46**	P	**P**	**22 56 50.3**	**-0.1**
	comp=Z,13µm,6.2s						
STS	**Santiago**	**83.73**	**40**	P	**P**	**22 56 51.4**	**+1.2**
STS				pmax	pmax		
	comp=Z,1µm,1.8s,mb6.5						
STS	**Santiago**	**83.73**	**40**	P	**P**	**22 56 51.4**	**+1.2**
	comp=Z,1µm,1.8s,mb6.5						
ECOG	**Cogollos-Vega**	**83.96**	**47**	P	**P**	**22 56 53.2**	**+1.7**
	comp=Z,72nm,1.2s						
EBER	**Berja**	**84.24**	**48**	P	**P**	**22 56 52.4**	**-0.5**
	comp=Z,2µm,1.4s,mb6.8						
ERUA	**La Rua**	**84.32**	**41**	P	**P**	**22 56 53.3**	**+0.1**
ERUA				pmax	pmax		
	comp=Z,2µm,1.5s,mb6.6						
ERUA	**La Rua**	**84.32**	**41**	P	**P**	**22 56 53.3**	**+0.1**
	comp=Z,2µm,1.5s,mb6.6						
ECAL	**Calabor**	**84.33**	**42**	P	**P**	**22 56 53.5**	**+0.2**
	comp=Z,2µm,1.6s,mb6.8						
BOSA	**Boshof**	**84.44**	**118**	P	**P**	**22 56 53.2**	**-0.9**
BOSA				pP	pP	22 57 21.8	-1.4
BOSA				SPn		23 07 07.4	
BOSA	**Boshof**	**84.44**	**118**	P	**P**	**22 56 52.6**	**-1.5**
BOSA				*PP	pP	22 57 22.0	-1.2
BOSA						23 00 06.5	
BOSA				S	S	23 07 07.1	-2.4
BOSA				SS	SS	23 12 41.9	-3.0
BOSA				pmax	pmax		
	comp=Z,237nm,0.9s,mb6.0						
BOSA				pmax	pmax		
	comp=Z,121nm,0.9s,mb5.7						
BOSA				smax			
	comp=N,26nm,1.3s						
BOSA				MLR	MLR		
	comp=Z,127µm,18.8s						
BOSA	**Boshof**	**84.44**	**118**	P	**P**	**22 56 52.6**	**-1.5**
	comp=Z,237nm,0.9s,mb6.0,baz=254,slow=4.2,SNR=133						
BOSA				pP	pP	22 57 22.0	-1.2
	comp=Z,750nm,0.9s,baz=220,slow=4.5,SNR=4.6						
BOSA				PP	PP	23 00 06.5	-5.5
	comp=Z,121nm,0.9s,baz=244,slow=4.3,SNR=2.1						
BOSA				S	S	23 07 07.1	-2.4
	comp=Z,26nm,1.3s,baz=304,slow=5.6,SNR=1.9						
BOSA				sS		23 07 51.8	
	comp=Z,27nm,1.2s,baz=80,slow=19,SNR=1.8						
BOSA				SS	SS	23 12 41.9	-3.0
	comp=Z,4.2nm,0.9s,baz=261,slow=10,SNR=1.8						
BOSA				PKKPbc		23 15 04.5	
	comp=Z,13nm,0.6s,baz=87,slow=4.4,SNR=7.4						
BOSA				PKPPKP		23 23 10.6	
	comp=Z,42nm,1.3s,baz=81,slow=3.2,SNR=3.5						
BOSA				LR	LR	23 33 52.7	
	comp=Z,127µm,18.8s,baz=259,slow=35						
BOSA	**Boshof**	**84.44**	**118**	*e*P	**P**	**22 56 52.8**	**-1.3**
	comp=Z,2µm,1.2s,mb6.9						
BOSA				LR	LR		
	comp=Z,118µm,19.0s						
OLHC	**Oulhaca**	**84.46**	**50**	P	**P**	**22 56 57.0**	**+2.9**
EQES	**Quesada**	**84.56**	**47**	P	**P**	**22 56 53.5**	**-1.0**
	comp=Z,3µm,1.9s,mb6.9						
PAB	**San Pablo**	**84.59**	**45**	P	**P**	**22 56 54.3**	**-0.3**
PAB				SKSac		23 06 31.6	
PAB				SKSac		23 07 11.4	
ODZI	**Dziouia**	**84.62**	**50**	P	**P**	**22 57 02.0**	**+7.2**
ENIJ	**Nijar**	**84.75**	**48**	P	**P**	**22 56 56.6**	**+1.1**
	comp=Z,604nm,1.0s,mb6.5						
EPON	**Pontenova**	**84.83**	**40**	P	**P**	**22 56 55.7**	**0.0**
	comp=Z,3µm,1.9s,mb6.9						
ESDC	**Sonseca Array**	**84.91**	**45**	P	**P**	**22 56 55.6**	**-0.6**
	comp=Z,347nm,1.1s,mb6.2,baz=246,slow=4.6,SNR=215						
ESDC				pP	pP	22 57 25.0	-0.4
	comp=Z,321nm,1.0s,baz=245,slow=4.8,SNR=2.0						
ESDC				S	S	23 07 12.3	-1.4
	comp=Z,2.1nm,0.9s,baz=148,slow=5.6,SNR=2.7						
ESDC				PKKP	PKKP	23 14 56.7	+17
	comp=Z,4.0nm,1.0s,baz=17,slow=2.9,SNR=3.6						
ESDC				PKKPbc		23 15 05.6	
	comp=Z,1.6nm,0.5s,baz=26,slow=0.7,SNR=5.3						
ESDC				PKPPKP		23 23 05.4	
	comp=Z,1.6nm,0.7s,baz=70,slow=2.1,SNR=5.9						
ESDC	**Sonseca Array**	**84.91**	**45**	P	**P**	**22 56 55.7**	**-0.5**
	comp=Z,612nm,1.5s,mb6.3						
OTSS	**Djebel Tessala**	**84.93**	**50**	P	**P**	**22 56 58.0**	**+1.6**
USTO	**Oran**	**85.32**	**49**	P	**P**	**22 57 02.0**	**+3.7**
EVIA	**Vianos**	**85.37**	**46**	P	**P**	**22 56 58.8**	**+0.3**
EVIA				pmax	pmax		
	comp=Z,1µm,1.6s,mb6.5						
EVIA	**Vianos**	**85.37**	**46**	P	**P**	**22 56 58.8**	**+0.3**
	comp=Z,1µm,1.6s,mb6.5						
EMUR	**La Murta**	**85.84**	**47**	P	**P**	**22 56 59.6**	**-1.2**
	comp=Z,3µm,2.7s,mb6.7						
CART	**Cartagena**	**85.89**	**48**	*e*P	**P**	**22 56 59.3**	**-1.8**
	comp=Z,376nm,0.8s,mb6.4						
OJBR	**Djebel Berber**	**85.89**	**50**	P	**P**	**22 57 03.0**	**+1.9**
MAW	**Mawson**	**85.92**	**163**	⇓*i*P	**P**	**22 56 59.8**	**-0.7**
	comp=Z,709nm,0.4s,mb7.0						
MAW				*i*		23 07 22.4	
MAW				*e*PKKP	PKKP	23 15 02.9	+25
MAW	**Mawson**	**85.92**	**163**	P	**P**	**22 57 00.0**	**-0.5**
MAW				*PP	pP	22 57 28.2	-1.5
MAW				S	S	23 07 15.7	-7.2
MAW				SSS	SSS	23 16 31.8	-4.3
MAW				pmax	pmax		
	comp=Z,423nm,1.0s						
MAW				smax			
	comp=N,2.0nm,0.7s						
MAW				MLR	MLR		
	comp=Z,67µm,21.0s						
MAW	**Mawson**	**85.92**	**163**	P	**P**	**22 57 00.0**	**-0.5**
	comp=Z,423nm,1.0s,mb6.3,baz=221,slow=6.5,SNR=50						
MAW				pP	pP	22 57 28.2	-1.6
	comp=Z,129nm,0.9s,baz=279,slow=21,SNR=1.9						
MAW				S	S	23 07 15.7	-7.2
	comp=Z,2.4nm,0.7s,baz=258,slow=21,SNR=1.7						
MAW				SS	SS	23 12 51.6	-14
	comp=Z,2.5nm,0.8s,baz=338,slow=10,SNR=2.3						
MAW				PKKPbc		23 15 01.3	
	comp=Z,21nm,0.6s,baz=67,slow=4.0,SNR=16						
MAW				SSS	SSS	23 16 31.8	-4.3
	comp=Z,17nm,1.2s,baz=211,slow=2.7,SNR=1.2						
MAW				PKPPKP		23 23 07.9	
	comp=Z,9.5nm,0.9s,baz=18,slow=2.7,SNR=6.4						
MAW				LR	LR	23 35 18.6	
	comp=Z,67µm,21.0s,baz=237,slow=36						
EARI	**Arriondas**	**86.01**	**41**	P	**P**	**22 57 01.5**	**0.0**
	comp=Z,2µm,2.3s,mb6.6						
ETOB	**Tobarra**	**86.02**	**47**	P	**P**	**22 57 01.2**	**-0.5**
	comp=Z,2µm,1.8s,mb6.7						
OJGS	**Djebel Guires**	**86.15**	**50**	P	**P**	**22 57 04.0**	**+1.6**

OKGL	Djebel Kef Gue	86.32	50	P	P	22 57 05.0	+1.8
ETRT	Tiaret	86.49	51	P	P	22 57 07.0	+3.0
EANR	'Ain N'Sour	86.60	50	P	P	22 57 06.0	+1.4
ECHF	Ech Chlef	86.87	50	P	P	22 57 08.5	+2.6
ECHE	Chera	86.88	46	P	P	22 57 06.1	+0.3
ECHE				pmax	pmax		
	comp=Z,53nm,0.7s,mb5.6						
ECHE	Chera	86.88	46	P	P	22 57 06.1	+0.3
	comp=Z,53nm,0.7s,mb5.6						
ECHA	Ech Chlef	86.89	50	P	P	22 57 08.5	+2.5
EBEN	Beniarda	86.96	47	P	P	22 57 05.8	-0.4
	comp=Z,2µm,2.2s,mb6.6						
EBNR	Beni Rached	87.07	50	P	P	22 57 09.0	+2.2
ELAN	Lanestosa	87.08	42	P	P	22 57 06.4	-0.3
	comp=Z,2µm,2.1s,mb6.5						
ECRI	Cripan	87.35	43	P	P	22 57 08.6	+0.6
	comp=Z,209nm,1.3s,mb5.9						
EMOS	Mosqueruela	87.58	45	P	P	22 57 09.4	+0.2
	comp=Z,5µm,2.4s,mb7.1						
SFJD	Kangerlussuaq	87.76	7	P	P	22 57 08.3	-1.1
SFJD				pP	pP	22 57 36.8	-2.0
SFJD				SKSac		23 07 25.3	
SFJD				pS		23 08 27.2	
SFJD	Kangerlussuaq	87.76	7	SKSac		23 07 40.0	
SFJD				PKKSbc		23 20 12.4	
SFJD	Kangerlussuaq	87.76	7⇓	iP	P	22 57 09.0	-0.4
SFJD				i	pP	22 57 36.8	-1.9
SFJD				i S		23 07 25.0	
SFJD				i		23 07 42.2	
SFJD				e		23 13 27.9	
SFJD				MLR	MLR		
	comp=Z,76µm,20.0s						
SFJD	Kangerlussuaq	87.76	7⇓	iP	P	22 57 09.0	-0.4
SFJD				i	pP	22 57 36.8	-1.9
SFJD				i S		23 07 25.0	
SFJD				i		23 07 42.2	
SFJD				i		23 07 49.7	
SFJD				e		23 13 27.9	
	comp=Z,76µm,20.0s						
VAL	Valentia	88.03	32	eP	P	22 57 11.6	+0.5
VAL				eSKS	SKS	23 07 29.4	+2.6
EMHD	Djebel Mahouad	88.06	50	P	P	22 57 12.0	+0.4
BBB	Bella Bella	88.14	328	PKKPbc		23 14 55.7	
	comp=Z,23nm,1.1s,baz=273,slow=4.6,SNR=3.6						
ESAC	San Caprasio	88.23	44	P	P	22 57 11.5	-0.8
	comp=Z,2µm,3.3s						
ELIZ	Elizondo	88.25	43	P	P	22 57 12.3	0.0
ELIZ				pmax	pmax		
	comp=Z,41nm,0.8s						
ELIZ	Elizondo	88.25	43	P	P	22 57 12.3	0.0
	comp=Z,41nm,0.8s						
EALK	Alkurruntz	88.29	43	P	P	22 57 12.3	-0.2
	comp=Z,3µm,2.7s,mb6.8						
ABA	Alger-Bouzarea	88.38	50	P	P	22 57 14.5	+1.4
ADJB	Djebel Djouab	88.39	51	P	P	22 57 15.8	+2.7
ERTA	Horta de San J	88.40	45	P	P	22 57 13.0	-0.1
	comp=Z,4µm,1.6s,mb7.2						
SJPF	Ste Jean	88.42	43	eP	P	22 57 13.2	+0.1
	comp=Z,1µm,0.7s,mb6.8						
EBR	Ebro Roquetas	88.44	45	eP	P	22 57 13.1	-0.2
EBR	Ebro Roquetas	88.44	45	eS	S	23 08 00.0	+13
OSSF	Osses	88.46	43	eP	P	22 57 14.7	+1.4
LARF	Larrau	88.53	43	eP	P	22 57 15.3	+1.7
ORDF	Ordiarp	88.65	43	eP	P	22 57 15.2	+1.0
AKET	Djebel Ketaf	88.66	51	P	P	22 57 17.2	+2.8
FDAF	Les Forges d'A	88.70	43	eP	P	22 57 16.4	+2.0
ETSF	Etsaut	88.74	43	eP	P	22 57 14.7	+0.1
	comp=Z,983nm,0.7s,mb6.6						
ETSF	Etsaut	88.74	43	eP	P	22 57 14.7	+0.1
ETSF				pmax	pmax		
	comp=Z,491nm,0.7s,mb6.7						
ATAF	Djebel Tarf	88.88	51	P	P	22 57 18.0	+2.6
REYF	Montagne du Re	88.93	43	eP	P	22 57 16.5	+1.0
EPOB	Poblet	89.08	45	P	P	22 57 15.3	-0.9
	comp=Z,2µm,4.0s						
EBIE	Bielsa	89.09	44	P	P	22 57 16.5	+0.2
	comp=Z,2µm,3.5s						
VIEF	Viey	89.11	43	eP	P	22 57 17.4	+1.1
LABF	Labassere	89.22	43	eP	P	22 57 18.7	+1.8
RESF	Ens	89.28	44	eP	P	22 57 19.0	+1.9
EPF	Esparros	89.38	43	eP	P	22 57 17.4	-0.2
	comp=Z,558nm,0.9s,mb6.3						
CPZ	Penzance	89.45	35	eP	P	22 57 17.1	-0.7
CPZ				AMb	AMB	22 57 21.1	
	comp=Z,926nm,1.0s,mb6.8						
ETOS	Mallorca	89.54	47	P	P	22 57 19.0	+0.5
	comp=Z,2µm,2.6s,mb6.8						
MELF	Melles	89.58	44	eP	P	22 57 20.2	+1.6
YKA	Yellowknife Ar	89.61	341	P	P	22 57 17.6	-0.5
	comp=Z,559nm,0.6s,mb6.9,baz=134,slow=4.7,SNR=846						
YKA				pP	pP	22 57 47.2	-0.4
	comp=Z,170nm,0.5s,baz=129,slow=4.8,SNR=1.3						
YKA				PP	PP	23 00 53.0	-0.5
	comp=Z,46nm,1.0s,baz=138,slow=9.7,SNR=2.5						
YKA				S		23 07 37.6	
	comp=Z,6.6nm,1.0s,baz=228,slow=33,SNR=2.3						
YKA				PKKPbc		23 14 53.7	
	comp=Z,10nm,1.0s,baz=312,slow=2.9,SNR=3.6						
YKA				PKPPKP		23 22 60.0	
	comp=Z,5.5nm,1.0s,baz=314,slow=2.1,SNR=5.6						
YKA				LR	LR	23 40 48.9	
	comp=Z,223µm,20.5s,baz=110,slow=38						
YKA	Yellowknife Ar	89.61	341	P	P	22 57 17.6	-0.5
YKA				pP	pP	22 57 47.2	-0.4
YKA				PP	PP	23 00 53.0	-0.5
YKA				S		23 07 37.6	
YKA				PKKPbc		23 14 53.7	
YKA				P'P'		23 22 60.0	
YKA				LR	LR	23 40 48.9	
CGW	Gweek	89.62	35	eP	P	22 57 17.9	-0.6
CGH1	Goonhilly	89.62	35	eP	P	22 57 18.0	-0.6
CGH1				e		22 57 18.0	
QUIF	Quistinic	89.64	38	eP	P	22 57 17.8	-0.9
	comp=Z,362nm,0.6s,mb6.4						
EMIR	Miracle	89.64	45	P	P	22 57 17.8	-1.0
	comp=Z,2µm,3.2s						
YKW3	Yellowknife Ar	89.66	341	eP	P	22 57 17.8	-0.6
YKW3				epP	pP	22 57 47.5	-0.4
CMA1	Manaccan	89.66	35	eP	P	22 57 18.7	0.0
CCA1	Carnmenellis	89.66	35	eP	P	22 57 18.0	-0.7
CRQ2	Rosemanowes 2	89.69	35	eP	P	22 57 19.5	+0.7
CRQ2				AMb	AMB	22 57 22.0	
	comp=Z,680nm,1.3s,mb6.6						
ROSF	Rostrenen	89.79	38	eP	P	22 57 18.5	-0.9
	comp=Z,466nm,0.7s,mb6.4						
ROSF	Rostrenen	89.79	38	eP	P	22 57 18.5	-0.9
ROSF				pmax	pmax		
	comp=Z,233nm,0.7s,mb6.4						
SALF	Salau	89.81	44	eP	P	22 57 19.9	+0.3
MLS	Moulis	89.84	44	eP	P	22 57 20.6	+0.8
SET	Setif	89.84	51	P	P	22 57 21.0	+1.0
CKHR	Kef el Ahmar	89.85	51	P	P	22 57 22.0	+2.0
LRYF	La Roche-sur-Y	89.92	40	eP	P	22 57 20.8	+0.8
CSA1	St Austell	89.94	35	eP	P	22 57 19.2	-0.8
CMER	Merouana	89.97	52	P	P	22 57 23.5	+2.9
MATP	Matopo	90.06	112	P	P	22 57 20.5	-0.8
	comp=Z,182nm,0.6s,mb6.4,baz=253,slow=4.6,SNR=172						
MATP				pP	pP	22 57 49.3	-1.5
	comp=Z,612nm,1.0s,baz=287,slow=2.1,SNR=3.1						
MATP				PP	PP	23 00 52.1	-6.0
	comp=Z,91nm,0.8s,baz=270,slow=9.2,SNR=5.5						
SGMF	Saint Gilles	90.16	38	eP	P	22 57 19.9	-1.2
	comp=Z,504nm,0.9s,mb6.4						
SGMF	Saint Gilles	90.16	38	eP	P	22 57 19.9	-1.2
SGMF				pmax	pmax		
	comp=Z,252nm,0.9s,mb6.3						
VALF	Valcebollere	90.19	45	eP	P	22 57 23.1	+1.7
MATF	Mathat	90.32	41	eP	P	22 57 22.4	+0.4
DCN	Croghan	90.32	32⇑	iP	P	22 57 20.6	-1.2
DFRA	Djebel Bou Aff	90.33	51	P	P	22 57 25.0	+2.7
LPEF	Le Peyrat	90.36	44	eP	P	22 57 23.2	+1.0
CARF	Carcanieres	90.39	44	eP	P	22 57 24.2	+1.8
DCO	Combe Farm	90.47	36	eP	P	22 57 21.5	-1.1
DYA	Yadsworthy	90.50	36	eP	P	22 57 21.0	-1.7
CTEI	Djebel Teioual	90.52	52	P	P	22 57 24.0	+0.8
LFF	La Frestale	90.53	42	eP	P	22 57 21.9	-1.1
	comp=Z,925nm,0.6s,mb6.8						
FILF	Fillols	90.62	45	eP	P	22 57 24.6	+1.1
CASM	Ain Smara	90.67	52	P	P	22 57 25.0	+1.2
DLF	Lyons Farm	90.67	32⇑	iP	P	22 57 22.0	-1.4
DSB	Dublin	90.72	32	eP	P	22 57 23.3	-0.4
	comp=Z,275nm,0.9s,mb6.4						
MTLF	Montolieu	90.75	44	eP	P	22 57 22.6	-1.4
	comp=Z,344nm,0.7s,mb6.3						
MTLF	Montolieu	90.75	44	eP	P	22 57 22.6	-1.4
MTLF				pmax	pmax		
	comp=Z,172nm,0.7s,mb6.3						
LRDF	Laroque-de-Fa	90.77	44	eP	P	22 57 24.9	+0.7
MFF	Saint Martin d	90.77	40	eP	P	22 57 23.4	-0.7
	comp=Z,1µm,0.7s,mb6.8						
EJON	La Jonquera	90.79	45	P	P	22 57 22.6	-1.7
	comp=Z,740nm,1.7s,mb6.5						
SJAF	Saint Jean de	90.80	45	eP	P	22 57 24.7	+0.4
CKFL	Kef-Lekhel	90.89	52	P	P	22 57 26.0	+1.1
HEX	Exmoor	90.90	35	eP	P	22 57 23.6	-1.0
DRV	Dumont d'Urvil	90.95	191	P	P	22 57 28.0	+3.6
HSA	Swansea	91.06	34	eP	P	22 57 25.1	-0.2
CAEH	'Ain El Ouahch	91.14	51	P	P	22 57 27.0	+0.9
GRR	Gorron	91.21	38	eP	P	22 57 24.9	-1.2
	comp=Z,958nm,0.7s,mb6.7						
GRR	Gorron	91.21	38	eP	P	22 57 24.9	-1.2
GRR				pmax	pmax		
	comp=Z,479nm,0.7s,mb6.7						
CAF	Calviac	91.36	42	eP	P	22 57 25.7	-1.2
	comp=Z,542nm,0.7s,mb6.5						
CGMA	Guelma	91.42	52	P	P	22 57 30.0	+2.6
GMM	Mts of Mourne	91.47	32	eP	P	22 57 26.2	-1.0
CMAH	Djebel Manchou	91.50	52	P	P	22 57 28.0	+0.3
YRE	Yr Eifl	91.57	33	eP	P	22 57 27.9	+0.3
YRE				AMb	AMB	22 57 30.5	
	comp=Z,362nm,2.1s,mb6.2						
FLN	La Foliniere	91.61	38	eP	P	22 57 26.9	-1.0
	comp=Z,1µm,1.2s,mb6.8						
FLN				eR			
	comp=Z,133µm,22.5s						
LSZ	Lusaka	91.62	107	eP	P	22 57 28.8	+0.1
LSZ				pmax	pmax		
	comp=Z,453nm,1.0s,mb6.7						
LSZ				MLR	MLR		
	comp=Z,142µm,22.0s						
LSZ	Lusaka	91.62	107	eP	P	22 57 28.8	+0.1
	comp=Z,453nm,1.0s,mb6.7						
LSZ				LR	LR		
	comp=Z,142µm,22.0s						
WCB1	Church Bay	91.72	33	eP	P	22 57 27.1	-1.2
WCB1				AMb	AMB	22 57 31.1	
	comp=Z,316nm,1.7s,mb6.3						
LDF	La Druitiere	91.74	38	eP	P	22 57 27.4	-1.1
	comp=Z,765nm,0.8s,mb6.7						
LDF	La Druitiere	91.74	38	eP	P	22 57 27.4	-1.1
LDF				pmax	pmax		
	comp=Z,383nm,0.8s,mb6.7						
WLF1	Llynfaes	91.75	33	eP	P	22 57 28.6	+0.2
WLF1				AMb	AMB	22 57 31.2	
	comp=Z,271nm,1.5s,mb6.3						
SWK	Warminster	91.78	35	eP	P	22 57 29.2	+0.5
MCH1	Michaelchurch	91.81	34	eP	P	22 57 29.0	+0.3
GCL	Cushendall	91.84	31	eP	P	22 57 29.5	+0.7
WME	Myndd Eilian	91.85	33	eP	P	22 57 28.8	0.0
WME				AMb	AMB	22 57 31.7	
	comp=Z,194nm,1.5s,mb6.1						
WPM1	Penmaenmawr	91.98	33	eP	P	22 57 29.6	+0.2
WPM1				AMb	AMB	22 57 32.2	
	comp=Z,398nm,1.7s,mb6.4						
SIW	Isle of Wight	92.03	36	eP	P	22 57 30.9	+1.1
WIM	Isle of Man	92.06	32	eP	P	22 57 30.4	+0.6
WIM				AMb	AMB	22 57 32.9	
	comp=Z,647nm,1.3s,mb6.7						
TCF	Toulx Ste Croi	92.07	41	eP	P	22 57 28.9	-1.2
	comp=Z,760nm,0.7s,mb6.7						
TCF	Toulx Ste Croi	92.07	41	eP	P	22 57 28.9	-1.2
TCF				pmax	pmax		
	comp=Z,380nm,0.7s,mb6.7						
LASF	Ste Croix	92.14	44	eP	P	22 57 29.9	-0.5
	comp=Z,320nm,0.9s,mb6.2						
SWN1	Swindon	92.21	35	eP	P	22 57 31.3	+0.8
GMK	Mull of Kintyr	92.24	31	eP	P	22 57 31.1	+0.4
LBL	Lubilhac	92.25	42	eP	P	22 57 31.9	+1.0
PYM	Petit Puy Mans	92.33	42	eP	P	22 57 33.7	+2.4
GAL1	Galloway	92.42	31	eP	P	22 57 30.5	-1.0
CRAG	Craig	92.45	329	eP	P	22 57 31.5	-0.1
	comp=Z,1µm,1.5s,mb6.9						
AGO	Saint Agoulin	92.54	42	eP	P	22 57 34.3	+2.1
BGF	Bois d'Agland	92.59	41	eP	P	22 57 31.6	-0.8
	comp=Z,1µm,0.7s,mb7.1						
BGF	Bois d'Agland	92.59	41	eP	P	22 57 31.6	-0.8
BGF				pmax	pmax		
	comp=Z,749nm,0.7s,mb7.1						
COLF	Collangettes	92.66	42	eP	P	22 57 33.3	+0.5
DLBC	Dease Lake	92.67	333	PKKPbc		23 14 45.4	
	comp=Z,24nm,1.1s,baz=281,slow=9.7,SNR=5.5						
DLBC				PKPPKP		23 22 54.7	
	comp=Z,1.9nm,0.6s,baz=141,slow=15,SNR=2.8						
DLBC				LR	LR	23 44 42.4	
	comp=Z,177µm,20.2s,baz=356,slow=39						
DLBC	Dease Lake	92.67	333⇓	eP	P	22 57 32.6	+0.1
MIR	Mirnyy	92.77	173	d iP	P	22 57 31.0	-1.8
MIR				e		23 01 22.0	
MIR				eS		23 08 00.0	
MIR				pmax	pmax		
	comp=Z,6µm,2.8s,mb7.5						
MIR				pmax	pmax		
	comp=Z,45µm,12.0s						
MIR				pmax	pmax		
	comp=N,11µm,14.0s						
MIR				MLR	MLR		
	comp=N,50µm,22.0s						
MIR				MLR	MLR		
	comp=E,38µm,22.0s						
MIR				MLR	MLR		
	comp=Z,165µm,22.0s						
HYF	Humbligny	92.78	40	eP	P	22 57 32.5	-0.8
GCD	Castle Douglas	92.80	32	eP	P	22 57 33.5	+0.4
PLDF	La Plantade	92.81	42	eP	P	22 57 35.1	+1.6
SKP1	Kophill	92.85	35	eP	P	22 57 33.5	0.0
GELF	Grande-Etoile	92.87	45	eP	P	22 57 34.4	+0.6
PRAF	Pradon	92.88	44	eP	P	22 57 34.4	+0.6
KWE	Weaver Farm	92.93	34	eP	P	22 57 32.7	-1.2
TREF	Trevaresse	92.94	45	eP	P	22 57 35.0	+0.8
KAR1	Arisaig	92.98	29	eP	P	22 57 34.5	+0.5
VIVF	Saint-Julien-l	93.00	43	eP	P	22 57 34.1	-0.3
	comp=Z,571nm,1.0s,mb6.6						
VIVF	Saint-Julien-l	93.00	43	eP	P	22 57 34.1	-0.3
VIVF				pmax	pmax		
	comp=Z,286nm,1.0s,mb6.6						
AVF	Avril sur Loir	93.00	41	eP	P	22 57 33.2	-1.1
	comp=Z,487nm,0.7s,mb6.7						
BERF	Bertagne	93.02	45	eP	P	22 57 35.3	+0.8
BBO1	Bothel	93.08	32⇑	eP	P	22 57 33.6	-0.9
BWH	Wardlaw	93.10	32⇑	eP	P	22 57 33.0	-1.6
PUYF	Puyloubier	93.11	45	eP	P	22 57 36.3	+1.4
PLL	Puu Ulaula	93.12	290	eP	P	22 57 36.6	+1.1
RRH	Rhenigidale	93.14	28	eP	P	22 57 34.6	0.0
LHO	Holmfirth	93.19	33	i P	P	22 57 35.2	+0.2
LHO				i		22 57 45.0	
LHO	Holmfirth	93.19	33	eP	P	22 57 35.6	+0.6
KBI1	Birley Grange	93.21	34	eP	P	22 57 35.7	+0.5
SSF	Saint Saulge	93.21	41	eP	P	22 57 34.0	-1.3
	comp=Z,896nm,0.7s,mb6.9						
SMRF	Simiane la Rot	93.22	44	eP	P	22 57 35.4	0.0
	comp=Z,249nm,0.7s,mb6.4						
SMF	Signal de Mont	93.24	41	eP	P	22 57 34.7	-0.7
	comp=Z,896nm,0.6s,mb7.0						
SMF	Signal de Mont	93.24	41	eP	P	22 57 34.7	-0.7
SMF				pmax	pmax		
	comp=Z,448nm,0.6s,mb7.0						
VILF	Villemus	93.26	44	eP	P	22 57 36.3	+0.7
POHA	Pohakuloa	93.26	290	PFAKE		22 57 50.0	+14
POHA				LR	LR		
	comp=Z,587µm,21.0s						
BDL	Dobcross Hall	93.26	32⇑	eP	P	22 57 35.9	+0.6
BHH	Howats Hill	93.27	32⇑	eP	P	22 57 34.1	-1.3
OCF	Saint Nazaire	93.29	44	eP	P	22 57 36.9	+1.2
OG26	St.-Nazaire-De	93.29	44	eP	P	22 57 36.9	+1.2
KSB	Sheil Bridge	93.33	29	eP	P	22 57 36.0	+0.5
KIH	Kanekii	93.38	289	eP	P	22 57 36.9	+0.2
TAVF	Tavernes	93.39	45	eP	P	22 57 34.9	-1.3
ESK	Eskdalemuir	93.39	32	P	P	22 57 36.4	+0.5
ESK				pmax	pmax		
	comp=Z,530nm,1.2s,mb6.8						
ESK	Eskdalemuir	93.39	32	eP	P	22 57 34.5	-1.4
	comp=Z,532nm,1.2s,mb6.8						
ESK				LR	LR		
	comp=Z,21µm,20.0s						
BBH	Bruntsheil	93.44	32⇑	eP	P	22 57 34.5	-1.6
BTA	Talkin	93.44	32	eP	P	22 57 35.9	-0.3
STOF	St-Etienne Org	93.44	44	eP	P	22 57 37.2	+0.8
RRR	Rubha Reidh	93.50	29	eP	P	22 57 36.6	+0.3
HPK	Haverah Park	93.51	33	eP	P	22 57 37.1	+0.6
LOR	Lormes	93.52	41	eP	P	22 57 35.5	-1.2
	comp=Z,885nm,0.7s,mb6.9						
LOR				eR			
	comp=Z,150µm,20.8s						
KAC	Achnashellach	93.54	29	eP	P	22 57 36.9	+0.4
LMR	La Mourre	93.57	45	eP	P	22 57 36.6	-0.4
	comp=Z,637nm,0.7s,mb6.8						
LMR	La Mourre	93.57	45	eP	P	22 57 36.6	-0.4
LMR				pmax	pmax		
	comp=Z,318nm,0.7s,mb6.8						
KKH	Kailua Kona	93.66	289	P	P	22 57 38.5	+0.5
OG25	Le Caire	93.70	44	eP	P	22 57 37.9	+0.3
EDI	Edinburgh	93.71	31	eS		23 08 01.4	
FRF	La Foret Royal	93.75	45	eP	P	22 57 37.3	-0.5
	comp=Z,373nm,0.9s,mb6.4						
FRF	La Foret Royal	93.75	45	eP	P	22 57 37.3	-0.5
FRF				pmax	pmax		
	comp=Z,187nm,0.9s,mb6.4						
ORIF	Oris-en-Rattie	93.81	43	eP	P	22 57 38.2	+0.2
	comp=Z,1µm,0.7s,mb6.9						
ORIF				eR			
	comp=Z,262µm,19.8s						
GRN	Grenoble	93.85	43	eP	P	22 57 39.1	+0.9
REB	Eisghbrachaidh	93.88	29	eP	P	22 57 38.2	+0.2
CGL	Cagliari Serpe	93.94	50	P	P	22 57 40.6	+1.9
MDO	Dochfour	93.94	29	eP	P	22 57 38.7	+0.4
MENF	Mencas	93.96	37	eP	P	22 57 38.8	+0.2
LCP	Cassop	93.97	33	eP	P	22 57 39.2	+0.7
CALN	Calern	93.99	45	eP	P	22 57 39.7	+0.8
VSL	Villasalto	94.04	49	P	P	22 57 38.1	-1.1
CASY	Casey	94.07	180⇓	iP	P	22 57 38.5	-0.2
CASY				i S	S	23 08 40.7	+4.2
CASY				ePKKP	SS	23 15 17.0	+14
HKL	Haleakala	94.22	290	eP	P	22 57 41.3	+0.8
MVIF	Mont Vial	94.22	45	eP	P	22 57 40.4	+0.5
SURF	Saint Ours	94.23	44	eP	P	22 57 41.2	+1.2
MVH1	Achvaich	94.27	29	eP	P	22 57 39.5	-0.3
REVF	Revere	94.31	45	eP	P	22 57 41.0	+0.7
MBDF	Montbardon	94.31	44	eP	P	22 57 40.2	-0.1
	comp=Z,592nm,0.9s,mb6.6						
MBDF	Montbardon	94.31	44	eP	P	22 57 40.2	-0.1
MBDF				pmax	pmax		
	comp=Z,296nm,0.9s,mb6.6						
SIT	Sitka	94.33	330	eP	P	22 57 40.2	+0.1
SIT				pmax	pmax		
	comp=Z,2µm,2.1s,mb7.1						
SIT				MLR	MLR		
	comp=Z,278µm,20.0s						
SIT	Sitka	94.33	330	eP	P	22 57 40.2	+0.2
	comp=Z,2µm,2.1s,mb7.1						
SIT				LR	LR		
	comp=Z,278µm,20.0s						
TOUF	Mont Tournerai	94.33	45	eP	P	22 57 41.1	+0.7
BNI	Bardonecchia	94.38	44	P	P	22 57 41.1	+0.5
BNI				pmax	pmax		
	comp=Z,150nm,1.0s,mb6.3						
BNI	Bardonecchia	94.38	44	eP	P	22 57 40.5	-0.1
	comp=Z,154nm,0.9s,mb6.3						
RRL	Cesana Torines	94.39	44	P	P	22 57 40.5	-0.2
SBF	Sospel	94.40	45	eP	P	22 57 40.4	-0.3
	comp=Z,686nm,0.7s,mb6.8						
SBF	Sospel	94.40	45	eP	P	22 57 40.4	-0.3
SBF				pmax	pmax		
	comp=Z,343nm,0.7s,mb6.8						
PZZ	Prazzo	94.43	44	P	P	22 57 42.0	+1.2
AUTN	L'Aution	94.45	45	eP	P	22 57 41.2	+0.3
OG22	Abries	94.46	44	eP	P	22 57 42.6	+1.6
STV	Sta Anna Valdi	94.48	45	P	P	22 57 39.8	-1.3
STV2	Anna di Valdie	94.48	45	P	P	22 57 38.5	-2.6
DGI	Dorgali Grotta	94.52	49	P	P	22 57 41.3	-0.1
MCD	Coleburn Disti	94.52	30	eP	P	22 57 41.5	+0.6
MME1	Meikle Cairn	94.52	30	eP	P	22 57 40.8	-0.1
SAOF	Saorge	94.53	45	eP	P	22 57 41.9	+0.6
DOI	San Damiano	94.53	44	P	P	22 57 41.0	-0.3
ENR	Entracque	94.53	45	P	P	22 57 41.3	0.0
SUMG	Summit	94.55	9	eP	P	22 57 41.0	+0.2
	comp=Z,879nm,1.0s,mb7.1						
NEGI	Negi	94.57	45	P	P	22 57 38.1	-3.4
LPL	La Plagne	94.60	43	eP	P	22 57 41.9	+0.3
	comp=Z,852nm,1.0s,mb6.8						
LPL	La Plagne	94.60	43	eP	P	22 57 41.9	+0.3
LPL				pmax	pmax		
	comp=Z,426nm,1.0s,mb6.8						
RSL	Roselend	94.60	43	eP	P	22 57 42.3	+0.7
LPG	La Plagne	94.60	43	eP	P	22 57 42.1	+0.5
	comp=Z,906nm,0.9s,mb6.9						
LPG	La Plagne	94.60	43	eP	P	22 57 42.1	+0.5
LPG				pmax	pmax		
	comp=Z,453nm,0.9s,mb6.9						
FENE	Fenestrelle	94.62	44	P	P	22 57 41.0	-0.7
CABF	La Chapelle	94.63	42	eP	P	22 57 41.2	-0.5
	comp=Z,636nm,0.8s,mb6.8						
CABF	La Chapelle	94.63	42	eP	P	22 57 41.2	-0.5
CABF				pmax	pmax		
	comp=Z,318nm,0.8s,mb6.8						
BHB	Bricherasio	94.67	44	P	P	22 57 41.4	-0.6
MONE	Monesi	94.70	45	P	P	22 57 39.3	-2.8
GIMEL	Gimel	94.71	42⇓	iP	P	22 57 41.7	-0.4
IMI	Imperia	94.72	45	P	P	22 57 39.1	-3.1
IMI				P		22 57 42.7	
MEZF	Maizieres J'vi	94.77	40	eP	P	22 57 41.6	-0.7
	comp=Z,1µm,0.7s,mb7.1						
RSP	Reno Superiore	94.79	44	P	P	22 57 42.7	+0.2
LSD	Ceresole Reale	94.85	43	P	P	22 57 42.0	-0.8
ROB	Roburent	94.86	45	P	P	22 57 41.4	-1.5
EMV	Vieux Emosson	94.92	43	P	P	22 57 43.6	+0.5
EMV	Vieux Emosson	94.92	43⇑	eP	P	22 57 42.6	-0.5
BAIF	Baives	94.93	38	eP	P	22 57 42.0	-1.0
	comp=Z,263nm,0.8s,mb6.4						
BAIF	Baives	94.93	38	eP	P	22 57 42.0	-1.0
BAIF				pmax	pmax		
	comp=Z,132nm,0.8s,mb6.4						
PGF	Pioggiola	94.94	47	eP	P	22 57 42.9	-0.4
	comp=Z,295nm,0.7s,mb6.5						
PGF	Pioggiola	94.94	47	eP	P	22 57 42.9	-0.4
PGF				pmax	pmax		
	comp=Z,148nm,0.7s,mb6.5						
PTS	Pantelleria	94.97	53	P	P	22 57 45.9	+2.3
BRANT	Les Verrieres	95.01	42⇑	eP	P	22 57 43.0	-0.5
FIN	Finale Ligure	95.05	45	P	P	22 57 40.1	-3.6
FIN				P		22 57 44.5	
AIGLE	Aigle	95.07	42⇓	iP	P	22 57 44.0	+0.2
URZ	Urewera	95.08	226	P	P	22 57 44.3	+0.2
	comp=Z,43nm,1.1s,mb5.8,baz=105,slow=2.8,SNR=7.4						
URZ				sP	sP	22 58 23.1	-2.5
	comp=Z,30nm,0.7s,baz=235,slow=4.1,SNR=1.8						
URZ				PP	PP	23 01 37.1	+0.4
	comp=Z,28nm,1.0s,baz=16,slow=2.2,SNR=2.5						
URZ				S		23 08 07.1	
	comp=Z,20nm,1.0s,baz=28,slow=12,SNR=2.2						
URZ				PKKPbc		23 14 37.4	
	comp=Z,17nm,0.6s,baz=256,slow=2.8,SNR=6.1						
URZ				PKPPKP		23 22 46.1	
	comp=Z,22nm,1.1s,baz=97,slow=6.1,SNR=4.4						
URZ				LR	LR	23 30 36.7	
	comp=Z,231µm,20.0s,baz=127,slow=29						
SNZO	South Karori	95.10	223	P	P	22 57 45.7	+1.7
	comp=Z,142nm,0.8s,mb6.5						
SNZO				LR	LR		
	comp=Z,43µm,19.0s						
MCQ	Macquarie Isla	95.22	206	eP	P	22 57 45.9	+1.7
TORNY	Torny	95.25	42⇑	eP	P	22 57 43.9	-0.6
TRAV		95.25	43	P	P	22 57 44.4	-0.2
DIX	Grande Dixence	95.26	43⇑	iP	P	22 57 44.8	+0.2
SENIN	Lac Senin	95.30	43⇑	eP	P	22 57 44.3	-0.5
GIVF	Givet	95.31	38	eP	P	22 57 44.0	-0.7
	comp=Z,782nm,0.7s,mb6.9						
GIVF	Givet	95.31	38	eP	P	22 57 44.0	-0.7
GIVF				pmax	pmax		
	comp=Z,391nm,0.7s,mb7.0						
HAU	Haudompre	95.36	41	eP	P	22 57 44.8	-0.2
	comp=Z,530nm,0.7s,mb6.8						
HAU				eR			
	comp=Z,127µm,20.4s						
HAU	Haudompre	95.36	41	eP	P	22 57 44.8	-0.2
HAU				pmax	pmax		
	comp=Z,265nm,0.7s,mb6.8						
HAU				MLR	MLR		
	comp=Z,127µm,20.4s						
LOMF	Lomont	95.39	42	eP	P	22 57 45.3	+0.1
PCP	Pian Castagno	95.40	45	P	P	22 57 41.6	-3.7
ORO	Oropa	95.45	43	P	P	22 57 45.4	-0.1
ORX	Oropa	95.45	43	P	P	22 57 45.0	-0.5

LKBD	Leukerbad	95.52	43	⇑eP	P	22 57 45.1	-0.7
MCGN	Macugnaga	95.58	43	P	P	22 57 46.3	+0.2
HINF	Hinteralfeld	95.59	41	eP	P	22 57 45.0	-1.1
	comp=Z,227nm,0.6s,mb6.5						
HINF	Hinteralfeld	95.59	41	eP	P	22 57 45.0	-1.1
HINF				pmax	pmax		
	comp=Z,114nm,0.6s,mb6.5						
MMK	Mattmark	95.60	43	⇑eP	P	22 57 46.3	+0.1
GENL	Genova Univers	95.63	45	P	P	22 57 42.7	-3.7
LVI	Isola Levanzo	95.64	52	P	P	22 57 48.7	+2.1
BOURR	Bourrignon	95.66	42	⇑eP	P	22 57 45.4	-1.0
RAO	Raoul Island	95.68	236	P	P	22 57 46.3	-0.7
	comp=Z,215nm,0.3s,mb7.1,baz=96,slow=21,SNR=2.2						
RAO				PP	PP	23 01 41.5	-0.3
	comp=Z,316nm,0.3s,baz=55,slow=22,SNR=2.4						
RAO				S		23 08 15.5	
	comp=Z,229nm,0.3s,baz=288,slow=23,SNR=2.1						
RAO				LR	LR	23 33 49.4	
	comp=Z,45µm,20.4s,baz=103,slow=31						
MOF	Molkenrain	95.78	41	eP	P	22 57 47.7	+0.8
RES	Resolute Bay	95.80	353	P	P	22 57 46.2	-0.2
RES				pmax	pmax		
	comp=Z,790nm,1.8s,mb6.8						
RES	Resolute Bay	95.80	353	eP	P	22 57 45.7	-0.7
	comp=Z,235nm,1.3s,mb6.5						
ERC	Erice	95.85	52	P	P	22 57 48.0	+0.5
BBS	Basel-Blauen	95.86	42	eP	P	22 57 46.8	-0.5
BBS	Basel-Blauen	95.86	42	eP	P	22 57 46.1	-1.2
WLF	Walferdange	95.91	39	P	P	22 57 47.0	-0.5
WLF				pmax	pmax		
	comp=Z,510nm,1.0s,mb6.9						
WLF	Walferdange	95.91	39	eP	P	22 57 46.7	-0.8
	comp=Z,508nm,0.9s,mb7.0						
BALST	Balsthal	95.93	42	⇑eP	P	22 57 46.6	-1.0
ECH	Echery	95.94	41	P	P	22 57 47.4	-0.2
HON	Honolulu	95.96	290	eP	P	22 57 47.9	-0.4
SCO	Scoresbysund	95.99	14	i P	P	22 57 46.9	-0.4
SCO				i S		23 08 16.2	
SCO				pmax	pmax		
	comp=Z,85nm,0.8s,mb6.2						
SCO	Scoresbysund	95.99	14	i P	P	22 57 46.9	-0.4
	comp=Z,85nm,0.8s,mb6.2						
SCO				i S		23 08 16.2	
SCO	Scoresbysund	95.99	14	i P	P	22 57 46.9	-0.4
	comp=Z,85nm,0.8s,mb6.2						
SCO	Scoresbysund	95.99	14	i S		23 08 16.2	
HASLI	Hasliberg	95.99	42	⇑eP	P	22 57 47.2	-0.7
KIP	Kipapa	96.00	290	eP	P	22 57 49.3	+0.8
KIP				pmax	pmax		
	comp=Z,1µm,1.5s,mb7.2						
KIP	Kipapa	96.00	290	eP	P	22 57 49.3	+0.7
	comp=Z,1µm,1.5s,mb7.2						
MFNL	Monte Finestre	96.01	52	P	P	22 57 51.1	+2.9
RPZ	Rata Peaks	96.04	219	P	P	22 57 48.8	+0.6
	comp=Z,154nm,1.0s,mb6.4,baz=142,slow=5.3,SNR=17						
RPZ				sP	sP	22 58 27.2	-2.5
	comp=Z,88nm,0.9s,baz=121,slow=11,SNR=1.3						
RPZ				PP	PP	23 01 43.8	-0.4
	comp=Z,44nm,1.1s,baz=149,slow=8.3,SNR=3.3						
RPZ				S		23 08 11.4	
	comp=Z,3.6nm,0.5s,baz=31,slow=22,SNR=3.6						
RPZ				PKKPbc		23 14 36.1	
	comp=Z,22nm,1.1s,baz=160,slow=6.6,SNR=2.2						
RPZ				PKPPKP		23 22 47.4	
	comp=Z,11nm,1.0s,baz=342,slow=6.2,SNR=7.1						
RPZ				LR	LR	23 28 43.1	
	comp=Z,44µm,21.4s,baz=98,slow=28						
BOB	Bobbio (Coli)	96.08	45	P	P	22 57 48.6	+0.3
CDF	Champ du Feu	96.09	41	eP	P	22 57 47.6	-0.7
	comp=Z,588nm,1.0s,mb6.7						
CDF	Champ du Feu	96.09	41	eP	P	22 57 47.6	-0.7
CDF				pmax	pmax		
	comp=Z,294nm,1.0s,mb6.7						
WLS	Welschbruch	96.14	41	eP	P	22 57 48.6	+0.1
LIBD	Limburg	96.19	41	eP	P	22 57 48.9	+0.1
LIBD	Limburg	96.19	41	eP	P	22 57 48.4	-0.4
BNALP	Bannalp	96.21	42	⇑iP	P	22 57 48.7	-0.2
HGN	Heimansgroeve	96.22	38	⇓eP	P	22 57 48.7	-0.1
	comp=Z,283nm,1.4s,mb6.5						
HGN				epP	pP	22 58 16.3	-2.2
HGN				esP	sP	22 58 29.3	-1.1
HGN				ePP	PP	23 01 35.5	-10
HGN				eS	S	23 08 21.9	-33
HGN				eSP	SP	23 10 19.2	-1.6
HGN				eSS	SS	23 15 15.5	-18
HGN				ex	x	23 22 46.6	
MUGIO	Muggio	96.25	43	P	P	22 57 48.8	-0.3
SULZ	Sulz-Cheisache	96.27	42	⇑iP	P	22 57 48.6	-0.5
KIZ	Kirchzarten	96.31	41	P	P	22 57 50.4	+1.1
KIZ	Kirchzarten	96.31	41	⇑eP	P	22 57 48.4	-0.9
VINC	Vinca	96.32	45	P	P	22 57 45.4	-4.1
FELD	Feldberg	96.33	41	eP	P	22 57 49.6	+0.2
FELD	Feldberg	96.33	41	eP	P	22 57 48.5	-0.9
MAON	Monte Argentar	96.36	47	P	P	22 57 50.5	+0.8
MUO	Muotathal	96.38	42	⇑iP	P	22 57 49.6	-0.1
PII	Pisa	96.42	46	P	P	22 57 49.5	-0.4
RUP	Ruppelstein	96.47	39	eP	P	22 57 50.5	+0.5
RUP	Ruppelstein	96.47	39	eP	P	22 57 49.8	-0.2
VLC	Villacollemand	96.48	45	P	P	22 57 50.5	+0.3
	comp=Z,1µm,2.4s,mb7.0						
ZUR	Zurich	96.50	42	⇑iP	P	22 57 49.9	-0.3
GRFL	Gerfalco	96.51	47	P	P	22 57 51.2	+0.8
LLS	Linth-Limmern	96.57	43	⇑iP	P	22 57 50.3	-0.3
BDI	Bagni Di Lucca	96.59	46	P	P	22 57 50.5	-0.2
ERBM	Eremo	96.59	45	P	P	22 57 52.8	+2.1
SLE	Schleitheim	96.59	42	⇑eP	P	22 57 50.0	-0.6
LANF	Langenberg	96.63	40	eP	P	22 57 51.0	+0.2
TUE	Stuetta	96.65	43	P	P	22 57 51.2	+0.3
GSCL	Gusciola	96.69	45	P	P	22 57 51.1	0.0
BFO	Black Forest	96.71	41	ePdif	P	22 57 50.2	-0.9
BFO				ePP	PP	23 01 42.3	-7.1
BFO				eSKSac		23 08 21.2	
BFO				eSP	SP	23 10 26.6	+0.3
BFO				eP'P'		23 22 48.7	
WILA	Wila	96.72	42	⇑P	P	22 57 51.1	-0.1
LRW	Lerwick	96.72	28	S		23 08 16.9	
LRW	Lerwick	96.72	28	eP	P	22 57 51.8	+0.9
LRW				eS		23 08 16.9	
VDL	Val di Lei	96.73	43	⇑iP	P	22 57 51.0	-0.3
AFI	Afiamalu	96.77	253	P	P	22 57 53.6	+1.5
AFI	Afiamalu	96.77	253	PP	PP	23 01 46.0	-4.6
AFI	Afiamalu	96.77	253	P	P	22 57 53.5	+1.3
AFI						23 01 50.1	
AFI				S		23 08 21.3	
AFI				pmax	pmax		
	comp=Z,137nm,1.1s,mb6.3						
AFI				pmax	pmax		
	comp=Z,25nm,0.2s,mb6.3						
AFI				MLR	MLR		
	comp=Z,181µm,22.0s						
AFI	Afiamalu	96.77	253	P	P	22 57 53.5	+1.3
	comp=Z,137nm,1.1s,mb6.3,baz=259,slow=3.8,SNR=6.0						
AFI				PP	PP	23 01 50.1	-0.5
	comp=Z,25nm,0.2s,baz=109,slow=12,SNR=5.0						
AFI				S		23 08 21.3	
	comp=Z,12nm,0.3s,baz=262,slow=14,SNR=2.8						
AFI				LR	LR	23 31 13.4	
	comp=Z,181µm,22.0s,baz=295,slow=29						
AFI	Afiamalu	96.77	253	eP	P	22 57 51.9	-0.2
	comp=Z,2µm,2.0s,mb7.1						
AFI				LR	LR		
	comp=Z,31µm,19.0s						
STEIN	Stein am Rhein	96.79	42	⇑eP	P	22 57 50.8	-0.7
WEIN	Weingarten	96.81	42	⇑eP	P	22 57 50.7	-0.9
ABH	Alteburg	96.83	39	eP	P	22 57 51.7	+0.1
ABH	Alteburg	96.83	39	eP	P	22 57 51.3	-0.3
TOLF	Tolfa	96.84	48	P	P	22 57 51.4	-0.5
SISB	Singen-Sch Ber	96.86	42	P	P	22 57 53.0	+1.1
PLONS	Plons	96.88	42	⇑iP	P	22 57 51.6	-0.4
GIB	Gibilmanna	96.90	52	P	P	22 57 54.2	+1.9
CSLB	Castelbuono	96.90	52	P	P	22 57 53.9	+1.6
SPAK	Spaichingen	96.90	41	eP	P	22 57 53.6	+1.6
SPAK	Spaichingen	96.90	41	eP	P	22 57 51.0	-1.0
KTD	Kalmit	96.93	40	eP	P	22 57 53.3	+1.1
KTD	Kalmit	96.93	40	eP	P	22 57 51.7	-0.5
ZCCA	Zocca	96.94	45	P	P	22 57 52.2	-0.1
FNVD	Fontana Vidola	96.98	46	P	P	22 57 51.4	-1.1
	comp=Z,493nm,0.9s,mb6.9						
VAE	Valguarnera	97.01	53	PKPPKP		23 22 46.0	
	comp=Z,6.3nm,0.7s,baz=244,slow=16,SNR=3.7						
VAE				LR	LR	23 43 39.2	
	comp=Z,185µm,19.6s,baz=102,slow=37						
BERNI	Berninapass	97.06	43	⇑eP	P	22 57 52.5	-0.3
SEI	Scarperia	97.09	46	P	P	22 57 53.7	+0.7
GUT	Gutenstein	97.10	41	P	P	22 57 54.0	+1.1
GUT	Gutenstein	97.10	41	eP	P	22 57 51.8	-1.1
SAL	Salo	97.10	44	P	P	22 57 53.2	+0.2
DAVOX	Davos	97.10	43	LR	LR	23 38 51.7	
	comp=Z,96µm,18.1s,baz=243,slow=34						
DAVOX	Davos	97.10	43	P	P	22 57 53.2	+0.2
DAVOX	Davos	97.10	43	⇑eP	P	22 57 52.7	-0.3
ROM9	Roma	97.11	48	P	P	22 57 55.0	+1.8
LBG	Lerchenberg	97.12	41	P	P	22 57 53.7	+0.7
LBG	Lerchenberg	97.12	41	⇑eP	P	22 57 52.0	-1.0
VMG	Vicchio	97.19	46	P	P	22 57 53.3	-0.2
LAV9	Lanuvio	97.19	48	P	P	22 57 54.7	+1.2
MA9	Marino	97.19	48	P	P	22 57 55.4	+1.9
WTSB	Winterswijk	97.20	37	eP	P	22 57 53.1	-0.2
	comp=Z,394nm,1.9s,mb6.5						
WTSB				epP	pP	22 58 19.9	-3.0
WTSB				ePP	PP	23 01 37.5	-16
WTSB	Winterswijk	97.20	37	ex	x	23 22 43.4	
	comp=Z,344nm,3.5s						
MABI	Malga Bissina	97.25	44	P	P	22 57 52.8	-0.9
PZI	Palazzolo	97.28	53	P	P	22 57 56.4	+2.4
PGD	Poggio Sodo	97.28	46	P	P	22 57 52.9	-1.0
DAVA	Damuels	97.29	42	⇑iP	P	22 57 53.9	+0.1
	comp=Z,12µm,6.7s						
FUORN	Ofenpass	97.29	43	P	P	22 57 53.9	0.0
FUORN	Ofenpass	97.29	43	⇑iP	P	22 57 53.6	-0.3
BRMO	Bormio	97.31	43	P	P	22 57 53.8	-0.1
SWS	Schriesheim	97.37	40	P	P	22 57 55.5	+1.4
SWS	Schriesheim	97.37	40	⇑eP	P	22 57 52.9	-1.2
SFI	Santa Sofia	97.37	46	P	P	22 57 54.6	+0.3
MNO	Monte Soro	97.38	52	P	P	22 57 56.1	+1.6
BUCH	Bad Urach	97.38	41	P	P	22 57 54.1	-0.1
BUCH	Bad Urach	97.38	41	eP	P	22 57 53.6	-0.6
SSY	Sortino	97.40	53	P	P	22 57 54.8	+0.2
VENT	Ventotene	97.40	49	P	P	22 57 56.6	+2.1
	comp=Z,426nm,1.5s,mb6.7						
STU	Stuttgart	97.41	41	⇑eP	P	22 57 53.6	-0.7
STU				e*PP	pP	22 58 20.6	-3.3
STU				e		23 01 51.5	
STU				e		23 08 13.9	
STU				i SP	SP	23 10 32.1	-1.4
STU				pmax	pmax		
	comp=Z,482nm,0.8s,mb7.0						
STU	Stuttgart	97.41	41	⇑eP	P	22 57 53.6	-0.7
	comp=Z,482nm,0.8s,mb7.0						
STU				i		22 58 05.7	
STU				⇑epP	pP	22 58 20.6	-3.3
STU				ePP	PP	23 01 51.5	-3.5
STU				eSKS	SKS	23 08 13.9	-5.9
STU				i SP	SP	23 10 32.1	-1.4
STU				ePKKPdf		23 14 35.5	
MNS	Montasola	97.42	48	P	P	22 57 54.9	+0.3
WIT	Witteveen	97.46	36	eP	P	22 57 54.8	+0.3
WIT				epP	pP	22 58 23.6	-0.5
TOD	Tromm	97.48	40	eP	P	22 57 53.4	-1.2
TOD	Tromm	97.48	40	eP	P	22 57 53.6	-1.0
CERT	Cerreto	97.48	48	P	P	22 57 54.5	-0.3
TNS	Taunus Mts	97.49	39	ePdif	P	22 57 54.4	-0.3
TNS				ePP	PP	23 01 49.9	-5.8
TNS				eSKSac		23 08 27.2	
TNS				eSP	SP	23 10 35.6	+1.2
TNS				eP'P'		23 22 48.4	
UBR	Uberruh	97.58	42	P	P	22 57 56.0	+0.9
UBR	Uberruh	97.58	42	⇑eP	P	22 57 54.8	-0.3
MURB	Monte Urbino	97.61	47	P	P	22 57 54.8	-0.6
ASS	Assisi	97.63	47	P	P	22 57 55.1	-0.4
FIAM	Fiamignano	97.69	48	P	P	22 57 55.8	+0.1
SLNA	Salina	97.69	52	P	P	22 57 57.4	+1.6
RSM	Repubblica di	97.79	46	P	P	22 57 58.0	+1.8
PTQR	Pietraquaria	97.80	48	P	P	22 57 56.9	+0.6
SIND	Sindeldorf	97.87	40	eP	P	22 57 55.8	-0.6
NRCA	Norcia	97.88	47	P	P	22 57 57.0	+0.4
VVLD	Villa Vallelon	97.91	48	P	P	22 57 55.8	-0.9
	comp=Z,2µm,2.8s,mb7.2						
AQU	L'Aquila	97.91	48	P	P	22 57 58.2	+1.4
AQU				pmax	pmax		
	comp=Z,600nm,1.0s,mb7.1						
AQU	L'Aquila	97.91	48	P	P	22 57 56.7	-0.1
HDH	Heidenheim	97.96	41	P	P	22 57 58.1	+1.3
HDH	Heidenheim	97.96	41	eP	P	22 57 56.2	-0.6
RFI	Roccamonfina	97.97	49	P	P	22 57 58.2	+1.1
ARV	Arcevia	97.98	47	P	P	22 57 57.0	0.0
SDI	San Donato	97.98	49	P	P	22 57 57.6	+0.5
CTI	Castel Tesino	97.99	44	P	P	22 57 56.7	-0.3
CGRP	Cima Grappa	98.03	44	⇑iP	P	22 57 58.0	+0.8
MOTA	Moosalm	98.09	43	⇑iP	P	22 57 56.7	-0.7
	comp=Z,716nm,1.7s,mb6.9						
SQTA	Sankt Quirin	98.11	43	⇑iP	P	22 57 57.1	-0.4
	comp=Z,458nm,1.1s,mb6.9						
SQTA	Sankt Quirin	98.11	43	⇑iP	P	22 57 57.1	-0.4
SQTA				pmax	pmax		
	comp=Z,458nm,1.1s,mb6.9						
CING	Cingoli	98.11	47	P	P	22 57 57.5	-0.1
	comp=Z,530nm,2.1s,mb6.7						
MTTG	Motta San Giov	98.14	53	P	P	22 57 59.6	+1.7
TERO	Teramo	98.14	48	P	P	22 57 58.7	+0.9
INTR	Introdacqua	98.15	48	P	P	22 57 58.1	+0.3
	comp=Z,839nm,1.5s,mb7.0						
RNI2	Rionero Sannit	98.22	49	P	P	22 57 59.4	+1.2
FAU	Forcella Aurin	98.27	44	⇑iP	P	22 57 59.0	+0.7
MIDA	Miranda	98.28	49	P	P	22 58 01.1	+2.7
CII	Carovilli	98.34	49	eP	P	22 57 58.8	+0.1
	comp=Z,211nm,1.0s,mb6.6						
WATA	Walderalm	98.39	43	⇑iP	P	22 57 58.3	-0.5
	comp=Z,418nm,1.2s,mb6.8						
WATA	Walderalm	98.39	43	⇑iP	P	22 57 58.3	-0.5
WATA				pmax	pmax		
	comp=Z,418nm,1.2s,mb6.8						
WTTA	Wattenberg	98.40	43	⇓iP	P	22 57 58.4	-0.4
	comp=Z,8µm,4.7s						
WTTA	Wattenberg	98.40	43	⇓iP	P	22 57 58.4	-0.4
WTTA				pmax	pmax		
	comp=Z,8µm,4.7s						
SOI	Samo	98.44	53	P	P	22 57 58.4	-0.9
FUR	Furstenfeldbru	98.48	42	ePdif	P	22 57 58.9	-0.3
FUR				ePP	PP	23 01 57.2	-5.9
FUR				eSKSac		23 08 30.0	
FUR				eSP	SP	23 10 45.0	+0.2
FUR				eSS	SS	23 15 59.9	-5.4
FUR				eP'P'		23 22 46.5	
CSO	Casso	98.50	44	⇓eP	P	22 57 59.0	-0.4
PSB1	Pescosannita	98.54	49	P	P	22 57 59.1	-0.5
CSSN	Cassano Irpino	98.57	50	P	P	22 57 59.9	+0.1
MRB1	Monte Rocchett	98.62	49	P	P	22 57 59.7	-0.3
MGR	Morigerati	98.72	51	P	P	22 57 59.7	-0.8
CIGN	Sant'Elia a Pi	98.74	49	P	P	22 58 00.8	+0.2
CSMI	Casera Mimoias	98.80	44	⇑iP	P	22 58 02.0	+1.3
SLCN	Sala Consilina	98.86	50	P	P	22 58 01.9	+0.7
MRLC	Muro Lucano	98.87	50	P	P	22 58 02.2	+1.0
FG5	Orsara di Pugl	98.88	49	P	P	22 58 02.3	+1.1
FVI	Forni Avoltri	98.91	44	P	P	22 58 00.7	-0.5
MPRI	Monte Prat	98.93	44	⇓eP	P	22 58 02.0	+0.7
GRI	Girifalco	98.94	52	P	P	22 58 02.2	+0.6
FG2	Serracapriola	98.97	49	P	P	22 58 02.7	+1.1
GRFO	Grafenberg	98.97	40	ePdif	P	22 58 01.2	-0.2
GRA1	Grafenberg Arr	98.97	40	ePdif	P	22 58 01.2	-0.2
GRA1				ePP	PP	23 02 00.7	-5.8
GRA1				epPP		23 02 27.4	
GRA1				eSKSac		23 08 34.1	
GRA1				eSdif		23 09 20.3	
GRA1				eSP	SP	23 10 51.4	+1.2
GRA1				ePKKPbc		23 14 30.6	
GRA1				eSS	SS	23 16 00.9	-11
GRA1				eP'P'		23 22 45.3	
GRF	Grafenberg Arr	98.97	40	eP	P	22 58 01.2	-0.2
GRF				e		23 02 00.7	
GRF				e		23 08 34.1	
GRF				S	S	23 09 20.3	+1.9
GRF				eSP	SP	23 10 51.4	+1.2
GRF	Grafenberg Arr	98.97	40	eP	P	22 58 01.2	-0.2
GRF				e		23 02 00.7	
GRF				e		23 08 34.1	
GRF				eS	S	23 09 20.3	+1.9
GRF				eSP	SP	23 10 51.4	+1.2
GRF	Grafenberg Arr	98.97	40	ePdif	P	22 58 01.2	-0.2
GRF				ePP	PP	23 02 00.7	-5.8
GRF				epPP		23 02 27.4	
GRF				eSKS	SKS	23 08 34.1	+6.3
GRF				Sdif		23 09 20.3	
GRF				eSP	SP	23 10 51.4	+1.2
GRF				PKKPbc		23 14 30.6	
GRF				eSS	SS	23 16 00.9	-11
GRF				P'P'		23 22 45.3	
FG4	Candela	99.01	50	P	P	22 58 01.5	-0.3
BAD	Bernadia	99.09	44	⇓eP	P	22 58 04.0	+1.9
GMNA	Gemona	99.10	44	P	P	22 58 02.0	-0.1
COLI	Coloredo	99.15	44	⇑iP	P	22 58 03.0	+0.7
MBAR	Mbarara	99.16	94	P	P	22 58 05.0	+1.9
MBAR				pmax	pmax		
	comp=Z,180nm,1.7s,mb6.3						
MBAR	Mbarara	99.16	94	eP	P	22 58 02.0	-1.1
	comp=Z,182nm,1.8s,mb6.3						
MBAR				LR	LR		
	comp=Z,57µm,20.0s						
CLZ	Clausthal	99.21	38	ePdif	P	22 58 02.3	-0.2
CLZ				ePP	PP	23 02 03.3	-5.0
CLZ				eSKSac		23 08 35.0	
CLZ				eSP	SP	23 10 53.4	+0.9
CLZ				eP'P'		23 22 45.1	
PTCC	Patocco-Chiusa	99.22	44	P	P	22 58 03.1	+0.5
RGNG	Rignano Grg	99.23	49	P	P	22 58 02.7	-0.1
KMY	Karmoy	99.25	30	eP	P	22 58 03.2	+0.8
KMY	Karmoy	99.25	30	⇓iP	P	22 58 03.3	+0.8
KMY				AMb	AMB	22 58 30.9	
	comp=Z,211nm,1.3s,mb6.5						
KMY				AMb	AMB	22 59 00.8	
	comp=Z,278nm,1.5s,mb6.6						
TRI	Trieste	99.27	45	P	P	22 58 04.0	+1.1
TIP	Timpagrande	99.31	52	P	P	22 58 01.9	-1.3
ORI	Oriolo Calabro	99.35	51	P	P	22 58 04.2	+0.8
STAV	Stavanger	99.36	30	eP	P	22 58 03.9	+1.0
	comp=Z,271nm,1.3s,mb6.6						
STAV	Stavanger	99.36	30	eP	P	22 58 03.9	+1.0
STAV				AMb	AMB	22 58 18.2	
	comp=Z,271nm,1.3s,mb6.6						
INK	Inuvik	99.36	340	P	P	22 58 01.8	-1.0
INK				pmax	pmax		
	comp=Z,360nm,1.0s						
INK	Inuvik	99.36	340	PKKPbc		23 14 27.5	
	comp=Z,45nm,1.0s,baz=274,slow=2.8,SNR=5.6						
INK				SS	SS	23 16 08.2	-8.9
	comp=Z,22nm,1.1s,baz=9.2,slow=12,SNR=1.5						
INK				PKPPKP		23 22 42.5	
	comp=Z,8.2nm,1.0s,baz=351,slow=5.8,SNR=4.0						
INK				LR	LR	23 45 58.3	
	comp=Z,222µm,21.4s,baz=0.5,slow=37						
INK	Inuvik	99.36	340	eP	P	22 58 01.3	-1.5
	comp=Z,0.2nm,2.1s						
INK				ePKKPbc		23 14 27.5	
KBA	Koelnbreinsper	99.44	43	⇑iP	P	22 58 02.9	-0.7
	comp=Z,11µm,8.8s						
KBA	Koelnbreinsper	99.44	43	⇑iP	P	22 58 02.9	-0.7
KBA				pmax	pmax		
	comp=Z,10µm,8.8s						
VOY	Vojsko	99.45	45	ePdiff	P	22 58 01.3	-2.4
VOY				e		22 58 05.1	
JAVS	Javornik	99.52	45	ePdiff	P	22 58 03.6	-0.4
MOX	Moxa	99.54	40	eP	P	22 58 05.3	+1.3
MOX				pmax	pmax		
	comp=Z,260nm,1.9s,mb6.5						
MOX	Moxa	99.54	40	eP	P	22 58 05.3	+1.3
	comp=Z,260nm,1.9s,mb6.5						
MOX				ePP	PP	23 02 06.0	-4.9
MOX				epPP		23 02 32.0	
MOX				eSKS	SKS	23 08 24.0	-6.6
MOX				ePS	PS	23 10 57.0	-13
MOX				eSS	SS	23 16 23.0	+3.1
MOX				eP'P'		23 22 44.0	
MOX	Moxa	99.54	40	i P	P	22 58 05.3	+1.3
	comp=Z,logA/T=2.1,mb6.5						
MOX				PP	PP	23 02 06.0	-4.9
MOX				pPP		23 02 32.0	
MOX				SKS	SKS	23 08 24.0	-6.6
MOX				PS	PS	23 10 57.0	-13
MOX				SS	SS	23 16 23.0	+3.1
MOX				PKPPKP		23 22 44.0	
MOX				L		23 46 38.0	
NVLJ	Novalja	99.64	46	i P	P	22 58 03.9	-0.7
EGD	Espegrend	99.66	29	eP	P	22 58 05.4	+1.2
	comp=Z,472nm,1.4s,mb6.9						
EGD	Espegrend	99.66	29	eP	P	22 58 05.4	+1.2
EGD				AMb	AMB	22 58 21.4	
	comp=Z,472nm,1.4s,mb6.9						
ASK	Askoy	99.73	29	eP	P	22 58 06.2	+1.6
	comp=Z,448nm,1.5s,mb6.9						
ASK	Askoy	99.73	29	eP	P	22 58 06.2	+1.6
ASK				AMb	AMB	22 58 18.6	
	comp=Z,448nm,1.5s,mb6.9						
JMIC	Jan Mayen	99.73	17	S		23 08 32.7	
	comp=Z,26nm,0.6s,baz=226,slow=6.7,SNR=1.7						
JMIC				SP	SP	23 10 55.4	-1.9
	comp=Z,15nm,0.6s,baz=162,slow=14,SNR=1.7						
JMIC				SS	SS	23 16 20.7	-1.5
	comp=Z,12nm,0.5s,baz=157,slow=8.5,SNR=2.0						
JMIC	Jan Mayen	99.73	17	eP	P	22 58 03.7	-0.7
JMIC				ePP	PP	23 02 14.0	+1.9
JMIC				eSKSa		23 08 32.3	
JMIC				eSS	SS	23 16 21.4	-0.8
JMIC				AMS	AMS	23 41 03.4	
	comp=Z,68µm,18.9s						
BER	Bergen	99.75	29	eP	P	22 58 05.4	+0.7
BER				⇑iP		22 58 06.5	
BER				AMb	AMB	22 58 22.3	
	comp=Z,543nm,1.3s,mb7.0						
BER				ePP	PP	23 02 10.5	-1.9
BER				eSKSa		23 08 31.2	
BER				eSS	SS	23 16 26.6	+3.9
BER				AMS	AMS	23 38 34.3	
	comp=Z,99µm,22.0s						
SUE	Sulen	99.76	28	eP	P	22 58 06.3	+1.6
SUE				AMb	AMB	22 58 14.8	
	comp=Z,212nm,1.6s,mb6.5						
SUE				AMb	AMB	22 58 53.1	
	comp=Z,293nm,1.6s,mb6.7						
RUND	Rundenannen	99.78	29	eP	P	22 58 06.6	+1.8
RUND				eP		22 58 07.0	
RUND	Rundenannen	99.78	29	eP	P	22 58 07.0	+2.2
RUND				AMb	AMB	22 58 22.5	
	comp=Z,761nm,1.7s,mb7.0						
RUND				AMb	AMB	22 59 00.9	
	comp=Z,751nm,1.5s,mb7.1						
LTRZ	Laterza	99.79	50	P	P	22 58 05.5	+0.2
SNART	Snartemo	99.86	31	eP	P	22 58 06.6	+1.4
	comp=Z,223nm,1.1s,mb6.7						
SNART	Snartemo	99.86	31	eP	P	22 58 06.6	+1.4
SNART				AMb	AMB	22 58 27.4	
	comp=Z,223nm,1.1s,mb6.7						
LJU	Ljubljana	99.88	45	eP	P	22 58 06.2	+0.6
LJU				e	pP	22 58 33.7	-1.5
LJU				e		23 02 10.9	
LJU				e		23 08 36.5	
LJU				eS	S	23 09 32.4	+6.3
LJU				e		23 10 54.5	
LJU				eSS	SS	23 16 26.1	+1.3
LJU	Ljubljana	99.88	45	ePdif	P	22 58 06.2	+0.6
LJU				e	pP	22 58 33.7	-1.5
LJU				ePP	PP	23 02 10.9	-2.9
LJU				epPP		23 02 37.6	
LJU				e		23 02 55.7	
LJU				eSKSac		23 08 36.5	
LJU				eSdif		23 09 32.4	
LJU				e		23 10 54.5	
LJU				ePKKPbc		23 14 26.1	
LJU				e		23 15 28.4	
LJU				eSS	SS	23 16 26.1	+1.3
LJU				e		23 19 23.1	
LJU				eP'P'		23 22 39.4	
LJU				e		23 23 13.4	
LJU	Ljubljana	99.88	45	ePdiff	P	22 58 06.2	+0.6
LJU				e		22 58 19.0	
LJU				epPdiff	pP	22 58 33.7	-1.5
LJU				ePP	PP	23 02 10.9	-2.9
LJU				epPP		23 02 37.6	
LJU				e		23 02 55.7	
LJU				eSKSac		23 08 36.5	
LJU				eSdiff		23 09 32.4	
LJU				e		23 10 54.5	
LJU				ePKKPbc		23 14 26.1	
LJU				e		23 15 28.4	
LJU				eSS	SS	23 16 26.1	+1.3
LJU				e		23 19 23.1	
LJU				e		23 23 13.4	
BLS5	Blasjo	99.90	30	eP	P	22 58 07.6	+2.2

BLS5				*e*P		22 58 07.9	
BLS5				AMb	AMB	22 58 26.6	
	comp=Z,183nm,1.2s,mb6.6						
BLS5				AMb	AMB	22 58 26.6	
	comp=Z,183nm,1.2s,mb6.6						
BSEG	**Bad Segeberg**	**99.91**	**36**	*e*Pdif	**P**	**22 58 05.3**	**-0.2**
BSEG				*e*PP	PP	23 02 08.4	-5.4
BSEG				*e*SKSac		23 08 39.0	
BSEG				*e*SP	SP	23 10 59.2	-0.2
BSEG				*e*P'P'		23 22 43.8	
OBKA	**Obir**	**100.04**	**44**	⇑*i*P	P	22 58 06.0	-0.3
	comp=Z,15µm,9.4s						
FOO	**Floro**	**100.10**	**28**	*e*P	P	22 58 02.7	-3.5
FOO				*e*P		22 58 04.0	
FOO	**Floro**	**100.10**	**28**	*e*P	P	22 58 04.1	-2.1
FOO				AMb	AMB	22 58 26.6	
	comp=Z,216nm,1.6s						
FOO				AMb	AMB	22 58 26.7	
	comp=Z,216nm,1.6s						
BRT	**Bari-Castellan**	**100.15**	**50**	P	P	22 58 07.8	+0.8
MUD	**Monsted U'grnd**	**100.17**	**34**	⇓*i*P	P	22 58 07.3	+0.7
MUD				*i*		22 58 33.4	
MUD				*i*		23 02 11.7	
MUD				*i*		23 09 32.3	
MUD				pmax	pmax		
	comp=Z,160nm,1.2s						
MUD				MLR	MLR		
	comp=Z,71µm,23.0s						
MUD	**Monsted U'grnd**	**100.17**	**34**	⇓*i*P	P	22 58 07.3	+0.7
	comp=Z,158nm,1.2s						
MUD				*i*		22 58 19.5	
MUD				*i*		22 58 33.4	
MUD				*i*		23 02 11.7	
MUD				*i* S		23 08 41.4	
MUD				*i*		23 09 32.3	
	comp=Z,71µm,23.0s						
ODD1	**Odda**	**100.17**	**30**	⇑*i*P	P	22 58 07.7	+1.1
	comp=Z,276nm,2.2s						
ODD1	**Odda**	**100.17**	**30**	⇑*i*P	P	22 58 07.7	+1.1
ODD1				AMb	AMB	22 58 28.2	
	comp=Z,276nm,2.2s						
BOJS	**Bojanci**	**100.19**	**45**	*e*Pdiff	P	22 58 08.0	+0.9
BOJS				*e*pPdiff		22 58 35.9	
BOJS				*e*PP	PP	23 02 13.4	-2.9
GERES	**GERESS Array B**	**100.23**	**42**	P	P	22 58 06.3	-0.8
GERES						23 02 11.1	
GERES				S		23 08 36.5	
GERES				SP	SP	23 11 01.4	-1.6
GERES				SS	SS	23 16 27.8	-1.9
GERES	**GERESS Array B**	**100.23**	**42**	P	P	22 58 06.3	-0.8
	comp=Z,10nm,0.8s,baz=225,slow=5.7,SNR=45						
GERES				pP		22 58 35.0	
	comp=Z,20nm,0.9s,baz=243,slow=6.0,SNR=1.6						
GERES				PP	PP	23 02 11.0	-5.5
	comp=Z,41nm,1.1s,baz=234,slow=8.4,SNR=4.3						
GERES				S		23 08 36.5	
	comp=Z,2.1nm,1.0s,baz=191,slow=27,SNR=1.8						
GERES				SP	SP	23 11 01.4	-1.6
	comp=Z,1.8nm,0.9s,baz=90,slow=1.3,SNR=2.2						
GERES				PKKPbc		23 14 23.6	
	comp=Z,6.4nm,0.7s,baz=123,slow=1.7,SNR=12						
GERES				SS	SS	23 16 27.8	-1.9
	comp=Z,4.3nm,1.0s,SNR=2.1						
GERES				PKPPKP		23 22 40.9	
	comp=Z,7.1nm,1.1s,SNR=7.8						
KHC	**Kasperske Hory**	**100.24**	**41**	*e*P	P	22 58 06.9	-0.3
KHC				*e*		23 02 11.4	
KHC				*e*		23 08 37.1	
KHC				*e*		23 10 59.4	
KHC				MLR	MLR		
	comp=Z,185µm,26.3s						
KHC	**Kasperske Hory**	**100.24**	**41**	*e*Pdif	P	22 58 06.9	-0.3
KHC				*e*		22 58 13.0	
KHC				*e*pP		22 58 33.8	
KHC				*e*		22 58 56.5	
KHC				*e*PP	PP	23 02 11.4	-5.2
KHC				*e*pPP		23 02 46.0	
KHC				*e*SKS	SKS	23 08 37.1	+3.1
KHC				*e*		23 10 59.4	
KHC				*e*		23 13 08.5	
KHC				LR	LR		
	comp=Z,185µm,26.3s						
KHC	**Kasperske Hory**	**100.24**	**41**	*e*PDIF	P	22 58 06.9	-0.3
KHC				x	x	22 58 13.0	
KHC				*e*pP		22 58 33.8	
KHC				*e*x	x	22 58 56.5	
KHC				*e*PP	PP	23 02 11.4	-5.2
KHC				*e*x	x	23 02 46.0	
KHC				*e*SKS	SKS	23 08 37.1	+3.1
KHC				*e*SP	SP	23 10 59.4	-3.7
KHC				*e*x	x	23 13 08.5	
KHC				*e*PKPPKP		23 22 42.2	
KHC				AMS	AMS	23 32 10.0	
	comp=Z,185µm,26.3s						
MOA	**Molln**	**100.27**	**43**	⇑*i*P	P	22 58 06.3	-1.0
	comp=Z,38µm,15.0s						
HYA	**Hoyanger**	**100.44**	**28**	*e*P	P	22 58 09.7	+2.0
	comp=Z,288nm,1.8s						
HYA	**Hoyanger**	**100.44**	**28**	*e*P	P	22 58 09.7	+2.0
HYA				AMb	AMB	22 59 08.1	
	comp=Z,288nm,1.8s						
PERS	**Pernice**	**100.45**	**44**	*e*Pdif	P	22 58 08.4	+0.3
PERS				*e*SKSac		23 08 38.3	
PERS				*e*		23 11 51.4	
PERS	**Pernice**	**100.45**	**44**	*e*Pdiff	P	22 58 08.4	+0.3
PERS				*e*SKSac		23 08 38.3	
PERS				*e*SP	SP	23 11 06.2	+0.8
PERS				*e*		23 11 51.4	
PERS				*e*		23 26 14.2	
CLL	**Collm**	**100.58**	**39**	*i* P	P	22 58 10.1	+1.5
CLL				*e*		23 08 38.0	
CLL				*e*S	S	23 09 33.0	+1.2
CLL				pmax	pmax		
	comp=Z,269nm,1.9s						
CLL				MLR	MLR		
	comp=Z,240µm,23.8s						
CLL	**Collm**	**100.58**	**39**	*i* Pdif	P	22 58 10.1	+1.5
	comp=Z,269nm,1.9s						
CLL				*e*pP		22 58 37.0	
CLL				*e*SKS	SKS	23 08 38.0	+2.4
CLL				*e*Sdif		23 09 33.0	
CLL				PKKP	PKKP	23 14 50.4	+38
CLL				P'P'		23 22 39.0	
CLL				LR	LR		
	comp=Z,240µm,23.8s						
CLL	**Collm**	**100.58**	**39**	*i* PDIF	P	22 58 10.1	+1.5
CLL				*i*		22 58 15.6	
CLL				*i* PDIF	P	22 58 20.7	+12
CLL				*i*		22 58 23.7	
CLL				*e*		22 58 37.0	
CLL				*e*		22 58 48.0	
CLL				*e**SP		22 58 58.0	
CLL				*i* PP	PP	23 02 14.3	-5.0
CLL				*e**SPP		23 02 55.0	
CLL				*e*		23 08 38.0	
CLL				*e*		23 09 15.0	
CLL				*e*		23 09 33.0	
CLL				*e*SP	SP	23 11 06.0	-0.8
CLL				*e*SPP	SPP	23 11 50.0	-5.3
CLL				*i* PKKP	PKKP	23 14 50.4	+38
CLL				*e*		23 15 28.0	
CLL				*e*SS	SS	23 16 30.0	-4.6
CLL				*e*		23 17 25.0	
CLL				*e*SKKP		23 17 45.0	
CLL				*e*PKPPKP		23 22 39.0	
CLL				*e*		23 23 19.0	
LCI	**Lecce**	**100.65**	**51**	P	P	22 58 11.1	+1.9
EYAK	**Cordova Ski Ar**	**100.72**	**331**	*e*Pdif	P	22 58 08.3	-0.8
ARSA	**Arzberg**	**100.90**	**44**	⇑*i*P	P	22 58 08.2	-2.0
	comp=Z,15µm,9.4s						
SISC	**Sisak**	**100.93**	**46**	*i* P	P	22 58 10.8	+0.5
DIV	**Divide**	**100.95**	**331**	*e*Pdif	P	22 58 08.4	-1.7
	comp=Z,16µm,1.5s						
DIV				LR	LR		
	comp=Z,480µm,20.0s						
BRG	**Berggiesshubel**	**101.01**	**40**	*i* P	P	22 58 11.2	+0.6
BRG				*e*		23 02 18.1	
BRG				S	S	23 09 38.1	+2.7
BRG				SP	SP	23 11 13.8	+2.3
BRG				SS	SS	23 16 36.9	-3.7
BRG				pmax	pmax		
	comp=Z,145nm,1.5s						
BRG				pmax	pmax		
	comp=Z,980nm,2.3s						
BRG				MLR	MLR		
	comp=Z,183µm,22.7s						
BRG				MLR	MLR		
	comp=N,63µm,22.5s						
BRG				MLR	MLR		
	comp=E,125µm,22.5s						
BRG	**Berggiesshubel**	**101.01**	**40**	*i* Pdif	P	22 58 11.2	+0.7
	comp=E,145nm,1.5s						
BRG				*i*		22 58 17.4	
BRG				*e*PP	PP	23 02 18.1	-4.6
BRG				*e*		23 02 43.5	
BRG				SKS	SKS	23 08 48.7	+11
BRG				S	S	23 09 38.1	+2.7
BRG				SP	SP	23 11 13.8	+2.3
BRG				PKKP	PKKP	23 14 23.6	+12
BRG				SS	SS	23 16 36.9	-3.7
BRG				P'P'		23 22 38.4	
BRG				LR	LR		
	comp=Z,183µm,22.7s						
DAG	**Danmarks Havn**	**101.06**	**10**	⇓*e*P	P	22 58 11.8	+1.5
DAG				pmax	pmax		
	comp=Z,78nm,1.0s						
DAG	**Danmarks Havn**	**101.06**	**10**	⇓*e*P	P	22 58 11.8	+1.5
	comp=Z,78nm,1.0s						
DAG	**Danmarks Havn**	**101.06**	**10**	⇓*i*P	P	22 58 11.8	+1.5
	comp=Z,78nm,1.0s						
STON	**Ston**	**101.09**	**48**	*i* P	P	22 58 10.8	-0.4
PRU	**Pruhonice**	**101.10**	**41**	*e*P	P	22 58 11.0	0.0
PRU				*e*		23 02 16.2	
PRU				*e*		23 08 44.0	
PRU				*e*		23 11 09.4	
PRU				MLR	MLR		
	comp=Z,145µm,26.8s						
PRU	**Pruhonice**	**101.10**	**41**	*e*Pdif	P	22 58 11.0	0.0
PRU				*e*pP		22 58 38.5	
PRU				*e*PP	PP	23 02 16.2	-7.2
PRU				*e*pPP		23 02 54.7	
PRU				*e*SKS	SKS	23 08 44.0	+5.8
PRU				*e*		23 11 09.4	
PRU				LR	LR		
	comp=Z,145µm,26.8s						
PRU	**Pruhonice**	**101.10**	**41**	*e*PDIF	P	22 58 11.0	0.0
PRU				*e*pP		22 58 38.5	
PRU				*e*PP	PP	23 02 16.2	-7.2
PRU				*e*x	x	23 02 54.7	
PRU				*e*SKS	SKS	23 08 44.0	+5.8
PRU				*e*SP	SP	23 11 09.4	-3.0
PRU				*e*PKPPKP		23 22 42.0	
PRU				AMS	AMS	23 36 40.0	
	comp=Z,145µm,26.8s						
PVCC	**Panska Ves**	**101.28**	**40**	*e*P	P	22 58 12.1	+0.3
PVCC				*e*		23 02 19.2	
PVCC				*e*		23 08 44.6	
PVCC				*e*		23 11 14.6	
PVCC				MLR	MLR		
	comp=Z,165µm,25.4s						
PVCC	**Panska Ves**	**101.28**	**40**	*e*Pdif	P	22 58 12.1	+0.3
PVCC				*e*pP		22 58 39.2	
PVCC				*e*PP	PP	23 02 19.2	-5.4
PVCC				*e*pPP		23 02 56.5	
PVCC				*e*SKS	SKS	23 08 44.6	+5.6
PVCC				*e*		23 11 14.6	
PVCC				LR	LR		
	comp=Z,165µm,25.4s						
PVCC	**Panska Ves**	**101.28**	**40**	*e*PDIF	P	22 58 12.1	+0.3
PVCC				*e*pP		22 58 39.2	
PVCC				*e*PP	PP	23 02 19.2	-5.4
PVCC				*e*x	x	23 02 56.5	
PVCC				*e*SKS	SKS	23 08 44.6	+5.6
PVCC				*e*SP	SP	23 11 14.6	+0.4
PVCC				*e*PKPPKP		23 22 42.2	
PVCC				AMS	AMS	23 37 00.0	
	comp=Z,165µm,25.4s						
RUE	**Ruedersdorf**	**101.40**	**38**	*e*Pdif	P	22 58 11.4	-0.8
	comp=Z,187nm,0.8s						
KONO	**Kongsberg**	**101.48**	**31**	PFAKE		22 58 20.0	+7.6
KONO				LR	LR		
	comp=Z,149µm,20.0s						
HCY	**Herceg Novi**	**101.53**	**49**	⇑*i*P	P	22 58 14.9	+1.8
MOL	**Molde**	**101.56**	**27**	*e*P	P	22 58 14.6	+1.9
	comp=Z,224nm,1.6s						
MOL	**Molde**	**101.56**	**27**	*e*P	P	22 58 14.6	+1.9
MOL				AMb	AMB	22 58 24.3	
	comp=Z,224nm,1.6s						
COP	**Copenhagen**	**101.64**	**35**	*e*P	P	22 58 16.7	+3.5
COP				*e*		23 02 23.3	
COP				*i* S		23 08 45.8	
COP				*i*		23 09 35.6	
COP				pmax	pmax		
	comp=Z,110nm,0.9s						
COP				MLR	MLR		
	comp=Z,54µm,19.0s						
COP	**Copenhagen**	**101.64**	**35**	*e*P	P	22 58 16.7	+3.5
	comp=Z,108nm,0.9s						
COP				*i*		22 58 42.0	
COP				*e*		23 02 23.3	
COP				*i* S		23 08 45.8	
COP				*i*		23 09 35.6	
COP				LR	LR		
	comp=Z,54µm,19.0s						
COP	**Copenhagen**	**101.64**	**35**	*i* P	P	22 58 16.7	+3.5
	comp=Z,108nm,0.9s						
COP				*i*		22 58 42.0	
COP				*e*		23 02 23.3	
COP				*i* S		23 08 45.8	
COP				*i*		23 09 35.6	
	comp=Z,54µm,19.0s						
BRY	**Bratogost**	**101.69**	**49**	*e*P	P	22 58 15.3	+1.6
SOP	**Sopron**	**101.70**	**43**	P	P	22 58 14.9	+1.2
VKA	**Vienna**	**101.71**	**43**	⇑*i*P	P	22 58 14.9	+1.2
	comp=Z,1µm,4.5s						
VKA				*i*		22 58 27.3	
VKA				*i*		22 58 42.0	
	comp=Z,19µm,16.0s						
VKA				MLRZ		23 38 00.0	
	comp=Z,130nm,26.0s						
VKA	**Vienna**	**101.71**	**43**	⇑*i*P	P	22 58 14.9	+1.2
VKA				MLR	MLR		
	comp=Z,130µm,26.0s						
KEK	**Kerkira**	**101.71**	**52**	*e*P	P	22 58 11.1	-2.9
THY	**Trims Highway**	**101.76**	**333**	*e*Pdif	P	22 58 12.8	-0.8
RGN	**Rugen**	**101.77**	**36**	Pdif	P	22 58 14.7	+0.8
	comp=Z,156nm,0.9s						
BUM	**Brajici-Budva**	**101.78**	**49**	⇑*i*P	P	22 58 16.0	+1.8
VLS	**Valsamata**	**101.88**	**54**	*e*P	P	22 58 11.0	-3.7
ULC	**Ulcinj**	**101.93**	**50**	⇑*i*P	P	22 58 17.0	+2.1
KRUC	**Moravsky**	**101.99**	**42**	P	P	22 58 16.1	+1.2
NKY	**Niksic**	**101.99**	**49**	⇑*i*P	P	22 58 17.1	+2.0
UPM	**Unac-Piva**	**102.03**	**48**	⇑*i*P	Pdif	22 58 17.2	+1.9
DOMB	**Dombas**	**102.04**	**28**	*e*P	Pdif	22 58 17.0	+2.1
	comp=Z,200nm,2.0s						
DOMB	**Dombas**	**102.04**	**28**	*e*P	Pdif	22 58 17.0	+2.1
DOMB				AMb	AMB	22 58 52.1	
	comp=Z,200nm,2.0s						
IGT	**Igoumenitsa**	**102.06**	**52**	*e*P	Pdif	22 58 17.1	+1.6
TTG	**Podgorica**	**102.07**	**49**	⇑*i*P	Pdif	22 58 17.5	+2.0
LKD	**Levkas**	**102.07**	**53**	*e*P	Pdif	22 58 18.2	+2.6
OSL	**Oslo**	**102.11**	**30**	*e*P	Pdif	22 58 16.8	+1.5
	comp=Z,268nm,1.0s						
OSL	**Oslo**	**102.11**	**30**	*e*P	Pdif	22 58 16.8	+1.5
OSL				AMb	AMB	22 58 34.8	
	comp=Z,268nm,1.0s						
UPC	**Upice**	**102.16**	**41**	*e*PDIF	Pdif	22 58 16.8	+1.1
UPC				*e*pP		22 58 43.4	
UPC				*e*PP	PP	23 02 21.9	-9.0
UPC				*e*PKPPKP		23 22 40.3	
VRAC	**Vranov**	**102.18**	**42**	⇑P	Pdif	22 58 17.2	+1.4
ZST	**Bratislava**	**102.19**	**43**	*i* P	Pdif	22 58 16.4	+0.5
ZST				*e*		23 02 25.8	
ZST				*e*S		23 08 43.0	
ZST				*e*SP	SP	23 11 33.2	+10
ZST	**Bratislava**	**102.19**	**43**	*i* P	Pdif	22 58 16.4	+0.5
ZST				*e*		22 58 25.8	
ZST				*e*		23 01 47.6	
ZST				*e*PP	PP	23 02 25.8	-5.5
ZST				*e*S		23 08 43.0	
ZST				*e*SP	SP	23 11 33.2	+10
ZST	**Bratislava**	**102.19**	**43**	PDIF	Pdif	22 58 16.4	+0.5
ZST				*e*		22 58 25.8	
ZST				*e*		23 01 47.6	
ZST				*e*PP	PP	23 02 25.8	-5.5
TIR	**Tirane**	**102.21**	**50**	*i* p	PP	23 02 16.0	-16
QSH	**Qafa e Shtames**	**102.29**	**50**	*i* p	PP	23 02 17.0	-15
DPC	**Dobruska-Polom**	**102.31**	**41**	*e*P	Pdif	22 58 16.2	-0.1
DPC				*e*		23 08 49.8	
DPC				*e*		23 11 21.7	
DPC				MLR	MLR		
	comp=Z,167µm,25.9s						
DPC	**Dobruska-Polom**	**102.31**	**41**	*e*Pdif	Pdif	22 58 16.2	-0.1
DPC				*e*pP		22 58 44.3	
DPC				*e*PP	PP	23 02 21.2	-11
DPC				*e*pPP		23 03 04.2	
DPC				*e*SKS	SKS	23 08 49.8	+5.9
DPC				*e*		23 11 21.7	
DPC				LR	LR		
	comp=Z,167µm,25.9s						
DPC	**Dobruska-Polom**	**102.31**	**41**	*e*PDIF	Pdif	22 58 16.2	-0.1
DPC				*e*pP		22 58 44.3	
DPC				*e*PP	PP	23 02 21.2	-11
DPC				*e*x	x	23 03 04.2	
DPC				*e*SKS	SKS	23 08 49.8	+5.9
DPC				*e*SP	SP	23 11 21.7	-3.0
DPC				*e*PKPPKP		23 22 38.1	
DPC				AMS	AMS	23 37 40.0	
	comp=Z,167µm,25.9s						
SML	**Sawmill**	**102.34**	**331**	P	Pdif	22 58 15.0	-1.2
SML	**Sawmill**	**102.34**	**331**	*e*Pdif	Pdif	22 58 14.5	-1.7
PLE	**Pljevlja**	**102.41**	**48**	⇑*i*P	Pdif	22 58 18.8	+1.9
KSP	**Ksiaz**	**102.42**	**40**	*e*P	Pdif	22 58 17.5	+0.7
KSP				*e*		23 08 44.0	
KSP				*e*SP	SP	23 11 22.5	-3.5
KSP				*e*SS	SS	23 16 59.0	-1.4
KSP	**Ksiaz**	**102.42**	**40**	*e*Pdif	Pdif	22 58 17.5	+0.7
KSP				*e*		22 58 28.8	
KSP				*e*		22 58 45.3	
KSP				*e*PP	PP	23 02 23.0	-10
KSP				*e*SKS	SKS	23 08 44.0	-0.4
KSP				*e*SP	SP	23 11 22.5	-3.5
KSP				*e*SS	SS	23 16 59.0	-1.4
KSP				LR	LR		
	comp=Z,458µm,31.1s						
KSP	**Ksiaz**	**102.42**	**40**	*e*P	Pdif	22 58 17.7	+0.9
	comp=Z,3µm,4.2s						
KSP				*e*		22 58 45.4	
KSP				*e*PP	PP	23 02 27.8	-5.3
KSP				*e*SKS	SKS	23 08 50.7	+6.2
KSP				*e*Sdiff		23 09 52.8	
KSP				*e*SP	SP	23 11 27.3	+1.3
KSP				*e*SS	SS	23 17 09.2	+8.8
KSP				MLR	MLR	23 37 48.4	
	comp=Z,397µm,31.1s						
NAO01	**NORSAR Array S**	**102.48**	**30**	*e*Pdif	Pdif	22 58 18.4	+1.6
	comp=Z,41nm,0.6s						
NAO01				*i* SP	SP	23 11 26.8	+0.5
NAO01				*e*PKKPbc		23 14 20.0	
NAO01				LR	LR		
	comp=Z,136µm,22.0s						
JAN	**Janina**	**102.48**	**52**	*e*P	Pdif	22 58 18.5	+1.2
SMOL	**Smolenice**	**102.49**	**43**	*e*P	Pdif	22 58 18.6	+1.4
SMOL				*e*		23 02 32.1	
SMOL	**Smolenice**	**102.49**	**43**	*e*P	Pdif	22 58 18.6	+1.4
SMOL				*e*		22 58 29.3	
SMOL				*e*PP	PP	23 02 32.1	-1.5
SMOL	**Smolenice**	**102.49**	**43**	PDIF	Pdif	22 58 18.6	+1.4
SMOL				*e*		22 58 29.3	
SMOL				*e*PP	PP	23 02 32.1	-1.5
BBLS	**Bajina Basta -**	**102.56**	**48**	⇓*i*P	Pdif	22 58 19.6	+2.0
BBLS	**Bajina Basta -**	**102.56**	**48**	⇓*i*		23 22 31.5	
PVY	**Plav**	**102.62**	**49**	⇑*i*P	Pdif	22 58 19.5	+1.6
ITM	**Ithomi**	**102.64**	**55**	*e*P	Pdif	22 58 20.0	+1.9
IVA	**Berane**	**102.64**	**49**	⇑*i*P	Pdif	22 58 19.6	+1.6
PKSM	**Moragy**	**102.66**	**45**	⇑P	Pdif	22 58 19.5	+1.5
NB2	**NORSAR Subarra**	**102.69**	**29**	P	Pdif	22 58 17.8	+0.1
	comp=Z,202nm,1.7s,baz=248,slow=4.5						
NB2	**NORSAR Subarra**	**102.69**	**29**	P	Pdif	22 58 17.8	+0.1
	baz=248,slow=4.6						
NOA	**NORSAR Array B**	**102.69**	**29**	P	Pdif	22 58 17.5	-0.2
NOA						23 02 30.1	
NOA				S		23 08 46.2	
NOA				SP	SP	23 11 27.6	-1.0
NOA				SS	SS	23 17 02.0	-1.8
NOA	**NORSAR Array B**	**102.69**	**29**	P	Pdif	22 58 17.5	-0.2
	comp=Z,32nm,1.1s,baz=251,slow=4.3,SNR=22						
NOA				PP	PP	23 02 30.1	-4.8
	comp=Z,29nm,1.2s,baz=248,slow=6.2,SNR=2.7						
NOA				S		23 08 46.1	
	comp=Z,1.6nm,0.8s,baz=280,slow=4.0,SNR=2.5						
NOA				SP	SP	23 11 27.6	-1.1
	comp=Z,0.9nm,0.7s,baz=47,slow=6.2,SNR=2.3						
NOA				PKKPbc		23 14 17.5	
	comp=Z,5.9nm,0.6s,baz=48,slow=1.2,SNR=15						
NOA				SS	SS	23 17 01.9	-1.9
	comp=Z,4.4nm,1.0s,baz=45,slow=4.4,SNR=2.2						
NOA				PKPPKP		23 22 35.6	
	comp=Z,7.2nm,1.0s,baz=78,slow=2.0,SNR=7.2						
NOA	**NORSAR Array B**	**102.69**	**29**	P	Pdif	22 58 17.5	-0.2
NOA				PP	PP	23 02 30.1	-4.8
NOA				S		23 08 46.1	
NOA				SP	SP	23 11 27.6	-1.1
NOA				PKKPbc		23 14 17.5	
NOA				SS	SS	23 17 01.9	-1.9
NOA				P'P'		23 22 35.6	
ILAR	**Eielson Array**	**102.70**	**335**	P	Pdif	22 58 15.8	-1.9
ILAR						23 02 28.1	
ILAR				S		23 08 44.9	
ILAR				SS	SS	23 17 03.3	-0.6
ILAR				SSS	SSS	23 20 59.8	+0.4
ILAR	**Eielson Array**	**102.70**	**335**	P	Pdif	22 58 15.8	-1.9
	comp=Z,13nm,0.8s,baz=147,slow=2.9,SNR=45						
ILAR				PP	PP	23 02 28.1	-6.9
	comp=Z,24nm,0.8s,baz=96,slow=8.0,SNR=6.8						
ILAR				S		23 08 44.9	
	comp=Z,4.2nm,0.8s,baz=256,slow=5.4,SNR=2.8						
ILAR				PKKPbc		23 14 14.4	
	comp=Z,7.9nm,0.9s,baz=271,slow=3.9,SNR=3.8						
ILAR				SS	SS	23 17 03.3	-0.6
	comp=Z,9.1nm,1.0s,baz=250,slow=2.8,SNR=2.7						
ILAR				SSS	SSS	23 20 59.8	+0.3
	comp=Z,0.2nm,0.5s,baz=64,slow=21,SNR=2.3						
MEV	**Metsovon**	**102.80**	**52**	*e*P	Pdif	22 58 23.3	+4.6
SLKM	**Skilak Lake**	**102.80**	**330**	P	Pdif	22 58 18.4	+0.2
SLKM	**Skilak Lake**	**102.80**	**330**	*e*Pdif	Pdif	22 58 17.4	-0.8
SRO1	**Iza**	**102.81**	**44**	*e*	Pdif	22 58 26.8	+8.2
SRO1				*e*PP	PP	23 02 31.6	-4.6
BSD	**Bornholm Skovb**	**102.82**	**36**	⇑*i*P	Pdif	22 58 19.9	+1.5
BSD				pmax	pmax		
	comp=Z,94nm,0.8s						
BSD	**Bornholm Skovb**	**102.82**	**36**	⇑*i*P	Pdif	22 58 19.9	+1.5
	comp=Z,94nm,0.8s						
BSD				*i*		22 58 44.1	
BSD				*e*		23 02 22.5	
OHR	**Ohrid**	**102.83**	**51**	⇑*i*P	Pdif	22 58 18.7	-0.1
OHR				*i*		23 08 50.1	
OHR				*i* PS	PS	23 11 37.6	-6.7
OHR	**Ohrid**	**102.83**	**51**	⇑*i*P	Pdif	22 58 18.7	-0.1
OHR				⇑*i*pP		22 58 47.3	
OHR				⇑*i*SKS	SKS	23 08 50.1	+3.5
OHR				*i* PS	PS	23 11 37.6	-6.7
SRO	**Srobarova**	**102.87**	**44**	*e*P	Pdif	22 58 26.5	+7.6
SRO				*e*PP	PP	23 02 31.6	-5.1
SRO	**Srobarova**	**102.87**	**44**	*e*	Pdif	22 58 26.5	+7.6
SRO				*e*PP	PP	23 02 31.6	-5.1
MORC	**Moravsky Berou**	**102.91**	**42**	P	Pdif	22 58 19.4	+0.4
MORC				pmax	pmax		
	comp=Z,91nm,0.8s						
MORC	**Moravsky Berou**	**102.91**	**42**	⇑P	Pdif	22 58 20.3	+1.4
FIB	**Fire Island**	**102.97**	**331**	PFAKE		22 58 30.0	+11
FIB				LR	LR		
	comp=Z,50µm,22.0s						
EVR	**Evrytania**	**103.00**	**53**	*e*P	Pdif	22 58 22.0	+2.3
DIVS	**Divcibare**	**103.03**	**48**	⇑*i*P	Pdif	22 58 20.2	+0.6
KOLL	**Kolacno**	**103.13**	**43**	*i* P	Pdif	22 58 21.4	+1.4
KOLL				*e*		23 02 31.5	
KOLL	**Kolacno**	**103.13**	**43**	*i* P	Pdif	22 58 21.4	+1.4
KOLL				*e*		22 58 31.6	
KOLL				*e*PP	PP	23 02 31.5	-7.1
KOLL	**Kolacno**	**103.13**	**43**	PDIF	Pdif	22 58 21.4	+1.4
KOLL				*e*		22 58 31.6	
KOLL				*e*PP	PP	23 02 31.5	-7.1
KDAK	**Kodiak Island**	**103.16**	**327**	*e*Pdif	Pdif	22 58 19.0	-0.9
	comp=Z,315nm,1.5s						
KDAK				*e*SP	SP	23 11 34.6	+0.9
KDAK				*e*PKKPbc		23 14 18.4	
KDAK				LR	LR		

	comp=Z,31μm,20.0s						
BUD	**Budapest**	**103.25**	**44**	⇑*e*P	Pdif	22 58 21.7	+1.2
KYTH	**Kithira**	**103.26**	**56**	*e*P	Pdif	22 58 23.5	+2.6
VLI	**Veliai**	**103.30**	**56**	*e*P	Pdif	22 58 23.0	+2.0
OKC	**Ostrava-Krasne**	**103.30**	**42**	*e*P	Pdif	22 58 22.4	+1.7
OKC				*e*		23 08 54.0	
OKC				MLR	MLR		
	comp=Z,86μm,21.3s						
OKC	**Ostrava-Krasne**	**103.30**	**42**	*e*PDIF	Pdif	22 58 22.4	+1.7
OKC				*e*pP		22 58 47.7	
OKC				*e*x	x	23 02 25.9	
OKC				*e*x	x	23 03 13.8	
OKC				*e*SKS	SKS	23 08 54.0	+5.5
OKC				*e*PKPPKP		23 22 38.6	
OKC				AMS	AMS	23 36 40.0	
	comp=Z,86μm,21.3s						
KZN	**Kozani**	**103.33**	**52**	*e*P	Pdif	22 58 23.0	+1.9
VYHS	**Vyhne**	**103.39**	**43**	*i* P	Pdif	22 58 22.1	+1.0
VYHS				*e*		23 02 33.2	
VYHS				*e*S		23 08 55.0	
VYHS				*e*		23 09 42.5	
VYHS	**Vyhne**	**103.39**	**43**	*i* P	Pdif	22 58 22.1	+1.0
VYHS				*e*		22 58 32.3	
VYHS				*e*PP	PP	23 02 33.2	-7.2
VYHS				*e*S		23 08 55.0	
VYHS				*e*		23 09 42.5	
VYHS				*e*SP	x	23 11 17.4	
VYHS				*e*SS	x	23 16 20.7	
VYHS	**Vyhne**	**103.39**	**43**	PDIF	Pdif	22 58 22.1	+1.0
VYHS				*e*		22 58 32.3	
VYHS				*e*PP	PP	23 02 33.2	-7.2
VYHS	**Vyhne**	**103.39**	**43**	*e*PKP		23 22 29.8	
VYHS				*e*		23 43 37.0	
RAC	**Raciborz**	**103.39**	**41**	*e*P	Pdif	22 58 22.8	+1.7
RAC				*e*		23 02 36.1	
RAC				*e*		23 08 55.5	
RAC				MLR	MLR		
	comp=Z,180μm,28.3s						
RAC	**Raciborz**	**103.39**	**41**	*e*P	Pdif	22 58 22.8	+1.7
RAC				*e*PP	PP	23 02 36.1	-4.3
RAC				⇑*e*SKSa		23 08 55.5	
RAC				MLR	MLR	23 38 15.0	
RAC				MLR	MLR	23 48 18.1	
	comp=Z,118μm,21.4s						
AGG	**Agios Georgios**	**103.42**	**53**	*e*P	Pdif	22 58 23.3	+1.8
GRUS	**Gruza**	**103.48**	**48**	⇑*i*P	Pdif	22 58 23.4	+1.7
GRUS	**Gruza**	**103.48**	**48**	⇓*i*		23 22 32.3	
SKO	**Skopje**	**103.51**	**50**	⇑*i*P	Pdif	22 58 23.3	+1.5
SKO				*i*		23 02 42.0	
SKO				pmax	pmax		
	comp=Z,60nm,0.7s						
SKO	**Skopje**	**103.51**	**50**	⇑*i*P	Pdif	22 58 23.3	+1.5
	comp=Z,60nm,0.7s						
SKO				*i*		22 58 38.5	
SKO				⇑*i*PP		22 58 49.2	
SKO				*i* PP	PP	23 02 42.0	+0.5
SKO	**Skopje**	**103.51**	**50**	⇑*i*P	Pdif	22 58 23.3	+1.5
SKO				*i*		22 58 38.5	
	comp=Z,0.1nm,0.7s						
SKO				⇑*i*pP		22 58 49.2	
SKO				*i* PP	PP	23 02 42.0	+0.5
	comp=Z,0.2nm,1.1s						
BEO	**Belgrade**	**103.53**	**47**	⇑*i*P	Pdif	22 58 22.8	+0.9
GKP	**Gorka Klasztor**	**103.64**	**38**	*e*P	Pdif	22 58 23.6	+1.5
GKP				*e*		23 02 37.2	
GKP				*e*		23 08 54.5	
GKP				*e*		23 09 38.9	
GKP				*e*SP	SP	23 11 36.5	-2.1
GKP	**Gorka Klasztor**	**103.64**	**38**	*e*P	Pdif	22 58 23.6	+1.5
	comp=Z,2.4nm,5.5s						
GKP				*e*		22 58 50.0	
GKP				*e*PP	PP	23 02 37.2	-4.8
GKP				*e*SKS	SKS	23 08 54.5	+4.5
GKP				*e*SKKS		23 09 38.9	
GKP				*e*SP	SP	23 11 36.5	-2.1
GKP				*e*SS	SS	23 17 07.3	-9.3
GKP				LR	LR		
	comp=Z,351μm,31.5s						
GKP	**Gorka Klasztor**	**103.64**	**38**	*e*P	Pdif	22 58 23.6	+1.5
	comp=Z,2μm,5.5s						
GKP				*e*		22 58 50.0	
GKP				*e*PP	PP	23 02 37.2	-4.9
GKP				*e*SKS	SKS	23 08 54.5	+4.5
GKP				*e*SKKS		23 09 38.9	
GKP				*e*SP	SP	23 11 36.5	-2.1
GKP				*e*SS	SS	23 17 07.3	-9.3
GKP				LMN		23 37 25.5	
	comp=Z,338μm,33.1s						
GKP				MLR	MLR	23 37 50.5	
	comp=Z,351μm,31.5s						
GKP				LME		23 38 34.4	
	comp=Z,291μm,27.8s						
GVD	**Gavdhos**	**103.72**	**58**	Pdif	Pdif	22 58 20.5	-2.5
	comp=Z,82nm,0.6s						
LIT	**Litokhoron**	**103.81**	**52**	*e*P	Pdif	22 58 22.1	-1.1
SPU	**Mount Spurr**	**103.85**	**330**	*e*Pdif	Pdif	22 58 22.4	-0.4
SPU				*e*PKKPbc		23 14 13.8	
MGER	**Gerania Oros**	**103.87**	**54**	*e*P	Pdif	22 58 24.3	+0.8
PSZ	**Piszkesteto**	**103.93**	**44**	*e*P	Pdif	22 58 23.4	-0.1
PSZ				pmax	pmax		
	comp=Z,51nm,0.9s						
PSZ	**Piszkesteto**	**103.93**	**44**	*e*Pdif	Pdif	22 58 23.4	-0.2
	comp=Z,51nm,0.9s						
SVIS	**Svilajnac**	**103.94**	**48**	⇑*i*P	Pdif	22 58 25.7	+2.1
VAM	**Vamos**	**103.95**	**57**	*e*P	Pdif	22 58 25.0	+1.1
NAIG	**Nisos Aigina**	**103.98**	**55**	*e*P	Pdif	22 58 25.5	+1.5
RSO	**Redoubt South**	**103.98**	**330**	*e*Pdif	Pdif	22 58 23.3	-0.1
NSAL	**Nisos Salamina**	**104.00**	**55**	*e*P	Pdif	22 58 25.6	+1.5
NSS	**Namsos**	**104.06**	**26**	*e*P	Pdif	22 58 23.4	-0.3
	comp=Z,117nm,1.6s						
NSS	**Namsos**	**104.06**	**26**	*e*P	Pdif	22 58 23.4	-0.3
NSS				AMb	AMB	22 58 59.1	
	comp=Z,117nm,1.6s						
NSS				AMS	AMS	23 37 10.6	
	comp=Z,63μm,21.1s						
XOR	**Xorichti**	**104.16**	**53**	*e*P	Pdif	22 58 28.0	+3.3
NEO	**Neokhori**	**104.17**	**53**	*e*P	Pdif	22 58 28.0	+3.2
VAY	**Valandovo**	**104.17**	**51**	*i* P	Pdif	22 58 26.3	+1.6
VAY				*i*		23 08 56.3	
VAY				*i* PS	PS	23 11 42.5	-15
VAY	**Valandovo**	**104.17**	**51**	*i* P	Pdif	22 58 26.3	+1.6
VAY				⇑*i*pP		22 58 52.8	
VAY				*i* PP	PP	23 02 38.1	-8.2
VAY				⇑*i*SKS	SKS	23 08 56.3	+3.5
VAY				*i* PS	PS	23 11 42.5	-15
ATH	**Athens Observa**	**104.21**	**55**	*e*P	Pdif	22 58 27.8	+2.8
MPAR	**Parnis Oros**	**104.27**	**54**	*e*P	Pdif	22 58 27.0	+1.7
THE	**Thessaloniki**	**104.30**	**52**	*e*P	Pdif	22 58 26.3	+1.0
BOLS	**Boljevac**	**104.34**	**48**	⇓*i*P	Pdif	22 58 26.3	+0.9
OJC	**Ojcow**	**104.42**	**42**	*e*Pdiff	Pdif	22 58 26.6	+1.0
OJC				*e*PKiKP		23 02 41.2	
OJC				⇑*e*SKSa		23 08 57.9	
OJC				*e*SS	SS	23 17 36.6	+9.2
OJC				MLR	MLR	23 44 13.3	
	comp=Z,92μm,19.1s						
KECS	**Kecovo**	**104.45**	**43**	*e*P	Pdif	22 58 23.5	-2.3
KECS				*e*S		23 08 56.9	
KECS				*e*		23 09 46.9	
KECS				*e*SP	SP	23 11 55.8	+9.0
KECS	**Kecovo**	**104.45**	**43**	*e*P	Pdif	22 58 23.5	-2.3
KECS				*e*		22 58 37.6	
KECS				*e*PP	PP	23 02 33.8	-15
KECS				*e*S		23 08 56.9	
KECS				*e*		23 09 46.9	
KECS				*e*SP	SP	23 11 55.8	+9.0
KECS				*e*		23 14 14.5	
KECS				*e*		23 14 31.2	
KECS	**Kecovo**	**104.45**	**43**	PDIF	Pdif	22 58 23.5	-2.3
KECS				*e*		22 58 37.6	
KECS				*e*		23 02 33.8	
BZS	**Buzias**	**104.53**	**46**	⇓P	Pdif	22 58 27.9	+1.7
NIE	**Niedzica**	**104.56**	**42**	*e*Pdiff	Pdif	22 58 28.7	+2.5
NIE				*e*PKP		23 02 39.7	
PLG	**Polygyros**	**104.59**	**52**	*e*P	Pdif	22 58 28.5	+1.9
AOS	**Alonnisos**	**104.63**	**53**	*e*P	Pdif	22 58 29.0	+2.2
PAIG	**Paliouri**	**104.66**	**53**	*e*P	Pdif	22 58 27.9	+1.0
KKB	**Krupnik**	**104.68**	**50**	*e*P	Pdif	22 58 29.0	+2.0
ZAPS	**Zavoj/Pirot**	**104.68**	**49**	⇓*i*P	Pdif	22 58 28.8	+1.9
VTS	**Vitosha**	**104.94**	**50**	*e*P	Pdif	22 58 30.0	+1.9
VTS	**Vitosha**	**104.94**	**50**	⇑P	Pdif	22 58 30.2	+2.1
NPS	**Neapolis**	**105.04**	**58**	*e*P	Pdif	22 58 34.0	+5.3
KMBO	**Kilima Mbogo**	**105.07**	**97**	PFAKE		23 03 00.0	
KMBO				LR	LR		
	comp=Z,465μm,20.0s						
MMB	**Musomiste**	**105.08**	**51**	*e*P	Pdif	22 58 31.0	+2.3
MELSS	**Ber_school_2**	**105.39**	**24**	*e*P	Pdif	22 58 31.5	+2.0
APE	**Apeiranthos**	**105.40**	**56**	*e*P	Pdif	22 58 31.5	+1.2
DRGR		**105.53**	**45**	⇑P	Pdif	22 58 32.1	+1.5
DRGR		**105.53**	**45**	⇑P	Pdif	22 58 32.1	+1.5
PGB	**Panagyurishte**	**105.61**	**50**	*e*P	Pdif	22 58 33.0	+1.9
WAR	**Warsaw**	**105.63**	**40**	*e*P	Pdif	22 58 33.6	+2.7
WAR				*e*		23 02 51.3	
WAR				*e*		23 09 03.7	
WAR				*e*		23 09 50.5	
WAR				*e*S		23 10 20.5	
WAR				*e*SS	SS	23 17 40.0	-4.2
WAR				MLR	MLR		
	comp=Z,160μm,23.6s						
WAR	**Warsaw**	**105.63**	**40**	*e*Pdif	Pdif	22 58 33.6	+2.7
WAR				*e*		22 58 59.3	
WAR				*e*PP	PP	23 02 51.3	-5.7
WAR				*e*SKS	SKS	23 09 03.7	+4.6
WAR				*e*SKKS		23 09 50.5	
WAR				*e*Sdif		23 10 20.5	
WAR				*e*SS	SS	23 17 40.0	-4.2
WAR				LR	LR		
	comp=Z,160μm,23.6s						
WAR	**Warsaw**	**105.63**	**40**	*e*Pdiff	Pdif	22 58 33.6	+2.7
WAR				*e*		22 58 59.3	
WAR				*e*PP	PP	23 02 51.3	-5.8
WAR				*e*SKS	SKS	23 09 03.7	+4.7
WAR				*e*SKKS		23 09 50.5	
WAR				*e*Sdiff		23 10 20.5	
WAR				*e*SS	SS	23 17 40.0	-4.2
WAR				MLR	MLR	23 42 49.0	
	comp=Z,160μm,23.6s						
LOF	**Lofoten**	**105.64**	**23**	*e*P	Pdif	22 58 35.9	+5.4
UZH	**Uzhgorod**	**105.65**	**44**	*i* P	Pdif	22 58 34.0	+2.9
KOLS	**Kolonicke sedl**	**105.70**	**43**	*e*P	Pdif	22 58 41.9	+11
KOLS				*e*PP	PP	23 02 50.8	-6.8
KOLS				*e*S	SKS	23 09 08.1	+8.6
KOLS				*e*		23 14 10.5	
KOLS				*e*		23 14 25.9	
KOLS	**Kolonicke sedl**	**105.70**	**43**	*e*	Pdif	22 58 41.9	+11
KOLS				*e*PP	PP	23 02 50.8	-6.8
KOLS				*e*		23 09 08.1	
KOLS				*e*		23 14 10.5	
KOLS				*e*		23 14 25.9	
KOLS	**Kolonicke sedl**	**105.70**	**43**	*e*PKP		23 22 28.5	
IMA	**Indian Mountai**	**105.79**	**335**	*e*P	Pdif	22 58 31.1	-0.2
IMA				pmax	pmax		
	comp=Z,341nm,1.9s						
IMA	**Indian Mountai**	**105.79**	**335**	*e*P	Pdif	22 58 31.1	-0.2
	comp=Z,341nm,1.9s						
JAWL	**J.Aulia**	**105.82**	**79**	*i* S	PS	23 12 20.4	+5.7
JAWL				AMS	AMS	23 13 09.3	
	comp=Z,141μm,21.5s						
RZN	**Rozhen**	**105.82**	**51**	*e*P	Pdif	22 58 33.0	+1.0
MRKH	**Merkhyat**	**105.84**	**79**	*i* S	PS	23 12 18.7	+3.7
KWP	**Kalwaria**	**106.13**	**43**	*e*P	Pdif	22 58 35.0	+1.9
KWP				*e*		23 02 56.9	
KWP				*e*		23 09 05.3	
KWP				*e*SP	SP	23 12 01.1	-2.4
KWP				*e*SS	SS	23 17 58.6	+7.5
KWP	**Kalwaria**	**106.13**	**43**	*e*Pdif	Pdif	22 58 35.0	+1.9
KWP				*e*		22 59 01.4	
KWP				*e*PP	PP	23 02 56.9	-3.8
KWP				*e*SKS	SKS	23 09 05.3	+4.0
KWP				*e*Sdif		23 10 25.5	
KWP				*e*SP	SP	23 12 01.1	-2.4
KWP				*e*SS	SS	23 17 58.6	+7.5
KWP	**Kalwaria**	**106.13**	**43**	*e*Pdiff	Pdif	22 58 35.0	+1.9
	comp=Z,900nm,4.1s						
KWP				*e*		22 59 01.4	
KWP				*e*PP	PP	23 02 56.9	-3.8
KWP				*e*SKS	SKS	23 09 05.3	+4.0
KWP				*e*Sdiff		23 10 25.5	
KWP				*e*SP	SP	23 12 01.1	-2.4
KWP				*e*SS	SS	23 17 58.6	+7.5
KWP				MLR	MLR	23 40 07.9	
	comp=Z,570μm,30.7s						
KWP				LME		23 40 13.7	
	comp=Z,624μm,29.1s						
KWP				LMN		23 41 03.8	
	comp=Z,375μm,27.5s						
SLAT	**Slait**	**106.18**	**79**	*i* S	PS	23 12 12.5	-5.8
RDO	**Rodhopi**	**106.31**	**52**	*e*P	Pdif	22 58 36.1	+1.9
KDZ	**Kurdzhali**	**106.33**	**51**	*e*P	Pdif	22 58 35.0	+0.8
PRK	**Paraskevi**	**106.45**	**54**	*e*P	Pdif	22 58 15.0	-20
OPO	**Ambohidratompo**	**106.84**	**117**	SP	SP	23 12 12.6	+1.2
	comp=Z,6.1nm,1.1s,baz=235,slow=9.3,SNR=6.8						
OPO				PKKPbc		23 14 04.8	
	comp=Z,16nm,0.9s,baz=40,slow=3.2,SNR=7.9						
OPO				SS	SS	23 18 01.1	0.0
	comp=Z,7.4nm,1.2s,baz=354,slow=10,SNR=1.8						
OPO				SSS	SSS	23 22 04.5	0.0
	comp=Z,2.7nm,0.9s,baz=87,slow=13,SNR=2.1						
OPO				PKPPKP		23 22 27.6	
	comp=Z,28nm,1.2s,baz=112,slow=2.1,SNR=8.4						
VOIR		**106.84**	**47**	⇑P	Pdif	22 58 37.6	+1.2
VOIR		**106.84**	**47**	⇑P	Pdif	22 58 37.6	+1.2
LVV	**L'vov**	**107.01**	**43**	*e*P	Pdif	22 58 40.6	+3.6
LVV				*e*		23 03 08.4	
LVV				*i*		23 09 06.9	
LVV				*i* SS	SS	23 18 10.8	+8.2
LVV				*i* SSS	SSS	23 22 03.6	-2.9
LVV	**L'vov**	**107.01**	**43**	*e*P	Pdif	22 58 40.5	+3.5
ARG	**Arkhangelos**	**107.24**	**57**	*e*P	Pdif	22 58 46.0	+7.6
SUW	**Suwalki**	**107.25**	**38**	*e*P	Pdif	22 58 39.1	+1.1
SUW				*e*		23 03 03.4	
SUW				*e*		23 09 09.3	
SUW	**Suwalki**	**107.25**	**38**	*e*Pdif	Pdif	22 58 39.1	+1.1
SUW				*e*		22 59 05.9	
SUW				*e*PP	PP	23 03 03.4	-5.9
SUW				*e*SKS	SKS	23 09 09.3	+3.2
SUW				*e*Sdif		23 10 31.1	
SUW				*e*SP	SP	23 12 06.1	-8.5
SUW				*e*SS	SS	23 17 59.1	-6.8
SUW	**Suwalki**	**107.25**	**38**	*e*Pdiff	Pdif	22 58 39.1	+1.1
	comp=Z,3μm,10.9s						
SUW				*e*		22 59 05.9	
SUW				*e*PP	PP	23 03 03.4	-5.9
SUW				*e*SKS	SKS	23 09 09.2	+3.2
SUW				*e*Sdiff		23 10 31.1	
SUW				*e*SP	SP	23 12 06.1	-8.5
SUW				*e*SS	SS	23 17 59.1	-6.8
SUW				MLR	MLR	23 40 22.3	
	comp=Z,430μm,31.0s						
JMB	**Yambol**	**107.35**	**50**	*e*P	Pdif	22 58 40.0	+1.3
BURAR	**Bucovina Array**	**107.37**	**45**	⇓P	Pdif	22 58 41.1	+2.4
MLR	**Muntele Rosu**	**107.47**	**47**	⇑P	Pdif	22 58 40.2	+1.0
MLR	**Muntele Rosu**	**107.47**	**47**	⇑*i*P	Pdif	22 58 40.7	+1.5
KBS	**Kingsbay**	**107.72**	**12**	⇓*i*P	Pdif	22 58 39.6	0.0
KBS				*e*SKSa		23 09 13.3	
KBS				*e*SS	SS	23 18 10.8	-1.1
KBS				AMS	AMS	23 46 10.6	
	comp=Z,45μm,22.0s						
TRO	**Tromso**	**107.85**	**22**	*e*P	Pdif	22 58 42.4	+2.1
	comp=Z,135nm,1.5s						
TRO	**Tromso**	**107.85**	**22**	*e*P	Pdif	22 58 42.4	+2.1
TRO				AMb	AMB	22 59 35.8	
	comp=Z,135nm,1.5s						
TRO				*e*PP	PP	23 03 10.3	-2.8
TRO				*e*SKSa		23 09 10.1	
TRO				*e*SS	SS	23 18 21.7	+7.8
TRO				AMS	AMS	23 41 27.9	
	comp=Z,65μm,24.8s						
PRD	**Provadia**	**108.07**	**50**	*e*P	Pdif	22 58 44.0	+2.1
VRI	**Vrincioaia**	**108.08**	**47**	⇓P	Pdif	22 58 52.5	+11
VRI	**Vrincioaia**	**108.08**	**47**	⇓*i*P	Pdif	22 58 52.4	+11
KMPD	**K-Podol'skiy**	**108.36**	**44**	P	Pdif	22 58 44.0	+1.0
KSL	**Kastellorizon**	**108.38**	**57**	*e*P	Pdif	22 58 26.5	-17
PSN	**Preselentsi**	**108.72**	**49**	*e*P	Pdif	22 58 46.0	+1.3
TAU	**Tasmania Unive**	**109.01**	**208**	PFAKE		23 03 00.0	
TAU				LR	LR		
	comp=Z,23μm,22.0s						
TIRR	**Tirgusor**	**109.01**	**49**	⇑P	Pdif	22 58 47.2	+1.2
ISAL	**Salakas**	**109.17**	**37**	*e*PP	PP	23 03 19.4	-4.3
ISAL				AMb	AMB	23 03 22.9	
	comp=Z,144nm,1.5s						
IZAR	**Zarasai**	**109.27**	**37**	*e*PP	PP	23 03 20.2	-4.2
IZAR				AMb	AMB	23 03 23.9	
	comp=Z,94nm,1.7s						
IDID	**Didziasalis**	**109.49**	**37**	*e*PP	PP	23 03 21.5	-4.5
IDID				AMb	AMB	23 03 24.4	
	comp=Z,112nm,1.2s						
KIS	**Kishinev**	**109.69**	**46**	*e*P	Pdif	22 58 48.0	-0.9
KIS				*i*		23 09 17.0	
KIS				*i* PS	PS	23 12 34.0	-17
KIS				*i* SS	SS	23 18 52.0	+13
KIS				MLR	MLR		
	comp=Z,147μm,22.0s						
FURI	**Furi**	**109.74**	**87**	Pdiff	Pdif	22 58 53.8	+4.0
FURI				pPdiff		22 59 21.8	
FURI	**Furi**	**109.74**	**87**	pPKiKP		23 03 27.9	
FURI				SKSac		23 09 31.9	
FINES	**FINESS Array B**	**109.80**	**31**	Pdiff	Pdif	22 58 50.4	+1.4
	comp=Z,1.1nm,0.8s,baz=158,slow=31,SNR=2.7						
FINES				pPdiff		22 59 17.1	
	comp=Z,9.8nm,0.8s,baz=261,slow=2.6,SNR=10						
FINES				PKiKP		23 02 49.5	
	comp=Z,17nm,0.9s,slow=1.9,SNR=2.8						
FINES				PP	PP	23 03 22.8	-5.1
	comp=Z,17nm,0.7s,baz=243,slow=4.3,SNR=4.0						
FINES				Sdiff		23 09 16.2	
	comp=Z,5.7nm,0.9s,baz=79,slow=9.7,SNR=2.3						
FINES				SP	SP	23 12 36.9	-2.0
	comp=Z,6.7nm,1.0s,baz=90,slow=5.7,SNR=2.9						
FINES				PKKPbc		23 13 55.3	
	comp=Z,24nm,0.7s,baz=83,slow=3.6,SNR=12						
FINES				PKPPKP		23 22 22.1	
	comp=Z,5.6nm,0.8s,baz=90,slow=3.8,SNR=8.7						
FINES	**FINESS Array B**	**109.80**	**31**	Pdif	Pdif	22 58 50.4	+1.4
FINES				PKPdf		23 02 49.5	
FINES				PP	PP	23 03 22.8	-5.1
FINES				Sdif		23 09 16.2	
FINES				SP	SP	23 12 36.9	-2.0
FINES				PKKPbc		23 13 55.3	
FINES				P'P'		23 22 22.1	
KAF	**Kangasniemi**	**109.96**	**30**	*e*p	Pdif	22 59 03.5	+14
MNK	**Minsk**	**110.02**	**38**	*e*P	Pdif	22 58 52.0	+1.8
ARCES	**ARCESS Array B**	**110.14**	**22**	PKIKP	PKPdf	23 02 51.7	+1.6
ARCES				S	SKS	23 09 19.1	+1.1
ARCES				SP	SP	23 12 44.0	+1.9
ARCES						23 13 53.1	
ARCES	**ARCESS Array B**	**110.14**	**22**	Pdiff	Pdif	22 58 48.4	-1.9
	comp=Z,2.7nm,0.8s,baz=67,slow=28,SNR=2.9						
ARCES				PKiKP		23 02 51.7	
	comp=Z,37nm,1.0s,baz=256,slow=5.0,SNR=4.0						
ARCES				Sdiff		23 09 19.1	
	comp=Z,5.2nm,0.9s,baz=27,slow=2.7,SNR=2.1						
ARCES				SP	SP	23 12 44.0	+1.9
	comp=Z,6.2nm,1.1s,baz=90,slow=7.3,SNR=2.3						
ARCES				PKKPbc		23 13 53.1	
	comp=Z,11nm,0.6s,baz=84,slow=4.4,SNR=6.9						
ARCES				SS	SS	23 18 37.2	-7.5
	comp=Z,4.8nm,0.9s,baz=336,slow=12,SNR=1.8						
ARCES				PKPPKP		23 22 19.4	
	comp=Z,11nm,1.1s,baz=127,slow=6.1,SNR=5.8						
ARCES	**ARCESS Array B**	**110.14**	**22**	Pdif	Pdif	22 58 48.4	-1.9
ARCES				PKPdf	PKPdf	23 02 51.7	+1.6
ARCES				Sdif		23 09 19.1	
ARCES				SP	SP	23 12 44.0	+1.9
ARCES				PKKPbc		23 13 53.1	
ARCES				SS	SS	23 18 37.2	-7.5
ARCES				P'P'		23 22 19.4	
AKASG	**Malin Array Be**	**110.44**	**42**	PKIKP	PKPdf	23 02 51.2	+0.1
AKASG						23 03 27.5	
AKASG						23 13 53.1	
AKASG	**Malin Array Be**	**110.44**	**42**	Pdiff	Pdif	22 58 51.4	-0.7
	comp=Z,0.2nm,0.3s,baz=266,slow=4.9,SNR=5.9						
AKASG				pPdiff		22 59 20.4	
	comp=Z,6.4nm,0.7s,baz=264,slow=4.3,SNR=7.3						
AKASG				PKiKP		23 02 51.2	
	comp=Z,31nm,0.7s,baz=273,slow=2.8,SNR=7.6						
AKASG				PP	PP	23 03 27.5	-5.2
	comp=Z,77nm,0.8s,baz=258,slow=7.5,SNR=8.2						
AKASG				PKKPbc		23 13 53.1	
	comp=Z,15nm,0.6s,baz=63,slow=3.7,SNR=20						
AKASG				PKPPKP		23 22 13.7	
	comp=Z,0.7nm,0.5s,baz=60,slow=2.8,SNR=4.1						
AKASG	**Malin Array Be**	**110.44**	**42**	Pdif	Pdif	22 58 51.4	-0.7
AKASG				PKPdf	PKPdf	23 02 51.2	+0.1
AKASG				PP	PP	23 03 27.5	-5.2
AKASG				PKKPbc		23 13 53.1	
AKASG				P'P'		23 22 13.7	
KEV	**Kevo**	**110.67**	**22**	PFAKE		23 03 00.0	+8.8
KEV				LR	LR		
	comp=Z,91μm,22.0s						
DZM	**Mont Dzumac**	**111.46**	**235**	*e*P	PP	23 03 28.7	-12
DZM	**Mont Dzumac**	**111.46**	**235**	Pdiff	Pdif	22 58 57.6	+0.3
	comp=Z,5.1nm,0.9s,baz=347,slow=23,SNR=1.7						
DZM				pPdiff		22 59 31.3	
	comp=Z,4.1nm,0.8s,baz=93,slow=21,SNR=2.0						
DZM				PKiKP		23 02 55.9	
	comp=Z,9.8nm,0.6s,baz=355,slow=23,SNR=12						
DZM				PP	PP	23 03 37.4	-3.2
	comp=Z,88nm,1.1s,baz=107,slow=9.5,SNR=6.3						
DZM				PKKPbc		23 13 53.1	
	comp=Z,22nm,0.9s,baz=288,slow=8.3,SNR=6.6						
DZM				SS	SS	23 19 08.2	+5.3
	comp=Z,3.1nm,0.8s,baz=215,slow=8.4,SNR=1.7						
DZM	**Mont Dzumac**	**111.46**	**235**	Pdif	Pdif	22 58 57.6	+0.3
DZM				PKPdf	PKPdf	23 02 55.9	+2.1
DZM				PP	PP	23 03 37.4	-3.2
DZM				PKKPbc		23 13 53.1	
DZM				SS	SS	23 19 08.2	+5.3
TNA	**Tin City**	**111.54**	**334**	Pdif	Pdif	22 58 55.0	-1.6
TNA				LR	LR		
	comp=Z,57μm,19.0s						
PUL	**Pulkovo**	**111.77**	**33**	*e*P	Pdif	22 58 57.6	-0.1
BR131	**Keskin Array S**	**112.15**	**54**	Pdif	Pdif	22 59 03.3	+3.4
BRTR	**Keskin Array B**	**112.15**	**54**	Pdiff	Pdif	22 59 03.2	+3.3
	comp=Z,1.1nm,1.0s,slow=1.2,SNR=7.1						
BRTR	**Keskin Array B**	**112.15**	**54**	Pdif	Pdif	22 59 03.2	+3.3
UMJS	**Umm Lajj**	**112.70**	**70**	P	PKPdf	23 03 01.0	+4.8
BHL	**Bhannes**	**112.88**	**61**	*e*P	PKPdf	23 02 59.9	+3.6
APA	**Apatity**	**113.05**	**24**	⇓*i*PKIKP	PKPdf	23 02 48.0	-7.9
APA				*i*		23 03 47.0	
APA				*e*		23 09 37.0	
APA				*i* SP	SP	23 13 07.0	-3.3
APA				*e*SS	SS	23 19 32.0	+8.6
APA				pmax	pmax		
	comp=Z,43nm,1.3s						
APA				MLR	MLR		
	comp=Z,130μm,20.0s						
SIM	**Simferopol'**	**113.11**	**49**	*e*P	Pdif	22 59 04.4	+0.4
SIM				*e*		23 02 56.7	
SIM				*e*		23 03 49.0	
SIM				*e*		23 09 31.0	
SIM				*e*PS	PS	23 13 25.0	+0.8
SIM				*e*SS	SS	23 19 34.0	+9.3
SIM				pmax	pmax		
	comp=Z,28μm,16.0s						
ASF	**Jabal al Asfar**	**113.63**	**63**	Pdiff	Pdif	22 59 05.9	-0.7
	comp=Z,0.9nm,0.5s,baz=321,slow=12,SNR=1.7						
ASF				pPdiff		22 59 35.8	
	comp=Z,4.1nm,0.8s,baz=112,slow=3.3,SNR=4.2						
ASF				PKiKP		23 03 00.0	
	comp=Z,152nm,1.1s,baz=180,slow=0.5,SNR=12						
ASF				PP	PP	23 03 50.1	-6.5
	comp=Z,48nm,1.0s,baz=142,slow=2.8,SNR=2.0						
ASF				SP	SP	23 13 17.0	+0.6
	comp=Z,6.9nm,1.1s,baz=140,slow=11,SNR=1.7						
ASF				PKKPab		23 13 50.2	
	comp=Z,45nm,1.0s,baz=323,slow=4.8,SNR=9.6						
ASF				SS	SS	23 19 30.7	-1.1
	comp=Z,4.1nm,1.0s,baz=133,slow=15,SNR=2.2						
ASF	**Jabal al Asfar**	**113.63**	**63**	Pdif	Pdif	22 59 05.9	-0.7
ASF				PKPdf	PKPdf	23 03 00.0	+2.2
ASF				PP	PP	23 03 50.1	-6.5
ASF				SP	SP	23 13 17.0	+0.6
ASF				PKKPab		23 13 50.2	
ASF				SS	SS	23 19 30.7	-1.1
CNB	**Canberra Magne**	**114.00**	**214**	*e*PKP	PKPdf	23 03 01.5	+3.0
	comp=Z,35nm,1.0s						
CNB				*e*PP	PP	23 03 53.4	-5.6
TOO	**Toolangi**	**114.14**	**210**	*e*PKP	PKPdf	23 03 17.2	+18
	comp=Z,18nm,1.1s						
TOO				*e*PP	PP	23 03 50.3	-10
TOO				*e*PKKP	PKKP	23 13 43.2	-4.5
RIV	**Riverview**	**114.15**	**216**	*e*PKP	PP	23 03 55.6	-4.5
KBRS	**Khaybar**	**114.54**	**70**	P	PKPdf	23 03 03.5	+3.7
MIDW	**Midway**	**114.71**	**293**	PFAKE		23 03 10.0	+10
MIDW				LR	LR		
	comp=Z,96μm,19.0s						
OBN	**Obninsk**	**115.10**	**38**	*b* *i*PKIKP	PKPdf	23 03 01.6	+1.4
OBN				*e*		23 03 31.7	

OBN				*i*		23 04 03.1	
OBN				*e*		23 09 44.0	
OBN				*i* PS	PS	23 13 25.0	-18
OBN				*i* SS	SS	23 19 51.8	+1.7
OBN				pmax	pmax		
	comp=Z,701nm,1.4s						
OBN				MLR	MLR		
	comp=Z,98µm,24.0s						
OBN	**Obninsk**	**115.10**	**38**	*i* PKP	PKPdf	23 03 01.6	+1.4
OBN				LR	LR		
	comp=Z,98µm,24.0s						
BLJS	**Baljurashi**	**115.41**	**77**	P	PKPdf	23 03 07.1	+5.5
ANN	**Anapa**	**115.45**	**49**	*i* PKIKP	PKPdf	23 03 04.2	+3.1
ANN				*e*		23 03 37.7	
ANN				*e*		23 09 43.5	
ANN				*i* PS	PS	23 13 34.3	-12
ANN				*e*SS	SS	23 20 12.5	+18
ANN				pmax	pmax		
	comp=Z,613nm,1.4s						
ANN				pmax	pmax		
	comp=N,142nm,1.5s						
MOS	**Moscow**	**115.69**	**37**κ	*i*PKIKP	PKPdf	23 03 03.3	+2.0
MOS				*i*		23 03 33.5	
MOS				*i*		23 04 03.3	
MOS				*i*		23 09 41.8	
MOS				pmax	pmax		
	comp=Z,1µm,1.7s						
MOS				pmax	pmax		
	comp=Z,612nm,1.5s						
MOS				pmax	pmax		
	comp=N,154nm,1.4s						
GSTR	**Great Sitkin T**	**115.77**	**319**	PKP	PKPdf	23 03 02.2	+0.6
VOR	**Voronezh**	**116.75**	**41**	*e*PKIKP	PKPdf	23 03 04.0	+0.6
VOR				*e*		23 04 12.5	
VOR				pmax	pmax		
	comp=E,270nm,1.8s						
VOR				pmax	pmax		
	comp=Z,900nm,1.8s						
VOR				pmax	pmax		
	comp=N,200nm,1.8s						
VOR				pmax	pmax		
	comp=Z,2µm,1.8s						
VOR				pmax	pmax		
	comp=E,2µm,1.6s						
VRSR	**Storozhevoye**	**116.75**	**42**⇓	*i*PKIKP	PKPdf	23 03 04.9	+1.5
VRSR				*e*		23 04 13.9	
VRSR				*e*		23 09 49.3	
VRSR				pmax	pmax		
	comp=Z,390nm,2.2s						
VRSR				pmax	pmax		
	comp=N,100nm,1.8s						
VRSR				pmax	pmax		
	comp=E,70nm,1.0s						
SOC	**Sochi**	**117.03**	**51**	*i* P	Pdif	22 59 23.9	+2.6
SOC				*i*		23 03 05.9	
SOC				*i*		23 09 40.9	
SOC				pmax	pmax		
	comp=Z,22µm,24.4s						
SOC				pmax	pmax		
	comp=N,1µm,12.2s						
SOC				pmax	pmax		
	comp=E,9µm,22.6s						
SOC				pmax	pmax		
	comp=E,183nm,1.3s						
SOC				pmax	pmax		
	comp=Z,627nm,1.3s						
SOC				pmax	pmax		
	comp=N,127nm,0.8s						
SOC				MLR	MLR		
	comp=Z,48µm,23.0s						
SOC				MLR	MLR		
	comp=N,28µm,25.0s						
HILS	**Ha’il**	**117.06**	**69**	P	PKPdf	23 03 08.6	+4.0
TATS	**Tathlith**	**117.06**	**78**	P	PKPdf	23 03 10.2	+5.5
AFFS	**‘Afif**	**117.52**	**73**	P	PKPdf	23 03 09.6	+4.1
KAMS	**Al Khamasin**	**118.24**	**77**	P	PKPdf	23 03 11.5	+4.5
KIV	**Kislovodsk**	**119.19**	**50**	*e*P	Pdif	22 59 35.2	+4.4
KIV				*e*		23 03 10.4	
KIV				*e*		23 04 30.6	
KIV				*e*PPP	PPP	23 07 06.2	-1.1
KIV				*e*		23 09 58.8	
KIV				*e*SP	SP	23 14 11.2	+4.1
KIV				*e*PS	PS	23 14 22.4	+2.6
KIV				*e*SS	SS	23 20 43.3	+0.1
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV				pmax	pmax		
	comp=N,137nm,1.1s						
KIV				pmax	pmax		
	comp=E,100nm,1.1s						
KIV				pmax	pmax		
	comp=Z,446nm,1.1s						
KIV				MLR	MLR		
	comp=N,44µm,19.0s						
KIV				MLR	MLR		
	comp=Z,71µm,19.0s						
KIV	**Kislovodsk**	**119.19**	**50**	*e*PKP	PKPdf	23 03 09.4	+1.1
KIV				*i* PKP	PKPdf	23 03 10.6	+2.2
KIV				LR	LR		
	comp=Z,14µm,21.0s						
MSL	**Mosul**	**119.21**	**59**	*e*P	Pdif	22 59 57.5	+26
MSL				*i* PKP	PKPdf	23 03 13.0	+4.4
MSL				*i* pP		23 03 39.0	
MSL				*i* PP	PP	23 04 34.5	-0.8
MSL				*i* pPP		23 04 58.5	
MSL				*e*SKS1		23 09 07.5	
MSL				*e*SKS2		23 09 44.0	
MSL				*e*sSKS1		23 10 51.0	
MSL				*e*sSKS2		23 11 20.0	
MSL				*e*PS	PS	23 14 01.0	-19
MSL				*e*SpP		23 14 24.0	
PECR	**Pechory**	**119.25**	**36**	*e*P	Pdif	22 59 38.0	+7.3
PECR				*i*		23 03 10.0	
PECR				*e*		23 04 30.0	
PECR				*e*		23 09 52.0	
PECR				MLR	MLR		
	comp=N,42µm,14.0s						
PECR				MLR	MLR		
	comp=N,68µm,20.0s						
ADE	**Adelaide**	**119.31**	**206**	PKIKP	PKPdf	23 03 10.1	+1.3
GOF	**Gofitskoye**	**119.43**	**49**⇑	*i*PKIKP	PKPdf	23 03 08.6	-0.2
GOF				*i*		23 03 37.9	
GOF				*i*		23 04 29.3	
GOF				pmax	pmax		
	comp=Z,260nm,1.2s						
GOF				pmax	pmax		
	comp=Z,2µm,1.5s						
BHD	**Baghdad**	**120.03**	**62**	*e*P	Pdif	23 00 02.5	+28
BHD				*i* PkP		23 03 13.0	
BHD				*i* PP	PP	23 04 36.0	-4.3
BHD				*i* pPP		23 05 02.0	
BHD				*i* SKS1		23 09 10.0	
BHD				*i* SKS2		23 09 45.0	
BHD				*i* sSKS1		23 10 50.0	
BHD				*i* sSKS2		23 11 26.0	
BHD				*i* PS	PS	23 14 07.0	-21
ZEI	**Tsey**	**120.07**	**51**	*e*P	Pdif	22 59 37.5	+2.8
ZEI				*e*		23 03 12.5	
ZEI				*e*		23 04 37.5	
STKA	**Stephens Creek**	**120.64**	**210**	*e*PKP	PKPdf	23 03 11.6	+0.1
	comp=Z,86nm,1.0s						
STKA				*e*PP	PP	23 04 41.5	-3.1
STKA				*e*PKKP	PKKP	23 13 19.0	-17
STKA	**Stephens Creek**	**120.64**	**210**	PKP	PKPdf	23 03 11.3	-0.1
	comp=Z,65nm,0.6s,baz=102,slow=2.5,SNR=35						
STKA				PP	PP	23 04 38.9	-5.7
	comp=Z,26nm,0.8s,baz=333,slow=4.0,SNR=1.8						
STKA				PKKPbc		23 13 18.8	
	comp=Z,20nm,0.7s,baz=354,slow=6.5,SNR=8.3						
STKA				SS	SS	23 21 04.2	+2.1
	comp=Z,3.5nm,0.8s,baz=44,slow=20,SNR=1.4						
DUS	**Dusheti**	**120.67**	**52**	P	PKPdf	23 03 14.2	+2.9
GNI	**Garni**	**120.69**	**55**	PP	PP	23 04 40.6	-4.2
	comp=Z,50nm,0.7s,baz=324,slow=13,SNR=1.5						
GNI				SKS	SKS	23 10 04.0	+6.0
	comp=Z,33nm,1.0s,baz=354,slow=22,SNR=2.1						
GNI				PKKPbc		23 13 23.6	
	comp=Z,20nm,0.8s,baz=359,slow=2.9,SNR=5.6						
GNI				SS	SS	23 20 59.8	-2.9
	comp=Z,6.1nm,0.9s,baz=111,slow=14,SNR=2.0						
TBLG	**Delisi**	**120.70**	**53**	P	PKPdf	23 03 14.5	+3.1
MTA	**Mtatsminda**	**120.74**	**53**	P	PKPdf	23 03 14.8	+3.4
RYDS	**Riyadh**	**120.84**	**73**	P	PKPdf	23 03 15.7	+3.7
BILL	**Bilibino**	**120.95**	**339***b*	*i*P	Pdif	22 59 36.7	-1.2
BILL				*i*		23 03 11.8	
BILL				pmax	pmax		
	comp=Z,30nm,2.0s						
BILL				MLR	MLR		
	comp=Z,97µm,17.0s						
BILL	**Bilibino**	**120.95**	**339**	Pdif	Pdif	22 59 38.0	+0.1
BILL				⇑*e*PKP	PKPdf	23 03 12.4	+1.2
DGRG	**David-gareji**	**121.17**	**53**	P	PKPdf	23 03 15.7	+3.4
SMY	**Shemya**	**121.72**	**320**	*e*PKIKP	PKPdf	23 03 13.8	+0.7
SMY				MLR	MLR		
	comp=Z,95µm,22.0s						
FX1	**Attu Island--F**	**122.26**	**321**	PKKPbc		23 13 13.1	
	comp=Z,38nm,0.6s,baz=341,slow=13,SNR=7.4						
FX1	**Attu Island--F**	**122.26**	**321**	*e*PKP	PKPdf	23 03 15.3	+1.2
MAK	**Makhachkala**	**122.72**	**51**	P	Pdif	22 59 44.6	-1.7
HNR	**Honiara**	**123.50**	**244**	PKIKP	PKPdf	23 03 16.5	-0.9
HNR						23 04 59.0	
HNR				pmax	pmax		
	comp=Z,30nm,0.4s						
HNR				pmax	pmax		
	comp=Z,32nm,0.3s						
HNR	**Honiara**	**123.50**	**244**	PKP	PKPdf	23 03 16.5	-0.9
	comp=Z,30nm,0.4s,baz=192,slow=9.4,SNR=2.2						
HNR				PP	PP	23 04 59.0	-6.0
	comp=Z,32nm,0.3s,baz=130,slow=14,SNR=1.9						
HNR	**Honiara**	**123.50**	**244**	*e*PKP	PKPdf	23 03 17.7	+0.3
HNR				LR	LR		
	comp=Z,131µm,21.0s						
HASS	**Wahat al Ahsa’**	**123.74**	**73**	P	PKPdf	23 03 19.4	+1.8
KWAJ	**Kwajalein Atol**	**124.08**	**267**	*e*PKP	PKPdf	23 03 19.3	+0.7
KWAJ				LR	LR		
	comp=Z,30µm,21.0s						
SOKR	**Solikamsk**	**124.96**	**30***c*	*i*PKIKP	PKPdf	23 03 19.1	0.0
SOKR				*i*		23 03 46.9	
SOKR				pmax	pmax		
	comp=Z,500nm,1.2s						
SOKR				MLR	MLR		
	comp=Z,44µm,19.0s						
ABTO	**Aybut**	**125.69**	**83**	⇑P	PKPdf	23 03 24.9	+3.3
WHFO	**Wadi Hawf**	**126.25**	**82**	⇓P	PKPdf	23 03 25.4	+2.7
RBK	**Rabkut**	**126.57**	**83**	⇓P	PKPdf	23 03 26.0	+2.8
ARU	**Arti**	**127.00**	**33**	*i* PKIKP	PKPdf	23 03 24.0	+0.9
ARU				*i*		23 05 22.6	
ARU				*e*		23 10 15.5	
ARU				*i* PS	PS	23 15 14.9	-14
ARU	**Arti**	**127.00**	**33**	*i* PKP	PKPdf	23 03 24.1	+1.0
NWAO	**Narrogin (SRO)**	**127.09**	**187**	PKIKP	PKPdf	23 03 23.0	-0.9
NWAO						23 05 23.1	
NWAO				SS	SS	23 22 25.9	+1.8
NWAO				SSS	SSS	23 27 07.0	-1.5
NWAO				pmax	pmax		
	comp=Z,154nm,0.8s						
NWAO				pmax	pmax		
	comp=Z,45nm,0.9s						
NWAO	**Narrogin (SRO)**	**127.09**	**187**	PKP	PKPdf	23 03 23.0	-0.9
	comp=Z,154nm,0.8s,baz=177,slow=4.9,SNR=28						
NWAO				PP	PP	23 05 23.1	-4.7
	comp=Z,45nm,0.9s,baz=303,slow=15,SNR=1.3						
NWAO				SS	SS	23 22 25.9	+1.8
	comp=Z,18nm,1.1s,baz=158,slow=5.8,SNR=2.3						
NWAO				SSS	SSS	23 27 07.0	-1.5
	comp=Z,13nm,1.1s,baz=272,slow=12,SNR=1.7						
NWAO	**Narrogin (SRO)**	**127.09**	**187**	*e*PKPdf	PKPdf	23 03 25.1	+1.2
NWAO				LR	LR		
	comp=Z,51µm,22.0s						
TIXI	**Tiksi**	**127.19**	**353**	PFAKE		23 03 40.0	+17
TIXI				LR	LR		
	comp=Z,93µm,21.0s						
CTA	**Charters Tower**	**127.20**	**223**	*e*PKP		23 03 10.8	
	comp=Z,17nm,1.9s						
CTA				*e*	PKPdf	23 03 24.9	+0.4
CTA	**Charters Tower**	**127.20**	**223**	PKP	PKPdf	23 03 23.9	-0.5
CTA				pPKP		23 03 55.0	
CTA				PP	PP	23 05 24.4	-4.5
	comp=Z,25nm,0.9s,baz=223,slow=9.2,SNR=1.4						
CTA				SS	SS	23 22 28.8	+3.2
	comp=Z,3.4nm,0.9s,baz=250,slow=13,SNR=1.8						
CTA	**Charters Tower**	**127.20**	**223**	PKP	PKPdf	23 03 23.9	-0.5
CTA				pPKP		23 03 55.0	
CTA				PP	PP	23 05 24.4	-4.5
CTA				SS	SS	23 22 28.8	+3.2
CTAO	**Charters Tower**	**127.20**	**223**	*e*PKIKP	PKPdf	23 03 23.8	-0.7
CTAO				MLR	MLR		
	comp=Z,130µm,21.0s						
WAKE	**Wake Island**	**127.58**	**279**	*e*PKPdf	PKPdf	23 03 25.9	+0.7
WAKE				LR	LR		
	comp=Z,190µm,22.0s						
SVE	**Sverdlovsk**	**127.91**	**32**	*e*P	Pdif	23 00 04.8	-3.9
SVE				MLR	MLR		
	comp=N,49µm,20.0s						
SVE				MLR	MLR		
	comp=E,62µm,20.0s						
SVE				MLR	MLR		
	comp=Z,62µm,20.0s						
SEY	**Seymchan**	**128.54**	**337**	*e*P	Pdif	23 00 12.8	+1.4
SEY				*e*		23 03 27.2	
SEY				*e*		23 22 40.9	
ASHO	**Ashiyiah**	**129.41**	**74**	⇑P	PKPdf	23 03 31.8	+3.2
	SNR=64						
ARQ	**Araqi**	**129.68**	**76**	⇑P	PKPdf	23 03 32.1	+2.9
BANOM	**Banah**	**129.75**	**72**	⇑P	PKPdf	23 03 32.4	+3.1
	SNR=39						
BSY	**Bisya**	**130.23**	**77**	⇑P	PKPdf	23 03 38.3	+8.1
	SNR=19						
HOQ	**Hoqain**	**130.43**	**76**	⇓P	PKPdf	23 03 32.8	+2.2
	SNR=18						
PET	**Petropavlovsk**	**130.63**	**324***d*	*i*P	Pdif	23 00 22.1	+1.3
PET				*i*		23 03 30.9	
PET				*i*		23 05 46.1	
PET				*e*PS	PS	23 15 59.1	-0.4
PET				*i* PPS	PPS	23 17 29.4	-10
PET				*i* SS	SS	23 23 05.4	-1.5
PET				*e*SSS	SSS	23 28 01.0	+1.1
PET				pmax	pmax		
	comp=Z,8µm,28.7s						
PET				pmax	pmax		
	comp=Z,3µm,19.0s						
PET				pmax	pmax		
	comp=Z,602µm,2.4s						
PET				pmax	pmax		
	comp=Z,16µm,13.6s						
PET				pmax	pmax		
	comp=Z,97µm,12.4s						
PET				pmax	pmax		
	comp=Z,131µm,21.1s						
PET				MLR	MLR		
	comp=Z,54µm,19.0s						
PET	**Petropavlovsk**	**130.63**	**324**	*e*PKP	PKPdf	23 03 30.8	+0.6
PET				*i* PKPr		23 03 31.1	
PET				LR	LR		
	comp=Z,20µm,20.0s						
JMDO	**Jabal Madar**	**131.01**	**77**	⇓P	PKPdf	23 03 34.1	+2.4
SMDO	**Samad**	**131.04**	**76**	⇓P	PKPdf	23 03 34.4	+2.6
	SNR=40						
BIDO	**Bidbid**	**131.17**	**76**	⇑P	PKPdf	23 03 35.5	+3.5
	SNR=21						
MA2	**Magadan**	**131.18**	**334***d*	*i*PKIKP	PKPdf	23 03 32.3	+1.3
MA2				MLR	MLR		
	comp=Z,119µm,22.0s						
MA2	**Magadan**	**131.18**	**334**	*i* PKPr		23 03 32.4	
MA2				LR	LR		
	comp=Z,11µm,20.0s						
WBK	**Wadi Bani Khal**	**131.83**	**77**	⇑P	PKPdf	23 03 37.1	+3.8
	SNR=27						
DGAR	**Diego Garcia**	**133.52**	**122**	PFAKE		23 03 50.0	+13
DGAR				LR	LR		
	comp=Z,15µm,20.0s						
PMG	**Port Moresby**	**133.83**	**234**	Pdiff	Pdif	23 00 41.4	+5.4
PMG				PKPdf	PKPdf	23 03 38.0	+0.8
PMG	**Port Moresby**	**133.83**	**234**	*e*PKHKP		23 03 26.4	
PMG				MLR	MLR		
	comp=Z,110µm,21.0s						
PMG	**Port Moresby**	**133.83**	**234**	PP	PP	23 06 07.3	-4.7
	comp=Z,139nm,1.1s,baz=142,slow=1.6,SNR=5.0						
PMG				SS	SS	23 23 53.3	+6.1
	comp=Z,5.5nm,0.6s,baz=344,slow=18,SNR=1.9						
WB2	**Warramunga Arr**	**134.15**	**212**	*e*PKP		23 03 24.0	
WB2				*e*	PKPdf	23 03 41.2	+3.6
WB2				*e*PP	PP	23 06 09.7	-4.2
WB2				*e*PKS	PKS	23 07 08.0	-4.9
WRA	**Warramunga Arr**	**134.16**	**212**	PKIKP	PKPdf	23 03 37.2	-0.5
WRA						23 04 08.1	
WRA						23 06 08.2	
WRA				SS	SS	23 23 52.9	+1.9
WRA	**Warramunga Arr**	**134.16**	**212**	PKhKP		23 03 21.7	
	comp=Z,15nm,0.9s,baz=161,slow=1.1,SNR=21						
WRA				PKP	PKPdf	23 03 37.2	-0.4
	comp=Z,150nm,0.7s,baz=160,slow=1.4,SNR=32						
WRA				pPKP		23 04 08.1	
	comp=Z,67nm,0.9s,baz=136,slow=1.6,SNR=1.1						
WRA				PP	PP	23 06 08.2	-5.8
	comp=Z,60nm,0.9s,baz=164,slow=5.1,SNR=3.3						
WRA				SS	SS	23 23 52.9	+1.9
	comp=Z,2.0nm,1.1s,baz=325,slow=5.7,SNR=2.3						
WRAB	**Tennant Creek**	**134.16**	**212**	PKHKP		23 03 21.7	
WRAB				MLR	MLR		
	comp=Z,29µm,19.0s						
BVAR	**Borovoye Array**	**134.65**	**33**	PKhKP		23 03 26.3	
	comp=Z,7.4nm,0.7s,baz=292,slow=2.0,SNR=9.8						
BVAR				PKP	PKPdf	23 03 38.3	+0.6
	comp=Z,114nm,0.8s,baz=272,slow=2.5,SNR=43						
BVAR				pPKP		23 04 08.7	
	comp=Z,92nm,0.8s,baz=244,slow=2.1,SNR=1.2						
BVAR				PP	PP	23 06 11.3	-4.7
	comp=Z,21nm,0.9s,baz=45,slow=4.2,SNR=2.0						
BVAR				SKKPbc		23 16 08.7	
	comp=Z,27nm,1.1s,baz=98,slow=10,SNR=2.8						
BVAR				SS	SS	23 23 54.1	-1.9
	comp=Z,0.2nm,0.4s,baz=306,slow=42,SNR=2.0						
BVAR	**Borovoye Array**	**134.65**	**33**	PKP	PKPdf	23 03 38.3	+0.6
BVAR				pPKP		23 04 08.7	
BVAR				PP	PP	23 06 11.3	-4.7
BVAR				SKKPbc		23 16 08.7	
BVAR				SS	SS	23 23 54.1	-1.9
YAK	**Yakutsk**	**135.92**	**347**	*e*P	Pdif	23 00 45.0	+1.1
YAK				*e*		23 06 21.0	
YAK				pmax	pmax		
	comp=Z,2µm,18.6s						
YAK				pmax	pmax		
	comp=N,454nm,16.9s						
YAK				pmax	pmax		
	comp=E,225nm,17.1s						
YAK				pmax	pmax		
	comp=Z,150nm,1.0s						
YAK				pmax	pmax		
	comp=N,96nm,1.3s						
YAK				pmax	pmax		
	comp=E,52nm,1.2s						
YAK	**Yakutsk**	**135.92**	**347**	*e*PKP		23 03 29.9	
YAK				⇑*i*PKP	PKPdf	23 03 39.6	-0.2
YAK				LR	LR		
	comp=Z,24µm,22.0s						
MBWA	**Marble Bar**	**138.25**	**193**	*e*PKP	PKPdf	23 03 37.4	-7.8
MBWA				LR	LR		
	comp=Z,47µm,21.0s						
NVS	**Novosibirsk**	**139.36**	**24**	*i* PKIKP	PKPdf	23 03 48.3	+2.1
NVS				*i*		23 04 17.4	
NVS				*i*		23 06 44.9	
NVS				*e*PPP	PPP	23 09 57.7	+8.1
NVS				*e*		23 10 40.0	
NVS				pmax	pmax		
	comp=Z,458nm,1.7s						
NVS				pmax	pmax		
	comp=N,295nm,1.9s						
NVS				pmax	pmax		
	comp=E,300nm,1.7s						
FITZ	**Fitzroy Crossi**	**139.50**	**202**	*e*PKP		23 03 38.0	
	comp=E,307nm,1.3s						
FITZ				*i*	PKPdf	23 03 52.1	+4.6
FITZ	**Fitzroy Crossi**	**139.50**	**202**	PKhKP		23 03 37.9	
	comp=E,143nm,0.7s,baz=180,slow=4.8,SNR=24						
FITZ				PKP	PKPdf	23 03 49.6	+2.1
	comp=E,449nm,0.7s,baz=199,slow=2.7,SNR=24						
FITZ				pPKP		23 04 18.2	
	comp=E,177nm,0.7s,baz=207,slow=1.9,SNR=1.3						
FITZ				PP	PP	23 06 40.8	-5.8
	comp=E,236nm,1.1s,baz=150,slow=2.3,SNR=2.3						
FITZ				SS	SS	23 24 52.9	-1.2
	comp=E,3.8nm,1.0s,baz=215,slow=9.9,SNR=1.7						
FITZ	**Fitzroy Crossi**	**139.50**	**202**	PKP	PKPdf	23 03 49.6	+2.1
FITZ				pPKP		23 04 18.2	
FITZ				PP	PP	23 06 40.8	-5.8
FITZ				SS	SS	23 24 52.9	-1.2
KAKA	**Kakadu**	**141.20**	**215**⇑	*i*PKP	PKPdf	23 03 43.2	-7.5
	comp=E,482nm,0.7s						
EKS2	**Erkin-Say**	**141.53**	**46**	P	PKPdf	23 03 48.8	-1.7
	SNR=25						
CLNS	**Chul’man**	**141.67**	**348**	*i* PKHKP		23 03 34.8	
CLNS				pmax	pmax		
	comp=Z,860nm,1.3s						
CLNS				pmax	pmax		
	comp=N,256nm,0.9s						
CLNS				pmax	pmax		
	comp=E,128nm,1.0s						
AML	**Almayashu**	**141.69**	**46**	P	PKPdf	23 03 48.2	-2.5
	SNR=30						
MNCY	**Minicoy**	**141.69**	**102**	*i* P	PKPdf	23 03 54.0	+2.4
MNCY				*i* x	x	23 10 06.0	
BHJ	**Bhuj**	**141.70**	**77**	*e*x	PKPdf	23 03 46.3	-5.1
BHJ				*e*x	x	23 07 25.0	
USP	**Ospenovka**	**141.75**	**44**	P	PKPdf	23 03 49.6	-1.3
	SNR=41						
AAK	**Ala-Archa**	**142.02**	**45**	P	PKPdf	23 03 52.4	+1.1
	SNR=47						
AAK	**Ala-Archa**	**142.02**	**45**	*i* PKIKP	PKPdf	23 03 52.7	+1.4
AAK				MLR	MLR		
	comp=Z,153µm,23.0s						
AAK	**Ala-Archa**	**142.02**	**45**	*e*PKP	PKPdf	23 03 49.7	-1.7
AAK				*i* PKP	PKPdf	23 03 52.7	+1.4
AAK				LR	LR		
	comp=Z,24µm,22.0s						
CHMS	**Chumysh**	**142.03**	**45**	P	PKPdf	23 03 50.7	-0.6
	SNR=37						
BOD	**Bodaibo**	**142.07**	**357**	*e*PKHKP		23 03 45.8	
BOD				pmax	pmax		
	comp=Z,621nm,0.7s						
YUK	**Yuzh-Kuril’sk**	**142.18**	**317**⇓	*i*PKHKP		23 03 44.0	
YUK				*e*		23 07 00.5	
YUK				*e*PPP	PPP	23 10 09.0	-3.5
YUK				pmax	pmax		
	comp=Z,112µm,16.0s						
YUK				pmax	pmax		
	comp=E,28µm,10.0s						
YUK				pmax	pmax		
	comp=N,230nm,0.5s						
YUK				pmax	pmax		
	comp=Z,350nm,0.5s						
YUK				pmax	pmax		
	comp=E,510nm,0.6s						
YUK				pmax	pmax		
	comp=N,26µm,10.0s						
YUK				pmax	pmax		
	comp=E,21µm,12.0s						
YUK				MLR	MLR		
	comp=Z,70µm,26.0s						
YUK				MLR	MLR		
	comp=N,55µm,22.0s						
YUK				MLR	MLR		
	comp=E,33µm,15.0s						
UCH	**Uchtor**	**142.20**	**46**	P	PKPdf	23 03 51.1	-0.5
	SNR=44						
KBK	**Karagaybulak**	**142.31**	**45**	P	PKPdf	23 03 51.1	-0.8
	SNR=37						
YSS	**Yuzh-Sakhalins**	**142.51**	**323**⇓	*i*PKHKP		23 03 46.0	
YSS				*i*		23 07 03.0	
YSS				*e*PPP	PPP	23 10 20.0	+4.9
YSS				*e*		23 10 54.0	
YSS				*e*SS	SS	23 25 35.0	+6.1
YSS				pmax	pmax		
	comp=Z,20nm,2.5s						
YSS				pmax	pmax		
	comp=Z,6µm,0.3s						
YSS				MLR	MLR		
	comp=N,72µm,21.0s						
YSS				MLR	MLR		
	comp=Z,124µm,21.0s						
YSS				MLR	MLR		
	comp=E,30µm,19.0s						
YSS	**Yuzh-Sakhalins**	**142.51**	**323**⇑	*i*PKP	PKPdf	23 03 53.7	+1.7
YSS				LR	LR		
	comp=Z,77µm,21.0s						
TKM2	**Tokmak 2**	**142.62**	**44**	P	PKPdf	23 03 53.0	+0.7
	SNR=32						
KZA	**Kyzart**	**142.76**	**46**	P	PKPdf	23 03 53.5	+0.9
	SNR=37						
ULHL	**Ulahol**	**143.35**	**45**	P	PKPbc	23 03 55.4	+3.3
	SNR=9.6						
BHV	**Bhavnagar**	**143.90**	**80**	*e*P	PKPbc	23 03 55.0	+0.7
ASAJ	**Asahikawa**	**144.18**	**320**	PKIKP	PKPdf	23 03 54.3	-0.7
ASAJ						23 07 12.4	
ASAJ						23 10 49.2	

ASAJ				SS	SS	23 25 50.4	+2.1
ASAJ				SSS	SSS	23 31 07.0	-7.1
ASAJ				pmax	pmax		
	comp=Z,628nm,0.9s						
ASAJ				pmax	pmax		
	comp=Z,64nm,0.8s						
ASAJ	**Asahikawa**	**144.18**	**320**	PKP	PKPdf	23 03 54.3	-0.7
	comp=Z,628nm,0.9s						
ASAJ				PP	PP	23 07 12.3	-1.6
	comp=Z,64nm,0.8s,baz=348,slow=34,SNR=1.7						
ASAJ				SKS	SKS	23 10 49.1	-2.1
	comp=Z,46nm,1.3s,baz=311,slow=11,SNR=1.8						
ASAJ				SS	SS	23 25 50.4	+2.1
	comp=Z,2.2nm,0.3s,baz=147,slow=31,SNR=3.6						
ASAJ				SSS	SSS	23 31 07.0	-7.1
	comp=Z,2.0nm,0.3s,baz=149,slow=34,SNR=1.9						
BOM	**Bombay**	**144.22**	**85**	*e*P	PKPbc	23 03 56.4	+1.1
BOM				*e*P		23 03 57.0	
	comp=Z,848nm,0.9s						
BOM				AMb	AMB	23 04 05.2	
	comp=Z,2µm,2.1s						
BOM				*e*x	x	23 13 56.5	
KSH	**Kashi**	**144.31**	**49**	*i* PKP	PKPdf	23 03 55.1	-0.3
KSH				*e*APKP		23 04 21.0	
KSH				*e*PKS	PKS	23 07 29.0	-1.0
KSH				SKKS		23 13 47.1	
KSH				PP	PP		
	comp=Z,26µm,4.3s						
KSH				LR	LR		
	comp=N,111µm,19.4s						
KSH				LR	LR		
	comp=E,84µm,17.3s						
MKAR	**Makanchi Array**	**144.51**	**34**	PKP	PKPdf	23 03 54.7	-0.8
	comp=E,273nm,0.6s,baz=326,slow=1.5,SNR=202						
MKAR				pPKP		23 04 26.2	
	comp=E,397nm,0.9s,slow=2.4,SNR=2.3						
MKAR				SS	SS	23 25 56.1	+4.2
	comp=E,0.1nm,0.4s,baz=266,slow=40,SNR=2.1						
MKAR				SSS	SSS	23 31 06.7	-12
	comp=E,0.1nm,0.3s,baz=211,slow=21,SNR=2.2						
MKAR	**Makanchi Array**	**144.51**	**34**	PKP	PKPdf	23 03 54.7	-0.8
MKAR				pPKP		23 04 26.2	
MKAR				SS	SS	23 25 56.1	+4.2
MKAR				SSS	SSS	23 31 06.7	-12
MNGI	**Mangalore**	**144.87**	**96**	*e*P	PKPdf	23 03 56.5	-0.6
MNGI				*i* P		23 03 58.0	
MNGI				*i* x	x	23 13 59.1	
POO	**Poona**	**145.14**	**86**	⇓*i*P	PKPdf	23 03 57.0	-0.4
POO				*i* x	x	23 11 04.0	
POO				AMS	AMS	00 03 44.1	
	comp=Z,86µm,23.0s						
KAD	**Karad**	**145.26**	**88**	⇓*i*P	PKPdf	23 03 57.3	-0.3
KAD				*i* x	x	23 07 21.5	
JMU	**Jammu**	**145.57**	**61**	*e*x	PKPdf	23 04 02.0	+4.2
AJM	**Ajmer**	**146.22**	**72**	*i* P	PKPdf	23 03 60.0	+0.9
AJM				AMS	AMS	00 34 02.3	
	comp=Z,32µm,17.9s						
KLR	**Kul'dur**	**146.27**	**335**	⇑*i*PKHKP		23 03 56.0	
KLR				*i*		23 03 56.7	
KLR				*e*		23 04 21.2	
KLR				pmax	pmax		
	comp=N,2µm,1.8s						
KLR				pmax	pmax		
	comp=E,2µm,1.8s						
KLR				pmax	pmax		
	comp=Z,4µm,1.8s						
THN	**Thein Dam**	**146.30**	**61**	*e*P	PKPdf	23 04 00.0	+1.0
	comp=Z,679nm,0.8s						
THN				*e*x	x	23 07 50.6	
PONG	**Pong**	**146.60**	**62**	*e*P	PKPdf	23 04 01.0	+1.5
SARN	**Sarigan**	**146.67**	**270**	*e*PKP	PKPdf	23 04 00.0	0.0
GUMO	**Guam**	**146.80**	**264**	*e*PKIKP	PKPdf	23 04 00.7	+0.4
GUMO				MLR	MLR		
	comp=Z,97µm,22.0s						
BHK	**Bhakra**	**147.10**	**63**	*e*P	PKPdf	23 04 02.7	+2.3
BHK				*e*x	x	23 07 13.1	
IRK	**Irkutsk**	**147.34**	**7**	*e*PKIKP	PKPdf	23 04 01.7	+1.6
IRK				*e*		23 04 36.0	
IRK				pmax	pmax		
	comp=Z,4µm,2.3s						
MOY	**Mondy**	**147.40**	**11**	*e*PKP2	PKPab	23 04 02.9	-4.3
SDNR	**Sundarnagar**	**147.55**	**62**	*e*P	PKPdf	23 04 02.6	+1.5
LATR	**Latur**	**147.67**	**87**	*e*P	PKPdf	23 04 02.5	+0.9
SMLA	**Simla**	**147.79**	**63**	*i* P	PKPdf	23 04 02.4	+0.8
SMLA				*i* x	x	23 04 40.3	
TLY	**Talaya**	**147.81**	**8**	*d i*PKIKP	PKPdf	23 04 01.8	+0.9
TLY				*e*		23 07 33.1	
TLY				pmax	pmax		
	comp=Z,5µm,1.8s						
TLY				MLR	MLR		
	comp=Z,110µm,24.0s						
TLY	**Talaya**	**147.81**	**8**	*i* PKPr		23 04 02.0	
CIT	**Chita**	**147.89**	**357**	*e*PKIKP	PKPdf	23 04 03.0	+2.0
CIT				*e*		23 04 36.8	
CIT				*e*		23 07 35.3	
CIT				*e*		23 26 29.5	
CIT				*e*		23 27 14.3	
CIT				pmax	pmax		
	comp=Z,12µm,2.1s						
PALK	**Pallekele**	**148.25**	**109**	*e*PKPbc	PKPdf	23 04 06.4	+3.7
NDI	**New Delhi**	**148.27**	**67**	*e*P	PKPdf	23 04 01.7	-0.6
NDI				*e*P		23 04 02.5	
NDI				*e*x	x	23 14 18.0	
AKL	**Akola**	**148.35**	**83**	*e*P	PKPdf	23 04 08.5	+5.8
AKL				AMb	AMB	23 04 20.2	
	comp=Z,5µm,1.8s						
DDI	**Dehra Dun**	**148.71**	**64**	*e*P	PKPdf	23 04 05.5	+2.5
DDI				*e*x	x	23 08 06.5	
BHPL	**Bhopal**	**148.84**	**78**	⇓*i*P	PKPdf	23 04 04.1	+0.7
BHPL				*i* x	x	23 08 30.0	
BHPL				AMS	AMS	00 07 27.6	
	comp=Z,77µm,22.4s						
ZAK	**Zakamensk**	**149.02**	**9**	*e*PKIKP	PKPdf	23 04 06.1	+3.2
ZAK				*e*		23 04 10.8	
WMQ	**Urumqi**	**149.34**	**34**	PKP	PKPdf	23 04 05.8	+2.2
WMQ				APKP		23 04 32.6	
WMQ				XPKP		23 04 43.2	
WMQ				PP	PP	23 07 45.8	+1.9
WMQ				PP	PP		
	comp=Z,87µm,9.3s						
WMQ				LR	LR		
	comp=N,147µm,26.0s						
WMQ				LR	LR		
	comp=E,226µm,28.0s						
WMQ				LR	LR		
	comp=Z,315µm,27.2s						
WMQ	**Urumqi**	**149.34**	**34**	PKPdf	PKPdf	23 04 05.1	+1.6
WMQ				SKKSac		23 14 26.6	
WMQ	**Urumqi**	**149.34**	**34**	SKKPdf		23 17 43.6	
HYB	**Hyderabad**	**149.39**	**89**	*e*PKP	PKPdf	23 04 05.0	+0.6
HYB				*e*PP	PP	23 07 20.0	-25
HYB				*e*SKKS		23 14 22.0	
HYB				*e*		23 15 14.0	
HYB				LR	LR		
	comp=Z,218nm,28.0s						
JHNI	**Jhansi**	**149.79**	**73**	*e*P	PKPdf	23 04 06.0	+1.1
JHNI				*e*x	x	23 06 08.0	
HIA	**Hailar**	**149.85**	**348**	PKPdf	PKPdf	23 04 04.9	+0.7
HIA				SS	SS	23 26 43.7	-7.9
HIA	**Hailar**	**149.85**	**348**	SKPdf		23 07 46.5	
HIA	**Hailar**	**149.85**	**348**	*e*PKPdf	PKPdf	23 04 04.8	+0.6
MDRS	**Chennai**	**149.97**	**98**	*e*P	PKPdf	23 04 06.0	+0.6
MDRS				*e*x	x	23 14 32.0	
MDRS				AMS	AMS	00 08 52.6	
	comp=Z,100µm,18.5s						
NGP	**Nagpur**	**150.28**	**82**	*e*x	PKPdf	23 04 09.2	+3.5
NGP				*e*x	x	23 04 21.0	
CBIJ	**Chichi jima**	**150.39**	**290**	PKP	PKPdf	23 04 05.6	-0.1
	comp=Z,377nm,1.3s,baz=269,slow=18,SNR=2.6						
CBIJ				PKPbc	PKPdf	23 04 11.0	+5.3
	comp=Z,2µm,1.0s,baz=56,slow=1.1,SNR=38						
CBIJ				PP	PP	23 07 49.0	-1.8
	comp=Z,250nm,1.1s,baz=64,slow=21,SNR=1.7						
CBIJ				SS	SS	23 27 04.8	+6.7
	comp=Z,53nm,0.9s,baz=276,slow=20,SNR=2.1						
PTH	**Pithoragarh**	**150.70**	**65**	*e*x	PKPdf	23 04 10.0	+3.9
PTH				*e*x	x	23 07 53.0	
MDJ	**Mudanjiang**	**150.83**	**332**	PKPdf	PKPdf	23 04 06.5	+0.7
MDJ				PP	PP	23 07 54.8	+2.0
MDJ	**Mudanjiang**	**150.83**	**332**	*e*PKPdf	PKPdf	23 04 06.8	+0.9
MJAR	**Matsushiro Arr**	**150.85**	**310**	PKIKP	PKPdf	23 04 06.4	+0.3
MJAR						23 07 50.8	
MJAR	**Matsushiro Arr**	**150.85**	**310**	PKP	PKPdf	23 04 06.3	+0.2
	comp=Z,103nm,1.1s,baz=172,slow=0.2,SNR=39						
MJAR				PKPbc	PKPdf	23 04 11.9	+5.7
	comp=Z,376nm,0.9s,baz=121,slow=1.1,SNR=79						
MJAR				PP	PP	23 07 50.8	-2.4
	comp=Z,71nm,1.1s,baz=45,slow=2.5,SNR=3.6						
MAJO	**Matsushiro**	**150.85**	**310**	PKPdf	PKPdf	23 04 06.8	+0.7
MAJO				PP	PP	23 07 53.1	-0.2
MAJO	**Matsushiro**	**150.85**	**310**	*e*PKPdf	PKPdf	23 04 08.7	+2.6
MAJO				LR	LR		
	comp=Z,148µm,20.0s						
MAT	**Matsushiro**	**150.85**	**310**	*e*PKP	PKPdf	23 04 06.0	-0.1
MAT	**Matsushiro**	**150.85**	**310**	PKP	PKPdf	23 04 05.9	-0.2
JHJ	**Hachijo jima 2**	**151.02**	**303**	PKP	PKPdf	23 04 06.2	-0.2
	comp=Z,31nm,0.3s,baz=108,slow=19,SNR=2.0						
JHJ				PKPbc	PKPdf	23 04 12.2	+5.7
	comp=Z,2µm,0.9s,baz=150,slow=6.7,SNR=18						
JHJ				PP	PP	23 07 51.5	-2.8
	comp=Z,88nm,0.8s,baz=275,slow=23,SNR=1.6						
SONM	**Songino Array**	**151.92**	**6**	PKP	PKPdf	23 04 08.9	+1.6
	comp=Z,98nm,0.8s,baz=323,slow=1.1,SNR=50						
SONM				PKPbc	PKPdf	23 04 15.6	+8.3
	comp=Z,336nm,0.6s,baz=303,slow=1.1,SNR=102						
SONM				PP	PP	23 07 56.4	-2.0
	comp=Z,62nm,1.0s,baz=7.8,slow=4.6,SNR=1.9						
SONM				SS	SS	23 27 08.2	-6.0
	comp=Z,0.5nm,0.5s,baz=324,slow=3.2,SNR=3.7						
ULN	**Ulaanbaatar**	**151.96**	**5**	PKPdf	PKPdf	23 04 09.3	+1.9
ULN				SS	SS	23 26 48.6	-26
ULN	**Ulaanbaatar**	**151.96**	**5**	*e*PKPdf	PKPdf	23 04 09.1	+1.7
ULN				LR	LR		
	comp=Z,89µm,21.0s						
ALBI	**Allahabad**	**152.75**	**73**	*e*x	PKPdf	23 04 15.0	+5.8
BLSP	**Bilaspur**	**153.18**	**80**	⇓*i*P	PKPdf	23 04 10.5	+0.6
CN2	**Changchun**	**153.21**	**336**	PKP	PKPdf	23 04 09.3	0.0
CN2				*e*PP	PP	23 08 02.0	-4.1
CN2				PP	PP		
	comp=Z,46µm,8.0s						
CN2				LR	LR		
	comp=N,94µm,21.0s						
CN2				LR	LR		
	comp=E,66µm,21.0s						
VIS	**Vishakhapatnam**	**153.93**	**90**	*e*P	PKPdf	23 04 12.3	+1.3
VIS				AMS	AMS	00 09 13.8	
	comp=Z,95µm,23.1s						
KOLN	**Koldanda**	**153.98**	**67**	*e*P	PKPdf	23 04 10.8	0.0
	comp=Z,4µm,1.8s						
VLK	**Valmikinagar**	**154.30**	**68**	*i* P	PKPdf	23 04 12.0	+0.7
VLK				*e*x	x	23 04 15.0	
GKN	**Gorkha**	**154.82**	**66**	*e*P	PKPdf	23 04 11.9	-0.1
	comp=Z,3µm,1.1s						
DMN	**Daman**	**155.32**	**67**	*e*P	PKPdf	23 04 13.1	+0.5
	comp=Z,4µm,1.2s						
KKN	**Kakani**	**155.43**	**67**	*e*P	PKPdf	23 04 12.9	+0.1
	comp=Z,3µm,1.1s						
PKI	**Pulchoki**	**155.59**	**67**	*e*P	PKPdf	23 04 13.8	+0.8
	comp=Z,2µm,1.2s						
SNY	**Shenyang**	**155.61**	**336**	PKPR		23 04 14.0	
SNY				APKP		23 04 43.9	
SNY				PP	PP	23 08 12.0	-7.6
SNY				SKKS		23 14 54.0	
SNY				LR	LR		
	comp=N,66µm,27.5s						
SNY				LR	LR		
	comp=E,90µm,22.0s						
SNY				LR	LR		
	comp=Z,157µm,37.3s						
GUN	**Gumba**	**155.91**	**66**	*e*P	PKPdf	23 04 13.3	-0.1
	comp=Z,5µm,1.3s						
BWNR	**Bhubaneshwar**	**156.54**	**85**	*e*P	PKPdf	23 04 23.7	+9.3
BWNR				AML	AML	23 04 29.3	
	comp=Z,1µm,1.1s						
BWNR				*e*x	x	23 05 15.0	
KS15	**Wonju Array Si**	**157.04**	**323**	*e*PKPdf	PKPdf	23 04 16.0	+1.4
INCN	**Inchon**	**157.71**	**325**	*e*PKPdf	PKPdf	23 04 17.2	+1.7
INCN				LR	LR		
	comp=Z,95µm,22.0s						
JNU	**Nakatsue**	**157.78**	**310**	PKP	PKPdf	23 04 16.4	+0.6
	comp=Z,70nm,1.2s,baz=47,slow=16,SNR=18						
JNU				pPKP		23 04 46.5	
	comp=Z,204nm,1.1s,baz=63,slow=18,SNR=3.7						
JNU				PP	PP	23 08 21.6	-10
	comp=Z,27nm,0.8s,baz=166,slow=20,SNR=2.3						
JNU				SKKS		23 19 31.7	
	comp=Z,1.3nm,0.3s,baz=90,slow=44,SNR=1.8						
JNU				SS	SS	23 28 17.1	-0.4
	comp=Z,2.5nm,0.7s,baz=108,slow=31,SNR=1.8						
SLGI	**Shiliguri**	**158.39**	**68**	*e*x	x	23 04 44.9	
GTA	**Gaotai**	**158.40**	**24**	PKP	PKPdf	23 04 18.1	+1.8
GTA				APKP		23 04 49.5	
GTA				PKP2	PKPab	23 04 52.3	-1.5
GTA				XPKP		23 04 57.6	
GTA				PKS	PKS	23 07 50.8	+1.8
GTA				PP	PP	23 08 29.8	-5.2
GTA				SKS	SKS	23 11 13.9	+5.1
GTA				SS	SS	23 28 14.9	-9.1
GTA				LR	LR		
	comp=N,101µm,25.6s						
GTA				LR	LR		
	comp=E,104µm,28.9s						
GTA				LR	LR		
	comp=Z,256µm,39.7s						
DL2	**Dalian**	**158.88**	**336**	*i* PKP	PKPdf	23 04 18.0	+1.1
DL2				APKP		23 04 46.0	
DL2				PKS	PKS	23 07 52.0	+2.5
DL2				PP	PP	23 08 36.0	-1.4
DL2				PPP	PPP	23 12 14.0	-6.2
DL2				LR	LR		
	comp=E,341µm,23.0s						
CAL	**Calcutta**	**158.91**	**79**	*e*P	PKPdf	23 04 16.6	-0.7
CAL				*e*P		23 04 20.0	
CAL				*e*x	x	23 12 14.4	
HHC	**Hu-ho-hao-te**	**159.12**	**358**	*e*PKP	PKPdf	23 04 19.3	+2.2
HHC				APKP		23 04 49.4	
HHC				XPKP		23 04 58.3	
HHC				PP	PP	23 08 30.8	-7.8
HHC				LR	LR		
	comp=N,94µm,27.0s						
HHC				LR	LR		
	comp=E,73µm,27.9s						
HHC				LR	LR		
	comp=Z,305µm,43.1s						
BTO	**Baotou**	**159.37**	**2**	*e*PKP	PKPdf	23 04 19.1	+1.7
LSA	**Lhasa**	**159.72**	**57**	PKP	PKPdf	23 04 20.0	+1.9
LSA				SKKS		23 15 13.4	
LSA				LR	LR		
	comp=N,37µm,38.7s						
LSA				LR	LR		
	comp=E,88µm,40.0s						
LSA				LR	LR		
	comp=Z,100µm,37.5s						
LSA	**Lhasa**	**159.72**	**57**	PKPdf	PKPdf	23 04 20.3	+2.2
LSA	**Lhasa**	**159.72**	**57**	*e*PKPdf	PKPdf	23 04 20.2	+2.1
MATI	**Mati**	**160.21**	**231**	*e*P	PKPdf	23 04 24.4	+5.3
KGM	**Kluang**	**160.77**	**157**	P	PKPdf	23 04 22.9	+3.2
DAV	**Davao City (W)**	**160.79**	**230**	*e*P	PKPdf	23 04 22.0	+2.4
PBA	**Port Blair**	**160.81**	**113**	*e*P	PKPdf	23 04 17.8	-1.8
PBA				*e*P		23 04 18.5	
PBA				*e*x	x	23 08 28.1	
KCP	**Kidapawan**	**161.10**	**229**	⇓*e*P	PKPdf	23 04 25.0	+5.1
AGT	**Agartala**	**161.45**	**74**	*i* P	PKPdf	23 04 19.0	-1.0
AGT				*i* x	x	23 04 52.0	
KSM	**Kuching**	**161.66**	**178**	*e*PKPdf	PKPdf	23 04 21.2	+0.7
SHL	**Shillong**	**161.69**	**69**	*e*P	PKPdf	23 04 20.2	0.0
SHL				*e*P		23 04 21.5	
SHL				*e*x	x	23 08 25.0	
BUKP	**Musuan**	**161.71**	**231**	*e*P	PKPdf	23 04 21.7	+1.2
IPM	**Ipoh**	**162.03**	**147**	P	PKPdf	23 04 22.3	+1.4
CGP	**Cagayan de Oro**	**162.36**	**232**	⇓*e*P	PKPdf	23 04 26.2	+5.0
KULM	**Kulim**	**162.43**	**145**	*e*PKPdf	PKPdf	23 04 21.9	+0.6
JOW	**Kunigami**	**162.54**	**296**	PKP	PKPdf	23 04 22.6	+1.5
	comp=Z,194nm,1.1s,baz=161,slow=11,SNR=5.2						
JOW				PP	PP	23 08 56.4	-0.7
	comp=Z,46nm,1.0s,baz=144,slow=21,SNR=2.8						
JOW				SKKS		23 19 28.6	
	comp=Z,23nm,0.8s,baz=210,slow=27,SNR=2.0						
JOW				SS	SS	23 29 14.2	+6.8
	comp=Z,22nm,0.9s,baz=170,slow=27,SNR=3.2						
SCPH	**Surigao**	**162.59**	**237**	*e*P	PKPdf	23 04 25.7	+4.3
SCPH				*e*S	Px	23 04 55.8	
LZH	**Lanzhou**	**162.78**	**19**	⇓*i*PKP	PKPdf	23 04 23.5	+2.5
LZH				APKP		23 04 54.3	
LZH				XPKP		23 05 05.5	
LZH				PP	PP	23 09 00.0	+2.0
LZH				SKKS		23 15 28.0	
LZH				LR	LR		
	comp=E,158µm,19.5s						
LZH				LR	LR		
	comp=Z,278µm,21.0s						
TIA	**Tai'an**	**162.84**	**342**	PKP	PKPdf	23 04 22.4	+1.4
TIA				XPKP		23 05 01.0	
TIA				PP	PP	23 08 53.4	-4.9
TIA				LR	LR		
	comp=N,72µm,27.0s						
TIA				LR	LR		
	comp=E,170µm,26.0s						
PAGZ	**Pagadian**	**162.88**	**227**	*e*P	PKPdf	23 04 26.5	+4.8
PAGZ				*e*S	Px	23 05 12.5	
TSM	**Tawau**	**163.00**	**205**	P	PKPdf	23 04 25.0	+3.2
MSLP	**Maasin**	**163.30**	**236**	*e*P	PKPdf	23 04 24.1	+2.0
IMP	**Imphal**	**163.68**	**70**	*i* P	PKPdf	23 04 26.0	+3.8
IMP				*e*x	x	23 04 57.0	
IMP				*e*x	x	23 09 07.0	
TBP	**Tagbilaran**	**163.79**	**233**	*e*P	PKPdf	23 04 23.0	+0.4
PLP	**Palo**	**163.80**	**240**	*i* P	PKPdf	23 04 26.8	+4.2
SNG	**Songkhla**	**163.95**	**141**	P	PKPdf	23 04 23.0	+0.2
	comp=E,1µm,1.0s						
SNPH	**Sibulan**	**164.02**	**231**	*e*P	PKPdf	23 04 26.8	+4.0
LLP	**Lapu-Lapu**	**164.10**	**235**	*e*P	PKPdf	23 04 23.1	+0.2
CNP	**Catarman**	**164.78**	**243**	*e*P	PKPdf	23 04 25.3	+1.7
KKM	**Kota Kinabalu**	**165.23**	**202**	*e*PKPdf	PKPdf	23 04 24.6	+0.6
KKM	**Kota Kinabalu**	**165.23**	**202**	P	PKPdf	23 04 25.3	+1.3
GUIM	**Jordan**	**165.34**	**233**	*e*P	PKPdf	23 04 28.1	+4.0
SSE	**Sheshan**	**165.45**	**322**	PKP	PKPdf	23 04 26.5	+2.7
SSE				APKP		23 04 53.8	
SSE				XPKP		23 05 03.8	
SSE				PP	PP	23 09 14.0	+1.5
SSE				PP	PP		
	comp=Z,71µm,12.0s						
SSE				LR	LR		
	comp=N,261µm,20.0s						
SSE				LR	LR		
	comp=E,295µm,20.0s						
SSE				LR	LR		
	comp=Z,121µm,20.0s						
MMPH	**Masbate**	**165.56**	**241**	⇓*i*P	PKPdf	23 04 30.0	+5.7
PVCP	**Virac**	**165.74**	**246**	*e*P	PKPdf	23 04 27.6	+3.2
XAN	**Xi'an**	**165.84**	**6**	PKP	PKPdf	23 04 25.4	+1.4
XAN				APKP		23 04 53.0	
XAN				PP	PP	23 09 13.6	-0.8
XAN				SKKS		23 15 42.5	
XAN				SS	SS	23 29 38.0	-3.1
XAN				LR	LR		
	comp=N,83µm,30.0s						
XAN				LR	LR		
	comp=E,132µm,30.9s						
XAN				LR	LR		
	comp=Z,219µm,33.7s						
XAN	**Xi'an**	**165.84**	**6**	PKPdf	PKPdf	23 04 25.1	+1.1
XAN				PP	PP	23 09 13.4	-1.0
NJ2	**Nanjing**	**165.91**	**331**	*e*PKP	PKPdf	23 04 25.5	+1.4
NJ2				APKP		23 04 52.4	
NJ2				XPKP		23 05 03.0	
NJ2				PKP2	PKPab	23 05 28.3	+1.7
NJ2				PKS	PKS	23 07 57.0	+1.2
NJ2				PP	PP	23 09 12.0	-2.8
NJ2				SKS	SKS	23 11 18.0	+2.9
NJ2				PP	PP		
	comp=Z,134µm,10.1s						
NJ2				LR	LR		
	comp=N,569µm,29.6s						
NJ2				LR	LR		
	comp=E,622µm,22.6s						
NJ2				LR	LR		
	comp=Z,130µm,25.9s						
CUYO	**Cuyo Island**	**166.64**	**229**	*e*P	PKPdf	23 04 30.6	+5.5
AUQP	**San Andres**	**166.86**	**242**	*e*P	PKPdf	23 04 29.1	+3.9
BATP	**Bataraza**	**167.03**	**213**	*e*P	PKPdf	23 04 26.8	+1.4
GQP	**Guinayangan**	**167.34**	**244**	⇓*e*P	PKPdf	23 04 30.6	+5.0
CD2	**Chengdu**	**167.35**	**29**	PKP	PKPdf	23 04 26.8	+1.6
CD2				PKP2	PKPab	23 05 26.0	-6.9
CD2				PP	PP	23 09 18.0	-4.0
CD2				LR	LR		
	comp=E,122µm,32.4s						
CD2				LR	LR		
	comp=Z,374µm,34.8s						
BOAC	**Boac**	**167.61**	**240**	*e*P	PKPdf	23 04 28.4	+2.6
SJMP	**San Jose**	**167.62**	**235**	*e*P	PKPdf	23 04 27.3	+1.6
BUSP	**Coron**	**168.01**	**230**	*e*P	PKPdf	23 04 27.7	+1.7
POLP	**Polilio Island**	**168.17**	**246**	*e*P	PKPdf	23 04 30.8	+4.8
LBPH	**Los Banos**	**168.53**	**242**	*i* P	PKPdf	23 04 33.0	+6.7
CMAR	**Chiang Mai Arr**	**168.72**	**95**	PKIKP	PKPdf	23 04 27.2	+0.9
CMAR						23 04 56.9	
CMAR						23 05 39.3	
CMAR						23 09 27.3	
CMAR				SS	SS	23 30 08.8	-1.5
CMAR	**Chiang Mai Arr**	**168.72**	**95**	PKP	PKPdf	23 04 27.2	+0.9
	comp=Z,71nm,0.9s,baz=267,slow=1.8,SNR=40						
CMAR				pPKP		23 04 56.9	
	comp=Z,41nm,0.9s,baz=254,slow=1.6,SNR=1.7						
CMAR				PKPab	PKPab	23 05 39.3	+0.1
	comp=Z,85nm,0.8s,baz=260,slow=5.7,SNR=9.5						
CMAR				pPKPab		23 06 06.0	
	comp=Z,52nm,0.8s,baz=253,slow=5.1,SNR=3.7						
CMAR				PP	PP	23 09 27.2	-1.9
	comp=Z,40nm,0.9s,baz=290,slow=4.2,SNR=4.2						
CMAR				SS	SS	23 30 08.8	-1.5
	comp=Z,1.3nm,0.3s,baz=136,slow=54,SNR=2.8						
ARP	**Angono**	**168.74**	**243**	*e*P	PKPdf	23 04 30.8	+4.3
QVPH	**Quezon City--P**	**168.88**	**244**	*i* P	PKPdf	23 04 31.6	+5.1
TATO	**Taipei**	**168.90**	**299**	PKPdf	PKPdf	23 04 27.3	+1.0
TATO				pPKPdf		23 04 57.4	
TATO				PKPab	PKPab	23 05 42.6	+2.8
TATO				PP	PP	23 09 24.1	-5.8
TATO	**Taipei**	**168.90**	**299**	*e*PKP	PKPdf	23 04 27.2	+0.9
TATO				LR	LR		
	comp=Z,48µm,19.0s						
BALP	**Baler**	**168.92**	**250**	*e*P	PKPdf	23 04 27.9	+1.4
WHN	**Wuhan**	**168.94**	**344**	PKP	PKPdf	23 04 27.3	+1.1
WHN				SS	SS	23 30 02.8	-9.4
WHN				LR	LR		
	comp=Z,874µm,39.5s						
NZB	**Bigte**	**168.95**	**245**	*e*P	PKPdf	23 04 31.9	+5.3
NST	**Nakhon Sawan**	**169.01**	**111**	P	PKPdf	23 04 27.0	+0.4
	comp=Z,432nm,1.3s						
CAUP	**Cauayan**	**169.11**	**256**	*e*P	PKPdf	23 04 31.3	+4.7
YHNB	**Yeheng**	**169.12**	**298**	*e*PKPdf	PKPdf	23 04 29.0	+2.6
NACB	**Ninganchiao**	**169.12**	**295**	*e*PKP	PKPdf	23 04 28.1	+1.7
SGCP	**Mt. Cagua**	**169.22**	**263**	*e*P	PKPdf	23 04 31.9	+5.3
PCPH	**Palayan**	**169.26**	**248**	⇓*e*P	PKPdf	23 04 27.7	+1.0
CVP	**Callao Caves**	**169.32**	**260**	*e*P	PKPdf	23 04 29.0	+2.3
	comp=Z,85µm,2.0s						
NBP	**Mount Natib**	**169.46**	**242**	*e*P	PKPdf	23 04 28.1	+1.3
BBP	**Basco**	**169.49**	**275**	*e*P	PKPdf	23 04 27.7	+1.0
ENH	**Enshi**	**169.62**	**6**	PKPdf	PKPdf	23 04 27.7	+1.1
ENH				PP	PP	23 09 30.1	-3.3
ENH				S'S'ac		23 30 11.4	
ENH	**Enshi**	**169.62**	**6**	*e*PKPdf	PKPdf	23 04 27.5	+0.9
APYP	**Conner**	**169.89**	**260**	*e*P	PKPdf	23 04 29.2	+2.2
BCPH	**Baguio City Da**	**170.05**	**251**	⇓*i*P	PKPdf	23 04 28.0	+0.9
ABRA	**Dolores**	**170.33**	**258**	*e*P	PKPdf	23 04 29.9	+2.6
SCZP	**Santa Cruz**	**170.38**	**246**	*e*P	PKPdf	23 04 30.0	+2.6
BOLP	**Bolinao**	**170.64**	**249**	*e*P	PKPdf	23 04 28.2	+0.7
KMI	**Kunming**	**170.94**	**54**	PKPdf	PKPdf	23 04 29.0	+1.5
KMI	**Kunming**	**170.94**	**54**	PP	PP	23 10 09.2	+29
QZH	**Quanzhou**	**171.22**	**306**	*i* PKP	PKPdf	23 04 29.1	+1.4
QZH				LR	LR		
	comp=N,30µm,17.3s						
QZH				LR	LR		
	comp=E,206µm,22.5s						
QZH				LR	LR		
	comp=Z,1349µm,52.6s						
KKTK	**Khon Kaen**	**171.63**	**114**	P	PKPdf	23 04 30.2	+2.1
	comp=Z,2µm,1.0s						
GYA	**Guiyang**	**172.47**	**29**	*i* PKP	PKPdf	23 04 28.5	+0.2
GYA				PKP2	PKPab	23 05 58.8	+3.2
GYA				PP	PP	23 09 46.8	-0.9
GYA				SKKS		23 16 24.1	
GYA				LR	LR		
	comp=N,61µm,26.6s						
GYA				LR	LR		
	comp=E,82µm,26.3s						
GYA				LR	LR		
	comp=Z,100µm,24.3s						
HKC	**Hong Kong**	**176.04**	**307**	⇓*i*P	PKPdf	23 04 32.0	+2.4
GZH	**Guangzhou**	**176.05**	**323**	PKP	PKPdf	23 04 30.6	+1.0
GZH				SS	SS	23 31 18.3	-2.1
GZH				LR	LR		
	comp=N,29µm,32.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
GZH				LR	LR		
	comp=E,99µm,24.6s						
GZH				LR	LR		
	comp=Z,299µm,46.6s						
QIZ	Qiongzhong	178.75	135	PKP	PKPdf	23 04 31.6	+1.6
QIZ				APKP		23 05 02.3	
QIZ				PKP2	PKPab	23 06 28.5	+4.9
QIZ				PP	PP	23 10 23.0	+4.7
QIZ				SKKS		23 16 53.8	
QIZ				SS	SS	23 31 49.3	+3.5
QIZ				LR	LR		
	comp=E,101µm,32.7s						
QIZ				LR	LR		
	comp=Z,382µm,54.6s						
QIZ	Qiongzhong	178.75	135	PKPdf	PKPdf	23 04 31.7	+1.7
QIZ				PP	PP	23 10 18.3	0.0
QIZ	Qiongzhong	178.75	135	*e*PKPdf	PKPdf	23 04 31.3	+1.3

IDC 13 23:03:00.4±11.0, 20.35S×69.00W, h100^{km}±83^{km}, mb4.8/1, mb1 4.6/3, mb1mx4.0/17, mbtmp4.9/3, ML4.5/1, Error ellipse: s-maj=131.7km s-min=41.3km az=22.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.12	12	P	P	23 04 02.4	-0.1
	19nm,0.3s,baz=193,slow=8.1,SNR=33						
SIV	San Ignacio	8.70	61	P	P	23 05 02.4	-2.6
	3.9nm,0.3s,baz=250,slow=13,SNR=9.8						
BDFB	Brasilia	20.50	80	P	P	23 07 31.3	-1.2
	87nm,1.3s,baz=291,slow=14,SNR=3.4						
DUS	Dusheti	120.77	52	P	Pdif	23 17 59.7	-7.4
WRA	Warramunga Arr	133.89	211	PKP	PKPdf	23 22 06.4	-0.2
	4.1nm,1.4s,baz=145,slow=1.7,SNR=5.0						
MKAR	Makanchi Array	144.75	35	PKP	PKPdf	23 22 24.3	-1.1
	0.3nm,0.4s,baz=297,slow=3.2,SNR=5.5						
SONM	Songino Array	152.33	7	PKPbc	PKPdf	23 22 44.8	+7.3
	0.6nm,0.3s,baz=314,slow=2.0,SNR=4.2						

IDC 13 23:04:35.3±6.4, 19.75S×68.86W, h128^{km}±33^{km}, mb4.2/2, mb1 4.0/5, mb1mx3.8/19, mbtmp4.4/5, Error ellipse: s-maj=86.9km s-min=37.3km az=58.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.51	11	P	P	23 05 29.8	+0.3
	2.6nm,0.3s,baz=357,slow=16,SNR=3.3						
SIV	San Ignacio	8.30	64	P	P	23 06 31.0	-3.1
	1.0nm,0.3s,baz=253,slow=13,SNR=3.7						
CPUP	Villa Florida	12.47	124	P	P	23 07 28.2	-1.0
	0.4nm,0.3s,baz=326,slow=12,SNR=3.2						
BDFB	Brasilia	20.27	82	P	P	23 09 02.8	0.0
	14nm,0.9s,baz=270,slow=4.5,SNR=5.3						
DBIC	Dimbokro	68.20	74	P	P	23 15 21.9	-2.5
	9.3nm,0.8s,baz=223,slow=3.3,SNR=4.8						

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*IDC **13** 23:15:22.0±5.5, 20.37S×68.94W, h83^{km}±37^{km}, mb4.0/3, mb1 4.1/6, mb1mx3.8/18, mbtmp4.3/6, Error ellipse: s-maj=66.1km s-min=30.3km az=41.0*

*NEIC **13** 23:15:24.5±2.6, 20.25S×68.79W, h107^{km}±21^{km}, mb4.6/2, Error ellipse: s-maj=32.9km s-min=17.1km az=69.0*

ISC 13 23:15:23.0±2.3, 20.3S±0.1×68.7W±0.2, h103^{km}±20^{km}, n13, σ0^{s}99/11, mb4.6/3, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.04	8	P	P	23 16 24.0	0.0
	25nm,0.3s,baz=194,slow=8.8,SNR=71						
LPAZ	La Paz	4.04	8	*e*P	P	23 16 26.5	+2.5
SIV	San Ignacio	8.45	61	P	P	23 17 23.0	-1.1
	1.5nm,0.3s,baz=253,slow=11,SNR=9.6						
CPUP	Villa Florida	12.06	122	P	P	23 18 12.7	+0.2
	0.1nm,0.3s,baz=10.0,slow=18,SNR=2.9						
SAML	Samuel	12.50	26	P	P	23 18 17.9	-0.5
TRQA	Tornquist	18.62	163	P	P	23 19 34.6	-0.3
	7.8nm,1.1s						
BDFB	Brasilia	20.24	80	P	P	23 19 54.3	+2.2
	2.2nm,0.4s,baz=255,slow=7.9,SNR=4.1						
SDV	Santo Domingo	29.07	356	P	P	23 21 11.1	-5.0
RCBR	Riachuelo	34.97	70	*e*P	P	23 22 06.4	-0.9
	26nm,0.8s,mb5.1						
DBIC	Dimbokro	68.24	74	P	P	23 26 15.4	+0.3
	8.3nm,0.9s,mb4.5,baz=220,slow=9.1,SNR=6.2						
YKA	Yellowknife Ar	90.13	341	P	P	23 28 12.0	-0.2
	1.5nm,0.7s,mb4.2,baz=131,slow=5.1,SNR=5.9						
MKAR	Makanchi Array	144.57	35	PKP	PKPdf	23 34 49.0	+1.8
	0.4nm,0.5s,baz=310,slow=3.0,SNR=8.6						
SONM	Songino Array	152.26	7	PKPbc	PKPdf	23 35 08.5	+9.0
	0.5nm,0.4s,baz=299,slow=1.4,SNR=4.1						

IDC 13 23:15:49.0±2.3, 21.09S×69.39W, mb4.1/2, mb1 4.3/4, mb1mx4.1/16, mbtmp4.2/4, ML3.9/1, Error ellipse: s-maj=62.8km s-min=40.6km az=174.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.92	14	Pn	Pn	23 17 05.1	-1.0
	2.5nm,0.3s,baz=199,slow=11,SNR=1.6						
SIV	San Ignacio	9.38	59	Pn	P	23 18 04.8	-3.7
	1.6nm,0.3s,baz=282,slow=10,SNR=5.1						
BDFB	Brasilia	20.99	79	P	P	23 20 34.6	-2.0
	1.9nm,0.3s,baz=253,slow=16,SNR=3.3						
YKA	Yellowknife Ar	90.65	341	P	P	23 28 53.2	-1.2
	1.1nm,0.7s,baz=137,slow=4.7,SNR=5.4						
MKAR	Makanchi Array	145.56	35	PKPbc	PKPbc	23 35 29.9	+0.1
	0.3nm,0.5s,baz=319,slow=2.2,SNR=3.5						
SONM	Songino Array	153.10	6	PKPbc	PKPdf	23 35 47.4	+4.7
	0.4nm,0.7s,baz=358,slow=1.4,SNR=2.7						

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*NEIC **13** 23:18:35.7±0.4, 20.03S×69.11W, mb4.5/11, Error ellipse: s-maj=11.4km s-min=7.4km az=77.0*

*IDC **13** 23:18:36.6±0.6, 19.91S×69.05W, h108^{km}±4^{km}, mb4.1/11, mb1 4.3/13, mb1mx4.2/18, mbtmp4.5/13, Error ellipse: s-maj=21.3km s-min=13.8km az=45.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 13 23:18:32.9±1.7, 19.98S±0.06×69.2W±0.1, h94^{km}±16^{km}, n59, σ0^{s}97/33, mb4.2/14, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.80	15	P	P	23 19 36.5	+6.0
	10nm,0.3s,baz=194,slow=8.8,SNR=26						
LPAZ	La Paz	3.80	15	*e*P	P	23 19 36.4	+5.8
SIV	San Ignacio	8.65	64	P	P	23 20 37.1	+0.1
	6.8nm,0.3s,baz=255,slow=12,SNR=50						
CFAA	Coronel Fontan	11.60	176	P	P	23 21 14.8	-1.9
	0.1nm,0.3s,baz=212,slow=4.4,SNR=3.1						
CFAA	Coronel Fontan	11.60	176	P	P	23 21 14.8	-1.9
SAML	Samuel	12.39	29	P	P	23 21 27.4	+0.2
CPUP	Villa Florida	12.57	122	P	P	23 21 29.6	0.0
	1.3nm,0.3s,baz=322,slow=14,SNR=27						
CPUP	Villa Florida	12.57	122	*e*P	P	23 21 29.1	-0.4
	21nm,0.8s						
MDZ	Mendoza	12.85	179	*e*P	P	23 21 34.9	+1.7
TRQA	Tornquist	19.06	162	*e*P	P	23 22 49.6	-0.7
	18nm,0.7s						
BDFB	Brasilia	20.58	81	P	P	23 23 06.3	-0.1
	13nm,0.4s,baz=257,slow=11,SNR=21						
PLCA	Paso Flores	20.72	183	P	P	23 23 08.1	+0.5
	29nm,1.0s,baz=329,slow=3.1,SNR=15						
OTAV	Otavalo	22.06	335	*e*P	P	23 23 23.8	+2.6
TXAR	Lajitas Array	59.26	325	P	P	23 28 26.3	-0.7
	0.7nm,0.6s,mb3.9,baz=151,slow=9.3,SNR=2.4						
MNTX	Cornudas Mount	62.03	325	*e*P	P	23 28 43.9	-1.9
	1.4nm,0.6s,mb4.2						
SNAA	Sanae	63.78	161	P	P	23 28 57.1	+0.3
	0.7nm,0.7s,mb3.6,baz=235,slow=7.0,SNR=5.8						
SDCO	Great Sand Dun	66.83	329	*e*P	P	23 29 16.6	-0.3
	2.8nm,0.6s,mb4.3						
DBIC	Dimbokro	68.53	74	P	P	23 29 26.8	-1.0
	4.7nm,0.7s,mb4.5,baz=240,slow=5.2,SNR=8.3						
PDAR	Pinedale Array	72.69	330	P	P	23 29 52.5	+0.1
	0.5nm,0.6s,mb3.5,baz=140,slow=7.0,SNR=2.6						
ULM	Lac du Bonnet	73.81	343	P	P	23 29 57.7	-1.1
	5.0nm,0.5s,mb4.5,baz=164,slow=5.6,SNR=5.2						
ULM	Lac du Bonnet	73.81	343	P	P	23 29 57.7	-1.1
NVAR	Mina Array Bea	74.16	322	P	P	23 30 02.0	+0.9
	1.8nm,0.6s,mb4.0,baz=146,slow=7.3,SNR=10.0						
NVAR				pP	pP	23 30 29.2	+3.6
	1.3nm,0.8s,baz=143,slow=7.0,SNR=3.6						
NVAR	Mina Array Bea	74.16	322	P	P	23 30 02.0	+0.9
NVAR				pP	pP	23 30 29.2	+3.6
HLID	Hailey	75.64	328	*e*P	P	23 30 09.8	+0.4
	3.4nm,0.7s,mb4.2						
FFC	Flin Flon	79.53	341	P	P	23 30 30.8	+0.1
TSUM	Tsumeb	80.70	107	P	P	23 30 38.5	+0.8
	3.4nm,1.0s,mb4.1,baz=213,slow=5.8,SNR=9.0						
FCC	Fort Churchill	81.11	347	*e*P	P	23 30 38.5	-0.5
	4.0nm,0.5s,mb4.5						
EVO	Evora	81.64	44	*e*P	Px	23 30 51.1	
	3.4nm,0.6s						
EDM	Edmonton	82.30	335	*e*P	P	23 30 43.9	-1.4
BOSA	Boshof	84.36	118	P	P	23 30 57.4	+1.1
	2.2nm,0.8s,mb4.1,baz=243,slow=4.5,SNR=3.3						
ESDC	Sonseca Array	84.92	45	P	P	23 31 08.8	+10
	1.7nm,0.8s,mb4.0,baz=252,slow=5.1,SNR=7.0						
SJPF	Ste Jean	88.42	43	*e*P	Px	23 31 26.9	
	6.6nm,0.8s						
ETSF	Etsaut	88.75	43	*e*P	Px	23 31 28.4	
YKA	Yellowknife Ar	89.69	341	P	P	23 31 21.7	+0.6
	6.6nm,0.7s,mb4.9,baz=133,slow=4.6,SNR=45						
YKA				pP	pP	23 31 49.8	+3.4
	1.8nm,0.6s,baz=136,slow=4.7,SNR=3.7						
YKA				sP	sP	23 32 01.3	+5.0
	2.6nm,0.7s,baz=133,slow=4.7,SNR=4.3						
YKA	Yellowknife Ar	89.69	341	P	P	23 31 21.8	+0.6
YKA				pP	pP	23 31 49.8	+3.4
YKA				sP	sP	23 32 01.3	+5.0
YKW3	Yellowknife Ar	89.74	341	*e*P	P	23 31 22.2	+0.8
LFF	La Frestale	90.54	42	*e*P	Px	23 31 35.8	
	4.9nm,0.5s						
MTLF	Montolieu	90.75	44	*e*P	Px	23 31 37.3	
MFF	Saint Martin d	90.78	40	*e*P	Px	23 31 37.7	
	7.8nm,0.8s						
GRR	Gorron	91.22	38	*e*P	Px	23 31 39.0	
CAF	Calviac	91.37	42	*e*P	Px	23 31 39.6	
	2.9nm,0.6s						
FLN	La Foliniere	91.62	38	*e*P	Px	23 31 40.6	
	4.2nm,0.6s						
TCF	Toulx Ste Croi	92.08	41	*e*P	Px	23 31 42.1	
VIVF	Saint-Julien-l	93.01	43	*e*P	Px	23 31 48.1	
AVF	Avril sur Loir	93.01	41	*e*P	Px	23 31 46.8	
	3.9nm,0.8s						
SSF	Saint Saulge	93.22	41	*e*P	Px	23 31 47.2	
	3.9nm,0.7s						
SMF	Signal de Mont	93.25	41	*e*P	Px	23 31 48.4	
	6.7nm,0.6s						
LOR	Lormes	93.53	41	*e*P	Px	23 31 49.2	
ORIF	Oris-en-Rattie	93.81	43	*e*P	Px	23 31 51.6	
	4.0nm,0.7s						
CABF	La Chapelle	94.64	42	*e*P	Px	23 31 54.8	
BAIF	Baives	94.94	38	*e*P	Px	23 31 55.4	
HAU	Haudompre	95.37	41	*e*P	Px	23 31 58.3	
CDF	Champ du Feu	96.10	41	*e*P	Px	23 32 01.3	
WRA	Warramunga Arr	134.13	211	PKP	PKPdf	23 37 41.9	+1.6
	0.7nm,0.5s,baz=148,slow=1.6,SNR=13						
BVAR	Borovoye Array	134.67	33	PKP	PKPdf	23 37 43.3	+2.9
	0.2nm,0.2s,baz=90,slow=2.9,SNR=2.8						
ASAJ	Asahikawa	144.26	320	PKP	PKPdf	23 37 58.7	+0.9
	2.3nm,0.3s,baz=145,slow=34,SNR=3.1						
MKAR	Makanchi Array	144.53	34	PKP	PKPdf	23 37 58.9	+0.7
	1.2nm,0.6s,baz=324,slow=2.7,SNR=12						
MKAR				pPKP		23 38 28.5	
	0.8nm,0.6s,baz=327,slow=3.1,SNR=4.0						
MJAR	Matsushiro Arr	150.94	310	PKPbc	PKPdf	23 38 16.9	+7.9
	1.7nm,0.5s,baz=90,slow=2.0,SNR=7.8						
MJAR				pPKPbc		23 38 47.6	
	2.1nm,0.3s,baz=79,slow=2.6,SNR=3.6						
SONM	Songino Array	151.98	6	PKP	PKPdf	23 38 13.0	+2.8
	0.3nm,0.8s,baz=45,slow=2.0,SNR=2.6						
SONM				PKPbc	PKPdf	23 38 19.3	+9.2
	2.5nm,0.6s,baz=322,slow=1.1,SNR=17						
SONM				pPKP		23 38 40.2	
	1.0nm,0.5s,baz=296,slow=1.8,SNR=4.4						
SONM				pPKPbc		23 38 48.6	
	0.9nm,0.5s,baz=301,slow=1.5,SNR=3.6						

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*NEIC **13** 23:20:27.6±1.5, 20.36S×68.98W, h94^{km}±13^{km}, Error ellipse: s-maj=26.7km s-min=13.8km az=106.0*

IDC 13 23:20:28.4±6.3, 19.97S×69.09W, h106^{km}±45^{km}, mb3.8/4, mb1 3.9/5, mb1mx3.6/17, mbtmp4.3/5, Error ellipse: s-maj=77.4km s-min=24.2km az=122.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.77	14	P	P	23 21 29.8	+3.9
	3.3nm,0.3s,baz=210,slow=12,SNR=5.3						
LPAZ	La Paz	3.77	14	P	P	23 21 29.8	+3.9
SIV	San Ignacio	8.59	64	P	P	23 22 29.5	-1.9
	5.4nm,0.3s,baz=253,slow=12,SNR=8.0						
CFAA	Coronel Fontan	11.61	176	P	P	23 23 04.6	-7.3
	0.1nm,0.3s,baz=300,slow=8.6,SNR=5.2						
CFAA	Coronel Fontan	11.61	176	P	P	23 23 04.6	-7.3
BDFB	Brasilia	20.52	81	P	P	23 24 59.0	-1.2
	6.0nm,0.4s,baz=254,slow=5.7,SNR=5.5						
PLCA	Paso Flores	20.73	183	P	P	23 25 01.2	-1.0
	6.3nm,0.7s,baz=3.6,slow=10,SNR=3.7						
SNAA	Sanae	63.77	161	P	P	23 30 48.3	-2.6
	0.4nm,0.7s,baz=190,slow=13,SNR=2.6						
DBIC	Dimbokro	68.47	74	P	P	23 31 19.7	-1.9
	4.4nm,0.9s,baz=218,slow=4.8,SNR=6.3						
WRA	Warramunga Arr	134.17	211	PKP	PKPdf	23 39 33.4	-1.0
	3.8nm,0.9s,baz=152,slow=4.4,SNR=7.9						
BVAR	Borovoye Array	134.62	33	PKP	PKPdf	23 39 35.2	+0.8
	0.4nm,0.4s,baz=315,slow=2.1,SNR=3.9						

IDC 13 23:21:39.4±2.3, 20.08S×68.91W, h133^{km}±21^{km}, mb4.0/5, mb1 4.0/9, mb1mx3.8/20, mbtmp4.3/9, Error ellipse: s-maj=30.9km s-min=18.1km az=102.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.84	11	P	P	23 22 38.7	+0.6
	3.1nm,0.3s,baz=205,slow=7.0,SNR=2.4						
SIV	San Ignacio	8.49	63	P	P	23 23 37.6	-3.0
	2.5nm,0.3s,baz=256,slow=12,SNR=4.2						
CFAA	Coronel Fontan	11.50	177	P	P	23 24 18.5	-2.0
	0.1nm,0.3s,baz=338,slow=0.6,SNR=8.3						
CPUP	Villa Florida	12.33	122	P	P	23 24 30.5	-0.9
	0.7nm,0.3s,baz=330,slow=0.9,SNR=4.8						
BDFB	Brasilia	20.37	81	P	P	23 26 07.1	-0.4
	11nm,0.4s,baz=270,slow=9.1,SNR=8.5						
PLCA	Paso Flores	20.64	184	P	P	23 26 09.3	-0.7
	5.0nm,0.6s,baz=358,slow=9.8,SNR=6.9						
SNAA	Sanae	63.62	161	P	P	23 31 55.8	-2.2
	2.8nm,1.2s,baz=217,slow=9.9,SNR=4.8						
DBIC	Dimbokro	68.34	74	P	P	23 32 26.7	-2.2
	7.0nm,0.9s,baz=214,slow=6.5,SNR=7.1						
YKA	Yellowknife Ar	89.85	341	P	P	23 34 22.2	-1.6
	1.3nm,0.6s,baz=131,slow=4.5,SNR=4.1						

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*NEIC **13** 23:25:18.8±0.8, 19.89S×68.92W, mb4.4/2, Error ellipse: s-maj=18.9km s-min=16.1km az=78.0*

*IDC **13** 23:25:19.4±0.8, 19.98S×68.96W, h104^{km}±7^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.7/18, mbtmp4.2/8, Error ellipse: s-maj=25.2km s-min=18.1km az=70.0*

ISC 13 23:25:16.7±2.1, 20.0S±0.1×69.1W±0.2, h97^{km}±20^{km}, n17, σ0^{s}99/13, mb4.2/5, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.80	14	P	P	23 26 14.3	-0.1
	0.9nm,0.3s,baz=281,slow=8.6,SNR=6.2						
SIV	San Ignacio	8.60	64	P	P	23 27 15.0	-5.0
	0.6nm,0.3s,baz=218,slow=11,SNR=4.0						
CPUP	Villa Florida	12.51	122	P	P	23 28 12.3	-0.1
	0.4nm,0.3s,baz=324,slow=12,SNR=11						
CPUP	Villa Florida	12.51	122	P	P	23 28 12.3	-0.1
BDFB	Brasilia	20.52	81	P	P	23 29 50.2	+0.9
	3.6nm,0.5s,baz=261,slow=10,SNR=4.0						
PLCA	Paso Flores	20.70	183	P	P	23 29 51.1	+0.1
	5.0nm,0.6s,baz=4.2,slow=12,SNR=16						
PLCA	Paso Flores	20.70	183	*e*P	P	23 29 51.0	-0.1
	5.7nm,0.6s						
PLCA				P		23 29 51.1	
SNAA	Sanae	63.74	161	P	P	23 35 40.0	0.0
	0.9nm,0.6s,mb3.8,baz=269,slow=5.7,SNR=7.8						
DBIC	Dimbokro	68.47	74	P	P	23 36 09.7	-1.3
	5.2nm,0.9s,mb4.4,baz=120,slow=18,SNR=6.7						
ISCO	Idaho Springs	68.57	330	*e*P	P	23 36 08.6	-2.6
	15nm,1.3s,mb4.7						
NVAR	Mina Array Bea	74.22	322	P	P	23 36 45.9	+1.0
	0.9nm,0.8s,mb3.6,baz=129,slow=5.8,SNR=3.5						
NVAR				pP	pP	23 37 13.2	+3.0
	0.3nm,0.5s,baz=117,slow=4.0,SNR=2.1						
YKA	Yellowknife Ar	89.72	341	P	P	23 38 05.8	+1.0
	3.2nm,0.8s,mb4.5,baz=134,slow=4.6,SNR=19						
YKA				pP	pP	23 38 32.8	+2.0
	0.5nm,0.5s,baz=136,slow=4.8,SNR=2.9						
YKA				sP	sP	23 38 43.2	+2.1
	0.7nm,0.6s,baz=142,slow=4.3,SNR=2.7						
YKA	Yellowknife Ar	89.72	341	P	P	23 38 05.8	+1.0
YKA				pP	pP	23 38 32.8	+1.9
YKA				sP	sP	23 38 43.2	+2.1
WRA	Warramunga Arr	134.15	211	PKP	PKPdf	23 44 25.1	+1.3
	0.8nm,0.8s,baz=152,slow=1.8,SNR=4.1						
MKAR	Makanchi Array	144.51	35	PKP	PKPdf	23 44 42.7	+1.1
	0.8nm,0.7s,baz=317,slow=2.9,SNR=9.1						
MKAR	Makanchi Array	144.51	35	PKP	PKPdf	23 44 42.7	+1.1
SONM	Songino Array	151.99	6	PKPbc	PKPdf	23 45 01.9	+8.3
	2.5nm,1.0s,slow=1.4,SNR=4.1						

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*NEIC **13** 23:26:39.3±0.2, 19.86S×68.92W, mb4.8/34, Error ellipse: s-maj=6.7km s-min=4.5km az=61.0*

*IDC **13** 23:26:39.6±0.4, 19.88S×68.99W, h107^{km}±3^{km}, mb4.4/21, mb1 4.6/23, mb1mx4.6/25, mbtmp4.8/23, MS5.3/1, Ms1 5.4/1, ms1mx5.1/24, Error ellipse: s-maj=15.3km s-min=9.7km az=67.0, - Incorrectly calculated travel-time residual on T phase at H03N*

*BJI **13** 23:26:40.3, 19.90S×68.90W, h106^{km}, mB4.9*

ISC 13 23:26:37.8±0.3, 19.83S±0.05×68.94W±0.07, h107^{km}, h107^{km}±.8^{km}:pP-P, n118, σ0^{s}94/97, mb4.7/53, 2C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.60	12	P	P	23 27 38.8	+5.9
	46nm,0.3s,baz=186,slow=8.6,SNR=59						
LPAZ				LR	LR	23 28 41.0	
	comp=Z,37µm,18.8s,baz=359,slow=33						
LPAZ	La Paz	3.60	12	*e*P	P	23 27 38.7	+5.8
SIV	San Ignacio	8.40	64	P	P	23 28 38.9	+0.7
	32nm,0.3s,baz=256,slow=11,SNR=164						
CFAA	Coronel Fontan	11.74	177	P	P	23 29 17.9	-5.1
	0.1nm,0.3s,baz=6.4,slow=14,SNR=5.9						
SAML	Samuel	12.16	28	*e*P	P	23 29 27.9	-0.7
	24nm,1.0s						
CPUP	Villa Florida	12.48	123	P	P	23 29 32.1	-0.7
	3.0nm,0.3s,baz=318,slow=12,SNR=44						
BDFB	Brasilia	20.35	82	P	P	23 31 08.1	+0.2
	33nm,0.4s,baz=268,slow=11,SNR=34						
PLCA	Paso Flores	20.88	183	P	P	23 31 11.2	-1.8
	50nm,0.8s,baz=5.1,slow=13,SNR=36						
PLCA	Paso Flores	20.88	183⇑	*e*P	P	23 31 11.2	-1.9
	66nm,0.8s						
SDV	Santo Domingo	28.58	356	P	P	23 32 26.5	+0.4
	4.7nm,0.4s,mb4.5,baz=352,slow=7.4,SNR=5.3						
USHA	Ushuaia	34.95	179	P	P	23 33 19.9	-1.3
	8.6nm,0.7s,mb4.7,baz=35,slow=5.0,SNR=5.3						
RCBR	Riachuelo	34.99	71	*e*P	P	23 33 22.2	+0.3
	90nm,1.3s,mb5.4						
SJG	San Juan	37.80	4	P	P	23 33 44.7	-0.8
	15nm,0.5s,mb5.0,baz=250,slow=5.8,SNR=11						
COW	Cow Castle Cre	54.09	348	*e*P	P	23 35 53.8	0.0
LRAL	Lakeview Retre	55.33	342	*e*P	P	23 36 00.6	-2.3
	4.1nm,0.6s,mb4.6						
NATX	Nacogdoches	56.92	334	*e*P	P	23 36 13.9	-0.3
	12nm,0.6s,mb5.1						
CPCT	Cooper Cave	56.93	345	*e*P	P	23 36 13.1	-1.2
CPCT				*e*pP	pP	23 36 39.1	-1.2
SWET	Sewanee	57.07	343	*e*P	P	23 36 13.6	-1.7
OXF	Oxford	57.44	340	*e*P	P	23 36 16.0	-1.9
	48nm,1.0s,mb5.5						
ELN	Prospectdale	57.83	349	*e*P	P	23 36 20.3	-0.3
ELN				*e*pP	pP	23 36 46.5	-0.1
FWV	Forest Hill	58.19	349	*e*P	P	23 36 22.8	-0.2
WVT	Waverly	58.46	342	*e*P	P	23 36 22.7	-2.2
TXAR	Lajitas Array	59.25	325	P	P	23 36 29.9	-0.6
	3.0nm,0.8s,mb4.4,baz=141,slow=8.2,SNR=7.0						
TXAR	Lajitas Array	59.25	325	P	P	23 36 29.9	-0.6
BLO	Bloomington	60.96	344	*e*P	P	23 36 40.5	-1.6
BRYW	Bryant College	61.48	358	*e*P	P	23 36 45.1	-0.4
	39nm,1.0s,mb5.4						
BRYW				*e*pP	pP	23 37 11.0	-1.0
MNTX	Cornudas Mount	62.02	325	*e*P	P	23 36 47.5	-1.8
	12nm,1.1s,mb4.8						
ALLY	Alegheny Colle	62.04	351	*e*P	P	23 36 48.8	-0.5
ALLY				*e*pP	pP	23 37 15.4	-0.3
GENY	Geneseo	62.82	353	*e*P	P	23 36 54.2	-0.2
SNAA	Sanae	63.86	161	P	P	23 36 59.9	-0.9
	12nm,1.0s,mb4.7,baz=291,slow=5.7,SNR=41						
SNAA				pP	pP	23 37 27.3	-0.1
	4.4nm,1.1s,baz=305,slow=5.7,SNR=3.5						
SNAA	Sanae	63.86	161	*e*P	P	23 36 59.5	-1.3
KSU1	Kansas State U	64.09	336	*e*P	P	23 37 01.5	-1.3
ANMO	Albuquerque	65.10	327	P	P	23 37 09.3	-0.1
	3.2nm,0.7s,mb4.2,baz=132,slow=7.7,SNR=6.8						
ANMO	Albuquerque	65.10	327	*e*P	P	23 37 09.2	-0.3
	4.6nm,0.9s,mb4.3						
JFWS	Jewell Farm	65.44	343	*e*P	P	23 37 10.1	-1.5
	8.2nm,0.8s,mb4.6						
SDCO	Great Sand Dun	66.81	329	*e*P	P	23 37 20.1	-0.1
	34nm,1.3s,mb5.0						
SDCO				*e*pP	pP	23 37 46.4	-0.7
DBIC	Dimbokro	68.29	74	P	P	23 37 29.9	+0.1
	29nm,0.8s,mb5.2,baz=216,slow=5.3,SNR=27						
DBIC				pP	pP	23 37 56.8	0.0
	8.2nm,0.6s,baz=225,slow=11,SNR=2.5						
DBIC	Dimbokro	68.29	74	*e*P	P	23 37 29.4	-0.4
	23nm,0.7s,mb5.1						
DBIC				*e*pP	pP	23 37 57.1	+0.3
MAIT	Maitri	68.36	159	*e*P	P	23 37 29.1	-0.3
ISCO	Idaho Springs	68.49	330	*e*P	P	23 37 31.2	+0.5
	17nm,1.6s,mb4.6						
ISCO				*e*PcP	PcP	23 37 55.7	+0.6
ISCO				pP	pP	23 37 58.5	+1.0
NEN	Nelson	70.25	322	*e*P	P	23 37 42.1	+0.6
QSPA	South Pole Qui	70.36	180⇑	*i*P	P	23 37 41.9	+0.5
	37nm,1.0s,mb5.2						
SRU	San Rafael	70.37	327	*e*P	P	23 37 42.3	+0.2
SRU				*e*pP	pP	23 38 09.9	+0.7
EYMN	Ely	70.43	344	*e*P	P	23 37 40.8	-1.5
	5.9nm,0.9s,mb4.4						
MSU	Marysvale	70.80	325	*e*P	P	23 37 45.5	+0.7
ARUT	Antelope Range	70.96	324	*e*P	P	23 37 47.0	+1.2
MPU	Maple Canyon	71.61	327	*e*P	P	23 37 50.1	+0.6
JLU	Jordanelle	71.95	327	*e*P	P	23 37 52.6	+1.0
BW06	Boulder Array	72.66	330	*e*P	P	23 37 56.0	+0.3
PDAR	Pinedale Array	72.66	330	P	P	23 37 56.0	+0.3
	1.9nm,0.7s,mb4.0,baz=128,slow=7.2,SNR=7.0						
SPUT	South Promonto	72.98	327	*e*P	P	23 37 58.0	+0.4
AHID	Auburn Hatcher	73.40	329	*e*P	P	23 38 00.5	+0.5
	4.4nm,0.6s,mb4.5						
ULM	Lac du Bonnet	73.72	342	P	P	23 38 01.1	-0.7
	14nm,0.7s,mb4.8,baz=152,slow=6.4,SNR=11						
ULM				pP	pP	23 38 27.5	-1.5
	4.2nm,0.6s,baz=159,slow=4.3,SNR=3.0						
ULM	Lac du Bonnet	73.72	342	P	P	23 38 01.1	-0.7
ULM				pP	pP	23 38 27.5	-1.6
TPAW	Teton Pass	73.87	330	*e*P	P	23 38 03.6	+0.8
	14nm,1.1s,mb4.6						
RRI2	Red Ridge	73.94	329	*e*P	P	23 38 03.8	+0.6
	52nm,1.3s,mb5.1						
OMM	Old Mammoth Mi	74.04	321	*e*P	P	23 38 04.7	+0.9
ELK	Elko	74.04	325	*e*P	P	23 38 04.4	+0.5
	3.9nm,0.9s,mb4.1						
NVAR	Mina Array Bea	74.17	322	P	P	23 38 06.0	+1.3
	6.8nm,0.8s,mb4.5,baz=152,slow=7.2,SNR=29						
NVAR				pP	pP	23 38 31.9	-0.1
	1.6nm,0.9s,baz=140,slow=7.4,SNR=2.7						
IMW	Indian Meadow	74.17	330	*e*P	P	23 38 05.1	+0.6
	21nm,1.1s,mb4.8						
LAO	LASA Array	74.27	334	*e*P	P	23 38 05.5	+0.4
	7.8nm,0.7s,mb4.5						
SCHQ	Schefferville	74.38	1	P	P	23 38 05.2	-0.3
	6.6nm,0.9s,mb4.4,baz=168,slow=5.0,SNR=7.6						
SCHQ				pP	pP	23 38 33.8	+0.9
	5.1nm,0.9s,baz=179,slow=5.2,SNR=3.4						
DGMT	Dagmar	74.94	337	*e*P	P	23 38 09.1	+0.3
	29nm,0.9s,mb5.0						
HLID	Hailey	75.62	328	*e*P	P	23 38 14.0	+1.3
	18nm,1.1s,mb4.7						
HLID				*e*pP	pP	23 38 40.4	+0.2
MCMT	McKenzie Canyo	75.78	329	*e*P	P	23 38 14.8	+1.2
BOZ	Bozeman (W)	75.81	331	*e*P	P	23 38 14.1	+0.3

	28nm,1.8s,mb4.7						
BEKR	Beckwourth	76.32	322	eP	P	23 38 17.4	+0.6
	6.4nm,1.1s,mb4.3						
MSO	Missoula	77.77	330	eP	P	23 38 25.7	+1.0
	8.2nm,1.4s,mb4.3						
BMO	Blue Mountains	78.00	327	eP	P	23 38 26.8	+0.7
	12nm,1.1s,mb4.5						
SYO	Syowa Base	78.07	160	⇓P	P	23 38 25.0	-0.9
VNDA	Vanda	78.48	190	P	P	23 38 28.6	+0.6
	3.2nm,0.9s,mb4.1,baz=142,slow=4.3,SNR=10						
VNDA	Vanda	78.48	190	eP	P	23 38 28.5	+0.4
	4.5nm,0.9s,mb4.2						
YBH	Yreka Blue Hor	78.88	322	P	P	23 38 30.6	-0.3
	4.5nm,0.7s,mb4.4,baz=103,slow=5.6,SNR=8.5						
FFC	Flin Flon	79.45	341	eP	P	23 38 33.6	0.0
TSUM	Tsumeb	80.55	107	P	P	23 38 41.0	+0.7
	4.1nm,0.8s,mb4.3,baz=271,slow=10.0,SNR=4.5						
TSUM				pP	pP	23 39 09.7	+1.8
	13nm,1.2s,baz=238,slow=1.8,SNR=4.8						
FCC	Fort Churchill	81.00	347	eP	P	23 38 41.9	0.0
	8.5nm,0.6s,mb4.8						
EVO	Evora	81.39	44	eP	P	23 38 46.3	+1.9
	7.3nm,0.7s,mb4.3						
EDM	Edmonton	82.25	335	eP	P	23 38 48.2	-0.2
EDM				epP	pP	23 39 16.4	+0.2
MTE	Manteigas	82.73	43	P	P	23 38 47.8	-3.4
	7.2nm,0.8s,mb4.5						
BOSA	Boshof	84.25	118	P	P	23 38 59.9	+0.7
	5.3nm,0.8s,mb4.4,baz=189,slow=4.0,SNR=6.1						
BOSA				pP	pP	23 39 28.1	+1.1
	6.4nm,0.9s,baz=305,slow=7.9,SNR=3.7						
ESDC	Sonseca Array	84.67	45	P	P	23 39 03.2	+2.2
	0.4nm,0.5s,mb3.6,baz=123,slow=25,SNR=8.8						
ESDC				pP	pP	23 39 30.4	+1.5
	3.0nm,0.8s,baz=242,slow=4.5,SNR=4.6						
MAW	Mawson	85.93	163	P	P	23 39 07.4	+0.9
	2.7nm,0.5s,mb4.5,baz=224,slow=5.6,SNR=14						
YKA	Yellowknife Ar	89.61	341	P	P	23 39 24.8	+0.6
	25nm,0.7s,mb5.5,baz=133,slow=4.7,SNR=105						
YKA				pP	pP	23 39 52.9	+0.4
	5.8nm,0.7s,baz=133,slow=4.6,SNR=3.1						
YKA	Yellowknife Ar	89.61	341	P	P	23 39 24.8	+0.6
YKA				pP	pP	23 39 52.9	+0.4
YKW3	Yellowknife Ar	89.66	341	eP	P	23 39 24.9	+0.5
MFF	Saint Martin d	90.54	40	eP	P	23 39 38.8	+10
	9.1nm,0.8s,mb4.7						
GRR	Gorron	90.98	38	eP	P	23 39 40.5	+10
	19nm,1.0s,mb4.9						
LDF	La Druitiere	91.50	38	eP	P	23 39 43.7	+10
TCF	Toulx Ste Croi	91.83	41	eP	P	23 39 44.8	+10
	3.7nm,0.6s,mb4.5						
BGF	Bois d'Agland	92.35	41	eP	P	23 39 47.2	+10
DLBC	Dease Lake	92.72	333	P	P	23 39 39.8	+1.1
	6.2nm,1.0s,mb4.9,baz=112,slow=4.3,SNR=10						
DLBC	Dease Lake	92.72	333	eP	P	23 39 39.6	+0.8
AVF	Avril sur Loir	92.76	41	eP	P	23 39 48.6	+9.4
	4.1nm,0.7s,mb4.5						
SSF	Saint Saulge	92.97	41	eP	P	23 39 50.1	+10
	4.8nm,0.6s,mb4.7						
SMF	Signal de Mont	93.00	41	eP	P	23 39 50.2	+10
	7.5nm,0.6s,mb4.9						
LOR	Lormes	93.28	41	eP	P	23 39 51.7	+10
	7.1nm,0.6s,mb4.8						
CASY	Casey	94.16	180	eP	P	23 39 45.7	+0.7
	7.0nm,0.7s,mb5.1						
STKA	Stephens Creek	120.84	210	PKP	PKPdf	23 45 18.8	+0.8
	3.0nm,1.0s,baz=64,slow=14,SNR=4.1						
STKA	Stephens Creek	120.84	210	PKP	PKPdf	23 45 18.8	+0.8
CTA	Charters Tower	127.45	223	PKP	PKPdf	23 45 32.4	+1.5
	2.4nm,0.7s,baz=272,slow=1.0,SNR=5.3						
CTA	Charters Tower	127.45	223	PKP	PKPdf	23 45 32.4	+1.4
CTAO	Charters Tower	127.45	223	ePKP	PKPdf	23 45 32.2	+1.3
WRA	Warramunga Arr	134.37	211	PKhKP		23 45 33.4	
	0.5nm,0.7s,baz=150,slow=1.2,SNR=5.0						
WRA				PKP	PKPdf	23 45 45.1	+1.0
	3.9nm,0.6s,baz=156,slow=1.8,SNR=27						
BVAR	Borovoye Array	134.43	33	PKP	PKPdf	23 45 45.8	+2.5
	1.1nm,0.7s,baz=326,slow=5.3,SNR=5.3						
BVAR				pPKP		23 46 13.9	
	1.4nm,0.7s,SNR=3.1						
FITZ	Fitzroy Crossi	139.68	202	PKhKP		23 45 45.1	
	6.0nm,1.1s,baz=180,slow=3.0,SNR=2.8						
FITZ				PKP	PKPdf	23 45 55.1	+1.3
	5.4nm,0.6s,baz=200,slow=3.2,SNR=5.5						
ASAJ	Asahikawa	144.28	320	PKP	PKPdf	23 46 02.3	+1.1
	12nm,0.7s,baz=135,slow=31,SNR=10						
MKAR	Makanchi Array	144.29	35	PKP	PKPdf	23 46 01.9	+0.8
	5.4nm,0.9s,baz=322,slow=2.8,SNR=28						
MKAR				pPKP		23 46 31.3	
	3.5nm,0.7s,baz=317,slow=2.7,SNR=5.3						
MKAR	Makanchi Array	144.29	35	PKP	PKPdf	23 46 01.9	+0.8
MKAR				pPKP		23 46 31.3	
HIA	Hailar	149.82	349	ePKPbc	PKPdf	23 46 16.9	+6.7
MJAR	Matsushiro Arr	150.99	311	PKPbc	PKPdf	23 46 19.7	+7.3
	11nm,0.8s,baz=90,slow=1.6,SNR=28						
MJAR				PKPab	PKPab	23 46 28.3	-0.2
	2.3nm,0.5s,baz=115,slow=2.7,SNR=4.4						
MJAR				pPKPbc		23 46 48.7	
	1.1nm,0.3s,baz=47,slow=43,SNR=2.3						
MJAR				pPKPab		23 46 58.3	
	4.4nm,0.7s,baz=94,slow=2.2,SNR=5.4						
MAJO	Matsushiro	150.99	311	ePKPbc	PKPdf	23 46 20.0	+7.6
MAT	Matsushiro	150.99	311	ePKP	PKPdf	23 46 20.0	+7.6
MAT	Matsushiro	150.99	311	PKP	PKPdf	23 46 19.9	+7.5
SONM	Songino Array	151.81	7	PKP	PKPdf	23 46 16.3	+3.1
	2.4nm,0.8s,baz=313,slow=1.9,SNR=6.7						
SONM				PKPbc	PKPdf	23 46 22.4	+9.2
	7.2nm,0.5s,baz=298,slow=1.3,SNR=32						
SONM				pPKP		23 46 42.8	
	1.9nm,0.5s,baz=285,slow=1.7,SNR=2.2						
SONM				pPKPbc		23 46 51.1	
	4.4nm,0.7s,baz=319,slow=2.0,SNR=3.3						
CN2	Changchun	153.24	336	ePKP	PKPdf	23 46 17.8	+2.4
GTA	Gaotai	158.21	24	ePKP	PKPdf	23 46 24.0	+1.9
GTA				APKP		23 46 58.1	
GTA				XPKP		23 47 09.0	
LZH	Lanzhou	162.60	20	ePKP	PKPdf	23 46 29.0	+2.2
LZH				APKP		23 46 59.0	
LZH				XPKP		23 47 09.5	
GYA	Guiyang	172.26	31	i PKP	PKPdf	23 46 36.3	+2.1
GYA				XPKP		23 47 13.8	
GYA				PKP2	PKPab	23 48 03.9	+3.2
GYA				PP	PP	23 51 54.3	+1.7
GYA				PP	PP		
	comp=Z,100nm,8.4s						

*IDC **13** 23:33:25.0±5.2, 5.72S×151.94E, h50^{km}±46^{km}, mb4.1/8, mb1 4.3/9, mb1mx4.1/15, mbtmp4.4/9, ML3.5/1, Error ellipse: s-maj=44.7km s-min=27.9km az=113.0*

*NEIC **13** 23:33:26.1±2.6, 5.71S×151.96E, h58^{km}±21^{km}, mb4.6/3, Error ellipse: s-maj=24.8km s-min=14.4km az=116.0*

ISC 13 23:33:24.7±4.0**, 5.7S**±0.2×**151.8E**±0.2**, h57**^{km}±33^{km}**, n16, σ0^{s}94**/16**, mb4.2**/9**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.92	231	P	P	23 34 52.7	+0.8
	8.0nm,0.3s,baz=46,slow=7.2,SNR=30						
PMG				S	S	23 35 57.4	-1.8
	6.9nm,0.3s,baz=103,slow=9.0,SNR=3.1						
KAKA	Kakadu	20.35	249	eP	P	23 37 58.5	-0.6
	19nm,0.8s						
WRAB	Tennant Creek	22.12	229	eP	P	23 38 17.4	+0.5
	13nm,0.6s,mb4.5						
WB2	Warramunga Arr	22.13	229	eP	P	23 38 19.1	+2.2
WRA	Warramunga Arr	22.14	229	P	P	23 38 17.7	+0.6
	7.5nm,0.8s,mb4.2,baz=55,slow=10,SNR=22						
FITZ	Fitzroy Crossi	28.38	242	eP	P	23 39 15.8	-0.3
	11nm,0.3s,mb5.0						
FITZ	Fitzroy Crossi	28.38	242	P	P	23 39 16.0	-0.1
	10nm,0.4s,mb4.8,baz=54,slow=4.1,SNR=19						
ULN	Ulaanbaatar	66.21	329	P	P	23 44 09.2	+0.4
SONM	Songino Array	66.53	328	P	P	23 44 10.9	0.0
	1.0nm,0.6s,mb4.0,baz=135,slow=5.2,SNR=4.4						
SLKM	Skilak Lake	79.86	25	eP	P	23 45 27.6	-1.1
MKAR	Makanchi Array	80.32	319	P	P	23 45 32.5	+1.0
	0.3nm,0.6s,mb3.4,baz=89,slow=9.4,SNR=4.1						
ILAR	Eielson Array	83.33	22	P	P	23 45 45.4	-1.2
	2.6nm,0.8s,mb4.3,baz=261,slow=4.9,SNR=13						
MAW	Mawson	84.40	203	P	P	23 45 51.3	-0.6
	1.8nm,0.8s,mb4.2,baz=104,slow=4.2,SNR=2.5						
BVAR	Borovoye Array	89.33	323	P	P	23 46 15.8	-0.3
	1.8nm,0.9s,mb4.4,baz=90,slow=4.3,SNR=4.6						
YKA	Yellowknife Ar	96.64	28	P	P	23 46 49.8	+0.3
	0.7nm,0.9s,mb4.1,baz=272,slow=5.1,SNR=5.4						
BDFB	Brasilia	151.13	137	PKPbc	PKPdf	23 53 13.9	+7.4
	2.3nm,0.5s,baz=192,slow=6.7,SNR=3.3						

IDC 13 23:36:28.2±34.0**, 19.75S**×**68.65W, h144**^{km}±213^{km}**, mb3.8**/1**, mb1 3.8**/3**, mb1mx3.3**/18**, mbtmp4.0**/3**, ML3.3**/1**, Error ellipse: s-maj=460.6km s-min=48.8km az=26.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.48	8	P	P	23 37 22.0	-0.3
	2.2nm,0.3s,baz=186,slow=9.0,SNR=23						
SIV	San Ignacio	8.13	64	P	P	23 38 23.5	-0.9
	2.1nm,0.3s,baz=253,slow=13,SNR=22						
YKA	Yellowknife Ar	89.62	341	P	P	23 49 09.3	-1.0
	1.2nm,0.8s,baz=133,slow=4.7,SNR=10.0						
SONM	Songino Array	151.70	7	PKPbc	PKPdf	23 56 05.3	+6.6
	0.3nm,0.4s,slow=2.0,SNR=3.0						

IDC 13 23:37:08.5±3.0**, 20.02S**×**68.87W, h111**^{km}±33^{km}**, mb3.5**/3**, mb1 3.6**/5**, mb1mx3.4**/17**, mbtmp4.1**/5**, Error ellipse: s-maj=54.8km s-min=28.2km az=119.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.77	11	P	P	23 38 05.7	-0.3
	4.0nm,0.3s,baz=196,slow=8.1,SNR=14						
SIV	San Ignacio	8.43	63	P	P	23 39 07.2	-1.9
	5.3nm,0.3s,baz=254,slow=12,SNR=29						
BDFB	Brasilia	20.32	81	P	P	23 41 36.6	-1.2
	1.8nm,0.4s,baz=261,slow=10,SNR=4.2						
PLCA	Paso Flores	20.70	184	P	P	23 41 39.9	-1.7
	1.6nm,0.6s,baz=5.6,slow=13,SNR=4.9						
DBIC	Dimbokro	68.28	74	P	P	23 47 57.9	-2.1
	1.7nm,0.5s,baz=214,slow=8.7,SNR=5.2						

*NEIC **13** 23:39:26.8±0.4, 19.98S×69.03W, mb4.6/4, Error ellipse: s-maj=11.1km s-min=7.7km az=84.0*

*IDC **13** 23:39:27.0±0.6, 20.01S×69.06W, h104^{km}±4^{km}, mb4.1/12, mb1 4.2/15, mb1mx4.1/22, mbtmp4.5/15, Error ellipse: s-maj=19.0km s-min=12.6km az=83.0*

ISC 13 23:39:25.1±0.5**, 20.00S**±0.06×**69.06W**±0.09**, h101**^{km}**, h101**^{km}±3.4^{km}**:pP-P, n47,** σ**1^{s}07**/43**, mb4.3**/20**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.79	14	P	P	23 40 24.2	+1.5
	11nm,0.3s,baz=201,slow=6.9,SNR=31						
LPAZ	La Paz	3.79	14	P	P	23 40 24.2	+1.5
SIV	San Ignacio	8.58	64	P	P	23 41 27.7	-0.2
	15nm,0.3s,baz=255,slow=12,SNR=97						
CFAA	Coronel Fontan	11.58	177	P	P	23 42 04.2	-4.2
	0.2nm,0.3s,baz=354,slow=12,SNR=9.2						
SAML	Samuel	12.36	28	eP	P	23 42 17.9	-0.8
	15nm,0.9s						
CPUP	Villa Florida	12.49	122	P	P	23 42 19.7	-0.7
	0.8nm,0.3s,baz=326,slow=11,SNR=19						
CPUP	Villa Florida	12.49	122	eP	P	23 42 19.6	-0.8
	11nm,0.8s						
BDFB	Brasilia	20.49	81	P	P	23 43 57.0	0.0
	30nm,0.5s,baz=264,slow=11,SNR=44						
BAO	Brasilia Array	20.51	81	P	P	23 43 57.0	-0.3
PLCA	Paso Flores	20.71	183	P	P	23 43 58.2	-0.9
	21nm,0.6s,baz=7.9,slow=12,SNR=38						
PLCA	Paso Flores	20.71	183	eP	P	23 43 58.0	-1.1
	21nm,0.6s						
SDV	Santo Domingo	28.74	357	P	P	23 45 14.4	-1.0
	3.0nm,0.5s,mb4.2,baz=282,slow=7.0,SNR=3.4						
USHA	Ushuaia	34.78	179	P	P	23 46 06.5	-1.1
	9.0nm,1.0s,mb4.6,baz=8.3,slow=8.0,SNR=3.1						
SJG	San Juan	37.98	4	P	P	23 46 33.3	-1.5
	6.5nm,0.4s,mb4.9,baz=38,slow=23,SNR=7.4						
SWET	Sewanee	57.20	344	eP	P	23 49 04.6	+0.6
SWET				e	pP	23 49 28.4	-0.6
SWET				e		23 49 39.0	
WVT	Waverly	58.58	342	P	P	23 49 12.0	-1.7
VNA3	Neumayer Olymp	61.54	162		P	23 49 33.7	+0.3
VNA1	Neumayer--Stat	61.74	161		P	23 49 35.7	+0.9
VNA2	Neumayer--Watz	62.11	161		P	23 49 38.4	+1.2
SNAA	Sanae	63.74	161	P	P	23 49 47.4	-0.5
	2.9nm,0.6s,mb4.3,baz=287,slow=6.8,SNR=64						
SNAA	Sanae	63.74	161	eP	P	23 49 47.2	-0.7
	6.7nm,0.6s,mb4.7						
SDCO	Great Sand Dun	66.89	329	P	P	23 50 09.1	+0.4
DBIC	Dimbokro	68.45	74	P	P	23 50 18.2	-0.5
	4.9nm,0.4s,mb4.7,baz=248,slow=7.7,SNR=19						
DBIC				pP	pP	23 50 45.7	+1.3
	4.0nm,0.7s,baz=218,slow=9.7,SNR=1.3						
DBIC	Dimbokro	68.45	74	P	P	23 50 18.2	-0.5
DBIC				pP	pP	23 50 45.7	+1.3
BW06	Boulder Array	72.75	330	P	P	23 50 43.3	-0.8
NVAR	Mina Array Bea	74.23	322	P	P	23 50 53.5	+0.6
	0.3nm,0.6s,mb3.2,baz=153,slow=4.0,SNR=2.6						
NVAR				pP	pP	23 51 19.8	+0.7
	0.6nm,0.8s,baz=149,slow=7.2,SNR=3.3						
NVAR	Mina Array Bea	74.23	322	P	P	23 50 53.5	+0.6
NVAR				pP	pP	23 51 19.8	+0.7
SCHQ	Schefferville	74.55	1	P	P	23 50 53.8	-0.5
	2.0nm,0.8s,mb3.9,baz=158,slow=5.4,SNR=4.2						
TSUM	Tsumeb	80.61	107	P	P	23 51 31.7	+3.2
	3.6nm,0.6s,mb4.4,baz=224,slow=4.8,SNR=5.8						
ESDC	Sonseca Array	84.86	45	P	P	23 51 52.3	+2.5
	0.1nm,0.4s,mb3.1,baz=109,slow=27,SNR=3.1						
MAW	Mawson	85.80	163	P	P	23 51 54.7	+0.8
	1.8nm,0.6s,mb4.2,baz=234,slow=2.1,SNR=6.6						
YKA	Yellowknife Ar	89.73	341	P	P	23 52 13.8	+1.1
	0.8nm,0.6s,mb4.0,baz=134,slow=4.4,SNR=9.0						
YKA				pP	pP	23 52 40.1	+0.4
	2.2nm,0.7s,baz=133,slow=4.6,SNR=9.0						
YKA				sP	sP	23 52 50.9	+0.5
	2.4nm,0.5s,baz=134,slow=4.7,SNR=9.0						
YKA	Yellowknife Ar	89.73	341	P	P	23 52 13.8	+1.1
YKA				pP	pP	23 52 40.1	+0.4
YKA				sP	sP	23 52 50.9	+0.5
LFF	La Frestale	90.49	42	eP	P	23 52 27.3	+11
	5.3nm,0.7s,mb4.5						
MFF	Saint Martin d	90.74	40	eP	P	23 52 28.5	+11
GRR	Gorron	91.18	38	eP	P	23 52 30.2	+10
	10nm,0.7s,mb4.8						
LDF	La Druitiere	91.70	38	eP	P	23 52 32.7	+10
	4.9nm,0.6s,mb4.6						
TCF	Toulx Ste Croi	92.03	41	eP	P	23 52 33.6	+10
	3.0nm,0.7s,mb4.4						
AVF	Avril sur Loir	92.96	41	eP	P	23 52 37.8	+10
	1.5nm,0.6s,mb4.2						
SMRF	Simiane la Rot	93.17	44	eP	P	23 52 38.1	+9.0
	19nm,1.0s,mb5.1						
SSF	Saint Saulge	93.17	41	eP	P	23 52 39.2	+10
	3.0nm,0.6s,mb4.5						
SMF	Signal de Mont	93.20	41	eP	P	23 52 39.2	+10
	3.8nm,0.6s,mb4.6						
LOR	Lormes	93.48	41	eP	P	23 52 40.7	+10
	3.9nm,0.6s,mb4.6						
WRA	Warramunga Arr	134.17	211	PKP	PKPdf	23 58 32.5	+0.8
	0.6nm,0.5s,baz=157,slow=1.4,SNR=4.9						
MKAR	Makanchi Array	144.49	35	PKP	PKPdf	23 58 49.9	+0.5
	0.7nm,0.5s,baz=321,slow=2.6,SNR=14						
MKAR				pPKP		23 59 18.5	
	0.6nm,0.5s,baz=323,slow=3.4,SNR=3.4						
MKAR	Makanchi Array	144.49	35	PKP	PKPdf	23 58 49.9	+0.5
MKAR				pPKP		23 59 18.5	
SONM	Songino Array	151.99	7	PKPbc	PKPdf	23 59 10.6	+9.1
	0.6nm,0.4s,baz=296,slow=0.9,SNR=7.1						
SONM				pPKP		23 59 30.2	
	1.0nm,0.4s,baz=287,slow=1.9,SNR=5.5						
SONM				pPKPbc		23 59 39.2	
	1.2nm,0.6s,baz=328,slow=1.8,SNR=4.7						

*IDC **13** 23:47:10.7±3.0, 20.10S×68.91W, h124^{km}±28^{km}, mb3.8/4, mb1 3.8/7, mb1mx3.6/19, mbtmp4.2/7, Error ellipse: s-maj=35.7km s-min=21.0km az=81.0*

*NEIC **13** 23:47:11.2±1.3, 20.11S×68.85W, h128^{km}±13^{km}, mb4.2/1, Error ellipse: s-maj=18.0km s-min=12.8km az=55.0*

ISC 13 23:47:10.4±1.4**, 20.2S**±0.1×**68.8W**±0.1**, h129**^{km}±18^{km}**, n12,** σ**1^{s}12**/11**, mb4.2**/3**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.96	9	P	P	23 48 10.6	0.0
	6.3nm,0.3s,baz=189,slow=9.0,SNR=49						
ARE	Arequipa	4.53	325	eP	P	23 48 17.0	-1.3
ARE				eS	S	23 49 12.0	+1.6
SIV	San Ignacio	8.45	61	P	P	23 49 09.8	-1.3
	5.1nm,0.3s,baz=255,slow=11,SNR=44						
CFAA	Coronel Fontan	11.35	178	P	P	23 49 45.3	-4.4
	0.0nm,0.3s,baz=221,slow=8.7,SNR=2.9						
CPUP	Villa Florida	12.16	122	P	P	23 50 01.2	+1.0
	0.1nm,0.3s,baz=313,slow=14,SNR=4.9						
BDFB	Brasilia	20.27	80	P	P	23 51 39.3	+1.4
	2.2nm,0.4s,baz=264,slow=13,SNR=4.5						
PLCA	Paso Flores	20.51	184	P	P	23 51 39.9	-0.2
	3.6nm,0.9s,baz=350,slow=9.3,SNR=5.5						
SJG	San Juan	38.17	4	P	P	23 54 15.7	-3.5
	4.7nm,0.3s,mb4.5,baz=334,slow=17,SNR=4.4						
SNAA	Sanae	63.45	161	P	P	23 57 28.4	0.0
	3.1nm,1.1s,mb4.0						
YKA	Yellowknife Ar	90.02	341	P	P	23 59 55.9	-0.3
	0.9nm,0.6s,mb3.9,baz=129,slow=4.7,SNR=14						
MKAR	Makanchi Array	144.52	35	PKP	PKPdf	00 06 32.4	+1.0
	0.6nm,0.7s,baz=298,slow=3.3,SNR=6.2						
MKAR	Makanchi Array	144.52	35	PKP	PKPdf	00 06 32.4	+1.0

*NEIC **13** 23:54:33.7, 59.97N×152.72W, h96^{km}, MG3.1(AEIC), After AEIC.*

*IDC **13** 23:54:37.0±6.6, 60.36N×152.64W, h122^{km}±64^{km}, mb3.1/1, mb1 3.3/4, mb1mx3.0/22, mbtmp3.5/4, Error ellipse: s-maj=56.0km s-min=30.8km az=40.0*

ISC 13 23:54:31.7±0.3**, 59.96N**±0.03×**152.72W**±0.06**, h107**^{km}±3^{km}**, n69,** σ**0^{s}76**/91**, mb3.6**/1**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVE	Iliamna Volcan	0.16	289	P	P	23 54 46.9	+0.2
IVE				S	S	23 54 57.5	-0.6
ILIM	Iliamna	0.17	314	P	P	23 54 46.8	+0.1
ILIM				S	S	23 54 57.5	-0.6
ILS	Iliamna Low So	0.18	268	P	P	23 54 46.9	+0.1
ILS				S	S	23 54 57.9	-0.3
INE	Iliamna NE	0.20	299	P	P	23 54 47.1	+0.2
INE				S	S	23 54 58.3	-0.1
ILW	Iliamna West	0.23	295	P	P	23 54 47.2	+0.2
ILW				S	S	23 54 58.9	+0.4
OPT	Oil Point	0.41	220	P	P	23 54 48.0	+0.1
OPT				S	S	23 54 59.5	-0.4
RSO	Redoubt South	0.50	358	P	P	23 54 48.8	+0.4
RSO				S	S	23 55 00.8	-0.1
RDN	Redoubt North	0.55	358	P	P	23 54 49.1	+0.3
RDN				S	S	23 55 01.2	-0.5
NCT	North Crescent	0.61	350	P	P	23 54 49.4	+0.2
NCT				S	S	23 55 01.7	-0.7
DFR	Drift River	0.63	1	P	P	23 54 49.6	+0.3
DFR				S	S	23 55 02.3	-0.4
RDT	Redoubt	0.63	14	P	P	23 54 49.5	+0.2
AUL	Augustine Lava	0.69	212	P	P	23 54 50.2	+0.4
AUL				S	S	23 55 03.4	-0.1
AUE	Augustine Isla	0.69	209	P	P	23 54 50.0	+0.2
AUP	Augustine Pinn	0.70	211	P	P	23 54 50.3	+0.3
AGU	Augustine-Summ	0.71	211	P	P	23 54 50.3	+0.3
AUW	Augustine West	0.71	213	P	P	23 54 50.3	+0.2
NNL	Ninilchik	0.72	83	P	P	23 54 51.4	+1.3
XLV	Seldovia	0.72	135	P	P	23 54 50.1	0.0
AUI	Augustine Isla	0.73	210	P	P	23 54 50.3	+0.1
AUI				S	S	23 55 04.5	+0.4
CNPM	China Poot	0.87	120	P	P	23 54 51.8	+0.2
NKA	Nikishka	1.07	43	P	P	23 54 55.9	+2.2
MCNL	McNeil River	1.14	227	P	P	23 54 54.4	-0.1
MCNL				S	S	23 55 10.3	-1.3
CKL	Chakachamna La	1.25	8	P	P	23 54 56.3	+0.5
SPU	Mount Spurr	1.27	15	eP	P	23 54 56.3	+0.3
CKN	Chakachatna No	1.29	12	P	P	23 54 56.9	+0.6
SLKM	Skilak Lake	1.36	65	P	P	23 54 57.7	+0.6
SLKM				S	S	23 55 15.2	-1.0
VOGL	Vogel Lake	1.53	47	P	P	23 55 00.9	+1.8
VOGL				S	S	23 55 22.3	+2.5
FIB	Fire Island	1.74	45	eP	P	23 55 03.2	+1.5
KAHG	Katmai Hook Gl	1.75	213	P	P	23 55 02.2	+0.3
KAHG				S	S	23 55 23.2	-1.2
MPA	Moose Pass	1.75	71	P	P	23 55 02.2	+0.3
KAHC	Katmai Hardscr	1.77	223	P	P	23 55 02.4	+0.3
KAHC				S	S	23 55 24.5	-0.3
SVW2	Sparrevohn	1.82	310	P	P	23 55 02.5	-0.1
SVW2				S	S	23 55 24.9	-1.0
RC01	Rabbit Creek A	1.86	51	P	P	23 55 03.7	+0.5
KDAK	Kodiak Island	2.19	178	eP	P	23 55 06.2	-1.4
PWA	Palmer West	2.19	38	P	P	23 55 08.1	+0.5
PWA				S	S	23 55 35.3	+0.8
ACHA	Angle Creek He	2.22	219	P	P	23 55 08.3	+0.4
MGLS	Mageik LS	2.22	219	P	P	23 55 08.5	+0.6
CAHL	Cahill	2.34	216	P	P	23 55 10.2	+0.6
CNTC	Contact Creek	2.36	225	P	P	23 55 10.2	+0.3
PMR	Palmer	2.40	46	eP	P	23 55 10.7	+0.3
KJL	Kejulik	2.42	219	P	P	23 55 11.4	+0.7
GHO	Glory Hole Cre	2.59	44	P	P	23 55 12.9	-0.2
GHO				S	S	23 55 42.4	-1.8
SML	Sawmill	2.83	47	P	P	23 55 15.8	-0.5
HIN	Hinchinbrook I	3.13	79	P	P	23 55 20.3	-0.1
SCM	Sheep Creek Mo	3.23	52	P	P	23 55 21.0	-0.7
MID	Middleton Isla	3.28	97	P	P	23 55 21.8	-0.5
TT01	Tatalina	3.35	333	P	P	23 55 23.1	-0.3
VLZ	Valdez	3.36	67	P	P	23 55 23.1	-0.4
VLZ				S	S	23 55 59.6	-3.2
HUR	Hurricane	3.37	25	P	P	23 55 24.3	+0.8
CVA	Cordova	3.52	77	P	P	23 55 25.5	-0.2
TRF	Thorofare Moun	3.69	17	P	P	23 55 29.2	+1.3
RAGM	Ragged Mountai	4.04	81	P	P	23 55 32.3	-0.4
KAIM	Kayak Island	4.17	87	P	P	23 55 34.2	-0.3
PAX	Paxson	4.60	46	P	P	23 55 39.8	-0.6
WRH	Wood River Hil	5.01	24	P	P	23 55 45.3	-0.7
MLY	Manley	5.17	9	P	P	23 55 48.4	+0.4
CCB	Clear Creek Bu	5.23	24	P	P	23 55 47.8	-1.0
BALM	Baldy	5.24	74	P	P	23 55 47.7	-1.2
MDM	Murphy Dome	5.43	21	P	P	23 55 50.8	-0.7
IL1	Eielson Array	5.53	27	P	P	23 55 51.9	-1.0
ILAR	Eielson Array	5.53	27	P	P	23 55 51.9	-1.1
	1.4nm,0.3s,baz=218,slow=14,SNR=37						
ILAR				S	S	23 56 50.8	-5.1
	0.1nm,0.3s,baz=207,slow=24,SNR=3.3						
IM3	Indian Mountai	6.06	356	P	P	23 55 59.9	-0.2
IMA	Indian Mountai	6.14	356	eP	P	23 56 02.6	+1.3
PNL	Peninsula	6.72	87	P	P	23 56 09.9	+0.6
BM3	Burnt Mountain	8.30	22	P	P	23 56 29.0	-1.6
DLBC	Dease Lake	11.72	88	P	P	23 57 20.4	+4.2
	0.8nm,0.3s,baz=199,slow=22,SNR=12						
YKA	Yellowknife Ar	18.34	66	P	P	23 58 39.4	-0.2
	0.1nm,0.3s,baz=278,slow=10,SNR=6.4						
YKA	Yellowknife Ar	18.34	66	P	P	23 58 39.4	-0.2
SONM	Songino Array	54.93	306	P	P	00 03 53.1	+0.1
	0.3nm,0.5s,mb3.6,baz=45,slow=6.1,SNR=3.7						

*NEIC **14** 00:05:34.7±1.7, 20.07S×68.88W, h117^{km}±16^{km}, mb3.9/5, Error ellipse: s-maj=20.1km s-min=12.8km az=76.0*

*IDC **14** 00:05:37.8±2.2, 20.08S×68.72W, h139^{km}±18^{km}, mb3.8/5, mb1 4.0/8, mb1mx3.7/18, mbtmp4.3/8, Error ellipse: s-maj=25.0km s-min=16.3km az=65.0*

ISC 14 00:05:35.8±1.1**, 20.17S**±0.06×**68.8W**±0.1**, h138**^{km}±11^{km}**, n20,** σ**0^{s}99**/18**, mb4.0**/4**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	2.78	169	eP	P	00 06 20.6	+0.1
LPAZ	La Paz	3.90	9	P	P	00 06 34.6	-0.8
	5.5nm,0.3s,baz=195,slow=7.7,SNR=52						
LPAZ				S	S	00 07 22.5	+1.4
	1.1nm,0.3s,baz=278,slow=14,SNR=3.8						
LPAZ	La Paz	3.90	9	eP	P	00 06 34.4	-0.9
SIV	San Ignacio	8.40	62	P	P	00 07 34.1	-1.5
	8.4nm,0.3s,baz=256,slow=11,SNR=142						
CFAA	Coronel Fontan	11.40	178	P	P	00 08 24.1	+8.7
	0.0nm,0.3s,baz=14,slow=4.2,SNR=2.5						
CPUP	Villa Florida	12.16	122	P	P	00 08 25.8	+0.5
	0.7nm,0.3s,baz=326,slow=15,SNR=13						
CPUP	Villa Florida	12.16	122	eP	P	00 08 25.0	-0.3
	8.3nm,0.9s						
SAML	Samuel	12.38	27	eP	P	00 08 24.4	-3.9
	3.2nm,0.7s						
TRQA	Tornquist	18.77	163	eP	P	00 09 46.2	-0.5
	1.1nm,0.3s						
BDFB	Brasilia	20.23	80	P	P	00 10 03.1	+1.1
	5.5nm,0.5s,baz=258,slow=9.9,SNR=9.4						

```
BAO   Brasilia Array      20.26  80    P       P       00 10 03.0 +0.8
PLCA  Paso Flores         20.56 184    P       P       00 10 07.4 +2.3
      2.0nm,0.7s,baz=357,slow=14,SNR=6.4
PLCA  Paso Flores         20.56 184   eP       P       00 10 04.9 -0.2
      2.1nm,0.6s
DBIC  Dimbokro            68.22  74    P       P       00 16 23.4 -0.6
      3.4nm,0.4s,mb4.5,baz=206,slow=12,SNR=13
ISCO  Idaho Springs       68.87 330    P       P       00 16 23.2 -4.3
      0.7nm,0.3s,mb3.9
NVAR  Mina Array Bea      74.54 322    P       P       00 17 00.8 -0.4
      0.7nm,0.7s,mb3.4,baz=141,slow=6.6,SNR=6.4
YKA   Yellowknife Ar      89.98 341    P       P       00 18 20.2  0.0
      2.2nm,0.7s,mb4.2,baz=133,slow=4.7,SNR=31
YKA                                    pP      pP      00 18 47.3 -8.5
      0.4nm,0.8s,baz=140,slow=4.7,SNR=2.5
YKA                                    sP      sP      00 18 58.1  -13
      1.3nm,0.7s,baz=134,slow=4.7,SNR=8.0
WRA   Warramunga Arr     134.17 211    PKP     PKPdf   00 24 40.1 +2.3
      0.3nm,0.7s,baz=157,slow=1.9,SNR=5.5
MKAR  Makanchi Array     144.47  35    PKP     PKPdf   00 24 57.3 +1.8
      0.2nm,0.5s,baz=333,slow=3.1,SNR=3.7
SONM  Songino Array      152.12   7    PKPbc   PKPdf   00 25 17.2  +10
      0.6nm,0.6s,baz=299,slow=1.8,SNR=4.6
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*NEIC **14** 00:08:42.1±1.4, 19.68S×69.26W, h109^{km}±15^{km}, mb3.9/2, Error ellipse: s-maj=17.3km s-min=12.4km az=60.0*
*IDC **14** 00:08:46.6±2.4, 19.62S×68.89W, h139^{km}±21^{km}, mb3.5/3, mb1 3.6/6, mb1mx3.4/19, mbtmp3.9/6, Error ellipse: s-maj=32.5km s-min=17.6km az=77.0*
ISC 14 00:08:40.9±1.4, 19.75S±0.09×69.32W±0.09, h118^{km}±16^{km}, n15, σ1$\overset{s}{.}$12/16, mb4.0/1, Northern Chile

```
Code  Station Name         Δ°   AZ°   Phase ID             Time      Res
                                      Op      ISC        h  m  s     ISC
LPAZ  La Paz               3.63  18    P       P       00 09 40.6 +4.1
      8.1nm,0.3s,baz=197,slow=5.7,SNR=46
LPAZ                                   S       S       00 10 19.7 +0.9
      1.3nm,0.3s,baz=35,slow=21,SNR=6.2
LPAZ  La Paz               3.63  18   eP       P       00 09 40.4 +4.0
ARE   Arequipa             3.87 327   eP       P       00 09 39.0 -0.7
ARE                                   i S      S       00 10 24.4 -0.3
SIV   San Ignacio          8.70  66    P       P       00 10 44.5 -0.5
      1.1nm,0.3s,baz=253,slow=14,SNR=9.9
SAML  Samuel              12.27  30    P       P       00 11 33.4 +0.7
CPUP  Villa Florida       12.83 123    P       P       00 11 39.9  0.0
      0.1nm,0.3s,baz=307,slow=14,SNR=3.8
CPUP  Villa Florida       12.83 123    P       P       00 11 39.9  0.0
TRQA  Tornquist           19.32 162   eP       P       00 12 59.3 +0.1
      7.4nm,0.7s
BDFB  Brasilia            20.70  82    P       P       00 13 11.3 -2.3
      1.2nm,0.3s,baz=62,slow=16,SNR=2.3
PLCA  Paso Flores         20.94 183    P       P       00 13 19.8 +4.0
      3.0nm,0.7s,baz=351,slow=9.4,SNR=7.4
PLCA  Paso Flores         20.94 183   eP       P       00 13 17.8 +2.0
      3.5nm,0.8s
MPU   Maple Canyon        71.35 327    P       P       00 19 48.6 -1.3
YKA   Yellowknife Ar      89.42 341    P       P       00 21 26.6 +1.5
      0.9nm,0.6s,mb4.0,baz=130,slow=4.6,SNR=12
YKA   Yellowknife Ar      89.42 341    P       P       00 21 26.6 +1.5
SONM  Songino Array      151.77   6    PKPbc   PKPdf   00 28 25.1  +10
      0.6nm,0.6s,baz=244,slow=0.5,SNR=4.6
```

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*NEIC **14** 00:12:17.3, 32.92S×69.86W, h130^{km}, MD2.9(GUC), After GUC.*
GUC 14 00:12:17.3±0.5, 32.92S×69.86W, h130^{km}±3^{km}, MD2.9, ML3.1, 9C-3D, Mendoza Province

```
Code  Station Name         Δ°   AZ°   Phase ID             Time      Res
                                      Op      ISC        h  m  s     ISC
FCH   Farellones           0.55 222⇑iP         P       00 12 36.7 -0.1
FCH                                   i S      S       00 12 52.0 +0.4
JACH  Jahuel               0.66 290⇓iP         P       00 12 37.6 +0.1
JACH                                  i S      S       00 12 53.2 +0.2
PEL   Peldehue             0.73 252   eP       P       00 12 38.1 +0.1
PEL                                   i S      S       00 12 54.3 +0.4
CLCH  Cerro Calan          0.74 230⇑iP         P       00 12 38.4 +0.3
CLCH                                  i S      S       00 12 54.2 +0.2
CLCH                                   AMP             00 12 56.0
      comp=E,480nm,0.7s
DSCH  Colegio Aleman       0.77 231⇑iP         P       00 12 38.6 +0.3
DSCH                                  i S      S       00 12 54.7 +0.4
DSCH                                   AMP             00 12 55.5
      comp=N,549nm,0.5s
STL   Santa Lucia          0.84 232   eP       P       00 12 37.9 -0.9
STL                                   i S      S       00 12 54.5 -0.9
STL                                    AMP             00 12 55.3
      comp=N,376nm,0.2s
PCH   Pirque               0.89 218⇑iP         P       00 12 39.6 +0.3
PCH                                   i S      S       00 12 56.7 +0.5
ANTU  Antumapu             0.92 225⇑iP         P       00 12 39.9 +0.3
ANTU                                  i S      S       00 12 56.8 +0.2
ANTU                                   AMP             00 12 58.6
      comp=E,349nm,0.1s
ROCH  El Roble             0.97 266⇓iP         P       00 12 40.5 +0.4
ROCH                                  i S      S       00 12 58.2 +0.7
TACH  Talagante            1.17 231⇑iP         P       00 12 42.3 +0.2
TACH                                  i S      S       00 13 00.8  0.0
CHCH  Chadas Angostu       1.21 213⇑iP         P       00 12 42.7 +0.1
CHCH                                  i S      S       00 13 02.1 +0.3
CACH  El Canelo            1.35 207   eP       P       00 12 44.5 +0.4
PACH  Papudo               1.39 285⇑iP         P       00 12 44.5  0.0
PACH                                  i S      S       00 13 04.9 -0.4
CICH  Cipreses             1.48 198   eP       P       00 12 45.5 -0.1
LCCH  Las Cruces           1.54 248   i P      P       00 12 46.6 +0.3
LCCH                                  i S      S       00 13 08.4 +0.1
LNV   Longovilo            1.66 231⇓iP         P       00 12 47.4 -0.2
LNV                                   i S      S       00 13 10.0 -0.8
SFDO  San Fernando         1.95 209⇑iP         P       00 12 50.8 -0.3
SFDO                                  i S      S       00 13 16.9 +0.2
CMCH  Combarbala           1.99 330   eP       P       00 12 51.9 +0.3
CMCH                                  i S      S       00 13 17.8 +0.2
CMCH                                   AMP             00 13 20.1
      comp=E,620nm,0.8s
LPAZ  La Paz              16.63   6   eP       P       00 15 56.2 -7.8
```

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*NEIC **14** 00:15:37.5±0.8, 20.01S×68.88W, mb4.0/3, Error ellipse: s-maj=15.6km s-min=12.4km az=62.0*
*IDC **14** 00:15:37.9±1.0, 19.99S×68.91W, h110^{km}±7^{km}, mb3.8/4, mb1 4.0/7, mb1mx3.6/18, mbtmp4.3/7, Error ellipse: s-maj=24.6km s-min=22.5km az=95.0*
ISC 14 00:15:37.7±1.4, 20.0S±0.1×68.80W±0.10, h121^{km}±16^{km}, n18, σ0$\overset{s}{.}$99/16, mb4.1/2, Chile-Bolivia border region

```
Code  Station Name         Δ°   AZ°   Phase ID             Time      Res
                                      Op      ISC        h  m  s     ISC
LPAZ  La Paz               3.78  10    P       P       00 16 36.1 +0.7
      5.5nm,0.3s,baz=209,slow=6.4,SNR=43
LPAZ  La Paz               3.78  10   eP       P       00 16 36.0 +0.6
ARE   Arequipa             4.38 324   eP       P       00 16 42.0 -1.4
ARE                                   i S      S       00 17 35.0 +1.1
SIV   San Ignacio          8.38  63    P       P       00 17 36.7 -0.9
      7.8nm,0.3s,baz=257,slow=11,SNR=140
CPUP  Villa Florida       12.27 123    P       P       00 18 29.8 +0.5
      0.3nm,0.3s,baz=321,slow=13,SNR=7.0
CPUP  Villa Florida       12.27 123   eP       P       00 18 29.9 +0.7
      2.6nm,0.7s
SAML  Samuel              12.29  27    P       P       00 18 26.2 -3.4
      1.6nm,0.4s
BDFB  Brasilia            20.26  81    P       P       00 20 06.8 +1.2
      4.2nm,0.4s,baz=265,slow=12,SNR=7.2
BAO   Brasilia Array      20.28  81    P       P       00 20 06.0 +0.2
PLCA  Paso Flores         20.68 184    P       P       00 20 10.2 +0.5
      4.5nm,0.7s,baz=11,slow=11,SNR=11
PLCA  Paso Flores         20.68 184   eP       P       00 20 08.7 -1.0
      5.5nm,0.8s
DBIC  Dimbokro            68.23  74    P       P       00 26 27.4 -0.3
      6.3nm,0.9s,mb4.4,baz=215,slow=12,SNR=12
DBIC                                   pP      pP      00 26 55.8 -2.0
      4.3nm,0.9s,baz=226,slow=14,SNR=1.6
DBIC  Dimbokro            68.23  74    P       P       00 26 27.4 -0.3
DBIC                                   pP      pP      00 26 55.8 -2.0
YKA   Yellowknife Ar      89.85 341    P       P       00 28 23.4 -0.1
      0.4nm,0.6s,mb3.7,baz=136,slow=4.2,SNR=6.7
YKA                                    pP      pP      00 28 51.0 -4.1
      0.5nm,0.8s,baz=131,slow=4.6,SNR=3.6
YKA   Yellowknife Ar      89.85 341    P       P       00 28 23.4 -0.1
YKA                                    pP      pP      00 28 51.0 -4.1
MKAR  Makanchi Array     144.39  35    PKP     PKPdf   00 34 59.5 +0.1
      0.3nm,0.5s,baz=328,slow=3.5,SNR=5.2
MKAR  Makanchi Array     144.39  35    PKP     PKPdf   00 34 59.5 +0.1
SONM  Songino Array      152.00   7    PKPbc   PKPdf   00 35 20.4 +8.9
      0.4nm,0.5s,baz=329,slow=1.9,SNR=4.7
SONM                                   pPKPbc          00 35 49.9
      0.4nm,0.6s,slow=7.4,SNR=2.7
```

IGQ 14 00:20:09.2, 1.74S×78.19W, h174^{km}±2^{km}, mb4.1, 1C-16D, Error ellipse: s-maj=3.2km s-min=1.7km az=46.4, Ecuador

```
Code  Station Name         Δ°   AZ°   Phase ID             Time      Res
                                      Op      ISC        h  m  s     ISC
ARRY  Arrayan              0.35 311  ⇓P        P       00 20 33.1  0.0
ARRY                                   S       S       00 20 50.1 -1.4
ULBA  Ulba                 0.36 322  ⇓P        P       00 20 33.2 +0.1
ULBA                                   S       S       00 20 50.1 -1.4
RUN5  Runtun               0.40 324  ⇓P        P       00 20 33.3 +0.1
RUN5                                   S       S       00 20 51.0 -0.7
CUSU  Cusua                0.41 315  ⇓P        P       00 20 33.9 +0.6
JUIV  Juive                0.42 318  ⇓P        P       00 20 33.3  0.0
IGUA  Igualata             0.51 299    P       P       00 20 34.3 +0.6
PISA  Pisayambo            0.70 344  ⇓P        P       00 20 35.2 +0.6
TAMB  Tambo                1.05 350  ⇓P        P       00 20 37.8 +1.0
CAMI  Rancho Maria         1.10 343    P       P       00 20 38.5 +1.3
VC1   Cotopaxi 1           1.11 349  ⇓P        P       00 20 38.4 +1.1
ANTI  Antisana             1.28   1  ⇓P        P       00 20 39.5 +0.7
JUA2  San Juan 2           1.57 345  ⇓P        P       00 20 42.4 +0.7
GGP   Refugio Guagua       1.60 345  ⇓P        P       00 20 42.8 +0.8
TERV  Terraza Guagua       1.61 345    P       P       00 20 42.9 +0.9
PINO  Pino                 1.62 345  ⇓P        P       00 20 43.1 +0.9
YANA  Yana                 1.65 347  ⇓P        P       00 20 43.1 +0.6
ELAGU Cayambe Volc         1.71   7    P       P       00 20 43.9 +0.8
CAYR  Refugio Cayamb       1.75   6  ⇓P        P       00 20 44.5 +1.0
JOR1  San Jorge 1          1.78 345  ⇓P        P       00 20 42.4 -1.5
CAYA  Cayambe              1.81   6  ⇓P        P       00 20 45.1 +1.0
OTAV  Otavalo              1.98 352   eP       P       00 20 46.5 +0.6
COTA  Cotacachi            2.06 356    P       P       00 20 48.4 +1.5
HOJA  Cerro de Hojas       2.45 286  ⇑P        P       00 20 51.1 -0.3
HOJA                                   S       S       00 21 23.5 -0.6
JAMA  Jama                 2.49 306    P       P       00 20 51.9  0.0
ECEN  Cerro Negro          2.55   5    P       P       00 20 54.2 +1.5
```

IDC 14 00:28:21.6±2.9, 20.00S×68.86W, h136^{km}±40^{km}, mb3.1/3, mb1 3.2/6, mb1mx3.1/19, mbtmp3.6/6, Error ellipse: s-maj=41.5km s-min=32.6km az=126.0, Chile-Bolivia border region

```
Code  Station Name         Δ°   AZ°   Phase ID             Time      Res
                                      Op      ISC        h  m  s     ISC
LPAZ  La Paz               3.75  11    P       P       00 29 19.1  0.0
      0.9nm,0.3s,baz=203,slow=6.0,SNR=11
SIV   San Ignacio          8.41  63    P       P       00 30 19.5 -2.2
      1.1nm,0.3s,baz=259,slow=11,SNR=28
CPUP  Villa Florida       12.34 123    P       P       00 31 11.8 -1.8
      0.1nm,0.3s,baz=328,slow=17,SNR=3.3
BDFB  Brasilia            20.31  81    P       P       00 32 48.9 +0.1
      1.7nm,0.4s,baz=232,slow=11,SNR=3.0
PLCA  Paso Flores         20.72 184    P       P       00 32 52.4 -0.3
      1.1nm,0.6s,baz=340,slow=12,SNR=5.4
SNAA  Sanae               63.68 161    P       P       00 38 37.4 -2.9
      0.3nm,0.7s,baz=259,slow=10,SNR=5.1
```

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*NEIC **14** 00:30:00.7±1.1, 20.21S×69.14W, h91^{km}±13^{km}, mb4.5/4, Error ellipse: s-maj=12.9km s-min=11.0km az=60.0*
*IDC **14** 00:30:01.4±0.9, 20.03S×69.08W, h106^{km}±7^{km}, mb3.8/5, mb1 3.9/7, mb1mx3.7/17, mbtmp4.2/7, Error ellipse: s-maj=24.3km s-min=22.4km az=108.0*
ISC 14 00:29:59.3±1.3, 20.18S±0.07×69.19W±0.09, h102^{km}±14^{km}, n21, σ1$\overset{s}{.}$12/19, mb4.4/5, Northern Chile

```
Code  Station Name         Δ°   AZ°   Phase ID             Time      Res
                                      Op      ISC        h  m  s     ISC
LPAZ  La Paz               4.00  15    P       P       00 31 02.5 +2.8
      2.8nm,0.3s,baz=200,slow=8.5,SNR=11
LPAZ                                   S       S       00 31 46.1 +0.4
      2.0nm,0.3s,baz=200,slow=16,SNR=4.3
LPAZ  La Paz               4.00  15   eP       P       00 31 02.1 +2.4
ARE   Arequipa             4.29 329   eP       P       00 31 04.0 +0.3
ARE                                   eS       S       00 31 50.0 -3.0
SIV   San Ignacio          8.77  63    P       P       00 32 03.1 -1.6
      3.4nm,0.3s,baz=256,slow=11,SNR=47
CPUP  Villa Florida       12.50 122    P       P       00 32 55.0 +0.4
      0.5nm,0.3s,baz=324,slow=16,SNR=12
CPUP  Villa Florida       12.50 122   eP       P       00 32 54.6  0.0
      4.1nm,0.8s
TRQA  Tornquist           18.88 162   eP       P       00 34 13.1 -1.0
      8.4nm,0.9s
PLCA  Paso Flores         20.52 183    P       P       00 34 32.4 +1.1
      3.9nm,0.6s,baz=351,slow=11,SNR=15
PLCA  Paso Flores         20.52 183   eP       P       00 34 32.4 +1.1
      4.4nm,0.7s
BDFB  Brasilia            20.64  81    P       P       00 34 32.6  0.0
      14nm,0.6s,baz=268,slow=11,SNR=15
BAO   Brasilia Array      20.66  81    P       P       00 34 33.0 +0.1
RCBR  Riachuelo           35.33  71   eP       P       00 36 47.7 +0.9
      21nm,0.9s,mb5.0
PMSA  Palmer Station      44.70 177    P       P       00 38 02.8 -0.7
      76nm,1.4s,mb5.2
TXAR  Lajitas Array       59.40 325    pP      pP      00 40 17.7 -1.1
      0.2nm,0.6s,baz=146,slow=4.5,SNR=2.9
SNAA  Sanae               63.61 161    P       P       00 40 21.9 +0.8
      0.6nm,1.0s,mb3.4,baz=306,slow=7.1,SNR=4.4
DBIC  Dimbokro            68.61  74    P       P       00 40 52.0 -1.8
      4.1nm,0.7s,mb4.3,baz=159,slow=5.7,SNR=8.4
MPU   Maple Canyon        71.77 327   eP       P       00 41 13.5 +1.0
YKA   Yellowknife Ar      89.86 341    P       P       00 42 47.0 -0.4
      0.8nm,0.6s,mb4.0,baz=131,slow=4.8,SNR=12
YKA                                    pP      pP      00 43 14.9 +0.3
      0.5nm,0.7s,baz=134,slow=5.0,SNR=4.7
YKA                                    sP      sP      00 43 25.6 +0.2
      0.5nm,0.7s,baz=136,slow=4.6,SNR=3.7
WRA   Warramunga Arr     133.95 211    PKP     PKPdf   00 49 07.7 +2.4
      0.4nm,0.8s,baz=145,slow=1.7,SNR=5.1
MKAR  Makanchi Array     144.71  35    PKP     PKPdf   00 49 24.3 +0.4
      0.5nm,0.8s,slow=3.6,SNR=4.1
SONM  Songino Array      152.18   6    PKPbc   PKPdf   00 49 45.2 +9.4
      0.6nm,0.5s,baz=321,slow=1.8,SNR=4.9
SONM                                   pPKPbc          00 50 13.8
      0.3nm,0.5s,baz=315,slow=1.7,SNR=1.9
```

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*IDC **14** 00:38:59.5±0.8, 19.72S×69.01W, h108^{km}±6^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.6/19, mbtmp4.2/6, Error ellipse: s-maj=26.2km s-min=19.7km az=83.0*
*NEIC **14** 00:39:01.4±1.4, 19.58S×69.04W, h148^{km}±15^{km}, mb4.0/4, Error ellipse: s-maj=19.5km s-min=13.8km az=68.0*
ISC 14 00:38:59.5±1.1, 19.64S±0.08×68.93W±0.09, h136^{km}±12^{km}, n26, σ1$\overset{s}{.}$21/24, mb4.1/5, 3C, Chile-Bolivia border region

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Code  Station Name         Δ°   AZ°   Phase ID             Time      Res
                                      Op      ISC        h  m  s     ISC
LPAZ  La Paz               3.42  13    P       P       00 39 56.4 +3.8
      7.5nm,0.3s,baz=209,slow=7.3,SNR=145
LPAZ  La Paz               3.42  13⇑iPn        P       00 39 56.4 +3.8
ARE   Arequipa             3.99 322   eP       P       00 40 00.0 -0.1
ARE                                   eS       S       00 40 47.0 +0.3
SIV   San Ignacio          8.32  65    P       P       00 40 58.2 -0.1
      4.1nm,0.3s,baz=254,slow=11,SNR=176
SAML  Samuel              11.99  28   eP       P       00 41 46.6 -0.4
      3.0nm,0.9s
CPUP  Villa Florida       12.59 124    P       P       00 41 54.8 +0.1
      0.1nm,0.3s,baz=301,slow=15,SNR=3.0
CPUP  Villa Florida       12.59 124    Pn      P       00 41 51.5 -3.2
CPUP                                   P               00 41 54.8
TRQA  Tornquist           19.32 163   eP       P       00 43 14.6 -1.8
      1.6nm,0.5s
BDFB  Brasilia            20.32  82    P       P       00 43 28.9 +2.1
      4.3nm,0.5s,baz=280,slow=11,SNR=8.8
BAO   Brasilia Array      20.35  82    P       P       00 43 23.5 -3.5
PLCA  Paso Flores         21.07 183    P       P       00 43 35.1 +0.9
      4.3nm,1.1s,mb3.7,baz=359,slow=6.3,SNR=5.9
PLCA  Paso Flores         21.07 183   eP       P       00 43 35.1 +1.0
      5.3nm,1.0s,mb3.8
OTAV  Otavalo             21.84 334    P       P       00 43 41.7 -0.2
SDV   Santo Domingo       28.39 356    P       P       00 44 43.0 -0.4
      2.5nm,0.7s,mb4.0
COW   Cow Castle Cre      53.90 348   eP       P       00 48 06.6 -4.5
VNA3  Neumayer Olymp      61.84 162⇑iP         P       00 49 06.2 +0.1
VNA2  Neumayer--Watz      62.41 161    P       P       00 49 10.4 +0.5
SNAA  Sanae               64.04 161⇑iP         P       00 49 20.7 +0.2
SNAA  Sanae               64.04 161    P       P       00 49 20.8 +0.4
      0.8nm,0.8s,mb3.6,baz=282,slow=8.3,SNR=10
SNAA                                   pP      pP      00 49 48.7 -4.6
      0.4nm,0.8s,baz=329,slow=8.9,SNR=2.2
SNAA                                   sP      sP      00 49 58.1  -10
      0.5nm,0.9s,baz=288,slow=1.7,SNR=2.6
SNAA  Sanae               64.04 161   eP       P       00 49 20.8 +0.3
      2.3nm,0.8s,mb4.1
DGMT  Dagmar              74.76 337   eP       P       00 50 23.4 -2.8
      10nm,0.7s,mb4.6
FCC   Fort Churchill      80.82 347   eP       P       00 50 58.9 -0.4
YKA   Yellowknife Ar      89.43 341    P       P       00 51 43.8 +2.2
      2.5nm,0.6s,mb4.3,baz=131,slow=4.7,SNR=50
YKA                                    pP      pP      00 52 12.4 -4.2
      0.5nm,0.6s,baz=134,slow=4.5,SNR=3.6
WRA   Warramunga Arr     134.53 211    PKP     PKPdf   00 58 05.0 +2.5
      0.9nm,0.7s,baz=154,slow=1.8,SNR=16
MKAR  Makanchi Array     144.13  34    PKP     PKPdf   00 58 21.3 +2.4
      0.6nm,0.6s,baz=300,slow=3.5,SNR=5.8
SONM  Songino Array      151.62   7    PKPbc   PKPdf   00 58 41.4  +10
      1.6nm,0.6s,baz=325,slow=1.7,SNR=11
SONM                                   pPKPbc          00 59 11.3
      0.5nm,0.3s,baz=314,slow=1.8,SNR=3.3
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*CASC **14** 00:43:01.4±2.6, 11.54N×87.07W, h20^{km}±9^{km}, MD4.1, ML4.0, mb4.4(NEIC)*
*NEIC **14** 00:43:04.4±3.2, 12.56N×86.07W, h40^{km}±37^{km}, mb4.4/2, Error ellipse: s-maj=108.7km s-min=16.6km az=55.0*
*IDC **14** 00:43:06.5±3.0, 12.03N×86.52W, h79^{km}±35^{km}, mb3.5/5, mb1 3.8/6, mb1mx3.5/21, mbtmp3.7/6, MS4.3/1, Ms1 4.3/1, ms1mx4.2/18, Error ellipse: s-maj=85.1km s-min=21.3km az=51.0*
ISC 14 00:43:02.7±0.8, 11.61N±0.07×87.02W±0.05, h60^{km}±9^{km}, n34, σ1$\overset{s}{.}$15/46, mb3.9/7, 8C-9D, Near coast of Nicaragua

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Code  Station Name         Δ°   AZ°   Phase ID             Time      Res
                                      Op      ISC        h  m  s     ISC
CRUN  El Crucero           0.79  62⇓eP         P       00 43 17.9 -0.3
LEON  Leon                 0.81   9⇑eP         P       00 43 16.8 -1.6
XAVN  Gruta Xavier         0.86  52   eP       P       00 43 18.6 -0.5
XAVN                                  eS       S       00 43 32.8 +1.5
MIRN  Miramar              0.87  20⇓eP         P       00 43 18.0 -1.3
TICN  Ticuantepe           0.87  61⇑eP         P       00 43 18.9 -0.4
APYN  Apoyeque             0.90  47⇑eP         P       00 43 19.1 -0.5
MOMJ  Momotombo            0.92  30⇓eP         P       00 43 19.0 -0.8
MOMJ                                  eS       S       00 43 32.4 -0.2
MGAN  Managua              0.92  55⇑eP         P       00 43 19.2 -0.6
MGAN                                  eS       S       00 43 33.0 +0.3
MGAN                                  i                00 43 34.4
      comp=E,4µm,0.3s
MASN  Masaya               0.92  66   eS       S       00 43 34.8 +2.0
CNGN  Cerro Negro          0.93  19⇓eP         P       00 43 19.0 -1.1
CNGN                                  eS       S       00 43 36.7 +3.7
TEL3  Telica 3             0.97  10⇑eP         P       00 43 19.4 -1.1
WILN  Americas 2           0.98  56⇑eP         P       00 43 20.2 -0.5
WILN                                  eS       S       00 43 35.0 +1.0
APON  Apoyo                0.98  72⇓eP         P       00 43 19.9 -0.8
TELN  Telica               1.00  10   eP       P       00 43 19.9 -1.1
CRIN  San Cristobal        1.08 358⇓eP         P       00 43 20.9 -1.2
PYTN  Playitas             1.31  46⇑eP         P       00 43 24.8 -0.6
PYTN                                  eS       S       00 43 45.5 +3.3
CONN  Concepcion           1.36  92⇓eP         P       00 43 24.9 -1.2
CONN                                  eS       S       00 43 44.4 +1.0
CNCH  Conchagua            1.83 334⇓eP         P       00 43 33.4 +0.9
CNCH                                  eS       S       00 43 56.2 +1.6
BLLM  Bellamira            2.17 327⇓eP         P       00 43 38.7 +1.4
BLLM                                  eS       S       00 44 04.4 +1.4
JTS   JuntasAbangare       2.42 123    P       P       00 43 42.7 +2.0
      comp=E,4.5nm,0.3s,baz=312,slow=16,SNR=18
JTS                                    S       S       00 44 17.0 +7.9
      comp=E,11nm,0.3s,baz=303,slow=21,SNR=4.7
JTS                                    LR      LR      00 44 52.5
      comp=E,7µm,21.6s,baz=172,slow=46
JTS   JuntasAbangare       2.42 123    P       P       00 43 42.7 +2.0
JTS                                    S       S       00 44 17.0 +7.9
SNVI  San Vicente          2.67 318   eP       P       00 43 44.3  0.0
LCBS  La Ceiba             2.79 317⇑eP         P       00 43 45.8 -0.3
BOQS  Boqueron             3.05 314   eP       P       00 43 49.4 -0.3
SBLS  San Blas             3.37 311   eP       P       00 43 56.3 +2.1
SBLS                                  eS       S       00 44 32.6 -0.6
SNJE  San Jose             3.38 312   eP       P       00 43 54.9 +0.6
TXAR  Lajitas Array       23.49 321    P       P       00 48 08.6 +0.7
      comp=E,2.7nm,0.8s,mb3.7,baz=143,slow=9.0,SNR=17
TXAR  Lajitas Array       23.49 321    P       P       00 48 08.6 +0.7
WMOK  Wichita Mounta      25.39 337   eP       P       00 48 24.1 -2.0
      comp=E,5.6nm,0.9s,mb4.1
LPAZ  La Paz              33.43 146   eP       P       00 49 44.8 +6.7
      comp=E,7.2nm,0.6s,mb4.8
PDAR  Pinedale Array      36.70 332    P       P       00 50 05.2 -0.5
      comp=E,0.4nm,0.6s,mb3.4,baz=130,slow=7.0,SNR=3.3
SIV   San Ignacio         37.57 136    P       P       00 50 13.4 +0.2
      comp=E,4.1nm,0.7s,mb4.2,baz=305,slow=8.6,SNR=5.3
NVAR  Mina Array Bea      38.61 319    P       P       00 50 23.1 +1.5
      comp=E,0.4nm,0.6s,mb3.3,baz=186,slow=11,SNR=4.3
YKA   Yellowknife Ar      54.52 345    P       P       00 52 23.5 -3.1
      comp=E,0.8nm,0.7s,mb3.9,baz=138,slow=8.0,SNR=7.3
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*NEIC **14** 00:44:58.9±1.2, 19.85S×68.74W, h147^{km}±14^{km}, mb4.1/1, Error ellipse: s-maj=18.5km s-min=11.8km az=47.0*
*IDC **14** 00:44:59.3±2.4, 19.99S×68.72W, h140^{km}±25^{km}, mb3.1/4, mb1 3.4/7, mb1mx3.3/20, mbtmp3.8/7, Error ellipse: s-maj=33.6km s-min=18.0km az=74.0*
ISC 14 00:44:58.4±1.3, 19.9S±0.1×68.7W±0.1, h158^{km}±15^{km}, n13, σ1$\overset{s}{.}$10/15, mb3.3/2, Chile-Bolivia border region

```
Code  Station Name         Δ°   AZ°   Phase ID             Time      Res
                                      Op      ISC        h  m  s     ISC
LPAZ  La Paz               3.60   9    P       P       00 45 55.0 +0.5
      1.8nm,0.3s,baz=195,slow=8.3,SNR=24
LPAZ                                   S       S       00 46 41.9 +4.3
      0.5nm,0.3s,baz=281,slow=23,SNR=4.4
LPAZ  La Paz               3.60   9   ePn      P       00 45 54.2 -0.3
ARE   Arequipa             4.28 322   eP       P       00 46 04.0 +0.7
ARE                                   eS       S       00 46 45.0 -8.4
SIV   San Ignacio          8.25  63    P       P       00 46 55.2 -0.7
      3.7nm,0.3s,baz=259,slow=10,SNR=55
CPUP  Villa Florida       12.30 124    P       P       00 47 48.4 -0.8
      0.2nm,0.3s,baz=330,slow=12,SNR=5.3
CPUP  Villa Florida       12.30 124    P       P       00 47 48.4 -0.8
BDFB  Brasilia            20.17  81    P       P       00 49 23.7 +1.4
      0.9nm,0.3s,baz=262,slow=10,SNR=3.5
PLCA  Paso Flores         20.86 184    P       P       00 49 29.2 +0.1
      1.1nm,0.6s,baz=357,slow=11,SNR=5.4
PLCA  Paso Flores         20.86 184    P       P       00 49 29.4 +0.4
      16nm,1.8s
JTS   JuntasAbangare      33.96 331    P       P       00 51 27.0 -1.8
SNAA  Sanae               63.77 161    P       P       00 55 15.3 +0.2
      0.3nm,1.0s,mb3.1,baz=299,slow=10,SNR=3.0
MPU   Maple Canyon        71.75 327    P       P       00 56 04.0 -1.2
YKA   Yellowknife Ar      89.71 341    P       P       00 57 41.1 +1.9
      0.5nm,0.7s,mb3.6,baz=135,slow=4.5,SNR=9.0
```

IDC 14 00:47:15.7±3.0, 20.11S×68.68W, h133^{km}±28^{km}, mb3.2/3, mb1 3.5/6, mb1mx3.3/19, mbtmp3.8/6, Error ellipse: s-maj=46.1km s-min=20.6km az=80.0, Chile-Bolivia border region

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Code  Station Name         Δ°   AZ°   Phase ID             Time      Res
                                      Op      ISC        h  m  s     ISC
LPAZ  La Paz               3.83   8    P       P       00 48 14.2 -0.1
      5.1nm,0.3s,baz=199,slow=7.8,SNR=25
SIV   San Ignacio          8.32  62    P       P       00 49 13.1 -1.4
      1.4nm,0.3s,baz=261,slow=10,SNR=15
CPUP  Villa Florida       12.13 123    P       P       00 50 04.5 -0.7
      0.1nm,0.3s,baz=323,slow=14,SNR=3.3
PLCA  Paso Flores         20.62 184    P       P       00 51 44.6 -1.5
      1.2nm,0.9s,baz=337,slow=11,SNR=4.1
SNAA  Sanae               63.52 161    P       P       00 57 31.4 -2.3
      0.3nm,0.7s,baz=316,slow=4.6,SNR=6.1
YKA   Yellowknife Ar      89.95 341    P       P       00 59 58.8 -1.8
      0.7nm,0.8s,baz=130,slow=4.5,SNR=7.5
MKAR  Makanchi Array     144.38  35    PKP     PKPdf   01 06 35.5 -0.3
      0.2nm,0.4s,baz=342,slow=3.8,SNR=4.4
SONM  Songino Array      152.05   7    PKPbc   PKPdf   01 06 55.9 +7.8
      0.4nm,0.4s,baz=333,slow=2.8,SNR=4.0
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*BJI **14** 00:57:17.3, 19.90S×68.90W, h111^{km}*
*IDC **14** 00:57:17.8±0.8, 19.86S×69.00W, h103^{km}±7^{km}, mb3.8/10, mb1 4.0/12, mb1mx3.9/18, mbtmp4.2/12, Error ellipse: s-maj=20.5km s-min=14.5km az=64.0*
*NEIC **14** 00:57:18.4±1.1, 19.85S×68.92W, h111^{km}±11^{km}, mb4.4/5,*

Error ellipse: s-maj=14.7km s-min=8.8km az=71.0

ISC 14 00:57:17.0±0.7**,19.98S**±0.04×**69.03W**±0.08**,h115**^{km}±7^{km}**,**
h110^{km}±4.2^{km}**:pP-P,n40,**σ**1**^{s}.**32**/37**,mb4.1**/11**,4D,**
Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	**3.01**	**165**	*e*P	**P**	**00 58 08.8**	**+4.6**
LPAZ	**La Paz**	**3.77**	**13**	P	**P**	**00 58 15.9**	**+1.4**
	33nm,0.3s,baz=209,slow=7.2,SNR=338						
LPAZ				S	**S**	**00 58 59.8**	**+1.4**
	baz=67,slow=24,SNR=2.3						
LPAZ	**La Paz**	**3.77**	**13**	*e*P	**P**	**00 58 15.9**	**+1.3**
ANCH	**Antofagasta**	**3.90**	**199**	*e*P	**P**	**00 58 14.7**	**-1.5**
ARE	**Arequipa**	**4.21**	**326**	*e*P	**P**	**00 58 21.0**	**+0.6**
ARE				*i* S	**S**	**00 59 13.0**	**+4.0**
CPN1	**Cerro Paranal**	**4.79**	**195**	*e*P	**P**	**00 58 26.3**	**-2.0**
SIV	**San Ignacio**	**8.55**	**64**	P	**P**	**00 59 17.0**	**-2.3**
	17nm,0.3s,baz=259,slow=11,SNR=472						
CFAA	**Coronel Fontan**	**11.60**	**177**	P	**P**	**01 00 01.0**	**+1.1**
	0.1nm,0.3s,baz=349,slow=14,SNR=6.1						
SAML	**Samuel**	**12.34**	**28**	*e*P	**P**	**01 00 05.9**	**-3.9**
	4.6nm,0.6s						
CPUP	**Villa Florida**	**12.48**	**123**	P	**P**	**01 00 11.6**	**+0.1**
	0.8nm,0.3s,baz=314,slow=16,SNR=19						
CPUP	**Villa Florida**	**12.48**	**123**	*e*P	**P**	**01 00 10.4**	**-1.1**
	12nm,1.0s						
TRQA	**Tornquist**	**19.02**	**163**	*e*P	**P**	**01 01 31.9**	**-0.5**
	18nm,1.1s						
BDFB	**Brasilia**	**20.47**	**81**	P	**P**	**01 01 47.1**	**-0.4**
	1.8nm,0.4s,baz=259,slow=9.5,SNR=3.9						
PLCA	**Paso Flores**	**20.72**	**183**	P	**P**	**01 01 50.4**	**+0.5**
	4.6nm,0.7s,baz=0.2,slow=11,SNR=12						
PLCA	**Paso Flores**	**20.72**	**183**	*e*P	**P**	**01 01 51.2**	**+1.2**
	12nm,1.2s						
PAYG	**Puerto Ayora**	**28.30**	**310**	P	**P**	**01 03 00.2**	**-1.9**
	12nm,0.7s,mb4.5						
TEIG	**Tepich**	**44.18**	**334**	*e*P	**P**	**01 05 17.7**	**+1.4**
	8.7nm,0.5s,mb4.7						
LRAL	**Lakeview Retre**	**55.44**	**342**	*e*P	**P**	**01 06 39.4**	**-2.6**
TXAR	**Lajitas Array**	**59.33**	**325**	P	**P**	**01 07 07.8**	**-1.5**
	0.2nm,0.5s,mb3.4,baz=141,slow=8.0,SNR=3.8						
TXAR	**Lajitas Array**	**59.33**	**325**	P	**P**	**01 07 07.8**	**-1.5**
VNA3	**Neumayer Olymp**	**61.54**	**162**	⇓*i*P	**P**	**01 07 25.1**	**+1.2**
VNA3				*e*	pP	01 07 51.9	-0.2
VNA3				*e*		01 08 00.3	
VNA3				*e*		01 08 05.1	
VNA1	**Neumayer--Stat**	**61.75**	**161**	⇓*i*P	**P**	**01 07 26.9**	**+1.7**
VNA1				*e*	pP	01 07 53.2	-0.3
VNA1				*e*		01 08 03.9	
VNA1				*e*		01 08 09.3	
VNA2	**Neumayer--Watz**	**62.11**	**161**	⇓*i*P	**P**	**01 07 29.0**	**+1.3**
VNA2				*e*	pP	01 07 58.4	+2.5
VNA2				*e*		01 08 06.2	
VNA2				*e*		01 08 12.5	
SNAA	**Sanae**	**63.74**	**161**	P	**P**	**01 07 39.4**	**+1.0**
	1.4nm,0.6s,mb4.0,baz=281,slow=6.3,SNR=37						
SNAA	**Sanae**	**63.74**	**161**	⇓*i*P	**P**	**01 07 39.4**	**+1.1**
SNAA				*e*	pP	01 08 10.6	+3.9
SNAA				*e*		01 08 16.9	
SNAA				*e*		01 08 22.6	
DBIC	**Dimbokro**	**68.42**	**74**	P	**P**	**01 08 08.0**	**-0.9**
	9.7nm,1.1s,mb4.5,baz=244,slow=6.9,SNR=14						
DBIC				PcP	PcP	01 08 36.3	+2.8
	8.4nm,1.0s,baz=232,slow=5.2,SNR=5.5						
DBIC	**Dimbokro**	**68.42**	**74**	P	**P**	**01 08 08.0**	**-0.9**
DBIC				PcP	PcP	01 08 36.3	+2.8
PDAR	**Pinedale Array**	**72.74**	**330**	P	**P**	**01 08 34.5**	**+0.1**
	0.5nm,0.6s,mb3.5,baz=127,slow=7.4,SNR=4.3						
ULM	**Lac du Bonnet**	**73.84**	**342**	P	**P**	**01 08 39.4**	**-1.3**
	1.6nm,0.3s,mb4.2,baz=118,slow=4.5,SNR=3.3						
NVAR	**Mina Array Bea**	**74.23**	**322**	P	**P**	**01 08 44.2**	**+0.9**
	0.7nm,0.8s,mb3.5,baz=177,slow=7.1,SNR=5.4						
NVAR				pP	pP	01 09 10.6	-1.9
	0.5nm,0.8s,baz=162,slow=9.4,SNR=3.4						
FCC	**Fort Churchill**	**81.14**	**347**	*e*P	**P**	**01 09 19.9**	**-0.9**
	3.1nm,0.6s,mb4.3						
EDM	**Edmonton**	**82.34**	**335**	*e*P	**P**	**01 09 26.4**	**-0.8**
MAW	**Mawson**	**85.81**	**163**	P	**P**	**01 09 45.9**	**+1.7**
	1.3nm,0.6s,mb4.0,baz=238,slow=3.8,SNR=4.2						
YKA	**Yellowknife Ar**	**89.72**	**341**	P	**P**	**01 10 03.2**	**+0.2**
	4.1nm,0.6s,mb4.7,baz=133,slow=4.6,SNR=58						
YKA				pP	pP	01 10 30.1	-3.1
	2.2nm,0.7s,baz=134,slow=4.7,SNR=8.5						
YKW3	**Yellowknife Ar**	**89.78**	**341**	*e*P	**P**	**01 10 03.3**	**+0.1**
WRA	**Warramunga Arr**	**134.19**	**211**	PKP	PKPdf	01 16 24.1	+2.2
	1.1nm,0.5s,baz=155,slow=1.8,SNR=24						
WRA				pPKP		01 16 52.4	
	0.4nm,0.7s,baz=160,slow=1.6,SNR=1.7						
MKAR	**Makanchi Array**	**144.47**	**35**	PKP	PKPdf	01 16 40.4	+0.8
	0.6nm,0.4s,baz=306,slow=3.5,SNR=7.0						
CN2	**Changchun**	**153.34**	**336**	*e*PKP	PKPdf	01 16 50.0	-3.7
LZH	**Lanzhou**	**162.78**	**20**	*e*PKP	PKPdf	01 17 10.1	+4.9
LZH				APKP		01 17 39.5	
LZH				XPKP		01 17 47.5	
NJ2	**Nanjing**	**166.06**	**331**	*e*PKP	PKPdf	01 17 04.1	-4.3

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*NEIC **14** 01:04:50.9±1.0, 19.82S×68.82W, h116^{km}±11^{km}, mb3.9/1,*
Error ellipse: s-maj=15.4km s-min=10.5km az=46.0
*IDC **14** 01:04:53.0±3.0, 19.77S×68.74W, h133^{km}±24^{km}, mb3.7/4,*
mb1 3.9/7, mb1mx3.5/20, mbtmp4.2/7, Error ellipse:
s-maj=35.5km s-min=19.7km az=64.0

ISC 14 01:04:49.9±1.4**,19.90S**±0.10×**68.9W**±0.1**,h125**^{km}±16^{km}**,**
n12,σ**0**^{s}.**79**/15**,mb4.0**/3**,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.66**	**11**	P	**P**	**01 05 46.9**	**+0.9**
	3.0nm,0.3s,baz=207,slow=7.7,SNR=11						
LPAZ				S	**S**	**01 06 29.8**	**+0.9**
	1.0nm,0.3s,baz=45,slow=22,SNR=2.3						
LPAZ	**La Paz**	**3.66**	**11**	*e*Pn	**P**	**01 05 46.0**	**0.0**
LPAZ				P		01 05 46.9	
LPAZ				S	**S**	**01 06 29.8**	**+0.9**
ARE	**Arequipa**	**4.24**	**323**	*e*P	**P**	**01 05 53.0**	**-0.8**
ARE				*e*S	**S**	**01 06 35.0**	**-7.8**
SIV	**San Ignacio**	**8.36**	**64**	P	**P**	**01 06 48.0**	**-1.6**
	4.0nm,0.3s,baz=260,slow=11,SNR=35						
CPUP	**Villa Florida**	**12.38**	**123**	P	**P**	**01 07 43.9**	**+1.0**
	0.5nm,0.3s,baz=322,slow=14,SNR=13						
CPUP	**Villa Florida**	**12.38**	**123**	*e*P	**P**	**01 07 43.4**	**+0.5**
CPUP				P		01 07 43.9	
TRQA	**Tornquist**	**19.05**	**163**	*e*P	**P**	**01 09 04.6**	**-0.3**
	3.7nm,0.6s						
BDFB	**Brasilia**	**20.29**	**81**	P	**P**	**01 09 17.7**	**-0.1**
	2.6nm,0.4s,baz=259,slow=11,SNR=4.7						
SNAA	**Sanae**	**63.77**	**161**	P	**P**	**01 15 11.4**	**+1.0**
	0.4nm,0.7s,mb3.4,baz=333,slow=5.7,SNR=7.1						
DBIC	**Dimbokro**	**68.24**	**74**	P	**P**	**01 15 39.2**	**-0.5**
	5.3nm,0.8s,mb4.4,baz=100,slow=0.5,SNR=13						
DBIC	**Dimbokro**	**68.24**	**74**	P	**P**	**01 15 39.2**	**-0.5**
YKA	**Yellowknife Ar**	**89.70**	**341**	P	**P**	**01 17 34.6**	**0.0**
	1.0nm,0.6s,mb4.1,baz=135,slow=4.6,SNR=12						
YKA				pP	pP	01 18 02.3	-4.8
	0.5nm,0.6s,baz=136,slow=4.8,SNR=6.0						

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*NEIC **14** 01:07:13.4±0.2, 19.85S×68.95W, mb4.7/18, Error ellipse:*
s-maj=8.3km s-min=5.2km az=59.0
NEIC Felt [IV] at Huara; [III] at Iquique and Pozo Almonte.
*IDC **14** 01:07:13.5±0.5, 19.83S×68.94W, h105^{km}±3^{km}, mb4.2/17,*
mb1 4.4/19, mb1mx4.4/22, mbtmp4.7/19, Error ellipse:
s-maj=14.6km s-min=10.3km az=67.0
*BJI **14** 01:07:14.3, 19.80S×69.00W, h105^{km}, mB4.8*

ISC 14 01:07:11.4±0.2**,19.87S**±0.04×**68.97W**±0.05**,h103**^{km}**,**
h103^{km}±2.1^{km}**:pP-P,n110,**σ**1**^{s}.**08**/94**,mb4.5**/29**,6C-2D,**
Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	**3.11**	**167**	⇓*i*P	**P**	**01 08 03.1**	**+3.4**
LPAZ	**La Paz**	**3.65**	**13**	P	**P**	**01 08 12.8**	**+5.8**
	14nm,0.3s,baz=191,slow=8.0,SNR=46						
LPAZ				S	**S**	**01 08 54.1**	**+4.9**
	11nm,0.3s,baz=78,slow=22,SNR=4.7						
LPAZ	**La Paz**	**3.65**	**13**	*e*Pn	**P**	**01 08 12.6**	**+5.6**
ANCH	**Antofagasta**	**4.03**	**199**	⇑*i*P	**P**	**01 08 09.9**	**-2.3**
ARE	**Arequipa**	**4.15**	**324**	*e*P	**P**	**01 08 13.0**	**-0.8**
ARE				*e*S	**S**	**01 08 57.0**	**-4.6**
CPN1	**Cerro Paranal**	**4.92**	**195**	*i* P	**P**	**01 08 22.0**	**-2.4**
SIV	**San Ignacio**	**8.44**	**64**	P	**P**	**01 09 12.9**	**+0.5**
	42nm,0.3s,baz=256,slow=11,SNR=290						
SIV				S	**S**	**01 10 44.9**	**-1.8**
	baz=7.1,slow=23,SNR=3.5						
CFAA	**Coronel Fontan**	**11.71**	**177**	P	**P**	**01 09 53.0**	**-3.2**
	0.2nm,0.3s,baz=354,slow=14,SNR=9.9						
CFAA	**Coronel Fontan**	**11.71**	**177**	P	**P**	**01 09 53.0**	**-3.2**
SAML	**Samuel**	**12.21**	**28**	*e*Pn	**P**	**01 10 02.7**	**-0.2**
	7.2nm,0.7s						
CPUP	**Villa Florida**	**12.49**	**123**	P	**P**	**01 10 06.7**	**+0.1**
	4.4nm,0.3s,baz=321,slow=15,SNR=60						
CPUP	**Villa Florida**	**12.49**	**123**	*e*Pn	**P**	**01 10 06.0**	**-0.5**
	146nm,1.1s						
TRQA	**Tornquist**	**19.12**	**163**	*e*P	**P**	**01 11 27.0**	**-1.7**
	22nm,0.6s						
BDFB	**Brasilia**	**20.39**	**81**	P	**P**	**01 11 42.7**	**+0.6**
	29nm,0.6s,baz=264,slow=11,SNR=31						
BAO	**Brasilia Array**	**20.41**	**81**	P	**P**	**01 11 42.5**	**+0.2**
PLCA	**Paso Flores**	**20.84**	**183**	P	**P**	**01 11 45.7**	**-0.9**
	26nm,0.7s,baz=5.6,slow=11,SNR=23						
PLCA				PcP	PcP	01 15 51.6	-0.1
	3.0nm,0.9s,baz=126,slow=1.8,SNR=3.1						
PLCA	**Paso Flores**	**20.84**	**183**	*e*P	**P**	**01 11 45.6**	**-1.0**
	28nm,0.7s						
OTAV	**Otavalo**	**22.03**	**334**	*e*P	**P**	**01 12 00.6**	**+2.1**
	21nm,1.0s,mb4.4						
CAM4	**Nova Friburgo**	**24.74**	**100**	*e*P	**P**	**01 12 25.1**	**+0.3**
CAM4				*i*		01 12 26.9	
CAM4				*i*		01 12 34.0	
SDV	**Santo Domingo**	**28.62**	**357**	P	**P**	**01 12 59.7**	**-0.6**
	6.5nm,0.7s,mb4.4,baz=360,slow=7.2,SNR=5.8						
SDV	**Santo Domingo**	**28.62**	**357**	*e*P	**P**	**01 12 59.3**	**-1.0**
	8.9nm,0.8s,mb4.5						
JTS	**JuntasAbangare**	**33.85**	**331**	P	**P**	**01 13 47.5**	**+1.4**
	6.9nm,0.9s,mb4.5,baz=182,slow=0.9,SNR=4.9						
JTS	**JuntasAbangare**	**33.85**	**331**	*e*P	**P**	**01 13 47.9**	**+1.7**
	13nm,0.9s,mb4.8						
JTS				*e*PP	PP	01 15 03.1	+0.6
RCBR	**Riachuelo**	**35.03**	**71**	*e*P	**P**	**01 13 57.6**	**+1.4**
	17nm,0.6s,mb5.0						
SJG	**San Juan**	**37.84**	**4**	P	**P**	**01 14 18.2**	**-1.6**
	5.6nm,0.3s,mb4.9,baz=342,slow=22,SNR=7.9						
TEIG	**Tepich**	**44.10**	**334**	*e*P	**P**	**01 15 10.8**	**-0.5**
	9.7nm,0.6s,mb4.7						
TWB	**Tillmans-White**	**53.74**	**348**	*e*P	**P**	**01 16 25.0**	**-0.3**
NHSC	**New Hope**	**53.75**	**348**	*e*P	**P**	**01 16 25.6**	**+0.2**
	110nm,0.8s						
NHSC				*e*sP	sP	01 17 02.8	+1.0
COW	**Cow Castle Cre**	**54.12**	**348**	*e*P	**P**	**01 16 27.8**	**-0.2**
JSC	**Jenkinsville**	**55.10**	**348**	*e*P	**P**	**01 16 34.5**	**-0.7**
LRAL	**Lakeview Retre**	**55.35**	**342**	*e*P	**P**	**01 16 35.5**	**-1.6**
	12nm,0.8s,mb5.0						
ELN	**Prospectdale**	**57.86**	**349**	*e*P	**P**	**01 16 54.9**	**+0.1**
FWV	**Forest Hill**	**58.22**	**349**	*e*P	**P**	**01 16 55.9**	**-1.3**
TXAR	**Lajitas Array**	**59.27**	**325**	P	**P**	**01 17 03.7**	**-0.8**
	2.1nm,0.8s,mb4.2,baz=141,slow=8.0,SNR=17						
TXAR	**Lajitas Array**	**59.27**	**325**	P	**P**	**01 17 03.7**	**-0.8**
FVM	**French Village**	**60.98**	**341**	*e*P	**P**	**01 17 12.9**	**-3.2**
	38nm,0.8s,mb5.5						
WMOK	**Wichita Mounta**	**61.25**	**332**	*e*P	**P**	**01 17 15.9**	**-2.1**
	2.4nm,0.8s,mb4.3						
WMOK				*e*PcP	PcP	01 17 59.4	+0.2
VNA3	**Neumayer Olymp**	**61.63**	**162**	*e*	**P**	**01 17 21.7**	**+1.6**
VNA3	**Neumayer Olymp**	**61.63**	**162**	*e*	sP	01 17 46.8	-10
VNA3	**Neumayer Olymp**	**61.63**	**162**	*e*	PcP	01 17 56.1	-4.2
VNA3	**Neumayer Olymp**	**61.63**	**162**	⇑*i*P	**P**	**01 17 20.1**	**0.0**
VNA3				*e*		01 17 21.7	
VNA3				*e*	pP	01 17 46.8	+1.0
VNA3				*e*		01 17 56.1	
CLNB	**Carlsbad**	**61.68**	**327**	*e*P	**P**	**01 17 20.9**	**-0.1**
VNA1	**Neumayer--Stat**	**61.84**	**161**	*e*	**P**	**01 17 23.7**	**+2.2**
VNA1	**Neumayer--Stat**	**61.84**	**161**	*e*	sP	01 17 48.8	-10
VNA1	**Neumayer--Stat**	**61.84**	**161**	*e*	PcP	01 17 57.7	-3.4
VNA1	**Neumayer--Stat**	**61.84**	**161**	⇑*i*P	**P**	**01 17 22.0**	**+0.5**
VNA1				*e*		01 17 23.7	
VNA1				*e*	pP	01 17 48.8	+1.7
VNA1				*e*		01 17 57.7	
ALLY	**Alegheny Colle**	**62.07**	**351**	*e*P	**P**	**01 17 22.3**	**-1.2**
BINY	**Binghamton**	**62.09**	**354**	*e*P	**P**	**01 17 23.2**	**-0.3**
	6.6nm,0.9s,mb4.7						
BINY				*e*	pP	01 17 45.1	-4.1
VNA2	**Neumayer--Watz**	**62.20**	**161**	*e*	**P**	**01 17 25.8**	**+1.9**
VNA2	**Neumayer--Watz**	**62.20**	**161**	*e*	sP	01 17 49.8	-11
VNA2	**Neumayer--Watz**	**62.20**	**161**	*e*	PcP	01 18 00.2	-2.4
VNA2	**Neumayer--Watz**	**62.20**	**161**	⇑*i*P	**P**	**01 17 24.0**	**+0.1**
VNA2				*e*		01 17 25.8	
VNA2				*e*	pP	01 17 49.8	+0.2
VNA2				*e*		01 18 00.2	
CPRX	**Cap Rock**	**62.28**	**327**	*e*P	**P**	**01 17 24.0**	**-0.9**
CPRX				*e*PcP	PcP	01 18 04.4	+1.0
NCB	**Newcomb**	**63.70**	**356**	*e*P	**P**	**01 17 33.9**	**-0.3**
	5.1nm,0.6s,mb4.5						
SNAA	**Sanae**	**63.84**	**161**	*e*	**P**	**01 17 36.1**	**+1.5**
SNAA	**Sanae**	**63.84**	**161**	*e*	sP	01 18 00.0	-12
SNAA	**Sanae**	**63.84**	**161**	*e*	PcP	01 18 10.0	+0.7
SNAA	**Sanae**	**63.84**	**161**	P	**P**	**01 17 34.6**	**0.0**
	2.3nm,0.7s,mb4.1,baz=286,slow=5.6,SNR=25						
SNAA				pP	pP	01 18 00.7	+0.3
	2.1nm,0.8s,baz=302,slow=6.5,SNR=5.0						
SNAA	**Sanae**	**63.84**	**161**	⇑*i*P	**P**	**01 17 34.5**	**-0.1**
SNAA				*e*		01 17 36.1	
SNAA				*e*	pP	01 18 00.0	-0.4
SNAA				*e*		01 18 10.0	
BNM	**Barren Site**	**64.58**	**326**	*e*P	**P**	**01 17 38.7**	**-1.4**
BNM				*e*PcP	PcP	01 18 14.1	+1.2
ANMO	**Albuquerque**	**65.11**	**327**	P	**P**	**01 17 43.4**	**-0.2**
	2.1nm,0.7s,mb4.1,baz=149,slow=5.9,SNR=12						
RW3	**Ridgway**	**68.29**	**328**	*e*P	**P**	**01 18 03.9**	**+0.5**
DBIC	**Dimbokro**	**68.33**	**74**	P	**P**	**01 18 04.2**	**+0.2**
	20nm,0.7s,mb5.1,baz=240,slow=6.4,SNR=26						
DBIC				pP	pP	01 18 30.6	+0.4
	8.6nm,0.6s,baz=240,slow=5.8,SNR=2.6						
DBIC	**Dimbokro**	**68.33**	**74**	*e*P	**P**	**01 18 03.5**	**-0.5**
	21nm,0.6s,mb5.2						
DBIC				*e*pP	pP	01 18 31.1	+0.9
ISCO	**Idaho Springs**	**68.50**	**330**	*e*P	**P**	**01 18 04.9**	**+0.2**
	11nm,1.0s,mb4.6						
NEN	**Nelson**	**70.26**	**322**	*e*P	**P**	**01 18 16.1**	**+0.6**
NEN				*e*sP	sP	01 18 54.1	+1.3
QSPA	**South Pole Qui**	**70.32**	**180**	⇓*i*P	**P**	**01 18 16.0**	**+0.8**
	14nm,0.9s,mb4.8						
MSU	**Marysvale**	**70.81**	**325**	*e*P	**P**	**01 18 19.8**	**+1.0**
ARUT	**Antelope Range**	**70.97**	**324**	*e*P	**P**	**01 18 21.1**	**+1.3**
MPU	**Maple Canyon**	**71.63**	**327**	*e*P	**P**	**01 18 24.4**	**+0.8**
DAU	**Daniels Canyon**	**71.73**	**327**	*e*P	**P**	**01 18 23.5**	**-0.7**
DAU				*e*PcP	PcP	01 18 40.1	-2.8
TCUT	**Toone Canyon**	**72.33**	**328**	*e*P	**P**	**01 18 28.6**	**+0.9**
PDAR	**Pinedale Array**	**72.67**	**330**	P	**P**	**01 18 29.7**	**-0.1**
	1.8nm,0.8s,mb4.0,baz=146,slow=5.3,SNR=13						
TPH	**Tonopah**	**73.31**	**322**	*e*P	**P**	**01 18 34.4**	**+0.8**
TPH				*e*pP	pP	01 18 58.5	-1.6
ULM	**Lac du Bonnet**	**73.75**	**342**	P	**P**	**01 18 35.2**	**-0.7**
	10nm,0.7s,mb4.7,baz=155,slow=4.5,SNR=10						
ULM				sP	sP	01 19 13.3	-0.2
	4.0nm,0.6s,baz=162,slow=1.8,SNR=3.0						
ULM	**Lac du Bonnet**	**73.75**	**342**	P	**P**	**01 18 35.2**	**-0.7**
ULM				sP	sP	01 19 13.3	-0.2
MNV	**Mina**	**74.09**	**322**	*e*P	**P**	**01 18 37.5**	**-0.6**
	7.1nm,1.0s,mb4.3						
NVAR	**Mina Array Bea**	**74.18**	**322**	P	**P**	**01 18 39.9**	**+1.2**
	6.0nm,0.8s,mb4.4,baz=141,slow=7.5,SNR=38						
SCHQ	**Schefferville**	**74.41**	**1**	P	**P**	**01 18 39.4**	**-0.2**
	7.6nm,0.9s,mb4.4,baz=166,slow=3.5,SNR=10						
SCHQ	**Schefferville**	**74.41**	**1**	P	**P**	**01 18 39.4**	**-0.2**
LRV	**Little Rabbit**	**74.50**	**319**	*e*P	**P**	**01 18 41.8**	**+1.2**
HLID	**Hailey**	**75.64**	**328**	*e*P	**P**	**01 18 46.2**	**-0.6**
	18nm,1.1s,mb4.7						
MCMT	**McKenzie Canyo**	**75.79**	**329**	*e*P	**P**	**01 18 48.2**	**+0.5**
MCMT				*e*sP	sP	01 19 26.5	+1.0
CHMT	**Chamberlain Mo**	**77.53**	**331**	*e*P	**P**	**01 18 56.3**	**-1.0**
SYO	**Syowa Base**	**78.05**	**160**	⇑P	**P**	**01 18 59.0**	**-0.7**
VNDA	**Vanda**	**78.44**	**190**	P	**P**	**01 19 03.2**	**+1.4**
	2.1nm,0.8s,mb3.9,baz=127,slow=5.7,SNR=11						
VNDA	**Vanda**	**78.44**	**190**	P	**P**	**01 19 03.2**	**+1.4**
CROR	**Criterion Ridg**	**80.03**	**325**	P	**P**	**01 19 13.1**	**+2.1**
VFP	**Flag Point**	**80.51**	**325**	P	**P**	**01 19 15.5**	**+1.9**
FCC	**Fort Churchill**	**81.03**	**347**	*e*P	**P**	**01 19 15.7**	**-0.3**
	13nm,0.8s,mb4.8						
EDM	**Edmonton**	**82.27**	**335**	*e*P	**P**	**01 19 22.0**	**-0.5**
JCW	**Jim Creek**	**82.63**	**327**	P	**P**	**01 19 24.8**	**+0.3**
CMW	**Cultus Mountai**	**82.87**	**328**	P	**P**	**01 19 26.6**	**+0.9**
BOSA	**Boshof**	**84.26**	**118**	P	**P**	**01 19 33.9**	**+0.7**
	2.1nm,0.5s,mb4.2,baz=243,slow=20,SNR=7.9						
BOSA				pP	pP	01 20 00.3	0.0
	10nm,0.9s,baz=240,slow=4.4,SNR=5.2						
ESDC	**Sonseca Array**	**84.71**	**45**	P	**P**	**01 19 35.6**	**+0.4**
	0.6nm,0.7s,mb3.6,baz=270,slow=3.8,SNR=3.0						
ESDC				pP	pP	01 20 04.2	+2.0
	2.2nm,0.9s,baz=242,slow=5.7,SNR=3.8						
MAW	**Mawson**	**85.91**	**163**	P	**P**	**01 19 41.7**	**+1.4**
	2.3nm,0.6s,mb4.3,baz=218,slow=6.5,SNR=9.0						
MAW				pP	pP	01 20 10.4	+2.9
	2.0nm,0.6s,baz=249,slow=7.5,SNR=3.3						
YKA	**Yellowknife Ar**	**89.63**	**341**	P	**P**	**01 19 59.0**	**+0.8**
	22nm,0.7s,mb5.4,baz=134,slow=4.6,SNR=204						
YKA				pP	pP	01 20 26.9	+1.2
	4.4nm,0.8s,baz=134,slow=4.9,SNR=3.9						
YKA				sP	sP	01 20 36.8	+0.1
	4.8nm,0.8s,baz=133,slow=4.7,SNR=3.3						
YKA	**Yellowknife Ar**	**89.63**	**341**	P	**P**	**01 19 59.0**	**+0.7**
YKA				pP	pP	01 20 26.9	+1.2
YKA				sP	sP	01 20 36.8	+0.1
YKW3	**Yellowknife Ar**	**89.69**	**341**	*e*P	**P**	**01 19 59.3**	**+0.7**
YKW3				*e*pP	pP	01 20 25.6	-0.4
YKW3				*e*sP	sP	01 20 36.9	-0.1
STKA	**Stephens Creek**	**120.80**	**210**	PKP	PKPdf	01 25 51.5	-0.4
	2.5nm,0.9s,baz=12,slow=23,SNR=3.2						
WRA	**Warramunga Arr**	**134.32**	**211**	PKP	PKPdf	01 26 19.3	+1.3
	3.2nm,0.7s,baz=158,slow=1.8,SNR=40						
WRA				pPKP		01 26 47.4	
	1.1nm,0.7s,baz=156,slow=1.7,SNR=2.9						
MKAR	**Makanchi Array**	**144.34**	**35**	PKP	PKPdf	01 26 36.0	+0.8
	2.2nm,0.7s,baz=297,slow=2.7,SNR=18						
MKAR				pPKP		01 27 04.8	
	2.2nm,0.6s,baz=297,slow=2.7,SNR=3.6						
MKAR				sPKP		01 27 17.6	
	4.0nm,0.8s,slow=2.4,SNR=7.8						
MDJ	**Mudanjiang**	**150.89**	**332**	PKP	PKPdf	01 26 46.8	+0.8
MJAR	**Matsushiro Arr**	**151.00**	**311**	PKPbc	PKPdf	01 26 54.2	+7.8
	8.4nm,0.8s,baz=92,slow=1.5,SNR=24						
SONM	**Songino Array**	**151.85**	**7**	PKP	PKPdf	01 26 50.4	+3.2
	2.1nm,0.8s,baz=330,slow=0.8,SNR=14						
SONM				PKPbc	PKPdf	01 26 56.4	+9.1
	7.5nm,0.5s,baz=304,slow=1.3,SNR=45						
SONM				pPKPbc		01 27 25.1	
	2.5nm,0.6s,baz=304,slow=1.3,SNR=4.3						
GTA	**Gaotai**	**158.25**	**24**	*e*PKP	PKPdf	01 26 58.6	+2.5
GTA				XPKP		01 27 42.4	
LZH	**Lanzhou**	**162.65**	**20**	*e*PKP	PKPdf	01 27 04.5	+3.6
LZH				APKP		01 27 35.5	
LZH				XPKP		01 27 46.3	
SSE	**Sheshan**	**165.55**	**323**	*e*PKP	PKPdf	01 27 05.8	+1.9
KMI	**Kunming**	**170.72**	**54**	PKP	PKPdf	01 27 09.0	+1.6
GYA	**Guiyang**	**172.31**	**31**	*i* PKP	PKPdf	01 27 10.8	+2.5
GYA				XPKP		01 27 48.9	
GYA				PKP2	PKPab	01 28 36.8	+1.9
GYA				PP	PP	01 32 29.4	+2.6
GYA				PP	PP		
	comp=Z,100nm,8.0s						

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*MOS **14** 01:13:53.6±3.3, 51.53N×100.45E, h27^{km}, mb4.3/1, Error*
ellipse: s-maj=15.7km s-min=12.3km az=137.2

BYKL 14 01:13:53.9±0.5**,51.53N**×**100.40E,4C-7D,**
Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOY	**Mondy**	**0.39**	**69**	⇑*i*PG	Pg	01 14 01.5	-0.3
MOY				*e*		01 14 07.1	
MOY				pmax	pmax		
	comp=Z,546nm,0.1s						
MOY				smax			
	comp=N,9µm,0.1s						
MOY	**Mondy**	**0.39**	**69**	⇓*i*Pg	Pg	01 14 01.1	-0.7
	comp=N,184nm,0.8s						
MOY				⇓*i*Pg	Pg	01 14 01.1	-0.7
	comp=N,386nm,0.8s						
MOY				⇓*i*Pg	Pg	01 14 01.1	-0.7
	comp=N,551nm,0.8s						
MOY				Pmax		01 14 01.7	
	comp=N,691nm,0.6s						
MOY				*e*Sg	Sg	01 14 07.2	+0.2
MOY				Smax		01 14 09.1	
	comp=N,10µm,0.9s						
ORL	**Orlik**	**1.07**	**340**	*e*PN	Pn	01 14 13.8	-2.3
ORL				*e*		01 14 28.1	
ORL				pmax	pmax		
	comp=Z,285nm,0.2s						
ORL				smax			
	comp=E,2µm,0.4s						
ORL	**Orlik**	**1.07**	**340**	⇑*i*Pg	Pg	01 14 13.8	-1.5
	comp=E,121nm,0.7s						
ORL				⇓*i*Pg	Pg	01 14 13.8	-1.5
	comp=E,33nm,0.7s						
ORL				⇑*i*Pg	Pg	01 14 13.8	-1.5
	comp=E,150nm,0.7s						
ORL				Pmax		01 14 14.3	
	comp=E,281nm,0.3s						
ORL				*e*Sg	Sg	01 14 28.2	-1.5
ORL				Smax		01 14 28.3	
	comp=E,2µm,1.1s						
ARS	**Arshan**	**1.32**	**72**	*e*PN	Pn	01 14 17.6	-1.9
ARS				*e*		01 14 35.0	
ARS				pmax	pmax		
	comp=Z,213nm,0.2s						
ARS				smax			
	comp=E,3µm,0.2s						
ARS	**Arshan**	**1.32**	**72**	*e*Pg	Pg	01 14 17.6	-2.6
ARS				*e*		01 14 20.2	
ARS				*e*		01 14 22.6	
ARS				max		01 14 24.1	
	comp=E,246nm,0.3s						
ARS				*e*Sg	Sg	01 14 35.0	-2.8
ARS				Smax		01 14 40.5	
	comp=E,3µm,0.8s						
TLY	**Talaya**	**2.03**	**84**	*e*PN	Pn	01 14 29.9	+0.2
TLY				*e*		01 14 56.0	
TLY				pmax	pmax		
	comp=Z,122nm,0.8s						
TLY				smax			
	comp=N,904nm,0.6s						
TLY	**Talaya**	**2.03**	**84**	⇓*i*Pg	Pg	01 14 30.0	-4.4
TLY				Pmax		01 14 31.7	
	comp=N,102nm,0.5s						
TLY				*e*Sg	Sg	01 14 56.0	-5.4
TLY				Smax		01 15 00.0	
	comp=N,910nm,0.7s						
ZAK	**Zakamensk**	**2.15**	**121**	⇓*i*PN	Pn	01 14 31.8	+0.3
ZAK				*e*		01 15 01.4	
ZAK				pmax	pmax		
	comp=Z,594nm,0.7s						
ZAK				smax			
	comp=N,696nm,0.7s						
ZAK	**Zakamensk**	**2.15**	**121**	⇓*i*Pg	Pg	01 14 31.8	-5.1
ZAK				Pmax		01 14 32.1	
	comp=N,469nm,0.5s						
ZAK				*e*Sg	Sg	01 15 01.1	-4.5
ZAK				Smax		01 15 05.8	
	comp=N,564nm,0.5s						
IRK	**Irkutsk**	**2.50**	**72**	*e*PN	Pn	01 14 37.5	+1.0
IRK				*e*		01 15 10.3	
IRK				pmax	pmax		
	comp=Z,201nm,0.1s						
IRK				smax			
	comp=N,3µm,1.0s						
IRK	**Irkutsk**	**2.50**	**72**	*e*Pg	Pg	01 14 38.5	-5.4
IRK				Pmax		01 14 45.8	
	comp=N,243nm,0.3s						
IRK				*e*Sg	Sg	01 15 09.9	-7.3
IRK				Smax		01 15 12.1	
	comp=N,3µm,1.0s						
LSTR	**Listvyanka**	**2.78**	**81**	*e*PN	Pn	01 14 42.9	+2.5
LSTR				*e*		01 15 18.5	
LSTR				pmax	pmax		
	comp=Z,52nm,0.9s						
LSTR				smax			
	comp=N,851nm,1.3s						
LSTR	**Listvyanka**	**2.78**	**81**	*e*Pn	Pn	01 14 39.8	-0.6
LSTR				*e*Pg	Pg	01 14 42.9	-6.5
LSTR				Pmax		01 14 46.5	
	comp=N,55nm,1.2s						
LSTR				*e*Sg	Sg	01 15 18.5	-7.9
LSTR				Smax		01 15 20.0	
	comp=N,845nm,1.3s						
TDJR	**Todzha**	**2.80**	**290**	*e*Pg	Pg	01 14 43.2	-6.6
TDJR				*e*Sg	Sg	01 15 22.1	-5.0
TSC	**Tosontsengel**	**3.09**	**207**	*e*Pn	Pn	01 14 43.9	-1.0
TSC				*e*Pg	Pg	01 14 47.2	-8.4
TSC				*e*Sg	Sg	01 15 29.6	-7.2
TRG	**Tyrgan**	**3.87**	**69**	*e*PN	Pn	01 15 01.9	+6.0
TRG				*e*		01 15 51.8	

TRG				pmax	pmax		
	comp=Z,44nm,0.3s						
TRG				smax			
	comp=N,355nm,0.5s						
TRG	**Tyrgan**	**3.87**	**69**	*e*Pn	Pn	01 14 58.0	+2.1
TRG				*e*Pg	Pg	01 15 01.9	-9.2
TRG				Pmax		01 15 06.8	
	comp=N,44nm,0.4s						
TRG				*e*Sg	Sg	01 15 51.9	-11
TRG				Smax		01 16 00.0	
	comp=N,360nm,0.9s						
KAB	**Kabansk**	**3.92**	**80**	*e*Pn	Pn	01 14 57.7	+1.1
KAB				max		01 14 58.4	
	comp=N,218nm,0.3s						
KAB				*e*Sg	Sg	01 15 54.0	-10
KAB				Smax		01 16 00.0	
	comp=N,1μm,0.9s						
FFNB	**Fofonovo**	**3.98**	**80**	*e*Pg	Pg	01 15 05.1	-8.4
FFNB				*e*		01 15 09.6	
FFNB				max		01 15 09.9	
	comp=N,41nm,0.2s						
FFNB				*e*Sg	Sg	01 15 55.2	-11
FFNB				Smax		01 15 59.6	
	comp=N,671nm,0.6s						
ZRHB	**Zarechye**	**4.29**	**74**	*e*Pg	Pg	01 15 11.2	-8.4
ZRHB				*e*Sg	Sg	01 16 06.8	-10
OGRR	**Ongureny**	**4.87**	**61**	*e*	Pn	01 15 10.7	+0.5
OGRR				Pg	Pg	01 15 19.8	-11
OGRR				*e*		01 15 22.5	
OGRR				max		01 15 27.6	
	comp=N,30nm,0.6s						
OGRR				*e*Sg	Sg	01 16 24.0	-12
OGRR				Smax		01 16 27.3	
	comp=N,648nm,1.2s						
MXMB	**Maximikha**	**5.40**	**68**	*e*Pn	Pn	01 15 17.8	+0.2
MXMB				*e*Pg	Pg	01 15 32.1	-10
MXMB				Pmax		01 15 35.3	
	comp=N,17nm,0.5s						
MXMB				*e*Sn	Sn	01 16 18.6	-2.8
MXMB				*e*Sg	Sg	01 16 41.6	-12
MXMB				Smax		01 16 42.4	
	comp=N,444nm,1.3s						
ULN	**Ulaanbaatar**	**5.66**	**128**	*i* PN	Pn	01 15 18.4	-3.0
ULN	**Ulaanbaatar**	**5.66**	**128**	*e*Pg	Pg	01 15 34.3	-13
ULN				*e*Sg	Sg	01 16 50.0	-12
EBM	**Esen Bulak**	**5.82**	**210**	*e*Pg	Pg	01 15 36.7	-13
EBM				*e*Sg	Sg	01 16 54.2	-14
SYVR	**Suvo**	**6.23**	**66**	*e*Pg	Pg	01 15 46.1	-12
SYVR				*e*Sg	Sg	01 17 05.4	-16
SYVR				Smax		01 17 10.0	
	comp=N,150nm,2.0s						
NIZ	**Nizh Angarsk**	**6.90**	**48**	*e*PN	Pn	01 15 38.9	+0.1
NIZ				*e*S	Sn	01 17 27.9	+29
NIZ				smax			
	comp=N,139nm,1.0s						
NIZ	**Nizh Angarsk**	**6.90**	**48**	*i* Pn	Pn	01 15 39.0	+0.2
NIZ				max		01 15 47.2	
	comp=N,16nm,1.0s						
NIZ				⇑*e*Pg	Pg	01 15 58.8	-13
NIZ				*e*		01 16 53.6	
NIZ				*e*Sg	Sg	01 17 27.9	-16
NIZ				Smax		01 17 29.8	
	comp=N,235nm,1.7s						
YLYR	**Ulyunkhan**	**7.28**	**58**	*e*PN	Pn	01 15 44.7	+0.6
YLYR				*e*S	Sn	01 17 37.6	+29
YLYR				smax			
	comp=E,450nm,2.1s						
YLYR	**Ulyunkhan**	**7.28**	**58**	*e*Pn	Pn	01 15 43.7	-0.4
YLYR				*e*Sn	Sn	01 17 06.4	-2.1
YLYR				*e*Sg	Sg	01 17 40.0	-16
YLYR				Smax		01 17 42.1	
	comp=E,463nm,2.1s						
KMO	**Kumora**	**7.75**	**52**	*e*Pn	Pn	01 15 49.7	-1.0
KMO				max		01 16 09.1	
	comp=E,15nm,0.4s						
KMO				*e*Sn	Sn	01 17 15.5	-4.8
KMO				*e*Sg	Sg	01 17 53.7	-18
KMO				Smax		01 18 03.7	
	comp=E,214nm,1.4s						
KPC	**Khapcheranga**	**7.84**	**99**	*e*Pg	Pg	01 16 14.0	-16
KPC				Pmax		01 16 20.9	
	comp=E,4.0nm,0.3s						
KPC				*e*Sg	Sg	01 17 54.9	-20
KPC				Smax		01 18 00.8	
	comp=E,198nm,2.1s						
CIT	**Chita**	**8.18**	**81**	*e*	P	01 16 09.2	+13
CIT				*e*Sg	Sg	01 18 07.0	-19
CIT				Smax		01 18 23.6	
	comp=E,98nm,1.4s						
UKT	**Uakit**	**8.82**	**58**	Pn	P	01 16 04.6	-1.0
UKT				max		01 16 26.4	
	comp=E,4.0nm,1.0s						
UKT				*e*Pg	P	01 16 31.7	+26
UKT				*e*Sg	Sg	01 18 27.6	-20
UKT				Smax		01 18 49.0	
	comp=E,74nm,1.8s						
NLYR	**Nelyaty**	**10.28**	**55**	*e*Sg	S	01 19 13.3	+51
NLYR				Smax		01 19 26.5	
	comp=E,85nm,1.4s						
CRS	**Chara**	**11.75**	**56**	*e*Sg	S	01 19 58.6	+60
CRS				Smax		01 20 11.1	
	comp=E,85nm,2.1s						
TUP	**Tupik**	**12.13**	**69**	*e*Sg	S	01 20 07.2	+59
TUP				Smax		01 20 33.7	
	comp=E,60nm,1.8s						
TIXI	**Tiksi**	**23.85**	**22**	*e*P	P	01 19 03.7	-5.3
SOC	**Sochi**	**40.65**	**283**	*e*P	P	01 21 30.4	-6.7
SOC				*e*		01 23 05.1	
SOC				*e*		01 23 41.6	
SOC				*e*S	S	01 27 38.4	-9.4
SOC				*e*SS	SS	01 30 37.0	-4.9
SOC				*e*		01 31 27.4	

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*NEIC **14** 01:21:56.9±1.4,20.12S×68.76W,h126^{km}±31^{km},mb3.5/4, Error ellipse: s-maj=19.1km s-min=16.8km az=142.0*

*IDC **14** 01:21:58.5±2.4,19.98S×68.64W,h136^{km}±25^{km},mb3.3/4, mb1 3.6/7,mb1mx3.4/20,mbtmp3.9/7,Error ellipse: s-maj=33.1km s-min=17.5km az=73.0*

ISC 14 01:21:55.8±1.4**,20.12S**±0.09×**68.8W**±0.1**,h128**^{km}±18^{km}**, n14,**σ**1**^{s}**15**/16**,mb3.9**/3**,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.85**	**9**	P	**P**	**01 22 56.4**	**+1.8**
	3.4nm,0.3s,baz=193,slow=8.2,SNR=38						
LPAZ				S	**S**	**01 23 38.6**	**-1.0**
	1.3nm,0.3s,baz=218,slow=18,SNR=2.5						
LPAZ	**La Paz**	**3.85**	**9**	*e*Pn	**P**	**01 22 56.2**	**+1.6**
ARE	**Arequipa**	**4.47**	**324**	*e*P	**P**	**01 23 02.0**	**-0.9**
ARE				*e*S	**S**	**01 23 49.0**	**-5.4**
SIV	**San Ignacio**	**8.38**	**62**	P	**P**	**01 23 55.9**	**+0.3**
	3.3nm,0.3s,baz=259,slow=11,SNR=50						
CPUP	**Villa Florida**	**12.18**	**123**	P	**P**	**01 24 46.3**	**+0.3**
	0.1nm,0.3s,baz=323,slow=15,SNR=7.1						
CPUP	**Villa Florida**	**12.18**	**123**	*e*Pn	**P**	**01 24 46.1**	**+0.1**
	1.2nm,0.6s						
SAML	**Samuel**	**12.34**	**27**	*e*Pn	**P**	**01 24 49.1**	**+0.9**
	1.1nm,0.6s						
TRQA	**Tornquist**	**18.82**	**163**	*e*P	**P**	**01 26 05.7**	**-2.3**
	0.8nm,0.6s						
BDFB	**Brasilia**	**20.23**	**81**	P	**P**	**01 26 21.6**	**-1.2**
	2.6nm,0.7s,baz=254,slow=12,SNR=3.5						
PLCA	**Paso Flores**	**20.61**	**184**	P	**P**	**01 26 28.6**	**+2.1**
	2.3nm,0.8s,baz=350,slow=10,SNR=5.6						
PLCA	**Paso Flores**	**20.61**	**184**	*e*P	**P**	**01 26 28.0**	**+1.5**
	0.7nm,0.5s						
SDV	**Santo Domingo**	**28.88**	**356**	*e*P	**P**	**01 27 50.3**	**+5.5**
	6.4nm,0.4s,mb4.7						
SNAA	**Sanae**	**63.53**	**161**	P	**P**	**01 32 14.4**	**+0.1**
	0.2nm,0.6s,mb3.1,baz=260,slow=10,SNR=8.1						
YKA	**Yellowknife Ar**	**89.94**	**341**	P	**P**	**01 34 41.5**	**+0.2**
	1.1nm,0.6s,mb4.0,baz=133,slow=4.7,SNR=12						

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*CRAAG **14** 01:21:58.8,18.40S×174.73W,Mb6.1*

*MOS **14** 01:22:05.7±0.8,18.57S×174.74W,h92^{km},mb5.9/40, MS5.5/32,Error ellipse: s-maj=8.8km s-min=6.2km az=67.3*

*BJI **14** 01:22:10.5,18.53S×174.05W,h150^{km},mB6.4,mb5.8*

*NEIC **14** 01:22:12.1±0.8,18.72S×174.72W,h144^{km}±7^{km},mb5.7/82, Error ellipse: s-maj=5.0km s-min=3.2km az=131.0*

NEIC Felt at Nuku‘alofa.

*IDC **14** 01:22:12.5±0.5,18.74S×174.79W,h144^{km}±4^{km},mb5.4/25, mb1 5.5/26,mb1mx5.5/26,mbtmp5.8/26,Error ellipse: s-maj=11.0km s-min=8.0km az=153.0*

ISC 14 01:22:11.4±0.1**,18.76S**±0.03×**174.72W**±0.03**,h150**^{km}**, h150**^{km}±1.9^{km}**:pP-P,n1093,**σ**0**^{s}**99**/387**,mb5.6**/121**, 177C-28D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.59**	**31**	P	**P**	**01 23 26.1**	**-7.5**
AFI				S	**S**	**01 24 20.7**	**-17**
AFI				pmax	pmax		
	comp=Z,359nm,0.3s						
AFI	**Afiamalu**	**5.59**	**31**	P	**P**	**01 23 26.1**	**-7.5**
	comp=Z,359nm,0.3s,baz=272,slow=0.5,SNR=88						
AFI				S	**S**	**01 24 20.7**	**-17**
	comp=Z,1μm,0.3s,baz=222,slow=21,SNR=18						
AFI	**Afiamalu**	**5.59**	**31**	*e*P	**P**	**01 23 25.2**	**-8.4**
	comp=Z,10μm,0.7s						
AFI				*e*S	**S**	**01 24 19.1**	**-18**
RAO	**Raoul Island**	**10.84**	**195**	*e*P	**P**	**01 24 41.2**	**-2.2**
RAO				pmax	pmax		
	comp=Z,4μm,0.9s						
RAO	**Raoul Island**	**10.84**	**195**	P	**P**	**01 24 41.2**	**-2.1**
	comp=Z,541nm,0.3s,baz=91,slow=24,SNR=13						
RAO				S	**S**	**01 26 36.1**	**-6.4**
	comp=Z,908nm,0.3s,baz=80,slow=23,SNR=17						
RAO	**Raoul Island**	**10.84**	**195**	*e*P	**P**	**01 24 41.2**	**-2.1**
	comp=Z,4μm,0.9s						
RAR	**Rarotonga**	**14.26**	**102**	*e*P	**P**	**01 25 21.2**	**-6.4**
RAR				*e*S	**S**	**01 27 53.6**	**-8.7**
RAR				pmax	pmax		
	comp=Z,3μm,1.5s						
RAR	**Rarotonga**	**14.26**	**102**	*e*P	**P**	**01 25 21.2**	**-6.4**
	comp=Z,3μm,1.5s						
RAR				*e*S	**S**	**01 27 53.6**	**-8.7**
DZM	**Mont Dzumac**	**17.96**	**256**	*e*P	**P**	**01 26 13.8**	**+0.8**
DZM	**Mont Dzumac**	**17.96**	**256**	P	**P**	**01 26 13.0**	**+0.1**
	comp=Z,6.1nm,0.3s,baz=83,slow=13,SNR=71						
DZM				S	**S**	**01 29 31.2**	**+5.9**
	comp=Z,0.6nm,0.3s,baz=106,slow=20,SNR=1.4						
DZM	**Mont Dzumac**	**17.96**	**256**	*e*P	**P**	**01 26 13.8**	**+0.8**
NOUC	**Port Laguerre**	**18.09**	**256**	*e*P	**P**	**01 26 15.2**	**+0.9**
NOUC	**Port Laguerre**	**18.09**	**256**	*e*P	**P**	**01 26 15.2**	**+0.9**
OUZ	**Omahuta**	**19.39**	**210**	*e*P	**P**	**01 26 28.3**	**+0.3**
OUZ				S	**S**	**01 30 08.0**	**+14**
OUZ	**Omahuta**	**19.39**	**210**	PN	**P**	**01 26 28.4**	**+0.4**
WIZ	**White Island**	**19.99**	**199**	PN	**P**	**01 26 35.1**	**+1.0**
MTAZ	**Motutapu**	**20.14**	**205**	P	**P**	**01 26 37.0**	**+1.4**
MTAZ	**Motutapu**	**20.14**	**205**	PN	**P**	**01 26 37.0**	**+1.3**
PUZ	**Puketiti**	**20.19**	**196**	*e*P	**P**	**01 26 36.9**	**+0.8**
PUZ	**Puketiti**	**20.19**	**196**	PN	**P**	**01 26 36.8**	**+0.6**
PUZ				SN	**S**	**01 30 06.2**	**-3.0**
MKAZ	**Moumakai**	**20.32**	**204**	P	**P**	**01 26 38.7**	**+1.3**
MKAZ	**Moumakai**	**20.32**	**204**	PN	**P**	**01 26 38.7**	**+1.3**
WTAZ	**Waiatarua**	**20.40**	**205**	P	**P**	**01 26 39.4**	**+1.2**
WTAZ	**Waiatarua**	**20.40**	**205**	PN	**P**	**01 26 39.6**	**+1.3**
MWZ	**Matawai**	**20.64**	**198**	*e*P	**P**	**01 26 40.4**	**-0.2**
MWZ	**Matawai**	**20.64**	**198**	*e*PN	**P**	**01 26 39.3**	**-1.4**
LIRZ	**Lichensteins R**	**20.68**	**200**	P	**P**	**01 26 42.5**	**+1.4**
LIRZ	**Lichensteins R**	**20.68**	**200**	PN	**P**	**01 26 42.5**	**+1.4**
URZ	**Urewera**	**20.69**	**198**	P	**P**	**01 26 40.4**	**-0.7**
	comp=Z,471nm,0.3s,baz=11,slow=5.1,SNR=102						
URZ				S	**S**	**01 30 17.2**	**-1.3**
	comp=Z,310nm,0.6s,baz=264,slow=23,SNR=11						
PATZ	**Paeroa**	**21.07**	**200**	P	**P**	**01 26 47.4**	**+2.5**
HIZ	**Hauiti**	**21.67**	**203**	*e*P	**P**	**01 26 53.3**	**+2.5**
HIZ				S	**S**	**01 30 46.6**	**+10**
HIZ	**Hauiti**	**21.67**	**203**	PN	**P**	**01 26 53.3**	**+2.5**
BKZ	**Black Stump Fm**	**21.71**	**199**	*e*PN	**P**	**01 26 50.8**	**-0.5**
OTVZ	**Oturere**	**21.97**	**200**	PN	**P**	**01 26 52.7**	**-1.0**
TUVZ	**Tukino**	**22.07**	**200**	P	**P**	**01 26 53.8**	**-0.9**
TUVZ	**Tukino**	**22.07**	**200**	PN	**P**	**01 26 53.8**	**-0.9**
FWVZ	**Far West T-bar**	**22.09**	**200**	*e*PN	**P**	**01 26 54.0**	**-0.9**
WNVZ	**Wahianoa**	**22.14**	**200**	PN	**P**	**01 26 54.3**	**-1.1**
MOVZ	**Moawhango**	**22.16**	**200**	P	**P**	**01 26 54.1**	**-1.5**
MOVZ	**Moawhango**	**22.16**	**200**	PN	**P**	**01 26 54.0**	**-1.6**
VRZ	**Vera Road**	**22.25**	**202**	*e*P	**P**	**01 26 57.6**	**+1.1**
VRZ	**Vera Road**	**22.25**	**202**	PN	**P**	**01 26 58.7**	**+2.2**
RAEZ	**Rainy Point**	**22.52**	**202**	PN	**P**	**01 27 00.6**	**+1.5**
PKE	**Pukeiti**	**22.59**	**203**	PN	**P**	**01 27 02.4**	**+2.6**
NEZ	**North Egmont**	**22.62**	**203**	PN	**P**	**01 27 02.3**	**+2.2**
TSZ	**Takapari Road**	**22.69**	**199**	*e*P	**P**	**01 27 00.3**	**-0.5**
TSZ	**Takapari Road**	**22.69**	**199**	*e*PN	**P**	**01 27 00.4**	**-0.4**
TSZ				SN	**S**	**01 30 57.8**	**+3.7**
BFZ	**Birch Farm**	**23.18**	**198**	*e*P	**P**	**01 27 06.4**	**+0.9**
BFZ	**Birch Farm**	**23.18**	**198**	PN	**P**	**01 27 06.6**	**+1.0**
BFZ				SN	**S**	**01 31 08.4**	**+6.0**
MRZ	**Mangatainoka R**	**23.36**	**199**	*e*P	**P**	**01 27 06.1**	**-1.2**
MRZ	**Mangatainoka R**	**23.36**	**199**	*e*PN	**P**	**01 27 05.9**	**-1.3**
MRZ				SN	**S**	**01 31 06.6**	**+1.1**
KIW	**Kapiti Island**	**23.75**	**200**	PN	**P**	**01 27 10.4**	**-0.6**
PPT	**Papeete**	**23.92**	**91**	P	**P**	**01 27 12.1**	**-0.7**
	comp=Z,174nm,0.9s,mb5.6,baz=295,slow=2.9,SNR=10						
CAW	**Cannon Point**	**23.93**	**199**	PN	**P**	**01 27 11.5**	**-1.1**
DUWZ	**D’Urville Isla**	**24.03**	**202**	PN	**P**	**01 27 11.5**	**-2.2**
MSWZ	**Moikau Station**	**24.15**	**199**	PN	**P**	**01 27 13.5**	**-1.3**
SNZO	**South Karori**	**24.22**	**200**	*e*P	**P**	**01 27 14.2**	**-1.3**
	comp=Z,326nm,0.9s,mb5.9						
SNZO				LR	LR		
	comp=Z,6μm,22.0s						
SNZO	**South Karori**	**24.22**	**200**	PN	**P**	**01 27 14.3**	**-1.2**
TCW	**Tory Channel**	**24.28**	**201**	PN	**P**	**01 27 14.8**	**-1.2**
QRZ	**Quartz Range**	**24.56**	**204**	*e*P	**P**	**01 27 19.3**	**+0.6**
QRZ	**Quartz Range**	**24.56**	**204**	PN	**P**	**01 27 18.6**	**-0.1**
TUWZ	**Tuamarina**	**24.58**	**201**	PN	**P**	**01 27 17.3**	**-1.6**
NNZ	**Nelson**	**24.59**	**202**	PN	**P**	**01 27 17.0**	**-1.9**
THZ	**Tophouse**	**25.24**	**202**	PN	**P**	**01 27 24.1**	**-0.9**
THZ				SN	**S**	**01 31 40.0**	**+2.9**
KHZ	**Kahutara**	**25.60**	**200**	PN	**P**	**01 27 27.3**	**-1.1**
HNR	**Honiara**	**26.23**	**287**	P	**P**	**01 27 33.8**	**-0.7**
	comp=Z,266nm,0.8s,mb5.9,baz=254,slow=2.0,SNR=4.1						
HNR	**Honiara**	**26.23**	**287**	P	**P**	**01 27 33.8**	**-0.7**
HNR				LR	LR		
	comp=Z,7μm,22.0s						
LTZ	**Lake Taylor**	**26.36**	**202**	*e*P	**P**	**01 27 33.1**	**-2.3**
LTZ	**Lake Taylor**	**26.36**	**202**	PN	**P**	**01 27 33.3**	**-2.0**
RPZ	**Rata Peaks**	**27.61**	**203**	P	**P**	**01 27 45.1**	**-1.7**
	comp=Z,83nm,0.5s,mb5.7,baz=21,slow=0.8,SNR=30						
FOZ	**Fox Glacier**	**28.00**	**205**	PN	**P**	**01 27 46.4**	**-3.9**
MSZ	**Milford Sound**	**29.62**	**206**	PN	**P**	**01 28 02.4**	**-2.4**
KWAJ	**Kwajalein Atol**	**32.47**	**326**	PFAKE		01 28 40.0	+10
KWAJ				LR	LR		
	comp=Z,2μm,20.0s						
CNB	**Canberra Magne**	**35.75**	**235**	⇑*i*P	**P**	**01 28 57.4**	**-0.2**
	comp=Z,154nm,0.7s,mb5.7						
CNB				*i* PCP	PcP	01 31 24.1	+1.5
CNB				*e*S	**S**	**01 34 23.0**	**+0.1**
CTA	**Charters Tower**	**36.77**	**261**	⇑*i*P	**P**	**01 29 06.2**	**-0.2**
	comp=Z,435nm,0.4s,mb6.4						
CTA				*i* PCP	PcP	01 31 26.7	+0.9
CTA				*e*S	**S**	**01 34 38.4**	**-0.1**
CTAO	**Charters Tower**	**36.77**	**261**	⇑*e*P	**P**	**01 29 06.0**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,460nm,0.5s,mb6.4						
CTAO				MLR	MLR		
	comp=Z,6μm,20.0s						
CTAO	**Charters Tower**	**36.77**	**261**	⇑*e*P	**P**	**01 29 06.0**	**-0.3**
	comp=Z,460nm,0.5s,mb6.4						
CTAO				LR	LR		
	comp=Z,6μm,20.0s						
PMG	**Port Moresby**	**38.05**	**279**	*e*P	**P**	**01 29 17.2**	**0.0**
PMG				*e*		01 31 30.5	
PMG				pmax	pmax		
	comp=Z,269nm,0.8s						
PMG				MLR	MLR		
	comp=Z,10μm,22.0s						
PMG	**Port Moresby**	**38.05**	**279**	P	**P**	**01 29 17.4**	**+0.2**
	comp=Z,237nm,0.8s,mb5.9,baz=92,slow=6.1,SNR=56						
PMG	**Port Moresby**	**38.05**	**279**	*e*P	**P**	**01 29 17.2**	**+0.1**
	comp=Z,269nm,0.8s,mb5.9						
PMG				*e*PcP	PcP	01 31 30.5	+0.7
PMG				LR	LR		
	comp=Z,10μm,22.0s						
TOO	**Toolangi**	**39.41**	**233**	⇑*i*P	**P**	**01 29 27.2**	**-1.0**
	comp=Z,63nm,0.8s,mb5.3						
TOO				*i* PCP	PcP	01 31 37.1	+3.2
TOO	**Toolangi**	**39.41**	**233**	⇑*i*P	**P**	**01 29 27.2**	**-1.0**
TOO				*i*		01 31 37.1	
TOO				pmax	pmax		
	comp=Z,63nm,0.8s,mb5.3						
TAU	**Tasmania Unive**	**40.02**	**225**	*e*P	**P**	**01 29 32.7**	**-0.5**
TAU				pmax	pmax		
	comp=Z,143nm,1.3s,mb5.4						
TAU				MLR	MLR		
	comp=Z,1μm,22.0s						
TAU	**Tasmania Unive**	**40.02**	**225**	*e*P	**P**	**01 29 32.7**	**-0.5**
	comp=Z,143nm,1.3s,mb5.4						
TAU				LR	LR		
	comp=Z,1μm,22.0s						
STKA	**Stephens Creek**	**41.33**	**243**	⇑*i*P	**P**	**01 29 43.7**	**-0.3**
	comp=Z,133nm,1.1s,mb5.5						
STKA				*i* PCP	PcP	01 31 41.2	+1.1
STKA				*i* S	**S**	**01 35 31.3**	**-15**
STKA	**Stephens Creek**	**41.33**	**243**	P	**P**	**01 29 43.8**	**-0.2**
	comp=Z,317nm,1.2s,mb5.8,baz=85,slow=9.0,SNR=78						
STKA				S	**S**	**01 35 44.6**	**-2.0**
	comp=Z,6.3nm,0.8s,baz=263,slow=18,SNR=2.9						
PTCN	**Pitcairn Islan**	**41.73**	**107**	PFAKE		01 30 00.0	+13
PTCN				LR	LR		
	comp=Z,10μm,19.0s						
WAKE	**Wake Island**	**42.00**	**333**	*e*P	**P**	**01 29 48.6**	**-1.1**
	comp=Z,734nm,0.6s,mb6.5						
WAKE				LR	LR		
	comp=Z,7μm,22.0s						
POHA	**Pohakuloa**	**42.66**	**27**	PFAKE		01 30 10.0	+15
POHA				LR	LR		
	comp=Z,28μm,22.0s						
KIP	**Kipapa**	**43.16**	**23**	*e*P	**P**	**01 29 57.6**	**-1.4**
KIP				pmax	pmax		
	comp=Z,361nm,1.1s,mb5.9						
KIP				MLR	MLR		
	comp=Z,4μm,20.0s						
KIP	**Kipapa**	**43.16**	**23**	*e*P	**P**	**01 29 57.6**	**-1.5**
	comp=Z,361nm,1.1s,mb5.9						
KIP				LR	LR		
	comp=Z,4μm,20.0s						
ADE	**Adelaide**	**44.16**	**239**	*e*P	**P**	**01 30 06.5**	**-0.4**
MIDW	**Midway**	**46.77**	**357**	*e*P	**P**	**01 30 26.1**	**-1.6**
	comp=Z,418nm,1.3s,mb5.9						
MIDW				LR	LR		
	comp=Z,4μm,20.0s						
WB2	**Warramunga Arr**	**47.91**	**260**	⇑*i*P	**P**	**01 30 35.5**	**-1.2**
WB2				*i* S	**S**	**01 37 18.4**	**-2.9**
WB2				*i* SCS	ScS	01 40 20.9	+10
WRAB	**Tennant Creek**	**47.92**	**260**	⇑*i*P	**P**	**01 30 35.5**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,505nm,0.7s,mb6.3						
WRAB				MLR	MLR		
	comp=Z,2μm,22.0s						
WRAB	**Tennant Creek**	**47.92**	**260**	⇑*i*P	**P**	**01 30 35.5**	**-1.2**
	comp=Z,505nm,0.7s,mb6.3						
WRAB				LR	LR		
	comp=Z,2μm,22.0s						
WRA	**Warramunga Arr**	**47.93**	**260**	P	**P**	**01 30 35.8**	**-1.0**
	comp=Z,255nm,0.5s,mb6.1,baz=98,slow=6.4,SNR=909						
WRA				S	**S**	**01 37 18.3**	**-3.1**
	comp=Z,25nm,0.8s,baz=95,slow=13,SNR=11						
KAKA	**Kakadu**	**51.07**	**269**	⇑*i*P	**P**	**01 30 59.7**	**-1.1**
	comp=Z,659nm,0.6s,mb6.4						
KAKA				*e*S	**S**	**01 38 01.6**	**-3.5**
GUMO	**Guam**	**51.18**	**306**	*e*P	**P**	**01 31 00.9**	**-0.8**
GUMO				*e*		01 32 15.6	
GUMO				pmax	pmax		
	comp=Z,1μm,1.2s,mb6.3						
GUMO	**Guam**	**51.18**	**306**	*e*P	**P**	**01 31 00.9**	**-0.8**
	comp=Z,1μm,1.2s,mb6.3						
GUMO				*e*PcP	PcP	01 32 15.6	+0.5
FITZ	**Fitzroy Crossi**	**56.34**	**260**	S	**S**	**01 39 17.8**	**+1.8**
	comp=Z,14nm,1.0s,baz=281,slow=15,SNR=7.0						
SBA	**Scott Base**	**59.81**	**184**	⇑*e*P	**P**	**01 32 04.5**	**+1.7**
SBA				e*PP	pP	01 32 37.8	-0.5
SBA				pmax	pmax		
	comp=Z,188nm,0.8s,mb6.0						
SBA				MLR	MLR		
	comp=Z,3μm,21.0s						
SBA	**Scott Base**	**59.81**	**184**	⇑*e*P	**P**	**01 32 04.5**	**+1.7**
	comp=Z,188nm,0.8s,mb6.0						
SBA				*e*pP	pP	01 32 37.8	-0.5
SBA				LR	LR		
	comp=Z,3μm,21.0s						
VNDA	**Vanda**	**59.92**	**186**	⇑*i*P	**P**	**01 32 04.5**	**+1.0**
VNDA				*PP	pP	01 32 38.4	-0.6
VNDA				pmax	pmax		
	comp=Z,74nm,0.8s						
VNDA				MLR	MLR		
	comp=Z,2μm,20.0s						
VNDA	**Vanda**	**59.92**	**186**	P	**P**	**01 32 04.6**	**+1.1**
	comp=Z,70nm,0.7s,mb5.6,baz=7.3,slow=6.8,SNR=174						
VNDA				pP	pP	01 32 38.7	-0.3
	comp=Z,61nm,1.0s,baz=8.4,slow=8.6,SNR=4.6						
VNDA	**Vanda**	**59.92**	**186**	⇑*i*P	**P**	**01 32 04.5**	**+1.0**
	comp=Z,74nm,0.8s,mb5.6						
VNDA				*e*pP	pP	01 32 38.4	-0.6
VNDA				LR	LR		
	comp=Z,2μm,20.0s						
MBWA	**Marble Bar**	**61.26**	**256**	⇑*e*P	**P**	**01 32 11.6**	**-1.8**
	comp=Z,240nm,1.0s,mb6.0						
MBWA				LR	LR		
	comp=Z,8μm,22.0s						
NWAO	**Narrogin (SRO)**	**61.91**	**242**	P	**P**	**01 32 16.8**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,66nm,0.9s						
NWAO	**Narrogin (SRO)**	**61.91**	**242**	*e*P	**P**	**01 32 16.4**	**-1.1**
	comp=Z,71nm,0.8s,mb5.5						
NWAO				LR	LR		
	comp=Z,4μm,20.0s						
BUKP	**Musuan**	**65.00**	**288**	*e*P	**P**	**01 32 38.0**	**-0.1**
CGP	**Cagayan de Oro**	**65.57**	**289**	⇓*e*P	**P**	**01 32 42.4**	**+0.6**
MSLP	**Maasin**	**66.13**	**291**	*e*P	**P**	**01 32 44.5**	**-0.8**
PAGZ	**Pagadian**	**66.50**	**288**	*e*P	**P**	**01 32 47.3**	**-0.4**
CASY	**Casey**	**66.84**	**205**	⇑*i*P	**P**	**01 32 49.0**	**+0.1**
SNPH	**Sibulan**	**67.24**	**289**	*e*P	**P**	**01 32 51.4**	**-0.9**
CNP	**Catarman**	**67.34**	**293**	*e*P	**P**	**01 32 52.4**	**-0.5**
PVCP	**Virac**	**68.27**	**294**	*e*P	**P**	**01 32 58.1**	**-0.5**
GUIM	**Jordan**	**68.36**	**290**	*e*P	**P**	**01 32 57.1**	**-2.1**
OTRP	**Odiongan**	**69.60**	**291**	*e*P	**P**	**01 33 05.5**	**-1.3**
CUYO	**Cuyo Island**	**69.85**	**290**	*e*P	**P**	**01 33 07.7**	**-0.6**
TSM	**Tawau**	**70.17**	**282**	P	**P**	**01 33 11.1**	**+0.8**
BOAC	**Boac**	**70.23**	**292**	*e*P	**P**	**01 33 10.7**	**+0.1**
KIWB	**Kanaga Island**	**70.34**	**358**	*e*P	**P**	**01 33 10.0**	**-0.7**
SJMP	**San Jose**	**70.44**	**291**	*e*P	**P**	**01 33 11.9**	**+0.1**
MJAR	**Matsushiro Arr**	**70.72**	**321**	P	**P**	**01 33 12.5**	**-0.7**
	comp=Z,170nm,0.7s,mb5.9,baz=160,slow=6.5,SNR=265						
MJAR				pP	pP	01 33 50.9	+1.2
	comp=Z,36nm,1.0s,baz=156,slow=5.3,SNR=1.6						
MJAR				PKPPKP		02 01 08.0	
	comp=Z,0.8nm,0.3s,baz=270,slow=2.9,SNR=5.7						
MJAR	**Matsushiro Arr**	**70.72**	**321**	P	**P**	**01 33 12.5**	**-0.7**
MJAR				pP	pP	01 33 50.9	+1.2
MJAR				P’P’		02 01 08.0	
MAJO	**Matsushiro**	**70.72**	**321**	⇑*i*P	**P**	**01 33 12.7**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,243nm,0.8s,mb6.0						
MAJO				MLR	MLR		
	comp=Z,3μm,21.0s						
MAJO	**Matsushiro**	**70.72**	**321**	⇑*i*P	**P**	**01 33 12.7**	**-0.5**
	comp=Z,243nm,0.8s,mb6.0						
MAJO				LR	LR		
	comp=Z,3μm,21.0s						
MAT	**Matsushiro**	**70.72**	**321**	*e*P	**P**	**01 33 13.0**	**-0.2**
MAT				pmax	pmax		
	comp=Z,178nm,0.7s,mb5.9						
MAT	**Matsushiro**	**70.72**	**321**	*e*P	**P**	**01 33 13.0**	**-0.2**
	comp=Z,178nm,0.7s,mb5.9						
MAT	**Matsushiro**	**70.72**	**321**	P	**P**	**01 33 12.6**	**-0.6**
BUSP	**Coron**	**71.06**	**290**	*e*P	**P**	**01 33 15.5**	**-0.1**
QSPA	**South Pole Qui**	**71.30**	**180**	⇑*i*P	**P**	**01 33 17.2**	**+1.3**
	comp=Z,291nm,0.8s,mb6.1						
ENPP	**El Nido**	**71.42**	**289**	*e*P	**P**	**01 33 17.9**	**+0.2**
JOW	**Kunigami**	**71.49**	**308**	P	**P**	**01 33 18.8**	**+0.9**
	comp=Z,115nm,0.9s,mb5.6,baz=221,slow=25,SNR=6.7						
LUBP	**Lubang**	**71.75**	**292**	*e*P	**P**	**01 33 18.4**	**-1.2**
SMY	**Shemya**	**71.85**	**353**	*e*P	**P**	**01 33 18.4**	**-1.2**
SMY				pmax	pmax		
	comp=Z,540nm,0.8s,mb6.3						
SMY	**Shemya**	**71.85**	**353**	*e*P	**P**	**01 33 18.4**	**-1.2**
	comp=Z,540nm,0.8s,mb6.3						
BATP	**Bataraza**	**71.93**	**286**	*e*P	**P**	**01 33 20.8**	**+0.1**
FX1	**Attu Island--F**	**72.11**	**352**	*e*P	**P**	**01 33 19.4**	**-1.8**
CVP	**Callao Caves**	**72.12**	**296**	⇑*e*P	**P**	**01 33 22.0**	**+0.2**
	comp=Z,27μm,1.5s						
YUK	**Yuzh-Kuril’sk**	**72.15**	**331**	P	**P**	**01 33 20.0**	**-1.5**
YUK				pmax	pmax		
	comp=Z,4μm,3.5s						
YUK				pmax	pmax		
	comp=N,6μm,4.0s						
YUK				pmax	pmax		
	comp=E,3μm,3.0s						

KKM	**Kota Kinabalu**	**72.35**	**283**	P	**P**	**01 33 23.5**	**+0.3**
APYP	**Conner**	**72.69**	**296**	*e*P	**P**	**01 33 24.5**	**-0.7**
JNU	**Nakatsue**	**73.20**	**315**	P	**P**	**01 33 27.9**	**-0.1**
	comp=E,238nm,0.8s,mb6.0,baz=72,slow=5.3,SNR=78						
SKR	**Severo-Kuril’s**	**73.76**	**341**	*e*P	**P**	**01 33 26.0**	**-4.8**
SKR				pmax	pmax		
	comp=Z,330nm,0.9s,mb6.1						
MIR	**Mirnyy**	**73.86**	**205***c*	*i*P	**P**	**01 33 31.2**	**+0.2**
MIR				pmax	pmax		
	comp=Z,318nm,1.2s,mb5.9						
MIR				pmax	pmax		
	comp=Z,1µm,4.0s						
SAO	**San Andreas Ge**	**74.67**	**42**	*e*P	**P**	**01 33 35.4**	**-0.9**
SAO				pmax	pmax		
	comp=Z,148nm,1.1s,mb5.5						
SAO				MLR	MLR		
	comp=Z,3µm,19.0s						
SAO	**San Andreas Ge**	**74.67**	**42**	*e*P	**P**	**01 33 35.4**	**-0.9**
	comp=Z,148nm,1.1s,mb5.5						
SAO				LR	LR		
	comp=Z,3µm,19.0s						
HOPS	**Hopland**	**75.06**	**39**	*e*P	**P**	**01 33 37.4**	**-1.1**
	comp=Z,216nm,1.3s,mb5.6						
HOPS				LR	LR		
	comp=Z,5µm,20.0s						
PET	**Petropavlovsk**	**75.12**	**344**	*e*P	**P**	**01 33 37.1**	**-1.4**
PET				pmax	pmax		
	comp=Z,127nm,1.4s,mb5.4						
PET	**Petropavlovsk**	**75.12**	**344**	PFAKE		01 33 50.0	+12
PET				LR	LR		
	comp=Z,3µm,22.0s						
NACB	**Ninganchiao**	**75.32**	**302**	*e*P	**P**	**01 33 39.9**	**-0.4**
MWC	**Mount Wilson**	**75.38**	**46**	P	**P**	**01 33 39.6**	**-0.8**
MWC	**Mount Wilson**	**75.38**	**46**	*e*P	**P**	**01 33 39.9**	**-0.5**
BAR	**Barrett**	**75.46**	**48**	*e*P	**P**	**01 33 40.0**	**-0.8**
YHNB	**Yeheng**	**75.73**	**303**	*e*P	**P**	**01 33 42.5**	**0.0**
TATO	**Taipei**	**75.79**	**303**	*e*P	**P**	**01 33 42.7**	**-0.2**
	comp=Z,150nm,0.7s,mb5.7						
TATO				LR	LR		
	comp=Z,3µm,21.0s						
YSS	**Yuzh-Sakhalins**	**75.79**	**331**	⇑*i*P	**P**	**01 33 42.4**	**0.0**
YSS				*e**SP	sP	01 34 21.0	-15
YSS				S	S	01 43 15.0	+4.6
YSS				*e*		01 43 48.0	
YSS				*e*		01 44 20.0	
YSS				pmax	pmax		
	comp=Z,250nm,1.0s,mb5.8						
YSS				pmax	pmax		
	comp=Z,2µm,5.0s						
YSS				pmax	pmax		
	comp=Z,130nm,1.0s,mb5.5						
YSS	**Yuzh-Sakhalins**	**75.79**	**331**	⇑*i*P	**P**	**01 33 42.8**	**+0.4**
YSS				LR	LR		
	comp=Z,2µm,19.0s						
CMB	**Columbia Colle**	**76.11**	**41**	*e*P	**P**	**01 33 43.7**	**-0.7**
CMB				pmax	pmax		
	comp=Z,77nm,1.0s,mb5.3						
CMB				MLR	MLR		
	comp=Z,3µm,21.0s						
CMB	**Columbia Colle**	**76.11**	**41**	*e*P	**P**	**01 33 43.6**	**-0.7**
	comp=Z,77nm,1.0s,mb5.3						
CMB				LR	LR		
	comp=Z,3µm,21.0s						
PFO	**Pinyon Flat Ob**	**76.13**	**47**	*e*P	**P**	**01 33 44.1**	**-0.5**
PFO				*e*		01 33 57.2	
PFO				*e**PP	pP	01 34 18.8	-2.9
PFO				pmax	pmax		
	comp=Z,84nm,1.2s,mb5.2						
PFO				MLR	MLR		
	comp=Z,917nm,20.0s						
PFO	**Pinyon Flat Ob**	**76.13**	**47**	*e*P	**P**	**01 33 44.1**	**-0.5**
	comp=Z,84nm,1.2s,mb5.2						
PFO				*e*PcP	PcP	01 33 57.2	+0.8
PFO				*e*pP	pP	01 34 18.8	-2.9
PFO				LR	LR		
	comp=Z,917nm,20.0s						
KRMB	**Red Mountain**	**76.21**	**37**	*e*P	**P**	**01 33 45.0**	**+0.2**
KRMB				*e*pP	pP	01 34 25.2	+3.3
WDC	**Whiskeytown Da**	**76.39**	**38**	*e*P	**P**	**01 33 45.1**	**-0.8**
WDC				pmax	pmax		
	comp=Z,107nm,1.0s,mb5.4						
WDC				MLR	MLR		
	comp=Z,3µm,19.0s						
WDC	**Whiskeytown Da**	**76.39**	**38**	*e*P	**P**	**01 33 45.1**	**-0.8**
	comp=Z,107nm,1.0s,mb5.4						
WDC				*e*pP	pP	01 34 25.2	+2.2
WDC				LR	LR		
	comp=Z,3µm,19.0s						
OMM	**Old Mammoth Mi**	**76.74**	**42**	*e*P	**P**	**01 33 47.6**	**-0.4**
KEBM	**Edson Butte**	**76.86**	**36**	*e*P	**P**	**01 33 48.5**	**0.0**
KEBM				*e*sP	sP	01 34 43.7	+1.8
DAC	**Darwin (Calif)**	**76.87**	**44**	*e*P	**P**	**01 33 48.0**	**-0.7**
DAC				pmax	pmax		
	comp=Z,55nm,1.2s,mb5.1						
DAC				MLR	MLR		
	comp=Z,4µm,20.0s						
DAC	**Darwin (Calif)**	**76.87**	**44**	*e*P	**P**	**01 33 48.0**	**-0.7**
	comp=Z,55nm,1.2s,mb5.1						
DAC				LR	LR		
	comp=Z,4µm,20.0s						
YBH	**Yreka Blue Hor**	**77.03**	**37**	*e*P	**P**	**01 33 49.5**	**0.0**
YBH				pmax	pmax		
	comp=Z,93nm,0.9s						
YBH				MLR	MLR		
	comp=Z,2µm,19.0s						
YBH	**Yreka Blue Hor**	**77.03**	**37**	*e*P	**P**	**01 33 49.5**	**0.0**
	comp=Z,93nm,0.9s,mb5.4						
YBH				*e*pP	pP	01 34 30.5	+3.8
YBH				LR	LR		
	comp=Z,2µm,19.0s						
LHEM	**Herd Peak**	**77.24**	**38**	P	**P**	**01 33 50.5**	**-0.1**
BEKR	**Beckwourth**	**77.25**	**40**	⇑*i*P	**P**	**01 33 50.4**	**-0.3**
	comp=Z,54nm,1.0s,mb5.1						
NVAR	**Mina Array Bea**	**77.66**	**42**	P	**P**	**01 33 52.9**	**-0.2**
	comp=Z,66nm,0.8s,mb5.3,baz=215,slow=7.5,SNR=188						
NVAR				pP	pP	01 34 28.4	-1.9
	comp=Z,32nm,1.0s,baz=219,slow=6.7,SNR=2.8						
NVAR				PKKP	PKKP	01 52 44.3	+23
	comp=Z,0.9nm,0.8s,baz=75,slow=1.8,SNR=3.9						
NVAR				PKKPbc		01 52 58.1	
	comp=Z,1.5nm,0.8s,baz=94,slow=4.4,SNR=6.5						
NVAR				PKPPKP		02 01 01.9	
	comp=Z,1.1nm,0.7s,baz=72,slow=2.9,SNR=4.1						
NVAR	**Mina Array Bea**	**77.66**	**42**	P	**P**	**01 33 52.9**	**-0.2**
NVAR				pP	pP	01 34 28.4	-1.9
NVAR				PKKP	PKKP	01 52 44.3	+23
NVAR				PKKPbc		01 52 58.1	
NVAR				P’P’		02 01 01.9	
KS15	**Wonju Array Si**	**77.71**	**317**	*e*P	**P**	**01 33 54.6**	**+1.3**
PAHR	**Pah Rah Range**	**77.74**	**40**	*e*P	**P**	**01 33 53.6**	**+0.2**
	comp=Z,74nm,1.4s,mb5.1						
MNV	**Mina**	**77.75**	**42**	*e*P	**P**	**01 33 53.1**	**-0.4**
MNV				pmax	pmax		
	comp=Z,110nm,0.9s,mb5.5						
MNV				MLR	MLR		
	comp=Z,4µm,20.0s						
MNV	**Mina**	**77.75**	**42**	*e*P	**P**	**01 33 53.1**	**-0.4**
	comp=Z,110nm,0.9s,mb5.5						
MNV				LR	LR		
	comp=Z,4µm,20.0s						
LDFC	**Landfair**	**77.86**	**46**	⇑*i*P	**P**	**01 33 54.5**	**+0.3**
HSO	**Harness Mounta**	**77.97**	**36**	P	**P**	**01 33 54.7**	**+0.1**
TPH	**Tonopah**	**78.14**	**43**	*e*P	**P**	**01 33 55.5**	**-0.2**
TPH				*e**PP	pP	01 34 31.1	-1.8
TPH				pmax	pmax		
	comp=Z,109nm,0.9s,mb5.5						
TPH				MLR	MLR		
	comp=Z,4µm,20.0s						
TPH	**Tonopah**	**78.14**	**43**	*e*P	**P**	**01 33 55.5**	**-0.1**
	comp=Z,109nm,0.9s,mb5.5						
TPH				*e*pP	pP	01 34 31.1	-1.8
TPH				LR	LR		
	comp=Z,4µm,20.0s						
NEN	**Nelson**	**78.36**	**46**	⇑*i*P	**P**	**01 33 56.7**	**-0.2**
KDAK	**Kodiak Island**	**78.45**	**12**	⇑*i*P	**P**	**01 33 56.3**	**-0.6**
	comp=Z,420nm,1.4s,mb5.9						
KDAK				*e*pP	pP	01 34 34.7	+0.5
KDAK				LR	LR		
	comp=Z,651nm,20.0s						
MOD	**Modoc**	**78.53**	**38**	⇑*e*P	**P**	**01 33 57.5**	**-0.2**
	comp=Z,87nm,1.0s,mb5.3						
MOD				LR	LR		
	comp=Z,3µm,22.0s						
COR	**Corvallis**	**78.55**	**35**	PFAKE		01 34 10.0	+12
COR				LR	LR		
	comp=Z,3µm,20.0s						
INCN	**Inchon**	**78.55**	**316**	*e*P	**P**	**01 33 59.0**	**+1.1**
	comp=Z,300nm,1.4s,mb5.7						
INCN				*e*pP	pP	01 34 36.0	+0.8
INCN				LR	LR		
	comp=Z,3µm,20.0s						
HBO	**Huckleberry Mo**	**78.60**	**36**	P	**P**	**01 33 57.8**	**-0.2**
FRIS	**Frissel Point**	**78.96**	**36**	P	**P**	**01 33 59.6**	**-0.3**
SSE	**Sheshan**	**79.00**	**308**	*e*P	**P**	**01 34 00.8**	**+0.4**
SSE				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.1						
SSE				AMB	AMB		
	comp=Z,6µm,12.0s						
SSE	**Sheshan**	**79.00**	**308**	*e*P	**P**	**01 34 00.8**	**+0.4**
	comp=Z,53nm,1.1s,mb5.1						
TRCR	**Troy Canyon**	**79.36**	**43**	*e*P	**P**	**01 34 01.8**	**-0.4**
PINOR	**Pine Mountain**	**79.39**	**36**	P	**P**	**01 34 02.5**	**+0.2**
TUC	**Tucson**	**79.49**	**51**	⇑*e*P	**P**	**01 34 03.3**	**+0.2**
TUC				pmax	pmax		
	comp=Z,118nm,1.1s,mb5.4						
TUC				MLR	MLR		
	comp=Z,3µm,22.0s						
TUC	**Tucson**	**79.49**	**51**	⇑*e*P	**P**	**01 34 03.3**	**+0.2**
	comp=Z,118nm,1.1s,mb5.4						
TUC				LR	LR		
	comp=Z,3µm,22.0s						
BMN	**Battle Mountai**	**79.51**	**41**	⇑*e*P	**P**	**01 34 02.7**	**-0.3**
BMN				pmax	pmax		
	comp=Z,87nm,0.9s,mb5.4						
BMN				MLR	MLR		
	comp=Z,2µm,20.0s						
BMN	**Battle Mountai**	**79.51**	**41**	⇑*e*P	**P**	**01 34 02.7**	**-0.3**
	comp=Z,87nm,0.9s,mb5.4						
BMN				LR	LR		
	comp=Z,2µm,20.0s						
BMW	**Boistfort Moun**	**79.83**	**33**	P	**P**	**01 34 04.4**	**-0.2**
WVOR	**Wild Horse Val**	**79.84**	**39**	⇑*e*P	**P**	**01 34 04.5**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,112nm,1.1s,mb5.4						
WVOR				MLR	MLR		
	comp=Z,2µm,20.0s						
WVOR	**Wild Horse Val**	**79.84**	**39**	⇑*e*P	**P**	**01 34 04.5**	**-0.3**
	comp=Z,112nm,1.1s,mb5.4						
WVOR				LR	LR		
	comp=Z,2µm,20.0s						
VIPM	**Ingram Point**	**79.97**	**36**	P	**P**	**01 34 05.2**	**-0.2**
VFP	**Flag Point**	**80.02**	**35**	P	**P**	**01 34 05.2**	**-0.4**
OCWA	**Octopus Mounta**	**80.19**	**32**	⇑*e*P	**P**	**01 34 06.8**	**+0.3**
	comp=Z,391nm,1.7s,mb5.8						
OCWA				LR	LR		
	comp=Z,5µm,21.0s						
ARUT	**Antelope Range**	**80.47**	**45**	*e*P	**P**	**01 34 08.2**	**0.0**
ARUT				*e**PP	pP	01 34 44.2	-1.4
WUAZ	**Wupatki**	**80.69**	**48**	*e*P	**P**	**01 34 09.9**	**+0.5**
	comp=Z,128nm,1.1s,mb5.5						
WUAZ				*e*pP	pP	01 34 43.3	-3.6
WUAZ				LR	LR		
	comp=Z,7µm,22.0s						
ELK	**Elko**	**80.93**	**42**	⇑*e*P	**P**	**01 34 10.3**	**-0.3**
ELK				pmax	pmax		
	comp=Z,55nm,0.9s						
ELK				MLR	MLR		
	comp=Z,3µm,19.0s						
ELK	**Elko**	**80.93**	**42**	PKKPbc		01 52 49.1	
	comp=Z,1.7nm,0.9s,baz=293,slow=2.0,SNR=5.0						
ELK	**Elko**	**80.93**	**42**	⇑*e*P	**P**	**01 34 10.3**	**-0.2**
	comp=Z,55nm,0.9s,mb5.2						
ELK				LR	LR		
	comp=Z,3µm,19.0s						
RSO	**Redoubt South**	**80.93**	**11**	*e*P	**P**	**01 34 08.9**	**-1.3**
MDJ	**Mudanjiang**	**80.93**	**323**	P	**P**	**01 34 11.4**	**+0.9**
MDJ				PP	PP	01 37 17.3	-1.5
MDJ				S	S	01 44 02.3	-2.7
MDJ				AMB	AMB		
	comp=Z,140nm,1.2s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,2µm,6.0s						
MDJ	**Mudanjiang**	**80.93**	**323**	PFAKE		01 34 20.0	+10
MDJ				LR	LR		
	comp=Z,4µm,21.0s						
PGC	**Sidney**	**81.15**	**32**	*e*P	**P**	**01 34 10.6**	**-0.9**
	comp=Z,259nm,1.2s,mb5.7						
NJ2	**Nanjing**	**81.20**	**308**	*e*P	**P**	**01 34 13.5**	**+1.3**
NJ2				PP	PP	01 37 22.0	+0.6
NJ2				S	S	01 44 16.0	+7.9
NJ2				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,3µm,7.2s						
NJ2				LR	LR		
	comp=N,24µm,28.8s						
NJ2				LR	LR		
	comp=E,32µm,25.4s						
NJ2				LR	LR		
	comp=Z,12µm,30.8s						
RMW	**Rattlesnake Mo**	**81.21**	**33**	P	**P**	**01 34 11.5**	**-0.4**
SLKM	**Skilak Lake**	**81.44**	**12**	*e*P	**P**	**01 34 12.1**	**-0.7**
PMSA	**Palmer Station**	**81.63**	**156**	PFAKE		01 34 30.0	+16
PMSA				LR	LR		
	comp=Z,5µm,21.0s						
MVU	**Marysvale**	**81.67**	**45**	⇑*e*P	**P**	**01 34 15.2**	**+0.7**
	comp=Z,76nm,1.1s,mb5.2						
MVU				*e*pP	pP	01 34 55.0	+3.0
MVU				LR	LR		
	comp=Z,3µm,20.0s						
MSU	**Marysvale**	**81.69**	**45**	*e*P	**P**	**01 34 15.0**	**+0.4**
MSU	**Marysvale**	**81.69**	**45**	*e*P	**P**	**01 34 15.5**	**+0.9**
SPU	**Mount Spurr**	**81.72**	**11**	*e*P	**P**	**01 34 12.8**	**-1.5**
BMO	**Blue Mountains**	**82.06**	**37**	*e*P	**P**	**01 34 15.4**	**-0.9**
	comp=Z,107nm,1.4s,mb5.3						
BMO				LR	LR		
	comp=Z,4µm,20.0s						
FIB	**Fire Island**	**82.06**	**12**	*e*P	**P**	**01 34 16.0**	**0.0**
FIB				MLR	MLR		
	comp=Z,950nm,21.0s						
SIT	**Sitka**	**82.40**	**20**	*e*P	**P**	**01 34 16.9**	**-0.9**
SIT				pmax	pmax		
	comp=Z,82nm,1.1s,mb5.3						
SIT				MLR	MLR		
	comp=Z,3µm,20.0s						
SIT	**Sitka**	**82.40**	**20**	*e*P	**P**	**01 34 16.9**	**-1.0**
	comp=Z,82nm,1.1s,mb5.3						
SIT				LR	LR		
	comp=Z,3µm,20.0s						
EYAK	**Cordova Ski Ar**	**82.43**	**14**	⇑*e*P	**P**	**01 34 17.1**	**-0.8**
DL2	**Dalian**	**82.64**	**315**	P	**P**	**01 34 21.0**	**+1.5**
DL2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
DL2				AMB	AMB		
	comp=Z,910nm,5.0s						
TMUT	**Trail Mountain**	**82.75**	**44**	⇑*e*P	**P**	**01 34 20.9**	**+0.9**
TMUT				*e*pP	pP	01 35 01.4	+3.8
OD2	**Odessa Site #2**	**82.80**	**35**	P	**P**	**01 34 19.6**	**-0.5**
MPU	**Maple Canyon**	**82.84**	**44**	⇑*e*P	**P**	**01 34 20.6**	**+0.1**
NOQ	**North Oquirrh**	**82.86**	**43**	*e*P	**P**	**01 34 20.5**	**0.0**
CN2	**Changchun**	**82.86**	**321**	*e*P	**P**	**01 34 21.0**	**+0.5**
CN2				*e*S	S	01 44 31.0	+6.3
CN2				AMB	AMB		
	comp=Z,200nm,0.9s,mb5.8						
CN2				AMB	AMB		
	comp=Z,4µm,6.0s						
CN2				LR	LR		
	comp=N,2µm,21.0s						
CN2				LR	LR		
	comp=E,2µm,21.0s						
CN2				LR	LR		
	comp=Z,6µm,23.0s						
SNY	**Shenyang**	**82.92**	**318**	⇑P	**P**	**01 34 22.0**	**+1.2**
SNY				AP	pP	01 35 01.3	+2.9
DIV	**Divide**	**82.94**	**14**	⇑*i*P	**P**	**01 34 19.9**	**-0.6**
	comp=Z,913nm,0.9s,mb6.5						
DIV				*e*pP	pP	01 34 58.9	+0.8
DIV				LR	LR		
	comp=Z,5µm,19.0s						
MA2	**Magadan**	**82.98**	**343**	⇑*e*P	**P**	**01 34 20.3**	**-0.5**
MA2				pmax	pmax		
	comp=Z,111nm,0.9s,mb5.6						
MA2				MLR	MLR		
	comp=Z,2µm,19.0s						
MA2	**Magadan**	**82.98**	**343**	⇑*e*P	**P**	**01 34 20.3**	**-0.5**
	comp=Z,111nm,0.9s,mb5.6						
MA2				LR	LR		
	comp=Z,2µm,19.0s						
SPUT	**South Promonto**	**83.00**	**42**	⇑*e*P	**P**	**01 34 21.1**	**-0.1**
SPUT				*e*pP	pP	01 34 57.5	-1.4
QIZ	**Qiongzhong**	**83.01**	**293**	P	**P**	**01 34 23.6**	**+1.9**
QIZ	**Qiongzhong**	**83.01**	**293**	PFAKE		01 34 30.0	+8.3
QIZ				LR	LR		
	comp=Z,2µm,20.0s						
SML	**Sawmill**	**83.01**	**12**	⇑*e*P	**P**	**01 34 20.1**	**-0.7**
SML				*e*PcP	PcP	01 34 30.5	+5.0
HLID	**Hailey**	**83.01**	**40**	⇑*i*P	**P**	**01 34 21.4**	**+0.1**
	comp=Z,107nm,1.0s,mb5.5						
HLID				LR	LR		
	comp=Z,3µm,20.0s						
KGM	**Kluang**	**83.03**	**274**	P	**P**	**01 34 23.6**	**+1.6**
HVU	**Hansel Valley**	**83.05**	**42**	⇑*e*P	**P**	**01 34 21.3**	**-0.2**
HVU				*e*pP	pP	01 35 01.2	+2.1
SRU	**San Rafael**	**83.11**	**45**	⇑*e*P	**P**	**01 34 22.1**	**+0.3**
SRU				*e*pP	pP	01 35 01.8	+2.4
CTU	**Camp Tracy**	**83.12**	**43**	*e*P	**P**	**01 34 21.8**	**-0.1**
LAZ	**Ladron**	**83.17**	**50**	*e*P	**P**	**01 34 23.0**	**+0.8**
LENM	**Lemitar**	**83.18**	**51**	*e*P	**P**	**01 34 23.1**	**+0.8**
LENM				*e*pP	pP	01 35 01.0	+1.0
MNTX	**Cornudas Mount**	**83.23**	**53**	⇑*e*P	**P**	**01 34 23.2**	**+0.5**
	comp=Z,137nm,1.1s,mb5.6						
MNTX				LR	LR		
	comp=Z,5µm,21.0s						
JLU	**Jordanelle**	**83.27**	**43**	*e*P	**P**	**01 34 22.6**	**0.0**
JLU				*e*pP	pP	01 35 02.5	+2.2
DAU	**Daniels Canyon**	**83.30**	**43**	P	**P**	**01 34 23.0**	**+0.3**
DAU	**Daniels Canyon**	**83.30**	**43**	*e*P	**P**	**01 34 23.1**	**+0.4**
BNM	**Barren Site**	**83.42**	**51**	*e*P	**P**	**01 34 24.5**	**+1.0**
LPM	**Los Pinos Moun**	**83.50**	**51**	*e*P	**P**	**01 34 25.0**	**+1.1**
LPM				*e*pP	pP	01 35 06.2	+4.7
LTX	**Lajitas**	**83.52**	**56**	*e*P	**P**	**01 34 25.1**	**+0.9**
LTX				pmax	pmax		
	comp=Z,138nm,1.2s,mb5.6						
LTX				MLR	MLR		
	comp=Z,4µm,20.0s						
LTX	**Lajitas**	**83.52**	**56**	*e*P	**P**	**01 34 25.1**	**+0.9**
	comp=Z,138nm,1.2s,mb5.6						
LTX				LR	LR		
	comp=Z,4µm,20.0s						
TXAR	**Lajitas Array**	**83.52**	**56**	P	**P**	**01 34 24.9**	**+0.8**
	comp=Z,36nm,1.0s,mb5.1,baz=217,slow=6.3,SNR=226						
TXAR				pP	pP	01 35 01.9	0.0
	comp=Z,5.0nm,0.8s,baz=311,slow=23,SNR=3.7						
TXAR				PKKPbc		01 52 43.4	
	comp=Z,2.1nm,0.8s,baz=135,slow=1.8,SNR=12						
TXAR				PKPPKP		02 00 43.6	
	comp=Z,0.6nm,0.9s,baz=121,slow=5.3,SNR=4.7						
TCUT	**Toone Canyon**	**83.56**	**43**	⇑*e*P	**P**	**01 34 24.5**	**+0.4**
TCUT				*e*pP	pP	01 35 04.7	+2.9
HWUT	**Hardware Ranch**	**83.72**	**42**	⇑*e*P	**P**	**01 34 24.6**	**-0.3**
	comp=Z,61nm,0.9s,mb5.3						
HWUT				*e*pP	pP	01 35 04.8	+2.2
HWUT				LR	LR		
	comp=Z,5µm,20.0s						
PV10	**Paradox Valley**	**83.74**	**46**	*e*P	**P**	**01 34 25.2**	**+0.1**
PV10				*e*pP	pP	01 35 06.7	+3.9
USHA	**Ushuaia**	**83.85**	**146**	P	**P**	**01 34 26.3**	**+1.1**
	comp=Z,94nm,0.8s,mb5.6,baz=204,slow=4.2,SNR=37						
ANMO	**Albuquerque**	**83.92**	**50**	⇑*e*P	**P**	**01 34 26.8**	**+0.8**
ANMO				*e**PP	pP	01 35 03.8	+0.1
ANMO				pmax	pmax		
	comp=Z,141nm,1.1s						
ANMO				MLR	MLR		
	comp=Z,3µm,22.0s						
ANMO	**Albuquerque**	**83.92**	**50**	⇑*e*P	**P**	**01 34 26.8**	**+0.8**
	comp=Z,141nm,1.1s,mb5.6						
ANMO				*e*pP	pP	01 35 03.8	+0.1
ANMO				LR	LR		
	comp=Z,3µm,22.0s						
PV01	**Paradox Valley**	**83.94**	**46**	*e*P	**P**	**01 34 26.3**	**+0.2**
WHN	**Wuhan**	**83.95**	**305**	*e*P	**P**	**01 34 27.5**	**+1.2**
NEW	**Newport**	**84.18**	**35**	PFAKE		01 34 40.0	+13
NEW				LR	LR		
	comp=Z,3µm,20.0s						
MAW	**Mawson**	**84.22**	**199**	⇑*i*P	**P**	**01 34 27.8**	**+1.1**
	comp=Z,85nm,0.6s,mb5.7						
MAW	**Mawson**	**84.22**	**199**	P	**P**	**01 34 28.0**	**+1.3**
MAW				pmax	pmax		
	comp=Z,106nm,0.6s						
MAW				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAW	**Mawson**	**84.22**	**199**	P	**P**	**01 34 28.0**	**+1.3**
	comp=Z,106nm,0.6s,mb5.7,baz=129,slow=6.4,SNR=220						
MAW				PKKPbc		01 52 37.1	
	comp=Z,1.5nm,0.7s,baz=1.3,slow=6.1,SNR=3.7						
TNA	**Tin City**	**84.22**	**3**	*e*P	**P**	**01 34 27.0**	**+0.2**
	comp=Z,93nm,0.8s,mb5.6						
TNA				LR	LR		
	comp=Z,1µm,19.0s						
TIA	**Tai’an**	**84.43**	**311**	⇑P	**P**	**01 34 29.6**	**+1.1**
TIA				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.3						
PAYG	**Puerto Ayora**	**84.51**	**89**	PFAKE		01 34 40.0	+11
PAYG				LR	LR		
	comp=Z,3µm,19.0s						
RW3	**Ridgway**	**84.61**	**47**	*e*P	**P**	**01 34 30.0**	**+0.6**
AHID	**Auburn Hatcher**	**84.62**	**42**	⇑*e*P	**P**	**01 34 29.2**	**-0.1**
	comp=Z,152nm,1.1s,mb5.6						
AHID				*e*pP	pP	01 35 07.9	+0.8
AHID				LR	LR		
	comp=Z,4µm,21.0s						
CLNB	**Carlsbad**	**84.63**	**53**	*e*P	**P**	**01 34 30.1**	**+0.5**
CLNB				*e*PP	PP	01 37 45.0	-3.9
MCK	**McKinley**	**84.65**	**11**	⇑*i*P	**P**	**01 34 28.4**	**-0.5**
MCK				pmax	pmax		
	comp=Z,179nm,0.9s,mb5.8						
MCK				MLR	MLR		
	comp=Z,2µm,22.0s						
MCK	**McKinley**	**84.65**	**11**	⇑*i*P	**P**	**01 34 28.4**	**-0.5**
	comp=Z,179nm,0.9s,mb5.8						
MCK				LR	LR		
	comp=Z,2µm,22.0s						
MCMT	**McKenzie Canyo**	**84.65**	**39**	*e*P	**P**	**01 34 29.8**	**+0.4**
RRI2	**Red Ridge**	**84.79**	**41**	⇑*e*P	**P**	**01 34 30.5**	**+0.4**
	comp=Z,188nm,1.1s,mb5.7						
CPRX	**Cap Rock**	**84.97**	**53**	*e*P	**P**	**01 34 32.1**	**+0.8**
CPRX				*e*sP	sP	01 35 22.9	-2.7
THY	**Trims Highway**	**84.98**	**13**	*e*P	**P**	**01 34 30.4**	**-0.2**
TPAW	**Teton Pass**	**85.09**	**41**	⇑*e*P	**P**	**01 34 32.0**	**+0.4**
	comp=Z,98nm,0.9s,mb5.5						
MSO	**Missoula**	**85.12**	**37**	⇑*e*P	**P**	**01 34 30.9**	**-0.8**
	comp=Z,75nm,1.5s,mb5.2						
MSO				*e*PP	PP	01 37 48.2	-4.2
MSO				LR	LR		
	comp=Z,2µm,20.0s						
SNOW	**Snow King Moun**	**85.20**	**41**	⇑*e*P	**P**	**01 34 32.6**	**+0.4**
	comp=Z,139nm,0.9s,mb5.7						
BSMT	**Bassoo Peak**	**85.22**	**36**	P	**P**	**01 34 31.7**	**-0.5**
WUWY	**Wally Ulrich**	**85.25**	**41**	⇑*e*P	**P**	**01 34 32.6**	**+0.2**
WUWY				*e*pP	pP	01 35 13.7	+3.4
DLBC	**Dease Lake**	**85.28**	**22**	*e*P	**P**	**01 34 32.4**	**+0.2**
IMW	**Indian Meadow**	**85.31**	**41**	⇑*e*P	**P**	**01 34 33.2**	**+0.4**
	comp=Z,110nm,1.0s,mb5.5						
MOOW	**Moose Ponds**	**85.36**	**41**	⇑*e*P	**P**	**01 34 32.8**	**-0.2**
	comp=Z,223nm,2.0s,mb5.5						
MOOW				*e*PP	PP	01 37 51.3	-3.1
LOHW	**Long Hollow**	**85.37**	**41**	⇑*e*P	**P**	**01 34 33.1**	**+0.1**
	comp=Z,75nm,1.1s,mb5.3						
LOHW				*e*PP	PP	01 37 50.1	-4.4
SEY	**Seymchan**	**85.43**	**346**	*e*P	**P**	**01 34 32.9**	**0.0**
SEY				*e*	pP	01 35 09.4	-1.3
SEY				pmax	pmax		
	comp=N,80nm,1.2s						
SEY				pmax	pmax		
	comp=E,40nm,1.2s						
SEY				pmax	pmax		
	comp=Z,320nm,1.2s,mb5.9						
QLMT	**Earthquake Lak**	**85.50**	**40**	*e*P	**P**	**01 34 34.5**	**+0.8**
CHMT	**Chamberlain Mo**	**85.56**	**37**	*e*P	**P**	**01 34 33.4**	**-0.5**
BW06	**Boulder Array**	**85.60**	**42**	PFAKE		01 34 50.0	+16
BW06				LR	LR		
	comp=Z,5µm,21.0s						
PDAR	**Pinedale Array**	**85.60**	**42**	P	**P**	**01 34 34.0**	**-0.1**
	comp=Z,35nm,0.8s,mb5.1,baz=211,slow=3.5,SNR=202						
PDAR				pP	pP	01 35 09.7	-2.4
	comp=Z,6.9nm,0.8s,baz=226,slow=5.1,SNR=1.6						
PDAR				PKKPbc		01 52 38.0	
	comp=Z,5.4nm,0.8s,baz=76,slow=6.1,SNR=8.0						
PDAR				PKPPKP		02 00 41.0	
	comp=Z,1.2nm,0.8s,baz=90,slow=3.0,SNR=4.4						
YMR	**Madison River**	**85.70**	**40**	*e*P	**P**	**01 34 35.5**	**+0.9**
BOZ	**Bozeman (W)**	**85.82**	**39**	⇑*i*P	**P**	**01 34 35.2**	**0.0**
BOZ				pmax	pmax		
	comp=Z,135nm,1.4s,mb5.5						
BOZ				MLR	MLR		
	comp=Z,3µm,21.0s						
BOZ	**Bozeman (W)**	**85.82**	**39**	⇑*i*P	**P**	**01 34 35.2**	**+0.1**

```
      comp=Z,135nm,1.4s,mb5.5
BOZ                                 LR       LR
      comp=Z,3µm,21.0s
SDCO  Great Sand Dun      85.89  48 PFAKE             01 34 50.0   +14
SDCO                                LR       LR
      comp=Z,4µm,21.0s
YNR   Norris Junctio      85.90  40 eP       P        01 34 36.9  +1.3
ILAR  Eielson Array       85.97  12 P        P        01 34 34.8  -0.7
      comp=Z,86nm,0.8s,mb5.5,baz=210,slow=5.7,SNR=584
ILAR                                PKiKP             01 39 43.0
      comp=Z,3.4nm,1.1s,baz=290,slow=2.9,SNR=6.2
ILAR                                PKKPbc            01 52 36.3
      comp=Z,1.8nm,0.6s,baz=346,slow=2.7,SNR=12
ILAR                                PKPPKP            02 00 40.6
      comp=Z,0.9nm,1.0s,baz=304,slow=3.0,SNR=6.0
LKWY  Lake                85.99  40 PFAKE             01 34 50.0   +14
LKWY                                LR       LR
      comp=Z,6µm,22.0s
IPM   Ipoh                86.03 276 P        P        01 34 38.6  +1.7
IMA   Indian Mountai      86.05   8 P        P        01 34 36.3  +0.5
IMA                                 pmax     pmax
      comp=Z,780nm,1.1s,mb6.3
IMA   Indian Mountai      86.05   8 eP       P        01 34 36.4  +0.6
      comp=Z,782nm,1.1s,mb6.3
HRY   Holter Researc      86.27  38 eP       P        01 34 37.2  -0.1
RWWY  Rawlins             86.58  44 eP       P        01 34 38.4  -0.5
      comp=Z,75nm,1.1s,mb5.4
KULM  Kulim               86.62 277⇑eP       P        01 34 41.1  +1.3
ISCO  Idaho Springs       86.76  46 PFAKE             01 34 50.0   +10
ISCO                                LR       LR
      comp=Z,5µm,22.0s
SNG   Songkhla            87.26 278 P        P        01 34 45.0  +2.1
      comp=Z,680nm,1.0s,mb6.4
AMTX  Amarillo            87.41  52 eP       P        01 34 43.3  +0.2
      comp=Z,100nm,1.2s,mb5.5
AMTX                                LR       LR
      comp=Z,4µm,21.0s
ENH   Enshi               87.66 303 PFAKE             01 35 00.0   +16
ENH                                 LR       LR
      comp=Z,4µm,22.0s
BILL  Bilibino            87.67 353c iP      P        01 34 43.6  +0.1
BILL                                e                 01 38 11.8
BILL                                pmax     pmax
      comp=Z,153nm,1.0s,mb5.8
BILL  Bilibino            87.67 353 eP       P        01 34 43.4  -0.2
      comp=Z,146nm,0.9s,mb5.8
BILL                                LR       LR
      comp=Z,3µm,19.0s
PLCA  Paso Flores         88.19 133 P        P        01 34 48.0  +1.3
      comp=Z,13nm,0.9s,mb4.8,baz=251,slow=5.8,SNR=25
PLCA                                pP       pP       01 35 23.1  -1.7
      comp=Z,13nm,1.1s,baz=247,slow=8.7,SNR=4.0
PLCA  Paso Flores         88.19 133 P        P        01 34 48.0  +1.3
PLCA                                pP       pP       01 35 23.1  -1.7
PLCA                                LR       LR
      comp=Z,6µm,20.0s
GYA   Guiyang             88.51 298⇑iP       P        01 34 50.3  +1.8
GYA                                 PP       PP       01 38 23.8  +2.8
GYA                                 AMB      AMB
      comp=Z,70nm,1.2s,mb5.5
GYA                                 AMB      AMB
      comp=Z,3µm,5.1s
GYA                                 LR       LR
      comp=N,390nm,17.8s
GYA                                 LR       LR
      comp=E,540nm,17.2s
GYA                                 LR       LR
      comp=Z,870nm,17.6s
EDM   Edmonton            89.00  32 eP       P        01 34 49.8  -0.3
EDM                                 e                 01 38 17.6
SYO   Syowa Base          89.07 192 ⇓P       P        01 34 49.0  -1.1
HIA   Hailar              89.12 323⇑iP       P        01 34 51.6  +0.8
HIA                                 LR       LR
      comp=Z,5µm,19.0s
WMOK  Wichita Mounta      89.53  53 PFAKE             01 35 00.0  +6.9
WMOK                                LR       LR
      comp=Z,3µm,21.0s
XAN   Xi’an               89.58 306 P        P        01 34 54.9  +1.5
XAN                                 AMB      AMB
      comp=Z,160nm,1.4s,mb5.8
LAO   LASA Array          89.59  40 eP       P        01 34 53.6  +0.5
      comp=Z,67nm,0.9s,mb5.6
LAO                                 LR       LR
      comp=Z,4µm,20.0s
SNAA  Sanae               89.63 177 e        P        01 34 54.8  +2.1
SNAA  Sanae               89.63 177 e        pP       01 35 28.5  -2.4
SNAA  Sanae               89.63 177⇑iP       P        01 34 53.2  +0.5
SNAA                                e        pP       01 35 28.5  -2.4
SNAA                                e                 01 38 30.9
SNAA                                e                 01 45 17.4
SNAA                                e                 01 45 31.4
SNAA  Sanae               89.63 177 P        P        01 34 53.3  +0.5
      comp=Z,39nm,0.8s,mb5.4,baz=208,slow=4.9,SNR=189
SNAA                                pP       pP       01 35 28.7  -2.2
      comp=Z,17nm,1.1s,baz=208,slow=5.3,SNR=2.3
SNAA                                PKKPbc            01 52 25.8
      comp=Z,1.3nm,0.9s,baz=53,slow=3.7,SNR=7.5
SNAA  Sanae               89.63 177⇑iP       P        01 34 53.2  +0.5
SNAA                                e                 01 34 54.8
SNAA                                e        pP       01 35 28.5  -2.4
SNAA                                e                 01 38 30.9
SNAA                                e                 01 39 45.7
SNAA                                e                 01 40 07.7
SNAA                                e                 01 40 22.0
SNAA                                e                 01 45 17.4
SNAA                                e                 01 45 31.4
VNA3  Neumayer Olymp      89.63 175 e        P        01 34 55.1  +2.3
VNA3  Neumayer Olymp      89.63 175 e        pP       01 35 27.9  -3.1
VNA3  Neumayer Olymp      89.63 175⇑i                 01 52 25.3
VNA3  Neumayer Olymp      89.63 175⇑iP       P        01 34 53.4  +0.6
VNA3                                e                 01 34 55.1
VNA3                                e        pP       01 35 27.9  -3.1
VNA3                                e                 01 38 13.9
VNA3                                e                 01 39 47.4
VNA3                                e                 01 40 08.1
VNA3                                e                 01 40 24.1
VNA3                                e                 01 45 16.9
VNA3                                e                 01 45 31.8
RSSD  Black Hills         89.78  43 P        P        01 34 52.8  -1.2
RSSD                                pmax     pmax
      comp=Z,41nm,1.0s,mb5.3
RSSD  Black Hills         89.78  43 eP       P        01 34 53.5  -0.5
      comp=Z,41nm,0.9s,mb5.4
RSSD                                LR       LR
      comp=Z,4µm,20.0s
NNT   Nongplab            89.85 283 P        P        01 34 57.9  +2.8
VNA2  Neumayer--Watz      90.11 176 e        P        01 34 57.7  +2.7
VNA2  Neumayer--Watz      90.11 176 e        pP       01 35 31.2  -2.0
VNA2  Neumayer--Watz      90.11 176⇑i                 01 52 24.2
VNA2  Neumayer--Watz      90.11 176 P        P        01 34 56.2  +1.2
VNA2                                e                 01 34 57.7
VNA2                                e        pP       01 35 31.2  -2.0
VNA2                                e                 01 38 25.0
VNA2                                e                 01 39 49.1
VNA2                                e                 01 40 11.4
VNA2                                e                 01 40 24.8
VNA2                                e                 01 45 21.4
VNA2                                e                 01 45 35.7
VNA1  Neumayer--Stat      90.32 176 eP       P        01 34 57.3  +1.3
VNA1  Neumayer--Stat      90.32 176 e        P        01 34 58.8  +2.8
VNA1  Neumayer--Stat      90.32 176 e        pP       01 35 31.6  -2.6
VNA1  Neumayer--Stat      90.32 176⇑i                 01 52 24.2
HHC   Hu-ho-hao-te        90.39 313 i P      P        01 34 58.9  +1.9
HHC                                 PP       PP       01 38 34.4  -1.3
HHC                                 S        S        01 45 44.3  +8.1
HHC                                 AMB      AMB
      comp=Z,140nm,1.4s,mb5.7
HHC                                 LR       LR
      comp=N,3µm,24.8s
HHC                                 LR       LR
      comp=E,1µm,32.2s
HHC                                 LR       LR
      comp=Z,8µm,42.1s
CBKS  Cedar Bluff         90.45  49 eP       P        01 34 56.5  -0.8
CBKS                                pmax     pmax
      comp=Z,42nm,1.0s,mb5.3
CBKS                                MLR      MLR
      comp=Z,3µm,21.0s
CBKS  Cedar Bluff         90.45  49 eP       P        01 34 56.5  -0.8
      comp=Z,42nm,1.0s,mb5.3
CBKS                                LR       LR
      comp=Z,3µm,21.0s
NST   Nakhon Sawan        90.49 286 P        P        01 34 59.5  +1.5
CLNS  Chul’man            90.56 331 eP       P        01 34 57.4   0.0
CLNS                                e                 01 38 30.2
CLNS                                ePPP     PPP      01 40 28.4  -8.8
CLNS                                eS       S        01 45 50.0   +13
CLNS                                ePS      PS       01 46 57.0   -12
CLNS                                ePPS     PPS      01 47 42.9  +1.0
CLNS                                pmax     pmax
      comp=Z,281nm,1.0s,mb6.2
CLNS                                pmax     pmax
      comp=N,158nm,1.4s
CLNS                                pmax     pmax
      comp=E,111nm,0.9s
CLNS                                pmax     pmax
      comp=Z,29nm,1.4s,mb5.1
CLNS                                pmax     pmax
      comp=N,23nm,1.1s
CLNS                                pmax     pmax
      comp=E,20nm,1.3s
CLNS                                smax
      comp=N,1µm,14.1s
CLNS                                smax
      comp=Z,613nm,12.4s
CLNS                                smax
      comp=E,72nm,12.5s
CLNS                                MLR      MLR
      comp=N,400nm,14.0s
CLNS                                MLR      MLR
      comp=Z,800nm,14.0s
CLNS                                MLR      MLR
      comp=E,100nm,15.0s
MAIT  Maitri              90.58 182⇑iP       P        01 34 57.8  +0.6
NVL   N’lazarevskaya      90.59 182⇓iP       P        01 34 54.8  -2.5
NVL                                 pmax     pmax
      comp=Z,17nm,1.1s,mb5.0
NANT  Nan                 91.01 289 ⇓P       P        01 35 00.0  -0.4
      comp=Z,662nm,0.5s
KMI   Kunming             91.35 296 ⇑P       P        01 35 04.4  +2.5
KMI                                 PP       PP       01 38 45.4  +1.8
KMI                                 S        S        01 45 51.8  +6.8
KMI                                 AMB      AMB
      comp=Z,80nm,1.5s,mb5.5
KMI                                 LR       LR
      comp=N,2µm,30.0s
KMI                                 LR       LR
      comp=E,3µm,27.1s
KMI                                 LR       LR
      comp=Z,10µm,54.5s
KMI   Kunming             91.35 296 ⇑P       P        01 35 04.4  +2.5
KMI                                 *PP      pP       01 35 32.9  -7.2
KMI                                 *SP      sP       01 35 43.1   -13
KMI                                                   01 38 45.4
KMI                                 S        S        01 45 51.7  +6.7
KMI                                 pmax     pmax
      comp=Z,80nm,1.5s,mb5.5
KMI                                 MLR      MLR
      comp=Z,10µm,54.5s
KMI   Kunming             91.35 296 ⇑P       P        01 35 04.4  +2.5
      comp=Z,80nm,1.5s,mb5.5
KMI                                 pP       pP       01 35 32.9  -7.2
KMI                                 sP       sP       01 35 43.1   -13
KMI                                 PP       PP       01 38 45.4  +1.8
KMI                                 S        S        01 45 51.7  +6.7
KMI                                 LR       LR
      comp=Z,10µm,54.5s
BTO   Baotou              91.36 313 eP       P        01 35 03.1  +1.5
NATX  Nacogdoches         91.61  57 PFAKE             01 35 10.0  +7.1
NATX                                LR       LR
      comp=Z,4µm,21.0s
DGMT  Dagmar              91.63  39 eP       P        01 35 02.9  +0.3
      comp=Z,397nm,1.6s,mb6.2
DGMT                                LR       LR
      comp=Z,3µm,21.0s
YAK   Yakutsk             91.69 337 eP       P        01 35 01.9  -0.7
YAK                                 pmax     pmax
      comp=Z,113nm,0.7s,mb6.0
YAK                                 MLR      MLR
      comp=Z,2µm,22.0s
YAK   Yakutsk             91.69 337 eP       P        01 35 01.9  -0.6
      comp=Z,113nm,0.7s,mb6.0
YAK                                 LR       LR
      comp=Z,2µm,22.0s
INK   Inuvik              91.82  14 eP       P        01 35 02.5  -0.5
INK                                 pmax     pmax
      comp=Z,147nm,1.0s
INK   Inuvik              91.82  14 eP       P        01 35 02.5  -0.5
      comp=Z,147nm,1.0s,mb6.0
CMAR  Chiang Mai Arr      92.47 289 P        P        01 35 09.2  +2.0
      comp=Z,75nm,1.1s,mb5.7,baz=105,slow=2.6,SNR=103
CMAR                                pP       pP       01 35 47.1  +1.6
      comp=Z,56nm,1.1s,baz=112,slow=3.0,SNR=5.6
CMAR                                PKKPbc            01 52 19.4
      comp=Z,1.9nm,0.7s,baz=294,slow=5.2,SNR=6.9
CD2   Chengdu             92.48 302 P        P        01 35 08.4  +1.4
CHG   Chiang Mai          92.59 289 ⇑P       P        01 35 09.5  +1.8
      comp=Z,86nm,0.7s,mb6.0
MDZ   Mendoza             92.59 126 eP       P        01 35 04.2  -3.2
KSU1  Kansas State U      92.81  50 eP       P        01 35 08.3  +0.1
JTS   JuntasAbangare      93.04  80 eP       P        01 35 10.6  +0.8
JTS                                 pmax     pmax
      comp=Z,92nm,0.9s
JTS                                 MLR      MLR
      comp=Z,1µm,21.0s
JTS   JuntasAbangare      93.04  80 P        P        01 35 10.6  +0.8
      comp=Z,65nm,0.9s,mb5.8,baz=279,slow=4.0,SNR=34
JTS   JuntasAbangare      93.04  80 eP       P        01 35 10.6  +0.7
      comp=Z,92nm,0.9s,mb5.9
JTS                                 LR       LR
      comp=Z,1µm,21.0s
TEIG  Tepich              93.14  70 PFAKE             01 35 20.0   +10
TEIG                                LR       LR
      comp=Z,1µm,22.0s
CFAA  Coronel Fontan      93.59 125 P        P        01 35 14.2  +2.2
      comp=Z,5.2nm,0.9s,mb4.7,baz=248,slow=4.0,SNR=46
CFAA                                pP       pP       01 35 49.1  -1.2
      comp=Z,3.5nm,1.0s,baz=245,slow=8.2,SNR=5.0
CFAA                                PP       PP       01 39 01.5  +0.3
      comp=Z,0.2nm,0.7s,baz=264,slow=2.8,SNR=3.3
CFAA                                PKKPbc            01 52 18.4
      comp=Z,0.6nm,0.8s,baz=39,slow=0.7,SNR=6.6
YKA   Yellowknife Ar      93.67  24 P        P        01 35 11.2  -0.4
      comp=Z,21nm,0.9s,mb5.3,baz=236,slow=4.0,SNR=144
YKA                                 pP       pP       01 35 49.0  -0.9
      comp=Z,3.0nm,0.7s,baz=237,slow=4.5,SNR=1.8
YKA                                 PKiKP             01 39 57.6
      comp=Z,0.6nm,0.7s,baz=263,slow=1.5,SNR=2.7
YKA                                 PKPPKP            02 00 32.4
      comp=Z,0.2nm,0.3s,baz=54,slow=2.9,SNR=6.2
YKA   Yellowknife Ar      93.67  24 P        P        01 35 11.2  -0.4
YKA                                 pP       pP       01 35 49.0  -0.9
YKW3  Yellowknife Ar      93.70  24 eP       P        01 35 11.2  -0.5
CIT   Chita               93.89 324 eP       P        01 35 13.8  +1.0
CIT                                 e        pP       01 35 51.5  +0.4
CIT                                 e                 01 45 36.4
CIT                                 pmax     pmax
      comp=Z,223nm,3.2s
LZH   Lanzhou             94.20 307 ⇑P       P        01 35 16.5  +1.9
LZH                                 PP       PP       01 39 06.8  +1.1
LZH                                 eS       S        01 46 16.0  +6.5
LZH                                 SS       SS       01 52 39.5  +1.6
LZH                                 AMB      AMB
      comp=Z,130nm,1.5s,mb5.8
LZH                                 AMB      AMB
      comp=Z,650nm,5.8s
LZH                                 LR       LR
      comp=E,8µm,18.5s
LZH                                 LR       LR
      comp=Z,9µm,20.0s
LZH   Lanzhou             94.20 307 ⇑P       P        01 35 16.5  +1.9
LZH                                 *PP      pP       01 35 41.5   -11
LZH                                 *SP      sP       01 35 50.0   -19
LZH                                                   01 39 06.8
LZH                                 eS       S        01 46 16.0  +6.5
LZH                                 SS       SS       01 52 39.5  +1.6
LZH                                 pmax     pmax
      comp=Z,139nm,1.5s,mb5.9
LZH                                 MLR      MLR
      comp=Z,9µm,20.0s
LZH   Lanzhou             94.20 307 ⇑P       P        01 35 16.5  +1.9
      comp=Z,139nm,1.5s,mb5.9
LZH                                 pP       pP       01 35 41.5   -11
LZH                                 sP       sP       01 35 50.0   -19
LZH                                 PP       PP       01 39 06.8  +1.1
LZH                                 eS       S        01 46 16.0  +6.5
LZH                                 sS                01 46 55.0
LZH                                 SS       SS       01 52 39.5  +1.6
LZH                                 LR       LR
      comp=Z,9µm,20.0s
UALR  University of       94.48  55 eP       P        01 35 15.8  -0.1
      comp=Z,40nm,1.2s,mb5.4
UALR                                epP      pP       01 35 52.1  -2.2
TRQA  Tornquist           95.33 133 PFAKE             01 35 30.0   +10
TRQA                                LR       LR
      comp=Z,5µm,21.0s
FFC   Flin Flon           95.59  34 PFAKE             01 35 30.0   +10
FFC                                 LR       LR
      comp=Z,879nm,22.0s
OTAV  Otavalo             96.02  92 PFAKE             01 35 40.0   +17
OTAV                                LR       LR
      comp=Z,4µm,22.0s
ULN   Ulaanbaatar         96.10 318⇑iP       P        01 35 23.5  +0.6
ULN                                 LR       LR
      comp=Z,2µm,20.0s
SONM  Songino Array       96.50 318 P        P        01 35 25.0  +0.2
      comp=Z,10nm,0.9s,mb5.2,baz=128,slow=2.1,SNR=41
SONM                                PP       PP       01 39 14.8  -8.1
      comp=Z,2.0nm,0.8s,baz=124,slow=6.3,SNR=3.5
SONM                                PKiKP             01 40 02.1
      comp=Z,1.9nm,0.7s,baz=147,slow=1.0,SNR=4.1
SONM                                PKKPbc            01 52 09.4
      comp=Z,1.0nm,0.8s,baz=270,slow=3.7,SNR=3.6
SONM                                PKPPKP            02 00 21.0
      comp=Z,2.3nm,1.2s,baz=243,slow=2.8,SNR=4.9
OXF   Oxford              96.68  56 PFAKE             01 35 40.0   +14
OXF                                 LR       LR
      comp=Z,4µm,22.0s
FVM   French Village      96.98  52 eP       P        01 35 26.7  -0.6
FVM                                 e*PP     pP       01 36 02.7  -2.9
FVM                                 pmax     pmax
      comp=Z,114nm,1.5s,mb6.0
FVM   French Village      96.98  52 eP       P        01 35 26.7  -0.6
      comp=Z,114nm,1.5s,mb6.0
FVM                                 epP      pP       01 36 02.7  -2.9
ULM   Lac du Bonnet       97.32  39 P        P        01 35 27.4  -1.1
      comp=Z,8.0nm,0.8s,mb5.1,baz=260,slow=4.7,SNR=9.2
ULM                                 PP       PP       01 39 24.1  -5.2
      comp=Z,3.7nm,0.9s,baz=277,slow=6.9,SNR=3.8
PLAL  Pickwick Lake       97.87  56 PFAKE             01 35 40.0  +8.6
PLAL                                LR       LR
      comp=Z,3µm,20.0s
TIXI  Tiksi               97.89 345c iP      P        01 35 29.9  -0.7
TIXI                                pmax     pmax
      comp=Z,71nm,1.5s,mb5.9
TIXI  Tiksi               97.89 345⇑iP       P        01 35 29.0  -1.6
TIXI                                LR       LR
      comp=Z,2µm,22.0s
LRAL  Lakeview Retre      98.16  58 PFAKE             01 35 40.0  +7.3
LRAL                                LR       LR
      comp=Z,4µm,20.0s
GTA   Gaotai              98.29 309 eP       P        01 35 34.3  +1.2
GTA                                 PP       PP       01 39 38.9  +2.0
GTA                                 SKS      SKS      01 46 01.1  +5.7
GTA                                 S        S        01 46 48.8  +4.8
GTA                                 SS       SS       01 53 38.8  +4.1
GTA                                 AMB      AMB
      comp=Z,10.0nm,1.5s,mb5.0
GTA                                 LR       LR
      comp=N,2µm,33.6s
GTA                                 LR       LR
      comp=E,2µm,29.8s
GTA                                 LR       LR
      comp=Z,5µm,39.0s
WVT   Waverly             98.40  55 PFAKE             01 35 40.0  +6.3
WVT                                 LR       LR
      comp=Z,4µm,20.0s
JFWS  Jewell Farm         98.62  48 PFAKE             01 35 50.0   +15
JFWS                                LR       LR
      comp=Z,2µm,20.0s
ZAK   Zakamensk           99.28 320 eP       P        01 35 36.6  -0.8
ZAK                                 pmax     pmax
      comp=Z,5.0nm,1.2s,mb4.8
EYMN  Ely                 99.30  43 PFAKE             01 35 50.0   +12
EYMN                                LR       LR
      comp=Z,3µm,22.0s
TLY   Talaya              99.46 321 eP       P        01 35 39.0  +0.8
TLY                                 pmax     pmax
      comp=Z,12nm,0.8s,mb5.4
TLY   Talaya              99.46 321⇑eP       P        01 35 38.1  -0.1
TLY                                 LR       LR
      comp=Z,471nm,21.0s
LPAZ  La Paz              99.83 111 PKKPbc            01 52 01.6
      comp=Z,4.8nm,0.7s,baz=70,slow=3.0,SNR=5.1
LPAZ  La Paz              99.83 111 PFAKE             01 35 50.0  +9.4
LPAZ                                LR       LR
      comp=Z,5µm,20.0s
WCI   Wyandotte Cave     100.17  53 PFAKE             01 35 50.0  +8.3
WCI                                 LR       LR
      comp=Z,3µm,22.0s
SHL   Shillong           100.83 293 ex       PP       01 39 49.7  -7.0
MOY   Mondy              101.03 321 eP       P        01 35 45.7  +0.4
DWPF  Disney             101.41  64 PFAKE             01 36 00.0   +12
DWPF                                LR       LR
      comp=Z,3µm,20.0s
LSA   Lhasa              102.53 297 PFAKE             01 36 00.0  +7.6
LSA                                 LR       LR
      comp=Z,2µm,21.0s
AAM   Ann Arbor          103.15  50 PFAKE             01 36 10.0   +15
AAM                                 LR       LR
      comp=Z,3µm,20.0s
CAL   Calcutta           103.17 290 ex       x        01 40 32.8
NHSC  New Hope           103.70  59 PFAKE             01 36 10.0   +13
NHSC                                LR       LR
      comp=Z,3µm,19.0s
BLA   Blacksburg         104.43  55 PFAKE             01 36 10.0  +9.4
BLA                                 LR       LR
      comp=Z,2µm,22.0s
CPUP  Villa Florida      104.49 125 PFAKE             01 36 10.0  +8.9
CPUP                                LR       LR
      comp=Z,3µm,20.0s
BWNR  Bhubaneshwar       104.87 287 ex       PP       01 40 24.8  -2.4
PALK  Pallekele          106.07 272 PFAKE             01 40 30.0
PALK                                LR       LR
      comp=Z,853nm,22.0s
SDV   Santo Domingo      106.08  86 PFAKE             01 40 30.0
SDV                                 LR       LR
      comp=Z,3µm,22.0s
SIV   San Ignacio        106.14 113 PKKPbc            01 51 41.5
      comp=Z,5.5nm,0.8s,baz=96,slow=5.7,SNR=7.9
PKI   Pulchoki           106.94 294 eP                01 40 20.7
      comp=Z,39nm,0.7s
CBN   Corbin             107.00  55 PFAKE             01 40 30.0
CBN                                 LR       LR
      comp=Z,4µm,20.0s
KKN   Kakani             107.10 294 eP                01 40 21.3
      comp=Z,52nm,0.8s
SAML  Samuel             107.11 106 PFAKE             01 40 30.0
SAML                                LR       LR
      comp=Z,5µm,22.0s
DMN   Daman              107.21 294 eP                01 40 21.4
      comp=Z,19nm,0.6s
GKN   Gorkha             107.70 294 eP                01 40 21.8
      comp=Z,33nm,0.8s
KOLN  Koldanda           108.55 294 eP                01 40 23.1
      comp=Z,40nm,0.7s
DGAR  Diego Garcia       108.88 255 PFAKE             01 40 40.0
DGAR                                LR       LR
      comp=Z,896nm,21.0s
NCB   Newcomb            110.23  49 ePdif    Pdif     01 36 23.1  -2.8
HYB   Hyderabad          110.82 282 ePKIKP   PKPdf    01 40 29.0  +2.0
HYB                                 e                 01 41 11.0
HYB   Hyderabad          110.82 282 i PKP    PKPdf    01 40 29.0  +2.0
HYB                                 ePP      PP       01 41 11.0   0.0
HRV   Harvard--Oak R     112.01  51 PFAKE             01 40 40.0   +11
HRV                                 LR       LR
      comp=Z,4µm,22.0s
NVS   Novosibirsk        112.04 322 ePKIKP   PKPdf    01 40 27.1  -1.4
NVS                                 i                 01 41 02.2
NVS                                 pmax     pmax
      comp=Z,25nm,1.2s
NVS                                 pmax     pmax
      comp=N,8.0nm,1.1s
NVS                                 pmax     pmax
      comp=E,15nm,1.4s
WES   Weston             112.17  51 PFAKE             01 40 40.0   +11
WES                                 LR       LR
      comp=Z,4µm,22.0s
MKAR  Makanchi Array     112.25 314 i PKIKP  PKPdf    01 40 29.6  +0.5
MKAR                                pmax     pmax
      comp=Z,19nm,0.6s
MKAR  Makanchi Array     112.25 314 Pdiff    Pdif     01 36 36.2  +1.5
      comp=Z,1.1nm,0.8s,baz=90,slow=4.9,SNR=9.8
MKAR                                PKiKP             01 40 29.9
      comp=Z,26nm,0.6s,baz=64,slow=1.6,SNR=98
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MKAR				PKKPbc		01 51 21.7	
	comp=Z,4.4nm,0.7s,baz=279,slow=3.2,SNR=19						
SJG	**San Juan**	**112.69**	**78**	PKiKP		01 40 31.4	
	comp=Z,10nm,0.7s,slow=8.1,SNR=7.0						
SJG	**San Juan**	**112.69**	**78**	PKPdf	PKPdf	01 40 31.4	+0.7
SJG				LR	LR		
	comp=Z,2µm,21.0s						
AKL	**Akola**	**112.98**	**285**	*i* P	PKPdf	01 40 35.5	+4.3
AKL				*e*x	x	01 41 04.8	
BHPL	**Bhopal**	**113.12**	**288**	*e*P	PKPdf	01 40 32.2	+0.8
BHPL				AMb	AMB	01 40 35.1	
	comp=Z,37nm,0.8s						
MNGI	**Mangalore**	**113.20**	**276**	*e*P	PKPdf	01 40 32.6	+0.8
WVL	**Waterville**	**113.55**	**49**	PFAKE		01 40 40.0	+8.2
WVL				LR	LR		
	comp=Z,11µm,21.0s						
NDI	**New Delhi**	**114.25**	**294**	*e*P	PKPdf	01 40 33.8	+0.2
PQI	**Presque Isle**	**114.80**	**47**	PFAKE		01 40 50.0	+16
PQI				LR	LR		
	comp=Z,11µm,20.0s						
KAD	**Karad**	**114.86**	**281**	*e*P	PKPdf	01 40 34.5	-0.5
KAD				AMb	AMB	01 40 37.9	
	comp=Z,44nm,0.8s						
SCHQ	**Schefferville**	**115.41**	**38**	PKP	PKPdf	01 40 35.4	+0.2
	comp=Z,6.8nm,0.8s,baz=106,slow=1.9,SNR=9.2						
SCHQ				PKKPbc		01 51 11.6	
	comp=Z,4.6nm,0.7s,baz=51,slow=4.0,SNR=9.5						
POO	**Poona**	**115.43**	**282**	*e*P	PKPdf	01 40 35.8	-0.3
POO				AMb	AMB	01 40 39.5	
	comp=Z,50nm,0.8s						
THN	**Thein Dam**	**116.04**	**298**	*e*P	PKPdf	01 40 36.6	-0.3
	comp=Z,30nm,0.8s						
ULHL	**Ulahol**	**116.34**	**308**	P	PKPdf	01 40 39.0	+1.8
	SNR=65						
BBSR	**BB Station**	**116.42**	**63**	PFAKE		01 40 50.0	+12
BBSR				LR	LR		
	comp=Z,2µm,21.0s						
KSH	**Kashi**	**116.42**	**305**	*e*PKP	PKPdf	01 40 39.0	+1.5
KSH				PP	PP		
	comp=Z,2µm,9.7s						
KSH				LR	LR		
	comp=N,2µm,15.2s						
KSH				LR	LR		
	comp=E,1µm,12.5s						
BOM	**Bombay**	**116.47**	**282**	*i* P	PKPdf	01 40 41.0	+3.0
TKM2	**Tokmak 2**	**116.83**	**309**	P	PKPdf	01 40 39.2	+1.1
	SNR=67						
KZA	**Kyzart**	**117.07**	**308**	P	PKPdf	01 40 40.7	+2.0
	SNR=56						
KBK	**Karagaybulak**	**117.31**	**309**	P	PKPdf	01 40 40.4	+1.3
	SNR=62						
BDFB	**Brasilia**	**117.39**	**120**	PKP	PKPdf	01 40 43.1	+3.4
	comp=E,4.1nm,0.8s,baz=211,slow=0.5,SNR=4.2						
BDFB				PKKPbc		01 51 06.1	
	comp=E,5.7nm,0.7s,baz=146,slow=2.2,SNR=8.9						
CHMS	**Chumysh**	**117.45**	**309**	P	PKPdf	01 40 40.5	+1.1
	SNR=38						
FRU	**Bishkek**	**117.55**	**309**	⇑*i*PKIKP	PKPdf	01 40 41.0	+1.5
FRU				*e*		01 41 52.0	
FRU				pmax	pmax		
	comp=Z,80nm,1.8s						
UCH	**Uchtor**	**117.62**	**308**	P	PKPdf	01 40 41.9	+2.2
	SNR=51						
AAK	**Ala-Archa**	**117.64**	**309**	P	PKPdf	01 40 41.1	+1.4
	SNR=28						
AAK	**Ala-Archa**	**117.64**	**309**	PKIKP	PKPdf	01 40 41.0	+1.3
AAK				pmax	pmax		
	comp=Z,29nm,0.8s						
AAK	**Ala-Archa**	**117.64**	**309**	⇑*i*PKP	PKPdf	01 40 39.0	-0.7
AAK				LR	LR		
	comp=Z,218nm,22.0s						
USP	**Ospenovka**	**117.64**	**310**	P	PKPdf	01 40 40.7	+1.0
	SNR=74						
CAM4	**Nova Friburgo**	**117.89**	**129**	⇑*i*P	PKPdf	01 40 41.1	+0.4
CAM4				*i*		01 40 42.4	
CAM4				*i*		01 40 51.3	
CAM4				*i*		01 41 11.0	
EKS2	**Erkin-Say**	**118.17**	**309**	P	PKPdf	01 40 42.3	+1.5
	SNR=49						
AML	**Almayashu**	**118.23**	**308**	P	PKPdf	01 40 42.7	+1.8
	SNR=101						
KBS	**Kingsbay**	**119.71**	**359**	*e*P	PKPdf	01 40 43.1	+0.1
KBS				AMb	AMB	01 40 47.0	
	comp=Z,61nm,1.1s						
BVA0	**Borovoye Array**	**119.72**	**321**	*i* PKIKP	PKPdf	01 40 44.5	+1.0
BVA0				pmax	pmax		
	comp=Z,11nm,0.8s						
BVAR	**Borovoye Array**	**119.72**	**321**	PKP	PKPdf	01 40 44.4	+0.9
	comp=Z,85nm,0.6s,baz=120,slow=2.1,SNR=44						
BVAR				PKKPbc		01 50 55.8	
	comp=Z,3.0nm,0.9s,baz=246,slow=43,SNR=8.1						
SFJD	**Kangerlussuaq**	**120.18**	**22**	⇑*i*PKIKP	PKPdf	01 40 44.3	+0.2
SFJD				pmax	pmax		
	comp=Z,18nm,0.6s						
SFJD	**Kangerlussuaq**	**120.18**	**22**	⇑*i*P	PKPdf	01 40 44.3	+0.2
	comp=Z,18nm,0.6s						
KKAR	**Karatay Array**	**120.56**	**309**	*i* PKIKP	PKPdf	01 40 46.2	+0.8
KKAR				pmax	pmax		
	comp=Z,46nm,0.9s						
DAG	**Danmarks Havn**	**120.70**	**6**	⇓*e*PKIKP	PKPdf	01 40 44.8	-0.2
DAG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
DAG	**Danmarks Havn**	**120.70**	**6**	⇓*e*P	PKPdf	01 40 44.8	-0.2
DAG				*e*		01 42 10.0	
DAG	**Danmarks Havn**	**120.70**	**6**	⇓*i*P	PKPdf	01 40 44.8	-0.2
	comp=Z,7.5nm,0.7s						
DAG				*e*		01 42 10.0	
HSP	**Hornsund**	**121.49**	**357**	*e*P	PKPdf	01 40 47.1	+0.6
TRIS	**Tristan da Cun**	**122.04**	**163**	PFAKE		01 41 00.0	+12
TRIS				LR	LR		
	comp=Z,4µm,22.0s						
SVE	**Sverdlovsk**	**124.28**	**327**	⇑*i*PKIKP	PKPdf	01 40 53.4	+1.1
SVE				*e*		01 42 37.5	
SVE				pmax	pmax		
	comp=E,140µm,1.7s						
SOKR	**Solikamsk**	**125.13**	**331**	*c i*PKIKP	PKPdf	01 40 53.8	0.0
SOKR				pmax	pmax		
	comp=Z,190nm,0.9s						
ARU	**Arti**	**125.49**	**327**	*i* PKIKP	PKPdf	01 40 55.6	+1.0
ARU				*e*		01 42 47.5	
ARU				*e*PPP	PPP	01 45 36.4	+2.7
ARU				*e*		01 47 50.1	
ARU				*e*PS	PS	01 52 33.6	-17
ARU				*e*SS	SS	01 59 33.5	-1.5
ARU	**Arti**	**125.49**	**327**	*e*PKPdf	PKPdf	01 40 55.4	+0.8
ARU				LR	LR		
	comp=Z,502nm,20.0s						
SCO	**Scoresbysund**	**125.75**	**11**	*i* PKIKP	PKPdf	01 40 56.1	+1.4
SCO				pmax	pmax		
	comp=Z,38nm,0.8s						
SCO	**Scoresbysund**	**125.75**	**11**	*i* P	PKPdf	01 40 56.1	+1.4
	comp=Z,38nm,0.8s						
AB31	**Akbulak array**	**126.91**	**318**	*i* PKIKP	PKPdf	01 40 58.3	+0.8
AB31				pmax	pmax		
	comp=Z,86nm,1.3s						
SUR	**Sutherland**	**127.02**	**196**	PFAKE		01 41 10.0	+12
SUR				LR	LR		
	comp=Z,1µm,20.0s						
JMIC	**Jan Mayen**	**127.13**	**6**	PKP	PKPdf	01 40 59.2	+1.9
	comp=Z,53nm,0.8s,baz=28,slow=2.3,SNR=4.8						
KEV	**Kevo**	**127.31**	**351**	*e*PKP	PKPdf	01 40 57.7	0.0
KEV				LR	LR		
	comp=Z,1µm,22.0s						
ARCES	**ARCESS Array B**	**127.73**	**351**	PKP	PKPdf	01 40 59.7	+1.1
	comp=Z,88nm,1.0s,baz=356,slow=0.8,SNR=75						
ARCES	**ARCESS Array B**	**127.73**	**351**	PKP	PKPdf	01 40 59.7	+1.1
APA	**Apatity**	**128.02**	**347**	*i* PKIKP	PKPdf	01 41 00.0	+0.8
APA				pmax	pmax		
	comp=Z,54nm,1.1s						
TRO	**Tromso**	**128.45**	**354**	*e*P	PKPdf	01 40 59.1	-0.9
TRO				AMb	AMB	01 41 01.7	
	comp=Z,96nm,1.3s						
BOSA	**Boshof**	**129.10**	**203**	PKP	PKPdf	01 41 04.8	+2.4
	comp=Z,31nm,0.9s,baz=155,slow=2.3,SNR=22						
BOSA	**Boshof**	**129.10**	**203**	PKP	PKPdf	01 41 04.8	+2.4
BOSA				LR	LR		
	comp=Z,3µm,20.0s						
WBK	**Wadi Bani Khal**	**129.84**	**284**	P	PKPdf	01 41 06.0	+2.1
	SNR=8.0						
CS6B	**Jaguaretama**	**130.44**	**115**	*e*P	PKPdf	01 40 58.6	-6.6
CS6B				*e*		01 41 01.3	
JMDO	**Jabal Madar**	**130.61**	**284**	P	PKPdf	01 41 06.7	+1.4
	SNR=29						
BIDO	**Bidbid**	**130.70**	**285**	P	PKPdf	01 41 07.7	+2.3
	SNR=20						
SMDO	**Samad**	**130.73**	**285**	P	PKPdf	01 41 06.8	+1.3
	SNR=36						
HOQ	**Hoqain**	**131.45**	**285**	P	PKPdf	01 41 08.4	+1.5
	SNR=12						
BSY	**Bisya**	**131.48**	**284**	P	PKPdf	01 41 08.1	+1.1
	SNR=34						
PECR	**Pechory**	**132.60**	**332**	*e*PKIKP	PKPdf	01 41 08.6	+0.4
PECR				pmax	pmax		
	comp=Z,1µm,1.4s						
RCBR	**Riachuelo**	**132.63**	**117**	PFAKE		01 41 20.0	+11
RCBR				LR	LR		
	comp=Z,3µm,21.0s						
ASHO	**Ashiyiah**	**132.67**	**287**	P	PKPdf	01 41 10.1	+0.9
	SNR=25						
NSS	**Namsos**	**134.04**	**356**	*e*P	PKPdf	01 41 09.8	-0.8
NSS				AMb	AMB	01 41 15.2	
	comp=Z,57nm,2.1s						
KAF	**Kangasniemi**	**134.27**	**346**	*e*pkp	PKPdf	01 41 05.4	-5.7
FINES	**FINESS Array B**	**134.91**	**346**	PKhKP		01 41 00.0	
	comp=Z,4.0nm,0.7s,SNR=11						
FINES				PKP	PKPdf	01 41 14.1	+1.8
	comp=Z,58nm,0.9s,baz=63,slow=4.3,SNR=33						
FINES				SKKPbc		01 53 23.4	
	comp=Z,2.1nm,0.8s,baz=180,slow=3.8,SNR=4.7						
FINES	**FINESS Array B**	**134.91**	**346**	PKP	PKPdf	01 41 14.1	+1.8
FINES				SKKPbc		01 53 23.4	
PUL	**Pulkovo**	**135.25**	**342**	⇓*i*PKIKP	PKPdf	01 41 13.4	+0.4
OBN	**Obninsk**	**136.63**	**334**	*c i*PKHKP		01 41 04.4	
OBN				*i*		01 41 16.6	
OBN				*i*		01 44 03.1	
OBN				pmax	pmax		
	comp=Z,14nm,0.6s						
OBN				pmax	pmax		
	comp=Z,97nm,0.8s						
OBN	**Obninsk**	**136.63**	**334**	⇑*i*PKP	PKPdf	01 41 16.7	+1.1
OBN				LR	LR		
	comp=Z,528nm,20.0s						
NB2	**NORSAR Subarra**	**137.56**	**356**	PKPdf	PKPdf	01 41 07.5	-10
	comp=Z,8.4nm,1.1s,baz=7.0,slow=1.8						
NB2	**NORSAR Subarra**	**137.56**	**356**	PKPd	PKPdf	01 41 07.5	-10
	baz=6.6,slow=1.8						
NOA	**NORSAR Array B**	**137.56**	**356**	PKhKP		01 41 07.6	
	comp=Z,4.2nm,0.7s,baz=16,slow=5.0,SNR=19						
NOA				PKP	PKPdf	01 41 18.1	+0.9
	comp=Z,16nm,0.8s,baz=14,slow=4.0,SNR=21						
NOA				PP	PP	01 44 02.3	-6.1
	comp=Z,3.4nm,0.8s,baz=9.1,slow=5.5,SNR=5.6						
NOA				SKKPbc		01 53 30.1	
	comp=Z,0.7nm,0.8s,baz=187,slow=5.6,SNR=3.3						
NOA	**NORSAR Array B**	**137.56**	**356**	PKP	PKPdf	01 41 18.1	+0.9
NOA				PP	PP	01 44 02.3	-6.1
NOA				SKKPbc		01 53 30.1	
VOR	**Voronezh**	**137.68**	**329**	*e*PKIKP	PKPdf	01 41 19.0	+1.3
VOR						01 44 03.0	
VOR				pmax	pmax		
	comp=N,30nm,1.7s						
VOR				pmax	pmax		
	comp=Z,170nm,1.7s						
VOR				pmax	pmax		
	comp=N,100nm,3.0s						
NAO01	**NORSAR Array S**	**137.78**	**356**	PFAKE		01 41 30.0	+12
NAO01				LR	LR		
	comp=Z,2µm,19.0s						
VRSR	**Storozhevoye**	**138.00**	**328**	*e*PKIKP	PKPdf	01 41 18.1	-0.2
VRSR				*e*		01 44 13.9	
VRSR				*e*PPP	PPP	01 47 08.2	-6.1
VRSR				pmax	pmax		
	comp=Z,70nm,1.8s						
VRSR				pmax	pmax		
	comp=N,7.0nm,1.7s						
VRSR				pmax	pmax		
	comp=E,30nm,0.8s						
HFS	**Hagfors**	**138.24**	**354**	PKIKP	PKPdf	01 41 18.6	+0.1
HFS	**Hagfors**	**138.24**	**354**	PKhKP		01 41 07.5	
	comp=E,9.8nm,0.8s,baz=342,slow=4.7,SNR=26						
HFS				PKP	PKPdf	01 41 18.5	+0.1
	comp=E,39nm,0.7s,slow=1.4,SNR=19						
KONO	**Kongsberg**	**139.05**	**357**	PFAKE		01 41 30.0	+10
KONO				LR	LR		
	comp=Z,2µm,21.0s						
GOF	**Gofitskoye**	**139.16**	**318**	⇑*i*PKIKP	PKPdf	01 41 21.8	+1.3
GOF				pmax	pmax		
	comp=Z,130nm,1.6s						
LSZ	**Lusaka**	**139.34**	**215**	PFAKE		01 41 30.0	+8.4
LSZ				LR	LR		
	comp=Z,2µm,20.0s						
TI2	**Plekhanov**	**139.42**	**313**	*e*PKHKP		01 41 04.0	
ZEI	**Tsey**	**139.59**	**315**	*e*PKHKP		01 41 13.7	
KIV	**Kislovodsk**	**139.88**	**317**	*e*PKHKP		01 41 16.9	
KIV				pmax	pmax		
	comp=Z,22nm,0.8s						
KIV	**Kislovodsk**	**139.88**	**317**	PFAKE		01 41 30.0	+8.1
KIV				LR	LR		
	comp=Z,513nm,21.0s						
GNI	**Garni**	**140.00**	**311**	PKhKP		01 41 22.9	
	comp=Z,32nm,0.8s,baz=345,slow=10,SNR=12						
GNI	**Garni**	**140.00**	**311**	PKP	PKPdf	01 41 22.9	+0.7
GNI				LR	LR		
	comp=Z,1µm,21.0s						
MNK	**Minsk**	**140.37**	**339**	*e*PKHKP		01 41 17.0	
TSUM	**Tsumeb**	**140.38**	**198**	PKhKP		01 41 17.6	
	comp=Z,11nm,0.7s,baz=124,slow=4.6,SNR=23						
TSUM	**Tsumeb**	**140.38**	**198**	PFAKE		01 41 40.0	+17
TSUM				LR	LR		
	comp=Z,3µm,21.0s						
CLDR	**Caldiran**	**140.95**	**310**	*e*P	PKPdf	01 41 19.4	-4.6
KARS	**Kars**	**141.00**	**312**	*e*P	PKPdf	01 41 20.3	-3.7
TVAN	**Van**	**141.53**	**309**	*i* P	PKPdf	01 41 21.3	-3.7
HKR	**Hakkari**	**141.59**	**307**	P	PKPdf	01 41 20.6	-4.5
BCA	**Borcka**	**141.69**	**314**	P	PKPdf	01 41 21.3	-3.9
SOC	**Sochi**	**141.96**	**318**	*i* PKHKP		01 41 21.9	
SOC				*e*		01 44 34.8	
SOC				*e*PPP	PPP	01 47 39.7	-6.4
SOC				*e*SS	SS	02 02 53.5	-0.6
SOC				*e*SSS	SSS	02 08 11.1	-3.7
SOC				pmax	pmax		
	comp=Z,56nm,0.8s						
SOC				pmax	pmax		
	comp=N,13nm,0.9s						
SOC				pmax	pmax		
	comp=E,10.0nm,0.9s						
SUW	**Suwalki**	**142.21**	**343**	*e*PKP	PKPdf	01 41 22.5	-3.1
MUD	**Monsted U'grnd**	**142.26**	**356**	*i* PKHKP		01 41 22.8	
MUD				pmax	pmax		
	comp=Z,26nm,0.6s						
MUD	**Monsted U'grnd**	**142.26**	**356**	*i* P	PKPdf	01 41 22.8	-2.8
	comp=Z,26nm,0.6s						
EDI	**Edinburgh**	**142.35**	**8**	*e*P	PKPdf	01 41 22.5	-3.3
ERZM	**Erzurum**	**142.50**	**312**	*i* P	PKPdf	01 41 25.4	-1.2
EZM	**Erzurum**	**142.50**	**312**	P	PKPdf	01 41 24.9	-1.7
GMK	**Mull of Kintyr**	**142.56**	**10**	*e*P	PKPdf	01 41 22.7	-3.5
ANN	**Anapa**	**142.72**	**321**	*c i*PKHKP		01 41 23.3	
ANN				*e*PPP	PPP	01 47 51.1	-1.0
ANN				pmax	pmax		
	comp=Z,95nm,0.9s						
COP	**Copenhagen**	**142.75**	**353**	*e*PKIKP	PKPdf	01 41 24.7	-1.8
COP				pmax	pmax		
	comp=Z,49nm,1.0s						
COP	**Copenhagen**	**142.75**	**353**	*i* P	PKPdf	01 41 24.7	-1.8
	comp=Z,49nm,1.0s						
AKASG	**Malin Array Be**	**142.89**	**335**	PKhKP		01 41 23.9	
	comp=Z,26nm,0.5s,baz=38,slow=4.1,SNR=171						
AKASG				SKKPbc		01 52 56.8	
	comp=Z,0.2nm,0.3s,baz=232,slow=6.1,SNR=4.2						
AKASG	**Malin Array Be**	**142.89**	**335**	PKP	PKPdf	01 41 23.9	-3.0
AKASG				SKKPbc		01 52 56.8	
EKA	**Eskdalemuir Ar**	**142.93**	**8**	PKhKP		01 41 23.9	
	comp=Z,29nm,0.9s,baz=319,slow=2.5,SNR=35						
ESK	**Eskdalemuir**	**142.94**	**8**	PFAKE		01 41 40.0	+13
ESK				LR	LR		
	comp=Z,503nm,21.0s						
BSD	**Bornholm Skovb**	**142.98**	**351**	⇓*i*PKHKP		01 41 24.2	
BSD				pmax	pmax		
	comp=Z,72nm,0.7s						
BSD	**Bornholm Skovb**	**142.98**	**351**	⇓*i*P	PKPdf	01 41 24.2	-2.7
	comp=Z,72nm,0.7s						
BWH	**Wardlaw**	**143.02**	**9**	*e*P	PKPbc	01 41 23.8	-1.2
BTMT	**Batman**	**143.06**	**309**	P	PKPbc	01 41 26.4	+0.7
BBH	**Bruntsheil**	**143.16**	**8**	*e*P	PKPbc	01 41 25.1	-0.3
BHH	**Howats Hill**	**143.16**	**8**	*e*P	PKPbc	01 41 24.2	-1.3
GAL1	**Galloway**	**143.16**	**10**	*e*P	PKPbc	01 41 23.4	-2.1
GCD	**Castle Douglas**	**143.28**	**9**	⇑*e*P	PKPbc	01 41 24.8	-1.0
BEST	**Besiri**	**143.33**	**309**	*i* P	PKPbc	01 41 26.7	+0.2
BTA	**Talkin**	**143.41**	**8**	*e*P	PKPbc	01 41 25.7	-0.5
BBO1	**Bothel**	**143.50**	**8**	*e*P	PKPbc	01 41 25.2	-1.3
BINT	**Bingol**	**143.53**	**311**	P	PKPbc	01 41 27.9	+0.8
GMM	**Mts of Mourne**	**143.55**	**11**	⇑*e*P	PKPbc	01 41 25.8	-0.9
LCP	**Cassop**	**143.72**	**7**	*e*P	PKPbc	01 41 26.4	-0.7
WIM	**Isle of Man**	**143.86**	**10**	*e*P	PKPbc	01 41 26.5	-1.1
KELT	**Kelkit**	**143.87**	**313**	*i* P	PKPbc	01 41 29.9	+1.9
DIY	**Diyarbakir**	**144.10**	**309**	P	PKPbc	01 41 29.2	+0.4
DCN	**Croghan**	**144.14**	**13**	⇑*i*P	PKPbc	01 41 28.3	-0.1
GKP	**Gorka Klasztor**	**144.33**	**348**	⇑*e*PKP	PKPdf	01 41 29.0	-0.3
GKP	**Gorka Klasztor**	**144.33**	**348**	⇑*e*PKP	PKPdf	01 41 29.0	-0.3
DLF	**Lyons Farm**	**144.34**	**12**	⇑*i*P	PKPbc	01 41 28.9	0.0
WAR	**Warsaw**	**144.38**	**343**	⇑*i*PKP	PKPdf	01 41 30.3	+0.8
HPK	**Haverah Park**	**144.47**	**7**	*e*P	PKPbc	01 41 28.7	-0.6
CALA	**Caldeira**	**144.53**	**49**	*e*PKP	PKPdf	01 41 30.2	+0.1
SIM	**Simferopol'**	**144.54**	**324**	*e*PKIKP	PKPdf	01 41 31.0	+1.0
SIM				pmax	pmax		
	comp=Z,3µm,17.0s						
HOR	**Horta**	**144.60**	**49**	*e*PKP	PKPdf	01 41 31.1	+0.8
WCB1	**Church Bay**	**144.62**	**10**	*e*P	PKPbc	01 41 28.1	-1.6
WCB1				AMb	AMB	01 41 33.7	
	comp=Z,177nm,1.5s						
WME	**Myndd Eilian**	**144.64**	**10**	⇑*e*P	PKPbc	01 41 29.6	-0.2
BSEG	**Bad Segeberg**	**144.68**	**355**	*e*PKPdf	PKPdf	01 41 30.0	+0.1
WLF1	**Llynfaes**	**144.73**	**10**	*e*P	PKPdf	01 41 28.7	-1.4
WLF1				AMb	AMB	01 41 34.1	
	comp=Z,211nm,1.4s						
YRC	**Rhoscolyn**	**144.74**	**10**	*e*P	PKPdf	01 41 30.0	-0.1
YRC				AMb	AMB	01 41 32.5	
	comp=Z,210nm,1.3s						
PICO	**Pico**	**144.76**	**49**	*e*PKP	PKPdf	01 41 31.3	+0.7
ELZG	**Elazig**	**144.76**	**311**	*i* P	PKPdf	01 41 33.4	+2.8
STGR	**Santa Cruz**	**144.81**	**48**	*e*PKP	PKPdf	01 41 31.8	+1.2
WPM1	**Penmaenmawr**	**144.84**	**10**	*e*P	PKPdf	01 41 28.7	-1.5
WPM1				AMb	AMB	01 41 33.9	
	comp=Z,306nm,1.5s						
LHO	**Holmfirth**	**144.85**	**7**	*i* P	PKPdf	01 41 31.3	+1.1
LHO	**Holmfirth**	**144.85**	**7**	*e*P	PKPdf	01 41 30.0	-0.3
YLL	**Llanberis**	**144.91**	**10**	*e*P	PKPdf	01 41 30.7	+0.4
YRE	**Yr Eifl**	**145.02**	**10**	*e*P	PKPdf	01 41 29.8	-0.8
YRE				AMb	AMB	01 41 34.4	
	comp=Z,328nm,1.4s						
LMK	**Market Rasen**	**145.10**	**6**	*e*P	PKPdf	01 41 30.5	-0.2
KBI1	**Birley Grange**	**145.17**	**7**	*e*P	PKPdf	01 41 30.5	-0.3
MYA	**Malataya**	**145.23**	**311**	P	PKPdf	01 41 33.7	+2.3
SBD1	**Bryn Du**	**145.28**	**9**	*e*P	PKPdf	01 41 31.0	0.0
URFA	**Urfa**	**145.30**	**309**	P	PKPdf	01 41 33.5	+2.0
KWE	**Weaver Farm**	**145.37**	**8**	*e*P	PKPdf	01 41 31.4	+0.3
ASBA	**Santa Barbara**	**145.44**	**48**	*e*PKP	PKPdf	01 41 33.5	+1.7
PBIS	**Biscoitos**	**145.48**	**48**	*e*PKP	PKPdf	01 41 34.0	+2.2
PPAD	**Pico dos Padre**	**145.48**	**48**	*e*PKP	PKPdf	01 41 33.7	+1.9
ADH	**Angra Heroismo**	**145.54**	**48**	*e*PKP	PKPdf	01 41 34.2	+2.3
PVNV	**Vila Nova**	**145.54**	**48**	*e*PKP	PKPdf	01 41 34.2	+2.3
LVV	**L'vov**	**145.56**	**338**	*i* PKIKP	PKPdf	01 41 33.7	+2.1
LVV				*e*		01 44 53.0	
LVV				*e*		01 48 32.0	
RIB2	**Ribeirinha**	**145.57**	**48**	*e*PKP	PKPdf	01 41 34.5	+2.5
PSCM	**Serra do Cume**	**145.60**	**48**	*e*PKP	PKPdf	01 41 34.1	+2.1
SVST	**Sivas**	**145.61**	**314**	*i* P	PKPdf	01 41 34.7	+2.7
PFAV	**Pico das Favas**	**145.62**	**48**	*e*PKP	PKPdf	01 41 35.3	+3.3
TOKT	**Tokat**	**145.62**	**315**	P	PKPdf	01 41 33.9	+1.9
HLM1	**Long Mynd**	**145.72**	**9**	*e*P	PKPdf	01 41 33.1	+1.4
SSP1	**Stoney Pound**	**145.78**	**9**	*e*P	PKPdf	01 41 32.6	+0.8
KIS	**Kishinev**	**145.86**	**331**	α *i*PKIKP	PKPdf	01 41 33.0	+0.8
KIS				pmax	pmax		
	comp=Z,1µm,1.0s						
KIS				pmax	pmax		
	comp=Z,5µm,8.0s						
WIT	**Witteveen**	**146.00**	**358**	*e*PKP	PKPdf	01 41 34.7	+2.5
HTR	**Trewern Hill**	**146.08**	**9**	*e*P	PKPdf	01 41 33.6	+1.2
HTR				AMb	AMB	01 41 37.2	
	comp=Z,356nm,1.5s						
BOYT	**Boyabat**	**146.12**	**318**	*i* P	PKPdf	01 41 34.6	+1.8
KWP	**Kalwaria**	**146.17**	**340**	⇑*e*PKP	PKPdf	01 41 34.2	+1.6
BYBT	**Boyabat**	**146.18**	**318**	P	PKPdf	01 41 34.9	+2.0
MCH1	**Michaelchurch**	**146.20**	**9**	P	PKPdf	01 41 34.4	+1.8
MCH1	**Michaelchurch**	**146.20**	**9**	*e*P	PKPdf	01 41 34.1	+1.6
MCH1				*e*P		01 41 34.4	
HAE	**Alders End**	**146.23**	**9**	*e*P	PKPdf	01 41 32.7	+0.1
HAE				AMb	AMB	01 41 37.9	
	comp=Z,1µm,1.4s						
GZT	**Gaziantep**	**146.25**	**310**	*i* P	PKPdf	01 41 34.8	+1.7
HSA	**Swansea**	**146.26**	**11**	*e*P	PKPdf	01 41 34.4	+1.7
IAS	**Iasi**	**146.28**	**332**	PKP2	PKPab	01 41 35.9	-1.7
IAS	**Iasi**	**146.28**	**332**	⇓P	PKPdf	01 41 36.3	+3.5
OJC	**Ojcow**	**146.54**	**343**	*e*PKP	PKPdf	01 41 34.9	+1.7
HGH	**Gray Hill**	**146.58**	**9**	*e*P	PKPdf	01 41 34.3	+1.1
HGH				AMb	AMB	01 41 38.7	
	comp=Z,383nm,1.1s						
GAZ	**Gaziantep**	**146.58**	**310**	P	PKPdf	01 41 35.4	+1.8
CTKT	**Corum**	**146.62**	**317**	*i* P	PKPdf	01 41 35.6	+2.0
KAHT	**Ahir Dag**	**146.63**	**311**	*i* P	PKPdf	01 41 35.7	+1.9
CLZ	**Clausthal**	**146.75**	**354**	*e*PKPdf	PKPdf	01 41 35.0	+1.6
CLZ				*e*pPKPbc		01 42 18.3	
SKP1	**Kophill**	**146.76**	**7**	*e*P	PKPdf	01 41 34.2	+0.8
BNN	**Bunyan**	**146.80**	**314**	P	PKPdf	01 41 36.1	+2.1
KSP	**Ksiaz**	**146.82**	**347**	*e*PKPdf	PKPdf	01 41 35.5	+1.9
KSP				*i* PKPab	PKPab	01 41 37.9	-1.6
KSP				*e*pPKPdf		01 42 13.9	
KSP				*e*pPKP		01 42 16.2	
KSP	**Ksiaz**	**146.82**	**347**	*e*PKP	PKPdf	01 41 35.6	+2.0
TCR	**Colchester**	**146.82**	**5**	*e*P	PKPdf	01 41 35.2	+1.6
SWN1	**Swindon**	**146.85**	**8**	*e*P	PKPdf	01 41 35.6	+2.0
WTSB	**Winterswijk**	**146.85**	**358**	*e*PKP	PKPdf	01 41 35.7	+2.1
	comp=Z,361nm,1.0s						
WTSB				*e*x	x	01 41 58.1	
TOS	**Tosya**	**146.88**	**318**	*e*P	PKPdf	01 41 38.1	+4.1
HTL	**Hartland**	**146.92**	**11**	*e*P	PKPdf	01 41 34.9	+1.1
KOLS	**Kolonicke sedl**	**146.92**	**339**	*i* PKP	PKPdf	01 41 36.1	+2.3
KOLS				*e*		01 41 39.6	
BURAR	**Bucovina Array**	**146.94**	**335**	P	PKPdf	01 41 36.3	+2.4
BURAR	**Bucovina Array**	**146.94**	**335**	⇑P	PKPdf	01 41 38.3	+4.4
CLL	**Collm**	**146.96**	**351**	*e*PKIKP	PKPdf	01 41 35.0	+1.2
CLL				*i* PKP1	PKPbc	01 41 37.8	+2.2
CLL				*i* PKP2	PKPab	01 41 39.9	-0.2
CLL				*i* *PPKP		01 42 18.5	
HEX	**Exmoor**	**146.97**	**11**	*e*P	PKPdf	01 41 34.4	+0.6
BALT	**Daday**	**147.00**	**320**	*i* P	PKPdf	01 41 35.6	+1.4
FAC	**Faja de Cima**	**147.04**	**48**	*e*PKP	PKPdf	01 41 40.0	+5.6
RAC	**Raciborz**	**147.09**	**345**	*e*PKPdf	PKPdf	01 41 36.0	+1.9
NIE	**Niedzica**	**147.11**	**342**	*e*PKP	PKPdf	01 41 36.2	+2.1
CML	**Cha da Macela**	**147.12**	**48**	*e*PKP	PKPdf	01 41 38.0	+3.5
PVER	**Pico Vermelho**	**147.13**	**48**	*e*PKP	PKPdf	01 41 39.6	+5.1
CMLA	**Cha da Macela**	**147.14**	**48**	PFAKE		01 41 50.0	+15
CMLA				LR	LR		
	comp=Z,697nm,22.0s						
SWK	**Warminster**	**147.14**	**9**	*e*P	PKPdf	01 41 35.9	+1.7
LFA	**Lagoa do Fogo**	**147.16**	**48**	*e*PKP	PKPdf	01 41 39.3	+4.7
TLCR		**147.18**	**329**	⇓P	PKPdf	01 41 39.2	+4.8
UPC	**Upice**	**147.19**	**347**	*e*PKPDF	PKPdf	01 41 36.1	+1.9
UPC				⇑*e*PKPB	PKPdf	01 41 38.9	+4.7
VIF	**Vila Franca**	**147.21**	**48**	*e*PKP	PKPdf	01 41 39.8	+5.1
PCNG	**Congro**	**147.23**	**48**	*e*PKP	PKPdf	01 41 39.7	+5.0
BRG	**Berggiesshubel**	**147.23**	**350**	⇑*i*PKIKP	PKPdf	01 41 36.2	+1.9
BRG				*i*		01 41 38.8	
BRG				pmax	pmax		
	comp=Z,70nm,1.2s						
BRG				pmax	pmax		
	comp=Z,262nm,1.1s						
BRG				pmax	pmax		
	comp=Z,87nm,1.1s						
BRG	**Berggiesshubel**	**147.23**	**350**	⇑*i*PKP	PKPdf	01 41 36.2	+1.9
BRG				*i*		01 41 38.8	
BRG				*e*		01 42 19.0	
DPC	**Dobruska-Polom**	**147.28**	**347**	*e*PKPDF	PKPdf	01 41 36.4	+2.0
DPC				⇑*e*PKPB	PKPdf	01 41 39.1	+4.7
OKC	**Ostrava-Krasne**	**147.33**	**345**	*e*PKP	PKPdf	01 41 36.3	+1.8
OKC				*e*		01 41 38.8	
OKC	**Ostrava-Krasne**	**147.33**	**345**	*e*PKPDF	PKPdf	01 41 36.3	+1.8
OKC				⇑*e*PKPB	PKPdf	01 41 38.8	+4.3
TSA1	**Sevenoaks**	**147.34**	**6**	*e*P	PKPdf	01 41 36.5	+2.1
CANT	**Cankiri**	**147.38**	**318**	P	PKPdf	01 41 36.2	+1.3
CDAG	**Cicekdag**	**147.41**	**316**	*i* P	PKPdf	01 41 40.2	+5.2
CSA1	**St Austell**	**147.45**	**12**	*e*P	PKPdf	01 41 38.0	+3.3
PVCC	**Panska Ves**	**147.45**	**349**	*e*PKPDF	PKPdf	01 41 39.3	+4.6
CPZ	**Penzance**	**147.50**	**13**	*e*P	PKPdf	01 41 37.7	+3.0
CPZ				AMb	AMB	01 41 44.0	
	comp=Z,316nm,1.4s						
AVNT	**Avonos**	**147.51**	**314**	*i* P	PKPdf	01 41 36.3	+1.1
CFR	**Carcaliu**	**147.52**	**329**	⇑*i*P	PKPdf	01 41 36.2	+1.2
MORC	**Moravsky Berou**	**147.53**	**345**	PKIKP	PKPdf	01 41 36.8	+2.0
CCA1	**Carnmenellis**	**147.54**	**13**	*e*P	PKPdf	01 41 37.6	+2.8
COBT	**Iskenderun**	**147.55**	**309**	*i* P	PKPdf	01 41 37.3	+2.0

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TFO1  Folkestone        147.56   5  eP       PKPdf   01 41 38.3 +3.5
DYA   Yadsworthy        147.56  11  eP       PKPdf   01 41 36.5 +1.6
ELDT  Eldivan           147.56 318  i P      PKPdf   01 41 36.7 +1.5
CRQ2  Rosemanowes 2     147.57  13  eP       PKPdf   01 41 38.3 +3.4
SAFT  Safranbolu        147.60 320   P       PKPdf   01 41 36.0 +0.7
CGW   Gweek             147.63  13  eP       PKPdf   01 41 37.9 +2.9
CMA1  Manaccan          147.66  13  eP       PKPdf   01 41 37.6 +2.5
VRI   Vrincioaia        147.67 331   PKIKP   PKPdf   01 41 36.5 +1.3
VRI   Vrincioaia        147.67 331⇓iP       PKPdf   01 41 36.8 +1.6
VRI   Vrincioaia        147.67 331⇓iP       PKPdf   01 41 36.8 +1.6
DCO   Combe Farm        147.68  11  eP       PKPdf   01 41 36.4 +1.4
CGH1  Goonhilly         147.69  13  eP       PKPdf   01 41 38.8 +3.7
CEYT  Ceyhan            147.71 311  eP       PKPdf   01 41 40.2 +4.6
TEB   Eastbourne        147.76   6  eP       PKPdf   01 41 39.7 +4.6
BRD   Bordesti          147.77 331⇓iP       PKPdf   01 41 37.9 +2.5
MOX   Moxa              147.79 352  ePKIKP   PKPdf   01 41 36.8 +1.6
MOX                                 e                01 41 40.2
MOX                                  pmax    pmax
      comp=Z,336nm,1.4s
MOX   Moxa              147.79 352⇑ePKPdf   PKPdf   01 41 36.8 +1.6
MOX   Moxa              147.79 352⇑iP       PKPdf   01 41 36.8 +1.6
MOX                                  PP2             01 41 40.0
MOX                                  PKP2    PKPab   01 41 46.0 +2.7
HTY   Hatay             147.80 309  eP       PKPdf   01 41 40.2 +4.4
KECS  Kecovo            147.89 341  ePKP     PKPdf   01 41 36.9 +1.4
KECS                                i                01 41 40.8
TIRR  Tirgusor          147.90 328   PKIKP   PKPdf   01 41 37.4 +1.8
TIRR  Tirgusor          147.90 328 ⇓P       PKPdf   01 41 37.3 +1.7
PRA   Prague            147.92 349   PKPDF   PKPdf   01 41 37.0 +1.5
PRA                                 ex       x       01 42 18.0
HARR  Harsova           147.97 329⇓iP       PKPdf   01 41 37.6 +1.9
PRU   Pruhonice         147.98 349  ePKPDF   PKPdf   01 41 37.1 +1.5
PRU                               ⇑ePKPB    PKPdf   01 41 40.8 +5.2
KAMT  Kaman             147.98 316   P       PKPdf   01 41 36.6 +0.7
NIG   Nigde             148.01 313  eP       PKPdf   01 41 40.0 +3.9
HGN   Heimansgroeve     148.07 359  ePKP     PKPdf   01 41 37.0 +1.3
      comp=Z,246nm,2.1s
HGN                                 ex       x       01 42 19.6
VRAC  Vranov            148.19 346   PKIKP   PKPdf   01 41 37.7 +1.7
VRAC                                                 01 41 41.9
VRAC                                 pmax    pmax
      comp=Z,45nm,0.9s
VRAC                                 pmax    pmax
      comp=Z,68nm,0.8s
VRAC  Vranov            148.19 346   PKP     PKPdf   01 41 37.7 +1.7
      comp=Z,44nm,0.9s,baz=13,slow=3.5,SNR=30
VRAC                                 PKPbc   PKPdf   01 41 41.9 +6.0
      comp=Z,68nm,0.8s,baz=4.9,slow=4.5,SNR=40
VRAC  Vranov            148.19 346   P       PKPdf   01 41 37.8 +1.8
MLR   Muntele Rosu      148.31 332   PKIKP   PKPdf   01 41 37.8 +1.5
MLR   Muntele Rosu      148.31 332   PKP     PKPdf   01 41 37.9 +1.6
      comp=Z,99nm,1.1s,baz=339,slow=2.3,SNR=34
MLR                                  PKPbc   PKPdf   01 41 42.5 +6.2
      comp=Z,115nm,0.8s,baz=278,slow=7.1,SNR=58
MLR   Muntele Rosu      148.31 332⇓iP       PKPdf   01 41 37.9 +1.6
MLR   Muntele Rosu      148.31 332⇓iP       PKPdf   01 41 37.9 +1.6
ANTO  Ankara            148.31 317  eP       PKPdf   01 41 37.3 +0.8
ANTO  Ankara            148.31 317   P       PKPdf   01 41 38.2 +1.7
LOD   Lodumlu           148.32 317  eP       PKPdf   01 41 38.4 +1.9
ISR   Istrita           148.32 331⇓iP       PKPdf   01 41 38.1 +1.8
FKH   Fakeheh           148.33 305  eP       PKPdf   01 41 38.4 +1.7
VYHS  Vyhne             148.37 343  ePKP     PKPdf   01 41 38.0 +1.7
VYHS                                i                01 41 42.0
SGKT  Sivrigoynuk       148.38 319  i P      PKPdf   01 41 38.0 +1.4
KOLL  Kolacno           148.41 343  i PKP    PKPdf   01 41 38.2 +1.9
KOLL                                i                01 41 42.6
MBAR  Mbarara           148.44 235   PKP2    PKPab   01 41 50.0 +2.9
MBAR                                 MLR     MLR
      comp=Z,418nm,21.0s
MBAR  Mbarara           148.44 235   PFAKE           01 41 50.0  +13
MBAR                                 LR      LR
      comp=Z,418nm,21.0s
TNS   Taunus Mts        148.51 356  ePKIKP   PKPdf   01 41 38.1 +1.7
TNS                                 e                01 41 42.3
PSN   Preselentsi       148.57 327  eP       PKPdf   01 41 39.0 +2.3
PSZ   Piszkesteto       148.58 341⇑ePKP/p   PKPdf   01 41 38.0 +1.4
PSZ                                 i                01 41 42.4
DRGR                    148.59 337   PKIKP   PKPdf   01 41 38.1 +1.4
DRGR                    148.59 337 ⇓P       PKPdf   01 41 42.1 +5.4
ASF   Jabal al Asfar    148.62 301   PKP     PKPdf   01 41 39.2 +2.0
      comp=Z,128nm,0.9s,baz=349,slow=1.5,SNR=14
ASF                                  PKPbc   PKPdf   01 41 44.1 +6.9
      comp=Z,231nm,0.8s,baz=1.2,slow=1.2,SNR=144
SMOL  Smolenice         148.73 344  i PKP    PKPdf   01 41 38.6 +1.8
SMOL                                e                01 41 43.5
GIVF  Givet             148.73   1  ePKIKP   PKPdf   01 41 38.5 +1.7
VOIR                    148.74 333 ⇑P       PKPdf   01 41 39.6 +2.6
BAIF  Baives            148.77   1  ePKIKP   PKPdf   01 41 38.6 +1.8
GRA1  Grafenberg Arr    148.78 353  ePKPdf   PKPdf   01 41 38.3 +1.4
GRA1                                ePKPbc   PKPdf   01 41 43.4 +6.5
GRF   Grafenberg Arr    148.78 353  ePKIKP   PKPdf   01 41 38.3 +1.4
GRF                                 e                01 41 43.4
ABH   Alteburg          148.90 357   PKP     PKPdf   01 41 38.2 +1.1
ABH   Alteburg          148.90 357⇑eP       PKPdf   01 41 38.8 +1.7
HENT  Hendek            148.94 321  i P      PKPdf   01 41 36.0  -1.4
MDU   Mudurnu           148.96 320  eP       PKPdf   01 41 42.6 +5.1
KHC   Kasperske Hory    148.97 349  ePKIKP   PKPdf   01 41 38.9 +1.7
KHC                                 e                01 41 43.5
KHC                                 e                01 42 10.0
KHC   Kasperske Hory    148.97 349  ePKP     PKPdf   01 41 38.9 +1.7
KHC                                 e                01 41 43.5
KHC                                 e                01 41 51.5
KHC                                 e                01 42 10.0
KHC   Kasperske Hory    148.97 349  ePKPDF   PKPdf   01 41 38.9 +1.7
KHC                               ⇑ePKPB    PKPdf   01 41 43.5 +6.3
KHC                                  x       x       01 41 51.5
KHC                                 epPKP            01 42 10.0
BHL   Bhannes           149.03 305  eP       PKPdf   01 41 39.5 +1.7
MEST  Erdemli           149.05 311  i P      PKPdf   01 41 43.6 +5.9
BUC   Bucharest         149.06 330⇑iPKIKP   PKPdf   01 41 41.5 +4.0
TOD   Tromm             149.10 356   PKHKP           01 41 38.2
TOD   Tromm             149.10 356⇑eP       PKPdf   01 41 38.9 +1.5
RUP   Ruppelstein       149.10 358   PKHKP           01 41 38.2
RUP   Ruppelstein       149.10 358⇑eP       PKPdf   01 41 39.3 +1.9
ZST   Bratislava        149.11 345  ePKP     PKPdf   01 41 39.3 +1.9
ZST                                 e                01 41 44.3
SRO   Srobarova         149.14 343  ePKP     PKPdf   01 41 44.5 +7.0
BUC1  Bucharest         149.14 330   P       PKPdf   01 41 43.4 +5.8
BUC1  Bucharest         149.14 330⇑iP       PKPdf   01 41 41.5 +3.9
SRO2  Moca              149.16 343  ePKP     PKPdf   01 41 43.2 +5.7
SRO1  Iza               149.21 343  i PKP    PKPdf   01 41 44.3 +6.7
BUD   Budapest          149.23 342⇑iPKP/p   PKPdf   01 41 43.9 +6.3
GEC2  GERESS Array S    149.23 349  ePKPdf   PKPdf   01 41 38.9 +1.3
GEC2                                ePKPbc   PKPdf   01 41 44.1 +6.5
GEC2                                epPKPbc          01 42 24.2
GERES GERESS Array B    149.23 349   PKP     PKPdf   01 41 39.6 +2.0
      comp=Z,64nm,0.9s,baz=45,slow=1.4,SNR=50
GERES                                PKPbc   PKPdf   01 41 44.3 +6.7
      comp=Z,75nm,0.7s,baz=24,slow=2.3,SNR=102
SWS   Schriesheim       149.23 356  eP       PKPdf   01 41 38.8 +1.2
VKA   Vienna            149.24 346⇑iPKP     PKPdf   01 41 39.4 +1.8
VKA                                 i                01 41 44.3
SIND  Sindeldorf        149.29 354⇑eP       PKPdf   01 41 38.8 +1.1
PRD   Provadia          149.31 327  eP       PKPdf   01 41 40.0 +2.1
KTD   Kalmit            149.43 356  eP       PKPdf   01 41 39.8 +1.9
KIZT  Kizilcal          149.45 317  eP       PKPdf   01 41 40.0 +1.7
KDHN  Kadinhani         149.49 316  i P      PKPdf   01 41 40.0 +1.6
IKL   Isikli            149.54 311  eP       PKPdf   01 41 43.7 +5.2
KONT  Konya--Tatoy      149.63 315  eP       PKPdf   01 41 44.3 +5.7
HRT   Hereke            149.67 322  eP       PKPdf   01 41 43.5 +5.0
ROSF  Rostrenen         149.69  11  ePKIKP   PKPdf   01 41 39.5 +1.2
      comp=Z,64nm,0.9s
FLN   La Foliniere      149.71   8  ePKIKP   PKPdf   01 41 39.8 +1.5
      comp=Z,182nm,0.9s
ESKT  Eskisehir         149.74 319  eP       PKPdf   01 41 41.9 +3.2
ESKT  Eskisehir         149.74 319  i P      PKPdf   01 41 39.9 +1.3
PHNC  Paralimni         149.83 308 ⇑P       PKPdf   01 41 45.7 +6.8
ERMK  Ermenek           149.90 312  i P      PKPdf   01 41 46.5 +7.5
SGMF  Saint Gilles      149.90  10  ePKIKP   PKPdf   01 41 39.8 +1.2
      comp=Z,113nm,1.0s
LDF   La Druitiere      149.92   7  ePKIKP   PKPdf   01 41 40.1 +1.5
      comp=Z,149nm,0.9s
HDH   Heidenheim        149.99 353⇑eP       PKPdf   01 41 40.1 +1.4
BZS   Buzias            149.99 337   PKIKP   PKPdf   01 41 40.2 +1.4
BZS   Buzias            149.99 337 ⇑P       PKPdf   01 41 41.3 +2.5
YLV   Yalova            150.00 322  eP       PKPdf   01 41 40.0 +0.9
GRR   Gorron            150.03   8  ePKIKP   PKPdf   01 41 40.3 +1.5
      comp=Z,108nm,0.8s
LBG   Lerchenberg       150.04 355⇑eP       PKPdf   01 41 40.5 +1.7
HDMB  Hadim             150.04 313  eP       PKPdf   01 41 44.4 +5.2
MOA   Molln             150.08 348⇑iP       PKPdf   01 41 40.2 +1.3
MOA                                 i                01 41 46.1
QUIF  Quistinic         150.12  11  ePKIKP   PKPdf   01 41 40.3 +1.3
      comp=Z,74nm,1.1s
CRAR  CRAIOVA           150.17 333   PKP2    PKPab   01 41 47.0  -6.3
CTT   Catalca           150.17 323  eP       PKPdf   01 41 45.2 +5.9
STR   Strasbourg        150.19 357   PKP     PKPdf   01 41 41.2 +2.2
BUCH  Bad Urach         150.21 355⇑eP       PKPdf   01 41 40.6 +1.5
JMB   Yambol            150.26 327  eP       PKPdf   01 41 40.0 +0.6
FUR   Furstenfeldbru    150.27 352  ePKPdf   PKPdf   01 41 40.3 +1.1
FUR                                 ePKPbc   PKPdf   01 41 46.5 +7.3
PVL   Pavlikeni         150.33 330  eP       PKPdf   01 41 41.0 +1.6
MEZF  Maizieres J'vi    150.34   0  ePKIKP   PKPdf   01 41 41.2 +1.9
MAMC  Mammari           150.36 309 ⇑P       PKPdf   01 41 47.0 +7.3
CSS   Prodhromos        150.37 309 ⇑P       PKPdf   01 41 46.9 +7.1
      comp=Z,4.0nm,0.8s
ARSA  Arzberg           150.37 346⇑iP       PKPdf   01 41 40.3 +0.9
ARSA                                i                01 41 46.6
CDF   Champ du Feu      150.38 357  ePKIKP   PKPdf   01 41 40.9 +1.6
BFO   Black Forest      150.41 356  ePKPdf   PKPdf   01 41 40.7 +1.3
BFO                                 ePKPbc   PKPdf   01 41 46.6 +7.2
ULDT  Uludag            150.41 321  i P      PKPdf   01 41 40.8 +1.2
ALT   Altintas          150.48 318  eP       PKPdf   01 41 45.7 +5.9
ECH   Echery            150.58 357   PKP     PKPdf   01 41 41.0 +1.4
SPAK  Spaichingen       150.60 355  eP       PKPdf   01 41 40.9 +1.2
GUT   Gutenstein        150.60 355⇑eP       PKPdf   01 41 41.1 +1.4
EDRB  Edirne            150.62 326  eP       PKPdf   01 41 41.2 +1.3
ORLT  Orhaneli          150.62 321  eP       PKPdf   01 41 44.6 +4.6
LEF   Lefka             150.62 309  eP       PKPdf   01 41 44.1 +4.0
LIBD  Limburg           150.63 357   PKIKP   PKPdf   01 41 41.0 +1.3
LIBD  Limburg           150.63 357  eP       PKPdf   01 41 41.1 +1.4
SZAC  Souni-Zanaja      150.79 309 ⇑P       PKPdf   01 41 47.8 +7.4
      comp=Z,19nm,0.8s
KIZ   Kirchzarten       150.80 356⇑eP       PKPdf   01 41 41.2 +1.2
ALFC  Alevga            150.82 310 ⇑P       PKPdf   01 41 47.6 +7.2
HAU   Haudompre         150.82 359  ePKIKP   PKPdf   01 41 41.7 +1.7
      comp=Z,42nm,0.9s
FELD  Feldberg          150.88 356   PKP     PKPdf   01 41 41.7 +1.6
FELD  Feldberg          150.88 356⇑eP       PKPdf   01 41 41.6 +1.5
UBR   Uberruh           150.89 353⇑eP       PKPdf   01 41 41.5 +1.4
ISP   Isparta           150.92 316  eP       PKPdf   01 41 41.2 +0.7
ISP   Isparta           150.92 316   PKIKP   PKPdf   01 41 47.6 +7.1
EIL   Elat              150.92 298   PKP     PKPdf   01 41 42.2 +1.5
      comp=Z,20nm,0.8s,baz=342,slow=4.3,SNR=15
EIL                                  PKPbc   PKPdf   01 41 47.5 +6.7
      comp=Z,281nm,0.8s,baz=332,slow=4.1,SNR=110
TKTP  Tekketepe         150.93 317  i P      PKPdf   01 41 42.2 +1.7
MOF   Molkenrain        150.95 357   PKP     PKPdf   01 41 41.7 +1.5
BNT   Bandirma          150.99 323  eP       PKPdf   01 41 47.1 +6.6
HINF  Hinteralfeld      150.99 358  ePKIKP   PKPdf   01 41 41.8 +1.5
KBA   Koelnbreinsper    151.00 349⇑iP       PKPdf   01 41 41.2 +0.9
KBA                                 i                01 41 47.6
MRMT  Marmara Adasi     151.01 323  eP       PKPdf   01 41 46.2 +5.7
WATA  Walderalm         151.04 351⇑iP       PKPdf   01 41 41.5 +1.1
WATA                                i                01 41 48.0
DST   Dursunbey         151.05 321  eP       PKPdf   01 41 47.0 +6.4
DIM   Dimitrovgrad      151.10 328  eP       PKPdf   01 41 42.0 +1.4
MOTA  Moosalm           151.10 352⇑iP       PKPdf   01 41 42.0 +1.6
MOTA                                i                01 41 48.4
WTTA  Wattenberg        151.10 351⇑iP       PKPdf   01 41 42.2 +1.7
WTTA                                i                01 41 48.7
PPCY  Paphos            151.13 309 ⇑P       PKPdf   01 41 47.7 +6.8
PPCY  Paphos            151.13 309⇑eP       PKPdf   01 41 47.7 +6.8
SQTA  Sankt Quirin      151.21 352⇑iP       PKPdf   01 41 42.3 +1.7
SQTA                                i                01 41 48.7
SVIS  Svilajnac         151.25 336⇓iPKP     PKPdf   01 41 42.0 +1.2
KHL   Karahalli         151.28 318  eP       PKPdf   01 41 48.1 +7.1
OBKA  Obir              151.29 347⇑iP       PKPdf   01 41 41.9 +1.1
OBKA                                i                01 41 48.3
OBKA                                i                01 41 57.1
DAVA  Damuels           151.30 353⇓iP       PKPdf   01 41 42.9 +2.1
DAVA                                i                01 41 49.1
BTOK  Tokmak            151.31 322  i P      PKPdf   01 41 42.5 +1.5
BBS   Basel-Blauen      151.32 357   PKIKP   PKPdf   01 41 41.5 +0.7
BBS   Basel-Blauen      151.32 357⇑eP       PKPdf   01 41 42.5 +1.7
ANTB  Antalya           151.33 314  eP       PKPdf   01 41 46.3 +5.2
BOLS  Boljevac          151.35 334⇑iPKP     PKPdf   01 41 41.8 +0.9
PGB   Panagyurishte     151.39 330  eP       PKPdf   01 41 42.0 +1.0
KDZ   Kurdzhali         151.45 327  eP       PKPdf   01 41 42.0 +0.8
LOMF  Lomont            151.46 358   PKP     PKPdf   01 41 42.7 +1.7
BALB  Balikesir         151.48 322  eP       PKPdf   01 41 47.9 +6.6
HYF   Humbligny         151.49   4  ePKIKP   PKPdf   01 41 43.1 +2.1
ZAPS  Zavoj/Pirot       151.50 333⇑iPKP     PKPdf   01 41 42.4 +1.2
LOR   Lormes            151.55   2  ePKIKP   PKPdf   01 41 43.0 +1.9
      comp=Z,133nm,1.2s
FVI   Forni Avoltri     151.56 349   PKIKP   PKPdf   01 41 42.1 +0.9
PTCC  Patocco-Chiusa    151.64 348   PKP     PKPdf   01 41 42.3 +1.0
ALN   Alexandroupoli    151.66 326  eP       PKPdf   01 41 42.5 +1.0
LJU   Ljubljana         151.74 346  ePKPdf   PKPdf   01 41 43.0 +1.5
LJU                                 i                01 41 49.9
LJU                                 e                01 42 00.5
LJU                                 e                01 42 29.0
SSF   Saint Saulge      151.74   3  ePKIKP   PKPdf   01 41 43.3 +1.9
      comp=Z,108nm,1.0s
RZN   Rozhen            151.77 328  eP       PKPdf   01 41 41.0  -0.7
GMNA  Gemona            151.79 348   PKP     PKPdf   01 41 42.8 +1.3
MANT  Manisa            151.79 319  i P      PKPdf   01 41 42.8 +1.1
GRUS  Gruza             151.79 336⇓iPKP     PKPdf   01 41 42.8 +1.1
VTS   Vitosha           151.80 331  eP       PKPdf   01 41 43.0 +1.3
VTS   Vitosha           151.80 331   P       PKPdf   01 41 43.1 +1.4
DAVOX Davos             151.80 353   PKP     PKPdf   01 41 43.5 +2.0
      comp=Z,25nm,0.8s,baz=306,slow=1.3,SNR=27
DAVOX                                PKPbc   PKPdf   01 41 48.3 +6.8
      comp=Z,231nm,0.6s,baz=78,slow=1.5,SNR=139
DAVOX Davos             151.80 353   PKP     PKPdf   01 41 43.8 +2.3
SISC  Sisak             151.82 343  i P      PKPdf   01 41 43.1 +1.6
GOLH  Golhisar          151.88 316  i P      PKPdf   01 41 49.2 +7.3
MFF   Saint Martin d    151.88   8  ePKIKP   PKPdf   01 41 43.3 +1.7
      comp=Z,128nm,1.3s
DIVS  Divcibare         151.89 337⇓iPKP     PKPdf   01 41 50.3 +8.6
VOY   Vojsko            151.89 347  ePKPdf   PKPdf   01 41 42.8 +1.1
VOY                                 ePKPbc   PKPdf   01 41 49.5 +7.8
ELL   Elmali            151.92 315  eP       PKPdf   01 41 44.4 +2.4
FUORN Ofenpass          151.92 353   PKP     PKPdf   01 41 44.1 +2.4
DENT  Denizli           151.93 317  eP       PKPdf   01 41 49.0 +7.0
AVF   Avril sur Loir    152.00   3  ePKIKP   PKPdf   01 41 43.3 +1.5
      comp=Z,50nm,1.2s
BRMO  Bormio            152.05 352   PKP     PKPdf   01 41 43.7 +1.8
SMF   Signal de Mont    152.17   2  ePKIKP   PKPdf   01 41 43.7 +1.6
      comp=Z,102nm,1.3s
BGF   Bois d'Agland     152.21   4  ePKIKP   PKPdf   01 41 44.0 +1.9
      comp=Z,58nm,1.0s
CABF  La Chapelle       152.22 359  ePKIKP   PKPdf   01 41 44.5 +2.4
      comp=Z,108nm,0.9s
BARS  Barje             152.23 333⇓iPKP             01 42 18.4
EZN   Ezine             152.25 324  eP       PKPdf   01 41 49.4 +7.0
CTI   Castel Tesino     152.29 350   PKIKP   PKPdf   01 41 43.7 +1.4
BBLS  Bajina Basta -    152.30 338⇓iPKP     PKPdf   01 41 43.5 +1.2
MMB   Musomiste         152.34 329  eP       PKPdf   01 41 43.0 +0.5
AYVA  Ayvalik           152.39 322  i P      PKPdf   01 41 43.8 +1.2
BOZC  Bozcaada          152.39 324  i P      PKPdf   01 41 42.3  -0.3
KKB   Krupnik           152.43 330  eP       PKPdf   01 41 43.0 +0.4
TCF   Toulx Ste Croi    152.44   5  ePKIKP   PKPdf   01 41 44.1 +1.6
      comp=Z,106nm,1.2s
MABI  Malga Bissina     152.44 352   PKP     PKPdf   01 41 44.0 +1.5
NVSS  Nova Varos 2      152.50 337⇑iPKP     PKPdf   01 41 52.4  +10
FETY  Fethiye           152.53 315  eP       PKPdf   01 41 45.5 +2.6
KDAG  Bornova           152.64 320  i P      PKPdf   01 41 44.4 +1.4
IZM   Izmir             152.64 320  eP       PKPdf   01 41 43.0  0.0
MMK   Mattmark          152.70 356   PKIKP   PKPdf   01 41 45.5 +2.7
DIX   Grande Dixence    152.70 357   PKIKP   PKPdf   01 41 45.5 +2.7
AGO   Saint Agoulin     152.73   3   PKP     PKPdf   01 41 45.7 +2.8
MUGIO Muggio            152.74 354   PKP     PKPdf   01 41 44.3 +1.4
SRS   Serrai            152.76 329  eP       PKPdf   01 41 42.5  -0.5
PLE   Pljevlja          152.77 337⇑iPKP     PKPdf   01 41 45.6 +2.6
MCGN  Macugnaga         152.79 356   PKP     PKPdf   01 41 45.1 +2.1
PLDF  La Plantade       152.84   3   PKP     PKPdf   01 41 46.4 +3.4
LOS   Limnos            152.86 325  eP       PKPdf   01 41 52.1 +8.9
SAL   Salo              152.88 352   PKIKP   PKPdf   01 41 44.9 +1.8
IVA   Berane            152.97 336⇑iPKP     PKPdf   01 41 44.7 +1.4
MLSB  Milas             153.00 318  eP       PKPdf   01 41 49.7 +6.2
PYM   Petit Puy Mans    153.02   4   PKP     PKPdf   01 41 46.9 +3.6
EMAZ  Mazaricos         153.04  24   PKP     PKPdf   01 41 44.9 +1.5
NVLJ  Novalja           153.05 345  i P      PKPdf   01 41 44.6 +1.2
UPM   Unac-Piva         153.05 338⇑iPKP     PKPdf   01 41 44.5 +1.1
SKO   Skopje            153.09 333  i PKIKP  PKPdf   01 41 44.5 +1.0
SKO                               ⇑iPKHKP           01 41 52.9
      comp=Z,0.1nm,0.9s
SKO                                 i PKP2   PKPab   01 42 05.3  -0.3
SOH   Sokhos            153.10 329  eP       PKPdf   01 41 42.0  -1.6
ORX   Oropa             153.11 356   PKIKP   PKPdf   01 41 46.1 +2.7
ORO   Oropa             153.12 356   PKIKP   PKPdf   01 41 44.6 +1.2
OUR   Ouranopolis       153.15 327  eP       PKPdf   01 41 43.9 +0.2
PVY   Plav              153.18 335⇑iPKP     PKPdf   01 41 44.9 +1.3
TRAV                    153.25 356   P       PKPdf   01 41 47.0 +3.4
STS   Santiago          153.26  23   PKIKP   PKPdf   01 41 45.7 +2.0
LPL   La Plagne         153.30 358  ePKIKP   PKPdf   01 41 46.1 +2.4
LPG   La Plagne         153.31 358  ePKIKP   PKPdf   01 41 46.4 +2.7
LSD   Ceresole Reale    153.34 357   PKIKP   PKPdf   01 41 46.2 +2.5
EPON  Pontenova         153.36  21   PKP     PKPdf   01 41 46.0 +2.2
NKY   Niksic            153.36 337⇑iPKP     PKPdf   01 41 45.2 +1.3
THE   Thessaloniki      153.44 329  eP       PKPdf   01 41 45.1 +1.1
BRY   Bratogost         153.45 338⇑iPKP     PKPdf   01 41 45.0 +1.0
GRG   Griva             153.46 330  eP       PKPdf   01 41 44.6 +0.6
LBL   Lubilhac          153.55   3   PKP     PKPdf   01 41 47.3 +3.3
TTG   Podgorica         153.59 336  ePKP     PKPdf   01 41 45.2 +1.0
GRN   Grenoble          153.59 359   PKP     PKPdf   01 41 46.3 +2.2
PAIG  Paliouri          153.61 327  eP       PKPdf   01 41 44.1  -0.2
GDM   Grand'Maison      153.63 359   PKP     PKPdf   01 41 46.3 +2.2
LFF   La Frestale       153.63   7  ePKIKP   PKPdf   01 41 45.9 +1.7
RSP   Reno Superiore    153.64 357   PKIKP   PKPdf   01 41 45.5 +1.3
FENE  Fenestrelle       153.77 357   P       PKPdf   01 41 44.6 +0.3
CAF   Calviac           153.78   5  ePKIKP   PKPdf   01 41 46.4 +2.0
      comp=Z,55nm,1.1s
EZAM  Zamans            153.84  24   PKIKP   PKPdf   01 41 47.3 +2.8
BOB   Bobbio (Coli)     153.84 353   PKIKP   PKPdf   01 41 47.6 +3.1
BUM   Brajici-Budva     153.84 337⇓iPKP     PKPdf   01 41 45.5 +1.0
HCY   Herceg Novi       153.86 337⇑iPKP     PKPdf   01 41 45.5 +0.9
RRL   Cesana Torines    153.89 358   PKIKP   PKPdf   01 41 47.3 +2.8
ORIF  Oris-en-Rattie    153.92 359  ePKIKP   PKPdf   01 41 46.7 +2.1
      comp=Z,46nm,1.0s
BHB   Bricherasio       153.95 357   P       PKPdf   01 41 45.8 +1.2
VIVF  Saint-Julien-l    153.98   1  ePKIKP   PKPdf   01 41 46.8 +2.1
      comp=Z,125nm,1.3s
EARI  Arriondas         153.99  18   PKP     PKPdf   01 41 47.0 +2.3
ULC   Ulcinj            154.00 336⇑iPKP     PKPdf   01 41 45.7 +1.0
ZCCA  Zocca             154.05 351   PKP     PKPdf   01 41 47.2 +2.4
AOS   Alonnisos         154.06 325  eP       PKPdf   01 41 45.9 +0.9
OHR   Ohrid             154.06 332⇑iPKIKP   PKPdf   01 41 46.2 +1.3
OHR                               ⇑iPKHKP           01 41 54.7
OHR                                 i PKP2   PKPab   01 42 08.9  -0.8
FNA   Florina           154.07 331  eP       PKPdf   01 41 45.5 +0.5
LIT   Litokhoron        154.08 329  eP       PKPdf   01 41 45.2 +0.3
MBDF  Montbardon        154.08 358  ePKIKP   PKPdf   01 41 46.9 +2.1
      comp=Z,75nm,1.4s
GSCL  Gusciola          154.10 351   PKP     PKPdf   01 41 46.6 +1.8
PCP   Pian Castagno     154.15 355   PKIKP   PKPdf   01 41 45.6 +0.7
ERUA  La Rua            154.19  21   PKIKP   PKPdf   01 41 47.3 +2.3
RSM   Repubblica di     154.20 348   PKIKP   PKPdf   01 41 47.6 +2.6
FNVD  Fontana Vidola    154.20 350   PKP     PKPdf   01 41 46.8 +1.8
TIR   Tirane            154.27 334   PKIKP   PKPdf   01 41 46.9 +1.7
SEI   Scarperia         154.27 350   PKP     PKPdf   01 41 49.5 +4.4
XOR   Xorichti          154.28 327  eP       PKPdf   01 41 45.5 +0.2
DOI   San Damiano       154.28 357   PKIKP   PKPdf   01 41 44.1  -1.0
PZZ   Prazzo            154.29 357   PKIKP   PKPdf   01 41 47.0 +1.9
ELOB  Lobios            154.32  23   PKP     PKPdf   01 41 47.2 +2.0
SURF  Saint Ours        154.33 357   PKP     PKPdf   01 41 47.6 +2.5
VMG   Vicchio           154.33 350   PKP     PKPdf   01 41 46.1 +0.9
SFI   Santa Sofia       154.33 349⇑iPKIKP   PKPdf   01 41 47.2 +2.0
BDI   Bagni Di Lucca    154.38 351   PKIKP   PKPdf   01 41 46.0 +0.8
PGD   Poggio Sodo       154.38 349   PKIKP   PKPdf   01 41 46.6 +1.4
ROB   Roburent          154.45 356   PKIKP   PKPdf   01 41 46.0 +0.7
ARV   Arcevia           154.51 347   PKP2    PKPdf   01 41 47.1 +1.7
FIN   Finale Ligure     154.51 355   PKIKP   PKPdf   01 41 45.8 +0.4
ELAN  Lanestosa         154.52  15   PKP     PKPdf   01 41 48.2 +2.7
STV2  Anna di Valdie    154.54 357   P       PKPdf   01 41 44.9  -0.5
ENR   Entracque         154.55 356   PKIKP   PKPdf   01 41 46.0 +0.6
CING  Cingoli           154.57 346   PKP     PKPdf   01 41 47.0 +1.5
MONE  Monesi            154.68 356   P       PKPdf   01 41 46.5 +0.9
PII   Pisa              154.73 351   PKIKP   PKPdf   01 41 50.2 +4.5
ECAL  Calabor           154.73  21   PKP     PKPdf   01 41 47.9 +2.2
LASF  Ste Croix         154.74   2  ePKIKP   PKPdf   01 41 48.0 +2.3
      comp=Z,161nm,1.4s
TOUF  Mont Tournerai    154.77 357   PKP     PKPdf   01 41 48.1 +2.4
AUTN  L'Aution          154.78 356   PKP     PKPdf   01 41 47.8 +2.1
SAOF  Saorge            154.78 356   PKP     PKPdf   01 41 47.1 +1.4
MURB  Monte Urbino      154.82 347   PKP     PKPdf   01 41 47.3 +1.5
IMI   Imperia           154.83 356   P       PKPdf   01 41 46.5 +0.7
STOF  St-Etienne Org    154.84 359   PKP     PKPdf   01 41 48.7 +2.9
SMRF  Simiane la Rot    154.86 359  ePKIKP   PKPdf   01 41 48.5 +2.7
MVIF  Mont Vial         154.89 357   PKP     PKPdf   01 41 56.3  +10
SBF   Sospel            154.91 356  ePKIKP   PKPdf   01 41 47.7 +1.8
      comp=Z,125nm,1.2s
MEV   Metsovon          154.93 330  eP       PKPdf   01 41 47.1 +1.0
EALK  Alkurruntz        154.96  12   PKP     PKPdf   01 41 48.0 +2.0
PVRL  Vila Real         154.96  24  ePKPdf   PKPdf   01 41 48.0 +1.9
PVRL  Vila Real         154.96  24  ePKPab   PKPab   01 42 12.4  -1.1
AGG   Agios Georgios    154.98 327  eP       PKPdf   01 41 46.9 +0.7
VILF  Villemus          154.99 359   PKP     PKPdf   01 41 48.5 +2.5
ASS   Assisi            154.99 347   PKIKP   PKPdf   01 41 46.4 +0.4
ELIZ  Elizondo          155.00  12   PKIKP   PKPdf   01 41 48.6 +2.5
PRAF  Pradon            155.04   0   PKP     PKPdf   01 41 48.5 +2.4
CALN  Calern            155.05 357   PKP     PKPdf   01 41 48.3 +2.2
NRCA  Norcia            155.10 346   PKP     PKPdf   01 41 47.5 +1.3
SJPF  Ste Jean          155.11  11  ePKIKP   PKPdf   01 41 47.6 +1.4
TAVF  Tavernes          155.21 359   PKP     PKPdf   01 41 48.7 +2.4
TREF  Trevaresse        155.22 360   PKP     PKPdf   01 41 49.2 +2.9
LARF  Larrau            155.23  11   PKP     PKPdf   01 41 49.0 +2.7
FRF   La Foret Royal    155.25 358  ePKIKP   PKPdf   01 41 48.0 +1.6
      comp=Z,80nm,1.3s
REYF  Montagne du Re    155.30  10   PKP     PKPdf   01 41 48.8 +2.4
PUYF  Puyloubier        155.31 359   PKP     PKPdf   01 41 51.8 +5.4
ECRI  Cripan            155.33  14   PKIKP   PKPdf   01 41 49.4 +2.9
MTLF  Montolieu         155.36   5  ePKIKP   PKPdf   01 41 48.4 +1.9
      comp=Z,63nm,1.4s
PVIS  Viseu             155.37  25  ePKPdf   PKPdf   01 41 48.5 +1.9
PVIS  Viseu             155.37  25  ePKPab   PKPab   01 42 13.8  -1.5
LABF  Labassere         155.40   9   PKP     PKPdf   01 41 48.6 +2.0
ETSF  Etsaut            155.44  10  ePKIKP   PKPdf   01 41 49.2 +2.6
      comp=Z,39nm,0.8s
EPF   Esparros          155.45   9  ePKIKP   PKPdf   01 41 48.8 +2.2
      comp=Z,69nm,1.3s
GELF  Grande-Etoile     155.46 360   PKP     PKPdf   01 41 48.7 +2.1
LMR   La Mourre         155.48 358  ePKIKP   PKPdf   01 41 48.5 +1.8
      comp=Z,158nm,1.6s
AQU   L'Aquila          155.49 345   PKIKP   PKPdf   01 41 48.1 +1.4
BERF  Bertagne          155.52 359   PKP     PKPdf   01 41 49.5 +2.8
RGNG  Rignano Grg       155.53 341   PKP     PKPdf   01 41 47.8 +1.0
VIEF  Viey              155.55   9   PKP     PKPdf   01 41 52.6 +5.8
IGT   Igoumenitsa       155.55 331  eP       PKPdf   01 41 47.9 +1.0
MLS   Moulis            155.62   7   PKP     PKPdf   01 41 48.3 +1.4
MNS   Montasola         155.63 347⇑iPKIKP   PKPdf   01 41 47.7 +0.8
FIAM  Fiamignano        155.64 346   PKP     PKPdf   01 41 48.6 +1.7
KEK   Kerkira           155.65 332   PKP     PKPdf   01 41 48.6 +1.6
MELF  Melles            155.66   8   PKP     PKPdf   01 41 49.0 +2.1
RESF  Ens               155.67   9   PKP     PKPdf   01 41 49.8 +2.9
INTR  Introdacqua       155.69 344   PKP     PKPdf   01 41 48.3 +1.3
EBIE  Bielsa            155.76   9   PKP     PKPdf   01 41 49.8 +2.8
MTE   Manteigas         155.78  24  ePKPdf   PKPdf   01 41 49.3 +2.2
MTE   Manteigas         155.78  24  ePKPab   PKPab   01 42 15.7  -1.3
MTE   Manteigas         155.78  24  ePP      PP      01 45 52.0  -3.5
PTQR  Pietraquaria      155.81 345   PKP     PKPdf   01 41 48.5 +1.4
LCI   Lecce             155.83 336   PKIKP   PKPdf   01 41 49.1 +1.9
CII   Carovilli         155.85 343   PKP     PKPdf   01 41 48.8 +1.6
VVLD  Villa Vallelon    155.90 345   PKP     PKPdf   01 41 48.3 +1.1
RNI2  Rionero Sannit    155.91 344   PKP     PKPdf   01 41 49.1 +1.8
MIDA  Miranda           155.94 343   PKP     PKPdf   01 41 49.1 +1.8
SDI   San Donato        156.00 344   PKIKP   PKPdf   01 41 48.4 +1.0
LKD   Levkas            156.06 329  eP       PKPdf   01 41 49.4 +1.8
IDI   Anoyia            156.07 317   PKP     PKPdf   01 41 49.4 +1.7
      comp=Z,25nm,0.9s,baz=332,slow=2.6,SNR=14
IDI                                  PKPab   PKPab   01 42 22.0 +3.5
      comp=Z,46nm,0.7s,baz=14,slow=12,SNR=5.5
TOLF  Tolfa             156.08 348   PKP     PKPdf   01 41 49.0 +1.5
LTRZ  Laterza           156.08 338   PKP     PKPdf   01 41 48.8 +1.3
PGF   Pioggiola         156.08 353  ePKIKP   PKPdf   01 41 49.2 +1.7
      comp=Z,91nm,1.1s
PTOM  Tomar             156.09  27  ePKPdf   PKPdf   01 41 50.0 +2.4
PTOM  Tomar             156.09  27  ePKPab   PKPab   01 42 17.3  -1.1
SGG   Gregorio Mates    156.15 343   PKP     PKPdf   01 41 48.6 +1.0
MA9   Marino            156.22 346   P       PKPdf   01 41 48.8 +1.1
PCBR  Castelo Branco    156.28  25  ePKPdf   PKPdf   01 41 50.0 +2.2
PCBR  Castelo Branco    156.28  25  ePKPab   PKPab   01 42 18.2  -1.0
PLOU  Loures            156.36  29  ePKPdf   PKPdf   01 41 51.5 +3.5
PLOU  Loures            156.36  29  ePKPab   PKPab   01 42 18.3  -1.3
MRLC  Muro Lucano       156.39 340   PKP     PKPdf   01 41 49.2 +1.2
MSC   Monte Massico     156.44 343   PKP     PKPdf   01 41 49.1 +1.1
CSSN  Cassano Irpino    156.44 341   PKP     PKPdf   01 41 48.7 +0.7
ESAC  San Caprasio      156.60  11   PKP     PKPdf   01 41 50.8 +2.6
SGO   Sicignano         156.63 340   PKIKP   PKPdf   01 41 49.1 +0.8
SLCN  Sala Consilina    156.68 340   PKP     PKPdf   01 41 49.3 +0.9
EMIR  Miracle           156.70   7   PKP     PKPdf   01 41 52.0 +3.7
EHIG  Higuera           156.75  61   PKP     PKPdf   01 41 53.1 +4.2
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MGR	**Morigerati**	**156.93**	**340**	PKP	PKPdf	01 41 49.0	+0.3
MOE	**Montemor**	**157.02**	**28**	*e*PKPab	PKPab	01 42 21.8	-0.6
EVO	**Evora**	**157.16**	**28**	⇑*i*PKIKP	PKPdf	01 41 51.4	+2.3
	comp=Z,106nm,1.2s						
EPOB	**Poblet**	**157.20**	**8**	PKP	PKPdf	01 41 50.5	+1.4
EGOM	**La Gomera**	**157.38**	**61**	PKP	PKPdf	01 41 52.5	+2.8
EBAD	**Badajoz**	**157.40**	**26**	PKP	PKPdf	01 41 51.5	+2.1
ERTA	**Horta de San J**	**157.48**	**10**	PKP	PKPdf	01 41 51.7	+2.2
PTEO	**Sao Teotonio**	**157.63**	**30**	*e*PKPdf	PKPdf	01 41 52.3	+2.5
PTEO	**Sao Teotonio**	**157.63**	**30**	*e*PKPab	PKPab	01 42 24.3	-0.8
EBR	**Ebro Roquetas**	**157.64**	**10**	*e*PKPDF	PKPdf	01 41 51.2	+1.5
PBEJ	**Beja**	**157.64**	**28**	*e*PKPdf	PKPdf	01 41 52.4	+2.6
PBEJ	**Beja**	**157.64**	**28**	*e*PKPab	PKPab	01 42 24.4	-0.7
ESDC	**Sonseca Array**	**157.68**	**19**	PKP	PKPdf	01 41 51.9	+2.2
	comp=Z,8.4nm,0.8s,baz=341,slow=2.4,SNR=26						
ESDC				PKPab	PKPab	01 42 24.9	-0.4
	comp=Z,15nm,0.8s,baz=332,slow=3.5,SNR=21						
ESDC				PP	PP	01 46 04.0	-1.9
	comp=Z,2.7nm,0.9s,baz=354,slow=5.6,SNR=4.5						
ESDC	**Sonseca Array**	**157.68**	**19**	PKP	PKPdf	01 41 52.0	+2.2
GRI	**Girifalco**	**157.79**	**336**	PKIKP	PKPdf	01 41 51.5	+1.6
CCAN	**Las Canadas**	**157.86**	**61**	PKP	PKPdf	01 41 53.4	+3.0
EMOS	**Mosqueruela**	**157.91**	**12**	PKP	PKPdf	01 41 53.0	+3.0
EGRO	**El Granado**	**158.22**	**28**	PKP	PKPdf	01 41 52.9	+2.4
PALC	**Alcoutim**	**158.28**	**28**	*e*PKPdf	PKPdf	01 41 52.9	+2.3
PALC	**Alcoutim**	**158.28**	**28**	*e*PKPab	PKPab	01 42 26.9	-1.0
EMIN	**Mina Concepcio**	**158.38**	**26**	PKP	PKPdf	01 41 53.2	+2.5
ECHE	**Chera**	**158.55**	**13**	PKIKP	PKPdf	01 41 53.3	+2.5
SOI	**Samo**	**158.59**	**336**	PKIKP	PKPdf	01 41 51.9	+1.0
MTTG	**Motta San Giov**	**158.79**	**337**	PKP	PKPdf	01 41 52.1	+0.9
EADA	**Adamuz**	**158.84**	**22**	PKP	PKPdf	01 41 53.6	+2.4
EVIA	**Vianos**	**159.07**	**17**	PKIKP	PKPdf	01 41 54.0	+2.5
ETOB	**Tobarra**	**159.32**	**15**	PKP	PKPdf	01 41 54.4	+2.7
ESPR	**Espera**	**159.48**	**26**	PKP	PKPdf	01 41 54.8	+2.9
EBEN	**Beniarda**	**159.56**	**12**	PKP	PKPdf	01 41 55.7	+3.7
EQES	**Quesada**	**159.68**	**19**	PKP	PKPdf	01 41 54.2	+2.1
VAE	**Valguarnera**	**159.71**	**339**	PKP	PKPdf	01 41 55.1	+2.9
	comp=Z,5.5nm,0.9s,baz=19,slow=6.0,SNR=3.1						
CFTV	**Fuerteventura**	**159.85**	**58**	PKP	PKPdf	01 41 54.9	+2.3
ELOJ	**Sierra Loja**	**159.90**	**22**	PKIKP	PKPdf	01 41 55.1	+2.7
ECOG	**Cogollos-Vega**	**159.99**	**21**	PKIKP	PKPdf	01 41 54.4	+1.9
ERON	**Agron**	**160.14**	**22**	PKP	PKPdf	01 41 54.6	+1.9
EMIJ	**Mijas**	**160.18**	**24**	PKP	PKPdf	01 41 56.3	+3.6
EBER	**Berja**	**160.56**	**20**	P	PKPdf	01 41 57.0	+3.9
ENIJ	**Nijar**	**160.71**	**18**	PKIKP	PKPdf	01 41 54.9	+1.6
CAEH	**’Ain El Ouahch**	**162.00**	**356**	P	PKPdf	01 41 57.0	+2.5
CMAH	**Djebel Manchou**	**162.11**	**354**	P	PKPdf	01 41 57.0	+2.3
EBNR	**Beni Rached**	**162.23**	**10**	P	PKPdf	01 41 57.0	+2.2
DFRA	**Djebel Bou Aff**	**162.28**	**358**	P	PKPdf	01 41 59.0	+4.2
ECHF	**Ech Chlef**	**162.33**	**11**	P	PKPdf	01 41 57.0	+2.1
ECHA	**Ech Chlef**	**162.34**	**10**	P	PKPdf	01 41 57.0	+2.1
CKFL	**Kef-Lekhel**	**162.39**	**356**	P	PKPdf	01 41 58.0	+3.1
EANR	**’Ain N’Sour**	**162.49**	**11**	P	PKPdf	01 41 54.0	-1.1
EMHD	**Djebel Mahouad**	**162.51**	**6**	P	PKPdf	01 41 57.0	+1.9
CASM	**Ain Smara**	**162.54**	**357**	P	PKPdf	01 41 58.0	+2.9
SET	**Setif**	**162.63**	**360**	P	PKPdf	01 41 59.0	+3.8
ETRT	**Tiaret**	**163.07**	**11**	P	PKPdf	01 41 56.0	+0.3
DBIC	**Dimbokro**	**164.45**	**139**	PKP	PKPdf	01 41 58.5	+0.9
	comp=Z,23nm,0.8s,baz=178,slow=2.1,SNR=15						
DBIC	**Dimbokro**	**164.45**	**139**	PKP	PKPdf	01 41 58.5	+0.9
DBIC				LR	LR		
	comp=Z,1μm,21.0s						

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*BJI **14** 01:39:29.8, 19.90S×69.10W, h104^{km}*

*NEIC **14** 01:39:29.8±1.4, 19.87S×69.08W, h105^{km}±14^{km}, mb4.2/9, Error ellipse: s-maj=17.0km s-min=10.8km az=58.0*

*IDC **14** 01:39:32.0±0.8, 19.75S×68.98W, h107^{km}±7^{km}, mb3.9/10, mb1 4.1/11, mb1mx3.9/20, mbtmp4.3/11, Error ellipse: s-maj=21.9km s-min=15.4km az=71.0*

ISC 14 01:39:28.6±0.8**, 19.79S**±0.05×**69.08W**±0.08**, h100**^{km}±8^{km}**, n43,** σ**1**^{s}**09**/38**, mb4.2**/12**, 4C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**3.21**	**165**	*e*P	**P**	**01 40 18.3**	**+0.1**
LPAZ	**La Paz**	**3.60**	**15**	P	**P**	**01 40 30.1**	**+6.7**
	9.2nm,0.3s,baz=192,slow=7.7,SNR=44						
LPAZ				S	**S**	**01 41 13.2**	**+8.0**
	5.1nm,0.3s,baz=227,slow=20,SNR=3.8						
LPAZ	**La Paz**	**3.60**	**15**	*e*P	**P**	**01 40 29.9**	**+6.4**
ARE	**Arequipa**	**4.02**	**325**	*e*P	**P**	**01 40 31.0**	**+1.7**
ARE				*e*S	**S**	**01 41 16.0**	**+0.4**
CPN1	**Cerro Paranal**	**4.97**	**194**	*e*P	**P**	**01 40 40.9**	**-1.3**
SIV	**San Ignacio**	**8.51**	**65**	P	**P**	**01 41 31.1**	**+0.5**
	13nm,0.3s,baz=261,slow=11,SNR=170						
SAML	**Samuel**	**12.20**	**29**	*e*P	**P**	**01 42 19.1**	**-1.0**
	1.4nm,0.5s						
CPUP	**Villa Florida**	**12.62**	**123**	*e*P	**P**	**01 42 25.4**	**-0.3**
	18nm,0.9s						
TRQA	**Tornquist**	**19.22**	**163**	P	**P**	**01 43 43.6**	**-3.6**
	3.5nm,0.6s						
BDFB	**Brasilia**	**20.49**	**82**	P	**P**	**01 44 00.7**	**+0.1**
	3.7nm,0.3s,baz=266,slow=12,SNR=8.5						
PLCA	**Paso Flores**	**20.91**	**183**	P	**P**	**01 44 05.5**	**+0.7**
	3.5nm,0.7s,baz=4.1,slow=10,SNR=11						
PLCA	**Paso Flores**	**20.91**	**183**	*e*P	**P**	**01 44 03.7**	**-1.1**
	3.4nm,0.6s						
OTAV	**Otavalo**	**21.92**	**334**	*e*P	**P**	**01 44 18.5**	**+3.7**
	3.2nm,0.7s,mb3.8						
PAYG	**Puerto Ayora**	**28.14**	**310**	*e*P	**P**	**01 45 12.2**	**-1.4**
	22nm,0.9s,mb4.7						
SDV	**Santo Domingo**	**28.53**	**357**	P	**P**	**01 45 15.2**	**-1.9**
	3.3nm,0.6s,mb4.1						
SJG	**San Juan**	**37.77**	**5**	P	**P**	**01 46 36.4**	**-0.4**
	3.4nm,0.3s,mb4.6,baz=55,slow=5.0,SNR=4.9						
TEIG	**Tepich**	**43.99**	**334**	*e*P	**P**	**01 47 24.9**	**-3.0**
JSC	**Jenkinsville**	**55.00**	**348**	*e*P	**P**	**01 48 51.8**	**-0.2**
LRAL	**Lakeview Retre**	**55.24**	**342**	*e*P	**P**	**01 48 53.1**	**-0.7**
	3.0nm,0.7s,mb4.4						
ELN	**Prospectdale**	**57.77**	**349**	*e*P	**P**	**01 49 12.4**	**+0.8**
TXAR	**Lajitas Array**	**59.14**	**325**	P	**P**	**01 49 21.9**	**+0.7**
	0.6nm,0.8s,mb3.7,baz=146,slow=8.3,SNR=5.0						
VNA3	**Neumayer Olymp**	**61.74**	**162**	⇑*i*P	**P**	**01 49 39.1**	**+0.7**
VNA1	**Neumayer--Stat**	**61.95**	**161**	⇑*i*P	**P**	**01 49 40.9**	**+1.2**
ALLY	**Alegheny Colle**	**61.98**	**351**	*e*P	**P**	**01 49 40.1**	**-0.2**
VNA2	**Neumayer--Watz**	**62.31**	**161**	⇑*i*P	**P**	**01 49 42.0**	**-0.2**
SNAA	**Sanae**	**63.94**	**161**	⇑*i*P	**P**	**01 49 53.4**	**+0.6**
SNAA	**Sanae**	**63.94**	**161**	P	**P**	**01 49 53.4**	**+0.6**
	1.0nm,0.7s,mb3.8,baz=283,slow=6.2,SNR=18						
SNAA				pP	pP	01 50 19.8	+1.9
	0.5nm,0.7s,baz=295,slow=12,SNR=2.7						
DBIC	**Dimbokro**	**68.42**	**74**	P	**P**	**01 50 21.9**	**-0.3**
	4.1nm,0.7s,mb4.4,baz=356,slow=13,SNR=5.4						
DBIC	**Dimbokro**	**68.42**	**74**	*e*P	**P**	**01 50 21.6**	**-0.5**
	6.5nm,0.8s,mb4.5						
PDAR	**Pinedale Array**	**72.55**	**330**	P	**P**	**01 50 48.9**	**+2.3**
	0.6nm,0.8s,mb3.5,baz=120,slow=7.6,SNR=4.5						
ULM	**Lac du Bonnet**	**73.64**	**342**	P	**P**	**01 50 53.3**	**+0.5**
	4.2nm,0.6s,mb4.3,baz=166,slow=5.9,SNR=4.7						
SYO	**Syowa Base**	**78.16**	**160**	⇓X	**P**	**01 51 18.0**	**+0.1**
EDM	**Edmonton**	**82.15**	**335**	*e*P	**P**	**01 51 39.7**	**+0.2**
YKA	**Yellowknife Ar**	**89.53**	**341**	P	**P**	**01 52 15.2**	**-0.2**
	5.7nm,0.6s,mb4.8,baz=131,slow=4.8,SNR=39						
YKA				pP	pP	01 52 44.9	+2.8
	2.1nm,0.7s,baz=134,slow=4.6,SNR=4.8						
YKW3	**Yellowknife Ar**	**89.58**	**341**	*e*P	**P**	**01 52 13.5**	**-2.1**
MATP	**Matopo**	**89.99**	**112**	P	**P**	**01 52 20.4**	**+1.9**
	1.0nm,0.5s,mb4.2,baz=98,slow=22,SNR=5.5						
WRA	**Warramunga Arr**	**134.33**	**212**	PKP	PKPdf	01 58 37.8	+2.2
	0.8nm,0.5s,baz=156,slow=1.7,SNR=23						
WRA				pPKP		01 59 07.2	
	0.5nm,0.6s,baz=159,slow=1.8,SNR=2.8						
MKAR	**Makanchi Array**	**144.34**	**34**	PKP	PKPdf	01 58 54.0	+1.2
	0.8nm,0.5s,baz=302,slow=3.9,SNR=6.5						
MDJ	**Mudanjiang**	**150.77**	**332**	PKP	PKPdf	01 59 02.4	-1.0
MJAR	**Matsushiro Arr**	**150.86**	**311**	PKPbc	PKPdf	01 59 12.5	+8.7
	1.0nm,0.3s,baz=86,slow=2.0,SNR=5.4						
SONM	**Songino Array**	**151.78**	**6**	PKP	PKPdf	01 59 09.0	+4.2
	0.5nm,0.5s,baz=45,slow=1.7,SNR=5.1						
SONM				PKPbc	PKPdf	01 59 14.6	+10
	4.0nm,0.6s,baz=319,slow=1.4,SNR=25						
CN2	**Changchun**	**153.14**	**336**	*e*PKP	PKPdf	01 59 02.0	-4.8
LZH	**Lanzhou**	**162.61**	**19**	*e*PKP	PKPdf	01 59 21.3	+2.9
LZH				APKP		01 59 52.0	
LZH				XPKP		02 00 02.5	

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*NEIC **14** 01:43:01.8±1.6, 20.20S×68.93W, h119^{km}±21^{km}, Error ellipse: s-maj=21.9km s-min=18.4km az=192.0*

*IDC **14** 01:43:02.1±2.8, 20.15S×68.93W, h122^{km}±31^{km}, mb3.5/3, mb1 3.7/5, mb1mx3.5/17, mbtmp4.1/5, Error ellipse: s-maj=36.1km s-min=22.3km az=85.0*

ISC 14 01:43:00.8±1.9**, 20.2S**±0.1×**68.9W**±0.1**, h123**^{km}±23^{km}**, n9,** σ**0**^{s}**92**/11**, mb3.9**/1**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.97**	**11**	P	**P**	**01 44 03.1**	**+2.0**
	2.9nm,0.3s,baz=193,slow=7.4,SNR=7.5						
LPAZ				S	**S**	**01 44 46.9**	**-0.3**
	1.3nm,0.3s,baz=172,slow=7.4,SNR=3.3						
LPAZ	**La Paz**	**3.97**	**11**	*e*Pn	**P**	**01 44 03.0**	**+1.9**
LPAZ				P		01 44 03.1	
LPAZ				S	**S**	**01 44 46.9**	**-0.3**
ARE	**Arequipa**	**4.46**	**326**	*e*P	**P**	**01 44 07.0**	**-0.7**
SIV	**San Ignacio**	**8.55**	**62**	P	**P**	**01 45 01.7**	**-1.2**
	2.7nm,0.3s,baz=255,slow=11,SNR=12						
BDFB	**Brasilia**	**20.39**	**80**	P	**P**	**01 47 30.4**	**+0.6**
	3.1nm,0.5s,baz=260,slow=12,SNR=5.5						
PLCA	**Paso Flores**	**20.50**	**184**	P	**P**	**01 47 30.9**	**+0.1**
	2.7nm,0.6s,baz=9.7,slow=14,SNR=7.8						
PLCA	**Paso Flores**	**20.50**	**184**	P	**P**	**01 47 30.9**	**+0.1**
YKA	**Yellowknife Ar**	**89.98**	**341**	P	**P**	**01 55 46.8**	**-0.2**
	0.6nm,0.6s,mb3.9,baz=133,slow=4.9,SNR=3.8						
YKA	**Yellowknife Ar**	**89.98**	**341**	P	**P**	**01 55 46.8**	**-0.2**

IDC 14 01:52:55.2±1.4**, 7.46N**×**93.74E, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.8**/18**, mbtmp3.9**/5**, ML4.6**/1**, Error ellipse: s-maj=51.0km s-min=27.7km az=52.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.05**	**24**	Pn	P	01 55 50.4	-0.9
	1.0nm,0.3s,baz=215,slow=14,SNR=4.0						
SONM	**Songino Array**	**41.66**	**13**	P	P	02 00 44.4	-2.5
	0.6nm,0.5s,baz=191,slow=9.1,SNR=3.1						
WRA	**Warramunga Arr**	**48.35**	**125**	P	P	02 01 38.9	-2.0
	0.6nm,0.5s,baz=305,slow=8.5,SNR=14						
MATP	**Matopo**	**69.83**	**245**	P	P	02 04 12.4	+2.3
	1.3nm,0.6s,baz=98,slow=5.2,SNR=5.0						
FINES	**FINESS Array B**	**72.89**	**332**	P	P	02 04 25.7	-2.1
	1.3nm,0.7s,baz=76,slow=5.7,SNR=13						
KAF	**Kangasniemi**	**72.98**	**333**	*e*p	P	02 04 26.1	-2.2
	1.3nm,0.6s,baz=108,slow=5.7						
GERES	**GERESS Array B**	**77.87**	**318**	P	P	02 04 55.6	-0.8
	0.4nm,0.6s,baz=90,slow=5.3,SNR=5.5						

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*NEIC **14** 02:08:16.6±0.8, 20.10S×69.28W, mb4.2/1, Error ellipse: s-maj=16.7km s-min=11.1km az=70.0*

*IDC **14** 02:08:17.3±2.6, 20.17S×69.22W, h113^{km}±24^{km}, mb3.5/4, mb1 3.7/8, mb1mx3.5/19, mbtmp3.9/8, Error ellipse: s-maj=30.2km s-min=22.5km az=49.0*

ISC 14 02:08:13.9±1.2**, 20.02S**±0.08×**69.3W**±0.1**, h94**^{km}±15^{km}**, n13,** σ**0**^{s}**71**/14**, mb3.7**/3**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.88**	**17**	P	**P**	**02 09 18.2**	**+5.6**
	8.3nm,0.3s,baz=196,slow=6.8,SNR=43						
LPAZ	**La Paz**	**3.88**	**17**	*e*P	**P**	**02 09 18.1**	**+5.4**
ARE	**Arequipa**	**4.11**	**329**	*e*P	**P**	**02 09 17.0**	**+1.2**
ARE				*e*S	**S**	**02 10 02.0**	**-1.0**
SIV	**San Ignacio**	**8.79**	**64**	P	**P**	**02 10 20.0**	**+0.1**
	4.1nm,0.3s,baz=259,slow=10,SNR=46						
CFAA	**Coronel Fontan**	**11.57**	**175**	P	**P**	**02 10 56.9**	**-0.4**
	0.1nm,0.3s,baz=350,slow=13,SNR=4.1						
CPUP	**Villa Florida**	**12.67**	**122**	P	**P**	**02 11 12.4**	**+0.5**
	0.4nm,0.3s,baz=324,slow=14,SNR=13						
CPUP	**Villa Florida**	**12.67**	**122**	*e*Pn	**P**	**02 11 11.8**	**-0.1**
CPUP				P		02 11 12.4	
TRQA	**Tornquist**	**19.06**	**162**	*e*P	**P**	**02 12 31.3**	**0.0**
	7.0nm,0.6s						
BDFB	**Brasilia**	**20.72**	**81**	P	**P**	**02 12 48.6**	**-0.3**
	3.3nm,0.5s,baz=241,slow=12,SNR=6.8						
TXAR	**Lajitas Array**	**59.21**	**325**	P	**P**	**02 18 07.4**	**-0.3**
	0.1nm,0.5s,mb3.1,baz=148,slow=8.5,SNR=2.7						
TXAR				pP	pP	02 18 33.8	+2.5
	0.2nm,0.6s,baz=151,slow=8.0,SNR=2.3						
DBIC	**Dimbokro**	**68.67**	**74**	P	**P**	**02 19 08.9**	**-0.8**
	2.6nm,0.6s,mb4.2,baz=223,slow=9.5,SNR=5.8						
YKA	**Yellowknife Ar**	**89.68**	**341**	P	**P**	**02 21 03.4**	**+1.3**
	0.6nm,0.6s,mb3.9,baz=134,slow=4.7,SNR=6.8						
YKA				pP	pP	02 21 30.8	+3.4
	0.4nm,0.6s,baz=135,slow=4.9,SNR=2.5						
YKA	**Yellowknife Ar**	**89.68**	**341**	P	**P**	**02 21 03.4**	**+1.3**
YKA				pP	pP	02 21 30.8	+3.4

IDC 14 02:13:26.4±3.4**, 20.37S**×**68.52W, h48**^{km}±37^{km}**, mb3.4**/3**, mb1 3.8**/5**, mb1mx3.5**/17**, mbtmp3.8**/5**, ML3.4**/1**, Error ellipse: s-maj=42.2km s-min=31.1km az=90.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.08**	**5**	P	P	02 14 26.1	-1.8
	1.7nm,0.3s,baz=191,slow=8.6,SNR=11						
SIV	**San Ignacio**	**8.31**	**60**	P	P	02 15 26.0	-1.0
	1.0nm,0.3s,baz=258,slow=12,SNR=15						
BDFB	**Brasilia**	**20.06**	**80**	P	P	02 17 54.6	-3.8
	2.7nm,0.8s,baz=274,slow=15,SNR=3.6						
PLCA	**Paso Flores**	**20.37**	**184**	P	P	02 17 59.0	-2.5
	0.6nm,0.5s,baz=8.7,slow=16,SNR=3.6						
YKA	**Yellowknife Ar**	**90.25**	**340**	P	P	02 26 21.8	-1.0
	0.3nm,0.5s,baz=130,slow=4.8,SNR=4.6						

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*NEIC **14** 02:31:11.4±0.7, 20.23S×68.81W, h107^{km}±11^{km}, Error ellipse: s-maj=11.8km s-min=9.2km az=94.0*

*IDC **14** 02:31:11.7±2.4, 20.25S×68.79W, h107^{km}±23^{km}, mb3.6/4, mb1 3.6/7, mb1mx3.5/18, mbtmp4.0/7, Error ellipse: s-maj=39.3km s-min=19.1km az=111.0*

ISC 14 02:31:11.0±1.1**, 20.26S**±0.08×**68.8W**±0.1**, h120**^{km}±18^{km}**, n11,** σ**0**^{s}**63**/11**, mb3.9**/2**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.99**	**9**	P	**P**	**02 32 11.8**	**+0.3**
	4.0nm,0.3s,baz=190,slow=8.4,SNR=128						
LPAZ	**La Paz**	**3.99**	**9**	*e*P	**P**	**02 32 11.3**	**-0.2**
ARE	**Arequipa**	**4.58**	**325**	*e*P	**P**	**02 32 18.0**	**-1.4**
ARE				*e*S	**S**	**02 33 13.0**	**+1.0**
SIV	**San Ignacio**	**8.45**	**61**	P	**P**	**02 33 11.6**	**-0.2**
	3.6nm,0.3s,baz=259,slow=11,SNR=102						
CFAA	**Coronel Fontan**	**11.31**	**178**	P	**P**	**02 33 50.4**	**+0.4**
	0.0nm,0.3s,baz=3.6,slow=16,SNR=4.1						
CPUP	**Villa Florida**	**12.12**	**122**	P	**P**	**02 34 01.2**	**+0.6**
	0.1nm,0.3s,baz=332,slow=15,SNR=3.8						
BDFB	**Brasilia**	**20.26**	**80**	P	**P**	**02 35 38.7**	**-0.3**
	2.4nm,0.4s,baz=267,slow=10,SNR=7.8						
PLCA	**Paso Flores**	**20.47**	**184**	P	**P**	**02 35 40.5**	**-0.5**
	2.6nm,0.6s,baz=353,slow=13,SNR=9.6						
SNAA	**Sanae**	**63.41**	**161**	P	**P**	**02 41 29.8**	**+0.1**
	0.4nm,0.7s,mb3.5,baz=268,slow=5.5,SNR=8.5						
DBIC	**Dimbokro**	**68.25**	**74**	P	**P**	**02 42 01.8**	**+0.4**
	3.8nm,0.8s,mb4.3,baz=177,slow=7.3,SNR=7.9						
YKA	**Yellowknife Ar**	**90.06**	**341**	pP	pP	02 44 33.1	+3.8
	0.2nm,0.3s,baz=133,slow=3.7,SNR=4.3						

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*IDC **14** 02:33:03.8±0.8, 2.08N×126.52E, mb4.2/10, mb1 4.4/10, mb1mx4.2/16, mbtmp4.2/10, Error ellipse: s-maj=53.8km s-min=15.9km az=76.0*

*NEIC **14** 02:33:08.2±0.6, 2.06N×126.72E, h30^{km}, mb4.5/2, Error ellipse: s-maj=41.1km s-min=11.0km az=76.0*

ISC 14 02:33:06.8±0.6**, 2.1N**±0.1×**126.6E**±0.3**, h33**^{km}**, n15,** σ**1**^{s}**05**/15**, mb4.2**/10**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**15.80**	**159**	*e*P	**P**	**02 36 52.5**	**+3.9**
	11nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.07**	**183**	P	**P**	**02 37 40.1**	**-0.2**
	11nm,0.4s,baz=9.7,slow=9.7,SNR=22						
WRAB	**Tennant Creek**	**23.16**	**161**	*e*P	**P**	**02 38 10.9**	**-0.6**
	17nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**23.16**	**161**	P	**P**	**02 38 10.6**	**-1.0**
	12nm,0.6s,mb4.5,baz=340,slow=11,SNR=111						
WB2	**Warramunga Arr**	**23.17**	**161**	*e*P	**P**	**02 38 11.1**	**-0.5**
MJAR	**Matsushiro Arr**	**35.95**	**16**	P	**P**	**02 40 06.7**	**+0.3**
	2.0nm,0.6s,mb4.2,baz=177,slow=9.2,SNR=5.1						
STKA	**Stephens Creek**	**36.65**	**158**	P	**P**	**02 40 12.6**	**+0.3**
	3.7nm,0.8s,mb4.3,baz=338,slow=4.0,SNR=5.3						
SONM	**Songino Array**	**48.81**	**342**	P	**P**	**02 41 50.9**	**0.0**
	0.8nm,0.5s,mb4.0,baz=152,slow=7.2,SNR=6.1						
MKAR	**Makanchi Array**	**58.83**	**326**	P	**P**	**02 43 03.0**	**-1.6**
	1.0nm,0.4s,mb4.2,baz=122,slow=8.2,SNR=17						
MKAR	**Makanchi Array**	**58.83**	**326**	P	**P**	**02 43 03.0**	**-1.6**
BVAR	**Borovoye Array**	**68.62**	**327**	P	**P**	**02 44 07.8**	**-0.8**
	0.6nm,0.6s,mb3.7,baz=149,slow=8.6,SNR=4.4						
VNDA	**Vanda**	**81.81**	**173**	P	**P**	**02 45 24.5**	**+0.9**
	1.4nm,0.6s,mb4.1,baz=309,slow=6.5,SNR=5.0						
VNDA	**Vanda**	**81.81**	**173**	P	**P**	**02 45 24.5**	**+0.9**
MAW	**Mawson**	**82.16**	**200**	P	**P**	**02 45 26.8**	**+1.3**
	0.9nm,0.3s,mb4.2,baz=7.7,slow=6.2,SNR=4.0						
FINES	**FINESS Array B**	**93.21**	**332**	P	**P**	**02 46 21.6**	**+2.7**
	0.4nm,0.6s,mb4.0,slow=3.8,SNR=3.8						

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*IDC **14** 02:45:30.6±0.9, 2.95N×93.97E, mb4.2/8, mb1 4.3/9, mb1mx4.1/19, mbtmp4.1/9, ML4.0/1, Error ellipse: s-maj=40.4km s-min=19.5km az=56.0*

*NEIC **14** 02:45:34.9±0.7, 2.95N×93.94E, h30^{km}, mb4.5/2, Error ellipse: s-maj=18.1km s-min=12.0km az=41.0*

ISC 14 02:45:35.4±4.6**, 3.0N**±0.1×**94.2E**±0.2**, h49**^{km}±38^{km}**, n18,** σ**0**^{s}**87**/16**, mb4.3**/11**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.81**	**70**	*e*Pn	**P**	**02 47 15.2**	**0.0**
KULM				*e*Sn	**S**	**02 48 31.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**16.03**	**16**	Pn	**P**	**02 49 20.8**	**+1.5**
	0.2nm,0.3s,baz=214,slow=13,SNR=9.9						
KSM	**Kuching**	**16.16**	**95**	*e*P	**P**	**02 49 26.0**	**+5.1**
AAK	**Ala-Archa**	**43.19**	**339**	*e*P	**P**	**02 53 32.2**	**-1.2**
	31nm,0.6s,mb5.2						
MKAR	**Makanchi Array**	**44.82**	**348**	P	**P**	**02 53 46.9**	**+0.5**
	4.5nm,0.8s,mb4.4,baz=166,slow=8.7,SNR=33						
MKAR	**Makanchi Array**	**44.82**	**348**	P	**P**	**02 53 46.9**	**+0.5**
WRA	**Warramunga Arr**	**45.53**	**122**	P	**P**	**02 53 53.1**	**+0.7**
	4.3nm,0.8s,mb4.4,baz=301,slow=8.8,SNR=28						
WRAB	**Tennant Creek**	**45.53**	**122**	*e*P	**P**	**02 53 52.6**	**+0.1**
	13nm,1.0s,mb4.8						
SONM	**Songino Array**	**45.87**	**11**	P	**P**	**02 53 56.0**	**+1.2**
	1.8nm,0.8s,mb4.1,baz=196,slow=9.0,SNR=10						
ULN	**Ulaanbaatar**	**46.03**	**12**	P	**P**	**02 53 56.5**	**+0.5**
	2.0nm,0.7s,mb4.2						
BVAR	**Borovoye Array**	**53.59**	**342**	P	**P**	**02 54 53.0**	**-0.8**
	1.6nm,0.7s,mb4.1,baz=149,slow=8.6,SNR=11						
STKA	**Stephens Creek**	**56.79**	**132**	P	**P**	**02 55 17.4**	**+0.2**
	3.9nm,0.8s,mb4.5,baz=320,slow=7.0,SNR=3.5						
BRTR	**Keskin Array B**	**65.68**	**313**	P	**P**	**02 56 15.8**	**-1.3**
	1.2nm,0.8s,mb4.0,baz=119,slow=6.9,SNR=5.3						
FINES	**FINESS Array B**	**77.02**	**333**	P	**P**	**02 57 23.9**	**-0.7**
	0.5nm,0.4s,mb3.8,baz=80,slow=12,SNR=4.1						
GERES	**GERESS Array B**	**81.48**	**319**	P	**P**	**02 57 49.5**	**+0.4**
	1.7nm,0.7s,mb4.1,baz=104,slow=5.5,SNR=16						
TXAR	**Lajitas Array**	**143.56**	**27**	PKP	PKPdf	03 05 06.2	+0.8
	0.4nm,0.9s,baz=219,slow=8.0,SNR=3.1						
CFAA	**Coronel Fontan**	**147.10**	**208**	PKPbc	PKPdf	03 05 17.2	+5.7
	0.3nm,0.8s,baz=222,slow=3.5,SNR=4.5						
CFAA	**Coronel Fontan**	**147.10**	**208**	PKPbc	PKPdf	03 05 17.2	+5.7

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*IDC **14** 02:48:48.8±1.6, 2.74N×93.82E, mb3.9/6, mb1 4.1/7, mb1mx3.9/19, mbtmp3.9/7, ML4.4/1, Error ellipse: s-maj=57.3km s-min=26.7km az=54.0*

*NEIC **14** 02:48:53.2±0.8, 2.75N×93.85E, h30^{km}, mb4.3/2, Error ellipse: s-maj=25.9km s-min=13.2km az=62.0*

ISC 14 02:48:51.5±1.1**, 2.8N**±0.2×**93.9E**±0.2**, h30**^{km}**, n11,** σ**0**^{s}**68**/11**, mb4.0**/8**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.39**	**17**	Pn	**P**	**02 52 42.1**	**+0.9**
	0.5nm,0.3s,baz=213,slow=12,SNR=7.1						
MKAR	**Makanchi Array**	**45.01**	**349**	P	**P**	**02 57 06.2**	**+0.1**
	2.1nm,0.5s,mb4.2,baz=168,slow=8.9,SNR=15						
MKAR	**Makanchi Array**	**45.01**	**349**	P	**P**	**02 57 06.2**	**+0.1**
WRA	**Warramunga Arr**	**45.69**	**121**	P	**P**	**02 57 11.9**	**0.0**
	1.5nm,0.7s,mb4.0,baz=301,slow=8.9,SNR=8.6						
WRAB	**Tennant Creek**	**45.70**	**121**	*e*P	**P**	**02 57 11.9**	**0.0**
	6.8nm,1.0s,mb4.5						
SONM	**Songino Array**	**46.20**	**12**	P	**P**	**02 57 15.1**	**-0.4**
	1.3nm,0.8s,mb3.9,baz=188,slow=8.4,SNR=6.3						
ULN	**Ulaanbaatar**	**46.37**	**12**	P	**P**	**02 57 16.2**	**-0.6**
	1.2nm,0.5s,mb4.1						
BVAR	**Borovoye Array**	**53.74**	**343**	P	**P**	**02 58 12.2**	**-1.0**
	0.8nm,0.5s,mb3.9,baz=140,slow=12,SNR=4.8						
FINES	**FINESS Array B**	**77.09**	**333**	P	**P**	**03 00 43.2**	**-0.3**
	0.9nm,0.8s,mb3.7,baz=45,slow=2.7,SNR=3.7						
FINES	**FINESS Array B**	**77.09**	**333**	P	**P**	**03 00 43.2**	**-0.3**
GERES	**GERESS Array B**	**81.45**	**319**	P	**P**	**03 01 08.6**	**+1.4**
	0.6nm,0.7s,mb3.6,baz=90,slow=5.9,SNR=5.7						

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*NNC **14** 02:51:54.9±5.5, 40.21N×72.39E, h7^{km}±14^{km}, mpv3.2, Error ellipse: s-maj=44.3km s-min=14.9km az=175.0*

ISC 14 02:51:48.3±4.9**, 39.5N**±0.4×**72.8E**±0.3**, h152**^{km}±44^{km}**, n8,** σ**0**^{s}**23**/9**, 3C-1D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.70**	**15**	P	**P**	**02 52 32.5**	**-0.1**
	SNR=32						
UCH	**Uchtor**	**3.02**	**26**	P	**P**	**02 52 36.4**	**-0.2**
	SNR=16						
KZA	**Kyzart**	**3.18**	**36**	P	**P**	**02 52 38.6**	**-0.1**
	SNR=8.3						
AAK	**Ala-Archa**	**3.38**	**22**	P	**P**	**02 52 42.0**	**+0.7**
	SNR=8.9						
AAK	**Ala-Archa**	**3.38**	**22**	⇑Pn	**P**	**02 52 41.7**	**+0.4**
	9.4nm,0.5s						
AAK				⇓Lg		02 53 26.9	
	67nm,1.2s						
ULHL	**Ulahol**	**3.80**	**43**	P	**P**	**02 52 46.6**	**-0.1**
	SNR=6.2						
KK31	**Karatay Array**	**3.95**	**336**	Pn	**P**	**02 52 48.8**	**0.0**
	1.6nm,0.3s,baz=145,slow=12,SNR=47						
KK31				⇑Lg		02 53 36.5	
	5.9nm,0.3s,baz=151,slow=23,SNR=6.4						
AB31	**Akbulak array**	**13.34**	**321**	P	**P**	**02 54 52.5**	**+0.1**
	0.8nm,0.6s,baz=139,slow=14,SNR=20						
AB31				⇑S	**S**	**02 57 17.5**	**-0.1**
	0.8nm,0.5s,baz=133,slow=23,SNR=3.8						

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*NEIC **14** 03:14:33.6±1.2, 19.96S×68.78W, h134^{km}±11^{km}, Error ellipse: s-maj=15.5km s-min=11.9km az=204.0*

*IDC **14** 03:14:33.2±2.6, 19.91S×68.82W, h130^{km}±21^{km}, mb3.5/6, mb1 3.7/8, mb1mx3.6/18, mbtmp4.0/8, Error ellipse: s-maj=26.0km s-min=18.2km az=56.0*

ISC 14 03:14:32.9±1.6**, 19.9S**±0.1×**68.8W**±0.1**, h143**^{km}±15^{km}**, n13,** σ**0**^{s}**84**/14**, mb3.6**/4**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.67**	**9**	P	**P**	**03 15 31.0**	**+1.5**
	6.1nm,0.3s,baz=192,slow=7.7,SNR=252						
LPAZ				S	**S**	**03 16 12.2**	**-0.6**
	1.7nm,0.3s,baz=207,slow=18,SNR=2.7						
LPAZ	**La Paz**	**3.67**	**9**	*e*Pn	**P**	**03 15 31.0**	**+1.5**
ARE	**Arequipa**	**4.31**	**323**	*e*P	**P**	**03 15 38.0**	**0.0**
ARE				*e*S	**S**	**03 16 22.0**	**-6.1**
SIV	**San Ignacio**	**8.29**	**63**	P	**P**	**03 16 30.4**	**-0.9**
	4.8nm,0.3s,baz=256,slow=11,SNR=240						
BDFB	**Brasilia**	**20.20**	**81**	P	**P**	**03 18 59.1**	**+0.7**
	2.5nm,0.4s,baz=268,slow=10,SNR=12						
PLCA	**Paso Flores**	**20.80**	**184**	P	**P**	**03 19 03.9**	**-0.3**
	1.3nm,0.7s,baz=8.5,slow=19,SNR=4.1						
TXAR	**Lajitas Array**	**59.43**	**325**	P	**P**	**03 24 21.4**	**-1.5**
	0.1nm,0.5s,mb3.0,baz=159,slow=7.7,SNR=3.7						
TXAR	**Lajitas Array**	**59.43**	**325**	P	**P**	**03 24 21.4**	**-1.5**
DBIC	**Dimbokro**	**68.16**	**74**	P	**P**	**03 25 20.1**	**-0.1**
	1.9nm,0.3s,mb4.2,baz=106,slow=4.8,SNR=8.3						
NVAR	**Mina Array Bea**	**74.35**	**322**	P	**P**	**03 25 57.0**	**+0.3**
	0.6nm,0.8s,mb3.4,baz=178,slow=6.4,SNR=4.1						
NVAR	**Mina Array Bea**	**74.35**	**322**	P	**P**	**03 25 57.0**	**+0.3**
YKA	**Yellowknife Ar**	**89.76**	**341**	P	**P**	**03 27 16.6**	**+0.9**
	1.5nm,0.7s,mb4.1,baz=135,slow=4.5,SNR=15						
YKA				pP	pP	03 27 54.3	+1.9
	0.7nm,0.6s,baz=136,slow=4.6,SNR=6.7						
SONM	**Songino Array**	**151.88**	**7**	PKPbc	PKPdf	03 34 12.9	+9.0
	0.5nm,0.6s,baz=346,slow=5.9,SNR=6.1						

IDC 14 03:14:40.6±2.1**, 7.35N**×**93.65E, mb3.6**/4**, mb1 3.7**/4**,**

mb1mx3.6/16,**mbtmp3.6**/4,**Error ellipse: s-maj=85.0km s-min=29.1km az=56.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	40.49	348	P	P	03 22 21.8	-1.0
	0.4nm,0.7s,baz=170,slow=8.8,SNR=2.9						
SONM	Songino Array	41.78	13	P	P	03 22 31.5	-1.9
	1.1nm,0.9s,baz=194,slow=5.1,SNR=5.6						
WRA	Warramunga Arr	48.36	125	P	P	03 23 24.5	-1.9
	0.3nm,0.7s,baz=305,slow=8.6,SNR=6.1						
FINES	FINESS Array B	72.95	332	P	P	03 26 11.3	-2.2
	0.5nm,0.7s,baz=90,slow=5.6,SNR=3.9						

IDC 14 03:18:22.8±1.4**,8.77N×92.81E,mb3.5**/5**,mb1 3.8**/6**, mb1mx3.6**/18**,mbtmp3.5**/6**,ML4.4**/1**,Error ellipse: s-maj=44.4km s-min=26.1km az=50.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.32	31	Pn	P	03 21 07.1	-2.0
	0.7nm,0.3s,baz=220,slow=14,SNR=2.9						
MKAR	Makanchi Array	38.94	348	P	P	03 25 50.4	-1.8
	0.2nm,0.3s,baz=158,slow=7.8,SNR=4.0						
SONM	Songino Array	40.60	14	P	P	03 26 03.9	-2.0
	0.4nm,0.7s,baz=217,slow=7.2,SNR=2.7						
WRA	Warramunga Arr	49.85	125	P	P	03 27 18.2	-2.0
	0.4nm,0.6s,baz=306,slow=9.0,SNR=17						
BRTR	Keskin Array B	60.85	311	P	P	03 28 38.8	-0.8
	0.7nm,0.7s,baz=127,slow=6.2,SNR=4.0						
GERES	GERESS Array B	76.28	318	P	P	03 30 12.7	-2.6
	0.2nm,0.3s,baz=90,slow=4.0,SNR=5.2						

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*IDC **14** 03:32:45.8±1.6, 1.15N×97.97E, mb4.1/6, mb1 4.2/7, mb1mx3.9/17, mbtmp4.1/7, ML4.2/1, Error ellipse: s-maj=74.8km s-min=19.4km az=58.0*

*NEIC **14** 03:32:50.4±0.7, 1.16N×98.02E, h30^{km}, mb4.4/1, Error ellipse: s-maj=20.8km s-min=10.1km az=68.0*

ISC 14 03:32:48.8±1.1**,1.2N**±0.1×**98.0E**±0.2**,h33**^{km}**,n11,**σ0^{s}**28**/9**, mb4.1**/7**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	4.88	33	*e*Pn	Pn	03 34 01.9	0.0
CMAR	Chiang Mai Arr	17.21	3	P	P	03 36 48.6	+0.2
	0.3nm,0.3s,baz=193,slow=11,SNR=4.6						
WRA	Warramunga Arr	41.34	122	P	P	03 40 33.3	-0.2
	1.8nm,0.4s,mb4.0,baz=303,slow=8.9,SNR=27						
WRAB	Tennant Creek	41.34	122	*e*P	P	03 40 33.4	-0.2
	4.0nm,0.6s,mb4.2						
SONM	Songino Array	47.06	8	P	P	03 41 19.3	+0.1
	1.4nm,0.5s,mb4.2,baz=196,slow=9.2,SNR=14						
MKAR	Makanchi Array	47.48	345	P	P	03 41 22.6	0.0
	1.9nm,0.5s,mb4.3,baz=154,slow=9.1,SNR=25						
STKA	Stephens Creek	52.74	133	P	P	03 42 03.3	+0.4
	1.9nm,0.5s,mb4.3,baz=348,slow=9.0,SNR=8.2						
BVAR	Borovoye Array	56.55	340	P	P	03 42 29.8	-0.6
	0.9nm,0.5s,mb4.1,baz=145,slow=9.0,SNR=6.7						
FINES	FINESS Array B	80.40	332	P	P	03 44 58.8	+0.4
	1.5nm,0.9s,mb3.9,baz=135,slow=7.9,SNR=3.3						
TXAR	Lajitas Array	143.28	33	PKP	PKPdf	03 52 23.6	+3.2
	0.1nm,0.3s,baz=346,slow=3.7,SNR=2.6						
TXAR	Lajitas Array	143.28	33	PKP	PKPdf	03 52 23.6	+3.2

IDC 14 03:32:52.7±2.8**,19.87S×68.67W,h140**^{km}±29^{km}**,mb3.3**/2**, mb1 3.6**/4**,mb1mx3.2**/18**,mbtmp3.9**/4**,Error ellipse: s-maj=47.7km s-min=23.0km az=82.0,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.60	8	P	P	03 33 48.0	-0.2
	4.0nm,0.3s,baz=191,slow=8.5,SNR=62						
LPAZ				S	S	03 34 31.3	+0.5
	0.3nm,0.3s,baz=256,slow=17,SNR=1.7						
SIV	San Ignacio	8.20	63	P	P	03 34 48.4	-1.4
	2.6nm,0.3s,baz=258,slow=12,SNR=113						
PLCA	Paso Flores	20.86	184	P	P	03 37 23.7	-1.2
	2.5nm,1.0s,baz=352,slow=15,SNR=3.2						
YKA	Yellowknife Ar	89.73	341	P	P	03 45 34.5	-1.2
	0.1nm,0.3s,baz=133,slow=4.6,SNR=7.7						

IDC 14 03:39:55.9±1.9**,17.32S×177.27W,mb3.8**/4**,mb1 4.1**/4**, mb1mx3.8**/15**,mbtmp3.8**/4**,Error ellipse: s-maj=108.4km s-min=28.0km az=147.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.87	241	P	P	03 47 31.5	-1.5
	2.0nm,0.8s,baz=84,slow=9.2,SNR=3.2						
WB2	Warramunga Arr	45.80	259	*e*P	P	03 48 19.9	-1.6
WRA	Warramunga Arr	45.81	259	P	P	03 48 19.7	-1.9
	1.3nm,0.3s,baz=97,slow=7.4,SNR=86						
TXAR	Lajitas Array	84.76	57	P	P	03 52 32.9	-0.8
	0.1nm,0.3s,baz=225,slow=3.8,SNR=3.6						
TXAR	Lajitas Array	84.76	57	P	P	03 52 32.9	-0.8
ILAR	Eielson Array	85.07	13	P	P	03 52 32.7	-1.7
	0.2nm,0.5s,baz=216,slow=5.2,SNR=6.1						

IDC 14 03:43:40.6±3.4**,20.02S×68.69W,h128**^{km}±49^{km}**,mb2.9**/1**, mb1 3.3**/3**,mb1mx3.0**/18**,mbtmp3.7**/3**,Error ellipse: s-maj=58.0km s-min=39.8km az=95.0,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.75	8	P	P	03 44 37.9	-0.2
	1.3nm,0.3s,baz=194,slow=8.9,SNR=52						
SIV	San Ignacio	8.28	62	P	P	03 45 37.7	-1.3
	1.7nm,0.3s,baz=261,slow=10,SNR=88						
PLCA	Paso Flores	20.70	184	P	P	03 48 10.7	-1.6
	1.0nm,0.7s,baz=2.7,slow=10,SNR=3.8						
WRA	Warramunga Arr	134.32	211	PKP	PKPdf	04 02 43.9	-0.2
	0.4nm,1.1s,baz=152,slow=1.8,SNR=4.8						

IDC 14 03:43:45.3±9.0**,0.92N×97.08E,mb3.7**/3**,mb1 3.8**/4**, mb1mx3.6**/16**,mbtmp3.7**/4**,ML4.0**/1**,Error ellipse: s-maj=189.1km s-min=102.1km az=139.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	17.53	6	P	P	03 47 50.9	-2.0
	0.2nm,0.3s,baz=194,slow=11,SNR=3.8						
SONM	Songino Array	47.43	9	P	P	03 52 21.7	-1.8
	0.9nm,0.8s,baz=196,slow=7.4,SNR=5.2						
MKAR	Makanchi Array	47.49	346	P	P	03 52 22.5	-1.4
	0.7nm,0.6s,baz=153,slow=8.1,SNR=6.6						
BVAR	Borovoye Array	56.48	341	P	P	03 53 28.3	-3.0
	0.4nm,0.6s,baz=135,slow=8.2,SNR=3.6						

NEIC 14 04:25:42.4,60.06N×153.23W,h138^{km}**,MG3.5**(AEIC)**, After AEIC.,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILW	Iliamna West	0.05	85	P	P	04 26 00.5	-0.8
ILW				S	S	04 26 15.3	-0.3
INE	Iliamna NE	0.08	87	P	P	04 26 00.5	-0.9
INE				S	S	04 26 15.5	-0.3
IVS	Iliamna South	0.09	123	P	P	04 26 00.6	-0.9
IVS				S	S	04 26 16.4	+0.5
IVE	Iliamna Volcan	0.11	110	P	P	04 26 00.4	-1.1
IVE				S	S	04 26 15.3	-0.7
ILS	Iliamna Low So	0.13	141	P	P	04 26 00.5	-1.1
ILS				S	S	04 26 15.3	-0.8
ILIM	Iliamna	0.14	80	P	P	04 26 00.4	-1.1
ILIM				S	S	04 26 14.9	-1.1
OPT	Oil Point	0.41	180	P	P	04 26 01.5	-1.0
OPT				S	S	04 26 16.1	-1.9
RED	Redoubt Volcan	0.43	32	P	P	04 26 00.8	-1.9
RSO	Redoubt South	0.47	30	P	P	04 26 01.9	-1.0
RDN	Redoubt North	0.51	27	P	P	04 26 02.1	-1.0
NCT	North Crescent	0.53	16	P	P	04 26 02.1	-1.1
NCT				S	S	04 26 17.8	-1.2
DFR	Drift River	0.60	26	P	P	04 26 02.4	-1.2
RDT	Redoubt	0.66	38	P	P	04 26 02.8	-1.1
AUL	Augustine Lava	0.68	189	P	P	04 26 03.1	-1.0
AUL				S	S	04 26 19.2	-1.4
AUW	Augustine West	0.70	190	P	P	04 26 03.2	-1.0
AUW				S	S	04 26 18.4	-2.3
AUE	Augustine Isla	0.70	186	P	P	04 26 03.0	-1.2
AUP	Augustine Pinn	0.70	188	P	P	04 26 03.3	-0.9
AGU	Augustine-Summ	0.71	189	P	P	04 26 03.2	-1.0
AUI	Augustine Isla	0.73	188	P	P	04 26 03.2	-1.1
AUI				S	S	04 26 19.2	-1.9
HOM	Homer	0.89	116	P	P	04 26 04.9	-0.6
NNL	Ninilchik	0.97	90	P	P	04 26 06.3	+0.2
XLV	Seldovia	0.97	128	P	P	04 26 05.1	-1.0
XLV				S	S	04 26 23.1	-1.2
MCNL	McNeil River	1.04	213	P	P	04 26 05.5	-1.2
MCNL				S	S	04 26 23.4	-1.9
CNPM	China Poot	1.14	117	P	P	04 26 07.0	-0.7
CNPM				S	S	04 26 25.6	-1.5
NKA	Nikishka	1.20	54	P	P	04 26 09.1	+0.7
CKL	Chakachamna La	1.23	21	P	P	04 26 08.0	-0.6
CKL				S	S	04 26 28.2	-0.4
SPU	Mount Spurr	1.27	27	*e*P	P	04 26 08.0	-1.1
BGL	Barrier Glacie	1.28	18	P	P	04 26 08.7	-0.5
CKN	Chakachatna No	1.28	23	P	P	04 26 08.5	-0.7
SYI	Shuyak Island	1.51	163	P	P	04 26 10.6	-1.1
SYI				S	S	04 26 32.1	-1.9
SVW2	Sparrevohn	1.56	313	P	P	04 26 10.3	-1.9
SLKM	Skilak Lake	1.56	72	P	P	04 26 11.2	-1.0
SLKM				S	S	04 26 33.1	-1.9
KAPH	Katmai Pasha	1.57	202	P	P	04 26 11.1	-1.2
KAPH				S	S	04 26 33.2	-2.0
VOGL	Vogel Lake	1.67	54	P	P	04 26 13.4	0.0
VOGL				S	S	04 26 38.0	+0.8
KAHC	Katmai Hardscr	1.68	214	P	P	04 26 12.0	-1.5
KAHC				S	S	04 26 35.3	-2.0
KAHG	Katmai Hook Gl	1.71	204	P	P	04 26 12.5	-1.3
FIB	Fire Island	1.87	52	P	P	04 26 15.2	-0.6
MPA	Moose Pass	1.98	76	P	P	04 26 15.5	-1.4
RC01	Rabbit Creek A	2.01	57	P	P	04 26 15.7	-1.7
ACHA	Angle Creek He	2.14	211	P	P	04 26 17.7	-1.4
MGLS	Mageik LS	2.14	211	P	P	04 26 18.0	-1.1
ANCK	Angle Creek	2.20	213	P	P	04 26 18.4	-1.3
ANCK				S	S	04 26 47.2	-1.1
CNTC	Contact Creek	2.26	218	P	P	04 26 19.0	-1.5
CAHL	Cahill	2.28	209	P	P	04 26 19.4	-1.4
PWA	Palmer West	2.29	44	P	P	04 26 18.8	-2.1
PWA				S	S	04 26 49.5	-0.8
KDAK	Kodiak Island	2.31	171	P	P	04 26 18.2	-2.9
KDAK				S	S	04 26 47.4	-3.2
PMR	Palmer	2.53	51	P	P	04 26 21.2	-2.8
PMR				S	S	04 26 52.0	-3.7
KNK	Knik Glacier	2.71	58	P	P	04 26 23.8	-2.5
GHO	Glory Hole Cre	2.72	49	P	P	04 26 23.7	-2.7
GHO				S	S	04 26 56.6	-3.4
CUT	Chulitna	2.76	30	P	P	04 26 25.0	-1.9
CUT				S	S	04 26 58.7	-2.2
SML	Sawmill	2.97	52	P	P	04 26 26.8	-2.9
TT01	Tatalina	3.16	336	P	P	04 26 29.8	-2.4
TTA	Tatalina	3.18	336	P	P	04 26 30.0	-2.5
HIN	Hinchinbrook I	3.37	81	P	P	04 26 33.1	-1.9
SCM	Sheep Creek Mo	3.38	56	P	P	04 26 32.4	-2.8
HUR	Hurricane	3.40	29	P	P	04 26 33.1	-2.3
MID	Middleton Isla	3.54	97	P	P	04 26 34.8	-2.5
VLZ	Valdez	3.57	69	P	P	04 26 36.1	-1.5
KTH	Kantishna Hill	3.68	16	P	P	04 26 36.7	-2.3
KTH				S	S	04 27 18.8	-3.6
TRF	Thorofare Moun	3.68	21	P	P	04 26 36.9	-2.2
CVA	Cordova	3.75	79	P	P	04 26 37.1	-3.0
EYAK	Cordova Ski Ar	3.75	79	P	P	04 26 38.0	-2.1
EYAK				S	S	04 27 20.2	-4.1
DIV	Divide	3.83	70	P	P	04 26 39.4	-1.7
DIV				S	S	04 27 22.3	-3.7
RND	Reindeer	3.95	30	P	P	04 26 40.6	-2.1
MCK	McKinley	4.21	27	P	P	04 26 43.9	-2.2
RAGM	Ragged Mountai	4.28	82	P	P	04 26 44.8	-2.2
RAGM				S	S	04 27 32.3	-4.4
TZL	Tazlina	4.29	59	P	P	04 26 45.5	-1.6
KAIM	Kayak Island	4.43	88	P	P	04 26 46.8	-2.2
KAIM				S	S	04 27 35.4	-4.8
PAX	Paxson	4.73	48	P	P	04 26 50.6	-2.4
PAX				S	S	04 27 43.1	-4.3
GLB	Gilahina Butte	4.83	69	P	P	04 26 52.0	-2.3
THY	Trims Highway	4.90	43	P	P	04 26 53.6	-1.6
NEA	Nenana	4.93	21	P	P	04 26 53.0	-2.8
WRH	Wood River Hil	5.04	26	P	P	04 26 54.3	-2.9
MLY	Manley	5.12	12	P	P	04 26 55.9	-2.4
TGL	Tana Glacier	5.20	78	P	P	04 26 56.7	-2.6
CCB	Clear Creek Bu	5.25	26	P	P	04 26 57.1	-2.9
HDA	Harding Lake	5.26	31	P	P	04 26 57.3	-2.8
MENT	Mentasta	5.39	54	*e*P	P	04 26 59.9	-2.0
MDM	Murphy Dome	5.44	23	P	P	04 26 59.5	-2.9
COLA	College	5.44	25	P	P	04 26 59.6	-2.9
BALM	Baldy	5.46	75	P	P	04 27 01.4	-1.4
IL1	Eielson Array	5.57	29	P	P	04 27 01.1	-3.2
YAH	Yahtse	5.74	82	P	P	04 27 05.2	-1.2
IM3	Indian Mountai	5.96	358	P	P	04 27 07.2	-2.2
IMA	Indian Mountai	6.04	358	*e*P	P	04 27 09.1	-1.4
SDPT	Sand Point	6.11	223	P	P	04 27 08.8	-2.7
BCA3	Beaver Creek A	6.24	56	P	P	04 27 10.8	-2.4
BLHA	Black Hill	6.42	231	P	P	04 27 14.2	-1.5
HAG	Hague Volcano	6.65	228	P	P	04 27 17.2	-1.6
DOL	Dolgoi Island	6.76	227	P	P	04 27 18.3	-2.1
PNL	Peninsula	6.98	87	P	P	04 27 21.2	-2.1
COLD	Coldfoot	7.32	9	P	P	04 27 25.3	-2.7
BM3	Burnt Mountain	8.31	24	P	P	04 27 36.9	-4.2
DLBC	Dease Lake	11.97	88	P	P	04 28 29.3	0.0

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*BJI **14** 04:26:21.7, 1.98N×93.07E, h37^{km}, mB5.3, mb4.9, Ms4.9, Msz4.6*

*MOS **14** 04:26:24.9±1.3, 2.49N×93.14E, h37^{km}, mb5.0/22, Error ellipse: s-maj=13.7km s-min=6.8km az=101.0*

*NEIC **14** 04:26:25.6±0.4, 2.47N×93.08E, mb4.9/18, Error ellipse: s-maj=10.0km s-min=6.9km az=208.0*

*IDC **14** 04:26:25.5±0.6, 2.53N×93.14E, h29^{km}±3^{km}, mb4.3/18, mb1 4.5/19, mb1mx4.4/22, mbtmp4.5/19, ML4.3/1, MS4.6/3, Ms1 4.6/3, ms1mx4.2/11, Error ellipse: s-maj=21.3km s-min=13.5km az=56.0*

ISC 14 04:26:23.8±0.3**,2.45N**±0.05×**93.10E**±0.04**,h30**^{km}**, h30**^{km}±.7^{km}**:pP-P,n129,**σ1^{s}**11**/127**,mb4.7**/53**,MS4.7**/8**, 8C-4D,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	8.04	69	⇑*e*Pn	P	04 28 20.3	-1.3
IPM	Ipoh	8.19	75	P	P	04 28 23.0	-0.6
SNG	Songkhla	8.84	58	P	P	04 28 31.5	-1.2
	1µm,1.0s						
KGM	Kluang	10.22	92	P	P	04 28 51.5	-0.3
NNT	Nongplab	12.03	33	P	P	04 29 15.3	-1.1
PALK	Pallekele	13.25	292	*e*Pn	P	04 29 30.7	-1.9
	64nm,1.0s						
PALK				*e*Sn	S	04 31 46.5	-13
NST	Nakhon Sawan	14.86	27	P	P	04 29 47.0	-6.8
KKTK	Khon Kaen	16.79	34	PG	P	04 30 21.0	+2.3
KKTK				SG	PP	04 30 28.0	-4.5
CMAR	Chiang Mai Arr	16.91	19	Pn	P	04 30 18.8	-1.4
	0.4nm,0.3s,baz=215,slow=13,SNR=47						
CMAR				LR	LR	04 37 58.4	
	comp=Z,942nm,18.8s,baz=220,slow=41						
KSM	Kuching	17.22	93	*e*P	P	04 30 26.4	+2.3
CHG	Chiang Mai	17.24	19	⇓P	P	04 30 22.9	-1.4
	50nm,1.1s						
NANT	Nan	17.87	24	⇑P	P	04 30 32.0	-0.1
	188nm,0.9s						
VIS	Vishakhapatnam	17.95	328	*i* P	P	04 30 33.7	+0.6
VIS				*i* x	x	04 33 39.3	
HYB	Hyderabad	20.62	317	*e*P	P	04 31 04.5	+0.9
HYB				pmax	pmax		
	comp=Z,50nm,1.0s						
HYB	Hyderabad	20.62	317	*i* P	P	04 31 04.5	+0.9
	comp=Z,50nm,1.0s						
HYB				*e*		04 31 08.0	
HYB				*e*S	S	04 34 48.5	+0.9
SHL	Shillong	23.01	357	*e*P	P	04 31 28.0	+0.5
SHL				*e*S	S	04 35 37.0	+5.1
KKM	Kota Kinabalu	23.32	80	*e*P	P	04 31 31.6	+0.9
KKM	Kota Kinabalu	23.32	80	P	P	04 31 32.5	+1.9
KMI	Kunming	24.38	22	⇑P	P	04 31 43.0	+2.1
KMI				AP		04 31 50.5	
KMI				XP		04 31 53.8	
KMI				PP	PP	04 32 17.9	+1.4
KMI				S	S	04 35 57.0	+1.5
KMI				AMB	AMB		
	comp=Z,20nm,2.0s,mb4.2						
KMI				AMB	AMB		
	comp=Z,190nm,4.0s						
KMI				LR	LR		
	comp=N,1µm,14.8s,MS4.6						
KMI				LR	LR		
	comp=E,1µm,18.0s,MS4.6						
KMI				LR	LR		
	comp=Z,1µm,18.7s,MS4.4						
KMI	Kunming	24.38	22	⇑P	P	04 31 43.0	+2.1
KMI				*SP		04 31 53.7	
KMI						04 32 17.9	
KMI				S	S	04 35 57.0	+1.5
KMI				*SS		04 36 09.5	
KMI				pmax	pmax		
	comp=Z,26nm,2.0s,mb4.3						
KMI	Kunming	24.38	22	⇑P	P	04 31 43.0	+2.1
	comp=Z,26nm,2.0s,mb4.3						
KMI				pP		04 31 50.5	
KMI				sP		04 31 53.7	
KMI				PP	PP	04 32 17.9	+1.4
KMI				S	S	04 35 57.0	+1.5
KMI				sS		04 36 09.5	
POO	Poona	24.72	312	*e*P	P	04 31 44.5	+0.3
POO				*i* x	x	04 37 19.0	
PKI	Pulchoki	26.04	344	*e*P	P	04 31 56.7	+0.2
DMN	Daman	26.16	344	*e*P	P	04 31 58.3	+0.7
GUN	Gumba	26.24	345	*e*P	P	04 31 59.2	+0.8
	comp=Z,103nm,1.3s,mb5.2						
KKN	Kakani	26.28	344	*e*P	P	04 31 59.4	+0.7
	comp=Z,56nm,1.1s,mb5.0						
KKN	Kakani	26.28	344	*e*P	P	04 31 59.4	+0.7
KKN				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.7						
GKN	Gorkha	26.67	343	*e*P	P	04 32 02.4	+0.2
	comp=Z,37nm,0.8s,mb5.0						
KOLN	Koldanda	26.77	341	*e*P	P	04 32 02.3	-0.9
	comp=Z,54nm,1.1s,mb5.0						
LSA	Lhasa	27.16	356	P	P	04 32 09.0	+2.2
LSA	Lhasa	27.16	356	*e*P	P	04 32 08.3	+1.5
LSA				pmax	pmax		
	comp=Z,26nm,0.8s,mb4.8						
LSA	Lhasa	27.16	356	*e*P	P	04 32 08.3	+1.5
	comp=Z,26nm,0.8s,mb4.8						
CD2	Chengdu	30.05	19	P	P	04 32 32.0	-0.7
ENH	Enshi	31.73	28	*e*P	P	04 32 46.6	-0.9
	comp=Z,16nm,0.7s,mb5.0						
WHN	Wuhan	34.43	34	P	P	04 33 12.0	+1.0
XAN	Xi’an	34.73	23	P	P	04 33 12.6	-0.9
XAN				AP	pP	04 33 23.8	+1.4
XAN				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
LZH	Lanzhou	34.92	15	*e*P	P	04 33 15.3	+0.2
LZH				AP	pP	04 33 24.4	+0.4
LZH				XP	sP	04 33 27.5	-0.2
LZH				AMB	AMB		
	comp=Z,40nm,1.6s,mb5.1						
LZH				AMB	AMB		
	comp=Z,210nm,4.2s						
LZH				LR	LR		
	comp=E,1µm,13.5s						
LZH				LR	LR		
	comp=Z,2µm,15.0s,MS4.9						
LZH	Lanzhou	34.92	15	*e*P	P	04 33 15.2	+0.1
LZH				*SP	sP	04 33 27.5	-0.2
LZH				pmax	pmax		
	comp=Z,49nm,1.6s,mb5.2						
LZH	Lanzhou	34.92	15	*e*P	P	04 33 15.2	+0.1
	comp=Z,49nm,1.6s,mb5.2						
LZH				pP	pP	04 33 24.4	+0.4
LZH				sP	sP	04 33 27.5	-0.2
GTA	Gaotai	37.29	9	*e*P	P	04 33 35.8	+0.7
GTA				LR	LR		
	comp=N,280nm,16.7s,MS4.4						
GTA				LR	LR		
	comp=E,480nm,17.9s,MS4.4						
GTA				LR	LR		
	comp=Z,1µm,19.8s,MS4.6						
FITZ	Fitzroy Crossi	38.00	124	P	P	04 33 40.7	-0.5
	comp=Z,24nm,0.8s,mb5.0,baz=323,slow=5.1,SNR=13						
NJ2	Nanjing	38.13	37	*e*P	P	04 33 43.0	+0.7
NJ2				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,570nm,6.0s						
NJ2				LR	LR		
	comp=N,2µm,23.8s,MS5.0						
NJ2				LR	LR		
	comp=E,2µm,22.4s,MS5.0						
NJ2				LR	LR		
	comp=Z,1µm,23.4s,MS4.6						
SSE	Sheshan	38.93	40	*e*P	P	04 33 48.8	-0.1
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,640nm,12.0s						
SSE	Sheshan	38.93	40	*e*P	P	04 33 48.8	-0.1
	comp=Z,44nm,0.7s,mb5.3						
HHC	Hu-ho-hao-te	41.71	21	*i* P	P	04 34 13.8	+2.0
HHC				AP	pP	04 34 22.6	+1.9
HHC				XP	sP	04 34 27.9	+3.5
HHC				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.6						
HHC				LR	LR		
	comp=N,590nm,17.8s,MS5.0						
HHC				LR	LR		
	comp=E,2µm,16.7s,MS5.0						
HHC				LR	LR		
	comp=Z,2µm,35.7s						
NWAO	Narrogin (SRO)	41.94	149	LR	LR	04 49 53.1	
	comp=Z,734nm,18.8s,MS4.6,baz=284,slow=34						
ULHL	Ulahol	42.41	341	P	P	04 34 17.7	+0.2
	SNR=7.1						
UCH	Uchtor	42.96	340	P	P	04 34 22.2	+0.1
	SNR=8.6						
AML	Almayashu	43.17	339	P	P	04 34 24.5	+0.8
	SNR=11						
AAK	Ala-Archa	43.33	340	P	P	04 34 23.8	-1.2
FRU	Bishkek	43.47	340	*e*P	P	04 34 36.0	+10
EKS2	Erkin-Say	43.60	339	P	P	04 34 27.8	+0.5
	SNR=5.6						
USP	Ospenovka	43.89	340	P	P	04 34 29.0	-0.5
	SNR=7.6						
MKAR	Makanchi Array	45.16	350	P	P	04 34 39.4	-0.3
	comp=Z,4.7nm,0.4s,mb4.7,baz=169,slow=8.7,SNR=51						
MKAR				pP	pP	04 34 48.3	-0.4
	comp=Z,9.6nm,0.7s,baz=167,slow=7.5,SNR=16						
KKAR	Karatay Array	45.21	337	*i* P	P	04 34 39.4	-0.8
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
WRA	Warramunga Arr	46.18	121	P	P	04 34 48.3	+0.2
	comp=Z,6.9nm,0.6s,mb4.8,baz=301,slow=8.8,SNR=71						
WRAB	Tennant Creek	46.18	121	*e*P	P	04 34 46.9	-1.3
WRAB				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
WRAB	Tennant Creek	46.18	121	*e*P	P	04 34 46.9	-1.2
	comp=Z,19nm,0.8s,mb5.1						
WB2	Warramunga Arr	46.19	121	*e*P	P	04 34 48.1	-0.1
SONM	Songino Array	46.65	12	P	P	04 34 51.4	-0.1
	comp=Z,12nm,1.0s,mb4.8,baz=198,slow=7.8,SNR=45						
ULN	Ulaanbaatar	46.82	13	*e*P	P	04 34 52.6	-0.2
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
ULN	Ulaanbaatar	46.82	13	*e*P	P	04 34 52.6	-0.2
	comp=Z,6.9nm,0.9s,mb4.6						
SNY	Shenyang	47.80	31	⇑P	P	04 35 01.3	+0.7
SNY				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
ZAK	Zakamensk	48.53	9	*e*P	P	04 35 06.8	+0.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.7						
TLY	Talaya	49.85	9	*e*P	P	04 35 17.2	+0.9
TLY				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.5						
CN2	Changchun	50.17	30	*e*P	P	04 35 20.0	+1.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
HIA	Hailar	51.90	22	*e*P	P	04 35 30.8	-1.1
HIA				pmax	pmax		
	comp=Z,16nm,0.9s						

HIA	**Hailar**	**51.90**	**22**	*e*P	**P**	**04 35 30.8**	**-1.1**
	comp=Z,16nm,0.9s,mb5.0						
CIT	**Chita**	**52.28**	**16**	*e*P	**P**	**04 35 35.0**	**+0.3**
CIT				*e*		04 35 50.5	
CIT				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
NVS	**Novosibirsk**	**52.84**	**353**	*e*P	**P**	**04 35 37.8**	**-1.1**
NVS				pmax	pmax		
	comp=N,15nm,1.0s						
NVS				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
NVS				pmax	pmax		
	comp=E,8.0nm,1.4s						
MDJ	**Mudanjiang**	**52.89**	**32**	P	**P**	**04 35 41.1**	**+1.7**
MJAR	**Matsushiro Arr**	**53.63**	**45**	P	**P**	**04 35 45.6**	**+0.7**
	comp=E,1.5nm,0.2s,mb4.5,baz=231,slow=7.8,SNR=4.0						
BVA0	**Borovoye Array**	**53.80**	**343**	*i* P	**P**	**04 35 44.3**	**-1.7**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.6						
BVAR	**Borovoye Array**	**53.80**	**343**	P	**P**	**04 35 43.9**	**-2.1**
	comp=Z,3.4nm,0.7s,mb4.4,baz=143,slow=7.4,SNR=21						
BVAR				pP	pP	04 35 53.3	-1.8
	comp=Z,4.4nm,0.9s,baz=158,slow=8.0,SNR=8.2						
AB31	**Akbulak array**	**54.54**	**334**	*i* P	**P**	**04 35 50.0**	**-1.5**
AB31				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
KLR	**Kul'dur**	**57.07**	**29**	*e*P	**P**	**04 36 07.2**	**-2.5**
KLR				MLR	MLR		
	comp=E,700nm,17.0s						
STKA	**Stephens Creek**	**57.25**	**131**	P	**P**	**04 36 09.8**	**-1.4**
	comp=E,5.4nm,0.8s,mb4.7,baz=304,slow=8.7,SNR=6.4						
STKA	**Stephens Creek**	**57.25**	**131**	*e*P	**P**	**04 36 11.1**	**-0.2**
SVE	**Sverdlovsk**	**60.07**	**340**	*e*P	**P**	**04 36 30.8**	**+0.3**
SVE				*e*	pP	04 36 39.0	-0.8
SVE				MLR	MLR		
	comp=N,100nm,16.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,200nm,16.0s,MS4.4						
SVE				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.3						
ARU	**Arti**	**60.49**	**339**	⇓*i*P	**P**	**04 36 31.7**	**-1.7**
ARU				*e*		04 38 42.3	
ARU				*e*S	**S**	**04 44 47.4**	**+2.3**
ARU				*e*SS	SS	04 48 48.8	+4.3
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
KIV	**Kislovodsk**	**60.72**	**320**	*e*P	**P**	**04 36 31.4**	**-3.6**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
YSS	**Yuzh-Sakhalins**	**61.70**	**36**	*e*P	**P**	**04 36 42.0**	**+0.3**
SOC	**Sochi**	**62.47**	**319**	*e*P	**P**	**04 36 42.5**	**-4.4**
SOC				*e*		04 37 23.9	
SOC				*e*S	**S**	**04 45 06.3**	**-4.0**
SOC				pmax	pmax		
	comp=Z,55nm,1.4s,mb5.5						
SOC				pmax	pmax		
	comp=N,18nm,0.7s						
SOC				pmax	pmax		
	comp=E,20nm,0.7s						
BR131	**Keskin Array S**	**65.26**	**313**	*e*P	**P**	**04 37 03.9**	**-1.3**
	comp=E,1.0nm,0.5s,mb4.1						
YAK	**Yakutsk**	**65.44**	**18**	*e*P	**P**	**04 37 05.7**	**-0.2**
YAK				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=N,10.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
OBN	**Obninsk**	**69.43**	**329**	*e*P	**P**	**04 37 31.0**	**-0.2**
OBN				*e*	pP	04 37 39.0	-1.5
OBN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
IDI	**Anoyia**	**70.86**	**306**	P	**P**	**04 37 39.8**	**-0.5**
	comp=Z,6.9nm,0.7s,mb4.7,baz=72,slow=11,SNR=5.9						
AKASG	**Malin Array Be**	**71.79**	**323**	P	**P**	**04 37 43.8**	**-1.8**
	comp=Z,1.4nm,0.8s,mb4.0,baz=85,slow=5.2,SNR=7.6						
BOSA	**Boshof**	**71.88**	**239**	P	**P**	**04 37 48.1**	**+1.6**
	comp=Z,11nm,1.2s,mb4.7,baz=88,slow=5.9,SNR=2.9						
MLR	**Muntele Rosu**	**72.36**	**317**	P	**P**	**04 37 49.5**	**+0.5**
	comp=Z,7.5nm,0.8s,mb4.7,baz=135,slow=2.6,SNR=16						
TIXI	**Tiksi**	**72.72**	**11**	⇑*i*P	**P**	**04 37 49.4**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,38nm,1.6s,mb5.1						
MAW	**Mawson**	**73.05**	**192**	P	**P**	**04 37 53.2**	**+0.6**
	comp=Z,3.5nm,0.8s,mb4.3,baz=35,slow=11,SNR=6.5						
KOLS	**Kolonicke sedl**	**75.62**	**320**	*e*P	**P**	**04 38 08.5**	**+0.6**
KOLS				*e*	pP	04 38 17.9	+0.6
KOLS				*e*		04 38 42.7	
KOLS				*e*		04 39 21.8	
KOLS	**Kolonicke sedl**	**75.62**	**320**	*e*	**P**	**04 38 08.5**	**+0.6**
KOLS				*e*pP	pP	04 38 17.9	+0.6
KOLS				*e*		04 38 42.7	
KOLS				*e*		04 39 21.8	
VSU	**Vasula**	**75.72**	**330**	⇑*e*P	**P**	**04 38 06.7**	**-1.5**
SUR	**Sutherland**	**76.44**	**236**	LR	LR	05 04 03.4	
	comp=Z,644nm,21.5s,MS4.9,baz=298,slow=30						
FINES	**FINESS Array B**	**77.02**	**333**	P	**P**	**04 38 14.4**	**-1.1**
	comp=Z,1.2nm,0.6s,mb4.0,baz=90,slow=3.8,SNR=6.6						
KAF	**Kangasniemi**	**77.14**	**334**	*e*p	**P**	**04 38 15.4**	**-0.7**
	comp=Z,7.8nm,1.0s,mb4.6,baz=106,slow=5.2						
KAF	**Kangasniemi**	**77.14**	**334**	*e*P	**P**	**04 38 15.4**	**-0.7**
KAF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
OJC	**Ojcow**	**77.47**	**321**	*e*P	pP	04 38 28.2	+0.6
VYHS	**Vyhne**	**77.77**	**319**	*e*P	**P**	**04 38 17.2**	**-2.6**
VYHS				*e*pP	pP	04 38 28.4	-0.9
OKC	**Ostrava-Krasne**	**78.45**	**320**	*e*pP	pP	04 38 34.6	+1.6
ZST	**Bratislava**	**78.86**	**319**	*e*P	**P**	**04 38 24.1**	**-1.7**
ZST				*e*pP	pP	04 38 35.3	0.0
DPC	**Dobruska-Polom**	**79.69**	**321**	*e*P	**P**	**04 38 31.0**	**+0.7**
DPC				*e*pP	pP	04 38 40.6	+0.8
DPC				*e*x	x	04 38 54.5	
UPC	**Upice**	**79.91**	**321**	*e*P	**P**	**04 38 33.1**	**+1.6**
UPC				*e*pP	pP	04 38 41.7	+0.8
SYO	**Syowa Base**	**79.95**	**197**	⇓P	**P**	**04 38 31.8**	**+0.5**
SYO	**Syowa Base**	**79.95**	**197**	⇓PcP	PcP	04 38 38.5	-0.6
ARCES	**ARCESS Array B**	**80.00**	**341**	P	**P**	**04 38 32.0**	**+0.4**
	comp=Z,2.4nm,0.8s,mb4.2,baz=108,slow=3.8,SNR=4.8						
PRU	**Pruhonice**	**80.77**	**320**	*e*P	**P**	**04 38 38.2**	**+2.1**
PRU				*e*pP	pP	04 38 46.5	+0.9
PVCC	**Panska Ves**	**80.83**	**321**	*e*pP	pP	04 38 46.3	+0.5
GERES	**GERESS Array B**	**81.18**	**319**	P	**P**	**04 38 39.1**	**+0.9**
	comp=Z,4.1nm,0.8s,mb4.4,baz=104,slow=5.5,SNR=28						
GERES				pP	pP	04 38 48.3	+0.6
	comp=Z,13nm,1.0s,baz=104,slow=5.5,SNR=18						
BRG	**Berggiesshubel**	**81.26**	**321**	*i* P	pP	04 38 49.1	+1.0
BRG				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KHC	**Kasperske Hory**	**81.30**	**319**	*e*P	**P**	**04 38 39.6**	**+0.8**
KHC				*e*pP	pP	04 38 49.2	+0.9
CLL	**Collm**	**81.90**	**321**	*e*P	**P**	**04 38 37.0**	**-4.9**
CLL				e*PP	pP	04 38 46.0	-5.4
CLL				i *SP	sP	04 38 51.9	-2.6
CLL	**Collm**	**81.90**	**321**	P	**P**	**04 38 43.0**	**+1.1**
CLL				*e*PCP	PcP	04 38 46.0	-2.0
CLL				i *PP	pP	04 38 51.9	+0.5
HFS	**Hagfors**	**82.61**	**330**	P	**P**	**04 38 45.1**	**-0.3**
	comp=Z,1.3nm,0.4s,mb4.3,baz=153,slow=6.6,SNR=7.4						
HFS				pP	pP	04 38 54.5	-0.4
	comp=Z,2.8nm,0.7s,baz=90,slow=3.0,SNR=4.5						
MOX	**Moxa**	**82.71**	**321**	*e*P	**P**	**04 38 50.0**	**+3.9**
GRA1	**Grafenberg Arr**	**82.88**	**320**	*e*P	**P**	**04 38 48.9**	**+1.9**
	comp=Z,7.0nm,0.9s,mb4.7						
GRF	**Grafenberg Arr**	**82.88**	**320**	*e*P	**P**	**04 38 48.9**	**+1.9**
GRF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
GRF	**Grafenberg Arr**	**82.88**	**320**	*e*P	**P**	**04 38 48.9**	**+1.9**
GRF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
GRF	**Grafenberg Arr**	**82.88**	**320**	*e*P	**P**	**04 38 48.9**	**+1.9**
	comp=Z,7.0nm,0.9s,mb4.7						
DAVOX	**Davos**	**83.58**	**317**	P	**P**	**04 38 51.4**	**+0.7**
	comp=Z,4.2nm,0.5s,mb4.8,baz=105,slow=4.4,SNR=9.8						
DAVOX				pP	pP	04 39 00.8	+0.6
	comp=Z,11nm,0.6s,baz=108,slow=4.0,SNR=9.9						
NB2	**NORSAR Subarra**	**83.93**	**331**	P	**P**	**04 38 52.3**	**+0.2**
	comp=Z,2.9nm,0.9s,mb4.4,baz=95,slow=5.0						
NOA	**NORSAR Array B**	**83.93**	**331**	P	**P**	**04 38 52.2**	**+0.1**
	comp=Z,1.2nm,0.8s,mb4.1,baz=99,slow=5.4,SNR=4.0						
NOA				pP	pP	04 39 01.2	-0.5
	comp=Z,2.8nm,1.0s,baz=99,slow=5.3,SNR=4.9						
LPG	**La Plagne**	**85.70**	**315**	*e*P	**P**	**04 39 05.7**	**+4.3**
	comp=Z,21nm,1.1s,mb5.0						
LPG	**La Plagne**	**85.70**	**315**	*e*P	**P**	**04 39 05.7**	**+4.3**
LPG				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.0						
TXAR	**Lajitas Array**	**144.55**	**26**	PKP	PKPdf	04 45 59.0	-4.3
	comp=Z,2.7nm,0.8s,baz=274,slow=2.0,SNR=27						
TXAR				pPKP		04 46 08.8	
	comp=Z,0.7nm,0.4s,baz=14,slow=0.3,SNR=5.7						
TXAR	**Lajitas Array**	**144.55**	**26**	PKP	PKPdf	04 45 59.0	-4.3
TXAR				pPKP		04 46 08.8	
NATX	**Nacogdoches**	**145.19**	**12**	*e*PKP	PKPdf	04 46 01.9	-2.4

STR ***14*** *04:28:13.8±1.2,41.92N×2.40W,h10^{km}±1^{km},Ml3.0,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

INMG ***14*** *04:28:17.3±1.2,42.21N×2.79W,h8^{km}±3^{km},ML2.5,Error ellipse: s-maj=2.7km s-min=1.8km az=111.0*

LDG ***14*** *04:28:17.2±0.1,42.24N×2.76W,h3^{km},Ml3.0/14,Error ellipse: s-maj=1.7km s-min=1.2km az=145.0*

CSEM ***14*** *04:28:17.8±0.1,42.26N×2.73W,h11^{km},ML3.1/22,Error ellipse: s-maj=2.5km s-min=1.7km az=158.0*

NEIC ***14*** *04:28:17.0,42.20N×2.76W,h2^{km},ML3.3(STR), ML3.0(LDG),MN2.6(MDD),After MDD.*

MDD 14 04:28:17.5±0.3,**42.23N×2.75W,h11**^{km}**,mbLg2.6**/32, **1C-1D,Error ellipse: s-maj=3.2km s-min=2.6km az=143.0,PRXIMO,Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ECRI	**Cripan**	**0.42**	**26**	⇓Pg	Pg	04 28 25.2	-0.9
	37nm,0.1s,SNR=18						
ECRI				Lg		04 28 31.7	
	261nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**1.12**	**334**	Pg	Pg	04 28 37.9	-2.0
ELAN				Lg		04 28 54.4	
ELAN	**Lanestosa**	**1.12**	**334**	Pg	Pg	04 28 38.0	-1.8
	29nm,0.2s,SNR=198						
ELAN				Lg		04 28 54.4	
	91nm,0.2s,SNR=23						
ELAN	**Lanestosa**	**1.12**	**334**	Pg	Pg	04 28 37.9	-2.0
	29nm,0.2s,SNR=198						
ELIZ	**Elizondo**	**1.30**	**44**	Pg	Pg	04 28 41.0	-2.4
ELIZ				Lg		04 28 58.6	
ELIZ	**Elizondo**	**1.30**	**44**	⇑Pg	Pg	04 28 41.0	-2.5
	17nm,0.3s,SNR=18						
ELIZ				Lg		04 28 58.6	
	24nm,0.2s,SNR=8.8						
EALK	**Alkurruntz**	**1.35**	**43**	Pn	Pn	04 28 41.3	-1.0
EALK				Pg	Pg	04 28 42.4	-2.0
EALK				Lg		04 28 59.9	
EALK	**Alkurruntz**	**1.35**	**43**	Pn	Pn	04 28 41.2	-1.1
	2.4nm,0.1s,SNR=104						
EALK				Pg	Pg	04 28 42.4	-2.0
	24nm,0.2s,SNR=7.9						
EALK				Lg		04 28 59.9	
	118nm,0.2s,SNR=13						
SJPF	**Ste Jean**	**1.43**	**52**	*e*Pn	Pn	04 28 42.8	-0.7
SJPF				*e*Sn	Sn	04 29 00.3	-2.1
SJPF				*e*Sg	Sg	04 29 02.4	-2.8
	62nm,0.4s						
OSSF	**Osses**	**1.50**	**47**	Pg	Pg	04 28 43.6	-3.9
OSSF				Sg	Sg	04 29 03.1	-4.5
LARF	**Larrau**	**1.53**	**58**	Pg	Pg	04 28 44.4	-3.7
LARF				Sg	Sg	04 29 04.6	-4.0
ORDF	**Ordiarp**	**1.66**	**53**	Pg	Pg	04 28 45.8	-4.9
ORDF				Sg	Sg	04 29 09.1	-3.7
ETSF	**Etsaut**	**1.75**	**67**	*e*Pn	Pn	04 28 46.0	-2.2
ETSF				*e*Pg	Pg	04 28 48.8	-3.7
ETSF				*e*Sn	Sn	04 29 08.2	-2.4
ETSF				*e*Sg	Sg	04 29 12.1	-3.8
	35nm,0.2s						
ESAC	**San Caprasio**	**1.78**	**106**	Pn	Pn	04 28 47.2	-1.3
	36nm,0.3s,SNR=13						
ESAC				Pg	Pg	04 28 50.2	-2.9
	48nm,0.3s,SNR=9.9						
ESAC				Lg		04 29 13.1	
	100nm,0.3s,SNR=7.7						
ESAC	**San Caprasio**	**1.78**	**106**	Pn	Pn	04 28 47.2	-1.3
	36nm,0.3s,SNR=13						
ESAC	**San Caprasio**	**1.78**	**106**	Pg	Pg	04 28 50.2	-2.9
	48nm,0.3s,SNR=9.9						
REYF	**Montagne du Re**	**1.93**	**64**	Pg	Pg	04 28 50.0	-6.1
REYF				Sg	Sg	04 29 14.8	-7.1
EARI	**Arriondas**	**2.10**	**301**	Pn	Pn	04 28 52.7	-0.4
	4.3nm,0.4s,SNR=16						
EARI				Lg		04 29 24.2	
	4.5nm,0.1s,SNR=4.8						
EARI	**Arriondas**	**2.10**	**301**	Pn	Pn	04 28 52.7	-0.4
	4.3nm,0.4s,SNR=16						
VIEF	**Viey**	**2.15**	**72**	Pg	Pg	04 28 52.8	-7.7
VIEF				Sg	Sg	04 29 21.5	-7.7
EBIE	**Bielsa**	**2.19**	**77**	Pn	Pn	04 28 53.5	-1.0
EBIE				Lg		04 29 24.1	
EBIE	**Bielsa**	**2.19**	**77**	Pn	Pn	04 28 53.5	-1.0
	4.9nm,0.3s,SNR=18						
EBIE				Sn	Sn	04 29 21.2	-0.6
	SNR=7.9						
EBIE				Lg		04 29 24.1	
	9.1nm,0.3s,SNR=6.2						
EBIE	**Bielsa**	**2.19**	**77**	Pn	Pn	04 28 53.5	-0.9
	4.9nm,0.3s,SNR=18						
LABF	**Labassere**	**2.24**	**68**	Pg	Pg	04 28 54.4	-7.9
RESF	**Ens**	**2.36**	**75**	Pg	Pg	04 28 55.1	-10
EPF	**Esparros**	**2.42**	**70**	*e*Pn	Pn	04 28 56.7	-1.0
EPF				*e*Sn	Sn	04 29 24.0	-3.6
	30nm,0.2s						
EMOS	**Mosqueruela**	**2.54**	**137**	Pg	Pg	04 29 01.6	-6.6
EMOS				Lg		04 29 36.4	
EMOS	**Mosqueruela**	**2.54**	**137**	Pg	Pg	04 29 01.6	-6.6
	3.2nm,0.3s,SNR=13						
EMOS				Sn	Sn	04 29 28.1	-2.5
	SNR=7.9						
EMOS				Lg		04 29 36.4	
	3.7nm,0.2s,SNR=6.4						
EMOS	**Mosqueruela**	**2.54**	**137**	Pg	Pg	04 29 01.6	-6.6
	3.2nm,0.3s,SNR=13						
ERTA	**Horta de San J**	**2.64**	**118**	Pn	Pn	04 28 58.9	-2.1
	7.4nm,0.9s,SNR=7.7						
ERTA				Pg	Pg	04 29 05.6	-4.7
	3.9nm,0.4s,SNR=8.1						
ERTA				Sn	Sn	04 29 30.9	-2.4
	3.9nm,0.2s,SNR=7.9						
ERTA				Lg		04 29 40.7	
	5.4nm,0.2s,SNR=5.9						
ERTA	**Horta de San J**	**2.64**	**118**	Pn	Pn	04 28 58.9	-2.0
	7.4nm,0.9s,SNR=7.7						
ERTA	**Horta de San J**	**2.64**	**118**	Pg	Pg	04 29 05.6	-4.7
	3.9nm,0.4s,SNR=8.1						
ERTA				Sn	Sn	04 29 30.9	-2.4
	3.9nm,0.2s,SNR=7.9						
MELF	**Melles**	**2.67**	**75**	Pg	Pg	04 29 00.4	-11
ESDC	**Sonseca Array**	**2.72**	**200**	Pn	Pn	04 28 59.1	-2.9
	1.3nm,0.4s,baz=28,slow=13,SNR=9.4						
ESDC				Pg	Pg	04 29 05.9	-5.8
	3.2nm,0.3s,baz=20,slow=17,SNR=15						
ESDC				Lg		04 29 43.3	
	3.5nm,0.3s,baz=24,slow=28,SNR=7.3						
ESDC	**Sonseca Array**	**2.72**	**200**	Pn	Pn	04 28 59.1	-2.9
	1.3nm,0.4s,slow=13,SNR=9.4						
ESDC	**Sonseca Array**	**2.72**	**200**	Pg	Pg	04 29 05.9	-5.9
	3.2nm,0.3s,baz=20,slow=17,SNR=15						
EBR	**Ebro Roquetas**	**2.82**	**119**	*e*Rs		04 29 40.0	
SALF	**Salau**	**2.96**	**78**	Pg	Pg	04 29 04.3	-12
ECHE	**Chera**	**2.97**	**152**	Pn	Pn	04 29 04.5	-1.1
	4.6nm,0.5s,SNR=6.3						
ECHE				Lg		04 29 50.6	
	11nm,0.6s,SNR=5.4						
ECHE	**Chera**	**2.97**	**152**	Pn	Pn	04 29 04.4	-1.1
ECAL	**Calabor**	**2.98**	**266**	Pn	Pn	04 29 03.8	-1.9
	4.5nm,0.3s,SNR=24						
ECAL				Pg	Pg	04 29 11.4	-5.7
	8.0nm,0.3s,SNR=8.7						
ECAL				Lg		04 29 50.6	
	13nm,0.2s,SNR=8.0						
ECAL	**Calabor**	**2.98**	**266**	Pn	Pn	04 29 03.8	-1.9
	4.5nm,0.3s,SNR=24						
ECAL	**Calabor**	**2.98**	**266**	Pg	Pg	04 29 11.4	-5.6
	8.0nm,0.3s,SNR=8.7						
EPOB	**Poblet**	**3.00**	**106**	Pn	Pn	04 29 01.5	-4.5
EPOB				Pg	Pg	04 29 12.4	-5.0
EPOB				Sn	Sn	04 29 39.1	-3.1
EPOB				Lg		04 29 48.9	
EPOB	**Poblet**	**3.00**	**106**	Pn	Pn	04 29 03.4	-2.5
	1.6nm,0.3s,SNR=7.1						
EPOB				Pg	Pg	04 29 12.4	-5.0
	3.2nm,0.3s,SNR=6.8						
EPOB				Sn	Sn	04 29 39.1	-3.1
	2.7nm,0.2s,SNR=7.9						
EPOB				Lg		04 29 48.9	
	9.3nm,0.3s,SNR=5.7						
EPOB	**Poblet**	**3.00**	**106**	Pg	Pg	04 29 12.4	-5.0
	3.2nm,0.3s,SNR=6.8						
EPOB				Sn	Sn	04 29 39.1	-3.2
	2.7nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**3.20**	**94**	Pn	Pn	04 29 07.5	-1.4
	1.8nm,0.4s,SNR=6.6						
EMIR	**Miracle**	**3.20**	**94**	Pn	Pn	04 29 07.5	-1.4
	1.8nm,0.4s,SNR=6.6						
ERUA	**La Rua**	**3.26**	**274**	Pn	Pn	04 29 07.8	-1.9
ERUA				Pg	Pg	04 29 17.4	-5.2
ERUA				Lg		04 29 59.2	
ERUA	**La Rua**	**3.26**	**274**	Pn	Pn	04 29 07.8	-1.9
	3.1nm,0.2s,SNR=15						
ERUA				Pg	Pg	04 29 17.4	-5.2
	2.5nm,0.3s,SNR=6.5						
ERUA				Lg		04 29 59.2	
	4.9nm,0.2s,SNR=5.0						
EPON	**Pontenova**	**3.42**	**290**	Pn	Pn	04 29 09.8	-2.1
EPON				Sn	Sn	04 29 50.7	-2.1
EPON				Lg		04 30 01.9	
EPON	**Pontenova**	**3.42**	**290**	Pn	Pn	04 29 09.8	-2.1
	1.4nm,0.3s,SNR=6.5						
EPON				Sn	Sn	04 29 50.0	-2.8
	3.6nm,0.2s,SNR=7.9						
EPON				Lg		04 30 01.9	
	4.4nm,0.2s,SNR=5.0						
EPON	**Pontenova**	**3.42**	**290**	Pn	Pn	04 29 09.8	-2.1
	1.4nm,0.3s,SNR=6.5						
EPON				Sn	Sn	04 29 50.7	-2.1
	3.6nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**3.60**	**177**	Pg	Pg	04 29 22.7	-6.6
EVIA				Lg		04 30 11.4	
EVIA	**Vianos**	**3.60**	**177**	Pg	Pg	04 29 22.7	-6.6
	2.2nm,0.2s,SNR=7.9						
EVIA				Lg		04 30 11.4	
	13nm,0.3s,SNR=5.3						
ETOB	**Tobarra**	**3.70**	**165**	Pn	Pn	04 29 15.8	-0.1
	0.2nm,0.1s,SNR=13						
ETOB				Pg	Pg	04 29 25.3	-6.1
	3.8nm,0.4s,SNR=5.9						
ETOB				Lg		04 30 13.1	
	13nm,0.5s,SNR=7.9						
ETOB	**Tobarra**	**3.70**	**165**	Pn	Pn	04 29 15.8	-0.2
	0.2nm,0.1s,SNR=13						
ETOB	**Tobarra**	**3.70**	**165**	Pg	Pg	04 29 25.3	-6.1
	3.8nm,0.4s,SNR=5.9						
MTLF	**Montolieu**	**3.82**	**72**	*e*Pn	Pn	04 29 15.2	-2.5
MTLF				*e*Sn	Sn	04 29 58.3	-4.8
	6.6nm,0.5s						
MTLF				*e*Sg	Sg	04 30 16.9	-7.9
	47nm,1.4s						
PVRL	**Vila Real**	**3.83**	**257**	*e*Pn	Pn	04 29 15.0	-2.8
PVRL				*e*Sn	Sn	04 29 57.9	-5.5
PVRL				*e*Sg	Sg	04 30 15.9	-9.3
	17nm,0.4s						
PVRL	**Vila Real**	**3.83**	**257**	*e*Pn	Pn	04 29 15.0	-2.8
PVRL				*e*Sn	Sn	04 29 57.9	-5.5
PVRL				*e*Sg	Sg	04 30 15.9	-9.3
	17nm,0.4s						
ELOB	**Lobios**	**3.97**	**266**	Pn	Pn	04 29 17.0	-2.7
	2.3nm,0.2s,SNR=25						
ELOB				Sn	Sn	04 30 00.7	-6.2
	3.4nm,0.5s,SNR=7.9						
ELOB				Lg		04 30 22.0	
	6.5nm,0.3s,SNR=5.0						
ELOB	**Lobios**	**3.97**	**266**	Pn	Pn	04 29 17.0	-2.8
	2.3nm,0.2s,SNR=25						
ELOB				Sn	Sn	04 30 00.7	-6.1
	3.4nm,0.5s,SNR=7.9						
EBEN	**Beniarda**	**4.02**	**150**	Pn	Pn	04 29 19.6	-0.8
	9.9nm,0.8s,SNR=7.1						
EBEN	**Beniarda**	**4.02**	**150**	Pn	Pn	04 29 19.6	-0.9
	9.9nm,0.8s,SNR=7.1						
MTE	**Manteigas**	**4.05**	**245**	*e*Sn	Sn	04 30 03.7	-5.1
MTE				*e*Sg	Sg	04 30 23.7	-8.6
	12nm,0.4s						
MTE	**Manteigas**	**4.05**	**245**	*e*Sn	Sn	04 30 03.7	-5.1
MTE				*e*Sg	Sg	04 30 23.7	-8.6
	12nm,0.4s						
PVIS	**Viseu**	**4.15**	**250**	*e*Pn	Pn	04 29 19.1	-3.2
PVIS				*e*Sn	Sn	04 30 05.8	-5.6
PVIS				*e*Sg	Sg	04 30 27.3	-8.4
	9.7nm,0.3s						
PVIS	**Viseu**	**4.15**	**250**	*e*Pn	Pn	04 29 19.1	-3.2
PVIS				*e*Sn	Sn	04 30 05.8	-5.6
PVIS				*e*Sg	Sg	04 30 27.3	-8.4
	9.7nm,0.3s						
EJON	**La Jonquera**	**4.19**	**85**	Pn	Pn	04 29 21.1	-1.8
EJON				Sn	Sn	04 30 09.2	-3.1
EJON				Lg		04 30 27.2	
EJON	**La Jonquera**	**4.19**	**85**	Pn	Pn	04 29 21.1	-1.8
	9.1nm,1.1s,SNR=8.1						
EJON				Sn	Sn	04 30 08.6	-3.8
	0.8nm,0.1s,SNR=7.9						
EJON				Lg		04 30 30.0	
	14nm,1.0s,SNR=5.0						
EJON	**La Jonquera**	**4.19**	**85**	Pn	Pn	04 29 21.1	-1.8
	9.1nm,1.1s,SNR=8.1						
EJON				Sn	Sn	04 30 09.2	-3.2
	0.8nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**4.29**	**200**	Pn	Pn	04 29 21.1	-3.3
	0.9nm,0.3s,SNR=4.9						
EADA				Pg	Pg	04 29 36.2	-7.0
	0.4nm,0.1s,SNR=7.9						
EADA				Lg		04 30 30.3	
	1.7nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**4.29**	**200**	Pn	Pn	04 29 21.1	-3.3
	0.9nm,0.3s,SNR=4.9						
EADA	**Adamuz**	**4.29**	**200**	Pg	Pg	04 29 36.2	-7.1
	0.4nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**4.30**	**238**	*e*Pn	Pn	04 29 21.5	-2.9
PCBR				*e*Sn	Sn	04 30 09.8	-5.4
PCBR				*e*Sg	Sg	04 30 31.0	-10
	7.4nm,0.2s						
PCBR	**Castelo Branco**	**4.30**	**238**	*e*Pn	Pn	04 29 21.5	-2.9
PCBR				*e*Sn	Sn	04 30 09.8	-5.4
PCBR				*e*Sg	Sg	04 30 31.0	-10
	7.4nm,0.2s						
CAF	**Calviac**	**4.42**	**51**	*e*Pn	Pn	04 29 21.8	-4.3
CAF				*e*Sn	Sn	04 30 11.4	-6.7
CAF				*e*Sg	Sg	04 30 34.1	-10
	2.8nm,0.3s						
EQES	**Quesada**	**4.43**	**183**	Pg	Pg	04 29 38.6	-7.4
	3.3nm,0.3s,SNR=8.1						
EQES				Lg		04 30 37.3	
	7.0nm,0.4s,SNR=5.0						
EQES	**Quesada**	**4.43**	**183**	Pg	Pg	04 29 38.6	-7.4
	3.3nm,0.3s,SNR=8.1						
EMUR	**La Murta**	**4.54**	**165**	Pg	Pg	04 29 42.1	-6.0
EMUR	**La Murta**	**4.54**	**165**	Pg	Pg	04 29 40.4	-7.7
	3.7nm,0.3s,SNR=4.0						
EMAZ	**Mazaricos**	**4.65**	**281**	Pn	Pn	04 29 26.4	-3.0
	8.7nm,1.1s,SNR=6.8						
EMAZ				Sn	Sn	04 30 16.2	-7.8
	3.7nm,0.4s,SNR=5.0						
EMAZ				Lg		04 30 42.5	
	2.6nm,0.3s,SNR=5.4						
EMAZ	**Mazaricos**	**4.65**	**281**	Pn	Pn	04 29 26.4	-3.0
EMAZ				Sn	Sn	04 30 16.2	-7.9
MFF	**Saint Martin d**	**4.75**	**22**	*e*Pn	Pn	04 29 27.2	-3.6
MFF				*e*Sn	Sn	04 30 20.8	-5.8
	1.6nm,0.3s						
EBAD	**Badajoz**	**4.76**	**224**	Pn	Pn	04 29 27.1	-3.8
	1.5nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	04 30 20.6	-6.2
	3.6nm,0.2s,SNR=7.9						
EBAD				Lg		04 30 44.5	
	4.6nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.76**	**224**	Pn	Pn	04 29 27.1	-3.8
EBAD				Sn	Sn	04 30 20.6	-6.1
PTOM	**Tomar**	**5.02**	**240**	*e*Pn	Pn	04 29 31.3	-3.3
PTOM				*e*Sn	Sn	04 30 26.6	-6.8
PTOM				*e*Sg	Sg	04 30 55.2	-9.4
	7.6nm,0.5s						
PTOM	**Tomar**	**5.02**	**240**	*e*Pn	Pn	04 29 31.3	-3.3
PTOM				*e*Sn	Sn	04 30 26.6	-6.8
PTOM				*e*Sg	Sg	04 30 55.2	-9.4
	7.6nm,0.5s						
LASF	**Ste Croix**	**5.17**	**67**	*e*Pn	Pn	04 29 33.4	-3.4
LASF				*e*Sn	Sn	04 30 29.9	-7.4
	5.0nm,0.5s						
EMIN	**Mina Concepcio**	**5.38**	**215**	Pn	Pn	04 29 35.6	-4.1
	0.2nm,0.1s,SNR=7.9						

EMIN				Sn	Sn	04 30 36.6	-5.9
	0.4nm,0.2s,SNR=7.9						
EMIN				Lg		04 31 05.5	
	7.7nm,0.6s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.38**	**215**	Pn	Pn	04 29 35.7	-4.0
EMIN				Sn	Sn	04 30 36.6	-5.9
TCF	**Toulx Ste Croi**	**5.40**	**40**	*e*Pn	Pn	04 29 36.5	-3.5
TCF				*e*Sn	Sn	04 30 34.6	-8.3
	1.3nm,0.2s						
EVO	**Evora**	**5.46**	**229**	*e*Pn	Pn	04 29 37.5	-3.3
EVO				*e*Sn	Sn	04 30 38.0	-6.4
EVO				*e*Sg	Sg	04 31 08.8	-10
	9.0nm,0.4s						
QUIF	**Quistinic**	**5.69**	**357**	*e*Pn	Pn	04 29 40.4	-3.7
QUIF				*e*Sn	Sn	04 30 42.7	-7.5
PBEJ	**Beja**	**5.75**	**225**	*e*Sn	Sn	04 30 46.3	-5.3
PBEJ				*e*Sg	Sg	04 31 19.4	-9.4
BGF	**Bois d'Agland**	**5.90**	**41**	*e*Pn	Pn	04 29 42.6	-4.4
EGRO	**El Granado**	**5.94**	**219**	Pn	Pn	04 29 43.6	-4.0
EGRO				Sn	Sn	04 30 49.3	-7.1
EGRO				Lg		04 31 25.4	
EGRO	**El Granado**	**5.94**	**219**	Pn	Pn	04 29 43.6	-4.0
	0.3nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	04 30 49.3	-7.1
	1.7nm,0.3s,SNR=7.9						
EGRO				Lg		04 31 25.4	
	2.2nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**5.94**	**219**	Pn	Pn	04 29 43.6	-4.0
EGRO				Sn	Sn	04 30 49.3	-7.1
PALC	**Alcoutim**	**5.99**	**219**	*e*Pn	Pn	04 29 43.9	-4.4
PALC				*e*Sg	Sg	04 31 26.2	-11
	4.5nm,0.3s						
PALC	**Alcoutim**	**5.99**	**219**	Pn	Pn	04 29 43.9	-4.4
PALC				Lg		04 31 26.2	
	2.2nm,0.3s						
VIVF	**Saint-Julien-l**	**6.00**	**62**	*e*Pn	Pn	04 29 44.9	-3.6
SGMF	**Saint Gilles**	**6.02**	**1**	*e*Pn	Pn	04 29 44.4	-4.4
SGMF				*e*Sn	Sn	04 30 48.2	-10
ROSF	**Rostrenen**	**6.11**	**357**	*e*Pn	Pn	04 29 46.3	-3.8
ROSF				*e*Sn	Sn	04 30 52.2	-8.6
	2.9nm,0.2s						
GRR	**Gorron**	**6.30**	**12**	*e*Pn	Pn	04 29 46.7	-6.0
GRR				*e*Sn	Sn	04 30 55.8	-10
	1.6nm,0.2s						
HYF	**Humbligny**	**6.33**	**35**	*e*Pn	Pn	04 29 48.5	-4.6
SMF	**Signal de Mont**	**6.46**	**45**	*e*Pn	Pn	04 29 50.5	-4.5
LDF	**La Druitiere**	**6.62**	**15**	*e*Pn	Pn	04 29 52.2	-5.1
LDF				*e*Sn	Sn	04 31 04.7	-8.9
	1.1nm,0.2s						
FLN	**La Foliniere**	**6.72**	**13**	*e*Pn	Pn	04 29 53.2	-5.4
FLN				*e*Sn	Sn	04 31 06.4	-10
	5.0nm,0.5s						
LMR	**La Mourre**	**6.90**	**78**	*e*Pn	Pn	04 29 56.8	-4.4
FRF	**La Foret Royal**	**7.03**	**76**	*e*Pn	Pn	04 29 58.6	-4.4
PGF	**Pioggiola**	**8.71**	**84**	*e*Pn	P	04 30 21.0	-5.4

IDC 14 04:35:23.4±3.4, 9.65S×109.50E, mb3.6/4, mb1 3.8/5, mb1mx3.7/16, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=149.1km s-min=25.6km az=46.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**17.77**	**120**	P	P	04 39 32.7	-1.2
	0.2nm,0.3s,baz=356,slow=18,SNR=1.4						
FITZ				S	S	04 42 34.9	-16
	0.2nm,0.3s,baz=172,slow=6.4,SNR=2.9						
WRA	**Warramunga Arr**	**26.07**	**116**	P	P	04 40 58.7	-1.9
	0.4nm,0.5s,baz=287,slow=12,SNR=5.6						
SONM	**Songino Array**	**57.29**	**358**	P	P	04 45 13.6	-1.7
	0.4nm,0.6s,baz=180,slow=7.2,SNR=3.1						
MKAR	**Makanchi Array**	**61.21**	**339**	P	P	04 45 38.4	-4.0
	0.5nm,0.6s,baz=148,slow=7.0,SNR=5.0						
BVAR	**Borovoye Array**	**70.76**	**336**	P	P	04 46 42.9	-0.5
	0.4nm,0.6s,baz=124,slow=10,SNR=2.6						

IDC 14 04:44:52.8±1.2, 15.35S×167.93E, mb4.0/6, mb1 4.3/7, mb1mx4.1/16, mbtmp4.0/7, ML3.7/1, MS4.5/1, Ms1 4.5/1, ms1mx4.0/4, Error ellipse: s-maj=47.0km s-min=24.3km az=140.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.83**	**192**	*e*P	Pn	04 46 33.7	-3.1
DZM				*e*S	Sn	04 47 44.6	-12
DZM	**Mont Dzumac**	**6.83**	**192**	Pn	Pn	04 46 33.8	-3.0
	1.6nm,0.3s,baz=60,slow=19,SNR=18						
DZM				Sn	Sn	04 47 47.7	-8.6
	1.9nm,0.3s,baz=311,slow=20,SNR=3.8						
RAO	**Raoul Island**	**19.02**	**139**	LR	LR	04 54 49.2	
	comp=Z,1μm,18.2s,baz=172,slow=31						
WRA	**Warramunga Arr**	**32.30**	**257**	P	P	04 51 22.9	-3.0
	0.4nm,0.7s,baz=86,slow=9.3,SNR=7.2						
FITZ	**Fitzroy Crossi**	**40.54**	**260**	P	P	04 52 34.7	-0.9
	3.4nm,0.6s,baz=77,slow=6.2,SNR=13						
SONM	**Songino Array**	**83.37**	**323**	P	P	04 57 22.9	-0.3
	0.4nm,0.6s,baz=135,slow=3.5,SNR=3.9						
ILAR	**Eielson Array**	**86.91**	**18**	P	P	04 57 38.2	-2.3
	1.1nm,0.8s,baz=235,slow=5.4,SNR=11						
NVAR	**Mina Array Bea**	**87.19**	**49**	P	P	04 57 42.4	-0.1
	0.6nm,0.7s,baz=232,slow=5.3,SNR=4.4						
YKA	**Yellowknife Ar**	**97.80**	**27**	P	P	04 58 29.3	-1.6
	0.3nm,0.3s,baz=255,slow=4.4,SNR=8.1						

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*IDC **14** 04:50:14.0±0.5, 58.35S×139.67W, mb4.6/12, mb1 4.7/12, mb1mx4.7/16, mbtmp4.6/12, MS4.9/11, Ms1 4.9/11, ms1mx4.7/16, Error ellipse: s-maj=22.5km s-min=14.8km az=180.0*

*BJI **14** 04:50:15.4, 58.30S×139.60W, h10^{km}, mB5.8, Ms5.9, Msz5.6*

*NEIC **14** 04:50:15.5±0.3, 58.31S×139.55W, h10^{km}, mb5.0/11, Error ellipse: s-maj=9.3km s-min=7.9km az=166.0*

ISC 14 04:50:14.0±0.5, 58.34S±0.10×139.6W±0.1, h10^{km}, (h10^{km}±1.1^{km}:pP-P), n65, σ0^{s}98/39, mb4.7/20, MS5.0/12, 5C-3D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	**Scott Base**	**26.28**	**203**	*e*P	**P**	**04 55 51.9**	**+1.2**
	16nm,1.1s,mb4.5						
VNDA	**Vanda**	**27.23**	**204**	P	**P**	**04 56 00.1**	**+0.8**
	1.5nm,0.8s,mb3.6,baz=73,slow=8.2,SNR=7.4						
VNDA				LR	LR	05 03 57.2	
	comp=Z,3μm,19.8s,MS4.9,baz=18,slow=30						
VNDA	**Vanda**	**27.23**	**204**	*e*P	**P**	**04 55 59.9**	**+0.5**
	15nm,1.3s,mb4.4						
QSPA	**South Pole Qui**	**31.81**	**180**	*e*P	**P**	**04 56 40.1**	**-0.2**
	46nm,1.2s,mb5.2						
QSPA				⇑*i*P	pP	04 56 41.5	-1.7
RPZ	**Rata Peaks**	**33.44**	**274**	LR	LR	05 07 55.3	
	comp=Z,2μm,19.1s,MS4.8,baz=120,slow=32						
URZ	**Urewera**	**34.27**	**287**	LR	LR	05 07 45.1	
	comp=Z,2μm,21.9s,MS4.9,baz=54,slow=31						
USHA	**Ushuaia**	**37.70**	**116**	P	**P**	**04 57 29.5**	**-1.3**
	12nm,1.0s,mb4.6,baz=211,slow=5.9,SNR=3.3						
PPT	**Papeete**	**41.37**	**346**	LR	LR	05 10 41.0	
	comp=Z,2μm,18.1s,MS5.0,baz=205,slow=30						
CASY	**Casey**	**45.20**	**212**	*e*P	**P**	**04 58 32.6**	**+0.4**
	33nm,1.3s,mb5.0						
PLCA	**Paso Flores**	**45.95**	**99**	P	**P**	**04 58 39.4**	**+1.0**
	3.6nm,0.9s,mb4.3,baz=216,slow=7.9,SNR=4.8						
PLCA				LR	LR	05 13 07.7	
	comp=Z,1μm,20.0s,MS4.8,baz=172,slow=30						
PLCA	**Paso Flores**	**45.95**	**99**	P	**P**	**04 58 39.4**	**+1.0**
VNA3	**Neumayer Olymp**	**46.03**	**160**	*e*	**P**	**04 58 41.4**	**+2.8**
VNA3	**Neumayer Olymp**	**46.03**	**160**	*e*	**P**	**04 58 55.2**	**+17**
VNA3	**Neumayer Olymp**	**46.03**	**160**	⇑*i*P	**P**	**04 58 38.3**	**-0.3**
VNA3				*e*	pP	04 58 41.4	-0.3
VNA3				*e*		04 58 55.2	
VNA2	**Neumayer--Watz**	**46.70**	**160**	*e*	**P**	**04 58 47.1**	**+3.1**
VNA2	**Neumayer--Watz**	**46.70**	**160**	*e*	**P**	**04 59 00.8**	**+17**
VNA2	**Neumayer--Watz**	**46.70**	**160**	⇑*i*P	**P**	**04 58 44.0**	**0.0**
VNA2				*e*	pP	04 58 47.1	+0.1
VNA2				*e*		04 59 00.8	
VNA1	**Neumayer--Stat**	**46.78**	**160**	*e*	**P**	**04 58 48.2**	**+3.6**
VNA1	**Neumayer--Stat**	**46.78**	**160**	*e*	**P**	**04 59 00.7**	**+16**
VNA1	**Neumayer--Stat**	**46.78**	**160**	⇑*i*P	**P**	**04 58 44.9**	**+0.3**
VNA1				*e*	pP	04 58 48.2	+0.6
VNA1				*e*		04 59 00.7	
SNAA	**Sanae**	**46.82**	**163**	⇓*i*	**P**	**04 58 44.1**	**-0.8**
SNAA	**Sanae**	**46.82**	**163**	*e*	**P**	**04 58 47.3**	**+2.4**
SNAA	**Sanae**	**46.82**	**163**	*e*	**P**	**04 59 00.9**	**+16**
SNAA	**Sanae**	**46.82**	**163**	P	**P**	**04 58 44.2**	**-0.7**
	1.6nm,0.6s,mb4.2,baz=225,slow=7.5,SNR=54						
SNAA	**Sanae**	**46.82**	**163**	*e*P	**P**	**04 58 43.2**	**-1.7**
	66nm,1.9s,mb5.2						
SNAA				⇓*i*P		04 58 44.1	
SNAA				*e*	pP	04 58 47.3	-0.6
SNAA				*e*		04 59 00.9	
TRQA	**Tornquist**	**52.37**	**103**	*e*P	**P**	**04 59 27.4**	**-0.7**
	18nm,1.2s,mb4.9						
DZM	**Mont Dzumac**	**52.73**	**290**	P	**P**	**04 59 31.0**	**0.0**
	2.8nm,0.3s,mb4.6,baz=69,slow=16,SNR=7.5						
SYO	**Syowa Base**	**52.95**	**180**	⇑P	**P**	**04 59 29.5**	**-2.5**
MAW	**Mawson**	**53.27**	**191**	P	**P**	**04 59 34.0**	**-0.3**
	7.6nm,0.9s,mb4.6,baz=180,slow=9.1,SNR=12						
MAW				LR	LR	05 20 11.0	
	comp=Z,1μm,20.6s,MS5.0,baz=114,slow=34						
STKA	**Stephens Creek**	**57.73**	**261**	P	**P**	**05 00 06.9**	**-0.2**
	11nm,1.0s,mb4.8,baz=135,slow=9.8,SNR=6.4						
STKA				LR	LR	05 22 08.5	
	comp=Z,559nm,18.9s,MS4.7,baz=131,slow=33						
CTA	**Charters Tower**	**64.80**	**272**	P	**P**	**05 00 54.6**	**-0.3**
	12nm,0.9s,mb4.9,baz=142,slow=8.6,SNR=9.3						
CTAO	**Charters Tower**	**64.80**	**272**	*e*P	**P**	**05 00 54.8**	**-0.1**
	42nm,1.3s,mb5.3						
LPAZ	**La Paz**	**66.58**	**83**	P	**P**	**05 01 07.5**	**+1.1**
	6.6nm,1.1s,mb4.6,baz=203,slow=6.6,SNR=12						
LPAZ	**La Paz**	**66.58**	**83**	*e*P	**P**	**05 01 06.3**	**-0.1**
	12nm,1.1s,mb4.8						
WRA	**Warramunga Arr**	**71.19**	**263**	P	**P**	**05 01 33.8**	**-1.1**
	12nm,1.1s,mb4.7,baz=149,slow=5.5,SNR=16						
JATB	**Jatai**	**74.00**	**98**	⇓*i*P	**P**	**05 01 51.6**	**+0.2**
JATB				*i*	pP	05 01 55.0	+0.5
JATB				*i*		05 02 04.6	
JATB				*i*		05 02 14.6	
JATB				*i*		05 02 16.9	
SAML	**Samuel**	**75.33**	**83**	*e*P	**P**	**05 01 58.2**	**-0.9**
	14nm,1.3s,mb4.7						
OTAV	**Otavalo**	**75.48**	**65**	*e*P	**P**	**05 02 00.6**	**+0.5**
	59nm,1.7s,mb5.2						
FITZ	**Fitzroy Crossi**	**77.22**	**256**	P	**P**	**05 02 09.8**	**+0.1**
	21nm,1.1s,mb5.0,baz=157,slow=6.4,SNR=5.8						
FITZ				LR	LR	05 33 06.5	
	comp=Z,253nm,21.5s,MS4.5,baz=76,slow=33						
BDFB	**Brasilia**	**77.69**	**100**	LR	LR	05 34 02.5	
	comp=Z,1μm,20.4s,MS5.3,baz=208,slow=34						
ROSC	**El Rosal**	**81.49**	**66**	P	**P**	**05 02 34.1**	**+1.3**
	8.5nm,0.8s,mb4.7,baz=104,slow=22,SNR=9.7						
SDV	**Santo Domingo**	**86.77**	**68**	*e*P	**P**	**05 02 58.2**	**-1.4**
	7.1nm,0.8s,mb5.0						
TXAR	**Lajitas Array**	**92.37**	**31**	P	**P**	**05 03 26.4**	**+0.8**
	0.3nm,0.7s,mb3.7,baz=192,slow=8.6,SNR=4.5						
BOSA	**Boshof**	**92.46**	**167**	LR	LR	05 44 40.1	
	comp=Z,855nm,18.9s,MS5.2,baz=166,slow=35						
NVAR	**Mina Array Bea**	**98.05**	**17**	LR	LR	05 39 06.4	
	comp=Z,738nm,20.6s,MS5.2,baz=185,slow=30						
CMAR	**Chiang Mai Arr**	**121.89**	**253**	PKP	PKPdf	05 09 09.6	-1.9
	0.8nm,0.4s,baz=194,slow=3.7,SNR=4.0						
MCK	**McKinley**	**121.96**	**355**	*e*P	PKPdf	05 09 08.3	-2.3
YKA	**Yellowknife Ar**	**122.05**	**13**	PKP	PKPdf	05 09 07.3	-3.5
	0.2nm,0.3s,baz=191,slow=2.0,SNR=5.2						
ILAR	**Eielson Array**	**122.92**	**356**	PKP	PKPdf	05 09 09.5	-2.8
	11nm,0.9s,baz=224,slow=1.7,SNR=71						
SONM	**Songino Array**	**140.55**	**284**	PKhKP		05 09 38.5	
	0.8nm,0.8s,baz=162,slow=3.4,SNR=6.1						
ESDC	**Sonseca Array**	**146.25**	**104**	PKPbc	PKPbc	05 09 55.8	+1.9
	1.6nm,0.7s,baz=235,slow=4.3,SNR=6.9						
WMQ	**Urumqi**	**147.66**	**264**	*e*PKP	PKPdf	05 09 57.4	-0.6
WMQ				LR	LR		
	comp=N,1μm,23.0s,MS5.7						
WMQ				LR	LR		
	comp=E,1μm,22.5s,MS5.7						
WMQ				LR	LR		
	comp=Z,1μm,24.0s,MS5.5						
SJPF	**Ste Jean**	**150.16**	**102**	*e*PKIKP	PKPdf	05 10 05.3	+3.3
	comp=Z,23nm,1.2s						
ETSF	**Etsaut**	**150.35**	**103**	*e*PKIKP	PKPdf	05 10 05.5	+3.2
	comp=Z,15nm,0.9s						
EPF	**Esparros**	**150.91**	**104**	*e*PKIKP	PKPdf	05 10 06.9	+3.8
	comp=Z,23nm,1.1s						
MTLF	**Montolieu**	**152.09**	**106**	*e*PKIKP	PKPdf	05 10 08.6	+3.8
	comp=Z,17nm,1.0s						
MKAR	**Makanchi Array**	**152.49**	**264**	PKPbc	PKPdf	05 10 10.0	+4.7
	comp=Z,4.2nm,0.8s,baz=117,slow=2.7,SNR=23						
ROSF	**Rostrenen**	**152.56**	**92**	*e*PKIKP	PKPdf	05 10 09.5	+4.2
	comp=Z,14nm,1.0s						
CAF	**Calviac**	**153.13**	**103**	*e*PKIKP	PKPdf	05 10 10.7	+4.5
	comp=Z,10nm,1.0s						
LASF	**Ste Croix**	**153.44**	**106**	*e*PKIKP	PKPdf	05 10 10.7	+4.0
	comp=Z,16nm,1.0s						
LMR	**La Mourre**	**154.23**	**111**	*e*PKIKP	PKPdf	05 10 11.5	+3.7
	comp=Z,57nm,1.4s						
SBF	**Sospel**	**155.08**	**111**	*e*PKIKP	PKPdf	05 10 13.5	+4.6
	comp=Z,103nm,1.4s						
GERES	**GERESS Array B**	**161.66**	**110**	PKP	PKPdf	05 10 15.9	-0.6
	comp=Z,0.2nm,0.4s,baz=315,slow=1.4,SNR=4.3						
AKASG	**Malin Array Be**	**169.99**	**135**	PKPab	PKPab	05 11 36.1	-1.3
	comp=Z,5.2nm,0.9s,baz=216,slow=3.7,SNR=13						
FINES	**FINESS Array B**	**172.18**	**61**	PKPab	PKPab	05 11 47.0	+0.2
	comp=Z,1.2nm,0.7s,baz=346,slow=7.9,SNR=4.4						

TRN 14 05:41:29.1, 15.82N×61.61W, h26^{km}, MD3.6, 6C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOG	**Dongo Capester**	**0.21**	**358**	⇑*e*P	Pb	05 41 35.4	+0.5
SCG	**Saint Claude**	**0.22**	**342**	⇑*e*P	Pb	05 41 35.4	+0.4
BCG	**Bois Riant Cap**	**0.27**	**358**	⇓*e*P	Pb	05 41 36.2	+0.6
MGG	**Marie-Galante**	**0.30**	**70**	⇑*i*P	Pb	05 41 37.7	+1.6
BBL	**Barber's Block**	**0.32**	**155**	⇓*e*P	Pb	05 41 38.2	+1.8
DWS	**Wesley**	**0.38**	**131**	⇑*e*P	Pb	05 41 40.2	+2.8
DWS				*e*S	Sb	05 41 46.3	+3.3
SEG	**Port Louis**	**0.59**	**10**	⇑*e*P	Pb	05 41 42.2	+1.4
DEG	**La Desirade**	**0.72**	**47**	⇑*e*P	Pb	05 41 44.0	+1.0
MBRY		**1.02**	**330**	*i* P	Pn	05 41 49.7	+1.8
MBLG		**1.05**	**330**	*i* P	Pn	05 41 50.0	+1.8
MBLG				*e*S	Sb	05 42 03.9	+2.2
MLYT		**1.06**	**328**	*i* P	Pn	05 41 50.4	+2.0
MLYT				*i* S	Sb	05 42 04.7	+2.7
MBWH		**1.07**	**329**	*i* P	Pn	05 41 50.3	+1.7
MBWH				*i* S	Sb	05 42 04.5	+1.9
FDF	**Fort de France**	**1.17**	**158**	*e*P	Pn	05 41 51.4	+1.5
FDF				*e*S	Sn	05 42 07.6	+2.5
BPA	**Boggy Peak**	**1.25**	**349**	*e*P	Pn	05 41 53.5	+2.4
BPA				*e*S	Sn	05 42 09.9	+2.8
CRM	**Caravelle**	**1.25**	**147**	*e*P	Pn	05 41 53.3	+2.1
CRM				*e*S	Sn	05 42 08.6	+1.2
BIM	**Bigot**	**1.39**	**158**	*e*S	Sn	05 42 12.5	+1.6
MVM	**Montagne Vaucl**	**1.43**	**151**	*e*P	Pn	05 41 56.1	+2.4
MVM				*e*S	Sn	05 42 12.7	+0.8
CPB	**Codrington**	**1.82**	**354**	*e*P	Pn	05 42 01.9	+2.5
CPB				*e*S	Sn	05 42 24.6	+2.7

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*NEIC **14** 05:42:53.6±1.1, 19.95S×68.91W, h109^{km}±10^{km}, mb4.0/3, Error ellipse: s-maj=11.9km s-min=10.3km az=59.0*

*IDC **14** 05:42:55.5±2.6, 19.96S×68.89W, h124^{km}±23^{km}, mb3.5/7, mb1 3.8/9, mb1mx3.6/18, mbtmp4.0/9, Error ellipse: s-maj=26.0km s-min=16.9km az=71.0*

ISC 14 05:42:53.0±1.6, 20.0S±0.1×68.9W±0.1, h118^{km}±15^{km}, n20, σ0^{s}97/17, mb4.0/7, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.72**	**11**	P	**P**	**05 43 53.1**	**+3.3**
	6.0nm,0.3s,baz=189,slow=8.6,SNR=112						
LPAZ	**La Paz**	**3.72**	**11**	*e*P	**P**	**05 43 52.9**	**+3.0**
ARE	**Arequipa**	**4.27**	**324**	P	**P**	**05 43 57.0**	**-0.3**
SIV	**San Ignacio**	**8.42**	**63**	P	**P**	**05 44 53.0**	**-0.4**
	4.4nm,0.3s,baz=255,slow=11,SNR=151						
SAML	**Samuel**	**12.26**	**28**	*e*P	**P**	**05 45 43.5**	**-1.1**
	2.9nm,0.7s						
BDFB	**Brasilia**	**20.33**	**81**	P	**P**	**05 47 22.2**	**+0.3**
	3.0nm,0.6s,baz=262,slow=11,SNR=6.0						
PLCA	**Paso Flores**	**20.75**	**184**	P	**P**	**05 47 27.6**	**+1.5**
	3.3nm,0.7s,baz=355,slow=13,SNR=12						
PLCA	**Paso Flores**	**20.75**	**184**	*e*P	**P**	**05 47 26.7**	**+0.6**
	3.3nm,0.6s						
PMSA	**Palmer Station**	**44.90**	**177**	*e*P	**P**	**05 50 56.3**	**-0.9**
	68nm,1.2s,mb5.3						
TXAR	**Lajitas Array**	**59.39**	**325**	P	**P**	**05 52 44.2**	**-1.3**
	0.2nm,0.6s,mb3.3,baz=160,slow=11,SNR=2.8						
SNAA	**Sanae**	**63.72**	**161**	P	**P**	**05 53 13.0**	**-0.9**
	0.7nm,0.6s,mb3.6,baz=290,slow=6.6,SNR=18						
DBIC	**Dimbokro**	**68.28**	**74**	P	**P**	**05 53 44.7**	**+0.9**
	2.8nm,0.7s,mb4.2,baz=225,slow=12,SNR=4.2						
NVAR	**Mina Array Bea**	**74.30**	**322**	P	**P**	**05 54 20.2**	**+0.9**
	0.5nm,0.7s,mb3.4,baz=193,slow=6.8,SNR=4.3						
CHMT	**Chamberlain Mo**	**77.65**	**331**	P	**P**	**05 54 43.0**	**+5.0**
FCC	**Fort Churchill**	**81.14**	**347**	*e*P	**P**	**05 54 56.6**	**+0.1**
	1.3nm,0.5s,mb4.0						
YKA	**Yellowknife Ar**	**89.75**	**341**	P	**P**	**05 55 39.3**	**+0.5**
	2.0nm,0.7s,mb4.4,baz=134,slow=4.7,SNR=22						
YKA				pP	pP	05 56 06.4	-3.2
	0.5nm,0.7s,baz=130,slow=4.8,SNR=3.9						
YKA	**Yellowknife Ar**	**89.75**	**341**	P	**P**	**05 55 39.3**	**+0.5**
YKA				pP	pP	05 56 06.4	-3.2
WRA	**Warramunga Arr**	**134.28**	**211**	PKP	PKPdf	06 01 59.0	+1.2
	0.5nm,0.8s,baz=154,slow=1.8,SNR=8.8						
MKAR	**Makanchi Array**	**144.37**	**35**	PKP	PKPdf	06 02 16.1	+1.1
	0.4nm,0.4s,baz=338,slow=2.3,SNR=6.0						
SONM	**Songino Array**	**151.93**	**7**	PKPbc	PKPdf	06 02 36.5	+9.3
	0.8nm,0.5s,baz=304,slow=1.3,SNR=7.8						

WEL 14 05:52:49.5±1.1, 45.75S×166.40E, h5^{km}, ML4.1/7, Error ellipse: s-maj=10.4km s-min=5.6km az=90.0, Needs DCZ badly., Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**1.09**	**98**	P*	Pb	05 53 09.6	-0.9
WHZ				S*	Sb	05 53 24.4	-0.4
WHZ				S*	Sb	05 53 24.7	-0.1
MLZ	**Mavora Lakes**	**1.31**	**73**	P*	Pb	05 53 12.9	-1.2
MSZ	**Milford Sound**	**1.52**	**46**	PN	Pn	05 53 15.9	-1.6
MSZ				SN	Sn	05 53 38.3	+0.4
WKZ	**Wanaka**	**2.06**	**65**	*e*PN	Pn	05 53 25.8	+0.5
WKZ				SN	Sn	05 53 50.8	-0.8
EAZ	**Earnscleugh**	**2.11**	**77**	PN	Pn	05 53 26.4	+0.5
EAZ				SN	Sn	05 53 51.1	-1.7
TUZ	**Tuapeka**	**2.27**	**96**	PN	Pn	05 53 27.7	-0.5
TUZ				SN	Sn	05 53 55.1	-1.7
JCZ	**Jackson Bay**	**2.37**	**46**	*e*PN	Pn	05 53 29.9	+0.4
JCZ				SN	Sn	05 53 58.7	-0.6
LBZ	**Lake Benmore**	**3.00**	**64**	PN	Pn	05 53 37.6	-1.1
ODZ	**Otahua Downs**	**3.07**	**78**	PN	Pn	05 53 38.3	-1.3
FOZ	**Fox Glacier**	**3.20**	**48**	*e*PN	Pn	05 53 42.8	+1.3
RPZ	**Rata Peaks**	**3.89**	**60**	PN	Pn	05 53 49.1	-2.2
LTZ	**Lake Taylor**	**5.15**	**57**	*e*PN	Pn	05 54 06.0	-3.2
DSZ	**Denniston Nort**	**5.59**	**46**	*e*PN	Pn	05 54 13.4	-2.0
QRZ	**Quartz Range**	**6.64**	**44**	*e*PN	Pn	05 54 28.1	-2.1

IDC 14 06:00:40.6±3.6, 9.09S×120.15E, mb3.7/2, mb1 3.7/3, mb1mx3.7/13, mbtmp3.6/3, ML3.7/1, Error ellipse: s-maj=204.3km s-min=37.8km az=50.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.45**	**130**	P	P	06 04 45.7	-1.5
	0.3nm,0.3s,baz=302,slow=12,SNR=22						
SONM	**Songino Array**	**57.97**	**349**	P	P	06 10 34.6	-2.7
	0.4nm,0.5s,baz=163,slow=7.0,SNR=3.5						
MKAR	**Makanchi Array**	**65.06**	**332**	P	P	06 11 23.1	-2.0
	0.4nm,0.4s,baz=147,slow=8.3,SNR=10						

IGQ 14 06:05:12.3, 0.15S×78.50W, h11^{km}±1^{km}, mb4.0, 5C-10D, Error ellipse: s-maj=1.0km s-min=0.7km az=30.3, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YANA	**Yana**	**0.08**	**296**	⇓P	Pg	06 05 15.2	+0.4
GGP	**Refugio Guagua**	**0.10**	**258**	⇓P	Pg	06 05 15.5	+0.5
TERV	**Terraza Guagua**	**0.11**	**259**	⇓P	Pg	06 05 15.8	+0.6
PINO	**Pino**	**0.11**	**268**	⇓P	Pg	06 05 15.8	+0.7
JUA2	**San Juan 2**	**0.12**	**240**	⇓P	Pg	06 05 15.4	+0.1
JOR1	**San Jorge 1**	**0.21**	**318**	⇓P	Pg	06 05 16.1	-0.7
ANTI	**Antisana**	**0.45**	**131**	⇓P	Pg	06 05 21.2	-0.2
VC1	**Cotopaxi 1**	**0.49**	**169**	⇑P	Pg	06 05 23.0	+0.7
COTA	**Cotacachi**	**0.51**	**19**	⇑P	Pg	06 05 22.8	+0.2
CAMI	**Rancho Maria**	**0.52**	**180**	⇓P	Pg	06 05 23.7	+0.8
CAYR	**Refugio Cayamb**	**0.52**	**71**	P	Pg	06 05 23.2	+0.4
ELAGU	**Cayambe Volc**	**0.53**	**76**	P	Pg	06 05 23.4	+0.4
ELAGU				S	Sg	06 05 31.3	+1.2
TAMB	**Tambo**	**0.55**	**166**	⇑P	Pg	06 05 24.0	+0.5
CAYA	**Cayambe**	**0.56**	**66**	⇑P	Pg	06 05 23.8	+0.3
PISA	**Pisayambo**	**0.91**	**173**	⇓P	Pb	06 05 30.3	+0.8
ECEN	**Cerro Negro**	**1.11**	**29**	⇓P	Pb	06 05 33.4	+0.5
RUN5	**Runtun**	**1.26**	**177**	P	Pb	06 05 37.0	+1.5
RUN5				S	Sb	06 05 53.4	+1.9
ULBA	**Ulba**	**1.29**	**176**	⇑P	Pb	06 05 37.1	+1.0
IGUA	**Igualata**	**1.33**	**186**	P	Pb	06 05 37.8	+0.9
ARRY	**Arrayan**	**1.34**	**178**	P	Pb	06 05 37.6	+0.5
ARRY				S	Sb	06 05 55.2	+1.1
LORE	**San Lorenzo**	**1.48**	**347**	P	Pn	06 05 40.6	+1.6
HOJA	**Cerro de Hojas**	**2.23**	**246**	P	Pn	06 05 50.6	+0.9

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*NEIC **14** 06:14:52.6±1.0, 2.48N×93.12E, Error ellipse: s-maj=21.1km s-min=17.4km az=213.0*

*IDC **14** 06:14:52.5±1.3, 2.40N×93.03E, h30^{km}±5^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.7/16, mbtmp3.8/5, ML4.3/1, Error ellipse: s-maj=46.8km s-min=20.1km az=56.0*

ISC 14 06:14:51.8±1.4, 2.5N±0.2×93.2E±0.1, h33^{km}, (h30^{km}±.9^{km}:pP-P), n9, σ0^{s}39/8, mb3.8/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**7.92**	**69**	*e*Pn	**Pn**	**06 16 47.1**	**-0.5**
SNG	**Songkhla**	**8.72**	**58**	P	**P**	**06 16 59.0**	**+0.5**
	1μm,1.0s						
CMAR	**Chiang Mai Arr**	**16.82**	**19**	Pn	**P**	**06 18 46.0**	**-0.4**
	0.4nm,0.3s,baz=219,slow=12,SNR=9.3						
NANT	**Nan**	**17.78**	**24**	P	**P**	**06 19 09.0**	**+11**
	188nm,0.8s						
MKAR	**Makanchi Array**	**45.12**	**349**	P	**P**	**06 23 06.9**	**0.0**
	0.7nm,0.5s,mb3.8,baz=171,slow=8.9,SNR=13						
MKAR				pP	pP	06 23 16.2	-0.6
	1.4nm,0.6s,baz=168,slow=8.3,SNR=11						
WRA	**Warramunga Arr**	**46.12**	**121**	P	**P**	**06 23 15.2**	**+0.1**
	1.3nm,0.8s,mb3.9,baz=300,slow=8.7,SNR=16						
WRA				pP	pP	06 23 24.7	-0.3
	1.8nm,1.1s,baz=302,slow=8.6,SNR=4.0						
SONM	**Songino Array**	**46.57**	**12**	P	**P**	**06 23 18.9**	**+0.6**
	0.7nm,0.7s,mb3.7,baz=197,slow=8.2,SNR=5.9						
SONM				pP	pP	06 23 27.9	-0.2
	1.2nm,0.6s,baz=192,slow=8.2,SNR=7.9						
GERES	**GERESS Array B**	**81.21**	**319**	P	**P**	**06 27 05.6**	**-0.3**
	0.3nm,0.3s,mb3.6,baz=101,slow=5.0,SNR=4.7						
GERES				pP	pP	06 27 14.9	-1.4
	0.6nm,0.2s,baz=76,slow=5.5,SNR=2.5						
TXAR	**Lajitas Array**	**144.45**	**26**	PKP	PKPdf	06 34 25.9	+0.5
	0.1nm,0.4s,baz=161,slow=2.6,SNR=4.0						
TXAR				pPKP		06 34 35.1	
	0.3nm,0.5s,slow=2.5,SNR=4.6						

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*BJI **14** 06:15:24.5, 2.37N×92.92E, h33^{km}, mB5.1, mb4.8, Ms4.8, Msz4.4*

*MOS **14** 06:15:24.5±1.6, 2.39N×93.06E, h33^{km}, mb4.9/24, Error ellipse: s-maj=14.0km s-min=6.8km az=103.7*

*NEIC **14** 06:15:26.6±0.3, 2.44N×93.08E, mb4.9/19, Error ellipse: s-maj=7.7km s-min=6.1km az=221.0*

*IDC **14** 06:15:26.3±0.6, 2.45N×93.03E, h30^{km}±3^{km}, mb4.4/16, mb1 4.5/17, mb1mx4.4/21, mbtmp4.6/17, ML4.3/1, MS4.1/1, Ms1 4.1/1, ms1mx3.8/10, Error ellipse: s-maj=18.7km s-min=12.2km az=57.0*

ISC 14 06:15:24.3±0.3, 2.42N±0.05×93.10E±0.04, h30^{km}, h30^{km}±.6^{km}:pP-P, n117, σ1^{s}21/124, mb4.7/52, MS4.5/9, 5C-4D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**8.05**	**69**	*e*Pn	**P**	**06 17 21.4**	**-0.9**
KULM				*e*Sn	**Sn**	**06 18 50.9**	**-2.4**
IPM	**Ipoh**	**8.19**	**75**	P	**P**	**06 17 22.9**	**-1.4**
KGM	**Kluang**	**10.21**	**92**	P	**P**	**06 17 52.1**	**-0.2**
NNT	**Nongplab**	**12.05**	**33**	P	**P**	**06 18 16.6**	**-0.7**
NNT	**Nongplab**	**12.05**	**33**	P	**P**	**06 18 16.6**	**-0.7**
PALK	**Pallekele**	**13.26**	**292**	*e*Pn	**P**	**06 18 28.9**	**-4.4**
NST	**Nakhon Sawan**	**14.88**	**27**	P	**P**	**06 18 53.0**	**-1.7**
NST	**Nakhon Sawan**	**14.88**	**27**	P	**P**	**06 18 53.0**	**-1.7**
KKTK	**Khon Kaen**	**16.82**	**34**	PG	**P**	**06 19 22.0**	**+2.5**

KKTK				SG	x	06 19 30.0	
CMAR	**Chiang Mai Arr**	**16.94**	**19**	Pn	**P**	**06 19 19.3**	**-1.7**
	0.4nm,0.3s,baz=214,slow=13,SNR=12						
KSM	**Kuching**	**17.22**	**93**	*e*P	**P**	**06 19 26.7**	**+2.1**
CHG	**Chiang Mai**	**17.27**	**19**	⇑P	**P**	**06 19 23.4**	**-1.8**
	50nm,0.9s						
VIS	**Vishakhapatnam**	**17.98**	**328**	*i* P	**P**	**06 19 32.9**	**-1.2**
VIS				*i* x	x	06 22 37.1	
HYB	**Hyderabad**	**20.65**	**317**	*i* P	**P**	**06 20 04.0**	**-0.4**
HYB				*e*S	**S**	**06 23 50.0**	**+1.3**
IMP	**Imphal**	**22.25**	**2**	*e*P	**P**	**06 20 21.0**	**+0.5**
SHL	**Shillong**	**23.05**	**357**	*e*P	**P**	**06 20 28.5**	**+0.1**
SHL				*e*S	**S**	**06 24 40.0**	**+7.0**
KMI	**Kunming**	**24.41**	**22**	P	**P**	**06 20 44.5**	**+2.8**
KMI				AP		06 20 50.3	
KMI				XP		06 20 53.3	
KMI				PP	PP	06 21 22.5	+5.1
KMI				S	**S**	**06 25 02.8**	**+6.2**
KMI				SS	SS	06 25 58.9	+7.4
KMI				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.0						
KMI				AMB	AMB		
	comp=Z,140nm,3.4s						
KMI				LR	LR		
	comp=N,850nm,13.5s						
KMI				LR	LR		
	comp=E,1µm,19.2s						
KMI				LR	LR		
	comp=Z,1µm,16.0s,MS4.4						
KMI	**Kunming**	**24.41**	**22**	P	**P**	**06 20 44.5**	**+2.8**
KMI				*SP		06 20 53.2	
KMI						06 21 22.5	
KMI				S	**S**	**06 25 02.8**	**+6.2**
KMI				SS	SS	06 25 58.9	+7.4
KMI				pmax	pmax		
	comp=Z,17nm,1.6s,mb4.2						
KMI	**Kunming**	**24.41**	**22**	P	**P**	**06 20 44.5**	**+2.8**
	comp=Z,17nm,1.6s,mb4.2						
KMI				pP		06 20 50.3	
KMI				sP		06 20 53.2	
KMI				PP	PP	06 21 22.5	+5.1
KMI				S	**S**	**06 25 02.8**	**+6.2**
KMI				sS		06 25 09.1	
KMI				SS	SS	06 25 58.9	+7.4
POO	**Poona**	**24.75**	**312**	⇓*i*P	**P**	**06 20 44.0**	**-1.0**
POO				*i* x	x	06 25 22.0	
PKI	**Pulchoki**	**26.07**	**344**	*e*P	**P**	**06 20 59.1**	**+1.7**
DMN	**Daman**	**26.19**	**344**	*e*P	**P**	**06 20 59.8**	**+1.3**
GUN	**Gumba**	**26.27**	**345**	*e*P	**P**	**06 20 59.8**	**+0.6**
	comp=Z,77nm,1.0s,mb5.2						
KKN	**Kakani**	**26.32**	**344**	*e*P	**P**	**06 20 59.6**	**0.0**
	comp=Z,50nm,1.1s,mb5.0						
KKN	**Kakani**	**26.32**	**344**	*e*P	**P**	**06 20 59.6**	**0.0**
KKN				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.7						
GKN	**Gorkha**	**26.70**	**343**	*e*P	**P**	**06 21 03.0**	**-0.1**
	comp=Z,67nm,0.8s,mb5.2						
KOLN	**Koldanda**	**26.80**	**341**	*e*P	**P**	**06 21 04.3**	**+0.3**
	comp=Z,99nm,1.3s,mb5.2						
LSA	**Lhasa**	**27.20**	**356**	P	**P**	**06 21 09.3**	**+1.7**
LSA	**Lhasa**	**27.20**	**356**	*e*P	**P**	**06 21 08.6**	**+1.0**
LSA				*e**PP	pP	06 21 18.2	+1.9
LSA				pmax	pmax		
	comp=Z,37nm,0.6s,mb5.1						
LSA	**Lhasa**	**27.20**	**356**	*e*P	**P**	**06 21 08.6**	**+1.0**
	comp=Z,37nm,0.6s,mb5.1						
LSA				*e*pP	pP	06 21 18.2	+2.0
NDI	**New Delhi**	**30.19**	**331**	*e*P	**P**	**06 21 33.0**	**-1.6**
ENH	**Enshi**	**31.76**	**28**	*e*P	**P**	**06 21 47.2**	**-1.1**
	comp=Z,14nm,0.8s,mb4.9						
WHN	**Wuhan**	**34.45**	**34**	*e*P	**P**	**06 22 13.0**	**+1.2**
XAN	**Xi'an**	**34.76**	**23**	P	**P**	**06 22 14.3**	**0.0**
XAN				AP	pP	06 22 22.8	-0.3
XAN				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
LZH	**Lanzhou**	**34.95**	**15**	*e*P	**P**	**06 22 16.0**	**+0.1**
LZH				AP	pP	06 22 24.5	-0.2
LZH				XP	sP	06 22 29.6	+1.1
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,110nm,4.0s						
LZH	**Lanzhou**	**34.95**	**15**	*e*P	**P**	**06 22 16.0**	**+0.1**
	comp=Z,25nm,1.0s,mb5.1						
LZH				pP	pP	06 22 24.5	-0.2
LZH				sP	sP	06 22 29.6	+1.1
GTA	**Gaotai**	**37.32**	**9**	*e*P	**P**	**06 22 36.6**	**+0.6**
GTA				AP	pP	06 22 45.4	+0.6
GTA				XP	sP	06 22 48.0	-0.5
GTA				PP	PP	06 24 03.8	0.0
GTA				S	**S**	**06 28 22.0**	**+0.8**
GTA				AMB	AMB		
	comp=Z,230nm,6.9s						
GTA				LR	LR		
	comp=N,340nm,17.6s,MS4.3						
GTA				LR	LR		
	comp=E,270nm,20.6s,MS4.3						
GTA				LR	LR		
	comp=Z,660nm,22.2s,MS4.4						
FITZ	**Fitzroy Crossi**	**37.98**	**124**	*e*P	**P**	**06 22 42.3**	**+0.6**
	comp=Z,15nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**37.98**	**124**	P	**P**	**06 22 42.0**	**+0.4**
	comp=Z,22nm,0.8s,mb4.9,baz=230,slow=1.6,SNR=16						
FITZ				LR	LR	06 37 40.0	
	comp=Z,286nm,20.2s,MS4.1,baz=264,slow=35						
NJ2	**Nanjing**	**38.16**	**37**	*e*P	**P**	**06 22 45.1**	**+2.0**
NJ2				AP	pP	06 22 54.8	+2.9
NJ2				XP	sP	06 22 58.8	+3.2
NJ2				PP	PP	06 24 18.6	+4.8
NJ2				S	**S**	**06 28 40.0**	**+6.0**
NJ2				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,380nm,10.0s						
NJ2				LR	LR		
	comp=N,2µm,18.0s						
NJ2				LR	LR		
	comp=E,2µm,25.0s						
NJ2				LR	LR		
	comp=Z,1µm,23.2s						
SSE	**Sheshan**	**38.95**	**40**	*e*P	**P**	**06 22 50.6**	**+0.9**
SSE				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.2						
SSE				AMB	AMB		
	comp=Z,30nm,3.5s						
SSE	**Sheshan**	**38.95**	**40**	*e*P	**P**	**06 22 50.6**	**+0.9**
	comp=Z,38nm,0.6s,mb5.3						
WMQ	**Urumqi**	**41.51**	**354**	*e*P	**P**	**06 23 11.6**	**+1.0**
WMQ				AP	pP	06 23 21.4	+1.9
WMQ				XP	sP	06 23 25.3	+2.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,550nm,6.0s						
WMQ				LR	LR		
	comp=N,1µm,22.2s,MS4.9						
WMQ				LR	LR		
	comp=E,1µm,21.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
HHC	**Hu-ho-hao-te**	**41.73**	**21**	*e*P	**P**	**06 23 14.3**	**+1.7**
HHC				AP	pP	06 23 23.4	+2.0
HHC				XP	sP	06 23 27.8	+2.7
HHC				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.5						
HHC				AMB	AMB		
	comp=Z,270nm,8.0s						
HHC				LR	LR		
	comp=N,500nm,17.8s,MS5.0						
HHC				LR	LR		
	comp=E,2µm,16.6s,MS5.0						
ULHL	**Ulahol**	**42.44**	**341**	P	**P**	**06 23 18.8**	**+0.5**
	SNR=7.4						
KZA	**Kyzart**	**42.61**	**340**	P	**P**	**06 23 20.8**	**+1.0**
	SNR=6.4						
UCH	**Uchtor**	**42.99**	**340**	P	**P**	**06 23 23.5**	**+0.6**
	SNR=9.5						
AML	**Almayashu**	**43.20**	**339**	P	**P**	**06 23 25.3**	**+0.8**
	SNR=10						
TKM2	**Tokmak 2**	**43.25**	**341**	P	**P**	**06 23 24.7**	**-0.2**
	SNR=6.8						
AAK	**Ala-Archa**	**43.36**	**340**	*e*P	**P**	**06 23 25.3**	**-0.5**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
AAK	**Ala-Archa**	**43.36**	**340**	*e*P	**P**	**06 23 25.3**	**-0.5**
	comp=Z,4.8nm,0.9s,mb4.2						
FRU	**Bishkek**	**43.50**	**340**	*e*P	**P**	**06 23 29.0**	**+2.1**
FRU				*e*		06 25 10.0	
FRU				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.4						
EKS2	**Erkin-Say**	**43.63**	**339**	P	**P**	**06 23 29.0**	**+1.0**
	SNR=5.6						
USP	**Ospenovka**	**43.92**	**340**	P	**P**	**06 23 30.0**	**-0.3**
	SNR=9.3						
MKAR	**Makanchi Array**	**45.19**	**350**	P	**P**	**06 23 40.5**	**0.0**
	comp=Z,7.2nm,0.5s,mb4.8,baz=171,slow=8.1,SNR=44						
MKAR				pP	pP	06 23 49.6	+0.2
	comp=Z,7.6nm,0.6s,baz=165,slow=8.5,SNR=7.6						
KKAR	**Karatay Array**	**45.24**	**337**	*i* P	**P**	**06 23 40.2**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**46.16**	**121**	P	**P**	**06 23 49.3**	**+0.8**
	comp=Z,8.0nm,0.7s,mb4.8,baz=300,slow=8.8,SNR=25						
WRA				pP	pP	06 23 58.6	+1.1
	comp=Z,8.2nm,0.7s,baz=297,slow=9.0,SNR=7.2						
WRAB	**Tennant Creek**	**46.17**	**121**	*e*P	**P**	**06 23 49.1**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
WRAB	**Tennant Creek**	**46.17**	**121**	*e*P	**P**	**06 23 49.1**	**+0.5**
	comp=Z,20nm,0.9s,mb5.0						
WB2	**Warramunga Arr**	**46.17**	**121**	*e*P	**P**	**06 23 49.5**	**+0.9**
SONM	**Songino Array**	**46.68**	**12**	P	**P**	**06 23 53.1**	**+0.8**
	comp=Z,6.8nm,0.7s,mb4.7,baz=195,slow=8.3,SNR=23						
SONM				pP	pP	06 24 01.7	+0.5
	comp=Z,8.2nm,0.8s,baz=194,slow=8.1,SNR=11						
ULN	**Ulaanbaatar**	**46.85**	**13**	*e*P	**P**	**06 23 53.8**	**+0.2**
ULN				*e**PP	pP	06 24 02.8	+0.2
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
ULN	**Ulaanbaatar**	**46.85**	**13**	*e*P	**P**	**06 23 53.8**	**+0.2**
	comp=Z,7.7nm,1.1s,mb4.5						
ULN				*e*pP	pP	06 24 02.8	+0.2
OPO	**Ambohidratompo**	**49.75**	**243**	P	**P**	**06 24 17.6**	**+1.1**
	comp=Z,5.4nm,0.9s,mb4.6,baz=74,slow=8.4,SNR=4.7						
TLY	**Talaya**	**49.88**	**9**	*e*P	**P**	**06 24 18.3**	**+1.2**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.4						
TLY				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.1						
CN2	**Changchun**	**50.20**	**30**	*e*P	**P**	**06 24 22.5**	**+2.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CIT	**Chita**	**52.31**	**16**	*e*P	**P**	**06 24 36.6**	**+1.1**
CIT				*e*	pP	06 24 45.6	+1.1
NVS	**Novosibirsk**	**52.87**	**353**	*i* P	**P**	**06 24 37.9**	**-1.8**
NVS				*i*	pP	06 24 47.3	-1.5
NVS				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
NVS				pmax	pmax		
	comp=N,13nm,1.4s						
BVA0	**Borovoye Array**	**53.84**	**343**	*i* P	**P**	**06 24 44.9**	**-1.9**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.7						
BVAR	**Borovoye Array**	**53.84**	**343**	P	**P**	**06 24 44.9**	**-1.9**
	comp=Z,4.1nm,0.8s,mb4.4,baz=135,slow=8.4,SNR=15						
BVAR				pP	pP	06 24 53.9	-1.9
	comp=Z,3.1nm,0.7s,baz=143,slow=7.4,SNR=6.9						
AB31	**Akbulak array**	**54.57**	**334**	*i* P	**P**	**06 24 50.2**	**-2.0**
AB31				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
CTAO	**Charters Tower**	**56.71**	**116**	*e*P	**P**	**06 25 05.0**	**-3.1**
CTAO				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
CTAO	**Charters Tower**	**56.71**	**116**	*e*P	**P**	**06 25 05.0**	**-3.1**
	comp=Z,8.6nm,0.6s,mb5.0						
KLR	**Kul'dur**	**57.10**	**29**	*e*P	**P**	**06 25 08.0**	**-2.5**
STKA	**Stephens Creek**	**57.23**	**131**	P	**P**	**06 25 12.2**	**+0.6**
	comp=Z,6.2nm,0.7s,mb4.7,baz=286,slow=7.3,SNR=8.6						
STKA	**Stephens Creek**	**57.23**	**131**	*e*P	**P**	**06 25 11.7**	**+0.1**
GNI	**Garni**	**57.60**	**317**	P	**P**	**06 25 14.0**	**-0.1**
	comp=Z,4.1nm,0.3s,mb4.9,baz=167,slow=18,SNR=4.4						
ZEI	**Tsey**	**59.40**	**320**	*e*P	**P**	**06 25 22.4**	**-4.2**
ZEI				*i* *PP	pP	06 25 29.8	-6.0
ZEI				*i*		06 27 33.6	
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
SVE	**Sverdlovsk**	**60.10**	**340**	*e*P	**P**	**06 25 29.5**	**-1.8**
SVE				MLR	MLR		
	comp=N,200nm,16.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.4						
SVE				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.5						
ASF	**Jabal al Asfar**	**60.43**	**306**	P	**P**	**06 25 34.3**	**+0.5**
	comp=Z,4.7nm,0.8s,mb4.6,baz=151,slow=2.4,SNR=4.2						
ARU	**Arti**	**60.52**	**339**	⇑*i*P	**P**	**06 25 31.8**	**-2.3**
ARU				*e*		06 27 44.5	
ARU				*e*S	**S**	**06 33 48.3**	**+2.2**
ARU				*e*SS	SS	06 37 48.4	+2.9
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
KIV	**Kislovodsk**	**60.74**	**320**	*e*P	**P**	**06 25 33.6**	**-2.2**
KIV				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
EIL	**Elat**	**61.35**	**303**	*e*P	**P**	**06 25 39.6**	**-0.5**
	comp=Z,13nm,1.0s,mb5.0						
EIL				*e*pP	pP	06 25 50.8	+1.4
YSS	**Yuzh-Sakhalins**	**61.73**	**36**	*e*P	**P**	**06 25 42.0**	**-0.4**
SOC	**Sochi**	**62.50**	**319**	*e*P	**P**	**06 25 37.6**	**-10**
SOC				*e*SS	SS	06 38 10.1	-7.2
SOC				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.2						
SOC				pmax	pmax		
	comp=N,30nm,1.4s						
SOC				pmax	pmax		
	comp=E,40nm,1.3s						
YAK	**Yakutsk**	**65.47**	**18**	*e*P	**P**	**06 26 05.7**	**-1.0**
YAK				*e*	pP	06 26 15.0	-0.9
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
MATP	**Matopo**	**67.21**	**247**	P	**P**	**06 26 17.9**	**-0.6**
	comp=E,7.8nm,1.0s,mb4.7,baz=75,slow=4.4,SNR=7.3						
OBN	**Obninsk**	**69.46**	**329**	⇓*i*P	**P**	**06 26 28.1**	**-3.8**
OBN				*i*		06 26 40.2	
OBN				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
OBN				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.4						
AKASG	**Malin Array Be**	**71.82**	**323**	P	**P**	**06 26 44.9**	**-1.3**
	comp=Z,0.7nm,0.4s,mb3.9,baz=85,slow=5.2,SNR=14						
AKASG	**Malin Array Be**	**71.82**	**323**	P	**P**	**06 26 44.9**	**-1.3**
BOSA	**Boshof**	**71.86**	**239**	P	**P**	**06 26 46.5**	**-0.4**
	comp=Z,4.5nm,0.8s,mb4.4,baz=52,slow=7.5,SNR=4.3						
TIXI	**Tiksi**	**72.75**	**11**	⇑*i*P	**P**	**06 26 51.1**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,19nm,1.7s,mb4.8						
MAW	**Mawson**	**73.02**	**192**	P	**P**	**06 26 52.1**	**-0.9**
	comp=Z,4.7nm,0.8s,mb4.5,baz=19,slow=7.6,SNR=7.5						
KOLS	**Kolonicke sedl**	**75.65**	**320**	*e*P	**P**	**06 27 09.5**	**+0.9**
VSU	**Vasula**	**75.75**	**330**	⇑*i*P	**P**	**06 27 07.7**	**-1.3**
FINES	**FINESS Array B**	**77.05**	**333**	P	**P**	**06 27 15.2**	**-1.0**
	comp=Z,2.2nm,0.8s,mb4.2,baz=63,slow=4.3,SNR=6.4						
FINES				pP	pP	06 27 25.0	-0.5
	comp=Z,2.9nm,0.7s,baz=108,slow=6.0,SNR=6.1						
FINES	**FINESS Array B**	**77.05**	**333**	P	**P**	**06 27 15.2**	**-1.0**
FINES				pP	pP	06 27 25.0	-0.5
KAF	**Kangasniemi**	**77.17**	**334**	*e*p	**P**	**06 27 16.1**	**-0.7**
	comp=Z,2.9nm,0.6s,mb4.4,baz=107,slow=5.2						
KAF	**Kangasniemi**	**77.17**	**334**	*e*P	**P**	**06 27 16.1**	**-0.7**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
VYHS	**Vyhne**	**77.79**	**319**	*e*P	**P**	**06 27 21.1**	**+0.6**
VYHS				*e*	pP	06 27 29.0	-0.9
ZST	**Bratislava**	**78.88**	**319**	*e*P	**P**	**06 27 27.4**	**+0.9**
SYO	**Syowa Base**	**79.92**	**197**	⇓P	**P**	**06 27 30.8**	**-0.9**
SYO	**Syowa Base**	**79.92**	**197**	⇓PcP	PcP	06 27 38.2	-1.4
ARCES	**ARCESS Array B**	**80.03**	**341**	P	**P**	**06 27 32.5**	**+0.1**
	comp=Z,1.4nm,0.6s,mb4.1,baz=135,slow=1.7,SNR=5.5						
ARCES				pP	pP	06 27 43.0	+1.2
	comp=Z,3.4nm,0.8s,baz=288,slow=3.8,SNR=2.8						
ARCES	**ARCESS Array B**	**80.03**	**341**	P	**P**	**06 27 32.5**	**+0.1**
ARCES				pP	pP	06 27 43.0	+1.2
GERES	**GERESS Array B**	**81.21**	**319**	P	**P**	**06 27 39.6**	**+0.7**
	comp=Z,5.4nm,0.8s,mb4.5,baz=104,slow=5.5,SNR=24						
GERES				pP	pP	06 27 48.8	+0.4
	comp=Z,6.7nm,0.9s,baz=101,slow=6.8,SNR=6.3						
BRG	**Berggiesshubel**	**81.29**	**321**	*e*P	**P**	**06 27 40.5**	**+1.2**
BRG				*i*	pP	06 27 49.4	+0.7
BRG				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.7						
BRG	**Berggiesshubel**	**81.29**	**321**	*e*P	**P**	**06 27 40.5**	**+1.2**
	comp=Z,18nm,1.7s,mb4.7						
BRG				*i*	pP	06 27 49.4	+0.7
BILL	**Bilibino**	**81.51**	**21**	⇑*e*P	**P**	**06 27 41.3**	**+1.2**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
GRA1	**Grafenberg Arr**	**82.91**	**320**	*e*P	**P**	**06 27 49.6**	**+1.9**
	comp=Z,6.0nm,1.0s,mb4.6						
GRA1				*e*pP	pP	06 27 58.2	+1.0
GRF	**Grafenberg Arr**	**82.91**	**320**	*e*P	**P**	**06 27 49.6**	**+1.9**
GRF				*e**PP	pP	06 27 58.2	+1.0
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
GRF	**Grafenberg Arr**	**82.91**	**320**	*e*P	**P**	**06 27 49.6**	**+1.9**
GRF				*e**PP	pP	06 27 58.2	+1.0
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
GRF	**Grafenberg Arr**	**82.91**	**320**	*e*P	**P**	**06 27 49.6**	**+1.9**
	comp=Z,6.0nm,1.0s,mb4.6						
GRF				*e*pP	pP	06 27 58.2	+1.0
NB2	**NORSAR Subarra**	**83.96**	**331**	P	**P**	**06 27 52.6**	**-0.3**
	comp=Z,1.8nm,0.9s,mb4.2,baz=95,slow=5.0						
NOA	**NORSAR Array B**	**83.96**	**331**	P	**P**	**06 27 52.7**	**-0.2**
	comp=Z,1.3nm,0.8s,mb4.1,baz=98,slow=5.7,SNR=3.3						
NOA				pP	pP	06 28 02.5	+0.1
	comp=Z,2.6nm,0.9s,baz=95,slow=5.4,SNR=5.9						
COLA	**College**	**99.74**	**22**	*i* P	**P**	**06 29 06.0**	**-0.6**
TXAR	**Lajitas Array**	**144.58**	**26**	PKP	PKPdf	06 35 00.2	-3.6
	comp=Z,0.9nm,0.5s,baz=256,slow=1.5,SNR=11						
TXAR				pPKP		06 35 09.2	
	comp=Z,3.4nm,0.9s,baz=266,slow=1.8,SNR=11						

MDD ***14*** *06:15:35.7±2.5, 36.61N×10.88W, mb2.9/5, Error ellipse: s-maj=22.5km s-min=19.4km az=109.0, PRXIMO*

INMG ***14*** *06:15:36.4±0.9, 36.54N×10.96W, h10^{km}, ML1.7, Error ellipse: s-maj=8.1km s-min=5.6km az=97.0*

ISC 14 06:15:36.1±1.8**, 36.63N**±0.08×**10.7W**±0.1**, h10**^{km}**, n15, σ0**^{s}**.88**/25**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	**1.84**	**60**	*e*Pn	**Pn**	**06 16 08.9**	**+0.8**
PTEO				*e*Sn	**Sn**	**06 16 33.7**	**+2.0**
	2.7nm,0.1s						
PTEO	**Sao Teotonio**	**1.84**	**60**	Pn	**Pn**	**06 16 08.9**	**+0.8**
PTEO				Sn	**Sn**	**06 16 33.7**	**+2.0**
	1.4nm,0.1s						
PLOU	**Loures**	**2.57**	**29**	*e*Sn	**Sn**	**06 16 50.1**	**-0.1**
MOE	**Montemor**	**2.67**	**44**	*e*Pn	**Pn**	**06 16 20.1**	**+0.1**
MOE				*e*Sn	**Sn**	**06 16 53.3**	**+0.6**
PBEJ	**Beja**	**2.67**	**58**	*e*Sn	**Sn**	**06 16 53.7**	**+1.0**
PALC	**Alcoutim**	**2.73**	**71**	*e*Pn	**Pn**	**06 16 21.6**	**+0.8**
PALC				*e*Sn	**Sn**	**06 16 55.0**	**+0.8**
	1.7nm,0.1s						
PALC	**Alcoutim**	**2.73**	**71**	Pn	**Pn**	**06 16 21.6**	**+0.8**
PALC				Sn	**Sn**	**06 16 55.0**	**+0.8**
	0.9nm,0.1s						
EGRO	**El Granado**	**2.75**	**70**	Pn	**Pn**	**06 16 21.3**	**+0.2**
	0.0nm,0.0s,SNR=6.8						
EGRO				Sn	**Sn**	**06 16 54.8**	**+0.1**
	0.9nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.43**	**69**	Pn	**Pn**	**06 16 30.7**	**-0.1**
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**06 17 11.2**	**-0.7**
	0.6nm,0.3s,SNR=7.9						
PTOM	**Tomar**	**3.50**	**31**	*e*Sn	**Sn**	**06 17 12.3**	**-1.3**
	4.7nm,0.3s						
PTOM	**Tomar**	**3.50**	**31**	Sn	**Sn**	**06 17 12.3**	**-1.3**
	2.3nm,0.3s						
EBAD	**Badajoz**	**3.63**	**53**	Pn	**Pn**	**06 16 33.1**	**-0.6**
	0.4nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**06 17 16.7**	**-0.3**
	0.8nm,0.1s,SNR=7.9						
ESPR	**Espera**	**3.92**	**85**	Pn	**Pn**	**06 16 37.4**	**-0.3**
	0.3nm,0.2s,SNR=7.9						
ESPR				Sn	**Sn**	**06 17 23.5**	**-0.8**
	6.7nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**4.47**	**70**	Pn	**Pn**	**06 16 45.3**	**-0.3**
	0.3nm,0.3s,SNR=5.5						
ECAB				Sn	**Sn**	**06 17 35.7**	**-2.6**
	1.7nm,0.3s,SNR=7.9						
ELOB	**Lobios**	**5.62**	**21**	Sn	**Sn**	**06 17 58.0**	**-9.3**
	0.2nm,0.1s,SNR=7.9						

SKHL 14 06:21:13.7±0.3**, 52.61N×143.85E, h9**^{km}±1^{km}**, mb3.6**/1**, Sakhalin Island**

JMA ***14*** *06:23:54.4±0.1, 39.43N×142.68E, h35^{km}±1^{km}, M4.2 Broadband fault plane solution: P waves. NP1:ϕ_s177°, δ26°, λ4°. NP2:ϕ_s84°, δ88°, λ116°. Principal axes: T Plg41°, Azm18°; N Plg26°, Azm263°; P Plg38°, Azm151°;*

JMA Felt I J1.

MOS ***14*** *06:23:54.3±1.3, 39.57N×142.68E, h45^{km}, mb3.9/1 Error ellipse: s-maj=21.9km s-min=10.8km az=72.0*

NEIC ***14*** *06:23:56.7±0.7, 39.63N×142.58E, MG4.2(JMA), Error ellipse: s-maj=20.4km s-min=7.9km az=131.0*

NEIC Recorded [1 JMA] in Iwate Prefecture.

IDC ***14*** *06:23:56.6±1.6, 39.58N×142.56E, h40^{km}±7^{km}, mb3.6/8, mb1 3.9/10, mb1mx3.8/21, mbtmp3.9/10, ML3.8/2, Error ellipse: s-maj=39.0km s-min=20.0km az=160.0*

ISC 14 06:23:54.6±1.1**, 39.49N**±0.05×**142.68E**±0.09**, h45**^{km}±9^{km}**, h41**^{km}±.4^{km}**:pP-P, n24, σ0**^{s}**.71**/32**, mb3.7**/9**, 4C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.67**	**278**	P	**P**	**06 24 07.5**	**-0.2**
MIYJ				S	**S**	**06 24 16.2**	**-1.1**
JTH	**Tanohata**	**0.77**	**306**	⇓P	**P**	**06 24 09.3**	**+0.2**
JTH				S	**S**	**06 24 20.1**	**+0.3**
OFUJ	**Ofunato**	**0.88**	**243**	⇑P	**P**	**06 24 10.0**	**-0.7**
OFUJ				*e*S	**S**	**06 24 21.6**	**-1.0**
JOM	**Ohasama**	**1.07**	**269**	⇓P	**P**	**06 24 13.7**	**+0.3**
JOM				S	**S**	**06 24 27.5**	**+0.2**
JKZ	**Kuzumaki**	**1.15**	**296**	⇓P	**P**	**06 24 15.3**	**+0.9**
JKZ				S	**S**	**06 24 30.3**	**+1.0**
JMK	**Ichinoseki**	**1.25**	**245**	⇑P	**P**	**06 24 15.8**	**-0.2**
JMK				S	**S**	**06 24 31.3**	**-0.7**
JANG	**Nango**	**1.25**	**315**	⇓P	**P**	**06 24 16.5**	**+0.5**
MJAR	**Matsushiro Arr**	**4.59**	**232**	P	**P**	**06 25 04.0**	**+0.6**
	4.8nm,0.3s,baz=35,slow=13,SNR=53						
MAJO	**Matsushiro**	**4.59**	**232**	*e*P	**P**	**06 25 04.1**	**+0.7**
MAT	**Matsushiro**	**4.59**	**232**	P	**P**	**06 25 04.3**	**+0.9**
MAT				*e*S	**S**	**06 25 56.6**	**+0.4**
ASAJ	**Asahikawa**	**4.62**	**359**	P	**P**	**06 25 03.9**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ	**Asahikawa**	**4.62**	**359**	P	**P**	**06 25 03.9**	**+0.1**
	comp=Z,3.6nm,0.3s,baz=105,slow=16,SNR=6.8						
YUK	**Yuzh-Kuril'sk**	**5.13**	**27**	⇑*i*P	**P**	**06 25 07.2**	**-3.7**
YUK				*i* S	**S**	**06 26 04.0**	**-5.5**
YUK				pmax	pmax		
	comp=Z,260nm,0.2s						
YUK				smax			
	comp=N,390nm,0.4s						
YUK				smax			
	comp=E,190nm,0.5s						
YSS	**Yuzh-Sakhalins**	**7.46**	**0**	⇑*i*P	**P**	**06 25 42.7**	**-0.8**
YSS				pmax	pmax		
	comp=Z,22nm,1.3s						
SONM	**Songino Array**	**27.33**	**300**	P	**P**	**06 29 37.5**	**+0.3**
	comp=Z,0.3nm,0.4s,mb3.1,baz=85,slow=8.7,SNR=4.2						
ZAK	**Zakamensk**	**29.61**	**305**	*e*P	**P**	**06 29 57.0**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.5						
MKAR	**Makanchi Array**	**43.70**	**300**	P	**P**	**06 31 56.6**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.6,baz=84,slow=10,SNR=12						
ILAR	**Eielson Array**	**46.90**	**34**	P	**P**	**06 32 22.6**	**+0.7**
	comp=Z,1.9nm,0.7s,mb4.1,baz=278,slow=6.7,SNR=20						
ILAR				pP	pP	06 32 34.0	-0.2
	comp=Z,1.2nm,0.8s,baz=272,slow=6.5,SNR=7.1						

YKA	Yellowknife Ar	61.19	31	P	P	06 34 06.5	-0.1
	comp=Z,0.2nm,0.5s,mb3.5,baz=298,slow=7.1,SNR=4.1						
FINES	FINESS Array B	67.11	332	P	P	06 34 44.5	-0.6
	comp=Z,1.5nm,0.7s,mb4.1,baz=27,slow=8.5,SNR=5.5						
FINES				pP	pP	06 34 56.6	-1.3
	comp=Z,2.0nm,0.8s,baz=63,slow=4.3,SNR=4.0						
FINES	FINESS Array B	67.11	332	P	P	06 34 44.5	-0.6
FINES				pP	pP	06 34 56.6	-1.3
NOA	NORSAR Array B	72.30	337	P	P	06 35 15.7	-1.1
	comp=Z,0.8nm,0.9s,mb3.6,baz=65,slow=8.9,SNR=3.4						
NVAR	Mina Array Bea	72.74	54	P	P	06 35 20.8	+1.1
	comp=Z,0.8nm,0.8s,mb3.7,baz=293,slow=4.8,SNR=4.3						
AKASG	Malin Array Be	72.96	322	P	P	06 35 20.4	-0.4
	comp=Z,0.6nm,0.4s,mb3.9,baz=42,slow=6.3,SNR=5.4						
AKASG				pP	pP	06 35 32.3	-1.5
	comp=Z,1.2nm,0.5s,baz=44,slow=6.1,SNR=4.3						

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*NEIC **14** 06:24:50.8±1.1,2.35N×93.05E,h30^{km},mb4.2/1,Error ellipse: s-maj=24.0km s-min=15.5km az=59.0*

*IDC **14** 06:24:50.2±1.8,2.31N×92.94E,h28^{km}±6^{km},mb4.0/5, mb1 4.2/6,mb1mx3.9/18,mbtmp4.2/6,ML4.4/1,Error ellipse: s-maj=63.4km s-min=20.4km az=60.0*

ISC 14 06:24:49.5±1.2**,2.3N**±0.1×**93.0E**±0.1**,h33**^{km}**,n17,** σ**1^{s}22**/16**,mb4.0**/6**,1C,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	8.14	69	ePn	P	06 26 46.7	-1.5
IPM	Ipoh	8.28	74	P	P	06 26 49.8	-0.2
SNG	Songkhla	8.95	57	P	P	06 26 58.0	-1.4
	770nm,1.0s						
KGM	Kluang	10.28	92	P	P	06 27 19.1	+1.3
KKTK	Khon Kaen	16.93	34	PG	P	06 28 48.0	+2.5
CMAR	Chiang Mai Arr	17.04	19	P	P	06 28 45.3	-1.6
	0.5nm,0.3s,baz=214,slow=13,SNR=16						
CHG	Chiang Mai	17.37	19	⇑P	P	06 28 51.7	+0.6
	15nm,1.1s						
NANT	Nan	18.01	24	P	P	06 29 06.5	+7.5
	100nm,0.8s						
IMP	Imphal	22.34	2	iP	P	06 29 47.0	+1.1
SHL	Shillong	23.13	357	eP	P	06 29 53.0	-0.8
KMI	Kunming	24.52	22	P	P	06 30 09.9	+2.6
	7.0nm,0.9s,mb4.2						
FITZ	Fitzroy Crossi	37.99	124	P	P	06 32 06.2	-0.1
	14nm,0.9s,mb4.7,baz=282,slow=2.4,SNR=5.4						
MKAR	Makanchi Array	45.27	350	P	P	06 33 05.2	-0.5
	0.6nm,0.5s,mb3.7,baz=172,slow=7.8,SNR=4.6						
WRA	Warramunga Arr	46.17	121	P	P	06 33 13.4	+0.1
	5.4nm,1.0s,mb4.5,baz=305,slow=7.7,SNR=7.0						
SONM	Songino Array	46.78	12	P	P	06 33 18.1	+0.5
	0.4nm,0.5s,mb3.6,baz=191,slow=7.3,SNR=11						
SONM				pP	pP	06 33 26.5	-1.0
	1.1nm,0.5s,baz=189,slow=7.9,SNR=5.0						
BVAR	Borovoye Array	53.90	343	P	P	06 34 10.7	-1.2
	0.5nm,0.5s,mb3.7,baz=169,slow=7.3,SNR=2.1						
BVAR				pP	pP	06 34 19.2	-2.7
	1.1nm,0.6s,baz=127,slow=7.2,SNR=3.7						
TXAR	Lajitas Array	144.68	26	PKP	PKPdf	06 44 25.1	+1.6
	0.3nm,0.5s,baz=158,slow=1.3,SNR=5.9						
TXAR				pPKP		06 44 34.1	
	0.5nm,0.6s,baz=54,slow=0.4,SNR=6.2						

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*NEIC **14** 06:27:30.0±1.4,2.68N×93.11E,h30^{km},mb4.6/2,Error ellipse: s-maj=27.4km s-min=16.6km az=183.0*

*IDC **14** 06:27:30.7±3.8,2.75N×92.89E,h29^{km}±6^{km},mb4.2/4, mb1 4.4/5,mb1mx3.9/18,mbtmp4.4/5,ML4.1/1,Error ellipse: s-maj=88.0km s-min=56.7km az=133.0*

ISC 14 06:27:27.5±2.4**,2.5N**±0.3×**93.2E**±0.1**,h33**^{km}**, (h28**^{km}±1.8^{km}**:pP-P),n11,**σ**0^{s}57**/9**,mb4.5**/6**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	7.93	70	ePn	Pn	06 29 23.3	-0.1
CMAR	Chiang Mai Arr	16.80	19	Pn	P	06 31 21.5	-0.4
	0.3nm,0.3s,baz=215,slow=12,SNR=3.5						
LSA	Lhasa	27.09	356	eP	P	06 33 10.3	+0.9
	24nm,0.7s,mb4.8						
AAK	Ala-Archa	43.28	340	P	P	06 35 27.0	-0.8
	5.0nm,1.0s,mb4.2						
MKAR	Makanchi Array	45.10	349	P	P	06 35 42.0	-0.3
	4.0nm,0.5s,mb4.5,baz=172,slow=8.1,SNR=24						
MKAR				pP	pP	06 35 51.0	-1.3
	3.6nm,0.5s,baz=170,slow=9.0,SNR=6.1						
MKAR	Makanchi Array	45.10	349	P	P	06 35 42.0	-0.3
MKAR				pP	pP	06 35 51.0	-1.3
SONM	Songino Array	46.55	12	P	P	06 35 54.7	+0.9
	2.0nm,0.6s,mb4.2,baz=193,slow=8.0,SNR=4.5						
SONM				pP	pP	06 36 03.1	-0.6
	3.2nm,0.8s,baz=194,slow=8.5,SNR=5.0						
ZAL	Zalesovo	51.70	354	P	P	06 36 33.4	0.0
	4.8nm,0.4s,mb4.8,baz=294,slow=7.1,SNR=9.0						
ZAL				pP	pP	06 36 42.3	-1.1
	4.0nm,0.4s,baz=309,slow=5.1,SNR=5.2						
GERES	GERESS Array B	81.18	319	P	P	06 39 41.4	0.0
	0.7nm,0.2s,mb4.2,baz=90,slow=4.0,SNR=4.3						
TXAR	Lajitas Array	144.44	26	PKP	PKPdf	06 47 04.7	+3.6
	0.6nm,0.8s,baz=270,slow=1.8,SNR=3.5						
TXAR	Lajitas Array	144.44	26	PKP	PKPdf	06 47 04.7	+3.6

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*NEIC **14** 06:29:56.1±0.5,8.85S×130.53E,h50^{km},mb4.5/2,Error ellipse: s-maj=22.5km s-min=7.1km az=73.0*

*IDC **14** 06:29:57.2±5.5,8.97S×130.17E,h56^{km}±56^{km},mb3.8/4, mb1 4.0/6,mb1mx3.8/13,mbtmp4.1/6,ML3.9/2,Error ellipse: s-maj=45.8km s-min=27.0km az=56.0*

ISC 14 06:29:53.6±3.1**,8.94S**±0.09×**130.4E**±0.1**,h44**^{km}±31^{km}**, n11,**σ**0^{s}61**/15**,mb4.1**/6**,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.20	206	eP	P	06 32 22.2	+1.8
	9.0nm,0.3s						
FITZ				eS	S	06 34 14.2	-0.3
FITZ	Fitzroy Crossi	10.20	206	P	P	06 32 20.5	0.0
	2.4nm,0.3s,baz=18,slow=9.9,SNR=22						
FITZ				S	S	06 34 13.9	-0.6
	4.5nm,0.3s,baz=174,slow=14,SNR=4.8						
WRAB	Tennant Creek	11.59	161	ePn	P	06 32 39.2	-0.1
	7.9nm,0.5s						
WRA	Warramunga Arr	11.60	161	P	P	06 32 38.9	-0.5
	0.5nm,0.3s,baz=341,slow=13,SNR=20						
WRA				S	S	06 34 48.6	+0.1
	1.7nm,0.3s,baz=331,slow=22,SNR=7.5						
WB2	Warramunga Arr	11.60	161	eP	P	06 32 39.5	+0.1
WB2				eS	S	06 34 48.0	-0.6
STKA	Stephens Creek	25.10	157	P	P	06 35 17.2	+1.3
	3.2nm,0.8s,mb3.9,baz=327,slow=9.7,SNR=2.0						
ULN	Ulaanbaatar	60.20	342	eP	P	06 39 58.8	-0.7
	3.8nm,0.7s,mb4.5						
SONM	Songino Array	60.38	342	P	P	06 40 00.4	-0.3
	1.0nm,0.5s,mb4.1,baz=162,slow=7.5,SNR=5.8						
MKAR	Makanchi Array	70.03	327	P	P	06 41 02.6	-0.2
	2.2nm,0.6s,mb4.3,baz=120,slow=7.8,SNR=15						
AAK	Ala-Archa	72.24	320	eP	P	06 41 16.3	+0.1
	4.2nm,1.1s,mb4.3						
BVAR	Borovoye Array	79.88	328	P	P	06 41 59.7	+0.4
	0.5nm,0.5s,mb3.7,baz=141,slow=9.2,SNR=3.9						

CASC 14 06:31:59.3±2.7**,15.04N**×**90.69W,h136**^{km}±27^{km}**,MD3.8, 1C-2D,Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.89	165	⇑eP	P	06 32 20.8	-1.3
IXG				eS	S	06 32 40.6	+1.1
RBDL	Robledal	1.34	133	⇓eP	P	06 32 25.8	-0.7
RBDL				eS	S	06 32 46.5	-0.7
RTR	El Retiro	1.52	138	eP	P	06 32 29.7	+1.3
SBLS	San Blas	1.57	139	eP	P	06 32 30.6	+1.6
LCBS	La Ceiba	2.15	129	⇓eP	P	06 32 36.4	+0.5
LCBS				eS	S	06 33 05.4	+1.6

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*NEIC **14** 06:37:04.7,15.75N×61.67W,h34^{km},MD3.6(TRN),After TRN.*

TRN 14 06:37:04.4,15.85N×61.62W,h24^{km}**,5C-2D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOG	Dongo Capester	0.18	0	⇑eP	Pb	06 37 10.5	+0.8
SCG	Saint Claude	0.19	341	⇑iP	Pb	06 37 10.6	+0.8
BCG	Bois Riant Cap	0.23	360	⇓eP	Pb	06 37 11.3	+1.0
MGG	Marie-Galante	0.30	77	⇑iP	Pb	06 37 12.8	+1.6
BBL	Barber's Block	0.35	156	eP	Pb	06 37 13.5	+1.4
DWS	Wesley	0.41	133	⇓iP	Pb	06 37 16.2	+3.3
DWS				eS	Sb	06 37 21.8	+3.0
SEG	Port Louis	0.56	11	⇑eP	Pb	06 37 17.2	+1.8
DEG	La Desirade	0.71	49	⇑eP	Pb	06 37 19.1	+1.2
MBLG		1.01	329	eP	Pb	06 37 24.6	+1.5
MBLG				eS	Sb	06 37 38.6	+2.5
MLGT	Long Ground	1.01	329	eP	Pb	06 37 24.6	+1.5
MLGT				eS	Sb	06 37 38.6	+2.5
MLYT		1.03	328	iP	Pb	06 37 25.4	+2.0
MBWH		1.04	328	iP	Pb	06 37 25.2	+1.6
MBWH				iS	Sb	06 37 39.1	+2.2
FDF	Fort de France	1.20	158	eP	Pn	06 37 26.7	+0.8
FDF				eS	Sb	06 37 44.2	+2.8
BPA	Boggy Peak	1.21	349	eP	Pn	06 37 28.8	+2.7
BPA				eS	Sb	06 37 44.3	+2.5
CRM	Caravelle	1.28	148	eP	Pn	06 37 28.4	+1.3
CRM				eS	Sn	06 37 45.1	+1.4
BIM	Bigot	1.43	158	eP	Pn	06 37 32.5	+3.3
BIM				eS	Sn	06 37 48.6	+1.3
MVM	Montagne Vaucl	1.47	151	eP	Pn	06 37 31.7	+1.9
MVM				eS	Sn	06 37 50.3	+2.0
CPB	Codrington	1.79	354	eP	Pn	06 37 36.5	+2.2
CPB				eS	Sn	06 38 00.0	+3.4

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*IDC **14** 06:52:08.2±2.4,19.92S×68.80W,h135^{km}±20^{km},mb3.8/4, mb1 3.8/6,mb1mx3.5/18,mbtmp4.2/6,Error ellipse: s-maj=27.6km s-min=20.3km az=82.0*

ISC 14 06:52:08.0±1.8**,19.9S**±0.1×**68.7W**±0.2**,h151**^{km}±20^{km}**,n14,** σ**0^{s}58**/11**,mb4.0**/2**,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.65	9	P	P	06 53 04.4	-0.2
	2.0nm,0.3s,baz=194,slow=8.3,SNR=52						
LPAZ				S	S	06 53 48.6	+0.7
	1.3nm,0.3s,baz=268,slow=13,SNR=4.4						
SIV	San Ignacio	8.26	63	P	P	06 54 04.7	-1.2
	4.2nm,0.3s,baz=258,slow=11,SNR=120						
BDFB	Brasilia	20.17	81	P	P	06 56 33.2	+0.6
	2.0nm,0.5s,baz=269,slow=9.0,SNR=5.9						
PLCA	Paso Flores	20.81	184	P	P	06 56 39.0	+0.1
	2.7nm,0.6s,baz=354,slow=12,SNR=7.1						
VNA3	Neumayer Olymp	61.52	162		P	07 02 11.0	+0.1
VNA1	Neumayer--Stat	61.72	161		P	07 02 12.5	+0.2
VNA2	Neumayer--Watz	62.08	161		P	07 02 14.9	+0.2
SNAA	Sanae	63.72	161		P	07 02 25.3	0.0
DBIC	Dimbokro	68.12	74	P	P	07 02 54.8	+0.5
	6.5nm,1.0s,mb4.3,baz=240,slow=11,SNR=4.2						
YKA	Yellowknife Ar	89.76	341	P	P	07 04 48.9	-1.1
	0.4nm,0.4s,mb3.7,baz=135,slow=4.4,SNR=6.8						
WRA	Warramunga Arr	134.40	211	PKP	PKPdf	07 11 10.6	+1.6
	0.4nm,0.8s,baz=152,slow=1.8,SNR=40						
MKAR	Makanchi Array	144.24	35	PKP	PKPdf	07 11 27.4	+1.6
	0.3nm,0.3s,baz=325,slow=2.8,SNR=7.0						
JHJ	Hachijo jima 2	151.41	303	PKPbc	PKPdf	07 11 46.5	+8.6
	258nm,0.8s,baz=220,slow=21,SNR=3.9						
SONM	Songino Array	151.87	7	PKPbc	PKPdf	07 11 47.9	+10
	0.7nm,0.3s,baz=288,slow=1.4,SNR=7.3						

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*KRSC **14** 06:54:37.8±1.7,49.79N×152.19E,h367^{km}±7^{km},ML5.7*

*SKHL **14** 06:54:38.4±2.3,50.16N×151.94E,h350^{km}±20^{km},mb6.0/7, mbh6.1/4,msh5.6/8*

*BJI **14** 06:54:39.5,50.00N×151.85E,h357^{km},mB4.9,mb5.2*

*MOS **14** 06:54:39.7±0.8,50.24N×151.76E,h349^{km},mb5.0/86, Error ellipse: s-maj=6.5km s-min=3.6km az=92.8*

*NEIC **14** 06:54:40.3±0.1,50.26N×151.70E,mb4.9/143,Error ellipse: s-maj=3.7km s-min=2.2km az=168.0*

*IDC **14** 06:54:41.0±0.4,50.26N×151.69E,h348^{km}±3^{km},mb4.6/29, mb1 4.7/31,mb1mx4.7/32,mbtmp5.3/31,Error ellipse: s-maj=8.1km s-min=5.3km az=141.0*

ISC 14 06:54:39.3±0.1**,50.28N**±0.02×**151.76E**±0.02**,h343**^{km}**, h343**^{km}±.8^{km}**:pP-P,n675,**σ**0^{s}97**/741**,mb4.9**/210**,44C-57D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALID	Alaid	2.49	75	iP	P	06 55 34.2	+0.1
SKR	Severo-Kuril's	2.81	80	⇓iPN	P	06 55 39.2	+2.4
SKR				eS	S	06 56 17.4	-4.5
SKR				pmax	pmax		
	comp=N,540nm,0.5s						
SKR				pmax	pmax		
	comp=E,3μm,1.0s						
SKR				pmax	pmax		
	comp=N,8μm,2.0s						
SKR				pmax	pmax		
	comp=E,5μm,2.0s						
SKR				pmax	pmax		
	comp=Z,12μm,2.0s						
SKR				smax			
	comp=E,4μm,1.0s						
SKR				smax			
	comp=N,3μm,0.9s						
SKR				smax			
	comp=N,13μm,6.0s						
SKR				smax			
	comp=E,18μm,4.0s						
SKR	Severo-Kuril's	2.81	80	⇓iP	P	06 55 32.9	-3.9
SKR				⇓iP		06 55 32.9	
SKR				AMB	AMB	06 55 34.0	
	comp=E,7μm,2.0s						
SKR				AMB	AMB	06 55 34.0	
	comp=E,4μm,2.0s						
SKR				AMB	AMB	06 55 34.0	
	comp=E,12μm,2.0s						
SKR				AMB	AMB	06 55 34.0	
	comp=E,8μm,2.0s						
SKR				AMB	AMB	06 55 34.0	
	comp=E,5μm,2.0s						
SKR				AMB	AMB	06 55 34.0	
	comp=E,12μm,2.0s						
SKR				AMB	AMB	06 55 34.0	
	comp=E,3μm,1.0s						
SKR				AMB	AMB	06 55 34.0	
	comp=E,540nm,0.5s						
SKR				eS	S	06 56 17.4	-4.5
SKR				A		06 56 20.4	
	comp=E,4μm,1.0s						
SKR				A		06 56 20.4	
	comp=E,12μm,6.0s						
SKR				A		06 56 20.4	
	comp=E,5μm,6.0s						
SKR				A		06 56 20.4	
	comp=E,17μm,4.0s						
SKR				A		06 56 20.4	
	comp=E,18μm,4.0s						
SKR				A		06 56 20.4	
	comp=E,13μm,6.0s						
SKR				A		06 56 20.4	
	comp=E,5μm,6.0s						
SKR				A		06 56 20.4	
	comp=E,3μm,0.9s						
SKR				A		06 56 20.4	
	comp=E,1μm,0.9s						
SKR	Severo-Kuril's	2.81	80	iP	P	06 55 32.9	-3.9
SKR				eS	S	06 56 17.4	-4.5
PAU	Pauzhetka	3.42	68	iP	P	06 55 42.5	+0.1
PAU				iS	S	06 56 30.8	-1.1
PAU	Pauzhetka	3.42	68	iP	P	06 55 42.3	-0.1
PAU				eS	S	06 56 29.2	-2.7
PAU				Smax			
	comp=E,2μm,1.2s						
MIPR	Malaya Ipel'ka	3.72	56	eP	P	06 55 46.9	+1.4
APC	Apacha	4.29	50	iP	P	06 55 51.8	+0.5
APC				eS	S	06 56 44.8	-3.0
APC				Smax			
	comp=E,770nm,1.1s						
GRL	Gorelyy	4.56	58	iP	P	06 55 55.0	+0.7
GRL				iS	S	06 56 51.1	-2.0
RUS	Russkaya	4.75	60	P	P	06 55 56.2	-0.1
RUS				S	S	06 56 52.9	-3.9
RUS	Russkaya	4.75	60	iP	P	06 55 56.3	0.0
RUS				iS	S	06 56 53.1	-3.7
PET	Petropavlovsk	5.10	55	P	P	06 56 01.0	+0.8
PET				S	S	06 57 00.4	-3.3
PET	Petropavlovsk	5.10	55	⇓ePn	P	06 56 00.4	+0.3
	comp=E,648nm,1.0s						
PET	Petropavlovsk	5.10	55	eP	P	06 56 00.2	0.0
PET				⇓iP		06 56 00.2	
PET				AMB	AMB	06 56 01.6	
	comp=E,1μm,3.5s						
PET				AMB	AMB	06 56 02.3	
	comp=E,620nm,1.1s						
PET				iS	S	06 57 02.7	-1.0
PET				A		06 57 03.3	
	comp=E,4μm,8.6s						
PET				A		06 57 06.0	
	comp=E,9μm,6.1s						
PET				A		06 57 06.2	
	comp=E,1μm,1.0s						
PET				A		06 57 06.8	
	comp=E,5μm,10.0s						
PET				A		06 57 07.7	
	comp=E,2μm,0.6s						
PET				AMS	AMS	06 57 35.5	
	comp=E,2μm,13.0s						
PET				AMS	AMS	06 57 36.8	
	comp=E,3μm,12.0s						
PET	Petropavlovsk	5.10	55	iP	P	06 56 01.3	+1.1
PET				iS	S	06 57 00.4	-3.3
GNL	Ganaly	5.13	46	iP	P	06 56 01.7	+1.2
GNL				eS	S	06 57 02.4	-1.9
KOK	Koryaka	5.23	52	iP	P	06 56 03.3	+1.7
KOK				eS	S	06 57 05.3	-1.0
AVH	Avacha	5.27	53	iP	P	06 56 03.7	+1.7
AVH				eS	S	06 57 05.3	-1.8
UGLR	Uglovaya	5.28	53	iP	P	06 56 03.7	+1.5
UGLR				eS	S	06 57 06.4	-1.0
SMAR	Somma	5.30	53	iP	P	06 56 03.8	+1.4
SMAR				eS	S	06 57 07.2	-0.5
SDLR	Sedlovina	5.35	53	eP	P	06 56 04.8	+1.8
SDLR				eS	S	06 57 08.4	-0.3
NLC	Nalytchevo	5.54	55	iP	P	06 56 04.4	-0.7
NLC				iS	S	06 57 09.8	-2.7
KUR	Kuril'sk	5.69	209	iP	P	06 56 03.5	-3.3
KUR				iP		06 56 03.5	
KUR				AMB	AMB	06 56 04.0	
	comp=E,340nm,0.7s						
KUR				AMB	AMB	06 56 04.0	
	comp=E,3μm,1.0s						
KUR				iS	S	06 57 11.0	-4.6
KUR				A		06 57 12.0	
	comp=E,4μm,2.0s						
KUR				A		06 57 12.0	
	comp=E,6μm,2.0s						
KUR				A		06 57 25.0	
	comp=E,570nm,0.6s						
KUR				A		06 57 25.0	
	comp=E,300nm,0.6s						
KUR				AMS	AMS	06 57 50.0	
	comp=E,3μm,16.0s						
TYV	Tymovskoe	5.83	279	iP	P	06 56 09.4	+0.9
TYV				iP		06 56 09.4	
TYV				AMB	AMB	06 56 10.0	
	comp=E,3μm,3.0s						
TYV				AMB	AMB	06 56 10.0	
	comp=E,4μm,3.0s						
TYV				AMB	AMB	06 56 10.0	
	comp=E,470nm,0.9s						
TYV				AMB	AMB	06 56 10.0	
	comp=E,560nm,0.9s						
TYV				iS	S	06 57 22.5	+3.9
TYV				A		06 57 27.0	
	comp=E,2μm,1.8s						
TYV				A		06 57 27.5	
	comp=E,6μm,7.0s						
TYV				A		06 57 27.5	
	comp=E,6μm,7.0s						
TYV				A		06 57 27.5	
	comp=E,10μm,6.0s						
SPN	Mys Shipunski	5.87	58	P	P	06 56 07.9	-1.0
SPN				S	S	06 57 12.2	-7.1
SPN	Mys Shipunski	5.87	58	iP	P	06 56 07.8	-1.1
SPN				iS	S	06 57 14.0	-5.3
KII	Karymskiy	6.05	49	P	P	06 56 12.6	+1.6
KII				S	S	06 57 21.9	-1.1
KII	Karymskiy	6.05	49	iP	P	06 56 12.5	+1.5
KII				eS	S	06 57 22.0	-1.0
OKH	Okha	6.37	304	⇑iP	P	06 56 14.2	-0.6
OKH				eP		06 56 14.9	
OKH				AMB	AMB	06 56 15.6	
	comp=E,3μm,4.0s						
OKH				AMB	AMB	06 56 15.8	
	comp=E,1μm,0.9s						
OKH				⇓iS	S	06 57 33.6	+3.8
OKH				eS	S	06 57 34.0	+4.2
OKH				A		06 57 34.6	
	comp=E,7μm,5.0s						
OKH				A		06 57 34.6	
	comp=E,7μm,5.0s						
UGL	Uglegorsk	6.41	263	⇑iPN	P	06 56 19.0	+3.8
UGL				pmax	pmax		
	comp=N,480nm,0.6s						
UGL				pmax	pmax		
	comp=E,400nm,0.6s						
UGL				pmax	pmax		
	comp=Z,1μm,0.6s						
UGL				pmax	pmax		
	comp=Z,4μm,2.0s						
UGL				pmax	pmax		
	comp=E,2μm,4.0s						
UGL	Uglegorsk	6.41	263	iP	P	06 56 19.0	+3.8
UGL				iP		06 56 19.0	
UGL				AMB	AMB	06 56 20.0	
	comp=E,2μm,3.0s						
UGL				AMB	AMB	06 56 20.0	
	comp=E,4μm,3.0s						
UGL				AMB	AMB	06 56 20.0	
	comp=E,480nm,0.6s						
UGL				AMB	AMB	06 56 20.0	
	comp=E,400nm,0.6s						
UGL				AMB	AMB	06 56 20.0	
	comp=E,1μm,0.6s						
UGL				AMB	AMB	06 56 21.5	
	comp=E,2μm,1.0s						
UGL				iS	S	06 57 37.0	+6.5
UGL				A		06 57 43.0	
	comp=E,9μm,7.0s						
UGL				A		06 57 43.0	
	comp=E,4μm,7.0s						
YSS	Yuzh-Sakhalins	6.83	244	⇑iPN	P	06 56 22.7	+2.5
YSS				pmax	pmax		
	comp=Z,819nm,0.8s						
YSS	Yuzh-Sakhalins	6.83	244	⇑iPn	P	06 56 22.7	+2.5
	comp=Z,819nm,0.8s						
YSS				eS	S	06 57 48.6	+9.1
YSS	Yuzh-Sakhalins	6.83	244	iP	P	06 56 22.6	+2.4
YSS				iP		06 56 22.6	
YSS				AMB	AMB	06 56 23.8	
	comp=Z,730nm,1.0s						
YSS				AMB	AMB	06 56 23.8	
	comp=Z,890nm,1.0s						
YSS				AMB	AMB	06 56 23.8	
	comp=Z,1μm,1.0s						
YSS				iS	S	06 57 43.0	+3.5
YSS				A		06 57 49.0	
	comp=Z,2μm,4.0s						
YSS				A		06 57 49.0	
	comp=Z,3μm,6.0s						
YSS				A		06 57 50.7	
	comp=Z,640nm,1.5s						
TUMR	Tumrok	7.14	42	iP	P	06 56 25.8	+1.9
TUMR				eS	S	06 57 44.0	-2.1
YUK	Yuzh-Kuril'sk	7.42	215	ePN	P	06 56 24.8	-2.4
YUK				iS	S	06 57 47.5	-4.6
YUK				pmax	pmax		
	comp=E,360nm,0.3s						
YUK				pmax	pmax		
	comp=Z,690nm,0.3s						
YUK				pmax	pmax		
	comp=N,220nm,0.5s						
YUK				pmax	pmax		
	comp=Z,3μm,1.0s						
YUK				pmax	pmax		
	comp=N,2μm,0.8s						
YUK				pmax	pmax		
	comp=E,2μm,0.6s						
YUK				smax			
	comp=E,1μm,0.5s						
YUK				smax			
	comp=N,2μm,0.4s						
YUK				smax			

	comp=N,10µm,1.4s						
YUK				smax			
	comp=E,4µm,1.0s						
YUK	**Yuzh-Kuril’sk**	**7.42**	**215**	*e*P	**P**	**06 56 24.8**	**-2.4**
YUK				AMB	AMB	06 56 26.5	
	comp=E,220nm,0.4s						
YUK				AMB	AMB	06 56 26.5	
	comp=E,360nm,0.4s						
YUK				AMB	AMB	06 56 26.5	
	comp=E,690nm,0.4s						
YUK				AMB	AMB	06 56 28.0	
	comp=E,2µm,1.2s						
YUK				AMB	AMB	06 56 28.0	
	comp=E,3µm,1.2s						
YUK				*i* S	**S**	**06 57 47.5**	**-4.6**
YUK				A		06 57 56.0	
	comp=E,2µm,0.5s						
YUK				A		06 57 56.0	
	comp=E,1µm,0.5s						
YUK				A		06 57 56.0	
	comp=E,10µm,1.2s						
YUK				A		06 57 56.0	
	comp=E,4µm,1.2s						
MKZ	**Mys Kozlova**	**7.45**	**51**	P	**P**	**06 56 26.1**	**-1.4**
MKZ				S	**S**	**06 57 44.5**	**-8.2**
MKZ	**Mys Kozlova**	**7.45**	**51**	*i* P	**P**	**06 56 26.2**	**-1.3**
MKZ				*i* S	**S**	**06 57 45.6**	**-7.1**
KMNR	**Kamenistaya**	**7.50**	**40**	*i* P	**P**	**06 56 29.8**	**+1.7**
KMNR				*e*S	**S**	**06 57 51.3**	**-2.4**
KOZ	**Kozyrevsk**	**7.57**	**37**	P	**P**	**06 56 30.8**	**+1.9**
KOZ	**Kozyrevsk**	**7.57**	**37**	*i* P	**P**	**06 56 31.0**	**+2.1**
KOZ				*e*S	**S**	**06 57 52.8**	**-2.4**
KOZR	**Kozyr**	**7.58**	**37**	PN	**P**	**06 56 30.8**	**+1.7**
KPT	**Kopyto**	**7.64**	**38**	*i* P	**P**	**06 56 31.3**	**+1.5**
KPT				*e*S	**S**	**06 57 54.7**	**-2.0**
SRDR	**Sredinnyy**	**7.70**	**35**	*i* P	**P**	**06 56 32.4**	**+1.9**
SRDR				*e*S	**S**	**06 57 56.2**	**-1.8**
LGNR	**Loginova**	**7.91**	**39**	*i* P	**P**	**06 56 34.7**	**+1.7**
LGNR				*e*S	**S**	**06 57 59.9**	**-2.6**
ZLN	**Zelenaya**	**7.91**	**40**	*i* P	**P**	**06 56 35.2**	**+2.2**
ZLN				*e*S	**S**	**06 57 59.3**	**-3.2**
KRSR	**Krestovskiy**	**7.95**	**38**	*i* P	**P**	**06 56 35.0**	**+1.5**
KRSR				*e*S	**S**	**06 57 59.5**	**-4.0**
CIRR	**Tsirk**	**7.96**	**39**	*i* P	**P**	**06 56 36.0**	**+2.5**
CIRR				*e*S	**S**	**06 58 01.3**	**-2.2**
KLY	**Klyuchi**	**8.06**	**38**	P	**P**	**06 56 37.4**	**+2.7**
KLY				S	**S**	**06 58 03.8**	**-1.9**
KLY	**Klyuchi**	**8.06**	**38**	*i* P	**P**	**06 56 37.1**	**+2.4**
KLY				*e*S	**S**	**06 58 04.0**	**-1.7**
JWK2	**Keihoku**	**8.29**	**237**	P	**P**	**06 56 40.3**	**+2.8**
JWK2				*e*S	**S**	**06 58 17.4**	**+6.8**
ASAJ	**Asahikawa**	**8.76**	**229**	PN	**P**	**06 56 44.5**	**+1.3**
ASAJ				S	**S**	**06 58 22.4**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,48nm,0.3s						
ASAJ				smax			
	comp=N,4.0nm,0.3s						
ASAJ	**Asahikawa**	**8.76**	**229**	P	**P**	**06 56 44.5**	**+1.3**
	comp=N,48nm,0.3s,baz=53,slow=12,SNR=481						
ASAJ				S	**S**	**06 58 22.4**	**+1.5**
	comp=N,3.9nm,0.3s,baz=150,slow=20,SNR=2.6						
ASAJ	**Asahikawa**	**8.76**	**229**	P	**P**	**06 56 44.4**	**+1.2**
ASAJ				*e*S	**S**	**06 58 23.3**	**+2.4**
KBTR	**Krutoberegovo**	**8.90**	**44**	P	**P**	**06 56 43.3**	**-1.5**
KBTR				S	**S**	**06 58 15.3**	**-8.6**
KBTR	**Krutoberegovo**	**8.90**	**44**	*i* P	**P**	**06 56 43.6**	**-1.2**
KBTR				*e*S	**S**	**06 58 17.0**	**-6.9**
GRNR	**Gornyy**	**9.79**	**279**	*e*P	**P**	**06 56 53.1**	**-2.3**
GRNR				AMB	AMB	06 56 54.8	
	comp=N,110nm,0.8s						
GRNR				AMB	AMB	06 56 54.8	
	comp=N,240nm,0.8s						
GRNR				AMB	AMB	06 56 54.8	
	comp=N,360nm,0.8s						
BKI	**Bering**	**9.93**	**55**	*e*P	**P**	**06 56 53.7**	**-3.4**
BKI				*e*S	**S**	**06 58 30.0**	**-16**
BKI				Smax			
	comp=N,900nm,0.7s						
JEM	**Erimo**	**10.18**	**219**	P	**P**	**06 56 56.3**	**-3.9**
JEM				*e*S	**S**	**06 58 45.3**	**-6.4**
JEW	**Eniwo**	**10.27**	**228**	P	**P**	**06 57 00.8**	**-0.5**
JEW				*e*S	**S**	**06 58 52.8**	**-0.9**
OSSR	**Ossora**	**11.10**	**32**	*i* P	**P**	**06 57 10.3**	**-0.8**
JSH	**Shimam**	**11.11**	**231**	P	**P**	**06 57 10.3**	**-1.0**
JSH				*e*S	**S**	**06 59 08.0**	**-3.7**
TEY	**Ternei**	**11.48**	**249**	*e*P	**P**	**06 57 15.5**	**-0.3**
TEY				*e*S	**S**	**06 59 24.0**	**+4.2**
TEY				A		06 59 26.5	
	comp=N,320nm,1.7s						
TEY				A		06 59 26.5	
	comp=N,600nm,1.7s						
TEY				A		06 59 27.0	
	comp=N,3µm,7.0s						
TEY				A		06 59 27.0	
	comp=N,3µm,7.0s						
TEY				AMS	AMS	07 01 14.0	
	comp=N,1µm,10.0s						
JOT	**Ohata**	**11.60**	**224**	P	**P**	**06 57 12.2**	**-5.1**
JOT				*e*S	**S**	**06 59 12.3**	**-10**
EKMR	**Ekimchan**	**12.01**	**291**	*i* P	**P**	**06 57 23.1**	**+1.0**
EKMR				AMB	AMB	06 57 25.4	
	comp=N,40nm,0.8s						
EKMR				AMB	AMB	06 57 25.4	
	comp=N,120nm,0.8s						
EKMR				AMB	AMB	06 57 25.4	
	comp=N,170nm,0.8s						
JTM	**Tenmabayashi**	**12.08**	**222**	P	**P**	**06 57 17.7**	**-5.3**
JTM				*e*S	**S**	**06 59 22.0**	**-11**
SEY	**Seymchan**	**12.70**	**1**	*e*PN	**P**	**06 57 32.3**	**+1.9**
SEY				*e*S	**S**	**06 59 46.9**	**+0.8**
SEY				pmax	pmax		
	comp=Z,60nm,0.9s						
SEY				pmax	pmax		
	comp=E,30nm,0.8s						
SEY				smax			
	comp=N,100nm,3.3s						
SEY				smax			
	comp=E,2µm,8.2s						
KLR	**Kul’dur**	**12.98**	**273**	*e*P	**P**	**06 57 33.2**	**-0.6**
KLR				AMB	AMB	06 57 36.3	
	comp=E,70nm,1.4s						
KLR				AMB	AMB	06 57 36.3	
	comp=E,10.0nm,1.4s						
KLR				AMB	AMB	06 57 36.3	
	comp=E,150nm,1.4s						
KLR				*e*S	**S**	**07 00 02.8**	**+10**
KLR				A		07 00 05.2	
	comp=E,340nm,3.0s						
KLR				A		07 00 05.2	
	comp=E,830nm,3.0s						
FX1	**Attu Island--F**	**13.56**	**71**	⇑*i*P	**P**	**06 57 40.5**	**0.0**
FX1				*e*S	**S**	**07 00 13.8**	**+8.9**
SMY	**Shemya**	**14.12**	**71**	*e*P	**P**	**06 57 45.4**	**-1.5**
SMY				pmax	pmax		
	comp=Z,2µm,0.8s						
SMY	**Shemya**	**14.12**	**71**	*e*P	**P**	**06 57 45.4**	**-1.5**
	comp=Z,2µm,0.8s						
JYA	**Atsumi**	**14.48**	**221**	P	**P**	**06 57 48.9**	**-2.0**
JYA				*e*S	**S**	**07 00 20.7**	**-3.7**
KAMR	**Kamenskoye**	**14.55**	**28**	*i* P	**P**	**06 57 52.0**	**+0.6**
KAMR				*e*S	**S**	**07 00 16.7**	**-8.9**
KAMR				Smax			
	comp=Z,70nm,1.5s						
BMKR	**Bomnak**	**14.62**	**296**	*i* P	**P**	**06 57 50.5**	**-1.8**
BMKR				AMB	AMB	06 57 51.5	
	comp=Z,30nm,0.7s						
BMKR				AMB	AMB	06 57 51.5	
	comp=Z,60nm,0.7s						
BMKR				AMB	AMB	06 57 51.5	
	comp=Z,100nm,0.7s						
ZEA	**Zeya**	**15.46**	**292**	⇓*e*P	**P**	**06 57 59.0**	**-2.3**
ZEA				⇓*e*P		06 57 59.0	
ZEA				AMB	AMB	06 57 59.6	
	comp=Z,50nm,1.0s						
ZEA				AMB	AMB	06 57 59.6	
	comp=Z,130nm,1.0s						
ZEA				AMB	AMB	06 57 59.6	
	comp=Z,230nm,1.0s						
ZEA				*e*S	**S**	**07 00 46.5**	**+2.8**
ZEA				A		07 00 48.0	
	comp=Z,900nm,6.0s						
KROS	**Kirovskiy**	**15.67**	**295**	*i* P	**P**	**06 58 00.9**	**-2.6**
KROS				AMB	AMB	06 58 02.3	
	comp=Z,90nm,1.1s						
KROS				AMB	AMB	06 58 02.3	
	comp=Z,110nm,1.1s						
MDJ	**Mudanjiang**	**16.00**	**258**	P	**P**	**06 58 06.1**	**-1.0**
MDJ				XP		06 59 38.1	
MDJ				S	**S**	**07 00 55.8**	**+1.5**
MDJ				PCP	PcP	07 02 41.1	-1.6
MDJ				SCP		07 05 42.4	
MDJ				PCS		07 06 17.0	
MDJ				SCS	ScS	07 09 21.4	+0.5
MDJ				AMB	AMB		
	comp=Z,120nm,1.8s						
MAJO	**Matsushiro**	**16.85**	**221**	⇓*e*P	**P**	**06 58 14.7**	**-1.3**
MAJO				*e*S	**S**	**07 01 11.0**	**+0.5**
MAJO				pmax	pmax		
	comp=Z,161nm,0.5s						
MAJO	**Matsushiro**	**16.85**	**221**	⇓*e*P	**P**	**06 58 14.7**	**-1.3**
	comp=Z,161nm,0.5s						
MAJO				*e*S	**S**	**07 01 11.0**	**+0.5**
MAT	**Matsushiro**	**16.85**	**221**	*e*P	**P**	**06 58 15.0**	**-1.0**
MAT				*e*S	**S**	**07 01 13.0**	**+2.5**
MAT				pmax	pmax		
	comp=Z,148nm,0.5s						
MAT	**Matsushiro**	**16.85**	**221**	*e*P	**P**	**06 58 15.0**	**-1.0**
	comp=Z,148nm,0.5s						
MAT				*e*S	**S**	**07 01 13.0**	**+2.5**
MAT	**Matsushiro**	**16.85**	**221**	P	**P**	**06 58 15.1**	**-0.9**
MAT				S	**S**	**07 01 13.0**	**+2.5**
MAT	**Matsushiro**	**16.85**	**221**	P	**P**	**06 58 15.1**	**-0.9**
MAT				*e*S	**S**	**07 01 13.5**	**+3.0**
MJAR	**Matsushiro Arr**	**16.85**	**221**	P	**P**	**06 58 14.8**	**-1.2**
	comp=Z,29nm,0.3s,baz=20,slow=8.8,SNR=130						
MJAR				S	**S**	**07 01 15.8**	**+5.2**
	comp=Z,0.7nm,0.3s,baz=11,slow=20,SNR=4.4						
YAK	**Yakutsk**	**16.91**	**322**	*e*P	**P**	**06 58 16.7**	**+0.2**
YAK				pmax	pmax		
	comp=Z,218nm,0.6s						
YAK	**Yakutsk**	**16.91**	**322**	*e*P	**P**	**06 58 16.7**	**+0.2**
	comp=Z,218nm,0.6s						
YAK				*e*S	**S**	**07 01 22.7**	**+11**
JRY	**Ryogami san**	**17.02**	**218**	P	**P**	**06 58 16.5**	**-1.3**
JRY				*e*S	**S**	**07 01 13.1**	**-0.7**
CLNS	**Chul’man**	**17.18**	**303**	*e*P	**P**	**06 58 21.0**	**+1.7**
CLNS				*e*S	**S**	**07 01 25.2**	**+8.5**
CLNS				pmax	pmax		
	comp=Z,284nm,0.8s						
CLNS				pmax	pmax		
	comp=N,127nm,1.2s						
CLNS				pmax	pmax		
	comp=E,149nm,1.0s						
CLNS				smax			
	comp=N,185nm,1.2s						
CLNS				smax			
	comp=E,93nm,1.2s						
CLNS				smax			
	comp=Z,41nm,1.1s						
CLNS				MLR	MLR		
	comp=Z,200nm,12.0s						
CLNS				MLR	MLR		
	comp=N,300nm,20.0s						
CLNS				MLR	MLR		
	comp=E,100nm,15.0s						
JOD2	**Odawara 2**	**17.61**	**216**	P	**P**	**06 58 22.0**	**-1.8**
JSG	**Sagara**	**18.48**	**218**	P	**P**	**06 58 35.0**	**+2.5**
CN2	**Changchun**	**19.01**	**260**	*e*P	**P**	**06 58 36.3**	**-1.4**
CN2				*e*XP		07 00 10.8	
CN2				*e*S	**S**	**07 01 47.8**	**-2.8**
CN2				PCP	PcP	07 02 48.1	+0.5
CN2				SCS	ScS	07 09 28.8	-1.1
CN2				AMB	AMB		
	comp=Z,140nm,0.9s						
CN2				AMB	AMB		
	comp=Z,400nm,3.0s						
JWT	**Wachi**	**19.14**	**225**	P	**P**	**06 58 38.1**	**-0.9**
BILL	**Bilibino**	**19.21**	**17**	*c i*P	**P**	**06 58 39.4**	**-0.1**
BILL				*i* S	**S**	**07 01 59.4**	**+5.3**
BILL				pmax	pmax		
	comp=Z,25nm,0.6s						
BILL	**Bilibino**	**19.21**	**17**	*e*P	**P**	**06 58 39.4**	**-0.2**
	comp=Z,26nm,0.6s						
BILL				*e*ScP		07 05 49.8	
JIE	**Ise**	**19.32**	**220**	P	**P**	**06 58 42.5**	**+1.6**
KIWB	**Kanaga Island**	**19.53**	**73**	*e*P	**P**	**06 58 41.4**	**-1.4**
JAD	**Aida**	**19.98**	**227**	P	**P**	**06 58 47.5**	**+0.1**
GSTR	**Great Sitkin T**	**20.17**	**72**	*e*P	**P**	**06 58 47.4**	**-1.6**
JHS	**Saijyo**	**20.43**	**229**	P	**P**	**06 58 52.6**	**+0.9**
JWZ	**Kozaga**	**20.48**	**221**	P	**P**	**06 58 52.9**	**+0.7**
SNY	**Shenyang**	**21.20**	**257**	⇓P	**P**	**06 59 00.0**	**+0.9**
SNY				S	**S**	**07 02 28.8**	**-0.2**
SNY				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.0						
SNY				LR	LR		
	comp=N,600nm,13.8s						
SNY				LR	LR		
	comp=E,660nm,23.4s						
SNY				LR	LR		
	comp=Z,590nm,10.8s						
KS15	**Wonju Array Si**	**21.36**	**242**	*e*P	**P**	**06 59 01.3**	**+0.7**
KS15				*e*PcP	PcP	07 02 51.2	-0.9
INCN	**Inchon**	**22.04**	**244**	*e*P	**P**	**06 59 09.1**	**+1.9**
	comp=Z,88nm,0.8s,mb5.0						
JNU	**Nakatsue**	**23.04**	**230**	P	**P**	**06 59 16.1**	**-0.4**
	comp=Z,106nm,0.9s,mb5.1,baz=41,slow=8.4,SNR=25						
JNU	**Nakatsue**	**23.04**	**230**	P	**P**	**06 59 16.6**	**+0.1**
TIXI	**Tiksi**	**23.83**	**342**	*i* P	**P**	**06 59 23.8**	**+0.4**
TIXI	**Tiksi**	**23.83**	**342**	*i* Pr	**P**	**06 59 23.8**	**+0.4**
CIT	**Chita**	**23.85**	**289**	⇓*i*P	**P**	**06 59 25.1**	**+1.3**
CIT				*e*		07 09 45.5	
CIT				pmax	pmax		
	comp=Z,374nm,1.0s,mb5.6						
DL2	**Dalian**	**24.11**	**253**	P	**P**	**06 59 27.0**	**+0.7**
DL2				XP		07 01 10.0	
DL2				AMB	AMB		
	comp=Z,60nm,0.9s,mb4.8						
DL2				AMB	AMB		
	comp=Z,480nm,3.0s						
JFU	**Fukue jima 2**	**24.48**	**233**	P	**P**	**06 59 31.4**	**+1.8**
JSU	**Suzuyama**	**24.57**	**228**	P	**P**	**06 59 30.6**	**+0.2**
TNA	**Tin City**	**25.71**	**38**	*e*P	**P**	**06 59 40.4**	**-0.1**
	comp=Z,42nm,0.9s,mb4.7						
TIA	**Tai’an**	**28.59**	**254**	P	**P**	**07 00 05.4**	**-1.1**
TIA				AMB	AMB		
	comp=Z,70nm,1.1s,mb4.8						
ULN	**Ulaanbaatar**	**29.06**	**283**	*i* P	**P**	**07 00 10.7**	**+0.2**
ULN	**Ulaanbaatar**	**29.06**	**283**	*i* Pr	**P**	**07 00 10.7**	**+0.2**
HHC	**Hu-ho-hao-te**	**29.36**	**267**	*e*P	**P**	**07 00 13.3**	**+0.1**
HHC				AP		07 01 19.4	
HHC				XP	sP	07 01 57.8	+0.7
HHC				PCP	PcP	07 03 12.8	+2.7
HHC				S	**S**	**07 04 43.0**	**+2.1**
HHC				PCS		07 06 55.1	
HHC				SCS	ScS	07 10 11.9	+0.3
HHC				AMB	AMB		
	comp=Z,60nm,1.2s,mb4.7						
HHC				AMB	AMB		
	comp=Z,170nm,6.3s						
HHC				LR	LR		
	comp=N,200nm,16.7s						
HHC				LR	LR		
	comp=E,440nm,20.2s						
HHC				LR	LR		
	comp=Z,640nm,22.6s						
SONM	**Songino Array**	**29.48**	**283**	P	**P**	**07 00 14.4**	**+0.2**
	comp=Z,12nm,0.4s,mb4.5,baz=71,slow=7.7,SNR=148						
SONM				PcP	PcP	07 03 09.0	-1.3
	comp=Z,18nm,0.8s,baz=101,slow=2.1,SNR=13						
SONM				ScP		07 06 17.0	
	comp=Z,10nm,1.2s,baz=90,slow=1.2,SNR=11						
JOW	**Kunigami**	**29.52**	**226**	P	**P**	**07 00 13.0**	**-1.7**
	comp=Z,79nm,0.9s,mb4.9,baz=122,slow=27,SNR=8.2						
JOW				S	**S**	**07 04 45.0**	**+1.5**
	comp=Z,50nm,0.9s,baz=251,slow=25,SNR=4.1						
SSE	**Sheshan**	**29.76**	**242**	*e*P	**P**	**07 00 15.8**	**-1.0**
SSE				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.7						
SSE	**Sheshan**	**29.76**	**242**	*e*P	**P**	**07 00 15.8**	**-1.0**
	comp=Z,45nm,0.8s,mb4.8						
TLY	**Talaya**	**29.90**	**292**	*e*P	**P**	**07 00 19.0**	**+1.2**
TLY				*e*		07 01 28.1	
TLY				*e*S	**S**	**07 04 53.1**	**+3.9**
TLY				pmax	pmax		
	comp=Z,343nm,0.8s,mb5.6						
TLY	**Talaya**	**29.90**	**292**	⇓*i*P	**P**	**07 00 19.2**	**+1.4**
	comp=Z,293nm,0.7s,mb5.6						
TLY				*e*PcP	PcP	07 03 10.6	-0.7
TLY				*e*ScP		07 06 18.7	
NJ2	**Nanjing**	**30.40**	**246**	*e*P	**P**	**07 00 21.5**	**-0.8**
NJ2				AP	pP	07 01 28.1	+0.8
NJ2				PP	PP	07 01 40.0	+1.8
NJ2				XP	sP	07 02 08.1	+1.4
NJ2				S	**S**	**07 04 55.0**	**-2.2**
NJ2				XS		07 06 56.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.5						
NJ2				LR	LR		
	comp=N,680nm,31.1s						
NJ2				LR	LR		
	comp=E,530nm,28.0s						
NJ2				LR	LR		
	comp=Z,290nm,23.0s						
TTA	**Tatalina**	**30.48**	**45**	*e*P	**P**	**07 00 22.9**	**+0.2**
BTO	**Baotou**	**30.48**	**268**	*e*P	**P**	**07 00 22.1**	**-0.8**
ZAK	**Zakamensk**	**30.51**	**289**	⇑*i*P	**P**	**07 00 24.1**	**+1.0**
ZAK				*e*	pP	07 01 32.6	+4.4
ZAK				pmax	pmax		
	comp=Z,140nm,1.0s,mb5.2						
SVW2	**Sparrevohn**	**30.74**	**49**	*e*P	**P**	**07 00 25.5**	**+0.5**
MOY	**Mondy**	**31.48**	**293**	*e*P	**P**	**07 00 32.8**	**+1.4**
MOY				pmax	pmax		
	comp=Z,177nm,1.6s,mb5.0						
IMA	**Indian Mountai**	**31.57**	**39**	*e*P	**P**	**07 00 32.9**	**+0.9**
IMA				pmax	pmax		
	comp=Z,41nm,0.4s,mb5.0						
IMA	**Indian Mountai**	**31.57**	**39**	*e*P	**P**	**07 00 32.9**	**+0.9**
	comp=Z,41nm,0.4s,mb5.0						
RSO	**Redoubt South**	**32.18**	**50**	*e*P	**P**	**07 00 37.7**	**+0.4**
SPU	**Mount Spurr**	**32.44**	**49**	*e*P	**P**	**07 00 39.9**	**+0.3**
SPU				*e*ScP		07 06 25.6	
KDAK	**Kodiak Island**	**32.69**	**55**	*e*P	**P**	**07 00 40.5**	**-1.2**
MCK	**McKinley**	**33.63**	**44**	*e*P	**P**	**07 00 49.6**	**0.0**
MCK				pmax	pmax		
	comp=Z,15nm,0.4s,mb4.6						
MCK	**McKinley**	**33.63**	**44**	*e*P	**P**	**07 00 49.6**	**0.0**
	comp=Z,15nm,0.4s,mb4.6						
MCK				*e*ScP		07 06 31.0	
SML	**Sawmill**	**34.13**	**47**	⇑*e*P	**P**	**07 00 53.9**	**0.0**
WHN	**Wuhan**	**34.15**	**249**	*e*P	**P**	**07 00 54.0**	**-0.4**
ILAR	**Eielson Array**	**34.43**	**42**	P	**P**	**07 00 56.2**	**-0.1**
	comp=Z,13nm,0.4s,mb4.5,baz=266,slow=4.7,SNR=322						
ILAR				pP	pP	07 02 02.1	-0.9
	comp=Z,7.1nm,0.8s,baz=267,slow=8.0,SNR=4.2						
ILAR				S	**S**	**07 05 58.5**	**-0.6**
	comp=Z,0.9nm,1.0s,baz=266,slow=12,SNR=4.8						
ILAR				ScP		07 06 32.5	
	comp=Z,1.6nm,0.7s,baz=270,slow=3.8,SNR=6.9						
THY	**Trims Highway**	**35.08**	**44**	*e*P	**P**	**07 01 01.7**	**-0.1**
XAN	**Xi’an**	**35.11**	**259**	P	**P**	**07 01 02.5**	**+0.1**
XAN				AMB	AMB		
	comp=Z,60nm,1.4s,mb4.6						
DIV	**Divide**	**35.46**	**48**	⇑*i*P	**P**	**07 01 05.4**	**+0.4**
	comp=Z,134nm,0.6s,mb5.3						
EYAK	**Cordova Ski Ar**	**35.59**	**49**	*e*P	**P**	**07 01 06.5**	**+0.3**
EYAK				*e*ScP		07 06 37.9	
MENT	**Mentasta**	**36.07**	**45**	*e*P	**P**	**07 01 11.1**	**+1.0**
LZH	**Lanzhou**	**37.05**	**266**	⇓*i*P	**P**	**07 01 20.0**	**+1.4**
LZH				AP	pP	07 02 26.0	0.0
LZH				XP	sP	07 03 03.4	-1.1
LZH				PCP	PcP	07 03 32.0	+0.2
LZH				S	**S**	**07 06 38.0**	**-1.0**
LZH				SCP		07 06 45.0	
LZH				XS		07 08 38.0	
LZH				SS	SS	07 09 32.5	+0.3
LZH				SCS	ScS	07 10 53.5	+1.6
LZH				AMB	AMB		
	comp=Z,360nm,1.2s,mb5.5						
LZH				AMB	AMB		
	comp=Z,1µm,4.0s						
LZH	**Lanzhou**	**37.05**	**266**	⇓*i*P	**P**	**07 01 20.0**	**+1.4**
LZH				*PP	pP	07 02 26.0	0.0
LZH				*SP	sP	07 03 03.4	-1.1
LZH						07 03 32.0	
LZH				S	**S**	**07 06 38.0**	**-1.0**
LZH				*SS		07 08 38.0	
LZH				SS	SS	07 09 32.5	+0.3
LZH						07 10 53.5	
LZH				pmax	pmax		
	comp=Z,365nm,1.2s,mb5.5						
LZH	**Lanzhou**	**37.05**	**266**	⇓*i*P	**P**	**07 01 20.0**	**+1.4**
	comp=Z,365nm,1.2s,mb5.5						
LZH				pP	pP	07 02 26.0	0.0
LZH				sP	sP	07 03 03.4	-1.1
LZH				PcP	PcP	07 03 32.0	+0.2
LZH				S	**S**	**07 06 38.0**	**-1.0**
LZH				ScP		07 06 45.0	
LZH				sS		07 08 38.0	
LZH				SS	SS	07 09 32.5	+0.3
LZH				ScS	ScS	07 10 53.5	+1.6
GTA	**Gaotai**	**37.68**	**274**	⇓*i*P	**P**	**07 01 25.3**	**+1.5**
GTA				AP	pP	07 02 31.8	+0.4
GTA				PP	PP	07 03 03.0	+4.0
GTA				XP	sP	07 03 12.0	+2.2
GTA				PCP	PcP	07 03 33.3	-0.4
GTA				SCP		07 06 46.3	
GTA				S	**S**	**07 06 49.4**	**+0.9**
GTA				PCS		07 07 22.5	
GTA				XS		07 08 50.1	
GTA				SS	SS	07 09 44.4	-0.2
GTA				SCS	ScS	07 10 55.5	0.0
GTA				AMB	AMB		
	comp=Z,160nm,0.9s,mb5.2						
GTA				AMB	AMB		
	comp=Z,120nm,5.7s						
GTA				LR	LR		
	comp=N,230nm,13.4s						
GTA				LR	LR		
	comp=E,250nm,13.4s						
GTA				LR	LR		
	comp=Z,800nm,14.1s						
INK	**Inuvik**	**39.21**	**35**	P	**P**	**07 01 36.4**	**+0.4**
INK						07 03 17.0	
INK				S	**S**	**07 07 10.5**	**-0.4**
INK				pmax	pmax		
	comp=Z,31nm,0.3s						
INK				pmax	pmax		
	comp=Z,11nm,1.1s						
INK				smax			
	comp=N,6.0nm,0.8s						
INK	**Inuvik**	**39.21**	**35**	P	**P**	**07 01 36.4**	**+0.3**
	comp=N,31nm,0.3s,mb5.0,baz=301,slow=7.2,SNR=424						
INK				PP	PP	07 03 17.0	+1.7
	comp=N,11nm,1.1s,baz=264,slow=9.6,SNR=4.8						
INK				S	**S**	**07 07 10.4**	**-0.4**
	comp=N,5.7nm,0.8s,baz=131,slow=29,SNR=14						
INK	**Inuvik**	**39.21**	**35**	⇑*e*P	**P**	**07 01 36.8**	**+0.8**
	comp=N,42nm,0.4s,mb5.0						
INK				*e*PP	PP	07 03 15.6	+0.4
INK				*e*ScP		07 06 52.0	
GZH	**Guangzhou**	**40.36**	**242**	P	**P**	**07 01 40.8**	**-5.1**
CVP	**Callao Caves**	**40.37**	**227**	*e*P	**P**	**07 01 46.0**	**0.0**
	comp=N,21µm,1.0s						
NVS	**Novosibirsk**	**40.40**	**304**	⇓*i*P	**P**	**07 01 46.0**	**+0.1**
NVS				*e**PP	pP	07 02 56.5	+2.3
NVS				*i*		07 03 29.8	
NVS				*i* S	**S**	**07 07 26.4**	**-2.2**
NVS				*e*		07 11 08.5	
NVS				pmax	pmax		
	comp=E,185nm,1.7s						
NVS				pmax	pmax		
	comp=Z,182nm,1.7s,mb5.0						
NVS				pmax	pmax		
	comp=N,139nm,1.9s						
NVS				pmax	pmax		
	comp=Z,41nm,1.0s,mb4.6						
NVS				pmax	pmax		
	comp=N,20nm,1.5s						
NVS				pmax	pmax		
	comp=E,17nm,1.4s						
NVS				smax			
	comp=N,26nm,1.5s						
NVS				smax			
	comp=E,31nm,1.2s						
CD2	**Chengdu**	**40.44**	**260**	P	**P**	**07 01 46.8**	**+0.3**
CD2				AMB	AMB		
	comp=Z,80nm,1.0s,mb4.9						
GYA	**Guiyang**	**41.76**	**252**	⇑*i*P	**P**	**07 01 56.1**	**-1.1**
GYA				AP	pP	07 03 05.8	-0.1
GYA				XP	sP	07 03 44.6	+0.7
GYA				S	**S**	**07 07 44.8**	**-3.8**
GYA				SCS	ScS	07 11 18.1	-1.6

GYA				AMB	AMB		
	comp=Z,110nm,0.8s,mb5.0						
SIT	**Sitka**	**41.81**	**52**	*e*P	**P**	**07 01 59.3**	**+2.1**
SIT				pmax	pmax		
	comp=Z,99nm,1.4s,mb4.8						
SIT	**Sitka**	**41.81**	**52**	*e*P	**P**	**07 01 59.3**	**+2.1**
	comp=Z,99nm,1.4s,mb4.8						
BALP	**Baler**	**42.19**	**226**	*e*P	**P**	**07 02 00.3**	**-0.5**
WMQ	**Urumqi**	**42.92**	**287**	*e*P	**P**	**07 02 07.0**	**+0.8**
WMQ				AP	pP	07 03 17.1	+1.9
WMQ				XP	sP	07 03 55.9	+2.6
WMQ				AMB	AMB		
	comp=Z,110nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,270nm,4.6s						
PVCP	**Virac**	**42.94**	**221**	*e*P	**P**	**07 02 06.9**	**+0.1**
SCZP	**Santa Cruz**	**42.95**	**228**	*e*P	**P**	**07 02 05.8**	**-1.0**
DLBC	**Dease Lake**	**43.84**	**48**	P	**P**	**07 02 14.4**	**+1.0**
	comp=Z,23nm,0.6s,mb4.5,baz=289,slow=7.3,SNR=68						
DLBC				ScP		07 07 10.6	
	comp=Z,1.9nm,0.5s,baz=273,slow=9.8,SNR=5.2						
DLBC	**Dease Lake**	**43.84**	**48**	*e*P	**P**	**07 02 15.4**	**+2.0**
DLBC				*e*ScP		07 07 11.7	
MKAR	**Makanchi Array**	**44.61**	**294**	P	**P**	**07 02 19.5**	**-0.2**
MKAR						07 03 54.9	
MKAR				S	**S**	**07 08 29.9**	**+0.7**
MKAR	**Makanchi Array**	**44.61**	**294**	P	**P**	**07 02 19.5**	**-0.2**
	comp=Z,93nm,0.7s,mb5.0,baz=65,slow=7.9,SNR=415						
MKAR				PcP	PcP	07 03 54.9	-1.5
	comp=Z,11nm,0.6s,baz=68,slow=5.2,SNR=6.0						
MKAR				ScP		07 07 12.8	
	comp=Z,7.9nm,0.8s,baz=45,slow=3.4,SNR=10						
MKAR				S	**S**	**07 08 29.9**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=67,slow=11,SNR=2.1						
MKAR	**Makanchi Array**	**44.61**	**294**	P	**P**	**07 02 19.5**	**-0.2**
MKAR				PcP	PcP	07 03 54.9	-1.5
MKAR				ScP		07 07 12.8	
MKAR				S	**S**	**07 08 29.9**	**+0.6**
OTRP	**Odiongan**	**44.96**	**223**	*e*P	**P**	**07 02 23.0**	**+0.1**
KMI	**Kunming**	**45.15**	**255**	⇓P	**P**	**07 02 24.1**	**-0.1**
KMI				AP	pP	07 03 34.4	+0.6
KMI				PCP	PcP	07 03 58.5	0.0
KMI				XP	sP	07 04 14.4	+2.5
KMI				PP	PP	07 04 17.1	+3.0
KMI				S	**S**	**07 08 35.6**	**-1.5**
KMI				XS		07 10 42.0	
KMI				AMB	AMB		
	comp=Z,110nm,0.8s,mb5.0						
KMI				AMB	AMB		
	comp=Z,230nm,3.1s						
KMI	**Kunming**	**45.15**	**255**	⇓P	**P**	**07 02 24.1**	**-0.1**
	comp=Z,111nm,0.8s,mb5.0						
KMI				pP	pP	07 03 34.4	+0.6
KMI				PcP	PcP	07 03 58.5	0.0
KMI				sP	sP	07 04 14.4	+2.5
KMI				PP	PP	07 04 17.1	+3.0
KMI				S	**S**	**07 08 35.6**	**-1.5**
KMI				sS		07 10 42.0	
SJMP	**San Jose**	**45.28**	**224**	*e*P	**P**	**07 02 25.2**	**-0.2**
RES	**Resolute Bay**	**47.79**	**19**	*e*P	**P**	**07 02 42.8**	**-1.2**
RES				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.5						
RES	**Resolute Bay**	**47.79**	**19**	*e*P	**P**	**07 02 42.8**	**-1.2**
	comp=Z,30nm,1.0s,mb4.5						
RES				*e*ScP		07 07 28.0	
BVA0	**Borovoye Array**	**47.98**	**306**	*i* P	**P**	**07 02 45.7**	**0.0**
BVA0				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.0						
BVAR	**Borovoye Array**	**47.98**	**306**	P	**P**	**07 02 45.9**	**+0.2**
	comp=Z,50nm,0.5s,mb5.0,baz=58,slow=7.5,SNR=303						
BVAR				PcP	PcP	07 04 06.9	-1.4
	comp=Z,18nm,0.4s,baz=87,slow=4.4,SNR=19						
BVAR				ScP		07 07 27.1	
	comp=Z,5.0nm,0.7s,baz=83,slow=3.0,SNR=6.5						
BVAR				S	**S**	**07 09 17.4**	**+1.0**
	comp=Z,5.2nm,1.1s,baz=63,slow=9.9,SNR=4.4						
PAGZ	**Pagadian**	**48.44**	**219**	*e*P	**P**	**07 02 48.4**	**-1.4**
YKW3	**Yellowknife Ar**	**48.63**	**38**	⇑*e*P	**P**	**07 02 50.7**	**+0.2**
YKW3				*e*pP	pP	07 04 02.0	+0.7
YKW3				*e*ScP		07 07 30.8	
YKA	**Yellowknife Ar**	**48.67**	**38**	P	**P**	**07 02 50.7**	**-0.1**
YKA				*PP	pP	07 04 02.4	+0.8
YKA				S	**S**	**07 09 27.0**	**+1.1**
YKA	**Yellowknife Ar**	**48.67**	**38**	P	**P**	**07 02 50.7**	**-0.1**
	comp=Z,13nm,0.4s,mb4.5,baz=302,slow=7.0,SNR=115						
YKA				pP	pP	07 04 02.3	+0.7
	comp=Z,4.2nm,0.8s,baz=301,slow=7.7,SNR=2.5						
YKA				ScP		07 07 30.9	
	comp=Z,6.6nm,0.9s,baz=301,slow=4.3,SNR=18						
YKA				S	**S**	**07 09 27.0**	**+1.1**
	comp=Z,1.6nm,1.1s,baz=306,slow=14,SNR=3.7						
YKA	**Yellowknife Ar**	**48.67**	**38**	P	**P**	**07 02 50.7**	**-0.2**
YKA				pP	pP	07 04 02.4	+0.8
YKA				ScP		07 07 30.9	
YKA				S	**S**	**07 09 27.0**	**+1.1**
LSA	**Lhasa**	**49.30**	**269**	P	**P**	**07 02 57.0**	**+0.9**
TKM2	**Tokmak 2**	**50.72**	**293**	P	**P**	**07 03 07.2**	**+0.7**
	SNR=54						
ULHL	**Ulahol**	**50.73**	**292**	P	**P**	**07 03 08.0**	**+1.4**
	SNR=19						
SOKR	**Solikamsk**	**50.81**	**319**	*d* *i*P	**P**	**07 03 03.7**	**-3.2**
SOKR				pmax	pmax		
	comp=Z,70nm,1.0s,mb4.8						
IMP	**Imphal**	**50.93**	**262**	*i* P	**P**	**07 03 07.0**	**-1.2**
NANT	**Nan**	**51.12**	**251**	⇓P	**P**	**07 03 09.0**	**-0.7**
	comp=Z,500nm,0.6s,mb5.9						
USP	**Ospenovka**	**51.16**	**294**	P	**P**	**07 03 10.2**	**+0.5**
	SNR=143						
CHMS	**Chumysh**	**51.17**	**293**	P	**P**	**07 03 10.2**	**+0.5**
	SNR=35						
KBK	**Karagaybulak**	**51.26**	**293**	P	**P**	**07 03 11.2**	**+0.7**
	SNR=12						
FRU	**Bishkek**	**51.35**	**293**	⇓*i*P	**P**	**07 03 12.0**	**+0.9**
FRU				*e*	pP	07 04 20.0	-2.8
FRU				pmax	pmax		
	comp=Z,200nm,1.5s,mb5.1						
POHA	**Pohakuloa**	**51.40**	**107**	*e*P	**P**	**07 03 10.9**	**-0.8**
	comp=Z,894nm,0.6s						
KZA	**Kyzart**	**51.43**	**292**	P	**P**	**07 03 13.2**	**+1.5**
	SNR=81						
AAK	**Ala-Archa**	**51.54**	**293**	P	**P**	**07 03 13.1**	**+0.6**
	SNR=46						
AAK	**Ala-Archa**	**51.54**	**293**	⇓*i*P	**P**	**07 03 12.0**	**-0.5**
AAK				*e*	pP	07 04 19.4	-4.9
AAK				pmax	pmax		
	comp=Z,76nm,0.8s,mb5.1						
AAK	**Ala-Archa**	**51.54**	**293**	⇓*i*P	**P**	**07 03 12.0**	**-0.6**
	comp=Z,76nm,0.8s,mb5.1						
AAK				*e*PcP	PcP	07 04 19.4	-2.1
AAK				*e*ScP		07 07 41.6	
SHL	**Shillong**	**51.68**	**265**	⇓*i*P	**P**	**07 03 13.0**	**-0.8**
UCH	**Uchtor**	**51.77**	**293**	P	**P**	**07 03 15.0**	**+0.8**
	SNR=23						
ARU	**Arti**	**51.84**	**315**	⇓*i*P	**P**	**07 03 14.4**	**-0.1**
ARU				*i*		07 04 20.8	
ARU				*e*	pP	07 04 27.5	+1.1
ARU				*i*		07 05 13.2	
ARU				*e*		07 12 22.1	
ARU				*e*SS	SS	07 13 53.9	+2.4
ARU				pmax	pmax		
	comp=Z,133nm,0.7s,mb5.4						
ARU	**Arti**	**51.84**	**315**	⇓*i*P	**P**	**07 03 14.3**	**-0.2**
	comp=Z,172nm,0.7s,mb5.5						
ARU				*e*PcP	PcP	07 04 21.0	-1.5
ARU				*e*PP	PP	07 05 13.5	-3.1
EKS2	**Erkin-Say**	**51.95**	**294**	P	**P**	**07 03 16.2**	**+0.6**
	SNR=86						
CHG	**Chiang Mai**	**52.18**	**253**	⇓P	**P**	**07 03 17.3**	**-0.2**
	comp=Z,107nm,0.9s,mb5.2						
PGC	**Sidney**	**52.21**	**57**	*e*P	**P**	**07 03 16.9**	**-0.5**
	comp=Z,20nm,0.6s,mb4.6						
AML	**Almayashu**	**52.31**	**293**	P	**P**	**07 03 19.3**	**+1.0**
	SNR=51						
CMAR	**Chiang Mai Arr**	**52.45**	**253**	P	**P**	**07 03 19.1**	**-0.5**
	comp=Z,37nm,0.9s,mb4.7,baz=26,slow=7.4,SNR=72						
CMAR				PcP	PcP	07 04 25.1	-0.1
	comp=Z,21nm,0.7s,baz=13,slow=3.2,SNR=15						
CMAR				ScP		07 07 47.6	
	comp=Z,3.1nm,0.7s,baz=19,slow=3.8,SNR=6.3						
KSH	**Kashi**	**52.56**	**289**	*i* PR		07 03 20.0	
KSH				*e*PCP	PcP	07 04 25.0	-0.4
KSH				*e*AP	pP	07 04 33.3	+1.1
KSH				*e*XP	sP	07 05 11.3	+1.6
KSH				*e*PP	PP	07 05 25.0	+1.2
KSH				*e*SCP		07 07 47.0	
KSH				*e*PCS		07 08 22.3	
KSH				*e*S	**S**	**07 10 18.8**	**-0.3**
KSH				*e*XS		07 12 27.0	
KSH				*e*SCS	ScS	07 12 29.0	-1.7
KSH				*e*SS	SS	07 14 01.3	-2.3
KSH				AMB	AMB		
	comp=Z,550nm,1.8s,mb5.6						
DAG	**Danmarks Havn**	**53.08**	**357**	⇑*e*P	**P**	**07 03 22.0**	**-1.4**
	comp=Z,4.0nm,1.0s						
DAG				*e*		07 04 25.0	
DAG	**Danmarks Havn**	**53.08**	**357**	⇑*i*P	**P**	**07 03 22.0**	**-1.4**
	comp=Z,4.0nm,1.0s						
DAG				*e*		07 04 25.0	
KKM	**Kota Kinabalu**	**53.17**	**226**	P	**P**	**07 03 26.1**	**+1.2**
RPW	**Rockport**	**53.37**	**56**	P	**P**	**07 03 25.7**	**-0.2**
KKAR	**Karatay Array**	**53.58**	**296**	*i* P	**P**	**07 03 26.9**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,34nm,0.7s,mb4.8						
KEV	**Kevo**	**53.72**	**339**	*e*p	**P**	**07 03 26.6**	**-1.5**
	comp=Z,9.9nm,0.6s,mb4.3						
KEV	**Kevo**	**53.72**	**339**	*e*P	**P**	**07 03 26.6**	**-1.5**
KEV				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
APA	**Apatity**	**53.75**	**335**	⇑*i*P	**P**	**07 03 27.5**	**-0.8**
APA				pmax	pmax		
	comp=Z,49nm,1.0s,mb4.8						
NST	**Nakhon Sawan**	**53.87**	**249**	P	**P**	**07 03 30.0**	**+0.2**
	comp=Z,50nm,0.8s,mb4.9						
GUN	**Gumba**	**53.90**	**272**	*e*P	**P**	**07 03 30.1**	**+0.2**
	comp=Z,140nm,0.5s,mb5.5						
ARCES	**ARCESS Array B**	**54.23**	**340**	P	**P**	**07 03 30.7**	**-1.0**
	comp=Z,20nm,0.7s,mb4.5,baz=24,slow=7.5,SNR=62						
ARCES				PcP	PcP	07 04 30.1	-1.3
	comp=Z,5.2nm,0.7s,baz=45,slow=5.1,SNR=4.1						
ARCES				ScP		07 07 54.5	
	comp=Z,4.1nm,0.8s,baz=51,slow=7.8,SNR=4.3						
KKN	**Kakani**	**54.37**	**272**	*e*P	**P**	**07 03 33.5**	**+0.2**
	comp=Z,184nm,0.6s,mb5.6						
KKN	**Kakani**	**54.37**	**272**	*e*P	**P**	**07 03 33.5**	**+0.2**
KKN				pmax	pmax		
	comp=Z,92nm,0.6s,mb5.3						
PKI	**Pulchoki**	**54.44**	**272**	*e*P	**P**	**07 03 33.7**	**-0.1**
	comp=Z,355nm,1.3s,mb5.5						
PKI	**Pulchoki**	**54.44**	**272**	*e*P	**P**	**07 03 33.7**	**-0.1**
PKI				pmax	pmax		
	comp=Z,178nm,1.3s,mb5.2						
TWW	**Teanaway**	**54.51**	**57**	P	**P**	**07 03 34.8**	**+0.7**
EDM	**Edmonton**	**54.55**	**47**	⇑*i*P	**P**	**07 03 34.1**	**-0.2**
EDM				*e*pP	pP	07 04 47.4	+0.4
EDM				*e*ScP		07 07 56.9	
DMN	**Daman**	**54.60**	**272**	*e*P	**P**	**07 03 35.4**	**+0.5**
	comp=Z,435nm,1.0s,mb5.7						
GKN	**Gorkha**	**54.63**	**273**	*e*P	**P**	**07 03 35.3**	**+0.1**
	comp=Z,860nm,1.3s,mb5.9						
EBG	**Ellensburg**	**54.81**	**57**	P	**P**	**07 03 36.5**	**+0.3**
KOLN	**Koldanda**	**55.46**	**273**	*e*P	**P**	**07 03 41.1**	**+0.1**
	comp=Z,306nm,0.9s,mb5.6						
AB31	**Akbulak array**	**55.52**	**307**	P	**P**	**07 03 40.8**	**-0.3**
AB31				pmax	pmax		
	comp=Z,26nm,0.5s,mb4.8						
HBO	**Huckleberry Mo**	**55.77**	**61**	P	**P**	**07 03 43.9**	**+0.8**
NEW	**Newport**	**55.79**	**54**	P	**P**	**07 03 42.9**	**-0.2**
NEW						07 04 37.5	
NEW				*PP	pP	07 04 56.7	+0.4
NEW				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NEW	**Newport**	**55.79**	**54**	P	**P**	**07 03 42.9**	**-0.1**
	comp=Z,6.3nm,0.5s,mb4.2,baz=310,slow=8.5,SNR=17						
NEW				PcP	PcP	07 04 37.5	-0.2
	comp=Z,4.8nm,0.7s,baz=243,slow=3.3,SNR=4.6						
NEW				pP	pP	07 04 56.7	+0.4
	comp=Z,4.3nm,0.9s,baz=321,slow=9.4,SNR=2.3						
NEW	**Newport**	**55.79**	**54**	*e*P	**P**	**07 03 42.6**	**-0.4**
	comp=Z,25nm,1.1s,mb4.5						
NEW				*e*PcP	PcP	07 04 37.6	-0.1
NEW				*e*pP	pP	07 04 57.0	+0.7
CROR	**Criterion Ridg**	**55.79**	**59**	P	**P**	**07 03 43.7**	**+0.5**
LGTI	**Lohaghat**	**56.45**	**277**	*e*P	**P**	**07 03 48.5**	**+0.5**
PINOR	**Pine Mountain**	**56.60**	**60**	P	**P**	**07 03 50.1**	**+1.3**
BOK	**Bokaro**	**56.77**	**268**	*e*x	x	07 04 41.6	
BOK				AMb	AMB	07 04 43.4	
	comp=Z,59nm,1.0s,mb4.9						
KHMM	**Horse Mountain**	**56.87**	**64**	*e*P	**P**	**07 03 51.7**	**+1.0**
YBH	**Yreka Blue Hor**	**56.90**	**63**	*e*P	**P**	**07 03 51.5**	**+0.6**
YBH				*e**PP	pP	07 05 06.9	+2.4
YBH				pmax	pmax		
	comp=Z,18nm,0.7s						
YBH	**Yreka Blue Hor**	**56.90**	**63**	P	**P**	**07 03 52.0**	**+1.0**
	comp=Z,19nm,0.8s,mb4.5,baz=354,slow=4.1,SNR=57						
YBH				pP	pP	07 05 05.5	+0.9
	comp=Z,10nm,1.0s,baz=330,slow=2.0,SNR=4.6						
YBH	**Yreka Blue Hor**	**56.90**	**63**	*e*P	**P**	**07 03 51.5**	**+0.6**
	comp=Z,18nm,0.7s,mb4.5						
YBH				*e*pP	pP	07 05 06.9	+2.4
SUMG	**Summit**	**57.24**	**4**	*e*P	**P**	**07 03 52.6**	**-0.3**
	comp=Z,17nm,0.7s,mb4.5						
SUMG				*e*PcP	PcP	07 04 43.0	0.0
LHEM	**Herd Peak**	**57.25**	**63**	P	**P**	**07 03 54.2**	**+0.9**
SMLA	**Simla**	**57.27**	**281**	*i* P	**P**	**07 03 50.5**	**-3.1**
THN	**Thein Dam**	**57.30**	**283**	*e*P	**P**	**07 03 52.1**	**-1.7**
	comp=Z,29nm,0.8s,mb4.7						
WDC	**Whiskeytown Da**	**57.75**	**64**	*e*P	**P**	**07 03 57.1**	**+0.3**
WDC				*e**PP	pP	07 05 11.8	+1.1
WDC				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.5						
WDC	**Whiskeytown Da**	**57.75**	**64**	*e*P	**P**	**07 03 57.1**	**+0.3**
	comp=Z,16nm,0.7s,mb4.5						
WDC				*e*pP	pP	07 05 11.8	+1.2
BMO	**Blue Mountains**	**57.88**	**57**	*e*P	**P**	**07 03 58.1**	**+0.5**
	comp=Z,13nm,0.9s,mb4.2						
BMO				*e*pP	pP	07 05 11.9	+0.3
BMO				*e*ScP		07 08 11.2	
MOD	**Modoc**	**58.16**	**61**	*e*P	**P**	**07 04 00.2**	**+0.6**
	comp=Z,37nm,0.6s,mb4.9						
MOD				*e*pP	pP	07 05 11.9	-1.7
MSO	**Missoula**	**58.36**	**54**	*e*P	**P**	**07 04 01.0**	**+0.1**
	comp=Z,12nm,0.6s,mb4.4						
MSO				*e*pP	pP	07 05 15.9	+1.0
FFC	**Flin Flon**	**58.63**	**41**	⇑*e*P	**P**	**07 04 02.7**	**0.0**
FFC				*e**PP	pP	07 05 15.6	-1.2
FFC				pmax	pmax		
	comp=Z,25nm,0.6s,mb4.8						
FFC	**Flin Flon**	**58.63**	**41**	⇑*e*P	**P**	**07 04 02.7**	**0.0**
	comp=Z,25nm,0.6s,mb4.8						
FFC				*e*pP	pP	07 05 15.6	-1.2
FFC				*e*ScP		07 08 14.5	
CHMT	**Chamberlain Mo**	**58.66**	**53**	*e*P	**P**	**07 04 03.1**	**+0.1**
CHMT				*e*pP	pP	07 05 17.7	+0.6
WVOR	**Wild Horse Val**	**58.74**	**60**	⇑*e*P	**P**	**07 04 04.2**	**+0.6**
WVOR				*e**PP	pP	07 05 18.0	+0.2
WVOR				*e*		07 06 21.6	
WVOR				pmax	pmax		
	comp=Z,36nm,0.7s,mb4.9						
WVOR	**Wild Horse Val**	**58.74**	**60**	⇑*e*P	**P**	**07 04 04.2**	**+0.6**
	comp=Z,36nm,0.7s,mb4.9						
WVOR				*e*pP	pP	07 05 18.0	+0.1
WVOR				*e*PP	PP	07 06 21.6	+2.4
FCC	**Fort Churchill**	**58.82**	**34**	*e*P	**P**	**07 04 03.2**	**-0.7**
FCC				*e**PP	pP	07 05 17.7	-0.4
FCC				pmax	pmax		
	comp=Z,38nm,0.7s,mb4.9						
FCC	**Fort Churchill**	**58.82**	**34**	*e*P	**P**	**07 04 03.2**	**-0.7**
	comp=Z,38nm,0.7s,mb4.9						
FCC				*e*pP	pP	07 05 17.7	-0.4
FCC				*e*ScP		07 08 14.8	
NDI	**New Delhi**	**58.90**	**279**	*e*P	**P**	**07 04 03.8**	**-1.1**
NDI				AMb	AMB	07 04 04.5	
	comp=Z,87nm,0.9s,mb5.2						
BWNR	**Bhubaneshwar**	**59.34**	**265**	*e*x	x	07 05 37.1	
BWNR				AMb	AMB	07 05 43.4	
	comp=Z,43nm,1.7s,mb4.6						
BEKR	**Beckwourth**	**59.47**	**63**	*e*P	**P**	**07 04 08.9**	**+0.2**
	comp=Z,24nm,0.6s,mb4.8						
BEKR				*e*pP	pP	07 05 23.2	+0.1
BEKR				*e*ScP		07 08 18.7	
HRY	**Holter Researc**	**59.52**	**53**	*e*P	**P**	**07 04 09.4**	**+0.6**
HRY				*e*pP	pP	07 05 25.9	+2.6
PMG	**Port Moresby**	**59.56**	**185**	P	**P**	**07 04 08.2**	**-1.4**
	comp=Z,22nm,0.7s,mb4.7,baz=354,slow=2.0,SNR=9.3						
KAF	**Kangasniemi**	**59.87**	**334**	*e*p	**P**	**07 04 09.8**	**-1.2**
	baz=35,slow=6.3						
KSM	**Kuching**	**59.98**	**230**	*e*P	**P**	**07 04 12.6**	**+0.3**
KSM				*e*PcP	PcP	07 04 53.6	-1.0
PAHR	**Pah Rah Range**	**60.14**	**63**	*e*P	**P**	**07 04 13.3**	**+0.2**
	comp=Z,14nm,0.7s,mb4.5						
PAHR				*e*PcP	PcP	07 04 53.4	-1.6
WCN	**Washoe City**	**60.20**	**63**	*e*P	**P**	**07 04 14.1**	**+0.7**
WCN				*e**PP	pP	07 05 27.9	-0.2
WCN				pmax	pmax		
	comp=Z,39nm,1.1s,mb4.8						
WCN	**Washoe City**	**60.20**	**63**	*e*P	**P**	**07 04 14.1**	**+0.6**
	comp=Z,39nm,1.1s,mb4.8						
WCN				*e*pP	pP	07 05 27.9	-0.2
MCMT	**McKenzie Canyo**	**60.27**	**55**	*e*P	**P**	**07 04 13.9**	**+0.1**
MCMT				*e*pP	pP	07 05 30.5	+2.0
HLID	**Hailey**	**60.29**	**57**	*e*P	**P**	**07 04 14.3**	**+0.3**
	comp=Z,18nm,1.2s,mb4.4						
HLID				*e*PcP	PcP	07 04 56.0	+0.4
HLID				*e*ScP		07 08 22.8	
BOZ	**Bozeman (W)**	**60.34**	**53**	⇑*e*P	**P**	**07 04 15.1**	**+0.8**
BOZ				*e**PP	pP	07 05 29.6	+0.6
BOZ				pmax	pmax		
	comp=Z,21nm,0.6s,mb4.7						
BOZ	**Bozeman (W)**	**60.34**	**53**	⇑*e*P	**P**	**07 04 15.1**	**+0.8**
	comp=Z,21nm,0.6s,mb4.7						
BOZ				*e*pP	pP	07 05 29.6	+0.5
FINES	**FINESS Array B**	**60.48**	**333**	P	**P**	**07 04 14.3**	**-0.7**
	comp=Z,42nm,0.4s,mb5.2,baz=36,slow=7.7,SNR=416						
FINES				PcP	PcP	07 04 54.2	-1.8
	comp=Z,9.8nm,0.7s,baz=45,slow=5.4,SNR=6.3						
FINES	**FINESS Array B**	**60.48**	**333**	P	**P**	**07 04 14.3**	**-0.7**
FINES				PcP	PcP	07 04 54.2	-1.8
PUL	**Pulkovo**	**60.52**	**330**	⇑*e*P	**P**	**07 04 15.1**	**-0.2**
PUL				pmax	pmax		
	comp=Z,135nm,0.8s,mb5.4						
PUL	**Pulkovo**	**60.52**	**330**	*e*P	**P**	**07 04 13.5**	**-1.8**
CMB	**Columbia Colle**	**60.69**	**65**	*e*P	**P**	**07 04 16.8**	**+0.1**
CMB				*e**PP	pP	07 05 32.3	+0.8
CMB				pmax	pmax		
	comp=Z,38nm,1.1s,mb4.7						
CMB	**Columbia Colle**	**60.69**	**65**	*e*P	**P**	**07 04 16.8**	**0.0**
	comp=Z,38nm,1.1s,mb4.7						
CMB				*e*pP	pP	07 05 32.3	+0.7
BMN	**Battle Mountai**	**60.87**	**61**	*e*P	**P**	**07 04 18.6**	**+0.7**
BMN				*e**PP	pP	07 05 32.8	0.0
BMN				pmax	pmax		
	comp=Z,21nm,0.7s,mb4.7						
BMN	**Battle Mountai**	**60.87**	**61**	*e*P	**P**	**07 04 18.6**	**+0.7**
	comp=Z,21nm,0.7s,mb4.7						
BMN				*e*pP	pP	07 05 32.8	+0.1
QLMT	**Earthquake Lak**	**61.00**	**54**	*e*P	**P**	**07 04 19.4**	**+0.7**
QLMT				*e*pP	pP	07 05 34.2	+0.6
MOS	**Moscow**	**61.04**	**324**	κ *i*P	**P**	**07 04 18.6**	**-0.2**
MOS				*e*		07 06 36.9	
MOS				*e*S	**S**	**07 12 08.7**	**-0.5**
MOS				pmax	pmax		
	comp=Z,111nm,0.8s,mb5.3						
YMR	**Madison River**	**61.36**	**54**	*e*P	**P**	**07 04 21.6**	**+0.6**
YMR				*e*pP	pP	07 05 36.6	+0.6
YFT	**Old Faithful**	**61.57**	**54**	*e*P	**P**	**07 04 24.6**	**+2.2**
YFT				*e*pP	pP	07 05 41.6	+4.0
NVAR	**Mina Array Bea**	**61.62**	**63**	P	**P**	**07 04 23.3**	**+0.5**
	comp=Z,15nm,0.7s,mb4.7,baz=293,slow=8.1,SNR=120						
NVAR				pP	pP	07 05 37.8	-0.2
	comp=Z,4.7nm,0.7s,baz=313,slow=5.5,SNR=4.6						
NVAR				tx	tx	07 05 52.2	
	comp=Z,4.7nm,0.8s,baz=304,slow=6.0,SNR=5.1						
MNV	**Mina**	**61.70**	**63**	*e*P	**P**	**07 04 23.8**	**+0.4**
MNV				*e**PP	pP	07 05 38.4	-0.2
MNV				*e*		07 06 42.4	
MNV				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.5						
MNV	**Mina**	**61.70**	**63**	*e*P	**P**	**07 04 23.8**	**+0.4**
	comp=Z,12nm,0.7s,mb4.5						
MNV				*e*pP	pP	07 05 38.4	-0.2
MNV				*e*PP	PP	07 06 42.4	-3.3
LKWY	**Lake**	**61.72**	**54**	*e*P	**P**	**07 04 25.3**	**+1.9**
LKWY				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.5						
LKWY	**Lake**	**61.72**	**54**	*e*P	**P**	**07 04 25.3**	**+1.9**
	comp=Z,14nm,0.9s,mb4.5						
ELK	**Elko**	**61.76**	**59**	*e*P	**P**	**07 04 24.6**	**+0.9**
ELK				*e**PP	pP	07 05 39.2	+0.3
ELK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ELK	**Elko**	**61.76**	**59**	*e*P	**P**	**07 04 24.6**	**+0.8**
	comp=Z,8.9nm,0.6s,mb4.5						
ELK				*e*pP	pP	07 05 39.2	+0.3
OMM	**Old Mammoth Mi**	**61.78**	**64**	*e*P	**P**	**07 04 24.5**	**+0.6**
OMM				*e*pP	pP	07 05 39.6	+0.5
SFJD	**Kangerlussuaq**	**61.83**	**10**	*e*P	**P**	**07 04 21.7**	**-2.1**
SFJD				*e*		07 04 59.7	
KULM	**Kulim**	**61.88**	**242**	*e*P	**P**	**07 04 25.1**	**+0.2**
IMW	**Indian Meadow**	**61.90**	**54**	*e*P	**P**	**07 04 25.6**	**+1.0**
IMW				*e*pP	pP	07 05 40.6	+0.8
OBN	**Obninsk**	**61.91**	**324**	*d* *i*P	**P**	**07 04 23.4**	**-1.1**
OBN				*i*		07 05 00.4	
OBN				*i* *PP	pP	07 05 41.5	+1.8
OBN				*i*		07 06 43.5	
OBN				*i* S	**S**	**07 12 18.1**	**-2.0**
OBN				pmax	pmax		
	comp=Z,149nm,1.6s,mb5.3						
OBN	**Obninsk**	**61.91**	**324**	*e*P	**P**	**07 04 23.7**	**-0.8**
	comp=Z,72nm,0.7s,mb5.3						
OBN				*e*PcP	PcP	07 05 00.6	-1.3
DGMT	**Dagmar**	**62.04**	**47**	*e*P	**P**	**07 04 24.5**	**-1.0**
	comp=Z,34nm,0.6s,mb5.0						
DGMT				*e*PcP	PcP	07 05 02.9	+0.4
DGMT				*e*pP	pP	07 05 41.2	+0.4
AJM	**Ajmer**	**62.07**	**279**	*e*P	**P**	**07 04 25.0**	**-1.0**
AJM				AMb	AMB	07 04 26.9	
	comp=Z,82nm,1.0s,mb5.2						
RRI2	**Red Ridge**	**62.08**	**55**	*e*P	**P**	**07 04 27.3**	**+1.4**
	comp=Z,29nm,0.6s,mb5.0						
MOOW	**Moose Ponds**	**62.11**	**54**	*e*P	**P**	**07 04 26.8**	**+0.8**
	comp=Z,8.7nm,0.7s,mb4.4						
TPAW	**Teton Pass**	**62.18**	**55**	*e*P	**P**	**07 04 27.6**	**+1.1**
	comp=Z,20nm,0.6s,mb4.8						
TPAW				*e*pP	pP	07 05 43.0	+1.2
MTUM	**Tungsten Hills**	**62.21**	**64**	*e*P	**P**	**07 04 27.2**	**+0.4**
MTUM				*e*pP	pP	07 05 43.3	+1.2
IPM	**Ipoh**	**62.25**	**241**	P	**P**	**07 04 27.4**	**+0.1**
WUWY	**Wally Ulrich**	**62.25**	**55**	*e*P	**P**	**07 04 27.9**	**+0.9**
LOHW	**Long Hollow**	**62.27**	**54**	*e*P	**P**	**07 04 27.9**	**+0.8**
	comp=Z,30nm,1.2s,mb4.7						
LOHW				*e*pP	pP	07 05 42.3	-0.1
SNOW	**Snow King Moun**	**62.30**	**55**	*e*P	**P**	**07 04 28.4**	**+1.1**
	comp=Z,11nm,0.6s,mb4.6						
SNOW				*e*pP	pP	07 05 43.8	+1.2
LAO	**LASA Array**	**62.33**	**49**	*e*P	**P**	**07 04 27.8**	**+0.4**
	comp=Z,34nm,1.1s,mb4.8						
LAO				*e*pP	pP	07 05 41.4	-1.4
HVU	**Hansel Valley**	**62.39**	**57**	*e*P	**P**	**07 04 27.6**	**-0.3**
TPH	**Tonopah**	**62.48**	**63**	*e*P	**P**	**07 04 28.8**	**+0.3**
TPH				*e**PP	pP	07 05 43.6	-0.3
TPH				*e*		07 06 52.0	
TPH				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.8						
TPH	**Tonopah**	**62.48**	**63**	*e*P	**P**	**07 04 28.8**	**+0.3**
	comp=Z,20nm,0.7s,mb4.8						
TPH				*e*pP	pP	07 05 43.6	-0.3
TPH				*e*PP	PP	07 06 52.0	-0.2
BHPL	**Bhopal**	**62.59**	**274**	*e*P	**P**	**07 04 28.7**	**-0.7**
BHPL				AMb	AMB	07 04 30.4	
	comp=Z,88nm,0.8s,mb5.3						
AHID	**Auburn Hatcher**	**62.60**	**55**	*e*P	**P**	**07 04 29.8**	**+0.6**
	comp=Z,6.0nm,0.7s,mb4.2						
VSU	**Vasula**	**62.68**	**331**	*i* P	**P**	**07 04 28.9**	**-0.6**
VSU	**Vasula**	**62.68**	**331**	*i* Pr	**P**	**07 04 28.9**	**-0.6**
SPUT	**South Promonto**	**62.90**	**57**	*e*P	**P**	**07 04 29.8**	**-1.4**
KGM	**Kluang**	**63.11**	**237**	P	**P**	**07 04 33.9**	**+0.9**
HWUT	**Hardware Ranch**	**63.16**	**57**	*e*P	**P**	**07 04 33.3**	**+0.4**
	comp=Z,17nm,0.6s,mb4.8						
TRCR	**Troy Canyon**	**63.22**	**62**	*e*P	**P**	**07 04 33.7**	**+0.4**
TRCR				*e*pP	pP	07 05 48.4	-0.5
PDAR	**Pinedale Array**	**63.41**	**54**	P	**P**	**07 04 35.0**	**+0.5**
	comp=Z,18nm,0.5s,mb4.9,baz=318,slow=1.2,SNR=211						
PDAR				pP	pP	07 05 50.4	+0.3
	comp=Z,3.6nm,0.7s,baz=333,slow=3.3,SNR=3.3						
PDAR				tx	tx	07 06 07.0	
	comp=Z,5.6nm,1.0s,baz=315,slow=4.2,SNR=4.1						
DAC	**Darwin (Calif)**	**63.51**	**65**	*e*P	**P**	**07 04 35.0**	**-0.1**
DAC				*e**PP	pP	07 05 52.5	+1.6
DAC				*e*		07 07 00.2	
DAC				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.4						
DAC	**Darwin (Calif)**	**63.51**	**65**	*e*P	**P**	**07 04 35.0**	**-0.1**

	comp=Z,6.9nm,0.7s,mb4.4						
DAC				*e*pP	pP	07 05 52.5	+1.6
DAC				*e*PP	PP	07 07 00.1	-0.7
NOQ	**North Oquirrh**	**63.53**	**58**	*e*P	**P**	**07 04 34.0**	**-1.1**
TCUT	**Toone Canyon**	**63.59**	**57**	*e*P	**P**	**07 04 35.3**	**-0.2**
CTU	**Camp Tracy**	**63.71**	**57**	*e*P	**P**	**07 04 36.5**	**+0.2**
CTU				*e*pP	pP	07 05 51.2	-0.8
VRSR	**Storozhevoye**	**63.81**	**320**	*e*P	**P**	**07 04 35.7**	**-1.0**
VRSR				pmax	pmax		
	comp=Z,110nm,0.7s,mb5.6						
VRSR				pmax	pmax		
	comp=N,130nm,0.8s						
VRSR				pmax	pmax		
	comp=E,20nm,1.0s						
JLU	**Jordanelle**	**63.93**	**57**	*e*P	**P**	**07 04 38.5**	**+0.7**
JLU				*e*pP	pP	07 05 54.1	+0.6
NLU	**North Lily Min**	**64.05**	**58**	*e*P	**P**	**07 04 39.7**	**+1.3**
NLU				*e*pP	pP	07 05 55.1	+0.8
DAU	**Daniels Canyon**	**64.17**	**57**	*e*P	**P**	**07 04 40.5**	**+1.3**
DAU				*e**PP	pP	07 05 54.4	-0.8
MPU	**Maple Canyon**	**64.25**	**58**	*e*P	**P**	**07 04 40.6**	**+0.9**
MPU				*e*pP	pP	07 05 56.6	+0.9
ULM	**Lac du Bonnet**	**64.45**	**41**	P	**P**	**07 04 40.5**	**-0.3**
	comp=E,3.9nm,0.3s,mb4.5,baz=320,slow=6.7,SNR=6.4						
NB2	**NORSAR Subarra**	**64.60**	**340**	P	**P**	**07 04 41.1**	**-0.5**
	comp=E,23nm,0.7s,mb4.9,baz=26,slow=6.5						
NB2	**NORSAR Subarra**	**64.60**	**340**	P	**P**	**07 04 41.1**	**-0.5**
	baz=26,slow=6.5						
NOA	**NORSAR Array B**	**64.60**	**340**	P	**P**	**07 04 41.3**	**-0.3**
	comp=E,23nm,0.7s,mb4.9,baz=26,slow=6.3,SNR=74						
NOA				PcP	PcP	07 05 10.8	-1.9
	comp=E,2.7nm,0.7s,baz=29,slow=3.5,SNR=4.3						
NOA				PP	PP	07 07 07.6	-2.5
	comp=E,2.0nm,0.8s,baz=40,slow=5.7,SNR=4.0						
NOA	**NORSAR Array B**	**64.60**	**340**	P	**P**	**07 04 41.3**	**-0.3**
NOA				PcP	PcP	07 05 10.8	-1.9
NOA				PP	PP	07 07 07.6	-2.5
MWC	**Mount Wilson**	**64.68**	**66**	*e*P	**P**	**07 04 42.2**	**-0.4**
MWC				*e**PP	pP	07 05 58.7	0.0
ARUT	**Antelope Range**	**64.82**	**61**	*e*P	**P**	**07 04 43.4**	**-0.1**
ARUT				*e**PP	pP	07 05 58.7	-0.9
NAO01	**NORSAR Array S**	**64.85**	**340**	*e*P	**P**	**07 04 42.7**	**-0.5**
	comp=E,39nm,1.1s,mb5.0						
KAKA	**Kakadu**	**64.96**	**201**	⇓*i*P	**P**	**07 04 43.4**	**-1.3**
	comp=E,50nm,0.9s,mb5.2						
TMUT	**Trail Mountain**	**64.99**	**58**	*e*P	**P**	**07 04 45.5**	**+1.0**
MVU	**Marysvale**	**65.00**	**59**	*e*P	**P**	**07 04 45.6**	**+1.0**
	comp=E,8.4nm,0.7s,mb4.5						
MSU	**Marysvale**	**65.01**	**59**	*e*P	**P**	**07 04 45.7**	**+1.0**
MSU				*e**PP	pP	07 06 01.0	+0.1
RSSD	**Black Hills**	**65.25**	**50**	*e*P	**P**	**07 04 45.8**	**-0.3**
RSSD				*e**PP	pP	07 06 01.9	-0.4
RSSD				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.8						
RSSD	**Black Hills**	**65.25**	**50**	*e*P	**P**	**07 04 45.8**	**-0.3**
	comp=Z,14nm,0.6s,mb4.8						
RSSD				*e*pP	pP	07 06 01.9	-0.4
RWWY	**Rawlins**	**65.40**	**54**	*e*P	**P**	**07 04 46.2**	**-0.8**
	comp=Z,7.5nm,0.6s,mb4.5						
SRU	**San Rafael**	**65.49**	**58**	*e*P	**P**	**07 04 48.3**	**+0.6**
SRU				*e**PP	pP	07 06 03.9	-0.1
NEN	**Nelson**	**65.54**	**63**	*e*P	**P**	**07 04 48.6**	**+0.5**
NEN				*e*pP	pP	07 06 03.6	-0.8
NEN				*e*PP	PP	07 07 17.8	-1.1
LDFC	**Landfair**	**65.79**	**64**	*e*P	**P**	**07 04 49.5**	**-0.2**
LDFC				*e*pP	pP	07 06 05.9	-0.2
LDFC				*e*PP	PP	07 07 18.6	-2.6
PFO	**Pinyon Flat Ob**	**66.05**	**66**	*e*P	**P**	**07 04 51.1**	**-0.2**
PFO				*e**PP	pP	07 06 07.0	-0.8
PFO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
PFO	**Pinyon Flat Ob**	**66.05**	**66**	*e*P	**P**	**07 04 51.1**	**-0.2**
	comp=Z,5.2nm,0.6s,mb4.4						
PFO				*e*pP	pP	07 06 07.0	-0.8
HYB	**Hyderabad**	**66.10**	**269**	*e*P	**P**	**07 04 51.0**	**-0.8**
HYB				*e*		07 05 19.0	
HYB	**Hyderabad**	**66.10**	**269**	*i* P	**P**	**07 04 51.0**	**-0.8**
HYB				*e*PcP	PcP	07 05 19.0	-0.7
BAR	**Barrett**	**66.59**	**67**	*e*P	**P**	**07 04 53.7**	**-1.0**
BAR				*e*pP	pP	07 06 11.6	+0.3
GOF	**Gofitskoye**	**66.73**	**313**	⇓*i*P	**P**	**07 04 54.1**	**-1.3**
GOF				*i*		07 05 26.8	
GOF				*i* S	S	07 13 19.2	+0.4
GOF				pmax	pmax		
	comp=Z,150nm,1.3s,mb5.6						
GOF				smax			
	comp=N,80nm,2.0s						
GOF				smax			
	comp=E,180nm,2.0s						
PV10	**Paradox Valley**	**66.83**	**58**	*e*P	**P**	**07 04 57.2**	**+1.1**
PV10				*e*pP	pP	07 06 13.1	+0.4
PV01	**Paradox Valley**	**67.25**	**57**	*e*P	**P**	**07 04 58.2**	**-0.6**
PV01				*e*pP	pP	07 06 15.9	+0.4
SUW	**Suwalki**	**67.48**	**330**	*e*P	**P**	**07 04 59.0**	**-0.8**
BHJ	**Bhuj**	**67.53**	**280**	*e*P	**P**	**07 05 00.5**	**-0.2**
BHJ				AMb	AMB	07 05 01.6	
	comp=Z,64nm,0.8s,mb5.4						
WUAZ	**Wupatki**	**67.60**	**61**	*e*P	**P**	**07 05 01.9**	**+1.0**
	comp=Z,44nm,1.5s,mb5.0						
WUAZ				*e*pP	pP	07 06 17.7	-0.1
WUAZ				*e*PP	PP	07 07 34.9	-1.4
ISCO	**Idaho Springs**	**67.61**	**54**	*e*P	**P**	**07 05 01.5**	**+0.6**
ISCO				*e**PP	pP	07 06 17.7	-0.1
ISCO				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.7						
ISCO	**Idaho Springs**	**67.61**	**54**	*e*P	**P**	**07 05 01.5**	**+0.6**
	comp=Z,21nm,1.3s,mb4.7						
ISCO				*e*pP	pP	07 06 17.7	0.0
KIV	**Kislovodsk**	**67.72**	**312**	*e*P	**P**	**07 05 02.1**	**+0.6**
KIV				*e*		07 05 25.9	
KIV				*e*S	S	07 13 30.1	-0.5
KIV				pmax	pmax		
	comp=N,37nm,0.9s						
KIV				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.3						
KIV				pmax	pmax		
	comp=E,16nm,0.7s						
KIV	**Kislovodsk**	**67.72**	**312**	*e*P	**P**	**07 05 02.0**	**+0.5**
	comp=E,84nm,0.8s,mb5.5						
ZEI	**Tsey**	**68.04**	**311**	*e*P	**P**	**07 05 03.1**	**-0.3**
ZEI				*i* *PP	pP	07 06 23.4	+3.0
ZEI				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.9						
EYMN	**Ely**	**68.06**	**40**	*e*P	**P**	**07 05 02.5**	**-1.0**
	comp=Z,11nm,0.7s,mb4.7						
EYMN				*e*pP	pP	07 06 19.3	-1.2
AKASG	**Malin Array Be**	**68.13**	**325**	P	**P**	**07 05 02.7**	**-1.2**
AKASG				S	S	07 13 33.0	-2.2
AKASG	**Malin Array Be**	**68.13**	**325**	P	**P**	**07 05 02.7**	**-1.2**
	comp=Z,34nm,0.6s,mb5.2,baz=32,slow=6.2,SNR=151						
AKASG				PP	PP	07 07 30.9	-10
	comp=Z,1.5nm,0.5s,baz=33,slow=9.1,SNR=4.6						
AKASG				S	S	07 13 33.0	-2.2
	comp=Z,0.2nm,0.3s,baz=26,slow=12,SNR=7.2						
AKASG	**Malin Array Be**	**68.13**	**325**	P	**P**	**07 05 02.7**	**-1.2**
AKASG				PP	PP	07 07 30.9	-10
AKASG				S	S	07 13 33.0	-2.2
POO	**Poona**	**68.30**	**273**	⇓*i*P	**P**	**07 05 04.0**	**-1.4**
TI2	**Plekhanov**	**68.40**	**310**	*i* P	**P**	**07 04 56.4**	**-9.3**
BSD	**Bornholm Skovb**	**68.97**	**335**	⇑*i*P	**P**	**07 05 08.7**	**-0.2**
KAD	**Karad**	**68.98**	**272**	*e*P	**P**	**07 05 09.5**	**-0.1**
KAD				AMb	AMB	07 05 10.2	
	comp=Z,65nm,0.7s,mb5.5						
SDCO	**Great Sand Dun**	**69.18**	**56**	*e*P	**P**	**07 05 10.8**	**+0.3**
	comp=Z,3.6nm,0.7s,mb4.2						
SDCO				*e*pP	pP	07 06 27.6	-0.2
MUD	**Monsted U'grnd**	**69.21**	**339**	*e*P	**P**	**07 05 10.4**	**+0.1**
MUD				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
MUD	**Monsted U'grnd**	**69.21**	**339**	*e*P	**P**	**07 05 10.4**	**+0.1**
	comp=Z,10nm,0.6s,mb4.7						
MUD	**Monsted U'grnd**	**69.21**	**339**	*i* P	**P**	**07 05 10.4**	**+0.1**
	comp=Z,10nm,0.6s,mb4.7						
SOC	**Sochi**	**69.40**	**314**	*e*P	**P**	**07 05 10.4**	**-1.3**
SOC				*e*		07 05 31.0	
SOC				*e*		07 07 47.8	
SOC				*e*S	S	07 13 50.0	-0.1
SOC				*e*SS	SS	07 18 30.8	+4.0
SOC				*e*SSS	SSS	07 21 31.1	-5.0
SOC				pmax	pmax		
	comp=Z,48nm,0.7s,mb5.3						
SOC				pmax	pmax		
	comp=N,25nm,1.2s						
SOC				pmax	pmax		
	comp=E,52nm,1.4s						
SOC				pmax	pmax		
	comp=Z,82nm,0.8s,mb5.5						
ANN	**Anapa**	**69.49**	**316**	*e*P	**P**	**07 05 11.3**	**-0.9**
ANN				pmax	pmax		
	comp=Z,105nm,1.6s,mb5.3						
GNI	**Garni**	**69.59**	**309**	P	**P**	**07 05 14.7**	**+1.7**
	comp=Z,19nm,0.6s,mb5.0,baz=354,slow=0.7,SNR=15						
CTA	**Charters Tower**	**70.22**	**185**	⇓*i*P	**P**	**07 05 15.7**	**-1.4**
	comp=Z,21nm,0.8s,mb4.9						
CTA	**Charters Tower**	**70.22**	**185**	⇓*i*P	**P**	**07 05 15.7**	**-1.4**
CTA				pmax	pmax		
	comp=Z,21nm,0.8s						
TUC	**Tucson**	**70.28**	**63**	*e*P	**P**	**07 05 17.1**	**-0.2**
TUC				*e**PP	pP	07 06 34.2	-0.5
TUC				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.5						
TUC	**Tucson**	**70.28**	**63**	*e*P	**P**	**07 05 17.1**	**-0.2**
	comp=Z,15nm,1.4s,mb4.5						
TUC				*e*pP	pP	07 06 34.2	-0.5
SCHQ	**Schefferville**	**70.40**	**23**	P	**P**	**07 05 17.3**	**-0.3**
	comp=Z,15nm,0.4s,mb5.1,baz=350,slow=6.1,SNR=84						
LVV	**L'vov**	**70.73**	**327**	*e*P	**P**	**07 05 19.0**	**-0.7**
LVV				*e*S	S	07 13 59.6	-5.8
ANMO	**Albuquerque**	**70.75**	**58**	*e*P	**P**	**07 05 20.3**	**+0.3**
ANMO				*e**PP	pP	07 06 37.6	+0.1
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ANMO	**Albuquerque**	**70.75**	**58**	*e*P	**P**	**07 05 20.3**	**+0.3**
	comp=Z,5.9nm,0.9s,mb4.3						
ANMO				*e*pP	pP	07 06 37.6	+0.1
KAC	**Achnashellach**	**70.94**	**347**	*e*P	**P**	**07 05 20.5**	**-0.3**
KAC				AMb	AMB	07 05 23.7	
	comp=Z,65nm,1.9s,mb5.0						
BSEG	**Bad Segeberg**	**71.22**	**337**	*e*P	**P**	**07 05 22.4**	**-0.2**
BSEG				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
KSB	**Sheil Bridge**	**71.24**	**347**	*e*P	**P**	**07 05 22.1**	**-0.5**
KSB				AMb	AMB	07 05 23.4	
	comp=Z,58nm,0.9s,mb5.3						
BNM	**Barren Site**	**71.25**	**59**	*e*P	**P**	**07 05 24.0**	**+1.0**
BNM				*e*pP	pP	07 06 41.9	+1.2
BNM				*e*PP	PP	07 08 07.0	-0.5
KIS	**Kishinev**	**71.32**	**323**	*e*P	**P**	**07 05 21.0**	**-2.2**
KIS				*e*		07 08 05.0	
KWP	**Kalwaria**	**71.35**	**328**	*e*P	**P**	**07 05 20.0**	**-3.4**
KWP				pmax	pmax		
	comp=Z,36nm,0.6s,mb5.3						
KWP	**Kalwaria**	**71.35**	**328**	*e*P	**P**	**07 05 20.0**	**-3.4**
	comp=Z,36nm,0.6s,mb5.3						
WRAB	**Tennant Creek**	**71.57**	**197**	*e*P	**P**	**07 05 24.1**	**-1.1**
WRAB				*e*		07 05 41.8	
WRAB				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.5						
WRAB	**Tennant Creek**	**71.57**	**197**	*e*P	**P**	**07 05 24.1**	**-1.1**
	comp=Z,99nm,1.0s,mb5.5						
WRAB				*e*PcP	PcP	07 05 41.8	-1.0
KAR1	**Arisaig**	**71.58**	**347**	*e*P	**P**	**07 05 24.5**	**-0.1**
KAR1				AMb	AMB	07 05 25.8	
	comp=Z,52nm,1.8s,mb5.0						
WB2	**Warramunga Arr**	**71.58**	**197**	⇓*i*P	**P**	**07 05 24.1**	**-1.1**
WRA	**Warramunga Arr**	**71.58**	**197**	P	**P**	**07 05 24.1**	**-1.2**
	comp=Z,34nm,0.6s,mb5.2,baz=16,slow=6.1,SNR=264						
WRA				PcP	PcP	07 05 41.4	-1.5
	comp=Z,8.7nm,0.6s,baz=12,slow=4.9,SNR=10						
WRA				pP	pP	07 06 44.5	+1.6
	comp=Z,6.8nm,0.9s,baz=15,slow=6.7,SNR=4.8						
OJC	**Ojcow**	**71.81**	**330**	*e*P	**P**	**07 05 25.9**	**-0.2**
MNGI	**Mangalore**	**71.81**	**268**	*e*P	**P**	**07 05 26.1**	**-0.6**
MNGI				AMb	AMB	07 05 27.6	
	comp=Z,61nm,1.2s,mb5.2						
FITZ	**Fitzroy Crossi**	**71.87**	**206**	⇓*i*P	**P**	**07 05 26.5**	**-0.5**
	comp=Z,86nm,0.8s,mb5.5						
FITZ	**Fitzroy Crossi**	**71.87**	**206**	P	**P**	**07 05 26.5**	**-0.5**
	comp=Z,118nm,0.8s,mb5.7,baz=8.5,slow=5.1,SNR=84						
KOLS	**Kolonicke sedl**	**72.09**	**328**	*e*P	**P**	**07 05 27.4**	**-0.4**
KOLS				*e*PP	PP	07 08 03.7	-10
BURAR	**Bucovina Array**	**72.16**	**325**	⇑P	**P**	**07 05 28.1**	**-0.1**
NIE	**Niedzica**	**72.33**	**329**	*e*P	**P**	**07 05 29.3**	**+0.1**
KSP	**Ksiaz**	**72.35**	**332**	⇓*e*P	**P**	**07 05 29.1**	**-0.2**
KSP	**Ksiaz**	**72.35**	**332**	*e*P	**P**	**07 05 29.4**	**+0.2**
OKC	**Ostrava-Krasne**	**72.67**	**331**	*e*P	**P**	**07 05 31.2**	**+0.2**
KSU1	**Kansas State U**	**72.68**	**49**	*e*P	**P**	**07 05 30.2**	**-1.1**
UPC	**Upice**	**72.73**	**332**	*e*P	**P**	**07 05 31.2**	**-0.2**
DPC	**Dobruska-Polom**	**72.78**	**332**	*e*P	**P**	**07 05 32.1**	**+0.4**
TLCR		**72.81**	**322**	⇓P	**P**	**07 05 32.5**	**+0.5**
CLL	**Collm**	**72.89**	**334**	⇓*i*P	**P**	**07 05 32.0**	**-0.3**
CLL				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.2						
CLL	**Collm**	**72.89**	**334**	⇓*i*P	**P**	**07 05 32.0**	**-0.3**
	comp=Z,37nm,0.8s,mb5.2						
CLL	**Collm**	**72.89**	**334**	⇓P	**P**	**07 05 32.0**	**-0.3**
	comp=Z,logA/T=1.7,mb5.2						
MORC	**Moravsky Berou**	**72.91**	**331**	P	**P**	**07 05 32.6**	**+0.1**
MORC	**Moravsky Berou**	**72.91**	**331**	*e*P	**P**	**07 05 32.3**	**-0.2**
	comp=Z,34nm,0.9s,mb5.1						
BRG	**Berggiesshubel**	**73.01**	**334**	*i* P	**P**	**07 05 32.6**	**-0.5**
BRG				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
BRG	**Berggiesshubel**	**73.01**	**334**	*i* P	**P**	**07 05 32.5**	**-0.5**
	comp=Z,16nm,1.0s,mb4.7						
VRI	**Vrincioaia**	**73.06**	**323**	P	**P**	**07 05 34.1**	**+0.6**
VRI	**Vrincioaia**	**73.06**	**323**	⇑P	**P**	**07 05 33.8**	**+0.3**
KECS	**Kecovo**	**73.08**	**328**	*e*P	**P**	**07 05 33.1**	**-0.4**
CLZ	**Clausthal**	**73.11**	**336**	*e*P	**P**	**07 05 33.8**	**+0.2**
CLZ				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9						
CLZ	**Clausthal**	**73.11**	**336**	*e*P	**P**	**07 05 33.8**	**+0.2**
	comp=Z,22nm,0.8s,mb4.9						
PVCC	**Panska Ves**	**73.14**	**333**	*e*P	**P**	**07 05 33.9**	**+0.1**
BOYT	**Boyabat**	**73.29**	**316**	*i* P	**P**	**07 05 35.6**	**+0.8**
AMTX	**Amarillo**	**73.36**	**55**	*e*P	**P**	**07 05 35.4**	**-0.1**
	comp=Z,16nm,0.6s,mb4.9						
MSL	**Mosul**	**73.38**	**307**	*e*P	**P**	**07 05 36.0**	**+0.5**
TIRR	**Tirgusor**	**73.58**	**321**	P	**P**	**07 05 36.0**	**-0.5**
TIRR	**Tirgusor**	**73.58**	**321**	⇑P	**P**	**07 05 36.8**	**+0.3**
CPRX	**Cap Rock**	**73.60**	**58**	*e*P	**P**	**07 05 37.5**	**+0.6**
CPRX				*e*pP	pP	07 06 54.4	-0.5
VRAC	**Vranov**	**73.62**	**331**	P	**P**	**07 05 37.1**	**+0.5**
VYHS	**Vyhne**	**73.62**	**329**	*e*P	**P**	**07 05 36.9**	**+0.3**
PRU	**Pruhonice**	**73.63**	**333**	*e*P	**P**	**07 05 36.6**	**-0.1**
MLR	**Muntele Rosu**	**73.68**	**324**	P	**P**	**07 05 37.1**	**+0.1**
MLR	**Muntele Rosu**	**73.68**	**324**	⇑*i*P	**P**	**07 05 38.0**	**+1.0**
ELZG	**Elazig**	**73.71**	**311**	*i* P	**P**	**07 05 38.3**	**+1.0**
DRGR		**73.77**	**326**	P	**P**	**07 05 37.4**	**-0.1**
DRGR		**73.77**	**326**	⇑P	**P**	**07 05 37.7**	**+0.2**
MNTX	**Cornudas Mount**	**73.78**	**60**	*e*P	**P**	**07 05 38.4**	**+0.5**
	comp=Z,3.3nm,0.6s,mb4.2						
MNTX				*e*pP	pP	07 06 55.4	-0.5
BANOM	**Banah**	**73.83**	**291**	⇓P	**P**	**07 05 37.5**	**-0.8**
	SNR=12						
MOX	**Moxa**	**73.87**	**335**	*e*P	**P**	**07 05 37.9**	**-0.1**
MOX				pmax	pmax		
	comp=Z,34nm,1.3s,mb4.9						
MOX	**Moxa**	**73.87**	**335**	*e*P	**P**	**07 05 37.9**	**-0.1**
	comp=Z,34nm,1.3s,mb4.9						
MOX	**Moxa**	**73.87**	**335**	*i* P	**P**	**07 05 37.9**	**-0.1**
	comp=Z,logA/T=1.4,mb4.9						
BALT	**Daday**	**73.88**	**317**	*i* P	**P**	**07 05 37.4**	**-0.8**
CTKT	**Corum**	**73.98**	**315**	*i* P	**P**	**07 05 39.8**	**+0.9**
VOIR		**74.06**	**324**	⇓P	**P**	**07 05 39.8**	**+0.5**
ZST	**Bratislava**	**74.44**	**330**	*e*P	**P**	**07 05 41.8**	**+0.5**
BIDO	**Bidbid**	**74.51**	**288**	P	**P**	**07 05 42.6**	**+0.3**
	SNR=6.7						
WBK	**Wadi Bani Khal**	**74.67**	**287**	P	**P**	**07 05 43.8**	**+0.6**
	SNR=6.4						
KHC	**Kasperske Hory**	**74.68**	**333**	*e*P	**P**	**07 05 42.8**	**+0.1**
KHC				*e*x	x	07 05 47.2	
GRA1	**Grafenberg Arr**	**74.84**	**335**	*e*P	**P**	**07 05 43.8**	**+0.2**
	comp=Z,47nm,0.7s,mb5.3						
GRA1				*e*PP	PP	07 08 28.8	-8.5
GRF	**Grafenberg Arr**	**74.84**	**335**	*e*P	**P**	**07 05 43.8**	**+0.2**
GRF				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.3						
GRF	**Grafenberg Arr**	**74.84**	**335**	*e*P	**P**	**07 05 43.8**	**+0.2**
GRF				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.3						
GRF	**Grafenberg Arr**	**74.84**	**335**	*e*P	**P**	**07 05 43.8**	**+0.2**
	comp=Z,47nm,0.7s,mb5.3						
GRF				*e*PP	PP	07 08 28.8	-8.5
ASHO	**Ashiyiah**	**74.90**	**290**	P	**P**	**07 05 43.6**	**-0.9**
	SNR=10						
GEC2	**GERESS Array S**	**74.90**	**333**	*e*P	**P**	**07 05 43.7**	**-0.3**
GERES	**GERESS Array B**	**74.90**	**333**	P	**P**	**07 05 43.3**	**-0.6**
	comp=Z,6.8nm,0.7s,mb4.5,baz=34,slow=4.8,SNR=43						
GERES				PP	PP	07 08 26.1	-12
	comp=Z,1.1nm,0.6s,baz=31,slow=7.8,SNR=4.5						
SMDO	**Samad**	**74.90**	**288**	P	**P**	**07 05 44.5**	**0.0**
	SNR=9.5						
HOQ	**Hoqain**	**74.96**	**289**	P	**P**	**07 05 44.3**	**-0.5**
	SNR=18						
CDAG	**Cicekdag**	**74.98**	**315**	*i* P	**P**	**07 05 43.4**	**-1.2**
WMOK	**Wichita Mounta**	**74.99**	**54**	*e*P	**P**	**07 05 43.8**	**-1.0**
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
WMOK	**Wichita Mounta**	**74.99**	**54**	*e*P	**P**	**07 05 43.8**	**-1.0**
	comp=Z,6.7nm,0.6s,mb4.5						
BHD	**Baghdad**	**75.04**	**304**	*e*P	**P**	**07 05 43.0**	**-2.1**
TNS	**Taunus Mts**	**75.09**	**337**	*e*P	**P**	**07 05 44.9**	**-0.1**
TNS				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.8						
TNS	**Taunus Mts**	**75.09**	**337**	*e*P	**P**	**07 05 44.9**	**-0.1**
	comp=Z,17nm,0.8s,mb4.8						
BZS	**Buzias**	**75.17**	**326**	⇑P	**P**	**07 05 45.3**	**-0.2**
HGN	**Heimansgroeve**	**75.21**	**338**	⇓*e*P	**P**	**07 05 44.9**	**-0.8**
	comp=Z,34nm,2.6s,mb4.6						
SGKT	**Sivrigoynuk**	**75.24**	**317**	*i* P	**P**	**07 05 46.0**	**-0.1**
GZT	**Gaziantep**	**75.30**	**311**	*i* P	**P**	**07 05 47.0**	**+0.5**
JMDO	**Jabal Madar**	**75.38**	**287**	P	**P**	**07 05 47.0**	**-0.2**
	SNR=14						
KAHT	**Ahir Dag**	**75.41**	**312**	*i* P	**P**	**07 05 47.7**	**+0.6**
AVNT	**Avonos**	**75.44**	**314**	*i* P	**P**	**07 05 47.3**	**+0.1**
TOD	**Tromm**	**75.56**	**336**	*e*P	**P**	**07 05 46.7**	**-1.0**
MOA	**Molln**	**75.62**	**332**	⇓*i*P	**P**	**07 05 48.2**	**+0.1**
	comp=Z,9.8nm,0.8s,mb4.6						
ARQ	**Araqi**	**75.62**	**289**	P	**P**	**07 05 48.2**	**-0.4**
	SNR=20						
BSY	**Bisya**	**75.66**	**288**	P	**P**	**07 05 48.5**	**-0.3**
	SNR=30						
ARSA	**Arzberg**	**75.77**	**331**	⇓*i*P	**P**	**07 05 49.2**	**+0.3**
	comp=Z,14nm,1.1s,mb4.6						
GIVF	**Givet**	**76.08**	**339**	*e*P	**P**	**07 05 50.2**	**-0.4**
FUR	**Furstenfeldbru**	**76.21**	**334**	*e*P	**P**	**07 05 51.4**	**+0.1**
FUR				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.0						
FUR	**Furstenfeldbru**	**76.21**	**334**	*e*P	**P**	**07 05 51.4**	**+0.1**
	comp=Z,20nm,0.6s,mb5.0						
MENF	**Mencas**	**76.25**	**341**	*e*P	**P**	**07 05 51.3**	**-0.2**
BAIF	**Baives**	**76.27**	**339**	*e*P	**P**	**07 05 51.3**	**-0.3**
	comp=Z,20nm,0.8s,mb4.6						
BAIF	**Baives**	**76.27**	**339**	*e*P	**P**	**07 05 51.3**	**-0.3**
BAIF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
PERS	**Pernice**	**76.45**	**331**	*e*P	**P**	**07 05 52.6**	**0.0**
LTX	**Lajitas**	**76.54**	**60**	*e*P	**P**	**07 05 53.6**	**+0.1**
LTX				*e**PP	pP	07 07 10.9	-1.0
LTX				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
LTX	**Lajitas**	**76.54**	**60**	*e*P	**P**	**07 05 53.6**	**+0.1**
	comp=Z,6.5nm,0.5s,mb4.6						
LTX				*e*pP	pP	07 07 10.9	-1.1
TXAR	**Lajitas Array**	**76.54**	**60**	P	**P**	**07 05 54.0**	**+0.5**
	comp=Z,5.6nm,0.5s,mb4.5,baz=295,slow=4.4,SNR=108						
TXAR				pP	pP	07 07 11.9	0.0
	comp=Z,12nm,0.8s,baz=300,slow=4.2,SNR=11						
TXAR				tx	tx	07 07 28.6	
	comp=Z,3.7nm,0.6s,baz=301,slow=5.0,SNR=4.8						
COBT	**Iskenderun**	**76.59**	**312**	*i* P	**P**	**07 05 53.7**	**+0.1**
KBA	**Koelnbreinsper**	**76.59**	**332**	⇑*i*P	**P**	**07 05 54.0**	**+0.6**
	comp=Z,43nm,0.7s,mb5.3						
KBA	**Koelnbreinsper**	**76.59**	**332**	⇑*i*P	**P**	**07 05 54.0**	**+0.6**
KBA				pmax	pmax		
	comp=Z,43nm,0.7s,mb5.3						
BFO	**Black Forest**	**76.86**	**336**	*e*P	**P**	**07 05 54.6**	**-0.3**
BFO				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
BFO	**Black Forest**	**76.86**	**336**	*e*P	**P**	**07 05 54.6**	**-0.3**
	comp=Z,16nm,0.8s,mb4.8						
WATA	**Walderalm**	**76.88**	**333**	⇓*i*P	**P**	**07 05 55.6**	**+0.6**
	comp=Z,13nm,0.9s,mb4.7						
WATA	**Walderalm**	**76.88**	**333**	⇓*i*P	**P**	**07 05 55.6**	**+0.6**
WATA				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
WTTA	**Wattenberg**	**76.93**	**333**	⇑*i*P	**P**	**07 05 56.1**	**+0.8**
	comp=Z,46nm,0.8s,mb5.3						
WTTA	**Wattenberg**	**76.93**	**333**	⇑*i*P	**P**	**07 05 56.1**	**+0.8**
WTTA				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.3						
GRUS	**Gruza**	**76.98**	**326**	⇓*i*P	**P**	**07 05 55.0**	**-0.7**
MOTA	**Moosalm**	**77.00**	**334**	⇓*i*P	**P**	**07 05 56.1**	**+0.4**
	comp=Z,32nm,0.9s,mb5.0						
MOTA	**Moosalm**	**77.00**	**334**	⇓*i*P	**P**	**07 05 56.1**	**+0.4**
MOTA				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0						
WLS	**Welschbruch**	**77.04**	**337**	*e*P	**P**	**07 05 55.7**	**-0.1**
CDF	**Champ du Feu**	**77.06**	**337**	*e*P	**P**	**07 05 55.5**	**-0.4**
	comp=Z,39nm,1.0s,mb4.8						
CDF	**Champ du Feu**	**77.06**	**337**	*e*P	**P**	**07 05 55.5**	**-0.4**
CDF				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
SQTA	**Sankt Quirin**	**77.09**	**334**	⇑*i*P	**P**	**07 05 56.7**	**+0.6**
	comp=Z,24nm,0.9s,mb4.9						
SQTA	**Sankt Quirin**	**77.09**	**334**	⇑*i*P	**P**	**07 05 56.7**	**+0.6**
SQTA				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.9						
VTS	**Vitosha**	**77.18**	**324**	P	**P**	**07 05 56.8**	**0.0**
PTCC	**Patocco-Chiusa**	**77.19**	**332**	P	**P**	**07 05 55.9**	**-0.8**
ECH	**Echery**	**77.27**	**337**	*e*P	**P**	**07 05 56.8**	**-0.3**
VISS	**Visnje**	**77.28**	**331**	*e*P	**P**	**07 05 56.5**	**-0.8**
GMNA	**Gemona**	**77.35**	**332**	P	**P**	**07 05 57.1**	**-0.5**
FELD	**Feldberg**	**77.36**	**336**	*e*P	**P**	**07 05 57.3**	**-0.3**
DAVA	**Damuels**	**77.40**	**334**	⇑*i*P	**P**	**07 05 58.1**	**+0.3**
	comp=Z,22nm,0.8s,mb5.0						
BOJS	**Bojanci**	**77.41**	**330**	*e*P	**P**	**07 05 57.4**	**-0.5**
BBLS	**Bajina Basta -**	**77.47**	**327**	*e*P	**P**	**07 05 57.8**	**-0.5**
MEZF	**Maizieres J'vi**	**77.52**	**338**	*e*P	**P**	**07 05 58.1**	**-0.4**
MEST	**Erdemli**	**77.54**	**313**	*i* P	**P**	**07 05 58.2**	**-0.6**
THEF	**They Montfort**	**77.55**	**337**	*e*P	**P**	**07 05 58.5**	**-0.1**
MOF	**Molkenrain**	**77.61**	**336**	*e*P	**P**	**07 05 58.6**	**-0.4**
HAU	**Haudompre**	**77.67**	**337**	*e*P	**P**	**07 05 59.0**	**-0.3**
	comp=Z,15nm,0.6s,mb4.6						
HAU	**Haudompre**	**77.67**	**337**	*e*P	**P**	**07 05 59.0**	**-0.3**
HAU				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
HINF	**Hinteralfeld**	**77.72**	**337**	*e*P	**P**	**07 05 59.0**	**-0.5**
DAVOX	**Davos**	**77.86**	**334**	P	**P**	**07 06 01.0**	**+0.7**
BBS	**Basel-Blauen**	**77.87**	**336**	*e*P	**P**	**07 05 59.4**	**-1.0**
FUORN	**Ofenpass**	**77.90**	**334**	P	**P**	**07 06 01.4**	**+0.8**
BRMO	**Bormio**	**78.00**	**334**	P	**P**	**07 06 02.1**	**+1.0**
TKTP	**Tekketepe**	**78.09**	**316**	*i* P	**P**	**07 06 01.1**	**-0.6**
LOMF	**Lomont**	**78.15**	**336**	*e*P	**P**	**07 06 02.0**	**+0.1**
TUE	**Stuetta**	**78.29**	**334**	P	**P**	**07 06 03.3**	**+0.6**
	comp=Z,19nm,0.8s,mb4.9						
MABI	**Malga Bissina**	**78.35**	**334**	P	**P**	**07 06 02.8**	**-0.1**
	comp=Z,12nm,0.8s,mb4.7						
SKO	**Skopje**	**78.38**	**325**	*e*P	**P**	**07 06 03.0**	**-0.2**
FLN	**La Foliniere**	**78.50**	**342**	*e*P	**P**	**07 06 03.5**	**-0.2**
	comp=Z,36nm,0.9s,mb4.8						
FLN	**La Foliniere**	**78.50**	**342**	*e*P	**P**	**07 06 03.5**	**-0.2**
FLN				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
LDF	**La Druitiere**	**78.59**	**341**	*e*P	**P**	**07 06 03.9**	**-0.3**
ACCN	**Adirondack Com**	**78.66**	**32**	*e*P	**P**	**07 06 03.6**	**-1.1**
ACCN				*e*pP	pP	07 07 23.1	-0.4
MUGIO	**Muggio**	**78.88**	**334**	P	**P**	**07 06 05.5**	**-0.3**
GRR	**Gorron**	**78.93**	**342**	*e*P	**P**	**07 06 06.2**	**+0.2**
	comp=Z,67nm,1.0s,mb5.0						
GRR	**Gorron**	**78.93**	**342**	*e*P	**P**	**07 06 06.2**	**+0.2**
GRR				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.0						
LOR	**Lormes**	**78.96**	**338**	*e*P	**P**	**07 06 06.1**	**-0.1**
	comp=Z,53nm,0.9s,mb5.0						
LOR	**Lormes**	**78.96**	**338**	*e*P	**P**	**07 06 06.1**	**-0.1**
LOR				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.0						
CABF	**La Chapelle**	**79.03**	**337**	*e*P	**P**	**07 06 06.8**	**+0.3**
	comp=Z,28nm,0.9s,mb4.7						
CABF	**La Chapelle**	**79.03**	**337**	*e*P	**P**	**07 06 06.8**	**+0.3**
CABF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
MMK	**Mattmark**	**79.06**	**335**	P	**P**	**07 06 07.4**	**+0.7**
DIX	**Grande Dixence**	**79.18**	**336**	P	**P**	**07 06 08.3**	**+1.0**
WVT	**Waverly**	**79.20**	**45**	*e*P	**P**	**07 06 08.0**	**+0.3**
WVT				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
WVT	**Waverly**	**79.20**	**45**	*e*P	**P**	**07 06 08.0**	**+0.3**
	comp=Z,6.3nm,0.6s,mb4.5						
SSF	**Saint Saulge**	**79.24**	**339**	*e*P	**P**	**07 06 07.6**	**0.0**
SSF				pmax	pmax		

	comp=Z,16nm,0.8s,mb4.8						
SSF	Saint Saulge	79.24	339	eP	P	07 06 07.6	0.0
	comp=Z,16nm,0.8s,mb4.8						
HYF	Humbligny	79.25	339	eP	P	07 06 07.9	+0.2
SGMF	Saint Gilles	79.39	343	eP	P	07 06 08.8	+0.4
	comp=Z,53nm,0.8s,mb5.0						
SGMF	Saint Gilles	79.39	343	eP	P	07 06 08.8	+0.4
SGMF				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.0						
ROSF	Rostrenen	79.45	343	eP	P	07 06 08.9	+0.2
	comp=Z,96nm,0.9s,mb5.2						
ROSF	Rostrenen	79.45	343	eP	P	07 06 08.9	+0.2
ROSF				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.2						
NATX	Nacogdoches	79.45	53	eP	P	07 06 09.6	+0.5
	comp=Z,50nm,1.4s,mb5.1						
AVF	Avril sur Loir	79.53	339	eP	P	07 06 09.0	-0.2
	comp=Z,53nm,0.9s,mb5.0						
AVF	Avril sur Loir	79.53	339	eP	P	07 06 09.0	-0.2
AVF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.0						
SMF	Signal de Mont	79.55	338	eP	P	07 06 09.4	+0.1
	comp=Z,74nm,0.9s,mb5.1						
SMF	Signal de Mont	79.55	338	eP	P	07 06 09.4	+0.1
SMF				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.1						
ASF	Jabal al Asfar	79.77	309	P	P	07 06 11.5	+0.7
	comp=Z,18nm,0.9s,mb4.8,baz=294,slow=3.7,SNR=19						
LSD	Ceresole Reale	79.82	336	P	P	07 06 11.4	+0.6
BOB	Bobbio (Coli)	79.83	334	P	P	07 06 11.3	+0.5
BOB				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.7						
BOB	Bobbio (Coli)	79.83	334	P	P	07 06 11.3	+0.5
	comp=Z,12nm,0.7s,mb4.8						
QUIF	Quistinic	79.83	343	eP	P	07 06 10.7	-0.1
BGF	Bois d'Agland	79.87	339	eP	P	07 06 11.4	+0.4
LPL	La Plagne	79.88	336	eP	P	07 06 12.0	+0.9
	comp=Z,55nm,0.8s,mb5.0						
LPL	La Plagne	79.88	336	eP	P	07 06 12.0	+0.9
LPL				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.0						
GSCL	Gusciola	79.88	333	P	P	07 06 12.3	+1.2
LPG	La Plagne	79.89	336	eP	P	07 06 12.3	+1.2
	comp=Z,45nm,0.7s,mb5.0						
LPG	La Plagne	79.89	336	eP	P	07 06 12.3	+1.2
LPG				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.0						
GRAM		79.90	333	P	P	07 06 13.1	+1.9
SFI	Santa Sofia	79.91	332	P	P	07 06 12.0	+0.7
SFI				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.2						
SFI	Santa Sofia	79.91	332	P	P	07 06 12.0	+0.7
	comp=Z,51nm,1.1s,mb5.2						
ARV	Arcevia	79.94	331	P	P	07 06 11.6	+0.1
	comp=Z,34nm,1.2s,mb5.0						
VMG	Vicchio	79.95	332	P	P	07 06 13.0	+1.5
PGD	Poggio Sodo	79.98	332	P	P	07 06 12.9	+1.3
PGD				pmax	pmax		
	comp=Z,72nm,1.1s,mb5.3						
PGD	Poggio Sodo	79.98	332	P	P	07 06 12.9	+1.3
	comp=Z,72nm,1.1s,mb5.3						
PLAL	Pickwick Lake	80.04	46	eP	P	07 06 11.7	-0.5
	comp=Z,4.0nm,0.7s,mb4.3						
CODM		80.06	333	P	P	07 06 11.9	-0.1
RSP	Reno Superiore	80.08	335	P	P	07 06 11.0	-1.1
SARO	Sassorosso	80.09	333	P	P	07 06 12.4	+0.2
BACM		80.10	333	P	P	07 06 12.2	-0.1
BDI	Bagni Di Lucca	80.14	333	P	P	07 06 13.4	+0.9
BDI				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0						
BDI	Bagni Di Lucca	80.14	333	P	P	07 06 13.4	+0.9
	comp=Z,32nm,0.9s,mb5.0						
VINC	Vinca	80.20	333	P	P	07 06 12.1	-0.7
PLDF	La Plantade	80.24	338	eP	P	07 06 14.6	+1.7
FENE	Fenestrelle	80.24	335	P	P	07 06 12.9	-0.1
TCF	Toulx Ste Croi	80.27	339	eP	P	07 06 13.3	+0.2
	comp=Z,71nm,1.1s,mb5.0						
TCF	Toulx Ste Croi	80.27	339	eP	P	07 06 13.3	+0.2
TCF				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.0						
AGO	Saint Agoulin	80.28	338	eP	P	07 06 15.1	+2.0
PCP	Pian Castagno	80.29	334	P	P	07 06 13.7	+0.5
MAIM		80.31	333	P	P	07 06 12.4	-0.9
BNI	Bardonecchia	80.32	336	eP	P	07 06 13.9	+0.5
BNI				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.9						
BNI	Bardonecchia	80.32	336	eP	P	07 06 13.9	+0.5
	comp=Z,19nm,0.8s,mb4.9						
WES	Weston	80.33	31	eP	P	07 06 14.1	+0.6
WES				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.0						
WES	Weston	80.33	31	eP	P	07 06 14.1	+0.5
	comp=Z,24nm,0.8s,mb5.0						
BHB	Bricherasio	80.36	335	P	P	07 06 12.6	-1.1
RRL	Cesana Torines	80.42	336	P	P	07 06 14.2	+0.3
NRCA	Norcia	80.49	330	P	P	07 06 14.9	+0.6
MFF	Saint Martin d	80.49	341	eP	P	07 06 14.6	+0.4
	comp=Z,37nm,0.9s,mb4.8						
MFF	Saint Martin d	80.49	341	eP	P	07 06 14.6	+0.4
MFF				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
PYM	Petit Puy Mans	80.59	338	eP	P	07 06 16.5	+1.7
MBDF	Montbardon	80.60	336	eP	P	07 06 15.0	+0.1
	comp=Z,43nm,1.0s,mb4.8						
ORIF	Oris-en-Rattie	80.66	336	eP	P	07 06 15.7	+0.5
	comp=Z,39nm,0.8s,mb4.9						
FIN	Finale Ligure	80.69	334	P	P	07 06 14.1	-1.3
ROB	Roburent	80.70	335	P	P	07 06 14.4	-1.0
PZZ	Prazzo	80.72	335	P	P	07 06 14.1	-1.4
SWET	Sewanee	80.82	45	eP	P	07 06 16.2	0.0
SWET				epP	pP	07 07 35.1	-0.5
STV2	Anna di Valdie	80.90	335	P	P	07 06 14.9	-1.5
MONE	Monesi	80.94	335	P	P	07 06 15.7	-0.9
VIVF	Saint-Julien-l	81.02	337	eP	P	07 06 17.5	+0.5
	comp=Z,32nm,0.8s,mb4.8						
IMI	Imperia	81.05	334	P	P	07 06 16.3	-0.9
TOUF	Mont Tournerai	81.13	335	eP	P	07 06 17.8	+0.2
SBF	Sospel	81.22	335	eP	P	07 06 18.0	-0.1
	comp=Z,97nm,0.9s,mb5.2						
RJF	Les Rejaudoux	81.36	339	eP	P	07 06 19.2	+0.4
	comp=Z,84nm,1.0s,mb5.1						
WHFO	Wadi Hawf	81.39	288	P	P	07 06 18.7	-0.8
	SNR=23						
CAF	Calviac	81.59	339	eP	P	07 06 20.9	+0.9
	comp=Z,80nm,1.0s,mb5.2						
SMRF	Simiane la Rot	81.61	336	eP	P	07 06 20.3	+0.2
	comp=Z,9.6nm,0.7s,mb4.5						
FRF	La Foret Royal	81.72	335	eP	P	07 06 20.9	+0.2
LFF	La Frestale	81.88	340	eP	P	07 06 22.1	+0.6
	comp=Z,141nm,1.0s,mb5.4						
LFF	La Frestale	81.88	340	eP	P	07 06 22.1	+0.6
LFF				pmax	pmax		
	comp=Z,71nm,1.0s,mb5.5						
LASF	Ste Croix	81.96	337	eP	P	07 06 22.5	+0.6
	comp=Z,66nm,1.4s,mb5.0						
LMR	La Mourre	81.97	335	eP	P	07 06 22.0	0.0
	comp=Z,40nm,0.9s,mb4.9						
LMR	La Mourre	81.97	335	eP	P	07 06 22.0	0.0
LMR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
PGF	Pioggiola	82.00	333	eP	P	07 06 22.2	0.0
	comp=Z,30nm,0.8s,mb4.9						
PGF	Pioggiola	82.00	333	eP	P	07 06 22.2	0.0
PGF				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
ABTO	Aybut	82.11	288	P	P	07 06 22.8	-0.4
	SNR=8.9						
STKA	Stephens Creek	82.28	189	⇓iP	P	07 06 23.5	-0.4
	comp=Z,12nm,0.6s,mb4.9						
STKA	Stephens Creek	82.28	189	P	P	07 06 23.2	-0.6
	comp=Z,21nm,0.8s,mb5.0,baz=349,slow=6.8,SNR=29						
TIP	Timpagrande	82.53	326	eP	P	07 06 24.7	-0.3
MTLF	Montolieu	83.05	338	eP	P	07 06 27.8	+0.4
	comp=Z,41nm,1.1s,mb4.9						
MTLF	Montolieu	83.05	338	eP	P	07 06 27.8	+0.4
MTLF				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.9						
EPF	Esparros	83.78	339	eP	P	07 06 31.6	+0.5
	comp=Z,18nm,0.7s,mb4.7						
EPF	Esparros	83.78	339	eP	P	07 06 31.6	+0.5
EPF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7						
SJPF	Ste Jean	84.05	340	eP	P	07 06 32.6	+0.2
ETSF	Etsaut	84.11	340	eP	P	07 06 33.0	+0.3
	comp=Z,16nm,0.6s,mb4.7						
ETSF	Etsaut	84.11	340	eP	P	07 06 33.0	+0.3
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
KLBR	Kellerberrin	86.90	209	eP	P	07 06 45.3	-1.2
	comp=Z,44nm,0.9s,mb5.3						
PVRL	Vila Real	87.07	345	eP	P	07 06 46.3	-0.8
	comp=Z,21nm,0.8s,mb5.0						
PVIS	Viseu	87.65	345	eP	P	07 06 49.2	-0.7
	comp=Z,30nm,1.5s,mb4.9						
MTE	Manteigas	87.89	344	eP	P	07 06 50.5	-0.6
ESDC	Sonseca Array	87.92	341	P	P	07 06 50.5	-0.7
	comp=Z,4.3nm,0.8s,mb4.4,baz=8.0,slow=4.4,SNR=17						
ESDC				PP	PP	07 10 23.8	-0.9
	comp=Z,0.4nm,0.4s,baz=22,slow=7.7,SNR=4.1						
PCBR	Castelo Branco	88.43	344	eP	P	07 06 52.6	-1.0
PBEJ	Beja	90.26	344	eP	P	07 07 01.4	-0.7
	comp=Z,9.1nm,1.2s,mb4.6						
PALC	Alcoutim	90.74	344	eP	P	07 07 03.6	-0.7
	comp=Z,24nm,1.8s,mb4.8						
SDV	Santo Domingo	110.52	45	PKiKP		07 12 31.8	
	comp=Z,2.5nm,0.7s,baz=102,slow=5.2,SNR=5.5						
DBIC	Dimbokro	119.77	333	PKP	PKPdf	07 12 49.0	0.0
	comp=Z,9.2nm,0.7s,baz=3.6,slow=1.2,SNR=13						
DBIC				pPKP		07 14 15.1	
	comp=Z,2.8nm,0.6s,baz=334,slow=5.6,SNR=1.5						
MIR	Mirnyy	124.73	205c	iPKIKP	PKPdf	07 12 57.2	0.0
MIR				pmax	pmax		
	comp=Z,25nm,1.0s						
VNDA	Vanda	127.68	177	PKP	PKPdf	07 13 02.6	0.0
	comp=Z,2.5nm,0.7s,baz=314,slow=3.0,SNR=8.7						
LPAZ	La Paz	133.36	58	PKP	PKPdf	07 13 15.3	+0.4
	comp=Z,0.7nm,0.6s,baz=340,slow=4.3,SNR=3.6						
LPAZ				SKPbc		07 16 10.8	
	comp=Z,6.5nm,1.0s,baz=348,slow=5.1,SNR=15						
LPAZ	La Paz	133.36	58	PKP	PKPdf	07 13 15.3	+0.4
LPAZ				SKPbc		07 16 10.8	
BOSA	Boshof	134.51	278	PKhKP		07 13 10.9	
	comp=Z,2.9nm,0.6s,baz=138,slow=12,SNR=9.3						
BOSA				PKP	PKPdf	07 13 17.2	+0.4
	comp=Z,6.1nm,0.5s,baz=91,slow=1.3,SNR=13						
BOSA				SKPbc		07 16 12.9	
	comp=Z,6.0nm,1.1s,baz=134,slow=6.4,SNR=3.5						
BOSA	Boshof	134.51	278	PKP	PKPdf	07 13 17.2	+0.4
BOSA				SKPbc		07 16 12.9	
MAW	Mawson	134.72	213	PKP	PKPdf	07 13 16.2	+0.1
	comp=Z,11nm,0.8s,baz=357,slow=1.4,SNR=15						
MAW				SKPbc		07 16 13.4	
	comp=Z,6.3nm,0.9s,baz=38,slow=4.6,SNR=8.0						
SIV	San Ignacio	136.76	50	PKP	PKPdf	07 13 21.2	0.0
	comp=Z,6.3nm,0.9s,baz=26,slow=0.5,SNR=18						
SIV				pPKP		07 14 49.6	
	comp=Z,1.6nm,0.8s,baz=42,slow=4.5,SNR=3.9						
SIV				SKPbc		07 16 21.3	
	comp=Z,11nm,1.0s,baz=316,slow=2.2,SNR=17						
SUR	Sutherland	139.87	277	PKhKP		07 13 20.7	
	comp=Z,7.7nm,0.7s,baz=18,slow=6.4,SNR=4.3						
BDFB	Brasilia	141.93	32	PKhKP		07 13 27.6	
	comp=Z,9.1nm,0.5s,baz=304,slow=3.0,SNR=22						
BDFB				SKPbc		07 16 35.8	
	comp=Z,3.0nm,0.7s,baz=320,slow=4.7,SNR=4.3						
SYO	Syowa Base	143.39	214	⇑X	PKPdf	07 13 28.6	-2.7
SYO	Syowa Base	143.39	214	⇓P	x	07 13 57.5	
CFAA	Coronel Fontan	145.03	73	PKPbc	PKPbc	07 13 37.6	+1.7
	comp=Z,2.8nm,0.7s,baz=288,slow=2.5,SNR=71						
CFAA				pPKPbc		07 15 02.1	
	comp=Z,0.8nm,0.8s,baz=257,slow=1.9,SNR=4.6						
CFAA				SKPbc		07 16 43.0	
	comp=Z,0.9nm,0.8s,baz=306,slow=3.7,SNR=8.3						
PLCA	Paso Flores	149.22	88	PKPbc	PKPdf	07 13 48.0	+6.0
	comp=Z,14nm,0.8s,baz=290,slow=2.8,SNR=24						
PLCA				pPKPbc		07 15 12.5	
	comp=Z,6.2nm,1.0s,baz=264,slow=4.7,SNR=4.3						
PLCA	Paso Flores	149.22	88	ePKPdf	PKPdf	07 13 42.5	+0.6
PLCA				ePKPbc	PKPdf	07 13 48.1	+6.2
CAM4	Nova Friburgo	149.95	27	⇓iP	PKPdf	07 13 50.6	+7.0
CAM4				i		07 13 52.4	
NVL	N'lazarevskaya	152.42	207	⇑iPKIKP	PKPdf	07 13 53.3	+7.4
NVL				i *PP		07 14 05.5	
NVL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MAIT	Maitri	152.44	207	ePKP	PKPdf	07 13 54.0	+8.1
SNAA	Sanae	155.64	199	⇑i	PKPdf	07 13 59.9	+10
SNAA	Sanae	155.64	199	e	PKPab	07 14 20.7	0.0
SNAA	Sanae	155.64	199	e	Px	07 15 49.2	
SNAA	Sanae	155.64	199	PKP	PKPdf	07 13 50.5	+0.4
	comp=Z,0.9nm,0.8s,baz=125,slow=2.6,SNR=8.1						
SNAA				PKPbc	PKPdf	07 14 00.4	+10
	comp=Z,2.4nm,0.8s,baz=221,slow=0.8,SNR=18						
SNAA	Sanae	155.64	199	ePKPdf	PKPdf	07 13 50.4	+0.2
SNAA				e		07 14 00.1	
VNA2	Neumayer--Watz	157.15	198	⇑i	PKPdf	07 14 03.7	+12
VNA2	Neumayer--Watz	157.15	198	e	PKPab	07 14 26.1	-1.1
VNA2	Neumayer--Watz	157.15	198	e	Px	07 15 51.0	
VNA3	Neumayer Olymp	157.30	195	⇑i	PKPdf	07 14 03.7	+11
VNA3	Neumayer Olymp	157.30	195	e	PKPab	07 14 26.3	-1.5
VNA3	Neumayer Olymp	157.30	195	e	Px	07 15 50.7	
VNA1	Neumayer--Stat	157.54	197	⇑i	PKPdf	07 14 04.2	+12
VNA1	Neumayer--Stat	157.54	197	e	PKPab	07 14 27.8	-1.1
VNA1	Neumayer--Stat	157.54	197	e	Px	07 15 55.7	

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*BJI **14** 07:31:45.0, 35.02N×23.57E, h34^{km}, mB5.2, mb5.1, Ms5.0, Msz4.6*

*PDG **14** 07:31:45.4±0.1, 35.25N×23.92E, h3^{km}±1^{km}*

*ATH **14** 07:31:46.5, 35.14N×23.97E, h12^{km}±1^{km}, MD4.4/24, ML4.3*

*CSEM **14** 07:31:47.9, 35.06N×24.05E, h30^{km}, mb4.7*

*MOS **14** 07:31:47.7±1.2, 35.13N×24.05E, h28^{km}, mb4.8/30, Error ellipse: s-maj=4.3km s-min=2.2km az=105.0*

*IDC **14** 07:31:47.3±2.0, 35.25N×24.11E, h12^{km}±12^{km}, mb4.4/20, mb1 4.5/25, mb1mx4.5/28, mbtmp4.4/25, ML4.1/5, Error ellipse: s-maj=15.5km s-min=11.9km az=11.0*

*NEIC **14** 07:31:48.2±0.3, 35.06N×24.08E, mb4.6/100, ML4.4(THE), ML4.3(ATH), Error ellipse: s-maj=4.5km s-min=2.5km az=198.0*

NEIC Felt at Rethymnon.

*HLW **14** 07:31:48.9, 35.19N×24.00E, h33^{km}, Mb4.3*

*ZUR_RM **14** 07:31:48, 35.06N×24.08E, h27^{km}, Mw4.7/8, Moment Tensor Solution. s8 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.79; $M_{\theta\theta}$0.95; $M_{\phi\phi}$-0.16; $M_{r\theta}$0.43; $M_{\theta\phi}$0.01; $M_{\phi r}$0.36; Best double couple: $M_0$1.04×10^{16} NP1:ϕ_s249°, δ62°, λ-113°. NP2:ϕ_s111°, δ36°, λ-54°. Principal axes: T 1.0571, Plg14°, Azm356°; N -.0289, Plg20°, Azm260°; P -1.0281, Plg65°, Azm118°;*

*THE **14** 07:31:49.3, 35.03N×24.04E, h20^{km}, ML4.8*

ISC 14 07:31:46.3±0.1**, 35.05N**±0.02×**24.09E**±0.02**, h21**^{km}**, h21**^{km}±1.9^{km}**: pP-P, n589,** σ1^{s}**30**/633**, mb4.7**/97**, MS4.4**/5**, 41C-39D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.21	180	ePB	Pb	07 31 53.0	+1.3
VAM	Vamos	0.37	14	⇑ePG	Pb	07 31 52.9	-1.3
VAM				eSB	Sb	07 31 57.8	-1.7
IDI	Anoyia	0.70	70	Pg	Pb	07 31 59.4	-0.4
	212nm,0.3s,baz=261,slow=16,SNR=801						
IDI				Lg		07 32 09.5	
	5µm,0.3s,baz=358,slow=22,SNR=139						
IDI	Anoyia	0.70	70	Pg	Pb	07 31 59.3	-0.4
NPS	Neapolis	1.27	80	ePG	Pn	07 32 11.6	+2.5
NPS				eSB	Sb	07 32 30.5	+5.1
XRY	Khrisi	1.33	97	ePn	Pn	07 32 12.4	+2.4
XRY				eSb	Sb	07 32 33.0	+5.9
XRY	Khrisi	1.33	97	ePG	Pn	07 32 13.5	+3.5
XRY				eSB	Sb	07 32 33.0	+5.9
KYTH	Kithira	1.50	326	ePB	Pb	07 32 12.5	-0.8
THR6	Thira Island,	1.69	39	ePb	Pb	07 32 16.6	+0.1
THR5	Thira Island,	1.71	37	ePb	Pb	07 32 16.7	-0.2
THR1	Thera Island	1.73	40	ePb	Pb	07 32 16.4	-0.9
THR3	Thira Island,	1.73	38	ePb	Pb	07 32 17.1	-0.2
THR3	Thira Island,	1.73	38	ePb	Pb	07 32 17.0	-0.3
SANT	Santorini	1.73	40	ePn	Pn	07 32 15.9	+0.2
SANT	Santorini	1.73	40	ePn	Pn	07 32 15.9	+0.2
THR4	Thira Island,	1.77	37	ePb	Pb	07 32 18.1	+0.2
THR4	Thira Island,	1.77	37	ePb	Pb	07 32 18.1	+0.2
VLI	Veliai	1.91	331	ePN	Pn	07 32 19.1	+0.8
APE	Apeiranthos	2.33	30	ePN	Pn	07 32 22.9	-1.4
APE				eSN	Sn	07 32 51.0	-1.7
APE	Apeiranthos	2.33	30c	iP	Pn	07 32 23.9	-0.4
APE	Apeiranthos	2.33	30	ePB	Pb	07 32 26.0	-1.5
APE	Apeiranthos	2.33	30	ePb	Pb	07 32 25.5	-2.0
APE				eSn	Sn	07 32 51.0	-1.6
KARP	Karpathos	2.56	78	ePB	Pb	07 32 30.9	-0.6
NAIG	Nisos Aigina	2.75	350	ePB	Pb	07 32 30.5	-4.1
NAIG	Nisos Aigina	2.75	350	ePb	Pb	07 32 30.2	-4.4
ITM	Ithomi	2.75	321	⇑iPN	Pn	07 32 32.0	+1.7
ITM				eSN	Sn	07 33 03.4	+0.1
NSAL	Nisos Salamina	2.90	350	ePN	Pn	07 32 33.0	+0.6
NSAL	Nisos Salamina	2.90	350	ePn	Pn	07 32 32.4	0.0
NISR	Nisiros	2.92	57	ePB	Pb	07 32 36.5	-1.1
ATH	Athens Observa	2.93	354	ePN	Pn	07 32 34.0	+1.1
ATH	Athens Observa	2.93	354	ePb	Pb	07 32 34.9	-2.9
PTL	Penteli	3.00	357	ePN	Pn	07 32 34.5	+0.7
MGER	Gerania Oros	3.01	347	ePN	Pn	07 32 34.5	+0.6
MGER	Gerania Oros	3.01	347	ePn	Pn	07 32 34.0	+0.1
MPAR	Parnis Oros	3.11	355	ePN	Pn	07 32 36.0	+0.6
MPAR	Parnis Oros	3.11	355	ePn	Pn	07 32 35.5	+0.1
BODT	Bodrum	3.30	51	ePN	Pn	07 32 39.4	+1.4
BODT	Bodrum	3.30	51	P	Pn	07 32 39.3	+1.3
BDRM	Kayabasi	3.38	53	i P	Pn	07 32 42.5	+3.2
SMG	Samos	3.46	39	ePN	Pn	07 32 43.1	+2.7
ARG	Arkhangelos	3.49	69	ePN	Pn	07 32 44.6	+3.8
ARG				eSN	Sn	07 33 27.0	+5.0
ARG	Arkhangelos	3.49	69	eS	Sn	07 33 27.0	+5.0
RLS	Riolos of Patr	3.67	326	ePB	Pb	07 32 45.1	-5.3
SLUM		3.67	165	⇑P	Pn	07 32 45.0	+1.7
SLUM				S	Sn	07 33 26.8	+0.2
LKR	Lokris	3.70	347	⇑iPN	Pn	07 32 43.8	0.0
MLSB	Milas	3.73	52	ePN	Pn	07 32 46.4	+2.1
MLSB	Milas	3.73	52	P	Pn	07 32 46.3	+2.0
URLA	Izmir	3.87	31	i P	Pn	07 32 46.2	0.0
DALT	Dalyan (Mudla)	4.07	64	ePN	Pn	07 32 52.8	+3.7
BLCB	Balcova	4.09	35	ePN	Pn	07 32 49.3	0.0
BLCB	Balcova	4.09	35	P	Pn	07 32 49.2	-0.1
VLS	Valsamata	4.20	319	ePN	Pn	07 32 50.6	-0.3
IZM	Izmir	4.21	36	ePN	Pn	07 32 53.0	+2.0
IZM	Izmir	4.21	36	P	Pn	07 32 52.9	+1.9
AGG	Agios Georgios	4.21	341	ePn	Pn	07 32 51.6	+0.6
AGG				eSn	Sn	07 33 40.1	-0.1
KDAG	Bornova	4.21	36	i P	Pn	07 32 51.7	+0.6
EVR	Evrytania	4.27	335	ePN	Pn	07 32 53.6	+1.7
NEO	Neokhori	4.31	351	ePN	Pn	07 32 52.9	+0.5
FETY	Fethiye	4.36	67	PN	Pn	07 32 55.5	+2.4
XOR	Xorichti	4.37	351	ePn	Pn	07 32 53.5	+0.2
PRK	Paraskevi	4.54	22	ePN	Pn	07 32 56.9	+1.2
LKD	Levkas	4.57	324	ePn	Pn	07 32 56.4	+0.2
KSL	Kastellorizon	4.61	75	ePn	Pn	07 32 58.0	+1.3
KSL	Kastellorizon	4.61	75	ePN	Pn	07 32 59.0	+2.3
AKAS	Kas	4.65	74	i P	Pn	07 32 55.8	-1.5
HMAT	Matruh	4.68	147	⇑P	Pn	07 32 58.3	+0.5
HMAT				S	Sn	07 33 50.1	-2.0
AYVA	Ayvalik	4.73	25	i P	Pn	07 32 59.3	+0.9
DNZL	Cakiroluk	4.79	55	i P	Pn	07 33 01.4	+2.1
DENT	Denizli	4.82	54	ePN	Pn	07 33 03.0	+3.4
PAIG	Paliouri	4.88	356	ePn	Pn	07 33 00.5	0.0
LIA	Limnos Island	4.92	10	ePN	Pn	07 33 01.7	+0.6
GOLH	Golhisar	4.94	62	i P	Pn	07 33 03.6	+2.3
MANT	Manisa	4.97	45	i P	Pn	07 33 04.8	+3.0
ELL	Elmali	5.02	69	PN	Pn	07 33 04.8	+2.3
EZN	Ezine	5.09	20	ePN	Pn	07 32 60.0	-3.5
LIT	Litokhoron	5.20	346	ePn	Pn	07 33 04.9	-0.2
LIT				eSn	Sn	07 34 04.1	-1.1
MEV	Metsovon	5.25	335	eSn	Sn	07 34 05.1	-1.3
JAN	Janina	5.27	332	ePN	Pn	07 33 06.5	+0.4
PLG	Polygyros	5.34	355	ePN	Pn	07 33 08.3	+1.3
KHL	Karahalli	5.46	52	ePN	Pn	07 33 10.3	+1.7
BALB	Balikesir	5.49	32	ePN	Pn	07 33 09.4	+0.3
KZN	Kozani	5.56	341	ePN	Pn	07 33 11.8	+1.7
THE	Thessaloniki	5.64	351	ePn	Pn	07 33 12.1	+0.8
KEK	Kerkira	5.77	325	Pn	Pn	07 33 11.7	-1.4
KEK				Sn	Sn	07 34 19.2	-0.3
KEK	Kerkira	5.77	325	ePN	Pn	07 33 12.0	-1.1
SOH	Sokhos	5.79	354	ePn	Pn	07 33 14.5	+1.1
TKTP	Tekketepe	5.84	57	i P	Pn	07 33 13.4	-0.6
ISP	Isparta	5.88	60	ePN	Pn	07 33 16.3	+1.7
ISP	Isparta	5.88	60d	iP	Pn	07 33 15.8	+1.2
ISP	Isparta	5.88	60	ePn	Pn	07 33 15.7	+1.1
	47nm,0.6s						
ISP	Isparta	5.88	60	ePn	Pn	07 33 15.7	+1.1
	47nm,0.6s						
SWA2		5.90	168	⇑P	Pn	07 33 15.1	+0.2
GDZ	Gediz	5.91	45	i P	Pn	07 33 07.6	-7.4
SWA1		5.93	166	⇓eP	Pn	07 33 15.7	+0.4
SRS	Serrai	6.07	356	ePn	Pn	07 33 17.7	+0.3
FNA	Florina	6.11	340	ePn	Pn	07 33 17.1	-0.8
RDO	Rodhopi	6.20	10	ePN	Pn	07 33 19.6	+0.5
ALT	Altintas	6.26	49	PN	Pn	07 33 21.2	+1.2
ALT	Altintas	6.26	49	P	Pn	07 33 21.1	+1.1
NVR	Nevrokopi	6.29	358	ePN	Pn	07 33 21.2	+0.7
VAY	Valandovo	6.38	350	i Pn	Pn	07 33 23.5	+1.9
VAY				⇑i		07 33 24.9	
ULDT	Uludag	6.47	37	i P	Pn	07 33 25.5	+2.5
MMB	Musomiste	6.54	358	i P	Pn	07 33 23.5	-0.4
HBRG	Burj al 'Arab	6.58	131	⇑P	Pn	07 33 24.6	0.0
RZN	Rozhen	6.65	4	i P	Pn	07 33 25.0	-0.5
KDZ	Kurdzhali	6.67	9	i P	Pn	07 33 26.0	+0.2
KKB	Krupnik	6.85	354	i P	Pn	07 33 28.0	-0.3
YLV	Yalova	6.92	36	ePN	Pn	07 33 29.4	+0.2
ESKT	Eskisehir	7.00	48	ePN	Pn	07 33 31.2	+0.8
ESKT	Eskisehir	7.00	48	i P	Pn	07 33 32.3	+1.9
ESKT	Eskisehir	7.00	48	P	Pn	07 33 31.1	+0.7
PLD	Plovdiv	7.06	4	i P	Pn	07 33 33.0	+1.7
HDMB	Hadim	7.07	72	ePN	Pn	07 33 33.4	+2.0
LCI	Lecce	7.09	320	P	Pn	07 33 30.4	-1.3
LCI				pmax	pmax		
	comp=Z,43nm,0.5s						
LCI	Lecce	7.09	320	P	Pn	07 33 30.4	-1.3
	comp=Z,42nm,0.5s						
TIR	Tirane	7.11	333	P	Pn	07 33 36.4	+4.4
TIR	Tirane	7.11	333	i Pn	Pn	07 33 36.5	+4.5
SOI	Samo	7.13	297	P	Pn	07 33 31.8	-0.5
SOI						07 34 47.8	
SOI				pmax	pmax		
	comp=Z,16nm,0.6s						
SOI	Samo	7.13	297	Pn	Pn	07 33 31.8	-0.5
	comp=Z,16nm,0.6s						
SOI				Sn	Sn	07 34 47.8	-5.7
TIP	Timpagrande	7.16	307	Pn	Pn	07 33 30.8	-1.8
	comp=Z,89nm,1.1s						
TIP				Sn	Px	07 33 34.7	
LEF	Lefka	7.22	87	ePN	Pn	07 33 30.9	-2.6
SKO	Skopje	7.22	344	i Pn	Pn	07 33 33.0	-0.5
SKO				i		07 33 37.5	
SKO				i		07 33 46.0	
QSH	Qafa e Shtames	7.25	334	i Pn	Pn	07 33 34.0	+0.1
KDHN	Kadinhani	7.32	59	i P	Pn	07 33 34.0	-0.9
KDHN	Kadinhani	7.32	59	i P	Pn	07 33 33.3	-1.6
KIZT	Kizilcal	7.32	56	ePN	Pn	07 33 35.7	+0.8
KIZT	Kizilcal	7.32	56	P	Pn	07 33 35.6	+0.8
ERMK	Ermenek	7.34	75	i P	Pn	07 33 36.1	+0.9
PGB	Panagyurishte	7.49	0	i P	Pn	07 33 37.0	-0.3
VTS	Vitosha	7.56	355	i P	Pn	07 33 38.5	+0.2
VTS	Vitosha	7.56	355	⇑P	Pn	07 33 39.9	+1.6
VTS	Vitosha	7.56	355	⇑P	Pn	07 33 39.9	+1.6
CSS	Prodhromos	7.59	88	ePn	Pn	07 33 36.4	-2.2
	comp=Z,53nm,0.8s						
JMB	Yambol	7.66	14	i P	Pn	07 33 41.0	+1.4
HMYD	Mayadein	7.72	131	P	Pn	07 33 40.2	-0.3
HNAT	Natroun	7.72	133	P	Pn	07 33 39.9	-0.6
ORI	Oriolo Calabro	7.86	312	P	Pn	07 33 40.3	-2.2
ORI				pmax	pmax		
	comp=Z,64nm,0.3s						
ORI	Oriolo Calabro	7.86	312	Pn	Pn	07 33 40.3	-2.2
	comp=Z,64nm,0.3s						
ULC	Ulcinj	7.88	333	ePn	Pn	07 33 39.4	-3.3
ULC				eSn	Sn	07 35 04.7	-7.4
IKL	Isikli	7.91	79	ePN	Pn	07 33 41.9	-1.1
FYM	Al Fayyum	7.94	130	⇑P	Pn	07 33 42.8	-0.8
BARS	Barje	7.96	348	⇑iPn	Px	07 34 18.9	
BRT	Bari-Castellan	7.96	319	P	Pn	07 33 41.9	-1.9
BRT				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRT	Bari-Castellan	7.96	319	Pn	Pn	07 33 41.9	-1.9
	comp=Z,2.2nm,0.6s						
LTRZ	Laterza	7.99	316	Pn	Pn	07 33 40.7	-3.5
VAE	Valguarnera	8.18	290	Pn	P	07 33 52.0	+5.0
	comp=Z,25nm,0.3s,baz=227,slow=5.1,SNR=6.9						
VAE				Sn	Sn	07 35 18.9	-0.9
	comp=Z,10nm,0.3s,baz=80,slow=8.0,SNR=4.7						
PVY	Plav	8.19	338	ePn	P	07 33 44.3	-2.7
PVY				eSn	Sn	07 35 12.2	-7.7
PVL	Pavlikeni	8.21	6	i P	P	07 33 45.7	-1.7

TTG	Podgorica	8.28	334	⇓iPn	P	07 33 44.9	-3.3
TTG				eSn	Sn	07 35 14.6	-7.5
KOT	Kottamia	8.29	126	⇑P	P	07 33 48.1	-0.4
KOT				S	Sn	07 35 16.2	-6.4
BUM	Brajici-Budva	8.30	332	⇓iPn	P	07 33 45.0	-3.6
BUM				eSn	Sn	07 35 15.2	-7.5
MEST	Erdemli	8.31	76	i P	P	07 33 47.5	-1.3
ZAPS	Zavoj/Pirot	8.32	353	⇑iPn	P	07 33 49.2	+0.4
HSAF	As Saff	8.32	129	P	P	07 33 47.8	-1.0
SZH	Strazhica	8.33	9	P	P	07 33 50.0	+1.0
SGKT	Sivrigoynuk	8.38	46	i P	P	07 33 51.8	+2.2
ANTO	Ankara	8.43	53	eP	P	07 33 50.6	+0.3
ANTO	Ankara	8.43	53	⇓P	P	07 33 52.6	+2.3
ANTO	Ankara	8.43	53	⇓P	P	07 33 52.6	+2.2
GLL	Jalalah	8.45	128	⇑P	P	07 33 49.7	-0.9
MGR	Morigerati	8.46	309	Pn	P	07 33 48.4	-2.4
	comp=Z,15nm,0.6s						
IVA	Berane	8.46	339	⇓iPn	P	07 33 47.9	-2.9
IVA				eSn	Sn	07 35 19.1	-7.6
PRD	Provadia	8.54	17	i P	P	07 33 52.0	+0.2
SLCN	Sala Consilina	8.56	311	Pn	P	07 33 50.8	-1.4
HCY	Herceg Novi	8.58	331	⇓iPn	P	07 33 49.1	-3.4
HCY				eSn	Sn	07 35 21.8	-7.8
HFRF	Wahat Farafira	8.67	154	P	P	07 33 52.1	-1.5
NKY	Niksic	8.71	334	⇓iPn	P	07 33 50.8	-3.4
NKY				eSn	Sn	07 35 25.0	-7.8
AMAG	Maghara	8.84	117	⇑P	P	07 33 54.7	-1.3
SGO	Sicignano	8.86	311	P	P	07 33 54.2	-2.1
SGO				pmax	pmax		
	comp=Z,13nm,0.6s						
SGO	Sicignano	8.86	311	Pn	P	07 33 54.2	-2.1
	comp=Z,13nm,0.6s						
MRLC	Muro Lucano	8.87	313	Pn	P	07 33 53.8	-2.6
TREB	Trebinje	8.87	331	Pn	P	07 33 51.0	-5.4
BRTR	Keskin Array B	8.92	56	Pn	P	07 33 58.6	+1.5
	comp=Z,1.6nm,0.3s,baz=229,slow=14,SNR=71						
BOLS	Boljevac	8.92	350	⇑iPn	P	07 33 55.7	-1.5
BRY	Bratogost	8.95	333	ePn	P	07 33 54.4	-3.1
BRY				eSn	Sn	07 35 30.8	-7.9
SUZ		9.03	123	P	P	07 33 57.5	-1.2
PLE	Pljevlja	9.04	338	⇓iPn	P	07 33 55.4	-3.4
PLE				eSn	Sn	07 35 32.8	-8.1
UPM	Unac-Piva	9.08	335	⇓iPn	P	07 33 56.5	-2.9
UPM				eSn	Sn	07 35 34.1	-8.0
FG4	Candela	9.08	315	P	P	07 33 56.6	-2.8
FG4				pmax	pmax		
	comp=Z,7.0nm,0.3s						
FG4	Candela	9.08	315	Pn	P	07 33 56.6	-2.8
	comp=Z,7.4nm,0.3s						
NVSS	Nova Varos 2	9.11	339	⇑iPn	P	07 33 54.8	-4.9
ELDT	Eldivan	9.17	51	i P	P	07 34 02.8	+2.2
GRUS	Gruza	9.21	345	⇑iPn	P	07 34 05.4	+4.3
CSSN	Cassano Irpino	9.21	312	P	P	07 33 55.9	-5.3
CDAG	Cicekdag	9.38	58	i P	P	07 34 06.7	+3.3
RGNG	Rignano Grg	9.39	317	Pn	P	07 33 59.8	-3.9
MRB1	Monte Rocchett	9.40	313	P	P	07 34 02.2	-1.6
SVIS	Svilajnac	9.50	347	ePn	P	07 34 03.8	-1.3
BBLS	Bajina Basta -	9.52	339	⇑iPn	P	07 34 00.5	-4.9
SLTI	Sal'it	9.55	104	Pn	P	07 34 03.2	-2.7
DIVS	Divcibare	9.57	342	⇑iPn	P	07 34 02.6	-3.5
KZIT	Kziot	9.59	113	Pn	P	07 34 03.7	-2.8
KZIT				Sn	Sn	07 35 45.9	-8.8
BALT	Daday	9.76	46	i P	P	07 34 10.0	+1.2
HNKL	Nakhl	9.79	119	⇓P	P	07 34 07.5	-1.6
SGG	Gregorio Mates	9.91	313	Pn	P	07 34 10.1	-0.7
TIRR	Tirgusor	9.97	18	⇓P	P	07 34 11.4	-0.2
COBT	Iskenderun	10.00	78	i P	P	07 34 09.5	-2.5
MSC	Monte Massico	10.05	311	P	P	07 34 12.3	-0.4
MIDA	Miranda	10.14	313	P	P	07 34 15.7	+1.7
MIDA				S	Px	07 34 22.7	
MZDA	Masada	10.16	108	Pn	P	07 34 11.2	-3.0
CII	Carovilli	10.16	314	P	P	07 34 15.5	+1.3
CII				S	Px	07 34 19.1	
KMTI	Karmit	10.24	116	Pn	P	07 34 12.9	-2.4
KMTI				Sn	S	07 36 03.2	-7.3
RNI2	Rionero Sannit	10.24	313	Pn	P	07 34 17.9	+2.6
PRNI	Paran	10.32	114	Pn	P	07 34 13.8	-2.6
PRNI				Sn	S	07 36 02.3	-10
VOIR		10.40	4	⇑P	P	07 34 17.8	+0.3
MLR	Muntele Rosu	10.53	7	Pn	P	07 34 19.2	0.0
	comp=Z,0.5nm,0.3s,baz=178,slow=3.5,SNR=22						
MLR	Muntele Rosu	10.53	7	⇓P	P	07 34 19.4	+0.2
MLR	Muntele Rosu	10.53	7	⇑P	P	07 34 19.0	-0.2
MBH	Mount Berech	10.54	117	Pn	P	07 34 17.4	-2.1
BOYT	Boyabat	10.62	50	i P	P	07 34 21.9	+1.4
EIL	Elat	10.63	117	Pn	P	07 34 19.5	-1.3
	comp=Z,2.1nm,0.3s,baz=42,slow=7.3,SNR=12						
EIL				Sn	S	07 36 12.1	-8.2
	comp=Z,1.1nm,0.3s,baz=307,slow=30,SNR=3.5						
EIL	Elat	10.63	117	Pn	P	07 34 19.0	-1.8
HKAT	Jabal Katrina	10.64	125	P	P	07 34 19.4	-1.5
VVLD	Villa Vallelon	10.66	313	P	P	07 34 26.5	+5.5
VVLD				S	Px	07 34 29.8	
BZS	Buzias	10.72	351	⇑P	P	07 34 20.4	-1.5
VRI	Vrincioaia	10.99	10	P	P	07 34 26.5	+0.9
AKRG	Al Kharijah	11.01	148	⇓P	P	07 34 24.5	-1.3
GTR	Jabal at Tayr	11.03	148	⇓P	P	07 34 24.5	-1.6
ASF	Jabal al Asfar	11.06	101	Pn	P	07 34 25.4	-1.2
	comp=Z,0.6nm,0.3s,baz=164,slow=11,SNR=5.3						
ASF				Sn	S	07 36 36.3	+5.6
	comp=Z,1.1nm,0.3s,baz=305,slow=22,SNR=4.1						
AQU	L'Aquila	11.08	314	P	P	07 34 34.0	+7.2
HHRG	Al Ghardaqah	11.26	131	⇓P	P	07 34 27.3	-2.0
NRCA	Norcia	11.54	316	Pn	P	07 34 30.7	-2.4
PKSM	Moragy	11.89	341	⇓P	P	07 34 33.4	-4.4
BOJS	Bojanci	12.42	330	ePn	P	07 34 41.1	-3.8
BOJS				eSn	S	07 36 54.8	-8.9
ELZG	Elazig	12.43	70	i P	P	07 34 44.9	-0.2
KIS	Kishinev	12.46	15	eP	P	07 34 43.0	-2.4
KIS				MLR	MLR		
	comp=N,800nm,11.0s						
KIS				MLR	MLR		
	comp=Z,800nm,11.0s						
KIS				MLR	MLR		
	comp=Z,800nm,12.0s						
SIM	Simferopol'	12.52	35	eP	P	07 34 45.3	-0.9
SIM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SIM				MLR	MLR		
	comp=Z,400nm,20.0s						
SIM	Simferopol'	12.52	35	eP	P	07 34 45.3	-0.9
	comp=Z,400nm,20.0s						
BURAR	Bucovina Array	12.59	4	⇓P	P	07 34 49.6	+2.6
BURAR	Bucovina Array	12.59	4	⇓P	P	07 34 49.6	+2.5
PSZ	Piszkesteto	13.23	348	P	P	07 34 54.8	-0.9
PSZ				pmax	pmax		
	comp=Z,14nm,1.0s						
PSZ	Piszkesteto	13.23	348	Pn	P	07 34 54.8	-0.9
	comp=Z,14nm,1.0s						
PSZ	Piszkesteto	13.23	348	Pn	P	07 34 54.8	-0.9
	comp=Z,14nm,1.0s						
PERS	Pernice	13.41	332	ePn	P	07 34 54.1	-3.9
VOY	Vojsko	13.42	328	ePn	P	07 34 54.7	-3.4
VOY				eSn	S	07 37 17.9	-10
OBKA	Obir	13.53	331	⇑iPn	P	07 34 56.9	-2.6
OBKA				i Sn	S	07 37 21.6	-8.6
ROBS	Robic	13.75	328	ePn	P	07 35 01.3	-1.2
PGF	Pioggiola	13.94	307	eP	P	07 35 11.3	+6.4
	comp=Z,32nm,0.8s						
PGF	Pioggiola	13.94	307	eP	P	07 35 11.3	+6.4
PGF				pmax	pmax		
	comp=Z,16nm,0.8s						
VYHS	Vyhne	13.99	345	ePN	P	07 35 07.9	+2.3
ANN	Anapa	14.12	42	eP	P	07 35 12.3	+5.0
ANN				eS	S	07 37 46.3	+2.1
ANN				pmax	pmax		
	comp=Z,39nm,1.3s						
KBA	Koelnbreinsper	14.48	329	⇑iPn	P	07 35 10.0	-2.0
KBA				i Sn	S	07 37 45.3	-7.4
KWP	Kalwaria	14.61	356	eP	P	07 35 17.5	+3.8
KWP				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KWP	Kalwaria	14.61	356	ePn	P	07 35 17.5	+3.8
	comp=Z,6.3nm,0.8s						
MOA	Molln	14.74	333	⇑iPn	P	07 35 13.4	-2.0
MOA				i Sn	S	07 37 49.8	-9.2
LVV	L'vov	14.76	360	eP	P	07 35 11.4	-4.3
LVV				MLR	MLR		
	comp=Z,270nm,16.8s						
SOC	Sochi	14.78	50	eP	P	07 35 14.9	-1.1
SOC				e		07 37 51.3	
SOC				pmax	pmax		
	comp=Z,53nm,1.7s						
SOC				pmax	pmax		
	comp=N,27nm,1.2s						
SOC				pmax	pmax		
	comp=E,30nm,1.0s						
SOC				MLR	MLR		
	comp=Z,472nm,16.0s						
SOC				MLR	MLR		
	comp=N,212nm,13.0s						
SOC				MLR	MLR		
	comp=E,443nm,16.0s						
SOC	Sochi	14.78	50	eP	P	07 35 14.9	-1.1
	comp=E,27nm,1.2s						
VRAC	Vranov	15.28	341	P	P	07 35 24.7	+2.2
VRAC				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRAC	Vranov	15.28	341	Pn	P	07 35 24.7	+2.2
	comp=Z,1.2nm,0.3s,baz=126,slow=9.0,SNR=8.1						
VRAC	Vranov	15.28	341	⇓P	P	07 35 27.6	+5.1
WTTA	Wattenberg	15.37	326	⇑iPn	P	07 35 23.7	+0.1
WTTA				i Sn	S	07 38 08.3	-5.4
OKC	Ostrava-Krasne	15.41	345	AMS	AMS	07 42 30.0	
	comp=Z,700nm,14.8s						
WATA	Walderalm	15.45	326	⇑iPn	P	07 35 24.8	+0.2
WATA				i Sn	S	07 38 09.2	-6.4
MORC	Moravsky Berou	15.48	344	eP	P	07 35 27.9	+2.8
MORC				pmax	pmax		
	comp=Z,14nm,1.1s						
MORC	Moravsky Berou	15.48	344	eP	P	07 35 27.9	+2.9
	comp=Z,14nm,1.1s						
MORC	Moravsky Berou	15.48	344	eP	P	07 35 27.9	+2.8
	comp=Z,14nm,1.1s						
OJC	Ojcow	15.48	350	eP	P	07 35 28.9	+3.8
MSL	Mosul	15.50	80	eP	P	07 35 28.5	+3.1
SQTA	Sankt Quirin	15.53	325	⇑iPn	P	07 35 26.1	+0.4
SQTA				i Sn	S	07 38 12.7	-4.9
SBF	Sospel	15.56	309	eP	P	07 35 26.9	+0.7
	comp=Z,52nm,1.0s						
SBF	Sospel	15.56	309	eP	P	07 35 26.9	+0.7
SBF				pmax	pmax		
	comp=Z,26nm,1.0s						
MOTA	Moosalm	15.67	326	⇑iPn	P	07 35 27.6	+0.1
MOTA				i Sn	S	07 38 16.1	-4.7
GEC2	GERESS Array S	15.78	334	eP	P	07 35 32.4	+3.4
GEC2				pmax	pmax		
	comp=Z,35nm,0.9s						
GEC2	GERESS Array S	15.78	334	eP	P	07 35 32.4	+3.4
	comp=Z,35nm,0.9s						
GERES	GERESS Array B	15.78	334	Pn	P	07 35 28.0	-1.0
	comp=Z,1.3nm,0.3s,baz=151,slow=12,SNR=57						
GERES				PcP	PcP	07 40 27.4	-1.5
	comp=Z,0.1nm,0.3s,baz=207,slow=3.0,SNR=3.4						
DAVOX	Davos	15.87	322	Pn	P	07 35 33.5	+3.4
	comp=Z,1.2nm,0.3s,baz=182,slow=19,SNR=12						
LMR	La Mourre	15.92	307	eP	P	07 35 30.6	-0.2
FRF	La Foret Royal	15.93	307	eP	P	07 35 31.3	+0.4
	comp=Z,21nm,0.7s						
FRF	La Foret Royal	15.93	307	eP	P	07 35 31.3	+0.4
FRF				pmax	pmax		
	comp=Z,11nm,0.7s						
KHC	Kasperske Hory	16.07	334	eP	P	07 35 29.9	-2.7
KHC				MLR	MLR		
	comp=Z,1µm,12.4s						
KHC	Kasperske Hory	16.07	334	eP	P	07 35 29.9	-2.7
KHC				⇑iP		07 35 34.7	
KHC				e		07 35 35.7	
KHC	Kasperske Hory	16.07	334	eP	P	07 35 29.9	-2.7
KHC				ex	x	07 35 35.7	
KHC				AMS	AMS	07 43 00.0	
	comp=Z,1µm,12.4s						
KHC	Kasperske Hory	16.07	334	⇑iP	P	07 35 34.7	+2.1
AKASG	Malin Array Be	16.09	12	Pn	P	07 35 31.1	-1.7
	comp=Z,2.2nm,0.3s,baz=203,slow=10,SNR=25						
AKASG				PcP	PcP	07 40 27.9	-1.5
	comp=Z,0.3nm,0.3s,baz=230,slow=0.6,SNR=4.2						
FUR	Furstenfeldbru	16.20	328	eP	P	07 35 37.2	+2.8
DAVA	Damuels	16.21	323	⇑iPn	P	07 35 35.4	+0.9
DAVA				i Sn	S	07 38 30.3	-3.2
DPC	Dobruska-Polom	16.31	342	eP	P	07 35 36.7	+1.0
DPC				AMS	AMS	07 43 10.0	
	comp=Z,800nm,18.6s						
LLS	Linth-Limmern	16.36	321	⇓P	P	07 35 37.8	+1.5
MBDF	Montbardon	16.40	311	eP	P	07 35 36.4	-0.5
	comp=Z,65nm,1.1s						
MBDF	Montbardon	16.40	311	eP	P	07 35 36.4	-0.5
MBDF				pmax	pmax		
	comp=Z,32nm,1.1s						
PRU	Pruhonice	16.48	338	eP	P	07 35 39.0	+1.1
PRU				AMS	AMS	07 43 20.0	
	comp=Z,1µm,14.1s						
UPC	Upice	16.53	342	eP	P	07 35 39.6	+1.1
MUO	Muotathal	16.63	320	⇓P	P	07 35 40.5	+0.7
KSP	Ksiaz	16.77	343	eP	P	07 35 42.3	+0.8
KSP				eS	S	07 38 52.0	+5.7
KSP	Ksiaz	16.77	343	eP	P	07 35 44.0	+2.6
SMRF	Simiane la Rot	16.81	308	eP	P	07 35 42.5	+0.4
	comp=Z,17nm,0.7s						
LKBD	Leukerbad	16.82	317	⇓P	P	07 35 41.4	-0.7
LKBD				⇓P		07 35 42.2	
LKBD	Leukerbad	16.82	317	⇓P	P	07 35 42.2	+0.1
LPG	La Plagne	16.82	314	eP	P	07 35 42.2	+0.1
LPL	La Plagne	16.84	314	eP	P	07 35 42.5	+0.1
	comp=Z,7.0nm,0.5s						
LPL	La Plagne	16.84	314	eP	P	07 35 42.5	+0.1
LPL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KIV	Kislovodsk	16.86	53	d iP	P	07 35 42.8	+0.1
KIV				pmax	pmax		
	comp=Z,68nm,1.3s						
KIV				MLR	MLR		
	comp=Z,200nm,14.0s						
KIV	Kislovodsk	16.86	53	⇓eP	P	07 35 45.3	+2.6
	comp=Z,93nm,1.1s						
KIV	Kislovodsk	16.86	53	i P	P	07 35 42.8	+0.1
	comp=Z,200nm,14.0s						
BHD	Baghdad	16.89	90	eP	P	07 35 42.0	-1.2
PVCC	Panska Ves	16.95	339	eP	P	07 35 42.7	-1.1
PVCC				AMS	AMS	07 43 50.0	
	comp=Z,900nm,11.6s						
ORIF	Oris-en-Rattie	17.05	311	eP	P	07 35 44.6	-0.5
	comp=Z,20nm,0.8s						
ORIF				eR			
	comp=Z,665nm,21.0s						
GNI	Garni	17.13	67	P	P	07 35 46.6	+0.4
GNI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GNI	Garni	17.13	67	P	P	07 35 46.6	+0.5
	comp=Z,0.7nm,0.3s,baz=321,slow=1.2,SNR=11						
GNI	Garni	17.13	67	eP	P	07 35 47.7	+1.5
	comp=Z,46nm,1.2s						
NOTT	Nottersdorf	17.16	333	eP	P	07 35 47.6	+1.2
ZEI	Tsey	17.22	57	eP	P	07 35 45.4	-1.8
SLE	Schleitheim	17.23	322	⇑P	P	07 35 47.7	+0.4
SULZ	Sulz-Cheisache	17.26	321	⇓P	P	07 35 49.6	+1.9
GRA1	Grafenberg Arr	17.41	331	eP	P	07 35 50.9	+1.3
	comp=Z,155nm,1.2s						
GRF	Grafenberg Arr	17.41	331	eP	P	07 35 50.9	+1.3
GRF				pmax	pmax		
	comp=Z,155nm,1.2s						
GRF	Grafenberg Arr	17.41	331	eP	P	07 35 50.9	+1.3
GRF				pmax	pmax		
	comp=Z,155nm,1.2s						
GRF	Grafenberg Arr	17.41	331	eP	P	07 35 50.9	+1.3
	comp=Z,155nm,1.2s						
BRG	Berggiesshubel	17.44	338	⇓iP	P	07 35 50.8	+0.8
BRG				pmax	pmax		
	comp=Z,34nm,1.3s						
BRG				MLR	MLR		
	comp=Z,737nm,12.5s						
BRG				MLR	MLR		
	comp=N,615nm,13.2s						
BRG				MLR	MLR		
	comp=E,232nm,13.2s						
BRG	Berggiesshubel	17.44	338	⇓iP	P	07 35 50.8	+0.9
	comp=E,34nm,1.3s						
BRG	Berggiesshubel	17.44	338	eP	P	07 35 50.6	+0.6
TI2	Plekhanov	17.50	61	eP	P	07 35 43.6	-7.1
BBS	Basel-Blauen	17.54	320	eP	P	07 35 51.3	+0.1
GUNZ	Gunzen	17.54	334	eP	P	07 35 52.3	+1.1
FELD	Feldberg	17.55	322	eP	P	07 35 52.3	+1.0
STU	Stuttgart	17.59	326	eP	P	07 35 52.1	+0.3
WERD	Werda	17.62	334	eP	P	07 35 52.8	+0.6
BFO	Black Forest	17.69	323	eP	P	07 35 54.1	+1.1
BFO				pmax	pmax		
	comp=Z,18nm,0.9s						
BFO	Black Forest	17.69	323	eP	P	07 35 54.1	+1.1
	comp=Z,18nm,0.9s						
VIVF	Saint-Julien-l	17.78	309	eP	P	07 35 54.1	-0.1
	comp=Z,22nm,1.0s						
VIVF	Saint-Julien-l	17.78	309	eP	P	07 35 54.1	-0.1
VIVF				pmax	pmax		
	comp=Z,11nm,1.0s						
CABF	La Chapelle	17.81	316	eP	P	07 35 51.8	-2.8
	comp=Z,33nm,0.9s						
CABF	La Chapelle	17.81	316	eP	P	07 35 51.8	-2.8
CABF				pmax	pmax		
	comp=Z,17nm,0.9s						
LOMF	Lomont	17.83	319	eP	P	07 35 56.0	+1.2
DGRG	David-gareji	17.88	63	P	P	07 35 57.4	+1.9
LASF	Ste Croix	17.98	306	eP	P	07 35 56.9	+0.2
	comp=Z,108nm,1.5s						
MOF	Molkenrain	17.98	320	eP	P	07 35 55.8	-0.9
MOX	Moxa	18.03	334	eP	P	07 35 56.2	-1.1
MOX				pmax	pmax		
	comp=Z,31nm,1.3s						
MOX				MLR	MLR		
	comp=Z,900nm,17.0s						
MOX	Moxa	18.03	334	eP	P	07 35 56.2	-1.1
	comp=Z,31nm,1.3s						
MOX	Moxa	18.03	334	i P	P	07 35 56.2	-1.1
	comp=Z,logA/T=1.4						
MOX				L		07 44 24.0	
MOX	Moxa	18.03	334	eP	P	07 35 57.3	0.0
	comp=Z,31nm,1.4s						
EJON	La Jonquera	18.08	300	P	P	07 35 59.9	+1.9
	comp=Z,61nm,1.5s						
EJON	La Jonquera	18.08	300	P	P	07 35 59.9	+1.9
	comp=Z,61nm,1.5s,SNR=7.9						
HINF	Hinteralfeld	18.11	320	eP	P	07 35 57.4	-0.9
	comp=Z,11nm,0.3s						
CLL	Collm	18.12	337	⇓iP	P	07 35 58.3	-0.1
CLL				pmax	pmax		
	comp=Z,15nm,0.7s						
CLL	Collm	18.12	337	⇓iP	P	07 35 58.3	-0.1
	comp=Z,15nm,0.7s						
CLL				i pP		07 36 07.9	
CLL	Collm	18.12	337	⇓P	P	07 35 58.3	-0.1
	comp=Z,logA/T=1.3						
CLL				i *SP		07 36 07.9	
CLL				i		07 36 25.2	
CLL	Collm	18.12	337	eP	P	07 35 58.5	+0.1
	comp=Z,15nm,0.7s						
CLL				i pP		07 36 07.9	
ECH	Echery	18.20	321	eP	P	07 35 58.4	-1.0
WLS	Welschbruch	18.23	322	eP	P	07 36 00.6	+0.8
CDF	Champ du Feu	18.27	322	eP	P	07 36 00.1	-0.2
	comp=Z,44nm,0.9s						
CDF	Champ du Feu	18.27	322	eP	P	07 36 00.1	-0.2
CDF				pmax	pmax		
	comp=Z,22nm,0.9s						
LANF	Langenberg	18.39	324	eP	P	07 36 02.4	+0.7
HAU	Haudompre	18.49	320	eP	P	07 36 02.2	-0.8
	comp=Z,47nm,0.7s						
HAU				eR			
	comp=Z,436nm,20.1s						
KTD	Kalmit	18.49	325	eP	P	07 36 03.2	+0.2
THEF	They Montfort	18.82	320	eP	P	07 36 07.2	+0.3
MTLF	Montolieu	18.83	303	eP	P	07 36 07.4	+0.3
	comp=Z,22nm,0.9s						
MTLF	Montolieu	18.83	303	eP	P	07 36 07.4	+0.3
MTLF				pmax	pmax		
	comp=Z,11nm,0.9s						
EMIR	Miracle	18.92	298	P	P	07 36 10.1	+1.9
	comp=Z,31nm,1.0s						
EMIR	Miracle	18.92	298	P	P	07 36 10.1	+1.9
	comp=Z,31nm,1.0s,SNR=7.9						
SUW	Suwalki	18.97	358	eP	P	07 36 07.4	-1.4
TNS	Taunus Mts	18.98	328	eP	P	07 36 08.0	-0.8
TNS				pmax	pmax		
	comp=Z,31nm,1.1s						
TNS	Taunus Mts	18.98	328	eP	P	07 36 08.0	-0.8
	comp=Z,31nm,1.1s						
EPOB	Poblet	19.12	296	P	P	07 36 13.1	+2.5
	comp=Z,16nm,0.9s						
EPOB	Poblet	19.12	296	P	P	07 36 13.1	+2.5
	comp=Z,16nm,0.9s,SNR=7.9						
SMF	Signal de Mont	19.14	313	eP	P	07 36 09.4	-1.4
	comp=Z,36nm,1.0s						
SMF	Signal de Mont	19.14	313	eP	P	07 36 09.4	-1.4
SMF				pmax	pmax		
	comp=Z,18nm,1.0s						
LOR	Lormes	19.45	315	eP	P	07 36 13.4	-1.0
	comp=Z,18nm,0.8s						
LOR				eR			
	comp=Z,457nm,21.7s						
CLZ	Clausthal	19.46	334	eP	P	07 36 13.2	-1.3
CLZ				pmax	pmax		
	comp=Z,15nm,1.0s						
CLZ	Clausthal	19.46	334	eP	P	07 36 13.2	-1.3
	comp=Z,15nm,1.0s						
MEZF	Maizieres J'vi	19.48	319	eP	P	07 36 13.9	-0.8
	comp=Z,86nm,0.7s						
CAF	Calviac	19.49	307	eP	P	07 36 15.3	+0.4
VRSR	Storozhevoye	19.50	29	eP	P	07 36 13.3	-1.6
VRSR				pmax	pmax		
	comp=Z,20nm,1.5s						
VRSR				pmax	pmax		
	comp=N,30nm,1.0s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.8s						
VRSR	Storozhevoye	19.50	29	eP	P	07 36 13.3	-1.6
	comp=E,30nm,1.0s						
AVF	Avril sur Loir	19.51	313	eP	P	07 36 14.6	-0.4
	comp=E,29nm,1.0s						
AVF	Avril sur Loir	19.51	313	eP	P	07 36 14.6	-0.4
AVF				pmax	pmax		
	comp=Z,15nm,1.0s						
SSF	Saint Saulge	19.55	314	eP	P	07 36 14.5	-1.0
SSF				pmax	pmax		
	comp=Z,12nm,0.8s						
SSF	Saint Saulge	19.55	314	eP	P	07 36 14.5	-1.0
	comp=Z,12nm,0.8s						
MNK	Minsk	19.63	7	eP	P	07 36 12.0	-4.3
WLF	Walferdange	19.65	323	eP	P	07 36 14.6	-2.0
WLF				pmax	pmax		
	comp=Z,54nm,1.2s						
WLF	Walferdange	19.65	323	eP	P	07 36 14.6	-2.0
	comp=Z,54nm,1.2s						
WLF	Walferdange	19.65	323	eP	P	07 36 15.9	-0.7
	comp=Z,21nm,0.8s						
BGF	Bois d'Agland	19.70	312	eP	P	07 36 16.4	-0.8
	comp=Z,39nm,0.8s						
BGF	Bois d'Agland	19.70	312	eP	P	07 36 16.4	-0.8
BGF				pmax	pmax		
	comp=Z,20nm,0.8s						
MELF	Melles	19.71	300	eP	P	07 36 19.6	+2.3
EBEN	Beniarda	19.77	288	P	P	07 36 22.7	+4.6
	comp=Z,68nm,1.5s						
EBEN	Beniarda	19.77	288	P	P	07 36 22.7	+4.6
	comp=Z,68nm,1.5s,SNR=7.9						
TCF	Toulx Ste Croi	19.97	311	eP	P	07 36 19.8	-0.3
	comp=Z,18nm,0.9s						
TCF	Toulx Ste Croi	19.97	311	eP	P	07 36 19.8	-0.3
TCF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RESF	Ens	19.99	300	eP	P	07 36 21.3	+0.9
RJF	Les Rejaudoux	20.00	308	eP	P	07 36 20.3	-0.2
	comp=Z,22nm,0.8s						
RJF				eR			
	comp=Z,440nm,22.1s						
EPF	Esparros	20.05	301	eP	P	07 36 21.7	+0.7
	comp=Z,20nm,0.8s						
EPF	Esparros	20.05	301	eP	P	07 36 21.7	+0.7
EPF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NRDL	Niedersach Rie	20.09	335	eP	P	07 36 20.8	-0.5
	comp=Z,21nm,1.2s						
EBIE	Bielsa	20.10	299	P	P	07 36 22.8	+1.3
	comp=Z,12nm,0.6s						
EBIE	Bielsa	20.10	299	P	P	07 36 22.8	+1.3
	comp=Z,12nm,0.6s,SNR=11						
EMOS	Mosqueruela	20.12	293	P	P	07 36 24.9	+3.3
	comp=Z,11nm,1.0s						
EMOS	Mosqueruela	20.12	293	P	P	07 36 24.9	+3.2
	comp=Z,11nm,1.0s,SNR=7.9						
LABF	Labassere	20.24	300	eP	P	07 36 25.2	+2.2
MEM	Membach	20.35	325	P	P	07 36 23.8	-0.3
LFF	La Frestale	20.37	306	eP	P	07 36 24.5	+0.2
	comp=Z,34nm,0.8s						
LFF	La Frestale	20.37	306	eP	P	07 36 24.5	+0.2
LFF				pmax	pmax		

	comp=Z,17nm,0.8s						
ECHE	**Chera**	**20.41**	**290**	P	**P**	**07 36 27.9**	**+3.1**
ECHE				pmax	pmax		
	comp=Z,14nm,1.1s						
ECHE	**Chera**	**20.41**	**290**	P	**P**	**07 36 27.9**	**+3.2**
	comp=Z,14nm,1.1s						
ECHE	**Chera**	**20.41**	**290**	P	**P**	**07 36 27.9**	**+3.1**
	comp=Z,14nm,1.1s,SNR=7.9						
HGN	**Heimansgroeve**	**20.49**	**326**	*e*P	**P**	**07 36 25.1**	**-0.4**
	comp=Z,29nm,1.2s						
HGN				*e*S	**S**	**07 40 23.3**	**+14**
GIVF	**Givet**	**20.59**	**323**	*e*P	**P**	**07 36 25.6**	**-0.9**
	comp=Z,44nm,0.7s						
GIVF	**Givet**	**20.59**	**323**	*e*P	**P**	**07 36 25.6**	**-0.9**
GIVF				pmax	pmax		
	comp=Z,22nm,0.7s						
ETSF	**Etsaut**	**20.65**	**300**	*e*P	**P**	**07 36 28.5**	**+1.2**
	comp=Z,22nm,0.6s						
ETSF	**Etsaut**	**20.65**	**300**	*e*P	**P**	**07 36 28.5**	**+1.2**
ETSF				pmax	pmax		
	comp=Z,11nm,0.6s						
DOU	**Dourbes**	**20.70**	**323**	P	**P**	**07 36 26.9**	**-0.7**
IBBN	**Ibbenburen**	**20.82**	**331**	*e*P	**P**	**07 36 28.7**	**-0.2**
	comp=Z,70nm,0.1s						
BAIF	**Baives**	**20.87**	**322**	*e*P	**P**	**07 36 28.3**	**-1.1**
	comp=Z,107nm,0.7s						
BAIF	**Baives**	**20.87**	**322**	*e*P	**P**	**07 36 28.3**	**-1.1**
BAIF				pmax	pmax		
	comp=Z,53nm,0.7s						
WTSB	**Winterswijk**	**20.96**	**329**	*e*P	**P**	**07 36 27.8**	**-2.5**
SJPF	**Ste Jean**	**21.18**	**300**	*e*P	**P**	**07 36 33.5**	**+0.9**
	comp=Z,57nm,0.9s,mb4.6						
SJPF	**Ste Jean**	**21.18**	**300**	*e*P	**P**	**07 36 33.5**	**+0.9**
SJPF				pmax	pmax		
	comp=Z,29nm,0.9s,mb4.6						
BSEG	**Bad Segeberg**	**21.21**	**337**	*e*P	**P**	**07 36 30.7**	**-2.2**
UCC	**Uccle**	**21.26**	**324**	P	**P**	**07 36 33.2**	**-0.2**
ELIZ	**Elizondo**	**21.41**	**300**	P	**P**	**07 36 34.6**	**-0.3**
ELIZ				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.3						
ELIZ	**Elizondo**	**21.41**	**300**	P	**P**	**07 36 34.6**	**-0.3**
	comp=Z,12nm,0.7s,mb4.3						
ELIZ	**Elizondo**	**21.41**	**300**	P	**P**	**07 36 34.6**	**-0.3**
	comp=Z,12nm,0.7s,mb4.3,SNR=7.9						
EVIA	**Vianos**	**21.55**	**287**	P	**P**	**07 36 39.2**	**+2.8**
	comp=Z,11nm,0.4s,mb4.6,SNR=8.9						
MFF	**Saint Martin d**	**21.58**	**310**	*e*P	**P**	**07 36 37.0**	**+0.4**
	comp=Z,59nm,0.8s,mb4.7						
MFF	**Saint Martin d**	**21.58**	**310**	*e*P	**P**	**07 36 37.0**	**+0.4**
MFF				pmax	pmax		
	comp=Z,29nm,0.8s,mb4.8						
OBN	**Obninsk**	**21.85**	**19**	*d i*P	**P**	**07 36 37.6**	**-1.7**
OBN				*i* *PP		07 36 50.0	
OBN				*i* S	**S**	**07 40 36.3**	**+1.6**
OBN				pmax	pmax		
	comp=Z,25nm,0.6s,mb4.8						
OBN				MLR	MLR		
	comp=Z,200nm,15.0s,MS3.6						
OBN	**Obninsk**	**21.85**	**19**	*e*P	**P**	**07 36 36.6**	**-2.7**
	comp=Z,91nm,1.2s,mb5.1						
OBN	**Obninsk**	**21.85**	**19**	*i* P	**P**	**07 36 37.6**	**-1.7**
	comp=Z,25nm,0.6s,mb4.8						
EBER	**Berja**	**21.89**	**283**	P	**P**	**07 36 42.4**	**+2.6**
	comp=Z,80nm,1.2s,mb5.0						
EBER	**Berja**	**21.89**	**283**	P	**P**	**07 36 42.4**	**+2.6**
	comp=Z,80nm,1.2s,mb5.0,SNR=7.9						
ECRI	**Cripan**	**21.99**	**298**	P	**P**	**07 36 40.8**	**0.0**
ECRI				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.6						
ECRI	**Cripan**	**21.99**	**298**	P	**P**	**07 36 40.8**	**0.0**
	comp=Z,21nm,0.8s,mb4.6						
ECRI	**Cripan**	**21.99**	**298**	P	**P**	**07 36 40.8**	**0.0**
	comp=Z,21nm,0.8s,mb4.6,SNR=7.9						
EQES	**Quesada**	**22.00**	**285**	P	**P**	**07 36 44.3**	**+3.4**
	comp=Z,59nm,1.7s,mb4.7						
EQES	**Quesada**	**22.00**	**285**	P	**P**	**07 36 44.3**	**+3.4**
	comp=Z,59nm,1.7s,mb4.7,SNR=7.3						
ECOG	**Cogollos-Vega**	**22.41**	**284**	P	**P**	**07 36 49.3**	**+4.3**
ECOG				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.1						
ECOG	**Cogollos-Vega**	**22.41**	**284**	P	**P**	**07 36 49.3**	**+4.3**
	comp=Z,4.1nm,0.5s,mb4.1						
ECOG	**Cogollos-Vega**	**22.41**	**284**	P	**P**	**07 36 49.3**	**+4.3**
	comp=Z,4.1nm,0.5s,mb4.1,SNR=7.9						
LDF	**La Druitiere**	**22.43**	**314**	*e*P	**P**	**07 36 45.3**	**+0.2**
	comp=Z,69nm,1.0s,mb4.8						
LDF	**La Druitiere**	**22.43**	**314**	*e*P	**P**	**07 36 45.3**	**+0.2**
LDF				pmax	pmax		
	comp=Z,35nm,1.0s,mb4.7						
MOS	**Moscow**	**22.69**	**20**	*e*P	**P**	**07 36 46.9**	**-0.7**
MOS				*e*		07 36 56.5	
MOS				*e*		07 37 09.8	
MOS				*e*S	**S**	**07 40 52.5**	**+2.5**
FLN	**La Foliniere**	**22.72**	**315**	*e*P	**P**	**07 36 48.1**	**+0.1**
	comp=Z,49nm,0.7s,mb4.7						
FLN				*e*R			
	comp=Z,224nm,19.3s						
ESDC	**Sonseca Array**	**22.73**	**290**	P	**P**	**07 36 50.4**	**+2.3**
	comp=Z,15nm,0.8s,mb4.5,baz=82,slow=9.5,SNR=42						
ESDC	**Sonseca Array**	**22.73**	**290**	P	**P**	**07 36 50.5**	**+2.4**
	comp=Z,7.3nm,1.0s,mb4.1						
ESDC	**Sonseca Array**	**22.73**	**290**	P	**P**	**07 36 50.5**	**+2.4**
	comp=Z,7.3nm,1.0s,mb4.1,SNR=32						
GRR	**Gorron**	**22.77**	**313**	*e*P	**P**	**07 36 48.8**	**+0.3**
	comp=Z,38nm,0.8s,mb4.6						
GRR	**Gorron**	**22.77**	**313**	*e*P	**P**	**07 36 48.8**	**+0.3**
GRR				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.6						
ELAN	**Lanestosa**	**22.78**	**299**	P	**P**	**07 36 48.2**	**-0.3**
	comp=Z,30nm,1.9s,mb4.4						
ELAN	**Lanestosa**	**22.78**	**299**	P	**P**	**07 36 48.2**	**-0.4**
	comp=Z,30nm,1.9s,mb4.4,SNR=4.6						
EADA	**Adamuz**	**23.18**	**286**	P	**P**	**07 36 56.6**	**+4.1**
	comp=Z,12nm,1.0s,mb4.3						
EADA	**Adamuz**	**23.18**	**286**	P	**P**	**07 36 56.6**	**+4.1**
	comp=Z,12nm,1.0s,mb4.3,SNR=4.6						
EMIJ	**Mijas**	**23.42**	**282**	P	**P**	**07 36 57.2**	**+2.3**
	comp=Z,21nm,0.8s,mb4.6						
EMIJ	**Mijas**	**23.42**	**282**	P	**P**	**07 36 57.2**	**+2.3**
	comp=Z,21nm,0.8s,mb4.6,SNR=7.9						
VSU	**Vasula**	**23.49**	**3**	*e*P	**P**	**07 36 54.4**	**-0.9**
SGMF	**Saint Gilles**	**23.74**	**312**	*e*P	**P**	**07 36 58.2**	**+0.3**
	comp=Z,23nm,0.7s,mb4.4						
SGMF	**Saint Gilles**	**23.74**	**312**	*e*P	**P**	**07 36 58.2**	**+0.3**
SGMF				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.4						
ECAB	**El Cabril**	**23.85**	**286**	P	**P**	**07 37 00.1**	**+1.1**
	comp=Z,63nm,2.0s,mb4.7						
ECAB	**El Cabril**	**23.85**	**286**	P	**P**	**07 37 00.1**	**+1.1**
	comp=Z,63nm,2.0s,mb4.7,SNR=7.8						
QUIF	**Quistinic**	**23.98**	**311**	*e*P	**P**	**07 37 00.7**	**+0.5**
	comp=Z,38nm,0.8s,mb4.5						
QUIF	**Quistinic**	**23.98**	**311**	*e*P	**P**	**07 37 00.7**	**+0.5**
QUIF				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.6						
EARI	**Arriondas**	**24.07**	**299**	P	**P**	**07 36 59.7**	**-1.4**
	comp=Z,41nm,1.5s,mb4.6						
EARI	**Arriondas**	**24.07**	**299**	P	**P**	**07 36 59.7**	**-1.4**
	comp=Z,41nm,1.5s,mb4.7,SNR=7.9						
ROSF	**Rostrenen**	**24.21**	**312**	*e*P	**P**	**07 37 02.4**	**-0.1**
	comp=Z,26nm,0.7s,mb4.5						
ROSF	**Rostrenen**	**24.21**	**312**	*e*P	**P**	**07 37 02.4**	**-0.1**
ROSF				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.5						
EMIN	**Mina Concepcio**	**24.85**	**285**	P	**P**	**07 37 10.1**	**+1.4**
	comp=Z,28nm,1.1s,mb4.7						
EMIN	**Mina Concepcio**	**24.85**	**285**	P	**P**	**07 37 10.1**	**+1.4**
	comp=Z,28nm,1.1s,mb4.7,SNR=7.9						
ECAL	**Calabor**	**25.00**	**295**	P	**P**	**07 37 09.6**	**-0.5**
	comp=Z,25nm,0.7s,mb4.9,SNR=4.6						
EBAD	**Badajoz**	**25.08**	**288**	P	**P**	**07 37 10.5**	**-0.4**
	comp=Z,30nm,0.7s,mb4.9						
EBAD	**Badajoz**	**25.08**	**288**	P	**P**	**07 37 10.5**	**-0.4**
	comp=Z,30nm,0.7s,mb4.9,SNR=7.9						
PCBR	**Castelo Branco**	**25.44**	**290**	*e*P	**P**	**07 37 15.7**	**+1.4**
	comp=Z,24nm,1.3s,mb4.6						
PCBR				*e*pP	pP	07 37 18.9	-1.4
MTE	**Manteigas**	**25.50**	**292**	*e*P	**P**	**07 37 16.2**	**+1.3**
	comp=Z,13nm,0.8s,mb4.5						
MTE	**Manteigas**	**25.50**	**292**	*e*P	**P**	**07 37 15.4**	**+0.6**
	comp=Z,30nm,1.3s,mb4.7						
PALC	**Alcoutim**	**25.51**	**285**	*e*P	**P**	**07 37 15.3**	**+0.4**
PALC				*e*pP	pP	07 37 21.0	0.0
EGRO	**El Granado**	**25.51**	**285**	P	**P**	**07 37 14.5**	**-0.5**
	comp=Z,7.3nm,0.8s,mb4.3						
PVRL	**Vila Real**	**25.67**	**294**	*e*P	**P**	**07 37 18.3**	**+1.8**
	comp=Z,20nm,1.6s,mb4.4						
PVRL				*e*pP	pP	07 37 22.2	-0.3
PBEJ	**Beja**	**25.78**	**286**	*e*P	**P**	**07 37 19.4**	**+1.9**
	comp=Z,18nm,1.1s,mb4.5						
PVIS	**Viseu**	**25.78**	**292**	*e*P	**P**	**07 37 18.7**	**+1.2**
	comp=Z,12nm,1.0s,mb4.4						
PVIS				*e*pP	pP	07 37 23.0	-0.5
EVO	**Evora**	**25.87**	**287**	*e*P	**P**	**07 37 19.8**	**+1.5**
	comp=Z,15nm,0.8s,mb4.3						
HFS	**Hagfors**	**26.00**	**348**	P	**P**	**07 37 17.9**	**-1.3**
	comp=Z,7.5nm,0.5s,mb4.5,baz=146,slow=11,SNR=39						
HFA0	**Hagfors New Ar**	**26.00**	**348**	P	**P**	**07 37 18.5**	**-0.8**
FINES	**FINESS Array B**	**26.45**	**2**	P	**P**	**07 37 20.6**	**-2.8**
	comp=Z,3.4nm,0.7s,mb4.0,baz=158,slow=10,SNR=13						
FINES				PcP	PcP	07 40 47.7	-1.3
	comp=Z,1.9nm,0.5s,baz=154,slow=3.3,SNR=9.0						
FINES	**FINESS Array B**	**26.45**	**2**	P	**P**	**07 37 20.6**	**-2.8**
FINES				P		07 37 23.8	
FINES				PcP	PcP	07 40 47.7	-1.3
PTEO	**Sao Teotonio**	**26.49**	**285**	*e*pP	pP	07 37 29.8	-0.3
PTEO	**Sao Teotonio**	**26.49**	**285**	*e*pP	pP	07 37 29.8	-0.3
KAF	**Kangasniemi**	**27.12**	**2**	*e*p	**P**	**07 37 26.5**	**-3.1**
NAO01	**NORSAR Array S**	**27.18**	**346**	*e*P	**P**	**07 37 28.3**	**-1.8**
	comp=Z,9.2nm,0.7s,mb4.4						
NB2	**NORSAR Subarra**	**27.29**	**346**	P	**P**	**07 37 30.0**	**-1.1**
	comp=Z,11nm,0.9s,mb4.4,baz=156,slow=9.3						
NOA	**NORSAR Array B**	**27.29**	**346**	P	**P**	**07 37 29.2**	**-1.9**
	comp=Z,6.1nm,0.8s,mb4.2,baz=152,slow=8.7,SNR=14						
EKA	**Eskdalemuir Ar**	**27.63**	**326**	P	**P**	**07 37 33.5**	**-0.8**
	comp=Z,5.2nm,0.6s,mb4.3,baz=119,slow=9.7,SNR=15						
BANOM	**Banah**	**29.11**	**99**	⇓P	**P**	**07 37 48.4**	**+0.5**
ASHO	**Ashiyiah**	**29.48**	**102**	P	**P**	**07 37 51.6**	**+0.4**
	SNR=9.1						
AB31	**Akbulak array**	**29.82**	**51**	*i* P	**P**	**07 37 52.6**	**-1.5**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ARQ	**Araqi**	**30.50**	**104**	⇓P	**P**	**07 38 00.7**	**+0.5**
HOQ	**Hoqain**	**31.00**	**103**	P	**P**	**07 38 05.1**	**+0.3**
	SNR=8.3						
BSY	**Bisya**	**31.33**	**104**	P	**P**	**07 38 08.2**	**+0.6**
	SNR=6.7						
ABTO	**Aybut**	**31.41**	**117**	⇑P	**P**	**07 38 09.6**	**+1.2**
ARU	**Arti**	**31.67**	**37**	⇑*i*P	**P**	**07 38 08.2**	**-2.1**
ARU				*e*		07 40 59.4	
ARU				*e*S	**S**	**07 43 11.8**	**-5.5**
ARU				*e*SS	SS	07 45 05.3	-2.1
ARU				*e*		07 48 33.3	
ARU				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.6						
ARU	**Arti**	**31.67**	**37**	*e*P	**P**	**07 38 08.6**	**-1.7**
	comp=Z,28nm,1.4s,mb4.9						
SMDO	**Samad**	**31.85**	**103**	P	**P**	**07 38 12.4**	**+0.2**
	SNR=7.8						
RBK	**Rabkut**	**31.99**	**115**	P	**P**	**07 38 14.7**	**+1.3**
	SNR=6.3						
JMDO	**Jabal Madar**	**32.24**	**104**	⇓P	**P**	**07 38 16.2**	**+0.6**
SOKR	**Solikamsk**	**32.49**	**31**	*e*P	**P**	**07 38 14.6**	**-2.8**
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
WBK	**Wadi Bani Khal**	**32.81**	**103**	P	**P**	**07 38 22.4**	**+1.8**
	SNR=7.9						
ARCES	**ARCESS Array B**	**34.55**	**1**	P	**P**	**07 38 32.4**	**-2.8**
	comp=Z,2.5nm,0.4s,mb4.5,baz=182,slow=9.2,SNR=22						
ARCES				PcP	PcP	07 41 08.8	-1.2
	comp=Z,2.4nm,0.8s,baz=180,slow=1.2,SNR=4.0						
ARCES	**ARCESS Array B**	**34.55**	**1**	P	**P**	**07 38 32.4**	**-2.8**
ARCES				PcP	PcP	07 41 08.8	-1.2
KEV	**Kevo**	**34.80**	**2**	*e*p	**P**	**07 38 32.0**	**-5.3**
KKAR	**Karatay Array**	**36.54**	**63**	*i* P	**P**	**07 38 52.1**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
BVA0	**Borovoye Array**	**37.06**	**46**	*i* P	**P**	**07 38 55.8**	**-0.8**
BVA0				pmax	pmax		
	comp=Z,7.0nm,2.1s,mb4.1						
DBIC	**Dimbokro**	**38.81**	**230**	P	**P**	**07 39 12.5**	**+0.8**
	comp=Z,3.6nm,0.5s,mb4.4,baz=6.2,slow=8.8,SNR=5.5						
EKS2	**Erkin-Say**	**38.97**	**63**	P	**P**	**07 39 13.5**	**+0.8**
	SNR=11						
AAK	**Ala-Archa**	**39.50**	**63**	P	**P**	**07 39 18.2**	**+1.1**
	SNR=5.2						
AAK	**Ala-Archa**	**39.50**	**63**	*d i*P	**P**	**07 39 16.9**	**-0.2**
AAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**39.50**	**63**	*e*P	**P**	**07 39 16.4**	**-0.7**
	comp=Z,15nm,1.1s,mb4.6						
FRU	**Bishkek**	**39.56**	**63**	*e*P	**P**	**07 39 19.5**	**+1.8**
FRU				pmax	pmax		
	comp=Z,40nm,1.8s,mb4.8						
KZA	**Kyzart**	**40.12**	**64**	P	**P**	**07 39 24.3**	**+2.1**
	SNR=12						
TKM2	**Tokmak 2**	**40.27**	**63**	P	**P**	**07 39 25.5**	**+2.0**
	SNR=7.3						
ULHL	**Ulahol**	**40.83**	**64**	P	**P**	**07 39 29.8**	**+1.8**
	SNR=13						
THN	**Thein Dam**	**42.62**	**78**	*e*P	**P**	**07 39 43.1**	**+0.2**
	comp=Z,21nm,0.6s,mb5.0						
SDNR	**Sundarnagar**	**43.93**	**79**	*e*P	**P**	**07 39 53.4**	**-0.1**
MKAR	**Makanchi Array**	**44.57**	**56**	*i* P	**P**	**07 39 58.1**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MKAR	**Makanchi Array**	**44.57**	**56**	P	**P**	**07 39 58.2**	**-0.3**
	comp=Z,5.6nm,0.6s,mb4.6,baz=282,slow=6.2,SNR=70						
NVS	**Novosibirsk**	**44.79**	**45**	*i* P	**P**	**07 39 59.2**	**-1.0**
NVS				*e*		07 41 46.1	
NVS				pmax	pmax		
	comp=Z,27nm,1.5s,mb4.9						
NVS				pmax	pmax		
	comp=N,13nm,1.6s						
NVS				pmax	pmax		
	comp=E,14nm,1.6s						
ZAL	**Zalesovo**	**45.70**	**46**	P	**P**	**07 40 07.1**	**-0.3**
	comp=E,3.8nm,0.4s,mb4.7,baz=204,slow=7.8,SNR=11						
LGTI	**Lohaghat**	**47.30**	**80**	*i* P	**P**	**07 40 20.0**	**-0.4**
SUMG	**Summit**	**48.77**	**339**	*e*P	**P**	**07 40 31.2**	**0.0**
	comp=E,9.1nm,0.9s,mb4.8						
SUMG				*e*PcP	PcP	07 41 56.3	-0.1
WMQ	**Urumqi**	**48.82**	**59**	P	**P**	**07 40 33.0**	**+1.0**
WMQ				AP	pP	07 40 40.5	+2.2
WMQ				XP	sP	07 40 43.8	+3.0
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,110nm,6.0s						
WMQ				LR	LR		
	comp=N,720nm,24.0s,MS4.7						
WMQ				LR	LR		
	comp=E,700nm,24.2s,MS4.7						
WMQ				LR	LR		
	comp=Z,880nm,25.0s,MS4.7						
KOLN	**Koldanda**	**50.67**	**81**	*e*P	**P**	**07 40 46.3**	**-0.1**
	comp=Z,60nm,0.9s,mb5.5						
GKN	**Gorkha**	**51.41**	**80**	*e*P	**P**	**07 40 51.8**	**-0.2**
	comp=Z,111nm,0.8s,mb5.8						
DMN	**Daman**	**51.95**	**80**	*e*P	**P**	**07 40 56.0**	**-0.1**
	comp=Z,125nm,0.8s						
KKN	**Kakani**	**52.02**	**80**	*e*P	**P**	**07 40 56.5**	**-0.1**
	comp=Z,74nm,0.8s,mb5.7						
KKN	**Kakani**	**52.02**	**80**	*e*P	**P**	**07 40 56.5**	**-0.1**
KKN				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.4						
PKI	**Pulchoki**	**52.21**	**80**	*e*P	**P**	**07 40 57.9**	**-0.2**
	comp=Z,100nm,0.8s,mb5.8						
PKI	**Pulchoki**	**52.21**	**80**	*e*P	**P**	**07 40 57.9**	**-0.2**
PKI				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.5						
GUN	**Gumba**	**52.45**	**80**	*e*P	**P**	**07 40 59.9**	**0.0**
	comp=Z,110nm,0.8s,mb5.8						
LSA	**Lhasa**	**55.94**	**75**	*e*P	**P**	**07 41 26.1**	**+0.7**
LSA				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
LSA	**Lhasa**	**55.94**	**75**	*e*P	**P**	**07 41 26.1**	**+0.7**
	comp=Z,30nm,0.8s,mb5.4						
TLY	**Talaya**	**57.32**	**47**	*e*P	**P**	**07 41 34.2**	**-0.8**
TLY				*e*		07 43 38.3	
TLY				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
TLY	**Talaya**	**57.32**	**47**	*e*P	**P**	**07 41 34.2**	**-0.8**
	comp=Z,6.7nm,1.2s,mb4.5						
TLY				*e*PP	PP	07 43 38.3	-5.5
ZAK	**Zakamensk**	**57.48**	**48**	*e*P	**P**	**07 41 35.5**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
GTA	**Gaotai**	**58.79**	**61**	*e*P	**P**	**07 41 45.3**	**-0.1**
GTA				AP	pP	07 41 52.4	+0.5
GTA				XP	sP	07 41 55.9	+1.7
GTA				PP	PP	07 43 57.9	+0.6
GTA				S	**S**	**07 49 48.5**	**+0.7**
GTA				XS		07 50 01.9	
GTA				SS	SS	07 53 45.3	+2.4
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
GTA				AMB	AMB		
	comp=Z,30nm,4.6s						
GTA				LR	LR		
	comp=N,120nm,21.8s,MS4.2						
GTA				LR	LR		
	comp=E,160nm,21.0s,MS4.2						
GTA				LR	LR		
	comp=Z,400nm,22.2s,MS4.5						
SONM	**Songino Array**	**60.24**	**50**	P	**P**	**07 41 55.0**	**-0.3**
	comp=Z,7.0nm,0.8s,mb4.7,baz=286,slow=8.2,SNR=42						
ULN	**Ulaanbaatar**	**60.64**	**50**	*e*P	**P**	**07 41 56.6**	**-1.4**
ULN				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.1						
ULN	**Ulaanbaatar**	**60.64**	**50**	*e*P	**P**	**07 41 56.6**	**-1.4**
	comp=Z,15nm,0.9s,mb5.1						
TIXI	**Tiksi**	**61.58**	**20**	*e*P	**P**	**07 42 00.8**	**-3.3**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
SCHQ	**Schefferville**	**62.70**	**319**	P	**P**	**07 42 11.1**	**-0.7**
	comp=Z,4.2nm,0.4s,mb4.9,baz=55,slow=5.7,SNR=8.5						
SCHQ	**Schefferville**	**62.70**	**319**	P	**P**	**07 42 11.1**	**-0.7**
LZH	**Lanzhou**	**63.04**	**63**	*e*P	**P**	**07 42 14.5**	**+0.2**
LZH				AP	pP	07 42 20.0	-0.7
LZH				XP	sP	07 42 23.6	+0.5
LZH				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.6						
LZH				AMB	AMB		
	comp=Z,220nm,4.2s						
LZH	**Lanzhou**	**63.04**	**63**	*e*P	**P**	**07 42 14.5**	**+0.2**
LZH				*SP	sP	07 42 23.6	+0.5
LZH				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.6						
LZH	**Lanzhou**	**63.04**	**63**	*e*P	**P**	**07 42 14.5**	**+0.2**
	comp=Z,51nm,1.0s,mb5.6						
LZH				pP	pP	07 42 20.0	-0.7
LZH				sP	sP	07 42 23.6	+0.5
BOSA	**Boshof**	**63.33**	**179**	P	**P**	**07 42 18.4**	**+2.1**
	comp=Z,6.2nm,1.0s,mb4.7,baz=269,slow=7.6,SNR=4.2						
CD2	**Chengdu**	**65.25**	**69**	P	**P**	**07 42 29.0**	**+0.2**
CD2				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.2						
YAK	**Yakutsk**	**66.41**	**30**	*i* P	**P**	**07 42 35.0**	**-0.7**
HHC	**Hu-ho-hao-te**	**66.43**	**56**	*e*P	**P**	**07 42 36.4**	**+0.2**
HHC				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.3						
HHC				AMB	AMB		
	comp=Z,180nm,6.5s						
HHC				LR	LR		
	comp=N,140nm,22.6s						
HHC				LR	LR		
	comp=E,170nm,15.5s						
HHC				LR	LR		
	comp=Z,430nm,25.0s,MS4.6						
KMI	**Kunming**	**67.19**	**75**	P	**P**	**07 42 41.1**	**-0.2**
KMI				AP	pP	07 42 48.5	+0.8
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
KMI	**Kunming**	**67.19**	**75**	P	**P**	**07 42 41.1**	**-0.2**
	comp=Z,14nm,1.1s,mb4.9						
KMI				pP	pP	07 42 48.5	+0.8
CMAR	**Chiang Mai Arr**	**67.46**	**83**	P	**P**	**07 42 42.4**	**-0.7**
	comp=Z,6.2nm,0.8s,mb4.7,baz=293,slow=9.4,SNR=19						
XAN	**Xi'an**	**67.68**	**63**	P	**P**	**07 42 43.8**	**-0.4**
XAN				AP	pP	07 42 52.3	+1.6
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
HIA	**Hailar**	**67.73**	**45**	*e*P	**P**	**07 42 44.3**	**+0.1**
HIA				pmax	pmax		
	comp=Z,21nm,1.0s						
HIA	**Hailar**	**67.73**	**45**	*e*P	**P**	**07 42 44.3**	**0.0**
	comp=Z,21nm,1.0s,mb5.1						
ENH	**Enshi**	**69.90**	**67**	*e*P	**P**	**07 42 57.6**	**-0.4**
	comp=Z,22nm,1.0s,mb5.0						
FCC	**Fort Churchill**	**73.38**	**331**	*e*P	**P**	**07 43 18.1**	**-0.1**
FCC				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
FCC	**Fort Churchill**	**73.38**	**331**	*e*P	**P**	**07 43 18.1**	**-0.1**
	comp=Z,4.2nm,0.7s,mb4.5						
BILL	**Bilibino**	**73.39**	**14**	*ce*P	**P**	**07 43 17.3**	**-0.8**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BILL	**Bilibino**	**73.39**	**14**	⇑*i*P	**P**	**07 43 17.3**	**-0.8**
CN2	**Changchun**	**73.90**	**48**	*e*P	**P**	**07 43 21.3**	**-0.2**
CN2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
KLR	**Kul'dur**	**74.43**	**40**	*e*P	**P**	**07 43 21.2**	**-3.2**
NJ2	**Nanjing**	**75.88**	**61**	*e*P	**P**	**07 43 32.1**	**-1.0**
NJ2				AP	pP	07 43 42.4	+2.7
NJ2				XP	sP	07 43 46.5	+4.6
NJ2				PP	PP	07 46 24.6	-0.7
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,150nm,5.7s						
NJ2				LR	LR		
	comp=N,370nm,29.0s,MS4.7						
NJ2				LR	LR		
	comp=E,350nm,26.0s,MS4.7						
NJ2				LR	LR		
	comp=Z,370nm,28.6s,MS4.5						
MDJ	**Mudanjiang**	**75.91**	**45**	P	**P**	**07 43 31.8**	**-1.2**
MDJ				AP	pP	07 43 38.3	-1.3
MDJ				PCP	PcP	07 43 44.1	-1.7
MDJ				PP	PP	07 46 21.1	-4.2
MDJ				S	S	07 53 12.1	-1.0
MDJ				SCS	ScS	07 53 44.3	+1.5
MDJ				AMB	AMB		
	comp=Z,30nm,5.1s						
MA2	**Magadan**	**75.96**	**25**	*e*P	**P**	**07 43 33.4**	**+0.4**
MA2				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
MA2	**Magadan**	**75.96**	**25**	*e*P	**P**	**07 43 33.4**	**+0.5**
	comp=Z,24nm,0.9s,mb5.1						
YKA	**Yellowknife Ar**	**77.28**	**342**	P	**P**	**07 43 40.3**	**0.0**
	comp=Z,1.5nm,0.7s,mb4.0,baz=37,slow=5.7,SNR=13						
MCWV	**Mont Chateau**	**77.83**	**310**	*e*P	**P**	**07 43 43.8**	**0.0**
	comp=Z,7.4nm,0.7s,mb4.7						
SSE	**Sheshan**	**78.07**	**60**	*e*P	**P**	**07 43 42.3**	**-3.0**
SSE				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.4						
SSE				AMB	AMB		
	comp=Z,40nm,3.5s						
SSE	**Sheshan**	**78.07**	**60**	*e*P	**P**	**07 43 42.2**	**-3.1**
	comp=Z,31nm,0.6s,mb5.4						
KS15	**Wonju Array Si**	**79.03**	**52**	*e*P	**P**	**07 43 50.1**	**-0.4**
KS15				*e*PP	PP	07 46 49.9	-1.5
IMA	**Indian Mountai**	**79.19**	**359**	*e*P	**P**	**07 43 52.1**	**+1.4**
IMA				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
IMA	**Indian Mountai**	**79.19**	**359**	*e*P	**P**	**07 43 52.1**	**+1.3**
	comp=Z,21nm,0.9s,mb5.1						
FFC	**Flin Flon**	**79.31**	**331**	*e*P	**P**	**07 43 52.0**	**+0.4**
FFC				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
FFC	**Flin Flon**	**79.31**	**331**	*e*P	**P**	**07 43 52.0**	**+0.4**
	comp=Z,9.3nm,0.8s,mb4.8						
ILAR	**Eielson Array**	**80.26**	**356**	P	**P**	**07 43 57.4**	**+0.9**
	comp=Z,1.8nm,0.9s,mb4.0,baz=354,slow=4.8,SNR=17						
YSS	**Yuzh-Sakhalins**	**81.56**	**37**	⇑*i*P	**P**	**07 44 04.0**	**+0.3**
YSS				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4						
YSS	**Yuzh-Sakhalins**	**81.56**	**37**	*e*P	**P**	**07 44 04.2**	**+0.6**
	comp=Z,62nm,1.3s,mb5.4						
SPU	**Mount Spurr**	**84.06**	**358**	*e*P	**P**	**07 44 16.5**	**+0.3**
BDFB	**Brasilia**	**84.85**	**247**	P	**P**	**07 44 23.5**	**+2.4**
	comp=Z,2.5nm,0.7s,mb4.5,baz=48,slow=5.8,SNR=4.9						
PLAL	**Pickwick Lake**	**85.86**	**310**	*e*P	**P**	**07 44 26.2**	**+0.3**
	comp=Z,4.4nm,0.9s,mb4.7						
MJAR	**Matsushiro Arr**	**86.05**	**47**	P	**P**	**07 44 27.1**	**+0.4**
	comp=Z,2.8nm,0.9s,mb4.5,baz=303,slow=5.4,SNR=10						
LRAL	**Lakeview Retre**	**86.43**	**308**	*e*P	**P**	**07 44 29.1**	**+0.4**
	comp=Z,6.2nm,0.8s,mb4.9						
LAO	**LASA Array**	**87.18**	**328**	*e*P	**P**	**07 44 32.4**	**+0.4**
	comp=Z,22nm,1.0s,mb5.3						
SDV	**Santo Domingo**	**88.80**	**280**	P	**P**	**07 44 41.1**	**+0.6**
	comp=Z,2.6nm,0.8s,mb4.6,baz=55,slow=6.5,SNR=3.5						
NEW	**Newport**	**90.11**	**335**	*e*P	**P**	**07 44 46.6**	**+0.7**
NEW				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NEW	**Newport**	**90.11**	**335**	*e*P	**P**	**07 44 46.6**	**+0.7**
	comp=Z,8.3nm,0.8s,mb5.1						
PHWY	**Pilot Hill**	**91.02**	**324**	*e*P	**P**	**07 44 50.1**	**-0.1**

IMW	**Indian Meadow**	91.41	329	eP	P	07 44 53.9	+1.9
	comp=Z,5.0nm,1.1s,mb4.8						
PDAR	**Pinedale Array**	91.73	328	P	P	07 44 53.8	+0.3
	comp=Z,0.8nm,0.8s,mb4.1,baz=56,slow=5.3,SNR=6.7						
HWUT	**Hardware Ranch**	93.55	328	eP	P	07 45 02.0	+0.2
	comp=Z,3.6nm,0.8s,mb4.8						
SDCO	**Great Sand Dun**	93.78	322	eP	P	07 45 03.7	+0.7
	comp=Z,2.7nm,1.2s,mb4.5						
ANMO	**Albuquerque**	96.44	321	i P	P	07 45 14.5	-0.8
TXAR	**Lajitas Array**	99.21	316	P	P	07 45 29.4	+1.5
	comp=Z,0.1nm,0.4s,mb3.7,baz=124,slow=42,SNR=2.6						

NEIC ***14*** *07:44:20.6±1.5, 20.20S×69.22W, h98*^{km}*±16*^{km}*, mb4.1/4, Error ellipse: s-maj=18.4km s-min=14.4km az=65.0*

IDC ***14*** *07:44:22.9±2.9, 20.22S×69.16W, h121*^{km}*±25*^{km}*, mb3.8/6, mb1 4.0/7, mb1mx3.7/16, mbtmp4.2/7, Error ellipse: s-maj=26.5km s-min=21.3km az=58.0*

ISC 14 07:44:18.1±1.5**, 20.17S**±0.08×**69.17W**±0.08**, h89**^{km}±13^{km}**, n23, σ0**^{s}**96**/21**, mb4.1**/7**, 2C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	3.98	15	P	P	07 45 23.6	+5.4
	2.7nm,0.3s,baz=189,slow=8.3,SNR=67						
LPAZ				S	S	07 46 02.7	-1.3
	4.9nm,0.3s,baz=235,slow=8.8,SNR=5.2						
LPAZ	**La Paz**	3.98	15	⇑ePn	P	07 45 23.5	+5.3
ARE	**Arequipa**	4.29	329	⇑iP	P	07 45 22.9	+0.4
ARE				eS	S	07 46 12.0	+0.3
SIV	**San Ignacio**	8.75	63	P	P	07 46 23.3	-0.3
	6.8nm,0.3s,baz=252,slow=12,SNR=127						
CFAA	**Coronel Fontan**	11.42	176	S	S	07 48 57.4	-8.5
	0.2nm,0.3s,baz=226,slow=16,SNR=5.2						
SAML	**Samuel**	12.56	28	ePn	P	07 47 16.2	+1.3
TRQA	**Tornquist**	18.89	162	eP	P	07 48 33.2	-0.7
	9.2nm,0.8s						
PLCA	**Paso Flores**	20.53	183	P	P	07 48 51.2	-0.1
	5.6nm,0.6s,baz=358,slow=11,SNR=11						
PLCA	**Paso Flores**	20.53	183	P	P	07 48 51.2	-0.1
BDFB	**Brasilia**	20.62	81	P	P	07 48 53.1	+0.7
	14nm,0.4s,baz=264,slow=10,SNR=31						
RCBR	**Riachuelo**	35.31	71	eP	P	07 51 08.1	+1.4
	5.9nm,0.5s,mb4.7						
LRAL	**Lakeview Retre**	55.58	342	eP	P	07 53 44.2	-2.6
	0.8nm,0.4s,mb4.1						
TXAR	**Lajitas Array**	59.40	325	P	P	07 54 12.8	-0.9
	0.4nm,0.6s,mb3.6,baz=149,slow=8.9,SNR=6.7						
DBIC	**Dimbokro**	68.60	74	P	P	07 55 13.0	-1.0
	4.9nm,1.0s,mb4.3,baz=143,slow=5.9,SNR=5.6						
ARUT	**Antelope Range**	71.10	324	eP	P	07 55 29.9	+1.1
MPU	**Maple Canyon**	71.77	327	eP	P	07 55 33.5	+0.7
NVAR	**Mina Array Bea**	74.30	322	P	P	07 55 48.1	+0.5
	0.7nm,0.6s,mb3.5,baz=175,slow=6.3,SNR=7.2						
FCC	**Fort Churchill**	81.28	347	eP	P	07 56 24.9	-0.8
	1.6nm,0.6s,mb4.0						
YKA	**Yellowknife Ar**	89.85	341	P	P	07 57 07.9	+0.2
	2.3nm,0.7s,mb4.4,baz=135,slow=4.7,SNR=14						
WRA	**Warramunga Arr**	133.97	211	PKP	PKPdf	08 03 26.7	+0.9
	0.5nm,0.5s,baz=155,slow=1.7,SNR=8.8						
MKAR	**Makanchi Array**	144.69	35	PKP	PKPdf	08 03 45.1	+0.9
	1.0nm,0.5s,baz=315,slow=3.0,SNR=5.8						
MJAR	**Matsushiro Arr**	151.04	310	PKPbc	PKPdf	08 04 00.6	+5.6
	1.1nm,0.5s,baz=58,slow=1.9,SNR=4.2						
SONM	**Songino Array**	152.17	6	PKP	PKPdf	08 03 57.1	+0.9
	0.3nm,0.5s,baz=90,slow=1.4,SNR=2.2						
SONM				PKPbc	PKPdf	08 04 05.0	+8.8
	1.6nm,0.5s,baz=318,slow=0.9,SNR=12						

IDC 14 07:54:18.6±16.0**, 3.33N**×**126.58E, h130**^{km}±162^{km}**, mb3.5**/6**, mb1 3.6**/6**, mb1mx3.5**/18**, mbtmp3.9**/6**, Error ellipse: s-maj=94.5km s-min=25.1km az=62.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	21.32	182	P	P	07 58 55.2	-1.2
	4.2nm,0.8s,baz=354,slow=9.2,SNR=3.8						
WRA	**Warramunga Arr**	24.35	162	P	P	07 59 23.7	-2.1
	2.1nm,0.6s,baz=343,slow=10,SNR=23						
WB2	**Warramunga Arr**	24.36	162	eP	P	07 59 23.7	-2.2
STKA	**Stephens Creek**	37.81	159	P	P	08 01 23.2	-0.8
	2.5nm,0.6s,baz=343,slow=9.4,SNR=8.1						
SONM	**Songino Array**	47.63	342	P	P	08 02 41.9	-1.4
	0.6nm,0.6s,baz=149,slow=7.6,SNR=5.4						
MKAR	**Makanchi Array**	57.80	325	P	P	08 03 56.5	-2.0
	0.8nm,0.5s,baz=117,slow=6.4,SNR=5.6						
BVAR	**Borovoye Array**	67.57	327	P	P	08 05 00.4	-2.7
	0.4nm,0.5s,baz=135,slow=4.1,SNR=3.1						

IDC ***14*** *07:59:22.5±9.3, 35.50N×70.42E, mb3.8/2, mb1 3.8/4, mb1mx3.5/20, mbtmp3.7/4, ML3.7/2, Error ellipse: s-maj=156.5km s-min=44.3km az=154.0*

MOS ***14*** *07:59:28.1±2.0, 35.89N×70.38E, h33*^{km}*, mb4.1/2, Error ellipse: s-maj=46.3km s-min=18.3km az=88.0*

NNC ***14*** *07:59:46.1±12.0, 37.07N×71.11E, h216*^{km}*±200*^{km}*, mpv3.8, Error ellipse: s-maj=150.4km s-min=92.7km az=36.0*

ISC 14 07:59:41.3±2.5**, 36.8N**±0.1×**71.1E**±0.2**, h126**^{km}±26^{km}**, n20, σ0**^{s}**29**/23**, mb3.6**/2**, 2C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	5.72	20	P	P	08 01 05.0	-0.1
	SNR=30						
UCH	**Uchtor**	6.07	25	P	P	08 01 09.7	-0.1
	SNR=9.3						
KZA	**Kyzart**	6.21	30	P	P	08 01 11.7	0.0
	SNR=8.8						
KK31	**Karatay Array**	6.33	356	P	P	08 01 13.6	+0.2
	4.1nm,0.3s,baz=179,slow=13,SNR=76						
KK31				⇓S	S	08 02 24.8	-0.1
	22nm,0.3s						
KKAR	**Karatay Array**	6.33	356	eP	P	08 01 13.5	+0.1
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AAK	**Ala-Archa**	6.42	23	⇑P	P	08 01 14.8	+0.2
	comp=Z,2.4nm,0.4s						
AAK				⇓S	S	08 02 27.0	0.0
	comp=Z,23nm,0.6s						
AAK	**Ala-Archa**	6.42	23	P	P	08 01 14.8	+0.1
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
USP	**Ospenovka**	7.00	21	P	P	08 01 22.4	-0.1
	SNR=5.8						
TKM2	**Tokmak 2**	7.06	28	P	P	08 01 23.2	-0.2
	SNR=5.1						
SMLA	**Simla**	7.59	136	i P	P	08 01 16.5	-14
SMLA				i S	S	08 02 35.1	-20
MKAR	**Makanchi Array**	13.04	36	Pn	P	08 02 47.6	+4.9
	comp=Z,0.3nm,0.3s,baz=211,slow=10,SNR=7.8						
AB31	**Akbulak array**	14.86	331	⇑P	P	08 03 05.7	-0.2
	comp=Z,1.3nm,0.2s						
AB31				S	S	08 05 42.9	-4.4
	comp=Z,0.9nm,0.2s,baz=154,slow=23,SNR=8.0						
AB31	**Akbulak array**	14.86	331	P	P	08 03 05.6	-0.2
BVAR	**Borovoye Array**	16.25	359	Pn	P	08 03 23.8	+0.5
	comp=Z,0.2nm,0.3s,baz=180,slow=14,SNR=4.7						
POO	**Poona**	18.35	172	ex	x	08 03 48.0	
FINES	**FINESS Array B**	37.27	326	P	P	08 06 42.6	+0.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	37.27	326	P	P	08 06 42.6	+0.4
	comp=Z,0.6nm,0.4s,mb3.8,baz=117,slow=8.5,SNR=5.9						
NB2	**NORSAR Subarra**	44.18	323	P	P	08 07 38.4	-0.3
	comp=Z,0.2nm,0.6s,mb3.0,baz=99,slow=7.9						
NOA	**NORSAR Array B**	44.18	323	P	P	08 07 38.1	-0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	44.18	323	P	P	08 07 38.1	-0.6
	comp=Z,0.9nm,0.7s,mb3.6,baz=97,slow=7.8,SNR=3.9						

BJI ***14*** *08:03:07.1, 51.19N×179.37E, h45*^{km}*, mB5.3, mb5.2, Ms5.0, Msz4.7*

MOS ***14*** *08:03:07.9±0.9, 51.21N×179.50E, h44*^{km}*, mb5.5/108, MS4.6/20, Error ellipse: s-maj=6.7km s-min=4.1km az=91.0*

IDC ***14*** *08:03:07.8±1.8, 51.22N×179.43E, h31*^{km}*±12*^{km}*, mb4.8/31, mb1 4.9/31, mb1mx4.8/35, mbtmp4.9/31, MS4.5/19, Ms1 4.5/19, ms1mx4.4/29, Error ellipse: s-maj=16.1km s-min=8.7km az=166.0*

NEIC ***14*** *08:03:09.7±0.1, 51.16N×179.51E, mb5.2/163, ML5.4(AEIC), Error ellipse: s-maj=4.1km s-min=1.8km az=180.0*

ISC 14 08:03:08.3±0.2**, 51.14N**±0.04×**179.54E**±0.02**, h52**^{km}**, h52**^{km}±1.4^{km}**:pP-P, n584, σ0**^{s}**95**/577**, mb5.2**/216**, MS4.7**/47**, 43C-19D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	2.12	72	P	P	08 03 42.4	+0.4
KIKV	**Kanaga Island**	2.19	69	P	P	08 03 43.5	+0.4
KIWB	**Kanaga Island**	2.19	70	P	P	08 03 43.8	+0.8
KINC	**Kanaga Island**	2.23	68	P	P	08 03 44.5	+0.9
ADAG	**Mount Adagdak**	2.56	69	P	P	08 03 48.7	+0.4
GSSP	**Great Sitkin S**	2.84	69	P	P	08 03 52.9	+0.6
GSTD	**Great Sitkin T**	2.85	69	P	P	08 03 52.7	+0.3
GSMY	**Great Sitkin M**	2.90	70	P	P	08 03 53.3	+0.2
GSTR	**Great Sitkin T**	2.91	69	P	P	08 03 53.8	+0.5
GSIG	**Igitkin Island**	2.96	72	P	P	08 03 54.2	+0.3
SMY	**Shemya**	3.72	297	P	P	08 04 04.8	0.0
SMY				S	S	08 04 51.5	+3.7
ATKA	**Atka Island**	4.05	72	P	P	08 04 08.8	-0.5
ATKA				S	S	08 04 56.0	0.0
FX1	**Attu Island--F**	4.31	296	Pn	P	08 04 12.8	-0.2
	127nm,0.3s,baz=140,slow=9.2,SNR=72						
FX1				Sn	S	08 05 12.4	+10
	114nm,0.3s,baz=105,slow=22,SNR=12						
FX1				LR	LR	08 05 44.0	
	comp=Z,323nm,18.6s,baz=110,slow=37						
FX1	**Attu Island--F**	4.31	296	P	P	08 04 12.7	-0.3
NIKO	**Nikolski**	7.39	71	P	P	08 04 55.5	-0.7
OKFG	**Magazine Ridge**	8.03	69	P	P	08 05 05.8	+0.8
SPIA	**Saint Paul Isl**	8.51	41	P	P	08 05 13.8	+2.2
MNAT	**Makushin Natee**	8.84	67	P	P	08 05 15.8	-0.4
WESS	**West Dahl Sout**	10.10	65	P	P	08 05 33.4	+0.2
WESN	**West Dahl Nort**	10.20	64	P	P	08 05 34.8	+0.2
SSLN	**Shishaldin Nor**	10.59	63	P	P	08 05 40.1	+0.3
FALS	**False Pass**	10.93	63	P	P	08 05 44.6	+0.1
SDPT	**Sand Point**	12.68	63	eP	P	08 06 05.6	-2.4
	27nm,0.3s						
PET	**Petropavlovsk**	12.98	287	eP	P	08 06 12.0	0.0
PET				eS	S	08 08 35.3	-0.3
PET				pmax	pmax		
	comp=Z,52nm,1.6s						
PET				smax			
	comp=E,23nm,0.7s						
PET				smax			
	comp=N,19nm,0.7s						
PET				MLR	MLR		
	comp=Z,2µm,19.0s						
PET				MLR	MLR		
	comp=Z,2µm,15.0s						
PET	**Petropavlovsk**	12.98	287	eP	P	08 06 10.2	-1.7
TNA	**Tin City**	15.84	19	P	P	08 06 48.7	-0.2
	comp=Z,122nm,1.3s						
SVW2	**Sparrevohn**	16.97	44	eP	P	08 07 04.2	+1.0
KDAK	**Kodiak Island**	17.43	57	eP	P	08 07 07.9	-1.1
	comp=Z,19nm,0.9s						
TTA	**Tatalina**	17.65	39	eP	P	08 07 12.6	+0.9
RSO	**Redoubt South**	18.03	48	eP	P	08 07 16.8	+0.4
BILL	**Bilibino**	18.16	344	⇑iP	P	08 07 16.1	-1.8
BILL				pmax	pmax		
	comp=Z,117nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2µm,20.0s						
BILL	**Bilibino**	18.16	344	eP	P	08 07 18.0	+0.1
	comp=Z,109nm,1.0s						
MA2	**Magadan**	18.28	309	eP	P	08 07 18.0	-1.5
MA2				pmax	pmax		
	comp=Z,19nm,0.8s						
MA2	**Magadan**	18.28	309	eP	P	08 07 17.9	-1.5
	comp=Z,19nm,0.8s						
SPU	**Mount Spurr**	18.59	46	eP	P	08 07 22.5	-0.7
SEY	**Seymchan**	18.74	319	eP	P	08 07 23.4	-1.6
SEY				eS	S	08 10 50.1	+1.5
SEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
SEY				pmax	pmax		
	comp=E,10.0nm,0.8s						
SEY				pmax	pmax		
	comp=Z,30nm,0.8s						
SLKM	**Skilak Lake**	19.24	49	P	P	08 07 31.7	+1.1
SLKM	**Skilak Lake**	19.24	49	eP	P	08 07 29.6	-1.1
PWA	**Palmer West**	19.73	46	eP	P	08 07 35.5	-0.5
PWA				pmax	pmax		
	comp=Z,18nm,0.4s						
PWA	**Palmer West**	19.73	46	eP	P	08 07 35.5	-0.5
	comp=Z,18nm,0.4s						
PMR	**Palmer**	20.05	46	eP	P	08 07 37.2	-2.2
PMR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PMR	**Palmer**	20.05	46	eP	P	08 07 37.2	-2.2
	comp=Z,10nm,0.7s						
IMA	**Indian Mountai**	20.21	32	P	P	08 07 41.4	+0.4
IMA				pmax	pmax		
	comp=Z,350nm,1.0s						
IMA	**Indian Mountai**	20.21	32	eP	P	08 07 41.5	+0.5
	comp=Z,65nm,0.9s						
SML	**Sawmill**	20.48	46	P	P	08 07 41.9	-2.0
SML	**Sawmill**	20.48	46	eP	P	08 07 41.0	-2.9
MCK	**McKinley**	20.87	41	P	P	08 07 46.1	-1.7
MCK				pmax	pmax		
	comp=Z,69nm,1.2s						
MCK	**McKinley**	20.87	41	eP	P	08 07 45.5	-2.3
	comp=Z,69nm,1.2s						
EYAK	**Cordova Ski Ar**	21.40	50	eP	P	08 07 50.8	-2.5
DIV	**Divide**	21.50	49	eP	P	08 07 51.8	-2.5
	comp=Z,152nm,0.7s,mb5.5						
ILAR	**Eielson Array**	22.09	39	P	P	08 07 59.5	-0.6
	comp=Z,6.5nm,0.6s,mb4.3,baz=239,slow=8.4,SNR=42						
ILAR				PcP	PcP	08 11 54.8	-2.4
	comp=Z,2.2nm,0.7s,baz=272,slow=3.3,SNR=4.4						
ILAR				ScP		08 15 31.4	
	comp=Z,1.7nm,0.8s,baz=293,slow=3.5,SNR=7.4						
THY	**Trims Highway**	22.10	43	eP	P	08 07 59.5	-0.6
YUK	**Yuzh-Kuril'sk**	23.64	266	eP	P	08 08 15.0	-0.2
YUK				pmax	pmax		
	comp=Z,110nm,0.5s,mb5.5						
YUK				pmax	pmax		
	comp=Z,2µm,2.0s,mb6.2						
YUK				MLR	MLR		
	comp=E,3µm,17.0s						
YUK				MLR	MLR		
	comp=Z,2µm,17.0s,MS4.6						
YSS	**Yuzh-Sakhalins**	24.30	275	α iP	P	08 08 22.4	+0.8
YSS				e		08 08 41.2	
YSS				e		08 08 59.0	
YSS				S	S	08 12 40.0	+5.9
YSS				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.3						
YSS				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.3						
YSS				MLR	MLR		
	comp=N,700nm,19.0s,MS4.3						
YSS				MLR	MLR		
	comp=E,700nm,20.0s,MS4.3						
YSS	**Yuzh-Sakhalins**	24.30	275	eP	P	08 08 22.7	+1.1
	comp=E,140nm,1.1s,mb5.3						
ASAJ	**Asahikawa**	25.66	269	P	P	08 08 35.0	+0.4
ASAJ				pmax	pmax		
	comp=Z,139nm,1.0s						
ASAJ				MLR	MLR		
	comp=Z,785nm,19.1s						
ASAJ	**Asahikawa**	25.66	269	P	P	08 08 35.0	+0.4
	comp=Z,139nm,1.0s,mb5.4,baz=40,slow=5.8,SNR=42						
ASAJ				LR	LR	08 18 44.9	
	comp=Z,785nm,19.1s,MS4.2,baz=37,slow=37						
INK	**Inuvik**	28.26	35	P	P	08 08 57.1	-1.0
	comp=Z,11nm,1.0s,mb4.4,baz=242,slow=6.6,SNR=16						
INK				ScP		08 15 49.1	
	comp=Z,10.0nm,1.2s,baz=98,slow=27,SNR=10						
INK	**Inuvik**	28.26	35	eP	P	08 08 56.7	-1.4
	comp=Z,53nm,1.1s,mb5.1						
YAK	**Yakutsk**	28.79	312	eP	P	08 09 01.9	-1.1
YAK				e*PP	pP	08 09 10.0	-6.2
YAK				ePPP	PPP	08 10 03.2	-6.9
YAK				e		08 12 12.4	
YAK				eS	S	08 13 49.1	+1.5
YAK				e		08 19 41.6	
YAK				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.0						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,33nm,1.3s						
YAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
YAK				pmax	pmax		
	comp=N,5.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
YAK				smax			
	comp=E,6.0nm,1.4s						
YAK				smax			
	comp=N,2.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,867nm,16.0s,MS4.5						
YAK				MLR	MLR		
	comp=N,281nm,14.0s,MS4.4						
YAK				MLR	MLR		
	comp=E,706nm,17.0s,MS4.4						
YAK	**Yakutsk**	28.79	312	eP	P	08 09 01.2	-1.8
	comp=E,88nm,1.1s,mb5.4						
DLBC	**Dease Lake**	29.36	56	P	P	08 09 08.0	-0.1
	comp=E,4.0nm,1.0s,mb4.1,baz=277,slow=12,SNR=7.3						
DLBC	**Dease Lake**	29.36	56	eP	P	08 09 06.9	-1.2
KLR	**Kul'dur**	30.24	285	⇓iP	P	08 09 12.7	-3.3
KLR				pmax	pmax		
	comp=N,62nm,1.4s						
KLR				pmax	pmax		
	comp=Z,96nm,1.4s,mb5.3						
KLR				MLR	MLR		
	comp=E,800nm,18.0s						
TIXI	**Tiksi**	30.34	331	eP	P	08 09 11.2	-5.4
TIXI				eS	S	08 14 16.4	+4.5
TIXI				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,865nm,15.0s,MS4.5						
TIXI	**Tiksi**	30.34	331	⇑iP	P	08 09 14.8	-1.8
BBB	**Bella Bella**	31.91	67	P	P	08 09 31.3	+0.6
	comp=Z,18nm,1.0s,mb4.8,baz=274,slow=12,SNR=3.5						
BBB				PcP	PcP	08 12 19.1	-1.1
	comp=Z,10nm,0.9s,baz=345,slow=6.4,SNR=3.2						
BBB	**Bella Bella**	31.91	67	P	P	08 09 31.3	+0.6
BBB				PcP	PcP	08 12 19.1	-1.1
MJAR	**Matsushiro Arr**	32.71	260	P	P	08 09 36.9	-0.9
	comp=Z,7.4nm,0.8s,mb4.7,baz=48,slow=7.5,SNR=24						
MJAR				PcP	PcP	08 12 21.6	-1.0
	comp=Z,5.9nm,0.9s,baz=38,slow=0.2,SNR=9.0						
MJAR				ScP		08 16 03.9	
	comp=Z,0.8nm,0.5s,baz=264,slow=2.4,SNR=6.0						
MJAR				LR	LR	08 22 12.2	
	comp=Z,661nm,19.0s,MS4.4,baz=70,slow=35						
MJAR	**Matsushiro Arr**	32.71	260	P	P	08 09 36.9	-0.9
MJAR				PcP	PcP	08 12 21.6	-1.0
MJAR				ScP		08 16 03.9	
MJAR				LR	LR	08 22 12.2	
MAJO	**Matsushiro**	32.71	260	P	P	08 09 37.3	-0.5
MAJO				pmax	pmax		
	comp=Z,59nm,1.2s,mb5.4						
MAJO	**Matsushiro**	32.71	260	eP	P	08 09 37.0	-0.8
	comp=Z,59nm,1.3s,mb5.4						
MAT	**Matsushiro**	32.71	260	eP	P	08 09 38.0	+0.2
MAT				eS	S	08 14 51.0	+1.5
MAT				pmax	pmax		
	comp=Z,71nm,1.3s,mb5.4						
MAT				MLR	MLR		
	comp=Z,710nm,20.0s,MS4.4						
MAT	**Matsushiro**	32.71	260	eP	P	08 09 38.0	+0.2
	comp=Z,71nm,1.3s,mb5.4						
MAT				eS	S	08 14 51.0	+1.5
MAT				LR	LR		
	comp=Z,710nm,20.0s,MS4.4						
MAT	**Matsushiro**	32.71	260	P	P	08 09 37.9	+0.1
MAT				S	S	08 14 50.6	+1.1
MDJ	**Mudanjiang**	33.58	279	P	P	08 09 42.9	-2.3
MDJ				AP	pP	08 09 55.3	-3.4
MDJ				XP	sP	08 10 01.5	-3.7
MDJ				PP	PP	08 10 58.8	0.0
MDJ				PCP	PcP	08 12 23.0	-1.9
MDJ				S	S	08 14 58.0	-4.8
MDJ				XS		08 15 22.3	
MDJ				SCP		08 16 01.4	
MDJ				PCS		08 16 07.0	
MDJ				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,100nm,8.2s						
MDJ				LR	LR		
	comp=N,470nm,19.1s						
MDJ				LR	LR		
	comp=E,460nm,26.4s						
MDJ				LR	LR		
	comp=Z,1µm,24.2s						
MDJ	**Mudanjiang**	33.58	279	eP	P	08 09 43.0	-2.2
	comp=Z,19nm,1.0s,mb5.0						
OCWA	**Octopus Mounta**	36.00	73	eP	P	08 10 05.7	-0.1
	comp=Z,52nm,1.1s,mb5.4						
OCWA				epP	pP	08 10 18.7	-0.7
YKW3	**Yellowknife Ar**	36.13	46	eP	P	08 10 05.7	-1.2
YKA	**Yellowknife Ar**	36.16	46	P	P	08 10 06.1	-0.9
	comp=Z,14nm,0.7s,mb5.0,baz=283,slow=8.7,SNR=82						
YKA				PcP	PcP	08 12 32.1	0.0
	comp=Z,6.0nm,0.8s,baz=287,slow=3.2,SNR=8.7						
YKA				ScP		08 16 14.7	
	comp=Z,1.7nm,0.7s,baz=292,slow=3.2,SNR=6.5						
YKA	**Yellowknife Ar**	36.16	46	P	P	08 10 06.1	-0.9
YKA				PcP	PcP	08 12 32.1	0.0
YKA				ScP		08 16 14.7	
CN2	**Changchun**	36.56	280	eP	P	08 10 09.5	-1.2
CN2				eAP	pP	08 10 23.0	-1.2
CN2				PP	PP	08 11 34.4	-1.6
CN2				eS	S	08 15 46.0	-2.9
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,1µm,19.0s,MS4.8						
CN2				LR	LR		
	comp=E,1µm,19.0s,MS4.8						
CN2				LR	LR		
	comp=Z,1µm,21.0s,MS4.7						
HDW	**Hoodsport**	36.72	72	P	P	08 10 13.3	+1.4
BOD	**Bodaibo**	37.28	306	eP	P	08 10 15.3	-1.2
BOD				pmax	pmax		
	comp=Z,74nm,1.3s,mb5.4						
HIA	**Hailar**	37.40	291	eP	P	08 10 16.4	-1.2
HIA				pmax	pmax		
	comp=Z,102nm,1.3s						
HIA	**Hailar**	37.40	291	eP	P	08 10 16.4	-1.2
	comp=Z,102nm,1.3s,mb5.5						
FMW	**Mount Fremont**	37.88	73	P	P	08 10 23.0	+1.3
PNT	**Penticton**	38.00	68	P	P	08 10 22.8	+0.2
TBM	**Table Mountain**	38.41	72	P	P	08 10 27.1	+1.0
EBG	**Ellensburg**	38.56	72	P	P	08 10 28.5	+1.3
SNY	**Shenyang**	38.78	279	⇑P	P	08 10 29.5	+0.3
SNY				S	S	08 16 19.8	-2.9
SNY				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.0						
SNY				LR	LR		
	comp=N,560nm,18.0s,MS4.5						
SNY				LR	LR		
	comp=E,490nm,22.2s,MS4.5						
SNY				LR	LR		
	comp=Z,880nm,21.9s,MS4.5						
INCN	**Inchon**	39.39	271	eP	P	08 10 34.6	+0.3
	comp=Z,64nm,0.9s,mb5.3						
OD2	**Odessa Site #2**	39.43	70	P	P	08 10 34.8	+0.3
WRD	**Warden**	39.46	71	P	P	08 10 34.9	+0.1
JNU	**Nakatsue**	39.50	262	P	P	08 10 35.6	+0.3
	comp=Z,61nm,1.1s,mb5.2,baz=39,slow=14,SNR=10						
JNU				PcP	PcP	08 12 40.8	-2.0
	comp=Z,11nm,0.9s,baz=79,slow=13,SNR=3.5						
CIT	**Chita**	39.73	298	⇑iP	P	08 10 37.1	+0.1
CIT				e		08 16 30.5	
CIT				pmax	pmax		
	comp=Z,140nm,1.4s,mb5.5						
EDM	**Edmonton**	39.84	60	eP	P	08 10 37.4	-0.5
EDM	**Edmonton**	39.84	60	eP	P	08 10 36.9	-1.0
NEW	**Newport**	39.95	68	P	P	08 10 39.0	+0.2
NEW				pmax	pmax		
	comp=Z,19nm,0.7s						
NEW	**Newport**	39.95	68	P	P	08 10 39.0	+0.2
	comp=Z,18nm,0.7s,mb4.9,baz=304,slow=7.2,SNR=26						
NEW	**Newport**	39.95	68	eP	P	08 10 38.7	-0.1
	comp=Z,19nm,0.7s,mb4.9						
YBH	**Yreka Blue Hor**	39.95	80	P	P	08 10 41.3	+2.4

YBH				pmax	pmax		
	comp=Z,25nm,1.0s						
YBH	**Yreka Blue Hor**	**39.95**	**80**	P	**P**	**08 10 40.4**	**+1.5**
	comp=Z,11nm,1.0s,mb4.5,baz=278,slow=4.9,SNR=12						
YBH				LR	LR	08 23 57.7	
	comp=Z,973nm,21.8s,MS4.6,baz=298,slow=31						
YBH	**Yreka Blue Hor**	**39.95**	**80**	*e*P	**P**	**08 10 40.3**	**+1.4**
	comp=Z,25nm,1.0s,mb4.9						
RES	**Resolute Bay**	**40.40**	**24**	*e*P	**P**	**08 10 41.1**	**-1.2**
RES				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.8						
RES	**Resolute Bay**	**40.40**	**24**	*e*P	**P**	**08 10 41.1**	**-1.1**
	comp=Z,21nm,1.0s,mb4.8						
WDC	**Whiskeytown Da**	**40.71**	**82**	P	**P**	**08 10 49.7**	**+4.5**
WDC				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.7						
WDC	**Whiskeytown Da**	**40.71**	**82**	*e*P	**P**	**08 10 46.2**	**+1.1**
	comp=Z,24nm,1.1s,mb4.7						
MOD	**Modoc**	**41.35**	**79**	*e*P	**P**	**08 10 51.6**	**+1.2**
	comp=Z,63nm,1.3s,mb5.1						
BMO	**Blue Mountains**	**41.57**	**73**	*e*P	**P**	**08 10 52.6**	**+0.5**
	comp=Z,35nm,1.3s,mb4.8						
WVOR	**Wild Horse Val**	**42.08**	**77**	P	**P**	**08 10 57.9**	**+1.6**
WVOR				pmax	pmax		
	comp=Z,81nm,1.3s,mb5.2						
WVOR	**Wild Horse Val**	**42.08**	**77**	*e*P	**P**	**08 10 57.2**	**+0.9**
	comp=Z,81nm,1.4s,mb5.2						
BEKR	**Beckwourth**	**42.48**	**81**	*e*P	**P**	**08 11 00.2**	**+0.5**
	comp=Z,31nm,1.4s,mb4.7						
MSO	**Missoula**	**42.53**	**69**	*e*P	**P**	**08 10 59.6**	**-0.3**
	comp=Z,25nm,0.9s,mb5.0						
CHMT	**Chamberlain Mo**	**42.89**	**68**	*e*P	**P**	**08 11 02.4**	**-0.5**
PAHR	**Pah Rah Range**	**43.18**	**81**	*e*P	**P**	**08 11 06.1**	**+0.7**
	comp=Z,18nm,0.9s,mb4.8						
WCN	**Washoe City**	**43.19**	**81**	P	**P**	**08 11 07.0**	**+1.5**
WCN				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.0						
WCN	**Washoe City**	**43.19**	**81**	*e*P	**P**	**08 11 06.1**	**+0.6**
	comp=Z,34nm,1.2s,mb5.0						
CMB	**Columbia Colle**	**43.56**	**83**	P	**P**	**08 11 10.4**	**+1.9**
CMB				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.9						
CMB	**Columbia Colle**	**43.56**	**83**	*e*P	**P**	**08 11 08.9**	**+0.4**
	comp=Z,27nm,1.2s,mb4.8						
HRY	**Holter Researc**	**43.83**	**68**	*e*P	**P**	**08 11 10.2**	**-0.3**
HLID	**Hailey**	**44.01**	**73**	⇑*e*P	**P**	**08 11 12.4**	**+0.3**
	comp=Z,52nm,1.1s,mb5.2						
BMN	**Battle Mountai**	**44.09**	**78**	P	**P**	**08 11 14.2**	**+1.4**
BMN				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.1						
BMN	**Battle Mountai**	**44.09**	**78**	*e*P	**P**	**08 11 12.8**	**0.0**
	comp=Z,42nm,1.1s,mb5.1						
MCMT	**McKenzie Canyo**	**44.25**	**71**	*e*P	**P**	**08 11 14.0**	**0.0**
MCMT				*e*pP	pP	08 11 26.9	-0.8
BOZ	**Bozeman (W)**	**44.52**	**69**	P	**P**	**08 11 16.2**	**+0.1**
BOZ				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.5						
BOZ	**Bozeman (W)**	**44.52**	**69**	⇑*e*P	**P**	**08 11 16.1**	**0.0**
	comp=Z,72nm,1.0s,mb5.5						
NVAR	**Mina Array Bea**	**44.62**	**81**	P	**P**	**08 11 18.4**	**+1.3**
	comp=Z,9.9nm,0.9s,mb4.7,baz=301,slow=5.7,SNR=57						
NVAR				PcP	PcP	08 13 00.6	+1.0
	comp=Z,6.6nm,0.8s,baz=274,slow=6.0,SNR=3.6						
NVAR				ScP		08 16 48.9	
	comp=Z,2.0nm,0.8s,baz=271,slow=6.9,SNR=6.9						
NVAR				LR	LR	08 28 02.7	
	comp=Z,568nm,19.9s,MS4.5,baz=270,slow=34						
OMM	**Old Mammoth Mi**	**44.69**	**83**	*e*P	**P**	**08 11 18.9**	**+1.3**
MNV	**Mina**	**44.71**	**81**	P	**P**	**08 11 19.0**	**+1.2**
MNV				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.0						
MNV	**Mina**	**44.71**	**81**	*e*P	**P**	**08 11 18.4**	**+0.7**
	comp=Z,31nm,1.1s,mb5.0						
QLMT	**Earthquake Lak**	**45.09**	**70**	*e*P	**P**	**08 11 20.7**	**0.0**
MTUM	**Tungsten Hills**	**45.12**	**83**	*e*P	**P**	**08 11 21.3**	**+0.3**
FFC	**Flin Flon**	**45.13**	**53**	*e*P	**P**	**08 11 19.4**	**-1.4**
FFC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
FFC	**Flin Flon**	**45.13**	**53**	*e*P	**P**	**08 11 19.4**	**-1.4**
	comp=Z,4.2nm,0.8s,mb4.3						
ELK	**Elko**	**45.13**	**77**	P	**P**	**08 11 22.5**	**+1.4**
	comp=Z,23nm,0.9s,mb5.0,baz=300,slow=7.6,SNR=106						
ELK				LR	LR	08 27 12.5	
	comp=Z,652nm,21.3s,MS4.5,baz=310,slow=32						
ELK	**Elko**	**45.13**	**77**	*e*P	**P**	**08 11 21.6**	**+0.6**
	comp=Z,28nm,0.9s,mb5.1						
TLY	**Talaya**	**45.31**	**302**	*e*P	**P**	**08 11 22.8**	**+0.5**
TLY				*e*S	**S**	**08 18 02.5**	**+4.1**
TLY				pmax	pmax		
	comp=Z,52nm,1.7s,mb5.1						
TLY				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.0						
TLY	**Talaya**	**45.31**	**302**	*e*P	**P**	**08 11 22.2**	**-0.1**
	comp=Z,52nm,1.3s,mb5.2						
ULN	**Ulaanbaatar**	**45.43**	**296**	*e*P	**P**	**08 11 23.4**	**+0.1**
ULN				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.1						
ULN	**Ulaanbaatar**	**45.43**	**296**	*e*P	**P**	**08 11 23.4**	**+0.1**
	comp=Z,35nm,1.1s,mb5.1						
YMR	**Madison River**	**45.45**	**70**	*e*P	**P**	**08 11 23.4**	**-0.2**
JOW	**Kunigami**	**45.50**	**258**	P	**P**	**08 11 24.8**	**+0.6**
	comp=Z,72nm,1.1s,mb5.4,baz=155,slow=27,SNR=3.1						
TPH	**Tonopah**	**45.51**	**81**	P	**P**	**08 11 25.3**	**+1.2**
TPH				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
TPH	**Tonopah**	**45.51**	**81**	*e*P	**P**	**08 11 24.7**	**+0.6**
	comp=Z,40nm,1.0s,mb5.3						
GCMT	**Greycliff**	**45.59**	**68**	*e*P	**P**	**08 11 24.5**	**-0.1**
YNR	**Norris Junctio**	**45.59**	**69**	*e*P	**P**	**08 11 25.0**	**+0.3**
YFT	**Old Faithful**	**45.65**	**70**	*e*P	**P**	**08 11 26.2**	**+1.1**
SONM	**Songino Array**	**45.82**	**296**	P	**P**	**08 11 27.0**	**+0.6**
	comp=Z,14nm,1.0s,mb4.9,baz=53,slow=8.3,SNR=80						
SONM				PcP	PcP	08 13 02.9	-0.7
	comp=Z,8.3nm,1.1s,baz=117,slow=2.8,SNR=3.5						
SONM				ScP		08 16 52.5	
	comp=Z,1.5nm,0.9s,baz=90,slow=1.2,SNR=5.5						
SONM				LR	LR	08 32 33.9	
	comp=Z,2µm,18.4s,MS5.1,baz=61,slow=39						
LKWY	**Lake**	**45.84**	**69**	P	**P**	**08 11 28.3**	**+1.6**
LKWY				pmax	pmax		
	comp=Z,59nm,0.9s,mb5.5						
LKWY	**Lake**	**45.84**	**69**	*e*P	**P**	**08 11 27.4**	**+0.7**
	comp=Z,59nm,0.9s,mb5.5						
IMW	**Indian Meadow**	**45.90**	**71**	*e*P	**P**	**08 11 27.7**	**+0.6**
	comp=Z,55nm,1.0s,mb5.4						
RRI2	**Red Ridge**	**45.99**	**71**	*e*P	**P**	**08 11 28.6**	**+0.8**
	comp=Z,56nm,0.9s,mb5.5						
HVU	**Hansel Valley**	**46.02**	**74**	P	**P**	**08 11 29.4**	**+1.2**
HVU	**Hansel Valley**	**46.02**	**74**	*e*P	**P**	**08 11 28.6**	**+0.5**
MOOW	**Moose Ponds**	**46.10**	**71**	*e*P	**P**	**08 11 28.6**	**-0.1**
	comp=Z,13nm,0.9s,mb4.9						
TPAW	**Teton Pass**	**46.13**	**71**	*e*P	**P**	**08 11 29.4**	**+0.4**
	comp=Z,36nm,1.0s,mb5.2						
TIA	**Tai'an**	**46.15**	**276**	⇑P	**P**	**08 11 29.0**	**-0.2**
TIA				AMB	AMB		
	comp=Z,70nm,1.2s,mb5.5						
ZAK	**Zakamensk**	**46.18**	**300**	⇓*i*P	**P**	**08 11 29.4**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.0						
ZAK				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.6						
WUWY	**Wally Ulrich**	**46.22**	**71**	*e*P	**P**	**08 11 29.8**	**+0.1**
SNOW	**Snow King Moun**	**46.26**	**71**	*e*P	**P**	**08 11 30.5**	**+0.5**
	comp=Z,34nm,1.0s,mb5.2						
LOHW	**Long Hollow**	**46.27**	**71**	*e*P	**P**	**08 11 30.1**	**+0.1**
	comp=Z,19nm,0.9s,mb5.0						
TRCR	**Troy Canyon**	**46.36**	**80**	*e*P	**P**	**08 11 31.4**	**+0.5**
BGU	**Big Grassy Mou**	**46.37**	**75**	*e*P	**P**	**08 11 31.4**	**+0.5**
DAC	**Darwin (Calif)**	**46.40**	**83**	*e*P	**P**	**08 11 32.1**	**+0.9**
DAC				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
DAC	**Darwin (Calif)**	**46.40**	**83**	*e*P	**P**	**08 11 31.5**	**+0.3**
	comp=Z,20nm,1.0s,mb5.0						
AHID	**Auburn Hatcher**	**46.46**	**72**	*e*P	**P**	**08 11 31.8**	**+0.3**
	comp=Z,40nm,1.0s,mb5.3						
SPUT	**South Promonto**	**46.50**	**74**	*e*P	**P**	**08 11 32.2**	**+0.3**
MOY	**Mondy**	**46.72**	**303**	*e*P	**P**	**08 11 34.1**	**+0.6**
MOY				pmax	pmax		
	comp=Z,59nm,1.3s,mb5.4						
HHC	**Hu-ho-hao-te**	**46.75**	**285**	*e*P	**P**	**08 11 34.4**	**+0.6**
HHC				AP	pP	08 11 49.4	+1.8
HHC				PCP	PcP	08 13 08.5	+1.5
HHC				PP	PP	08 13 26.3	+2.4
HHC				S	**S**	**08 18 23.1**	**+4.0**
HHC				XS		08 18 42.6	
HHC				SCS	ScS	08 21 25.0	+3.9
HHC				SS	SS	08 21 36.9	-1.7
HHC				AMB	AMB		
	comp=Z,70nm,1.3s,mb5.4						
HHC				LR	LR		
	comp=N,650nm,17.8s,MS4.7						
HHC				LR	LR		
	comp=E,600nm,20.2s,MS4.7						
HHC				LR	LR		
	comp=Z,630nm,26.2s						
HWUT	**Hardware Ranch**	**46.86**	**74**	*e*P	**P**	**08 11 34.8**	**+0.1**
	comp=Z,21nm,1.0s,mb5.0						
FCC	**Fort Churchill**	**46.88**	**45**	P	**P**	**08 11 33.6**	**-1.0**
FCC				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.2						
FCC	**Fort Churchill**	**46.88**	**45**	*e*P	**P**	**08 11 32.9**	**-1.8**
	comp=Z,38nm,1.1s,mb5.2						
SSE	**Sheshan**	**46.95**	**268**	*e*P	**P**	**08 11 36.3**	**+0.8**
SSE				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.3						
SSE				AMB	AMB		
	comp=Z,190nm,5.0s						
SSE	**Sheshan**	**46.95**	**268**	*e*P	**P**	**08 11 36.3**	**+0.8**
	comp=Z,49nm,1.1s,mb5.3						
LAO	**LASA Array**	**47.07**	**65**	*e*P	**P**	**08 11 35.8**	**-0.6**
	comp=Z,41nm,1.1s,mb5.3						
NOQ	**North Oquirrh**	**47.09**	**75**	*e*P	**P**	**08 11 35.2**	**-1.3**
DGMT	**Dagmar**	**47.22**	**62**	*e*P	**P**	**08 11 35.7**	**-1.7**
	comp=Z,17nm,0.9s,mb5.0						
TCUT	**Toone Canyon**	**47.24**	**74**	*e*P	**P**	**08 11 38.3**	**+0.5**
CTU	**Camp Tracy**	**47.29**	**75**	*e*P	**P**	**08 11 38.4**	**+0.3**
BW06	**Boulder Array**	**47.38**	**71**	⇑*e*P	**P**	**08 11 38.8**	**0.0**
	comp=Z,61nm,0.8s,mb5.6						
PDAR	**Pinedale Array**	**47.38**	**71**	P	**P**	**08 11 39.1**	**+0.3**
	comp=Z,64nm,0.8s,mb5.6,baz=301,slow=3.7,SNR=358						
PDAR				LR	LR	08 28 46.4	
	comp=Z,493nm,21.6s,MS4.4,baz=326,slow=32						
MWC	**Mount Wilson**	**47.42**	**86**	P	**P**	**08 11 40.0**	**+0.7**
MWC	**Mount Wilson**	**47.42**	**86**	*e*P	**P**	**08 11 39.4**	**+0.1**
JLU	**Jordanelle**	**47.53**	**75**	*e*P	**P**	**08 11 40.4**	**+0.4**
NLU	**North Lily Min**	**47.54**	**76**	*e*P	**P**	**08 11 40.8**	**+0.7**
DAU	**Daniels Canyon**	**47.76**	**75**	P	**P**	**08 11 43.3**	**+1.5**
DAU	**Daniels Canyon**	**47.76**	**75**	*e*P	**P**	**08 11 42.8**	**+0.9**
NJ2	**Nanjing**	**47.77**	**271**	*e*P	**P**	**08 11 41.8**	**-0.2**
NJ2				AP	pP	08 11 57.3	+1.4
NJ2				PP	PP	08 13 33.6	+0.2
NJ2				S	**S**	**08 18 35.0**	**+1.3**
NJ2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,90nm,7.0s						
NJ2				LR	LR		
	comp=N,980nm,21.5s,MS4.8						
NJ2				LR	LR		
	comp=E,710nm,25.1s,MS4.8						
NJ2				LR	LR		
	comp=Z,640nm,20.1s,MS4.6						
MPU	**Maple Canyon**	**47.77**	**75**	*e*P	**P**	**08 11 41.7**	**-0.2**
BTO	**Baotou**	**47.83**	**286**	*e*P	**P**	**08 11 42.8**	**+0.4**
BTO				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.5						
ARUT	**Antelope Range**	**48.03**	**79**	P	**P**	**08 11 44.7**	**+0.7**
ARUT	**Antelope Range**	**48.03**	**79**	*e*P	**P**	**08 11 44.1**	**+0.1**
MVU	**Marysvale**	**48.35**	**77**	*e*P	**P**	**08 11 46.7**	**+0.3**
	comp=Z,36nm,1.1s,mb5.3						
MSU	**Marysvale**	**48.36**	**77**	*e*P	**P**	**08 11 47.0**	**+0.5**
TMUT	**Trail Mountain**	**48.47**	**76**	*e*P	**P**	**08 11 47.9**	**+0.6**
NEN	**Nelson**	**48.52**	**82**	*e*P	**P**	**08 11 47.8**	**0.0**
LDFC	**Landfair**	**48.72**	**83**	*e*P	**P**	**08 11 49.1**	**-0.2**
PFO	**Pinyon Flat Ob**	**48.83**	**85**	P	**P**	**08 11 50.3**	**+0.1**
PFO				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.2						
PFO	**Pinyon Flat Ob**	**48.83**	**85**	*e*P	**P**	**08 11 49.9**	**-0.3**
	comp=Z,35nm,1.4s,mb5.2						
SRU	**San Rafael**	**49.00**	**76**	P	**P**	**08 11 51.7**	**+0.3**
SRU	**San Rafael**	**49.00**	**76**	*e*P	**P**	**08 11 51.2**	**-0.3**
BAR	**Barrett**	**49.31**	**86**	*e*P	**P**	**08 11 53.4**	**-0.5**
RWWY	**Rawlins**	**49.42**	**71**	*e*P	**P**	**08 11 53.6**	**-1.0**
	comp=Z,60nm,1.0s,mb5.6						
RSSD	**Black Hills**	**49.82**	**66**	P	**P**	**08 11 56.9**	**-0.7**
RSSD				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
RSSD	**Black Hills**	**49.82**	**66**	*e*P	**P**	**08 11 56.5**	**-1.2**
	comp=Z,15nm,0.8s,mb5.1						
KBS	**Kingsbay**	**49.99**	**357**	*e*P	**P**	**08 11 58.0**	**-0.5**
KBS				pmax	pmax		
	comp=Z,58nm,0.8s,mb5.7						
KBS	**Kingsbay**	**49.99**	**357**	*e*P	**P**	**08 11 58.0**	**-0.5**
	comp=Z,58nm,0.8s,mb5.7						
PV10	**Paradox Valley**	**50.37**	**75**	*e*P	**P**	**08 12 02.1**	**+0.2**
ULM	**Lac du Bonnet**	**50.69**	**56**	LR	LR	08 33 40.9	
	comp=Z,778nm,20.8s,MS4.7,baz=92,slow=36						
PHWY	**Pilot Hill**	**50.70**	**70**	*e*P	**P**	**08 12 03.9**	**-0.6**
WUAZ	**Wupatki**	**50.76**	**80**	*e*P	**P**	**08 12 05.2**	**+0.2**
	comp=Z,84nm,1.1s,mb5.6						
PV01	**Paradox Valley**	**50.81**	**75**	*e*P	**P**	**08 12 05.0**	**-0.3**
ISCO	**Idaho Springs**	**51.54**	**72**	P	**P**	**08 12 11.4**	**+0.6**
ISCO				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
ISCO	**Idaho Springs**	**51.54**	**72**	*e*P	**P**	**08 12 11.1**	**+0.3**
	comp=Z,26nm,1.0s,mb5.1						
WHN	**Wuhan**	**51.63**	**273**	*e*P	**P**	**08 12 10.3**	**-1.2**
HSP	**Hornsund**	**51.73**	**355**	*e*P	**P**	**08 12 10.9**	**-0.8**
DAG	**Danmarks Havn**	**51.84**	**5**	⇓*e*P	**P**	**08 12 11.5**	**-1.1**
DAG				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
DAG	**Danmarks Havn**	**51.84**	**5**	⇓*e*P	**P**	**08 12 11.5**	**-1.1**
	comp=Z,7.5nm,0.7s,mb4.7						
DAG	**Danmarks Havn**	**51.84**	**5**	⇓*i*P	**P**	**08 12 11.5**	**-1.1**
	comp=Z,7.5nm,0.7s,mb4.7						
XAN	**Xi'an**	**52.67**	**280**	P	**P**	**08 12 18.4**	**-1.0**
XAN				AP	pP	08 12 32.0	-1.4
XAN				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.1						
SDCO	**Great Sand Dun**	**52.92**	**74**	*e*P	**P**	**08 12 21.3**	**+0.1**
	comp=Z,39nm,1.4s,mb5.1						
SDCO				LR	LR		
	comp=Z,803nm,20.0s,MS4.8						
TUC	**Tucson**	**53.25**	**82**	P	**P**	**08 12 23.1**	**-0.6**
TUC				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.1						
TUC	**Tucson**	**53.25**	**82**	*e*P	**P**	**08 12 22.9**	**-0.8**
	comp=Z,31nm,1.2s,mb5.1						
NVS	**Novosibirsk**	**53.60**	**314**	⇑*i*P	**P**	**08 12 24.2**	**-1.7**
NVS				*e*	pP	08 12 37.7	-2.3
NVS				*e*S	**S**	**08 19 51.2**	**-2.6**
NVS				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.4						
NVS				pmax	pmax		
	comp=N,35nm,1.4s						
NVS				pmax	pmax		
	comp=E,46nm,1.4s						
NVS				smax			
	comp=N,15nm,1.8s						
NVS				smax			
	comp=E,18nm,2.0s						
SUMG	**Summit**	**53.78**	**13**	*e*P	**P**	**08 12 26.4**	**-0.6**
	comp=E,54nm,1.0s,mb5.4						
ANMO	**Albuquerque**	**54.16**	**77**	*e*P	**P**	**08 12 30.3**	**-0.1**
ANMO				pmax	pmax		
	comp=Z,22nm,1.2s						
ANMO				MLR	MLR		
	comp=Z,632nm,22.0s						
ANMO	**Albuquerque**	**54.16**	**77**	P	**P**	**08 12 30.8**	**+0.4**
	comp=Z,7.5nm,0.9s,mb4.6,baz=316,slow=7.8,SNR=32						
ANMO	**Albuquerque**	**54.16**	**77**	*e*P	**P**	**08 12 30.2**	**-0.1**
	comp=Z,22nm,1.2s,mb5.0						
ANMO				LR	LR		
	comp=Z,632nm,22.0s,MS4.6						
LENM	**Lemitar**	**54.37**	**78**	*e*P	**P**	**08 12 31.8**	**0.0**
EYMN	**Ely**	**54.37**	**56**	*e*P	**P**	**08 12 29.3**	**-2.4**
	comp=Z,38nm,1.1s,mb5.2						
LZH	**Lanzhou**	**54.44**	**285**	⇑P	**P**	**08 12 32.5**	**+0.1**
LZH				AP	pP	08 12 47.0	+0.5
LZH				XP	sP	08 12 52.9	+0.5
LZH				PP	PP	08 14 36.0	-0.3
LZH				S	**S**	**08 20 02.0**	**-3.5**
LZH				SS	SS	08 23 46.0	-1.9
LZH				AMB	AMB		
	comp=Z,110nm,1.5s,mb5.6						
LZH				AMB	AMB		
	comp=Z,380nm,4.2s						
LZH				LR	LR		
	comp=E,1µm,14.3s						
LZH				LR	LR		
	comp=Z,2µm,15.2s,MS5.2						
LZH	**Lanzhou**	**54.44**	**285**	⇑P	**P**	**08 12 32.5**	**+0.1**
	comp=Z,114nm,1.5s,mb5.6						
LZH				pP	pP	08 12 47.0	+0.5
LZH				sP	sP	08 12 52.9	+0.5
LZH				PP	PP	08 14 36.0	-0.3
LZH				S	**S**	**08 20 02.0**	**-3.5**
LZH				sS		08 20 30.0	
LZH				SS	SS	08 23 46.0	-1.9
LZH				LR	LR		
	comp=Z,2µm,15.2s,MS5.2						
LPM	**Los Pinos Moun**	**54.48**	**78**	P	**P**	**08 12 33.5**	**+0.8**
BNM	**Barren Site**	**54.59**	**78**	*e*P	**P**	**08 12 33.8**	**+0.3**
GTA	**Gaotai**	**54.68**	**291**	⇑P	**P**	**08 12 33.8**	**-0.3**
GTA				AP	pP	08 12 46.9	-1.3
GTA				XP	sP	08 12 54.1	-0.1
GTA				PP	PP	08 14 38.0	-0.4
GTA				S	**S**	**08 20 09.8**	**+1.2**
GTA				SS	SS	08 23 51.1	-0.5
GTA				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.3						
GTA				AMB	AMB		
	comp=Z,270nm,5.7s						
GTA				LR	LR		
	comp=N,590nm,17.6s,MS5.0						
GTA				LR	LR		
	comp=E,940nm,16.4s,MS5.0						
GTA				LR	LR		
	comp=Z,1µm,16.0s,MS5.1						
ENH	**Enshi**	**54.87**	**276**	*e*P	**P**	**08 12 33.5**	**-2.0**
	comp=Z,60nm,1.2s,mb5.5						
CBKS	**Cedar Bluff**	**55.66**	**69**	P	**P**	**08 12 41.3**	**+0.1**
CBKS				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.9						
CBKS	**Cedar Bluff**	**55.66**	**69**	*e*P	**P**	**08 12 40.4**	**-0.7**
	comp=Z,121nm,1.0s,mb5.9						
MNTX	**Cornudas Mount**	**57.02**	**79**	⇑*e*P	**P**	**08 12 50.6**	**-0.4**
	comp=Z,40nm,1.0s,mb5.4						
MNTX				*e*pP	pP	08 13 05.0	-0.2
AMTX	**Amarillo**	**57.12**	**74**	*e*P	**P**	**08 12 50.6**	**-1.1**
	comp=Z,16nm,0.8s,mb5.1						
KSU1	**Kansas State U**	**57.30**	**67**	*e*P	**P**	**08 12 51.1**	**-1.7**
SCO	**Scoresbysund**	**57.70**	**8**	*i* P	**P**	**08 12 54.3**	**-0.9**
SCO				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
SCO	**Scoresbysund**	**57.70**	**8**	*i* P	**P**	**08 12 54.3**	**-0.9**
	comp=Z,12nm,0.9s,mb4.9						
KEV	**Kevo**	**57.76**	**349**	*e*p	**P**	**08 12 54.9**	**-0.8**
CD2	**Chengdu**	**58.00**	**281**	P	**P**	**08 12 57.4**	**-0.4**
JMIC	**Jan Mayen**	**58.05**	**3**	LR	LR	08 38 53.6	
	comp=Z,187nm,21.4s,MS4.2,baz=185,slow=37						
ARCES	**ARCESS Array B**	**58.15**	**350**	P	**P**	**08 12 56.8**	**-1.6**
	comp=Z,16nm,0.8s,mb5.1,baz=18,slow=7.7,SNR=18						
JFWS	**Jewell Farm**	**58.32**	**60**	P	**P**	**08 12 58.3**	**-1.7**
JFWS				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.5						
JFWS	**Jewell Farm**	**58.32**	**60**	*e*P	**P**	**08 12 58.1**	**-1.9**
	comp=Z,46nm,0.9s,mb5.5						
WMQ	**Urumqi**	**58.59**	**302**	P	**P**	**08 13 02.0**	**+0.2**
WMQ				AP	pP	08 13 16.2	+0.1
WMQ				XP	sP	08 13 22.5	+0.5
WMQ				PCP	PcP	08 13 52.0	+0.7
WMQ				PP	PP	08 15 13.7	+0.2
WMQ				AMB	AMB		
	comp=Z,40nm,1.4s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,180nm,4.4s						
WMQ				LR	LR		
	comp=N,1µm,19.0s,MS5.0						
WMQ				LR	LR		
	comp=E,770nm,20.5s,MS5.0						
WMQ				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
WMOK	**Wichita Mounta**	**58.97**	**72**	*e*P	**P**	**08 13 04.1**	**-0.4**
WMOK				*e**PP	pP	08 13 18.5	-0.3
WMOK				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
WMOK				MLR	MLR		
	comp=Z,632nm,20.0s,MS4.7						
WMOK	**Wichita Mounta**	**58.97**	**72**	*e*P	**P**	**08 13 04.1**	**-0.5**
	comp=Z,30nm,0.9s,mb5.3						
WMOK				*e*pP	pP	08 13 18.5	-0.3
WMOK				LR	LR		
	comp=Z,632nm,20.0s,MS4.7						
GYA	**Guiyang**	**59.30**	**275**	⇑*i*P	**P**	**08 13 05.8**	**-1.2**
GYA				AP	pP	08 13 20.3	-1.0
GYA				XP	sP	08 13 27.0	-0.3
GYA				PP	PP	08 15 18.4	-1.8
GYA				S	**S**	**08 21 05.6**	**-4.1**
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,330nm,4.2s						
GYA				LR	LR		
	comp=N,470nm,19.4s,MS4.8						
GYA				LR	LR		
	comp=E,610nm,18.6s,MS4.8						
GYA				LR	LR		
	comp=Z,390nm,18.4s,MS4.6						
MKAR	**Makanchi Array**	**59.36**	**308**	*i* P	**P**	**08 13 05.8**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MKAR	**Makanchi Array**	**59.36**	**308**	P	**P**	**08 13 05.8**	**-1.2**
	comp=Z,6.8nm,0.3s,mb5.1,baz=55,slow=7.2,SNR=120						
MKAR				LR	LR	08 40 10.6	
	comp=Z,760nm,19.6s,MS4.8,baz=3.1,slow=38						
LTX	**Lajitas**	**59.73**	**80**	P	**P**	**08 13 09.3**	**-0.6**
LTX				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
LTX	**Lajitas**	**59.73**	**80**	*e*P	**P**	**08 13 08.8**	**-1.1**
	comp=Z,40nm,1.1s,mb5.4						
TXAR	**Lajitas Array**	**59.73**	**80**	P	**P**	**08 13 09.3**	**-0.6**
	comp=Z,5.0nm,0.7s,mb4.7,baz=294,slow=4.7,SNR=63						
TXAR				LR	LR	08 39 10.4	
	comp=Z,488nm,18.2s,MS4.7,baz=315,slow=36						
TXAR				PKP2bc		08 42 44.2	
	comp=Z,1.2nm,1.1s,baz=135,slow=3.5,SNR=6.0						
TXAR	**Lajitas Array**	**59.73**	**80**	P	**P**	**08 13 09.3**	**-0.6**
TXAR				LR	LR	08 39 10.4	
TXAR				⇑*e*		08 42 44.2	
SOKR	**Solikamsk**	**60.33**	**330**	⇓*i*P	**P**	**08 13 11.1**	**-2.5**
SOKR				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
SOKR				MLR	MLR		
	comp=Z,420nm,17.0s,MS4.7						
BVA0	**Borovoye Array**	**60.39**	**319**	P	**P**	**08 13 13.6**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
BVAR	**Borovoye Array**	**60.39**	**319**	P	**P**	**08 13 13.8**	**-0.3**
	comp=Z,55nm,0.6s,mb5.8,baz=53,slow=7.4,SNR=279						
SCHQ	**Schefferville**	**60.84**	**37**	P	**P**	**08 13 15.9**	**-1.2**
	comp=Z,19nm,1.0s,mb5.2,baz=340,slow=7.8,SNR=13						
SCHQ				LR	LR	08 41 18.1	
	comp=Z,668nm,21.8s,MS4.8,baz=305,slow=38						
SVE	**Sverdlovsk**	**61.23**	**327**	*e*P	**P**	**08 13 20.0**	**+0.3**
SVE				*e*	pP	08 13 36.0	+2.0
SVE				*e*		08 14 01.4	
SVE				pmax	pmax		
	comp=Z,80nm,1.4s,mb5.7						
SVE				MLR	MLR		
	comp=N,600nm,18.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,200nm,18.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,900nm,18.0s,MS5.0						
SLM	**Saint Louis**	**61.26**	**63**	*e*P	**P**	**08 13 18.3**	**-1.8**
SLM				*e**PP	pP	08 13 33.5	-1.0
FVM	**French Village**	**61.60**	**64**	P	**P**	**08 13 20.9**	**-1.6**
FVM				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.2						
FVM	**French Village**	**61.60**	**64**	*e*P	**P**	**08 13 20.1**	**-2.4**
	comp=Z,16nm,0.8s,mb5.2						
ARU	**Arti**	**62.25**	**327**	*e*P	**P**	**08 13 26.1**	**-0.5**
ARU				*e*		08 14 04.5	
ARU				*e*PPP	PPP	08 17 11.9	-3.8
ARU				*e*S	**S**	**08 21 51.2**	**+4.3**
ARU				*e*		08 23 14.9	
ARU				*e*SS	SS	08 25 55.0	+2.5
ARU				MLR	MLR		
	comp=Z,900nm,20.0s,MS4.9						
ARU				MLR	MLR		
	comp=N,600nm,19.0s,MS4.9						
ARU				MLR	MLR		
	comp=E,600nm,19.0s,MS4.9						
ARU	**Arti**	**62.25**	**327**	*e*P	**P**	**08 13 25.3**	**-1.3**
	comp=E,112nm,1.2s,mb5.9						

KMI	Kunming	62.72	277	⇑P	P	08 13 29.4	-0.7
KMI				AP	pP	08 13 46.3	+1.8
KMI				PP	PP	08 15 50.4	+0.2
KMI				S	S	08 21 52.3	-0.9
KMI				SCS	ScS	08 23 15.0	+0.8
KMI				SS	SS	08 25 57.3	-3.2
KMI				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.8						
KMI				AMB	AMB		
	comp=Z,210nm,4.8s						
KMI				LR	LR		
	comp=N,300nm,17.2s,MS4.7						
KMI				LR	LR		
	comp=E,280nm,17.2s,MS4.7						
KMI				LR	LR		
	comp=Z,780nm,37.7s						
KMI	Kunming	62.72	277	⇑P	P	08 13 29.4	-0.7
KMI				*PP	pP	08 13 46.2	+1.7
KMI						08 15 50.4	
KMI				S	S	08 21 52.3	-0.9
KMI				*SS		08 22 19.9	
KMI						08 23 15.0	
KMI				SS	SS	08 25 57.2	-3.3
KMI				pmax	pmax		
	comp=Z,17nm,1.4s,mb5.0						
KMI				MLR	MLR		
	comp=Z,790nm,37.7s,MS4.6						
KMI	Kunming	62.72	277	⇑P	P	08 13 29.4	-0.7
	comp=Z,17nm,1.4s,mb5.0						
KMI				pP	pP	08 13 46.2	+1.7
KMI				sP	sP	08 13 52.6	+2.2
KMI				PP	PP	08 15 50.4	+0.2
KMI				S	S	08 21 52.3	-0.9
KMI				sS		08 22 19.9	
KMI				ScS	ScS	08 23 15.0	+0.8
KMI				SS	SS	08 25 57.2	-3.3
KMI				LR	LR		
	comp=Z,790nm,37.7s,MS4.6						
UALR	University of	62.75	68	eP	P	08 13 28.6	-1.5
	comp=Z,27nm,0.9s,mb5.4						
SADO	Sadowa	62.81	52	P	P	08 13 29.0	-1.5
	comp=Z,6.8nm,0.8s,mb4.8,baz=335,slow=4.7,SNR=4.6						
SADO				PcP	PcP	08 14 08.4	+0.1
	comp=Z,28nm,1.0s,baz=328,slow=5.8,SNR=8.2						
SADO				LR	LR	08 43 30.8	
	comp=Z,733nm,18.7s,MS4.9,baz=70,slow=39						
PARMO	Parma	62.91	65	eP	P	08 13 30.2	-1.1
BLO	Bloomington	62.94	61	P	P	08 13 29.3	-2.2
BLO				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.5						
BLO	Bloomington	62.94	61	eP	P	08 13 29.0	-2.5
	comp=Z,39nm,1.1s,mb5.5						
HBAR	Harrisburg	63.17	66	eP	P	08 13 31.9	-1.1
GLAT	Glass	63.45	65	eP	P	08 13 34.0	-0.9
NATX	Nacogdoches	63.51	72	eP	P	08 13 35.2	-0.1
	comp=Z,23nm,0.8s,mb5.3						
NATX				epP	pP	08 13 47.5	-2.1
UTMT	University of	63.64	64	eP	P	08 13 35.1	-0.9
	comp=Z,152nm,1.1s,mb5.9						
UTMT				epP	pP	08 13 50.4	0.0
HALT	Halls	63.68	65	eP	P	08 13 36.1	-0.2
HALT				epP	pP	08 13 49.9	-0.8
WVT	Waverly	64.38	64	P	P	08 13 40.3	-0.5
WVT				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
WVT	Waverly	64.38	64	eP	P	08 13 39.5	-1.3
	comp=Z,28nm,1.0s,mb5.2						
ALLY	Alegheny Colle	64.56	55	eP	P	08 13 40.8	-1.1
OXF	Oxford	64.63	66	P	P	08 13 41.7	-0.8
OXF				pmax	pmax		
	comp=Z,250nm,1.0s,mb6.2						
OXF	Oxford	64.63	66	⇑eP	P	08 13 41.3	-1.1
	comp=Z,255nm,1.1s,mb6.2						
GENY	Geneseo	64.92	52	eP	P	08 13 42.0	-2.2
PLAL	Pickwick Lake	65.06	65	eP	P	08 13 44.0	-1.2
	comp=Z,39nm,0.8s,mb5.5						
KAF	Kangasniemi	65.11	346	ep	P	08 13 42.5	-2.6
FRNY	Flat Rock	65.45	48	eP	P	08 13 44.6	-3.0
TKM2	Tokmak 2	65.45	308	P	P	08 13 47.8	+0.2
	SNR=32						
ULHL	Ulahol	65.63	308	P	P	08 13 49.3	+0.5
	SNR=17						
USP	Ospenovka	65.73	309	P	P	08 13 49.9	+0.5
	SNR=27						
FINES	FINESS Array B	65.78	346	P	P	08 13 47.7	-1.6
	comp=Z,8.2nm,0.9s,mb4.8,baz=37,slow=9.5,SNR=21						
FINES				LR	LR	08 47 38.9	
	comp=Z,381nm,18.9s,MS4.6,baz=178,slow=41						
CHMS	Chumysh	65.81	309	P	P	08 13 50.7	+0.8
	SNR=12						
KBK	Karagaybulak	65.97	309	P	P	08 13 51.9	+1.0
	SNR=12						
FRU	Bishkek	66.00	309	i P	P	08 13 51.5	+0.4
FRU				e		08 14 12.0	
FRU				pmax	pmax		
	comp=Z,100nm,1.6s,mb5.6						
FRU				MLR	MLR		
	comp=Z,700nm,20.0s,MS4.9						
SWET	Sewanee	66.11	63	eP	P	08 13 50.6	-1.3
MCWV	Mont Chateau	66.17	56	eP	P	08 13 51.2	-1.0
	comp=Z,8.2nm,0.8s,mb4.8						
AAK	Ala-Archa	66.21	309	P	P	08 13 52.9	+0.4
	SNR=16						
AAK	Ala-Archa	66.21	309	P	P	08 13 51.9	-0.5
AAK				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
AAK	Ala-Archa	66.21	309	eP	P	08 13 51.7	-0.7
	comp=Z,30nm,1.0s,mb5.3						
KZA	Kyzart	66.25	308	P	P	08 13 53.7	+1.0
	SNR=23						
BINY	Binghamton	66.26	52	eP	P	08 13 51.4	-1.4
	comp=Z,13nm,0.8s,mb5.0						
TZTN	Tazewell	66.47	61	eP	P	08 13 53.2	-0.9
UCH	Uchtor	66.50	309	P	P	08 13 55.4	+1.1
	SNR=24						
LSA	Lhasa	66.53	289	eP	P	08 13 55.6	+0.9
LSA				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.4						
LSA	Lhasa	66.53	289	eP	P	08 13 55.6	+0.9
	comp=Z,33nm,0.8s,mb5.4						
EKS2	Erkin-Say	66.54	309	P	P	08 13 55.2	+0.7
	SNR=20						
CPCT	Cooper Cave	66.73	62	eP	P	08 13 54.3	-1.5
AML	Almayashu	66.98	309	P	P	08 13 58.6	+1.4
	SNR=18						
LRAL	Lakeview Retre	67.09	66	eP	P	08 13 56.5	-1.6
	comp=Z,26nm,1.0s,mb5.2						
AB31	Akbulak array	67.49	322	P	P	08 14 00.1	-0.3
AB31				pmax	pmax		
	comp=Z,68nm,1.0s,mb5.6						
BLA	Blacksburg	67.67	58	P	P	08 14 01.5	-0.2
BLA				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
BLA	Blacksburg	67.67	58	eP	P	08 14 00.2	-1.5
	comp=Z,17nm,0.9s,mb5.1						
KKAR	Karatay Array	67.77	312	i P	P	08 14 02.2	0.0
KKAR				pmax	pmax		
	comp=Z,55nm,1.0s,mb5.5						
NB2	NORSAR Subarra	67.78	354	P	P	08 14 01.2	-0.8
	comp=Z,66nm,0.9s,mb5.7,baz=7.0,slow=6.2						
NB2	NORSAR Subarra	67.78	354	P	P	08 14 01.2	-0.8
	baz=6.6,slow=6.5						
NOA	NORSAR Array B	67.78	354	P	P	08 14 01.2	-0.8
	comp=Z,35nm,0.8s,mb5.4,baz=8.1,slow=6.3,SNR=85						
NOA				LR	LR	08 48 22.2	
	comp=Z,204nm,18.1s,MS4.4,baz=355,slow=40						
NOA	NORSAR Array B	67.78	354	P	P	08 14 01.2	-0.8
NOA				LR	LR	08 48 22.2	
KSH	Kashi	67.80	306	eP	P	08 14 03.0	+0.5
KSH				eAP	pP	08 14 19.3	+2.2
KSH				ePCP	PcP	08 14 29.3	+0.4
KSH				ePP	PP	08 16 35.1	+0.8
KSH				eSCP		08 18 26.0	
KSH				ePCS		08 18 32.0	
KSH				eS	S	08 22 53.6	-1.5
KSH				eSCS	ScS	08 23 52.1	-0.8
KSH				eSS	SS	08 27 18.0	-0.7
KSH				AMB	AMB		
	comp=Z,270nm,1.7s,mb6.0						
KSH				LR	LR		
	comp=N,540nm,11.2s						
KSH				LR	LR		
	comp=E,2µm,17.8s						
SDMD	Soldier’s Deli	67.91	54	eP	P	08 14 02.3	-0.9
NAO01	NORSAR Array S	68.00	354	eP	P	08 14 00.7	-2.6
	comp=E,13nm,0.8s,mb5.0						
PAL	Palisades	68.18	51	P	P	08 14 04.1	-0.7
PAL				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
PAL	Palisades	68.18	51	eP	P	08 14 03.1	-1.7
	comp=Z,24nm,1.2s,mb5.1						
VSU	Vasula	68.53	345	eP	P	08 14 05.7	-0.9
NANT	Nan	68.64	274	⇑P	P	08 14 06.0	-2.0
	comp=Z,62nm,1.0s,mb5.5						
MOS	Moscow	68.90	338	eP	P	08 14 08.9	-0.1
MOS				eS	S	08 23 06.0	-2.0
MOS				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.1						
SHL	Shillong	69.11	285	eP	P	08 14 10.0	-0.8
TAOE	Nuku Hiva Isla	69.15	137	eLR	LR	08 33 41.6	
	comp=Z,3µm,22.8s,baz=334						
JSC	Jenkinsville	69.39	61	P	P	08 14 12.3	-0.1
JSC	Jenkinsville	69.39	61	eP	P	08 14 11.7	-0.7
OBN	Obninsk	69.72	338	⇓iP	P	08 14 13.5	-0.5
OBN				i *PP	pP	08 14 41.2	+13
OBN				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.3						
OBN				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.2						
OBN	Obninsk	69.72	338	i P	P	08 14 12.8	-1.2
OBN				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
CHG	Chiang Mai	69.73	275	⇓P	P	08 14 13.3	-1.4
	comp=Z,20nm,1.3s,mb4.9						
CMAR	Chiang Mai Arr	69.99	275	P	P	08 14 15.7	-0.6
	comp=Z,8.6nm,0.8s,mb4.7,baz=27,slow=6.9,SNR=29						
COW	Cow Castle Cre	70.38	61	eP	P	08 14 17.6	-0.8
GUN	Gumba	70.97	291	eP	P	08 14 22.9	+0.8
	comp=Z,342nm,1.0s,mb6.2						
KKN	Kakani	71.41	291	eP	P	08 14 25.4	+0.6
	comp=Z,158nm,1.1s,mb5.9						
KKN	Kakani	71.41	291	eP	P	08 14 25.4	+0.6
KKN				pmax	pmax		
	comp=Z,79nm,1.1s,mb5.6						
PKI	Pulchoki	71.50	291	eP	P	08 14 25.8	+0.5
	comp=Z,236nm,1.3s,mb6.0						
PKI	Pulchoki	71.50	291	eP	P	08 14 25.8	+0.5
PKI				pmax	pmax		
	comp=Z,118nm,1.3s,mb5.7						
GKN	Gorkha	71.63	292	eP	P	08 14 26.4	+0.3
	comp=Z,224nm,1.1s,mb6.0						
DMN	Daman	71.65	291	eP	P	08 14 27.0	+0.8
	comp=Z,233nm,1.3s,mb5.9						
KOLN	Koldanda	72.41	292	eP	P	08 14 31.2	+0.5
	comp=Z,138nm,1.2s,mb5.8						
MUD	Monsted U’grnd	72.48	354	i P	P	08 14 31.1	+0.5
MUD				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.4						
MUD	Monsted U’grnd	72.48	354	i P	P	08 14 31.1	+0.5
	comp=Z,53nm,1.1s,mb5.4						
VRSR	Storozhevoye	72.62	335	eP	P	08 14 31.3	-0.1
VRSR				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.1						
VRSR				pmax	pmax		
	comp=N,20nm,0.9s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.8s						
PPT	Papeete	73.57	149	eLR	LR	08 35 40.6	
	comp=E,1µm,25.8s,baz=340						
PPT	Papeete	73.57	149	LR	LR	08 44 06.5	
	comp=E,721nm,18.3s,MS5.0,baz=338,slow=33						
ESK	Eskdalemuir	73.89	2	P	P	08 14 38.8	+0.1
ESK				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.3						
ESK	Eskdalemuir	73.89	2	eP	P	08 14 38.2	-0.5
	comp=Z,46nm,1.2s,mb5.3						
BOK	Bokaro	74.05	288	eP	P	08 14 41.2	+0.9
BSEG	Bad Segeberg	74.91	353	eP	P	08 14 45.1	+0.4
BSEG				pmax	pmax		
	comp=Z,63nm,1.2s,mb5.4						
NDI	New Delhi	75.36	297	eP	P	08 14 46.5	-1.3
AKASG	Malin Array Be	75.45	341	P	P	08 14 47.1	-0.7
	comp=Z,15nm,0.8s,mb5.0,baz=22,slow=5.9,SNR=58						
DCN	Croghan	75.74	4	eP	P	08 14 45.0	-4.4
DLF	Lyons Farm	75.82	4	eP	P	08 14 45.0	-4.8
RUE	Ruedersdorf	76.06	351	eP	P	08 14 51.0	-0.2
CTA	Charters Tower	76.71	212	eP	P	08 14 55.3	-0.3
	comp=Z,9.9nm,0.8s,mb4.8						
CTA	Charters Tower	76.71	212	eP	P	08 14 55.3	-0.3
CTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CTAO	Charters Tower	76.71	212	P	P	08 14 55.4	-0.2
CTAO				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
CTAO	Charters Tower	76.71	212	eP	P	08 14 54.5	-1.1
	comp=Z,12nm,0.8s,mb4.9						
CTAO				LR	LR		
	comp=Z,412nm,20.0s,MS4.7						
CLZ	Clausthal	76.99	353	eP	P	08 14 57.0	+0.5
CLZ				pmax	pmax		
	comp=Z,53nm,1.3s,mb5.3						
CLZ	Clausthal	76.99	353	eP	P	08 14 57.0	+0.5
	comp=Z,53nm,1.3s,mb5.3						
LVV	L’vov	77.28	344	i P	P	08 14 58.0	-0.1
CLL	Collm	77.30	351	i P	P	08 14 57.6	-0.6
CLL				e*PP	pP	08 15 12.0	-1.0
CLL				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
CLL	Collm	77.30	351	i P	P	08 14 57.6	-0.6
	comp=Z,13nm,1.2s,mb4.7						
CLL				epP	pP	08 15 12.0	-1.0
CLL	Collm	77.30	351	P	P	08 14 57.6	-0.6
	comp=Z,logA/T=1.0,mb4.7						
CLL				e*PP	pP	08 15 12.0	-1.0
BLSP	Bilaspur	77.55	290	eP	P	08 15 01.7	+1.4
BLSP				AMb	AMB	08 15 02.0	
	comp=Z,78nm,1.5s,mb5.4						
OJC	Ojcow	77.56	347	eP	P	08 14 59.6	-0.1
BRG	Berggiesshubel	77.63	351	⇓iP	P	08 15 00.1	0.0
	comp=Z,20nm,1.3s,mb4.9						
KWP	Kalwaria	77.68	345	eP	P	08 15 00.4	0.0
KWP				pmax	pmax		
	comp=Z,116nm,1.2s,mb5.7						
KWP	Kalwaria	77.68	345	eP	P	08 15 00.4	0.0
	comp=Z,116nm,1.2s,mb5.7						
UPC	Upice	77.77	349	eP	P	08 15 00.6	-0.2
DPC	Dobruska-Polom	77.89	349	eP	P	08 15 01.6	+0.1
DPC				AMS	AMS	08 57 20.0	
	comp=Z,300nm,19.2s						
PVCC	Panska Ves	77.91	350	AMS	AMS	08 54 20.0	
	comp=Z,500nm,18.6s						
MOX	Moxa	78.08	352	eP	P	08 15 02.7	+0.2
MOX				pmax	pmax		
	comp=Z,32nm,1.6s,mb5.0						
MOX	Moxa	78.08	352	eP	P	08 15 02.7	+0.2
	comp=Z,32nm,1.6s,mb5.0						
MOX	Moxa	78.08	352	i P	P	08 15 02.7	+0.2
	comp=Z,logA/T=1.3,mb5.0						
OKC	Ostrava-Krasne	78.16	348	eP	P	08 15 03.4	+0.4
OKC				AMS	AMS	08 54 20.0	
	comp=Z,300nm,18.6s						
KIV	Kislovodsk	78.16	330c	iP	P	08 15 03.5	+0.4
KIV				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
KIV				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.4						
KIV	Kislovodsk	78.16	330	⇑iP	P	08 15 03.6	+0.5
NIE	Niedzica	78.26	346	eP	P	08 15 05.0	+1.4
MORC	Moravsky Berou	78.30	348	eP	P	08 15 03.4	-0.4
MORC				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
MORC	Moravsky Berou	78.30	348	eP	P	08 15 03.4	-0.4
	comp=Z,11nm,1.3s,mb4.6						
HGN	Heimansgroeve	78.33	356	⇑eP	P	08 15 03.9	-0.1
	comp=Z,32nm,1.1s,mb5.2						
HGN				ex	x	08 15 12.2	
HGN	Heimansgroeve	78.33	356	eS	S	08 25 12.6	+19
KOLS	Kolonicke sedl	78.43	345	eP	P	08 15 04.7	+0.2
PRU	Pruhonice	78.44	350	eP	P	08 15 04.6	0.0
PRU				AMS	AMS	08 54 30.0	
	comp=Z,500nm,20.8s						
AJM	Ajmer	78.51	298	eP	P	08 15 05.7	+0.3
AJM				AMb	AMB	08 15 07.3	
	comp=Z,41nm,1.7s,mb5.1						
TNS	Taunus Mts	78.73	354	eP	P	08 15 06.3	+0.1
TNS				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.1						
TNS	Taunus Mts	78.73	354	eP	P	08 15 06.3	+0.1
	comp=Z,38nm,1.5s,mb5.1						
ZEI	Tsey	78.83	328	eP	P	08 15 07.1	+0.3
ZEI				i *PP	pP	08 15 11.6	-10
ZEI				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
VRAC	Vranov	78.88	349	P	P	08 15 08.0	+1.0
ANN	Anapa	78.97	334	eP	P	08 15 06.1	-1.5
ANN				MLR	MLR		
	comp=N,1µm,22.0s,MS5.2						
ANN				MLR	MLR		
	comp=E,249nm,22.0s,MS5.2						
ANN				MLR	MLR		
	comp=Z,506nm,22.0s,MS4.8						
TBI	Tubuai	79.03	151	eLQ		08 34 59.9	
	comp=Z,351nm,39.5s						
TBI				eLR	LR	08 38 17.0	
	baz=335						
GIVF	Givet	79.04	357	eP	P	08 15 07.9	+0.1
	comp=Z,66nm,1.2s,mb5.2						
GIVF	Givet	79.04	357	eP	P	08 15 07.9	+0.1
GIVF				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
KIS	Kishinev	79.05	340	eP	P	08 15 06.0	-1.9
KIS				MLR	MLR		
	comp=N,400nm,17.0s,MS4.9						
KIS				MLR	MLR		
	comp=Z,800nm,17.0s,MS5.1						
KIS				MLR	MLR		
	comp=E,300nm,16.0s,MS4.9						
KIS				MLR	MLR		
	comp=Z,800nm,17.0s						
GRA1	Grafenberg Arr	79.06	352	eP	P	08 15 08.4	+0.5
	comp=Z,30nm,0.9s,mb5.2						
GRF	Grafenberg Arr	79.06	352	eP	P	08 15 08.4	+0.5
GRF				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
GRF	Grafenberg Arr	79.06	352	eP	P	08 15 08.4	+0.5
GRF				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
GRF	Grafenberg Arr	79.06	352	eP	P	08 15 08.4	+0.5
	comp=Z,30nm,0.9s,mb5.2						
BAIF	Baives	79.11	357	eP	P	08 15 08.4	+0.2
	comp=Z,81nm,1.2s,mb5.2						
BAIF	Baives	79.11	357	eP	P	08 15 08.4	+0.2
BAIF				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.2						
KECS	Kecovo	79.15	346	eP	P	08 15 07.1	-1.4
KECS				e	pP	08 15 20.4	-2.9
BURAR	Bucovina Array	79.18	343	P	P	08 15 09.3	+0.6
BURAR	Bucovina Array	79.18	343	⇑P	P	08 15 09.4	+0.7
TOD	Tromm	79.33	354	eP	P	08 15 08.3	-1.1
VYHS	Vyhne	79.38	347	i P	P	08 15 10.0	+0.3
KHC	Kasperske Hory	79.39	351	eP	P	08 15 09.4	-0.4
KHC	Kasperske Hory	79.39	351	eP	P	08 15 09.4	-0.4
KHC				AMS	AMS	08 54 20.0	
	comp=Z,400nm,19.7s						
SOC	Sochi	79.42	332	eP	P	08 15 04.7	-5.3
SOC				eS	S	08 25 07.2	+1.7
SOC				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
SOC				pmax	pmax		
	comp=N,34nm,1.1s						
SOC				pmax	pmax		
	comp=E,24nm,1.2s						
SOC				MLR	MLR		
	comp=N,343nm,16.0s						
SOC				MLR	MLR		
	comp=Z,639nm,16.0s,MS5.1						
SOC				MLR	MLR		
	comp=E,178nm,22.0s						
BHPL	Bhopal	79.45	294	eP	P	08 15 10.8	+0.1
BHPL				AMb	AMB	08 15 12.4	
	comp=Z,66nm,1.7s,mb5.3						
TI2	Plekhanov	79.47	327	⇑iP	P	08 15 01.0	-9.3
TI2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
SMOL	Smolenice	79.55	348	eP	P	08 15 11.6	+0.9
GEC2	GERESS Array S	79.66	351	eP	P	08 15 11.3	+0.1
GEC2				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
GEC2	GERESS Array S	79.66	351	eP	P	08 15 11.3	+0.1
	comp=Z,18nm,1.4s,mb4.8						
GERES	GERESS Array B	79.66	351	P	P	08 15 11.5	+0.2
	comp=Z,2.2nm,0.6s,mb4.3,baz=27,slow=3.0,SNR=21						
GERES				LR	LR	08 55 34.1	
	comp=Z,436nm,20.0s,MS4.8,baz=22,slow=40						
SIM	Simferopol’	79.72	336	P	P	08 15 13.0	+1.3
SIM				eS	S	08 25 24.0	+15
PSZ	Piszkesteto	79.79	346	eP	P	08 15 12.4	+0.5
PSZ				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
PSZ	Piszkesteto	79.79	346	eP	P	08 15 12.4	+0.5
	comp=Z,32nm,1.1s,mb5.2						
PSZ	Piszkesteto	79.79	346	⇓e	P	08 15 13.1	+1.2
ZST	Bratislava	79.91	348	eP	P	08 15 13.6	+1.0
DRGR		80.43	344	P	P	08 15 16.0	+0.6
DRGR		80.43	344	⇑P	P	08 15 16.1	+0.7
FLN	La Foliniere	80.48	0	eP	P	08 15 15.4	-0.2
	comp=Z,102nm,1.3s,mb5.3						
FLN	La Foliniere	80.48	0	eP	P	08 15 15.4	-0.2
FLN				pmax	pmax		
	comp=Z,51nm,1.3s,mb5.3						
FUR	Furstenfeldbru	80.57	352	eP	P	08 15 15.9	-0.2
FUR				pmax	pmax		
	comp=Z,21nm,0.4s,mb5.4						
FUR	Furstenfeldbru	80.57	352	eP	P	08 15 15.9	-0.2
	comp=Z,21nm,0.4s,mb5.4						
MOA	Molln	80.59	350	⇓iP	P	08 15 16.8	+0.6
	comp=Z,5.6nm,0.9s,mb4.5						
WLS	Welschbruch	80.60	355	eP	P	08 15 16.3	0.0
CDF	Champ du Feu	80.61	355	eP	P	08 15 16.3	0.0
BFO	Black Forest	80.63	354	eP	P	08 15 16.5	+0.1
BFO				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.8						
BFO	Black Forest	80.63	354	eP	P	08 15 16.5	+0.1
	comp=Z,20nm,1.5s,mb4.8						
MEZF	Maizieres J’vi	80.63	356	eP	P	08 15 16.8	+0.4
LDF	La Druitiere	80.65	360	eP	P	08 15 16.2	-0.3
	comp=Z,26nm,0.8s,mb4.9						
LDF	La Druitiere	80.65	360	eP	P	08 15 16.2	-0.3
LDF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
ECH	Echery	80.81	355	eP	P	08 15 17.6	+0.2
GRR	Gorron	80.86	0	eP	P	08 15 17.7	+0.1
THEF	They Montfort	80.86	356	eP	P	08 15 17.7	+0.1
ROSF	Rostrenen	80.88	2	eP	P	08 15 17.9	+0.2
	comp=Z,89nm,1.3s,mb5.2						
ROSF	Rostrenen	80.88	2	eP	P	08 15 17.9	+0.2
ROSF				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.2						
GNI	Garni	80.88	327	eP	P	08 15 19.4	+1.5
GNI				pmax	pmax		
	comp=Z,28nm,1.1s						
GNI	Garni	80.88	327	eP	P	08 15 19.4	+1.5
	comp=Z,28nm,1.1s,mb5.1						
SGMF	Saint Gilles	80.97	1	eP	P	08 15 18.5	+0.3
	comp=Z,43nm,0.8s,mb5.1						
SGMF	Saint Gilles	80.97	1	eP	P	08 15 18.5	+0.3
SGMF				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
ARSA	Arzberg	81.03	349	⇑iP	P	08 15 19.3	+0.7
	comp=Z,35nm,1.6s,mb5.0						
HAU	Haudompre	81.07	355	eP	P	08 15 18.7	0.0
MLR	Muntele Rosu	81.08	342	P	P	08 15 20.5	+1.6
MLR	Muntele Rosu	81.08	342	⇓P	P	08 15 20.4	+1.5
FELD	Feldberg	81.10	354	eP	P	08 15 18.7	-0.2
WRAB	Tennant Creek	81.11	222	eP	P	08 15 18.2	-1.3
WRAB				e*PP	pP	08 15 32.8	-1.6
WRAB				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
WRAB	Tennant Creek	81.11	222	eP	P	08 15 18.2	-1.3
	comp=Z,14nm,0.9s,mb4.9						
WRAB				epP	pP	08 15 32.8	-1.6
WB2	Warramunga Arr	81.11	222	eP	P	08 15 18.2	-1.3
WRA	Warramunga Arr	81.12	223	P	P	08 15 18.2	-1.4
	comp=Z,7.8nm,0.9s,mb4.6,baz=35,slow=6.2,SNR=29						
MOF	Molkenrain	81.18	355	eP	P	08 15 19.1	-0.2
HINF	Hinteralfeld	81.23	355	eP	P	08 15 19.4	-0.2
QUIF	Quistinic	81.30	2	eP	P	08 15 21.3	+1.4
	comp=Z,52nm,1.1s,mb5.1						
QUIF	Quistinic	81.30	2	eP	P	08 15 21.3	+1.4
QUIF				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
VOIR		81.31	342	⇑P	P	08 15 21.1	+1.1
WTTA	Wattenberg	81.43	352	⇑iP	P	08 15 21.4	+0.8
	comp=Z,33nm,1.2s,mb5.1						
WTTA	Wattenberg	81.43	352	⇑iP	P	08 15 21.4	+0.8
WTTA				pmax	pmax		

	comp=Z,33nm,1.2s,mb5.1						
KBA	**Koelnbreinsper**	81.45	351	⇑iP	P	08 15 21.8	+1.1
	comp=Z,64nm,1.2s,mb5.4						
KBA	**Koelnbreinsper**	81.45	351	⇑iP	P	08 15 21.8	+1.1
KBA				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.4						
TIRR	**Tirgusor**	81.55	340	P	P	08 15 21.6	+0.3
TIRR	**Tirgusor**	81.55	340	⇑P	P	08 15 21.1	-0.2
DAVA	**Damuels**	81.55	353	⇑iP	P	08 15 22.9	+1.6
	comp=Z,20nm,1.2s,mb4.9						
PERS	**Pernice**	81.69	349	eP	P	08 15 22.5	+0.5
LOMF	**Lomont**	81.69	355	eP	P	08 15 22.1	+0.1
BZS	**Buzias**	81.75	345	P	P	08 15 22.8	+0.4
BZS	**Buzias**	81.75	345	⇑P	P	08 15 22.7	+0.3
OBKA	**Obir**	81.88	350	⇑iP	P	08 15 23.5	+0.5
	comp=Z,32nm,1.2s,mb5.1						
LOR	**Lormes**	81.91	357	eP	P	08 15 23.2	+0.1
	comp=Z,52nm,1.3s,mb5.0						
LOR	**Lormes**	81.91	357	eP	P	08 15 23.2	+0.1
LOR				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.0						
PTCC	**Patocco-Chiusa**	82.11	350	P	P	08 15 24.3	+0.1
SSF	**Saint Saulge**	82.12	357	eP	P	08 15 24.4	+0.2
SSF				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
SSF	**Saint Saulge**	82.12	357	eP	P	08 15 24.4	+0.2
	comp=Z,30nm,1.3s,mb5.1						
FUORN	**Ofenpass**	82.19	353	P	P	08 15 25.5	+0.9
ROBS	**Robic**	82.25	350	eP	P	08 15 24.3	-0.6
AVF	**Avril sur Loir**	82.40	357	eP	P	08 15 25.7	+0.1
	comp=Z,35nm,1.1s,mb4.9						
AVF	**Avril sur Loir**	82.40	357	eP	P	08 15 25.7	+0.1
AVF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
TUE	**Stuetta**	82.41	353	P	P	08 15 26.3	+0.6
	comp=Z,25nm,1.4s,mb5.0						
CABF	**La Chapelle**	82.47	355	eP	P	08 15 26.6	+0.6
	comp=Z,40nm,1.2s,mb4.9						
CABF	**La Chapelle**	82.47	355	eP	P	08 15 26.6	+0.6
CABF				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
SMF	**Signal de Mont**	82.53	357	eP	P	08 15 26.5	+0.2
	comp=Z,77nm,1.2s,mb5.3						
SMF	**Signal de Mont**	82.53	357	eP	P	08 15 26.5	+0.2
SMF				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.3						
MFF	**Saint Martin d**	82.64	360	eP	P	08 15 27.2	+0.3
	comp=Z,41nm,1.1s,mb5.1						
MFF	**Saint Martin d**	82.64	360	eP	P	08 15 27.2	+0.3
MFF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
BOJS	**Bojanci**	82.79	349	eP	P	08 15 27.8	+0.2
TCF	**Toulx Ste Croi**	82.93	358	eP	P	08 15 28.5	+0.1
	comp=Z,10nm,0.8s,mb4.6						
TCF	**Toulx Ste Croi**	82.93	358	eP	P	08 15 28.5	+0.1
TCF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
SVIS	**Svilajnac**	83.10	344	eP	P	08 15 29.0	-0.3
AGO	**Saint Agoulin**	83.14	357	eP	P	08 15 31.9	+2.5
PLDF	**La Plantade**	83.21	357	eP	P	08 15 32.1	+2.3
HYB	**Hyderabad**	83.31	289	⇑eP	P	08 15 30.5	-0.4
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
HYB	**Hyderabad**	83.31	289	⇑eP	P	08 15 30.5	-0.4
	comp=Z,50nm,1.0s,mb5.5						
HYB	**Hyderabad**	83.31	289	⇑iP	P	08 15 30.5	-0.4
	comp=Z,50nm,1.0s,mb5.5						
FITZ	**Fitzroy Crossi**	83.50	231	eP	P	08 15 31.5	-0.3
	comp=Z,23nm,1.0s,mb5.2						
FITZ	**Fitzroy Crossi**	83.50	231	P	P	08 15 31.5	-0.3
	comp=Z,38nm,1.0s,mb5.4,baz=10,slow=5.0,SNR=15						
LPL	**La Plagne**	83.53	355	eP	P	08 15 32.8	+1.5
LPG	**La Plagne**	83.55	355	eP	P	08 15 33.1	+1.7
	comp=Z,37nm,1.2s,mb5.1						
LPG	**La Plagne**	83.55	355	eP	P	08 15 33.1	+1.7
LPG				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.1						
GRUS	**Gruza**	83.58	345	⇑iP	P	08 15 32.1	+0.5
BBLS	**Bajina Basta -**	83.81	346	⇓iP	P	08 15 33.6	+0.8
RJF	**Les Rejaudoux**	83.93	359	eP	P	08 15 33.6	+0.3
LBL	**Lubilhac**	83.96	357	eP	P	08 15 36.0	+2.5
BNI	**Bardonecchia**	83.99	355	eP	P	08 15 34.4	+0.7
BNI				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
BNI	**Bardonecchia**	83.99	355	eP	P	08 15 34.4	+0.8
	comp=Z,27nm,1.2s,mb5.2						
BOB	**Bobbio (Coli)**	84.09	353	P	P	08 15 35.3	+1.1
BOB				pmax	pmax		
	comp=Z,77nm,1.3s,mb5.7						
BOB	**Bobbio (Coli)**	84.09	353	P	P	08 15 35.3	+1.1
	comp=Z,77nm,1.3s,mb5.7						
ORIF	**Oris-en-Rattie**	84.17	355	eP	P	08 15 35.8	+1.2
VIVF	**Saint-Julien-l**	84.29	356	eP	P	08 15 36.0	+0.9
CAF	**Calviac**	84.29	358	eP	P	08 15 36.1	+0.9
	comp=Z,62nm,1.3s,mb5.3						
CAF	**Calviac**	84.29	358	eP	P	08 15 36.1	+0.9
CAF				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.3						
LFF	**La Frestale**	84.30	359	eP	P	08 15 35.8	+0.6
	comp=Z,151nm,1.5s,mb5.6						
LFF	**La Frestale**	84.30	359	eP	P	08 15 35.8	+0.6
LFF				pmax	pmax		
	comp=Z,75nm,1.5s,mb5.6						
MBDF	**Montbardon**	84.31	355	eP	P	08 15 36.6	+1.3
	comp=Z,13nm,0.7s,mb4.9						
MBDF	**Montbardon**	84.31	355	eP	P	08 15 36.6	+1.3
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
VMG	**Vicchio**	84.71	351	P	P	08 15 39.2	+1.9
BR131	**Keskin Array S**	84.72	334	eP	P	08 15 38.1	+0.7
	comp=Z,9.0nm,0.7s,mb5.0						
SFI	**Santa Sofia**	84.74	351	P	P	08 15 38.9	+1.5
SFI				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.3						
SFI	**Santa Sofia**	84.74	351	P	P	08 15 38.9	+1.5
	comp=Z,22nm,0.9s,mb5.3						
PGD	**Poggio Sodo**	84.78	351	P	P	08 15 39.9	+2.3
PGD				pmax	pmax		
	comp=Z,102nm,1.2s,mb5.8						
PGD	**Poggio Sodo**	84.78	351	P	P	08 15 39.9	+2.3
	comp=Z,102nm,1.2s,mb5.8						
TOUF	**Mont Tournerai**	85.00	354	eP	P	08 15 40.2	+1.5
AUTN	**L'Aution**	85.00	354	eP	P	08 15 39.7	+1.0
ARV	**Arcevia**	85.03	350	P	P	08 15 40.0	+1.1
	comp=Z,44nm,1.2s,mb5.5						
LASF	**Ste Croix**	85.09	357	eP	P	08 15 40.1	+0.9
MVIF	**Mont Vial**	85.12	354	eP	P	08 15 39.5	+0.2
SMRF	**Simiane la Rot**	85.12	356	eP	P	08 15 40.8	+1.5
	comp=Z,58nm,1.0s,mb5.3						
SBF	**Sospel**	85.13	354	eP	P	08 15 39.9	+0.5
	comp=Z,71nm,1.0s,mb5.5						
SBF	**Sospel**	85.13	354	eP	P	08 15 39.9	+0.5
SBF				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.5						
POO	**Poona**	85.20	294	eP	P	08 15 40.7	+0.4
POO				AMb	AMB	08 15 42.4	
	comp=Z,59nm,1.5s,mb5.5						
SNTG	**Esanatoglia**	85.27	350	P	P	08 15 41.4	+1.3
FRF	**La Foret Royal**	85.48	355	eP	P	08 15 41.7	+0.6
	comp=Z,44nm,1.1s,mb5.2						
FRF	**La Foret Royal**	85.48	355	eP	P	08 15 41.7	+0.6
FRF				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.2						
ASS	**Assisi**	85.49	350	P	P	08 15 42.3	+1.1
ASS				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.3						
ASS	**Assisi**	85.49	350	P	P	08 15 42.3	+1.1
	comp=Z,19nm,0.8s,mb5.3						
JTS	**JuntasAbangare**	85.51	79	P	P	08 15 43.7	+1.8
GRFL	**Gerfalco**	85.57	352	P	P	08 15 41.9	+0.3
	comp=Z,33nm,0.9s,mb5.6						
NRCA	**Norcia**	85.67	350	P	P	08 15 43.8	+1.8
LMR	**La Mourre**	85.72	355	eP	P	08 15 42.9	+0.6
	comp=Z,65nm,1.1s,mb5.5						
LMR	**La Mourre**	85.72	355	eP	P	08 15 42.9	+0.6
LMR				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.5						
MTLF	**Montolieu**	85.88	358	eP	P	08 15 43.9	+0.9
	comp=Z,48nm,1.4s,mb5.2						
MTLF	**Montolieu**	85.88	358	eP	P	08 15 43.9	+0.9
MTLF				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.2						
MNS	**Montasola**	86.16	350	P	P	08 15 44.7	+0.3
MNS				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.5						
MNS	**Montasola**	86.16	350	P	P	08 15 44.7	+0.3
	comp=Z,26nm,0.8s,mb5.5						
PGF	**Pioggiola**	86.33	353	eP	P	08 15 45.9	+0.6
	comp=Z,108nm,1.2s,mb5.7						
PGF	**Pioggiola**	86.33	353	eP	P	08 15 45.9	+0.6
PGF				pmax	pmax		
	comp=Z,54nm,1.2s,mb5.7						
ETSF	**Etsaut**	86.35	0	eP	P	08 15 46.5	+1.1
	comp=Z,12nm,0.9s,mb4.8						
ETSF	**Etsaut**	86.35	0	eP	P	08 15 46.5	+1.1
ETSF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.8						
TIP	**Timpagrande**	88.80	347	eP	P	08 15 56.8	-0.5
STKA	**Stephens Creek**	89.16	212	P	P	08 15 59.5	+0.3
	comp=Z,7.0nm,1.0s,mb4.9,baz=333,slow=6.8,SNR=4.5						
ESDC	**Sonseca Array**	89.52	3	P	P	08 15 59.4	-1.3
	comp=Z,1.2nm,0.4s,mb4.6,baz=342,slow=4.7,SNR=12						
SDV	**Santo Domingo**	95.28	69	eP	P	08 16 28.2	+0.4
	comp=Z,4.9nm,0.9s,mb4.9						
ROSC	**El Rosal**	96.27	74	LR	LR	09 02 44.4	
	comp=Z,59nm,20.6s,MS4.0,baz=237,slow=37						
DBIC	**Dimbokro**	122.30	5	PKP	PKPdf	08 21 58.7	+0.9
	comp=Z,2.7nm,0.4s,baz=221,slow=3.0,SNR=6.8						
BDFB	**Brasilia**	128.15	65	PKP	PKPdf	08 22 10.2	+1.2
	comp=Z,5.3nm,0.9s,baz=53,slow=8.5,SNR=6.4						
PLCA	**Paso Flores**	131.90	106	PKP	PKPdf	08 22 18.0	+2.5
	comp=Z,4.8nm,1.1s,baz=359,slow=5.2,SNR=3.4						
QSPA	**South Pole Qui**	140.89	180	eP	PKPdf	08 22 27.3	-3.5
TSUM	**Tsumeb**	145.08	329	ePKP	PKPdf	08 22 40.9	+1.1
MAW	**Mawson**	145.65	217	PKPbc	PKPbc	08 22 40.5	+0.4
	comp=Z,11nm,1.1s,baz=70,slow=6.6,SNR=11						
LBTB	**Lobatse**	147.15	313	ePKIKP	PKPdf	08 22 45.1	+2.0
LBTB				e		08 22 47.7	
BOSA	**Boshof**	150.34	310	PKPbc	PKPdf	08 22 55.9	+7.8
	comp=Z,27nm,0.8s,baz=47,slow=2.1,SNR=24						
BOSA	**Boshof**	150.34	310	ePKPbc	PKPdf	08 22 55.4	+7.3
SYO	**Syowa Base**	153.92	212	⇑PKiKP		08 23 06.3	
SYO	**Syowa Base**	153.92	212	⇓P	Px	08 23 33.6	
SNAA	**Sanae**	159.37	178	e	Px	08 23 51.9	
SNAA	**Sanae**	159.37	178	e	Px	08 23 57.7	
SNAA	**Sanae**	159.37	178	⇓iPKIKP	PKPdf	08 22 59.8	+0.8
SNAA				e		08 23 16.0	
SNAA				e		08 23 38.8	
SNAA	**Sanae**	159.37	178	⇓iP	PKPdf	08 22 59.8	+0.8
SNAA				e		08 23 16.0	
SNAA				e		08 23 21.4	
SNAA				e		08 23 38.8	
SNAA				e		08 23 51.9	
SNAA				e		08 23 57.7	
VNA3	**Neumayer Olymp**	159.39	172	e	Px	08 23 52.8	
VNA3	**Neumayer Olymp**	159.39	172	e	Px	08 23 58.2	
VNA3	**Neumayer Olymp**	159.39	172	⇓iP	PKPdf	08 22 59.7	+0.7
VNA3				e		08 23 14.6	
VNA3				e		08 23 20.3	
VNA3				e		08 23 39.4	
VNA3				e		08 23 52.8	
VNA3				e		08 23 58.2	
VNA2	**Neumayer--Watz**	159.89	173	e	Px	08 23 55.9	
VNA2	**Neumayer--Watz**	159.89	173	e	Px	08 24 00.6	
VNA2	**Neumayer--Watz**	159.89	173	⇓iP	PKPdf	08 23 00.8	+1.2
VNA2				e		08 23 16.8	
VNA2				e		08 23 23.1	
VNA2				e		08 23 41.1	
VNA2				e		08 23 55.9	
VNA2				e		08 24 00.6	
VNA1	**Neumayer--Stat**	160.09	172	e	Px	08 23 56.8	
VNA1	**Neumayer--Stat**	160.09	172	e	Px	08 24 03.1	
VNA1	**Neumayer--Stat**	160.09	172	⇓iP	PKPdf	08 23 02.3	+2.5
VNA1				e		08 23 17.2	
VNA1				e		08 23 22.7	
VNA1				e		08 23 42.8	
VNA1				e		08 23 56.8	
VNA1				e		08 24 03.1	

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*NEIC **14** 08:03:23.2, 18.14N×69.47W, h93^{km}, MD3.6(RSPR), After RSPR.*

RSPR 14 08:03:23.2, 18.14N×69.47W, h93^{km}±2^{km}, MD3.6/9, **MD3.6**/9, **6C-3D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STDO	**Santo Domingo**	0.54	306	⇓eP	P	08 03 37.8	-0.9
STDO				eS	S	08 03 49.8	-0.4
CRPR	**Cabo Rojo, PR**	2.25	93	⇑eP	P	08 03 58.5	-0.9
CRPR				eS	S	08 04 25.5	-0.8
AGPR	**Aguadilla, PR**	2.26	81	⇑eP	P	08 03 58.4	-1.2
AGPR				eS	S	08 04 26.6	-0.1
LSP	**Las Mesas**	2.27	89	⇑eP	P	08 03 58.6	-1.1
MGP	**Maguayo**	2.27	93	⇑eP	P	08 03 59.2	-0.5
MGP				eS	S	08 04 26.4	-0.3
LRS	**Lares**	2.50	86	⇓eP	P	08 04 01.0	-1.9
LRS				eS	S	08 04 31.3	-1.2
AOPR	**Arecibo Observ**	2.59	85	⇓eP	P	08 04 02.9	-1.3
AOPR				eS	S	08 04 34.2	-0.6
CPD	**Cerro la Pandu**	3.38	91	⇑eP	P	08 04 14.4	-0.7
CPD				eS	S	08 04 52.7	-1.6
MTP	**Monte Pirata**	3.72	90	⇑eP	P	08 04 18.7	-1.0
MTP				eS	S	08 05 01.6	-1.1

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*IDC **14** 08:06:04.7±6.3, 7.80N×94.17E, h61^{km}±57^{km}, mb4.1/7, mb1 4.3/8, mb1mx4.0/18, mbtmp4.4/8, ML4.1/1, Error ellipse: s-maj=44.7km s-min=18.9km az=56.0*

*NEIC **14** 08:06:05.2±1.0, 7.78N×94.23E, h66^{km}±10^{km}, mb4.5/2, Error ellipse: s-maj=12.4km s-min=8.1km az=220.0*

ISC 14 08:06:03.1±1.8**, 7.89N**±0.09×**94.26E**±0.10**, h63**^{km}±17^{km}, **n19,** σ**0**^{s}**65**/19**, mb4.5**/15**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	6.85	112	ePn	P	08 07 42.8	-0.4
CMAR	**Chiang Mai Arr**	11.46	23	P	P	08 08 47.0	+0.9
	0.4nm,0.3s,baz=212,slow=14,SNR=15						
PALK	**Pallekele**	13.45	268	P	P	08 09 13.1	+0.4
PKI	**Pulchoki**	21.30	338	eP	P	08 10 46.3	-0.1
	13nm,0.5s,mb4.5						
GUN	**Gumba**	21.44	339	eP	P	08 10 46.2	-1.6
	31nm,0.6s,mb4.8						
DMN	**Daman**	21.45	337	eP	P	08 10 47.8	-0.1
	31nm,0.7s,mb4.8						
KKN	**Kakani**	21.54	338	eP	P	08 10 47.9	-1.0
	12nm,0.5s,mb4.6						
LSA	**Lhasa**	21.90	353	eP	P	08 10 56.2	+3.9
	9.7nm,0.7s,mb4.3						
GKN	**Gorkha**	21.98	337	eP	P	08 10 52.6	-0.6
	13nm,0.4s,mb4.8						
KOLN	**Koldanda**	22.20	334	eP	P	08 10 56.1	+0.7
	20nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	40.33	130	P	P	08 13 36.3	+0.1
	4.2nm,0.7s,mb4.2,baz=344,slow=8.9,SNR=5.5						
WRA	**Warramunga Arr**	48.17	126	P	P	08 14 39.4	+0.1
	2.7nm,0.5s,mb4.5,baz=305,slow=8.6,SNR=70						
WRAB	**Tennant Creek**	48.18	126	eP	P	08 14 39.2	-0.1
	5.0nm,0.5s,mb4.8						
FINES	**FINESS Array B**	72.75	332	P	P	08 17 26.4	+0.2
	3.1nm,0.6s,mb4.4,baz=92,slow=5.0,SNR=13						
KAF	**Kangasniemi**	72.83	333	ep	P	08 17 26.4	-0.2
ARCES	**ARCESS Array B**	75.30	340	P	P	08 17 41.7	+1.0
	1.5nm,0.4s,mb4.2,baz=135,slow=5.1,SNR=14						
BOSA	**Boshof**	75.69	238	P	P	08 17 43.6	-0.2
	7.1nm,1.0s,mb4.5,baz=82,slow=7.6,SNR=7.3						
GERES	**GERESS Array B**	77.89	318	P	P	08 17 55.9	+0.1
	1.2nm,0.5s,mb4.1,baz=76,slow=5.5,SNR=4.1						
NOA	**NORSAR Array B**	79.78	331	P	P	08 18 06.0	+0.3
	0.7nm,0.7s,mb3.7,baz=99,slow=8.3,SNR=3.1						

NEIC 14 08:07:14.5, 51.06N×179.63E, h5^{km}, ML3.6(AEIC)**, After AEIC., Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	2.08	69	P	Pn	08 07 49.8	-0.8
KIKV	**Kanaga Island**	2.16	66	P	Pn	08 07 51.1	-0.5
KIKV				S	Sn	08 08 18.9	-0.2
KIWB	**Kanaga Island**	2.16	67	P	Pn	08 07 50.8	-0.9
KINC	**Kanaga Island**	2.21	65	P	Pn	08 07 51.7	-0.6
ADAG	**Mount Adagdak**	2.53	67	P	Pn	08 07 56.7	-0.2
GSSP	**Great Sitkin S**	2.81	67	P	Pn	08 08 00.4	-0.5
GSTD	**Great Sitkin T**	2.82	68	P	Pn	08 08 00.7	-0.3
GSMY	**Great Sitkin M**	2.87	68	P	Pn	08 07 60.0	-1.7
GSTR	**Great Sitkin T**	2.88	67	P	Pn	08 08 00.6	-1.3
GSIG	**Igitkin Island**	2.93	70	P	Pn	08 08 02.3	-0.2
SMY	**Shemya**	3.81	298	P	Pn	08 08 13.5	-1.6
ATKA	**Atka Island**	4.01	71	P	Pn	08 08 15.9	-2.1
FX1	**Attu Island--F**	4.39	297	P	Pn	08 08 23.4	-0.1

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*ATH **14** 08:13:57.8, 36.46N×26.88E, h12^{km}±7^{km}, MD3.0/5*

*ISK **14** 08:13:57.5, 36.52N×26.86E, h32^{km}, MD3.1*

*NEIC **14** 08:13:57.8, 36.47N×26.91E, h5^{km}, MD3.0(ATH), After ATH.*

*CSEM **14** 08:13:58.2±0.3, 36.53N×27.06E, h30^{km}, MD3.0, Error ellipse: s-maj=9.8km s-min=6.9km az=96.0*

ISC 14 08:13:57.6±0.8**, 36.47N**±0.03×**26.97E**±0.07**, h7**^{km}±7^{km}, **n15,** σ**1**^{s}**24**/23**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NISR	**Nisiros**	0.19	42	ePG	Pg	08 14 03.0	+1.4
NISR	**Nisiros**	0.19	42	ePg	Pg	08 14 02.0	+0.4
BODT	**Bodrum**	0.65	25	i PG	Pg	08 14 11.2	+0.5
BODT				i SG	Sg	08 14 20.0	+0.6
KARP	**Karpathos**	0.93	170	ePG	Pg	08 14 15.3	-1.0
KARP				eSB	Sb	08 14 28.5	+0.4
KARP	**Karpathos**	0.93	170	ePg	Pg	08 14 15.3	-1.0
KARP				eSg	Sg	08 14 30.0	+1.3
ARG	**Arkhangelos**	0.97	105	ePB	Pb	08 14 17.5	+1.2
MLSB	**Milas**	1.05	38	ePG	Pg	08 14 16.7	-1.9
SMG	**Samos**	1.24	355	ePb	Pb	08 14 21.5	+0.5
SMG				eSn	Sn	08 14 39.5	+1.0
SMG	**Samos**	1.24	355	ePB	Pb	08 14 21.5	+0.5
SMG				eSB	Sb	08 14 38.5	+1.5
APE	**Apeiranthos**	1.30	298	ePN	Pn	08 14 18.2	-4.0
APE				eSN	Sn	08 14 33.7	-6.3
APE	**Apeiranthos**	1.30	298	ePG	Pn	08 14 21.0	-1.2
APE				eSB	Sb	08 14 39.0	+0.3
APE	**Apeiranthos**	1.30	298	ePn	Pn	08 14 21.0	-1.2
APE				eSn	Sn	08 14 40.0	0.0
FETY	**Fethiye**	1.71	84	ePN	Pn	08 14 26.5	-1.6
BLCB	**Balcova**	1.91	2	PN	Pn	08 14 27.9	-3.1
IZM	**Izmir**	1.94	7	ePN	Pn	08 14 29.3	-2.0

CASC 14 08:19:32.4±2.2**, 5.90N×82.82W, h35**^{km}±201^{km}**, MD4.2, 4C-5D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	2.75	353	⇓eP	P	08 20 13.1	-2.1
ACR				eS	S	08 20 46.3	-1.3
SVTC	**San Vito de Co**	2.87	357	⇓eP	P	08 20 16.1	-0.8
SVTC				eS	S	08 20 52.0	+1.5
BRU2	**Volcan**	2.88	2	eS	S	08 20 50.6	-0.1
BUS	**Buena Vista**	3.75	346	⇑eP	P	08 20 28.8	-0.5
BUS				eS	S	08 21 13.9	+1.0
URSC	**Urasca**	4.02	346	⇑eP	P	08 20 32.5	-0.6
LAJ	**Bijagual**	4.14	342	eP	P	08 20 34.0	-0.9
SJS	**Escuela Geolog**	4.19	343	⇓eP	P	08 20 35.0	-0.7
SJS				eS	S	08 21 21.4	-2.8
PRS1	**Puriscal**	4.32	340	eP	P	08 20 35.8	-1.6
CGA2	**Cerro Gallo 2**	4.40	338	⇓eP	P	08 20 38.0	-0.6
CGA2				eS	S	08 21 28.8	-0.6
JCR	**Jicaral**	4.53	330	⇑eP	P	08 20 39.6	-0.9
TRTC	**Tortuguero**	4.73	349	⇓eP	P	08 20 43.1	-0.1
VCR	**Vista de Mar**	5.04	327	⇑eP	P	08 20 46.6	-1.0
VCR				eS	S	08 21 42.9	-2.6

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*NEIC **14** 08:29:58.6±1.2, 31.83S×67.04W, h117^{km}±13^{km}, mb4.5/1, Error ellipse: s-maj=18.4km s-min=10.9km az=60.0*

*GUC **14** 08:29:59.4±0.7, 31.83S×67.34W, h150^{km}, ML4.6*

ISC 14 08:29:59.9±1.4**, 31.82S**±0.05×**67.4W**±0.2**, h157**^{km}±18^{km}, **n19,** σ**0**^{s}**71**/25**, 5C-4D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDZ	**Mendoza**	1.62	229	⇑iP	P	08 30 31.2	-0.4
MDZ				i		08 30 51.2	
MDZ				eS	S	08 31 01.3	+5.3
JACH	**Jahuel**	2.83	252	eP	P	08 30 46.8	+0.7
FCH	**Farellones**	2.86	238	eP	P	08 30 47.0	+0.6
CLCH	**Cerro Calan**	3.07	238	⇑iP	P	08 30 48.8	-0.4
CLCH				i S	S	08 31 26.7	-0.2
CLCH				AMP		08 31 31.2	
	comp=E,428nm,0.6s						
DSCH	**Colegio Aleman**	3.10	239	eP	P	08 30 49.3	-0.2
DSCH				eS	S	08 31 27.5	0.0
DSCH				AMP		08 31 30.7	
	comp=N,437nm,0.4s						
CMCH	**Combarbala**	3.14	281	⇓iP	P	08 30 50.1	+0.1
CMCH				i S	S	08 31 28.4	+0.1
CMCH				AMP		08 31 31.0	
	comp=E,2μm,0.8s						
PCH	**Pirque**	3.17	235	eP	P	08 30 50.3	-0.1
TLL	**Tololo Astrono**	3.35	299	⇓iP	P	08 30 53.6	+0.9
TLL				i S	S	08 31 34.0	+0.8
TLL				AMP		08 31 36.9	
	comp=N,859nm,0.5s						
CHCH	**Chadas Angostu**	3.45	231	⇓iP	P	08 30 53.8	-0.2
TACH	**Talagante**	3.49	237	⇓iP	P	08 30 53.8	-0.7
CACH	**El Canelo**	3.53	229	eP	P	08 30 55.3	+0.3
CICH	**Cipreses**	3.55	225	eP	P	08 30 55.1	-0.2
LCO	**Las Campanas**	3.99	314	eP	P	08 31 01.5	+0.5
LCO				i S	S	08 31 47.4	-0.7
VACH	**Vallenar**	4.34	317	i S	S	08 31 55.4	-0.9
TRQA	**Tornquist**	7.65	146	ePn	P	08 31 44.5	-5.1
	comp=N,13nm,0.9s						
VNA3	**Neumayer Olymp**	49.95	159	⇑i	P	08 38 38.8	-0.3
VNA1	**Neumayer--Stat**	50.19	158	⇑i	P	08 38 45.3	+4.3
VNA2	**Neumayer--Watz**	50.55	158	⇑i	P	08 38 45.8	+2.1
SNAA	**Sanae**	52.16	159		P	08 38 54.3	-1.5

IDC 14 08:47:36.7±12.0**, 2.97N×94.02E, mb3.7**/2**, mb1 3.9**/3**, mb1mx3.6**/17**, mbtmp3.7**/3**, ML4.5**/1**, Error ellipse: s-maj=230.4km s-min=114.1km az=154.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	16.13	17	Pn	P	08 51 25.2	-1.3
	0.7nm,0.3s,baz=209,slow=14,SNR=5.8						
MKAR	**Makanchi Array**	44.83	349	P	P	08 55 52.7	-1.6
	0.8nm,0.6s,baz=164,slow=8.8,SNR=6.9						
SONM	**Songino Array**	45.95	12	P	P	08 56 01.0	-2.2
	0.5nm,0.7s,baz=196,slow=9.0,SNR=4.3						

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*IDC **14** 08:53:02.7±3.3, 51.26N×179.50E, h24^{km}±20^{km}, mb4.3/20, mb1 4.5/20, mb1mx4.5/26, mbtmp4.5/20, MS2.8/1, Ms1 2.8/1, ms1mx2.8/37, Error ellipse: s-maj=19.2km s-min=11.8km az=157.0*

*BJI **14** 08:53:04.7, 51.51N×179.09E, h39^{km}, mB5.0, mb4.9, Ms4.9, Msz4.7*

*MOS **14** 08:53:04.1±0.9, 51.19N×179.58E, h51^{km}, mb5.0/42, Error ellipse: s-maj=8.6km s-min=6.9km az=94.5*

*NEIC **14** 08:53:05.7±0.2, 51.15N×179.54E, mb4.7/60, ML4.9(AEIC), Error ellipse: s-maj=6.0km s-min=2.7km az=174.0*

ISC 14 08:53:05.1±0.6**, 51.19N**±0.06×**179.56E**±0.03**, h59**^{km}±5^{km}, **h52**^{km}±2.0^{km}**:pP-P, n240,** σ**0**^{s}**89**/244**, mb4.7**/96**, MS4.7**/7**, 13C-3D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	2.08	73	P	P	08 53 38.2	-0.2
KIKV	**Kanaga Island**	2.15	70	P	P	08 53 39.6	+0.2
KIWB	**Kanaga Island**	2.16	71	P	P	08 53 39.6	+0.1
KINC	**Kanaga Island**	2.20	69	P	P	08 53 40.1	0.0
ADAG	**Mount Adagdak**	2.52	70	P	P	08 53 44.6	0.0
ADAG				S	S	08 54 16.5	+2.3
GSTD	**Great Sitkin T**	2.81	70	P	P	08 53 48.2	-0.6
GSTD				S	S	08 54 26.4	+4.7
GSMY	**Great Sitkin M**	2.86	71	P	P	08 53 48.9	-0.6
GSTR	**Great Sitkin T**	2.88	70	P	P	08 53 49.3	-0.3
GSIG	**Igitkin Island**	2.93	72	P	P	08 53 49.8	-0.6
SMY	**Shemya**	3.71	297	P	P	08 54 02.5	+1.0
SMY				S	S	08 54 50.5	+6.2
ATKA	**Atka Island**	4.01	73	P	P	08 54 04.6	-1.1
ATKA				S	S	08 54 54.9	+3.1
FX1	**Attu Island--F**	4.30	296	P	P	08 54 08.6	-1.1

FX1						08 55 08.3	
FX1				pmax	pmax		
	comp=Z,36nm,0.3s						
FX1				smax			
	comp=N,123nm,0.3s						
FX1				MLR	MLR		
	comp=Z,104nm,18.8s						
FX1	Attu Island--F	4.30	296	Pn	P	08 54 08.6	-1.0
	comp=Z,36nm,0.3s,baz=33,slow=16,SNR=74						
FX1				Sn	S	08 55 08.3	+9.3
	comp=Z,123nm,0.3s,baz=93,slow=22,SNR=9.8						
FX1				LR	LR	08 55 49.2	
	comp=Z,104nm,18.8s,baz=316,slow=39						
FX1	Attu Island--F	4.30	296	P	P	08 54 09.3	-0.4
NIKO	Nikolski	7.36	71	P	P	08 54 52.0	-0.3
SPIA	Saint Paul Isl	8.46	41	P	P	08 55 08.2	+0.7
MSW	Makushin Switc	8.76	67	P	P	08 55 11.4	-0.1
AKGG	Akutan Green G	9.28	65	P	P	08 55 19.0	+0.4
WPOG	Pogromni	10.08	64	P	P	08 55 30.0	+0.5
PET	Petropavlovsk	12.98	286	*e*P	P	08 56 11.8	+3.3
PET				*e*S	S	08 58 39.4	+7.5
PET				smax			
	comp=E,21nm,0.7s						
PET				smax			
	comp=N,600nm,28.0s						
PET				MLR	MLR		
	comp=Z,500nm,16.0s						
PET				MLR	MLR		
	comp=Z,400nm,16.0s						
TNA	Tin City	15.78	19	P	P	08 56 44.4	-0.2
	comp=Z,15nm,0.9s						
KDAK	Kodiak Island	17.39	57	*e*P	P	08 57 00.5	-4.4
	comp=Z,21nm,0.6s						
RSO	Redoubt South	17.98	48	*e*P	P	08 57 13.0	+0.9
BILL	Bilibino	18.11	344	⇑*i*P	P	08 57 14.8	+1.1
BILL				pmax	pmax		
	comp=Z,32nm,1.2s						
BILL	Bilibino	18.11	344	*e*P	P	08 57 14.5	+0.8
	comp=Z,28nm,0.9s						
SPU	Mount Spurr	18.54	46	*e*P	P	08 57 18.8	-0.1
SEY	Seymchan	18.71	319	*e*P	P	08 57 20.3	-0.6
SEY				pmax	pmax		
	comp=E,4.0nm,0.7s						
SEY				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
SLKM	Skilak Lake	19.19	49	*e*P	P	08 57 25.0	-1.3
IMA	Indian Mountai	20.15	32	*e*P	P	08 57 37.0	+0.4
IMA				pmax	pmax		
	comp=Z,99nm,0.9s						
IMA	Indian Mountai	20.15	32	*e*P	P	08 57 37.0	+0.4
	comp=Z,99nm,0.9s						
SML	Sawmill	20.43	46	*e*P	P	08 57 37.3	-2.3
MCK	McKinley	20.82	41	*e*P	P	08 57 44.1	+0.6
MCK				pmax	pmax		
	comp=Z,13nm,1.0s						
MCK	McKinley	20.82	41	*e*P	P	08 57 44.1	+0.6
	comp=Z,13nm,1.0s						
EYAK	Cordova Ski Ar	21.36	51	*e*P	P	08 57 46.5	-2.5
DIV	Divide	21.46	49	*e*P	P	08 57 48.5	-1.5
	comp=Z,31nm,0.5s,mb4.9						
ILAR	Eielson Array	22.04	39	P	P	08 57 55.5	-0.1
	comp=Z,3.3nm,0.8s,mb3.8,baz=240,slow=8.6,SNR=31						
ILAR				PcP	PcP	09 01 51.4	-1.6
	comp=Z,0.6nm,0.5s,baz=239,slow=2.0,SNR=6.5						
ILAR				ScP		09 05 27.3	
	comp=Z,0.4nm,0.5s,baz=285,slow=3.7,SNR=5.3						
YSS	Yuzh-Sakhalins	24.31	274	*e*P	P	08 58 17.2	-0.6
YSS				*e*		08 58 32.8	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7						
YSS	Yuzh-Sakhalins	24.31	274	*e*P	P	08 58 16.6	-1.2
	comp=Z,45nm,1.2s,mb4.8						
ASAJ	Asahikawa	25.67	269	P	P	08 58 31.5	+0.7
ASAJ				pmax	pmax		
	comp=Z,44nm,0.9s						
ASAJ	Asahikawa	25.67	269	P	P	08 58 31.4	+0.6
	comp=Z,44nm,0.9s,mb5.0,baz=62,slow=6.2,SNR=28						
INK	Inuvik	28.21	35	P	P	08 58 53.0	-0.8
INK						09 02 05.8	
INK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
INK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
INK	Inuvik	28.21	35	P	P	08 58 53.0	-0.8
	comp=Z,6.5nm,0.8s,mb4.3,baz=251,slow=11,SNR=12						
INK				PcP	PcP	09 02 05.8	-0.6
	comp=Z,2.8nm,0.6s,baz=332,slow=3.0,SNR=3.8						
INK	Inuvik	28.21	35	*e*P	P	08 58 52.5	-1.2
	comp=Z,6.2nm,0.8s,mb4.3						
YAK	Yakutsk	28.77	311	*e*P	P	08 58 57.5	-1.4
YAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
KLR	Kul'dur	30.24	285	*e*P	P	08 59 08.8	-3.3
KLR				pmax	pmax		
	comp=N,20nm,1.0s						
KLR				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.0						
MJAR	Matsushiro Arr	32.74	260	P	P	08 59 33.1	-1.0
	comp=Z,0.5nm,0.3s,mb3.9,baz=143,slow=12,SNR=4.2						
MJAR				PcP	PcP	09 02 18.5	0.0
	comp=Z,2.4nm,0.8s,baz=70,slow=2.5,SNR=4.9						
MDJ	Mudanjiang	33.59	279	P	P	08 59 39.3	-2.0
MDJ				AP	pP	08 59 52.4	-3.9
MDJ				XP	sP	08 59 58.5	-5.2
MDJ				PP	PP	09 00 55.8	+0.6
MDJ				PCP	PcP	09 02 18.8	-2.0
MDJ				S	S	09 04 57.4	-1.0
MDJ				XS		09 05 19.8	
MDJ				SCP		09 05 59.1	
MDJ				PCS		09 06 05.3	
MDJ				AMB	AMB		
	comp=Z,40nm,5.5s						
MDJ				LR	LR		
	comp=N,660nm,21.1s,MS4.4						
MDJ				LR	LR		
	comp=E,440nm,21.8s,MS4.4						
MDJ				LR	LR		
	comp=Z,1µm,19.8s,MS4.6						
YKA	Yellowknife Ar	36.11	46	P	P	09 00 01.5	-1.2
	comp=Z,2.9nm,0.5s,mb4.5,baz=283,slow=8.4,SNR=25						
YKA				PcP	PcP	09 02 27.6	-0.3
	comp=Z,1.2nm,0.5s,baz=294,slow=3.2,SNR=7.5						
YKA				ScP		09 06 12.2	
	comp=Z,0.8nm,0.6s,baz=290,slow=3.3,SNR=5.2						
YKA	Yellowknife Ar	36.11	46	P	P	09 00 01.5	-1.2
YKA				PcP	PcP	09 02 27.6	-0.3
YKA				ScP		09 06 12.2	
CN2	Changchun	36.57	280	*e*P	P	09 00 05.8	-1.0
CN2				*e*AP	pP	09 00 19.0	-2.9
CN2				PP	PP	09 01 30.8	-1.6
CN2				S	S	09 05 42.0	-2.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
CN2				AMB	AMB		
	comp=Z,100nm,5.0s						
CN2				LR	LR		
	comp=N,3µm,19.0s,MS5.1						
CN2				LR	LR		
	comp=E,2µm,19.0s,MS5.1						
CN2				LR	LR		
	comp=Z,500nm,21.0s,MS4.3						
CMW	Cultus Mountai	36.89	71	P	P	09 00 11.0	+1.6
BOD	Bodaibo	37.27	306	*e*P	P	09 00 11.7	-0.7
BOD				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.2						
HIA	Hailar	37.40	291	*e*P	P	09 00 12.5	-1.1
HIA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HIA	Hailar	37.40	291	*e*P	P	09 00 12.5	-1.1
	comp=Z,5.1nm,0.5s,mb4.6						
ETW	Entiat	38.33	71	P	P	09 00 22.7	+1.2
WTV	Waterville	38.51	71	P	P	09 00 24.1	+1.2
EBG	Ellensburg	38.53	72	P	P	09 00 24.4	+1.4
RSW	Rattlesnake Hi	39.37	72	P	P	09 00 31.3	+1.3
CIT	Chita	39.73	298	*e*P	P	09 00 33.2	+0.3
CIT				pmax	pmax		
	comp=Z,41nm,1.3s,mb5.0						
EDM	Edmonton	39.80	60	*e*P	P	09 00 32.8	-0.8
NEW	Newport	39.91	69	*e*P	P	09 00 34.3	-0.2
NEW				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NEW	Newport	39.91	69	*e*P	P	09 00 34.3	-0.2
	comp=Z,6.4nm,0.8s,mb4.4						
RES	Resolute Bay	40.34	24	*e*P	P	09 00 38.1	+0.3
MOD	Modoc	41.32	79	*e*P	P	09 00 47.2	+1.0
	comp=Z,9.0nm,0.8s,mb4.5						
BMO	Blue Mountains	41.53	73	*e*P	P	09 00 48.0	+0.1
	comp=Z,6.3nm,0.9s,mb4.2						
WVOR	Wild Horse Val	42.05	77	*e*P	P	09 00 53.1	+1.0
WVOR				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.6						
WVOR	Wild Horse Val	42.05	77	*e*P	P	09 00 53.1	+1.0
	comp=Z,16nm,1.0s,mb4.6						
BEKR	Beckwourth	42.46	81	*e*P	P	09 00 56.4	+0.9
MSO	Missoula	42.50	69	*e*P	P	09 00 55.6	-0.1
	comp=Z,10nm,1.2s,mb4.3						
CHMT	Chamberlain Mo	42.86	68	*e*P	P	09 00 57.8	-0.8
HRY	Holter Researc	43.79	68	*e*P	P	09 01 05.9	-0.4
HLID	Hailey	43.98	73	*e*P	P	09 01 08.4	+0.5
	comp=Z,16nm,1.1s,mb4.7						
HLID				*e*pP	pP	09 01 20.4	-2.8
BMN	Battle Mountai	44.07	78	*e*P	P	09 01 08.7	+0.1
BMN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
BMN	Battle Mountai	44.07	78	*e*P	P	09 01 08.7	+0.1
	comp=Z,9.4nm,0.9s,mb4.5						
MCMT	McKenzie Canyo	44.21	71	*e*P	P	09 01 09.7	0.0
BOZ	Bozeman (W)	44.48	69	*e*P	P	09 01 11.7	-0.1
BOZ				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
BOZ	Bozeman (W)	44.48	69	*e*P	P	09 01 11.7	-0.2
	comp=Z,18nm,0.9s,mb4.8						
NVAR	Mina Array Bea	44.60	81	P	P	09 01 14.1	+1.2
	comp=Z,3.3nm,0.8s,mb4.2,baz=298,slow=7.0,SNR=7.8						
NVAR				PcP	PcP	09 02 56.1	+0.7
	comp=Z,2.1nm,0.8s,baz=295,slow=2.0,SNR=3.7						
NVAR	Mina Array Bea	44.60	81	P	P	09 01 14.1	+1.2
NVAR				PcP	PcP	09 02 56.1	+0.7
MNV	Mina	44.69	81	*e*P	P	09 01 13.4	-0.2
MNV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
MNV	Mina	44.69	81	*e*P	P	09 01 13.4	-0.2
	comp=Z,8.5nm,1.0s,mb4.5						
QLMT	Earthquake Lak	45.05	70	*e*P	P	09 01 16.5	+0.1
MTUM	Tungsten Hills	45.10	83	*e*P	P	09 01 17.2	+0.3
ELK	Elko	45.10	77	*e*P	P	09 01 17.6	+0.7
ELK				pmax	pmax		
	comp=Z,11nm,1.0s						
ELK	Elko	45.10	77	*e*P	P	09 01 17.6	+0.7
	comp=Z,11nm,1.0s,mb4.7						
TLY	Talaya	45.29	302*c*	*i*P	P	09 01 18.4	+0.2
TLY				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.7						
YMR	Madison River	45.42	70	*e*P	P	09 01 19.4	+0.1
ULN	Ulaanbaatar	45.42	296*c*	*i*P	P	09 01 19.8	+0.5
YNR	Norris Junctio	45.56	70	*e*P	P	09 01 21.7	+1.2
YNR				*e*pP	pP	09 01 35.8	0.0
YFT	Old Faithful	45.62	70	*e*P	P	09 01 21.9	+1.0
SONM	Songino Array	45.81	296	P	P	09 01 23.0	+0.7
	comp=Z,4.1nm,0.8s,mb4.4,baz=62,slow=8.4,SNR=38						
LKWY	Lake	45.81	70	*e*P	P	09 01 23.3	+0.9
LKWY				*e**PP	pP	09 01 35.9	-1.9
LKWY				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
LKWY	Lake	45.81	70	*e*P	P	09 01 23.3	+0.9
	comp=Z,17nm,0.9s,mb5.0						
LKWY				*e*pP	pP	09 01 35.9	-1.9
IMW	Indian Meadow	45.87	71	*e*P	P	09 01 23.5	+0.6
	comp=Z,14nm,1.0s,mb4.9						
IMW				*e*pP	pP	09 01 37.1	-1.1
HVU	Hansel Valley	45.99	74	*e*P	P	09 01 24.1	+0.2
MOOW	Moose Ponds	46.07	71	*e*P	P	09 01 24.2	-0.3
	comp=Z,6.2nm,1.1s,mb4.5						
TPAW	Teton Pass	46.10	71	*e*P	P	09 01 24.7	0.0
	comp=Z,14nm,1.2s,mb4.8						
ZAK	Zakamensk	46.17	300	⇓*i*P	P	09 01 25.3	+0.1
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
WUWY	Wally Ulrich	46.19	71	*e*P	P	09 01 25.3	-0.2
SNOW	Snow King Moun	46.23	71	*e*P	P	09 01 26.0	+0.3
	comp=Z,9.6nm,1.1s,mb4.6						
LOHW	Long Hollow	46.23	71	*e*P	P	09 01 26.3	+0.5
	comp=Z,5.3nm,0.9s,mb4.5						
TRCR	Troy Canyon	46.33	80	*e*P	P	09 01 26.4	-0.2
AHID	Auburn Hatcher	46.43	72	*e*P	P	09 01 27.4	+0.1
	comp=Z,17nm,1.1s,mb4.9						
SPUT	South Promonto	46.47	74	P	P	09 01 28.1	+0.4
MOY	Mondy	46.71	303	*e*P	P	09 01 30.3	+0.9
MOY				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
HHC	Hu-ho-hao-te	46.75	285	*e*P	P	09 01 30.0	+0.1
HHC				AP	pP	09 01 41.0	-4.3
HHC				XP	sP	09 01 47.0	-5.2
HHC				PCP	PcP	09 03 04.8	+1.9
HHC				PP	PP	09 03 20.6	+0.5
HHC				SCP		09 06 55.9	
HHC				S	S	09 08 14.8	+0.3
HHC				XS		09 08 33.8	
HHC				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
HHC				AMB	AMB		
	comp=Z,160nm,7.1s						
HHC				LR	LR		
	comp=N,370nm,19.0s,MS4.8						
HHC				LR	LR		
	comp=E,850nm,19.0s,MS4.8						
HHC				LR	LR		
	comp=Z,940nm,17.8s,MS4.8						
HWUT	Hardware Ranch	46.83	74	*e*P	P	09 01 30.9	+0.5
	comp=Z,7.7nm,1.1s,mb4.5						
FCC	Fort Churchill	46.83	45	*e*P	P	09 01 29.1	-1.2
FCC				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
FCC	Fort Churchill	46.83	45	*e*P	P	09 01 29.1	-1.2
	comp=Z,2.9nm,0.6s,mb4.4						
SSE	Sheshan	46.96	268	*e*P	P	09 01 31.9	+0.2
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,40nm,3.8s						
SSE	Sheshan	46.96	268	*e*P	P	09 01 31.9	+0.2
	comp=Z,42nm,0.7s,mb5.5						
LAO	LASA Array	47.04	65	*e*P	P	09 01 31.9	-0.1
	comp=Z,5.9nm,0.8s,mb4.6						
TCUT	Toone Canyon	47.21	74	*e*P	P	09 01 31.1	-2.5
CTU	Camp Tracy	47.26	75	*e*P	P	09 01 34.1	+0.2
BW06	Boulder Array	47.35	71	*e*P	P	09 01 34.4	-0.2
	comp=Z,24nm,0.9s,mb5.1						
PDAR	Pinedale Array	47.35	71	P	P	09 01 35.0	+0.5
	comp=Z,19nm,0.8s,mb5.1,baz=307,slow=4.3,SNR=135						
JLU	Jordanelle	47.50	75	*e*P	P	09 01 35.3	-0.5
NLU	North Lily Min	47.51	76	*e*P	P	09 01 35.8	-0.1
DAU	Daniels Canyon	47.73	75	*e*P	P	09 01 38.5	+0.9
MPU	Maple Canyon	47.74	75	*e*P	P	09 01 38.6	+0.9
NJ2	Nanjing	47.79	271	*e*P	P	09 01 39.3	+1.1
NJ2				AP	pP	09 01 54.8	+1.2
NJ2				PP	PP	09 03 31.0	+1.3
NJ2				S	S	09 08 31.0	+1.7
NJ2				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,90nm,6.4s						
NJ2				LR	LR		
	comp=N,910nm,21.5s,MS4.7						
NJ2				LR	LR		
	comp=E,510nm,25.1s,MS4.7						
NJ2				LR	LR		
	comp=Z,540nm,20.1s,MS4.5						
BTO	Baotou	47.83	286	*e*P	P	09 01 39.0	+0.6
ARUT	Antelope Range	48.01	79	*e*P	P	09 01 39.3	-0.5
MVU	Marysvale	48.32	77	*e*P	P	09 01 42.4	+0.2
	comp=Z,8.4nm,0.9s,mb4.8						
MSU	Marysvale	48.34	77	*e*P	P	09 01 42.8	+0.5
TMUT	Trail Mountain	48.44	76	*e*P	P	09 01 43.9	+0.8
NEN	Nelson	48.49	82	P	P	09 01 43.3	-0.2
NEN				*e*pP	pP	09 01 58.1	-1.0
LDFC	Landfair	48.70	83	*e*P	P	09 01 44.8	-0.3
SRU	San Rafael	48.98	76	*e*P	P	09 01 47.4	+0.2
BAR	Barrett	49.29	86	*e*P	P	09 01 48.9	-0.8
RWWY	Rawlins	49.39	71	*e*P	P	09 01 50.0	-0.4
	comp=Z,21nm,1.1s,mb5.1						
PV10	Paradox Valley	50.34	75	*e*P	P	09 01 58.2	+0.5
WUAZ	Wupatki	50.73	80	*e*P	P	09 02 00.8	+0.1
	comp=Z,14nm,0.9s,mb4.9						
PV01	Paradox Valley	50.78	75	*e*P	P	09 02 00.4	-0.7
ISCO	Idaho Springs	51.51	72	*e*P	P	09 02 06.9	+0.3
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
ISCO	Idaho Springs	51.51	72	*e*P	P	09 02 06.9	+0.4
	comp=Z,7.5nm,1.1s,mb4.5						
SDCO	Great Sand Dun	52.89	74	*e*P	P	09 02 16.9	0.0
	comp=Z,7.6nm,1.2s,mb4.5						
TUC	Tucson	53.23	82	*e*P	P	09 02 18.8	-0.7
TUC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
TUC	Tucson	53.23	82	*e*P	P	09 02 18.8	-0.8
	comp=Z,2.5nm,0.9s,mb4.1						
NVS	Novosibirsk	53.57	314	*i* P	P	09 02 20.0	-1.7
NVS				*e*		09 02 30.5	
NVS				*e*		09 03 26.7	
NVS				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
NVS				pmax	pmax		
	comp=N,10.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,12nm,1.2s						
SUMG	Summit	53.73	13	*e*P	P	09 02 22.0	-0.7
	comp=E,12nm,0.9s,mb4.8						
ANMO	Albuquerque	54.14	77	*e*P	P	09 02 26.6	+0.5
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ANMO	Albuquerque	54.14	77	*e*P	P	09 02 26.6	+0.4
	comp=Z,5.4nm,1.2s,mb4.3						
LZH	Lanzhou	54.45	285	⇑P	P	09 02 28.9	+0.5
LZH				AP	pP	09 02 43.5	-0.7
LZH				XP	sP	09 02 49.6	-1.3
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,110nm,4.0s						
LZH	Lanzhou	54.45	285	⇑P	P	09 02 28.9	+0.5
	comp=Z,28nm,1.0s,mb5.2						
LZH				pP	pP	09 02 43.5	-0.7
LZH				sP	sP	09 02 49.6	-1.3
BNM	Barren Site	54.57	78	*e*P	P	09 02 29.5	+0.2
GTA	Gaotai	54.68	291	*e*P	P	09 02 29.9	-0.1
GTA				AP	pP	09 02 44.3	-1.5
GTA				XP	sP	09 02 50.3	-2.3
GTA				PP	PP	09 04 35.0	+0.6
GTA				S	S	09 10 06.6	+2.7
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
GTA				AMB	AMB		
	comp=Z,130nm,5.0s						
GTA				LR	LR		
	comp=N,150nm,19.5s,MS4.3						
GTA				LR	LR		
	comp=E,240nm,20.6s,MS4.3						
GTA				LR	LR		
	comp=Z,300nm,23.7s,MS4.3						
CBKS	Cedar Bluff	55.63	69	*e*P	P	09 02 36.2	-0.7
CBKS				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.4						
CBKS	Cedar Bluff	55.63	69	*e*P	P	09 02 36.2	-0.8
	comp=Z,38nm,1.0s,mb5.4						
MNTX	Cornudas Mount	57.00	79	*e*P	P	09 02 46.2	-0.6
	comp=Z,9.1nm,1.0s,mb4.8						
AMTX	Amarillo	57.09	74	*e*P	P	09 02 46.6	-0.8
	comp=Z,3.8nm,0.6s,mb4.6						
KSU1	Kansas State U	57.26	67	*e*P	P	09 02 47.0	-1.6
ARCES	ARCESS Array B	58.10	350	P	P	09 02 52.3	-1.7
	comp=Z,7.1nm,0.8s,mb4.8,baz=27,slow=11,SNR=7.5						
WMQ	Urumqi	58.58	302	*e*P	P	09 02 58.9	+1.2
WMQ				AP	pP	09 03 13.1	-0.5
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,220nm,4.5s						
WMQ				LR	LR		
	comp=N,1µm,19.0s,MS5.0						
WMQ				LR	LR		
	comp=E,770nm,20.5s,MS5.0						
WMQ				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
WMOK	Wichita Mounta	58.94	72	*e*P	P	09 02 59.7	-0.6
WMOK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
WMOK	Wichita Mounta	58.94	72	*e*P	P	09 02 59.7	-0.6
	comp=Z,8.5nm,0.9s,mb4.8						
GYA	Guiyang	59.32	275	⇑*i*P	P	09 03 01.3	-1.7
GYA				AP	pP	09 03 17.4	-1.6
GYA				XP	sP	09 03 24.6	-1.3
GYA				PP	PP	09 05 13.8	-2.6
GYA				S	S	09 11 01.4	-3.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,110nm,3.8s						
GYA				LR	LR		
	comp=N,280nm,18.0s,MS4.6						
GYA				LR	LR		
	comp=E,310nm,18.6s,MS4.6						
GYA				LR	LR		
	comp=Z,290nm,19.0s,MS4.4						
MKAR	Makanchi Array	59.34	308	P	P	09 03 01.9	-1.0
	comp=Z,4.7nm,0.5s,mb4.8,baz=53,slow=6.1,SNR=48						
MKAR	Makanchi Array	59.34	308	P	P	09 03 01.9	-1.0
TXAR	Lajitas Array	59.70	80	P	P	09 03 05.1	-0.6
	comp=Z,1.6nm,0.7s,mb4.1,baz=304,slow=5.3,SNR=24						
BVA0	Borovoye Array	60.37	319	P	P	09 03 09.4	-0.5
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
SCHQ	Schefferville	60.79	37	P	P	09 03 11.4	-1.3
	comp=Z,2.2nm,0.5s,mb4.6,baz=306,slow=7.3,SNR=9.9						
SVE	Sverdlovsk	61.20	327	*e*P	P	09 03 16.5	+1.1
SVE				*e*		09 03 41.5	
SVE				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.2						
ARU	Arti	62.22	327	⇑*i*P	P	09 03 22.8	+0.5
ARU				*e*		09 04 01.0	
ARU				*e*		09 05 39.7	
ARU				*e*PPP	PPP	09 07 13.4	+1.8
ARU				*e*S	S	09 11 48.2	+6.4
ARU				*e*SS	SS	09 15 51.5	+4.0
ARU				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.3						
ARU	Arti	62.22	327	*e*P	P	09 03 21.5	-0.8
	comp=Z,32nm,1.1s,mb5.4						
KMI	Kunming	62.73	277	P	P	09 03 26.8	+0.6
KMI	Kunming	62.73	277	P	P	09 03 26.7	+0.5
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
KMI	Kunming	62.73	277	P	P	09 03 26.7	+0.5
	comp=Z,7.0nm,0.5s,mb5.0						
WVT	Waverly	64.34	64	*e*P	P	09 03 35.6	-0.9
WVT				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
WVT	Waverly	64.34	64	*e*P	P	09 03 35.6	-0.9
	comp=Z,4.1nm,0.8s,mb4.5						
OXF	Oxford	64.60	66	*e*P	P	09 03 37.2	-1.0
OXF				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6						
OXF	Oxford	64.60	66	*e*P	P	09 03 37.2	-1.0
	comp=Z,60nm,1.0s,mb5.6						
PLAL	Pickwick Lake	65.02	65	*e*P	P	09 03 39.7	-1.3
	comp=Z,10nm,0.6s,mb5.0						
KAF	Kangasniemi	65.06	347	*e*p	P	09 03 38.3	-2.4
TKM2	Tokmak 2	65.43	308	P	P	09 03 44.5	+1.0
	SNR=12						
ULHL	Ulahol	65.61	308	P	P	09 03 45.3	+0.7
	SNR=10						
USP	Ospenovka	65.72	309	P	P	09 03 46.0	+0.8
	SNR=24						
FINES	FINESS Array B	65.74	346	P	P	09 03 42.8	-2.3
	comp=Z,2.4nm,0.8s,mb4.3,baz=34,slow=6.9,SNR=8.7						
FRU	Bishkek	65.98	309	⇓*i*P	P	09 03 48.0	+1.1
SWET	Sewanee	66.07	63	*e*P	P	09 03 46.8	-0.9
MCWV	Mont Chateau	66.13	56	P	P	09 03 47.1	-0.8
AAK	Ala-Archa	66.19	309	P	P	09 03 48.9	+0.6
	SNR=9.6						
AAK	Ala-Archa	66.19	309*c*	*i*P	P	09 03 47.9	-0.4
AAK				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
AAK	Ala-Archa	66.19	309	*e*P	P	09 03 47.3	-1.0
	comp=Z,12nm,0.8s,mb5.0						
KZA	Kyzart	66.23	308	P	P	09 03 49.8	+1.3
	SNR=14						
UCH	Uchtor	66.48	309	P	P	09 03 51.7	+1.6
	SNR=13						
EKS2	Erkin-Say	66.52	309	P	P	09 03 51.4	+1.0

	SNR=18						
LSA	Lhasa	66.53	289	P	P	09 03 52.0	+1.3
LSA	Lhasa	66.53	289	eP	P	09 03 51.4	+0.7
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
LSA	Lhasa	66.53	289	eP	P	09 03 51.4	+0.7
	comp=Z,9.2nm,0.7s,mb4.9						
PMG	Port Moresby	66.54	215	i P	P	09 03 50.9	0.0
AML	Almayashu	66.96	309	P	P	09 03 54.8	+1.6
	SNR=25						
AB31	Akbulak array	67.46	322	i P	P	09 03 56.2	+0.1
AB31				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
NB2	NORSAR Subarra	67.73	354	P	P	09 03 57.1	-0.5
	comp=Z,22nm,1.0s,mb5.2,baz=7.0,slow=6.2						
NB2	NORSAR Subarra	67.73	354	P	P	09 03 57.1	-0.5
	baz=6.6,slow=6.5						
NOA	NORSAR Array B	67.73	354	P	P	09 03 57.2	-0.4
	comp=Z,11nm,0.8s,mb5.0,baz=8.1,slow=6.3,SNR=35						
NOA	NORSAR Array B	67.73	354	P	P	09 03 57.2	-0.4
KKAR	Karatay Array	67.75	312	i P	P	09 03 58.2	+0.2
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
SHL	Shillong	69.11	285	eP	P	09 04 06.5	-0.3
JSC	Jenkinsville	69.35	61	eP	P	09 04 07.5	-0.6
OBN	Obninsk	69.68	338	⇓iP	P	09 04 09.3	-0.4
OBN				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
CMAR	Chiang Mai Arr	70.01	275	P	P	09 04 12.2	-0.2
	comp=Z,4.4nm,0.9s,mb4.4,baz=19,slow=8.2,SNR=11						
GUN	Gumba	70.97	291	eP	P	09 04 19.0	+1.0
	comp=Z,99nm,1.0s,mb5.7						
KKN	Kakani	71.41	291	eP	P	09 04 21.0	+0.3
	comp=Z,50nm,0.9s,mb5.4						
KKN	Kakani	71.41	291	eP	P	09 04 21.0	+0.3
KKN				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
PKI	Pulchoki	71.50	291	eP	P	09 04 21.7	+0.5
	comp=Z,54nm,1.0s,mb5.4						
PKI	Pulchoki	71.50	291	eP	P	09 04 21.7	+0.5
PKI				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
GKN	Gorkha	71.63	292	eP	P	09 04 22.4	+0.4
	comp=Z,35nm,0.8s,mb5.3						
DMN	Daman	71.65	291	eP	P	09 04 22.9	+0.8
	comp=Z,48nm,1.0s,mb5.4						
VRSR	Storozhevoye	72.58	335	eP	P	09 04 27.0	-0.1
VRSR				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
VRSR				pmax	pmax		
	comp=N,9.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,3.0nm,0.5s						
AKASG	Malin Array Be	75.40	341	P	P	09 04 43.1	-0.4
	comp=E,2.9nm,0.6s,mb4.4,baz=19,slow=5.6,SNR=16						
CTA	Charters Tower	76.76	212	P	P	09 04 51.9	+0.1
	comp=E,2.5nm,0.8s,mb4.2,baz=54,slow=4.3,SNR=3.6						
CTA	Charters Tower	76.76	212	P	P	09 04 51.9	+0.1
CTAO	Charters Tower	76.76	212	eP	P	09 04 50.7	-1.1
CLL	Collm	77.25	351	i P	P	09 04 53.6	-0.3
CLL				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
CLL	Collm	77.25	351	i P	P	09 04 53.6	-0.3
	comp=Z,8.0nm,1.3s,mb4.5						
CLL	Collm	77.25	351	P	P	09 04 53.6	-0.3
	comp=Z,logA/T=0.8,mb4.5						
KIV	Kislovodsk	78.12	330	eP	P	09 05 00.2	+1.3
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
KIV				pmax	pmax		
	comp=N,5.0nm,0.8s						
KIV				pmax	pmax		
	comp=E,2.0nm,0.8s						
HGN	Heimansgroeve	78.28	356	ePKP	P	09 05 00.3	+0.8
	comp=E,18nm,1.4s,mb4.8						
HGN				eP		09 13 26.1	
	comp=E,22nm,1.1s						
ANN	Anapa	78.93	334	eP	P	09 05 12.2	+8.9
ANN				e*PP	pP	09 05 32.9	+13
ANN				eS	S	09 15 10.8	+15
ANN				pmax	pmax		
	comp=Z,40nm,1.7s,mb5.1						
GRA1	Grafenberg Arr	79.01	352	eP	P	09 05 04.4	+0.8
	comp=Z,7.0nm,1.1s,mb4.5						
GRF	Grafenberg Arr	79.01	352	eP	P	09 05 04.4	+0.8
GRF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
GRF	Grafenberg Arr	79.01	352	eP	P	09 05 04.4	+0.8
GRF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
GRF	Grafenberg Arr	79.01	352	eP	P	09 05 04.4	+0.8
	comp=Z,7.0nm,1.1s,mb4.5						
KHC	Kasperske Hory	79.34	351	eP	P	09 05 06.0	+0.6
GERES	GERESS Array B	79.61	351	P	P	09 05 07.2	+0.3
	comp=Z,0.3nm,0.3s,mb3.7,baz=45,slow=3.8,SNR=4.6						
GNI	Garni	80.85	327	⇑iP	P	09 05 13.7	0.0
GNI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WRAB	Tennant Creek	81.16	223	eP	P	09 05 14.7	-1.0
WRA	Warramunga Arr	81.17	223	P	P	09 05 14.7	-1.0
	comp=Z,1.8nm,0.8s,mb4.1,baz=32,slow=6.2,SNR=19						
FITZ	Fitzroy Crossi	83.54	231	P	P	09 05 27.7	-0.3
	comp=Z,8.7nm,0.8s,mb4.9,baz=173,slow=2.5,SNR=6.3						
BR131	Keskin Array S	84.68	334	eP	P	09 05 34.5	+1.3
	comp=Z,3.8nm,0.7s,mb4.6						
DBIC	Dimbokro	122.25	5	PKP	PKPdf	09 11 54.7	+1.2
	comp=Z,1.9nm,0.5s,baz=326,slow=6.5,SNR=4.6						
TSUM	Tsumeb	145.05	329	ePKP	PKPdf	09 12 37.2	+1.6
MAW	Mawson	145.70	217	PKPbc	PKPbc	09 12 38.2	+2.2
	comp=Z,2.0nm,0.7s,baz=90,slow=7.4,SNR=4.6						
LBTB	Lobatse	147.12	313	ePKPdf	PKPdf	09 12 41.4	+2.4
LBTB				ePKPbc	PKPdf	09 12 43.7	+4.8
BOSA	Boshof	150.32	310	PKPbc	PKPdf	09 12 51.9	+7.9
	comp=Z,12nm,0.9s,baz=100,slow=1.0,SNR=11						
SNAA	Sanae	159.42	178	⇑i	PKPdf	09 12 55.8	+0.9
VNA3	Neumayer Olymp	159.44	172	⇑i	PKPdf	09 12 55.9	+1.0
VNA2	Neumayer--Watz	159.94	173	⇑i	PKPdf	09 12 58.3	+2.9
VNA1	Neumayer--Stat	160.14	172	⇑i	PKPdf	09 12 58.3	+2.6

BJI ***14*** *09:01:27.9, 51.43N×179.42E, h33km, mB5.2, mb5.0, Ms5.0, Msz4.7*

IDC ***14*** *09:01:28.0±2.9, 51.32N×179.56E, h20km±17km, mb4.5/22, mb1 4.7/22, mb1mx4.6/28, mbtmp4.7/22, MS4.6/20, Ms1 4.5/20, ms1mx4.5/35, Error ellipse: s-maj=21.7km s-min=11.2km az=171.0*

MOS ***14*** *09:01:29.2±0.9, 51.24N×179.51E, h43km, mb5.1/71, MS4.7/16, Error ellipse: s-maj=7.2km s-min=5.1km az=91.0*

NEIC ***14*** *09:01:30.2±0.2, 51.16N×179.54E, mb5.0/102, MS4.8/3, ML5.3(AEIC), Error ellipse: s-maj=5.3km s-min=2.3km az=181.0*

ISC 14 09:01:29.1±0.2**, 51.19N**±0.05×**179.54E**±0.02**, h44km, h44km**±1.9km**:pP-P, n390, σ0.94**/388**, mb5.0**/139**, MS4.7**/37**, 5C-10D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	2.10	73	P	P	09 02 03.1	+0.6
KIKV	Kanaga Island	2.17	70	P	P	09 02 04.7	+1.1
KIWB	Kanaga Island	2.17	71	P	P	09 02 04.3	+0.7
KIWB				S	S	09 02 33.6	+4.3
KINC	Kanaga Island	2.21	69	P	P	09 02 05.2	+1.0
ADAG	Mount Adagdak	2.53	70	P	P	09 02 09.9	+1.1
GSSP	Great Sitkin S	2.82	70	P	P	09 02 13.8	+1.0
GSTD	Great Sitkin T	2.83	70	P	P	09 02 13.8	+0.8
GSMY	Great Sitkin M	2.87	71	P	P	09 02 13.2	-0.5
GSTR	Great Sitkin T	2.89	70	P	P	09 02 14.5	+0.7
GSIG	Igitkin Island	2.94	72	P	P	09 02 15.6	+1.1
GSIG				S	S	09 02 49.0	+0.1
SMY	Shemya	3.70	297	P	P	09 02 25.7	+0.3
SMY				S	S	09 03 08.4	+0.1
ATKA	Atka Island	4.03	73	P	P	09 02 30.8	+0.9
ATKA				S	S	09 03 17.2	+0.8
FX1	Attu Island--F	4.29	296	P	P	09 02 33.2	-0.4
FX1						09 03 28.5	
FX1				pmax	pmax		
	comp=Z,36nm,0.3s						
FX1				smax			
	comp=N,113nm,0.3s						
FX1				MLR	MLR		
	comp=Z,679nm,18.4s						
FX1	Attu Island--F	4.29	296	Pn	P	09 02 33.2	-0.4
	comp=Z,36nm,0.3s,baz=59,slow=22,SNR=53						
FX1				Sn	S	09 03 28.5	+5.5
	comp=Z,112nm,0.3s,baz=44,slow=20,SNR=2.6						
FX1				LR	LR	09 04 14.7	
	comp=Z,679nm,18.4s,baz=112,slow=39						
FX1	Attu Island--F	4.29	296	P	P	09 02 34.6	+1.0
NIKO	Nikolski	7.37	71	P	P	09 03 16.5	-0.4
SPIA	Saint Paul Isl	8.47	41	P	P	09 03 33.1	+1.0
MSW	Makushin Switc	8.77	67	P	P	09 03 36.5	+0.4
FALS	False Pass	10.90	64	P	P	09 04 04.8	-0.4
SDPT	Sand Point	12.65	63	eP	P	09 04 26.5	-2.4
	comp=Z,18nm,0.3s						
PET	Petropavlovsk	12.97	286	eP	P	09 04 32.8	-0.3
PET				eS	S	09 06 56.6	-0.2
PET				pmax	pmax		
	comp=Z,21nm,1.2s						
PET				smax			
	comp=E,39nm,1.5s						
PET				MLR	MLR		
	comp=Z,2µm,19.0s						
PET				MLR	MLR		
	comp=Z,2µm,16.0s						
TNA	Tin City	15.79	19	eP	P	09 05 09.3	-0.3
	comp=Z,87nm,1.5s						
SVW2	Sparrevohn	16.93	45	eP	P	09 05 25.9	+1.9
KDAK	Kodiak Island	17.40	57	eP	P	09 05 27.7	-2.2
TTA	Tatalina	17.61	39	eP	P	09 05 34.4	+1.9
RSO	Redoubt South	17.99	48	eP	P	09 05 38.1	+0.9
BILL	Bilibino	18.11	344	eP	P	09 05 39.5	+0.8
BILL				pmax	pmax		
	comp=Z,44nm,1.0s						
BILL	Bilibino	18.11	344	eP	P	09 05 39.5	+0.8
	comp=Z,44nm,1.0s						
MA2	Magadan	18.25	309	eP	P	09 05 40.2	-0.3
MA2				pmax	pmax		
	comp=Z,13nm,1.6s						
SPU	Mount Spurr	18.55	46	eP	P	09 05 44.0	-0.2
SEY	Seymchan	18.70	319	eP	P	09 05 48.9	+2.9
SEY				pmax	pmax		
	comp=E,9.0nm,0.9s						
SEY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
SLKM	Skilak Lake	19.20	49	eP	P	09 05 51.3	-0.4
PMR	Palmer	20.02	47	eP	P	09 05 59.2	-1.4
PMR				pmax	pmax		
	comp=Z,12nm,1.0s						
PMR	Palmer	20.02	47	eP	P	09 05 59.2	-1.4
	comp=Z,12nm,1.0s						
IMA	Indian Mountai	20.16	32	P	P	09 06 01.8	-0.3
IMA				pmax	pmax		
	comp=Z,220nm,1.0s						
IMA	Indian Mountai	20.16	32	eP	P	09 06 02.8	+0.7
	comp=Z,38nm,0.9s						
SML	Sawmill	20.44	46	eP	P	09 06 03.2	-1.8
MCK	McKinley	20.82	41	eP	P	09 06 08.2	-0.8
MCK				pmax	pmax		
	comp=Z,27nm,1.1s						
MCK	McKinley	20.82	41	eP	P	09 06 08.2	-0.8
	comp=Z,27nm,1.1s						
EYAK	Cordova Ski Ar	21.37	51	eP	P	09 06 13.1	-1.4
DIV	Divide	21.47	49	eP	P	09 06 13.5	-2.0
	comp=Z,150nm,0.9s,mb5.3						
ILAR	Eielson Array	22.05	39	P	P	09 06 20.6	-0.7
	comp=Z,3.1nm,0.7s,baz=231,slow=7.5,SNR=30						
ILAR				PcP	PcP	09 10 17.6	-1.3
	comp=Z,0.9nm,0.5s,baz=271,slow=3.4,SNR=6.3						
THY	Trims Highway	22.06	43	eP	P	09 06 20.9	-0.4
MENT	Mentasta	22.82	45	eP	P	09 06 29.3	+0.7
YUK	Yuzh-Kuril'sk	23.65	266	eP	P	09 06 37.0	+0.1
YUK				e		09 07 17.0	
YUK				eSS	SS	09 11 58.0	+22
YUK				pmax	pmax		
	comp=Z,2µm,2.0s						
YUK				pmax	pmax		
	comp=E,2µm,3.0s						
YUK				MLR	MLR		
	comp=Z,1µm,17.0s						
YUK				MLR	MLR		
	comp=E,3µm,18.0s						
YSS	Yuzh-Sakhalins	24.30	274	⇑eP	P	09 06 43.0	-0.2
YSS				e		09 07 22.0	
YSS				eS	S	09 10 54.0	-2.4
YSS				pmax	pmax		
	comp=Z,60nm,1.2s,mb4.9						
YSS				MLR	MLR		
	comp=N,600nm,19.0s,MS4.4						
YSS				MLR	MLR		
	comp=E,1µm,19.0s,MS4.4						
YSS				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.3						
YSS	Yuzh-Sakhalins	24.30	274	eP	P	09 06 43.4	+0.2
	comp=Z,26nm,0.7s,mb4.8						
ASAJ	Asahikawa	25.66	269	P	P	09 06 57.0	+0.7
ASAJ				pmax	pmax		
	comp=Z,58nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,843nm,19.8s						
ASAJ	Asahikawa	25.66	269	P	P	09 06 57.0	+0.7
	comp=Z,58nm,0.9s,mb5.1,baz=58,slow=6.5,SNR=38						
ASAJ				LR	LR	09 15 42.3	
	comp=Z,843nm,19.8s,MS4.3,baz=87,slow=33						
INK	Inuvik	28.21	35	P	P	09 07 18.7	-0.7
INK						09 10 31.3	
INK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	Inuvik	28.21	35	P	P	09 07 18.6	-0.7
	comp=Z,7.5nm,0.9s,mb4.3,baz=222,slow=7.5,SNR=12						
INK				PcP	PcP	09 10 31.3	-1.1
	comp=Z,2.1nm,0.5s,baz=286,slow=5.5,SNR=4.7						
INK	Inuvik	28.21	35	eP	P	09 07 18.0	-1.4
	comp=Z,44nm,1.3s,mb4.9						
YAK	Yakutsk	28.76	311	eP	P	09 07 23.2	-1.1
YAK				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,3.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,12nm,1.1s						
YAK				MLR	MLR		
	comp=Z,953nm,17.0s,MS4.5						
YAK				MLR	MLR		
	comp=N,236nm,14.0s,MS4.4						
YAK				MLR	MLR		
	comp=E,671nm,16.0s,MS4.4						
DLBC	Dease Lake	29.33	56	P	P	09 07 30.1	+0.7
	comp=E,0.6nm,0.5s,baz=283,slow=14,SNR=3.6						
DLBC				LR	LR	09 19 35.5	
	comp=E,905nm,21.1s,MS4.4,baz=278,slow=37						
DLBC	Dease Lake	29.33	56	eP	P	09 07 29.6	+0.1
KLR	Kul'dur	30.23	285	eP	P	09 07 33.8	-3.7
KLR				pmax	pmax		
	comp=N,28nm,1.2s						
KLR				pmax	pmax		
	comp=Z,43nm,1.2s,mb5.0						
MJAR	Matsushiro Arr	32.73	260	PcP	PcP	09 10 43.9	-0.5
	comp=Z,1.0nm,0.3s,baz=344,slow=2.2,SNR=4.1						
MJAR				LR	LR	09 18 39.1	
	comp=Z,716nm,21.1s,MS4.3,baz=70,slow=32						
MDJ	Mudanjiang	33.58	279	P	P	09 08 05.3	-1.5
MDJ				AP	pP	09 08 16.4	-2.3
MDJ				XP	sP	09 08 21.3	-2.9
MDJ				PP	PP	09 09 21.5	+1.4
MDJ				PCP	PcP	09 10 44.8	-1.9
MDJ				S	S	09 13 24.3	-0.8
MDJ				XS		09 13 42.6	
MDJ				SCP		09 14 26.5	
MDJ				PCS		09 14 30.8	
MDJ				AMB	AMB		
	comp=Z,50nm,5.7s						
MDJ				LR	LR		
	comp=N,660nm,20.4s,MS4.5						
MDJ				LR	LR		
	comp=E,720nm,23.6s,MS4.5						
MDJ				LR	LR		
	comp=Z,1µm,19.3s,MS4.7						
MDJ	Mudanjiang	33.58	279	eP	P	09 08 05.3	-1.5
	comp=Z,10nm,0.8s,mb4.8						
MDJ				e	pP	09 08 17.2	-1.4
YKW3	Yellowknife Ar	36.10	46	eP	P	09 08 27.1	-1.1
YKA	Yellowknife Ar	36.12	46	P	P	09 08 27.0	-1.4
	comp=Z,7.7nm,0.7s,mb4.7,baz=282,slow=8.7,SNR=9.5						
YKA				PcP	PcP	09 10 53.3	-0.6
	comp=Z,3.0nm,0.9s,baz=292,slow=2.5,SNR=4.8						
YKA				ScP		09 14 37.8	
	comp=Z,0.9nm,0.6s,baz=292,slow=3.1,SNR=6.9						
YKA	Yellowknife Ar	36.12	46	P	P	09 08 27.0	-1.4
YKA				PcP	PcP	09 10 53.3	-0.6
YKA				ScP		09 14 37.9	
CN2	Changchun	36.56	280	eP	P	09 08 34.0	+1.7
CN2				PP	PP	09 09 54.9	-2.5
CN2				eS	S	09 14 11.8	+0.7
CN2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,2µm,21.0s,MS5.0						
CN2				LR	LR		
	comp=E,1µm,21.0s,MS5.0						
CN2				LR	LR		
	comp=Z,1µm,21.0s,MS4.7						
CBIJ	Chichi jima	37.06	244	LR	LR	09 20 00.6	
	comp=Z,470nm,21.9s,MS4.2,baz=21,slow=30						
JCW	Jim Creek	37.12	71	P	P	09 08 38.2	+1.3
BOD	Bodaibo	37.26	306	eP	P	09 08 36.9	-1.1
BOD				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.1						
HIA	Hailar	37.39	291	eP	P	09 08 38.1	-1.1
HIA				pmax	pmax		
	comp=Z,63nm,1.4s						
HIA	Hailar	37.39	291	eP	P	09 08 38.1	-1.1
	comp=Z,63nm,1.4s,mb5.2						
RCM	Mount Rainier-	37.88	73	P	P	09 08 45.3	+2.1
WPW	White Pass	38.05	73	P	P	09 08 46.0	+1.2
NLW	Nelson Butte	38.12	70	P	P	09 08 46.5	+1.3
ETW	Entiat	38.35	71	P	P	09 08 48.4	+1.2
TBM	Table Mountain	38.40	72	P	P	09 08 48.5	+0.9
WTV	Waterville	38.52	71	P	P	09 08 49.4	+0.8
EBG	Ellensburg	38.54	72	P	P	09 08 50.1	+1.3
SNY	Shenyang	38.78	279	⇓P	P	09 08 51.4	+0.6
SNY				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
SNY				LR	LR		
	comp=N,560nm,17.7s,MS4.5						
SNY				LR	LR		
	comp=E,480nm,19.5s,MS4.5						
SNY				LR	LR		
	comp=Z,820nm,22.8s,MS4.5						
SNIWA	Snively Ranch	39.30	72	P	P	09 08 56.5	+1.3
RSW	Rattlesnake Hi	39.38	72	P	P	09 08 57.2	+1.5
OD2	Odessa Site #2	39.41	71	P	P	09 08 56.6	+0.6
JNU	Nakatsue	39.52	262	P	P	09 08 57.4	+0.3
	comp=Z,14nm,0.8s,mb4.7,baz=108,slow=4.4,SNR=4.6						
CIT	Chita	39.71	298	eP	P	09 08 57.1	-1.4
CIT				e		09 09 12.5	
CIT				e		09 10 30.6	
CIT				pmax	pmax		
	comp=Z,85nm,2.2s,mb5.1						
KHMM	Horse Mountain	39.79	82	P	P	09 08 59.5	+0.3
EDM	Edmonton	39.81	60	P	P	09 08 58.9	-0.4
EDM	Edmonton	39.81	60	eP	P	09 08 58.1	-1.2
NEW	Newport	39.92	69	P	P	09 08 59.9	-0.4
NEW				pmax	pmax		
	comp=Z,47nm,1.3s						
NEW	Newport	39.92	69	P	P	09 08 59.6	-0.7
	comp=Z,9.7nm,0.5s,mb4.8,baz=298,slow=7.4,SNR=21						
NEW	Newport	39.92	69	eP	P	09 08 59.4	-0.9
	comp=Z,47nm,1.3s,mb5.1						
YBH	Yreka Blue Hor	39.94	80	P	P	09 09 02.5	+2.0
YBH				pmax	pmax		
	comp=Z,11nm,0.9s						
YBH	Yreka Blue Hor	39.94	80	eP	P	09 09 01.2	+0.8
	comp=Z,11nm,0.9s,mb4.6						
RES	Resolute Bay	40.35	24	eP	P	09 09 03.1	-0.4
RES				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
RES	Resolute Bay	40.35	24	eP	P	09 09 03.1	-0.4
	comp=Z,12nm,1.0s,mb4.6						
MOD	Modoc	41.33	79	eP	P	09 09 12.6	+0.6
	comp=Z,8.6nm,0.6s,mb4.6						
BMO	Blue Mountains	41.55	73	eP	P	09 09 13.8	+0.2
	comp=Z,9.0nm,0.8s,mb4.5						
WVOR	Wild Horse Val	42.06	77	P	P	09 09 19.2	+1.3
WVOR				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.7						
WVOR	Wild Horse Val	42.06	77	eP	P	09 09 18.4	+0.5
	comp=Z,19nm,0.9s,mb4.7						
BEKR	Beckwourth	42.47	81	eP	P	09 09 18.6	-2.7
	comp=Z,20nm,1.4s,mb4.6						
MSO	Missoula	42.51	69	eP	P	09 09 20.9	-0.6
	comp=Z,31nm,1.3s,mb4.9						
CHMT	Chamberlain Mo	42.87	68	eP	P	09 09 23.8	-0.7
WCN	Washoe City	43.18	81	P	P	09 09 28.5	+1.4
WCN				pmax	pmax		
	comp=Z,66nm,1.7s,mb5.1						
WCN	Washoe City	43.18	81	eP	P	09 09 27.3	+0.3
	comp=Z,66nm,1.7s,mb5.1						
CMB	Columbia Colle	43.55	83	eP	P	09 09 29.4	-0.7
CMB				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
CMB	Columbia Colle	43.55	83	eP	P	09 09 29.4	-0.8
	comp=Z,9.7nm,1.0s,mb4.5						
HRY	Holter Researc	43.80	68	eP	P	09 09 31.4	-0.6
HLID	Hailey	43.99	73	eP	P	09 09 33.4	-0.2
	comp=Z,33nm,1.1s,mb5.0						
BMN	Battle Mountai	44.08	78	P	P	09 09 35.6	+1.2
BMN				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
BMN	Battle Mountai	44.08	78	eP	P	09 09 34.6	+0.2
	comp=Z,14nm,0.8s,mb4.7						
MCMT	McKenzie Canyo	44.23	71	eP	P	09 09 34.8	-0.7
BOZ	Bozeman (W)	44.50	69	P	P	09 09 37.3	-0.3
BOZ				pmax	pmax		
	comp=Z,56nm,1.1s,mb5.2						
BOZ	Bozeman (W)	44.50	69	eP	P	09 09 36.9	-0.7
	comp=Z,56nm,1.1s,mb5.2						
NVAR	Mina Array Bea	44.61	81	P	P	09 09 39.2	+0.6
	comp=Z,2.9nm,0.6s,mb4.3,baz=303,slow=7.0,SNR=21						
NVAR				ScP		09 15 11.6	
	comp=Z,1.1nm,0.8s,baz=262,slow=7.4,SNR=4.9						
IRK	Irkutsk	44.66	302	eP	P	09 09 39.3	+0.5
IRK				e		09 09 59.4	
IRK				pmax	pmax		
	comp=Z,43nm,2.2s,mb4.9						
OMM	Old Mammoth Mi	44.68	83	eP	P	09 09 39.6	+0.5
MNV	Mina	44.70	81	eP	P	09 09 39.3	-0.1
MNV				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.6						
MNV	Mina	44.70	81	eP	P	09 09 39.3	-0.1
	comp=Z,12nm,1.2s,mb4.6						
QLMT	Earthquake Lak	45.06	70	eP	P	09 09 41.8	-0.4
MTUM	Tungsten Hills	45.11	83	eP	P	09 09 43.0	+0.3
ELK	Elko	45.12	77	P	P	09 09 42.4	-0.2
ELK				pmax	pmax		
	comp=Z,21nm,0.9s						
ELK	Elko	45.12	77	eP	P	09 09 42.2	-0.4
	comp=Z,22nm,0.9s,mb5.0						
TLY	Talaya	45.28	302	eP	P	09 09 43.3	-0.5
TLY				eS	S	09 16 16.1	-4.3
TLY				eSS	SS	09 19 42.1	+7.0
TLY				pmax	pmax		
	comp=Z,26nm,1.6s,mb4.8						
TLY				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.1						
TLY	Talaya	45.28	302	eP	P	09 09 43.6	-0.2
	comp=Z,6.3nm,0.8s,mb4.5						
ULN	Ulaanbaatar	45.41	296	⇓iP	P	09 09 44.9	0.0
ULN	Ulaanbaatar	45.41	296	eP	P	09 09 45.1	+0.2
	comp=Z,19nm,1.1s,mb4.8						
YMR	Madison River	45.43	70	eP	P	09 09 44.9	-0.2
TPH	Tonopah	45.50	81	P	P	09 09 47.2	+1.5
TPH				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.0						
TPH	Tonopah	45.50	81	eP	P	09 09 46.1	+0.4
	comp=Z,32nm,1.2s,mb5.0						
GCMT	Greycliff	45.56	68	eP	P	09 09 46.2	0.0
YNR	Norris Junctio	45.57	70	eP	P	09 09 46.7	+0.4
YFT	Old Faithful	45.63	70	eP	P	09 09 47.8	+1.1
SONM	Songino Array	45.80	296	P	P	09 09 48.3	+0.3
	comp=Z,5.2nm,0.8s,mb4.5,baz=57,slow=8.1,SNR=37						
SONM				ScP		09 15 17.1	
	comp=Z,1.0nm,1.0s,baz=27,slow=3.2,SNR=3.3						
SONM				LR	LR	09 30 46.7	
	comp=Z,2µm,18.3s,MS5.1,baz=53,slow=38						
LKWY	Lake	45.82	70	P	P	09 09 50.3	+2.1
LKWY				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
LKWY	Lake	45.82	70	eP	P	09 09 49.4	+1.2

	comp=Z,40nm,1.0s,mb5.3						
IMW	Indian Meadow	45.88	71	eP	P	09 09 48.8	+0.1
	comp=Z,33nm,1.0s,mb5.2						
RRI2	Red Ridge	45.97	71	eP	P	09 09 50.1	+0.7
	comp=Z,12nm,0.6s,mb5.0						
HVU	Hansel Valley	46.01	74	P	P	09 09 50.8	+1.1
HVU	Hansel Valley	46.01	74	eP	P	09 09 49.9	+0.2
MOOW	Moose Ponds	46.08	71	eP	P	09 09 49.8	-0.5
	comp=Z,16nm,1.2s,mb4.8						
TPAW	Teton Pass	46.11	71	eP	P	09 09 51.0	+0.5
	comp=Z,14nm,0.9s,mb4.9						
TIA	Tai'an	46.15	276	⇑P	P	09 09 51.0	+0.1
ZAK	Zakamensk	46.16	300	eP	P	09 09 50.3	-0.5
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
WUWY	Wally Ulrich	46.20	71	eP	P	09 09 50.5	-0.7
SNOW	Snow King Moun	46.24	71	eP	P	09 09 52.0	+0.5
	comp=Z,22nm,1.0s,mb5.0						
LOHW	Long Hollow	46.24	71	eP	P	09 09 51.6	0.0
	comp=Z,11nm,0.9s,mb4.8						
TRCR	Troy Canyon	46.35	80	eP	P	09 09 52.3	-0.1
DAC	Darwin (Calif)	46.39	83	P	P	09 09 53.5	+0.7
DAC				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
DAC	Darwin (Calif)	46.39	83	eP	P	09 09 52.4	-0.4
	comp=Z,7.4nm,0.9s,mb4.6						
AHID	Auburn Hatcher	46.44	72	eP	P	09 09 53.1	0.0
	comp=Z,31nm,1.1s,mb5.2						
SPUT	South Promonto	46.48	74	eP	P	09 09 53.0	-0.5
MOY	Mondy	46.70	303	eP	P	09 09 55.8	+0.8
MOY				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
HHC	Hu-ho-hao-te	46.74	285	eP	P	09 09 56.8	+1.4
HHC				AP	pP	09 10 08.8	+1.2
HHC				XP	sP	09 10 14.4	+1.6
HHC				PCP	PcP	09 11 30.1	+1.3
HHC				PP	PP	09 11 43.1	-2.2
HHC				PCS		09 15 25.5	
HHC				S	S	09 16 41.8	+0.5
HHC				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
HHC				AMB	AMB		
	comp=Z,180nm,7.3s						
HHC				LR	LR		
	comp=N,730nm,17.8s,MS4.8						
HHC				LR	LR		
	comp=E,720nm,22.6s,MS4.8						
HHC				LR	LR		
	comp=Z,670nm,19.0s,MS4.6						
HWUT	Hardware Ranch	46.84	74	eP	P	09 09 56.4	+0.2
	comp=Z,14nm,1.0s,mb4.8						
FCC	Fort Churchill	46.84	45	eP	P	09 09 54.7	-1.3
FCC				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
FCC	Fort Churchill	46.84	45	eP	P	09 09 54.7	-1.3
	comp=Z,9.2nm,0.9s,mb4.7						
SSE	Sheshan	46.95	268	eP	P	09 09 57.0	-0.3
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,110nm,6.4s						
SSE	Sheshan	46.95	268	eP	P	09 09 57.0	-0.3
	comp=Z,34nm,0.8s,mb5.3						
LAO	LASA Array	47.05	65	eP	P	09 09 57.7	-0.1
	comp=Z,28nm,1.1s,mb5.1						
DGMT	Dagmar	47.20	62	eP	P	09 09 57.5	-1.4
	comp=Z,9.8nm,0.9s,mb4.7						
TCUT	Toone Canyon	47.23	74	eP	P	09 09 59.6	+0.3
CTU	Camp Tracy	47.27	75	eP	P	09 09 59.7	0.0
BW06	Boulder Array	47.36	71	eP	P	09 09 59.6	-0.7
	comp=Z,36nm,0.8s,mb5.3						
PDAR	Pinedale Array	47.36	71	P	P	09 10 00.1	-0.3
	comp=Z,44nm,0.9s,mb5.4,baz=302,slow=3.3,SNR=204						
PDAR				LR	LR	09 27 40.0	
	comp=Z,479nm,21.0s,MS4.4,baz=315,slow=33						
MWC	Mount Wilson	47.42	86	P	P	09 10 00.9	0.0
MWC	Mount Wilson	47.42	86	eP	P	09 10 00.6	-0.3
JLU	Jordanelle	47.51	75	eP	P	09 10 01.7	+0.1
JLU				epP	pP	09 10 13.2	-0.5
NLU	North Lily Min	47.52	76	eP	P	09 10 02.6	+1.0
DAU	Daniels Canyon	47.74	75	P	P	09 10 04.4	+1.0
DAU	Daniels Canyon	47.74	75	eP	P	09 10 04.0	+0.7
MPU	Maple Canyon	47.76	75	eP	P	09 10 03.6	+0.1
NJ2	Nanjing	47.77	271	eP	P	09 10 05.8	+2.0
NJ2				AP	pP	09 10 18.3	+2.4
NJ2				XP	sP	09 10 23.4	+2.3
NJ2				PP	PP	09 11 57.3	+2.3
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,130nm,5.6s						
NJ2				LR	LR		
	comp=N,1µm,22.0s,MS4.9						
NJ2				LR	LR		
	comp=E,1µm,24.2s,MS4.9						
NJ2				LR	LR		
	comp=Z,800nm,25.6s,MS4.6						
BTO	Baotou	47.82	286	eP	P	09 10 03.0	-1.0
ARUT	Antelope Range	48.02	79	eP	P	09 10 06.0	+0.4
ARUT	Antelope Range	48.02	79	eP	P	09 10 05.8	+0.2
MVU	Marysvale	48.33	77	eP	P	09 10 08.4	+0.4
	comp=Z,12nm,0.9s,mb4.9						
MSU	Marysvale	48.35	77	P	P	09 10 08.9	+0.8
MSU	Marysvale	48.35	77	eP	P	09 10 08.4	+0.3
TMUT	Trail Mountain	48.45	76	eP	P	09 10 09.3	+0.4
NEN	Nelson	48.51	82	eP	P	09 10 08.9	-0.5
LDFC	Landfair	48.71	83	eP	P	09 10 10.2	-0.8
LDFC				epP	pP	09 10 21.7	-1.4
PFO	Pinyon Flat Ob	48.83	85	eP	P	09 10 11.6	-0.2
PFO				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
PFO	Pinyon Flat Ob	48.83	85	eP	P	09 10 10.2	-1.7
	comp=Z,5.2nm,0.9s,mb4.6						
SRU	San Rafael	48.99	76	P	P	09 10 13.6	+0.6
SRU	San Rafael	48.99	76	eP	P	09 10 13.2	+0.2
BAR	Barrett	49.30	86	eP	P	09 10 14.9	-0.7
RWWY	Rawlins	49.40	71	eP	P	09 10 15.7	-0.5
	comp=Z,45nm,1.2s,mb5.4						
RSSD	Black Hills	49.79	66	P	P	09 10 18.8	-0.4
RSSD				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
RSSD	Black Hills	49.79	66	eP	P	09 10 18.1	-1.1
	comp=Z,8.2nm,1.0s,mb4.7						
KBS	Kingsbay	49.94	357	eP	P	09 10 18.5	-1.3
KBS				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.2						
KBS	Kingsbay	49.94	357	eP	P	09 10 18.5	-1.3
	comp=Z,22nm,0.9s,mb5.2						
PV10	Paradox Valley	50.35	75	eP	P	09 10 23.6	0.0
ULM	Lac du Bonnet	50.66	56	P	P	09 10 24.0	-1.7
	comp=Z,1.9nm,0.4s,mb4.3,baz=287,slow=3.7,SNR=3.0						
ULM				LR	LR	09 32 02.8	
	comp=Z,911nm,21.8s,MS4.8,baz=71,slow=36						
PHWY	Pilot Hill	50.68	70	eP	P	09 10 25.0	-0.9
WUAZ	Wupatki	50.75	80	eP	P	09 10 26.6	+0.1
	comp=Z,16nm,0.8s,mb5.0						
PV01	Paradox Valley	50.79	75	eP	P	09 10 26.4	-0.4
ISCO	Idaho Springs	51.52	72	P	P	09 10 33.2	+0.9
ISCO				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
ISCO	Idaho Springs	51.52	72	eP	P	09 10 32.5	+0.2
	comp=Z,21nm,1.1s,mb5.0						
WHN	Wuhan	51.63	273	eP	P	09 10 32.5	-0.8
HSP	Hornsund	51.67	355	eP	P	09 10 31.8	-1.2
SDCO	Great Sand Dun	52.90	74	eP	P	09 10 42.6	-0.1
	comp=Z,29nm,1.4s,mb5.0						
SDCO				epP	pP	09 10 54.6	-0.4
TUC	Tucson	53.24	82	P	P	09 10 45.1	-0.2
TUC				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
TUC	Tucson	53.24	82	eP	P	09 10 44.5	-0.8
	comp=Z,12nm,1.1s,mb4.8						
NVS	Novosibirsk	53.56	314	⇑iP	P	09 10 46.2	-1.2
NVS				eS	S	09 18 24.5	+8.8
NVS				pmax	pmax		
	comp=N,17nm,1.2s						
NVS				pmax	pmax		
	comp=E,20nm,1.2s						
NVS				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
NVS				smax			
	comp=N,16nm,1.1s						
NVS				smax			
	comp=E,12nm,1.4s						
SUMG	Summit	53.73	13	eP	P	09 10 47.2	-1.1
	comp=E,32nm,1.1s,mb5.2						
ANMO	Albuquerque	54.15	77	P	P	09 10 52.1	+0.2
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANMO	Albuquerque	54.15	77	eP	P	09 10 51.5	-0.5
	comp=Z,7.3nm,1.0s,mb4.6						
LZH	Lanzhou	54.43	285	eP	P	09 10 54.5	+0.5
LZH				AP	pP	09 11 09.8	+3.4
LZH				XP	sP	09 11 14.0	+2.5
LZH				PP	PP	09 12 58.0	+0.2
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,120nm,4.2s						
LZH				LR	LR		
	comp=E,1µm,15.7s						
LZH				LR	LR		
	comp=Z,2µm,16.3s,MS5.2						
LZH	Lanzhou	54.43	285	eP	P	09 10 54.6	+0.6
LZH				*PP	pP	09 11 09.8	+3.4
LZH						09 12 58.0	
LZH				eS	S	09 18 27.0	-0.7
LZH				SS	SS	09 22 04.0	-6.0
LZH				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.0						
LZH				MLR	MLR		
	comp=Z,2µm,16.3s,MS5.2						
LZH	Lanzhou	54.43	285	eP	P	09 10 54.6	+0.6
	comp=Z,28nm,1.5s,mb5.0						
LZH				pP	pP	09 11 09.8	+3.4
LZH				sP	sP	09 11 14.0	+2.5
LZH				PP	PP	09 12 58.0	+0.2
LZH				eS	S	09 18 27.0	-0.7
LZH				sS		09 18 55.0	
LZH				SS	SS	09 22 04.0	-6.0
LZH				LR	LR		
	comp=Z,2µm,16.3s,MS5.2						
BNM	Barren Site	54.58	78	eP	P	09 10 55.1	0.0
GTA	Gaotai	54.67	291	eP	P	09 10 56.1	+0.4
GTA				AP	pP	09 11 09.5	+1.4
GTA				XP	sP	09 11 15.0	+1.8
GTA				PP	PP	09 13 01.8	+2.0
GTA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
GTA				AMB	AMB		
	comp=Z,180nm,6.9s						
GTA				LR	LR		
	comp=N,670nm,16.1s,MS5.0						
GTA				LR	LR		
	comp=E,860nm,16.8s,MS5.0						
GTA				LR	LR		
	comp=Z,1µm,15.7s,MS5.0						
CBKS	Cedar Bluff	55.64	69	P	P	09 11 02.9	+0.2
CBKS				e		09 11 12.0	
CBKS				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.8						
CBKS	Cedar Bluff	55.64	69	eP	P	09 11 01.6	-1.1
	comp=Z,105nm,1.1s,mb5.8						
MNTX	Cornudas Mount	57.01	79	eP	P	09 11 11.9	-0.8
	comp=Z,11nm,0.9s,mb4.9						
CPRX	Cap Rock	57.03	77	eP	P	09 11 12.0	-0.8
AMTX	Amarillo	57.10	74	eP	P	09 11 12.6	-0.7
	comp=Z,17nm,1.0s,mb5.0						
AMTX				epP	pP	09 11 23.6	-2.1
KSU1	Kansas State U	57.27	67	eP	P	09 11 12.9	-1.6
KEV	Kevo	57.71	349	ep	P	09 11 16.0	-1.1
	comp=Z,8.2nm,0.9s,mb4.8						
KEV	Kevo	57.71	349	eP	P	09 11 16.0	-1.1
KEV				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
JMIC	Jan Mayen	57.99	3	LR	LR	09 36 04.9	
	comp=Z,216nm,18.1s,MS4.3,baz=264,slow=36						
ARCES	ARCESS Array B	58.10	350	P	P	09 11 17.6	-2.2
	comp=Z,3.4nm,0.8s,mb4.4,baz=25,slow=7.1,SNR=8.2						
WMQ	Urumqi	58.56	302	eP	P	09 11 24.0	+0.6
WMQ				AP	pP	09 11 36.7	+0.8
WMQ				XP	sP	09 11 42.0	+1.1
WMQ				PCP	PcP	09 12 13.6	+0.5
WMQ				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,330nm,5.6s						
WMQ				LR	LR		
	comp=N,1µm,20.0s,MS5.1						
WMQ				LR	LR		
	comp=E,1µm,20.5s,MS5.1						
WMQ				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
WMOK	Wichita Mounta	58.95	72	eP	P	09 11 25.1	-1.0
WMOK				e*PP	pP	09 11 36.5	-2.1
WMOK				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
WMOK	Wichita Mounta	58.95	72	eP	P	09 11 25.1	-1.1
	comp=Z,19nm,1.0s,mb5.1						
WMOK				epP	pP	09 11 36.5	-2.1
GYA	Guiyang	59.30	275	⇓iP	P	09 11 27.8	-0.9
GYA				AP	pP	09 11 40.5	-0.7
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,320nm,4.0s						
GYA				LR	LR		
	comp=N,490nm,19.0s,MS4.9						
GYA				LR	LR		
	comp=E,670nm,18.2s,MS4.9						
GYA				LR	LR		
	comp=Z,710nm,18.0s,MS4.8						
MKAR	Makanchi Array	59.33	308	P	P	09 11 26.6	-2.0
	comp=Z,3.5nm,0.4s,mb4.8,baz=51,slow=7.0,SNR=47						
MKAR				LR	LR	09 39 23.1	
	comp=Z,784nm,18.2s,MS4.9,baz=7.7,slow=38						
LTX	Lajitas	59.71	80	P	P	09 11 31.3	-0.2
LTX				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
LTX	Lajitas	59.71	80	eP	P	09 11 30.8	-0.7
	comp=Z,9.2nm,0.9s,mb4.8						
TXAR	Lajitas Array	59.71	80	P	P	09 11 30.6	-0.9
	comp=Z,2.3nm,0.5s,mb4.5,baz=302,slow=5.5,SNR=57						
TXAR				LR	LR	09 37 59.1	
	comp=Z,514nm,18.4s,MS4.7,baz=240,slow=37						
SOKR	Solikamsk	60.29	330	eP	P	09 11 35.1	+0.1
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SOKR				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.6						
BVA0	Borovoye Array	60.36	319	i P	P	09 11 34.0	-1.6
BVA0				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
BVAR	Borovoye Array	60.36	319	P	P	09 11 35.8	+0.2
	comp=Z,31nm,0.7s,mb5.4,baz=50,slow=6.8,SNR=136						
SCHQ	Schefferville	60.79	37	P	P	09 11 36.0	-2.5
	comp=Z,5.0nm,0.8s,mb4.7,baz=346,slow=7.2,SNR=8.3						
SVE	Sverdlovsk	61.19	327	eP	P	09 11 41.2	0.0
SLM	Saint Louis	61.23	63	eP	P	09 11 40.6	-1.1
FVM	French Village	61.58	64	P	P	09 11 42.3	-1.7
FVM				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.0						
FVM	French Village	61.58	64	eP	P	09 11 42.1	-1.9
	comp=Z,8.6nm,0.7s,mb5.0						
ARU	Arti	62.21	327	⇓iP	P	09 11 46.7	-1.3
ARU				e		09 12 25.7	
ARU				e		09 14 02.2	
ARU				eS	S	09 20 10.8	+2.0
ARU				eSS	SS	09 24 15.4	+1.3
ARU				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.4						
ARU				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.0						
ARU				MLR	MLR		
	comp=N,600nm,19.0s,MS4.9						
ARU				MLR	MLR		
	comp=E,600nm,19.0s,MS4.9						
ARU	Arti	62.21	327	eP	P	09 11 47.2	-0.8
	comp=E,41nm,1.1s,mb5.5						
HNR	Honiara	62.71	202	LR	LR	09 36 18.6	
	comp=E,618nm,19.7s,MS4.8,baz=18,slow=33						
KMI	Kunming	62.72	277	P	P	09 11 51.6	-0.3
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.7						
KMI	Kunming	62.72	277	P	P	09 11 51.6	-0.3
	comp=Z,8.0nm,1.2s,mb4.7						
PARMO	Parma	62.88	65	eP	P	09 11 52.2	-0.6
BLO	Bloomington	62.91	61	P	P	09 11 53.2	+0.2
BLO				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.2						
BLO	Bloomington	62.91	61	eP	P	09 11 51.2	-1.7
	comp=Z,11nm,0.6s,mb5.2						
UTMT	University of	63.62	64	eP	P	09 11 56.8	-0.8
	comp=Z,82nm,1.0s,mb5.7						
MET	Memphis--Engin	63.87	66	eP	P	09 11 58.8	-0.4
WVT	Waverly	64.35	64	P	P	09 12 01.0	-1.3
WVT				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
WVT	Waverly	64.35	64	eP	P	09 12 00.8	-1.5
	comp=Z,14nm,0.9s,mb5.0						
OXF	Oxford	64.61	66	P	P	09 12 03.7	-0.3
OXF				pmax	pmax		
	comp=Z,160nm,1.0s,mb6.0						
OXF	Oxford	64.61	66	eP	P	09 12 02.8	-1.2
	comp=Z,164nm,1.1s,mb6.0						
PLAL	Pickwick Lake	65.04	65	eP	P	09 12 05.4	-1.4
	comp=Z,24nm,0.6s,mb5.4						
KAF	Kangasniemi	65.06	346	ep	P	09 12 04.0	-2.5
	comp=Z,9.4nm,1.0s,mb4.8,baz=8.3,slow=5.5						
KAF	Kangasniemi	65.06	346	eP	P	09 12 04.0	-2.5
KAF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
AFI	Afiamalu	65.26	171	LR	LR	09 32 49.0	
	comp=Z,390nm,21.7s,MS4.6,baz=277,slow=29						
TKM2	Tokmak 2	65.42	308	P	P	09 12 10.1	+1.0
	SNR=20						
ULHL	Ulahol	65.60	307	P	P	09 12 11.4	+1.1
	SNR=11						
USP	Ospenovka	65.70	309	P	P	09 12 11.7	+0.8
	SNR=35						
FINES	FINESS Array B	65.73	346	P	P	09 12 09.6	-1.2
	comp=Z,1.5nm,0.4s,mb4.4,baz=21,slow=6.0,SNR=12						
FINES				LR	LR	09 46 58.8	
	comp=Z,360nm,18.0s,MS4.6,baz=33,slow=42						
FINES	FINESS Array B	65.73	346	P	P	09 12 09.6	-1.2
FINES				LR	LR	09 46 58.8	
CHMS	Chumysh	65.78	309	P	P	09 12 12.3	+0.9
	SNR=6.2						
KBK	Karagaybulak	65.94	309	P	P	09 12 09.7	-2.8
	SNR=8.8						
FRU	Bishkek	65.97	309	eP	P	09 12 14.0	+1.4
FRU				e		09 12 45.0	
SWET	Sewanee	66.08	63	eP	P	09 12 12.0	-1.5
AAK	Ala-Archa	66.18	309	P	P	09 12 14.9	+0.9
	SNR=13						
AAK	Ala-Archa	66.18	309	eP	P	09 12 13.6	-0.4
AAK				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
AAK	Ala-Archa	66.18	309	eP	P	09 12 13.6	-0.4
	comp=Z,20nm,1.0s,mb5.1						
BINY	Binghamton	66.22	52	eP	P	09 12 13.3	-0.9
	comp=Z,12nm,0.9s,mb4.9						
KZA	Kyzart	66.22	308	P	P	09 12 15.6	+1.3
	SNR=18						
TZTN	Tazewell	66.44	61	eP	P	09 12 15.3	-0.4
UCH	Uchtor	66.47	309	P	P	09 12 17.0	+1.2
	SNR=20						
EKS2	Erkin-Say	66.51	309	P	P	09 12 17.1	+1.1
	SNR=18						
LSA	Lhasa	66.52	289	eP	P	09 12 17.0	+0.7
LSA				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.1						
LSA	Lhasa	66.52	289	eP	P	09 12 17.0	+0.7
	comp=Z,24nm,1.1s,mb5.2						
CPCT	Cooper Cave	66.70	62	eP	P	09 12 16.0	-1.4
AML	Almayashu	66.95	309	P	P	09 12 20.7	+1.9
	SNR=30						
LRAL	Lakeview Retre	67.06	66	eP	P	09 12 18.4	-1.2
	comp=Z,12nm,0.8s,mb5.0						
AB31	Akbulak array	67.45	322	P	P	09 12 21.1	-0.8
AB31				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
NB2	NORSAR Subarra	67.73	354	P	P	09 12 22.1	-1.3
	comp=Z,26nm,1.0s,mb5.2,baz=8.0,slow=6.2						
NB2	NORSAR Subarra	67.73	354	P	P	09 12 22.1	-1.3
	baz=7.8,slow=6.5						
NOA	NORSAR Array B	67.73	354	P	P	09 12 22.5	-0.9
	comp=Z,19nm,0.9s,mb5.1,baz=7.7,slow=6.3,SNR=30						
KKAR	Karatay Array	67.74	312	i P	P	09 12 22.9	-0.9
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
KSH	Kashi	67.77	306	eP	P	09 12 24.5	+0.5
KSH				eAP	pP	09 12 36.6	-0.2
KSH				eXP	sP	09 12 42.3	+0.7
KSH				AMB	AMB		
	comp=Z,390nm,3.8s						
KSH				LR	LR		
	comp=N,2µm,16.6s						
KSH				LR	LR		
	comp=E,610nm,9.1s						
HFS	Hagfors	68.45	352	LR	LR	09 43 31.8	
	comp=E,400nm,20.1s,MS4.7,baz=345,slow=37						
VSU	Vasula	68.48	345	eP	P	09 12 27.8	-0.3
SHL	Shillong	69.10	285	eP	P	09 12 32.0	-0.5
SHL				ex	x	09 17 29.5	
JSC	Jenkinsville	69.36	61	P	P	09 12 33.8	-0.2
JSC	Jenkinsville	69.36	61	eP	P	09 12 33.1	-0.8
OBN	Obninsk	69.67	338	⇑iP	P	09 12 35.1	-0.4
OBN				e		09 12 59.8	
OBN				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
CMAR	Chiang Mai Arr	69.99	275	P	P	09 12 37.9	-0.2
	comp=Z,5.5nm,0.9s,mb4.5,baz=28,slow=7.6,SNR=8.8						
NHSC	New Hope	70.84	61	P	P	09 12 42.5	-0.5
	comp=Z,81nm,1.3s,mb5.5						
GUN	Gumba	70.96	291	eP	P	09 12 44.8	+1.0
	comp=Z,175nm,1.0s,mb5.9						
KKN	Kakani	71.40	291	eP	P	09 12 46.6	+0.2
	comp=Z,94nm,0.9s,mb5.7						
KKN	Kakani	71.40	291	eP	P	09 12 46.6	+0.2
KKN				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.4						
PKI	Pulchoki	71.49	291	eP	P	09 12 47.5	+0.5
	comp=Z,149nm,1.3s,mb5.8						
PKI	Pulchoki	71.49	291	eP	P	09 12 47.5	+0.5
PKI				pmax	pmax		
	comp=Z,75nm,1.3s,mb5.5						
GKN	Gorkha	71.62	292	eP	P	09 12 47.7	0.0
	comp=Z,93nm,1.0s,mb5.7						
DMN	Daman	71.64	291	eP	P	09 12 48.1	+0.3
	comp=Z,88nm,1.1s,mb5.6						
PPT	Papeete	73.61	149	eS	S	09 22 25.8	+0.4
	comp=Z,801nm,27.0s						
PPT				eLR	LR	09 35 17.7	
	comp=Z,1µm,25.0s,baz=344						
PPT	Papeete	73.61	149	LR	LR	09 42 10.2	
	comp=Z,721nm,18.1s,MS5.0,baz=159,slow=33						
BSEG	Bad Segeberg	74.86	353	eP	P	09 13 07.2	+1.1
BSEG				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
AKASG	Malin Array Be	75.40	341	P	P	09 13 08.8	-0.5
	comp=Z,2.1nm,0.4s,mb4.4,baz=20,slow=5.6,SNR=22						
CTA	Charters Tower	76.75	212	⇓iP	P	09 13 18.0	+0.4
	comp=Z,30nm,0.6s,mb5.4						
CTA	Charters Tower	76.75	212	⇓iP	P	09 13 18.0	+0.4
CTA				pmax	pmax		
	comp=Z,30nm,0.6s						
CLZ	Clausthal	76.94	353	eP	P	09 13 18.8	+0.8
CLZ				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.0						
CLZ	Clausthal	76.94	353	eP	P	09 13 18.8	+0.8
	comp=Z,26nm,1.3s,mb5.0						
CLL	Collm	77.25	351	eP	P	09 13 19.0	-0.7
CLL				pmax	pmax		
	comp=Z,16nm,1.6s,mb4.7						
CLL	Collm	77.25	351	eP	P	09 13 19.0	-0.7
	comp=Z,16nm,1.6s,mb4.7						
CLL	Collm	77.25	351	P	P	09 13 19.0	-0.7
	comp=Z,logA/T=1.0,mb4.7						
BRG	Berggiesshubel	77.58	351	i P	P	09 13 22.3	+0.7
BRG				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
BRG				MLR	MLR		
	comp=N,360nm,23.5s,MS4.8						
BRG				MLR	MLR		
	comp=E,404nm,23.5s,MS4.8						
BRG				MLR	MLR		
	comp=Z,397nm,16.7s						
BRG	Berggiesshubel	77.58	351	i P	P	09 13 22.2	+0.6
	comp=Z,4.8nm,0.7s,mb4.5						
BRG				LR	LR		
	comp=Z,400nm,16.7s,MS4.8						
KWP	Kalwaria	77.63	345	eP	P	09 13 20.6	-1.3
KWP				pmax	pmax		
	comp=Z,55nm,1.2s,mb5.4						
KWP	Kalwaria	77.63	345	eP	P	09 13 20.6	-1.3

	comp=Z,55nm,1.2s,mb5.4						
MOX	Moxa	78.03	352	eP	P	09 13 24.0	0.0
KIV	Kislovodsk	78.12	330	eP	P	09 13 23.9	-0.8
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
KIV				pmax	pmax		
	comp=E,4.0nm,0.8s						
KIV				MLR	MLR		
	comp=N,298nm,15.0s,MS4.8						
KIV				MLR	MLR		
	comp=E,230nm,15.0s,MS4.8						
KIV				MLR	MLR		
	comp=Z,272nm,15.0s,MS4.7						
KOLS	Kolonicke sedl	78.38	345	eP	P	09 13 27.0	+1.0
TNS	Taunus Mts	78.68	354	eP	P	09 13 28.4	+0.7
TNS				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
TNS	Taunus Mts	78.68	354	eP	P	09 13 28.4	+0.7
	comp=Z,8.0nm,0.9s,mb4.7						
ZEI	Tsey	78.79	328	eP	P	09 13 22.3	-6.1
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
ANN	Anapa	78.92	334	eP	P	09 13 25.5	-3.6
ANN				MLR	MLR		
	comp=N,900nm,20.0s,MS5.1						
ANN				MLR	MLR		
	comp=E,265nm,20.0s,MS5.1						
ANN				MLR	MLR		
	comp=Z,560nm,20.0s,MS4.9						
GIVF	Givet	78.99	357	eP	P	09 13 29.8	+0.5
GRA1	Grafenberg Arr	79.01	352	eP	P	09 13 30.3	+0.8
	comp=Z,30nm,1.4s,mb5.0						
GRF	Grafenberg Arr	79.01	352	eP	P	09 13 30.3	+0.8
GRF				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0						
GRF	Grafenberg Arr	79.01	352	eP	P	09 13 30.3	+0.8
GRF				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0						
GRF	Grafenberg Arr	79.01	352	eP	P	09 13 30.3	+0.8
	comp=Z,30nm,1.4s,mb5.0						
BAIF	Baives	79.05	357	eP	P	09 13 30.2	+0.5
TBI	Tubuai	79.07	151	eS	PS	09 24 11.8	-2.4
	comp=Z,890nm,26.5s						
TBI				eLR	LR	09 37 20.2	
	comp=Z,1µm,23.5s,baz=340						
KECS	Kecovo	79.10	346	eP	P	09 13 30.3	+0.3
VYHS	Vyhne	79.33	347	eP	P	09 13 32.3	+1.1
VYHS				e	pP	09 13 46.1	+1.9
KHC	Kasperske Hory	79.34	351	eP	P	09 13 30.2	-1.1
KHC	Kasperske Hory	79.34	351	eP	P	09 13 31.0	-0.3
SOC	Sochi	79.37	332	eP	P	09 13 29.2	-2.4
SOC				eS	S	09 23 22.0	-5.6
SOC				eSS	SS	09 28 36.1	-2.1
SOC				eSSS	SSS	09 32 05.1	+7.0
SOC				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.2						
SOC				pmax	pmax		
	comp=N,28nm,1.0s						
SOC				pmax	pmax		
	comp=E,11nm,0.9s						
SOC				MLR	MLR		
	comp=N,397nm,16.0s,MS4.8						
SOC				MLR	MLR		
	comp=Z,665nm,16.0s,MS5.1						
SOC				MLR	MLR		
	comp=E,68nm,18.0s,MS4.8						
GEC2	GERESS Array S	79.61	351	eP	P	09 13 33.3	+0.5
GEC2				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
GEC2	GERESS Array S	79.61	351	eP	P	09 13 33.3	+0.5
	comp=Z,5.0nm,1.1s,mb4.4						
GERES	GERESS Array B	79.61	351	P	P	09 13 33.1	+0.4
	comp=Z,0.9nm,0.5s,mb3.9,baz=45,slow=3.8,SNR=8.2						
GERES				LR	LR	09 53 36.4	
	comp=Z,580nm,20.9s,MS4.9,baz=14,slow=39						
SIM	Simferopol’	79.68	336	P	P	09 13 40.0	+6.8
PSZ	Piszkesteto	79.74	346	eP	P	09 13 33.3	-0.2
PSZ				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
PSZ	Piszkesteto	79.74	346	eP	P	09 13 33.3	-0.1
	comp=Z,12nm,1.1s,mb4.7						
ZST	Bratislava	79.86	348	eP	P	09 13 35.4	+1.3
FLN	La Foliniere	80.43	0	eP	P	09 13 37.2	+0.1
FLN				eR			
	comp=Z,396nm,22.8s						
CDF	Champ du Feu	80.56	355	eP	P	09 13 38.1	+0.3
BFO	Black Forest	80.58	354	eP	P	09 13 38.5	+0.6
BFO				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
BFO	Black Forest	80.58	354	eP	P	09 13 38.5	+0.6
	comp=Z,6.0nm,1.1s,mb4.4						
MEZF	Maizieres J’vi	80.58	356	eP	P	09 13 38.4	+0.5
LDF	La Druitiere	80.60	360	eP	P	09 13 37.8	-0.2
GRR	Gorron	80.80	0	eP	P	09 13 39.4	+0.3
	comp=Z,20nm,0.9s,mb4.8						
GRR	Gorron	80.80	0	eP	P	09 13 39.4	+0.3
GRR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
ROSF	Rostrenen	80.83	2	eP	P	09 13 39.7	+0.5
	comp=Z,87nm,1.4s,mb5.2						
ROSF	Rostrenen	80.83	2	eP	P	09 13 39.7	+0.5
ROSF				pmax	pmax		
	comp=Z,44nm,1.4s,mb5.2						
GNI	Garni	80.84	327	eP	P	09 13 38.8	-0.7
GNI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SGMF	Saint Gilles	80.92	1	eP	P	09 13 40.2	+0.5
	comp=Z,24nm,0.8s,mb4.9						
SGMF	Saint Gilles	80.92	1	eP	P	09 13 40.2	+0.5
SGMF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
HAU	Haudompre	81.01	355	eP	P	09 13 40.5	+0.3
HAU				eR			
	comp=Z,426nm,21.2s						
WRAB	Tennant Creek	81.15	222	eP	P	09 13 40.7	-0.8
HINF	Hinteralfeld	81.18	355	eP	P	09 13 41.1	0.0
QUIF	Quistinic	81.25	2	eP	P	09 13 41.9	+0.4
	comp=Z,41nm,1.3s,mb4.9						
QUIF	Quistinic	81.25	2	eP	P	09 13 41.9	+0.4
QUIF				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
LOR	Lormes	81.85	357	eP	P	09 13 45.2	+0.6
LOR				eR			
	comp=Z,372nm,19.5s						
DAVOX	Davos	82.01	353	LR	LR	09 52 37.8	
	comp=Z,233nm,19.7s,MS4.5,baz=88,slow=38						
SSF	Saint Saulge	82.07	357	eP	P	09 13 46.2	+0.5
AVF	Avril sur Loir	82.35	357	eP	P	09 13 47.6	+0.4
	comp=Z,18nm,1.0s,mb4.6						
AVF	Avril sur Loir	82.35	357	eP	P	09 13 47.6	+0.4
AVF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
CABF	La Chapelle	82.42	355	eP	P	09 13 48.3	+0.8
SMF	Signal de Mont	82.48	357	eP	P	09 13 48.3	+0.5
	comp=Z,27nm,1.0s,mb4.8						
SMF	Signal de Mont	82.48	357	eP	P	09 13 48.3	+0.5
SMF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
MFF	Saint Martin d	82.59	360	eP	P	09 13 48.9	+0.5
	comp=Z,22nm,1.0s,mb4.8						
MFF	Saint Martin d	82.59	360	eP	P	09 13 48.9	+0.5
MFF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
TCF	Toulx Ste Croi	82.88	358	eP	P	09 13 50.4	+0.5
HYB	Hyderabad	83.30	289	⇓eP	P	09 13 53.0	+0.4
HYB				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
HYB	Hyderabad	83.30	289	⇓eP	P	09 13 53.0	+0.4
	comp=Z,40nm,1.0s,mb5.4						
HYB	Hyderabad	83.30	289	⇓iP	P	09 13 53.0	+0.4
	comp=Z,40nm,1.0s,mb5.4						
LPG	La Plagne	83.49	355	eP	P	09 13 56.1	+3.1
FITZ	Fitzroy Crossi	83.53	231	P	P	09 13 53.4	-0.3
	comp=Z,9.3nm,0.6s,mb5.1,baz=63,slow=6.8,SNR=4.4						
BBLS	Bajina Basta -	83.77	346	⇑iP	P	09 13 55.5	+1.1
RJF	Les Rejaudoux	83.87	359	eP	P	09 13 55.5	+0.6
RJF				eR			
	comp=Z,445nm,21.5s						
ORIF	Oris-en-Rattie	84.12	355	eP	P	09 13 57.7	+1.6
ORIF				eR			
	comp=Z,307nm,21.5s						
VIVF	Saint-Julien-l	84.23	356	eP	P	09 13 57.7	+1.0
	comp=Z,16nm,1.1s,mb4.8						
VIVF	Saint-Julien-l	84.23	356	eP	P	09 13 57.7	+1.0
VIVF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.8						
CAF	Calviac	84.24	358	eP	P	09 13 57.9	+1.2
LFF	La Frestale	84.25	359	eP	P	09 13 57.8	+1.0
BR131	Keskin Array S	84.68	334	eP	P	09 14 00.6	+1.5
	comp=Z,2.0nm,0.5s,mb4.5						
SMRF	Simiane la Rot	85.07	356	eP	P	09 14 02.6	+1.7
	comp=Z,32nm,1.1s,mb5.0						
SBF	Sospel	85.08	354	eP	P	09 14 01.5	+0.6
	comp=Z,35nm,0.9s,mb5.2						
SBF	Sospel	85.08	354	eP	P	09 14 01.5	+0.6
SBF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.2						
POO	Poona	85.18	294	⇓iP	P	09 14 01.0	-1.0
	comp=Z,30nm,1.0s,mb5.4						
ETSF	Etsaut	86.29	0	eP	P	09 14 08.3	+1.4
URZ	Urewera	89.10	182	LR	LR	09 45 37.0	
	comp=Z,180nm,21.6s,MS4.5,baz=219,slow=30						
STKA	Stephens Creek	89.21	212	LR	LR	09 52 20.0	
	comp=Z,633nm,19.6s,MS5.0,baz=20,slow=34						
PLCA	Paso Flores	131.91	106	PKP	PKPdf	09 20 39.0	+1.6
	comp=Z,1.7nm,0.8s,baz=85,slow=20,SNR=2.2						
TSUM	Tsumeb	145.04	329	ePKP	PKPdf	09 21 02.7	+1.2
MAW	Mawson	145.70	217	PKPbc	PKPbc	09 21 04.2	+2.2
	comp=Z,2.3nm,0.8s,baz=97,slow=7.7,SNR=4.0						
LBTB	Lobatse	147.11	313	ePKP2	PKPab	09 21 07.4	-3.5
BOSA	Boshof	150.31	310	PKPbc	PKPdf	09 21 17.6	+7.6
	comp=Z,9.3nm,0.7s,baz=330,slow=3.8,SNR=4.4						

NIED **14** *09:04:00, 30.70N×142.10E, h5^{km}, Mw4.5 Best double couple: $M_0$7.1×10^{15} NP1:ϕ_s49°, δ82°, λ112°. NP2:ϕ_s157°, δ23°, λ20°.*

IDC **14** *09:04:19.5±0.7, 30.52N×141.73E, mb4.2/12, mb1 4.4/15, mb1mx4.4/21, mbtmp4.2/15, ML4.2/3, MS3.8/4, Ms1 3.8/4, ms1mx3.6/36, Error ellipse: s-maj=21.3km s-min=17.6km az=72.0*

JMA **14** *09:04:20.5±0.2, 30.67N×142.12E, h50^{km}, M4.5*

MOS **14** *09:04:20.3±1.2, 30.44N×141.68E, h20^{km}, mb5.0/12, Error ellipse: s-maj=23.0km s-min=9.0km az=111.7*

NEIC **14** *09:04:22.4±3.6, 30.50N×141.73E, h20^{km}±24^{km}, mb4.7/2, MW4.5(NIED), Error ellipse: s-maj=14.9km s-min=10.0km az=97.0*

ISC 14 09:04:22.3±0.4**, 30.54N**±0.03×**141.7E**±0.1**, h33^{km}, n52, σ1^{s}04**/60**, mb4.4**/22**, 2C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.02	329	P	P	09 05 08.9	+0.1
JHJ	Hachijo jima 2	3.04	328	Pn	Pn	09 05 08.2	-1.1
	25nm,0.3s,baz=73,slow=15,SNR=20						
JHJ				Sn	Sn	09 05 45.1	+0.1
	61nm,0.3s,baz=85,slow=23,SNR=5.9						
JHJ				LR	LR	09 06 32.8	
	comp=Z,2µm,18.7s,baz=96,slow=44						
CBIJ	Chichi jima	3.46	173	Pn	Pn	09 05 14.7	-0.6
	60nm,0.3s,baz=307,slow=19,SNR=11						
CBIJ				Sn	Sn	09 05 53.0	-2.6
	45nm,0.3s,baz=283,slow=22,SNR=8.6						
CBIJ				LR	LR	09 06 27.3	
	comp=Z,492nm,18.2s,baz=137,slow=37						
CBIJ	Chichi jima	3.46	173	P	P	09 05 14.8	-0.3
JHHJ	Haha-jima-NKT	3.92	174	P	P	09 05 21.9	+0.3
JHHJ				eS	S	09 06 05.0	-2.1
BSO1	Boso 1	4.14	352	P	P	09 05 22.1	-2.7
BSO1				eS	S	09 06 08.4	-4.4
JKO	Kozu shima	4.23	330	P	P	09 05 25.9	-0.1
BSO2	Boso 2	4.27	350	eS	S	09 06 15.4	-0.6
BSO3	Boso 3	4.36	347	P	P	09 05 26.8	-1.1
BSO3				eS	S	09 06 18.1	-0.2
JOD2	Odawara 2	5.19	336	eS	S	09 06 39.0	-0.2
JIE	Ise	5.70	314	P	P	09 05 48.3	+1.5
JRY	Ryogami san	5.94	338	P	P	09 05 49.6	-0.5
JRY				eS	S	09 06 56.4	-1.6
MJAR	Matsushiro Arr	6.65	335	Pn	Pn	09 05 59.5	-0.9
	4.5nm,0.3s,baz=154,slow=11,SNR=55						
MJAR				Sn	Sn	09 07 15.9	+0.1
	1.1nm,0.3s,baz=158,slow=21,SNR=6.1						
MAJO	Matsushiro	6.66	335	eP	P	09 05 59.4	-0.8
MAJO				pmax	pmax		
	comp=Z,39nm,0.6s						
MAJO	Matsushiro	6.66	335	ePn	Pn	09 05 59.4	-1.0
	comp=Z,39nm,0.6s						
MAT	Matsushiro	6.66	335	eP	P	09 06 00.0	-0.2
MAT				eS	S	09 07 15.0	-0.8
MAT				pmax	pmax		
	comp=Z,28nm,1.0s						
MAT	Matsushiro	6.66	335	eP	P	09 06 00.0	-0.2
	comp=Z,28nm,1.0s						
MAT				eS	S	09 07 15.0	-0.8
MAT	Matsushiro	6.66	335	P	P	09 06 00.2	0.0
MAT				S	S	09 07 14.5	-1.3
JMK	Ichinoseki	8.40	357	P	P	09 06 20.2	-4.3
JMK				eS	S	09 07 47.5	-12
JNU	Nakatsue	9.55	288	Pn	P	09 06 45.0	+4.5
	comp=Z,0.3nm,0.3s,baz=50,slow=26,SNR=3.6						
JNU				LR	LR	09 10 32.8	
	comp=Z,998nm,18.5s,baz=88,slow=39						
JOW	Kunigami	12.35	256	LR	LR	09 11 44.9	
	comp=Z,740nm,20.8s,baz=266,slow=36						
SONM	Songino Array	32.00	313	P	P	09 10 48.8	+1.2
	comp=Z,5.6nm,0.8s,mb4.5,baz=121,slow=8.0,SNR=5.3						
TLY	Talaya	35.05	318	eP	P	09 11 15.8	+1.9
TLY				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
CMAR	Chiang Mai Arr	40.50	263	P	P	09 12 00.9	+1.1
	comp=Z,1.8nm,0.6s,mb4.0,baz=72,slow=6.0,SNR=6.1						
MKAR	Makanchi Array	48.00	307	i P	P	09 13 00.3	+0.4
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	Makanchi Array	48.00	307	P	P	09 13 00.8	+1.0
	comp=Z,4.4nm,0.7s,mb4.6,baz=88,slow=8.9,SNR=6.5						
WRAB	Tennant Creek	50.68	189	eP	P	09 13 20.1	-0.7
WRAB				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
WRAB	Tennant Creek	50.68	189	eP	P	09 13 20.1	-0.7
	comp=Z,20nm,0.8s,mb5.1						
WB2	Warramunga Arr	50.69	189	eP	P	09 13 20.4	-0.4
WRA	Warramunga Arr	50.69	189	P	P	09 13 20.2	-0.6
	comp=Z,4.8nm,0.3s,mb4.8,baz=6.5,slow=7.7,SNR=44						
ILAR	Eielson Array	54.92	30	P	P	09 13 52.6	+0.9
	comp=Z,2.1nm,1.0s,mb4.1,baz=263,slow=7.0,SNR=7.5						
BVA0	Borovoye Array	55.25	316	i P	P	09 13 57.2	+2.9
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.8						
KKAR	Karatay Array	56.77	304	i P	P	09 14 06.0	+0.7
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
SVE	Sverdlovsk	60.26	321	⇑eP	P	09 14 30.0	+0.5
SVE				e		09 15 14.6	
SVE				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.4						
ARU	Arti	61.46	321	⇑iP	P	09 14 37.5	-0.1
ARU				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
ARU	Arti	61.46	321	eP	P	09 14 37.7	0.0
	comp=Z,26nm,0.9s,mb5.4						
AB31	Akbulak array	62.42	313	i P	P	09 14 44.0	-0.1
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
YKA	Yellowknife Ar	69.33	29	P	P	09 15 30.0	+2.1
	comp=Z,0.7nm,0.8s,mb3.7,baz=293,slow=5.6,SNR=3.5						
OBN	Obninsk	73.47	325	eP	P	09 15 53.8	+0.9
OBN				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
KAF	Kangasniemi	74.20	334	ep	P	09 15 56.7	-0.2
	comp=Z,1.4nm,0.4s,mb4.2,baz=52,slow=5.5						
KAF	Kangasniemi	74.20	334	eP	P	09 15 56.7	-0.2
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
FINES	FINESS Array B	74.68	333	P	P	09 16 00.3	+0.6
	comp=Z,3.1nm,0.8s,mb4.3,baz=58,slow=4.8,SNR=8.7						
KIV	Kislovodsk	75.40	313	eP	P	09 16 06.1	+1.9
KIV				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
NVAR	Mina Array Bea	78.74	52	P	P	09 16 23.3	+0.3
	comp=Z,0.8nm,0.6s,mb3.9,baz=292,slow=7.7,SNR=6.2						
AKASG	Malin Array Be	79.60	323	P	P	09 16 27.8	+0.3
	comp=Z,0.6nm,0.4s,mb3.9,baz=44,slow=5.2,SNR=5.5						
AKASG				PP	PP	09 19 27.3	-2.5
	comp=Z,0.2nm,0.2s,baz=46,slow=7.8,SNR=4.7						
AKASG	Malin Array Be	79.60	323	P	P	09 16 27.8	+0.3
AKASG				PP	PP	09 19 27.3	-2.6
NB2	NORSAR Subarra	80.27	338	P	P	09 16 31.0	+0.2
	comp=Z,0.9nm,0.6s,mb3.9,baz=40,slow=5.3						
NOA	NORSAR Array B	80.27	338	P	P	09 16 31.3	+0.5
	comp=Z,2.4nm,0.8s,mb4.2,baz=40,slow=5.2,SNR=5.7						
PDAR	Pinedale Array	82.07	45	P	P	09 16 41.0	+0.3
	comp=Z,0.2nm,0.5s,mb3.3,baz=56,slow=48,SNR=3.2						
TXAR	Lajitas Array	93.88	53	P	P	09 17 38.8	+1.1
	comp=Z,0.6nm,0.8s,mb4.1,baz=270,slow=1.3,SNR=5.4						
LPAZ	La Paz	149.29	69	PKP2	PKPab	09 24 13.2	-1.7
LPAZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LPAZ	La Paz	149.29	69	PKPbc	PKPdf	09 24 13.2	+9.4
	comp=Z,2.9nm,1.0s,baz=297,slow=2.3,SNR=5.0						

LDG **14** *09:05:01.4±0.3, 14.71S×167.11E, h10^{km}, Mb5.1/2, Error ellipse: s-maj=49.8km s-min=11.1km az=90.0*

BJI **14** *09:05:03.1, 14.56S×167.07E, h22^{km}, mB5.4, mb5.2, Ms5.3, Msz4.9*

MOS **14** *09:05:03.6±1.0, 14.95S×166.87E, h33^{km}, mb5.2/23, Error ellipse: s-maj=14.1km s-min=10.8km az=129.0*

CRAAG **14** *09:05:03.9, 14.92S×166.83E, Mb5.4*

NEIC **14** *09:05:04.9±1.1, 15.02S×166.93E, h38^{km}±9^{km}, mb5.3/36, MS4.9/108, Error ellipse: s-maj=8.0km s-min=7.3km az=70.0*

IDC **14** *09:05:05.6±3.2, 15.00S×166.92E, h40^{km}±27^{km}, mb4.7/20, mb1 4.8/22, mb1mx4.8/22, mbtmp4.9/22, ML4.9/2, MS4.7/14, Ms1 4.7/14, ms1mx4.5/27, Error ellipse: s-maj=16.5km s-min=14.2km az=79.0*

ISC 14 09:05:04.1±0.2**, 15.03S**±0.04×**166.84E**±0.05**, h43^{km}, h43^{km}**±2.2^{km}**:pP-P, n424, σ0^{s}95**/142**, mb5.2**/65**, MS4.9**/123**, 19C-8D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.01	183	eP	P	09 06 45.7	-1.2
DZM				eS	S	09 08 01.3	-4.9
DZM	Mont Dzumac	7.01	183	Pn	P	09 06 46.8	-0.1
	6.7nm,0.3s,baz=34,slow=19,SNR=43						
DZM				Sn	S	09 08 04.1	-2.1
	3.4nm,0.3s,baz=155,slow=23,SNR=3.0						
DZM				LR	LR	09 09 23.7	
	comp=Z,7µm,18.1s,baz=3.5,slow=37						
NOUC	Port Laguerre	7.05	184	eP	P	09 06 44.6	-2.8
NOUC				eS	S	09 08 01.5	-5.7
NOUC	Port Laguerre	7.05	184	eP	P	09 06 44.6	-2.8
NOUC				eS	S	09 08 01.5	-5.7
HNR	Honiara	8.74	309	P	P	09 07 10.9	+0.1
HNR						09 08 46.8	
HNR				pmax	pmax		
	comp=Z,43nm,0.3s						
HNR				smax			
	comp=N,40nm,0.3s						
HNR				MLR	MLR		
	comp=Z,5µm,19.4s						
HNR	Honiara	8.74	309	Pn	P	09 07 10.9	+0.1
	comp=Z,43nm,0.3s,baz=148,slow=4.3,SNR=13						
HNR				Sn	S	09 08 46.8	-2.2
	comp=Z,40nm,0.3s,baz=44,slow=16,SNR=4.2						
HNR				LR	LR	09 10 18.2	
	comp=Z,5µm,19.4s,baz=144,slow=36						
HNR	Honiara	8.74	309	ePn	P	09 07 09.6	-1.1
RAO	Raoul Island	19.96	138	LR	LR	09 15 38.8	
	comp=Z,2µm,21.5s,baz=178,slow=32						
PMG	Port Moresby	20.03	284	P	P	09 09 36.1	-0.2
PMG				pmax	pmax		
	comp=Z,30nm,1.0s						
PMG	Port Moresby	20.03	284	P	P	09 09 36.1	-0.2
	comp=Z,30nm,0.9s,baz=159,slow=2.5,SNR=7.9						
PMG	Port Moresby	20.03	284	eP	P	09 09 36.3	0.0
	comp=Z,146nm,1.0s						
PMG				LR	LR		
	comp=Z,2µm,19.0s,MS4.4						
CTA	Charters Tower	20.26	253	⇓iP	P	09 09 39.4	+0.7
	comp=Z,45nm,1.0s						
CTA	Charters Tower	20.26	253	P	P	09 09 39.5	+0.8
CTA				pmax	pmax		
	comp=Z,56nm,1.0s						
CTA				MLR	MLR		
	comp=Z,3µm,20.3s						
CTA	Charters Tower	20.26	253	P	P	09 09 39.5	+0.8
	comp=Z,56nm,1.0s,baz=78,slow=14,SNR=49						
CTA				LR	LR	09 16 36.0	
	comp=Z,3µm,20.2s,MS4.6,baz=73,slow=34						
CTAO	Charters Tower	20.26	253	⇓iP	P	09 09 39.0	+0.3
	comp=Z,76nm,1.0s						
CTAO				LR	LR		
	comp=Z,3µm,20.0s,MS4.6						
AFI	Afiamalu	20.73	90	LR	LR	09 15 51.0	
	comp=Z,1µm,20.5s,MS4.3,baz=265,slow=31						
STKA	Stephens Creek	28.49	230	eP	P	09 10 58.2	+0.6
	comp=Z,14nm,1.2s,mb4.5						
STKA	Stephens Creek	28.49	230	P	P	09 10 57.2	-0.4
	comp=Z,3.3nm,0.6s,baz=352,slow=6.6,SNR=9.4						
STKA				LR	LR	09 21 37.8	
	comp=Z,2µm,20.4s,MS4.7,baz=52,slow=35						
RPZ	Rata Peaks	28.82	174	LR	LR	09 21 03.4	
	comp=Z,1µm,20.1s,MS4.5,baz=3.6,slow=33						
WB2	Warramunga Arr	31.34	256	eP	P	09 11 21.1	-2.0
WRAB	Tennant Creek	31.34	256	eP	P	09 11 22.2	-0.9
	comp=Z,123nm,1.7s,mb5.5						
WRAB				ePcP	PcP	09 14 15.7	-0.6
WRAB				LR	LR		
	comp=Z,1µm,20.0s,MS4.6						
WRA	Warramunga Arr	31.35	256	P	P	09 11 21.9	-1.3
WRA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	31.35	256	P	P	09 11 21.9	-1.2
	comp=Z,5.0nm,0.8s,mb4.4,baz=86,slow=8.7,SNR=32						
KAKA	Kakadu	33.46	270	eP	P	09 11 40.8	-0.8
	comp=Z,33nm,1.2s,mb5.1						
WAKE	Wake Island	34.10	360	PFAKE		09 12 00.0	+13
WAKE				LR	LR		
	comp=Z,2µm,22.0s,MS4.7						
FITZ	Fitzroy Crossi	39.56	260	⇑iP	P	09 12 33.0	0.0
	comp=Z,52nm,0.9s,mb5.3						
FITZ	Fitzroy Crossi	39.56	260	P	P	09 12 33.1	+0.1
	comp=Z,48nm,0.8s,mb5.3,baz=94,slow=3.5,SNR=40						
PPT	Papeete	41.84	100	P	P	09 12 53.1	+1.2
PPT				pmax	pmax		
	comp=Z,128nm,1.2s						
PPT	Papeete	41.84	100	P	P	09 12 53.1	+1.2
	comp=Z,128nm,1.2s,mb5.4,baz=164,slow=2.6,SNR=5.1						
TBI	Tubuai	41.96	108	eS	S	09 18 56.4	-12
	comp=Z,437nm,32.0s						
TBI				eLQ		09 22 49.0	
	comp=Z,928nm,29.8s						
TBI				eLR	LR	09 24 34.7	
	comp=Z,792nm,26.8s						
MBWA	Marble Bar	45.07	255	eP	P	09 13 18.4	+0.3
	comp=Z,44nm,1.1s,mb5.2						
MBWA				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
MIDW	Midway	45.63	20	PFAKE		09 13 30.0	+7.6
MIDW				LR	LR		
	comp=Z,1µm,19.0s,MS4.8						
NWAO	Narrogin (SRO)	48.24	239	PFAKE		09 13 50.0	+7.1
NWAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
POHA	Pohakuloa	50.64	48	PFAKE		09 14 10.0	+8.5
POHA				LR	LR		
	comp=Z,8µm,19.0s,MS5.7						
TAOE	Nuku Hiva Isla	52.12	90	eLQ		09 26 34.7	
	comp=Z,4µm,32.7s						
TAOE				eLR	LR	09 29 22.7	
	comp=Z,2µm,24.0s						
MJAR	Matsushiro Arr	57.98	333	P	P	09 14 53.7	-1.2
MJAR				pmax	pmax		
	comp=Z,19nm,0.8s						
MJAR	Matsushiro Arr	57.98	333	P	P	09 14 53.7	-1.2
	comp=Z,19nm,0.8s,mb5.2,baz=166,slow=8.0,SNR=25						
MJAR	Matsushiro Arr	57.98	333	P	P	09 14 53.7	-1.2
MAJO	Matsushiro	57.98	333	eP	P	09 14 52.9	-2.1
	comp=Z,36nm,1.0s,mb5.3						
MAJO				ePP	PP	09 17 01.3	-3.9
MAT	Matsushiro	57.98	333	eP	P	09 14 54.0	-0.9
	comp=Z,19nm,0.9s,mb5.1						
MAT	Matsushiro	57.98	333	P	P	09 14 53.7	-1.2
KSM	Kuching	58.26	281	eP	P	09 14 56.8	-0.4
YHNB	Yeheng	59.37	311	eP	P	09 15 04.5	-0.3
TATO	Taipei	59.47	311	PFAKE		09 15 20.0	+15
TATO				LR	LR		
	comp=Z,841nm,19.0s,MS4.9						
VNDA	Vanda	62.55	181	P	P	09 15 25.0	-0.7
VNDA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VNDA	Vanda	62.55	181	P	P	09 15 25.0	-0.6

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      comp=Z,8.5nm,0.9s,mb4.9,baz=357,slow=7.4,SNR=21
VNDA  Vanda             62.55 181  eP      P       09 15 24.5 -1.2
      comp=Z,50nm,1.4s,mb5.5
VNDA                                LR     LR
      comp=Z,310nm,21.0s,MS4.5
SBA   Scott Base        62.84 180  eP      P       09 15 28.2 +0.6
      comp=Z,50nm,1.0s,mb5.6
SBA                                eScP            09 20 09.2
SBA                                 LR     LR
      comp=Z,524nm,19.0s,MS4.7
ASAJ  Asahikawa         62.88 341   P      P       09 15 28.5 +0.2
ASAJ                                pmax   pmax
      comp=Z,44nm,0.9s
ASAJ  Asahikawa         62.88 341   P      P       09 15 28.4 +0.2
      comp=Z,44nm,0.8s,mb5.6,baz=223,slow=8.4,SNR=46
CASY  Casey             63.10 202   PFAKE          09 15 40.0  +11
CASY                                LR     LR
      comp=Z,890nm,21.0s,MS4.9
SSE   Sheshan           63.45 317  eP      P       09 15 32.8 +0.6
SSE                                 AMB    AMB
      comp=Z,20nm,0.7s,mb5.4
SSE                                 AMB    AMB
      comp=Z,470nm,10.1s
SSE   Sheshan           63.45 317  eP      P       09 15 32.7 +0.5
      comp=Z,26nm,0.7s,mb5.5
INCN  Inchon            64.48 325   PFAKE          09 15 50.0  +11
INCN                                LR     LR
      comp=Z,376nm,19.0s,MS4.6
YSS   Yuzh-Sakhalins    65.38 342⇑iP      P       09 15 44.6 +0.1
YSS                                e       pP      09 15 55.6 -1.4
YSS                                 pmax   pmax
      comp=Z,80nm,0.9s,mb5.8
YSS                                 pmax   pmax
      comp=Z,110nm,0.9s,mb5.9
YSS   Yuzh-Sakhalins    65.38 342  eP      P       09 15 44.6 +0.1
      comp=Z,205nm,1.3s,mb6.0
YSS                                 LR     LR
      comp=Z,526nm,20.0s,MS4.7
QIZ   Qiongzhong        65.52 299   PFAKE          09 16 00.0  +14
QIZ                                 LR     LR
      comp=Z,337nm,19.0s,MS4.6
NJ2   Nanjing           65.60 316  eP      P       09 15 46.0 -0.2
NJ2                                 AP     pP      09 15 59.0 +0.3
NJ2                                 PP     PP      09 18 12.8 -0.2
NJ2                                 S      S       09 24 26.0 -0.9
NJ2                                 AMB    AMB
      comp=Z,30nm,1.0s,mb5.3
NJ2                                 AMB    AMB
      comp=Z,180nm,9.6s
NJ2                                 LR     LR
      comp=N,890nm,26.2s,MS5.0
NJ2                                 LR     LR
      comp=E,800nm,25.6s,MS5.0
NJ2                                 LR     LR
      comp=Z,600nm,23.9s,MS4.7
WHN   Wuhan             67.84 312  eP      P       09 16 00.5 +0.2
FX1   Attu Island--F    67.85   4  eP      P       09 15 59.5 -0.4
PET   Petropavlovsk     68.14 355  eP      P       09 16 01.9 +0.1
PET                                eS      S       09 24 55.3 -1.8
PET                                 pmax   pmax
      comp=Z,51nm,1.1s,mb5.5
PET   Petropavlovsk     68.14 355  eP      P       09 16 00.9 -0.9
      comp=Z,88nm,1.3s,mb5.6
PET                                 LR     LR
      comp=Z,542nm,21.0s,MS4.8
DL2   Dalian            68.29 323   P      P       09 16 03.0  0.0
DL2                                 AMB    AMB
      comp=Z,10.0nm,0.6s,mb5.0
MDJ   Mudanjiang        68.35 332   P      P       09 16 02.8 -0.4
MDJ                                 AP     pP      09 16 14.8 -1.0
MDJ                                 XP     sP      09 16 19.6 -0.8
MDJ                                 PCP    PcP     09 16 27.8 -0.8
MDJ                                 PP     PP      09 18 32.8 -3.7
MDJ                                 S      S       09 25 01.0 +1.2
MDJ                                 SCS    ScS     09 25 58.4 +2.9
MDJ                                 AMB    AMB
      comp=Z,30nm,1.0s,mb5.3
MDJ   Mudanjiang        68.35 332  eP      P       09 16 03.1 -0.2
      comp=Z,70nm,1.2s,mb5.6
MDJ                                 LR     LR
      comp=Z,293nm,19.0s,MS4.5
TIA   Tai’an            69.29 319  eP      P       09 16 08.8 -0.4
TIA                                 AMB    AMB
      comp=Z,30nm,1.2s,mb5.1
CN2   Changchun         69.69 329  eP      P       09 16 11.3 -0.2
CN2                                eAP     pP      09 16 24.5 +0.5
CN2                                eS      S       09 25 17.1 +1.4
CN2                                 AMB    AMB
      comp=Z,30nm,0.9s,mb5.2
CN2                                 AMB    AMB
      comp=Z,600nm,10.0s
CN2                                 LR     LR
      comp=N,1µm,23.0s,MS5.1
CN2                                 LR     LR
      comp=E,500nm,23.0s,MS5.1
CN2                                 LR     LR
      comp=Z,500nm,23.0s,MS4.7
MIR   Mirnyy            69.89 204d iP      P       09 16 12.8 +0.5
MIR                                 pmax   pmax
      comp=Z,171nm,2.0s,mb5.6
KLR   Kul’dur           71.11 337  eP      P       09 16 17.4 -2.6
KLR                                 pmax   pmax
      comp=Z,30nm,1.6s,mb5.0
ENH   Enshi             71.24 310  eP      P       09 16 19.9 -1.2
      comp=Z,98nm,1.1s,mb5.7
ENH                                 LR     LR
      comp=Z,541nm,20.0s,MS4.8
GYA   Guiyang           71.55 305⇑iP      P       09 16 23.6 +0.6
GYA                                 AP     pP      09 16 33.8 -1.8
GYA                                 XP     sP      09 16 37.9 -2.3
GYA                                 PP     PP      09 19 04.3 +0.3
GYA                                 S      S       09 25 38.3 +0.8
GYA                                 SKS    SKS     09 26 18.6 +0.3
GYA                                 AMB    AMB
      comp=Z,30nm,1.1s,mb5.1
GYA                                 AMB    AMB
      comp=Z,340nm,4.0s
GYA                                 LR     LR
      comp=N,640nm,18.2s,MS5.1
GYA                                 LR     LR
      comp=E,710nm,18.9s,MS5.1
GYA                                 LR     LR
      comp=Z,670nm,19.0s,MS4.9
NST   Nakhon Sawan      72.61 292   P      P       09 16 31.0 +1.4
NANT  Nan               73.28 295   P      P       09 16 34.0 +0.5
      comp=Z,175nm,0.8s,mb6.0
XAN   Xi’an             73.59 313   P      P       09 16 35.4 +0.4
XAN                                 AMB    AMB
      comp=Z,20nm,1.2s,mb4.9
KMI   Kunming           74.11 302 ⇑P      P       09 16 40.3 +2.1
KMI                                 AP     pP      09 16 51.0 +0.2
KMI                                 XP     sP      09 16 53.3 -2.2
KMI                                 PP     PP      09 19 29.6 +3.9
KMI                                 S      S       09 26 12.4 +5.7
KMI                                 SKS    SKS     09 26 41.9 +4.6
KMI                                 SS     SS      09 30 58.3 +3.7
KMI                                 AMB    AMB
      comp=Z,40nm,1.4s,mb5.2
KMI                                 AMB    AMB
      comp=Z,240nm,3.2s
KMI                                 LR     LR
      comp=N,360nm,19.8s,MS4.9
KMI                                 LR     LR
      comp=E,440nm,17.4s,MS4.9
KMI                                 LR     LR
      comp=Z,500nm,20.6s,MS4.8
KMI   Kunming           74.11 302 ⇑P      P       09 16 40.2 +2.0
      comp=Z,49nm,1.4s,mb5.2
KMI                                 pP     pP      09 16 51.0 +0.2
KMI                                 sP     sP      09 16 53.2 -2.3
KMI                                 PP     PP      09 19 29.6 +3.9
KMI                                 S      S       09 26 12.4 +5.7
KMI                                 sS             09 26 30.0
KMI                                 SKS    SKS     09 26 41.9 +4.6
KMI                                 SS     SS      09 30 58.3 +3.7
KMI                                 LR     LR
      comp=Z,500nm,20.6s,MS4.8
CMAR  Chiang Mai Arr    74.69 294   P      P       09 16 43.1 +1.4
CMAR                                pmax   pmax
      comp=Z,13nm,0.9s
CMAR  Chiang Mai Arr    74.69 294   P      P       09 16 43.0 +1.4
      comp=Z,13nm,0.9s,mb4.8,baz=116,slow=4.4,SNR=31
CHG   Chiang Mai        74.83 295 ⇑P      P       09 16 43.7 +1.3
      comp=Z,25nm,0.8s,mb5.2
QSPA  South Pole Qui    75.00 180  eP      P       09 16 43.1 +0.8
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      comp=Z,55nm,1.1s,mb5.4
QSPA                                LR     LR
      comp=Z,500nm,20.0s,MS4.8
MA2   Magadan           75.48 352   PFAKE          09 17 00.0  +15
MA2                                 LR     LR
      comp=Z,504nm,21.0s,MS4.8
HHC   Hu-ho-hao-te      75.55 320  eP      P       09 16 47.3 +1.2
HHC                                 AP     pP      09 17 00.1 +1.4
HHC                                 AMB    AMB
      comp=Z,20nm,1.1s,mb5.0
HHC                                 AMB    AMB
      comp=Z,270nm,10.4s
HHC                                 LR     LR
      comp=N,730nm,17.8s,MS5.2
HHC                                 LR     LR
      comp=E,720nm,19.0s,MS5.2
HHC                                 LR     LR
      comp=Z,520nm,26.2s
CD2   Chengdu           75.86 308   P      P       09 16 49.3 +1.1
CD2                                 AMB    AMB
      comp=Z,20nm,1.2s,mb4.9
HIA   Hailar            76.34 330  eP      P       09 16 50.6 +0.1
      comp=Z,32nm,1.2s,mb5.1
HIA                                 LR     LR
      comp=Z,460nm,19.0s,MS4.8
LZH   Lanzhou           78.22 313 ⇑P      P       09 17 07.3 +6.1
LZH                                 AP     pP      09 17 14.0 +0.1
LZH                                 XP     sP      09 17 17.0 -1.6
LZH                                 S      S       09 26 59.9 +8.5
LZH                                 SS     SS      09 32 00.0 +3.1
LZH                                 AMB    AMB
      comp=Z,50nm,1.0s,mb5.4
LZH                                 AMB    AMB
      comp=Z,210nm,4.6s
LZH                                 LR     LR
      comp=E,1µm,18.1s
LZH                                 LR     LR
      comp=Z,1µm,19.2s,MS5.3
SEY   Seymchan          78.53 353  eP      P       09 17 02.1 -0.2
SEY                                e               09 21 50.7
SEY                                e               09 27 03.7
SEY                                 pmax   pmax
      comp=Z,40nm,1.1s,mb5.3
SEY                                 pmax   pmax
      comp=N,20nm,0.9s
SEY                                 pmax   pmax
      comp=E,40nm,0.9s
KDAK  Kodiak Island     79.89  21   PFAKE          09 17 20.0  +10
KDAK                                LR     LR
      comp=Z,201nm,20.0s,MS4.5
CIT   Chita             81.12 330  eP      P       09 17 16.6 +0.1
CIT                                 pmax   pmax
      comp=Z,77nm,1.3s,mb5.5
MAW   Mawson            81.45 202⇑iP      P       09 17 19.1 +1.2
      comp=Z,15nm,1.0s,mb4.9
MAW   Mawson            81.45 202   P      P       09 17 19.2 +1.2
      comp=Z,18nm,1.0s,mb5.0,baz=106,slow=7.0,SNR=21
MAW                                 LR     LR      09 47 58.7
      comp=Z,597nm,21.8s,MS4.9,baz=28,slow=32
SVW2  Sparrevohn        81.56  17  eP      P       09 17 19.4 +0.8
RSO   Redoubt South     81.91  19  eP      P       09 17 20.3 -0.1
ULN   Ulaanbaatar       82.13 324  i P     P       09 17 22.2 +0.4
ULN   Ulaanbaatar       82.13 324   PFAKE          09 17 30.0 +8.2
ULN                                 LR     LR
      comp=Z,250nm,20.0s,MS4.6
YAK   Yakutsk           82.19 343c iP      P       09 17 21.4 -0.5
YAK                                 pmax   pmax
      comp=Z,25nm,0.9s,mb5.1
YAK                                 pmax   pmax
      comp=N,7.0nm,1.0s
YAK                                 pmax   pmax
      comp=E,4.0nm,1.1s
YAK                                 pmax   pmax
      comp=Z,58nm,1.0s,mb5.5
YAK                                 pmax   pmax
      comp=N,14nm,1.1s
YAK                                 pmax   pmax
      comp=E,7.0nm,1.1s
YAK   Yakutsk           82.19 343  eP      P       09 17 21.6 -0.2
      comp=E,142nm,1.1s,mb5.8
YAK                                 LR     LR
      comp=Z,393nm,22.0s,MS4.7
SONM  Songino Array     82.49 324   P      P       09 17 24.4 +0.8
      comp=Z,7.2nm,1.0s,mb4.6,baz=135,slow=5.2,SNR=30
SONM                                PKPPKP         09 44 00.3
      comp=Z,0.7nm,1.0s,baz=225,slow=1.7,SNR=4.1
TNA   Tin City          82.57  10  eP      P       09 17 23.2 -0.5
      comp=Z,74nm,1.5s,mb5.5
TNA                                 LR     LR
      comp=Z,203nm,19.0s,MS4.5
GTA   Gaotai            82.58 314⇑iP      P       09 17 26.1 +1.8
GTA                                 AP     pP      09 17 35.9 -1.2
GTA                                 XP     sP      09 17 39.9 -1.8
GTA                                 PP     PP      09 20 37.3 +1.4
GTA                                 S      S       09 27 40.0 +3.3
GTA                                 XS             09 27 58.3
GTA                                 SS     SS      09 33 06.9 +4.7
GTA                                 AMB    AMB
      comp=Z,30nm,1.2s,mb5.2
GTA                                 AMB    AMB
      comp=Z,130nm,5.3s
GTA                                 LR     LR
      comp=N,400nm,16.0s,MS5.1
GTA                                 LR     LR
      comp=E,440nm,15.3s,MS5.1
GTA                                 LR     LR
      comp=Z,700nm,19.9s,MS5.0
SLKM  Skilak Lake       82.75  20  eP      P       09 17 24.1 -0.6
BILL  Bilibino          82.84 360c iP      P       09 17 25.0  0.0
BILL                               i               09 17 34.3
BILL                                pmax   pmax
      comp=Z,108nm,1.1s,mb5.8
BILL  Bilibino          82.84 360⇑iP      P       09 17 24.9 -0.1
      comp=Z,148nm,1.3s,mb5.9
BILL                                LR     LR
      comp=Z,319nm,22.0s,MS4.7
TTA   Tatalina          82.92  16  eP      P       09 17 26.2 +0.7
FIB   Fire Island       83.26  19   PFAKE          09 17 40.0  +13
FIB                                 LR     LR
      comp=Z,885nm,21.0s,MS5.1
PMR   Palmer            83.92  20  eP      P       09 17 30.4 -0.2
      comp=Z,69nm,1.6s,mb5.5
SML   Sawmill           84.34  20  eP      P       09 17 32.0 -0.7
HOPS  Hopland           84.55  47   PFAKE          09 17 50.0  +16
HOPS                                LR     LR
      comp=Z,904nm,19.0s,MS5.2
DIV   Divide            84.71  21   PFAKE          09 17 50.0  +15
DIV                                 LR     LR
      comp=Z,761nm,20.0s,MS5.1
SAO   San Andreas Ge    84.84  50   PFAKE          09 17 50.0  +14
SAO                                 LR     LR
      comp=Z,684nm,20.0s,MS5.0
LSA   Lhasa             85.37 302   P      P       09 17 41.0 +2.4
LSA   Lhasa             85.37 302   PFAKE          09 17 50.0  +11
LSA                                 LR     LR
      comp=Z,415nm,20.0s,MS4.8
ZAK   Zakamensk         85.56 325⇓iP      P       09 17 38.9 -0.1
ZAK                                 pmax   pmax
      comp=Z,13nm,1.1s,mb5.1
MCK   McKinley          85.56  18   PFAKE          09 17 50.0  +11
MCK                                 LR     LR
      comp=Z,306nm,22.0s,MS4.7
WDC   Whiskeytown Da    85.57  46   PFAKE          09 17 50.0  +11
WDC                                 LR     LR
      comp=Z,644nm,20.0s,MS5.0
YBH   Yreka Blue Hor    85.92  45   P      P       09 17 41.0  0.0
      comp=Z,9.3nm,1.1s,mb4.9,baz=131,slow=4.2,SNR=6.1
YBH                                 LR     LR      09 47 53.1
      comp=Z,463nm,19.9s,MS4.9,baz=180,slow=30
TLY   Talaya            86.01 326  eP      P       09 17 41.6 +0.4
TLY                                 pmax   pmax
      comp=Z,15nm,1.0s,mb5.2
TLY   Talaya            86.01 326  eP      P       09 17 41.2  0.0
      comp=Z,11nm,0.9s,mb5.1
IMA   Indian Mountai    86.05  15  eP      P       09 17 42.4 +1.4
      comp=Z,32nm,1.1s,mb5.5
CMB   Columbia Colle    86.11  49   PFAKE          09 17 50.0 +8.0
CMB                                 LR     LR
      comp=Z,691nm,21.0s,MS5.0
SIT   Sitka             86.26  28   PFAKE          09 17 50.0 +7.7
SIT                                 LR     LR
      comp=Z,870nm,20.0s,MS5.2
ILAR  Eielson Array     86.94  18   P      P       09 17 44.0 -1.4
      comp=Z,7.5nm,0.8s,mb5.0,baz=245,slow=5.4,SNR=41
ILAR                                PKKPbc         09 35 39.8
      comp=Z,0.5nm,1.0s,slow=2.7,SNR=4.5
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ILAR                                LR     LR      09 54 10.9
      comp=Z,485nm,18.6s,MS4.9,baz=191,slow=34
MTUM  Tungsten Hills    87.20  50  eP      P       09 17 45.9 -1.5
MOY   Mondy             87.44 325  eP      P       09 17 49.1 +0.9
OCWA  Octopus Mounta    87.49  39   PFAKE          09 18 00.0  +11
OCWA                                LR     LR
      comp=Z,498nm,19.0s,MS4.9
PFO   Pinyon Flat Ob    87.51  54  eP      P       09 17 48.3 -0.6
      comp=Z,6.1nm,1.1s,mb4.7
PFO                                 LR     LR
      comp=Z,230nm,19.0s,MS4.6
DAC   Darwin (Calif)    87.54  52   PFAKE          09 18 00.0  +11
DAC                                 LR     LR
      comp=Z,552nm,20.0s,MS5.0
MOD   Modoc             87.64  46   PFAKE          09 18 00.0  +11
MOD                                 LR     LR
      comp=Z,492nm,22.0s,MS4.9
NVAR  Mina Array Bea    87.78  49   P      P       09 17 50.3 +0.2
      comp=Z,2.5nm,0.8s,mb4.5,baz=218,slow=5.9,SNR=8.7
MNV   Mina              87.89  49   PFAKE          09 18 00.0 +9.3
MNV                                 LR     LR
      comp=Z,833nm,21.0s,MS5.1
PALK  Pallekele         88.16 278   PFAKE          09 18 00.0 +7.5
PALK                                LR     LR
      comp=Z,128nm,19.0s,MS4.4
SYO   Syowa Base        88.30 197 ⇓P      P       09 17 51.0 -0.9
SYO   Syowa Base        88.30 197 ⇓P      P       09 17 54.0 +2.1
SYO   Syowa Base        88.30 197 ⇓pP     pP      09 18 07.5 +2.7
TPH   Tonopah           88.45  50   PFAKE          09 18 00.0 +6.7
TPH                                 LR     LR
      comp=Z,455nm,20.0s,MS4.9
WVOR  Wild Horse Val    88.99  46  eP      P       09 17 55.0 -0.8
      comp=Z,13nm,1.2s,mb5.1
WVOR                               ePP     PP      09 21 26.4 -1.8
WVOR                                LR     LR
      comp=Z,498nm,19.0s,MS5.0
GUN   Gumba             89.18 299  eP      P       09 17 58.1 +1.0
      comp=Z,51nm,1.0s,mb5.8
BMN   Battle Mountai    89.27  48   PFAKE          09 18 10.0  +13
BMN                                 LR     LR
      comp=Z,503nm,20.0s,MS4.9
DLBC  Dease Lake        89.39  28   LR     LR      09 49 40.5
      comp=Z,364nm,20.4s,MS4.8,baz=243,slow=30
PKI   Pulchoki          89.48 299  eP      P       09 17 59.2 +0.7
      comp=Z,79nm,1.2s,mb5.9
KKN   Kakani            89.65 299  eP      P       09 18 00.0 +0.7
      comp=Z,40nm,0.9s,mb5.7
DMN   Daman             89.75 299  eP      P       09 18 00.7 +1.0
      comp=Z,122nm,1.1s,mb6.1
TIXI  Tiksi             90.18 349   PFAKE          09 18 10.0 +9.2
TIXI                                LR     LR
      comp=Z,252nm,19.0s,MS4.7
GKN   Gorkha            90.26 299  eP      P       09 18 00.8 -1.3
BMO   Blue Mountains    90.75  44   PFAKE          09 18 20.0  +16
BMO                                 LR     LR
      comp=Z,522nm,19.0s,MS5.0
ELK   Elko              90.79  48   LR     LR      09 50 04.1
      comp=Z,521nm,19.9s,MS5.0,baz=342,slow=30
ELK   Elko              90.79  48  eP      P       09 18 04.2 -0.2
      comp=Z,6.4nm,1.1s,mb4.9
ELK                                 LR     LR
      comp=Z,628nm,20.0s,MS5.0
PMSA  Palmer Station    91.63 161   PFAKE          09 18 20.0  +12
PMSA                                LR     LR
      comp=Z,463nm,20.0s,MS4.9
TUC   Tucson            91.63  57  eP      P       09 18 08.3 -0.1
      comp=Z,6.7nm,1.3s,mb4.8
TUC                                 LR     LR
      comp=Z,524nm,20.0s,MS5.0
NEW   Newport           92.06  40   P      P       09 18 09.2 -0.7
      comp=Z,5.6nm,1.0s,mb4.9,baz=242,slow=1.6,SNR=5.4
NEW   Newport           92.06  40   P      P       09 18 09.2 -0.7
NEW                                 LR     LR
      comp=Z,428nm,19.0s,MS4.9
WUAZ  Wupatki           92.08  54   PFAKE          09 18 20.0  +10
WUAZ                                LR     LR
      comp=Z,972nm,19.0s,MS5.3
HLID  Hailey            92.28  46   PFAKE          09 18 20.0 +8.9
HLID                                LR     LR
      comp=Z,577nm,19.0s,MS5.0
MVU   Marysvale         92.32  51  eP      P       09 18 12.2 +0.7
      comp=Z,5.1nm,1.1s,mb4.8
MVU                                 LR     LR
      comp=Z,479nm,21.0s,MS4.9
MSU   Marysvale         92.35  51  eP      P       09 18 11.7 +0.1
WMQ   Urumqi            92.64 315  eP      P       09 18 13.4 +0.6
WMQ                                 AP     pP      09 18 26.9 +1.1
WMQ                                 AMB    AMB
      comp=Z,20nm,1.2s,mb5.4
WMQ                                 AMB    AMB
      comp=Z,130nm,6.0s
WMQ                                 LR     LR
      comp=N,2µm,24.0s,MS5.7
WMQ                                 LR     LR
      comp=E,2µm,22.6s,MS5.7
WMQ                                 LR     LR
      comp=Z,2µm,22.4s,MS5.6
MAIT  Maitri            92.70 188  eP      P       09 18 13.2 +0.7
SNAA  Sanae             93.23 183  e       P       09 18 22.6 +7.8
SNAA  Sanae             93.23 183  e       P       09 18 29.0  +14
SNAA  Sanae             93.23 183   P      P       09 18 15.0 +0.2
SNAA                                pmax   pmax
      comp=Z,1.0nm,0.7s
SNAA  Sanae             93.23 183   P      P       09 18 15.0 +0.2
      comp=Z,1.3nm,0.7s,mb4.5,baz=200,slow=1.9,SNR=14
SNAA  Sanae             93.23 183⇑iP      P       09 18 14.4 -0.4
SNAA                               e               09 18 22.6
SNAA                               e       pP      09 18 29.0 +1.2
INK   Inuvik            93.30  19   LR     LR      09 55 48.0
      comp=Z,351nm,19.5s,MS4.8,baz=143,slow=33
MSO   Missoula          93.62  43   PFAKE          09 18 30.0  +13
MSO                                 LR     LR
      comp=Z,320nm,20.0s,MS4.8
HWUT  Hardware Ranch    93.70  48   PFAKE          09 18 30.0  +12
HWUT                                LR     LR
      comp=Z,523nm,22.0s,MS5.0
VNA3  Neumayer Olymp    93.91 181  e       P       09 18 25.3 +7.4
VNA3  Neumayer Olymp    93.91 181  e       P       09 18 32.5  +15
VNA3  Neumayer Olymp    93.91 181⇑iP      P       09 18 17.8 -0.1
VNA3                               e               09 18 25.3
VNA3                               e       pP      09 18 32.5 +1.6
VNA2  Neumayer--Watz    94.17 182  e       P       09 18 27.9 +8.8
VNA2  Neumayer--Watz    94.17 182  e       P       09 18 34.2  +15
VNA2  Neumayer--Watz    94.17 182⇑iP      P       09 18 19.1  0.0
VNA2                               e               09 18 27.9
VNA2                               e       pP      09 18 34.2 +2.1
AHID  Auburn Hatcher    94.36  47   PFAKE          09 18 30.0 +9.4
AHID                                LR     LR
      comp=Z,549nm,22.0s,MS5.0
VNA1  Neumayer--Stat    94.47 182  e       P       09 18 29.5 +9.0
VNA1  Neumayer--Stat    94.47 182  e       P       09 18 36.8  +16
VNA1  Neumayer--Stat    94.47 182⇑iP      P       09 18 21.9 +1.4
VNA1                               e               09 18 29.5
VNA1                               e       pP      09 18 36.8 +3.3
BOZ   Bozeman (W)       94.81  44   PFAKE          09 18 30.0 +7.4
BOZ                                 LR     LR
      comp=Z,360nm,21.0s,MS4.8
LKWY  Lake              95.34  45   PFAKE          09 18 40.0  +15
LKWY                                LR     LR
      comp=Z,887nm,20.0s,MS5.2
BW06  Boulder Array     95.45  47   PFAKE          09 18 40.0  +14
BW06                                LR     LR
      comp=Z,415nm,21.0s,MS4.9
PDAR  Pinedale Array    95.45  47   P      P       09 18 24.6 -1.0
      comp=Z,1.2nm,1.1s,mb4.2,SNR=3.1
PDAR                                PP     PP      09 22 17.0 -1.9
      comp=Z,0.4nm,0.8s,baz=252,slow=4.7,SNR=4.4
PDAR                                LR     LR      09 54 09.9
      comp=Z,257nm,18.6s,MS4.7,baz=208,slow=31
ANMO  Albuquerque       95.81  56  eP      P       09 18 26.7 -0.7
ANMO  Albuquerque       95.81  56   PFAKE          09 18 40.0  +13
ANMO                                LR     LR
      comp=Z,377nm,21.0s,MS4.8
LTX   Lajitas           96.78  62   PFAKE          09 18 40.0 +8.0
LTX                                 LR     LR
      comp=Z,644nm,20.0s,MS5.1
TXAR  Lajitas Array     96.78  62   PP     PP      09 22 27.9 -2.0
      comp=Z,3.5nm,1.3s,baz=231,slow=8.0,SNR=7.2
TXAR                                PKKPbc         09 35 14.1
      comp=Z,0.3nm,0.9s,baz=108,slow=2.9,SNR=3.0
MKAR  Makanchi Array    97.14 316   P      P       09 18 34.2 +1.0
MKAR                                pmax   pmax
      comp=Z,6.0nm,0.9s
MKAR                                pmax   pmax
      comp=Z,1.0nm,1.0s
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MKAR	Makanchi Array	97.14	316	P	P	09 18 34.1	+1.0
	comp=Z,5.9nm,0.9s,mb5.0,baz=101,slow=6.2,SNR=21						
MKAR				PKKPbc		09 35 12.5	
	comp=Z,1.0nm,1.0s,baz=315,slow=1.7,SNR=5.2						
SDCO	Great Sand Dun	97.22	53	PFAKE		09 18 50.0	+16
SDCO				LR	LR		
	comp=Z,684nm,20.0s,MS5.1						
ISCO	Idaho Springs	97.61	51	PFAKE		09 18 50.0	+15
ISCO				LR	LR		
	comp=Z,381nm,19.0s,MS4.9						
YKA	Yellowknife Ar	98.00	27	P	P	09 18 35.6	-1.1
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA	Yellowknife Ar	98.00	27	P	P	09 18 35.6	-1.1
	comp=Z,2.0nm,0.7s,mb4.7,baz=254,slow=4.5,SNR=15						
LAO	LASA Array	98.70	44	PFAKE		09 18 50.0	+10
LAO				LR	LR		
	comp=Z,414nm,19.0s,MS5.0						
AMTX	Amarillo	99.62	56	PFAKE		09 19 00.0	+15
AMTX				LR	LR		
	comp=Z,394nm,19.0s,MS4.9						
DGMT	Dagmar	100.41	43	PFAKE		09 19 00.0	+12
DGMT				LR	LR		
	comp=Z,322nm,20.0s,MS4.8						
CBKS	Cedar Bluff	101.88	53	PFAKE		09 19 10.0	+15
CBKS				LR	LR		
	comp=Z,606nm,22.0s,MS5.1						
WMOK	Wichita Mounta	101.94	57	PFAKE		09 19 10.0	+15
WMOK				LR	LR		
	comp=Z,436nm,21.0s,MS5.0						
PAYG	Puerto Ayora	102.25	94	PFAKE		09 19 10.0	+13
PAYG				LR	LR		
	comp=Z,505nm,20.0s,MS5.0						
FFC	Flin Flon	102.79	36	PFAKE		09 19 10.0	+12
FFC				LR	LR		
	comp=Z,150nm,21.0s,MS4.5						
NATX	Nacogdoches	104.87	61	PFAKE		09 19 20.0	+12
NATX				LR	LR		
	comp=Z,569nm,19.0s,MS5.1						
BVAR	Borovoye Array	105.72	321	Pdiff	Pdif	09 19 12.2	+0.8
	comp=Z,0.4nm,0.4s,baz=76,slow=6.1,SNR=3.7						
BVAR				PKiKP		09 23 24.7	
	comp=Z,0.6nm,0.8s,baz=90,slow=1.4,SNR=3.1						
BVAR				PP	PP	09 23 39.9	+2.8
	comp=Z,1.3nm,0.8s,baz=90,slow=5.9,SNR=4.2						
EYMN	Ely	108.79	44	PFAKE		09 23 40.0	
EYMN				LR	LR		
	comp=Z,433nm,20.0s,MS5.0						
OXF	Oxford	109.57	58	PFAKE		09 23 40.0	
OXF				LR	LR		
	comp=Z,278nm,20.0s,MS4.8						
JTS	JuntasAbangare	110.05	84	PFAKE		09 23 40.0	+8.4
JTS				LR	LR		
	comp=Z,120nm,22.0s,MS4.4						
TRQA	Tornquist	110.12	141	PFAKE		09 23 40.0	+8.7
TRQA				LR	LR		
	comp=Z,641nm,20.0s,MS5.2						
PLAL	Pickwick Lake	110.70	58	PFAKE		09 23 50.0	+17
PLAL				LR	LR		
	comp=Z,314nm,20.0s,MS4.9						
WVT	Waverly	110.98	57	PFAKE		09 23 50.0	+17
WVT				LR	LR		
	comp=Z,328nm,20.0s,MS4.9						
LRAL	Lakeview Retre	111.45	60	PFAKE		09 23 50.0	+16
LRAL				LR	LR		
	comp=Z,397nm,20.0s,MS5.0						
WCI	Wyandotte Cave	112.31	55	PFAKE		09 23 50.0	+14
WCI				LR	LR		
	comp=Z,488nm,21.0s,MS5.1						
ARU	Arti	112.50	325	⇑iPKIKP	PKPdf	09 23 39.7	+4.2
OTAV	Otavalo	113.89	97	PFAKE		09 23 50.0	+11
OTAV				LR	LR		
	comp=Z,325nm,21.0s,MS4.9						
AAM	Ann Arbor	114.33	50	PFAKE		09 23 50.0	+11
AAM				LR	LR		
	comp=Z,740nm,21.0s,MS5.3						
KBS	Kingsbay	114.96	355	PFAKE		09 23 50.0	+10
KBS				LR	LR		
	comp=Z,203nm,19.0s,MS4.8						
DWPF	Disney	115.89	66	PFAKE		09 24 00.0	+17
DWPF				LR	LR		
	comp=Z,287nm,20.0s,MS4.9						
BLA	Blacksburg	116.96	56	PFAKE		09 24 00.0	+15
BLA				LR	LR		
	comp=Z,369nm,20.0s,MS5.0						
NHSC	New Hope	117.17	60	PFAKE		09 24 00.0	+15
NHSC				LR	LR		
	comp=Z,528nm,21.0s,MS5.1						
MCWV	Mont Chateau	117.32	53	PFAKE		09 24 00.0	+15
MCWV				LR	LR		
	comp=Z,839nm,20.0s,MS5.4						
LPAZ	La Paz	117.44	118	PKP	PKPdf	09 23 47.3	+1.3
	comp=Z,1.4nm,0.9s,baz=269,slow=6.8,SNR=4.2						
LPAZ	La Paz	117.44	118	PKP	PKPdf	09 23 47.3	+1.3
LPAZ				LR	LR		
	comp=Z,343nm,20.0s,MS5.0						
CBN	Corbin	119.33	54	PFAKE		09 24 00.0	+11
CBN				LR	LR		
	comp=Z,524nm,19.0s,MS5.2						
KEV	Kevo	119.91	345	PFAKE		09 24 00.0	+10
KEV				LR	LR		
	comp=Z,383nm,21.0s,MS5.0						
ARCES	ARCESS Array B	120.44	345	PKIKP	PKPdf	09 23 52.3	+1.6
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ARCES	ARCESS Array B	120.44	345	PKP	PKPdf	09 23 52.3	+1.6
	comp=Z,6.4nm,0.8s,baz=83,slow=2.2,SNR=18						
NCB	Newcomb	121.05	48	ePKPdf	PKPdf	09 23 52.1	-0.4
BOSA	Boshof	122.88	221	PKIKP	PKPdf	09 23 59.6	+3.2
BOSA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BOSA	Boshof	122.88	221	PKP	PKPdf	09 23 59.6	+3.2
	comp=Z,6.1nm,0.9s,baz=49,slow=14,SNR=3.8						
HRV	Harvard--Oak R	123.22	49	PFAKE		09 24 10.0	+13
HRV				LR	LR		
	comp=Z,546nm,20.0s,MS5.2						
WES	Weston	123.41	49	PFAKE		09 24 10.0	+13
WES				LR	LR		
	comp=Z,599nm,19.0s,MS5.3						
SDV	Santo Domingo	123.56	89	ePKPdf	PKPdf	09 23 58.6	+0.6
SDV				epPKPdf		09 24 07.6	
SDV				LR	LR		
	comp=Z,317nm,19.0s,MS5.0						
GNI	Garni	123.99	308	i PKIKP	PKPdf	09 24 00.7	+2.4
GNI	Garni	123.99	308	i PKP	PKPdf	09 24 00.8	+2.5
GNI				LR	LR		
	comp=Z,286nm,20.0s,MS4.9						
WVL	Waterville	124.15	46	PFAKE		09 24 10.0	+12
WVL				LR	LR		
	comp=Z,7µm,21.0s						
OBN	Obninsk	124.73	328	⇓iPKIKP	PKPdf	09 24 00.6	+1.3
OBN				pmax	pmax		
	comp=Z,11nm,1.0s						
OBN				MLR	MLR		
	comp=Z,200nm,22.0s,MS4.7						
PQI	Presque Isle	124.74	43	PFAKE		09 24 10.0	+10
PQI				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
KIV	Kislovodsk	124.75	313	i PKIKP	PKPdf	09 24 01.4	+1.8
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV	Kislovodsk	124.75	313	i PKP	PKPdf	09 24 01.5	+1.9
KIV				LR	LR		
	comp=Z,41nm,22.0s,MS4.0						
SAML	Samuel	124.99	112	ePKPdf	PKPdf	09 24 00.8	0.0
SAML				LR	LR		
	comp=Z,359nm,19.0s,MS5.1						
FINES	FINESS Array B	125.84	338	PKIKP	PKPdf	09 24 02.3	+1.1
FINES				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FINES	FINESS Array B	125.84	338	PKP	PKPdf	09 24 02.2	+1.0
	comp=Z,8.3nm,1.0s,baz=27,slow=4.3,SNR=11						
LSZ	Lusaka	129.24	235	PFAKE		09 24 20.0	+11
LSZ				LR	LR		
	comp=Z,680nm,20.0s,MS5.3						
SJG	San Juan	129.25	79	PFAKE		09 24 20.0	+11
SJG				LR	LR		
	comp=Z,325nm,19.0s,MS5.0						
BBSR	BB Station	130.23	60	PFAKE		09 24 20.0	+10
BBSR				LR	LR		
	comp=Z,262nm,19.0s,MS5.0						
AKASG	Malin Array Be	130.75	326	PKIKP	PKPdf	09 24 12.1	+1.2
AKASG						09 26 30.5	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	130.75	326	PKP	PKPdf	09 24 12.1	+1.2
	comp=Z,0.5nm,0.4s,baz=49,slow=2.2,SNR=14						
AKASG				PP	PP	09 26 30.5	-0.8
	comp=Z,0.3nm,0.3s,baz=47,slow=6.7,SNR=4.5						
AKASG	Malin Array Be	130.75	326	PKP	PKPdf	09 24 12.1	+1.2
AKASG				PP	PP	09 26 30.5	-0.8
NB2	NORSAR Subarra	130.80	345	PKPdf	PKPdf	09 24 11.5	+0.8
	comp=Z,3.8nm,1.1s,baz=31,slow=1.9						
NOA	NORSAR Array B	130.80	345	PKIKP	PKPdf	09 24 12.3	+1.6
NOA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	NORSAR Array B	130.80	345	PKP	PKPdf	09 24 12.3	+1.6
	comp=Z,2.9nm,0.9s,baz=37,slow=2.0,SNR=5.3						
NOA	NORSAR Array B	130.80	345	PKP	PKPdf	09 24 12.3	+1.6
BR131	Keskin Array S	132.39	310	PFAKE		09 24 30.0	+16
BR131				LR	LR		
	comp=Z,124nm,19.0s,MS4.6						
KONO	Kongsberg	132.41	345	PFAKE		09 24 30.0	+16
KONO				LR	LR		
	comp=Z,261nm,19.0s,MS5.0						
MBAR	Mbarara	133.91	254	PFAKE		09 24 30.0	+12
MBAR				LR	LR		
	comp=Z,171nm,21.0s,MS4.7						
TSUM	Tsumeb	134.47	223	PFAKE		09 24 30.0	+11
TSUM				LR	LR		
	comp=Z,693nm,21.0s,MS5.3						
KOLS	Kolonicke sedl	135.47	327	ePKP	PKPdf	09 24 22.2	+2.4
MORC	Moravsky Berou	137.29	331	ePKPdf	PKPdf	09 24 23.9	+0.7
VYHS	Vyhne	137.52	329	ePKP	PKPdf	09 24 24.7	+1.1
ESK	Eskdalemuir	139.06	351	PFAKE		09 24 40.0	+14
ESK				LR	LR		
	comp=Z,116nm,20.0s,MS4.6						
MOX	Moxa	139.22	336	eP	PKPdf	09 24 26.0	-0.6
KHC	Kasperske Hory	139.56	333	i PKIKP	PKPdf	09 24 31.4	+4.1
KHC	Kasperske Hory	139.56	333	ePKP	PKPdf	09 24 31.5	+4.2
GERES	GERESS Array B	139.72	333	PKHKP		09 24 22.0	
GERES						09 24 28.7	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.2s						
GERES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES	GERESS Array B	139.72	333	PKhKP		09 24 22.0	
	comp=Z,0.5nm,0.2s,slow=4.0,SNR=5.6						
GERES				PKP	PKPdf	09 24 28.7	+1.1
	comp=Z,3.1nm,0.9s,baz=90,slow=1.3,SNR=7.8						
GERES	GERESS Array B	139.72	333	PKP	PKPdf	09 24 28.7	+1.1
GRA1	Grafenberg Arr	140.13	335	ePKP	PKPdf	09 24 30.4	+2.1
GRF	Grafenberg Arr	140.13	335	ePKIKP	PKPdf	09 24 30.4	+2.1
GIVF	Givet	142.09	341	ePKP1	PKPdf	09 24 32.8	+1.1
BAIF	Baives	142.32	342	ePKP1	PKPdf	09 24 33.2	+1.1
DAVA	Damuels	142.57	334	⇑iP	PKPdf	09 24 30.7	-1.9
CDF	Champ du Feu	142.69	337	ePKP1	PKPdf	09 24 29.8	-3.0
FUORN	Ofenpass	142.92	333	PKP	PKPdf	09 24 32.2	-1.0
DAVOX	Davos	142.97	333	PKP	PKPdf	09 24 31.6	-1.7
HINF	Hinteralfeld	143.35	337	ePKP1	PKPbc	09 24 32.6	+0.3
HAU	Haudompre	143.38	338	ePKP1	PKPbc	09 24 33.0	+0.7
	comp=Z,35nm,1.0s						
MEZF	Maizieres J'vi	143.41	340	ePKP1	PKPbc	09 24 33.7	+1.3
TUE	Stuetta	143.44	334	PKP	PKPdf	09 24 33.5	-0.6
ARV	Arcevia	143.92	327	PKP	PKPdf	09 24 35.6	+0.6
MUGIO	Muggio	144.00	333	PKP	PKPdf	09 24 34.8	-0.3
SNTG	Esanatoglia	144.09	327	PKP	PKPdf	09 24 36.1	+0.8
ORI	Oriolo Calabro	144.09	320	PKP	PKPdf	09 24 36.2	+0.8
SFI	Santa Sofia	144.20	329	PKP	PKPdf	09 24 36.3	+0.8
MRLC	Muro Lucano	144.27	321	PKP	PKPdf	09 24 35.6	-0.1
PGD	Poggio Sodo	144.28	329	PKP	PKPdf	09 24 37.0	+1.4
NRCA	Norcia	144.28	326	PKP	PKPdf	09 24 36.1	+0.4
MURB	Monte Urbino	144.30	327	PKP	PKPdf	09 24 36.3	+0.6
ZCCA	Zocca	144.30	330	PKP	PKPdf	09 24 37.2	+1.5
VMG	Vicchio	144.31	329	PKP	PKPdf	09 24 37.9	+2.2
SEI	Scarperia	144.33	329	PKP	PKPdf	09 24 37.5	+1.8
MMK	Mattmark	144.35	334	PKP	PKPdf	09 24 36.7	+1.0
CII	Carovilli	144.36	324	PKP	PKPdf	09 24 36.5	+0.6
FNVD	Fontana Vidola	144.37	329	PKP	PKPdf	09 24 37.2	+1.4
ASS	Assisi	144.37	327	PKP	PKPdf	09 24 36.0	+0.2
INTR	Introdacqua	144.40	324	PKP	PKPdf	09 24 36.9	+1.0
TIP	Timpagrande	144.40	318	⇑iPKP	PKPdf	09 24 37.0	+1.0
SLCN	Sala Consilina	144.40	321	PKP	PKPdf	09 24 36.5	+0.5
MCGN	Macugnaga	144.42	334	PKP	PKPdf	09 24 37.1	+1.3
MIDA	Miranda	144.44	324	PKP	PKPdf	09 24 36.3	+0.3
AQU	L'Aquila	144.45	325	PKP	PKPdf	09 24 36.9	+0.9
RNI2	Rionero Sannit	144.46	324	PKP	PKPdf	09 24 36.9	+0.9
CSSN	Cassano Irpino	144.48	322	PKP	PKPdf	09 24 36.6	+0.5
GSCL	Gusciola	144.49	330	PKP	PKPdf	09 24 37.3	+1.3
SGO	Sicignano	144.50	321	PKP	PKPdf	09 24 36.4	+0.3
SGG	Gregorio Mates	144.53	323	PKP	PKPdf	09 24 36.2	0.0
DIX	Grande Dixence	144.56	335	PKP	PKPdf	09 24 37.2	+1.1
MGR	Morigerati	144.60	321	PKP	PKPdf	09 24 36.1	-0.2
GRAM		144.63	331	P	PKPbc	09 24 37.1	+1.0
CABF	La Chapelle	144.64	337	ePKP1	PKPbc	09 24 37.5	+1.4
	comp=Z,126nm,1.1s						
VVLD	Villa Vallelon	144.65	324	PKP	PKPdf	09 24 36.7	+0.3
VALM		144.66	330	P	PKPbc	09 24 37.1	+0.9
FIAM	Fiamignano	144.66	325	PKP	PKPdf	09 24 37.2	+0.8
PTQR	Pietraquaria	144.67	325	PKP	PKPdf	09 24 37.2	+0.8
ORX	Oropa	144.68	334	P	PKPbc	09 24 36.2	0.0
ORO	Oropa	144.69	334	PKP	PKPdf	09 24 36.9	+0.6
BDI	Bagni Di Lucca	144.70	330	PKP	PKPdf	09 24 36.3	-0.1
BOB	Bobbio (Coli)	144.71	332	PKP	PKPdf	09 24 37.7	+1.3
EMV	Vieux Emosson	144.78	336	PKP	PKPdf	09 24 37.9	+1.4
FLN	La Foliniere	144.78	345	ePKP1	PKPbc	09 24 37.2	+0.8
	comp=Z,71nm,0.9s						
BACM		144.79	331	P	PKPdf	09 24 36.8	+0.3
CODM		144.81	331	P	PKPdf	09 24 37.1	+0.5
RFI	Roccamonfina	144.81	323	PKP	PKPdf	09 24 37.8	+1.1
GRI	Girifalco	144.82	318	PKP	PKPdf	09 24 38.6	+1.8
MNS	Montasola	144.82	326	PKP	PKPdf	09 24 37.1	+0.4
LDF	La Druitiere	144.85	345	ePKP1	PKPbc	09 24 36.8	+0.2
	comp=Z,58nm,1.0s						
MAIM		144.86	330	P	PKPdf	09 24 36.7	0.0
LOR	Lormes	144.88	340	ePKP1	PKPbc	09 24 37.7	+1.0
	comp=Z,174nm,1.2s						
TRAV		144.88	334	P	PKPdf	09 24 36.6	0.0
MSC	Monte Massico	144.89	323	PKP	PKPdf	09 24 37.5	+0.7
CERT	Cerreto	144.95	325	PKP	PKPdf	09 24 37.5	+0.6
PII	Pisa	144.99	330	PKP	PKPdf	09 24 37.3	+0.4
MTCE	Montecelio	145.03	325	PKP	PKPdf	09 24 37.4	+0.4
LSD	Ceresole Reale	145.17	335	P	PKPdf	09 24 39.1	+1.9
SSF	Saint Saulge	145.18	340	ePKP1	PKPbc	09 24 38.8	+1.3
	comp=Z,345nm,1.1s						
GRFL	Gerfalco	145.18	328	PKP	PKPdf	09 24 38.1	+0.8
GRR	Gorron	145.22	346	ePKP1	PKPbc	09 24 38.6	+1.0
	comp=Z,198nm,1.1s						
HYF	Humbligny	145.27	341	ePKP1	PKPbc	09 24 39.1	+1.4
LPL	La Plagne	145.29	335	ePKP1	PKPbc	09 24 39.7	+1.9
	comp=Z,272nm,1.3s						
PCP	Pian Castagno	145.29	332	P	PKPdf	09 24 38.3	+0.9
LPG	La Plagne	145.30	335	ePKP1	PKPbc	09 24 39.7	+1.8
	comp=Z,304nm,1.1s						
RSP	Reno Superiore	145.37	334	P	PKPdf	09 24 37.9	+0.4
TOLF	Tolfa	145.41	326	PKP	PKPdf	09 24 39.5	+1.8
SMF	Signal de Mont	145.42	339	ePKP1	PKPbc	09 24 39.4	+1.3
	comp=Z,327nm,1.2s						
AVF	Avril sur Loir	145.46	340	ePKP1	PKPbc	09 24 39.5	+1.3
	comp=Z,183nm,1.1s						
SOI	Samo	145.47	317	PKP	PKPdf	09 24 40.0	+2.1
FENE	Fenestrelle	145.55	334	P	PKPdf	09 24 39.7	+1.9
BHB	Bricherasio	145.62	334	P	PKPdf	09 24 38.5	+0.6
BNI	Bardonecchia	145.69	335	PKP	PKPdf	09 24 40.5	+2.4
FIN	Finale Ligure	145.71	332	P	PKPdf	09 24 39.0	+0.9
SGMF	Saint Gilles	145.73	347	ePKP1	PKPbc	09 24 40.1	+1.3
	comp=Z,354nm,1.2s						
MTTG	Motta San Giov	145.75	317	PKP	PKPdf	09 24 40.4	+2.0
RRL	Cesana Torines	145.76	334	P	PKPdf	09 24 40.6	+2.4
OG22	Abries	145.77	334	PKP	PKPdf	09 24 40.4	+2.2
ROB	Roburent	145.79	333	P	PKPdf	09 24 39.5	+1.2
GDM	Grand'Maison	145.80	335	PKP	PKPdf	09 24 41.1	+2.9
ROSF	Rostrenen	145.80	348	ePKP1	PKPbc	09 24 40.2	+1.2
	comp=Z,236nm,1.2s						
BGF	Bois d'Agland	145.83	340	ePKP1	PKPbc	09 24 40.7	+1.6
DOI	San Damiano	145.90	334	PKP	PKPdf	09 24 39.6	+1.2
GRN	Grenoble	145.91	336	PKP	PKPdf	09 24 41.7	+3.3
MBDF	Montbardon	145.92	334	ePKP1	PKPbc	09 24 41.0	+1.6
	comp=Z,242nm,1.2s						
PZZ	Prazzo	145.96	334	P	PKPdf	09 24 39.8	+1.3
MONE	Monesi	146.01	333	P	PKPdf	09 24 41.0	+2.4
ENR	Entracque	146.04	333	P	PKPdf	09 24 38.4	-0.3
STV2	Anna di Valdie	146.07	333	P	PKPdf	09 24 38.7	0.0
IMI	Imperia	146.08	332	PKP	PKPdf	09 24 40.7	+1.9
SURF	Saint Ours	146.10	334	PKP	PKPdf	09 24 42.0	+3.2
ORIF	Oris-en-Rattie	146.13	335	ePKP1	PKPbc	09 24 42.0	+2.1
	comp=Z,120nm,0.9s						
SAOF	Saorge	146.17	333	PKP	PKPdf	09 24 41.3	+2.4
QUIF	Quistinic	146.18	348	ePKP1	PKPbc	09 24 41.2	+1.3
	comp=Z,134nm,1.3s						
AUTN	L'Aution	146.22	333	PKP	PKPdf	09 24 42.0	+3.0
TCF	Toulx Ste Croi	146.28	341	ePKP1	PKPbc	09 24 42.1	+1.9
	comp=Z,164nm,1.1s						
TOUF	Mont Tournerai	146.29	333	PKP	PKPdf	09 24 42.2	+3.1
SBF	Sospel	146.32	333	ePKP1	PKPbc	09 24 42.0	+1.6
	comp=Z,256nm,0.9s						
MVIF	Mont Vial	146.42	333	PKP	PKPdf	09 24 42.2	+2.8
REVF	Revere	146.45	333	PKP	PKPdf	09 24 42.4	+3.0
COLF	Collangettes	146.45	338	PKP	PKPdf	09 24 43.2	+3.8
OG25	Le Caire	146.50	335	PKP	PKPdf	09 24 42.2	+2.7
PGF	Pioggiola	146.60	330	ePKP1	PKPbc	09 24 43.1	+2.0
	comp=Z,250nm,1.1s						
OCF	Saint Nazaire	146.64	336	PKP	PKPdf	09 24 43.9	+4.2
OG26	St.-Nazaire-De	146.64	336	PKP	PKPdf	09 24 43.9	+4.2
CALN	Calern	146.65	333	PKP	PKPdf	09 24 42.8	+3.0
VIVF	Saint-Julien-l	146.65	337	ePKP1	PKPbc	09 24 43.5	+2.4
	comp=Z,124nm,1.1s						
MFF	Saint Martin d	146.69	344	ePKP1	PKPbc	09 24 43.1	+1.9
	comp=Z,195nm,0.9s						
LCHF	La Chataignera	146.79	344	PKP	PKPdf	09 24 43.8	+3.9
FRF	La Foret Royal	146.91	333	ePKP1	PKPbc	09 24 43.7	+1.9
	comp=Z,225nm,1.1s						
FRNF	Fournols	146.96	340	PKP	PKPdf	09 24 44.8	+4.6
SMRF	Simiane la Rot	147.03	335	ePKP1	PKPdf	09 24 44.6	+4.2
	comp=Z,168nm,1.2s						
VILF	Villemus	147.07	335	PKP	PKPdf	09 24 45.6	+5.2
LMR	La Mourre	147.15	333	ePKP1	PKPdf	09 24 44.4	+3.8
	comp=Z,203nm,1.1s						
PUYF	Puyloubier	147.34	334	PKP	PKPdf	09 24 46.2	+5.3
RJF	Les Rejaudoux	147.38	341	ePKP1	PKPdf	09 24 45.4	+4.5
	comp=Z,196nm,1.3s						
TREF	Trevaresse	147.40	335	PKP	PKPdf	09 24 46.7	+5.7
BERF	Bertagne	147.52	334	PKP	PKPdf	09 24 46.7	+5.5
CAF	Calviac	147.53	340	ePKP1	PKPdf	09 24 46.0	+4.9
	comp=Z,117nm,1.1s						
GELF	Grande-Etoile	147.57	334	PKP	PKPdf	09 24 46.7	+5.4
OLEF	Ile d'Oleron	147.62	345	PKP	PKPdf	09 24 45.9	+4.6
LASF	Ste Croix	147.62	337	ePKP1	PKPdf	09 24 45.5	+4.2
	comp=Z,119nm,1.0s						
LFF	La Frestale	147.95	341	ePKP1	PKPdf	09 24 46.7	+4.9
	comp=Z,236nm,1.2s						
VSL	Villasalto	148.63	325	ePKPbc	PKPdf	09 24 48.1	+5.0
MTLF	Montolieu	148.86	338	ePKP1	PKPdf	09 24 49.5	+6.2
	comp=Z,226nm,1.2s						
LRDF	Laroque-de-Fa	149.09	337	PKP	PKPdf	09 24 49.8	+6.1
LPEF	Le Peyrat	149.32	338	PKP	PKPdf	09 24 50.4	+6.3
EJON	La Jonquera	149.38	336	P	PKPdf	09 24 49.9	+5.7
RCBR	Riachuelo	149.38	131	PFAKE		09 25 00.0	+15
RCBR				LR	LR		
	comp=Z,382nm,20.0s,MS5.2						
FILF	Fillols	149.41	337	PKP	PKPdf	09 24 50.7	+6.5
MLS	Moulis	149.60	339	PKP	PKPdf	09 24 51.0	+6.5
VALF	Valcebollere	149.75	337	PKP	PKPdf	09 24 51.5	+6.7
EPF	Esparros	149.79	340	ePKP1	PKPdf	09 24 51.4	+6.6
	comp=Z,66nm,1.0s						
MELF	Melles	149.79	339	PKP	PKPdf	09 24 51.7	+6.9
LABF	Labassere	149.86	340	PKP	PKPdf	09 24 52.6	+7.7
RESF	Ens	149.99	340	PKP	PKPdf	09 24 52.9	+7.8
VIEF	Viey	150.02	340	PKP	PKPdf	09 24 53.1	+7.9
EBIE	Bielsa	150.16	340	P	PKPdf	09 24 52.6	+7.2
EALK	Alkurruntz	150.18	343	P	PKPdf	09 24 52.2	+6.7
ETSF	Etsaut	150.19	341	ePKP1	PKPdf	09 24 53.1	+7.6
	comp=Z,140nm,1.1s						
LARF	Larrau	150.20	342	PKP	PKPdf	09 24 52.9	+7.4
SJPF	Ste Jean	150.20	342	ePKP1	PKPdf	09 24 52.7	+7.2
	comp=Z,92nm,1.1s						
EMIR	Miracle	150.36	338	P	PKPdf	09 24 52.9	+7.1
ELAN	Lanestosa	150.68	345	P	PKPdf	09 24 52.9	+6.7
EPOB	Poblet	151.01	338	P	PKPdf	09 24 52.3	+5.6
EARI	Arriondas	151.01	348	P	PKPdf	09 24 53.0	+6.4
EBR	Ebro Roquetas	151.69	338	eP	PKPdf	09 24 58.0	+10
CMAH	Djebel Manchou	151.74	323	P	PKPdf	09 24 56.0	+8.0
ABSA	Djebel Ababsia	151.95	323	P	PKPdf	09 24 57.0	+8.7
CAEH	'Ain El Ouahch	151.95	324	P	PKPdf	09 24 57.0	+8.7
CKFL	Kef-Lekhel	152.29	324	P	PKPdf	09 24 59.0	+10
CASM	Ain Smara	152.53	324	P	PKPdf	09 24 58.0	+8.9
DFRA	Djebel Bou Aff	152.66	325	P	PKPdf	09 25 02.0	+13
ESDC	Sonseca Array	154.16	344	PKP	PKPdf	09 24 53.7	+2.5
	comp=Z,0.3nm,0.3s,baz=298,slow=38,SNR=2.7						
ESDC				PKPbc	PKPdf	09 25 03.0	+12
	comp=Z,0.9nm,0.6s,SNR=4.1						
ESDC				PKPab	PKPab	09 25 15.2	-0.5
	comp=Z,1.2nm,0.5s,slow=4.4,SNR=4.5						
EVO	Evora	156.15	350	ePKP2	PKPab	09 25 24.0	-0.2
	comp=Z,15nm,0.8s						
DBIC	Dimbokro	168.37	225	PFAKE		09 25 20.0	+13
DBIC				LR	LR		
	comp=Z,433nm,19.0s						

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*IDC **14** 09:07:01.5±2.2, 33.67S×179.50E, h159^{km}±20^{km}, mb4.5/12, mb1 4.6/14, mb1mx4.4/20, mbtmp4.9/14, Error ellipse: s-maj=17.1km s-min=13.5km az=36.0*

*NEIC **14** 09:07:03.2±1.8, 33.67S×179.51E, h176^{km}±17^{km}, mb5.2/5, Error ellipse: s-maj=15.4km s-min=13.9km az=216.0*

ISC 14 09:07:00.6±0.6**, 33.68S**±0.05×**179.47E**±0.09**, h157**^{km}±7^{km}**, n51, σ1^{s}.27**/46**, mb4.7**/16**, 2C-1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.99	193	PN	P	09 08 01.6	-0.1
MXZ				SN	S	09 08 46.9	-1.8
WIZ	White Island	4.26	205	PN	P	09 08 07.7	+2.4
PUZ	Puketiti	4.49	192	PN	P	09 08 06.8	-1.4
PUZ				SN	S	09 08 57.1	-3.3
TGRZ	Tauranga	4.81	212	PN	P	09 08 14.9	+2.4
MARZ	Manawahe	4.86	207	PN	P	09 08 14.4	+1.3
MWZ	Matawai	4.90	198	PN	P	09 08 13.0	-0.6
MWZ				SN	S	09 09 07.5	-2.6
EDRZ	Edgecumbe	4.94	206	PN	P	09 08 14.7	+0.6
RAO	Raoul Island	4.95	27	S	S	09 09 10.2	-0.9
	262nm,0.3s,baz=72,slow=23,SNR=4.4						
URZ	Urewera	4.95	202	P	P	09 08 15.2	+0.9
	44nm,0.3s,baz=348,slow=2.4,SNR=176						
URZ				S	S	09 09 09.4	-1.9
	343nm,0.3s,baz=110,slow=22,SNR=23						
URZ	Urewera	4.95	202	PN	P	09 08 14.5	+0.2
URZ				SN	S	09 09 09.9	-1.4
LIRZ	Lichensteins R	4.99	209	PN	P	09 08 17.1	+2.3
TAZ	Tarawera	5.14	207	PN	P	09 08 18.0	+1.3
PATZ	Paeroa	5.36	208	PN	P	09 08 20.8	+1.1
KNZ	Kokohu	5.52	195	PN	P	09 08 19.5	-2.3
WATZ	Wairara	5.86	210	PN	P	09 08 27.1	+0.9
HATZ	Hinemaiaia	5.87	207	PN	P	09 08 27.0	+0.5
RATZ	Rangitukua	5.98	209	PN	P	09 08 28.3	+0.5
BKZ	Black Stump Fm	5.98	203	PN	P	09 08 26.1	-1.7
SNZO	South Karori	8.50	205	eP	P	09 08 55.9	-5.7
RPZ	Rata Peaks	11.97	211	P	P	09 09 49.2	+2.2
	6.8nm,0.3s,baz=150,slow=8.7,SNR=3.5						
DZM	Mont Dzumac	16.30	312	P	P	09 10 44.5	+2.6
	2.1nm,0.3s,baz=130,slow=15,SNR=6.7						
AFI	Afiamalu	21.23	24	P	P	09 11 33.9	-1.2
	28nm,0.6s,mb4.8,baz=300,slow=12,SNR=6.5						
HNR	Honiara	30.09	319	P	P	09 12 56.3	-1.2
	57nm,0.5s,mb5.6,baz=297,slow=9.3,SNR=2.2						
STKA	Stephens Creek	31.78	263	P	P	09 13 12.2	0.0
	3.2nm,0.7s,mb4.2,baz=76,slow=7.8,SNR=5.4						
CTA	Charters Tower	32.42	286	P	P	09 13 18.3	+0.5
	36nm,0.6s,mb5.3,baz=110,slow=10,SNR=40						
CTAO	Charters Tower	32.42	286	eP	P	09 13 18.1	+0.3
	44nm,0.6s,mb5.4						
PMG	Port Moresby	38.28	302	P	P	09 14 07.3	-0.1
	12nm,0.5s,mb4.8,baz=81,slow=7.5,SNR=5.8						
WB2	Warramunga Arr	42.21	277	eP	P	09 14 38.7	-1.0
WRAB	Tennant Creek	42.22	277	eP	P	09 14 38.8	-0.9
	66nm,0.8s,mb5.3						
WRA	Warramunga Arr	42.22	277	P	P	09 14 39.1	-0.7
	42nm,0.8s,mb5.1,baz=117,slow=7.5,SNR=56						
KAKA	Kakadu	47.52	285	⇑iP	P	09 15 20.6	-1.3
	26nm,0.7s,mb5.0						
FITZ	Fitzroy Crossi	50.32	274	⇑iP	P	09 15 42.6	-0.7
	15nm,0.7s,mb4.7						
FITZ	Fitzroy Crossi	50.32	274	P	P	09 15 42.2	-1.2
	20nm,0.6s,mb4.9,baz=142,slow=4.5,SNR=12						
QSPA	South Pole Qui	56.44	180	⇓iP	P	09 16 27.6	+0.1
	69nm,1.2s,mb5.4						
PLCA	Paso Flores	81.82	134	P	P	09 19 04.2	+0.9
	4.5nm,0.6s,mb4.3,baz=235,slow=5.4,SNR=22						
PLCA	Paso Flores	81.82	134	P	P	09 19 04.2	+0.9
PLCA				LR	LR		

	comp=Z,642nm,21.0s						
CFAA	**Coronel Fontan**	88.97	128	P	P	09 19 39.9	+1.3
	comp=Z,0.8nm,1.0s,mb3.6,baz=247,slow=4.9						
YBH	**Yreka Blue Hor**	91.93	39	P	P	09 19 52.5	+0.3
	comp=Z,2.4nm,0.7s,mb4.3,baz=213,slow=4.0,SNR=6.7						
NVAR	**Mina Array Bea**	92.09	44	P	P	09 19 53.5	+0.5
	comp=Z,3.2nm,0.7s,mb4.5,baz=211,slow=6.4,SNR=12						
TXAR	**Lajitas Array**	95.94	59	P	P	09 20 10.8	0.0
	comp=Z,0.4nm,0.8s,mb3.8,baz=233,slow=4.5,SNR=3.0						
PDAR	**Pinedale Array**	99.98	45	P	P	09 20 29.2	+0.5
	comp=Z,0.7nm,0.8s,mb4.2,baz=178,slow=2.7,SNR=4.8						
MKAR	**Makanchi Array**	118.21	309	PKKPbc		09 35 49.1	
	comp=Z,0.5nm,0.4s,baz=304,slow=2.6,SNR=7.5						
ARCES	**ARCESS Array B**	141.28	346	PKhKP		09 26 05.1	
	comp=Z,1.6nm,0.6s,slow=3.6,SNR=4.0						
ARCES				PKP	PKPdf	09 26 11.2	-0.3
	comp=Z,1.1nm,0.5s,baz=45,slow=2.6,SNR=8.0						
ARCES	**ARCESS Array B**	141.28	346	PKP	PKPdf	09 26 11.2	-0.3
KAF	**Kangasniemi**	146.83	337	*e*pkp	PKPdf	09 26 19.3	-1.8
FINES	**FINESS Array B**	147.39	336	PKPbc	PKPdf	09 26 23.1	+1.0
	comp=Z,3.5nm,0.5s,baz=40,slow=4.9,SNR=27						
NB2	**NORSAR Subarra**	151.59	348	PKPbc	PKPdf	09 26 34.1	+5.5
	comp=Z,1.4nm,0.6s,baz=13,slow=2.4						
NOA	**NORSAR Array B**	151.59	348	PKPbc	PKPdf	09 26 34.1	+5.5
	comp=Z,0.6nm,0.6s,baz=354,slow=3.9,SNR=8.1						
NOA				PKPab	PKPab	09 26 42.5	-4.1
	comp=Z,1.3nm,0.6s,baz=26,slow=4.1,SNR=5.8						
AKASG	**Malin Array Be**	152.42	317	PKPbc	PKPdf	09 26 36.5	+6.3
	comp=Z,0.4nm,0.4s,baz=47,slow=2.2,SNR=4.5						
AKASG				PKPab	PKPab	09 26 44.4	-6.1
	comp=Z,0.5nm,0.3s,baz=53,slow=3.6,SNR=5.5						
DBIC	**Dimbokro**	152.82	171	PKPbc	PKPdf	09 26 39.5	+7.7
	comp=Z,1.8nm,0.6s,baz=98,slow=11,SNR=5.6						
DBIC				PKPab	PKPab	09 26 49.7	-3.5
	comp=Z,5.6nm,0.9s,baz=158,slow=10,SNR=3.8						
DBIC	**Dimbokro**	152.82	171	PKPbc	PKPdf	09 26 39.5	+7.7
DBIC				PKPab	PKPab	09 26 49.7	-3.5

NEIC 14 09:15:26.6, 50.95N×179.68E, h26^{km}, ML3.6(AEIC), After AEIC., Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	2.10	66	P	Pn	09 16 00.7	-0.1
KIKV	**Kanaga Island**	2.18	64	P	Pn	09 16 00.8	-1.2
KIWB	**Kanaga Island**	2.18	64	P	Pn	09 16 01.1	-0.9
KINC	**Kanaga Island**	2.23	63	P	Pn	09 16 02.1	-0.6
ADAG	**Mount Adagdak**	2.55	65	P	Pn	09 16 07.1	-0.1
GSSP	**Great Sitkin S**	2.83	65	P	Pn	09 16 11.2	0.0
GSTD	**Great Sitkin T**	2.84	65	P	Pn	09 16 12.2	+0.9
GSMY	**Great Sitkin M**	2.88	66	P	Pn	09 16 10.2	-1.8
GSTR	**Great Sitkin T**	2.90	65	P	Pn	09 16 12.6	+0.3
GSIG	**Igitkin Island**	2.94	68	P	Pn	09 16 12.7	-0.1
SMY	**Shemya**	3.89	299	P	Pn	09 16 26.4	+0.1
ATKA	**Atka Island**	4.02	69	P	Pn	09 16 29.9	+1.7
FX1	**Attu Island--F**	4.47	298	P	Pn	09 16 33.5	-1.0

NEIC 14 09:19:15.1, 50.87N×179.69E, h21^{km}, ML3.5(AEIC), After AEIC., Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	2.12	64	P	Pn	09 19 49.7	-0.5
KIWB	**Kanaga Island**	2.21	62	P	Pn	09 19 51.9	+0.6
KINC	**Kanaga Island**	2.26	61	P	Pn	09 19 51.9	-0.2
ADAG	**Mount Adagdak**	2.57	63	P	Pn	09 19 58.1	+1.5
GSMY	**Great Sitkin M**	2.91	65	P	Pn	09 20 00.6	-0.7
ATKA	**Atka Island**	4.04	68	P	Pn	09 20 17.5	0.0
FX1	**Attu Island--F**	4.52	299	P	Pn	09 20 23.2	-1.0

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*BEO **14** 09:23:27.6±0.3, 43.79N×20.84E, h11^{km}*

*CSEM **14** 09:23:27.0±0.1, 43.81N×20.85E, h12^{km}, ML3.0, Error ellipse: s-maj=2.1km s-min=1.6km az=88.0*

*NEIC **14** 09:23:30.2, 43.72N×20.66E, h6^{km}, ML3.0(PDG), After PDG.*

*PDG **14** 09:23:30.2±0.3, 43.72N×20.66E, h6^{km}*

ISC 14 09:23:26.8±0.3, 43.82N±0.02×20.81E±0.03, h11^{km}, n33, σ1^{s}25/52, 13C-5D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRUS	**Gruza**	0.10	318	⇓*i*Pg	Pg	09 23 30.2	+0.6
GRUS				Sg	Sg	09 23 32.3	+0.7
SVIS	**Svilajnac**	0.57	32	⇓*i*Pg	Pg	09 23 38.3	-0.1
SVIS				Sg	Sg	09 23 46.0	0.0
NVSS	**Nova Varos 2**	0.86	249	⇑*i*Pg	Pg	09 23 42.9	-1.2
NVSS				Sg	Sg	09 23 53.9	-1.8
BBLS	**Bajina Basta -**	1.01	274	⇑*i*Pg	Pg	09 23 47.0	-0.2
BBLS				Sg	Sg	09 24 01.6	+0.9
BEO	**Belgrade**	1.04	346	⇑*i*Pg	Pg	09 23 47.3	-0.4
BEO				Sg	Sg	09 24 02.1	+0.5
PLE	**Pljevlja**	1.14	245	⇑*i*Pg	Pg	09 23 49.1	-0.5
PLE				*e*Sg	Sg	09 24 04.4	-0.4
IVA	**Berane**	1.15	215	⇓*i*Pg	Pg	09 23 49.2	-0.7
IVA				*e*Sg	Sg	09 24 05.0	-0.4
IVA	**Berane**	1.15	215	⇓*i*Pg	Pg	09 23 49.2	-0.7
IVA				*e*Sg	Sg	09 24 04.9	-0.5
PVY	**Plav**	1.36	207	*e*Pg	Pg	09 23 52.5	-1.6
PVY				*e*Sg	Sg	09 24 12.0	-0.4
ZAPS	**Zavoj/Pirot**	1.41	111	⇑*i*Pg	Pg	09 23 53.8	-1.4
ZAPS				Sg	Sg	09 24 12.9	-1.1
UPM	**Unac-Piva**	1.51	247	⇓*i*Pg	Pg	09 23 55.5	-1.6
UPM				*e*Sg	Sg	09 24 17.5	+0.3
NKY	**Niksic**	1.66	233	⇑*i*Pg	Pg	09 23 57.5	-2.5
NKY				*e*Sg	Sg	09 24 21.0	-1.1
TTG	**Podgorica**	1.79	220	⇑*i*Pn	Pn	09 23 59.7	+1.7
TTG				*e*Sn	Sn	09 24 24.9	+4.1
BRY	**Bratogost**	1.89	242	⇑*i*Pn	Pn	09 24 02.0	+2.7
BRY				*e*Sn	Sn	09 24 27.5	+4.2
SKO	**Skopje**	1.90	166	*e*Pn	Pn	09 24 01.0	+1.5
SKO				*i*		09 24 09.0	
BUM	**Brajici-Budva**	2.06	223	*e*Pn	Pn	09 24 04.7	+2.8
BUM				*e*Sn	Sn	09 24 31.7	+4.0
TREB	**Trebinje**	2.10	239	Pn	Pn	09 24 04.8	+2.3
HCY	**Herceg Novi**	2.17	232	*e*Pn	Pn	09 24 05.7	+2.2
HCY				*e*Sn	Sn	09 24 34.2	+3.7
ULC	**Ulcinj**	2.17	212	*e*Pn	Pn	09 24 06.3	+2.8
ULC				*e*Sn	Sn	09 24 34.1	+3.5
RHK3	**Tenkes**	2.76	320	*e*P	Pn	09 24 12.3	+0.5
BLY	**Banja Luka**	2.77	291	Pn	Pn	09 24 11.5	-0.4
BLY				Sn	Sn	09 24 43.5	-2.1
PKSM	**Moragy**	2.85	328	⇑*i*P	Pn	09 24 13.3	+0.2
PKS2	**Kecel**	2.91	338	*e*P	Pn	09 24 14.7	+0.8
RHK1	**Bakonya**	3.00	321	⇑*i*P	Pn	09 24 15.6	+0.4
RHK1				*e*S	Sn	09 24 51.1	-0.3
FNA	**Florina**	3.06	172	*e*P	Pn	09 24 17.3	+1.2
GRG	**Griva**	3.09	157	*e*P	Pn	09 24 16.9	+0.4
SRS	**Serrai**	3.39	142	*e*P	Pn	09 24 20.6	-0.2
PKS8	**Sarbogard**	3.41	335	⇑*e*P	Pn	09 24 21.2	+0.1
SOH	**Sokhos**	3.54	147	*e*P	Pn	09 24 22.5	-0.4
PSZ	**Piszkesteto**	4.15	351	⇑*e*Pn	Pn	09 24 31.3	-0.4
OUR	**Ouranopolis**	4.20	145	*e*P	Pn	09 24 31.8	-0.5
VYHS	**Vyhne**	4.88	344	*e*PN	Pn	09 24 39.0	-2.9
ARSA	**Arzberg**	5.06	315	⇑*i*P	Pn	09 24 43.8	-0.7

JMA 14 09:28:12.4±0.3, 27.25N×129.66E, h18^{km}, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	0.83	310	P	Pb	09 28 27.9	0.0
JTK				S	Sb	09 28 40.1	+1.5
JZK	**Kikaishima**	1.10	15	P	Pb	09 28 33.1	+0.6
JZK				S	Sb	09 28 48.0	+1.6
JAM	**Amami Oshima**	1.16	358	P	Pb	09 28 32.7	-0.9
JAM				S	Sb	09 28 47.8	-0.4
JOW	**Kunigami**	1.30	252	P	Pn	09 28 36.2	+0.3
JIH	**Iheya**	1.52	262	P	Pn	09 28 39.0	0.0
JIH				*e*S	Sn	09 28 58.5	0.0
JMZ	**Minamidaito 2**	2.00	135	P	Pn	09 28 46.5	+0.7
JMZ				S	Sn	09 29 10.6	+0.1
JJT2	**Tamagusuku 2**	2.04	238	P	Pn	09 28 46.5	+0.1
JJT2				*e*S	Sn	09 29 12.5	+0.9
NAH1	**Naha**	2.05	240	*e*S	Sn	09 29 12.0	+0.2
JAGN	**Aguni-jima**	2.26	254	P	Pn	09 28 49.1	-0.4
JAGN				S	Sn	09 29 16.8	-0.3
JKE	**Kume jima 2**	2.73	251	P	Pn	09 28 55.4	-0.9
JKE				S	Sn	09 29 27.9	-1.2

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*BJI **14** 09:29:53.9, 14.20S×76.20W, h21^{km}, mB5.3, Ms5.5, Msz5.1*

*NEIC **14** 09:29:54.0±0.2, 14.16S×76.21W, mb5.2/97, MS5.0/3, Error ellipse: s-maj=7.5km s-min=4.0km az=55.0*

NEIC Felt [IV] at Ica; [III] at Chincha, Palpa and Pisco. Also felt at Lima.

*MOS **14** 09:29:54.1±1.1, 14.17S×76.23W, h33^{km}, mb5.1/20, Error ellipse: s-maj=19.4km s-min=12.4km az=123.9*

*IDC **14** 09:29:58.2±3.6, 14.13S×76.11W, h55^{km}±32^{km}, mb4.5/23, mb1 4.7/24, mb1mx4.7/25, mbtmp4.8/24, ML4.5/1, MS4.2/5, Ms1 4.2/5, ms1mx4.0/21, Error ellipse: s-maj=21.6km s-min=12.6km az=63.0*

ISC 14 09:29:52.1±0.2, 14.12S±0.04×76.27W±0.05, h20^{km}, h20^{km}±.7^{km}:pP-P, n303, σ1^{s}03/257, mb5.1/123, MS4.7/11, 11C-5D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	5.17	117	⇓*i*P	Pn	09 31 08.4	-2.0
ARE				*e*S	Sn	09 32 10.0	-0.2
LPAZ	**La Paz**	8.15	106	P	P	09 31 53.6	+1.3
LPAZ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
LPAZ				MLR	MLR		
	comp=Z,765nm,18.9s						
LPAZ	**La Paz**	8.15	106	P	P	09 31 53.6	+1.3
	comp=Z,3.0nm,0.3s,baz=294,slow=11,SNR=82						
LPAZ				LR	LR	09 34 26.6	
	comp=Z,765nm,18.9s,baz=319,slow=34						
LPAZ	**La Paz**	8.15	106	*e*Pn	P	09 31 52.1	-0.2
SAML	**Samuel**	13.81	70	*e*Pn	P	09 33 03.2	-6.3
	comp=Z,2.5nm,1.3s						
OTAV	**Otavalo**	14.43	351	*e*Pn	P	09 33 21.3	+3.8
	comp=Z,81nm,0.9s						
SIV	**San Ignacio**	14.80	99	P	P	09 33 17.3	-5.0
	comp=Z,0.6nm,0.3s,baz=281,slow=14,SNR=37						
TLL	**Tololo Astrono**	16.75	163	*e*P	P	09 33 46.5	-0.9
CFAA	**Coronel Fontan**	18.90	158	P	P	09 34 14.2	+0.1
	comp=Z,0.2nm,0.3s,baz=329,slow=12,SNR=33						
CFAA				LR	LR	09 40 25.1	
	comp=Z,128nm,19.0s,baz=312,slow=33						
ROSC	**El Rosal**	18.95	6	P	P	09 34 19.2	+4.5
	comp=Z,1.2nm,0.3s,baz=107,slow=15,SNR=9.7						
PAYG	**Puerto Ayora**	19.25	313	*e*P	P	09 34 19.6	+1.3
	comp=Z,49nm,0.8s						
PAYG				*e*pP		09 34 27.1	
CLCH	**Cerro Calan**	19.89	166	*e*P	P	09 34 25.9	+0.6
SDV	**Santo Domingo**	23.53	14	P	P	09 35 04.0	+1.8
	comp=Z,32nm,0.7s,mb4.9,baz=212,slow=9.3,SNR=59						
JATB	**Jatai**	24.10	102	⇓*i*P	P	09 35 07.4	-0.4
JATB				*i*		09 35 09.4	
JATB				*i*		09 35 12.0	
JATB				*i*		09 35 18.4	
JATB				*i*		09 35 29.5	
JTS	**JuntasAbangare**	25.73	340	P	P	09 35 27.8	+4.5
JTS				pmax	pmax		
	comp=Z,13nm,0.9s						
JTS	**JuntasAbangare**	25.73	340	P	P	09 35 27.8	+4.5
	comp=Z,13nm,0.8s,mb4.5,baz=146,slow=2.0,SNR=9.6						
JTS	**JuntasAbangare**	25.73	340	*e*P	P	09 35 27.1	+3.8
	comp=Z,85nm,1.6s,mb5.0						
PLCA	**Paso Flores**	26.98	170	P	P	09 35 33.0	-1.6
PLCA				pmax	pmax		
	comp=Z,17nm,1.1s						
PLCA	**Paso Flores**	26.98	170	P	P	09 35 33.0	-1.7
	comp=Z,17nm,1.1s,mb4.5,baz=348,slow=10,SNR=13						
PLCA	**Paso Flores**	26.98	170	*e*P	P	09 35 32.5	-2.1
	comp=Z,20nm,1.0s,mb4.6						
TRQA	**Tornquist**	27.01	155	*e*P	P	09 35 32.5	-2.4
	comp=Z,9.4nm,0.7s,mb4.4						
BDFB	**Brasilia**	27.34	97	P	P	09 35 37.0	-1.1
BDFB				pmax	pmax		
	comp=Z,13nm,0.8s						
BDFB				MLR	MLR		
	comp=Z,3µm,20.6s						
BDFB	**Brasilia**	27.34	97	P	P	09 35 37.0	-1.1
	comp=Z,13nm,0.8s,mb4.5,baz=264,slow=9.3,SNR=7.8						
BDFB				LR	LR	09 47 21.1	
	comp=Z,3µm,20.6s,MS4.8,baz=282,slow=38						
CAM4	**Nova Friburgo**	32.98	109	(P)	P	09 36 28.6	+0.4
NHSC	**New Hope**	47.10	356	*e*P	P	09 38 24.4	-0.5
	comp=Z,74nm,0.9s,mb5.6						
NHSC				*e*pP	pP	09 38 30.6	-0.3
LRAL	**Lakeview Retre**	47.99	348	*e*P	P	09 38 30.9	-1.0
	comp=Z,103nm,1.0s,mb5.8						
LRAL				*e*pP	pP	09 38 38.3	+0.4
JSC	**Jenkinsville**	48.36	354	*e*P	P	09 38 33.8	-0.9
JSC				*e*PcP	PcP	09 40 00.5	-1.1
NATX	**Nacogdoches**	48.91	339	*e*P	P	09 38 39.6	+0.6
	comp=Z,55nm,1.1s,mb5.5						
SWET	**Sewanee**	49.91	350	*e*P	P	09 38 45.5	-1.2
CPCT	**Cooper Cave**	49.91	351	*e*P	P	09 38 45.7	-0.9
CPCT				*e*pP	pP	09 38 50.2	-2.5
CPCT				*e*PcP	PcP	09 40 03.8	-3.4
OXF	**Oxford**	49.95	346	*e*P	P	09 38 45.7	-1.3
	comp=Z,121nm,1.2s,mb5.8						
OXF				*e*pP	pP	09 38 52.9	0.0
PLAL	**Pickwick Lake**	50.10	347	*e*P	P	09 38 46.5	-1.6
	comp=Z,39nm,0.9s,mb5.4						
PLAL				*e*pP	pP	09 38 51.6	-2.4
LTX	**Lajitas**	50.65	329	*e*P	P	09 38 53.0	+0.6
	comp=Z,29nm,1.0s,mb5.2						
LTX				*e*pP	pP	09 39 00.6	+2.2
LTX				*e*PcP	PcP	09 40 08.5	-1.5
TXAR	**Lajitas Array**	50.65	329	P	P	09 38 53.1	+0.7
TXAR				pmax	pmax		
	comp=Z,14nm,0.8s						
TXAR	**Lajitas Array**	50.65	329	P	P	09 38 53.1	+0.7
	comp=Z,14nm,0.8s,mb5.0,baz=149,slow=9.1,SNR=154						
MET	**Memphis--Engin**	50.66	345	*e*P	P	09 38 51.8	-0.6
TZTN	**Tazewell**	50.85	352	*e*P	P	09 38 51.9	-1.9
TZTN				*e*pP	pP	09 38 59.1	-0.6
UALR	**University of**	50.96	343	*e*P	P	09 38 53.4	-1.3
	comp=Z,71nm,1.3s,mb5.4						
UALR				*e*pP	pP	09 39 00.5	-0.1
WVT	**Waverly**	51.15	348	*e*P	P	09 38 54.2	-1.9
	comp=Z,47nm,1.2s,mb5.3						
WVT				*e*pP	pP	09 38 58.5	-3.6
BLA	**Blacksburg**	51.20	356	*e*P	P	09 38 55.9	-0.5
	comp=Z,76nm,1.5s,mb5.4						
BLA				*e*pP	pP	09 39 00.3	-2.1
BLA				*e*PcP	PcP	09 40 13.1	+1.2
HALT	**Halls**	51.27	346	*e*P	P	09 38 55.6	-1.3
HALT				*e*pP	pP	09 39 02.4	-0.5
GNAR	**Gosnell**	51.48	346	*e*P	P	09 38 57.8	-0.8
CBN	**Corbin**	52.05	359	*e*P	P	09 39 03.0	+0.1
	comp=Z,51nm,0.7s,mb5.6						
PARMO	**Parma**	52.08	346	*e*P	P	09 39 02.3	-0.9
WMOK	**Wichita Mounta**	53.08	337	*e*P	P	09 39 09.3	-1.4
	comp=Z,14nm,1.1s,mb4.8						
WMOK				*e*pP	pP	09 39 17.9	+1.3
WMOK				*e*PcP	PcP	09 40 18.0	-0.9
CLNB	**Carlsbad**	53.16	331	*e*P	P	09 39 11.7	+0.4
CLNB				*e*PcP	PcP	09 40 19.3	+0.1
SDMD	**Soldier's Deli**	53.25	359	*e*P	P	09 39 10.9	-0.9
SDMD				*e*pP	pP	09 39 18.4	+0.7
MNTX	**Cornudas Mount**	53.43	329	*e*P	P	09 39 12.8	-0.5
	comp=Z,18nm,1.1s,mb4.9						
MNTX				*e*PcP	PcP	09 40 18.3	-2.0
FVM	**French Village**	53.50	346	*e*P	P	09 39 12.2	-1.5
	comp=Z,18nm,0.7s,mb5.1						
FVM				*e*pP	pP	09 39 18.2	-1.5
MCWV	**Mont Chateau**	53.60	357	*e*P	P	09 39 13.1	-1.3
	comp=Z,11nm,0.8s,mb4.8						
MCWV				*e*pP	pP	09 39 21.0	+0.7
CPRX	**Cap Rock**	53.79	331	*e*P	P	09 39 16.3	+0.5
CPRX				*e*pP	pP	09 39 23.4	+1.7
BLO	**Bloomington**	53.87	350	*e*P	P	09 39 14.7	-1.6
	comp=Z,37nm,0.6s,mb5.5						
BLO				*e*PcP	PcP	09 40 20.8	-1.0
AMTX	**Amarillo**	54.38	334	*e*P	P	09 39 19.2	-0.9
	comp=Z,35nm,1.5s,mb5.1						
AMTX				*e*PcP	PcP	09 40 22.3	-1.5
PAL	**Palisades**	54.88	2	*e*P	P	09 39 23.0	-0.8
	comp=Z,26nm,0.7s,mb5.4						
PAL				*e*pP	pP	09 39 28.7	-1.1
ALLY	**Alegheny Colle**	55.60	356	*e*P	P	09 39 27.6	-1.4
BRYW	**Bryant College**	55.92	4	*e*P	P	09 39 30.7	-0.6
	comp=Z,51nm,0.6s,mb5.7						
BRYW				*e*pP	pP	09 39 35.9	-1.4
BNM	**Barren Site**	56.02	330	*e*P	P	09 39 32.7	+0.6
BNM				*e*pP	pP	09 39 41.1	+3.0
BNM				*e*PcP	PcP	09 40 30.6	+0.4
BINY	**Binghamton**	56.03	0	*e*P	P	09 39 31.3	-0.8
	comp=Z,40nm,0.8s,mb5.5						
BINY				*e*pP	pP	09 39 36.4	-1.6
QUA2	**Belchertown**	56.23	3	*e*P	P	09 39 33.3	-0.2
	comp=Z,19nm,0.6s,mb5.3						
QUA2				*e*pP	pP	09 39 38.8	-0.7
WES	**Weston**	56.40	4	*e*P	P	09 39 33.4	-1.3
	comp=Z,20nm,0.8s,mb5.2						
HRV	**Harvard--Oak R**	56.51	4	*e*P	P	09 39 34.9	-0.5
	comp=Z,30nm,0.9s,mb5.3						
ANMO	**Albuquerque**	56.59	330	P	P	09 39 36.6	+0.5
ANMO				pmax	pmax		
	comp=Z,15nm,1.0s						
ANMO	**Albuquerque**	56.59	330	P	P	09 39 36.6	+0.4
	comp=Z,15nm,1.0s,mb5.0,baz=149,slow=8.9,SNR=38						
ANMO	**Albuquerque**	56.59	330	*e*P	P	09 39 36.4	+0.2
	comp=Z,35nm,1.2s,mb5.3						
ANMO				*e*pP	pP	09 39 42.8	+0.6
GENY	**Geneseo**	56.62	359	*e*P	P	09 39 34.4	-1.8
TUC	**Tucson**	56.77	325	*e*P	P	09 39 37.7	+0.2
	comp=Z,44nm,1.7s,mb5.2						
CBKS	**Cedar Bluff**	57.05	338	*e*P	P	09 39 38.5	-0.8
	comp=Z,36nm,0.8s,mb5.5						
CBKS				*e*pP	pP	09 39 45.0	-0.4
CBKS				*e*PcP	PcP	09 40 33.1	-1.0
ACCN	**Adirondack Com**	57.27	2	⇑*i*P	P	09 39 40.8	-0.1
ACCN				*e*pP	pP	09 39 45.5	-1.4
HNH	**Hanover**	57.65	3	*e*P	P	09 39 44.0	+0.4
	comp=Z,2.2nm,0.9s,mb4.2						
HNH				*e*pP	pP	09 39 50.6	+1.0
NCB	**Newcomb**	57.83	2	*e*P	P	09 39 44.1	-0.7
	comp=Z,18nm,0.7s,mb5.2						
NCB				*e*PcP	PcP	09 40 36.3	-0.8
MIV	**Mineville/With**	57.96	2	*e*P	P	09 39 44.9	-0.8
MIV				*e*pP	pP	09 39 52.1	+0.4
SDCO	**Great Sand Dun**	58.44	333	*e*P	P	09 39 49.5	+0.4
	comp=Z,57nm,1.5s,mb5.4						
SADO	**Sadowa**	58.66	358	P	P	09 39 48.8	-1.8
	comp=Z,17nm,0.7s,mb5.2,baz=196,slow=7.2,SNR=21						
FRNY	**Flat Rock**	58.72	2	*e*P	P	09 39 50.6	-0.4
FRNY				*e*pP	pP	09 39 55.8	-1.3
MSNY	**Massena**	58.84	1	*e*P	P	09 39 50.2	-1.6
MSNY				*e*pP	pP	09 39 58.2	+0.3
WUAZ	**Wupatki**	59.51	327	*e*P	P	09 39 57.2	+0.6
	comp=Z,76nm,1.6s,mb5.5						
PV01	**Paradox Valley**	60.16	331	*e*P	P	09 40 01.5	+0.5
ISCO	**Idaho Springs**	60.20	334	*e*P	P	09 40 01.3	0.0
	comp=Z,22nm,1.4s,mb5.0						
BAR	**Barrett**	60.47	321	*e*P	P	09 40 03.8	+0.5
PV10	**Paradox Valley**	60.57	331	*e*P	P	09 40 02.4	-1.5
PFO	**Pinyon Flat Ob**	60.98	322	*e*P	P	09 40 07.5	+0.7
	comp=Z,43nm,1.1s,mb5.5						
PFO				*e*pP	pP	09 40 13.1	+0.3
LDFC	**Landfair**	61.24	324	*e*P	P	09 40 08.7	+0.3
LDFC				*e*PcP	PcP	09 40 49.6	-1.1
PHWY	**Pilot Hill**	61.39	335	*e*P	P	09 40 09.0	-0.4
NEN	**Nelson**	61.50	325	*e*P	P	09 40 10.1	0.0
NEN				*e*pP	pP	09 40 17.3	+1.0
SRU	**San Rafael**	61.86	330	*e*P	P	09 40 12.7	+0.1
SRU				*e*pP	pP	09 40 19.6	+1.0
SRU				*e*PcP	PcP	09 40 52.8	-0.4
MSU	**Marysvale**	62.21	329	*e*P	P	09 40 15.4	+0.4
MSU				*e*PcP	PcP	09 40 55.1	+0.5
MVU	**Marysvale**	62.22	329	*e*P	P	09 40 15.6	+0.6
	comp=Z,17nm,1.0s,mb5.1						
MVU				*e*PcP	PcP	09 40 55.4	+0.8
ARUT	**Antelope Range**	62.31	327	*e*P	P	09 40 17.0	+1.3
MWC	**Mount Wilson**	62.37	321	*e*P	P	09 40 16.9	+0.8
MWC				*e*pP	pP	09 40 22.4	+0.3
RWWY	**Rawlins**	62.44	334	*e*P	P	09 40 16.5	+0.1
	comp=Z,151nm,2.0s,mb5.8						
MPU	**Maple Canyon**	63.10	330	*e*P	P	09 40 21.4	+0.6
DAU	**Daniels Canyon**	63.23	331	*e*P	P	09 40 22.5	+0.8
DAU				*e*PcP	PcP	09 40 57.9	-0.9
RSSD	**Black Hills**	63.25	338	*e*P	P	09 40 21.5	-0.2
	comp=Z,15nm,1.2s,mb5.0						
EYMN	**Ely**	63.26	349	*e*P	P	09 40 20.6	-1.1
	comp=Z,29nm,1.0s,mb5.4						
JLU	**Jordanelle**	63.47	331	*e*P	P	09 40 23.8	+0.6
DAC	**Darwin (Calif)**	63.51	323	*e*P	P	09 40 24.1	+0.5
	comp=Z,20nm,1.1s,mb5.0						
DAC				*e*PcP	PcP	09 41 00.1	+0.1
CTU	**Camp Tracy**	63.68	331	*e*P	P	09 40 24.7	0.0
TCUT	**Toone Canyon**	63.85	331	*e*P	P	09 40 25.7	-0.1
TCUT				*e*PcP	PcP	09 41 00.7	-0.6
TRCR	**Troy Canyon**	63.87	326	*e*P	P	09 40 26.7	+0.8
HWUT	**Hardware Ranch**	64.31	331	*e*P	P	09 40 28.6	-0.2
	comp=Z,26nm,1.0s,mb5.2						
PDAR	**Pinedale Array**	64.33	333	P	P	09 40 28.4	-0.4
	comp=Z,2.7nm,0.8s,mb4.3,baz=143,slow=7.4,SNR=20						
SPUT	**South Promonto**	64.50	330	*e*P	P	09 40 29.5	-0.5
TPH	**Tonopah**	64.57	325	*e*P	P	09 40 30.8	+0.3
	comp=Z,57nm,1.5s,mb5.4						
MTUM	**Tungsten Hills**	64.82	324	*e*P	P	09 40 32.9	+0.8
AHID	**Auburn Hatcher**	65.01	332	*e*P	P	09 40 32.1	-1.2
	comp=Z,40nm,1.7s,mb5.2						
HVU	**Hansel Valley**	65.01	331	*e*P	P	09 40 32.9	-0.4
OMM	**Old Mammoth Mi**	65.25	324	*e*P	P	09 40 35.9	+1.0
MNV	**Mina**	65.34	325	*e*P	P	09 40 34.8	-0.7
	comp=Z,40nm,1.6s,mb5.2						
SNOW	**Snow King Moun**	65.41	333	*e*P	P	09 40 35.8	0.0
NVAR	**Mina Array Bea**	65.42	325	P	P	09 40 37.0	+1.0
	comp=Z,7.9nm,0.8s,mb4.8,baz=135,slow=7.2,SNR=55						
ELK	**Elko**	65.45	328	P	P	09 40 36.7	+0.6
ELK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ELK	**Elko**	65.45	328	P	P	09 40 36.7	+0.6
	comp=Z,6.6nm,0.9s,mb4.7,baz=124,slow=4.7,SNR=31						
ELK	**Elko**	65.45	328	*e*P	P	09 40 36.3	+0.2
	comp=Z,25nm,1.3s,mb5.1						
LOHW	**Long Hollow**	65.46	333	*e*P	P	09 40 35.4	-0.7
	comp=Z,5.9nm,0.8s,mb4.7						
LOHW				*e*PcP	PcP	09 41 06.8	-1.1
WUWY	**Wally Ulrich**	65.46	333	*e*P	P	09 40 34.8	-1.3
TPAW	**Teton Pass**	65.52	333	*e*P	P	09 40 36.5	0.0
RRI2	**Red Ridge**	65.57	333	*e*P	P	09 40 36.8	0.0
	comp=Z,57nm,1.2s,mb5.5						
MOOW	**Moose Ponds**	65.63	333	*e*P	P	09 40 36.6	-0.6
	comp=Z,28nm,1.7s,mb5.0						
LRV	**Little Rabbit**	65.64	321	*e*P	P	09 40 38.7	+1.3
IMW	**Indian Meadow**	65.83	333	*e*P	P	09 40 38.0	-0.5
	comp=Z,42nm,1.6s,mb5.2						
LKWY	**Lake**	66.14	334	*e*P	P	09 40 42.4	+2.0
	comp=Z,56nm,1.8s,mb5.3						
LKWY				LR	LR		
	comp=Z,843nm,19.0s,MS5.0						
YFT	**Old Faithful**	66.23	334	*e*P	P	09 40 42.6	+1.6
LAO	**LASA Array**	66.24	338	*e*P	P	09 40 40.6	-0.5
	comp=Z,54nm,1.8s,mb5.3						
CMB	**Columbia Colle**	66.34	323	*e*P	P	09 40 42.1	+0.3
	comp=Z,22nm,1.3s,mb5.0						
ULM	**Lac du Bonnet**	66.36	346	P	P	09 40 40.6	-1.1
	comp=Z,29nm,1.0s,mb5.3,baz=159,slow=5.9,SNR=20						
YMR	**Madison River**	66.46	334	*e*P	P	09 40 43.0	+0.6
QLMT	**Earthquake Lak**	66.79	334	*e*P	P	09 40 45.9	+1.3
GCMT	**Greycliff**	66.82	335	*e*P	P	09 40 44.2	-0.6
WCN	**Washoe City**	66.84	324	*e*P	P	09 40 46.4	+1.3
	comp=Z,30nm,1.2s,mb5.2						
DGMT	**Dagmar**	67.07	340	*e*P	P	09 40 46.1	-0.2
	comp=Z,74nm,1.6s,mb5.5						
HLID	**Hailey**	67.16	331	*e*P	P	09 40 47.1	+0.1
	comp=Z,6.2nm,0.8s,mb4.7						
MCMT	**McKenzie Canyo**	67.41	333	*e*P	P	09 40 49.1	+0.5
BOZ	**Bozeman (W)**	67.52	334	*e*P	P	09 40 48.4	-0.8
	comp=Z,21nm,1.2s,mb5.0						
BEKR	**Beckwourth**	67.57	325	*e*P	P	09 40 50.4	+0.8
	comp=Z,22nm,1.0s,mb5.2						
NSHM	**Saint Helena R**	67.97	322	*e*P	P	09 40 53.3	+1.1
WVOR	**Wild Horse Val**	68.42	328	*e*P	P	09 40 54.9	0.0
HRY	**Holter Researc**	68.45	335	*e*P	P	09 40 54.5	-0.6
MOD	**Modoc**	68.93	326	P	P	09 40 59.0	+0.9
LTIM	**Timbered Crate**	69.09	325	P	P	09 40 59.7	+0.7
SCHQ	**Schefferville**	69.14	6	P	P	09 40 57.4	-1.7
	comp=Z,9.2nm,0.9s,mb4.7,baz=179,slow=5.7,SNR=10						
SCHQ				LR	LR	10 12 18.4	
	comp=Z,326nm,18.6s,MS4.6,baz=162,slow=37						
CHMT	**Chamberlain Mo**	69.22	334	*e*P	P	09 41 00.1	+0.4
VNA3	**Neumayer Olymp**	69.27	161	*e*	P	09 41 04.2	+4.6
VNA3	**Neumayer Olymp**	69.27	161	*e*	P	09 41 13.2	+14
VNA3	**Neumayer Olymp**	69.27	161	*e*	P	09 41 17.8	+18
VNA3	**Neumayer Olymp**	69.27	161	*e*	PcP	09 41 21.8	-1.6
VNA3	**Neumayer Olymp**	69.27	161	⇑*i*P	P	09 40 58.6	-1.0
VNA3				*e*	pP	09 41 04.2	-1.5

VNA3				*e*		09 41 13.2	
VNA3				*e*		09 41 17.8	
VNA3				*e*		09 41 21.8	
TBI	**Tubuai**	**69.31**	**250**	*e*S	S	09 50 21.9	+17
	comp=Z,293nm,29.2s						
TBI				*e*LR	LR	10 01 27.4	
	comp=Z,434nm,26.8s,baz=98						
MSO	**Missoula**	**69.45**	**333**	*e*P	**P**	**09 41 01.6**	**+0.5**
	comp=Z,35nm,1.6s,mb5.0						
BMO	**Blue Mountains**	**69.50**	**330**	*e*P	**P**	**09 41 00.9**	**-0.6**
	comp=Z,9.4nm,1.0s,mb4.7						
BMO				LR	LR		
	comp=Z,522nm,19.0s,MS4.8						
VNA1	**Neumayer--Stat**	**69.54**	**161**	*e*	**P**	**09 41 06.2**	**+4.9**
VNA1	**Neumayer--Stat**	**69.54**	**161**	*e*	**P**	**09 41 15.0**	**+14**
VNA1	**Neumayer--Stat**	**69.54**	**161**	*e*	**P**	**09 41 18.4**	**+17**
VNA1	**Neumayer--Stat**	**69.54**	**161**	*e*	PcP	09 41 22.2	-2.3
VNA1	**Neumayer--Stat**	**69.54**	**161**	⇑*i*P	**P**	**09 41 00.7**	**-0.6**
VNA1				*e*	pP	09 41 06.2	-1.2
VNA1				*e*		09 41 15.0	
VNA1				*e*		09 41 18.4	
VNA1				*e*		09 41 22.2	
VNA2	**Neumayer--Watz**	**69.89**	**161**	*e*	**P**	**09 41 07.2**	**+3.8**
VNA2	**Neumayer--Watz**	**69.89**	**161**	*e*	**P**	**09 41 16.0**	**+13**
VNA2	**Neumayer--Watz**	**69.89**	**161**	*e*	**P**	**09 41 20.0**	**+17**
VNA2	**Neumayer--Watz**	**69.89**	**161**	*e*	PcP	09 41 23.9	-2.1
VNA2	**Neumayer--Watz**	**69.89**	**161**	⇑*i*P	**P**	**09 41 02.4**	**-1.0**
VNA2				*e*	pP	09 41 07.2	-2.3
VNA2				*e*		09 41 16.0	
VNA2				*e*		09 41 20.0	
VNA2				*e*		09 41 23.9	
YBH	**Yreka Blue Hor**	**70.14**	**325**	P	**P**	**09 41 05.0**	**-0.4**
YBH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YBH	**Yreka Blue Hor**	**70.14**	**325**	P	**P**	**09 41 05.0**	**-0.5**
	comp=Z,8.2nm,0.8s,mb4.7,baz=97,slow=2.4,SNR=12						
YBH	**Yreka Blue Hor**	**70.14**	**325**	*e*P	**P**	**09 41 05.3**	**-0.2**
	comp=Z,12nm,1.0s,mb4.8						
HBO	**Huckleberry Mo**	**71.34**	**327**	P	**P**	**09 41 13.3**	**+0.6**
SNAA	**Sanae**	**71.49**	**161**	*e*	**P**	**09 41 16.6**	**+3.5**
SNAA	**Sanae**	**71.49**	**161**	*e*	**P**	**09 41 26.3**	**+13**
SNAA	**Sanae**	**71.49**	**161**	*e*	**P**	**09 41 32.7**	**+20**
SNAA	**Sanae**	**71.49**	**161**	*e*	PcP	09 41 33.9	+1.1
SNAA	**Sanae**	**71.49**	**161**	*c i*P	**P**	**09 41 11.9**	**-1.2**
SNAA	**Sanae**	**71.49**	**161**	⇑*i*P	**P**	**09 41 11.9**	**-1.2**
SNAA				*e*	pP	09 41 16.6	-2.7
SNAA				*e*		09 41 26.3	
SNAA				*e*		09 41 32.7	
SNAA				*e*		09 41 33.9	
GBL	**Gable Mountain**	**71.81**	**330**	P	**P**	**09 41 16.7**	**+1.3**
SNIWA	**Snively Ranch**	**71.81**	**330**	P	**P**	**09 41 16.9**	**+1.5**
NEW	**Newport**	**71.94**	**333**	P	**P**	**09 41 16.5**	**+0.3**
NEW				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NEW	**Newport**	**71.94**	**333**	P	**P**	**09 41 16.5**	**+0.3**
	comp=Z,9.5nm,1.0s,mb4.7,baz=139,slow=6.8,SNR=14						
NEW	**Newport**	**71.94**	**333**	*e*P	**P**	**09 41 15.4**	**-0.8**
	comp=Z,18nm,1.1s,mb4.9						
FFC	**Flin Flon**	**71.96**	**345**	P	**P**	**09 41 13.9**	**-2.3**
	comp=Z,5.2nm,0.9s,mb4.5						
EBG	**Ellensburg**	**72.56**	**330**	P	**P**	**09 41 21.6**	**+1.7**
WPW	**White Pass**	**72.90**	**329**	P	**P**	**09 41 23.0**	**+1.1**
DBIC	**Dimbokro**	**73.79**	**79**	P	**P**	**09 41 26.4**	**-1.3**
DBIC				pmax	pmax		
	comp=Z,17nm,1.0s						
DBIC	**Dimbokro**	**73.79**	**79**	P	**P**	**09 41 26.4**	**-1.3**
	comp=Z,16nm,0.9s,mb4.9,baz=223,slow=6.3,SNR=12						
DBIC	**Dimbokro**	**73.79**	**79**	P	**P**	**09 41 26.5**	**-1.2**
	comp=Z,17nm,0.8s,mb5.0						
FCC	**Fort Churchill**	**74.07**	**350**	*e*P	**P**	**09 41 27.8**	**-0.7**
	comp=Z,21nm,0.8s,mb5.1						
EDM	**Edmonton**	**74.23**	**338**	⇑*i*P	**P**	**09 41 29.0**	**-0.5**
EFAM	**Famara**	**74.25**	**54**	P	**P**	**09 41 29.4**	**-0.7**
	comp=Z,164nm,2.6s,mb5.5						
QSPA	**South Pole Qui**	**76.03**	**180**	⇑*i*P	**P**	**09 41 39.5**	**+0.2**
	comp=Z,26nm,1.0s,mb5.1						
MAIT	**Maitri**	**76.12**	**160**	*e*P	**P**	**09 41 39.5**	**-0.5**
NVL	**N'lazarevskaya**	**76.15**	**160**	⇓*i*P	**P**	**09 41 39.2**	**-1.0**
NVL				*i* *PP	pP	09 41 48.5	+2.2
NVL				*i* *SP	sP	09 41 52.6	+4.1
NVL				*i*		09 44 35.2	
NVL				*e*S	S	09 51 16.1	-5.6
NVL				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
NVL				MLR	MLR		
	comp=Z,40nm,17.4s,MS3.8						
FRB	**Frobisher Bay**	**77.85**	**4**	P	**P**	**09 41 49.3**	**-0.4**
FRB				pmax	pmax		
	comp=Z,13nm,0.7s						
FRB	**Frobisher Bay**	**77.85**	**4**	P	**P**	**09 41 49.3**	**-0.4**
	comp=Z,13nm,0.7s,mb5.0,baz=188,slow=6.3,SNR=21						
PTEO	**Sao Teotonio**	**81.52**	**48**	*e*P	**P**	**09 42 10.8**	**+0.8**
	comp=Z,33nm,1.4s,mb5.1						
PTEO				*e*pP	pP	09 42 16.6	+0.4
YKA	**Yellowknife Ar**	**82.03**	**343**	P	**P**	**09 42 11.9**	**-0.1**
	comp=Z,7.6nm,0.8s,mb4.7,baz=138,slow=5.3,SNR=89						
YKA				LR	LR	10 24 27.4	
	comp=Z,178nm,19.1s,MS4.5,baz=280,slow=40						
YKW3	**Yellowknife Ar**	**82.08**	**343**	*e*P	**P**	**09 42 11.6**	**-0.8**
PBEJ	**Beja**	**82.34**	**48**	*e*P	**P**	**09 42 15.4**	**+1.2**
	comp=Z,22nm,1.3s,mb4.9						
PBEJ				*e*pP	pP	09 42 20.8	+0.4
PALC	**Alcoutim**	**82.39**	**48**	*e*P	**P**	**09 42 16.4**	**+1.9**
	comp=Z,48nm,1.5s,mb5.2						
PALC				*e*pP	pP	09 42 21.0	+0.3
EGRO	**El Granado**	**82.41**	**48**	P	**P**	**09 42 15.5**	**+0.9**
	comp=Z,15nm,1.0s,mb4.9						
EVO	**Evora**	**82.44**	**47**	*e*P	**P**	**09 42 14.7**	**0.0**
	comp=Z,63nm,1.1s,mb5.1						
PTOM	**Tomar**	**82.62**	**46**	*e*P	**P**	**09 42 17.0**	**+1.4**
	comp=Z,41nm,1.3s,mb5.3						
PTOM				*e*pP	pP	09 42 21.7	-0.2
VNDA	**Vanda**	**82.81**	**191**	P	**P**	**09 42 16.6**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VNDA	**Vanda**	**82.81**	**191**	P	**P**	**09 42 16.6**	**+0.6**
	comp=Z,5.7nm,0.9s,mb4.6,baz=138,slow=3.3,SNR=5.4						
VNDA	**Vanda**	**82.81**	**191**	*e*P	**P**	**09 42 16.3**	**+0.4**
	comp=Z,9.9nm,1.0s,mb4.8						
EMIN	**Mina Concepcio**	**83.09**	**48**	P	**P**	**09 42 18.0**	**-0.1**
	comp=Z,15nm,0.9s,mb5.0						
EBAD	**Badajoz**	**83.25**	**47**	P	**P**	**09 42 19.9**	**+1.0**
	comp=Z,9.3nm,0.8s,mb4.9						
ESPR	**Espera**	**83.34**	**50**	P	**P**	**09 42 20.3**	**+0.9**
	comp=Z,21nm,1.1s,mb5.1						
PCBR	**Castelo Branco**	**83.36**	**46**	*e*P	**P**	**09 42 20.0**	**+0.5**
	comp=Z,21nm,1.4s,mb5.0						
PCBR				*e*pP	pP	09 42 25.2	-0.5
PVIS	**Viseu**	**83.44**	**45**	*e*P	**P**	**09 42 20.7**	**+0.9**
	comp=Z,38nm,1.4s,mb5.2						
PVIS				*e*pP	pP	09 42 25.5	-0.6
MTE	**Manteigas**	**83.55**	**46**	*e*P	**P**	**09 42 21.7**	**+1.3**
MTE				*e*pP	pP	09 42 26.1	-0.6
PVRL	**Vila Real**	**83.80**	**45**	*e*P	**P**	**09 42 22.8**	**+1.1**
PVRL				*e*pP	pP	09 42 27.4	-0.5
EMIJ	**Mijas**	**84.02**	**50**	P	**P**	**09 42 24.6**	**+1.7**
	comp=Z,12nm,0.6s,mb5.2						
ECAB	**El Cabril**	**84.13**	**49**	P	**P**	**09 42 26.5**	**+3.0**
	comp=Z,3.3nm,0.7s,mb4.6						
DLBC	**Dease Lake**	**84.52**	**335**	P	**P**	**09 42 26.3**	**+1.5**
	comp=Z,14nm,0.8s,mb5.1,baz=141,slow=5.1,SNR=18						
DLBC	**Dease Lake**	**84.52**	**335**	*e*P	**P**	**09 42 25.7**	**+0.8**
ERUA	**La Rua**	**84.65**	**44**	P	**P**	**09 42 26.5**	**+0.6**
	comp=Z,0.5nm,0.4s,mb4.0						
ELOJ	**Sierra Loja**	**84.70**	**50**	P	**P**	**09 42 27.5**	**+1.2**
	comp=Z,7.0nm,0.5s,mb5.0						
ELUQ	**Luque**	**84.77**	**49**	P	**P**	**09 42 28.3**	**+1.6**
	comp=Z,10nm,0.6s,mb5.1						
EADA	**Adamuz**	**84.78**	**49**	P	**P**	**09 42 28.8**	**+2.1**
	comp=Z,9.5nm,1.0s,mb4.9						
EPON	**Pontenova**	**85.03**	**43**	P	**P**	**09 42 26.0**	**-1.8**
	comp=Z,27nm,1.7s,mb5.1						
EBER	**Berja**	**85.55**	**50**	P	**P**	**09 42 33.0**	**+2.5**
	comp=Z,16nm,0.7s,mb5.4						
EQES	**Quesada**	**85.75**	**50**	P	**P**	**09 42 32.4**	**+0.9**
	comp=Z,12nm,0.8s,mb5.2						
SYO	**Syowa Base**	**85.78**	**161**	⇓P	**P**	**09 42 29.0**	**-1.9**
ESDC	**Sonseca Array**	**85.79**	**48**	P	**P**	**09 42 32.2**	**+0.5**
	comp=Z,0.9nm,0.5s,mb4.2,baz=257,slow=5.9,SNR=6.3						
ESDC	**Sonseca Array**	**85.79**	**48**	P	**P**	**09 42 32.2**	**+0.6**
	comp=Z,9.7nm,2.1s,mb4.7						
EVIA	**Vianos**	**86.46**	**49**	P	**P**	**09 42 36.1**	**+1.0**
	comp=Z,10.0nm,0.7s,mb5.2						
ETOB	**Tobarra**	**87.17**	**49**	P	**P**	**09 42 44.2**	**+5.8**
	comp=Z,20nm,0.9s,mb5.3						
ECHE	**Chera**	**87.92**	**48**	P	**P**	**09 42 44.7**	**+2.7**
	comp=Z,10nm,0.8s,mb5.1						
ETSF	**Etsaut**	**89.34**	**45**	*e*P	**P**	**09 42 53.0**	**+4.3**
RES	**Resolute Bay**	**89.39**	**355**	*e*P	**P**	**09 42 48.0**	**-0.2**
	comp=Z,7.2nm,0.9s,mb5.0						
QUIF	**Quistinic**	**89.41**	**40**	*e*P	**P**	**09 42 53.5**	**+4.6**
EPF	**Esparros**	**90.00**	**46**	*e*P	**P**	**09 42 56.1**	**+4.2**
SUMG	**Summit**	**90.01**	**11**	*e*P	**P**	**09 42 52.2**	**+0.9**
	comp=Z,35nm,0.8s,mb5.7						
MFF	**Saint Martin d**	**90.87**	**42**	*e*P	**P**	**09 43 00.2**	**+4.5**
	comp=Z,7.9nm,0.6s,mb4.9						
LFF	**La Frestale**	**90.90**	**44**	*e*P	**P**	**09 43 00.1**	**+4.2**
GRR	**Gorron**	**91.02**	**40**	*e*P	**P**	**09 43 00.8**	**+4.4**
	comp=Z,18nm,0.9s,mb5.1						
FLN	**La Foliniere**	**91.38**	**40**	*e*P	**P**	**09 43 02.4**	**+4.4**
	comp=Z,15nm,0.8s,mb5.1						
MTLF	**Montolieu**	**91.40**	**46**	*e*P	**P**	**09 43 02.6**	**+4.3**
	comp=Z,16nm,0.9s,mb5.0						
RJF	**Les Rejaudoux**	**91.54**	**44**	*e*P	**P**	**09 43 02.8**	**+3.9**
LDF	**La Druitiere**	**91.55**	**40**	*e*P	**P**	**09 43 03.5**	**+4.7**
	comp=Z,16nm,0.8s,mb5.1						
INK	**Inuvik**	**91.71**	**342**	P	**P**	**09 42 59.3**	**+0.2**
INK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
INK	**Inuvik**	**91.71**	**342**	P	**P**	**09 42 59.3**	**+0.2**
	comp=Z,8.5nm,1.0s,mb5.0,baz=107,slow=4.8,SNR=12						
INK	**Inuvik**	**91.71**	**342**	*e*P	**P**	**09 42 58.3**	**-0.8**
	comp=Z,23nm,1.3s,mb5.3						
CAF	**Calviac**	**91.79**	**44**	*e*P	**P**	**09 43 04.5**	**+4.5**
	comp=Z,46nm,1.3s,mb5.3						
EKA	**Eskdalemuir Ar**	**92.17**	**33**	P	**P**	**09 43 01.0**	**-0.5**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**92.17**	**33**	P	**P**	**09 43 01.0**	**-0.5**
	comp=Z,1.1nm,0.7s,mb4.3,baz=36,slow=28,SNR=2.9						
TCF	**Toulx Ste Croi**	**92.31**	**43**	*e*P	**P**	**09 42 53.2**	**-9.2**
	comp=Z,42nm,1.4s,mb5.3						
BGF	**Bois d'Agland**	**92.81**	**43**	*e*P	**P**	**09 43 08.6**	**+3.9**
	comp=Z,27nm,0.9s,mb5.4						
BOSA	**Boshof**	**93.15**	**120**	P	**P**	**09 43 10.5**	**+3.8**
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
BOSA	**Boshof**	**93.15**	**120**	P	**P**	**09 43 10.5**	**+3.8**
	comp=Z,3.0nm,0.8s,mb4.8,baz=174,slow=6.1,SNR=3.9						
AVF	**Avril sur Loir**	**93.21**	**43**	*e*P	**P**	**09 43 10.8**	**+4.3**
	comp=Z,7.0nm,0.7s,mb4.9						
MAW	**Mawson**	**93.29**	**165**	P	**P**	**09 43 06.3**	**-0.1**
MAW				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAW	**Mawson**	**93.29**	**165**	P	**P**	**09 43 06.3**	**0.0**
	comp=Z,5.9nm,0.8s,mb5.1,baz=230,slow=6.5,SNR=9.0						
SMF	**Signal de Mont**	**93.49**	**43**	*e*P	**P**	**09 43 12.3**	**+4.5**
	comp=Z,27nm,1.0s,mb5.3						
SML	**Sawmill**	**94.09**	**333**	*e*P	**P**	**09 43 09.6**	**-0.6**
ORIF	**Oris-en-Rattie**	**94.38**	**45**	*e*P	**P**	**09 43 17.4**	**+5.5**
	comp=Z,14nm,0.8s,mb5.2						
FRF	**La Foret Royal**	**94.56**	**46**	*e*P	**P**	**09 43 16.9**	**+4.1**
ILAR	**Eielson Array**	**94.64**	**336**	P	**P**	**09 43 12.3**	**-0.4**
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR	**Eielson Array**	**94.64**	**336**	P	**P**	**09 43 12.3**	**-0.4**
	comp=Z,2.6nm,0.8s,mb4.7,baz=154,slow=2.6,SNR=32						
LPL	**La Plagne**	**95.12**	**44**	*e*P	**P**	**09 43 19.5**	**+4.2**
	comp=Z,11nm,0.8s,mb5.0						
LPG	**La Plagne**	**95.13**	**45**	*e*P	**P**	**09 43 19.8**	**+4.4**
	comp=Z,46nm,1.4s,mb5.4						
SBF	**Sospel**	**95.19**	**46**	*e*P	**P**	**09 43 20.0**	**+4.3**
RSO	**Redoubt South**	**95.63**	**331**	*e*P	**P**	**09 43 17.0**	**-0.3**
GRA1	**Grafenberg Arr**	**99.02**	**41**	*e*P	**P**	**09 43 34.1**	**+1.3**
	comp=Z,6.0nm,1.0s,mb5.1						
GRF	**Grafenberg Arr**	**99.02**	**41**	*e*P	**P**	**09 43 34.1**	**+1.3**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb5.1						
GRF	**Grafenberg Arr**	**99.02**	**41**	*e*P	**P**	**09 43 34.1**	**+1.3**
	comp=Z,6.0nm,1.0s,mb5.1						
CLL	**Collm**	**100.42**	**40**	*e*P	P	09 43 35.0	-4.2
CLL				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.8						
OBN	**Obninsk**	**114.50**	**36**	*i* PKIKP	PKPdf	09 48 29.1	-5.7
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GNI	**Garni**	**122.60**	**51**	*i* PKIKP	PKPdf	09 48 44.7	-6.2
YAK	**Yakutsk**	**128.68**	**345**	*i* PKIKP	PKPdf	09 48 58.8	-3.3
YAK				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.5						
AB31	**Akbulak array**	**129.94**	**36**	*i* PKIKP	PKPdf	09 49 02.2	-2.7
AB31				pmax	pmax		
	comp=Z,21nm,1.1s						
WB2	**Warramunga Arr**	**134.69**	**222**	⇑*i*P	PKPdf	09 49 11.2	-3.4
WRAB	**Tennant Creek**	**134.70**	**222**	*e*PKPdf	PKPdf	09 49 10.9	-3.7
WRA	**Warramunga Arr**	**134.70**	**222**	PKIKP	PKPdf	09 49 11.6	-3.0
WRA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**134.70**	**222**	PKP	PKPdf	09 49 11.6	-3.0
	comp=Z,6.1nm,0.8s,baz=128,slow=1.9,SNR=6.6						
NVS	**Novosibirsk**	**136.34**	**17**	*e*PKIKP	PKPdf	09 49 12.0	-4.6
MJAR	**Matsushiro Arr**	**141.98**	**312**	PKHKP		09 49 18.8	
MJAR						09 49 24.6	
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	**Matsushiro Arr**	**141.98**	**312**	PKhKP		09 49 18.8	
	comp=Z,3.6nm,0.7s,baz=106,slow=2.2,SNR=12						
MJAR				PKP	PKPdf	09 49 24.6	-2.7
	comp=Z,2.8nm,0.7s,baz=112,slow=2.7,SNR=6.6						
AAK	**Ala-Archa**	**142.03**	**36**	⇑*i*PKIKP	PKPdf	09 49 23.8	-3.4
MDJ	**Mudanjiang**	**142.48**	**329**	PKP	PKPdf	09 49 23.8	-4.1
TLY	**Talaya**	**142.53**	**0**	⇓*i*PKIKP	PKPdf	09 49 26.5	-1.3
MKAR	**Makanchi Array**	**142.80**	**25**	PKIKP	PKPdf	09 49 23.3	-5.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**142.80**	**25**	PKP	PKPdf	09 49 23.2	-5.2
	comp=Z,1.1nm,0.7s,slow=1.2,SNR=7.0						
ZAK	**Zakamensk**	**143.83**	**0**	*e*PKIKP	PKPdf	09 49 25.2	-4.8
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KSH	**Kashi**	**144.86**	**39**	*e*PKP	PKPdf	09 49 29.0	-3.2
KSH				*e*APKP		09 49 39.0	
KSH				*e*XPKP		09 49 43.8	
KSH				*e*PP	PP	09 52 47.0	-2.7
KSH				*e*PKS	PKS	09 53 03.0	+0.4
KSH				*e*SKS	SKS	09 56 33.3	-7.2
KSH				PP	PP		
	comp=Z,190nm,3.6s						
CN2	**Changchun**	**145.06**	**332**	*e*PKP	PKPdf	09 49 27.5	-5.0
ULN	**Ulaanbaatar**	**146.24**	**356**	*c i*PKP2	PKPab	09 49 33.1	-1.1
ULN	**Ulaanbaatar**	**146.24**	**356**	*e*PKPbc	PKPbc	09 49 32.6	+1.2
SONM	**Songino Array**	**146.31**	**357**	PKPbc	PKPbc	09 49 33.9	+2.3
	comp=Z,19nm,0.9s,baz=338,slow=2.9,SNR=97						
WMQ	**Urumqi**	**147.37**	**22**	*e*PKP	PKPdf	09 49 32.4	-3.9
WMQ				PP	PP		
	comp=Z,260nm,4.6s						
WMQ				LR	LR		
	comp=N,330nm,23.2s,MS5.2						
WMQ				LR	LR		
	comp=E,320nm,22.0s,MS5.2						
WMQ				LR	LR		
	comp=Z,360nm,24.0s,MS5.1						
KS15	**Wonju Array Si**	**148.36**	**322**	*e*PKPbc	PKPdf	09 49 38.9	+0.7
THN	**Thein Dam**	**148.61**	**50**	*e*P	PKPdf	09 49 38.8	+0.1
	comp=Z,25nm,0.7s						
POO	**Poona**	**151.01**	**77**	*e*P	PKPdf	09 49 37.0	-5.8
GTA	**Gaotai**	**154.57**	**7**	*e*PKP	PKPdf	09 49 45.6	-1.6
GTA				PKP2	PKPab	09 50 08.0	-0.7
GTA				PKS	PKS	09 53 17.8	+1.4
GTA				PP	PP	09 53 51.5	+6.1
GTA				SKKS		10 00 30.4	
GTA				PP	PP		
	comp=Z,90nm,6.9s						
GTA				LR	LR		
	comp=N,70nm,26.0s,MS4.7						
GTA				LR	LR		
	comp=E,130nm,21.8s,MS4.7						
GTA				LR	LR		
	comp=Z,280nm,26.0s,MS5.0						
SSE	**Sheshan**	**156.71**	**319**	*e*PKP	PKPdf	09 49 48.3	-2.0
KOLN	**Koldanda**	**156.85**	**51**	*e*P	PKPab	09 50 17.6	-1.3
	comp=Z,23nm,0.9s						
NJ2	**Nanjing**	**157.42**	**325**	*e*PKP	PKPdf	09 49 44.4	-6.9
GKN	**Gorkha**	**157.50**	**49**	*e*P	PKPab	09 50 20.0	-1.6
	comp=Z,42nm,0.9s						
DMN	**Daman**	**158.06**	**49**	*e*P	PKPab	09 50 23.4	-0.7
	comp=Z,45nm,0.8s						
KKN	**Kakani**	**158.09**	**49**	*e*P	PKPab	09 50 23.1	-1.1
	comp=Z,72nm,0.8s						
LZH	**Lanzhou**	**158.12**	**360**	*e*PKP	PKPdf	09 49 52.0	0.0
LZH				PP	PP	09 54 09.1	+3.8
LZH				SKKS		10 00 52.0	
LZH				SS	SS	10 14 04.0	+3.4
LZH				PP	PP		
	comp=Z,180nm,7.8s						
LZH				LR	LR		
	comp=N,270nm,19.8s						
LZH				LR	LR		
	comp=Z,330nm,21.0s,MS5.2						
LZH	**Lanzhou**	**158.12**	**360**	*e*PKP	PKPdf	09 49 52.0	0.0
LZH				sPKP		09 50 15.0	
LZH				PP	PP	09 54 09.1	+3.8
LZH				SKKS		10 00 52.0	
LZH				SS	SS	10 14 04.0	+3.4
LZH				LR	LR		
	comp=Z,340nm,21.0s,MS5.2						
PKI	**Pulchoki**	**158.31**	**49**	*e*P	PKPab	09 50 23.8	-1.3
	comp=Z,33nm,1.0s						
GUN	**Gumba**	**158.45**	**48**	*e*P	PKPab	09 50 24.2	-1.6
	comp=Z,112nm,1.0s						
GYA	**Guiyang**	**167.42**	**348**	*i* PKP	PKPdf	09 49 59.3	-2.0
GYA				APKP		09 50 10.3	
GYA				PKP2	PKPab	09 51 05.6	+0.9
GYA				PP	PP	09 54 54.3	+0.3
GYA				PP	PP		
	comp=Z,120nm,8.9s						
GYA				LR	LR		
	comp=N,390nm,20.8s						
GYA				LR	LR		
	comp=E,610nm,21.5s						
GYA				LR	LR		
	comp=Z,420nm,21.6s						
KMI	**Kunming**	**169.01**	**5**	PKP	PKPdf	09 50 00.6	-1.7
CMAR	**Chiang Mai Arr**	**173.70**	**46**	PKIKP	PKPdf	09 50 02.2	-2.8
CMAR						09 51 31.9	
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**173.70**	**46**	PKP	PKPdf	09 50 02.2	-2.8
	comp=Z,2.3nm,0.9s,baz=317,slow=1.0,SNR=11						
CMAR				PKPab	PKPab	09 51 31.9	-0.8
	comp=Z,1.4nm,0.8s,baz=306,slow=5.1,SNR=5.0						

NEIC 14 09:31:02.4,50.94N×179.66E,h14^{km},ML3.6(AEIC)**,After AEIC.,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.11**	**66**	P	Pn	09 31 37.1	-0.8
KIKV	**Kanaga Island**	**2.20**	**63**	P	Pn	09 31 38.6	-0.5
KIWB	**Kanaga Island**	**2.20**	**64**	P	Pn	09 31 38.7	-0.4
KINC	**Kanaga Island**	**2.24**	**62**	P	Pn	09 31 39.3	-0.4
ADAG	**Mount Adagdak**	**2.56**	**64**	P	Pn	09 31 45.0	+0.7
GSTD	**Great Sitkin T**	**2.85**	**65**	P	Pn	09 31 47.7	-0.7
GSTD				S	Sn	09 32 23.2	+0.4
GSMY	**Great Sitkin M**	**2.90**	**66**	P	Pn	09 31 47.8	-1.3
GSTR	**Great Sitkin T**	**2.91**	**65**	P	Pn	09 31 49.2	-0.1
GSIG	**Igitkin Island**	**2.95**	**67**	P	Pn	09 31 49.5	-0.4
ATKA	**Atka Island**	**4.04**	**69**	P	Pn	09 32 05.4	+0.1
FX1	**Attu Island--F**	**4.47**	**298**	P	Pn	09 32 10.9	-0.5

IDC ***14*** *09:37:50.0±1.0,61.88N×26.60W,mb3.8/12,mb1 4.0/13, mb1mx3.9/24,mbtmp3.8/13,ML2.6/1,Error ellipse: s-maj=40.8km s-min=14.5km az=3.0*

CSEM ***14*** *09:37:49.0±0.1,61.92N×26.68W,h10^{km},mb4.3/6,Error ellipse: s-maj=7.2km s-min=1.9km az=31.0*

NEIC ***14*** *09:37:51.6±0.4,61.88N×26.63W,h10^{km},mb4.3/7,Error ellipse: s-maj=15.2km s-min=5.5km az=211.0*

ISC 14 09:37:49.8±0.5**,61.9N**±0.1×**26.6W**±0.2**,h10**^{km}**,n29,** σ**0^{s}81**/28**,mb3.7**/13**,Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUMG	**Summit**	**11.59**	**342**	*e*P	**P**	**09 40 37.4**	**-0.6**
	11nm,1.1s						
SUMG	**Summit**	**11.59**	**342**	*e*P	**P**	**09 40 37.4**	**-0.6**
	11nm,1.1s						
EKA	**Eskdalemuir Ar**	**13.84**	**108**	Pn	**P**	**09 41 08.0**	**0.0**
	0.0nm,0.3s,baz=304,slow=6.0,SNR=4.1						
ROSF	**Rostrenen**	**18.92**	**125**	*e*P	**P**	**09 42 12.3**	**-0.4**
	27nm,1.1s						
GRR	**Gorron**	**19.83**	**121**	*e*P	**P**	**09 42 22.4**	**-0.8**
BAIF	**Baives**	**20.71**	**111**	*e*P	**P**	**09 42 32.3**	**-0.1**
GIVF	**Givet**	**20.95**	**110**	*e*P	**P**	**09 42 34.9**	**0.0**
SSF	**Saint Saulge**	**22.68**	**117**	*e*P	**P**	**09 42 52.1**	**-0.1**
	4.8nm,0.9s,mb3.9						
CDF	**Champ du Feu**	**23.28**	**110**	*e*P	**P**	**09 42 57.9**	**-0.1**
MOX	**Moxa**	**23.66**	**101**	*e*P	**P**	**09 43 04.0**	**+2.4**
FINES	**FINESS Array B**	**24.43**	**68**	P	**P**	**09 43 09.7**	**+0.7**
	1.8nm,0.8s,mb3.5,baz=338,slow=10,SNR=4.9						
GERES	**GERESS Array B**	**25.89**	**102**	P	**P**	**09 43 23.1**	**+0.1**
	0.2nm,0.3s,mb3.2,baz=324,slow=12,SNR=4.4						
AKASG	**Malin Array Be**	**31.91**	**85**	P	**P**	**09 44 16.1**	**-1.1**
	0.4nm,0.5s,mb3.5,baz=310,slow=8.9,SNR=7.4						
AKASG	**Malin Array Be**	**31.91**	**85**	P	**P**	**09 44 16.0**	**-1.1**
YKA	**Yellowknife Ar**	**37.99**	**311**	P	**P**	**09 45 08.7**	**-0.3**
	1.3nm,0.9s,mb3.7,baz=53,slow=8.5,SNR=4.5						
YKA	**Yellowknife Ar**	**37.99**	**311**	P	**P**	**09 45 08.7**	**-0.3**
ILAR	**Eielson Array**	**46.06**	**329**	P	**P**	**09 46 15.1**	**+0.4**
	0.8nm,0.9s,mb3.6,baz=20,slow=6.9,SNR=5.4						
ILAR				PcP	PcP	09 47 50.2	-1.4
	0.8nm,0.8s,baz=352,slow=3.5,SNR=5.2						
ILAR	**Eielson Array**	**46.06**	**329**	PcP	PcP	09 47 50.2	-1.4
PDAR	**Pinedale Array**	**50.29**	**288**	P	**P**	**09 46 47.7**	**-0.2**
	2.5nm,0.8s,mb4.3,baz=49,slow=6.2,SNR=18						
ELK	**Elko**	**54.44**	**291**	P	**P**	**09 47 19.9**	**+1.0**
	1.6nm,0.8s,mb4.0,baz=51,slow=4.9,SNR=7.6						
ANMO	**Albuquerque**	**55.18**	**280**	P	**P**	**09 47 25.0**	**+0.5**
	0.7nm,0.6s,mb3.9,baz=357,slow=2.4,SNR=5.0						
MKAR	**Makanchi Array**	**57.66**	**50**	P	**P**	**09 47 42.3**	**+0.2**
	1.0nm,0.8s,mb3.9,baz=323,slow=6.1,SNR=7.1						
NVAR	**Mina Array Bea**	**57.69**	**292**	P	**P**	**09 47 42.7**	**+0.3**
	0.2nm,0.3s,mb3.6,baz=76,slow=5.4,SNR=3.8						
NVAR	**Mina Array Bea**	**57.69**	**292**	P	**P**	**09 47 42.7**	**+0.3**
TXAR	**Lajitas Array**	**58.53**	**274**	P	**P**	**09 47 47.5**	**-0.9**
	0.3nm,0.7s,mb3.4,baz=68,slow=6.7,SNR=5.9						
SONM	**Songino Array**	**64.29**	**33**	P	**P**	**09 48 27.3**	**+0.4**
	1.3nm,0.9s,mb4.0,baz=328,slow=5.7,SNR=9.9						
LZH	**Lanzhou**	**74.45**	**40**	*e*P	**P**	**09 49 27.7**	**-1.6**
LZH				pP	pP	09 49 44.1	+12
HYB	**Hyderabad**	**81.72**	**69**	*e*P	**P**	**09 50 13.0**	**+3.4**
HYB	**Hyderabad**	**81.72**	**69**	*i* P	**P**	**09 50 13.0**	**+3.4**

IDC 14 09:49:34.6±3.2**,0.26N**×**98.27E,mb3.8**/3**,mb1 3.9**/4**, mb1mx3.7**/15**,mbtmp3.7**/4**,Error ellipse: s-maj=119.4km s-min=28.6km az=60.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**18.09**	**2**	P	P	09 53 47.7	-1.5
	baz=196,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	**40.63**	**122**	P	P	09 57 16.8	-1.5
	0.1nm,0.4s,baz=302,slow=9.1,SNR=5.4						
SONM	**Songino Array**	**47.90**	**7**	P	P	09 58 14.9	-1.7
	0.3nm,0.3s,baz=191,slow=6.1,SNR=5.0						
MKAR	**Makanchi Array**	**48.41**	**345**	P	P	09 58 18.4	-2.1
	1.3nm,0.5s,baz=160,slow=8.0,SNR=9.9						
TXAR	**Lajitas Array**	**143.87**	**34**	PKP	PKPdf	10 09 11.3	-3.1
	0.2nm,0.5s,baz=213,slow=0.8,SNR=5.1						

ATH ***14*** *09:51:18.0,38.98N×22.29E,h14^{km}±1^{km},MD3.1/4*

NEIC ***14*** *09:51:18.0,38.98N×22.29E,h14^{km},MD3.1(ATH),After ATH.*

CSEM ***14*** *09:51:18.8±0.1,39.06N×22.40E,h8^{km},MD3.1,Error ellipse: s-maj=2.4km s-min=1.9km az=53.0*

THE ***14*** *09:51:20.4,39.17N×22.36E,h11^{km}*

ISC 14 09:51:17.8±0.7**,39.07N**±0.03×**22.33E**±0.04**,h14**^{km}±7^{km}**, n12,** σ**0^{s}99**/19**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.43**	**249**	*e*PB	**Pb**	**09 51 25.5**	**-1.2**
EVR				*e*SB	**Sb**	**09 51 31.3**	**-1.4**
LKR	**Lokris**	**0.67**	**129**	*e*PG	**Pg**	**09 51 30.1**	**-1.4**
LKR				*e*SB	**Sb**	**09 51 39.7**	**+0.1**
NEO	**Neokhori**	**0.73**	**71**	*e*PB	**Pb**	**09 51 33.3**	**+1.5**
NEO				*e*SB	**Sb**	**09 51 44.2**	**+2.9**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
LIT	**Litokhoron**	**1.03**	**7**	*e*Pg	**Pg**	**09 51 38.5**	**-0.1**
LIT				*e*Sg	**Sg**	**09 51 51.7**	**-0.8**
MEV	**Metsovon**	**1.11**	**310**	*e*Pg	**Pg**	**09 51 39.8**	**-0.2**
MEV				*e*Sg	**Sg**	**09 51 56.0**	**+1.1**
JAN	**Janina**	**1.28**	**297**	*e*PB	**Pb**	**09 51 42.5**	**+1.3**
LKD	**Levkas**	**1.36**	**255**	*e*Pg	**Pg**	**09 51 45.2**	**+0.1**
LKD				*e*Sg	**Sg**	**09 52 04.5**	**+1.3**
OUR	**Ouranopolis**	**1.79**	**45**	*e*Pb	**Pb**	**09 51 49.1**	**-0.7**
FNA	**Florina**	**1.86**	**337**	*e*Pb	**Pb**	**09 51 50.4**	**-0.6**
FNA				*e*Sb	**Sb**	**09 52 13.8**	**-0.2**
GRG	**Griva**	**1.88**	**2**	*e*Pb	**Pb**	**09 51 50.9**	**-0.5**
VLI	**Veliai**	**2.40**	**168**	*e*PN	**Pn**	**09 51 58.0**	**+0.7**
ESKT	**Eskisehir**	**6.62**	**83**	*i* Sg	**Sg**	**09 54 51.6**	**-6.8**

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*IDC **14** 10:04:48.5±2.6, 13.31N×87.66W, h163^{km}±32^{km}, mb3.1/4, mb1 3.5/6, mb1mx3.3/20, mbtmp3.7/6, Error ellipse: s-maj=44.6km s-min=24.7km az=42.0*

*NEIC **14** 10:04:49.4±1.5, 13.11N×87.73W, h178^{km}±19^{km}, mb4.1/4, Error ellipse: s-maj=25.6km s-min=15.3km az=48.0*

*CASC **14** 10:04:50.8±2.5, 11.90N×88.17W, h2^{km}±6^{km}, MD4.2, ML3.6, mb4.1(NEIC)*

ISC 14 10:04:49.8±0.3**, 13.16N**±0.09×**87.40W**±0.07**, h192**^{km}±4^{km}**, n48, σ1^{s}21**/67**, mb3.6**/7**, 13C-3D, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.43**	**285**	*e*P	**P**	**10 05 17.2**	**+1.0**
CNCH				*e*S	**S**	**10 05 37.9**	**+1.4**
CRIN	**San Cristobal**	**0.57**	**143**	⇑*e*P	**P**	**10 05 13.9**	**-2.8**
CRIN				*e*S	**S**	**10 05 35.9**	**-1.6**
TELN	**Telica**	**0.79**	**135**	*e*S	**S**	**10 05 40.5**	**+1.2**
TEL3	**Telica 3**	**0.80**	**137**	⇓*e*P	**P**	**10 05 15.0**	**-2.8**
BLLM	**Bellamira**	**0.86**	**289**	⇑*e*P	**P**	**10 05 18.9**	**+0.8**
BLLM				*e*S	**S**	**10 05 40.8**	**+0.8**
VSM	**San Miguel**	**0.89**	**287**	⇑*e*P	**P**	**10 05 19.1**	**+0.9**
LEON	**Leon**	**0.89**	**146**	⇑*e*P	**P**	**10 05 15.3**	**-3.0**
LEON				*e*S	**S**	**10 05 36.3**	**-4.0**
CNGN	**Cerro Negro**	**0.95**	**134**	*e*S	**S**	**10 05 39.2**	**-1.7**
APYN	**Apoyeque**	**1.38**	**132**	⇓*e*P	**P**	**10 05 20.9**	**-1.3**
APYN				*e*S	**S**	**10 05 48.8**	**+1.7**
XAVN	**Gruta Xavier**	**1.46**	**134**	*e*P	**P**	**10 05 21.4**	**-1.4**
XAVN				*e*S	**S**	**10 05 46.4**	**-1.9**
SNVI	**San Vicente**	**1.47**	**288**	⇑*e*P	**P**	**10 05 23.3**	**+0.3**
SNVI				*e*P		10 05 23.4	
SNVI				*e*S	**S**	**10 05 47.3**	**-1.2**
MGAN	**Managua**	**1.51**	**132**	*e*P	**P**	**10 05 23.2**	**-0.1**
MGAN				*e*S	**S**	**10 05 48.7**	**-0.5**
	comp=N,480nm,0.3s						
MGAN				*i*		10 05 50.5	
	comp=E,555nm,0.3s						
WILN	**Americas 2**	**1.55**	**130**	*e*S	**S**	**10 05 50.5**	**+0.7**
CRUN	**El Crucero**	**1.59**	**137**	*e*P	**P**	**10 05 24.1**	**0.0**
CRUN				*e*S	**S**	**10 05 48.8**	**-1.7**
TICN	**Ticuantepe**	**1.60**	**134**	*e*P	**P**	**10 05 24.3**	**+0.1**
LCBS	**La Ceiba**	**1.61**	**288**	⇑*e*P	**P**	**10 05 24.2**	**0.0**
LCBS				*e*S	**S**	**10 05 50.3**	**-0.5**
LFRS	**El Faro**	**1.68**	**286**	⇑*i*P	**P**	**10 05 25.0**	**+0.1**
LBRS	**Las Brisas**	**1.69**	**290**	⇑*e*P	**P**	**10 05 25.8**	**+0.7**
LFU	**La Fuente**	**1.76**	**289**	*e*P	**P**	**10 05 26.4**	**+0.7**
APON	**Apoyo**	**1.80**	**133**	*e*S	**S**	**10 05 54.9**	**+0.8**
SNET	**Serv Nac Est T**	**1.85**	**287**	*e*P	**P**	**10 05 26.4**	**-0.3**
SNET				*e*S	**S**	**10 05 54.0**	**-0.9**
SNET				*i*		10 05 56.6	
	comp=Z,862nm,0.2s						
BOQS	**Boqueron**	**1.91**	**288**	⇑*e*P	**P**	**10 05 27.6**	**+0.3**
BOQS				*e*S	**S**	**10 05 56.3**	**+0.3**
SNJE	**San Jose**	**2.25**	**288**	*e*P	**P**	**10 05 31.2**	**+0.3**
SNJE				*e*S	**S**	**10 06 02.2**	**-0.4**
SBLS	**San Blas**	**2.26**	**288**	⇑*e*P	**P**	**10 05 31.5**	**+0.5**
SBLS				*e*S	**S**	**10 06 01.4**	**-1.4**
RTR	**El Retiro**	**2.30**	**289**	⇑*e*P	**P**	**10 05 32.2**	**+0.7**
RTR				*e*S	**S**	**10 06 05.2**	**+1.7**
RBDL	**Robledal**	**2.41**	**293**	⇓*e*P	**P**	**10 05 33.5**	**+0.8**
RBDL				*e*S	**S**	**10 06 06.7**	**+0.8**
JTS	**JuntasAbangare**	**3.73**	**140**	P	**P**	**10 05 49.0**	**+0.4**
	comp=Z,5.0nm,0.3s,baz=330,slow=18,SNR=33						
JTS				S	**S**	**10 06 31.6**	**-2.3**
	comp=Z,20nm,0.3s,baz=293,slow=23,SNR=14						
JTS	**JuntasAbangare**	**3.73**	**140**	*e*Pn	**P**	**10 05 48.9**	**+0.3**
JTS				P		10 05 49.0	
JTS				S	**S**	**10 06 31.6**	**-2.3**
CGA2	**Cerro Gallo 2**	**4.25**	**137**	*e*P	**P**	**10 05 56.8**	**+1.6**
CGA2				*e*S	**S**	**10 06 45.5**	**-0.1**
PRS1	**Puriscal**	**4.38**	**136**	⇑*e*P	**P**	**10 05 57.0**	**+0.2**
PRS1				*e*S	**S**	**10 06 49.5**	**+0.9**
URSC	**Urasca**	**4.85**	**133**	*e*P	**P**	**10 06 06.1**	**+3.3**
URSC				*e*S	**S**	**10 07 00.8**	**+1.4**
BUS	**Buena Vista**	**5.06**	**135**	⇑*e*P	**P**	**10 06 08.2**	**+2.7**
SDV	**Santo Domingo**	**17.00**	**103**	P	**P**	**10 08 39.7**	**+1.9**
	comp=Z,0.7nm,0.3s,baz=303,slow=8.1,SNR=6.5						
SDV	**Santo Domingo**	**17.00**	**103**	P	**P**	**10 08 39.7**	**+1.9**
SDV				*e*P		10 08 39.9	
LRAL	**Lakeview Retre**	**19.78**	**1**	*e*P	**P**	**10 09 08.1**	**+1.0**
	comp=Z,4.8nm,0.6s						
TXAR	**Lajitas Array**	**22.06**	**319**	P	**P**	**10 09 28.5**	**-1.0**
	comp=Z,0.8nm,0.6s,mb3.5,baz=142,slow=9.3,SNR=14						
TXAR	**Lajitas Array**	**22.06**	**319**	P	**P**	**10 09 28.5**	**-1.0**
CPCT	**Cooper Cave**	**22.34**	**6**	*e*P	**P**	**10 09 33.6**	**+1.3**
TZTN	**Tazewell**	**23.54**	**8**	*e*P	**P**	**10 09 44.5**	**+0.7**
WMOK	**Wichita Mounta**	**23.82**	**336**	*e*P	**P**	**10 09 45.2**	**-1.3**
	comp=Z,3.1nm,0.6s,mb4.1						
PDAR	**Pinedale Array**	**35.17**	**331**	P	**P**	**10 11 23.8**	**-3.4**
	comp=Z,0.2nm,0.4s,mb3.0,baz=124,slow=11,SNR=3.9						
SNOW	**Snow King Moun**	**36.27**	**331**	*e*P	**P**	**10 11 35.9**	**-0.5**
	comp=Z,5.6nm,0.6s,mb4.3						
MCMT	**McKenzie Canyo**	**38.29**	**330**	*e*P	**P**	**10 11 53.5**	**+0.3**
SCHQ	**Schefferville**	**44.59**	**17**	P	**P**	**10 12 43.8**	**-0.5**
	comp=Z,1.7nm,0.5s,mb3.6,baz=209,slow=6.4,SNR=6.1						
FCC	**Fort Churchill**	**45.79**	**355**	*e*P	**P**	**10 12 52.0**	**-1.8**
	comp=Z,2.0nm,0.5s,mb3.7						
ILAR	**Eielson Array**	**65.39**	**336**	P	**P**	**10 15 11.2**	**-2.2**
	comp=Z,0.2nm,0.5s,mb3.0,baz=176,slow=5.6,SNR=4.6						
STKA	**Stephens Creek**	**131.50**	**239**	PKP	PKPdf	10 23 42.0	+1.8
	comp=Z,2.4nm,1.0s,baz=79,slow=2.2,SNR=3.5						
WRA	**Warramunga Arr**	**139.50**	**255**	PKP	PKPdf	10 23 56.7	+1.5
	comp=Z,1.1nm,0.5s,baz=86,slow=2.3,SNR=20						

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*NEIC **14** 10:05:42.4, 59.85N×151.03W, h45^{km}, ML3.5(PMR), ML3.2(AEIC), After AEIC.*

NEIC Felt [II] at Homer.

*IDC **14** 10:05:45.7±5.1, 60.12N×150.70W, h90^{km}±44^{km}, mb3.5/2, mb1 3.7/5, mb1mx3.3/22, mbtmp3.9/5, Error ellipse: s-maj=45.2km s-min=28.4km az=56.0*

ISC 14 10:05:40.3±0.3**, 59.82N**±0.03×**150.98W**±0.04**, h64**^{km}±5^{km}**, n83, σ0^{s}69**/98**, mb3.6**/2**, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNL	**Ninilchik**	**0.28**	**325**	P	**P**	**10 05 50.9**	**+0.3**
CNPM	**China Poot**	**0.32**	**204**	P	**P**	**10 05 51.0**	**0.0**
CNPM				S	**S**	**10 05 58.2**	**-0.7**
HOM	**Homer**	**0.37**	**245**	P	**P**	**10 05 51.5**	**+0.1**
HOM				S	**S**	**10 05 59.5**	**-0.1**
XLV	**Seldovia**	**0.52**	**226**	P	**P**	**10 05 52.7**	**-0.2**
XLV				S	**S**	**10 06 01.1**	**-1.0**
SLKM	**Skilak Lake**	**0.79**	**28**	P	**P**	**10 05 56.5**	**+0.6**
NKA	**Nikishka**	**0.94**	**352**	P	**P**	**10 05 59.6**	**+1.8**
ILIM	**Iliamna**	**1.03**	**286**	P	**P**	**10 05 58.8**	**-0.4**
ILIM				S	**S**	**10 06 12.0**	**-1.0**
RDT	**Redoubt**	**1.04**	**317**	P	**P**	**10 05 58.9**	**-0.3**
RDT				S	**S**	**10 06 12.5**	**-0.8**
IVE	**Iliamna Volcan**	**1.04**	**282**	P	**P**	**10 05 59.0**	**-0.3**
IVE				S	**S**	**10 06 12.2**	**-1.1**
MPA	**Moose Pass**	**1.05**	**50**	P	**P**	**10 05 59.8**	**+0.4**
ILS	**Iliamna Low So**	**1.06**	**278**	P	**P**	**10 05 59.4**	**-0.1**
INE	**Iliamna NE**	**1.07**	**284**	P	**P**	**10 05 59.4**	**-0.4**
INE				S	**S**	**10 06 13.3**	**-0.8**
RSO	**Redoubt South**	**1.10**	**307**	P	**P**	**10 05 59.6**	**-0.4**
ILW	**Iliamna West**	**1.11**	**284**	P	**P**	**10 05 59.9**	**-0.3**
ILW				S	**S**	**10 06 14.3**	**-0.7**
RDN	**Redoubt North**	**1.13**	**309**	P	**P**	**10 05 60.0**	**-0.5**
RDN				S	**S**	**10 06 14.4**	**-1.1**
OPT	**Oil Point**	**1.15**	**263**	P	**P**	**10 06 01.0**	**+0.3**
OPT				S	**S**	**10 06 15.4**	**-0.5**
VOGL	**Vogel Lake**	**1.21**	**13**	P	**P**	**10 06 03.1**	**+1.6**
NCT	**North Crescent**	**1.23**	**308**	P	**P**	**10 06 01.3**	**-0.4**
AUE	**Augustine Isla**	**1.30**	**250**	P	**P**	**10 06 03.4**	**+0.5**
AUL	**Augustine Lava**	**1.32**	**252**	P	**P**	**10 06 03.7**	**+0.5**
AUL				S	**S**	**10 06 21.4**	**+1.2**
AGU	**Augustine-Summ**	**1.33**	**251**	P	**P**	**10 06 04.0**	**+0.8**
AGU				S	**S**	**10 06 21.3**	**+1.0**
AUI	**Augustine Isla**	**1.33**	**250**	P	**P**	**10 06 03.9**	**+0.5**
AUI				S	**S**	**10 06 21.5**	**+1.0**
AUW	**Augustine West**	**1.34**	**252**	P	**P**	**10 06 04.1**	**+0.6**
FIB	**Fire Island**	**1.41**	**16**	P	**P**	**10 06 05.6**	**+1.2**
SYI	**Shuyak Island**	**1.41**	**211**	P	**P**	**10 06 05.0**	**+0.6**
RC01	**Rabbit Creek A**	**1.42**	**25**	P	**P**	**10 06 05.1**	**+0.6**
CKN	**Chakachatna No**	**1.53**	**338**	P	**P**	**10 06 06.9**	**+0.9**
CKL	**Chakachamna La**	**1.54**	**335**	P	**P**	**10 06 06.5**	**+0.4**
CP2	**Crater Peak Tw**	**1.58**	**337**	P	**P**	**10 06 07.6**	**+1.0**
MCNL	**McNeil River**	**1.82**	**251**	P	**P**	**10 06 10.8**	**+0.8**
PWA	**Palmer West**	**1.92**	**16**	P	**P**	**10 06 12.1**	**+0.8**
PMR	**Palmer**	**2.00**	**26**	P	**P**	**10 06 12.6**	**+0.2**
KNK	**Knik Glacier**	**2.03**	**37**	P	**P**	**10 06 13.4**	**+0.6**
CFI	**College Fiord**	**2.10**	**48**	P	**P**	**10 06 13.9**	**0.0**
KAPH	**Katmai Pasha**	**2.12**	**236**	P	**P**	**10 06 14.3**	**+0.2**
GHO	**Glory Hole Cre**	**2.21**	**26**	P	**P**	**10 06 15.8**	**+0.4**
KDAK	**Kodiak Island**	**2.21**	**203**	P	**P**	**10 06 14.8**	**-0.5**
HIN	**Hinchinbrook I**	**2.32**	**74**	P	**P**	**10 06 16.5**	**-0.4**
KAHC	**Katmai Hardscr**	**2.38**	**242**	P	**P**	**10 06 19.0**	**+1.2**
SML	**Sawmill**	**2.38**	**32**	P	**P**	**10 06 18.0**	**+0.2**
MID	**Middleton Isla**	**2.39**	**97**	*e*P	**P**	**10 06 19.3**	**+1.3**
SVW2	**Sparrevohn**	**2.62**	**301**	P	**P**	**10 06 20.4**	**-0.8**
VLZ	**Valdez**	**2.65**	**58**	P	**P**	**10 06 21.4**	**-0.3**
VLZ				S	**S**	**10 06 52.1**	**-0.6**
SCM	**Sheep Creek Mo**	**2.70**	**40**	P	**P**	**10 06 23.0**	**+0.6**
CVA	**Cordova**	**2.71**	**72**	P	**P**	**10 06 21.5**	**-1.0**
EYAK	**Cordova Ski Ar**	**2.72**	**72**	P	**P**	**10 06 21.8**	**-0.8**
MGLS	**Mageik LS**	**2.77**	**236**	P	**P**	**10 06 22.9**	**-0.4**
CAHL	**Cahill**	**2.85**	**234**	P	**P**	**10 06 24.4**	**-0.1**
DIV	**Divide**	**2.90**	**61**	P	**P**	**10 06 24.6**	**-0.5**
KJL	**Kejulik**	**2.96**	**235**	P	**P**	**10 06 26.1**	**0.0**
RAGM	**Ragged Mountai**	**3.21**	**77**	P	**P**	**10 06 28.6**	**-0.9**
KAIM	**Kayak Island**	**3.31**	**85**	P	**P**	**10 06 30.9**	**0.0**
TZL	**Tazlina**	**3.51**	**48**	P	**P**	**10 06 34.2**	**+0.5**
TRF	**Thorofare Moun**	**3.66**	**5**	P	**P**	**10 06 37.1**	**+1.2**
RND	**Reindeer**	**3.74**	**15**	P	**P**	**10 06 37.8**	**+0.8**
KTH	**Kantishna Hill**	**3.75**	**0**	P	**P**	**10 06 38.6**	**+1.5**
GLB	**Gilahina Butte**	**3.89**	**62**	P	**P**	**10 06 38.1**	**-1.0**
TT01	**Tatalina**	**3.94**	**324**	P	**P**	**10 06 39.2**	**-0.5**
MCK	**McKinley**	**4.05**	**13**	P	**P**	**10 06 42.0**	**+0.8**
PAX	**Paxson**	**4.13**	**38**	P	**P**	**10 06 42.4**	**0.0**
THY	**Trims Highway**	**4.39**	**32**	P	**P**	**10 06 46.7**	**+0.7**
BALM	**Baldy**	**4.45**	**70**	P	**P**	**10 06 46.1**	**-0.8**
YAH	**Yahtse**	**4.66**	**79**	P	**P**	**10 06 49.2**	**-0.6**
MENT	**Mentasta**	**4.69**	**45**	P	**P**	**10 06 50.3**	**+0.1**
WRH	**Wood River Hil**	**4.86**	**15**	P	**P**	**10 06 52.5**	**-0.1**
CTGM	**Chitina Glacie**	**4.92**	**72**	P	**P**	**10 06 53.4**	**-0.1**
DOT	**Dot Lake**	**5.06**	**38**	P	**P**	**10 06 55.1**	**-0.3**
CCB	**Clear Creek Bu**	**5.07**	**16**	P	**P**	**10 06 55.2**	**-0.3**
COLA	**College**	**5.28**	**15**	P	**P**	**10 06 58.1**	**-0.3**
MDM	**Murphy Dome**	**5.32**	**13**	P	**P**	**10 06 58.7**	**-0.2**
ILAR	**Eielson Array**	**5.33**	**19**	P	**P**	**10 06 58.6**	**-0.4**
	2.4nm,0.3s,baz=203,slow=14,SNR=192						
ILAR				S	**S**	**10 07 54.8**	**-5.0**
	1.5nm,0.3s,baz=200,slow=26,SNR=3.5						
IL1	**Eielson Array**	**5.33**	**19**	P	**P**	**10 06 58.7**	**-0.3**
BCA3	**Beaver Creek A**	**5.48**	**50**	P	**P**	**10 07 00.8**	**-0.4**
PNL	**Peninsula**	**5.86**	**86**	P	**P**	**10 07 06.1**	**-0.3**
IM3	**Indian Mountai**	**6.32**	**350**	P	**P**	**10 07 12.7**	**-0.1**
COLD	**Coldfoot**	**7.45**	**2**	P	**P**	**10 07 27.8**	**-0.7**
WHY	**Whitehorse**	**8.06**	**77**	P	**P**	**10 07 36.2**	**-0.7**
BM3	**Burnt Mountain**	**8.14**	**18**	P	**P**	**10 07 36.6**	**-1.5**
DLBC	**Dease Lake**	**10.85**	**88**	P	**P**	**10 08 15.6**	**+0.7**
	1.0nm,0.3s,baz=238,slow=13,SNR=20						
YKA	**Yellowknife Ar**	**17.60**	**66**	P	**P**	**10 09 41.9**	**-0.3**
	0.2nm,0.3s,baz=277,slow=12,SNR=8.7						
YKA	**Yellowknife Ar**	**17.60**	**66**	P	**P**	**10 09 41.9**	**-0.3**
SONM	**Songino Array**	**55.72**	**307**	P	**P**	**10 15 11.6**	**-0.4**
	0.2nm,0.4s,mb3.5,baz=45,slow=5.2,SNR=3.9						
AKASG	**Malin Array Be**	**69.84**	**360**	P	**P**	**10 16 44.4**	**-0.9**
	0.4nm,0.4s,mb3.8,baz=3.2,slow=6.1,SNR=5.3						

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*ISK **14** 10:20:23.4, 39.65N×29.43E, h20^{km}, MD2.7*

*CSEM **14** 10:20:23.4±0.2, 39.67N×29.38E, h26^{km}, MD2.7, Error ellipse: s-maj=6.4km s-min=3.7km az=29.0*

ISC 14 10:20:23.3±1.5**, 39.67N**±0.08×**29.49E**±0.08**, h1**^{km}±18^{km}**, n8, σ1^{s}27**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.55**	**330**	*i* P	**Pg**	**10 20 32.7**	**-1.4**
ULDT				*i* S	**Sg**	**10 20 41.4**	**0.0**
ORLT	**Orhaneli**	**0.59**	**310**	*e*PG	**Pg**	**10 20 35.1**	**0.0**
YLV	**Yalova**	**0.90**	**354**	PG	**Pg**	**10 20 41.3**	**0.0**
YLV				SG	**Sg**	**10 20 55.1**	**+1.8**
KCT	**Karacabey**	**1.06**	**305**	PG	**Pg**	**10 20 43.2**	**-1.1**
ESKT	**Eskisehir**	**1.06**	**98**	PN	**Pn**	**10 20 44.4**	**-0.7**
ESKT	**Eskisehir**	**1.06**	**98**	*i* P	**Pb**	**10 20 42.2**	**-1.9**
ESKT				*i* S	**Sb**	**10 20 59.8**	**+1.5**
HRT	**Hereke**	**1.16**	**7**	*e*PN	**Pn**	**10 20 45.1**	**-1.4**
MANT	**Manisa**	**1.38**	**212**	*i* P	**Pn**	**10 20 51.9**	**+2.2**
MANT				*i* S	**Sb**	**10 21 07.7**	**+0.1**

TAP 14 10:32:09.5, 24.01N×121.60E, h2^{km}, ML3.5, 1C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.03**	**172**	P	Pg	10 32 10.2	0.0
HWA				S	Sg	10 32 11.8	+1.1
TWD	**Chiawan**	**0.07**	**357**	⇑*i*P	Pg	10 32 11.5	+0.6
TWD				S	Sg	10 32 13.2	+1.4
WHF	**Hehuan Shan**	**0.33**	**294**	*e*P	Pg	10 32 17.6	+1.5
WHF				S	Sg	10 32 23.1	+2.5
ENA	**Nanau**	**0.44**	**17**	*e*P	Pg	10 32 19.7	+1.6
TWT	**Tachien**	**0.46**	**302**	*e*P	Pg	10 32 20.2	+1.6
NNS	**Nan Shan**	**0.48**	**334**	*e*P	Pg	10 32 20.9	+1.9
NNS				S	Sg	10 32 26.9	+1.6
ENTT	**Nioudou**	**0.63**	**357**	*e*P	Pg	10 32 23.9	+1.9
ENTT				S	Sg	10 32 33.1	+2.7
TWC	**Suao**	**0.64**	**21**	*e*P	Pg	10 32 24.2	+2.0
SMLT	**Sun Moon Lake**	**0.65**	**259**	*e*P	Pg	10 32 23.6	+1.1
TYC	**Yuchr**	**0.69**	**261**	*e*P	Pg	10 32 24.5	+1.3
NSK	**Sanguang**	**0.70**	**342**	*e*P	Pg	10 32 25.4	+2.0
NSK				S	Sg	10 32 34.6	+1.9
TWE	**Neicheng**	**0.71**	**5**	*e*P	Pg	10 32 25.4	+1.8
TWE				S	Sg	10 32 35.1	+2.0
NSTT	**Nanjuang**	**0.82**	**319**	*e*P	Pg	10 32 27.9	+1.9
NSTT				S	Sg	10 32 39.7	+2.7
TWQ1	**Liyutan**	**0.83**	**294**	*e*P	Pg	10 32 26.9	+0.9
WNT	**Mingjian**	**0.85**	**261**	*e*P	Pg	10 32 27.5	+1.1
TCU	**Taichung**	**0.86**	**279**	*e*P	Pg	10 32 28.2	+1.6
TCU				S	Sg	10 32 42.1	+4.2
NSY	**Sanyi**	**0.87**	**298**	*e*P	Pg	10 32 28.6	+1.8
NSY				S	Sg	10 32 43.2	+4.9
ALS	**Alishan**	**0.88**	**236**	*e*P	Pg	10 32 25.8	-1.3
CHKT	**Chengkung**	**0.93**	**193**	*e*P	Pb	10 32 27.1	-0.9
TWA	**Mucha**	**0.97**	**359**	*e*P	Pb	10 32 30.3	+1.7
TWA				S	Sb	10 32 43.5	+1.9
HSN	**Hsinchu**	**0.98**	**324**	*e*P	Pb	10 32 30.7	+2.0
ELDTW	**Lidau**	**0.98**	**213**	*e*P	Pb	10 32 28.5	-0.3
WGK	**Gukeng**	**1.00**	**251**	*e*P	Pb	10 32 30.7	+1.5
TWB1	**Santiao Chiao**	**1.05**	**20**	*e*P	Pb	10 32 31.8	+1.7
NWF	**Wu-fen Shan**	**1.07**	**9**	*e*P	Pb	10 32 32.6	+2.2
NWF				S	Sb	10 32 46.6	+2.1
TWS1	**Kuangyinshan**	**1.10**	**351**	*e*P	Pb	10 32 31.5	+0.7
TWS1				S	Sb	10 32 51.0	+5.6
CHN4	**Tsaushan**	**1.13**	**235**	*e*P	Pb	10 32 32.5	+1.1
WTP	**Ta-pu**	**1.18**	**230**	*e*P	Pb	10 32 32.7	+0.5
CHY	**Chiayi**	**1.19**	**245**	*e*P	Pb	10 32 34.8	+2.4
TWK	**Hsinying**	**1.26**	**234**	*e*P	Pb	10 32 33.6	0.0
TWY	**Chenhua**	**1.26**	**360**	*e*P	Pb	10 32 34.7	+1.1
TWG	**Pinlang**	**1.28**	**202**	*e*P	Pb	10 32 35.5	+1.6
CHN1	**Nanshi**	**1.28**	**230**	*e*P	Pb	10 32 34.4	+0.5
CHN1				S	Sb	10 32 54.5	+3.7
SGST	**Jiashian**	**1.31**	**225**	*e*P	Pb	10 32 35.1	+0.6
CHN3	**Shinhua**	**1.47**	**231**	*e*P	Pn	10 32 39.2	+2.2
SSD	**Sandimen**	**1.54**	**215**	*e*P	Pn	10 32 37.3	-0.8
TWM1	**Shoushan**	**1.60**	**223**	*e*P	Pn	10 32 42.9	+3.9
PNG	**Penghu**	**1.92**	**257**	*e*P	Pn	10 32 42.0	-1.6
PNG				S	Sn	10 33 07.6	-1.0
WDGT	**Dungji**	**1.93**	**248**	*e*P	Pn	10 32 43.9	+0.2

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*IDC **14** 10:45:46.7±2.4, 57.07S×26.34W, h83^{km}±20^{km}, mb4.7/12, mb1 4.6/13, mb1mx4.6/16, mbtmp4.9/13, MS3.7/8, Ms1 3.7/8, ms1mx3.7/14, Error ellipse: s-maj=17.8km s-min=11.7km az=40.0*

*BJI **14** 10:45:47.0, 57.10S×26.30W, h87^{km}, mB5.1, Ms5.2, Msz5.2*

*NEIC **14** 10:45:47.0±1.2, 57.07S×26.33W, h88^{km}±10^{km}, mb4.9/15, Error ellipse: s-maj=8.5km s-min=5.7km az=214.0*

ISC 14 10:45:51.3±3.0**, 57.15S**±0.09×**26.3W**±0.1**, h145**^{km}±30^{km}**, n132, σ1^{s}22**/47**, mb4.7**/20**, 5C-7D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.59**	**157**	*e*	**P**	**10 49 25.6**	**+1.8**
VNA1	**Neumayer--Stat**	**15.59**	**157**	*e*	**P**	**10 49 26.6**	**+2.8**
VNA1	**Neumayer--Stat**	**15.59**	**157**	⇑*i*P	**P**	**10 49 23.2**	**-0.6**
VNA1				*e*		10 49 25.6	
VNA1				*e*		10 49 26.6	
VNA1				*e*		10 52 05.4	
VNA1				*e*		10 57 45.5	
VNA3	**Neumayer Olymp**	**15.79**	**160**	*e*	**P**	**10 49 27.5**	**+1.2**
VNA3	**Neumayer Olymp**	**15.79**	**160**	*e*	**P**	**10 49 28.6**	**+2.3**
VNA3	**Neumayer Olymp**	**15.79**	**160**	⇑*i*P	**P**	**10 49 25.1**	**-1.2**
VNA3				*e*		10 49 27.5	
VNA3				*e*		10 49 28.6	
VNA3				*e*		10 49 59.1	
VNA3				*e*		10 52 11.3	
VNA3				*e*		10 54 18.3	
VNA3				*e*		10 57 45.1	
VNA2	**Neumayer--Watz**	**15.99**	**157**	*e*	**P**	**10 49 30.7**	**+2.0**
VNA2	**Neumayer--Watz**	**15.99**	**157**	*e*	**P**	**10 49 32.3**	**+3.6**
VNA2	**Neumayer--Watz**	**15.99**	**157**	⇑*i*P	**P**	**10 49 28.3**	**-0.4**
VNA2				*e*		10 49 30.7	
VNA2				*e*		10 49 32.3	
VNA2				*e*		10 50 02.7	
VNA2				*e*		10 52 16.8	
VNA2				*e*		10 54 19.0	
VNA2				*e*		10 57 45.9	
SNAA	**Sanae**	**17.54**	**155**	⇑*i*	**P**	**10 49 45.5**	**-2.1**
SNAA	**Sanae**	**17.54**	**155**	*e*	**P**	**10 49 47.8**	**+0.2**
SNAA	**Sanae**	**17.54**	**155**	*e*	**P**	**10 49 49.5**	**+1.9**
SNAA	**Sanae**	**17.54**	**155**	P	**P**	**10 49 45.6**	**-2.0**
	0.5nm,0.3s,baz=321,slow=11,SNR=59						
SNAA				PcP	PcP	10 54 20.3	+0.1
	0.1nm,0.3s,baz=229,slow=2.4,SNR=3.8						
SNAA				LR	LR	10 55 10.0	
	comp=Z,72nm,21.8s,baz=315,slow=32						
SNAA				ScP		10 57 46.6	
	0.1nm,0.3s,baz=307,slow=2.1,SNR=9.4						
SNAA	**Sanae**	**17.54**	**155**	⇑*i*P	**P**	**10 49 45.5**	**-2.1**
SNAA				*e*		10 49 47.8	
SNAA				*e*		10 49 49.5	
SNAA				*e*		10 50 28.9	
SNAA				*e*		10 52 52.7	
SNAA				*e*		10 54 21.0	
SNAA				*e*		10 57 47.0	
PMSA	**Palmer Station**	**19.57**	**232**	*e*P	**P**	**10 50 06.3**	**-3.3**
	148nm,1.6s						
MAIT	**Maitri**	**21.05**	**145**	*e*P	**P**	**10 50 23.5**	**-1.0**
USHA	**Ushuaia**	**23.41**	**258**	P	**P**	**10 50 48.6**	**+1.2**
	25nm,0.8s,mb4.7,baz=71,slow=8.7,SNR=12						
USHA				LR	LR	10 57 47.1	
	comp=Z,351nm,18.9s,baz=81,slow=31						
USHA	**Ushuaia**	**23.41**	**258**	P	**P**	**10 50 48.6**	**+1.2**
USHA				LR	LR	10 57 47.1	
TRQA	**Tornquist**	**30.21**	**294**	*e*P	**P**	**10 51 48.9**	**-1.0**
	14nm,1.1s,mb4.6						
TRQA				*e*PcP	PcP	10 54 47.8	+0.6
SYO	**Syowa Base**	**30.42**	**139**	⇓P	**P**	**10 51 49.5**	**-2.0**
SYO	**Syowa Base**	**30.42**	**139**	⇓PcP	PcP	10 54 46.8	-0.7
PLCA	**Paso Flores**	**32.68**	**281**	P	**P**	**10 52 09.4**	**-2.0**
	2.6nm,0.9s,mb4.0,baz=107,slow=6.5,SNR=5.6						
PLCA				PcP	PcP	10 54 53.9	+0.1
	1.5nm,0.7s,baz=304,slow=8.0,SNR=4.6						
PLCA				LR	LR	11 03 44.4	
	comp=Z,209nm,20.6s,baz=167,slow=33						
PLCA	**Paso Flores**	**32.68**	**281**	*e*P	**P**	**10 52 09.2**	**-2.2**
	9.9nm,1.3s,mb4.4						
QSPA	**South Pole Qui**	**33.10**	**180**	⇓*e*P	**P**	**10 52 15.4**	**+0.8**
	61nm,0.9s,mb5.3						
QSPA				*e*PcP	PcP	10 54 55.4	+0.9
QSPA				*e*ScP		10 58 31.2	
CAM4	**Nova Friburgo**	**36.73**	**334**	⇓*i*P	**P**	**10 52 47.2**	**+1.3**
CAM4				*i*		10 52 48.9	
CAM4				*i*		10 52 50.7	
CFAA	**Coronel Fontan**	**38.45**	**294**	P	**P**	**10 52 58.6**	**-1.5**
	0.6nm,0.5s,mb3.5,baz=143,slow=6.8,SNR=14						
CFAA				PcP	PcP	10 55 11.8	+0.9
	0.7nm,0.5s,baz=145,slow=1.9,SNR=5.9						
CFAA				LR	LR	11 06 40.9	
	comp=Z,20nm,21.1s,baz=61,slow=33						
MAW	**Mawson**	**38.98**	**142**	P	**P**	**10 53 04.2**	**+0.1**
	3.4nm,0.5s,mb4.2,baz=230,slow=7.6,SNR=14						
MAW				PcP	PcP	10 55 13.5	+1.3
	6.3nm,0.9s,baz=233,slow=4.9,SNR=5.1						
MAW				LR	LR	11 06 03.0	
	comp=Z,199nm,21.6s,baz=267,slow=31						
BDFB	**Brasilia**	**44.56**	**329**	P	**P**	**10 53 51.1**	**+1.0**
	16nm,0.6s,mb4.8,baz=161,slow=2.4,SNR=22						
SBA	**Scott Base**	**45.01**	**184**	*e*P	**P**	**10 53 52.5**	**-0.5**
	9.4nm,1.0s,mb4.4						
SBA				*e*PcP	PcP	10 55 33.3	+1.4
VNDA	**Vanda**	**45.49**	**182**	P	**P**	**10 53 58.2**	**+1.4**
	6.6nm,0.8s,mb4.3,baz=184,slow=6.3,SNR=22						
VNDA				PcP	PcP	10 55 35.3	+1.7
	3.6nm,0.8s,baz=244,slow=1.9,SNR=4.1						
VNDA				ScP		10 59 19.6	
	3.4nm,0.8s,baz=222,slow=3.4,SNR=11						
VNDA				LR	LR	11 12 49.0	
	comp=Z,68nm,20.7s,baz=311,slow=36						
VNDA	**Vanda**	**45.49**	**182**	*e*P	**P**	**10 53 57.7**	**+0.9**
	9.7nm,0.9s,mb4.4						
VNDA				*e*PcP	PcP	10 55 35.1	+1.4
BOSA	**Boshof**	**45.78**	**74**	P	**P**	**10 53 59.3**	**-0.4**
	12nm,0.8s,mb4.6,baz=190,slow=9.2,SNR=15						
BOSA				LR	LR	11 08 20.0	
	comp=Z,249nm,20.5s,baz=183,slow=30						
BOSA	**Boshof**	**45.78**	**74**	*e*P	**P**	**10 53 59.9**	**+0.2**
BOSA				*e*S	tx	10 55 05.3	
BOSA	**Boshof**	**45.78**	**74**	*e*P	**P**	**10 53 58.4**	**-1.3**
	12nm,0.8s,mb4.6						
TSUM	**Tsumeb**	**49.81**	**59**	*e*P	**P**	**10 54 30.1**	**-0.9**
	7.0nm,0.8s,mb4.3						
LPAZ	**La Paz**	**51.41**	**305**	P	**P**	**10 54 43.2**	**0.0**
	24nm,0.6s,mb5.0,baz=151,slow=6.3,SNR=125						
LPAZ				PcP	PcP	10 55 57.4	+1.7
	11nm,0.6s,baz=133,slow=2.7,SNR=5.6						
LPAZ	**La Paz**	**51.41**	**305**	⇓*e*P	**P**	**10 54 42.9**	**-0.2**
	26nm,0.7s,mb5.0						
LPAZ				*e*PcP	PcP	10 55 57.1	+1.4
SAML	**Samuel**	**55.92**	**314**	⇓*i*P	**P**	**10 55 15.2**	**-1.1**
	49nm,0.9s,mb5.3						
SAML				*e*PcP	PcP	10 56 13.3	+0.4
DBIC	**Dimbokro**	**65.97**	**23**	P	**P**	**10 56 23.9**	**-0.1**
	17nm,0.6s,mb5.0,baz=164,slow=7.4,SNR=30						
DBIC	**Dimbokro**	**65.97**	**23**	*e*P	**P**	**10 56 23.2**	**-0.9**
	20nm,0.7s,mb5.1						
OTAV	**Otavalo**	**70.67**	**303**	*e*P	**P**	**10 56 54.5**	**+1.5**
	7.3nm,0.6s,mb4.6						
MBAR	**Mbarara**	**72.23**	**62**	*e*P	**P**	**10 57 03.8**	**+1.6**
	11nm,1.3s,mb4.4						
ROSC	**El Rosal**	**72.98**	**309**	P	**P**	**10 57 07.3**	**+0.7**
	12nm,0.6s,mb4.8,baz=126,slow=23,SNR=7.9						
SDV	**Santo Domingo**	**75.13**	**314**	P	**P**	**10 57 19.5**	**+0.6**
	60nm,0.7s,mb5.3,baz=178,slow=5.7,SNR=93						
SDV	**Santo Domingo**	**75.13**	**314**	⇓*i*P	**P**	**10 57 19.5**	**+0.5**
	81nm,0.9s,mb5.3						
SJG	**San Juan**	**82.01**	**322**	P	**P**	**10 57 56.0**	**-0.3**
	9.9nm,0.3s,mb4.9,baz=319,slow=19,SNR=8.9						
JTS	**JuntasAbangare**	**82.52**	**302**	P	**P**	**10 57 59.6**	**+0.8**
	7.8nm,1.0s,mb4.4,baz=340,slow=22,SNR=3.1						
JTS	**JuntasAbangare**	**82.52**	**302**	*e*P	**P**	**10 57 59.2**	**+0.3**
	26nm,1.2s,mb4.8						
URZ	**Urewera**	**82.92**	**198**	LR	LR	11 28 54.4	
	comp=Z,148nm,19.8s,baz=168,slow=31						
WRA	**Warramunga Arr**	**101.51**	**161**	P	P	10 59 27.6	0.0
	0.7nm,0.7s,baz=193,slow=4.5,SNR=6.8						
WRA				PKKPbc		11 15 35.6	
	0.9nm,0.7s,baz=0.2,slow=2.9,SNR=13						
TXAR	**Lajitas Array**	**107.73**	**297**	PKiKP		11 04 03.4	
	0.4nm,0.6s,baz=153,slow=4.4,SNR=7.2						
SDCO	**Great Sand Dun**	**115.47**	**300**	*e*PKPdf	PKPdf	11 04 17.7	+2.5
SCHQ	**Schefferville**	**116.37**	**335**	PKP	PKPdf	11 04 17.9	+1.4
	1.8nm,0.6s,baz=222,slow=13,SNR=3.8						
PV01	**Paradox Valley**	**117.24**	**298**	*e*PKPdf	PKPdf	11 04 21.6	+3.0
PV10	**Paradox Valley**	**117.66**	**298**	*e*PKPdf	PKPdf	11 04 21.9	+2.6
LDFC	**Landfair**	**118.06**	**292**	*e*PKPdf	PKPdf	11 04 22.6	+2.3

NEN	**Nelson**	118.37	292	ePKPdf	PKPdf	11 04 22.8	+2.0
SRU	**San Rafael**	118.95	298	ePKPdf	PKPdf	11 04 24.1	+2.2
MSU	**Marysvale**	119.28	296	ePKPdf	PKPdf	11 04 26.0	+3.5
MVU	**Marysvale**	119.29	296	ePKPdf	PKPdf	11 04 26.1	+3.6
RWWY	**Rawlins**	119.41	302	ePKPdf	PKPdf	11 04 24.9	+2.2
TMUT	**Trail Mountain**	119.42	297	ePKPdf	PKPdf	11 04 25.9	+3.1
RSSD	**Black Hills**	119.88	306	ePKPdf	PKPdf	11 04 25.4	+1.8
DAU	**Daniels Canyon**	120.32	298	ePKPdf	PKPdf	11 04 27.6	+3.1
NLU	**North Lily Min**	120.36	297	ePKPdf	PKPdf	11 04 27.6	+3.0
JLU	**Jordanelle**	120.56	298	ePKPdf	PKPdf	11 04 27.9	+3.0
CTU	**Camp Tracy**	120.77	298	ePKPdf	PKPdf	11 04 27.6	+2.2
TCUT	**Toone Canyon**	120.94	299	ePKPdf	PKPdf	11 04 28.7	+3.0
PDAR	**Pinedale Array**	121.34	301	PKP	PKPdf	11 04 28.1	+1.7
	2.4nm,0.5s,baz=137,slow=5.0,SNR=24						
ULM	**Lac du Bonnet**	121.38	315	PKP	PKPdf	11 04 27.8	+1.5
	5.6nm,0.6s,baz=104,slow=0.5,SNR=5.1						
HWUT	**Hardware Ranch**	121.39	299	ePKPdf	PKPdf	11 04 29.2	+2.7
NOA	**NORSAR Array B**	121.47	20	PKP	PKPdf	11 04 28.6	+2.4
	0.9nm,0.7s,baz=117,slow=3.0,SNR=2.8						
AHID	**Auburn Hatcher**	122.06	300	ePKPdf	PKPdf	11 04 30.7	+2.9
HVU	**Hansel Valley**	122.10	298	ePKPdf	PKPdf	11 04 30.6	+2.7
NVAR	**Mina Array Bea**	122.27	292	PKP	PKPdf	11 04 32.1	+3.8
	4.0nm,0.6s,baz=118,slow=3.2,SNR=44						
SNOW	**Snow King Moun**	122.43	301	ePKPdf	PKPdf	11 04 31.7	+3.2
LOHW	**Long Hollow**	122.48	301	ePKPdf	PKPdf	11 04 31.0	+2.4
WUWY	**Wally Ulrich**	122.48	301	ePKPdf	PKPdf	11 04 31.3	+2.7
ELK	**Elko**	122.51	296	ePKPdf	PKPdf	11 04 31.8	+3.1
TPAW	**Teton Pass**	122.55	301	ePKPdf	PKPdf	11 04 30.9	+2.2
RRI2	**Red Ridge**	122.61	300	ePKPdf	PKPdf	11 04 31.8	+3.0
MOOW	**Moose Ponds**	122.65	301	ePKPdf	PKPdf	11 04 31.7	+2.8
IMW	**Indian Meadow**	122.85	301	ePKPdf	PKPdf	11 04 32.4	+3.1
LAO	**LASA Array**	122.85	306	ePKPdf	PKPdf	11 04 31.5	+2.3
YFT	**Old Faithful**	123.22	302	ePKPdf	PKPdf	11 04 34.4	+4.4
CMAR	**Chiang Mai Arr**	124.22	110	PKP	PKPdf	11 04 35.2	+2.6
	3.9nm,0.8s,baz=239,slow=3.7,SNR=16						
BEKR	**Beckwourth**	124.40	291	ePKPdf	PKPdf	11 04 35.2	+2.8
BOZ	**Bozeman (W)**	124.50	302	ePKPdf	PKPdf	11 04 35.8	+3.3
FINES	**FINESS Array B**	125.13	28	PKP	PKPdf	11 04 35.3	+2.2
	2.8nm,0.6s,baz=173,slow=1.2,SNR=16						
HRY	**Holter Researc**	125.39	303	ePKPdf	PKPdf	11 04 37.3	+3.3
WVOR	**Wild Horse Val**	125.45	295	ePKPdf	PKPdf	11 04 37.9	+3.6
KAF	**Kangasniemi**	125.76	27	epkp	PKPdf	11 04 33.4	-0.9
MOD	**Modoc**	125.89	293	ePKPdf	PKPdf	11 04 38.7	+3.6
LTIM	**Timbered Crate**	125.95	292	P	PKPdf	11 04 38.9	+3.6
CHMT	**Chamberlain Mo**	126.19	302	ePKPdf	PKPdf	11 04 38.3	+2.7
MSO	**Missoula**	126.45	301	ePKPdf	PKPdf	11 04 38.8	+2.8
BMO	**Blue Mountains**	126.59	298	ePKPdf	PKPdf	11 04 39.0	+2.6
FCC	**Fort Churchill**	127.46	323	ePKPdf	PKPdf	11 04 38.8	+1.2
HBO	**Huckleberry Mo**	128.32	293	P	PKPdf	11 04 43.3	+3.5
TBM	**Table Mountain**	129.85	298	P	PKPdf	11 04 46.5	+3.9
AAK	**Ala-Archa**	129.88	71	ePKPdf	PKPdf	11 04 44.8	+2.1
FMW	**Mount Fremont**	130.20	297	P	PKPdf	11 04 46.3	+3.0
EDM	**Edmonton**	130.77	308	ePKPdf	PKPdf	11 04 46.2	+2.0
ARCES	**ARCESS Array B**	131.78	22	PKP	PKPdf	11 04 47.9	+2.2
	1.9nm,0.5s,baz=198,slow=2.1,SNR=12						
ARCES				PP	PP	11 07 10.7	-1.2
	2.1nm,0.8s,baz=278,slow=8.6,SNR=4.2						
MKAR	**Makanchi Array**	136.77	72	PKhKP		11 04 47.3	
	0.4nm,0.3s,baz=219,slow=7.8,SNR=4.6						
MKAR				PKP	PKPdf	11 04 58.1	+2.7
	2.9nm,0.8s,baz=243,slow=2.7,SNR=11						
MKAR	**Makanchi Array**	136.77	72	PKP	PKPdf	11 04 58.1	+2.7
YKA	**Yellowknife Ar**	137.31	317	PKhKP		11 04 46.3	
	1.1nm,0.5s,baz=132,slow=2.5,SNR=3.9						
YKA				PKP	PKPdf	11 04 57.9	+1.9
	19nm,0.9s,baz=129,slow=2.1,SNR=36						
YKA				PP	PP	11 07 45.0	-0.9
	0.7nm,0.5s,baz=120,slow=6.6,SNR=6.3						
YKA	**Yellowknife Ar**	137.31	317	PKP	PKPdf	11 04 57.9	+1.9
YKA				PP	PP	11 07 45.0	-0.9
YKW3	**Yellowknife Ar**	137.36	317	ePKPdf	PKPdf	11 04 58.0	+1.9
LZH	**Lanzhou**	140.92	101	ePKP	PKPdf	11 05 05.0	+1.7
LZH				sPKP		11 05 33.0	
GTA	**Gaotai**	141.17	93	ePKP	PKPdf	11 05 06.8	+3.2
ZAL	**Zalesovo**	142.39	65	PKhKP		11 05 04.2	
	1.9nm,0.3s,baz=360,slow=1.4,SNR=5.1						
ZAL				PKP	PKPdf	11 05 09.6	+4.4
	1.9nm,0.3s,baz=254,slow=2.0,SNR=8.1						
ZAL	**Zalesovo**	142.39	65	PKP	PKPdf	11 05 04.2	-1.0
ZAL				PKP	PKPdf	11 05 09.6	+4.4
NJ2	**Nanjing**	145.35	121	ePKP	PKPdf	11 05 12.1	+1.1
INK	**Inuvik**	146.96	319	ePKPbc	PKPbc	11 05 17.5	+3.2
BTO	**Baotou**	147.53	102	ePKP	PKPdf	11 05 20.0	+5.6
HHC	**Hu-ho-hao-te**	148.53	103	ePKP	PKPdf	11 05 23.4	+7.4
HHC				APKP		11 05 40.6	
HHC				XPKP		11 05 58.8	
HHC				PP	PP		
	comp=Z,90nm,6.6s						
EYAK	**Cordova Ski Ar**	149.46	302	ePKPbc	PKPdf	11 05 24.6	+7.8
DIV	**Divide**	149.68	303	ePKPdf	PKPdf	11 05 19.9	+2.8
DIV				ePKPbc	PKPdf	11 05 24.9	+7.8
SONM	**Songino Array**	150.29	88	PKPbc	PKPdf	11 05 26.9	+8.5
	comp=Z,24nm,0.7s,baz=288,slow=3.9,SNR=77						
SONM				PKPab	PKPab	11 05 33.9	+1.0
	comp=Z,3.8nm,0.6s,baz=225,slow=2.9,SNR=5.8						
THY	**Trims Highway**	150.38	308	ePKPbc	PKPdf	11 05 27.4	+9.3
TLY	**Talaya**	150.92	79	ePKPbc	PKPdf	11 05 28.5	+9.2
SML	**Sawmill**	151.06	304	ePKPbc	PKPdf	11 05 28.3	+9.2
ILAR	**Eielson Array**	151.21	310	PKPbc	PKPdf	11 05 28.4	+9.1
	comp=Z,65nm,0.8s,baz=333,slow=0.4,SNR=211						
ILAR				PKPab	PKPab	11 05 37.1	+0.9
	comp=Z,11nm,0.7s,baz=160,slow=1.3,SNR=15						
JNU	**Nakatsue**	151.35	137	PKPbc	PKPdf	11 05 29.7	+9.2
	comp=Z,9.9nm,0.8s,baz=334,slow=13,SNR=5.8						
JNU				PKPab	PKPab	11 05 38.9	+1.0
	comp=Z,16nm,1.1s,baz=82,slow=35,SNR=2.8						
KDAK	**Kodiak Island**	151.73	294	ePKPbc	PKPdf	11 05 29.9	+10
MCK	**McKinley**	151.84	307	ePKPbc	PKPdf	11 05 30.3	+10
SPU	**Mount Spurr**	152.59	301	ePKPbc	PKPdf	11 05 31.2	+10
RSO	**Redoubt South**	152.71	300	ePKPbc	PKPdf	11 05 31.5	+10
IMA	**Indian Mountai**	154.22	312	ePKPbc	PKPdf	11 05 35.9	+12
CN2	**Changchun**	157.81	115	ePKP	PKPdf	11 05 38.0	+9.0
MDJ	**Mudanjiang**	160.42	120	PKP	PKPdf	11 05 36.1	+4.1

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*JMA **14** 11:00:17.5±0.2,24.60N×122.01E,h49^{km},M3.6*
*TAP **14** 11:00:18.5,24.39N×122.01E,h20^{km},ML4.1*
TAP Felt III J at Nanau, I J at Suao, I J at Nioudou.
ISC 14 11:00:16.6±0.4**,24.36N**±0.02×**122.16E**±0.02**,h2**^{km}±3^{km}**,**
n62,σ**0$\overset{s}{.}$90**/99**,3C-10D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	0.38	312	⇓iP	**Pg**	**11 00 24.8**	**+0.7**
TWC				S	**Sg**	**11 00 29.0**	**-0.2**
EHP	**Heping Village**	0.38	263	eP	**Pg**	**11 00 24.3**	**+0.1**
EHP				S	**Sg**	**11 00 29.2**	**-0.1**
ENA	**Nanau**	0.39	281	⇑iP	**Pg**	**11 00 24.5**	**+0.2**
ENA				S	**Sg**	**11 00 28.6**	**-0.8**
ILA	**Ilan**	0.55	318	eP	**Pg**	**11 00 28.2**	**+0.5**
ILA				S	**Sg**	**11 00 35.9**	**+0.9**
TWE	**Neicheng**	0.57	309	⇓iP	**Pg**	**11 00 28.3**	**+0.2**
TWE				S	**Sg**	**11 00 35.0**	**-0.7**
TWD	**Chiawan**	0.58	242	eP	**Pg**	**11 00 28.3**	**+0.1**
TWD				S	**Sg**	**11 00 37.6**	**+1.7**
ENTT	**Nioudou**	0.61	298	⇓iP	**Pg**	**11 00 28.6**	**-0.1**
ENTT				S	**Sg**	**11 00 35.3**	**-1.5**
HWA	**Hwalien**	0.63	233	eP	**Pg**	**11 00 30.7**	**+1.6**
HWA				S	**Sg**	**11 00 41.1**	**+3.6**
TWB1	**Santiao Chiao**	0.67	347	P	**Pg**	**11 00 31.1**	**+1.1**
TWB1				S	**Sg**	**11 00 39.5**	**+0.7**
NNS	**Nan Shan**	0.72	277	⇓iP	**Pg**	**11 00 30.4**	**-0.6**
YOJ	**Yonaguni jima**	0.79	82	P	**Pg**	**11 00 34.3**	**+2.0**
YOJ				S	**Sg**	**11 00 46.6**	**+3.8**
NWF	**Wu-fen Shan**	0.79	334	⇓iP	**Pg**	**11 00 33.0**	**+0.7**
NWF				S	**Sg**	**11 00 43.4**	**+0.5**
NSK	**Sanguang**	0.79	294	⇓iP	**Pg**	**11 00 31.8**	**-0.6**
NSK				S	**Sg**	**11 00 40.7**	**-2.3**
TWA	**Mucha**	0.81	320	eP	**Pg**	**11 00 33.0**	**+0.2**
TWA				S	**Sg**	**11 00 42.7**	**-0.9**
WHF	**Hehuan Shan**	0.84	256	⇑iP	**Pg**	**11 00 32.7**	**-0.6**
WHF				S	**Sg**	**11 00 45.2**	**+0.7**
ESL	**Shilin**	0.85	231	⇓iP	**Pg**	**11 00 33.4**	**-0.3**
ESL				S	**Sg**	**11 00 45.2**	**+0.2**
TAP1	**Taipei**	0.89	320	eP	**Pb**	**11 00 34.0**	**-0.4**
TAP1				S	**Sg**	**11 00 45.8**	**-0.5**
TWT	**Tachien**	0.90	264	eP	**Pb**	**11 00 34.4**	**-0.1**
TWT				S	**Sg**	**11 00 46.5**	**-0.1**
TAP	**Taipei**	0.90	319	eP	**Pb**	**11 00 34.8**	**+0.2**
TAP				S	**Sg**	**11 00 46.0**	**-0.6**
TWS1	**Kuangyinshan**	1.00	318	eP	**Pb**	**11 00 36.5**	**+0.2**
TWS1				S	**Sb**	**11 00 50.1**	**+0.4**
TWY	**Chenhua**	1.05	331	eP	**Pb**	**11 00 37.0**	**0.0**
NCU	**National Centr**	1.07	305	eP	**Pb**	**11 00 38.0**	**+0.5**
NCU				S	**Sb**	**11 00 52.1**	**+0.3**
NSTT	**Nanjuang**	1.09	285	⇑P	**Pb**	**11 00 37.5**	**-0.2**
NSTT				S	**Sb**	**11 00 53.2**	**+1.0**
EHY	**Hungye**	1.14	222	eP	**Pb**	**11 00 37.2**	**-1.4**
HSN	**Hsinchu**	1.17	293	eP	**Pb**	**11 00 38.9**	**-0.3**
HSN				S	**Sb**	**11 00 55.3**	**+0.7**
SMLT	**Sun Moon Lake**	1.24	248	⇓P	**Pb**	**11 00 39.7**	**-0.6**
TWQ1	**Liyutan**	1.26	270	⇓iP	**Pb**	**11 00 41.1**	**+0.4**
TWQ1				S	**Sb**	**11 00 59.4**	**+2.1**
TYC	**Yuchr**	1.27	250	⇓iP	**Pb**	**11 00 40.1**	**-0.8**
TYC				S	**Sb**	**11 00 57.5**	**0.0**
PCYT	**Pengchaiyu**	1.27	357	eP	**Pb**	**11 00 40.3**	**-0.6**
TWF1	**Yuli**	1.27	218	eP	**Pb**	**11 00 39.1**	**-1.8**
NSY	**Sanyi**	1.27	273	eP	**Pb**	**11 00 41.4**	**+0.5**
TCU	**Taichung**	1.37	262	eP	**Pb**	**11 00 42.0**	**-0.5**
TCU				S	**Sb**	**11 01 01.4**	**+1.0**
WNT	**Mingjian**	1.43	251	eP	**Pn**	**11 00 43.3**	**-0.3**
IRIF	**Iriomote-Funau**	1.44	90	P	**Pn**	**11 00 43.6**	**-0.1**
IRIF				S	**Sb**	**11 01 03.1**	**+0.8**
CHKT	**Chengkung**	1.45	210	eP	**Pn**	**11 00 42.2**	**-1.6**
ALS	**Alishan**	1.50	236	eP	**Pn**	**11 00 44.2**	**-0.3**
HATJ	**Hateruma jima**	1.54	101	P	**Pn**	**11 00 45.9**	**+0.8**
ELDTW	**Lidau**	1.56	222	eP	**Pn**	**11 00 43.5**	**-1.9**
WGK	**Gukeng**	1.60	246	eP	**Pn**	**11 00 46.7**	**+0.6**
WGK				S	**Sb**	**11 01 08.8**	**+1.6**
JKRS	**Kuro-shima**	1.69	94	P	**Pn**	**11 00 47.9**	**+0.5**
JKRS				S	**Sb**	**11 01 09.8**	**-0.1**
CHN2	**Minshiung**	1.74	242	eP	**Pn**	**11 00 48.7**	**+0.6**
CHN2				S	**Sn**	**11 01 12.0**	**+0.9**
CHN4	**Tsaushan**	1.75	235	eP	**Pn**	**11 00 48.6**	**+0.5**
CHN4				S	**Sn**	**11 01 12.7**	**+1.5**
WTCT	**Ta-ch’eng**	1.78	254	eP	**Pn**	**11 00 48.2**	**-0.4**
WTP	**Ta-pu**	1.79	232	eP	**Pn**	**11 00 49.0**	**+0.2**
WTP				S	**Sn**	**11 01 12.7**	**+0.3**
CHY	**Chiayi**	1.80	242	eP	**Pn**	**11 00 49.6**	**+0.7**
CHY				S	**Sn**	**11 01 13.5**	**+0.9**
JIJ	**Ishigaki jima**	1.81	89	P	**Pn**	**11 00 48.8**	**-0.3**
JIJ				S	**Sn**	**11 01 11.7**	**-1.2**
TWG	**Pinlang**	1.82	213	eP	**Pn**	**11 00 47.5**	**-1.7**
TWK	**Hsinying**	1.87	235	eP	**Pn**	**11 00 49.7**	**-0.3**
TWK				S	**Sn**	**11 01 14.3**	**-0.2**
CHN1	**Nanshi**	1.89	232	eP	**Pn**	**11 00 50.3**	**+0.1**
WSF	**Szhu**	1.91	248	eP	**Pn**	**11 00 50.4**	**0.0**
WSF				S	**Sn**	**11 01 15.5**	**+0.2**
SGST	**Jiashian**	1.92	229	eP	**Pn**	**11 00 50.8**	**+0.2**
CHN8	**Yiju**	2.04	241	eP	**Pn**	**11 00 52.0**	**-0.3**
ECL	**Taimali**	2.07	212	eP	**Pn**	**11 00 53.1**	**+0.4**
CHN3	**Shinhua**	2.08	233	eP	**Pn**	**11 00 53.4**	**+0.5**
SSD	**Sandimen**	2.13	221	eP	**Pn**	**11 00 53.5**	**0.0**
SCLT	**Jiali**	2.15	237	eP	**Pn**	**11 00 53.6**	**-0.3**
EAST	**Anshuo**	2.30	212	eP	**Pn**	**11 00 54.7**	**-1.3**
JTJ	**Tarama**	2.34	82	P	**Pn**	**11 00 56.9**	**+0.3**
JTJ				eS	**Sn**	**11 01 25.7**	**-0.5**
SCZT	**Fangliau**	2.43	216	eP	**Pn**	**11 00 58.6**	**+0.7**
PNG	**Penghu**	2.50	252	eP	**Pn**	**11 00 56.9**	**-2.1**
WDGT	**Dungji**	2.53	245	eP	**Pn**	**11 00 58.3**	**-1.1**
WDGT				S	**Sn**	**11 01 28.1**	**-3.1**
KNM	**Kinmen**	3.40	272	eP	**Pn**	**11 01 08.9**	**-2.8**

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*NIED **14** 11:07:00,29.20N×130.60E,h35^{km},Mw5.1 Best double couple: $M_0$5.38×10^{16} NP1:ϕ_s191°,δ90°,λ-60°. NP2: ϕ_s281°,δ30°,λ-179°.*
*IDC **14** 11:07:53.6±0.4,29.33N×130.45E,mb4.9/32,mb1 4.9/36, mb1mx4.9/38,mbtmp4.9/36,ML4.2/5,MS4.3/10,Ms1 4.3/10, ms1mx4.2/24,Error ellipse: s-maj=13.5km s-min=11.1km az=93.0*
*BJI **14** 11:07:56.3,29.10N×130.78E,h45^{km},mB4.9,mb5.0, Ms4.9,Msz4.7*
*MOS **14** 11:07:56.9±1.2,29.36N×130.49E,h30^{km},mb5.3/38, MS5.0/17,Error ellipse: s-maj=10.5km s-min=5.8km az=109.4*
*JMA **14** 11:07:57.8,29.23N×130.61E,h71^{km}±3^{km},M5.0*
JMA Felt II J1.
*NEIC **14** 11:07:59.0±0.2,29.31N×130.42E,mb5.1/87,MS5.3/95, MW5.1(NIED),Error ellipse: s-maj=4.8km s-min=3.5km az=148.0*
NEIC Recorded [2 JMA] on Nakano-shima.
ISC 14 11:07:57.2±0.2**,29.26N**±0.02×**130.51E**±0.03**,h32**^{km}**,**
h32^{km}±.6^{km}**:pP-P,n412,**σ**1$\overset{s}{.}$12**/356**,mb5.1**/134**,MS5.1**/118**,**
30C-11D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	0.80	316	P	**Pn**	**11 08 14.8**	**+2.5**
JNN				S	**Sn**	**11 08 27.9**	**+4.8**
JZK	**Kikaishima**	1.06	207	P	**Pn**	**11 08 17.3**	**+1.3**
JAM	**Amami Oshima**	1.16	223	P	**Pn**	**11 08 19.1**	**+1.6**
JAM				S	**Sn**	**11 08 35.6**	**+3.2**
JKC	**Kuchinoerabu**	1.23	347	P	**Pn**	**11 08 20.2**	**+1.8**
JKC				S	**Sn**	**11 08 36.9**	**+2.9**
JTN	**Tanegashima 3**	1.45	16	P	**Pn**	**11 08 22.4**	**+0.8**
JTN				S	**Sn**	**11 08 40.6**	**+1.0**
JTSR	**Tashiro 2**	1.93	11	P	**Pn**	**11 08 29.5**	**+1.0**
JTSR				S	**Sn**	**11 08 53.2**	**+1.3**
JTK	**Tokunoshima**	2.01	223	P	**Pn**	**11 08 30.6**	**+0.9**
JSU	**Suzuyama**	2.24	359	P	**Pn**	**11 08 33.5**	**+0.6**
JNAR	**Kushima--Naru**	2.35	16	P	**Pn**	**11 08 35.7**	**+1.2**
JNAR				S	**Sn**	**11 09 02.9**	**+0.3**
JSJ	**Shimokoshiki**	2.50	344	P	**Pn**	**11 08 37.7**	**+1.0**
JTZ	**Takazaki**	2.68	11	P	**Pn**	**11 08 39.9**	**+0.7**
JOW	**Kunigami**	3.12	220	Pn	**Pn**	**11 08 45.2**	**-0.3**
	23nm,0.3s,baz=58,slow=13,SNR=12						
JOW				Sn	**Sn**	**11 09 22.7**	**+0.5**
JOW				LR	LR	11 10 18.4	
	comp=Z,9µm,19.0s,baz=118,slow=46						
JKIT	**Kitakata**	3.45	13	P	**Pn**	**11 08 50.2**	**+0.1**
JNU	**Nakatsue**	3.86	5	Pn	**Pn**	**11 08 56.7**	**+0.7**
	baz=159,slow=8.4						
JNU				Sn	**Sn**	**11 09 40.5**	**-0.2**
	30nm,0.3s,baz=235,slow=19,SNR=2.6						
JNU				LR	LR	11 10 12.2	
	comp=Z,1µm,20.0s,baz=189,slow=36						
JKD	**Kudamatsu**	4.92	13	P	**Pn**	**11 09 09.7**	**-1.2**
JTY	**Toyota**	5.01	5	P	**Pn**	**11 09 12.1**	**-0.1**
JFM	**Mihama**	7.77	35	P	**Pn**	**11 09 50.0**	**-1.1**
SSE	**Sheshan**	8.27	285	eP	**P**	**11 09 53.3**	**-4.8**
	28nm,0.6s						
SSE				S	**Sn**	**11 11 22.4**	**-9.0**
JGM	**Miyama**	8.29	38	P	**P**	**11 09 57.0**	**-1.2**
KS15	**Wonju Array Si**	8.45	346	ePn	**P**	**11 10 01.4**	**+0.9**
JKG	**Kaga**	8.54	34	P	**P**	**11 10 01.5**	**-0.2**
INCN	**Inchon**	8.81	339	ePn	**P**	**11 10 03.8**	**-1.7**
	50nm,0.8s						
JHJ	**Hachijo jima 2**	8.82	62	Pn	**P**	**11 10 04.6**	**-1.1**
	55nm,0.3s,baz=163,slow=5.8,SNR=22						
JHJ				LR	LR	11 13 04.7	
	comp=Z,2µm,19.6s,baz=272,slow=35						
YHNB	**Yeheng**	9.34	243	ePn	**P**	**11 10 10.1**	**-2.8**
JOD2	**Odawara 2**	9.41	48	P	**P**	**11 10 12.0**	**-1.7**
MAJO	**Matsushiro**	9.72	40	eP	**P**	**11 10 15.8**	**-2.3**
	26nm,0.6s						
MAT	**Matsushiro**	9.72	40	P	**P**	**11 10 16.4**	**-1.7**
MAT				S	**Sn**	**11 12 04.0**	**-3.2**
MJAR	**Matsushiro Arr**	9.72	40	P	**P**	**11 10 15.6**	**-2.5**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJAR	**Matsushiro Arr**	9.72	40	Pn	**P**	**11 10 15.6**	**-2.5**
	comp=Z,3.0nm,0.3s,baz=232,slow=14,SNR=28						
NJ2	**Nanjing**	10.42	288	eP	**P**	**11 10 28.6**	**+1.0**
NJ2				AP		11 10 35.6	
NJ2				XP		11 10 39.8	
NJ2				S	**S**	**11 12 29.0**	**+4.8**
NJ2				XS		11 12 39.0	
NJ2				AMB	AMB		
	comp=Z,140nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,230nm,8.1s						
NJ2				LR	LR		
	comp=N,4µm,13.1s						
NJ2				LR	LR		
	comp=E,8µm,13.8s						
NJ2				LR	LR		
	comp=Z,5µm,14.3s						
CBIJ	**Chichi jima**	10.53	99	Pn	**P**	**11 10 24.6**	**-4.5**
	comp=Z,29nm,0.3s,baz=287,slow=21,SNR=11						
CBIJ				LR	LR	11 13 50.8	
	comp=Z,1µm,21.2s,baz=189,slow=34						
TIA	**Tai’an**	13.22	305	P	**P**	**11 11 07.1**	**+1.8**
TIA				LR	LR		
	comp=N,3µm,14.0s						
TIA				LR	LR		
	comp=E,4µm,14.0s						
SNY	**Shenyang**	13.74	338	⇑P	**P**	**11 11 12.8**	**+0.6**
SNY				S	**S**	**11 13 44.0**	**-0.6**
SNY				AMB	AMB		
	comp=Z,260nm,5.7s						
SNY				LR	LR		
	comp=N,4µm,15.6s						
SNY				LR	LR		
	comp=E,2µm,13.8s						
SNY				LR	LR		
	comp=Z,5µm,13.1s						
WHN	**Wuhan**	14.08	279	eP	**P**	**11 11 20.0**	**+3.3**
WHN				LR	LR		
	comp=N,690nm,11.6s						
WHN				LR	LR		
	comp=E,4µm,12.0s						
WHN				LR	LR		
	comp=Z,6µm,15.0s						
CN2	**Changchun**	15.06	346	eP	**P**	**11 11 31.9**	**+2.4**
CN2				eXP		11 11 45.0	
CN2				eS	**S**	**11 14 19.1**	**+3.2**
CN2				AMB	AMB		
	comp=Z,210nm,0.9s						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=N,2µm,13.0s						
CN2				LR	LR		
	comp=E,2µm,13.0s						
CN2				LR	LR		
	comp=Z,3µm,15.0s						
MDJ	**Mudanjiang**	15.34	358	P	**P**	**11 11 33.6**	**+0.5**
MDJ				AP		11 11 41.1	
MDJ				XP		11 11 45.6	
MDJ				S	**S**	**11 14 26.1**	**+3.7**
MDJ				PCP	PcP	11 16 36.5	-0.9
MDJ				SCP		11 20 08.0	
MDJ				PCS		11 20 12.0	
MDJ				AMB	AMB		
	comp=Z,120nm,7.5s						
MDJ				LR	LR		
	comp=N,1µm,15.3s						
MDJ				LR	LR		
	comp=E,1µm,15.7s						
MDJ				LR	LR		
	comp=Z,1µm,16.6s						
MDJ	**Mudanjiang**	15.34	358	ePn	**P**	**11 11 34.4**	**+1.3**
	comp=Z,18nm,0.9s						
GZH	**Guangzhou**	16.58	252	P	**P**	**11 11 45.6**	**-3.5**
GZH				LR	LR		
	comp=N,2µm,17.4s						
GZH				LR	LR		
	comp=E,1µm,13.0s						
GZH				LR	LR		
	comp=Z,2µm,13.4s						
ASAJ	**Asahikawa**	17.68	30	P	**P**	**11 11 60.0**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=215,slow=15,SNR=10						
ENH	**Enshi**	18.28	278	eP	**P**	**11 12 10.9**	**+0.6**
	comp=Z,77nm,0.8s						
XAN	**Xi’an**	18.98	290	P	**P**	**11 12 17.8**	**-0.8**
XAN				AMB	AMB		
	comp=Z,70nm,0.8s						
XAN				LR	LR		
	comp=N,850nm,13.0s						
XAN				LR	LR		
	comp=E,2µm,11.8s						
XAN				LR	LR		
	comp=Z,2µm,12.1s						
YUK	**Yuzh-Kuril’sk**	19.16	36	eP	**P**	**11 12 19.0**	**-1.7**
YUK				MLR	MLR		
	comp=N,2µm,19.0s						
YUK				MLR	MLR		
	comp=Z,3µm,19.0s						
HHC	**Hu-ho-hao-te**	19.30	312	eP	**P**	**11 12 21.1**	**-1.2**
HHC				AP		11 12 30.8	
HHC				XP		11 12 35.4	
HHC				PP	PP	11 12 38.3	-1.2
HHC				S	**S**	**11 16 00.8**	**+8.0**
HHC				XS		11 16 09.9	
HHC				SS	SS	11 16 24.4	+5.5
HHC				AMB	AMB		
	comp=Z,60nm,0.9s						
HHC				LR	LR		
	comp=N,2µm,15.5s						
HHC				LR	LR		
	comp=E,2µm,14.3s						
HHC				LR	LR		
	comp=Z,3µm,15.5s						
KLR	**Kul’dur**	19.96	2	eP	**P**	**11 12 24.0**	**-5.6**
KLR				MLR	MLR		
	comp=Z,1µm,12.5s						
YSS	**Yuzh-Sakhalins**	20.08	25	⇑eP	**P**	**11 12 29.8**	**-1.0**
YSS				e		11 12 39.2	
YSS				S	**S**	**11 16 04.0**	**-5.3**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				pmax	pmax		
	comp=Z,110nm,1.1s						
YSS				MLR	MLR		
	comp=N,800nm,15.0s,MS4.3						
YSS				MLR	MLR		
	comp=Z,800nm,15.0s,MS4.2						
YSS				MLR	MLR		
	comp=E,800nm,18.0s,MS4.3						
YSS	**Yuzh-Sakhalins**	20.08	25	eP	**P**	**11 12 29.7**	**-1.0**
	comp=E,52nm,1.1s						
YSS				LR	LR		
	comp=Z,824nm,19.0s,MS4.1						
BTO	**Baotou**	20.20	309	eP	**P**	**11 12 29.9**	**-2.2**
BTO				LR	LR		
	comp=N,2µm,15.1s,MS4.7						
BTO				LR	LR		
	comp=E,2µm,13.1s,MS4.7						
GUMO	**Guam**	20.51	136	PFAKE		11 12 50.0	+15
GUMO				LR	LR		
	comp=Z,761nm,20.0s,MS4.1						
GYA	**Guiyang**	21.26	268	⇑iP	**P**	**11 12 43.5**	**+0.4**
GYA				AP		11 12 50.6	
GYA				AMB	AMB		
	comp=Z,140nm,0.8s,mb5.3						
GYA				AMB	AMB		
	comp=Z,280nm,3.2s						
GYA				LR	LR		
	comp=N,2µm,15.6s,MS4.8						
GYA				LR	LR		
	comp=E,2µm,13.8s,MS4.8						
GYA				LR	LR		
	comp=Z,3µm,13.2s,MS4.9						
QIZ	**Qiongzhong**	21.40	246	P	**P**	**11 12 45.6**	**+1.1**
QIZ				XP		11 12 58.8	
QIZ				eS	**S**	**11 16 36.1**	**+0.8**
QIZ				XS		11 16 50.3	
QIZ				SS	SS	11 17 12.5	+1.9
QIZ				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.0						
QIZ				LR	LR		
	comp=N,1µm,18.1s,MS4.4						
QIZ				LR	LR		
	comp=E,810nm,18.4s,MS4.4						
QIZ				LR	LR		
	comp=Z,2µm,19.5s,MS4.4						
QIZ	**Qiongzhong**	21.40	246	eP	**P**	**11 12 45.1**	**+0.6**
	comp=Z,77nm,0.9s,mb5.0						
QIZ				LR	LR		
	comp=Z,2µm,20.0s,MS4.4						
HIA	**Hailar**	21.60	341	eP	**P**	**11 12 44.6**	**-1.8**
	comp=Z,20nm,0.7s,mb4.7						
HIA				LR	LR		
	comp=Z,1µm,20.0s,MS4.3						
CD2	**Chengdu**	23.19	281	P	**P**	**11 13 03.3**	**+1.1**
CD2				S	**S**	**11 17 11.5**	**+3.8**
CD2				AMB	AMB		
	comp=Z,220nm,0.7s,mb5.7						
CD2				LR	LR		
	comp=N,2µm,12.0s						
CD2				LR	LR		
	comp=Z,3µm,12.6s,MS5.0						
LZH	**Lanzhou**	23.41	294	eP	**P**	**11 13 05.0**	**+0.7**
LZH				AP		11 13 12.5	
LZH				PP	PP	11 13 32.8	-3.4
LZH				S	**S**	**11 17 06.5**	**-5.0**
LZH				AMB	AMB		

	comp=Z,90nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,470nm,5.2s						
LZH				LR	LR		
	comp=E,5µm,14.1s						
LZH				LR	LR		
	comp=Z,6µm,15.1s,MS5.2						
LZH	**Lanzhou**	**23.41**	**294**	*e*P	**P**	**11 13 05.0**	**+0.7**
	comp=Z,97nm,1.5s,mb5.0						
LZH				pP		11 13 12.5	
LZH				sP		11 13 16.2	
LZH				PP	PP	11 13 32.8	-3.4
LZH				S	**S**	**11 17 06.5**	**-5.0**
LZH				sS		11 17 24.1	
LZH				SS	SS	11 17 52.5	-6.8
LZH				LR	LR		
	comp=Z,6µm,15.1s,MS5.2						
KMI	**Kunming**	**25.02**	**267**	P	**P**	**11 13 20.8**	**+0.9**
KMI				AP	pP	11 13 29.8	+0.5
KMI				XP	sP	11 13 33.1	-0.5
KMI				PP	PP	11 14 00.6	+2.9
KMI				S	**S**	**11 17 46.8**	**+7.8**
KMI				XS		11 18 02.0	
KMI				AMB	AMB		
	comp=Z,160nm,0.8s,mb5.6						
KMI				AMB	AMB		
	comp=Z,120nm,3.1s						
KMI				LR	LR		
	comp=N,1µm,14.4s,MS4.9						
KMI				LR	LR		
	comp=E,2µm,13.1s,MS4.9						
KMI				LR	LR		
	comp=Z,3µm,13.1s,MS5.0						
KMI	**Kunming**	**25.02**	**267**	P	**P**	**11 13 20.7**	**+0.8**
	comp=Z,164nm,0.8s,mb5.6						
KMI				pP	pP	11 13 29.7	+0.4
KMI				sP	sP	11 13 33.1	-0.5
KMI				PP	PP	11 14 00.6	+2.9
KMI				S	**S**	**11 17 46.7**	**+7.7**
KMI				sS		11 18 02.0	
KMI				SS	SS	11 18 52.5	+14
KMI				LR	LR		
	comp=Z,3µm,13.1s,MS5.0						
ULN	**Ulaanbaatar**	**25.94**	**322**	*d i*P	**P**	**11 13 27.4**	**-0.9**
ULN	**Ulaanbaatar**	**25.94**	**322**	*e*P	**P**	**11 13 27.2**	**-1.1**
	comp=Z,26nm,0.7s,mb4.9						
ULN				*e*pP	pP	11 13 36.0	-1.7
ULN				*e*PcP	PcP	11 16 57.0	0.0
ULN				LR	LR		
	comp=Z,2µm,20.0s,MS4.6						
CIT	**Chita**	**26.00**	**336**	*e*P	**P**	**11 13 28.8**	**0.0**
CIT				*e*	pP	11 13 37.2	-1.0
CIT				*e*		11 13 42.2	
CIT				*e*		11 14 27.3	
CIT				pmax	pmax		
	comp=Z,92nm,1.0s,mb5.3						
SONM	**Songino Array**	**26.27**	**322**	P	**P**	**11 13 29.7**	**-1.7**
	comp=Z,16nm,0.8s,mb4.6,baz=140,slow=9.7,SNR=62						
SONM				PcP	PcP	11 16 56.5	-1.3
	comp=Z,1.4nm,0.7s,baz=158,slow=2.2,SNR=3.9						
SONM				LR	LR	11 24 57.5	
	comp=Z,2µm,20.0s,MS4.5,baz=122,slow=39						
GTA	**Gaotai**	**27.18**	**300**	*e*P	**P**	**11 13 39.6**	**-0.2**
GTA				AP	pP	11 13 49.3	+0.1
GTA				XP	sP	11 13 53.3	-0.1
GTA				PP	PP	11 14 26.3	-0.4
GTA				PCP	PcP	11 17 00.3	+0.3
GTA				S	**S**	**11 18 15.8**	**+1.3**
GTA				XS		11 18 32.3	
GTA				SS	SS	11 19 33.8	+3.1
GTA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
GTA				LR	LR		
	comp=N,1µm,16.0s,MS4.9						
GTA				LR	LR		
	comp=E,2µm,14.5s,MS4.9						
GTA				LR	LR		
	comp=Z,3µm,16.4s,MS4.9						
KKTK	**Khon Kaen**	**28.50**	**249**	⇓P	**P**	**11 13 52.0**	**+0.1**
	comp=Z,802nm,0.4s						
NANT	**Nan**	**29.07**	**256**	⇑P	**P**	**11 13 56.0**	**-1.1**
	comp=Z,150nm,0.6s,mb5.9						
ZAK	**Zakamensk**	**29.43**	**323**	*e*P	**P**	**11 13 58.9**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.1						
IRK	**Irkutsk**	**30.07**	**327**	*e*P	**P**	**11 14 04.6**	**-1.1**
IRK				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.0						
CHG	**Chiang Mai**	**30.56**	**257**	P	**P**	**11 14 09.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**30.72**	**257**	P	**P**	**11 14 10.5**	**-1.2**
CMAR						11 17 09.3	
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR				MLR	MLR		
	comp=Z,598nm,18.3s						
CMAR	**Chiang Mai Arr**	**30.72**	**257**	P	**P**	**11 14 10.4**	**-1.3**
	comp=Z,5.5nm,0.8s,mb4.5,baz=56,slow=6.6,SNR=18						
CMAR				PcP	PcP	11 17 09.2	+0.2
	comp=Z,4.8nm,0.7s,baz=45,slow=1.2,SNR=16						
CMAR				LR	LR	11 29 16.9	
	comp=Z,598nm,18.2s,MS4.3,baz=75,slow=42						
NST	**Nakhon Sawan**	**31.05**	**251**	P	**P**	**11 14 14.0**	**-0.7**
MOY	**Mondy**	**31.35**	**324**	*e*P	**P**	**11 14 16.0**	**-0.9**
PET	**Petropavlovsk**	**31.46**	**33**	*e*P	**P**	**11 14 16.9**	**-1.0**
PET				*e*S	**S**	**11 19 24.2**	**+1.7**
PET				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.2						
PET				MLR	MLR		
	comp=Z,700nm,18.0s,MS4.4						
PET	**Petropavlovsk**	**31.46**	**33**	*e*P	**P**	**11 14 16.3**	**-1.7**
	comp=Z,50nm,1.3s,mb5.2						
PET				*e*pP	pP	11 14 28.6	+1.2
PET				LR	LR		
	comp=Z,700nm,20.0s,MS4.3						
YAK	**Yakutsk**	**32.78**	**359**	*d i*P	**P**	**11 14 26.4**	**-2.9**
YAK				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.3						
YAK				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.3						
YAK	**Yakutsk**	**32.78**	**359**	PFAKE		11 14 40.0	+11
YAK				LR	LR		
	comp=Z,731nm,20.0s,MS4.4						
NNT	**Nongplab**	**33.05**	**246**	P	**P**	**11 14 33.0**	**+0.9**
MA2	**Magadan**	**33.30**	**19**	*e*P	**P**	**11 14 33.0**	**-0.8**
	comp=Z,31nm,0.8s,mb5.3						
MA2				LR	LR		
	comp=Z,581nm,20.0s,MS4.3						
KSM	**Kuching**	**33.68**	**219**	*e*P	**P**	**11 14 38.0**	**+0.3**
LSA	**Lhasa**	**34.15**	**281**	P	**P**	**11 14 42.8**	**+1.2**
LSA				AP	pP	11 14 50.6	-0.6
LSA				SCS	ScS	11 24 54.9	-5.5
LSA				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.5						
LSA				LR	LR		
	comp=E,1µm,15.8s						
LSA				LR	LR		
	comp=Z,2µm,15.3s,MS4.9						
LSA	**Lhasa**	**34.15**	**281**	*e*P	**P**	**11 14 41.2**	**-0.4**
	comp=Z,46nm,0.8s,mb5.5						
LSA				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
SHL	**Shillong**	**34.38**	**273**	*e*P	**P**	**11 14 42.5**	**-1.1**
SEY	**Seymchan**	**36.54**	**17**	*e*P	**P**	**11 15 01.4**	**-0.2**
SEY				*e*		11 16 26.6	
SEY				*e*PPP	PPP	11 16 48.2	+2.0
SEY						11 17 24.5	
SEY				*e*S	**S**	**11 20 45.9**	**+4.7**
SEY				*e*		11 25 18.2	
SEY				pmax	pmax		
	comp=N,20nm,1.1s						
SEY				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.2						
SEY				pmax	pmax		
	comp=E,9.0nm,1.0s						
KULM	**Kulim**	**36.95**	**236**	*e*P	**P**	**11 15 05.0**	**-0.5**
KULM				*e*pP	pP	11 15 15.6	+0.5
GUN	**Gumba**	**39.04**	**279**	*e*P	**P**	**11 15 23.3**	**+0.5**
	comp=E,408nm,0.8s,mb6.2						
PKI	**Pulchoki**	**39.52**	**279**	*e*P	**P**	**11 15 26.5**	**-0.4**
	comp=E,254nm,0.7s,mb6.0						
KKN	**Kakani**	**39.58**	**279**	*e*P	**P**	**11 15 27.4**	**0.0**
	comp=E,304nm,0.8s,mb6.1						
DMN	**Daman**	**39.77**	**279**	*e*P	**P**	**11 15 29.0**	**0.0**
	comp=E,165nm,0.8s,mb5.8						
GKN	**Gorkha**	**40.09**	**280**	*e*P	**P**	**11 15 31.3**	**-0.2**
	comp=E,216nm,0.8s,mb5.9						
KOLN	**Koldanda**	**41.03**	**280**	*e*P	**P**	**11 15 39.1**	**-0.2**
	comp=E,136nm,0.8s,mb5.7						
MKAR	**Makanchi Array**	**41.12**	**309**	P	**P**	**11 15 38.7**	**-1.1**
MKAR						11 17 38.7	
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,367nm,20.8s						
MKAR	**Makanchi Array**	**41.12**	**309**	P	**P**	**11 15 38.7**	**-1.1**
	comp=Z,8.3nm,0.5s,mb4.6,baz=90,slow=10,SNR=83						
MKAR				PcP	PcP	11 17 38.7	-0.8
	comp=Z,6.8nm,0.8s,baz=76,slow=5.0,SNR=7.0						
MKAR				LR	LR	11 33 06.4	
	comp=Z,367nm,20.8s,MS4.2,baz=275,slow=37						
MKAR	**Makanchi Array**	**41.12**	**309**	P	**P**	**11 15 38.7**	**-1.1**
MKAR				PcP	PcP	11 17 38.7	-0.8
MKAR				LR	LR	11 33 06.4	
PMG	**Port Moresby**	**41.66**	**155**	PFAKE		11 16 00.0	+15
PMG				LR	LR		
	comp=Z,298nm,20.0s,MS4.2						
NVS	**Novosibirsk**	**42.30**	**321**	*e*P	**P**	**11 15 47.8**	**-1.6**
NVS				*e*		11 17 41.0	
NVS				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
NVS				pmax	pmax		
	comp=N,5.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,12nm,1.0s						
TIXI	**Tiksi**	**42.45**	**359**	PFAKE		11 16 00.0	+10
TIXI				LR	LR		
	comp=Z,495nm,19.0s,MS4.4						
LGTI	**Lohaghat**	**43.53**	**283**	*i* P	**P**	**11 16 01.0**	**+1.3**
PTH	**Pithoragarh**	**43.53**	**283**	*e*P	**P**	**11 16 00.0**	**+0.3**
PTH				*e*x	x	11 17 58.0	
BILL	**Bilibino**	**44.17**	**18**	*c i*P	**P**	**11 16 03.9**	**-0.5**
BILL				*i*	pP	11 16 14.0	0.0
BILL				*i*		11 17 49.5	
BILL				*e*S	**S**	**11 22 34.7**	**-0.1**
BILL				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.1						
BILL				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.4						
BILL	**Bilibino**	**44.17**	**18**	*e*P	**P**	**11 16 03.8**	**-0.5**
	comp=Z,29nm,0.8s,mb5.1						
BILL				*e*pP	pP	11 16 14.7	+0.7
BILL				*e*PcP	PcP	11 17 49.5	+0.1
BILL				LR	LR		
	comp=Z,468nm,22.0s,MS4.4						
ULHL	**Ulahol**	**45.20**	**302**	P	**P**	**11 16 13.1**	**+0.1**
	SNR=5.2						
KSH	**Kashi**	**45.55**	**298**	*e*P	**P**	**11 16 16.8**	**+1.0**
KSH				*e*AP	pP	11 16 26.0	+0.5
KSH				*e*PCP	PcP	11 17 51.1	-3.4
KSH				*e*PP	PP	11 18 04.0	+1.2
KSH				*e*SCP		11 21 40.0	
KSH				*e*PCS		11 21 44.1	
KSH				*e*S	**S**	**11 22 54.0**	**-1.0**
KSH				*e*XS		11 23 17.3	
KSH				*e*SCS	ScS	11 26 05.1	-1.9
KSH				AMB	AMB		
	comp=Z,160nm,5.0s						
KSH				LR	LR		
	comp=N,980nm,12.3s,MS5.2						
KSH				LR	LR		
	comp=E,1µm,11.1s,MS5.2						
TKM2	**Tokmak 2**	**45.66**	**303**	P	**P**	**11 16 17.6**	**+1.0**
	SNR=31						
SMLA	**Simla**	**45.77**	**286**	*i* P	**P**	**11 16 14.0**	**-3.7**
KBK	**Karagaybulak**	**46.14**	**302**	P	**P**	**11 16 21.4**	**+1.0**
	SNR=9.6						
CHMS	**Chumysh**	**46.28**	**303**	P	**P**	**11 16 22.0**	**+0.5**
	SNR=16						
NDI	**New Delhi**	**46.28**	**283**	*e*IP		11 16 19.5	
NDI				*e*P		11 16 20.0	
FRU	**Bishkek**	**46.38**	**303**	*e*P	**P**	**11 16 22.5**	**+0.2**
FRU				*e*		11 18 49.0	
USP	**Ospenovka**	**46.45**	**303**	P	**P**	**11 16 23.2**	**+0.3**
	SNR=24						
AAK	**Ala-Archa**	**46.48**	**302**	P	**P**	**11 16 23.7**	**+0.6**
	SNR=8.4						
AAK	**Ala-Archa**	**46.48**	**302**	*i* P	**P**	**11 16 22.0**	**-1.1**
AAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
AAK				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.9						
AAK	**Ala-Archa**	**46.48**	**302**	*e*P	**P**	**11 16 22.1**	**-1.0**
	comp=Z,13nm,0.9s,mb4.9						
AAK				*e*pP	pP	11 16 31.5	-1.3
AAK				*e*PcP	PcP	11 17 57.0	-0.7
UCH	**Uchtor**	**46.48**	**302**	P	**P**	**11 16 23.6**	**+0.5**
	SNR=58						
AML	**Almayashu**	**47.10**	**302**	P	**P**	**11 16 29.4**	**+1.4**
	SNR=9.5						
FITZ	**Fitzroy Crossi**	**47.32**	**186**	⇓*i*P	**P**	**11 16 30.0**	**-0.1**
	comp=Z,10.0nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**47.32**	**186**	P	**P**	**11 16 30.1**	**0.0**
	comp=Z,12nm,0.6s,mb5.0,baz=7.5,slow=6.1,SNR=27						
BHPL	**Bhopal**	**47.66**	**276**	*e*P	**P**	**11 16 30.0**	**-2.7**
HNR	**Honiara**	**47.80**	**139**	PFAKE		11 16 50.0	+16
HNR				LR	LR		
	comp=Z,294nm,20.0s,MS4.3						
HYB	**Hyderabad**	**48.79**	**268**	*e*P	**P**	**11 16 41.0**	**-0.5**
HYB	**Hyderabad**	**48.79**	**268**	*i* P	**P**	**11 16 41.0**	**-0.5**
WRAB	**Tennant Creek**	**49.05**	**175**	*e*P	**P**	**11 16 43.6**	**+0.1**
	comp=Z,49nm,1.3s,mb5.4						
WRAB				*e*PP	PP	11 18 34.1	-3.0
WRA	**Warramunga Arr**	**49.06**	**175**	P	**P**	**11 16 43.0**	**-0.5**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**49.06**	**175**	P	**P**	**11 16 43.0**	**-0.6**
	comp=Z,5.7nm,0.8s,mb4.7,baz=354,slow=8.3,SNR=38						
WB2	**Warramunga Arr**	**49.06**	**175**	*e*P	**P**	**11 16 43.2**	**-0.3**
KKAR	**Karatay Array**	**49.38**	**303**	*i* P	**P**	**11 16 44.5**	**-1.2**
KKAR				pmax	pmax		
	comp=Z,51nm,0.8s,mb5.6						
BVA0	**Borovoye Array**	**49.42**	**316**	*i* P	**P**	**11 16 44.6**	**-1.3**
BVA0				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
BVAR	**Borovoye Array**	**49.42**	**316**	P	**P**	**11 16 44.4**	**-1.5**
	comp=Z,73nm,0.6s,mb5.9,baz=95,slow=9.0,SNR=277						
BVAR				PcP	PcP	11 18 07.3	-0.8
	comp=Z,13nm,0.6s,baz=103,slow=2.6,SNR=7.1						
MBWA	**Marble Bar**	**51.19**	**193**	PFAKE		11 17 10.0	+10
MBWA				LR	LR		
	comp=Z,460nm,22.0s,MS4.5						
CTA	**Charters Tower**	**51.36**	**161**	P	**P**	**11 16 59.8**	**-1.3**
	comp=Z,4.1nm,0.9s,mb4.4,baz=348,slow=13,SNR=3.6						
CTA				LR	LR	11 35 58.2	
	comp=Z,223nm,19.1s,MS4.2,baz=73,slow=33						
CTAO	**Charters Tower**	**51.36**	**161**	PFAKE		11 17 10.0	+8.9
CTAO				LR	LR		
	comp=Z,333nm,19.0s,MS4.4						
TNA	**Tin City**	**52.02**	**28**	*e*P	**P**	**11 17 05.0**	**-0.5**
	comp=Z,28nm,1.2s,mb5.1						
TNA				*e*pP	pP	11 17 16.4	+1.0
TNA				*e*PcP	PcP	11 18 15.5	-2.0
TNA				LR	LR		
	comp=Z,187nm,21.0s,MS4.1						
POO	**Poona**	**52.46**	**272**	*e*P	**P**	**11 17 07.0**	**-2.5**
KAD	**Karad**	**52.66**	**270**	*e*P	**P**	**11 17 10.1**	**-0.8**
KAD				AMb	AMB	11 17 10.2	
	comp=Z,35nm,1.1s,mb5.2						
TRD	**Trivandrum**	**54.20**	**259**	*e*P	**P**	**11 17 21.7**	**-0.6**
TRD				AMb	AMB	11 17 23.2	
	comp=Z,68nm,0.5s,mb5.8						
SVE	**Sverdlovsk**	**55.14**	**321**	*e*P	**P**	**11 17 25.8**	**-2.9**
SVE				*e*		11 17 37.9	
SVE				*e*		11 20 46.0	
SVE				pmax	pmax		
	comp=Z,1µm,0.8s						
SVE				MLR	MLR		
	comp=N,500nm,15.0s,MS5.4						
SVE				MLR	MLR		
	comp=E,2µm,15.0s,MS5.4						
SVE				MLR	MLR		
	comp=Z,4µm,15.0s,MS5.6						
AB31	**Akbulak array**	**56.09**	**312**	P	**P**	**11 17 34.3**	**-1.3**
AB31				pmax	pmax		
	comp=Z,53nm,0.6s,mb5.8						
ARU	**Arti**	**56.30**	**321**	⇑*i*P	**P**	**11 17 35.6**	**-1.4**
ARU				*e*		11 18 32.3	
ARU				*e*S	**S**	**11 25 22.6**	**-0.5**
ARU				*e*		11 27 20.2	
ARU				*e*SS	SS	11 29 10.5	+0.1
ARU				pmax	pmax		
	comp=Z,86nm,0.8s,mb5.8						
ARU				MLR	MLR		
	comp=Z,1µm,16.5s,MS5.1						
ARU				MLR	MLR		
	comp=N,200nm,16.0s,MS5.0						
ARU				MLR	MLR		
	comp=E,1µm,16.0s,MS5.0						
ARU	**Arti**	**56.30**	**321**	*e*P	**P**	**11 17 35.9**	**-1.2**
	comp=E,83nm,0.8s,mb5.8						
ARU				*e*pP	pP	11 17 45.6	-1.3
ARU				*e*PcP	PcP	11 18 33.0	-1.0
ARU				LR	LR		
	comp=Z,249nm,22.0s,MS4.3						
TTA	**Tatalina**	**56.90**	**32**	*e*P	**P**	**11 17 41.0**	**-0.2**
SOKR	**Solikamsk**	**57.09**	**324**	*c i*P	**P**	**11 17 40.9**	**-1.7**
SOKR				MLR	MLR		
	comp=Z,390nm,17.0s,MS4.6						
SVW2	**Sparrevohn**	**57.13**	**34**	*e*P	**P**	**11 17 43.1**	**+0.2**
IMA	**Indian Mountai**	**57.90**	**28**	*e*P	**P**	**11 17 48.8**	**+0.6**
	comp=Z,6.8nm,0.7s,mb4.8						
SPU	**Mount Spurr**	**58.84**	**34**	*e*P	**P**	**11 17 54.5**	**-0.2**
SPU				*e*pP	pP	11 18 05.2	+0.4
KDAK	**Kodiak Island**	**58.89**	**38**	*e*P	**P**	**11 17 53.4**	**-1.8**
	comp=Z,12nm,0.6s,mb5.1						
FIB	**Fire Island**	**59.74**	**33**	PFAKE		11 18 10.0	+8.9
FIB				LR	LR		
	comp=Z,702nm,19.0s,MS4.8						
MCK	**McKinley**	**60.05**	**30**	*e*P	**P**	**11 18 02.1**	**-1.0**
	comp=Z,14nm,1.1s,mb4.9						
MCK				LR	LR		
	comp=Z,422nm,21.0s,MS4.6						
PMR	**Palmer**	**60.19**	**33**	*e*P	**P**	**11 18 02.4**	**-1.7**
	comp=Z,26nm,1.0s,mb5.2						
SML	**Sawmill**	**60.54**	**33**	*e*P	**P**	**11 18 05.4**	**-1.1**
ILAR	**Eielson Array**	**60.82**	**29**	P	**P**	**11 18 07.0**	**-1.3**
ILAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ILAR	**Eielson Array**	**60.82**	**29**	P	**P**	**11 18 07.0**	**-1.4**
	comp=Z,6.5nm,0.8s,mb4.8,baz=292,slow=8.7,SNR=14						
DZM	**Mont Dzumac**	**61.67**	**142**	P	**P**	**11 18 13.7**	**-1.0**
	comp=Z,8.2nm,0.8s,mb4.9,baz=340,slow=11,SNR=3.4						
STKA	**Stephens Creek**	**61.71**	**169**	P	**P**	**11 18 13.7**	**-1.2**
	comp=Z,5.1nm,1.0s,mb4.6,baz=31,slow=6.1,SNR=4.3						
DIV	**Divide**	**61.86**	**33**	*e*P	**P**	**11 18 15.5**	**0.0**
	comp=Z,81nm,0.9s,mb5.8						
DIV				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
EYAK	**Cordova Ski Ar**	**61.98**	**34**	*e*P	**P**	**11 18 14.5**	**-1.8**
NWAO	**Narrogin (SRO)**	**63.12**	**193**	P	**P**	**11 18 23.3**	**-0.9**
NWAO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NWAO	**Narrogin (SRO)**	**63.12**	**193**	P	**P**	**11 18 23.2**	**-0.9**
	comp=Z,8.5nm,0.9s,mb4.9,baz=58,slow=9.5,SNR=2.8						
WBK	**Wadi Bani Khal**	**63.80**	**282**	P	**P**	**11 18 28.9**	**+0.1**
	SNR=14						
SMDO	**Samad**	**64.41**	**283**	P	**P**	**11 18 33.0**	**+0.2**
	SNR=9.3						
JMDO	**Jabal Madar**	**64.63**	**282**	P	**P**	**11 18 34.6**	**+0.4**
	SNR=20						
BSY	**Bisya**	**65.25**	**283**	P	**P**	**11 18 38.3**	**0.0**
	SNR=14						
INK	**Inuvik**	**65.31**	**24**	P	**P**	**11 18 37.4**	**-0.5**
INK				pmax	pmax		
	comp=Z,12nm,0.7s						
INK	**Inuvik**	**65.31**	**24**	P	**P**	**11 18 37.4**	**-0.5**
	comp=Z,12nm,0.7s,mb5.0,baz=289,slow=8.4,SNR=26						
INK	**Inuvik**	**65.31**	**24**	*e*P	**P**	**11 18 37.5**	**-0.4**
	comp=Z,11nm,0.6s,mb5.1						
INK				*e*pP	pP	11 18 49.3	+1.3
ASHO	**Ashiyiah**	**65.48**	**286**	P	**P**	**11 18 39.6**	**-0.1**
	SNR=6.7						
KBS	**Kingsbay**	**66.65**	**349**	PFAKE		11 19 00.0	+14
KBS				LR	LR		
	comp=Z,345nm,22.0s,MS4.5						
POHA	**Pohakuloa**	**66.99**	**80**	PFAKE		11 19 00.0	+11
POHA				LR	LR		
	comp=Z,6µm,19.0s,MS5.8						
KEV	**Kevo**	**67.36**	**338**	*e*P	**P**	**11 18 48.0**	**-3.0**
KEV				LR	LR		
	comp=Z,887nm,19.0s,MS5.0						
MOS	**Moscow**	**67.90**	**322**	*e*P	**P**	**11 18 53.8**	**-0.8**
MOS				pmax	pmax		
	comp=Z,58nm,0.7s,mb5.7						
MOS				MLR	MLR		
	comp=Z,2µm,18.2s,MS5.3						
ARCES	**ARCESS Array B**	**67.93**	**338**	P	**P**	**11 18 53.0**	**-1.5**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARCES	**ARCESS Array B**	**67.93**	**338**	P	**P**	**11 18 53.0**	**-1.6**
	comp=Z,4.9nm,0.8s,mb4.6,baz=62,slow=7.6,SNR=10						
SIT	**Sitka**	**68.12**	**36**	PFAKE		11 19 10.0	+14
SIT				LR	LR		
	comp=Z,575nm,20.0s,MS4.8						
GOF	**Gofitskoye**	**68.26**	**310**	⇑*i*P	**P**	**11 18 55.5**	**-1.5**
GOF				pmax	pmax		
	comp=Z,60nm,1.3s,mb5.5						
ZEI	**Tsey**	**68.47**	**308**	*e*P	**P**	**11 18 57.5**	**-0.8**
ZEI				*i* *PP	pP	11 19 09.2	+0.9
ZEI				pmax	pmax		
	comp=Z,63nm,0.8s,mb5.7						
VRSR	**Storozhevoye**	**68.57**	**318**	*e*P	**P**	**11 18 57.4**	**-1.4**
VRSR				pmax	pmax		
	comp=N,70nm,1.0s						
VRSR				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
VRSR				pmax	pmax		
	comp=E,20nm,0.6s						
OBN	**Obninsk**	**68.68**	**322**	⇓*i*P	**P**	**11 18 58.2**	**-1.2**
OBN				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
OBN				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.0						
OBN	**Obninsk**	**68.68**	**322**	PFAKE		11 19 10.0	+11
OBN				LR	LR		
	comp=Z,236nm,19.0s,MS4.4						
GNI	**Garni**	**68.79**	**305**	*c i*P	**P**	**11 19 00.9**	**+0.5**
GNI				pmax	pmax		
	comp=Z,70nm,1.3s						
GNI	**Garni**	**68.79**	**305**	LR	LR	11 54 49.6	
	comp=Z,146nm,18.6s,MS4.2,baz=246,slow=41						
GNI	**Garni**	**68.79**	**305**	*e*P	**P**	**11 19 00.9**	**+0.5**
	comp=Z,55nm,0.9s,mb5.5						
GNI				*e*pP	pP	11 19 10.4	0.0
GNI				LR	LR		
	comp=Z,283nm,19.0s,MS4.5						
KIV	**Kislovodsk**	**68.88**	**309**	*c i*P	**P**	**11 19 00.5**	**-0.3**
KIV				pmax	pmax		
	comp=N,69nm,1.1s						
KIV				pmax	pmax		
	comp=E,37nm,1.1s						
KIV				pmax	pmax		
	comp=Z,109nm,1.1s,mb5.7						
KIV	**Kislovodsk**	**68.88**	**309**	*e*P	**P**	**11 19 01.1**	**+0.3**
	comp=Z,112nm,1.1s,mb5.7						
RBK	**Rabkut**	**69.95**	**279**	P	**P**	**11 19 08.2**	**+0.4**
	SNR=6.3						
WHFO	**Wadi Hawf**	**70.15**	**280**	⇓P	**P**	**11 19 09.3**	**+0.3**
	SNR=17						
DLBC	**Dease Lake**	**70.24**	**33**	*e*P	**P**	**11 19 09.3**	**+0.4**
DLBC				*e*pP	pP	11 19 16.8	-2.2
KAF	**Kangasniemi**	**70.83**	**331**	*e*p	**P**	**11 19 10.6**	**-1.8**
	baz=62,slow=5.8						
SOC	**Sochi**	**71.02**	**310**	*e*P	**P**	**11 19 11.0**	**-2.9**
SOC				*e*		11 19 32.2	
SOC				*e*S	S	11 28 22.8	-3.5
SOC				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.4						
SOC				pmax	pmax		
	comp=N,15nm,0.7s						
SOC				pmax	pmax		
	comp=E,4.0nm,0.5s						
SOC				MLR	MLR		
	comp=Z,780nm,20.0s,MS5.0						
SOC				MLR	MLR		
	comp=N,441nm,19.0s,MS4.9						
SOC				MLR	MLR		
	comp=E,399nm,20.0s,MS4.9						
FINES	**FINESS Array B**	**71.23**	**331**	P	**P**	**11 19 13.0**	**-1.8**
FINES						11 21 51.2	
FINES				pmax	pmax		
	comp=Z,10.0nm,0.5s						

FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES				MLR	MLR		
	comp=Z,371nm,19.3s						
FINES	FINESS Array B	71.23	331	P	P	11 19 13.0	-1.8
	comp=Z,9.7nm,0.5s,mb5.0,baz=63,slow=5.7,SNR=48						
FINES				PP	PP	11 21 51.2	-3.6
	comp=Z,3.6nm,0.8s,baz=80,slow=8.5,SNR=5.2						
FINES				LR	LR	11 53 49.0	
	comp=Z,371nm,19.3s,MS4.7,baz=209,slow=39						
FINES	FINESS Array B	71.23	331	P	P	11 19 13.0	-1.8
FINES				PP	PP	11 21 51.2	-3.6
FINES				LR	LR	11 53 49.0	
MSL	Mosul	71.44	302	*e*	P	11 19 15.5	-1.0
ANN	Anapa	72.06	312	*e*P	P	11 19 18.0	-2.1
ANN				*e*S	S	11 28 36.2	-2.0
ANN				pmax	pmax		
	comp=Z,56nm,0.7s,mb5.6						
ANN				MLR	MLR		
	comp=N,471nm,21.0s,MS4.8						
ANN				MLR	MLR		
	comp=E,398nm,21.0s,MS4.8						
ANN				MLR	MLR		
	comp=Z,729nm,21.0s,MS4.9						
RES	Resolute Bay	72.19	11	*e*P	P	11 19 20.5	+0.1
	comp=Z,54nm,0.9s,mb5.5						
RES				*e*pP	pP	11 19 30.3	-0.2
DAG	Danmarks Havn	72.52	353	⇑*e*P	P	11 19 22.0	-0.2
DAG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
DAG	Danmarks Havn	72.52	353	⇑*e*P	P	11 19 22.0	-0.2
	comp=Z,4.5nm,0.8s,mb4.5						
DAG	Danmarks Havn	72.52	353	⇑*i*P	P	11 19 22.0	-0.2
	comp=Z,4.5nm,0.8s,mb4.5						
AKASG	Malin Array Be	74.54	320	P	P	11 19 33.4	-1.0
AKASG				pmax	pmax		
	comp=Z,28nm,0.5s						
AKASG	Malin Array Be	74.54	320	P	P	11 19 33.4	-1.0
	comp=Z,28nm,0.5s,mb5.5,baz=58,slow=6.3,SNR=71						
YKW3	Yellowknife Ar	74.89	26	*e*P	P	11 19 35.4	-0.7
YKA	Yellowknife Ar	74.93	26	P	P	11 19 36.7	+0.3
YKA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YKA	Yellowknife Ar	74.93	26	P	P	11 19 36.7	+0.3
	comp=Z,6.5nm,0.8s,mb4.6,baz=305,slow=5.6,SNR=40						
YKA	Yellowknife Ar	74.93	26	P	P	11 19 36.7	+0.3
BR131	Keskin Array S	76.77	308	*e*P	P	11 19 47.2	-0.1
	comp=Z,32nm,0.7s,mb5.4						
HFS	Hagfors	77.07	333	P	P	11 19 47.5	-1.1
HFS				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HFS	Hagfors	77.07	333	P	P	11 19 47.5	-1.1
	comp=Z,7.8nm,0.5s,mb4.9,baz=90,slow=5.9,SNR=33						
TLCR		77.38	315	⇓P	P	11 19 51.3	+0.8
NB2	NORSAR Subarra	77.48	334	P	P	11 19 49.3	-1.5
	comp=Z,4.8nm,0.5s,mb4.7,baz=48,slow=5.6						
NOA	NORSAR Array B	77.48	334	P	P	11 19 49.4	-1.4
NOA						11 22 42.8	
NOA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	NORSAR Array B	77.48	334	P	P	11 19 49.4	-1.4
	comp=Z,4.4nm,0.5s,mb4.7,baz=50,slow=5.6,SNR=22						
NOA				PP	PP	11 22 42.8	-4.5
	comp=Z,2.5nm,0.7s,baz=48,slow=8.6,SNR=6.7						
CFR	Carcaliu	77.80	315	⇑*i*P	P	11 19 53.4	+0.5
CFR	Carcaliu	77.80	315	⇑*i*P	P	11 19 53.4	+0.5
ASF	Jabal al Asfar	77.82	300	P	P	11 19 53.2	-0.1
	comp=Z,11nm,0.9s,mb4.8,baz=300,slow=2.7,SNR=11						
LVV	L’vov	77.88	321	*e*P	P	11 19 52.8	-0.4
TIRR	Tirgusor	77.98	314	⇓P	P	11 19 54.9	+1.0
SUMG	Summit	78.15	357	⇑*e*P	P	11 19 54.9	+0.6
	comp=Z,26nm,0.7s,mb5.3						
SUMG				*e*	pP	11 20 04.5	0.0
OCWA	Octopus Mounta	78.28	42	PFAKE		11 20 10.0	+15
OCWA				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
VRI	Vrincioaia	78.32	316	⇑*i*P	P	11 19 56.9	+1.2
VRI	Vrincioaia	78.32	316	⇑*i*P	P	11 19 56.9	+1.2
BURAR	Bucovina Array	78.34	318	⇓P	P	11 19 57.1	+1.3
KWP	Kalwaria	78.71	321	⇑*e*P	P	11 19 57.7	-0.1
	comp=Z,67nm,0.7s,mb5.7						
MLR	Muntele Rosu	78.98	316	P	P	11 19 59.8	+0.4
MLR				pmax	pmax		
	comp=Z,11nm,0.6s						
MLR	Muntele Rosu	78.98	316	P	P	11 19 59.8	+0.4
	comp=Z,11nm,0.6s,mb4.9,baz=327,slow=7.0,SNR=18						
MLR	Muntele Rosu	78.98	316	⇑*i*P	P	11 20 00.1	+0.7
MLR	Muntele Rosu	78.98	316	⇑*i*P	P	11 20 00.1	+0.7
KONO	Kongsberg	78.99	334	PFAKE		11 20 10.0	+11
KONO				LR	LR		
	comp=Z,586nm,21.0s,MS4.9						
CSS	Prodhromos	79.18	304	*e*P	P	11 20 00.2	-0.5
	comp=Z,50nm,0.7s,mb5.6						
KOLS	Kolonicke sedl	79.32	320	*e*P	P	11 20 01.5	+0.4
ISP	Isparta	79.81	308	*e*P	P	11 20 03.5	-0.5
OJC	Ojcow	79.97	322	*e*P	P	11 20 04.8	+0.2
NIE	Niedzica	80.14	322	*e*P	P	11 20 07.1	+1.6
COR	Corvallis	80.44	44	PFAKE		11 20 20.0	+13
COR				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
KECS	Kecovo	80.56	321	*e*P	P	11 20 08.4	+0.6
EDM	Edmonton	80.96	33	*e*P	P	11 20 09.7	-0.1
OKC	Ostrava-Krasne	81.06	323	*e*P	P	11 20 11.1	+0.7
OKC				AMS	AMS	11 59 30.0	
	comp=Z,600nm,17.9s						
PSZ	Piszkesteto	81.21	320	*e*P	P	11 20 10.7	-0.5
MORC	Moravsky Berou	81.42	323	*e*P	P	11 20 12.2	0.0
	comp=Z,15nm,0.8s,mb5.0						
KSP	Ksiaz	81.44	324	*e*P	P	11 20 12.3	0.0
KSP				*e**PP	pP	11 20 22.9	+0.3
KSP				MLR	MLR		
	comp=Z,2µm,18.7s,MS5.4						
VYHS	Vyhne	81.46	321	*e*P	P	11 20 13.1	+0.6
DPC	Dobruska-Polom	81.72	324	*e*P	P	11 20 15.5	+1.7
DPC				*e*pP	pP	11 20 24.4	+0.4
DPC				AMS	AMS	11 59 40.0	
	comp=Z,1µm,17.0s						
UPC	Upice	81.78	324	*e*P	P	11 20 15.7	+1.6
NEW	Newport	81.97	39	P	P	11 20 15.9	+0.8
NEW				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NEW	Newport	81.97	39	P	P	11 20 15.9	+0.7
	comp=Z,6.2nm,0.9s,mb4.5,baz=323,slow=4.4,SNR=10						
NEW	Newport	81.97	39	*e*P	P	11 20 15.9	+0.8
	comp=Z,6.6nm,0.9s,mb4.6						
NEW				*e*pP	pP	11 20 27.1	+1.7
NEW				LR	LR		
	comp=Z,642nm,20.0s,MS5.0						
VRAC	Vranov	82.19	323	P	P	11 20 16.4	+0.1
VRAC				pmax	pmax		
	comp=Z,14nm,0.7s						
VRAC	Vranov	82.19	323	P	P	11 20 16.4	+0.1
	comp=Z,14nm,0.7s,mb5.0,baz=337,slow=20,SNR=12						
YBH	Yreka Blue Hor	82.32	46	P	P	11 20 17.8	+0.8
	comp=Z,3.1nm,0.9s,mb4.2,baz=264,slow=4.5,SNR=5.4						
YBH	Yreka Blue Hor	82.32	46	P	P	11 20 17.8	+0.8
YBH				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
PVCC	Panska Ves	82.51	325	*e*P	P	11 20 18.4	+0.5
PVCC				AMS	AMS	12 01 20.0	
	comp=Z,1µm,15.8s						
ZST	Bratislava	82.58	322	*e*P	P	11 20 20.4	+2.1
BRG	Berggiesshubel	82.61	325	*i* P	P	11 20 18.9	+0.5
BRG				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.8						
BRG	Berggiesshubel	82.61	325	*i* P	P	11 20 18.9	+0.5
	comp=Z,15nm,1.4s,mb4.8						
CLL	Collm	82.81	326	*i* P	P	11 20 19.6	+0.2
CLL				*i* *PP	pP	11 20 29.2	-0.5
CLL				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.2						
CLL	Collm	82.81	326	*i* P	P	11 20 19.6	+0.2
	comp=Z,35nm,1.4s,mb5.2						
CLL				*i* pP	pP	11 20 29.2	-0.5
CLL	Collm	82.81	326	P	P	11 20 19.6	+0.2
	comp=Z,logA/T=1.4,mb5.2						
CLL				*i* *PP	pP	11 20 29.2	-0.5
CLL				*e**SP	sP	11 20 36.0	+3.0
PRU	Pruhonice	82.85	324	*e*P	P	11 20 20.8	+1.1
PRU				*e*pP	pP	11 20 29.1	-0.9
PRU				AMS	AMS	12 00 30.0	
	comp=Z,900nm,16.0s						
WDC	Whiskeytown Da	83.05	47	PFAKE		11 20 30.0	+9.1
WDC				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
HOPS	Hopland	83.55	49	PFAKE		11 20 40.0	+16
HOPS				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
SKO	Skopje	83.62	315	*e*P	P	11 20 24.5	+0.7
MOD	Modoc	83.73	45	PFAKE		11 20 40.0	+16
MOD				LR	LR		
	comp=Z,3µm,22.0s,MS5.6						
NKC	Novy Kostel	83.75	325	*e*P	P	11 20 25.3	+1.1
NKC				*e*pP	pP	11 20 34.7	+0.1
NKC				AMS	AMS	12 02 00.0	
	comp=Z,1µm,15.4s						
BMO	Blue Mountains	83.85	41	*e*P	P	11 20 25.4	+0.6
	comp=Z,11nm,0.9s,mb5.0						
BMO				*e*pP	pP	11 20 35.9	+0.7
BMO				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
KHC	Kasperske Hory	83.87	324	*e*P	P	11 20 25.8	+0.9
KHC				*e**PP	pP	11 20 35.3	+0.1
KHC				MLR	MLR		
	comp=Z,1µm,17.6s,MS5.2						
KHC	Kasperske Hory	83.87	324	*e*P	P	11 20 25.8	+0.9
KHC				*e*pP	pP	11 20 35.3	+0.1
KHC				*e*		11 20 58.5	
KHC				LR	LR		
	comp=Z,1µm,17.6s,MS5.2						
KHC	Kasperske Hory	83.87	324	*e*P	P	11 20 25.8	+0.9
KHC				*e*pP	pP	11 20 35.3	+0.1
KHC				x	x	11 20 58.5	
KHC				AMS	AMS	12 01 00.0	
	comp=Z,1µm,17.6s						
MOX	Moxa	83.90	326	*e*P	P	11 20 25.6	+0.6
MOX				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.1						
MOX				MLR	MLR		
	comp=Z,900nm,20.0s,MS5.2						
MOX	Moxa	83.90	326	*e*P	P	11 20 25.6	+0.6
	comp=Z,24nm,1.4s,mb5.1						
MOX				LR	LR		
	comp=Z,900nm,20.0s,MS5.2						
MOX	Moxa	83.90	326	*i* P	P	11 20 25.6	+0.6
	comp=Z,logA/T=1.2,mb5.1						
MOX				L		12 01 50.0	
GERES	GERESS Array B	83.99	324	P	P	11 20 25.3	-0.2
GERES						11 23 35.1	
GERES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GERES	GERESS Array B	83.99	324	P	P	11 20 25.3	-0.1
	comp=Z,4.1nm,0.8s,mb4.6,baz=45,slow=3.8,SNR=23						
GERES				PP	PP	11 23 35.1	-6.0
	comp=Z,0.3nm,0.3s,baz=23,slow=7.5,SNR=3.2						
ARSA	Arzberg	84.00	322	⇓*i*P	P	11 20 26.2	+0.6
	comp=Z,16nm,0.8s,mb5.2						
SFJD	Kangerlussuaq	84.04	0	⇑*i*P	P	11 20 25.2	-0.1
SFJD				*i*	pP	11 20 35.2	-0.4
SFJD				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.5						
SFJD	Kangerlussuaq	84.04	0	⇑*i*P	P	11 20 25.2	-0.1
	comp=Z,36nm,0.8s,mb5.5						
SFJD				*i*	pP	11 20 35.2	-0.4
MOA	Molln	84.31	323	⇑*i*P	P	11 20 28.2	+1.1
	comp=Z,14nm,0.8s,mb5.1						
MOA				*i*		11 26 10.5	
WVOR	Wild Horse Val	84.45	44	*e*P	P	11 20 28.7	+0.7
	comp=Z,6.9nm,0.9s,mb4.8						
WVOR				LR	LR		
	comp=Z,3µm,21.0s,MS5.6						
MSO	Missoula	84.56	38	PFAKE		11 20 40.0	+12
MSO				LR	LR		
	comp=Z,480nm,21.0s,MS4.9						
GRA1	Grafenberg Arr	84.71	325	*e*P	P	11 20 29.7	+0.6
	comp=Z,22nm,1.0s,mb5.2						
GRA1				*e*pP	pP	11 20 39.5	+0.1
GRF	Grafenberg Arr	84.71	325	*e*P	P	11 20 29.7	+0.6
GRF				*e**PP	pP	11 20 39.5	+0.1
GRF				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.2						
GRF	Grafenberg Arr	84.71	325	*e*P	P	11 20 29.7	+0.6
	comp=Z,22nm,1.0s,mb5.2						
GRF				*e*pP	pP	11 20 39.5	+0.1
FCC	Fort Churchill	84.79	22	*e*P	P	11 20 29.7	+0.5
	comp=Z,31nm,0.8s,mb5.5						
BEKR	Beckwourth	84.83	47	*e*P	P	11 20 31.3	+1.3
	comp=Z,8.5nm,0.9s,mb4.9						
CHMT	Chamberlain Mo	84.88	38	*e*P	P	11 20 30.3	+0.3
OBKA	Obir	84.98	321	⇑*i*P	P	11 20 30.7	+0.2
	comp=Z,10nm,0.7s,mb5.1						
FFC	Flin Flon	84.98	28	*e*P	P	11 20 30.0	-0.2
	comp=Z,12nm,0.9s,mb5.0						
IDI	Anoyia	85.00	308	P	P	11 20 31.0	+0.2
	comp=Z,13nm,0.7s,mb5.2,baz=48,slow=6.4,SNR=8.9						
BOJS	Bojanci	85.21	320	*e*P	P	11 20 32.1	+0.4
KBA	Koelnbreinsper	85.28	322	⇓*i*P	P	11 20 32.5	+0.6
	comp=Z,14nm,0.7s,mb5.2						
CEY	Cerknica	85.52	321	*e*P	P	11 20 33.9	+0.7
WCN	Washoe City	85.53	47	*e*P	P	11 20 34.7	+1.2
	comp=Z,7.4nm,1.0s,mb4.9						
JAVS	Javornik	85.63	321	*e*P	P	11 20 34.3	+0.5
VOY	Vojsko	85.63	321	*e*P	P	11 20 33.3	-0.5
HRY	Holter Researc	85.77	38	*e*P	P	11 20 35.7	+1.3
HRY				*e*pP	pP	11 20 47.0	+2.3
CMB	Columbia Colle	85.84	48	*e*P	P	11 20 34.5	-0.5
	comp=Z,12nm,1.0s,mb5.1						
CMB				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
SAO	San Andreas Ge	85.84	50	PFAKE		11 20 50.0	+15
SAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
WTTA	Wattenberg	86.06	323	⇑*i*P	P	11 20 36.8	+0.9
	comp=Z,6.9nm,0.6s,mb5.1						
FRB	Frobisher Bay	86.09	8	P	P	11 20 34.9	-0.7
FRB				pmax	pmax		
	comp=Z,26nm,0.9s						
FRB	Frobisher Bay	86.09	8	P	P	11 20 34.9	-0.7
	comp=Z,26nm,0.9s,mb5.5,baz=345,slow=5.1,SNR=36						
HLID	Hailey	86.29	41	*e*P	P	11 20 38.5	+1.5
	comp=Z,16nm,0.9s,mb5.3						
HLID				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
MCMT	McKenzie Canyo	86.40	40	*e*P	P	11 20 38.8	+1.3
BMN	Battle Mountai	86.48	45	*e*P	P	11 20 40.5	+2.4
	comp=Z,9.0nm,1.0s,mb5.0						
BMN				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
BOZ	Bozeman (W)	86.55	38	*e*P	P	11 20 39.9	+1.5
	comp=Z,7.7nm,0.9s,mb4.9						
BOZ				*e*pP	pP	11 20 50.9	+2.3
BOZ				LR	LR		
	comp=Z,674nm,21.0s,MS5.0						
EKA	Eskdalemuir Ar	86.89	336	P	P	11 20 39.2	-0.5
EKA						11 24 01.0	
EKA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
EKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
EKA	Eskdalemuir Ar	86.89	336	P	P	11 20 39.2	-0.5
	comp=Z,3.4nm,0.5s,mb4.9,baz=43,slow=4.8,SNR=17						
EKA				PP	PP	11 24 01.0	-4.0
	comp=Z,4.5nm,0.8s,baz=44,slow=8.6,SNR=9.3						
ESK	Eskdalemuir	86.91	336	PFAKE		11 20 50.0	+10
ESK				LR	LR		
	comp=Z,125nm,19.0s,MS4.3						
NVAR	Mina Array Bea	86.96	47	P	P	11 20 41.2	+0.7
	comp=Z,2.7nm,0.8s,mb4.5,baz=306,slow=4.0,SNR=20						
MNV	Mina	87.06	47	PFAKE		11 20 50.0	+9.1
MNV				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
QLMT	Earthquake Lak	87.18	39	*e*P	P	11 20 42.6	+1.2
DAVOX	Davos	87.29	324	P	P	11 20 42.3	+0.4
	comp=Z,10nm,0.7s,mb5.2,baz=317,slow=1.5,SNR=11						
DAVOX				PP	PP	11 24 06.6	-1.9
	comp=Z,3.7nm,0.7s,baz=336,slow=21,SNR=3.5						
CDF	Champ du Feu	87.50	326	*e*P	P	11 20 42.6	-0.2
ELK	Elko	87.51	44	*e*P	P	11 20 44.8	+1.8
	comp=Z,6.0nm,0.9s,mb4.8						
ELK				LR	LR		
	comp=Z,3µm,22.0s,MS5.6						
YMR	Madison River	87.54	39	*e*P	P	11 20 45.2	+2.1
YFT	Old Faithful	87.75	39	*e*P	P	11 20 47.6	+3.5
YFT				*e*pP	pP	11 20 58.8	+4.3
TPH	Tonopah	87.86	47	PFAKE		11 21 00.0	+15
TPH				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
LKWY	Lake	87.91	39	*e*P	P	11 20 47.1	+2.2
	comp=Z,22nm,0.9s,mb5.4						
LKWY				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
IMW	Indian Meadow	88.05	39	*e*P	P	11 20 47.7	+2.2
	comp=Z,15nm,0.9s,mb5.2						
HINF	Hinteralfeld	88.12	326	*e*P	P	11 20 45.1	-0.7
	comp=Z,5.6nm,0.5s,mb4.7						
MOOW	Moose Ponds	88.25	39	*e*P	P	11 20 48.4	+1.8
	comp=Z,5.9nm,1.0s,mb4.8						
TPAW	Teton Pass	88.30	40	*e*P	P	11 20 48.3	+1.5
	comp=Z,16nm,0.9s,mb5.2						
TPAW				*e*pP	pP	11 20 59.3	+2.2
WUWY	Wally Ulrich	88.38	40	*e*P	P	11 20 48.9	+1.7
SNOW	Snow King Moun	88.43	40	*e*P	P	11 20 49.4	+2.0
	comp=Z,11nm,0.9s,mb5.1						
SNOW				*e*pP	pP	11 21 00.9	+3.2
DGMT	Dagmar	88.45	33	PFAKE		11 21 00.0	+13
DGMT				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
DAC	Darwin (Calif)	88.67	49	PFAKE		11 21 00.0	+11
DAC				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
AHID	Auburn Hatcher	88.68	40	PFAKE		11 21 00.0	+11
AHID				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
LAO	LASA Array	88.69	35	*e*P	P	11 20 50.2	+1.6
	comp=Z,10nm,0.3s,mb5.6						
LAO				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
HWUT	Hardware Ranch	89.15	42	*e*P	P	11 20 51.9	+1.0
	comp=Z,11nm,0.9s,mb5.2						
HWUT				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
BW06	Boulder Array	89.55	40	PFAKE		11 21 00.0	+7.3
BW06				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
PDAR	Pinedale Array	89.55	40	P	P	11 20 53.7	+1.0
	comp=Z,3.0nm,0.8s,mb4.7,baz=332,slow=1.6,SNR=12						
LPL	La Plagne	89.76	324	*e*P	P	11 20 52.5	-1.1
LPG	La Plagne	89.76	324	*e*P	P	11 20 52.9	-0.8
	comp=Z,10nm,0.7s,mb5.0						
LOR	Lormes	89.95	327	*e*P	P	11 20 53.5	-1.0
	comp=Z,5.4nm,0.5s,mb4.8						
SSF	Saint Saulge	90.27	327	*e*P	P	11 20 55.0	-1.0
	comp=Z,2.9nm,0.6s,mb4.5						
MBDF	Montbardon	90.28	324	*e*P	P	11 20 55.4	-0.7
SMF	Signal de Mont	90.40	326	*e*P	P	11 20 55.8	-0.8
	comp=Z,20nm,1.2s,mb5.0						
SBF	Sospel	90.52	323	*e*P	P	11 20 56.5	-0.7
AVF	Avril sur Loir	90.53	327	*e*P	P	11 20 56.3	-0.9
	comp=Z,3.5nm,0.5s,mb4.6						
ORIF	Oris-en-Rattie	90.61	324	*e*P	P	11 20 56.8	-0.8
	comp=Z,11nm,0.8s,mb4.9						
MVU	Marysvale	90.73	44	*e*P	P	11 21 00.5	+2.2
	comp=Z,5.8nm,0.9s,mb4.9						
MVU				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
MSU	Marysvale	90.74	44	*e*P	P	11 20 59.8	+1.4
LDF	La Druitiere	90.81	330	*e*P	P	11 20 57.6	-0.8
	comp=Z,9.4nm,0.5s,mb5.1						
ULM	Lac du Bonnet	90.81	28	P	P	11 20 58.8	+0.4
	comp=Z,2.4nm,0.5s,mb4.8,baz=320,slow=4.6,SNR=3.5						
NEN	Nelson	90.84	48	*e*P	P	11 20 59.9	+1.0
FLN	La Foliniere	90.84	330	*e*P	P	11 20 57.7	-0.8
	comp=Z,11nm,0.6s,mb5.0						
BGF	Bois d’Agland	90.94	327	*e*P	P	11 20 58.2	-0.9
PFO	Pinyon Flat Ob	91.00	50	PFAKE		11 21 10.0	+10
PFO				LR	LR		
	comp=Z,433nm,19.0s,MS4.9						
GRR	Gorron	91.28	330	*e*P	P	11 21 00.0	-0.6
	comp=Z,18nm,0.9s,mb5.1						
SRU	San Rafael	91.36	43	*e*P	P	11 21 01.2	0.0
TCF	Toulx Ste Croi	91.44	327	*e*P	P	11 21 00.6	-0.8
	comp=Z,7.5nm,0.9s,mb4.7						
RWWY	Rawlins	91.56	39	*e*P	P	11 21 03.4	+1.4
	comp=Z,15nm,1.1s,mb5.2						
RSSD	Black Hills	91.58	36	*e*P	P	11 21 02.8	+0.7
RSSD				LR	LR		
	comp=Z,826nm,19.0s,MS5.2						
SGMF	Saint Gilles	92.12	331	*e*P	P	11 21 03.6	-0.9
	comp=Z,8.1nm,0.6s,mb5.0						
MFF	Saint Martin d	92.31	328	*e*P	P	11 21 05.0	-0.4
	comp=Z,9.4nm,0.6s,mb5.0						
ROSF	Rostrenen	92.36	331	*e*P	P	11 21 04.8	-0.8
	comp=Z,19nm,1.0s,mb5.1						
RJF	Les Rejaudoux	92.49	327	*e*P	P	11 21 05.1	-1.1
QUIF	Quistinic	92.64	331	*e*P	P	11 21 05.9	-1.0
	comp=Z,6.9nm,0.7s,mb4.9						
PV10	Paradox Valley	92.72	43	*e*P	P	11 21 09.6	+2.1
TBI	Tubuai	93.02	115	*e*LQ		11 20 29.1	
	comp=Z,155nm,40.2s						
TBI				*e*LR	LR	11 24 50.6	
	comp=Z,171nm,44.0s						
WUAZ	Wupatki	93.13	46	*e*P	P	11 21 11.0	+1.5
	comp=Z,9.9nm,1.0s,mb5.2						
WUAZ				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
PV01	Paradox Valley	93.15	43	*e*P	P	11 21 10.6	+1.1
MTLF	Montolieu	93.58	325	*e*P	P	11 21 10.2	-1.1
ISCO	Idaho Springs	93.74	40	PFAKE		11 21 20.0	+7.9
ISCO				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
EYMN	Ely	94.39	27	PFAKE		11 21 30.0	+15
EYMN				LR	LR		
	comp=Z,515nm,21.0s,MS5.0						
SCHQ	Schefferville	94.93	10	P	P	11 21 16.2	-1.0
	comp=Z,5.3nm,1.0s,mb4.9,baz=279,slow=4.5,SNR=4.5						
SDCO	Great Sand Dun	95.21	41	PFAKE		11 21 30.0	+11
SDCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
TUC	Tucson	95.55	48	*e*P	P	11 21 21.1	+0.5
	comp=Z,3.7nm,1.1s,mb4.7						
TUC				LR	LR		
	comp=Z,914nm,20.0s,MS5.2						
CASY	Casey	96.46	188	PFAKE		11 21 40.0	+16
CASY				LR	LR		
	comp=Z,344nm,20.0s,MS4.8						
ANMO	Albuquerque	96.54	44	⇑*i*P	P	11 21 27.0	+1.9
ANMO	Albuquerque	96.54	44	PFAKE		11 21 40.0	+15
ANMO				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
CBKS	Cedar Bluff	97.64	37	PFAKE		11 21 40.0	+10
CBKS				LR	LR		
	comp=Z,536nm,20.0s,MS5.0						
MBAR	Mbarara	98.82	274	PFAKE		11 21 50.0	+14
MBAR				LR	LR		
	comp=Z,85nm,20.0s,MS4.2						
JFWS	Jewell Farm	98.99	29	PFAKE		11 21 50.0	+14
JFWS				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
AMTX	Amarillo	99.41	41	PFAKE		11 21 50.0	+12
AMTX				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
WMOK	Wichita Mounta	101.16	40	PFAKE		11 22 00.0	+14
WMOK				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
LTX	Lajitas	102.09	46	PFAKE		11 22 00.0	+10
LTX				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
TXAR	Lajitas Array	102.09	46	P	Pdif	11 21 49.9	-0.3
	comp=Z,0.3nm,0.6s,baz=315,slow=1.3,SNR=5.0						
AAM	Ann Arbor	102.14	25	PFAKE		11 22 00.0	+10
AAM				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
CCM	Cathedral Cave	102.48	33	PFAKE		11 22 00.0	+8.3
CCM				LR	LR		
	comp=Z,772nm,20.0s,MS5.2						
PQI	Presque Isle	102.59	13	PFAKE		11 22 00.0	+8.1
PQI				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
WVL	Waterville	104.25	15	PFAKE		11 22 10.0	+11
WVL				LR	LR		
	comp=Z,6µm,22.0s,MS6.1						
WCI	Wyandotte Cave	104.56	29	PFAKE		11 22 10.0	+9.2
WCI				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
WVT	Waverly	105.63	31	PFAKE		11 26 30.0	
WVT				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
NATX	Nacogdoches	105.67	39	PFAKE		11 26 30.0	
NATX				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
HRV	Harvard--Oak R	105.75	17	PFAKE		11 26 30.0	
HRV				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
MCWV	Mont Chateau	105.84	24	PFAKE		11 26 30.0	
MCWV				LR	LR		

	comp=Z,2µm,20.0s,MS5.5						
WES	Weston	105.92	17	PFAKE		11 26 30.0	
WES				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
OXF	Oxford	106.21	33	PFAKE		11 26 30.0	
OXF				LR	LR		
	comp=Z,858nm,20.0s,MS5.3						
PLAL	Pickwick Lake	106.46	32	PFAKE		11 26 30.0	
PLAL				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
BLA	Blacksburg	107.79	26	PFAKE		11 26 30.0	
BLA				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
CBN	Corbin	108.00	23	PFAKE		11 26 30.0	
CBN				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
VNDA	Vanda	108.20	173	PFAKE		11 26 30.0	
VNDA				LR	LR		
	comp=Z,183nm,22.0s,MS4.6						
LRAL	Lakeview Retre	108.57	33	PFAKE		11 26 40.0	
LRAL				LR	LR		
	comp=Z,665nm,19.0s,MS5.2						
NHSC	New Hope	111.49	27	PFAKE		11 26 40.0	+6.4
NHSC				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
DWPF	Disney	115.28	31	PFAKE		11 26 50.0	+8.8
DWPF				LR	LR		
	comp=Z,890nm,19.0s,MS5.4						
BOSA	Boshof	115.71	250	PKIKP	PKPdf	11 26 38.1	-3.9
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BOSA	Boshof	115.71	250	PKP	PKPdf	11 26 38.1	-4.0
	comp=Z,2.3nm,0.6s,baz=239,slow=20,SNR=4.8						
BBSR	BB Station	117.03	14	PFAKE		11 26 50.0	+5.5
BBSR				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
DBIC	Dimbokro	124.16	302	PKP	PKPdf	11 26 54.3	-4.4
	comp=Z,7.7nm,0.8s,baz=11,slow=3.6,SNR=7.9						
DBIC	Dimbokro	124.16	302	PKP	PKPdf	11 26 54.3	-4.4
DBIC				LR	LR		
	comp=Z,267nm,21.0s,MS4.9						
JTS	JuntasAbangare	127.89	46	PFAKE		11 27 10.0	+4.0
JTS				LR	LR		
	comp=Z,90nm,20.0s,MS4.5						
SJG	San Juan	130.23	21	PFAKE		11 27 20.0	+10
SJG				LR	LR		
	comp=Z,868nm,19.0s,MS5.5						
SNAA	Sanae	130.62	198	⇑*i*P	PKPdf	11 27 06.3	-3.4
SNAA				*e*		11 27 16.9	
SNAA				*e*		11 27 19.3	
PAYG	Puerto Ayora	131.85	61	PFAKE		11 27 20.0	+6.5
PAYG				LR	LR		
	comp=Z,583nm,21.0s,MS5.3						
VNA2	Neumayer--Watz	132.25	197	⇑*i*P	PKPdf	11 27 09.6	-3.2
VNA2				*e*		11 27 20.8	
VNA2				*e*		11 27 24.5	
VNA3	Neumayer Olymp	132.63	196	⇑*i*P	PKPdf	11 27 09.9	-3.6
VNA3				*e*		11 27 19.9	
VNA3				*e*		11 27 23.6	
VNA1	Neumayer--Stat	132.65	197	⇑*i*P	PKPdf	11 27 11.3	-2.3
VNA1				*e*		11 27 21.7	
SDV	Santo Domingo	136.94	31	PKhKP		11 27 12.4	
	comp=Z,3.2nm,0.7s,baz=263,slow=5.5,SNR=4.2						
SDV				PKP	PKPdf	11 27 18.3	-4.6
	comp=Z,6.3nm,0.7s,baz=351,slow=2.4,SNR=9.2						
SDV	Santo Domingo	136.94	31	PKP	PKPdf	11 27 18.3	-4.6
SDV				LR	LR		
	comp=Z,618nm,20.0s,MS5.3						
OTAV	Otavalo	139.69	48	PFAKE		11 27 40.0	+12
OTAV				LR	LR		
	comp=Z,264nm,22.0s,MS4.9						
RCBR	Riachuelo	153.39	329	PFAKE		11 28 00.0	+10
RCBR				LR	LR		
	comp=Z,629nm,22.0s,MS5.4						
SAML	Samuel	156.05	35	PFAKE		11 28 00.0	+6.1
SAML				LR	LR		
	comp=Z,458nm,20.0s,MS5.3						
LPAZ	La Paz	158.54	57	PFAKE		11 28 10.0	+13
LPAZ				LR	LR		
	comp=Z,492nm,20.0s,MS5.3						
PLCA	Paso Flores	159.35	129	PFAKE		11 28 10.0	+13
PLCA				LR	LR		
	comp=Z,599nm,20.0s,MS5.4						
BDFB	Brasilia	166.38	354	PKIKP	PKPdf	11 28 00.9	-4.1
BDFB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BDFB	Brasilia	166.38	354	PKP	PKPdf	11 28 00.8	-4.1
	comp=Z,3.5nm,0.8s,baz=92,slow=6.5,SNR=3.2						
TRQA	Tornquist	166.41	133	PFAKE		11 28 10.0	+5.6
TRQA				LR	LR		
	comp=Z,462nm,20.0s						
CPUP	Villa Florida	172.47	69	PFAKE		11 28 20.0	+12
CPUP				LR	LR		
	comp=Z,656nm,22.0s						

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*NEIC **14** 11:10:57.1±1.7, 19.99S×68.78W, h138^{km}±17^{km}, Error ellipse: s-maj=20.0km s-min=17.6km az=72.0*

IDC 14 11:10:57.3±2.6**, 19.99S×68.79W, h142**^{km}±24^{km}**, mb3.4**/5**, mb1 3.7**/7**, mb1mx3.5**/17**, mbtmp4.0**/7**, Error ellipse: s-maj=27.3km s-min=22.8km az=51.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.73	10	P	P	11 11 55.1	+0.4
	2.9nm,0.3s,baz=174,slow=7.2,SNR=86						
LPAZ				S	S	11 12 35.7	-3.1
	0.5nm,0.3s,baz=236,slow=22,SNR=2.4						
LPAZ	La Paz	3.73	10	*e*Pn	P	11 11 54.8	+0.1
LPAZ				P		11 11 55.1	
LPAZ				S	S	11 12 35.7	-3.1
SIV	San Ignacio	8.35	63	P	P	11 12 54.2	-2.3
	4.1nm,0.3s,baz=254,slow=12,SNR=154						
BDFB	Brasilia	20.24	81	P	P	11 15 22.9	-0.5
	2.7nm,0.4s,baz=257,slow=10,SNR=4.2						
PLCA	Paso Flores	20.73	184	P	P	11 15 26.8	-1.4
	1.8nm,0.8s,baz=355,slow=7.7,SNR=4.6						
TXAR	Lajitas Array	59.46	325	P	P	11 20 45.1	-2.7
	0.2nm,0.7s,baz=141,slow=5.8,SNR=2.8						
DBIC	Dimbokro	68.20	74	P	P	11 21 42.8	-2.3
	2.0nm,0.5s,baz=214,slow=9.0,SNR=6.4						
YKA	Yellowknife Ar	89.80	341	P	P	11 23 40.2	-0.4
	0.7nm,0.5s,baz=133,slow=4.5,SNR=5.0						
YKA	Yellowknife Ar	89.80	341	P	P	11 23 40.2	-0.4

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*THE **14** 11:29:19.8, 38.30N×22.43E, h1^{km}, ML3.5*

*ATH **14** 11:29:20.1, 38.35N×22.30E, h26^{km}±1^{km}, MD3.6/15, ML3.4*

*NEIC **14** 11:29:20.2, 38.31N×22.31E, h10^{km}, ML3.4(ATH), After ATH.*

*CSEM **14** 11:29:20.3±0.1, 38.33N×22.30E, h2^{km}, ML3.4, Error ellipse: s-maj=1.9km s-min=1.5km az=17.0*

ISC 14 11:29:19.0±0.9**, 38.30N**±0.03×**22.33E**±0.04**, h1**^{km}±8^{km}**, n31, σ1§16**/38**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKR	Lokris	0.63	56	*e*PB	Pb	11 29 31.8	-0.8
LKR				*e*SN	Sn	11 29 41.2	-4.5
AGG	Agios Georgios	0.72	0	*e*Pg	Pg	11 29 32.8	-0.6
AGG				*e*Sg	Sg	11 29 44.2	+1.2
RLS	Riolos of Patr	0.72	250	*e*PN	Pn	11 29 34.4	-1.6
EVR	Evrytania	0.73	327	*e*PN	Pn	11 29 33.9	-2.4
MGER	Gerania Oros	0.80	113	*e*PN	Pn	11 29 37.0	-0.2
NSAL	Nisos Salamina	0.98	113	*e*PN	Pn	11 29 40.0	+0.2
NAIG	Nisos Aigina	1.07	120	*e*PN	Pn	11 29 41.8	+0.8
MPAR	Parnis Oros	1.12	97	*e*PN	Pn	11 29 42.0	+0.2
MPAR				*e*SN	Sn	11 29 58.0	-0.1
MPAR	Parnis Oros	1.12	97	*e*Pb	Pn	11 29 42.0	+0.2
MPAR				*e*Sb	Sb	11 29 57.0	+1.1
ATH	Athens Observa	1.15	106	*e*PN	Pn	11 29 43.0	+0.9
ATH	Athens Observa	1.15	106	*e*Pb	Pb	11 29 43.5	+2.2
ITM	Ithomi	1.16	196	*e*PN	Pn	11 29 42.4	0.0
NEO	Neokhori	1.22	35	*e*Pn	Pn	11 29 42.7	-0.6
NEO				*e*Sb	Sb	11 29 59.3	+0.4
PTL	Penteli	1.24	101	*e*PN	Pn	11 29 43.8	+0.3
VLS	Valsamata	1.37	265	*e*PN	Pn	11 29 45.2	-0.2
LKD	Levkas	1.38	288	*e*Pg	Pg	11 29 45.7	-0.8
LKD				*e*Sg	Sg	11 30 07.0	+2.2
VLI	Veliai	1.65	163	*e*PB	Pb	11 29 49.6	-0.4
MEV	Metsovon	1.71	330	*e*Pb	Pb	11 29 51.6	+0.6
JAN	Janina	1.77	320	*e*Pg	Pg	11 29 54.2	-0.3
LIT	Litokhoron	1.80	4	*e*Pb	Pb	11 29 51.5	-1.1
PAIG	Paliouri	1.94	33	*e*Pb	Pb	11 29 52.4	-2.5
PAIG				*e*Sb	Sb	11 30 18.2	-1.3
KZN	Kozani	2.05	348	*e*PN	Pn	11 29 56.3	+1.3
KYTH	Kithira	2.10	164	*e*PB	Pb	11 29 57.0	-0.6
PLG	Polygyros	2.24	22	*e*PN	Pn	11 29 57.0	-0.9
OUR	Ouranopolis	2.40	32	*e*Pn	Pn	11 29 59.1	-1.0
KEK	Kerkira	2.42	306	*e*Pn	Pn	11 30 03.0	+2.6
APE	Apeiranthos	2.83	115	*e*Pn	Pn	11 30 09.4	+3.2
VAM	Vamos	3.26	152	*e*Pn	Pn	11 30 11.5	-0.8
SKO	Skopje	3.73	350	*e*P	Pn	11 30 29.0	+10
BZS	Buzias	7.33	356	S	Sn	11 32 36.4	+1.7
BURAR	Bucovina Array	9.54	12	S	Sn	11 33 22.6	-7.2

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*BJI **14** 11:37:19.8, 26.06N×95.65E, h104^{km}, mB5.0, mb4.9*

*NEIC **14** 11:37:19.4±0.8, 26.07N×95.69E, h84^{km}±7^{km}, mb4.9/15, Error ellipse: s-maj=8.1km s-min=6.9km az=224.0*

*MOS **14** 11:37:20.2±1.2, 26.07N×95.65E, h105^{km}, mb4.4/18, Error ellipse: s-maj=10.1km s-min=8.3km az=119.0*

*IDC **14** 11:37:21.2±0.6, 26.08N×95.79E, h98^{km}±4^{km}, mb4.0/17, mb1 4.2/18, mb1mx4.2/21, mbtmp4.4/18, MS3.2/1, Ms1 3.4/1, ms1mx3.0/25, Error ellipse: s-maj=17.3km s-min=9.8km az=50.0*

ISC 14 11:37:18.9±0.3**, 26.02N**±0.04×**95.65E**±0.03**, h96**^{km}**, h96**^{km}±3.5^{km}**:pP-P, n130, σ1§33**/139**, mb4.5**/33**, 12C-1D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKP	Lekhapani	1.36	16	*e*P	P	11 37 42.0	-1.6
LKP				*e*x	x	11 37 52.0	
IMP	Imphal	1.98	232	*i* PG	P	11 37 55.0	+3.4
IMP				*i* x	x	11 38 09.0	
IMP				*i* SN	S	11 38 17.0	+1.3
IMP				*i* x	x	11 38 27.0	
SHL	Shillong	3.42	263	*e*P	P	11 38 12.5	+1.1
SHL				*e*S	S	11 38 49.0	-2.1
AGT	Agartala	4.52	243	*i* P	P	11 38 25.0	-1.5
AGT				*i* x	x	11 40 29.0	
LSA	Lhasa	5.41	314	P	P	11 38 41.0	+2.5
LSA				S	S	11 39 40.4	+0.3
LSA				Smax			
	comp=N,440nm,0.7s						
LSA				Smax			
	comp=E,710nm,0.8s						
LSA	Lhasa	5.41	314	*e*Pn	P	11 38 40.7	+2.2
KMI	Kunming	6.47	96	⇑P	P	11 38 57.0	+3.9
KMI				S	S	11 40 01.5	-4.6
KMI				AMB	AMB		
	comp=Z,50nm,0.9s						
KMI				AMB	AMB		
	comp=Z,80nm,3.1s						
KMI				LR	LR		
	comp=N,340nm,5.9s						
KMI				LR	LR		
	comp=E,240nm,7.0s						
KMI				LR	LR		
	comp=Z,210nm,7.6s						
KMI	Kunming	6.47	96	⇑P	P	11 38 57.0	+3.9
	comp=Z,51nm,0.9s						
KMI				S	S	11 40 01.5	-4.6
SLGI	Shiliguri	6.52	278	*e*x	x	11 39 47.9	
CMAR	Chiang Mai Arr	8.12	157	P	P	11 39 17.9	+2.1
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,145nm,18.2s						
CMAR	Chiang Mai Arr	8.12	157	P	P	11 39 17.9	+2.1
	comp=Z,2.7nm,0.3s,baz=332,slow=13,SNR=261						
CMAR				LR	LR	11 42 36.9	
	comp=Z,144nm,18.2s,baz=147,slow=39						
CD2	Chengdu	8.64	54	P	P	11 39 22.0	-0.7
CD2				AMB	AMB		
	comp=Z,20nm,0.7s						
GUN	Gumba	8.91	284	*e*P	P	11 39 25.0	-1.5
	comp=Z,671nm,0.4s						
GUN				*e*S	S	11 41 01.7	-4.2
BOK	Bokaro	9.13	258	*e*P	P	11 39 29.1	-0.4
BOK				*e*x	x	11 41 04.8	
BOK				AML	AML	11 41 12.8	
	comp=N,332nm,0.3s						
BOK				AML	AML	11 41 12.8	
	comp=E,238nm,0.3s						
PKI	Pulchoki	9.28	282	*e*P	P	11 39 30.3	-1.1
	comp=E,286nm,0.5s						
PKI				*e*S	S	11 41 08.7	-6.0
PKI	Pulchoki	9.28	282	*e*P	P	11 39 30.3	-1.1
PKI				*e*S	S	11 41 08.7	-6.0
PKI				pmax	pmax		
	comp=Z,143nm,0.5s						
KKN	Kakani	9.42	283	*e*P	P	11 39 32.4	-0.9
	comp=Z,275nm,0.2s						
KKN				*e*S	S	11 41 13.5	-4.6
KKN	Kakani	9.42	283	*e*P	P	11 39 32.4	-0.9
KKN				*e*S	S	11 41 13.5	-4.6
KKN				pmax	pmax		
	comp=Z,138nm,0.2s						
DMN	Daman	9.55	282	*e*P	P	11 39 33.8	-1.3
	comp=Z,97nm,0.3s						
DMN				*e*S	S	11 41 15.4	-5.9
GYA	Guiyang	9.90	85	⇑*i*P	P	11 39 39.9	+0.1
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
GKN	Gorkha	10.02	284	*e*P	P	11 39 39.7	-1.7
	comp=Z,403nm,0.5s						
GKN				*e*S	S	11 41 27.8	-4.7
KOLN	Koldanda	10.89	282	*e*P	P	11 39 50.5	-2.6
	comp=Z,85nm,0.2s						
KOLN				*e*S	S	11 41 46.1	-7.5
LZH	Lanzhou	12.24	33	*e*P	P	11 40 09.5	-1.5
LZH				AP		11 40 24.0	
LZH				AMB	AMB		
	comp=Z,30nm,1.0s						
LZH				AMB	AMB		
	comp=Z,190nm,4.0s						
LZH	Lanzhou	12.24	33	*e*P	P	11 40 09.5	-1.5
LZH				pmax	pmax		
	comp=Z,36nm,1.0s						
LZH	Lanzhou	12.24	33	*e*P	P	11 40 09.5	-1.5
	comp=Z,36nm,1.0s						
LZH				pP		11 40 24.0	
LZH				sP		11 40 29.0	
ENH	Enshi	12.92	68	⇓*i*Pn	P	11 40 26.6	+6.6
	comp=Z,46nm,0.6s						
BLSP	Bilaspur	12.94	255	*e*P	P	11 40 19.8	-0.5
BLSP				*e*S	S	11 42 32.9	-9.4
BLSP				AML	AML	11 42 41.7	
	comp=E,101nm,0.2s						
BLSP				AML	AML	11 42 44.9	
	comp=N,113nm,1.0s						
XAN	Xi'an	13.99	52	P	P	11 40 30.1	-3.8
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s						
LGTI	Lohaghat	14.06	288	*i* P	P	11 40 35.0	+0.2
LGTI				*e*x	x	11 43 05.5	
VIS	Vishakhapatnam	14.10	237	*e*P	P	11 40 36.6	+1.2
VIS				*i* x	x	11 42 57.0	
PTH	Pithoragarh	14.10	288	*e*P	P	11 40 34.0	-1.3
PTH				*e*x	x	11 43 00.0	
NGP	Nagpur	15.97	256	*e*P	P	11 41 01.9	+2.8
NGP				*e*x	x	11 43 50.6	
NDI	New Delhi	16.59	283	*e*x	P	11 41 04.0	-2.8
NDI				*e*x	x	11 43 57.0	
SMLA	Simla	17.01	292	*i* x	x	11 41 06.6	
SMLA				*i* x	x	11 44 09.7	
SDNR	Sundarnagar	17.25	293	*e*P	P	11 41 13.0	-2.1
SDNR				*e*x	x	11 44 19.0	
HYB	Hyderabad	18.03	245	*e*P	P	11 41 26.0	+1.4
HYB				*e*S	S	11 44 38.0	-1.1
HYB				pmax	pmax		
	comp=Z,80nm,1.0s						
HYB	Hyderabad	18.03	245	*e*P	P	11 41 26.0	+1.4
	comp=Z,80nm,1.0s						
HYB				*e*S	S	11 44 38.0	-1.1
HYB	Hyderabad	18.03	245	*i* P	P	11 41 26.0	+1.4
	comp=Z,80nm,1.0s						
HYB				*e*S	S	11 44 42.0	+2.9
THN	Thein Dam	18.52	295	*e*x	P	11 41 26.2	-3.9
THN				*e*x	x	11 44 44.1	
AJM	Ajmer	18.85	276	*i* P	P	11 41 35.0	+1.2
HHC	Hu-ho-hao-te	19.83	38	*e*P	P	11 41 48.1	+3.9
HHC				AP		11 42 09.3	
HHC				S	S	11 45 20.8	+3.7
HHC				PCP	PcP	11 46 00.5	+2.3
HHC				AMB	AMB		
	comp=Z,20nm,1.1s						
HHC				AMB	AMB		
	comp=Z,180nm,7.4s						
HHC				LR	LR		
	comp=N,180nm,17.8s						
HHC				LR	LR		
	comp=E,140nm,14.3s						
HHC				LR	LR		
	comp=Z,220nm,19.0s						
TIA	Tai'an	20.96	56	*e*P	P	11 41 54.1	-1.8
POO	Poona	21.49	254	⇑*i*P	P	11 42 03.0	+1.8
POO				*i* x	x	11 46 01.0	
POO				*e*x	x	11 49 06.5	
KZA	Kyzart	23.19	319	P	P	11 42 21.5	+3.9
	SNR=6.4						
MKAR	Makanchi Array	23.29	336	P	P	11 42 20.6	+2.1
MKAR						11 46 05.0	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR				pmax	pmax		
	comp=E,1.0nm,0.6s						
MKAR	Makanchi Array	23.29	336	P	P	11 42 20.6	+2.1
	comp=E,3.4nm,0.6s,mb3.9,baz=139,slow=11,SNR=19						
MKAR				PcP	PcP	11 46 05.0	+0.1
	comp=E,2.3nm,0.5s,baz=163,slow=2.2,SNR=12						
MKAR				ScP		11 49 32.4	
	comp=E,1.4nm,0.6s,baz=135,slow=2.0,SNR=10						
MKAR	Makanchi Array	23.29	336	P	P	11 42 20.6	+2.1
MKAR				PcP	PcP	11 46 05.0	+0.1
MKAR				ScP		11 49 32.4	
SONM	Songino Array	23.36	18	P	P	11 42 19.8	+0.7
	comp=E,4.0nm,0.6s,mb3.9,baz=195,slow=9.2,SNR=27						
SONM				ScP		11 49 31.9	
	comp=E,1.4nm,1.1s,baz=180,slow=3.7,SNR=4.9						
TKM2	Tokmak 2	23.51	321	P	P	11 42 24.1	+3.3
	SNR=7.7						
ULN	Ulaanbaatar	23.58	19	*e*P	P	11 42 22.4	+1.1
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb3.9						
ULN	Ulaanbaatar	23.58	19	*e*P	P	11 42 22.4	+1.1
	comp=Z,6.8nm,1.1s,mb3.9						
UCH	Uchtor	23.72	318	P	P	11 42 27.0	+4.3
	SNR=7.2						
KBK	Karagaybulak	23.72	320	P	P	11 42 26.5	+3.8
	SNR=6.7						
AAK	Ala-Archa	23.97	319	*e*P	P	11 42 27.9	+2.7
AAK				*e*		11 46 06.4	
AAK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.0						
AAK	Ala-Archa	23.97	319	*e*P	P	11 42 27.9	+2.7
	comp=Z,5.7nm,0.7s,mb4.0						
AAK				*e*PcP	PcP	11 46 06.4	0.0
AML	Almayashu	24.16	317	P	P	11 42 30.7	+3.7
	SNR=9.6						
EKS2	Erkin-Say	24.42	318	P	P	11 42 33.1	+3.6
	SNR=10						
TRD	Trivandrum	24.88	229	*i* x	S	11 46 59.5	+12
ZAK	Zakamensk	25.02	12	⇑*i*P	P	11 42 36.9	+1.7
ZAK				*e*		11 43 03.6	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
KKAR	Karatay Array	26.66	316	P	P	11 42 52.6	+2.1
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
HIA	Hailar	29.80	33	*e*P	P	11 43 18.0	-0.7
HIA				pmax	pmax		
	comp=Z,14nm,0.7s						
HIA	Hailar	29.80	33	*e*P	P	11 43 18.0	-0.6
	comp=Z,14nm,0.7s,mb4.7						
CN2	Changchun	29.97	46	*e*P	P	11 43 24.0	+3.8
NVS	Novosibirsk	30.20	346	*e*P	P	11 43 22.7	+0.5
BVAR	Borovoye Array	32.93	332	P	P	11 43 47.6	+1.6
	comp=Z,0.7nm,0.3s,mb3.9,baz=133,slow=11,SNR=6.8						
BVAR				pP	pP	11 44 09.3	+1.1
	comp=Z,2.0nm,0.6s,baz=130,slow=12,SNR=4.7						
BVAR				PcP	PcP	11 46 28.6	+0.3
	comp=Z,4.6nm,0.6s,baz=153,slow=3.3,SNR=17						
BVAR				ScP		11 50 02.5	
	comp=Z,0.8nm,0.6s,baz=135,slow=2.1,SNR=5.2						
MDJ	Mudanjiang	33.02	47	P	P	11 43 45.4	-1.4
MDJ				AP	pP	11 44 13.6	+4.6
MDJ				XP	sP	11 44 28.8	+8.2
MDJ				PCP	PcP	11 46 26.8	-1.8
MDJ				S	S	11 48 54.3	-2.8
MDJ				SCP		11 49 58.5	
MDJ				PCS		11 50 12.3	
MDJ				AMB	AMB		
	comp=Z,20nm,4.1s						
MDJ				LR	LR		
	comp=N,170nm,15.6s						
MDJ				LR	LR		
	comp=E,280nm,14.5s						
MDJ				LR	LR		
	comp=Z,330nm,11.0s						
AB31	Akbulak array	36.06	319	P	P	11 44 14.5	+1.7
MJAR	Matsushiro Arr	37.59	63	P	P	11 44 23.6	-2.1
MJAR				*PP	pP	11 44 48.8	+0.5
MJAR						11 46 41.4	
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MJAR	Matsushiro Arr	37.59	63	P	P	11 44 23.6	-2.1
	comp=Z,1.8nm,0.5s,mb4.2,baz=273,slow=9.1,SNR=7.0						
MJAR				pP	pP	11 44 48.8	+0.5
	comp=Z,1.3nm,0.5s,baz=272,slow=9.5,SNR=2.9						
MJAR				PcP	PcP	11 46 41.4	-0.7
	comp=Z,3.4nm,0.8s,baz=261,slow=1.2,SNR=9.4						
ASAJ	Asahikawa	41.83	52	P	P	11 45 00.8	+0.2
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ASAJ	Asahikawa	41.83	52	P	P	11 45 00.8	+0.1
	comp=Z,3.8nm,0.4s,mb4.5,baz=299,slow=7.4,SNR=8.3						
YSS	Yuzh-Sakhalins	42.49	48	*e*P	P	11 45 05.0	-1.0
GOF	Gofitskoye	45.97	308	*e*P	P	11 45 30.6	-3.3
ASF	Jabal al Asfar	51.16	291	P	P	11 46 15.9	+1.6
	comp=Z,2.0nm,0.3s,mb4.6,baz=59,slow=4.4,SNR=3.7						
FITZ	Fitzroy Crossi	52.67	143	P	P	11 46 24.8	-0.9
	comp=Z,9.9nm,0.6s,mb5.1,baz=359,slow=4.1,SNR=7.7						
AKASG	Malin Array Be	55.55	315	P	P	11 46 45.8	-0.6
	comp=Z,1.6nm,0.4s,mb4.4,baz=75,slow=6.4,SNR=8.1						
AKASG				ScP		11 51 34.2	
	comp=Z,0.1nm,0.3s,baz=70,slow=4.4,SNR=6.5						
AKASG	Malin Array Be	55.55	315	P	P	11 46 45.8	-0.6
AKASG				ScP		11 51 34.2	
FINES	FINESS Array B	57.75	328	P	P	11 47 01.9	+0.1
FINES				*PP	pP	11 47 25.0	-0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	57.75	328	P	P	11 47 01.9	0.0
	comp=Z,1.7nm,0.6s,mb4.2,baz=97,slow=8.1,SNR=8.5						
FINES				pP	pP	11 47 25.0	-0.7
	comp=Z,1.5nm,0.6s,baz=90,slow=7.6,SNR=3.3						
FINES	FINESS Array B	57.75	328	P	P	11 47 01.9	0.0
FINES				pP	pP	11 47 25.0	-0.7
BILL	Bilibino	58.90	24	⇑*i*P	P	11 47 09.3	-0.4
BILL				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
BILL	Bilibino	58.90	24	*e*P	P	11 47 08.2	-1.4
	comp=Z,9.1nm,0.6s,mb5.0						
ARCES	ARCESS Array B	58.94	337	P	P	11 47 10.5	+0.6
ARCES				*PP	pP	11 47 33.2	-0.8
ARCES						11 47 58.2	
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	58.94	337	P	P	11 47 10.5	+0.5
	comp=Z,3.8nm,0.9s,mb4.4,baz=90,slow=6.1,SNR=7.6						
ARCES				pP	pP	11 47 33.2	-0.7
	comp=Z,3.0nm,0.8s,baz=101,slow=6.2,SNR=1.6						

ARCES				PcP	PcP	11 47 58.2	+0.4
	comp=Z,2.0nm,0.6s,baz=90,slow=6.1,SNR=5.2						
WRA	Warramunga Arr	59.15	137	P	P	11 47 11.5	-0.6
WRA				*PP	pP	11 47 36.2	+0.1
WRA				pmax	pmax		
	comp=Z,20nm,0.4s						
WRA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WRA	Warramunga Arr	59.15	137	P	P	11 47 11.5	-0.5
	comp=Z,20nm,0.4s,mb5.5,baz=321,slow=7.5,SNR=121						
WRA				pP	pP	11 47 36.2	+0.1
	comp=Z,4.3nm,0.5s,baz=327,slow=7.5,SNR=3.1						
WRAB	Tennant Creek	59.15	137	eP	P	11 47 11.2	-0.9
WRAB				pmax	pmax		
	comp=Z,44nm,0.7s,mb5.6						
WRAB	Tennant Creek	59.15	137	eP	P	11 47 11.2	-0.8
	comp=Z,44nm,0.7s,mb5.6						
WB2	Warramunga Arr	59.16	137	eP	P	11 47 11.9	-0.2
KLBR	Kellerberrin	61.06	158⇑	iP	P	11 47 24.4	-0.6
	comp=Z,4.9nm,0.3s,mb5.0						
PMG	Port Moresby	61.20	118	P	P	11 47 26.2	0.0
PMG				pmax	pmax		
	comp=Z,41nm,0.7s						
PMG	Port Moresby	61.20	118	P	P	11 47 26.2	+0.1
	comp=Z,41nm,0.7s,mb5.6,baz=350,slow=6.1,SNR=14						
PMG	Port Moresby	61.20	118	eP	P	11 47 25.9	-0.3
	comp=Z,30nm,0.6s,mb5.5						
NB2	NORSAR Subarra	64.93	328	P	P	11 47 49.9	-0.2
	comp=Z,1.4nm,0.5s,mb4.0,baz=82,slow=6.2						
NOA	NORSAR Array B	64.93	328	P	P	11 47 49.8	-0.3
NOA				*PP	pP	11 48 13.4	-1.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	64.93	328	P	P	11 47 49.8	-0.3
	comp=Z,1.4nm,0.5s,mb4.1,baz=82,slow=6.3,SNR=6.5						
NOA				pP	pP	11 48 13.3	-1.1
	comp=Z,0.7nm,0.5s,baz=83,slow=6.4,SNR=2.3						
GERES	GERESS Array B	65.74	314	P	P	11 47 55.6	+0.1
GERES				*PP	pP	11 48 19.9	0.0
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES	GERESS Array B	65.74	314	P	P	11 47 55.6	+0.1
	comp=Z,0.6nm,0.3s,mb4.0,baz=63,slow=6.0,SNR=9.4						
GERES				pP	pP	11 48 19.9	0.0
	comp=Z,2.3nm,0.7s,baz=76,slow=5.5,SNR=5.4						
CTA	Charters Tower	67.19	128⇑	iP	P	11 48 04.9	-0.2
	comp=Z,13nm,0.8s,mb4.8						
CTA	Charters Tower	67.19	128⇑	iP	P	11 48 04.9	-0.2
CTA				pmax	pmax		
	comp=Z,13nm,0.8s						
STKA	Stephens Creek	72.36	140⇑	iP	P	11 48 36.1	-0.3
	comp=Z,7.9nm,0.6s,mb4.7						
STKA	Stephens Creek	72.36	140	P	P	11 48 35.8	-0.6
	comp=Z,12nm,0.8s,mb4.8,baz=312,slow=5.1,SNR=18						
IMA	Indian Mountai	74.41	23	eP	P	11 48 47.8	+0.2
IMA				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.8						
IMA	Indian Mountai	74.41	23	eP	P	11 48 47.8	+0.2
	comp=Z,13nm,0.6s,mb4.8						
SUMG	Summit	76.85	347	eP	P	11 49 01.8	+0.5
	comp=Z,6.7nm,0.8s,mb4.4						
MCK	McKinley	77.35	24	eP	P	11 49 04.6	+0.4
MCK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
MCK	McKinley	77.35	24	eP	P	11 49 04.6	+0.3
	comp=Z,3.8nm,0.5s,mb4.4						
ILAR	Eielson Array	77.50	23	P	P	11 49 04.6	-0.4
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ILAR	Eielson Array	77.50	23	P	P	11 49 04.5	-0.5
	comp=Z,3.7nm,0.7s,mb4.2,baz=301,slow=4.6,SNR=43						
SPU	Mount Spurr	77.51	27	eP	P	11 49 05.8	+0.6
RSO	Redoubt South	77.59	28	eP	P	11 49 05.9	+0.3
SML	Sawmill	78.66	26	eP	P	11 49 11.6	+0.1
KDAK	Kodiak Island	79.06	30	eP	P	11 49 13.1	-0.7
	comp=Z,11nm,0.6s,mb4.8						
INK	Inuvik	79.26	17	P	P	11 49 15.6	+1.0
INK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
INK	Inuvik	79.26	17	P	P	11 49 15.6	+1.0
	comp=Z,7.4nm,0.6s,mb4.7,baz=325,slow=5.1,SNR=27						
INK	Inuvik	79.26	17	eP	P	11 49 15.0	+0.3
	comp=Z,7.8nm,0.6s,mb4.7						
DIV	Divide	80.06	26	eP	P	11 49 19.6	+0.5
	comp=Z,34nm,0.8s,mb5.2						
EYAK	Cordova Ski Ar	80.42	26	eP	P	11 49 20.6	-0.3
ESDC	Sonseca Array	80.70	310	pP	pP	11 49 48.0	-0.3
	comp=Z,0.8nm,0.6s,baz=48,slow=8.3,SNR=2.1						
BOSA	Boshof	86.70	236	P	P	11 49 54.4	+1.0
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
BOSA	Boshof	86.70	236	P	P	11 49 54.4	+1.0
	comp=Z,3.0nm,0.7s,mb4.3,baz=68,slow=19,SNR=5.8						
YKA	Yellowknife Ar	88.53	14	P	P	11 50 01.6	+0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	88.53	14	P	P	11 50 01.6	+0.2
	comp=Z,1.4nm,0.8s,mb4.1,baz=326,slow=4.5,SNR=7.6						
VNA2	Neumayer--Watz	118.61	201⇑	i	PKPdf	11 55 56.6	+1.7
VNA3	Neumayer Olymp	119.33	201⇑	i	PKPdf	11 55 57.6	+1.3
SDV	Santo Domingo	142.82	337	ePKPpre		11 56 40.0	
SDV				ePKPdf	PKPdf	11 56 44.2	+2.4
BDFB	Brasilia	144.61	280	PKP	PKPdf	11 56 47.0	+2.2
	comp=Z,14nm,0.6s,baz=95,slow=2.6,SNR=20						
ROSC	El Rosal	147.80	341	PKPbc	PKPdf	11 56 57.1	+6.8
	comp=Z,29nm,0.6s,baz=125,slow=8.7,SNR=16						
OTAV	Otavalo	153.28	347	ePKPbc	PKPdf	11 57 09.1	+11
SAML	Samuel	153.69	306	ePKPdf	PKPdf	11 57 01.8	+2.8
SAML				ePKPbc	PKPdf	11 57 09.9	+11

ISC 14 11:42:51.5±0.9, 37.14N±0.07×37.56E±0.06, h10^{km}, n7, σ1^{s}36/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GZT	Gaziantep	0.22	2	iP	Pg	11 42 55.5	-0.8
GZT				iS	Sg	11 43 04.6	+5.2
GAZ	Gaziantep	0.28	278	PG	Pg	11 42 56.0	-1.4
GAZ				SG	Sg	11 43 03.0	+1.7
KAHT	Ahir Dag	0.73	313	iP	Pb	11 43 04.3	-1.6
KAHT				iS	Sb	11 43 16.3	+0.5
URFA	Urfa	1.05	73	PN	Pn	11 43 13.2	+0.9
COBT	Iskenderun	1.21	240	iP	Pb	11 43 13.0	-1.1
COBT				iS	Sb	11 43 30.8	+1.2
MYA	Malataya	1.37	30	ePN	Pn	11 43 14.6	-2.3
ELZG	Elazig	1.77	39	iP	Pn	11 43 22.9	+0.4
ELZG				iS	Sn	11 43 47.2	+2.0

NEIC 14 11:44:43.9, 50.93N×179.52E, h26^{km}, ML4.5(AEIC), After AEIC., Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	2.20	67	P	Pn	11 45 19.4	-0.2
KIKV	Kanaga Island	2.28	64	P	Pn	11 45 20.8	0.0
KIWB	Kanaga Island	2.28	65	eP	Pn	11 45 20.2	-0.6
ADAG	Mount Adagdak	2.65	65	P	Pn	11 45 25.8	-0.2
GSMY	Great Sitkin M	2.98	66	P	Pn	11 45 30.7	-0.1
GSTR	Great Sitkin T	3.00	65	P	Pn	11 45 30.6	-0.4
GSIG	Igitkin Island	3.04	68	P	Pn	11 45 29.9	-1.6
ATKA	Atka Island	4.12	70	P	Pn	11 45 45.7	-1.3
FX1	Attu Island--F	4.39	299	P	Pn	11 45 50.0	-0.8

BJI ***14*** *11:45:16.0, 51.58N×179.16E, h34^{km}, mB5.0, mb4.9, Ms5.2, Msz4.7*

MOS ***14*** *11:45:16.1±0.9, 51.13N×179.57E, h53^{km}, mb5.1/38, Error ellipse: s-maj=8.9km s-min=7.0km az=93.1*

NEIC ***14*** *11:45:18.3±0.2, 51.17N×179.55E, mb4.8/65, ML4.5(AEIC), Error ellipse: s-maj=6.6km s-min=2.8km az=178.0*

IDC ***14*** *11:45:18.0±0.7, 51.17N×179.49E, h58^{km}±5^{km}, mb4.2/21, mb1 4.4/21, mb1mx4.3/26, mbtmp4.5/21, Error ellipse: s-maj=17.5km s-min=10.2km az=168.0*

ISC 14 11:45:16.3±0.8, **51.15N**±0.06×**179.56E**±0.04, **h52**^{km}±6^{km}, **h44**^{km}±3.6^{km}**:pP-P, n229,** σ**0**^{s}**93**/226, **mb4.8**/100, **MS4.9**/6, **6C-1D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIWB	Kanaga Island	2.17	70	eP	P	11 45 50.3	-0.5
ADAG	Mount Adagdak	2.53	69	P	P	11 45 56.2	+0.2
ADAG				S	S	11 46 32.2	+6.5
GSTD	Great Sitkin T	2.83	70	P	P	11 46 00.6	+0.5
GSTR	Great Sitkin T	2.89	69	eP	P	11 45 59.9	-1.1
SMY	Shemya	3.73	297	P	P	11 46 14.2	+1.3
SMY				S	S	11 47 04.0	+8.0
ATKA	Atka Island	4.03	72	P	P	11 46 16.4	-0.6
FX1	Attu Island--F	4.32	296	P	P	11 46 21.7	+0.6
FX1				S	S	11 47 19.0	+8.3
FX1				pmax	pmax		
	comp=Z,208nm,0.3s						
FX1				smax			
	comp=N,111nm,0.3s						
FX1	Attu Island--F	4.32	296	P	P	11 46 21.7	+0.6
	comp=N,208nm,0.3s,baz=273,slow=6.2,SNR=100						
FX1				S	S	11 47 19.0	+8.4
	comp=N,111nm,0.3s,baz=86,slow=22,SNR=8.9						
FX1	Attu Island--F	4.32	296	P	P	11 46 22.6	+1.5
PET	Petropavlovsk	12.99	286	eP	P	11 48 24.1	+4.0
PET				eS	S	11 50 39.9	-3.9
PET				smax			
	comp=N,37nm,0.8s						
PET				MLR	MLR		
	comp=Z,1μm,17.0s						
PET				MLR	MLR		
	comp=Z,800nm,15.0s						
RSO	Redoubt South	18.00	48	eP	P	11 49 25.1	+1.1
BILL	Bilibino	18.15	344c	iP	P	11 49 27.1	+1.3
BILL				pmax	pmax		
	comp=Z,14nm,0.6s						
BILL	Bilibino	18.15	344	eP	P	11 49 26.6	+0.9
	comp=Z,39nm,1.1s						
SPU	Mount Spurr	18.57	46	eP	P	11 49 31.2	+0.3
IMA	Indian Mountai	20.18	32	eP	P	11 49 48.1	-0.6
IMA				pmax	pmax		
	comp=Z,111nm,0.9s						
IMA	Indian Mountai	20.18	32	eP	P	11 49 48.1	-0.7
	comp=Z,111nm,0.9s						
SML	Sawmill	20.46	46	eP	P	11 49 49.8	-1.8
MCK	McKinley	20.84	41	eP	P	11 49 53.9	-1.7
MCK				pmax	pmax		
	comp=Z,14nm,1.0s						
MCK	McKinley	20.84	41	eP	P	11 49 53.9	-1.7
	comp=Z,14nm,1.0s						
EYAK	Cordova Ski Ar	21.38	50	eP	P	11 50 02.1	+1.1
DIV	Divide	21.48	49	P	P	11 50 03.3	+1.3
	comp=Z,53nm,0.6s,mb5.0						
ILAR	Eielson Array	22.07	39	P	P	11 50 06.8	-1.0
	comp=Z,2.1nm,0.8s,mb3.6,baz=266,slow=11,SNR=9.7						
YSS	Yuzh-Sakhalins	24.31	275	eP	P	11 50 29.2	-0.5
YSS				pmax	pmax		
	comp=Z,50nm,1.3s,mb4.8						
YSS	Yuzh-Sakhalins	24.31	275	eP	P	11 50 29.2	-0.5
	comp=Z,50nm,1.3s,mb4.8						
ASAJ	Asahikawa	25.67	269	P	P	11 50 42.5	-0.2
ASAJ				pmax	pmax		
	comp=Z,48nm,0.9s						
ASAJ	Asahikawa	25.67	269	P	P	11 50 42.5	-0.2
	comp=Z,48nm,0.9s,mb5.0,baz=53,slow=6.5,SNR=30						
INK	Inuvik	28.24	35	P	P	11 51 05.7	-0.2
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
INK	Inuvik	28.24	35	P	P	11 51 05.7	-0.2
	comp=Z,4.4nm,1.0s,mb4.1,baz=275,slow=10,SNR=4.1						
INK	Inuvik	28.24	35	eP	P	11 51 04.5	-1.4
	comp=Z,6.5nm,1.0s,mb4.2						
YAK	Yakutsk	28.80	312c	iP	P	11 51 09.2	-1.7
YAK				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.9						
KLR	Kul'dur	30.25	285	eP	P	11 51 21.2	-2.8
KLR				pmax	pmax		
	comp=N,22nm,0.9s						
KLR				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.1						
MJAR	Matsushiro Arr	32.73	260	P	P	11 51 44.4	-1.5
	comp=Z,2.6nm,0.9s,mb4.2,baz=55,slow=8.3,SNR=7.1						
MAT	Matsushiro	32.73	260	eP	P	11 51 47.0	+1.1
MAT	Matsushiro	32.73	260	P	P	11 51 46.5	+0.6
MAT				eS	S	11 56 58.0	+0.3
MDJ	Mudanjiang	33.59	279	P	P	11 51 51.8	-1.5
MDJ				AP	pP	11 52 00.5	-6.3
MDJ				XP	sP	11 52 04.4	-9.0
MDJ				PP	PP	11 53 07.6	+0.7
MDJ				PCP	PcP	11 54 32.4	-0.4
MDJ				AMB	AMB		
	comp=Z,60nm,4.4s						
MDJ				LR	LR		
	comp=N,1μm,25.8s						
MDJ				LR	LR		
	comp=E,600nm,31.6s						
MDJ				LR	LR		
	comp=Z,900nm,21.4s,MS4.5						
YKW3	Yellowknife Ar	36.11	46	eP	P	11 52 12.8	-1.8
YKA	Yellowknife Ar	36.13	46	P	P	11 52 13.7	-1.0
	comp=Z,4.3nm,0.8s,mb4.4,baz=282,slow=8.6,SNR=19						
YKA				PcP	PcP	11 54 39.1	-0.9
	comp=Z,0.6nm,0.7s,baz=304,slow=2.7,SNR=4.2						
YKA	Yellowknife Ar	36.13	46	P	P	11 52 13.7	-1.0
YKA				PcP	PcP	11 54 39.1	-0.9
CN2	Changchun	36.58	280	eP	P	11 52 17.4	-1.3
CN2				eXP	sP	11 52 34.8	-4.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,2μm,21.0s,MS5.1						
CN2				LR	LR		
	comp=E,3μm,21.0s,MS5.1						
CN2				LR	LR		
	comp=Z,4μm,19.0s,MS5.2						
HIA	Hailar	37.41	291	eP	P	11 52 24.6	-1.0
HIA				pmax	pmax		
	comp=Z,20nm,1.1s						
HIA	Hailar	37.41	291	eP	P	11 52 24.6	-1.0
	comp=Z,20nm,1.1s,mb4.9						
JNU	Nakatsue	39.52	262	P	P	11 52 43.7	+0.3
	comp=Z,10nm,0.9s,mb4.6,baz=32,slow=20,SNR=4.9						
CIT	Chita	39.74	298	eP	P	11 52 45.1	+0.1
CIT				pmax	pmax		
	comp=Z,41nm,1.6s,mb4.9						
EDM	Edmonton	39.82	60	eP	P	11 52 44.5	-1.1
NEW	Newport	39.92	68	eP	P	11 52 46.7	+0.2
NEW				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NEW	Newport	39.92	68	eP	P	11 52 46.6	+0.1
	comp=Z,8.7nm,0.8s,mb4.5						
MOD	Modoc	41.33	79	eP	P	11 52 59.1	+0.9
	comp=Z,14nm,1.1s,mb4.5						
BMO	Blue Mountains	41.55	73	eP	P	11 53 00.1	+0.3
	comp=Z,12nm,1.3s,mb4.4						
WVOR	Wild Horse Val	42.05	77	eP	P	11 53 04.9	+0.8
WVOR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
WVOR	Wild Horse Val	42.05	77	eP	P	11 53 04.9	+0.8
	comp=Z,9.9nm,0.9s,mb4.4						
BEKR	Beckwourth	42.46	81	P	P	11 53 09.0	+1.5
MSO	Missoula	42.51	69	eP	P	11 53 07.3	-0.4
	comp=Z,5.1nm,0.8s,mb4.3						
CHMT	Chamberlain Mo	42.87	68	eP	P	11 53 09.9	-0.8
HRY	Holter Researc	43.81	68	eP	P	11 53 18.1	-0.2
HLID	Hailey	43.99	73	eP	P	11 53 20.3	+0.4
	comp=Z,16nm,1.1s,mb4.7						
MCMT	McKenzie Canyo	44.23	71	eP	P	11 53 21.7	0.0
BOZ	Bozeman (W)	44.50	69	eP	P	11 53 23.9	0.0
BOZ				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
BOZ	Bozeman (W)	44.50	69	eP	P	11 53 23.9	0.0
	comp=Z,16nm,0.8s,mb4.8						
NVAR	Mina Array Bea	44.60	81	P	P	11 53 25.8	+1.0
	comp=Z,3.6nm,0.9s,mb4.2,baz=301,slow=6.3,SNR=17						
NVAR				pP	pP	11 53 40.9	+2.2
	comp=Z,4.4nm,0.8s,baz=306,slow=6.8,SNR=8.9						
NVAR	Mina Array Bea	44.60	81	P	P	11 53 25.8	+1.0
NVAR				pP	pP	11 53 40.9	+2.2
MNV	Mina	44.69	81	eP	P	11 53 26.2	+0.7
MNV				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.5						
MNV	Mina	44.69	81	eP	P	11 53 26.2	+0.6
	comp=Z,12nm,1.4s,mb4.5						
QLMT	Earthquake Lak	45.06	70	eP	P	11 53 28.6	+0.2
MTUM	Tungsten Hills	45.10	83	eP	P	11 53 30.1	+1.3
ELK	Elko	45.11	77	eP	P	11 53 29.2	+0.4
ELK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ELK	Elko	45.11	77	eP	P	11 53 29.1	+0.3
	comp=Z,9.6nm,0.8s,mb4.7						
TLY	Talaya	45.31	302	eP	P	11 53 30.5	+0.2
TLY				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
YMR	Madison River	45.43	70	eP	P	11 53 31.4	+0.1
YMR				epP	pP	11 53 42.0	-3.2
ULN	Ulaanbaatar	45.44	296	eP	P	11 53 31.1	-0.2
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
ULN	Ulaanbaatar	45.44	296	eP	P	11 53 31.1	-0.2
	comp=Z,8.2nm,1.0s,mb4.5						
GCMT	Greycliff	45.57	68	eP	P	11 53 32.9	+0.5
YNR	Norris Junctio	45.57	70	eP	P	11 53 33.7	+1.2
YFT	Old Faithful	45.63	70	eP	P	11 53 34.4	+1.5
LKWY	Lake	45.82	70	eP	P	11 53 36.1	+1.7
LKWY				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
LKWY	Lake	45.82	70	eP	P	11 53 36.1	+1.6
	comp=Z,21nm,0.9s,mb5.1						
SONM	Songino Array	45.82	296	P	P	11 53 34.4	0.0
	comp=Z,3.3nm,0.9s,mb4.3,baz=56,slow=8.8,SNR=20						
IMW	Indian Meadow	45.88	71	eP	P	11 53 35.3	+0.3
	comp=Z,14nm,0.9s,mb4.9						
RRI2	Red Ridge	45.97	71	eP	P	11 53 37.0	+1.4
	comp=Z,16nm,0.9s,mb5.0						
HVU	Hansel Valley	46.00	74	eP	P	11 53 36.6	+0.7
MOOW	Moose Ponds	46.08	71	eP	P	11 53 36.7	+0.2
	comp=Z,7.8nm,1.1s,mb4.5						
TPAW	Teton Pass	46.11	71	eP	P	11 53 37.2	+0.5
	comp=Z,5.9nm,0.8s,mb4.6						
TIA	Tai'an	46.17	276	P	P	11 53 38.8	+1.5
TIA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
ZAK	Zakamensk	46.19	300	iP	P	11 53 36.6	-0.6
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
SNOW	Snow King Moun	46.24	71	eP	P	11 53 39.0	+1.3
	comp=Z,7.2nm,0.9s,mb4.6						
LOHW	Long Hollow	46.24	71	eP	P	11 53 37.8	0.0
	comp=Z,5.4nm,0.8s,mb4.5						
TRCR	Troy Canyon	46.34	80	eP	P	11 53 39.0	+0.4
AHID	Auburn Hatcher	46.44	72	eP	P	11 53 39.7	+0.4
	comp=Z,13nm,1.0s,mb4.8						
HHC	Hu-ho-hao-te	46.76	285	eP	P	11 53 43.8	+1.9
HHC				AP	pP	11 53 51.4	-4.4
HHC				XP	sP	11 53 58.3	-3.6
HHC				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
HHC				AMB	AMB		
	comp=Z,80nm,4.7s						
HWUT	Hardware Ranch	46.84	74	eP	P	11 53 42.9	+0.4
	comp=Z,6.6nm,0.9s,mb4.6						
SSE	Sheshan	46.96	268	eP	P	11 53 42.5	-1.1
SSE				AMB	AMB		
	comp=Z,50nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,130nm,4.0s						
SSE	Sheshan	46.96	268	eP	P	11 53 42.5	-1.1
	comp=Z,50nm,0.7s,mb5.5						
BW06	Boulder Array	47.36	71	eP	P	11 53 46.3	-0.3
	comp=Z,20nm,0.9s,mb5.1						
PDAR	Pinedale Array	47.36	71	P	P	11 53 46.5	-0.1
	comp=Z,18nm,0.8s,mb5.0,baz=315,slow=4.2,SNR=63						
PDAR				pP	pP	11 54 01.8	+1.3
	comp=Z,20nm,0.9s,baz=304,slow=3.7,SNR=12						
JLU	Jordanelle	47.51	75	eP	P	11 53 48.2	+0.5
DAU	Daniels Canyon	47.74	75	eP	P	11 53 50.0	+0.4
NJ2	Nanjing	47.79	271	eP	P	11 53 52.0	+1.9
NJ2				AP	pP	11 54 04.4	+0.4
NJ2				XP	sP	11 54 09.8	-0.3
NJ2				PP	PP	11 55 43.4	+1.9
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,130nm,5.6s						
NJ2				LR	LR		
	comp=N,2μm,22.0s,MS5.1						
NJ2				LR	LR		
	comp=E,2μm,24.2s,MS5.1						
NJ2				LR	LR		
	comp=Z,1μm,25.6s,MS4.8						
BTO	Baotou	47.84	286	eP	P	11 53 50.4	0.0
BTO				LR	LR		
	comp=N,530nm,11.7s						
BTO				LR	LR		
	comp=E,500nm,9.9s						
ARUT	Antelope Range	48.02	79	eP	P	11 53 52.4	+0.6
MVU	Marysvale	48.33	77	eP	P	11 53 54.6	+0.5
	comp=E,6.7nm,1.0s,mb4.6						
MSU	Marysvale	48.34	77	eP	P	11 53 54.8	+0.5
TMUT	Trail Mountain	48.45	76	eP	P	11 53 55.5	+0.4
NEN	Nelson	48.50	82	eP	P	11 53 55.7	+0.2
LDFC	Landfair	48.70	83	eP	P	11 53 56.8	-0.3
PFO	Pinyon Flat Ob	48.81	85	eP	P	11 53 57.5	-0.5
PFO				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
PFO	Pinyon Flat Ob	48.81	85	eP	P	11 53 57.5	-0.5
	comp=Z,9.2nm,1.0s,mb4.8						
SRU	San Rafael	48.98	76	eP	P	11 53 59.9	+0.7
BAR	Barrett	49.29	86	eP	P	11 54 01.7	0.0
RWWY	Rawlins	49.40	71	eP	P	11 54 01.2	-1.2
	comp=Z,18nm,0.9s,mb5.1						
RSSD	Black Hills	49.80	66	eP	P	11 54 03.4	-2.0
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
RSSD	Black Hills	49.80	66	eP	P	11 54 03.4	-2.0
	comp=Z,2.3nm,0.8s,mb4.3						
PV10	Paradox Valley	50.35	75	eP	P	11 54 09.7	0.0
WUAZ	Wupatki	50.74	80	eP	P	11 54 13.7	+0.9
	comp=Z,14nm,0.9s,mb4.9						
PV01	Paradox Valley	50.79	75	eP	P	11 54 12.9	-0.2
RW3	Ridgway	51.25	75	P	P	11 54 16.0	-0.6
ISCO	Idaho Springs	51.52	72	eP	P	11 54 18.0	-0.6
ISCO				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
ISCO	Idaho Springs	51.52	72	eP	P	11 54 18.0	-0.5
	comp=Z,7.9nm,1.1s,mb4.6						
HSP	Hornsund	51.71	355	eP	P	11 54 18.6	-0.9
HSP	Hornsund	51.71	355	eP	P	11 54 18.6	-0.9
SDCO	Great Sand Dun	52.90	74	eP	P	11 54 28.6	-0.3
	comp=Z,12nm,1.3s,mb4.7						
TUC	Tucson	53.23	82	eP	P	11 54 30.9	-0.6
TUC				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
TUC	Tucson	53.23	82	eP	P	11 54 30.9	-0.5
	comp=Z,6.5nm,0.9s,mb4.6						
NVS	Novosibirsk	53.60	314⇑	iP	P	11 54 31.7	-2.1
SUMG	Summit	53.76	13	eP	P	11 54 33.9	-0.9
	comp=Z,16nm,1.0s,mb4.9						
ANMO	Albuquerque	54.14	77	eP	P	11 54 38.2	+0.1
ANMO				e*PP	pP	11 54 50.2	-2.2
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ANMO	Albuquerque	54.14	77	eP	P	11 54 38.2	0.0
	comp=Z,1.6nm,0.9s,mb4.0						
ANMO				epP	pP	11 54 50.2	-2.1
LZH	Lanzhou	54.45	285	eP	P	11 54 40.5	+0.1
LZH				AP	pP	11 54 50.0	-4.6
LZH				XP	sP	11 54 54.5	-6.1
LZH				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.1						
LZH				AMB	AMB		
	comp=Z,130nm,4.0s						
LZH	Lanzhou	54.45	285	eP	P	11 54 40.5	+0.1
LZH				*SP	sP	11 54 54.5	-6.1
LZH				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.1						
LZH	Lanzhou	54.45	285	eP	P	11 54 40.5	+0.1
	comp=Z,31nm,1.2s,mb5.1						
LZH				pP	pP	11 54 50.0	-4.6
LZH				sP	sP	11 54 54.5	-6.1
GTA	Gaotai	54.69	291	eP	P	11 54 42.1	0.0
GTA				AP	pP	11 54 53.8	-2.5
GTA				XP	sP	11 54 57.5	-4.8
GTA				PP	PP	11 56 47.8	+1.4
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
GTA				AMB	AMB		
	comp=Z,50nm,3.8s						
GTA				LR	LR		
	comp=N,1μm,16.4s,MS5.3						

GTA				LR	LR		
	comp=E,2μm,17.6s,MS5.3						
GTA				LR	LR		
	comp=Z,2μm,16.8s,MS5.3						
CBKS	**Cedar Bluff**	**55.64**	**69**	*e*P	**P**	**11 54 48.6**	**-0.4**
CBKS				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.3						
CBKS	**Cedar Bluff**	**55.64**	**69**	*e*P	**P**	**11 54 48.6**	**-0.3**
	comp=Z,31nm,1.0s,mb5.3						
MNTX	**Cornudas Mount**	**57.00**	**79**	*e*P	**P**	**11 54 57.9**	**-0.9**
	comp=Z,9.3nm,1.0s,mb4.8						
AMTX	**Amarillo**	**57.10**	**74**	P	**P**	**11 54 58.2**	**-1.3**
	comp=Z,7.8nm,0.9s,mb4.7						
ARCES	**ARCESS Array B**	**58.13**	**350**	P	**P**	**11 55 04.3**	**-2.0**
	comp=Z,4.8nm,0.8s,mb4.6,baz=45,slow=12,SNR=6.2						
WMOK	**Wichita Mounta**	**58.95**	**72**	*e*P	**P**	**11 55 11.5**	**-0.8**
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
WMOK	**Wichita Mounta**	**58.95**	**72**	*e*P	**P**	**11 55 11.5**	**-0.8**
	comp=Z,6.6nm,0.8s,mb4.7						
GYA	**Guiyang**	**59.32**	**275**⇑	*i*P	**P**	**11 55 14.5**	**-0.5**
GYA				AP	pP	11 55 27.8	-1.6
GYA				XP	sP	11 55 32.6	-2.9
GYA				PP	PP	11 57 26.8	-1.4
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,3.8s						
GYA				LR	LR		
	comp=N,340nm,18.2s,MS4.6						
GYA				LR	LR		
	comp=E,290nm,18.6s,MS4.6						
GYA				LR	LR		
	comp=Z,370nm,19.0s,MS4.5						
MKAR	**Makanchi Array**	**59.36**	**308**	P	**P**	**11 55 13.2**	**-1.8**
	comp=Z,3.3nm,0.5s,mb4.6,baz=53,slow=6.1,SNR=26						
MKAR				pP	pP	11 55 28.4	-1.0
	comp=Z,4.0nm,0.8s,baz=51,slow=7.8,SNR=4.8						
TXAR	**Lajitas Array**	**59.71**	**80**	P	**P**	**11 55 16.4**	**-1.3**
	comp=Z,1.4nm,0.7s,mb4.1,baz=300,slow=4.9,SNR=15						
TXAR				pP	pP	11 55 31.7	-0.4
	comp=Z,2.2nm,0.6s,baz=302,slow=5.7,SNR=8.6						
BVA0	**Borovoye Array**	**60.39**	**319**	*i* P	**P**	**11 55 21.0**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
SCHQ	**Schefferville**	**60.81**	**37**	P	**P**	**11 55 23.8**	**-1.0**
	comp=Z,6.0nm,0.9s,mb4.7,baz=298,slow=6.1,SNR=4.9						
SVE	**Sverdlovsk**	**61.23**	**327**	*e*P	**P**	**11 55 28.9**	**+1.3**
SVE				*e*		11 56 09.0	
SVE				MLR	MLR		
	comp=N,200nm,18.0s,MS4.7						
SVE				MLR	MLR		
	comp=E,500nm,18.0s,MS4.7						
SVE				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.8						
ARU	**Arti**	**62.25**	**327**⇑	*i*P	**P**	**11 55 34.6**	**+0.1**
ARU				*e*		11 56 12.8	
ARU				*e*		11 57 54.3	
ARU				*e*S	**S**	**12 03 55.7**	**+1.0**
ARU				*e*SS	SS	12 08 06.0	+5.6
ARU				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.2						
WVT	**Waverly**	**64.36**	**64**	*e*P	**P**	**11 55 48.0**	**-0.6**
WVT				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
WVT	**Waverly**	**64.36**	**64**	*e*P	**P**	**11 55 48.0**	**-0.6**
	comp=Z,7.0nm,0.8s,mb4.7						
OXF	**Oxford**	**64.61**	**66**	*e*P	**P**	**11 55 50.0**	**-0.3**
OXF				pmax	pmax		
	comp=Z,75nm,1.1s,mb5.6						
OXF	**Oxford**	**64.61**	**66**	*e*P	**P**	**11 55 50.0**	**-0.3**
	comp=Z,75nm,1.1s,mb5.6						
PLAL	**Pickwick Lake**	**65.04**	**65**	*e*P	**P**	**11 55 51.5**	**-1.6**
	comp=Z,22nm,0.7s,mb5.3						
PLAL				*e*pP	pP	11 56 03.0	-4.6
TKM2	**Tokmak 2**	**65.46**	**308**	P	**P**	**11 55 56.0**	**+0.5**
	SNR=16						
ULHL	**Ulahol**	**65.64**	**308**	P	**P**	**11 55 57.4**	**+0.7**
	SNR=10						
USP	**Ospenovka**	**65.74**	**309**	P	**P**	**11 55 57.7**	**+0.4**
	SNR=22						
FINES	**FINESS Array B**	**65.77**	**346**	P	**P**	**11 55 55.8**	**-1.5**
	comp=Z,3.5nm,0.9s,mb4.4,baz=45,slow=8.1,SNR=7.0						
CHMS	**Chumysh**	**65.81**	**309**	P	**P**	**11 55 59.5**	**+1.7**
	SNR=5.1						
KBK	**Karagaybulak**	**65.97**	**309**	P	**P**	**11 55 56.2**	**-2.7**
	SNR=8.9						
FRU	**Bishkek**	**66.00**	**309**	*e*P	**P**	**11 56 00.0**	**+1.0**
AAK	**Ala-Archa**	**66.21**	**309**	P	**P**	**11 55 59.9**	**-0.5**
AAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
AAK	**Ala-Archa**	**66.21**	**309**	*e*P	**P**	**11 55 59.7**	**-0.7**
	comp=Z,15nm,0.9s,mb5.0						
KZA	**Kyzart**	**66.25**	**308**	P	**P**	**11 56 02.0**	**+1.3**
	SNR=12						
UCH	**Uchtor**	**66.51**	**309**	P	**P**	**11 56 04.2**	**+1.9**
	SNR=12						
EKS2	**Erkin-Say**	**66.54**	**309**	P	**P**	**11 56 03.3**	**+0.8**
	SNR=13						
AML	**Almayashu**	**66.98**	**309**	P	**P**	**11 56 06.4**	**+1.2**
	SNR=18						
LRAL	**Lakeview Retre**	**67.06**	**66**	*e*P	**P**	**11 56 04.9**	**-1.0**
	comp=Z,7.6nm,0.9s,mb4.7						
LRAL				*e*pP	pP	11 56 14.9	-5.7
AB31	**Akbulak array**	**67.49**	**322**	*i* P	**P**	**11 56 08.2**	**-0.1**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
NB2	**NORSAR Subarra**	**67.77**	**354**	P	**P**	**11 56 08.9**	**-0.9**
	comp=Z,12nm,0.8s,mb5.0,baz=7.0,slow=6.2						
NOA	**NORSAR Array B**	**67.77**	**354**	P	**P**	**11 56 08.9**	**-0.9**
	comp=Z,12nm,0.9s,mb4.9,baz=7.9,slow=6.3,SNR=16						
NOA				pP	pP	11 56 24.4	-0.1
	comp=Z,3.5nm,0.8s,baz=9.2,slow=6.4,SNR=4.3						
NOA	**NORSAR Array B**	**67.77**	**354**	P	**P**	**11 56 08.9**	**-0.9**
NOA				pP	pP	11 56 24.4	-0.1
KKAR	**Karatay Array**	**67.77**	**312**	*i* P	**P**	**11 56 09.9**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
KONO	**Kongsberg**	**69.26**	**355**	*i* P	**P**	**11 56 19.4**	**+0.3**
OBN	**Obninsk**	**69.71**	**338**⇑	*e*P	**P**	**11 56 22.7**	**+0.8**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
CMAR	**Chiang Mai Arr**	**70.01**	**275**	P	**P**	**11 56 22.9**	**-1.4**
	comp=Z,3.9nm,0.9s,mb4.3,baz=24,slow=6.8,SNR=13						
GUN	**Gumba**	**70.98**	**291**	*e*P	**P**	**11 56 31.0**	**+0.9**
	comp=Z,133nm,1.0s,mb5.8						
KKN	**Kakani**	**71.42**	**291**	*e*P	**P**	**11 56 33.4**	**+0.7**
	comp=Z,28nm,0.7s,mb5.3						
KKN	**Kakani**	**71.42**	**291**	*e*P	**P**	**11 56 33.4**	**+0.7**
KKN				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
PKI	**Pulchoki**	**71.51**	**291**	*e*P	**P**	**11 56 33.7**	**+0.4**
	comp=Z,51nm,1.1s,mb5.4						
PKI	**Pulchoki**	**71.51**	**291**	*e*P	**P**	**11 56 33.7**	**+0.4**
PKI				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
GKN	**Gorkha**	**71.64**	**292**	*e*P	**P**	**11 56 34.4**	**+0.4**
	comp=Z,54nm,0.9s,mb5.5						
DMN	**Daman**	**71.66**	**291**	*e*P	**P**	**11 56 34.6**	**+0.4**
	comp=Z,24nm,0.7s,mb5.2						
KOLN	**Koldanda**	**72.42**	**292**	*e*P	**P**	**11 56 38.9**	**+0.2**
	comp=Z,52nm,1.2s,mb5.3						
AKASG	**Malin Array Be**	**75.44**	**341**	P	**P**	**11 56 54.9**	**-0.7**
	comp=Z,1.2nm,0.5s,mb4.1,baz=22,slow=6.0,SNR=10						
AKASG	**Malin Array Be**	**75.44**	**341**	P	**P**	**11 56 54.9**	**-0.7**
GOF	**Gofitskoye**	**77.06**	**330**	*e*P	**P**	**11 57 03.6**	**-1.4**
KIV	**Kislovodsk**	**78.16**	**330**	*e*P	**P**	**11 57 12.2**	**+1.2**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
KIV				pmax	pmax		
	comp=N,5.0nm,1.1s						
ANN	**Anapa**	**78.96**	**334**	*e*P	**P**	**11 57 11.2**	**-4.2**
ANN				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.3						
BAIF	**Baives**	**79.09**	**357**	*e*P	**P**	**11 57 16.3**	**+0.3**
KHC	**Kasperske Hory**	**79.38**	**351**⇓	*i*P	**P**	**11 57 17.9**	**+0.3**
GERES	**GERESS Array B**	**79.65**	**351**	P	**P**	**11 57 19.0**	**-0.1**
	comp=Z,0.3nm,0.3s,mb3.7,baz=45,slow=3.8,SNR=5.0						
FLN	**La Foliniere**	**80.47**	**0**	*e*P	**P**	**11 57 23.7**	**+0.2**
LDF	**La Druitiere**	**80.63**	**360**	*e*P	**P**	**11 57 23.9**	**-0.5**
GRR	**Gorron**	**80.84**	**0**	*e*P	**P**	**11 57 25.3**	**-0.1**
ROSF	**Rostrenen**	**80.86**	**2**	*e*P	**P**	**11 57 25.5**	**-0.1**
	comp=Z,27nm,1.2s,mb4.7						
ROSF	**Rostrenen**	**80.86**	**2**	*e*P	**P**	**11 57 25.5**	**-0.1**
ROSF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
GNI	**Garni**	**80.88**	**327**	*i* P	**P**	**11 57 26.9**	**+1.1**
SGMF	**Saint Gilles**	**80.96**	**1**	*e*P	**P**	**11 57 26.2**	**+0.1**
	comp=Z,21nm,0.8s,mb4.8						
SGMF	**Saint Gilles**	**80.96**	**1**	*e*P	**P**	**11 57 26.2**	**+0.1**
SGMF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**81.13**	**223**	*e*P	**P**	**11 57 26.8**	**-0.7**
WRA	**Warramunga Arr**	**81.14**	**223**	P	**P**	**11 57 25.3**	**-2.3**
	comp=Z,2.0nm,0.8s,mb4.1,baz=37,slow=6.0,SNR=14						
LOR	**Lormes**	**81.89**	**357**	*e*P	**P**	**11 57 31.0**	**0.0**
	comp=Z,3.4nm,0.6s,mb4.1						
LOR	**Lormes**	**81.89**	**357**	*e*P	**P**	**11 57 31.0**	**0.0**
LOR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
AVF	**Avril sur Loir**	**82.38**	**357**	*e*P	**P**	**11 57 33.7**	**+0.2**
	comp=Z,8.9nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**82.38**	**357**	*e*P	**P**	**11 57 33.7**	**+0.2**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CABF	**La Chapelle**	**82.46**	**355**	*e*P	**P**	**11 57 34.1**	**+0.2**
	comp=Z,10nm,1.0s,mb4.4						
CABF	**La Chapelle**	**82.46**	**355**	*e*P	**P**	**11 57 34.1**	**+0.2**
CABF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
SMF	**Signal de Mont**	**82.51**	**357**	*e*P	**P**	**11 57 34.1**	**-0.1**
MFF	**Saint Martin d**	**82.63**	**360**	*e*P	**P**	**11 57 34.5**	**-0.2**
	comp=Z,27nm,1.2s,mb4.8						
MFF	**Saint Martin d**	**82.63**	**360**	*e*P	**P**	**11 57 34.5**	**-0.2**
MFF				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
HYB	**Hyderabad**	**83.32**	**289**	*e*P	**P**	**11 57 39.0**	**+0.2**
HYB	**Hyderabad**	**83.32**	**289**	*i* P	**P**	**11 57 39.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**83.52**	**231**	P	**P**	**11 57 39.7**	**-0.1**
	comp=Z,16nm,0.8s,mb5.2,baz=160,slow=4.6,SNR=16						
MBDF	**Montbardon**	**84.30**	**355**	*e*P	**P**	**11 57 43.7**	**+0.6**
	comp=Z,14nm,1.0s,mb4.8						
MBDF	**Montbardon**	**84.30**	**355**	*e*P	**P**	**11 57 43.7**	**+0.6**
MBDF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
BR131	**Keskin Array S**	**84.71**	**334**	*e*P	**P**	**11 57 46.6**	**+1.2**
	comp=Z,3.3nm,0.7s,mb4.6						
SBF	**Sospel**	**85.12**	**354**	*e*P	**P**	**11 57 47.2**	**-0.1**
	comp=Z,126nm,1.2s,mb5.6						
SBF	**Sospel**	**85.12**	**354**	*e*P	**P**	**11 57 47.2**	**-0.1**
SBF				pmax	pmax		
	comp=Z,63nm,1.2s,mb5.6						
LMR	**La Mourre**	**85.70**	**355**	*e*P	**P**	**11 57 51.5**	**+1.4**
	comp=Z,38nm,1.1s,mb5.2						
LMR	**La Mourre**	**85.70**	**355**	*e*P	**P**	**11 57 51.5**	**+1.4**
LMR				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.2						
PGF	**Pioggiola**	**86.32**	**353**	*e*P	**P**	**11 57 54.3**	**+1.1**
	comp=Z,115nm,1.5s,mb5.6						
PGF	**Pioggiola**	**86.32**	**353**	*e*P	**P**	**11 57 54.3**	**+1.1**
PGF				pmax	pmax		
	comp=Z,58nm,1.5s,mb5.6						
STKA	**Stephens Creek**	**89.19**	**212**	P	**P**	**11 58 06.3**	**-0.9**
	comp=Z,4.5nm,1.1s,mb4.7,baz=329,slow=14,SNR=2.9						
STKA	**Stephens Creek**	**89.19**	**212**	P	**P**	**11 58 06.3**	**-0.9**
TSUM	**Tsumeb**	**145.08**	**329**	*e*PKP	PKPdf	12 04 48.9	+1.2
BOSA	**Boshof**	**150.35**	**310**	PKPbc	PKPdf	12 05 02.9	+6.8
	comp=Z,5.6nm,0.8s,baz=302,slow=2.1,SNR=6.7						
VNA3	**Neumayer Olymp**	**159.41**	**172**		PKPdf	12 05 27.1	+20
VNA3	**Neumayer Olymp**	**159.41**	**172**		PKPdf	12 06 00.7	+54
VNA3	**Neumayer Olymp**	**159.41**	**172**	P	PKPdf	12 05 13.0	+6.1
VNA3				P		12 05 27.1	
VNA2	**Neumayer--Watz**	**159.90**	**173**		PKPdf	12 05 25.0	+18
VNA2	**Neumayer--Watz**	**159.90**	**173**		PKPdf	12 05 49.9	+42
VNA2	**Neumayer--Watz**	**159.90**	**173**		PKPdf	12 06 03.3	+56
VNA2	**Neumayer--Watz**	**159.90**	**173**		PKPdf	12 06 08.4	+61
VNA2	**Neumayer--Watz**	**159.90**	**173**	P	PKPdf	12 05 08.6	+1.1
VNA2				P		12 05 25.0	

IDC ***14*** *11:48:58.4±2.3, 51.24N×179.51E, h14^{km}±13^{km}, mb4.8/23, mb1 5.0/23, mb1mx4.9/26, mbtmp4.9/23, MS5.0/24, Ms1 5.0/24, ms1mx5.0/30, Error ellipse: s-maj=18.5km s-min=10.9km az=161.0*

MOS ***14*** *11:49:00.7±1.2, 51.10N×179.59E, h40^{km}, mb5.4/111, MS5.1/62, Error ellipse: s-maj=6.7km s-min=4.3km az=91.4*

BJI ***14*** *11:49:01.1, 51.74N×179.26E, h31^{km}, mB5.4, mb5.2, Ms5.2, Msz5.0*

HRVD ***14*** *11:49:02.7±0.5, 51.03N×179.71E, h20^{km}, MW5.6/49, Centroid moment Tensor Solution. LP body waves: s29,c32;Mantle waves: s49,c81; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}2.08±.14; $M_{\theta\theta}$-1.91±.09; $M_{\phi\phi}$-0.17±.12; $M_{r\theta}$1.58±.22; $M_{\theta\phi}$-0.66±.07; $M_{\phi r}$0.97±.33; Best double couple: $M_0$2.805×10^{17} NP1: ϕ_s260°,δ25°,λ105°. NP2:ϕ_s63°,δ66°,λ83°. Principal axes: T 2.802, Plg68°, Azm319°; N .003, Plg6°, Azm66°; P -2.807, Plg20°, Azm158°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***14*** *11:49:02.6±0.4, 51.02N×179.60E, h48^{km}±3^{km}, mb5.2/139, MS5.1/131, ML5.6(AEIC) Error ellipse: s-maj=4.7km s-min=2.2km az=183.0*

BGS ***14*** *11:49:03.8±2.6, 51.02N×179.60E, h48^{km}, mb5.2*

ISC 14 11:49:01.2±0.2**, 51.01N**±0.04×**179.60E**±0.02**, h49**^{km}**, h49**^{km}±2.2^{km}**:pP-P, n605,** σ**1**^{s}**07**/549**, mb5.2**/197**, MS5.1**/172**, 21C-16D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.12**	**68**	P	**P**	**11 49 35.4**	**+0.5**
KIKV	**Kanaga Island**	**2.20**	**65**	P	**P**	**11 49 36.7**	**+0.7**
KIWB	**Kanaga Island**	**2.20**	**66**	P	**P**	**11 49 36.6**	**+0.5**
KINC	**Kanaga Island**	**2.24**	**64**	P	**P**	**11 49 37.5**	**+0.8**
ADAG	**Mount Adagdak**	**2.56**	**66**	P	**P**	**11 49 41.8**	**+0.5**
GSTD	**Great Sitkin T**	**2.85**	**67**	P	**P**	**11 49 45.9**	**+0.4**
GSMY	**Great Sitkin M**	**2.90**	**67**	P	**P**	**11 49 46.0**	**-0.2**
GSTR	**Great Sitkin T**	**2.92**	**66**	P	**P**	**11 49 46.9**	**+0.5**
GSIG	**Igitkin Island**	**2.96**	**69**	P	**P**	**11 49 47.8**	**+0.8**
SMY	**Shemya**	**3.82**	**299**	*e*P	**P**	**11 49 58.5**	**-0.6**
SMY	**Shemya**	**3.82**	**299**	P	**P**	**11 49 58.8**	**-0.3**
ATKA	**Atka Island**	**4.04**	**70**	P	**P**	**11 50 01.9**	**-0.3**
ATKA				S	**S**	**11 50 50.3**	**+1.4**
FX1	**Attu Island--F**	**4.40**	**298**	P	**P**	**11 50 07.0**	**-0.3**
FX1						11 51 04.2	
FX1				pmax	pmax		
	comp=Z,442nm,0.3s						
FX1				smax			
	comp=N,165nm,0.3s						
FX1	**Attu Island--F**	**4.40**	**298**	Pn	**P**	**11 50 07.0**	**-0.2**
	comp=N,442nm,0.3s,baz=217,slow=4.2,SNR=75						
FX1				Sn	**S**	**11 51 04.2**	**+6.4**
	comp=N,165nm,0.3s,baz=78,slow=23,SNR=11						
FX1	**Attu Island--F**	**4.40**	**298**	P	**P**	**11 50 06.0**	**-1.3**
NIKO	**Nikolski**	**7.39**	**70**	P	**P**	**11 50 47.7**	**-1.4**
SPIA	**Saint Paul Isl**	**8.58**	**40**	P	**P**	**11 51 05.9**	**+0.4**
MNAT	**Makushin Natee**	**8.86**	**66**	P	**P**	**11 51 08.9**	**-0.4**
UNV	**Unalaska Valle**	**8.95**	**66**	P	**P**	**11 51 10.0**	**-0.6**
AKGG	**Akutan Green G**	**9.33**	**64**	P	**P**	**11 51 17.1**	**+1.3**
AKUT	**Akutan**	**9.44**	**65**	*e*P	**P**	**11 51 19.4**	**+2.1**
	comp=N,89nm,0.6s						
FALS	**False Pass**	**10.94**	**63**	P	**P**	**11 51 37.7**	**0.0**
SDPT	**Sand Point**	**12.70**	**62**	*e*P	**P**	**11 51 59.7**	**-1.6**
	comp=N,50nm,0.4s						
PET	**Petropavlovsk**	**13.05**	**287**	*e*P	**P**	**11 52 05.3**	**-0.8**
PET				*e*S	**S**	**11 54 26.9**	**-3.7**
PET				pmax	pmax		
	comp=Z,55nm,1.3s						
PET				smax			
	comp=N,37nm,0.8s						
PET				MLR	MLR		
	comp=Z,5μm,19.0s						
PET				MLR	MLR		
	comp=Z,4μm,19.0s						
PET	**Petropavlovsk**	**13.05**	**287**	*e*P	**P**	**11 52 04.8**	**-1.3**
	comp=Z,95nm,1.3s						
SKR	**Severo-Kuril's**	**14.83**	**278**	P	Px	11 52 13.0	
SKR				*e*S	**S**	**11 55 04.0**	**-8.6**
SKR				MLR	MLR		
	comp=N,3μm,16.0s						
SKR				MLR	MLR		
	comp=E,6μm,16.0s						
SKR				MLR	MLR		
	comp=Z,4μm,16.0s						
TNA	**Tin City**	**15.94**	**19**	P	**P**	**11 52 42.5**	**-0.9**
	comp=Z,80nm,1.1s						
SVW2	**Sparrevohn**	**17.03**	**44**	*e*P	**P**	**11 52 57.7**	**+0.6**
KDAK	**Kodiak Island**	**17.46**	**56**	*e*P	**P**	**11 52 59.5**	**-3.0**
TTA	**Tatalina**	**17.72**	**38**	*e*P	**P**	**11 53 05.9**	**+0.2**
RSO	**Redoubt South**	**18.08**	**48**	*e*P	**P**	**11 53 10.2**	**+0.1**
BILL	**Bilibino**	**18.29**	**344**	*e*P	**P**	**11 53 11.7**	**-1.0**
BILL	**Bilibino**	**18.29**	**344**	*e*P	**P**	**11 53 11.7**	**-0.9**
MA2	**Magadan**	**18.39**	**309**	*e*P	**P**	**11 53 14.6**	**+0.6**
MA2				pmax	pmax		
	comp=Z,41nm,1.2s						
MA2	**Magadan**	**18.39**	**309**	*e*P	**P**	**11 53 14.6**	**+0.6**
	comp=Z,41nm,1.2s						
SPU	**Mount Spurr**	**18.64**	**46**	*e*P	**P**	**11 53 16.7**	**-0.3**
SEY	**Seymchan**	**18.86**	**320**	*e*P	**P**	**11 53 19.6**	**+0.1**
SEY				*e*S	**S**	**11 56 40.5**	**-4.1**
SEY				pmax	pmax		
	comp=N,20nm,0.8s						
SEY				pmax	pmax		
	comp=E,10.0nm,0.8s						
SEY				pmax	pmax		
	comp=Z,30nm,0.8s						
SLKM	**Skilak Lake**	**19.29**	**49**	*e*P	**P**	**11 53 23.9**	**-0.4**
PWA	**Palmer West**	**19.79**	**46**	*e*P	**P**	**11 53 28.9**	**-0.9**
PWA				pmax	pmax		
	comp=Z,21nm,0.6s						
PWA	**Palmer West**	**19.79**	**46**	*e*P	**P**	**11 53 28.9**	**-0.9**
	comp=Z,21nm,0.6s						
PMR	**Palmer**	**20.11**	**46**	*e*P	**P**	**11 53 32.8**	**-0.4**
PMR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PMR	**Palmer**	**20.11**	**46**	*e*P	**P**	**11 53 32.8**	**-0.4**
	comp=Z,4.0nm,0.3s						
IMA	**Indian Mountai**	**20.29**	**32**	*e*P	**P**	**11 53 33.8**	**-1.2**
SML	**Sawmill**	**20.54**	**46**	*e*P	**P**	**11 53 34.7**	**-2.9**
MCK	**McKinley**	**20.93**	**41**	*e*P	**P**	**11 53 40.8**	**-0.9**
MCK				pmax	pmax		
	comp=Z,88nm,1.1s						
MCK				MLR	MLR		
	comp=Z,3μm,21.0s,MS4.6						
MCK	**McKinley**	**20.93**	**41**	*e*P	**P**	**11 53 40.8**	**-0.9**
	comp=Z,88nm,1.1s						
MCK				LR	LR		
	comp=Z,3μm,21.0s,MS4.6						
DIV	**Divide**	**21.55**	**49**	*e*P	**P**	**11 53 46.6**	**-1.3**
	comp=Z,256nm,0.7s,mb5.8						
DIV				LR	LR		
	comp=Z,17μm,19.0s,MS5.5						
ILAR	**Eielson Array**	**22.16**	**39**	P	**P**	**11 53 52.0**	**-1.9**
	comp=Z,4.7nm,0.5s,mb4.2,baz=234,slow=8.2,SNR=33						
ILAR				PcP	PcP	11 57 51.1	+0.5
	comp=Z,2.4nm,0.8s,baz=272,slow=2.5,SNR=4.4						
ILAR				ScP		12 01 24.8	
	comp=Z,1.7nm,0.9s,baz=280,slow=3.2,SNR=7.2						
THY	**Trims Highway**	**22.16**	**43**	*e*P	**P**	**11 53 53.5**	**-0.4**
MIDW	**Midway**	**22.88**	**173**	PFAKE		11 54 10.0	+8.8
MIDW				LR	LR		
	comp=Z,4μm,21.0s,MS4.8						
MENT	**Mentasta**	**22.91**	**45**	*e*P	**P**	**11 54 02.3**	**+1.1**
YUK	**Yuzh-Kuril'sk**	**23.68**	**266**	*e*P	**P**	**11 54 03.0**	**-5.8**
YUK				*e*		11 54 56.0	
YUK				pmax	pmax		
	comp=Z,110nm,0.5s,mb5.5						
YUK				pmax	pmax		
	comp=Z,1μm,1.6s,mb6.1						
YUK				pmax	pmax		
	comp=E,2μm,3.0s						
YUK				MLR	MLR		
	comp=Z,3μm,17.0s,MS4.9						
YUK				MLR	MLR		
	comp=N,2μm,14.0s,MS5.2						
YUK				MLR	MLR		
	comp=E,6μm,18.0s,MS5.2						
YSS	**Yuzh-Sakhalins**	**24.35**	**275**⇑	*i*P	**P**	**11 54 17.0**	**+1.7**
YSS				*e*		11 54 26.0	
YSS				*e*		11 54 52.0	
YSS				S	**S**	**11 58 26.0**	**-2.4**
YSS				*e*		11 58 40.0	
YSS				*e*		11 59 40.0	
YSS				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.1						
YSS	**Yuzh-Sakhalins**	**24.35**	**275**	*e*P	**P**	**11 54 15.9**	**+0.5**
	comp=Z,78nm,1.0s,mb5.1						
YSS				LR	LR		
	comp=Z,5μm,20.0s,MS5.0						
ASAJ	**Asahikawa**	**25.70**	**269**	P	**P**	**11 54 28.1**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,51nm,0.7s						
ASAJ				MLR	MLR		
	comp=Z,2μm,20.4s						
ASAJ	**Asahikawa**	**25.70**	**269**	P	**P**	**11 54 28.1**	**-0.1**
	comp=Z,51nm,0.7s,mb5.2,baz=75,slow=5.8,SNR=37						
ASAJ				LR	LR	12 03 16.3	
	comp=Z,2μm,20.4s,MS4.7,baz=77,slow=34						
SIT	**Sitka**	**26.75**	**59**	PFAKE		11 54 50.0	+12
SIT				LR	LR		
	comp=Z,5μm,19.0s,MS5.1						
INK	**Inuvik**	**28.34**	**35**	P	**P**	**11 54 49.5**	**-2.5**
INK						11 58 03.1	
INK				pmax	pmax		
	comp=Z,8.0nm,0.4s						
INK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
INK				pmax	pmax		
	comp=N,5.0nm,0.8s						
INK	**Inuvik**	**28.34**	**35**	P	**P**	**11 54 49.5**	**-2.5**
	comp=N,7.6nm,0.4s,mb4.7,baz=245,slow=9.9,SNR=25						
INK				PcP	PcP	11 58 03.1	-1.0
	comp=N,8.0nm,0.7s,baz=244,slow=2.4,SNR=4.5						
INK				ScP		12 01 44.4	
	comp=N,5.0nm,0.8s,baz=89,slow=26,SNR=11						
INK	**Inuvik**	**28.34**	**35**	*e*P	**P**	**11 54 50.4**	**-1.7**
	comp=N,35nm,1.1s,mb4.9						
YAK	**Yakutsk**	**28.91**	**312**	*e*P	**P**	**11 54 56.6**	**-0.6**
YAK				*e**PP	pP	11 55 04.8	-5.1
YAK				*e*		11 55 45.3	
YAK				*e*PPP	PPP	11 56 03.5	-1.3
YAK				*e*		11 58 06.3	
YAK				*e*S	**S**	**11 59 44.0**	**+1.2**
YAK				*e*		12 05 36.6	
YAK				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.1						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,28nm,1.2s						
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,17nm,1.2s						
YAK				smax			
	comp=N,12nm,1.2s						
YAK				smax			
	comp=Z,3.0nm,0.9s						
YAK				smax			
	comp=E,13nm,1.1s						
YAK				MLR	MLR		
	comp=Z,2μm,16.0s,MS4.9						
YAK				MLR	MLR		
	comp=N,920nm,14.0s,MS4.9						
YAK				MLR	MLR		
	comp=E,2μm,16.0s,MS4.9						
YAK	**Yakutsk**	**28.91**	**312**	*e*P	**P**	**11 54 55.0**	**-2.1**
	comp=E,71nm,1.0s,mb5.3						
YAK				LR	LR		
	comp=Z,4μm,20.0s,MS5.1						
DLBC	**Dease Lake**	**29.40**	**56**	P	**P**	**11 54 57.8**	**-3.8**
	comp=Z,1.2nm,0.7s,baz=308,slow=19,SNR=3.1						
DLBC				LR	LR	12 06 55.4	
	comp=Z,2μm,21.2s,MS4.7,baz=279,slow=37						
DLBC	**Dease Lake**	**29.40**	**56**	*e*P	**P**	**11 54 58.0**	**-3.6**
KLR	**Kul'dur**	**30.31**	**286**	*e*P	**P**	**11 55 05.8**	**-4.0**
KLR				pmax	pmax		
	comp=N,48nm,1.0s						
KLR				pmax	pmax		
	comp=Z,88nm,1.0s,mb5.4						
KLR				MLR	MLR		
	comp=Z,2μm,17.0s,MS4.8						
TIXI	**Tiksi**	**30.47**	**331**	PFAKE		11 55 20.0	+9.0
TIXI				LR	LR		
	comp=Z,5μm,19.0s,MS5.2						
CLNS	**Chul'man**	**31.98**	**302**	*e*P	**P**	**11 55 23.5**	**-0.9**
CLNS				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.0						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,19nm,1.0s						

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CLNS                           MLR    MLR
      comp=Z,5µm,18.0s,MS5.2
CLNS                           MLR    MLR
      comp=N,2µm,14.0s,MS5.0
CLNS                           MLR    MLR
      comp=E,400nm,16.0s,MS5.0
MJAR  Matsushiro Arr   32.73 260  P      P      11 55 30.2  -1.0
      comp=E,6.8nm,0.8s,mb4.6,baz=50,slow=7.5,SNR=17
MJAR                           PcP    PcP    11 58 17.3  +1.4
      comp=E,4.4nm,0.9s,baz=54,slow=2.9,SNR=7.6
MJAR                           ScP           12 01 58.0
      comp=E,2.3nm,0.9s,baz=50,slow=1.5,SNR=6.3
MJAR                           LR     LR     12 07 17.8
      comp=E,2µm,19.8s,MS4.8,baz=70,slow=34
MAJO  Matsushiro       32.73 260 eP      P      11 55 30.4  -0.8
MAJO                           pmax   pmax
      comp=Z,34nm,1.1s,mb5.2
MAJO                           MLR    MLR
      comp=Z,3µm,22.0s,MS4.9
MAJO  Matsushiro       32.73 260 eP      P      11 55 30.4  -0.8
      comp=Z,34nm,1.1s,mb5.2
MAJO                           LR     LR
      comp=Z,3µm,22.0s,MS4.9
MAT   Matsushiro       32.73 260 eP      P      11 55 31.0  -0.2
MAT                             eS      S      12 00 48.0  +4.8
MAT                            pmax   pmax
      comp=Z,29nm,1.1s,mb5.1
MAT                            MLR    MLR
      comp=Z,2µm,20.0s,MS4.9
MAT   Matsushiro       32.73 260 eP      P      11 55 31.0  -0.2
      comp=Z,29nm,1.1s,mb5.1
MAT                             eS      S      12 00 48.0  +4.8
MAT                            LR     LR
      comp=Z,2µm,20.0s,MS4.9
MAT   Matsushiro       32.73 260  P      P      11 55 31.0  -0.2
MAT                            S      S      12 00 48.0  +4.8
WAKE  Wake Island      33.28 203  PFAKE         11 55 50.0   +14
WAKE                           LR     LR
      comp=Z,3µm,19.0s,MS5.0
MDJ   Mudanjiang       33.64 279  P      P      11 55 38.1  -0.8
MDJ                            AP     pP     11 55 51.1  -0.8
MDJ                            XP     sP     11 55 57.3  -0.8
MDJ                            PP     PP     11 56 54.8  +2.2
MDJ                            PCP    PcP    11 58 17.4  -0.9
MDJ                            S      S      12 00 56.3  -0.9
MDJ                            SCP           12 01 57.4
MDJ                            PCS           12 02 02.6
MDJ                            AMB    AMB
      comp=Z,20nm,0.9s,mb5.0
MDJ                            AMB    AMB
      comp=Z,200nm,9.2s
MDJ                            LR     LR
      comp=N,1µm,23.3s,MS4.8
MDJ                            LR     LR
      comp=E,2µm,26.0s,MS4.8
MDJ                            LR     LR
      comp=Z,3µm,20.6s
MDJ   Mudanjiang       33.64 279 eP      P      11 55 38.8  -0.2
      comp=Z,20nm,0.9s,mb5.0
MDJ                            LR     LR
      comp=Z,3µm,20.0s,MS5.1
JHJ   Hachijo jima 2   34.03 254  LR     LR     12 06 37.8
      comp=Z,1µm,20.6s,MS4.7,baz=102,slow=31
KIP   Kipapa           34.34 141  PFAKE         11 56 00.0   +15
KIP                            LR     LR
      comp=Z,3µm,20.0s,MS5.0
OBC   Olympics--Boni   35.92  72  P      P      11 56 01.7  +3.3
OCWA  Octopus Mounta   35.99  73  P      P      11 55 59.6  +0.6
      comp=Z,64nm,1.0s,mb5.5
OCWA                           LR     LR
      comp=Z,2µm,22.0s,MS4.9
PGC   Sidney           36.03  71 eP      P      11 55 59.5  +0.2
      comp=Z,124nm,1.3s,mb5.7
YKW3  Yellowknife Ar   36.19  46 eP      P      11 55 58.7  -1.8
YKA   Yellowknife Ar   36.21  46  P      P      11 55 58.9  -1.8
      comp=Z,14nm,0.6s,mb5.1,baz=283,slow=8.4,SNR=43
YKA                            PcP    PcP    11 58 26.1  +0.5
      comp=Z,3.6nm,0.7s,baz=292,slow=2.9,SNR=6.1
YKA                            ScP           12 02 11.6
      comp=Z,2.0nm,0.8s,baz=288,slow=3.4,SNR=5.9
YKA                            LR     LR     12 12 25.5
      comp=Z,9µm,18.6s,MS5.6,baz=295,slow=39
YKA   Yellowknife Ar   36.21  46  P      P      11 55 58.9  -1.8
YKA                            PcP    PcP    11 58 26.1  +0.5
YKA                            ScP           12 02 11.7
YKA                            LR     LR     12 12 25.5
CN2   Changchun        36.63 280 eP      P      11 56 04.8  +0.4
CN2                             eXP     sP     11 56 21.5  -2.0
CN2                             eS      S      12 01 42.5  -0.8
CN2                            AMB    AMB
      comp=Z,20nm,0.9s,mb5.0
CN2                            AMB    AMB
      comp=Z,400nm,7.0s
CN2                            LR     LR
      comp=N,2µm,19.0s,MS5.1
CN2                            LR     LR
      comp=E,3µm,19.0s,MS5.1
CN2                            LR     LR
      comp=Z,4µm,19.0s,MS5.2
HDW   Hoodsport        36.71  72  P      P      11 56 06.6  +1.5
POHA  Pohakuloa        36.84 139  PFAKE         11 56 20.0   +14
POHA                           LR     LR
      comp=Z,30µm,20.0s,MS6.1
GNW   Green Mountain   36.89  72  P      P      11 56 07.5  +1.0
MBW   Mount Baker      36.89  70  P      P      11 56 09.2  +2.6
CMW   Cultus Mountai   36.92  71  P      P      11 56 08.1  +1.2
CBIJ  Chichi jima      37.02 244  LR     LR     12 08 21.1
      comp=Z,2µm,21.9s,MS4.7,baz=19,slow=31
BOD   Bodaibo          37.39 307 eP      P      11 56 08.8  -1.8
BOD                            pmax   pmax
      comp=Z,90nm,1.0s,mb5.5
HTW   Haystack Looko   37.41  71  P      P      11 56 11.8  +0.9
HIA   Hailar           37.49 291 eP      P      11 56 10.1  -1.4
HIA                            pmax   pmax
      comp=Z,67nm,1.1s
HIA                            MLR    MLR
      comp=Z,2µm,21.0s
HIA   Hailar           37.49 291 eP      P      11 56 10.1  -1.5
      comp=Z,67nm,1.1s,mb5.4
HIA                            LR     LR
      comp=Z,2µm,21.0s,MS5.0
FMW   Mount Fremont    37.88  73  P      P      11 56 16.2  +1.4
COR   Corvallis        38.04  77  P      P      11 56 17.3  +1.1
COR                            pmax   pmax
      comp=Z,66nm,0.8s,mb5.4
COR                            MLR    MLR
      comp=Z,2µm,21.0s,MS5.0
COR   Corvallis        38.04  77  P      P      11 56 17.3  +1.0
      comp=Z,66nm,0.8s,mb5.4
COR                            LR     LR
      comp=Z,2µm,21.0s,MS5.0
TBM   Table Mountain   38.41  72  P      P      11 56 20.2  +1.0
EBG   Ellensburg       38.56  72  P      P      11 56 21.6  +1.1
KS15  Wonju Array Si   38.67 270 eP      P      11 56 21.8  +0.3
SNY   Shenyang         38.84 279 ⇑P      P      11 56 24.1  +1.2
SNY                            S      S      12 02 23.8  +6.8
SNY                            AMB    AMB
      comp=Z,30nm,1.0s,mb5.0
SNY                            LR     LR
      comp=N,1µm,20.7s,MS4.9
SNY                            LR     LR
      comp=E,1µm,24.3s,MS4.9
SNY                            LR     LR
      comp=Z,2µm,21.9s,MS4.9
INCN  Inchon           39.43 271  P      P      11 56 27.0  -0.9
      comp=Z,31nm,0.9s,mb5.0
INCN                           LR     LR
      comp=Z,712nm,19.0s,MS4.5
WRD   Warden           39.46  71  P      P      11 56 29.4  +1.4
JNU   Nakatsue         39.53 262  P      P      11 56 29.9  +1.2
      comp=Z,32nm,0.9s,mb5.0,baz=48,slow=7.2,SNR=11
JNU                            LR     LR     12 11 46.2
      comp=Z,2µm,20.5s,MS5.0,baz=266,slow=35
KHMM  Horse Mountain   39.77  82 eP      P      11 56 32.0  +1.4
CIT   Chita            39.83 298 eP      P      11 56 30.5  -0.5
CIT                            pmax   pmax
      comp=Z,41nm,1.1s,mb5.1
EDM   Edmonton         39.87  60 eP      P      11 56 30.5  -0.8
EDM   Edmonton         39.87  60 eP      P      11 56 29.9  -1.4
YBH   Yreka Blue Hor   39.93  80  P      P      11 56 35.7  +3.8
YBH                            pmax   pmax
      comp=Z,38nm,0.9s
YBH   Yreka Blue Hor   39.93  80 eP      P      11 56 32.7  +0.7
      comp=Z,38nm,0.9s,mb5.1
YBH                            LR     LR
      comp=Z,2µm,20.0s,MS4.9
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NEW   Newport          39.95  68 eP      P      11 56 32.1  +0.1
NEW                            pmax   pmax
      comp=Z,39nm,1.0s
NEW   Newport          39.95  68 eP      P      11 56 30.9  -1.1
      comp=Z,39nm,1.0s,mb5.1
NEW                            LR     LR
      comp=Z,1µm,19.0s,MS4.8
RES   Resolute Bay     40.49  24 eP      P      11 56 35.1  -1.2
RES                            pmax   pmax
      comp=Z,20nm,0.8s,mb4.9
RES   Resolute Bay     40.49  24 eP      P      11 56 35.0  -1.2
      comp=Z,20nm,0.8s,mb4.9
WDC   Whiskeytown Da   40.68  82  P      P      11 56 41.1  +2.9
WDC                            pmax   pmax
      comp=Z,26nm,1.0s,mb4.8
WDC   Whiskeytown Da   40.68  82 eP      P      11 56 38.2   0.0
      comp=Z,26nm,1.0s,mb4.8
WDC                            LR     LR
      comp=Z,1µm,22.0s,MS4.8
LASM  Arnica Sink      40.71  80  P      P      11 56 41.6  +3.3
HOPS  Hopland          41.27  84  P      P      11 56 43.0  -0.1
HOPS                           LR     LR
      comp=Z,3µm,19.0s,MS5.2
MOD   Modoc            41.33  78 eP      P      11 56 43.0  -0.5
      comp=Z,26nm,0.8s,mb4.9
MOD                            LR     LR
      comp=Z,3µm,22.0s,MS5.1
BMO   Blue Mountains   41.56  73 eP      P      11 56 44.6  -0.7
BMO                            LR     LR
      comp=Z,1µm,22.0s,MS4.8
WVOR  Wild Horse Val   42.06  77 eP      P      11 56 49.8  +0.4
WVOR                           MLR    MLR
      comp=Z,3µm,21.0s,MS5.1
BEKR  Beckwourth       42.46  81 eP      P      11 56 52.2  -0.5
      comp=Z,9.0nm,0.7s,mb4.5
MSO   Missoula         42.54  69 eP      P      11 56 51.8  -1.5
MSO                            LR     LR
      comp=Z,834nm,19.0s,MS4.7
CHMT  Chamberlain Mo   42.90  68 eP      P      11 56 55.2  -1.0
PAHR  Pah Rah Range    43.16  81  P      P      11 56 58.0  -0.4
      comp=Z,25nm,1.0s,mb4.9
WCN   Washoe City      43.17  81  P      P      11 57 01.1  +2.6
WCN                            pmax   pmax
      comp=Z,45nm,1.0s,mb5.2
WCN   Washoe City      43.17  81 eP      P      11 56 59.1  +0.6
      comp=Z,45nm,1.0s,mb5.2
KWAJ  Kwajalein Atol   43.23 197  PFAKE         11 57 10.0   +11
KWAJ                           LR     LR
      comp=Z,419nm,22.0s,MS4.3
CMB   Columbia Colle   43.53  83 eP      P      11 57 02.3  +0.8
CMB                            pmax   pmax
      comp=Z,22nm,1.1s,mb4.8
CMB                            MLR    MLR
      comp=Z,2µm,19.0s,MS5.0
CMB   Columbia Colle   43.53  83 eP      P      11 57 02.3  +0.8
      comp=Z,22nm,1.1s,mb4.8
CMB                            LR     LR
      comp=Z,2µm,19.0s,MS5.0
SAO   San Andreas Ge   43.65  85  PFAKE         11 57 10.0  +7.6
SAO                            LR     LR
      comp=Z,2µm,19.0s,MS5.0
HRY   Holter Researc   43.84  68 eP      P      11 57 03.2  -0.6
HLID  Hailey           44.01  73 eP      P      11 57 05.0  -0.2
HLID                           LR     LR
      comp=Z,2µm,22.0s,MS4.9
BMN   Battle Mountai   44.08  78 eP      P      11 57 05.9   0.0
BMN                            pmax   pmax
      comp=Z,20nm,0.7s,mb5.0
BMN                            MLR    MLR
      comp=Z,2µm,22.0s,MS5.0
BMN   Battle Mountai   44.08  78 eP      P      11 57 05.9   0.0
      comp=Z,20nm,0.7s,mb5.0
BMN                            LR     LR
      comp=Z,2µm,22.0s,MS5.0
MCMT  McKenzie Canyo   44.25  70 eP      P      11 57 06.9  -0.3
BOZ   Bozeman (W)      44.52  69 eP      P      11 57 08.9  -0.4
BOZ                            MLR    MLR
      comp=Z,2µm,19.0s,MS4.9
NVAR  Mina Array Bea   44.60  81  P      P      11 57 10.9  +0.9
      comp=Z,7.4nm,0.8s,mb4.6,baz=296,slow=6.0,SNR=22
NVAR                           ScP           12 02 43.2
      comp=Z,1.2nm,0.8s,baz=272,slow=7.4,SNR=3.9
OMM   Old Mammoth Mi   44.66  83 eP      P      11 57 11.3  +0.7
MNV   Mina             44.69  81 eP      P      11 57 11.0  +0.2
MNV                            pmax   pmax
      comp=Z,41nm,1.2s,mb5.1
MNV                            MLR    MLR
      comp=Z,2µm,20.0s,MS5.0
MNV   Mina             44.69  81 eP      P      11 57 11.0  +0.2
      comp=Z,41nm,1.2s,mb5.1
MNV                            LR     LR
      comp=Z,2µm,20.0s,MS5.0
IRK   Irkutsk          44.79 302 eP      P      11 57 09.8  -1.6
IRK                            pmax   pmax
      comp=Z,17nm,1.2s,mb4.8
QLMT  Earthquake Lak   45.09  70 eP      P      11 57 13.5  -0.4
MTUM  Tungsten Hills   45.09  83 eP      P      11 57 14.3  +0.3
ELK   Elko             45.12  77 eP      P      11 57 14.5  +0.3
ELK                            MLR    MLR
      comp=Z,3µm,22.0s
FFC   Flin Flon        45.17  53 eP      P      11 57 12.2  -2.2
FFC                            pmax   pmax
      comp=Z,8.0nm,0.9s,mb4.5
FFC                            MLR    MLR
      comp=Z,1µm,19.0s,MS4.8
FFC   Flin Flon        45.17  53 eP      P      11 57 12.2  -2.2
      comp=Z,8.0nm,0.9s,mb4.5
FFC                            LR     LR
      comp=Z,1µm,19.0s,MS4.8
TLY   Talaya           45.41 302 eP      P      11 57 16.3   0.0
TLY                             eS      S      12 03 47.1  -6.2
TLY                            pmax   pmax
      comp=Z,24nm,1.0s,mb5.0
TLY                            MLR    MLR
      comp=Z,5µm,19.0s,MS5.5
TLY   Talaya           45.41 302 eP      P      11 57 15.6  -0.8
      comp=Z,25nm,1.0s,mb5.0
TLY                            LR     LR
      comp=Z,1µm,19.0s,MS4.9
YMR   Madison River    45.45  70 eP      P      11 57 16.7  -0.1
TPH   Tonopah          45.49  81 eP      P      11 57 17.5  +0.3
TPH                            pmax   pmax
      comp=Z,51nm,1.0s,mb5.3
TPH                            MLR    MLR
      comp=Z,2µm,20.0s,MS5.0
TPH   Tonopah          45.49  81 eP      P      11 57 17.5  +0.3
      comp=Z,51nm,1.0s,mb5.3
TPH                            LR     LR
      comp=Z,2µm,20.0s,MS5.0
JOW   Kunigami         45.51 258  LR     LR     12 18 04.4
      comp=Z,699nm,18.5s,MS4.6,baz=288,slow=38
ULN   Ulaanbaatar      45.52 296 eP      P      11 57 16.8  -0.5
ULN                            pmax   pmax
      comp=Z,31nm,1.0s,mb5.2
ULN                            MLR    MLR
      comp=Z,5µm,19.0s,MS5.5
ULN   Ulaanbaatar      45.52 296 eP      P      11 57 16.8  -0.5
      comp=Z,31nm,1.0s,mb5.2
ULN                            LR     LR
      comp=Z,5µm,19.0s,MS5.5
YNR   Norris Junctio   45.60  69 eP      P      11 57 18.7  +0.7
YFT   Old Faithful     45.65  70 eP      P      11 57 19.2  +0.8
LKWY  Lake             45.85  69 eP      P      11 57 20.7  +0.8
LKWY                           pmax   pmax
      comp=Z,51nm,0.8s,mb5.5
LKWY                           MLR    MLR
      comp=Z,1µm,19.0s,MS4.9
LKWY  Lake             45.85  69 eP      P      11 57 20.7  +0.8
      comp=Z,51nm,0.8s,mb5.5
LKWY                           LR     LR
      comp=Z,1µm,19.0s,MS4.9
IMW   Indian Meadow    45.90  70 eP      P      11 57 20.3  -0.1
SONM  Songino Array    45.91 296  P      P      11 57 19.7  -0.7
      comp=Z,16nm,0.9s,mb4.9,baz=63,slow=5.5,SNR=45
SONM                           LR     LR     12 18 20.5
      comp=Z,6µm,18.2s,MS5.6,baz=55,slow=38
RRI2  Red Ridge        45.99  71 eP      P      11 57 21.2  +0.1
      comp=Z,113nm,1.3s,mb5.6
HVU   Hansel Valley    46.02  74  P      P      11 57 23.9  +2.6
HVU   Hansel Valley    46.02  74 eP      P      11 57 21.5  +0.2
MOOW  Moose Ponds      46.10  71 eP      P      11 57 21.4  -0.5
      comp=Z,19nm,1.0s,mb5.0
TPAW  Teton Pass       46.13  71 eP      P      11 57 21.7  -0.5
TIA   Tai'an           46.21 277 eP      P      11 57 22.0  -0.9
TIA                            AMB    AMB
      comp=Z,50nm,1.0s,mb5.4
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WUWY  Wally Ulrich     46.23  71 eP      P      11 57 22.3  -0.6
SNOW  Snow King Moun   46.26  71 eP      P      11 57 23.3  +0.1
      comp=Z,22nm,0.6s,mb5.3
LOHW  Long Hollow      46.27  71 eP      P      11 57 23.3  +0.1
      comp=Z,14nm,0.8s,mb5.0
ZAK   Zakamensk        46.28 301⇑iP      P      11 57 22.9  -0.3
ZAK                             e                11 59 00.4
ZAK                            pmax   pmax
      comp=Z,24nm,1.2s,mb5.0
ZAK                            pmax   pmax
      comp=Z,6.0nm,1.4s,mb4.3
TRCR  Troy Canyon      46.34  80 eP      P      11 57 23.2  -0.7
BGU   Big Grassy Mou   46.36  75 eP      P      11 57 23.9  -0.2
DAC   Darwin (Calif)   46.37  83 eP      P      11 57 24.0  -0.2
DAC                            pmax   pmax
      comp=Z,18nm,1.0s,mb5.0
DAC                            MLR    MLR
      comp=Z,2µm,19.0s,MS5.0
DAC   Darwin (Calif)   46.37  83 eP      P      11 57 24.0  -0.1
      comp=Z,18nm,1.0s,mb5.0
DAC                            LR     LR
      comp=Z,2µm,19.0s,MS5.0
AHID  Auburn Hatcher   46.46  72 eP      P      11 57 24.5  -0.3
      comp=Z,101nm,1.4s,mb5.6
AHID                           LR     LR
      comp=Z,2µm,22.0s,MS5.0
SPUT  South Promonto   46.49  74 eP      P      11 57 24.1  -0.9
GUMO  Guam             46.70 230  PFAKE         11 57 40.0   +13
GUMO                           LR     LR
      comp=Z,1µm,20.0s,MS4.8
HHC   Hu-ho-hao-te     46.82 285 eP      P      11 57 28.4  +0.8
HHC                            AP     pP     11 57 41.3  +0.4
HHC                            XP     sP     11 57 44.9  -1.8
HHC                            PCP    PcP    11 59 00.6  +0.1
HHC                            PP     PP     11 59 16.4  -1.4
HHC                            SCP           12 02 50.4
HHC                            PCS           12 02 56.4
HHC                            S      S      12 04 13.8  +0.3
HHC                            XS            12 04 33.9
HHC                            SCS    ScS    12 07 12.5  -2.6
HHC                            SS     SS     12 07 33.1  -0.1
HHC                            AMB    AMB
      comp=Z,50nm,1.1s,mb5.4
HHC                            LR     LR
      comp=N,2µm,17.8s,MS5.1
HHC                            LR     LR
      comp=E,1µm,19.0s,MS5.1
HHC                            LR     LR
      comp=Z,1µm,22.6s,MS4.8
MOY   Mondy            46.83 303 eP      P      11 57 27.4  -0.1
MOY                            pmax   pmax
      comp=Z,37nm,1.9s,mb5.0
HWUT  Hardware Ranch   46.85  73 eP      P      11 57 28.2  +0.3
      comp=Z,39nm,0.9s,mb5.3
HWUT                           LR     LR
      comp=Z,1µm,19.0s,MS4.9
FCC   Fort Churchill   46.94  45  P      P      11 57 27.0  -1.3
FCC                            pmax   pmax
      comp=Z,23nm,0.9s,mb5.1
FCC   Fort Churchill   46.94  45 eP      P      11 57 26.1  -2.2
      comp=Z,23nm,0.8s,mb5.2
SSE   Sheshan          46.98 268 eP      P      11 57 29.0   0.0
SSE                            XP     sP     11 57 40.4  -7.7
SSE                            PP     PP     11 59 23.8  +4.3
SSE                            S      S      12 04 17.9  +1.9
SSE                            AMB    AMB
      comp=Z,40nm,0.8s,mb5.4
SSE                            AMB    AMB
      comp=Z,220nm,6.9s
SSE                            LR     LR
      comp=N,660nm,24.7s,MS4.6
SSE                            LR     LR
      comp=E,480nm,24.7s,MS4.6
SSE                            LR     LR
      comp=Z,900nm,20.2s,MS4.7
SSE   Sheshan          46.98 268 eP      P      11 57 29.0   0.0
      comp=Z,44nm,0.8s,mb5.4
SSE                            sP     sP     11 57 40.4  -7.7
SSE                            pP     pP     11 57 46.2  +3.9
SSE                            PP     PP     11 59 23.7  +4.2
SSE                            S      S      12 04 17.9  +1.9
SSE                            sS            12 04 42.2
SSE                            ScS    ScS    12 07 23.9  +7.6
SSE                            SS     SS     12 07 48.7   +13
SSE                            LR     LR
      comp=Z,910nm,20.2s,MS4.7
NOQ   North Oquirrh    47.08  75 eP      P      11 57 29.6   0.0
LAO   LASA Array       47.09  65 eP      P      11 57 29.8  +0.1
      comp=Z,24nm,0.8s,mb5.2
LAO                            LR     LR
      comp=Z,2µm,20.0s,MS5.0
TCUT  Toone Canyon     47.24  74  P      P      11 57 31.0  +0.1
DGMT  Dagmar           47.24  62 eP      P      11 57 29.5  -1.3
      comp=Z,8.2nm,0.6s,mb4.8
DGMT                           LR     LR
      comp=Z,2µm,20.0s,MS5.1
CTU   Camp Tracy       47.28  75 eP      P      11 57 31.5  +0.2
BW06  Boulder Array    47.38  71 eP      P      11 57 31.5  -0.5
      comp=Z,78nm,1.0s,mb5.6
BW06                           LR     LR
      comp=Z,2µm,20.0s,MS5.0
PDAR  Pinedale Array   47.38  71  P      P      11 57 31.9  -0.2
      comp=Z,55nm,0.8s,mb5.6,baz=305,slow=3.9,SNR=77
PDAR                           LR     LR     12 15 01.6
      comp=Z,1µm,21.1s,MS4.9,baz=316,slow=33
MWC   Mount Wilson     47.39  86  P      P      11 57 33.0  +0.8
MWC   Mount Wilson     47.39  86 eP      P      11 57 32.0  -0.2
JLU   Jordanelle       47.52  74 eP      P      11 57 34.5  +1.3
NLU   North Lily Min   47.53  76 eP      P      11 57 33.1  -0.1
DAU   Daniels Canyon   47.75  75 eP      P      11 57 36.1  +1.1
DAU   Daniels Canyon   47.75  75 eP      P      11 57 35.2  +0.2
MPU   Maple Canyon     47.76  75 eP      P      11 57 34.4  -0.7
NJ2   Nanjing          47.82 271 eP      P      11 57 38.0  +2.4
NJ2                            AP     pP     11 57 50.4  +1.5
NJ2                            PP     PP     11 59 29.5  +2.5
NJ2                            S      S      12 04 31.0  +3.2
NJ2                            AMB    AMB
      comp=Z,20nm,0.7s,mb5.3
NJ2                            AMB    AMB
      comp=Z,130nm,5.6s
NJ2                            LR     LR
      comp=N,2µm,23.0s,MS5.2
NJ2                            LR     LR
      comp=E,2µm,24.2s,MS5.2
NJ2                            LR     LR
      comp=Z,2µm,24.6s,MS5.0
BTO   Baotou           47.91 286 eP      P      11 57 36.0  -0.2
ARUT  Antelope Range   48.02  79 eP      P      11 57 38.4  +1.3
ARUT  Antelope Range   48.02  79 eP      P      11 57 36.7  -0.4
MVU   Marysvale        48.33  77 eP      P      11 57 39.6  +0.1
MVU                            LR     LR
      comp=Z,2µm,22.0s,MS5.1
MSU   Marysvale        48.35  77 eP      P      11 57 40.1  +0.5
MSU   Marysvale        48.35  77 eP      P      11 57 39.7   0.0
TMUT  Trail Mountain   48.46  76 eP      P      11 57 40.7  +0.2
NEN   Nelson           48.49  82 eP      P      11 57 40.8   0.0
LDFC  Landfair         48.69  83 eP      P      11 57 41.5  -0.8
PFO   Pinyon Flat Ob   48.80  85 eP      P      11 57 42.6  -0.6
PFO                            pmax   pmax
      comp=Z,18nm,1.0s,mb5.1
PFO                            MLR    MLR
      comp=Z,433nm,19.0s,MS4.5
PFO   Pinyon Flat Ob   48.80  85 eP      P      11 57 42.6  -0.6
      comp=Z,18nm,1.0s,mb5.0
PFO                            LR     LR
      comp=Z,433nm,19.0s,MS4.5
SRU   San Rafael       48.99  75 eP      P      11 57 46.0  +1.4
SRU   San Rafael       48.99  75 eP      P      11 57 45.2  +0.6
BAR   Barrett          49.28  86 eP      P      11 57 45.9  -0.9
RWWY  Rawlins          49.42  71 eP      P      11 57 46.9  -1.0
      comp=Z,77nm,1.2s,mb5.6
RSSD  Black Hills      49.83  66 eP      P      11 57 50.7  -0.2
RSSD                           pmax   pmax
      comp=Z,71nm,1.7s,mb5.4
RSSD  Black Hills      49.83  66 eP      P      11 57 50.0  -0.9
      comp=Z,71nm,1.7s,mb5.4
RSSD                           LR     LR
      comp=Z,1µm,19.0s,MS4.8
KBS   Kingsbay         50.11 357 eP      P      11 57 51.4  -1.3
KBS                            pmax   pmax
      comp=Z,64nm,0.8s,mb5.7
KBS                            MLR    MLR
      comp=Z,2µm,19.0s,MS5.2
KBS   Kingsbay         50.11 357 eP      P      11 57 51.4  -1.3
      comp=Z,64nm,0.8s,mb5.7
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KBS                                  LR     LR
      comp=Z,2µm,19.0s,MS5.2
KBS   Kingsbay         50.11 357  eP     P      11 57 52.0 -0.7
KBS                                  AMb    AMB    11 57 54.8
      comp=Z,49nm,0.7s,mb5.7
KBS                               eS     S      12 05 04.0 +4.8
KBS                                  AMS    AMS    12 20 57.2
      comp=Z,1µm,18.4s,MS4.9
PV10  Paradox Valley   50.36  75  eP     P      11 57 55.0 -0.1
PHWY  Pilot Hill       50.70  70  eP     P      11 57 57.4 -0.2
ULM   Lac du Bonnet    50.72  56   P     P      11 57 57.2 -0.5
      comp=Z,2.6nm,0.4s,mb4.5,baz=306,slow=7.8,SNR=4.4
ULM                                  LR     LR     12 19 34.3
      comp=Z,2µm,21.1s,MS5.2,baz=306,slow=36
WUAZ  Wupatki          50.74  80  eP     P      11 57 57.6 -0.4
      comp=Z,24nm,0.8s,mb5.2
WUAZ                                 LR     LR
      comp=Z,3µm,19.0s,MS5.4
PV01  Paradox Valley   50.80  75  eP     P      11 57 57.9 -0.5
TATO  Taipei           51.07 262   PFAKE        11 58 10.0 +9.3
TATO                                 LR     LR
      comp=Z,2µm,20.0s,MS5.1
RW3   Ridgway          51.26  75   P     P      11 58 02.0 +0.1
ISCO  Idaho Springs    51.54  72  eP     P      11 58 03.9 -0.1
ISCO                                 pmax   pmax
      comp=Z,27nm,1.1s,mb5.1
ISCO                                 MLR    MLR
      comp=Z,2µm,22.0s,MS5.0
ISCO  Idaho Springs    51.54  72  eP     P      11 58 03.9 -0.1
      comp=Z,27nm,1.1s,mb5.1
ISCO                                 LR     LR
      comp=Z,2µm,22.0s,MS5.0
WHN   Wuhan            51.67 273  eP     P      11 58 06.0 +0.9
HSP   Hornsund         51.85 355  eP     P      11 58 04.4 -1.5
DAG   Danmarks Havn    51.96    5⇓eP     P      11 58 05.6 -1.1
DAG                                  pmax   pmax
      comp=Z,7.0nm,0.7s,mb4.7
DAG   Danmarks Havn    51.96    5⇓eP     P      11 58 05.6 -1.1
      comp=Z,6.8nm,0.7s,mb4.7
DAG   Danmarks Havn    51.96    5⇓iP     P      11 58 05.6 -1.1
      comp=Z,6.8nm,0.7s,mb4.7
XAN   Xi'an            52.74 280   P     P      11 58 12.9 -0.2
XAN                                  AMB    AMB
      comp=Z,20nm,1.1s,mb5.0
SDCO  Great Sand Dun   52.91  74  eP     P      11 58 14.2 -0.1
SDCO                                 LR     LR
      comp=Z,2µm,20.0s,MS5.1
TUC   Tucson           53.22  82  eP     P      11 58 15.5 -1.2
TUC                                  pmax   pmax
      comp=Z,9.0nm,0.9s,mb4.7
TUC                                  MLR    MLR
      comp=Z,914nm,20.0s,MS4.8
TUC   Tucson           53.22  82  eP     P      11 58 15.5 -1.2
      comp=Z,9.1nm,0.9s,mb4.7
TUC                                  LR     LR
      comp=Z,914nm,20.0s,MS4.8
NVS   Novosibirsk      53.72 315⇑iP     P      11 58 17.3 -2.7
NVS                               i      pP     11 58 32.9 -0.6
NVS                               eS     S      12 05 46.0 -2.8
NVS                                  pmax   pmax
      comp=Z,50nm,0.9s,mb5.4
NVS                                  pmax   pmax
      comp=N,27nm,1.1s
NVS                                  pmax   pmax
      comp=E,44nm,1.2s
NVS                                  smax
      comp=N,27nm,2.4s
SUMG  Summit           53.89  13  eP     P      11 58 19.1 -1.9
      comp=N,46nm,0.9s,mb5.4
LAZ   Ladron           54.09  78  eP     P      11 58 23.7 +0.6
ANMO  Albuquerque      54.15  77  eP     P      11 58 24.0 +0.5
ANMO                                 pmax   pmax
      comp=Z,15nm,0.9s
ANMO                                 MLR    MLR
      comp=Z,2µm,21.0s
ANMO  Albuquerque      54.15  77  eP     P      11 58 24.0 +0.5
      comp=Z,15nm,0.9s,mb4.9
ANMO                                 LR     LR
      comp=Z,2µm,21.0s,MS5.1
LENM  Lemitar          54.35  78  eP     P      11 58 25.0  0.0
EYMN  Ely              54.41  56  eP     P      11 58 24.1 -1.1
      comp=Z,56nm,1.3s,mb5.3
EYMN                                 LR     LR
      comp=Z,2µm,20.0s,MS5.2
LZH   Lanzhou          54.52 285  eP     P      11 58 25.9 -0.2
LZH                                  AP     pP     11 58 37.5 -2.2
LZH                                  XP     sP     11 58 45.0 -0.4
LZH                                  PP     PP     12 00 29.0 -1.1
LZH                                  S      S      12 06 01.0 +1.1
LZH                                  SS     SS     12 09 42.5  0.0
LZH                                  AMB    AMB
      comp=Z,60nm,1.0s,mb5.6
LZH                                  AMB    AMB
      comp=Z,300nm,4.0s
LZH                                  LR     LR
      comp=N,3µm,16.9s
LZH                                  LR     LR
      comp=Z,4µm,18.5s,MS5.5
LZH   Lanzhou          54.52 285  eP     P      11 58 25.9 -0.2
LZH                                  *PP    pP     11 58 37.5 -2.2
LZH                                  *SP    sP     11 58 45.0 -0.4
LZH                                                12 00 29.0
LZH                                  S      S      12 06 01.0 +1.1
LZH                                  *SS           12 06 22.4
LZH                                  SS     SS     12 09 42.5  0.0
LZH                                  pmax   pmax
      comp=Z,63nm,1.0s,mb5.6
LZH                                  MLR    MLR
      comp=Z,4µm,18.5s,MS5.5
LZH   Lanzhou          54.52 285  eP     P      11 58 25.9 -0.2
      comp=Z,63nm,1.0s,mb5.6
LZH                                  pP     pP     11 58 37.5 -2.2
LZH                                  sP     sP     11 58 45.0 -0.4
LZH                                  PP     PP     12 00 29.0 -1.1
LZH                                  S      S      12 06 01.0 +1.1
LZH                                  sS            12 06 22.4
LZH                                  SS     SS     12 09 42.5  0.0
LZH                                  LR     LR
      comp=Z,4µm,18.5s,MS5.5
BNM   Barren Site      54.58  78  eP     P      11 58 27.1 +0.5
GTA   Gaotai           54.77 291  eP     P      11 58 27.1 -0.8
GTA                                  AP     pP     11 58 38.9 -2.6
GTA                                  XP     sP     11 58 42.6 -4.5
GTA                                  PP     PP     12 00 31.8 -0.5
GTA                                  S      S      12 06 05.3 +2.1
GTA                                  AMB    AMB
      comp=Z,30nm,1.0s,mb5.3
GTA                                  AMB    AMB
      comp=Z,340nm,5.4s
GTA                                  LR     LR
      comp=N,2µm,16.1s,MS5.5
GTA                                  LR     LR
      comp=E,3µm,17.2s,MS5.5
GTA                                  LR     LR
      comp=Z,3µm,16.8s,MS5.5
ENH   Enshi            54.92 276  eP     P      11 58 27.7 -1.5
      comp=Z,42nm,1.1s,mb5.4
ENH                                  LR     LR
      comp=Z,927nm,19.0s,MS4.9
CBKS  Cedar Bluff      55.67  69  eP     P      11 58 33.0 -1.4
CBKS                                 pmax   pmax
      comp=Z,134nm,1.1s,mb5.9
CBKS                                 MLR    MLR
      comp=Z,1µm,20.0s,MS4.9
CBKS  Cedar Bluff      55.67  69  eP     P      11 58 33.0 -1.4
      comp=Z,134nm,1.1s,mb5.9
CBKS                                 LR     LR
      comp=Z,1µm,20.0s,MS4.9
SFJD  Kangerlussuaq    56.36  21  eP     P      11 58 38.3 -0.7
SFJD                              i             12 06 45.1
SFJD                                 MLR    MLR
      comp=Z,1µm,20.0s,MS5.0
SFJD  Kangerlussuaq    56.36  21  eP     P      11 58 38.3 -0.7
SFJD                              e             12 02 57.6
SFJD                              i             12 06 45.1
SFJD                              i             12 13 40.3
SFJD                                 LR     LR
      comp=Z,1µm,20.0s,MS5.0
SFJD  Kangerlussuaq    56.36  21  i P    P      11 58 38.3 -0.7
SFJD                              e             12 02 57.6
SFJD                              i             12 06 45.1
SFJD                              i             12 13 40.3
      comp=Z,1µm,20.0s
MNTX  Cornudas Mount   57.00  79  eP     P      11 58 43.3 -0.8
AMTX  Amarillo         57.12  74  eP     P      11 58 44.3 -0.6
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      comp=Z,43nm,1.1s,mb5.4
AMTX                                 LR     LR
      comp=Z,1µm,22.0s,MS5.0
KSU1  Kansas State U   57.31  67  eP     P      11 58 45.3 -0.9
CLNB  Carlsbad         57.55  78   P     P      11 58 47.7 -0.2
SCO   Scoresbysund     57.82   8  i P    P      11 58 49.5 +0.2
SCO                                  pmax   pmax
      comp=Z,12nm,1.0s,mb4.9
SCO   Scoresbysund     57.82   8  i P    P      11 58 49.5 +0.2
      comp=Z,12nm,1.0s,mb4.9
KEV   Kevo             57.89 349  eP     P      11 58 48.6 -1.2
      comp=Z,7.3nm,0.8s,mb4.8
KEV                                  LR     LR
      comp=Z,1µm,19.0s,MS5.1
CD2   Chengdu          58.06 281   P     P      11 58 51.5  0.0
CD2                                  AP     pP     11 59 05.1 -0.1
CD2                                  S      S      12 06 45.3 -1.6
CD2                                  AMB    AMB
      comp=Z,30nm,0.7s,mb5.4
CD2                                  LR     LR
      comp=N,920nm,20.4s
CD2                                  LR     LR
      comp=Z,1µm,20.4s,MS5.0
JMIC  Jan Mayen        58.17   3     LR     LR     12 25 56.6
      comp=Z,548nm,18.5s,MS4.7,baz=338,slow=38
JMIC  Jan Mayen        58.17   3  eS     S      12 06 50.0 +2.2
JMIC                                 AMS    AMS    12 26 19.1
      comp=Z,496nm,17.9s,MS4.7
ARCES ARCESS Array B   58.28 350   P     P      11 58 49.9 -2.6
      comp=Z,20nm,0.7s,mb5.2,baz=18,slow=7.7,SNR=24
JFWS  Jewell Farm      58.35  60  eP     P      11 58 51.6 -1.8
JFWS                                 pmax   pmax
      comp=Z,45nm,0.8s,mb5.5
JFWS                                 MLR    MLR
      comp=Z,2µm,20.0s,MS5.2
JFWS  Jewell Farm      58.35  60  eP     P      11 58 51.6 -1.8
      comp=Z,45nm,0.8s,mb5.5
JFWS                                 LR     LR
      comp=Z,2µm,20.0s,MS5.2
WMQ   Urumqi           58.69 302   P     P      11 58 55.4 -0.3
WMQ                                  AP     pP     11 59 08.1 -1.3
WMQ                                  XP     sP     11 59 13.5 -1.6
WMQ                                  PCP    PcP    11 59 45.0  0.0
WMQ                                  PP     PP     12 01 07.0 -0.6
WMQ                                  S      S      12 06 54.4 -0.6
WMQ                                  SCS    ScS    12 08 37.6 +0.1
WMQ                                  AMB    AMB
      comp=Z,40nm,0.8s,mb5.5
WMQ                                  AMB    AMB
      comp=Z,340nm,6.0s
WMQ                                  LR     LR
      comp=N,3µm,19.4s,MS5.5
WMQ                                  LR     LR
      comp=E,2µm,20.2s,MS5.5
WMQ                                  LR     LR
      comp=Z,4µm,20.2s,MS5.6
TRO   Tromso           58.84 352  eP     P      11 58 53.5 -2.9
TRO                               eS     S      12 06 58.9 +2.3
TRO                                  AMS    AMS    12 25 21.2
      comp=Z,873nm,19.8s,MS4.9
WMOK  Wichita Mounta   58.96  72  eP     P      11 58 56.7 -1.1
WMOK                              e*PP   pP     11 59 08.7 -2.7
WMOK                                 pmax   pmax
      comp=Z,27nm,0.9s,mb5.3
WMOK                                 MLR    MLR
      comp=Z,1µm,19.0s,MS5.0
WMOK  Wichita Mounta   58.96  72  eP     P      11 58 56.7 -1.0
      comp=Z,27nm,0.9s,mb5.3
WMOK                              epP    pP     11 59 08.7 -2.7
WMOK                                 LR     LR
      comp=Z,1µm,19.0s,MS5.0
APA   Apatity          59.04 346⇑iP     P      11 58 55.0 -2.9
APA                               e             12 07 18.0
APA                                  pmax   pmax
      comp=Z,38nm,1.4s,mb5.2
GYA   Guiyang          59.36 275⇑iP     P      11 59 01.3 +0.7
GYA                                  AP     pP     11 59 13.8 -0.5
GYA                                  XP     sP     11 59 19.9 -0.1
GYA                                  PP     PP     12 01 13.6 -0.2
GYA                                  S      S      12 07 01.3 -2.6
GYA                                  AMB    AMB
      comp=Z,30nm,1.0s,mb5.3
GYA                                  AMB    AMB
      comp=Z,310nm,4.8s
GYA                                  LR     LR
      comp=N,680nm,18.3s,MS5.0
GYA                                  LR     LR
      comp=E,940nm,18.8s,MS5.0
GYA                                  LR     LR
      comp=Z,810nm,18.0s,MS4.9
MKAR  Makanchi Array   59.47 308  i P    P      11 58 59.0 -2.1
MKAR                                 pmax   pmax
      comp=Z,18nm,0.6s
MKAR  Makanchi Array   59.47 308   P     P      11 58 59.4 -1.7
      comp=Z,12nm,0.4s,mb5.2,baz=47,slow=7.0,SNR=56
MKAR                                 LR     LR     12 25 12.7
      comp=Z,2µm,20.4s,MS5.3,baz=18,slow=37
LTX   Lajitas          59.70  80  eP     P      11 59 01.6 -1.4
LTX                                  pmax   pmax
      comp=Z,19nm,1.0s,mb5.1
LTX                                  MLR    MLR
      comp=Z,1µm,20.0s,MS5.1
LTX   Lajitas          59.70  80  eP     P      11 59 01.6 -1.4
      comp=Z,19nm,1.0s,mb5.1
LTX                                  LR     LR
      comp=Z,1µm,20.0s,MS5.1
TXAR  Lajitas Array    59.71  80   P     P      11 59 02.3 -0.7
      comp=Z,6.5nm,0.8s,mb4.7,baz=298,slow=4.9,SNR=22
TXAR                                 LR     LR     12 24 55.0
      comp=Z,1µm,18.1s,MS5.1,baz=310,slow=36
SOKR  Solikamsk        60.46 331⇓iP     P      11 59 06.7 -1.0
SOKR                                 pmax   pmax
      comp=Z,40nm,1.0s,mb5.4
SCHQ  Schefferville    60.91  37   P     P      11 59 09.7 -1.1
      comp=Z,16nm,1.0s,mb5.1,baz=336,slow=6.9,SNR=13
SCHQ                                 LR     LR     12 27 00.7
      comp=Z,2µm,20.9s,MS5.2,baz=312,slow=38
SLM   Saint Louis      61.27  63  eP     P      11 59 13.1 -0.4
SVE   Sverdlovsk       61.36 327  eP     P      11 59 14.1 +0.3
SVE                                  pmax   pmax
      comp=Z,60nm,1.0s,mb5.7
SVE                                  MLR    MLR
      comp=N,2µm,18.0s,MS5.4
SVE                                  MLR    MLR
      comp=E,1µm,18.0s,MS5.4
SVE                                  MLR    MLR
      comp=Z,3µm,18.0s,MS5.5
FVM   French Village   61.62  64   P     P      11 59 14.2 -1.6
FVM                                  pmax   pmax
      comp=Z,33nm,1.1s,mb5.4
FVM   French Village   61.62  64  eP     P      11 59 13.9 -1.9
      comp=Z,33nm,1.1s,mb5.4
AAM   Ann Arbor        62.30  56   PFAKE        11 59 30.0  +10
AAM                                  LR     LR
      comp=Z,2µm,20.0s,MS5.2
ARU   Arti             62.38 328⇑iP     P      11 59 18.8 -1.8
ARU                               i      pP     11 59 34.6 +0.2
ARU                               e             11 59 54.7
ARU                               e             12 01 38.4
ARU                               ePPP   PPP    12 03 08.9 -1.3
ARU                               eS     S      12 07 39.6 -2.4
ARU                                  pmax   pmax
      comp=Z,60nm,0.8s,mb5.8
ARU                                  MLR    MLR
      comp=Z,2µm,20.0s,MS5.4
ARU                                  MLR    MLR
      comp=N,2µm,19.0s,MS5.3
ARU                                  MLR    MLR
      comp=E,1µm,20.0s,MS5.3
ARU   Arti             62.38 328  eP     P      11 59 18.9 -1.8
      comp=E,70nm,0.9s,mb5.8
ARU                                  LR     LR
      comp=Z,635nm,20.0s,MS4.8
HNR   Honiara          62.56 202   PFAKE        11 59 30.0 +7.6
HNR                                  LR     LR
      comp=Z,1µm,20.0s,MS5.1
QIZ   Qiongzhong       62.74 267   P     P      11 59 26.3 +2.7
QIZ                                  AP     pP     11 59 38.1 +0.7
QIZ                                  XP     sP     11 59 44.1 +1.1
QIZ                                  S      S      12 07 52.8 +5.8
QIZ                                  LR     LR
      comp=E,510nm,20.4s
QIZ                                  LR     LR
      comp=Z,640nm,19.0s,MS4.8
QIZ   Qiongzhong       62.74 267   PFAKE        11 59 40.0  +16
QIZ                                  LR     LR
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      comp=Z,712nm,20.0s,MS4.8
UALR  University of    62.76  68  eP     P      11 59 23.4 -0.1
      comp=Z,28nm,1.0s,mb5.3
KMI   Kunming          62.78 277   P     P      11 59 23.5 -0.3
KMI                                  AP     pP     11 59 34.8 -2.8
KMI                                  XP     sP     11 59 39.5 -3.7
KMI                                  PP     PP     12 01 42.3 -1.5
KMI                                  S      S      12 07 47.1 -0.3
KMI                                  XS            12 08 10.0
KMI                                  SKS    SKS    12 09 10.6 +2.4
KMI                                  SS     SS     12 11 52.5 -2.3
KMI                                  AMB    AMB
      comp=Z,270nm,7.8s
KMI                                  LR     LR
      comp=N,850nm,19.3s,MS5.0
KMI                                  LR     LR
      comp=E,630nm,16.6s,MS5.0
KMI                                  LR     LR
      comp=Z,890nm,22.8s
KMI   Kunming          62.78 277   P     P      11 59 23.5 -0.3
      comp=Z,0.3nm,7.8s
KMI                                  pP     pP     11 59 34.7 -2.9
KMI                                  sP     sP     11 59 39.5 -3.7
KMI                                  PP     PP     12 01 42.2 -1.6
KMI                                  S      S      12 07 47.1 -0.3
KMI                                  sS            12 08 10.0
KMI                                  SKS    SKS    12 09 10.6 +2.4
KMI                                  SS     SS     12 11 52.5 -2.3
KMI                                  LR     LR
      comp=Z,890nm,22.8s,MS4.9
PARMO Parma            62.92  65  eP     P      11 59 24.1 -0.5
NATX  Nacogdoches      63.51  72  eP     P      11 59 28.7 +0.2
NATX                                 LR     LR
      comp=Z,1µm,21.0s,MS5.1
HALT  Halls            63.69  65  eP     P      11 59 28.7 -0.9
WCI   Wyandotte Cave   63.76  61   PFAKE        11 59 40.0  +10
WCI                                  LR     LR
      comp=Z,2µm,20.0s,MS5.3
WVT   Waverly          64.39  64  eP     P      11 59 33.0 -1.1
WVT                                  pmax   pmax
      comp=Z,25nm,0.9s,mb5.2
WVT                                  MLR    MLR
      comp=Z,1µm,20.0s,MS5.2
WVT   Waverly          64.39  64  eP     P      11 59 33.0 -1.1
      comp=Z,25nm,0.9s,mb5.2
WVT                                  LR     LR
      comp=Z,1µm,20.0s,MS5.2
NSS   Namsos           64.40 354  eP     P      11 59 30.8 -2.8
NSS                                  AMb    AMB    11 59 36.2
      comp=Z,34nm,1.7s,mb5.1
ALLY  Alegheny Colle   64.60  55  eP     P      11 59 34.6 -0.7
OXF   Oxford           64.65  66  eP     P      11 59 34.2 -1.6
OXF                                  pmax   pmax
      comp=Z,277nm,1.1s,mb6.2
OXF                                  MLR    MLR
      comp=Z,858nm,20.0s,MS4.9
OXF   Oxford           64.65  66  eP     P      11 59 34.2 -1.6
      comp=Z,277nm,1.1s,mb6.2
OXF                                  LR     LR
      comp=Z,858nm,20.0s,MS4.9
GENY  Geneseo          64.97  52  eP     P      11 59 36.4 -1.3
PLAL  Pickwick Lake    65.08  65  eP     P      11 59 37.0 -1.6
PLAL                                 LR     LR
      comp=Z,1µm,19.0s,MS5.1
KAF   Kangasniemi      65.24 347  ep     P      11 59 37.1 -2.0
      comp=Z,20nm,1.0s,mb5.1,baz=15,slow=5.8
KAF   Kangasniemi      65.24 347  eP     P      11 59 37.1 -2.0
KAF                                  pmax   pmax
      comp=Z,20nm,1.0s,mb5.1
FRNY  Flat Rock        65.50  48   P     P      11 59 40.4 -0.6
TKM2  Tokmak 2         65.56 308   P     P      11 59 41.6 +0.1
      SNR=38
ULHL  Ulahol           65.74 308   P     P      11 59 45.0 +2.3
      SNR=21
NCB   Newcomb          65.84  49  eP     P      11 59 41.8 -1.5
      comp=Z,10nm,0.9s,mb4.8
USP   Ospenovka        65.85 309   P     P      11 59 43.0 -0.3
      SNR=54
FINES FINESS Array B   65.91 346   P     P      11 59 41.3 -2.1
      comp=Z,12nm,0.9s,mb5.0,baz=27,slow=8.5,SNR=25
FINES                                LR     LR     12 33 32.8
      comp=Z,1µm,18.1s,MS5.1,baz=25,slow=41
CHMS  Chumysh          65.92 309   P     P      11 59 44.0 +0.1
      SNR=13
KBK   Karagaybulak     66.08 309   P     P      11 59 45.0 +0.2
      SNR=26
FRU   Bishkek          66.11 309  i P    P      11 59 47.0 +2.0
FRU                               e      pP     12 00 04.0 +5.0
FRU                                  MLR    MLR
      comp=Z,2µm,20.0s,MS5.2
SWET  Sewanee          66.12  63  eP     P      11 59 44.3 -0.9
MCWV  Mont Chateau     66.20  56   PFAKE        12 00 00.0  +14
MCWV                                 LR     LR
      comp=Z,3µm,19.0s,MS5.5
BINY  Binghamton       66.30  52  eP     P      11 59 45.8 -0.5
      comp=Z,27nm,1.0s,mb5.2
AAK   Ala-Archa        66.32 309   P     P      11 59 46.5 +0.2
      SNR=23
AAK   Ala-Archa        66.32 309  eP     P      11 59 45.1 -1.3
AAK                                  pmax   pmax
      comp=Z,50nm,1.1s,mb5.5
AAK                                  MLR    MLR
      comp=Z,502nm,20.0s,MS4.7
AAK   Ala-Archa        66.32 309  eP     P      11 59 45.1 -1.3
      comp=Z,50nm,1.1s,mb5.5
AAK                                  LR     LR
      comp=Z,502nm,20.0s,MS4.7
KZA   Kyzart           66.36 308   P     P      11 59 47.2 +0.6
      SNR=28
PMG   Port Moresby     66.41 215   PFAKE        12 00 00.0  +13
PMG                                  LR     LR
      comp=Z,1µm,19.0s,MS5.2
TZTN  Tazewell         66.49  61  eP     P      11 59 45.0 -2.5
ACCN  Adirondack Com   66.55  50  eP     P      11 59 47.2 -0.6
LSA   Lhasa            66.61 289  eP     P      11 59 48.6 +0.2
LSA                                  pmax   pmax
      comp=Z,37nm,0.8s,mb5.5
LSA                                  MLR    MLR
      comp=Z,2µm,19.0s,MS5.3
LSA   Lhasa            66.61 289  eP     P      11 59 48.6 +0.2
      comp=Z,37nm,0.8s,mb5.5
LSA                                  LR     LR
      comp=Z,2µm,19.0s,MS5.3
UCH   Uchtor           66.61 309   P     P      11 59 51.0 +2.8
      SNR=21
PQI   Presque Isle     66.64  44   PFAKE        12 00 00.0  +12
PQI                                  LR     LR
      comp=Z,18µm,19.0s
EKS2  Erkin-Say        66.65 309   P     P      11 59 48.4  0.0
      SNR=33
CPCT  Cooper Cave      66.75  62  eP     P      11 59 47.7 -1.5
AML   Almayashu        67.09 309   P     P      11 59 51.8 +0.5
      SNR=40
LRAL  Lakeview Retre   67.10  66  eP     P      11 59 49.6 -1.8
      comp=Z,13nm,0.7s,mb5.1
LRAL                                 LR     LR
      comp=Z,818nm,20.0s,MS4.9
WVL   Waterville       67.53  46   PFAKE        12 00 10.0  +16
WVL                                  LR     LR
      comp=Z,12µm,20.0s,MS6.1
AB31  Akbulak array    67.62 322  i P    P      11 59 54.0 -0.4
AB31                                 pmax   pmax
      comp=Z,25nm,0.8s,mb5.3
BLA   Blacksburg       67.70  58  eP     P      11 59 54.0 -1.1
BLA                                  pmax   pmax
      comp=Z,13nm,0.6s,mb5.1
BLA                                  MLR    MLR
      comp=Z,2µm,20.0s,MS5.3
BLA   Blacksburg       67.70  58  eP     P      11 59 54.0 -1.1
      comp=Z,13nm,0.6s,mb5.1
BLA                                  LR     LR
      comp=Z,2µm,20.0s,MS5.3
KKAR  Karatay Array    67.89 312  i P    P      11 59 55.5 -0.7
KKAR                                 pmax   pmax
      comp=Z,27nm,0.8s,mb5.3
KSH   Kashi            67.91 306  eP     P      11 59 56.0 -0.4
KSH                               eAP    pP     12 00 09.0 -1.4
KSH                               eXP    sP     12 00 14.1 -1.6
KSH                               ePCP   PcP    12 00 22.3 -0.3
KSH                               ePP    PP     12 02 27.3 -1.2
KSH                               eSCP          12 04 21.3
KSH                               ePCS          12 04 26.3
KSH                               eS     S      12 08 48.1 -1.8
KSH                               eXS           12 09 10.1
KSH                               ePS    PS     12 09 18.3 -2.8
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KSH				*e*SS	SS	12 13 10.3	-3.4
KSH				AMB	AMB		
	comp=Z,500nm,3.7s						
KSH				LR	LR		
	comp=N,4µm,19.6s,MS5.8						
KSH				LR	LR		
	comp=E,3µm,15.3s,MS5.8						
NB2	**NORSAR Subarra**	**67.91**	**354**	P	**P**	**11 59 54.6**	**-1.4**
	comp=E,65nm,0.9s,mb5.7,baz=7.0,slow=6.2						
NB2	**NORSAR Subarra**	**67.91**	**354**	P	**P**	**11 59 54.6**	**-1.4**
	baz=7.2,slow=6.5						
NOA	**NORSAR Array B**	**67.91**	**354**	P	**P**	**11 59 54.6**	**-1.4**
	comp=E,41nm,0.8s,mb5.5,baz=8.3,slow=6.3,SNR=65						
NOA				LR	LR	12 34 17.4	
	comp=E,640nm,18.3s,MS4.9,baz=345,slow=40						
NAO01	**NORSAR Array S**	**68.13**	**354**	*e*P	**P**	**11 59 56.9**	**-0.5**
	comp=E,21nm,1.0s,mb5.1						
NAO01				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
HRV	**Harvard--Oak R**	**68.22**	**49**	PFAKE		12 00 10.0	+12
HRV				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
WES	**Weston**	**68.43**	**49**	PFAKE		12 00 10.0	+10
WES				LR	LR		
	comp=Z,3µm,22.0s,MS5.5						
CBN	**Corbin**	**68.58**	**56**	PFAKE		12 00 10.0	+9.5
CBN				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
VSU	**Vasula**	**68.66**	**345**	*e*P	**P**	**11 59 59.1**	**-1.6**
NANT	**Nan**	**68.69**	**274**	P	**P**	**12 00 02.0**	**+0.5**
BER	**Bergen**	**68.86**	**357**	AMS	AMS	12 41 34.2	
	comp=Z,584nm,17.5s,MS4.9						
TAOE	**Nuku Hiva Isla**	**69.03**	**137**	*e*P	**P**	**12 00 12.4**	**+8.7**
	comp=Z,2µm,34.0s						
TAOE				*e*LR	LR	12 20 53.1	
	comp=Z,7µm,23.1s,baz=340						
KKTK	**Khon Kaen**	**69.18**	**270**	P	**P**	**12 00 05.0**	**+0.4**
SHL	**Shillong**	**69.18**	**285**	*e*P	**P**	**12 00 03.0**	**-1.5**
KONO	**Kongsberg**	**69.40**	**355**	PFAKE		12 00 20.0	+15
KONO				LR	LR		
	comp=Z,1µm,21.0s,MS5.1						
JSC	**Jenkinsville**	**69.42**	**61**	P	**P**	**12 00 06.0**	**+0.2**
JSC	**Jenkinsville**	**69.42**	**61**	*e*P	**P**	**12 00 05.0**	**-0.8**
CHG	**Chiang Mai**	**69.78**	**275**	⇓P	**P**	**12 00 08.9**	**+0.6**
	comp=Z,18nm,0.8s,mb5.1						
OBN	**Obninsk**	**69.85**	**338**	*c i*P	**P**	**12 00 07.0**	**-1.1**
OBN				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.3						
OBN				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.6						
OBN	**Obninsk**	**69.85**	**338**	⇑*i*P	**P**	**12 00 07.1**	**-1.0**
OBN				LR	LR		
	comp=Z,3µm,17.0s,MS5.6						
CMAR	**Chiang Mai Arr**	**70.05**	**275**	P	**P**	**12 00 09.2**	**-0.6**
	comp=Z,11nm,0.8s,mb4.8,baz=26,slow=6.9,SNR=34						
CMAR				LR	LR	12 35 15.9	
	comp=Z,524nm,18.5s,MS4.8,baz=50,slow=40						
COW	**Cow Castle Cre**	**70.40**	**61**	*e*P	**P**	**12 00 12.0**	**+0.2**
NHSC	**New Hope**	**70.89**	**61**	PFAKE		12 00 30.0	+15
NHSC				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
GUN	**Gumba**	**71.06**	**291**	*e*P	**P**	**12 00 15.9**	**0.0**
	comp=Z,265nm,0.9s,mb6.2						
KKN	**Kakani**	**71.50**	**291**	*e*P	**P**	**12 00 18.4**	**-0.1**
	comp=Z,127nm,0.9s,mb5.9						
KKN	**Kakani**	**71.50**	**291**	*e*P	**P**	**12 00 18.4**	**-0.1**
KKN				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.5						
PKI	**Pulchoki**	**71.59**	**291**	*e*P	**P**	**12 00 19.0**	**0.0**
	comp=Z,164nm,1.0s,mb5.9						
PKI	**Pulchoki**	**71.59**	**291**	*e*P	**P**	**12 00 19.0**	**0.0**
PKI				pmax	pmax		
	comp=Z,82nm,1.0s,mb5.6						
GKN	**Gorkha**	**71.72**	**292**	*e*P	**P**	**12 00 19.4**	**-0.4**
	comp=Z,172nm,1.0s,mb5.9						
DMN	**Daman**	**71.74**	**291**	*e*P	**P**	**12 00 20.2**	**+0.3**
	comp=Z,92nm,0.8s,mb5.8						
KAC	**Achnashellach**	**71.78**	**3**	*e*P	**P**	**12 00 19.6**	**0.0**
KAC				AMb	AMB	12 00 22.1	
	comp=Z,62nm,1.5s,mb5.3						
KSB	**Sheil Bridge**	**72.06**	**3**	*e*P	**P**	**12 00 21.6**	**+0.3**
KSB				AMb	AMB	12 00 24.6	
	comp=Z,61nm,1.4s,mb5.3						
MNK	**Minsk**	**72.24**	**343**	*e*P	**P**	**12 00 20.0**	**-2.4**
KAR1	**Arisaig**	**72.34**	**3**	*e*P	**P**	**12 00 23.3**	**+0.3**
KAR1				AMb	AMB	12 00 26.2	
	comp=Z,94nm,1.5s,mb5.5						
KOLN	**Koldanda**	**72.50**	**292**	*e*P	**P**	**12 00 24.0**	**-0.4**
	comp=Z,71nm,0.9s,mb5.6						
MUD	**Monsted U’grnd**	**72.61**	**354**	⇓*e*P	**P**	**12 00 26.4**	**+2.0**
MUD				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.3						
MUD				MLR	MLR		
	comp=Z,630nm,18.0s,MS4.9						
MUD	**Monsted U’grnd**	**72.61**	**354**	⇓*e*P	**P**	**12 00 26.4**	**+2.0**
	comp=Z,43nm,1.1s,mb5.3						
MUD	**Monsted U’grnd**	**72.61**	**354**	⇓*i*P	**P**	**12 00 26.4**	**+2.0**
	comp=Z,43nm,1.1s,mb5.3						
	comp=Z,620nm,18.0s						
SDNR	**Sundarnagar**	**73.44**	**300**	*e*P	**P**	**12 00 30.0**	**+0.1**
PPT	**Papeete**	**73.44**	**149**	*e*S	S	12 09 54.8	+0.3
	comp=Z,1µm,26.8s						
PPT				*e*SS	SS	12 14 03.9	-36
	comp=Z,541nm,25.0s						
PPT				*e*LR	LR	12 22 31.4	
	comp=Z,2µm,25.2s,baz=343						
PPT	**Papeete**	**73.44**	**149**	LR	LR	12 24 51.4	
	comp=Z,1µm,21.0s,MS5.2,baz=316,slow=29						
BSD	**Bornholm Skovb**	**73.48**	**351**	*e*P	**P**	**12 00 30.4**	**+0.8**
BSD				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
BSD	**Bornholm Skovb**	**73.48**	**351**	*e*P	**P**	**12 00 30.4**	**+0.8**
	comp=Z,14nm,0.7s,mb5.0						
BSD	**Bornholm Skovb**	**73.48**	**351**	*i* P	**P**	**12 00 30.4**	**+0.8**
	comp=Z,14nm,0.7s,mb5.0						
SMLA	**Simla**	**73.61**	**299**	*i* P	**P**	**12 00 27.4**	**-3.5**
DWPF	**Disney**	**73.95**	**65**	PFAKE		12 00 40.0	+7.1
DWPF				LR	LR		
	comp=Z,890nm,19.0s,MS5.1						
ESK	**Eskdalemuir**	**74.02**	**2**	*e*P	**P**	**12 00 32.4**	**-0.3**
ESK				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2						
ESK				MLR	MLR		
	comp=Z,187nm,19.0s,MS4.4						
ESK	**Eskdalemuir**	**74.02**	**2**	*e*P	**P**	**12 00 32.4**	**-0.3**
	comp=Z,32nm,1.0s,mb5.2						
ESK				LR	LR		
	comp=Z,187nm,19.0s,MS4.4						
BWH	**Wardlaw**	**74.15**	**2**	*e*P	**P**	**12 00 34.7**	**+1.2**
BWH				AMb	AMB	12 00 35.2	
	comp=Z,38nm,1.0s,mb5.3						
RAR	**Rarotonga**	**74.17**	**160**	PFAKE		12 00 50.0	+16
RAR				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
BBH	**Bruntsheil**	**74.20**	**2**	*e*P	**P**	**12 00 35.0**	**+1.2**
BBH				AMb	AMB	12 00 36.1	
	comp=Z,65nm,1.2s,mb5.4						
BHH	**Howats Hill**	**74.24**	**2**	*e*P	**P**	**12 00 35.2**	**+1.2**
BHH				AMb	AMB	12 00 36.2	
	comp=Z,45nm,1.2s,mb5.3						
BBO1	**Bothel**	**74.60**	**2**	*e*P	**P**	**12 00 37.2**	**+1.2**
BBO1				AMb	AMB	12 00 38.4	
	comp=Z,54nm,1.1s,mb5.4						
BSEG	**Bad Segeberg**	**75.04**	**353**	*e*P	**P**	**12 00 39.2**	**+0.6**
BSEG				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
KAKA	**Kakadu**	**75.54**	**228**	⇑*i*P	**P**	**12 00 41.6**	**-0.7**
	comp=Z,24nm,0.8s,mb5.2						
KAKA				*i* pP	pP	12 00 58.4	+2.0
AKASG	**Malin Array Be**	**75.58**	**341**	P	**P**	**12 00 40.4**	**-1.4**
	comp=Z,6.3nm,0.4s,mb4.9,baz=22,slow=5.9,SNR=40						
DCN	**Croghan**	**75.86**	**4**	*e*P	**P**	**12 00 41.1**	**-2.2**
DLF	**Lyons Farm**	**75.94**	**4**	*e*P	**P**	**12 00 40.9**	**-2.9**
DSB	**Dublin**	**76.00**	**4**	*e*P	**P**	**12 00 43.8**	**-0.3**
	comp=Z,15nm,0.8s,mb5.0						
CTA	**Charters Tower**	**76.63**	**212**	*e*P	**P**	**12 00 48.0**	**-0.4**
	comp=Z,7.7nm,0.9s,mb4.6						
CTA	**Charters Tower**	**76.63**	**212**	*e*P	**P**	**12 00 48.0**	**-0.4**
CTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CTAO	**Charters Tower**	**76.63**	**212**	PFAKE		12 01 00.0	+12
CTAO				LR	LR		
	comp=Z,734nm,20.0s,MS5.0						
CLZ	**Clausthal**	**77.12**	**353**	*e*P	**P**	**12 00 51.1**	**+0.6**
CLZ				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.1						
CLZ	**Clausthal**	**77.12**	**353**	*e*P	**P**	**12 00 51.1**	**+0.6**
	comp=Z,36nm,1.3s,mb5.1						
GOF	**Gofitskoye**	**77.19**	**330**	⇑*i*P	**P**	**12 00 50.9**	**-0.1**
GOF				*i*	pP	12 01 06.7	+1.5
GOF				pmax	pmax		
	comp=Z,90nm,1.3s,mb5.5						
WTSB	**Winterswijk**	**77.22**	**355**	*e*P	**P**	**12 00 52.4**	**+1.4**
	comp=Z,36nm,1.4s,mb5.1						
LVV	**L’vov**	**77.41**	**344**	*e*P	**P**	**12 00 53.0**	**+0.9**
CLL	**Collm**	**77.42**	**351**	⇓*i*P	**P**	**12 00 52.6**	**+0.4**
	comp=Z,10.0nm,1.0s,mb4.7						
CLL				*e*pP	pP	12 01 07.0	+0.6
CLL				LR	LR		
	comp=Z,1µm,17.8s,MS5.2						
CLL	**Collm**	**77.42**	**351**	⇓P	**P**	**12 00 52.6**	**+0.4**
	comp=Z,logA/T=1.0,mb4.7						
CLL				*e**PP	pP	12 01 07.0	+0.6
CLL				*e*SS	SS	12 15 59.0	+19
MAK	**Makhachkala**	**77.56**	**326**	*e*P	**P**	**12 01 03.0**	**+10**
MAK				MLR	MLR		
	comp=N,6µm,18.0s,MS6.0						
MAK				MLR	MLR		
	comp=E,1µm,18.0s,MS6.0						
MAK				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.6						
OJC	**Ojcow**	**77.69**	**347**	*e*P	**P**	**12 00 54.8**	**+1.1**
BRG	**Berggiesshubel**	**77.76**	**351**	⇑*i*P	**P**	**12 00 54.9**	**+0.8**
BRG				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
BRG				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.8						
BRG				MLR	MLR		
	comp=N,945nm,19.1s,MS5.3						
BRG				MLR	MLR		
	comp=E,1µm,19.1s,MS5.3						
BRG				MLR	MLR		
	comp=Z,1µm,18.5s,MS5.2						
BRG	**Berggiesshubel**	**77.76**	**351**	⇑*i*P	**P**	**12 00 54.9**	**+0.9**
	comp=Z,17nm,1.2s,mb4.9						
BRG				*e*		12 01 17.1	
BRG				LR	LR		
	comp=Z,1µm,18.5s,MS5.2						
KWP	**Kalwaria**	**77.81**	**345**	*e*P	**P**	**12 00 56.3**	**+2.0**
UPC	**Upice**	**77.90**	**349**	*e*P	**P**	**12 00 55.9**	**+1.1**
DPC	**Dobruska-Polom**	**78.02**	**349**	*e*P	**P**	**12 00 55.8**	**+0.4**
DPC				AMS	AMS	12 40 00.0	
	comp=Z,900nm,19.8s						
PVCC	**Panska Ves**	**78.04**	**350**	AMS	AMS	12 38 40.0	
	comp=Z,1µm,19.5s						
MOX	**Moxa**	**78.21**	**352**	*e*P	**P**	**12 00 57.7**	**+1.2**
MOX				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
MOX				MLR	MLR		
	comp=Z,900nm,20.0s,MS5.1						
MOX	**Moxa**	**78.21**	**352**	*e*P	**P**	**12 00 57.7**	**+1.2**
	comp=Z,24nm,1.4s,mb4.9						
MOX				LR	LR		
	comp=Z,900nm,20.0s,MS5.1						
MOX	**Moxa**	**78.21**	**352**	*i* P	**P**	**12 00 57.7**	**+1.2**
	comp=Z,logA/T=1.2,mb4.9						
MOX				L		12 41 33.0	
KIV	**Kislovodsk**	**78.29**	**330**	*e*P	**P**	**12 00 56.6**	**-0.5**
KIV				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
KIV				MLR	MLR		
	comp=Z,269nm,20.0s,MS4.6						
KIV	**Kislovodsk**	**78.29**	**330**	*e*P	**P**	**12 00 56.6**	**-0.5**
	comp=Z,34nm,1.1s,mb5.2						
KIV				LR	LR		
	comp=Z,269nm,20.0s,MS4.6						
OKC	**Ostrava-Krasne**	**78.29**	**348**	*e*P	**P**	**12 00 58.4**	**+1.4**
OKC				AMS	AMS	12 40 10.0	
	comp=Z,1µm,18.1s						
HGN	**Heimansgroeve**	**78.46**	**356**	*e*P	**P**	**12 00 58.3**	**+0.5**
	comp=Z,34nm,0.9s,mb5.3						
NKC	**Novy Kostel**	**78.54**	**352**	*e*P	**P**	**12 00 59.4**	**+1.1**
NKC				AMS	AMS	12 41 30.0	
	comp=Z,1µm,18.6s						
KOLS	**Kolonicke sedl**	**78.56**	**345**	*e*P	**P**	**12 00 59.5**	**+1.0**
PRU	**Pruhonice**	**78.58**	**350**	*e*P	**P**	**12 01 00.1**	**+1.6**
PRU				AMS	AMS	12 38 50.0	
	comp=Z,1µm,19.8s						
TNS	**Taunus Mts**	**78.86**	**354**	*e*P	**P**	**12 01 00.4**	**+0.3**
TNS				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
TNS	**Taunus Mts**	**78.86**	**354**	*e*P	**P**	**12 01 00.4**	**+0.3**
	comp=Z,17nm,0.9s,mb5.0						
TBI	**Tubuai**	**78.90**	**151**	*e*S	S	12 10 58.3	+4.3
	comp=Z,448nm,30.5s						
TBI				*e*LR	LR	12 25 07.5	
	comp=Z,3µm,23.0s,baz=336						
ZEI	**Tsey**	**78.96**	**328**	*e*P	**P**	**12 01 00.6**	**-0.2**
ZEI				*i* *PP	pP	12 01 22.1	+7.1
ZEI				*i*		12 03 57.5	
ZEI				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.2						
GIVF	**Givet**	**79.17**	**357**	*e*P	**P**	**12 01 02.3**	**+0.5**
	comp=Z,38nm,1.1s,mb5.0						
GIVF	**Givet**	**79.17**	**357**	*e*P	**P**	**12 01 02.3**	**+0.5**
GIVF				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
KIS	**Kishinev**	**79.18**	**340**	*e*P	**P**	**12 00 56.0**	**-5.9**
KIS				*e*		12 04 00.0	
KIS				*e*		12 10 57.0	
KIS				MLR	MLR		
	comp=N,2µm,17.0s,MS5.5						
KIS				MLR	MLR		
	comp=E,600nm,17.0s,MS5.5						
KIS				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.6						
KIS				MLR	MLR		
	comp=Z,2µm,17.0s						
GRA1	**Grafenberg Arr**	**79.19**	**352**	*e*P	**P**	**12 01 02.6**	**+0.7**
	comp=Z,25nm,0.9s,mb5.1						
GRA1				LR	LR		
	comp=Z,700nm,18.1s,MS5.0						
GRF	**Grafenberg Arr**	**79.19**	**352**	*e*P	**P**	**12 01 02.6**	**+0.7**
GRF				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
GRF				MLR	MLR		
	comp=Z,700nm,18.1s,MS5.0						
GRF	**Grafenberg Arr**	**79.19**	**352**	*e*P	**P**	**12 01 02.6**	**+0.7**
	comp=Z,25nm,0.9s,mb5.1						
GRF				LR	LR		
	comp=Z,700nm,18.1s,MS5.0						
BAIF	**Baives**	**79.23**	**357**	*e*P	**P**	**12 01 03.0**	**+0.9**
	comp=Z,96nm,1.2s,mb5.3						
BAIF	**Baives**	**79.23**	**357**	*e*P	**P**	**12 01 03.0**	**+0.9**
BAIF				pmax	pmax		
	comp=Z,48nm,1.2s,mb5.3						
KECS	**Kecovo**	**79.28**	**346**	*e*P	**P**	**12 01 03.9**	**+1.5**
VYHS	**Vyhne**	**79.51**	**347**	*e*P	**P**	**12 01 03.7**	**0.0**
KHC	**Kasperske Hory**	**79.52**	**351**	*e*P	**P**	**12 01 04.6**	**+0.9**
KHC				*e*x	x	12 01 09.0	
KHC				AMS	AMS	12 40 20.0	
	comp=Z,1µm,19.6s						
SOC	**Sochi**	**79.55**	**332**	*e*P	**P**	**12 01 02.0**	**-2.0**
SOC				*e*PPP	PPP	12 05 53.9	-3.2
SOC				*e*S	S	12 11 06.4	+6.0
SOC				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
SOC				pmax	pmax		
	comp=N,24nm,0.9s						
SOC				pmax	pmax		
	comp=E,15nm,0.8s						
SOC				MLR	MLR		
	comp=N,1µm,18.0s,MS5.2						
SOC				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.5						
SOC				MLR	MLR		
	comp=E,568nm,22.0s,MS5.2						
BBSR	**BB Station**	**79.56**	**51**	PFAKE		12 01 20.0	+16
BBSR				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
TI2	**Plekhanov**	**79.60**	**327**	*i* P	**P**	**12 00 55.8**	**-8.5**
TI2				MLR	MLR		
	comp=N,2µm,18.0s,MS5.5						
TI2				MLR	MLR		
	comp=E,1µm,18.0s,MS5.5						
TI2				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.5						
SMOL	**Smolenice**	**79.68**	**348**	*e*P	**P**	**12 01 06.1**	**+1.5**
GEC2	**GERESS Array S**	**79.79**	**351**	*e*P	**P**	**12 01 05.4**	**+0.2**
GEC2				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6						
GEC2	**GERESS Array S**	**79.79**	**351**	*e*P	**P**	**12 01 05.4**	**+0.2**
	comp=Z,11nm,1.4s,mb4.6						
GERES	**GERESS Array B**	**79.79**	**351**	P	**P**	**12 01 04.1**	**-1.1**
	comp=Z,3.7nm,0.7s,mb4.4,baz=18,slow=4.2,SNR=20						
GERES				LR	LR	12 39 54.3	
	comp=Z,1µm,20.8s,MS5.3,baz=16,slow=38						
SIM	**Simferopol’**	**79.85**	**336**	P	**P**	**12 00 59.0**	**-6.6**
PSZ	**Piszkesteto**	**79.92**	**346**	*e*P	**P**	**12 01 05.7**	**-0.2**
PSZ				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
PSZ	**Piszkesteto**	**79.92**	**346**	*e*P	**P**	**12 01 05.7**	**-0.2**
	comp=Z,34nm,1.2s,mb5.2						
ZST	**Bratislava**	**80.04**	**348**	*e*P	**P**	**12 01 08.8**	**+2.3**
FLN	**La Foliniere**	**80.61**	**0**	*e*P	**P**	**12 01 09.6**	**+0.1**
	comp=Z,72nm,1.0s,mb5.2						
FLN				*e*R			
	comp=Z,1µm,20.2s						
FLN	**La Foliniere**	**80.61**	**0**	*e*P	**P**	**12 01 09.6**	**+0.1**
FLN				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
FLN				MLR	MLR		
	comp=Z,1µm,20.3s,MS5.2						
CDF	**Champ du Feu**	**80.74**	**355**	*e*P	**P**	**12 01 10.7**	**+0.5**
BFO	**Black Forest**	**80.76**	**354**	*e*P	**P**	**12 01 10.6**	**+0.3**
BFO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
BFO	**Black Forest**	**80.76**	**354**	*e*P	**P**	**12 01 10.6**	**+0.3**
	comp=Z,7.0nm,1.0s,mb4.5						
MEZF	**Maizieres J’vi**	**80.76**	**356**	*e*P	**P**	**12 01 10.9**	**+0.6**
LDF	**La Druitiere**	**80.78**	**360**	*e*P	**P**	**12 01 10.6**	**+0.2**
	comp=Z,48nm,0.9s,mb5.1						
LDF	**La Druitiere**	**80.78**	**360**	*e*P	**P**	**12 01 10.6**	**+0.2**
LDF				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
GRR	**Gorron**	**80.98**	**0**	*e*P	**P**	**12 01 12.0**	**+0.5**
	comp=Z,64nm,1.0s,mb5.2						
GRR	**Gorron**	**80.98**	**0**	*e*P	**P**	**12 01 12.0**	**+0.5**
GRR				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2						
ROSF	**Rostrenen**	**81.00**	**2**	*e*P	**P**	**12 01 12.2**	**+0.6**
	comp=Z,81nm,1.2s,mb5.2						
ROSF	**Rostrenen**	**81.00**	**2**	*e*P	**P**	**12 01 12.2**	**+0.6**
ROSF				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.2						
GNI	**Garni**	**81.01**	**327**	*e*P	**P**	**12 01 13.0**	**+1.2**
GNI				pmax	pmax		
	comp=Z,14nm,1.2s						
GNI	**Garni**	**81.01**	**327**	LR	LR	12 40 24.0	
	comp=Z,522nm,21.4s,MS4.9,baz=26,slow=38						
GNI	**Garni**	**81.01**	**327**	*e*P	**P**	**12 01 13.1**	**+1.3**
GNI				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
WRAB	**Tennant Creek**	**81.04**	**223**	P	**P**	**12 01 13.9**	**+1.5**
WRAB				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
WRAB	**Tennant Creek**	**81.04**	**223**	*e*P	**P**	**12 01 11.3**	**-1.1**
	comp=Z,20nm,1.0s,mb5.0						
WRAB				LR	LR		
	comp=Z,427nm,21.0s,MS4.8						
WB2	**Warramunga Arr**	**81.05**	**223**	*e*P	**P**	**12 01 11.7**	**-0.7**
WB2				*e*pP	pP	12 01 28.0	+1.3
WRA	**Warramunga Arr**	**81.06**	**223**	P	**P**	**12 01 11.5**	**-0.9**
	comp=Z,3.5nm,0.7s,mb4.4,baz=32,slow=6.1,SNR=28						
SGMF	**Saint Gilles**	**81.10**	**1**	*e*P	**P**	**12 01 12.7**	**+0.6**
	comp=Z,78nm,1.0s,mb5.3						
SGMF	**Saint Gilles**	**81.10**	**1**	*e*P	**P**	**12 01 12.7**	**+0.6**
SGMF				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
ARSA	**Arzberg**	**81.16**	**349**	⇑*i*P	**P**	**12 01 14.7**	**+2.2**
	comp=Z,18nm,1.2s,mb4.9						
HAU	**Haudompre**	**81.19**	**355**	*e*P	**P**	**12 01 13.0**	**+0.4**
HAU				*e*R			
	comp=Z,1µm,20.4s						
MLR	**Muntele Rosu**	**81.21**	**342**	LR	LR	12 40 50.5	
	comp=Z,2µm,19.7s,MS5.6,baz=23,slow=38						
HINF	**Hinteralfeld**	**81.36**	**355**	*e*P	**P**	**12 01 13.7**	**+0.2**
QUIF	**Quistinic**	**81.42**	**2**	*e*P	**P**	**12 01 14.5**	**+0.7**
	comp=Z,55nm,1.2s,mb5.0						
QUIF	**Quistinic**	**81.42**	**2**	*e*P	**P**	**12 01 14.5**	**+0.7**
QUIF				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
MOTA	**Moosalm**	**81.53**	**352**	⇓*i*P	**P**	**12 01 16.1**	**+1.7**
	comp=Z,22nm,1.1s,mb5.0						
MOTA	**Moosalm**	**81.53**	**352**	⇓*i*P	**P**	**12 01 16.1**	**+1.7**
MOTA				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0						
WTTA	**Wattenberg**	**81.56**	**352**	⇑*i*P	**P**	**12 01 15.8**	**+1.2**
	comp=Z,28nm,1.0s,mb5.2						
WTTA	**Wattenberg**	**81.56**	**352**	⇑*i*P	**P**	**12 01 15.8**	**+1.2**
WTTA				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
KBA	**Koelnbreinsper**	**81.58**	**351**	⇓*i*P	**P**	**12 01 15.3**	**+0.7**
	comp=Z,50nm,0.9s,mb5.5						
KBA	**Koelnbreinsper**	**81.58**	**351**	⇓*i*P	**P**	**12 01 15.3**	**+0.7**
KBA				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.4						
SQTA	**Sankt Quirin**	**81.64**	**352**	⇑*i*P	**P**	**12 01 17.0**	**+2.0**
	comp=Z,15nm,1.0s,mb4.9						
SQTA	**Sankt Quirin**	**81.64**	**352**	⇑*i*P	**P**	**12 01 17.0**	**+2.0**
SQTA				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
DAVA	**Damuels**	**81.68**	**353**	⇑*i*P	**P**	**12 01 16.0**	**+0.8**
	comp=Z,11nm,1.1s,mb4.7						
GROS	**Grobnik**	**81.94**	**349**	*e*P	**P**	**12 01 17.6**	**+1.1**
OBKA	**Obir**	**82.01**	**350**	⇑*i*P	**P**	**12 01 16.7**	**-0.2**
	comp=Z,21nm,0.9s,mb5.1						
LOR	**Lormes**	**82.03**	**357**	*e*P	**P**	**12 01 17.7**	**+0.7**
	comp=Z,14nm,0.9s,mb4.6						
LOR				*e*R			
	comp=Z,930nm,21.0s						
LOR	**Lormes**	**82.03**	**357**	*e*P	**P**	**12 01 17.7**	**+0.7**
LOR				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
LOR				MLR	MLR		
	comp=Z,930nm,21.0s,MS5.1						
SSF	**Saint Saulge**	**82.25**	**357**	*e*P	**P**	**12 01 18.8**	**+0.7**
SSF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**82.25**	**357**	*e*P	**P**	**12 01 18.8**	**+0.7**
	comp=Z,11nm,1.0s,mb4.8						
AVF	**Avril sur Loir**	**82.53**	**357**	*e*P	**P**	**12 01 20.1**	**+0.6**
	comp=Z,33nm,1.1s,mb5.0						
AVF	**Avril sur Loir**	**82.53**	**357**	*e*P	**P**	**12 01 20.1**	**+0.6**
AVF				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
CABF	**La Chapelle**	**82.60**	**355**	*e*P	**P**	**12 01 20.9**	**+1.0**
SMF	**Signal de Mont**	**82.66**	**357**	*e*P	**P**	**12 01 20.9**	**+0.7**
	comp=Z,58nm,1.1s,mb5.2						
SMF	**Signal de Mont**	**82.66**	**357**	*e*P	**P**	**12 01 20.9**	**+0.7**
SMF				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.2						
MFF	**Saint Martin d**	**82.77**	**360**	*e*P	**P**	**12 01 21.6**	**+0.8**
	comp=Z,36nm,1.0s,mb5.1						
MFF	**Saint Martin d**	**82.77**	**360**	*e*P	**P**	**12 01 21.6**	**+0.8**
MFF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
BGF	**Bois d’Agland**	**82.77**	**358**	*e*P	**P**	**12 01 21.4**	**+0.6**
	comp=Z,26nm,0.8s,mb5.0						
BGF	**Bois d’Agland**	**82.77**	**358**	*e*P	**P**	**12 01 21.4**	**+0.6**
BGF				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
CEY	**Cerknica**	**82.78**	**350**	*e*P	**P**	**12 01 22.3**	**+1.4**
BOJS	**Bojanci**	**82.92**	**349**	*e*P	**P**	**12 01 23.3**	**+1.7**
TCF	**Toulx Ste Croi**	**83.06**	**358**	*e*P	**P**	**12 01 22.9**	**+0.7**
	comp=Z,24nm,1.0s,mb4.9						
TCF	**Toulx Ste Croi**	**83.06**	**358**	*e*P	**P**	**12 01 22.9**	**+0.7**
TCF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
SVIS	**Svilajnac**	**83.24**	**345**	*e*P	**P**	**12 01 23.7**	**+0.5**
HYB	**Hyderabad**	**83.40**	**289**	*e*P	**P**	**12 01 24.5**	**0.0**
HYB	**Hyderabad**	**83.40**	**289**	*i* P	**P**	**12 01 24.5**	**0.0**
FITZ	**Fitzroy Crossi**	**83.45**	**231**	*e*P	**P**	**12 01 24.8**	**0.0**
	comp=Z,17nm,0.9s,mb5.1						
FITZ				*e*pP	pP	12 01 39.5	+0.4
LPL	**La Plagne**	**83.66**	**355**	*e*P	**P**	**12 01 27.2**	**+2.0**
LPG	**La Plagne**	**83.67**	**355**	*e*P	**P**	**12 01 27.5**	**+2.2**
	comp=Z,26nm,1.0s,mb5.0						
LPG	**La Plagne**	**83.67**	**355**	*e*P	**P**	**12 01 27.5**	**+2.2**
LPG				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
BBLS	**Bajina Basta -**	**83.95**	**346**	⇓*i*P	**P**	**12 01 26.9**	**+0.2**
RJF	**Les Rejaudoux**	**84.05**	**359**	*e*P	**P**	**12 01 28.0**	**+0.8**
RJF				*e*R			
	comp=Z,1µm,21.5s						
BNI	**Bardonecchia**	**84.12**	**355**	*e*P	**P**	**12 01 28.1**	**+0.5**
BNI				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.2						

BNI	Bardonecchia	84.12	355	eP	P	12 01 28.1	+0.5
	comp=Z,18nm,0.9s,mb5.2						
ORIF	Oris-en-Rattie	84.30	356	eP	P	12 01 30.2	+1.7
	comp=Z,29nm,1.0s,mb5.1						
ORIF				eR			
	comp=Z,783nm,23.0s						
VIVF	Saint-Julien-l	84.41	356	eP	P	12 01 30.3	+1.3
	comp=Z,20nm,1.0s,mb4.9						
VIVF	Saint-Julien-l	84.41	356	eP	P	12 01 30.3	+1.3
VIVF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
CAF	Calviac	84.42	358	eP	P	12 01 30.4	+1.3
	comp=Z,61nm,1.2s,mb5.3						
CAF	Calviac	84.42	358	eP	P	12 01 30.4	+1.3
CAF				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.3						
LFF	La Frestale	84.43	359	eP	P	12 01 30.2	+1.1
MBDF	Montbardon	84.44	355	eP	P	12 01 30.8	+1.6
	comp=Z,41nm,1.1s,mb5.2						
MBDF	Montbardon	84.44	355	eP	P	12 01 30.8	+1.6
MBDF				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.2						
BR131	Keskin Array S	84.85	334	eP	P	12 01 31.2	-0.2
	comp=Z,11nm,0.7s,mb5.1						
BR131				LR	LR		
	comp=Z,642nm,21.0s,MS5.0						
SMRF	Simiane la Rot	85.25	356	eP	P	12 01 35.2	+2.0
	comp=Z,43nm,0.9s,mb5.3						
SBF	Sospel	85.26	354	eP	P	12 01 34.1	+0.8
	comp=Z,71nm,0.9s,mb5.5						
SBF	Sospel	85.26	354	eP	P	12 01 34.1	+0.8
SBF				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.5						
POO	Poona	85.29	294	ex	x	12 01 41.0	
SKO	Skopje	85.46	344	eP	P	12 01 36.5	+2.2
JTS	JuntasAbangare	85.49	79	PFAKE		12 01 50.0	+15
JTS				LR	LR		
	comp=Z,90nm,20.0s,MS4.2						
FRF	La Foret Royal	85.61	355	eP	P	12 01 36.0	+1.0
LMR	La Mourre	85.84	355	eP	P	12 01 37.4	+1.3
	comp=Z,80nm,1.3s,mb5.5						
LMR	La Mourre	85.84	355	eP	P	12 01 37.4	+1.3
LMR				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.5						
MTLF	Montolieu	86.00	358	eP	P	12 01 38.3	+1.4
	comp=Z,56nm,1.3s,mb5.3						
MTLF	Montolieu	86.00	358	eP	P	12 01 38.3	+1.4
MTLF				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.3						
AQU	L'Aquila	86.24	350	P	P	12 01 32.9	-5.2
AQU	L'Aquila	86.24	350	P	P	12 01 39.8	+1.7
PGF	Pioggiola	86.46	353	eP	P	12 01 40.3	+1.1
	comp=Z,74nm,1.0s,mb5.6						
PGF	Pioggiola	86.46	353	eP	P	12 01 40.3	+1.1
PGF				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.6						
ETSF	Etsaut	86.47	0	eP	P	12 01 39.8	+0.6
	comp=Z,24nm,0.8s,mb5.2						
ETSF	Etsaut	86.47	0	eP	P	12 01 39.8	+0.6
ETSF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.2						
PVRL	Vila Real	87.87	6	eP	P	12 01 48.3	+2.2
	comp=Z,23nm,1.3s,mb5.2						
PVRL				e-		12 01 53.4	
PVIS	Viseu	88.42	6	eP	P	12 01 50.1	+1.4
	comp=Z,17nm,1.4s,mb5.1						
PVIS				e-		12 01 55.5	
MTE	Manteigas	88.75	5	eP	P	12 01 51.0	+0.7
	comp=Z,27nm,1.5s,mb5.4						
MTE				e-		12 01 56.9	
MTE	Manteigas	88.75	5	eP	P	12 01 51.2	+0.9
	comp=Z,9.5nm,0.8s,mb5.2						
TIP	Timpagrande	88.94	347	eP	P	12 01 51.9	+0.7
MBWA	Marble Bar	88.98	234	PFAKE		12 02 00.0	+8.2
MBWA				LR	LR		
	comp=Z,691nm,19.0s,MS5.1						
STKA	Stephens Creek	89.08	212	P	P	12 01 51.9	-0.2
	comp=Z,3.7nm,0.8s,mb4.8,baz=16,slow=9.1,SNR=4.6						
STKA				LR	LR	12 40 13.1	
	comp=Z,1µm,18.7s,MS5.4,baz=24,slow=34						
PCBR	Castelo Branco	89.31	5	eP	P	12 01 53.9	+0.9
PCBR				e-		12 01 59.7	
ESDC	Sonseca Array	89.64	3	P	P	12 01 52.6	-1.8
	comp=Z,1.6nm,0.7s,mb4.4,baz=354,slow=6.2,SNR=6.3						
PALK	Pallekele	89.97	281	P	P	12 01 54.7	-1.9
	comp=Z,22nm,0.6s,mb5.7						
PALK				LR	LR		
	comp=Z,146nm,19.0s,MS4.4						
SJG	San Juan	90.41	60	PFAKE		12 02 10.0	+11
SJG				LR	LR		
	comp=Z,868nm,19.0s,MS5.2						
PAYG	Puerto Ayora	90.59	90	PFAKE		12 02 10.0	+10
PAYG				LR	LR		
	comp=Z,583nm,21.0s,MS5.0						
SNZO	South Karori	92.04	184	PFAKE		12 02 20.0	+14
SNZO				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
SDV	Santo Domingo	95.29	69	P	P	12 02 22.3	+1.3
	comp=Z,3.6nm,0.6s,mb5.0,baz=64,slow=5.2,SNR=6.2						
SDV	Santo Domingo	95.29	69	P	P	12 02 22.3	+1.3
SDV				LR	LR		
	comp=Z,618nm,20.0s,MS5.1						
ROSC	El Rosal	96.26	74	LR	LR	12 51 00.2	
	comp=Z,200nm,18.6s,MS4.6,baz=233,slow=39						
OTAV	Otavalo	97.33	81	PFAKE		12 02 40.0	+10
OTAV				LR	LR		
	comp=Z,264nm,22.0s,MS4.7						
TAU	Tasmania Unive	97.67	203	PFAKE		12 02 40.0	+8.8
TAU				LR	LR		
	comp=Z,269nm,19.0s,MS4.8						
NWAO	Narrogin (SRO)	99.96	229	PFAKE		12 02 50.0	+8.1
NWAO				LR	LR		
	comp=Z,546nm,19.0s,MS5.1						
SAML	Samuel	113.90	74	PFAKE		12 07 50.0	+15
SAML				LR	LR		
	comp=Z,458nm,20.0s,MS5.1						
LPAZ	La Paz	116.48	83	PFAKE		12 07 50.0	+10
LPAZ				LR	LR		
	comp=Z,409nm,19.0s,MS5.1						
SIV	San Ignacio	120.65	77	PKP	PKPdf	12 07 49.2	+1.4
	comp=Z,1.1nm,0.5s,baz=340,slow=6.1,SNR=7.2						
DBIC	Dimbokro	122.42	5	PKP	PKPdf	12 07 51.0	-0.3
	comp=Z,2.8nm,0.5s,baz=22,slow=5.4,SNR=5.9						
DBIC	Dimbokro	122.42	5	PKP	PKPdf	12 07 51.0	-0.3
DBIC				LR	LR		
	comp=Z,861nm,19.0s,MS5.4						
MBAR	Mbarara	123.28	322	PFAKE		12 08 10.0	+17
MBAR				LR	LR		
	comp=Z,168nm,20.0s,MS4.7						
RCBR	Riachuelo	126.14	46	PFAKE		12 08 10.0	+12
RCBR				LR	LR		
	comp=Z,629nm,22.0s,MS5.2						
CFAA	Coronel Fontan	127.41	96	PKP	PKPdf	12 08 01.2	+0.8
	comp=Z,0.2nm,0.4s,baz=326,slow=3.6,SNR=2.0						
CASY	Casey	128.14	209	PKP	PKPdf	12 08 01.9	+1.0
CASY				LR	LR		
	comp=Z,944nm,20.0s,MS5.5						
BDFB	Brasilia	128.17	65	PKP	PKPdf	12 08 03.8	+1.6
	comp=Z,2.6nm,0.7s,baz=297,slow=6.3,SNR=3.4						
VNDA	Vanda	128.74	185	PKIKP	PKPdf	12 08 03.4	+1.5
VNDA				MLR	MLR		
	comp=Z,505nm,20.0s						
SBA	Scott Base	128.84	183	PFAKE		12 08 10.0	+8.0
SBA				LR	LR		
	comp=Z,464nm,19.0s,MS5.2						
CPUP	Villa Florida	130.64	82	PKP	PKPdf	12 08 09.4	+2.7
	comp=Z,2.6nm,0.9s,baz=99,slow=1.2,SNR=3.9						
CPUP	Villa Florida	130.64	82	PKP	PKPdf	12 08 09.4	+2.7
CPUP				LR	LR		
	comp=Z,609nm,21.0s,MS5.3						
PLCA	Paso Flores	131.82	106	PKP	PKPdf	12 08 11.8	+3.2
	comp=Z,1.6nm,0.6s,baz=350,slow=1.2,SNR=6.0						
PLCA	Paso Flores	131.82	106	PKP	PKPdf	12 08 11.8	+3.2
PLCA				LR	LR		
	comp=Z,599nm,20.0s,MS5.3						
TRQA	Tornquist	135.49	98	PFAKE		12 08 30.0	+14
TRQA				LR	LR		
	comp=Z,462nm,20.0s,MS5.2						
LSZ	Lusaka	137.59	317	PFAKE		12 08 30.0	+10
LSZ				LR	LR		
	comp=Z,956nm,19.0s,MS5.5						
QSPA	South Pole Qui	140.76	180	eP	PKPdf	12 08 21.0	-2.9
PMSA	Palmer Station	145.14	138	PFAKE		12 08 40.0	+8.2
PMSA				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
TSUM	Tsumeb	145.21	329	ePKP	PKPdf	12 08 34.7	+1.4
TSUM				LR	LR		
	comp=Z,678nm,19.0s,MS5.4						
MAW	Mawson	145.58	217	eP	PKPdf	12 08 35.5	+3.1
	comp=Z,12nm,1.0s						
MAW	Mawson	145.58	217	PKP2	PKPab	12 08 35.0	-0.1
MAW				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MAW	Mawson	145.58	217	PKPbc	PKPbc	12 08 35.0	+1.8
	comp=Z,4.9nm,0.7s,baz=77,slow=5.2,SNR=10.0						
BOSA	Boshof	150.46	309	PKIKP	PKPdf	12 08 48.2	+6.6
BOSA				pmax	pmax		
	comp=Z,24µm,0.8s						
BOSA	Boshof	150.46	309	PKPbc	PKPdf	12 08 48.2	+6.6
	comp=Z,24nm,0.8s,baz=60,slow=3.9,SNR=20						
BOSA	Boshof	150.46	309	ePKPbc	PKPdf	12 08 48.6	+7.1
BOSA				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
SYO	Syowa Base	153.84	212	⇓PKiKP		12 08 55.5	
SYO	Syowa Base	153.84	212	⇑P	PKPdf	12 09 07.5	+22
SNAA	Sanae	159.24	178		PKPdf	12 09 07.0	+15
SNAA	Sanae	159.24	178		PKPdf	12 09 45.0	+53
SNAA	Sanae	159.24	178	P	PKPdf	12 08 54.8	+2.7
SNAA				P		12 09 07.0	
VNA3	Neumayer Olymp	159.26	172		PKPdf	12 09 08.0	+16
VNA3	Neumayer Olymp	159.26	172		PKPdf	12 09 13.4	+21
VNA3	Neumayer Olymp	159.26	172		PKPdf	12 09 34.0	+42
VNA3	Neumayer Olymp	159.26	172	P	PKPdf	12 08 54.5	+2.4
VNA3				P		12 09 08.0	
VNA3				P		12 09 13.4	
VNA2	Neumayer--Watz	159.76	173		PKPdf	12 09 10.5	+18
VNA2	Neumayer--Watz	159.76	173		PKPdf	12 09 35.7	+43
VNA2	Neumayer--Watz	159.76	173	P	PKPdf	12 08 56.3	+3.6
VNA2				P		12 09 10.5	

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*NEIC **14** 11:51:23.8, 29.05S×71.41W, h43^{km}, MD3.7(GUC), After GUC.*

GUC 14 11:51:23.8±0.5**, 29.05S×71.41W, h43^{km}**±2^{km}**, MD3.7, ML3.5, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	Las Campanas	0.62	87	eP	P	11 51 37.0	+0.7
LCO				i S	S	11 51 47.5	+2.1
LCO				AMP		11 51 49.1	
	comp=E,2µm,0.2s						
VACH	Vallenar	0.74	51	eP	P	11 51 38.4	+0.4
VACH				i S	S	11 51 49.3	+1.0
VACH				AMP		11 51 50.1	
	comp=E,8µm,0.1s						
LSCH	La Serena	0.87	170	i P	P	11 51 40.1	+0.4
LSCH				i S	S	11 51 52.2	+0.9
LSCH				AMP		11 51 53.6	
	comp=E,865nm,0.4s						
TLL	Tololo Astrono	1.23	155	eP	P	11 51 46.2	+1.4
TLL				i S	S	11 52 02.9	+2.3
CPCH	Copiapo	1.93	29	eP	P	11 51 58.1	+3.4
CPCH				i S	S	11 52 21.7	+3.8
CPCH				AMP		11 52 24.6	
	comp=N,2µm,0.1s						

NEIC 14 11:52:42.1, 50.82N×179.61E, h24^{km}, ML3.8(AEIC)**, After AEIC., Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.20	63	P	Pn	11 53 17.3	-0.5
KIKV	Kanaga Island	2.28	61	P	Pn	11 53 19.0	0.0
KIWB	Kanaga Island	2.28	62	P	Pn	11 53 18.5	-0.5
KIWB				S	Sn	11 53 47.2	+0.6
KINC	Kanaga Island	2.33	60	P	Pn	11 53 19.9	+0.2
KINC				S	Sn	11 53 48.9	+1.0
ADAG	Mount Adagdak	2.64	62	P	Pn	11 53 24.0	-0.2
ADAG				S	Sn	11 53 55.8	0.0
ATKA	Atka Island	4.11	68	P	Pn	11 53 44.4	-0.7
FX1	Attu Island--F	4.50	300	P	Pn	11 53 48.6	-2.0

NEIC 14 11:54:16.1, 50.88N×179.98W, h4^{km}, ML4.2(AEIC)**, After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIWB	Kanaga Island	2.02	60	P	Pn	11 54 50.4	-1.1
KINC	Kanaga Island	2.07	58	P	Pn	11 54 51.7	-0.5
ATKA	Atka Island	3.85	68	P	Pn	11 55 19.0	+1.6
FX1	Attu Island--F	4.70	298	P	Pn	11 55 25.4	-4.1

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*JMA **14** 12:08:28.9±0.2, 40.57N×137.86E, h294^{km}±2^{km}, M3.1*

*IDC **14** 12:08:28.1±1.3, 40.66N×137.62E, h264^{km}±13^{km}, mb3.2/9, mb1 3.4/11, mb1mx3.3/22, mbtmp3.8/11, Error ellipse: s-maj=17.2km s-min=12.7km az=121.0*

*NEIC **14** 12:08:29.5±1.1, 40.61N×137.65E, h280^{km}±15^{km}, mb3.8/1, Error ellipse: s-maj=19.8km s-min=15.4km az=202.0*

ISC 14 12:08:28.6±0.5**, 40.59N**±0.04×**137.86E**±0.10**, h289^{km}**±6^{km}**, n31, σ1^{s}09**/44**, mb3.4**/10**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIW	Iwasaki	1.63	89	P	P	12 09 12.8	+0.9
JIW				S	S	12 09 47.1	+1.5
JOSM	Okushiri--Mats	1.92	39	P	P	12 09 14.5	+0.5
JOSM				eS	S	12 09 49.6	+0.2
JAW	Awa shima	2.39	153	P	P	12 09 18.2	+0.1
JOT	Ohata	2.54	71	P	P	12 09 20.1	+0.6
JYK	Kaneyama	2.55	130	P	P	12 09 20.3	+0.7
JYK				eS	S	12 10 00.4	+1.1
JSD	Sado	2.57	173	P	P	12 09 20.0	+0.2
JKB	Kayabe	2.72	61	P	P	12 09 21.8	+0.6
JANG	Nango	2.79	93	P	P	12 09 22.3	+0.4
JANG				eS	S	12 10 02.7	-0.8
JOM	Ohasama	2.86	112	P	P	12 09 22.8	+0.2
JOM				eS	S	12 10 04.8	+0.2
JMK	Ichinoseki	3.06	121	P	P	12 09 24.7	+0.1
JMK				eS	S	12 10 07.8	-0.5
MAT	Matsushiro	4.05	176	eP	P	12 09 36.0	+0.6
MAT	Matsushiro	4.05	176	P	P	12 09 35.9	+0.5
MAT				eS	S	12 10 31.3	+3.9
MAT	Matsushiro	4.05	176	P	P	12 09 35.4	0.0
MJAR	Matsushiro Arr	4.05	176	P	P	12 09 35.6	+0.2
	1.7nm,0.3s,baz=359,slow=10,SNR=24						
JCH	Churui	4.59	62	P	P	12 09 41.6	+0.1
JCH				eS	S	12 10 35.6	-2.8
JRY	Ryogami san	4.64	170	P	P	12 09 42.0	-0.1
JRY				eS	S	12 10 39.7	+0.2
ASAJ	Asahikawa	4.97	43	P	P	12 09 45.9	0.0
	2.6nm,0.3s,baz=239,slow=12,SNR=12						
ASAJ				S	S	12 10 45.1	-1.2
	1.1nm,0.3s,baz=319,slow=33,SNR=14						
JOD2	Odawara 2	5.41	169	P	P	12 09 49.0	-2.1
JOD2				eS	S	12 10 53.4	-2.3
JTKR	Abashiri--Toko	5.61	51	P	P	12 09 53.3	-0.2
JTKR				S	S	12 10 58.1	-1.9
JHJ	Hachijo jima 2	7.62	168	P	P	12 10 14.7	-3.4
	11nm,0.3s,baz=51,slow=19,SNR=4.7						
JHJ				S	S	12 11 39.4	-4.7
	6.8nm,0.3s,baz=77,slow=22,SNR=4.0						
ULN	Ulaanbaatar	23.13	299	eP	P	12 13 11.0	+0.3
	1.7nm,0.5s,mb3.6						
SONM	Songino Array	23.57	298	P	P	12 13 13.8	-1.0
	0.8nm,0.4s,mb3.4,baz=100,slow=9.0,SNR=9.8						
MKAR	Makanchi Array	39.94	298	P	P	12 15 35.4	-1.1
	0.6nm,0.6s,mb3.1,baz=89,slow=10,SNR=6.3						
ILAR	Eielson Array	48.03	34	P	P	12 16 40.8	+0.4
	0.6nm,0.6s,mb3.1,baz=262,slow=6.1,SNR=8.3						
INK	Inuvik	52.52	28	P	P	12 17 14.1	+0.3
	1.0nm,0.6s,mb3.3,baz=292,slow=6.8,SNR=3.7						
INK	Inuvik	52.52	28	P	P	12 17 14.1	+0.3
WRA	Warramunga Arr	60.31	184	P	P	12 18 08.9	-0.4
	0.5nm,0.5s,mb3.3,baz=1.3,slow=7.5,SNR=24						
FINES	FINESS Array B	64.37	330	P	P	12 18 33.8	-1.3
	0.8nm,0.7s,mb3.4,baz=350,slow=34,SNR=2.9						
NVAR	Mina Array Bea	75.04	52	P	P	12 19 42.6	+2.5
	0.6nm,0.5s,mb3.5,baz=299,slow=6.7,SNR=6.2						
PDAR	Pinedale Array	77.10	44	P	P	12 19 53.4	+1.9
	0.4nm,0.5s,mb3.4,slow=1.5,SNR=4.4						
TXAR	Lajitas Array	90.06	50	P	P	12 20 59.5	+2.5
	0.5nm,0.6s,mb3.5,baz=284,slow=5.2,SNR=3.7						

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*NEIC **14** 12:11:47.0, 50.89N×179.56E, h29^{km}, mb4.1/1, ML3.8(AEIC), After AEIC.*

*IDC **14** 12:11:51.6±4.5, 51.32N×179.54E, h63^{km}±38^{km}, mb3.7/8, mb1 3.8/8, mb1mx3.5/25, mbtmp3.9/8, ML4.2/1, Error ellipse: s-maj=54.6km s-min=18.2km az=171.0*

ISC 14 12:11:46.0±1.4**, 50.7N**±0.1×**179.58E**±0.06**, h55^{km}**±9^{km}**, n24, σ0^{s}99**/31**, mb3.9**/9**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.28	60	P	P	12 12 22.1	0.0
KIMD				S	S	12 12 49.1	+0.2
KIWB	Kanaga Island	2.37	59	P	P	12 12 23.6	+0.3
KIWB				S	S	12 12 52.6	+1.4
KIKV	Kanaga Island	2.37	58	P	P	12 12 23.3	0.0
KIKV				S	S	12 12 51.6	+0.4
KINC	Kanaga Island	2.42	57	P	P	12 12 24.2	+0.2
KINC				S	S	12 12 52.7	+0.2
ADAG	Mount Adagdak	2.73	60	P	P	12 12 28.5	+0.1
GSTD	Great Sitkin T	3.02	61	P	P	12 12 32.2	-0.3
GSTD				S	S	12 13 08.1	+0.5
GSMY	Great Sitkin M	3.06	62	P	P	12 12 32.7	-0.4
GSTR	Great Sitkin T	3.08	61	P	P	12 12 33.2	-0.2
GSIG	Igitkin Island	3.11	63	P	P	12 12 33.4	-0.4
SMY	Shemya	3.98	303	P	P	12 12 45.0	-1.1
ATKA	Atka Island	4.18	66	P	P	12 12 48.5	-0.4
ATKA				S	S	12 13 35.3	-1.7
FX1	Attu Island--F	4.56	302	P	P	12 12 53.0	-1.1
	47nm,0.3s,baz=143,slow=11,SNR=72						
FX1				S	S	12 13 48.4	+2.0
	5.9nm,0.3s,baz=103,slow=23,SNR=1.9						
FX1	Attu Island--F	4.56	302	P	P	12 12 53.9	-0.3
RSO	Redoubt South	18.32	47	P	P	12 15 57.2	-0.2
SPU	Mount Spurr	18.89	45	P	P	12 16 04.3	+0.1
ASAJ	Asahikawa	25.68	270	P	P	12 17 15.5	+3.4
	5.0nm,0.8s,mb4.1,baz=68,slow=5.1,SNR=6.5						
INK	Inuvik	28.62	35	P	P	12 17 38.1	-0.6
	0.9nm,0.6s,mb3.7,baz=243,slow=11,SNR=6.2						
YKA	Yellowknife Ar	36.46	45	P	P	12 18 45.6	-1.3
	0.3nm,0.3s,mb3.6,baz=284,slow=7.4,SNR=7.0						
SONM	Songino Array	46.05	296	P	P	12 20 06.7	+1.2
	0.3nm,0.4s,mb3.6,baz=45,slow=7.0,SNR=4.6						
BW06	Boulder Array	47.50	71	eP	P	12 20 18.8	+1.7
	1.4nm,0.6s,mb4.2						
PDAR	Pinedale Array	47.50	71	P	P	12 20 18.8	+1.7
	1.6nm,0.8s,mb4.1,baz=316,slow=4.1,SNR=13						
MKAR	Makanchi Array	59.67	308	P	P	12 21 46.1	-0.4
	0.6nm,0.3s,mb4.0,baz=51,slow=6.6,SNR=12						
NOA	NORSAR Array B	68.25	354	P	P	12 22 41.1	-1.1
	1.5nm,0.8s,mb4.1,baz=7.9,slow=6.3,SNR=3.4						
HFS	Hagfors	68.96	352	P	P	12 22 44.5	-2.1
	1.1nm,0.6s,mb4.0,slow=4.3,SNR=3.0						

NDI 14 12:16:12.6±2.4**, 19.24N×73.20E, h2^{km}**±11^{km}**, MD3.9, ML3.7, MW3.7, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOM	Bombay	0.50	227	eP	Pg	12 16 22.3	-0.3
BOM				eS	Sg	12 16 29.4	+0.2
POO	Poona	0.93	139	eP	Pb	12 16 30.8	-0.3
POO				i S	Sg	12 16 43.6	-0.1
POO				AML	AML	12 16 44.4	
	comp=N,3µm,0.2s						
POO				AML	AML	12 16 44.4	
	comp=E,3µm,0.2s						
KAD	Karad	2.13	154	eP	Pn	12 16 48.3	-1.4
KAD				eS	Sn	12 17 17.4	+0.3
KAD				AML	AML	12 17 19.6	
	comp=N,356nm,0.3s						
KAD				AML	AML	12 17 20.0	
	comp=E,621nm,0.5s						
LATR	Latur	3.28	104	eP	Pn	12 17 06.0	-0.1
LATR				ex	x	12 17 47.5	
NGP	Nagpur	5.81	70	eP	Pn	12 17 57.4	+15
NGP				eS	Sn	12 19 00.6	+10
VIS	Vishakhapatnam	9.73	97	ex	x	12 20 05.0	
VIS				i x	x	12 21 10.7	
TRD	Trivandrum	11.27	161	ex	x	12 18 11.7	
TRD				i x	x	12 20 24.3	
TRD	Trivandrum	11.27	161	ex	x	12 18 11.7	
TRD				i x	x	12 20 24.3	

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*NEIC **14** 12:17:29.4, 50.95N×179.59E, h34^{km}, mb4.3/1, ML3.8(AEIC), After AEIC.*

*IDC **14** 12:17:33.6±4.1, 51.43N×179.54E, h60^{km}±37^{km}, mb3.5/9, mb1 3.7/9, mb1mx3.5/23, mbtmp3.8/9, ML4.0/1, Error ellipse: s-maj=43.1km s-min=15.7km az=174.0*

ISC 14 12:17:31.4±1.1**, 51.3N**±0.2×**179.62E**±0.07**, h59^{km}**±8^{km}**, n28, σ0^{s}68**/31**, mb3.7**/10**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.02	75	P	P	12 18 03.6	-0.2
KIKV	Kanaga Island	2.09	73	P	P	12 18 05.0	+0.2
KIWB	Kanaga Island	2.09	73	P	P	12 18 04.9	0.0
KINC	Kanaga Island	2.12	71	P	P	12 18 05.8	+0.4
ADAG	Mount Adagdak	2.45	72	P	P	12 18 09.7	-0.3
ADAG				S	S	12 18 43.3	+4.5
GSSP	Great Sitkin S	2.73	71	P	P	12 18 13.8	-0.2
GSTD	Great Sitkin T	2.74	72	P	P	12 18 13.9	-0.2
GSMY	Great Sitkin M	2.79	73	P	P	12 18 14.5	-0.3
GSTR	Great Sitkin T	2.81	72	P	P	12 18 15.0	0.0
GSIG	Igitkin Island	2.86	74	P	P	12 18 15.3	-0.5
SMY	Shemya	3.70	295	P	P	12 18 28.5	+0.9
ATKA	Atka Island	3.95	74	P	P	12 18 30.2	-0.8
ATKA				S	S	12 19 16.9	+0.4
FX1	Attu Island--F	4.29	294	P	P	12 18 35.2	-0.5
	32nm,0.3s,baz=202,slow=2.3,SNR=38						
FX1				S	S	12 19 31.9	+7.0
	5.5nm,0.3s,baz=78,slow=23,SNR=2.5						
FX1	Attu Island--F	4.29	294	P	P	12 18 36.5	+0.7
RSO	Redoubt South	17.88	48	P	P	12 21 37.5	+0.2
SPU	Mount Spurr	18.44	47	eP	P	12 21 45.4	+1.4
ILAR	Eielson Array	21.93	39	P	P	12 22 19.1	-1.8
	0.3nm,0.9s,mb2.7,baz=225,slow=5.1,SNR=4.2						
ASAJ	Asahikawa	25.71	268	P	P	12 22 57.2	-0.3
	6.4nm,1.0s,mb4.1,baz=61,slow=5.9,SNR=7.3						
INK	Inuvik	28.10	35	P	P	12 23 19.4	+0.3
	0.7nm,0.4s,mb3.6,baz=254,slow=14,SNR=4.3						
YKA	Yellowknife Ar	36.01	46	P	P	12 24 27.9	-0.2
	0.3nm,0.4s,mb3.6,baz=286,slow=7.3,SNR=6.8						
MCMT	McKenzie Canyo	44.14	71	eP	P	12 25 35.7	+0.3
NVAR	Mina Array Bea	44.55	82	P	P	12 25 39.5	+0.7
	0.2nm,0.5s,mb3.2,baz=291,slow=7.7,SNR=3.3						
SONM	Songino Array	45.79	296	P	P	12 25 49.2	+0.6
	0.5nm,0.7s,mb3.5,baz=72,slow=7.8,SNR=4.6						
BW06	Boulder Array	47.28	71	eP	P	12 26 00.5	+0.2
	1.5nm,0.4s,mb4.3						
PDAR	Pinedale Array	47.28	71	P	P	12 26 01.1	+0.8
	2.3nm,0.6s,mb4.3,baz=314,slow=3.5,SNR=20						
MKAR	Makanchi Array	59.30	308	P	P	12 27 27.4	-1.6
	0.7nm,0.4s,mb4.1,baz=46,slow=6.8,SNR=10						
MKAR	Makanchi Array	59.30	308	P	P	12 27 27.4	-1.6
NOA	NORSAR Array B	67.63	354	P	P	12 28 22.7	-0.6
	0.3nm,0.5s,mb3.6,baz=345,slow=4.6,SNR=2.6						

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*IDC **14** 12:39:28.6±0.6, 20.10S×69.10W, h103^{km}±4^{km}, mb3.9/12, mb1 4.1/14, mb1mx4.0/19, mbtmp4.3/14, Error ellipse: s-maj=16.1km s-min=11.1km az=84.0*

*NEIC **14** 12:39:29.1±0.8, 20.16S×69.16W, h104^{km}±8^{km}, mb4.4/11, Error ellipse: s-maj=11.2km s-min=6.5km az=71.0*

ISC 14 12:39:26.3±0.7**, 20.17S**±0.04×**69.21W**±0.07**, h93^{km}**±7^{km}**, n51, σ0^{s}90**/46**, mb4.1**/17**, 3C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANCH	Antofagasta	3.67	198	eP	P	12 40 22.1	-0.1
LPAZ	La Paz	3.99	15	P	P	12 40 30.9	+4.4
	6.8nm,0.3s,baz=189,slow=7.2,SNR=111						
LPAZ				S	S	12 41 12.1	-0.3
	6.5nm,0.3s,baz=28,slow=2.9,SNR=5.6						
LPAZ	La Paz	3.99	15	⇑ePn	P	12 40 31.0	+4.5
LPAZ				eSn	S	12 41 14.8	+2.4
ARE	Arequipa	4.28	329	⇑iP	P	12 40 30.4	-0.1
ARE				i S	S	12 41 18.2	-1.3
CPN1	Cerro Paranal	4.58	194	eP	P	12 40 34.0	-0.6
SIV	San Ignacio	8.78	63	P	P	12 41 31.1	-1.0
	11nm,0.3s,baz=253,slow=12,SNR=180						
CFAA	Coronel Fontan	11.43	176	P	P	12 42 08.9	+1.1
	0.1nm,0.3s,baz=347,slow=12,SNR=5.1						

CPUP	Villa Florida	12.52	122	P	P	12 42 22.1	-0.2
	1.0nm,0.3s,baz=324,slow=12,SNR=17						
CPUP	Villa Florida	12.52	122	*e*Pn	P	12 42 22.3	0.0
	8.2nm,0.8s						
SAML	Samuel	12.58	28	*e*Pn	P	12 42 25.6	+2.4
	4.2nm,0.4s						
TRQA	Tornquist	18.90	162	*e*P	P	12 43 41.7	-0.4
	4.6nm,0.6s						
PLCA	Paso Flores	20.53	183	P	P	12 43 59.6	+0.3
	13nm,0.7s,baz=357,slow=11,SNR=38						
PLCA	Paso Flores	20.53	183	*e*P	P	12 43 59.4	+0.2
	19nm,1.1s						
BDFB	Brasilia	20.66	81	P	P	12 43 60.0	-0.6
	24nm,0.4s,baz=261,slow=11,SNR=21						
OTAV	Otavalo	22.21	335	*e*P	P	12 44 18.7	+2.7
RCBR	Riachuelo	35.34	71	*e*P	P	12 46 15.1	+0.3
	15nm,0.5s,mb5.1						
TXAR	Lajitas Array	59.38	325	P	P	12 49 20.2	-1.1
	0.4nm,0.5s,mb3.7,baz=157,slow=9.5,SNR=4.8						
VNA3	Neumayer Olymp	61.42	161		P	12 49 35.4	+0.7
VNA2	Neumayer--Watz	62.00	161		P	12 49 39.1	+0.5
SNAA	Sanae	63.63	161		P	12 49 49.2	-0.1
SNAA	Sanae	63.63	161	P	P	12 49 48.5	-0.8
	1.1nm,0.6s,mb3.9,baz=274,slow=6.6,SNR=24						
SNAA	Sanae	63.63	161	P	P	12 49 49.2	-0.1
SDCO	Great Sand Dun	66.96	329	*e*P	P	12 50 11.5	+0.2
	5.8nm,1.3s,mb4.2						
WUAZ	Wupatki	68.29	324	*e*P	P	12 50 20.1	+0.6
	4.2nm,0.7s,mb4.4						
DBIC	Dimbokro	68.63	74	P	P	12 50 20.5	-1.4
	2.4nm,0.3s,mb4.5,baz=217,slow=6.5,SNR=15						
DBIC				pP	pP	12 50 47.0	+1.2
	4.5nm,0.6s,baz=214,slow=7.6,SNR=3.0						
DBIC				sP	sP	12 50 58.4	+2.6
	7.2nm,0.8s,baz=210,slow=8.8,SNR=2.7						
DBIC	Dimbokro	68.63	74	P	P	12 50 20.5	-1.4
DBIC				pP	pP	12 50 47.0	+1.2
DBIC				sP	sP	12 50 58.4	+2.6
ISCO	Idaho Springs	68.65	331	*e*P	P	12 50 21.6	-0.1
	1.6nm,0.6s,mb4.0						
QSPA	South Pole Qui	70.02	180	⇓*i*P	P	12 50 30.6	+1.2
	5.7nm,0.6s,mb4.6						
SRU	San Rafael	70.51	327	*e*P	P	12 50 33.1	+0.1
MVU	Marysvale	70.94	326	*e*P	P	12 50 36.4	+0.8
	5.6nm,0.9s,mb4.4						
ARUT	Antelope Range	71.08	324	*e*P	P	12 50 37.5	+1.0
PDAR	Pinedale Array	72.82	330	P	P	12 50 46.4	-0.3
	0.3nm,0.5s,mb3.3,baz=135,slow=4.2,SNR=3.5						
ULM	Lac du Bonnet	73.97	343	P	P	12 50 52.1	-1.1
	2.5nm,0.6s,mb4.2,baz=150,slow=9.6,SNR=2.9						
ELK	Elko	74.17	325	P	P	12 50 54.7	+0.1
	0.4nm,0.3s,mb3.6,baz=96,slow=9.3,SNR=5.0						
ELK				sP	sP	12 51 32.5	+3.6
	0.5nm,0.3s,baz=149,slow=3.4,SNR=2.9						
ELK	Elko	74.17	325	P	P	12 50 54.7	+0.1
ELK				sP	sP	12 51 32.5	+3.6
NVAR	Mina Array Bea	74.28	322	P	P	12 50 55.9	+0.6
	1.4nm,0.7s,mb3.8,baz=150,slow=6.7,SNR=11						
NVAR				sP	sP	12 51 33.1	+3.5
	1.1nm,0.7s,baz=160,slow=9.1,SNR=4.6						
SCHQ	Schefferville	74.72	1	P	P	12 50 56.5	-0.9
	3.8nm,0.9s,mb4.1,baz=195,slow=12,SNR=4.0						
SYO	Syowa Base	77.84	160	⇓P	P	12 51 14.2	-0.5
SYO	Syowa Base	77.84	160	⇑PcP	PcP	12 51 24.2	-0.4
VNDA	Vanda	78.11	190	P	P	12 51 15.3	-0.8
	0.5nm,0.5s,mb3.5,baz=125,slow=3.7,SNR=3.5						
VNDA	Vanda	78.11	190	P	P	12 51 15.3	-0.8
FCC	Fort Churchill	81.27	347	*e*P	P	12 51 32.6	-0.8
	2.7nm,0.7s,mb4.2						
YKA	Yellowknife Ar	89.84	341	P	P	12 52 15.2	-0.2
	3.5nm,0.6s,mb4.6,baz=131,slow=4.6,SNR=25						
YKA				sP	sP	12 52 51.5	+1.2
	2.7nm,0.8s,baz=134,slow=4.6,SNR=5.7						
YKA	Yellowknife Ar	89.84	341	P	P	12 52 15.2	-0.2
YKA				sP	sP	12 52 51.5	+1.2
WRA	Warramunga Arr	133.95	211	PKhKP		12 58 22.2	
	0.2nm,0.4s,baz=130,slow=2.7,SNR=7.3						
WRA				PKP	PKPdf	12 58 34.4	+1.0
	1.1nm,0.7s,baz=161,slow=1.7,SNR=18						
ASAJ	Asahikawa	144.37	319	PKP	PKPdf	12 58 52.2	+0.7
	3.7nm,0.8s,baz=244,slow=3.0,SNR=6.9						
MKAR	Makanchi Array	144.71	35	PKP	PKPdf	12 58 52.2	+0.1
	1.0nm,0.4s,baz=326,slow=4.4,SNR=9.8						
MKAR	Makanchi Array	144.71	35	PKP	PKPdf	12 58 52.2	+0.1
MJAR	Matsushiro Arr	151.02	310	PKPbc	PKPdf	12 59 09.7	+7.1
	2.5nm,0.6s,baz=114,slow=1.1,SNR=6.4						
MAT	Matsushiro	151.02	310	PKP	PKPdf	12 59 09.6	+7.0
SONM	Songino Array	152.17	6	PKP	PKPdf	12 59 04.6	+0.7
	1.1nm,0.4s,baz=315,slow=1.7,SNR=3.6						
SONM				PKPbc	PKPdf	12 59 12.4	+8.4
	2.3nm,0.4s,baz=306,slow=1.3,SNR=23						
SONM				pPKP		12 59 33.5	
	1.0nm,0.4s,baz=301,slow=1.3,SNR=4.7						
SONM				pPKPbc		12 59 39.7	
	1.1nm,0.5s,baz=296,slow=1.6,SNR=3.5						

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*PGC **14** 12:50:33.2, 49.33N×129.85W, h10^{km}, Mw3.7, West of Vancouver Island, British Columbia*
*NEIC **14** 12:50:33.0, 49.33N×129.85W, h10^{km}, ML3.7(PGC), After PGC.*
*IDC **14** 12:50:33.5±2.1, 49.38N×129.49W, mb1 3.6/8, mb1mx3.5/26, mbtmp3.4/8, ML3.6/7, Error ellipse: s-maj=32.2km s-min=11.6km az=69.0*
ISC 14 12:50:33.3±0.6**, 49.37N**±0.04×**129.57W**±0.05**, h10^{km}, n46, σ1^{s}14**/68**, 1C-2D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BPBC	Brooks Peninsu	1.41	55	Pn	Pn	12 50 59.3	+0.2
BPBC				Sn	Sn	12 51 17.8	-0.1
	comp=Z,142nm,0.2s						
BPBC				Sg	Sg	12 51 21.6	+1.2
BPBC				Trac		12 51 23.3	
	comp=Z,142nm,0.2s						
HOLB	Holberg	1.58	36	⇓Pn	Pn	12 51 01.4	-0.2
HOLB				Trac		12 51 23.6	
	comp=Z,65nm,0.2s						
EDB	Eliza Dome	1.67	71	Pn	Pn	12 51 02.7	-0.2
EDB				Sn	Sn	12 51 24.1	-0.4
EDB				Trac		12 51 26.1	
	comp=Z,15nm,0.1s						
MAYB	Maynard	1.87	55	Pn	Pn	12 51 05.8	+0.2
PHC	Port Hardy	1.93	45	⇓Pn	Pn	12 51 06.5	0.0
PHC				Sn	Sn	12 51 30.2	-0.7
PHC				Trac		12 51 31.2	
	comp=Z,32nm,0.3s						
ETB	Estevan Point	1.98	89	Pn	Pn	12 51 06.6	-0.7
ETB				Trac		12 51 36.1	
	comp=Z,7.9nm,0.2s						
WOSB	Woss	2.10	67	⇑Pn	Pn	12 51 09.7	+0.6
WOSB				Sn	Sn	12 51 37.1	+1.7
	comp=Z,29nm,0.2s						
WOSB				Trac		12 51 39.1	
	comp=Z,29nm,0.2s						
GDR	Gold River	2.34	78	Pn	Pn	12 51 12.5	0.0
GDR				Sn	Sn	12 51 41.8	+0.2
	comp=Z,13nm,0.2s						
GDR				Trac		12 51 45.8	
	comp=Z,13nm,0.2s						
NCRB	Newcastle Ridg	2.50	64	⇑Pn	Pn	12 51 15.7	+1.0
NCRB				Sn	Sn	12 51 46.5	+0.9
	comp=Z,19nm,0.3s						
NCRB				Trac		12 51 47.5	
	comp=Z,19nm,0.3s						
BTB	Buttle Lake	2.65	86	Pn	Pn	12 51 16.8	-0.1
BTB				Sn	Sn	12 51 50.3	+1.0
	comp=Z,19nm,0.3s						
BTB				Trac		12 51 54.1	
	comp=Z,19nm,0.3s						
OZB	Mount Ozzard	2.71	97	Pn	Pn	12 51 16.5	-1.2
OZB				Sn	Sn	12 51 48.8	-2.0
OZB				Trac		12 51 50.1	
	comp=Z,10.0nm,0.1s						
CBB	Campbell River	2.81	75	Pn	Pn	12 51 20.0	+0.8
CBB				Sn	Sn	12 51 54.6	+1.2
CBB				Trac		12 51 58.2	
	comp=Z,12nm,0.3s						
BBB	Bella Bella	2.97	18	Pn	Pn	12 51 21.0	-0.4
	34nm,0.3s,baz=214,slow=12,SNR=597						
BBB				Sn	Sn	12 51 55.3	-2.2
	12nm,0.3s,baz=109,slow=22,SNR=6.1						
BBB	Bella Bella	2.97	18	Pn	Pn	12 51 21.0	-0.5
BBB				Sn	Sn	12 51 55.2	-2.3
BBB				Trac		12 51 58.0	
	comp=Z,29nm,0.2s						
ALB	Alberni	3.10	90	Pn	Pn	12 51 24.9	+1.6
ALB				Trac		12 52 02.0	
	comp=Z,2.0nm,0.2s						
MGB	Mount Grey	3.22	95	Pn	Pn	12 51 24.5	-0.5
MGB				Sn	Sn	12 52 02.3	-1.6
	comp=Z,6.0nm,0.2s						
MGB				Trac		12 52 04.0	
	comp=Z,6.0nm,0.2s						
TXB	Texada	3.36	82	Pn	Pn	12 51 28.0	+1.0
TXB				Sn	Sn	12 52 07.5	+0.1
	comp=Z,7.0nm,0.3s						
TXB				Trac		12 52 15.4	
	comp=Z,7.0nm,0.3s						
PFB	Port Renfrew	3.47	101	Pn	Pn	12 51 28.1	-0.4
PFB				Sn	Sn	12 52 07.1	-3.1
PFB				Trac		12 52 11.2	
	comp=Z,2.0nm,0.2s						
BNB	Barry Inlet	3.50	338	Pn	Pn	12 51 27.6	-1.3
NLLB	Nanaimo Lost L	3.66	90	Pn	Pn	12 51 32.1	+0.9
NLLB				Sn	Sn	12 52 14.1	-0.8
NLLB				Trac		12 52 17.7	
	comp=Z,3.0nm,0.2s						
SHB	Sechelt	3.72	84	Pn	Pn	12 51 33.0	+0.9
SHB				Sn	Sn	12 52 16.6	+0.1
SHB				Trac		12 52 22.0	
	comp=Z,8.0nm,0.2s						
LZB	Mount Lazard	3.86	99	Pn	Pn	12 51 33.6	-0.4
LZB				Sn	Sn	12 52 16.8	-3.2
LZB				Trac		12 52 18.7	
	comp=Z,1.0nm,0.1s						
OCWA	Octopus Mounta	3.93	112	*e*P	Pn	12 51 34.5	-0.5
GOBB	Galiano Island	4.00	94	Pn	Pn	12 51 36.7	+0.7
PGC	Sidney	4.09	98	*e*P	Pn	12 51 37.0	-0.3
PGC	Sidney	4.09	98	Pn	Pn	12 51 37.1	-0.3
PGC				Sn	Sn	12 52 22.4	-3.5
PGC				Trac		12 52 27.2	
	comp=Z,1.0nm,0.1s						
WPB	Watts Point	4.16	84	Pn	Pn	12 51 39.5	+1.3
VGZ	Gonzales	4.23	101	Pn	Pn	12 51 38.5	-0.8
VGZ				Sn	Sn	12 52 26.1	-3.3
VGZ				Trac		12 52 29.0	
	comp=Z,5.0nm,0.2s						
SNB	Saturna Island	4.25	96	Pn	Pn	12 51 40.7	+1.1
SNB				Sn	Sn	12 52 28.9	-1.0
SNB				Trac		12 52 33.6	
	comp=Z,2.0nm,0.2s						
WSLR	Whistler	4.38	77	Pn	Pn	12 51 43.5	+2.0
WSLR				Trac		12 52 41.9	
	comp=Z,1.0nm,0.2s						
HNB	Haney	4.58	89	Pn	Pn	12 51 45.0	+0.8
HNB				Sn	Sn	12 52 37.4	-0.7
HNB				Trac		12 52 41.6	
	comp=Z,2.0nm,0.2s						
VDB	Vedder Mountai	4.91	91	Pn	Pn	12 51 49.5	+0.5
RUBB	Prince Rupert	4.99	355	Pn	Pn	12 51 48.6	-1.4
LLLB	Lillooet	5.12	73	Pn	Pn	12 51 52.4	+0.5
PNT	Penticton	6.51	87	Pn	Pn	12 52 11.4	-0.1
BMBC	Bull Mountain	8.07	31	⇑Pn	P	12 52 34.5	+1.1
NEW	Newport	8.29	93	Pn	P	12 52 34.9	-1.6
	0.8nm,0.3s,baz=294,slow=10.0,SNR=4.7						
YBH	Yreka Blue Hor	9.02	145	Pn	P	12 52 45.6	-1.0
	0.0nm,0.3s,baz=11,slow=10,SNR=2.4						
DLBC	Dease Lake	9.09	358	Pn	P	12 52 45.2	-2.4
	0.2nm,0.3s,baz=215,slow=16,SNR=3.7						
NVAR	Mina Array Bea	13.60	139	Pn	P	12 53 50.1	+1.5
	0.1nm,0.3s,baz=324,slow=12,SNR=2.9						
BW06	Boulder Array	15.36	108	P	P	12 54 13.1	+1.6
PDAR	Pinedale Array	15.36	108	Pn	P	12 54 12.7	+1.1
	0.1nm,0.3s,baz=302,slow=12,SNR=3.8						
YKA	Yellowknife Ar	15.54	27	Pn	P	12 54 11.7	-2.1
	0.1nm,0.3s,baz=215,slow=12,SNR=4.6						
YKA	Yellowknife Ar	15.54	27	Pn	P	12 54 11.7	-2.1
FFC	Flin Flon	17.73	62	P	P	12 54 42.1	+0.5
ILAR	Eielson Array	17.98	336	P	P	12 54 46.5	+1.9
	baz=143,slow=14,SNR=2.6						

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*IDC **14** 13:03:35.0±1.1, 51.34N×179.53E, mb3.7/11, mb1 4.0/11, mb1mx3.9/22, mbtmp3.7/11, Error ellipse: s-maj=35.1km s-min=18.4km az=174.0*
*MOS **14** 13:03:41.6±1.2, 51.19N×179.60E, h63^{km}, mb4.2/4, Error ellipse: s-maj=20.5km s-min=14.3km az=84.7*
*NEIC **14** 13:03:42.6±1.0, 51.08N×179.68E, h59^{km}±7^{km}, mb4.2/6, ML4.0(AEIC), Error ellipse: s-maj=17.7km s-min=6.8km az=181.0*
ISC 14 13:03:40.7±1.0**, 51.1N**±0.1×**179.57E**±0.06**, h60^{km}**±7^{km}**, n41, σ1^{s}05**/49**, mb3.8**/15**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	2.12	69	P	P	13 04 14.0	-0.6
KIMD				S	S	13 04 38.8	-1.0
KIKV	Kanaga Island	2.20	67	P	P	13 04 15.6	-0.1
KIKV				S	S	13 04 41.7	-0.1
KIWB	Kanaga Island	2.20	67	P	P	13 04 15.4	-0.3
KINC	Kanaga Island	2.24	66	P	P	13 04 16.3	-0.1
ADAG	Mount Adagdak	2.56	67	P	P	13 04 20.6	-0.3
ADAG				S	S	13 04 54.4	+3.4
GSTD	Great Sitkin T	2.86	68	P	P	13 04 24.1	-0.9
GSTD				S	S	13 04 59.8	+1.5
GSMY	Great Sitkin M	2.91	68	P	P	13 04 25.2	-0.5
GSMY				S	S	13 05 00.9	+1.4
GSTR	Great Sitkin T	2.92	67	P	P	13 04 25.5	-0.4
GSTR				S	S	13 05 03.3	+3.4
GSIG	Igitkin Island	2.96	70	P	P	13 04 25.5	-1.1
GSIG				S	S	13 05 01.8	+0.7
SMY	Shemya	3.78	298	P	P	13 04 39.5	+1.5
ATKA	Atka Island	4.05	71	P	P	13 04 40.3	-1.5
FX1	Attu Island--F	4.36	297	P	P	13 04 45.4	-0.8
FX1						13 05 42.0	
FX1				pmax	pmax		
	comp=Z,24nm,0.3s						
FX1				smax			
	comp=N,5.0nm,0.3s						
FX1	Attu Island--F	4.36	297	Pn	P	13 04 45.4	-0.8
	comp=N,24nm,0.3s,baz=194,slow=11,SNR=62						
FX1				Sn	S	13 05 42.0	+5.8
	comp=N,4.6nm,0.3s,baz=108,slow=12,SNR=3.8						
FX1	Attu Island--F	4.36	297	P	P	13 04 48.2	+2.0
RSO	Redoubt South	18.07	48	*e*P	P	13 07 49.2	+0.4
BILL	Bilibino	18.24	344	*e*P	P	13 07 51.1	+0.2
BILL				pmax	pmax		
	comp=Z,12nm,1.1s						
BILL	Bilibino	18.24	344	*e*P	P	13 07 51.1	+0.2
	comp=Z,12nm,1.1s						
SPU	Mount Spurr	18.63	46	*e*P	P	13 07 56.8	+1.3
SLKM	Skilak Lake	19.28	49	*e*P	P	13 08 02.9	+0.1
IMA	Indian Mountai	20.27	32	*e*P	P	13 08 13.1	-0.2
IMA				pmax	pmax		
	comp=Z,26nm,0.9s						
IMA	Indian Mountai	20.27	32	*e*P	P	13 08 13.1	-0.3
	comp=Z,26nm,0.9s						
MCK	McKinley	20.91	41	P	P	13 08 21.0	+1.0
MCK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MCK	McKinley	20.91	41	P	P	13 08 20.9	+0.9
	comp=Z,5.7nm,1.1s						
ILAR	Eielson Array	22.14	39	P	P	13 08 30.6	-1.7
	comp=Z,0.6nm,0.8s,mb3.1,baz=251,slow=10,SNR=7.5						
YKA	Yellowknife Ar	36.20	46	P	P	13 10 37.2	-1.7
	comp=Z,1.0nm,0.8s,mb3.8,baz=287,slow=8.4,SNR=3.5						
HLID	Hailey	44.02	73	*e*P	P	13 11 44.3	+0.6
	comp=Z,2.8nm,1.0s,mb4.0						
MCMT	McKenzie Canyo	44.25	71	*e*P	P	13 11 46.0	+0.4
BOZ	Bozeman (W)	44.53	69	*e*P	P	13 11 47.9	+0.2
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
BOZ	Bozeman (W)	44.53	69	*e*P	P	13 11 47.9	+0.1
	comp=Z,5.9nm,1.0s,mb4.4						
NVAR	Mina Array Bea	44.61	81	P	P	13 11 49.2	+0.7
	comp=Z,0.2nm,0.6s,mb3.1,baz=294,slow=8.9,SNR=2.6						
SONM	Songino Array	45.87	296	P	P	13 11 59.1	+0.7
	comp=Z,0.7nm,0.8s,mb3.6,baz=54,slow=11,SNR=6.6						
ZAK	Zakamensk	46.24	301	*e*P	P	13 12 02.2	+0.9
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.6						
BW06	Boulder Array	47.38	71	*e*P	P	13 12 10.7	+0.3
	comp=Z,4.2nm,0.8s,mb4.4						
PDAR	Pinedale Array	47.39	71	P	P	13 12 11.2	+0.8
	comp=Z,2.3nm,0.7s,mb4.2,baz=322,slow=4.0,SNR=22						
MKAR	Makanchi Array	59.43	308	P	P	13 13 37.5	-1.6
	comp=Z,1.0nm,0.6s,mb4.0,baz=59,slow=7.1,SNR=9.1						
TXAR	Lajitas Array	59.72	80	P	P	13 13 40.0	-1.4
	comp=Z,0.2nm,0.4s,mb3.5,baz=278,slow=6.4,SNR=2.7						
FINES	FINESS Array B	65.87	346	P	P	13 14 18.9	-2.5
	comp=Z,0.8nm,0.8s,mb3.8,baz=9.5,slow=17,SNR=2.3						
NB2	NORSAR Subarra	67.87	354	P	P	13 14 33.3	-0.7
	comp=Z,1.5nm,0.9s,mb4.0,baz=6.0,slow=6.5						
NOA	NORSAR Array B	67.87	354	P	P	13 14 31.9	-2.1
	comp=Z,2.3nm,0.9s,mb4.2,baz=8.0,slow=6.3,SNR=4.8						
CMAR	Chiang Mai Arr	70.02	275	P	P	13 14 48.5	+0.5
	comp=Z,0.7nm,0.7s,mb3.7,baz=30,slow=7.3,SNR=4.0						
WRA	Warramunga Arr	81.07	223	P	P	13 15 52.3	+1.5
	comp=Z,0.2nm,0.5s,mb3.3,baz=31,slow=5.9,SNR=3.1						

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*NIED **14** 13:06:00, 43.00N×145.40E, h41^{km}, Mw3.9 Best double couple: M$_0$9.27×10^{14} NP1:ϕ_s32°, δ70°, λ89°. NP2:ϕ_s217°, δ20°, λ94°.*
*JMA **14** 13:06:23.0±0.1, 42.98N×145.40E, h48^{km}±1^{km}, M3.8*
JMA Felt I J1.
*SKHL **14** 13:06:23.5±0.5, 42.94N×145.44E, h33^{km}, mb4.4/3*
*IDC **14** 13:06:24.4±3.0, 42.92N×145.29E, h62^{km}±28^{km}, mb3.6/8, mb1 3.8/10, mb1mx3.6/21, mbtmp3.8/10, ML3.7/2, Error ellipse: s-maj=38.7km s-min=22.8km az=178.0*
ISC 14 13:06:21.7±0.8**, 42.95N**±0.06×**145.43E**±0.06**, h52^{km}**±5^{km}**, n23, σ0^{s}81**/33**, mb3.7**/8**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.47	29	P	P	13 06 33.3	+0.5
NEM2				*e*S	S	13 06 40.4	-0.5
JAK	Akkeshi	0.54	275	P	P	13 06 34.2	+0.6
JAK				*e*S	S	13 06 42.3	0.0
JNK	Nakash	0.82	321	P	P	13 06 37.5	+0.3
JNK				*e*S	S	13 06 47.6	-1.0
JRA	Rausu	1.01	347	P	P	13 06 40.3	+0.5
JRA				*e*S	S	13 06 53.3	+0.1
YUK	Yuzh-Kuril'sk	1.12	16	*e*P	P	13 06 41.3	-0.1
YUK				AMB	AMB	13 06 41.6	
	90nm,0.4s						
YUK				AMB	AMB	13 06 41.6	
	460nm,0.4s						
YUK				*i* S	S	13 06 54.3	-1.8
YUK				A		13 06 56.0	
	8μm,1.0s						
YUK				A		13 06 56.0	
	10μm,1.0s						
YUK				A		13 06 56.5	
	4μm,0.3s						
YUK				A		13 06 56.5	
	4μm,0.3s						
JOB	Onbets	1.17	268	P	P	13 06 42.7	+0.6
JOB				*e*S	S	13 06 57.3	+0.1
JAR	Ashorobuto	1.26	286	P	P	13 06 44.1	+0.7
JAR				*e*S	S	13 06 59.6	+0.1
JTKR	Abashiri--Toko	1.50	313	P	P	13 06 47.7	+0.9
JCH	Churui	1.56	258	P	P	13 06 47.6	0.0
JCH				*e*S	S	13 07 06.1	-0.7
ASAJ	Asahikawa	2.37	300	P	P	13 06 60.0	+1.0
	18nm,0.3s,baz=116,slow=11,SNR=72						
ASAJ				S	S	13 07 31.9	+5.0
	18nm,0.3s,baz=1.1,slow=17,SNR=5.9						
KUR	Kuril'sk	2.88	37	*e*P	P	13 07 05.0	-1.2
KUR				AMB	AMB	13 07 12.0	
	70nm,0.6s						
KUR				*e*S	S	13 07 40.5	+0.7
KUR				A		13 07 49.5	
	230nm,0.6s						
KUR				A		13 07 49.5	
	70nm,0.6s						
YSS	Yuzh-Sakhalins	4.43	336	*e*P	P	13 07 30.0	+1.9
MJAR	Matsushiro Arr	8.48	223	P	P	13 08 22.9	-1.6
	0.6nm,0.3s,baz=29,slow=13,SNR=8.2						
EKMR	Ekimchan	13.10	325	*e*P	P	13 09 26.4	-0.6
EKMR				AMB	AMB	13 09 28.3	
	4.0nm,0.8s						
SONM	Songino Array	27.63	294	P	P	13 12 05.3	-0.9
	2.0nm,0.7s,mb3.9,baz=82,slow=8.0,SNR=16						
ILAR	Eielson Array	42.87	36	P	P	13 14 16.8	+0.8
	0.6nm,0.7s,mb3.4,baz=274,slow=7.7,SNR=8.6						
MKAR	Makanchi Array	43.84	298	P	P	13 14 23.8	-0.4
	0.8nm,0.5s,mb3.7,baz=82,slow=8.6,SNR=6.8						
FINES	FINESS Array B	65.01	332	P	P	13 16 56.8	-1.1
	1.7nm,0.7s,mb4.2,baz=45,slow=11,SNR=6.3						
NVAR	Mina Array Bea	69.06	57	P	P	13 17 24.8	+1.0
	0.3nm,0.8s,mb3.3,baz=280,slow=4.9,SNR=3.7						
NB2	NORSAR Subarra	69.88	338	P	P	13 17 28.3	-0.1
	1.2nm,0.7s,mb3.9,baz=32,slow=6.2						
NOA	NORSAR Array B	69.88	338	P	P	13 17 28.3	-0.1
	1.8nm,0.7s,mb4.1,baz=34,slow=6.3,SNR=7.7						
NOA				pP	pP	13 17 38.9	-4.4
	1.0nm,0.8s,baz=42,slow=6.0,SNR=3.8						
PDAR	Pinedale Array	71.38	49	P	P	13 17 38.3	+0.6
	0.1nm,0.4s,mb3.1,baz=326,slow=3.3,SNR=4.3						
AKASG	Malin Array Be	71.47	323	P	P	13 17 37.9	-0.2
	0.7nm,0.4s,mb4.0,baz=39,slow=5.9,SNR=7.3						

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*NEIC **14** 13:06:26.8±0.8, 19.92S×69.01W, h88^{km}±8^{km}, mb4.3/4, Error ellipse: s-maj=9.6km s-min=6.4km az=76.0*
*IDC **14** 13:06:28.9±0.7, 19.96S×68.89W, h109^{km}±6^{km}, mb3.8/7, mb1 4.1/10, mb1mx3.9/19, mbtmp4.3/10, MS3.1/1, Ms1 3.2/1, ms1mx2.9/24, Error ellipse: s-maj=19.5km s-min=10.7km az=90.0*
ISC 14 13:06:25.7±1.0**, 19.97S**±0.05×**69.03W**±0.08**, h95^{km}**±10^{km}**, n33, σ0^{s}86**/30**, mb4.2**/8**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.76	13	P	P	13 07 26.8	+4.0
	8.2nm,0.3s,baz=186,slow=9.3,SNR=35						
LPAZ				S	S	13 08 08.2	+2.1
	1.0nm,0.3s,baz=191,slow=14,SNR=2.0						
LPAZ				LR	LR	13 09 05.2	
	comp=Z,267nm,19.3s,baz=155,slow=42						
LPAZ	La Paz	3.76	13	*e*Pn	P	13 07 27.1	+4.4
ARE	Arequipa	4.20	326	*e*P	P	13 07 29.0	+0.2
ARE				*e*S	S	13 08 16.0	-0.9
SIV	San Ignacio	8.54	64	P	P	13 08 27.9	-0.4
	12nm,0.3s,baz=256,slow=11,SNR=354						
CFAA	Coronel Fontan	11.61	177	P	P	13 09 09.7	+0.1
	0.1nm,0.3s,baz=349,slow=12,SNR=4.7						
SAML	Samuel	12.33	28	*e*Pn	P	13 09 17.8	-1.4
	5.3nm,0.7s						
CPUP	Villa Florida	12.49	123	P	P	13 09 21.3	+0.1
	0.5nm,0.3s,baz=320,slow=15,SNR=13						
CPUP	Villa Florida	12.49	123	*e*Pn	P	13 09 21.6	+0.4
	17nm,1.1s						
TRQA	Tornquist	19.04	163	*e*P	P	13 10 42.1	-0.7
BDFB	Brasilia	20.47	81	P	P	13 10 57.1	-0.9
	5.7nm,0.6s,baz=260,slow=13,SNR=6.2						
PLCA	Paso Flores	20.74	183	P	P	13 11 00.7	+0.2
	8.4nm,0.8s,baz=2.1,slow=11,SNR=20						
PLCA	Paso Flores	20.74	183	*e*P	P	13 11 00.8	+0.2
	9.1nm,0.8s						
SDV	Santo Domingo	28.71	357	*e*P	P	13 12 16.0	-0.4
	2.1nm,0.5s,mb4.0						
JTS	JuntasAbangare	33.91	331	P	P	13 13 00.8	-1.0
	4.2nm,0.7s,mb4.4						
RCBR	Riachuelo	35.12	71	*e*P	P	13 13 13.2	+1.0
	52nm,1.4s,mb5.2						
VNA3	Neumayer Olymp	61.56	162		P	13 16 35.4	+0.6
VNA2	Neumayer--Watz	62.13	161		P	13 16 39.5	+0.8
SNAA	Sanae	63.76	161		P	13 16 49.4	0.0
SNAA	Sanae	63.76	161	P	P	13 16 49.3	-0.1
	0.5nm,0.5s,mb3.6,baz=290,slow=6.3,SNR=15						
SNAA				pP	pP	13 17 15.6	+2.3
	0.4nm,0.8s,baz=308,slow=8.8,SNR=2.4						
SNAA	Sanae	63.76	161	P	P	13 16 49.4	0.0
DBIC	Dimbokro	68.42	74	P	P	13 17 18.5	-1.4
	5.4nm,0.8s,mb4.5,baz=165,slow=6.4,SNR=8.8						
DBIC				pP	pP	13 17 46.2	+2.0
	3.9nm,0.7s,baz=210,slow=4.9,SNR=2.1						
DBIC	Dimbokro	68.42	74	P	P	13 17 18.5	-1.4
DBIC				pP	pP	13 17 46.2	+2.0
MSU	Marysvale	70.86	325	*e*P	P	13 17 34.6	+0.3
MPU	Maple Canyon	71.68	327	P	P	13 17 40.0	+0.8
PDAR	Pinedale Array	72.73	330	P	P	13 17 46.7	+1.4
	0.2nm,0.4s,mb3.3,baz=135,slow=8.9,SNR=3.2						
NVAR	Mina Array Bea	74.22	322	P	P	13 17 54.6	+0.4
	1.0nm,0.7s,mb3.6,baz=147,slow=7.2,SNR=9.4						
EDM	Edmonton	82.33	335	*e*P	P	13 18 37.4	-0.8
YKA	Yellowknife Ar	89.71	341	P	P	13 19 13.9	-0.1
	3.8nm,0.7s,mb4.7,baz=135,slow=4.7,SNR=21						
WRA	Warramunga Arr	134.20	211	PKP	PKPdf	13 25 34.2	+1.0
	0.9nm,0.6s,baz=161,slow=1.8,SNR=18						

WRA				pPKP		13 26 03.1	
	0.6nm,0.7s,baz=164,slow=1.8,SNR=3.4						
ASAJ	**Asahikawa**	**144.32**	**320**	PKP	PKPdf	13 25 51.0	+0.4
	2.6nm,0.7s,baz=202,slow=6.2,SNR=5.4						
MKAR	**Makanchi Array**	**144.46**	**35**	PKP	PKPdf	13 25 50.9	+0.1
	0.4nm,0.4s,baz=297,slow=2.7,SNR=5.7						
MKAR				pPKP		13 26 21.2	
	0.4nm,0.4s,baz=333,slow=3.2,SNR=3.0						
MJAR	**Matsushiro Arr**	**151.01**	**310**	PKPbc	PKPdf	13 26 08.8	+7.0
	1.9nm,0.8s,baz=104,slow=2.0,SNR=6.2						
SONM	**Songino Array**	**151.96**	**7**	PKP	PKPdf	13 26 05.6	+2.7
	1.7nm,0.4s,slow=1.2,SNR=4.3						
SONM				PKPbc	PKPdf	13 26 11.3	+8.4
	1.8nm,0.4s,baz=308,slow=1.5,SNR=18						
SONM				pPKPbc		13 26 41.1	
	0.8nm,0.7s,baz=317,slow=1.4,SNR=3.2						

NEIC 14 13:17:05.8,50.80N×179.64E,h27^{km},ML3.6(AEIC)**,After AEIC.,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.19**	**63**	P	Pn	13 17 40.9	-0.3
KIMD				S	Sn	13 18 08.0	+0.3
KIKV	**Kanaga Island**	**2.27**	**60**	P	Pn	13 17 42.2	-0.3
KIWB	**Kanaga Island**	**2.27**	**61**	P	Pn	13 17 41.8	-0.6
KINC	**Kanaga Island**	**2.32**	**59**	P	Pn	13 17 43.1	-0.1
ADAG	**Mount Adagdak**	**2.63**	**62**	P	Pn	13 17 47.1	-0.5
GSTD	**Great Sitkin T**	**2.92**	**63**	P	Pn	13 17 50.9	-0.8
GSTD				S	Sn	13 18 26.6	+0.2
GSMY	**Great Sitkin M**	**2.97**	**63**	P	Pn	13 17 51.4	-1.0
GSTR	**Great Sitkin T**	**2.99**	**63**	P	Pn	13 17 52.0	-0.6
GSIG	**Igitkin Island**	**3.02**	**65**	P	Pn	13 17 52.5	-0.6
ATKA	**Atka Island**	**4.10**	**68**	P	Pn	13 18 07.3	-1.1
FX1	**Attu Island--F**	**4.53**	**300**	P	Pn	13 18 13.8	-0.7

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*IDC **14** 13:30:40.3±1.4,8.71S×130.04E,mb3.8/3,mb1 3.9/4,mb1mx3.7/11,mbtmp3.8/4,ML3.4/1,Error ellipse: s-maj=190.0km s-min=24.4km az=66.0*

ISC 14 13:30:41.8±1.1**,8.91S**±0.07×**130.4E**±0.1**,h33^{km},n7,** σ**1^{s}33**/11**,mb3.8**/3**,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**4.30**	**152**	*e*P	**P**	**13 31 51.5**	**+4.8**
	14nm,0.5s						
KAKA				*e*S	**S**	**13 32 45.1**	**+8.7**
FITZ	**Fitzroy Crossi**	**10.22**	**206**	*e*P	**P**	**13 33 11.6**	**+2.2**
	13nm,1.2s						
FITZ				*e*S	**S**	**13 35 03.0**	**-1.0**
WRA	**Warramunga Arr**	**11.63**	**161**	Pn	**P**	**13 33 29.6**	**+1.1**
	0.3nm,0.3s,baz=339,slow=14,SNR=16						
WRA				Sn	**S**	**13 35 37.7**	**-0.6**
	0.6nm,0.3s,baz=338,slow=21,SNR=7.1						
WB2	**Warramunga Arr**	**11.63**	**161**	*e*P	**P**	**13 33 29.4**	**+0.8**
WB2				*e*S	**S**	**13 35 36.1**	**-2.3**
STKA	**Stephens Creek**	**25.13**	**157**	P	**P**	**13 36 10.7**	**+5.2**
	1.0nm,0.5s,mb3.6,baz=343,slow=11,SNR=3.7						
SONM	**Songino Array**	**60.35**	**342**	P	**P**	**13 40 48.8**	**-1.2**
	0.5nm,0.6s,mb3.7,baz=159,slow=5.7,SNR=4.7						
MKAR	**Makanchi Array**	**70.00**	**327**	P	**P**	**13 41 52.0**	**-0.2**
	1.3nm,0.6s,mb4.0,baz=128,slow=7.9,SNR=12						

KRSC 14 13:30:50.7±0.6**,52.15N×159.21E,h40^{km}**±4^{km}**,ML3.9,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**0.51**	**304**	*i* P	P	13 31 01.9	+0.3
RUS				*i* S	S	13 31 10.0	+0.6
GRL	**Gorelyy**	**0.81**	**300**	*i* P	P	13 31 06.8	+1.2
GRL				*e*S	S	13 31 18.0	+1.4
PET	**Petropavlovsk**	**0.94**	**339**	*i* P	P	13 31 07.7	+0.2
PET				*i* S	S	13 31 19.5	-0.5
NLC	**Nalytchevo**	**1.03**	**5**	*e*P	P	13 31 08.0	-0.8
NLC				*e*S	S	13 31 21.4	-0.8
SPN	**Mys Shipunski**	**1.07**	**27**	*i* P	P	13 31 09.9	+0.5
SPN				*i* S	S	13 31 24.7	+1.4
UGLR	**Uglovaya**	**1.09**	**348**	*e*P	P	13 31 10.0	+0.4
UGLR				*e*S	S	13 31 24.0	+0.3
SDLR	**Sedlovina**	**1.15**	**350**	*e*P	P	13 31 10.0	-0.5
AVH	**Avacha**	**1.15**	**346**	*i* P	P	13 31 10.9	+0.3
AVH				*e*S	S	13 31 26.0	+0.6
KOK	**Koryaka**	**1.20**	**343**	*e*P	P	13 31 11.7	+0.5
KOK				*e*S	S	13 31 26.5	0.0
APC	**Apacha**	**1.47**	**303**	*i* P	P	13 31 16.5	+1.3
APC				*i* S	S	13 31 35.2	+1.7
APC				Smax			
	230nm,0.6s						
PAU	**Pauzhetka**	**1.64**	**246**	*e*P	P	13 31 17.1	-0.5
PAU				*e*S	S	13 31 36.2	-1.4
PAU				Smax			
	370nm,0.4s						
GNL	**Ganaly**	**1.73**	**334**	*i* P	P	13 31 19.7	+0.9
GNL				*e*S	S	13 31 41.0	+1.2
KII	**Karymskiy**	**1.90**	**4**	*e*P	P	13 31 23.2	+2.0
KII				*e*S	S	13 31 46.8	+2.8
ALID	**Alaid**	**2.62**	**242**	*e*P	P	13 31 31.1	-0.5
ALID				*e*S	S	13 32 00.9	-1.6
MKZ	**Mys Kozlova**	**2.84**	**31**	*e*P	P	13 31 33.6	-1.2
MKZ				*e*S	S	13 32 05.7	-2.4
TUMR	**Tumrok**	**3.19**	**10**	*e*P	P	13 31 41.1	+1.5
TUMR				*e*S	S	13 32 17.6	+0.8
KMNR	**Kamenistaya**	**3.66**	**9**	*e*P	P	13 31 47.9	+1.5
KMNR				*e*S	S	13 32 29.3	+0.4
KPT	**Kopyto**	**3.87**	**8**	*e*P	P	13 31 50.1	+0.8
KPT				*e*S	S	13 32 34.0	-0.1
SRDR	**Sredinnyy**	**4.19**	**4**	*e*P	P	13 31 54.0	+0.2
SRDR				*e*S	S	13 32 40.7	-1.4
KBTR	**Krutoberegovo**	**4.58**	**26**	*e*P	P	13 31 59.3	-0.1
KBTR				*e*S	S	13 32 49.2	-3.0
BKI	**Bering**	**5.05**	**50**	*e*S	S	13 32 54.8	-9.1

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*IDC **14** 13:55:50.9±1.9,17.65S×178.48W,h566^{km}±32^{km},mb3.5/4,mb1 3.6/6,mb1mx3.2/18,mbtmp4.5/6,Error ellipse: s-maj=51.5km s-min=21.8km az=146.0*

*NEIC **14** 13:55:51.2±0.9,17.51S×178.51W,h572^{km}±13^{km},mb4.2/7,Error ellipse: s-maj=24.5km s-min=12.4km az=162.0*

ISC 14 13:55:50.0±1.4**,17.6S**±0.2×**178.6W**±0.2**,h567^{km}**±25^{km}**,n15,** σ**0^{s}73**/15**,mb4.3**/8**,3D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.48**	**62**	P	**P**	**13 57 43.5**	**-0.4**
	4.0nm,0.3s,baz=81,slow=9.5,SNR=10						
AFI	**Afiamalu**	**7.48**	**62**	P	**P**	**13 57 43.5**	**-0.4**
AFI				P		13 57 44.6	
DZM	**Mont Dzumac**	**14.80**	**250**	P	**P**	**13 59 00.1**	**+3.3**
	1.1nm,0.3s,baz=58,slow=16,SNR=12						
HNR	**Honiara**	**22.39**	**288**	P	**P**	**14 00 08.9**	**+0.7**
	31nm,0.4s,mb5.2,baz=61,slow=16,SNR=4.1						
CTA	**Charters Tower**	**33.36**	**260**	*e*P	**P**	**14 01 43.7**	**+0.3**
	3.9nm,0.8s,mb4.0						
CTAO	**Charters Tower**	**33.36**	**260**	*e*P	**P**	**14 01 43.6**	**+0.2**
	5.0nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**38.66**	**241**	⇓*i*P	**P**	**14 02 27.1**	**+0.2**
	5.1nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**38.66**	**241**	P	**P**	**14 02 27.2**	**+0.2**
	4.6nm,0.4s,mb4.3,baz=123,slow=23,SNR=41						
WB2	**Warramunga Arr**	**44.54**	**259**	⇓*i*P	**P**	**14 03 12.9**	**-0.8**
WRAB	**Tennant Creek**	**44.54**	**259**	*e*P	**P**	**14 03 13.2**	**-0.5**
	7.5nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**44.55**	**259**	P	**P**	**14 03 13.0**	**-0.8**
	2.7nm,0.4s,mb4.1,baz=95,slow=7.3,SNR=140						
KAKA	**Kakadu**	**47.44**	**269**	*e*P	**P**	**14 03 35.8**	**-0.1**
	7.0nm,0.5s,mb4.5						
FITZ	**Fitzroy Crossi**	**52.94**	**260**	⇓*i*P	**P**	**14 04 15.7**	**-0.4**
	1.4nm,0.2s,mb4.0						
SBA	**Scott Base**	**60.75**	**184**	*e*P	**P**	**14 05 09.1**	**+0.4**
	3.0nm,0.4s,mb4.0						
ILAR	**Eielson Array**	**85.59**	**13**	P	**P**	**14 07 30.1**	**+0.6**
	0.1nm,0.4s,baz=220,slow=5.2,SNR=5.2						

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*NEIC **14** 14:00:39.3,36.92N×11.05W,MG3.9(MDD),After MDD.*

*INMG **14** 14:00:40.3±0.9,36.77N×11.09W,h10^{km},ML2.5,Error ellipse: s-maj=5.9km s-min=4.3km az=83.0*

*CSEM **14** 14:00:40.9±0.5,36.99N×11.06W,h12^{km},ML3.5/14,Error ellipse: s-maj=9.3km s-min=5.3km az=52.0*

*MDD **14** 14:00:41.5±3.3,37.05N×10.78W,mb4.2/9,Error ellipse: s-maj=30.5km s-min=21.5km az=57.0,PRXIMO*

ISC 14 14:00:39.3±1.2**,37.00N**±0.05×**10.96W**±0.08**,h10^{km},n47,** σ**1^{s}26**/82**,Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTEO	**Sao Teotonio**	**1.86**	**72**	*e*Pn	**Pn**	**14 01 12.7**	**+1.1**
PTEO				*e*Sn	**Sn**	**14 01 37.2**	**+1.9**
	28nm,0.4s						
PTEO	**Sao Teotonio**	**1.86**	**72**	*e*Pn	**Pn**	**14 01 12.7**	**+1.1**
PTEO				*e*Sn	**Sn**	**14 01 37.2**	**+1.9**
	28nm,0.4s						
PLOU	**Loures**	**2.36**	**37**	*e*Pn	**Pn**	**14 01 20.2**	**+1.4**
PLOU				*e*Sn	**Sn**	**14 01 51.4**	**+3.3**
	16nm,0.2s						
PLOU	**Loures**	**2.36**	**37**	Pn	**Pn**	**14 01 20.2**	**+1.4**
PLOU				Sn	**Sn**	**14 01 51.4**	**+3.3**
	7.9nm,0.2s						
MOE	**Montemor**	**2.56**	**53**	*e*Pn	**Pn**	**14 01 22.9**	**+1.2**
MOE				*e*Sn	**Sn**	**14 01 55.0**	**+1.8**
PBEJ	**Beja**	**2.66**	**66**	*e*Pn	**Pn**	**14 01 24.5**	**+1.5**
PBEJ				*e*Sn	**Sn**	**14 01 56.8**	**+1.1**
	9.0nm,0.1s						
PBEJ	**Beja**	**2.66**	**66**	Pn	**Pn**	**14 01 24.5**	**+1.5**
PBEJ				Sn	**Sn**	**14 01 56.8**	**+1.1**
	4.5nm,0.1s						
PALC	**Alcoutim**	**2.81**	**79**	*e*Pn	**Pn**	**14 01 25.6**	**+0.4**
PALC				*e*Sn	**Sn**	**14 01 59.4**	**-0.2**
	14nm,0.1s						
PALC	**Alcoutim**	**2.81**	**79**	*e*Pn	**Pn**	**14 01 25.6**	**+0.4**
PALC				*e*Sn	**Sn**	**14 01 59.4**	**-0.2**
	14nm,0.1s						
EGRO	**El Granado**	**2.82**	**78**	Pn	**Pn**	**14 01 26.0**	**+0.6**
	2.0nm,0.1s,SNR=7.0						
EGRO				Sn	**Sn**	**14 01 59.5**	**-0.2**
	11nm,0.1s,SNR=13						
EGRO	**El Granado**	**2.82**	**78**	Pn	**Pn**	**14 01 26.0**	**+0.7**
	2.0nm,0.1s,SNR=7.0						
EGRO				Sn	**Sn**	**14 01 59.5**	**-0.2**
	11nm,0.1s,SNR=13						
PTOM	**Tomar**	**3.29**	**37**	*e*Sn	**Sn**	**14 02 13.1**	**+1.4**
	9.8nm,0.1s						
PTOM	**Tomar**	**3.29**	**37**	Sn	**Sn**	**14 02 13.1**	**+1.4**
	4.9nm,0.1s						
EMIN	**Mina Concepcio**	**3.50**	**76**	Pn	**Pn**	**14 01 34.9**	**0.0**
	1.6nm,0.1s,SNR=9.4						
EMIN				Sn	**Sn**	**14 02 16.0**	**-0.8**
	0.7nm,0.1s						
EMIN	**Mina Concepcio**	**3.50**	**76**	Pn	**Pn**	**14 01 34.9**	**0.0**
	1.6nm,0.1s,SNR=9.4						
EMIN				Sn	**Sn**	**14 02 16.0**	**-0.8**
	0.7nm,0.1s						
EBAD	**Badajoz**	**3.58**	**59**	Pn	**Pn**	**14 01 36.8**	**+0.7**
EBAD				Sn	**Sn**	**14 02 19.3**	**+0.4**
EBAD	**Badajoz**	**3.58**	**59**	Pn	**Pn**	**14 01 36.2**	**+0.2**
	2.8nm,0.1s,SNR=12						
EBAD				Sn	**Sn**	**14 02 19.3**	**+0.4**
	7.6nm,0.1s,SNR=7.7						
EBAD	**Badajoz**	**3.58**	**59**	Pn	**Pn**	**14 01 36.7**	**+0.6**
	2.8nm,0.1s,SNR=12						
EBAD				Sn	**Sn**	**14 02 19.3**	**+0.4**
	7.6nm,0.1s,SNR=7.7						
PCBR	**Castelo Branco**	**3.94**	**43**	*e*Pn	**Pn**	**14 01 42.1**	**+0.9**
PCBR				*e*Sn	**Sn**	**14 02 28.4**	**+0.4**
	4.0nm,0.1s						
PCBR	**Castelo Branco**	**3.94**	**43**	Pn	**Pn**	**14 01 42.1**	**+0.9**
PCBR				Sn	**Sn**	**14 02 28.4**	**+0.4**
	2.0nm,0.1s						
ESPR	**Espera**	**4.09**	**90**	Pn	**Pn**	**14 01 42.3**	**-1.1**
ESPR				Sn	**Sn**	**14 02 29.1**	**-2.7**
ESPR	**Espera**	**4.09**	**90**	Pn	**Pn**	**14 01 42.3**	**-1.1**
	2.9nm,0.1s,SNR=8.4						
ESPR				Sn	**Sn**	**14 02 29.4**	**-2.3**
	34nm,0.3s,SNR=7.9						
ESPR	**Espera**	**4.09**	**90**	Pn	**Pn**	**14 01 42.3**	**-1.0**
	2.9nm,0.1s,SNR=8.4						
ESPR				Sn	**Sn**	**14 02 29.4**	**-2.4**
	34nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**4.32**	**37**	*e*Sn	**Sn**	**14 02 38.8**	**+1.2**
	4.6nm,0.3s						
MTE	**Manteigas**	**4.32**	**37**	Sn	**Sn**	**14 02 38.8**	**+1.2**
	2.3nm,0.3s						
PVIS	**Viseu**	**4.41**	**32**	*e*Pn	**Pn**	**14 01 48.2**	**+0.2**
PVIS				*e*Sn	**Sn**	**14 02 39.7**	**-0.3**
	6.8nm,0.1s						
PVIS	**Viseu**	**4.41**	**32**	Pn	**Pn**	**14 01 48.2**	**+0.2**
PVIS				Sn	**Sn**	**14 02 39.7**	**-0.3**
	3.4nm,0.1s						
ECAB	**El Cabril**	**4.53**	**75**	Pn	**Pn**	**14 01 49.2**	**-0.4**
ECAB				Sn	**Sn**	**14 02 40.8**	**-2.2**
ECAB	**El Cabril**	**4.53**	**75**	Pn	**Pn**	**14 01 49.2**	**-0.4**
	1.1nm,0.1s,SNR=13						
ECAB				Sn	**Sn**	**14 02 40.4**	**-2.6**
	5.1nm,0.2s,SNR=8.4						
ECAB	**El Cabril**	**4.53**	**75**	Pn	**Pn**	**14 01 49.2**	**-0.4**
	1.1nm,0.1s,SNR=13						
ECAB				Sn	**Sn**	**14 02 40.4**	**-2.6**
	5.1nm,0.2s,SNR=8.4						
PVRL	**Vila Real**	**4.96**	**30**	*e*Sn	**Sn**	**14 02 52.9**	**-0.9**
EADA	**Adamuz**	**5.20**	**75**	Pn	**Pn**	**14 01 58.5**	**-0.6**
	1.0nm,0.1s,SNR=9.3						
EADA				Sn	**Sn**	**14 02 56.4**	**-3.5**
	0.2nm,0.1s,SNR=7.0						
EADA	**Adamuz**	**5.20**	**75**	Pn	**Pn**	**14 01 58.5**	**-0.6**
	1.0nm,0.1s,SNR=9.3						
EADA				Sn	**Sn**	**14 02 56.4**	**-3.4**
	0.2nm,0.1s,SNR=7.0						
ELOB	**Lobios**	**5.35**	**24**	Pn	**Pn**	**14 02 00.5**	**-0.7**
ELOB				Sn	**Sn**	**14 03 00.5**	**-3.2**
ELOB	**Lobios**	**5.35**	**24**	Pn	**Pn**	**14 02 00.5**	**-0.7**
	1.1nm,0.1s,SNR=6.7						
ELOB				Sn	**Sn**	**14 03 02.4**	**-1.3**
	3.5nm,0.1s,SNR=6.6						
ELOB	**Lobios**	**5.35**	**24**	Pn	**Pn**	**14 02 00.5**	**-0.7**
	1.1nm,0.1s,SNR=6.7						
ELOB				Sn	**Sn**	**14 03 00.5**	**-3.2**
	3.5nm,0.1s,SNR=6.6						
EZAM	**Zamans**	**5.43**	**18**	Sn	**Sn**	**14 03 04.4**	**-1.2**
	1.1nm,0.1s,SNR=7.9						
EZAM	**Zamans**	**5.43**	**18**	Sn	**Sn**	**14 03 02.8**	**-2.9**
	1.1nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**5.92**	**32**	Sn	**Sn**	**14 03 15.8**	**-2.0**
	1.0nm,0.4s,SNR=7.9						
ECAL	**Calabor**	**5.92**	**32**	Sn	**Sn**	**14 03 14.6**	**-3.2**
	0.2nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**6.11**	**62**	Pn	**Pn**	**14 02 11.3**	**-0.6**
	3.1nm,0.1s,baz=248,slow=13,SNR=4.0						
ESDC				Sn	**Sn**	**14 03 17.1**	**-5.6**
	0.8nm,0.2s,baz=56,slow=39,SNR=5.6						
ESDC	**Sonseca Array**	**6.11**	**62**	Pn	**Pn**	**14 02 11.3**	**-0.6**
	3.1nm,0.1s,SNR=4.0						
ESDC				Sn	**Sn**	**14 03 17.1**	**-5.6**
	0.8nm,0.2s,SNR=5.6						
EMAZ	**Mazaricos**	**6.13**	**14**	Sn	**Sn**	**14 03 18.4**	**-4.9**
	4.5nm,0.1s,SNR=7.9						
EQES	**Quesada**	**6.33**	**80**	Sn	**Sn**	**14 03 23.9**	**-4.3**
	SNR=7.9						
EQES	**Quesada**	**6.33**	**80**	Sn	**Sn**	**14 03 23.9**	**-4.2**
	SNR=7.9						
EPON	**Pontenova**	**6.96**	**24**	Pn	**Pn**	**14 02 22.4**	**-1.5**
	1.8nm,0.2s,SNR=5.0						
EPON				Sn	**Sn**	**14 03 39.1**	**-4.9**
	1.1nm,0.1s						
EPON	**Pontenova**	**6.96**	**24**	Pn	**Pn**	**14 02 22.4**	**-1.5**
	1.8nm,0.2s,SNR=5.0						
EPON				Sn	**Sn**	**14 03 39.1**	**-4.8**
	1.1nm,0.1s						

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*NEIC **14** 14:04:00.9±1.6,20.12S×69.15W,h108^{km}±21^{km},Error ellipse: s-maj=22.6km s-min=17.4km az=221.0*

*IDC **14** 14:04:02.4±2.8,20.14S×69.02W,h116^{km}±26^{km},mb3.8/3,mb1 3.8/6,mb1mx3.5/18,mbtmp4.1/6,Error ellipse: s-maj=39.0km s-min=24.3km az=108.0*

ISC 14 14:03:59.2±1.6**,20.1S**±0.1×**69.2W**±0.1**,h111^{km}**±24^{km}**,n9,** σ**0^{s}89**/11**,mb4.3**/1**,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.90**	**15**	P	**P**	**14 05 02.1**	**+3.8**
	1.9nm,0.3s,baz=210,slow=6.9,SNR=37						
LPAZ				S	**S**	**14 05 44.3**	**+0.8**
	1.8nm,0.3s,baz=213,slow=7.2,SNR=3.6						
LPAZ	**La Paz**	**3.90**	**15**	*e*Pn	**P**	**14 05 02.1**	**+3.7**
LPAZ				P		14 05 02.1	
LPAZ				S	**S**	**14 05 44.3**	**+0.8**
ARE	**Arequipa**	**4.20**	**328**	*e*P	**P**	**14 05 03.0**	**+0.5**
ARE				*e*S	**S**	**14 05 50.0**	**-0.9**
SIV	**San Ignacio**	**8.73**	**64**	P	**P**	**14 06 02.5**	**-1.5**
	2.6nm,0.3s,baz=256,slow=11,SNR=74						
CPUP	**Villa Florida**	**12.56**	**122**	P	**P**	**14 06 54.9**	**-0.1**
	0.2nm,0.3s,baz=323,slow=12,SNR=4.7						
PLCA	**Paso Flores**	**20.62**	**183**	P	**P**	**14 08 31.9**	**+0.4**
	3.8nm,0.7s,baz=358,slow=11,SNR=15						
BDFB	**Brasilia**	**20.63**	**81**	P	**P**	**14 08 32.5**	**+0.7**
	7.9nm,0.6s,baz=267,slow=11,SNR=8.2						
DBIC	**Dimbokro**	**68.60**	**74**	P	**P**	**14 14 52.2**	**-0.5**
	3.6nm,0.8s,mb4.3,baz=216,slow=5.4,SNR=4.1						
MKAR	**Makanchi Array**	**144.63**	**35**	PKP	PKPdf	14 23 24.2	+1.6
	0.5nm,0.6s,baz=311,slow=3.5,SNR=4.4						

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*IDC **14** 14:08:59.1±1.0,8.00S×117.96E,mb3.9/5,mb1 3.9/7,mb1mx3.8/16,mbtmp3.8/7,ML3.8/2,Error ellipse: s-maj=56.3km s-min=18.0km az=63.0*

*NEIC **14** 14:09:02.9±8.9,8.00S×118.01E,h26^{km}±68^{km},Error ellipse: s-maj=41.5km s-min=17.8km az=63.0*

NEIC Felt [II] at Dompu.

ISC 14 14:08:59.8±5.4**,8.0S**±0.2×**118.1E**±0.2**,h20^{km}**±41^{km}**,n8,** σ**0^{s}90**/10**,mb3.9**/5**,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.46**	**145**	Pn	**P**	**14 11 58.5**	**-0.6**
	0.6nm,0.3s,baz=330,slow=9.6,SNR=9.9						
FITZ				Sn	**S**	**14 14 14.4**	**-4.0**
	1.3nm,0.3s,baz=184,slow=19,SNR=8.2						
WRA	**Warramunga Arr**	**19.71**	**129**	P	**P**	**14 13 31.7**	**+0.5**
	0.2nm,0.3s,baz=302,slow=12,SNR=13						
WRA				S	**S**	**14 17 06.9**	**+0.2**
	0.0nm,0.3s,baz=305,slow=26,SNR=3.0						
NWAO	**Narrogin (SRO)**	**24.86**	**182**	P	**P**	**14 14 23.1**	**+0.3**
	3.5nm,0.7s,mb4.0,baz=352,slow=8.0,SNR=2.1						
STKA	**Stephens Creek**	**32.30**	**141**	P	**P**	**14 15 30.5**	**+0.6**
	1.9nm,0.8s,mb4.0,baz=323,slow=12,SNR=3.8						
STKA	**Stephens Creek**	**32.30**	**141**	P	**P**	**14 15 30.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**32.36**	**324**	P	**P**	**14 15 31.4**	**+0.9**
	1.0nm,0.6s,mb3.8,baz=160,slow=6.9,SNR=6.2						
SONM	**Songino Array**	**56.51**	**351**	P	**P**	**14 18 43.2**	**+0.1**
	1.0nm,0.8s,mb3.9,baz=168,slow=7.7,SNR=8.9						
MKAR	**Makanchi Array**	**63.14**	**333**	P	**P**	**14 19 26.9**	**-1.7**
	0.3nm,0.5s,mb3.7,baz=146,slow=7.2,SNR=3.9						

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*BJI **14** 14:23:05.6,26.31N×87.37E,h44^{km},mB4.7,mb4.3*

*DMN **14** 14:23:12.9±0.8,27.30N×87.89E,h10^{km},Ml4.6/5,Error ellipse: s-maj=49.1km s-min=15.1km az=9.0*

*IDC **14** 14:23:12.6±0.6,27.24N×87.85E,mb4.2/14,mb1 4.3/15,mb1mx4.2/23,mbtmp4.2/15,ML3.5/1,MS2.4/1,Ms1 2.6/1,ms1mx2.5/13,Error ellipse: s-maj=30.4km s-min=13.7km az=54.0*

*NDI **14** 14:23:14.0±4.4,27.46N×87.97E,h10^{km},MD4.4,mb4.6(NEIC)*

*NEIC **14** 14:23:18.5±0.6,27.21N×87.92E,h44^{km}±5^{km},mb4.6/10,Error ellipse: s-maj=8.2km s-min=5.7km az=196.0*

ISC 14 14:23:18.0±0.6**,27.25N**±0.04×**87.94E**±0.04**,h58^{km}**±5^{km}**,n67,** σ**0^{s}96**/74**,mb4.4**/21**,Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLGI	**Shiliguri**	**0.69**	**142**	*e*P	**P**	**14 23 29.8**	**-2.2**
GUN	**Gumba**	**1.95**	**290**	*e*Pn	**P**	**14 23 49.6**	**+0.2**
GUN				*e*Sn	**S**	**14 24 17.2**	**+4.6**
PKI	**Pulchoki**	**2.28**	**279**	*e*Sn	**S**	**14 24 25.8**	**+4.9**
	2µm,0.6s						
PKI	**Pulchoki**	**2.28**	**279**	*e*Pn	**P**	**14 23 54.4**	**+0.4**
PKI				*e*Sn	**S**	**14 24 25.8**	**+4.9**
KKN	**Kakani**	**2.43**	**284**	*e*Pn	**P**	**14 23 56.5**	**+0.3**
KKN				*e*Sn	**S**	**14 24 28.8**	**+4.1**
	330nm,0.2s						
DMN	**Daman**	**2.55**	**279**	*e*Pn	**P**	**14 23 57.9**	**0.0**
DMN				*e*Sn	**S**	**14 24 31.7**	**+3.9**
	1µm,0.6s						
GKN	**Gorkha**	**3.03**	**285**	*e*Pn	**P**	**14 24 04.6**	**-0.1**
GKN				*e*Sn	**S**	**14 24 42.1**	**+2.2**
	546nm,0.3s						
LSA	**Lhasa**	**3.73**	**48**	P	**P**	**14 24 15.3**	**+0.7**
LSA				S	**S**	**14 25 01.4**	**+3.7**
LSA	**Lhasa**	**3.73**	**48**	*e*Pn	**P**	**14 24 15.2**	**+0.6**
KOLN	**Koldanda**	**3.89**	**279**	*e*Pn	**P**	**14 24 15.7**	**-1.1**
KOLN				*e*Sn	**S**	**14 25 03.0**	**+1.3**
	267nm,0.3s						
BOK	**Bokaro**	**3.91**	**209**	*i* P	**P**	**14 24 17.8**	**+0.8**
BOK				*i* S	**S**	**14 25 02.8**	**+0.8**
SHL	**Shillong**	**3.91**	**114**	*e*P	**P**	**14 24 16.5**	**-0.6**
SHL				*e*SB	**S**	**14 25 14.0**	**+12**
AGT	**Agartala**	**4.49**	**138**	*e*PG	**P**	**14 24 42.0**	**+17**
LGTI	**Lohaghat**	**7.13**	**290**	*i* P	**P**	**14 25 01.5**	**-0.5**
LGTI				*i* x	x	14 26 23.0	
PTH	**Pithoragarh**	**7.18**	**290**	*e*P	**P**	**14 25 00.0**	**-2.8**
PTH				*e*x	x	14 26 18.0	
NDI	**New Delhi**	**9.59**	**281**	*e*P	**P**	**14 25 30.0**	**-5.9**
NDI				*e*S	**S**	**14 27 11.0**	**-12**
NGP	**Nagpur**	**10.13**	**235**	*e*P	**P**	**14 25 41.4**	**-1.9**
NGP				*e*x	x	14 27 31.3	
SMLA	**Simla**	**10.18**	**295**	*i* P	**P**	**14 25 36.8**	**-7.2**
SMLA				*i* S	**S**	**14 27 25.4**	**-12**
VIS	**Vishakhapatnam**	**10.39**	**205**	*i* x	x	14 27 39.9	
VIS				*i* x	x	14 28 34.9	
SDNR	**Sundarnagar**	**10.47**	**296**	*e*S	**S**	**14 27 28.0**	**-17**
HYB	**Hyderabad**	**13.08**	**224**	*e*P	**P**	**14 26 20.0**	**-2.9**
HYB	**Hyderabad**	**13.08**	**224**	*i* P	**P**	**14 26 22.5**	**-0.4**
HYB				*e*S	**S**	**14 28 48.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**13.38**	**129**	Pn	**P**	**14 26 23.1**	**-3.8**
	0.1nm,0.3s,baz=304,slow=12,SNR=3.3						
CMAR				LR	LR	14 31 16.3	
	comp=Z,16nm,19.0s,baz=320,slow=36						
POO	**Poona**	**15.61**	**239**	*e*x	x	14 26 51.0	
KAD	**Karad**	**16.11**	**235**	*e*x	x	14 26 59.4	
AAK	**Ala-Archa**	**18.86**	**328**	*e*P	**P**	**14 27 34.9**	**-1.0**
	4.3nm,0.8s						
ENH	**Enshi**	**19.12**	**76**	*e*P	**P**	**14 27 40.2**	**+1.2**
	9.4nm,0.7s						
MKAR	**Makanchi Array**	**20.02**	**349**	P	**P**	**14 27 46.0**	**-2.5**
	1.5nm,0.4s,baz=167,slow=10,SNR=22						
SONM	**Songino Array**	**25.11**	**30**	P	**P**	**14 28 39.5**	**+0.7**
	5.9nm,0.7s,mb4.2,baz=221,slow=7.8,SNR=36						
ULN	**Ulaanbaatar**	**25.43**	**31**	*e*P	**P**	**14 28 42.3**	**+0.5**
	8.9nm,0.7s,mb4.4						
BVAR	**Borovoye Array**	**28.88**	**338**	P	**P**	**14 29 12.4**	**-0.8**
	0.8nm,0.5s,mb3.7,baz=152,slow=8.9,SNR=7.2						
AKASG	**Malin Array Be**	**49.80**	**315**	P	**P**	**14 32 05.9**	**-1.0**
	0.6nm,0.5s,mb3.9,baz=78,slow=7.2,SNR=4.5						
MLR	**Muntele Rosu**	**51.85**	**308**	P	**P**	**14 32 23.6**	**+1.2**
	5.6nm,0.7s,mb4.6,baz=176,slow=1.1,SNR=12						
FINES	**FINESS Array B**	**53.05**	**328**	P	**P**	**14 32 31.0**	**-0.2**
	2.5nm,0.6s,mb4.3,baz=103,slow=8.1,SNR=20						
FINES	**FINESS Array B**	**53.05**	**328**	P	**P**	**14 32 31.0**	**-0.2**
ARCES	**ARCESS Array B**	**55.17**	**338**	P	**P**	**14 32 46.8**	**+0.2**
	2.3nm,0.8s,mb4.3,baz=100,slow=7.0,SNR=5.8						
FITZ	**Fitzroy Crossi**	**58.03**	**137**	P	**P**	**14 33 08.1**	**+0.4**
	3.0nm,1.0s,mb4.3,baz=19,slow=11,SNR=2.3						
HFS	**Hagfors**	**58.99**	**326**	P	**P**	**14 33 12.7**	**-1.0**
	2.6nm,0.7s,mb4.4,baz=146,slow=5.3,SNR=6.1						
GERES	**GERESS Array B**	**59.90**	**313**	P	**P**	**14 33 20.3**	**+0.2**
	1.5nm,0.7s,mb4.1,baz=76,slow=5.5,SNR=11						
NB2	**NORSAR Subarra**	**60.18**	**327**	P	**P**	**14 33 20.9**	**-1.0**
	1.0nm,0.6s,mb4.0,baz=85,slow=7.0						
NOA	**NORSAR Array B**	**60.18**	**327**	P	**P**	**14 33 21.3**	**-0.6**
	1.1nm,0.7s,mb4.0,baz=87,slow=6.9,SNR=5.8						
NOA	**NORSAR Array B**	**60.18**	**327**	P	**P**	**14 33 21.3**	**-0.6**
HAU	**Haudompre**	**64.86**	**313**	*e*P	**P**	**14 33 52.9**	**-0.3**
WRA	**Warramunga Arr**	**64.96**	**131**	P	**P**	**14 33 55.8**	**+1.5**
	1.1nm,0.5s,mb4.2,baz=324,slow=6.5,SNR=39						
SBF	**Sospel**	**65.13**	**308**	*e*P	**P**	**14 33 55.9**	**+1.0**
LPG	**La Plagne**	**65.19**	**310**	*e*P	**P**	**14 33 55.9**	**+0.6**
	14nm,0.8s,mb4.8						
LPL	**La Plagne**	**65.20**	**310**	*e*P	**P**	**14 33 56.0**	**+0.6**
CABF	**La Chapelle**	**65.37**	**311**	*e*P	**P**	**14 33 56.5**	**+0.1**
MBDF	**Montbardon**	**65.37**	**309**	*e*P	**P**	**14 33 56.8**	**+0.3**
	10nm,0.8s,mb4.6						
ORIF	**Oris-en-Rattie**	**65.93**	**310**	*e*P	**P**	**14 34 00.4**	**+0.3**
NWAO	**Narrogin (SRO)**	**66.00**	**153**	P	**P**	**14 34 00.2**	**-0.5**
	3.6nm,0.8s,mb4.4,baz=318,slow=12,SNR=3.0						
LOR	**Lormes**	**66.68**	**312**	*e*P	**P**	**14 34 04.2**	**-0.5**
SMF	**Signal de Mont**	**66.85**	**312**	*e*P	**P**	**14 34 05.6**	**-0.3**
	10nm,0.9s,mb4.6						
SSF	**Saint Saulge**	**66.96**	**312**	*e*P	**P**	**14 34 06.4**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	9.2nm,0.7s,mb4.6						
AVF	Avril sur Loir	67.14	312	eP	P	14 34 07.4	-0.2
	10nm,0.8s,mb4.6						
BGF	Bois d'Agland	67.54	312	eP	P	14 34 09.9	-0.2
LASF	Ste Croix	67.56	309	eP	P	14 34 10.8	+0.5
TCF	Toulx Ste Croi	68.04	312	eP	P	14 34 13.7	+0.4
	11nm,0.9s,mb4.6						
CAF	Calviac	68.53	310	eP	P	14 34 16.9	+0.5
	6.8nm,0.8s,mb4.4						
RJF	Les Rejaudoux	68.79	311	eP	P	14 34 18.8	+0.8
LDF	La Druitiere	68.87	315	eP	P	14 34 18.3	-0.1
GRR	Gorron	69.40	315	eP	P	14 34 20.8	-0.8
LFF	La Frestale	69.43	311	eP	P	14 34 20.5	-1.4
MFF	Saint Martin d	69.50	313	eP	P	14 34 22.2	-0.1
DBIC	Dimbokro	89.47	277	P	P	14 36 10.2	-0.4
	9.9nm,1.2s,mb5.0,baz=143,slow=5.1,SNR=2.9						
CPUP	Villa Florida	149.04	264	PKPbc	PKPdf	14 43 02.6	+6.8
	2.6nm,0.7s,baz=93,slow=5.5,SNR=7.4						
SIV	San Ignacio	149.18	285	PKPbc	PKPdf	14 43 03.5	+7.3
	baz=140,slow=5.1						

FUNV ***14*** *14:24:39.8, 10.88N×61.63W, h40*^{km}*, MW2.9*
TRN ***14*** *14:24:40.1, 10.90N×61.74W, h56*^{km}*, MD3.2*
NEIC ***14*** *14:24:40.1, 10.90N×61.74W, h55*^{km}*, MD3.2(TRN), After TRN.*
ISC 14 14:24:38.3±0.6, **10.84N**±0.04×**61.75W**±0.04, **h74**^{km}±7^{km}, **n20**, σ1^{s}**10**/35, **1D, Trinidad**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.39	120	⇓iP	P	14 24 50.4	-0.2
TRN				eS	S	14 24 57.8	-2.0
GUIV	Guiria	0.51	248	eP	P	14 24 52.1	+0.4
GUIV				eS	S	14 25 01.0	-0.6
TPP	Pointe-a-Pierr	0.59	151	eP	P	14 24 55.6	+3.0
TPP				eS	S	14 25 03.1	+0.1
TBH	Brigand Hill	0.75	118	eP	P	14 24 57.0	+2.7
TPR	Prospect	1.01	70	eP	P	14 24 58.0	+0.6
TPR				eS	S	14 25 10.9	-0.8
GRW	Mount Saint Ca	1.31	4	eP	P	14 25 01.6	+0.1
GUNV	Guanoco	1.36	240	eP	P	14 25 03.8	+1.7
GUNV				eS	S	14 25 21.7	+2.1
GRHS	Sauteurs	1.38	4	eP	P	14 25 02.1	-0.2
GRHS				eS	S	14 25 19.3	-0.8
ITEV	Isla Los Testi	1.46	291	eP	P	14 25 04.1	+0.8
ITEV				eS	S	14 25 22.1	+0.3
CRUV	Carupano	1.48	264	eP	P	14 25 04.1	+0.5
CRUV				eS	S	14 25 22.1	-0.1
ORIV	Oritupano	2.40	223	eP	P	14 25 18.2	+1.8
PCRV	Puerto La Cruz	2.92	257	eP	P	14 25 24.3	+0.8
PCRV				eS	S	14 25 56.8	-0.8
IBAV	Isla La Blanqu	2.94	290	eP	P	14 25 24.3	+0.4
IBAV				eS	S	14 25 57.3	-0.9
GURV	El Guri	3.33	203	eP	P	14 25 29.7	+0.3
GURV				eS	S	14 26 05.8	-2.1
CUPV	Cœpira	4.05	259	eP	P	14 25 39.9	+0.5
CUPV				eS	S	14 26 24.5	-1.4
ORCV	Isla La Orchil	4.47	283	eP	P	14 25 45.1	-0.1
LUEV	Luepa	4.97	177	eP	P	14 25 50.6	-1.5
LUEV				eS	S	14 26 43.2	-5.6
CAOV	Caicara del Or	5.71	233	eP	P	14 26 01.7	-0.6
CAOV				eS	S	14 27 02.2	-5.0
TURV	Turiamo	6.00	267	eP	P	14 26 06.4	+0.1
BAUV	El Baul	6.48	254	eP	P	14 26 11.6	-1.4
BAUV				eS	S	14 27 20.1	-6.2

IDC ***14*** *14:30:43.5±1.3, 71.42N×2.75W, mb3.5/3, mb1 3.8/8, mb1mx3.6/24, mbtmp3.7/8, ML3.5/5, MS3.3/5, Ms1 3.3/5, ms1mx3.0/21, Error ellipse: s-maj=30.2km s-min=18.9km az=32.0*
BER ***14*** *14:30:47.5±0.9, 71.88N×2.11W, h10*^{km}*, MW3.1*
ISC 14 14:30:40.4±0.7, **71.64N**±0.09×**2.9W**±0.2, **h10**^{km}, **n19**, σ1^{s}**04**/18, **mb3.4**/3, **MS3.3**/4, **1C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	1.94	253	Pn	Pn	14 31 15.2	+1.5
	3.7nm,0.3s,baz=97,slow=13,SNR=2.2						
JMIC				Sn	Sn	14 31 36.8	-1.5
	4.2nm,0.3s,baz=12,slow=16,SNR=2.3						
LOF	Lofoten	6.65	114	eP	Pn	14 32 20.6	0.0
DAG	Danmarks Havn	6.69	327	⇑iP	Pn	14 32 21.1	0.0
	9.1nm,0.3s						
TRO	Tromso	7.50	95	eP	Pn	14 32 30.8	-1.6
MELSS	Ber_school_2	7.57	121	eP	Pn	14 32 33.5	-0.1
MELSS				eS	Sn	14 33 52.1	-8.2
STOK	Stokkvaagen	7.79	125	eP	Pn	14 32 37.6	+1.1
NSS	Namsos	9.01	135	eP	P	14 32 53.1	-0.5
ARCES	ARCESS Array B	9.62	89	Pn	P	14 33 01.5	-0.3
	0.5nm,0.3s,baz=289,slow=11,SNR=16						
NOA	NORSAR Array B	12.00	145	Pn	P	14 33 33.4	-0.9
	0.4nm,0.3s,baz=339,slow=12,SNR=3.8						
HFS	Hagfors	13.31	142	Pn	P	14 33 51.0	-0.8
	0.3nm,0.3s,baz=342,slow=9.1,SNR=21						
HFS				Sn	S	14 36 11.4	-9.5
	0.0nm,0.3s,baz=338,slow=23,SNR=2.8						
HFS				LR	LR	14 38 38.4	
	comp=Z,74nm,20.7s,baz=311,slow=36						
FINES	FINESS Array B	15.20	117	Pn	P	14 34 16.5	+0.2
	0.2nm,0.3s,baz=330,slow=11,SNR=6.9						
EKA	Eskdalemuir Ar	16.38	181	Pn	P	14 34 32.0	+0.5
	0.1nm,0.3s,baz=28,slow=14,SNR=2.9						
GERES	GERESS Array B	24.12	153	LR	LR	14 45 17.5	
	comp=Z,51nm,21.9s,MS3.0,baz=117,slow=37						
AKASG	Malin Array Be	25.48	128	P	P	14 36 11.4	+1.7
	0.3nm,0.3s,mb3.3,baz=335,slow=10,SNR=5.3						
DAVOX	Davos	25.66	160	LR	LR	14 47 12.7	
	comp=Z,32nm,18.6s,MS2.9,baz=18,slow=39						
MLR	Muntele Rosu	29.61	137	LR	LR	14 50 00.3	
	comp=Z,74nm,18.4s,MS3.4,baz=333,slow=39						
BRTR	Keskin Array B	36.85	130	P	P	14 37 53.6	+3.4
	0.7nm,0.5s,mb3.7,baz=333,slow=5.5,SNR=3.9						
ILAR	Eielson Array	41.66	338	P	P	14 38 35.3	+5.6
	0.4nm,0.7s,mb3.1,baz=3.0,slow=6.8,SNR=4.0						
TXAR	Lajitas Array	65.77	290	LR	LR	15 10 47.1	
	comp=Z,62nm,18.8s,MS3.8,baz=260,slow=36						

NEIC ***14*** *14:46:47.6±0.9, 17.50S×69.39W, h162*^{km}*±19*^{km}*, mb4.0/2, Error ellipse: s-maj=23.5km s-min=13.7km az=145.0*
IDC ***14*** *14:46:48.8±1.3, 17.42S×69.28W, h172*^{km}*±9*^{km}*, mb3.6/7, mb1 3.8/8, mb1mx3.6/17, mbtmp4.1/8, Error ellipse: s-maj=20.0km s-min=14.5km az=75.0*
ISC 14 14:46:46.7±0.7, **17.46S**±0.08×**69.40W**±0.06, **h170**^{km}±6^{km}, **n18**, σ1^{s}**14**/19, **mb3.9**/7, **1C-1D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	1.68	46	P	P	14 47 22.4	+2.5
	168nm,0.3s,baz=242,slow=7.3,SNR=2491						
LPAZ				S	S	14 47 46.7	+1.0
	10nm,0.3s,baz=110,slow=21,SNR=3.7						
LPAZ	La Paz	1.68	46	⇓iPn	P	14 47 22.4	+2.4
ARE	Arequipa	2.23	296	⇑iP	P	14 47 26.0	-0.1
ARE				i S	S	14 47 54.9	-1.6
SIV	San Ignacio	8.11	81	P	P	14 48 41.2	-1.2
	5.9nm,0.3s,baz=275,slow=10,SNR=61						
SIV				S	S	14 50 09.9	-2.8
	1.1nm,0.3s,baz=345,slow=19,SNR=8.4						
SAML	Samuel	10.40	36	ePn	P	14 49 13.6	+1.1
	4.0nm,0.8s						
CFAA	Coronel Fontan	14.12	176	P	P	14 49 59.9	-0.4
	0.1nm,0.3s,baz=341,slow=12,SNR=4.6						
CFAA	Coronel Fontan	14.12	176	P	P	14 49 59.9	-0.4
BDFB	Brasilia	20.58	88	P	P	14 51 13.8	-0.1
	3.3nm,0.4s,baz=252,slow=9.9,SNR=6.5						
PLCA	Paso Flores	23.21	182	P	P	14 51 40.6	+1.2
	5.4nm,0.9s,mb4.0,baz=354,slow=11,SNR=12						
PLCA	Paso Flores	23.21	182	eP	P	14 51 40.8	+1.3
	5.8nm,0.9s,mb4.0						
SNAA	Sanae	66.23	162	P	P	14 57 18.5	+0.4
	0.3nm,0.6s,mb3.3,baz=280,slow=12,SNR=7.3						
DBIC	Dimbokro	68.09	75	P	P	14 57 30.6	-0.1
	14nm,0.5s,mb4.9,baz=236,slow=6.1,SNR=33						
PDAR	Pinedale Array	70.40	330	P	P	14 57 45.3	+1.1
	0.2nm,0.4s,mb3.2,baz=114,slow=8.9,SNR=2.7						
ULM	Lac du Bonnet	71.34	342	P	P	14 57 49.5	-0.2
	3.1nm,0.4s,mb4.4,baz=110,slow=3.9,SNR=3.2						
SCHQ	Schefferville	72.03	2	P	P	14 57 52.4	-1.3
	1.0nm,0.5s,mb3.8,baz=196,slow=7.4,SNR=2.8						
YKA	Yellowknife Ar	87.24	341	P	P	14 59 14.9	+0.3
	1.1nm,0.5s,mb4.0,baz=133,slow=4.8,SNR=6.9						
MKAR	Makanchi Array	142.56	32	PKP	PKPdf	15 06 02.2	+2.9
	0.2nm,0.6s,baz=297,slow=3.2,SNR=3.0						
SONM	Songino Array	149.51	6	PKP	PKPdf	15 06 11.9	+1.0
	0.1nm,0.3s,baz=307,slow=3.1,SNR=2.9						
SONM				PKPbc	PKPdf	15 06 17.3	+6.3
	0.6nm,0.5s,baz=301,slow=1.8,SNR=8.0						
SONM				PKPab	PKPab	15 06 22.4	-1.0
	0.7nm,0.6s,baz=317,slow=2.3,SNR=9.0						

IDC 14 15:25:12.3±4.1, **1.97N**×**98.07E**, **mb3.6**/3, **mb1 3.7**/3, **mb1mx3.6**/15, **mbtmp3.6**/3, **Error ellipse: s-maj=163.5km s-min=28.7km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.71	123	P	P	15 33 03.2	-1.8
	0.4nm,0.5s,baz=302,slow=9.1,SNR=3.7						
SONM	Songino Array	46.25	8	P	P	15 33 39.8	-1.4
	0.2nm,0.4s,baz=188,slow=9.6,SNR=4.3						
MKAR	Makanchi Array	46.72	345	P	P	15 33 42.8	-2.1
	1.0nm,0.5s,baz=157,slow=8.9,SNR=16						

NEIC ***14*** *15:28:29.6±1.0, 50.99N×179.68E, h49*^{km}*±6*^{km}*, mb4.0/2, ML3.9(AEIC), Error ellipse: s-maj=20.6km s-min=5.7km az=182.0*
MOS ***14*** *15:28:30.7±1.9, 51.20N×179.49E, h69*^{km}*, mb4.4/3, Error ellipse: s-maj=24.2km s-min=16.0km az=123.1*
IDC ***14*** *15:28:32.4±4.0, 51.20N×179.59E, h72*^{km}*±36*^{km}*, mb3.5/9, mb1 3.8/10, mb1mx3.6/25, mbtmp3.9/10, ML3.7/1, Error ellipse: s-maj=42.4km s-min=15.5km az=176.0*
ISC 14 15:28:28.0±1.2, **51.0N**±0.2×**179.62E**±0.07, **h54**^{km}±8^{km}, **n36**, σ1^{s}**02**/41, **mb3.9**/12, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	2.13	67	P	P	15 29 02.2	+0.3
KIMD				S	S	15 29 29.9	+2.8
KIKV	Kanaga Island	2.21	64	P	P	15 29 03.1	+0.1
KIWB	Kanaga Island	2.21	65	P	P	15 29 03.1	+0.1
KINC	Kanaga Island	2.25	63	P	P	15 29 03.9	+0.2
ADAG	Mount Adagdak	2.57	65	P	P	15 29 08.1	-0.1
GSSP	Great Sitkin S	2.86	65	P	P	15 29 11.8	-0.5
GSTD	Great Sitkin T	2.86	66	P	P	15 29 11.8	-0.6
GSMY	Great Sitkin M	2.91	67	P	P	15 29 12.4	-0.7
GSTR	Great Sitkin T	2.93	66	P	P	15 29 13.2	-0.1
GSIG	Igitkin Island	2.97	68	P	P	15 29 13.2	-0.6
SMY	Shemya	3.85	299	P	P	15 29 27.3	+1.0
ATKA	Atka Island	4.05	70	P	P	15 29 28.1	-1.0
ATKA				S	S	15 30 15.3	-0.5
FX1	Attu Island--F	4.43	298	P	P	15 29 34.0	-0.5
FX1				S	S	15 30 30.4	+5.1
FX1				pmax	pmax		
	comp=Z,16nm,0.3s						
FX1				smax			
	comp=N,5.0nm,0.3s						
FX1	Attu Island--F	4.43	298	P	P	15 29 34.0	-0.4
	comp=N,16nm,0.3s,baz=151,slow=5.1,SNR=42						
FX1				S	S	15 30 30.4	+5.1
	comp=N,5.3nm,0.3s,baz=112,slow=22,SNR=4.2						
FX1	Attu Island--F	4.43	298	P	P	15 29 34.3	-0.2
FX1				S	S	15 30 31.9	+6.6
RSO	Redoubt South	18.10	48	eP	P	15 32 37.4	+0.6
BILL	Bilibino	18.34	344	eP	P	15 32 40.6	+0.9
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BILL	Bilibino	18.34	344	eP	P	15 32 39.1	-0.6
	comp=Z,6.0nm,1.0s						
SPU	Mount Spurr	18.67	46	eP	P	15 32 44.6	+0.9
ILAR	Eielson Array	22.19	39	P	P	15 33 21.5	+0.9
	comp=Z,0.8nm,0.6s,mb3.3,baz=250,slow=9.9,SNR=8.5						
YSS	Yuzh-Sakhalins	24.36	275	P	P	15 33 44.5	+2.7
ASAJ	Asahikawa	25.70	269	P	P	15 33 56.1	+1.6
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ASAJ	Asahikawa	25.70	269	P	P	15 33 56.1	+1.6
	comp=Z,9.8nm,0.9s,mb4.3,baz=76,slow=6.4,SNR=10						
INK	Inuvik	28.37	35	P	P	15 34 18.2	-0.4
	comp=Z,0.6nm,0.4s,mb3.6,baz=248,slow=14,SNR=3.4						
KLR	Kul'dur	30.34	286	eP	P	15 34 33.0	-3.3
BOD	Bodaibo	37.43	307	eP	P	15 35 35.6	-1.6
BOD				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
NVAR	Mina Array Bea	44.60	81	P	P	15 36 37.5	+1.2
	comp=Z,1.0nm,1.1s,mb3.6,baz=274,slow=12,SNR=3.1						
SONM	Songino Array	45.94	296	P	P	15 36 47.4	+0.5
	comp=Z,0.7nm,0.6s,mb3.8,baz=60,slow=7.7,SNR=9.5						
ZAK	Zakamensk	46.31	301	eP	P	15 36 49.5	-0.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.6						
BW06	Boulder Array	47.38	71	eP	P	15 36 58.8	+0.4
	comp=Z,3.0nm,0.8s,mb4.3						
PDAR	Pinedale Array	47.38	71	P	P	15 36 59.0	+0.7
	comp=Z,3.1nm,0.8s,mb4.3,baz=311,slow=4.3,SNR=17						
MKAR	Makanchi Array	59.51	308	P	P	15 38 26.4	-1.2
	comp=Z,0.8nm,0.3s,mb4.2,baz=51,slow=6.3,SNR=12						
TXAR	Lajitas Array	59.70	80	P	P	15 38 27.8	-1.4
	comp=Z,0.2nm,0.4s,mb3.5,baz=299,slow=11,SNR=2.6						
TXAR	Lajitas Array	59.70	80	P	P	15 38 27.8	-1.4
NB2	NORSAR Subarra	67.96	354	P	P	15 39 21.2	-1.3
	comp=Z,0.9nm,0.7s,mb3.9,baz=6.0,slow=6.2						
NOA	NORSAR Array B	67.96	354	P	P	15 39 20.6	-2.0
	comp=Z,0.9nm,0.8s,mb3.9,baz=337,slow=4.7,SNR=5.5						

IDC ***14*** *15:42:31.2±1.2, 33.36N×91.81E, mb3.7/6, mb1 3.9/9, mb1mx3.8/19, mbtmp3.7/9, ML3.2/3, MS3.7/5, Ms1 3.7/5, ms1mx3.5/18, Error ellipse: s-maj=42.0km s-min=21.6km az=52.0*
BJI ***14*** *15:42:35.6, 33.56N×92.13E, h46*^{km}*, mB4.7, mb4.6, ML4.0, Ms4.1, Msz3.9*
NEIC ***14*** *15:42:37.7±1.7, 33.46N×92.07E, h47*^{km}*±22*^{km}*, mb4.2/3, Error ellipse: s-maj=16.5km s-min=15.7km az=73.0*
ISC 14 15:42:34.5±1.2, **33.42N**±0.06×**92.07E**±0.07, **h35**^{km}±15^{km}, **n27**, σ1^{s}**00**/26, **mb4.0**/8, **MS3.8**/3, **1C, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	3.79	192	P	P	15 43 38.0	+5.9
LSA				Smax			
	comp=N,190nm,0.9s						
LSA				Smax			
	comp=E,410nm,0.8s						
LSA	Lhasa	3.79	192	ePn	P	15 43 37.8	+5.7
GUN	Gumba	7.65	226	eP	P	15 44 28.0	+1.6
	comp=E,80nm,0.7s						
SHL	Shillong	7.83	181	eP	P	15 44 29.0	+0.2
SHL				eS	S	15 45 57.0	-0.2
KKN	Kakani	8.11	228	eP	P	15 44 32.6	0.0
	comp=E,37nm,0.6s						
PKI	Pulchoki	8.19	226	eP	P	15 44 34.2	+0.5
	comp=E,90nm,0.7s						
DMN	Daman	8.34	228	eP	P	15 44 35.8	-0.1
	comp=E,130nm,0.8s						
GKN	Gorkha	8.37	232	eP	P	15 44 35.8	-0.5
	comp=E,45nm,0.5s						
GTA	Gaotai	8.64	44	eP	P	15 44 41.4	+1.4
GTA				AP		15 44 49.3	
GTA				XP		15 44 53.0	
GTA				XS		15 46 29.9	
GTA				LR	LR		
	comp=N,590nm,12.2s						
GTA				LR	LR		
	comp=E,910nm,10.7s						
GTA				LR	LR		
	comp=Z,560nm,12.2s						
KOLN	Koldanda	9.22	235	eP	P	15 44 47.3	-0.8
	comp=Z,32nm,0.9s						
GYA	Guiyang	14.42	115	⇑iP	P	15 45 56.6	-1.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
MKAR	Makanchi Array	15.29	334	Pn	P	15 46 05.9	-3.4
	comp=Z,0.1nm,0.3s,baz=131,slow=11,SNR=10						
CMAR	Chiang Mai Arr	16.12	156	Pn	P	15 46 20.2	0.0
	comp=Z,0.1nm,0.3s,baz=329,slow=12,SNR=7.1						
CMAR				LR	LR	15 53 13.1	
	comp=Z,90nm,20.3s,slow=40						
AAK	Ala-Archa	16.60	309	eP	P	15 46 29.9	+3.9
	comp=Z,39nm,1.7s						
SONM	Songino Array	18.00	33	P	P	15 46 42.9	-0.6
	comp=Z,0.0nm,0.3s,baz=219,slow=9.1,SNR=9.5						
SONM				LR	LR	15 54 25.6	
	comp=Z,265nm,19.6s,baz=235,slow=39						
ULN	Ulaanbaatar	18.32	34	eP	P	15 46 47.4	-0.1
	comp=Z,8.4nm,1.4s						
BVAR	Borovoye Array	24.99	328	P	P	15 47 56.2	-0.1
	comp=Z,1.1nm,0.5s,mb3.6,baz=130,slow=12,SNR=6.5						
CN2	Changchun	27.90	58	eP	P	15 48 23.0	-0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
MJAR	Matsushiro Arr	37.66	72	LR	LR	16 08 34.2	
	comp=Z,61nm,18.1s,MS3.4,baz=260,slow=41						
AKASG	Malin Array Be	48.26	311	P	P	15 51 12.4	-1.3
	comp=Z,2.3nm,0.7s,mb4.3,baz=76,slow=7.7,SNR=4.5						
FINES	FINESS Array B	49.89	325	P	P	15 51 25.9	-0.2
	comp=Z,1.1nm,0.6s,mb4.1,baz=90,slow=7.6,SNR=6.2						
NB2	NORSAR Subarra	57.07	325	P	P	15 52 19.1	-0.1
	comp=Z,0.1nm,0.5s,mb3.1,baz=82,slow=7.4						
NOA	NORSAR Array B	57.07	325	P	P	15 52 16.6	-2.6
	comp=Z,1.4nm,0.9s,mb4.0,baz=80,slow=7.2,SNR=3.8						
WRA	Warramunga Arr	66.65	136	P	P	15 53 24.4	+0.4
	comp=Z,0.8nm,0.9s,mb3.7,baz=328,slow=7.0,SNR=5.6						
ILAR	Eielson Array	71.91	23	P	P	15 53 57.6	+2.2
	comp=Z,0.4nm,0.5s,mb3.6,baz=292,slow=4.9,SNR=3.3						
ILAR				LR	LR	16 27 18.9	
	comp=Z,55nm,19.2s,MS3.8,baz=178,slow=37						
EPON	Pontenova	73.92	311	P	P	15 54 08.9	+1.3
	comp=Z,3.0nm,0.3s,mb4.7						
BOSA	Boshof	88.38	234	LR	LR	16 32 56.7	
	comp=Z,96nm,20.1s,MS4.2,baz=259,slow=34						

LDG ***14*** *15:44:57.2, 15.24N×61.58W, h137*^{km}
TRN ***14*** *15:45:00.4, 15.26N×61.33W, h134*^{km}*, MD4.5, M3.7(FDF)*
BJI ***14*** *15:45:01.3, 15.20N×61.40W, h147*^{km}*, mB5.3*
IDC ***14*** *15:45:01.1±1.7, 15.24N×61.40W, h147*^{km}*±15*^{km}*, mb4.3/23, mb1 4.5/25, mb1mx4.4/27, mbtmp4.7/25, MS3.3/5, Ms1 3.3/5, ms1mx3.1/24, Error ellipse: s-maj=12.0km s-min=8.0km az=78.0*
NEIC ***14*** *15:45:01.3±0.2, 15.25N×61.41W, h148*^{km}*±2*^{km}*, mb4.9/88, MD4.5(TRN), Error ellipse: s-maj=3.4km s-min=3.0km az=203.0*
MOS ***14*** *15:45:01.9±0.7, 15.27N×61.43W, h170*^{km}*, mb4.8/58, Error ellipse: s-maj=7.2km s-min=4.5km az=58.2*
ISC 14 15:44:59.6±0.2, **15.26N**±0.02×**61.37W**±0.03, **h148**^{km}±1^{km}, **n337**, σ0^{s}**79**/335, **mb4.7**/118, **22C-22D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBL	Barber's Block	0.28	339	⇓eP	P	15 45 20.4	+0.1
DWS	Wesley	0.31	10	eP	P	15 45 21.0	+0.6
DWS				eS	S	15 45 36.1	-0.2
FDF	Fort de France	0.57	158	⇓iP	P	15 45 21.4	-0.1
MGG	Marie-Galante	0.65	4	⇑eP	P	15 45 21.9	-0.1
CRM	Caravelle	0.67	139	⇓eP	P	15 45 21.1	-1.0
CRM				eS	S	15 45 36.8	-2.5
BIM	Bigot	0.80	159	⇓eP	P	15 45 22.7	-0.1
BIM				eS	S	15 45 40.6	-0.1
DOG	Dongo Capester	0.80	343	⇑eP	P	15 45 23.6	+0.7
SCG	Saint Claude	0.82	338	⇑eP	P	15 45 23.9	+0.9
MVM	Montagne Vaucl	0.84	147	eP	P	15 45 21.4	-1.8
BCG	Bois Riant Cap	0.85	343	⇓eP	P	15 45 23.8	+0.6
DEG	La Desirade	1.08	16	⇑eP	P	15 45 24.8	-0.3
SEG	Port Louis	1.14	353	⇑iP	P	15 45 26.2	+0.6
SLW	Petit Monier	1.30	161	eP	P	15 45 26.6	-0.8
SLW				eS	S	15 45 46.4	-2.3
BPA	Boggy Peak	1.83	345	⇓iP	P	15 45 33.9	+0.9
BPA				eS	S	15 45 58.5	-0.2
SFAN	Fancy Village	1.88	174	⇓iP	P	15 45 33.6	+0.1
SSV	Crater Summit	1.93	175	eP	P	15 45 34.3	+0.2
SSV				e		15 45 49.0	
SSV				eS	S	15 46 02.7	+2.0
SVV	Soufriere Volc	1.94	176	⇓iP	P	15 45 34.5	+0.3
SVV				eS	S	15 45 60.0	-0.8
BHS	Barnard House	1.97	173	eP	P	15 45 34.5	0.0
BHS				eS	S	15 46 01.6	+0.1
SVB	Belmont	1.98	177	⇑eP	P	15 45 35.1	+0.3
SVB				eS	S	15 46 01.3	-0.5
CPB	Codrington	2.40	350	⇓iP	P	15 45 40.1	+0.1
CPB				eS	S	15 46 09.9	-1.0
STAT	Sint Eustatius	2.71	325	⇓eP	P	15 45 46.9	+3.0
BBSP	Saint Philip	2.83	139	eS	S	15 46 20.0	-0.5
SABT	Saba	2.96	323	⇑iP	P	15 45 48.6	+1.5
GRSS	Sisters	2.96	185	⇓iP	P	15 45 46.7	-0.4
GRHS	Sauteurs	3.03	185	eP	P	15 45 47.9	-0.1
GRHS				eS	S	15 46 24.2	-0.9
GRW	Mount Saint Ca	3.10	185	eP	P	15 45 50.9	+2.0
STMA	St. Maarten, A	3.23	329	eS	S	15 46 28.0	-1.6
TPR	Prospect	4.09	172	eP	P	15 46 04.4	+2.5
BOT	Bacolet	4.12	171	eP	P	15 46 04.9	+2.6
TRN	Trinidad (W)	4.59	180	eP	P	15 46 11.1	+2.6
TRN				eS	S	15 47 01.6	+0.1
TBH	Brigand Hill	4.76	176	eP	P	15 46 14.9	+4.2
TPP	Pointe-a-Pierr	4.92	181	eP	P	15 46 15.3	+2.5
SJG	San Juan	5.39	302	P	P	15 46 20.0	+1.0
SJG				S	S	15 47 21.0	+0.5
SJG				pmax	pmax		
	comp=Z,8.0nm,0.3s						
SJG				smax			
	comp=E,2.0nm,0.3s						
SJG				MLR	MLR		
	comp=Z,156nm,21.1s						
SJG	San Juan	5.39	302	P	P	15 46 20.0	+1.0
	comp=Z,8.0nm,0.3s,baz=145,slow=9.9,SNR=31						
SJG				S	S	15 47 21.0	+0.4
	comp=Z,2.2nm,0.3s,baz=309,slow=20,SNR=6.0						
SJG				LR	LR	15 48 10.1	
	comp=Z,156nm,21.1s,baz=348,slow=35						
CAR	Caracas	7.19	230	eS	S	15 47 56.6	-7.3
SDV	Santo Domingo	11.05	236	P	P	15 47 34.3	-0.2
	comp=Z,0.3nm,0.3s,baz=71,slow=9.3,SNR=5.3						
SDV	Santo Domingo	11.05	236	P	P	15 47 34.3	-0.2
ROSC	El Rosal	16.41	232	P	P	15 48 46.1	+3.2
	comp=Z,1.3nm,0.3s,baz=108,slow=19,SNR=5.7						
OTAV	Otavalo	22.53	230	eP	P	15 49 46.6	-1.3
	comp=Z,12nm,1.2s,mb4.2						
SAML	Samuel	24.12	184	eP	P	15 50 03.0	-0.2
	comp=Z,104nm,1.4s,mb5.2						
ELN	Prospectdale	27.83	325	eP	P	15 50 37.7	+0.5
FFD	Franklin Falls	29.46	345	P	P	15 50 49.1	-2.6
	comp=Z,43nm,0.4s,mb5.5						
PLAL	Pickwick Lake	30.99	314	eP	P	15 51 04.8	-0.5
	comp=Z,4.2nm,0.4s,mb4.5						
SIV	San Ignacio	31.06	179	P	P	15 51 05.7	-0.4
	comp=Z,25nm,0.8s,mb5.0,baz=12,slow=9.3,SNR=117						
LPAZ	La Paz	32.05	192	P	P	15 51 13.9	-0.8
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LPAZ				MLR	MLR		
	comp=Z,30nm,20.8s						
LPAZ	La Paz	32.05	192	P	P	15 51 13.9	-0.8
	comp=Z,0.8nm,0.5s,mb3.7,baz=15,slow=15,SNR=1.7						
LPAZ				LR	LR	16 06 05.3	
	comp=Z,30nm,20.8s,baz=32,slow=40						
BDFB	Brasilia	33.42	156	P	P	15 51 26.8	+0.3
BDFB				pmax	pmax		
	comp=Z,13nm,0.9s						
BDFB				MLR	MLR		
	comp=Z,37nm,20.0s						
BDFB	Brasilia	33.42	156	P	P	15 51 26.8	+0.3
	comp=Z,13nm,0.9s,mb4.7,baz=343,slow=8.3,SNR=12						
BDFB				LR	LR	16 04 43.2	
	comp=Z,37nm,20.0s,baz=306,slow=35						
WMOK	Wichita Mounta	38.76	307	eP	P	15 52 10.4	-0.9
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
WMOK	Wichita Mounta	38.76	307	eP	P	15 52 10.4	-0.9
	comp=Z,7.2nm,0.6s,mb4.5						
KSU1	Kansas State U	38.95	314	P	P	15 52 12.9	+0.1
SCHQ	Schefferville	39.71	355	P	P	15 52 19.9	+1.0
	comp=Z,11nm,0.6s,mb4.7,baz=166,slow=7.1,SNR=28						
SCHQ				LR	LR	16 07 46.0	
	comp=Z,28nm,21.2s,baz=278,slow=34						
TXAR	Lajitas Array	41.34	297	P	P	15 52 32.8	+0.3
TXAR						15 54 29.2	
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TXAR	Lajitas Array	41.34	297	P	P	15 52 32.8	+0.3
	comp=Z,1.6nm,0.5s,mb3.9,baz=114,slow=8.5,SNR=17						
TXAR				PcP	PcP	15 54 29.2	+0.6
	comp=Z,2.2nm,0.7s,baz=127,slow=6.3,SNR=9.4						

CPUP	Villa Florida	41.53	175	P	P	15 52 33.3	-0.9
CPUP				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CPUP	Villa Florida	41.53	175	P	P	15 52 33.2	-0.9
	comp=Z,6.2nm,0.6s,mb4.4,baz=15,slow=10,SNR=22						
CLNB	Carlsbad	42.12	301	*e*P	P	15 52 38.3	-0.6
CPRX	Cap Rock	42.29	303	*e*P	P	15 52 40.2	-0.2
ULM	Lac du Bonnet	44.67	329	P	P	15 52 58.4	-0.8
	comp=Z,19nm,0.6s,mb4.9,baz=131,slow=8.5,SNR=16						
ULM	Lac du Bonnet	44.67	329	P	P	15 52 58.4	-0.8
BNM	Barren Site	44.80	303	*e*P	P	15 53 01.2	+0.7
LPM	Los Pinos Moun	44.84	303	P	P	15 53 03.7	+2.9
ANMO	Albuquerque	44.85	304	⇑*i*P	P	15 53 01.5	+0.6
ANMO	Albuquerque	44.85	304	*e*P	P	15 53 01.6	+0.7
	comp=Z,4.8nm,1.1s,mb4.0						
SDCO	Great Sand Dun	44.88	309	*e*P	P	15 53 01.0	0.0
	comp=Z,7.8nm,1.0s,mb4.3						
ISCO	Idaho Springs	45.62	311	*e*P	P	15 53 07.3	+0.4
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
ISCO	Idaho Springs	45.62	311	*e*P	P	15 53 07.3	+0.4
	comp=Z,4.4nm,0.9s,mb4.1						
RSSD	Black Hills	46.16	317	*e*P	P	15 53 11.0	-0.1
RSSD				*e*		15 54 45.1	
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
RSSD	Black Hills	46.16	317	*e*P	P	15 53 11.0	-0.1
	comp=Z,5.0nm,0.7s,mb4.2						
RSSD				*e*PcP	PcP	15 54 45.0	+0.1
CFAA	Coronel Fontan	47.06	188	P	P	15 53 18.1	-0.2
	comp=Z,0.8nm,0.8s,mb3.4,baz=347,slow=6.3,SNR=10						
PV01	Paradox Valley	47.31	308	*e*P	P	15 53 20.2	+0.1
DGMT	Dagmar	48.22	323	*e*P	P	15 53 27.3	+0.2
	comp=Z,41nm,0.7s,mb5.2						
WUAZ	Wupatki	48.90	304	*e*P	P	15 53 33.6	+1.0
	comp=Z,15nm,0.7s,mb4.7						
WUAZ				*e*PcP	PcP	15 54 56.1	+1.2
SRU	San Rafael	49.05	309	*e*P	P	15 53 33.6	0.0
SRU				*e*		15 54 55.6	
BW06	Boulder Array	49.40	314	*e*P	P	15 53 35.9	-0.3
	comp=Z,17nm,0.8s,mb4.7						
BW06				*e*PcP	PcP	15 54 56.2	-0.4
PDAR	Pinedale Array	49.40	314	P	P	15 53 36.4	+0.2
	comp=Z,17nm,0.8s,mb4.7,baz=116,slow=8.7,SNR=113						
PDAR				PcP	PcP	15 54 55.8	-0.8
	comp=Z,1.8nm,0.7s,baz=85,slow=4.5,SNR=4.4						
PDAR				ScP		15 58 38.2	
	comp=Z,1.3nm,0.7s,baz=108,slow=4.7,SNR=8.5						
TMUT	Trail Mountain	49.61	309	*e*P	P	15 53 38.3	+0.5
FCC	Fort Churchill	49.72	338	*e*P	P	15 53 37.0	-1.4
FCC				*e*		15 54 55.9	
FCC				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.6						
FCC	Fort Churchill	49.72	338	*e*P	P	15 53 37.0	-1.4
	comp=Z,15nm,1.0s,mb4.6						
FCC				*e*PcP	PcP	15 54 55.9	-1.6
DAU	Daniels Canyon	49.93	310	*e*P	P	15 53 40.8	+0.5
JLU	Jordanelle	50.12	310	*e*P	P	15 53 41.9	+0.2
TCUT	Toone Canyon	50.23	311	*e*P	P	15 53 42.3	-0.3
FFC	Flin Flon	50.35	331	*e*P	P	15 53 41.6	-1.6
FFC				*e*		15 54 59.9	
FFC				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
FFC	Flin Flon	50.35	331	*e*P	P	15 53 41.5	-1.7
	comp=Z,5.8nm,0.7s,mb4.3						
FFC				*e*PcP	PcP	15 54 59.9	0.0
CTU	Camp Tracy	50.37	310	*e*P	P	15 53 43.9	+0.3
LOHW	Long Hollow	50.39	314	*e*P	P	15 53 43.6	-0.1
	comp=Z,10nm,0.9s,mb4.5						
LOHW				*e*PcP	PcP	15 55 00.1	-0.2
HWUT	Hardware Ranch	50.48	312	*e*P	P	15 53 43.6	-0.8
	comp=Z,23nm,1.3s,mb4.6						
HWUT				*e*PcP	PcP	15 55 00.5	-0.1
AHID	Auburn Hatcher	50.48	313	*e*P	P	15 53 44.7	+0.3
	comp=Z,27nm,0.9s,mb4.9						
AHID				*e*PcP	PcP	15 55 00.1	-0.5
MOOW	Moose Ponds	50.53	315	*e*P	P	15 53 44.8	0.0
	comp=Z,4.5nm,0.8s,mb4.2						
TPAW	Teton Pass	50.59	314	*e*P	P	15 53 45.1	-0.2
	comp=Z,20nm,0.8s,mb4.8						
TPAW				*e*PcP	PcP	15 55 01.1	+0.1
IMW	Indian Meadow	50.71	315	*e*P	P	15 53 45.9	-0.3
	comp=Z,5.9nm,0.7s,mb4.3						
RRI2	Red Ridge	50.80	314	*e*P	P	15 53 47.0	+0.2
	comp=Z,16nm,0.8s,mb4.7						
ARUT	Antelope Range	50.98	306	*e*P	P	15 53 47.5	-0.8
QLMT	Earthquake Lak	51.34	316	*e*P	P	15 53 52.3	+1.4
HVU	Hansel Valley	51.40	312	*e*P	P	15 53 50.7	-0.7
NEN	Nelson	51.71	304	*e*P	P	15 53 54.5	+0.7
BOZ	Bozeman (W)	51.74	317	*e*P	P	15 53 53.5	-0.4
BOZ				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.6						
BOZ	Bozeman (W)	51.74	317	*e*P	P	15 53 53.5	-0.4
	comp=Z,17nm,1.0s,mb4.6						
PTOM	Tomar	52.03	51	*e*P	P	15 53 56.6	+0.4
EVO	Evora	52.11	53	*e*P	P	15 53 56.1	-0.7
	comp=Z,6.6nm,0.6s,mb4.2						
PBEJ	Beja	52.13	54	*e*P	P	15 53 57.6	+0.7
	comp=Z,14nm,1.1s,mb4.5						
HRY	Holter Researc	52.22	318	*e*P	P	15 53 57.6	+0.1
MCMT	McKenzie Canyo	52.30	315	*e*P	P	15 53 58.7	+0.6
PALC	Alcoutim	52.34	54	*e*P	P	15 53 59.4	+0.9
	comp=Z,26nm,1.0s,mb4.8						
EGRO	El Granado	52.34	54	P	P	15 53 58.6	+0.1
	comp=Z,9.8nm,0.6s,mb4.6						
PVIS	Viseu	52.65	50	*e*P	P	15 54 00.8	0.0
	comp=Z,14nm,0.9s,mb4.7						
PVRL	Vila Real	52.91	50	*e*P	P	15 54 03.2	+0.6
PVRL	Vila Real	52.91	50	*e*P	P	15 54 02.9	+0.3
ELK	Elko	52.95	310	*e*P	P	15 54 03.2	+0.2
ELK				pmax	pmax		
	comp=Z,13nm,1.4s						
ELK	Elko	52.95	310	*e*P	P	15 54 03.2	+0.2
	comp=Z,13nm,1.4s,mb4.5						
EMIN	Mina Concepcio	53.02	54	P	P	15 54 04.0	+0.5
	comp=Z,11nm,0.9s,mb4.6						
HLID	Hailey	53.03	313	*e*P	P	15 54 03.9	+0.4
	comp=Z,7.8nm,0.7s,mb4.5						
TRQA	Tornquist	53.04	181	*e*P	P	15 54 02.0	-1.6
	comp=Z,10nm,0.7s,mb4.7						
CHMT	Chamberlain Mo	53.21	318	*e*P	P	15 54 04.2	-0.6
ESPR	Espera	53.52	55	P	P	15 54 08.6	+1.4
	comp=Z,29nm,1.0s,mb5.0						
ECAB	El Cabril	54.04	54	P	P	15 54 11.5	+0.5
	comp=Z,25nm,1.2s,mb4.8						
BMN	Battle Mountai	54.37	309	*e*P	P	15 54 13.6	+0.2
BMN				pmax	pmax		
	comp=Z,32nm,1.2s,mb4.9						
BMN	Battle Mountai	54.37	309	*e*P	P	15 54 13.6	+0.2
	comp=Z,32nm,1.2s,mb4.9						
EADA	Adamuz	54.71	54	P	P	15 54 15.8	-0.1
	comp=Z,2.9nm,0.8s,mb4.1						
MNV	Mina	54.75	306	*e*P	P	15 54 16.1	0.0
MNV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
MNV	Mina	54.75	306	*e*P	P	15 54 16.1	0.0
	comp=Z,11nm,1.0s,mb4.5						
NVAR	Mina Array Bea	54.87	306	P	P	15 54 17.6	+0.6
	comp=Z,5.1nm,0.8s,mb4.3,baz=105,slow=6.9,SNR=33						
EARI	Arriondas	55.17	48	P	P	15 54 19.7	+0.6
	comp=Z,20nm,1.0s,mb4.8						
BMO	Blue Mountains	55.36	314	*e*P	P	15 54 19.2	-1.3
BMO				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.4						
BMO	Blue Mountains	55.36	314	*e*P	P	15 54 19.1	-1.4
	comp=Z,7.9nm,1.1s,mb4.4						
ESDC	Sonseca Array	55.41	52	P	P	15 54 21.4	+0.4
	comp=Z,6.5nm,0.7s,mb4.5,baz=261,slow=7.6,SNR=23						
ESDC	Sonseca Array	55.41	52	P	P	15 54 21.3	+0.4
	comp=Z,6.3nm,0.7s,mb4.5						
EDM	Edmonton	55.49	325	*e*P	P	15 54 20.1	-1.2
WVOR	Wild Horse Val	55.79	311	*e*P	P	15 54 23.1	-0.5
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.3						
WVOR	Wild Horse Val	55.79	311	*e*P	P	15 54 23.1	-0.6
	comp=Z,6.5nm,1.2s,mb4.3						
EQES	Quesada	55.84	55	P	P	15 54 24.9	+0.8
	comp=Z,23nm,0.7s,mb5.1						
DBIC	Dimbokro	56.00	92	P	P	15 54 25.2	-0.3
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DBIC	Dimbokro	56.00	92	P	P	15 54 25.2	-0.3
	comp=Z,3.2nm,0.7s,mb4.3,baz=275,slow=5.7,SNR=6.6						
DBIC	Dimbokro	56.00	92	P	P	15 54 25.2	-0.3
NEW	Newport	56.11	318	*e*P	P	15 54 24.6	-1.2
NEW				pmax	pmax		
	comp=Z,37nm,0.7s						
NEW	Newport	56.11	318	*e*P	P	15 54 24.6	-1.3
	comp=Z,37nm,0.7s,mb5.3						
PLCA	Paso Flores	56.36	188	P	P	15 54 26.2	-1.5
PLCA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PLCA	Paso Flores	56.36	188	P	P	15 54 26.2	-1.4
	comp=Z,5.4nm,0.9s,mb4.4,baz=339,slow=7.0,SNR=10						
ELAN	Lanestosa	56.42	48	P	P	15 54 28.5	+0.4
	comp=Z,11nm,0.7s,mb4.8						
QUIF	Quistinic	57.61	43	*e*P	P	15 54 36.1	-0.2
ROSF	Rostrenen	57.64	42	*e*P	P	15 54 36.4	-0.1
SJPF	Ste Jean	57.99	48	*e*P	P	15 54 39.7	+0.6
	comp=Z,60nm,1.0s,mb5.1						
SJPF	Ste Jean	57.99	48	*e*P	P	15 54 39.7	+0.6
SJPF				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
SGMF	Saint Gilles	58.09	42	*e*P	P	15 54 39.6	0.0
EMOS	Mosqueruela	58.16	52	P	P	15 54 41.6	+1.3
	comp=Z,14nm,0.7s,mb4.9						
ETSF	Etsaut	58.44	49	*e*P	P	15 54 42.9	+0.7
ERTA	Horta de San J	58.84	51	P	P	15 54 43.5	-1.6
	comp=Z,14nm,0.6s,mb5.0						
SUMG	Summit	58.85	8	*e*P	P	15 54 44.7	+0.1
	comp=Z,66nm,0.9s,mb5.5						
EBIE	Bielsa	58.92	49	P	P	15 54 46.2	+0.6
	comp=Z,30nm,1.0s,mb5.1						
EPF	Esparros	59.11	49	*e*P	P	15 54 47.7	+0.8
GRR	Gorron	59.22	42	*e*P	P	15 54 47.3	-0.3
	comp=Z,38nm,0.6s,mb5.1						
GRR	Gorron	59.22	42	*e*P	P	15 54 47.3	-0.3
GRR				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.1						
MFF	Saint Martin d	59.34	45	*e*P	P	15 54 48.3	-0.1
	comp=Z,16nm,0.5s,mb4.8						
MFF	Saint Martin d	59.34	45	*e*P	P	15 54 48.3	-0.1
MFF				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.8						
MELF	Melles	59.40	49	*e*P	P	15 54 50.0	+1.1
FLN	La Foliniere	59.54	42	*e*P	P	15 54 49.6	-0.2
	comp=Z,54nm,0.6s,mb5.2						
FLN	La Foliniere	59.54	42	*e*P	P	15 54 49.6	-0.2
FLN				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.2						
LFF	La Frestale	59.68	47	*e*P	P	15 54 50.8	+0.1
SALF	Salau	59.70	49	*e*P	P	15 54 52.0	+1.1
LDF	La Druitiere	59.74	42	*e*P	P	15 54 50.9	-0.2
	comp=Z,41nm,0.9s,mb5.0						
LDF	La Druitiere	59.74	42	*e*P	P	15 54 50.9	-0.2
LDF				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.0						
EMIR	Miracle	59.84	50	P	P	15 54 52.7	+0.8
	comp=Z,11nm,0.5s,mb5.0						
YKA	Yellowknife Ar	60.01	335	P	P	15 54 51.4	-1.3
YKA						15 55 35.3	
YKA				pmax	pmax		
	comp=Z,14nm,0.7s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	60.01	335	P	P	15 54 51.4	-1.3
	comp=Z,14nm,0.7s,mb4.9,baz=108,slow=7.5,SNR=40						
YKA				PcP	PcP	15 55 35.3	-1.6
	comp=Z,1.2nm,0.7s,baz=96,slow=4.4,SNR=4.2						
RJF	Les Rejaudoux	60.28	46	*e*P	P	15 54 54.5	-0.3
	comp=Z,28nm,0.8s,mb4.8						
RJF	Les Rejaudoux	60.28	46	*e*P	P	15 54 54.5	-0.3
RJF				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
MTLF	Montolieu	60.52	49	*e*P	P	15 54 56.2	-0.2
	comp=Z,45nm,0.9s,mb5.0						
MTLF	Montolieu	60.52	49	*e*P	P	15 54 56.2	-0.2
MTLF				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.0						
CAF	Calviac	60.61	47	*e*P	P	15 54 56.8	-0.2
	comp=Z,28nm,0.8s,mb4.8						
CAF	Calviac	60.61	47	*e*P	P	15 54 56.8	-0.2
CAF				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
TCF	Toulx Ste Croi	60.90	45	*e*P	P	15 54 59.0	0.0
	comp=Z,35nm,0.9s,mb4.9						
TCF	Toulx Ste Croi	60.90	45	*e*P	P	15 54 59.0	0.0
TCF				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.9						
HYF	Humbligny	61.34	44	*e*P	P	15 55 02.0	+0.1
BGF	Bois d'Agland	61.38	45	*e*P	P	15 55 01.9	-0.3
LBL	Lubilhac	61.48	47	*e*P	P	15 55 03.9	+1.0
AVF	Avril sur Loir	61.75	45	*e*P	P	15 55 04.1	-0.6
	comp=Z,28nm,0.6s,mb4.9						
AVF	Avril sur Loir	61.75	45	*e*P	P	15 55 04.1	-0.6
AVF				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.0						
LASF	Ste Croix	61.78	48	*e*P	P	15 55 05.3	+0.3
PLDF	La Plantade	61.83	46	*e*P	P	15 55 06.4	+1.1
SSF	Saint Saulge	61.89	45	*e*P	P	15 55 05.0	-0.7
SSF				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.0						
SSF	Saint Saulge	61.89	45	*e*P	P	15 55 05.0	-0.7
	comp=Z,19nm,0.7s,mb5.0						
SMF	Signal de Mont	62.07	45	*e*P	P	15 55 06.3	-0.5
	comp=Z,55nm,1.0s,mb5.0						
SMF	Signal de Mont	62.07	45	*e*P	P	15 55 06.3	-0.5
SMF				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
LOR	Lormes	62.16	44	*e*P	P	15 55 06.8	-0.6
	comp=Z,77nm,0.8s,mb5.3						
LOR	Lormes	62.16	44	*e*P	P	15 55 06.8	-0.6
LOR				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.3						
VIVF	Saint-Julien-l	62.44	47	*e*P	P	15 55 09.8	+0.5
	comp=Z,41nm,0.9s,mb5.0						
VIVF	Saint-Julien-l	62.44	47	*e*P	P	15 55 09.8	+0.5
VIVF				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.0						
BAIF	Baives	62.79	41	*e*P	P	15 55 10.7	-0.9
SMRF	Simiane la Rot	63.00	48	*e*P	P	15 55 13.9	+0.8
MEZF	Maizieres J'vi	63.12	43	*e*P	P	15 55 13.6	-0.1
	comp=Z,61nm,0.5s,mb5.4						
GIVF	Givet	63.19	41	*e*P	P	15 55 13.9	-0.3
	comp=Z,57nm,0.8s,mb5.1						
GIVF	Givet	63.19	41	*e*P	P	15 55 13.9	-0.3
GIVF				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.2						
ORIF	Oris-en-Rattie	63.30	47	*e*P	P	15 55 15.8	+0.8
	comp=Z,19nm,0.9s,mb4.6						
ORIF	Oris-en-Rattie	63.30	47	*e*P	P	15 55 15.8	+0.8
ORIF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
CABF	La Chapelle	63.60	45	*e*P	P	15 55 16.8	-0.1
	comp=Z,19nm,0.9s,mb4.6						
CABF	La Chapelle	63.60	45	*e*P	P	15 55 16.8	-0.1
CABF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
THEF	They Montfort	63.70	44	*e*P	P	15 55 17.4	-0.2
FRF	La Foret Royal	63.75	49	*e*P	P	15 55 17.6	-0.3
	comp=Z,21nm,0.8s,mb4.7						
FRF	La Foret Royal	63.75	49	*e*P	P	15 55 17.6	-0.3
FRF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
MBDF	Montbardon	63.92	47	*e*P	P	15 55 19.6	+0.6
	comp=Z,26nm,0.7s,mb4.9						
MBDF	Montbardon	63.92	47	*e*P	P	15 55 19.6	+0.6
MBDF				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
HAU	Haudompre	63.92	44	*e*P	P	15 55 18.3	-0.7
LPL	La Plagne	63.95	47	*e*P	P	15 55 20.0	+0.8
	comp=Z,56nm,1.0s,mb5.1						
LPL	La Plagne	63.95	47	*e*P	P	15 55 20.0	+0.8
LPL				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
LPG	La Plagne	63.96	47	*e*P	P	15 55 20.2	+0.9
WLF	Walferdange	63.98	42	P	P	15 55 18.9	-0.4
HGN	Heimansgroeve	63.98	41	*e*P	P	15 55 19.0	-0.3
	comp=Z,25nm,0.9s,mb5.0						
LOMF	Lomont	64.18	45	*e*P	P	15 55 20.5	-0.1
HINF	Hinteralfeld	64.24	44	*e*P	P	15 55 20.0	-1.0
	comp=Z,29nm,0.9s,mb4.8						
HINF	Hinteralfeld	64.24	44	*e*P	P	15 55 20.0	-1.0
HINF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
MOF	Molkenrain	64.43	44	*e*P	P	15 55 21.5	-0.8
ECH	Echery	64.48	44	*e*P	P	15 55 21.9	-0.7
CDF	Champ du Feu	64.58	43	*e*P	P	15 55 22.6	-0.6
	comp=Z,22nm,0.8s,mb4.8						
CDF	Champ du Feu	64.58	43	*e*P	P	15 55 22.6	-0.6
CDF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
WLS	Welschbruch	64.63	43	*e*P	P	15 55 23.1	-0.5
BBS	Basel-Blauen	64.65	44	*e*P	P	15 55 21.3	-2.4
WTSB	Winterswijk	64.68	39	*e*P	P	15 55 23.6	-0.2
	comp=Z,26nm,1.0s,mb5.0						
ABH	Alteburg	64.91	42	*e*P	P	15 55 24.5	-0.8
FELD	Feldberg	65.02	44	*e*P	P	15 55 25.4	-0.7
KTD	Kalmit	65.20	42	*e*P	P	15 55 26.8	-0.4
BFO	Black Forest	65.27	44	*e*P	P	15 55 26.8	-0.9
BFO				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.4						
BFO	Black Forest	65.27	44	*e*P	P	15 55 26.8	-0.9
	comp=Z,7.0nm,1.1s,mb4.4						
DAG	Danmarks Havn	65.30	10	⇑*e*P	P	15 55 27.0	-0.5
DAG				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
DAG	Danmarks Havn	65.30	10	⇑*e*P	P	15 55 27.0	-0.5
	comp=Z,10nm,0.8s,mb4.7						
DAG	Danmarks Havn	65.30	10	⇑*i*P	P	15 55 27.0	-0.5
	comp=Z,10nm,0.8s,mb4.7						
PGF	Pioggiola	65.42	50	*e*P	P	15 55 28.4	-0.4
	comp=Z,33nm,0.7s,mb5.0						
PGF	Pioggiola	65.42	50	*e*P	P	15 55 28.4	-0.4
PGF				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.0						
TNS	Taunus Mts	65.52	41	*e*P	P	15 55 29.2	-0.1
TNS				pmax	pmax		
	comp=Z,126nm,2.5s,mb5.3						
TNS	Taunus Mts	65.52	41	*e*P	P	15 55 29.2	-0.1
	comp=Z,126nm,2.5s,mb5.3						
TUE	Stuetta	65.83	46	P	P	15 55 31.7	+0.3
STU	Stuttgart	65.88	43	P	P	15 55 30.6	-1.0
DLBC	Dease Lake	65.97	328	P	P	15 55 32.4	+0.4
	comp=Z,9.6nm,0.7s,mb4.8,baz=103,slow=4.7,SNR=25						
DLBC	Dease Lake	65.97	328	*e*P	P	15 55 31.6	-0.4
DAVA	Damuels	66.24	45	⇓*i*P	P	15 55 34.2	+0.3
	comp=Z,31nm,0.7s,mb5.2						
CLZ	Clausthal	66.87	40	*e*P	P	15 55 37.8	0.0
CLZ				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.9						
CLZ	Clausthal	66.87	40	*e*P	P	15 55 37.8	0.0
	comp=Z,19nm,1.0s,mb4.9						
BSEG	Bad Segeberg	67.03	38	*e*P	P	15 55 39.6	+0.9
MOTA	Moosalm	67.08	45	⇓*i*P	P	15 55 39.0	-0.2
	comp=Z,11nm,1.2s,mb4.5						
MOTA	Moosalm	67.08	45	⇓*i*P	P	15 55 39.0	-0.2
MOTA				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.6						
SQTA	Sankt Quirin	67.14	45	⇑*i*P	P	15 55 39.6	0.0
	comp=Z,19nm,1.2s,mb4.8						
SQTA	Sankt Quirin	67.14	45	⇑*i*P	P	15 55 39.6	0.0
SQTA				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.8						
GRA1	Grafenberg Arr	67.26	42	*e*P	P	15 55 40.1	-0.2
	comp=Z,14nm,0.9s,mb4.8						
GRF	Grafenberg Arr	67.26	42	*e*P	P	15 55 40.1	-0.2
GRF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
GRF	Grafenberg Arr	67.26	42	*e*P	P	15 55 40.1	-0.2
GRF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
GRF	Grafenberg Arr	67.26	42	*e*P	P	15 55 40.1	-0.2
	comp=Z,14nm,0.9s,mb4.8						
WATA	Walderalm	67.40	45	⇑*i*P	P	15 55 40.9	-0.3
	comp=Z,5.5nm,1.1s,mb4.3						
WATA	Walderalm	67.40	45	⇑*i*P	P	15 55 40.9	-0.3
WATA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.3						
WTTA	Wattenberg	67.44	45	⇓*i*P	P	15 55 41.4	0.0
	comp=Z,5.9nm,0.6s,mb4.6						
WTTA	Wattenberg	67.44	45	⇓*i*P	P	15 55 41.4	0.0
WTTA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
MOX	Moxa	67.57	41	*e*P	P	15 55 42.0	-0.2
NKC	Novy Kostel	68.08	42	*e*P	P	15 55 45.4	+0.1
NB2	NORSAR Subarra	68.34	30	P	P	15 55 46.8	+0.1
	comp=Z,1.0nm,0.7s,mb3.6,baz=260,slow=6.5						
NOA	NORSAR Array B	68.34	30	P	P	15 55 47.2	+0.5
NOA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NOA	NORSAR Array B	68.34	30	P	P	15 55 47.2	+0.4
	comp=Z,8.3nm,0.8s,mb4.5,baz=262,slow=6.3,SNR=27						
NOA	NORSAR Array B	68.34	30	P	P	15 55 47.2	+0.4
CLL	Collm	68.48	41	*i* P	P	15 55 47.4	-0.4
CLL				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.8						
CLL	Collm	68.48	41	*i* P	P	15 55 47.4	-0.4
	comp=Z,23nm,1.2s,mb4.8						
CLL	Collm	68.48	41	P	P	15 55 47.4	-0.4
	comp=Z,logA/T=1.3,mb4.8						
KBA	Koelnbreinsper	68.60	45	⇓*i*P	P	15 55 48.2	-0.4
	comp=Z,26nm,1.2s,mb4.8						
KBA	Koelnbreinsper	68.60	45	⇓*i*P	P	15 55 48.2	-0.4
KBA				pmax	pmax		
	comp=Z,27nm,1.2s,mb4.8						
KHC	Kasperske Hory	68.78	43	*e*P	P	15 55 49.7	0.0
GEC2	GERESS Array S	68.86	43	*e*P	P	15 55 49.9	-0.2
GEC2				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.6						
GEC2	GERESS Array S	68.86	43	*e*P	P	15 55 49.9	-0.2
	comp=Z,15nm,1.3s,mb4.6						
GERES	GERESS Array B	68.86	43	P	P	15 55 49.5	-0.6
GERES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GERES	GERESS Array B	68.86	43	P	P	15 55 49.5	-0.6
	comp=Z,5.1nm,0.7s,mb4.4,baz=270,slow=5.3,SNR=35						
BRG	Berggiesshubel	69.06	41	*i* P	P	15 55 51.3	0.0
BRG				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
BRG	Berggiesshubel	69.06	41	*i* P	P	15 55 51.3	0.0
	comp=Z,14nm,0.8s,mb4.8						
JAVS	Javornik	69.10	46	*e*P	P	15 55 51.5	-0.2
MOA	Molln	69.23	44	⇑*i*P	P	15 55 51.8	-0.6
	comp=Z,6.0nm,0.8s,mb4.4						
INK	Inuvik	69.34	338	P	P	15 55 51.9	-0.8
INK				pmax	pmax		
	comp=Z,17nm,0.7s						
INK	Inuvik	69.34	338	P	P	15 55 51.9	-0.9
	comp=Z,17nm,0.7s,mb4.9,baz=100,slow=6.3,SNR=46						
INK	Inuvik	69.34	338	*e*P	P	15 55 51.3	-1.4
	comp=Z,26nm,0.9s,mb5.0						
PRU	Pruhonice	69.42	42	*e*P	P	15 55 54.0	+0.5
OBKA	Obir	69.43	46	⇑*i*P	P	15 55 53.5	-0.1
	comp=Z,19nm,0.8s,mb4.9						
PVCC	Panska Ves	69.45	41	*e*P	P	15 55 53.9	+0.2
HFA0	Hagfors New Ar	69.45	31	P	P	15 55 53.6	+0.1
BOJS	Bojanci	69.94	47	*e*P	P	15 55 56.6	-0.1
USHA	Ushuaia	70.07	184	P	P	15 55 56.5	-0.9
	comp=Z,3.3nm,0.6s,mb4.2,baz=1.5,slow=8.8,SNR=6.0						
ARSA	Arzberg	70.08	45	⇑*i*P	P	15 55 56.8	-0.8
	comp=Z,12nm,0.9s,mb4.6						
GROS	Grobnik	70.09	46	*e*P	P	15 55 57.0	-0.6
UPC	Upice	70.37	41	*e*P	P	15 55 59.6	+0.3
KSP	Ksiaz	70.54	41	*e*P	P	15 56 00.3	0.0
DPC	Dobruska-Polom	70.57	42	*e*P	P	15 56 00.7	+0.2
KRUC	Moravsky	70.63	43	P	P	15 56 00.9	0.0
VRAC	Vranov	70.76	43	P	P	15 56 01.4	-0.2
ZST	Bratislava	71.12	44	*e*P	P	15 56 03.7	-0.1
MORC	Moravsky Berou	71.36	42	*e*P	P	15 56 04.9	-0.3
MORC				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
MORC	Moravsky Berou	71.36	42	*e*P	P	15 56 04.9	-0.4
	comp=Z,9.2nm,1.0s,mb4.5						
JAVC	Velka Javorina	71.48	43	P	P	15 56 06.6	+0.7
OKC	Ostrava-Krasne	71.75	42	*e*P	P	15 56 08.1	+0.6
VYHS	Vyhne	72.27	43	*e*P	P	15 56 10.8	+0.2
PKSM	Moragy	72.27	46	P	P	15 56 10.9	+0.3
OJC	Ojcow	72.80	42	*e*P	P	15 56 14.2	+0.5
BBLS	Bajina Basta -	72.99	48	⇑*i*P	P	15 56 15.5	+0.6
BZS	Buzias	74.39	46	P	P	15 56 24.0	+1.0
ILAR	Eielson Array	74.41	334	P	P	15 56 22.4	-0.3
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ILAR	Eielson Array	74.41	334	P	P	15 56 22.4	-0.4
	comp=Z,5.3nm,0.5s,mb4.5,baz=81,slow=5.3,SNR=50						
SUW	Suwalki	74.61	38	P	P	15 56 24.5	+0.4
ARCES	ARCESS Array B	74.73	21	P	P	15 56 25.0	+0.5
ARCES				pmax	pmax		
	comp=Z,18nm,0.8s						
ARCES	ARCESS Array B	74.73	21	P	P	15 56 25.0	+0.5
	comp=Z,18nm,0.8s,mb4.8,baz=281,slow=6.2,SNR=30						
DRGR		75.02	45	P	P	15 56 26.5	-0.1
DRGR		75.02	45	⇑P	P	15 56 27.4	+0.8
SML	Sawmill	75.26	331	*e*P	P	15 56 27.8	+0.2
FINES	FINESS Array B	75.52	30	P	P	15 56 29.1	+0.1

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FINES				pmax	pmax		
	comp=Z,7.0nm,0.7s						
FINES	**FINESS Array B**	**75.52**	**30**	P	**P**	**15 56 29.1**	**0.0**
	comp=Z,6.5nm,0.7s,mb4.4,baz=260,slow=3.7,SNR=33						
KAF	**Kangasniemi**	**75.56**	**29**	*e*p	**P**	**15 56 29.0**	**-0.3**
VSU	**Vasula**	**76.15**	**33**	P	**P**	**15 56 32.3**	**-0.4**
BURAR	**Bucovina Array**	**76.61**	**44**	⇑P	**P**	**15 56 37.2**	**+1.7**
MLR	**Muntele Rosu**	**77.42**	**46**	P	**P**	**15 56 41.0**	**+1.0**
MLR	**Muntele Rosu**	**77.42**	**46**	⇓P	**P**	**15 56 41.5**	**+1.5**
IDI	**Anoyia**	**78.35**	**56**	LR	LR	16 28 18.2	
	comp=Z,204nm,20.7s,baz=30,slow=33						
AKASG	**Malin Array Be**	**78.72**	**40**	P	**P**	**15 56 47.0**	**0.0**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**78.72**	**40**	P	**P**	**15 56 47.0**	**0.0**
	comp=Z,1.5nm,0.5s,mb3.9,baz=266,slow=4.9,SNR=16						
OBN	**Obninsk**	**82.09**	**35**	*d* *i*P	**P**	**15 57 05.7**	**+0.9**
OBN				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.1						
OBN	**Obninsk**	**82.09**	**35**	P	**P**	**15 57 05.2**	**+0.4**
VRSR	**Storozhevoye**	**84.71**	**38**	*e*P	**P**	**15 57 18.3**	**+0.3**
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
VRSR				pmax	pmax		
	comp=N,20nm,1.1s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.7s						
SOC	**Sochi**	**87.43**	**46**	*e*P	**P**	**15 57 31.1**	**-0.3**
SOC				*e*S	S	16 07 54.1	-3.5
SOC				pmax	pmax		
	comp=N,8.0nm,0.9s						
SOC				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.9						
SOC				pmax	pmax		
	comp=E,5.0nm,0.8s						
GOF	**Gofitskoye**	**89.17**	**43**	⇓*i*P	**P**	**15 57 39.9**	**+0.2**
GOF				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
KIV	**Kislovodsk**	**89.33**	**44**	⇓*i*P	**P**	**15 57 41.7**	**+1.3**
GNI	**Garni**	**92.14**	**47**	⇑*i*P	**P**	**15 57 54.5**	**+0.9**
ARU	**Arti**	**92.87**	**29**	*i* P	**P**	**15 57 54.2**	**-2.4**
SNAA	**Sanae**	**95.09**	**164**	P	**P**	**15 58 07.1**	**+0.8**
	comp=Z,0.2nm,0.6s,mb3.5,baz=311,slow=11,SNR=3.1						
SONM	**Songino Array**	**116.24**	**9**	PKP	PKPdf	16 03 26.9	+1.5
	comp=Z,0.4nm,0.4s,baz=260,slow=0.9,SNR=6.9						
MDJ	**Mudanjiang**	**119.58**	**351**	PKP	PKPdf	16 03 35.6	+3.7
CN2	**Changchun**	**120.90**	**354**	*e*PKP	PKPdf	16 03 38.9	+4.3
MJAR	**Matsushiro Arr**	**125.26**	**341**	PKIKP	PKPdf	16 03 44.2	+1.0
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR	**Matsushiro Arr**	**125.26**	**341**	PKP	PKPdf	16 03 44.1	+0.9
	comp=Z,2.4nm,0.7s,baz=35,slow=0.2,SNR=7.3						
LZH	**Lanzhou**	**127.05**	**15**	*e*PKP	PKPdf	16 03 45.9	-0.7
LZH				sPKP		16 03 50.8	
NJ2	**Nanjing**	**132.96**	**360**	*e*PKP	PKPdf	16 03 57.3	-0.8
NJ2				PP	PP	16 06 28.0	-0.9
NJ2				SS	SS	16 24 04.0	+7.3
NJ2				PP	PP		
	comp=Z,230nm,7.0s						
NJ2				LR	LR		
	comp=N,370nm,24.0s						
NJ2				LR	LR		
	comp=E,270nm,23.8s						
NJ2				LR	LR		
	comp=Z,220nm,29.8s						
SSE	**Sheshan**	**133.84**	**357**	*e*PKP	PKPdf	16 04 03.9	+4.2
CMAR	**Chiang Mai Arr**	**141.28**	**31**	PKIKP	PKPdf	16 04 12.0	-1.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**141.28**	**31**	PKhKP		16 04 11.9	
	comp=Z,0.9nm,0.8s,baz=315,slow=2.6,SNR=3.5						
CMAR				PKP	PKPdf	16 04 15.1	+1.5
	comp=Z,0.9nm,0.6s,baz=286,slow=2.3,SNR=5.6						
CTA	**Charters Tower**	**153.27**	**256**	PKIKP	PKPdf	16 04 42.7	+10
CTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CTA	**Charters Tower**	**153.27**	**256**	PKPbc	PKPdf	16 04 42.7	+10
	comp=Z,4.5nm,0.9s,baz=338,slow=4.2,SNR=5.6						
STKA	**Stephens Creek**	**153.32**	**228**	PKPbc	PKPdf	16 04 42.6	+10
	comp=Z,3.0nm,0.8s,baz=162,slow=3.2,SNR=3.3						
WRA	**Warramunga Arr**	**164.32**	**250**	PKP2	PKPab	16 05 43.0	-0.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**164.32**	**250**	PKPab	PKPab	16 05 43.0	-0.1
	comp=Z,1.7nm,0.6s,baz=100,slow=4.2,SNR=17						

WEL 14 15:48:26.1±0.2**, 41.33S**×**173.01E, h122**^{km}±1^{km}**, ML3.5**/8**, 4C-1D, Error ellipse: s-maj=1.3km s-min=1.2km az=0.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNZ	**Nelson**	**0.30**	**69**	⇑PN	P	15 48 43.1	-0.3
NNZ				SN	S	15 48 55.3	-1.1
THZ	**Tophouse**	**0.44**	**190**	⇑PN	P	15 48 43.9	-0.2
THZ				SN	S	15 48 56.5	-1.1
QRZ	**Quartz Range**	**0.62**	**324**	⇓PN	P	15 48 44.8	-0.3
QRZ				SN	S	15 48 57.6	-2.0
TUWZ	**Tuamarina**	**0.71**	**99**	PN	P	15 48 45.9	0.0
TUWZ				SN	S	15 48 59.9	-1.0
BSWZ	**Blackbirch Sta**	**0.76**	**121**	PN	P	15 48 46.2	-0.1
BSWZ				SN	S	15 49 01.0	-0.5
DUWZ	**D'Urville Isla**	**0.87**	**53**	PN	P	15 48 47.4	+0.1
DUWZ				SN	S	15 49 02.7	-0.5
TCW	**Tory Channel**	**0.96**	**84**	PN	P	15 48 48.3	+0.1
TCW				SN	S	15 49 04.0	-0.9
DSZ	**Denniston Nort**	**0.99**	**245**	PN	P	15 48 47.9	-0.7
KHZ	**Kahutara**	**1.16**	**160**	PN	P	15 48 50.0	-0.3
MRW	**Makara Radio**	**1.28**	**86**	PN	P	15 48 51.1	-0.6
MRW				SN	S	15 49 09.4	-1.4
SNZO	**South Karori**	**1.28**	**90**	PN	P	15 48 50.9	-0.7
SNZO				SN	S	15 49 09.4	-1.4
WEL	**Wellington**	**1.33**	**89**	PN	P	15 48 51.5	-0.7
BHW	**Baring Head**	**1.41**	**94**	PN	P	15 48 52.1	-0.9
KIW	**Kapiti Island**	**1.51**	**73**	PN	P	15 48 53.8	-0.5
LTZ	**Lake Taylor**	**1.55**	**200**	PN	P	15 48 54.1	-0.6
CAW	**Cannon Point**	**1.57**	**83**	⇑PN	P	15 48 54.1	-0.8
MSWZ	**Moikau Station**	**1.69**	**94**	⇑PN	P	15 48 55.3	-1.1

TAP ***14*** *15:48:26.4, 24.01N×122.83E, h3^{km}±1^{km}, ML2.7*

JMA 14 15:48:27.4±0.2**, 24.09N**×**122.89E, h14**^{km}**, M2.4, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.39**	**17**	P	Pb	15 48 35.2	-0.3
YOJ				S	Sg	15 48 40.5	-0.4
IRIF	**Iriomote-Funau**	**0.81**	**72**	P	Pb	15 48 42.3	-0.3
IRIF				S	Sb	15 48 53.9	+0.8
HATJ	**Hateruma jima**	**0.84**	**92**	P	Pb	15 48 43.3	+0.1
HATJ				S	Sb	15 48 54.2	+0.2
JKRS	**Kuro-shima**	**1.03**	**82**	P	Pb	15 48 46.6	+0.1
JKRS				S	Sb	15 49 00.8	+1.1
JIJ	**Ishigaki jima**	**1.18**	**76**	P	Pb	15 48 48.6	-0.4
JIJ				S	Sb	15 49 03.9	0.0
JTJ	**Tarama**	**1.74**	**71**	P	Pn	15 48 58.6	+1.1
JTJ				*e*S	Sn	15 49 20.7	+1.1

BJI ***14*** *15:51:44.3, 51.40N×177.76E, h46^{km}, mB4.8, mb4.5, Ms4.2, Msz4.1*

MOS ***14*** *15:51:46.3±1.0, 51.38N×177.60E, h54^{km}, mb4.4/7, Error ellipse: s-maj=12.9km s-min=9.9km az=88.6*

NEIC ***14*** *15:51:47.2±0.2, 51.30N×177.69E, mb4.3/14, ML4.2(AEIC), Error ellipse: s-maj=7.4km s-min=3.5km az=178.0*

IDC ***14*** *15:51:47.3±0.6, 51.32N×177.67E, h44^{km}±5^{km}, mb4.0/19, mb1 4.2/20, mb1mx4.1/29, mbtmp4.3/20, ML3.6/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/31, Error ellipse: s-maj=15.8km s-min=11.0km az=172.0*

ISC 14 15:51:45.5±0.3**, 51.34N**±0.08×**177.68E**±0.04**, h45**^{km}**, h45**^{km}±1.2^{km}**:pP-P, n84,** σ**0^{s}81**/86**, mb4.2**/33**, MS3.9**/5**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMY	**Shemya**	**2.61**	**304**	P	**P**	**15 52 28.4**	**+2.2**
SMY				S	**S**	**15 53 03.8**	**+6.9**
FX1	**Attu Island--F**	**3.18**	**301**	P	**P**	**15 52 35.8**	**+1.5**
FX1				S	**S**	**15 53 17.8**	**+6.4**
FX1				pmax	pmax		
	comp=Z,22nm,0.3s						
FX1				smax			
	comp=N,35nm,0.3s						
FX1	**Attu Island--F**	**3.18**	**301**	P	**P**	**15 52 35.8**	**+1.5**
	comp=N,22nm,0.3s,baz=214,slow=5.5,SNR=50						
FX1				S	**S**	**15 53 17.8**	**+6.4**
	comp=N,35nm,0.3s,baz=32,slow=21,SNR=3.9						
FX1	**Attu Island--F**	**3.18**	**301**	P	**P**	**15 52 37.1**	**+2.8**
KIMD	**Kanaga Island**	**3.20**	**81**	P	**P**	**15 52 35.5**	**+0.9**
KIKV	**Kanaga Island**	**3.26**	**79**	P	**P**	**15 52 35.7**	**+0.3**
KIWB	**Kanaga Island**	**3.27**	**79**	P	**P**	**15 52 36.0**	**+0.4**
KINC	**Kanaga Island**	**3.29**	**78**	P	**P**	**15 52 36.4**	**+0.6**
ADAG	**Mount Adagdak**	**3.62**	**78**	P	**P**	**15 52 40.8**	**+0.2**
GSSP	**Great Sitkin S**	**3.90**	**76**	P	**P**	**15 52 44.7**	**+0.3**
GSTD	**Great Sitkin T**	**3.91**	**77**	P	**P**	**15 52 44.6**	**0.0**
GSMY	**Great Sitkin M**	**3.96**	**77**	P	**P**	**15 52 45.0**	**-0.3**
GSMY				S	**S**	**15 53 37.0**	**+5.9**
GSTR	**Great Sitkin T**	**3.97**	**77**	P	**P**	**15 52 45.9**	**+0.5**
GSIG	**Igitkin Island**	**4.03**	**78**	P	**P**	**15 52 46.0**	**-0.4**
ATKA	**Atka Island**	**5.12**	**77**	P	**P**	**15 53 01.7**	**+0.1**
ATKA				S	**S**	**15 53 59.5**	**-0.8**
BILL	**Bilibino**	**17.65**	**346**	*e*P	**P**	**15 55 48.6**	**-0.7**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BILL	**Bilibino**	**17.65**	**346**	*e*P	**P**	**15 55 48.6**	**-0.7**
	comp=Z,7.8nm,1.1s						
KDAK	**Kodiak Island**	**18.30**	**58**	*e*P	**P**	**15 55 54.2**	**-3.3**
	comp=Z,6.3nm,0.6s						
RSO	**Redoubt South**	**18.77**	**49**	*e*P	**P**	**15 56 03.4**	**+0.3**
SPU	**Mount Spurr**	**19.30**	**48**	*e*P	**P**	**15 56 09.3**	**+0.2**
SLKM	**Skilak Lake**	**20.00**	**50**	*e*P	**P**	**15 56 15.5**	**-1.1**
IMA	**Indian Mountai**	**20.67**	**34**	*e*P	**P**	**15 56 23.2**	**-0.4**
IMA				pmax	pmax		
	comp=Z,60nm,0.8s						
IMA	**Indian Mountai**	**20.67**	**34**	*e*P	**P**	**15 56 23.2**	**-0.4**
	comp=Z,60nm,0.8s						
EYAK	**Cordova Ski Ar**	**22.18**	**51**	*e*P	**P**	**15 56 38.8**	**+0.1**
DIV	**Divide**	**22.25**	**50**	*e*P	**P**	**15 56 39.2**	**-0.3**
	comp=Z,18nm,0.6s,mb4.7						
ILAR	**Eielson Array**	**22.67**	**40**	P	**P**	**15 56 43.8**	**+0.3**
	comp=Z,2.4nm,0.6s,mb3.8,baz=245,slow=9.7,SNR=15						
ILAR				LR	LR	16 06 41.5	
	comp=Z,40nm,20.1s,MS2.9,baz=0.3,slow=39						
ASAJ	**Asahikawa**	**24.50**	**267**	P	**P**	**15 57 01.8**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ASAJ	**Asahikawa**	**24.50**	**267**	P	**P**	**15 57 01.8**	**+0.4**
	comp=Z,7.2nm,0.9s,mb4.1,baz=81,slow=5.8,SNR=8.5						
YAK	**Yakutsk**	**27.78**	**311**	*e*P	**P**	**15 57 30.8**	**-1.0**
INK	**Inuvik**	**28.76**	**36**	P	**P**	**15 57 40.3**	**-0.2**
	comp=Z,2.1nm,0.6s,mb4.0,baz=304,slow=8.1,SNR=4.7						
CN2	**Changchun**	**35.38**	**279**	*e*P	**P**	**15 58 38.6**	**+0.1**
BOD	**Bodaibo**	**36.22**	**306**	*e*P	**P**	**15 58 44.7**	**-0.8**
BOD				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
NEW	**Newport**	**40.95**	**68**	P	**P**	**15 59 25.2**	**+0.3**
YBH	**Yreka Blue Hor**	**41.06**	**79**	P	**P**	**15 59 27.9**	**+1.9**
	comp=Z,4.7nm,0.7s,mb4.2						
ULN	**Ulaanbaatar**	**44.28**	**295**	*e*P	**P**	**15 59 52.9**	**+0.8**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
ULN	**Ulaanbaatar**	**44.28**	**295**	*e*P	**P**	**15 59 52.9**	**+0.8**
	comp=Z,1.4nm,0.7s,mb3.8						
SONM	**Songino Array**	**44.67**	**295**	P	**P**	**15 59 56.6**	**+1.4**
	comp=Z,1.8nm,0.6s,mb4.1,baz=57,slow=8.1,SNR=23						
SONM				PcP	PcP	16 01 37.8	+0.1
	comp=Z,0.3nm,0.5s,baz=84,slow=2.5,SNR=3.6						
HLID	**Hailey**	**45.06**	**72**	P	**P**	**15 59 59.0**	**+0.7**
ZAK	**Zakamensk**	**45.06**	**299**	*e*P	**P**	**15 59 56.9**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s,mb3.4						
MCMT	**McKenzie Canyo**	**45.27**	**70**	*e*P	**P**	**15 59 59.1**	**-0.9**
BOZ	**Bozeman (W)**	**45.53**	**68**	*e*P	**P**	**16 00 01.0**	**-1.1**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BOZ	**Bozeman (W)**	**45.53**	**68**	*e*P	**P**	**16 00 01.0**	**-1.0**
	comp=Z,2.5nm,0.6s,mb4.3						
NVAR	**Mina Array Bea**	**45.74**	**80**	P	**P**	**16 00 04.8**	**+1.0**
	comp=Z,4.5nm,0.9s,mb4.4,baz=302,slow=6.1,SNR=22						
SSE	**Sheshan**	**45.79**	**266**	*e*P	**P**	**16 00 02.9**	**-1.5**
SSE				AP	pP	16 00 16.4	-0.4
SSE				XP	sP	16 00 21.9	-0.3
SSE				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
SSE				AMB	AMB		
	comp=Z,80nm,6.2s						
SSE				LR	LR		
	comp=N,50nm,16.7s,MS3.6						
SSE				LR	LR		
	comp=E,30nm,16.7s,MS3.6						
SSE				LR	LR		
	comp=Z,70nm,15.5s,MS3.7						
SSE	**Sheshan**	**45.79**	**266**	*e*P	**P**	**16 00 02.9**	**-1.5**
	comp=Z,20nm,0.6s,mb5.2						
SSE				pP	pP	16 00 16.4	-0.4
SSE				sP	sP	16 00 21.9	-0.3
SSE				S	**S**	**16 06 43.9**	**-0.1**
SSE				sS		16 07 05.1	
SSE				SS	SS	16 10 05.7	+5.1
SSE				LR	LR		
	comp=Z,70nm,15.5s,MS3.7						
MNV	**Mina**	**45.83**	**80**	*e*P	**P**	**16 00 05.1**	**+0.5**
MNV				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
MNV	**Mina**	**45.83**	**80**	*e*P	**P**	**16 00 05.1**	**+0.5**
	comp=Z,3.4nm,1.1s,mb4.2						
ELK	**Elko**	**46.22**	**76**	P	**P**	**16 00 08.6**	**+1.0**
NJ2	**Nanjing**	**46.60**	**269**	*e*P	**P**	**16 00 11.5**	**+0.8**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
BW06	**Boulder Array**	**48.41**	**70**	*e*P	**P**	**16 00 24.8**	**0.0**
	comp=Z,1.0nm,0.5s,mb4.1						
PDAR	**Pinedale Array**	**48.41**	**70**	P	**P**	**16 00 23.9**	**-0.8**
	comp=Z,1.6nm,0.5s,mb4.3,baz=303,slow=2.9,SNR=14						
MVU	**Marysvale**	**49.44**	**76**	*e*P	**P**	**16 00 33.6**	**+0.9**
	comp=Z,2.2nm,1.1s,mb4.1						
PV10	**Paradox Valley**	**51.44**	**74**	*e*P	**P**	**16 00 48.3**	**+0.4**
GTA	**Gaotai**	**53.51**	**290**	*e*P	**P**	**16 01 03.9**	**+0.5**
GTA				AP	pP	16 01 16.5	+0.4
GTA				XP	sP	16 01 21.8	+0.5
GTA				PP	PP	16 03 06.1	+0.4
GTA				AMB	AMB		
	comp=Z,40nm,4.6s						
GTA				LR	LR		
	comp=N,80nm,17.6s,MS4.0						
GTA				LR	LR		
	comp=E,100nm,17.2s,MS4.0						
GTA				LR	LR		
	comp=Z,220nm,15.3s,MS4.3						
SDCO	**Great Sand Dun**	**53.98**	**73**	*e*P	**P**	**16 01 06.8**	**0.0**
ANMO	**Albuquerque**	**55.25**	**76**	*e*P	**P**	**16 01 16.2**	**0.0**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ANMO	**Albuquerque**	**55.25**	**76**	*e*P	**P**	**16 01 16.2**	**0.0**
	comp=Z,1.3nm,0.6s,mb4.1						
WMQ	**Urumqi**	**57.49**	**301**	*e*P	**P**	**16 01 33.0**	**+1.0**
WMQ				AP	pP	16 01 45.7	+0.9
WMQ				XP	sP	16 01 51.0	+1.0
WMQ				LR	LR		
	comp=N,350nm,20.3s,MS4.6						
WMQ				LR	LR		
	comp=E,390nm,24.3s,MS4.6						
WMQ				LR	LR		
	comp=Z,370nm,22.6s,MS4.4						
ARCES	**ARCESS Array B**	**57.72**	**349**	P	**P**	**16 01 32.6**	**-0.8**
	comp=Z,1.8nm,0.6s,mb4.3,baz=18,slow=7.7,SNR=6.6						
MNTX	**Cornudas Mount**	**58.12**	**78**	*e*P	**P**	**16 01 36.1**	**-0.6**
	comp=Z,4.0nm,0.9s,mb4.5						
MKAR	**Makanchi Array**	**58.30**	**306**	P	**P**	**16 01 37.2**	**-0.5**
	comp=Z,1.8nm,0.8s,mb4.2,baz=49,slow=6.9,SNR=16						
MKAR				pP	pP	16 01 49.8	-0.7
	comp=Z,0.6nm,0.5s,baz=40,slow=6.6,SNR=6.4						
MKAR				PcP	PcP	16 02 28.7	+0.5
	comp=Z,0.5nm,0.5s,baz=121,slow=7.1,SNR=4.0						
BVAR	**Borovoye Array**	**59.46**	**318**	P	**P**	**16 01 45.8**	**+0.1**
	comp=Z,5.9nm,0.6s,mb4.8,baz=49,slow=7.1,SNR=43						
BVAR				pP	pP	16 01 59.0	+0.6
	comp=Z,4.3nm,0.6s,baz=53,slow=6.6,SNR=9.0						
WMOK	**Wichita Mounta**	**60.01**	**71**	*e*P	**P**	**16 01 49.3**	**-0.4**
WMOK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
WMOK	**Wichita Mounta**	**60.01**	**71**	*e*P	**P**	**16 01 49.3**	**-0.3**
	comp=Z,1.1nm,0.5s,mb4.1						
TXAR	**Lajitas Array**	**60.83**	**79**	P	**P**	**16 01 55.1**	**-0.2**
	comp=Z,2.0nm,0.8s,mb4.3,baz=297,slow=5.6,SNR=12						
ARU	**Arti**	**61.44**	**326**	*e*P	**P**	**16 01 58.5**	**-0.6**
ARU	**Arti**	**61.44**	**326**	*e*P	**P**	**16 01 58.9**	**-0.2**
	comp=Z,3.0nm,0.6s,mb4.6						
FINES	**FINESS Array B**	**65.30**	**345**	P	**P**	**16 02 23.4**	**-0.8**
	comp=Z,2.4nm,0.8s,mb4.2,baz=63,slow=4.3,SNR=6.8						
FINES	**FINESS Array B**	**65.30**	**345**	P	**P**	**16 02 23.4**	**-0.8**
NB2	**NORSAR Subarra**	**67.44**	**353**	P	**P**	**16 02 37.7**	**-0.1**
	comp=Z,1.1nm,0.6s,mb4.1,baz=9.0,slow=6.2						
NOA	**NORSAR Array B**	**67.44**	**353**	P	**P**	**16 02 37.8**	**0.0**
	comp=Z,2.1nm,0.8s,mb4.2,baz=11,slow=6.5,SNR=7.1						
SHL	**Shillong**	**67.92**	**284**	*e*P	**P**	**16 02 41.5**	**+0.1**
SHL				*e*x	x	16 03 34.5	
CMAR	**Chiang Mai Arr**	**68.81**	**273**	P	**P**	**16 02 46.1**	**-0.9**
	comp=Z,1.1nm,0.5s,mb4.0,baz=25,slow=6.1,SNR=6.5						
AKASG	**Malin Array Be**	**74.86**	**340**	P	**P**	**16 03 22.8**	**+0.4**
	comp=Z,1.4nm,0.5s,mb4.1,baz=22,slow=5.7,SNR=8.7						
CTA	**Charters Tower**	**76.28**	**210**	P	**P**	**16 03 30.8**	**-0.3**
	comp=Z,2.8nm,0.8s,mb4.2,baz=52,slow=12,SNR=3.1						
CTAO	**Charters Tower**	**76.28**	**210**	P	**P**	**16 03 30.5**	**-0.6**
GERES	**GERESS Array B**	**79.25**	**349**	P	**P**	**16 03 46.6**	**-0.4**
	comp=Z,0.3nm,0.7s,mb3.4,baz=18,slow=3.1,SNR=4.8						
WRAB	**Tennant Creek**	**80.48**	**221**	*e*P	**P**	**16 03 51.6**	**-2.6**
WRA	**Warramunga Arr**	**80.50**	**221**	P	**P**	**16 03 53.7**	**-0.5**
	comp=Z,1.6nm,0.7s,mb4.1,baz=35,slow=6.3,SNR=12						
WRA				pP	pP	16 04 06.5	-1.1
	comp=Z,2.0nm,0.8s,baz=34,slow=6.0,SNR=9.3						
FITZ	**Fitzroy Crossi**	**82.74**	**229**	P	**P**	**16 04 06.7**	**+0.8**
	comp=Z,11nm,0.6s,mb5.1,baz=27,slow=3.7,SNR=18						
FITZ				pP	pP	16 04 19.5	+0.3
	comp=Z,6.6nm,0.6s,baz=345,slow=2.6,SNR=4.7						
RPZ	**Rata Peaks**	**94.85**	**185**	LR	LR	16 37 30.0	
	comp=Z,102nm,21.5s,MS4.3,baz=216,slow=29						
PLCA	**Paso Flores**	**133.08**	**105**	PKP	PKPdf	16 10 57.9	+2.1
	comp=Z,1.9nm,0.9s,baz=307,slow=5.1,SNR=3.1						
MAW	**Mawson**	**145.11**	**217**	PKPbc	PKPbc	16 11 16.9	+0.2
	comp=Z,2.7nm,0.6s,baz=50,slow=4.2,SNR=4.7						
BOSA	**Boshof**	**149.30**	**307**	PKPbc	PKPdf	16 11 31.4	+6.9
	comp=Z,9.2nm,1.0s,baz=316,slow=2.7,SNR=8.2						

IDC ***14*** *15:58:23.1±1.1, 2.17N×96.23E, mb4.2/9, mb1 4.4/10, mb1mx4.2/18, mbtmp4.2/10, ML4.1/1, MS3.8/1, Ms1 3.8/1, ms1mx3.1/19, Error ellipse: s-maj=48.0km s-min=17.4km az=56.0*

BJI ***14*** *15:58:28.1, 2.20N×96.40E, h30^{km}, mb4.8, Ms4.0, Msz3.8*

NEIC ***14*** *15:58:28.2±0.6, 2.20N×96.37E, h30^{km}, mb4.7/10, Error ellipse: s-maj=15.3km s-min=9.1km az=45.0*

ISC 14 15:58:25.7±0.6**, 2.13N**±0.07×**96.34E**±0.08**, h30**^{km}**, n34,** σ**0^{s}98**/37**, mb4.5**/20**, MS3.8**/2**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.32**	**54**	*e*Pn	**Pn**	**15 59 45.5**	**+0.2**
SNG	**Songkhla**	**6.58**	**40**	P	**Pn**	**16 00 02.0**	**-1.0**
	220nm,0.8s						
KKTK	**Khon Kaen**	**15.49**	**24**	P	**P**	**16 02 08.0**	**+4.0**
CMAR	**Chiang Mai Arr**	**16.43**	**9**	Pn	**P**	**16 02 15.4**	**-0.5**
	0.3nm,0.3s,baz=198,slow=11,SNR=53						
CMAR				Sn	**S**	**16 05 18.2**	**+1.5**
	0.0nm,0.3s,baz=220,slow=28,SNR=3.6						
NANT	**Nan**	**17.11**	**14**	P	**P**	**16 02 26.0**	**+1.5**
KKM	**Kota Kinabalu**	**20.20**	**78**	*e*P	**P**	**16 03 01.0**	**0.0**
KMI	**Kunming**	**23.68**	**15**	P	**P**	**16 03 35.3**	**-0.6**
KMI				AP		16 03 43.8	
KMI				S	**S**	**16 07 49.0**	**+3.6**
KMI				LR	LR		
	comp=N,210nm,12.0s,MS3.9						
KMI				LR	LR		
	comp=E,140nm,15.2s,MS3.9						
KMI				LR	LR		
	comp=Z,200nm,15.1s,MS3.7						
KMI	**Kunming**	**23.68**	**15**	P	**P**	**16 03 35.3**	**-0.6**
	comp=Z,7.0nm,1.6s,mb3.8						
KMI				pP		16 03 43.8	
KMI				S	**S**	**16 07 49.0**	**+3.6**
PKI	**Pulchoki**	**27.38**	**339**	*e*P	**P**	**16 04 13.7**	**+3.1**
	comp=Z,40nm,1.3s,mb4.8						
GUN	**Gumba**	**27.52**	**340**	*e*P	**P**	**16 04 12.8**	**+0.9**
	comp=Z,47nm,1.1s,mb5.0						
KKN	**Kakani**	**27.63**	**338**	*e*P	**P**	**16 04 13.7**	**+0.8**
	comp=Z,27nm,1.1s,mb4.8						
LSA	**Lhasa**	**27.86**	**350**	P	**P**	**16 04 15.0**	**0.0**
LSA	**Lhasa**	**27.86**	**350**	*e*P	**P**	**16 04 15.5**	**+0.5**
	comp=Z,24nm,1.0s,mb4.8						
GKN	**Gorkha**	**28.06**	**338**	*e*P	**P**	**16 04 16.4**	**-0.4**
	comp=Z,22nm,0.9s,mb4.8						
KOLN	**Koldanda**	**28.26**	**336**	*e*P	**P**	**16 04 19.4**	**+0.8**
	comp=Z,12nm,0.7s,mb4.6						
XAN	**Xi'an**	**33.85**	**19**	P	**P**	**16 05 06.4**	**-1.5**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
LZH	**Lanzhou**	**34.50**	**11**	*e*P	**P**	**16 05 12.5**	**-0.9**
LZH				AP	pP	16 05 24.0	+1.7
LZH				XP	sP	16 05 29.0	+2.9
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LZH	**Lanzhou**	**34.50**	**11**	*e*P	**P**	**16 05 12.5**	**-0.9**
	comp=Z,23nm,1.0s,mb5.1						
LZH				pP	pP	16 05 24.0	+1.7
LZH				sP	sP	16 05 29.0	+2.9
FITZ	**Fitzroy Crossi**	**35.16**	**126**	P	**P**	**16 05 19.4**	**+0.2**
	comp=Z,5.4nm,0.8s,mb4.6,baz=314,slow=3.5,SNR=3.9						
GTA	**Gaotai**	**37.24**	**4**	*e*P	**P**	**16 05 34.4**	**-2.2**
GTA				AP	pP	16 05 43.8	-1.7
GTA				XP	sP	16 05 47.6	-1.7
WRA	**Warramunga Arr**	**43.25**	**122**	P	**P**	**16 06 27.3**	**+0.8**
	comp=Z,1.3nm,0.6s,mb3.9,baz=301,slow=9.2,SNR=9.9						
MKAR	**Makanchi Array**	**46.15**	**347**	P	**P**	**16 06 49.5**	**+0.1**
	comp=Z,12nm,0.8s,mb4.9,baz=162,slow=7.1,SNR=74						
MKAR	**Makanchi Array**	**46.15**	**347**	P	**P**	**16 06 49.5**	**+0.1**
SONM	**Songino Array**	**46.35**	**9**	P	**P**	**16 06 50.6**	**-0.4**
	comp=Z,2.2nm,0.7s,mb4.2,baz=188,slow=8.3,SNR=20						
SONM				LR	LR	16 28 30.9	
	comp=Z,108nm,18.6s,MS3.8,baz=58,slow=39						
ULN	**Ulaanbaatar**	**46.49**	**10**	P	**P**	**16 06 52.0**	**-0.1**
STKA	**Stephens Creek**	**54.61**	**132**	P	**P**	**16 07 55.4**	**+1.4**
	comp=Z,1.5nm,0.7s,mb4.1,baz=328,slow=16,SNR=3.5						
STKA	**Stephens Creek**	**54.61**	**132**	P	**P**	**16 07 55.4**	**+1.4**
BVAR	**Borovoye Array**	**55.10**	**341**	P	**P**	**16 07 56.4**	**-1.0**
	comp=Z,3.7nm,0.8s,mb4.5,baz=135,slow=8.4,SNR=24						
ARU	**Arti**	**62.00**	**337**	*e*P	**P**	**16 08 44.7**	**-0.7**
	comp=Z,4.4nm,0.8s,mb4.6						
YAK	**Yakutsk**	**64.78**	**17**	*e*P	**P**	**16 09 02.4**	**-1.1**
	comp=Z,12nm,0.8s,mb5.0						
AKASG	**Malin Array Be**	**74.01**	**322**	P	**P**	**16 09 60.0**	**-0.4**
	comp=Z,0.2nm,0.3s,mb3.5,baz=94,slow=4.6,SNR=4.1						
AKASG	**Malin Array Be**	**74.01**	**322**	P	**P**	**16 09 60.0**	**-0.4**
ARCES	**ARCESS Array B**	**81.38**	**340**	P	**P**	**16 10 40.9**	**+0.1**
	comp=Z,3.0nm,0.8s,mb4.3,baz=76,slow=5.0,SNR=4.3						
GERES	**GERESS Array B**	**83.56**	**319**	P	**P**	**16 10 52.7**	**+0.3**
	comp=Z,0.2nm,0.3s,mb3.7,baz=72,slow=6.2,SNR=3.9						

NEIC ***14*** *16:09:39.7±1.0, 20.09S×177.59W, h510^{km}±11^{km}, mb4.4/8, Error ellipse: s-maj=15.2km s-min=9.6km az=145.0*

IDC ***14*** *16:09:39.2±1.7, 20.05S×177.56W, h501^{km}±19^{km}, mb3.4/9, mb1 3.7/12, mb1mx3.5/19, mbtmp4.3/12, Error ellipse: s-maj=21.2km s-min=13.3km az=136.0*

ISC 14 16:09:37.7±1.1**, 20.1S**±0.1×**177.7W**±0.1**, h494**^{km}±16^{km}**, n29,** σ**0^{s}88**/23**, mb4.0**/14**, 4D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.32**	**43**	P	**P**	**16 11 39.1**	**+0.6**
	7.4nm,0.3s,baz=352,slow=4.3,SNR=25						
AFI				S	**S**	**16 13 14.5**	**+0.2**
	12nm,0.3s,baz=162,slow=17,SNR=4.9						
AFI	**Afiamalu**	**8.32**	**43**	*e*P	**P**	**16 11 39.0**	**+0.5**
	28nm,0.4s						
AFI				*e*S	**S**	**16 13 12.8**	**-1.5**
DZM	**Mont Dzumac**	**14.98**	**260**	P	**P**	**16 12 51.5**	**+3.4**
	1.0nm,0.3s,baz=90,slow=17,SNR=13						
URZ	**Urewera**	**18.68**	**193**	P	**P**	**16 13 24.0**	**-0.6**
	1.6nm,0.3s,baz=346,slow=4.2,SNR=1.3						
RPZ	**Rata Peaks**	**25.40**	**199**	P	**P**	**16 14 26.7**	**+0.4**
	5.1nm,0.5s,mb4.2,baz=63,slow=2.3,SNR=2.7						
CTA	**Charters Tower**	**33.86**	**264**	⇓*i*P	**P**	**16 15 40.6**	**+1.1**
	6.6nm,0.5s,mb4.3						
CTA	**Charters Tower**	**33.86**	**264**	P	**P**	**16 15 40.6**	**+1.1**
	8.2nm,0.5s,mb4.4,baz=91,slow=11,SNR=18						
CTAO	**Charters Tower**	**33.86**	**264**	⇓*e*P	**P**	**16 15 40.5**	**+1.0**
	8.2nm,0.6s,mb4.3						
PMG	**Port Moresby**	**35.57**	**282**	*e*P	**P**	**16 15 54.6**	**+0.7**

	11nm,0.9s,mb4.3						
WB2	Warramunga Arr	44.97	262	⇓iP	P	16 17 09.1	-0.5
WRAB	Tennant Creek	44.97	262	eP	P	16 17 08.9	-0.7
	8.7nm,0.7s,mb4.3						
WRA	Warramunga Arr	44.98	262	P	P	16 17 09.2	-0.5
	5.1nm,0.3s,mb4.4,baz=97,slow=7.8,SNR=214						
KAKA	Kakadu	48.29	271	⇓iP	P	16 17 34.5	-0.6
	5.0nm,0.3s,mb4.3						
FITZ	Fitzroy Crossi	53.41	262	eP	P	16 18 12.1	-0.5
	5.2nm,0.4s,mb4.2						
MBWA	Marble Bar	58.26	257	eP	P	16 18 44.8	-1.4
	5.4nm,0.6s,mb4.0						
VNDA	Vanda	58.36	185	P	P	16 18 46.5	+0.4
	0.7nm,0.5s,mb3.2,baz=19,slow=5.5,SNR=3.7						
MJAR	Matsushiro Arr	70.06	323	P	P	16 20 00.6	-0.2
	3.4nm,0.5s,mb4.1,baz=156,slow=6.5,SNR=14						
NVAR	Mina Array Bea	80.49	43	P	P	16 20 59.0	+0.4
	0.6nm,0.7s,mb3.2,baz=241,slow=9.3,SNR=3.6						
ILAR	Eielson Array	87.83	13	P	P	16 21 33.3	-0.8
	0.6nm,0.4s,mb3.7,baz=216,slow=6.1,SNR=5.8						
PDAR	Pinedale Array	88.43	43	P	P	16 21 38.1	+0.6
	0.4nm,0.6s,mb3.3,baz=180,slow=1.5,SNR=3.6						
CMAR	Chiang Mai Arr	90.28	289	P	P	16 21 48.2	+1.7
	0.9nm,0.8s,mb3.7,baz=121,slow=4.1,SNR=5.2						
BVAR	Borovoye Array	118.96	320	PKP	PKPdf	16 27 28.9	-0.3
	0.6nm,0.4s,baz=90,slow=1.4,SNR=5.9						
ARCES	ARCESS Array B	128.56	350	PKP	PKPdf	16 27 47.4	+0.1
	2.7nm,0.9s,baz=27,slow=2.7,SNR=4.2						
ARCES	ARCESS Array B	128.56	350	PKP	PKPdf	16 27 47.4	+0.1
FINES	FINESS Array B	135.46	344	PKP	PKPdf	16 28 01.1	+0.8
	0.3nm,0.4s,baz=135,slow=2.7,SNR=4.9						
AKASG	Malin Array Be	142.80	332	PKhKP		16 28 11.1	
	1.4nm,0.4s,baz=42,slow=4.7,SNR=19						
AKASG	Malin Array Be	142.80	332	PKP	PKPdf	16 28 11.1	-2.6
CLL	Collm	147.72	347	ePKP1	PKPdf	16 28 27.0	+5.0
GERES	GERESS Array B	149.88	345	PKPbc	PKPdf	16 28 32.0	+6.4
	1.0nm,0.6s,slow=1.3,SNR=9.7						

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*NEIC **14** 16:10:34.8,40.79S×174.47E,h5^{km},ML4.0(WEL),After WEL.*

WEL 14 16:10:35.2±0.1,**40.80S**×**174.49E,h5**^{km}**,ML4.1**/35,**12D, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIW	Kapiti Island	0.33	101	P	Pg	16 10 41.5	-0.3
KIW				S	Sg	16 10 45.8	-0.4
KIW	Kapiti Island	0.33	101	⇓PG	Pg	16 10 41.5	-0.3
KIW				SG	Sg	16 10 45.9	-0.3
DUWZ	D'Urville Isla	0.43	270	⇓PG	Pg	16 10 43.2	-0.7
DUWZ				SG	Sg	16 10 49.4	-0.3
TCW	Tory Channel	0.44	201	P	Pg	16 10 43.4	-0.7
TCW				S	Sg	16 10 49.1	-0.9
TCW	Tory Channel	0.44	201	⇓PG	Pg	16 10 43.4	-0.7
TCW				SG	Sg	16 10 49.5	-0.5
MRW	Makara Radio	0.46	160	P	Pg	16 10 44.3	-0.1
MRW				S	Sg	16 10 50.4	-0.1
MRW	Makara Radio	0.46	160	⇓PG	Pg	16 10 44.3	-0.1
MRW				SG	Sg	16 10 50.4	-0.1
WEL	Wellington	0.53	156	P	Pg	16 10 45.6	-0.2
WEL	Wellington	0.53	156	PG	Pg	16 10 45.6	-0.2
SNZO	South Karori	0.53	162	P	Pg	16 10 45.7	-0.2
SNZO	South Karori	0.53	162	PG	Pg	16 10 45.7	-0.3
SNZO				SG	Sg	16 10 53.2	+0.1
CAW	Cannon Point	0.54	125	P	Pg	16 10 45.8	-0.2
CAW	Cannon Point	0.54	125	⇓PG	Pg	16 10 45.8	-0.2
CAW				SG	Sg	16 10 53.4	+0.3
BHW	Baring Head	0.67	155	P	Pg	16 10 48.4	-0.3
BHW	Baring Head	0.67	155	⇓PG	Pg	16 10 48.4	-0.3
TUWZ	Tuamarina	0.75	213	⇓PG	Pg	16 10 49.0	-1.3
MRZ	Mangatainoka R	0.84	81	P	Pb	16 10 51.0	-0.9
MRZ	Mangatainoka R	0.84	81	⇓PG	Pg	16 10 51.0	-1.0
MSWZ	Moikau Station	0.84	137	⇓PG	Pg	16 10 52.1	0.0
MTW	Mount Morrison	0.85	115	P	Pb	16 10 51.9	-0.1
MTW	Mount Morrison	0.85	115	⇓PG	Pg	16 10 51.9	-0.2
PAWZ	Paruwai Farm	0.92	130	⇓P*	Pb	16 10 53.4	+0.2
NNZ	Nelson	0.94	243	P*	Pb	16 10 53.7	+0.1
BSWZ	Blackbirch Sta	1.02	207	⇓P*	Pb	16 10 54.3	-0.8
WAZ	Wanganui	1.11	20	P*	Pb	16 10 55.1	-1.4
BFZ	Birch Farm	1.34	85	P*	Pb	16 11 00.3	-0.2
TSZ	Takapari Road	1.35	57	P*	Pb	16 10 59.9	-0.7
QRZ	Quartz Range	1.49	268	PN	Pn	16 11 02.2	-0.5
RAEZ	Rainy Point	1.51	357	PN	Pn	16 11 02.7	-0.4
THZ	Tophouse	1.53	231	P*	Pb	16 11 02.5	-1.3
NEZ	North Egmont	1.56	349	PN	Pn	16 11 03.9	+0.2
MTVZ	Mangateitei	1.60	28	PN	Pn	16 11 03.5	-0.9
PKE	Pukeiti	1.65	346	PN	Pn	16 11 04.6	-0.5
MOVZ	Moawhango	1.70	35	PN	Pn	16 11 04.8	-0.9
WNVZ	Wahianoa	1.70	30	PN	Pn	16 11 05.0	-0.7
TRVZ	Turoa	1.71	29	PN	Pn	16 11 05.2	-0.6
DRZ	Dome Shelter	1.73	29	PN	Pn	16 11 06.0	-0.2
FWVZ	Far West T-bar	1.75	28	PN	Pn	16 11 05.8	-0.7
KHZ	Kahutara	1.77	203	PN	Pn	16 11 06.5	-0.2
TUVZ	Tukino	1.77	31	PN	Pn	16 11 06.2	-0.6
WPVZ	Whakapapa	1.79	27	PN	Pn	16 11 06.2	-0.8
CNZ	Chateau	1.79	27	PN	Pn	16 11 06.3	-0.8
NGZ	Ngauruhoe	1.83	28	PN	Pn	16 11 07.2	-0.5
OTVZ	Oturere	1.87	29	PN	Pn	16 11 07.6	-0.6
TWVZ	Taurewa	1.88	23	PN	Pn	16 11 07.3	-1.0
WTVZ	West Tongariro	1.88	27	PN	Pn	16 11 08.0	-0.4
KATZ	Kakaramea	2.05	27	PN	Pn	16 11 10.3	-0.4
RITZ	Rihia Road	2.10	31	PN	Pn	16 11 12.7	+1.2
RATZ	Rangitukua	2.17	28	PN	Pn	16 11 13.4	+0.9
DSZ	Denniston Nort	2.23	244	PN	Pn	16 11 13.2	-0.2
BKZ	Black Stump Fm	2.24	44	PN	Pn	16 11 12.9	-0.7
HIZ	Hauiti	2.30	7	PN	Pn	16 11 13.6	-0.8

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*IDC **14** 16:27:26.0±5.0,34.61N×24.40E,h21^{km}±26^{km},mb3.7/5, mb1 3.7/6,mb1mx3.5/22,mbtmp3.8/6,ML3.7/1,Error ellipse: s-maj=31.4km s-min=26.5km az=64.0*

*CSEM **14** 16:27:27.9±0.1,34.54N×24.57E,h30^{km},MD3.7,Error ellipse: s-maj=3.8km s-min=2.6km az=77.0*

*ATH **14** 16:27:28.4,34.66N×24.58E,h30^{km}±2^{km},MD3.7/9*

*NEIC **14** 16:27:28.2,34.65N×24.59E,h30^{km},MD3.7(ATH),After ATH.*

*HLW **14** 16:27:28.4,34.71N×24.76E,h26^{km},Mb3.4*

ISC 14 16:27:27.3±0.4,**34.52N**±0.03×**24.58E**±0.05,**h33**^{km}**,n32,** σ**1§39**/40,**mb3.7**/5,**6C,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.52	308	ePb	Pb	16 27 39.0	+0.8
GVD	Gavdhos	0.52	308	ePB	Pb	16 27 38.8	+0.6
IDI	Anoyia	0.81	18	Pg	P	16 27 41.2	-0.9
	195nm,0.3s,baz=202,slow=16,SNR=1191						
IDI				Lg		16 27 51.5	
	264nm,0.3s,baz=354,slow=9.2,SNR=20						
VAM	Vamos	0.94	341	ePB	Pb	16 27 43.8	-1.2
VAM				eSN	Sn	16 27 56.5	-0.2
XRY	Khrisi	0.98	68	ePN	Pn	16 27 46.0	+1.1
XRY				eSN	Sn	16 28 00.0	+2.3
XRY	Khrisi	0.98	68	ePb	Pb	16 27 45.3	-0.4
XRY				eSn	Sn	16 28 00.0	+2.3
NPS	Neapolis	1.12	48	ePN	Pn	16 27 48.1	+1.2
NPS				eSN	Sn	16 28 02.2	+0.8
KYTH	Kithira	2.17	325	ePB	Pb	16 28 03.7	-2.0
KYTH	Kithira	2.17	325	ePb	Pb	16 28 04.5	-1.2
VLI	Veliai	2.57	329	ePN	Pn	16 28 08.9	+1.2
APE	Apeiranthos	2.66	17	ePN	Pn	16 28 09.5	+0.6
APE	Apeiranthos	2.66	17	ePn	Pn	16 28 08.5	-0.4
SLUM		3.06	170	⇑P	P	16 28 17.0	+2.5
NAIG	Nisos Aigina	3.35	345	ePN	Pn	16 28 18.5	-0.2
ITM	Ithomi	3.42	322	ePN	Pn	16 28 20.0	+0.3
MGER	Gerania Oros	3.62	343	ePN	Pn	16 28 22.5	-0.1
HMAT	Matruh	4.02	148	⇑P	P	16 28 29.1	+1.2
HMAT				S	S	16 29 14.0	-0.6
HMAT	Matruh	4.02	148	P	P	16 28 29.1	+1.1
HMAT				S	S	16 29 14.0	-0.6
SWA2		5.31	172	⇑P	P	16 28 47.4	+1.0
SWA2		5.31	172	P	P	16 28 47.3	+1.0
SWA1		5.33	169	⇑P	P	16 28 48.1	+1.6
SWA1				S	S	16 29 46.9	-0.7
AMAG	Maghara	8.24	116	⇑P	P	16 29 24.3	-3.0
SUZ		8.40	121	⇑P	P	16 29 27.4	-2.2
EIL	Elat	10.03	116	Pn	P	16 29 50.0	-2.1
	0.4nm,0.3s,baz=321,slow=6.5,SNR=6.8						
EIL				Sn	S	16 31 34.6	-10
	0.6nm,0.3s,baz=225,slow=2.9,SNR=4.2						
GERES	GERESS Array B	16.44	334	Pn	P	16 31 19.1	+2.3
	0.5nm,0.3s,baz=148,slow=13,SNR=30						
AKASG	Malin Array Be	16.52	10	Pn	P	16 31 17.5	-0.4
	2.4nm,0.3s,baz=200,slow=10,SNR=35						
KHC	Kasperske Hory	16.72	334	eP	P	16 31 22.5	+2.1
HFS	Hagfors	26.60	348	P	P	16 33 01.9	-2.2
	0.6nm,0.3s,mb3.5,baz=124,slow=10,SNR=3.8						
NOA	NORSAR Array B	27.90	346	P	P	16 33 13.0	-3.1
	0.2nm,0.5s,mb3.0,baz=180,slow=18,SNR=2.9						
ARCES	ARCESS Array B	35.07	1	P	P	16 34 15.1	-3.8
	3.1nm,1.0s,mb4.2,baz=180,slow=7.2,SNR=4.5						
MKAR	Makanchi Array	44.52	56	P	P	16 35 36.8	-0.6
	1.5nm,0.5s,mb4.0,baz=284,slow=6.6,SNR=11						
SONM	Songino Array	60.26	50	P	P	16 37 33.7	-0.9
	0.5nm,0.5s,mb3.8,baz=290,slow=7.9,SNR=7.7						

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*BJI **14** 16:30:43.7,32.77S×72.32W,h30^{km},mB4.9*

*NEIC **14** 16:30:46.1,32.72S×71.70W,h31^{km},mb4.5/16, ML4.9(GUC),After GUC.*

NEIC Felt [IV] at Papudo, Valparaiso, Vina del Mar and Zapallar; [III] at Illapel, La Ligua, Rancagua, Salamanca and Santiago; [II] at Ovalle and Quillota.

*GUC **14** 16:30:46.1±0.7,32.72S×71.70W,h31^{km}±3^{km},MD4.9, ML4.9*

*IDC **14** 16:30:47.1±4.0,32.65S×71.56W,h37^{km}±33^{km},mb4.4/11, mb1 4.5/15,mb1mx4.4/18,mbtmp4.5/15,ML4.5/3,MS4.0/9, Ms1 4.0/9,ms1mx3.9/25,Error ellipse: s-maj=24.4km s-min=15.4km az=87.0*

ISC 14 16:30:44.7±0.3,**32.67S**±0.03×**71.79W**±0.04,**h31**^{km}**,** **(h26**^{km}±2.5^{km}**:pP-P),n109,**σ**1§09**/80,**mb4.5**/25,**MS4.1**/6, **10C-7D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	Papudo	0.32	66	⇓iP	Pb	16 30 53.3	+0.8
IHA	Instituto Hidr	0.38	161	⇓iP	Pb	16 30 53.6	+0.3
ROCH	El Roble	0.72	115	⇑iP	Pb	16 30 58.6	-0.1
LCCH	Las Cruces	0.82	167	eP	Pn	16 31 00.1	-0.2
JACH	Jahuel	1.01	91	⇑iP	Pn	16 31 02.9	-0.1
TACH	Talagante	1.21	144	⇑iP	Pn	16 31 06.2	+0.4
SAN	Santiago	1.23	130	eP	Pn	16 31 06.1	0.0
DSCH	Colegio Aleman	1.26	126	eP	Pn	16 31 06.9	+0.4
DSCH				i S	Sn	16 31 22.1	-0.3
DSCH				AMP		16 31 28.4	
	comp=E,46µm,0.5s						
CLCH	Cerro Calan	1.28	125	⇓iP	Pn	16 31 07.3	+0.6
CLCH				i S	Sn	16 31 22.7	-0.2
CLCH				AMP		16 31 29.1	
	comp=E,42µm,0.4s						
ANTU	Antumapu	1.32	133	eP	Pn	16 31 07.8	+0.4
ANTU				i S	Sn	16 31 24.1	0.0
ANTU				AMP		16 31 30.8	
	comp=E,26µm,0.4s						
LNV	Longovilo	1.32	166	eP	Pn	16 31 07.5	+0.1
PCH	Pirque	1.43	132	⇑iP	Pn	16 31 09.6	+0.7
CHCH	Chadas Angostu	1.58	143	⇑iP	Pn	16 31 11.9	+0.8
CACH	El Canelo	1.75	146	⇑iP	Pn	16 31 15.5	+1.9
CICH	Cipreses	2.00	146	⇓iP	Pn	16 31 18.6	+1.4
SFDO	San Fernando	2.05	162	⇓iP	Pn	16 31 18.7	+0.9
NICH	Los Niches	2.37	169	eP	Pn	16 31 23.1	+0.6
MDZ	Mendoza	2.48	96	eP	Pn	16 31 28.4	+4.4
MDZ				i		16 31 29.2	
MDZ				i	Sn	16 31 43.4	-10
TLL	Tololo Astrono	2.63	19	eP	Pn	16 31 27.5	+1.3
TLL				i S	Sn	16 32 00.0	+2.7
TALC	Talca	2.73	177	eP	Pn	16 31 27.1	-0.4
TALC				i S	Sn	16 31 58.7	-1.0
TALC				AMP		16 32 15.0	
	comp=N,13µm,0.4s						
ZON	Zonda	2.87	68	⇑iP	Pn	16 31 23.5	-6.0
ZON				eS	Sn	16 32 03.5	+0.2
CFAA	Coronel Fontan	3.19	72	Pn	Pn	16 31 37.9	+3.8
	comp=N,19nm,0.3s,baz=245,slow=11,SNR=295						
CFAA				Lg		16 32 19.1	
	comp=N,26nm,0.3s,baz=343,slow=19,SNR=4.9						
CFAA				LR	LR	16 33 07.5	
	comp=N,702nm,20.7s,baz=226,slow=47						
PLCA	Paso Flores	8.11	173	Pn	P	16 32 41.9	-1.5
	comp=N,1.5nm,0.3s,baz=332,slow=12,SNR=23						
PLCA				Lg		16 34 54.0	
	comp=N,0.3nm,0.3s,baz=80,slow=22,SNR=3.9						
PLCA				LR	LR	16 35 54.9	
	comp=N,1µm,18.2s,baz=351,slow=38						
PLCA	Paso Flores	8.11	173	eP	P	16 32 41.6	-1.7
TRQA	Tornquist	9.64	127	eP	P	16 33 02.1	-2.5
CPUP	Villa Florida	14.08	67	Pn	P	16 34 01.4	-2.9
	comp=N,0.9nm,0.3s,baz=250,slow=14,SNR=15						
CPUP				Sn	S	16 36 35.4	-5.0
	comp=N,0.6nm,0.3s,baz=290,slow=15,SNR=3.3						
CPUP				LR	LR	16 40 17.5	
	comp=N,365nm,18.5s,baz=266,slow=41						
CPUP	Villa Florida	14.08	67	ePn	P	16 34 01.5	-2.9
	comp=N,25nm,1.0s						
ARE	Arequipa	16.14	1	eP	P	16 34 35.0	+3.9
LPAZ	La Paz	16.64	12	Pn	P	16 34 38.1	+0.6
	comp=N,0.7nm,0.3s,baz=175,slow=25,SNR=13						
LPAZ	La Paz	16.64	12	ePn	P	16 34 38.1	+0.6
	comp=N,12nm,1.0s						
SIV	San Ignacio	19.24	33	P	P	16 35 06.7	-2.7
	comp=N,0.6nm,0.3s,baz=227,slow=12,SNR=23						
USHA	Ushuaia	22.28	175	P	P	16 35 43.0	+2.3
	comp=N,25nm,1.0s,mb4.6,baz=18,slow=5.3,SNR=5.1						
USHA				LR	LR	16 44 33.0	
	comp=N,292nm,18.5s,MS3.7,baz=342,slow=37						
SAML	Samuel	24.91	21	eP	P	16 36 05.8	-0.9
	comp=N,22nm,1.1s,mb4.6						
BDFB	Brasilia	27.43	57	P	P	16 36 27.8	-2.1
	comp=N,29nm,1.0s,mb4.8,baz=237,slow=6.2,SNR=18						
BDFB				LR	LR	16 48 20.5	
	comp=N,1µm,21.7s,MS4.5,baz=234,slow=39						
ROSC	El Rosal	37.40	356	P	P	16 37 60.0	+3.1
	comp=N,4.9nm,0.4s,mb4.7,baz=90,slow=20,SNR=5.5						
SDV	Santo Domingo	41.34	2	P	P	16 38 29.2	-0.4
	comp=N,9.6nm,0.8s,mb4.5,baz=252,slow=6.4,SNR=8.4						
SDV				LR	LR	16 56 44.0	
	comp=N,256nm,20.8s,MS4.1,baz=206,slow=38						
SDV	Santo Domingo	41.34	2	eP	P	16 38 29.0	-0.6
	comp=N,11nm,0.9s,mb4.5						
VNA3	Neumayer Olymp	50.51	158		pP	16 39 48.4	-2.6
VNA3	Neumayer Olymp	50.51	158		sP	16 39 53.3	-1.4
VNA3	Neumayer Olymp	50.51	158	⇑iP	P	16 39 41.4	-0.2
VNA3				P		16 39 48.4	
VNA3				P		16 39 53.3	
SJG	San Juan	50.78	7	P	P	16 39 42.5	-1.9
	comp=N,8.6nm,0.3s,mb5.1,baz=217,slow=5.1,SNR=3.9						
VNA1	Neumayer--Stat	50.82	157		sP	16 39 53.2	-3.8
VNA1	Neumayer--Stat	50.82	157	P	P	16 39 45.0	+1.1
VNA1				P	pP	16 39 53.2	-0.1
VNA2	Neumayer--Watz	51.16	158		pP	16 39 53.5	-2.4
VNA2	Neumayer--Watz	51.16	158		sP	16 39 57.7	-1.9
VNA2	Neumayer--Watz	51.16	158	⇑iP	P	16 39 46.2	-0.3
VNA2				P		16 39 53.5	
VNA2				P		16 39 57.7	
SNAA	Sanae	52.74	158		pP	16 40 05.0	-2.9
SNAA	Sanae	52.74	158		sP	16 40 08.1	-3.4
SNAA	Sanae	52.74	158	LR	LR	17 01 14.3	
	comp=N,115nm,19.1s,MS3.9,baz=282,slow=35						
SNAA	Sanae	52.74	158	⇑iP	P	16 39 57.7	-0.8
SNAA				P		16 40 05.0	
SNAA				P	pP	16 40 08.1	+0.2
QSPA	South Pole Qui	57.56	180	⇓iP	P	16 40 33.7	+0.3
	comp=N,24nm,1.0s,mb5.2						
VNDA	Vanda	65.45	191	P	P	16 41 26.9	+0.6
	comp=N,2.0nm,1.0s,mb4.1,baz=162,slow=6.1,SNR=4.9						
VNDA	Vanda	65.45	191	eP	P	16 41 26.1	-0.2
	comp=N,3.7nm,1.4s,mb4.2						
SYO	Syowa Base	67.03	159	⇓P	P	16 41 33.7	-2.8
TAOE	Nuku Hiva Isla	67.07	274	eS	S	16 50 48.9	+21
	comp=N,2µm,39.5s						
TAOE				eLR	LR	17 02 02.7	
	comp=N,722nm,22.7s,baz=121						
TBI	Tubuai	67.84	256	eLR	LR	17 02 22.1	
	comp=N,528nm,25.0s,baz=108						
TXAR	Lajitas Array	68.68	330	P	P	16 41 47.8	+0.3
	comp=N,0.4nm,0.4s,mb3.8,baz=146,slow=9.0,SNR=4.7						
SWET	Sewanee	68.82	348	eP	P	16 41 47.0	-1.2
WVT	Waverly	70.07	346	eP	P	16 41 55.1	-0.7
	comp=N,27nm,0.9s,mb5.2						
PPT	Papeete	70.65	261	eS	S	16 51 25.4	+15
	comp=N,109nm,24.8s						
PPT				eLR	LR	17 03 29.1	
	comp=N,219nm,26.0s						
MNTX	Cornudas Mount	71.46	330	eP	P	16 42 03.2	-1.2
	comp=N,4.3nm,0.9s,mb4.4						
WMOK	Wichita Mounta	71.68	337	eP	P	16 42 04.3	-1.3
	comp=N,1.7nm,0.9s,mb4.0						
CPRX	Cap Rock	72.00	332	eP	P	16 42 07.8	+0.1
MAW	Mawson	74.39	164	P	P	16 42 20.6	-0.2
	comp=N,23nm,1.2s,mb5.0,baz=233,slow=9.5,SNR=11						
LAZ	Ladron	74.53	330	eP	P	16 42 23.9	+1.6
DBIC	Dimbokro	74.56	71	P	P	16 42 21.8	-1.1
	comp=N,11nm,0.9s,mb4.8,baz=189,slow=6.5,SNR=6.5						
DBIC	Dimbokro	74.56	71	eP	P	16 42 20.6	-2.3
	comp=N,12nm,0.9s,mb4.8						
ANMO	Albuquerque	74.72	331	LR	LR	17 10 44.3	
	comp=N,186nm,19.8s,MS4.4,slow=32						
ANMO	Albuquerque	74.72	331	eP	P	16 42 23.8	+0.4
SDCO	Great Sand Dun	76.78	333	eP	P	16 42 35.8	+0.8
	comp=N,3.1nm,0.9s,mb4.2						
WUAZ	Wupatki	77.31	328	eP	P	16 42 38.5	+0.4
	comp=N,9.9nm,1.0s,mb4.7						
NEN	Nelson	79.03	326	eP	P	16 42 47.9	+0.4
NEN				e		16 42 55.6	
TSUM	Tsumeb	79.38	106	eP	P	16 42 49.0	-0.7
	comp=N,33nm,1.3s,mb5.1						
BOSA	Boshof	80.50	118	P	P	16 42 54.9	-0.6
	comp=N,13nm,0.9s,mb4.9,baz=196,slow=4.9,SNR=10						
CASY	Casey	81.35	181	P	P	16 42 59.6	+0.4
SPUT	South Promonto	82.60	330	eP	P	16 43 04.9	-1.3
BW06	Boulder Array	82.67	333	eP	P	16 43 07.5	+1.0
	comp=N,4.4nm,1.4s,mb4.3						
BW06				epP	pP	16 43 14.2	-2.2
PDAR	Pinedale Array	82.67	333	P	P	16 43 06.7	+0.1
	comp=N,0.4nm,0.6s,mb3.6,baz=146,slow=5.3,SNR=5.9						
NVAR	Mina Array Bea	82.91	325	P	P	16 43 08.7	+0.8
	comp=N,1.7nm,0.8s,mb4.1,baz=140,slow=6.8,SNR=9.8						
ELK	Elko	83.34	328	LR	LR	17 16 08.0	
	comp=N,88nm,21.4s,MS4.1,baz=163,slow=33						
ELK	Elko	83.34	328	eP	P	16 43 10.5	+0.5
	comp=N,2.5nm,0.9s,mb4.2						
ELK				epP	pP	16 43 18.5	-1.4
ULM	Lac du Bonnet	85.27	345	P	P	16 43 19.7	+0.3
	comp=N,5.0nm,0.8s,mb4.7,baz=96,slow=7.3,SNR=3.7						
HLID	Hailey	85.28	330	P	P	16 43 20.7	+1.0
	comp=N,2.6nm,1.0s,mb4.3						
MCMT	McKenzie Canyo	85.69	332	eP	P	16 43 19.9	-1.8
BMO	Blue Mountains	87.55	329	eP	P	16 43 31.0	+0.3
	comp=N,4.1nm,1.4s,mb4.5						
AKASG	Malin Array Be	121.13	47	PKP	PKPdf	16 49 34.0	-5.5
	comp=N,1.5nm,0.8s,baz=267,slow=2.2,SNR=9.1						
WRA	Warramunga Arr	122.02	209	PKP	PKPdf	16 49 36.8	-5.1
	comp=N,0.3nm,0.5s,baz=156,slow=1.8,SNR=6.7						
HYB	Hyderabad	149.27	112	eP	PKPdf	16 50 32.0	+0.3
HYB	Hyderabad	149.27	112	i PKP	PKPdf	16 50 32.0	+0.3
EKS2	Erkin-Say	151.15	60	P	PKPdf	16 50 36.7	+2.9
	SNR=17						
AML	Almayashu	151.16	61	P	PKPdf	16 50 36.9	+3.0
	SNR=11						
USP	Ospenovka	151.57	58	P	PKPdf	16 50 37.5	+3.0
	SNR=13						
AAK	Ala-Archa	151.67	60	P	PKPdf	16 50 38.0	+3.3
	SNR=11						
AAK	Ala-Archa	151.67	60	ePKPbc	PKPdf	16 50 36.6	+2.0
UCH	Uchtor	151.75	61	P	PKPdf	16 50 38.7	+4.0
	SNR=22						
CHMS	Chumysh	151.80	59	P	PKPdf	16 50 38.0	+3.2
	SNR=6.1						
KBK	Karagaybulak	152.00	60	P	PKPdf	16 50 38.8	+3.7
	SNR=7.0						
KZA	Kyzart	152.31	61	P	PKPdf	16 50 39.5	+3.9
	SNR=6.1						
TKM2	Tokmak 2	152.42	59	P	PKPdf	16 50 39.2	+3.5
	SNR=9.4						
ULHL	Ulahol	153.01	60	P	PKPdf	16 50 41.1	+4.6
	SNR=5.4						
MKAR	Makanchi Array	155.72	47	PKP	PKPdf	16 50 36.5	-3.5
	comp=N,0.3nm,0.3s,baz=326,slow=4.4,SNR=3.8						
MKAR				PKPab	PKPab	16 51 03.3	-0.5
	comp=N,1.8nm,0.5s,baz=270,slow=1.2,SNR=4.4						
MKAR	Makanchi Array	155.72	47	PKP	PKPdf	16 50 36.5	-3.5
MKAR				PKPab	PKPab	16 51 03.3	-0.5
WMQ	Urumqi	160.47	49	ePKP	PKPdf	16 50 40.8	-5.1
CN2	Changchun	162.52	314	ePKP	PKPdf	16 50 43.0	-5.0
CMAR	Chiang Mai Arr	163.58	147	PKPab	PKPab	16 51 36.0	-2.5
	comp=N,0.8nm,0.9s,baz=202,slow=4.9,SNR=4.4						
SONM	Songino Array	164.79	5	PKPab	PKPab	16 51 43.3	+0.4
	comp=N,1.1nm,0.9s,baz=342,slow=3.9,SNR=6.7						
GTA	Gaotai	170.44	43	ePKP	PKPdf	16 50 51.8	-2.5
GTA				APKP		16 50 59.8	
GTA				XPKP		16 51 02.3	
GTA				PKP2	PKPab	16 52 08.9	+0.9
GTA				PP	PP	16 55 59.8	+0.6
GTA				SKKS		17 02 44.8	
GTA				SS	SS	17 16 58.1	+2.9
GTA				PP	PP		
	comp=Z,50nm,7.7s						
NJ2	Nanjing	170.98	269	ePKP	PKPdf	16 50 49.8	-5.0
LZH	Lanzhou	175.03	45	ePKP	PKPdf	16 50 51.0	-5.4
LZH				XPKP		16 51 01.3	

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*IDC **14** 16:47:42.5±2.8,19.88S×69.02W,h84^{km}±25^{km},mb4.0/13, mb1 4.3/15,mb1mx4.2/20,mbtmp4.4/15,MS3.5/1, Ms1 3.4/1,ms1mx2.7/29,Error ellipse: s-maj=21.4km s-min=13.9km az=81.0*

*NEIC **14** 16:47:44.1±0.3,19.96S×68.97W,mb4.5/13,Error ellipse: s-maj=10.2km s-min=6.6km az=71.0*

*BJI **14** 16:47:46.1,20.00S×69.00W,h102^{km}*

ISC 14 16:47:42.2±0.3,**19.92S**±0.04×**68.99W**±0.07,**h101**^{km}**,** **h101**^{km}±2.6^{km}**:pP-P,n58,**σ**1§08**/48,**mb4.3**/17,**2C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.71	13	P	P	16 48 43.8	+5.1
	16nm,0.3s,baz=195,slow=8.4,SNR=250						
LPAZ				S	S	16 49 21.0	-0.6
	5.9nm,0.3s,baz=196,slow=5.1,SNR=5.2						
LPAZ	La Paz	3.71	13	eP	P	16 48 43.6	+4.9
ANCH	Antofagasta	3.97	199	eP	P	16 48 41.0	-1.2
ARE	Arequipa	4.18	325	eP	P	16 48 45.0	-0.2
ARE				eS	S	16 49 29.0	-4.3
CPN1	Cerro Paranal	4.86	195	eP	P	16 48 52.6	-1.8
SIV	San Ignacio	8.49	64	P	P	16 49 44.1	+0.2
	29nm,0.3s,baz=256,slow=12,SNR=784						
CFAA	Coronel Fontan	11.65	177	P	P	16 50 25.3	-1.1
	0.1nm,0.3s,slow=12,SNR=3.3						
CFAA				S	S	16 52 25.6	-9.3
	0.1nm,0.3s,baz=247,slow=13,SNR=2.4						
SAML	Samuel	12.27	28	eP	P	16 50 33.5	-1.1
	3.6nm,0.7s						
CPUP	Villa Florida	12.48	123	P	P	16 50 38.0	+0.6
	1.5nm,0.3s,baz=319,slow=16,SNR=43						
CPUP	Villa Florida	12.48	123	⇑eP	P	16 50 37.8	+0.5
	64nm,1.1s						
TRQA	Tornquist	19.07	163	eP	P	16 51 58.5	-0.7
	10nm,0.6s						
BDFB	Brasilia	20.42	81	P	P	16 52 13.9	+0.5
	9.7nm,0.4s,baz=271,slow=12,SNR=13						
BDFB				LR	LR	16 59 57.4	
	comp=Z,123nm,18.2s,baz=237,slow=36						
PLCA	Paso Flores	20.78	183	P	P	16 52 16.9	-0.1
	6.0nm,0.6s,baz=9.0,slow=13,SNR=20						
PLCA	Paso Flores	20.78	183	eP	P	16 52 17.3	+0.2
	6.1nm,0.6s						
OTAV	Otavalo	22.08	334	eP	P	16 52 33.3	+3.3
	7.9nm,0.9s,mb4.0						
SDV	Santo Domingo	28.67	357	P	P	16 53 30.9	-1.0
	2.3nm,0.4s,mb4.2,baz=180,slow=4.0,SNR=2.6						
SDV	Santo Domingo	28.67	357	P	P	16 53 32.3	+0.4
	3.1nm,0.7s,mb4.0						
JSC	Jenkinsville	55.16	348	eP	P	16 57 05.8	-0.9
ELN	Prospectdale	57.91	349	eP	P	16 57 25.9	-0.3
WVT	Waverly	58.53	342	eP	P	16 57 28.7	-1.9
	8.2nm,0.6s,mb4.9						
TXAR	Lajitas Array	59.30	325	P	P	16 57 35.4	-0.5
	0.3nm,0.4s,mb3.7,baz=140,slow=9.8,SNR=7.3						
FVM	French Village	61.02	341	eP	P	16 57 46.3	-1.3
	15nm,0.7s,mb5.1						
VNA3	Neumayer Olymp	61.59	162		Px	16 58 08.6	
VNA3	Neumayer Olymp	61.59	162		pP	16 58 18.5	+2.4
VNA3	Neumayer Olymp	61.59	162	P	P	16 57 53.4	+2.5
VNA3				P		16 58 08.6	
VNA3				P	pP	16 58 18.5	+2.4
VNA2	Neumayer--Watz	62.16	161		Px	16 58 09.3	
VNA2	Neumayer--Watz	62.16	161		pP	16 58 21.3	+1.4
VNA2	Neumayer--Watz	62.16	161	P	P	16 57 57.2	+2.5

VNA2				P		16 58 09.3	
VNA2				P	pP	16 58 21.3	+1.4
SNAA	Sanae	63.79	161		P	16 58 08.2	+2.8
SNAA	Sanae	63.79	161		Px	16 58 22.3	
SNAA	Sanae	63.79	161		pP	16 58 32.6	+1.9
SNAA	Sanae	63.79	161	P	P	16 58 06.0	+0.6
	0.6nm,0.6s,mb3.6,baz=266,slow=7.3,SNR=17						
SNAA	Sanae	63.79	161	eP	P	16 58 04.1	-1.3
	1.4nm,0.5s,mb4.0						
SDCO	Great Sand Dun	66.86	329	eP	P	16 58 25.9	+0.2
	4.3nm,0.8s,mb4.3						
SDCO				epP	pP	16 58 50.5	-0.7
SDCO				esP	sP	16 59 04.3	+2.2
DBIC	Dimbokro	68.37	74	P	P	16 58 35.1	-0.3
	13nm,0.7s,mb4.9,baz=229,slow=6.6,SNR=18						
DBIC	Dimbokro	68.37	74	eP	P	16 58 34.8	-0.7
	28nm,1.2s,mb5.0						
NEN	Nelson	70.30	322	eP	P	16 58 47.6	+0.7
MSU	Marysvale	70.84	325	eP	P	16 58 51.6	+1.5
MSU				epP	pP	16 59 17.1	+1.2
MVU	Marysvale	70.86	325	eP	P	16 58 51.2	+1.1
	3.9nm,0.8s,mb4.3						
ARUT	Antelope Range	71.01	324	eP	P	16 58 53.0	+1.9
PDAR	Pinedale Array	72.71	330	P	P	16 59 01.5	+0.4
	0.8nm,0.7s,mb3.7,baz=117,slow=3.3,SNR=5.6						
ULM	Lac du Bonnet	73.80	342	P	P	16 59 06.3	-1.0
	2.9nm,0.7s,mb4.1,baz=141,slow=4.1,SNR=4.1						
TBI	Tubuai	73.94	251	ePP	PP	17 01 49.3	-7.1
	528nm,25.0s						
TBI				eLR	LR	17 21 59.3	
	6µm,28.5s						
ELK	Elko	74.09	325	P	P	16 59 09.8	+0.6
	0.7nm,0.3s,mb3.8,baz=208,slow=23,SNR=6.5						
NVAR	Mina Array Bea	74.21	322	P	P	16 59 11.3	+1.3
	2.0nm,0.7s,mb3.9,baz=174,slow=6.6,SNR=11						
NVAR	Mina Array Bea	74.21	322	P	P	16 59 11.3	+1.3
SCHQ	Schefferville	74.47	1	P	P	16 59 10.7	-0.4
	1.9nm,0.6s,mb4.0,baz=205,slow=8.0,SNR=3.4						
HLID	Hailey	75.67	328	eP	P	16 59 18.3	+0.1
	5.7nm,0.2s,mb5.0						
SYO	Syowa Base	78.00	160	⇑P	P	16 59 30.0	-0.6
VNDA	Vanda	78.38	190	P	P	16 59 33.6	+1.0
	0.6nm,0.6s,mb3.5,baz=158,slow=5.4,SNR=3.3						
EDM	Edmonton	82.31	335	eP	P	16 59 53.4	-0.5
EDM				epP	pP	17 00 22.1	+1.8
YKA	Yellowknife Ar	89.68	341	P	P	17 00 30.0	+0.4
	8.1nm,0.7s,mb5.0,baz=133,slow=4.6,SNR=36						
WRA	Warramunga Arr	134.26	211	PKP	PKPdf	17 06 51.0	+2.0
	1.5nm,0.7s,baz=156,slow=1.9,SNR=21						
MKAR	Makanchi Array	144.40	35	PKP	PKPdf	17 07 07.8	+1.3
	0.7nm,0.6s,baz=309,slow=3.3,SNR=7.7						
WMQ	Urumqi	149.22	34	ePKP	PKPdf	17 07 15.7	+1.1
MJAR	Matsushiro Arr	151.02	311	PKPbc	PKPdf	17 07 25.7	+8.1
	3.5nm,0.8s,baz=96,slow=1.6,SNR=8.8						
MAJO	Matsushiro	151.02	311	ePKPbc	PKPdf	17 07 25.5	+7.9
SONM	Songino Array	151.91	7	PKP	PKPdf	17 07 21.8	+3.2
	2.5nm,0.6s,baz=135,slow=3.5,SNR=14						
SONM				PKPbc	PKPdf	17 07 28.0	+9.5
	2.3nm,0.4s,baz=320,slow=1.7,SNR=35						
SONM				PKPab	PKPab	17 07 37.5	+0.5
	1.4nm,0.6s,baz=330,slow=1.7,SNR=6.9						

PGC 14 16:50:53.5, 49.61N×127.31W, h25^{km}±9^{km}, ML3.5/32, 2D, Southwest of Nootka Island, British Columbia, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDB	Eliza Dome	0.29	25	⇓P	Pb	16 50 59.6	-0.7
EDB				S	Sb	16 51 04.2	-0.8
EDB				Trac		16 51 04.8	
	comp=Z,13µm,0.3s						
ETB	Estevan Point	0.56	115	P	Pb	16 51 03.7	-0.9
ETB				S	Sb	16 51 11.7	-0.5
ETB				Trac		16 51 12.6	
	comp=Z,3µm,0.1s						
BPBC	Brooks Peninsu	0.62	332	⇑P	Pb	16 51 05.2	-0.3
BPBC				S	Sb	16 51 13.0	-1.0
BPBC				Trac		16 51 16.7	
	comp=Z,1µm,0.3s						
WOSB	Woss	0.73	41	⇑P	Pb	16 51 06.2	-1.2
WOSB				S	Sb	16 51 16.5	-0.5
WOSB				Trac		16 51 16.8	
	comp=Z,2µm,0.3s						
MAYB	Maynard	0.80	6	⇓P	Pb	16 51 07.6	-0.9
MAYB				S	Sb	16 51 18.4	-0.6
MAYB				Trac		16 51 19.9	
	comp=Z,645nm,0.3s						
GDR	Gold River	0.85	78	⇑P	Pb	16 51 07.5	-1.9
GDR				S	Sb	16 51 17.8	-2.7
GDR				Trac		16 51 19.4	
	comp=Z,1µm,0.3s						
PHC	Port Hardy	1.10	356	P	Pn	16 51 12.4	-1.0
PHC				S	Sb	16 51 26.2	-1.4
PHC				Trac		16 51 29.0	
	comp=Z,720nm,0.6s						
NCRB	Newcastle Ridg	1.13	45	⇑P	Pn	16 51 12.6	-1.3
NCRB				S	Sb	16 51 27.4	-1.2
NCRB				Trac		16 51 29.8	
	comp=Z,901nm,0.4s						
HOLB	Holberg	1.16	333	⇑P	Pn	16 51 13.0	-1.2
HOLB				S	Sb	16 51 27.3	-1.9
HOLB				Trac		16 51 33.4	
	comp=Z,414nm,0.4s						
BTB	Buttle Lake	1.18	96	P	Pn	16 51 13.4	-1.1
BTB				S	Sn	16 51 28.6	-1.2
BTB				Trac		16 51 29.3	
	comp=Z,1µm,0.3s						
CBB	Campbell River	1.33	71	P	Pn	16 51 14.9	-1.8
CBB				S	Sn	16 51 32.2	-1.5
CBB				Trac		16 51 33.1	
	comp=Z,422nm,0.4s						
OZB	Mount Ozzard	1.36	118	P	Pn	16 51 14.6	-2.6
OZB				S	Sn	16 51 33.6	-0.9
OZB				Trac		16 51 36.1	
	comp=Z,805nm,0.3s						
ALB	Alberni	1.66	101	P	Pn	16 51 20.9	-0.4
ALB				S	Sn	16 51 41.7	-0.3
ALB				Trac		16 51 50.4	
	comp=Z,563nm,0.5s						
TXB	Texada	1.87	86	P	Pn	16 51 23.0	-1.5
TXB				S	Sn	16 51 48.0	+0.6
TXB				Trac		16 52 00.1	
	comp=Z,471nm,0.6s						
PFB	Port Renfrew	2.16	118	P	Pn	16 51 30.0	+1.5
PFB				S	Sn	16 51 57.0	+2.3
PFB				Trac		16 52 03.4	
	comp=Z,157nm,0.4s						
NLLB	Nanaimo Lost L	2.21	99	P	Pn	16 51 31.1	+1.9
NLLB				S	Sn	16 51 57.4	+1.5
NLLB				Trac		16 52 01.2	
	comp=Z,502nm,0.5s						
SHB	Sechelt	2.24	89	P	Pn	16 51 29.9	+0.2
SHB				S	Sn	16 51 58.5	+1.7
SHB				Trac		16 52 08.6	
	comp=Z,468nm,0.5s						
LZB	Mount Lazard	2.50	112	P	Pn	16 51 34.9	+1.4
LZB				Trac		16 52 13.0	
	comp=Z,56nm,0.5s						
GOBB	Galiano Island	2.58	103	P	Pn	16 51 36.0	+1.4
GOBB				S	Sn	16 52 07.4	+2.0
GOBB				Trac		16 52 16.9	
	comp=Z,132nm,0.4s						
BIB	Bowen Island	2.62	93	P	Pn	16 51 36.3	+1.2
BIB				Trac		16 52 18.0	
	comp=Z,148nm,0.5s						
BBB	Bella Bella	2.62	349	P	Pn	16 51 33.8	-1.4
BBB				Trac		16 52 26.2	
	comp=Z,208nm,0.7s						
WPB	Watts Point	2.67	87	P	Pn	16 51 37.9	+2.0
WPB				S	Sn	16 52 04.4	-3.3
WPB				Trac		16 52 15.5	
	comp=Z,127nm,0.4s						
PGC	Sidney	2.71	109	P	Pn	16 51 39.9	+3.4
PGC				S	Sn	16 52 09.1	+0.3
PGC				Trac		16 52 26.9	
	comp=Z,109nm,0.5s						
SNB	Saturna Island	2.84	106	P	Pn	16 51 39.8	+1.5
SNB				Trac		16 52 22.4	
	comp=Z,169nm,0.6s						
VGZ	Gonzales	2.89	113	P	Pn	16 51 42.0	+3.0
VGZ				Trac		16 52 28.5	
	comp=Z,87nm,0.5s						
WSLR	Whistler	2.89	78	P	Pn	16 51 39.8	+0.8
WSLR				S	Sn	16 52 16.9	+3.6
WSLR				Trac		16 52 22.7	
	comp=Z,89nm,0.6s						
HNB	Haney	3.11	94	P	Pn	16 51 43.7	+1.6
HNB				Trac		16 52 29.8	
	comp=Z,142nm,0.5s						
VDB	Vedder Mountai	3.46	98	P	Pn	16 51 50.2	+3.1
VDB				Trac		16 52 39.7	
	comp=Z,45nm,0.5s						
LLLB	Lillooet	3.63	72	P	Pn	16 51 48.9	-0.7
LLLB				Trac		16 52 47.1	
	comp=Z,40nm,0.5s						
HOPB	Hope	3.85	91	P	Pn	16 51 54.2	+1.6
HOPB				Trac		16 52 59.1	
	comp=Z,62nm,0.5s						
BNB	Barry Inlet	4.08	318	P	Pn	16 51 53.4	-2.4
BNB				S	Sn	16 52 39.2	-4.2
BNB				Trac		16 52 42.7	
	comp=Z,122nm,0.4s						
MOBC	Moresby Island	4.60	323	P	Pn	16 52 00.0	-3.2
MOBC				S	Sn	16 52 51.0	-5.4
MOBC				Trac		16 53 23.7	
	comp=Z,9.0nm,0.7s						
VIB	Van Inlet	4.90	320	P	Pn	16 52 04.2	-3.3
RUBB	Prince Rupert	5.06	340	P	Pn	16 52 08.4	-1.4
RUBB				Sg	Sn	16 53 12.3	+4.2
RUBB				Trac		16 53 40.8	
	comp=Z,42nm,0.7s						
NDB	Naden	5.58	323	P	Pn	16 52 13.9	-3.2
NDB				S	Sn	16 53 15.7	-5.4
NDB				Trac		16 53 18.1	
	comp=Z,2.0nm,0.3s						

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*IDC **14** 17:05:43.5±14.0, 3.50N×122.80E, h444^{km}±195^{km}, mb3.1/5, mb1 3.3/5, mb1mx3.0/17, mbtmp3.9/5, Error ellipse: s-maj=83.5km s-min=28.3km az=66.0*

*NEIC **14** 17:05:46.1±2.7, 3.68N×123.39E, h485^{km}±38^{km}, mb4.3/1, Error ellipse: s-maj=50.1km s-min=13.8km az=63.0*

ISC 14 17:05:44.7±2.9, 3.7N±0.2×123.4E±0.3, h484^{km}±40^{km}, n9, σ0^{s}91/9, mb3.7/6, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	7.56	288	eP	P	17 07 37.0	-0.3
KSM	Kuching	13.31	261	P	P	17 08 39.1	+0.8
FITZ	Fitzroy Crossi	21.79	174	P	P	17 10 00.4	-1.1
	2.9nm,0.7s,mb3.9,baz=3.4,slow=8.7,SNR=6.6						
WRAB	Tennant Creek	25.83	156	eP	P	17 10 37.9	-0.2
	3.6nm,0.3s,mb4.3						
WRA	Warramunga Arr	25.84	156	P	P	17 10 38.0	-0.1
	2.0nm,0.3s,mb4.0,baz=337,slow=9.5,SNR=52						
STKA	Stephens Creek	39.38	155	P	P	17 12 34.2	+1.4
	1.2nm,0.3s,mb3.8,baz=317,slow=7.6,SNR=5.9						
STKA	Stephens Creek	39.38	155	P	P	17 12 34.2	+1.4
SONM	Songino Array	46.34	344	P	P	17 13 28.6	+0.9
	0.4nm,0.8s,mb2.9,baz=170,slow=8.8,SNR=3.1						
MKAR	Makanchi Array	55.73	327	P	P	17 14 35.1	-1.4
	0.6nm,0.4s,mb3.3,baz=124,slow=8.2,SNR=15						

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*NEIC **14** 17:08:50.8±0.5, 31.50S×68.05W, h104^{km}±8^{km}, mb3.8/3, Error ellipse: s-maj=10.1km s-min=7.6km az=104.0*

*GUC **14** 17:08:50.8±0.8, 31.49S×68.14W, h125^{km}, ML4.5*

ISC 14 17:08:50.0±0.6, 31.51S±0.04×68.07W±0.07, h113^{km}±10^{km}, h114^{km}±.6^{km}:pP-P, n30, σ0^{s}99/35, mb4.0/2, 16C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	Zonda	0.52	266	⇓iP	P	17 09 08.0	+0.5
ZON				eS	S	17 09 15.0	-5.7
MDZ	Mendoza	1.52	206	⇑iP	P	17 09 19.3	+1.5
MDZ				i		17 09 23.4	
MDZ				i S	S	17 09 38.3	-0.3
MDZ				i		17 09 41.5	
JACH	Jahuel	2.44	241	eP	P	17 09 29.9	+0.3
TLL	Tololo Astrono	2.71	299	⇑iP	P	17 09 34.0	+0.9
TLL				i S	S	17 10 06.3	+0.7
PEL	Peldehue	2.75	233	eP	P	17 09 33.5	-0.2
PEL				i S	S	17 10 06.1	-0.6
CLCH	Cerro Calan	2.81	227	eP	P	17 09 34.9	+0.4
CLCH				i S	S	17 10 08.3	+0.2
CLCH				AMP		17 10 15.1	
	comp=E,1µm,0.5s						
DSCH	Colegio Aleman	2.83	228	i P	P	17 09 35.4	+0.6
DSCH				i S	S	17 10 09.3	+0.7
DSCH				AMP		17 10 16.3	
	comp=E,2µm,0.5s						
PCH	Pirque	2.95	224	eP	P	17 09 36.6	+0.2
ANTU	Antumapu	2.99	226	⇑iP	P	17 09 37.8	+0.9
ANTU				i S	S	17 10 12.7	+0.3
ANTU				AMP		17 10 16.0	
	comp=E,953nm,0.3s						
PACH	Papudo	3.04	249	eP	P	17 09 35.8	-1.8
LSCH	La Serena	3.17	299	⇓iP	P	17 09 39.0	-0.3
LSCH				i S	S	17 10 14.0	-2.7
LSCH				AMP		17 10 15.4	
	comp=N,734nm,0.4s						
CHCH	Chadas Angostu	3.26	221	eP	P	17 09 40.7	+0.2
CACH	El Canelo	3.37	219	eP	P	17 09 42.5	+0.5
CICH	Cipreses	3.43	215	eP	P	17 09 43.5	+0.6
LCCH	Las Cruces	3.55	236	eP	P	17 09 42.6	-1.9
LNV	Longovilo	3.73	228	eP	P	17 09 44.6	-2.3
TRQA	Tornquist	8.23	144	ePn	P	17 10 46.7	-1.3
CPUP	Villa Florida	10.73	64	ePn	P	17 11 20.4	-1.1
LPAZ	La Paz	15.15	360	eP	P	17 12 19.7	+0.5
	comp=N,1.7nm,0.6s						
SAML	Samuel	22.90	12	eP	P	17 13 46.1	+1.3
	comp=N,4.3nm,0.8s,mb3.8						
VNA3	Neumayer Olymp	50.44	159	⇑i	P	17 17 42.6	+5.0
VNA3	Neumayer Olymp	50.44	159	⇑i	pP	17 18 05.4	+1.0
VNA3	Neumayer Olymp	50.44	159	⇑iP	P	17 17 38.1	+0.5
VNA3				⇑iP		17 17 42.6	
VNA3				⇑iP	pP	17 18 05.4	+1.0
VNA2	Neumayer--Watz	51.05	158	⇑i	P	17 17 47.4	+5.2
VNA2	Neumayer--Watz	51.05	158	⇑i	pP	17 18 09.9	+0.8
VNA2	Neumayer--Watz	51.05	158	⇑iP	P	17 17 42.8	+0.6
VNA2				⇑iP		17 17 47.4	
VNA2				⇑iP	pP	17 18 09.9	+0.8
SNAA	Sanae	52.66	159	⇑i	P	17 17 54.0	-0.3
SNAA	Sanae	52.66	159	⇑i	P	17 17 58.4	+4.1
SNAA	Sanae	52.66	159	⇑i	pP	17 18 19.6	-1.7
SNAA	Sanae	52.66	159	eP	P	17 17 53.7	-0.6
	comp=N,1.5nm,0.7s,mb4.1						
SNAA				epP	pP	17 18 20.7	-0.6

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*IDC **14** 17:10:11.1±1.8, 51.30N×179.47E, h6^{km}±10^{km}, mb5.8/37, mb1 5.8/37, mb1mx5.8/38, mbtmp5.8/37, MS6.6/28, Ms1 6.6/28, ms1mx6.6/31, Error ellipse: s-maj=12.2km s-min=8.5km az=147.0*

*NEIC **14** 17:10:12.3±0.1, 51.24N×179.31E, h17^{km}, mb6.1/241, ME6.5, MS6.7/114, MW6.6, ML6.7(AEIC), Error ellipse: s-maj=3.2km s-min=1.7km az=176.0 Broadband fault plane solution: P waves. NP1:φ$_s$65°, δ73°, λ80°. NP2: φ$_s$276°, δ20°, λ120°. Principal axes: T Plg61°, Azm320°; N Plg0°, Azm0°; P Plg27°, Azm163°; Moment Tensor Solution. s79 Moment tensor: Scale 10^{18} Nm; M$_{rr}$5.37; M$_{θθ}$-5.23; M$_{φφ}$-0.14; M$_{rθ}$5.63; M$_{θφ}$-1.47; M$_{φr}$3.79; Best double couple: M$_0$8.7×10^{18} NP1:φ$_s$269°, δ21°, λ117°. NP2:φ$_s$60°, δ71°, λ80°. Principal axes: T 8.8, Plg63°, Azm315°; N -.12, Plg9°, Azm64°; P -8.67, Plg25°, Azm158°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [V] on Adak.

*BJI **14** 17:10:14.3, 51.19N×179.32E, h48^{km}, mB7.0, mb6.0, Ms6.8, Msz6.6*

*MOS **14** 17:10:14.2±0.9, 51.27N×179.48E, h41^{km}, mb6.2/130, MS6.7/80, Error ellipse: s-maj=6.4km s-min=3.4km az=93.6*

*BGS **14** 17:10:15.4, 50.95N×178.96E, h51^{km}, mb5.9*

*CRAAG **14** 17:10:15.2, 51.35N×179.49E, Mb6.7*

*HRVD **14** 17:10:16.6±0.1, 51.15N×179.52E, h18^{km}, MW6.8/78, Centroid moment Tensor Solution. LP body waves: s78,c207; Mantle waves: s78,c401; Half duration: 5^{s}9 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.00±.01; M$_{θθ}$-1.03±.01; M$_{φφ}$0.02±.01; M$_{rθ}$1.20±.02; M$_{θφ}$-0.34±.00; M$_{φr}$0.73±.02; Best double couple: M$_0$1.763×10^{19} NP1: φ$_s$268°, δ20°, λ115°. NP2:φ$_s$62°, δ72°, λ81°. Principal axes: T 1.725, Plg62°, Azm318°; N .071, Plg8°, Azm64°; P -1.8, Plg26°, Azm158°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 14 17:10:15.3±0.1, 51.16N±0.02×179.48E±0.02, h54^{km}, h54^{km}±2.8^{km}:pP-P, n1485, σ0^{s}95/1476, mb6.0/327, MS6.7/174, 483C-29D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	Kanaga Island	2.14	72	P	P	17 10 49.6	+0.2
KIKV	Kanaga Island	2.21	70	P	P	17 10 51.3	+0.8
KIWB	Kanaga Island	2.21	71	P	P	17 10 50.6	+0.1
KINC	Kanaga Island	2.25	69	P	P	17 10 51.4	+0.4
ADAG	Mount Adagdak	2.58	70	P	P	17 10 56.0	+0.3
ETKA	Kagalaska Isla	2.66	73	P	P	17 10 57.3	+0.4
ETKA				S	S	17 11 29.9	+1.9
GSSP	Great Sitkin S	2.86	69	P	P	17 10 59.9	+0.2
GSTD	Great Sitkin T	2.87	70	P	P	17 10 59.8	0.0
GSMY	Great Sitkin M	2.92	71	P	P	17 11 00.5	0.0
GSTR	Great Sitkin T	2.93	70	P	P	17 11 00.9	+0.2
GSIG	Igitkin Island	2.98	72	P	P	17 11 01.7	+0.3
SMY	Shemya	3.68	297	P	P	17 11 09.2	-2.0
SMY				S	S	17 11 50.7	-3.0
ATKA	Atka Island	4.07	73	P	P	17 11 16.3	-0.4
ATKA				S	S	17 12 05.9	+2.3
FX1	Attu Island--F	4.26	296	P	P	17 11 18.3	-1.1
FX1				pmax	pmax		
	comp=Z,492nm,0.3s						
FX1	Attu Island--F	4.26	296	Pn	P	17 11 18.3	-1.1
	comp=Z,492nm,0.3s,baz=156,slow=11,SNR=143						
FX1	Attu Island--F	4.26	296	P	P	17 11 16.2	-3.3
NIKO	Nikolski	7.42	71	P	P	17 12 02.4	-1.1
NIKO				S	S	17 13 27.3	+0.3
OKCE	Okmok Cone E	7.91	69	P	P	17 12 09.6	-0.6
OKFG	Magazine Ridge	8.05	69	P	P	17 12 12.4	+0.2
SPIA	Saint Paul Isl	8.52	41	P	P	17 12 18.7	+0.1
SPIA				S	S	17 13 47.0	-7.3
MNAT	Makushin Natee	8.87	67	P	P	17 12 23.1	-0.3
MTBL	Makushin Table	8.89	66	P	P	17 12 23.6	-0.1
LVA	Lava Point	9.30	66	P	P	17 12 29.6	+0.3
AKGG	Akutan Green G	9.33	65	P	P	17 12 29.3	-0.5
AKLV	Akutan Long Va	9.35	66	P	P	17 12 29.5	-0.5
AHB	Akutan Harbor	9.41	66	P	P	17 12 30.9	-0.1
AKUT	Akutan	9.45	66	P	P	17 12 30.2	-1.1
AKA	Akutan	9.45	66	P	P	17 12 30.2	-1.1
WFAR	Faris Peak	10.10	64	P	P	17 12 40.0	-0.2
WESS	West Dahl Sout	10.12	65	P	P	17 12 40.3	-0.1
WPOG	Pogromni	10.13	64	P	P	17 12 40.5	-0.1
WESN	West Dahl Nort	10.22	64	P	P	17 12 42.0	+0.2
WTUG	Tugumak	10.40	63	P	P	17 12 44.3	+0.1
SSLW	Shishaldin Wes	10.53	64	P	P	17 12 47.1	+1.1
SSLN	Shishaldin Nor	10.61	63	P	P	17 12 47.4	+0.3
FALS	False Pass	10.94	64	P	P	17 12 51.0	-0.7
BALA	Baldy Mountain	11.37	62	P	P	17 12 57.2	-0.2
DT1	Dutton Round H	11.64	63	P	P	17 13 00.1	-0.9
DTNA	Dutton South F	11.66	63	P	P	17 13 00.5	-0.8
HAG	Hague Volcano	11.89	62	P	P	17 13 03.4	-1.0
BLHA	Black Hill	11.89	60	P	P	17 13 03.5	-1.0
PN6	Pavlof North-6	11.91	62	P	P	17 13 04.9	+0.2
PVV	Pavlof Volcano	11.97	62	P	P	17 13 04.4	-1.0
SDPT	Sand Point	12.70	63	P	P	17 13 12.1	-3.2
PET	Petropavlovsk	12.94	286	⇑eP	P	17 13 14.2	-4.2
PET				eS	S	17 15 42.1	+0.6
PET				pmax	pmax		
	comp=Z,50µm,14.1s						
PET				pmax	pmax		
	comp=Z,356nm,1.2s						
PET				pmax	pmax		
	comp=Z,40µm,8.0s						
PET				smax			
	comp=N,17µm,9.5s						
PET				smax			
	comp=N,38µm,20.8s						
PET				smax			
	comp=E,456nm,1.4s						
PET				MLR	MLR		
	comp=Z,317µm,21.0s						
PET				MLR	MLR		
	comp=Z,230µm,21.0s						
PET	Petropavlovsk	12.94	286	⇑eP	P	17 13 14.2	-4.2
	comp=Z,356nm,1.2s						
PET				eS	S	17 15 42.1	+0.6
SKR	Severo-Kuril's	14.73	277	⇑iP	P	17 13 38.0	-3.7
SKR				i S	S	17 16 26.0	+1.9
SKR				pmax	pmax		
	comp=N,220nm,1.0s						
SKR				pmax	pmax		
	comp=E,220nm,1.0s						
SKR				pmax	pmax		
	comp=Z,990nm,1.0s						
SKR				pmax	pmax		
	comp=Z,46µm,10.0s						
SKR				pmax	pmax		
	comp=N,10µm,4.0s						
SKR				pmax	pmax		
	comp=E,40µm,4.0s						
SKR				smax			
	comp=N,100µm,16.0s						
SKR				smax			
	comp=E,24µm,12.0s						
SKR				MLR	MLR		
	comp=N,60µm,20.0s						
SKR				MLR	MLR		
	comp=Z,180µm,20.0s						
SKR				MLR	MLR		
	comp=E,218µm,18.0s						
SKR	Severo-Kuril's	14.73	277	⇑iP	P	17 13 38.0	-3.7
	comp=E,990nm,1.0s						
SKR				i S	S	17 16 26.0	+1.9
TNA	Tin City	15.82	19	eP	P	17 13 56.9	+1.2
	comp=E,4µm,1.7s						
SVW2	Sparrevohn	16.98	45	eP	P	17 14 10.3	+0.1
KDAK	Kodiak Island	17.45	57	eP	P	17 14 13.5	-2.6
TTA	Tatalina	17.65	39	eP	P	17 14 19.6	+1.0
RSO	Redoubt South	18.03	48	eP	P	17 14 23.1	-0.3
BILL	Bilibino	18.12	344	c iP	P	17 14 25.2	+0.8
BILL				pmax	pmax		
	comp=Z,384nm,0.6s						
BILL				MLR	MLR		
	comp=Z,331µm,20.0s						
BILL	Bilibino	18.12	344	⇑iP	P	17 14 25.2	+0.8
	comp=Z,384nm,0.6s						
MA2	Magadan	18.23	309	c iP	P	17 14 24.8	-1.0
MA2				pmax	pmax		
	comp=Z,166nm,1.1s						
MA2				MLR	MLR		
	comp=Z,229µm,15.0s						
MA2	Magadan	18.23	309	⇑iP	P	17 14 24.8	-1.0
	comp=Z,166nm,1.1s						
SPU	Mount Spurr	18.60	46	eP	P	17 14 29.3	-0.9
SEY	Seymchan	18.69	319	i P	P	17 14 30.1	-1.2
SEY				eS	S	17 17 56.4	+1.9
SEY				pmax	pmax		
	comp=N,130nm,1.0s						
SEY				pmax	pmax		
	comp=Z,400nm,1.0s						
SEY				pmax	pmax		
	comp=E,200nm,0.9s						
SEY	Seymchan	18.69	319	i P	P	17 14 30.1	-1.2
	comp=E,0.4nm,1.0s						
SEY				eS	S	17 17 56.4	+1.9
SLKM	Skilak Lake	19.25	49	P	P	17 14 36.3	-1.3
SLKM	Skilak Lake	19.25	49	eP	P	17 14 36.0	-1.6
FIB	Fire Island	19.45	47	eP	P	17 14 39.4	-0.5
	comp=E,520nm,0.8s						
PWA	Palmer West	19.74	46	eP	P	17 14 41.7	-1.2
PWA				pmax	pmax		
	comp=Z,65nm,0.4s						
PMR	Palmer	20.06	47	eP	P	17 14 44.1	-2.3
PMR				pmax	pmax		
	comp=Z,196nm,0.8s						
PMR	Palmer	20.06	47	eP	P	17 14 44.1	-2.3
	comp=Z,196nm,0.8s						
IMA	Indian Mountai	20.20	32	P	P	17 14 47.7	-0.1
IMA				pmax	pmax		
	comp=Z,3µm,0.8s						
IMA	Indian Mountai	20.20	32	eP	P	17 14 47.9	+0.1
	comp=Z,550nm,0.9s						
SML	Sawmill	20.49	46	eP	P	17 14 48.2	-2.6

MCK	**McKinley**	**20.87**	**41**	*e*P	**P**	**17 14 52.4**	**-2.3**
	comp=Z,54nm,1.0s						
MCK				LR	LR		
	comp=Z,84µm,20.0s,MS6.1						
MID	**Middleton Isla**	**20.94**	**53**	*e*P	**P**	**17 14 56.6**	**+1.2**
EYAK	**Cordova Ski Ar**	**21.41**	**51**	*e*P	**P**	**17 14 58.3**	**-1.9**
DIV	**Divide**	**21.51**	**49**	*e*P	**P**	**17 14 59.0**	**-2.2**
	comp=Z,82nm,1.0s,mb5.1						
DIV				LR	LR		
	comp=Z,837µm,21.0s,MS7.1						
ILAR	**Eielson Array**	**22.09**	**39**	P	**P**	**17 15 06.7**	**-0.2**
ILAR						17 19 03.4	
ILAR						17 26 22.1	
ILAR	**Eielson Array**	**22.09**	**39**	P	**P**	**17 15 06.7**	**-0.3**
	comp=Z,107nm,0.6s,mb5.4,baz=243,slow=9.6,SNR=93						
ILAR				PcP	PcP	17 19 03.4	-0.6
	comp=Z,21nm,0.7s,baz=309,slow=4.4,SNR=9.3						
ILAR				ScP		17 22 39.7	
	comp=Z,12nm,0.6s,baz=288,slow=3.1,SNR=13						
ILAR				ScS	ScS	17 26 22.1	+3.3
	comp=Z,7.8nm,0.8s,baz=270,slow=2.9,SNR=8.9						
ILAR				P3KPbc		17 48 51.5	
	comp=Z,5.9nm,1.1s,baz=59,slow=3.1,SNR=18						
THY	**Trims Highway**	**22.10**	**43**	*e*P	**P**	**17 15 06.1**	**-0.9**
MENT	**Mentasta**	**22.86**	**45**	*e*P	**P**	**17 15 14.3**	**0.0**
MIDW	**Midway**	**23.04**	**173**	*e*P	**P**	**17 15 15.9**	**-0.5**
	comp=Z,2µm,1.0s,mb6.4						
MIDW				LR	LR		
	comp=Z,190µm,19.0s,MS6.6						
YUK	**Yuzh-Kuril'sk**	**23.61**	**266**⇑	*i*P	**P**	**17 15 22.0**	**+0.2**
YUK				*e*		17 15 59.0	
YUK				*e*PPP	PPP	17 16 09.0	+3.0
YUK				*i* S	**S**	**17 19 36.0**	**+7.0**
YUK				*e*SS	SS	17 20 25.0	+4.5
YUK				pmax	pmax		
	comp=Z,65µm,5.0s						
YUK				pmax	pmax		
	comp=N,27µm,4.0s						
YUK				pmax	pmax		
	comp=E,65µm,4.0s						
YUK				pmax	pmax		
	comp=E,3µm,1.0s						
YUK				pmax	pmax		
	comp=Z,4µm,1.0s,mb6.8						
YUK				pmax	pmax		
	comp=N,1µm,0.9s						
YUK				smax			
	comp=E,52µm,9.0s						
YUK				smax			
	comp=N,106µm,12.0s						
YUK				MLR	MLR		
	comp=Z,123µm,23.0s,MS6.3						
YUK				MLR	MLR		
	comp=N,84µm,16.0s						
YUK				MLR	MLR		
	comp=E,94µm,20.0s						
YUK	**Yuzh-Kuril'sk**	**23.61**	**266**⇑	*i*P	**P**	**17 15 22.0**	**+0.2**
	comp=E,4µm,1.0s,mb6.8						
YUK				*e*		17 15 59.0	
YUK				*e*PPP	PPP	17 16 09.0	+3.0
YUK				*i* S	**S**	**17 19 36.0**	**+7.0**
YUK				*e*SS	SS	17 20 25.0	+4.5
YUK				LR	LR		
	comp=Z,123µm,23.0s,MS6.3						
YSS	**Yuzh-Sakhalins**	**24.26**	**274**α	*i*P	**P**	**17 15 29.0**	**+0.9**
YSS				*e*		17 15 44.0	
YSS				*i*		17 16 05.0	
YSS				*i* PPP	PPP	17 16 20.0	+4.9
YSS				*i* S	**S**	**17 19 46.0**	**+5.8**
YSS				*e*		17 20 04.0	
YSS				pmax	pmax		
	comp=N,640nm,1.3s						
YSS				pmax	pmax		
	comp=E,810nm,1.3s						
YSS				pmax	pmax		
	comp=E,31µm,12.0s						
YSS				pmax	pmax		
	comp=Z,38µm,12.0s						
YSS				pmax	pmax		
	comp=N,18µm,10.0s						
YSS				pmax	pmax		
	comp=Z,14µm,10.0s						
YSS				MLR	MLR		
	comp=E,84µm,19.0s,MS6.3						
YSS				MLR	MLR		
	comp=Z,149µm,19.0s,MS6.5						
YSS				MLR	MLR		
	comp=N,52µm,16.0s,MS6.3						
YSS	**Yuzh-Sakhalins**	**24.26**	**274**	*i* Pcu		17 15 29.0	
YSS				*e*		17 15 44.0	
YSS				*i*		17 16 05.0	
YSS				*i* PPP	PPP	17 16 20.0	+4.9
YSS				*i* S	**S**	**17 19 46.0**	**+5.8**
YSS				*e*		17 20 04.0	
YSS				LR	LR		
	comp=Z,149µm,19.0s,MS6.5						
ASAJ	**Asahikawa**	**25.62**	**269**	P	**P**	**17 15 41.7**	**+0.6**
	comp=Z,1µm,0.9s,mb6.3,baz=47,slow=3.2,SNR=172						
ASAJ				ScP		17 22 53.0	
	comp=Z,20nm,0.8s,baz=173,slow=3.7,SNR=6.1						
ASAJ				LR	LR	17 25 12.1	
	comp=Z,114µm,19.2s,MS6.4,baz=77,slow=35						
ASAJ				ScS	ScS	17 26 36.5	+3.8
	comp=Z,9.2nm,1.0s,baz=84,slow=33,SNR=8.4						
SIT	**Sitka**	**26.73**	**60**	*e*P	**P**	**17 15 50.6**	**-0.7**
SIT				pmax	pmax		
	comp=Z,511nm,1.4s,mb5.9						
SIT				MLR	MLR		
	comp=Z,320µm,20.0s,MS6.9						
SIT	**Sitka**	**26.73**	**60**	*e*P	**P**	**17 15 50.6**	**-0.7**
	comp=Z,511nm,1.4s,mb5.9						
SIT				LR	LR		
	comp=Z,320µm,20.0s,MS6.9						
CRAG	**Craig**	**28.20**	**63**	*e*P	**P**	**17 16 05.0**	**+0.4**
	comp=Z,125nm,1.4s,mb5.3						
INK	**Inuvik**	**28.26**	**35**	P	**P**	**17 16 04.1**	**-0.9**
INK						17 19 18.2	
INK						17 26 49.4	
INK	**Inuvik**	**28.26**	**35**	P	**P**	**17 16 04.1**	**-0.9**
	comp=Z,28nm,0.3s,mb5.3,baz=246,slow=8.5,SNR=89						
INK				PcP	PcP	17 19 18.2	+0.8
	comp=Z,44nm,0.6s,baz=195,slow=4.0,SNR=5.4						
INK				ScP		17 22 58.1	
	comp=Z,60nm,0.9s,baz=93,slow=28,SNR=11						
INK				ScS	ScS	17 26 49.4	+5.5
	comp=Z,15nm,1.1s,baz=11,slow=31,SNR=14						
INK				P3KPbc		17 48 23.8	
	comp=Z,3.5nm,1.0s,baz=100,slow=6.1,SNR=5.9						
INK	**Inuvik**	**28.26**	**35**	P	**P**	**17 16 04.1**	**-0.9**
INK				PcP	PcP	17 19 18.2	+0.8
INK				ScP		17 22 58.1	
INK				ScS	ScS	17 26 49.4	+5.5
INK				*e*		17 48 23.8	
YAK	**Yakutsk**	**28.75**	**312***c*	*i*P	**P**	**17 16 07.6**	**-1.8**
YAK				*e**PP	pP	17 16 16.2	-6.8
YAK				*e*PPP	PPP	17 17 04.1	-12
YAK				*e*		17 19 18.4	
YAK				*e*S	**S**	**17 20 50.9**	**-2.6**
YAK				*e*SSS	SSS	17 22 25.2	-19
YAK				*e*		17 26 49.1	
YAK				pmax	pmax		
	comp=E,140nm,1.1s						
YAK				pmax	pmax		
	comp=Z,272nm,1.1s,mb5.9						
YAK				pmax	pmax		
	comp=N,22nm,0.9s						
YAK				smax			
	comp=E,167nm,1.1s						
YAK				smax			
	comp=Z,45nm,0.9s						
YAK				smax			
	comp=N,128nm,1.2s						
YAK				MLR	MLR		
	comp=N,18µm,16.0s,MS6.6						
YAK				MLR	MLR		
	comp=E,124µm,16.0s,MS6.6						
YAK				MLR	MLR		
	comp=Z,174µm,16.0s,MS6.8						
YAK	**Yakutsk**	**28.75**	**312**⇑	*i*P	**P**	**17 16 07.6**	**-1.8**
	comp=Z,272nm,1.1s,mb5.9						
YAK				*e*pP	pP	17 16 16.2	-6.8
YAK				*e*PPP	PPP	17 17 04.1	-12
YAK				*e*		17 19 18.4	
YAK				*e*S	**S**	**17 20 50.9**	**-2.6**
YAK				*e*SSS	SSS	17 22 25.2	-19
YAK				*e*		17 26 49.1	
YAK				LR	LR		
	comp=Z,174µm,16.0s,MS6.8						
DLBC	**Dease Lake**	**29.38**	**56**	P	**P**	**17 16 14.9**	**-0.2**
	comp=Z,13nm,0.8s,baz=272,slow=9.2,SNR=30						
DLBC				ScP		17 23 03.2	
	comp=Z,12nm,1.1s,baz=265,slow=6.4,SNR=4.7						
DLBC				LR	LR	17 28 10.7	
	comp=Z,143µm,21.3s,MS6.6,baz=278,slow=37						
DLBC	**Dease Lake**	**29.38**	**56**	*e*P	**P**	**17 16 14.3**	**-0.7**
KLR	**Kul'dur**	**30.20**	**285**⇓	*i*P	**P**	**17 16 19.0**	**-3.4**
KLR				*e*S	**S**	**17 21 11.4**	**-5.2**
KLR				pmax	pmax		
	comp=N,1µm,2.4s						
KLR				pmax	pmax		
	comp=E,520nm,2.4s						
KLR				pmax	pmax		
	comp=Z,2µm,2.4s,mb6.4						
KLR				smax			
	comp=N,2µm,4.0s						
KLR				smax			
	comp=E,3µm,4.0s						
CLNS	**Chul'man**	**31.84**	**302**	*e*P	**P**	**17 16 35.2**	**-1.6**
CLNS				*e*PPP	PPP	17 17 46.3	-12
CLNS				*e*		17 19 26.2	
CLNS				*e*S	**S**	**17 21 39.6**	**-2.7**
CLNS				pmax	pmax		
	comp=Z,158nm,1.2s,mb5.7						
CLNS				pmax	pmax		
	comp=N,61nm,0.8s						
CLNS				pmax	pmax		
	comp=E,103nm,1.0s						
CLNS				smax			
	comp=N,14µm,19.7s						
CLNS				smax			
	comp=Z,26µm,29.2s						
CLNS				smax			
	comp=E,19µm,23.3s						
CLNS				MLR	MLR		
	comp=N,100µm,17.0s,MS6.7						
CLNS				MLR	MLR		
	comp=E,96µm,17.0s,MS6.7						
CLNS				MLR	MLR		
	comp=Z,169µm,17.0s,MS6.8						
MAJO	**Matsushiro**	**32.68**	**260**	*e*P	**P**	**17 16 43.8**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,315nm,1.0s,mb6.2						
MAJO				MLR	MLR		
	comp=Z,111µm,22.0s,MS6.5						
MAJO	**Matsushiro**	**32.68**	**260**	*e*P	**P**	**17 16 43.8**	**-0.6**
	comp=Z,315nm,1.0s,mb6.2						
MAJO				LR	LR		
	comp=Z,111µm,22.0s,MS6.5						
MAT	**Matsushiro**	**32.68**	**260**	*e*P	**P**	**17 16 44.0**	**-0.4**
MAT				*e*S	**S**	**17 22 01.0**	**+5.3**
MAT				pmax	pmax		
	comp=Z,354nm,1.1s,mb6.2						
MAT	**Matsushiro**	**32.68**	**260**	*e*P	**P**	**17 16 44.0**	**-0.4**
	comp=Z,354nm,1.1s,mb6.2						
MAT				*e*S	**S**	**17 22 01.0**	**+5.3**
MAT	**Matsushiro**	**32.68**	**260**	P	**P**	**17 16 44.4**	**0.0**
MAT				S	**S**	**17 22 00.0**	**+4.3**
MJAR	**Matsushiro Arr**	**32.68**	**260**	P	**P**	**17 16 44.3**	**-0.1**
	comp=Z,82nm,0.9s,mb5.6,baz=50,slow=8.5,SNR=93						
MJAR				PcP	PcP	17 19 29.4	+0.1
	comp=Z,29nm,0.9s,baz=286,slow=1.2,SNR=6.9						
MJAR				ScP		17 23 11.8	
	comp=Z,13nm,1.0s,baz=64,slow=3.3,SNR=6.7						
MJAR				LR	LR	17 28 01.7	
	comp=Z,95µm,21.8s,MS6.5,baz=60,slow=33						
WAKE	**Wake Island**	**33.39**	**202**	*e*P	**P**	**17 16 50.2**	**-0.5**
	comp=Z,556nm,1.4s,mb6.3						
WAKE				LR	LR		
	comp=Z,94µm,20.0s,MS6.5						
MDJ	**Mudanjiang**	**33.54**	**279**	P	**P**	**17 16 50.0**	**-1.7**
MDJ				AP	pP	17 17 03.0	-2.6
MDJ				XP	sP	17 17 09.3	-3.0
MDJ				PP	PP	17 18 06.4	+1.2
MDJ				PCP	PcP	17 19 29.3	-2.3
MDJ				XS		17 22 31.1	
MDJ				SCP		17 23 09.9	
MDJ				PCS		17 23 15.4	
MDJ				SCS	ScS	17 27 11.0	+1.0
MDJ				AMB	AMB		
	comp=Z,120nm,1.2s,mb5.7						
MDJ				AMB	AMB		
	comp=Z,14µm,9.7s						
MDJ				LR	LR		
	comp=N,68µm,23.9s,MS6.5						
MDJ				LR	LR		
	comp=E,86µm,23.2s,MS6.5						
MDJ				LR	LR		
	comp=Z,128µm,23.2s,MS6.6						
MDJ	**Mudanjiang**	**33.54**	**279**	P	**P**	**17 16 50.5**	**-1.2**
MDJ				PnPn		17 18 07.6	
MDJ	**Mudanjiang**	**33.54**	**279**	P	**P**	**17 16 50.0**	**-1.7**
	comp=Z,130nm,1.2s,mb5.7						
MDJ				pP	pP	17 17 03.0	-2.6
MDJ				sP	sP	17 17 09.3	-3.0
MDJ				PP	PP	17 18 06.4	+1.2
MDJ				PcP	PcP	17 19 29.3	-2.3
MDJ				sS		17 22 31.1	
MDJ				ScP		17 23 09.9	
MDJ				PcS		17 23 15.4	
MDJ				ScS	ScS	17 27 11.0	+1.0
MDJ				LR	LR		
	comp=Z,128µm,23.2s,MS6.6						
JHJ	**Hachijo jima 2**	**34.00**	**253**	P	**P**	**17 16 55.7**	**-0.1**
	comp=Z,586nm,0.9s,mb6.5,baz=78,slow=5.6,SNR=7.7						
JHJ				LR	LR	17 27 52.9	
	comp=Z,56µm,21.4s,MS6.3,baz=60,slow=31						
KIP	**Kipapa**	**34.50**	**141**	*e*P	**P**	**17 17 00.9**	**+0.7**
KIP				pmax	pmax		
	comp=Z,696nm,1.1s,mb6.5						
KIP				MLR	MLR		
	comp=Z,141µm,20.0s,MS6.7						
KIP	**Kipapa**	**34.50**	**141**	*e*P	**P**	**17 17 00.9**	**+0.7**
	comp=Z,696nm,1.1s,mb6.5						
KIP				LR	LR		
	comp=Z,141µm,20.0s,MS6.7						
HON	**Honolulu**	**34.60**	**141**	*e*P	**P**	**17 17 01.6**	**+0.6**
OBC	**Olympics--Boni**	**35.95**	**72**	P	**P**	**17 17 13.8**	**+1.5**
OOW	**Octopus West**	**36.02**	**73**	P	**P**	**17 17 14.6**	**+1.7**
OCWA	**Octopus Mounta**	**36.02**	**73**	*e*P	**P**	**17 17 13.7**	**+0.9**
	comp=Z,612nm,1.1s,mb6.5						
OCWA				LR	LR		
	comp=Z,87µm,19.0s,MS6.5						
PGC	**Sidney**	**36.05**	**71**	*e*P	**P**	**17 17 13.3**	**+0.1**
	comp=Z,498nm,1.1s,mb6.4						
YKW3	**Yellowknife Ar**	**36.14**	**46**	*e*P	**P**	**17 17 12.7**	**-1.1**
YKA	**Yellowknife Ar**	**36.16**	**46**	P	**P**	**17 17 13.0**	**-0.9**
	comp=Z,177nm,0.7s,mb6.1,baz=283,slow=8.4,SNR=127						
YKA				PcP	PcP	17 19 39.3	+0.3
	comp=Z,39nm,0.7s,baz=288,slow=3.4,SNR=9.5						
YKA				ScP		17 23 23.6	
	comp=Z,32nm,0.9s,baz=290,slow=3.1,SNR=14						
YKA				LR	LR	17 33 29.8	
	comp=Z,267µm,19.2s,MS7.0,baz=285,slow=39						
YKA	**Yellowknife Ar**	**36.16**	**46**	P	**P**	**17 17 13.0**	**-0.9**
YKA				PcP	PcP	17 19 39.3	+0.3
YKA				ScP		17 23 23.6	
YKA				LR	LR	17 33 29.8	
CN2	**Changchun**	**36.52**	**280**	*e*P	**P**	**17 17 16.3**	**-0.9**
CN2				*e*XP	sP	17 17 33.9	-3.9
CN2				*e*S	**S**	**17 22 53.3**	**-1.7**
CN2				AMB	AMB		
	comp=Z,120nm,1.2s,mb5.6						
CN2				AMB	AMB		
	comp=Z,16µm,7.0s						
CN2				LR	LR		
	comp=N,94µm,19.0s,MS6.8						
CN2				LR	LR		
	comp=E,104µm,19.0s,MS6.8						
CN2	**Changchun**	**36.52**	**280**	*e*P	**P**	**17 17 16.3**	**-0.9**
	comp=E,120nm,1.2s,mb5.6						
CN2				*e*sP	sP	17 17 33.9	-3.9
CN2				*e*S	**S**	**17 22 53.3**	**-1.7**
SQM	**Sequim**	**36.55**	**72**	P	**P**	**17 17 18.8**	**+1.5**
GNW	**Green Mountain**	**36.92**	**72**	P	**P**	**17 17 21.8**	**+1.4**
POHA	**Pohakuloa**	**37.01**	**139**	PFAKE		17 17 30.0	+8.6
POHA				LR	LR		
	comp=Z,161µm,21.0s,MS6.8						
CBIJ	**Chichi jima**	**37.01**	**244**	P	**P**	**17 17 21.6**	**+0.2**
	comp=Z,440nm,0.9s,mb6.3,baz=42,slow=3.8,SNR=19						
CBIJ				LR	LR	17 29 59.2	
	comp=Z,54µm,21.8s,MS6.3,baz=35,slow=32						
BOD	**Bodaibo**	**37.24**	**306**⇓	*i*P	**P**	**17 17 21.8**	**-1.2**
BOD				*e*		17 23 01.2	
BOD				pmax	pmax		
	comp=Z,506nm,0.8s,mb6.4						
BOD	**Bodaibo**	**37.24**	**306**⇓	*i*P	**P**	**17 17 21.8**	**-1.2**
	comp=Z,506nm,0.8s,mb6.4						
BOD				*e*		17 23 01.2	
HIA	**Hailar**	**37.36**	**291**	P	**P**	**17 17 23.3**	**-0.8**
HIA	**Hailar**	**37.36**	**291**	*e*P	**P**	**17 17 23.2**	**-0.9**
HIA				pmax	pmax		
	comp=Z,136nm,0.6s						
HIA	**Hailar**	**37.36**	**291**	*e*P	**P**	**17 17 23.2**	**-0.9**
	comp=Z,136nm,0.6s,mb6.0						
HEBO	**Mount Hebo**	**37.49**	**76**	P	**P**	**17 17 27.2**	**+2.0**
TTW	**Tolt Reservoir**	**37.54**	**72**	P	**P**	**17 17 26.5**	**+0.9**
LON	**Longmire**	**37.91**	**73**	P	**P**	**17 17 29.8**	**+1.1**
COR	**Corvallis**	**38.09**	**77**	*e*P	**P**	**17 17 31.1**	**+0.9**
COR				pmax	pmax		
	comp=Z,1µm,1.3s,mb6.5						
COR				MLR	MLR		
	comp=Z,31µm,22.0s,MS6.1						
COR	**Corvallis**	**38.09**	**77**	*e*P	**P**	**17 17 31.1**	**+1.0**
	comp=Z,1µm,1.3s,mb6.5						
COR				LR	LR		
	comp=Z,31µm,22.0s,MS6.1						
KEBM	**Edson Butte**	**38.35**	**80**	*e*P	**P**	**17 17 33.9**	**+1.5**
TBM	**Table Mountain**	**38.44**	**72**	P	**P**	**17 17 34.0**	**+0.9**
KS15	**Wonju Array Si**	**38.59**	**270**	*e*P	**P**	**17 17 34.9**	**+0.4**
HOOD	**Mount Hood Mea**	**38.72**	**75**	P	**P**	**17 17 37.0**	**+1.6**
SNY	**Shenyang**	**38.74**	**279**	⇑P	**P**	**17 17 36.5**	**+0.8**
SNY				XP	sP	17 17 51.3	-5.0
SNY				LR	LR		
	comp=N,60µm,19.5s,MS6.5						
SNY				LR	LR		
	comp=E,57µm,21.9s,MS6.5						
SNY				LR	LR		
	comp=Z,103µm,22.5s,MS6.6						
KBO	**Bosley Butte**	**38.77**	**81**	*e*P	**P**	**17 17 37.1**	**+1.2**
INCN	**Inchon**	**39.35**	**271**	*e*P	**P**	**17 17 41.0**	**+0.2**
	comp=Z,641nm,1.1s,mb6.3						
INCN				LR	LR		
	comp=Z,34µm,20.0s,MS6.2						
KRMB	**Red Mountain**	**39.35**	**81**	P	**P**	**17 17 42.7**	**+2.0**
JNU	**Nakatsue**	**39.47**	**262**	P	**P**	**17 17 42.9**	**+1.0**
	comp=Z,419nm,1.0s,mb6.1,baz=50,slow=11,SNR=61						
JNU				LR	LR	17 32 50.9	
	comp=Z,97µm,21.4s,MS6.6,baz=49,slow=34						
CIT	**Chita**	**39.69**	**298**⇑	*i*P	**P**	**17 17 43.8**	**+0.3**
CIT				*e*S	**S**	**17 23 46.0**	**+3.1**
CIT				pmax	pmax		
	comp=Z,2µm,2.6s,mb6.4						
CIT	**Chita**	**39.69**	**298**⇑	*i*P	**P**	**17 17 43.8**	**+0.3**
	comp=Z,2µm,2.6s,mb6.4						
CIT				*e*S	**S**	**17 23 46.0**	**+3.1**
KHMM	**Horse Mountain**	**39.83**	**82**	*e*P	**P**	**17 17 45.7**	**+0.9**
EDM	**Edmonton**	**39.86**	**60**	*e*P	**P**	**17 17 44.1**	**-0.7**
NEW	**Newport**	**39.97**	**68**	*e*P	**P**	**17 17 45.6**	**-0.2**
NEW				pmax	pmax		
	comp=Z,148nm,0.7s						
NEW				MLR	MLR		
	comp=Z,67µm,19.0s						
NEW	**Newport**	**39.97**	**68**	ScP		17 23 39.9	
	comp=Z,11nm,0.7s,baz=280,slow=3.0,SNR=3.8						
NEW				LR	LR	17 33 15.6	
	comp=Z,63µm,19.9s,MS6.5,baz=293,slow=35						
NEW				P3KP		17 48 57.8	
	comp=Z,4.6nm,0.4s,baz=99,slow=18,SNR=6.7						
NEW	**Newport**	**39.97**	**68**	*e*P	**P**	**17 17 45.6**	**-0.2**
	comp=Z,148nm,0.7s,mb5.8						
NEW				LR	LR		
	comp=Z,67µm,19.0s,MS6.5						
YBH	**Yreka Blue Hor**	**39.98**	**80**	*e*P	**P**	**17 17 47.6**	**+1.6**
YBH				pmax	pmax		
	comp=Z,328nm,1.0s						
YBH				MLR	MLR		
	comp=Z,115µm,22.0s						
YBH	**Yreka Blue Hor**	**39.98**	**80**	ScP		17 23 40.1	
	comp=Z,4.9nm,0.7s,baz=328,slow=7.9,SNR=3.2						
YBH				LR	LR	17 31 07.1	
	comp=Z,112µm,21.5s,MS6.7,baz=299,slow=31						
YBH	**Yreka Blue Hor**	**39.98**	**80**	*e*P	**P**	**17 17 47.6**	**+1.6**
	comp=Z,328nm,1.0s,mb6.0						
YBH				LR	LR		
	comp=Z,115µm,22.0s,MS6.7						
RES	**Resolute Bay**	**40.38**	**24**	*e*P	**P**	**17 17 48.5**	**-0.5**
RES				pmax	pmax		
	comp=Z,291nm,1.1s,mb5.9						
RES	**Resolute Bay**	**40.38**	**24**	*e*P	**P**	**17 17 48.5**	**-0.5**
	comp=Z,291nm,1.1s,mb5.9						
WDC	**Whiskeytown Da**	**40.74**	**82**	*e*P	**P**	**17 17 52.4**	**+0.2**
WDC				pmax	pmax		
	comp=Z,212nm,1.1s,mb5.7						
WDC				MLR	MLR		
	comp=Z,58µm,19.0s,MS6.5						
WDC	**Whiskeytown Da**	**40.74**	**82**	*e*P	**P**	**17 17 52.4**	**+0.1**
	comp=Z,212nm,1.1s,mb5.7						
WDC				LR	LR		
	comp=Z,58µm,19.0s,MS6.5						
HOPS	**Hopland**	**41.34**	**84**	*e*P	**P**	**17 17 57.1**	**0.0**
	comp=Z,682nm,1.4s,mb6.1						
HOPS				LR	LR		
	comp=Z,167µm,20.0s,MS6.9						
MOD	**Modoc**	**41.38**	**79**	*e*P	**P**	**17 17 58.5**	**+1.0**
	comp=Z,536nm,1.1s,mb6.1						
MOD				LR	LR		
	comp=Z,126µm,21.0s,MS6.8						
BMO	**Blue Mountains**	**41.59**	**73**⇑	*e*P	**P**	**17 17 59.8**	**+0.7**
	comp=Z,8.6nm,0.5s						
BMO				LR	LR		
	comp=Z,88µm,22.0s,MS6.6						
DL2	**Dalian**	**41.64**	**276**⇑	*i*P	**P**	**17 18 00.0**	**+0.4**
DL2				PP	PP	17 19 38.0	-1.5
DL2				S	**S**	**17 24 12.0**	**0.0**
DL2				SS	SS	17 27 14.0	+0.5
DL2				AMB	AMB		
	comp=Z,180nm,1.0s,mb5.7						
DL2				AMB	AMB		
	comp=Z,10µm,12.0s						
DL2				LR	LR		
	comp=N,26µm,15.0s,MS6.5						
DL2				LR	LR		
	comp=E,38µm,15.0s,MS6.5						
DL2	**Dalian**	**41.64**	**276**⇑	*i*P	**P**	**17 18 00.0**	**+0.4**
	comp=E,190nm,1.0s,mb5.7						
DL2				PP	PP	17 19 38.0	-1.5
DL2				S	**S**	**17 24 12.0**	**0.0**
DL2				SS	SS	17 27 14.0	+0.5
NSHM	**Saint Helena R**	**41.91**	**84**	*e*P	**P**	**17 18 02.7**	**+0.9**
WVOR	**Wild Horse Val**	**42.10**	**77**	*e*P	**P**	**17 18 04.1**	**+0.7**
	comp=E,581nm,1.5s,mb6.0						
WVOR				LR	LR		
	comp=Z,186µm,22.0s,MS6.9						
BEKR	**Beckwourth**	**42.51**	**81**	*e*P	**P**	**17 18 07.3**	**+0.6**
	comp=Z,180nm,1.0s,mb5.8						
MSO	**Missoula**	**42.55**	**69**	*e*P	**P**	**17 18 06.6**	**-0.4**
	comp=Z,151nm,0.8s,mb5.8						
MSO				LR	LR		
	comp=Z,32µm,20.0s,MS6.2						
SAC	**San Andreas**	**42.60**	**85**	P	**P**	**17 18 09.0**	**+1.5**
CHMT	**Chamberlain Mo**	**42.91**	**68**	*e*P	**P**	**17 18 09.3**	**-0.7**
WCN	**Washoe City**	**43.22**	**81**	*e*P	**P**	**17 18 13.5**	**+0.9**
WCN				pmax	pmax		
	comp=Z,354nm,1.0s,mb6.0						
WCN	**Washoe City**	**43.22**	**81**	*e*P	**P**	**17 18 13.5**	**+1.0**
	comp=Z,354nm,1.0s,mb6.0						
KWAJ	**Kwajalein Atol**	**43.35**	**197**	P	**P**	**17 18 12.1**	**-1.8**
KWAJ				LR	LR		
	comp=Z,11µm,20.0s,MS5.8						
CMB	**Columbia Colle**	**43.59**	**83**	*e*P	**P**	**17 18 15.9**	**+0.3**
CMB				*e**PP	pP	17 18 29.4	-0.4
CMB				pmax	pmax		
	comp=Z,210nm,1.0s,mb5.8						
CMB				MLR	MLR		
	comp=Z,129µm,21.0s,MS6.8						
CMB	**Columbia Colle**	**43.59**	**83**	*e*P	**P**	**17 18 15.9**	**+0.4**
	comp=Z,210nm,1.0s,mb5.8						
CMB				*e*pP	pP	17 18 29.4	-0.4
CMB				LR	LR		
	comp=Z,129µm,21.0s,MS6.8						
SAO	**San Andreas Ge**	**43.71**	**85**	*e*P	**P**	**17 18 16.9**	**+0.3**
SAO				pmax	pmax		
	comp=Z,162nm,1.2s,mb5.6						
SAO				MLR	MLR		
	comp=Z,65µm,20.0s,MS6.5						
SAO	**San Andreas Ge**	**43.71**	**85**	*e*P	**P**	**17 18 16.9**	**+0.3**
	comp=Z,162nm,1.2s,mb5.6						
SAO				LR	LR		

	comp=Z,65μm,20.0s,MS6.5						
HRY	**Holter Researc**	**43.85**	**68**	*e*P	**P**	**17 18 17.0**	**-0.5**
HLID	**Hailey**	**44.04**	**73**	PFAKE		17 18 30.0	+11
HLID				LR	LR		
	comp=Z,70μm,21.0s,MS6.5						
BMN	**Battle Mountai**	**44.12**	**78**	*e*P	**P**	**17 18 20.7**	**+0.9**
BMN				pmax	pmax		
	comp=Z,302nm,0.8s,mb6.1						
BMN				MLR	MLR		
	comp=Z,107μm,22.0s,MS6.7						
BMN	**Battle Mountai**	**44.12**	**78**	*e*P	**P**	**17 18 20.7**	**+0.8**
	comp=Z,302nm,0.8s,mb6.1						
BMN				LR	LR		
	comp=Z,107μm,22.0s,MS6.7						
LRV	**Little Rabbit**	**44.19**	**86**	*e*P	**P**	**17 18 20.5**	**0.0**
MCMT	**McKenzie Canyo**	**44.27**	**71**	*e*P	**P**	**17 18 20.7**	**-0.2**
BOZ	**Bozeman (W)**	**44.54**	**69**	⇑*e*P	**P**	**17 18 23.0**	**-0.1**
BOZ				pmax	pmax		
	comp=Z,172nm,1.2s,mb5.8						
BOZ				MLR	MLR		
	comp=Z,59μm,19.0s,MS6.5						
BOZ	**Bozeman (W)**	**44.54**	**69**	⇑*e*P	**P**	**17 18 23.0**	**-0.1**
	comp=Z,172nm,1.2s,mb5.8						
BOZ				LR	LR		
	comp=Z,59μm,19.0s,MS6.5						
IRK	**Irkutsk**	**44.64**	**302**	⇑*i*P	**P**	**17 18 23.4**	**-0.4**
IRK				*e*		17 20 08.4	
IRK				*e*S	**S**	**17 24 57.8**	**+2.3**
IRK				pmax	pmax		
	comp=Z,426nm,4.5s						
IRK	**Irkutsk**	**44.64**	**302**	⇑*i*P	**P**	**17 18 23.4**	**-0.4**
	comp=Z,426nm,4.5s						
IRK				*e*		17 20 08.4	
IRK				*e*S	**S**	**17 24 57.8**	**+2.3**
NVAR	**Mina Array Bea**	**44.65**	**81**	P	**P**	**17 18 25.1**	**+1.1**
	comp=Z,77nm,0.9s,mb5.5,baz=294,slow=7.0,SNR=139						
NVAR				ScP		17 23 56.4	
	comp=Z,3.4nm,0.7s,baz=320,slow=7.0,SNR=3.8						
NVAR				S	**S**	**17 24 53.0**	**-2.8**
	comp=Z,5.7nm,0.4s,baz=214,slow=10,SNR=35						
NVAR				LR	LR	17 34 52.6	
	comp=Z,79μm,20.1s,MS6.6,baz=285,slow=33						
OMM	**Old Mammoth Mi**	**44.72**	**83**	*e*P	**P**	**17 18 25.9**	**+1.2**
MNV	**Mina**	**44.74**	**81**	*e*P	**P**	**17 18 25.4**	**+0.6**
MNV				pmax	pmax		
	comp=Z,1μm,3.7s						
MNV				MLR	MLR		
	comp=Z,79μm,20.0s,MS6.6						
MNV	**Mina**	**44.74**	**81**	*e*P	**P**	**17 18 25.4**	**+0.6**
	comp=Z,1μm,3.7s						
MNV				LR	LR		
	comp=Z,79μm,20.0s,MS6.6						
QLMT	**Earthquake Lak**	**45.11**	**70**	*e*P	**P**	**17 18 27.6**	**-0.1**
FFC	**Flin Flon**	**45.14**	**53**	*e*P	**P**	**17 18 25.8**	**-2.0**
FFC				pmax	pmax		
	comp=Z,86nm,1.0s,mb5.5						
FFC				MLR	MLR		
	comp=Z,42μm,20.0s,MS6.4						
FFC	**Flin Flon**	**45.14**	**53**	*e*P	**P**	**17 18 25.8**	**-1.9**
	comp=Z,86nm,1.0s,mb5.5						
FFC				LR	LR		
	comp=Z,42μm,20.0s,MS6.4						
MTUM	**Tungsten Hills**	**45.15**	**83**	*e*P	**P**	**17 18 28.8**	**+0.7**
ELK	**Elko**	**45.16**	**77**	PFAKE		17 18 40.0	+12
ELK				LR	LR		
	comp=Z,100μm,21.0s,MS6.7						
TLY	**Talaya**	**45.26**	**302**	*d* *i*P	**P**	**17 18 28.9**	**+0.1**
TLY				*e*		17 20 03.5	
TLY				*e*S	**S**	**17 25 06.3**	**+1.9**
TLY				pmax	pmax		
	comp=Z,596nm,1.9s,mb6.1						
TLY				MLR	MLR		
	comp=Z,237μm,23.0s,MS7.1						
TLY	**Talaya**	**45.26**	**302**	*i* Pr	**P**	**17 18 28.9**	**+0.1**
TLY				*e*		17 20 03.5	
TLY				*e*S	**S**	**17 25 06.3**	**+1.9**
ULN	**Ulaanbaatar**	**45.38**	**296**	P	**P**	**17 18 30.3**	**+0.5**
ULN				S	**S**	**17 25 08.9**	**+2.7**
ULN	**Ulaanbaatar**	**45.38**	**296**	⇑*e*P	**P**	**17 18 30.3**	**+0.5**
ULN				pmax	pmax		
	comp=Z,229nm,1.0s,mb6.0						
ULN				MLR	MLR		
	comp=Z,213μm,19.0s,MS7.1						
ULN	**Ulaanbaatar**	**45.38**	**296**	⇑*e*P	**P**	**17 18 30.3**	**+0.5**
	comp=Z,229nm,1.0s,mb6.0						
ULN				LR	LR		
	comp=Z,213μm,19.0s,MS7.1						
JOW	**Kunigami**	**45.47**	**258**	P	**P**	**17 18 31.5**	**+0.7**
	comp=Z,346nm,1.0s,mb6.2,baz=48,slow=5.1,SNR=19						
YMR	**Madison River**	**45.48**	**70**	*e*P	**P**	**17 18 30.8**	**+0.3**
	comp=Z,810nm,1.0s,mb6.5						
TPH	**Tonopah**	**45.54**	**81**	*e*P	**P**	**17 18 32.0**	**+0.8**
TPH				pmax	pmax		
	comp=Z,343nm,0.9s,mb6.3						
TPH				MLR	MLR		
	comp=Z,99μm,20.0s,MS6.8						
TPH	**Tonopah**	**45.54**	**81**	*e*P	**P**	**17 18 32.0**	**+0.8**
	comp=Z,343nm,0.9s,mb6.3						
TPH				LR	LR		
	comp=Z,99μm,20.0s,MS6.8						
GCMT	**Greycliff**	**45.61**	**68**	*e*P	**P**	**17 18 31.4**	**-0.2**
YNR	**Norris Junctio**	**45.62**	**69**	*e*P	**P**	**17 18 32.3**	**+0.6**
YFT	**Old Faithful**	**45.67**	**70**	*e*P	**P**	**17 18 33.3**	**+1.2**
SONM	**Songino Array**	**45.77**	**296**	P	**P**	**17 18 33.6**	**+0.7**
	comp=Z,77nm,0.7s,mb5.8,baz=57,slow=9.4,SNR=399						
SONM				PcP	PcP	17 20 12.4	+2.1
	comp=Z,25nm,0.7s,baz=45,slow=2.0,SNR=2.5						
SONM				ScP		17 24 01.5	
	comp=Z,18nm,1.0s,baz=37,slow=3.4,SNR=7.4						
SONM				LR	LR	17 39 23.2	
	comp=Z,229μm,18.5s,MS7.2,baz=55,slow=38						
LKWY	**Lake**	**45.87**	**69**	*e*P	**P**	**17 18 34.7**	**+1.0**
LKWY				pmax	pmax		
	comp=Z,350nm,0.8s,mb6.3						
LKWY				MLR	MLR		
	comp=Z,54μm,19.0s,MS6.5						
LKWY	**Lake**	**45.87**	**69**	*e*P	**P**	**17 18 34.7**	**+1.0**
	comp=Z,350nm,0.8s,mb6.3						
LKWY				LR	LR		
	comp=Z,54μm,19.0s,MS6.5						
IMW	**Indian Meadow**	**45.93**	**71**	*e*P	**P**	**17 18 34.7**	**+0.5**
	comp=Z,404nm,0.9s,mb6.3						
RRI2	**Red Ridge**	**46.02**	**71**	*e*P	**P**	**17 18 35.6**	**+0.7**
	comp=Z,456nm,0.9s,mb6.4						
HVU	**Hansel Valley**	**46.05**	**74**	*e*P	**P**	**17 18 35.6**	**+0.5**
	comp=Z,418nm,1.0s,mb6.3						
TIA	**Tai’an**	**46.12**	**276**	⇑P	**P**	**17 18 36.0**	**+0.2**
TIA				AP	pP	17 18 52.0	+2.0
TIA				S	**S**	**17 25 21.5**	**+4.7**
TIA				AMB	AMB		
	comp=Z,430nm,1.0s,mb6.3						
TIA				AMB	AMB		
	comp=Z,16μm,12.0s						
TIA				LR	LR		
	comp=N,11μm,19.4s,MS5.9						
TIA				LR	LR		
	comp=E,9μm,23.7s,MS5.9						
TIA	**Tai’an**	**46.12**	**276**	⇑P	**P**	**17 18 36.0**	**+0.2**
	comp=E,430nm,1.0s,mb6.3						
TIA				pP	pP	17 18 52.0	+2.0
TIA				S	**S**	**17 25 21.5**	**+4.7**
MOOW	**Moose Ponds**	**46.13**	**71**	*e*P	**P**	**17 18 36.0**	**+0.2**
	comp=E,197nm,1.1s,mb6.0						
ZAK	**Zakamensk**	**46.14**	**300**	⇓*i*P	**P**	**17 18 35.9**	**+0.2**
ZAK				*e*		17 20 09.5	
ZAK				pmax	pmax		
	comp=Z,205nm,1.3s,mb5.9						
ZAK	**Zakamensk**	**46.14**	**300**	⇓*i*P	**P**	**17 18 35.9**	**+0.2**
	comp=Z,205nm,1.3s,mb5.9						
ZAK				*e*		17 20 09.5	
TPAW	**Teton Pass**	**46.15**	**71**	*e*P	**P**	**17 18 36.4**	**+0.5**
	comp=Z,356nm,1.0s,mb6.2						
WUWY	**Wally Ulrich**	**46.25**	**71**	*e*P	**P**	**17 18 37.0**	**+0.3**
SNOW	**Snow King Moun**	**46.28**	**71**	*e*P	**P**	**17 18 37.7**	**+0.7**
	comp=Z,264nm,0.9s,mb6.2						
LOHW	**Long Hollow**	**46.29**	**71**	*e*P	**P**	**17 18 37.2**	**+0.2**
	comp=Z,155nm,0.9s,mb5.9						
TRCR	**Troy Canyon**	**46.39**	**80**	*e*P	**P**	**17 18 38.3**	**+0.4**
BGU	**Big Grassy Mou**	**46.40**	**75**	*e*P	**P**	**17 18 38.5**	**+0.5**
AHID	**Auburn Hatcher**	**46.48**	**72**	*e*P	**P**	**17 18 38.8**	**+0.3**
	comp=Z,364nm,0.9s,mb6.3						
AHID				LR	LR		
	comp=Z,84μm,22.0s,MS6.7						
SPUT	**South Promonto**	**46.53**	**74**	*e*P	**P**	**17 18 39.2**	**+0.3**
MOY	**Mondy**	**46.68**	**303**	*e*P	**P**	**17 18 40.6**	**+0.6**
MOY				pmax	pmax		
	comp=Z,1μm,4.0s						
MOY	**Mondy**	**46.68**	**303**	*e*P	**P**	**17 18 40.6**	**+0.6**
	comp=Z,1μm,4.0s						
HHC	**Hu-ho-hao-te**	**46.70**	**285**	*e*P	**P**	**17 18 41.3**	**+1.0**
HHC				AP	pP	17 18 55.1	+0.5
HHC				XP	sP	17 19 01.0	+0.1
HHC				PCP	PcP	17 20 13.8	+0.2
HHC				PP	PP	17 20 29.3	-1.0
HHC				PCS		17 24 11.4	
HHC				S	**S**	**17 25 26.3**	**+1.2**
HHC				XS		17 25 44.3	
HHC				SCS	ScS	17 28 24.8	-2.6
HHC				SS	SS	17 28 43.8	-0.8
HHC				AMB	AMB		
	comp=Z,300nm,1.9s,mb5.9						
HHC				LR	LR		
	comp=N,48μm,20.2s,MS6.7						
HHC				LR	LR		
	comp=E,65μm,20.2s,MS6.7						
HHC				LR	LR		
	comp=Z,66μm,23.8s,MS6.5						
HHC	**Hu-ho-hao-te**	**46.70**	**285**	*e*P	**P**	**17 18 41.3**	**+1.0**
	comp=Z,310nm,1.9s,mb5.9						
HHC				pP	pP	17 18 55.1	+0.5
HHC				sP	sP	17 19 01.0	+0.1
HHC				PcP	PcP	17 20 13.8	+0.2
HHC				PP	PP	17 20 29.3	-1.0
HHC				PcS		17 24 11.4	
HHC				S	**S**	**17 25 26.3**	**+1.2**
HHC				sS		17 25 44.3	
HHC				ScS	ScS	17 28 24.8	-2.6
HHC				SS	SS	17 28 43.8	-0.8
HHC				LR	LR		
	comp=Z,66μm,23.8s,MS6.5						
GUMO	**Guam**	**46.74**	**229**	P	**P**	**17 18 37.9**	**-3.0**
GUMO				pmax	pmax		
	comp=Z,272nm,1.3s,mb6.0						
GUMO				MLR	MLR		
	comp=Z,39μm,20.0s,MS6.4						
GUMO	**Guam**	**46.74**	**229**	P	**P**	**17 18 37.9**	**-3.1**
	comp=Z,272nm,1.3s,mb6.0						
GUMO				LR	LR		
	comp=Z,39μm,20.0s,MS6.4						
HWUT	**Hardware Ranch**	**46.88**	**74**	*e*P	**P**	**17 18 42.0**	**+0.2**
	comp=Z,504nm,1.3s,mb6.3						
HWUT				LR	LR		
	comp=Z,87μm,20.0s,MS6.7						
FCC	**Fort Churchill**	**46.89**	**45**	P	**P**	**17 18 40.1**	**-1.4**
FCC				pmax	pmax		
	comp=Z,320nm,1.1s,mb6.2						
FCC	**Fort Churchill**	**46.89**	**45**	⇑*e*P	**P**	**17 18 40.0**	**-1.5**
	comp=Z,317nm,1.1s,mb6.2						
SSE	**Sheshan**	**46.91**	**268**	⇑P	**P**	**17 18 42.5**	**+0.4**
SSE				AP	pP	17 18 56.5	+0.2
SSE				XP	sP	17 19 02.8	+0.1
SSE				PP	PP	17 20 31.3	-1.2
SSE				S	**S**	**17 25 28.9**	**+0.7**
SSE				AMB	AMB		
	comp=Z,400nm,1.2s,mb6.2						
SSE				AMB	AMB		
	comp=Z,16μm,12.0s						
SSE				LR	LR		
	comp=N,31μm,24.8s,MS6.3						
SSE				LR	LR		
	comp=E,24μm,24.7s,MS6.3						
SSE				LR	LR		
	comp=Z,41μm,22.0s,MS6.3						
SSE	**Sheshan**	**46.91**	**268**	⇑P	**P**	**17 18 42.5**	**+0.4**
	comp=Z,400nm,1.2s,mb6.2						
SSE				pP	pP	17 18 56.5	+0.2
SSE				sP	sP	17 19 02.8	+0.1
SSE				PP	PP	17 20 31.3	-1.2
SSE				S	**S**	**17 25 28.9**	**+0.7**
SSE				LR	LR		
	comp=Z,41μm,22.0s,MS6.3						
LAO	**LASA Array**	**47.09**	**65**	*e*P	**P**	**17 18 42.9**	**-0.4**
	comp=Z,181nm,0.8s,mb6.0						
LAO				LR	LR		
	comp=Z,107μm,20.0s,MS6.8						
NOQ	**North Oquirrh**	**47.12**	**75**	*e*P	**P**	**17 18 43.7**	**+0.1**
	comp=Z,1μm,1.2s,mb6.6						
DGMT	**Dagmar**	**47.24**	**62**	*e*P	**P**	**17 18 42.8**	**-1.6**
	comp=Z,1μm,1.8s,mb6.5						
DGMT				LR	LR		
	comp=Z,100μm,22.0s,MS6.7						
TCUT	**Toone Canyon**	**47.27**	**74**	*e*P	**P**	**17 18 45.5**	**+0.7**
CTU	**Camp Tracy**	**47.32**	**75**	*e*P	**P**	**17 18 45.4**	**+0.2**
	comp=Z,639nm,1.3s,mb6.4						
BW06	**Boulder Array**	**47.40**	**71**	⇑*e*P	**P**	**17 18 46.0**	**+0.2**
	comp=Z,21nm,0.3s,mb5.5						
BW06				LR	LR		
	comp=Z,82μm,22.0s,MS6.7						
PDAR	**Pinedale Array**	**47.40**	**71**	P	**P**	**17 18 46.0**	**+0.2**
	comp=Z,533nm,0.8s,mb6.5,baz=300,slow=3.8,SNR=696						
PDAR				ScP		17 24 10.5	
	comp=Z,7.3nm,0.8s,baz=207,slow=2.0,SNR=5.3						
PDAR				LR	LR	17 36 18.8	
	comp=Z,67μm,21.9s,MS6.6,baz=316,slow=33						
MWC	**Mount Wilson**	**47.46**	**86**	*e*P	**P**	**17 18 46.4**	**0.0**
JLU	**Jordanelle**	**47.55**	**75**	*e*P	**P**	**17 18 47.1**	**+0.1**
NLU	**North Lily Min**	**47.57**	**76**	*e*P	**P**	**17 18 47.7**	**+0.5**
NJ2	**Nanjing**	**47.74**	**271**	*e*P	**P**	**17 18 48.4**	**-0.2**
NJ2				AP	pP	17 19 00.8	-2.1
NJ2				XP	sP	17 19 06.1	-3.0
NJ2				PP	PP	17 20 39.6	-0.4
NJ2				S	**S**	**17 25 44.0**	**+4.2**
NJ2				XS		17 26 05.0	
NJ2				AMB	AMB		
	comp=Z,280nm,1.0s,mb6.2						
NJ2				AMB	AMB		
	comp=Z,15μm,11.3s						
NJ2				LR	LR		
	comp=N,117μm,22.3s,MS6.9						
NJ2				LR	LR		
	comp=E,107μm,25.4s,MS6.9						
NJ2				LR	LR		
	comp=Z,79μm,23.1s,MS6.6						
NJ2	**Nanjing**	**47.74**	**271**	*e*P	**P**	**17 18 48.4**	**-0.2**
	comp=Z,280nm,1.0s,mb6.2						
NJ2				pP	pP	17 19 00.8	-2.1
NJ2				sP	sP	17 19 06.1	-3.0
NJ2				PP	PP	17 20 39.6	-0.4
NJ2				S	**S**	**17 25 44.0**	**+4.2**
NJ2				sS		17 26 05.0	
NJ2				LR	LR		
	comp=Z,79μm,23.1s,MS6.6						
DAU	**Daniels Canyon**	**47.79**	**75**	⇑*e*P	**P**	**17 18 49.7**	**+0.9**
BTO	**Baotou**	**47.79**	**286**	*e*P	**P**	**17 18 49.8**	**+0.9**
BTO				S	**S**	**17 25 40.8**	**+0.3**
BTO				AMB	AMB		
	comp=Z,480nm,1.5s,mb6.3						
BTO	**Baotou**	**47.79**	**286**	*e*P	**P**	**17 18 49.8**	**+0.9**
	comp=Z,480nm,1.5s,mb6.3						
BTO				S	**S**	**17 25 40.8**	**+0.3**
MPU	**Maple Canyon**	**47.80**	**75**	*e*P	**P**	**17 18 49.1**	**+0.1**
	comp=Z,308nm,1.1s,mb6.2						
ARUT	**Antelope Range**	**48.06**	**79**	*e*P	**P**	**17 18 51.2**	**+0.2**
MVU	**Marysvale**	**48.37**	**77**	*e*P	**P**	**17 18 54.1**	**+0.7**
	comp=Z,21nm,0.8s,mb5.2						
MVU				LR	LR		
	comp=Z,116μm,22.0s,MS6.8						
MSU	**Marysvale**	**48.39**	**77**	⇑*e*P	**P**	**17 18 54.2**	**+0.7**
TMUT	**Trail Mountain**	**48.50**	**76**	*e*P	**P**	**17 18 54.9**	**+0.5**
NEN	**Nelson**	**48.55**	**82**	*e*P	**P**	**17 18 54.9**	**+0.1**
LDFC	**Landfair**	**48.75**	**83**	*e*P	**P**	**17 18 56.1**	**-0.2**
PFO	**Pinyon Flat Ob**	**48.87**	**85**	*e*P	**P**	**17 18 57.0**	**-0.3**
PFO				pmax	pmax		
	comp=Z,156nm,1.0s,mb6.0						
PFO				MLR	MLR		
	comp=Z,20μm,21.0s,MS6.1						
PFO	**Pinyon Flat Ob**	**48.87**	**85**	*e*P	**P**	**17 18 57.0**	**-0.3**
	comp=Z,156nm,1.0s,mb6.0						
PFO				LR	LR		
	comp=Z,20μm,21.0s,MS6.1						
SRU	**San Rafael**	**49.03**	**76**	*e*P	**P**	**17 18 58.5**	**0.0**
	comp=Z,547nm,1.1s,mb6.5						
BAR	**Barrett**	**49.34**	**86**	*e*P	**P**	**17 19 00.8**	**-0.2**
RWWY	**Rawlins**	**49.44**	**71**	*e*P	**P**	**17 19 00.9**	**-0.7**
	comp=Z,14μm,1.4s						
RSSD	**Black Hills**	**49.84**	**66**	*e*P	**P**	**17 19 03.3**	**-1.3**
RSSD				pmax	pmax		
	comp=Z,214nm,1.3s,mb6.0						
RSSD				MLR	MLR		
	comp=Z,10μm,19.0s,MS5.8						
RSSD	**Black Hills**	**49.84**	**66**	*e*P	**P**	**17 19 03.3**	**-1.3**
	comp=Z,214nm,1.3s,mb6.0						
RSSD				LR	LR		
	comp=Z,10μm,19.0s,MS5.8						
KBS	**Kingsbay**	**49.96**	**357**	P	**P**	**17 19 05.0**	**-0.2**
KBS				S	**S**	**17 26 13.0**	**+2.7**
KBS				sS		17 26 33.6	
KBS	**Kingsbay**	**49.96**	**357**	*e*P	**P**	**17 19 04.8**	**-0.3**
KBS				pmax	pmax		
	comp=Z,329nm,0.7s,mb6.5						
KBS				MLR	MLR		
	comp=Z,88μm,19.0s,MS6.8						
KBS	**Kingsbay**	**49.96**	**357**	*e*P	**P**	**17 19 04.8**	**-0.4**
	comp=Z,329nm,0.7s,mb6.5						
KBS				LR	LR		
	comp=Z,88μm,19.0s,MS6.8						
KBS	**Kingsbay**	**49.96**	**357**	⇑*i*P	**P**	**17 19 04.6**	**-0.6**
KBS				AMb	AMB	17 19 09.2	
	comp=Z,307nm,0.6s,mb6.5						
KBS				*e*S	**S**	**17 26 13.0**	**+2.7**
KBS				AMS	AMS	17 41 32.0	
	comp=Z,54μm,18.9s,MS6.6						
PV10	**Paradox Valley**	**50.40**	**75**	*e*P	**P**	**17 19 08.9**	**-0.1**
ULM	**Lac du Bonnet**	**50.70**	**56**	P	**P**	**17 19 09.5**	**-1.6**
	comp=Z,19nm,0.4s,mb5.4,baz=304,slow=8.3,SNR=19						
ULM				LR	LR	17 40 49.7	
	comp=Z,103μm,20.6s,MS6.8,baz=310,slow=36						
PHWY	**Pilot Hill**	**50.72**	**70**	*e*P	**P**	**17 19 10.5**	**-0.9**
WUAZ	**Wupatki**	**50.79**	**80**	*e*P	**P**	**17 19 12.4**	**+0.4**
	comp=Z,317nm,0.8s,mb6.3						
WUAZ				LR	LR		
	comp=Z,161μm,20.0s,MS7.0						
PV01	**Paradox Valley**	**50.83**	**75**	*e*P	**P**	**17 19 11.9**	**-0.4**
TATO	**Taipei**	**51.02**	**262**	PFAKE		17 19 20.0	+6.1
TATO				LR	LR		
	comp=Z,75μm,22.0s,MS6.7						
RW3	**Ridgway**	**51.30**	**75**	P	**P**	**17 19 13.8**	**-2.0**
RW3	**Ridgway**	**51.30**	**75**	*e*P	**P**	**17 19 15.7**	**-0.1**
YHNB	**Yeheng**	**51.31**	**262**	*e*P	**P**	**17 19 15.2**	**-0.9**
NACB	**Ninganchiao**	**51.53**	**261**	*e*P	**P**	**17 19 15.5**	**-2.3**
HOPEN	**Hopen**	**51.55**	**353**	*e*P	**P**	**17 19 16.1**	**-1.1**
HOPEN				AMb	AMB	17 19 19.1	
	comp=Z,1μm,1.6s,mb6.6						
ISCO	**Idaho Springs**	**51.57**	**72**	*e*P	**P**	**17 19 18.1**	**+0.3**
	comp=Z,254nm,1.1s,mb6.1						
ISCO				LR	LR		
	comp=Z,71μm,21.0s,MS6.7						
WHN	**Wuhan**	**51.59**	**273**	P	**P**	**17 19 16.6**	**-1.5**
WHN				S	**S**	**17 26 35.3**	**+1.9**
WHN				LR	LR		
	comp=Z,69μm,17.4s,MS6.7						
HSP	**Hornsund**	**51.70**	**355**	*e*P	**P**	**17 19 17.3**	**-1.0**
DAG	**Danmarks Havn**	**51.82**	**5**	⇓*i*P	**P**	**17 19 18.0**	**-1.2**
DAG				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.0						
DAG	**Danmarks Havn**	**51.82**	**5**	⇓*i*P	**P**	**17 19 18.0**	**-1.2**
	comp=Z,199nm,1.0s,mb6.0						
XAN	**Xi’an**	**52.64**	**280**	P	**P**	**17 19 25.1**	**-0.8**
XAN				PP	PP	17 21 28.1	+1.6
XAN				PPP	PPP	17 22 30.6	-1.8
XAN				S	**S**	**17 26 42.3**	**-5.4**
XAN				AMB	AMB		
	comp=Z,250nm,1.4s,mb6.0						
XAN				LR	LR		
	comp=N,28μm,22.3s,MS6.5						
XAN				LR	LR		
	comp=E,35μm,22.7s,MS6.5						
XAN				LR	LR		
	comp=Z,63μm,22.7s,MS6.6						
XAN	**Xi’an**	**52.64**	**280**	P	**P**	**17 19 25.1**	**-0.8**
	comp=Z,250nm,1.4s,mb6.0						
XAN				PP	PP	17 21 28.1	+1.6
XAN				S	**S**	**17 26 42.3**	**-5.4**
XAN				LR	LR		
	comp=Z,63μm,22.7s,MS6.6						
QZH	**Quanzhou**	**52.85**	**264**	⇑*i*P	**P**	**17 19 27.5**	**-0.1**
QZH				PP	PP	17 21 28.0	-0.8
QZH				S	**S**	**17 26 54.8**	**+4.1**
QZH				AMB	AMB		
	comp=Z,720nm,1.1s,mb6.5						
QZH				AMB	AMB		
	comp=Z,28μm,11.9s						
QZH				LR	LR		
	comp=N,60μm,25.0s						
QZH				LR	LR		
	comp=E,32μm,16.1s						
QZH				LR	LR		
	comp=Z,83μm,21.0s,MS6.8						
QZH	**Quanzhou**	**52.85**	**264**	⇑*i*P	**P**	**17 19 27.5**	**-0.1**
	comp=Z,720nm,1.1s,mb6.5						
QZH				PP	PP	17 21 28.0	-0.8
QZH				S	**S**	**17 26 54.8**	**+4.1**
QZH				LR	LR		
	comp=Z,83μm,21.0s,MS6.8						
SDCO	**Great Sand Dun**	**52.94**	**74**	⇑*e*P	**P**	**17 19 28.4**	**+0.2**
	comp=Z,226nm,1.1s,mb6.0						
SDCO				LR	LR		
	comp=Z,73μm,20.0s,MS6.7						
TUC	**Tucson**	**53.28**	**82**	P	**P**	**17 19 30.7**	**0.0**
TUC				S	**S**	**17 27 01.9**	**+5.5**
TUC	**Tucson**	**53.28**	**82**	*e*P	**P**	**17 19 30.5**	**-0.2**
TUC				pmax	pmax		
	comp=Z,211nm,1.1s,mb6.0						
TUC				MLR	MLR		
	comp=Z,48μm,20.0s,MS6.5						
TUC	**Tucson**	**53.28**	**82**	*e*P	**P**	**17 19 30.5**	**-0.2**
	comp=Z,211nm,1.1s,mb6.0						
TUC				LR	LR		
	comp=Z,48μm,20.0s,MS6.5						
NVS	**Novosibirsk**	**53.55**	**314**	⇑*i*P	**P**	**17 19 30.7**	**-1.7**
NVS				*i*		17 20 36.6	
NVS				*i*		17 29 19.1	
NVS				pmax	pmax		
	comp=N,1μm,2.3s						
NVS				pmax	pmax		
	comp=Z,3μm,2.3s,mb6.8						
NVS				pmax	pmax		
	comp=E,2μm,2.4s						
NVS	**Novosibirsk**	**53.55**	**314**	⇑*i*P	**P**	**17 19 30.7**	**-1.7**
	comp=E,3μm,2.3s,mb6.8						
NVS				*i*		17 20 36.6	
NVS				*i*		17 29 19.1	
SUMG	**Summit**	**53.76**	**13**	⇑*e*P	**P**	**17 19 33.2**	**-0.6**
	comp=E,386nm,1.0s,mb6.3						
LAZ	**Ladron**	**54.14**	**78**	*e*P	**P**	**17 19 37.4**	**+0.4**
ANMO	**Albuquerque**	**54.19**	**77**	*e*P	**P**	**17 19 37.2**	**-0.2**
ANMO				pmax	pmax		
	comp=Z,146nm,1.1s						
ANMO				MLR	MLR		
	comp=Z,85μm,22.0s						
ANMO	**Albuquerque**	**54.19**	**77**	*e*P	**P**	**17 19 37.2**	**-0.2**
	comp=Z,146nm,1.1s,mb5.8						
ANMO				LR	LR		
	comp=Z,85μm,22.0s,MS6.8						
EYMN	**Ely**	**54.39**	**56**	*e*P	**P**	**17 19 36.6**	**-2.0**
	comp=Z,176nm,0.9s,mb6.0						
EYMN				LR	LR		
	comp=Z,92μm,20.0s,MS6.8						
LENM	**Lemitar**	**54.40**	**78**	*e*P	**P**	**17 19 38.8**	**-0.1**
LZH	**Lanzhou**	**54.40**	**285**	⇑*i*P	**P**	**17 19 39.5**	**+0.6**
LZH				AP	pP	17 19 53.0	-0.5
LZH				PP	PP	17 21 41.0	-1.7
LZH				S	**S**	**17 27 10.0**	**-1.5**
LZH				XS		17 27 34.0	
LZH				SS	SS	17 30 51.5	-2.4
LZH				AMB	AMB		
	comp=Z,980nm,1.7s,mb6.5						
LZH				AMB	AMB		
	comp=Z,8μm,6.5s						
LZH				LR	LR		
	comp=N,134μm,16.2s						
LZH				LR	LR		
	comp=Z,185μm,17.5s,MS7.2						
LZH	**Lanzhou**	**54.40**	**285**	⇑*i*P	**P**	**17 19 39.5**	**+0.6**
	comp=Z,980nm,1.7s,mb6.5						
LZH				pP	pP	17 19 53.0	-0.5
LZH				PP	PP	17 21 41.0	-1.7
LZH				S	**S**	**17 27 10.0**	**-1.5**
LZH				sS		17 27 34.0	
LZH				SS	SS	17 30 51.5	-2.4
LZH				LR	LR		
	comp=Z,185μm,17.5s,MS7.2						
LPM	**Los Pinos Moun**	**54.51**	**78**	*e*P	**P**	**17 19 39.3**	**-0.4**
BNM	**Barren Site**	**54.62**	**78**	*e*P	**P**	**17 19 40.6**	**0.0**
GTA	**Gaotai**	**54.64**	**291**	⇑*i*P	**P**	**17 19 40.8**	**+0.2**
GTA				AP	pP	17 19 55.3	+0.1

GTA				XP	sP	17 20 00.5	-0.9
GTA				PP	PP	17 21 45.3	+0.5
GTA				PPP	PPP	17 23 01.6	+4.3
GTA				SCP		17 24 33.5	
GTA				S	**S**	**17 27 18.8**	**+4.1**
GTA				SCS	ScS	17 29 19.9	-1.5
GTA				AMB	AMB		
	comp=Z,220nm,1.1s,mb6.1						
GTA				AMB	AMB		
	comp=Z,17µm,6.9s						
GTA				LR	LR		
	comp=N,57µm,16.4s,MS7.0						
GTA				LR	LR		
	comp=E,81µm,16.7s,MS7.0						
GTA				LR	LR		
	comp=Z,106µm,16.0s,MS7.0						
GTA	**Gaotai**	**54.64**	**291**	⇑*i*P	**P**	**17 19 40.8**	**+0.2**
	comp=Z,220nm,1.1s,mb6.1						
GTA				pP	pP	17 19 55.3	+0.1
GTA				sP	sP	17 20 00.5	-0.9
GTA				PP	PP	17 21 45.3	+0.5
GTA				ScP		17 24 33.5	
GTA				S	**S**	**17 27 18.8**	**+4.1**
GTA				ScS	ScS	17 29 19.9	-1.5
GTA				LR	LR		
	comp=Z,106µm,16.0s,MS7.0						
ENH	**Enshi**	**54.83**	**276**	P	**P**	**17 19 40.8**	**-1.2**
ENH				S	**S**	**17 27 19.7**	**+2.3**
ENH				ScS	ScS	17 29 26.7	+3.9
ENH	**Enshi**	**54.83**	**276**	*e*P	**P**	**17 19 40.5**	**-1.6**
	comp=Z,423nm,1.2s,mb6.3						
CBKS	**Cedar Bluff**	**55.69**	**69**	*e*P	**P**	**17 19 47.5**	**-0.7**
CBKS				pmax	pmax		
	comp=Z,1µm,1.1s,mb6.8						
CBKS				MLR	MLR		
	comp=Z,58µm,20.0s,MS6.7						
CBKS	**Cedar Bluff**	**55.69**	**69**	*e*P	**P**	**17 19 47.5**	**-0.7**
	comp=Z,1µm,1.1s,mb6.8						
CBKS				LR	LR		
	comp=Z,58µm,20.0s,MS6.7						
CVP	**Callao Caves**	**56.23**	**256**	*e*P	**P**	**17 19 51.0**	**-1.3**
SFJD	**Kangerlussuaq**	**56.25**	**21**	⇑*i*P	**P**	**17 19 50.1**	**-1.7**
SFJD				*i* S	**S**	**17 27 27.4**	**-8.3**
SFJD				MLR	MLR		
	comp=Z,50µm,20.0s,MS6.6						
SFJD	**Kangerlussuaq**	**56.25**	**21**	⇑*i*P	**P**	**17 19 50.1**	**-1.7**
SFJD				*i*		17 21 46.7	
SFJD				*i*		17 23 06.7	
SFJD				*i* S	**S**	**17 27 27.4**	**-8.3**
	comp=Z,50µm,20.0s						
APYP	**Conner**	**56.46**	**256**	*e*P	**P**	**17 19 51.7**	**-2.3**
CAUP	**Cauayan**	**56.81**	**255**	*e*P	**P**	**17 19 55.9**	**-0.6**
ABRA	**Dolores**	**56.95**	**257**	*e*P	**P**	**17 19 56.0**	**-1.4**
MNTX	**Cornudas Mount**	**57.05**	**79**	*e*P	**P**	**17 19 57.4**	**-0.7**
	comp=Z,208nm,0.9s,mb6.2						
MNTX				LR	LR		
	comp=Z,42µm,20.0s,MS6.5						
CPRX	**Cap Rock**	**57.07**	**77**	*e*P	**P**	**17 19 57.2**	**-0.9**
AMTX	**Amarillo**	**57.15**	**74**	*e*P	**P**	**17 19 58.0**	**-0.7**
	comp=Z,204nm,0.9s,mb6.2						
AMTX				LR	LR		
	comp=Z,69µm,22.0s,MS6.7						
KSU1	**Kansas State U**	**57.32**	**67**	*e*P	**P**	**17 19 58.0**	**-1.9**
GZH	**Guangzhou**	**57.49**	**267**	P	**P**	**17 19 57.1**	**-4.1**
GZH				PP	PP	17 22 07.8	-2.9
GZH				S	**S**	**17 27 46.8**	**-5.9**
GZH				LR	LR		
	comp=N,19µm,23.3s,MS6.3						
GZH				LR	LR		
	comp=E,17µm,20.0s,MS6.3						
GZH				LR	LR		
	comp=Z,33µm,22.6s,MS6.4						
HKC	**Hong Kong**	**57.54**	**266**	⇑*i*P	**P**	**17 20 04.0**	**+2.4**
HKC				*i* S	**S**	**17 28 00.0**	**+6.6**
CLNB	**Carlsbad**	**57.59**	**78**	*e*P	**P**	**17 20 00.8**	**-1.0**
SCO	**Scoresbysund**	**57.68**	**8**	*i* P	**P**	**17 20 00.2**	**-1.7**
SCO				*i* S	**S**	**17 27 56.0**	**+1.5**
SCO				pmax	pmax		
	comp=Z,83nm,1.0s,mb5.7						
SCO	**Scoresbysund**	**57.68**	**8**	*i* P	**P**	**17 20 00.2**	**-1.7**
	comp=Z,83nm,1.0s,mb5.7						
SCO				*i* S	**S**	**17 27 56.0**	**+1.5**
KEV	**Kevo**	**57.73**	**349**	*e*p	**P**	**17 19 59.5**	**-2.8**
KEV	**Kevo**	**57.73**	**349**	P	**P**	**17 20 00.0**	**-2.3**
KEV				S	**S**	**17 27 54.6**	**-0.6**
KEV	**Kevo**	**57.73**	**349**	P	**P**	**17 20 00.7**	**-1.6**
KEV				pmax	pmax		
	comp=Z,86nm,1.0s,mb5.7						
BALP	**Baler**	**57.88**	**254**	*e*P	**P**	**17 20 03.1**	**-1.0**
CD2	**Chengdu**	**57.96**	**281**	⇑*i*P	**P**	**17 20 03.9**	**-0.5**
CD2				PCP	PcP	17 20 57.3	+1.5
CD2				PP	PP	17 22 11.6	-3.2
CD2				PPP	PPP	17 23 33.8	-3.9
CD2				S	**S**	**17 27 59.9**	**+1.2**
CD2				XS		17 28 19.3	
CD2				SS	SS	17 31 52.6	+0.7
CD2				AMB	AMB		
	comp=Z,290nm,1.2s,mb6.2						
CD2				LR	LR		
	comp=N,39µm,21.6s						
CD2				LR	LR		
	comp=Z,59µm,21.0s,MS6.7						
CD2	**Chengdu**	**57.96**	**281**	⇑*i*P	**P**	**17 20 03.9**	**-0.5**
	comp=Z,290nm,1.2s,mb6.2						
CD2				PcP	PcP	17 20 57.3	+1.5
CD2				PP	PP	17 22 11.6	-3.2
CD2				S	**S**	**17 27 59.9**	**+1.2**
CD2				sS		17 28 19.3	
CD2				SS	SS	17 31 52.6	+0.7
CD2				LR	LR		
	comp=Z,59µm,21.0s,MS6.7						
BCPH	**Baguio City Da**	**58.00**	**256**	⇓*i*P	**P**	**17 20 03.0**	**-1.8**
PVCP	**Virac**	**58.01**	**251**	*e*P	**P**	**17 20 04.5**	**-0.5**
JMIC	**Jan Mayen**	**58.02**	**3**	LR	LR	17 46 00.2	
	comp=Z,32µm,21.1s,MS6.4,baz=347,slow=37						
JMIC	**Jan Mayen**	**58.02**	**3**	⇑*i*P	**P**	**17 20 02.7**	**-1.6**
JMIC				AMb	AMB	17 20 09.5	
	comp=Z,334nm,2.2s,mb6.0						
JMIC				*e*S	**S**	**17 28 01.9**	**+2.9**
JMIC				AMS	AMS	17 46 22.2	
	comp=Z,26µm,20.5s,MS6.3						
ARCES	**ARCESS Array B**	**58.11**	**350**	P	**P**	**17 20 03.0**	**-1.9**
	comp=Z,129nm,0.8s,mb6.0,baz=22,slow=6.5,SNR=122						
ARCES				ScP		17 24 54.8	
	comp=Z,6.9nm,0.8s,baz=350,slow=7.4,SNR=3.7						
ARCES				PKPPKP		17 49 46.6	
	comp=Z,6.6nm,0.9s,baz=53,slow=6.1,SNR=6.1						
JFWS	**Jewell Farm**	**58.34**	**60**	*e*P	**P**	**17 20 04.3**	**-2.6**
JFWS				pmax	pmax		
	comp=Z,354nm,1.0s,mb6.3						
JFWS				MLR	MLR		
	comp=Z,130µm,22.0s,MS7.0						
JFWS	**Jewell Farm**	**58.34**	**60**	*e*P	**P**	**17 20 04.2**	**-2.6**
	comp=Z,354nm,1.0s,mb6.3						
JFWS				LR	LR		
	comp=Z,130µm,22.0s,MS7.0						
BOLP	**Bolinao**	**58.41**	**256**	*e*P	**P**	**17 20 06.2**	**-1.4**
POLP	**Polilio Island**	**58.45**	**253**	*e*P	**P**	**17 20 07.7**	**-0.3**
WMQ	**Urumqi**	**58.55**	**302**	⇑*i*P	**P**	**17 20 08.5**	**+0.2**
WMQ				AP	pP	17 20 22.7	-0.3
WMQ				XP	sP	17 20 29.0	-0.3
WMQ				PCP	PcP	17 20 58.5	+0.6
WMQ				S	**S**	**17 28 05.5**	**-0.7**
WMQ				SCS	ScS	17 29 49.0	-0.5
WMQ				SS	SS	17 31 59.6	-1.5
WMQ				AMB	AMB		
	comp=Z,460nm,0.8s,mb6.6						
WMQ				AMB	AMB		
	comp=Z,16µm,8.0s						
WMQ				LR	LR		
	comp=N,123µm,19.2s,MS7.1						
WMQ				LR	LR		
	comp=E,105µm,22.0s,MS7.1						
WMQ				LR	LR		
	comp=Z,203µm,20.8s,MS7.2						
WMQ	**Urumqi**	**58.55**	**302**	P	**P**	**17 20 08.3**	**0.0**
WMQ				S	**S**	**17 28 10.7**	**+4.5**
WMQ	**Urumqi**	**58.55**	**302**	⇑*i*P	**P**	**17 20 08.5**	**+0.2**
	comp=Z,470nm,0.8s,mb6.6						
WMQ				pP	pP	17 20 22.7	-0.3
WMQ				sP	sP	17 20 29.0	-0.3
WMQ				PcP	PcP	17 20 58.5	+0.6
WMQ				S	**S**	**17 28 05.5**	**-0.7**
WMQ				ScS	ScS	17 29 49.0	-0.5
WMQ				SS	SS	17 31 59.6	-1.5
WMQ				LR	LR		
	comp=Z,203µm,20.8s,MS7.2						
CNP	**Catarman**	**58.57**	**249**	*e*P	**P**	**17 20 07.8**	**-1.0**
TRO	**Tromso**	**58.68**	**352**	⇑*i*P	**P**	**17 20 06.1**	**-2.8**
	comp=Z,169nm,0.6s,mb6.2						
TRO				LR	LR		
	comp=Z,42700µm,20.8s						
TRO	**Tromso**	**58.68**	**352**	⇑*i*P	**P**	**17 20 06.1**	**-2.8**
TRO				AMb	AMB	17 20 08.3	
	comp=Z,169nm,0.6s,mb6.2						
TRO				*e*S	**S**	**17 28 08.1**	**+0.4**
TRO				*e*SS	SS	17 31 59.6	-3.3
TRO				AMS	AMS	17 46 21.2	
	comp=Z,43µm,20.8s,MS6.5						
BESP	**Borongan**	**58.84**	**248**	*e*P	**P**	**17 20 10.3**	**-0.4**
KTK1	**Kautokeino**	**58.87**	**350**	⇑*i*P	**P**	**17 20 08.1**	**-2.1**
	comp=Z,435nm,1.8s,mb6.2						
KTK1	**Kautokeino**	**58.87**	**350**	⇑*i*P	**P**	**17 20 08.1**	**-2.1**
KTK1				AMb	AMB	17 20 12.0	
	comp=Z,435nm,1.8s,mb6.2						
SCZP	**Santa Cruz**	**58.87**	**256**	*e*P	**P**	**17 20 10.1**	**-0.8**
APA	**Apatity**	**58.88**	**346**	⇑*i*P	**P**	**17 20 08.0**	**-2.3**
APA				*i* *PP	pP	17 20 25.1	+0.1
APA				*i*		17 20 59.3	
APA				*i* PPP	PPP	17 23 49.0	+2.0
APA				*i* S	**S**	**17 28 09.0**	**-1.2**
APA				*i*		17 28 30.0	
APA				*i*		17 29 48.0	
APA				*i* SS	SS	17 32 11.0	+4.9
APA				pmax	pmax		
	comp=Z,52nm,1.0s,mb5.5						
APA				pmax	pmax		
	comp=Z,12µm,14.0s						
APA				pmax	pmax		
	comp=N,6µm,20.0s						
APA				pmax	pmax		
	comp=E,2µm,20.0s						
APA				MLR	MLR		
	comp=Z,116µm,18.0s,MS7.0						
APA	**Apatity**	**58.88**	**346**	⇑*i*P	**P**	**17 20 08.0**	**-2.3**
	comp=Z,52nm,1.0s,mb5.5						
APA				*i* pP	pP	17 20 25.1	+0.1
APA				*i*		17 20 59.3	
APA				*i* PPP	PPP	17 23 49.0	+2.0
APA				*i* S	**S**	**17 28 09.0**	**-1.2**
APA				*i*		17 28 30.0	
APA				*i*		17 29 48.0	
APA				*i* SS	SS	17 32 11.0	+4.9
APA				LR	LR		
	comp=Z,116µm,18.0s,MS7.0						
WMOK	**Wichita Mounta**	**58.99**	**72**	⇑*e*P	**P**	**17 20 11.0**	**-0.5**
WMOK				pmax	pmax		
	comp=Z,231nm,0.9s,mb6.2						
WMOK				MLR	MLR		
	comp=Z,48µm,19.0s,MS6.7						
WMOK	**Wichita Mounta**	**58.99**	**72**	⇑*e*P	**P**	**17 20 11.0**	**-0.6**
	comp=Z,231nm,0.9s,mb6.2						
WMOK				LR	LR		
	comp=Z,48µm,19.0s,MS6.7						
AUQP	**San Andres**	**59.11**	**252**	*e*P	**P**	**17 20 13.0**	**+0.5**
GYA	**Guiyang**	**59.27**	**275**	⇓*i*P	**P**	**17 20 12.6**	**-0.9**
GYA				XP	sP	17 20 30.8	-3.7
GYA				S	**S**	**17 28 16.9**	**+1.0**
GYA				AMB	AMB		
	comp=Z,170nm,1.2s,mb6.0						
GYA				AMB	AMB		
	comp=Z,12µm,12.9s						
GYA				LR	LR		
	comp=N,21µm,23.3s,MS6.6						
GYA				LR	LR		
	comp=E,42µm,19.4s,MS6.6						
GYA				LR	LR		
	comp=Z,34µm,20.3s,MS6.5						
GYA	**Guiyang**	**59.27**	**275**	⇓*i*P	**P**	**17 20 12.6**	**-0.9**
	comp=Z,170nm,1.2s,mb6.0						
GYA				sP	sP	17 20 30.8	-3.7
GYA				S	**S**	**17 28 16.9**	**+1.0**
GYA				LR	LR		
	comp=Z,34µm,20.3s,MS6.5						
MKAR	**Makanchi Array**	**59.31**	**308**	P	**P**	**17 20 12.4**	**-1.2**
	comp=Z,112nm,0.5s,mb6.2,baz=49,slow=6.3,SNR=879						
MKAR				LR	LR	17 46 14.5	
	comp=Z,100µm,21.6s,MS6.9,baz=20,slow=36						
MKAR				PKPPKP		17 49 34.0	
	comp=Z,2.1nm,1.1s,baz=270,slow=1.2,SNR=4.9						
LPIG	**La Paz**	**59.32**	**89**	⇑*i*P	**P**	**17 20 13.7**	**-0.2**
BOAC	**Boac**	**59.50**	**253**	*e*P	**P**	**17 20 14.4**	**-0.8**
LTX	**Lajitas**	**59.76**	**80**	*e*P	**P**	**17 20 15.9**	**-1.0**
LTX				pmax	pmax		
	comp=Z,214nm,0.9s,mb6.2						
LTX				MLR	MLR		
	comp=Z,66µm,20.0s,MS6.8						
LTX	**Lajitas**	**59.76**	**80**	*e*P	**P**	**17 20 15.9**	**-0.9**
	comp=Z,214nm,0.9s,mb6.2						
LTX				LR	LR		
	comp=Z,66µm,20.0s,MS6.8						
TXAR	**Lajitas Array**	**59.76**	**80**	P	**P**	**17 20 16.4**	**-0.5**
	comp=Z,54nm,0.8s,mb5.6,baz=297,slow=5.6,SNR=100						
TXAR				LR	LR	17 46 10.7	
	comp=Z,58µm,18.2s,MS6.8,baz=240,slow=36						
TXAR				PKPPKP		17 49 40.9	
	comp=Z,1.2nm,0.9s,baz=153,slow=5.6,SNR=4.2						
TXAR				PKP2bc		17 49 56.5	
	comp=Z,3.1nm,1.0s,baz=104,slow=5.2,SNR=6.9						
TXAR	**Lajitas Array**	**59.76**	**80**	P	**P**	**17 20 16.4**	**-0.5**
TXAR				LR	LR	17 46 10.7	
TXAR				P'P'		17 49 40.9	
TXAR				⇑*e*		17 49 56.5	
LUBP	**Lubang**	**60.25**	**254**	*e*P	**P**	**17 20 18.6**	**-1.8**
OTRP	**Odiongan**	**60.25**	**252**	*e*P	**P**	**17 20 20.4**	**0.0**
SOKR	**Solikamsk**	**60.29**	**330**	*c* *i*P	**P**	**17 20 18.4**	**-1.7**
SOKR				*i* SS	SS	17 32 21.2	-6.6
SOKR				pmax	pmax		
	comp=Z,180nm,1.0s,mb6.1						
SOKR				MLR	MLR		
	comp=Z,64µm,17.0s,MS6.8						
SOKR	**Solikamsk**	**60.29**	**330**	⇑*i*P	**P**	**17 20 18.4**	**-1.7**
	comp=Z,180nm,1.0s,mb6.1						
SOKR				*i* SS	SS	17 32 21.2	-6.6
SOKR				LR	LR		
	comp=Z,64µm,17.0s,MS6.8						
MSLP	**Maasin**	**60.35**	**247**	*e*P	**P**	**17 20 19.7**	**-1.4**
BVA0	**Borovoye Array**	**60.35**	**319**	*i* P	**P**	**17 20 20.0**	**-0.6**
BVA0				pmax	pmax		
	comp=Z,80nm,0.7s,mb5.9						
BVA0	**Borovoye Array**	**60.35**	**319**	*i* P	**P**	**17 20 20.0**	**-0.6**
	comp=Z,80nm,0.7s,mb5.9						
BVAR	**Borovoye Array**	**60.35**	**319**	P	**P**	**17 20 20.3**	**-0.3**
	comp=Z,796nm,0.7s,mb6.9,baz=45,slow=6.3,SNR=755						
BVAR				PKPPKP		17 49 38.2	
	comp=Z,3.2nm,1.0s,baz=180,slow=4.4,SNR=6.3						
RCP	**Roxas**	**60.45**	**250**	⇑*e*P	**P**	**17 20 21.6**	**-0.2**
LOF	**Lofoten**	**60.56**	**354**	⇑*i*P	**P**	**17 20 19.7**	**-2.1**
	comp=Z,234nm,0.8s,mb6.4						
LOF	**Lofoten**	**60.56**	**354**	⇑*i*P	**P**	**17 20 19.7**	**-2.1**
LOF				AMb	AMB	17 20 25.1	
	comp=Z,234nm,0.8s,mb6.3						
SJMP	**San Jose**	**60.71**	**252**	*e*P	**P**	**17 20 22.9**	**-0.6**
SCHQ	**Schefferville**	**60.84**	**37**	P	**P**	**17 20 22.3**	**-1.6**
	comp=Z,76nm,0.8s,mb5.8,baz=331,slow=6.9,SNR=48						
SCHQ				LR	LR	17 48 56.6	
	comp=Z,71µm,19.0s,MS6.8,baz=320,slow=38						
SCHQ				PKPPKP		17 49 44.5	
	comp=Z,6.2nm,0.9s,baz=124,slow=4.7,SNR=5.4						
BUTP	**Butuan**	**60.84**	**246**	*e*P	**P**	**17 20 23.4**	**-1.1**
SVE	**Sverdlovsk**	**61.19**	**327**	α *i*P	**P**	**17 20 25.9**	**-0.3**
SVE				*e*		17 22 40.0	
SVE				*e*PPP	PPP	17 24 10.0	-2.0
SVE				*e*PS	PS	17 28 45.0	-19
SVE				*e*		17 29 08.0	
SVE				pmax	pmax		
	comp=Z,1µm,2.7s,mb6.5						
SVE				pmax	pmax		
	comp=N,5µm,13.0s						
SVE				pmax	pmax		
	comp=E,5µm,13.0s						
SVE				pmax	pmax		
	comp=Z,16µm,13.0s						
SVE				MLR	MLR		
	comp=N,49µm,18.0s,MS6.8						
SVE				MLR	MLR		
	comp=E,42µm,18.0s,MS6.8						
SVE				MLR	MLR		
	comp=Z,80µm,18.0s,MS6.9						
SVE	**Sverdlovsk**	**61.19**	**327**	*i* Pcu	**P**	**17 20 25.9**	**-0.3**
	comp=Z,1µm,2.7s,mb6.5						
SVE				*e*		17 22 40.0	
SVE				*e*PPP	PPP	17 24 10.0	-2.0
SVE				*e*PS	PS	17 28 45.0	-19
SVE				*e*		17 29 08.0	
SVE				LR	LR		
	comp=Z,80µm,18.0s,MS6.9						
SLM	**Saint Louis**	**61.27**	**63**	*e*P	**P**	**17 20 26.4**	**-0.7**
SLM				pmax	pmax		
	comp=Z,150nm,0.8s,mb6.2						
SLM	**Saint Louis**	**61.27**	**63**	*e*P	**P**	**17 20 26.4**	**-0.7**
	comp=Z,150nm,0.8s,mb6.2						
GUIM	**Jordan**	**61.29**	**250**	*e*P	**P**	**17 20 24.1**	**-3.4**
FVM	**French Village**	**61.62**	**64**	*e*P	**P**	**17 20 27.6**	**-1.8**
FVM				pmax	pmax		
	comp=Z,174nm,0.9s,mb6.2						
FVM	**French Village**	**61.62**	**64**	*e*P	**P**	**17 20 27.6**	**-1.8**
	comp=Z,174nm,0.9s,mb6.2						
BUSP	**Coron**	**61.63**	**253**	*e*P	**P**	**17 20 29.0**	**-0.7**
MELSS	**Ber_school_2**	**61.80**	**354**	⇑*i*P	**P**	**17 20 28.3**	**-1.9**
CUYO	**Cuyo Island**	**62.04**	**251**	*e*P	**P**	**17 20 32.0**	**-0.5**
BUKP	**Musuan**	**62.05**	**246**	*e*P	**P**	**17 20 31.6**	**-0.9**
MATI	**Mati**	**62.12**	**244**	*e*P	**P**	**17 20 31.2**	**-1.9**
ARU	**Arti**	**62.21**	**327**	⇑*i*P	**P**	**17 20 32.4**	**-0.7**
ARU				*e*	pP	17 20 47.1	-0.8
ARU				*e*		17 21 08.3	
ARU				*i* S	**S**	**17 28 56.2**	**+3.2**
ARU				*e*SS		17 29 20.6	
ARU				*i*		17 30 18.8	
ARU				*i* SS	SS	17 32 55.6	-2.9
ARU				pmax	pmax		
	comp=Z,334nm,0.8s,mb6.5						
ARU				MLR	MLR		
	comp=E,77µm,20.0s,MS7.0						
ARU				MLR	MLR		
	comp=Z,112µm,20.0s,MS7.0						
ARU				MLR	MLR		
	comp=N,74µm,19.0s,MS7.0						
ARU	**Arti**	**62.21**	**327**	⇑*i*P	**P**	**17 20 32.4**	**-0.7**
	comp=N,334nm,0.8s,mb6.5						
ARU				*e*	pP	17 20 47.1	-0.8
ARU				*e*		17 21 08.3	
ARU				*i* S	**S**	**17 28 56.2**	**+3.2**
ARU				*e*SS		17 29 20.6	
ARU				*i*		17 30 18.8	
ARU				*i* SS	SS	17 32 55.6	-2.9
ARU				LR	LR		
	comp=Z,112µm,20.0s,MS7.0						
STOK	**Stokkvaagen**	**62.38**	**354**	⇑*i*P	**P**	**17 20 32.6**	**-1.5**
	comp=Z,651nm,0.9s,mb6.8						
STOK	**Stokkvaagen**	**62.38**	**354**	⇑*i*P	**P**	**17 20 32.6**	**-1.5**
STOK				AMb	AMB	17 20 35.0	
	comp=Z,651nm,0.9s,mb6.8						
DAV	**Davao City (W)**	**62.41**	**245**	*e*P	**P**	**17 20 34.5**	**-0.5**
MAIG	**Mazatlaan**	**62.42**	**87**	⇑*i*P	**P**	**17 20 35.0**	**0.0**
MOR8	**Moi Rana**	**62.44**	**353**	⇑*i*P	**P**	**17 20 31.7**	**-2.8**
	comp=Z,339nm,0.8s,mb6.5						
MOR8	**Moi Rana**	**62.44**	**353**	⇑*i*P	**P**	**17 20 31.7**	**-2.8**
MOR8				AMb	AMB	17 20 34.0	
	comp=Z,339nm,0.8s,mb6.5						
DCPH	**Dipolog City**	**62.47**	**248**	*e*P	**P**	**17 20 33.9**	**-1.5**
QIZ	**Qiongzhong**	**62.67**	**267**	⇑*i*P	**P**	**17 20 36.5**	**-0.2**
QIZ				AP	pP	17 20 50.6	-1.0
QIZ				PP	PP	17 22 56.3	-0.4
QIZ				S	**S**	**17 29 01.6**	**+2.3**
QIZ				AMB	AMB		
	comp=Z,14µm,12.6s						
QIZ				LR	LR		
	comp=E,22µm,21.0s						
QIZ				LR	LR		
	comp=Z,26µm,24.5s,MS6.3						
HNR	**Honiara**	**62.67**	**202**	P	**P**	**17 20 38.6**	**+1.8**
	comp=Z,88nm,0.8s,mb6.0,baz=278,slow=9.1,SNR=4.3						
HNR				LR	LR	17 42 28.7	
	comp=Z,49µm,21.2s,MS6.7,baz=26,slow=31						
KMI	**Kunming**	**62.68**	**277**	⇑P	**P**	**17 20 36.1**	**-0.6**
KMI				AP	pP	17 20 51.3	-0.3
KMI				PCP	PcP	17 21 12.8	-2.0
KMI				PP	PP	17 22 57.5	+0.8
KMI				PPP	PPP	17 24 28.8	+1.5
KMI				S	**S**	**17 29 03.3**	**+3.9**
KMI				SS	SS	17 33 08.8	+2.3
KMI				AMB	AMB		
	comp=Z,130nm,1.8s,mb5.8						
KMI				AMB	AMB		
	comp=Z,12µm,8.5s						
KMI				LR	LR		
	comp=N,29µm,19.3s,MS6.6						
KMI				LR	LR		
	comp=E,24µm,17.0s,MS6.6						
KMI				LR	LR		
	comp=Z,39µm,23.5s						
KMI	**Kunming**	**62.68**	**277**	P	**P**	**17 20 36.0**	**-0.7**
KMI	**Kunming**	**62.68**	**277**	⇑P	**P**	**17 20 36.1**	**-0.6**
KMI				*PP	pP	17 20 51.3	-0.3
KMI						17 21 12.8	
KMI						17 22 57.5	
KMI				PPP	PPP	17 24 28.8	+1.5
KMI				S	**S**	**17 29 03.3**	**+3.9**
KMI				*SS		17 29 30.4	
KMI				SS	SS	17 33 08.7	+2.2
KMI				pmax	pmax		
	comp=Z,133nm,1.8s,mb5.8						
KMI				MLR	MLR		
	comp=Z,39µm,23.5s,MS6.5						
KMI	**Kunming**	**62.68**	**277**	⇑P	**P**	**17 20 36.1**	**-0.6**
	comp=Z,130nm,1.8s,mb5.8						
KMI				pP	pP	17 20 51.3	-0.3
KMI				PcP	PcP	17 21 12.8	-2.0
KMI				PP	PP	17 22 57.5	+0.8
KMI				S	**S**	**17 29 03.3**	**+3.9**
KMI				SS	SS	17 33 08.8	+2.3
KMI				LR	LR		
	comp=Z,39µm,23.5s,MS6.5						
ENPP	**El Nido**	**62.72**	**253**	*e*P	**P**	**17 20 36.8**	**-0.3**
UALR	**University of**	**62.77**	**68**	*e*P	**P**	**17 20 35.6**	**-1.5**
	comp=Z,195nm,0.9s,mb6.2						
PARMO	**Parma**	**62.93**	**65**	*e*P	**P**	**17 20 37.1**	**-1.1**
BLO	**Bloomington**	**62.96**	**61**	*e*P	**P**	**17 20 36.6**	**-1.8**
BLO				pmax	pmax		
	comp=Z,168nm,0.8s,mb6.2						
BLO	**Bloomington**	**62.96**	**61**	*e*P	**P**	**17 20 36.6**	**-1.8**
	comp=Z,168nm,0.8s,mb6.2						
PAGZ	**Pagadian**	**63.04**	**247**	*e*P	**P**	**17 20 37.8**	**-1.4**
HBAR	**Harrisburg**	**63.20**	**66**	*e*P	**P**	**17 20 38.5**	**-1.5**
GNAR	**Gosnell**	**63.27**	**65**	*e*P	**P**	**17 20 38.7**	**-1.8**
	comp=Z,955nm,1.3s,mb6.8						
GLAT	**Glass**	**63.47**	**65**	*e*P	**P**	**17 20 40.1**	**-1.6**
NATX	**Nacogdoches**	**63.53**	**72**	*e*P	**P**	**17 20 41.9**	**-0.3**
	comp=Z,423nm,1.2s,mb6.3						
NATX				LR	LR		
	comp=Z,86µm,22.0s,MS6.9						
IPIL	**Ipil**	**63.56**	**248**	*e*P	**P**	**17 20 41.2**	**-1.5**
UTMT	**University of**	**63.66**	**64**	*e*P	**P**	**17 20 41.8**	**-1.1**
	comp=Z,923nm,1.1s,mb6.7						
HALT	**Halls**	**63.70**	**65**	*e*P	**P**	**17 20 42.3**	**-0.9**
WCI	**Wyandotte Cave**	**63.76**	**61**	PFAKE		17 20 50.0	+6.5
WCI				LR	LR		
	comp=Z,20µm,19.0s,MS6.3						
WCI	**Wyandotte Cave**	**63.76**	**61**	P	**P**	**17 20 42.3**	**-1.2**
WCI				S	**S**	**17 29 12.5**	**0.0**
MET	**Memphis--Engin**	**63.92**	**66**	*e*P	**P**	**17 20 44.0**	**-0.6**
RORSS	**Ber_school_1**	**63.95**	**354**	*e*P	**P**	**17 20 43.2**	**-1.1**
ACSO	**Alum Creek Sta**	**64.11**	**58**	*e*P	**P**	**17 20 44.4**	**-1.4**
	comp=Z,7.7nm,0.6s						
NSS	**Namsos**	**64.24**	**354**	⇑*i*P	**P**	**17 20 43.8**	**-2.4**
	comp=Z,261nm,1.8s,mb6.0						
NSS	**Namsos**	**64.24**	**354**	⇑*i*P	**P**	**17 20 43.8**	**-2.4**
NSS				AMb	AMB	17 20 46.5	
	comp=Z,261nm,1.8s,mb6.0						
NSS				AMS	AMS	17 53 46.0	
	comp=Z,37µm,19.1s,MS6.6						
BUF	**Buffalo**	**64.30**	**53**	*i* P	**P**	**17 20 46.7**	**-0.3**
WVT	**Waverly**	**64.40**	**64**	PFAKE		17 21 00.0	+12
WVT				LR	LR		
	comp=Z,60µm,20.0s,MS6.8						
AAA	**Alma-Ata**	**64.48**	**308**	*i* P	**P**	**17 20 48.0**	**-0.1**
AAA				*i* S	**S**	**17 29 20.0**	**-1.4**
AAA				pmax	pmax		
	comp=Z,14µm,8.0s						
AAA				smax			
	comp=N,7µm,8.0s						
AAA				MLR	MLR		

	comp=Z,39µm,18.0s,MS6.6						
ALLY	**Alegheny Colle**	**64.57**	**55**	*e*P	**P**	**17 20 47.7**	**-1.1**
OXF	**Oxford**	**64.66**	**66**	*e*P	**P**	**17 20 48.3**	**-1.1**
OXF				pmax	pmax		
	comp=Z,2µm,1.3s,mb7.0						
OXF				MLR	MLR		
	comp=Z,46µm,19.0s,MS6.7						
OXF	**Oxford**	**64.66**	**66**	*e*P	**P**	**17 20 48.3**	**-1.1**
	comp=Z,2µm,1.3s,mb7.0						
OXF				LR	LR		
	comp=Z,46µm,19.0s,MS6.7						
MSNY	**Massena**	**64.73**	**49**	*e*P	**P**	**17 20 47.6**	**-2.1**
GENY	**Geneseo**	**64.94**	**52**	*e*P	**P**	**17 20 50.0**	**-1.1**
KAF	**Kangasniemi**	**65.08**	**346**	*e*p	**P**	**17 20 49.2**	**-2.4**
PLAL	**Pickwick Lake**	**65.08**	**65**	*e*P	**P**	**17 20 50.5**	**-1.7**
PLAL				LR	LR		
	comp=Z,25µm,19.0s,MS6.4						
AFI	**Afiamalu**	**65.24**	**171**	*e*P	**P**	**17 20 52.8**	**-0.7**
AFI				pmax	pmax		
	comp=Z,192nm,1.5s,mb5.9						
AFI				MLR	MLR		
	comp=Z,69µm,19.0s,MS6.9						
AFI	**Afiamalu**	**65.24**	**171**	*e*P	**P**	**17 20 52.8**	**-0.7**
	comp=Z,192nm,1.5s,mb5.9						
AFI				LR	LR		
	comp=Z,69µm,19.0s,MS6.9						
TRON	**Trondheim**	**65.40**	**355**	*e*P	**P**	**17 20 52.0**	**-1.7**
TKM2	**Tokmak 2**	**65.41**	**308**	P	**P**	**17 20 54.6**	**+0.5**
	SNR=316						
FRNY	**Flat Rock**	**65.45**	**48**	*e*P	**P**	**17 20 51.2**	**-3.2**
ULHL	**Ulahol**	**65.59**	**307**	P	**P**	**17 20 55.8**	**+0.6**
	SNR=260						
BATP	**Bataraza**	**65.59**	**253**	*e*P	**P**	**17 20 55.8**	**+0.1**
USP	**Ospenovka**	**65.69**	**309**	P	**P**	**17 20 56.5**	**+0.5**
	SNR=416						
FINES	**FINESS Array B**	**65.75**	**346**	P	**P**	**17 20 54.1**	**-1.8**
	comp=Z,65nm,0.8s,mb5.7,baz=34,slow=6.9,SNR=142						
FINES				PKPPKP		17 49 28.6	
	comp=Z,3.4nm,0.8s,baz=162,slow=6.0,SNR=7.1						
FINES				LR	LR	17 54 36.4	
	comp=Z,56µm,18.8s,MS6.8,baz=24,slow=41						
CHMS	**Chumysh**	**65.77**	**309**	P	**P**	**17 20 56.7**	**+0.3**
	SNR=159						
NCB	**Newcomb**	**65.80**	**49**	*e*P	**P**	**17 20 53.9**	**-2.7**
	comp=Z,63nm,0.9s,mb5.7						
NCB				LR	LR		
	comp=Z,73µm,19.0s,MS6.9						
KBK	**Karagaybulak**	**65.92**	**309**	P	**P**	**17 20 58.0**	**+0.6**
	SNR=201						
FRU	**Bishkek**	**65.96**	**309**	⇑*i*P	**P**	**17 20 58.5**	**+0.9**
FRU				*i*	pP	17 21 14.0	+1.4
FRU				*e*		17 25 00.0	
FRU				*e*S	S	17 29 40.0	+0.6
FRU				pmax	pmax		
	comp=Z,8µm,2.9s						
FRU				MLR	MLR		
	comp=N,53µm,16.0s,MS6.9						
FRU				MLR	MLR		
	comp=E,36µm,16.0s,MS6.9						
FRU				MLR	MLR		
	comp=Z,65µm,16.0s,MS6.9						
CJM	**Chamela**	**66.00**	**88**	⇑*i*P	**P**	**17 20 57.7**	**-0.5**
MIV	**Mineville/With**	**66.05**	**49**	*e*P	**P**	**17 20 55.8**	**-2.4**
SWET	**Sewanee**	**66.12**	**63**	*e*P	**P**	**17 20 57.3**	**-1.6**
AAK	**Ala-Archa**	**66.17**	**309**	P	**P**	**17 20 59.6**	**+0.6**
	SNR=217						
AAK	**Ala-Archa**	**66.17**	**309**	*e*P	**P**	**17 20 58.3**	**-0.7**
AAK				pmax	pmax		
	comp=Z,306nm,0.8s,mb6.4						
AAK				MLR	MLR		
	comp=Z,24µm,21.0s,MS6.4						
AAK	**Ala-Archa**	**66.17**	**309**	*e*P	**P**	**17 20 58.3**	**-0.7**
	comp=Z,306nm,0.8s,mb6.4						
AAK				LR	LR		
	comp=Z,24µm,21.0s,MS6.4						
KZA	**Kyzart**	**66.21**	**308**	P	**P**	**17 21 00.4**	**+1.1**
	SNR=331						
BINY	**Binghamton**	**66.27**	**52**	*e*P	**P**	**17 20 58.0**	**-1.6**
	comp=Z,576nm,1.5s,mb6.4						
BINY				LR	LR		
	comp=Z,92µm,19.0s,MS7.0						
UCH	**Uchtor**	**66.46**	**308**	P	**P**	**17 21 01.8**	**+1.0**
	SNR=190						
TZTN	**Tazewell**	**66.48**	**61**	*e*P	**P**	**17 21 00.1**	**-1.0**
LSA	**Lhasa**	**66.49**	**288**	P	**P**	**17 21 01.8**	**+0.6**
LSA				AP	pP	17 21 11.5	-4.8
LSA				XP	sP	17 21 18.0	-4.2
LSA				PCP	PcP	17 21 24.4	-6.0
LSA				PP	PP	17 23 33.8	+3.7
LSA				S	S	17 29 48.8	+2.7
LSA				AMB	AMB		
	comp=Z,190nm,1.3s,mb6.0						
LSA				AMB	AMB		
	comp=Z,19µm,14.3s						
LSA				LR	LR		
	comp=N,26µm,19.7s,MS6.7						
LSA				LR	LR		
	comp=E,38µm,19.7s,MS6.7						
LSA				LR	LR		
	comp=Z,66µm,19.7s,MS6.8						
LSA	**Lhasa**	**66.49**	**288**	P	**P**	**17 21 02.8**	**+1.6**
LSA				S	S	17 29 51.1	+4.9
LSA	**Lhasa**	**66.49**	**288**	*e*P	**P**	**17 21 02.4**	**+1.2**
LSA				pmax	pmax		
	comp=Z,209nm,0.9s,mb6.2						
LSA	**Lhasa**	**66.49**	**288**	P	**P**	**17 21 01.8**	**+0.6**
	comp=Z,190nm,1.3s,mb6.0						
LSA				pP	pP	17 21 11.5	-4.8
LSA				sP	sP	17 21 18.0	-4.2
LSA				PcP	PcP	17 21 24.4	-6.0
LSA				PP	PP	17 23 33.8	+3.7
LSA				S	S	17 29 48.8	+2.7
LSA				LR	LR		
	comp=Z,66µm,19.7s,MS6.8						
PMG	**Port Moresby**	**66.49**	**215**	P	**P**	**17 21 01.6**	**+0.1**
PMG				S	S	17 29 50.8	+4.4
PMG				pmax	pmax		
	comp=Z,57nm,0.9s						
PMG				smax			
	comp=N,11nm,1.0s						
PMG	**Port Moresby**	**66.49**	**215**	P	**P**	**17 21 01.6**	**+0.1**
	comp=N,57nm,0.9s,mb5.6,baz=338,slow=8.8,SNR=11						
PMG				S	S	17 29 50.8	+4.4
	comp=N,10nm,1.0s,baz=128,slow=9.4,SNR=2.2						
PMG	**Port Moresby**	**66.49**	**215**	*e*P	**P**	**17 21 00.3**	**-1.2**
	comp=N,131nm,1.3s,mb5.8						
PMG				LR	LR		
	comp=Z,47µm,20.0s,MS6.7						
EKS2	**Erkin-Say**	**66.50**	**309**	P	**P**	**17 21 01.8**	**+0.8**
	SNR=736						
ACCN	**Adirondack Com**	**66.51**	**50**	*e*P	**P**	**17 20 59.1**	**-2.0**
PUL	**Pulkovo**	**66.64**	**344**	*c i*P	**P**	**17 20 59.3**	**-2.4**
PUL				*e*		17 25 06.7	
PUL				*e*S	S	17 29 44.4	-3.1
PUL				*e*SS	SS	17 34 08.2	+0.9
PUL				pmax	pmax		
	comp=Z,6µm,9.4s						
PUL				pmax	pmax		
	comp=N,3µm,10.1s						
PUL				pmax	pmax		
	comp=E,914nm,8.4s						
PUL				MLR	MLR		
	comp=N,31µm,12.0s,MS6.8						
PUL				MLR	MLR		
	comp=E,26µm,12.0s,MS6.8						
PUL				MLR	MLR		
	comp=Z,46µm,12.0s,MS6.9						
PUL	**Pulkovo**	**66.64**	**344**	⇑*i*P	**P**	**17 20 59.3**	**-2.4**
PUL				*e*		17 25 06.7	
PUL				*e*S	S	17 29 44.4	-3.1
PUL				*e*SS	SS	17 34 08.2	+0.9
PUL				LR	LR		
	comp=Z,46µm,12.0s,MS6.9						
PECR	**Pechory**	**66.72**	**335**	α *i*P	**P**	**17 21 01.4**	**-0.8**
PECR				*e*		17 21 22.0	
PECR				*e*S	S	17 29 50.6	+2.2
PECR				*e*PS	PS	17 30 29.0	+11
PECR				*e*		17 30 47.0	
PECR				pmax	pmax		
	comp=Z,2µm,1.3s,mb7.1						
PECR				pmax	pmax		
	comp=N,5µm,12.0s						
PECR				pmax	pmax		
	comp=E,3µm,12.0s						
PECR				smax			
	comp=E,8µm,15.0s						
PECR				smax			
	comp=N,6µm,14.0s						
PECR				MLR	MLR		
	comp=N,48µm,19.0s,MS6.9						
PECR				MLR	MLR		
	comp=E,53µm,18.0s,MS6.9						
PECR	**Pechory**	**66.72**	**335**	*i* Pcu	**P**	**17 21 01.4**	**-0.8**
PECR				*e*		17 21 22.0	
PECR				*e*S	S	17 29 50.6	+2.2
PECR				*e*PS	PS	17 30 29.0	+11
PECR				*e*		17 30 47.0	
CPCT	**Cooper Cave**	**66.74**	**62**	*e*P	**P**	**17 21 01.2**	**-1.5**
DOMB	**Dombas**	**66.89**	**355**	⇑*i*P	**P**	**17 21 02.1**	**-1.1**
	comp=E,456nm,1.9s,mb6.2						
DOMB	**Dombas**	**66.89**	**355**	⇑*i*P	**P**	**17 21 02.1**	**-1.1**
DOMB				AMb	AMB	17 21 05.1	
	comp=Z,456nm,1.9s,mb6.2						
HNH	**Hanover**	**66.92**	**48**	*e*P	**P**	**17 21 03.0**	**-0.7**
	comp=Z,6.0nm,0.9s						
AML	**Almayashu**	**66.93**	**309**	P	**P**	**17 21 05.2**	**+1.4**
	SNR=502						
COLM	**Colima**	**67.09**	**88**	⇑*i*P	**P**	**17 21 04.1**	**-1.0**
LRAL	**Lakeview Retre**	**67.11**	**66**	PFAKE		17 21 20.0	+15
LRAL				LR	LR		
	comp=Z,34µm,20.0s,MS6.6						
FWV	**Forest Hill**	**67.20**	**58**	*e*P	**P**	**17 21 04.8**	**-0.8**
FFD	**Franklin Falls**	**67.40**	**48**	P	**P**	**17 21 01.5**	**-5.2**
	comp=Z,62nm,0.7s,mb5.7						
AB31	**Akbulak array**	**67.45**	**322**	*i* P	**P**	**17 21 06.9**	**0.0**
AB31				pmax	pmax		
	comp=Z,873nm,1.2s,mb6.7						
AB31	**Akbulak array**	**67.45**	**322**	*i* P	**P**	**17 21 06.9**	**0.0**
	comp=Z,873nm,1.2s,mb6.7						
WVL	**Waterville**	**67.48**	**46**	*e*P	**P**	**17 21 05.2**	**-2.0**
	comp=Z,339nm,1.0s,mb6.3						
WVL				LR	LR		
	comp=Z,270µm,20.0s,MS7.5						
ELN	**Prospectdale**	**67.50**	**58**	*e*P	**P**	**17 21 05.9**	**-1.5**
FOO	**Floro**	**67.50**	**357**	*e*P	**P**	**17 21 05.7**	**-1.3**
	comp=Z,160nm,1.9s,mb5.7						
FOO	**Floro**	**67.50**	**357**	*e*P	**P**	**17 21 05.7**	**-1.3**
FOO				AMb	AMB	17 21 17.5	
	comp=Z,160nm,1.9s,mb5.7						
BLA	**Blacksburg**	**67.69**	**58**	*e*P	**P**	**17 21 07.8**	**-0.8**
BLA				pmax	pmax		
	comp=Z,117nm,0.8s,mb6.0						
BLA				MLR	MLR		
	comp=Z,91µm,21.0s,MS7.0						
BLA	**Blacksburg**	**67.69**	**58**	*e*P	**P**	**17 21 07.8**	**-0.8**
	comp=Z,117nm,0.8s,mb6.0						
BLA				LR	LR		
	comp=Z,91µm,21.0s,MS7.0						
KKAR	**Karatay Array**	**67.73**	**312**	*i* P	**P**	**17 21 08.8**	**+0.1**
KKAR				pmax	pmax		
	comp=Z,583nm,1.0s,mb6.6						
KKAR	**Karatay Array**	**67.73**	**312**	*i* P	**P**	**17 21 08.8**	**+0.1**
	comp=Z,583nm,1.0s,mb6.6						
NB2	**NORSAR Subarra**	**67.75**	**354**	P	**P**	**17 21 08.0**	**-0.6**
	comp=Z,431nm,0.8s,mb6.5,baz=7.0,slow=6.2						
NB2	**NORSAR Subarra**	**67.75**	**354**	P	**P**	**17 21 08.0**	**-0.6**
	baz=7.3,slow=6.5						
NOA	**NORSAR Array B**	**67.75**	**354**	P	**P**	**17 21 07.7**	**-0.9**
	comp=Z,257nm,0.8s,mb6.3,baz=10,slow=6.4,SNR=512						
NOA				PKPPKP		17 49 26.6	
	comp=Z,5.4nm,0.9s,baz=169,slow=3.6,SNR=9.3						
NOA				LR	LR	17 52 06.3	
	comp=Z,26µm,18.7s,MS6.5,baz=345,slow=37						
KSH	**Kashi**	**67.75**	**306**	⇑*i*P	**P**	**17 21 09.0**	**0.0**
KSH				*e*AP	pP	17 21 24.0	-0.1
KSH				*e*XP	sP	17 21 27.1	-2.8
KSH				*e*PCP	PcP	17 21 36.4	+0.9
KSH				PP	PP	17 23 39.1	-1.7
KSH				*e*PPP	PPP	17 25 17.3	-0.6
KSH				*e*SCP		17 25 34.0	
KSH				*e*PCS		17 25 39.3	
KSH				S	S	17 29 59.3	-1.9
KSH				XS		17 30 21.3	
KSH				*e*PS	PS	17 30 29.5	-3.4
KSH				SCS	ScS	17 30 59.0	-0.2
KSH				*e*SS	SS	17 34 22.0	-2.7
KSH				AMB	AMB		
	comp=Z,23µm,4.6s						
KSH				LR	LR		
	comp=N,108µm,16.6s,MS7.3						
KSH				LR	LR		
	comp=E,110µm,15.6s,MS7.3						
KSH	**Kashi**	**67.75**	**306**	⇑*i*P	**P**	**17 21 09.0**	**0.0**
KSH				*e*pP	pP	17 21 24.0	-0.1
KSH				*e*sP	sP	17 21 27.1	-2.8
KSH				*e*PcP	PcP	17 21 36.4	+0.9
KSH				PP	PP	17 23 39.1	-1.7
KSH				*e*ScP		17 25 34.0	
KSH				*e*PcS		17 25 39.3	
KSH				S	S	17 29 59.3	-1.9
KSH				sS		17 30 21.3	
KSH				ScS	ScS	17 30 59.0	-0.2
KSH				*e*SS	SS	17 34 22.0	-2.7
SDMD	**Soldier's Deli**	**67.92**	**54**	*e*P	**P**	**17 21 08.4**	**-1.7**
NAO01	**NORSAR Array S**	**67.97**	**354**	*e*P	**P**	**17 21 08.4**	**-1.5**
	comp=E,95nm,0.7s,mb5.9						
NAO01				LR	LR		
	comp=Z,33µm,19.0s,MS6.6						
QUA2	**Belchertown**	**67.97**	**50**	*e*P	**P**	**17 21 08.2**	**-2.1**
	comp=Z,172nm,1.4s,mb5.9						
SUE	**Sulen**	**68.05**	**357**	*e*P	**P**	**17 21 09.2**	**-1.2**
	comp=Z,195nm,1.3s,mb6.0						
SUE	**Sulen**	**68.05**	**357**	*e*P	**P**	**17 21 09.2**	**-1.2**
SUE				AMb	AMB	17 21 13.6	
	comp=Z,195nm,1.3s,mb6.0						
BRNJ	**Basking Ridge**	**68.11**	**52**	*e*P	**P**	**17 21 10.6**	**-0.6**
HRV	**Harvard--Oak R**	**68.18**	**49**	P	**P**	**17 21 10.2**	**-1.4**
HRV				S	S	17 30 04.6	-1.7
HRV				SKSac		17 31 06.5	
HRV	**Harvard--Oak R**	**68.18**	**49**	P	**P**	**17 21 09.3**	**-2.3**
HRV				pmax	pmax		
	comp=Z,81nm,1.0s,mb5.7						
HRV				MLR	MLR		
	comp=Z,85µm,19.0s,MS7.0						
HRV	**Harvard--Oak R**	**68.18**	**49**	P	**P**	**17 21 09.3**	**-2.3**
	comp=Z,81nm,1.0s,mb5.7						
HRV				LR	LR		
	comp=Z,85µm,19.0s,MS7.0						
PAL	**Palisades**	**68.19**	**51**	*e*P	**P**	**17 21 10.3**	**-1.4**
PAL				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.8						
PAL	**Palisades**	**68.19**	**51**	*e*P	**P**	**17 21 10.3**	**-1.4**
	comp=Z,72nm,0.8s,mb5.8						
MOIG	**Morelia**	**68.29**	**85**	⇑*i*P	**P**	**17 21 13.4**	**+0.7**
CPNY	**Central Park**	**68.33**	**52**	*e*P	**P**	**17 21 11.0**	**-1.5**
WES	**Weston**	**68.39**	**49**	*e*P	**P**	**17 21 11.4**	**-1.5**
WES				pmax	pmax		
	comp=Z,134nm,0.7s,mb6.1						
WES				MLR	MLR		
	comp=Z,118µm,20.0s,MS7.1						
WES	**Weston**	**68.39**	**49**	*e*P	**P**	**17 21 11.4**	**-1.4**
	comp=Z,134nm,0.7s,mb6.1						
WES				LR	LR		
	comp=Z,118µm,20.0s,MS7.1						
IMP	**Imphal**	**68.39**	**283**	*i* P	**P**	**17 21 13.0**	**-0.2**
IMP				*e*x	x	17 21 42.0	
HFA0	**Hagfors New Ar**	**68.46**	**352**	P	**P**	**17 21 11.3**	**-1.7**
VSU	**Vasula**	**68.49**	**345**	⇑*i*P	**P**	**17 21 12.0**	**-1.2**
UBT	**Ubonrachathani**	**68.54**	**268**	⇑P	**P**	**17 21 13.9**	**-0.3**
CBN	**Corbin**	**68.55**	**56**	*e*P	**P**	**17 21 13.4**	**-0.6**
CBN				LR	LR		
	comp=Z,147µm,20.0s,MS7.2						
NANT	**Nan**	**68.60**	**274**	⇑P	**P**	**17 21 14.0**	**-0.6**
	comp=Z,662nm,0.5s,mb6.8						
ASK	**Askoy**	**68.61**	**357**	*e*P	**P**	**17 21 13.6**	**-0.4**
	comp=Z,378nm,1.9s,mb6.0						
ASK	**Askoy**	**68.61**	**357**	*e*P	**P**	**17 21 13.6**	**-0.4**
ASK				AMb	AMB	17 21 16.8	
	comp=Z,378nm,1.9s,mb6.0						
BRYW	**Bryant College**	**68.64**	**49**	*e*P	**P**	**17 21 12.8**	**-1.7**
	comp=Z,90nm,0.7s,mb5.8						
BER	**Bergen**	**68.71**	**357**	⇑*i*P	**P**	**17 21 14.1**	**-0.5**
BER				LR	LR		
	comp=Z,20033µm,17.7s						
BER	**Bergen**	**68.71**	**357**	⇑*i*P	**P**	**17 21 14.0**	**-0.5**
BER				⇑*i*P		17 21 14.1	
BER				AMb	AMB	17 21 17.3	
	comp=Z,265nm,1.9s,mb5.8						
BER				*e*PP	PP	17 23 43.6	-5.4
BER				*e*S	S	17 30 14.4	+2.2
BER				*e*SS	SS	17 34 40.0	+0.7
BER				AMS	AMS	18 02 27.1	
	comp=Z,20µm,17.7s,MS6.4						
KKM	**Kota Kinabalu**	**68.72**	**252**	*e*P	**P**	**17 21 13.9**	**-1.5**
KKM	**Kota Kinabalu**	**68.72**	**252**	P	**P**	**17 21 15.6**	**+0.2**
EGD	**Espegrend**	**68.82**	**357**	*e*P	**P**	**17 21 15.1**	**-0.2**
	comp=Z,454nm,1.4s,mb6.2						
EGD	**Espegrend**	**68.82**	**357**	*e*P	**P**	**17 21 15.1**	**-0.2**
EGD				AMb	AMB	17 21 18.0	
	comp=Z,454nm,1.4s,mb6.2						
MOS	**Moscow**	**68.86**	**338**	α *i*P	**P**	**17 21 15.5**	**-0.1**
MOS				*e*		17 21 39.0	
MOS				*e*		17 23 47.0	
MOS				*e*PPP	PPP	17 25 26.6	-1.8
MOS				*e*S	S	17 30 16.0	+1.9
MOS				*e*		17 31 06.1	
MOS				*e*SS	SS	17 34 48.7	+6.9
MOS				pmax	pmax		
	comp=Z,440nm,0.8s,mb6.4						
MOS				MLR	MLR		
	comp=N,119µm,18.0s						
MOS				MLR	MLR		
	comp=Z,132µm,18.0s,MS7.2						
MOS	**Moscow**	**68.86**	**338**	*i* Pcu	**P**	**17 21 15.5**	**-0.1**
	comp=Z,440nm,0.8s,mb6.4						
MOS				*e*		17 21 39.0	
MOS				*e*		17 23 47.0	
MOS				*e*PPP	PPP	17 25 26.6	-1.8
MOS				*e*S	S	17 30 16.0	+1.9
MOS				*e*		17 31 06.1	
MOS				*e*SS	SS	17 34 48.7	+6.9
MOS				LR	LR		
	comp=Z,132µm,18.0s,MS7.2						
OSL	**Oslo**	**68.88**	**354**	*e*P	**P**	**17 21 14.9**	**-0.7**
	comp=Z,482nm,1.0s,mb6.4						
OSL	**Oslo**	**68.88**	**354**	*e*P	**P**	**17 21 14.9**	**-0.7**
OSL				AMb	AMB	17 21 17.7	
	comp=Z,482nm,1.0s,mb6.4						
SHL	**Shillong**	**69.07**	**285**	*e*P	**P**	**17 21 17.0**	**-0.4**
	comp=Z,680nm,1.0s,mb6.5						
SHL				*e*S	S	17 30 20.0	+2.9
KKTK	**Khon Kaen**	**69.10**	**270**	⇑P	**P**	**17 21 17.0**	**-0.7**
	comp=Z,2µm,0.5s						
TSM	**Tawau**	**69.12**	**250**	P	**P**	**17 21 18.2**	**+0.3**
TAOE	**Nuku Hiva Isla**	**69.19**	**137**	*e*LR	LR	17 20 56.5	
	comp=Z,15µm,26.9s,baz=163						
TAOE	**Nuku Hiva Isla**	**69.19**	**137**	*e*P	**P**	**17 21 01.1**	**-17**
	comp=Z,15µm,26.9s						
TAOE				*e*S	S	17 30 01.1	-18
	comp=Z,98µm,26.3s						
TAOE				*e*LQ		17 37 48.3	
	comp=Z,108µm,37.0s						
TAOE				*e*LR	LR	17 42 01.6	
	comp=Z,424µm,22.4s,baz=342						
JSC	**Jenkinsville**	**69.41**	**61**	P	**P**	**17 21 18.9**	**-0.4**
JSC	**Jenkinsville**	**69.41**	**61**	*e*P	**P**	**17 21 18.3**	**-1.0**
BLS5	**Blasjo**	**69.63**	**356**	⇑*i*P	**P**	**17 21 20.5**	**+0.3**
	comp=Z,167nm,0.9s,mb6.0						
BLS5	**Blasjo**	**69.63**	**356**	⇑*i*P	**P**	**17 21 20.5**	**+0.3**
BLS5				AMb	AMB	17 21 22.9	
	comp=Z,167nm,0.9s,mb6.0						
ZIIG	**Zihuatanejo**	**69.66**	**87**	⇑*i*P	**P**	**17 21 21.2**	**+0.1**
TAS	**Tashkent**	**69.67**	**311**	*e*P	**P**	**17 21 21.8**	**+1.0**
OBN	**Obninsk**	**69.68**	**338**	*c i*P	**P**	**17 21 19.4**	**-1.2**
OBN				*i*		17 23 55.0	
OBN				*i* PPP	PPP	17 25 33.4	-3.1
OBN				*i* S	S	17 30 23.6	-0.2
OBN				*i* PS	PS	17 30 56.1	-1.5
OBN				*i* SS	SS	17 34 57.3	+3.0
OBN				pmax	pmax		
	comp=Z,8µm,8.8s						
OBN				MLR	MLR		
	comp=Z,128µm,17.0s,MS7.2						
OBN	**Obninsk**	**69.68**	**338**	⇑*i*P	**P**	**17 21 19.4**	**-1.2**
OBN				*i*		17 23 55.0	
OBN				*i* PPP	PPP	17 25 33.4	-3.1
OBN				*i* S	S	17 30 23.6	-0.2
OBN				*i* PS	PS	17 30 56.1	-1.5
OBN				*i* SS	SS	17 34 57.3	+3.0
OBN				LR	LR		
	comp=Z,128µm,17.0s,MS7.2						
CHG	**Chiang Mai**	**69.69**	**275**	⇑P	**P**	**17 21 21.0**	**-0.3**
	comp=Z,150nm,1.1s,mb5.8						
CMAR	**Chiang Mai Arr**	**69.96**	**275**	P	**P**	**17 21 22.7**	**-0.2**
CMAR				S	S	17 30 29.9	+2.3
CMAR	**Chiang Mai Arr**	**69.96**	**275**	P	**P**	**17 21 22.7**	**-0.2**
	comp=Z,79nm,0.8s,mb5.7,baz=30,slow=5.7,SNR=124						
CMAR				PcP	PcP	17 21 54.9	+10
	comp=Z,32nm,0.8s,baz=26,slow=7.2,SNR=5.9						
CMAR				S	S	17 30 29.9	+2.2
	comp=Z,0.2nm,0.4s,baz=11,slow=4.6,SNR=2.1						
CMAR				PKKP	PKKP	17 41 06.1	+7.3
	comp=Z,0.7nm,0.8s,baz=239,slow=5.2,SNR=4.2						
CMAR				PKPPKP		17 49 26.8	
	comp=Z,3.0nm,0.8s,baz=234,slow=4.6,SNR=9.6						
CMAR				LR	LR	17 54 23.4	
	comp=Z,17µm,18.7s,MS6.3,baz=55,slow=38						
STAV	**Stavanger**	**70.14**	**357**	*e*P	**P**	**17 21 22.6**	**-0.7**
	comp=Z,299nm,1.3s,mb6.1						
STAV	**Stavanger**	**70.14**	**357**	*e*P	**P**	**17 21 22.6**	**-0.7**
STAV				AMb	AMB	17 21 25.9	
	comp=Z,299nm,1.3s,mb6.1						
PLIG	**Platanillo**	**70.31**	**85**	⇑*i*P	**P**	**17 21 24.4**	**-0.6**
PPM	**Popocatepetl**	**70.35**	**84**	*e*P	**P**	**17 21 24.5**	**-0.8**
PPM				⇑*i*P		17 21 26.3	
COW	**Cow Castle Cre**	**70.39**	**61**	*e*P	**P**	**17 21 25.2**	**-0.1**
SNART	**Snartemo**	**70.68**	**356**	⇑*i*P	**P**	**17 21 26.3**	**-0.3**
	comp=Z,164nm,2.0s,mb5.6						
SNART	**Snartemo**	**70.68**	**356**	⇑*i*P	**P**	**17 21 26.3**	**-0.3**
SNART				AMb	AMB	17 21 30.0	
	comp=Z,164nm,2.0s,mb5.6						
CAIG	**El Cayaco**	**70.83**	**87**	⇑*i*P	**P**	**17 21 28.8**	**+0.6**
MLA1	**Latheron**	**70.87**	**2**	⇑*i*P	**P**	**17 21 27.2**	**-0.5**
NHSC	**New Hope**	**70.89**	**61**	*e*P	**P**	**17 21 28.0**	**-0.3**
	comp=Z,575nm,1.1s,mb6.4						
NHSC				LR	LR		
	comp=Z,108µm,19.0s,MS7.1						
TWB	**Tillmans-White**	**70.92**	**61**	*e*P	**P**	**17 21 28.0**	**-0.5**
GUN	**Gumba**	**70.93**	**291**	*e*P	**P**	**17 21 26.8**	**-1.9**
	comp=Z,1µm,0.7s,mb6.9						
REB	**Eisghbrachaidh**	**71.01**	**3**	⇑*i*P	**P**	**17 21 28.5**	**-0.1**
RGRS	**Roger Stewart**	**71.03**	**61**	*e*P	**P**	**17 21 28.2**	**-0.9**
CSU	**Charleston Sou**	**71.04**	**61**	*e*P	**P**	**17 21 29.9**	**+0.6**
IZAR	**Zarasai**	**71.16**	**344**	*e*P	**P**	**17 21 28.4**	**-1.2**
IZAR				*e*sP	sP	17 21 48.8	-1.7
RRH	**Rhenigidale**	**71.16**	**3**	⇑*i*P	**P**	**17 21 29.2**	**-0.3**
MVH1	**Achvaich**	**71.23**	**2**	⇑*i*P	**P**	**17 21 29.5**	**-0.4**
RRR	**Rubha Reidh**	**71.25**	**3**	⇑*e*P	**P**	**17 21 29.6**	**-0.5**
NST	**Nakhon Sawan**	**71.30**	**272**	P	**P**	**17 21 31.0**	**0.0**
	comp=Z,75nm,1.0s,mb5.6						
ISAL	**Salakas**	**71.35**	**344**	*e*P	**P**	**17 21 29.3**	**-1.4**
ISAL				AMb	AMB	17 21 35.0	
	comp=Z,34nm,1.3s,mb5.1						
KKN	**Kakani**	**71.37**	**291**	*e*P	**P**	**17 21 29.7**	**-1.6**
	comp=Z,484nm,0.6s,mb6.6						
KKN	**Kakani**	**71.37**	**291**	*e*P	**P**	**17 21 29.7**	**-1.6**
KKN				pmax	pmax		
	comp=Z,242nm,0.6s,mb6.3						
PKI	**Pulchoki**	**71.46**	**291**	*e*P	**P**	**17 21 29.9**	**-1.9**
	comp=Z,2µm,1.4s,mb6.8						
PKI	**Pulchoki**	**71.46**	**291**	*e*P	**P**	**17 21 29.9**	**-1.9**
PKI				pmax	pmax		
	comp=Z,765nm,1.4s,mb6.4						
IDID	**Didziasalis**	**71.49**	**344**	*i* P	**P**	**17 21 30.5**	**-1.0**
IDID				AMb	AMB	17 21 34.0	
	comp=Z,41nm,1.2s,mb5.2						
IDID				*e*sP	sP	17 21 51.0	-1.5
IIGN	**Ignalina**	**71.55**	**344**	*e*P	**P**	**17 21 31.1**	**-0.8**
GKN	**Gorkha**	**71.59**	**292**	*e*P	**P**	**17 21 30.4**	**-2.2**
	comp=Z,395nm,0.4s,mb6.7						
MCD	**Coleburn Disti**	**71.59**	**2**	⇑*i*P	**P**	**17 21 31.8**	**-0.3**
DMN	**Daman**	**71.61**	**291**	*e*P	**P**	**17 21 30.8**	**-1.9**
	comp=Z,577nm,0.8s,mb6.5						
KSK	**Scoval**	**71.62**	**4**	⇑*e*P	**P**	**17 21 32.1**	**-0.1**
KAC	**Achnashellach**	**71.63**	**3**	⇑*i*P	**P**	**17 21 32.5**	**+0.2**
KAC				AMb	AMB	17 21 35.5	
	comp=Z,309nm,2.2s,mb5.8						
MDO	**Dochfour**	**71.71**	**2**	⇑*i*P	**P**	**17 21 32.6**	**-0.2**
MME1	**Meikle Cairn**	**71.87**	**1**	⇑*i*P	**P**	**17 21 33.1**	**-0.6**
KSB	**Sheil Bridge**	**71.92**	**3**	⇑*i*P	**P**	**17 21 34.2**	**+0.2**
KSB				AMb	AMB	17 21 38.1	
	comp=Z,380nm,1.8s,mb6.0						
MNK	**Minsk**	**72.07**	**343**	⇑*i*P	**P**	**17 21 33.0**	**-2.0**
VOR	**Voronezh**	**72.11**	**335**	*e*P	**P**	**17 21 35.0**	**-0.3**
VOR						17 24 16.0	

VOR				*e*		17 30 57.5	
VOR				pmax	pmax		
	comp=N,70nm,2.0s						
VOR				pmax	pmax		
	comp=Z,270nm,2.0s,mb5.8						
VOR				pmax	pmax		
	comp=N,200nm,2.0s						
VOR				pmax	pmax		
	comp=E,80nm,2.0s						
VOR	**Voronezh**	**72.11**	**335**	*e*P	**P**	**17 21 35.0**	**-0.3**
VOR				*e*		17 24 16.0	
VOR				*e*		17 30 57.5	
KAR1	**Arisaig**	**72.19**	**3**	⇑*i*P	**P**	**17 21 35.7**	**+0.1**
KAR1				AMb	AMB	17 21 39.8	
	comp=Z,521nm,1.5s,mb6.2						
KOLN	**Koldanda**	**72.37**	**292**	*e*P	**P**	**17 21 34.7**	**-2.5**
	comp=Z,1µm,1.5s,mb6.7						
MUD	**Monsted U'grnd**	**72.45**	**354**	⇑*i*P	**P**	**17 21 37.4**	**+0.2**
MUD				*i* S	S	17 31 00.9	+5.2
MUD				pmax	pmax		
	comp=Z,170nm,0.9s,mb6.0						
MUD				MLR	MLR		
	comp=Z,31µm,19.0s,MS6.6						
MUD	**Monsted U'grnd**	**72.45**	**354**	⇑*i*P	**P**	**17 21 37.4**	**+0.2**
	comp=Z,173nm,0.9s,mb6.0						
MUD				*i* S	S	17 31 00.9	+5.2
	comp=Z,31µm,19.0s						
VRSR	**Storozhevoye**	**72.58**	**335**	⇑*i*P	**P**	**17 21 36.7**	**-1.3**
VRSR				*e**PP	pP	17 21 46.8	-6.4
VRSR				*e**SP	sP	17 21 52.2	-6.8
VRSR				*e*	pP	17 21 56.2	+3.0
VRSR				*e*		17 24 14.4	
VRSR				pmax	pmax		
	comp=Z,170nm,0.7s,mb6.1						
VRSR				pmax	pmax		
	comp=N,20nm,1.0s						
VRSR				pmax	pmax		
	comp=E,20nm,0.6s						
VRSR				MLR	MLR		
	comp=Z,10µm,18.0s,MS6.1						
VRSR				MLR	MLR		
	comp=N,6µm,19.0s,MS6.0						
VRSR				MLR	MLR		
	comp=E,4µm,16.0s,MS6.0						
VRSR	**Storozhevoye**	**72.58**	**335**	⇑*i*P	**P**	**17 21 36.7**	**-1.3**
	comp=E,170nm,0.7s,mb6.1						
VRSR				*e*pP	pP	17 21 46.8	-6.4
VRSR				*e*sP	sP	17 21 52.2	-6.8
VRSR				*e*	pP	17 21 56.2	+3.0
VRSR				*e*		17 24 14.4	
VRSR				LR	LR		
	comp=Z,10µm,18.0s,MS6.1						
PTH	**Pithoragarh**	**72.97**	**296**	*e*P	**P**	**17 21 42.0**	**+1.3**
COP	**Copenhagen**	**72.98**	**352**	⇑*i*P	**P**	**17 21 40.1**	**-0.1**
COP				*i*		17 26 05.0	
COP				*i* S	S	17 31 05.3	+3.7
COP				*i*		17 35 50.4	
COP				pmax	pmax		
	comp=Z,120nm,0.8s,mb5.9						
COP				MLR	MLR		
	comp=Z,20µm,20.0s,MS6.4						
COP	**Copenhagen**	**72.98**	**352**	⇑*i*P	**P**	**17 21 40.1**	**-0.1**
	comp=Z,123nm,0.8s,mb5.9						
COP				*i*		17 26 05.0	
COP				*i* S	S	17 31 05.3	+3.7
COP				*i*		17 35 50.4	
	comp=Z,20µm,20.0s						
LGTI	**Lohaghat**	**73.03**	**296**	*i* P	**P**	**17 21 42.0**	**+0.9**
LGTI				*e*x	x	17 22 33.0	
OXX	**Oaxaca**	**73.03**	**84**	⇑*e*P	**P**	**17 21 44.0**	**+2.7**
VHO	**Vista Hermosa**	**73.03**	**84**	⇑*i*P	**P**	**17 21 42.9**	**+1.7**
EDI	**Edinburgh**	**73.26**	**2**	⇑*i*P	**P**	**17 21 41.6**	**-0.2**
THN	**Thein Dam**	**73.26**	**301**	*e*P	**P**	**17 21 41.8**	**-0.6**
THN				*e*S	S	17 31 08.9	+3.6
SDNR	**Sundarnagar**	**73.30**	**299**	*e*P	**P**	**17 21 42.6**	**0.0**
BSD	**Bornholm Skovb**	**73.31**	**351**	⇓*i*P	**P**	**17 21 41.7**	**-0.5**
BSD				*i*		17 22 03.6	
BSD				pmax	pmax		
	comp=Z,86nm,0.8s,mb5.7						
BSD	**Bornholm Skovb**	**73.31**	**351**	⇓*i*P	**P**	**17 21 41.7**	**-0.5**
	comp=Z,86nm,0.8s,mb5.7						
BSD				*i*		17 22 03.6	
SUW	**Suwalki**	**73.33**	**346**	*e*P	**P**	**17 21 41.4**	**-0.9**
SUW				*e**PP	pP	17 21 52.0	-5.5
SUW				*e*	pP	17 21 56.4	-1.1
SUW				*e*		17 24 24.9	
SUW				*e*S	S	17 31 05.7	+0.1
SUW				*e*		17 31 46.3	
SUW				MLR	MLR		
	comp=Z,76µm,24.1s,MS6.9						
SUW	**Suwalki**	**73.33**	**346**	*e*P	**P**	**17 21 41.4**	**-0.9**
SUW				*e*pP	pP	17 21 52.0	-5.5
SUW				*e*PcP	PcP	17 21 56.4	-2.3
SUW				*e*PP	PP	17 24 24.9	-3.2
SUW				*e*S	S	17 31 05.7	+0.1
SUW				*e*SKS	SKS	17 31 46.3	+7.3
SUW				*e*SS	SS	17 36 27.8	+37
SUW	**Suwalki**	**73.33**	**346**	*e*P	**P**	**17 21 41.4**	**-0.9**
SUW				*e*pP	pP	17 21 52.0	-5.6
SUW				*e*PcP	PcP	17 21 56.4	-2.2
SUW				*e*PP	PP	17 24 24.9	-3.3
SUW				*e*S	S	17 31 05.7	+0.1
SUW				*e*SKS	SKS	17 31 46.3	+7.3
SUW				*e*SS	SS	17 36 27.8	+37
SUW				MLR	MLR	17 53 01.6	
	comp=Z,76µm,24.1s,MS6.9						
SMLA	**Simla**	**73.47**	**299**	*i* P	**P**	**17 21 40.5**	**-3.1**
CAL	**Calcutta**	**73.48**	**285**	*e*x	x	17 21 53.0	
CAL				*e*x	x	17 29 58.5	
PONG	**Pong**	**73.51**	**300**	*e*P	**P**	**17 21 43.0**	**-0.8**
PPT	**Papeete**	**73.61**	**149**	*e*LR	LR	17 21 24.2	
	comp=Z,6µm,26.2s,baz=158						
PPT	**Papeete**	**73.61**	**149**	*e*P	**P**	**17 21 26.9**	**-18**
	comp=Z,6µm,26.2s						
PPT				*e*S	S	17 30 50.8	-19
	comp=Z,75µm,28.0s						
PPT				*e*SS	SS	17 35 20.0	-36
	comp=Z,30µm,24.8s						
PPT				*e*LR	LR	17 43 52.2	
	comp=Z,164µm,25.8s,baz=343						
PPT	**Papeete**	**73.61**	**149**	P	**P**	**17 21 47.0**	**+2.3**
	comp=Z,86nm,0.9s,mb5.7,baz=19,slow=11,SNR=5.1						
PPT				LR	LR	17 51 00.5	
	comp=Z,43µm,18.8s,MS6.8,baz=321,slow=33						
BHK	**Bhakra**	**73.66**	**300**	*e*P	**P**	**17 21 43.9**	**-0.8**
BHK				*e*x	x	17 31 23.8	
GMK	**Mull of Kintyr**	**73.78**	**3**	⇑*i*P	**P**	**17 21 44.8**	**0.0**
DZM	**Mont Dzumac**	**73.81**	**193**	*e*P	**P**	**17 21 46.9**	**+1.2**
DZM	**Mont Dzumac**	**73.81**	**193**	P	**P**	**17 21 47.2**	**+1.4**
	comp=Z,37nm,1.0s,mb5.3,baz=44,slow=8.0,SNR=9.4						
ESK	**Eskdalemuir**	**73.87**	**2**	*e*P	**P**	**17 21 45.2**	**-0.2**
ESK				pmax	pmax		
	comp=Z,204nm,0.9s,mb6.1						
ESK				MLR	MLR		
	comp=Z,7µm,20.0s,MS5.9						
ESK	**Eskdalemuir**	**73.87**	**2**	*e*P	**P**	**17 21 45.2**	**-0.2**
	comp=Z,204nm,0.9s,mb6.1						
ESK				LR	LR		
	comp=Z,7µm,20.0s,MS5.9						
ESK	**Eskdalemuir**	**73.87**	**2**	*e*P	**P**	**17 21 45.5**	**+0.1**
ESK				AMb	AMB	17 21 48.4	
	comp=Z,280nm,1.3s,mb6.0						
NNT	**Nongplab**	**73.88**	**270**	P	**P**	**17 21 46.3**	**0.0**
DWPF	**Disney**	**73.96**	**65**	P	**P**	**17 21 47.2**	**+0.7**
DWPF				S	S	17 31 16.2	+3.0
DWPF	**Disney**	**73.96**	**65**	*e*P	**P**	**17 21 46.9**	**+0.4**
	comp=Z,516nm,1.3s,mb6.3						
DWPF				LR	LR		
	comp=Z,11µm,20.0s,MS6.1						
BWH	**Wardlaw**	**74.00**	**2**	⇑*i*P	**P**	**17 21 46.0**	**-0.1**
BOK	**Bokaro**	**74.01**	**288**	*i* P	**P**	**17 21 46.8**	**-0.1**
BOK				*i* x	x	17 24 30.8	
RGN	**Rugen**	**74.03**	**352**	*e*P	**P**	**17 21 46.0**	**-0.3**
	comp=Z,170nm,0.7s,mb6.1						
GCL	**Cushendall**	**74.03**	**3**	⇑*e*P	**P**	**17 21 46.0**	**-0.3**
BBH	**Bruntsheil**	**74.05**	**1**	⇑*i*P	**P**	**17 21 46.5**	**0.0**
BHH	**Howats Hill**	**74.09**	**2**	⇑*i*P	**P**	**17 21 46.8**	**+0.1**
BCC1	**Chapelcross**	**74.17**	**2**	*e*P	**P**	**17 21 47.0**	**-0.2**
CMIG	**Matias Romero**	**74.17**	**82**	⇑*i*P	**P**	**17 21 48.7**	**+0.7**
GAL1	**Galloway**	**74.28**	**3**	⇑*e*P	**P**	**17 21 47.4**	**-0.4**
BTA	**Talkin**	**74.29**	**1**	⇑*e*P	**P**	**17 21 47.7**	**-0.1**
GCD	**Castle Douglas**	**74.31**	**2**	⇑*e*P	**P**	**17 21 47.4**	**-0.6**
RAR	**Rarotonga**	**74.34**	**160**	*e*P	**P**	**17 21 49.0**	**+0.2**
RAR				pmax	pmax		
	comp=Z,102nm,1.1s						
RAR	**Rarotonga**	**74.34**	**160**	*e*P	**P**	**17 21 49.0**	**+0.1**
	comp=Z,102nm,1.1s,mb5.7						
BDL	**Dobcross Hall**	**74.39**	**1**	⇑*i*P	**P**	**17 21 48.7**	**+0.3**
HUIG	**Huatulco**	**74.41**	**84**	⇑*i*P	**P**	**17 21 50.4**	**+1.1**
BBO1	**Bothel**	**74.45**	**2**	⇑*i*P	**P**	**17 21 48.6**	**-0.2**
LCP	**Cassop**	**74.47**	**1**	⇑*e*P	**P**	**17 21 48.7**	**-0.1**
GMM	**Mts of Mourne**	**74.87**	**3**	⇑*i*P	**P**	**17 21 50.9**	**-0.3**
BSEG	**Bad Segeberg**	**74.88**	**353**	*e*P	**P**	**17 21 51.5**	**+0.2**
BSEG				*e*S	S	17 31 24.6	+1.7
WIM	**Isle of Man**	**75.00**	**3**	⇑*i*P	**P**	**17 21 51.8**	**-0.2**
WIM				AMb	AMB	17 21 55.0	
	comp=Z,421nm,1.5s,mb6.2						
HPK	**Haverah Park**	**75.25**	**1**	⇑*i*P	**P**	**17 21 53.0**	**-0.3**
NDI	**New Delhi**	**75.32**	**297**	*i* P	**P**	**17 21 53.0**	**-1.3**
NDI				*e*P		17 21 53.0	
NDI				*e*x	x	17 31 28.0	
NDI				*e*x	x	17 31 29.0	
WAR	**Warsaw**	**75.38**	**347**	⇑*e*P	**P**	**17 21 54.4**	**+0.3**
WAR				*e*		17 22 04.1	
WAR				*e*		17 24 48.9	
WAR				*e*S	S	17 31 31.0	+2.6
WAR				*e*		17 31 55.2	
WAR				MLR	MLR		
	comp=Z,49µm,22.0s,MS6.8						
WAR	**Warsaw**	**75.38**	**347**	⇑*e*P	**P**	**17 21 54.4**	**+0.3**
WAR				*e*PcP	PcP	17 22 04.1	-3.4
WAR				*e*PP	PP	17 24 48.9	+3.4
WAR				*e*S	S	17 31 31.0	+2.6
WAR				*e*SKS	SKS	17 31 55.2	+1.2
WAR				*e*SS	SS	17 36 58.8	+37
WAR				LR	LR		
	comp=Z,49µm,22.0s,MS6.8						
WAR	**Warsaw**	**75.38**	**347**	⇑*e*P	**P**	**17 21 54.4**	**+0.3**
WAR				*e*PcP	PcP	17 22 04.1	-3.4
WAR				*e*PP	PP	17 24 48.9	+3.4
WAR				*e*S	S	17 31 31.0	+2.6
WAR				*e*SKS	SKS	17 31 55.2	+1.2
WAR				*e*SS	SS	17 36 58.8	+37
WAR				MLR	MLR	17 54 40.3	
	comp=Z,49µm,22.0s,MS6.8						
LDU	**Leeds Universi**	**75.40**	**1**	⇑*e*P	**P**	**17 21 54.2**	**0.0**
AKASG	**Malin Array Be**	**75.41**	**341**	P	**P**	**17 21 53.6**	**-0.8**
	comp=Z,47nm,0.4s,mb5.8,baz=24,slow=6.0,SNR=217						
AKASG				PKPPKP		17 49 07.6	
	comp=Z,0.1nm,0.3s,baz=208,slow=1.3,SNR=7.5						
KAKA	**Kakadu**	**75.59**	**228**	⇑*i*P	**P**	**17 21 55.3**	**-0.8**
	comp=Z,762nm,1.5s,mb6.4						
LHO	**Holmfirth**	**75.66**	**1**	⇑*i*P	**P**	**17 21 55.3**	**-0.5**
DCN	**Croghan**	**75.71**	**4**	⇑*i*P	**P**	**17 21 56.3**	**+0.3**
WME	**Myndd Eilian**	**75.77**	**2**	⇑*e*P	**P**	**17 21 55.9**	**-0.5**
WME				AMb	AMB	17 21 59.0	
	comp=Z,171nm,1.7s,mb5.7						
WCB1	**Church Bay**	**75.78**	**2**	⇑*e*P	**P**	**17 21 55.9**	**-0.5**
WCB1				AMb	AMB	17 22 00.1	
	comp=Z,234nm,1.2s,mb6.0						
DLF	**Lyons Farm**	**75.79**	**4**	⇑*i*P	**P**	**17 21 56.6**	**+0.1**
DSB	**Dublin**	**75.85**	**4**	*e*P	**P**	**17 21 56.6**	**-0.2**
	comp=Z,240nm,0.8s,mb6.2						
WLF1	**Llynfaes**	**75.87**	**2**	⇑*e*P	**P**	**17 21 56.5**	**-0.4**
WLF1				AMb	AMB	17 22 00.5	
	comp=Z,219nm,1.3s,mb5.9						
TEIG	**Tepich**	**75.89**	**75**	P	**P**	**17 21 58.6**	**+0.9**
TEIG				S	S	17 31 39.6	+5.0
KSM	**Kuching**	**75.90**	**254**	*e*P	**P**	**17 21 57.4**	**-0.5**
YRC	**Rhoscolyn**	**75.90**	**3**	⇑*e*P	**P**	**17 21 57.7**	**+0.6**
WPM1	**Penmaenmawr**	**75.91**	**2**	⇑*e*P	**P**	**17 21 56.5**	**-0.7**
WPM1				AMb	AMB	17 22 00.9	
	comp=Z,214nm,1.4s,mb5.9						
KBI1	**Birley Grange**	**75.95**	**1**	⇑*i*P	**P**	**17 21 57.2**	**-0.2**
RUE	**Ruedersdorf**	**76.03**	**351**	*e*P	**P**	**17 21 57.2**	**-0.6**
	comp=Z,73nm,0.9s,mb5.6						
YRE	**Yr Eifl**	**76.18**	**2**	⇑*i*P	**P**	**17 21 58.4**	**-0.3**
YRE				AMb	AMB	17 22 01.6	
	comp=Z,250nm,1.5s,mb5.9						
KWE	**Weaver Farm**	**76.19**	**1**	⇑*i*P	**P**	**17 21 58.6**	**-0.2**
WIT	**Witteveen**	**76.22**	**356**	*e*P	**P**	**17 21 59.8**	**+0.9**
WIT				*e*PcP	PcP	17 22 08.0	-3.2
SBD1	**Bryn Du**	**76.28**	**2**	⇑*i*P	**P**	**17 21 59.3**	**0.0**
CCIG	**Comitan**	**76.50**	**81**	⇑*i*P	**P**	**17 22 03.3**	**+2.1**
HLM1	**Long Mynd**	**76.67**	**1**	⇑*i*P	**P**	**17 22 01.6**	**+0.1**
HLM1				AMb	AMB	17 22 05.6	
	comp=Z,233nm,1.2s,mb6.0						
CTA	**Charters Tower**	**76.71**	**212**	⇑*i*P	**P**	**17 22 02.2**	**-0.2**
	comp=Z,54nm,0.7s,mb5.6						
CTA				*e*S	S	17 31 48.0	+4.3
CTA	**Charters Tower**	**76.71**	**212**	⇑*i*P	**P**	**17 22 02.2**	**-0.2**
CTA				*e*S	S	17 31 48.0	+4.3
CTA				pmax	pmax		
	comp=Z,54nm,0.7s						
CTA	**Charters Tower**	**76.71**	**212**	P	**P**	**17 22 02.5**	**+0.1**
	comp=Z,88nm,0.9s,mb5.7,baz=16,slow=6.2,SNR=14						
CTA				LR	LR	17 52 00.2	
	comp=Z,18µm,19.7s,MS6.4,baz=5.3,slow=33						
SSP1	**Stoney Pound**	**76.77**	**2**	⇑*i*P	**P**	**17 22 02.1**	**+0.1**
VAL	**Valentia**	**76.94**	**6**	*e*P	**P**	**17 22 02.7**	**-0.4**
VAL				*e*S	S	17 31 50.1	+4.5
CLZ	**Clausthal**	**76.96**	**353**	*e*P	**P**	**17 22 03.4**	**+0.3**
CLZ				*e*S	S	17 31 47.2	+1.5
GOF	**Gofitskoye**	**77.02**	**330**	⇑*i*P	**P**	**17 22 01.6**	**-2.0**
GOF				*i* S	S	17 31 49.5	+3.0
GOF				pmax	pmax		
	comp=Z,240nm,1.0s,mb6.1						
GOF				smax			
	comp=E,410nm,1.9s						
GOF				smax			
	comp=N,250nm,2.5s						
GOF	**Gofitskoye**	**77.02**	**330**	⇑*i*P	**P**	**17 22 01.6**	**-2.0**
	comp=N,240nm,1.0s,mb6.1						
GOF				*i* S	S	17 31 49.5	+3.0
JHNI	**Jhansi**	**77.05**	**294**	*i* P	**P**	**17 22 03.0**	**-1.2**
JHNI				*e*x	x	17 22 23.0	
WTSB	**Winterswijk**	**77.06**	**355**	⇑*e*P	**P**	**17 22 03.5**	**-0.2**
	comp=N,217nm,0.9s,mb6.1						
WTSB				*e*PcP	PcP	17 22 11.4	-3.4
HTR	**Trewern Hill**	**77.11**	**2**	⇑*i*P	**P**	**17 22 04.0**	**0.0**
HTR				AMb	AMB	17 22 07.0	
	comp=Z,528nm,1.5s,mb6.3						
HAE	**Alders End**	**77.16**	**1**	⇑*i*P	**P**	**17 22 04.4**	**+0.1**
HAE				AMb	AMB	17 22 08.1	
	comp=Z,484nm,2.0s,mb6.1						
MCH1	**Michaelchurch**	**77.19**	**2**	P	**P**	**17 22 04.4**	**-0.1**
MCH1	**Michaelchurch**	**77.19**	**2**	⇑*i*P	**P**	**17 22 04.2**	**-0.3**
MCH1				⇑*i*P		17 22 04.4	
LVV	**L'vov**	**77.24**	**344**	⇑*i*P	**P**	**17 22 04.5**	**-0.2**
LVV				*e*		17 24 59.2	
LVV				*e*PPP	PPP	17 26 46.6	-2.5
LVV				*i* S	S	17 31 49.0	+0.2
LVV				*e*PS	PS	17 32 15.6	-20
LVV				pmax	pmax		
	comp=Z,4µm,9.8s						
LVV				pmax	pmax		
	comp=N,2µm,9.0s						
LVV				pmax	pmax		
	comp=E,700nm,9.0s						
LVV				MLR	MLR		
	comp=N,65µm,22.8s,MS7.0						
LVV				MLR	MLR		
	comp=Z,89µm,22.8s,MS7.0						
LVV				MLR	MLR		
	comp=E,34µm,22.0s,MS7.0						
CLL	**Collm**	**77.26**	**351**	⇑*i*P	**P**	**17 22 04.1**	**-0.7**
CLL				*i*		17 22 13.4	
CLL				*i* *PP	pP	17 22 17.9	-2.3
CLL				*e*S	S	17 31 49.0	0.0
CLL				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.5						
CLL				MLR	MLR		
	comp=Z,54µm,19.5s,MS6.9						
CLL	**Collm**	**77.26**	**351**	⇑*i*P	**P**	**17 22 04.1**	**-0.7**
	comp=Z,70nm,1.0s,mb5.5						
CLL				*i* PcP	PcP	17 22 13.4	-2.2
CLL				*i* pP	pP	17 22 17.9	-2.3
CLL				*e*S	S	17 31 49.0	0.0
CLL				LR	LR		
	comp=Z,54µm,19.5s,MS6.9						
CLL	**Collm**	**77.26**	**351**	⇑P	**P**	**17 22 04.1**	**-0.7**
	comp=Z,logA/T=1.8,mb5.5						
CLL				*i* PCP	PcP	17 22 13.4	-2.2
CLL				*i* *SP	sP	17 22 17.9	-8.2
CLL				*e*		17 22 27.0	
CLL				*e*PP	PP	17 24 48.0	-13
CLL				*e*PPP	PPP	17 26 51.0	+1.7
CLL				*e*S	S	17 31 49.0	0.0
CLL				*e**SS		17 32 05.0	
CLL				*e*PS	PS	17 32 36.0	+0.2
CLL				*e*PPS	PPS	17 32 49.0	-4.8
CLL				*e*		17 33 33.0	
CLL				*e*SS	SS	17 37 03.0	+12
CLL				*e*PKPPKP		17 49 24.0	
CLL				*i* SKPPKP		17 52 32.4	
KSP	**Ksiaz**	**77.37**	**349**	⇑*e*P	**P**	**17 22 04.9**	**-0.6**
KSP				*e*S	S	17 31 50.0	-0.2
KSP				MLR	MLR		
	comp=Z,96µm,21.3s,MS7.1						
KSP	**Ksiaz**	**77.37**	**349**	⇑*e*P	**P**	**17 22 04.9**	**-0.6**
KSP				*e*PP	PP	17 24 45.0	-17
KSP				*e*PPP	PPP	17 26 39.5	-11
KSP				*e*S	S	17 31 50.0	-0.2
KSP				*e*SS	SS	17 36 28.0	-24
KSP				LR	LR		
	comp=Z,96µm,21.3s,MS7.1						
KSP	**Ksiaz**	**77.37**	**349**	⇑*e*P	**P**	**17 22 05.2**	**-0.3**
	comp=Z,15µm,10.8s						
KSP				*e*PP	PP	17 24 56.3	-5.5
KSP				*e*S	S	17 31 50.7	+0.5
KSP				*e*SKS	SKS	17 32 18.2	+10
KSP				*e*SS	SS	17 36 51.9	-0.5
KSP				MLR	MLR	17 59 26.8	
	comp=Z,82µm,21.4s,MS7.0						
ASH	**Ashkhabad**	**77.39**	**316**	⇑*i*P	**P**	**17 22 08.0**	**+2.2**
ASH				*e*S	S	17 32 00.0	+9.4
MAK	**Makhachkala**	**77.39**	**326**	⇑*i*P	**P**	**17 22 07.0**	**+1.3**
MAK				*i*	pP	17 22 25.0	+4.0
MAK				*e*		17 25 01.0	
MAK				*i* PPP	PPP	17 26 52.0	+1.3
MAK				*e*S	S	17 31 57.8	+7.3
MAK				*i*		17 32 31.0	
MAK				pmax	pmax		
	comp=Z,1µm,2.0s,mb6.5						
MAK				pmax	pmax		
	comp=N,8µm,10.0s						
MAK				pmax	pmax		
	comp=E,2µm,10.0s						
MAK				pmax	pmax		
	comp=Z,19µm,10.0s						
MAK				smax			
	comp=N,14µm,13.0s						
MAK				smax			
	comp=E,8µm,8.0s						
MAK				MLR	MLR		
	comp=Z,134µm,18.0s,MS7.3						
MAK				MLR	MLR		
	comp=E,52µm,16.0s						
MAK	**Makhachkala**	**77.39**	**326**	⇑*i*P	**P**	**17 22 07.0**	**+1.3**
	comp=E,1µm,2.0s,mb6.5						
MAK				*i*	pP	17 22 25.0	+4.0
MAK				*e*		17 25 01.0	
MAK				*i* PPP	PPP	17 26 52.0	+1.3
MAK				*e*S	S	17 31 57.8	+7.3
MAK				*i*		17 32 31.0	
MAK				LR	LR		
	comp=Z,134µm,18.0s,MS7.3						
HSA	**Swansea**	**77.42**	**2**	⇑*e*P	**P**	**17 22 05.3**	**-0.4**
SNG	**Songkhla**	**77.46**	**266**	P	**P**	**17 22 06.0**	**-0.7**
	comp=Z,298nm,1.0s,mb6.2						
BLSP	**Bilaspur**	**77.51**	**290**	*e*P	**P**	**17 22 06.8**	**0.0**
BLSP				AMb	AMB	17 22 11.1	
	comp=Z,471nm,1.7s,mb6.2						
OJC	**Ojcow**	**77.52**	**347**	⇑*i*P	**P**	**17 22 05.9**	**-0.4**
OJC				*e*PcP	PcP	17 22 16.1	-0.7
OJC				*e*PP	PP	17 24 58.5	-4.6
OJC				*e*S	S	17 31 49.7	-2.1
OJC				⇑*e*SKSa		17 32 11.0	
OJC				*e*SS	SS	17 36 48.3	-6.3
OJC				MLR	MLR	17 58 48.7	
	comp=Z,59µm,19.3s,MS6.9						
HGH	**Gray Hill**	**77.56**	**1**	⇑*i*P	**P**	**17 22 06.5**	**0.0**
HGH				AMb	AMB	17 22 09.4	
	comp=Z,533nm,1.6s,mb6.2						
BRG	**Berggiesshubel**	**77.60**	**351**	⇑*i*P	**P**	**17 22 06.2**	**-0.5**
BRG				*e*		17 22 14.8	
BRG				PPP	PPP	17 26 48.0	-4.7
BRG				S	S	17 31 54.9	+2.2
BRG				PS	PS	17 32 47.5	+7.3
BRG				pmax	pmax		
	comp=Z,117nm,1.6s,mb5.6						
BRG				MLR	MLR		
	comp=N,57µm,21.1s,MS7.0						
BRG				MLR	MLR		
	comp=E,37µm,21.1s,MS7.0						
BRG				MLR	MLR		
	comp=Z,61µm,20.4s,MS6.9						
BRG	**Berggiesshubel**	**77.60**	**351**	⇑*i*P	**P**	**17 22 06.2**	**-0.5**
	comp=Z,117nm,1.6s,mb5.6						
BRG				*e*		17 22 14.8	
BRG				*e*		17 22 28.6	
BRG				PP	PP	17 24 46.0	-18
BRG				PPP	PPP	17 26 48.0	-4.7
BRG				S	S	17 31 55.0	+2.3
BRG				PS	PS	17 32 47.5	+7.3
BRG				SS	SS	17 37 10.0	+14
BRG				P'P'		17 49 13.3	
BRG				LR	LR		
	comp=Z,61µm,20.4s,MS6.9						
KWP	**Kalwaria**	**77.64**	**345**	⇑*e*P	**P**	**17 22 07.5**	**+0.5**
KWP				*e*PP	PP	17 25 02.6	-1.7
KWP				*e*S	S	17 31 43.6	-10
KWP				*e*SKS	SKS	17 32 10.9	+0.3
KWP				MLR	MLR	17 56 04.2	
	comp=Z,122µm,23.8s,MS7.2						
UPC	**Upice**	**77.73**	**349**	⇑*i*P	**P**	**17 22 07.2**	**-0.3**
UPC				*e*S	S	17 31 54.1	0.0
DPC	**Dobruska-Polom**	**77.85**	**349**	⇑*i*P	**P**	**17 22 08.0**	**-0.1**
DPC				*e*S	S	17 31 56.3	+0.9
DPC				*e*SS	SS	17 37 00.5	+0.9
DPC				AMS	AMS	17 59 30.0	
	comp=Z,44µm,20.2s						
RAC	**Raciborz**	**77.88**	**348**	*e*P	**P**	**17 22 08.6**	**+0.4**
RAC				MLR	MLR		
	comp=E,50µm,22.6s,MS7.0						
RAC				MLR	MLR		
	comp=Z,62µm,19.2s,MS7.0						
RAC				MLR	MLR		
	comp=N,55µm,19.1s,MS7.0						
MOX	**Moxa**	**78.05**	**352**	*e*P	**P**	**17 22 08.8**	**-0.3**
MOX				pmax	pmax		
	comp=Z,160nm,1.2s,mb5.8						
MOX				MLR	MLR		
	comp=Z,33µm,22.0s,MS6.6						
MOX	**Moxa**	**78.05**	**352**	*e*P	**P**	**17 22 08.8**	**-0.3**
	comp=Z,160nm,1.2s,mb5.8						
MOX				*e*S	S	17 32 00.0	+2.6
MOX				*e*SS	SS	17 37 14.0	+12
MOX				*e*P'P'		17 49 10.0	
MOX				LR	LR		
	comp=Z,33µm,22.0s,MS6.6						
MOX	**Moxa**	**78.05**	**352**	*i* P	**P**	**17 22 08.8**	**-0.3**
	comp=Z,logA/T=2.1,mb5.8						
MOX				S	S	17 32 00.0	+2.6
MOX				SS	SS	17 37 14.0	+12
MOX				PKPPKP		17 49 10.0	
MOX				L		18 00 08.0	
HEX	**Exmoor**	**78.11**	**2**	⇑*i*P	**P**	**17 22 09.5**	**0.0**
KIV	**Kislovodsk**	**78.12**	**330**	*c* *i*P	**P**	**17 22 10.2**	**+0.5**
KIV				*e*		17 25 09.4	
KIV				*e*PPP	PPP	17 26 55.5	-2.4
KIV				*i* S	S	17 32 02.8	+4.4
KIV				*e*SS	SS	17 37 08.4	+4.7
KIV				pmax	pmax		
	comp=E,35nm,0.8s						
KIV				pmax	pmax		
	comp=Z,120nm,0.8s,mb5.9						
KIV				pmax	pmax		
	comp=N,65nm,1.0s						
KIV				smax			
	comp=N,3µm,7.0s						
KIV	**Kislovodsk**	**78.12**	**330**	⇑*i*P	**P**	**17 22 10.2**	**+0.5**
	comp=N,120nm,0.8s,mb5.9						
KIV				*e*		17 25 09.4	
KIV				*e*PPP	PPP	17 26 55.5	-2.4
KIV				*i* S	S	17 32 02.8	+4.4
KIV				*e*SS	SS	17 37 08.4	+4.7
OKC	**Ostrava-Krasne**	**78.12**	**348**	⇑*i*P	**P**	**17 22 09.6**	**0.0**
OKC				*e*S	S	17 31 58.6	+0.3
OKC				*e*SS	SS	17 37 11.5	+7.8

OKC				AMS	AMS	18 01 10.0	
	comp=N,44µm,18.7s						
HTL	**Hartland**	**78.16**	**3**	P	**P**	**17 22 09.9**	**+0.1**
HTL	**Hartland**	**78.16**	**3**	⇑*i*P	**P**	**17 22 09.6**	**-0.2**
HTL				⇑*e*P		17 22 09.9	
NIE	**Niedzica**	**78.23**	**346**	⇑*i*P	**P**	**17 22 10.4**	**+0.2**
MORC	**Moravsky Berou**	**78.26**	**348**	*e*P	**P**	**17 22 09.9**	**-0.5**
MORC				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.3						
MORC	**Moravsky Berou**	**78.26**	**348**	*e*P	**P**	**17 22 09.9**	**-0.5**
	comp=Z,35nm,0.9s,mb5.3						
HGN	**Heimansgroeve**	**78.30**	**356**	⇑*i*P	**P**	**17 22 10.4**	**-0.1**
	comp=Z,301nm,1.0s,mb6.2						
HGN				*e*PcP	PcP	17 22 18.7	-1.4
HGN				*e*PP	PP	17 25 08.9	-1.0
HGN				*e*PPP	PPP	17 27 04.4	+5.0
HGN				*e*S	S	17 31 57.5	-2.7
HGN				*e*SS	SS	17 37 14.5	+8.2
PRA	**Prague**	**78.34**	**350**	⇑P	**P**	**17 22 09.0**	**-1.8**
PRA				*e*x	x	17 25 07.0	
PRA				*e*x	x	17 33 05.0	
PRA				AMS	AMS	18 00 10.0	
NKC	**Novy Kostel**	**78.38**	**352**	⇑*i*P	**P**	**17 22 10.9**	**-0.1**
NKC				*e*S	S	17 32 02.2	+1.2
NKC				*e*SS	SS	17 37 08.0	+0.5
NKC				AMS	AMS	17 59 10.0	
	comp=Z,36µm,19.2s						
KOLS	**Kolonicke sedl**	**78.39**	**345**	*i* P	**P**	**17 22 11.5**	**+0.4**
PRU	**Pruhonice**	**78.41**	**350**	⇑*i*P	**P**	**17 22 11.0**	**-0.2**
PRU				*e*S	S	17 32 02.0	+0.6
PRU				MLR	MLR		
	comp=Z,62µm,20.2s,MS6.9						
PRU	**Pruhonice**	**78.41**	**350**	⇑*i*P	**P**	**17 22 11.0**	**-0.2**
PRU				*e*S	S	17 32 02.0	+0.6
PRU				*e*SS	SS	17 36 59.1	-8.8
PRU				AMS	AMS	18 00 00.0	
	comp=Z,62µm,20.2s						
MENF	**Mencas**	**78.63**	**358**	⇑*e*P	**P**	**17 22 12.4**	**0.0**
UZH	**Uzhgorod**	**78.68**	**345**	*c i*P	**P**	**17 22 13.0**	**+0.3**
UZH				*e*S	S	17 32 00.0	-4.3
UZH	**Uzhgorod**	**78.68**	**345**	⇑*i*P	**P**	**17 22 13.0**	**+0.3**
UZH				*e*S	S	17 32 00.0	-4.3
TNS	**Taunus Mts**	**78.70**	**354**	*e*P	**P**	**17 22 12.8**	**0.0**
TNS				*e*S	S	17 32 05.2	+0.7
ZEI	**Tsey**	**78.79**	**328**	*e*P	**P**	**17 22 13.9**	**+0.5**
ZEI				*i* *PP	pP	17 22 31.5	+2.7
ZEI				*i*		17 25 12.4	
ZEI				*e*S	S	17 32 10.6	+5.1
ZEI				pmax	pmax		
	comp=Z,269nm,1.0s,mb6.1						
CSA1	**St Austell**	**78.79**	**3**	⇑*e*P	**P**	**17 22 13.3**	**0.0**
VRAC	**Vranov**	**78.84**	**349**	P	**P**	**17 22 13.9**	**+0.3**
VRAC	**Vranov**	**78.84**	**349**	*e*P	**P**	**17 22 13.7**	**+0.1**
VRAC				*e*S	tx	17 32 42.7	
VRAC				*e*SS	SS	17 37 18.1	+3.7
KULM	**Kulim**	**78.89**	**265**	*e*P	**P**	**17 22 13.2**	**-1.3**
ANN	**Anapa**	**78.93**	**334**	*c i*P	**P**	**17 22 13.2**	**-0.9**
ANN				*e**PP	pP	17 22 27.8	-1.7
ANN				*e*PPP	PPP	17 27 08.3	+3.2
ANN				*e*S	S	17 32 09.2	+2.2
ANN				*e*PS	PS	17 33 05.2	+7.7
ANN				*e*SS	SS	17 37 15.6	-0.2
ANN				pmax	pmax		
	comp=Z,9µm,9.3s						
ANN				MLR	MLR		
	comp=N,140µm,22.0s,MS7.3						
ANN				MLR	MLR		
	comp=E,34µm,22.0s,MS7.3						
ANN				MLR	MLR		
	comp=Z,53µm,22.0s,MS6.8						
ANN	**Anapa**	**78.93**	**334**	⇑*i*P	**P**	**17 22 13.2**	**-0.9**
ANN				*e*pP	pP	17 22 27.8	-1.7
ANN				*e*PPP	PPP	17 27 08.3	+3.2
ANN				*e*S	S	17 32 09.2	+2.2
ANN				*e*PS	PS	17 33 05.2	+7.7
ANN				*e*SS	SS	17 37 15.6	-0.2
ANN				LR	LR		
	comp=Z,53µm,22.0s,MS6.8						
CCA1	**Carnmenellis**	**78.95**	**3**	⇑*i*P	**P**	**17 22 14.1**	**-0.1**
CPZ	**Penzance**	**78.97**	**3**	⇑*i*P	**P**	**17 22 14.3**	**0.0**
CPZ				AMb	AMB	17 22 17.2	
	comp=Z,358nm,1.9s,mb6.0						
CRQ2	**Rosemanowes 2**	**78.97**	**3**	⇑*i*P	**P**	**17 22 14.2**	**0.0**
CRQ2				AMb	AMB	17 22 17.3	
	comp=Z,302nm,1.9s,mb5.9						
KIS	**Kishinev**	**79.01**	**340**	α*i*P	**P**	**17 22 13.0**	**-1.5**
KIS				*e*	pP	17 22 27.0	-2.9
KIS				*i*		17 25 22.0	
KIS				*i* S	S	17 32 08.0	+0.2
KIS				*e*		17 32 23.0	
KIS				*e*		17 32 33.0	
KIS				*e*PS	PS	17 32 50.0	-8.6
KIS				pmax	pmax		
	comp=Z,300nm,1.0s,mb6.2						
KIS				pmax	pmax		
	comp=Z,11µm,15.0s						
KIS				pmax	pmax		
	comp=Z,11µm,20.0s						
KIS				smax			
	comp=N,6µm,11.0s						
KIS				smax			
	comp=E,6µm,15.0s						
KIS				MLR	MLR		
	comp=N,28µm,19.0s						
KIS				MLR	MLR		
	comp=Z,92µm,19.0s,MS7.1						
KIS				MLR	MLR		
	comp=Z,91µm,19.0s						
KIS	**Kishinev**	**79.01**	**340**	*i* Pcu	**P**	**17 22 13.0**	**-1.5**
	comp=Z,300nm,1.0s,mb6.2						
KIS				*e*	pP	17 22 27.0	-2.9
KIS				*i*		17 25 22.0	
KIS				*i* S	S	17 32 08.0	+0.2
KIS				*e*		17 32 23.0	
KIS				*e*		17 32 33.0	
KIS				*e*PS	PS	17 32 50.0	-8.6
KIS				LR	LR		
	comp=Z,92µm,19.0s,MS7.1						
GIVF	**Givet**	**79.01**	**356**	⇑*i*P	**P**	**17 22 14.4**	**-0.1**
	comp=Z,375nm,1.1s,mb5.9						
GIVF	**Givet**	**79.01**	**356**	⇑*i*P	**P**	**17 22 14.4**	**-0.1**
GIVF				pmax	pmax		
	comp=Z,188nm,1.1s,mb5.9						
GRA1	**Grafenberg Arr**	**79.03**	**352**	*e*P	**P**	**17 22 14.9**	**+0.3**
GRA1				*e*S	S	17 32 11.2	+3.3
GRA1				*e*SS	SS	17 37 44.6	+27
GRA1				*e*		17 52 32.1	
GRA1				LR	LR		
	comp=Z,44µm,21.9s,MS6.8						
GRF	**Grafenberg Arr**	**79.03**	**352**	*e*P	**P**	**17 22 14.9**	**+0.3**
GRF				*e*S	S	17 32 11.2	+3.3
GRF				*e*SS	SS	17 37 44.6	+27
CGW	**Gweek**	**79.03**	**3**	⇑*e*P	**P**	**17 22 14.4**	**-0.2**
CMA1	**Manaccan**	**79.06**	**3**	⇑*e*P	**P**	**17 22 14.7**	**0.0**
TBI	**Tubuai**	**79.07**	**151**	*e*P	**P**	**17 21 58.0**	**-17**
	comp=Z,6µm,28.5s						
TBI				*e*S	S	17 32 12.7	+3.8
	comp=Z,76µm,33.8s						
TBI				*e*LR	LR	17 46 30.2	
	comp=Z,164µm,22.8s,baz=337						
BAIF	**Baives**	**79.08**	**357**	⇑*i*P	**P**	**17 22 15.0**	**+0.2**
	comp=Z,526nm,1.0s,mb6.1						
BAIF	**Baives**	**79.08**	**357**	⇑*i*P	**P**	**17 22 15.0**	**+0.2**
BAIF				pmax	pmax		
	comp=Z,263nm,1.0s,mb6.1						
CGH1	**Goonhilly**	**79.09**	**3**	⇑*i*P	**P**	**17 22 15.0**	**+0.1**
IAS	**Iasi**	**79.09**	**341**	P	**P**	**17 22 15.1**	**+0.1**
IAS	**Iasi**	**79.09**	**341**	⇑P	**P**	**17 22 15.5**	**+0.5**
ABH	**Alteburg**	**79.10**	**355**	⇑*e*P	**P**	**17 22 14.0**	**-1.0**
ABH	**Alteburg**	**79.10**	**355**	⇑*e*P	**P**	**17 22 15.0**	**0.0**
ONI	**Oni**	**79.11**	**329**	P	**P**	**17 22 14.1**	**-1.1**
KRUC	**Moravsky**	**79.11**	**349**	P	**P**	**17 22 14.8**	**-0.2**
KECS	**Kecovo**	**79.11**	**346**	*i* P	**P**	**17 22 15.4**	**+0.3**
DUS	**Dusheti**	**79.12**	**327**	P	**P**	**17 22 17.0**	**+1.8**
BURAR	**Bucovina Array**	**79.15**	**343**	P	**P**	**17 22 15.7**	**+0.4**
BURAR	**Bucovina Array**	**79.15**	**343**	⇓P	**P**	**17 22 16.1**	**+0.8**
JAVC	**Velka Javorina**	**79.15**	**348**	P	**P**	**17 22 16.4**	**+1.1**
IPM	**Ipoh**	**79.21**	**264**	P	**P**	**17 22 16.1**	**-0.2**
TOD	**Tromm**	**79.30**	**354**	⇑*e*P	**P**	**17 22 15.1**	**-0.9**
TOD	**Tromm**	**79.30**	**354**	⇑*e*P	**P**	**17 22 16.1**	**+0.1**
RUP	**Ruppelstein**	**79.31**	**355**	⇑*e*P	**P**	**17 22 15.3**	**-0.8**
RUP	**Ruppelstein**	**79.31**	**355**	⇑*e*P	**P**	**17 22 16.3**	**+0.2**
KOLL	**Kolacno**	**79.32**	**347**	*i* P	**P**	**17 22 16.7**	**+0.5**
VYHS	**Vyhne**	**79.35**	**347**	*i* P	**P**	**17 22 16.8**	**+0.5**
VYHS				*e*S	S	17 32 07.4	-3.9
VYHS	**Vyhne**	**79.35**	**347**	*i* P	**P**	**17 22 16.8**	**+0.5**
VYHS				*e*		17 25 02.6	
VYHS				*e*		17 32 07.4	
KHC	**Kasperske Hory**	**79.36**	**351**	⇑*i*P	**P**	**17 22 16.6**	**+0.2**
KHC				*e*		17 22 25.0	
KHC				*e*S	S	17 32 13.0	+1.6
KHC				*e*SS	SS	17 37 20.4	-1.8
KHC				MLR	MLR		
	comp=Z,62µm,20.1s,MS6.9						
KHC	**Kasperske Hory**	**79.36**	**351**	⇑*i*P	**P**	**17 22 16.6**	**+0.2**
KHC				*e*		17 22 19.5	
KHC				*e*		17 22 25.0	
KHC				*e*S	S	17 32 13.0	+1.6
KHC				*e*SS	SS	17 37 20.4	-1.8
KHC				LR	LR		
	comp=Z,62µm,20.1s,MS6.9						
KHC	**Kasperske Hory**	**79.36**	**351**	⇑*i*P	**P**	**17 22 16.6**	**+0.2**
KHC				x	x	17 22 19.5	
KHC				PCP	PcP	17 22 25.0	+0.3
KHC				*e*S	S	17 32 13.0	+1.6
KHC				*e*SS	SS	17 37 20.4	-1.8
KHC				AMS	AMS	18 00 10.0	
	comp=Z,62µm,20.1s						
SOC	**Sochi**	**79.38**	**331**	*c i*P	**P**	**17 22 16.6**	**0.0**
SOC				*e*S	S	17 32 14.6	+2.9
SOC				pmax	pmax		
	comp=Z,111nm,0.7s,mb5.9						
SOC				pmax	pmax		
	comp=N,27nm,0.9s						
SOC				pmax	pmax		
	comp=E,22nm,1.0s						
SOC				pmax	pmax		
	comp=Z,12µm,9.5s						
SOC				MLR	MLR		
	comp=N,47µm,18.0s,MS6.9						
SOC				MLR	MLR		
	comp=E,29µm,18.0s,MS6.9						
SOC				MLR	MLR		
	comp=Z,104µm,18.0s,MS7.2						
SOC	**Sochi**	**79.38**	**331**	⇑*i*P	**P**	**17 22 16.6**	**0.0**
	comp=Z,111nm,0.7s,mb5.9						
SOC				*e*S	S	17 32 14.6	+2.9
SOC				LR	LR		
	comp=Z,104µm,18.0s,MS7.2						
WLF	**Walferdange**	**79.39**	**356**	*e*P	**P**	**17 22 16.6**	**+0.1**
WLF				pmax	pmax		
	comp=Z,84nm,0.9s,mb5.7						
WLF	**Walferdange**	**79.39**	**356**	*e*P	**P**	**17 22 16.6**	**0.0**
	comp=Z,84nm,0.9s,mb5.7						
BHPL	**Bhopal**	**79.41**	**294**	*e*P	**P**	**17 22 17.0**	**-0.2**
BHPL				AMb	AMB	17 22 21.2	
	comp=Z,588nm,1.8s,mb6.2						
SWS	**Schriesheim**	**79.42**	**354**	P	**P**	**17 22 16.4**	**-0.3**
SWS	**Schriesheim**	**79.42**	**354**	⇑*e*P	**P**	**17 22 16.6**	**-0.1**
TI2	**Plekhanov**	**79.43**	**327**	α*i*P	**P**	**17 22 08.0**	**-8.9**
TI2				*i* S	S	17 32 10.4	-1.9
TI2				pmax	pmax		
	comp=Z,250nm,1.0s,mb6.1						
TI2				pmax	pmax		
	comp=Z,19µm,5.0s						
TI2				MLR	MLR		
	comp=N,22µm,25.0s,MS6.7						
TI2				MLR	MLR		
	comp=E,33µm,25.0s,MS6.7						
TI2				MLR	MLR		
	comp=Z,15µm,25.0s,MS6.2						
TBLG	**Delisi**	**79.43**	**327**	*i* Pcu	**P**	**17 22 08.0**	**-9.0**
	comp=Z,250nm,1.0s,mb6.1						
TBLG				*i* S	S	17 32 10.4	-2.0
TBLG				LR	LR		
	comp=Z,15µm,25.0s,MS6.2						
TBLG	**Delisi**	**79.43**	**327**	P	**P**	**17 22 17.9**	**+1.0**
MTA	**Mtatsminda**	**79.45**	**327**	P	**P**	**17 22 17.7**	**+0.7**
MTA				S	S	17 32 18.3	+5.8
DGRG	**David-gareji**	**79.46**	**327**	P	**P**	**17 22 17.7**	**+0.6**
DGRG				S		17 32 40.4	
SIND	**Sindeldorf**	**79.49**	**353**	P	**P**	**17 22 17.1**	**0.0**
SIND	**Sindeldorf**	**79.49**	**353**	⇑*e*P	**P**	**17 22 16.9**	**-0.2**
SMOL	**Smolenice**	**79.52**	**348**	*e*P	**P**	**17 22 17.9**	**+0.6**
BBSR	**BB Station**	**79.52**	**51**	*e*P	**P**	**17 22 16.8**	**-0.9**
	comp=Z,49nm,0.8s,mb5.5						
KTD	**Kalmit**	**79.63**	**354**	⇑*e*P	**P**	**17 22 17.9**	**+0.1**
KTD	**Kalmit**	**79.63**	**354**	*e*P	**P**	**17 22 17.8**	**0.0**
GEC2	**GERESS Array S**	**79.63**	**351**	*e*P	**P**	**17 22 17.8**	**-0.1**
GERES	**GERESS Array B**	**79.63**	**351**	P	**P**	**17 22 17.7**	**-0.1**
	comp=Z,23nm,0.7s,mb5.2,baz=23,slow=4.4,SNR=129						
GERES				PKKPbc		17 41 06.5	
	comp=Z,0.9nm,0.6s,baz=180,slow=2.7,SNR=8.5						
GERES				PKPPKP		17 49 06.9	
	comp=Z,1.0nm,0.7s,baz=180,slow=1.3,SNR=5.8						
GERES				LR	LR	18 01 05.2	
	comp=Z,72µm,21.2s,MS7.0,baz=8.3,slow=38						
SIM	**Simferopol’**	**79.68**	**336**	*c i*P	**P**	**17 22 18.1**	**-0.1**
SIM				*e*		17 25 20.0	
SIM				*e*S	S	17 32 17.5	+2.6
SIM				*e*SSS	SSS	17 40 44.0	-3.8
SIM				pmax	pmax		
	comp=Z,5µm,11.5s						
SIM				MLR	MLR		
	comp=Z,106µm,18.0s,MS7.2						
SIM	**Simferopol’**	**79.68**	**336**	⇑*i*P	**P**	**17 22 18.1**	**-0.1**
SIM				*e*		17 25 20.0	
SIM				*e*S	S	17 32 17.5	+2.6
SIM				*e*SSS	SSS	17 40 44.0	-3.8
SIM				LR	LR		
	comp=Z,106µm,18.0s,MS7.2						
PSZ	**Piszkesteto**	**79.75**	**346**	*e*P	**P**	**17 22 18.9**	**+0.4**
PSZ				pmax	pmax		
	comp=Z,128nm,1.1s,mb5.8						
PSZ	**Piszkesteto**	**79.75**	**346**	⇑*i*P	**P**	**17 22 19.6**	**+1.1**
KGM	**Kluang**	**79.77**	**260**	P	**P**	**17 22 19.7**	**+0.4**
ZST	**Bratislava**	**79.87**	**348**	*e*P	**P**	**17 22 20.0**	**+0.8**
ZST				*e*S	S	17 32 17.9	+1.1
VKA	**Vienna**	**79.90**	**349**	⇑*i*P	**P**	**17 22 19.2**	**-0.1**
VKA				pmax	pmax		
	comp=Z,10µm,8.5s						
VKA				MLR	MLR		
	comp=Z,16µm,19.0s,MS6.4						
VKA	**Vienna**	**79.90**	**349**	⇑*i*P	**P**	**17 22 19.2**	**-0.1**
	comp=Z,10µm,8.5s						
VKA				LR	LR		
	comp=Z,16µm,19.0s,MS6.4						
LANF	**Langenberg**	**79.98**	**354**	⇑*e*P	**P**	**17 22 19.7**	**0.0**
NGP	**Nagpur**	**80.08**	**291**	*e*P	**P**	**17 22 20.6**	**-0.2**
NGP				*e*S	S	17 32 22.7	+3.2
SRO	**Srobarova**	**80.08**	**347**	*e*P	**P**	**17 22 21.4**	**+1.1**
STU	**Stuttgart**	**80.10**	**353**	*e*P	**P**	**17 22 19.9**	**-0.5**
STU				pmax	pmax		
	comp=Z,68nm,0.8s,mb5.6						
STU	**Stuttgart**	**80.10**	**353**	*e*P	**P**	**17 22 19.9**	**-0.5**
	comp=Z,68nm,0.8s,mb5.6						
SRO1	**Iza**	**80.15**	**347**	*e*P	**P**	**17 22 21.3**	**+0.6**
VIS	**Vishakhapatnam**	**80.17**	**286**	*i* P	**P**	**17 22 19.4**	**-2.0**
VIS				*e*P		17 22 21.6	
VIS				AMb	AMB	17 22 26.1	
	comp=Z,290nm,1.5s,mb6.0						
HDH	**Heidenheim**	**80.21**	**353**	P	**P**	**17 22 21.1**	**+0.1**
HDH	**Heidenheim**	**80.21**	**353**	⇑*e*P	**P**	**17 22 21.0**	**0.0**
LBG	**Lerchenberg**	**80.23**	**354**	P	**P**	**17 22 21.6**	**+0.5**
LBG	**Lerchenberg**	**80.23**	**354**	⇑*e*P	**P**	**17 22 21.0**	**-0.1**
BUD	**Budapest**	**80.31**	**347**	⇑*e*P	**P**	**17 22 22.3**	**+0.8**
DRGR		**80.39**	**344**	P	**P**	**17 22 22.5**	**+0.5**
DRGR		**80.39**	**344**	⇑P	**P**	**17 22 22.7**	**+0.7**
BUCH	**Bad Urach**	**80.41**	**353**	P	**P**	**17 22 22.5**	**+0.5**
BUCH	**Bad Urach**	**80.41**	**353**	⇑*e*P	**P**	**17 22 22.3**	**+0.3**
SOP	**Sopron**	**80.45**	**348**	⇑*e*P	**P**	**17 22 23.1**	**+0.9**
SOP	**Sopron**	**80.45**	**348**	⇑*i*P	**P**	**17 22 23.1**	**+0.9**
FLN	**La Foliniere**	**80.45**	**360**	⇑*i*P	**P**	**17 22 22.0**	**-0.3**
	comp=Z,514nm,1.0s,mb6.1						
FLN				*e*R			
	comp=Z,45µm,19.8s						
FLN	**La Foliniere**	**80.45**	**360**	⇑*i*P	**P**	**17 22 22.0**	**-0.3**
FLN				pmax	pmax		
	comp=Z,257nm,1.0s,mb6.1						
FLN				MLR	MLR		
	comp=Z,45µm,19.8s,MS6.8						
PKSG		**80.49**	**347**	⇑*e*P	**P**	**17 22 23.2**	**+0.7**
VRI	**Vrincioaia**	**80.53**	**341**	P	**P**	**17 22 23.2**	**+0.5**
VRI	**Vrincioaia**	**80.53**	**341**	⇓P	**P**	**17 22 23.6**	**+0.9**
FUR	**Furstenfeldbru**	**80.53**	**352**	*e*P	**P**	**17 22 22.8**	**+0.1**
MOA	**Molln**	**80.55**	**350**	⇑*i*P	**P**	**17 22 23.0**	**+0.2**
	comp=Z,10µm,8.4s						
WLS	**Welschbruch**	**80.57**	**355**	⇑*e*P	**P**	**17 22 22.8**	**-0.1**
CDF	**Champ du Feu**	**80.58**	**355**	⇑*i*P	**P**	**17 22 22.7**	**-0.2**
	comp=Z,141nm,1.0s,mb5.6						
CDF	**Champ du Feu**	**80.58**	**355**	⇑*i*P	**P**	**17 22 22.7**	**-0.2**
CDF				pmax	pmax		
	comp=Z,71nm,1.0s,mb5.5						
BFO	**Black Forest**	**80.60**	**354**	*e*P	**P**	**17 22 22.9**	**-0.1**
BFO				*e*S	S	17 32 25.2	+0.8
BFO				*e*		17 52 27.3	
MEZF	**Maizieres J’vi**	**80.60**	**356**	⇑*i*P	**P**	**17 22 23.3**	**+0.3**
	comp=Z,463nm,1.2s,mb6.0						
LDF	**La Druitiere**	**80.62**	**360**	⇑*i*P	**P**	**17 22 22.8**	**-0.4**
	comp=Z,364nm,0.9s,mb6.0						
LDF	**La Druitiere**	**80.62**	**360**	⇑*i*P	**P**	**17 22 22.8**	**-0.4**
LDF				pmax	pmax		
	comp=Z,182nm,0.9s,mb6.0						
BCA	**Borcka**	**80.72**	**329**	*e*P	**P**	**17 22 23.4**	**-0.5**
TLCR		**80.73**	**339**	⇓P	**P**	**17 22 24.9**	**+1.1**
BRD	**Bordesti**	**80.76**	**341**	⇓*i*P	**P**	**17 22 26.9**	**+2.9**
BRD	**Bordesti**	**80.76**	**341**	⇓*i*P	**P**	**17 22 26.9**	**+2.9**
ECH	**Echery**	**80.78**	**355**	⇑*e*P	**P**	**17 22 23.7**	**-0.3**
SPAK	**Spaichingen**	**80.79**	**354**	⇑*e*P	**P**	**17 22 23.1**	**-1.0**
SPAK	**Spaichingen**	**80.79**	**354**	⇑*e*P	**P**	**17 22 24.5**	**+0.4**
GUT	**Gutenstein**	**80.80**	**353**	P	**P**	**17 22 24.7**	**+0.6**
GUT	**Gutenstein**	**80.80**	**353**	⇑*e*P	**P**	**17 22 24.0**	**-0.1**
LIBD	**Limburg**	**80.82**	**355**	⇑*e*P	**P**	**17 22 24.1**	**-0.1**
LIBD	**Limburg**	**80.82**	**355**	⇑*e*P	**P**	**17 22 24.5**	**+0.3**
GRR	**Gorron**	**80.83**	**0**	⇑*i*P	**P**	**17 22 24.2**	**-0.1**
	comp=Z,413nm,0.8s,mb6.1						
GRR	**Gorron**	**80.83**	**0**	⇑*i*P	**P**	**17 22 24.2**	**-0.1**
GRR				pmax	pmax		
	comp=Z,206nm,0.8s,mb6.1						
THEF	**They Montfort**	**80.83**	**356**	⇑*e*P	**P**	**17 22 24.4**	**+0.1**
GNI	**Garni**	**80.84**	**327**	*e*P	**P**	**17 22 25.3**	**+0.8**
GNI	**Garni**	**80.84**	**327**	*e*P	**P**	**17 22 25.7**	**+1.2**
GNI				pmax	pmax		
	comp=Z,128nm,0.8s						
GNI				MLR	MLR		
	comp=Z,69µm,20.0s						
GNI	**Garni**	**80.84**	**327**	P	**P**	**17 22 26.3**	**+1.8**
	comp=Z,65nm,0.9s,mb5.6,baz=354,slow=3.7,SNR=35						
GNI				LR	LR	18 03 41.1	
	comp=Z,110µm,18.4s,MS7.2,baz=29,slow=40						
ROSF	**Rostrenen**	**80.85**	**2**	⇑*i*P	**P**	**17 22 24.4**	**0.0**
	comp=Z,355nm,1.1s,mb5.9						
ROSF	**Rostrenen**	**80.85**	**2**	⇑*i*P	**P**	**17 22 24.4**	**0.0**
ROSF				pmax	pmax		
	comp=Z,177nm,1.1s,mb5.9						
CFR	**Carcaliu**	**80.89**	**340**	⇑*i*P	**P**	**17 22 24.5**	**-0.1**
SGMF	**Saint Gilles**	**80.95**	**1**	⇑*i*P	**P**	**17 22 25.0**	**+0.1**
	comp=Z,448nm,0.8s,mb6.1						
SGMF	**Saint Gilles**	**80.95**	**1**	⇑*i*P	**P**	**17 22 25.0**	**+0.1**
SGMF				pmax	pmax		
	comp=Z,224nm,0.8s,mb6.2						
KIZ	**Kirchzarten**	**81.00**	**354**	P	**P**	**17 22 25.4**	**+0.3**
KIZ	**Kirchzarten**	**81.00**	**354**	⇑*e*P	**P**	**17 22 24.8**	**-0.3**
ARSA	**Arzberg**	**81.00**	**349**	⇑*i*P	**P**	**17 22 25.9**	**+0.7**
	comp=Z,7µm,6.6s						
HAU	**Haudompre**	**81.04**	**355**	⇑*i*P	**P**	**17 22 25.3**	**-0.1**
	comp=Z,91nm,0.9s,mb5.4						
HAU				*e*R			
	comp=Z,45µm,22.4s						
HAU	**Haudompre**	**81.04**	**355**	⇑*i*P	**P**	**17 22 25.3**	**-0.1**
HAU				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.4						
HAU				MLR	MLR		
	comp=Z,45µm,22.4s,MS6.8						
MLR	**Muntele Rosu**	**81.04**	**341**	P	**P**	**17 22 26.1**	**+0.6**
MLR	**Muntele Rosu**	**81.04**	**341**	⇓*i*P	**P**	**17 22 26.6**	**+1.2**
MLR	**Muntele Rosu**	**81.04**	**341**	⇓*i*P	**P**	**17 22 26.6**	**+1.1**
FELD	**Feldberg**	**81.07**	**354**	⇑*e*P	**P**	**17 22 25.4**	**-0.1**
FELD	**Feldberg**	**81.07**	**354**	⇑*e*P	**P**	**17 22 25.5**	**0.0**
WB2	**Warramunga Arr**	**81.11**	**222**	*e*P	**P**	**17 22 25.9**	**-0.4**
WB2				*e*S	S	17 32 30.2	-0.1
UBR	**Uberruh**	**81.11**	**353**	P	**P**	**17 22 26.2**	**+0.4**
UBR	**Uberruh**	**81.11**	**353**	⇑*e*P	**P**	**17 22 25.9**	**+0.1**
WRA	**Warramunga Arr**	**81.12**	**222**	P	**P**	**17 22 25.7**	**-0.7**
	comp=Z,77nm,1.0s,mb5.6,baz=34,slow=5.6,SNR=45						
WRA				PKKPbc		17 41 04.0	
	comp=Z,2.7nm,0.7s,baz=228,slow=2.3,SNR=12						
WRA				PKPPKP		17 49 04.1	
	comp=Z,1.2nm,1.0s,baz=220,slow=1.5,SNR=5.0						
MOF	**Molkenrain**	**81.15**	**355**	⇑*e*P	**P**	**17 22 25.4**	**-0.5**
SLE	**Schleitheim**	**81.15**	**354**	⇑*i*P	**P**	**17 22 25.7**	**-0.2**
SISB	**Singen-Sch Ber**	**81.19**	**354**	P	**P**	**17 22 28.8**	**+2.6**
HINF	**Hinteralfeld**	**81.20**	**355**	⇑*i*P	**P**	**17 22 25.9**	**-0.3**
	comp=Z,74nm,0.9s,mb5.3						
HINF	**Hinteralfeld**	**81.20**	**355**	⇑*i*P	**P**	**17 22 25.9**	**-0.3**
HINF				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.3						
STEIN	**Stein am Rhein**	**81.22**	**354**	⇑*i*P	**P**	**17 22 26.3**	**0.0**
TRULL	**Truellikon**	**81.25**	**354**	⇑*i*P	**P**	**17 22 25.4**	**-1.1**
VOIR		**81.27**	**342**	⇑P	**P**	**17 22 27.9**	**+1.3**
QUIF	**Quistinic**	**81.27**	**2**	⇑*i*P	**P**	**17 22 26.6**	**0.0**
	comp=Z,601nm,1.5s,mb6.0						
QUIF	**Quistinic**	**81.27**	**2**	⇑*i*P	**P**	**17 22 26.6**	**0.0**
QUIF				pmax	pmax		
	comp=Z,301nm,1.5s,mb6.0						
PKS9	**Tamasi**	**81.29**	**347**	⇑*e*P	**P**	**17 22 26.8**	**+0.1**
WATA	**Walderalm**	**81.33**	**352**	⇑*i*P	**P**	**17 22 27.5**	**+0.6**
	comp=Z,120nm,1.1s,mb5.7						
WATA	**Walderalm**	**81.33**	**352**	⇑*i*P	**P**	**17 22 27.5**	**+0.6**
WATA				pmax	pmax		
	comp=Z,120nm,1.1s,mb5.7						
FLACH	**Flaach**	**81.34**	**354**	⇑*i*P	**P**	**17 22 26.9**	**0.0**
WEIN	**Weingarten**	**81.35**	**354**	⇑*i*P	**P**	**17 22 27.1**	**+0.1**
MOTA	**Moosalm**	**81.36**	**352**	⇑*i*P	**P**	**17 22 27.5**	**+0.4**
	comp=Z,186nm,1.3s,mb5.9						
MOTA	**Moosalm**	**81.36**	**352**	⇑*i*P	**P**	**17 22 27.5**	**+0.4**
MOTA				pmax	pmax		
	comp=Z,186nm,1.3s,mb5.9						
HARR	**Harsova**	**81.40**	**340**	⇓*i*P	**P**	**17 22 27.8**	**+0.5**
WTTA	**Wattenberg**	**81.40**	**352**	⇑*i*P	**P**	**17 22 28.0**	**+0.7**
	comp=Z,6µm,5.8s						
WTTA	**Wattenberg**	**81.40**	**352**	⇑*i*P	**P**	**17 22 28.0**	**+0.7**
WTTA				pmax	pmax		
	comp=Z,6µm,5.8s						
SULZ	**Sulz-Cheisache**	**81.41**	**354**	⇑*i*P	**P**	**17 22 27.3**	**0.0**
KBA	**Koelnbreinsper**	**81.41**	**350**	⇑*i*P	**P**	**17 22 28.4**	**+1.1**
	comp=Z,8µm,5.6s						
KBA	**Koelnbreinsper**	**81.41**	**350**	⇑*i*P	**P**	**17 22 28.4**	**+1.1**
KBA				pmax	pmax		
	comp=Z,8µm,5.6s						
WILA	**Wila**	**81.47**	**354**	⇑*i*P	**P**	**17 22 27.7**	**+0.1**
MTUR	**Matau**	**81.47**	**342**	⇑*i*P	**P**	**17 22 30.0**	**+2.3**
MTUR	**Matau**	**81.47**	**342**	⇑*i*P	**P**	**17 22 30.0**	**+2.3**
SQTA	**Sankt Quirin**	**81.48**	**352**	⇑*i*P	**P**	**17 22 28.4**	**+0.7**
	comp=Z,157nm,1.2s,mb5.8						
SQTA	**Sankt Quirin**	**81.48**	**352**	⇑*i*P	**P**	**17 22 28.4**	**+0.7**
SQTA				pmax	pmax		
	comp=Z,157nm,1.2s,mb5.8						
BBS	**Basel-Blauen**	**81.51**	**355**	⇑*e*P	**P**	**17 22 27.0**	**-0.8**
BBS	**Basel-Blauen**	**81.51**	**355**	⇑*e*P	**P**	**17 22 28.1**	**+0.3**
TIRR	**Tirgusor**	**81.51**	**339**	P	**P**	**17 22 28.3**	**+0.4**
DAVA	**Damuels**	**81.52**	**353**	⇑*i*P	**P**	**17 22 28.1**	**+0.2**
	comp=Z,7µm,7.1s						
ZUR	**Zurich**	**81.54**	**354**	⇑*i*P	**P**	**17 22 28.1**	**+0.1**
LIENZ	**Alp Oberkamor**	**81.54**	**353**	⇑*i*P	**P**	**17 22 28.3**	**+0.3**
BOURR	**Bourrignon**	**81.60**	**355**	⇑*i*P	**P**	**17 22 28.5**	**+0.2**
PKSM	**Moragy**	**81.61**	**347**	⇑*i*P	**P**	**17 22 28.1**	**-0.3**
BALST	**Balsthal**	**81.63**	**354**	⇑*i*P	**P**	**17 22 28.6**	**+0.1**
PERS	**Pernice**	**81.65**	**349**	*e*P	**P**	**17 22 29.1**	**+0.5**
LOMF	**Lomont**	**81.66**	**355**	⇑*e*P	**P**	**17 22 28.9**	**+0.3**
KOGS	**Kog**	**81.70**	**348**	*e*P	**P**	**17 22 29.0**	**+0.1**
BZS	**Buzias**	**81.72**	**344**	P	**P**	**17 22 29.2**	**+0.2**
BZS	**Buzias**	**81.72**	**344**	⇑P	**P**	**17 22 29.5**	**+0.5**
PLONS	**Plons**	**81.80**	**353**	⇑*i*P	**P**	**17 22 29.6**	**+0.3**
RHK1	**Bakonya**	**81.80**	**347**	⇓*i*P	**P**	**17 22 29.4**	**0.0**
OBKA	**Obir**	**81.84**	**350**	⇑*i*P	**P**	**17 22 30.1**	**+0.5**
	comp=Z,6µm,5.2s						
SEST	**Monte Rota**	**81.85**	**351**	P	**P**	**17 22 30.1**	**+0.5**
LOR	**Lormes**	**81.88**	**357**	⇑*i*P	**P**	**17 22 29.7**	**0.0**
	comp=Z,94nm,0.7s,mb5.5						
LOR				*e*R			
	comp=Z,45µm,19.8s						
LOR	**Lormes**	**81.88**	**357**	⇑*i*P	**P**	**17 22 29.7**	**0.0**
LOR				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.5						
LOR				MLR	MLR		
	comp=Z,45µm,19.8s,MS6.8						
HYF	**Humbligny**	**81.91**	**358**	⇑*i*P	**P**	**17 22 30.2**	**+0.3**
MUO	**Muotathal**	**81.93**	**354**	⇑*i*P	**P**	**17 22 30.5**	**+0.5**
FVI	**Forni Avoltri**	**81.95**	**351**	P	**P**	**17 22 30.0**	**-0.1**
LSR	**Lussari**	**81.99**	**350**	⇑*i*P	**P**	**17 22 30.0**	**-0.3**

CLDR	Caldiran	82.02	327	eP	P	17 22 32.3	+1.6
LLS	Linth-Limmern	82.03	353	⇑iP	P	17 22 31.0	+0.5
DAVOX	Davos	82.03	353	P	P	17 22 31.5	+1.0
DAVOX	Davos	82.03	353	⇑iP	P	17 22 31.4	+0.9
BNALP	Bannalp	82.04	354	⇑iP	P	17 22 31.0	+0.4
PTCC	Patocco-Chiusa	82.08	350	P	P	17 22 30.4	-0.4
BRANT	Les Verrieres	82.09	355	⇑iP	P	17 22 31.3	+0.4
SSF	Saint Saulge	82.09	357	⇑iP	P	17 22 30.8	-0.1
SSF				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.6						
SSF	Saint Saulge	82.09	357	⇑iP	P	17 22 30.8	-0.1
	comp=Z,59nm,0.8s,mb5.6						
BUC1	Bucharest	82.12	341	P	P	17 22 31.5	+0.4
FUORN	Ofenpass	82.16	353	P	P	17 22 32.3	+1.1
FUORN	Ofenpass	82.16	353	⇑iP	P	17 22 32.2	+1.0
HASLI	Hasliberg	82.17	354	⇑iP	P	17 22 31.7	+0.4
ERZM	Erzurum	82.19	329	i P	P	17 22 32.9	+1.4
EZM	Erzurum	82.20	329	eP	P	17 22 32.8	+1.2
GMNA	Gemona	82.22	350	P	P	17 22 31.2	-0.3
ROBS	Robic	82.22	350	eP	P	17 22 30.8	-0.7
TORNY	Torny	82.23	355	⇑iP	P	17 22 32.1	+0.5
BAD	Bernadia	82.26	350	⇑iP	P	17 22 31.0	-0.7
MPRI	Monte Prat	82.28	351	⇑eP	P	17 22 31.0	-0.8
BUA	Buia	82.29	350	⇓eP	P	17 22 32.0	+0.1
WIMIS	Wimmis	82.30	354	⇑iP	P	17 22 32.3	+0.4
PSN	Preselentsi	82.30	339	i P	P	17 22 34.5	+2.5
LJU	Ljubljana	82.31	349	eP	P	17 22 31.8	-0.2
LJU				eS	S	17 32 40.1	-1.9
LJU				eSKSac		17 32 49.3	
COLI	Coloredo	82.34	350	⇓eP	P	17 22 32.0	-0.2
VDL	Val di Lei	82.35	353	⇑iP	P	17 22 33.1	+0.9
AVF	Avril sur Loir	82.37	357	⇑iP	P	17 22 32.4	+0.1
	comp=Z,243nm,1.0s,mb5.8						
AVF	Avril sur Loir	82.37	357	⇑iP	P	17 22 32.4	+0.1
AVF				pmax	pmax		
	comp=Z,121nm,1.0s,mb5.8						
TUE	Stuetta	82.37	353	P	P	17 22 33.2	+0.9
BERNI	Berninapass	82.38	353	⇑iP	P	17 22 33.4	+1.0
VOY	Vojsko	82.39	350	eP	P	17 22 31.8	-0.6
VOY				e	pP	17 22 49.8	+1.9
MLNI	Malnisio	82.41	351	⇑eP	P	17 22 32.0	-0.5
CABF	La Chapelle	82.44	355	⇑iP	P	17 22 33.0	+0.3
	comp=Z,383nm,1.3s,mb5.9						
CABF	La Chapelle	82.44	355	⇑iP	P	17 22 33.0	+0.3
CABF				pmax	pmax		
	comp=Z,192nm,1.3s,mb5.9						
FUSIO	Fusio	82.44	354	⇑iP	P	17 22 33.5	+0.8
BZK	Bozkurt	82.50	335	eP	P	17 22 32.2	-0.9
SMF	Signal de Mont	82.50	357	⇑iP	P	17 22 33.1	+0.1
	comp=Z,390nm,1.0s,mb6.1						
SMF	Signal de Mont	82.50	357	⇑iP	P	17 22 33.1	+0.1
SMF				pmax	pmax		
	comp=Z,195nm,1.0s,mb6.1						
GIMEL	Gimel	82.51	355	⇑iP	P	17 22 33.6	+0.6
LCHF	La Chataignera	82.55	0	eP	P	17 22 34.3	+1.1
CAE	Caneva	82.57	351	⇑iP	P	17 22 33.0	-0.3
LKBD	Leukerbad	82.58	354	⇑P	P	17 22 34.1	+0.7
CTI	Castel Tesino	82.60	351	P	P	17 22 33.1	-0.4
MFF	Saint Martin d	82.61	360	⇑iP	P	17 22 33.8	+0.3
	comp=Z,309nm,0.9s,mb6.0						
MFF	Saint Martin d	82.61	360	⇑iP	P	17 22 33.8	+0.3
MFF				pmax	pmax		
	comp=Z,155nm,0.9s,mb6.0						
BGF	Bois d'Agland	82.62	358	⇑iP	P	17 22 33.7	+0.1
	comp=Z,209nm,1.1s,mb5.8						
BGF	Bois d'Agland	82.62	358	⇑iP	P	17 22 33.7	+0.1
BGF				pmax	pmax		
	comp=Z,104nm,1.1s,mb5.8						
SENIN	Lac Senin	82.62	355	⇑iP	P	17 22 34.4	+0.8
LRYF	La Roche-sur-Y	82.64	1	eP	P	17 22 34.0	+0.3
SISC	Sisak	82.64	348	i P	P	17 22 34.6	+0.9
AIGLE	Aigle	82.66	355	⇑iP	P	17 22 34.2	+0.4
BEO	Belgrade	82.69	345	⇑iP	P	17 22 34.2	+0.2
MABI	Malga Bissina	82.69	352	P	P	17 22 34.2	+0.2
	comp=Z,110nm,0.9s,mb5.9						
GRYON	Gryon	82.74	355	⇑iP	P	17 22 34.8	+0.6
TVAN	Van	82.75	327	i P	P	17 22 36.9	+2.5
BOJS	Bojanci	82.75	349	eP	P	17 22 34.5	+0.2
BOJS				eS	S	17 32 45.3	-1.2
BOJS				eSKSac		17 32 53.2	
BOYT	Boyabat	82.75	334	i P	P	17 22 35.5	+1.1
SALAN	Lac Salanfe	82.86	355	⇑iP	P	17 22 35.5	+0.7
MMK	Mattmark	82.89	354	P	P	17 22 36.3	+1.3
MMK	Mattmark	82.89	354	⇑iP	P	17 22 36.2	+1.2
DIX	Grande Dixence	82.90	354	P	P	17 22 36.5	+1.5
DIX	Grande Dixence	82.90	354	⇑iP	P	17 22 36.3	+1.3
TCF	Toulx Ste Croi	82.90	358	⇑iP	P	17 22 35.2	+0.2
	comp=Z,117nm,0.8s,mb5.6						
TCF	Toulx Ste Croi	82.90	358	⇑iP	P	17 22 35.2	+0.2
TCF				pmax	pmax		
	comp=Z,58nm,0.8s,mb5.7						
PRD	Provadia	82.93	340	i P	P	17 22 36.0	+0.8
EMV	Vieux Emosson	82.94	355	⇑iP	P	17 22 36.1	+0.9
MUGIO	Muggio	82.94	353	P	P	17 22 35.4	+0.2
MUGIO	Muggio	82.94	353	⇑iP	P	17 22 35.2	0.0
OG05	Jujurieux	83.04	356	eP	P	17 22 36.1	+0.4
BALT	Daday	83.06	335	i P	P	17 22 37.0	+1.1
SVIS	Svilajnac	83.07	344	⇑iP	P	17 22 36.0	+0.1
AGO	Saint Agoulin	83.11	357	eP	P	17 22 38.0	+1.9
SAL	Salo	83.14	352	P	P	17 22 36.4	+0.2
SZH	Strazhica	83.18	341	i P	P	17 22 37.0	+0.5
PLDF	La Plantade	83.18	357	eP	P	17 22 38.2	+1.8
OLEF	Ile d'Oleron	83.27	1	eP	P	17 22 37.4	+0.5
HYB	Hyderabad	83.27	289	⇑eP	P	17 22 37.0	-0.4
HYB				e	pP	17 22 56.0	+3.1
HYB				pmax	pmax		
	comp=Z,330nm,1.0s,mb6.3						
HYB	Hyderabad	83.27	289	⇑iP	P	17 22 37.0	-0.4
	comp=Z,330nm,1.0s,mb6.3						
HYB				e	pP	17 22 56.0	+3.1
HYB				eS	S	17 32 56.0	+3.7
HYB				LR	LR	17 50 20.0	
	comp=Z,70nm,18.0s						
ORX	Oropa	83.31	354	P	P	17 22 36.9	-0.1
TOKT	Tokat	83.31	332	eP	P	17 22 37.1	-0.1
ORO	Oropa	83.31	354	P	P	17 22 37.5	+0.4
RSL	Roselend	83.33	355	⇑eP	P	17 22 38.0	+0.8
PVL	Pavlikeni	83.35	341	i P	P	17 22 38.0	+0.7
TOS	Tosya	83.35	334	eP	P	17 22 38.4	+1.0
BOLS	Boljevac	83.39	344	⇓iP	P	17 22 37.4	-0.1
PYM	Petit Puy Mans	83.42	358	eP	P	17 22 39.2	+1.6
DIVS	Divcibare	83.46	345	⇓iP	P	17 22 38.3	+0.4
FITZ	Fitzroy Crossi	83.49	231	eS	S	17 32 55.8	+1.4
FITZ	Fitzroy Crossi	83.49	231	P	P	17 22 38.9	+0.4
	comp=Z,136nm,0.6s,mb6.2,baz=17,slow=4.6,SNR=69						
FITZ				LR	LR	18 01 41.7	
	comp=Z,24µm,18.8s,MS6.6,baz=72,slow=37						
FITZ	Fitzroy Crossi	83.49	231	⇑iP	P	17 22 38.9	+0.4
	comp=Z,162nm,0.9s,mb6.1						
FITZ				eS	S	17 32 55.8	+1.4
LPL	La Plagne	83.50	355	⇑iP	P	17 22 39.4	+1.4
	comp=Z,137nm,1.0s,mb5.6						
LPL	La Plagne	83.50	355	⇑iP	P	17 22 39.4	+1.4
LPL				pmax	pmax		
	comp=Z,68nm,1.0s,mb5.6						
LPG	La Plagne	83.52	355	⇑iP	P	17 22 39.7	+1.7
	comp=Z,257nm,1.2s,mb5.9						
LPG	La Plagne	83.52	355	⇑iP	P	17 22 39.7	+1.7
LPG				pmax	pmax		
	comp=Z,129nm,1.2s,mb5.9						
SAFT	Safranbolu	83.52	335	eP	P	17 22 38.2	0.0
CTKT	Corum	83.53	334	i P	P	17 22 40.8	+2.5
LSD	Ceresole Reale	83.53	355	P	P	17 22 39.6	+1.5
GRUS	Gruza	83.55	345	⇓iP	P	17 22 38.9	+0.6
BHV	Bhavnagar	83.58	297	eP	P	17 22 40.0	+1.1
COLF	Collangettes	83.63	357	eP	P	17 22 39.3	+0.7
LATR	Latur	83.67	291	eP	P	17 22 39.5	+0.1
BTMT	Batman	83.70	328	eP	P	17 22 40.3	+1.1
NVLJ	Novalja	83.72	349	i P	P	17 22 39.0	-0.1
BHJ	Bhuj	83.77	300	eP	P	17 22 39.8	-0.1
BHJ				eS	S	17 33 01.2	+4.1
BBLS	Bajina Basta -	83.78	346	⇓iP	P	17 22 40.2	+0.8
ZAPS	Zavoj/Pirot	83.79	343	⇑iP	P	17 22 39.4	-0.1
FRNF	Fournols	83.80	358	eP	P	17 22 40.3	+0.8
JMB	Yambol	83.81	340	P	P	17 22 40.7	+1.1
GRN	Grenoble	83.82	356	⇑eP	P	17 22 40.9	+1.3
RSP	Reno Superiore	83.83	354	P	P	17 22 39.6	0.0
GDM	Grand'Maison	83.84	355	⇑eP	P	17 22 41.1	+1.4
CANT	Cankiri	83.86	335	eP	P	17 22 41.6	+1.6
RJF	Les Rejaudoux	83.90	359	⇑iP	P	17 22 40.3	+0.3
	comp=Z,244nm,1.1s,mb6.0						
RJF				eR			
	comp=Z,59µm,21.5s						
RJF	Les Rejaudoux	83.90	359	⇑iP	P	17 22 40.3	+0.3
RJF				pmax	pmax		
	comp=Z,122nm,1.1s,mb5.9						
RJF				MLR	MLR		
	comp=Z,59µm,21.5s,MS6.9						
LBL	Lubilhac	83.93	357	eP	P	17 22 42.2	+2.1
RAVA	Ravarino	83.93	352	P	P	17 22 42.2	+2.0
BNI	Bardonecchia	83.96	355	eP	P	17 22 41.9	+1.6
BNI				pmax	pmax		
	comp=Z,122nm,0.8s,mb6.1						
BNI	Bardonecchia	83.96	355	eP	P	17 22 41.9	+1.6
	comp=Z,122nm,0.8s,mb6.1						
FENE	Fenestrelle	83.96	355	P	P	17 22 41.7	+1.4
CORM	Corum	83.99	334	eP	P	17 22 41.6	+1.1
MCJ	Malvern	84.00	69	⇑iP	P	17 22 42.5	+1.4
ELDT	Eldivan	84.03	335	i P	P	17 22 41.9	+1.2
BEST	Besiri	84.05	328	i P	P	17 22 42.6	+1.7
BOB	Bobbio (Coli)	84.06	353	P	P	17 22 42.1	+1.3
NVSS	Nova Varos 2	84.09	345	⇑iP	P	17 22 41.6	+0.7
RRL	Cesana Torines	84.09	355	P	P	17 22 42.9	+1.9
BHB	Bricherasio	84.14	354	P	P	17 22 41.7	+0.5
ORIF	Oris-en-Rattie	84.14	355	⇑iP	P	17 22 42.4	+1.2
	comp=Z,260nm,1.1s,mb6.0						
ORIF				eR			
	comp=Z,40µm,20.8s						
OG22	Abries	84.18	355	⇑eP	P	17 22 42.9	+1.5
PGB	Panagyurishte	84.22	342	i P	P	17 22 42.0	+0.3
ELZG	Elazig	84.24	330	i P	P	17 22 43.6	+1.8
VIVF	Saint-Julien-l	84.26	356	⇑iP	P	17 22 42.5	+0.7
	comp=Z,158nm,1.0s,mb5.8						
VIVF	Saint-Julien-l	84.26	356	⇑iP	P	17 22 42.5	+0.7
VIVF				pmax	pmax		
	comp=Z,79nm,1.0s,mb5.8						
CAF	Calviac	84.27	358	⇑iP	P	17 22 42.5	+0.7
	comp=Z,382nm,1.3s,mb6.1						
CAF	Calviac	84.27	358	⇑iP	P	17 22 42.5	+0.7
CAF				pmax	pmax		
	comp=Z,191nm,1.3s,mb6.1						
LFF	La Frestale	84.27	359	⇑iP	P	17 22 42.4	+0.5
	comp=Z,505nm,1.2s,mb6.2						
LFF	La Frestale	84.27	359	⇑iP	P	17 22 42.4	+0.5
LFF				pmax	pmax		
	comp=Z,253nm,1.2s,mb6.2						
MBDF	Montbardon	84.28	355	⇑iP	P	17 22 43.1	+1.2
	comp=Z,108nm,0.7s,mb5.8						
MBDF	Montbardon	84.28	355	⇑iP	P	17 22 43.1	+1.2
MBDF				pmax	pmax		
	comp=Z,54nm,0.7s,mb5.8						
GRAM		84.28	352	P	P	17 22 42.7	+0.8
PLE	Pljevlja	84.31	346	⇑iP	P	17 22 43.3	+1.2
SGKT	Sivrigoynuk	84.31	336	i P	P	17 22 43.1	+1.0
ZCCA	Zocca	84.35	352	P	P	17 22 44.5	+2.3
PCP	Pian Castagno	84.35	354	P	P	17 22 42.3	+0.1
EDRB	Edirne	84.37	340	eP	P	17 22 41.2	-1.2
VTS	Vitosha	84.37	343	i P	P	17 22 42.5	+0.1
VTS	Vitosha	84.37	343	P	P	17 22 42.8	+0.4
HENT	Hendek	84.37	337	i P	P	17 22 42.7	+0.2
GSCL	Gusciola	84.38	352	P	P	17 22 43.9	+1.5
DIY	Diyarbakir	84.39	329	eP	P	17 22 43.2	+0.6
STH	Stony Hill	84.40	68	⇑iP	P	17 22 44.2	+1.1
CODM		84.40	353	P	P	17 22 42.9	+0.3
VALM		84.41	352	P	P	17 22 43.0	+0.4
DIM	Dimitrovgrad	84.43	341	i P	P	17 22 43.0	+0.3
GWJ	Greenwich	84.45	68	⇑iP	P	17 22 44.7	+1.4
GENL	Genova Univers	84.46	353	P	P	17 22 42.2	-0.6
PCJ	Portland Cotta	84.46	69	⇑eP	P	17 22 44.5	+1.1
DOI	San Damiano	84.48	354	P	P	17 22 42.5	-0.4
DOI				pmax	pmax		
	comp=Z,282nm,2.2s,mb6.0						
DOI	San Damiano	84.48	354	P	P	17 22 42.5	-0.4
	comp=Z,282nm,2.2s,mb6.0						
PZZ	Prazzo	84.48	355	P	P	17 22 43.0	+0.1
BACM		84.50	352	P	P	17 22 43.6	+0.6
OCF	Saint Nazaire	84.51	356	⇑eP	P	17 22 44.5	+1.5
OG26	St.-Nazaire-De	84.51	356	⇑eP	P	17 22 44.5	+1.5
UPM	Unac-Piva	84.51	346	⇑iP	P	17 22 42.9	-0.2
FNVD	Fontana Vidola	84.51	352	P	P	17 22 44.7	+1.6
SURF	Saint Ours	84.53	355	⇑eP	P	17 22 45.2	+2.1
PLD	Plovdiv	84.55	341	P	P	17 22 43.5	+0.2
SARO	Sassorosso	84.56	352	P	P	17 22 44.1	+0.8
MYA	Malataya	84.57	330	eP	P	17 22 42.4	-1.2
CDAG	Cicekdag	84.57	334	i P	P	17 22 44.2	+0.7
ISK	Istanbul-Kandi	84.59	338	eP	P	17 22 42.1	-1.4
VLC	Villacollemand	84.59	352	P	P	17 22 43.9	+0.4
SEI	Scarperia	84.61	351	P	P	17 22 45.6	+2.0
RSM	Repubblica di	84.62	351	P	P	17 22 45.6	+2.0
VINC	Vinca	84.63	352	P	P	17 22 43.7	+0.1
ROB	Roburent	84.64	354	P	P	17 22 43.5	-0.2
BDI	Bagni Di Lucca	84.67	352	P	P	17 22 44.2	+0.3
HRT	Hereke	84.67	337	eP	P	17 22 44.0	0.0
IVA	Berane	84.67	345	⇑iP	P	17 22 44.4	+0.5
OG25	Le Caire	84.68	355	⇑eP	P	17 22 45.0	+1.1
VMG	Vicchio	84.68	351	P	P	17 22 45.3	+1.4
BR131	Keskin Array S	84.68	334	eP	P	17 22 44.5	+0.5
	comp=Z,94nm,0.8s,mb6.0						
SFI	Santa Sofia	84.71	351	P	P	17 22 45.7	+1.6
FIN	Finale Ligure	84.71	354	P	P	17 22 43.7	-0.4
YHJ	Yallahs	84.73	68	⇑eP	P	17 22 46.5	+1.7
STV2	Anna di Valdie	84.73	354	P	P	17 22 43.5	-0.7
STV	Sta Anna Valdi	84.73	354	P	P	17 22 43.6	-0.6
ENR	Entracque	84.74	354	P	P	17 22 43.5	-0.7
PGD	Poggio Sodo	84.75	351	P	P	17 22 46.2	+1.9
LOD	Lodumlu	84.77	335	eP	P	17 22 44.9	+0.4
ANTO	Ankara	84.78	335	eP	P	17 22 45.0	+0.5
ANTO	Ankara	84.78	335	P	P	17 22 45.4	+0.9
ANTO				PP	PP	17 26 03.4	+0.7
MAIM		84.82	352	P	P	17 22 44.3	-0.3
KDZ	Kurdzhali	84.84	341	i P	P	17 22 45.7	+0.9
BRY	Bratogost	84.86	346	⇑iP	P	17 22 44.8	-0.1
MONE	Monesi	84.87	354	P	P	17 22 45.1	+0.2
BNN	Bunyan	84.87	332	eP	P	17 22 45.8	+0.8
NKY	Niksic	84.88	346	⇑iP	P	17 22 43.7	-1.3
PVY	Plav	84.93	345	⇑iP	P	17 22 45.2	0.0
RZN	Rozhen	84.94	341	i P	P	17 22 37.0	-8.3
TOUF	Mont Tournerai	84.97	354	⇑eP	P	17 22 46.5	+1.2
AUTN	L'Aution	84.97	354	⇑eP	P	17 22 46.0	+0.6
SAOF	Saorge	84.97	354	⇑eP	P	17 22 45.9	+0.5
KAMT	Kaman	84.99	334	eP	P	17 22 45.8	+0.1
ARV	Arcevia	85.00	350	P	P	17 22 46.7	+1.2
PII	Pisa	85.01	352	P	P	17 22 45.4	-0.2
STON	Ston	85.01	347	i P	P	17 22 44.8	-0.8
IMI	Imperia	85.03	354	P	P	17 22 45.9	+0.2
STOF	St-Etienne Org	85.06	355	⇑eP	P	17 22 47.3	+1.5
BADI	Badiali	85.06	351	P	P	17 22 47.3	+1.5
LASF	Ste Croix	85.07	357	⇑iP	P	17 22 46.7	+0.9
	comp=Z,141nm,0.8s,mb5.8						
MVIF	Mont Vial	85.09	354	⇑eP	P	17 22 46.7	+0.7
CING	Cingoli	85.09	350	P	P	17 22 47.1	+1.1
KKB	Krupnik	85.09	343	i P	P	17 22 46.5	+0.5
SMRF	Simiane la Rot	85.09	356	⇑iP	P	17 22 47.5	+1.5
	comp=Z,347nm,0.9s,mb6.2						
NEGI	Negi	85.10	354	P	P	17 22 46.4	+0.3
SBF	Sospel	85.10	354	⇑iP	P	17 22 46.5	+0.5
	comp=Z,451nm,0.9s,mb6.3						
SBF	Sospel	85.10	354	⇑iP	P	17 22 46.5	+0.5
SBF				pmax	pmax		
	comp=Z,226nm,0.9s,mb6.3						
POO	Poona	85.16	294	eP	P	17 22 47.5	+0.6
POO				AMb	AMB	17 22 49.2	
	comp=Z,258nm,1.7s,mb6.1						
POO				i S	S	17 33 08.0	-2.9
TTG	Podgorica	85.21	345	⇑iP	P	17 22 45.7	-0.9
VILF	Villemus	85.21	355	⇑eP	P	17 22 48.4	+1.8
AVNT	Avonos	85.22	333	i P	P	17 22 47.1	+0.4
REVF	Revere	85.23	354	⇑eP	P	17 22 47.3	+0.6
MMB	Musomiste	85.23	342	i P	P	17 22 47.5	+0.8
SNTG	Esanatoglia	85.24	350	P	P	17 22 47.8	+1.1
CALN	Calern	85.25	355	⇑eP	P	17 22 47.7	+1.0
MURB	Monte Urbino	85.27	350	P	P	17 22 48.6	+1.7
PRAF	Pradon	85.28	356	⇑eP	P	17 22 48.8	+1.9
SKO	Skopje	85.29	344	⇑iP	P	17 22 47.8	+0.8
SKO				pmax	pmax		
	comp=Z,67nm,0.8s,mb5.8						
SKO	Skopje	85.29	344	⇑iP	P	17 22 47.8	+0.8
	comp=Z,0.1nm,0.8s						
HCY	Herceg Novi	85.31	346	⇑iP	P	17 22 46.7	-0.4
MRMT	Marmara Adasi	85.37	339	eP	P	17 22 45.5	-1.9
BUM	Brajici-Budva	85.39	346	⇑iP	P	17 22 47.5	0.0
ALN	Alexandroupoli	85.43	340	eP	P	17 22 48.0	+0.3
TAVF	Tavernes	85.43	355	⇑eP	P	17 22 49.3	+1.7
NVR	Nevrokopi	85.44	342	eP	P	17 22 48.4	+0.6
ULDT	Uludag	85.45	338	i P	P	17 22 48.5	+0.7
FRF	La Foret Royal	85.45	355	⇑iP	P	17 22 48.1	+0.3
TREF	Trevaresse	85.45	356	⇑eP	P	17 22 49.5	+1.7
ASS	Assisi	85.46	350	P	P	17 22 48.5	+0.7
BOM	Bombay	85.46	295	eP	P	17 22 50.2	+1.9
	comp=Z,609nm,1.1s,mb6.6						
BOM				ex	x	17 33 15.8	
BNT	Bandirma	85.53	339	eP	P	17 22 48.5	+0.2
PUYF	Puyloubier	85.53	355	⇑eP	P	17 22 49.5	+1.4
GRFL	Gerfalco	85.54	352	P	P	17 22 48.5	+0.3
JTS	JuntasAbangare	85.54	79	P	P	17 22 48.1	-0.8
JTS				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JTS	JuntasAbangare	85.54	79	P	P	17 22 48.1	-0.8
	comp=Z,7.7nm,0.6s,mb5.1,baz=338,slow=6.7,SNR=5.0						
JTS	JuntasAbangare	85.54	79	eP	P	17 22 48.5	-0.3
	comp=Z,12nm,0.4s,mb5.5						
ESKT	Eskisehir	85.61	336	eP	P	17 22 48.6	-0.1
ESKT	Eskisehir	85.61	336	i P	P	17 22 48.8	+0.2
NRCA	Norcia	85.63	350	P	P	17 22 49.9	+1.2
MDRS	Chennai	85.64	285	ex	x	17 22 48.0	
MDRS				ex	x	17 26 12.0	
ULC	Ulcinj	85.67	345	⇑iP	P	17 22 48.3	-0.6
LMR	La Mourre	85.69	355	⇑iP	P	17 22 49.5	+0.6
	comp=Z,310nm,1.0s,mb6.2						
LMR	La Mourre	85.69	355	⇑iP	P	17 22 49.5	+0.6
LMR				pmax	pmax		
	comp=Z,155nm,1.0s,mb6.2						
GELF	Grande-Etoile	85.69	356	⇑eP	P	17 22 50.6	+1.7
EPON	Pontenova	85.71	5	P	P	17 22 48.4	-0.7
	comp=Z,4µm,4.8s						
VAY	Valandovo	85.72	343	⇑iP	P	17 22 49.8	+0.7
VAY				i S	S	17 33 15.4	-0.4
VAY				i PS	PS	17 34 27.9	+6.2
SRS	Serrai	85.72	342	eP	P	17 22 48.8	-0.4
GZT	Gaziantep	85.73	330	i P	P	17 22 50.8	+1.5
BERF	Bertagne	85.75	355	⇑eP	P	17 22 50.8	+1.6
TERO	Teramo	85.79	350	P	P	17 22 50.1	+0.7
EARI	Arriondas	85.83	3	P	P	17 22 48.6	-1.0
	comp=Z,5µm,6.1s						
MTLF	Montolieu	85.85	358	⇑iP	P	17 22 50.3	+0.6
	comp=Z,261nm,1.2s,mb6.0						
MTLF	Montolieu	85.85	358	⇑iP	P	17 22 50.3	+0.6
MTLF				pmax	pmax		
	comp=Z,130nm,1.2s,mb6.0						
KAD	Karad	85.93	293	⇑iP	P	17 22 50.7	0.0
KIZT	Kizilcal	85.95	335	eP	P	17 22 49.9	-0.4
ELAN	Lanestosa	85.95	2	P	P	17 22 50.2	0.0
	comp=Z,4µm,4.8s						
OSSF	Osses	85.96	1	⇑eP	P	17 22 50.1	-0.1
EMAZ	Mazaricos	85.98	6	P	P	17 22 50.1	-0.3
	comp=Z,6µm,6.7s						
EALK	Alkurruntz	85.99	1	P	P	17 22 49.6	-0.8
	comp=Z,5µm,6.0s						
ORDF	Ordiarp	86.00	0	⇑eP	P	17 22 49.9	-0.6
GAZ	Gaziantep	86.01	331	eP	P	17 22 51.7	+1.1
CANB	Canakkale	86.05	339	eP	P	17 22 49.2	-1.6
SOH	Sokhos	86.05	342	eP	P	17 22 50.0	-0.7
ELIZ	Elizondo	86.05	1	P	P	17 22 50.5	-0.2
ELIZ				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.6						
ELIZ	Elizondo	86.05	1	P	P	17 22 50.5	-0.2
	comp=Z,45nm,1.1s,mb5.6						
STS	Santiago	86.07	6	P	P	17 22 50.6	-0.2
STS				pmax	pmax		
	comp=Z,107nm,1.1s,mb6.0						
STS	Santiago	86.07	6	P	P	17 22 50.6	-0.2
	comp=Z,107nm,1.1s,mb6.0						
AQU	L'Aquila	86.08	350	eP	P	17 22 51.1	+0.3
AQU				pmax	pmax		
	comp=Z,490nm,1.1s,mb6.7						
AQU	L'Aquila	86.08	350	eP	P	17 22 51.1	+0.3
	comp=Z,490nm,1.1s,mb6.7						
GRG	Griva	86.10	343	eP	P	17 22 52.2	+1.2
SJPF	Ste Jean	86.10	1	⇑iP	P	17 22 52.3	+1.4
	comp=Z,77nm,0.8s,mb5.7						
SJPF	Ste Jean	86.10	1	⇑iP	P	17 22 52.3	+1.4
SJPF				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.7						
MNS	Montasola	86.12	350	P	P	17 22 51.3	+0.2
REYF	Montagne du Re	86.15	360	⇑eP	P	17 22 51.1	-0.1
TIR	Tirane	86.17	345	P	P	17 22 52.0	+0.7
LABF	Labassere	86.17	360	⇑eP	P	17 22 50.8	-0.5
LARF	Larrau	86.18	0	⇑eP	P	17 22 51.8	+0.5
EPF	Esparros	86.18	359	⇑iP	P	17 22 51.3	-0.1
	comp=Z,105nm,1.0s,mb5.7						
EPF	Esparros	86.18	359	⇑iP	P	17 22 51.3	-0.1
EPF				pmax	pmax		
	comp=Z,52nm,1.0s,mb5.7						
FIAM	Fiamignano	86.19	350	P	P	17 22 52.6	+1.2
BALB	Balikesir	86.22	338	eP	P	17 22 51.1	-0.5
KDHN	Kadinhani	86.22	335	i P	P	17 22 51.6	-0.1
OHR	Ohrid	86.24	344	⇑iP	P	17 22 51.5	-0.2
LRDF	Laroque-de-Fa	86.24	358	⇑eP	P	17 22 52.7	+1.1
LPEF	Le Peyrat	86.25	358	⇑eP	P	17 22 52.2	+0.5
MLS	Moulis	86.25	359	⇑eP	P	17 22 52.0	+0.3
PGF	Pioggiola	86.30	353	⇑iP	P	17 22 52.6	+0.7
	comp=Z,414nm,0.9s,mb6.4						
PGF	Pioggiola	86.30	353	⇑iP	P	17 22 52.6	+0.7
PGF				pmax	pmax		
	comp=Z,207nm,0.9s,mb6.4						
THE	Thessaloniki	86.31	342	eP	P	17 22 50.9	-1.1
ETSF	Etsaut	86.32	0	⇑iP	P	17 22 52.9	+0.9
	comp=Z,424nm,1.4s,mb6.2						
ETSF	Etsaut	86.32	0	⇑iP	P	17 22 52.9	+0.9
ETSF				pmax	pmax		
	comp=Z,212nm,1.4s,mb6.2						
VIEF	Viey	86.33	360	⇑eP	P	17 22 52.9	+0.8
MELF	Melles	86.34	359	⇑eP	P	17 22 52.0	-0.1
INTR	Introdacqua	86.36	349	P	P	17 22 53.4	+1.2
GDZ	Gediz	86.36	337	i P	P	17 22 52.5	+0.2
OUR	Ouranopolis	86.40	341	eP	P	17 22 52.2	-0.3
FDAF	Les Forges d'A	86.40	0	⇑eP	P	17 22 53.0	+0.6
PTQR	Pietraquaria	86.41	350	P	P	17 22 53.4	+0.9
RESF	Ens	86.41	359	⇑eP	P	17 22 53.4	+0.9
SALF	Salau	86.45	359	⇑eP	P	17 22 52.5	-0.1
FNA	Florina	86.45	344	eP	P	17 22 52.2	-0.5
PLG	Polygyros	86.46	342	eP	P	17 22 52.1	-0.7
RGNG	Rignano Grg	86.48	348	P	P	17 22 53.5	+0.7
TOLF	Tolfa	86.51	351	P	P	17 22 53.5	+0.5
	comp=Z,697nm,2.9s,mb6.4						
CERT	Cerreto	86.52	350	P	P	17 22 53.7	+0.7
VVLD	Villa Vallelon	86.53	349	P	P	17 22 53.3	+0.2
EBIE	Bielsa	86.53	360	P	P	17 22 52.3	-0.7
	comp=Z,6µm,6.7s						
LIA	Limnos Island	86.57	340	eP	P	17 22 53.0	-0.3
CIGN	Sant'Elia a Pi	86.59	348	P	P	17 22 55.1	+1.7
ECRI	Cripan	86.59	1	P	P	17 22 53.5	+0.1
ECRI				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.8						
ECRI	Cripan	86.59	1	P	P	17 22 53.5	+0.2
	comp=Z,46nm,0.8s,mb5.8						
CII	Carovilli	86.59	349	eP	P	17 22 53.7	+0.3
	comp=Z,287nm,1.3s,mb6.3						
CEYT	Ceyhan	86.60	332	eP	P	17 22 53.8	+0.3
FILF	Fillols	86.62	358	⇑eP	P	17 22 54.1	+0.6
RNI2	Rionero Sannit	86.63	349	P	P	17 22 54.8	+1.2
ERUA	La Rua	86.65	5	P	P	17 22 53.1	-0.5
ERUA				pmax	pmax		
	comp=Z,71nm,1.0s,mb5.8						
ERUA	La Rua	86.65	5	P	P	17 22 53.1	-0.6
	comp=Z,71nm,1.0s,mb5.8						
SDI	San Donato	86.67	349	P	P	17 22 54.0	+0.2
MIDA	Miranda	86.68	349	P	P	17 22 55.2	+1.4
SJAF	Saint Jean de	86.69	357	⇑eP	P	17 22 54.2	+0.4
ROM9	Roma	86.69	350	P	P	17 22 55.7	+1.8
EJON	La Jonquera	86.72	357	P	P	17 22 52.9	-1.1
	comp=Z,3µm,5.3s						
VALF	Valcebollere	86.79	358	⇑eP	P	17 22 55.1	+0.8
EZAM	Zamans	86.80	6	P	P	17 22 54.2	-0.2
EZAM				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.7						
EZAM	Zamans	86.80	6	P	P	17 22 54.2	-0.2
	comp=Z,40nm,0.9s,mb5.7						
KZN	Kozani	86.85	343	eP	P	17 22 54.6	-0.1
PAIG	Paliouri	86.85	342	eP	P	17 22 54.0	-0.7
COBT	Iskenderun	86.90	331	i P	P	17 22 57.6	+2.5
FG5	Orsara di Pugl	86.91	348	P	P	17 22 56.2	+1.3
LIT	Litokhoron	86.91	343	eP	P	17 22 54.5	-0.5
PRK	Paraskevi	86.96	339	eP	P	17 22 54.7	-0.6
FG4	Candela	87.02	348	P	P	17 22 55.9	+0.4
PSB1	Pescosannita	87.02	348	P	P	17 22 56.3	+0.8
RFI	Roccamonfina	87.05	349	P	P	17 22 56.5	+0.9

MRB1	**Monte Rocchett**	**87.10**	**348**	P	**P**	**17 22 56.5**	**+0.6**
ELOB	**Lobios**	**87.12**	**6**	P	**P**	**17 22 54.7**	**-1.3**
	comp=Z,3µm,4.1s						
ECAL	**Calabor**	**87.12**	**5**	P	**P**	**17 22 55.2**	**-0.7**
	comp=Z,5µm,6.2s						
ANTT		**87.21**	**331**	*e*P	**P**	**17 22 56.5**	**-0.1**
ISP	**Isparta**	**87.28**	**336**	*e*P	**P**	**17 22 55.8**	**-1.1**
ISP	**Isparta**	**87.28**	**336**	*e*P	**P**	**17 22 57.6**	**+0.7**
ISP				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.8						
EMIR	**Miracle**	**87.29**	**358**	P	**P**	**17 22 55.7**	**-1.1**
	comp=Z,3µm,4.5s						
CSSN	**Cassano Irpino**	**87.35**	**348**	P	**P**	**17 22 57.0**	**-0.1**
LTRZ	**Laterza**	**87.36**	**347**	P	**P**	**17 22 57.6**	**+0.4**
LCI	**Lecce**	**87.44**	**346**	P	**P**	**17 22 57.9**	**+0.4**
MEV	**Metsovon**	**87.45**	**343**	*e*P	**P**	**17 22 58.9**	**+1.3**
MEST	**Erdemli**	**87.47**	**333**	*i* P	**P**	**17 22 57.8**	**0.0**
XOR	**Xorichti**	**87.49**	**342**	*e*P	**P**	**17 22 57.3**	**-0.5**
ESAC	**San Caprasio**	**87.50**	**360**	P	**P**	**17 22 58.4**	**+0.6**
	comp=Z,5µm,5.3s						
AOS	**Alonnisos**	**87.54**	**341**	*e*P	**P**	**17 22 58.3**	**+0.2**
NEO	**Neokhori**	**87.54**	**342**	*e*P	**P**	**17 22 57.0**	**-1.1**
ADH	**Angra Heroismo**	**87.54**	**21**	*e*P	**P**	**17 23 00.0**	**+1.9**
ADH	**Angra Heroismo**	**87.54**	**21**	*e*PP	PP	17 26 37.5	+12
ADH				*e*S	S	17 34 00.0	+27
ADH				*i* SS	SS	17 39 30.0	+7.0
ADH	**Angra Heroismo**	**87.54**	**21**	*i* LR	LR	17 52 15.0	
IZM	**Izmir**	**87.55**	**338**	*e*P	**P**	**17 22 57.2**	**-0.9**
HDMB	**Hadim**	**87.58**	**334**	*e*P	**P**	**17 22 56.2**	**-2.1**
SGO	**Sicignano**	**87.61**	**348**	P	**P**	**17 22 58.2**	**-0.2**
VENT	**Ventotene**	**87.61**	**349**	P	**P**	**17 22 59.1**	**+0.7**
JAN	**Janina**	**87.64**	**344**	*e*P	**P**	**17 22 59.1**	**+0.6**
PVRL	**Vila Real**	**87.73**	**5**	*e*P	**P**	**17 22 59.1**	**+0.2**
	comp=Z,87nm,1.0s,mb5.9						
SLCN	**Sala Consilina**	**87.74**	**348**	P	**P**	**17 22 59.2**	**+0.2**
KEK	**Kerkira**	**87.77**	**344**	P	**P**	**17 22 58.2**	**-0.9**
KEK	**Kerkira**	**87.77**	**344**	*e*P	**P**	**17 22 58.7**	**-0.5**
EPOB	**Poblet**	**87.85**	**359**	P	**P**	**17 22 59.2**	**-0.3**
	comp=Z,3µm,4.3s						
IGT	**Igoumenitsa**	**87.85**	**344**	*e*P	**P**	**17 22 59.3**	**-0.2**
ORI	**Oriolo Calabro**	**87.95**	**347**	P	**P**	**17 23 01.0**	**+1.0**
AGG	**Agios Georgios**	**87.99**	**342**	*e*P	**P**	**17 22 59.5**	**-0.7**
MGR	**Morigerati**	**88.00**	**348**	P	**P**	**17 22 59.9**	**-0.3**
GOLH	**Golhisar**	**88.10**	**336**	*i* P	**P**	**17 23 00.6**	**-0.2**
ANTB	**Antalya**	**88.13**	**335**	*e*P	**P**	**17 22 56.5**	**-4.5**
EVR	**Evrytania**	**88.19**	**343**	*e*P	**P**	**17 23 01.0**	**-0.2**
LKR	**Lokris**	**88.22**	**342**	*e*P	**P**	**17 22 59.8**	**-1.5**
RIV	**Riverview**	**88.23**	**203**	*e*P	**P**	**17 23 04.4**	**+2.9**
ERTA	**Horta de San J**	**88.26**	**359**	P	**P**	**17 23 01.6**	**+0.2**
	comp=Z,4µm,6.3s						
PVIS	**Viseu**	**88.27**	**6**	*i* P	**P**	**17 23 01.6**	**+0.1**
	comp=Z,87nm,1.4s,mb5.8						
SMG	**Samos**	**88.30**	**339**	*e*P	**P**	**17 23 01.6**	**-0.1**
EBR	**Ebro Roquetas**	**88.39**	**359**	*e*P	**P**	**17 22 59.0**	**-3.1**
BANOM	**Banah**	**88.43**	**311**	⇑P	**P**	**17 23 01.8**	**-0.8**
	SNR=44						
ELL	**Elmali**	**88.47**	**336**	*e*P	**P**	**17 23 02.5**	**-0.1**
MLSB	**Milas**	**88.48**	**338**	*e*P	**P**	**17 22 57.8**	**-4.8**
MPAR	**Parnis Oros**	**88.55**	**341**	*e*P	**P**	**17 23 02.8**	**-0.1**
LKD	**Levkas**	**88.60**	**344**	*e*P	**P**	**17 23 02.5**	**-0.6**
MTE	**Manteigas**	**88.61**	**5**	*i* P	**P**	**17 23 03.3**	**+0.2**
	comp=Z,101nm,0.9s,mb6.2						
MTE	**Manteigas**	**88.61**	**5**	*e*PP	PP	17 26 33.2	-1.2
MTE				*e*S	S	17 33 45.1	+1.9
MTE				*e*SS	SS	17 39 51.1	+13
MTE				*e*LQ		17 48 51.9	
MTE				*e*LR	LR	17 52 20.8	
	comp=Z,29µm,20.0s						
MTE	**Manteigas**	**88.61**	**5**	*e*P	**P**	**17 23 02.7**	**-0.4**
	comp=Z,71nm,0.9s,mb6.0						
ATH	**Athens Observa**	**88.73**	**341**	*e*P	**P**	**17 23 01.6**	**-2.2**
PDA	**Ponta Delgada**	**88.75**	**20**	*i* P	**P**	**17 23 08.5**	**+4.6**
PDA	**Ponta Delgada**	**88.75**	**20**	*e*PP	PP	17 26 32.0	-3.6
PDA				*i* S	S	17 33 55.4	+11
PDA				*e*		17 34 00.5	
PDA				*i* SS	SS	17 39 38.0	-2.5
PDA				*i* LQ		17 47 44.0	
PDA				*i* LR	LR	17 51 06.0	
DALT	**Dalyan (Mudla)**	**88.77**	**337**	*e*P	**P**	**17 23 03.0**	**-0.9**
TIP	**Timpagrande**	**88.77**	**347**	P	**P**	**17 23 04.4**	**+0.5**
	comp=Z,2µm,5.4s						
FETY	**Fethiye**	**88.79**	**337**	*e*P	**P**	**17 23 03.0**	**-1.0**
BODT	**Bodrum**	**88.81**	**338**	*e*P	**P**	**17 22 58.9**	**-5.3**
EMOS	**Mosqueruela**	**88.85**	**360**	P	**P**	**17 23 03.0**	**-1.3**
	comp=Z,5µm,7.8s						
FKH	**Fakeheh**	**88.97**	**330**	*e*P	**P**	**17 23 05.7**	**+0.7**
PHNC	**Paralimni**	**88.97**	**332**	P	**P**	**17 23 05.4**	**+0.4**
MNGI	**Mangalore**	**89.00**	**289**	*i* P	**P**	**17 23 05.2**	**-0.3**
MNGI				*i* S	S	17 33 31.7	-16
MBWA	**Marble Bar**	**89.01**	**234**	*e*P	**P**	**17 23 04.5**	**-0.9**
	comp=Z,88nm,1.2s,mb6.0						
AKAS	**Kas**	**89.03**	**336**	*i* P	**P**	**17 23 04.6**	**-0.6**
RLS	**Riolos of Patr**	**89.08**	**343**	*e*P	**P**	**17 23 05.4**	**0.0**
VLS	**Valsamata**	**89.13**	**344**	*e*P	**P**	**17 23 05.1**	**-0.5**
STKA	**Stephens Creek**	**89.17**	**212**	*e*S	S	17 33 45.9	-2.7
STKA	**Stephens Creek**	**89.17**	**212**	P	**P**	**17 23 07.0**	**+1.1**
	comp=Z,104nm,1.1s,mb6.1,baz=12,slow=3.8,SNR=26						
STKA				PKKPbc		17 40 44.7	
	comp=Z,3.7nm,0.9s,baz=223,slow=4.5,SNR=5.6						
STKA				LR	LR	18 01 30.4	
	comp=Z,52µm,19.7s,MS7.0,baz=18,slow=34						
STKA	**Stephens Creek**	**89.17**	**212**	⇑*i*P	**P**	**17 23 06.9**	**+0.9**
	comp=Z,74nm,1.1s,mb5.9						
STKA				*e*S	S	17 33 45.9	-2.7
GRI	**Girifalco**	**89.17**	**347**	P	**P**	**17 23 05.7**	**-0.1**
PCBR	**Castelo Branco**	**89.17**	**5**	*i* P	**P**	**17 23 05.5**	**-0.3**
	comp=Z,75nm,1.6s,mb5.8						
APE	**Apeiranthos**	**89.21**	**339**	*e*P	**P**	**17 23 00.5**	**-5.5**
CSS	**Prodhromos**	**89.22**	**333**	⇑P	**P**	**17 23 06.0**	**-0.1**
	comp=Z,0.9nm,0.8s						
CSS	**Prodhromos**	**89.22**	**333**	⇑*e*P	**P**	**17 23 06.0**	**-0.1**
ALFC	**Alevga**	**89.24**	**333**	⇑P	**P**	**17 23 06.2**	**-0.1**
	comp=Z,3.8nm,0.8s						
ALFC	**Alevga**	**89.24**	**333**	⇑*e*P	**P**	**17 23 06.2**	**-0.1**
VSL	**Villasalto**	**89.30**	**352**	*e*P	**P**	**17 23 05.5**	**-0.9**
	comp=Z,52nm,0.9s,mb5.9						
PTOM	**Tomar**	**89.33**	**6**	*e*P	**P**	**17 23 06.2**	**-0.4**
	comp=Z,117nm,0.9s,mb6.2						
PTOM	**Tomar**	**89.33**	**6**	*e*PP	PP	17 26 40.0	-0.2
ETOS	**Mallorca**	**89.40**	**357**	P	**P**	**17 23 06.2**	**-0.6**
	comp=Z,3µm,5.8s						
ARG	**Arkhangelos**	**89.42**	**337**	P	**P**	**17 23 08.3**	**+1.2**
ARG	**Arkhangelos**	**89.42**	**337**	*e*P	**P**	**17 23 06.6**	**-0.5**
ESDC	**Sonseca Array**	**89.49**	**3**	P	**P**	**17 23 07.1**	**-0.2**
	comp=Z,19nm,0.8s,mb5.5,baz=356,slow=4.2,SNR=50						
ESDC				PKKPbc		17 40 41.9	
	comp=Z,1.6nm,0.7s,baz=162,slow=2.5,SNR=5.6						
ESDC	**Sonseca Array**	**89.49**	**3**	P	**P**	**17 23 05.7**	**-1.6**
	comp=Z,16nm,0.8s,mb5.4						
BHL	**Bhannes**	**89.51**	**331**	*e*P	**P**	**17 23 07.0**	**-0.5**
PPCY	**Paphos**	**89.57**	**334**	P	**P**	**17 23 07.4**	**-0.4**
ASHO	**Ashiyiah**	**89.59**	**311**	P	**P**	**17 23 08.0**	**-0.2**
	SNR=46						
PAB	**San Pablo**	**89.61**	**3**	P	**P**	**17 23 07.5**	**-0.3**
ECHE	**Chera**	**89.62**	**0**	P	**P**	**17 23 07.8**	**-0.1**
ECHE				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.2						
ECHE	**Chera**	**89.62**	**0**	P	**P**	**17 23 07.8**	**-0.1**
	comp=Z,9.1nm,0.7s,mb5.2						
ITM	**Ithomi**	**89.85**	**342**	*e*P	**P**	**17 23 08.1**	**-1.0**
PALK	**Pallekele**	**89.86**	**281**	*e*P	**P**	**17 23 09.8**	**+0.2**
	comp=Z,220nm,1.6s,mb6.2						
PALK				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
WBK	**Wadi Bani Khal**	**89.91**	**307**	P	**P**	**17 23 11.0**	**+1.3**
	SNR=17						
HOQ	**Hoqain**	**89.92**	**309**	P	**P**	**17 23 09.8**	**+0.2**
	SNR=22						
SOI	**Samo**	**89.96**	**347**	P	**P**	**17 23 08.0**	**-1.5**
SOI				pmax	pmax		
	comp=Z,602nm,3.9s						
SOI	**Samo**	**89.96**	**347**	P	**P**	**17 23 08.0**	**-1.5**
	comp=Z,602nm,3.9s						
SMDO	**Samad**	**89.99**	**308**	P	**P**	**17 23 10.8**	**+0.8**
	SNR=20						
PLOU	**Loures**	**90.01**	**7**	*e*P	**P**	**17 23 10.8**	**+1.0**
	comp=Z,124nm,1.0s,mb6.2						
PLOU	**Loures**	**90.01**	**7**	*e*PP	PP	17 26 43.1	-2.5
MTTG	**Motta San Giov**	**90.08**	**347**	P	**P**	**17 23 11.3**	**+1.2**
CNB	**Canberra Magne**	**90.09**	**204**	*e*P	**P**	**17 23 11.8**	**+1.5**
	comp=Z,101nm,1.1s,mb6.1						
VLI	**Veliai**	**90.10**	**341**	*e*P	**P**	**17 23 08.0**	**-2.2**
LIS	**Lisbon**	**90.18**	**7**	*e*P	**P**	**17 23 11.0**	**+0.5**
LIS				*e*SS	SS	17 39 58.4	-3.0
LIS				*e*SS	SS	17 40 00.2	-1.1
LIS				AMS	AMS	18 01 01.3	
	comp=Z,42µm,23.1s,MS6.8						
EBAD	**Badajoz**	**90.28**	**5**	P	**P**	**17 23 09.3**	**-1.7**
	comp=Z,2µm,4.9s						
SJG	**San Juan**	**90.40**	**60**	*e*P	**P**	**17 23 12.4**	**+0.3**
SJG				pmax	pmax		
	comp=Z,349nm,1.2s						
SJG	**San Juan**	**90.40**	**60**	*e*P	**P**	**17 23 12.4**	**+0.4**
	comp=Z,349nm,1.2s,mb6.6						
ERC	**Erice**	**90.43**	**350**	P	**P**	**17 23 13.4**	**+1.6**
EVO	**Evora**	**90.44**	**6**	⇑*i*P	**P**	**17 23 11.3**	**-0.5**
	comp=Z,104nm,1.2s,mb5.7						
EVO				*e*R			
	comp=Z,36µm,21.0s						
KYTH	**Kithira**	**90.50**	**341**	*e*P	**P**	**17 23 13.0**	**+0.9**
ARQ	**Araqi**	**90.51**	**310**	P	**P**	**17 23 13.1**	**+0.6**
	SNR=52						
EBEN	**Beniarda**	**90.51**	**360**	P	**P**	**17 23 12.8**	**+0.7**
	comp=Z,4µm,7.2s						
JMDO	**Jabal Madar**	**90.54**	**308**	P	**P**	**17 23 13.3**	**+0.6**
	SNR=47						
EVIA	**Vianos**	**90.56**	**2**	P	**P**	**17 23 12.6**	**+0.2**
EVIA				pmax	pmax		
	comp=Z,55nm,1.0s,mb5.8						
EVIA	**Vianos**	**90.56**	**2**	P	**P**	**17 23 12.6**	**+0.2**
	comp=Z,55nm,1.0s,mb5.8						
ETOB	**Tobarra**	**90.56**	**1**	P	**P**	**17 23 12.2**	**-0.2**
	comp=Z,2µm,4.0s						
PAYG	**Puerto Ayora**	**90.67**	**90**	P	**P**	**17 23 15.7**	**+2.2**
PAYG				SKSac		17 33 46.2	
PAYG				ScS	ScS	17 34 13.4	+8.2
PAYG	**Puerto Ayora**	**90.67**	**90**	*e*P	**P**	**17 23 14.8**	**+1.3**
	comp=Z,297nm,1.4s,mb6.4						
BSY	**Bisya**	**90.68**	**309**	P	**P**	**17 23 14.0**	**+0.7**
	SNR=15						
ASF	**Jabal al Asfar**	**90.71**	**329**	P	**P**	**17 23 13.8**	**+0.6**
	comp=Z,43nm,0.8s,mb5.8,baz=270,slow=2.3,SNR=54						
ASF				PP	PP	17 26 52.4	+1.0
	comp=Z,16nm,1.0s,baz=7.2,slow=0.9,SNR=5.5						
NPS	**Neapolis**	**90.92**	**339**	*e*P	**P**	**17 23 12.1**	**-2.1**
PBEJ	**Beja**	**90.95**	**6**	*i* P	**P**	**17 23 13.9**	**-0.3**
	comp=Z,76nm,1.5s,mb5.8						
PBEJ	**Beja**	**90.95**	**6**	*e*PP	PP	17 26 51.5	-1.7
EADA	**Adamuz**	**90.97**	**3**	P	**P**	**17 23 12.5**	**-1.8**
	comp=Z,2µm,5.7s						
ECAB	**El Cabril**	**91.03**	**4**	P	**P**	**17 23 12.4**	**-2.1**
	comp=Z,3µm,6.3s						
VAM	**Vamos**	**91.10**	**340**	*e*P	**P**	**17 23 14.2**	**-0.8**
TRD	**Trivandrum**	**91.19**	**285**	*e*P	**P**	**17 23 16.6**	**+0.7**
XRY	**Khrisi**	**91.28**	**339**	*e*P	**P**	**17 23 15.0**	**-0.8**
EMIN	**Mina Concepcio**	**91.28**	**5**	P	**P**	**17 23 13.9**	**-1.9**
	comp=Z,2µm,5.0s						
EMUR	**La Murta**	**91.37**	**1**	P	**P**	**17 23 16.1**	**-0.1**
	comp=Z,2µm,6.0s						
PTEO	**Sao Teotonio**	**91.37**	**7**	*e*P	**P**	**17 23 16.0**	**-0.2**
	comp=Z,93nm,1.5s,mb5.9						
PTEO	**Sao Teotonio**	**91.37**	**7**	*e*PP	PP	17 26 54.6	-2.0
EQES	**Quesada**	**91.38**	**2**	P	**P**	**17 23 14.8**	**-1.4**
	comp=Z,3µm,6.1s						
EGRO	**El Granado**	**91.47**	**6**	P	**P**	**17 23 14.4**	**-2.2**
	comp=Z,1µm,3.6s						
PALC	**Alcoutim**	**91.53**	**6**	*i* P	**P**	**17 23 16.8**	**-0.1**
	comp=Z,96nm,1.4s,mb5.9						
PALC	**Alcoutim**	**91.53**	**6**	*e*PP	PP	17 26 54.5	-3.4
ELUQ	**Luque**	**91.59**	**3**	P	**P**	**17 23 17.0**	**-0.2**
ELUQ				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.6						
ELUQ	**Luque**	**91.59**	**3**	P	**P**	**17 23 17.0**	**-0.2**
	comp=Z,36nm,1.2s,mb5.6						
GVD	**Gavdhos**	**91.67**	**340**	*e*P	**P**	**17 23 16.8**	**-0.8**
	comp=Z,57nm,0.9s,mb5.9						
ELOJ	**Sierra Loja**	**92.00**	**3**	P	**P**	**17 23 19.0**	**-0.1**
ELOJ				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.7						
ELOJ	**Sierra Loja**	**92.00**	**3**	P	**P**	**17 23 19.0**	**-0.1**
	comp=Z,39nm,1.0s,mb5.7						
ERON	**Agron**	**92.14**	**3**	P	**P**	**17 23 19.7**	**0.0**
	comp=Z,7.7nm,0.7s,mb5.1						
ESPR	**Espera**	**92.22**	**4**	P	**P**	**17 23 18.9**	**-1.2**
	comp=Z,1µm,4.5s						
EBER	**Berja**	**92.29**	**2**	P	**P**	**17 23 19.7**	**-0.7**
	comp=Z,2µm,7.1s						
CMAH	**Djebel Manchou**	**92.31**	**354**	P	**P**	**17 23 21.0**	**+0.5**
DFRA	**Djebel Bou Aff**	**92.48**	**355**	P	**P**	**17 23 22.0**	**+0.7**
EMIJ	**Mijas**	**92.56**	**3**	P	**P**	**17 23 20.2**	**-1.5**
	comp=Z,2µm,4.8s						
ABSA	**Djebel Ababsia**	**92.65**	**354**	P	**P**	**17 23 22.0**	**-0.1**
CASM	**Ain Smara**	**92.73**	**354**	P	**P**	**17 23 22.0**	**-0.5**
SET	**Setif**	**92.85**	**355**	P	**P**	**17 23 26.0**	**+3.0**
CKHR	**Kef el Ahmar**	**93.03**	**355**	P	**P**	**17 23 25.0**	**+1.2**
CPB	**Codrington**	**93.11**	**57**	*e*P	**P**	**17 23 26.4**	**+1.8**
TOO	**Toolangi**	**93.26**	**206**	*e*P	**P**	**17 23 26.8**	**+2.0**
TOO				*e*S	S	17 34 36.0	+11
TOO				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.4						
TOO	**Toolangi**	**93.26**	**206**	*e*P	**P**	**17 23 26.8**	**+2.0**
	comp=Z,14nm,0.9s,mb5.4						
TOO				*e*S	S	17 34 36.0	+11
BPA	**Boggy Peak**	**93.59**	**57**	*e*P	**P**	**17 23 27.8**	**+1.1**
EIL	**Elat**	**93.65**	**330**	*e*P	**P**	**17 23 27.4**	**+0.6**
	comp=Z,75nm,1.6s,mb5.9						
RPZ	**Rata Peaks**	**94.78**	**186**	P	**P**	**17 23 32.9**	**+1.3**
	comp=Z,8.4nm,0.8s,mb5.2,baz=16,slow=14,SNR=2.9						
SDV	**Santo Domingo**	**95.30**	**69**	P	**P**	**17 23 35.9**	**+1.2**
	comp=Z,29nm,0.8s,mb5.7,baz=318,slow=2.4,SNR=22						
SDV	**Santo Domingo**	**95.30**	**69**	*e*P	**P**	**17 23 35.3**	**+0.6**
	comp=Z,34nm,0.8s,mb5.8						
ROSC	**El Rosal**	**96.29**	**74**	P	**P**	**17 23 41.3**	**+2.2**
	comp=Z,2.5nm,0.3s,mb5.1,baz=102,slow=23,SNR=6.2						
ROSC				LR	LR	18 13 07.9	
	comp=Z,11µm,18.8s,MS6.4,baz=355,slow=39						
WHFO	**Wadi Hawf**	**96.45**	**309**	P	**P**	**17 23 40.6**	**+0.9**
	SNR=9.0						
OTAV	**Otavalo**	**97.38**	**80**	*e*P	**P**	**17 23 45.0**	**+0.9**
	comp=Z,55nm,1.6s,mb5.7						
NWAO	**Narrogin (SRO)**	**100.00**	**229**	P	P	17 23 57.8	+2.2
	comp=Z,30nm,1.1s,baz=41,slow=3.7,SNR=4.5						
NWAO				PKKPbc		17 40 15.0	
	comp=Z,5.6nm,0.5s,baz=222,slow=5.0,SNR=13						
NWAO	**Narrogin (SRO)**	**100.00**	**229**	P	P	17 23 57.8	+2.2
NWAO				PKKPbc		17 40 15.0	
SAML	**Samuel**	**113.94**	**74**	*e*PKP	PKPdf	17 28 49.8	+1.5
SAML				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
LPAZ	**La Paz**	**116.54**	**83**	PKP	PKPdf	17 28 57.2	+4.0
	comp=Z,3.9nm,0.7s,baz=46,slow=2.8,SNR=10						
LPAZ				PKKPab		17 39 30.3	
	comp=Z,5.2nm,0.9s,baz=172,slow=4.8,SNR=4.8						
LPAZ	**La Paz**	**116.54**	**83**	*e*PKP	PKPdf	17 28 55.3	+2.0
SIV	**San Ignacio**	**120.69**	**77**	PKP	PKPdf	17 29 02.9	+1.5
	comp=Z,8.7nm,0.5s,baz=281,slow=2.7,SNR=38						
SIV				PKKPab		17 39 10.1	
	comp=Z,3.9nm,0.9s,baz=154,slow=5.4,SNR=5.1						
SIV				SKKPbc		17 43 01.6	
	comp=Z,3.7nm,1.1s,baz=156,slow=7.0,SNR=3.1						
DRV	**Dumont d'Urvil**	**121.26**	**197**	Pdif	Pdif	17 25 36.0	+7.5
DRV	**Dumont d'Urvil**	**121.26**	**197**	PP	PP	17 30 41.0	+4.3
DRV				SKS	SKS	17 36 00.0	+5.6
DRV				SP	SP	17 40 29.0	+10
DBIC	**Dimbokro**	**122.28**	**5**	PKP	PKPdf	17 29 06.4	+1.9
	comp=Z,26nm,0.5s,baz=354,slow=2.5,SNR=43						
DBIC				SKKPbc		17 42 58.4	
	comp=Z,15nm,1.1s,baz=265,slow=14,SNR=3.9						
DBIC	**Dimbokro**	**122.28**	**5**	*e*PKP	PKPdf	17 29 05.4	+0.9
MBAR	**Mbarara**	**123.12**	**322**	*e*PKIKP	PKPdf	17 29 06.6	+0.4
MBAR				MLR	MLR		
	comp=Z,6µm,21.0s,MS6.2						
RCBR	**Riachuelo**	**126.09**	**45**	PFAKE		17 29 20.0	+8.1
RCBR				LR	LR		
	comp=Z,26µm,22.0s,MS6.9						
CFAA	**Coronel Fontan**	**127.51**	**96**	PKP	PKPdf	17 29 17.6	+3.4
	comp=Z,2.6nm,0.6s,baz=299,slow=2.4,SNR=36						
CFAA				SKPbc		17 32 36.6	
	comp=Z,1.7nm,0.7s,baz=289,slow=1.6,SNR=3.3						
CFAA				SKKPbc		17 42 23.6	
	comp=Z,0.2nm,0.5s,baz=171,slow=2.7,SNR=3.4						
JATB	**Jatai**	**127.94**	**70**	*e*P	PKPdf	17 29 15.3	0.0
JATB				*e*		17 29 17.2	
JATB				*i*		17 29 19.8	
JATB				*i*		17 29 20.9	
JATB				*i*		17 29 29.5	
JATB				*e*		17 29 34.0	
JATB				*e*		17 29 36.1	
JATB				*i* I		17 30 10.4	
JATB				*e*		17 30 46.2	
JATB				*e*		17 31 19.4	
MDZ	**Mendoza**	**127.98**	**97**	*e*P	PKPdf	17 29 19.6	+4.5
MDZ				*e*		17 30 35.5	
BDFB	**Brasilia**	**128.17**	**65**	PKP	PKPdf	17 29 18.0	+2.2
	comp=Z,18nm,0.8s,baz=274,slow=1.4,SNR=17						
BDFB				SKPbc		17 32 38.4	
	comp=Z,7.3nm,0.7s,baz=217,slow=2.5,SNR=2.4						
BAO	**Brasilia Array**	**128.18**	**65**	P	PKPdf	17 29 18.0	+2.2
CASY	**Casey**	**128.24**	**209**	*e*P	PKPdf	17 29 16.5	+1.9
VNDA	**Vanda**	**128.88**	**185**	PKP	PKPdf	17 29 17.8	+2.1
	comp=Z,4.1nm,0.5s,baz=329,slow=2.4,SNR=14						
VNDA				SKPbc		17 32 37.3	
	comp=Z,8.9nm,1.0s,baz=349,slow=2.6,SNR=4.5						
VNDA				SKKPbc		17 42 23.0	
	comp=Z,3.8nm,0.9s,baz=306,slow=4.4,SNR=3.1						
VNDA	**Vanda**	**128.88**	**185**	*e*PKP	PKPdf	17 29 16.6	+1.0
SBA	**Scott Base**	**128.99**	**183**	PKIKP	PKPdf	17 29 18.1	+2.3
SBA	**Scott Base**	**128.99**	**183**	*e*PKP	PKPdf	17 29 17.1	+1.3
OPO	**Ambohidratompo**	**130.38**	**293**	PKP	PKPdf	17 29 22.6	+2.7
	comp=Z,19nm,1.0s,baz=342,slow=1.6,SNR=12						
OPO				SKPbc		17 32 44.9	
	comp=Z,5.2nm,0.8s,baz=32,slow=5.5,SNR=3.8						
CPUP	**Villa Florida**	**130.70**	**82**	PKPdf	PKPdf	17 29 22.0	+1.6
CPUP				SKPbc		17 32 41.3	
CPUP	**Villa Florida**	**130.70**	**82**	SKPbc		17 32 44.5	
	comp=Z,22nm,1.0s,baz=314,slow=5.5,SNR=7.8						
CPUP	**Villa Florida**	**130.70**	**82**	*e*PKP	PKPdf	17 29 22.1	+1.7
PLCA	**Paso Flores**	**131.94**	**106**	PKIKP	PKPdf	17 29 25.2	+2.8
PLCA				pmax	pmax		
	comp=Z,17nm,0.6s						
PLCA				pmax	pmax		
	comp=N,34nm,1.1s						
PLCA	**Paso Flores**	**131.94**	**106**	PKP	PKPdf	17 29 25.2	+2.9
	comp=N,17nm,0.6s,baz=304,slow=2.3,SNR=16						
PLCA				SKPbc		17 32 48.9	
	comp=N,34nm,1.1s,baz=322,slow=4.8,SNR=10						
PLCA	**Paso Flores**	**131.94**	**106**	*e*PKP	PKPdf	17 29 24.0	+1.7
MIR	**Mirnyy**	**134.14**	**214**	*d i*PKIKP	PKPdf	17 29 26.2	+0.4
MIR				pmax	pmax		
	comp=Z,82nm,1.2s						
TRQA	**Tornquist**	**135.59**	**98**	*e*PKP	PKPdf	17 29 30.1	+0.9
LPA	**La Plata**	**136.16**	**91**	*ce*PKP	PKPdf	17 29 30.0	-0.3
LPA				*e*PP	PP	17 32 11.0	-3.3
LPA				*e*SKP		17 33 02.0	
LPA				SKIKP		17 33 06.0	
LPA				*e*SKS	SKS	17 36 43.0	+9.3
LPA				*e*SKKS		17 39 00.0	
LPA				*e*SKKS		17 42 45.0	
	comp=Z,26µm,19.0s						
CAM4	**Nova Friburgo**	**136.61**	**64**	*i*	PKPdf	17 29 33.6	+2.2
LSZ	**Lusaka**	**137.43**	**317**	*e*PKHKP		17 29 25.0	
USHA	**Ushuaia**	**140.41**	**123**	PKP	PKPdf	17 29 40.4	+2.9
	comp=Z,12nm,0.7s,baz=160,slow=0.3,SNR=7.1						
QSPA	**South Pole Qui**	**140.91**	**180**	*e*P	PKPdf	17 29 36.3	-1.3
MATP	**Matopo**	**141.81**	**313**	PKhKP		17 29 37.5	
	comp=Z,27nm,0.8s,baz=43,slow=2.8,SNR=20						
MATP				PKP	PKPdf	17 29 41.8	+0.9
	comp=Z,25nm,0.7s,baz=23,slow=2.4,SNR=30						
MATP				SKPbc		17 33 20.9	
	comp=Z,52nm,1.2s,baz=75,slow=5.0,SNR=4.8						
TSUM	**Tsumeb**	**145.04**	**329**	PKP	PKPdf	17 29 48.2	+1.8
	comp=Z,334nm,0.9s,baz=2.3,slow=4.5,SNR=154						
TSUM	**Tsumeb**	**145.04**	**329**	*e*PKP	PKPdf	17 29 47.6	+1.1
TSUM				LR	LR		
	comp=Z,28µm,22.0s,MS7.0						
PMSA	**Palmer Station**	**145.31**	**138**	*e*PKP	PKPdf	17 29 46.9	+1.3
MAW	**Mawson**	**145.65**	**217**	⇑*i*P	PKPdf	17 29 47.9	+1.8
	comp=Z,122nm,1.0s						
MAW	**Mawson**	**145.65**	**217**	PKPbc	PKPbc	17 29 48.1	+1.2
	comp=Z,207nm,1.2s,baz=79,slow=3.3,SNR=36						
LBTB	**Lobatse**	**147.10**	**313**	PKPbc	PKPdf	17 29 54.7	+4.9
	comp=Z,383nm,0.8s,baz=45,slow=2.0,SNR=81						
LBTB	**Lobatse**	**147.10**	**313**	*e*PKPdf	PKPdf	17 29 51.7	+1.8
BOSA	**Boshof**	**150.30**	**309**	PKIKP	PKPdf	17 29 56.8	+2.0
BOSA						17 30 03.3	
BOSA	**Boshof**	**150.30**	**309**	PKPbc	PKPdf	17 30 03.3	+8.4
	comp=Z,190nm,0.8s,baz=33,slow=2.2,SNR=62						
BOSA	**Boshof**	**150.30**	**309**	PKPdf	PKPdf	17 29 56.8	+1.9
BOSA				*e*PKPbc	PKPdf	17 30 01.9	+7.1
BOSA				PKPbc	PKPdf	17 30 03.3	+8.4
SYO	**Syowa Base**	**153.92**	**212**	⇑PKiKP		17 30 10.5	
SUR	**Sutherland**	**155.55**	**312**	PKPab	PKPab	17 30 32.3	+1.6
	comp=Z,57nm,0.8s,baz=6.9,slow=4.3,SNR=13						
SUR	**Sutherland**	**155.55**	**312**	PKP	PKPdf	17 30 02.5	+0.4
SUR				PKPab	PKPab	17 30 32.3	+1.6
SNAA	**Sanae**	**159.39**	**178**	⇑*i*	PKPdf	17 30 07.2	+1.4
SNAA	**Sanae**	**159.39**	**178**		PKPdf	17 30 22.8	+17
SNAA	**Sanae**	**159.39**	**178**		PKPab	17 30 46.4	+0.4
SNAA	**Sanae**	**159.39**	**178**	PKP	PKPdf	17 30 06.6	+0.9
	comp=Z,5.7nm,1.1s,baz=101,slow=0.9,SNR=11						
SNAA				PKPab	PKPab	17 30 48.0	+2.0
	comp=Z,4.0nm,0.9s,baz=0.5,slow=4.9,SNR=3.6						
SNAA	**Sanae**	**159.39**	**178**	⇑*i*P	PKPdf	17 30 07.2	+1.4
SNAA				P		17 30 22.8	
VNA3	**Neumayer Olymp**	**159.42**	**172**		PKPdf	17 30 23.8	+18
VNA3	**Neumayer Olymp**	**159.42**	**172**		PKPdf	17 30 28.6	+23
VNA3	**Neumayer Olymp**	**159.42**	**172**	P	PKPdf	17 30 07.2	+1.4
VNA3				P		17 30 23.8	
VNA3				P		17 30 28.6	
MAIT	**Maitri**	**159.53**	**192**	*e*P	PKPdf	17 30 08.2	+2.3
VNA2	**Neumayer--Watz**	**159.92**	**173**	⇑*i*	PKPdf	17 30 24.2	+18
VNA2	**Neumayer--Watz**	**159.92**	**173**		PKPdf	17 30 33.0	+27
VNA2	**Neumayer--Watz**	**159.92**	**173**		PKPab	17 30 48.0	-0.3
VNA2	**Neumayer--Watz**	**159.92**	**173**	P	PKPdf	17 30 08.5	+2.1
VNA2				⇑*i*P		17 30 24.2	
VNA2				P		17 30 33.0	
VNA1	**Neumayer--Stat**	**160.12**	**172**		PKPdf	17 30 24.7	+18
VNA1	**Neumayer--Stat**	**160.12**	**172**	⇑*i*P	PKPdf	17 30 08.3	+1.7
VNA1				P		17 30 24.7	
TRIS	**Tristan da Cun**	**163.59**	**35**	PFAKE		17 30 20.0	+8.9
TRIS				LR	LR		
	comp=Z,17µm,20.0s						

NEIC ***14*** *17:13:51.0±1.5, 32.55S×178.74W, h43^{km}±13^{km}, mb5.1/6, Error ellipse: s-maj=14.6km s-min=11.2km az=102.0*

IDC ***14*** *17:13:51.4±1.9, 32.58S×178.86W, h41^{km}±16^{km}, mb4.6/9, mb1 4.6/12, mb1mx4.5/20, mbtmp4.8/12, ML4.3/2, MS5.2/3, Ms1 5.2/3, ms1mx4.8/30, Error ellipse: s-maj=17.5km s-min=10.5km az=109.0*

ISC 14 17:13:44.9±1.7**, 32.72S**±0.04×**178.95W**±0.10**, h1**^{km}±11^{km}**, n73, σ**0^{s}**86**/56**, mb4.9**/10**, 21C-2D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.57**	**15**	P	**Pn**	**17 14 42.8**	**+0.2**
	202nm,0.3s,baz=253,slow=22,SNR=8.6						
RAO				S	**Sn**	**17 15 21.2**	**-4.8**
	624nm,0.3s,baz=90,slow=21,SNR=4.1						
RAO				LR	LR	17 15 54.9	
	comp=Z,5µm,21.6s,baz=187,slow=36						
MXZ	**Matakaoa Point**	**5.33**	**204**	PN	**Pn**	**17 15 06.8**	**-0.6**
MXZ				SN	**Sn**	**17 16 10.4**	**+0.2**
PUZ	**Puketiti**	**5.80**	**202**	PN	**Pn**	**17 15 13.2**	**-0.9**
PUZ				SN	**Sn**	**17 16 22.3**	**0.0**
MWZ	**Matawai**	**6.29**	**206**	PN	**Pn**	**17 15 19.8**	**-1.3**
MWZ				SN	**Sn**	**17 16 34.3**	**-0.2**
URZ	**Urewera**	**6.39**	**209**	P	**Pn**	**17 15 24.1**	**+1.7**
	23nm,0.3s,baz=343,slow=1.0,SNR=42						
URZ				S	**Sn**	**17 16 38.0**	**+1.0**
	47nm,0.3s,baz=160,slow=21,SNR=9.0						
URZ	**Urewera**	**6.39**	**209**	PN	**Pn**	**17 15 21.7**	**-0.7**
URZ				SN	**Sn**	**17 16 37.8**	**+0.9**
OUZ	**Omahuta**	**6.67**	**246**	PN	**Pn**	**17 15 32.0**	**+5.6**
KNZ	**Kokohu**	**6.85**	**203**	PN	**Pn**	**17 15 28.1**	**-0.8**
KNZ				SN	**Sn**	**17 16 48.2**	**-0.4**
BKZ	**Black Stump Fm**	**7.42**	**209**	PN	**Pn**	**17 15 36.0**	**-0.8**
HIZ	**Hauiti**	**7.67**	**219**	PN	**Pn**	**17 15 40.9**	**+0.5**
TUVZ	**Tukino**	**7.86**	**212**	PN	**Pn**	**17 15 43.5**	**+0.4**
MOVZ	**Moawhango**	**7.93**	**211**	PN	**Pn**	**17 15 44.2**	**+0.2**
WNVZ	**Wahianoa**	**7.93**	**212**	PN	**Pn**	**17 15 44.1**	**0.0**
PWZ	**Pawanui**	**8.03**	**204**	PN	**P**	**17 15 45.0**	**-0.5**
VRZ	**Vera Road**	**8.17**	**217**	PN	**P**	**17 15 48.7**	**+1.3**
WAZ	**Wanganui**	**8.55**	**213**	PN	**P**	**17 15 53.9**	**+1.1**
BFZ	**Birch Farm**	**8.83**	**205**	PN	**P**	**17 15 57.4**	**+0.9**
RPZ	**Rata Peaks**	**13.48**	**213**	P	**P**	**17 16 54.4**	**-5.4**
	1.2nm,0.3s,baz=232,slow=1.7,SNR=10						
RPZ				S	**S**	**17 19 25.4**	**-6.0**
	6.4nm,0.3s,baz=285,slow=16,SNR=6.4						
DZM	**Mont Dzumac**	**16.74**	**306**	*e*P	**P**	**17 17 48.1**	**+5.9**
DZM	**Mont Dzumac**	**16.74**	**306**	P	**P**	**17 17 43.1**	**+0.9**
	0.3nm,0.3s,baz=122,slow=17,SNR=7.7						

DZM				LR	LR	17 22 56.6	
	comp=Z,7µm,18.1s,baz=114,slow=33						
DZM	**Mont Dzumac**	**16.74**	**306**	P	**P**	**17 17 43.1**	**+0.9**
DZM				*e*P		17 17 48.1	
DZM				LR	LR	17 22 56.6	
NOUC	**Port Laguerre**	**16.82**	**305**	*e*P	**P**	**17 17 49.4**	**+6.3**
NOUC	**Port Laguerre**	**16.82**	**305**	*e*P	**P**	**17 17 49.4**	**+6.3**
AFI	**Afiamalu**	**19.84**	**21**	*e*Pn	**P**	**17 18 14.7**	**-5.4**
	45nm,0.9s						
HNR	**Honiara**	**30.29**	**315**	P	**P**	**17 19 59.7**	**-0.2**
	58nm,0.7s,mb5.5,baz=149,slow=6.8,SNR=5.8						
STKA	**Stephens Creek**	**33.23**	**261**	P	**P**	**17 20 26.1**	**+0.5**
	2.9nm,0.5s,mb4.5,baz=104,slow=10.0,SNR=9.5						
CTA	**Charters Tower**	**33.46**	**283**	⇑*i*P	**P**	**17 20 29.1**	**+1.5**
	19nm,0.4s,mb5.4						
CTA	**Charters Tower**	**33.46**	**283**	P	**P**	**17 20 28.2**	**+0.6**
	22nm,0.5s,mb5.3,baz=110,slow=10,SNR=84						
CTAO	**Charters Tower**	**33.46**	**283**	*e*P	**P**	**17 20 29.1**	**+1.4**
	22nm,0.6s,mb5.3						
WB2	**Warramunga Arr**	**43.42**	**275**	*e*P	**P**	**17 21 50.7**	**-0.3**
WRAB	**Tennant Creek**	**43.43**	**275**	⇑*e*P	**P**	**17 21 50.6**	**-0.4**
	56nm,0.8s,mb5.3						
WRA	**Warramunga Arr**	**43.43**	**275**	P	**P**	**17 21 50.5**	**-0.6**
	22nm,0.4s,mb5.2,baz=116,slow=7.7,SNR=86						
VNDA	**Vanda**	**45.71**	**186**	P	**P**	**17 22 10.2**	**+1.5**
	2.2nm,0.7s,mb4.3,baz=15,slow=5.3,SNR=13						
FITZ	**Fitzroy Crossi**	**51.59**	**272**	P	**P**	**17 22 54.5**	**-0.5**
	291nm,0.9s,baz=5.0,slow=4.7,SNR=12						
CASY	**Casey**	**52.72**	**209**	*e*P	**P**	**17 23 01.6**	**-1.2**
NWAO	**Narrogin (SRO)**	**52.85**	**251**	P	**P**	**17 23 02.3**	**-2.0**
	12nm,1.1s,mb4.7,baz=194,slow=6.1,SNR=6.0						
NWAO	**Narrogin (SRO)**	**52.85**	**251**	*e*P	**P**	**17 23 01.7**	**-2.6**
	6.1nm,0.8s,mb4.6						
MAW	**Mawson**	**69.85**	**201**	P	**P**	**17 24 58.2**	**-0.5**
	5.4nm,0.7s,mb4.8,baz=114,slow=7.1,SNR=7.4						
SYO	**Syowa Base**	**74.67**	**193**	⇓P	**P**	**17 25 24.5**	**-2.6**
SYO	**Syowa Base**	**74.67**	**193**	⇓P	**P**	**17 25 29.5**	**+2.4**
SNAA	**Sanae**	**75.86**	**179**	⇑*i*	**P**	**17 25 33.5**	**-0.4**
SNAA	**Sanae**	**75.86**	**179**	⇑*i*	pP	17 25 38.1	+3.8
SNAA	**Sanae**	**75.86**	**179**	⇑*i*	PcP	17 25 50.8	+4.0
SNAA	**Sanae**	**75.86**	**179**	P	**P**	**17 25 33.6**	**-0.3**
	5.1nm,0.9s,mb4.7,baz=208,slow=5.3,SNR=29						
SNAA	**Sanae**	**75.86**	**179**	⇑*e*P	**P**	**17 25 33.5**	**-0.4**
	11nm,0.7s,mb5.1						
SNAA				*e*		17 25 38.3	
VNA3	**Neumayer Olymp**	**76.05**	**176**	⇑*i*	pP	17 25 40.1	+4.7
VNA3	**Neumayer Olymp**	**76.05**	**176**	⇑*i*	PcP	17 25 51.7	+4.1
VNA3	**Neumayer Olymp**	**76.05**	**176**	⇑*i*P	**P**	**17 25 34.8**	**-0.1**
VNA3				⇑*i*P		17 25 40.1	
VNA3				⇑*i*P		17 25 51.7	
VNA3				⇑*i*P		17 26 04.2	
VNA2	**Neumayer--Watz**	**76.47**	**177**	⇑*i*	pP	17 25 42.5	+4.8
VNA2	**Neumayer--Watz**	**76.47**	**177**	⇑*i*	PcP	17 25 53.0	+3.6
VNA2	**Neumayer--Watz**	**76.47**	**177**	⇑*i*P	**P**	**17 25 37.7**	**+0.4**
VNA2				⇑*i*P		17 25 42.5	
VNA2				⇑*i*P		17 25 53.0	
VNA2				⇑*i*P		17 26 06.9	
VNA1	**Neumayer--Stat**	**76.70**	**177**	⇑*i*	pP	17 25 44.8	+5.7
VNA1	**Neumayer--Stat**	**76.70**	**177**	⇑*i*P	**P**	**17 25 39.4**	**+0.8**
VNA1				⇑*i*P		17 25 44.8	
JOW	**Kunigami**	**77.64**	**313**	LR	LR	17 54 24.5	
	comp=Z,13µm,19.2s,baz=302,slow=31						
PLCA	**Paso Flores**	**81.52**	**133**	P	**P**	**17 26 05.9**	**+0.6**
	1.5nm,0.7s,mb4.2,baz=329,slow=22,SNR=3.1						
CFAA	**Coronel Fontan**	**88.50**	**127**	P	**P**	**17 26 40.3**	**-0.1**
	0.1nm,0.4s,baz=218,slow=12,SNR=2.6						
MKAR	**Makanchi Array**	**118.63**	**309**	PKP	PKPdf	17 32 32.8	-3.7
	0.9nm,0.4s,baz=207,slow=0.9,SNR=10						
BVAR	**Borovoye Array**	**127.48**	**315**	PKP	PKPdf	17 32 50.5	-2.8
	2.3nm,0.4s,baz=124,slow=2.2,SNR=22						
SUMG	**Summit**	**135.15**	**16**	*e*PKPdf	PKPdf	17 33 06.3	-1.1
KEV	**Kevo**	**140.19**	**346**	*e*pkp	PKPdf	17 33 11.1	-5.5
ARCES	**ARCESS Array B**	**140.67**	**347**	PKhKP		17 33 09.7	
	3.5nm,0.9s,baz=24,slow=2.1,SNR=8.1						
ARCES				PKP	PKPdf	17 33 15.0	-2.3
	3.9nm,0.6s,baz=63,slow=2.0,SNR=12						
KAF	**Kangasniemi**	**146.44**	**339**	*e*pkp	PKPdf	17 33 25.4	-2.1
FINES	**FINESS Array B**	**147.02**	**338**	PKPbc	PKPdf	17 33 27.6	-0.9
	12nm,0.6s,baz=54,slow=3.5,SNR=59						
NB2	**NORSAR Subarra**	**150.91**	**350**	PKPabc	PKPdf	17 33 37.1	+2.5
	102nm,1.7s,baz=16,slow=2.6						
NB2	**NORSAR Subarra**	**150.91**	**350**	PKPa	PKPdf	17 33 37.1	+2.5
	baz=16,slow=2.6						
NB2	**NORSAR Subarra**	**150.91**	**350**	PKPab	PKPdf	17 33 37.1	+2.5
NOA	**NORSAR Array B**	**150.91**	**350**	PKP	PKPdf	17 33 31.3	-3.3
	1.2nm,0.6s,baz=224,slow=29,SNR=3.6						
NOA				PKPbc	PKPdf	17 33 38.0	+3.4
	6.0nm,0.6s,baz=13,slow=4.0,SNR=22						
NOA	**NORSAR Array B**	**150.91**	**350**	PKP	PKPdf	17 33 31.3	-3.3
NOA				PKPbc	PKPdf	17 33 38.0	+3.4
NAO01	**NORSAR Array S**	**151.14**	**350**	*e*PKPbc	PKPdf	17 33 38.2	+3.2
AKASG	**Malin Array Be**	**152.59**	**319**	PKPbc	PKPdf	17 33 41.8	+4.4
	1.4nm,0.3s,baz=46,slow=2.9,SNR=16						
BR131	**Keskin Array S**	**152.90**	**294**	*e*PKPbc	PKPdf	17 33 42.7	+4.5
DBIC	**Dimbokro**	**153.50**	**167**	PKPbc	PKPdf	17 33 47.2	+7.4
	4.6nm,0.3s,baz=182,slow=3.0,SNR=12						
CLL	**Collm**	**159.47**	**338**	*e*PKP2	PKPab	17 34 22.0	-2.6

MAN 14 17:15:33.9, 7.74N×126.30E, h9^{km}, mb4.0, ML2.8, MS2.5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.79**	**183**	*e*P	Pb	17 15 49.3	-0.2
BUKP	**Musuan**	**1.24**	**276**	*e*P	Pb	17 15 37.0	-20
BUKP				*e*S	Sb	17 16 08.1	-4.8
KCP	**Kidapawan**	**1.41**	**239**	⇓*e*P	Pn	17 15 58.9	-0.9
PAGZ	**Pagadian**	**2.90**	**272**	*e*P	Pn	17 16 21.0	-0.2

NEIC ***14*** *17:16:42.7±1.1, 19.93S×68.91W, h113^{km}±11^{km}, mb4.3/5, Error ellipse: s-maj=16.0km s-min=10.9km az=73.0*

IDC ***14*** *17:16:43.3±2.0, 20.02S×69.03W, h113^{km}±17^{km}, mb4.1/6, mb1 4.2/9, mb1mx3.9/19, mbtmp4.5/9, Error ellipse: s-maj=28.1km s-min=13.4km az=85.0*

ISC 14 17:16:41.8±1.1, **19.93S**±0.06×**68.81W**±0.08, **h111**^{km}±13^{km}, **n23, σ1^{s}37**/21, **mb4.3**/5, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.68**	**10**	P	**P**	**17 17 40.8**	**+2.8**
	7.0nm,0.3s,baz=188,slow=8.8,SNR=295						
LPAZ				S	**S**	**17 18 25.3**	**+4.6**
	2.4nm,0.3s,baz=232,slow=23,SNR=6.6						
LPAZ	**La Paz**	**3.68**	**10**	*e*P	**P**	**17 17 40.7**	**+2.7**
LPAZ				*e*S	**S**	**17 18 20.1**	**-0.7**
ARE	**Arequipa**	**4.29**	**323**	*e*P	**P**	**17 17 46.0**	**-0.2**
SIV	**San Ignacio**	**8.34**	**63**	P	**P**	**17 18 41.5**	**+0.1**
	baz=253,slow=14						
SIV				S	**S**	**17 20 13.2**	**-1.3**
	baz=343,slow=22,SNR=3.3						
CFAA	**Coronel Fontan**	**11.64**	**178**	P	**P**	**17 19 24.4**	**-1.0**
	0.9nm,0.3s,baz=324,slow=9.2,SNR=102						
SAML	**Samuel**	**12.20**	**27**	*e*Pn	**P**	**17 19 30.4**	**-2.5**
	11nm,0.7s						
CPUP	**Villa Florida**	**12.33**	**123**	P	**P**	**17 19 36.0**	**+1.3**
	0.3nm,0.3s,baz=310,slow=14,SNR=16						
CPUP	**Villa Florida**	**12.33**	**123**	*e*P	**P**	**17 19 35.9**	**+1.3**
	20nm,1.0s						
BDFB	**Brasilia**	**20.26**	**81**	P	**P**	**17 21 11.9**	**+1.4**
	2.5nm,0.4s,baz=255,slow=9.1,SNR=4.6						
PLCA	**Paso Flores**	**20.79**	**184**	P	**P**	**17 21 15.2**	**-0.5**
	6.0nm,0.7s,baz=0.3,slow=11,SNR=12						
PLCA	**Paso Flores**	**20.79**	**184**	*e*P	**P**	**17 21 14.8**	**-1.0**
	6.2nm,0.7s						
OTAV	**Otavalo**	**22.16**	**334**	*e*P	**P**	**17 21 30.7**	**+1.3**
	12nm,1.1s,mb4.1						
SDV	**Santo Domingo**	**28.69**	**356**	P	**P**	**17 22 32.5**	**+1.8**
	3.1nm,0.7s,mb4.0,baz=198,slow=3.2,SNR=3.3						
SDV	**Santo Domingo**	**28.69**	**356**	P	**P**	**17 22 27.9**	**-2.8**
	3.3nm,0.9s,mb4.0						
DBIC	**Dimbokro**	**68.21**	**74**	P	**P**	**17 27 33.9**	**+0.9**
	1.7nm,0.4s,mb4.2,baz=240,slow=3.6,SNR=5.8						
DBIC				pP	pP	17 28 02.8	+2.1
	4.5nm,0.9s,baz=201,slow=11,SNR=1.6						
ULM	**Lac du Bonnet**	**73.85**	**342**	P	**P**	**17 28 04.1**	**-1.9**
	6.4nm,0.8s,mb4.4,baz=129,slow=6.5,SNR=3.6						
YKA	**Yellowknife Ar**	**89.74**	**341**	P	**P**	**17 29 28.3**	**0.0**
	6.0nm,0.8s,mb4.8,baz=132,slow=4.6,SNR=14						
YKA	**Yellowknife Ar**	**89.74**	**341**	P	**P**	**17 29 28.3**	**0.0**
WRA	**Warramunga Arr**	**134.34**	**211**	PKP	PKPdf	17 35 47.8	+0.3
	0.8nm,0.6s,baz=155,slow=1.7,SNR=9.8						
MKAR	**Makanchi Array**	**144.31**	**35**	PKP	PKPdf	17 36 04.5	-0.1
	1.9nm,0.9s,baz=297,slow=2.7,SNR=4.5						
MKAR				pPKP		17 36 35.8	
	1.3nm,0.9s,baz=270,slow=1.2,SNR=3.4						
ASAJ	**Asahikawa**	**144.43**	**320**	PKP	PKPdf	17 36 03.9	-1.0
	1.8nm,0.5s,baz=246,slow=19,SNR=3.9						
MJAR	**Matsushiro Arr**	**151.15**	**311**	PKPbc	PKPdf	17 36 23.3	+7.3
	2.7nm,0.8s,baz=106,slow=1.3,SNR=7.0						
SONM	**Songino Array**	**151.89**	**7**	PKP	PKPdf	17 36 19.0	+2.1
	0.8nm,0.9s,baz=346,slow=1.1,SNR=3.7						
SONM				PKPbc	PKPdf	17 36 25.5	+8.7
	2.6nm,0.7s,baz=304,slow=1.3,SNR=15						

MOS ***14*** *17:18:19.9±1.3, 51.09N×179.44E, h60^{km}, mb5.1/7, Error ellipse: s-maj=18.3km s-min=15.4km az=44.0*

NEIC ***14*** *17:18:19.9±0.3, 51.02N×179.51E, mb5.0/12, ML4.5(AEIC), Error ellipse: s-maj=10.8km s-min=3.9km az=171.0*

IDC ***14*** *17:18:20.0±0.5, 51.07N×179.45E, h46^{km}±4^{km}, mb4.3/17, mb1 4.5/17, mb1mx4.4/27, mbtmp4.6/17, Error ellipse: s-maj=18.7km s-min=10.4km az=164.0*

ISC 14 17:18:18.0±0.4, **50.88N**±0.08×**179.52E**±0.05, **h47**^{km}, **h47**^{km}±1.7^{km}**:pP-P, n61, σ1^{s}01**/65, **mb4.8**/29, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**2.22**	**65**	P	**P**	**17 18 53.0**	**-0.1**
KIMD				S	**S**	**17 19 20.2**	**+0.7**
KIKV	**Kanaga Island**	**2.31**	**63**	P	**P**	**17 18 54.4**	**0.0**
KIKV				S	**S**	**17 19 21.4**	**-0.2**
KIWB	**Kanaga Island**	**2.31**	**64**	P	**P**	**17 18 54.6**	**+0.3**
KIWB				S	**S**	**17 19 22.8**	**+1.2**
KINC	**Kanaga Island**	**2.35**	**62**	P	**P**	**17 18 55.1**	**+0.1**
KIRH	**Kanaga Island**	**2.36**	**63**	P	**P**	**17 18 55.2**	**+0.1**
KIRH				S	**S**	**17 19 24.2**	**+1.3**
ADAG	**Mount Adagdak**	**2.67**	**64**	P	**P**	**17 19 00.3**	**+0.8**
GSTD	**Great Sitkin T**	**2.96**	**65**	P	**P**	**17 19 04.2**	**+0.5**
GSMY	**Great Sitkin M**	**3.01**	**65**	P	**P**	**17 19 04.1**	**-0.3**
GSTR	**Great Sitkin T**	**3.02**	**65**	P	**P**	**17 19 04.8**	**+0.2**
GSIG	**Igitkin Island**	**3.06**	**67**	P	**P**	**17 19 05.4**	**+0.3**
SMY	**Shemya**	**3.84**	**301**	P	**P**	**17 19 15.9**	**-0.2**
SMY				S	**S**	**17 20 03.6**	**+3.1**
ATKA	**Atka Island**	**4.14**	**69**	P	**P**	**17 19 19.9**	**-0.5**
ATKA				S	**S**	**17 20 06.0**	**-2.2**
FX1	**Attu Island--F**	**4.42**	**299**	P	**P**	**17 19 26.4**	**+2.1**
FX1				S	**S**	**17 20 22.5**	**+7.4**
FX1				pmax	pmax		
	comp=Z,53nm,0.3s						
FX1				smax			
	comp=N,21nm,0.3s						
FX1	**Attu Island--F**	**4.42**	**299**	P	**P**	**17 19 26.4**	**+2.2**
	comp=N,52nm,0.3s,baz=117,slow=2.3,SNR=5.3						
FX1				S	**S**	**17 20 22.5**	**+7.5**
	comp=N,21nm,0.3s,baz=75,slow=22,SNR=5.9						
FX1	**Attu Island--F**	**4.42**	**299**	P	**P**	**17 19 26.1**	**+1.9**
ILAR	**Eielson Array**	**22.30**	**39**	P	**P**	**17 23 12.4**	**+0.2**
	comp=N,6.9nm,0.8s,mb4.2,baz=249,slow=12,SNR=4.6						
ASAJ	**Asahikawa**	**25.64**	**269**	P	**P**	**17 23 46.2**	**+1.6**
ASAJ				pmax	pmax		
	comp=Z,53nm,1.0s						
ASAJ	**Asahikawa**	**25.64**	**269**	P	**P**	**17 23 46.2**	**+1.6**
	comp=Z,53nm,1.0s,mb5.0,baz=338,slow=7.7,SNR=5.8						
KLR	**Kul'dur**	**30.30**	**286**	*e*P	**P**	**17 24 22.6**	**-4.0**
MJAR	**Matsushiro Arr**	**32.66**	**260**	P	**P**	**17 24 45.9**	**-1.5**
	comp=Z,3.0nm,0.9s,mb4.2,baz=43,slow=5.6,SNR=2.4						
YKA	**Yellowknife Ar**	**36.34**	**46**	P	**P**	**17 25 17.1**	**-1.7**
	comp=Z,6.6nm,0.9s,mb4.6,baz=284,slow=8.6,SNR=4.5						
YBH	**Yreka Blue Hor**	**40.01**	**80**	P	**P**	**17 25 50.3**	**+0.8**
	comp=Z,3.3nm,0.9s,mb4.1,baz=304,slow=3.6,SNR=2.4						
YBH				pP	pP	17 26 03.8	+1.6
	comp=Z,6.0nm,0.8s,baz=259,slow=5.8,SNR=5.3						
NEW	**Newport**	**40.05**	**68**	P	**P**	**17 25 50.8**	**+0.9**
	comp=Z,6.9nm,0.8s,mb4.5,baz=286,slow=10,SNR=4.1						
NEW				pP	pP	17 26 03.6	+1.1
	comp=Z,13nm,0.7s,baz=300,slow=6.6,SNR=5.2						
ULN	**Ulaanbaatar**	**45.53**	**296**	*e*P	**P**	**17 26 34.0**	**-0.3**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
ULN	**Ulaanbaatar**	**45.53**	**296**	*e*P	**P**	**17 26 34.0**	**-0.3**
	comp=Z,7.2nm,0.8s,mb4.7						
SONM	**Songino Array**	**45.92**	**296**	P	**P**	**17 26 37.7**	**+0.3**
	comp=Z,4.8nm,0.9s,mb4.4,baz=62,slow=6.6,SNR=4.4						
ZAK	**Zakamensk**	**46.30**	**301**	*e*P	**P**	**17 26 40.7**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
ZAK	**Zakamensk**	**46.30**	**301**	*e*P	**P**	**17 26 40.7**	**+0.3**
	comp=Z,10.0nm,1.3s,mb4.6						
BW06	**Boulder Array**	**47.48**	**71**	*e*P	**P**	**17 26 49.4**	**-0.3**
	comp=Z,21nm,0.8s,mb5.1						
PDAR	**Pinedale Array**	**47.48**	**71**	P	**P**	**17 26 50.0**	**+0.3**
	comp=Z,22nm,0.8s,mb5.1,baz=305,slow=3.9,SNR=18						
PDAR				pP	pP	17 27 02.0	-0.6
	comp=Z,7.4nm,0.7s,baz=317,slow=2.8,SNR=5.0						
PDAR				sP	sP	17 27 07.8	-0.4
	comp=Z,8.5nm,0.7s,baz=282,slow=4.5,SNR=4.1						
SUMG	**Summit**	**54.04**	**13**	P	**P**	**17 27 37.6**	**-1.5**
	comp=Z,25nm,0.9s,mb5.2						
JMIC	**Jan Mayen**	**58.31**	**3**	P	**P**	**17 28 06.3**	**-3.4**
	comp=Z,57nm,0.6s,mb5.8,baz=40,slow=5.5,SNR=3.2						
MKAR	**Makanchi Array**	**59.51**	**308**	P	**P**	**17 28 16.4**	**-1.9**
	comp=Z,3.6nm,0.7s,mb4.5,baz=45,slow=7.1,SNR=7.7						
MKAR				pP	pP	17 28 31.0	-0.5
	comp=Z,15nm,1.1s,baz=55,slow=15,SNR=6.4						
MKAR	**Makanchi Array**	**59.51**	**308**	P	**P**	**17 28 16.4**	**-1.9**
MKAR				pP	pP	17 28 31.0	-0.5
TXAR	**Lajitas Array**	**59.78**	**80**	P	**P**	**17 28 20.1**	**-0.3**
	comp=Z,1.5nm,0.7s,mb4.2,baz=307,slow=4.5,SNR=3.9						
TXAR				pP	pP	17 28 33.3	-0.4
	comp=Z,4.5nm,0.8s,baz=300,slow=4.1,SNR=5.7						
BVAR	**Borovoye Array**	**60.58**	**319**	P	**P**	**17 28 24.8**	**-0.7**
	comp=Z,21nm,0.7s,mb5.3,baz=49,slow=7.3,SNR=15						
AAK	**Ala-Archa**	**66.36**	**309**	P	**P**	**17 29 02.5**	**-1.1**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
AAK	**Ala-Archa**	**66.36**	**309**	P	**P**	**17 29 02.5**	**-1.1**
	comp=Z,10.0nm,0.8s,mb4.9						
NB2	**NORSAR Subarra**	**68.04**	**354**	P	**P**	**17 29 11.6**	**-2.2**
	comp=Z,19nm,1.1s,mb5.0,baz=6.0,slow=6.2						
NB2	**NORSAR Subarra**	**68.04**	**354**	P	**P**	**17 29 11.6**	**-2.2**
	comp=Z,19nm,1.1s,mb5.0						
NB2	**NORSAR Subarra**	**68.04**	**354**	P	**P**	**17 29 11.6**	**-2.2**
	baz=5.9,slow=6.5						
NOA	**NORSAR Array B**	**68.04**	**354**	P	**P**	**17 29 12.2**	**-1.6**
	comp=Z,11nm,0.9s,mb4.9,baz=8.2,slow=6.3,SNR=9.3						
CMAR	**Chiang Mai Arr**	**70.00**	**275**	P	**P**	**17 29 26.6**	**0.0**
	comp=Z,3.6nm,0.9s,mb4.3,baz=19,slow=6.5,SNR=6.3						
GUN	**Gumba**	**71.05**	**291**	*e*P	**P**	**17 29 33.6**	**+0.8**
	comp=Z,89nm,0.9s,mb5.7						
KKN	**Kakani**	**71.50**	**291**	*e*P	**P**	**17 29 36.0**	**+0.5**
	comp=Z,76nm,1.1s,mb5.5						
KKN	**Kakani**	**71.50**	**291**	*e*P	**P**	**17 29 36.0**	**+0.5**
KKN				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.2						
PKI	**Pulchoki**	**71.58**	**291**	*e*P	**P**	**17 29 36.4**	**+0.4**
	comp=Z,60nm,1.1s,mb5.4						
PKI	**Pulchoki**	**71.58**	**291**	*e*P	**P**	**17 29 36.4**	**+0.4**
PKI				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
GKN	**Gorkha**	**71.72**	**292**	*e*P	**P**	**17 29 37.0**	**+0.2**
	comp=Z,62nm,1.0s,mb5.5						
KOLN	**Koldanda**	**72.50**	**292**	*e*P	**P**	**17 29 40.0**	**-1.4**
	comp=Z,27nm,1.0s,mb5.1						
AKASG	**Malin Array Be**	**75.69**	**341**	P	**P**	**17 29 58.2**	**-1.2**
	comp=Z,2.5nm,0.6s,mb4.3,baz=23,slow=6.1,SNR=4.7						
CTA	**Charters Tower**	**76.48**	**212**	P	**P**	**17 30 06.3**	**+1.8**
	comp=Z,7.0nm,1.0s,mb4.5,baz=337,slow=8.4,SNR=4.6						
WRAB	**Tennant Creek**	**80.91**	**223**	*e*P	**P**	**17 30 28.5**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**80.91**	**223**	*e*P	**P**	**17 30 28.5**	**-0.1**
	comp=Z,5.5nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**80.92**	**223**	P	**P**	**17 30 28.9**	**+0.2**
	comp=Z,1.6nm,0.9s,mb3.9,baz=38,slow=6.2,SNR=4.5						
WRA				pP	pP	17 30 41.9	-0.6
	comp=Z,2.7nm,0.7s,baz=32,slow=6.0,SNR=5.1						
FITZ	**Fitzroy Crossi**	**83.32**	**231**	P	**P**	**17 30 41.4**	**+0.3**
	comp=Z,14nm,0.9s,mb5.0,baz=101,slow=1.1,SNR=5.6						
FITZ				pP	pP	17 30 54.9	-0.1
	comp=Z,9.9nm,0.5s,baz=12,slow=8.7,SNR=3.6						
BR131	**Keskin Array S**	**84.95**	**334**	*e*P	**P**	**17 30 49.0**	**+0.1**
TSUM	**Tsumeb**	**145.30**	**329**	PKPbc	PKPbc	17 37 52.9	+2.0
	comp=Z,14nm,0.9s,baz=189,slow=2.9,SNR=6.2						
MAW	**Mawson**	**145.44**	**217**	PKPbc	PKPbc	17 37 52.4	+2.6
	comp=Z,4.3nm,1.0s,baz=107,slow=9.3,SNR=2.5						
MAW				pPKPbc		17 38 04.8	
	comp=Z,3.7nm,0.8s,baz=118,slow=6.7,SNR=2.9						
LBTB	**Lobatse**	**147.31**	**312**	PKPbc	PKPdf	17 37 58.4	+4.7
	comp=Z,12nm,0.9s,baz=22,slow=2.3,SNR=5.8						
BOSA	**Boshof**	**150.50**	**309**	PKPbc	PKPdf	17 38 06.5	+7.8
	comp=Z,7.7nm,0.9s,baz=65,slow=2.2,SNR=3.9						
BOSA				pPKPbc		17 38 20.6	
	comp=Z,6.4nm,0.9s,baz=256,slow=5.6,SNR=3.0						

NEIC 14 17:24:26.2, 51.00N×179.53E, h10^{km}, ML3.8(AEIC)**, After AEIC., Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**2.17**	**68**	P	Pn	17 25 02.2	-0.6
KIKV	**Kanaga Island**	**2.25**	**66**	P	Pn	17 25 04.3	+0.3
KINC	**Kanaga Island**	**2.29**	**65**	P	Pn	17 25 04.2	-0.5
ADAG	**Mount Adagdak**	**2.61**	**66**	P	Pn	17 25 07.8	-1.4
ATKA	**Atka Island**	**4.09**	**70**	P	Pn	17 25 30.8	+0.5
FX1	**Attu Island--F**	**4.37**	**298**	P	Pn	17 25 32.8	-1.4

NEIC ***14*** *17:28:48.5, 18.29N×102.97W, h14^{km}, MD3.9(MEX), After MEX.*

MEX 14 17:28:48.5±0.5, **18.29N×102.97W, h14**^{km}±13^{km}**, MD3.9, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COLM	**Colima**	**1.12**	**322**	*i* P	Pb	17 29 06.1	-3.0
COLM				*i* S	Sb	17 29 19.7	-3.7
ZIIG	**Zihuatanejo**	**1.58**	**115**	*i* P	Pn	17 29 12.9	-3.4
ZIIG				*i* S	Sn	17 29 31.1	-5.5
MOIG	**Morelia**	**2.18**	**50**	*i* P	Pn	17 29 21.2	-3.6
MOIG				*i* S	Sn	17 29 46.3	-5.5
SFJM	**Santa Fe**	**2.19**	**358**	*i* P	Pn	17 29 21.0	-4.0
SFJM				*i* S	Sn	17 29 49.0	-3.0
PPM	**Popocatepetl**	**4.19**	**79**	*e*P	Pn	17 29 55.5	+2.0
LPAZ	**La Paz**	**48.55**	**133**	*e*P	P	17 37 34.4	+0.9

IDC ***14*** *17:29:43.0±3.5, 49.70N×179.15E, mb3.6/4, mb1 3.8/4, mb1mx3.5/23, mbtmp3.6/4, Error ellipse: s-maj=98.0km s-min=29.3km az=179.0*

NEIC ***14*** *17:29:52.4, 50.84N×179.76E, h28^{km}, mb3.9/1, ML4.1(AEIC), After AEIC.*

ISC 14 17:29:49.5±1.3, **50.6N**±0.2×**179.68E**±0.07, **h28**^{km}**, n18, σ1^{s}15**/21, **mb3.7**/5, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**2.29**	**57**	P	**Pn**	**17 30 25.8**	**-0.6**
KIMD				S	**Sn**	**17 30 50.0**	**-3.9**
KIWB	**Kanaga Island**	**2.38**	**56**	P	**Pn**	**17 30 27.9**	**+0.3**
KIKV	**Kanaga Island**	**2.39**	**55**	P	**Pn**	**17 30 27.7**	**0.0**
KINC	**Kanaga Island**	**2.44**	**54**	P	**Pn**	**17 30 28.8**	**+0.3**
KINC				S	**Sn**	**17 30 55.9**	**-1.8**
KIRH	**Kanaga Island**	**2.44**	**55**	P	**Pn**	**17 30 29.1**	**+0.6**
ADAG	**Mount Adagdak**	**2.74**	**57**	P	**Pn**	**17 30 33.8**	**+1.0**
GSSP	**Great Sitkin S**	**3.02**	**58**	P	**Pn**	**17 30 37.8**	**+1.0**
GSMY	**Great Sitkin M**	**3.07**	**59**	P	**Pn**	**17 30 39.4**	**+2.0**
GSIG	**Igitkin Island**	**3.11**	**61**	P	**Pn**	**17 30 37.9**	**-0.1**
SMY	**Shemya**	**4.10**	**304**	P	**Pn**	**17 30 50.9**	**-1.2**
ATKA	**Atka Island**	**4.18**	**64**	P	**Pn**	**17 30 52.9**	**-0.3**
FX1	**Attu Island--F**	**4.67**	**302**	Pn	**Pn**	**17 31 00.8**	**+0.7**
	18nm,0.3s,baz=139,slow=20,SNR=14						
FX1				Sn	**Sn**	**17 31 55.8**	**+1.6**
	32nm,0.3s,baz=53,slow=9.8,SNR=8.7						
FX1	**Attu Island--F**	**4.67**	**302**	P	**Pn**	**17 30 59.9**	**-0.3**
ILAR	**Eielson Array**	**22.49**	**38**	P	**P**	**17 34 53.0**	**+5.2**
	0.3nm,0.6s,mb2.9,baz=232,slow=5.8,SNR=3.2						
BW06	**Boulder Array**	**47.49**	**71**	*e*P	**P**	**17 38 23.4**	**-0.3**
	0.8nm,0.6s,mb3.8						
PDAR	**Pinedale Array**	**47.49**	**71**	P	**P**	**17 38 24.4**	**+0.7**
	0.6nm,0.5s,mb3.8,baz=300,slow=2.5,SNR=5.4						
MKAR	**Makanchi Array**	**59.79**	**308**	P	**P**	**17 39 51.5**	**-2.7**
	0.4nm,0.5s,mb3.7,baz=47,slow=6.5,SNR=11						
BVAR	**Borovoye Array**	**60.89**	**319**	P	**P**	**17 39 59.8**	**-1.8**
	0.9nm,0.5s,mb4.1,baz=55,slow=6.4,SNR=5.8						

NEIC ***14*** *17:30:50.9, 51.13N×179.33E, h29^{km}, mb4.0/2, ML4.0(AEIC), After AEIC.*

IDC ***14*** *17:30:54.4±3.9, 51.30N×179.30E, h60^{km}±34^{km}, mb3.7/12, mb1 3.9/13, mb1mx3.8/25, mbtmp4.0/13, ML4.1/1, Error ellipse: s-maj=39.4km s-min=14.5km az=174.0*

ISC 14 17:30:51.5±0.9, **51.3N**±0.1×**179.27E**±0.06, **h52**^{km}±8^{km}, **n35, σ0^{s}76**/40, **mb3.9**/13, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**2.24**	**76**	P	**P**	**17 31 25.9**	**-1.1**
KIKV	**Kanaga Island**	**2.31**	**73**	P	**P**	**17 31 28.5**	**+0.6**
KIWB	**Kanaga Island**	**2.31**	**74**	P	**P**	**17 31 28.6**	**+0.6**
KINC	**Kanaga Island**	**2.34**	**72**	P	**P**	**17 31 28.0**	**-0.5**
KIRH	**Kanaga Island**	**2.36**	**73**	P	**P**	**17 31 28.9**	**+0.3**
KIRH				S	**S**	**17 31 58.2**	**+1.8**
ADAG	**Mount Adagdak**	**2.67**	**73**	P	**P**	**17 31 33.5**	**+0.4**
ADAG				S	**S**	**17 32 05.2**	**+0.8**
GSSP	**Great Sitkin S**	**2.95**	**72**	P	**P**	**17 31 37.4**	**+0.2**
GSTD	**Great Sitkin T**	**2.96**	**73**	P	**P**	**17 31 37.7**	**+0.4**
GSTD				S	**S**	**17 32 11.6**	**-0.2**
GSMY	**Great Sitkin M**	**3.01**	**73**	P	**P**	**17 31 37.3**	**-0.7**
GSIG	**Igitkin Island**	**3.08**	**75**	P	**P**	**17 31 38.7**	**-0.2**
GSIG				S	**S**	**17 32 13.6**	**-1.2**
SMY	**Shemya**	**3.52**	**297**	P	**P**	**17 31 44.1**	**-1.0**
FX1	**Attu Island--F**	**4.10**	**296**	P	**P**	**17 31 53.6**	**+0.3**
	36nm,0.3s,baz=44,slow=9.2,SNR=11						
FX1				S	**S**	**17 32 49.4**	**+8.9**
	25nm,0.3s,baz=79,slow=22,SNR=7.5						
FX1	**Attu Island--F**	**4.10**	**296**	P	**P**	**17 31 54.2**	**+0.9**
ATKA	**Atka Island**	**4.17**	**74**	P	**P**	**17 31 52.9**	**-1.4**
BILL	**Bilibino**	**17.99**	**344**	P	**P**	**17 34 59.3**	**+0.3**
	4.7nm,0.6s						
SPU	**Mount Spurr**	**18.62**	**47**	*e*P	**P**	**17 35 06.5**	**-0.4**
SLKM	**Skilak Lake**	**19.28**	**50**	*e*P	**P**	**17 35 15.2**	**+0.8**
IMA	**Indian Mountai**	**20.19**	**33**	*e*P	**P**	**17 35 23.8**	**-0.2**
ILAR	**Eielson Array**	**22.10**	**39**	P	**P**	**17 35 43.6**	**+0.3**
	0.9nm,0.6s,mb3.4,baz=248,slow=9.5,SNR=8.7						
ASAJ	**Asahikawa**	**25.49**	**268**	P	**P**	**17 36 17.6**	**+1.4**
	5.5nm,0.8s,mb4.1,baz=195,slow=6.4,SNR=4.4						
INK	**Inuvik**	**28.25**	**35**	P	**P**	**17 36 41.9**	**+0.6**
	1.4nm,0.6s,mb3.8,baz=201,slow=12,SNR=4.2						
YKA	**Yellowknife Ar**	**36.19**	**46**	P	**P**	**17 37 51.0**	**+0.5**
	1.0nm,0.6s,mb4.0,baz=282,slow=8.0,SNR=5.0						
YKA	**Yellowknife Ar**	**36.19**	**46**	P	**P**	**17 37 51.0**	**+0.5**
NVAR	**Mina Array Bea**	**44.77**	**81**	P	**P**	**17 39 01.4**	**0.0**
	0.5nm,0.7s,mb3.5,baz=280,slow=5.5,SNR=2.5						
NVAR	**Mina Array Bea**	**44.77**	**81**	P	**P**	**17 39 01.4**	**0.0**
SONM	**Songino Array**	**45.61**	**296**	P	**P**	**17 39 09.0**	**+1.0**
	0.8nm,0.7s,mb3.8,baz=63,slow=8.0,SNR=5.1						
BW06	**Boulder Array**	**47.49**	**71**	*e*P	**P**	**17 39 22.1**	**-0.8**
	1.6nm,0.7s,mb4.1						
PDAR	**Pinedale Array**	**47.49**	**71**	P	**P**	**17 39 22.8**	**-0.1**
	1.8nm,0.6s,mb4.2,baz=305,slow=4.1,SNR=8.9						
MKAR	**Makanchi Array**	**59.15**	**307**	P	**P**	**17 40 48.0**	**-0.8**
	1.3nm,0.5s,mb4.2,baz=49,slow=6.1,SNR=15						
BVAR	**Borovoye Array**	**60.19**	**319**	P	**P**	**17 40 55.9**	**0.0**
	5.4nm,0.7s,mb4.7,baz=52,slow=7.3,SNR=21						
CUYO	**Cuyo Island**	**61.95**	**251**	*e*P	**P**	**17 41 08.5**	**+0.2**
NB2	**NORSAR Subarra**	**67.64**	**354**	P	**P**	**17 41 41.8**	**-2.5**
	1.6nm,0.7s,mb4.2,baz=9.0,slow=6.2						
NOA	**NORSAR Array B**	**67.64**	**354**	P	**P**	**17 41 43.6**	**-0.7**
	1.6nm,0.8s,mb4.1,baz=8.4,slow=6.3,SNR=5.0						
CMAR	**Chiang Mai Arr**	**69.82**	**274**	P	**P**	**17 41 58.5**	**0.0**
	0.6nm,0.8s,mb3.6,baz=38,slow=6.8,SNR=4.8						
AKASG	**Malin Array Be**	**75.27**	**341**	P	**P**	**17 42 29.2**	**-0.8**
	0.3nm,0.3s,mb3.7,baz=22,slow=6.6,SNR=4.3						

NEIC ***14*** *17:33:29.4, 51.09N×179.40E, h25^{km}, mb4.4/1, ML3.8(AEIC), After AEIC.*

IDC ***14*** *17:33:32.4±4.7, 51.18N×179.56E, h56^{km}±38^{km}, mb3.6/9, mb1 3.9/9, mb1mx3.6/24, mbtmp3.9/9, ML3.9/1, Error ellipse: s-maj=52.1km s-min=16.9km az=175.0*

ISC 14 17:33:26.2±0.9, **50.5N**±0.1×**179.46E**±0.06, **h33**^{km}**, n27, σ0^{s}98**/32, **mb4.0**/10, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**2.42**	**58**	P	**P**	**17 34 04.6**	**+0.3**
KIMD				S	**S**	**17 34 34.5**	**+1.5**
KIWB	**Kanaga Island**	**2.51**	**57**	P	**P**	**17 34 05.9**	**+0.4**

KIWB				S	S	17 34 34.9	-0.4
KIKV	Kanaga Island	2.51	56	P	P	17 34 05.6	0.0
KINC	Kanaga Island	2.56	56	P	P	17 34 06.4	+0.1
KIRH	Kanaga Island	2.56	56	P	P	17 34 07.0	+0.7
KIRH				S	S	17 34 36.9	+0.2
ADAG	Mount Adagdak	2.87	58	P	P	17 34 10.9	+0.3
GSSP	Great Sitkin S	3.15	59	P	P	17 34 15.4	+0.7
GSTD	Great Sitkin T	3.15	59	P	P	17 34 14.9	+0.2
GSTD				S	S	17 34 50.2	-1.5
GSMY	Great Sitkin M	3.20	60	P	P	17 34 15.3	0.0
GSTR	Great Sitkin T	3.22	59	P	P	17 34 15.9	+0.3
GSIG	Igitkin Island	3.25	62	P	P	17 34 16.4	+0.3
SMY	Shemya	4.00	305	P	P	17 34 26.4	-0.2
ATKA	Atka Island	4.31	65	P	P	17 34 31.2	0.0
FX1	Attu Island--F	4.56	303	P	P	17 34 35.2	+0.4
	25nm,0.3s,baz=16,slow=2.9,SNR=11						
FX1				S	S	17 35 28.3	+1.0
	4.6nm,0.3s,baz=104,slow=17,SNR=2.2						
FX1	Attu Island--F	4.56	303	P	P	17 34 34.9	+0.2
ILAR	Eielson Array	22.59	38	P	P	17 38 21.9	-2.7
	0.8nm,0.6s,mb3.3,baz=274,slow=9.0,SNR=4.1						
INK	Inuvik	28.78	34	P	P	17 39 19.2	-3.4
	0.4nm,0.4s,mb3.5,baz=225,slow=2.9,SNR=2.3						
NEW	Newport	40.22	68	P	P	17 40 60.0	-1.0
	2.1nm,0.5s,mb4.1,baz=330,slow=3.6,SNR=3.1						
NEW	Newport	40.22	68	P	P	17 40 60.0	-1.0
SONM	Songino Array	46.04	296	P	P	17 41 49.1	+1.0
	0.3nm,0.5s,mb3.5,baz=46,slow=7.8,SNR=3.8						
BW06	Boulder Array	47.62	70	eP	P	17 42 01.1	+0.5
	2.1nm,0.5s,mb4.4						
PDAR	Pinedale Array	47.62	70	P	P	17 42 01.4	+0.7
	3.5nm,0.6s,mb4.6,baz=304,slow=3.5,SNR=15						
MKAR	Makanchi Array	59.69	308	P	P	17 43 27.8	-1.6
	0.8nm,0.3s,mb4.2,baz=47,slow=6.6,SNR=13						
BVAR	Borovoye Array	60.81	319	P	P	17 43 35.8	-1.2
	3.6nm,0.7s,mb4.6,baz=50,slow=7.5,SNR=14						
NB2	NORSAR Subarra	68.38	354	P	P	17 44 22.9	-2.8
	0.7nm,0.6s,mb3.9,baz=6.0,slow=5.8						
NOA	NORSAR Array B	68.38	354	P	P	17 44 23.4	-2.3
	0.9nm,0.6s,mb4.0,baz=7.3,slow=6.3,SNR=5.3						
CMAR	Chiang Mai Arr	69.99	275	P	P	17 44 37.8	+1.4
	0.5nm,0.7s,mb3.6,baz=28,slow=7.1,SNR=4.5						

MAN 14 17:37:23.5,18.77N×121.76E,h7^{km},mb4.6,ML3.5,MS3.3, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	Mt. Cagua	0.59	152	eP	Pg	17 37 35.3	0.0
SGCP				eS	Sg	17 37 43.3	+0.1
APYP	Conner	1.02	209	eP	Pb	17 37 42.5	-0.7
APYP				eS	Sb	17 37 56.3	-0.4
CVP	Callao Caves	1.06	177	eP	Pb	17 37 43.0	-0.8
CVP				eS	Sb	17 37 56.5	-1.2
ABRA	Dolores	1.49	222	eP	Pn	17 37 50.3	-0.6
ABRA				eS	Sb	17 38 09.7	-0.5
BBP	Basco	1.68	7	eP	Pn	17 37 53.0	-0.5
BBP				eS	Sn	17 38 15.0	-0.4
CAUP	Cauayan	1.81	178	eP	Pn	17 37 57.0	+1.5
CAUP				eS	Sn	17 38 25.0	+6.1
BALP	Baler	3.01	183	eP	Pn	17 38 12.9	+0.3
BALP				eS	Sn	17 38 49.3	-0.1

NEIC 14 17:44:53.9,51.09N×179.56E,h3^{km},ML3.5(AEIC),After AEIC.,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.12	70	P	Pn	17 45 30.8	+0.1
KIMD				S	Sn	17 46 00.5	+2.6
KIKV	Kanaga Island	2.19	68	P	Pn	17 45 31.3	-0.5
KIWB	Kanaga Island	2.20	68	eP	Pn	17 45 30.6	-1.2
KINC	Kanaga Island	2.24	67	P	Pn	17 45 32.6	+0.2
ADAG	Mount Adagdak	2.56	68	P	Pn	17 45 37.8	+0.8
GSSP	Great Sitkin S	2.85	68	P	Pn	17 45 41.8	+0.8
GSTD	Great Sitkin T	2.85	68	P	Pn	17 45 41.2	+0.1
GSTD				S	Sn	17 46 17.6	+1.2
GSMY	Great Sitkin M	2.90	69	P	Pn	17 45 43.0	+1.1
GSTR	Great Sitkin T	2.92	68	P	Pn	17 45 42.6	+0.6
SMY	Shemya	3.76	298	P	Pn	17 45 51.8	-2.2
ATKA	Atka Island	4.05	72	P	Pn	17 45 56.5	-1.7
FX1	Attu Island--F	4.34	297	P	Pn	17 46 00.6	-1.7

*BJI **14** 17:48:06.8,51.47N×179.15E,h39^{km},mB6.3,mb5.0, Ms5.8,Msz5.6*

*MOS **14** 17:48:07.8±0.8,51.28N×179.38E,h51^{km},mb5.3/61,Error ellipse: s-maj=8.3km s-min=5.2km az=94.0*

*NEIC **14** 17:48:07.6,51.06N×179.54E,h27^{km},mb5.1/105,MS5.5/4, ML5.3(AEIC),After AEIC.*

*IDC **14** 17:48:09.8±3.1,51.23N×179.41E,h57^{km}±27^{km},mb4.3/26, mb1 4.5/26,mb1mx4.4/29,mbtmp4.6/26,ML4.4/1,MS3.6/1, Ms1 3.6/1,ms1mx3.6/38,Error ellipse: s-maj=15.7km s-min=9.4km az=165.0*

ISC 14 17:48:07.3±0.2,51.15N±0.05×179.41E±0.03,h50^{km}, h50^{km}±3.3^{km}:pP-P,n379,σ0^{s}95/386,mb5.0/129,MS5.7/8, 25C-16D,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.18	73	P	P	17 48 42.0	0.0
KIKV	Kanaga Island	2.26	70	P	P	17 48 43.2	+0.2
KIKV				S	S	17 49 10.1	+0.4
KIWB	Kanaga Island	2.26	71	P	P	17 48 43.6	+0.6
KINC	Kanaga Island	2.30	69	P	P	17 48 44.0	+0.5
ADAG	Mount Adagdak	2.62	70	P	P	17 48 48.3	+0.1
GSTD	Great Sitkin T	2.91	70	P	P	17 48 52.1	-0.3
GSTD				S	S	17 49 27.6	+1.2
GSMY	Great Sitkin M	2.96	71	P	P	17 48 52.6	-0.4
GSMY				S	S	17 49 29.0	+1.4
GSTR	Great Sitkin T	2.98	70	P	P	17 48 53.2	-0.1
GSTR				S	S	17 49 29.5	+1.6
GSIG	Igitkin Island	3.03	72	P	P	17 48 54.2	+0.3
GSIG				S	S	17 49 32.0	+2.8
SMY	Shemya	3.65	298	P	P	17 49 03.6	+0.9
SMY				S	S	17 49 48.0	+3.1
ATKA	Atka Island	4.12	73	P	P	17 49 08.4	-0.9
ATKA				S	S	17 49 58.0	+1.3
FX1	Attu Island--F	4.23	297	P	P	17 49 11.3	+0.4
FX1				S	S	17 50 04.6	+5.0
FX1				pmax	pmax		
	comp=Z,76nm,0.3s						
FX1				smax			
	comp=N,75nm,0.3s						
FX1				MLR	MLR		
	comp=Z,732nm,18.7s						
FX1	Attu Island--F	4.23	297	P	P	17 49 11.3	+0.4
	comp=Z,76nm,0.3s,baz=156,slow=4.9,SNR=65						
FX1				S	S	17 50 04.6	+5.0
	comp=Z,75nm,0.3s,baz=241,slow=19,SNR=2.6						
FX1				LR	LR	17 50 34.2	
	comp=Z,732nm,18.7s,baz=258,slow=34						
FX1	Attu Island--F	4.23	297	P	P	17 49 11.5	+0.6
FX1				S	S	17 50 00.4	+0.8
NIKO	Nikolski	7.46	71	P	P	17 49 55.2	-0.9
OKCE	Okmok Cone E	7.95	69	P	P	17 50 03.0	+0.1
SPIA	Saint Paul Isl	8.55	41	P	P	17 50 12.6	+1.4
MSW	Makushin Switc	8.86	66	P	P	17 50 15.8	+0.4
MNAT	Makushin Natee	8.91	67	P	P	17 50 15.8	-0.3
LVA	Lava Point	9.34	66	P	P	17 50 21.7	-0.3
AKGG	Akutan Green G	9.38	65	P	P	17 50 22.9	+0.4
AHB	Akutan Harbor	9.46	66	P	P	17 50 24.9	+1.2
AKUT	Akutan	9.49	66	P	P	17 50 25.3	+1.2
WFAR	Faris Peak	10.15	64	P	P	17 50 33.7	+0.8
WPOG	Pogromni	10.18	64	P	P	17 50 33.9	+0.5
WTUG	Tugumak	10.44	63	P	P	17 50 38.2	+1.3
SDPT	Sand Point	12.74	63	eP	P	17 51 05.7	-2.2
	comp=Z,27nm,0.5s						
PET	Petropavlovsk	12.90	286	eP	P	17 51 13.0	+3.0
PET				eS	S	17 53 40.2	+7.4
PET				MLR	MLR		
	comp=Z,11µm,15.0s						
TNA	Tin City	15.85	20	eP	P	17 51 48.3	+0.2
	comp=Z,106nm,1.3s						
SVW2	Sparrevohn	17.02	45	eP	P	17 52 03.6	+0.7
KDAK	Kodiak Island	17.49	57	eP	P	17 52 05.6	-3.2
TTA	Tatalina	17.69	39	eP	P	17 52 12.2	+0.9
RSO	Redoubt South	18.07	48	eP	P	17 52 15.9	-0.2
BILL	Bilibino	18.12	344	⇑iP	P	17 52 15.1	-1.5
BILL				pmax	pmax		
	comp=Z,82nm,1.6s						
BILL	Bilibino	18.12	344	⇑iP	P	17 52 15.1	-1.5
	comp=Z,82nm,1.6s						
MA2	Magadan	18.21	309	i P	P	17 52 13.7	-4.0
SPU	Mount Spurr	18.63	46	eP	P	17 52 22.3	-0.6
SLKM	Skilak Lake	19.29	49	eP	P	17 52 29.7	-0.6
PWA	Palmer West	19.78	46	eP	P	17 52 35.2	-0.5
PWA				pmax	pmax		
	comp=Z,8.0nm,0.3s						
IMA	Indian Mountai	20.23	32	P	P	17 52 40.4	-0.1
IMA				pmax	pmax		
	comp=Z,620nm,1.4s						
IMA	Indian Mountai	20.23	32	eP	P	17 52 40.9	+0.4
	comp=Z,53nm,1.0s						
SML	Sawmill	20.53	46	eP	P	17 52 40.3	-3.2
EYAK	Cordova Ski Ar	21.45	51	eP	P	17 52 52.3	-0.6
DIV	Divide	21.55	49	eP	P	17 52 51.7	-2.2
	comp=Z,13nm,0.5s,mb4.6						
ILAR	Eielson Array	22.12	39	P	P	17 52 59.6	0.0
	comp=Z,5.6nm,0.7s,mb4.1,baz=264,slow=9.5,SNR=23						
THY	Trims Highway	22.14	43	eP	P	17 52 59.1	-0.6
MENT	Mentasta	22.90	45	eP	P	17 53 08.1	+1.1
YSS	Yuzh-Sakhalins	24.22	274	⇑eP	P	17 53 21.0	+1.0
YSS				e		17 53 38.5	
YSS				pmax	pmax		
	comp=Z,110nm,1.3s,mb5.1						
YSS	Yuzh-Sakhalins	24.22	274	⇑eP	P	17 53 21.0	+1.0
	comp=Z,110nm,1.3s,mb5.1						
YSS				e		17 53 38.5	
ASAJ	Asahikawa	25.58	269	P	P	17 53 33.4	+0.3
ASAJ				pmax	pmax		
	comp=Z,52nm,0.9s						
ASAJ	Asahikawa	25.58	269	P	P	17 53 33.4	+0.3
	comp=Z,52nm,0.9s,mb5.0,baz=65,slow=3.4,SNR=38						
INK	Inuvik	28.29	35	P	P	17 53 56.5	-1.1
	comp=Z,3.1nm,0.9s,mb4.0,baz=238,slow=9.8,SNR=10.0						
INK	Inuvik	28.29	35	P	P	17 53 56.5	-1.2
YAK	Yakutsk	28.72	312	eP	P	17 53 57.8	-3.8
YAK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK	Yakutsk	28.72	312	eP	P	17 53 57.8	-3.8
	comp=E,12nm,1.1s,mb4.5						
DLBC	Dease Lake	29.42	56	P	P	17 54 08.4	+0.6
	comp=E,2.9nm,1.0s,mb4.0,baz=288,slow=15,SNR=3.7						
DLBC	Dease Lake	29.42	56	eP	P	17 54 06.9	-0.8
KLR	Kul'dur	30.16	285	eP	P	17 54 11.3	-3.1
KLR				pmax	pmax		
	comp=N,46nm,1.8s						
KLR				pmax	pmax		
	comp=Z,74nm,1.8s,mb5.1						
MJAR	Matsushiro Arr	32.64	260	P	P	17 54 36.3	-0.1
	comp=Z,3.2nm,0.8s,mb4.3,baz=54,slow=6.7,SNR=7.5						
MJAR				PcP	PcP	17 57 21.4	-0.3
	comp=Z,2.7nm,0.9s,baz=112,slow=0.6,SNR=6.1						
MAT	Matsushiro	32.64	260	eP	P	17 54 36.0	-0.4
MAT				pmax	pmax		
	comp=Z,73nm,1.7s,mb5.3						
MAT	Matsushiro	32.64	260	eP	P	17 54 36.0	-0.4
	comp=Z,73nm,1.7s,mb5.3						
MAT	Matsushiro	32.64	260	P	P	17 54 36.3	-0.1
MDJ	Mudanjiang	33.50	279	P	P	17 54 42.6	-1.1
MDJ				AP	pP	17 54 53.3	-3.5
MDJ				XP	sP	17 54 59.4	-3.7
MDJ				PP	PP	17 55 58.6	+1.7
MDJ				PCP	PcP	17 57 23.3	-0.6
MDJ				S	S	18 00 01.8	+0.9
MDJ				XS		18 00 20.6	
MDJ				SCP		18 01 04.1	
MDJ				PCS		18 01 08.8	
MDJ				AMB	AMB		
	comp=Z,9µm,10.7s						
MDJ				LR	LR		
	comp=N,8µm,17.9s,MS5.7						
MDJ				LR	LR		
	comp=E,10µm,16.1s,MS5.7						
MDJ				LR	LR		
	comp=Z,9µm,16.7s,MS5.5						
MDJ	Mudanjiang	33.50	279	P	P	17 54 42.6	-1.1
	comp=Z,8.0nm,1.1s,mb4.6						
MDJ				pP	pP	17 54 53.3	-3.5
MDJ				sP	sP	17 54 59.4	-3.7
MDJ				PP	PP	17 55 58.6	+1.7
MDJ				PcP	PcP	17 57 23.3	-0.6
MDJ				S	S	18 00 01.8	+0.9
MDJ				sS		18 00 20.6	
MDJ				ScP		18 01 04.1	
MDJ				PcS		18 01 08.8	
MDJ				LR	LR		
	comp=Z,9µm,16.7s,MS5.5						
HKL	Haleakala	35.87	139	P	P	17 55 07.1	+2.8
OBC	Olympics--Boni	36.00	72	P	P	17 55 06.7	+1.6
YKW3	Yellowknife Ar	36.18	46	eP	P	17 55 04.0	-2.4
YKA	Yellowknife Ar	36.20	46	P	P	17 55 05.5	-1.0
	comp=Z,7.8nm,0.6s,mb4.8,baz=283,slow=8.5,SNR=22						
YKA				PcP	PcP	17 57 32.0	+0.5
	comp=Z,1.6nm,0.7s,baz=294,slow=3.3,SNR=4.1						
YKA	Yellowknife Ar	36.20	46	P	P	17 55 05.5	-1.0
YKA				PcP	PcP	17 57 32.0	+0.5
MCW	Mount Constitu	36.45	71	P	P	17 55 10.1	+1.2
CN2	Changchun	36.48	280	eP	P	17 55 08.5	-0.7
CN2				eXP	sP	17 55 26.3	-2.2
CN2				eS	S	18 00 45.8	-1.2
CN2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,3µm,17.0s,MS5.2						
CN2				LR	LR		
	comp=E,2µm,17.0s,MS5.2						
CN2				LR	LR		
	comp=Z,2µm,16.0s,MS5.1						
CN2	Changchun	36.48	280	eP	P	17 55 08.5	-0.7
	comp=Z,20nm,0.7s,mb5.2						
CN2				esP	sP	17 55 26.3	-2.2
CN2				eS	S	18 00 45.8	-1.2
CN2				LR	LR		
	comp=Z,2µm,16.0s,MS5.1						
HDW	Hoodsport	36.79	72	P	P	17 55 12.7	+1.0
BOD	Bodaibo	37.21	306	eP	P	17 55 14.1	-1.0
BOD				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.2						
BOD	Bodaibo	37.21	306	eP	P	17 55 14.1	-1.0
	comp=Z,29nm,0.7s,mb5.2						
HIA	Hailar	37.32	291	eP	P	17 55 15.0	-1.2
HIA				pmax	pmax		
	comp=Z,82nm,1.5s						
HIA	Hailar	37.32	291	eP	P	17 55 15.0	-1.1
	comp=Z,82nm,1.5s,mb5.3						
VLMM	Larch Mountain	38.42	75	P	P	17 55 26.6	+1.3
TBM	Table Mountain	38.48	72	P	P	17 55 26.7	+0.9
WTV	Waterville	38.61	71	P	P	17 55 27.4	+0.5
EBG	Ellensburg	38.63	72	P	P	17 55 27.9	+0.9
VFP	Flag Point	38.88	75	P	P	17 55 30.5	+1.4
RSW	Rattlesnake Hi	39.47	72	P	P	17 55 34.9	+0.8
OD2	Odessa Site #2	39.50	70	P	P	17 55 34.4	+0.1
CIT	Chita	39.66	298	eP	P	17 55 35.2	-0.4
CIT				e		17 55 59.4	
CIT				pmax	pmax		
	comp=Z,127nm,2.0s,mb5.3						
CIT	Chita	39.66	298	eP	P	17 55 35.2	-0.4
	comp=Z,127nm,2.0s,mb5.3						
CIT				e		17 55 59.4	
EDM	Edmonton	39.90	60	eP	P	17 55 36.8	-0.7
EDM	Edmonton	39.90	60	eP	P	17 55 36.2	-1.3
NEW	Newport	40.01	68	P	P	17 55 38.7	+0.2
NEW				pmax	pmax		
	comp=Z,27nm,0.9s						
NEW	Newport	40.01	68	P	P	17 55 38.4	-0.1
	comp=Z,9.7nm,0.5s,mb4.8,baz=296,slow=7.7,SNR=18						
NEW	Newport	40.01	68	eP	P	17 55 37.8	-0.8
	comp=Z,27nm,0.9s,mb5.0						
YBH	Yreka Blue Hor	40.03	80	P	P	17 55 39.9	+1.2
	comp=Z,13nm,1.1s,mb4.6,baz=306,slow=7.3,SNR=12						
MOD	Modoc	41.42	79	eP	P	17 55 50.7	+0.5
	comp=Z,14nm,0.8s,mb4.6						
BMO	Blue Mountains	41.64	73	eP	P	17 55 52.0	+0.1
	comp=Z,48nm,1.4s,mb4.9						
WVOR	Wild Horse Val	42.15	77	P	P	17 55 56.7	+0.6
WVOR				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.9						
WVOR	Wild Horse Val	42.15	77	eP	P	17 55 55.7	-0.4
	comp=Z,34nm,0.9s,mb5.0						
MSO	Missoula	42.60	69	eP	P	17 55 59.0	-0.8
	comp=Z,52nm,1.3s,mb5.1						
CHMT	Chamberlain Mo	42.96	68	eP	P	17 56 01.9	-0.7
SAO	San Andreas Ge	43.76	85	P	P	17 56 09.6	+0.3
HRY	Holter Researc	43.89	68	eP	P	17 56 10.3	+0.1
HLID	Hailey	44.08	73	eP	P	17 56 12.1	+0.3
	comp=Z,76nm,1.3s,mb5.3						
BMN	Battle Mountai	44.17	78	P	P	17 56 13.2	+0.6
BMN				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.9						
BMN	Battle Mountai	44.17	78	eP	P	17 56 12.6	0.0
	comp=Z,23nm,1.0s,mb4.9						
MCMT	McKenzie Canyo	44.31	71	eP	P	17 56 13.3	-0.4
BOZ	Bozeman (W)	44.59	69	eP	P	17 56 15.8	0.0
BOZ				pmax	pmax		
	comp=Z,59nm,0.9s,mb5.4						
BOZ	Bozeman (W)	44.59	69	eP	P	17 56 15.2	-0.6
	comp=Z,59nm,0.9s,mb5.4						
IRK	Irkutsk	44.61	302	eP	P	17 56 15.4	-0.6
IRK				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.9						
IRK	Irkutsk	44.61	302	eP	P	17 56 15.4	-0.6
	comp=Z,18nm,0.9s,mb4.9						
NVAR	Mina Array Bea	44.70	81	P	P	17 56 17.8	+0.9
	comp=Z,14nm,1.0s,mb4.7,baz=299,slow=6.7,SNR=39						
MNV	Mina	44.79	81	P	P	17 56 18.4	+0.8
MNV				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8						
MNV	Mina	44.79	81	eP	P	17 56 17.7	+0.1
	comp=Z,18nm,1.1s,mb4.8						
QLMT	Earthquake Lak	45.15	70	eP	P	17 56 20.0	-0.4
MTUM	Tungsten Hills	45.20	83	eP	P	17 56 21.3	+0.5
ELK	Elko	45.20	77	P	P	17 56 21.2	+0.4
ELK				pmax	pmax		
	comp=Z,21nm,0.9s						
ELK	Elko	45.20	77	eP	P	17 56 20.9	0.0
	comp=Z,21nm,0.9s,mb5.0						
TLY	Talaya	45.23	302	eP	P	17 56 21.3	+0.4
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
ULN	Ulaanbaatar	45.35	296	eP	P	17 56 22.2	+0.3
ULN				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.8						
ULN	Ulaanbaatar	45.35	296	eP	P	17 56 22.2	+0.3
	comp=Z,19nm,1.2s,mb4.8						
YMR	Madison River	45.52	70	eP	P	17 56 23.2	-0.1
	comp=Z,149nm,1.2s,mb5.8						
GCMT	Greycliff	45.65	68	eP	P	17 56 23.8	-0.5
YFT	Old Faithful	45.72	70	eP	P	17 56 25.8	+0.9
SONM	Songino Array	45.74	296	P	P	17 56 25.8	+0.8
	comp=Z,3.1nm,0.6s,mb4.4,baz=63,slow=5.5,SNR=34						
IMW	Indian Meadow	45.97	71	eP	P	17 56 26.9	0.0
	comp=Z,42nm,1.0s,mb5.3						
RRI2	Red Ridge	46.06	71	eP	P	17 56 27.6	-0.1
	comp=Z,70nm,1.1s,mb5.5						
TIA	Tai'an	46.07	276	eP	P	17 56 27.9	+0.1
ZAK	Zakamensk	46.10	300	⇓iP	P	17 56 27.9	0.0
ZAK				e		17 58 04.2	
ZAK				pmax	pmax		
	comp=Z,13nm,1.8s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
ZAK	Zakamensk	46.10	300	⇓iP	P	17 56 27.9	0.0
	comp=Z,13nm,1.8s,mb4.6						
ZAK				e		17 58 04.2	
MOOW	Moose Ponds	46.17	71	eP	P	17 56 28.1	-0.4
	comp=Z,37nm,1.3s,mb5.2						
TPAW	Teton Pass	46.20	71	eP	P	17 56 28.4	-0.3
	comp=Z,45nm,1.3s,mb5.2						
LOHW	Long Hollow	46.33	71	eP	P	17 56 29.8	+0.1
	comp=Z,41nm,1.3s,mb5.2						
TRCR	Troy Canyon	46.43	80	eP	P	17 56 30.1	-0.5
MOY	Mondy	46.65	303	eP	P	17 56 32.3	+0.2
HHC	Hu-ho-hao-te	46.67	285	eP	P	17 56 33.8	+1.4
HHC				AMB	AMB		
	comp=Z,40nm,1.4s,mb5.2						
HHC				LR	LR		
	comp=N,2µm,19.0s,MS5.2						
HHC				LR	LR		
	comp=E,2µm,17.8s,MS5.2						
HHC				LR	LR		
	comp=Z,3µm,18.2s,MS5.3						
HHC	Hu-ho-hao-te	46.67	285	eP	P	17 56 33.8	+1.4
	comp=Z,40nm,1.4s,mb5.2						
HHC				LR	LR		
	comp=Z,3µm,18.2s,MS5.3						
SSE	Sheshan	46.87	268	eP	P	17 56 35.4	+1.3
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,3µm,12.0s						
SSE	Sheshan	46.87	268	eP	P	17 56 35.4	+1.3
	comp=Z,36nm,0.8s,mb5.3						
HWUT	Hardware Ranch	46.93	73	eP	P	17 56 34.4	-0.1
	comp=Z,20nm,1.0s,mb5.0						
NOQ	North Oquirrh	47.16	75	eP	P	17 56 36.3	0.0
	comp=Z,76nm,1.1s,mb5.5						
BW06	Boulder Array	47.45	71	⇑eP	P	17 56 38.1	-0.4
	comp=Z,78nm,1.0s,mb5.6						
PDAR	Pinedale Array	47.45	71	P	P	17 56 38.4	-0.1
	comp=Z,45nm,0.8s,mb5.5,baz=304,slow=5.3,SNR=140						
NJ2	Nanjing	47.69	271	eP	P	17 56 42.3	+1.7
NJ2				AP	pP	17 56 56.8	+2.8
NJ2				XP	sP	17 57 00.0	+0.1
NJ2				PP	PP	17 58 33.5	+1.6
NJ2				S	S	18 03 34.0	+2.0
NJ2				XS		18 03 55.0	
NJ2				AMB	AMB		
	comp=Z,180nm,1.0s,mb6.1						
NJ2				AMB	AMB		
	comp=Z,2µm,10.3s						
NJ2				LR	LR		
	comp=N,7µm,22.3s,MS5.7						
NJ2				LR	LR		
	comp=E,7µm,25.4s,MS5.7						
NJ2				LR	LR		
	comp=Z,8µm,23.1s,MS5.6						
NJ2	Nanjing	47.69	271	eP	P	17 56 42.3	+1.7
	comp=Z,180nm,1.0s,mb6.1						
NJ2				pP	pP	17 56 56.8	+2.8
NJ2				sP	sP	17 57 00.0	+0.1
NJ2				PP	PP	17 58 33.5	+1.6
NJ2				S	S	18 03 34.0	+2.0
NJ2				sS		18 03 55.0	
NJ2				LR	LR		
	comp=Z,8µm,23.1s,MS5.6						
DAU	Daniels Canyon	47.83	75	P	P	17 56 42.8	+1.2
DAU	Daniels Canyon	47.83	75	eP	P	17 56 41.8	+0.2
ARUT	Antelope Range	48.11	79	eP	P	17 56 44.1	+0.3
ARUT	Antelope Range	48.11	79	eP	P	17 56 43.3	-0.5
MVU	Marysvale	48.42	77	eP	P	17 56 46.2	0.0
	comp=Z,24nm,1.0s,mb5.2						
MSU	Marysvale	48.44	77	P	P	17 56 46.9	+0.6
MSU	Marysvale	48.44	77	eP	P	17 56 46.5	+0.2
NEN	Nelson	48.59	82	eP	P	17 56 47.1	-0.4
SRU	San Rafael	49.08	75	P	P	17 56 51.7	+0.5
SRU	San Rafael	49.08	75	eP	P	17 56 50.9	-0.3
	comp=Z,29nm,0.9s,mb5.3						
BAR	Barrett	49.39	86	eP	P	17 56 52.5	-1.3
BAR				epP	pP	17 57 06.1	-1.1
RSSD	Black Hills	49.88	66	P	P	17 56 56.3	-1.1
RSSD				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
RSSD	Black Hills	49.88	66	eP	P	17 56 56.1	-1.3
	comp=Z,18nm,1.1s,mb5.0						
PV10	Paradox Valley	50.44	75	eP	P	17 57 01.7	0.0
ULM	Lac du Bonnet	50.74	56	P	P	17 57 03.4	-0.4
	comp=Z,2.7nm,0.4s,mb4.5,baz=289,slow=5.8,SNR=4.1						
ULM				PcP	PcP	17 58 19.5	-1.1
	comp=Z,3.6nm,0.6s,baz=260,slow=5.0,SNR=3.9						
PV01	Paradox Valley	50.88	75	eP	P	17 57 04.4	-0.6
RW3	Ridgway	51.34	75	P	P	17 57 08.9	+0.4
RW3	Ridgway	51.34	75	eP	P	17 57 08.3	-0.3
WHN	Wuhan	51.55	273	eP	P	17 57 09.5	-0.7
ISCO	Idaho Springs	51.61	72	eP	P	17 57 11.2	+0.7
ISCO				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.2						
ISCO	Idaho Springs	51.61	72	eP	P	17 57 09.2	-1.3
	comp=Z,45nm,1.3s,mb5.2						
SDCO	Great Sand Dun	52.99	74	eP	P	17 57 20.7	-0.2
	comp=Z,43nm,1.4s,mb5.2						
TUC	Tucson	53.32	82	eP	P	17 57 22.1	-1.3
TUC	Tucson	53.32	82	eP	P	17 57 21.9	-1.6

LAZ	**Ladron**	54.18	78	*e*P	P	17 57 29.4	-0.3
ANMO	**Albuquerque**	54.24	77	P	P	17 57 30.2	+0.1
ANMO				pmax	pmax		
	comp=Z,14nm,1.1s						
ANMO	**Albuquerque**	54.24	77	*e*P	P	17 57 29.6	-0.5
	comp=Z,14nm,1.2s,mb4.8						
LZH	**Lanzhou**	54.36	285	⇑P	P	17 57 31.8	+0.8
LZH				AP	pP	17 57 45.5	+0.8
LZH				XP	sP	17 57 51.3	+0.9
LZH				AMB	AMB		
	comp=Z,80nm,1.7s,mb5.4						
LZH				AMB	AMB		
	comp=Z,300nm,5.0s						
LZH	**Lanzhou**	54.36	285	⇑P	P	17 57 31.7	+0.7
LZH				*PP	pP	17 57 45.5	+0.8
LZH				*SP	sP	17 57 51.2	+0.8
LZH				pmax	pmax		
	comp=Z,89nm,1.7s,mb5.4						
LZH	**Lanzhou**	54.36	285	⇑P	P	17 57 31.8	+0.8
	comp=Z,89nm,1.7s,mb5.4						
LZH				pP	pP	17 57 45.5	+0.8
LZH				sP	sP	17 57 51.3	+0.9
LENM	**Lemitar**	54.44	78	*e*P	P	17 57 31.1	-0.5
GTA	**Gaotai**	54.60	291	⇑P	P	17 57 33.0	+0.3
GTA				AP	pP	17 57 46.0	-0.4
GTA				XP	sP	17 57 51.8	-0.4
GTA				PP	PP	17 59 36.3	-0.5
GTA				S	S	18 05 10.1	+3.2
GTA				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
GTA				LR	LR		
	comp=N,5µm,15.3s,MS5.9						
GTA				LR	LR		
	comp=E,6µm,14.9s,MS5.9						
GTA				LR	LR		
	comp=Z,6µm,19.9s						
GTA	**Gaotai**	54.60	291	⇑P	P	17 57 33.0	+0.3
	comp=Z,25nm,1.1s,mb5.2						
GTA				pP	pP	17 57 46.0	-0.4
GTA				sP	sP	17 57 51.8	-0.4
GTA				PP	PP	17 59 36.3	-0.5
GTA				S	S	18 05 10.1	+3.2
GTA				LR	LR		
	comp=Z,6µm,19.9s,MS5.7						
BNM	**Barren Site**	54.67	78	*e*P	P	17 57 32.6	-0.7
CPRX	**Cap Rock**	57.12	77	*e*P	P	17 57 49.9	-1.0
AMTX	**Amarillo**	57.19	74	*e*P	P	17 57 50.6	-0.8
	comp=Z,12nm,0.8s,mb5.0						
ARCES	**ARCESS Array B**	58.12	350	P	P	17 57 55.5	-1.8
	comp=Z,4.4nm,0.7s,mb4.6,baz=21,slow=6.9,SNR=11						
WMQ	**Urumqi**	58.51	302	P	P	17 58 00.5	0.0
WMQ				AP	pP	17 58 13.2	-1.1
WMQ				XP	sP	17 58 18.6	-1.5
WMQ				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
WMQ				LR	LR		
	comp=N,3µm,20.5s,MS5.5						
WMQ				LR	LR		
	comp=E,3µm,20.0s,MS5.5						
WMQ				LR	LR		
	comp=Z,3µm,20.2s,MS5.3						
WMQ	**Urumqi**	58.51	302	P	P	17 58 00.5	0.0
	comp=Z,28nm,1.4s,mb5.1						
WMQ				pP	pP	17 58 13.2	-1.1
WMQ				sP	sP	17 58 18.6	-1.5
WMQ				LR	LR		
	comp=Z,3µm,20.2s,MS5.3						
MKAR	**Makanchi Array**	59.29	308	P	P	17 58 04.8	-1.1
	comp=Z,3.3nm,0.5s,mb4.7,baz=47,slow=6.7,SNR=66						
MKAR	**Makanchi Array**	59.29	308	P	P	17 58 04.8	-1.0
TXAR	**Lajitas Array**	59.80	80	P	P	17 58 08.7	-0.9
	comp=Z,7.7nm,0.9s,mb4.7,baz=298,slow=4.3,SNR=31						
BVA0	**Borovoye Array**	60.33	319	*i* P	P	17 58 12.8	-0.1
BVA0				pmax	pmax		
	comp=Z,28nm,1.7s,mb5.0						
BVA0	**Borovoye Array**	60.33	319	*i* P	P	17 58 12.8	-0.1
	comp=Z,28nm,1.7s,mb5.0						
BVAR	**Borovoye Array**	60.33	319	P	P	17 58 12.8	-0.1
	comp=Z,18nm,0.7s,mb5.2,baz=47,slow=6.1,SNR=55						
SCHQ	**Schefferville**	60.87	37	P	P	17 58 14.2	-2.4
	comp=Z,8.9nm,1.0s,mb4.8,baz=344,slow=6.5,SNR=6.0						
ARU	**Arti**	62.20	327	⇓*i*P	P	17 58 25.1	-0.3
ARU				*e*		17 59 03.6	
ARU				*e*		18 00 40.6	
ARU				*e*S	S	18 06 48.4	+2.8
ARU				*e*SS	SS	18 10 51.8	+0.8
ARU				pmax	pmax		
	comp=Z,33nm,1.9s,mb5.1						
ARU	**Arti**	62.20	327	⇓*i*P	P	17 58 25.1	-0.3
	comp=Z,33nm,1.9s,mb5.1						
ARU				*e*		17 59 03.6	
ARU				*e*		18 00 40.6	
ARU				*e*S	S	18 06 48.4	+2.8
ARU				*e*SS	SS	18 10 51.8	+0.8
KMI	**Kunming**	62.64	277	⇑P	P	17 58 28.3	-0.5
KMI				S	S	18 06 50.1	-1.5
KMI				LR	LR		
	comp=N,6µm,20.6s,MS6.0						
KMI				LR	LR		
	comp=E,7µm,18.3s,MS6.0						
KMI				LR	LR		
	comp=Z,9µm,19.9s,MS5.9						
KMI	**Kunming**	62.64	277	⇑P	P	17 58 28.2	-0.6
KMI				S	S	18 06 50.1	-1.5
KMI				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.6						
KMI				MLR	MLR		
	comp=Z,9µm,19.9s,MS5.9						
KMI	**Kunming**	62.64	277	⇑P	P	17 58 28.3	-0.5
	comp=Z,9.0nm,1.7s,mb4.6						
KMI				S	S	18 06 50.1	-1.5
KMI				LR	LR		
	comp=Z,9µm,19.9s,MS5.9						
UALR	**University of**	62.81	68	*e*P	P	17 58 28.2	-1.6
	comp=Z,30nm,1.1s,mb5.3						
SADO	**Sadowa**	62.86	52	P	P	17 58 28.7	-1.3
	comp=Z,2.5nm,0.4s,mb4.7,baz=341,slow=3.9,SNR=3.6						
SADO				PcP	PcP	17 59 07.0	-0.7
	comp=Z,8.3nm,0.7s,baz=322,slow=6.7,SNR=4.2						
OXF	**Oxford**	64.70	66	P	P	17 58 41.8	-0.3
OXF				pmax	pmax		
	comp=Z,300nm,1.1s						
OXF	**Oxford**	64.70	66	*e*P	P	17 58 41.0	-1.1
	comp=Z,300nm,1.1s						
PLAL	**Pickwick Lake**	65.12	65	*e*P	P	17 58 43.3	-1.5
	comp=Z,27nm,0.8s,mb5.3						
TKM2	**Tokmak 2**	65.38	308	P	P	17 58 46.9	+0.5
	SNR=8.4						
ULHL	**Ulahol**	65.56	307	P	P	17 58 48.2	+0.6
	SNR=9.3						
USP	**Ospenovka**	65.66	309	P	P	17 58 48.5	+0.4
	SNR=18						
FINES	**FINESS Array B**	65.75	346	P	P	17 58 46.8	-1.6
	comp=Z,0.7nm,0.4s,mb4.1,baz=4.6,slow=7.8,SNR=9.1						
KBK	**Karagaybulak**	65.90	309	P	P	17 58 50.4	+0.7
	SNR=8.4						
FRU	**Bishkek**	65.93	309	*e*P	P	17 58 51.0	+1.1
FRU				pmax	pmax		
	comp=Z,210nm,2.5s,mb5.7						
FRU	**Bishkek**	65.93	309	*e*P	P	17 58 51.0	+1.1
	comp=Z,210nm,2.5s,mb5.7						
AAK	**Ala-Archa**	66.14	309	P	P	17 58 52.0	+0.8
	SNR=7.0						
AAK	**Ala-Archa**	66.14	309	⇑*i*P	P	17 58 50.9	-0.3
AAK				pmax	pmax		
	comp=Z,40nm,2.5s,mb5.0						
AAK	**Ala-Archa**	66.14	309	⇑*i*P	P	17 58 50.9	-0.3
	comp=Z,40nm,2.5s,mb5.0						
KZA	**Kyzart**	66.18	308	P	P	17 58 52.7	+1.3
	SNR=6.4						
UCH	**Uchtor**	66.43	308	P	P	17 58 54.3	+1.2
	SNR=5.9						
LSA	**Lhasa**	66.45	288	P	P	17 58 55.0	+1.6
EKS2	**Erkin-Say**	66.47	309	P	P	17 58 54.2	+0.9
	SNR=17						
AML	**Almayashu**	66.91	309	P	P	17 58 57.6	+1.5
	SNR=16						
LRAL	**Lakeview Retre**	67.15	65	*e*P	P	17 58 56.0	-1.8
	comp=Z,30nm,1.2s,mb5.2						
AB31	**Akbulak array**	67.43	322	*i* P	P	17 58 59.7	+0.5
AB31				pmax	pmax		
	comp=Z,196nm,1.6s,mb5.9						
AB31	**Akbulak array**	67.43	322	*i* P	P	17 58 59.7	+0.5
	comp=Z,196nm,1.6s,mb5.9						
ELN	**Prospectdale**	67.54	58	*e*P	P	17 58 58.9	-1.2
KKAR	**Karatay Array**	67.70	312	*i* P	P	17 59 01.1	+0.1
KKAR				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.2						
KKAR	**Karatay Array**	67.70	312	*i* P	P	17 59 01.1	+0.1
	comp=Z,19nm,0.7s,mb5.2						
KSH	**Kashi**	67.72	306	*e*P	P	17 59 00.3	-0.9
KSH				*e*AP	pP	17 59 16.0	+0.6
KSH				*e*XP	sP	17 59 20.3	-0.5
KSH				*e*PCP	PcP	17 59 32.0	+4.2
KSH				*e*PP	PP	18 01 31.0	-1.9
KSH				*e*SCP		18 03 28.5	
KSH				*e*PCS		18 03 34.1	
KSH				*e*S	S	18 07 49.0	-4.6
KSH				*e*XS		18 08 09.3	
KSH				*e*SCS	ScS	18 08 54.0	+2.2
KSH				*e*SS	SS	18 12 09.6	-7.3
KSH				AMB	AMB		
	comp=Z,16µm,9.1s						
KSH				LR	LR		
	comp=N,13µm,13.9s,MS6.4						
KSH				LR	LR		
	comp=E,11µm,15.6s,MS6.4						
NB2	**NORSAR Subarra**	67.76	354	P	P	17 58 59.9	-1.1
	comp=E,186nm,2.5s,mb5.7,baz=6.0,slow=6.2						
NB2	**NORSAR Subarra**	67.76	354	P	P	17 58 59.9	-1.1
	baz=6.4,slow=6.2						
NOA	**NORSAR Array B**	67.76	354	P	P	17 59 00.2	-0.8
	comp=E,6.3nm,0.6s,mb4.8,baz=8.1,slow=6.3,SNR=25						
NOA	**NORSAR Array B**	67.76	354	P	P	17 59 00.2	-0.8
VSU	**Vasula**	68.49	345	*e*P	P	17 59 04.8	-0.8
JSC	**Jenkinsville**	69.45	61	P	P	17 59 12.5	+0.5
JSC	**Jenkinsville**	69.45	61	*e*P	P	17 59 10.9	-1.1
OBN	**Obninsk**	69.67	338	⇑*i*P	P	17 59 11.7	-1.3
OBN				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1						
OBN	**Obninsk**	69.67	338	⇑*i*P	P	17 59 11.7	-1.3
	comp=Z,40nm,1.6s,mb5.1						
CMAR	**Chiang Mai Arr**	69.92	275	P	P	17 59 14.8	-0.3
	comp=Z,3.1nm,0.9s,mb4.2,baz=25,slow=7.2,SNR=9.3						
GUN	**Gumba**	70.89	291	*e*P	P	17 59 22.0	+1.1
	comp=Z,159nm,1.0s,mb5.9						
KKN	**Kakani**	71.33	291	*e*P	P	17 59 24.4	+0.9
	comp=Z,56nm,0.7s,mb5.6						
KKN	**Kakani**	71.33	291	*e*P	P	17 59 24.4	+0.9
KKN				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.3						
PKI	**Pulchoki**	71.42	291	*e*P	P	17 59 24.5	+0.5
	comp=Z,236nm,1.6s,mb5.9						
PKI	**Pulchoki**	71.42	291	*e*P	P	17 59 24.5	+0.5
PKI				pmax	pmax		
	comp=Z,118nm,1.6s,mb5.6						
GKN	**Gorkha**	71.55	292	*e*P	P	17 59 25.3	+0.5
	comp=Z,113nm,1.1s,mb5.7						
DMN	**Daman**	71.57	291	*e*P	P	17 59 25.7	+0.8
	comp=Z,247nm,1.7s,mb5.9						
KOLN	**Koldanda**	72.33	292	*e*P	P	17 59 29.9	+0.5
	comp=Z,136nm,1.6s,mb5.6						
VRSR	**Storozhevoye**	72.58	335	*e*P	P	17 59 29.7	-0.6
VRSR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
VRSR				pmax	pmax		
	comp=N,10.0nm,1.2s						
VRSR				pmax	pmax		
	comp=E,10.0nm,1.0s						
VRSR	**Storozhevoye**	72.58	335	*e*P	P	17 59 29.7	-0.6
	comp=E,10.0nm,1.1s,mb4.7						
BSEG	**Bad Segeberg**	74.89	353	*e*P	P	17 59 42.8	-0.9
BSEG				pmax	pmax		
	comp=Z,82nm,1.8s,mb5.4						
AKASG	**Malin Array Be**	75.41	341	P	P	17 59 46.1	-0.7
	comp=Z,1.2nm,0.3s,mb4.3,baz=21,slow=5.8,SNR=21						
WIT	**Witteveen**	76.23	355	*e*P	P	17 59 53.5	+2.0
CTA	**Charters Tower**	76.68	212	P	P	17 59 54.5	-0.2
	comp=Z,6.3nm,1.0s,mb4.5,baz=62,slow=3.2,SNR=4.0						
CTA	**Charters Tower**	76.68	212	P	P	17 59 54.5	-0.2
CTAO	**Charters Tower**	76.68	212	P	P	17 59 51.3	-3.4
CTAO				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
CTAO	**Charters Tower**	76.68	212	P	P	17 59 51.3	-3.4
	comp=Z,19nm,1.4s,mb4.8						
CLZ	**Clausthal**	76.96	353	*e*P	P	17 59 54.8	-0.8
CLZ				pmax	pmax		
	comp=Z,38nm,1.4s,mb5.1						
CLZ	**Clausthal**	76.96	353	*e*P	P	17 59 54.8	-0.8
	comp=Z,38nm,1.4s,mb5.1						
GOF	**Gofitskoye**	77.01	330	⇓*i*P	P	17 59 54.5	-1.5
GOF				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.2						
GOF	**Gofitskoye**	77.01	330	⇓*i*P	P	17 59 54.5	-1.5
	comp=Z,50nm,1.4s,mb5.2						
LVV	**L’vov**	77.24	344	*e*P	P	17 59 56.8	-0.4
CLL	**Collm**	77.27	351	⇓*i*P	P	17 59 57.2	-0.1
CLL				*e**PP	pP	18 00 14.0	+2.4
CLL				pmax	pmax		
	comp=Z,39nm,2.0s,mb5.0						
CLL	**Collm**	77.27	351	⇓*i*P	P	17 59 57.2	-0.1
	comp=Z,39nm,2.0s,mb5.0						
CLL				*e*pP	pP	18 00 14.0	+2.4
CLL	**Collm**	77.27	351	⇓P	P	17 59 57.2	-0.1
	comp=Z,logA/T=1.3,mb5.0						
CLL				*e*	pP	18 00 14.0	+2.4
BRG	**Berggiesshubel**	77.60	351	*i* P	P	17 59 59.1	-0.1
BRG				*e*		18 00 06.5	
BRG				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.8						
BRG				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
BRG	**Berggiesshubel**	77.60	351	*i* P	P	17 59 59.1	-0.1
	comp=Z,20nm,1.6s,mb4.8						
BRG				*e*		18 00 06.5	
UPC	**Upice**	77.74	349	*e*P	P	17 59 59.7	-0.2
DPC	**Dobruska-Polom**	77.85	349	*e*P	P	18 00 00.5	0.0
MOX	**Moxa**	78.05	352	*e*P	P	17 59 59.2	-2.4
MOX				pmax	pmax		
	comp=Z,27nm,1.8s,mb4.9						
MOX	**Moxa**	78.05	352	*e*P	P	17 59 59.2	-2.4
	comp=Z,27nm,1.8s,mb4.9						
MOX	**Moxa**	78.05	352	*i* P	P	17 59 59.2	-2.4
	comp=Z,logA/T=1.2,mb4.9						
KIV	**Kislovodsk**	78.11	330	*e*P	P	18 00 02.4	+0.3
KIV				pmax	pmax		
	comp=N,3.0nm,0.8s						
KIV				pmax	pmax		
	comp=E,3.0nm,0.8s						
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
KIV	**Kislovodsk**	78.11	330	*e*P	P	18 00 02.4	+0.3
	comp=Z,6.0nm,0.8s,mb4.6						
OKC	**Ostrava-Krasne**	78.13	348	*e*P	P	18 00 01.5	-0.5
HGN	**Heimansgroeve**	78.31	356	*e*P	P	18 00 02.0	-1.0
	comp=Z,24nm,1.3s,mb5.0						
KOLS	**Kolonicke sedl**	78.39	345	*e*P	P	18 00 02.7	-0.8
PRU	**Pruhonice**	78.41	350	*e*P	P	18 00 02.7	-0.9
TNS	**Taunus Mts**	78.71	354	*e*P	P	18 00 04.2	-1.1
TNS				pmax	pmax		
	comp=Z,28nm,1.8s,mb4.9						
TNS	**Taunus Mts**	78.71	354	*e*P	P	18 00 04.2	-1.1
	comp=Z,28nm,1.8s,mb4.9						
ZEI	**Tsey**	78.77	328	*e*P	P	18 00 03.8	-2.0
ZEI				*i* *PP	pP	18 00 16.9	-3.2
ZEI				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
GIVF	**Givet**	79.02	356	*e*P	P	18 00 06.5	-0.5
GRA1	**Grafenberg Arr**	79.03	352	*e*P	P	18 00 06.4	-0.6
	comp=Z,38nm,1.6s,mb5.1						
GRF	**Grafenberg Arr**	79.03	352	*e*P	P	18 00 06.4	-0.6
GRF				pmax	pmax		
	comp=Z,38nm,1.6s,mb5.1						
GRF	**Grafenberg Arr**	79.03	352	*e*P	P	18 00 06.4	-0.6
GRF				pmax	pmax		
	comp=Z,38nm,1.6s,mb5.1						
GRF	**Grafenberg Arr**	79.03	352	*e*P	P	18 00 06.4	-0.6
	comp=Z,38nm,1.6s,mb5.1						
BAIF	**Baives**	79.08	357	*e*P	P	18 00 07.1	-0.2
BURAR	**Bucovina Array**	79.14	343	⇑P	P	18 00 08.9	+1.2
VYHS	**Vyhne**	79.35	347	*e*P	P	18 00 09.0	+0.2
KHC	**Kasperske Hory**	79.36	351	*e*P	P	18 00 09.5	+0.7
GEC2	**GERESS Array S**	79.63	350	*e*P	P	18 00 09.6	-0.7
GEC2				pmax	pmax		
	comp=Z,27nm,2.1s,mb4.8						
GEC2	**GERESS Array S**	79.63	350	*e*P	P	18 00 09.6	-0.7
	comp=Z,27nm,2.1s,mb4.8						
GERES	**GERESS Array B**	79.63	350	P	P	18 00 10.6	+0.3
	comp=Z,0.4nm,0.5s,baz=37,slow=6.7,SNR=6.3						
ZST	**Bratislava**	79.87	348	*e*P	P	18 00 12.4	+0.8
FLN	**La Foliniere**	80.46	360	*e*P	P	18 00 14.0	-0.8
	comp=Z,119nm,1.6s,mb5.3						
FLN	**La Foliniere**	80.46	360	*e*P	P	18 00 14.0	-0.8
FLN				pmax	pmax		
	comp=Z,60nm,1.6s,mb5.3						
VRI	**Vrincioaia**	80.52	341	⇓P	P	18 00 18.0	+2.9
CDF	**Champ du Feu**	80.59	355	*e*P	P	18 00 15.0	-0.4
BFO	**Black Forest**	80.60	354	*e*P	P	18 00 14.1	-1.4
BFO				pmax	pmax		
	comp=Z,29nm,1.8s,mb4.9						
BFO	**Black Forest**	80.60	354	*e*P	P	18 00 14.1	-1.4
	comp=Z,29nm,1.8s,mb4.9						
MEZF	**Maizieres J’vi**	80.61	356	*e*P	P	18 00 15.3	-0.2
LDF	**La Druitiere**	80.63	360	*e*P	P	18 00 15.0	-0.7
	comp=Z,28nm,1.1s,mb4.8						
LDF	**La Druitiere**	80.63	360	*e*P	P	18 00 15.0	-0.7
LDF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
GNI	**Garni**	80.82	326	⇓*i*P	P	18 00 19.2	+2.4
GNI				pmax	pmax		
	comp=Z,26nm,1.7s						
GNI	**Garni**	80.82	326	P	P	18 00 20.0	+3.2
	comp=Z,1.5nm,0.3s,mb4.3,baz=337,slow=15,SNR=5.6						
GNI	**Garni**	80.82	326	⇓*i*P	P	18 00 19.2	+2.4
	comp=Z,26nm,1.7s,mb4.9						
GRR	**Gorron**	80.84	0	*e*P	P	18 00 16.1	-0.6
	comp=Z,42nm,1.1s,mb5.0						
GRR	**Gorron**	80.84	0	*e*P	P	18 00 16.1	-0.6
GRR				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
ROSF	**Rostrenen**	80.86	2	*e*P	P	18 00 16.2	-0.7
	comp=Z,122nm,1.6s,mb5.3						
ROSF	**Rostrenen**	80.86	2	*e*P	P	18 00 16.2	-0.7
ROSF				pmax	pmax		
	comp=Z,61nm,1.6s,mb5.3						
SGMF	**Saint Gilles**	80.96	1	*e*P	P	18 00 17.1	-0.3
ARSA	**Arzberg**	81.00	349	⇑*i*P	P	18 00 18.5	+0.9
	comp=Z,15nm,1.5s,mb4.7						
MLR	**Muntele Rosu**	81.04	341	⇓P	P	18 00 20.4	+2.5
HAU	**Haudompre**	81.04	355	*e*P	P	18 00 17.5	-0.3
WRAB	**Tennant Creek**	81.07	222	*e*P	P	18 00 16.1	-2.4
WRAB				pmax	pmax		
	comp=Z,54nm,1.5s,mb5.3						
WRAB	**Tennant Creek**	81.07	222	*e*P	P	18 00 16.1	-2.5
	comp=Z,54nm,1.5s,mb5.2						
WRA	**Warramunga Arr**	81.08	222	P	P	18 00 17.4	-1.2
	comp=Z,2.3nm,0.5s,mb4.3,baz=32,slow=5.9,SNR=54						
HINF	**Hinteralfeld**	81.20	355	*e*P	P	18 00 18.1	-0.6
VOIR		81.27	342	⇓P	P	18 00 22.8	+3.7
QUIF	**Quistinic**	81.29	2	*e*P	P	18 00 19.0	-0.1
WTTA	**Wattenberg**	81.40	352	⇑*i*P	P	18 00 20.6	+0.9
	comp=Z,34nm,1.6s,mb5.0						
WTTA	**Wattenberg**	81.40	352	⇑*i*P	P	18 00 20.6	+0.9
WTTA				pmax	pmax		
	comp=Z,34nm,1.6s,mb5.0						
KBA	**Koelnbreinsper**	81.42	350	⇑*i*P	P	18 00 21.2	+1.4
	comp=Z,36nm,1.6s,mb5.0						
KBA	**Koelnbreinsper**	81.42	350	⇑*i*P	P	18 00 21.2	+1.4
KBA				pmax	pmax		
	comp=Z,36nm,1.6s,mb5.0						
BZS	**Buzias**	81.72	344	⇓P	P	18 00 21.6	+0.2
OBKA	**Obir**	81.85	350	⇑*i*P	P	18 00 23.6	+1.6
	comp=Z,23nm,1.6s,mb4.8						
LOR	**Lormes**	81.89	357	*e*P	P	18 00 21.9	-0.3
	comp=Z,80nm,1.6s,mb5.1						
LOR	**Lormes**	81.89	357	*e*P	P	18 00 21.9	-0.3
LOR				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1						
SSF	**Saint Saulge**	82.10	357	*e*P	P	18 00 23.1	-0.3
SSF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
SSF	**Saint Saulge**	82.10	357	*e*P	P	18 00 23.1	-0.3
	comp=Z,2.7nm,0.7s,mb4.3						
AVF	**Avril sur Loir**	82.38	357	*e*P	P	18 00 24.4	-0.4
	comp=Z,8.6nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	82.38	357	*e*P	P	18 00 24.4	-0.4
AVF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CABF	**La Chapelle**	82.45	355	*e*P	P	18 00 25.3	+0.2
	comp=Z,34nm,1.4s,mb4.8						
CABF	**La Chapelle**	82.45	355	*e*P	P	18 00 25.3	+0.2
CABF				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8						
SMF	**Signal de Mont**	82.51	357	*e*P	P	18 00 25.1	-0.3
	comp=Z,21nm,1.0s,mb4.8						
SMF	**Signal de Mont**	82.51	357	*e*P	P	18 00 25.1	-0.3
SMF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
BGF	**Bois d’Agland**	82.62	358	*e*P	P	18 00 25.9	-0.1
MFF	**Saint Martin d**	82.62	360	*e*P	P	18 00 25.7	-0.3
TCF	**Toulx Ste Croi**	82.91	358	*e*P	P	18 00 27.2	-0.3
HYB	**Hyderabad**	83.23	289	*e*P	P	18 00 30.0	+0.3
HYB	**Hyderabad**	83.23	289	*i* P	P	18 00 30.0	+0.3
HYB				*e*S	S	18 10 51.0	+6.3
FITZ	**Fitzroy Crossi**	83.45	231	P	P	18 00 30.7	-0.1
	comp=Z,15nm,0.5s,mb5.3,baz=42,slow=1.1,SNR=45						
LPL	**La Plagne**	83.50	355	*e*P	P	18 00 31.6	+1.2
LPG	**La Plagne**	83.52	355	*e*P	P	18 00 31.6	+1.1
	comp=Z,86nm,1.9s,mb5.3						
LPG	**La Plagne**	83.52	355	*e*P	P	18 00 31.6	+1.1
LPG				pmax	pmax		
	comp=Z,43nm,1.9s,mb5.2						
RJF	**Les Rejaudoux**	83.91	359	*e*P	P	18 00 32.2	-0.3
ORIF	**Oris-en-Rattie**	84.15	355	*e*P	P	18 00 34.5	+0.8
VIVF	**Saint-Julien-l**	84.26	356	*e*P	P	18 00 34.8	+0.5
	comp=Z,38nm,1.4s,mb5.0						
VIVF	**Saint-Julien-l**	84.26	356	*e*P	P	18 00 34.8	+0.5
VIVF				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.0						
CAF	**Calviac**	84.28	358	*e*P	P	18 00 34.5	+0.2
	comp=Z,36nm,1.4s,mb5.0						
CAF	**Calviac**	84.28	358	*e*P	P	18 00 34.5	+0.2
CAF				pmax	pmax		
	comp=Z,18nm,1.4s,mb5.0						
LFF	**La Frestale**	84.28	359	*e*P	P	18 00 33.4	-1.0
	comp=Z,27nm,1.1s,mb5.0						
LFF	**La Frestale**	84.28	359	*e*P	P	18 00 33.4	-1.0
LFF				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
MBDF	**Montbardon**	84.29	355	*e*P	P	18 00 35.0	+0.6
BR131	**Keskin Array S**	84.67	334	*e*P	P	18 00 37.3	+0.9
	comp=Z,2.8nm,0.6s,mb4.6						
SMRF	**Simiane la Rot**	85.10	356	*e*P	P	18 00 39.5	+1.0
	comp=Z,116nm,1.6s,mb5.5						
SBF	**Sospel**	85.11	354	*e*P	P	18 00 38.3	-0.2
	comp=Z,33nm,1.1s,mb5.1						
SBF	**Sospel**	85.11	354	*e*P	P	18 00 38.3	-0.2
SBF				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.1						
POO	**Poona**	85.12	293	⇓*i*P	P	18 00 39.0	-0.1
FRF	**La Foret Royal**	85.46	355	*e*P	P	18 00 40.1	-0.1
LMR	**La Mourre**	85.69	355	*e*P	P	18 00 41.5	+0.1
	comp=Z,144nm,1.8s,mb5.6						
LMR	**La Mourre**	85.69	355	*e*P	P	18 00 41.5	+0.1
LMR				pmax	pmax		
	comp=Z,72nm,1.8s,mb5.6						
MTLF	**Montolieu**	85.86	358	*e*P	P	18 00 42.5	+0.3
	comp=Z,61nm,1.6s,mb5.3						
MTLF	**Montolieu**	85.86	358	*e*P	P	18 00 42.5	+0.3
MTLF				pmax	pmax		
	comp=Z,30nm,1.6s,mb5.3						
EPF	**Esparros**	86.19	359	*e*P	P	18 00 43.3	-0.5
	comp=Z,19nm,1.1s,mb4.9						
EPF	**Esparros**	86.19	359	*e*P	P	18 00 43.3	-0.5
EPF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.0						
PGF	**Pioggiola**	86.31	353	*e*P	P	18 00 44.4	0.0
	comp=Z,97nm,1.4s,mb5.5						
PGF	**Pioggiola**	86.31	353	*e*P	P	18 00 44.4	0.0
PGF				pmax	pmax		
	comp=Z,48nm,1.4s,mb5.5						
ETSF	**Etsaut**	86.33	360	*e*P	P	18 00 45.0	+0.5
STKA	**Stephens Creek**	89.14	211	P	P	18 00 60.0	+1.7
	comp=Z,2.4nm,1.1s,mb4.5,baz=23,slow=24,SNR=9.4						
STKA	**Stephens Creek**	89.14	211	P	P	18 00 60.0	+1.7
EVO	**Evora**	90.45	6	*e*P	P	18 01 03.5	-0.8
	comp=Z,7.3nm,0.8s,mb4.8						
DBIC	**Dimbokro**	122.29	5	PKP	PKPdf	18 06 58.4	+1.4
	comp=Z,3.9nm,0.9s,baz=13,slow=14,SNR=3.7						
PLCA	**Paso Flores**	131.98	106	PKP	PKPdf	18 07 16.6	+1.7
	comp=Z,2.8nm,0.8s,baz=254,slow=5.7,SNR=4.1						
TSUM	**Tsumeb**	145.03	329	*e*PKP	PKPdf	18 07 40.2	+1.3
MAW	**Mawson**	145.62	217	PKPbc	PKPbc	18 07 40.4	+1.2
	comp=Z,8.6nm,1.0s,baz=78,slow=7.0,SNR=8.6						
LBTB	**Lobatse**	147.08	313	*e*PKP2	PKPab	18 07 46.4	-1.8
BOSA	**Boshof**	150.27	309	PKPbc	PKPdf	18 07 55.1	+7.8
	comp=Z,8.4nm,0.7s,baz=59,slow=2.7,SNR=11						

SYO	Syowa Base	153.89	212	⇑PKPab	PKPab	18 08 15.5	+0.5
SNAA	Sanae	159.38	178	PKP	PKPdf	18 07 59.6	+1.4
	comp=Z,0.4nm,0.9s,baz=193,slow=9.2,SNR=3.2						
SNAA				PKPab	PKPab	18 08 36.8	-1.6
	comp=Z,0.4nm,0.6s,baz=358,slow=4.9,SNR=6.1						
VNA3	Neumayer Olymp	159.42	172		PKPdf	18 08 13.7	+15
VNA3	Neumayer Olymp	159.42	172		PKPdf	18 08 19.5	+21
VNA3	Neumayer Olymp	159.42	172		PKPab	18 08 37.3	-1.3
VNA3	Neumayer Olymp	159.42	172			18 08 52.1	
VNA3	Neumayer Olymp	159.42	172	P	PKPdf	18 08 00.0	+1.7
VNA3				P		18 08 13.7	
VNA3				P		18 08 19.5	
VNA2	Neumayer--Watz	159.91	173		PKPdf	18 08 14.5	+16
VNA2	Neumayer--Watz	159.91	173		PKPdf	18 08 19.4	+21
VNA2	Neumayer--Watz	159.91	173		PKPab	18 08 40.1	-0.6
VNA2	Neumayer--Watz	159.91	173	P	PKPdf	18 08 00.4	+1.6
VNA2				P		18 08 14.5	
VNA2				P		18 08 19.4	

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*BJI **14** 17:57:28.9, 51.86N×178.99E, h17^{km}, mB4.5, mb4.8, Ms5.5, Msz5.4*

*NEIC **14** 17:57:28.6±0.3, 51.23N×179.47E, mb4.7/52, ML4.6(AEIC), Error ellipse: s-maj=10.0km s-min=3.4km az=180.0*

*MOS **14** 17:57:30.0±0.9, 51.27N×179.50E, h54^{km}, mb4.9/27, Error ellipse: s-maj=10.7km s-min=7.4km az=98.8*

*IDC **14** 17:57:34.7±2.5, 51.52N×179.51E, h72^{km}±21^{km}, mb4.0/20, mb1 4.2/21, mb1mx4.1/27, mbtmp4.3/21, Error ellipse: s-maj=26.4km s-min=10.2km az=179.0*

ISC 14 17:57:27.0±0.3**, 51.30N**±0.08×**179.37E**±0.03**, h27**^{km}**, h27**^{km}±1.4^{km}**:pP-P, n170,** σ**1**^{s}**01**/183**, mb4.5**/70**, MS5.4**/1**, 7C-4D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.17	76	P	Pn	17 58 02.7	+0.5
KIMD				S	Sn	17 58 28.1	-0.3
KIKV	Kanaga Island	2.23	74	P	Pn	17 58 03.6	+0.5
KIKV				S	Sn	17 58 31.5	+1.5
KIWB	Kanaga Island	2.24	74	P	Pn	17 58 03.8	+0.7
KIWB				S	Sn	17 58 31.7	+1.5
KINC	Kanaga Island	2.27	72	P	Pn	17 58 04.6	+1.0
ADAG	Mount Adagdak	2.60	73	P	Pn	17 58 08.7	+0.4
GSSP	Great Sitkin S	2.88	72	P	Pn	17 58 12.6	+0.3
GSSP				S	Sn	17 58 51.4	+5.0
GSTD	Great Sitkin T	2.89	73	P	Pn	17 58 13.2	+0.8
GSTD				S	Sn	17 58 51.6	+4.9
GSMY	Great Sitkin M	2.94	74	P	Pn	17 58 13.5	+0.4
GSMY				S	Sn	17 58 50.5	+2.5
GSTR	Great Sitkin T	2.95	73	P	Pn	17 58 14.2	+0.9
GSIG	Igitkin Island	3.01	75	P	Pn	17 58 15.6	+1.5
GSIG				S	Sn	17 58 51.7	+2.0
SMY	Shemya	3.56	296	P	Pn	17 58 26.2	+4.3
SMY				S	Sn	17 59 13.0	+9.5
ATKA	Atka Island	4.10	75	P	Pn	17 58 29.5	-0.1
ATKA				S	Sn	17 59 16.6	-0.7
FX1	Attu Island--F	4.14	295	P	Pn	17 58 35.3	+5.1
FX1				S	Sn	17 59 23.2	+4.8
FX1				pmax	pmax		
	comp=Z,62nm,0.3s						
FX1	Attu Island--F	4.14	295	P	Pn	17 58 35.3	+5.1
	comp=Z,62nm,0.3s,baz=190,slow=5.0,SNR=25						
FX1				S	Sn	17 59 23.2	+4.8
	baz=254,slow=22,SNR=1.8						
FX1	Attu Island--F	4.14	295	P	Pn	17 58 35.4	+5.2
FX1				S	Sn	17 59 29.9	+12
TNA	Tin City	15.72	20	P	P	18 01 06.7	-1.2
KDAK	Kodiak Island	17.43	57	*e*P	P	18 01 25.7	-3.9
	comp=Z,20nm,0.5s						
BILL	Bilibino	17.98	344	⇓*i*P	P	18 01 39.7	+3.4
BILL				pmax	pmax		
	comp=Z,14nm,1.0s						
BILL	Bilibino	17.98	344	⇓*i*P	P	18 01 39.7	+3.4
	comp=Z,14nm,1.0s						
SPU	Mount Spurr	18.55	47	*e*P	P	18 01 44.4	+0.9
SLKM	Skilak Lake	19.21	50	*e*P	P	18 01 50.8	-0.6
IMA	Indian Mountai	20.13	32	*e*P	P	18 02 01.5	+0.1
IMA				pmax	pmax		
	comp=Z,617nm,0.9s						
IMA	Indian Mountai	20.13	32	*e*P	P	18 02 01.5	+0.2
	comp=Z,617nm,0.9s						
MCK	McKinley	20.81	41	P	P	18 02 09.0	+0.5
MCK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MCK	McKinley	20.81	41	P	P	18 02 09.0	+0.5
	comp=Z,7.4nm,0.8s						
DIV	Divide	21.48	49	*e*P	P	18 02 13.4	-1.9
	comp=Z,29nm,0.5s,mb4.9						
ILAR	Eielson Array	22.03	39	P	P	18 02 19.9	-0.9
	comp=Z,3.3nm,0.7s,mb3.9,baz=248,slow=9.4,SNR=18						
ILAR				ScP		18 09 52.3	
	comp=Z,0.6nm,0.6s,baz=264,slow=2.5,SNR=4.9						
YSS	Yuzh-Sakhalins	24.18	274	*e*P	P	18 02 41.6	-0.2
ASAJ	Asahikawa	25.56	268	P	P	18 02 57.2	+2.2
ASAJ				pmax	pmax		
	comp=Z,11nm,0.8s						
ASAJ	Asahikawa	25.56	268	P	P	18 02 57.2	+2.2
	comp=Z,11nm,0.8s,mb4.5,baz=38,slow=4.6,SNR=12						
INK	Inuvik	28.19	35	P	P	18 03 18.4	-0.4
	comp=Z,2.2nm,0.4s,mb4.1,baz=248,slow=7.1,SNR=8.6						
INK				PcP	PcP	18 06 31.6	-0.9
	comp=Z,1.2nm,0.5s,baz=253,slow=8.1,SNR=4.0						
INK	Inuvik	28.19	35	P	P	18 03 18.4	-0.4
INK				PcP	PcP	18 06 31.6	-0.9
YAK	Yakutsk	28.61	311	⇑*i*P	P	18 03 22.9	+0.2
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
YAK	Yakutsk	28.61	311	⇑*i*P	P	18 03 22.9	+0.2
	comp=Z,6.0nm,0.6s,mb4.5						
KLR	Kul'dur	30.10	285	*e*P	P	18 03 34.0	-2.1
MDJ	Mudanjiang	33.45	278	P	P	18 04 05.3	-0.3
MDJ				AP	pP	18 04 14.1	+0.4
MDJ				XP	sP	18 04 18.0	+0.8
MDJ				PP	PP	18 05 21.3	+3.5
MDJ				PCP	PcP	18 06 45.6	-0.9
MDJ				S	S	18 09 25.9	+1.7
MDJ				XS		18 09 40.9	
MDJ				SCP		18 10 27.9	
MDJ				PCS		18 10 31.6	
MDJ				AMB	AMB		
	comp=Z,3µm,13.3s						
MDJ				LR	LR		
	comp=N,3µm,15.6s,MS5.4						
MDJ				LR	LR		
	comp=E,6µm,18.2s,MS5.4						
MDJ				LR	LR		
	comp=Z,7µm,20.2s,MS5.4						
MDJ	Mudanjiang	33.45	278	P	P	18 04 05.3	-0.3
	comp=Z,6.0nm,1.2s,mb4.4						
MDJ				pP	pP	18 04 14.1	+0.4
MDJ				sP	sP	18 04 18.0	+0.8
MDJ				PP	PP	18 05 21.3	+3.5
MDJ				PcP	PcP	18 06 45.6	-0.9
MDJ				S	S	18 09 25.9	+1.7
MDJ				sS		18 09 40.9	
MDJ				ScP		18 10 27.9	
MDJ				PcS		18 10 31.6	
MDJ				LR	LR		
	comp=Z,7µm,20.2s,MS5.4						
YKW3	Yellowknife Ar	36.10	46	*e*P	P	18 04 25.6	-2.4
YKA	Yellowknife Ar	36.12	46	P	P	18 04 26.8	-1.3
	comp=Z,3.1nm,0.6s,mb4.4,baz=280,slow=7.7,SNR=20						
YKA	Yellowknife Ar	36.12	46	P	P	18 04 26.8	-1.3
CN2	Changchun	36.43	280	*e*P	P	18 04 30.1	-0.9
BOD	Bodaibo	37.10	306	*e*P	P	18 04 36.5	0.0
BOD				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
BOD	Bodaibo	37.10	306	*e*P	P	18 04 36.5	0.0
	comp=Z,14nm,0.8s,mb4.8						
HIA	Hailar	37.25	291	*e*P	P	18 04 37.5	-0.3
HIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HIA	Hailar	37.25	291	*e*P	P	18 04 37.5	-0.3
	comp=Z,4.4nm,0.6s,mb4.5						
CIT	Chita	39.57	298	*e*P	P	18 04 57.2	0.0
NEW	Newport	39.98	69	P	P	18 05 00.0	-0.7
	comp=Z,1.8nm,0.4s,mb4.1,baz=282,slow=7.5,SNR=4.0						
YBH	Yreka Blue Hor	40.03	80	P	P	18 05 03.7	+2.6
	comp=Z,2.8nm,0.8s,mb4.1,baz=298,slow=6.5,SNR=4.7						
BMO	Blue Mountains	41.62	73	*e*P	P	18 05 14.3	+0.3
	comp=Z,3.8nm,0.8s,mb4.1						
WVOR	Wild Horse Val	42.14	77	*e*P	P	18 05 19.0	+0.7
WVOR				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.3						
WVOR	Wild Horse Val	42.14	77	*e*P	P	18 05 19.0	+0.7
	comp=Z,7.5nm,0.9s,mb4.3						
MSO	Missoula	42.57	69	*e*P	P	18 05 20.2	-1.6
	comp=Z,6.1nm,1.0s,mb4.3						
HRY	Holter Researc	43.86	68	*e*P	P	18 05 31.7	-0.6
HLID	Hailey	44.06	73	*e*P	P	18 05 34.2	+0.2
	comp=Z,7.7nm,1.0s,mb4.4						
BMN	Battle Mountai	44.16	78	P	P	18 05 34.5	-0.3
MCMT	McKenzie Canyo	44.29	71	*e*P	P	18 05 35.0	-0.8
BOZ	Bozeman (W)	44.56	69	*e*P	P	18 05 36.7	-1.3
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
BOZ	Bozeman (W)	44.56	69	*e*P	P	18 05 36.7	-1.2
	comp=Z,5.4nm,0.6s,mb4.5						
NVAR	Mina Array Bea	44.70	81	P	P	18 05 39.5	+0.3
	comp=Z,4.6nm,0.8s,mb4.3,baz=299,slow=6.2,SNR=7.9						
MNV	Mina	44.79	81	*e*P	P	18 05 40.2	+0.3
QLMT	Earthquake Lak	45.13	70	*e*P	P	18 05 42.2	-0.4
TLY	Talaya	45.13	302	*e*P	P	18 05 42.9	+0.4
TLY				pmax	pmax		
	comp=Z,22nm,1.6s,mb4.7						
ELK	Elko	45.20	77	*e*P	P	18 05 42.3	-0.8
ELK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ELK	Elko	45.20	77	*e*P	P	18 05 42.3	-0.8
	comp=Z,7.7nm,1.1s,mb4.5						
MTUM	Tungsten Hills	45.20	83	P	P	18 05 42.3	-0.9
ULN	Ulaanbaatar	45.26	295	⇑*i*P	P	18 05 44.4	+0.9
SONM	Songino Array	45.65	296	P	P	18 05 48.1	+1.5
	comp=Z,4.0nm,0.7s,mb4.5,baz=57,slow=9.3,SNR=37						
IMW	Indian Meadow	45.95	71	*e*P	P	18 05 48.5	-0.5
	comp=Z,4.8nm,0.8s,mb4.5						
ZAK	Zakamensk	46.01	300	*e*P	P	18 05 43.9	-5.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
ZAK	Zakamensk	46.01	300	*e*P	P	18 05 43.9	-5.5
	comp=Z,1.0nm,0.8s,mb3.8						
SNOW	Snow King Moun	46.31	71	P	P	18 05 52.2	+0.3
TRCR	Troy Canyon	46.43	80	P	P	18 05 52.5	-0.4
MOY	Mondy	46.55	303	*e*P	P	18 05 55.3	+1.6
HHC	Hu-ho-hao-te	46.60	285	*e*P	P	18 05 57.1	+2.9
HHC				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
HHC	Hu-ho-hao-te	46.60	285	*e*P	P	18 05 57.1	+2.9
	comp=Z,29nm,1.0s,mb5.2						
SSE	Sheshan	46.85	268	*e*P	P	18 05 56.9	+0.6
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
SSE	Sheshan	46.85	268	*e*P	P	18 05 56.9	+0.6
	comp=Z,39nm,0.7s,mb5.5						
HWUT	Hardware Ranch	46.91	74	P	P	18 05 56.3	-0.3
BW06	Boulder Array	47.42	71	*e*P	P	18 05 59.5	-1.3
	comp=Z,13nm,1.0s,mb4.8						
PDAR	Pinedale Array	47.42	71	P	P	18 06 00.1	-0.6
	comp=Z,6.9nm,0.8s,mb4.7,baz=298,slow=3.7,SNR=35						
NJ2	Nanjing	47.67	270	*e*P	P	18 06 06.3	+3.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
NJ2	Nanjing	47.67	270	*e*P	P	18 06 06.3	+3.5
	comp=Z,10.0nm,0.8s,mb4.9						
MVU	Marysvale	48.41	77	P	P	18 06 09.1	+0.6
	comp=Z,6.8nm,1.0s,mb4.6						
SRU	San Rafael	49.06	76	*e*P	P	18 06 12.7	-0.7
	comp=Z,6.3nm,0.8s,mb4.7						
PV10	Paradox Valley	50.43	75	*e*P	P	18 06 23.9	0.0
ULM	Lac du Bonnet	50.68	56	P	P	18 06 25.1	-0.6
	comp=Z,1.6nm,0.4s,mb4.3,baz=279,slow=7.0,SNR=2.3						
PV01	Paradox Valley	50.87	75	*e*P	P	18 06 26.6	-0.7
RW3	Ridgway	51.33	75	P	P	18 06 30.2	-0.6
ISCO	Idaho Springs	51.59	72	*e*P	P	18 06 32.1	-0.6
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
ISCO	Idaho Springs	51.59	72	*e*P	P	18 06 32.1	-0.6
	comp=Z,5.1nm,1.0s,mb4.4						
NVS	Novosibirsk	53.41	314	*e*P	P	18 06 42.7	-3.4
LAZ	Ladron	54.18	78	*e*P	P	18 06 50.8	-1.3
ANMO	Albuquerque	54.23	77	P	P	18 06 53.6	+1.3
	comp=Z,0.3nm,0.3s,mb3.7,baz=204,slow=13,SNR=1.7						
LZH	Lanzhou	54.30	285	*e*P	P	18 06 53.5	+0.6
LZH				AP	pP	18 07 01.0	-0.3
LZH				XP	sP	18 07 04.5	0.0
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LZH	Lanzhou	54.30	285	*e*P	P	18 06 53.5	+0.6
LZH				*SP	sP	18 07 04.5	0.0
LZH				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
LZH	Lanzhou	54.30	285	*e*P	P	18 06 53.5	+0.6
	comp=Z,28nm,1.0s,mb5.2						
LZH				pP	pP	18 07 01.0	-0.3
LZH				sP	sP	18 07 04.5	0.0
GTA	Gaotai	54.53	291	*e*P	P	18 06 55.8	+1.3
	comp=Z,6.0nm,0.9s,mb4.6						
GTA				pP	pP	18 07 04.6	+1.7
GTA				sP	sP	18 07 07.8	+1.7
CPRX	Cap Rock	57.11	77	P	P	18 07 12.5	-0.8
ARCES	ARCESS Array B	57.97	349	P	P	18 07 16.8	-1.9
	comp=Z,3.3nm,0.7s,mb4.5,baz=16,slow=8.8,SNR=5.7						
WMQ	Urumqi	58.42	302	*e*P	P	18 07 23.0	+0.8
	comp=Z,9.0nm,0.8s,mb4.8						
WMQ				pP	pP	18 07 31.3	+0.6
WMQ				sP	sP	18 07 35.2	+1.3
MKAR	Makanchi Array	59.18	307	P	P	18 07 27.0	-0.5
	comp=Z,3.2nm,0.4s,mb4.7,baz=56,slow=6.1,SNR=58						
MKAR	Makanchi Array	59.18	307	P	P	18 07 27.0	-0.5
TXAR	Lajitas Array	59.80	80	P	P	18 07 30.9	-1.1
	comp=Z,1.8nm,0.7s,mb4.2,baz=304,slow=4.5,SNR=8.7						
BVA0	Borovoye Array	60.20	319	*i* P	P	18 07 34.1	-0.4
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
BVA0	Borovoye Array	60.20	319	*i* P	P	18 07 34.1	-0.4
	comp=Z,1.0nm,0.7s,mb4.0						
BVAR	Borovoye Array	60.20	319	P	P	18 07 34.9	+0.4
	comp=Z,5.2nm,0.4s,mb4.9,baz=50,slow=7.4,SNR=56						
SCHQ	Schefferville	60.77	37	P	P	18 07 36.6	-1.7
	comp=Z,2.2nm,0.6s,mb4.5,baz=276,slow=9.2,SNR=3.6						
ARU	Arti	62.06	327	⇓*i*P	P	18 07 46.6	-0.4
ARU				*e*		18 08 22.3	
ARU				*e*S	S	18 16 18.1	+10
ARU				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
ARU	Arti	62.06	327	⇓*i*P	P	18 07 46.6	-0.4
	comp=Z,7.0nm,0.9s,mb4.8						
ARU				*e*		18 08 22.3	
ARU				*e*S	S	18 16 18.1	+10
PLAL	Pickwick Lake	65.09	65	*e*P	P	18 08 04.8	-2.3
	comp=Z,47nm,2.3s,mb5.1						
FINES	FINESS Array B	65.60	346	P	P	18 08 08.4	-1.5
	comp=Z,2.1nm,0.9s,mb4.2,baz=333,slow=4.3,SNR=5.7						
AAK	Ala-Archa	66.03	309	⇑*i*P	P	18 08 12.3	-0.7
AAK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
AAK	Ala-Archa	66.03	309	⇑*i*P	P	18 08 12.3	-0.7
	comp=Z,11nm,1.3s,mb4.7						
AB31	Akbulak array	67.30	322	*i* P	P	18 08 21.1	+0.1
AB31				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
AB31	Akbulak array	67.30	322	*i* P	P	18 08 21.1	+0.1
	comp=Z,8.0nm,1.1s,mb4.7						
KKAR	Karatay Array	67.59	311	*i* P	P	18 08 23.5	+0.6
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
KKAR	Karatay Array	67.59	311	*i* P	P	18 08 23.5	+0.6
	comp=Z,8.0nm,0.7s,mb4.9						
NB2	NORSAR Subarra	67.61	354	P	P	18 08 21.7	-1.0
	comp=Z,8.0nm,0.7s,mb4.9,baz=7.0,slow=6.2						
NOA	NORSAR Array B	67.61	354	P	P	18 08 22.0	-0.8
	comp=Z,6.3nm,0.7s,mb4.7,baz=8.1,slow=6.3,SNR=27						
VSU	Vasula	68.34	345	*e*P	P	18 08 27.3	0.0
TAOE	Nuku Hiva Isla	69.33	137	*e*LR	LR	18 07 38.4	
CMAR	Chiang Mai Arr	69.88	275	P	P	18 08 37.5	0.0
	comp=Z,2.1nm,0.7s,mb4.2,baz=29,slow=6.8,SNR=13						
GUN	Gumba	70.82	291	*e*P	P	18 08 44.2	+1.2
	comp=Z,34nm,0.7s,mb5.4						
KKN	Kakani	71.26	291	*e*P	P	18 08 47.0	+1.3
	comp=Z,22nm,0.6s,mb5.3						
KKN	Kakani	71.26	291	*e*P	P	18 08 47.0	+1.3
KKN				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
PKI	Pulchoki	71.35	291	*e*P	P	18 08 47.2	+1.0
	comp=Z,13nm,0.7s,mb5.0						
PKI	Pulchoki	71.35	291	*e*P	P	18 08 47.2	+1.0
PKI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
GKN	Gorkha	71.48	292	*e*P	P	18 08 47.9	+0.9
	comp=Z,18nm,0.6s,mb5.2						
DMN	Daman	71.50	291	*e*P	P	18 08 48.1	+1.0
	comp=Z,20nm,1.0s,mb5.0						
KOLN	Koldanda	72.25	292	*e*P	P	18 08 52.5	+0.9
	comp=Z,12nm,0.8s,mb4.8						
AKASG	Malin Array Be	75.26	341	P	P	18 09 07.8	-0.7
	comp=Z,0.6nm,0.3s,mb4.0,baz=18,slow=5.9,SNR=7.7						
GOF	Gofitskoye	76.87	330	*e*P	P	18 09 16.8	-1.0
CLL	Collm	77.12	351	P	P	18 09 18.0	-1.0
KIV	Kislovodsk	77.97	330	*e*P	P	18 09 21.4	-2.4
KIV				pmax	pmax		
	comp=N,3.0nm,0.8s						
KIV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
KIV	Kislovodsk	77.97	330	*e*P	P	18 09 21.4	-2.4
	comp=Z,4.0nm,0.8s,mb4.4						
BAIF	Baives	78.94	357	*e*P	P	18 09 29.3	+0.3
GERES	GERESS Array B	79.49	350	P	P	18 09 32.3	+0.3
	comp=Z,0.5nm,0.6s,mb3.6,baz=27,slow=3.0,SNR=5.3						
FLN	La Foliniere	80.32	360	*e*P	P	18 09 36.1	-0.4
CDF	Champ du Feu	80.44	355	*e*P	P	18 09 36.8	-0.3
LDF	La Druitiere	80.49	360	*e*P	P	18 09 36.9	-0.5
	comp=Z,8.1nm,0.6s,mb4.5						
LDF	La Druitiere	80.49	360	*e*P	P	18 09 36.9	-0.5
LDF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
GRR	Gorron	80.70	0	*e*P	P	18 09 38.4	-0.1
	comp=Z,12nm,0.9s,mb4.5						
GRR	Gorron	80.70	0	*e*P	P	18 09 38.4	-0.1
GRR				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
ROSF	Rostrenen	80.72	2	*e*P	P	18 09 38.8	+0.2
SGMF	Saint Gilles	80.82	1	*e*P	P	18 09 39.0	-0.1
	comp=Z,24nm,0.9s,mb4.8						
SGMF	Saint Gilles	80.82	1	*e*P	P	18 09 39.0	-0.1
SGMF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
WRAB	Tennant Creek	81.16	222	*e*P	P	18 09 40.2	-1.3
KBA	Koelnbreinsper	81.27	350	⇑*i*P	P	18 09 42.5	+1.0
	comp=Z,8.4nm,0.8s,mb4.7						
KBA	Koelnbreinsper	81.27	350	⇑*i*P	P	18 09 42.5	+1.0
KBA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
LOR	Lormes	81.74	357	*e*P	P	18 09 44.0	0.0
	comp=Z,4.2nm,0.6s,mb4.2						
LOR	Lormes	81.74	357	*e*P	P	18 09 44.0	0.0
LOR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
SSF	Saint Saulge	81.96	357	*e*P	P	18 09 45.0	-0.1
SSF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
SSF	Saint Saulge	81.96	357	*e*P	P	18 09 45.0	-0.1
	comp=Z,1.5nm,0.6s,mb4.1						
AVF	Avril sur Loir	82.23	357	*e*P	P	18 09 46.6	+0.1
CABF	La Chapelle	82.30	355	*e*P	P	18 09 47.3	+0.4
	comp=Z,16nm,1.0s,mb4.6						
CABF	La Chapelle	82.30	355	*e*P	P	18 09 47.3	+0.4
CABF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
SMF	Signal de Mont	82.36	357	*e*P	P	18 09 47.0	-0.2
MFF	Saint Martin d	82.48	360	*e*P	P	18 09 47.8	0.0
	comp=Z,9.6nm,0.8s,mb4.5						
MFF	Saint Martin d	82.48	360	*e*P	P	18 09 47.8	0.0
MFF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LPG	La Plagne	83.38	355	*e*P	P	18 09 53.8	+1.3
	comp=Z,16nm,1.1s,mb4.7						
LPG	La Plagne	83.38	355	*e*P	P	18 09 53.8	+1.3
LPG				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
VIVF	Saint-Julien-l	84.12	356	*e*P	P	18 09 55.9	-0.3
	comp=Z,20nm,1.1s,mb4.9						
VIVF	Saint-Julien-l	84.12	356	*e*P	P	18 09 55.9	-0.3
VIVF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
MBDF	Montbardon	84.14	355	*e*P	P	18 09 56.9	+0.6
	comp=Z,9.8nm,0.9s,mb4.6						
MBDF	Montbardon	84.14	355	*e*P	P	18 09 56.9	+0.6
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
SMRF	Simiane la Rot	84.96	356	*e*P	P	18 10 01.8	+1.4
PGF	Pioggiola	86.16	353	*e*P	P	18 10 06.2	-0.2
	comp=Z,25nm,1.0s,mb5.1						
PGF	Pioggiola	86.16	353	*e*P	P	18 10 06.2	-0.2
PGF				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.1						
TSUM	Tsumeb	144.89	329	*e*PKP	PKPdf	18 17 02.1	-4.2
BOSA	Boshof	150.16	310	PKPbc	PKPdf	18 17 17.0	+2.3
	comp=Z,3.2nm,0.5s,baz=346,slow=5.7,SNR=10						

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*NEIC **14** 18:01:16.5, 51.08N×179.31E, h26^{km}, mb4.0/1, ML3.9(AEIC), After AEIC.*

*IDC **14** 18:01:18.2±5.2, 50.97N×179.50E, h54^{km}±38^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.6/24, mbtmp4.0/8, ML4.0/1, Error ellipse: s-maj=54.7km s-min=16.9km az=176.0*

ISC 14 18:01:16.6±1.4**, 50.9N**±0.2×**179.33E**±0.06**, h56**^{km}±9^{km}**, n22,** σ**1**^{s}**13**/28**, mb3.9**/8**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.31	67	P	P	18 01 52.7	-0.4
KIMD				S	S	18 02 20.3	-0.1
KIKV	Kanaga Island	2.39	65	P	P	18 01 54.2	-0.1
KIKV				S	S	18 02 24.6	+2.2
KIWB	Kanaga Island	2.39	66	P	P	18 01 54.1	-0.2
ADAG	Mount Adagdak	2.76	66	P	P	18 01 59.0	-0.4
ADAG				S	S	18 02 33.0	+1.4
GSTD	Great Sitkin T	3.05	66	P	P	18 02 04.8	+1.2
GSTD				S	S	18 02 38.7	-0.3
GSIG	Igitkin Island	3.15	68	P	P	18 02 04.5	-0.5
GSIG				S	S	18 02 40.2	-1.5
SMY	Shemya	3.71	301	P	P	18 02 10.7	-2.2
ATKA	Atka Island	4.24	70	P	P	18 02 20.9	+0.7
FX1	Attu Island--F	4.29	300	P	P	18 02 20.1	-0.9
	31nm,0.3s,baz=48,slow=1.3,SNR=9.8						
FX1				S	S	18 03 12.5	+2.2
	5.3nm,0.3s,baz=76,slow=23,SNR=3.2						
FX1	Attu Island--F	4.29	300	P	P	18 02 19.8	-1.2
SPU	Mount Spurr	18.83	46	P	P	18 05 30.7	-3.3
IMA	Indian Mountai	20.46	32	*e*P	P	18 05 50.7	-0.8
MCK	McKinley	21.11	41	*e*P	P	18 05 58.9	+0.7
ILAR	Eielson Array	22.34	39	P	P	18 06 10.8	+0.4
	0.5nm,0.6s,mb3.1,baz=255,slow=11,SNR=4.4						
ASAJ	Asahikawa	25.52	269	P	P	18 06 43.1	+2.0
	3.1nm,0.8s,mb3.9,baz=106,slow=12,SNR=3.9						
YKA	Yellowknife Ar	36.40	46	P	P	18 08 15.5	-1.4
	0.7nm,0.5s,mb3.8,baz=279,slow=8.1,SNR=4.3						
SONM	Songino Array	45.79	296	P	P	18 09 35.3	+1.3
	0.7nm,0.6s,mb3.8,baz=64,slow=7.2,SNR=4.5						
BW06	Boulder Array	47.57	71	*e*P	P	18 09 48.1	0.0
	1.1nm,0.8s,mb3.9						
PDAR	Pinedale Array	47.57	71	P	P	18 09 47.9	-0.2
	1.1nm,0.6s,mb4.1,baz=304,slow=2.4,SNR=5.0						
MKAR	Makanchi Array	59.38	308	P	P	18 11 14.3	-0.8
	0.8nm,0.4s,mb4.1,baz=48,slow=5.8,SNR=11						
MKAR	Makanchi Array	59.38	308	P	P	18 11 14.3	-0.8
BVAR	Borovoye Array	60.47	319	P	P	18 11 22.1	-0.2
	3.7nm,0.7s,mb4.5,baz=53,slow=7.2,SNR=14						

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*NEIC **14** 18:03:43.4, 51.02N×179.45E, h33^{km}, mb4.5/1, ML3.9(AEIC), After AEIC.*

*IDC **14** 18:03:46.6±3.6, 51.03N×179.46E, h72^{km}±29^{km}, mb3.6/12, mb1 3.8/12, mb1mx3.7/24, mbtmp4.0/12, Error ellipse: s-maj=29.8km s-min=13.7km az=166.0*

ISC 14 18:03:43.0±1.1**, 50.9N**±0.1×**179.46E**±0.06**, h58**^{km}±8^{km}**, n30,** σ**0**^{s}**88**/35**, mb4.0**/13**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.25	66	P	P	18 04 18.7	+0.1
KIMD				S	S	18 04 47.1	+1.9
KIKV	Kanaga Island	2.33	64	P	P	18 04 19.7	-0.1
KIWB	Kanaga Island	2.33	64	P	P	18 04 19.7	-0.1
KIWB				S	S	18 04 49.3	+2.0
KINC	Kanaga Island	2.38	63	P	P	18 04 19.9	-0.6
KIRH	Kanaga Island	2.38	64	P	P	18 04 20.2	-0.4
ADAG	Mount Adagdak	2.69	65	P	P	18 04 24.8	-0.3
ADAG				S	S	18 04 57.2	+0.7

GSSP	Great Sitkin S	2.98	65	P	P	18 04 28.8	-0.3
GSTD	Great Sitkin T	2.98	65	P	P	18 04 29.5	+0.4
GSMY	Great Sitkin M	3.03	66	P	P	18 04 29.0	-0.7
GSTR	Great Sitkin T	3.05	65	P	P	18 04 29.8	-0.2
GSIG	Igitkin Island	3.09	68	P	P	18 04 30.3	-0.2
SMY	Shemya	3.80	301	P	P	18 04 40.4	-0.1
ATKA	Atka Island	4.17	69	P	P	18 04 45.2	-0.5
ATKA				S	S	18 05 31.9	-1.8
FX1	Attu Island--F	4.37	299	P	P	18 04 47.8	-0.8
	67nm,0.3s,baz=219,slow=6.3,SNR=11						
FX1				S	S	18 05 39.7	+0.9
	3.7nm,0.3s,baz=149,slow=19,SNR=2.3						
FX1	Attu Island--F	4.37	299	P	P	18 04 47.9	-0.7
ILAR	Eielson Array	22.31	39	P	P	18 08 36.6	+0.3
	0.8nm,0.6s,mb3.3,baz=255,slow=11,SNR=5.6						
ASAJ	Asahikawa	25.60	269	P	P	18 09 10.0	+1.9
	5.9nm,0.7s,mb4.2,baz=74,slow=6.4,SNR=9.0						
INK	Inuvik	28.48	35	P	P	18 09 35.4	+1.1
	0.7nm,0.3s,mb3.7,baz=252,slow=3.2,SNR=3.9						
YKA	Yellowknife Ar	36.36	46	P	P	18 10 41.2	-1.5
	1.2nm,0.6s,mb4.0,baz=281,slow=8.0,SNR=6.5						
YKA	Yellowknife Ar	36.36	46	P	P	18 10 41.2	-1.5
MCMT	McKenzie Canyo	44.38	70	*e*P	P	18 11 49.6	+0.6
SONM	Songino Array	45.88	296	P	P	18 12 01.6	+0.7
	0.7nm,0.7s,mb3.7,baz=61,slow=8.0,SNR=5.4						
BW06	Boulder Array	47.51	71	*e*P	P	18 12 13.7	-0.1
	4.8nm,0.9s,mb4.5						
PDAR	Pinedale Array	47.51	71	P	P	18 12 14.3	+0.5
	3.6nm,0.6s,mb4.6,baz=310,slow=3.7,SNR=21						
MKAR	Makanchi Array	59.47	308	P	P	18 13 40.6	-1.1
	1.0nm,0.5s,mb4.2,baz=50,slow=6.0,SNR=14						
BVAR	Borovoye Array	60.54	319	P	P	18 13 48.5	-0.5
	4.5nm,0.6s,mb4.8,baz=48,slow=6.9,SNR=24						
NOA	NORSAR Array B	68.02	354	P	P	18 14 36.3	-1.1
	0.7nm,0.7s,mb3.8,baz=7.3,slow=6.2,SNR=3.4						
CMAR	Chiang Mai Arr	69.96	275	P	P	18 14 50.4	+0.3
	0.7nm,0.7s,mb3.7,baz=30,slow=7.5,SNR=5.5						
AKASG	Malin Array Be	75.66	341	P	P	18 15 21.9	-1.0
	0.2nm,0.2s,mb3.6,baz=21,slow=6.5,SNR=4.0						
WRA	Warramunga Arr	80.91	222	P	P	18 15 53.1	+0.7
	0.4nm,0.7s,mb3.5,baz=34,slow=6.1,SNR=4.2						

NEIC 14 18:16:35.6,51.10N×179.64E,h1^{km},ML3.7(AEIC)**,After AEIC.,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIKV	Kanaga Island	2.14	67	P	Pn	18 17 12.7	-0.3
KIRH	Kanaga Island	2.19	67	P	Pn	18 17 13.7	0.0
GSSP	Great Sitkin S	2.79	68	P	Pn	18 17 21.8	-0.5
GSMY	Great Sitkin M	2.85	69	P	Pn	18 17 23.1	0.0
ATKA	Atka Island	4.00	72	P	Pn	18 17 39.3	-0.1
FX1	Attu Island--F	4.38	297	P	Pn	18 17 43.9	-1.0

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*IDC **14** 18:16:59.6±2.8,50.50N×179.97E,mb3.5/5,mb1 3.9/6, mb1mx3.6/22,mbtmp3.7/6,ML3.7/1,Error ellipse: s-maj=72.5km s-min=19.6km az=5.0*

*NEIC **14** 18:17:09.3±1.6,51.06N×179.75E,h57^{km}±7^{km},mb4.0/1, ML3.6(AEIC),Error ellipse: s-maj=39.0km s-min=6.1km az=183.0*

ISC 14 18:17:07.9±2.7**,51.1N**±0.4×**179.7E**±0.1**,h59**^{km}±12^{km}**,n16, σ0^{s}52**/17**,mb3.6**/6**,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.04	69	P	P	18 17 40.8	+0.3
KIWB	Kanaga Island	2.12	67	*e*P	P	18 17 41.2	-0.5
GSTR	Great Sitkin T	2.83	67	P	P	18 17 51.5	-0.3
GSIG	Igitkin Island	2.88	70	P	P	18 17 53.0	+0.5
SMY	Shemya	3.84	298	P	P	18 18 06.3	+0.3
ATKA	Atka Island	3.96	71	P	P	18 18 07.4	-0.3
FX1	Attu Island--F	4.43	297	Pn	P	18 18 13.5	-0.7
	10nm,0.3s,baz=50,slow=15,SNR=5.8						
FX1				Sn	S	18 19 11.7	+6.7
	5.3nm,0.3s,baz=0.5,slow=20,SNR=3.0						
FX1	Attu Island--F	4.43	297	P	P	18 18 14.8	+0.6
ILAR	Eielson Array	22.07	39	P	P	18 21 59.4	+0.6
	0.3nm,0.6s,mb2.9,baz=256,slow=7.4,SNR=3.5						
SONM	Songino Array	45.94	296	P	P	18 25 26.7	+0.6
	0.4nm,0.7s,mb3.5,baz=39,slow=9.2,SNR=4.1						
BW06	Boulder Array	47.30	71	*e*P	P	18 25 37.5	+0.5
	0.9nm,0.5s,mb4.0						
PDAR	Pinedale Array	47.30	71	P	P	18 25 36.9	-0.1
	1.0nm,0.6s,mb3.9,baz=310,slow=3.5,SNR=6.2						
MKAR	Makanchi Array	59.48	308	P	P	18 27 05.7	-0.9
	0.5nm,0.4s,mb3.9,baz=49,slow=6.4,SNR=6.0						
MKAR	Makanchi Array	59.48	308	P	P	18 27 05.7	-0.9
NB2	NORSAR Subarra	67.85	354	P	P	18 28 00.3	-0.9
	0.7nm,0.7s,mb3.8,baz=9.0,slow=6.5						
NOA	NORSAR Array B	67.85	354	P	P	18 28 01.0	-0.2
	0.6nm,0.7s,mb3.7,baz=9.7,slow=6.6,SNR=3.9						

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*NEIC **14** 18:20:47.7,27.84N×143.57E,MG3.5(JMA),After JMA.*

IDC 14 18:20:46.6±2.0**,27.78N×143.66E,mb3.6**/3**,mb1 3.7**/4**, mb1mx3.4**/20**,mbtmp3.5**/4**,ML3.2**/1**,Error ellipse: s-maj=38.1km s-min=24.6km az=102.0,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.48	243	Pn	Pn	18 21 14.9	+0.4
	33nm,0.3s,baz=40,slow=6.1,SNR=7.0						
CBIJ				Sn	Sn	18 21 35.2	+0.3
	56nm,0.3s,baz=269,slow=22,SNR=4.9						
MJAR	Matsushiro Arr	9.88	334	Pn	P	18 23 08.7	-4.2
	0.2nm,0.3s,baz=162,slow=12,SNR=2.9						
WRAB	Tennant Creek	48.28	192	*e*P	P	18 29 27.8	-3.9
WRA	Warramunga Arr	48.29	192	P	P	18 29 29.5	-2.3
	0.5nm,0.5s,baz=12,slow=8.6,SNR=7.6						
MKAR	Makanchi Array	51.05	309	P	P	18 29 49.8	-2.7
	0.2nm,0.3s,baz=90,slow=8.6,SNR=4.1						
BVAR	Borovoye Array	58.43	317	P	P	18 30 45.0	-1.3
	0.5nm,0.5s,baz=90,slow=8.9,SNR=4.1						

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*NEIC **14** 18:32:08.3±1.1,50.90N×179.54E,h57^{km}±6^{km},mb3.9/3, ML3.8(AEIC),Error ellipse: s-maj=23.7km s-min=6.0km az=178.0*

*IDC **14** 18:32:09.8±4.6,50.99N×179.46E,h68^{km}±33^{km},mb3.6/9, mb1 3.8/9,mb1mx3.6/23,mbtmp3.9/9,ML4.2/1,Error ellipse: s-maj=49.1km s-min=14.6km az=175.0*

ISC 14 18:32:05.4±1.3**,50.7N**±0.1×**179.48E**±0.05**,h54**^{km}±8^{km}**, n27,σ0^{s}85**/35**,mb3.9**/11**,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.32	62	P	P	18 32 42.1	+0.1
KIWB	Kanaga Island	2.41	60	P	P	18 32 43.4	+0.1
KIKV	Kanaga Island	2.41	60	P	P	18 32 43.5	+0.2
KIKV				S	S	18 33 12.0	+0.4
KINC	Kanaga Island	2.46	59	P	P	18 32 43.8	-0.2
KIRH	Kanaga Island	2.46	60	P	P	18 32 44.2	+0.2
KIRH				S	S	18 33 13.7	+0.7
ADAG	Mount Adagdak	2.77	61	P	P	18 32 48.3	-0.1
ADAG				S	S	18 33 22.6	+1.9
GSSP	Great Sitkin S	3.05	61	P	P	18 32 51.9	-0.6
GSSP				S	S	18 33 27.7	-0.3
GSTD	Great Sitkin T	3.06	62	P	P	18 32 51.8	-0.7
GSMY	Great Sitkin M	3.10	63	P	P	18 32 53.2	+0.1
GSMY				S	S	18 33 29.0	-0.2
GSIG	Igitkin Island	3.15	64	P	P	18 32 54.8	+0.9
GSIG				S	S	18 33 30.0	-0.5
SMY	Shemya	3.91	303	P	P	18 33 05.7	+1.2
ATKA	Atka Island	4.23	67	P	P	18 33 08.3	-0.7
ATKA				S	S	18 33 56.2	-1.4
FX1	Attu Island--F	4.48	301	P	P	18 33 11.3	-1.3
	43nm,0.3s,baz=211,slow=6.2,SNR=25						
FX1				S	S	18 34 03.7	-0.3
	1.8nm,0.3s,baz=272,slow=12,SNR=2.0						
RSO	Redoubt South	18.34	47	*e*P	P	18 36 16.7	-0.5
BILL	Bilibino	18.56	344	P	P	18 36 21.8	+2.0
	2.7nm,0.8s						
ILAR	Eielson Array	22.45	38	P	P	18 37 00.6	+0.1
	0.6nm,0.6s,mb3.2,baz=246,slow=10,SNR=7.5						
INK	Inuvik	28.63	35	P	P	18 37 58.0	-0.4
	0.6nm,0.5s,mb3.6,baz=265,slow=9.6,SNR=2.6						
YKA	Yellowknife Ar	36.48	45	P	P	18 39 05.4	-1.2
	0.7nm,0.5s,mb3.8,baz=280,slow=8.1,SNR=2.9						
ULN	Ulaanbaatar	45.58	296	*e*P	P	18 40 21.8	+0.4
	1.1nm,0.7s,mb3.9						
SONM	Songino Array	45.97	296	P	P	18 40 25.4	+0.8
	0.7nm,0.7s,mb3.7,baz=57,slow=7.8,SNR=9.3						
BW06	Boulder Array	47.55	71	*e*P	P	18 40 38.0	+1.0
	2.5nm,0.6s,mb4.4						
PDAR	Pinedale Array	47.55	71	P	P	18 40 38.4	+1.3
	3.3nm,0.6s,mb4.5,baz=295,slow=3.1,SNR=22						
MKAR	Makanchi Array	59.59	308	P	P	18 42 04.3	-1.3
	0.8nm,0.5s,mb4.0,baz=51,slow=6.2,SNR=11						
BVAR	Borovoye Array	60.69	319	P	P	18 42 12.4	-0.6
	3.3nm,0.6s,mb4.6,baz=48,slow=6.5,SNR=25						
AAK	Ala-Archa	66.45	309	P	P	18 42 50.8	0.0
NOA	NORSAR Array B	68.21	354	P	P	18 43 00.2	-1.3
	0.9nm,0.7s,mb3.9,baz=8.5,slow=6.2,SNR=2.8						
CMAR	Chiang Mai Arr	70.00	275	P	P	18 43 14.0	+0.8
	0.5nm,0.7s,mb3.6,baz=30,slow=7.4,SNR=4.7						

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*NEIC **14** 18:32:41.0±0.8,13.17N×49.28E,h10^{km},mb3.9/2,Error ellipse: s-maj=15.6km s-min=11.6km az=173.0*

*IDC **14** 18:32:40.6±2.9,13.40N×49.42E,mb3.5/4,mb1 3.7/4, mb1mx3.5/16,mbtmp3.5/4,Error ellipse: s-maj=74.5km s-min=38.3km az=47.0*

*CSEM **14** 18:32:40.7±0.4,13.18N×49.23E,h15^{km},mb4.0/2,Error ellipse: s-maj=13.9km s-min=7.7km az=178.0*

*DHMR **14** 18:32:43.1±1.8,13.41N×48.95E,h2^{km}±706^{km},ML3.5*

ISC 14 18:32:40.8±2.5**,13.3N**±0.1×**49.30E**±0.04**,h16**^{km}±17^{km}**, n20,σ1^{s}18**/30**,mb3.7**/6**,10D,Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MUKL	Al Mukalla	1.20	348	⇓*i*P	Pb	18 33 02.5	-0.2
MUKL				*i* S	Sb	18 33 17.4	-0.5
MUKL	Al Mukalla	1.20	348	⇓*i*P	Pb	18 33 02.5	-0.2
MUKL				*i* S	Sb	18 33 18.2	+0.3
MUKL				AML	AML	18 33 20.9	
	comp=N,701nm,0.2s						
BDHA	Al Bayda'	3.69	281	⇓*i*P	Pn	18 33 39.9	+1.5
BDHA				*i* S	Sn	18 34 23.9	+1.8
BDHA	Al Bayda'	3.69	281	⇓*i*P	Pn	18 33 40.0	+1.5
BDHA				*i* S	Sn	18 34 23.4	+1.3
BDHA				AML	AML	18 34 26.5	
	comp=Z,328nm,0.3s						
BDHA	Al Bayda'	3.69	281	⇓*i*P	Pn	18 33 39.9	+1.4
BDHA				*i* S	Sn	18 34 23.4	+1.4
LBOS		3.98	279	⇓*i*P	Pn	18 33 43.7	+1.1
LBOS				*i* S	Sn	18 34 31.1	+1.8
LBOS		3.98	279	⇓*i*P	Pn	18 33 43.7	+1.1
LBOS				*i* S	Sn	18 34 29.7	+0.4
DHBB	Dhamar BB	4.93	286	*i* S	Sn	18 34 52.6	-0.8
TRBA	At Turbah	5.05	270	⇓*i*P	Pn	18 33 56.6	-1.1
TRBA				*i* S	Sn	18 34 56.6	+0.2
TRBA	At Turbah	5.05	270	⇓*i*P	Pn	18 33 56.6	-1.1
TRBA				AML	AML	18 34 04.4	
	comp=Z,78nm,0.5s						
TRBA				*i* S	Sn	18 34 54.5	-1.8
TRBA	At Turbah	5.05	270	⇓*i*P	Pn	18 33 56.6	-1.1
	comp=Z,39nm,0.5s						
TRBA				*i* S	Sn	18 34 56.6	+0.3
UDYN	Al 'Udayn	5.22	278	*i* S	Sn	18 34 58.1	-2.7
MBAR	Mbarara	23.00	235	*e*P	P	18 37 43.3	-2.9
	comp=Z,1.3nm,0.7s,mb3.5						
AKASG	Malin Array Be	40.73	340	P	P	18 40 22.6	+0.2
	comp=Z,0.2nm,0.3s,mb3.2,baz=149,slow=7.0,SNR=4.1						
MKAR	Makanchi Array	43.36	33	P	P	18 40 43.2	-0.8
	comp=Z,0.2nm,0.4s,mb3.2,baz=214,slow=4.5,SNR=3.1						
MKAR	Makanchi Array	43.36	33	P	P	18 40 43.2	-0.8
CMAR	Chiang Mai Arr	47.91	77	P	P	18 41 20.2	-0.4
	comp=Z,1.2nm,0.8s,mb4.0,baz=279,slow=8.8,SNR=4.5						
WRA	Warramunga Arr	89.90	110	P	P	18 45 41.7	+0.6
	comp=Z,0.4nm,0.6s,mb3.9,baz=299,slow=3.7,SNR=5.3						
WRAB	Tennant Creek	89.91	110	P	P	18 45 42.2	+1.1
	comp=Z,1.6nm,0.8s,mb4.4						
WRAB	Tennant Creek	89.91	110	P	P	18 45 42.2	+1.0
	comp=Z,1.6nm,0.8s,mb4.4						

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*MOS **14** 18:35:57.1±1.1,42.20N×144.90E,h46^{km},mb3.9/1,Error ellipse: s-maj=19.8km s-min=11.2km az=79.3*

*JMA **14** 18:35:58.4,42.31N×144.92E,h29^{km}±1^{km},M4.1 Broadband fault plane solution: P waves. NP1:ϕ_s235°, δ24°,λ115°. NP2:ϕ_s28°,δ69°,λ79°. Principal axes: T Plg65°, Azm280°; N Plg10°, Azm32°; P Plg23°, Azm126°;*

*NEIC **14** 18:35:58.5,42.31N×144.92E,h30^{km},MG4.1(JMA),After JMA.*

*IDC **14** 18:36:01.6±2.9,42.11N×144.75E,h61^{km}±23^{km},mb3.5/8, mb1 3.7/10,mb1mx3.6/22,mbtmp3.8/10,ML4.1/2,MS4.2/1, Ms1 4.2/1,ms1mx3.7/27,Error ellipse: s-maj=25.9km s-min=16.3km az=89.0*

ISC 14 18:35:56.6±0.8**,42.21N**±0.05×**145.05E**±0.08**,h44**^{km}±8^{km}**, n30,σ0^{s}76**/39**,mb3.8**/9**,3C-4D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAK	Akkeshi	0.83	342	⇓P	P	18 36 12.0	0.0
JAK				*e*S	S	18 36 22.5	-0.8
JOB	Onbets	1.13	308	⇓P	P	18 36 16.7	+0.4
JOB				*e*S	S	18 36 30.3	-0.6
NEM2	Nemuro 2	1.27	24	⇑P	P	18 36 19.1	+0.9
NEM2				*e*S	S	18 36 34.6	+0.3
JCH	Churui	1.31	289	⇑P	P	18 36 19.7	+0.8
JCH				*e*S	S	18 36 35.6	+0.1
JNK	Nakash	1.40	350	⇓P	P	18 36 19.9	-0.2
JNK				*e*S	S	18 36 36.4	-1.2
JEM	Erimo	1.42	263	P	P	18 36 21.6	+1.2
JAR	Ashorobuto	1.44	320	⇓P	P	18 36 20.4	-0.3
JNBK	Urakawa-nobuka	1.70	273	⇑P	P	18 36 24.7	+0.2
JRA	Rausu	1.73	2	P	P	18 36 25.0	+0.2
JRA				*e*S	S	18 36 45.0	-0.8
YUK	Yuzh-Kuril'sk	1.92	18	*e*PN	P	18 36 27.5	0.0
YUK				*e*S	S	18 36 50.5	-0.1
YUK				pmax	pmax		
	comp=Z,250nm,0.3s						
YUK				smax			
	comp=E,2μm,0.7s						
YUK				smax			
	comp=N,1μm,0.4s						
YUK				smax			
	comp=E,620nm,0.4s						
ASAJ	Asahikawa	2.62	318	PN	P	18 36 38.8	+1.3
ASAJ				S	S	18 37 11.6	+3.4
ASAJ				pmax	pmax		
	comp=Z,35nm,0.3s						
ASAJ				smax			
	comp=N,39nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,4μm,18.6s						
ASAJ	Asahikawa	2.62	318	P	P	18 36 38.8	+1.3
	comp=Z,35nm,0.3s,baz=164,slow=6.3,SNR=145						
ASAJ				S	S	18 37 11.6	+3.3
	comp=Z,39nm,0.3s,baz=250,slow=32,SNR=14						
ASAJ				LR	LR	18 37 31.5	
	comp=Z,4μm,18.6s,baz=309,slow=35						
YSS	Yuzh-Sakhalins	5.02	342	PN	P	18 37 10.9	-0.5
MAJO	Matsushiro	7.75	225	*e*PN	P	18 37 49.0	-0.6
MAT	Matsushiro	7.75	225	*e*PN	P	18 37 49.0	-0.6
MAT				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAT	Matsushiro	7.75	225	*e*P	P	18 37 49.0	-0.6
	comp=Z,6.3nm,0.5s						
MAT	Matsushiro	7.75	225	P	P	18 37 48.9	-0.7
MAT				*e*S	S	18 39 27.5	+11
MJAR	Matsushiro Arr	7.75	225	P	P	18 37 48.6	-0.9
	comp=Z,1.7nm,0.3s,baz=29,slow=15,SNR=17						
SONM	Songino Array	27.68	295	P	P	18 41 43.0	+0.6
	comp=Z,2.7nm,0.8s,mb3.9,baz=83,slow=8.0,SNR=14						
ZAK	Zakamensk	29.66	300	*e*P	P	18 41 59.4	-0.7
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.5						
ILAR	Eielson Array	43.64	35	P	P	18 44 01.4	+3.2
	comp=Z,0.6nm,0.5s,mb3.6,baz=250,slow=6.6,SNR=3.8						
MKAR	Makanchi Array	43.94	298	P	P	18 44 01.0	+0.2
	comp=Z,0.4nm,0.4s,mb3.5,baz=78,slow=11,SNR=3.5						
CMAR	Chiang Mai Arr	45.60	253	P	P	18 44 13.9	-0.6
	comp=Z,0.4nm,0.6s,mb3.6,baz=49,slow=7.0,SNR=4.7						
BVAR	Borovoye Array	49.30	310	P	P	18 44 43.3	+0.4
	comp=Z,1.3nm,0.3s,mb4.4,baz=79,slow=9.3,SNR=12						
WRA	Warramunga Arr	62.62	191	P	P	18 46 18.5	-0.5
	comp=Z,0.4nm,0.7s,mb3.6,baz=7.4,slow=7.0,SNR=3.4						
FINES	FINESS Array B	65.54	332	P	P	18 46 37.2	-0.1
	comp=Z,1.7nm,0.7s,mb4.2,baz=49,slow=6.5,SNR=11						
FINES	FINESS Array B	65.54	332	P	P	18 46 37.2	-0.1
NB2	NORSAR Subarra	70.47	338	P	P	18 47 07.5	-0.4
	comp=Z,1.4nm,1.0s,mb3.9,baz=35,slow=6.2						
NOA	NORSAR Array B	70.47	338	P	P	18 47 08.7	+0.7
	comp=Z,0.5nm,0.8s,mb3.5,baz=54,slow=4.8,SNR=3.0						
SIV	San Ignacio	145.57	48	PKPbc	PKPbc	18 55 35.0	+3.9
	comp=Z,0.4nm,0.3s,baz=135,slow=9.4,SNR=5.7						

NEIC 14 18:36:10.0,51.06N×179.66E,h1^{km},ML3.8(AEIC)**,After AEIC.,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.07	69	P	Pn	18 36 46.7	+0.5
KIKV	Kanaga Island	2.15	66	P	Pn	18 36 47.0	-0.4
KIWB	Kanaga Island	2.15	67	P	Pn	18 36 46.7	-0.7
ATKA	Atka Island	4.00	71	P	Pn	18 37 11.7	-2.0
FX1	Attu Island--F	4.41	297	P	Pn	18 37 16.6	-3.1

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*NEIC **14** 18:37:51.3±0.8,50.89N×179.52E,h46^{km}±6^{km},mb4.4/1, ML3.9(AEIC),Error ellipse: s-maj=14.2km s-min=5.0km az=181.0*

*IDC **14** 18:37:54.4±3.4,50.98N×179.49E,h72^{km}±28^{km},mb3.7/10, mb1 4.0/10,mb1mx3.8/23,mbtmp4.0/10,Error ellipse: s-maj=30.3km s-min=14.2km az=175.0*

ISC 14 18:37:49.1±1.1**,50.8N**±0.1×**179.47E**±0.05**,h48**^{km}±8^{km}**, n30,σ0^{s}98**/38**,mb4.1**/11**,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.30	63	P	P	18 38 25.1	-0.4
KIWB	Kanaga Island	2.39	61	P	P	18 38 26.9	+0.2
KIWB				S	S	18 38 55.6	+0.8
KIKV	Kanaga Island	2.39	61	P	P	18 38 26.7	0.0
KINC	Kanaga Island	2.44	60	P	P	18 38 27.1	-0.2
KINC				S	S	18 38 56.7	+0.6
KIRH	Kanaga Island	2.44	61	P	P	18 38 27.3	-0.1
KIRH				S	S	18 38 57.5	+1.3
ADAG	Mount Adagdak	2.75	62	P	P	18 38 31.5	-0.4
GSSP	Great Sitkin S	3.04	62	P	P	18 38 35.3	-0.6
GSTD	Great Sitkin T	3.04	63	P	P	18 38 35.4	-0.6
GSTD				S	S	18 39 13.4	+2.0
GSMY	Great Sitkin M	3.08	64	P	P	18 38 36.1	-0.5
GSMY				S	S	18 39 13.8	+1.2
GSTR	Great Sitkin T	3.10	63	P	P	18 38 36.3	-0.6
GSIG	Igitkin Island	3.14	65	P	P	18 38 37.1	-0.3
SMY	Shemya	3.88	303	P	P	18 38 47.2	-0.6
SMY				S	S	18 39 33.0	+0.3
ATKA	Atka Island	4.21	67	P	P	18 38 52.2	-0.4
ATKA				S	S	18 39 38.9	-2.3
FX1	Attu Island--F	4.46	301	P	P	18 38 56.3	+0.4
	80nm,0.3s,baz=272,slow=10,SNR=34						
FX1				S	S	18 39 48.3	+1.2
	20nm,0.3s,baz=105,slow=22,SNR=3.1						
FX1	Attu Island--F	4.46	301	P	P	18 38 56.7	+0.7
RSO	Redoubt South	18.31	47	*e*P	P	18 42 00.5	-0.5
BILL	Bilibino	18.52	344	P	P	18 42 01.8	-1.6
SPU	Mount Spurr	18.88	46	*e*P	P	18 42 06.7	-1.1
ILAR	Eielson Array	22.41	39	P	P	18 42 46.1	+1.6
	1.0nm,0.6s,mb3.4,baz=253,slow=11,SNR=11						
INK	Inuvik	28.59	35	P	P	18 43 41.7	-0.6
	1.4nm,0.5s,mb4.0,baz=9.8,slow=16,SNR=3.3						
INK	Inuvik	28.59	35	P	P	18 43 41.7	-0.7
NVAR	Mina Array Bea	44.72	81	P	P	18 45 59.3	+0.2
	0.6nm,0.4s,mb3.7,baz=287,slow=6.3,SNR=4.3						
SONM	Songino Array	45.95	296	P	P	18 46 10.1	+1.4
	0.7nm,0.5s,mb3.9,baz=61,slow=8.9,SNR=6.1						
SONM				PcP	PcP	18 47 46.1	+0.7
	0.2nm,0.5s,baz=77,slow=3.2,SNR=3.6						
BW06	Boulder Array	47.54	71	*e*P	P	18 46 21.5	+0.2
	2.5nm,0.5s,mb4.5						
PDAR	Pinedale Array	47.54	71	P	P	18 46 21.8	+0.5
	3.9nm,0.7s,mb4.6,baz=309,slow=4.3,SNR=26						
MKAR	Makanchi Array	59.56	308	P	P	18 47 48.4	-1.4
	1.0nm,0.3s,mb4.3,baz=50,slow=5.6,SNR=19						
BVAR	Borovoye Array	60.66	319	P	P	18 47 56.2	-0.9
	3.2nm,0.6s,mb4.6,baz=52,slow=7.0,SNR=22						
NOA	NORSAR Array B	68.16	354	P	P	18 48 44.0	-1.7
	1.4nm,0.7s,mb4.1,baz=7.4,slow=6.2,SNR=6.4						
CMAR	Chiang Mai Arr	69.99	275	P	P	18 48 58.5	+1.0
	0.7nm,0.7s,mb3.7,baz=38,slow=6.6,SNR=7.0						
WRA	Warramunga Arr	80.81	222	P	P	18 50 01.1	+1.8
	1.0nm,0.7s,mb3.9,baz=37,slow=6.0,SNR=7.4						

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*IDC **14** 18:42:50.6±7.4,49.44N×179.19E,h48^{km}±54^{km},mb3.5/5, mb1 3.9/6,mb1mx3.5/23,mbtmp3.9/6,ML3.5/1,Error ellipse: s-maj=79.8km s-min=22.7km az=5.0*

*NEIC **14** 18:42:53.3,51.05N×179.48E,h21^{km},ML3.6(AEIC),After AEIC.*

ISC 14 18:42:54.0±1.5**,50.8N**±0.2×**179.6E**±0.1**,h55**^{km}±12^{km}**,n22, σ0^{s}60**/29**,mb3.6**/5**,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.20	63	P	P	18 43 27.8	-1.0
KIMD				S	S	18 43 54.3	-0.5
KIKV	Kanaga Island	2.29	60	P	P	18 43 29.2	-0.9
KIKV				S	S	18 43 56.5	-0.5
KIWB	Kanaga Island	2.29	61	P	P	18 43 30.3	+0.2
KINC	Kanaga Island	2.33	59	P	P	18 43 30.9	+0.1
KINC				S	S	18 43 58.7	+0.4
KIRH	Kanaga Island	2.34	60	P	P	18 43 30.5	-0.4
ADAG	Mount Adagdak	2.65	62	P	P	18 43 34.8	-0.5
GSSP	Great Sitkin S	2.93	62	P	P	18 43 39.2	-0.1
GSTD	Great Sitkin T	2.94	63	P	P	18 43 40.3	+0.9
GSTD				S	S	18 44 13.8	+0.2
GSMY	Great Sitkin M	2.98	63	P	P	18 43 40.0	+0.1
GSMY				S	S	18 44 15.3	+0.7
GSTR	Great Sitkin T	3.00	63	P	P	18 43 40.0	-0.2
GSIG	Igitkin Island	3.03	65	P	P	18 43 41.0	+0.3
SMY	Shemya	3.94	302	P	P	18 43 45.9	-7.6
ATKA	Atka Island	4.11	68	P	P	18 43 56.1	+0.2
ATKA				S	S	18 44 43.5	+0.3
FX1	Attu Island--F	4.52	300	P	P	18 44 04.3	+2.6
	5.7nm,0.3s,baz=106,slow=21,SNR=8.6						
FX1				S	S	18 45 02.8	+9.3
	6.6nm,0.3s,baz=348,slow=21,SNR=5.5						
FX1	Attu Island--F	4.52	300	P	P	18 44 02.1	+0.4
ILAR	Eielson Array	22.32	39	P	P	18 47 57.5	+10
	0.6nm,0.9s,mb3.0,baz=251,slow=12,SNR=5.7						
SONM	Songino Array	46.02	296	P	P	18 51 13.0	-0.3
	0.5nm,1.0s,mb3.4,baz=57,slow=8.2,SNR=2.8						
BW06	Boulder Array	47.44	71	*e*P	P	18 51 24.9	+0.4
PDAR	Pinedale Array	47.44	71	P	P	18 51 25.3	+0.7
	1.0nm,0.5s,mb4.0,baz=309,slow=5.3,SNR=5.4						
MKAR	Makanchi Array	59.62	308	P	P	18 52 53.2	-1.0
	0.2nm,0.3s,mb3.6,baz=59,slow=7.1,SNR=4.5						
MKAR	Makanchi Array	59.62	308	P	P	18 52 53.2	-1.0
BVAR	Borovoye Array	60.69	319	P	P	18 53 01.3	-0.1
	0.8nm,0.6s,mb4.0,baz=58,slow=6.8,SNR=6.3						

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*IDC **14** 18:52:22.8±1.2,60.96N×148.66W,mb3.8/5,mb1 3.9/8, mb1mx3.8/22,mbtmp3.8/8,ML3.6/3,MS4.3/1,Ms1 4.4/1, ms1mx3.7/35,Error ellipse: s-maj=17.0km s-min=15.1km az=40.0*

*NEIC **14** 18:52:30.8,61.19N×148.50W,h15^{km},ML4.2(PMR), ML4.0(AEIC),After AEIC.*

NEIC Felt [III] at Anchorage and Girdwood; [II] at Eagle River and Palmer.

ISC 14 18:52:28.5±0.2**,61.18N**±0.02×**148.50W**±0.03**,h15**^{km}**,n94, σ1^{s}09**/113**,mb4.0**/6**,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNK	Knik Glacier	0.23	6	P	Pg	18 52 36.7	+2.8
KNK				S	Sg	18 52 41.7	+4.2
PMR	Palmer	0.51	324	P	Pb	18 52 39.9	+1.2
PMR				S	Sb	18 52 47.4	+1.8
RC01	Rabbit Creek A	0.61	262	P	Pb	18 52 42.1	+1.8
RC01				S	Sb	18 52 50.7	+2.4
GHO	Glory Hole Cre	0.63	341	P	Pb	18 52 41.8	+1.1
GHO				S	Sb	18 52 50.4	+1.5
SML	Sawmill	0.63	7	P	Pb	18 52 41.8	+1.0
SML				S	Sb	18 52 50.6	+1.4
FIB	Fire Island	0.81	270	P	Pb	18 52 45.6	+1.8
MPA	Moose Pass	0.81	212	P	Pb	18 52 45.1	+1.3
MPA				S	Sb	18 52 56.4	+2.0
PWA	Palmer West	0.81	306	P	Pb	18 52 44.6	+0.7
PWA				S	Sb	18 52 54.4	0.0
SCM	Sheep Creek Mo	0.86	40	P	Pb	18 52 45.3	+0.6
VOGL	Vogel Lake	0.95	260	P	Pb	18 52 48.3	+2.0

VLZ	Valdez	1.05	92	P	Pb	18 52 48.6	+0.6
VLZ				S	Sb	18 53 02.8	+1.5
SLKM	Skilak Lake	1.08	232	P	Pb	18 52 49.4	+1.0
HIN	Hinchinbrook I	1.26	128	P	Pb	18 52 52.8	+1.3
DIV	Divide	1.32	91	P	Pb	18 52 53.1	+0.5
DIV				S	Sb	18 53 10.0	+0.8
EYAK	Cordova Ski Ar	1.49	114	P	Pn	18 52 55.5	+0.5
CVA	Cordova	1.49	114	P	Pn	18 52 55.6	+0.6
TZL	Tazlina	1.71	58	P	Pn	18 52 58.8	+0.7
SPU	Mount Spurr	1.72	272	P	Pn	18 52 58.5	+0.3
SPU				S	Sn	18 53 20.2	+0.2
CKN	Chakachatna No	1.78	273	P	Pn	18 52 59.9	+0.8
NNL	Ninilchik	1.79	232	P	Pn	18 53 00.8	+1.5
CKL	Chakachamna La	1.86	272	P	Pn	18 53 00.5	+0.3
CKL				S	Sn	18 53 24.8	+1.2
HUR	Hurricane	1.88	344	P	Pn	18 53 01.1	+0.5
HUR				S	Sn	18 53 25.1	+1.0
RAGM	Ragged Mountai	2.04	111	P	Pn	18 53 02.8	0.0
MID	Middleton Isla	2.06	148	P	Pn	18 53 03.5	+0.3
CNPM	China Poot	2.15	220	P	Pn	18 53 04.9	+0.6
HOM	Homer	2.18	227	P	Pn	18 53 05.2	+0.4
HOM				S	Sn	18 53 32.6	+0.8
RDN	Redoubt North	2.19	254	P	Pn	18 53 04.8	-0.3
RDN				S	Sn	18 53 32.2	+0.1
RSO	Redoubt South	2.20	253	P	Pn	18 53 05.2	0.0
RND	Reindeer	2.24	356	P	Pn	18 53 06.2	+0.5
RND				S	Sn	18 53 33.8	+0.5
NCT	North Crescent	2.25	256	P	Pn	18 53 05.8	-0.1
GLB	Gilahina Butte	2.28	81	P	Pn	18 53 06.5	+0.2
GLB				S	Sn	18 53 34.4	+0.1
PAX	Paxson	2.29	37	P	Pn	18 53 07.1	+0.6
PAX				S	Sn	18 53 34.9	+0.2
XLV	Seldovia	2.36	224	P	Pn	18 53 07.0	-0.4
KAIM	Kayak Island	2.38	120	P	Pn	18 53 08.3	+0.6
TRF	Thorofare Moun	2.43	341	P	Pn	18 53 08.5	+0.1
ILIM	Iliamna	2.46	245	P	Pn	18 53 08.5	-0.3
INE	Iliamna NE	2.51	245	P	Pn	18 53 09.3	-0.3
IVE	Iliamna Volcan	2.51	244	P	Pn	18 53 09.3	-0.3
ILW	Iliamna West	2.55	246	P	Pn	18 53 09.9	-0.2
ILS	Iliamna Low So	2.57	243	P	Pn	18 53 10.1	-0.3
MCK	McKinley	2.57	356	P	Pn	18 53 11.0	+0.6
THY	Trims Highway	2.58	29	P	Pn	18 53 11.6	+0.9
KTH	Kantishna Hill	2.63	336	P	Pn	18 53 11.3	0.0
CRQM	Cirque	2.65	97	P	Pn	18 53 11.9	+0.3
TGL	Tana Glacier	2.80	96	P	Pn	18 53 13.3	-0.4
OPT	Oil Point	2.80	239	P	Pn	18 53 13.6	-0.1
MENT	Mentasta	2.86	50	P	Pn	18 53 15.5	+0.9
DDM	Donnelly Dome	2.89	24	P	Pn	18 53 16.2	+1.3
BALM	Baldy	2.99	90	P	Pn	18 53 16.0	-0.5
AUE	Augustine Isla	3.04	235	P	Pn	18 53 16.7	-0.4
AUL	Augustine Lava	3.05	236	P	Pn	18 53 17.0	-0.3
AUW	Augustine West	3.07	236	P	Pn	18 53 17.5	0.0
AUI	Augustine Isla	3.07	235	P	Pn	18 53 17.4	-0.2
DOT	Dot Lake	3.23	38	P	Pn	18 53 19.9	+0.1
WRH	Wood River Hil	3.31	3	P	Pn	18 53 20.3	-0.7
HDA	Harding Lake	3.31	12	P	Pn	18 53 20.8	-0.2
NEA	Nenana	3.42	356	P	Pn	18 53 21.6	-0.9
SVW2	Sparrevohn	3.43	272	P	Pn	18 53 21.2	-1.5
CTGM	Chitina Glacie	3.49	90	P	Pn	18 53 23.2	-0.3
CCB	Clear Creek Bu	3.49	5	P	Pn	18 53 22.6	-1.0
MCNL	McNeil River	3.54	238	P	Pn	18 53 23.5	-0.7
BCA3	Beaver Creek A	3.68	56	P	Pn	18 53 25.9	-0.3
IL1	Eielson Array	3.68	11	P	Pn	18 53 26.0	-0.2
ILAR	Eielson Array	3.68	11	Pn	Pn	18 53 21.1	-5.1
	0.6nm,0.3s,baz=270,slow=2.9,SNR=64						
ILAR				Sn	Sn	18 54 07.5	-2.2
	44nm,0.3s,baz=202,slow=7.7,SNR=10						
ILAR				LR	LR	18 55 23.8	
	comp=Z,4µm,18.4s,baz=341,slow=46						
COLA	College	3.72	4	P	Pn	18 53 25.8	-0.9
MDM	Murphy Dome	3.79	2	P	Pn	18 53 26.9	-0.9
KAPH	Katmai Pasha	3.92	231	P	Pn	18 53 29.1	-0.6
TT01	Tatalina	3.94	299	P	Pn	18 53 27.8	-2.1
TTA	Tatalina	3.95	300	P	Pn	18 53 27.9	-2.1
KDAK	Kodiak Island	3.99	213	P	Pn	18 53 28.9	-1.8
MLY	Manley	4.00	346	P	Pn	18 53 29.7	-1.0
KAHC	Katmai Hardscr	4.14	235	P	Pn	18 53 30.9	-1.9
MGLS	Mageik LS	4.56	232	P	Pn	18 53 37.1	-1.6
CAHL	Cahill	4.67	231	P	Pn	18 53 38.6	-1.6
CNTC	Contact Creek	4.74	235	P	Pn	18 53 39.7	-1.6
PNL	Peninsula	4.76	105	P	Pn	18 53 40.7	-0.9
KJL	Kejulik	4.77	232	P	Pn	18 53 40.5	-1.1
GCSA	Galena City Sc	5.23	317	P	Pn	18 53 45.9	-2.3
IM3	Indian Mountai	5.36	336	P	Pn	18 53 47.6	-2.3
IMA	Indian Mountai	5.42	337	*e*P	Pn	18 53 49.0	-1.9
COLD	Coldfoot	6.12	354	P	Pn	18 53 59.3	-1.4
BM3	Burnt Mountain	6.49	13	P	Pn	18 54 03.5	-2.4
WHY	Whitehorse	6.66	89	P	Pn	18 54 06.6	-1.8
INK	Inuvik	9.57	35	Pn	P	18 54 46.3	-2.4
	0.7nm,0.3s,baz=233,slow=15,SNR=14						
INK				Sn	Sn	18 56 37.1	+0.2
	0.6nm,0.3s,baz=222,slow=2.5,SNR=3.8						
INK				Lg		18 57 30.4	
	0.2nm,0.3s,baz=137,slow=26,SNR=4.0						
INK	Inuvik	9.57	35	*e*P	P	18 54 46.2	-2.4
DLBC	Dease Lake	9.70	98	Pn	P	18 54 45.9	-4.6
	0.5nm,0.3s,baz=301,slow=9.4,SNR=3.8						
DLBC				Lg		18 57 30.1	
	0.0nm,0.3s,baz=175,slow=25,SNR=3.1						
YKA	Yellowknife Ar	15.95	70	Pn	P	18 56 13.0	-0.7
	0.2nm,0.3s,baz=280,slow=14,SNR=3.2						
SONM	Songino Array	55.85	308	P	P	19 02 04.0	-3.1
	1.1nm,0.8s,mb3.9,baz=45,slow=7.0,SNR=7.2						
FINES	FINESS Array B	57.63	3	P	P	19 02 14.8	-4.9
	0.9nm,0.5s,mb4.0,baz=18,slow=8.8,SNR=10						
FINES	FINESS Array B	57.63	3	P	P	19 02 14.8	-4.9
BVAR	Borovoye Array	62.01	335	P	P	19 02 45.2	-4.7
	0.4nm,0.4s,mb4.0,baz=37,slow=7.2,SNR=5.2						
MKAR	Makanchi Array	64.84	324	P	P	19 03 03.0	-5.4
	0.2nm,0.3s,mb3.6,baz=37,slow=6.1,SNR=3.7						
LZH	Lanzhou	66.80	303	*e*P	P	19 03 20.5	-0.7
	12nm,1.0s,mb4.9						
LZH				pP	pP	19 03 27.9	+2.1
LZH				sP	sP	19 03 31.6	+4.1
AKASG	Malin Array Be	68.45	2	P	P	19 03 26.8	-4.6
	0.3nm,0.3s,mb3.8,baz=358,slow=6.4,SNR=6.9						

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*NEIC **14** 19:08:56.1±1.2, 20.05S×69.11W, h100^{km}±12^{km}, mb3.6/3, Error ellipse: s-maj=16.4km s-min=11.2km az=63.0*

*IDC **14** 19:08:58.1±2.7, 20.03S×68.96W, h116^{km}±24^{km}, mb3.5/4, mb1 3.8/7, mb1mx3.6/18, mbtmp4.0/7, MS4.2/1, Ms1 4.2/1, ms1mx4.1/18, Error ellipse: s-maj=34.4km s-min=17.1km az=75.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 14 19:08:54.8±1.5**, 20.13S**±0.08×**69.1W**±0.1**, h104**^{km}±17^{km}**, n17, σ1^{s}23**/15**, mb3.8**/2**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.93	14	P	P	19 09 55.8	+1.4
	3.0nm,0.3s,baz=188,slow=8.2,SNR=99						
LPAZ				S	S	19 10 40.7	+1.0
	1.2nm,0.3s,baz=254,slow=18,SNR=2.7						
LPAZ	La Paz	3.93	14	*e*Pn	P	19 09 55.8	+1.5
ARE	Arequipa	4.28	328	*e*P	P	19 09 57.0	-2.0
ARE				*e*S	S	19 10 42.0	-6.2
SIV	San Ignacio	8.70	63	P	P	19 10 57.4	-1.8
	2.2nm,0.3s,baz=256,slow=11,SNR=101						
CFAA	Coronel Fontan	11.46	176	LR	LR	19 16 32.6	
	comp=Z,1µm,21.7s,baz=105,slow=39						
CPUP	Villa Florida	12.48	122	P	P	19 11 50.7	+0.8
	0.3nm,0.3s,baz=321,slow=14,SNR=7.5						
CPUP	Villa Florida	12.48	122	*e*P	P	19 11 50.6	+0.7
	4.7nm,0.8s						
SAML	Samuel	12.51	28	P	P	19 11 50.4	+0.2
TRQA	Tornquist	18.92	162	P	P	19 13 08.9	-1.0
	1.0nm,0.6s						
PLCA	Paso Flores	20.58	183	P	P	19 13 28.9	+1.7
	1.4nm,0.7s,baz=9.8,slow=14,SNR=5.7						
PLCA	Paso Flores	20.58	183	Pn	P	19 13 29.3	+2.1
	2.6nm,0.9s						
BDFB	Brasilia	20.58	81	P	P	19 13 26.6	-0.8
	1.9nm,0.4s,baz=294,slow=13,SNR=3.4						
NVAR	Mina Array Bea	74.29	322	P	P	19 20 23.4	+0.9
	0.3nm,0.6s,mb3.2,baz=195,slow=7.8,SNR=3.5						
YKA	Yellowknife Ar	89.83	341	P	P	19 21 41.8	-0.7
	1.7nm,0.6s,mb4.3,baz=137,slow=4.7,SNR=8.0						
WRA	Warramunga Arr	134.02	211	PKP	PKPdf	19 28 03.1	+2.4
	0.3nm,0.4s,baz=146,slow=1.5,SNR=8.9						
MKAR	Makanchi Array	144.64	35	PKP	PKPdf	19 28 19.8	+0.8
	0.4nm,0.6s,baz=297,slow=2.7,SNR=4.5						
SONM	Songino Array	152.12	6	PKPbc	PKPdf	19 28 40.3	+9.3
	0.9nm,0.4s,baz=325,slow=1.3,SNR=12						

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*NEIC **14** 19:21:55.4, 51.07N×179.64E, h30^{km}, mb4.4/3, ML3.9(AEIC), After AEIC.*

*IDC **14** 19:22:01.6±4.4, 51.88N×179.74E, h67^{km}±35^{km}, mb3.3/6, mb1 3.6/7, mb1mx3.4/23, mbtmp3.7/7, ML3.2/1, Error ellipse: s-maj=68.7km s-min=21.8km az=177.0*

ISC 14 19:21:56.9±1.6**, 51.2N**±0.3×**179.73E**±0.09**, h68**^{km}±8^{km}**, n25, σ0^{s}95**/25**, mb3.5**/7**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	1.98	72	P	P	19 22 29.2	+0.3
KIKV	Kanaga Island	2.05	69	P	P	19 22 29.1	-0.8
KIWB	Kanaga Island	2.06	70	P	P	19 22 30.0	0.0
KINC	Kanaga Island	2.10	68	P	P	19 22 30.7	+0.2
KIRH	Kanaga Island	2.11	69	P	P	19 22 30.9	+0.2
ADAG	Mount Adagdak	2.42	69	P	P	19 22 34.9	-0.3
GSTD	Great Sitkin T	2.71	70	P	P	19 22 39.7	+0.4
GSMY	Great Sitkin M	2.76	70	P	P	19 22 39.4	-0.5
GSTR	Great Sitkin T	2.77	69	P	P	19 22 40.8	+0.7
GSIG	Igitkin Island	2.82	72	P	P	19 22 40.8	0.0
SMY	Shemya	3.81	296	P	P	19 22 55.2	+0.6
ATKA	Atka Island	3.91	73	P	P	19 22 54.2	-1.8
FX1	Attu Island--F	4.40	295	P	P	19 23 02.1	-0.7
	5.2nm,0.3s,baz=241,slow=19,SNR=13						
FX1	Attu Island--F	4.40	295	P	P	19 23 03.1	+0.3
RSO	Redoubt South	17.90	48	*e*P	P	19 26 03.9	+1.4
SPU	Mount Spurr	18.46	46	*e*P	P	19 26 10.6	+1.4
IMA	Indian Mountai	20.10	32	*e*P	P	19 26 27.6	+0.5
	58nm,1.5s						
ILAR	Eielson Array	21.97	39	P	P	19 26 44.0	-2.0
	0.4nm,0.6s,mb2.9,baz=248,slow=9.7,SNR=3.5						
SONM	Songino Array	45.91	296	P	P	19 30 15.3	+1.3
	0.2nm,0.6s,mb3.0,baz=73,slow=8.7,SNR=3.2						
BW06	Boulder Array	47.24	71	*e*P	P	19 30 24.9	+0.2
	8.5nm,1.7s,mb4.2						
PDAR	Pinedale Array	47.24	71	P	P	19 30 26.0	+1.3
	1.6nm,0.8s,mb3.8,baz=308,slow=4.5,SNR=10						
MKAR	Makanchi Array	59.43	308	P	P	19 31 53.5	-0.9
	0.2nm,0.4s,mb3.5,baz=62,slow=5.4,SNR=4.8						
NB2	NORSAR Subarra	67.75	354	P	P	19 32 48.4	-0.2
	0.8nm,0.8s,mb3.6,baz=7.0,slow=6.2						
NOA	NORSAR Array B	67.75	354	P	P	19 32 47.5	-1.1
	1.6nm,0.8s,mb3.9,baz=7.7,slow=6.4,SNR=4.7						
HFS	Hagfors	68.46	353	P	P	19 32 51.4	-1.7
	0.6nm,0.5s,mb3.7,slow=8.6,SNR=2.5						

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*NEIC **14** 19:22:49.5±2.7, 51.18N×179.49E, h58^{km}±18^{km}, mb4.3/2, Error ellipse: s-maj=40.3km s-min=12.6km az=170.0*

*IDC **14** 19:22:53.6±3.8, 51.36N×179.61E, h90^{km}±30^{km}, mb3.6/10, mb1 3.8/11, mb1mx3.6/25, mbtmp4.0/11, Error ellipse: s-maj=44.6km s-min=17.5km az=166.0*

ISC 14 19:22:51.4±3.0**, 51.3N**±0.2×**179.6E**±0.1**, h88**^{km}±23^{km}**, n19, σ1^{s}03**/20**, mb3.7**/11**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	3.72	296	*e*P	P	19 23 42.5	-5.4
FX1	Attu Island--F	4.31	295	P	P	19 23 54.5	-1.4
	25nm,0.3s,baz=208,slow=14,SNR=14						
FX1				S	S	19 24 47.9	+2.6
	12nm,0.3s,baz=74,slow=20,SNR=3.1						
FX1	Attu Island--F	4.31	295	*e*P	P	19 23 52.3	-3.6
SPU	Mount Spurr	18.47	47	*e*P	P	19 27 02.6	+0.3
IMA	Indian Mountai	20.08	32	*e*P	P	19 27 19.2	-0.4
	26nm,1.1s						
ILAR	Eielson Array	21.96	39	P	P	19 27 40.3	+1.6
	0.4nm,0.8s,mb2.8,baz=256,slow=11,SNR=2.9						
ASAJ	Asahikawa	25.72	269	P	P	19 28 15.7	+0.9
	5.2nm,0.8s,mb4.0,baz=65,slow=3.9,SNR=6.8						
SONM	Songino Array	45.82	296	P	P	19 31 07.2	+1.5
	0.6nm,0.6s,mb3.5,baz=61,slow=7.2,SNR=6.7						
BW06	Boulder Array	47.29	71	*e*P	P	19 31 17.3	-0.1
	1.7nm,0.7s,mb3.9						
PDAR	Pinedale Array	47.29	71	P	P	19 31 17.6	+0.2
	2.4nm,0.7s,mb4.0,baz=316,slow=3.6,SNR=12						
MKAR	Makanchi Array	59.33	308	P	P	19 32 45.7	-0.3
	1.0nm,0.7s,mb4.0,baz=54,slow=7.0,SNR=8.7						
MKAR	Makanchi Array	59.33	308	P	P	19 32 45.7	-0.3
NB2	NORSAR Subarra	67.67	354	P	P	19 33 40.2	-0.1
	1.8nm,0.8s,mb4.0,baz=7.0,slow=6.2						
NOA	NORSAR Array B	67.67	354	P	P	19 33 40.1	-0.2
	1.8nm,0.8s,mb4.0,baz=7.8,slow=6.3,SNR=5.5						
HFS	Hagfors	68.39	352	P	P	19 33 44.9	+0.1
	1.2nm,0.6s,mb3.9,baz=315,slow=2.1,SNR=4.1						
CMAR	Chiang Mai Arr	70.04	275	P	P	19 33 55.1	-0.5
	0.8nm,0.8s,mb3.6,baz=29,slow=5.7,SNR=5.1						
EKA	Eskdalemuir Ar	73.76	2	P	P	19 34 15.8	-1.1
	1.3nm,0.7s,mb3.8,baz=352,slow=5.0,SNR=2.9						
AKASG	Malin Array Be	75.36	341	P	P	19 34 24.8	-1.4
	0.2nm,0.2s,mb3.4,baz=22,slow=5.5,SNR=4.6						
AKASG	Malin Array Be	75.36	341	P	P	19 34 24.8	-1.4

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*TAP **14** 19:25:26.5, 23.89N×122.78E, h49^{km}±1^{km}, ML2.7*

JMA 14 19:25:28.8±0.1**, 24.74N**×**122.61E, h52**^{km}**, M1.6, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.46	127	P	P	19 25 39.6	-0.2
YOJ				*e*S	S	19 25 47.4	-0.3
IRIF	Iriomote-Funau	1.10	111	P	P	19 25 47.9	-0.2
IRIF				*e*S	S	19 26 02.4	-0.1
JKRS	Kuro-shima	1.37	111	P	P	19 25 52.0	-0.1
JIJ	Ishigaki jima	1.45	105	P	P	19 25 53.1	0.0
JIJ				*e*S	S	19 26 10.6	-0.5

NEIC 14 19:28:54.1, 50.93N×**179.71E, h32**^{km}**, ML3.8**(AEIC)**, After AEIC., Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	2.09	65	P	Pn	19 29 27.8	0.0
KIMD				S	Sn	19 29 54.9	+2.0
KIKV	Kanaga Island	2.17	63	P	Pn	19 29 28.9	-0.1
KIWB	Kanaga Island	2.17	64	*e*P	Pn	19 29 28.6	-0.4
KINC	Kanaga Island	2.22	62	P	Pn	19 29 29.7	+0.1
ADAG	Mount Adagdak	2.54	64	P	Pn	19 29 34.3	+0.2
GSMY	Great Sitkin M	2.87	66	P	Pn	19 29 38.5	-0.4
ATKA	Atka Island	4.01	69	P	Pn	19 29 54.2	-0.9
FX1	Attu Island--F	4.50	298	P	Pn	19 30 03.3	+1.3

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*NEIC **14** 19:29:57.1, 51.00N×179.60E, h14^{km}, mb4.0/1, ML3.3(AEIC), After AEIC.*

*IDC **14** 19:30:01.2±4.6, 51.40N×179.57E, h63^{km}±35^{km}, mb3.7/5, mb1 3.8/6, mb1mx3.5/24, mbtmp4.0/6, ML3.8/1, Error ellipse: s-maj=64.6km s-min=22.6km az=5.0*

ISC 14 19:30:00.2±1.8**, 51.5N**±0.4×**179.57E**±0.10**, h70**^{km}±11^{km}**, n18, σ0^{s}54**/19**, mb3.8**/6**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	2.02	80	P	P	19 30 32.2	-0.5
KIKV	Kanaga Island	2.08	77	P	P	19 30 33.7	+0.1
KINC	Kanaga Island	2.11	76	P	P	19 30 34.1	+0.1
KIRH	Kanaga Island	2.13	76	P	P	19 30 34.5	+0.2
ADAG	Mount Adagdak	2.44	76	P	P	19 30 39.2	+0.5
GSTD	Great Sitkin T	2.73	76	P	P	19 30 43.2	+0.4
GSMY	Great Sitkin M	2.79	76	P	P	19 30 42.8	-0.7
SMY	Shemya	3.61	293	P	P	19 30 55.7	+0.7
ATKA	Atka Island	3.94	77	P	P	19 30 59.8	+0.1
FX1	Attu Island--F	4.19	292	P	P	19 31 01.9	-1.3
	17nm,0.3s,baz=143,slow=5.6,SNR=25						
FX1				S	S	19 31 51.8	+0.4
	baz=217,slow=20,SNR=1.4						
FX1	Attu Island--F	4.19	292	*e*P	P	19 31 01.8	-1.4
ASAJ	Asahikawa	25.68	268	P	P	19 35 25.4	+0.4
	4.4nm,0.8s,mb3.9,baz=122,slow=5.1,SNR=5.4						
SONM	Songino Array	45.70	296	P	P	19 38 15.7	+0.2
	0.2nm,0.3s,mb3.3,baz=57,slow=8.2,SNR=4.2						
BW06	Boulder Array	47.26	71	*e*P	P	19 38 27.6	-0.2
	0.7nm,0.5s,mb3.6						
PDAR	Pinedale Array	47.26	71	P	P	19 38 28.4	+0.5
	1.1nm,0.6s,mb3.8,baz=322,slow=3.8,SNR=9.4						
MKAR	Makanchi Array	59.18	307	P	P	19 39 54.9	-0.9
	0.6nm,0.4s,mb4.0,baz=47,slow=6.6,SNR=12						
MKAR	Makanchi Array	59.18	307	P	P	19 39 54.9	-0.9
BVAR	Borovoye Array	60.17	319	P	P	19 40 02.6	+0.1
	2.3nm,0.6s,mb4.4,baz=48,slow=7.0,SNR=9.0						

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*IDC **14** 19:31:52.6±0.7, 7.27S×106.92E, mb4.3/13, mb1 4.4/13, mb1mx4.3/19, mbtmp4.3/13, Error ellipse: s-maj=31.7km s-min=16.0km az=51.0*

*NEIC **14** 19:32:04.7±5.4, 7.43S×106.97E, h102^{km}±50^{km}, mb4.1/5, Error ellipse: s-maj=35.6km s-min=11.4km az=64.0*

ISC 14 19:32:03.2±0.6**, 7.2S**±0.1×**107.2E**±0.2**, h100**^{km}**, n21, σ0^{s}94**/19**, mb4.2**/15**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	15.96	35	*e*P	P	19 35 49.4	+6.1
MBWA	Marble Bar	18.41	140	P	P	19 36 10.0	-3.1
	1.5nm,0.5s						
FITZ	Fitzroy Crossi	20.97	123	P	P	19 36 41.0	+0.9
	4.4nm,0.7s,baz=292,slow=5.4,SNR=3.7						
CMAR	Chiang Mai Arr	26.79	342	P	P	19 37 35.2	-0.8
	3.1nm,0.8s,mb3.9,baz=179,slow=9.0,SNR=22						
WRA	Warramunga Arr	29.20	118	P	P	19 37 57.4	-0.3
	1.1nm,0.4s,mb3.9,baz=291,slow=10,SNR=16						
WRAB	Tennant Creek	29.20	118	*e*P	P	19 37 57.1	-0.6
	2.5nm,0.5s,mb4.1						
LSA	Lhasa	39.82	338	*e*P	P	19 39 28.3	0.0
	2.5nm,0.7s,mb4.2						
STKA	Stephens Creek	40.35	132	*e*P	P	19 39 33.7	+1.0
	5.1nm,0.6s,mb4.5						
STKA	Stephens Creek	40.35	132	P	P	19 39 33.5	+0.9
	4.1nm,0.3s,mb4.7,baz=301,slow=10,SNR=28						
SONM	Songino Array	54.82	359	P	P	19 41 26.0	+0.7
	0.4nm,0.5s,mb3.7,baz=176,slow=7.7,SNR=4.4						
SONM				PcP	PcP	19 42 27.3	+1.2
	5.3nm,0.6s,baz=176,slow=3.3,SNR=30						
MKAR	Makanchi Array	58.16	340	P	P	19 41 47.0	-2.0
	1.7nm,0.6s,mb4.3,baz=144,slow=7.7,SNR=24						
ASAJ	Asahikawa	60.27	29	P	P	19 42 04.0	+0.5
	2.3nm,0.7s,mb4.3,baz=240,slow=6.5,SNR=4.5						
BVAR	Borovoye Array	67.65	337	P	P	19 42 50.6	-0.9
	2.1nm,0.4s,mb4.3,baz=145,slow=9.2,SNR=21						
BVAR				PP	PP	19 45 26.5	+2.8
	0.3nm,0.4s,baz=149,slow=8.4,SNR=3.9						
MATP	Matopo	76.95	251	P	P	19 43 46.9	-0.1
	2.0nm,0.7s,mb4.0,baz=112,slow=7.5,SNR=4.9						
BR131	Keskin Array S	82.12	312	*e*P	P	19 44 14.8	+0.3
	1.2nm,0.6s,mb3.9						
AKASG	Malin Array Be	87.99	322	P	P	19 44 43.1	-0.2
	1.0nm,0.5s,mb4.1,baz=85,slow=5.4,SNR=6.0						
MLR	Muntele Rosu	89.00	316	P	P	19 44 49.6	+1.5
	2.5nm,0.6s,mb4.4,baz=179,slow=4.3,SNR=7.8						
FINES	FINESS Array B	92.06	332	P	P	19 45 02.7	+0.7
	1.0nm,0.7s,mb4.1,baz=153,slow=8.5,SNR=3.8						
ARCES	ARCESS Array B	93.81	340	P	P	19 45 10.3	+0.5
	4.6nm,1.0s,mb4.8,baz=79,slow=6.2,SNR=5.1						
TXAR	Lajitas Array	143.57	49	PKP	PKPdf	19 51 29.6	+2.8
	0.9nm,0.6s,baz=300,slow=2.2,SNR=8.2						
BDFB	Brasilia	146.55	227	PKPbc	PKPbc	19 51 35.6	+1.9
	1.4nm,0.4s,baz=136,slow=8.1,SNR=3.6						

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*IDC **14** 19:34:43.9±2.8, 4.95N×125.92E, h35^{km}±21^{km}, mb4.2/9, mb1 4.3/9, mb1mx4.1/18, mbtmp4.4/9, Error ellipse: s-maj=32.8km s-min=14.6km az=79.0*

*NEIC **14** 19:34:44.9±2.1, 4.91N×125.85E, h45^{km}±19^{km}, mb4.5/8, Error ellipse: s-maj=18.2km s-min=6.7km az=57.0*

*MAN **14** 19:34:46.5, 5.00N×125.50E, h120^{km}, mb4.7, ML3.6, MS3.6*

ISC 14 19:34:44.1±1.0**, 4.90N**±0.05×**125.81E**±0.07**, h53**^{km}±11^{km}**, n33, σ1^{s}06**/39**, mb4.5**/17**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	2.08	12	*e*P	P	19 35 15.9	-1.5
MATI				*e*S	S	19 35 40.0	-2.1
KCP	Kidapawan	2.22	341⇑	*e*P	P	19 35 21.0	+1.7
KCP				*i* S	S	19 35 51.0	+5.5
BUKP	Musuan	3.06	346	*e*P	P	19 35 32.6	+1.5
BUKP				*e*S	S	19 36 08.6	+1.8
PAGZ	Pagadian	3.80	321	*e*P	P	19 35 41.1	-0.5
PAGZ				*e*S	S	19 36 23.0	-2.5
BUTP	Butuan	4.05	357	*e*P	P	19 35 46.2	+1.0
BUTP				*e*S	S	19 36 32.0	+0.2
IPIL	Ipil	4.32	312	*e*P	P	19 35 47.1	-1.8
IPIL				*e*S	S	19 36 34.2	-4.4
SCPH	Surigao	4.86	356	*e*P	P	19 35 58.2	+1.6
MSLP	Maasin	5.29	350	*e*P	P	19 36 02.3	-0.3
BESP	Borongan	6.67	357	*e*P	P	19 36 22.4	+0.5
KKM	Kota Kinabalu	9.62	277	*e*P	P	19 37 01.7	-1.0
KSM	Kuching	15.85	258	*e*P	P	19 38 30.4	+5.1
FITZ	Fitzroy Crossi	22.85	180	P	P	19 39 43.5	-0.4
	26nm,0.4s,mb5.0,baz=10,slow=7.4,SNR=29						
KULM	Kulim	25.07	272	P	P	19 40 05.3	-0.2
WRAB	Tennant Creek	26.06	161	*e*P	P	19 40 14.1	-0.6
	15nm,0.7s,mb4.6						
WRA	Warramunga Arr	26.07	161	P	P	19 40 13.9	-0.8
	14nm,0.9s,mb4.5,baz=342,slow=10,SNR=32						
WRA				ScP		19 47 18.7	
	0.9nm,1.0s,baz=335,slow=3.0,SNR=5.1						
WB2	Warramunga Arr	26.07	161	*e*P	P	19 40 14.6	-0.2
CMAR	Chiang Mai Arr	29.50	299	P	P	19 40 46.2	+0.5
	1.1nm,0.7s,mb3.7,baz=112,slow=7.4,SNR=7.9						
CMAR				ScP		19 47 28.8	
	1.0nm,1.0s,baz=147,slow=3.4,SNR=4.5						
MJAR	Matsushiro Arr	33.49	18	P	P	19 41 19.8	-0.8
	1.9nm,0.8s,mb4.1,baz=188,slow=8.9,SNR=4.6						
MJAR	Matsushiro Arr	33.49	18	P	P	19 41 19.8	-0.8
NWAO	Narrogin (SRO)	38.49	192	P	P	19 42 04.1	+1.2
	6.4nm,0.8s,mb4.4,baz=45,slow=2.9,SNR=3.3						
STKA	Stephens Creek	39.54	159	P	P	19 42 12.6	+1.0
	2.8nm,0.7s,mb4.1,baz=354,slow=9.7,SNR=2.8						
LSA	Lhasa	40.99	311	*e*P	P	19 42 25.4	+1.8
	4.1nm,0.6s,mb4.2						
LSA				*e*		19 42 32.7	
ASAJ	Asahikawa	41.76	18	P	P	19 42 28.7	-1.2
	5.4nm,0.7s,mb4.3,baz=237,slow=14,SNR=6.3						
GUN	Gumba	44.30	306	*e*P	P	19 42 51.4	+0.6
	40nm,0.8s,mb5.2						
PKI	Pulchoki	44.55	305	*e*P	P	19 42 52.4	-0.4
	12nm,1.0s,mb4.7						
KKN	Kakani	44.74	305	*e*P	P	19 42 54.3	0.0
	18nm,1.0s,mb4.8						
DMN	Daman	44.81	305	*e*P	P	19 42 54.6	-0.3
	14nm,1.0s,mb4.7						
GKN	Gorkha	45.35	305	*e*P	P	19 42 59.3	+0.1
	9.3nm,0.9s,mb4.6						
KOLN	Koldanda	46.11	304	*e*P	P	19 43 05.6	+0.4
	27nm,0.8s,mb5.2						
MKAR	Makanchi Array	56.08	325	P	P	19 44 19.2	-1.1
	1.8nm,0.4s,mb4.4,baz=118,slow=7.2,SNR=19						
MKAR	Makanchi Array	56.08	325	P	P	19 44 19.2	-1.1
VNDA	Vanda	84.69	173	P	P	19 47 13.6	+0.6
	2.1nm,0.8s,mb4.3,baz=303,slow=6.7,SNR=9.2						
VNDA	Vanda	84.69	173	P	P	19 47 13.6	+0.5

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*NEIC **14** 19:36:42.1±1.4, 20.09S×69.30W, h146^{km}±28^{km}, mb3.9/2, Error ellipse: s-maj=30.8km s-min=15.1km az=117.0*

*IDC **14** 19:36:43.5±2.8, 20.12S×69.10W, h146^{km}±42^{km}, mb3.8/3, mb1 3.7/4, mb1mx3.4/16, mbtmp4.2/4, MS3.9/1, Ms1 4.0/1, ms1mx3.9/24, Error ellipse: s-maj=73.5km s-min=25.5km az=117.0*

ISC 14 19:36:41.2±2.0**, 20.2S**±0.1×**69.1W**±0.2**, h142**^{km}±32^{km}**, n8, σ1^{s}09**/9**, mb4.2**/1**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.01	14	P	P	19 37 43.2	+1.0
	2.6nm,0.3s,baz=200,slow=9.6,SNR=34						
LPAZ				LR	LR	19 39 07.6	
	comp=Z,2µm,20.5s,baz=67,slow=37						
LPAZ	La Paz	4.01	14	*e*Pn	P	19 37 43.1	+0.8
ARE	Arequipa	4.35	328	*e*P	P	19 37 44.0	-2.8
ARE				*e*S	S	19 38 38.0	+0.8
SAML	Samuel	12.58	28	P	P	19 39 35.9	-0.2
	0.7nm,0.5s						
TRQA	Tornquist	18.84	162	*e*P	P	19 40 51.7	-0.8
	42nm,1.8s						
PLCA	Paso Flores	20.50	183	P	P	19 41 11.0	+1.3
	5.4nm,0.8s,baz=7.1,slow=12,SNR=9.5						
BDFB	Brasilia	20.59	81	P	P	19 41 10.8	+0.1
	5.7nm,0.4s,baz=270,slow=10,SNR=6.4						
DBIC	Dimbokro	68.56	74	P	P	19 47 30.8	-0.3
	4.4nm,0.9s,mb4.2,baz=220,slow=7.6,SNR=4.4						

TAP ***14*** *19:36:46.2, 24.42N×122.49E, h44^{km}±1^{km}, ML2.8*

JMA 14 19:36:46.4±0.1**, 24.64N×122.55E, h63^{km}, M1.9, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.46**	**113**	P	P	19 36 58.2	0.0
YOJ				S	S	19 37 06.7	-0.2
IRIF	**Iriomote-Funau**	**1.12**	**106**	P	P	19 37 06.1	-0.3
IRIF				*e*S	S	19 37 20.9	-0.3
JKRS	**Kuro-shima**	**1.39**	**106**	P	P	19 37 10.1	-0.1
JKRS				*e*S	S	19 37 28.0	+0.2
JIJ	**Ishigaki jima**	**1.48**	**100**	P	P	19 37 11.2	-0.2
JIJ				*e*S	S	19 37 29.2	-0.7

NEIC ***14*** *19:41:52.3, 50.96N×179.32E, h9^{km}, mb4.7/60, MS4.8/6, ML4.8(AEIC), After AEIC.*

MOS ***14*** *19:41:53.9±1.0, 51.19N×179.32E, h43^{km}, mb4.9/30, MS4.9/6, Error ellipse: s-maj=9.6km s-min=6.2km az=90.9*

IDC ***14*** *19:41:53.0±3.3, 51.30N×179.31E, h21^{km}±20^{km}, mb4.3/23, mb1 4.5/23, mb1mx4.4/28, mbtmp4.4/23, Error ellipse: s-maj=20.5km s-min=11.1km az=164.0*

BJI ***14*** *19:41:54.9, 51.20N×179.30E, h54^{km}, mB5.6, mb4.7, Ms5.0, Msz4.8*

ISC 14 19:41:55.6±0.6**, 51.23N**±0.06×**179.31E**±0.04**, h55^{km}**±4^{km}**, n210, σ0^{s}99**/223**, mb4.6**/78**, MS4.9**/9**, 9C, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**2.23**	**75**	P	**P**	**19 42 30.5**	**-0.4**
KIMD				S	**S**	**19 42 59.3**	**+2.1**
KIKV	**Kanaga Island**	**2.29**	**72**	P	**P**	**19 42 32.0**	**+0.1**
KIWB	**Kanaga Island**	**2.30**	**73**	P	**P**	**19 42 31.6**	**-0.3**
KINC	**Kanaga Island**	**2.33**	**71**	P	**P**	**19 42 32.2**	**-0.3**
KINC				S	**S**	**19 43 02.3**	**+2.3**
KIRH	**Kanaga Island**	**2.34**	**72**	P	**P**	**19 42 32.8**	**+0.2**
ADAG	**Mount Adagdak**	**2.66**	**72**	P	**P**	**19 42 37.0**	**-0.2**
ADAG				S	**S**	**19 43 11.4**	**+3.1**
GSTD	**Great Sitkin T**	**2.95**	**72**	P	**P**	**19 42 40.8**	**-0.5**
GSTD				S	**S**	**19 43 17.0**	**+1.4**
GSMY	**Great Sitkin M**	**3.00**	**72**	P	**P**	**19 42 41.3**	**-0.6**
GSMY				S	**S**	**19 43 18.2**	**+1.3**
GSTR	**Great Sitkin T**	**3.01**	**72**	P	**P**	**19 42 41.8**	**-0.3**
GSIG	**Igitkin Island**	**3.07**	**74**	P	**P**	**19 42 42.4**	**-0.5**
GSIG				S	**S**	**19 43 19.3**	**+0.7**
SMY	**Shemya**	**3.55**	**297**	P	**P**	**19 42 49.9**	**+0.2**
FX1	**Attu Island--F**	**4.14**	**296**	P	**P**	**19 42 56.9**	**-1.0**
FX1						19 43 45.0	
FX1				pmax	pmax		
	comp=Z,32nm,0.3s						
FX1	**Attu Island--F**	**4.14**	**296**	Pn	**P**	**19 42 56.9**	**-1.0**
	comp=Z,32nm,0.3s,baz=6.5,slow=17,SNR=77						
FX1				Sn	**S**	**19 43 45.0**	**-0.5**
	baz=52,slow=18,SNR=2.0						
FX1	**Attu Island--F**	**4.14**	**296**	P	**P**	**19 42 58.2**	**+0.3**
ATKA	**Atka Island**	**4.16**	**74**	P	**P**	**19 42 57.0**	**-1.2**
NIKO	**Nikolski**	**7.50**	**72**	P	**P**	**19 43 43.0**	**-1.9**
SPIA	**Saint Paul Isl**	**8.54**	**42**	P	**P**	**19 44 00.4**	**+1.2**
SVW2	**Sparrevohn**	**17.01**	**45**	*e*P	**P**	**19 45 52.1**	**+1.3**
KDAK	**Kodiak Island**	**17.50**	**57**	*e*P	**P**	**19 45 56.0**	**-1.0**
	comp=Z,5.2nm,0.5s						
TTA	**Tatalina**	**17.67**	**39**	*e*P	**P**	**19 46 00.8**	**+1.7**
BILL	**Bilibino**	**18.03**	**344**	*i* P	**P**	**19 46 04.1**	**+0.6**
BILL				pmax	pmax		
	comp=Z,15nm,1.0s						
BILL	**Bilibino**	**18.03**	**344**	*i* P	**P**	**19 46 04.1**	**+0.6**
	comp=Z,15nm,1.0s						
RSO	**Redoubt South**	**18.07**	**48**	*e*P	**P**	**19 46 04.8**	**+0.7**
SEY	**Seymchan**	**18.57**	**319**	*e*P	**P**	**19 46 06.7**	**-3.4**
SEY				*e*		19 49 26.8	
SPU	**Mount Spurr**	**18.63**	**47**	*e*P	**P**	**19 46 10.5**	**-0.3**
SLKM	**Skilak Lake**	**19.29**	**49**	*e*P	**P**	**19 46 16.3**	**-2.0**
PWA	**Palmer West**	**19.77**	**46**	*e*P	**P**	**19 46 23.8**	**+0.3**
PWA				pmax	pmax		
	comp=Z,20nm,0.6s						
IMA	**Indian Mountai**	**20.20**	**32**	*e*P	**P**	**19 46 28.6**	**+0.5**
IMA				pmax	pmax		
	comp=Z,16nm,0.6s						
IMA	**Indian Mountai**	**20.20**	**32**	*e*P	**P**	**19 46 28.6**	**+0.5**
	comp=Z,16nm,0.6s						
SML	**Sawmill**	**20.52**	**46**	*e*P	**P**	**19 46 28.8**	**-2.6**
MCK	**McKinley**	**20.89**	**41**	*e*P	**P**	**19 46 33.7**	**-1.5**
MCK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MCK	**McKinley**	**20.89**	**41**	*e*P	**P**	**19 46 33.7**	**-1.4**
	comp=Z,8.1nm,0.8s						
DIV	**Divide**	**21.55**	**49**	*e*P	**P**	**19 46 39.2**	**-2.6**
	comp=Z,38nm,0.6s,mb5.0						
ILAR	**Eielson Array**	**22.11**	**39**	P	**P**	**19 46 45.1**	**-2.2**
	comp=Z,4.1nm,0.6s,mb4.0,baz=244,slow=9.1,SNR=40						
ILAR				PcP	PcP	19 50 42.2	-1.9
	comp=Z,0.7nm,0.6s,baz=266,slow=3.1,SNR=5.6						
ILAR				ScP		19 54 18.8	
	comp=Z,0.5nm,0.6s,baz=289,slow=3.2,SNR=4.4						
THY	**Trims Highway**	**22.13**	**43**	P	**P**	**19 46 48.8**	**+1.3**
YSS	**Yuzh-Sakhalins**	**24.15**	**274**	⇑*e*P	**P**	**19 47 08.0**	**+0.8**
ASAJ	**Asahikawa**	**25.51**	**268**	P	**P**	**19 47 20.2**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,38nm,0.9s						
ASAJ	**Asahikawa**	**25.51**	**268**	P	**P**	**19 47 20.1**	**-0.2**
	comp=Z,38nm,0.9s,mb4.9,baz=64,slow=4.8,SNR=32						
INK	**Inuvik**	**28.27**	**35**	P	**P**	**19 47 44.3**	**-1.0**
INK						19 50 57.4	
INK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**28.27**	**35**	P	**P**	**19 47 44.3**	**-1.0**
	comp=Z,4.3nm,0.6s,mb4.3,baz=267,slow=9.9,SNR=8.4						
INK				PcP	PcP	19 50 57.4	-0.2
	comp=Z,0.8nm,0.5s,baz=198,slow=4.2,SNR=3.0						
INK	**Inuvik**	**28.27**	**35**	*e*P	**P**	**19 47 43.9**	**-1.4**
	comp=Z,11nm,0.8s,mb4.5						
YAK	**Yakutsk**	**28.62**	**311**	⇑*i*P	**P**	**19 47 46.9**	**-1.6**
YAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
YAK				MLR	MLR		
	comp=Z,2µm,19.0s,MS4.7						
YAK	**Yakutsk**	**28.62**	**311**	⇑*i*P	**P**	**19 47 46.9**	**-1.6**
	comp=Z,14nm,1.0s,mb4.7						
YAK				LR	LR		
	comp=Z,2µm,19.0s,MS4.7						
KLR	**Kul'dur**	**30.07**	**285**	*e*P	**P**	**19 47 57.8**	**-3.7**
MJAR	**Matsushiro Arr**	**32.59**	**259**	P	**P**	**19 48 23.0**	**-0.7**
	comp=Z,1.4nm,0.8s,mb4.0,baz=53,slow=7.1,SNR=6.4						
MJAR	**Matsushiro Arr**	**32.59**	**259**	P	**P**	**19 48 23.0**	**-0.8**
MDJ	**Mudanjiang**	**33.42**	**278**	P	**P**	**19 48 30.8**	**-0.1**
MDJ				PP	PP	19 49 46.0	+2.0
MDJ				PCP	PcP	19 51 12.3	+0.9
MDJ				S	**S**	**19 53 49.9**	**+2.7**
MDJ				SCP		19 54 54.3	
MDJ				PCS		19 54 57.8	
MDJ				AMB	AMB		
	comp=Z,390nm,13.4s						
MDJ				LR	LR		
	comp=N,1µm,21.2s,MS4.7						
MDJ				LR	LR		
	comp=E,1µm,23.2s,MS4.7						
MDJ				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
MDJ	**Mudanjiang**	**33.42**	**278**	P	**P**	**19 48 30.8**	**-0.1**
	comp=Z,6.0nm,1.1s,mb4.4						
MDJ				PP	PP	19 49 46.0	+2.0
MDJ				PcP	PcP	19 51 12.3	+0.9
MDJ				S	**S**	**19 53 49.9**	**+2.7**
MDJ				ScP		19 54 54.3	
MDJ				PcS		19 54 57.8	
MDJ				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
YKW3	**Yellowknife Ar**	**36.17**	**46**	*e*P	**P**	**19 48 53.0**	**-1.2**
YKA	**Yellowknife Ar**	**36.19**	**46**	P	**P**	**19 48 53.2**	**-1.2**
	comp=Z,6.2nm,0.6s,mb4.7,baz=284,slow=8.2,SNR=16						
YKA				PcP	PcP	19 51 18.8	-0.4
	comp=Z,1.6nm,0.8s,baz=294,slow=2.9,SNR=3.7						
YKA				ScP		19 55 03.3	
	comp=Z,0.4nm,0.5s,baz=287,slow=3.7,SNR=4.9						
YKA	**Yellowknife Ar**	**36.19**	**46**	P	**P**	**19 48 53.2**	**-1.2**
YKA				PcP	PcP	19 51 18.8	-0.4
YKA				ScP		19 55 03.4	
CN2	**Changchun**	**36.41**	**280**	*e*P	**P**	**19 48 57.3**	**+1.0**
CN2				PP	PP	19 50 21.6	+0.5
CN2				*e*S	**S**	**19 54 34.8**	**+1.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				LR	LR		
	comp=N,1µm,19.0s,MS4.8						
CN2				LR	LR		
	comp=E,1µm,19.0s,MS4.8						
CN2				LR	LR		
	comp=Z,2µm,19.0s,MS4.8						
CN2	**Changchun**	**36.41**	**280**	*e*P	**P**	**19 48 57.3**	**+1.0**
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				PP	PP	19 50 21.6	+0.5
CN2				*e*S	**S**	**19 54 34.8**	**+1.6**
CN2				LR	LR		
	comp=Z,2µm,19.0s,MS4.8						
BOD	**Bodaibo**	**37.11**	**306**	*e*P	**P**	**19 49 01.1**	**-1.0**
BOD				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
BOD	**Bodaibo**	**37.11**	**306**	*e*P	**P**	**19 49 01.1**	**-1.0**
	comp=Z,15nm,0.8s,mb4.9						
HIA	**Hailar**	**37.23**	**291**	*e*P	**P**	**19 49 02.1**	**-1.1**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HIA	**Hailar**	**37.23**	**291**	*e*P	**P**	**19 49 02.1**	**-1.2**
	comp=Z,5.7nm,0.7s,mb4.5						
JNU	**Nakatsue**	**39.37**	**262**	P	**P**	**19 49 22.6**	**+1.3**
	comp=Z,7.2nm,0.9s,mb4.4,baz=24,slow=11,SNR=3.4						
CIT	**Chita**	**39.56**	**298**	*e*P	**P**	**19 49 22.6**	**0.0**
CIT				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.6						
CIT	**Chita**	**39.56**	**298**	*e*P	**P**	**19 49 22.6**	**0.0**
	comp=Z,20nm,1.7s,mb4.6						
EDM	**Edmonton**	**39.92**	**60**	*e*P	**P**	**19 49 24.3**	**-1.2**
NEW	**Newport**	**40.05**	**68**	P	**P**	**19 49 26.5**	**-0.1**
NEW				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NEW	**Newport**	**40.05**	**68**	P	**P**	**19 49 26.5**	**-0.1**
	comp=Z,7.7nm,0.7s,mb4.6,baz=297,slow=7.3,SNR=12						
NEW	**Newport**	**40.05**	**68**	*e*P	**P**	**19 49 25.9**	**-0.7**
	comp=Z,5.7nm,0.5s,mb4.6						
YBH	**Yreka Blue Hor**	**40.08**	**80**	P	**P**	**19 49 29.2**	**+2.2**
YBH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YBH	**Yreka Blue Hor**	**40.08**	**80**	P	**P**	**19 49 29.2**	**+2.2**
	comp=Z,4.6nm,0.8s,mb4.3,baz=307,slow=5.6,SNR=8.9						
YBH	**Yreka Blue Hor**	**40.08**	**80**	*e*P	**P**	**19 49 28.4**	**+1.4**
RES	**Resolute Bay**	**40.37**	**24**	P	**P**	**19 49 29.6**	**+0.5**
MOD	**Modoc**	**41.47**	**79**	*e*P	**P**	**19 49 39.3**	**+0.8**
	comp=Z,4.8nm,0.6s,mb4.3						
WVOR	**Wild Horse Val**	**42.20**	**77**	*e*P	**P**	**19 49 44.4**	**+0.1**
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
WVOR	**Wild Horse Val**	**42.20**	**77**	*e*P	**P**	**19 49 44.4**	**+0.1**
	comp=Z,6.2nm,0.8s,mb4.3						
MSO	**Missoula**	**42.63**	**69**	*e*P	**P**	**19 49 47.5**	**-0.3**
	comp=Z,4.3nm,0.7s,mb4.3						
HRY	**Holter Researc**	**43.93**	**68**	*e*P	**P**	**19 49 57.9**	**-0.5**
HLID	**Hailey**	**44.12**	**73**	*e*P	**P**	**19 50 00.2**	**+0.2**
	comp=Z,9.1nm,0.8s,mb4.6						
MCMT	**McKenzie Canyo**	**44.35**	**71**	*e*P	**P**	**19 50 01.7**	**-0.1**
BOZ	**Bozeman (W)**	**44.62**	**69**	*e*P	**P**	**19 50 04.0**	**+0.1**
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
BOZ	**Bozeman (W)**	**44.62**	**69**	*e*P	**P**	**19 50 04.0**	**+0.1**
	comp=Z,6.3nm,0.6s,mb4.6						
NVAR	**Mina Array Bea**	**44.75**	**81**	P	**P**	**19 50 05.4**	**+0.3**
	comp=Z,2.4nm,0.7s,mb4.1,baz=294,slow=5.7,SNR=18						
TLY	**Talaya**	**45.13**	**302**	*e*P	**P**	**19 50 08.2**	**+0.3**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**45.26**	**295**	⇑*i*P	**P**	**19 50 09.6**	**+0.6**
ULN	**Ulaanbaatar**	**45.26**	**295**	*e*P	**P**	**19 50 09.1**	**+0.1**
	comp=Z,5.8nm,0.8s,mb4.5						
SONM	**Songino Array**	**45.65**	**296**	P	**P**	**19 50 12.6**	**+0.5**
	comp=Z,4.1nm,0.8s,mb4.4,baz=56,slow=9.2,SNR=47						
YFT	**Old Faithful**	**45.75**	**70**	*e*P	**P**	**19 50 13.3**	**+0.4**
IMW	**Indian Meadow**	**46.01**	**71**	*e*P	**P**	**19 50 15.0**	**0.0**
	comp=Z,9.6nm,0.8s,mb4.8						
ZAK	**Zakamensk**	**46.01**	**300**	*e*P	**P**	**19 50 13.8**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
ZAK	**Zakamensk**	**46.01**	**300**	*e*P	**P**	**19 50 13.8**	**-1.1**
	comp=Z,3.0nm,0.9s,mb4.2						
RRI2	**Red Ridge**	**46.10**	**71**	*e*P	**P**	**19 50 16.3**	**+0.6**
	comp=Z,9.7nm,0.7s,mb4.8						
HVU	**Hansel Valley**	**46.14**	**74**	*e*P	**P**	**19 50 16.3**	**+0.2**
	comp=Z,8.0nm,0.7s,mb4.8						
TPAW	**Teton Pass**	**46.23**	**71**	*e*P	**P**	**19 50 17.2**	**+0.4**
	comp=Z,6.0nm,0.7s,mb4.6						
SSE	**Sheshan**	**46.80**	**268**	*e*P	**P**	**19 50 22.3**	**+0.9**
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,290nm,12.0s						
SSE	**Sheshan**	**46.80**	**268**	*e*P	**P**	**19 50 22.3**	**+0.9**
	comp=Z,33nm,0.8s,mb5.3						
FCC	**Fort Churchill**	**46.92**	**45**	*e*P	**P**	**19 50 20.5**	**-1.4**
FCC				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
FCC	**Fort Churchill**	**46.92**	**45**	*e*P	**P**	**19 50 20.5**	**-1.5**
	comp=Z,2.2nm,0.6s,mb4.3						
HWUT	**Hardware Ranch**	**46.97**	**73**	*e*P	**P**	**19 50 22.4**	**-0.2**
	comp=Z,4.2nm,0.7s,mb4.5						
BW06	**Boulder Array**	**47.48**	**71**	*e*P	**P**	**19 50 26.1**	**-0.6**
	comp=Z,10nm,0.7s,mb4.9						
PDAR	**Pinedale Array**	**47.48**	**71**	P	**P**	**19 50 26.4**	**-0.2**
	comp=Z,19nm,0.7s,mb5.1,baz=304,slow=4.0,SNR=136						
NJ2	**Nanjing**	**47.63**	**270**	*e*P	**P**	**19 50 30.8**	**+2.9**
NJ2				AP	pP	19 50 40.8	-1.6
NJ2				XP	sP	19 50 44.8	-4.0
NJ2				PP	PP	19 52 21.5	+2.3
NJ2				S	**S**	**19 57 23.0**	**+4.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,780nm,8.0s						
NJ2				LR	LR		
	comp=N,1µm,21.6s,MS5.0						
NJ2				LR	LR		
	comp=E,1µm,25.3s,MS5.0						
NJ2				LR	LR		
	comp=Z,990nm,25.6s,MS4.7						
NJ2	**Nanjing**	**47.63**	**270**	*e*P	**P**	**19 50 30.8**	**+2.9**
	comp=Z,10.0nm,0.6s,mb5.0						
NJ2				pP	pP	19 50 40.8	-1.6
NJ2				sP	sP	19 50 44.8	-4.0
NJ2				PP	PP	19 52 21.5	+2.3
NJ2				S	**S**	**19 57 23.0**	**+4.6**
NJ2				LR	LR		
	comp=Z,990nm,25.6s,MS4.7						
DAU	**Daniels Canyon**	**47.88**	**75**	P	**P**	**19 50 29.3**	**-0.4**
ARUT	**Antelope Range**	**48.16**	**79**	*e*P	**P**	**19 50 31.7**	**-0.3**
TMUT	**Trail Mountain**	**48.59**	**76**	*e*P	**P**	**19 50 36.3**	**+1.0**
NEN	**Nelson**	**48.65**	**82**	*e*P	**P**	**19 50 35.6**	**-0.2**
SRU	**San Rafael**	**49.12**	**75**	*e*P	**P**	**19 50 39.5**	**+0.1**
	comp=Z,5.5nm,0.6s,mb4.8						
PV10	**Paradox Valley**	**50.48**	**75**	*e*P	**P**	**19 50 49.6**	**-0.3**
PV01	**Paradox Valley**	**50.92**	**75**	*e*P	**P**	**19 50 52.2**	**-1.0**
RW3	**Ridgway**	**51.38**	**75**	*e*P	**P**	**19 50 56.7**	**+0.1**
SDCO	**Great Sand Dun**	**53.03**	**74**	*e*P	**P**	**19 51 08.6**	**-0.4**
	comp=Z,7.4nm,0.6s,mb4.8						
NVS	**Novosibirsk**	**53.43**	**314**	*i* P	**P**	**19 51 09.8**	**-1.9**
SUMG	**Summit**	**53.72**	**13**	*e*P	**P**	**19 51 12.8**	**-0.8**
	comp=Z,11nm,0.8s,mb4.8						
LAZ	**Ladron**	**54.23**	**78**	*e*P	**P**	**19 51 17.7**	**-0.1**
LZH	**Lanzhou**	**54.28**	**285**	*e*P	**P**	**19 51 18.5**	**+0.3**
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,120nm,4.0s						
LZH	**Lanzhou**	**54.28**	**285**	*e*P	**P**	**19 51 18.5**	**+0.3**
	comp=Z,25nm,1.0s,mb5.1						
ANMO	**Albuquerque**	**54.28**	**77**	*e*P	**P**	**19 51 17.9**	**-0.3**
GTA	**Gaotai**	**54.51**	**291**	*e*P	**P**	**19 51 20.0**	**+0.2**
GTA				S	**S**	**19 58 58.3**	**+5.2**
GTA				XS		19 59 18.5	
GTA				LR	LR		
	comp=N,650nm,17.6s,MS4.8						
GTA				LR	LR		
	comp=E,550nm,18.7s,MS4.8						
GTA				LR	LR		
	comp=Z,800nm,18.7s,MS4.8						
GTA	**Gaotai**	**54.51**	**291**	*e*P	**P**	**19 51 20.0**	**+0.2**
	comp=Z,9.0nm,0.9s,mb4.8						
GTA				S	**S**	**19 58 58.3**	**+5.2**
GTA				sS		19 59 18.5	
GTA				LR	LR		
	comp=Z,810nm,18.7s,MS4.8						
BNM	**Barren Site**	**54.72**	**78**	*e*P	**P**	**19 51 20.9**	**-0.5**
MNTX	**Cornudas Mount**	**57.15**	**79**	*e*P	**P**	**19 51 38.3**	**-0.6**
	comp=Z,1.8nm,0.7s,mb4.2						
ARCES	**ARCESS Array B**	**58.03**	**349**	P	**P**	**19 51 42.2**	**-2.3**
	comp=Z,3.0nm,1.0s,mb4.3,baz=27,slow=8.1,SNR=4.0						
ARCES	**ARCESS Array B**	**58.03**	**349**	P	**P**	**19 51 42.2**	**-2.3**
WMQ	**Urumqi**	**58.42**	**302**	*e*P	**P**	**19 51 50.6**	**+3.0**
WMOK	**Wichita Mounta**	**59.08**	**72**	*e*P	**P**	**19 51 51.4**	**-0.9**
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
WMOK	**Wichita Mounta**	**59.08**	**72**	*e*P	**P**	**19 51 51.4**	**-0.9**
	comp=Z,7.2nm,0.8s,mb4.8						
MKAR	**Makanchi Array**	**59.19**	**307**	P	**P**	**19 51 51.7**	**-1.2**
	comp=Z,5.9nm,0.7s,mb4.7,baz=54,slow=7.2,SNR=61						
MKAR	**Makanchi Array**	**59.19**	**307**	P	**P**	**19 51 51.7**	**-1.2**
TXAR	**Lajitas Array**	**59.85**	**80**	P	**P**	**19 51 57.1**	**-0.6**
	comp=Z,1.6nm,0.6s,mb4.2,baz=298,slow=4.6,SNR=6.7						
BVA0	**Borovoye Array**	**60.23**	**319**	*i* P	**P**	**19 51 59.9**	**-0.1**
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
BVA0	**Borovoye Array**	**60.23**	**319**	*i* P	**P**	**19 51 59.9**	**-0.1**
	comp=Z,3.0nm,0.7s,mb4.4						
BVAR	**Borovoye Array**	**60.23**	**319**	P	**P**	**19 51 59.8**	**-0.1**
	comp=Z,26nm,0.7s,mb5.4,baz=51,slow=7.2,SNR=169						
SCHQ	**Schefferville**	**60.85**	**37**	P	**P**	**19 52 02.1**	**-2.1**
	comp=Z,3.2nm,0.6s,mb4.6,baz=244,slow=12,SNR=6.5						
SVE	**Sverdlovsk**	**61.07**	**327**	*e*P	**P**	**19 52 06.7**	**+1.1**
SVE				*e*		19 52 47.2	
SVE				MLR	MLR		
	comp=N,200nm,16.0s,MS5.1						
SVE				MLR	MLR		
	comp=E,1µm,16.0s,MS5.1						
SVE				MLR	MLR		
	comp=Z,1µm,16.0s,MS5.1						
ARU	**Arti**	**62.09**	**327**	*e*P	**P**	**19 52 12.1**	**-0.4**
ARU				*e*		19 52 49.2	
ARU				*e*S	**S**	**20 00 39.2**	**+7.6**
ARU				*e*SS	SS	20 04 33.8	-3.0
ARU				MLR	MLR		
	comp=N,700nm,17.0s,MS5.0						
ARU				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.1						
ARU				MLR	MLR		
	comp=E,500nm,19.0s,MS5.0						
KAF	**Kangasniemi**	**64.98**	**346**	*e*p	**P**	**19 52 28.9**	**-2.3**
TKM2	**Tokmak 2**	**65.28**	**308**	P	**P**	**19 52 34.3**	**+0.8**
	SNR=7.7						
ULHL	**Ulahol**	**65.46**	**307**	P	**P**	**19 52 35.1**	**+0.5**
	SNR=8.3						
USP	**Ospenovka**	**65.56**	**309**	P	**P**	**19 52 35.8**	**+0.5**
	SNR=13						
FINES	**FINESS Array B**	**65.66**	**346**	P	**P**	**19 52 33.6**	**-2.0**
	comp=E,1.0nm,0.7s,mb3.9,baz=340,slow=22,SNR=7.2						
KBK	**Karagaybulak**	**65.80**	**308**	P	**P**	**19 52 37.4**	**+0.6**
	SNR=6.5						
AAK	**Ala-Archa**	**66.04**	**309**	⇑*i*P	**P**	**19 52 37.7**	**-0.6**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
AAK				MLR	MLR		
	comp=Z,700nm,17.0s,MS4.9						
AAK	**Ala-Archa**	**66.04**	**309**	⇑*i*P	**P**	**19 52 37.7**	**-0.6**
	comp=Z,9.0nm,1.0s,mb4.8						
AAK				LR	LR		
	comp=Z,700nm,17.0s,MS4.9						
KZA	**Kyzart**	**66.08**	**308**	P	**P**	**19 52 40.0**	**+1.4**
	SNR=6.8						
LSA	**Lhasa**	**66.36**	**288**	P	**P**	**19 52 42.0**	**+1.4**
EKS2	**Erkin-Say**	**66.37**	**309**	P	**P**	**19 52 41.2**	**+0.8**
	SNR=17						
AML	**Almayashu**	**66.81**	**309**	P	**P**	**19 52 44.6**	**+1.4**
	SNR=16						
AB31	**Akbulak array**	**67.33**	**322**	P	**P**	**19 52 46.7**	**+0.4**
AB31				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
AB31	**Akbulak array**	**67.33**	**322**	P	**P**	**19 52 46.7**	**+0.4**
	comp=Z,11nm,1.0s,mb4.8						
KKAR	**Karatay Array**	**67.60**	**311**	*i* P	**P**	**19 52 48.0**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
KKAR	**Karatay Array**	**67.60**	**311**	*i* P	**P**	**19 52 48.0**	**-0.1**
	comp=Z,10.0nm,0.8s,mb4.9						
NB2	**NORSAR Subarra**	**67.68**	**354**	P	**P**	**19 52 47.4**	**-0.9**
	comp=Z,6.5nm,0.8s,mb4.7,baz=7.0,slow=6.2						
NB2	**NORSAR Subarra**	**67.68**	**354**	P	PcP	19 53 15.2	+0.2
	comp=Z,1.7nm,0.7s,baz=9.0,slow=6.5						
NOA	**NORSAR Array B**	**67.68**	**354**	P	**P**	**19 52 47.5**	**-0.8**
	comp=Z,4.8nm,0.7s,mb4.6,baz=8.8,slow=6.4,SNR=22						
HFS	**Hagfors**	**68.39**	**352**	P	**P**	**19 52 51.5**	**-1.2**
	comp=Z,2.2nm,0.6s,mb4.4,baz=45,slow=6.1,SNR=5.6						
VSU	**Vasula**	**68.40**	**345**	*i* P	**P**	**19 52 52.4**	**-0.4**
OBN	**Obninsk**	**69.58**	**338**	*e*P	**P**	**19 52 59.5**	**-0.7**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
OBN				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.8						
OBN	**Obninsk**	**69.58**	**338**	*e*P	**P**	**19 52 59.5**	**-0.7**
	comp=Z,7.0nm,0.7s,mb4.7						
OBN				LR	LR		
	comp=Z,500nm,18.0s,MS4.8						
CMAR	**Chiang Mai Arr**	**69.84**	**275**	P	**P**	**19 53 01.9**	**-0.5**
	comp=Z,1.6nm,0.8s,mb4.0,baz=32,slow=7.2,SNR=11						
GUN	**Gumba**	**70.80**	**291**	*e*P	**P**	**19 53 09.0**	**+0.9**
	comp=Z,64nm,0.9s,mb5.6						
KKN	**Kakani**	**71.25**	**291**	*e*P	**P**	**19 53 11.3**	**+0.6**
	comp=Z,27nm,0.8s,mb5.2						
KKN	**Kakani**	**71.25**	**291**	*e*P	**P**	**19 53 11.3**	**+0.6**
KKN				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
PKI	**Pulchoki**	**71.33**	**291**	*e*P	**P**	**19 53 11.6**	**+0.3**
	comp=Z,23nm,0.9s,mb5.1						
PKI	**Pulchoki**	**71.33**	**291**	*e*P	**P**	**19 53 11.6**	**+0.3**
PKI				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
GKN	**Gorkha**	**71.46**	**292**	*e*P	**P**	**19 53 12.5**	**+0.5**
	comp=Z,36nm,0.9s,mb5.3						
DMN	**Daman**	**71.48**	**291**	*e*P	**P**	**19 53 12.7**	**+0.5**
	comp=Z,23nm,0.9s,mb5.1						
KOLN	**Koldanda**	**72.24**	**292**	*e*P	**P**	**19 53 16.9**	**+0.2**
	comp=Z,30nm,1.2s,mb5.1						
AKASG	**Malin Array Be**	**75.31**	**341**	P	**P**	**19 53 33.2**	**-0.8**
	comp=Z,1.2nm,0.3s,mb4.2,baz=24,slow=6.1,SNR=9.8						
GOF	**Gofitskoye**	**76.91**	**330**	*e*P	**P**	**19 53 41.7**	**-1.5**
KWP	**Kalwaria**	**77.55**	**345**	*e*P	**P**	**19 53 47.4**	**+0.7**
BAIF	**Baives**	**79.00**	**357**	*e*P	**P**	**19 53 54.3**	**-0.3**
GERES	**GERESS Array B**	**79.55**	**350**	P	**P**	**19 53 57.5**	**-0.1**
	comp=Z,0.4nm,0.3s,mb3.8,baz=27,slow=4.4,SNR=3.9						
FLN	**La Foliniere**	**80.39**	**360**	*e*P	**P**	**19 54 01.9**	**-0.2**
CDF	**Champ du Feu**	**80.50**	**355**	*e*P	**P**	**19 54 02.7**	**0.0**
LDF	**La Druitiere**	**80.56**	**360**	*e*P	**P**	**19 54 02.7**	**-0.3**
	comp=Z,8.8nm,0.8s,mb4.5						
LDF	**La Druitiere**	**80.56**	**360**	*e*P	**P**	**19 54 02.7**	**-0.3**
LDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
GNI	**Garni**	**80.72**	**326**	⇑*i*P	**P**	**19 54 03.7**	**-0.4**
GNI				MLR	MLR		
	comp=Z,400nm,20.0s						
GRR	**Gorron**	**80.76**	**0**	*e*P	**P**	**19 54 04.1**	**0.0**
	comp=Z,8.8nm,0.7s,mb4.5						
GRR	**Gorron**	**80.76**	**0**	*e*P	**P**	**19 54 04.1**	**0.0**
GRR				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
ROSF	**Rostrenen**	**80.79**	**2**	*e*P	**P**	**19 54 04.4**	**+0.2**
SGMF	**Saint Gilles**	**80.88**	**1**	*e*P	**P**	**19 54 05.0**	**+0.3**
	comp=Z,16nm,0.8s,mb4.7						
SGMF	**Saint Gilles**	**80.88**	**1**	*e*P	**P**	**19 54 05.0**	**+0.3**
SGMF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	**81.08**	**222**	*e*P	**P**	**19 54 04.8**	**-1.5**
WRA	**Warramunga Arr**	**81.09**	**222**	P	**P**	**19 54 04.8**	**-1.5**
	comp=Z,0.9nm,0.7s,mb3.8,baz=32,slow=6.2,SNR=8.5						
KBA	**Koelnbreinsper**	**81.33**	**350**	⇑*i*P	**P**	**19 54 08.1**	**+1.0**
	comp=Z,6.2nm,0.7s,mb4.7						
KBA	**Koelnbreinsper**	**81.33**	**350**	⇑*i*P	**P**	**19 54 08.1**	**+1.0**
KBA				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
LOR	**Lormes**	**81.81**	**357**	*e*P	**P**	**19 54 09.4**	**-0.2**
SSF	**Saint Saulge**	**82.02**	**357**	*e*P	**P**	**19 54 11.1**	**+0.4**
SSF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
SSF	**Saint Saulge**	**82.02**	**357**	*e*P	**P**	**19 54 11.1**	**+0.4**
	comp=Z,1.6nm,0.7s,mb4.1						
AVF	**Avril sur Loir**	**82.30**	**357**	*e*P	**P**	**19 54 12.1**	**0.0**
MFF	**Saint Martin d**	**82.55**	**360**	*e*P	**P**	**19 54 13.3**	**-0.1**
	comp=Z,6.3nm,0.8s,mb4.4						

MFF	**Saint Martin d**	**82.55**	**360**	*e*P	**P**	**19 54 13.3**	**-0.1**
MFF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
TCF	**Toulx Ste Croi**	**82.83**	**358**	*e*P	**P**	**19 54 14.8**	**0.0**
HYB	**Hyderabad**	**83.15**	**289**	*e*P	**P**	**19 54 17.0**	**0.0**
HYB	**Hyderabad**	**83.15**	**289**	*i* P	**P**	**19 54 20.0**	**+3.0**
LPL	**La Plagne**	**83.42**	**355**	*e*P	**P**	**19 54 19.2**	**+1.4**
LPG	**La Plagne**	**83.44**	**355**	*e*P	**P**	**19 54 19.4**	**+1.5**
FITZ	**Fitzroy Crossi**	**83.44**	**230**	P	**P**	**19 54 18.4**	**0.0**
	comp=Z,5.3nm,0.8s,mb4.6,baz=75,slow=1.9,SNR=7.2						
ORIF	**Oris-en-Rattie**	**84.06**	**355**	*e*P	**P**	**19 54 22.2**	**+1.2**
LFF	**La Frestale**	**84.20**	**359**	*e*P	**P**	**19 54 22.2**	**+0.5**
MBDF	**Montbardon**	**84.21**	**355**	*e*P	**P**	**19 54 22.9**	**+1.2**
BR131	**Keskin Array S**	**84.58**	**334**	*e*P	**P**	**19 54 24.9**	**+1.2**
	comp=Z,3.0nm,0.7s,mb4.5						
LASF	**Ste Croix**	**84.99**	**357**	*e*P	**P**	**19 54 26.7**	**+1.0**
	comp=Z,6.4nm,0.8s,mb4.5						
SMRF	**Simiane la Rot**	**85.02**	**355**	*e*P	**P**	**19 54 27.4**	**+1.6**
	comp=Z,14nm,0.9s,mb4.8						
SBF	**Sospel**	**85.03**	**354**	*e*P	**P**	**19 54 26.3**	**+0.5**
	comp=Z,16nm,0.8s,mb4.9						
SBF	**Sospel**	**85.03**	**354**	*e*P	**P**	**19 54 26.3**	**+0.5**
SBF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
FRF	**La Foret Royal**	**85.38**	**355**	*e*P	**P**	**19 54 28.1**	**+0.5**
LMR	**La Mourre**	**85.61**	**355**	*e*P	**P**	**19 54 28.8**	**+0.1**
	comp=Z,8.6nm,0.9s,mb4.7						
LMR	**La Mourre**	**85.61**	**355**	*e*P	**P**	**19 54 28.8**	**+0.1**
LMR				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.7						
PGF	**Pioggiola**	**86.22**	**353**	*e*P	**P**	**19 54 32.4**	**+0.7**
	comp=Z,12nm,0.9s,mb4.8						
PGF	**Pioggiola**	**86.22**	**353**	*e*P	**P**	**19 54 32.4**	**+0.7**
PGF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.8						
ETSF	**Etsaut**	**86.25**	**360**	*e*P	**P**	**19 54 32.9**	**+1.0**
TSUM	**Tsumeb**	**144.93**	**329**	*e*PKP	PKPdf	20 01 27.9	+1.5
BOSA	**Boshof**	**150.17**	**309**	PKPbc	PKPdf	20 01 41.5	+6.7
	comp=Z,6.2nm,0.8s,baz=232,slow=1.7,SNR=8.7						

NEIC ***14*** *19:54:17.0±1.8, 50.93N×179.44E, h52^{km}±8^{km}, mb3.9/1, ML3.9(AEIC), Error ellipse: s-maj=39.1km s-min=6.7km az=184.0*

IDC ***14*** *19:54:17.7±6.4, 51.00N×179.28E, h55^{km}±43^{km}, mb3.3/4, mb1 3.7/5, mb1mx3.3/23, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=95.9km s-min=23.9km az=1.0*

ISC 14 19:54:14.0±1.4**, 50.7N**±0.2×**179.36E**±0.06**, h50**^{km}±11^{km}**, n19, σ0^{s}.50**/26**, mb3.7**/5**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.38**	**63**	P	**P**	**19 54 51.7**	**+0.2**
KIMD				S	**S**	**19 55 19.5**	**0.0**
KIWB	**Kanaga Island**	**2.47**	**61**	*e*Pn	**P**	**19 54 53.0**	**+0.3**
KIKV	**Kanaga Island**	**2.47**	**60**	P	**P**	**19 54 52.9**	**+0.2**
KIKV				S	**S**	**19 55 22.1**	**+0.4**
KINC	**Kanaga Island**	**2.52**	**60**	P	**P**	**19 54 53.1**	**-0.2**
KIRH	**Kanaga Island**	**2.52**	**61**	P	**P**	**19 54 53.7**	**+0.2**
KIRH				S	**S**	**19 55 23.5**	**+0.5**
ADAG	**Mount Adagdak**	**2.83**	**62**	P	**P**	**19 54 58.0**	**+0.1**
GSSP	**Great Sitkin S**	**3.12**	**62**	P	**P**	**19 55 01.5**	**-0.3**
GSTD	**Great Sitkin T**	**3.12**	**63**	P	**P**	**19 55 01.6**	**-0.3**
GSTD				S	**S**	**19 55 38.2**	**0.0**
GSMY	**Great Sitkin M**	**3.16**	**63**	P	**P**	**19 55 02.1**	**-0.4**
GSMY				S	**S**	**19 55 39.1**	**-0.2**
GSTR	**Great Sitkin T**	**3.18**	**62**	P	**P**	**19 55 02.8**	**0.0**
GSIG	**Igitkin Island**	**3.22**	**65**	P	**P**	**19 55 03.5**	**+0.2**
GSIG				S	**S**	**19 55 39.8**	**-0.9**
ATKA	**Atka Island**	**4.29**	**67**	P	**P**	**19 55 18.1**	**-0.3**
FX1	**Attu Island--F**	**4.42**	**302**	P	**P**	**19 55 19.6**	**-0.6**
	13nm,0.3s,baz=237,slow=5.4,SNR=20						
FX1				S	**S**	**19 56 11.4**	**+0.4**
	2.3nm,0.3s,baz=282,slow=20,SNR=2.0						
FX1	**Attu Island--F**	**4.42**	**302**	P	**P**	**19 55 21.1**	**+0.9**
ILAR	**Eielson Array**	**22.49**	**38**	P	**P**	**19 59 09.8**	**0.0**
	0.2nm,0.5s,mb2.8,baz=253,slow=11,SNR=4.6						
BW06	**Boulder Array**	**47.62**	**71**	*e*P	**P**	**20 02 47.1**	**+0.6**
	0.8nm,0.5s,mb4.0						
PDAR	**Pinedale Array**	**47.62**	**71**	P	**P**	**20 02 47.8**	**+1.2**
	1.3nm,0.6s,mb4.1,baz=315,slow=4.2,SNR=8.7						
MKAR	**Makanchi Array**	**59.53**	**308**	P	**P**	**20 04 12.9**	**-1.2**
	0.3nm,0.6s,mb3.5,baz=50,slow=7.0,SNR=6.2						
BVAR	**Borovoye Array**	**60.64**	**319**	P	**P**	**20 04 21.2**	**-0.5**
	1.1nm,0.6s,mb4.1,baz=48,slow=7.1,SNR=11						

IDC 14 19:54:39.9±7.2**, 71.59N**×**1.95W, mb3.5**/2**, mb1 3.8**/6**, mb1mx3.5**/22**, mbtmp3.7**/6**, ML3.3**/4**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx3.2**/28**, Error ellipse: s-maj=97.7km s-min=42.4km az=132.0, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMIC	**Jan Mayen**	**2.20**	**257**	LR	LR	19 55 50.5	
	comp=Z,568nm,20.9s,baz=173,slow=32						
ARCES	**ARCESS Array B**	**9.33**	**89**	Pn	P	19 56 56.0	-2.7
	0.2nm,0.3s,baz=294,slow=12,SNR=5.7						
NOA	**NORSAR Array B**	**11.79**	**147**	Pn	P	19 57 29.8	-2.4
	0.2nm,0.3s,baz=326,slow=13,SNR=3.3						
HFS	**Hagfors**	**13.09**	**143**	Pn	P	19 57 47.6	-2.0
	0.2nm,0.3s,baz=339,slow=13,SNR=19						
FINES	**FINESS Array B**	**14.91**	**119**	Pn	P	19 58 11.4	-2.0
	0.1nm,0.3s,baz=320,slow=11,SNR=6.7						
GERES	**GERESS Array B**	**23.94**	**154**	P	P	19 59 55.3	-0.6
	0.5nm,0.4s,baz=328,slow=9.3,SNR=1.7						
AKASG	**Malin Array Be**	**25.22**	**129**	P	P	20 00 07.2	-1.1
	1.5nm,0.5s,baz=336,slow=9.4,SNR=6.6						

BJI ***14*** *19:56:13.3, 51.31N×179.06E, h37^{km}, mB5.4, mb4.5, Ms5.2, Msz4.9*

MOS ***14*** *19:56:14.1±0.9, 51.12N×179.61E, h54^{km}, mb4.7/12, MS4.8/4, Error ellipse: s-maj=18.3km s-min=9.9km az=114.0*

NEIC ***14*** *19:56:16.7±0.8, 51.13N×179.47E, h57^{km}±6^{km}, mb4.5/8, ML4.0(AEIC), Error ellipse: s-maj=16.2km s-min=5.6km az=180.0*

IDC ***14*** *19:56:19.6±3.5, 51.43N×179.36E, h72^{km}±30^{km}, mb3.7/13, mb1 3.9/13, mb1mx3.8/23, mbtmp4.1/13, Error ellipse: s-maj=32.8km s-min=14.3km az=172.0*

ISC 14 19:56:15.9±0.8**, 51.2N**±0.1×**179.46E**±0.05**, h63**^{km}±6^{km}**, n65, σ0^{s}.91**/74**, mb4.3**/29**, 4C-1D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.15**	**73**	P	**P**	**19 56 49.4**	**-0.9**
KIKV	**Kanaga Island**	**2.22**	**70**	P	**P**	**19 56 50.8**	**-0.5**
KIKV				S	**S**	**19 57 19.0**	**+1.4**
KIWB	**Kanaga Island**	**2.23**	**71**	P	**P**	**19 56 50.6**	**-0.8**
KINC	**Kanaga Island**	**2.27**	**69**	P	**P**	**19 56 51.3**	**-0.6**
KIRH	**Kanaga Island**	**2.27**	**70**	P	**P**	**19 56 51.4**	**-0.6**
KIRH				S	**S**	**19 57 20.2**	**+1.3**
ADAG	**Mount Adagdak**	**2.59**	**70**	P	**P**	**19 56 56.6**	**+0.2**
GSSP	**Great Sitkin S**	**2.87**	**69**	P	**P**	**19 57 00.1**	**-0.4**
GSTD	**Great Sitkin T**	**2.88**	**70**	P	**P**	**19 56 59.6**	**-1.0**
GSTD				S	**S**	**19 57 34.9**	**+0.7**
GSMY	**Great Sitkin M**	**2.93**	**71**	P	**P**	**19 57 01.8**	**+0.5**
GSMY				S	**S**	**19 57 35.8**	**+0.4**
GSTR	**Great Sitkin T**	**2.94**	**70**	P	**P**	**19 57 02.0**	**+0.6**
GSTR				S	**S**	**19 57 38.5**	**+2.8**
GSIG	**Igitkin Island**	**2.99**	**72**	P	**P**	**19 57 02.4**	**+0.2**
SMY	**Shemya**	**3.67**	**297**	P	**P**	**19 57 11.8**	**+0.2**
ATKA	**Atka Island**	**4.08**	**73**	P	**P**	**19 57 15.9**	**-1.5**
ATKA				S	**S**	**19 58 03.3**	**-1.1**
FX1	**Attu Island--F**	**4.25**	**296**	P	**P**	**19 57 19.4**	**-0.4**
FX1				S	**S**	**19 58 10.1**	**+1.5**
FX1				pmax	pmax		
	comp=Z,46nm,0.3s						
FX1	**Attu Island--F**	**4.25**	**296**	P	**P**	**19 57 19.4**	**-0.4**
	comp=Z,46nm,0.3s,baz=120,slow=10,SNR=27						
FX1				S	**S**	**19 58 10.1**	**+1.5**
	baz=73,slow=19,SNR=1.6						
FX1	**Attu Island--F**	**4.25**	**296**	P	**P**	**19 57 19.6**	**-0.2**
KDAK	**Kodiak Island**	**17.46**	**57**	*e*P	**P**	**20 00 11.6**	**-4.6**
BILL	**Bilibino**	**18.12**	**344**	*e*P	**P**	**20 00 24.7**	**+0.4**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BILL	**Bilibino**	**18.12**	**344**	*e*P	**P**	**20 00 24.7**	**+0.3**
	comp=Z,4.7nm,0.6s						
SPU	**Mount Spurr**	**18.61**	**46**	*e*P	**P**	**20 00 30.6**	**+0.4**
IMA	**Indian Mountai**	**20.21**	**32**	*e*P	**P**	**20 00 47.5**	**-0.2**
IMA				pmax	pmax		
	comp=Z,23nm,0.8s						
IMA	**Indian Mountai**	**20.21**	**32**	*e*P	**P**	**20 00 47.5**	**-0.2**
	comp=Z,24nm,0.8s						
ILAR	**Eielson Array**	**22.10**	**39**	P	**P**	**20 01 05.9**	**-0.8**
	comp=Z,0.7nm,0.4s,mb3.4,baz=246,slow=9.0,SNR=10						
YSS	**Yuzh-Sakhalins**	**24.25**	**274**	⇓*i*P	**P**	**20 01 28.2**	**+0.5**
YSS				pmax	pmax		
	comp=Z,25nm,1.7s,mb4.4						
ASAJ	**Asahikawa**	**25.61**	**269**	P	**P**	**20 01 41.1**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,13nm,0.8s						
ASAJ	**Asahikawa**	**25.61**	**269**	P	**P**	**20 01 41.1**	**+0.4**
	comp=Z,13nm,0.8s,mb4.5,baz=45,slow=4.0,SNR=12						
YAK	**Yakutsk**	**28.74**	**312**	⇑*i*P	**P**	**20 02 08.7**	**-0.3**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
YAK				MLR	MLR		
	comp=Z,2µm,18.0s						
YKA	**Yellowknife Ar**	**36.17**	**46**	P	**P**	**20 03 13.1**	**-0.5**
	comp=Z,0.6nm,0.4s,mb3.9,baz=285,slow=8.9,SNR=3.6						
NVAR	**Mina Array Bea**	**44.66**	**81**	P	**P**	**20 04 26.1**	**+2.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=326,slow=3.3,SNR=3.2						
ULN	**Ulaanbaatar**	**45.37**	**296**	⇑*i*P	**P**	**20 04 29.8**	**+0.5**
SONM	**Songino Array**	**45.76**	**296**	P	**P**	**20 04 33.1**	**+0.8**
	comp=Z,1.1nm,0.6s,mb3.9,baz=55,slow=8.2,SNR=13						
ZAK	**Zakamensk**	**46.13**	**300**	*e*P	**P**	**20 04 35.6**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.6						
SSE	**Sheshan**	**46.90**	**268**	*e*P	**P**	**20 04 38.9**	**-2.7**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,380nm,7.6s						
SSE	**Sheshan**	**46.90**	**268**	*e*P	**P**	**20 04 38.9**	**-2.7**
	comp=Z,22nm,0.7s,mb5.2						
BW06	**Boulder Array**	**47.41**	**71**	*e*P	**P**	**20 04 45.5**	**+0.1**
	comp=Z,2.9nm,0.6s,mb4.4						
PDAR	**Pinedale Array**	**47.41**	**71**	P	**P**	**20 04 46.1**	**+0.6**
	comp=Z,3.5nm,0.6s,mb4.5,baz=310,slow=4.2,SNR=16						
NJ2	**Nanjing**	**47.72**	**271**	*e*P	**P**	**20 04 48.1**	**0.0**
NJ2				AP	pP	20 05 00.5	-3.8
NJ2				XP	sP	20 05 05.8	-5.8
NJ2				PP	PP	20 06 39.4	-0.2
NJ2				S	**S**	**20 11 41.0**	**+2.6**
NJ2				XS		20 12 01.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,400nm,6.0s						
NJ2				LR	LR		
	comp=N,3µm,25.9s						
NJ2				LR	LR		
	comp=E,2µm,27.2s						
NJ2				LR	LR		
	comp=Z,1µm,26.6s						
NVS	**Novosibirsk**	**53.54**	**314**	*e*P	**P**	**20 05 29.4**	**-2.5**
ANMO	**Albuquerque**	**54.20**	**77**	*i* P	**P**	**20 05 29.5**	**-7.5**
GTA	**Gaotai**	**54.63**	**291**	*e*P	**P**	**20 05 39.3**	**-0.8**
GTA				AP	pP	20 05 45.6	-11
ARCES	**ARCESS Array B**	**58.11**	**350**	P	**P**	**20 06 03.4**	**-1.1**
	comp=Z,1.5nm,0.6s,mb4.2,baz=49,slow=13,SNR=4.1						
MKAR	**Makanchi Array**	**59.31**	**308**	*i* P	**P**	**20 06 12.1**	**-1.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**59.31**	**308**	P	**P**	**20 06 11.9**	**-1.1**
	comp=Z,1.5nm,0.4s,mb4.4,baz=47,slow=6.6,SNR=38						
BVA0	**Borovoye Array**	**60.34**	**319**	*i* P	**P**	**20 06 19.7**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
ARU	**Arti**	**62.20**	**327**	⇑*i*P	**P**	**20 06 31.9**	**-0.7**
ARU				*e*		20 07 09.3	
ARU				*e*		20 08 54.9	
ARU				*e*S	**S**	**20 14 56.8**	**+5.2**
ARU				*e*		20 16 21.7	
ARU				*e*SS	SS	20 18 58.8	+1.4
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
ARU				MLR	MLR		
	comp=Z,600nm,18.5s						
ARU				MLR	MLR		
	comp=N,200nm,18.0s						
ARU				MLR	MLR		
	comp=E,200nm,16.0s						
FINES	**FINESS Array B**	**65.75**	**346**	P	**P**	**20 06 53.9**	**-1.6**
	comp=E,0.8nm,0.7s,mb3.9,baz=11,slow=9.7,SNR=4.9						
AAK	**Ala-Archa**	**66.16**	**309**	*i* P	**P**	**20 06 58.4**	**0.0**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
AAK				MLR	MLR		
	comp=Z,500nm,14.0s						
AB31	**Akbulak array**	**67.44**	**322**	*i* P	**P**	**20 07 06.7**	**+0.3**
KKAR	**Karatay Array**	**67.72**	**312**	*i* P	**P**	**20 07 08.4**	**+0.2**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
NB2	**NORSAR Subarra**	**67.75**	**354**	P	**P**	**20 07 07.7**	**-0.4**
	comp=Z,1.5nm,0.6s,mb4.2,baz=9.0,slow=6.5						
NOA	**NORSAR Array B**	**67.75**	**354**	P	**P**	**20 07 07.6**	**-0.5**
	comp=Z,2.5nm,0.8s,mb4.3,baz=8.2,slow=6.4,SNR=9.3						
HFS	**Hagfors**	**68.46**	**352**	P	**P**	**20 07 11.7**	**-0.9**
	comp=Z,1.0nm,0.4s,mb4.2,baz=45,slow=4.2,SNR=8.7						
OBN	**Obninsk**	**69.68**	**338**	*e*P	**P**	**20 07 19.9**	**-0.2**
OBN				pmax	pmax		
	comp=Z,17nm,2.5s,mb4.5						
OBN				MLR	MLR		
	comp=Z,500nm,20.0s						
CMAR	**Chiang Mai Arr**	**69.94**	**275**	P	**P**	**20 07 22.3**	**-0.1**
	comp=Z,0.9nm,0.7s,mb3.8,baz=30,slow=6.9,SNR=7.8						
GUN	**Gumba**	**70.92**	**291**	*e*P	**P**	**20 07 29.2**	**+1.1**
	comp=Z,11nm,0.4s,mb5.1						
KKN	**Kakani**	**71.36**	**291**	*e*P	**P**	**20 07 31.5**	**+0.8**
	comp=Z,10nm,0.6s,mb5.0						
KKN	**Kakani**	**71.36**	**291**	*e*P	**P**	**20 07 31.5**	**+0.8**
KKN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
PKI	**Pulchoki**	**71.45**	**291**	*e*P	**P**	**20 07 31.9**	**+0.6**
	comp=Z,5.9nm,0.5s,mb4.7						
PKI	**Pulchoki**	**71.45**	**291**	*e*P	**P**	**20 07 31.9**	**+0.6**
PKI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
GKN	**Gorkha**	**71.58**	**292**	*e*P	**P**	**20 07 32.5**	**+0.5**
DMN	**Daman**	**71.60**	**291**	*e*P	**P**	**20 07 32.3**	**+0.1**
	comp=Z,63nm,1.8s,mb5.2						
KOLN	**Koldanda**	**72.36**	**292**	*e*P	**P**	**20 07 37.4**	**+0.7**
	comp=Z,9.3nm,1.1s,mb4.6						
AKASG	**Malin Array Be**	**75.41**	**341**	P	**P**	**20 07 53.2**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.8,baz=19,slow=6.1,SNR=5.1						
GNI	**Garni**	**80.83**	**327**	⇑*i*P	**P**	**20 08 25.3**	**+1.4**
GNI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BOSA	**Boshof**	**150.29**	**309**	PKPbc	PKPdf	20 16 00.9	+6.7
	comp=Z,1.8nm,0.7s,baz=184,slow=2.6,SNR=4.5						

NEIC ***14*** *20:15:23.1±2.0, 22.95S×169.31E, h10^{km}, mb4.0/2, Error ellipse: s-maj=58.1km s-min=18.3km az=213.0*

IDC ***14*** *20:15:23.6±2.9, 22.80S×169.09E, mb4.0/4, mb1 4.2/5, mb1mx3.9/15, mbtmp4.0/5, ML3.6/1, MS3.6/1, Ms1 3.6/1, ms1mx3.5/26, Error ellipse: s-maj=59.9km s-min=45.6km az=20.0*

ISC 14 20:15:26.4±3.3**, 23.0S**±0.3×**169.1E**±0.2**, h34**^{km}±24^{km}**, n16, σ1^{s}.13**/19**, mb3.9**/5**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.62**	**291**	*e*P	**P**	**20 16 07.3**	**0.0**
DZM				*e*S	**S**	**20 16 37.9**	**-0.4**
DZM	**Mont Dzumac**	**2.62**	**291**	Pn	**P**	**20 16 07.4**	**+0.1**
	13nm,0.3s,baz=91,slow=17,SNR=225						
DZM				Sn	**S**	**20 16 38.8**	**+0.5**
	40nm,0.3s,baz=96,slow=19,SNR=6.0						
DZM				LR	LR	20 17 00.0	
	comp=Z,1µm,19.1s,baz=33,slow=38						
DZM	**Mont Dzumac**	**2.62**	**291**	*e*P	**P**	**20 16 07.3**	**0.0**
DZM				*e*S	**S**	**20 16 37.9**	**-0.4**
NOUC	**Port Laguerre**	**2.74**	**289**	*e*P	**P**	**20 16 08.8**	**-0.1**
NOUC	**Port Laguerre**	**2.74**	**289**	*e*P	**P**	**20 16 08.8**	**-0.1**
CTA	**Charters Tower**	**21.43**	**274**	P	**P**	**20 20 14.9**	**+1.3**
	2.4nm,0.6s,mb3.7,baz=100,slow=11,SNR=5.6						
CTAO	**Charters Tower**	**21.43**	**274**	*e*P	**P**	**20 20 14.8**	**+1.1**
	3.8nm,0.7s,mb3.8						
STKA	**Stephens Creek**	**25.89**	**244**	P	**P**	**20 20 58.5**	**+1.5**
	3.4nm,0.7s,mb4.0,baz=89,slow=15,SNR=8.7						
STKA	**Stephens Creek**	**25.89**	**244**	P	**P**	**20 20 58.5**	**+1.5**
WRAB	**Tennant Creek**	**32.43**	**269**	*e*P	**P**	**20 21 53.8**	**-1.8**
	2.0nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**32.44**	**269**	P	**P**	**20 21 54.1**	**-1.6**
	0.6nm,0.5s,mb3.7,baz=99,slow=8.4,SNR=18						
CMAR	**Chiang Mai Arr**	**79.94**	**295**	P	**P**	**20 27 35.3**	**+1.2**
	1.7nm,0.7s,mb4.1,baz=135,slow=4.3,SNR=11						
VNA3	**Neumayer Olymp**	**85.98**	**180**		**P**	**20 28 09.5**	**+5.7**
VNA3	**Neumayer Olymp**	**85.98**	**180**	P	**P**	**20 28 02.7**	**-1.1**
VNA3				P		20 28 09.5	
VNA2	**Neumayer--Watz**	**86.27**	**181**		**P**	**20 28 11.4**	**+6.2**
VNA2	**Neumayer--Watz**	**86.27**	**181**	P	**P**	**20 28 05.1**	**-0.1**
VNA2				P		20 28 11.4	

NEIC ***14*** *20:22:09.6, 51.07N×179.28E, h30^{km}, mb4.5/2, ML4.0(AEIC), After AEIC.*

MOS ***14*** *20:22:11.3±1.6, 51.14N×179.19E, h69^{km}, mb4.4/3, Error ellipse: s-maj=22.9km s-min=14.0km az=104.4*

IDC ***14*** *20:22:15.5±3.9, 51.49N×179.16E, h72^{km}±32^{km}, mb3.7/10, mb1 3.8/11, mb1mx3.6/24, mbtmp4.0/11, ML3.8/1, Error ellipse: s-maj=46.3km s-min=17.1km az=169.0*

ISC 14 20:22:08.0±1.2**, 50.8N**±0.1×**179.23E**±0.06**, h53**^{km}±8^{km}**, n35, σ0^{s}.90**/42**, mb4.0**/12**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.41**	**66**	P	**P**	**20 22 45.7**	**-0.3**
KIMD				S	**S**	**20 23 14.7**	**+0.3**
KIKV	**Kanaga Island**	**2.50**	**63**	P	**P**	**20 22 47.1**	**-0.1**
KIKV				S	**S**	**20 23 17.2**	**+0.7**
KIWB	**Kanaga Island**	**2.50**	**64**	P	**P**	**20 22 47.5**	**+0.4**
KINC	**Kanaga Island**	**2.54**	**63**	P	**P**	**20 22 47.7**	**0.0**
KIRH	**Kanaga Island**	**2.55**	**63**	P	**P**	**20 22 48.1**	**+0.2**
KIRH				S	**S**	**20 23 17.9**	**+0.1**
ADAG	**Mount Adagdak**	**2.86**	**64**	P	**P**	**20 22 52.1**	**-0.2**
ADAG				S	**S**	**20 23 26.4**	**+0.8**
GSSP	**Great Sitkin S**	**3.15**	**64**	P	**P**	**20 22 55.8**	**-0.6**
GSTD	**Great Sitkin T**	**3.15**	**65**	P	**P**	**20 22 56.0**	**-0.4**
GSTD				S	**S**	**20 23 32.9**	**-0.2**
GSMY	**Great Sitkin M**	**3.20**	**66**	P	**P**	**20 22 56.5**	**-0.6**
GSTR	**Great Sitkin T**	**3.21**	**65**	P	**P**	**20 22 57.2**	**-0.1**
GSIG	**Igitkin Island**	**3.25**	**67**	P	**P**	**20 22 57.4**	**-0.4**
SMY	**Shemya**	**3.72**	**303**	P	**P**	**20 23 05.0**	**+0.6**
FX1	**Attu Island--F**	**4.29**	**301**	P	**P**	**20 23 12.7**	**+0.2**
FX1				S	**S**	**20 24 02.1**	**+0.3**
FX1				pmax	pmax		
	comp=Z,24nm,0.3s						
FX1				smax			
	comp=N,14nm,0.3s						
FX1	**Attu Island--F**	**4.29**	**301**	P	**P**	**20 23 12.7**	**+0.2**
	comp=N,24nm,0.3s,baz=84,slow=22,SNR=51						
FX1				S	**S**	**20 24 02.1**	**+0.3**
	comp=N,14nm,0.3s,baz=306,slow=19,SNR=2.2						
FX1	**Attu Island--F**	**4.29**	**301**	P	**P**	**20 23 13.0**	**+0.5**
ATKA	**Atka Island**	**4.34**	**69**	P	**P**	**20 23 12.3**	**-0.8**
BILL	**Bilibino**	**18.41**	**345**	*e*P	**P**	**20 26 21.5**	**+0.8**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
IMA	**Indian Mountai**	**20.58**	**32**	*e*P	**P**	**20 26 43.4**	**-1.1**
IMA				pmax	pmax		
	comp=Z,28nm,0.9s						
IMA	**Indian Mountai**	**20.58**	**32**	*e*P	**P**	**20 26 43.4**	**-1.1**
	comp=Z,28nm,0.9s						
ILAR	**Eielson Array**	**22.46**	**39**	P	**P**	**20 27 03.2**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.3,baz=245,slow=9.2,SNR=11						
ASAJ	**Asahikawa**	**25.46**	**269**	P	**P**	**20 27 36.5**	**+4.2**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ASAJ	**Asahikawa**	**25.46**	**269**	P	**P**	**20 27 36.5**	**+4.1**
	comp=Z,6.2nm,0.9s,mb4.2,baz=95,slow=6.0,SNR=6.4						
INK	**Inuvik**	**28.63**	**35**	P	**P**	**20 28 01.2**	**+0.1**
	comp=Z,1.9nm,0.9s,mb3.8,baz=290,slow=12,SNR=3.2						
KLR	**Kul'dur**	**30.14**	**286**	*e*P	**P**	**20 28 12.7**	**-2.0**
SONM	**Songino Array**	**45.78**	**296**	P	**P**	**20 30 27.9**	**+2.1**
	comp=Z,0.7nm,0.5s,mb3.8,baz=61,slow=8.4,SNR=7.0						
ZAK	**Zakamensk**	**46.18**	**301**	*e*P	**P**	**20 30 29.9**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
BW06	**Boulder Array**	**47.67**	**71**	*e*P	**P**	**20 30 42.4**	**+1.7**
	comp=Z,2.5nm,0.8s,mb4.3						
PDAR	**Pinedale Array**	**47.67**	**71**	P	**P**	**20 30 42.7**	**+2.0**
	comp=Z,2.8nm,0.8s,mb4.3,baz=314,slow=5.2,SNR=14						
ARCES	**ARCESS Array B**	**58.43**	**349**	P	**P**	**20 31 58.0**	**-2.0**
	comp=Z,1.7nm,0.7s,mb4.2,baz=18,slow=8.6,SNR=3.7						
MKAR	**Makanchi Array**	**59.40**	**308**	P	**P**	**20 32 07.0**	**0.0**
	comp=Z,1.0nm,0.4s,mb4.2,baz=47,slow=6.3,SNR=26						
FINES	**FINESS Array B**	**66.05**	**346**	P	**P**	**20 32 48.9**	**-1.7**
	comp=Z,0.7nm,0.7s,mb3.8,baz=34,slow=6.9,SNR=5.7						
FINES	**FINESS Array B**	**66.05**	**346**	P	**P**	**20 32 48.9**	**-1.7**
NB2	**NORSAR Subarra**	**68.08**	**354**	P	**P**	**20 33 02.6**	**-0.8**
	comp=Z,1.2nm,0.8s,mb4.0,baz=10.0,slow=6.5						
NOA	**NORSAR Array B**	**68.08**	**354**	P	**P**	**20 33 02.7**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.9,baz=8.8,slow=6.2,SNR=3.9						
AKASG	**Malin Array Be**	**75.69**	**341**	P	**P**	**20 33 48.8**	**0.0**
	comp=Z,0.8nm,0.5s,mb3.9,baz=18,slow=6.0,SNR=5.0						

NEIC 14 20:24:42.0, 50.98N×**179.37E, h30**^{km}**, ML3.6**(AEIC)**, After AEIC., Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIKV	**Kanaga Island**	**2.34**	**66**	P	Pn	20 25 19.4	0.0
GSMY	**Great Sitkin M**	**3.05**	**68**	P	Pn	20 25 28.9	-0.6
ATKA	**Atka Island**	**4.20**	**70**	P	Pn	20 25 44.6	-1.1
FX1	**Attu Island--F**	**4.29**	**299**	P	Pn	20 25 46.1	-0.9

NEIC 14 20:30:43.6, 51.28N×**179.61E, h5**^{km}**, ML3.5**(AEIC)**, After AEIC., Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.03**	**75**	P	Pn	20 31 18.0	-0.9
KIKV	**Kanaga Island**	**2.10**	**72**	P	Pn	20 31 19.2	-0.7
ADAG	**Mount Adagdak**	**2.46**	**72**	P	Pn	20 31 25.1	0.0
GSMY	**Great Sitkin M**	**2.80**	**72**	P	Pn	20 31 29.0	-1.0
SMY	**Shemya**	**3.70**	**295**	P	Pn	20 31 39.3	-3.5
ATKA	**Atka Island**	**3.96**	**74**	P	Pn	20 31 43.0	-3.4
FX1	**Attu Island--F**	**4.29**	**294**	P	Pn	20 31 51.5	+0.4

NEIC 14 20:41:06.7, 50.84N×**179.52E, h4**^{km}**, ML3.6**(AEIC)**, After AEIC., Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.24**	**64**	P	Pn	20 41 45.2	+0.2
KIMD				S	Sn	20 42 13.0	-0.4
KIKV	**Kanaga Island**	**2.32**	**62**	P	Pn	20 41 46.5	+0.2
ADAG	**Mount Adagdak**	**2.69**	**63**	P	Pn	20 41 50.7	-0.7
ADAG				S	Sn	20 42 24.7	0.0
ATKA	**Atka Island**	**4.16**	**68**	P	Pn	20 42 12.4	0.0
FX1	**Attu Island--F**	**4.43**	**300**	P	Pn	20 42 15.7	-0.5

IDC ***14*** *20:55:20.5±1.0, 13.06N×49.53E, mb3.9/14, mb1 4.1/14, mb1mx4.0/20, mbtmp3.9/14, Error ellipse: s-maj=23.6km s-min=20.5km az=45.0*

NEIC ***14*** *20:55:21.7±0.5, 13.05N×49.48E, h10^{km}, mb4.6/7, Error ellipse: s-maj=12.6km s-min=6.6km az=179.0*

CSEM ***14*** *20:55:23.1±0.1, 13.02N×49.29E, h40^{km}, mb4.6/6, Error ellipse: s-maj=7.3km s-min=2.7km az=176.0*

DHMR ***14*** *20:55:26.2±1.4, 13.49N×48.91E, h4^{km}±170^{km}, ML3.7*

ISC 14 20:55:20.3±0.5**, 13.21N**±0.06×**49.36E**±0.03**, h10**^{km}**, n39, σ1^{s}.19**/54**, mb4.2**/21**, 6C-6D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MUKL	**Al Mukalla**	**1.30**	**346**	⇑*i*P	**Pb**	**20 55 44.5**	**0.0**
MUKL				*i* S	**Sb**	**20 56 01.2**	**+0.2**
MUKL	**Al Mukalla**	**1.30**	**346**	⇑*e*P	**Pb**	**20 55 44.4**	**-0.1**
MUKL				*i* S	**Sb**	**20 55 58.5**	**-2.5**
MUKL				AML	AML	20 56 26.1	
	comp=N,744nm,0.7s						
BDHA	**Al Bayda'**	**3.77**	**282**	⇓*i*P	**Pn**	**20 56 22.1**	**+2.3**
BDHA				*i* S	**Sn**	**20 57 04.8**	**+0.2**
BDHA	**Al Bayda'**	**3.77**	**282**	⇑*i*P	**Pn**	**20 56 21.9**	**+2.2**
BDHA				*i* S	**Sn**	**20 57 04.7**	**0.0**
BDHA				AML	AML	20 57 08.6	
	comp=Z,960nm,0.4s						
BDHA	**Al Bayda'**	**3.77**	**282**	⇑*i*P	**Pn**	**20 56 22.0**	**+2.2**
BDHA				*i* S	**Sn**	**20 57 04.9**	**+0.2**
	comp=Z,480nm,0.4s						

LBOS		4.05	280	⇓iP	Pn	20 56 25.8	+1.9
LBOS				i S	Sn	20 57 11.8	-0.1
LBOS		4.05	280	⇓iP	Pn	20 56 25.8	+1.9
LBOS				i S	Sn	20 57 11.7	-0.2
DHBB	Dhamar BB	5.01	286	⇑iP	Pn	20 56 39.1	+1.6
DHBB				i S	Sn	20 57 35.1	-1.1
DHBB	Dhamar BB	5.01	286	i P	Pn	20 56 37.9	+0.4
DHBB				i S	Sn	20 57 33.9	-2.3
DHBB	Dhamar BB	5.01	286	⇓iP	Pn	20 56 37.8	+0.3
DHBB				i S	Sn	20 57 33.7	-2.5
TRBA	At Turbah	5.11	271	⇓iP	Pn	20 56 38.6	-0.2
TRBA				i S	Sn	20 57 36.4	-2.2
TRBA	At Turbah	5.11	271	⇓iP	Pn	20 56 38.6	-0.2
TRBA				i S	Sn	20 57 37.1	-1.5
UDYN	Al ‘Udayn	5.30	279	eP	Pn	20 56 43.3	+1.8
UDYN				i S	Sn	20 57 41.8	-1.5
UDYN	Al ‘Udayn	5.30	279	⇑eP	Pn	20 56 41.9	+0.4
UDYN				i S	Sn	20 57 40.0	-3.4
SANA	San‘a	5.45	294	i P	Pn	20 56 44.1	+0.5
SANA				i S	Sn	20 57 43.9	-3.2
ASF	Jabal al Asfar	22.07	331	P	P	21 00 21.0	+3.9
	comp=Z,4.6nm,0.9s,mb3.9,baz=56,slow=1.0,SNR=5.7						
GNI	Garni	27.14	352	P	P	21 01 09.0	+3.3
	comp=Z,1.6nm,0.4s,mb3.9,baz=13,slow=4.7,SNR=4.2						
KOLN	Koldanda	35.05	60	eP	P	21 02 15.4	-0.2
	comp=Z,12nm,0.8s,mb4.9						
GKN	Gorkha	36.00	60	eP	P	21 02 21.0	-2.6
	comp=Z,8.3nm,0.9s,mb4.7						
DMN	Daman	36.29	61	eP	P	21 02 24.5	-1.6
	comp=Z,17nm,0.9s,mb5.0						
KKN	Kakani	36.48	61	eP	P	21 02 27.4	-0.3
	comp=Z,18nm,0.9s,mb5.0						
PKI	Pulchoki	36.53	61	eP	P	21 02 27.5	-0.6
	comp=Z,11nm,0.9s,mb4.7						
GUN	Gumba	37.03	61	eP	P	21 02 33.0	+0.7
	comp=Z,26nm,1.1s,mb5.0						
MATP	Matopo	39.22	212	P	P	21 02 50.5	-0.2
	comp=Z,0.8nm,0.5s,mb3.7,baz=165,slow=18,SNR=5.4						
AKASG	Malin Array Be	40.83	340	P	P	21 03 05.0	+1.3
	comp=Z,2.8nm,0.7s,mb4.0,baz=149,slow=7.2,SNR=16						
BVAR	Borovoye Array	43.11	18	P	P	21 03 22.6	+0.3
	comp=Z,0.7nm,0.8s,mb3.4,baz=191,slow=7.6,SNR=5.3						
MKAR	Makanchi Array	43.40	33	P	P	21 03 25.3	+0.5
	comp=Z,0.7nm,0.6s,mb3.6,baz=228,slow=7.8,SNR=12						
GERES	GERESS Array B	46.12	328	P	P	21 03 47.7	+1.1
	comp=Z,0.3nm,0.6s,mb3.4,baz=143,slow=4.9,SNR=3.6						
CMAR	Chiang Mai Arr	47.87	77	P	P	21 04 00.1	-0.8
	comp=Z,2.0nm,0.8s,mb4.2,baz=271,slow=8.4,SNR=14						
FINES	FINESS Array B	51.03	346	P	P	21 04 25.0	+0.5
	comp=Z,2.3nm,0.7s,mb4.2,baz=121,slow=11,SNR=11						
ESDC	Sonseca Array	53.61	310	P	P	21 04 46.2	+2.1
	comp=Z,0.7nm,0.6s,mb3.7,baz=116,slow=7.5,SNR=3.3						
ESDC	Sonseca Array	53.61	310	P	P	21 04 46.2	+2.1
NOA	NORSAR Array B	55.17	339	P	P	21 04 55.3	0.0
	comp=Z,0.9nm,0.8s,mb3.9,baz=125,slow=7.8,SNR=2.9						
NOA	NORSAR Array B	55.17	339	P	P	21 04 55.2	-0.1
ARCES	ARCESS Array B	58.28	350	P	P	21 05 16.5	-0.8
	comp=Z,2.8nm,0.8s,mb4.3,baz=141,slow=7.8,SNR=5.1						
SONM	Songino Array	58.35	42	P	P	21 05 18.0	0.0
	comp=Z,0.8nm,0.8s,mb3.8,baz=243,slow=5.5,SNR=4.5						
WRA	Warramunga Arr	89.81	110	P	P	21 08 20.5	-0.7
	comp=Z,0.7nm,0.7s,mb4.1,baz=299,slow=3.6,SNR=5.7						
WRAB	Tennant Creek	89.82	110	eP	P	21 08 21.1	-0.2
	comp=Z,6.2nm,1.1s,mb4.8						
WRAB	Tennant Creek	89.82	110	eP	P	21 08 21.1	-0.2
	comp=Z,6.2nm,1.1s,mb4.8						

*NEIC **14** 21:04:39.8, 15.39N×96.60W, h14^{km}, MD3.8(MEX), After MEX.*

MEX 14 21:04:39.8±0.3**, 15.39N×96.60W, h14**^{km}±31^{km}**, MD3.8, 1C, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.61	52	⇑iP	Pb	21 04 50.0	-1.7
HUIG				i S	Sb	21 04 58.1	-1.7
VHO	Vista Hermosa	1.68	356	i P	Pn	21 05 05.6	-3.4
VHO				i S	Sn	21 05 25.3	-5.0
OXX	Oaxaca	1.69	356	eP	Pn	21 05 05.5	-3.6
OXX				i S	Sn	21 05 27.0	-3.5
CMIG	Matias Romero	2.36	44	i P	Pn	21 05 15.3	-3.5
CMIG				i S	Sn	21 05 42.6	-5.2
PPM	Popocatepetl	4.14	332	eP	Pn	21 05 45.2	+1.2
PPM				i S	Sn	21 06 28.1	-4.6
PPM	Popocatepetl	4.14	332	eP	Pn	21 05 45.2	+1.2
PPM				eP		21 05 49.0	
PPM				i S	Sn	21 06 28.1	-4.6

*NEIC **14** 21:11:40.8, 51.05N×179.83E, h2^{km}, mb3.9/1, ML4.0(AEIC), After AEIC.*

*IDC **14** 21:11:41.4±3.6, 50.53N×177.48E, mb3.3/3, mb1 3.7/3, mb1mx3.4/22, mbtmp3.4/3, Error ellipse: s-maj=106.2km s-min=33.5km az=177.0*

ISC 14 21:11:41.9±2.7**, 50.8N**±0.4×**179.7E**±0.1**, h37**^{km}±23^{km}**, n13,** σ**0**^{s}**80**/12**, mb3.6**/2**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.13	62	P	P	21 12 15.3	-0.5
KIMD				S	S	21 12 41.4	+0.1
KIWB	Kanaga Island	2.22	61	eP	P	21 12 16.6	-0.4
KIKV	Kanaga Island	2.22	60	P	P	21 12 16.7	-0.4
KINC	Kanaga Island	2.27	59	P	P	21 12 17.2	-0.5
ADAG	Mount Adagdak	2.58	62	P	P	21 12 23.2	+1.0
GSTR	Great Sitkin T	2.94	62	eP	P	21 12 27.8	+0.5
GSIG	Igitkin Island	2.97	65	P	P	21 12 28.8	+1.1
ATKA	Atka Island	4.05	67	P	P	21 12 41.8	-1.2
FX1	Attu Island--F	4.56	300	P	P	21 12 50.6	+0.3
ILAR	Eielson Array	22.27	38	P		21 16 51.5	
	0.3nm,0.5s,baz=241,slow=9.3,SNR=4.8						
BW06	Boulder Array	47.37	71	P	P	21 20 14.4	+0.5
	0.7nm,0.7s,mb3.7						
PDAR	Pinedale Array	47.37	71	P	pP	21 20 28.3	+3.7
	0.7nm,0.6s,baz=304,slow=5.3,SNR=5.0						
MKAR	Makanchi Array	59.65	308	P	P	21 21 40.4	-4.0
	0.2nm,0.4s,mb3.5,baz=50,slow=5.8,SNR=7.5						

*IDC **14** 21:13:29.8±1.8, 49.63N×179.11E, mb3.7/7, mb1 4.1/8, mb1mx3.8/24, mbtmp3.8/8, ML4.2/1, Error ellipse: s-maj=41.4km s-min=12.6km az=19.0*

*NEIC **14** 21:13:38.8, 50.91N×179.44E, h23^{km}, mb4.5/2, ML3.8(AEIC), After AEIC.*

ISC 14 21:13:39.4±1.4**, 51.0N**±0.2×**179.39E**±0.07**, h54**^{km}±10^{km}**, n26,** σ**0**^{s}**85**/33**, mb3.8**/8**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.26	68	P	P	21 14 15.2	+0.1
KIKV	Kanaga Island	2.34	66	P	P	21 14 16.6	+0.3
KIKV				S	S	21 14 45.4	+1.5
KIWB	Kanaga Island	2.34	66	P	P	21 14 16.3	-0.1
KINC	Kanaga Island	2.39	65	P	P	21 14 17.0	+0.1
KIRH	Kanaga Island	2.39	66	P	P	21 14 17.1	+0.1
ADAG	Mount Adagdak	2.71	66	P	P	21 14 21.1	-0.4
ADAG				S	S	21 14 52.7	-0.5
GSTD	Great Sitkin T	3.00	67	P	P	21 14 24.9	-0.7
GSTD				S	S	21 14 59.4	-1.1
GSMY	Great Sitkin M	3.04	68	P	P	21 14 26.7	+0.4
GSMY				S	S	21 15 01.5	-0.2
GSTR	Great Sitkin T	3.06	67	P	P	21 14 26.2	-0.3
GSIG	Igitkin Island	3.10	69	P	P	21 14 27.3	+0.2
GSIG				S	S	21 15 02.7	-0.5
SMY	Shemya	3.72	300	P	P	21 14 36.9	+1.1
ATKA	Atka Island	4.19	70	P	P	21 14 41.9	-0.5
ATKA				S	S	21 15 33.1	+2.5
FX1	Attu Island--F	4.30	299	Pn	P	21 14 44.1	+0.2
	31nm,0.3s,baz=229,slow=8.1,SNR=20						
FX1				Sn	S	21 15 40.5	+7.1
	28nm,0.3s,baz=90,slow=22,SNR=8.4						
FX1	Attu Island--F	4.30	299	P	P	21 14 44.1	+0.1
UNV	Unalaska Valle	9.10	66	P	P	21 15 48.8	-1.8
RSO	Redoubt South	18.21	48	eP	P	21 17 49.9	+0.3
IMA	Indian Mountai	20.40	32	eP	P	21 18 13.3	-0.5
	32nm,1.0s						
ILAR	Eielson Array	22.28	39	P	P	21 18 39.7	+7.0
	0.6nm,0.7s,mb3.1,baz=262,slow=11,SNR=4.8						
INK	Inuvik	28.45	35	P	P	21 19 34.7	+4.0
	0.8nm,0.5s,mb3.6,baz=48,slow=0.8,SNR=3.6						
INK	Inuvik	28.45	35	P	P	21 19 34.7	+4.0
DLBC	Dease Lake	29.54	56	P	P	21 19 44.4	+3.9
	0.9nm,0.5s,mb3.8,baz=106,slow=27,SNR=2.7						
NVAR	Mina Array Bea	44.74	81	P	P	21 21 49.8	+1.1
	0.6nm,0.7s,mb3.5,baz=297,slow=6.0,SNR=2.9						
SONM	Songino Array	45.80	296	P	P	21 21 56.6	-0.5
	0.3nm,0.5s,mb3.5,baz=68,slow=6.7,SNR=3.5						
BW06	Boulder Array	47.52	71	eP	P	21 22 10.7	0.0
	2.4nm,0.6s,mb4.4						
PDAR	Pinedale Array	47.52	71	P	P	21 22 11.4	+0.7
	2.8nm,0.6s,mb4.5,baz=303,slow=4.5,SNR=14						
MKAR	Makanchi Array	59.39	308	P	P	21 23 37.0	-1.1
	0.5nm,0.4s,mb3.9,baz=52,slow=6.1,SNR=12						

*JMA **14** 21:25:56.8±0.2, 30.41N×131.11E, h30^{km}±1^{km}, M3.2*

*NEIC **14** 21:25:56.9, 30.41N×131.11E, h30^{km}, MG3.2(JMA), After JMA.*

*IDC **14** 21:26:00.2±8.2, 30.66N×131.52E, h71^{km}±54^{km}, mb3.5/4, mb1 3.5/5, mb1mx3.3/21, mbtmp3.7/5, ML2.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/33, Error ellipse: s-maj=63.4km s-min=40.4km az=173.0*

ISC 14 21:25:55.5±1.2**, 30.36N**±0.06×**131.16E**±0.09**, h30**^{km}**, n14,** σ**1**^{s}**12**/18**, mb3.7**/4**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTN	Tanegashima 3	0.33	332	P	Pb	21 26 03.7	+0.3
JTN				S	Sb	21 26 08.8	0.0
JTSR	Tashiro 2	0.83	346	P	Pn	21 26 11.2	0.0
JTSR				S	Sb	21 26 22.1	0.0
JKC	Kuchinoerabu	0.84	277	P	Pn	21 26 11.4	+0.1
JKC				S	Sb	21 26 22.2	-0.3
JNAR	Kushima--Naru	1.17	5	P	Pn	21 26 17.5	+1.5
JNN	Nakanoshima	1.23	245	P	Pn	21 26 18.4	+1.5
JSU	Suzuyama	1.29	332	P	Pn	21 26 18.0	+0.2
JSU				S	Sn	21 26 34.8	+0.6
JTZ	Takazaki	1.54	358	P	Pn	21 26 22.6	+1.3
JZO	Okuchi	1.84	345	P	Pn	21 26 26.6	+1.0
JNU	Nakatsue	2.76	355	P	Pn	21 26 39.1	+0.3
	0.9nm,0.3s,baz=201,slow=17,SNR=5.8						
JNU				S	Sn	21 27 09.0	-2.6
	1.4nm,0.3s,baz=49,slow=11,SNR=3.5						
CBIJ	Chichi jima	10.21	106	LR	LR	21 31 44.8	
	comp=Z,108nm,21.8s,baz=338,slow=34						
MKAR	Makanchi Array	40.89	308	P	P	21 33 35.1	-1.3
	0.6nm,0.7s,mb3.4,baz=99,slow=9.5,SNR=6.7						
BVAR	Borovoye Array	49.03	316	P	P	21 34 39.6	-1.8
	1.7nm,0.5s,mb4.3,baz=97,slow=9.3,SNR=15						
ILAR	Eielson Array	59.59	29	P	P	21 35 52.9	-5.5
	0.2nm,0.4s,mb3.5,baz=290,slow=7.4,SNR=4.4						
FINES	FINESS Array B	70.55	331	P	P	21 37 07.0	-2.2
	0.6nm,0.5s,mb3.8,baz=68,slow=5.6,SNR=13						

*IDC **14** 21:54:19.3±0.9, 5.28S×68.49E, mb4.1/11, mb1 4.2/11, mb1mx4.1/19, mbtmp4.1/11, MS4.0/2, Ms1 4.1/2, ms1mx3.4/31, Error ellipse: s-maj=26.5km s-min=22.3km az=14.0*

*NEIC **14** 21:54:20.8±0.5, 5.34S×68.61E, h10^{km}, mb4.5/10, Error ellipse: s-maj=13.3km s-min=12.3km az=73.0*

ISC 14 21:54:18.9±0.5**, 5.33S**±0.09×**68.58E**±0.09**, h10**^{km}**, n35,** σ**1**^{s}**25**/30**, mb4.4**/19**, MS4.1**/2**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	Diego Garcia	4.37	118	ePn	Pn	21 55 23.8	-3.2
DGAR				eS	Sn	21 56 10.1	-8.4
PALK	Pallekele	17.41	44	eP	P	21 58 25.9	+2.2
KOLN	Koldanda	35.96	23	eP	P	22 01 28.9	+6.9
	29nm,1.6s,mb5.0						
DMN	Daman	36.43	25	eP	P	22 01 26.5	+0.6
	19nm,1.0s,mb5.0						
PKI	Pulchoki	36.53	26	eP	P	22 01 27.1	+0.4
	21nm,1.3s,mb4.8						
GKN	Gorkha	36.58	24	eP	P	22 01 27.6	+0.4
	32nm,1.1s,mb5.0						
KKN	Kakani	36.66	25	eP	P	22 01 28.0	+0.2
	8.5nm,0.8s,mb4.7						
GUN	Gumba	37.03	26	eP	P	22 01 27.4	-3.5
	30nm,1.0s,mb5.1						
CMAR	Chiang Mai Arr	38.14	51	P	P	22 01 40.2	-0.2
	2.2nm,1.0s,mb3.9,baz=237,slow=8.9,SNR=9.7						
CMAR				LR	LR	22 15 50.1	
	comp=Z,66nm,18.4s,MS3.5,baz=220,slow=34						
CMAR	Chiang Mai Arr	38.14	51	P	P	22 01 40.2	-0.2
CMAR				LR	LR	22 15 50.1	
BOSA	Boshof	47.09	235	P	P	22 02 53.2	0.0
	3.6nm,0.7s,mb4.4,baz=58,slow=11,SNR=5.7						
BOSA	Boshof	47.09	235	eP	P	22 02 53.1	-0.1
	2.5nm,0.8s,mb4.2						
AAK	Ala-Archa	48.04	6	eP	P	22 03 00.9	+0.5
	2.0nm,0.6s,mb4.3						
GNI	Garni	50.30	336	P	P	22 03 15.3	-2.5
	1.2nm,0.4s,mb4.3,baz=3.6,slow=16,SNR=2.1						
GNI	Garni	50.30	336	P	P	22 03 15.8	-2.1
	4.6nm,0.9s,mb4.5						
MKAR	Makanchi Array	53.30	12	P	P	22 03 39.3	-1.1
	1.1nm,0.7s,mb3.9,baz=197,slow=7.8,SNR=14						
BRTR	Keskin Array B	55.20	327	P	P	22 03 53.6	-0.8
	1.3nm,0.9s,mb4.0,baz=140,slow=9.6,SNR=6.7						
SONM	Songino Array	62.50	28	P	P	22 04 46.2	+1.2
	3.0nm,0.8s,mb4.5,baz=225,slow=7.0,SNR=15						
MLR	Muntele Rosu	63.28	328	P	P	22 04 49.2	-1.0
	0.8nm,0.5s,mb4.1,baz=167,slow=12,SNR=2.8						
AKASG	Malin Array Be	65.27	334	P	P	22 05 00.8	-2.3
	0.2nm,0.3s,mb3.7,baz=141,slow=4.7,SNR=5.0						
AKASG	Malin Array Be	65.27	334	P	P	22 05 00.8	-2.3
WRA	Warramunga Arr	65.42	109	P	P	22 05 04.5	-0.1
	3.6nm,0.8s,mb4.5,baz=282,slow=6.4,SNR=25						
WRAB	Tennant Creek	65.43	109	eP	P	22 05 04.6	-0.1
	7.8nm,0.7s,mb4.8						
WRAB				e		22 05 11.3	
WB2	Warramunga Arr	65.43	109	eP	P	22 05 04.4	-0.3
CLL	Collm	73.65	327	P	P	22 05 55.0	+0.4
FINES	FINESS Array B	74.23	340	P	P	22 05 58.4	+0.7
	1.8nm,1.1s,mb3.9,baz=101,slow=7.1,SNR=3.8						
ESDC	Sonseca Array	80.11	312	P	P	22 06 31.1	+0.2
	1.0nm,0.7s,mb3.9,baz=90,slow=3.0,SNR=5.3						
VNA2	Neumayer--Watz	80.42	199		PcP	22 06 41.1	+1.7
VNA2	Neumayer--Watz	80.42	199	P	P	22 06 34.1	+2.2
VNA2				P		22 06 41.1	
VNA3	Neumayer Olymp	81.20	199		PcP	22 06 45.3	+2.5
VNA3	Neumayer Olymp	81.20	199	P	P	22 06 38.6	+2.6
VNA3				P		22 06 45.3	
RPZ	Rata Peaks	95.30	135	LR	LR	22 42 10.2	
	comp=Z,270nm,21.7s,MS4.7,baz=20,slow=30						
NVAR	Mina Array Bea	146.47	10	PKPbc	PKPbc	22 14 03.3	+2.6
	1.2nm,0.8s,baz=70,slow=1.6,SNR=6.4						
OTAV	Otavalo	146.70	262	ePKPbc	PKPbc	22 14 05.2	+3.3
TXAR	Lajitas Array	155.03	344	PKPab	PKPab	22 14 39.8	+0.3
	0.8nm,0.9s,baz=63,slow=5.6,SNR=4.0						

KMA 14 22:07:02.9, 33.15N×126.14E, ML3.7, South Korea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSSGP	Seogwipo	0.32	69	P	Pg	22 07 08.9	-0.4
KSSGP				S	Sg	22 07 13.8	+0.2
KSJJU	Jeju	0.44	50	P	Pg	22 07 11.2	-0.5
KSWAN	Wando	1.32	20	P	Pb	22 07 26.8	-1.6
KSHUK	Heuksando	1.64	340	P	Pn	22 07 31.2	-2.0
KSMOP	Mokpo	1.67	7	P	Pn	22 07 32.5	-1.1
KSKWJ	Gwangju	2.13	19	P	Pn	22 07 39.8	-0.3

*OMAN **14** 22:14:26.6±68.0, 28.22N×53.17E, h60^{km}, Error ellipse: s-maj=18.9km s-min=1.9km az=335.0*

*IDC **14** 22:14:35.4±0.6, 27.37N×53.85E, mb4.5/26, mb1 4.7/29, mb1mx4.6/32, mbtmp4.6/29, ML3.7/3, MS3.4/2, Ms1 3.4/2, ms1mx2.9/26, Error ellipse: s-maj=16.1km s-min=12.5km az=30.0*

*BJI **14** 22:14:36.4, 27.30N×53.80E, h21^{km}, mB5.0, mb5.0, Ms4.7, Msz4.4*

*CSEM **14** 22:14:36.8±0.1, 27.28N×53.77E, h22^{km}, mb4.7/69, Ms3.8, Error ellipse: s-maj=2.3km s-min=1.7km az=35.0*

*THR **14** 22:14:37.1±0.6, 27.22N×53.95E, h14^{km}±8^{km}, ML4.5*

*NEIC **14** 22:14:38.5±0.2, 27.29N×53.80E, mb4.7/77, MS3.9/2, ML4.5(THR), MN4.7(TEH), Error ellipse: s-maj=4.4km s-min=3.1km az=186.0*

NEIC Felt in the Lamerd area.

*TEH **14** 22:14:39.0, 27.30N×53.84E, h10^{km}, Mn4.7*

*MOS **14** 22:14:39.5±0.8, 27.41N×53.79E, h38^{km}, mb5.0/63, Error ellipse: s-maj=8.0km s-min=3.4km az=124.7*

ISC 14 22:14:36.6±0.8**, 27.33N**±0.02×**53.78E**±0.03**, h18**^{km}±6^{km}**, h20**^{km}±.8^{km}**:pP-P, n381,** σ**0**^{s}**98**/381**, mb4.6**/122**, MS4.0**/5**, 76C-11D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GHIR	Ghir-Karzin	1.19	324	ePG	Pn	22 15 02.5	+4.0
GHIR				eSG	Sb	22 15 20.6	+7.4
GHIR				AML	AML	22 15 27.8	
	comp=N,7µm,0.5s						
GHIR	Ghir-Karzin	1.19	324	ePg	Pn	22 15 02.5	+4.1
	SNR=90						
GHIR				eSg	Sb	22 15 20.6	+7.4
	comp=N,7µm,0.5s,SNR=90						
IMOK	Mook	1.96	331	Pn	Pn	22 15 12.8	+3.4
BNDS	Bandar-Abbas	2.13	87	ePG	Pn	22 15 13.1	+1.2
BNDS				AML	AML	22 15 51.1	
	comp=N,3µm,0.5s						
SHI	Shiraz	2.56	335	Pn	Pn	22 15 21.0	+2.9
IPAR	Pars	2.59	346	Pn	Pn	22 15 21.7	+3.2
BANOM	Banah	2.65	121	P	Pn	22 15 20.4	+1.0
	SNR=120						
ASHO	Ashiyiah	3.33	142	P	Pn	22 15 31.1	+2.1
	SNR=878						
KRBR	Kerman	3.72	44	ePN	Pn	22 15 36.4	+1.8
KRBR				AML	AML	22 16 39.7	
	comp=N,828nm,0.5s						
IMEH	Mehriz	4.12	10	Pn	Pn	22 15 41.6	+1.4
IBAF	Bafgh	4.53	20	Pn	Pn	22 15 46.8	+0.8
ISAD	Sadrabad	4.57	359	Pn	Sn	22 16 49.1	+9.1
ARQ	Araqi	4.68	147	P	Pn	22 15 49.5	+1.3
	SNR=70						
HOQ	Hoqain	4.91	139	⇓P	Pn	22 15 52.3	+0.9
	SNR=46						
ICHK	Chekchek	4.93	6	Pn	Px	22 15 40.9	
IGAR	Garneh	5.09	345	Pn	Pn	22 15 56.1	+2.1
BIDO	Bidbid	5.46	133	P	Pn	22 15 58.6	-0.6
	SNR=28						
BSY	Bisya	5.51	145	P	Pn	22 16 00.8	+0.9
	SNR=88						
BSYO	Bisya	5.55	145	P	Pn	22 16 00.9	+0.5
	SNR=88						
KBD	Kabd	5.68	290	eP	Pn	22 16 03.2	+1.0
KBD				eS	Px	22 16 40.5	
IZEF	Zefreh	5.69	348	Pn	Pn	22 15 58.6	-3.9
RDF	Al-Radifah	5.73	288	eP	Pn	22 16 03.7	+0.7
RDF				eS	Px	22 16 36.7	
SMDO	Samad	5.74	137	P	Pn	22 16 03.0	-0.3
	SNR=56						
IPIR	Pirpir	5.90	336	Pn	Pn	22 16 03.5	-1.9
NAY	Al-Naaiem	6.08	290	eP	Pn	22 16 07.6	-0.3
NAY				eS	Px	22 16 38.2	
IKLH	Kalahroud	6.27	343	Pn	Pn	22 16 08.7	-1.9
JMDO	Jabal Madar	6.30	141	⇓P	Pn	22 16 10.9	-0.2
	SNR=22						
ZHSF	Zahedan	6.56	68	ePN	Pn	22 16 14.4	-0.4
WBK	Wadi Bani Khal	6.65	134	P	Pn	22 16 15.2	-0.8
	SNR=76						
QAM	Qamsar	6.77	346	Pn	Pn	22 16 17.0	-0.7
IQOM	Qom	7.84	343	Lg		22 17 40.8	
IQOM	Qom	7.84	343	Pn	Px	22 16 22.2	
IQOM				Lg		22 17 40.8	
IVRN	Varamin	7.85	348	Pn	Pn	22 16 31.6	-1.1
IVRN				Sn	Sn	22 17 56.8	-5.2
ILAS	Lasjerd	8.06	355	Pn	P	22 16 35.7	-0.1
IANJ	Anjiloo	8.12	1	Pn	P	22 16 36.2	-0.3
IFIR	Firoozkooh	8.34	354	Pn	P	22 16 38.6	-1.0
IDMV	Damavand	8.36	350	Pn	P	22 16 39.1	-0.8
ISHM	Shahmirzad	8.46	357	Pn	P	22 16 41.8	+0.4
IKOM	Komasi	8.70	323	Pn	P	22 16 44.0	-0.6
IRAZ	Razeghan	8.70	339	Pn	P	22 16 56.6	+12
IRAZ	Razeghan	8.70	339	Pn	P	22 16 56.6	+12
IVIS	Veys	9.32	322	Pn	P	22 16 52.4	-0.8
IGHG	Ghaleghazi	9.33	320	Pn	P	22 16 52.8	-0.6
WHFO	Wadi Hawf	9.36	180	P	P	22 16 52.1	-1.6
	SNR=49						
SHAO	Shalim	9.41	169	P	P	22 16 52.9	-1.6
	SNR=44						
IGZV	Gazvin	9.53	342	Pn	P	22 16 54.5	-1.6
IGZV	Gazvin	9.53	342	Pn	P	22 16 53.9	-2.2
IGZV	Gazvin	9.53	342	Pn	P	22 16 53.9	-2.2
ILIN	Laeen	9.56	324	Pn	P	22 16 55.6	-0.9
RBK	Rabkut	9.78	178	P	P	22 16 57.8	-1.9
	SNR=41						
ABTO	Aybut	9.93	183	P	P	22 16 59.3	-2.4
	SNR=13						
IMOG	Moghan	9.95	27	Pn	P	22 16 59.6	-2.3
MHI	Mashhad	10.18	27	Pn	P	22 17 02.8	-2.2
IKRD	Kardeh	10.24	22	Pn	P	22 17 07.7	+1.9
ISFR	Esferayen	10.33	19	Pn	P	22 17 06.1	-0.9
IMYA	Miamay	10.47	29	Pn	P	22 17 08.8	-0.2
HKR	Hakkari	13.27	323	ePN	Px	22 17 38.4	
VANB	Van	14.21	325	ePN	Px	22 17 51.7	
CLDR	Caldiran	14.38	328	ePN	Px	22 17 54.5	
GNI	Garni	14.82	332	ePN	Px	22 18 08.7	
GNI	Garni	14.82	332	c iP	P	22 18 08.9	+1.8
GNI				MLR	MLR		
	comp=Z,200nm,14.0s						
GNI	Garni	14.82	332	Pn	P	22 18 10.1	+3.0
	comp=Z,0.6nm,0.3s,baz=174,slow=1.3,SNR=9.2						
GNI				LR	LR	22 24 38.6	
	comp=Z,278nm,21.4s,baz=42,slow=41						
GNI	Garni	14.82	332	ePn	P	22 18 09.8	+2.6
	comp=Z,87nm,0.6s						
GNI				i		22 18 14.9	
GNI	Garni	14.82	332	i P	P	22 18 08.9	+1.8
	comp=Z,200nm,14.0s						
BTMT	Batman	14.96	319	ePN	P	22 18 14.2	+5.3
ASF	Jabal al Asfar	15.44	292	Pn	P	22 18 13.4	-1.8
	comp=Z,3.0nm,0.3s,baz=282,slow=4.7,SNR=9.9						
ASF				LR	LR	22 25 01.4	
	comp=Z,70nm,20.1s,baz=268,slow=40						
DGRG	David-gareji	15.69	336	P	P	22 18 20.0	+1.6
BINT	Bingol	16.00	319	ePN	P	22 18 27.2	+4.8
URFA	Urfa	16.15	312	ePN	P	22 18 28.2	+3.9
ERZM	Erzurum	16.24	324	i P	P	22 18 26.7	+1.3
EZM	Erzurum	16.24	324	ePN	P	22 18 22.4	-3.0
EIL	Elat	16.72	282	Pn	P	22 18 33.2	+1.7
	comp=Z,0.6nm,0.3s,baz=42,slow=7.6,SNR=9.4						
EIL	Elat	16.72	282	eP	P	22 18 32.7	+1.1
	comp=Z,7.1nm,0.6s						
EIL	Elat	16.72	282	eP	P	22 18 32.7	+1.1
	comp=Z,7.1nm,0.6s						
MYA	Malataya	16.91	314	ePN	P	22 18 32.3	-1.7
BHL	Bhannes	16.91	297	eP	P	22 18 34.6	+0.6
BCA	Borcka	17.27	328	ePN	P	22 18 38.8	+0.4
ZEI	Tsey	17.38	335	eP	P	22 18 37.8	-2.0
GUMT	Gumushane	17.65	322	eP	P	22 18 43.0	-0.2
KIV	Kislovodsk	18.85	335	eP	P	22 18 59.2	+1.2
KIV				eS	S	22 22 24.3	-0.1
KIV				pmax	pmax		
	comp=Z,51nm,1.1s						
KIV				MLR	MLR		
	comp=N,71nm,19.0s						
KIV				MLR	MLR		
	comp=Z,65nm,19.0s						
KIV				MLR	MLR		
	comp=E,33nm,14.0s						
KIV	Kislovodsk	18.85	335	⇑eP	P	22 18 58.9	+0.9
	comp=E,109nm,1.3s						
KIV	Kislovodsk	18.85	335	⇑eP	P	22 18 58.9	+0.9
	comp=E,109nm,1.3s						
CSS	Prodhromos	19.07	299	eP	P	22 18 58.9	-1.7
	comp=E,9.3nm,0.6s						
CSS	Prodhromos	19.07	299	eP	P	22 18 58.9	-1.7
	comp=E,9.2nm,0.6s						
GOF	Gofitskoye	19.67	337	⇓iP	P	22 19 06.5	-1.0
GOF				pmax	pmax		
	comp=Z,40nm,1.7s						
GOF	Gofitskoye	19.67	337	i P	P	22 19 06.5	-1.0
	comp=Z,40nm,1.7s						
THN	Thein Dam	19.68	70	eP	P	22 19 05.7	-2.0
	comp=Z,11nm,0.6s						
SOC	Sochi	19.81	329	i P	P	22 19 07.9	-1.2
SOC				e		22 22 37.6	
SOC				pmax	pmax		
	comp=Z,56nm,1.0s						
SOC				pmax	pmax		
	comp=N,45nm,1.3s						
SOC				pmax	pmax		
	comp=E,11nm,1.0s						
SOC				MLR	MLR		

	comp=N,233nm,15.0s						
SOC				MLR	MLR		
	comp=Z,210nm,15.0s						
SOC				MLR	MLR		
	comp=E,140nm,16.0s						
SOC	Sochi	19.81	329	*i* P	P	22 19 07.9	-1.2
	comp=E,45nm,1.3s						
CORM	Corum	20.39	314	*e*PG	P	22 19 06.1	-9.1
CORM				*e*SG	P	22 19 20.6	+5.4
CTKT	Corum	20.53	315	*i* P	P	22 19 18.3	+1.7
KAMT	Kaman	20.57	311	*e*PN	P	22 19 12.7	-4.4
KKAR	Karatay Array	20.79	36	*i* P	P	22 19 17.4	-1.9
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KKAR	Karatay Array	20.79	36	*i* P	P	22 19 17.4	-1.9
	comp=Z,7.0nm,0.6s						
BR131	Keskin Array S	20.80	312	*e*P	P	22 19 19.6	+0.2
	comp=Z,17nm,0.8s						
BR131	Keskin Array S	20.80	312	*e*P	P	22 19 19.6	+0.2
	comp=Z,17nm,0.8s						
BRTR	Keskin Array B	20.80	312	P	P	22 19 19.9	+0.4
	comp=Z,22nm,0.8s,baz=131,slow=12,SNR=49						
BOYT	Boyabat	20.92	317	*i* P	P	22 19 21.6	+0.9
BYBT	Boyabat	21.04	317	*e*PN	P	22 19 21.7	-0.1
TOS	Tosya	21.25	315	*e*PN	P	22 19 20.3	-3.7
ELDT	Eldivan	21.33	313	*i* P	P	22 19 25.6	+0.8
LOD	Lodumlu	21.46	311	*e*PN	P	22 19 24.4	-1.8
BZK	Bozkurt	21.79	317	*e*PN	P	22 19 31.4	+2.0
ANN	Anapa	21.81	327	*d iP*	P	22 19 30.2	+0.6
ANN				*e**PP		22 19 50.8	
ANN				*e*S	S	22 23 19.7	-5.1
ANN				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.0						
ANN	Anapa	21.81	327	*i* P	P	22 19 30.2	+0.6
	comp=Z,59nm,1.0s,mb5.0						
BALT	Daday	21.92	316	*i* P	P	22 19 31.1	+0.3
AML	Almayashu	21.97	43	P	P	22 19 31.2	0.0
	SNR=12						
SAFT	Safranbolu	22.20	314	*e*PN	P	22 19 32.4	-1.2
SGKT	Sivrigoynuk	22.27	312	*i* P	P	22 19 35.9	+1.6
EKS2	Erkin-Say	22.33	42	P	P	22 19 35.5	+0.6
	SNR=20						
AB31	Akbulak array	22.41	11	P	P	22 19 35.6	+0.1
AB31				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.2						
AB31	Akbulak array	22.41	11	P	P	22 19 35.6	+0.1
	comp=Z,3.0nm,0.3s,mb4.2						
UCH	Uchtor	22.52	43	P	P	22 19 37.2	+0.5
	SNR=17						
ESKT	Eskisehir	22.61	308	*i* P	P	22 19 40.0	+2.5
AAK	Ala-Archa	22.74	42	P	P	22 19 40.4	+1.5
AAK				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.5						
AAK	Ala-Archa	22.74	42	*e*P	P	22 19 39.3	+0.4
	comp=Z,16nm,0.9s,mb4.4						
AAK	Ala-Archa	22.74	42	*e*P	P	22 19 39.3	+0.4
	comp=Z,16nm,0.9s,mb4.4						
KZA	Kyzart	22.89	44	P	P	22 19 41.4	+1.0
	SNR=34						
KBK	Karagaybulak	23.03	43	P	P	22 19 43.5	+1.8
	SNR=11						
USP	Ospenovka	23.12	41	P	P	22 19 44.2	+1.6
	SNR=5.7						
TKM2	Tokmak 2	23.57	43	P	P	22 19 48.0	+1.0
	SNR=10						
SIM	Simferopol’	23.59	323	*e*P	P	22 19 47.6	+0.5
SIM				*e**PP		22 20 04.1	
SIM				*e*S	S	22 23 49.6	-7.3
SIM				pmax	pmax		
	comp=Z,38nm,0.7s,mb4.9						
SIM	Simferopol’	23.59	323	*e*P	P	22 19 47.6	+0.5
	comp=Z,38nm,0.7s,mb4.9						
ULHL	Ulahol	23.61	45	P	P	22 19 49.0	+1.7
	SNR=14						
ULDT	Uludag	24.06	308	*i* P	P	22 19 53.8	+2.0
IDI	Anoyia	25.86	295	P	P	22 20 10.5	+1.5
	comp=Z,11nm,0.5s,mb4.6,baz=100,slow=9.3,SNR=22						
VRSR	Storozhevoye	26.30	339	*e*P	P	22 20 11.9	-0.9
VRSR				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.5						
VRSR				pmax	pmax		
	comp=N,6.0nm,1.2s						
VRSR				pmax	pmax		
	comp=E,7.0nm,0.8s						
KOLN	Koldanda	26.42	82	*e*P	P	22 20 14.4	+0.3
	comp=E,24nm,1.0s,mb4.7						
TIRR	Tirgusor	26.57	317	P	P	22 20 15.8	+0.4
TIRR	Tirgusor	26.57	317	⇓P	P	22 20 16.7	+1.3
GKN	Gorkha	27.30	81	*e*P	P	22 20 21.9	-0.4
	comp=E,7.4nm,0.3s,mb4.8						
KKN	Kakani	27.89	82	*e*P	P	22 20 27.3	-0.3
	comp=E,14nm,0.5s,mb4.9						
KKN	Kakani	27.89	82	*e*P	P	22 20 27.3	-0.3
KKN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.5						
PKI	Pulchoki	28.03	82	*e*P	P	22 20 28.6	-0.3
	comp=Z,25nm,0.8s,mb4.9						
PKI	Pulchoki	28.03	82	*e*P	P	22 20 28.6	-0.3
PKI				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.6						
VRI	Vrincioaia	28.32	318	⇑P	P	22 20 32.9	+1.6
GUN	Gumba	28.41	81	*e*P	P	22 20 32.2	-0.1
	comp=Z,38nm,0.8s,mb5.1						
BVA0	Borovoye Array	28.49	21	*i* P	P	22 20 32.3	-0.4
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
BVAR	Borovoye Array	28.49	21	P	P	22 20 32.4	-0.3
	comp=Z,4.9nm,0.5s,mb4.4,baz=211,slow=8.6,SNR=43						
BVAR				ScP		22 27 22.0	
	comp=Z,1.7nm,0.9s,baz=153,slow=3.2,SNR=4.7						
MLR	Muntele Rosu	28.60	317	P	P	22 20 35.2	+1.4
	comp=Z,8.5nm,0.7s,mb4.6,baz=6.6,slow=4.3,SNR=17						
MLR				ScP		22 27 23.2	
	comp=Z,1.3nm,0.6s,baz=172,slow=7.1,SNR=4.1						
MLR	Muntele Rosu	28.60	317	⇓P	P	22 20 35.2	+1.4
VTS	Vitosha	29.13	309	P	P	22 20 40.5	+1.9
ARU	Arti	29.29	5	⇓*i*P	P	22 20 39.3	-0.6
ARU				*e*		22 21 32.5	
ARU				*i*		22 23 43.0	
ARU				*e*S	S	22 25 18.8	-12
ARU				*e*		22 31 15.9	
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
ARU	Arti	29.29	5	*e*P	P	22 20 39.4	-0.4
	comp=Z,3.0nm,0.6s,mb4.2						
ARU	Arti	29.29	5	*e*ScS	ScS	22 31 15.9	-3.2
MKAR	Makanchi Array	29.67	41	P	P	22 20 42.9	-0.5
	comp=Z,7.9nm,0.5s,mb4.7,baz=230,slow=9.8,SNR=166						
SVE	Sverdlovsk	29.89	8	*e*P	P	22 20 44.0	-1.3
AKASG	Malin Array Be	29.89	328	P	P	22 20 44.0	-1.4
	comp=Z,5.7nm,0.6s,mb4.5,baz=135,slow=8.0,SNR=33						
AKASG				PcP	PcP	22 23 45.7	-2.5
	comp=Z,0.7nm,0.5s,baz=98,slow=2.3,SNR=4.7						
AKASG	Malin Array Be	29.89	328	P	P	22 20 44.0	-1.4
AKASG				PcP	PcP	22 23 45.7	-2.5
BURAR	Bucovina Array	30.13	320	⇑P	P	22 20 48.0	+0.5
OBN	Obninsk	30.46	340	⇑*i*P	P	22 20 49.5	-0.8
OBN				*e*		22 20 58.5	
OBN				*e*		22 21 06.2	
OBN				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.5						
OBN	Obninsk	30.46	340	⇑*i*P	P	22 20 49.6	-0.7
DRGR		31.20	317	P	P	22 20 57.7	+0.8
DRGR		31.20	317	⇑P	P	22 20 58.1	+1.2
BZS	Buzias	31.37	314	P	P	22 20 59.1	+0.7
SOKR	Solikamsk	32.30	3	*i* P	P	22 21 05.1	-1.3
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
KOLS	Kolonicke sedl	32.49	320	P	P	22 21 09.9	+1.7
KWP	Kalwaria	32.61	321	*e*P	P	22 21 09.2	0.0
TIP	Timpagrande	32.92	301	*e*P	P	22 21 11.8	-0.3
PSZ	Piszkesteto	33.42	317	*e*P	P	22 21 16.3	0.0
PSZ				*e*		22 21 28.9	
PSZ				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
PSZ	Piszkesteto	33.42	317	*e*P	P	22 21 16.3	0.0
	comp=Z,12nm,1.1s,mb4.8						
PSZ				*e*		22 21 28.9	
PKSM	Moragy	33.51	314	⇑*i*P	P	22 21 17.2	+0.1
OJC	Ojcow	34.53	321	*e*P	P	22 21 25.7	-0.2
NVS	Novosibirsk	34.86	30	*i* P	P	22 21 23.5	-5.1
SUW	Suwalki	34.86	328	*e*P	P	22 21 27.6	-1.0
JAVC	Velka Javorina	35.16	317	P	P	22 21 32.7	+1.4
OKC	Ostrava-Krasne	35.30	319	*e*P	P	22 21 32.2	-0.2
OKC				*e*	pP	22 21 36.7	-1.2
SOP	Sopron	35.38	315	P	P	22 21 33.6	+0.4
MORC	Moravsky Berou	35.62	319	*e*P	P	22 21 34.9	-0.3
MORC				*e**PP	pP	22 21 41.5	+0.8
MORC				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
MORC	Moravsky Berou	35.62	319	*e*P	P	22 21 34.9	-0.4
	comp=Z,5.8nm,0.6s,mb4.7						
MORC				*e*pP	pP	22 21 41.5	+0.8
MORC	Moravsky Berou	35.62	319	*e*P	P	22 21 35.0	-0.2
ARSA	Arzberg	35.89	314	⇑*i*P	P	22 21 37.5	0.0
	comp=Z,4.2nm,0.7s,mb4.5						
VRAC	Vranov	35.99	318	P	P	22 21 38.1	-0.3
	comp=Z,7.1nm,0.9s,mb4.6,baz=109,slow=9.9,SNR=6.8						
VRAC	Vranov	35.99	318	*e*P	P	22 21 38.4	+0.1
KRUC	Moravsky	36.01	317	P	P	22 21 38.6	+0.1
NRCA	Norcia	36.32	306	P	P	22 21 42.1	+0.9
VSU	Vasula	36.40	336	⇑*i*P	P	22 21 40.7	-0.9
TRI	Trieste	36.56	311	P	P	22 21 44.0	+0.8
DPC	Dobruska-Polom	36.58	319	*e*P	P	22 21 43.0	-0.3
DPC				*e*x	x	22 21 49.4	
DPC				AMS	AMS	22 30 40.0	
	comp=Z,100nm,22.8s						
ASS	Assisi	36.70	306	P	P	22 21 45.7	+1.4
UPC	Upice	36.83	319	*e*P	P	22 21 45.4	+0.1
MOA	Molln	36.89	314	⇑*i*P	P	22 21 46.1	+0.2
	comp=Z,7.9nm,0.7s,mb4.7						
PTCC	Patocco-Chiusa	37.03	312	P	P	22 21 47.3	+0.2
KBA	Koelnbreinsper	37.24	313	⇑*i*P	P	22 21 49.3	+0.5
	comp=Z,16nm,0.7s,mb5.0						
KBA	Koelnbreinsper	37.24	313	⇑*i*P	P	22 21 49.3	+0.5
KBA				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.0						
SFI	Santa Sofia	37.45	307	P	P	22 21 52.8	+2.2
SFI				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.0						
SFI	Santa Sofia	37.45	307	P	P	22 21 52.8	+2.2
	comp=Z,16nm,0.6s,mb5.0						
PRU	Pruhonice	37.48	318	*e*P	P	22 21 50.9	0.0
PRU				*e*x	x	22 21 59.8	
PRU				AMS	AMS	22 30 50.0	
	comp=Z,100nm,13.8s						
GEC2	GERESS Array S	37.58	316	*e*P	P	22 21 51.4	-0.3
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
GEC2	GERESS Array S	37.58	316	*e*P	P	22 21 51.4	-0.3
	comp=Z,4.0nm,1.1s,mb4.1						
GERES	GERESS Array B	37.58	316	P	P	22 21 51.3	-0.4
	comp=Z,1.6nm,0.5s,mb4.0,baz=110,slow=7.4,SNR=26						
GERES				PcP	PcP	22 24 09.1	-0.8
	comp=Z,0.5nm,0.4s,baz=153,slow=3.0,SNR=4.6						
GERES				ScP		22 27 53.9	
	comp=Z,0.8nm,0.7s,baz=135,slow=3.8,SNR=6.5						
KHC	Kasperske Hory	37.76	316	*e*P	P	22 21 53.3	+0.1
KHC				MLR	MLR		
	comp=Z,200nm,16.9s,MS4.0						
KHC	Kasperske Hory	37.76	316	*e*P	P	22 21 53.3	+0.1
KHC				*e*	pP	22 21 58.6	0.0
KHC				LR	LR		
	comp=Z,200nm,16.9s,MS4.0						
KHC	Kasperske Hory	37.76	316	*e*P	P	22 21 53.3	+0.1
KHC				*e*x	x	22 21 58.6	
KHC				AMS	AMS	22 30 50.0	
	comp=Z,200nm,16.9s						
SEST	Monte Rota	37.88	312	P	P	22 21 55.0	+0.7
	comp=Z,87nm,1.7s,mb5.2						
CTI	Castel Tesino	38.08	311	P	P	22 21 56.1	+0.2
BRG	Berggiesshubel	38.18	319	*i* P	P	22 21 56.4	-0.3
BRG				*e*	pP	22 22 03.1	+0.9
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
BRG	Berggiesshubel	38.18	319	*i* P	P	22 21 56.4	-0.3
	comp=Z,6.1nm,0.8s,mb4.4						
BRG				*e*	pP	22 22 03.1	+0.9
BRG	Berggiesshubel	38.18	319	*e*P	P	22 21 56.5	-0.2
	comp=Z,6.0nm,0.9s,mb4.3						
WTTA	Wattenberg	38.41	313	⇑*i*P	P	22 21 58.7	0.0
	comp=Z,23nm,0.5s,mb5.2						
WTTA	Wattenberg	38.41	313	⇑*i*P	P	22 21 58.7	0.0
WTTA				pmax	pmax		
	comp=Z,23nm,0.5s,mb5.2						
WATA	Walderalm	38.47	313	⇑*i*P	P	22 21 58.8	-0.4
	comp=Z,15nm,0.5s,mb5.0						
WATA	Walderalm	38.47	313	⇑*i*P	P	22 21 58.8	-0.4
WATA				pmax	pmax		
	comp=Z,15nm,0.5s,mb5.0						
APPI	Appiano	38.47	311	P	P	22 21 59.0	-0.2
	comp=Z,13nm,0.9s,mb4.7						
SQTA	Sankt Quirin	38.68	312	⇑*i*P	P	22 22 00.8	-0.1
	comp=Z,39nm,0.4s,mb5.5						
SQTA	Sankt Quirin	38.68	312	⇑*i*P	P	22 22 00.8	-0.1
SQTA				pmax	pmax		
	comp=Z,39nm,0.4s,mb5.5						
MOTA	Moosalm	38.78	313	⇑*i*P	P	22 22 01.3	-0.5
	comp=Z,11nm,0.5s,mb4.8						
MOTA	Moosalm	38.78	313	⇑*i*P	P	22 22 01.3	-0.5
MOTA				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.8						
FINES	FINESS Array B	38.84	339	P	P	22 22 01.4	-0.7
	comp=Z,5.2nm,0.5s,mb4.5,baz=145,slow=9.7,SNR=95						
MABI	Malga Bissina	38.84	310	P	P	22 22 03.1	+0.8
	comp=Z,10nm,0.7s,mb4.7						
NOTT	Nottersdorf	38.88	317	*e*P	P	22 22 02.5	-0.1
	comp=Z,7.0nm,0.9s,mb4.4						
CLL	Collm	38.89	319	*i* P	P	22 22 02.0	-0.7
CLL				*i*		22 22 09.7	
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
CLL	Collm	38.89	319	*i* P	P	22 22 02.0	-0.7
	comp=Z,9.0nm,1.0s,mb4.5						
CLL				*i*		22 22 09.7	
CLL	Collm	38.89	319	P	P	22 22 02.0	-0.7
	comp=Z,logA/T=1.0,mb4.5						
CLL				*i* *SP	sP	22 22 09.7	-0.7
CLL	Collm	38.89	319	*e*P	P	22 22 03.3	+0.6
	comp=Z,9.0nm,0.9s,mb4.5						
FUR	Furstenfeldbru	38.90	314	*e*P	P	22 22 02.6	-0.1
FUR				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.0						
FUR	Furstenfeldbru	38.90	314	*e*P	P	22 22 02.6	-0.1
	comp=Z,24nm,0.8s,mb5.0						
RUE	Ruedersdorf	38.91	321	*e*P	P	22 22 02.8	-0.1
BRMO	Bormio	39.04	311	P	P	22 22 04.5	+0.5
PGF	Pioggiola	39.26	305	*e*P	P	22 22 05.5	-0.3
	comp=Z,13nm,0.8s,mb4.4						
PGF	Pioggiola	39.26	305	*e*P	P	22 22 05.5	-0.3
PGF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
KAF	Kangasniemi	39.27	340	*e*p	P	22 22 04.8	-0.9
GRA1	Grafenberg Arr	39.39	316	*e*P	P	22 22 07.0	+0.1
	comp=Z,18nm,0.6s,mb5.0						
GRA1				*e*pP	pP	22 22 13.6	+1.2
GRA1				LR	LR		
	comp=Z,200nm,20.5s,MS3.9						
GRF	Grafenberg Arr	39.39	316	*e*P	P	22 22 07.0	+0.1
GRF				*e**PP	pP	22 22 13.6	+1.2
GRF				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.0						
GRF				MLR	MLR		
	comp=Z,200nm,20.5s,MS3.9						
GRF	Grafenberg Arr	39.39	316	*e*P	P	22 22 07.0	+0.1
GRF				*e**PP	pP	22 22 13.6	+1.2
GRF				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.0						
GRF				MLR	MLR		
	comp=Z,200nm,20.5s,MS3.9						
GRF	Grafenberg Arr	39.39	316	*e*P	P	22 22 07.0	+0.1
	comp=Z,18nm,0.6s,mb5.0						
GRF				*e*pP	pP	22 22 13.6	+1.2
GRF				LR	LR		
	comp=Z,200nm,20.5s,MS3.9						
DAVOX	Davos	39.44	311	P	P	22 22 07.5	+0.2
	comp=Z,15nm,0.6s,mb4.9,baz=122,slow=6.1,SNR=40						
DAVOX				PcP	PcP	22 24 14.3	-1.4
	comp=Z,1.0nm,0.3s,baz=131,slow=20,SNR=2.0						
DAVOX	Davos	39.44	311	P	P	22 22 07.4	+0.1
MOX	Moxa	39.47	318	*e*P	P	22 22 08.0	+0.5
MOX				*e*pP	pP	22 22 14.0	+1.0
MOX	Moxa	39.47	318	*e*P	P	22 22 08.0	+0.5
MOX				pP	pP	22 22 14.0	+1.0
MOX	Moxa	39.47	318	*e*P	P	22 22 07.6	+0.1
	comp=Z,6.0nm,1.2s,mb4.2						
BSD	Bornholm Skovb	39.49	325	⇓*i*P	P	22 22 06.5	-1.1
BSD				pmax	pmax		
	comp=Z,48nm,0.7s,mb5.3						
BSD	Bornholm Skovb	39.49	325	⇓*i*P	P	22 22 06.5	-1.1
	comp=Z,48nm,0.7s,mb5.3						
DAVA	Damuels	39.57	312	⇑*i*P	P	22 22 08.2	-0.1
	comp=Z,97nm,0.5s,mb5.8						
TUE	Stuetta	39.73	311	P	P	22 22 10.7	+1.0
GTA	Gaotai	39.90	60	⇑P	P	22 22 11.8	+0.7
GTA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
GTA				AMB	AMB		
	comp=Z,70nm,6.1s						
GTA				LR	LR		
	comp=N,170nm,11.5s,MS4.3						
GTA				LR	LR		
	comp=E,250nm,15.3s,MS4.3						
GTA				LR	LR		
	comp=Z,300nm,11.8s,MS4.4						
LLS	Linth-Limmern	40.04	311	⇑P	P	22 22 12.1	-0.1
WILA	Wila	40.24	312	⇑P	P	22 22 13.8	-0.1
ZUR	Zurich	40.45	312	⇑P	P	22 22 15.4	-0.2
SBF	Sospel	40.58	306	⇑*i*P	P	22 22 16.7	0.0
	comp=Z,51nm,1.1s,mb4.8						
SBF	Sospel	40.58	306	⇑*i*P	P	22 22 16.7	0.0
SBF				pmax	pmax		
	comp=Z,26nm,1.1s,mb4.8						
CLZ	Clausthal	40.62	319	*e*P	P	22 22 17.6	+0.7
CLZ				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.7						
CLZ	Clausthal	40.62	319	*e*P	P	22 22 17.6	+0.7
	comp=Z,15nm,0.7s,mb4.7						
SULZ	Sulz-Cheisache	40.79	312	⇓P	P	22 22 18.3	-0.1
BFO	Black Forest	40.84	313	*e*P	P	22 22 19.1	+0.3
BFO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
BFO	Black Forest	40.84	313	*e*P	P	22 22 19.1	+0.3
	comp=Z,5.0nm,0.7s,mb4.2						
LKBD	Leukerbad	40.87	310	⇓P	P	22 22 18.7	-0.4
NRDL	Niedersach Rie	40.99	320	*e*P	P	22 22 21.1	+1.1
	comp=Z,24nm,0.9s,mb4.8						
FRF	La Foret Royal	41.10	306	⇑*i*P	P	22 22 20.8	-0.2
	comp=Z,5.5nm,0.7s,mb4.0						
FRF	La Foret Royal	41.10	306	⇑*i*P	P	22 22 20.8	-0.2
FRF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
LMR	La Mourre	41.17	305	*e*P	P	22 22 21.8	+0.2
MBDF	Montbardon	41.18	308	⇑*i*P	P	22 22 21.9	+0.3
	comp=Z,22nm,1.0s,mb4.4						
MBDF	Montbardon	41.18	308	⇑*i*P	P	22 22 21.9	+0.3
MBDF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.4						
TNS	Taunus Mts	41.26	316	*e*P	P	22 22 22.2	0.0
TNS				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
TNS	Taunus Mts	41.26	316	*e*P	P	22 22 22.2	0.0
	comp=Z,5.0nm,0.8s,mb4.2						
BNI	Bardonecchia	41.29	308	*e*P	P	22 22 22.0	-0.5
BNI				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.3						
BNI	Bardonecchia	41.29	308	*e*P	P	22 22 22.0	-0.5
	comp=Z,8.2nm,0.9s,mb4.4						
LPG	La Plagne	41.31	309	*e*P	P	22 22 22.2	-0.5
	comp=Z,11nm,0.7s,mb4.3						
LPG	La Plagne	41.31	309	*e*P	P	22 22 22.2	-0.5
LPG				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
LPL	La Plagne	41.33	309	*e*P	P	22 22 22.3	-0.5
	comp=Z,14nm,0.9s,mb4.3						
LPL	La Plagne	41.33	309	*e*P	P	22 22 22.3	-0.5
LPL				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.3						
BSEG	Bad Segeberg	41.41	322	*e*P	P	22 22 24.2	+0.8
	comp=Z,13nm,1.2s,mb4.4						
CDF	Champ du Feu	41.54	313	⇑*i*P	P	22 22 23.5	-1.0
	comp=Z,7.9nm,0.7s,mb4.2						
CDF	Champ du Feu	41.54	313	⇑*i*P	P	22 22 23.5	-1.0
CDF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
HINF	Hinteralfeld	41.68	312	⇑*i*P	P	22 22 24.9	-0.8
	comp=Z,19nm,0.8s,mb4.5						
HINF	Hinteralfeld	41.68	312	⇑*i*P	P	22 22 24.9	-0.8
HINF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
ORIF	Oris-en-Rattie	41.83	308	*e*P	P	22 22 27.5	+0.5
	comp=Z,11nm,0.9s,mb4.2						
ORIF	Oris-en-Rattie	41.83	308	*e*P	P	22 22 27.5	+0.5
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
SMRF	Simiane la Rot	41.92	306	*e*P	P	22 22 27.7	0.0
	comp=Z,2.2nm,0.5s,mb3.8						
CABF	La Chapelle	41.96	310	⇑*i*P	P	22 22 27.8	-0.2
	comp=Z,17nm,0.7s,mb4.5						
CABF	La Chapelle	41.96	310	⇑*i*P	P	22 22 27.8	-0.2
CABF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.5						
HAU	Haudompre	42.06	312	⇑*i*P	P	22 22 27.8	-0.9
	comp=Z,12nm,0.6s,mb4.4						
HAU	Haudompre	42.06	312	⇑*i*P	P	22 22 27.8	-0.9
HAU				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
CMAR	Chiang Mai Arr	42.34	92	P	P	22 22 31.7	+0.2
	comp=Z,1.3nm,0.8s,mb3.6,baz=284,slow=8.8,SNR=7.2						
CMAR				PcP	PcP	22 24 24.9	-0.6
	comp=Z,1.6nm,0.7s,baz=291,slow=5.2,SNR=7.2						
WLF	Walferdange	42.55	315	*e*P	P	22 22 32.4	-0.4
WLF				*e**PP	pP	22 22 38.9	+0.6
WLF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
WLF	Walferdange	42.55	315	*e*P	P	22 22 32.4	-0.4
	comp=Z,9.2nm,0.6s,mb4.7						
WLF				*e*pP	pP	22 22 38.9	+0.6
WLF	Walferdange	42.55	315	*e*P	P	22 22 32.7	-0.1
	comp=Z,10.0nm,0.6s,mb4.7						
HFS	Hagfors	42.61	332	P	P	22 22 32.4	-0.7
	comp=Z,6.2nm,0.5s,mb4.6,baz=129,slow=9.5,SNR=48						
HFA0	Hagfors New Ar	42.62	332	P	P	22 22 31.9	-1.3
VIVF	Saint-Julien-l	42.67	308	*e*P	P	22 22 33.1	-0.8
	comp=Z,16nm,1.0s,mb4.4						
VIVF	Saint-Julien-l	42.67	308	*e*P	P	22 22 33.1	-0.8
VIVF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
WTSB	Winterswijk	42.76	318	*e*P	P	22 22 35.6	+1.2
	comp=Z,19nm,0.8s,mb4.9						
MOY	Mondy	42.81	42	*e*P	P	22 22 36.0	+1.1
MOY				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
HGN	Heimansgroeve	42.96	316	*e*P	P	22 22 36.5	+0.4
	comp=Z,8.8nm,0.9s,mb4.5						
MUD	Monsted U’grnd	42.99	325	⇑*i*P	P	22 22 36.9	+0.6
MUD				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.8						
MUD	Monsted U’grnd	42.99	325	⇑*i*P	P	22 22 36.9	+0.6
	comp=Z,12nm,0.6s,mb4.8						
MEZF	Maizieres J’vi	43.01	313	⇑*i*P	P	22 22 36.2	-0.3
	comp=Z,19nm,0.6s,mb4.7						
LASF	Ste Croix	43.17	306	⇑*i*P	P	22 22 38.4	+0.5
	comp=Z,25nm,1.1s,mb4.5						
GIVF	Givet	43.49	315	*e*P	P	22 22 40.7	+0.3
	comp=Z,20nm,0.6s,mb4.7						
GIVF	Givet	43.49	315	*e*P	P	22 22 40.7	+0.3
GIVF				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
SMF	Signal de Mont	43.49	310	⇑*i*P	P	22 22 39.8	-0.7
	comp=Z,23nm,0.8s,mb4.7						
SMF	Signal de Mont	43.49	310	⇑*i*P	P	22 22 39.8	-0.7
SMF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
LOR	Lormes	43.58	311	⇑*i*P	P	22 22 40.4	-0.8
	comp=Z,10nm,0.7s,mb4.4						
LOR	Lormes	43.58	311	⇑*i*P	P	22 22 40.4	-0.8
LOR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
DOU	Dourbes	43.63	315	P	P	22 22 42.0	+0.5
SSF	Saint Saulge	43.78	311	⇑*i*P	P	22 22 42.3	-0.5
SSF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
SSF	Saint Saulge	43.78	311	⇑*i*P	P	22 22 42.3	-0.5
	comp=Z,13nm,1.0s,mb4.6						
AVF	Avril sur Loir	43.85	310	⇑*i*P	P	22 22 42.6	-0.8
BAIF	Baives	43.87	315	⇑*i*P	P	22 22 44.0	+0.5
	comp=Z,58nm,0.8s,mb5.1						
BAIF	Baives	43.87	315	⇑*i*P	P	22 22 44.0	+0.5
BAIF				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.1						
ZAK	Zakamensk	43.89	45	⇑*i*P	P	22 22 43.9	+0.3
ZAK				*e*		22 24 23.9	
ZAK				pmax	pmax		

	comp=Z,3.0nm,0.7s,mb4.1						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6						
NB2	**NORSAR Subarra**	**44.13**	**332**	P	**P**	**22 22 44.1**	**-1.3**
	comp=Z,3.8nm,0.6s,mb4.3,baz=118,slow=7.9						
NOA	**NORSAR Array B**	**44.13**	**332**	P	**P**	**22 22 44.4**	**-1.1**
	comp=Z,3.3nm,0.6s,mb4.2,baz=120,slow=8.1,SNR=17						
NOA				PcP	PcP	22 24 29.1	-1.9
	comp=Z,1.5nm,0.7s,baz=104,slow=4.0,SNR=4.3						
BGF	**Bois d'Agland**	**44.16**	**310**	⇑*i*P	**P**	**22 22 45.4**	**-0.5**
	comp=Z,17nm,0.8s,mb4.5						
BGF	**Bois d'Agland**	**44.16**	**310**	⇑*i*P	**P**	**22 22 45.4**	**-0.5**
BGF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
MTLF	**Montolieu**	**44.29**	**305**	*e*P	**P**	**22 22 47.5**	**+0.5**
	comp=Z,44nm,1.2s,mb4.8						
MTLF	**Montolieu**	**44.29**	**305**	*e*P	**P**	**22 22 47.5**	**+0.5**
MTLF				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.8						
HYF	**Humbligny**	**44.40**	**311**	*e*P	**P**	**22 22 47.9**	**+0.1**
TLY	**Talaya**	**44.41**	**43**	*e*P	**P**	**22 22 48.4**	**+0.5**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
CAF	**Calviac**	**44.52**	**307**	⇑*i*P	**P**	**22 22 48.8**	**-0.1**
	comp=Z,15nm,0.8s,mb4.5						
CAF	**Calviac**	**44.52**	**307**	⇑*i*P	**P**	**22 22 48.8**	**-0.1**
CAF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
TCF	**Toulx Ste Croi**	**44.56**	**309**	⇑*i*P	**P**	**22 22 48.8**	**-0.4**
	comp=Z,19nm,0.9s,mb4.6						
TCF	**Toulx Ste Croi**	**44.56**	**309**	⇑*i*P	**P**	**22 22 48.8**	**-0.4**
TCF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
RJF	**Les Rejaudoux**	**44.95**	**308**	⇑*i*P	**P**	**22 22 52.3**	**0.0**
KEV	**Kevo**	**45.21**	**347**	*e*p	**P**	**22 22 53.1**	**-0.9**
ARCES	**ARCESS Array B**	**45.33**	**346**	P	**P**	**22 22 54.7**	**-0.3**
	comp=Z,3.1nm,0.5s,mb4.4,baz=142,slow=9.0,SNR=39						
ARCES				PcP	PcP	22 24 33.0	-2.0
	comp=Z,2.5nm,0.7s,baz=132,slow=5.3,SNR=4.0						
ARCES	**ARCESS Array B**	**45.33**	**346**	P	**P**	**22 22 54.7**	**-0.3**
ARCES				PcP	PcP	22 24 33.0	-2.0
LFF	**La Frestale**	**45.46**	**307**	⇑*i*P	**P**	**22 22 56.5**	**+0.1**
	comp=Z,24nm,0.7s,mb4.8						
LFF	**La Frestale**	**45.46**	**307**	⇑*i*P	**P**	**22 22 56.5**	**+0.1**
LFF				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.8						
SONM	**Songino Array**	**45.46**	**49**	P	**P**	**22 22 56.5**	**+0.2**
	comp=Z,4.8nm,0.8s,mb4.4,baz=266,slow=9.4,SNR=23						
EPF	**Esparros**	**45.65**	**305**	*e*P	**P**	**22 22 58.1**	**+0.2**
ULN	**Ulaanbaatar**	**45.91**	**49**	*e*P	**P**	**22 22 59.6**	**-0.2**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
ULN	**Ulaanbaatar**	**45.91**	**49**	*e*P	**P**	**22 22 59.6**	**-0.3**
	comp=Z,2.4nm,0.4s,mb4.5						
OPO	**Ambohidratompo**	**46.07**	**189**	P	**P**	**22 23 03.2**	**+1.8**
	comp=Z,2.2nm,0.8s,mb4.1,baz=63,slow=4.5,SNR=3.1						
MFF	**Saint Martin d**	**46.22**	**309**	*e*P	**P**	**22 23 01.0**	**-1.3**
	comp=Z,4.0nm,0.6s,mb4.2						
MFF	**Saint Martin d**	**46.22**	**309**	*e*P	**P**	**22 23 01.0**	**-1.3**
MFF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ETSF	**Etsaut**	**46.30**	**304**	*e*P	**P**	**22 23 03.6**	**+0.6**
	comp=Z,9.5nm,0.7s,mb4.6						
ETSF	**Etsaut**	**46.30**	**304**	*e*P	**P**	**22 23 03.6**	**+0.6**
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
LDF	**La Druitiere**	**46.41**	**312**	⇑*i*P	**P**	**22 23 02.6**	**-1.2**
	comp=Z,14nm,0.4s,mb4.9						
LDF	**La Druitiere**	**46.41**	**312**	⇑*i*P	**P**	**22 23 02.6**	**-1.2**
LDF				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.9						
FLN	**La Foliniere**	**46.67**	**312**	⇑*i*P	**P**	**22 23 04.8**	**-1.0**
	comp=Z,28nm,0.8s,mb5.0						
FLN	**La Foliniere**	**46.67**	**312**	⇑*i*P	**P**	**22 23 04.8**	**-1.0**
FLN				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
SJPF	**Ste Jean**	**46.80**	**305**	⇑*i*P	**P**	**22 23 07.3**	**+0.4**
	comp=Z,12nm,0.5s,mb4.8						
SJPF	**Ste Jean**	**46.80**	**305**	⇑*i*P	**P**	**22 23 07.3**	**+0.4**
SJPF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
GRR	**Gorron**	**46.88**	**312**	*e*P	**P**	**22 23 06.4**	**-1.1**
	comp=Z,9.1nm,0.5s,mb4.7						
GRR	**Gorron**	**46.88**	**312**	*e*P	**P**	**22 23 06.4**	**-1.1**
GRR				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
SGMF	**Saint Gilles**	**47.99**	**312**	⇑*i*P	**P**	**22 23 15.5**	**-0.8**
	comp=Z,9.0nm,0.4s,mb4.9						
SGMF	**Saint Gilles**	**47.99**	**312**	⇑*i*P	**P**	**22 23 15.5**	**-0.8**
SGMF				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
QUIF	**Quistinic**	**48.37**	**311**	⇑*i*P	**P**	**22 23 18.1**	**-1.1**
	comp=Z,28nm,0.8s,mb5.0						
QUIF	**Quistinic**	**48.37**	**311**	⇑*i*P	**P**	**22 23 18.1**	**-1.1**
QUIF				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
ROSF	**Rostrenen**	**48.48**	**312**	⇑*i*P	**P**	**22 23 19.0**	**-1.0**
	comp=Z,22nm,0.7s,mb5.0						
ROSF	**Rostrenen**	**48.48**	**312**	⇑*i*P	**P**	**22 23 19.0**	**-1.0**
ROSF				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
ESDC	**Sonseca Array**	**48.94**	**300**	P	**P**	**22 23 23.8**	**+0.1**
	comp=Z,1.5nm,0.5s,mb4.3,baz=68,slow=7.6,SNR=9.4						
EKA	**Eskdalemuir Ar**	**49.30**	**321**	P	**P**	**22 23 25.4**	**-0.9**
	comp=Z,2.4nm,0.4s,mb4.6,baz=107,slow=8.1,SNR=15						
CIT	**Chita**	**50.52**	**44**	*e*P	**P**	**22 23 34.6**	**-1.1**
PCBR	**Castelo Branco**	**51.63**	**301**	*e*P	**P**	**22 23 44.6**	**+0.4**
	comp=Z,17nm,1.6s,mb4.7						
PVRL	**Vila Real**	**51.68**	**302**	*e*P	**P**	**22 23 44.9**	**+0.3**
PVIS	**Viseu**	**51.86**	**302**	*e*P	**P**	**22 23 46.8**	**+0.8**
	comp=Z,28nm,1.5s,mb5.0						
EVO	**Evora**	**52.19**	**299**	*e*P	**P**	**22 23 48.9**	**+0.4**
	comp=Z,5.1nm,0.5s,mb4.4						
PTOM	**Tomar**	**52.37**	**300**	*e*P	**P**	**22 23 49.6**	**-0.2**
	comp=Z,17nm,0.9s,mb5.0						
NJ2	**Nanjing**	**55.98**	**68**	*e*P	**P**	**22 24 19.3**	**+2.9**
NJ2				PP	PP	22 26 26.8	+4.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,180nm,4.5s						
NJ2				LR	LR		
	comp=N,360nm,25.2s,MS4.5						
NJ2				LR	LR		
	comp=E,430nm,25.1s,MS4.5						
NJ2				LR	LR		
	comp=Z,230nm,26.8s,MS4.1						
SSE	**Sheshan**	**58.14**	**69**	*e*P	**P**	**22 24 30.5**	**-1.2**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,490nm,6.1s						
SSE	**Sheshan**	**58.14**	**69**	*e*P	**P**	**22 24 30.5**	**-1.2**
	comp=Z,35nm,0.7s,mb5.5						
DBIC	**Dimbokro**	**59.16**	**261**	*e*P	**P**	**22 24 38.8**	**-0.3**
DBIC				pmax	pmax		
	comp=Z,20nm,0.8s						
DBIC	**Dimbokro**	**59.16**	**261**	P	**P**	**22 24 38.9**	**-0.2**
	comp=Z,15nm,0.4s,mb5.4,baz=43,slow=5.9,SNR=77						
DBIC	**Dimbokro**	**59.16**	**261**	*e*P	**P**	**22 24 38.8**	**-0.2**
	comp=Z,20nm,0.8s,mb5.2						
DBIC				*e*pP	pP	22 24 44.6	-0.1
TIXI	**Tiksi**	**59.63**	**21**	*e*P	**P**	**22 24 38.6**	**-2.9**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
YAK	**Yakutsk**	**59.68**	**32**	*e*P	**P**	**22 24 42.5**	**+0.5**
YAK				pmax	pmax		
	comp=Z,28nm,0.5s,mb5.5						
YAK	**Yakutsk**	**59.68**	**32**	P	**P**	**22 24 39.6**	**-2.4**
	comp=Z,58nm,0.6s,mb5.8						
BOSA	**Boshof**	**61.98**	**208**	P	**P**	**22 24 57.8**	**-0.4**
	comp=Z,2.1nm,0.5s,mb4.6,baz=104,slow=18,SNR=7.2						
SUMG	**Summit**	**64.85**	**341**	*e*P	**P**	**22 25 16.6**	**+0.3**
	comp=Z,10nm,0.8s,mb4.9						
SUMG				*e*pP	pP	22 25 22.9	+0.9
MA2	**Magadan**	**70.25**	**32**	*e*P	**P**	**22 25 49.6**	**-0.7**
MA2				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
MA2	**Magadan**	**70.25**	**32**	*e*P	**P**	**22 25 49.7**	**-0.6**
MA2	**Magadan**	**70.25**	**32**	*e*P	**P**	**22 25 49.6**	**-0.7**
	comp=Z,17nm,1.3s,mb4.8						
BILL	**Bilibino**	**72.84**	**21**	*e*P	**P**	**22 26 05.9**	**+0.3**
BILL				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
BILL	**Bilibino**	**72.84**	**21**	*e*P	**P**	**22 26 05.9**	**+0.3**
	comp=Z,5.8nm,0.7s,mb4.6						
BILL	**Bilibino**	**72.84**	**21**	*e*P	**P**	**22 26 05.9**	**+0.3**
	comp=Z,6.0nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**82.97**	**114**	*e*P	**P**	**22 27 01.7**	**-0.7**
	comp=Z,6.9nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**82.97**	**114**	P	**P**	**22 27 01.9**	**-0.5**
	comp=Z,5.0nm,0.6s,mb4.7,baz=1.5,slow=4.8,SNR=8.9						
SCHQ	**Schefferville**	**83.67**	**330**	P	**P**	**22 27 05.1**	**-0.1**
	comp=Z,5.2nm,0.8s,mb4.7,baz=51,slow=7.8,SNR=5.9						
INK	**Inuvik**	**84.50**	**3**	P	**P**	**22 27 09.3**	**+0.2**
	comp=Z,1.0nm,0.5s,mb4.2,baz=328,slow=9.5,SNR=3.5						
INK	**Inuvik**	**84.50**	**3**	P	**P**	**22 27 09.3**	**+0.2**
IMA	**Indian Mountai**	**84.56**	**11**	*e*P	**P**	**22 27 10.1**	**+0.7**
IMA				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
IMA	**Indian Mountai**	**84.56**	**11**	*e*P	**P**	**22 27 10.1**	**+0.7**
	comp=Z,18nm,0.8s,mb5.2						
IMA	**Indian Mountai**	**84.56**	**11**	*e*P	**P**	**22 27 10.1**	**+0.7**
	comp=Z,18nm,0.8s,mb5.2						
KAKA	**Kakadu**	**85.94**	**106**	*e*P	**P**	**22 27 17.0**	**-0.5**
	comp=Z,6.8nm,0.9s,mb4.9						
ILAR	**Eielson Array**	**86.80**	**9**	P	**P**	**22 27 20.2**	**-0.3**
	comp=Z,2.6nm,0.6s,mb4.6,baz=326,slow=4.1,SNR=24						
YKA	**Yellowknife Ar**	**90.01**	**355**	P	**P**	**22 27 36.4**	**+0.5**
	comp=Z,2.4nm,0.6s,mb4.7,baz=6.8,slow=5.2,SNR=11						
YKA	**Yellowknife Ar**	**90.01**	**355**	P	**P**	**22 27 36.4**	**+0.5**
WRA	**Warramunga Arr**	**91.00**	**112**	P	**P**	**22 27 41.2**	**-0.3**
	comp=Z,0.4nm,0.6s,mb4.0,baz=316,slow=4.1,SNR=6.5						
WB2	**Warramunga Arr**	**91.01**	**112**	*e*P	**P**	**22 27 40.4**	**-1.1**

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*IDC **14** 22:14:48.0±1.9, 47.69N×27.69W, mb3.8/8, mb1 4.0/10, mb1mx3.8/27, mbtmp3.8/10, ML4.1/2, MS3.3/3, Ms1 3.3/3, ms1mx3.0/38, Error ellipse: s-maj=53.1km s-min=20.3km az=7.0*

*NEIC **14** 22:14:49.9±0.5, 47.82N×27.75W, h10^{km}, mb4.5/17, Error ellipse: s-maj=19.8km s-min=5.0km az=7.0*

*ZUR_RM **14** 22:14:49, 47.82N×27.75W, h12^{km}, Mw4.5/7, Moment Tensor Solution. s7 Moment tensor: Scale 10^{15}Nm; M_{rr}-4.66; $M_{\theta\theta}$0.70; $M_{\phi\phi}$3.96; $M_{r\theta}$-0.46; $M_{\theta\phi}$0.65; $M_{\phi r}$3.68; Best double couple: $M_0$5.72×10^{15} NP1:ϕ_s180°,δ65°,λ-98°. NP2:ϕ_s18°,δ26°,λ-73°. Principal axes: T 5.356, Plg20°, Azm276°; N .726, Plg7°, Azm183°; P -6.082, Plg69°, Azm74°;*

*CSEM **14** 22:14:51.0±0.2, 47.83N×27.63W, h33^{km}, mb4.3/14, Ms3.1 Error ellipse: s-maj=14.6km s-min=1.9km az=4.0*

ISC 14 22:14:47.7±0.6**, 47.7N**±0.2×**27.76W**±0.07**, h10^{km}, n57, σ1^{s}05**/56**, mb4.1**/24**, MS3.1**/3**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSF	**Rostrenen**	**16.38**	**79**	*e*P	**P**	**22 18 29.4**	**-10**
EKA	**Eskdalemuir Ar**	**17.03**	**54**	P	**P**	**22 18 47.5**	**+0.3**
	0.1nm,0.3s,baz=233,slow=14,SNR=4.9						
ESDC	**Sonseca Array**	**18.95**	**106**	P	**P**	**22 19 11.7**	**+0.6**
	0.5nm,0.3s,baz=295,slow=10,SNR=5.7						
LFF	**La Frestale**	**19.83**	**88**	*e*P	**P**	**22 19 19.2**	**-2.1**
EPF	**Esparros**	**20.24**	**93**	*e*P	**P**	**22 19 26.0**	**+0.4**
RJF	**Les Rejaudoux**	**20.24**	**86**	*e*P	**P**	**22 19 24.7**	**-1.0**
RJF				*e*R			
	209nm,20.5s						
TCF	**Toulx Ste Croi**	**20.43**	**83**	*e*P	**P**	**22 19 27.0**	**-0.7**
CAF	**Calviac**	**20.73**	**87**	*e*P	**P**	**22 19 29.9**	**-0.8**
	23nm,1.0s						
BGF	**Bois d'Agland**	**20.79**	**82**	*e*P	**P**	**22 19 30.7**	**-0.7**
BAIF	**Baives**	**21.06**	**72**	*e*P	**P**	**22 19 33.0**	**-1.1**
AVF	**Avril sur Loir**	**21.07**	**81**	*e*P	**P**	**22 19 33.6**	**-0.6**
	84nm,1.4s,mb4.6						
SSF	**Saint Saulge**	**21.11**	**80**	*e*P	**P**	**22 19 34.1**	**-0.5**
	25nm,1.2s,mb4.4						
LOR	**Lormes**	**21.30**	**79**	*e*P	**P**	**22 19 36.0**	**-0.5**
	10nm,0.8s,mb3.9						
LOR				*e*R			
	195nm,23.0s						
DOU	**Dourbes**	**21.31**	**72**	P	**P**	**22 19 36.0**	**-0.6**
MTLF	**Montolieu**	**21.38**	**91**	*e*P	**P**	**22 19 38.9**	**+1.5**
SMF	**Signal de Mont**	**21.43**	**81**	*e*P	**P**	**22 19 37.5**	**-0.4**
	88nm,1.5s,mb4.6						
GIVF	**Givet**	**21.45**	**71**	*e*P	**P**	**22 19 37.1**	**-1.0**
MEZF	**Maizieres J'vi**	**21.83**	**76**	*e*P	**P**	**22 19 41.5**	**-0.4**
	37nm,1.0s,mb4.5						
MEM	**Membach**	**22.16**	**70**	P	**P**	**22 19 46.0**	**+0.9**
LASF	**Ste Croix**	**22.22**	**88**	*e*P	**P**	**22 19 47.4**	**+1.6**
WLF	**Walferdange**	**22.36**	**72**	P	**P**	**22 19 45.8**	**-1.4**
HAU	**Haudompre**	**22.78**	**77**	*e*P	**P**	**22 19 52.3**	**+1.1**
HAU				*e*R			
	209nm,19.4s						
CABF	**La Chapelle**	**22.94**	**80**	*e*P	**P**	**22 19 54.2**	**+1.4**
	59nm,1.5s,mb4.5						
HINF	**Hinteralfeld**	**23.15**	**77**	*e*P	**P**	**22 19 55.8**	**+0.9**
	44nm,1.3s,mb4.4						
CDF	**Champ du Feu**	**23.30**	**75**	*e*P	**P**	**22 19 57.1**	**+0.8**
SCHQ	**Schefferville**	**25.18**	**301**	LR	LR	22 28 39.1	
	comp=Z,88nm,19.1s,MS3.3,baz=320,slow=33						
DAVOX	**Davos**	**25.41**	**78**	P	**P**	**22 20 17.3**	**+0.7**
	2.9nm,0.9s,mb3.8,baz=320,slow=14,SNR=4.8						
DAVOX				LR	LR	22 29 00.4	
	comp=Z,103nm,21.6s,MS3.3,baz=266,slow=34						
GRA1	**Grafenberg Arr**	**25.61**	**71**	*e*P	**P**	**22 20 19.0**	**+0.6**
	15nm,1.6s,mb4.3						
GRF	**Grafenberg Arr**	**25.61**	**71**	*e*P	**P**	**22 20 19.0**	**+0.6**
	15nm,1.6s,mb4.3						
MOX	**Moxa**	**25.69**	**69**	*e*P	**P**	**22 20 22.0**	**+2.7**
NOA	**NORSAR Array B**	**25.86**	**45**	P	**P**	**22 20 21.5**	**+0.8**
	0.6nm,0.7s,mb3.3,baz=257,slow=9.0,SNR=3.0						
NOA				LR	LR	22 30 06.2	
	comp=Z,30nm,18.5s,MS2.9,baz=190,slow=36						
CLL	**Collm**	**26.46**	**67**	P	**P**	**22 20 28.0**	**+1.7**
	logA/T=1.2,mb4.5						
BRG	**Berggiesshubel**	**27.11**	**68**	*e*P	**P**	**22 20 34.1**	**+1.7**
	25nm,2.0s,mb4.4						
BRG	**Berggiesshubel**	**27.11**	**68**	*e*P	**P**	**22 20 34.1**	**+1.8**
	25nm,2.0s,mb4.4						
GERES	**GERESS Array B**	**27.37**	**72**	P	**P**	**22 20 34.1**	**-0.6**
	1.0nm,0.8s,mb3.4,baz=276,slow=8.9,SNR=7.7						
MORC	**Moravsky Berou**	**29.60**	**69**	P	**P**	**22 20 53.4**	**-1.4**
	1.7nm,0.8s,mb3.8						
MORC	**Moravsky Berou**	**29.60**	**69**	P	**P**	**22 20 53.4**	**-1.4**
	1.6nm,0.8s,mb3.8						
FINES	**FINESS Array B**	**33.03**	**45**	P	**P**	**22 21 23.6**	**-1.2**
	1.2nm,0.9s,mb3.8,baz=328,slow=13,SNR=3.5						
AKASG	**Malin Array Be**	**36.56**	**64**	P	**P**	**22 21 53.6**	**-1.5**
	0.3nm,0.2s,mb3.7,baz=281,slow=8.5,SNR=5.5						
FCC	**Fort Churchill**	**39.56**	**311**	*e*P	**P**	**22 22 20.4**	**+0.1**
	5.7nm,1.2s,mb4.2						
FCC	**Fort Churchill**	**39.56**	**311**	*e*P	**P**	**22 22 20.4**	**+0.1**
	5.7nm,1.2s,mb4.2						
YMR	**Madison River**	**54.98**	**300**	P	**P**	**22 24 21.6**	**+0.5**
CHMT	**Chamberlain Mo**	**55.01**	**303**	*e*P	**P**	**22 24 20.1**	**-1.1**
CHMT	**Chamberlain Mo**	**55.01**	**303**	*e*P	**P**	**22 24 20.1**	**-1.1**
PDAR	**Pinedale Array**	**55.24**	**297**	P	**P**	**22 24 22.4**	**-0.6**
	1.8nm,1.0s,mb4.1,baz=53,slow=7.4,SNR=10						
SDCO	**Great Sand Dun**	**55.71**	**290**	P	**P**	**22 24 27.2**	**+0.7**
	0.9nm,0.9s,mb3.8						
SDCO	**Great Sand Dun**	**55.71**	**290**	P	**P**	**22 24 27.2**	**+0.7**
	0.9nm,0.9s,mb3.8						
HWUT	**Hardware Ranch**	**57.13**	**297**	*e*P	**P**	**22 24 35.5**	**-1.1**
	5.1nm,1.0s,mb4.5						
HWUT	**Hardware Ranch**	**57.13**	**297**	*e*P	**P**	**22 24 35.5**	**-1.1**
	5.1nm,1.0s,mb4.5						
PV10	**Paradox Valley**	**57.55**	**293**	*e*P	**P**	**22 24 39.3**	**-0.2**
PV10	**Paradox Valley**	**57.55**	**293**	*e*P	**P**	**22 24 39.3**	**-0.3**
BVAR	**Borovoye Array**	**57.99**	**45**	P	**P**	**22 24 42.2**	**-0.2**
	1.1nm,0.7s,mb4.0,baz=342,slow=4.6,SNR=3.6						
ILAR	**Eielson Array**	**58.28**	**334**	P	**P**	**22 24 45.9**	**+1.6**
	0.4nm,0.6s,mb3.7,baz=35,slow=5.0,SNR=7.2						
MSU	**Marysvale**	**59.40**	**295**	*e*P	**P**	**22 24 53.3**	**+0.8**
MVU	**Marysvale**	**59.43**	**295**	*e*P	**P**	**22 24 53.6**	**+0.9**
	8.7nm,1.2s,mb4.7						
MVU	**Marysvale**	**59.43**	**295**	*e*P	**P**	**22 24 53.6**	**+0.9**
	8.7nm,1.2s,mb4.7						
ELK	**Elko**	**59.85**	**299**	*e*P	**P**	**22 24 54.0**	**-1.5**
	4.6nm,1.2s,mb4.4						

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*IDC **14** 22:17:41.0±1.0, 25.81N×128.16E, mb4.0/8, mb1 4.2/8, mb1mx4.0/19, mbtmp4.0/8, MS4.2/1, Ms1 4.2/1, ms1mx3.1/32, Error ellipse: s-maj=34.8km s-min=6.5km az=100.0*

*JMA **14** 22:17:42.8±0.2, 25.87N×128.51E, h49^{km}, M3.4*

*NEIC **14** 22:17:45.5±1.1, 25.97N×128.56E, h35^{km}, mb4.2/1, Error ellipse: s-maj=66.2km s-min=10.8km az=74.0*

ISC 14 22:17:44.0±0.5**, 25.91N**±0.04×**128.45E**±0.04**, h49^{km}, n25, σ1^{s}15**/39**, mb3.9**/9**, MS4.3**/1**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.67**	**290**	P	**P**	**22 17 57.2**	**-0.1**
JJT2				S	**S**	**22 18 08.0**	**+0.9**
NAH1	**Naha**	**0.74**	**294**	P	**P**	**22 17 57.9**	**-0.4**
NAH1				S	**S**	**22 18 08.7**	**-0.1**
JOW	**Kunigami**	**0.94**	**350**	Pn	**P**	**22 18 00.5**	**-0.4**
	182nm,0.3s,baz=150,slow=20,SNR=180						
JOW				Sn	**S**	**22 18 14.9**	**+1.4**
JOW				LR	LR	22 18 25.0	
	comp=Z,1µm,19.0s,baz=286,slow=43						
JOW	**Kunigami**	**0.94**	**350**	P	**P**	**22 18 00.5**	**-0.4**
JOW				*e*S	**S**	**22 18 13.1**	**-0.4**
JIH	**Iheya**	**1.20**	**339**	P	**P**	**22 18 05.0**	**+0.3**
JIH				*e*S	**S**	**22 18 20.4**	**+0.2**
JAGN	**Aguni-jima**	**1.28**	**302**	P	**P**	**22 18 05.9**	**+0.1**
JAGN				S	**S**	**22 18 22.3**	**+0.2**
JKE	**Kume jima 2**	**1.55**	**286**	P	**P**	**22 18 09.2**	**-0.5**
JKE				S	**S**	**22 18 28.8**	**0.0**
JTK	**Tokunoshima**	**1.92**	**13**	P	**P**	**22 18 14.6**	**-0.3**
JTK				*e*S	**S**	**22 18 38.4**	**+0.4**
JMZ	**Minamidaito 2**	**2.50**	**91**	P	**P**	**22 18 21.0**	**-2.1**
JMZ				S	**S**	**22 18 48.1**	**-4.4**
JAM	**Amami Oshima**	**2.70**	**22**	P	**P**	**22 18 25.1**	**-0.9**
JAM				S	**S**	**22 18 56.2**	**-1.4**
JZK	**Kikaishima**	**2.76**	**29**	P	**P**	**22 18 26.8**	**0.0**
JZK				S	**S**	**22 18 58.4**	**-0.6**
JMJ	**Miyako jima 2**	**3.05**	**250**	P	**P**	**22 18 30.5**	**-0.5**
JMJ				*e*S	**S**	**22 19 05.0**	**-1.6**
JTJ	**Tarama**	**3.62**	**250**	P	**P**	**22 18 38.7**	**-0.3**
JTJ				*e*S	**S**	**22 19 18.5**	**-2.4**
JIJ	**Ishigaki jima**	**4.19**	**249**	P	**P**	**22 18 46.1**	**-1.0**
JIJ				*e*S	**S**	**22 19 31.7**	**-3.7**
JTN	**Tanegashima 3**	**5.23**	**25**	P	**P**	**22 18 59.6**	**-2.0**
JTN				*e*S	**S**	**22 19 56.5**	**-4.9**
SONM	**Songino Array**	**27.93**	**327**	P	**P**	**22 23 34.2**	**+2.5**
	0.7nm,0.5s,mb3.5,baz=146,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**41.90**	**312**	P	**P**	**22 25 31.5**	**+0.4**
	0.9nm,0.6s,mb3.6,baz=93,slow=11,SNR=10						
FITZ	**Fitzroy Crossi**	**43.83**	**184**	P	**P**	**22 25 48.2**	**+1.0**
	6.3nm,1.0s,mb4.3,baz=270,slow=1.0,SNR=3.5						
WRAB	**Tennant Creek**	**45.92**	**172**	*e*P	**P**	**22 26 05.5**	**+1.6**
	1.9nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**45.93**	**172**	P	**P**	**22 26 05.4**	**+1.4**
	1.6nm,0.6s,mb4.1,baz=353,slow=8.5,SNR=17						
BVAR	**Borovoye Array**	**50.65**	**318**	P	**P**	**22 26 41.7**	**+1.6**
	0.9nm,0.5s,mb4.0,baz=82,slow=9.6,SNR=8.2						
FINES	**FINESS Array B**	**73.24**	**331**	P	**P**	**22 29 12.8**	**+1.4**
	1.5nm,1.0s,mb3.9,baz=53,slow=9.5,SNR=5.7						
AKASG	**Malin Array Be**	**75.90**	**320**	P	**P**	**22 29 28.6**	**+1.6**
	0.8nm,0.5s,mb3.9,baz=54,slow=5.9,SNR=5.1						
ASF	**Jabal al Asfar**	**77.90**	**300**	LR	LR	23 06 35.5	
	comp=Z,165nm,21.5s,MS4.3,baz=342,slow=38						
NOA	**NORSAR Array B**	**79.69**	**334**	P	**P**	**22 29 49.4**	**+1.8**
	0.7nm,0.7s,mb3.7,baz=56,slow=5.2,SNR=3.0						

WEL 14 22:19:56.0±0.1**, 39.65S**×**173.49E, h5^{km}, ML3.5**/16**, 1C-1D, Error ellipse: s-maj=1.4km s-min=0.8km az=90.0, Off west coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRZ	**Ngariki Road**	**0.46**	**48**	PG	Pg	22 20 05.6	+0.4
NRZ				SG	Sg	22 20 10.9	-0.4
DFE	**Dawson Falls**	**0.57**	**56**	PG	Pg	22 20 07.2	-0.1
DFE				SG	Sg	22 20 15.8	+0.8
PKE	**Pukeiti**	**0.59**	**41**	⇑P*	Pb	22 20 08.1	-0.3
PKE				SG	Sg	22 20 16.1	+0.4
PKE				SG	Sg	22 20 16.4	+0.7
NEZ	**North Egmont**	**0.60**	**52**	P*	Pb	22 20 07.9	-0.6
NEZ				SG	Sg	22 20 16.3	+0.3
RAEZ	**Rainy Point**	**0.78**	**63**	⇓P*	Pb	22 20 11.1	-0.6
RAEZ				S*	Sb	22 20 22.2	-0.2
VRZ	**Vera Road**	**1.11**	**63**	P*	Pb	22 20 15.9	-1.4
VRZ				S*	Sb	22 20 30.5	-1.3
WAZ	**Wanganui**	**1.16**	**96**	P*	Pb	22 20 17.1	-1.0
WAZ				S*	Sb	22 20 33.6	+0.3
DUWZ	**D'Urville Isla**	**1.20**	**164**	P*	Pb	22 20 18.6	-0.3
QRZ	**Quartz Range**	**1.39**	**212**	PN	Pn	22 20 21.2	-1.0
HIZ	**Hauiti**	**1.55**	**44**	PN	Pn	22 20 22.2	-2.2
MTVZ	**Mangateitei**	**1.55**	**81**	PN	Pn	22 20 23.3	-1.1
NNZ	**Nelson**	**1.57**	**183**	PN	Pn	22 20 24.1	-0.6
KIW	**Kapiti Island**	**1.63**	**139**	PN	Pn	22 20 24.9	-0.6
FWVZ	**Far West T-bar**	**1.64**	**77**	PN	Pn	22 20 24.9	-0.7
DRZ	**Dome Shelter**	**1.65**	**78**	PN	Pn	22 20 26.2	+0.5
WPVZ	**Whakapapa**	**1.65**	**75**	PN	Pn	22 20 25.2	-0.6
WNVZ	**Wahianoa**	**1.66**	**80**	PN	Pn	22 20 25.0	-0.9
TCW	**Tory Channel**	**1.68**	**159**	PN	Pn	22 20 25.8	-0.3
NGZ	**Ngauruhoe**	**1.70**	**75**	PN	Pn	22 20 25.4	-1.1
TUVZ	**Tukino**	**1.71**	**78**	PN	Pn	22 20 26.3	-0.5
OTVZ	**Oturere**	**1.75**	**75**	PN	Pn	22 20 26.5	-0.8
MOVZ	**Moawhango**	**1.76**	**83**	PN	Pn	22 20 26.5	-0.9
TUWZ	**Tuamarina**	**1.82**	**169**	PN	Pn	22 20 29.1	+0.9
MRW	**Makara Radio**	**1.83**	**150**	PN	Pn	22 20 29.0	+0.6
KATZ	**Kakaramea**	**1.83**	**69**	PN	Pn	22 20 27.4	-1.0
MRZ	**Mangatainoka R**	**1.90**	**123**	PN	Pn	22 20 29.9	+0.6
SNZO	**South Karori**	**1.90**	**151**	PN	Pn	22 20 28.1	-1.3
RATZ	**Rangitukua**	**1.93**	**67**	PN	Pn	22 20 29.1	-0.7
TSZ	**Takapari Road**	**1.94**	**103**	PN	Pn	22 20 29.4	-0.6
WATZ	**Wairara**	**1.98**	**62**	PN	Pn	22 20 28.6	-1.9

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*IDC **14** 22:23:48.5±0.9, 5.39S×68.50E, mb4.0/13, mb1 4.1/13, mb1mx4.0/22, mbtmp4.0/13, MS3.9/2, Ms1 3.9/2, ms1mx3.6/15, Error ellipse: s-maj=27.1km s-min=21.3km az=31.0*

*NEIC **14** 22:23:49.8±0.5, 5.45S×68.56E, h10^{km}, mb4.6/3, Error ellipse: s-maj=17.4km s-min=9.6km az=216.0*

ISC 14 22:23:48.1±0.6**, 5.4S**±0.1×**68.6E**±0.1**, h10^{km}, n22, σ0^{s}94**/21**, mb4.1**/15**, MS3.8**/2**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.31**	**117**	*e*Pn	**Pn**	**22 24 54.1**	**-1.1**
CMAR	**Chiang Mai Arr**	**38.19**	**51**	P	**P**	**22 31 10.0**	**+0.1**
	1.1nm,0.9s,mb3.6,baz=239,slow=10,SNR=5.2						
CMAR				LR	LR	22 45 20.0	
	comp=Z,74nm,18.1s,MS3.5,baz=215,slow=34						
BOSA	**Boshof**	**47.05**	**236**	P	**P**	**22 32 21.2**	**-0.8**
	1.6nm,0.8s,mb4.0,baz=80,slow=11,SNR=3.3						
BOSA				LR	LR	22 48 16.8	
	comp=Z,244nm,21.8s,MS4.1,baz=167,slow=31						
BOSA	**Boshof**	**47.05**	**236**	P	**P**	**22 32 21.2**	**-0.9**
BOSA				LR	LR	22 48 16.8	
GNI	**Garni**	**50.39**	**336**	P	**P**	**22 32 49.1**	**+1.4**
	2.4nm,0.6s,mb4.4,baz=95,slow=11,SNR=4.1						
GNI	**Garni**	**50.39**	**336**	P	**P**	**22 32 49.1**	**+1.4**
MKAR	**Makanchi Array**	**53.39**	**12**	P	**P**	**22 33 09.1**	**-1.1**
	0.5nm,0.6s,mb3.6,baz=194,slow=7.1,SNR=8.1						
BVAR	**Borovoye Array**	**58.25**	**1**	P	**P**	**22 33 44.3**	**-0.8**
	0.6nm,0.7s,mb3.7,baz=198,slow=4.6,SNR=3.9						
SONM	**Songino Array**	**62.57**	**28**	P	**P**	**22 34 15.0**	**+0.3**
	1.6nm,0.8s,mb4.2,baz=225,slow=5.2,SNR=13						
AKASG	**Malin Array Be**	**65.36**	**334**	P	**P**	**22 34 31.3**	**-1.6**
	0.2nm,0.3s,mb3.6,baz=132,slow=5.8,SNR=5.6						
WRA	**Warramunga Arr**	**65.38**	**109**	P	**P**	**22 34 34.5**	**+1.0**
	3.4nm,0.9s,mb4.4,baz=284,slow=6.3,SNR=15						
WRAB	**Tennant Creek**	**65.38**	**109**	*e*P	**P**	**22 34 33.9**	**+0.3**
	12nm,1.0s,mb4.9						
WB2	**Warramunga Arr**	**65.39**	**109**	*e*P	**P**	**22 34 34.0**	**+0.5**
DAVOX	**Davos**	**73.32**	**322**	P	**P**	**22 35 22.1**	**+0.3**
	2.1nm,0.9s,mb4.1,baz=142,slow=16,SNR=3.6						
CLL	**Collm**	**73.74**	**327**	P	**P**	**22 35 26.0**	**+1.8**
GRA1	**Grafenberg Arr**	**73.91**	**325**	*e*P	**P**	**22 35 24.8**	**-0.5**
	6.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**73.91**	**325**	*e*P	**P**	**22 35 24.8**	**-0.5**
	6.0nm,1.1s,mb4.4						
CTA	**Charters Tower**	**76.58**	**109**	P	**P**	**22 35 41.7**	**+0.6**
	2.8nm,0.9s,mb4.2,baz=249,slow=8.6,SNR=3.2						
HFS	**Hagfors**	**78.16**	**335**	P	**P**	**22 35 47.7**	**-1.3**
	3.0nm,0.8s,mb4.3,baz=135,slow=6.3,SNR=6.2						
NOA	**NORSAR Array B**	**79.68**	**335**	P	**P**	**22 35 57.4**	**+0.1**
	1.0nm,0.8s,mb3.8,baz=111,slow=6.1,SNR=2.9						
ESDC	**Sonseca Array**	**80.18**	**312**	P	**P**	**22 36 01.5**	**+1.0**
	1.2nm,0.8s,mb3.9,baz=80,slow=4.9,SNR=5.0						
NVAR	**Mina Array Bea**	**146.55**	**10**	PKPbc	PKPbc	22 43 33.1	+3.0
	0.5nm,0.4s,baz=333,slow=2.0,SNR=5.6						

*IDC **14** 22:23:51.5±3.9, 26.02N×128.84E, mb3.6/4, mb1 3.7/4, mb1mx3.6/19, mbtmp3.6/4, MS4.0/1, Ms1 4.0/1, ms1mx3.0/25, Error ellipse: s-maj=226.0km s-min=18.6km az=66.0*

*JMA **14** 22:23:55.1±0.1, 25.87N×128.52E, h48^{km}±4^{km}, M3.1*

ISC 14 22:23:55.5±0.7, **25.90N**±0.05×**128.53E**±0.04, **h48**^{km}, **n16**, σ**0^{s}83**/25, **mb3.5**/4, **MS4.0**/1, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**0.75**	**289**	P	**P**	**22 24 09.5**	**-0.3**
JJT2				S	**S**	**22 24 19.8**	**-0.6**
NAH1	**Naha**	**0.82**	**292**	P	**P**	**22 24 10.4**	**-0.4**
NAH1				S	**S**	**22 24 21.6**	**-0.5**
JOW	**Kunigami**	**0.96**	**346**	Pn	**P**	**22 24 11.6**	**-1.2**
	145nm,0.3s,baz=155,slow=15,SNR=53						
JOW				Sn	**S**	**22 24 26.1**	**+0.5**
	172nm,0.3s,baz=137,slow=26,SNR=23						
JOW	**Kunigami**	**0.96**	**346**	P	**P**	**22 24 12.7**	**-0.1**
JOW				S	**S**	**22 24 25.9**	**+0.3**
JIH	**Iheya**	**1.24**	**336**	P	**P**	**22 24 17.1**	**+0.3**
JIH				S	**S**	**22 24 32.3**	**-0.4**
JAGN	**Aguni-jima**	**1.35**	**301**	P	**P**	**22 24 18.3**	**-0.1**
JAGN				S	**S**	**22 24 34.9**	**-0.5**
JKE	**Kume jima 2**	**1.63**	**286**	P	**P**	**22 24 21.6**	**-0.7**
JKE				S	**S**	**22 24 41.9**	**-0.3**
JTK	**Tokunoshima**	**1.92**	**11**	P	**P**	**22 24 26.9**	**+0.5**
JTK				S	**S**	**22 24 49.5**	**+0.2**
JMZ	**Minamidaito 2**	**2.42**	**91**	P	**P**	**22 24 33.1**	**-0.4**
JMZ				S	**S**	**22 25 00.1**	**-2.0**
JAM	**Amami Oshima**	**2.68**	**21**	P	**P**	**22 24 37.4**	**+0.2**
JAM				S	**S**	**22 25 07.6**	**-1.1**
JZK	**Kikaishima**	**2.73**	**28**	S	**S**	**22 25 10.8**	**+0.9**
SONM	**Songino Array**	**27.98**	**327**	P	**P**	**22 29 45.6**	**+1.9**
	0.5nm,0.6s,mb3.3,baz=135,slow=9.6,SNR=3.7						
MKAR	**Makanchi Array**	**41.96**	**312**	P	**P**	**22 31 44.2**	**+1.0**
	0.3nm,0.5s,mb3.2,baz=95,slow=10,SNR=9.1						
WRA	**Warramunga Arr**	**45.91**	**172**	P	**P**	**22 32 16.5**	**+1.0**
	0.5nm,0.4s,mb3.8,slow=8.3,SNR=7.6						
HNR	**Honiara**	**46.55**	**135**	LR	LR	22 46 51.3	
	comp=Z,167nm,21.8s,MS4.0,baz=164,slow=30						
BVAR	**Borovoye Array**	**50.71**	**318**	P	**P**	**22 32 53.6**	**+1.4**
	0.5nm,0.5s,mb3.7,baz=72,slow=9.1,SNR=4.2						

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*WEL **14** 22:33:25.4±0.5, 35.21S×178.87E, h218^{km}±7^{km}, ML5.4/21, Error ellipse: s-maj=4.9km s-min=4.9km az=90.0*

*HRVD **14** 22:33:25.6±1.2, 34.81S×178.82E, h220^{km}±10^{km}, MW5.3/29, Centroid moment Tensor Solution. LP body waves: s5,c5;Mantle waves: s29,c39; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.65±.12; $M_{\theta\theta}$0.01±.10; $M_{\phi\phi}$0.63±.09; $M_{r\theta}$-0.54±.10; $M_{\theta\phi}$-0.51±.11; $M_{\phi r}$-0.38±.10; Best double couple: $M_0$1.036×10^{17} NP1: ϕ_s120°, δ53°, λ-139°. NP2:ϕ_s2°, δ58°, λ-45°. Principal axes: T .929, Plg3°, Azm62°; N .213, Plg37°, Azm155°; P -1.142, Plg53°, Azm328°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **14** 22:33:25.6±0.8, 35.02S×178.73E, h199^{km}±8^{km}, mb4.9/17 Error ellipse: s-maj=12.8km s-min=9.3km az=51.0*

*IDC **14** 22:33:26.6±1.5, 35.10S×178.53E, h209^{km}±13^{km}, mb4.5/12, mb1 4.6/14, mb1mx4.5/19, mbtmp5.0/14, MS3.8/1, Ms1 3.8/1, ms1mx3.4/16, Error ellipse: s-maj=16.3km s-min=11.6km az=45.0*

ISC 14 22:33:25.2±0.7, **35.07S**±0.06×**178.65E**±0.08, **h205**^{km}±6^{km}, **n108**, σ**1^{s}06**/94, **mb4.7**/23, **14C-9D**, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.51**	**186**	P	**P**	**22 34 10.1**	**+0.2**
MXZ				S	**S**	**22 34 42.2**	**-2.3**
MXZ	**Matakaoa Point**	**2.51**	**186**	PN	**P**	**22 34 09.4**	**-0.5**
MXZ				SN	**S**	**22 34 42.9**	**-1.6**
WIZ	**White Island**	**2.73**	**205**	PN	**P**	**22 34 12.9**	**+0.5**
KUZ	**Kuaotunu**	**2.91**	**234**	*e*P	**P**	**22 34 15.4**	**+0.9**
KUZ	**Kuaotunu**	**2.91**	**234**	PN	**P**	**22 34 15.4**	**+0.9**
PUZ	**Puketiti**	**3.02**	**186**	P	**P**	**22 34 15.3**	**-0.5**
PUZ				S	**S**	**22 34 53.0**	**-1.9**
PUZ	**Puketiti**	**3.02**	**186**	PN	**P**	**22 34 15.3**	**-0.5**
PUZ				SN	**S**	**22 34 53.0**	**-1.9**
MARZ	**Manawahe**	**3.32**	**208**	P	**P**	**22 34 20.3**	**+0.9**
MARZ	**Manawahe**	**3.32**	**208**	PN	**P**	**22 34 20.0**	**+0.6**
MWZ	**Matawai**	**3.38**	**195**	P	**P**	**22 34 20.0**	**-0.2**
MWZ				S	**S**	**22 35 01.7**	**-1.0**
MWZ	**Matawai**	**3.38**	**195**	PN	**P**	**22 34 20.0**	**-0.2**
MWZ				SN	**S**	**22 35 02.2**	**-0.5**
EDRZ	**Edgecumbe**	**3.40**	**206**	P	**P**	**22 34 21.2**	**+0.8**
EDRZ	**Edgecumbe**	**3.40**	**206**	PN	**P**	**22 34 21.1**	**+0.7**
URZ	**Urewera**	**3.42**	**201**	P	**P**	**22 34 20.3**	**-0.3**
	96nm,0.3s,baz=318,slow=2.4,SNR=611						
URZ				S	**S**	**22 35 02.4**	**-1.1**
	282nm,0.3s,baz=317,slow=23,SNR=24						
URZ				LR	LR	22 35 27.7	
	comp=Z,1µm,18.7s,baz=179,slow=36						
URZ	**Urewera**	**3.42**	**201**	P	**P**	**22 34 19.9**	**-0.7**
URZ	**Urewera**	**3.42**	**201**	PN	**P**	**22 34 20.3**	**-0.3**
URZ				SN	**S**	**22 35 03.2**	**-0.3**
LIRZ	**Lichensteins R**	**3.45**	**211**	PN	**P**	**22 34 21.9**	**+0.9**
MTAZ	**Motutapu**	**3.49**	**239**	P	**P**	**22 34 22.9**	**+1.5**
MTAZ	**Motutapu**	**3.49**	**239**	PN	**P**	**22 34 22.9**	**+1.4**
TAZ	**Tarawera**	**3.60**	**208**	PN	**P**	**22 34 23.5**	**+0.7**
WTAZ	**Waiatarua**	**3.79**	**239**	P	**P**	**22 34 26.9**	**+1.7**
WTAZ	**Waiatarua**	**3.79**	**239**	PN	**P**	**22 34 27.1**	**+1.9**
PATZ	**Paeroa**	**3.83**	**209**	PN	**P**	**22 34 25.9**	**+0.3**
KNZ	**Kokohu**	**4.02**	**191**	P	**P**	**22 34 25.9**	**-2.2**
KNZ	**Kokohu**	**4.02**	**191**	PN	**P**	**22 34 26.6**	**-1.5**
OUZ	**Omahuta**	**4.14**	**266**	PN	**P**	**22 34 30.2**	**+0.6**
WATZ	**Wairara**	**4.32**	**212**	PN	**P**	**22 34 32.0**	**+0.2**
HATZ	**Hinemaiaia**	**4.33**	**207**	PN	**P**	**22 34 31.4**	**-0.5**
RATZ	**Rangitukua**	**4.44**	**210**	PN	**P**	**22 34 33.8**	**+0.5**
BKZ	**Black Stump Fm**	**4.44**	**202**	PN	**P**	**22 34 32.7**	**-0.6**
RITZ	**Rihia Road**	**4.50**	**209**	PN	**P**	**22 34 34.1**	**+0.1**
KATZ	**Kakaramea**	**4.56**	**210**	PN	**P**	**22 34 35.2**	**+0.4**
HIZ	**Hauiti**	**4.59**	**220**	PN	**P**	**22 34 37.0**	**+1.8**
CNZ	**Chateau**	**4.81**	**210**	PN	**P**	**22 34 38.0**	**0.0**
SNZO	**South Karori**	**6.96**	**205**	*e*Pn	**P**	**22 35 01.3**	**-4.4**
SNZO				*e*S	**S**	**22 36 14.8**	**-9.4**
RPZ	**Rata Peaks**	**10.44**	**212**	P	**P**	**22 35 45.7**	**-5.2**
	15nm,0.3s,baz=51,slow=3.0,SNR=79						
RPZ				S	**S**	**22 37 37.0**	**-8.1**
	10nm,0.3s,baz=353,slow=20,SNR=11						
DZM	**Mont Dzumac**	**16.79**	**317**	*e*P	**P**	**22 37 10.4**	**+0.4**
DZM	**Mont Dzumac**	**16.79**	**317**	P	**P**	**22 37 09.7**	**-0.3**
	0.8nm,0.3s,baz=125,slow=13,SNR=16						
DZM	**Mont Dzumac**	**16.79**	**317**	*e*P	**P**	**22 37 10.3**	**+0.4**
NOUC	**Port Laguerre**	**16.84**	**317**	*e*P	**P**	**22 37 10.8**	**+0.2**
NOUC	**Port Laguerre**	**16.84**	**317**	*e*P	**P**	**22 37 10.8**	**+0.2**
AFI	**Afiamalu**	**22.77**	**25**	*e*P	**P**	**22 38 09.5**	**-1.3**
	72nm,0.6s,mb5.4						
ARMA	**Armidale**	**23.16**	**274**	*e*P	**P**	**22 38 17.8**	**+3.3**
TBI	**Tubuai**	**30.06**	**76**	*e*LR	LR	22 47 12.8	
	109nm,30.0s						
HNR	**Honiara**	**30.71**	**322**	P	**P**	**22 39 21.7**	**-1.5**
	128nm,0.8s,mb5.6,baz=163,slow=1.5,SNR=6.8						
HNR	**Honiara**	**30.71**	**322**	*e*P	**P**	**22 39 22.0**	**-1.2**
	124nm,0.9s,mb5.5						
STKA	**Stephens Creek**	**30.96**	**265**	*e*P	**P**	**22 39 25.3**	**+0.1**
	9.8nm,1.5s,mb4.2						
STKA	**Stephens Creek**	**30.96**	**265**	P	**P**	**22 39 24.3**	**-0.9**
	7.5nm,0.8s,mb4.3,baz=105,slow=11,SNR=6.2						
CTA	**Charters Tower**	**32.19**	**289**	⇓*i*P	**P**	**22 39 36.3**	**+0.3**
	90nm,1.0s,mb5.2						
CTA	**Charters Tower**	**32.19**	**289**	P	**P**	**22 39 35.6**	**-0.3**
	118nm,1.0s,mb5.4,baz=112,slow=9.8,SNR=78						
CTAO	**Charters Tower**	**32.19**	**289**	*e*P	**P**	**22 39 35.1**	**-0.9**
	201nm,1.1s,mb5.6						
PPT	**Papeete**	**33.19**	**67**	*e*LR	LR	22 48 41.9	
	95nm,26.5s						
PMG	**Port Moresby**	**38.46**	**304**	P	**P**	**22 40 29.1**	**+0.2**
	46nm,0.8s,mb5.0,baz=105,slow=5.4,SNR=13						
PMG	**Port Moresby**	**38.46**	**304**	*e*P	**P**	**22 40 29.1**	**+0.2**
	35nm,0.8s,mb4.9						
WB2	**Warramunga Arr**	**41.73**	**279**	⇓*i*P	**P**	**22 40 54.6**	**-1.2**
WRAB	**Tennant Creek**	**41.74**	**279**	*e*P	**P**	**22 40 53.9**	**-1.9**
	90nm,1.0s,mb5.2						
WRA	**Warramunga Arr**	**41.74**	**279**	P	**P**	**22 40 54.8**	**-1.0**
	31nm,0.7s,mb4.8,baz=121,slow=7.6,SNR=90						
WRA				S	**S**	**22 46 52.9**	**-4.1**
	0.3nm,0.5s,baz=117,slow=18,SNR=3.9						
VNDA	**Vanda**	**43.19**	**185**	P	**P**	**22 41 07.5**	**+0.7**
	4.5nm,1.0s,mb3.9,baz=3.3,slow=9.5,SNR=15						
VNDA	**Vanda**	**43.19**	**185**	*e*P	**P**	**22 41 07.4**	**+0.5**
	7.1nm,1.1s,mb4.0						
SBA	**Scott Base**	**43.20**	**184**	*e*P	**P**	**22 41 09.4**	**+2.5**
	23nm,1.0s,mb4.6						
TAOE	**Nuku Hiva Isla**	**45.78**	**65**	*e*LR	LR	22 54 37.1	
	268nm,24.9s						
KAKA	**Kakadu**	**47.24**	**286**	*e*P	**P**	**22 41 37.9**	**-1.6**
	9.5nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**49.76**	**276**	*e*P	**P**	**22 41 59.0**	**+0.2**
	11nm,0.8s,mb4.2						
QSPA	**South Pole Qui**	**55.05**	**180**	⇓*i*P	**P**	**22 42 38.7**	**+1.6**
	42nm,0.8s,mb5.0						
MAW	**Mawson**	**66.95**	**202**	P	**P**	**22 43 56.8**	**-0.2**
	5.0nm,1.0s,mb4.1,baz=132,slow=12,SNR=4.9						
SYO	**Syowa Base**	**71.93**	**194**	⇓P	**P**	**22 44 24.6**	**-2.7**
SYO	**Syowa Base**	**71.93**	**194**	⇓X		22 44 40.0	
SNAA	**Sanae**	**73.55**	**180**	⇓*i*	**P**	**22 44 36.0**	**-0.7**
SNAA	**Sanae**	**73.55**	**180**	⇑*i*	**P**	**22 44 38.0**	**+1.3**
SNAA	**Sanae**	**73.55**	**180**	⇑*i*	PcP	22 44 47.6	-4.1
SNAA	**Sanae**	**73.55**	**180**		pP	22 45 22.4	-3.2
SNAA	**Sanae**	**73.55**	**180**	*e*P	**P**	**22 44 35.8**	**-0.9**
	32nm,1.2s,mb4.8						
SNAA				*e*PcP	PcP	22 44 47.4	-4.4
SNAA				*e*pP	pP	22 45 21.8	-3.8
SNAA				*e*sP	sP	22 45 43.6	-3.6
VNA3	**Neumayer Olymp**	**73.82**	**177**	⇑*i*	**P**	**22 44 39.5**	**+1.3**
VNA3	**Neumayer Olymp**	**73.82**	**177**	⇑*i*	PcP	22 44 48.1	-4.8
VNA3	**Neumayer Olymp**	**73.82**	**177**		pP	22 45 27.0	-0.2
VNA3	**Neumayer Olymp**	**73.82**	**177**	⇓*i*P	**P**	**22 44 38.0**	**-0.2**
VNA3				⇑*i*P		22 44 39.5	
VNA3				⇑*i*P		22 44 48.1	
VNA2	**Neumayer--Watz**	**74.22**	**178**	⇑*i*	**P**	**22 44 42.0**	**+1.5**
VNA2	**Neumayer--Watz**	**74.22**	**178**	⇑*i*	PcP	22 44 51.0	-3.6
VNA2	**Neumayer--Watz**	**74.22**	**178**		pP	22 45 29.7	+0.2
VNA2	**Neumayer--Watz**	**74.22**	**178**	⇓*i*P	**P**	**22 44 40.8**	**+0.3**
VNA2				⇑*i*P		22 44 42.0	
VNA2				⇑*i*P		22 44 51.0	
VNA1	**Neumayer--Stat**	**74.47**	**178**	⇑*i*	**P**	**22 44 45.2**	**+3.2**
VNA1	**Neumayer--Stat**	**74.47**	**178**	⇑*i*	PcP	22 44 55.4	-0.3
VNA1	**Neumayer--Stat**	**74.47**	**178**	⇓*i*P	**P**	**22 44 42.5**	**+0.6**
VNA1				⇑*i*P		22 44 45.2	
VNA1				⇑*i*P		22 44 55.4	
MJAR	**Matsushiro Arr**	**80.58**	**328**	P	**P**	**22 45 13.3**	**-2.8**
	0.8nm,0.4s,mb3.7,baz=158,slow=6.1,SNR=5.1						
PLCA	**Paso Flores**	**81.35**	**134**	P	**P**	**22 45 20.6**	**+0.6**
	10.0nm,1.0s,mb4.4,baz=235,slow=4.3,SNR=16						
CMB	**Columbia Colle**	**92.09**	**44**	*e*P	**P**	**22 46 11.9**	**-0.2**
	12nm,1.1s,mb4.7						
WDC	**Whiskeytown Da**	**92.69**	**41**	*e*P	**P**	**22 46 14.7**	**-0.2**
	13nm,1.2s,mb4.8						
LDFC	**Landfair**	**93.22**	**49**	*e*P	**P**	**22 46 18.1**	**+0.7**
YBH	**Yreka Blue Hor**	**93.42**	**40**	P	**P**	**22 46 18.3**	**+0.2**
	4.2nm,0.9s,mb4.5,baz=161,slow=3.1,SNR=4.7						
NVAR	**Mina Array Bea**	**93.55**	**45**	P	**P**	**22 46 19.6**	**+0.8**
	6.5nm,0.9s,mb4.7,baz=204,slow=6.9,SNR=23						
TUC	**Tucson**	**94.19**	**53**	*e*P	**P**	**22 46 23.2**	**+1.4**
	5.1nm,0.9s,mb4.5						
MOD	**Modoc**	**94.83**	**41**	*e*P	**P**	**22 46 24.4**	**-0.1**
	6.7nm,0.9s,mb4.8						
ELK	**Elko**	**96.86**	**44**	P	**P**	**22 46 33.7**	**-0.1**
	1.6nm,0.8s,mb4.3,baz=231,slow=5.8,SNR=5.7						
SRU	**San Rafael**	**98.61**	**48**	*e*P	**P**	**22 46 42.1**	**+0.3**
PDAR	**Pinedale Array**	**101.43**	**46**	P	P	22 46 55.6	+1.3
	0.7nm,0.7s,baz=206,slow=3.4,SNR=6.3						
SONM	**Songino Array**	**104.72**	**318**	PKKPbc		23 02 53.9	
	2.1nm,0.9s,baz=297,slow=5.5,SNR=5.5						
SONM				PKKP	PKKP	23 03 05.2	+29
	1.5nm,0.8s,baz=49,slow=3.5,SNR=4.1						
MKAR	**Makanchi Array**	**118.55**	**309**	PKP	PKPdf	22 51 46.7	-1.5
	0.4nm,0.8s,baz=45,slow=1.7,SNR=4.5						
MKAR	**Makanchi Array**	**118.55**	**309**	PKP	PKPdf	22 51 46.7	-1.5
ARCES	**ARCESS Array B**	**142.45**	**345**	PKP	PKPdf	22 52 34.7	+2.5
	1.3nm,0.7s,baz=70,slow=1.9,SNR=7.6						
ARCES	**ARCESS Array B**	**142.45**	**345**	PKP	PKPdf	22 52 34.7	+2.5
KAF	**Kangasniemi**	**147.82**	**336**	*e*pkp	PKPdf	22 52 43.6	+2.0
FINES	**FINESS Array B**	**148.37**	**335**	PKPbc	PKPdf	22 52 46.1	+3.6
	3.6nm,0.6s,baz=38,slow=5.1,SNR=31						
DBIC	**Dimbokro**	**151.56**	**173**	PKPbc	PKPdf	22 52 55.1	+6.3
	3.4nm,0.6s,baz=110,slow=8.7,SNR=9.1						
NB2	**NORSAR Subarra**	**152.79**	**347**	PKPabc	PKPdf	22 52 56.1	+6.9
	1.0nm,0.8s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**152.79**	**347**	PKPbc	PKPdf	22 52 56.5	+7.3
	1.1nm,0.8s,baz=27,slow=2.0,SNR=3.9						
NOA	**NORSAR Array B**	**152.79**	**347**	PKPbc	PKPdf	22 52 56.5	+7.3
AKASG	**Malin Array Be**	**152.94**	**315**	PKPbc	PKPdf	22 52 55.9	+6.1
	0.2nm,0.3s,baz=58,slow=2.7,SNR=4.5						
AKASG				pPKPbc		22 53 51.4	
	0.4nm,0.4s,baz=64,slow=3.8,SNR=4.5						
GERES	**GERESS Array B**	**162.30**	**326**	PKPab	PKPab	22 53 49.4	-2.4
	1.0nm,0.8s,baz=45,slow=3.8,SNR=8.4						

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*NEIC **14** 22:48:20.9, 16.05N×97.20W, h16^{km}, MD3.8(MEX), After MEX.*

MEX 14 22:48:20.9±1.1, **16.05N**×**97.20W**, **h16**^{km}±999^{km}, **MD3.8**, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.95**	**291**	*i* P	Pb	22 48 36.3	-2.2
PNIG				*i* S	Sb	22 48 46.6	-4.0
HUIG	**Huatulco**	**1.09**	**105**	*i* P	Pb	22 48 37.6	-3.3
HUIG				*i* S	Sb	22 48 50.3	-4.4
VHO	**Vista Hermosa**	**1.11**	**24**	*i* P	Pb	22 48 37.7	-3.6
VHO				*i* S	Sb	22 48 49.4	-5.9
OXX	**Oaxaca**	**1.13**	**24**	*i* P	Pb	22 48 39.5	-2.0
OXX				*i* S	Sb	22 48 53.0	-2.7
CMIG	**Matias Romero**	**2.45**	**65**	*e*P	Pn	22 48 58.0	-3.0
CMIG				*i* S	Sn	22 49 26.1	-4.8
PPM	**Popocatepetl**	**3.29**	**336**	*e*P	Pn	22 49 13.5	+0.6
PPM				*i* P		22 49 18.9	
PPM				*i* S	Sn	22 49 51.8	-0.4

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*IDC **14** 22:49:13.4±0.5, 51.22N×179.38E, mb4.9/27, mb1 5.1/27, mb1mx5.0/30, mbtmp4.9/27, MS5.0/25, Ms1 5.0/25, ms1mx5.0/29, Error ellipse: s-maj=17.4km s-min=10.6km az=166.0*

*BJI **14** 22:49:17.5, 51.22N×179.29E, h47^{km}, mB5.6, mb5.4, Ms5.3, Msz5.1*

*NEIC **14** 22:49:17.8, 50.98N×179.43E, h28^{km}, mb5.2/213, MS5.1/133, MW5.5, ML5.3(AEIC), Moment Tensor Solution. s14 Moment tensor: Scale 10^{17}Nm; M_{rr}1.69; $M_{\theta\theta}$-1.32; $M_{\phi\phi}$-0.37; $M_{r\theta}$1.00; $M_{\theta\phi}$-0.70; $M_{\phi r}$0.68; Best double couple: $M_0$2.1×10^{17} NP1:ϕ_s246°, δ27°, λ97°. NP2:ϕ_s58°, δ63°, λ87°. Principal axes: T 2.08, Plg72°, Azm321°; N 0, Plg3°, Azm60°; P -2.08, Plg18°, Azm151°; After AEIC.*

*MOS **14** 22:49:18.0±0.9, 51.20N×179.42E, h43^{km}, mb5.4/123, MS5.0/68 Error ellipse: s-maj=6.8km s-min=3.9km az=93.7*

*HRVD **14** 22:49:20.4±0.2, 51.04N×179.48E, h19^{km}, MW5.6/70, Centroid moment Tensor Solution. LP body waves: s57,c111;Mantle waves: s70,c160; Half duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}2.16±.04; $M_{\theta\theta}$-2.24±.04; $M_{\phi\phi}$0.07±.03; $M_{r\theta}$2.30±.09; $M_{\theta\phi}$-0.37±.03; $M_{\phi r}$0.76±.10; Best double couple: $M_0$3.293×10^{17} NP1: ϕ_s269°, δ22°, λ104°. NP2:ϕ_s74°, δ69°, λ85°. Principal axes: T 3.242, Plg66°, Azm335°; N .097, Plg5°, Azm76°; P -3.343, Plg24°, Azm168°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 14 22:49:18.0±0.2, **51.10N**±0.04×**179.42E**±0.02, **h46**^{km}, **h46**^{km}±2.5^{km}**:pP-P**, **n770**, σ**0^{s}97**/734, **mb5.2**/249, **MS5.1**/177, **74C-24D**, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.19**	**71**	P	**P**	**22 49 53.7**	**+0.9**
KIKV	**Kanaga Island**	**2.27**	**69**	P	**P**	**22 49 54.8**	**+0.9**
KIWB	**Kanaga Island**	**2.27**	**69**	P	**P**	**22 49 55.3**	**+1.4**
KINC	**Kanaga Island**	**2.31**	**68**	P	**P**	**22 49 55.4**	**+1.0**
KIRH	**Kanaga Island**	**2.32**	**69**	P	**P**	**22 49 55.4**	**+0.8**
KIRH				S	**S**	**22 50 25.7**	**+3.6**
ADAG	**Mount Adagdak**	**2.63**	**69**	P	**P**	**22 49 59.8**	**+0.7**
GSSP	**Great Sitkin S**	**2.92**	**68**	P	**P**	**22 50 03.4**	**+0.2**
GSSP				S	**S**	**22 50 38.3**	**+1.0**
GSTD	**Great Sitkin T**	**2.93**	**69**	P	**P**	**22 50 03.5**	**+0.3**
GSTD				S	**S**	**22 50 38.9**	**+1.4**
GSMY	**Great Sitkin M**	**2.98**	**70**	P	**P**	**22 50 04.0**	**+0.1**
GSMY				S	**S**	**22 50 39.4**	**+0.7**
GSTR	**Great Sitkin T**	**2.99**	**69**	P	**P**	**22 50 04.5**	**+0.3**
GSTR				S	**S**	**22 50 40.2**	**+1.2**
GSIG	**Igitkin Island**	**3.04**	**71**	P	**P**	**22 50 05.0**	**+0.2**
GSIG				S	**S**	**22 50 40.8**	**+0.6**
SMY	**Shemya**	**3.68**	**298**	P	**P**	**22 50 13.1**	**-0.8**
SMY	**Shemya**	**3.68**	**298**	P	**P**	**22 50 14.9**	**+1.1**
ATKA	**Atka Island**	**4.12**	**72**	P	**P**	**22 50 20.0**	**-0.2**
FX1	**Attu Island--F**	**4.26**	**297**	P	**P**	**22 50 21.2**	**-0.9**
FX1						22 51 18.7	
FX1				pmax	pmax		
	comp=Z,82nm,0.3s						
FX1				MLR	MLR		
	comp=Z,1µm,18.1s						
FX1	**Attu Island--F**	**4.26**	**297**	Pn	**P**	**22 50 21.2**	**-0.9**
	comp=Z,82nm,0.3s,baz=182,slow=7.0,SNR=129						
FX1				Sn	**S**	**22 51 18.7**	**+7.6**
FX1				LR	LR	22 51 53.1	
	comp=Z,1µm,18.1s,baz=351,slow=38						
FX1	**Attu Island--F**	**4.26**	**297**	P	**P**	**22 50 22.5**	**+0.4**
NIKO	**Nikolski**	**7.47**	**71**	P	**P**	**22 51 06.5**	**-0.6**
OKFG	**Magazine Ridge**	**8.11**	**69**	P	**P**	**22 51 16.4**	**+0.6**
SPIA	**Saint Paul Isl**	**8.59**	**41**	P	**P**	**22 51 23.6**	**+1.1**
MSW	**Makushin Switc**	**8.87**	**66**	P	**P**	**22 51 26.5**	**0.0**
MNAT	**Makushin Natee**	**8.92**	**66**	P	**P**	**22 51 26.8**	**-0.4**
UNV	**Unalaska Valle**	**9.02**	**67**	P	**P**	**22 51 27.9**	**-0.6**
AKUT	**Akutan**	**9.50**	**66**	P	**P**	**22 51 35.8**	**+0.8**
SDPT	**Sand Point**	**12.76**	**63**	*e*P	**P**	**22 52 17.0**	**-2.1**
	comp=Z,19nm,0.3s						
PET	**Petropavlovsk**	**12.92**	**287**	*ce*P	**P**	**22 52 21.5**	**+0.3**
PET				*e*S	**S**	**22 54 45.5**	**+1.2**
PET				pmax	pmax		
	comp=Z,1µm,12.7s						
PET				pmax	pmax		
	comp=Z,1µm,12.6s						
PET				pmax	pmax		
	comp=Z,60nm,0.8s						
PET				smax			
	comp=N,6µm,26.2s						
PET				MLR	MLR		
	comp=Z,5µm,17.0s						
PET	**Petropavlovsk**	**12.92**	**287**	⇑*e*P	**P**	**22 52 21.5**	**+0.3**
	comp=Z,60nm,0.8s						
PET				*e*S	**S**	**22 54 45.5**	**+1.2**
SKR	**Severo-Kuril’s**	**14.70**	**277**	*e*P	**P**	**22 52 38.0**	**-6.5**
SKR				pmax	pmax		
	comp=Z,270nm,1.0s						
SKR				pmax	pmax		
	comp=N,3µm,8.0s						
SKR				pmax	pmax		
	comp=E,4µm,10.0s						
SKR				MLR	MLR		
	comp=Z,8µm,20.0s						
SKR				MLR	MLR		
	comp=N,6µm,16.0s						
SKR				MLR	MLR		
	comp=E,6µm,20.0s						
SKR	**Severo-Kuril’s**	**14.70**	**277**	*e*P	**P**	**22 52 38.0**	**-6.5**
	comp=E,270nm,1.0s						
TNA	**Tin City**	**15.89**	**19**	*e*P	**P**	**22 52 58.4**	**-1.3**
	comp=E,140nm,1.5s						
SVW2	**Sparrevohn**	**17.05**	**44**	*e*P	**P**	**22 53 14.9**	**+0.7**
KDAK	**Kodiak Island**	**17.51**	**57**	*e*P	**P**	**22 53 18.2**	**-1.9**
TTA	**Tatalina**	**17.72**	**39**	*e*P	**P**	**22 53 23.2**	**+0.5**
RSO	**Redoubt South**	**18.10**	**48**	*e*P	**P**	**22 53 28.4**	**+1.0**
BILL	**Bilibino**	**18.17**	**344**	*c i*P	**P**	**22 53 28.7**	**+0.5**
BILL				pmax	pmax		
	comp=Z,84nm,1.2s						
BILL				MLR	MLR		
	comp=Z,5µm,15.0s						
BILL	**Bilibino**	**18.17**	**344**	⇑*i*P	**P**	**22 53 28.7**	**+0.5**
	comp=Z,84nm,1.2s						
MA2	**Magadan**	**18.24**	**309**	*de*P	**P**	**22 53 30.7**	**+1.5**
MA2				*e*		22 56 43.3	
MA2				pmax	pmax		
	comp=Z,20nm,1.1s						
MA2	**Magadan**	**18.24**	**309**	*e*Pr		22 53 30.7	
MA2				*e*		22 56 43.3	
SPU	**Mount Spurr**	**18.66**	**46**	*e*P	**P**	**22 53 33.1**	**-1.1**
SEY	**Seymchan**	**18.72**	**320**	*e*P	**P**	**22 53 33.8**	**-1.1**
SEY				*e*S	**S**	**22 57 00.8**	**+2.3**
SEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
SEY				pmax	pmax		
	comp=E,30nm,0.8s						
SEY				pmax	pmax		
	comp=Z,40nm,0.8s						
SLKM	**Skilak Lake**	**19.32**	**49**	P	**P**	**22 53 40.5**	**-1.2**
SLKM	**Skilak Lake**	**19.32**	**49**	*e*P	**P**	**22 53 39.9**	**-1.8**
PWA	**Palmer West**	**19.81**	**46**	*e*P	**P**	**22 53 46.4**	**-0.6**
PWA				pmax	pmax		
	comp=Z,20nm,0.3s						
IMA	**Indian Mountai**	**20.27**	**32**	*e*P	**P**	**22 53 51.5**	**-0.4**
IMA				pmax	pmax		
	comp=Z,447nm,1.0s						
IMA	**Indian Mountai**	**20.27**	**32**	*e*P	**P**	**22 53 51.5**	**-0.5**
	comp=Z,447nm,1.0s						
SML	**Sawmill**	**20.56**	**46**	P	**P**	**22 53 52.7**	**-2.2**
SML	**Sawmill**	**20.56**	**46**	*e*P	**P**	**22 53 52.1**	**-2.8**
EYAK	**Cordova Ski Ar**	**21.48**	**50**	*e*P	**P**	**22 54 02.2**	**-2.0**
DIV	**Divide**	**21.58**	**49**	*e*P	**P**	**22 54 03.1**	**-2.2**
	comp=Z,106nm,0.5s,mb5.5						
DIV				LR	LR		
	comp=Z,18µm,19.0s,MS5.5						
COLA	**College**	**21.82**	**38**	PFAKE		22 54 20.0	+12
COLA				LR	LR		
	comp=Z,1.0nm,22.0s						
ILAR	**Eielson Array**	**22.16**	**39**	P	**P**	**22 54 08.4**	**-2.6**
	comp=Z,3.1nm,0.5s,baz=244,slow=10,SNR=31						
ILAR				PcP	PcP	22 58 06.6	-1.2
	comp=Z,2.3nm,0.6s,baz=273,slow=2.5,SNR=7.1						
ILAR				ScP		23 01 43.0	
	comp=Z,2.2nm,0.9s,baz=284,slow=3.9,SNR=8.1						
THY	**Trims Highway**	**22.17**	**43**	*e*P	**P**	**22 54 10.2**	**-1.0**
MIDW	**Midway**	**22.99**	**173**	PFAKE		22 54 30.0	+11
MIDW				LR	LR		
	comp=Z,5µm,19.0s,MS5.0						
YUK	**Yuzh-Kuril’sk**	**23.57**	**266**	⇑*i*P	**P**	**22 54 24.5**	**-0.3**
YUK				*e*		22 54 55.0	
YUK				*e*PPP	PPP	22 55 16.0	+7.7
YUK				*e*S	**S**	**22 58 36.0**	**+3.7**
YUK				*e*SS	SS	22 59 39.4	+17
YUK				pmax	pmax		
	comp=Z,600nm,0.9s,mb6.0						
YUK				pmax	pmax		
	comp=E,240nm,0.7s						
YUK				pmax	pmax		
	comp=Z,3µm,2.2s						
YUK				pmax	pmax		
	comp=N,2µm,3.0s						
YUK				pmax	pmax		
	comp=E,3µm,3.0s						
YUK				smax			
	comp=N,3µm,3.0s						
YUK				smax			
	comp=E,2µm,3.0s						
YUK				MLR	MLR		
	comp=E,5µm,19.0s						
YUK				MLR	MLR		
	comp=Z,4µm,19.0s,MS4.9						
YUK	**Yuzh-Kuril’sk**	**23.57**	**266**	⇑*i*P	**P**	**22 54 24.5**	**-0.3**
	comp=Z,600nm,0.9s,mb6.0						
YUK				*e*		22 54 55.0	
YUK				*e*PPP	PPP	22 55 16.0	+7.7
YUK				*e*S	**S**	**22 58 36.0**	**+3.7**
YUK				*e*SS	SS	22 59 39.4	+17
YUK				LR	LR		
	comp=Z,4µm,19.0s,MS4.9						
YSS	**Yuzh-Sakhalins**	**24.23**	**275**	α*e*P	**P**	**22 54 32.6**	**+1.4**
YSS				*e**PP		22 54 41.4	
YSS				*e**SP		22 54 48.3	
YSS				*e*		22 55 04.0	
YSS				PPP	PPP	22 55 17.5	-0.1
YSS				*e*S	**S**	**22 58 51.0**	**+7.3**
YSS				*e*		22 59 08.0	
YSS				SS	SS	22 59 35.0	-3.7
YSS				pmax	pmax		
	comp=Z,180nm,1.1s,mb5.4						
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=E,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**24.23**	**275**	*e*Pcu		22 54 32.6	
	comp=E,180nm,1.1s						
YSS				*e*pP		22 54 41.4	
YSS				*e*sP		22 54 48.3	
YSS				*e*		22 55 04.0	

YSS				PPP	PPP	22 55 17.5	-0.1
YSS				*e*S	**S**	**22 58 51.0**	**+7.3**
YSS				*e*		22 59 08.0	
YSS				SS	SS	22 59 35.0	-3.7
ASAJ	**Asahikawa**	**25.58**	**269**	P	**P**	**22 54 44.9**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,225nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,2µm,18.2s						
ASAJ	**Asahikawa**	**25.58**	**269**	P	**P**	**22 54 44.9**	**+0.7**
	comp=Z,225nm,0.9s,mb5.7,baz=61,slow=4.3,SNR=61						
ASAJ				LR	LR	23 04 11.8	
	comp=Z,2µm,18.2s,MS4.8,baz=80,slow=35						
SIT	**Sitka**	**26.80**	**59**	PFAKE		22 55 10.0	+15
SIT				LR	LR		
	comp=Z,5µm,21.0s,MS5.1						
INK	**Inuvik**	**28.33**	**35**	P	**P**	**22 55 07.7**	**-1.4**
INK						22 58 20.5	
INK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
INK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
INK				MLR	MLR		
	comp=Z,3µm,19.3s						
INK	**Inuvik**	**28.33**	**35**	P	**P**	**22 55 07.7**	**-1.4**
	comp=Z,10nm,0.7s,mb4.6,baz=244,slow=7.7,SNR=17						
INK				PcP	PcP	22 58 20.5	-0.7
	comp=Z,6.2nm,0.6s,baz=299,slow=1.9,SNR=6.0						
INK				LR	LR	23 08 22.6	
	comp=Z,3µm,19.3s,MS5.0,baz=241,slow=41						
INK	**Inuvik**	**28.33**	**35**	*e*P	**P**	**22 55 07.6**	**-1.4**
	comp=Z,50nm,1.0s,mb5.1						
YAK	**Yakutsk**	**28.76**	**312**	*e*P	**P**	**22 55 10.6**	**-2.4**
YAK				*e**PP	pP	22 55 18.4	-6.7
YAK				*e*		22 56 18.8	
YAK				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,30nm,1.1s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,13nm,1.1s						
YAK				MLR	MLR		
	comp=Z,2µm,17.0s,MS4.9						
YAK				MLR	MLR		
	comp=N,889nm,16.0s,MS4.8						
YAK				MLR	MLR		
	comp=E,2µm,16.0s,MS4.8						
YAK	**Yakutsk**	**28.76**	**312**	*e*P	**P**	**22 55 10.6**	**-2.4**
	comp=E,46nm,0.9s,mb5.2						
YAK				*e*pP	pP	22 55 18.4	-6.7
YAK				*e*		22 56 18.8	
YAK				LR	LR		
	comp=Z,2µm,17.0s,MS4.9						
DLBC	**Dease Lake**	**29.44**	**56**	P	**P**	**22 55 19.7**	**+0.6**
	comp=Z,2.4nm,0.8s,baz=180,slow=24,SNR=4.6						
DLBC				LR	LR	23 07 37.1	
	comp=Z,5µm,20.8s,MS5.1,baz=274,slow=38						
KLR	**Kul’dur**	**30.18**	**285**	⇓*e*P	**P**	**22 55 22.0**	**-3.7**
KLR				*e*		22 56 18.0	
KLR				*e*S	**S**	**23 00 20.0**	**-0.4**
KLR				*e*		23 01 57.0	
KLR				pmax	pmax		
	comp=N,72nm,0.9s						
KLR				pmax	pmax		
	comp=E,36nm,0.9s						
KLR				pmax	pmax		
	comp=Z,110nm,0.9s,mb5.6						
KLR				smax			
	comp=N,95nm,2.6s						
KLR				smax			
	comp=E,76nm,2.6s						
KLR				MLR	MLR		
	comp=Z,2µm,15.0s,MS4.9						
TIXI	**Tiksi**	**30.33**	**331**	*e*P	**P**	**22 55 21.7**	**-5.2**
TIXI				*e*		22 56 29.5	
TIXI				*e*S	**S**	**23 00 13.4**	**-9.2**
TIXI				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.0						
TIXI	**Tiksi**	**30.33**	**331**	*e*P	**P**	**22 55 21.7**	**-5.2**
	comp=Z,12nm,1.1s,mb4.5						
TIXI				*e*		22 56 29.5	
TIXI				*e*S	**S**	**23 00 13.4**	**-9.2**
CLNS	**Chul’man**	**31.84**	**302**	*e*P	**P**	**22 55 33.1**	**-7.2**
CLNS				*e*		22 58 26.9	
CLNS				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.0						
CLNS				pmax	pmax		
	comp=N,15nm,0.9s						
CLNS				pmax	pmax		
	comp=E,17nm,1.0s						
CLNS				pmax	pmax		
	comp=N,18nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
CLNS				pmax	pmax		
	comp=E,13nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,5µm,18.0s,MS5.3						
CLNS				MLR	MLR		
	comp=N,1µm,14.0s,MS4.7						
CLNS				MLR	MLR		
	comp=E,700nm,18.0s,MS4.7						
MJAR	**Matsushiro Arr**	**32.64**	**260**	P	**P**	**22 55 47.9**	**+0.4**
	comp=E,9.2nm,0.9s,mb4.7,baz=48,slow=8.6,SNR=21						
MJAR				PcP	PcP	22 58 31.9	-0.9
	comp=E,3.4nm,0.6s,baz=20,slow=1.5,SNR=7.4						
MJAR				ScP		23 02 15.5	
	comp=E,1.2nm,0.7s,baz=57,slow=3.9,SNR=5.5						
MJAR				LR	LR	23 08 19.7	
	comp=E,2µm,18.2s,MS4.8,baz=60,slow=35						
MAJO	**Matsushiro**	**32.64**	**260**	*e*P	**P**	**22 55 47.3**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
MAJO				MLR	MLR		
	comp=Z,2µm,22.0s,MS4.8						
MAJO	**Matsushiro**	**32.64**	**260**	*e*P	**P**	**22 55 47.3**	**-0.1**
	comp=Z,33nm,1.0s,mb5.2						
MAJO				LR	LR		
	comp=Z,2µm,22.0s,MS4.8						
MAT	**Matsushiro**	**32.64**	**260**	*e*P	**P**	**22 55 48.0**	**+0.5**
MAT				*e*S	**S**	**23 01 03.0**	**+4.0**
MAT				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
MAT				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.8						
MAT	**Matsushiro**	**32.64**	**260**	*e*P	**P**	**22 55 48.0**	**+0.5**
	comp=Z,17nm,0.8s,mb5.0						
MAT				*e*S	**S**	**23 01 03.0**	**+4.0**
MAT				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
MAT	**Matsushiro**	**32.64**	**260**	P	**P**	**22 55 47.9**	**+0.4**
MAT				S	**S**	**23 01 03.0**	**+4.0**
WAKE	**Wake Island**	**33.32**	**202**	PFAKE		22 56 00.0	+6.5
WAKE				LR	LR		
	comp=Z,4µm,20.0s,MS5.1						
MDJ	**Mudanjiang**	**33.51**	**279**	P	**P**	**22 55 53.8**	**-1.1**
MDJ				AP	pP	22 56 04.8	-2.4
MDJ				XP	sP	22 56 09.8	-3.3
MDJ				PP	PP	22 57 09.5	+1.4
MDJ				PCP	PcP	22 58 34.8	-0.3
MDJ				S	**S**	**23 01 11.4**	**-1.2**
MDJ				XS		23 01 31.8	
MDJ				SCP		23 02 15.8	
MDJ				PCS		23 02 20.5	
MDJ				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,340nm,8.8s						
MDJ				LR	LR		
	comp=N,2µm,24.8s,MS5.0						
MDJ				LR	LR		
	comp=E,3µm,21.7s,MS5.0						
MDJ				LR	LR		
	comp=Z,3µm,22.5s,MS5.0						
MDJ	**Mudanjiang**	**33.51**	**279**	P	**P**	**22 55 53.8**	**-1.1**
	comp=Z,35nm,1.0s,mb5.2						
MDJ				pP	pP	22 56 04.8	-2.4
MDJ				sP	sP	22 56 09.8	-3.3
MDJ				PP	PP	22 57 09.5	+1.4
MDJ				PcP	PcP	22 58 34.8	-0.3
MDJ				S	**S**	**23 01 11.4**	**-1.2**
MDJ				sS		23 01 31.8	
MDJ				ScP		23 02 15.8	
MDJ				PcS		23 02 20.5	
MDJ				LR	LR		
	comp=Z,3µm,22.5s,MS5.0						
KIP	**Kipapa**	**34.48**	**141**	P	**P**	**22 56 03.9**	**+0.4**
KIP				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.1						
OBC	**Olympics--Boni**	**36.01**	**72**	P	**P**	**22 56 18.1**	**+1.9**
OOW	**Octopus West**	**36.07**	**73**	P	**P**	**22 56 19.0**	**+2.2**
OCWA	**Octopus Mounta**	**36.08**	**73**	*e*P	**P**	**22 56 16.8**	**0.0**
	comp=Z,29nm,0.8s,mb5.3						
OCWA				LR	LR		
	comp=Z,2µm,22.0s,MS4.8						
YKW3	**Yellowknife Ar**	**36.21**	**46**	*e*P	**P**	**22 56 16.4**	**-1.4**
YKA	**Yellowknife Ar**	**36.23**	**46**	P	**P**	**22 56 16.8**	**-1.1**
	comp=Z,15nm,0.7s,mb5.0,baz=283,slow=8.3,SNR=55						
YKA				PcP	PcP	22 58 42.7	-0.1
	comp=Z,4.2nm,0.7s,baz=291,slow=3.3,SNR=7.4						
YKA				ScP		23 02 26.8	
	comp=Z,3.0nm,0.7s,baz=292,slow=3.1,SNR=8.0						
YKA				LR	LR	23 12 44.8	
	comp=Z,10µm,18.7s,MS5.6,baz=290,slow=39						
YKA	**Yellowknife Ar**	**36.23**	**46**	P	**P**	**22 56 16.8**	**-1.1**
YKA				PcP	PcP	22 58 42.7	-0.1
YKA				ScP		23 02 26.8	
YKA				LR	LR	23 12 44.8	
OSD	**Olympics--Snow**	**36.33**	**72**	P	**P**	**22 56 20.8**	**+1.8**
CN2	**Changchun**	**36.50**	**280**	*e*P	**P**	**22 56 19.3**	**-1.1**
CN2				*e*XP	sP	22 56 36.9	-1.7
CN2				*e*S	**S**	**23 01 58.6**	**-0.1**
CN2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
CN2				AMB	AMB		
	comp=Z,500nm,4.0s						
CN2				LR	LR		
	comp=N,3µm,19.0s,MS5.2						
CN2				LR	LR		
	comp=E,3µm,19.0s,MS5.2						
CN2				LR	LR		
	comp=Z,4µm,19.0s,MS5.2						
CN2	**Changchun**	**36.50**	**280**	*e*P	**P**	**22 56 19.3**	**-1.1**
	comp=Z,30nm,1.0s,mb5.2						
CN2				*e*sP	sP	22 56 36.9	-1.7
CN2				*e*S	**S**	**23 01 58.6**	**-0.1**
CN2				LR	LR		
	comp=Z,4µm,19.0s,MS5.2						
HDW	**Hoodsport**	**36.80**	**72**	P	**P**	**22 56 24.2**	**+1.3**
GNW	**Green Mountain**	**36.97**	**72**	P	**P**	**22 56 25.3**	**+0.9**
POHA	**Pohakuloa**	**36.98**	**138**	PFAKE		22 56 30.0	+5.3
POHA				LR	LR		
	comp=Z,4µm,21.0s,MS5.2						
BMW	**Boistfort Moun**	**37.24**	**74**	P	**P**	**22 56 28.4**	**+1.8**
BOD	**Bodaibo**	**37.24**	**306**	*e*P	**P**	**22 56 25.6**	**-0.9**
BOD				pmax	pmax		
	comp=Z,89nm,0.9s,mb5.6						
BOD	**Bodaibo**	**37.24**	**306**	*e*P	**P**	**22 56 25.6**	**-0.9**
	comp=Z,89nm,0.9s,mb5.6						
HIA	**Hailar**	**37.35**	**291**	*e*P	**P**	**22 56 26.2**	**-1.3**
HIA				pmax	pmax		
	comp=Z,102nm,1.2s						
HIA				MLR	MLR		
	comp=Z,2µm,19.0s						
HIA	**Hailar**	**37.35**	**291**	*e*P	**P**	**22 56 26.2**	**-1.3**
	comp=Z,102nm,1.2s,mb5.5						
HIA				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
HTW	**Haystack Looko**	**37.49**	**71**	P	**P**	**22 56 29.8**	**+1.0**
COR	**Corvallis**	**38.13**	**77**	PFAKE		22 56 40.0	+5.9
COR				LR	LR		
	comp=Z,3µm,22.0s,MS5.0						
TWW	**Teanaway**	**38.35**	**72**	P	**P**	**22 56 37.8**	**+1.9**
TBM	**Table Mountain**	**38.49**	**72**	P	**P**	**22 56 38.6**	**+1.5**
KS15	**Wonju Array Si**	**38.55**	**270**	*e*P	**P**	**22 56 37.8**	**+0.2**
SNY	**Shenyang**	**38.72**	**279**	⇑P	**P**	**22 56 39.5**	**+0.6**
SNY				PP	PP	22 58 15.4	+3.6
SNY				S	**S**	**23 02 35.0**	**+2.6**
SNY				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.2						
SNY				LR	LR		
	comp=N,1µm,17.4s,MS4.9						
SNY				LR	LR		
	comp=E,1µm,21.9s,MS4.9						
SNY				LR	LR		
	comp=Z,2µm,21.3s,MS4.9						
SNY	**Shenyang**	**38.72**	**279**	⇑P	**P**	**22 56 39.5**	**+0.6**
	comp=Z,50nm,1.0s,mb5.2						
SNY				PP	PP	22 58 15.4	+3.6
SNY				S	**S**	**23 02 35.0**	**+2.6**
SNY				LR	LR		
	comp=Z,2µm,21.3s,MS4.9						
BROR	**Big Rock Looko**	**38.82**	**77**	P	**P**	**22 56 42.0**	**+2.1**
BVW	**Beverly**	**39.10**	**72**	P	**P**	**22 56 43.4**	**+1.3**
INCN	**Inchon**	**39.32**	**271**	*e*P	**P**	**22 56 44.7**	**+0.7**
	comp=Z,114nm,1.0s,mb5.6						
INCN				LR	LR		
	comp=Z,954nm,21.0s,MS4.6						
HUMO	**Hull Mountain**	**39.39**	**79**	PFAKE		22 56 50.0	+5.4
HUMO				LR	LR		
	comp=Z,3µm,22.0s,MS5.1						
WRD	**Warden**	**39.54**	**71**	P	**P**	**22 56 46.0**	**+0.2**
CIT	**Chita**	**39.69**	**298**	*e*P	**P**	**22 56 47.0**	**+0.1**
CIT				*e*	pP	22 56 58.8	-0.6
CIT				pmax	pmax		
	comp=Z,169nm,2.4s,mb5.3						
CIT	**Chita**	**39.69**	**298**	*e*P	**P**	**22 56 47.0**	**+0.1**
	comp=Z,169nm,2.4s,mb5.3						
CIT				*e*	pP	22 56 58.8	-0.6
EDM	**Edmonton**	**39.92**	**60**	P	**P**	**22 56 48.3**	**-0.5**
EDM	**Edmonton**	**39.92**	**60**	*e*P	**P**	**22 56 47.3**	**-1.5**
NEW	**Newport**	**40.03**	**68**	*e*P	**P**	**22 56 48.3**	**-1.5**
NEW				pmax	pmax		
	comp=Z,14nm,0.5s						
NEW				MLR	MLR		
	comp=Z,2µm,19.0s						
NEW	**Newport**	**40.03**	**68**	P	**P**	**22 56 50.3**	**+0.5**
	comp=Z,14nm,0.5s,mb5.0,baz=301,slow=8.2,SNR=26						
NEW	**Newport**	**40.03**	**68**	*e*P	**P**	**22 56 48.3**	**-1.4**
	comp=Z,14nm,0.5s,mb5.0						
NEW				LR	LR		
	comp=Z,2µm,19.0s,MS4.9						
YBH	**Yreka Blue Hor**	**40.03**	**80**	*e*P	**P**	**22 56 51.5**	**+1.6**
YBH				pmax	pmax		
	comp=Z,22nm,0.8s						
YBH				MLR	MLR		
	comp=Z,3µm,22.0s						
YBH	**Yreka Blue Hor**	**40.03**	**80**	P	**P**	**22 56 51.8**	**+1.9**
	comp=Z,14nm,0.9s,mb4.7,baz=277,slow=4.2,SNR=12						
YBH	**Yreka Blue Hor**	**40.03**	**80**	*e*P	**P**	**22 56 51.5**	**+1.7**
	comp=Z,22nm,0.8s,mb5.0						
YBH				LR	LR		
	comp=Z,3µm,22.0s,MS5.0						
RES	**Resolute Bay**	**40.46**	**24**	*e*P	**P**	**22 56 52.5**	**-0.6**
RES				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.8						
RES	**Resolute Bay**	**40.46**	**24**	*e*P	**P**	**22 56 52.5**	**-0.6**
	comp=Z,19nm,0.9s,mb4.8						
WDC	**Whiskeytown Da**	**40.78**	**82**	PFAKE		22 57 10.0	+14
WDC				LR	LR		
	comp=Z,1µm,21.0s,MS4.7						
HOPS	**Hopland**	**41.38**	**84**	PFAKE		22 57 10.0	+9.0
HOPS				LR	LR		
	comp=Z,3µm,19.0s,MS5.2						
MOD	**Modoc**	**41.42**	**78**	*e*P	**P**	**22 57 02.2**	**+0.8**
	comp=Z,13nm,0.6s,mb4.7						
MOD				LR	LR		
	comp=Z,3µm,21.0s,MS5.1						
BSMT	**Bassoo Peak**	**41.59**	**68**	P	**P**	**22 57 02.8**	**+0.2**
BMO	**Blue Mountains**	**41.65**	**73**	*e*P	**P**	**22 57 03.4**	**+0.3**
	comp=Z,16nm,0.9s,mb4.7						
BMO				LR	LR		
	comp=Z,2µm,22.0s,MS4.9						
WVOR	**Wild Horse Val**	**42.15**	**77**	*e*P	**P**	**22 57 08.6**	**+1.3**
WVOR				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.0						
WVOR				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.2						
WVOR	**Wild Horse Val**	**42.15**	**77**	*e*P	**P**	**22 57 08.6**	**+1.3**
	comp=Z,30nm,0.8s,mb5.0						
WVOR				LR	LR		
	comp=Z,3µm,22.0s,MS5.2						
BEKR	**Beckwourth**	**42.56**	**81**	*e*P	**P**	**22 57 10.8**	**+0.2**
	comp=Z,11nm,0.9s,mb4.6						
MSO	**Missoula**	**42.61**	**69**	*e*P	**P**	**22 57 10.4**	**-0.5**
	comp=Z,12nm,0.6s,mb4.8						
MSO				LR	LR		
	comp=Z,570nm,21.0s,MS4.4						
CHMT	**Chamberlain Mo**	**42.97**	**68**	*e*P	**P**	**22 57 13.4**	**-0.5**
KWAJ	**Kwajalein Atol**	**43.28**	**197**	PFAKE		22 57 30.0	+13
KWAJ				LR	LR		
	comp=Z,602nm,21.0s,MS4.5						
CMB	**Columbia Colle**	**43.64**	**83**	*e*P	**P**	**22 57 20.3**	**+0.8**
CMB				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
CMB				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.0						
CMB	**Columbia Colle**	**43.64**	**83**	*e*P	**P**	**22 57 20.3**	**+0.9**
	comp=Z,9.5nm,0.8s,mb4.6						
CMB				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
SAO	**San Andreas Ge**	**43.75**	**85**	PFAKE		22 57 30.0	+10
SAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
HRY	**Holter Researc**	**43.91**	**68**	*e*P	**P**	**22 57 20.6**	**-0.9**
HLID	**Hailey**	**44.09**	**73**	*e*P	**P**	**22 57 23.2**	**+0.2**
	comp=Z,35nm,0.9s,mb5.1						
HLID				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
BMN	**Battle Mountai**	**44.17**	**78**	*e*P	**P**	**22 57 24.4**	**+0.7**
BMN				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.8						
BMN				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.1						
BMN	**Battle Mountai**	**44.17**	**78**	*e*P	**P**	**22 57 24.4**	**+0.6**
	comp=Z,14nm,0.7s,mb4.8						
BMN				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
MCMT	**McKenzie Canyo**	**44.33**	**70**	*e*P	**P**	**22 57 24.8**	**-0.1**
BOZ	**Bozeman (W)**	**44.60**	**69**	*e*P	**P**	**22 57 26.8**	**-0.3**
BOZ				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.4						
BOZ				MLR	MLR		
	comp=Z,868nm,20.0s,MS4.7						
BOZ	**Bozeman (W)**	**44.60**	**69**	*e*P	**P**	**22 57 26.8**	**-0.3**
	comp=Z,58nm,0.9s,mb5.4						
BOZ				LR	LR		
	comp=Z,868nm,20.0s,MS4.7						
IRK	**Irkutsk**	**44.65**	**302**	*e*P	**P**	**22 57 26.6**	**-0.7**
IRK				*e*		22 59 09.6	
IRK				pmax	pmax		
	comp=Z,33nm,2.5s,mb4.7						
IRK	**Irkutsk**	**44.65**	**302**	*e*P	**P**	**22 57 26.6**	**-0.7**
	comp=Z,33nm,2.5s,mb4.7						
IRK				*e*		22 59 09.6	
NVAR	**Mina Array Bea**	**44.70**	**81**	P	**P**	**22 57 29.2**	**+1.2**
	comp=Z,8.5nm,0.9s,mb4.6,baz=299,slow=6.6,SNR=30						
NVAR				ScP		23 03 01.4	
	comp=Z,1.1nm,0.7s,baz=270,slow=6.8,SNR=4.2						
NVAR				LR	LR	23 14 15.2	
	comp=Z,1µm,20.0s,MS4.8,baz=270,slow=34						
NVAR	**Mina Array Bea**	**44.70**	**81**	P	**P**	**22 57 29.2**	**+1.2**
NVAR				ScP		23 03 01.4	
NVAR				LR	LR	23 14 15.2	
OMM	**Old Mammoth Mi**	**44.76**	**83**	*e*P	**P**	**22 57 29.0**	**+0.5**
MNV	**Mina**	**44.79**	**81**	*e*P	**P**	**22 57 29.0**	**+0.3**
MNV				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
MNV				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.9						
MNV	**Mina**	**44.79**	**81**	*e*P	**P**	**22 57 29.0**	**+0.3**
	comp=Z,13nm,0.9s,mb4.8						
MNV				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
QLMT	**Earthquake Lak**	**45.17**	**70**	*e*P	**P**	**22 57 31.6**	**-0.1**
MTUM	**Tungsten Hills**	**45.20**	**83**	*e*P	**P**	**22 57 33.2**	**+1.2**
FFC	**Flin Flon**	**45.21**	**53**	*e*P	**P**	**22 57 29.9**	**-1.9**
FFC				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
FFC				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.8						
FFC	**Flin Flon**	**45.21**	**53**	*e*P	**P**	**22 57 29.9**	**-1.9**
	comp=Z,5.4nm,0.8s,mb4.4						
FFC				LR	LR		
	comp=Z,1µm,19.0s,MS4.8						
ELK	**Elko**	**45.21**	**77**	*e*P	**P**	**22 57 32.4**	**+0.4**
ELK				pmax	pmax		
	comp=Z,23nm,0.8s						
ELK				MLR	MLR		
	comp=Z,2µm,22.0s						
ELK	**Elko**	**45.21**	**77**	*e*P	**P**	**22 57 32.4**	**+0.4**
	comp=Z,23nm,0.8s,mb5.1						
ELK				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
TLY	**Talaya**	**45.26**	**302**	*e*P	**P**	**22 57 31.6**	**-0.7**
	comp=Z,31nm,0.9s,mb5.1						
TLY				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
ULN	**Ulaanbaatar**	**45.38**	**296**	P	**P**	**22 57 33.4**	**+0.1**
ULN				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.3						
ULN	**Ulaanbaatar**	**45.38**	**296**	⇑*i*P	**P**	**22 57 33.6**	**+0.3**
ULN				LR	LR		
	comp=Z,4µm,19.0s,MS5.4						
YMR	**Madison River**	**45.53**	**70**	*e*P	**P**	**22 57 34.7**	**+0.2**
	comp=Z,82nm,1.0s,mb5.6						
TPH	**Tonopah**	**45.59**	**81**	*e*P	**P**	**22 57 35.2**	**+0.1**
TPH				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
TPH				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.0						
TPH	**Tonopah**	**45.59**	**81**	*e*P	**P**	**22 57 35.2**	**+0.1**
	comp=Z,32nm,1.0s,mb5.2						
TPH				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
YNR	**Norris Junctio**	**45.67**	**69**	*e*P	**P**	**22 57 36.1**	**+0.4**
YFT	**Old Faithful**	**45.73**	**70**	*e*P	**P**	**22 57 37.2**	**+1.1**
SONM	**Songino Array**	**45.77**	**296**	P	**P**	**22 57 36.9**	**+0.5**
	comp=Z,24nm,0.9s,mb5.1,baz=54,slow=10,SNR=114						
SONM				LR	LR	23 18 33.6	
	comp=Z,6µm,18.1s,MS5.6,baz=56,slow=38						
LKWY	**Lake**	**45.92**	**69**	*e*P	**P**	**22 57 38.1**	**+0.5**
LKWY				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.5						
LKWY				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.1						
LKWY	**Lake**	**45.92**	**69**	*e*P	**P**	**22 57 38.1**	**+0.5**
	comp=Z,52nm,0.9s,mb5.5						
LKWY				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
IMW	**Indian Meadow**	**45.98**	**70**	*e*P	**P**	**22 57 38.5**	**+0.4**
	comp=Z,41nm,0.9s,mb5.4						
RRI2	**Red Ridge**	**46.07**	**71**	*e*P	**P**	**22 57 39.3**	**+0.5**
	comp=Z,32nm,0.8s,mb5.3						
TIA	**Tai’an**	**46.09**	**276**	⇑P	**P**	**22 57 39.0**	**-0.1**
TIA				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.5						
TIA	**Tai’an**	**46.09**	**276**	⇑P	**P**	**22 57 39.0**	**-0.1**
	comp=Z,56nm,0.8s,mb5.5						
HVU	**Hansel Valley**	**46.10**	**74**	P	**P**	**22 57 39.7**	**+0.6**
HVU	**Hansel Valley**	**46.10**	**74**	*e*P	**P**	**22 57 39.3**	**+0.2**
	comp=Z,27nm,1.0s,mb5.1						
ZAK	**Zakamensk**	**46.13**	**300**	⇓*i*P	**P**	**22 57 39.3**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
ZAK	**Zakamensk**	**46.13**	**300**	⇓*i*P	**P**	**22 57 39.3**	**+0.1**
	comp=Z,22nm,1.2s,mb5.0						
MOOW	**Moose Ponds**	**46.18**	**71**	*e*P	**P**	**22 57 39.2**	**-0.5**
	comp=Z,15nm,0.9s,mb4.9						
TPAW	**Teton Pass**	**46.21**	**71**	*e*P	**P**	**22 57 40.3**	**+0.4**
	comp=Z,14nm,0.6s,mb5.1						
SNOW	**Snow King Moun**	**46.34**	**71**	*e*P	**P**	**22 57 41.5**	**+0.6**
	comp=Z,25nm,0.8s,mb5.2						
LOHW	**Long Hollow**	**46.34**	**71**	*e*P	**P**	**22 57 40.9**	**-0.1**
	comp=Z,14nm,0.8s,mb5.0						
TRCR	**Troy Canyon**	**46.44**	**80**	*e*P	**P**	**22 57 41.8**	**0.0**
AHID	**Auburn Hatcher**	**46.54**	**72**	*e*P	**P**	**22 57 42.7**	**+0.2**
	comp=Z,31nm,0.8s,mb5.3						
AHID				LR	LR		
	comp=Z,2µm,22.0s,MS4.9						
SPUT	**South Promonto**	**46.58**	**74**	*e*P	**P**	**22 57 43.1**	**+0.3**
GUMO	**Guam**	**46.67**	**229**	PFAKE		22 57 50.0	+6.1
GUMO				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
MOY	**Mondy**	**46.68**	**303**	*e*P	**P**	**22 57 43.7**	**+0.2**
MOY				pmax	pmax		
	comp=Z,75nm,2.2s,mb5.2						
MOY	**Mondy**	**46.68**	**303**	*e*P	**P**	**22 57 43.7**	**+0.2**
	comp=Z,75nm,2.2s,mb5.2						
HHC	**Hu-ho-hao-te**	**46.69**	**285**	*e*P	**P**	**22 57 44.4**	**+0.7**

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HHC                           AP     pP     22 57 57.0 +0.7
HHC                           XP     sP     22 58 03.1 +1.3
HHC                           PCP    PcP    22 59 19.4 +2.2
HHC                           PP     PP     22 59 29.1  -4.4
HHC                           PCS           23 03 10.5
HHC                           S      S      23 04 27.8  -1.2
HHC                           XS            23 04 46.8
HHC                           SCS    ScS    23 07 29.8  -1.9
HHC                           SS     SS     23 07 48.8 +0.6
HHC                           AMB    AMB
      comp=Z,70nm,1.1s,mb5.5
HHC                           AMB    AMB
      comp=Z,500nm,6.1s
HHC                           LR     LR
      comp=N,2µm,17.8s,MS5.2
HHC                           LR     LR
      comp=E,1µm,17.8s,MS5.2
HHC                           LR     LR
      comp=Z,2µm,19.0s,MS5.0
HHC   Hu-ho-hao-te   46.69 285 eP    P      22 57 44.4 +0.7
      comp=Z,76nm,1.1s,mb5.5
HHC                           pP     pP     22 57 57.0 +0.7
HHC                           sP     sP     22 58 03.1 +1.3
HHC                           PcP    PcP    22 59 19.4 +2.2
HHC                           PP     PP     22 59 29.1  -4.4
HHC                           PcS           23 03 10.5
HHC                           S      S      23 04 27.8  -1.2
HHC                           sS            23 04 46.8
HHC                           ScS    ScS    23 07 29.8  -1.9
HHC                           SS     SS     23 07 48.8 +0.6
HHC                           LR     LR
      comp=Z,2µm,19.0s,MS5.0
HWUT  Hardware Ranch 46.94  73 eP    P      22 57 45.8 +0.1
      comp=Z,15nm,0.9s,mb4.9
HWUT                          LR     LR
      comp=Z,2µm,19.0s,MS5.0
FCC   Fort Churchill 46.96  45  P    P      22 57 44.5  -1.0
FCC                           pmax   pmax
      comp=Z,14nm,0.9s,mb4.9
FCC   Fort Churchill 46.96  45 eP    P      22 57 43.8  -1.7
      comp=Z,14nm,0.8s,mb5.0
LAO   LASA Array     47.15  65 eP    P      22 57 46.6  -0.6
      comp=Z,29nm,0.9s,mb5.2
LAO                           LR     LR
      comp=Z,2µm,19.0s,MS5.1
DGMT  Dagmar         47.30  62 eP    P      22 57 46.8  -1.6
      comp=Z,8.4nm,0.6s,mb4.8
DGMT                          LR     LR
      comp=Z,2µm,19.0s,MS5.1
TCUT  Toone Canyon   47.32  74 eP    P      22 57 49.0 +0.3
CTU   Camp Tracy     47.37  75 eP    P      22 57 49.1 +0.1
      comp=Z,20nm,0.8s,mb5.1
BW06  Boulder Array  47.46  71 eP    P      22 57 49.5  -0.3
      comp=Z,70nm,0.8s,mb5.6
BW06                          LR     LR
      comp=Z,1µm,22.0s,MS4.9
PDAR  Pinedale Array 47.46  71  P    P      22 57 49.8   0.0
      comp=Z,75nm,0.9s,mb5.6,baz=298,slow=3.5,SNR=342
PDAR                          LR     LR     23 15 32.4
      comp=Z,1µm,21.3s,MS4.8,baz=314,slow=33
MWC   Mount Wilson   47.50  86  P    P      22 57 50.2   0.0
MWC   Mount Wilson   47.50  86 eP    P      22 57 49.8  -0.4
JLU   Jordanelle     47.61  74 eP    P      22 57 51.1 +0.2
NLU   North Lily Min 47.62  76 eP    P      22 57 51.4 +0.3
NJ2   Nanjing        47.70 271 eP    P      22 57 51.4  -0.4
NJ2                           AP     pP     22 58 03.9  -0.5
NJ2                           XP     sP     22 58 09.1  -0.8
NJ2                           PP     PP     22 59 42.9  -0.1
NJ2                           S      S      23 04 48.0 +4.5
NJ2                           XS            23 05 09.0
NJ2                           AMB    AMB
      comp=Z,40nm,0.8s,mb5.5
NJ2                           AMB    AMB
      comp=Z,430nm,5.5s
NJ2                           LR     LR
      comp=N,2µm,25.6s,MS5.2
NJ2                           LR     LR
      comp=E,2µm,24.4s,MS5.2
NJ2                           LR     LR
      comp=Z,1µm,27.1s,MS4.8
NJ2   Nanjing        47.70 271 eP    P      22 57 51.4  -0.4
      comp=Z,40nm,0.8s,mb5.5
NJ2                           pP     pP     22 58 03.9  -0.5
NJ2                           sP     sP     22 58 09.1  -0.8
NJ2                           PP     PP     22 59 42.9  -0.1
NJ2                           S      S      23 04 48.0 +4.5
NJ2                           sS            23 05 09.0
NJ2                           LR     LR
      comp=Z,1µm,27.1s,MS4.8
BTO   Baotou         47.77 286 eP    P      22 57 53.0 +0.8
BTO                           S      S      23 04 47.1 +2.7
DAU   Daniels Canyon 47.84  75  P    P      22 57 53.7 +0.9
DAU   Daniels Canyon 47.84  75 eP    P      22 57 53.0 +0.3
MPU   Maple Canyon   47.85  75 eP    P      22 57 53.5 +0.6
      comp=Z,8.1nm,0.7s,mb4.9
ARUT  Antelope Range 48.11  79 eP    P      22 57 55.2 +0.3
MVU   Marysvale      48.42  77 eP    P      22 57 57.6 +0.3
      comp=Z,20nm,0.9s,mb5.2
MVU                           LR     LR
      comp=Z,3µm,22.0s,MS5.2
MSU   Marysvale      48.44  77  P    P      22 57 58.5 +1.1
MSU   Marysvale      48.44  77 eP    P      22 57 57.5 +0.1
TMUT  Trail Mountain 48.55  76 eP    P      22 57 58.5 +0.2
NEN   Nelson         48.59  82 eP    P      22 57 58.6   0.0
LDFC  Landfair       48.80  83 eP    P      22 57 59.5  -0.7
PFO   Pinyon Flat Ob 48.91  85 eP    P      22 58 00.4  -0.7
PFO                           pmax   pmax
      comp=Z,11nm,0.9s,mb4.9
PFO                           MLR    MLR
      comp=Z,450nm,19.0s,MS4.5
PFO   Pinyon Flat Ob 48.91  85 eP    P      22 58 00.3  -0.8
      comp=Z,12nm,0.9s,mb4.9
PFO                           LR     LR
      comp=Z,450nm,19.0s,MS4.5
SRU   San Rafael     49.08  75  P    P      22 58 02.7 +0.3
SRU   San Rafael     49.08  75 eP    P      22 58 02.4   0.0
      comp=Z,21nm,0.6s,mb5.3
BAR   Barrett        49.38  86 eP    P      22 58 04.5  -0.3
RWWY  Rawlins        49.50  71 eP    P      22 58 04.9  -0.7
      comp=Z,43nm,1.0s,mb5.4
RSSD  Black Hills    49.90  66 eP    P      22 58 07.4  -1.2
RSSD                          pmax   pmax
      comp=Z,6.0nm,0.7s,mb4.7
RSSD                          MLR    MLR
      comp=Z,1µm,20.0s,MS5.0
RSSD  Black Hills    49.90  66 eP    P      22 58 07.4  -1.2
      comp=Z,5.6nm,0.7s,mb4.7
RSSD                          LR     LR
      comp=Z,1µm,20.0s,MS5.0
KBS   Kingsbay       50.02 357 eP    P      22 58 08.1  -1.0
KBS                           pmax   pmax
      comp=Z,77nm,0.8s,mb5.8
KBS                           MLR    MLR
      comp=Z,2µm,19.0s,MS5.2
KBS   Kingsbay       50.02 357 eP    P      22 58 08.1  -1.0
      comp=Z,77nm,0.8s,mb5.8
KBS                           LR     LR
      comp=Z,2µm,19.0s,MS5.2
KBS   Kingsbay       50.02 357 eP    P      22 58 09.4 +0.3
KBS                          eS      S      23 05 17.3 +2.0
KBS                           AMS    AMS    23 21 13.4
      comp=Z,1µm,18.2s,MS5.0
PV10  Paradox Valley 50.45  75 eP    P      22 58 12.7  -0.2
ULM   Lac du Bonnet  50.77  56  P    P      22 58 13.4  -1.8
      comp=Z,3.4nm,0.5s,mb4.6,baz=304,slow=5.4,SNR=4.4
ULM                           LR     LR     23 19 54.0
      comp=Z,2µm,21.1s,MS5.2,baz=316,slow=36
PHWY  Pilot Hill     50.78  70 eP    P      22 58 14.4  -0.9
WUAZ  Wupatki        50.84  80 eP    P      22 58 15.9   0.0
      comp=Z,35nm,0.9s,mb5.3
WUAZ                          LR     LR
      comp=Z,3µm,19.0s,MS5.3
PV01  Paradox Valley 50.88  75 eP    P      22 58 15.5  -0.7
TATO  Taipei         50.97 262  PFAKE       22 58 30.0  +13
TATO                          LR     LR
      comp=Z,2µm,19.0s,MS5.1
RW3   Ridgway        51.35  74  P    P      22 58 20.4 +0.7
RW3   Ridgway        51.35  74 eP    P      22 58 19.8 +0.1
WHN   Wuhan          51.56 273 eP    P      22 58 21.0  -0.4
WHN                           LR     LR
      comp=Z,2µm,15.0s,MS5.3
ISCO  Idaho Springs  51.62  72 eP    P      22 58 21.7   0.0
ISCO                          pmax   pmax
      comp=Z,24nm,1.0s,mb5.1
ISCO                          MLR    MLR
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      comp=Z,2µm,20.0s,MS5.0
ISCO  Idaho Springs  51.62  72 eP    P      22 58 21.7   0.0
      comp=Z,24nm,1.0s,mb5.1
ISCO                          LR     LR
      comp=Z,2µm,20.0s,MS5.0
HSP   Hornsund       51.76 355 eP    P      22 58 21.1  -1.2
DAG   Danmarks Havn  51.88   5⇓eP    P      22 58 22.0  -1.2
DAG                           pmax   pmax
      comp=Z,13nm,0.8s,mb4.9
DAG   Danmarks Havn  51.88   5⇓eP    P      22 58 22.0  -1.2
      comp=Z,13nm,0.8s,mb4.9
DAG   Danmarks Havn  51.88   5⇓iP    P      22 58 22.0  -1.2
      comp=Z,13nm,0.8s,mb4.9
XAN   Xi'an          52.61 280  P    P      22 58 28.3  -0.9
XAN                           AP     pP     22 58 43.4 +1.4
XAN                           PP     PP     23 00 30.6 +0.9
XAN                           S      S      23 05 51.1  -0.4
XAN                           AMB    AMB
      comp=Z,30nm,0.9s,mb5.2
XAN                           LR     LR
      comp=N,470nm,18.7s,MS4.9
XAN                           LR     LR
      comp=E,910nm,21.5s,MS4.9
XAN                           LR     LR
      comp=Z,1µm,22.7s,MS4.9
XAN   Xi'an          52.61 280  P    P      22 58 28.3  -0.9
      comp=Z,37nm,0.9s,mb5.3
XAN                           pP     pP     22 58 43.4 +1.4
XAN                           PP     PP     23 00 30.6 +0.9
XAN                           S      S      23 05 51.1  -0.4
XAN                           LR     LR
      comp=Z,1µm,22.7s,MS4.9
SDCO  Great Sand Dun 53.00  74 eP    P      22 58 31.9  -0.1
      comp=Z,22nm,1.0s,mb5.0
SDCO                          LR     LR
      comp=Z,2µm,19.0s,MS5.2
TUC   Tucson         53.33  82 eP    P      22 58 33.8  -0.8
TUC                           pmax   pmax
      comp=Z,11nm,1.0s,mb4.7
TUC                           MLR    MLR
      comp=Z,1µm,19.0s,MS4.9
TUC   Tucson         53.33  82 eP    P      22 58 33.8  -0.8
      comp=Z,11nm,1.0s,mb4.7
TUC                           LR     LR
      comp=Z,1µm,19.0s,MS4.9
NVS   Novosibirsk    53.57 314⇑iP    P      22 58 33.6  -2.4
NVS                          eS      S      23 06 04.3 +0.1
NVS                          e              23 08 20.3
NVS                           pmax   pmax
      comp=Z,86nm,1.7s,mb5.4
NVS                           pmax   pmax
      comp=N,31nm,1.4s
NVS                           pmax   pmax
      comp=E,47nm,1.6s
NVS                           smax
      comp=N,21nm,1.9s
NVS                           smax
      comp=E,14nm,1.6s
NVS   Novosibirsk    53.57 314⇑iP    P      22 58 33.6  -2.4
      comp=E,86nm,1.7s,mb5.4
NVS                          eS      S      23 06 04.3 +0.1
NVS                          e              23 08 20.3
SUMG  Summit         53.83  13 eP    P      22 58 36.7  -1.0
      comp=E,73nm,1.0s,mb5.6
LAZ   Ladron         54.19  78 eP    P      22 58 41.1 +0.2
ANMO  Albuquerque    54.24  77 eP    P      22 58 40.9  -0.4
ANMO                          pmax   pmax
      comp=Z,8.0nm,1.0s
ANMO                          MLR    MLR
      comp=Z,2µm,22.0s
ANMO  Albuquerque    54.24  77 eP    P      22 58 40.9  -0.4
      comp=Z,7.8nm,1.0s,mb4.6
ANMO                          LR     LR
      comp=Z,2µm,22.0s,MS5.1
LZH   Lanzhou        54.38 285 ⇑P    P      22 58 42.6 +0.3
LZH                           AP     pP     22 58 54.6  -0.6
LZH                           XP     sP     22 59 00.5   0.0
LZH                           PP     PP     23 00 46.0   0.0
LZH                           S      S      23 06 14.4  -1.1
LZH                           XS            23 06 33.5
LZH                           SS     SS     23 09 57.0  -0.6
LZH                           AMB    AMB
      comp=Z,110nm,1.5s,mb5.6
LZH                           AMB    AMB
      comp=Z,360nm,4.0s
LZH                           LR     LR
      comp=E,4µm,16.4s
LZH                           LR     LR
      comp=Z,4µm,17.3s,MS5.6
LZH   Lanzhou        54.38 285 ⇑P    P      22 58 42.6 +0.3
      comp=Z,110nm,1.5s,mb5.6
LZH                           pP     pP     22 58 54.6  -0.6
LZH                           sP     sP     22 59 00.5   0.0
LZH                           PP     PP     23 00 46.0   0.0
LZH                           S      S      23 06 14.4  -1.1
LZH                           sS            23 06 33.5
LZH                           SS     SS     23 09 57.0  -0.6
LZH                           LR     LR
      comp=Z,4µm,17.3s,MS5.6
LENM  Lemitar        54.45  78 eP    P      22 58 42.5  -0.3
EYMN  Ely            54.45  56  PFAKE       22 58 50.0 +7.4
EYMN                          LR     LR
      comp=Z,2µm,20.0s,MS5.2
GTA   Gaotai         54.63 291 ⇑P    P      22 58 44.1 +0.1
GTA                           AP     pP     22 58 57.0 +0.1
GTA                           XP     sP     22 59 02.4 +0.2
GTA                           PP     PP     23 00 48.1   0.0
GTA                           S      S      23 06 22.5 +3.8
GTA                           XS            23 06 44.3
GTA                           AMB    AMB
      comp=Z,60nm,0.9s,mb5.6
GTA                           AMB    AMB
      comp=Z,470nm,9.2s
GTA                           LR     LR
      comp=N,2µm,14.9s,MS5.5
GTA                           LR     LR
      comp=E,3µm,16.8s,MS5.5
GTA                           LR     LR
      comp=Z,3µm,15.3s,MS5.5
GTA   Gaotai         54.63 291 ⇑P    P      22 58 44.1 +0.1
      comp=Z,60nm,0.9s,mb5.6
GTA                           pP     pP     22 58 57.0 +0.1
GTA                           sP     sP     22 59 02.4 +0.2
GTA                           PP     PP     23 00 48.1   0.0
GTA                           S      S      23 06 22.5 +3.8
GTA                           sS            23 06 44.3
GTA                           LR     LR
      comp=Z,3µm,15.3s,MS5.5
BNM   Barren Site    54.67  78 eP    P      22 58 44.6 +0.2
ENH   Enshi          54.80 276 eP    P      22 58 43.9  -1.5
      comp=Z,60nm,1.2s,mb5.5
ENH                           LR     LR
      comp=Z,1µm,19.0s,MS5.0
CBKS  Cedar Bluff    55.74  69 eP    P      22 58 51.3  -0.8
CBKS                          pmax   pmax
      comp=Z,61nm,0.8s,mb5.7
CBKS                          MLR    MLR
      comp=Z,1µm,19.0s,MS5.0
CBKS  Cedar Bluff    55.74  69 eP    P      22 58 51.2  -0.8
      comp=Z,61nm,0.8s,mb5.7
CBKS                          LR     LR
      comp=Z,1µm,19.0s,MS5.0
SFJD  Kangerlussuaq  56.32  21 eP    P      22 58 48.0  -7.8
SFJD                         i S     S      23 06 32.1  -8.8
SFJD                          MLR    MLR
      comp=Z,1µm,19.0s,MS5.0
SFJD  Kangerlussuaq  56.32  21 i P   P      22 58 48.0  -7.8
SFJD                         i S     S      23 06 32.1  -8.8
      comp=Z,1µm,19.0s
MNTX  Cornudas Mount 57.10  79 eP    P      22 59 01.1  -0.9
      comp=Z,24nm,1.1s,mb5.1
CPRX  Cap Rock       57.12  77 eP    P      22 59 01.5  -0.5
AMTX  Amarillo       57.20  74 eP    P      22 59 02.0  -0.6
      comp=Z,9.1nm,0.6s,mb5.0
AMTX                          LR     LR
      comp=Z,1µm,22.0s,MS5.0
KSU1  Kansas State U 57.38  67 eP    P      22 59 02.2  -1.6
SCO   Scoresbysund   57.74   8 i P   P      22 59 04.8  -1.1
SCO                           pmax   pmax
      comp=Z,16nm,0.9s,mb5.0
SCO   Scoresbysund   57.74   8 i P   P      22 59 04.8  -1.1
      comp=Z,16nm,0.9s,mb5.0
KEV   Kevo           57.78 349 eP    P      22 59 04.3  -1.9
KEV                           LR     LR
      comp=Z,2µm,21.0s,MS5.2
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CD2   Chengdu        57.93 281  P    P      22 59 07.0  -0.8
CD2                           AP     pP     22 59 20.8   0.0
CD2                           PP     PP     23 01 16.5  -1.5
CD2                           S      S      23 07 06.3 +3.7
CD2                           AMB    AMB
      comp=Z,40nm,0.8s,mb5.5
CD2                           LR     LR
      comp=E,1µm,18.0s
CD2                           LR     LR
      comp=Z,1µm,21.6s,MS5.0
CD2   Chengdu        57.93 281  P    P      22 59 07.0  -0.8
      comp=Z,40nm,0.8s,mb5.5
CD2                           pP     pP     22 59 20.8   0.0
CD2                           PP     PP     23 01 16.5  -1.5
CD2                           S      S      23 07 06.3 +3.7
CD2                           LR     LR
      comp=Z,1µm,21.6s,MS5.0
JMIC  Jan Mayen      58.08   3 eP    P      22 59 08.2   0.0
JMIC                         eS      S      23 07 11.3 +7.2
JMIC                          AMS    AMS    23 29 35.6
      comp=Z,541nm,19.6s,MS4.7
ARCES ARCESS Array B 58.17 350  P    P      22 59 07.2  -1.7
      comp=Z,13nm,0.8s,mb5.0,baz=24,slow=8.0,SNR=21
JFWS  Jewell Farm    58.40  60  PFAKE       22 59 20.0 +9.1
JFWS                          LR     LR
      comp=Z,2µm,20.0s,MS5.2
TRO   Tromso         58.73 352⇑iP    P      22 59 10.1  -2.7
TRO                           pmax   pmax
      comp=Z,34nm,1.5s,mb5.2
TRO                           MLR    MLR
      comp=Z,940µm,20.3s
TRO   Tromso         58.73 352⇑iP    P      22 59 10.1  -2.7
      comp=Z,34nm,1.5s,mb5.2
TRO                           LR     LR
      comp=Z,940µm,20.3s
TRO   Tromso         58.73 352⇑iP    P      22 59 10.1  -2.7
TRO                           AMb    AMB    22 59 12.4
      comp=Z,34nm,1.5s,mb5.2
TRO                          eS      S      23 07 18.6 +6.0
TRO                           AMS    AMS    23 25 37.2
      comp=Z,940nm,20.3s,MS4.9
WMOK  Wichita Mounta 59.05  72 eP    P      22 59 14.5  -1.0
WMOK                          pmax   pmax
      comp=Z,26nm,0.8s,mb5.3
WMOK                          MLR    MLR
      comp=Z,834nm,21.0s,MS4.8
WMOK  Wichita Mounta 59.05  72 eP    P      22 59 14.5  -0.9
      comp=Z,26nm,0.8s,mb5.3
WMOK                          LR     LR
      comp=Z,834nm,21.0s,MS4.8
GYA   Guiyang        59.24 275⇑iP    P      22 59 15.8  -1.1
GYA                           AP     pP     22 59 28.4  -1.5
GYA                           XP     sP     22 59 34.6  -0.7
GYA                           S      S      23 07 19.4  -0.3
GYA                           AMB    AMB
      comp=Z,30nm,1.0s,mb5.3
GYA                           AMB    AMB
      comp=Z,1µm,4.2s
GYA                           LR     LR
      comp=N,810nm,16.4s,MS5.1
GYA                           LR     LR
      comp=E,790nm,17.3s,MS5.1
GYA                           LR     LR
      comp=Z,970nm,20.9s,MS4.9
GYA   Guiyang        59.24 275⇑iP    P      22 59 15.8  -1.1
      comp=Z,30nm,1.0s,mb5.3
GYA                           pP     pP     22 59 28.4  -1.5
GYA                           sP     sP     22 59 34.6  -0.7
GYA                           S      S      23 07 19.4  -0.3
GYA                           LR     LR
      comp=Z,970nm,20.9s,MS4.9
MKAR  Makanchi Array 59.32 308 i P   P      22 59 15.6  -1.6
MKAR                          pmax   pmax
      comp=Z,11nm,0.4s
MKAR  Makanchi Array 59.32 308  P    P      22 59 15.7  -1.5
      comp=Z,18nm,0.5s,mb5.4,baz=50,slow=6.3,SNR=345
MKAR                          LR     LR     23 26 18.7
      comp=Z,2µm,19.7s,MS5.3,baz=21,slow=38
LTX   Lajitas        59.80  80  P    P      22 59 20.7  -0.1
LTX                           pmax   pmax
      comp=Z,6.0nm,0.6s,mb4.8
LTX   Lajitas        59.80  80 eP    P      22 59 20.0  -0.8
      comp=Z,6.1nm,0.6s,mb4.8
LTX                           LR     LR
      comp=Z,1µm,19.0s,MS5.1
TXAR  Lajitas Array  59.80  80  P    P      22 59 20.6  -0.2
      comp=Z,2.9nm,0.5s,mb4.5,baz=285,slow=4.5,SNR=10.0
TXAR                          LR     LR     23 25 41.2
      comp=Z,1µm,18.0s,MS5.1,baz=335,slow=37
SOKR  Solikamsk      60.33 330⇑iP    P      22 59 20.0  -3.9
SOKR                          pmax   pmax
      comp=Z,40nm,1.1s,mb5.4
SOKR                          MLR    MLR
      comp=Z,1µm,17.0s,MS5.2
SOKR  Solikamsk      60.33 330⇑iP    P      22 59 20.0  -3.9
      comp=Z,40nm,1.1s,mb5.4
SOKR                          LR     LR
      comp=Z,1µm,17.0s,MS5.2
LOF   Lofoten        60.62 354⇑iP    P      22 59 23.8  -2.1
      comp=Z,52nm,1.7s,mb5.4
LOF   Lofoten        60.62 354⇑iP    P      22 59 23.8  -2.1
LOF                           AMb    AMB    22 59 33.9
      comp=Z,52nm,1.7s,mb5.4
SCHQ  Schefferville  60.91  37  P    P      22 59 26.6  -1.4
      comp=Z,19nm,0.9s,mb5.2,baz=319,slow=5.5,SNR=20
SCHQ                          LR     LR     23 28 12.7
      comp=Z,2µm,19.2s,MS5.3,baz=53,slow=38
CCM   Cathedral Cave 61.17  64  PFAKE       22 59 40.0  +10
CCM                           LR     LR
      comp=Z,766nm,19.0s,MS4.9
SVE   Sverdlovsk     61.22 327 eP    P      22 59 30.0   0.0
SVE                          ePCP    pP     22 59 45.0 +1.9
SVE                          e              23 00 08.6
SVE                          eS      S      23 07 44.0  -0.7
SVE                           pmax   pmax
      comp=Z,140nm,2.2s,mb5.7
SVE   Sverdlovsk     61.22 327 eP    P      22 59 30.0   0.0
      comp=Z,140nm,2.2s,mb5.7
SVE                          ePcP    pP     22 59 45.0 +1.9
SVE                          e              23 00 08.6
SVE                          eS      S      23 07 44.0  -0.7
SLM   Saint Louis    61.34  63 eP    P      22 59 28.8  -2.2
FVM   French Village 61.68  64  P    P      22 59 31.7  -1.7
FVM                           pmax   pmax
      comp=Z,10.0nm,0.5s,mb5.2
FVM   French Village 61.68  64 eP    P      22 59 31.3  -2.1
      comp=Z,9.6nm,0.4s,mb5.3
MELSS Ber_school_2   61.86 354 eP    P      22 59 32.7  -1.5
ARU   Arti           62.24 327⇑iP    P      22 59 35.8  -1.1
ARU                          i       pP     22 59 50.5 +0.5
ARU                          eSP     sP     22 59 58.0 +2.7
ARU                          i              23 00 15.1
ARU                          eS      S      23 07 58.2 +0.6
ARU                          e              23 09 23.3
ARU                          eSS     SS     23 12 01.8  -1.3
ARU                          eSSS    SSS    23 14 46.1 +0.1
ARU                           pmax   pmax
      comp=Z,64nm,0.9s,mb5.8
ARU                           MLR    MLR
      comp=N,2µm,20.0s,MS5.4
ARU                           MLR    MLR
      comp=Z,3µm,20.0s,MS5.4
ARU                           MLR    MLR
      comp=E,2µm,19.0s,MS5.4
ARU   Arti           62.24 327⇑iP    P      22 59 35.8  -1.1
      comp=E,64nm,0.9s,mb5.8
ARU                          i       pP     22 59 50.5 +0.5
ARU                          eSP     sP     22 59 58.0 +2.7
ARU                          i              23 00 15.1
ARU                          eS      S      23 07 58.2 +0.6
ARU                          e              23 09 23.3
ARU                          eSS     SS     23 12 01.8  -1.3
ARU                          eSSS    SSS    23 14 46.1 +0.1
ARU                           LR     LR
      comp=Z,3µm,20.0s,MS5.4
AAM   Ann Arbor      62.35  56  PFAKE       22 59 50.0  +12
AAM                           LR     LR
      comp=Z,2µm,20.0s,MS5.2
HNR   Honiara        62.60 202  PFAKE       22 59 50.0  +10
HNR                           LR     LR
      comp=Z,2µm,20.0s,MS5.2
QIZ   Qiongzhong     62.63 267  P    P      22 59 39.1  -0.9
QIZ                           AP     pP     22 59 52.9  -0.2
QIZ                           S      S      23 08 05.8 +2.8
QIZ                           XS            23 08 23.5
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QIZ				SS	SS	23 12 08.5	-1.4
QIZ				AMB	AMB		
	comp=Z,330nm,11.7s						
QIZ				LR	LR		
	comp=E,560nm,19.2s						
QIZ				LR	LR		
	comp=Z,760nm,17.0s,MS4.9						
KMI	**Kunming**	**62.65**	**277**	⇑P	**P**	**22 59 39.3**	**-0.7**
KMI				AP	pP	22 59 52.5	-0.7
KMI				XP	sP	22 59 56.8	-1.6
KMI				PP	PP	23 01 58.3	-1.6
KMI				S	**S**	**23 08 06.3**	**+3.1**
KMI				XS		23 08 29.4	
KMI				SCS	ScS	23 09 23.3	-1.4
KMI				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.7						
KMI				AMB	AMB		
	comp=Z,320nm,5.5s						
KMI				LR	LR		
	comp=N,840nm,20.1s,MS5.1						
KMI				LR	LR		
	comp=E,760nm,17.6s,MS5.1						
KMI				LR	LR		
	comp=Z,820nm,20.1s,MS4.9						
KMI	**Kunming**	**62.65**	**277**	⇑P	**P**	**22 59 39.3**	**-0.7**
KMI				*PP	pP	22 59 52.5	-0.7
KMI				*SP	sP	22 59 56.8	-1.6
KMI						23 01 58.3	
KMI				S	**S**	**23 08 06.2**	**+3.0**
KMI				*SS		23 08 29.4	
KMI						23 09 23.2	
KMI				SS	SS	23 12 13.2	+3.1
KMI				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.8						
KMI				MLR	MLR		
	comp=Z,820nm,20.1s,MS4.9						
KMI	**Kunming**	**62.65**	**277**	⇑P	**P**	**22 59 39.3**	**-0.7**
	comp=Z,13nm,1.6s,mb4.8						
KMI				pP	pP	22 59 52.5	-0.7
KMI				sP	sP	22 59 56.8	-1.6
KMI				PP	PP	23 01 58.3	-1.6
KMI				S	**S**	**23 08 06.3**	**+3.1**
KMI				sS		23 08 29.4	
KMI				ScS	ScS	23 09 23.3	-1.4
KMI				LR	LR		
	comp=Z,820nm,20.1s,MS4.9						
UALR	**University of**	**62.83**	**68**	*e*P	**P**	**22 59 39.8**	**-1.3**
	comp=Z,10nm,0.6s,mb5.1						
BLO	**Bloomington**	**63.02**	**60**	P	**P**	**22 59 42.2**	**-0.1**
BLO				pmax	pmax		
	comp=Z,15nm,0.5s,mb5.4						
BLO	**Bloomington**	**63.02**	**60**	*e*P	**P**	**22 59 41.7**	**-0.6**
	comp=Z,15nm,0.4s,mb5.5						
NATX	**Nacogdoches**	**63.59**	**72**	*e*P	**P**	**22 59 45.7**	**-0.4**
	comp=Z,20nm,0.5s,mb5.4						
NATX				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
HALT	**Halls**	**63.76**	**65**	P	**P**	**22 59 45.1**	**-2.1**
WCI	**Wyandotte Cave**	**63.82**	**61**	*e*P	**P**	**22 59 46.4**	**-1.1**
WCI				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.2						
WCI				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.3						
WCI	**Wyandotte Cave**	**63.82**	**61**	*e*P	**P**	**22 59 46.4**	**-1.1**
	comp=Z,15nm,0.6s,mb5.2						
WCI				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
MET	**Memphis--Engin**	**63.98**	**66**	P	**P**	**22 59 47.8**	**-0.7**
NSS	**Namsos**	**64.29**	**354**	*e*P	**P**	**22 59 47.7**	**-2.4**
	comp=Z,44nm,1.0s,mb5.4						
NSS	**Namsos**	**64.29**	**354**	*e*P	**P**	**22 59 47.7**	**-2.4**
NSS				AMb	AMB	22 59 48.8	
	comp=Z,44nm,1.0s,mb5.4						
NSS				*e*		23 22 04.6	
WVT	**Waverly**	**64.46**	**64**	*e*P	**P**	**22 59 49.9**	**-1.8**
WVT				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
WVT				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.2						
WVT	**Waverly**	**64.46**	**64**	*e*P	**P**	**22 59 49.9**	**-1.7**
	comp=Z,16nm,0.8s,mb5.1						
WVT				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
ALLY	**Alegheny Colle**	**64.64**	**55**	*e*P	**P**	**22 59 51.7**	**-1.0**
OXF	**Oxford**	**64.71**	**66**	*e*P	**P**	**22 59 52.3**	**-1.0**
OXF				pmax	pmax		
	comp=Z,192nm,1.0s,mb6.1						
OXF				MLR	MLR		
	comp=Z,913nm,20.0s,MS5.0						
OXF	**Oxford**	**64.71**	**66**	*e*P	**P**	**22 59 52.3**	**-1.1**
	comp=Z,192nm,1.0s,mb6.1						
OXF				LR	LR		
	comp=Z,913nm,20.0s,MS5.0						
KAF	**Kangasniemi**	**65.13**	**346**	*e*p	**P**	**22 59 53.2**	**-2.3**
PLAL	**Pickwick Lake**	**65.14**	**65**	*e*P	**P**	**22 59 54.4**	**-1.7**
	comp=Z,27nm,0.6s,mb5.5						
PLAL				LR	LR		
	comp=Z,972nm,19.0s,MS5.0						
AFI	**Afiamalu**	**65.19**	**171**	PFAKE		23 00 10.0	+13
AFI				LR	LR		
	comp=Z,3µm,19.0s,MS5.4						
TKM2	**Tokmak 2**	**65.42**	**308**	P	**P**	**22 59 58.0**	**+0.2**
	SNR=46						
FRNY	**Flat Rock**	**65.52**	**48**	*e*P	**P**	**22 59 55.9**	**-2.5**
ULHL	**Ulahol**	**65.60**	**307**	P	**P**	**22 59 59.2**	**+0.3**
	SNR=50						
USP	**Ospenovka**	**65.70**	**309**	P	**P**	**22 59 59.8**	**+0.3**
	SNR=87						
CHMS	**Chumysh**	**65.78**	**309**	P	**P**	**23 00 00.8**	**+0.7**
	SNR=32						
FINES	**FINESS Array B**	**65.80**	**346**	P	**P**	**22 59 58.1**	**-1.7**
	comp=Z,7.1nm,0.8s,mb4.8,baz=20,slow=9.0,SNR=35						
FINES				LR	LR	23 35 04.7	
	comp=Z,1µm,18.0s,MS5.1,baz=28,slow=42						
FINES	**FINESS Array B**	**65.80**	**346**	P	**P**	**22 59 58.1**	**-1.7**
FINES				LR	LR	23 35 04.7	
NCB	**Newcomb**	**65.87**	**49**	PFAKE		23 00 10.0	+9.4
NCB				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
KBK	**Karagaybulak**	**65.94**	**309**	P	**P**	**23 00 02.0**	**+1.0**
	SNR=37						
FRU	**Bishkek**	**65.97**	**309**	*i* P	**P**	**23 00 01.0**	**-0.2**
FRU				*e*	pP	23 00 19.0	+4.5
FRU				pmax	pmax		
	comp=Z,150nm,1.6s,mb5.8						
FRU				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.5						
FRU	**Bishkek**	**65.97**	**309**	*i* P	**P**	**23 00 01.0**	**-0.2**
	comp=Z,150nm,1.6s,mb5.8						
FRU				*e*	pP	23 00 19.0	+4.5
FRU				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
AAK	**Ala-Archa**	**66.17**	**309**	P	**P**	**23 00 02.9**	**+0.3**
	SNR=33						
AAK	**Ala-Archa**	**66.17**	**309**	P	**P**	**23 00 01.8**	**-0.8**
AAK				pmax	pmax		
	comp=Z,55nm,1.0s,mb5.5						
AAK	**Ala-Archa**	**66.17**	**309**	P	**P**	**23 00 01.8**	**-0.8**
	comp=Z,55nm,1.0s,mb5.5						
SWET	**Sewanee**	**66.19**	**63**	*e*P	**P**	**23 00 01.2**	**-1.6**
KZA	**Kyzart**	**66.22**	**308**	P	**P**	**23 00 03.7**	**+0.8**
	SNR=46						
BINY	**Binghamton**	**66.33**	**52**	*e*P	**P**	**23 00 02.1**	**-1.5**
	comp=Z,5.7nm,0.5s,mb4.9						
PMG	**Port Moresby**	**66.42**	**215**	P	**P**	**23 00 04.1**	**-0.5**
PMG				MLR	MLR		
	comp=Z,2µm,20.0s						
PMG	**Port Moresby**	**66.42**	**215**	LR	LR	23 27 30.5	
	comp=Z,1µm,19.3s,MS5.2,baz=50,slow=34						
UCH	**Uchtor**	**66.47**	**308**	P	**P**	**23 00 05.2**	**+0.8**
	SNR=45						
LSA	**Lhasa**	**66.47**	**288**	P	**P**	**23 00 03.8**	**-0.9**
LSA				AP	pP	23 00 12.6	-5.4
LSA				XP	sP	23 00 18.5	-4.5
LSA				PCP	PcP	23 00 27.3	-6.6
LSA				PP	PP	23 02 36.3	+2.9
LSA				S	S	23 08 54.4	+4.2
LSA				AMB	AMB		
	comp=Z,70nm,0.8s,mb5.7						
LSA				LR	LR		
	comp=N,690nm,17.9s,MS5.1						
LSA				LR	LR		
	comp=E,1µm,21.7s,MS5.1						
LSA				LR	LR		
	comp=Z,2µm,18.3s,MS5.3						
LSA	**Lhasa**	**66.47**	**288**	*e*P	**P**	**23 00 05.6**	**+0.9**
LSA				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.6						
LSA				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.3						
LSA	**Lhasa**	**66.47**	**288**	P	**P**	**23 00 03.8**	**-0.9**
	comp=Z,70nm,0.8s,mb5.7						
LSA				pP	pP	23 00 12.6	-5.4
LSA				sP	sP	23 00 18.5	-4.5
LSA				PcP	PcP	23 00 27.3	-6.6
LSA				PP	PP	23 02 36.3	+2.9
LSA				S	S	23 08 54.4	+4.2
LSA				LR	LR		
	comp=Z,2µm,18.3s,MS5.3						
MOL	**Molde**	**66.49**	**356**	⇓*i*P	**P**	**23 00 03.8**	**-0.5**
	comp=Z,89nm,1.5s,mb5.6						
MOL	**Molde**	**66.49**	**356**	⇓*i*P	**P**	**23 00 03.8**	**-0.5**
MOL				AMb	AMB	23 00 05.5	
	comp=Z,89nm,1.5s,mb5.6						
EKS2	**Erkin-Say**	**66.50**	**309**	P	**P**	**23 00 05.0**	**+0.3**
	SNR=101						
TZTN	**Tazewell**	**66.55**	**61**	*e*P	**P**	**23 00 04.2**	**-0.8**
ACCN	**Adirondack Com**	**66.58**	**49**	*e*P	**P**	**23 00 03.4**	**-1.7**
PQI	**Presque Isle**	**66.66**	**44**	PFAKE		23 00 20.0	+14
PQI				LR	LR		
	comp=Z,14µm,19.0s,MS6.2						
PUL	**Pulkovo**	**66.69**	**344**	c*e*P	**P**	**22 59 59.5**	**-6.0**
PUL				pmax	pmax		
	comp=Z,42nm,3.5s						
PUL				MLR	MLR		
	comp=Z,2µm,13.0s,MS5.4						
PUL				MLR	MLR		
	comp=N,974nm,12.0s,MS5.4						
PUL				MLR	MLR		
	comp=E,1µm,14.0s,MS5.4						
PUL	**Pulkovo**	**66.69**	**344**	⇑*e*P	**P**	**22 59 59.5**	**-6.0**
PUL				LR	LR		
	comp=Z,2µm,13.0s,MS5.4						
PECR	**Pechory**	**66.75**	**335**	*e*P	**P**	**23 00 04.7**	**-1.3**
PECR				pmax	pmax		
	comp=Z,500nm,1.0s						
CPCT	**Cooper Cave**	**66.81**	**62**	*e*P	**P**	**23 00 05.3**	**-1.3**
AML	**Almayashu**	**66.94**	**309**	P	**P**	**23 00 08.0**	**+0.6**
	SNR=104						
LRAL	**Lakeview Retre**	**67.17**	**65**	*e*P	**P**	**23 00 07.5**	**-1.5**
	comp=Z,10nm,0.7s,mb5.0						
LRAL				LR	LR		
	comp=Z,972nm,19.0s,MS5.0						
WVL	**Waterville**	**67.55**	**46**	PFAKE		23 00 20.0	+8.8
WVL				LR	LR		
	comp=Z,11µm,20.0s,MS6.1						
KKAR	**Karatay Array**	**67.74**	**312**	*i* P	**P**	**23 00 12.1**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.4						
KKAR	**Karatay Array**	**67.74**	**312**	*i* P	**P**	**23 00 12.1**	**-0.3**
	comp=Z,22nm,0.6s,mb5.4						
BLA	**Blacksburg**	**67.75**	**58**	P	**P**	**23 00 12.6**	**0.0**
BLA				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
BLA	**Blacksburg**	**67.75**	**58**	*e*P	**P**	**23 00 11.5**	**-1.1**
	comp=Z,16nm,0.9s,mb5.0						
BLA				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
KSH	**Kashi**	**67.76**	**306**	⇑*i*P	**P**	**23 00 13.1**	**+0.5**
KSH				*e*AP	pP	23 00 26.0	+0.1
KSH				*e*XP	sP	23 00 31.4	+0.5
KSH				*e*PCP	PcP	23 00 39.3	+0.1
KSH				*e*PP	PP	23 02 44.3	0.0
KSH				*e*SCP		23 04 38.5	
KSH				*e*PCS		23 04 43.0	
KSH				*e*S	S	23 09 05.0	-0.5
KSH				XS		23 09 27.1	
KSH				*e*PS	PS	23 09 35.3	-0.7
KSH				*e*SCS	ScS	23 10 03.1	-0.5
KSH				*e*SS	SS	23 13 27.3	-1.5
KSH				AMB	AMB		
	comp=Z,590nm,2.5s,mb6.2						
KSH				LR	LR		
	comp=N,3µm,15.5s,MS5.7						
KSH				LR	LR		
	comp=E,3µm,15.9s,MS5.7						
KSH	**Kashi**	**67.76**	**306**	⇑*i*P	**P**	**23 00 13.1**	**+0.5**
	comp=E,590nm,2.5s,mb6.2						
KSH				*e*pP	pP	23 00 26.0	+0.1
KSH				*e*sP	sP	23 00 31.4	+0.5
KSH				*e*PcP	PcP	23 00 39.3	+0.1
KSH				*e*PP	PP	23 02 44.3	0.0
KSH				*e*ScP		23 04 38.5	
KSH				*e*PcS		23 04 43.0	
KSH				*e*S	S	23 09 05.0	-0.5
KSH				sS		23 09 27.1	
KSH				*e*ScS	ScS	23 10 03.1	-0.5
KSH				*e*SS	SS	23 13 27.3	-1.5
NB2	**NORSAR Subarra**	**67.81**	**354**	P	**P**	**23 00 11.7**	**-0.8**
	comp=E,70nm,1.0s,mb5.6,baz=8.0,slow=6.5						
NB2	**NORSAR Subarra**	**67.81**	**354**	P	**P**	**23 00 11.7**	**-0.8**
	baz=8.2,slow=6.5						
NOA	**NORSAR Array B**	**67.81**	**354**	P	**P**	**23 00 12.0**	**-0.5**
	comp=E,43nm,0.9s,mb5.5,baz=8.2,slow=6.3,SNR=90						
NOA				LR	LR	23 34 13.2	
	comp=E,700nm,19.4s,MS4.9,baz=10.0,slow=40						
NOA	**NORSAR Array B**	**67.81**	**354**	P	**P**	**23 00 12.0**	**-0.5**
NOA				LR	LR	23 34 13.2	
SDMD	**Soldier's Deli**	**67.99**	**54**	*e*P	**P**	**23 00 12.8**	**-1.2**
NAO01	**NORSAR Array S**	**68.03**	**354**	*e*P	**P**	**23 00 12.7**	**-1.2**
	comp=E,18nm,1.0s,mb5.1						
HRV	**Harvard--Oak R**	**68.25**	**49**	PFAKE		23 00 30.0	+14
HRV				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
WES	**Weston**	**68.45**	**49**	PFAKE		23 00 30.0	+13
WES				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
VSU	**Vasula**	**68.54**	**345**	⇓*i*P	**P**	**23 00 15.7**	**-1.4**
NANT	**Nan**	**68.56**	**274**	P	**P**	**23 00 16.0**	**-1.9**
CBN	**Corbin**	**68.62**	**55**	PFAKE		23 00 30.0	+12
CBN				LR	LR		
	comp=Z,4µm,19.0s,MS5.7						
BER	**Bergen**	**68.77**	**357**	*e*P	**P**	**23 00 19.2**	**+0.8**
BER				AMS	AMS	23 41 31.0	
	comp=Z,440nm,17.0s,MS4.8						
MOS	**Moscow**	**68.91**	**338**	*e*P	**P**	**23 00 18.1**	**-1.3**
MOS				pmax	pmax		
	comp=Z,71nm,1.2s,mb5.5						
MOS				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.7						
MOS				MLR	MLR		
	comp=N,3µm,17.8s,MS5.6						
MOS				MLR	MLR		
	comp=E,2µm,17.8s,MS5.6						
MOS	**Moscow**	**68.91**	**338**	*e*P	**P**	**23 00 18.1**	**-1.3**
	comp=E,71nm,1.2s,mb5.5						
MOS				LR	LR		
	comp=Z,4µm,18.0s,MS5.7						
SHL	**Shillong**	**69.05**	**285**	*e*P	**P**	**23 00 20.0**	**-0.8**
SHL				*e*x	x	23 09 23.0	
TAOE	**Nuku Hiva Isla**	**69.17**	**137**	*e*S	S	23 09 09.0	-14
	comp=Z,996nm,27.6s						
TAOE				*e*LQ		23 17 59.2	
	comp=Z,3µm,30.7s						
TAOE				*e*LR	LR	23 20 43.1	
	comp=Z,9µm,22.0s,baz=341						
KONO	**Kongsberg**	**69.30**	**354**	PFAKE		23 00 30.0	+8.2
KONO				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
JSC	**Jenkinsville**	**69.47**	**61**	P	**P**	**23 00 23.2**	**-0.1**
JSC	**Jenkinsville**	**69.47**	**61**	*e*P	**P**	**23 00 22.7**	**-0.6**
CHG	**Chiang Mai**	**69.66**	**275**	⇑P	**P**	**23 00 24.0**	**-0.6**
	comp=Z,118nm,0.9s,mb5.8						
OBN	**Obninsk**	**69.72**	**338**	c *i*P	**P**	**23 00 22.9**	**-1.5**
OBN				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.3						
OBN				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.7						
OBN	**Obninsk**	**69.72**	**338**	⇑*i*P	**P**	**23 00 22.9**	**-1.5**
	comp=Z,45nm,1.0s,mb5.3						
OBN				LR	LR		
	comp=Z,4µm,17.0s,MS5.7						
CMAR	**Chiang Mai Arr**	**69.92**	**275**	P	**P**	**23 00 26.3**	**0.0**
	comp=Z,14nm,0.8s,mb4.9,baz=27,slow=7.0,SNR=53						
CMAR				LR	LR	23 33 24.1	
	comp=Z,600nm,19.0s,MS4.9,baz=60,slow=38						
COW	**Cow Castle Cre**	**70.45**	**61**	*e*P	**P**	**23 00 28.4**	**-0.9**
GUN	**Gumba**	**70.92**	**291**	*e*P	**P**	**23 00 33.1**	**+0.9**
	comp=Z,526nm,1.0s						
NHSC	**New Hope**	**70.95**	**61**	*e*P	**P**	**23 00 31.6**	**-0.7**
	comp=Z,39nm,0.7s,mb5.5						
NHSC				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
KKN	**Kakani**	**71.36**	**291**	*e*P	**P**	**23 00 35.5**	**+0.7**
	comp=Z,132nm,0.6s,mb6.1						
KKN	**Kakani**	**71.36**	**291**	*e*P	**P**	**23 00 35.5**	**+0.7**
KKN				pmax	pmax		
	comp=Z,66nm,0.6s,mb5.7						
PKI	**Pulchoki**	**71.45**	**291**	*e*P	**P**	**23 00 36.0**	**+0.7**
	comp=Z,211nm,1.0s,mb6.0						
PKI	**Pulchoki**	**71.45**	**291**	*e*P	**P**	**23 00 36.0**	**+0.7**
PKI				pmax	pmax		
	comp=Z,106nm,1.0s,mb5.7						
GKN	**Gorkha**	**71.58**	**292**	*e*P	**P**	**23 00 36.5**	**+0.4**
	comp=Z,236nm,0.9s,mb6.1						
DMN	**Daman**	**71.60**	**291**	*e*P	**P**	**23 00 37.0**	**+0.8**
	comp=Z,159nm,0.9s,mb5.9						
KOLN	**Koldanda**	**72.36**	**292**	*e*P	**P**	**23 00 41.0**	**+0.3**
	comp=Z,101nm,0.9s,mb5.8						
MUD	**Monsted U'grnd**	**72.51**	**354**	*i* P	**P**	**23 00 41.6**	**+0.6**
MUD				*e*S	S	23 10 05.5	+4.9
MUD				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.3						
MUD				MLR	MLR		
	comp=Z,880nm,18.0s,MS5.1						
MUD	**Monsted U'grnd**	**72.51**	**354**	*i* P	**P**	**23 00 41.6**	**+0.6**
	comp=Z,35nm,0.9s,mb5.3						
MUD				*e*S	S	23 10 05.5	+4.9
	comp=Z,880nm,18.0s						
VRSR	**Storozhevoye**	**72.62**	**335**	*e*P	**P**	**23 00 41.0**	**-0.8**
VRSR				pmax	pmax		
	comp=N,10.0nm,0.8s						
VRSR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
VRSR				pmax	pmax		
	comp=E,3.0nm,0.7s						
VRSR	**Storozhevoye**	**72.62**	**335**	*e*P	**P**	**23 00 41.0**	**-0.8**
	comp=E,20nm,0.8s,mb5.1						
COP	**Copenhagen**	**73.03**	**352**	⇑*i*P	**P**	**23 00 42.7**	**-1.4**
COP				*i* S	ScS	23 10 45.4	+0.7
COP				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
COP				MLR	MLR		
	comp=Z,490nm,19.0s,MS4.8						
COP	**Copenhagen**	**73.03**	**352**	⇑*i*P	**P**	**23 00 42.7**	**-1.4**
	comp=Z,20nm,0.8s,mb5.1						
COP				*i* S	ScS	23 10 45.4	+0.7
COP				LR	LR		
	comp=Z,490nm,19.0s,MS4.8						
COP	**Copenhagen**	**73.03**	**352**	⇑*i*P	**P**	**23 00 42.7**	**-1.4**
	comp=Z,20nm,0.8s,mb5.1						
COP	**Copenhagen**	**73.03**	**352**	*i* S	ScS	23 10 45.4	+0.7
	comp=Z,490nm,19.0s						
SDNR	**Sundarnagar**	**73.30**	**299**	*e*P	**P**	**23 00 47.0**	**+0.8**
SUW	**Suwalki**	**73.38**	**346**	*e*P	**P**	**23 00 44.9**	**-1.3**
SMLA	**Simla**	**73.47**	**299**	*i* P	**P**	**23 00 46.1**	**-1.1**
PPT	**Papeete**	**73.58**	**149**	*e*S	S	23 10 02.2	-11
	comp=Z,1µm,27.2s						
PPT				*e*LR	LR	23 22 53.1	
	comp=Z,4µm,25.2s,baz=342						
PPT	**Papeete**	**73.58**	**149**	LR	LR	23 24 20.1	
	comp=Z,2µm,21.5s,MS5.3,baz=328,slow=29						
DZM	**Mont Dzumac**	**73.74**	**193**	LR	LR	23 27 07.1	
	comp=Z,2µm,20.7s,MS5.4,baz=28,slow=31						
ESK	**Eskdalemuir**	**73.93**	**2**	*e*P	**P**	**23 00 48.8**	**-0.5**
ESK				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.2						
ESK				MLR	MLR		
	comp=Z,192nm,22.0s,MS4.3						
ESK	**Eskdalemuir**	**73.93**	**2**	*e*P	**P**	**23 00 48.8**	**-0.6**
	comp=Z,36nm,1.1s,mb5.2						
ESK				LR	LR		
	comp=Z,192nm,22.0s,MS4.3						
DWPF	**Disney**	**74.02**	**65**	*e*P	**P**	**23 00 49.7**	**-0.8**
	comp=Z,29nm,0.8s,mb5.3						
DWPF				LR	LR		
	comp=Z,745nm,20.0s,MS5.0						
BSEG	**Bad Segeberg**	**74.94**	**353**	*e*P	**P**	**23 00 55.0**	**-0.2**
BSEG				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.3						
NDI	**New Delhi**	**75.31**	**297**	*e*P	**P**	**23 00 57.6**	**-0.3**
NDI				AMb	AMB	23 00 59.0	
	comp=Z,37nm,0.8s,mb5.3						
AKASG	**Malin Array Be**	**75.46**	**341**	P	**P**	**23 00 57.2**	**-1.0**
	comp=Z,5.3nm,0.4s,mb4.8,baz=20,slow=5.7,SNR=65						
KAKA	**Kakadu**	**75.52**	**227**	⇑*i*P	**P**	**23 00 58.2**	**-1.1**
	comp=Z,21nm,0.7s,mb5.2						
KAKA				*i*	pP	23 01 11.2	-1.5
DCN	**Croghan**	**75.78**	**4**	⇑*i*P	**P**	**23 00 59.7**	**-0.3**
DLF	**Lyons Farm**	**75.86**	**4**	⇑*i*P	**P**	**23 01 00.2**	**-0.3**
DSB	**Dublin**	**75.91**	**4**	*e*P	**P**	**23 00 59.7**	**-1.0**
	comp=Z,24nm,0.9s,mb5.1						
WIT	**Witteveen**	**76.28**	**355**	*e*P	**P**	**23 01 03.9**	**+1.1**
CTA	**Charters Tower**	**76.64**	**212**	*e*P	**P**	**23 01 05.7**	**+0.1**
	comp=Z,6.6nm,0.8s,mb4.6						
CTA	**Charters Tower**	**76.64**	**212**	*e*P	**P**	**23 01 05.7**	**+0.1**
CTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CTA	**Charters Tower**	**76.64**	**212**	LR	LR	23 31 07.7	
	comp=Z,689nm,19.9s,MS5.0,baz=28,slow=33						
CTAO	**Charters Tower**	**76.64**	**212**	*e*P	**P**	**23 01 04.8**	**-0.8**
CTAO				MLR	MLR		
	comp=Z,816nm,20.0s,MS5.0						
BWNR	**Bhubaneshwar**	**76.68**	**286**	*e*P	**P**	**23 01 08.8**	**+3.0**
BWNR				AMb	AMB	23 01 13.3	
	comp=Z,60nm,1.4s,mb5.3						
CLZ	**Clausthal**	**77.01**	**353**	*e*P	**P**	**23 01 06.8**	**-0.3**
CLZ				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2						
CLZ	**Clausthal**	**77.01**	**353**	*e*P	**P**	**23 01 06.8**	**-0.3**
	comp=Z,32nm,1.0s,mb5.2						
GOF	**Gofitskoye**	**77.06**	**330**	⇑*i*P	**P**	**23 01 06.0**	**-1.4**
GOF				pmax	pmax		
	comp=Z,90nm,1.1s,mb5.6						
GOF	**Gofitskoye**	**77.06**	**330**	⇑*i*P	**P**	**23 01 06.0**	**-1.4**
	comp=Z,90nm,1.1s,mb5.6						
WTSB	**Winterswijk**	**77.12**	**355**	⇑*e*P	**P**	**23 01 06.7**	**-0.9**
	comp=Z,34nm,1.2s,mb5.2						
LVV	**L'vov**	**77.29**	**344**	*e*P	**P**	**23 01 08.0**	**-0.6**
CLL	**Collm**	**77.32**	**351**	⇑*i*P	**P**	**23 01 07.8**	**-1.0**
CLL				*e*S		23 11 18.0	
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
CLL	**Collm**	**77.32**	**351**	⇑*i*P	**P**	**23 01 07.8**	**-1.0**
	comp=Z,9.0nm,1.0s,mb4.7						
CLL				S		23 11 18.0	
CLL	**Collm**	**77.32**	**351**	⇑P	**P**	**23 01 07.8**	**-1.0**
	comp=Z,logA/T=1.0,mb4.7						
CLL				*e*PS	PS	23 11 42.0	+2.3
MAK	**Makhachkala**	**77.42**	**326**	*e*P	**P**	**23 01 10.0**	**+0.5**
MAK				S	S	23 10 59.0	+3.8
MAK				pmax	pmax		
	comp=Z,600nm,9.0s						
BLSP	**Bilaspur**	**77.50**	**290**	*e*P	**P**	**23 01 09.5**	**-0.8**
BLSP				AMb	AMB	23 01 11.5	
	comp=Z,56nm,1.4s,mb5.3						
OJC	**Ojcow**	**77.57**	**347**	*e*P	**P**	**23 01 09.7**	**-0.5**
OJC				*e*PcP	PcP	23 01 20.0	-0.6
OJC				*e*S	S	23 10 55.3	-1.4
OJC				MLR	MLR	23 40 07.3	
	comp=Z,2µm,17.7s,MS5.5						
BRG	**Berggiesshubel**	**77.66**	**351**	*i* P	**P**	**23 01 09.8**	**-0.8**
BRG				S	S	23 11 01.0	+3.4
BRG				SS	SS	23 15 56.0	-4.7
BRG				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
BRG				MLR	MLR		
	comp=N,1µm,19.9s,MS5.3						
BRG				MLR	MLR		
	comp=E,640nm,19.9s,MS5.3						
BRG				MLR	MLR		
	comp=Z,1µm,19.9s,MS5.2						
BRG	**Berggiesshubel**	**77.66**	**351**	*i* P	**P**	**23 01 09.8**	**-0.8**
	comp=Z,15nm,1.4s,mb4.7						
BRG				S	S	23 11 01.0	+3.4
BRG				SS	SS	23 15 56.0	-4.7
BRG				LR	LR		
	comp=Z,1µm,19.9s,MS5.2						
KWP	**Kalwaria**	**77.69**	**345**	*e*P	**P**	**23 01 11.4**	**+0.5**
UPC	**Upice**	**77.79**	**349**	*e*P	**P**	**23 01 11.3**	**-0.1**
DPC	**Dobruska-Polom**	**77.91**	**349**	*e*P	**P**	**23 01 12.1**	**+0.1**
DPC				*e*S	S	23 11 10.6	+10
DPC				MLR	MLR		
	comp=Z,1µm,19.1s,MS5.2						
DPC	**Dobruska-Polom**	**77.91**	**349**	*e*P	**P**	**23 01 12.1**	**+0.1**
DPC				*e*S	S	23 11 10.6	+10
DPC				*e*x	x	23 16 47.7	

DPC			AMS	AMS	23 40 20.0	
	comp=Z,1μm,19.1s					
MOX	**Moxa**	**78.10 352**	*e*P	**P**	**23 01 12.4**	**-0.7**
MOX			pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8					
MOX			MLR	MLR		
	comp=Z,800nm,20.0s,MS5.0					
MOX	**Moxa**	**78.10 352**	*e*P	**P**	**23 01 12.4**	**-0.7**
	comp=Z,19nm,1.4s,mb4.8					
MOX			*e*S	S	23 11 35.0	+33
MOX			*e*SS	SS	23 16 26.0	+19
MOX			LR	LR		
	comp=Z,800nm,20.0s,MS5.0					
MOX	**Moxa**	**78.10 352**	*i* P	**P**	**23 01 12.4**	**-0.7**
	comp=Z,logA/T=1.1,mb4.8					
MOX			S	S	23 11 35.0	+33
MOX			SS	SS	23 16 26.0	+19
MOX			L		23 44 40.0	
KIV	**Kislovodsk**	**78.15 330**	*e*P	**P**	**23 01 13.8**	**+0.3**
KIV			*e*S	S	23 11 05.7	+2.6
KIV			pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1					
KIV			pmax	pmax		
	comp=N,12nm,1.1s					
KIV			pmax	pmax		
	comp=E,5.0nm,0.8s					
KIV			MLR	MLR		
	comp=N,1μm,22.0s,MS5.3					
KIV			MLR	MLR		
	comp=Z,1μm,22.0s,MS5.2					
KIV			MLR	MLR		
	comp=E,1μm,19.0s,MS5.3					
KIV	**Kislovodsk**	**78.15 330**	*e*P	**P**	**23 01 13.8**	**+0.3**
	comp=E,20nm,0.8s,mb5.1					
KIV			*e*S	S	23 11 05.7	+2.6
KIV			LR	LR		
	comp=Z,1μm,22.0s,MS5.2					
OKC	**Ostrava-Krasne**	**78.18 348**	*e*P	**P**	**23 01 13.7**	**+0.2**
OKC			*e*S	ScS	23 11 33.5	+7.3
OKC			MLR	MLR		
	comp=Z,900nm,17.7s,MS5.2					
OKC	**Ostrava-Krasne**	**78.18 348**	*e*P	**P**	**23 01 13.7**	**+0.2**
OKC			*e*S	ScS	23 11 33.5	+7.3
OKC			*e*x	x	23 16 35.6	
OKC			AMS	AMS	23 40 30.0	
	comp=Z,900nm,17.7s					
NIE	**Niedzica**	**78.28 346**	*e*P	**P**	**23 01 15.0**	**+0.9**
MORC	**Moravsky Berou**	**78.32 348**	*e*P	**P**	**23 01 13.1**	**-1.2**
MORC			pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5					
MORC	**Moravsky Berou**	**78.32 348**	*e*P	**P**	**23 01 13.1**	**-1.2**
	comp=Z,8.4nm,1.3s,mb4.5					
HGN	**Heimansgroeve**	**78.36 356**	⇑*e*P	**P**	**23 01 14.0**	**-0.5**
	comp=Z,40nm,1.4s,mb5.2					
NKC	**Novy Kostel**	**78.44 352**	*e*P	**P**	**23 01 15.1**	**+0.2**
NKC			*e*S	S	23 11 14.3	+8.4
NKC			MLR	MLR		
	comp=Z,1μm,17.1s,MS5.2					
NKC	**Novy Kostel**	**78.44 352**	*e*P	**P**	**23 01 15.1**	**+0.2**
NKC			*e*S	S	23 11 14.3	+8.4
NKC			*e*x	x	23 16 31.5	
NKC			AMS	AMS	23 43 30.0	
	comp=Z,1μm,17.1s					
KOLS	**Kolonicke sedl**	**78.44 345**	*i* P	**P**	**23 01 15.3**	**+0.3**
AJM	**Ajmer**	**78.46 298**	*e*P	**P**	**23 01 14.7**	**-0.9**
AJM			AMb	AMB	23 01 16.7	
	comp=Z,44nm,0.9s,mb5.4					
PRU	**Pruhonice**	**78.47 350**	*e*P	**P**	**23 01 14.4**	**-0.7**
PRU			*e*S	ScS	23 11 26.8	-1.8
PRU			MLR	MLR		
	comp=Z,1μm,18.6s,MS5.3					
PRU	**Pruhonice**	**78.47 350**	*e*P	**P**	**23 01 14.4**	**-0.7**
PRU			*e*S	ScS	23 11 26.8	-1.8
PRU			*e*x	x	23 16 53.5	
PRU			AMS	AMS	23 40 50.0	
	comp=Z,1μm,18.6s					
TNS	**Taunus Mts**	**78.76 354**	*e*P	**P**	**23 01 16.2**	**-0.5**
TNS			pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9					
TNS	**Taunus Mts**	**78.76 354**	*e*P	**P**	**23 01 16.2**	**-0.5**
	comp=Z,17nm,1.0s,mb4.9					
ZEI	**Tsey**	**78.82 328**	*e*P	**P**	**23 01 14.4**	**-2.8**
ZEI			*i* *PP	pP	23 01 28.9	-1.8
ZEI			pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2					
VRAC	**Vranov**	**78.90 349**	P	**P**	**23 01 18.1**	**+0.6**
VRAC	**Vranov**	**78.90 349**	*e*P	**P**	**23 01 17.6**	**+0.1**
TBI	**Tubuai**	**79.03 151**	*e*S	S	23 11 02.8	-10
	comp=Z,682nm,34.0s					
TBI			*e*LR	LR	23 25 08.9	
	comp=Z,4μm,22.5s,baz=337					
KIS	**Kishinev**	**79.06 340**	*e*P	**P**	**23 01 17.0**	**-1.4**
KIS			*e*		23 04 16.0	
KIS			MLR	MLR		
	comp=N,2μm,17.0s,MS5.5					
KIS			MLR	MLR		
	comp=E,1μm,17.0s,MS5.5					
KIS			MLR	MLR		
	comp=Z,2μm,17.0s,MS5.6					
KIS			MLR	MLR		
	comp=Z,2μm,17.0s					
GIVF	**Givet**	**79.07 356**	*e*P	**P**	**23 01 18.0**	**-0.4**
	comp=Z,47nm,1.1s,mb5.0					
GIVF	**Givet**	**79.07 356**	*e*P	**P**	**23 01 18.0**	**-0.4**
GIVF			pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0					
GRA1	**Grafenberg Arr**	**79.08 352**	*e*P	**P**	**23 01 18.3**	**-0.2**
	comp=Z,30nm,1.1s,mb5.1					
GRA1			LR	LR		
	comp=Z,800nm,21.9s,MS5.0					
GRF	**Grafenberg Arr**	**79.08 352**	*e*P	**P**	**23 01 18.3**	**-0.2**
GRF			pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1					
GRF			MLR	MLR		
	comp=Z,800nm,21.9s,MS5.0					
GRF	**Grafenberg Arr**	**79.08 352**	*e*P	**P**	**23 01 18.3**	**-0.2**
GRF			pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1					
GRF			MLR	MLR		
	comp=Z,800nm,21.9s,MS5.0					
GRF	**Grafenberg Arr**	**79.08 352**	*e*P	**P**	**23 01 18.3**	**-0.2**
	comp=Z,30nm,1.1s,mb5.1					
GRF			LR	LR		
	comp=Z,800nm,21.9s,MS5.0					
GRFO	**Grafenberg**	**79.08 352**	*e*P	**P**	**23 01 18.4**	**-0.1**
GRFO			pmax	pmax		
	comp=Z,361nm,1.2s,mb6.2					
GRFO	**Grafenberg**	**79.08 352**	*e*P	**P**	**23 01 18.4**	**-0.1**
	comp=Z,361nm,1.2s,mb6.2					
IAS	**Iasi**	**79.13 341**	P	**P**	**23 01 19.0**	**+0.2**
BAIF	**Baives**	**79.14 357**	*e*P	**P**	**23 01 18.7**	**-0.1**
	comp=Z,75nm,1.1s,mb5.2					
BAIF	**Baives**	**79.14 357**	*e*P	**P**	**23 01 18.7**	**-0.1**
BAIF			pmax	pmax		
	comp=Z,37nm,1.1s,mb5.2					
ABH	**Alteburg**	**79.16 355**	*e*P	**P**	**23 01 17.5**	**-1.4**
KECS	**Kecovo**	**79.16 346**	*e*P	**P**	**23 01 17.6**	**-1.4**
BURAR	**Bucovina Array**	**79.19 343**	P	**P**	**23 01 19.2**	**+0.1**
BURAR	**Bucovina Array**	**79.19 343**	⇑P	**P**	**23 01 20.0**	**+0.9**
TOD	**Tromm**	**79.35 354**	*e*P	**P**	**23 01 18.3**	**-1.6**
RUP	**Ruppelstein**	**79.36 355**	*e*P	**P**	**23 01 18.6**	**-1.4**
BHPL	**Bhopal**	**79.40 294**	*e*P	**P**	**23 01 20.4**	**-0.3**
BHPL			AMb	AMB	23 01 21.9	
	comp=Z,66nm,1.1s,mb5.5					
VYHS	**Vyhne**	**79.40 347**	*e*P	**P**	**23 01 19.9**	**-0.3**
SOC	**Sochi**	**79.41 331**	*c* *i*P	**P**	**23 01 19.7**	**-0.7**
SOC			*e*		23 01 26.4	
SOC			*e*S	S	23 11 18.7	+2.3
SOC			*e*SS	SS	23 16 33.6	+6.4
SOC			pmax	pmax		
	comp=N,12nm,1.2s					
SOC			pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1					
SOC			pmax	pmax		
	comp=E,2.0nm,0.6s					
SOC			pmax	pmax		
	comp=Z,171nm,3.0s					
SOC			MLR	MLR		
	comp=N,1μm,20.0s,MS5.3					
SOC			MLR	MLR		
	comp=Z,2μm,20.0s,MS5.5					
SOC			MLR	MLR		
	comp=E,608nm,22.0s,MS5.3					
SOC	**Sochi**	**79.41 331**	⇑*i*P	**P**	**23 01 19.7**	**-0.7**
	comp=E,29nm,1.2s,mb5.1					
SOC			*e*		23 01 26.4	
SOC			*e*S	S	23 11 18.7	+2.3
SOC			*e*SS	SS	23 16 33.6	+6.4
SOC			LR	LR		
	comp=Z,2μm,20.0s,MS5.5					
KHC	**Kasperske Hory**	**79.42 351**	*e*P	**P**	**23 01 20.6**	**+0.3**
KHC			*e*		23 01 24.5	
KHC			*e*S	S	23 11 21.0	+4.7
KHC			MLR	MLR		
	comp=Z,1μm,19.8s,MS5.3					
KHC	**Kasperske Hory**	**79.42 351**	*e*P	**P**	**23 01 20.6**	**+0.3**
KHC			*e*		23 01 24.5	
KHC			*e*S	S	23 11 21.0	+4.7
KHC			*e*		23 17 05.4	
KHC			LR	LR		
	comp=Z,1μm,19.8s,MS5.3					
KHC	**Kasperske Hory**	**79.42 351**	*e*P	**P**	**23 01 20.6**	**+0.3**
KHC			x	x	23 01 24.5	
KHC			*e*S	S	23 11 21.0	+4.7
KHC			*e*x	x	23 17 05.4	
KHC			AMS	AMS	23 39 30.0	
	comp=Z,1μm,19.8s					
TBLG	**Delisi**	**79.46 327**	P	**P**	**23 01 21.9**	**+1.2**
DGRG	**David-gareji**	**79.49 327**	P	**P**	**23 01 22.3**	**+1.4**
SMOL	**Smolenice**	**79.57 348**	*e*P	**P**	**23 01 22.1**	**+0.9**
BBSR	**BB Station**	**79.59 51**	PFAKE		23 01 30.0	+8.4
BBSR			LR	LR		
	comp=Z,2μm,19.0s,MS5.3					
GERES	**GERESS Array B**	**79.69 350**	P	**P**	**23 01 21.7**	**-0.1**
	comp=Z,3.3nm,0.9s,mb4.3,baz=18,slow=4.2,SNR=28					
GERES			LR	LR	23 40 09.9	
	comp=Z,1μm,20.4s,MS5.3,baz=12,slow=38					
SIM	**Simferopol’**	**79.72 336**	*e*P	**P**	**23 01 21.9**	**-0.2**
SIM			*e*S		23 11 30.0	
SIM			pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9					
SIM	**Simferopol’**	**79.72 336**	*e*P	**P**	**23 01 21.9**	**-0.2**
	comp=Z,12nm,0.8s,mb4.9					
SIM			*e*S		23 11 30.0	
PSZ	**Piszkesteto**	**79.81 346**	*e*P	**P**	**23 01 22.0**	**-0.4**
PSZ			pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0					
PSZ	**Piszkesteto**	**79.81 346**	⇓*i*P	**P**	**23 01 23.4**	**+1.0**
ZST	**Bratislava**	**79.92 348**	*e*P	**P**	**23 01 23.9**	**+0.8**
ZST			*e*		23 04 19.0	
RAO	**Raoul Island**	**80.03 178**	PFAKE		23 01 30.0	+5.9
RAO			LR	LR		
	comp=Z,8μm,21.0s,MS6.0					
LANF	**Langenberg**	**80.04 354**	*e*P	**P**	**23 01 23.5**	**-0.2**
DRGR		**80.44 344**	P	**P**	**23 01 26.0**	**+0.1**
DRGR		**80.44 344**	⇓P	**P**	**23 01 27.2**	**+1.3**
FLN	**La Foliniere**	**80.52 360**	*e*P	**P**	**23 01 25.7**	**-0.5**
	comp=Z,83nm,1.1s,mb5.3					
FLN	**La Foliniere**	**80.52 360**	*e*P	**P**	**23 01 25.7**	**-0.5**
FLN			pmax	pmax		
	comp=Z,42nm,1.1s,mb5.3					
VRI	**Vrincioaia**	**80.57 341**	⇓*i*P	**P**	**23 01 27.4**	**+0.8**
FUR	**Furstenfeldbru**	**80.59 352**	*e*P	**P**	**23 01 26.8**	**+0.2**
FUR			pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1					
FUR	**Furstenfeldbru**	**80.59 352**	*e*P	**P**	**23 01 26.8**	**+0.2**
	comp=Z,32nm,1.2s,mb5.1					
MOA	**Molln**	**80.61 350**	⇑*i*P	**P**	**23 01 26.4**	**-0.3**
	comp=Z,7.4nm,1.4s,mb4.4					
WLS	**Welschbruch**	**80.63 355**	*e*P	**P**	**23 01 26.6**	**-0.2**
CDF	**Champ du Feu**	**80.64 355**	*e*P	**P**	**23 01 26.5**	**-0.4**
	comp=Z,9.7nm,0.7s,mb4.5					
CDF	**Champ du Feu**	**80.64 355**	*e*P	**P**	**23 01 26.5**	**-0.4**
CDF			pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5					
BFO	**Black Forest**	**80.65 354**	*e*P	**P**	**23 01 26.3**	**-0.6**
BFO			pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8					
BFO	**Black Forest**	**80.65 354**	*e*P	**P**	**23 01 26.3**	**-0.6**
	comp=Z,14nm,1.1s,mb4.8					
MEZF	**Maizieres J’vi**	**80.66 356**	*e*P	**P**	**23 01 27.0**	**0.0**
	comp=Z,61nm,1.2s,mb5.1					
LDF	**La Druitiere**	**80.68 360**	*e*P	**P**	**23 01 26.6**	**-0.5**
	comp=Z,57nm,1.0s,mb5.2					
LDF	**La Druitiere**	**80.68 360**	*e*P	**P**	**23 01 26.6**	**-0.5**
LDF			pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2					
TLCR		**80.78 339**	⇑P	**P**	**23 01 28.4**	**+0.7**
ECH	**Echery**	**80.84 355**	*e*P	**P**	**23 01 27.4**	**-0.5**
GNI	**Garni**	**80.87 326**	*c* *i*P	**P**	**23 01 28.8**	**+0.5**
GNI			pmax	pmax		
	comp=Z,29nm,1.5s					
GNI	**Garni**	**80.87 326**	P	**P**	**23 01 30.1**	**+1.9**
	comp=Z,5.0nm,0.5s,mb4.7,baz=343,slow=5.3,SNR=9.1					
GNI	**Garni**	**80.87 326**	⇑*i*P	**P**	**23 01 28.8**	**+0.5**
	comp=Z,29nm,1.5s,mb5.0					
GRR	**Gorron**	**80.89 0**	*e*P	**P**	**23 01 27.9**	**-0.3**
	comp=Z,63nm,1.0s,mb5.2					
GRR	**Gorron**	**80.89 0**	*e*P	**P**	**23 01 27.9**	**-0.3**
GRR			pmax	pmax		
	comp=Z,31nm,1.0s,mb5.2					
THEF	**They Montfort**	**80.89 356**	*e*P	**P**	**23 01 27.9**	**-0.3**
ROSF	**Rostrenen**	**80.92 2**	*e*P	**P**	**23 01 28.2**	**-0.1**
	comp=Z,62nm,1.2s,mb5.1					
ROSF	**Rostrenen**	**80.92 2**	*e*P	**P**	**23 01 28.2**	**-0.1**
ROSF			pmax	pmax		
	comp=Z,31nm,1.2s,mb5.1					
CFR	**Carcaliu**	**80.93 340**	⇓*i*P	**P**	**23 01 28.9**	**+0.4**
SGMF	**Saint Gilles**	**81.01 1**	*e*P	**P**	**23 01 28.7**	**-0.1**
	comp=Z,87nm,1.0s,mb5.3					
SGMF	**Saint Gilles**	**81.01 1**	*e*P	**P**	**23 01 28.7**	**-0.1**
SGMF			pmax	pmax		
	comp=Z,44nm,1.0s,mb5.3					
WRAB	**Tennant Creek**	**81.03 222**	*e*P	**P**	**23 01 28.3**	**-1.2**
WRAB			pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0					
WRAB			MLR	MLR		
	comp=Z,360nm,20.0s,MS4.7					
WRAB	**Tennant Creek**	**81.03 222**	*e*P	**P**	**23 01 28.3**	**-1.2**
	comp=Z,16nm,0.8s,mb5.0					
WRAB			LR	LR		
	comp=Z,255nm,20.0s,MS4.6					
WB2	**Warramunga Arr**	**81.04 222**	⇓*i*P	**P**	**23 01 29.0**	**-0.5**
WB2			*i*	pP	23 01 40.9	-2.2
WRA	**Warramunga Arr**	**81.05 222**	P	**P**	**23 01 29.2**	**-0.4**
	comp=Z,5.4nm,0.7s,mb4.6,baz=35,slow=6.2,SNR=32					
ARSA	**Arzberg**	**81.05 349**	⇑*i*P	**P**	**23 01 29.3**	**+0.2**
	comp=Z,15nm,1.1s,mb4.8					
MLR	**Muntele Rosu**	**81.09 341**	P	**P**	**23 01 30.9**	**+1.6**
	comp=Z,15nm,0.6s,mb5.1,baz=358,slow=0.5,SNR=44					
MLR	**Muntele Rosu**	**81.09 341**	⇑*i*P	**P**	**23 01 31.0**	**+1.7**
MLR	**Muntele Rosu**	**81.09 341**	⇑*i*P	**P**	**23 01 31.0**	**+1.7**
HAU	**Haudompre**	**81.09 355**	*e*P	**P**	**23 01 28.9**	**-0.4**
	comp=Z,21nm,1.0s,mb4.7					
HAU	**Haudompre**	**81.09 355**	*e*P	**P**	**23 01 28.9**	**-0.4**
HAU			pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7					
FELD	**Feldberg**	**81.13 354**	*e*P	**P**	**23 01 28.7**	**-0.7**
HINF	**Hinteralfeld**	**81.25 355**	*e*P	**P**	**23 01 29.6**	**-0.5**
	comp=Z,15nm,1.0s,mb4.6					
HINF	**Hinteralfeld**	**81.25 355**	*e*P	**P**	**23 01 29.6**	**-0.5**
HINF			pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6					
VOIR		**81.32 342**	⇓P	**P**	**23 01 32.0**	**+1.5**
QUIF	**Quistinic**	**81.34 2**	*e*P	**P**	**23 01 30.3**	**-0.2**
	comp=Z,62nm,1.2s,mb5.1					
QUIF	**Quistinic**	**81.34 2**	*e*P	**P**	**23 01 30.3**	**-0.2**
QUIF			pmax	pmax		
	comp=Z,31nm,1.2s,mb5.1					
WATA	**Walderalm**	**81.39 352**	⇑*i*P	**P**	**23 01 30.7**	**-0.1**
	comp=Z,40nm,1.3s,mb5.2					
WATA	**Walderalm**	**81.39 352**	⇑*i*P	**P**	**23 01 30.7**	**-0.1**
WATA			pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2					
MOTA	**Moosalm**	**81.42 352**	⇑*i*P	**P**	**23 01 30.9**	**-0.1**
	comp=Z,24nm,1.1s,mb5.0					
MOTA	**Moosalm**	**81.42 352**	⇑*i*P	**P**	**23 01 30.9**	**-0.1**
MOTA			pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0					
HARR	**Harsova**	**81.44 340**	⇓*i*P	**P**	**23 01 31.5**	**+0.3**
WTTA	**Wattenberg**	**81.45 352**	⇑*i*P	**P**	**23 01 31.2**	**0.0**
	comp=Z,30nm,0.9s,mb5.2					
WTTA	**Wattenberg**	**81.45 352**	⇑*i*P	**P**	**23 01 31.2**	**0.0**
WTTA			pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2					
KBA	**Koelnbreinsper**	**81.47 350**	⇑*i*P	**P**	**23 01 32.1**	**+0.9**
	comp=Z,56nm,1.1s,mb5.4					
KBA	**Koelnbreinsper**	**81.47 350**	⇑*i*P	**P**	**23 01 32.1**	**+0.9**
KBA			pmax	pmax		
	comp=Z,56nm,1.1s,mb5.4					
SQTA	**Sankt Quirin**	**81.53 352**	⇓*i*P	**P**	**23 01 32.4**	**+0.8**
	comp=Z,12nm,0.8s,mb4.9					
SQTA	**Sankt Quirin**	**81.53 352**	⇓*i*P	**P**	**23 01 32.4**	**+0.8**
SQTA			pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9					
TIRR	**Tirgusor**	**81.56 339**	P	**P**	**23 01 32.7**	**+0.9**
TIRR	**Tirgusor**	**81.56 339**	⇓P	**P**	**23 01 33.3**	**+1.5**
DAVA	**Damuels**	**81.58 353**	⇑*i*P	**P**	**23 01 32.8**	**+1.0**
	comp=Z,13nm,1.3s,mb4.7					
LOMF	**Lomont**	**81.72 355**	*e*P	**P**	**23 01 32.4**	**-0.1**
KOGS	**Kog**	**81.75 348**	*e*P	**P**	**23 01 32.5**	**-0.2**
BZS	**Buzias**	**81.77 344**	P	**P**	**23 01 33.3**	**+0.5**
OBKA	**Obir**	**81.90 350**	⇑*i*P	**P**	**23 01 33.6**	**+0.1**
	comp=Z,20nm,0.8s,mb5.1					
LOR	**Lormes**	**81.94 357**	*e*P	**P**	**23 01 33.4**	**-0.3**
	comp=Z,52nm,1.3s,mb5.0					
LOR	**Lormes**	**81.94 357**	*e*P	**P**	**23 01 33.4**	**-0.3**
LOR			pmax	pmax		
	comp=Z,26nm,1.3s,mb5.0					
FVI	**Forni Avoltri**	**82.00 351**	P	**P**	**23 01 33.7**	**-0.3**
FVI			pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8					
FVI	**Forni Avoltri**	**82.00 351**	P	**P**	**23 01 33.7**	**-0.3**
	comp=Z,13nm,1.1s,mb4.8					
DAVOX	**Davos**	**82.08 353**	P	**P**	**23 01 35.5**	**+1.1**
	comp=Z,11nm,1.0s,mb4.8,baz=338,slow=3.3,SNR=13					
PTCC	**Patocco-Chiusa**	**82.13 350**	P	**P**	**23 01 34.3**	**-0.4**
SSF	**Saint Saulge**	**82.16 357**	*e*P	**P**	**23 01 34.7**	**-0.1**
SSF			pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8					
SSF	**Saint Saulge**	**82.16 357**	*e*P	**P**	**23 01 34.7**	**-0.1**
	comp=Z,15nm,1.1s,mb4.8					
APPI	**Appiano**	**82.27 352**	P	**P**	**23 01 35.5**	**+0.1**
	comp=Z,90nm,2.8s,mb5.2					
GMNA	**Gemona**	**82.27 350**	P	**P**	**23 01 35.3**	**-0.1**
ROBS	**Robic**	**82.28 350**	*e*P	**P**	**23 01 34.6**	**-0.9**
BRMO	**Bormio**	**82.34 352**	P	**P**	**23 01 36.8**	**+1.0**
LJU	**Ljubljana**	**82.36 349**	*e*P	**P**	**23 01 36.3**	**+0.4**
AVF	**Avril sur Loir**	**82.43 357**	*e*P	**P**	**23 01 36.0**	**-0.2**
	comp=Z,40nm,1.1s,mb5.0					
AVF	**Avril sur Loir**	**82.43 357**	*e*P	**P**	**23 01 36.0**	**-0.2**
AVF			pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0					
CABF	**La Chapelle**	**82.50 355**	*e*P	**P**	**23 01 36.7**	**+0.1**
	comp=Z,34nm,1.1s,mb4.9					
CABF	**La Chapelle**	**82.50 355**	*e*P	**P**	**23 01 36.7**	**+0.1**
CABF			pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9					
SMF	**Signal de Mont**	**82.56 357**	*e*P	**P**	**23 01 36.7**	**-0.2**
	comp=Z,51nm,1.1s,mb5.2					
SMF	**Signal de Mont**	**82.56 357**	*e*P	**P**	**23 01 36.7**	**-0.2**
SMF			pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2					
CTI	**Castel Tesino**	**82.66 351**	P	**P**	**23 01 37.6**	**+0.2**
CTI			pmax	pmax		
	comp=Z,29nm,1.2s,mb5.2					
CTI	**Castel Tesino**	**82.66 351**	P	**P**	**23 01 37.6**	**+0.2**
	comp=Z,29nm,1.2s,mb5.2					
BGF	**Bois d’Agland**	**82.68 358**	*e*P	**P**	**23 01 37.4**	**-0.1**
	comp=Z,24nm,1.1s,mb4.8					
BGF	**Bois d’Agland**	**82.68 358**	*e*P	**P**	**23 01 37.4**	**-0.1**
BGF			pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8					
MFF	**Saint Martin d**	**82.68 360**	*e*P	**P**	**23 01 37.5**	**0.0**
	comp=Z,37nm,1.0s,mb5.1					
MFF	**Saint Martin d**	**82.68 360**	*e*P	**P**	**23 01 37.5**	**0.0**
MFF			pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1					
SISC	**Sisak**	**82.70 348**	*i* P	**P**	**23 01 36.8**	**-0.8**
VJD	**Vijayawada**	**82.70 287**	*i* x	x	23 04 20.0	
MABI	**Malga Bissina**	**82.75 352**	P	**P**	**23 01 40.1**	**+2.2**
	comp=Z,15nm,1.0s,mb5.0					
BOYT	**Boyabat**	**82.79 334**	*i* P	**P**	**23 01 39.4**	**+1.2**
BOJS	**Bojanci**	**82.81 349**	*e*P	**P**	**23 01 37.9**	**-0.2**
TCF	**Toulx Ste Croi**	**82.96 358**	*e*P	**P**	**23 01 38.8**	**-0.1**
	comp=Z,11nm,0.9s,mb4.6					
TCF	**Toulx Ste Croi**	**82.96 358**	*e*P	**P**	**23 01 38.8**	**-0.1**
TCF			pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6					
BALT	**Daday**	**83.10 335**	*i* P	**P**	**23 01 40.6**	**+0.9**
SVIS	**Svilajnac**	**83.12 344**	⇑*i*P	**P**	**23 01 39.5**	**-0.2**
HYB	**Hyderabad**	**83.26 289**	*e*P	**P**	**23 01 41.0**	**0.0**
HYB			pmax	pmax		
	comp=Z,70nm,1.0s,mb5.7					
HYB	**Hyderabad**	**83.26 289**	*e*P	**P**	**23 01 41.0**	**0.0**
	comp=Z,70nm,1.0s,mb5.7					
HYB	**Hyderabad**	**83.26 289**	*i* P	**P**	**23 01 41.0**	**0.0**
	comp=Z,70nm,1.0s,mb5.7					
HYB			*e*S	S	23 12 00.0	+3.6
FITZ	**Fitzroy Crossi**	**83.42 231**	*e*P	**P**	**23 01 41.8**	**0.0**
	comp=Z,18nm,0.6s,mb5.3					
FITZ	**Fitzroy Crossi**	**83.42 231**	LR	LR	23 35 31.0	
	comp=Z,412nm,19.0s,MS4.8,baz=64,slow=33					
DIVS	**Divcibare**	**83.51 345**	⇓*i*P	**P**	**23 01 41.5**	**-0.1**
LPL	**La Plagne**	**83.56 355**	*e*P	**P**	**23 01 43.1**	**+1.2**
	comp=Z,7.6nm,0.7s,mb4.7					
LPL	**La Plagne**	**83.56 355**	*e*P	**P**	**23 01 43.1**	**+1.2**
LPL			pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7					
LPG	**La Plagne**	**83.57 355**	*e*P	**P**	**23 01 43.3**	**+1.4**
	comp=Z,28nm,1.1s,mb5.0					
LPG	**La Plagne**	**83.57 355**	*e*P	**P**	**23 01 43.3**	**+1.4**
LPG			pmax	pmax		
	comp=Z,14nm,1.1s,mb5.0					
BBLS	**Bajina Basta -**	**83.83 346**	⇓*i*P	**P**	**23 01 43.7**	**+0.4**
ZAPS	**Zavoj/Pirot**	**83.84 343**	⇓*i*P	**P**	**23 01 43.7**	**+0.3**
RJF	**Les Rejaudoux**	**83.96 359**	*e*P	**P**	**23 01 43.9**	**0.0**
	comp=Z,40nm,1.2s,mb5.1					
RJF	**Les Rejaudoux**	**83.96 359**	*e*P	**P**	**23 01 43.9**	**0.0**
RJF			pmax	pmax		
	comp=Z,20nm,1.2s,mb5.1					
BNI	**Bardonecchia**	**84.02 355**	P	**P**	**23 01 45.7**	**+1.5**
BNI			pmax	pmax		
	comp=Z,39nm,2.1s,mb5.2					
BNI	**Bardonecchia**	**84.02 355**	P	**P**	**23 01 45.7**	**+1.5**
	comp=Z,39nm,2.1s,mb5.2					
ELDT	**Eldivan**	**84.06 335**	*i* P	**P**	**23 01 46.2**	**+1.6**
BOB	**Bobbio (Coli)**	**84.12 353**	P	**P**	**23 01 45.8**	**+1.1**
BOB			pmax	pmax		
	comp=Z,44nm,0.7s,mb5.7					
BOB	**Bobbio (Coli)**	**84.12 353**	P	**P**	**23 01 45.8**	**+1.1**
	comp=Z,44nm,0.7s,mb5.7					
ORIF	**Oris-en-Rattie**	**84.20 355**	*e*P	**P**	**23 01 46.1**	**+1.0**
	comp=Z,27nm,1.1s,mb5.0					
ORIF	**Oris-en-Rattie**	**84.20 355**	*e*P	**P**	**23 01 46.1**	**+1.0**
ORIF			pmax	pmax		
	comp=Z,14nm,1.1s,mb5.0					
ELZG	**Elazig**	**84.27 330**	*i* P	**P**	**23 01 47.0**	**+1.4**
VIVF	**Saint-Julien-l**	**84.31 356**	*e*P	**P**	**23 01 46.3**	**+0.6**
	comp=Z,16nm,0.9s,mb4.8					
VIVF	**Saint-Julien-l**	**84.31 356**	*e*P	**P**	**23 01 46.3**	**+0.6**
VIVF			pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8					
CAF	**Calviac**	**84.33 358**	*e*P	**P**	**23 01 46.3**	**+0.5**
	comp=Z,31nm,1.0s,mb5.1					
CAF	**Calviac**	**84.33 358**	*e*P	**P**	**23 01 46.3**	**+0.5**
CAF			pmax	pmax		
	comp=Z,16nm,1.0s,mb5.1					
LFF	**La Frestale**	**84.33 359**	*e*P	**P**	**23 01 46.2**	**+0.4**
	comp=Z,50nm,1.1s,mb5.3					
LFF	**La Frestale**	**84.33 359**	*e*P	**P**	**23 01 46.2**	**+0.4**
LFF			pmax	pmax		
	comp=Z,25nm,1.1s,mb5.3					
MBDF	**Montbardon**	**84.34 355**	*e*P	**P**	**23 01 46.9**	**+1.1**
	comp=Z,13nm,0.7s,mb4.9					
MBDF	**Montbardon**	**84.34 355**	*e*P	**P**	**23 01 46.9**	**+1.1**
MBDF			pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8					
SGKT	**Sivrigoynuk**	**84.35 336**	*i* P	**P**	**23 01 47.1**	**+1.1**
ZCCA	**Zocca**	**84.40 352**	P	**P**	**23 01 48.5**	**+2.4**
VTS	**Vitosha**	**84.41 343**	P	**P**	**23 01 47.1**	**+0.8**
GSCL	**Gusciola**	**84.44 352**	P	**P**	**23 01 49.0**	**+2.7**
FNVD	**Fontana Vidola**	**84.57 352**	P	**P**	**23 01 48.5**	**+1.5**
	comp=Z,110nm,1.6s,mb5.7					
SEI	**Scarperia**	**84.66 351**	P	**P**	**23 01 49.9**	**+2.5**
BR131	**Keskin Array S**	**84.72 334**	*e*P	**P**	**23 01 48.8**	**+0.9**
	comp=Z,13nm,0.8s,mb5.1					
BR131			LR	LR		
	comp=Z,677nm,19.0s,MS5.0					
BDI	**Bagni Di Lucca**	**84.72 352**	P	**P**	**23 01 48.4**	**+0.6**
BDI			pmax	pmax		
	comp=Z,21nm,1.1s,mb5.2					
BDI	**Bagni Di Lucca**	**84.72 352**	P	**P**	**23 01 48.4**	**+0.6**
	comp=Z,21nm,1.1s,mb5.2					
VMG	**Vicchio**	**84.73 351**	P	**P**	**23 01 49.9**	**+2.1**

SFI	**Santa Sofia**	**84.76**	**351**	P	**P**	**23 01 49.6**	**+1.6**
SFI				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.5						
SFI	**Santa Sofia**	**84.76**	**351**	P	**P**	**23 01 49.6**	**+1.6**
	comp=Z,32nm,0.9s,mb5.5						
PGD	**Poggio Sodo**	**84.80**	**351**	P	**P**	**23 01 49.9**	**+1.7**
PGD				pmax	pmax		
	comp=Z,102nm,1.2s,mb5.8						
PGD	**Poggio Sodo**	**84.80**	**351**	P	**P**	**23 01 49.9**	**+1.7**
	comp=Z,102nm,1.2s,mb5.8						
MSL	**Mosul**	**84.90**	**326**	*e*P	**P**	**23 01 49.0**	**+0.2**
MSL	**Mosul**	**84.90**	**326**	*e*SKS	SKS	23 12 14.0	+8.2
MSL				*e*S	S	23 12 29.5	+17
TOUF	**Mont Tournerai**	**85.02**	**354**	*e*P	**P**	**23 01 49.6**	**+0.3**
AUTN	**L'Aution**	**85.03**	**354**	*e*P	**P**	**23 01 49.6**	**+0.3**
SAOF	**Saorge**	**85.03**	**354**	*e*P	**P**	**23 01 49.1**	**-0.2**
ARV	**Arcevia**	**85.05**	**350**	P	**P**	**23 01 50.6**	**+1.2**
	comp=Z,33nm,1.0s,mb5.4						
PII	**Pisa**	**85.07**	**352**	P	**P**	**23 01 49.2**	**-0.3**
PII				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.3						
PII	**Pisa**	**85.07**	**352**	P	**P**	**23 01 49.2**	**-0.3**
	comp=Z,26nm,1.0s,mb5.3						
LASF	**Ste Croix**	**85.12**	**357**	*e*P	**P**	**23 01 51.2**	**+1.4**
	comp=Z,19nm,0.9s,mb4.9						
CING	**Cingoli**	**85.14**	**350**	P	**P**	**23 01 50.4**	**+0.5**
	comp=Z,97nm,2.6s,mb5.5						
MVIF	**Mont Vial**	**85.14**	**354**	*e*P	**P**	**23 01 49.8**	**-0.1**
POO	**Poona**	**85.15**	**293**	*e*P	**P**	**23 01 50.8**	**+0.3**
POO				AMb	AMB	23 01 54.0	
	comp=Z,43nm,0.9s,mb5.6						
SMRF	**Simiane la Rot**	**85.15**	**356**	*e*P	**P**	**23 01 51.0**	**+1.1**
	comp=Z,49nm,1.0s,mb5.3						
SBF	**Sospel**	**85.16**	**354**	*e*P	**P**	**23 01 50.1**	**+0.2**
	comp=Z,107nm,1.1s,mb5.6						
SBF	**Sospel**	**85.16**	**354**	*e*P	**P**	**23 01 50.1**	**+0.2**
SBF				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.6						
VILF	**Villemus**	**85.27**	**355**	*e*P	**P**	**23 01 52.5**	**+2.0**
SNTG	**Esanatoglia**	**85.29**	**350**	P	**P**	**23 01 52.0**	**+1.4**
CALN	**Calern**	**85.31**	**355**	*e*P	**P**	**23 01 53.0**	**+2.3**
MURB	**Monte Urbino**	**85.33**	**350**	P	**P**	**23 01 51.8**	**+1.0**
	comp=Z,38nm,0.9s,mb5.5						
SKO	**Skopje**	**85.34**	**344**	*e*P	**P**	**23 01 51.8**	**+0.9**
BOM	**Bombay**	**85.46**	**294**	*e*x	x	23 01 22.3	
ALN	**Alexandroupoli**	**85.47**	**340**	*e*P	**P**	**23 01 51.4**	**-0.2**
ULDT	**Uludag**	**85.49**	**338**	*i* P	**P**	**23 01 52.4**	**+0.7**
FRF	**La Foret Royal**	**85.51**	**355**	*e*P	**P**	**23 01 51.9**	**+0.2**
	comp=Z,38nm,1.0s,mb5.3						
FRF	**La Foret Royal**	**85.51**	**355**	*e*P	**P**	**23 01 51.9**	**+0.2**
FRF				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.3						
ASS	**Assisi**	**85.51**	**350**	P	**P**	**23 01 52.5**	**+0.8**
ASS				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.7						
ASS	**Assisi**	**85.51**	**350**	P	**P**	**23 01 52.5**	**+0.8**
	comp=Z,44nm,1.0s,mb5.7						
JTS	**JuntasAbangare**	**85.59**	**79**	PFAKE		23 02 00.0	+7.3
JTS				LR	LR		
	comp=Z,104nm,21.0s,MS4.2						
PUYF	**Puyloubier**	**85.59**	**355**	*e*P	**P**	**23 01 53.1**	**+1.0**
GRFL	**Gerfalco**	**85.59**	**352**	*i* P	**P**	**23 01 52.6**	**+0.5**
	comp=Z,42nm,1.0s,mb5.6						
ESKT	**Eskisehir**	**85.65**	**336**	*i* P	**P**	**23 01 52.6**	**+0.2**
NRCA	**Norcia**	**85.69**	**350**	⇓*i*P	**P**	**23 01 53.9**	**+1.3**
KAHT	**Ahir Dag**	**85.73**	**331**	*i* P	**P**	**23 01 54.1**	**+1.2**
LMR	**La Mourre**	**85.74**	**355**	*e*P	**P**	**23 01 53.2**	**+0.4**
	comp=Z,39nm,1.0s,mb5.3						
LMR	**La Mourre**	**85.74**	**355**	*e*P	**P**	**23 01 53.2**	**+0.4**
LMR				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.3						
GELF	**Grande-Etoile**	**85.75**	**356**	*e*P	**P**	**23 01 53.4**	**+0.6**
SRS	**Serrai**	**85.76**	**342**	*e*P	**P**	**23 01 54.2**	**+1.2**
GZT	**Gaziantep**	**85.77**	**330**	*i* P	**P**	**23 01 54.1**	**+1.1**
BERF	**Bertagne**	**85.81**	**355**	*e*P	**P**	**23 01 55.3**	**+2.2**
MTLF	**Montolieu**	**85.91**	**358**	*e*P	**P**	**23 01 54.2**	**+0.6**
	comp=Z,23nm,1.1s,mb5.0						
MTLF	**Montolieu**	**85.91**	**358**	*e*P	**P**	**23 01 54.2**	**+0.6**
MTLF				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.0						
KAD	**Karad**	**85.92**	**292**	*e*P	**P**	**23 01 54.0**	**-0.2**
AQU	**L'Aquila**	**86.13**	**350**	P	**P**	**23 01 55.9**	**+1.2**
AQU				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.4						
AQU	**L'Aquila**	**86.13**	**350**	P	**P**	**23 01 56.2**	**+1.5**
	comp=Z,23nm,0.8s,mb5.5						
GRG	**Griva**	**86.15**	**343**	*e*P	**P**	**23 01 56.3**	**+1.5**
SJPF	**Ste Jean**	**86.16**	**0**	*e*P	**P**	**23 01 56.7**	**+1.8**
	comp=Z,17nm,1.0s,mb5.0						
SJPF	**Ste Jean**	**86.16**	**0**	*e*P	**P**	**23 01 56.7**	**+1.8**
SJPF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
EPF	**Esparros**	**86.25**	**359**	*e*P	**P**	**23 01 56.7**	**+1.4**
	comp=Z,6.4nm,0.7s,mb4.7						
EPF	**Esparros**	**86.25**	**359**	*e*P	**P**	**23 01 56.7**	**+1.4**
EPF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
FIAM	**Fiamignano**	**86.25**	**350**	P	**P**	**23 01 55.8**	**+0.5**
PGF	**Pioggiola**	**86.36**	**353**	*e*P	**P**	**23 01 56.3**	**+0.5**
	comp=Z,64nm,1.0s,mb5.5						
PGF	**Pioggiola**	**86.36**	**353**	*e*P	**P**	**23 01 56.3**	**+0.5**
PGF				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.5						
ETSF	**Etsaut**	**86.38**	**360**	*e*P	**P**	**23 01 56.8**	**+0.9**
	comp=Z,32nm,1.3s,mb5.1						
ETSF	**Etsaut**	**86.38**	**360**	*e*P	**P**	**23 01 56.8**	**+0.9**
ETSF				pmax	pmax		
	comp=Z,16nm,1.3s,mb5.1						
OUR	**Ouranopolis**	**86.44**	**341**	*e*P	**P**	**23 01 55.7**	**-0.6**
PTQR	**Pietraquaria**	**86.46**	**350**	P	**P**	**23 01 57.5**	**+1.2**
FNA	**Florina**	**86.50**	**343**	*e*P	**P**	**23 01 57.0**	**+0.4**
CII	**Carovilli**	**86.65**	**349**	*e*P	**P**	**23 01 57.9**	**+0.6**
	comp=Z,11nm,0.8s,mb5.1						
COBT	**Iskenderun**	**86.94**	**331**	*i* P	**P**	**23 02 00.2**	**+1.4**
BHD	**Baghdad**	**87.13**	**324**	*e*P	**P**	**23 01 58.0**	**-1.9**
BHD	**Baghdad**	**87.13**	**324**	*e*SKS	SKS	23 12 25.0	+4.2
BHD				*e*S	S	23 12 47.0	+13
XOR	**Xorichti**	**87.53**	**342**	*e*P	**P**	**23 02 01.3**	**-0.3**
PVRL	**Vila Real**	**87.79**	**5**	*e*P	**P**	**23 02 03.8**	**+1.0**
	comp=Z,14nm,1.4s,mb5.0						
PVIS	**Viseu**	**88.34**	**6**	*e*P	**P**	**23 02 05.8**	**+0.3**
	comp=Z,15nm,1.2s,mb5.1						
MTE	**Manteigas**	**88.67**	**5**	*e*P	**P**	**23 02 06.9**	**-0.2**
MTE	**Manteigas**	**88.67**	**5**	*e*S	S	23 12 50.7	+2.5
MTE				*e*SS	SS	23 18 56.4	+13
MTE				*e*LQ		23 28 03.0	
MTE				*e*LR	LR	23 32 04.1	
	comp=Z,690nm,16.1s						
TIP	**Timpagrande**	**88.82**	**347**	*e*P	**P**	**23 02 07.6**	**-0.2**
MBWA	**Marble Bar**	**88.94**	**234**	PFAKE		23 02 20.0	+11
MBWA				LR	LR		
	comp=Z,751nm,21.0s,MS5.1						
STKA	**Stephens Creek**	**89.10**	**211**	*e*P	**P**	**23 02 10.2**	**+0.9**
	comp=Z,8.1nm,1.0s,mb5.0						
STKA	**Stephens Creek**	**89.10**	**211**	P	**P**	**23 02 09.8**	**+0.5**
	comp=Z,2.7nm,0.5s,mb4.8,baz=10,slow=6.4,SNR=5.1						
STKA				LR	LR	23 40 18.3	
	comp=Z,2μm,19.3s,MS5.4,baz=21,slow=34						
PCBR	**Castelo Branco**	**89.23**	**5**	*e*P	**P**	**23 02 10.0**	**+0.3**
	comp=Z,9.4nm,2.1s,mb4.8						
CSS	**Prodhromos**	**89.25**	**333**	*e*P	**P**	**23 02 10.0**	**0.0**
	comp=Z,20nm,1.1s,mb5.3						
PTOM	**Tomar**	**89.40**	**6**	*e*P	**P**	**23 02 11.6**	**+1.1**
ESDC	**Sonseca Array**	**89.55**	**3**	P	**P**	**23 02 11.2**	**0.0**
	comp=Z,2.5nm,0.8s,mb4.6,baz=346,slow=3.6,SNR=13						
PALK	**Pallekele**	**89.84**	**281**	PFAKE		23 02 20.0	+6.8
PALK				LR	LR		
	comp=Z,114nm,19.0s,MS4.3						
SJG	**San Juan**	**90.47**	**60**	*e*P	**P**	**23 02 16.3**	**+0.3**
SJG				pmax	pmax		
	comp=Z,54nm,1.0s						
SJG				MLR	MLR		
	comp=Z,985nm,20.0s						
SJG	**San Juan**	**90.47**	**60**	*e*P	**P**	**23 02 16.3**	**+0.3**
	comp=Z,54nm,1.0s,mb5.8						
SJG				LR	LR		
	comp=Z,985nm,20.0s,MS5.2						
PAYG	**Puerto Ayora**	**90.70**	**90**	PFAKE		23 02 30.0	+13
PAYG				LR	LR		
	comp=Z,514nm,20.0s,MS5.0						
ASF	**Jabal al Asfar**	**90.75**	**329**	P	**P**	**23 02 17.2**	**+0.2**
	comp=Z,9.0nm,0.9s,mb5.1,baz=193,slow=1.9,SNR=9.7						
SNZO	**South Karori**	**92.12**	**184**	PFAKE		23 02 30.0	+6.8
SNZO				LR	LR		
	comp=Z,2μm,21.0s,MS5.5						
SDV	**Santo Domingo**	**95.36**	**69**	PFAKE		23 02 50.0	+11
SDV				LR	LR		
	comp=Z,523nm,20.0s,MS5.0						
ROSC	**El Rosal**	**96.34**	**74**	LR	LR	23 52 59.2	
	comp=Z,206nm,18.4s,MS4.6,baz=182,slow=40						
OTAV	**Otavalo**	**97.43**	**80**	PFAKE		23 03 00.0	+12
OTAV				LR	LR		
	comp=Z,272nm,19.0s,MS4.8						
NWAO	**Narrogin (SRO)**	**99.93**	**229**	LR	LR	23 51 22.7	
	comp=Z,390nm,18.4s,MS5.0,baz=148,slow=37						
NWAO	**Narrogin (SRO)**	**99.93**	**229**	PFAKE		23 03 10.0	+11
NWAO				LR	LR		
	comp=Z,365nm,20.0s,MS4.9						
NNA	**Nana**	**107.86**	**87**	PFAKE		23 07 50.0	
NNA				LR	LR		
	comp=Z,112nm,19.0s,MS4.5						
SAML	**Samuel**	**113.99**	**74**	PFAKE		23 08 00.0	+7.9
SAML				LR	LR		
	comp=Z,556nm,21.0s,MS5.1						
LPAZ	**La Paz**	**116.59**	**83**	PFAKE		23 08 10.0	+13
LPAZ				LR	LR		
	comp=Z,494nm,22.0s,MS5.1						
DBIC	**Dimbokro**	**122.34**	**5**	PKP	PKPdf	23 08 09.7	+1.4
	comp=Z,3.4nm,0.4s,baz=0.6,slow=3.8,SNR=19						
DBIC	**Dimbokro**	**122.34**	**5**	PKP	PKPdf	23 08 09.7	+1.4
DBIC				LR	LR		
	comp=Z,955nm,20.0s,MS5.4						
MBAR	**Mbarara**	**123.14**	**322**	PFAKE		23 08 20.0	+10
MBAR				LR	LR		
	comp=Z,165nm,20.0s,MS4.7						
RCBR	**Riachuelo**	**126.16**	**45**	PFAKE		23 08 30.0	+14
RCBR				LR	LR		
	comp=Z,599nm,20.0s,MS5.3						
CASY	**Casey**	**128.17**	**209**	PFAKE		23 08 30.0	+12
CASY				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
BDFB	**Brasilia**	**128.23**	**65**	PKP	PKPdf	23 08 21.1	+1.5
	comp=Z,5.4nm,1.0s,baz=234,slow=3.7,SNR=4.5						
VNDA	**Vanda**	**128.82**	**185**	PKP	PKPdf	23 08 21.0	+1.8
	comp=Z,0.7nm,0.6s,baz=335,slow=5.7,SNR=4.6						
VNDA	**Vanda**	**128.82**	**185**	PKP	PKPdf	23 08 21.0	+1.8
VNDA				LR	LR		
	comp=Z,521nm,19.0s,MS5.2						
SBA	**Scott Base**	**128.92**	**183**	PFAKE		23 08 30.0	+11
SBA				LR	LR		
	comp=Z,932nm,20.0s,MS5.5						
CPUP	**Villa Florida**	**130.74**	**82**	PFAKE		23 08 40.0	+16
CPUP				LR	LR		
	comp=Z,562nm,19.0s,MS5.3						
PLCA	**Paso Flores**	**131.96**	**106**	PKP	PKPdf	23 08 28.2	+2.2
	comp=Z,1.8nm,0.7s,baz=316,slow=0.5,SNR=7.5						
PLCA	**Paso Flores**	**131.96**	**106**	PKP	PKPdf	23 08 28.2	+2.2
PLCA				LR	LR		
	comp=Z,636nm,20.0s,MS5.3						
TRQA	**Tornquist**	**135.62**	**98**	PFAKE		23 08 40.0	+7.1
TRQA				LR	LR		
	comp=Z,511nm,19.0s,MS5.3						
LSZ	**Lusaka**	**137.44**	**317**	PFAKE		23 08 50.0	+13
LSZ				LR	LR		
	comp=Z,806nm,20.0s,MS5.5						
QSPA	**South Pole Qui**	**140.85**	**180**	*e*P	PKPdf	23 08 39.7	-1.5
QSPA				LR	LR		
	comp=Z,829nm,22.0s,MS5.4						
MATP	**Matopo**	**141.82**	**312**	PKhKP		23 08 42.1	
	comp=Z,2.2nm,0.6s,baz=48,slow=6.7,SNR=13						
TSUM	**Tsumeb**	**145.08**	**329**	PKP	PKPdf	23 08 51.9	+1.7
	comp=Z,64nm,1.0s,baz=9.2,slow=4.7,SNR=37						
TSUM	**Tsumeb**	**145.08**	**329**	*e*PKP	PKPdf	23 08 50.9	+0.7
TSUM				LR	LR		
	comp=Z,774nm,20.0s,MS5.5						
PMSA	**Palmer Station**	**145.28**	**138**	PFAKE		23 09 00.0	+11
PMSA				LR	LR		
	comp=Z,1μm,20.0s,MS5.8						
MAW	**Mawson**	**145.58**	**217**	*e*P	PKPdf	23 08 50.9	+1.3
	comp=Z,3.5nm,0.3s						
MAW	**Mawson**	**145.58**	**217**	PKP2	PKPab	23 08 51.4	-0.9
MAW				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAW	**Mawson**	**145.58**	**217**	PKPbc	PKPbc	23 08 51.4	+1.1
	comp=Z,5.7nm,0.9s,baz=82,slow=4.3,SNR=9.9						
LBTB	**Lobatse**	**147.12**	**313**	*e*PKIKP	PKPdf	23 08 55.0	+1.5
LBTB				*e*		23 08 58.0	
LBTB				MLR	MLR		
	comp=Z,712nm,19.0s,MS5.5						
LBTB	**Lobatse**	**147.12**	**313**	PKPbc	PKPdf	23 08 58.5	+4.9
	comp=Z,43nm,0.9s,baz=31,slow=2.3,SNR=42						
LBTB	**Lobatse**	**147.12**	**313**	*e*PKPdf	PKPdf	23 08 55.0	+1.4
LBTB				*e*PKPbc	PKPdf	23 08 58.0	+4.5
LBTB				PKPbc	PKPdf	23 08 58.5	+4.9
LBTB				LR	LR		
	comp=Z,712nm,19.0s,MS5.5						
BOSA	**Boshof**	**150.31**	**309**	PKPbc	PKPdf	23 09 06.4	+7.9
	comp=Z,40nm,1.0s,baz=15,slow=2.1,SNR=39						
BOSA	**Boshof**	**150.31**	**309**	*e*PKPbc	PKPdf	23 09 05.8	+7.3
BOSA				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
SYO	**Syowa Base**	**153.85**	**212**	⇑PKPbc	PKPdf	23 09 11.0	+8.6
SNAA	**Sanae**	**159.33**	**178**	PKIKP	PKPdf	23 09 10.2	+0.8
SNAA						23 09 24.8	
VNA3	**Neumayer Olymp**	**159.37**	**172**		PKPdf	23 09 29.6	+20
VNA3	**Neumayer Olymp**	**159.37**	**172**		PKPdf	23 10 01.7	+52
VNA3	**Neumayer Olymp**	**159.37**	**172**	P	PKPdf	23 09 10.7	+1.3
VNA3				P		23 09 29.6	
VNA2	**Neumayer--Watz**	**159.86**	**173**		PKPdf	23 09 25.7	+16
VNA2	**Neumayer--Watz**	**159.86**	**173**		PKPdf	23 09 31.5	+22
VNA2	**Neumayer--Watz**	**159.86**	**173**	P	PKPdf	23 09 11.5	+1.5
VNA2				P		23 09 25.7	
VNA2				P		23 09 31.5	

*IDC **14** 22:58:32.0±8.5,25.17N×128.43E,mb3.6/3,mb1 3.6/3,mb1mx3.5/17,mbtmp3.6/3,Error ellipse: s-maj=202.9km s-min=145.0km az=23.0*

*JMA **14** 22:58:38.7±0.1,25.88N×128.52E,h44^{km}±4^{km},M3.3*

ISC 14 22:58:38.9±0.8,**25.88N**±0.05×**128.52E**±0.04,**h44**^{km},**n13**,σ**0**^{s}**71**/22,**mb3.4**/3,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**0.74**	**291**	P	**P**	**22 58 53.0**	**-0.1**
JJT2				*e*S	**S**	**22 59 03.3**	**-0.2**
NAH1	**Naha**	**0.82**	**294**	P	**P**	**22 58 53.8**	**-0.3**
NAH1				*e*S	**S**	**22 59 04.8**	**-0.5**
JOW	**Kunigami**	**0.98**	**347**	P	**P**	**22 58 56.3**	**-0.1**
JOW				*e*S	**S**	**22 59 08.8**	**-0.5**
JIH	**Iheya**	**1.26**	**337**	P	**P**	**22 59 00.6**	**+0.2**
JIH				*e*S	**S**	**22 59 16.5**	**+0.1**
JAGN	**Aguni-jima**	**1.35**	**302**	P	**P**	**22 59 01.8**	**0.0**
JAGN				*e*S	**S**	**22 59 18.6**	**-0.2**
JKE	**Kume jima 2**	**1.62**	**286**	*e*S	**S**	**22 59 24.5**	**-1.0**
JTK	**Tokunoshima**	**1.94**	**11**	P	**P**	**22 59 10.2**	**+0.1**
JTK				*e*S	**S**	**22 59 34.2**	**+0.9**
JMZ	**Minamidaito 2**	**2.43**	**91**	P	**P**	**22 59 16.9**	**-0.2**
JMZ				*e*S	**S**	**22 59 44.6**	**-1.2**
JAM	**Amami Oshima**	**2.70**	**21**	P	**P**	**22 59 20.9**	**-0.1**
JAM				*e*S	**S**	**22 59 51.6**	**-1.1**
JZK	**Kikaishima**	**2.75**	**28**	P	**P**	**22 59 22.4**	**+0.7**
JZK				*e*S	**S**	**22 59 53.9**	**0.0**
SONM	**Songino Array**	**27.99**	**327**	P	**P**	**23 04 29.6**	**+1.9**
	0.4nm,0.4s,mb3.4,baz=129,slow=9.2,SNR=3.9						
MKAR	**Makanchi Array**	**41.97**	**312**	P	**P**	**23 06 27.9**	**+0.7**
	0.3nm,0.4s,mb3.3,baz=91,slow=11,SNR=9.5						
FINES	**FINESS Array B**	**73.30**	**331**	P	**P**	**23 10 08.5**	**+1.2**
	0.4nm,0.6s,mb3.5,baz=72,slow=6.0,SNR=4.1						

*NEIC **14** 23:18:07.8,51.02N×179.47E,h10^{km},mb4.4/1,ML3.9(AEIC),After AEIC.*

*IDC **14** 23:18:12.9±4.5,51.28N×179.57E,h55^{km}±37^{km},mb4.0/6,mb1 4.1/6,mb1mx3.7/23,mbtmp4.2/6,ML4.0/1,Error ellipse: s-maj=55.2km s-min=19.0km az=173.0*

ISC 14 23:18:11.1±1.2,**51.2N**±0.2×**179.52E**±0.08,**h59**^{km}±9^{km},**n27**,σ**0**^{s}**73**/31,**mb4.2**/7,**Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.11**	**73**	P	**P**	**23 18 43.9**	**-0.8**
KIMD				S	**S**	**23 19 12.1**	**+2.4**
KIKV	**Kanaga Island**	**2.18**	**70**	P	**P**	**23 18 45.3**	**-0.5**
KIWB	**Kanaga Island**	**2.18**	**71**	P	**P**	**23 18 45.8**	**0.0**
KINC	**Kanaga Island**	**2.22**	**69**	P	**P**	**23 18 46.1**	**-0.2**
KIRH	**Kanaga Island**	**2.23**	**70**	P	**P**	**23 18 46.8**	**+0.3**
ADAG	**Mount Adagdak**	**2.55**	**70**	P	**P**	**23 18 50.3**	**-0.6**
GSSP	**Great Sitkin S**	**2.83**	**70**	P	**P**	**23 18 55.2**	**+0.2**
GSTD	**Great Sitkin T**	**2.84**	**70**	P	**P**	**23 18 56.2**	**+1.1**
GSTD				S	**S**	**23 19 34.1**	**+5.9**
GSMY	**Great Sitkin M**	**2.89**	**71**	P	**P**	**23 18 55.6**	**-0.2**
GSMY				S	**S**	**23 19 35.9**	**+6.4**
GSTR	**Great Sitkin T**	**2.90**	**70**	*e*P	**P**	**23 18 55.7**	**-0.3**
GSIG	**Igitkin Island**	**2.95**	**72**	P	**P**	**23 18 57.2**	**+0.5**
SMY	**Shemya**	**3.69**	**297**	P	**P**	**23 19 07.2**	**+0.1**
ATKA	**Atka Island**	**4.04**	**73**	P	**P**	**23 19 10.1**	**-1.9**
FX1	**Attu Island--F**	**4.28**	**296**	P	**P**	**23 19 15.1**	**-0.2**
	28nm,0.3s,baz=201,slow=1.2,SNR=35						
FX1				S	**S**	**23 20 11.9**	**+7.5**
	23nm,0.3s,baz=85,slow=21,SNR=6.9						
FX1	**Attu Island--F**	**4.28**	**296**	P	**P**	**23 19 15.5**	**+0.2**
RSO	**Redoubt South**	**18.00**	**48**	P	**P**	**23 22 18.7**	**+0.4**
SPU	**Mount Spurr**	**18.56**	**46**	P	**P**	**23 22 24.5**	**-0.6**
IMA	**Indian Mountai**	**20.17**	**32**	*e*P	**P**	**23 22 42.9**	**0.0**
ILAR	**Eielson Array**	**22.06**	**39**	P	**P**	**23 23 01.8**	**-0.1**
	0.2nm,0.4s,baz=236,slow=9.8,SNR=4.6						
ASAJ	**Asahikawa**	**25.65**	**269**	P	**P**	**23 23 37.5**	**+0.8**
	4.8nm,0.5s,mb4.3,baz=333,slow=2.3,SNR=5.3						
SONM	**Songino Array**	**45.79**	**296**	P	**P**	**23 26 29.1**	**+0.8**
	0.7nm,0.6s,mb3.8,baz=45,slow=8.7,SNR=5.7						
BW06	**Boulder Array**	**47.37**	**71**	*e*P	**P**	**23 26 40.5**	**-0.3**
	1.9nm,0.5s,mb4.3						
PDAR	**Pinedale Array**	**47.37**	**71**	P	**P**	**23 26 41.0**	**+0.3**
	2.5nm,0.6s,mb4.3,baz=317,slow=3.9,SNR=22						
MKAR	**Makanchi Array**	**59.32**	**308**	P	**P**	**23 28 08.0**	**-0.8**
	0.9nm,0.4s,mb4.2,baz=50,slow=6.8,SNR=29						
BVAR	**Borovoye Array**	**60.35**	**319**	P	**P**	**23 28 16.1**	**+0.3**
	4.0nm,0.6s,mb4.7,baz=52,slow=6.2,SNR=26						
NB2	**NORSAR Subarra**	**67.73**	**354**	P	**P**	**23 29 03.2**	**-0.5**
	1.8nm,0.8s,mb4.2,baz=7.0,slow=6.2						
NOA	**NORSAR Array B**	**67.73**	**354**	P	**P**	**23 29 03.0**	**-0.7**
	1.2nm,0.8s,mb4.0,baz=8.0,slow=6.3,SNR=4.0						

*IDC **14** 23:22:33.3±1.2,8.70S×130.59E,mb3.9/4,mb1 4.0/6,mb1mx3.8/14,mbtmp3.9/6,ML3.6/2,Error ellipse: s-maj=61.1km s-min=20.8km az=73.0*

*NEIC **14** 23:22:40.0±3.0,8.89S×130.38E,h50^{km}±33^{km},Error ellipse: s-maj=36.5km s-min=23.3km az=219.0*

ISC 14 23:22:41.4±2.1,**9.11S**±0.08×**130.4E**±0.1,**h89**^{km}±22^{km},**n10**,σ**0**^{s}**96**/15,**mb3.8**/4,**Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**4.13**	**150**	*e*P	**P**	**23 23 44.7**	**+1.1**
	31nm,0.7s						
FITZ	**Fitzroy Crossi**	**10.04**	**207**	*e*P	**P**	**23 25 05.1**	**+0.5**
	14nm,1.4s						
FITZ				*e*S	**S**	**23 26 56.0**	**-0.2**
FITZ	**Fitzroy Crossi**	**10.04**	**207**	Pn	**P**	**23 25 04.7**	**+0.2**
	0.6nm,0.3s,baz=20,slow=10,SNR=5.6						
FITZ				Sn	**S**	**23 26 56.2**	**+0.1**
	2.5nm,0.3s,baz=195,slow=13,SNR=6.6						
WRAB	**Tennant Creek**	**11.44**	**161**	*e*Pn	**P**	**23 25 22.5**	**-0.7**
WRAB				*e*Sn	**S**	**23 27 31.3**	**+1.7**
WRA	**Warramunga Arr**	**11.44**	**161**	Pn	**P**	**23 25 22.4**	**-0.9**
	0.3nm,0.3s,baz=347,slow=13,SNR=8.5						
WRA				Sn	**S**	**23 27 28.8**	**-1.0**
	0.7nm,0.3s,baz=331,slow=22,SNR=4.3						
WB2	**Warramunga Arr**	**11.45**	**161**	*e*P	**P**	**23 25 22.6**	**-0.7**
WB2				*e*S	**S**	**23 27 29.2**	**-0.6**
STKA	**Stephens Creek**	**24.95**	**157**	P	**P**	**23 28 01.1**	**+3.1**
	1.3nm,0.6s,mb3.6,baz=353,slow=8.1,SNR=2.3						
SONM	**Songino Array**	**60.54**	**342**	P	**P**	**23 32 43.9**	**-0.7**
	0.6nm,0.6s,mb3.8,baz=153,slow=7.7,SNR=3.4						
MKAR	**Makanchi Array**	**70.17**	**327**	P	**P**	**23 33 46.6**	**+0.1**
	1.8nm,0.6s,mb4.1,baz=126,slow=7.6,SNR=24						
BVAR	**Borovoye Array**	**80.02**	**328**	P	**P**	**23 34 42.9**	**+0.3**
	0.3nm,0.3s,mb3.6,baz=158,slow=7.8,SNR=4.5						

*BJI **14** 23:58:07.7,51.42N×179.14E,h39^{km},mB4.9,mb4.9,Ms4.5,Msz4.2*

*MOS **14** 23:58:07.5±0.8,51.28N×179.66E,h49^{km},mb5.0/55,Error ellipse: s-maj=9.3km s-min=5.5km az=94.4*

*NEIC **14** 23:58:10.2±0.2,51.29N×179.63E,mb4.7/63,ML4.2(AEIC),Error ellipse: s-maj=6.9km s-min=2.7km az=182.0*

*IDC **14** 23:58:10.2±3.4,51.40N×179.57E,h54^{km}±30^{km},mb4.2/17,mb1 4.4/18,mb1mx4.3/25,mbtmp4.5/18,ML4.0/1,MS4.1/6,Ms1 4.1/6,ms1mx3.8/24,Error ellipse: s-maj=21.9km s-min=11.9km az=166.0,Incorrectly calculated travel-time residual on T phase at H03N*

ISC 14 23:58:08.5±0.6,**51.24N**±0.06×**179.63E**±0.04,**h58**^{km}±4^{km},**h49**^{km}±4.3^{km}**:pP-P**,**n255**,σ**0**^{s}**87**/267,**mb4.7**/103,**MS4.2**/15,**12C-6D**,**Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.02**	**74**	P	**P**	**23 58 40.3**	**-0.6**
KIMD				S	**S**	**23 59 04.0**	**-1.0**
KIKV	**Kanaga Island**	**2.10**	**71**	P	**P**	**23 58 41.6**	**-0.3**
KIKV				S	**S**	**23 59 06.9**	**+0.2**
KIWB	**Kanaga Island**	**2.10**	**72**	P	**P**	**23 58 41.7**	**-0.3**
KIWB				S	**S**	**23 59 08.6**	**+1.7**
KINC	**Kanaga Island**	**2.13**	**70**	P	**P**	**23 58 42.5**	**0.0**
KIRH	**Kanaga Island**	**2.15**	**71**	P	**P**	**23 58 42.6**	**0.0**
KIRH				S	**S**	**23 59 10.2**	**+2.1**
ADAG	**Mount Adagdak**	**2.46**	**71**	P	**P**	**23 58 46.9**	**-0.2**
GSSP	**Great Sitkin S**	**2.75**	**70**	P	**P**	**23 58 50.8**	**-0.3**
GSTD	**Great Sitkin T**	**2.75**	**71**	P	**P**	**23 58 50.8**	**-0.5**
GSTD				S	**S**	**23 59 22.8**	**-0.6**
GSMY	**Great Sitkin M**	**2.80**	**72**	P	**P**	**23 58 51.4**	**-0.6**
GSMY				S	**S**	**23 59 25.6**	**+0.9**
GSTR	**Great Sitkin T**	**2.81**	**71**	P	**P**	**23 58 52.3**	**+0.2**
GSIG	**Igitkin Island**	**2.87**	**73**	P	**P**	**23 58 53.3**	**+0.4**
GSIG				S	**S**	**23 59 28.1**	**+1.8**
SMY	**Shemya**	**3.73**	**296**	P	**P**	**23 59 05.3**	**+0.3**
SMY				S	**S**	**23 59 51.4**	**+3.3**
ATKA	**Atka Island**	**3.96**	**74**	P	**P**	**23 59 07.9**	**-0.3**
ATKA				S	**S**	**23 59 51.8**	**-2.0**
FX1	**Attu Island--F**	**4.32**	**295**	P	**P**	**23 59 12.5**	**-0.8**
FX1				S	**S**	**00 00 08.0**	**+5.2**
FX1				pmax	pmax		
	comp=Z,27nm,0.3s						
FX1				smax			
	comp=N,60nm,0.3s						
FX1	**Attu Island--F**	**4.32**	**295**	P	**P**	**23 59 12.5**	**-0.7**
	comp=N,27nm,0.3s,baz=265,slow=5.3,SNR=53						
FX1				S	**S**	**00 00 08.0**	**+5.2**
	comp=N,60nm,0.3s,baz=94,slow=21,SNR=10						
FX1	**Attu Island--F**	**4.32**	**295**	P	**P**	**23 59 13.2**	**0.0**
NIKO	**Nikolski**	**7.30**	**72**	P	**P**	**23 59 54.0**	**-0.9**
PET	**Petropavlovsk**	**13.01**	**286**	*e*P	**P**	**00 01 12.7**	**+0.4**
PET				pmax	pmax		
	comp=Z,61nm,2.5s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
RSO	**Redoubt South**	**17.91**	**48**	*e*P	**P**	**00 02 15.8**	**+1.1**
BILL	**Bilibino**	**18.07**	**344**	⇑*i*P	**P**	**00 02 17.6**	**+0.9**
BILL				pmax	pmax		
	comp=Z,43nm,1.3s						
BILL				MLR	MLR		
	comp=Z,500nm,19.0s						
SPU	**Mount Spurr**	**18.47**	**46**	*e*P	**P**	**00 02 22.4**	**+0.8**
SEY	**Seymchan**	**18.70**	**319**	*e*P	**P**	**00 02 27.6**	**+3.4**
SEY				pmax	pmax		
	comp=Z,30nm,0.8s						
SLKM	**Skilak Lake**	**19.12**	**49**	*e*P	**P**	**00 02 28.5**	**-0.6**
IMA	**Indian Mountai**	**20.09**	**32**	*e*P	**P**	**00 02 39.4**	**0.0**
IMA				pmax	pmax		
	comp=Z,115nm,0.6s						
IMA	**Indian Mountai**	**20.09**	**32**	*e*P	**P**	**00 02 39.4**	**0.0**
	comp=Z,115nm,0.6s						
SML	**Sawmill**	**20.36**	**46**	*e*P	**P**	**00 02 39.8**	**-2.5**
DIV	**Divide**	**21.39**	**49**	*e*P	**P**	**00 02 53.2**	**+0.4**
	comp=Z,83nm,1.0s,mb5.0						
ILAR	**Eielson Array**	**21.97**	**39**	P	**P**	**00 02 57.3**	**-1.2**
	comp=Z,3.6nm,0.8s,mb3.9,baz=243,slow=8.8,SNR=32						
YSS	**Yuzh-Sakhalins**	**24.35**	**274**	*e*P	**P**	**00 03 22.9**	**+1.2**
YSS				*e*		00 03 41.2	
YSS				S	**S**	**00 07 32.0**	**-2.2**
YSS				MLR	MLR		
	comp=Z,300nm,16.0s,MS3.9						
YSS				MLR	MLR		
	comp=E,400nm,19.0s						
ASAJ	**Asahikawa**	**25.72**	**269**	P	**P**	**00 03 34.9**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,35nm,1.0s						

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ASAJ                                 MLR      MLR
      comp=Z,214nm,20.9s
ASAJ  Asahikawa          25.72 269   P        P          00 03 34.9 +0.1
      comp=Z,35nm,0.9s,mb4.9,baz=30,slow=5.4,SNR=11
ASAJ                                 LR       LR         00 11 40.4
      comp=Z,214nm,20.9s,MS3.6,baz=164,slow=32
INK   Inuvik             28.14  35   P        P          00 03 55.9 -0.8
INK                                                      00 07 08.9
INK                                  pmax     pmax
      comp=Z,2.0nm,0.4s
INK                                  pmax     pmax
      comp=Z,4.0nm,1.0s
INK   Inuvik             28.14  35   P        P          00 03 55.9 -0.8
      comp=Z,1.7nm,0.4s,mb4.0,baz=230,slow=11,SNR=7.2
INK                                  PcP      PcP        00 07 08.9 -0.9
      comp=Z,3.8nm,1.0s,baz=225,slow=5.4,SNR=3.8
INK   Inuvik             28.14  35  eP        P          00 03 53.3 -3.3
      comp=Z,9.9nm,1.0s,mb4.4
KLR   Kul'dur            30.27 285  eP        P          00 04 12.0 -3.9
KLR                                  pmax     pmax
      comp=N,25nm,1.2s
KLR                                  pmax     pmax
      comp=Z,43nm,1.2s,mb5.0
TIXI  Tiksi              30.28 331  eP        P          00 04 13.2 -2.5
TIXI                                eS        S          00 09 01.0 -9.1
TIXI                                 pmax     pmax
      comp=Z,1.0nm,0.8s,mb3.6
MJAR  Matsushiro Arr     32.79 260   P        P          00 04 37.5 -0.7
      comp=Z,1.4nm,0.5s,mb4.2,baz=45,slow=8.0,SNR=5.3
MJAR                                 LR       LR         00 15 20.7
      comp=Z,195nm,20.8s,MS3.8,baz=40,slow=32
MDJ   Mudanjiang         33.62 279   P        P          00 04 44.0 -1.2
MDJ                                  AP       pP         00 04 55.0 -4.8
MDJ                                  XP       sP         00 05 00.1 -6.9
MDJ                                  PP       PP         00 05 59.9 +0.8
MDJ                                  PCP      PcP        00 07 24.3 -0.2
MDJ                                  S        S          00 10 03.8 +1.1
MDJ                                  XS                  00 10 23.0
MDJ                                  SCP                 00 11 02.3
MDJ                                  PCS                 00 11 09.3
MDJ                                  AMB      AMB
      comp=Z,80nm,6.1s
MDJ                                  LR       LR
      comp=N,210nm,25.1s,MS3.8
MDJ                                  LR       LR
      comp=E,140nm,26.9s,MS3.8
MDJ                                  LR       LR
      comp=Z,330nm,21.6s
YKA   Yellowknife Ar     36.04  46   P        P          00 05 04.5 -1.1
      comp=Z,4.7nm,0.6s,mb4.6,baz=282,slow=8.3,SNR=27
YKA                                  PcP      PcP        00 07 31.0 -0.2
      comp=Z,2.3nm,0.8s,baz=288,slow=3.2,SNR=8.2
CN2   Changchun          36.61 280  eP        P          00 05 10.0 -0.6
EDM   Edmonton           39.74  60  eP        P          00 05 35.5 -1.0
CIT   Chita              39.74 298  eP        P          00 05 36.8 +0.2
CIT                                  pmax     pmax
      comp=Z,56nm,1.2s,mb5.2
NEW   Newport            39.85  69  eP        P          00 05 37.1 -0.5
NEW                                  pmax     pmax
      comp=Z,8.0nm,0.7s
NEW   Newport            39.85  69  eP        P          00 05 37.1 -0.5
      comp=Z,8.1nm,0.7s,mb4.6
YBH   Yreka Blue Hor     39.87  81  eP        P          00 05 38.5 +0.7
YBH                                  pmax     pmax
      comp=Z,8.0nm,0.9s
YBH   Yreka Blue Hor     39.87  81  eP        P          00 05 38.5 +0.7
      comp=Z,7.8nm,0.9s,mb4.4
RES   Resolute Bay       40.27  24  eP        P          00 05 40.9 +0.1
MOD   Modoc              41.27  79  eP        P          00 05 50.2 +0.9
      comp=Z,6.8nm,0.7s,mb4.4
BMO   Blue Mountains     41.48  73  eP        P          00 05 50.9 -0.1
      comp=Z,4.4nm,0.8s,mb4.1
MSO   Missoula           42.44  69  eP        P          00 05 58.5 -0.2
      comp=Z,5.7nm,1.0s,mb4.2
CHMT  Chamberlain Mo     42.80  68  eP        P          00 06 01.0 -0.7
HLID  Hailey             43.92  73  eP        P          00 06 11.0 +0.1
      comp=Z,23nm,1.4s,mb4.7
MCMT  McKenzie Canyo     44.15  71  eP        P          00 06 12.6 -0.2
BOZ   Bozeman (W)        44.42  69  eP        P          00 06 14.6 -0.3
BOZ                                  pmax     pmax
      comp=Z,14nm,0.6s,mb4.9
BOZ   Bozeman (W)        44.42  69  eP        P          00 06 14.6 -0.3
      comp=Z,14nm,0.6s,mb4.9
NVAR  Mina Array Bea     44.55  82   P        P          00 06 16.9 +0.9
      comp=Z,2.8nm,0.7s,mb4.2,baz=299,slow=5.6,SNR=8.1
QLMT  Earthquake Lak     44.99  70  eP        P          00 06 19.6 +0.2
MTUM  Tungsten Hills     45.05  83  eP        P          00 06 20.8 +0.8
ELK   Elko               45.05  77  eP        P          00 06 20.4 +0.5
ELK                                  pmax     pmax
      comp=Z,5.0nm,0.7s
ELK   Elko               45.05  77  eP        P          00 06 20.4 +0.4
      comp=Z,4.8nm,0.7s,mb4.4
TLY   Talaya             45.30 302  eP        P          00 06 21.7 -0.1
TLY                                  pmax     pmax
      comp=Z,19nm,1.3s,mb4.8
TLY                                  MLR      MLR
      comp=Z,396nm,18.0s,MS4.4
TLY   Talaya             45.30 302  eP        P          00 06 21.9 +0.1
ULN   Ulaanbaatar        45.44 296⇑iP        P          00 06 23.3 +0.3
YNR   Norris Junctio     45.50  70  eP        P          00 06 23.8 +0.3
YFT   Old Faithful       45.56  70  eP        P          00 06 25.2 +1.3
IMW   Indian Meadow      45.81  71  eP        P          00 06 26.5 +0.5
      comp=Z,8.7nm,0.8s,mb4.7
SONM  Songino Array      45.83 296   P        P          00 06 26.7 +0.7
      comp=Z,7.7nm,0.9s,mb4.6,baz=54,slow=11,SNR=50
SONM                                 LR       LR         00 27 16.7
      comp=Z,481nm,18.6s,MS4.5,baz=67,slow=38
RRI2  Red Ridge          45.90  72  eP        P          00 06 27.4 +0.7
      comp=Z,9.1nm,0.9s,mb4.7
HVU   Hansel Valley      45.94  74  eP        P          00 06 27.3 +0.3
REDW  Red Top Meadow     46.17  71  eP        P          00 06 29.6 +0.7
ZAK   Zakamensk          46.18 300⇑iP        P          00 06 29.2 +0.4
ZAK                                  pmax     pmax
      comp=Z,11nm,1.3s,mb4.6
SPUT  South Promonto     46.41  75   P        P          00 06 32.0 +1.2
MOY   Mondy              46.72 303  eP        P          00 06 33.4 +0.4
MOY                                  pmax     pmax
      comp=Z,20nm,1.4s,mb4.8
FCC   Fort Churchill     46.76  46  eP        P          00 06 31.6 -1.7
FCC                                  pmax     pmax
      comp=Z,19nm,1.4s,mb4.8
FCC   Fort Churchill     46.76  46  eP        P          00 06 31.6 -1.6
      comp=Z,19nm,1.4s,mb4.8
HWUT  Hardware Ranch     46.77  74  eP        P          00 06 33.9 +0.3
      comp=Z,5.0nm,0.7s,mb4.5
HHC   Hu-ho-hao-te       46.78 285  eP        P          00 06 34.1 +0.5
HHC                                  AP       pP         00 06 44.4 -4.3
HHC                                  XP       sP         00 06 51.8 -3.6
HHC                                  PCP      PcP        00 08 07.8 +1.3
HHC                                  PP       PP         00 08 19.8 -4.1
HHC                                  S        S          00 13 18.1 -0.5
HHC                                  XS                  00 13 39.5
HHC                                  SS       SS         00 16 37.3 -1.1
HHC                                  AMB      AMB
      comp=Z,20nm,1.1s,mb5.0
HHC                                  LR       LR
      comp=N,170nm,16.7s,MS4.2
HHC                                  LR       LR
      comp=E,150nm,15.5s,MS4.2
HHC                                  LR       LR
      comp=Z,150nm,16.6s,MS4.0
SSE   Sheshan            47.01 268  eP        P          00 06 32.5 -3.1
SSE                                  AMB      AMB
      comp=Z,20nm,0.7s,mb5.2
SSE                                  AMB      AMB
      comp=Z,80nm,4.8s
SSE   Sheshan            47.01 268  eP        P          00 06 32.5 -3.1
      comp=Z,21nm,0.7s,mb5.2
DGMT  Dagmar             47.12  62   P        P          00 06 35.0 -1.2
PDAR  Pinedale Array     47.29  71   P        P          00 06 37.6  0.0
      comp=Z,15nm,0.8s,mb5.0,baz=304,slow=5.3,SNR=22
JLU   Jordanelle         47.44  75   P        P          00 06 39.7 +0.8
DAU   Daniels Canyon     47.67  75  eP        P          00 06 41.2 +0.5
MVU   Marysvale          48.26  77  eP        P          00 06 45.4 +0.1
      comp=Z,5.4nm,0.9s,mb4.6
MSU   Marysvale          48.28  77  eP        P          00 06 46.0 +0.6
TMUT  Trail Mountain     48.39  76  eP        P          00 06 45.8 -0.5
SRU   San Rafael         48.92  76  eP        P          00 06 51.4 +1.1
PV10  Paradox Valley     50.28  75  eP        P          00 07 00.9 +0.1
WUAZ  Wupatki            50.68  80  eP        P          00 07 04.3 +0.3
      comp=Z,8.1nm,0.8s,mb4.7
PV01  Paradox Valley     50.72  75  eP        P          00 07 03.9 -0.3
RW3   Ridgway            51.18  75  eP        P          00 07 08.2 +0.5
HSP   Hornsund           51.63 355  eP        P          00 07 09.5 -1.0
SDCO  Great Sand Dun     52.83  74  eP        P          00 07 20.0  0.0

      comp=Z,17nm,1.4s,mb4.8
NVS   Novosibirsk        53.57 314⇑iP        P          00 07 23.8 -1.4
NVS                                 e                    00 08 30.1
NVS                                  pmax     pmax
      comp=Z,17nm,0.9s,mb5.0
NVS                                  pmax     pmax
      comp=N,6.0nm,0.8s
NVS                                  pmax     pmax
      comp=E,6.0nm,0.8s
LAZ   Ladron             54.03  78  eP        P          00 07 28.8 -0.1
ANMO  Albuquerque        54.08  77⇓iP        P          00 07 28.9 -0.4
BNM   Barren Site        54.51  78  eP        P          00 07 32.6 +0.1
GTA   Gaotai             54.70 291  eP        P          00 07 33.5 -0.3
GTA                                  AP       pP         00 07 43.8 -5.3
GTA                                  XP       sP         00 07 48.1 -7.6
GTA                                  PP       PP         00 09 38.1 -0.1
GTA                                  S        S          00 15 12.0 +4.1
GTA                                  AMB      AMB
      comp=Z,10.0nm,1.2s,mb4.7
GTA                                  AMB      AMB
      comp=Z,110nm,5.4s
GTA                                  LR       LR
      comp=N,140nm,16.1s,MS4.4
GTA                                  LR       LR
      comp=E,230nm,18.0s,MS4.4
GTA                                  LR       LR
      comp=Z,290nm,16.1s,MS4.4
MNTX  Cornudas Mount     56.94  79  eP        P          00 07 49.3 -0.6
      comp=Z,7.3nm,1.0s,mb4.7
KEV   Kevo               57.67 349  ep        P          00 07 53.2 -1.4
      comp=Z,6.4nm,0.8s,mb4.7
KEV   Kevo               57.67 349  eP        P          00 07 53.2 -1.4
KEV                                  pmax     pmax
      comp=Z,6.0nm,0.8s,mb4.7
ARCES ARCESS Array B     58.06 350   P        P          00 07 55.7 -1.5
      comp=Z,7.4nm,0.8s,mb4.8,baz=27,slow=8.1,SNR=8.5
ARCES ARCESS Array B     58.06 350   P        P          00 07 55.7 -1.5
WMQ   Urumqi             58.59 302  eP        P          00 08 01.2 -0.1
WMQ                                  AP       pP         00 08 14.0 -2.8
WMQ                                  XP       sP         00 08 19.3 -4.2
WMQ                                  PCP      PcP        00 08 51.2 +0.4
WMQ                                  PP       PP         00 10 12.6 -0.5
WMQ                                 eS        S          00 15 59.6 +0.4
WMQ                                  SCS      ScS        00 17 43.3 +1.2
WMQ                                  SS       SS         00 19 54.2  0.0
WMQ                                  AMB      AMB
      comp=Z,10.0nm,1.0s,mb4.8
WMQ                                  AMB      AMB
      comp=Z,130nm,4.5s
WMQ                                  LR       LR
      comp=N,460nm,20.0s,MS4.6
WMQ                                  LR       LR
      comp=E,220nm,20.0s,MS4.6
WMQ                                  LR       LR
      comp=Z,360nm,20.0s,MS4.5
WMOK  Wichita Mounta     58.88  72  eP        P          00 08 02.4 -1.0
WMOK                                 pmax     pmax
      comp=Z,8.0nm,1.0s,mb4.7
WMOK  Wichita Mounta     58.88  72  eP        P          00 08 02.4 -1.0
      comp=Z,7.7nm,1.0s,mb4.7
MKAR  Makanchi Array     59.34 308   P        P          00 08 05.3 -1.2
      comp=Z,5.2nm,0.6s,mb4.7,baz=55,slow=7.1,SNR=58
MKAR                                 LR       LR         00 34 19.0
      comp=Z,225nm,20.7s,MS4.3,baz=358,slow=37
TXAR  Lajitas Array      59.65  80   P        P          00 08 09.6 +0.8
      comp=Z,1.6nm,0.6s,mb4.2,baz=304,slow=4.5,SNR=8.5
BVA0  Borovoye Array     60.35 319  i P       P          00 08 12.3 -1.1
BVA0                                 pmax     pmax
      comp=Z,3.0nm,1.1s,mb4.2
SVE   Sverdlovsk         61.18 327⇓eP        P          00 08 19.0 +0.1
SVE                                  pmax     pmax
      comp=Z,20nm,1.2s,mb5.1
SVE                                  MLR      MLR
      comp=N,100nm,16.0s,MS4.2
SVE                                  MLR      MLR
      comp=E,100nm,16.0s,MS4.2
SVE                                  MLR      MLR
      comp=Z,300nm,16.0s,MS4.5
ARU   Arti               62.20 327⇑iP        P          00 08 24.7 -1.0
ARU                                 e                    00 09 04.5
ARU                                 eS        S          00 16 47.4 +2.2
ARU                                 e                    00 18 13.6
ARU                                 eSS       SS         00 20 52.5 +1.7
ARU                                  pmax     pmax
      comp=Z,15nm,1.0s,mb5.1
ARU   Arti               62.20 327  eP        P          00 08 24.3 -1.4
      comp=Z,12nm,0.9s,mb5.0
KMI   Kunming            62.77 277   P        P          00 08 30.0  0.0
KMI                                  pmax     pmax
      comp=Z,4.0nm,0.8s,mb4.6
KMI   Kunming            62.77 277   P        P          00 08 30.0  0.0
      comp=Z,4.0nm,0.8s,mb4.6
WVT   Waverly            64.28  64  eP        P          00 08 39.0 -0.6
WVT                                  pmax     pmax
      comp=Z,7.0nm,0.9s,mb4.7
WVT   Waverly            64.28  64  eP        P          00 08 39.0 -0.7
      comp=Z,7.2nm,0.9s,mb4.7
OXF   Oxford             64.54  66  eP        P          00 08 40.1 -1.2
OXF                                  pmax     pmax
      comp=Z,50nm,1.0s,mb5.5
OXF   Oxford             64.54  66  eP        P          00 08 40.1 -1.3
      comp=Z,50nm,1.0s,mb5.5
PLAL  Pickwick Lake      64.96  65  eP        P          00 08 42.4 -1.7
      comp=Z,11nm,0.8s,mb4.9
KAF   Kangasniemi        65.02 347  ep        P          00 08 41.8 -2.2
      comp=Z,2.2nm,0.7s,mb4.3,baz=15,slow=5.8
KAF   Kangasniemi        65.02 347  eP        P          00 08 41.8 -2.2
KAF                                  pmax     pmax
      comp=Z,2.0nm,0.7s,mb4.3
TKM2  Tokmak 2           65.44 308   P        P          00 08 47.9 +0.9
      SNR=5.0
ULHL  Ulahol             65.62 308   P        P          00 08 48.6 +0.5
      SNR=9.2
FINES FINESS Array B     65.69 346   P        P          00 08 46.9 -1.5
      comp=Z,4.0nm,0.9s,mb4.5,baz=45,slow=5.4,SNR=16
FINES                                LR       LR         00 41 59.8
      comp=Z,110nm,18.9s,MS4.1,baz=94,slow=40
USP   Ospenovka          65.72 309   P        P          00 08 49.4 +0.6
      SNR=17
FRU   Bishkek            65.98 309  eP        P          00 08 51.0 +0.5
FRU                                  pmax     pmax
      comp=Z,40nm,1.5s,mb5.2
AAK   Ala-Archa          66.19 309  eP        P          00 08 51.0 -0.8
AAK                                  pmax     pmax
      comp=Z,21nm,1.3s,mb5.0
AAK   Ala-Archa          66.19 309  eP        P          00 08 51.0 -0.8
      comp=Z,21nm,1.3s,mb5.0
KZA   Kyzart             66.23 308   P        P          00 08 53.2 +1.1
      SNR=6.7
UCH   Uchtor             66.49 309   P        P          00 08 55.2 +1.5
      SNR=5.9
EKS2  Erkin-Say          66.52 309   P        P          00 08 54.7 +0.8
      SNR=14
LSA   Lhasa              66.56 289   P        P          00 08 55.4 +1.0
LSA   Lhasa              66.56 289  eP        P          00 08 55.4 +1.0
LSA                                  pmax     pmax
      comp=Z,4.0nm,0.8s,mb4.5
LSA   Lhasa              66.56 289  eP        P          00 08 55.4 +1.0
      comp=Z,4.2nm,0.8s,mb4.5
CPCT  Cooper Cave        66.62  62   P        P          00 08 56.6 +1.9
AML   Almayashu          66.96 309   P        P          00 08 58.0 +1.3
      SNR=12
LRAL  Lakeview Retre     66.99  66  eP        P          00 08 56.0 -1.1
      comp=Z,3.3nm,0.6s,mb4.5
AB31  Akbulak array      67.45 322  i P       P          00 08 59.2 -0.4
AB31                                 pmax     pmax
      comp=Z,23nm,1.2s,mb5.1
NB2   NORSAR Subarra     67.69 354   P        P          00 09 00.1 -0.8
      comp=Z,18nm,0.8s,mb5.2,baz=7.0,slow=6.2
NB2   NORSAR Subarra     67.69 354   P        P          00 09 00.1 -0.8
      baz=6.6,slow=6.5
NOA   NORSAR Array B     67.69 354   P        P          00 09 00.4 -0.5
      comp=Z,12nm,0.8s,mb5.0,baz=8.2,slow=6.3,SNR=41
KKAR  Karatay Array      67.75 312  i P       P          00 09 01.5 -0.1
KKAR                                 pmax     pmax
      comp=Z,22nm,0.9s,mb5.2
SHL   Shillong           69.14 285  eP        P          00 09 10.5  0.0
OBN   Obninsk            69.64 338⇑eP        P          00 09 11.8 -1.3
OBN                                 e         pP         00 09 26.5 -2.6
OBN                                  pmax     pmax
      comp=Z,9.0nm,0.7s,mb4.8
OBN                                  MLR      MLR
      comp=Z,200nm,16.0s,MS4.5
CMAR  Chiang Mai Arr     70.05 275   P        P          00 09 15.9 -0.2
      comp=Z,5.4nm,0.9s,mb4.5,baz=24,slow=7.5,SNR=19
GUN   Gumba              70.99 291  eP        P          00 09 22.8 +1.1

      comp=Z,75nm,1.0s,mb5.6
KKN   Kakani             71.43 291  eP        P          00 09 24.8 +0.4
      comp=Z,43nm,1.1s,mb5.3
PKI   Pulchoki           71.52 291  eP        P          00 09 25.2 +0.3
      comp=Z,42nm,1.1s,mb5.3
GKN   Gorkha             71.65 292  eP        P          00 09 26.0 +0.3
      comp=Z,53nm,1.1s,mb5.4
DMN   Daman              71.67 291  eP        P          00 09 26.5 +0.7
      comp=Z,50nm,1.1s,mb5.4
KOLN  Koldanda           72.43 292  eP        P          00 09 30.6 +0.3
      comp=Z,31nm,1.1s,mb5.1
PPT   Papeete            73.63 149  eLR       LR         00 31 41.1
      comp=Z,259nm,24.2s,baz=333
PPT   Papeete            73.63 149   LR       LR         00 40 43.0
      comp=Z,184nm,18.3s,MS4.4,baz=356,slow=35
BSEG  Bad Segeberg       74.81 353  eP        P          00 09 44.1 +0.5
AKASG Malin Array Be     75.37 341   P        P          00 09 46.2 -0.7
      comp=Z,2.7nm,0.6s,mb4.3,baz=21,slow=5.7,SNR=18
AKASG Malin Array Be     75.37 341   P        P          00 09 46.2 -0.7
CTAO  Charters Tower     76.83 212   P        P          00 09 55.5 -0.2
CLZ   Clausthal          76.89 353  eP        P          00 09 56.1 +0.6
CLZ                                  pmax     pmax
      comp=Z,14nm,1.1s,mb4.8
CLZ   Clausthal          76.89 353  eP        P          00 09 56.1 +0.6
      comp=Z,14nm,1.1s,mb4.8
GOF   Gofitskoye         77.00 330⇑iP        P          00 09 55.2 -1.0
GOF                                  pmax     pmax
      comp=Z,20nm,1.3s,mb4.9
CLL   Collm              77.20 351  i P       P          00 09 56.2 -1.0
CLL                                 e*PP      pP         00 10 13.0 -0.4
CLL                                  pmax     pmax
      comp=Z,8.0nm,1.3s,mb4.5
CLL   Collm              77.20 351  i P       P          00 09 56.2 -1.0
      comp=Z,8.0nm,1.3s,mb4.5
CLL                                 epP       pP         00 10 13.0 -0.4
CLL   Collm              77.20 351   P        P          00 09 56.2 -1.0
      comp=Z,logA/T=0.8,mb4.5
CLL                                 e*PP      pP         00 10 13.0 -0.4
BRG   Berggiesshubel     77.54 351   P        P          00 09 58.3 -0.8
BRG                                  pmax     pmax
      comp=Z,5.0nm,1.2s,mb4.3
BRG   Berggiesshubel     77.54 351   P        P          00 09 58.3 -0.8
      comp=Z,4.8nm,1.2s,mb4.3
KWP   Kalwaria           77.60 345  eP        P          00 10 00.2 +0.8
MOX   Moxa               77.98 352  eP        P          00 10 01.7 +0.2
MOX   Moxa               77.98 352  i P       P          00 10 01.7 +0.2
KIV   Kislovodsk         78.10 330  eP        P          00 10 01.7 -0.6
KIV                                  pmax     pmax
      comp=Z,7.0nm,0.9s,mb4.6
KIV                                  pmax     pmax
      comp=N,6.0nm,1.2s
KIV                                  pmax     pmax
      comp=E,5.0nm,1.2s
KIV                                  MLR      MLR
      comp=N,66nm,21.0s,MS4.1
KIV                                  MLR      MLR
      comp=E,57nm,21.0s,MS4.1
KIV                                  MLR      MLR
      comp=Z,128nm,21.0s,MS4.2
TNS   Taunus Mts         78.64 354  eP        P          00 10 05.5 +0.4
TNS                                  pmax     pmax
      comp=Z,11nm,1.3s,mb4.6
TNS   Taunus Mts         78.64 354  eP        P          00 10 05.5 +0.4
      comp=Z,11nm,1.3s,mb4.6
ZEI   Tsey               78.77 328  eP        P          00 10 04.3 -1.7
ZEI                                 i *PP     pP         00 10 13.7 -8.5
ZEI                                  pmax     pmax
      comp=Z,5.0nm,0.6s,mb4.6
GIVF  Givet              78.94 357  eP        P          00 10 06.4 -0.4
GRA1  Grafenberg Arr     78.96 352  eP        P          00 10 07.0 +0.1
      comp=Z,14nm,1.2s,mb4.8
GRA1                                epP       pP         00 10 23.4 +0.3
GRF   Grafenberg Arr     78.96 352  eP        P          00 10 07.0 +0.1
GRF                                 e*PP      pP         00 10 23.4 +0.3
GRF                                  pmax     pmax
      comp=Z,14nm,1.2s,mb4.8
GRF   Grafenberg Arr     78.96 352  eP        P          00 10 07.0 +0.1
GRF                                 e*PP      pP         00 10 23.4 +0.3
GRF                                  pmax     pmax
      comp=Z,14nm,1.2s,mb4.8
GRF   Grafenberg Arr     78.96 352  eP        P          00 10 07.0 +0.1
      comp=Z,14nm,1.2s,mb4.8
GRF                                 epP       pP         00 10 23.4 +0.3
BAIF  Baives             79.00 357  eP        P          00 10 06.9 -0.2
      comp=Z,26nm,1.1s,mb4.8
BAIF  Baives             79.00 357  eP        P          00 10 06.9 -0.2
BAIF                                 pmax     pmax
      comp=Z,13nm,1.1s,mb4.8
TBI   Tubuai             79.09 151  eLR       LR         00 34 12.9
      comp=Z,350nm,23.2s
BURAR Bucovina Array     79.10 343 ⇓P         P          00 10 08.1 +0.4
KHC   Kasperske Hory     79.30 351  eP        P          00 10 09.0 +0.2
GERES GERESS Array B     79.57 351   P        P          00 10 09.8 -0.5
      comp=Z,1.2nm,0.8s,mb3.9,baz=18,slow=4.2,SNR=10
DRGR                     80.35 344 ⇑P         P          00 10 14.4  0.0
FLN   La Foliniere       80.38   0  eP        P          00 10 13.9 -0.7
      comp=Z,30nm,1.1s,mb4.8
FLN   La Foliniere       80.38   0  eP        P          00 10 13.9 -0.7
FLN                                  pmax     pmax
      comp=Z,15nm,1.1s,mb4.8
CDF   Champ du Feu       80.51 355  eP        P          00 10 14.7 -0.6
MEZF  Maizieres J'vi     80.53 356  eP        P          00 10 15.2 -0.2
      comp=Z,8.6nm,0.6s,mb4.5
LDF   La Druitiere       80.55 360  eP        P          00 10 14.7 -0.8
      comp=Z,21nm,1.0s,mb4.7
LDF   La Druitiere       80.55 360  eP        P          00 10 14.7 -0.8
LDF                                  pmax     pmax
      comp=Z,11nm,1.0s,mb4.7
GRR   Gorron             80.75   0  eP        P          00 10 16.2 -0.3
      comp=Z,17nm,0.9s,mb4.7
GRR   Gorron             80.75   0  eP        P          00 10 16.2 -0.3
GRR                                  pmax     pmax
      comp=Z,8.0nm,0.9s,mb4.7
ROSF  Rostrenen          80.77   2  eP        P          00 10 16.5 -0.2
      comp=Z,44nm,1.3s,mb4.9
ROSF  Rostrenen          80.77   2  eP        P          00 10 16.5 -0.2
ROSF                                 pmax     pmax
      comp=Z,22nm,1.3s,mb4.9
GNI   Garni              80.83 327  eP        P          00 10 18.7 +1.6
GNI                                  pmax     pmax
      comp=Z,9.0nm,1.4s
SGMF  Saint Gilles       80.87   1  eP        P          00 10 16.8 -0.4
      comp=Z,21nm,0.9s,mb4.8
SGMF  Saint Gilles       80.87   1  eP        P          00 10 16.8 -0.4
SGMF                                 pmax     pmax
      comp=Z,11nm,0.9s,mb4.8
ARSA  Arzberg            80.94 349⇓iP        P          00 10 18.9 +1.3
      comp=Z,5.8nm,1.3s,mb4.3
HAU   Haudompre          80.97 355  eP        P          00 10 17.2 -0.5
MLR   Muntele Rosu       81.00 342 ⇑P         P          00 10 19.6 +1.7
HINF  Hinteralfeld       81.13 355  eP        P          00 10 17.9 -0.6
QUIF  Quistinic          81.19   2  eP        P          00 10 18.1 -0.8
      comp=Z,31nm,1.1s,mb4.8
QUIF  Quistinic          81.19   2  eP        P          00 10 18.1 -0.8
QUIF                                 pmax     pmax
      comp=Z,16nm,1.1s,mb4.9
WRAB  Tennant Creek      81.22 223   P        P          00 10 18.2 -1.4
WRA   Warramunga Arr     81.24 223   P        P          00 10 18.7 -0.9
      comp=Z,1.2nm,0.9s,mb3.8,baz=34,slow=6.0,SNR=5.9
WTTA  Wattenberg         81.33 352⇑iP        P          00 10 20.5 +0.9
      comp=Z,16nm,1.2s,mb4.8
WTTA  Wattenberg         81.33 352⇑iP        P          00 10 20.5 +0.9
WTTA                                 pmax     pmax
      comp=Z,16nm,1.2s,mb4.8
KBA   Koelnbreinsper     81.35 351⇓iP        P          00 10 21.2 +1.5
      comp=Z,23nm,1.1s,mb5.0
KBA   Koelnbreinsper     81.35 351⇓iP        P          00 10 21.2 +1.5
KBA                                  pmax     pmax
      comp=Z,23nm,1.1s,mb5.0
PERS  Pernice            81.60 349  eP        P          00 10 21.3 +0.3
OBKA  Obir               81.79 350⇑iP        P          00 10 22.6 +0.6
      comp=Z,7.1nm,0.8s,mb4.7
LOR   Lormes             81.81 357  eP        P          00 10 21.7 -0.4
SSF   Saint Saulge       82.02 357  eP        P          00 10 23.1 -0.1
GCIS  Gornji Cirnik      82.29 349  eP        P          00 10 25.2 +0.6
AVF   Avril sur Loir     82.30 357  eP        P          00 10 24.4 -0.2
      comp=Z,12nm,1.1s,mb4.5
AVF   Avril sur Loir     82.30 357  eP        P          00 10 24.4 -0.2
AVF                                  pmax     pmax
      comp=Z,6.0nm,1.0s,mb4.5
CABF  La Chapelle        82.37 356  eP        P          00 10 24.9 -0.1
SMF   Signal de Mont     82.43 357  eP        P          00 10 25.0 -0.3
      comp=Z,17nm,1.1s,mb4.6
SMF   Signal de Mont     82.43 357  eP        P          00 10 25.0 -0.3
SMF                                  pmax     pmax
      comp=Z,9.0nm,1.1s,mb4.6
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MFF	Saint Martin d	82.54	360	*e*P	P	00 10 25.7	-0.1
	comp=Z,14nm,1.0s,mb4.7						
MFF	Saint Martin d	82.54	360	*e*P	P	00 10 25.7	-0.1
MFF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
BGF	Bois d'Agland	82.54	358	*e*P	P	00 10 25.6	-0.3
CEY	Cerknica	82.56	350	*e*P	P	00 10 24.4	-1.6
TCF	Toulx Ste Croi	82.83	358	*e*P	P	00 10 27.1	-0.2
	comp=Z,6.8nm,0.8s,mb4.4						
TCF	Toulx Ste Croi	82.83	358	*e*P	P	00 10 27.1	-0.2
TCF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
HYB	Hyderabad	83.34	289	*e*P	P	00 10 30.0	-0.5
HYB	Hyderabad	83.34	289	*i* P	P	00 10 32.0	+1.5
LPL	La Plagne	83.43	355	*e*P	P	00 10 31.4	+1.0
LPG	La Plagne	83.45	355	*e*P	P	00 10 31.5	+1.0
	comp=Z,13nm,1.1s,mb4.6						
LPG	La Plagne	83.45	355	*e*P	P	00 10 31.5	+1.0
LPG				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
ORIF	Oris-en-Rattie	84.07	356	*e*P	P	00 10 34.3	+0.8
	comp=Z,17nm,1.1s,mb4.8						
ORIF	Oris-en-Rattie	84.07	356	*e*P	P	00 10 34.3	+0.8
ORIF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
VIVF	Saint-Julien-l	84.19	356	*e*P	P	00 10 34.5	+0.4
CAF	Calviac	84.19	358	*e*P	P	00 10 34.5	+0.4
	comp=Z,13nm,1.1s,mb4.7						
CAF	Calviac	84.19	358	*e*P	P	00 10 34.5	+0.4
CAF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
LFF	La Frestale	84.20	359	*e*P	P	00 10 34.3	+0.1
	comp=Z,19nm,1.0s,mb4.9						
LFF	La Frestale	84.20	359	*e*P	P	00 10 34.3	+0.1
LFF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
MBDF	Montbardon	84.21	355	*e*P	P	00 10 35.2	+0.9
BR131	Keskin Array S	84.65	334	*e*P	P	00 10 37.1	+0.5
	comp=Z,2.9nm,0.8s,mb4.5						
LASF	Ste Croix	84.99	357	*e*P	P	00 10 39.5	+1.3
	comp=Z,7.8nm,0.9s,mb4.5						
SMRF	Simiane la Rot	85.03	356	*e*P	P	00 10 39.3	+1.0
	comp=Z,45nm,1.4s,mb5.1						
SBF	Sospel	85.04	354	*e*P	P	00 10 37.7	-0.7
FRF	La Foret Royal	85.38	355	*e*P	P	00 10 40.0	-0.1
	comp=Z,20nm,1.0s,mb4.9						
FRF	La Foret Royal	85.38	355	*e*P	P	00 10 40.0	-0.1
FRF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
LMR	La Mourre	85.62	355	*e*P	P	00 10 41.4	+0.1
	comp=Z,17nm,1.0s,mb4.9						
LMR	La Mourre	85.62	355	*e*P	P	00 10 41.4	+0.1
LMR				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9						
MTLF	Montolieu	85.77	358	*e*P	P	00 10 42.4	+0.4
	comp=Z,20nm,1.2s,mb4.9						
MTLF	Montolieu	85.77	358	*e*P	P	00 10 42.4	+0.4
MTLF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.9						
EPF	Esparros	86.11	359	*e*P	P	00 10 44.7	+1.0
PGF	Pioggiola	86.24	353	*e*P	P	00 10 44.5	+0.2
	comp=Z,35nm,1.1s,mb5.2						
PGF	Pioggiola	86.24	353	*e*P	P	00 10 44.5	+0.2
PGF				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.2						
ETSF	Etsaut	86.24	0	*e*P	P	00 10 45.0	+0.7
TSUM	Tsumeb	145.03	329	*e*PKP	PKPdf	00 17 40.2	+1.1
MAW	Mawson	145.77	217	PKPbc	PKPbc	00 17 42.3	+2.5
	comp=Z,1.0nm,0.3s,baz=180,slow=1.0,SNR=4.0						
BOSA	Boshof	150.33	310	PKPbc	PKPdf	00 17 55.0	+7.5
	comp=Z,10nm,0.9s,baz=75,slow=3.3,SNR=8.8						

CSEM ***15*** *00:18:24.8±0.1, 42.86N×29.36W, h10^{km}, mb4.6/61, Ms3.7, Error ellipse: s-maj=1.9km s-min=1.5km az=37.0*

BJI ***15*** *00:18:25.5, 43.00N×29.30W, h10^{km}, mB5.1, mb5.0, Ms4.4, Msz4.3*

MOS ***15*** *00:18:25.9±1.0, 43.07N×29.34W, h10^{km}, mb4.7/55, Error ellipse: s-maj=11.1km s-min=5.1km az=151.4*

IDC ***15*** *00:18:25.6±0.6, 42.98N×29.32W, mb4.0/16, mb1 4.2/17, mb1mx4.2/25, mbtmp4.0/17, ML5.3/1, MS4.0/11, Ms1 4.0/11, ms1mx3.8/22, Error ellipse: s-maj=18.9km s-min=13.9km az=165.0*

NEIC ***15*** *00:18:27.6±0.2, 43.00N×29.30W, h10^{km}, mb4.5/69, MS3.8/2, Error ellipse: s-maj=8.3km s-min=3.0km az=5.0*

ZUR_RM ***15*** *00:18:27, 43.00N×29.30W, h4^{km}, Mw4.8/9, Moment Tensor Solution. s9 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.10; $M_{\theta\theta}$0.32; $M_{\phi\phi}$0.78; $M_{r\theta}$-1.10; $M_{\theta\phi}$0.81; $M_{\phi r}$0.28; Best double couple: $M_0$1.68×10^{16} NP1:ϕ_s69°,δ64°,λ-55°. NP2:ϕ_s191°,δ43°,λ-140°. Principal axes: T 1.493, Plg12°, Azm134°; N .37, Plg31°, Azm232°; P -1.863, Plg56°, Azm26°;*

MDD ***15*** *00:18:45.3±9.2, 42.99N×27.16W, h10^{km}, mb4.0/18 Error ellipse: s-maj=119.0km s-min=51.2km az=103.0*

ISC 15 00:18:25.2±0.2, **42.85N**±0.03×**29.34W**±0.03, **h10**^{km}, **n293**, σ**1**$\overset{s}{.}$**04**/283, **mb4.4**/78, **MS3.9**/17, **9C-1D, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASBA	Santa Barbara	4.40	159	*e*P	Pn	00 19 31.4	-2.4
PFAV	Pico das Favas	4.48	157	*e*P	Pn	00 19 33.7	-1.1
SET4	Mosteiros	5.66	150	*e*P	Pn	00 19 51.2	-0.3
SET2	Ginetes	5.69	150	*e*P	Pn	00 19 51.5	-0.4
PFET	Feteiras	5.72	150	*e*P	Pn	00 19 51.9	-0.4
FAC	Faja de Cima	5.81	150	*e*P	Pn	00 19 53.7	+0.1
PVER	Pico Vermelho	5.84	149	*e*P	Pn	00 19 54.0	0.0
CML	Cha da Macela	5.85	149	*e*P	Pn	00 19 54.0	-0.1
LFA	Lagoa do Fogo	5.87	149	*e*P	Pn	00 19 54.6	+0.1
PFAD	Fenais da Ajud	5.88	147	*e*P	Pn	00 19 54.6	+0.1
PCNG	Congro	5.91	148	*e*P	Pn	00 19 54.9	-0.1
VIF	Vila Franca	5.91	148	*e*P	Pn	00 19 54.8	-0.2
MIRA	Miradouro	5.94	147	*e*P	Pn	00 19 55.8	+0.4
PSMN	Pico do Norte,	6.70	149	*e*P	Pn	00 20 05.6	-0.6
PMPS	Porto Santo	14.16	129	*e*P	P	00 21 47.8	-0.2
ELOB	Lobios	15.76	86	P	P	00 22 04.5	-4.3
	14nm,0.7s						
PLOU	Loures	15.78	98	*e*P	P	00 22 06.8	-2.2
	77nm,1.7s						
PTOM	Tomar	16.07	95	*e*P	P	00 22 16.2	+3.4
	88nm,1.5s						
PVRL	Vila Real	16.14	88	*e*P	P	00 22 16.5	+2.9
	40nm,1.2s						
PVIS	Viseu	16.14	90	*e*P	P	00 22 17.1	+3.4
MTE	Manteigas	16.48	91	*e*P	P	00 22 20.0	+2.0
	61nm,1.3s						
MTE				*e*S	S	00 25 35.0	+15
MTE	Manteigas	16.48	91	*e*P	P	00 22 19.2	+1.2
	52nm,1.1s						
MTE	Manteigas	16.48	91	*e*P	P	00 22 19.2	+1.2
	52nm,1.1s						
PTEO	Sao Teotonio	16.61	102	*e*P	P	00 22 17.8	-1.9
PCBR	Castelo Branco	16.69	93	*e*P	P	00 22 23.2	+2.6
	45nm,1.7s						
ECAL	Calabor	16.72	85	P	P	00 22 17.3	-3.7
	0.8nm,0.2s						
EVO	Evora	16.73	98	*e*P	P	00 22 16.9	-4.3
	121nm,1.4s						
EVO				*e*R			
	964nm,21.0s						
PBEJ	Beja	17.03	99	*e*P	P	00 22 27.2	+2.2
	54nm,1.8s						
EBAD	Badajoz	17.38	96	P	P	00 22 27.0	-2.4
	0.9nm,0.3s						
EBAD	Badajoz	17.38	96	P	P	00 22 27.0	-2.4
	0.9nm,0.3s,SNR=7.3						
PALC	Alcoutim	17.54	101	*e*P	P	00 22 33.8	+2.4
EARI	Arriondas	17.63	80	P	P	00 22 30.0	-2.4
	0.5nm,0.3s						
EARI	Arriondas	17.63	80	P	P	00 22 30.0	-2.4
	0.5nm,0.3s,SNR=4.7						
EBAJ	Bajamar	17.73	139	T		00 40 05.0	
	SNR=7.0						
CRAJ	Montana Rajada	17.84	141	T		00 40 05.3	
	SNR=7.9						
CCAN	Las Canadas	17.87	141	T		00 40 22.7	
	SNR=7.9						
EMIN	Mina Concepcio	18.00	99	P	P	00 22 36.0	-1.1
	0.6nm,0.3s						
EMIN	Mina Concepcio	18.00	99	P	P	00 22 36.0	-1.1
	0.6nm,0.3s,SNR=10.0						
CFUE	Fuerteventura	18.86	134	P	P	00 22 52.2	+4.5
	2.5nm,0.2s,SNR=7.9						
CFUE				T		00 41 28.1	
	SNR=7.9						
ELAN	Lanestosa	18.92	80	P	P	00 22 47.9	-0.5
	3.2nm,0.7s						
ELAN	Lanestosa	18.92	80	P	P	00 22 47.9	-0.5
	3.2nm,0.7s,SNR=12						
CFTV	Fuerteventura	18.97	134	T		00 41 40.5	
	SNR=11						
ESPR	Espera	18.97	100	P	P	00 22 49.6	+0.6
	1.0nm,0.4s,SNR=7.6						
ROSF	Rostrenen	19.00	64	*e*P	P	00 22 44.4	-4.9
	25nm,0.9s						
ROSF	Rostrenen	19.00	64	*e*P	P	00 22 44.4	-4.9
ROSF				pmax	pmax		
	comp=Z,12nm,0.9s						
QUIF	Quistinic	19.03	66	*e*P	P	00 22 44.9	-4.7
ESDC	Sonseca Array	19.32	91	P	P	00 22 52.1	-1.0
	comp=Z,1.8nm,0.3s,baz=287,slow=13,SNR=25						
ESDC	Sonseca Array	19.32	91	P	P	00 22 52.9	-0.2
	comp=Z,4.4nm,0.3s,baz=287,slow=13,SNR=40						
ESDC	Sonseca Array	19.32	91	P	P	00 22 52.9	-0.2
	comp=Z,4.4nm,0.3s,SNR=40						
EADA	Adamuz	19.38	96	P	P	00 22 54.5	+0.7
	comp=Z,0.4nm,0.3s						
EADA	Adamuz	19.38	96	P	P	00 22 54.5	+0.7
	comp=Z,0.4nm,0.3s,SNR=7.1						
SGMF	Saint Gilles	19.47	65	*e*P	P	00 22 52.2	-2.6
	comp=Z,105nm,1.4s						
SGMF	Saint Gilles	19.47	65	*e*P	P	00 22 52.2	-2.6
SGMF				pmax	pmax		
	comp=Z,53nm,1.4s						
ECRI	Cripan	19.69	82	P	P	00 22 57.2	-0.1
ECRI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ECRI	Cripan	19.69	82	P	P	00 22 57.2	-0.1
	comp=Z,6.5nm,0.8s,SNR=7.9						
DKH	Dar Kharkhour	19.95	104	*i* P	P	00 22 59.0	-1.3
ELOJ	Sierra Loja	20.09	98	P	P	00 23 02.4	+0.7
ELOJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ELOJ	Sierra Loja	20.09	98	P	P	00 23 02.4	+0.8
	comp=Z,9.4nm,0.9s,SNR=12						
EALK	Alkurruntz	20.32	79	P	P	00 23 03.3	-0.7
	comp=Z,1.4nm,0.7s,SNR=5.5						
ERON	Agron	20.39	98	P	P	00 23 05.8	+0.9
	comp=Z,2.2nm,0.8s,SNR=9.1						
ECOG	Cogollos-Vega	20.46	97	P	P	00 23 06.4	+0.8
ECOG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ECOG	Cogollos-Vega	20.46	97	P	P	00 23 06.4	+0.8
	comp=Z,1.9nm,0.5s,SNR=7.2						
SJPF	Ste Jean	20.54	80	*e*P	P	00 23 05.4	-0.9
	comp=Z,147nm,1.6s						
SJPF	Ste Jean	20.54	80	*e*P	P	00 23 05.4	-0.9
SJPF				pmax	pmax		
	comp=Z,74nm,1.6s						
GRR	Gorron	20.61	65	*e*P	P	00 23 06.1	-0.9
	comp=Z,113nm,1.3s						
GRR	Gorron	20.61	65	*e*P	P	00 23 06.1	-0.9
GRR				pmax	pmax		
	comp=Z,56nm,1.3s						
LCHF	La Chataignera	20.61	69	*e*P	P	00 23 06.0	-1.1
EQES	Quesada	20.62	95	P	P	00 23 07.8	+0.6
	comp=Z,0.3nm,0.4s						
EQES	Quesada	20.62	95	P	P	00 23 07.8	+0.6
	comp=Z,0.3nm,0.4s,SNR=7.8						
LARF	Larrau	20.72	80	*e*P	P	00 23 06.8	-1.4
EVIA	Vianos	20.73	93	P	P	00 23 08.4	0.0
EVIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
EVIA	Vianos	20.73	93	P	P	00 23 08.4	0.0
	comp=Z,9.5nm,0.7s,SNR=12						
FLN	La Foliniere	20.89	64	*e*P	P	00 23 09.1	-0.9
	comp=Z,42nm,1.0s						
FLN				*e*R			
	comp=Z,288nm,22.5s						
FLN	La Foliniere	20.89	64	*e*P	P	00 23 09.1	-0.9
FLN				pmax	pmax		
	comp=Z,21nm,1.0s						
FLN				MLR	MLR		
	comp=Z,290nm,22.5s,MS3.6						
MFF	Saint Martin d	21.02	70	*e*P	P	00 23 10.2	-1.1
	comp=Z,64nm,1.3s,mb4.5						
MFF	Saint Martin d	21.02	70	*e*P	P	00 23 10.2	-1.1
MFF				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.5						
ETSF	Etsaut	21.06	80	*e*P	P	00 23 11.1	-0.6
	comp=Z,38nm,1.1s,mb4.3						
ETSF	Etsaut	21.06	80	*e*P	P	00 23 11.1	-0.6
ETSF				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.3						
EKA	Eskdalemuir Ar	21.06	45	P	P	00 23 10.3	-1.3
EKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
EKA	Eskdalemuir Ar	21.06	45	P	P	00 23 10.3	-1.3
	comp=Z,2.9nm,0.9s,mb3.6,baz=236,slow=9.0,SNR=4.6						
LDF	La Druitiere	21.12	64	*e*P	P	00 23 11.2	-1.0
	comp=Z,72nm,1.4s,mb4.5						
LDF	La Druitiere	21.12	64	*e*P	P	00 23 11.2	-1.0
LDF				pmax	pmax		
	comp=Z,36nm,1.4s,mb4.5						
MIF	Mishlifen	21.12	109	*i* P	P	00 23 12.0	-0.4
ETOB	Tobarra	21.43	92	P	P	00 23 15.8	+0.3
	comp=Z,1.3nm,0.7s,mb3.4						
ETOB	Tobarra	21.43	92	P	P	00 23 15.8	+0.3
	comp=Z,1.3nm,0.7s,mb3.4,SNR=4.0						
CZD	Col de Zad	21.46	109	*i* P	P	00 23 15.0	-0.8
VIEF	Viey	21.48	80	*e*P	P	00 23 15.0	-1.0
EBIE	Bielsa	21.60	80	P	P	00 23 17.4	+0.2
	comp=Z,6.0nm,1.0s,mb4.0						
EBIE	Bielsa	21.60	80	P	P	00 23 17.4	+0.2
	comp=Z,6.0nm,1.0s,mb4.0,SNR=4.0						
EPF	Esparros	21.68	79	*e*P	P	00 23 17.6	-0.4
	comp=Z,145nm,1.6s,mb4.8						
EPF	Esparros	21.68	79	*e*P	P	00 23 17.6	-0.4
EPF				pmax	pmax		
	comp=Z,73nm,1.6s,mb4.9						
EMOS	Mosqueruela	21.69	87	P	P	00 23 18.8	+0.8
	comp=Z,25nm,1.0s,mb4.6						
EMOS	Mosqueruela	21.69	87	P	P	00 23 18.8	+0.7
	comp=Z,25nm,1.0s,mb4.6						
RESF	Ens	21.72	80	*e*P	P	00 23 17.9	-0.5
LFF	La Frestale	21.72	74	*e*P	P	00 23 17.7	-0.7
	comp=Z,58nm,1.1s,mb4.6						
LFF	La Frestale	21.72	74	*e*P	P	00 23 17.7	-0.7
LFF				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.6						
EMUR	La Murta	21.95	94	P	P	00 23 21.6	+1.0
	comp=Z,8.8nm,0.9s,mb4.2						
EMUR	La Murta	21.95	94	P	P	00 23 21.6	+0.9
	comp=Z,8.8nm,0.9s,mb4.2						
MELF	Melles	22.02	80	*e*P	P	00 23 20.9	-0.4
ERTA	Horta de San J	22.12	85	P	P	00 23 24.3	+1.9
	comp=Z,21nm,1.1s,mb4.5						
ERTA	Horta de San J	22.12	85	P	P	00 23 24.3	+1.9
	comp=Z,21nm,1.1s,mb4.5						
RJF	Les Rejaudoux	22.24	73	*e*P	P	00 23 24.0	+0.5
	comp=Z,43nm,1.3s,mb4.4						
RJF				*e*R			
	comp=Z,424nm,19.8s						
MLS	Moulis	22.24	79	*e*P	P	00 23 21.1	-2.5
EBR	Ebro Roquetas	22.27	85	*e*P	P	00 23 24.0	+0.1
EPOB	Poblet	22.57	83	P	P	00 23 28.2	+1.5
	comp=Z,14nm,1.4s,mb4.2						
EPOB	Poblet	22.57	83	P	P	00 23 28.2	+1.4
	comp=Z,14nm,1.4s,mb4.2						
TCF	Toulx Ste Croi	22.66	70	*e*P	P	00 23 27.2	-0.4
	comp=Z,79nm,1.4s,mb4.7						
TCF	Toulx Ste Croi	22.66	70	*e*P	P	00 23 27.2	-0.4
TCF				pmax	pmax		
	comp=Z,40nm,1.4s,mb4.7						
CAF	Calviac	22.66	74	*e*P	P	00 23 28.1	+0.4
	comp=Z,21nm,1.1s,mb4.2						
CAF	Calviac	22.66	74	*e*P	P	00 23 28.1	+0.4
CAF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.2						
EMIR	Miracle	22.76	82	P	P	00 23 28.8	+0.1
	comp=Z,15nm,1.2s,mb4.3						
EMIR	Miracle	22.76	82	P	P	00 23 28.8	+0.1
	comp=Z,15nm,1.2s,mb4.3						
HYF	Humbligny	22.93	68	*e*P	P	00 23 30.5	+0.3
MTLF	Montolieu	22.99	78	*e*P	P	00 23 31.7	+0.8
	comp=Z,146nm,1.5s,mb4.9						
MTLF	Montolieu	22.99	78	*e*P	P	00 23 31.7	+0.8
MTLF				pmax	pmax		
	comp=Z,73nm,1.5s,mb4.9						
BGF	Bois d'Agland	23.09	70	*e*P	P	00 23 31.3	-0.5
	comp=Z,100nm,1.2s,mb4.8						
BGF	Bois d'Agland	23.09	70	*e*P	P	00 23 31.3	-0.5
BGF				pmax	pmax		
	comp=Z,50nm,1.2s,mb4.8						
PYM	Petit Puy Mans	23.25	72	*e*P	P	00 23 35.9	+2.5
AVF	Avril sur Loir	23.43	69	*e*P	P	00 23 35.7	+0.6
	comp=Z,49nm,1.1s,mb4.6						
AVF	Avril sur Loir	23.43	69	*e*P	P	00 23 35.7	+0.6
AVF				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.6						
LBL	Lubilhac	23.46	73	*e*P	P	00 23 37.3	+1.8
SSF	Saint Saulge	23.52	68	*e*P	P	00 23 36.4	+0.4
SSF				pmax	pmax		
	comp=Z,28nm,1.3s,mb4.5						
SSF	Saint Saulge	23.52	68	*e*P	P	00 23 36.4	+0.4
	comp=Z,28nm,1.3s,mb4.5						
LOR	Lormes	23.76	68	*e*P	P	00 23 38.3	0.0
	comp=Z,30nm,0.9s,mb4.4						
LOR				*e*R			
	comp=Z,284nm,17.0s						
LOR	Lormes	23.76	68	*e*P	P	00 23 38.3	0.0
LOR				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.4						
LOR				MLR	MLR		
	comp=Z,280nm,17.0s,MS3.8						
SMF	Signal de Mont	23.77	69	*e*P	P	00 23 38.4	0.0
	comp=Z,23nm,1.0s,mb4.3						
SMF	Signal de Mont	23.77	69	*e*P	P	00 23 38.4	0.0
SMF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.3						
LASF	Ste Croix	24.04	76	*e*P	P	00 23 41.2	+0.1
	comp=Z,37nm,1.3s,mb4.4						
BAIF	Baives	24.06	61	*e*P	P	00 23 41.0	-0.2
	comp=Z,68nm,1.4s,mb4.6						
BAIF	Baives	24.06	61	*e*P	P	00 23 41.0	-0.2
BAIF				pmax	pmax		
	comp=Z,34nm,1.4s,mb4.6						
DOU	Dourbes	24.31	61	P	P	00 23 43.3	-0.4
GIVF	Givet	24.46	61	*e*P	P	00 23 45.4	+0.3
	comp=Z,69nm,1.3s,mb4.6						
GIVF	Givet	24.46	61	*e*P	P	00 23 45.4	+0.3
GIVF				pmax	pmax		
	comp=Z,35nm,1.3s,mb4.6						
VIVF	Saint-Julien-l	24.51	74	*e*P	P	00 23 46.3	+0.6
	comp=Z,59nm,1.5s,mb4.6						
VIVF	Saint-Julien-l	24.51	74	*e*P	P	00 23 46.3	+0.6
VIVF				pmax	pmax		
	comp=Z,29nm,1.5s,mb4.6						
MEZF	Maizieres J'vi	24.55	65	*e*P	P	00 23 46.3	+0.3
	comp=Z,29nm,0.8s,mb4.5						
MEM	Membach	25.25	60	P	P	00 23 53.7	+1.0
SMRF	Simiane la Rot	25.28	75	*e*P	P	00 23 53.9	+0.9
WLF	Walferdange	25.29	62	*e*P	P	00 23 50.5	-2.6
WLF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.5						
WLF	Walferdange	25.29	62	*e*P	P	00 23 50.5	-2.6
	comp=Z,18nm,1.1s,mb4.5						
WLF	Walferdange	25.29	62	*e*P	P	00 23 50.5	-2.6
	comp=Z,18nm,1.1s,mb4.5						
CABF	La Chapelle	25.32	69	*e*P	P	00 23 53.0	-0.3
	comp=Z,93nm,1.4s,mb4.8						
CABF	La Chapelle	25.32	69	*e*P	P	00 23 53.0	-0.3
CABF				pmax	pmax		
	comp=Z,47nm,1.4s,mb4.8						
ORIF	Oris-en-Rattie	25.35	73	*e*P	P	00 23 54.5	+0.8
	comp=Z,81nm,1.7s,mb4.7						
ORIF				*e*R			
	comp=Z,342nm,21.0s						
HAU	Haudompre	25.42	66	*e*P	P	00 23 54.6	+0.3
	comp=Z,41nm,1.3s,mb4.5						
HAU				*e*R			
	comp=Z,303nm,20.1s						
HAU	Haudompre	25.42	66	*e*P	P	00 23 54.6	+0.3
HAU				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.5						
HAU				MLR	MLR		
	comp=Z,300nm,20.1s,MS3.8						
HINF	Hinteralfeld	25.76	66	*e*P	P	00 23 58.1	+0.6
	comp=Z,11nm,0.7s,mb4.2						
HINF	Hinteralfeld	25.76	66	*e*P	P	00 23 58.1	+0.6
HINF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
LOMF	Lomont	25.77	67	*e*P	P	00 23 58.2	+0.6
LPL	La Plagne	25.87	72	*e*P	P	00 23 59.9	+1.3
RUP	Ruppelstein	25.88	62	*e*P	P	00 23 58.4	-0.2
LPG	La Plagne	25.89	72	*e*P	P	00 24 00.1	+1.4
BNI	Bardonecchia	25.90	73	*e*P	P	00 24 00.2	+1.4
BNI				pmax	pmax		
	comp=Z,57nm,1.7s,mb4.8						
BNI	Bardonecchia	25.90	73	*e*P	P	00 24 00.2	+1.4
	comp=Z,57nm,1.7s,mb4.8						
BNI	Bardonecchia	25.90	73	*e*P	P	00 24 00.2	+1.4
	comp=Z,57nm,1.7s,mb4.8						
MOF	Molkenrain	25.95	66	*e*P	P	00 23 59.2	-0.1
MBDF	Montbardon	26.01	73	*e*P	P	00 24 00.2	+0.4
	comp=Z,45nm,1.5s,mb4.5						
MBDF	Montbardon	26.01	73	*e*P	P	00 24 00.2	+0.4
MBDF				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.5						
CDF	Champ du Feu	26.03	65	*e*P	P	00 24 00.5	+0.5
	comp=Z,20nm,1.0s,mb4.3						
CDF	Champ du Feu	26.03	65	*e*P	P	00 24 00.5	+0.5
CDF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
ABH	Alteburg	26.20	62	*e*P	P	00 24 01.6	0.0
SCHQ	Schefferville	27.09	309	P	P	00 24 09.6	-0.1
	comp=Z,2.8nm,0.7s,mb3.9,baz=156,slow=3.4,SNR=3.8						
SCHQ				LR	LR	00 32 55.6	
	comp=Z,280nm,20.3s,MS3.8,baz=246,slow=32						
SCHQ	Schefferville	27.09	309	P	P	00 24 09.6	-0.1
SCHQ				LR	LR	00 32 55.6	
DAVOX	Davos	27.90	68	LR	LR	00 33 42.9	
	comp=Z,171nm,19.5s,MS3.6,baz=269,slow=33						
GRA1	Grafenberg Arr	28.59	62	*e*P	P	00 24 22.2	-1.1
	comp=Z,8.0nm,1.2s,mb4.3						
GRF	Grafenberg Arr	28.59	62	*e*P	P	00 24 22.2	-1.1
GRF				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
GRF	Grafenberg Arr	28.59	62	*e*P	P	00 24 22.2	-1.1
GRF				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
GRF	Grafenberg Arr	28.59	62	*e*P	P	00 24 22.2	-1.1
	comp=Z,8.0nm,1.2s,mb4.3						
CLL	Collm	29.69	59	*e*P	P	00 24 37.0	+3.8
CLL	Collm	29.69	59	P	P	00 24 37.0	+3.8
JMIC	Jan Mayen	30.06	13	LR	LR	00 33 25.4	
	comp=Z,202nm,18.9s,MS3.8,baz=164,slow=30						
SUMG	Summit	30.12	355	P	P	00 24 38.4	+1.5
	comp=Z,3.8nm,0.9s,mb4.1						
SUMG	Summit	30.12	355	P	P	00 24 38.3	+1.4
	comp=Z,3.8nm,0.9s,mb4.1						
KHC	Kasperske Hory	30.15	63	*e*P	P	00 24 37.0	-0.3
NOA	NORSAR Array B	30.24	39	P	P	00 24 37.0	-1.0
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,76nm,19.0s						
NOA	NORSAR Array B	30.24	39	P	P	00 24 37.0	-1.0
	comp=Z,0.9nm,0.7s,mb3.6,baz=254,slow=9.8,SNR=3.4						
NOA				LR	LR	00 36 30.8	
	comp=Z,76nm,19.0s,MS3.4,baz=250,slow=36						
GERES	GERESS Array B	30.26	63	P	P	00 24 37.7	-0.6
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES				MLR	MLR		
	comp=Z,141nm,19.6s						
GERES	GERESS Array B	30.26	63	P	P	00 24 37.7	-0.5
	comp=Z,0.8nm,0.6s,mb3.6,baz=270,slow=9.3,SNR=7.4						
GERES				LR	LR	00 36 20.6	
	comp=Z,141nm,19.6s,MS3.6,baz=339,slow=36						
CADS	Cadrg	30.61	69	*e*P	P	00 24 41.8	+0.4
PRU	Pruhonice	30.72	61	*e*P	P	00 24 43.8	+1.5
LJU	Ljubljana	31.19	69	*e*P	P	00 24 46.4	-0.1
AQU	L'Aquila	31.22	76	*e*P	P	00 24 45.0	-1.8
AQU				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
AQU	L'Aquila	31.22	76	*e*P	P	00 24 45.0	-1.8
	comp=Z,14nm,0.8s,mb4.8						
AQU	L'Aquila	31.22	76	*e*P	P	00 24 45.0	-1.8
	comp=Z,14nm,0.8s,mb4.8						
MORC	Moravsky Berou	32.67	61	*e*P	P	00 24 59.7	+0.3
MORC				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
MORC	Moravsky Berou	32.67	61	*e*P	P	00 24 59.7	+0.3
	comp=Z,3.5nm,1.0s,mb4.2						

MORC	Moravsky Berou	32.67	61	eP	P	00 24 59.7	+0.3
	comp=Z,3.5nm,1.0s,mb4.2						
SADO	Sadowa	35.54	291	P	P	00 25 23.4	-0.7
	comp=Z,3.3nm,0.9s,mb4.2,baz=27,slow=9.0,SNR=2.9						
KWP	Kalwaria	36.01	61	eP	P	00 25 29.9	+1.7
KWP				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
KWP	Kalwaria	36.01	61	eP	P	00 25 29.9	+1.7
	comp=Z,12nm,1.2s,mb4.7						
KWP	Kalwaria	36.01	61	eP	P	00 25 29.9	+1.7
	comp=Z,12nm,1.2s,mb4.7						
FINES	FINESS Array B	37.36	41	P	P	00 25 38.7	-0.7
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	37.36	41	P	P	00 25 38.7	-0.7
	comp=Z,2.8nm,0.8s,mb4.2,baz=256,slow=7.9,SNR=13						
FINES	FINESS Array B	37.36	41	P	P	00 25 38.7	-0.7
KAF	Kangasniemi	37.52	40	ep	P	00 25 39.4	-1.3
VSU	Vasula	37.61	46	⇑iP	P	00 25 40.4	-1.1
VSU	Vasula	37.61	46	i P	P	00 25 40.4	-1.1
BURAR	Bucovina Array	38.05	63	⇑P	P	00 25 47.2	+1.9
MLR	Muntele Rosu	39.08	67	⇓P	P	00 25 55.6	+1.6
FWV	Forest Hill	39.15	280	eP	P	00 25 56.4	+1.8
FWV	Forest Hill	39.15	280	eP	P	00 25 56.4	+1.8
AKASG	Malin Array Be	39.93	58	P	P	00 26 00.0	-0.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	39.93	58	P	P	00 26 00.0	-0.9
	comp=Z,1.0nm,0.5s,mb3.8,baz=279,slow=8.6,SNR=10.0						
DBIC	Dimbokro	42.02	142	P	P	00 26 19.3	+0.8
	comp=Z,8.3nm,1.2s,mb4.2,baz=306,slow=5.7,SNR=3.2						
DBIC				LR	LR	00 41 42.4	
	comp=Z,279nm,19.9s,MS4.1,baz=237,slow=33						
FCC	Fort Churchill	42.11	315	eP	P	00 26 19.5	+0.9
FCC				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.3						
FCC	Fort Churchill	42.11	315	eP	P	00 26 19.5	+0.9
	comp=Z,9.3nm,1.2s,mb4.3						
FCC	Fort Churchill	42.11	315	eP	P	00 26 19.5	+0.9
	comp=Z,9.3nm,1.2s,mb4.3						
CPCT	Cooper Cave	42.77	279	eP	P	00 26 25.7	+1.3
OBN	Obninsk	43.36	50	eP	P	00 26 29.4	+0.5
OBN				e		00 28 16.8	
OBN				pmax	pmax		
	comp=Z,23nm,1.7s,mb4.6						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.8						
OBN	Obninsk	43.36	50	eP	P	00 26 27.7	-1.2
OBN	Obninsk	43.36	50	eP	P	00 26 27.7	-1.2
OBN	Obninsk	43.36	50	ePcP	PcP	00 28 16.8	-1.3
WVT	Waverly	44.85	282	eP	P	00 26 41.0	-0.2
WVT				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
WVT	Waverly	44.85	282	eP	P	00 26 41.0	-0.3
	comp=Z,6.1nm,1.0s,mb4.4						
WVT	Waverly	44.85	282	eP	P	00 26 41.0	-0.2
	comp=Z,6.1nm,1.0s,mb4.4						
ULM	Lac du Bonnet	44.96	304	LR	LR	00 44 00.9	
	comp=Z,278nm,18.5s,MS4.2,baz=195,slow=34						
LRAL	Lakeview Retre	45.72	278	eP	P	00 26 48.6	+0.4
	comp=Z,5.6nm,1.1s,mb4.4						
LRAL	Lakeview Retre	45.72	278	eP	P	00 26 48.6	+0.4
	comp=Z,5.6nm,1.1s,mb4.4						
BR131	Keskin Array S	46.45	71	eP	P	00 26 54.2	+0.3
	comp=Z,3.4nm,1.0s,mb4.2						
SOC	Sochi	48.97	64	eP	P	00 27 14.4	+0.9
SOC				e		00 28 32.2	
SOC				e		00 29 09.1	
SOC				ePPP	PPP	00 30 00.1	-0.3
SOC				eSS	SS	00 37 43.5	+0.5
SOC				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
SOC				pmax	pmax		
	comp=N,5.0nm,1.0s						
SOC				pmax	pmax		
	comp=E,16nm,1.7s						
SOC				MLR	MLR		
	comp=Z,252nm,17.0s,MS4.3						
SOC				MLR	MLR		
	comp=N,87nm,22.0s						
SOC				MLR	MLR		
	comp=E,98nm,15.0s						
SOC	Sochi	48.97	64	eP	P	00 27 14.4	+0.9
	comp=E,5.0nm,1.0s,mb4.5						
KIV	Kislovodsk	50.76	62	eP	P	00 27 28.9	+1.7
KIV				pmax	pmax		
	comp=E,3.0nm,1.0s						
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
YKA	Yellowknife Ar	51.07	323	P	P	00 27 28.9	-0.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	51.07	323	P	P	00 27 28.9	-0.4
	comp=Z,2.2nm,0.8s,mb4.2,baz=66,slow=7.4,SNR=10.0						
LAO	LASA Array	52.67	303	eP	P	00 27 42.4	+0.8
	comp=Z,13nm,1.0s,mb4.8						
LAO	LASA Array	52.67	303	eP	P	00 27 42.4	+0.8
	comp=Z,13nm,1.0s,mb4.8						
WMOK	Wichita Mounta	53.34	286	eP	P	00 27 46.0	-0.7
WMOK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
WMOK	Wichita Mounta	53.34	286	eP	P	00 27 46.0	-0.7
	comp=Z,7.5nm,1.4s,mb4.4						
GNI	Garni	53.86	66	c iP	P	00 27 51.4	+0.9
GNI				pmax	pmax		
	comp=Z,12nm,1.7s						
GNI				MLR	MLR		
	comp=Z,300nm,17.0s						
GNI	Garni	53.86	66	i P	P	00 27 51.4	+0.9
	comp=Z,300nm,17.0s						
EDM	Edmonton	54.01	312	eP	P	00 27 51.7	+0.3
ARU	Arti	54.66	43	⇑iP	P	00 27 54.0	-2.1
ARU				e		00 28 54.9	
ARU				e		00 29 54.2	
ARU				eS	S	00 35 26.4	-8.0
ARU				eSS	SS	00 39 09.3	-7.7
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
ARU	Arti	54.66	43	eP	P	00 27 53.1	-3.1
	comp=Z,8.0nm,1.1s,mb4.7						
ARU	Arti	54.66	43	i P	P	00 27 54.0	-2.1
	comp=Z,7.0nm,1.0s,mb4.7						
ARU	Arti	54.66	43	ePcP	PcP	00 28 54.9	-4.0
INK	Inuvik	55.80	334	eP	P	00 28 02.8	-1.4
INK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
INK	Inuvik	55.80	334	eP	P	00 28 02.8	-1.4
	comp=Z,4.7nm,1.0s,mb4.5						
BOZ	Bozeman (W)	56.48	304	eP	P	00 28 08.2	-1.3
BOZ				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.8						
BOZ	Bozeman (W)	56.48	304	eP	P	00 28 08.2	-1.3
	comp=Z,15nm,1.6s,mb4.8						
BOZ	Bozeman (W)	56.48	304	eP	P	00 28 08.2	-1.3
	comp=Z,15nm,1.6s,mb4.8						
PDAR	Pinedale Array	56.60	300	P	P	00 28 09.6	-0.7
	comp=Z,3.8nm,1.0s,mb4.4,baz=53,slow=7.4,SNR=18						
PDAR				LR	LR	00 51 18.7	
	comp=Z,139nm,18.0s,MS4.1,baz=57,slow=35						
LOHW	Long Hollow	56.84	301	eP	P	00 28 12.1	0.0
	comp=Z,4.4nm,1.0s,mb4.4						
LOHW	Long Hollow	56.84	301	eP	P	00 28 12.1	0.0
	comp=Z,4.4nm,1.0s,mb4.4						
CHMT	Chamberlain Mo	56.85	305	eP	P	00 28 12.2	+0.1
CHMT	Chamberlain Mo	56.85	305	eP	P	00 28 12.2	+0.1
IMW	Indian Meadow	56.91	301	eP	P	00 28 12.9	+0.3
	comp=Z,10nm,1.0s,mb4.8						
IMW	Indian Meadow	56.91	301	eP	P	00 28 12.9	+0.3
	comp=Z,10nm,1.0s,mb4.8						
REDW	Red Top Meadow	57.12	301	eP	P	00 28 14.2	+0.1
	comp=Z,26nm,1.4s,mb5.1						
REDW	Red Top Meadow	57.12	301	eP	P	00 28 14.2	+0.1
	comp=Z,26nm,1.4s,mb5.1						
MSO	Missoula	57.30	306	eP	P	00 28 15.3	0.0
	comp=Z,12nm,1.7s,mb4.6						
MSO	Missoula	57.30	306	eP	P	00 28 15.3	0.0
	comp=Z,12nm,1.7s,mb4.6						
JTS	JuntasAbangare	58.06	253	i P	P	00 28 24.6	+3.6
NEW	Newport	58.45	308	eP	P	00 28 23.1	-0.2
NEW				pmax	pmax		
	comp=Z,15nm,1.0s						
NEW	Newport	58.45	308	eP	P	00 28 23.1	-0.2
	comp=Z,15nm,1.0s,mb5.0						
NEW	Newport	58.45	308	eP	P	00 28 23.1	-0.2
	comp=Z,15nm,1.0s,mb5.0						
HWUT	Hardware Ranch	58.47	299	eP	P	00 28 23.1	-0.4
	comp=Z,9.8nm,1.0s,mb4.8						
HWUT	Hardware Ranch	58.47	299	eP	P	00 28 23.1	-0.4
	comp=Z,9.8nm,1.0s,mb4.8						
PV10	Paradox Valley	58.51	295	eP	P	00 28 25.1	+1.2
PV10	Paradox Valley	58.51	295	eP	P	00 28 25.0	+1.1
ANMO	Albuquerque	58.59	290	⇑iP	P	00 28 23.5	-1.0
ANMO	Albuquerque	58.59	290	i P	P	00 28 23.5	-1.0
HLID	Hailey	59.25	303	eP	P	00 28 29.5	+0.5
	comp=Z,2.0nm,0.8s,mb4.2						
HLID	Hailey	59.25	303	eP	P	00 28 29.5	+0.6
	comp=Z,2.0nm,0.8s,mb4.2						
LTX	Lajitas	59.75	283	eP	P	00 28 32.7	+0.1
LTX				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
LTX	Lajitas	59.75	283	eP	P	00 28 32.7	+0.1
	comp=Z,5.6nm,1.0s,mb4.5						
LTX	Lajitas	59.75	283	eP	P	00 28 32.7	+0.1
	comp=Z,5.6nm,1.0s,mb4.5						
TXAR	Lajitas Array	59.75	283	P	P	00 28 32.7	+0.1
TXAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TXAR				MLR	MLR		
	comp=Z,157nm,19.5s						
TXAR	Lajitas Array	59.75	283	P	P	00 28 32.6	+0.1
	comp=Z,4.5nm,1.1s,mb4.4,baz=79,slow=6.4,SNR=15						
TXAR				LR	LR	00 55 01.8	
	comp=Z,157nm,19.5s,MS4.2,baz=15,slow=37						
MSU	Marysvale	60.52	297	eP	P	00 28 38.2	+0.5
ILAR	Eielson Array	62.19	335	P	P	00 28 47.4	-1.3
	comp=Z,1.2nm,0.7s,mb4.1,baz=38,slow=6.0,SNR=12						
ILAR				LR	LR	00 54 43.7	
	comp=Z,142nm,18.2s,MS4.2,baz=357,slow=35						
ILAR	Eielson Array	62.19	335	P	P	00 28 47.3	-1.4
IMA	Indian Mountai	63.29	338	eP	P	00 28 56.0	+0.1
IMA				e		00 29 01.4	
IMA				pmax	pmax		
	comp=Z,79nm,1.8s,mb5.5						
IMA	Indian Mountai	63.29	338	eP	P	00 28 56.0	+0.1
	comp=Z,79nm,1.8s,mb5.5						
IMA				e		00 29 01.4	
SPU	Mount Spurr	66.41	334	eP	P	00 29 15.2	-0.9
NVS	Novosibirsk	67.08	35	⇑iP	P	00 29 17.9	-2.5
LPAZ	La Paz	68.80	220	P	P	00 29 33.1	+1.3
LPAZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
LPAZ	La Paz	68.80	220	P	P	00 29 33.1	+1.2
	comp=Z,3.6nm,1.2s,mb4.2,baz=0.2,slow=7.6,SNR=6.5						
BILL	Bilibino	68.81	354	⇑P	P	00 29 26.9	-4.1
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
AAK	Ala-Archa	70.88	49	c iP	P	00 29 43.8	-0.3
AAK				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
AAK				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.1						
AAK	Ala-Archa	70.88	49	i P	P	00 29 43.8	-0.3
	comp=Z,100nm,20.0s						
MKAR	Makanchi Array	72.18	42	P	P	00 29 51.1	-0.7
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	72.18	42	P	P	00 29 51.1	-0.7
	comp=Z,2.0nm,0.8s,mb4.1,baz=329,slow=6.1,SNR=17						
CPUP	Villa Florida	73.51	206	P	P	00 30 00.0	0.0
	comp=Z,2.4nm,0.9s,mb4.1,baz=42,slow=12,SNR=3.4						
WMQ	Urumqi	76.96	41	eP	P	00 30 20.4	+1.1
WMQ				AP	pP	00 30 24.4	+1.9
WMQ				XP	sP	00 30 26.4	+2.8
WMQ				AMB	AMB		
	comp=Z,90nm,5.0s						
SONM	Songino Array	81.61	28	P	P	00 30 44.8	+0.5
	comp=Z,0.9nm,0.9s,mb3.7,baz=323,slow=6.2,SNR=5.3						
ULN	Ulaanbaatar	81.81	28	⇑iP	P	00 30 46.0	+0.6
ULN	Ulaanbaatar	81.81	28	i P	P	00 30 46.0	+0.6
BOSA	Boshof	87.04	134	LR	LR	01 08 12.0	
	comp=Z,194nm,19.8s,MS4.5,baz=240,slow=34						
CN2	Changchun	90.82	18	eP	P	00 31 29.0	-0.7
MDJ	Mudanjiang	90.90	15	P	P	00 31 28.8	-1.2
MDJ				AMB	AMB		
	comp=Z,120nm,11.4s						
NJ2	Nanjing	99.95	27	eP	P	00 32 11.5	-0.1
NJ2				AP	pP	00 32 22.1	+7.2
NJ2				XP	sP	00 32 26.0	+10
NJ2				PP	PP	00 36 18.8	-0.4
NJ2				S	S	00 43 39.0	-3.2
NJ2				XS		00 43 58.0	
VNDA	Vanda	144.92	184	PKIKP	PKPdf	00 38 03.9	-0.3
VNDA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VNDA	Vanda	144.92	184	PKPbc	PKPbc	00 38 03.9	+2.6
	comp=Z,2.9nm,1.1s,baz=202,slow=3.0,SNR=7.0						

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*NEIC **15** 00:40:28.4, 19.06N×67.06W, h5^{km}, MD3.6(RSPR), After RSPR.*

RSPR 15 00:40:28.4, 19.06N×67.06W, h5^{km}±2^{km}**, MD3.5**/15, **MD3.5**/15**, 10C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.59	184	eS	Sg	00 40 48.0	-0.2
AGPR	Aguadilla, PR	0.59	184	⇓eP	Pg	00 40 39.9	-0.3
AGPR				eS	Sg	00 40 48.0	-0.2
AOPR	Arecibo Observ	0.77	157	⇓eP	Pg	00 40 41.9	-1.9
AOPR				eS	Sg	00 40 54.2	+0.1
LRS	Lares	0.79	165	⇑eP	Pb	00 40 42.4	-1.8
LRS				eS	Sg	00 40 53.8	-0.9
MPR	Mayaguez	0.85	185	⇑eP	Pb	00 40 43.8	-1.3
MPR				eS	Sb	00 40 55.9	-0.7
LSP	Las Mesas	0.88	181	⇓eP	Pb	00 40 44.2	-1.6
LSP				eS	Sb	00 40 56.9	-0.7
MGP	Maguayo	1.05	181	⇑eP	Pb	00 40 46.6	-2.0
MGP				eS	Sb	00 41 00.4	-2.1
CRPR	Cabo Rojo, PR	1.05	182	⇓eP	Pb	00 40 46.6	-2.1
CRPR				eS	Sb	00 40 59.7	-2.8
ICM	Isla Caja Muer	1.27	156	⇑eP	Pb	00 40 50.5	-2.0
ICM				eS	Sb	00 41 06.0	-3.0
SJG	San Juan	1.28	137	⇑eP	Pb	00 40 50.4	-2.2
SJG				eS	Sb	00 41 06.9	-2.3
SJG	San Juan	1.28	137	⇑eP	Pb	00 40 50.3	-2.3
SJG				eS	Sb	00 41 06.6	-2.6
CBYP	Canovanas	1.39	124	⇑eP	Pb	00 40 50.3	-4.1
CBYP				eS	Sb	00 41 08.9	-3.4
HUMP	Col San Antoni	1.47	128	⇑eP	Pn	00 40 52.2	-3.4
HUMP				eS	Sb	00 41 11.7	-3.0
CPD	Cerro la Pandu	1.49	133	⇑eP	Pn	00 40 52.1	-3.8
CPD				eS	Sb	00 41 12.6	-2.7
MTP	Monte Pirata	1.72	124	⇑eP	Pn	00 40 55.3	-3.9
MTP				eS	Sn	00 41 16.6	-5.2

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*NEIC **15** 00:47:56.1±0.8, 0.31N×97.45E, Error ellipse: s-maj=22.1km s-min=16.8km az=88.0*

*IDC **15** 00:47:56.1±0.9, 0.24N×97.40E, h30^{km}±4^{km}, mb3.2/6, mb1 3.4/7, mb1mx3.4/16, mbtmp3.4/7, ML3.6/1, Error ellipse: s-maj=37.4km s-min=18.1km az=56.0*

ISC 15 00:47:54.7±1.1**, 0.4N**±0.1×**97.5E**±0.2**, h30^{km}, h30^{km}**±1.0^{km}**:pP-P, n12, σ0^{s}.85**/10**, mb3.5**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.81	33	eP	Pn	00 49 21.5	+0.2
CMAR	Chiang Mai Arr	18.02	5	P	P	00 52 04.6	-0.3
	0.1nm,0.3s,baz=200,slow=10,SNR=5.0						
CMAR				pP		00 52 14.2	
	baz=195,slow=11,SNR=2.9						
WRA	Warramunga Arr	41.38	121	P	P	00 55 39.9	-0.2
	0.2nm,0.4s,mb3.1,baz=304,slow=8.9,SNR=4.0						
WRA				pP	pP	00 55 48.3	-0.8
	1.0nm,0.7s,baz=300,slow=9.2,SNR=6.1						
SONM	Songino Array	47.89	8	P	P	00 56 32.6	+0.4
	0.2nm,0.4s,mb3.5,baz=172,slow=10,SNR=2.5						
SONM				pP	pP	00 56 42.1	+0.8
	1.9nm,0.9s,baz=187,slow=10,SNR=8.6						
MKAR	Makanchi Array	48.09	346	P	P	00 56 33.8	0.0
	0.4nm,0.7s,mb3.6,baz=143,slow=7.5,SNR=5.3						
MKAR				pP	pP	00 56 43.5	+0.7
	1.0nm,0.6s,baz=160,slow=9.2,SNR=9.1						
MKAR	Makanchi Array	48.09	346	P	P	00 56 33.8	0.0
MKAR				pP	pP	00 56 43.5	+0.6
BVAR	Borovoye Array	57.10	341	P	P	00 57 40.2	-0.6
	0.4nm,0.6s,mb3.6,baz=159,slow=12,SNR=2.4						
BVAR				pP	pP	00 57 49.2	-0.8
	1.1nm,0.8s,baz=158,slow=8.0,SNR=4.1						
AKASG	Malin Array Be	76.06	323	P	P	00 59 40.0	-1.3
	0.2nm,0.4s,mb3.4,baz=84,slow=5.6,SNR=3.2						
AKASG				pP	pP	00 59 50.2	-0.5
	0.1nm,0.3s,baz=88,slow=5.4,SNR=2.1						
AKASG	Malin Array Be	76.06	323	P	P	00 59 40.0	-1.3
AKASG				pP	pP	00 59 50.2	-0.5
GERES	GERESS Array B	85.60	319	P	P	01 00 33.7	+2.0
	0.3nm,0.8s,mb3.6,baz=124,slow=7.1,SNR=2.5						
GERES				pP	pP	01 00 42.4	+1.1
	0.8nm,0.9s,baz=72,slow=8.4,SNR=3.6						
CPUP	Villa Florida	144.59	221	PKP	PKPdf	01 07 29.2	-5.1
	1.6nm,0.7s,baz=147,slow=5.6,SNR=5.2						
CPUP				pPKP		01 07 39.1	
	1.5nm,0.6s,baz=107,slow=5.5,SNR=2.7						
CPUP	Villa Florida	144.59	221	ePKPdf	PKPdf	01 07 29.4	-4.9
CPUP				epPKPdf		01 07 39.4	

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*BJI **15** 00:56:49.9, 5.29N×123.83E, h529^{km}, mB4.8, mb4.6*

*MOS **15** 00:56:50.2±0.9, 5.45N×124.06E, h535^{km}, mb4.4/18, Error ellipse: s-maj=25.3km s-min=8.7km az=122.6*

*NEIC **15** 00:56:51.0±0.9, 5.32N×123.85E, h526^{km}±11^{km}, mb4.5/21, Error ellipse: s-maj=13.2km s-min=4.9km az=55.0*

*IDC **15** 00:56:51.2±1.2, 5.29N×123.81E, h526^{km}±13^{km}, mb3.7/17, mb1 3.7/17, mb1mx3.7/24, mbtmp4.6/17, Error ellipse: s-maj=21.1km s-min=7.5km az=60.0*

ISC 15 00:56:48.9±0.9**, 5.39N**±0.06×**123.99E**±0.08**, h511^{km}**±11^{km}**, n99, σ0^{s}.91**/102**, mb4.2**/42**, 10C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSM	Tawau	6.19	260	P	P	00 58 28.6	+0.2
KKM	Kota Kinabalu	7.76	275	eP	P	00 58 43.5	-0.6
KKM	Kota Kinabalu	7.76	275	P	P	00 58 44.1	-0.1
KAKA	Kakadu	19.84	155	⇑iP	P	01 00 46.5	+0.2
	22nm,0.6s						
IPM	Ipoh	22.89	269	P	P	01 01 17.9	+3.4
KULM	Kulim	23.24	271	P	P	01 01 16.7	-0.9
FITZ	Fitzroy Crossi	23.40	176	⇑iP	P	01 01 18.4	-0.6
	9.0nm,0.8s,mb4.5						
FITZ	Fitzroy Crossi	23.40	176	P	P	01 01 18.6	-0.4
	10nm,0.6s,mb4.6,baz=357,slow=7.1,SNR=17						
FITZ				ScP		01 07 35.9	
	7.8nm,1.0s,baz=220,slow=3.4,SNR=6.5						
SSE	Sheshan	25.71	354	eP	P	01 01 33.1	-6.4
	20nm,0.6s,mb4.9						
NJ2	Nanjing	26.96	350	eP	P	01 01 48.9	-1.6
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,250nm,4.1s						
WRAB	Tennant Creek	27.15	158	eP	P	01 01 51.5	-0.8
WRAB				pmax	pmax		
	comp=Z,11nm,0.4s,mb4.8						
WRAB	Tennant Creek	27.15	158	eP	P	01 01 51.5	-0.8
	comp=Z,11nm,0.4s,mb4.8						
WRA	Warramunga Arr	27.15	158	P	P	01 01 51.4	-1.0
WRA				S	S	01 05 50.5	-4.5
WRA				pmax	pmax		
	comp=Z,12nm,0.6s						
WRA				smax			
	comp=E,1.0nm,0.8s						
WRA				pmax	pmax		
	comp=E,1.0nm,0.6s						
WRA	Warramunga Arr	27.15	158	P	P	01 01 51.4	-1.0
	comp=E,12nm,0.6s,mb4.8,baz=335,slow=10,SNR=68						
WRA				S	S	01 05 50.5	-4.5
	comp=E,1.0nm,0.8s,baz=338,slow=16,SNR=4.6						
WRA				ScP		01 07 46.8	
	comp=E,1.3nm,0.6s,baz=340,slow=3.2,SNR=8.5						
WB2	Warramunga Arr	27.16	158	⇑iP	P	01 01 51.6	-0.8
WB2				eS	S	01 05 50.9	-4.2
PMG	Port Moresby	27.37	122	P	P	01 01 54.1	-0.2
PMG				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PMG	Port Moresby	27.37	122	P	P	01 01 54.1	-0.2
	comp=Z,7.9nm,0.5s,mb4.6,baz=322,slow=9.0,SNR=4.1						
CMAR	Chiang Mai Arr	27.68	300	P	P	01 01 56.9	-0.1
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CMAR				pmax	pmax		
	comp=E,2.0nm,0.5s						
CMAR	Chiang Mai Arr	27.68	300	P	P	01 01 56.9	-0.2
	comp=E,8.9nm,0.7s,mb4.5,baz=112,slow=6.8,SNR=37						
CMAR				ScP		01 07 50.0	
	comp=E,1.5nm,0.5s,baz=128,slow=1.5,SNR=10						
ENH	Enshi	28.27	333	eP	P	01 02 02.2	+0.1
	comp=E,14nm,0.8s,mb4.6						
XAN	Xi’an	31.75	336	P	P	01 02 31.4	-0.5
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
CTA	Charters Tower	33.47	140	⇑iP	P	01 02 47.6	+1.1
	comp=Z,7.0nm,0.7s,mb4.3						
CTA	Charters Tower	33.47	140	⇑iP	P	01 02 47.6	+1.1
CTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CTA	Charters Tower	33.47	140	P	P	01 02 47.5	+1.0
	comp=Z,11nm,0.8s,mb4.5,baz=324,slow=10,SNR=14						
SHL	Shillong	36.70	307	eP	P	01 03 14.0	+0.7
KLBR	Kellerberrin	37.25	189	eP	P	01 03 17.5	-0.3
	comp=Z,23nm,1.2s,mb4.6						
CN2	Changchun	38.28	2	eP	P	01 03 29.0	+3.0
NWAO	Narrogin (SRO)	38.64	189	P	P	01 03 29.6	+0.6
NWAO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NWAO	Narrogin (SRO)	38.64	189	P	P	01 03 29.6	+0.5
	comp=Z,9.0nm,0.7s,mb4.4,baz=307,slow=13,SNR=7.7						
LSA	Lhasa	39.30	312	eP	P	01 03 36.2	+1.7
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
LSA	Lhasa	39.30	312	eP	P	01 03 36.2	+1.7
	comp=Z,7.2nm,0.6s,mb4.4						
MDJ	Mudanjiang	39.38	6	P	P	01 03 37.0	+2.1
MDJ				AMB	AMB		
	comp=Z,50nm,5.6s						
GTA	Gaotai	40.30	331	eP	P	01 03 43.3	+0.9
STKA	Stephens Creek	40.68	157	⇑iP	P	01 03 46.5	+1.0
	comp=Z,12nm,0.6s,mb4.6						
STKA	Stephens Creek	40.68	157	P	P	01 03 46.5	+0.9
	comp=Z,19nm,0.7s,mb4.7,baz=338,slow=7.8,SNR=36						
STKA				ScP		01 08 35.1	
	comp=Z,3.2nm,0.8s,baz=309,slow=6.5,SNR=4.1						
GUN	Gumba	42.55	306	eP	P	01 04 00.9	+0.3
PKI	Pulchoki	42.79	305	eP	P	01 04 02.1	-0.4
	comp=Z,15nm,0.6s,mb4.7						
PKI	Pulchoki	42.79	305	eP	P	01 04 02.1	-0.4
PKI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
KKN	Kakani	42.98	306	eP	P	01 04 03.6	-0.4
	comp=Z,16nm,0.6s,mb4.7						
KKN	Kakani	42.98	306	eP	P	01 04 03.6	-0.4
KKN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.4						
DMN	Daman	43.05	305	eP	P	01 04 04.8	+0.2
	comp=Z,27nm,0.9s,mb4.8						
GKN	Gorkha	43.59	306	eP	P	01 04 08.3	-0.5
	comp=Z,18nm,0.7s,mb4.7						
HIA	Hailar	43.87	356	eP	P	01 04 11.1	+0.4
HIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HIA	Hailar	43.87	356	eP	P	01 04 11.1	+0.4
	comp=Z,5.5nm,0.7s,mb4.2						
ULN	Ulaanbaatar	44.74	344	d iP	P	01 04 17.8	+0.3
ULN	Ulaanbaatar	44.74	344	eP	P	01 04 17.7	+0.2
	comp=Z,7.9nm,0.7s,mb4.3						
SONM	Songino Array	44.90	343	P	P	01 04 18.9	+0.2
	comp=Z,6.3nm,0.8s,mb4.2,baz=160,slow=8.2,SNR=36						
ZAK	Zakamensk	48.09	342	eP	P	01 04 42.8	-0.4
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.3						
DZM	Mont Dzumac	49.72	125	P	P	01 04 57.0	+1.3
	comp=Z,4.3nm,0.6s,mb4.1,baz=223,slow=23,SNR=9.9						
WMQ	Urumqi	49.82	326	eP	P	01 04 57.3	+1.1
WMQ				AMB	AMB		
	comp=Z,50nm,5.2s						
MKAR	Makanchi Array	54.65	326	P	P	01 05 30.5	-0.5
MKAR						01 06 24.3	
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR				pmax	pmax		
	comp=E,1.0nm,0.7s						
MKAR	Makanchi Array	54.65	326	P	P	01 05 30.5	-0.5
	comp=E,6.3nm,0.4s,mb4.2,baz=124,slow=8.4,SNR=92						

MKAR				PcP	PcP	01 06 24.3	-1.7
	comp=E,2.3nm,0.7s,baz=119,slow=3.9,SNR=7.2						
MKAR				ScP		01 09 33.4	
	comp=E,1.4nm,0.7s,baz=124,slow=4.4,SNR=8.2						
KZA	Kyzart	56.56	318	P	P	01 05 45.1	+0.9
	SNR=12						
TKM2	Tokmak 2	56.71	319	P	P	01 05 45.3	+0.1
	SNR=8.0						
UCH	Uchtor	57.12	318	P	P	01 05 49.3	+1.2
	SNR=19						
AAK	Ala-Archa	57.30	318	P	P	01 05 49.9	+0.6
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.6						
AAK	Ala-Archa	57.30	318	*e*P	P	01 05 48.8	-0.5
	comp=Z,2.2nm,0.6s,mb3.6						
USP	Ospenovka	57.58	319	P	P	01 05 50.9	-0.3
	SNR=14						
AML	Almayashu	57.62	317	P	P	01 05 52.1	+0.6
	SNR=18						
EKS2	Erkin-Say	57.79	318	P	P	01 05 53.1	+0.5
	SNR=9.3						
NVS	Novosibirsk	59.18	334	*e*P	P	01 05 59.3	-2.5
KKAR	Karatay Array	60.17	317	*i* P	P	01 06 07.8	-0.7
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.1						
BVA0	Borovoye Array	64.45	327	*i* P	P	01 06 34.3	-1.8
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb3.5						
BVAR	Borovoye Array	64.45	327	P	P	01 06 35.3	-0.9
	comp=Z,2.6nm,0.4s,mb4.0,baz=149,slow=8.6,SNR=21						
RPZ	Rata Peaks	64.69	144	P	P	01 06 37.7	-0.1
	comp=Z,5.2nm,0.7s,mb4.1,baz=39,slow=6.5,SNR=3.5						
TIXI	Tiksi	66.25	2	⇑*i*P	P	01 06 45.8	-1.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.7						
AB31	Akbulak array	69.15	321	P	P	01 07 04.2	-0.8
AB31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
SVE	Sverdlovsk	71.13	329	*e*P	P	01 07 16.0	-0.6
ARU	Arti	72.09	328	⇓*i*P	P	01 07 20.8	-1.4
ARU				*e*		01 07 31.6	
ARU				*e*		01 10 06.6	
ARU				*e*S	S	01 16 52.9	+50
ARU				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.5						
ARU	Arti	72.09	328	*e*P	P	01 07 20.7	-1.5
	comp=Z,17nm,0.6s,mb4.7						
MZLS	Mizel	77.59	293	P	P	01 07 53.2	-0.3
GNI	Garni	78.33	310	P	P	01 07 57.9	+0.8
GNI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GNI	Garni	78.33	310	P	P	01 07 57.9	+0.8
	comp=Z,8.5nm,1.0s,mb4.0						
OPO	Ambohidratompo	79.28	250	P	P	01 08 00.7	-1.8
	comp=Z,1.6nm,0.8s,mb3.4,baz=78,slow=14,SNR=3.2						
TATS	Tathlith	79.29	289	P	P	01 08 02.7	+0.2
DJNS	Zahran al Janu	79.30	287	P	P	01 08 03.4	+0.8
ARSS	Ar Rass	79.36	295	P	P	01 08 02.7	-0.1
KIV	Kislovodsk	80.02	314	⇑*i*P	P	01 08 06.4	+0.5
KIV				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb3.9						
HILS	Ha'il	80.63	297	P	P	01 08 09.9	+0.6
BLJS	Baljurashi	81.05	289	P	P	01 08 12.5	+0.8
VRSR	Storozhevoye	82.57	321	*e*P	P	01 08 17.7	-1.0
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3						
KBRS	Khaybar	82.94	295	P	P	01 08 22.0	+0.9
OBN	Obninsk	84.14	325	α*i*P	P	01 08 26.2	-0.2
OBN				pmax	pmax		
	comp=Z,38nm,1.7s,mb4.7						
OBN	Obninsk	84.14	325	*e*P	P	01 08 25.9	-0.5
	comp=Z,16nm,0.8s,mb4.6						
QURS	Qurayyt al Mil	84.39	301	P	P	01 08 29.1	+0.9
UMJS	Umm Lajj	84.73	295	P	P	01 08 31.2	+1.1
TBKS	Tabuk	85.23	298	P	P	01 08 33.2	+0.8
VNDA	Vanda	85.42	172	P	P	01 08 32.7	+0.5
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VNDA	Vanda	85.42	172	P	P	01 08 32.7	+0.5
	comp=Z,0.8nm,0.6s,mb3.5,baz=322,slow=6.6,SNR=5.8						
VNDA	Vanda	85.42	172	*e*P	P	01 08 32.1	-0.1
	comp=Z,0.8nm,0.7s,mb3.4						
JMQS	Jabal Moqyreh	85.78	298	P	P	01 08 35.5	+0.5
AYUS	'Aynunah	86.36	298	P	P	01 08 38.2	+0.4
JMOS	Jabal al Moall	86.43	299	P	P	01 08 38.8	+0.7
BR131	Keskin Array S	86.87	309	*e*P	P	01 08 38.7	-1.3
	comp=Z,3.2nm,0.8s,mb4.0						
ARCES	ARCESS Array B	87.96	340	P	P	01 08 44.4	+0.1
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	87.96	340	P	P	01 08 44.4	0.0
	comp=Z,3.1nm,0.9s,mb4.0,baz=79,slow=6.2,SNR=5.4						
AKASG	Malin Array Be	88.89	321	P	P	01 08 47.5	-1.6
	comp=Z,0.2nm,0.2s,mb3.5,baz=70,slow=4.0,SNR=5.1						
FINES	FINESS Array B	89.09	332	P	P	01 08 48.7	-1.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	89.09	332	P	P	01 08 48.6	-1.2
	comp=Z,0.9nm,0.5s,mb3.8,baz=72,slow=6.0,SNR=12						

JMA 15 01:37:11.2±0.1**, 32.04N**×**140.74E, h29**^{km}**, M3.8, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.32	324	P	Pn	01 37 34.2	+0.2
JHJ2				S	Sn	01 37 50.5	-0.3
BSO1	Boso 1	2.61	4	P	Pn	01 37 52.5	0.0
BSO1				*e*S	Sn	01 38 23.8	+0.2
BSO2	Boso 2	2.70	0	*e*S	Sn	01 38 26.8	+0.9
BSO3	Boso 3	2.76	356	P	Pn	01 37 54.9	+0.3
BSO3				*e*S	Sn	01 38 27.6	+0.3
JIM2	Oshima 3	2.89	338	*e*S	Sn	01 38 29.9	-0.6
BSO4	Boso 4	2.96	354	*e*S	Sn	01 38 33.6	+1.2
JOD2	Odawara 2	3.50	337	P	Pn	01 38 05.7	+0.7
JOD2				*e*S	Sn	01 38 44.8	-1.2
JYN	Shimob	3.90	333	P	Pn	01 38 12.4	+1.6
JHU	Hanno	3.99	343	*e*S	Sn	01 38 57.2	-1.2
JWZ	Kozaga	4.49	291	P	Pn	01 38 16.1	-3.0

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*IDC **15** 01:44:05.5±3.1, 50.79N×179.20E, mb3.6/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=89.9km s-min=26.0km az=178.0*

*NEIC **15** 01:44:10.9, 51.01N×179.09E, h34^{km}, ML3.4(AEIC), After AEIC.*

ISC 15 01:44:07.6±6.7**, 50.8N**±0.6×**179.2E**±0.1**, h27**^{km}±38^{km}**, n10, σ0**^{s}**63**/10**, mb3.6**/5**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	2.46	65	P	Pn	01 44 47.3	+0.4
GSMY	Great Sitkin M	3.24	65	P	Pn	01 44 58.3	+0.3
FX1	Attu Island--F	4.27	302	P	Pn	01 45 12.5	-0.1
ATKA	Atka Island	4.38	69	P	Pn	01 45 14.4	+0.2
UNV	Unalaska Valle	9.29	65	P	P	01 46 22.0	-1.1
ILAR	Eielson Array	22.50	39	P	P	01 49 06.5	+0.5
	0.2nm,0.5s,mb2.8,baz=253,slow=9.4,SNR=3.9						
SONM	Songino Array	45.76	296	P	P	01 52 29.4	+1.2
	0.3nm,0.3s,mb3.7,baz=63,slow=8.7,SNR=4.0						
PDAR	Pinedale Array	47.71	71	P	P	01 52 43.5	-0.1
	1.0nm,0.9s,mb3.9,baz=304,slow=5.3,SNR=6.4						
MKAR	Makanchi Array	59.38	308	P	P	01 54 08.9	-0.7
	0.2nm,0.4s,mb3.5,baz=47,slow=5.0,SNR=4.2						
BVAR	Borovoye Array	60.50	319	P	P	01 54 16.7	-0.5
	2.2nm,0.7s,mb4.3,baz=45,slow=8.4,SNR=14						

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*IDC **15** 01:55:07.0±1.4, 4.04S×134.46E, mb3.9/2, mb1 4.1/5, mb1mx3.9/12, mbtmp3.9/5, ML3.7/3, MS3.5/3, Ms1 3.5/3, ms1mx3.1/17, Error ellipse: s-maj=62.1km s-min=25.2km az=71.0*

*NEIC **15** 01:55:08.7±0.7, 3.92S×134.57E, h10^{km}, mb4.0/3, Error ellipse: s-maj=17.6km s-min=9.8km az=71.0*

ISC 15 01:55:09.8±0.8**, 4.18S**±0.06×**134.5E**±0.1**, h33**^{km}**, n14, σ1**^{s}**14**/15**, mb3.8**/3**, MS3.3**/2**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	8.71	193	*e*P	P	01 57 18.8	+2.5
	9.1nm,0.4s						
WRAB	Tennant Creek	15.66	180	*e*P	P	01 58 50.5	+0.8
	19nm,0.8s						
WB2	Warramunga Arr	15.67	180	*e*P	P	01 58 50.0	+0.1
WRA	Warramunga Arr	15.67	180	Pn	P	01 58 49.0	-0.9
	0.2nm,0.3s,baz=1.1,slow=13,SNR=8.4						
WRA				Sn	S	02 01 40.5	-2.0
	0.1nm,0.3s,baz=353,slow=23,SNR=4.8						
FITZ	Fitzroy Crossi	16.31	211	*e*P	P	01 59 01.6	+3.6
	9.8nm,1.5s						
FITZ				*e*S	S	02 01 58.0	+0.6
FITZ	Fitzroy Crossi	16.31	211	Pn	P	01 58 58.8	+0.8
	0.9nm,0.3s,baz=26,slow=11,SNR=13						
FITZ				Sn	S	02 01 56.3	-1.1
	0.7nm,0.3s,baz=171,slow=14,SNR=6.3						
CTA	Charters Tower	19.55	145	P	P	01 59 38.5	+0.9
	0.1nm,0.3s,baz=326,slow=7.3,SNR=3.8						
CTA				LR	LR	02 07 44.1	
	comp=Z,196nm,19.4s,baz=228,slow=38						
CTAO	Charters Tower	19.55	145	P	P	01 59 37.9	+0.3
	7.2nm,0.9s						
HNR	Honiara	25.83	103	LR	LR	02 11 41.8	
	comp=Z,90nm,18.3s,MS3.3,baz=101,slow=38						
STKA	Stephens Creek	28.36	167	LR	LR	02 12 35.1	
	comp=Z,92nm,22.0s,MS3.3,baz=213,slow=37						
KULM	Kulim	35.06	285	P	P	02 02 02.0	0.0
SONM	Songino Array	57.35	338	P	P	02 04 55.5	-1.7
	0.4nm,0.6s,mb3.6,baz=147,slow=5.8,SNR=4.1						
MKAR	Makanchi Array	68.43	324	P	P	02 06 10.6	+0.1
	1.5nm,0.6s,mb4.2,baz=109,slow=8.4,SNR=12						
BRVK	Borovoye	78.20	326	P	P	02 07 07.9	+0.3
	0.3nm,0.6s,mb3.4						

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*IDC **15** 02:09:06.2±0.8, 22.01N×120.68E, mb3.9/10, mb1 4.1/10, mb1mx4.0/18, mbtmp3.9/10, MS3.4/2, Ms1 3.4/2, ms1mx3.0/27, Error ellipse: s-maj=39.3km s-min=19.0km az=63.0*

*TAP **15** 02:09:10.9, 21.99N×120.55E, h38^{km}, ML4.2*

*NEIC **15** 02:09:11.3±1.4, 21.96N×120.67E, h35^{km}±13^{km}, mb4.3/3, Error ellipse: s-maj=15.3km s-min=9.3km az=74.0*

*JMA **15** 02:09:12.7±0.4, 21.76N×120.88E, h89^{km}, M3.6*

ISC 15 02:09:10.9±1.4**, 21.93N**±0.07×**120.61E**±0.07**, h47**^{km}±13^{km}**, n26, σ0**^{s}**67**/29**, mb3.9**/12**, MS3.3**/1**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	2.42	22	*e*Pn	P	02 09 46.1	-2.8
YHNB	Yeheng	2.82	14	*e*P	P	02 09 54.7	0.0
YOJ	Yonaguni jima	3.36	41	P	P	02 10 03.8	+1.6
YOJ				*e*S	S	02 10 41.8	+0.6
HATJ	Hateruma jima	3.63	54	P	P	02 10 06.4	+0.3
HATJ				*e*S	S	02 10 47.5	-0.7
IRIF	Iriomote-Funau	3.74	50	P	P	02 10 08.0	+0.3
IRIF				*e*S	S	02 10 51.0	0.0
JKRS	Kuro-shima	3.89	53	P	P	02 10 10.2	+0.5
JKRS				*e*S	S	02 10 54.9	+0.3
JIJ	Ishigaki jima	4.06	53	P	P	02 10 12.2	0.0
JIJ				*e*S	S	02 10 57.7	-1.3
JTJ	Tarama	4.63	54	P	P	02 10 20.2	-0.1
JTJ				*e*S	S	02 11 13.6	+0.1
JNU	Nakatsue	14.39	37	LR	LR	02 17 39.9	
	comp=Z,141nm,20.0s,baz=195,slow=36						
CMAR	Chiang Mai Arr	20.62	264	P	P	02 13 48.2	-0.6
	0.8nm,0.3s,baz=72,slow=9.5,SNR=4.7						
HIA	Hailar	27.29	359	*e*P	P	02 14 53.4	+0.5
	9.0nm,1.3s,mb4.1						
SONM	Songino Array	28.26	340	P	P	02 15 01.3	-0.4
	0.8nm,0.7s,mb3.4,baz=155,slow=10,SNR=5.5						
SONM				LR	LR	02 27 26.0	
	comp=Z,77nm,20.3s,MS3.3,baz=121,slow=39						
MKAR	Makanchi Array	39.62	318	P	P	02 16 39.7	+0.2
	0.4nm,0.5s,mb3.5,baz=117,slow=8.1,SNR=5.4						
WRAB	Tennant Creek	43.72	161	*e*P	P	02 17 13.2	-0.3
	6.9nm,0.7s,mb4.5						
WRA	Warramunga Arr	43.72	161	P	P	02 17 13.1	-0.4
	4.5nm,0.6s,mb4.3,baz=344,slow=8.9,SNR=26						
WB2	Warramunga Arr	43.73	161	⇑*i*P	P	02 17 13.4	-0.2
BVAR	Borovoye Array	49.10	322	P	P	02 17 55.5	+0.1
	0.6nm,0.6s,mb3.8,baz=108,slow=9.4,SNR=4.2						
BVAR				PcP	PcP	02 19 18.9	+0.1
	0.3nm,0.3s,baz=63,slow=3.3,SNR=4.3						
STKA	Stephens Creek	57.15	159	P	P	02 18 56.1	+0.6
	1.0nm,0.5s,mb4.1,baz=309,slow=13,SNR=3.7						
FINES	FINESS Array B	73.12	330	P	P	02 20 37.6	-0.3
	0.8nm,0.8s,mb3.7,baz=108,slow=6.0,SNR=3.7						
INK	Inuvik	75.51	22	P	P	02 20 51.1	-0.4
	1.9nm,0.7s,mb4.1						
NOA	NORSAR Array B	79.96	332	P	P	02 21 16.0	-0.3
	0.6nm,0.7s,mb3.6,baz=63,slow=4.9,SNR=2.7						
GERES	GERESS Array B	84.24	321	P	P	02 21 39.6	+0.9
	1.0nm,0.8s,mb4.0,baz=45,slow=3.8,SNR=7.2						
YKA	Yellowknife Ar	85.25	22	P	P	02 21 43.8	+0.4
	0.9nm,0.8s,mb4.0,baz=310,slow=4.8,SNR=4.5						
YKA	Yellowknife Ar	85.25	22	P	P	02 21 43.8	+0.4
SDV	Santo Domingo	147.45	21	PKPbc	PKPdf	02 28 52.8	+4.8
	12nm,0.7s,baz=348,slow=1.7,SNR=21						
SDV	Santo Domingo	147.45	21	*e*PKPdf	PKPdf	02 28 49.5	+1.5
SDV				*e*PKPbc	PKPdf	02 28 52.9	+4.8

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*NEIC **15** 02:15:01.3±0.9, 20.01S×69.00W, h100^{km}±9^{km}, mb4.1/4, Error ellipse: s-maj=11.9km s-min=7.1km az=71.0*

*IDC **15** 02:15:02.0±0.7, 20.07S×68.96W, h108^{km}±6^{km}, mb3.9/10, mb1 4.2/13, mb1mx4.0/20, mbtmp4.4/13, MS3.1/1, Ms1 3.0/1, ms1mx2.4/25, Error ellipse: s-maj=19.4km s-min=13.1km az=73.0*

ISC 15 02:14:58.9±0.7**, 20.03S**±0.04×**69.05W**±0.07**, h91**^{km}±7^{km}**, h109**^{km}±4.1^{km}**:pP-P, n49, σ1**^{s}**00**/45**, mb4.0**/10**, 1C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.83	13	P	P	02 16 01.6	+4.8
	10nm,0.3s,baz=202,slow=6.9,SNR=202						
LPAZ				S	S	02 16 43.0	+2.0
	3.0nm,0.3s,baz=257,slow=14,SNR=2.3						
LPAZ	La Paz	3.83	13	*e*P	P	02 16 01.2	+4.4
ANCH	Antofagasta	3.84	199	*e*P	P	02 15 56.6	-0.5
ARE	Arequipa	4.24	326	*e*P	P	02 16 03.0	+0.4
ARE				*e*S	S	02 16 50.0	-1.3
CPN1	Cerro Paranal	4.74	195	*e*P	P	02 16 09.2	-0.2
SIV	San Ignacio	8.59	63	P	P	02 17 01.8	-0.3
	8.0nm,0.3s,baz=256,slow=12,SNR=244						
NNA	Nana	10.96	316	P	P	02 17 45.7	+11
CFAA	Coronel Fontan	11.54	177	P	P	02 17 42.1	+0.1
	0.1nm,0.3s,baz=2.6,slow=14,SNR=6.8						
SAML	Samuel	12.39	28	*e*P	P	02 17 51.5	-1.8
	5.1nm,0.9s						
CPUP	Villa Florida	12.46	122	P	P	02 17 54.9	+0.7
	1.1nm,0.3s,baz=320,slow=13,SNR=30						
CPUP	Villa Florida	12.46	122	*e*P	P	02 17 54.8	+0.6
	23nm,1.0s						
TRQA	Tornquist	18.98	163	*e*P	P	02 19 15.4	-0.2
	4.6nm,0.8s						
BDFB	Brasilia	20.49	81	P	P	02 19 30.8	-0.9
	8.5nm,0.6s,baz=275,slow=9.3,SNR=16						
BDFB				LR	LR	02 28 13.4	
	comp=Z,46nm,18.1s,baz=299,slow=39						
BAO	Brasilia Array	20.51	81	P	P	02 19 32.0	+0.1
PLCA	Paso Flores	20.67	183	P	P	02 19 33.9	+0.6
	10.0nm,0.7s,baz=1.3,slow=11,SNR=31						
PLCA	Paso Flores	20.67	183	*e*P	P	02 19 33.9	+0.6
	10nm,0.7s						
OTAV	Otavalo	22.15	334	P	P	02 19 49.2	+0.9
SDV	Santo Domingo	28.78	357	P	P	02 20 51.7	+1.2
	1.1nm,0.3s,mb4.0,baz=146,slow=3.6,SNR=2.8						
TXAR	Lajitas Array	59.36	325	P	P	02 24 52.8	-1.2
	0.5nm,0.8s,mb3.6,baz=164,slow=9.1,SNR=4.5						
VNA3	Neumayer Olymp	61.50	162	⇓*i*	P	02 25 08.2	+0.2
VNA3	Neumayer Olymp	61.50	162	*e*	P	02 25 09.9	+1.9
VNA1	Neumayer--Stat	61.70	161	⇓*i*	P	02 25 10.0	+0.6
VNA1	Neumayer--Stat	61.70	161	*e*	P	02 25 12.1	+2.7
VNA2	Neumayer--Watz	62.07	161	⇓*i*	P	02 25 10.4	-1.4
VNA2	Neumayer--Watz	62.07	161	*e*	P	02 25 12.1	+0.3
SNAA	Sanae	63.70	161	⇓*i*	P	02 25 22.4	-0.1
SNAA	Sanae	63.70	161	*e*	P	02 25 24.2	+1.6
SNAA	Sanae	63.70	161	P	P	02 25 20.9	-1.7
	1.3nm,0.7s,mb3.9,baz=281,slow=6.9,SNR=25						
SNAA				pP	pP	02 25 49.2	+3.4
	0.6nm,0.9s,baz=307,slow=7.5,SNR=2.3						
SNAA	Sanae	63.70	161	⇓*i*P	P	02 25 22.4	-0.1
DBIC	Dimbokro	68.45	74	P	P	02 25 52.0	-1.6
	5.4nm,0.6s,mb4.5,baz=176,slow=6.7,SNR=9.1						
DBIC				pP	pP	02 26 20.1	+2.9
	2.3nm,0.7s,baz=239,slow=9.4,SNR=1.4						
DBIC	Dimbokro	68.45	74	P	P	02 25 52.0	-1.6
DBIC				pP	pP	02 26 20.1	+2.9
QSPA	South Pole Qui	70.15	180	*e*P	P	02 26 03.5	+0.5
	2.6nm,0.7s,mb4.2						
SRU	San Rafael	70.48	327	*e*P	P	02 26 05.8	+0.1
MSU	Marysvale	70.90	325	*e*P	P	02 26 09.2	+1.0
PDAR	Pinedale Array	72.78	330	P	P	02 26 19.1	-0.1
	0.4nm,0.7s,mb3.4,baz=143,slow=7.4,SNR=3.7						
ULM	Lac du Bonnet	73.89	342	P	P	02 26 23.5	-2.0
	3.1nm,0.6s,mb4.2,baz=151,slow=4.6,SNR=4.2						
ULM	Lac du Bonnet	73.89	342	P	P	02 26 23.5	-2.0
NVAR	Mina Array Bea	74.27	322	P	P	02 26 28.9	+0.8
	1.1nm,0.7s,mb3.7,baz=146,slow=7.1,SNR=7.3						
HLID	Hailey	75.74	328	*e*P	P	02 26 37.4	+1.1
	3.7nm,1.5s,mb3.9						
SYO	Syowa Base	77.91	160	⇑P	P	02 26 47.5	-0.4
EDM	Edmonton	82.39	335	*e*P	P	02 27 11.4	-0.7
YKA	Yellowknife Ar	89.77	341	P	P	02 27 47.5	-0.3
	5.0nm,0.7s,mb4.8,baz=134,slow=4.7,SNR=29						
YKA				pP	pP	02 28 14.8	+2.4
	2.2nm,0.8s,baz=136,slow=4.6,SNR=3.0						
YKA	Yellowknife Ar	89.77	341	P	P	02 27 47.5	-0.3
YKA				pP	pP	02 28 14.8	+2.4
WRA	Warramunga Arr	134.14	211	PKP	PKPdf	02 34 07.9	+1.3
	0.9nm,0.6s,baz=157,slow=1.8,SNR=10						
MKAR	Makanchi Array	144.52	35	PKP	PKPdf	02 34 25.0	+0.5
	0.7nm,0.5s,baz=301,slow=2.7,SNR=6.7						
MKAR	Makanchi Array	144.52	35	PKP	PKPdf	02 34 25.0	+0.5
MJAR	Matsushiro Arr	151.04	310	PKP	PKPdf	02 34 35.4	-0.1
	1.0nm,0.3s,baz=302,slow=15,SNR=4.4						
MJAR				PKPbc	PKPdf	02 34 43.4	+7.9
	1.9nm,0.3s,baz=117,slow=1.1,SNR=7.1						
MJAR	Matsushiro Arr	151.04	310	PKP	PKPdf	02 34 35.4	-0.1
MJAR				PKPbc	PKPdf	02 34 43.4	+7.9
SONM	Songino Array	152.02	7	PKP	PKPdf	02 34 39.0	+2.5
	2.8nm,0.6s,baz=270,slow=1.2,SNR=4.3						
SONM				PKPbc	PKPdf	02 34 45.2	+8.6
	2.0nm,0.4s,baz=316,slow=1.5,SNR=16						
SONM				pPKPbc		02 35 13.1	
	0.8nm,0.5s,baz=320,slow=1.7,SNR=3.8						

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*IDC **15** 02:19:22.1±4.7, 16.90N×72.95E, mb4.0/3, mb1 4.3/3, mb1mx3.7/16, mbtmp4.0/3, Error ellipse: s-maj=105.4km s-min=44.5km az=85.0*

*NDI **15** 02:19:27.4±3.2, 17.22N×73.75E, h5^{km}, ML3.8*

ISC 15 02:19:24.9±1.1**, 17.14N**±0.07×**73.92E**±0.07**, h5**^{km}**, n24, σ1**^{s}**26**/32**, mb3.8**/3**, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAD	Karad	0.30	56	*e*P	Pg	02 19 35.0	+4.0
KAD				*e*S	Sg	02 19 40.2	+5.1
KAD				AML	AML	02 19 43.3	
	comp=E,2μm,0.2s						
KAD				AML	AML	02 19 43.6	
	comp=N,2μm,0.2s						
POO	Poona	1.38	357	*e*P	Pb	02 19 52.4	+1.5
POO				*e*S	Sb	02 20 10.3	+1.6
POO				AML	AML	02 20 11.5	
	comp=N,1μm,0.2s						
POO				AML	AML	02 20 11.7	
	comp=E,1μm,0.2s						
BOM	Bombay	2.04	329	*e*P	Pn	02 20 01.7	+1.3
BOM				*e*S	Sn	02 20 24.8	-1.7
BOM				AML	AML	02 20 31.0	
	comp=E,1μm,0.2s						
BOM				AML	AML	02 20 31.2	
	comp=N,862nm,0.2s						
MNGI	Mangalore	4.26	168	*e*x	Pn	02 20 23.1	-9.0
MNGI				*e*x	Sn	02 21 17.2	-5.7
AKL	Akola	4.60	39	*e*x	Pn	02 20 24.9	-12
AKL				*e*S	Sn	02 21 31.7	+0.4
AKL				AML	AML	02 21 54.7	
	comp=N,599nm,0.4s						
AKL				AML	AML	02 21 55.0	
	comp=E,632nm,0.4s						
BHV	Bhavnagar	4.88	340	*e*PB	Pb	02 20 50.0	-0.8
NGP	Nagpur	6.28	50	*e*P	Pn	02 21 02.0	+1.5
NGP				*e*S	Sn	02 22 09.1	-4.4
NGP				*e*x	x	02 22 45.8	
BHPL	Bhopal	6.90	28	*e*P	Pn	02 21 08.2	-1.1
BHPL				*e*S	Sn	02 22 22.6	-6.5
BHPL				AML	AML	02 22 27.3	
	comp=E,38nm,0.0s						
BHPL				AML	AML	02 22 29.5	
	comp=N,25nm,0.3s						
VIS	Vishakhapatnam	9.00	85	*e*P	P	02 21 40.5	+1.9
BLSP	Bilaspur	9.19	56	*e*P	P	02 21 40.4	-0.8
BLSP				*e*S	Sn	02 23 18.7	-7.5
BLSP				AML	AML	02 24 18.2	
	comp=N,234nm,0.4s						
BLSP				AML	AML	02 24 18.5	
	comp=E,117nm,0.5s						
AJM	Ajmer	9.32	4	*e*x	x	02 23 55.0	
BWNR	Bhubaneshwar	11.69	73	*e*P	P	02 22 14.8	-0.7
BWNR				*e*S	S	02 24 19.3	-8.3
NDI	New Delhi	11.88	14	*e*x	S	02 24 14.0	-18
NDI				*e*x	x	02 25 32.5	
BOK	Bokaro	13.02	57	*e*S	S	02 24 50.6	-9.1
BOK				*i* x	x	02 26 09.0	
BOK				*e*x	x	02 27 08.1	
KOLN	Koldanda	13.85	38	*e*P	P	02 22 43.6	-0.8
	comp=E,6.8nm,0.2s						
BHK	Bhakra	14.39	9	*e*x	x	02 26 50.4	
SDNR	Sundarnagar	14.56	10	*e*x	S	02 25 31.0	-5.6
GKN	Gorkha	14.65	41	*e*P	P	02 22 53.1	-1.8
	comp=E,15nm,0.5s						
PKI	Pulchoki	14.84	44	*e*P	P	02 22 57.1	-0.3
KKN	Kakani	14.91	43	*e*P	P	02 22 57.9	-0.4
	comp=E,17nm,0.6s						
KKN				*e*S	S	02 25 59.9	+15
GUN	Gumba	15.38	44	*e*P	P	02 23 03.1	-1.4
	comp=E,8.6nm,0.4s						
CMAR	Chiang Mai Arr	23.86	83	P	P	02 24 46.3	+6.1
	comp=E,4.0nm,0.9s,mb3.9,baz=276,slow=9.0,SNR=11						
SONM	Songino Array	40.54	34	P	P	02 27 08.9	+2.2
	comp=E,1.3nm,0.9s,mb3.6,baz=233,slow=7.2,SNR=7.6						
WRA	Warramunga Arr	69.83	119	P	P	02 30 39.2	+0.2
	comp=E,1.6nm,0.7s,mb4.1,baz=305,slow=5.8,SNR=11						

MOS 15 02:38:59.3±1.3**, 56.29N**×**114.29E, h14**^{km}**, mb4.1**/1**, Error ellipse: s-maj=44.7km s-min=27.2km az=54.6, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVK	Severo-Muysk	0.44	256	*e*PG	Pg	02 39 07.0	-1.5
SVK				*e*		02 39 12.4	
SVK				pmax	pmax		
	comp=Z,190nm,0.2s						
SVK				smax			
	comp=N,2μm,0.7s						
NLYR	Nelyaty	0.81	75	*e*PG	Pg	02 39 14.3	-1.4
NLYR				*e*		02 39 25.6	
NLYR				pmax	pmax		
	comp=Z,21nm,0.2s						
NLYR				smax			
	comp=N,810nm,0.9s						
BOD	Bodaibo	1.54	354	*e*PN	Pn	02 39 26.4	-0.2
BOD				*e*		02 39 47.2	
BOD				pmax	pmax		
	comp=Z,114nm,0.2s						
BOD				smax			
	comp=E,517nm,0.2s						
KMO	Kumora	1.78	258	*e*PN	Pn	02 39 29.8	-0.1
KMO				*e*S	Sn	02 39 53.8	+1.4
KMO				*e*		02 39 55.4	
KMO				pmax	pmax		
	comp=Z,36nm,0.4s						
KMO				smax			
	comp=N,615nm,1.0s						
YLYR	Ulyunkhan	2.27	233	*e*PN	Pn	02 39 36.9	-0.1
YLYR				*e*		02 39 39.8	
YLYR				*e*S	Sn	02 40 05.8	+0.8
YLYR				*e*		02 40 09.2	
YLYR				pmax	pmax		
	comp=Z,25nm,0.5s						
YLYR				smax			
	comp=E,200nm,0.6s						

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*MOS **15** 02:50:51.8±1.8, 41.34N×125.84W, h10^{km}, mb6.3/102, MS7.1/45, Error ellipse: s-maj=4.5km s-min=3.7km* *az=82.5 Broadband fault plane solution: P waves. $M_0$2.1×10^{19} NP1:ϕ_s340°,δ79°,λ176°. NP2:ϕ_s71°,δ86°,λ11°. Principal axes: T Plg10°, Azm296°; N Plg78°, Azm90°; P Plg5°, Azm205°;*

BJI ***15*** *02:50:52.8,41.30N×126.00W,h10^{km},mB6.4,mb5.5,Ms7.3,Msz7.0*

IDC ***15*** *02:50:52.3±0.4,41.38N×125.76W,mb4.9/29,mb1 5.0/37,mb1mx5.0/37,mbtmp4.9/37,ML4.3/6,MS6.9/14,Ms1 6.9/14,ms1mx6.7/35,Error ellipse: s-maj=8.9km s-min=7.0km az=41.0*

CRAAG ***15*** *02:50:52.5,41.34N×125.72W,Mb7.0*

HRVD ***15*** *02:50:53.2±0.1,41.15N×126.42W,h20^{km},MW7.2/78, Centroid moment Tensor Solution. LP body waves: s76,c195;Mantle waves: s78,c380; Half duration: 9^{s}9 Moment tensor: Scale 10^{20}Nm; M_{rr}0.01±.00; $M_{\theta\theta}$-0.83±.00; $M_{\phi\phi}$0.81±.00; $M_{r\theta}$0.03±.02; $M_{\theta\phi}$0.05±.00; $M_{\phi r}$0.11±.02; Best double couple: M_0.83×10^{20} NP1:ϕ_s317°,δ83°,λ175°. NP2:ϕ_s47°,δ85°,λ7°. Principal axes: T .832, Plg8°, Azm272°; N -.003, Plg82°, Azm81°; P -.829, Plg2°, Azm182°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

IGIL ***15*** *02:50:53.1,41.33N×125.86W,h1^{km},mb6.2,MS7.4*

NEIC ***15*** *02:50:54.2±0.1,41.29N×125.95W,h16^{km},mb6.1/196,ME7.6,MS7.1/101,MW7.1,MW7.0(BRK),MW6.8(MOS), Error ellipse: s-maj=3.8km s-min=2.3km az=27.0 Broadband fault plane solution: P waves. NP1:ϕ_s320°,δ88°,λ175°. NP2:ϕ_s50°,δ85°,λ2°. Principal axes: T Plg5°, Azm275°; N Plg0°, Azm0°; P Plg2°, Azm5°; Moment Tensor Solution. s39 Moment tensor: Scale 10^{19} Nm; M_{rr}0.37; $M_{\theta\theta}$-5.89; $M_{\phi\phi}$5.55; $M_{r\theta}$-0.51; $M_{\theta\phi}$-0.90; $M_{\phi r}$-0.87; Best double couple: $M_0$5.9×10^{19} NP1:ϕ_s130°,δ80°,λ178°. NP2:ϕ_s221°,δ88°,λ10°. Principal axes: T 5.74, Plg9°, Azm86°; N .27, Plg80°, Azm235°; P -6.01, Plg5°, Azm355°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Crescent City, Ferndale, Kneeland, Loleta and Petrolia; [III] at Arcata, Bayside, Blue Lake, Carlotta, Dunsmuir, Eureka, Fortuna, Garberville, Gasquet, Hoopa, Hydesville, Klamath, McKinleyville, Mount Shasta, Orick, Orleans, Redcrest, Redway, Rio Dell, Scotia, Smith River, Trinidad, Whitethorn, Willow Creek and Yreka. Also felt [III] at Azalea, Brookings, Glendale, Grants Pass, Jacksonville, Merlin, Roseburg and Wolf Creek, Oregon. Felt from southwestern Oregon south to the San Francisco Bay area and by some people in the Portland and Los Angeles areas. A tsunami was generated with maximum recorded wave heights [peak-to-trough] of 26 cm at Crescent City, 6.5 cm at Arena Cove and 5 cm at North Spit, California; 3.5 cm at Tofino and 2 cm at Bamfield, British Columbia, Canada.

ISC 15 02:50:55.8±0.2**,41.45N**±0.02×**125.59W**±0.03**,h18**^{km}**, h18**^{km}±.9^{km}**:pP-P,n1159,**σ**1**^{s}**51**/1046**,mb5.9**/220**, MS7.0**/149**,94C-51D,Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRMB	**Red Mountain**	**1.26**	**86**	ePn	**Pn**	**02 51 18.8**	**+0.1**
KBO	**Bosley Butte**	**1.27**	**53**	ePn	**Pn**	**02 51 18.9**	**0.0**
KHMM	**Horse Mountain**	**1.51**	**112**	ePn	**Pn**	**02 51 21.0**	**-1.3**
KEBM	**Edson Butte**	**1.70**	**33**	⇓ePn	**Pn**	**02 51 24.0**	**-0.9**
YBH	**Yreka Blue Hor**	**2.17**	**82**	eP	**Pn**	**02 51 32.7**	**+1.0**
YBH	**Yreka Blue Hor**	**2.17**	**82**	Pn	**Pn**	**02 51 33.5**	**+1.7**
	1μm,0.3s,baz=260,slow=12,SNR=5626						
YBH				LR	LR	02 52 20.7	
	comp=Z,1258μm,18.3s,baz=235,slow=38						
HUMO	**Hull Mountain**	**2.27**	**59**	⇑ePn	**Pn**	**02 51 33.5**	**+0.3**
WDC	**Whiskeytown Da**	**2.46**	**110**	⇑eP	**Pn**	**02 51 34.3**	**-1.5**
HOPS	**Hopland**	**3.12**	**141**	ePn	**Pn**	**02 51 40.4**	**-4.7**
COR	**Corvallis**	**3.56**	**27**	Pn	**Pn**	**02 51 50.0**	**-1.4**
COR	**Corvallis**	**3.56**	**27**	ePn	**Pn**	**02 51 50.0**	**-1.4**
NSHM	**Saint Helena R**	**3.71**	**141**	ePn	**Pn**	**02 51 47.1**	**-6.6**
MOD	**Modoc**	**3.98**	**82**	ePn	**Pn**	**02 51 57.3**	**-0.1**
BEKR	**Beckwourth**	**4.28**	**110**	⇑ePn	**Pn**	**02 51 60.0**	**-1.7**
SAC	**San Andreas**	**4.57**	**147**	P	**Pn**	**02 52 00.9**	**-4.9**
SAC	**San Andreas**	**4.57**	**147**	ePn	**Pn**	**02 52 00.2**	**-5.6**
WCN	**Washoe City**	**4.94**	**114**	P	**Pn**	**02 52 09.1**	**-2.0**
WCN				pmax	pmax		
	comp=Z,380nm,1.4s						
WCN	**Washoe City**	**4.94**	**114**	ePn	**Pn**	**02 52 09.0**	**-2.1**
PAHR	**Pah Rah Range**	**5.03**	**108**	ePn	**Pn**	**02 52 10.3**	**-2.0**
CMB	**Columbia Colle**	**5.26**	**129**	P	**Pn**	**02 52 12.3**	**-3.2**
CMB				pmax	pmax		
	comp=Z,170nm,0.6s						
CMB	**Columbia Colle**	**5.26**	**129**	⇑ePn	**Pn**	**02 52 12.2**	**-3.3**
WVOR	**Wild Horse Val**	**5.28**	**77**	eP	**Pn**	**02 52 14.5**	**-1.3**
SAO	**San Andreas Ge**	**5.68**	**144**	eP	**Pn**	**02 52 18.2**	**-3.2**
SAO				e		02 53 28.2	
SAO				pmax	pmax		
	comp=Z,140nm,0.6s						
SAO	**San Andreas Ge**	**5.68**	**144**	ePn	**Pn**	**02 52 15.4**	**-6.0**
SAO				eSn	**Sn**	**02 53 28.2**	**+1.3**
LRV	**Little Rabbit**	**6.15**	**143**	ePn	**Pn**	**02 52 23.4**	**-4.7**
NVAR	**Mina Array Bea**	**6.36**	**116**	Pn	**Pn**	**02 52 28.5**	**-2.5**
	comp=Z,12nm,0.3s,baz=289,slow=14,SNR=141						
NVAR				P3KPbc		03 30 21.7	
	comp=Z,0.0nm,0.3s,baz=118,slow=2.7,SNR=3.7						
OMM	**Old Mammoth Mi**	**6.37**	**125**	ePn	**Pn**	**02 52 29.7**	**-1.5**
OCWA	**Octopus Mounta**	**6.38**	**9**	ePn	**Pn**	**02 52 29.9**	**-1.4**
BMN	**Battle Mountai**	**6.41**	**96**	P	**Pn**	**02 52 31.2**	**-0.6**
BMN				pmax	pmax		
	comp=Z,7μm,1.5s						
BMN	**Battle Mountai**	**6.41**	**96**	ePn	**Pn**	**02 52 30.5**	**-1.3**
MNV	**Mina**	**6.46**	**115**	P	**Pn**	**02 52 29.8**	**-2.6**
MNV				pmax	pmax		
	comp=Z,5μm,1.5s						
MNV	**Mina**	**6.46**	**115**	⇑ePn	**Pn**	**02 52 29.7**	**-2.7**
MTUM	**Tungsten Hills**	**6.80**	**125**	ePn	**Pn**	**02 52 36.2**	**-1.1**
BMO	**Blue Mountains**	**6.95**	**58**	ePn	**Pn**	**02 52 39.4**	**0.0**
TPH	**Tonopah**	**7.27**	**115**	eP	**Pn**	**02 52 41.4**	**-2.4**
PGC	**Sidney**	**7.36**	**11**	ePn	**Pn**	**02 52 43.5**	**-1.6**
ELK	**Elko**	**7.85**	**92**	Pn	**Pn**	**02 52 51.8**	**-0.1**
	comp=Z,3.2nm,0.3s,baz=275,slow=14,SNR=156						
ELK				LR	LR	02 56 24.8	
	comp=Z,2017μm,21.0s,baz=272,slow=42						
ELK	**Elko**	**7.85**	**92**	ePn	**Pn**	**02 52 51.6**	**-0.3**
TRCR	**Troy Canyon**	**8.29**	**109**	ePn	**P**	**02 52 56.5**	**-1.6**
HLID	**Hailey**	**8.52**	**72**	ePn	**P**	**02 53 00.0**	**-1.3**
NEW	**Newport**	**9.08**	**39**	Pn	**P**	**02 53 07.5**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=204,slow=14,SNR=17						
NEW				LR	LR	02 57 08.6	
	comp=Z,1532μm,18.3s,baz=228,slow=41						
NEW	**Newport**	**9.08**	**39**	ePn	**P**	**02 53 08.1**	**-0.9**
MWC	**Mount Wilson**	**9.35**	**138**	P	**P**	**02 53 08.9**	**-3.8**
MWC	**Mount Wilson**	**9.35**	**138**	ePn	**P**	**02 53 08.5**	**-4.2**
BGU	**Big Grassy Mou**	**9.48**	**89**	ePn	**P**	**02 53 14.9**	**+0.3**
HVU	**Hansel Valley**	**9.60**	**84**	eP	**P**	**02 53 17.1**	**+0.9**
SPUT	**South Promonto**	**9.88**	**86**	ePn	**P**	**02 53 20.5**	**+0.5**
MCMT	**McKenzie Canyo**	**9.90**	**66**	ePn	**P**	**02 53 19.7**	**-0.6**
MSO	**Missoula**	**9.95**	**53**	ePn	**P**	**02 53 20.2**	**-0.7**
ARUT	**Antelope Range**	**10.06**	**107**	eP	**P**	**02 53 22.2**	**-0.3**
NOQ	**North Oquirrh**	**10.20**	**90**	ePn	**P**	**02 53 24.9**	**+0.4**
NEN	**Nelson**	**10.21**	**121**	ePn	**P**	**02 53 23.4**	**-1.2**
NLU	**North Lily Min**	**10.37**	**94**	ePn	**P**	**02 53 27.5**	**+0.7**
LDFC	**Landfair**	**10.40**	**124**	ePn	**P**	**02 53 24.4**	**-2.8**
CHMT	**Chamberlain Mo**	**10.40**	**54**	ePn	**P**	**02 53 26.3**	**-0.9**
CTU	**Camp Tracy**	**10.48**	**90**	ePn	**P**	**02 53 28.2**	**0.0**
HWUT	**Hardware Ranch**	**10.52**	**84**	⇑ePn	**P**	**02 53 29.6**	**+0.8**
PFO	**Pinyon Flat Ob**	**10.66**	**134**	P	**P**	**02 53 26.4**	**-4.4**
PFO				pmax	pmax		
	comp=Z,350nm,0.7s						
PFO	**Pinyon Flat Ob**	**10.66**	**134**	ePn	**P**	**02 53 26.1**	**-4.6**
MVU	**Marysvale**	**10.68**	**102**	ePn	**P**	**02 53 30.9**	**-0.1**
TCUT	**Toone Canyon**	**10.68**	**87**	eP	**P**	**02 53 31.9**	**+1.0**
MPU	**Maple Canyon**	**10.69**	**93**	ePn	**P**	**02 53 31.3**	**+0.2**
MSU	**Marysvale**	**10.70**	**102**	eP	**P**	**02 53 31.0**	**-0.3**
JLU	**Jordanelle**	**10.72**	**90**	eP	**P**	**02 53 32.0**	**+0.5**
RRI2	**Red Ridge**	**10.72**	**75**	eP	**P**	**02 53 32.6**	**+1.0**
AHID	**Auburn Hatcher**	**10.85**	**78**	eP	**P**	**02 53 34.0**	**+0.7**
BBB	**Bella Bella**	**10.88**	**352**	Pn	**P**	**02 53 29.8**	**-3.9**
	comp=Z,2.4nm,0.3s,baz=183,slow=11,SNR=46						
QLMT	**Earthquake Lak**	**10.88**	**67**	eP	**P**	**02 53 34.2**	**+0.5**
DAU	**Daniels Canyon**	**10.89**	**91**	eP	**P**	**02 53 34.0**	**+0.1**
BOZ	**Bozeman (W)**	**10.96**	**63**	eP	**P**	**02 53 33.5**	**-1.3**
TPAW	**Teton Pass**	**11.00**	**74**	eP	**P**	**02 53 36.5**	**+1.1**
IMW	**Indian Meadow**	**11.06**	**72**	eP	**P**	**02 53 36.9**	**+0.7**
REDW	**Red Top Meadow**	**11.06**	**75**	eP	**P**	**02 53 37.2**	**+1.0**
SNOW	**Snow King Moun**	**11.14**	**75**	eP	**P**	**02 53 38.1**	**+0.7**
WUWY	**Wally Ulrich**	**11.16**	**74**	eP	**P**	**02 53 38.5**	**+0.9**
YMR	**Madison River**	**11.17**	**68**	eP	**P**	**02 53 37.8**	**+0.1**
TMUT	**Trail Mountain**	**11.18**	**96**	eP	**P**	**02 53 39.2**	**+1.4**
MOOW	**Moose Ponds**	**11.18**	**73**	eP	**P**	**02 53 38.5**	**+0.6**
HRY	**Holter Researc**	**11.20**	**57**	eP	**P**	**02 53 38.7**	**+0.6**
YFT	**Old Faithful**	**11.22**	**70**	eP	**P**	**02 53 39.4**	**+1.0**
LOHW	**Long Hollow**	**11.27**	**74**	eP	**P**	**02 53 39.9**	**+0.9**
BAR	**Barrett**	**11.27**	**138**	eP	**P**	**02 53 36.0**	**-3.1**
YNR	**Norris Junctio**	**11.38**	**68**	eP	**P**	**02 53 40.6**	**+0.1**
LKWY	**Lake**	**11.55**	**69**	P	**P**	**02 53 43.0**	**+0.2**
SRU	**San Rafael**	**11.74**	**97**	eP	**P**	**02 53 46.8**	**+1.4**
BW06	**Boulder Array**	**11.98**	**78**	⇑eP	**P**	**02 53 48.9**	**+0.2**
PDAR	**Pinedale Array**	**11.98**	**78**	Pn	**P**	**02 53 48.5**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=252,slow=9.8,SNR=29						
PDAR				LR	LR	02 59 01.5	
	comp=Z,956μm,20.3s,baz=268,slow=40						
GCMT	**Greycliff**	**12.32**	**64**	eP	**P**	**02 53 52.6**	**-0.7**
WUAZ	**Wupatki**	**12.61**	**113**	eP	**P**	**02 53 57.4**	**+0.3**
PV10	**Paradox Valley**	**13.07**	**98**	eP	**P**	**02 54 04.4**	**+1.2**
PV01	**Paradox Valley**	**13.50**	**99**	eP	**P**	**02 54 09.2**	**+0.3**
RWWY	**Rawlins**	**13.76**	**83**	eP	**P**	**02 54 10.8**	**-1.5**
	comp=Z,7μm,1.2s						
EDM	**Edmonton**	**14.38**	**31**	P	**P**	**02 54 17.5**	**-2.8**
EDM	**Edmonton**	**14.38**	**31**	eP	**P**	**02 54 17.8**	**-2.6**
LAO	**LASA Array**	**14.86**	**63**	eP	**P**	**02 54 26.7**	**0.0**
	comp=Z,107nm,0.4s						
CRAG	**Craig**	**14.88**	**343**	eP	**P**	**02 54 26.0**	**-0.9**
	comp=Z,7μm,2.3s						
TUC	**Tucson**	**14.93**	**123**	Pn	**P**	**02 54 27.7**	**+0.1**
TUC				Pn	**P**	**02 54 34.0**	**+6.3**
TUC	**Tucson**	**14.93**	**123**	eP	**P**	**02 54 27.5**	**-0.2**
TUC				pmax	pmax		
	comp=Z,2μm,1.4s						
TUC	**Tucson**	**14.93**	**123**	eP	**P**	**02 54 27.5**	**-0.2**
	comp=Z,2μm,1.4s						
PHWY	**Pilot Hill**	**15.12**	**84**	eP	**P**	**02 54 28.2**	**-1.8**
ISCO	**Idaho Springs**	**15.26**	**90**	eP	**P**	**02 54 31.5**	**-0.4**
ISCO				pmax	pmax		
	comp=Z,478nm,1.2s						
ISCO	**Idaho Springs**	**15.26**	**90**	eP	**P**	**02 54 31.4**	**-0.4**
	comp=Z,478nm,1.2s						
SDCO	**Great Sand Dun**	**15.91**	**97**	eP	**P**	**02 54 41.1**	**+0.7**
	comp=Z,82nm,0.6s						
RSSD	**Black Hills**	**16.04**	**73**	Pn	**P**	**02 54 39.2**	**-2.8**
RSSD				Pn	**P**	**02 54 46.0**	**+4.0**
RSSD	**Black Hills**	**16.04**	**73**	P	**P**	**02 54 38.5**	**-3.5**
RSSD				pmax	pmax		
	comp=Z,2μm,1.3s						
RSSD	**Black Hills**	**16.04**	**73**	eP	**P**	**02 54 39.0**	**-3.0**
	comp=Z,2μm,1.4s						
LAZ	**Ladron**	**16.15**	**110**	P	**P**	**02 54 42.8**	**-0.6**
ANMO	**Albuquerque**	**16.36**	**107**	Pn	**P**	**02 54 46.1**	**0.0**
ANMO	**Albuquerque**	**16.36**	**107**	c iP	**P**	**02 54 45.6**	**-0.5**
ANMO	**Albuquerque**	**16.36**	**107**	Pn	**P**	**02 54 46.7**	**+0.6**
	baz=303,slow=11,SNR=87						
ANMO	**Albuquerque**	**16.36**	**107**	eP	**P**	**02 54 46.0**	**-0.1**
	comp=Z,353nm,0.6s						
LENM	**Lemitar**	**16.39**	**110**	eP	**P**	**02 54 47.6**	**+1.1**
LPM	**Los Pinos Moun**	**16.55**	**109**	eP	**P**	**02 54 49.4**	**+0.8**
BNM	**Barren Site**	**16.64**	**110**	eP	**P**	**02 54 50.5**	**+0.8**
DGMT	**Dagmar**	**16.66**	**58**	eP	**P**	**02 54 48.4**	**-1.4**
	comp=Z,105nm,0.4s						
SIT	**Sitka**	**16.84**	**341**	eP	**P**	**02 54 49.2**	**-2.8**
SIT				pmax	pmax		
	comp=Z,4μm,1.6s						
SIT	**Sitka**	**16.84**	**341**	eP	**P**	**02 54 49.2**	**-2.8**
	comp=Z,4μm,1.6s						
DLBC	**Dease Lake**	**17.24**	**352**	P	**P**	**02 54 55.4**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=174,slow=12,SNR=46						
DLBC				LR	LR	03 01 02.5	
	comp=Z,436μm,19.1s,baz=162,slow=35						
DLBC	**Dease Lake**	**17.24**	**352**	eP	**P**	**02 54 56.2**	**-0.9**
MNTX	**Cornudas Mount**	**18.88**	**115**	⇑eP	**P**	**02 55 17.6**	**+0.1**
	comp=Z,22μm,2.0s						
CPRX	**Cap Rock**	**19.19**	**109**	eP	**P**	**02 55 21.2**	**0.0**
GDL2	**Guadalupe Moun**	**19.29**	**112**	P	**P**	**02 55 20.6**	**-1.8**
CLNB	**Carlsbad**	**19.60**	**111**	eP	**P**	**02 55 25.1**	**-0.7**
AMTX	**Amarillo**	**19.87**	**101**	eP	**P**	**02 55 26.9**	**-2.0**
	comp=Z,29μm,2.0s						
AMTX				LR	LR		
	comp=Z,22μm,21.0s						
CBKS	**Cedar Bluff**	**19.92**	**89**	eP	**P**	**02 55 27.9**	**-1.5**
	comp=Z,7μm,1.2s						
CBKS				LR	LR		
	comp=Z,1052μm,21.0s						
FFC	**Flin Flon**	**20.49**	**42**	eP	**P**	**02 55 34.2**	**-1.0**
FFC				pmax	pmax		
	comp=Z,5μm,1.3s						
FFC				MLR	MLR		
	comp=Z,146μm,19.0s,MS6.4						
FFC	**Flin Flon**	**20.49**	**42**	eP	**P**	**02 55 34.2**	**-1.0**
	comp=Z,5μm,1.3s						
FFC				LR	LR		
	comp=Z,146μm,19.0s,MS6.4						
LPIG	**La Paz**	**21.49**	**139**	⇑iP	**P**	**02 55 44.0**	**-1.6**
LTX	**Lajitas**	**21.50**	**117**	⇑eP	**P**	**02 55 45.7**	**0.0**
LTX				pmax	pmax		
	comp=Z,85nm,0.6s,mb5.3						
LTX				MLR	MLR		
	comp=Z,405μm,20.0s,MS6.8						
LTX	**Lajitas**	**21.50**	**117**	⇑eP	**P**	**02 55 45.6**	**-0.1**
	comp=Z,85nm,0.6s,mb5.3						
LTX				LR	LR		
	comp=Z,405μm,20.0s,MS6.8						
TXAR	**Lajitas Array**	**21.50**	**117**	P	**P**	**02 55 45.0**	**-0.7**
	comp=Z,30nm,0.8s,mb4.8,baz=301,slow=9.8,SNR=156						
TXAR				S	S	02 59 59.0	+21
	comp=Z,9.8nm,1.0s,baz=297,slow=10,SNR=2.4						
TXAR				LR	LR	03 04 37.4	
	comp=Z,381μm,19.6s,MS6.8,baz=85,slow=38						
TXAR				SKKS		03 29 42.1	
	comp=Z,0.3nm,0.7s,baz=112,slow=6.7,SNR=4.6						
TXAR	**Lajitas Array**	**21.50**	**117**	P	**P**	**02 55 45.0**	**-0.7**
TXAR				S	S	02 59 59.0	+21
TXAR				LR	LR	03 04 37.4	
YKA	**Yellowknife Ar**	**22.07**	**14**	P	**P**	**02 55 49.0**	**-2.2**
	comp=Z,68nm,0.8s,mb5.1,baz=198,slow=10,SNR=46						
YKA				S	**S**	**02 59 57.6**	**+8.9**
	comp=Z,2.8nm,0.7s,baz=201,slow=19,SNR=3.9						
YKA				LR	LR	03 04 21.0	
	comp=Z,313μm,21.5s,MS6.7,baz=200,slow=36						
YKA				SKKS		03 29 39.0	
	comp=Z,3.0nm,1.1s,baz=22,slow=5.1,SNR=5.6						
YKA	**Yellowknife Ar**	**22.07**	**14**	P	**P**	**02 55 49.0**	**-2.2**
YKA				S	**S**	**02 59 57.6**	**+8.9**
YKA				LR	LR	03 04 21.0	
WMOK	**Wichita Mounta**	**22.08**	**99**	eP	**P**	**02 55 49.9**	**-1.6**
WMOK				pmax	pmax		
	comp=Z,1μm,1.1s,mb6.3						
WMOK				MLR	MLR		
	comp=Z,619μm,21.0s,MS7.0						
WMOK	**Wichita Mounta**	**22.08**	**99**	eP	**P**	**02 55 49.9**	**-1.6**
	comp=Z,1μm,1.1s,mb6.3						
WMOK				LR	LR		
	comp=Z,619μm,21.0s,MS7.0						
YKW3	**Yellowknife Ar**	**22.14**	**14**	eP	**P**	**02 55 49.4**	**-2.5**
MID	**Middleton Isla**	**22.16**	**331**	eP	**P**	**02 55 52.2**	**+0.1**
KSU1	**Kansas State U**	**22.19**	**86**	eP	**P**	**02 55 52.6**	**+0.1**
ULM	**Lac du Bonnet**	**22.37**	**57**	P	**P**	**02 55 53.5**	**-0.7**
	comp=Z,118nm,1.1s,mb5.2,baz=264,slow=10,SNR=60						
ULM				S	**S**	**03 00 11.7**	**+17**
	comp=Z,97nm,1.1s,baz=176,slow=19,SNR=2.0						
ULM				LR	LR	03 05 06.2	
	comp=Z,368μm,18.3s,MS6.8,baz=261,slow=38						
ULM	**Lac du Bonnet**	**22.37**	**57**	P	**P**	**02 55 53.5**	**-0.7**
ULM				S	**S**	**03 00 11.7**	**+17**
ULM				LR	LR	03 05 06.2	
EYAK	**Cordova Ski Ar**	**22.78**	**334**	eP	**P**	**02 55 54.0**	**-4.1**
KDAK	**Kodiak Island**	**23.70**	**323**	eP	**P**	**02 56 05.3**	**-1.8**
MENT	**Mentasta**	**24.05**	**340**	eP	**P**	**02 56 10.8**	**+0.3**
MAIG	**Mazatlaan**	**24.27**	**133**	⇑iP	**P**	**02 56 18.1**	**+5.1**
SLKM	**Skilak Lake**	**24.33**	**330**	eP	**P**	**02 56 11.9**	**-1.3**
SML	**Sawmill**	**24.55**	**334**	P	**P**	**02 56 10.8**	**-4.6**
PMR	**Palmer**	**24.67**	**333**	eP	**P**	**02 56 15.7**	**-0.8**
PMR				pmax	pmax		
	comp=Z,778nm,1.2s,mb6.1						
PMR	**Palmer**	**24.67**	**333**	eP	**P**	**02 56 15.7**	**-0.8**
	comp=Z,778nm,1.2s,mb6.1						
FIB	**Fire Island**	**24.75**	**331**	P	**P**	**02 56 15.0**	**-2.3**
	comp=Z,574nm,1.2s,mb6.0						
FIB				LR	LR		
	comp=Z,224μm,19.0s,MS6.7						
EYMN	**Ely**	**24.94**	**63**	eP	**P**	**02 56 19.2**	**0.0**
	comp=Z,8.8nm,0.7s						
EYMN				LR	LR		
	comp=Z,609μm,19.0s,MS7.1						
THY	**Trims Highway**	**24.99**	**338**	eP	**P**	**02 56 19.2**	**-0.3**
RSO	**Redoubt South**	**25.29**	**328**	eP	**P**	**02 56 20.9**	**-1.5**
SPU	**Mount Spurr**	**25.46**	**330**	eP	**P**	**02 56 21.5**	**-2.4**
JFWS	**Jewell Farm**	**26.11**	**75**	P	**P**	**02 56 30.6**	**+0.4**
JFWS	**Jewell Farm**	**26.11**	**75**	eP	**P**	**02 56 30.7**	**+0.5**
	comp=Z,29μm,2.0s						
JFWS				LR	LR		
	comp=Z,528μm,21.0s,MS7.0						
FCC	**Fort Churchill**	**26.25**	**38**	eP	**P**	**02 56 31.1**	**-0.2**
	comp=Z,3.7nm,0.8s						
ILAR	**Eielson Array**	**26.37**	**339**	P	**P**	**02 56 30.1**	**-2.2**
	comp=Z,101nm,1.2s,mb5.2,baz=157,slow=7.7,SNR=73						
ILAR				PcP	PcP	02 59 56.5	-2.1
	comp=Z,4.3nm,1.0s,baz=180,slow=2.7,SNR=2.4						
ILAR				LR	LR	03 06 04.6	
	comp=Z,134μm,20.5s,MS6.5,baz=166,slow=35						
NATX	**Nacogdoches**	**26.52**	**101**	eP	**P**	**02 56 34.3**	**+0.2**
	comp=Z,11μm,2.1s						
NATX				LR	LR		
	comp=Z,510μm,20.0s,MS7.1						
SDPT	**Sand Point**	**26.69**	**313**	eP	**P**	**02 56 31.3**	**-4.1**
	comp=Z,724nm,1.4s,mb6.0						
SVW2	**Sparrevohn**	**26.79**	**327**	eP	**P**	**02 56 32.8**	**-3.4**
UALR	**University of**	**26.88**	**93**	eP	**P**	**02 56 36.3**	**-1.1**
	comp=Z,11μm,2.3s						
SLM	**Saint Louis**	**27.09**	**84**	eP	**P**	**02 56 36.9**	**-2.4**
SLM				pmax	pmax		
	comp=Z,2μm,1.3s,mb6.5						
SLM	**Saint Louis**	**27.09**	**84**	eP	**P**	**02 56 36.9**	**-2.4**
	comp=Z,2μm,1.3s,mb6.5						
FVM	**French Village**	**27.15**	**86**	eP	**P**	**02 56 38.6**	**-1.2**
FVM				pmax	pmax		
	comp=Z,3μm,1.8s,mb6.5						
FVM	**French Village**	**27.15**	**86**	eP	**P**	**02 56 38.6**	**-1.2**
	comp=Z,3μm,1.8s,mb6.5						
INK	**Inuvik**	**27.25**	**354**	P	**P**	**02 56 37.9**	**-2.6**
INK				S	**S**	**03 01 23.4**	**+6.4**
INK				pmax	pmax		
	comp=Z,112nm,1.3s						
INK				smax			
	comp=E,33nm,1.2s						
INK	**Inuvik**	**27.25**	**354**	P	**P**	**02 56 37.9**	**-2.6**
	comp=E,112nm,1.3s,mb5.2,baz=167,slow=10,SNR=11						
INK				S	**S**	**03 01 23.4**	**+6.4**
	comp=E,33nm,1.2s,baz=180,slow=8.0,SNR=1.7						
INK	**Inuvik**	**27.25**	**354**	eP	**P**	**02 56 37.7**	**-2.8**
	comp=E,2μm,1.9s,mb6.4						
HBAR	**Harrisburg**	**27.83**	**91**	eP	**P**	**02 56 45.1**	**-0.9**
TTA	**Tatalina**	**28.00**	**330**	eP	**P**	**02 56 44.8**	**-2.5**
CJM	**Chamela**	**28.01**	**135**	eP	**P**	**02 56 54.0**	**+6.3**
PARMO	**Parma**	**28.10**	**88**	eP	**P**	**02 56 47.7**	**-0.8**
GNAR	**Gosnell**	**28.16**	**89**	eP	**P**	**02 56 48.4**	**-0.5**
	comp=E,3μm,1.4s,mb6.8						
PVMO	**Portageville**	**28.23**	**88**	eP	**P**	**02 56 49.4**	**-0.2**
SFJM	**Santa Fe**	**28.31**	**131**	i P	**P**	**02 56 50.0**	**-0.5**
MET	**Memphis--Engin**	**28.55**	**91**	eP	**P**	**02 56 52.3**	**-0.2**
GLAT	**Glass**	**28.59**	**88**	eP	**P**	**02 56 51.3**	**-1.6**
HALT	**Halls**	**28.69**	**89**	eP	**P**	**02 56 53.4**	**-0.4**
UTMT	**University of**	**28.88**	**88**	eP	**P**	**02 56 55.6**	**+0.1**
	comp=E,3μm,1.3s,mb6.9						
COLM	**Colima**	**29.00**	**133**	i P	**P**	**02 56 58.0**	**+1.4**
OXF	**Oxford**	**29.19**	**92**	eP	**P**	**02 56 57.3**	**-1.0**
OXF				pmax	pmax		
	comp=Z,302nm,0.9s,mb6.0						
OXF				MLR	MLR		
	comp=Z,434μm,20.0s,MS7.1						
OXF	**Oxford**	**29.19**	**92**	eP	**P**	**02 56 57.3**	**-1.0**
	comp=Z,302nm,0.9s,mb6.0						
OXF				LR	LR		
	comp=Z,434μm,20.0s,MS7.1						
IMA	**Indian Mountai**	**29.24**	**337**	eP	**P**	**02 56 56.6**	**-1.8**
IMA				pmax	pmax		
	comp=Z,69nm,1.0s,mb5.3						
BLO	**Bloomington**	**29.71**	**81**	eP	**P**	**02 57 02.0**	**-0.9**
BLO				pmax	pmax		
	comp=Z,1μm,1.1s,mb6.6						
BLO	**Bloomington**	**29.71**	**81**	eP	**P**	**02 57 02.0**	**-0.9**
	comp=Z,1μm,1.1s,mb6.6						
WVT	**Waverly**	**29.74**	**88**	eP	**P**	**02 57 02.3**	**-1.0**
	comp=Z,864nm,1.4s,mb6.3						
WVT				LR	LR		
	comp=Z,1172μm,21.0s,MS7.5						
WVT	**Waverly**	**29.74**	**88**	P	**P**	**02 57 02.3**	**-0.9**
WVT				P	pP	02 57 08.4	-0.1
WVT				S	**S**	**03 02 08.0**	**+11**
UNV	**Unalaska Valle**	**29.80**	**309**	eP	**P**	**02 56 58.4**	**-5.2**
	comp=Z,2μm,1.1s,mb6.8						
UNV				LR	LR		
	comp=Z,997μm,22.0s,MS7.4						
PLAL	**Pickwick Lake**	**30.00**	**90**	eP	**P**	**02 57 04.6**	**-0.9**
	comp=Z,1μm,1.3s,mb6.5						
PLAL				LR	LR		
	comp=Z,548μm,20.0s,MS7.2						
MOIG	**Morelia**	**30.02**	**129**	i P	**P**	**02 57 04.0**	**-1.8**
WCI	**Wyandotte Cave**	**30.16**	**83**	eP	**P**	**02 57 05.8**	**-1.2**
WCI				pmax	pmax		
	comp=Z,2μm,1.5s,mb6.7						
WCI				MLR	MLR		
	comp=Z,165μm,20.0s,MS6.7						
WCI	**Wyandotte Cave**	**30.16**	**83**	eP	**P**	**02 57 05.8**	**-1.2**
	comp=Z,2μm,1.5s,mb6.7						
WCI				LR	LR		
	comp=Z,165μm,20.0s,MS6.7						
WCI	**Wyandotte Cave**	**30.16**	**83**	P	**P**	**02 57 06.0**	**-1.0**
IIJ	**Jocotitlan**	**30.84**	**127**	i P	**P**	**02 57 23.2**	**+10**
IIC	**Rita Coyotepec**	**31.10**	**126**	eP	**P**	**02 57 13.1**	**-2.2**
NIKO	**Nikolski**	**31.11**	**307**	eP	**P**	**02 57 09.5**	**-5.6**
PTVM	**Pico Tres Padr**	**31.32**	**126**	eP	**P**	**02 57 19.6**	**+2.3**
SZVM	**Salazar**	**31.36**	**127**	eP	**P**	**02 57 08.6**	**-9.1**
UNM	**Universidad Na**	**31.48**	**126**	eP	**P**	**02 57 23.0**	**+4.3**
UNM				i P		02 57 23.6	
SWET	**Sewanee**	**31.52**	**88**	eP	**P**	**02 57 17.5**	**-1.4**
IIZ	**Mezontepec**	**31.55**	**127**	i P	**P**	**02 57 18.0**	**-1.4**
IIO	**Organos**	**31.56**	**126**	eP	**P**	**02 57 16.4**	**-3.0**
LRAL	**Lakeview Retre**	**31.64**	**93**	eP	**P**	**02 57 18.6**	**-1.3**
	comp=Z,52nm,0.5s,mb5.6						
LRAL				LR	LR		
	comp=Z,368μm,22.0s,MS7.0						
CHVM	**Chichinautzin**	**31.69**	**127**	eP	**P**	**02 57 23.5**	**+3.0**
PLIG	**Platanillo**	**32.01**	**128**	i P	**P**	**02 57 26.1**	**+2.8**
PPM	**Popocatepetl**	**32.02**	**126**	i P	**P**	**02 57 23.0**	**-0.4**
PPM				e		02 57 23.5	
IIB	**San Bernardino**	**32.27**	**126**	eP	**P**	**02 57 33.0**	**+7.4**
CPCT	**Cooper Cave**	**32.48**	**87**	eP	**P**	**02 57 26.5**	**-0.8**
CAIG	**El Cayaco**	**32.62**	**131**	i P	**P**	**02 57 26.1**	**-2.6**
TZTN	**Tazewell**	**32.80**	**85**	eP	**P**	**02 57 29.1**	**-0.9**
IISM	**Ciudad Serdan**	**32.84**	**124**	eP	**P**	**02 57 33.5**	**+2.9**
LVIG	**Laguna Verde**	**32.90**	**122**	i P	**P**	**02 57 29.2**	**-1.9**
ACX	**Acapulco**	**32.97**	**130**	eP	**P**	**02 57 26.4**	**-5.3**
HKL	**Haleakala**	**33.16**	**241**	P	**P**	**02 57 30.9**	**-2.5**
HKL	**Haleakala**	**33.16**	**241**	P	**P**	**02 57 26.8**	**-6.5**
POHA	**Pohakuloa**	**33.37**	**239**	PFAKE		02 57 40.0	+4.8
POHA				LR	LR		
	comp=Z,21μm,20.0s						
ALLY	**Alegheny Colle**	**33.70**	**74**	eP	**P**	**02 57 37.3**	**-0.6**
KKH	**Kailua Kona**	**33.76**	**239**	P	**P**	**02 57 30.8**	**-7.8**
TNA	**Tin City**	**33.82**	**330**	eP	**P**	**02 57 34.8**	**-3.8**
	comp=Z,126nm,1.2s,mb5.7						
TNA				LR	LR		
	comp=Z,157μm,22.0s,MS6.7						
KIP	**Kipapa**	**33.83**	**244**	P	**P**	**02 57 35.6**	**-3.6**
KIP				pmax	pmax		
	comp=Z,810nm,1.5s,mb6.4						
KIP	**Kipapa**	**33.83**	**244**	eP	**P**	**02 57 33.9**	**-5.3**
	comp=Z,807nm,1.5s,mb6.4						
KIP				LR	LR		
	comp=Z,52μm,21.0s,MS6.2						
HON	**Honolulu**	**33.89**	**244**	P	**P**	**02 57 37.7**	**-2.0**
HON	**Honolulu**	**33.89**	**244**	P	**P**	**02 57 33.8**	**-5.9**
BUF	**Buffalo**	**34.31**	**72**	eP	**P**	**02 57 43.8**	**+0.6**
PNIG	**Pinotepa**	**34.38**	**128**	i P	**P**	**02 57 44.3**	**+0.3**
FWV	**Forest Hill**	**34.47**	**81**	eP	**P**	**02 57 43.5**	**-1.0**
MCWV	**Mont Chateau**	**34.49**	**77**	eP	**P**	**02 57 43.5**	**-1.2**
	comp=Z,23nm,0.6s,mb5.3						
MCWV				LR	LR		
	comp=Z,689μm,22.0s,MS7.3						
EVV	**El Vigia**	**34.51**	**122**	eP	**P**	**02 57 49.5**	**+4.4**
ELN	**Prospectdale**	**34.64**	**82**	eP	**P**	**02 57 45.0**	**-1.0**
OXX	**Oaxaca**	**34.69**	**126**	i P	**P**	**02 57 47.5**	**+0.9**
VHO	**Vista Hermosa**	**34.69**	**126**	i P	**P**	**02 57 45.5**	**-1.2**
BLA	**Blacksburg**	**34.89**	**82**	eP	**P**	**02 57 47.5**	**-0.6**
	comp=Z,4.2nm,0.6s						
BLA				LR	LR		

	comp=Z,297µm,22.0s,MS7.0						
GENY	Geneseo	35.09	72	eP	P	02 57 49.1	-0.7
JSC	Jenkinsville	35.41	87	eP	P	02 57 51.1	-1.5
GSTR	Great Sitkin T	35.50	305	eP	P	02 57 47.6	-5.6
CMIG	Matias Romero	35.82	123	⇑iP	P	02 57 54.2	-2.1
HUIG	Huatulco	36.08	126	i P	P	02 57 56.5	-1.9
RES	Resolute Bay	36.15	13	eP	P	02 57 56.7	-1.7
RES				pmax	pmax		
	comp=Z,346nm,1.0s,mb6.2						
RES	Resolute Bay	36.15	13	eP	P	02 57 56.7	-1.8
	comp=Z,346nm,1.0s,mb6.2						
COW	Cow Castle Cre	36.22	88	eP	P	02 57 58.3	-1.2
BINY	Binghamton	36.55	72	eP	P	02 58 01.6	-0.5
	comp=Z,76nm,0.6s,mb5.7						
BINY				LR	LR		
	comp=Z,575µm,19.0s,MS7.4						
MSNY	Massena	36.64	67	eP	P	02 58 02.1	-0.8
NHSC	New Hope	36.73	88	eP	P	02 58 01.4	-2.4
	comp=Z,3µm,1.4s						
NHSC				LR	LR		
	comp=Z,687µm,19.0s,MS7.5						
SDMD	Soldier's Deli	36.77	77	eP	P	02 58 03.3	-0.8
TWB	Tillmans-White	36.78	88	eP	P	02 58 03.6	-0.6
CBN	Corbin	36.79	79	eP	P	02 58 04.1	-0.1
	comp=Z,4µm,1.6s						
CBN				LR	LR		
	comp=Z,113µm,20.0s,MS6.7						
RGRS	Roger Stewart	36.81	88	eP	P	02 58 04.0	-0.3
CSU	Charleston Sou	36.86	88	eP	P	02 58 04.6	-0.3
NCB	Newcomb	37.33	68	eP	P	02 58 08.1	-0.6
	comp=Z,11µm,2.1s						
NCB				LR	LR		
	comp=Z,405µm,20.0s,MS7.2						
FRNY	Flat Rock	37.56	67	eP	P	02 58 09.3	-1.3
MIV	Mineville/With	37.78	68	eP	P	02 58 12.2	-0.4
ACCN	Adirondack Com	37.87	69	eP	P	02 58 12.9	-0.4
BRNJ	Basking Ridge	38.02	74	eP	P	02 58 15.0	+0.5
CCIG	Comitan	38.17	121	eP	P	02 58 14.2	-1.8
DWPF	Disney	38.23	96	eP	P	02 58 15.6	-0.9
	comp=Z,4µm,2.1s,mb6.8						
DWPF				LR	LR		
	comp=Z,186µm,21.0s,MS6.9						
PAL	Palisades	38.39	73	eP	P	02 58 17.6	0.0
PAL				pmax	pmax		
	comp=Z,376nm,1.2s,mb6.0						
PAL	Palisades	38.39	73	eP	P	02 58 17.6	0.0
	comp=Z,376nm,1.2s,mb6.0						
CPNY	Central Park	38.42	73	eP	P	02 58 18.8	+0.9
HNH	Hanover	38.75	68	eP	P	02 58 21.0	+0.4
	comp=Z,56nm,1.2s,mb5.2						
QUA2	Belchertown	39.11	70	eP	P	02 58 23.2	-0.4
	comp=Z,1µm,1.6s,mb6.3						
FFD	Franklin Falls	39.26	68	eP	P	02 58 20.5	-4.4
	comp=Z,1µm,1.4s,mb6.5						
HRV	Harvard--Oak R	39.60	70	P	P	02 58 33.5	+5.8
HRV				PP	PP	03 00 08.7	+6.1
HRV				S	S	03 04 45.0	+15
HRV	Harvard--Oak R	39.60	70	P	P	02 58 27.3	-0.4
HRV				pmax	pmax		
	comp=Z,387nm,1.3s,mb6.0						
HRV				MLR	MLR		
	comp=Z,10µm,19.0s						
HRV	Harvard--Oak R	39.60	70	P	P	02 58 27.3	-0.5
	comp=Z,387nm,1.3s,mb6.0						
HRV				LR	LR		
	comp=Z,10µm,19.0s						
BRYW	Bryant College	39.80	71	eP	P	02 58 28.7	-0.7
	comp=Z,1µm,1.3s,mb6.5						
WES	Weston	39.81	70	P	P	02 58 27.4	-2.0
WES				pmax	pmax		
	comp=Z,2µm,2.0s,mb6.5						
WES				MLR	MLR		
	comp=Z,67µm,20.0s,MS6.5						
WES	Weston	39.81	70	P	P	02 58 27.4	-2.1
	comp=Z,2µm,2.0s,mb6.5						
WES				LR	LR		
	comp=Z,67µm,20.0s,MS6.5						
SCHQ	Schefferville	40.23	50	P	P	02 58 31.0	-1.7
	comp=Z,12nm,0.9s,baz=276,slow=7.5,SNR=11						
SCHQ				S	S	03 04 48.1	+9.4
	comp=Z,17nm,1.1s,baz=185,slow=18,SNR=1.8						
WVL	Waterville	40.34	66	eP	P	02 58 32.7	-1.1
	comp=Z,3µm,1.7s,mb6.8						
WVL				LR	LR		
	comp=Z,1707µm,19.0s,MS7.9						
PQI	Presque Isle	40.91	63	eP	P	02 58 36.9	-1.5
	comp=Z,151nm,1.5s,mb5.4						
PQI				LR	LR		
	comp=Z,1886µm,20.0s,MS8.0						
MTO2	Montecristo 2	41.36	120	eP	P	02 58 46.0	+3.7
RBDL	Robledal	41.36	121	eP	P	02 58 48.6	+6.3
SMY	Shemya	41.42	307	PFAKE		02 58 50.0	+7.5
SMY				LR	LR		
	comp=Z,105µm,20.0s,MS6.7						
RTR	El Retiro	41.54	121	eP	P	02 58 48.8	+4.8
SNJE	San Jose	41.59	121	eP	P	02 58 46.4	+2.1
SBLS	San Blas	41.60	121	eP	P	02 58 48.1	+3.7
FX1	Attu Island--F	41.96	307	P	P	02 58 44.0	-2.8
FX1				pmax	pmax		
	comp=Z,20nm,1.0s						
FX1	Attu Island--F	41.96	307	P	P	02 58 44.0	-2.8
	comp=Z,20nm,1.0s,baz=79,slow=17,SNR=2.4						
LBRS	Las Brisas	42.05	120	eP	P	02 58 51.3	+3.2
LFRS	El Faro	42.12	120	eP	P	02 58 51.2	+2.5
LCBS	La Ceiba	42.16	120	eP	P	02 58 50.9	+1.9
VSM	San Miguel	42.78	120	eP	P	02 58 57.5	+3.4
BLLM	Bellamira	42.79	120	eP	P	02 58 58.7	+4.5
CNCH	Conchagua	43.18	119	eP	P	02 59 01.8	+4.5
MIDW	Midway	43.90	269	eP	P	02 58 57.5	-5.6
	comp=Z,357nm,0.8s,mb6.2						
MIDW				LR	LR		
	comp=Z,458µm,22.0s,MS7.3						
CRIN	San Cristobal	44.12	119	eP	P	02 59 09.6	+4.6
BILL	Bilibino	44.25	330	αP	P	02 59 00.1	-5.3
BILL				i	pP	02 59 03.7	-7.1
BILL				i	pP	02 59 06.7	-4.1
BILL				i PPP	PPP	03 01 23.3	-5.0
BILL				i S	S	03 05 38.9	+1.3
BILL				pmax	pmax		
	comp=Z,56nm,1.6s,mb5.0						
BILL				MLR	MLR		
	comp=Z,119µm,15.0s,MS6.9						
BILL	Bilibino	44.25	330	Pcu		02 59 00.1	
	comp=Z,56nm,1.6s						
BILL				i		02 59 03.7	
BILL				i		02 59 06.7	
BILL				i PPP	PPP	03 01 23.3	-5.0
BILL				i S	S	03 05 38.9	+1.3
BILL				LR	LR		
	comp=Z,119µm,15.0s,MS6.9						
TELN	Telica	44.33	119	eP	P	02 59 09.0	+2.3
TEL3	Telica 3	44.35	119	eP	P	02 59 10.3	+3.5
LEON	Leon	44.43	119	eP	P	02 59 07.4	-0.1
CNGN	Cerro Negro	44.50	119	eP	P	02 59 13.3	+5.2
MIRN	Miramar	44.53	119	eP	P	02 59 11.1	+2.7
MOMJ	Momotombo	44.67	119	eP	P	02 59 09.9	+0.5
PYTN	Playitas	44.89	118	eP	P	02 59 15.0	+3.8
XAVN	Gruta Xavier	45.00	119	eP	P	02 59 17.4	+5.3
WILN	Americas 2	45.08	119	eP	P	02 59 15.0	+2.3
CRUN	El Crucero	45.14	119	eP	P	02 59 16.3	+3.1
TICN	Ticuantepe	45.15	119	eP	P	02 59 17.7	+4.5
APON	Apoyo	45.34	119	eP	P	02 59 18.5	+3.7
CONN	Concepcion	45.89	119	eP	P	02 59 22.1	+3.0
SFJD	Kangerlussuaq	46.92	31	P	P	02 59 27.2	+0.6
SFJD	Kangerlussuaq	46.92	31	eP	P	02 59 26.6	+0.1
SFJD				i P	pP	02 59 33.8	+1.8
SFJD				i S	S	03 06 28.7	+13
SFJD				LR	LR		
	comp=Z,208µm,18.0s,MS7.1						
SFJD	Kangerlussuaq	46.92	31	i P	P	02 59 33.8	+7.2
	comp=Z,223nm,1.1s,mb6.0						
SFJD				i S	S	03 06 28.7	+13
	comp=Z,208µm,18.0s						
VCR	Vista de Mar	46.95	120	eP	P	02 59 31.2	+3.7
JTS	JuntasAbangare	47.27	119	eP	P	02 59 27.1	-3.0
JTS				pmax	pmax		
	comp=Z,208nm,1.2s						
JTS				MLR	MLR		
	comp=Z,36µm,22.0s						
JTS	JuntasAbangare	47.27	119	P	P	02 59 27.5	-2.6
	comp=Z,13nm,0.9s,mb4.9,baz=299,slow=5.5,SNR=7.8						
JTS	JuntasAbangare	47.27	119	eP	P	02 59 27.1	-3.0
	comp=Z,208nm,1.2s,mb5.9						
JTS				LR	LR		
	comp=Z,36µm,22.0s,MS6.3						
JCR	Jicaral	47.50	120	eP	P	02 59 35.0	+3.1
TRTC	Tortuguero	47.88	118	eP	P	02 59 37.8	+2.9
PRS1	Puriscal	47.92	119	eP	P	02 59 38.8	+3.6
LAJ	Bijagual	48.14	119	eP	P	02 59 38.4	+1.5
URSC	Urasca	48.38	119	eP	P	02 59 41.4	+2.6
BUS	Buena Vista	48.60	119	eP	P	02 59 41.9	+1.4
BBSR	BB Station	48.63	80	eP	P	02 59 39.1	-1.4
	comp=Z,712nm,1.3s,mb6.5						
BBSR				LR	LR		
	comp=Z,243µm,19.0s,MS7.2						
SUMG	Summit	50.20	23	eP	P	02 59 51.0	-1.0
	comp=Z,466nm,1.0s,mb6.5						
DVD	David	50.29	118	eP	P	02 59 57.5	+4.0
PET	Petropavlovsk	50.42	311	ceP	P	02 59 48.8	-5.0
PET				e		03 01 52.5	
PET				ePPP	PPP	03 02 46.9	-0.8
PET				eS	S	03 06 58.3	-6.7
PET				eSS	SS	03 10 39.7	+3.6
PET				pmax	pmax		
	comp=N,1µm,7.0s						
PET				pmax	pmax		
	comp=E,3µm,6.9s						
PET				pmax	pmax		
	comp=Z,6µm,5.8s						
PET				pmax	pmax		
	comp=Z,238nm,1.1s,mb6.1						
PET				pmax	pmax		
	comp=N,2µm,21.9s						
PET				pmax	pmax		
	comp=Z,10µm,19.3s						
PET				pmax	pmax		
	comp=E,5µm,17.3s						
PET				pmax	pmax		
	comp=Z,5µm,15.1s						
PET				pmax	pmax		
	comp=Z,6µm,20.8s						
PET				smax			
	comp=E,33µm,18.4s						
PET				smax			
	comp=N,49µm,19.4s						
PET				smax			
	comp=E,100µm,21.9s						
PET	Petropavlovsk	50.42	311	⇑eP	P	02 59 48.8	-5.0
	comp=E,238nm,1.1s,mb6.1						
PET				e		03 01 52.5	
PET				ePPP	PPP	03 02 46.9	-0.8
PET				eS	S	03 06 58.3	-6.7
PET				eSS	SS	03 10 39.7	+3.6
PTP1	Petroterminal	50.48	119	eP	P	02 59 56.1	+1.3
SEY	Seymchan	50.65	324	eP	P	02 59 51.0	-4.5
SEY				e		03 01 50.9	
SEY				eS	S	03 07 08.3	+0.2
SEY						03 09 41.8	
SEY				pmax	pmax		
	comp=N,60nm,1.2s						
SEY				pmax	pmax		
	comp=E,200nm,1.2s						
SEY				pmax	pmax		
	comp=Z,300nm,1.2s,mb6.1						
SEY				smax			
	comp=N,195µm,20.3s						
SEY				smax			
	comp=E,59µm,17.9s						
SEY				MLR	MLR		
	comp=Z,83µm,24.0s,MS6.7						
SEY				MLR	MLR		
	comp=N,52µm,17.0s						
SEY	Seymchan	50.65	324	eP	P	02 59 51.0	-4.5
	comp=N,0.3nm,1.2s						
SEY				e		03 01 50.9	
SEY				eS	S	03 07 08.3	+0.2
SEY				e		03 09 41.8	
SEY				LR	LR		
	comp=Z,83µm,24.0s,MS6.7						
PINA	Piqa, Costa Ab	51.30	116	eP	P	03 00 03.2	+2.2
ACLA	Agua Clara, Si	51.46	115	eP	P	03 00 05.5	+3.2
ZANG	Zanguenga, Cho	51.64	116	eP	P	03 00 03.6	-0.1
TAOE	Nuku Hiva Isla	51.81	198	eLR	LR	03 14 03.3	
	comp=Z,2111µm,28.7s,baz=24						
UPA	Univ. de Panam	51.85	115	eP	P	03 00 06.8	+1.6
MA2	Magadan	52.41	320	P	P	03 00 05.4	-3.5
MA2				pmax	pmax		
	comp=Z,190nm,1.3s,mb5.9						
MA2	Magadan	52.41	320	P	P	03 00 05.4	-3.5
	comp=Z,190nm,1.3s,mb5.9						
PAYG	Puerto Ayora	52.71	133	PFAKE		03 00 20.0	+8.2
PAYG				LR	LR		
	comp=Z,110µm,22.0s,MS6.9						
SKR	Severo-Kuril's	52.72	308	eP	P	03 00 06.0	-5.3
SKR				e		03 02 05.0	
SKR				eS	S	03 07 36.0	-0.6
SKR				pmax	pmax		
	comp=E,640nm,1.5s						
SKR				pmax	pmax		
	comp=Z,1µm,1.5s,mb6.6						
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=N,3µm,14.0s						
SKR				pmax	pmax		
	comp=E,5µm,14.0s						
SKR				pmax	pmax		
	comp=Z,9µm,14.0s						
SKR				pmax	pmax		
	comp=N,3µm,14.0s						
SKR				pmax	pmax		
	comp=E,5µm,14.0s						
SKR				pmax	pmax		
	comp=Z,8µm,14.0s						
SKR				smax			
	comp=N,73µm,24.0s						
SKR				smax			
	comp=E,80µm,18.0s						
SKR				MLR	MLR		
	comp=N,31µm,20.0s,MS6.6						
SKR				MLR	MLR		
	comp=E,44µm,20.0s,MS6.6						
SKR				MLR	MLR		
	comp=Z,53µm,20.0s,MS6.6						
SKR	Severo-Kuril's	52.72	308	eP	P	03 00 06.0	-5.3
	comp=Z,1µm,1.5s,mb6.6						
SKR				e		03 02 05.0	
SKR				eS	S	03 07 36.0	-0.6
SKR				LR	LR		
	comp=Z,53µm,20.0s,MS6.6						
DAG	Danmarks Havn	53.75	16	⇓eP	P	03 00 16.9	-1.7
DAG				pmax	pmax		
	comp=Z,941nm,2.0s,mb6.4						
DAG	Danmarks Havn	53.75	16	⇓eP	P	03 00 16.9	-1.7
	comp=Z,941nm,2.0s,mb6.4						
DAG	Danmarks Havn	53.75	16	⇓iP	P	03 00 16.9	-1.7
	comp=Z,941nm,2.0s,mb6.4						
SJG	San Juan	55.44	96	P	P	03 00 29.6	-2.1
SJG				S	S	03 08 25.7	+12
SJG				pmax	pmax		
	comp=Z,61nm,1.1s						
SJG	San Juan	55.44	96	P	P	03 00 29.6	-2.1
	comp=Z,61nm,1.1s,mb5.5,baz=325,slow=7.5,SNR=8.5						
SJG				S	S	03 08 25.7	+12
	comp=Z,14nm,1.1s,baz=288,slow=7.9,SNR=2.3						
SJG	San Juan	55.44	96	eP	P	03 00 29.9	-1.7
	comp=Z,1µm,1.1s,mb6.8						
SJG				LR	LR		
	comp=Z,147µm,22.0s,MS7.0						
SJG	San Juan	55.44	96	eP	P	03 00 32.9	+1.2
TIXI	Tiksi	55.83	338	eP	P	03 00 26.6	-7.2
TIXI				e		03 02 34.1	
TIXI				eS	S	03 08 08.7	-10
TIXI				pmax	pmax		
	comp=Z,150nm,1.0s,mb6.0						
TIXI				pmax	pmax		
	comp=N,41nm,1.2s						
TIXI				pmax	pmax		
	comp=E,105nm,1.1s						
TIXI				pmax	pmax		
	comp=Z,6µm,9.5s						
TIXI				MLR	MLR		
	comp=Z,60µm,16.0s,MS6.8						
TIXI				MLR	MLR		
	comp=N,45µm,17.0s,MS6.7						
TIXI				MLR	MLR		
	comp=E,21µm,15.0s,MS6.7						
TIXI	Tiksi	55.83	338	eP	P	03 00 26.6	-7.2
	comp=E,150nm,1.0s,mb6.0						
TIXI				e		03 02 34.1	
TIXI				eS	S	03 08 08.7	-10
TIXI				LR	LR		
	comp=Z,60µm,16.0s,MS6.8						
SCO	Scoresbysund	55.84	23	i P	P	03 00 37.2	+3.3
SCO				i S	S	03 08 26.1	+7.6
SCO				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.6						
SCO	Scoresbysund	55.84	23	i P	P	03 00 37.2	+3.3
	comp=Z,58nm,1.0s,mb5.6						
SCO				i S	S	03 08 26.1	+7.6
KBS	Kingsbay	57.33	9	P	P	03 00 46.2	+1.7
KBS				pmax	pmax		
	comp=Z,150nm,0.9s,mb6.0						
KBS	Kingsbay	57.33	9	eP	P	03 00 44.5	0.0
KBS				LR	LR		
	comp=Z,95199µm,18.2s						
KBS	Kingsbay	57.33	9	eP	P	03 00 44.5	0.0
KBS				eS	S	03 08 45.1	+7.1
KBS				eSS	SS	03 12 38.3	+9.2
KBS				AMS	AMS	03 26 20.1	
	comp=Z,95µm,18.2s,MS6.9						
STMA	St. Maarten, A	57.76	94	eP	P	03 00 50.8	+2.6
SABT	Saba	57.91	94	eP	P	03 00 50.6	+1.3
SDV	Santo Domingo	58.14	108	P	P	03 00 49.3	-1.6
	comp=Z,11nm,1.0s,mb4.8,baz=350,slow=5.0,SNR=14						
SDV	Santo Domingo	58.14	108	eP	P	03 00 49.0	-1.9
	comp=Z,267nm,1.0s,mb6.2						
SDV				LR	LR		
	comp=Z,107µm,21.0s,MS6.9						
SDV	Santo Domingo	58.14	108	⇑eP	P	03 00 53.8	+2.8
SKDB	Saint Kitts 2	58.38	94	eP	P	03 00 57.1	+4.6
ROSC	El Rosal	58.38	114	P	P	03 00 52.1	-0.5
	comp=Z,12nm,1.1s,mb4.8,baz=84,slow=19,SNR=9.7						
ROSC				S	S	03 09 04.0	+11
	comp=Z,1.6nm,0.3s,baz=295,slow=13,SNR=2.1						
ROSC				LR	LR	03 30 39.8	
	comp=Z,59µm,20.8s,MS6.7,baz=345,slow=41						
SKI	Saint Kitts	58.47	94	eP	P	03 00 56.9	+3.8
SKTB	Turtle Beach	58.64	94	eP	P	03 00 58.8	+4.4
NVBH	Bath Hotel, Ne	58.69	94	eP	P	03 00 56.6	+1.9
CPB	Codrington	58.96	93	eP	P	03 00 58.3	+1.7
OTAV	Otavalo	59.06	121	P	P	03 00 56.2	-1.1
OTAV				S	S	03 09 15.3	+14
OTAV	Otavalo	59.06	121	⇑eP	P	03 00 56.1	-1.2
	comp=Z,483nm,1.2s,mb6.4						
OTAV				LR	LR		
	comp=Z,53µm,22.0s,MS6.6						
OTAV	Otavalo	59.06	121	⇑eP	P	03 01 01.4	+4.0
JMIC	Jan Mayen	59.28	20	eP	P	03 01 01.3	+3.2
JMIC				LR	LR		
	comp=Z,13µm,20.7s,MS6.0						
JMIC	Jan Mayen	59.28	20	eP	P	03 01 01.3	+3.2
JMIC				eS	S	03 09 08.8	+5.1
JMIC				AMS	AMS	03 26 32.6	
	comp=Z,128µm,20.7s,MS7.0						
BPA	Boggy Peak	59.31	94	eP	P	03 00 59.6	+0.6
HSP	Hornsund	59.34	9	eP	P	03 00 58.9	+0.3
SEG	Port Louis	59.97	94	eP	P	03 01 04.2	+0.6
DEG	La Desirade	60.36	94	eP	P	03 01 07.6	+1.4
BBL	Barber's Block	60.54	95	eP	P	03 01 05.1	-2.4
YAK	Yakutsk	60.57	328	eP	P	03 01 02.0	-5.1
YAK				i S	S	03 09 24.1	+3.8
YAK				pmax	pmax		
	comp=E,166nm,1.1s						
YAK				pmax	pmax		
	comp=Z,346nm,1.1s,mb6.4						
YAK				pmax	pmax		
	comp=N,64nm,1.2s						
YAK				smax			
	comp=N,46µm,19.1s						
YAK				smax			
	comp=Z,12µm,19.7s						
YAK				smax			
	comp=E,14µm,18.3s						
YAK	Yakutsk	60.57	328	eP	P	03 01 02.0	-5.1
	comp=E,346nm,1.1s,mb6.4						
YAK				i S	S	03 09 24.1	+3.8
DWS	Wesley	60.63	95	eP	P	03 01 09.3	+1.1
WAKE	Wake Island	60.97	271	P	P	03 01 04.0	-6.4
	comp=E,1µm,1.8s,mb6.8						
WAKE				LR	LR		
	comp=Z,359µm,21.0s,MS7.5						
SLB	Belfond	61.93	96	eP	P	03 01 25.4	+8.5
YUK	Yuzh-Kuril'sk	61.94	305	eP	P	03 01 11.0	-5.6
YUK				i S	S	03 09 36.5	-1.5
YUK				e		03 11 04.0	
YUK				eSS	SS	03 13 35.0	-7.2
YUK				pmax	pmax		
	comp=E,4µm,4.5s						
YUK				pmax	pmax		
	comp=N,2µm,3.0s						
YUK				smax			
	comp=E,11µm,12.0s						
YUK				smax			
	comp=N,13µm,8.0s						
SVB	Belmont	62.13	97	eP	P	03 01 22.0	+3.8
YSS	Yuzh-Sakhalins	62.26	309	⇑eP	P	03 01 13.0	-5.7
YSS				e	pP	03 01 18.0	-6.3
YSS				e		03 01 50.0	
YSS				e		03 03 40.0	
YSS				eS	S	03 09 34.0	-8.0
YSS				eSS	SS	03 13 39.0	-8.3
YSS				MLR	MLR		
	comp=Z,27µm,19.0s,MS6.4						
YSS				MLR	MLR		
	comp=N,19µm,16.0s,MS6.4						
YSS				MLR	MLR		
	comp=E,14µm,17.0s,MS6.4						
YSS	Yuzh-Sakhalins	62.26	309	PFAKE		03 01 20.0	+1.3
YSS				LR	LR		
	comp=Z,78µm,22.0s,MS6.8						
GRHS	Sauteurs	62.51	98	eP	P	03 01 25.5	+4.7
PPT	Papeete	62.78	206	eP	P	03 01 01.4	-21
	comp=Z,21µm,27.5s						
PPT				eS	S	03 09 36.3	-13
	comp=Z,363µm,28.2s						
PPT				eSS	SS	03 13 22.8	-33
	comp=Z,123µm,32.0s						
PPT				eLQ		03 16 37.0	
	comp=Z,583µm,30.2s						
PPT				eLR	LR	03 19 07.9	
	comp=Z,957µm,29.0s,baz=19						
PPT	Papeete	62.78	206	P	P	03 01 17.8	-4.7
	comp=Z,77nm,1.1s,mb5.8,baz=11,slow=5.2,SNR=3.1						
TRN	Trinidad (W)	63.71	99	eP	P	03 01 33.8	+5.1
ALNG	Atlantic LNG	63.80	100	eP	P	03 01 34.2	+4.8
ASAJ	Asahikawa	63.88	307	S	S	03 10 06.6	+4.3
	comp=Z,1.2nm,0.3s,baz=343,slow=19,SNR=1.8						
TPP	Pointe-a-Pierr	63.89	100	eP	P	03 01 31.2	+1.2
TBH	Brigand Hill	64.07	99	eP	P	03 01 32.6	+1.5
CLNS	Chul'man	65.62	325	eP	P	03 01 42.1	+1.7
CLNS				e*PP	pP	03 01 49.3	+3.3
CLNS				e		03 02 14.9	
CLNS				e		03 04 04.4	
CLNS				ePPP	PPP	03 05 32.2	-10
CLNS				eS	S	03 10 22.4	-1.1
CLNS				pmax	pmax		
	comp=Z,57nm,0.7s,mb5.7						
CLNS				pmax	pmax		
	comp=N,18nm,0.8s						
CLNS				pmax	pmax		
	comp=E,35nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,55nm,1.2s,mb5.5						
CLNS				pmax	pmax		
	comp=N,42nm,1.3s						
CLNS				pmax	pmax		
	comp=E,33nm,0.9s						
CLNS				smax			
	comp=N,19µm,15.0s						
CLNS				smax			
	comp=Z,9µm,14.3s						
CLNS				smax			
	comp=E,2µm,12.0s						
TRO	Tromso	66.21	13	eP	P	03 01 44.0	0.0
	comp=E,538nm,1.8s,mb6.3						
TRO				LR	LR		
	comp=Z,63884µm,19.5s						
TRO	Tromso	66.21	13	eP	P	03 01 44.0	0.0
TRO				AMb	AMB	03 01 54.0	
	comp=Z,538nm,1.8s,mb6.3						
TRO				eS	S	03 10 37.0	+6.5
TRO				AMS	AMS	03 31 33.4	
	comp=Z,64µm,19.5s,MS6.8						
PTCN	Pitcairn Islan	66.31	184	PFAKE		03 01 50.0	+4.6
PTCN				LR	LR		

	comp=Z,251μm,22.0s,MS7.4						
LOF	**Lofoten**	**66.52**	**16**	*e*P	**P**	**03 01 46.9**	**+0.9**
	comp=Z,619nm,2.0s,mb6.3						
LOF	**Lofoten**	**66.52**	**16**	*e*P	**P**	**03 01 46.9**	**+0.9**
LOF				AMb	AMB	03 01 56.7	
	comp=Z,619nm,2.0s,mb6.3						
KWAJ	**Kwajalein Atol**	**66.86**	**261**	PFAKE		03 01 50.0	+0.9
KWAJ				LR	LR		
	comp=Z,86μm,20.0s,MS7.0						
KLR	**Kul'dur**	**67.05**	**316**	*e*P	**P**	**03 01 41.5**	**-8.2**
KLR				*e*		03 01 41.8	
KLR				*e*S	S	03 10 35.5	-5.5
KEV	**Kevo**	**67.30**	**10**	*e*p	**P**	**03 01 48.1**	**-2.8**
	comp=Z,161nm,1.0s,mb6.0						
KEV	**Kevo**	**67.30**	**10**	*e*P	**P**	**03 01 48.1**	**-2.8**
KEV				pmax	pmax		
	comp=Z,161nm,1.0s,mb6.0						
ARCES	**ARCESS Array B**	**67.31**	**11**	P	**P**	**03 01 49.2**	**-1.8**
	comp=Z,32nm,0.9s,mb5.3,baz=342,slow=7.7,SNR=14						
TBI	**Tubuai**	**68.16**	**204**	*e*P	**P**	**03 01 37.0**	**-20**
	comp=Z,15μm,29.8s						
TBI				*e*S	S	03 10 41.1	-14
	comp=Z,403μm,30.2s						
TBI				*e*SS	SS	03 14 48.1	-31
	comp=Z,48μm,35.2s						
TBI				*e*LQ		03 18 24.6	
	comp=Z,332μm,31.5s						
TBI				*e*LR	LR	03 21 38.5	
	comp=Z,672μm,29.2s,baz=14						
LRW	**Lerwick**	**69.00**	**26**	AMS	AMS	03 33 21.4	
LRW	**Lerwick**	**69.00**	**26**	AMS	AMS	03 33 21.4	
	comp=Z,139μm,17.7s,MS7.2						
NSS	**Namsos**	**69.22**	**18**	*e*P	**P**	**03 02 04.1**	**+1.1**
	comp=Z,295nm,1.2s,mb6.1						
NSS	**Namsos**	**69.22**	**18**	*e*P	**P**	**03 02 04.1**	**+1.1**
NSS				AMb	AMB	03 02 13.6	
	comp=Z,295nm,1.2s,mb6.1						
BOD	**Bodaibo**	**69.31**	**330**	*e*P	**P**	**03 01 57.9**	**-5.7**
BOD				pmax	pmax		
	comp=Z,102nm,1.0s,mb5.7						
BOD	**Bodaibo**	**69.31**	**330**	*e*P	**P**	**03 01 57.9**	**-5.7**
	comp=Z,102nm,1.0s,mb5.7						
KAC	**Achnashellach**	**69.49**	**30**	*e*P	**P**	**03 02 06.0**	**+1.3**
NNA	**Nana**	**69.57**	**128**	*e*P	**P**	**03 02 02.7**	**-3.3**
	comp=Z,185nm,1.1s,mb5.9						
NNA				LR	LR		
	comp=Z,11μm,20.0s,MS6.1						
AFI	**Afiamalu**	**69.64**	**228**	P	**P**	**03 02 04.2**	**-2.1**
AFI				pmax	pmax		
	comp=Z,210nm,1.0s,mb6.0						
AFI	**Afiamalu**	**69.64**	**228**	*e*P	**P**	**03 02 00.9**	**-5.4**
	comp=Z,208nm,1.0s,mb6.0						
AFI				LR	LR		
	comp=Z,173μm,19.0s,MS7.3						
KSB	**Sheil Bridge**	**69.65**	**30**	*e*P	**P**	**03 02 08.2**	**+2.5**
KAR1	**Arisaig**	**69.71**	**31**	*e*P	**P**	**03 02 07.4**	**+1.3**
MOL	**Molde**	**69.73**	**21**	*e*P	**P**	**03 02 08.3**	**+2.3**
	comp=Z,350nm,1.7s,mb6.0						
MOL	**Molde**	**69.73**	**21**	*e*P	**P**	**03 02 08.3**	**+2.3**
MOL				AMb	AMB	03 02 20.1	
	comp=Z,350nm,1.7s,mb6.0						
RPN	**Rapa Nui**	**69.87**	**165**	PFAKE		03 02 10.0	+2.5
RPN				LR	LR		
	comp=Z,30μm,20.0s,MS6.5						
RAR	**Rarotonga**	**69.94**	**214**	PFAKE		03 02 10.0	+2.0
RAR				LR	LR		
	comp=Z,222μm,20.0s,MS7.4						
APA	**Apatity**	**70.15**	**8**	⇑*e*P	**P**	**03 02 07.6**	**-0.9**
APA				*i*	pP	03 02 14.0	-0.2
APA				*i*		03 02 27.4	
APA				*i*		03 04 50.0	
APA				*i* PPP	PPP	03 06 32.0	+6.1
APA				pmax	pmax		
	comp=Z,140nm,1.6s,mb5.6						
APA				MLR	MLR		
	comp=Z,130μm,19.0s,MS7.2						
APA	**Apatity**	**70.15**	**8**	⇑*e*P	**P**	**03 02 07.6**	**-0.9**
	comp=Z,140nm,1.6s,mb5.6						
APA				*i*	pP	03 02 14.0	-0.2
APA				*i*		03 02 27.4	
APA				*i*		03 04 50.0	
APA				*i* PPP	PPP	03 06 32.0	+6.1
APA				LR	LR		
	comp=Z,130μm,19.0s,MS7.2						
RUND	**Rundenannen**	**70.86**	**23**	*e*P	**P**	**03 02 16.6**	**+3.6**
RUND				AMb	AMB	03 02 23.3	
	comp=Z,321nm,1.8s,mb6.0						
BER	**Bergen**	**70.87**	**23**	*e*P	**P**	**03 02 16.6**	**+3.6**
BER				LR	LR		
	comp=Z,18μm,21.7s,MS6.3						
BER	**Bergen**	**70.87**	**23**	*e*P	**P**	**03 02 16.6**	**+3.6**
BER				*e*S	S	03 11 27.4	+1.3
BER				AMS	AMS	03 32 20.9	
	comp=Z,182μm,21.7s,MS7.3						
MAJO	**Matsushiro**	**71.01**	**302**	P	**P**	**03 02 09.3**	**-5.0**
MAJO				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.7						
MAJO	**Matsushiro**	**71.01**	**302**	*e*P	**P**	**03 02 08.3**	**-6.0**
	comp=Z,103nm,1.1s,mb5.7						
MAJO				LR	LR		
	comp=Z,130μm,22.0s,MS7.2						
MAT	**Matsushiro**	**71.01**	**302**	*e*P	**P**	**03 02 08.0**	**-6.3**
MAT				*e*S	S	03 11 32.0	+3.9
MAT				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.2						
MAT	**Matsushiro**	**71.01**	**302**	*e*P	**P**	**03 02 08.0**	**-6.3**
	comp=Z,31nm,0.9s,mb5.2						
MAT				*e*S	S	03 11 32.0	+3.9
MAT	**Matsushiro**	**71.01**	**302**	P	**P**	**03 02 08.1**	**-6.2**
MAT				S	S	03 11 23.0	-5.1
MJAR	**Matsushiro Arr**	**71.01**	**302**	P	**P**	**03 02 09.9**	**-4.5**
	comp=Z,13nm,0.8s,mb4.9,baz=37,slow=4.4,SNR=14						
ADH	**Angra Heroismo**	**71.05**	**55**	*e*P	PcP	03 02 32.5	-2.4
ADH				*e*S	ScS	03 12 17.5	+3.3
ADH	**Angra Heroismo**	**71.05**	**55**	*i* LR	LR	03 24 00.0	
MDJ	**Mudanjiang**	**71.08**	**313**	P	**P**	**03 02 13.8**	**-0.8**
MDJ				AP	pP	03 02 16.8	-3.5
MDJ				XP	sP	03 02 18.3	-4.0
MDJ				PCP	PcP	03 02 30.8	-4.2
MDJ				PP	PP	03 04 49.3	-5.1
MDJ				S	S	03 11 30.8	+2.0
MDJ				XS		03 11 37.3	
MDJ				AMB	AMB		
	comp=Z,4μm,10.1s						
MDJ				LR	LR		
	comp=N,151μm,54.9s,MS6.9						
MDJ				LR	LR		
	comp=E,105μm,56.0s,MS6.9						
MDJ				LR	LR		
	comp=Z,127μm,37.7s						
VAL	**Valentia**	**71.42**	**36**	*e*P	**P**	**03 02 19.5**	**+3.0**
VAL				*e*S	S	03 11 39.7	+7.2
VAL				*e*SS	SS	03 16 20.4	+11
VAL				*e*LQ		03 20 03.3	
EDI	**Edinburgh**	**71.44**	**30**	AMS	AMS	03 33 21.4	
EDI	**Edinburgh**	**71.44**	**30**	AMS	AMS	03 33 21.4	
	comp=Z,134μm,17.7s,MS7.3						
GMM	**Mts of Mourne**	**71.60**	**33**	*e*P	**P**	**03 02 19.7**	**+2.1**
GAL1	**Galloway**	**71.64**	**32**	*e*P	**P**	**03 02 19.7**	**+1.9**
DCN	**Croghan**	**71.70**	**34**	*e*P	**P**	**03 02 17.0**	**-1.2**
DCN				⇑*i*P	pP	03 02 24.3	+0.5
ESK	**Eskdalemuir**	**71.89**	**31**	*e*P	**P**	**03 02 16.5**	**-2.7**
ESK				pmax	pmax		
	comp=Z,2μm,2.8s,mb6.5						
ESK				MLR	MLR		
	comp=Z,36μm,20.0s,MS6.6						
ESK	**Eskdalemuir**	**71.89**	**31**	*e*P	**P**	**03 02 16.5**	**-2.8**
	comp=Z,2μm,2.8s,mb6.5						
ESK				LR	LR		
	comp=Z,36μm,20.0s,MS6.6						
NB2	**NORSAR Subarra**	**71.98**	**21**	P	**P**	**03 02 18.2**	**-1.5**
	comp=Z,156nm,1.1s,mb5.8,baz=327,slow=5.8						
NB2	**NORSAR Subarra**	**71.98**	**21**	P	**P**	**03 02 18.2**	**-1.5**
	baz=327,slow=5.9						
NOA	**NORSAR Array B**	**71.98**	**21**	P	**P**	**03 02 18.2**	**-1.5**
	comp=Z,12nm,0.9s,mb4.8,baz=328,slow=5.6,SNR=22						
NOA				LR	LR	03 36 02.1	
	comp=Z,47μm,18.6s,MS6.8,baz=330,slow=38						
DLF	**Lyons Farm**	**72.05**	**33**	*e*P	**P**	**03 02 19.2**	**-1.0**
DLF				⇑*i*P	pP	03 02 26.3	+0.4
NAO01	**NORSAR Array S**	**72.06**	**21**	*e*P	**P**	**03 02 17.4**	**-2.8**
	comp=Z,193nm,1.0s,mb6.0						
NAO01				LR	LR		
	comp=Z,81μm,21.0s,MS7.0						
JHJ	**Hachijo jima 2**	**72.08**	**298**	LR	LR	03 32 52.6	
	comp=Z,62μm,18.7s,MS6.9,baz=64,slow=35						
DSB	**Dublin**	**72.15**	**33**	P	**P**	**03 02 15.7**	**-5.1**
	comp=Z,84nm,1.0s,mb5.6						
PDA	**Ponta Delgada**	**72.58**	**55**	*i* P	**P**	**03 02 32.0**	**+8.3**
PDA	**Ponta Delgada**	**72.58**	**55**	*i* PP	PP	03 05 14.0	+6.9
PDA				*e*S	S	03 11 46.0	-0.1
PDA				*e*LQ		03 21 30.0	
PDA				*e*LR	LR	03 23 48.0	
CMLA	**Cha da Macela**	**72.66**	**55**	*e*P	**P**	**03 02 20.3**	**-3.8**
	comp=Z,369nm,1.1s,mb6.2						
CMLA				LR	LR		
	comp=Z,43μm,20.0s,MS6.7						
KONO	**Kongsberg**	**72.71**	**22**	PFAKE		03 02 30.0	+6.1
KONO				LR	LR		
	comp=Z,90μm,20.0s,MS7.0						
OSL	**Oslo**	**72.78**	**21**	*e*P	**P**	**03 02 26.4**	**+2.0**
	comp=Z,288nm,1.1s,mb6.1						
OSL	**Oslo**	**72.78**	**21**	*e*P	**P**	**03 02 26.4**	**+2.0**
OSL				AMb	AMB	03 02 36.6	
	comp=Z,288nm,1.1s,mb6.1						
WCB1	**Church Bay**	**72.80**	**33**	*e*P	**P**	**03 02 27.4**	**+2.8**
WCB1				AMb	AMB	03 02 34.9	
	comp=Z,391nm,1.6s,mb6.1						
YRC	**Rhoscolyn**	**72.88**	**33**	*e*P	**P**	**03 02 27.4**	**+2.3**
WLF1	**Llynfaes**	**72.92**	**32**	*e*P	**P**	**03 02 27.0**	**+1.6**
WLF1				AMb	AMB	03 02 34.5	
	comp=Z,302nm,2.0s,mb5.9						
LCP	**Cassop**	**72.98**	**30**	*e*P	**P**	**03 02 27.4**	**+1.8**
HIA	**Hailar**	**72.98**	**322**	*e*P	**P**	**03 02 20.8**	**-5.0**
HIA				pmax	pmax		
	comp=Z,98nm,1.2s						
HIA	**Hailar**	**72.98**	**322**	*e*P	**P**	**03 02 20.8**	**-5.0**
	comp=Z,98nm,1.2s,mb5.6						
YRE	**Yr Eifl**	**73.14**	**33**	*e*P	**P**	**03 02 29.1**	**+2.5**
WPM1	**Penmaenmawr**	**73.15**	**32**	*e*P	**P**	**03 02 29.3**	**+2.7**
HPK	**Haverah Park**	**73.52**	**31**	*e*P	**P**	**03 02 31.6**	**+2.9**
SBD1	**Bryn Du**	**73.67**	**32**	*e*P	**P**	**03 02 32.3**	**+2.6**
LHO	**Holmfirth**	**73.74**	**31**	*e*P	**P**	**03 02 32.3**	**+2.2**
CN2	**Changchun**	**73.87**	**315**	*e*P	**P**	**03 02 26.1**	**-4.9**
CN2				*e*AP	pP	03 02 30.6	-6.1
CN2				*e*XP	sP	03 02 33.4	-5.2
CN2				*e*S	S	03 11 53.4	-7.0
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
CN2				AMB	AMB		
	comp=Z,3μm,7.0s						
CN2	**Changchun**	**73.87**	**315**	*e*P	**P**	**03 02 26.1**	**-4.9**
	comp=Z,20nm,1.2s,mb4.9						
CN2				*e*pP	pP	03 02 30.6	-6.1
CN2				*e*sP	sP	03 02 33.4	-5.2
CN2				*e*S	S	03 11 53.4	-7.0
CN2				SS	SS	03 16 44.8	-2.3
KBI1	**Birley Grange**	**74.09**	**31**	*e*P	**P**	**03 02 35.0**	**+2.9**
SSP1	**Stoney Pound**	**74.09**	**32**	*e*P	**P**	**03 02 34.8**	**+2.6**
SSP1				AMb	AMB	03 02 41.5	
	comp=Z,165nm,2.1s,mb5.6						
HLM1	**Long Mynd**	**74.11**	**32**	*e*P	**P**	**03 02 34.7**	**+2.5**
HLM1				AMb	AMB	03 02 41.8	
	comp=Z,188nm,2.0s,mb5.7						
KWE	**Weaver Farm**	**74.15**	**31**	*e*P	**P**	**03 02 35.4**	**+3.0**
HTR	**Trewern Hill**	**74.29**	**33**	*e*P	**P**	**03 02 36.0**	**+2.7**
HTR				AMb	AMB	03 02 43.7	
	comp=Z,312nm,1.5s,mb6.0						
KAF	**Kangasniemi**	**74.33**	**13**	*e*p	**P**	**03 02 31.1**	**-2.2**
	comp=Z,93nm,0.9s,mb5.7,baz=336,slow=5.8						
KAF	**Kangasniemi**	**74.33**	**13**	*e*P	**P**	**03 02 31.1**	**-2.2**
KAF				pmax	pmax		
	comp=Z,93nm,0.9s,mb5.7						
MCH1	**Michaelchurch**	**74.46**	**33**	*e*P	**P**	**03 02 36.9**	**+2.6**
CWF	**Charnwood Fore**	**74.57**	**31**	AMS	AMS	03 34 20.5	
	comp=Z,59μm,19.7s						
CWF	**Charnwood Fore**	**74.57**	**31**	AMS	AMS	03 34 20.5	
	comp=Z,59μm,19.7s,MS6.9						
HTL	**Hartland**	**74.59**	**34**	AMS	AMS	03 34 57.0	
	comp=Z,75μm,21.7s						
HTL	**Hartland**	**74.59**	**34**	AMS	AMS	03 34 57.0	
	comp=Z,75μm,21.7s,MS6.9						
HAE	**Alders End**	**74.61**	**32**	*e*P	**P**	**03 02 38.0**	**+2.9**
HAE				AMb	AMB	03 02 45.9	
	comp=Z,464nm,1.7s,mb6.1						
HGH	**Gray Hill**	**74.81**	**33**	*e*P	**P**	**03 02 39.0**	**+2.7**
HGH				AMb	AMB	03 02 46.9	
	comp=Z,168nm,1.5s,mb5.7						
CCA1	**Carnmenellis**	**74.88**	**35**	*e*P	**P**	**03 02 39.6**	**+2.8**
CSA1	**St Austell**	**74.90**	**35**	*e*P	**P**	**03 02 39.2**	**+2.4**
FINES	**FINESS Array B**	**74.91**	**14**	P	**P**	**03 02 34.3**	**-2.3**
	comp=Z,14nm,0.8s,mb5.0,slow=3.8,SNR=28						
FINES				S	S	03 12 15.8	+4.1
	comp=Z,1.2nm,0.8s,baz=14,slow=12,SNR=2.2						
MUD	**Monsted U'grnd**	**75.25**	**24**	⇓*i*P	**P**	**03 02 43.1**	**+4.4**
MUD				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.6						
MUD	**Monsted U'grnd**	**75.25**	**24**	⇓*i*P	**P**	**03 02 43.1**	**+4.4**
	comp=Z,80nm,1.1s,mb5.6						
MUD				*i*		03 03 32.3	
MUD				*i*		03 07 22.7	
MUD				*i* S	S	03 12 29.7	+14
MUD				*i*		03 17 35.6	
	comp=Z,154μm,18.0s						
SAML	**Samuel**	**75.98**	**116**	*e*P	**P**	**03 02 39.7**	**-4.1**
	comp=Z,4.7nm,0.5s						
SAML				LR	LR		
	comp=Z,54μm,20.0s,MS6.9						
SNY	**Shenyang**	**76.22**	**314**	⇑P	**P**	**03 02 39.9**	**-4.6**
SNY				S	S	03 12 25.9	-0.6
SNY				XS		03 12 33.8	
SNY				AMB	AMB		
	comp=Z,150nm,2.8s,mb5.4						
SNY				LR	LR		
	comp=N,79μm,22.8s,MS7.1						
SNY				LR	LR		
	comp=E,62μm,22.7s,MS7.1						
SNY				LR	LR		
	comp=Z,73μm,23.0s,MS6.9						
ARE	**Arequipa**	**76.27**	**127**	*e*P	**P**	**03 02 44.0**	**-1.3**
ARE				*i*		03 02 53.2	
COP	**Copenhagen**	**76.88**	**23**	⇓*i*P	**P**	**03 02 52.7**	**+4.8**
COP				pmax	pmax		
	comp=Z,71nm,0.9s,mb5.6						
COP				MLR	MLR		
	comp=Z,86μm,19.0s,MS7.1						
COP	**Copenhagen**	**76.88**	**23**	⇓*i*P	**P**	**03 02 52.7**	**+4.8**
	comp=Z,71nm,0.9s,mb5.6						
COP				*i* S	S	03 12 46.0	+13
COP				*i*		03 17 45.0	
	comp=Z,86μm,19.0s						
ROSF	**Rostrenen**	**77.11**	**35**	*e*P	**P**	**03 02 44.7**	**-4.7**
	comp=Z,662nm,1.7s,mb6.0						
ROSF	**Rostrenen**	**77.11**	**35**	*e*P	**P**	**03 02 44.7**	**-4.7**
ROSF				pmax	pmax		
	comp=Z,331nm,1.7s,mb6.0						
IRK	**Irkutsk**	**77.17**	**331**	*e*P	**P**	**03 02 46.1**	**-3.5**
IRK				*e*S	S	03 12 44.3	+7.6
IRK				pmax	pmax		
	comp=Z,377nm,3.2s						
IRK	**Irkutsk**	**77.17**	**331**	*e*P	**P**	**03 02 46.1**	**-3.5**
	comp=Z,377nm,3.2s						
IRK				*e*S	S	03 12 44.3	+7.6
PUL	**Pulkovo**	**77.20**	**12**	*e*P	**P**	**03 02 47.5**	**-2.2**
PUL				*e*S	S	03 12 42.5	+5.6
PUL				*e*SS	SS	03 17 42.4	+4.6
PUL				pmax	pmax		
	comp=Z,617nm,2.0s,mb6.2						
PUL				smax			
	comp=E,8μm,7.3s						
PUL				MLR	MLR		
	comp=N,106μm,22.0s,MS7.2						
PUL				MLR	MLR		
	comp=Z,150μm,22.0s,MS7.3						
PUL				MLR	MLR		
	comp=E,55μm,20.0s,MS7.2						
PUL	**Pulkovo**	**77.20**	**12**	*e*P	**P**	**03 02 47.5**	**-2.2**
	comp=E,617nm,2.0s,mb6.2						
PUL				*e*S	S	03 12 42.5	+5.6
PUL				*e*SS	SS	03 17 42.4	+4.6
PUL				LR	LR		
	comp=Z,150μm,22.0s,MS7.3						
WIT	**Witteveen**	**77.45**	**27**	*e*P	**P**	**03 02 53.2**	**+2.0**
INCN	**Inchon**	**77.47**	**309**	PFAKE		03 03 00.0	+8.4
INCN				LR	LR		
	comp=Z,46μm,21.0s,MS6.8						
QUIF	**Quistinic**	**77.48**	**36**	*e*P	**P**	**03 02 46.9**	**-4.5**
	comp=Z,942nm,1.9s,mb6.1						
QUIF	**Quistinic**	**77.48**	**36**	*e*P	**P**	**03 02 46.9**	**-4.5**
QUIF				pmax	pmax		
	comp=Z,471nm,1.9s,mb6.1						
SGMF	**Saint Gilles**	**77.49**	**35**	*e*P	**P**	**03 02 46.9**	**-4.5**
	comp=Z,337nm,1.3s,mb5.8						
SGMF	**Saint Gilles**	**77.49**	**35**	*e*P	**P**	**03 02 46.9**	**-4.5**
SGMF				pmax	pmax		
	comp=Z,168nm,1.3s,mb5.8						
BSEG	**Bad Segeberg**	**77.73**	**25**	*e*P	**P**	**03 02 52.6**	**0.0**
BSEG				*e*S	S	03 12 55.5	+13
VSU	**Vasula**	**77.82**	**14**	*c i*P	**P**	**03 02 51.0**	**-2.0**
VSU	**Vasula**	**77.82**	**14**	⇑*i*P	**P**	**03 02 51.0**	**-2.0**
TLY	**Talaya**	**77.86**	**331**	*e*P	**P**	**03 02 50.2**	**-3.2**
TLY				*e*PPP	PPP	03 07 39.9	-0.2
TLY				*e*S	S	03 12 45.3	+1.2
TLY				*e*		03 13 14.0	
TLY				*e*PS	PS	03 13 36.6	+9.3
TLY				pmax	pmax		
	comp=Z,203nm,1.2s,mb5.9						
FLN	**La Foliniere**	**77.97**	**34**	*e*P	**P**	**03 02 49.6**	**-4.5**
	comp=Z,221nm,1.4s,mb5.6						
FLN				*e*R			
	comp=Z,172μm,22.5s						
FLN	**La Foliniere**	**77.97**	**34**	*e*P	**P**	**03 02 49.6**	**-4.5**
FLN				pmax	pmax		
	comp=Z,111nm,1.4s,mb5.6						
FLN				MLR	MLR		
	comp=Z,172μm,22.5s,MS7.3						
BSD	**Bornholm Skovb**	**78.09**	**22**	⇑*i*P	**P**	**03 03 01.0**	**+6.4**
BSD				pmax	pmax		
	comp=Z,127nm,0.9s,mb5.8						
BSD	**Bornholm Skovb**	**78.09**	**22**	⇑*i*P	**P**	**03 03 01.0**	**+6.4**
	comp=Z,127nm,0.9s,mb5.8						
BSD				*i*		03 03 22.6	
GRR	**Gorron**	**78.11**	**34**	*e*P	**P**	**03 02 50.8**	**-4.0**
	comp=Z,659nm,1.5s,mb6.0						
GRR	**Gorron**	**78.11**	**34**	*e*P	**P**	**03 02 50.8**	**-4.0**
GRR				pmax	pmax		
	comp=Z,329nm,1.5s,mb6.0						
RGN	**Rugen**	**78.12**	**23**	P	**P**	**03 02 52.5**	**-2.2**
LPAZ	**La Paz**	**78.19**	**124**	P	**P**	**03 02 53.7**	**-2.2**
LPAZ				S	S	03 12 59.0	+11
LPAZ	**La Paz**	**78.19**	**124**	P	**P**	**03 02 53.7**	**-2.2**
LPAZ				S	S	03 12 56.8	+8.4
LPAZ				smax			
	comp=E,1.0nm,1.0s						
LPAZ	**La Paz**	**78.19**	**124**	P	**P**	**03 02 53.7**	**-2.2**
	comp=E,6.1nm,0.8s,baz=342,slow=7.0,SNR=19						
LPAZ				S	S	03 12 56.8	+8.4
	comp=E,1.1nm,1.0s,baz=31,slow=19,SNR=1.6						
LPAZ	**La Paz**	**78.19**	**124**	*e*P	**P**	**03 02 53.4**	**-2.5**
	comp=E,240nm,1.3s,mb6.0						
LPAZ				LR	LR		
	comp=Z,56μm,22.0s,MS6.8						
WTSB	**Winterswijk**	**78.20**	**28**	*e*P	**P**	**03 02 54.5**	**-0.8**
	comp=Z,217nm,2.3s,mb5.7						
LDF	**La Druitiere**	**78.25**	**34**	*e*P	**P**	**03 02 51.2**	**-4.5**
EMAZ	**Mazaricos**	**78.44**	**42**	⇓P	**P**	**03 03 01.9**	**+5.1**
	comp=Z,4μm,5.4s						
STS	**Santiago**	**78.70**	**42**	P	**P**	**03 03 03.7**	**+5.5**
STS				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
STS	**Santiago**	**78.70**	**42**	P	**P**	**03 03 03.7**	**+5.4**
	comp=Z,30nm,0.8s,mb5.3						
MOY	**Mondy**	**78.81**	**333**	*e*P	**P**	**03 02 56.3**	**-2.3**
MOY				pmax	pmax		
	comp=Z,257nm,2.0s,mb5.8						
MOY	**Mondy**	**78.81**	**333**	*e*P	**P**	**03 02 56.3**	**-2.3**
	comp=Z,257nm,2.0s,mb5.8						
BAIF	**Baives**	**78.81**	**30**	*e*P	**P**	**03 02 54.3**	**-4.4**
	comp=Z,404nm,1.4s,mb5.8						
BAIF	**Baives**	**78.81**	**30**	*e*P	**P**	**03 02 54.3**	**-4.4**
BAIF				pmax	pmax		
	comp=Z,202nm,1.4s,mb5.9						
HGN	**Heimansgroeve**	**78.88**	**29**	*e*P	**P**	**03 02 58.9**	**-0.1**
	comp=Z,233nm,2.1s,mb5.7						
HGN	**Heimansgroeve**	**78.88**	**29**	*e*S		03 13 12.0	
HGN				*e*SS	SS	03 18 08.4	+5.3
GIVF	**Givet**	**79.01**	**30**	*e*P	**P**	**03 02 55.3**	**-4.5**
	comp=Z,720nm,1.7s,mb6.0						
GIVF	**Givet**	**79.01**	**30**	*e*P	**P**	**03 02 55.3**	**-4.5**
GIVF				pmax	pmax		
	comp=Z,360nm,1.7s,mb6.0						
ZAK	**Zakamensk**	**79.05**	**331**	*e*P	**P**	**03 03 03.8**	**+3.8**
ZAK				pmax	pmax		
	comp=Z,57nm,1.2s,mb5.4						
ZAK	**Zakamensk**	**79.05**	**331**	*e*P	**P**	**03 03 03.8**	**+3.8**
	comp=Z,57nm,1.2s,mb5.4						
EPON	**Pontenova**	**79.07**	**41**	⇓P	**P**	**03 03 04.2**	**+3.9**
	comp=Z,5μm,6.1s						
EZAM	**Zamans**	**79.16**	**42**	P	**P**	**03 03 07.1**	**+6.3**
EZAM				pmax	pmax		
	comp=Z,65nm,1.6s,mb5.3						
EZAM	**Zamans**	**79.16**	**42**	P	**P**	**03 03 07.0**	**+6.3**
	comp=Z,65nm,1.6s,mb5.3						
DL2	**Dalian**	**79.32**	**313**	⇑*i*P	**P**	**03 03 01.8**	**+0.1**
DL2				S	S	03 13 03.1	+3.1
DL2				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.2						
DL2				AMB	AMB		
	comp=Z,2μm,8.6s						
DL2				LR	LR		
	comp=N,39μm,24.3s,MS6.8						
DL2				LR	LR		
	comp=E,47μm,24.5s,MS6.8						
DL2				LR	LR		
	comp=Z,50μm,32.0s						
DL2	**Dalian**	**79.32**	**313**	⇑*i*P	**P**	**03 03 01.8**	**+0.1**
	comp=Z,40nm,1.2s,mb5.2						
DL2				S	S	03 13 03.1	+3.1
DL2				LR	LR		
	comp=Z,50μm,32.0s,MS6.7						
SOKR	**Solikamsk**	**79.33**	**359**	*d i*P	**P**	**03 02 59.7**	**-1.6**
SOKR				MLR	MLR		
	comp=Z,45μm,20.0s,MS6.8						
SOKR	**Solikamsk**	**79.33**	**359**	*i* Pr		03 02 59.7	
SOKR				LR	LR		
	comp=Z,45μm,20.0s,MS6.8						
ULN	**Ulaanbaatar**	**79.61**	**327**	P	**P**	**03 02 59.6**	**-3.4**
ULN				S	S	03 13 07.9	+5.0
ULN	**Ulaanbaatar**	**79.61**	**327**	P	**P**	**03 03 00.1**	**-3.0**
ULN				pmax	pmax		
	comp=Z,130nm,1.3s,mb5.7						
ULN	**Ulaanbaatar**	**79.61**	**327**	⇑*i*P	**P**	**03 02 59.3**	**-3.8**
ELOB	**Lobios**	**79.69**	**42**	⇓P	**P**	**03 03 08.1**	**+4.4**
	comp=Z,5μm,6.5s						
ERUA	**La Rua**	**79.76**	**41**	P	**P**	**03 03 07.2**	**+3.2**
ERUA				pmax	pmax		
	comp=Z,112nm,1.2s,mb5.7						
ERUA	**La Rua**	**79.76**	**41**	P	**P**	**03 03 07.2**	**+3.1**
	comp=Z,112nm,1.2s,mb5.7						
MFF	**Saint Martin d**	**79.80**	**35**	*e*P	**P**	**03 02 59.8**	**-4.3**
	comp=Z,663nm,1.8s,mb6.0						
MFF	**Saint Martin d**	**79.80**	**35**	*e*P	**P**	**03 02 59.8**	**-4.3**
MFF				pmax	pmax		
	comp=Z,332nm,1.8s,mb6.0						
WLF	**Walferdange**	**79.86**	**30**	*e*P	**P**	**03 03 02.7**	**-1.7**
WLF				pmax	pmax		
	comp=Z,448nm,1.9s,mb6.1						
WLF	**Walferdange**	**79.86**	**30**	*e*P	**P**	**03 03 02.7**	**-1.7**
	comp=Z,448nm,1.9s,mb6.1						
SONM	**Songino Array**	**79.90**	**327**	P	**P**	**03 03 01.3**	**-3.4**
	comp=Z,4.5nm,0.9s,baz=45,slow=3.5,SNR=33						
SONM				PKKPbc		03 21 58.2	
	comp=Z,1.0nm,0.9s,baz=198,slow=3.9,SNR=3.8						
EARI	**Arriondas**	**80.03**	**40**	P	**P**	**03 03 10.7**	**+5.2**
	comp=Z,4μm,5.4s						
RUE	**Ruedersdorf**	**80.05**	**24**	*e*P	**P**	**03 03 05.3**	**-0.1**
	comp=Z,333nm,1.5s,mb6.0						
RUP	**Ruppelstein**	**80.16**	**29**	*e*P	**P**	**03 03 05.6**	**-0.4**
RUP	**Ruppelstein**	**80.16**	**29**	⇑*e*P	**P**	**03 03 13.3**	**+7.3**
ABH	**Alteburg**	**80.19**	**29**	⇑*e*P	**P**	**03 03 13.2**	**+7.1**
TNS	**Taunus Mts**	**80.23**	**28**	*e*P	**P**	**03 03 06.2**	**-0.1**
TNS				*e*S		03 13 21.0	
TNS				pmax	pmax		
	comp=Z,466nm,2.2s,mb6.0						
TNS	**Taunus Mts**	**80.23**	**28**	*e*P	**P**	**03 03 06.2**	**-0.1**
	comp=Z,466nm,2.2s,mb6.0						
TNS				*e*S		03 13 21.0	
TNS				*e*SS	SS	03 18 35.9	+13
IZAR	**Zarasai**	**80.26**	**16**	*e*P	**P**	**03 03 05.4**	**-0.9**
IZAR				*e*	pP	03 03 12.5	+0.4
ECAL	**Calabor**	**80.30**	**42**	⇓P	**P**	**03 03 12.3**	**+5.4**
	comp=Z,5μm,5.2s						
PVRL	**Vila Real**	**80.30**	**43**	*e*P	**P**	**03 03 07.5**	**+0.6**
	comp=Z,91nm,1.1s,mb5.6						
MEZF	**Maizieres J'vi**	**80.40**	**31**	*e*P	**P**	**03 03 03.0**	**-4.3**
ISAL	**Salakas**	**80.40**	**16**	*e*P	**P**	**03 03 06.3**	**-0.8**

ISAL				*e*	pP	03 03 13.4	+0.6
HYF	**Humbligny**	**80.44**	**33**	*e*P	**P**	**03 03 03.3**	**-4.2**
	comp=Z,1µm,1.4s,mb6.3						
PVIS	**Viseu**	**80.62**	**43**	*e*P	**P**	**03 03 08.7**	**+0.1**
	comp=Z,61nm,1.0s,mb5.5						
IDID	**Didziasalis**	**80.77**	**16**	*e*P	**P**	**03 03 07.9**	**-1.1**
IDID				*e*pP	pP	03 03 11.0	-3.8
CLL	**Collm**	**80.83**	**25**	*e*P	**P**	**03 03 09.0**	**-0.5**
CLL				*i* *PP	pP	03 03 13.5	-1.7
CLL				*i* *SP	sP	03 03 15.9	-1.2
CLL				*e*S	S	03 13 18.0	+2.6
CLL				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.9						
CLL				MLR	MLR		
	comp=Z,206µm,21.3s,MS7.5						
CLL	**Collm**	**80.83**	**25**	*e*P	**P**	**03 03 09.0**	**-0.5**
	comp=Z,21nm,1.4s,mb4.9						
CLL				*i* pP	pP	03 03 13.5	-1.7
CLL				*i* sP	sP	03 03 15.9	-1.2
CLL				*e*S	S	03 13 18.0	+2.6
CLL				LR	LR		
	comp=Z,206µm,21.3s,MS7.5						
CLL	**Collm**	**80.83**	**25**	P	**P**	**03 03 09.0**	**-0.5**
	comp=Z,logA/T=1.2,mb4.9						
CLL				*i* *PP	pP	03 03 13.5	-1.7
CLL				*i* *SP	sP	03 03 15.9	-1.2
CLL				*i*		03 03 25.5	
CLL				*e*		03 09 30.0	
CLL				*e*S	S	03 13 18.0	+2.6
CLL				*e*PS	PS	03 14 09.0	+4.1
CLL				*e*SS	SS	03 18 35.0	+2.7
CLL				*e*PKKP	PKKP	03 21 52.0	+21
CLL				*e*		03 24 40.0	
KTD	**Kalmit**	**80.85**	**29**	⇑*e*P	**P**	**03 03 17.0**	**+7.3**
TOD	**Tromm**	**80.87**	**28**	*e*P	**P**	**03 03 09.1**	**-0.6**
TOD	**Tromm**	**80.87**	**28**	⇑*e*P	**P**	**03 03 17.1**	**+7.4**
ELAN	**Lanestosa**	**80.93**	**39**	⇓P	**P**	**03 03 15.2**	**+5.1**
	comp=Z,4µm,5.4s						
LOR	**Lormes**	**80.93**	**32**	*e*P	**P**	**03 03 05.9**	**-4.2**
	comp=Z,750nm,1.5s,mb6.1						
LOR				*e*R			
	comp=Z,277µm,17.0s						
LOR	**Lormes**	**80.93**	**32**	*e*P	**P**	**03 03 05.9**	**-4.2**
LOR				pmax	pmax		
	comp=Z,375nm,1.5s,mb6.1						
LOR				MLR	MLR		
	comp=Z,277µm,17.0s,MS7.7						
SWS	**Schriesheim**	**80.94**	**28**	⇑*e*P	**P**	**03 03 17.2**	**+7.1**
MOX	**Moxa**	**80.95**	**26**	*e*P	**P**	**03 03 09.6**	**-0.5**
MOX				*e*S		03 13 29.0	
MOX				*e*SS	SS	03 18 39.0	+4.8
MOX				pmax	pmax		
	comp=Z,489nm,2.2s,mb6.0						
MOX	**Moxa**	**80.95**	**26**	*e*P	**P**	**03 03 09.6**	**-0.5**
	comp=Z,489nm,2.2s,mb6.0						
MOX				*e*S		03 13 29.0	
MOX				*e*SS	SS	03 18 39.0	+4.8
MOX	**Moxa**	**80.95**	**26**	*i* P	**P**	**03 03 09.6**	**-0.5**
	comp=Z,logA/T=2.4,mb6.1						
MOX				S		03 13 29.0	
MOX				SS	SS	03 18 39.0	+4.8
MOX				L		03 40 46.0	
SSF	**Saint Saulge**	**80.96**	**33**	*e*P	**P**	**03 03 05.8**	**-4.5**
SSF				pmax	pmax		
	comp=Z,281nm,1.5s,mb6.0						
SSF	**Saint Saulge**	**80.96**	**33**	*e*P	**P**	**03 03 05.8**	**-4.5**
	comp=Z,280nm,1.5s,mb6.0						
NVS	**Novosibirsk**	**80.97**	**344**	*e*P	**P**	**03 03 06.6**	**-3.6**
NVS				*e*S	S	03 13 18.8	+2.0
NVS				pmax	pmax		
	comp=Z,308nm,1.1s,mb6.2						
NVS				pmax	pmax		
	comp=N,160nm,1.6s						
NVS				pmax	pmax		
	comp=E,209nm,1.2s						
NVS				smax			
	comp=N,2µm,4.7s						
NVS				smax			
	comp=E,3µm,5.2s						
NVS	**Novosibirsk**	**80.97**	**344**	*e*P	**P**	**03 03 06.6**	**-3.6**
	comp=E,308nm,1.1s,mb6.2						
NVS				*e*S	S	03 13 18.8	+2.0
MTE	**Manteigas**	**81.04**	**43**	*e*P	**P**	**03 03 09.5**	**-1.3**
	comp=E,39nm,1.0s,mb5.3						
MTE	**Manteigas**	**81.04**	**43**	*e*S	S	03 13 26.9	+9.1
MTE				*e*SS	SS	03 18 44.3	+8.6
MTE				*e*LQ		03 24 31.3	
MTE				*e*LR	LR	03 29 17.2	
	comp=E,147µm,20.0s						
MTE	**Manteigas**	**81.04**	**43**	*e*P	**P**	**03 03 09.2**	**-1.6**
	comp=E,262nm,1.3s,mb6.0						
TCF	**Toulx Ste Croi**	**81.05**	**34**	*e*P	**P**	**03 03 06.1**	**-4.6**
	comp=E,471nm,1.5s,mb5.9						
TCF	**Toulx Ste Croi**	**81.05**	**34**	*e*P	**P**	**03 03 06.1**	**-4.6**
TCF				pmax	pmax		
	comp=Z,235nm,1.5s,mb5.9						
BGF	**Bois d'Agland**	**81.09**	**33**	*e*P	**P**	**03 03 06.5**	**-4.5**
	comp=Z,658nm,1.5s,mb6.0						
BGF	**Bois d'Agland**	**81.09**	**33**	*e*P	**P**	**03 03 06.5**	**-4.5**
BGF				pmax	pmax		
	comp=Z,329nm,1.5s,mb6.0						
AVF	**Avril sur Loir**	**81.11**	**33**	*e*P	**P**	**03 03 06.4**	**-4.7**
	comp=Z,474nm,1.5s,mb5.9						
AVF	**Avril sur Loir**	**81.11**	**33**	*e*P	**P**	**03 03 06.4**	**-4.7**
AVF				pmax	pmax		
	comp=Z,237nm,1.5s,mb5.9						
PTOM	**Tomar**	**81.16**	**44**	*e*P	**P**	**03 03 12.5**	**+1.0**
	comp=Z,40nm,0.8s,mb5.4						
SUW	**Suwalki**	**81.20**	**18**	*e*P	**P**	**03 03 09.9**	**-1.5**
SUW				*e*pP	pP	03 03 13.5	-3.6
SUW				*e*PcP	PcP	03 03 17.0	-1.1
SUW				*e*SKS	SKS	03 13 27.7	-3.8
SUW				MLR	MLR	03 33 57.9	
	comp=Z,152µm,30.0s,MS7.2						
HAU	**Haudompre**	**81.30**	**30**	*e*P	**P**	**03 03 07.6**	**-4.4**
	comp=Z,245nm,1.5s,mb5.6						
HAU				*e*R			
	comp=Z,277µm,22.1s						
HAU	**Haudompre**	**81.30**	**30**	*e*P	**P**	**03 03 07.6**	**-4.4**
HAU				pmax	pmax		
	comp=Z,122nm,1.5s,mb5.6						
HAU				MLR	MLR		
	comp=Z,277µm,22.1s,MS7.6						
PLOU	**Loures**	**81.31**	**45**	*e*P	**P**	**03 03 13.6**	**+1.3**
CDF	**Champ du Feu**	**81.31**	**30**	*e*P	**P**	**03 03 07.9**	**-4.2**
	comp=Z,393nm,1.6s,mb5.8						
CDF	**Champ du Feu**	**81.31**	**30**	*e*P	**P**	**03 03 07.9**	**-4.2**
CDF				pmax	pmax		
	comp=Z,197nm,1.6s,mb5.8						
SIND	**Sindeldorf**	**81.37**	**28**	⇑*e*P	**P**	**03 03 19.3**	**+6.9**
PMPS	**Porto Santo**	**81.38**	**53**	*e*P	**P**	**03 03 17.9**	**+5.1**
ALMR	**Almeirim**	**81.42**	**44**	*e*P	**P**	**03 03 13.3**	**+0.5**
SMF	**Signal de Mont**	**81.43**	**33**	*e*P	**P**	**03 03 08.1**	**-4.6**
	comp=Z,363nm,1.5s,mb5.8						
SMF	**Signal de Mont**	**81.43**	**33**	*e*P	**P**	**03 03 08.1**	**-4.6**
SMF				pmax	pmax		
	comp=Z,181nm,1.5s,mb5.8						
ECH	**Echery**	**81.43**	**30**	*e*P	**P**	**03 03 16.2**	**+3.5**
LIS	**Lisbon**	**81.44**	**45**	*e*P	**P**	**03 03 12.7**	**-0.3**
LIS				AMb	AMB	03 03 31.6	
	comp=Z,355nm,1.5s,mb6.1						
LIS				*e*S	S	03 13 27.2	+5.2
LIS				*e*S	S	03 13 27.8	+5.8
LIS				AMS	AMS	03 37 12.4	
	comp=Z,133µm,17.3s,MS7.4						
LIS	**Lisbon**	**81.44**	**45**	*e*P	**P**	**03 03 12.7**	**-0.2**
LIS				*e*S	S	03 13 27.2	+5.2
	comp=Z,355nm,1.5s						
PCBR	**Castelo Branco**	**81.48**	**43**	*e*P	**P**	**03 03 14.1**	**+0.9**
LFF	**La Frestale**	**81.49**	**35**	*e*P	**P**	**03 03 08.9**	**-4.2**
	comp=Z,278nm,1.1s,mb5.8						
LFF	**La Frestale**	**81.49**	**35**	*e*P	**P**	**03 03 08.9**	**-4.2**
LFF				pmax	pmax		
	comp=Z,139nm,1.1s,mb5.8						
BRG	**Berggiesshubel**	**81.50**	**25**	*i* P	**P**	**03 03 12.3**	**-0.7**
BRG				*i*		03 03 20.2	
BRG						03 06 28.0	
BRG				SS	SS	03 18 45.0	+2.6
BRG						03 22 00.3	
BRG				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2						
BRG				MLR	MLR		
	comp=Z,183µm,17.2s,MS7.5						
BRG	**Berggiesshubel**	**81.50**	**25**	*i* P	**P**	**03 03 12.3**	**-0.7**
	comp=Z,32nm,1.0s,mb5.2						
BRG				*i*		03 03 20.2	
BRG				*i*		03 03 29.4	
BRG				PP	PP	03 06 28.0	+6.4
BRG				S	S	03 13 37.0	+15
BRG				PS	PS	03 14 24.0	+11
BRG				SS	SS	03 18 45.0	+2.6
BRG				PKKP	PKKP	03 22 00.3	+30
BRG				LR	LR		
	comp=Z,183µm,17.2s,MS7.5						
RJF	**Les Rejaudoux**	**81.54**	**35**	*e*P	**P**	**03 03 08.7**	**-4.6**
	comp=Z,245nm,1.1s,mb5.7						
RJF				*e*R			
	comp=Z,306µm,19.5s						
RJF	**Les Rejaudoux**	**81.54**	**35**	*e*P	**P**	**03 03 08.7**	**-4.6**
RJF				pmax	pmax		
	comp=Z,123nm,1.1s,mb5.8						
RJF				MLR	MLR		
	comp=Z,306µm,19.5s,MS7.7						
NKC	**Novy Kostel**	**81.58**	**26**	*e*P	**P**	**03 03 13.2**	**-0.2**
NKC				*e*S		03 13 35.2	
NKC				*e*x	x	03 14 19.3	
NKC				AMS	AMS	03 40 30.0	
	comp=Z,250µm,18.9s						
GRA1	**Grafenberg Arr**	**81.63**	**27**	*e*P	**P**	**03 03 14.0**	**+0.3**
	comp=Z,484nm,1.8s,mb6.1						
GRA1				*e*pP	pP	03 03 21.1	+1.6
GRA1				*e*S		03 13 35.0	
GRA1				*e*SS	SS	03 18 47.1	+2.6
GRA1				LR	LR		
	comp=Z,143µm,21.4s,MS7.3						
GRF	**Grafenberg Arr**	**81.63**	**27**	*e*P	**P**	**03 03 14.0**	**+0.3**
GRF				*e**PP	pP	03 03 21.1	+1.6
GRF				*e*S		03 13 35.0	
GRF				*e*SS	SS	03 18 47.1	+2.6
GRF				pmax	pmax		
	comp=Z,484nm,1.8s,mb6.1						
GRF				MLR	MLR		
	comp=Z,143µm,21.4s,MS7.3						
GRF	**Grafenberg Arr**	**81.63**	**27**	*e*P	**P**	**03 03 14.0**	**+0.3**
	comp=Z,484nm,1.8s,mb6.1						
GRF				*e*pP	pP	03 03 21.1	+1.6
GRF				*e*S		03 13 35.0	
GRF				*e*SS	SS	03 18 47.1	+2.6
GRF				LR	LR		
	comp=Z,143µm,21.4s,MS7.3						
HINF	**Hinteralfeld**	**81.65**	**30**	*e*P	**P**	**03 03 09.5**	**-4.3**
	comp=Z,129nm,1.2s,mb5.5						
HINF	**Hinteralfeld**	**81.65**	**30**	*e*P	**P**	**03 03 09.5**	**-4.3**
HINF				pmax	pmax		
	comp=Z,65nm,1.2s,mb5.4						
LIBD	**Limburg**	**81.65**	**30**	*e*P	**P**	**03 03 17.7**	**+3.8**
LIBD	**Limburg**	**81.65**	**30**	⇑*e*P	**P**	**03 03 21.8**	**+7.9**
LBG	**Lerchenberg**	**81.66**	**29**	⇑*e*P	**P**	**03 03 21.1**	**+7.2**
STU	**Stuttgart**	**81.71**	**28**	*e*P	**P**	**03 03 12.8**	**-1.3**
STU				pmax	pmax		
	comp=Z,92nm,1.4s,mb5.5						
STU	**Stuttgart**	**81.71**	**28**	*e*P	**P**	**03 03 12.8**	**-1.3**
	comp=Z,92nm,1.4s,mb5.5						
MOF	**Molkenrain**	**81.73**	**30**	*e*P	**P**	**03 03 17.9**	**+3.7**
MNK	**Minsk**	**81.75**	**15**	*e*P	**P**	**03 03 13.0**	**-1.2**
BFO	**Black Forest**	**81.77**	**29**	*e*P	**P**	**03 03 14.5**	**0.0**
BFO				*e*S	S	03 13 34.7	+10
BFO				pmax	pmax		
	comp=Z,800nm,2.6s,mb6.2						
BFO	**Black Forest**	**81.77**	**29**	*e*P	**P**	**03 03 14.5**	**0.0**
	comp=Z,800nm,2.6s,mb6.2						
BFO				*e*S	S	03 13 34.7	+10
BFO				*e*SS	SS	03 18 59.7	+13
EALK	**Alkurruntz**	**81.84**	**38**	⇓P	**P**	**03 03 19.5**	**+4.6**
	comp=Z,4µm,5.8s						
ECRI	**Cripan**	**81.84**	**39**	P	**P**	**03 03 20.0**	**+5.0**
	comp=Z,1µm,2.8s,mb6.3						
ELIZ	**Elizondo**	**81.87**	**38**	P	**P**	**03 03 19.0**	**+3.9**
ELIZ				pmax	pmax		
	comp=Z,78nm,1.7s,mb5.4						
ELIZ	**Elizondo**	**81.87**	**38**	P	**P**	**03 03 19.0**	**+3.9**
	comp=Z,78nm,1.7s,mb5.4						
KIZ	**Kirchzarten**	**81.93**	**30**	*e*P	**P**	**03 03 22.8**	**+7.5**
SVE	**Sverdlovsk**	**81.95**	**357**	*e*P	**P**	**03 03 13.6**	**-1.6**
SVE				*e*PPP	PPP	03 08 20.0	+3.0
SVE				*e*S	S	03 13 31.0	+4.1
SVE				pmax	pmax		
	comp=Z,100nm,2.0s,mb5.4						
SVE	**Sverdlovsk**	**81.95**	**357**	*e*P	**P**	**03 03 13.6**	**-1.6**
	comp=Z,100nm,2.0s,mb5.4						
SVE				*e*PPP	PPP	03 08 20.0	+3.0
SVE				*e*S	S	03 13 31.0	+4.1
PVCC	**Panska Ves**	**82.00**	**24**	*e*P	**P**	**03 03 15.3**	**-0.3**
PVCC				*e*		03 14 23.7	
PVCC				MLR	MLR		
	comp=Z,136µm,22.3s,MS7.3						
PVCC	**Panska Ves**	**82.00**	**24**	*e*P	**P**	**03 03 15.3**	**-0.3**
PVCC				*e*S		03 13 40.2	
PVCC				*e*x	x	03 14 23.7	
PVCC				AMS	AMS	03 38 40.0	
	comp=Z,136µm,22.3s						
FELD	**Feldberg**	**82.03**	**29**	*e*P	**P**	**03 03 17.7**	**+1.9**
FELD				⇑*e*P	pP	03 03 23.5	+1.9
FELD	**Feldberg**	**82.03**	**29**	⇑*e*P	**P**	**03 03 23.5**	**+7.7**
BUCH	**Bad Urach**	**82.04**	**28**	⇑*e*P	**P**	**03 03 23.5**	**+7.7**
SJPF	**Ste Jean**	**82.05**	**38**	*e*P	**P**	**03 03 11.8**	**-4.2**
	comp=Z,247nm,1.4s,mb5.6						
SJPF	**Ste Jean**	**82.05**	**38**	*e*P	**P**	**03 03 11.8**	**-4.2**
SJPF				pmax	pmax		
	comp=Z,124nm,1.4s,mb5.7						
CAF	**Calviac**	**82.08**	**35**	*e*P	**P**	**03 03 11.5**	**-4.6**
	comp=Z,164nm,1.1s,mb5.6						
CAF	**Calviac**	**82.08**	**35**	*e*P	**P**	**03 03 11.5**	**-4.6**
CAF				pmax	pmax		
	comp=Z,82nm,1.1s,mb5.6						
ORDF	**Ordiarp**	**82.10**	**37**	*e*P	**P**	**03 03 21.9**	**+5.6**
SPAK	**Spaichingen**	**82.13**	**29**	*e*P	**P**	**03 03 19.4**	**+3.1**
SPAK	**Spaichingen**	**82.13**	**29**	⇓*e*P	**P**	**03 03 23.8**	**+7.5**
MOS	**Moscow**	**82.14**	**9**	*e*P	**P**	**03 03 16.8**	**+0.6**
MOS				*e*		03 06 27.9	
MOS				*e*PPP	PPP	03 08 17.5	-1.2
MOS				*e*S	S	03 13 34.8	+6.0
MOS				*e*PS	PS	03 14 26.1	+5.3
MOS				pmax	pmax		
	comp=Z,2µm,3.8s						
MOS				pmax	pmax		
	comp=N,2µm,4.4s						
MOS				pmax	pmax		
	comp=N,241nm,1.6s						
MOS				pmax	pmax		
	comp=Z,403nm,1.6s,mb6.1						
MOS				pmax	pmax		
	comp=E,101nm,1.0s						
MOS				smax			
	comp=N,8µm,7.6s						
MOS				MLR	MLR		
	comp=N,82µm,18.1s						
MOS				MLR	MLR		
	comp=Z,97µm,18.1s,MS7.2						
MOS	**Moscow**	**82.14**	**9**	*e*P	**P**	**03 03 16.8**	**+0.6**
	comp=Z,403nm,1.6s,mb6.1						
MOS				*e*		03 06 27.9	
MOS				*e*PPP	PPP	03 08 17.5	-1.2
MOS				*e*S	S	03 13 34.8	+6.0
MOS				*e*PS	PS	03 14 26.1	+5.3
MOS				LR	LR		
	comp=Z,97µm,18.1s,MS7.2						
EVO	**Evora**	**82.17**	**45**	*e*P	**P**	**03 03 12.7**	**-4.1**
	comp=Z,864nm,1.6s,mb6.1						
EVO				*e*R			
	comp=Z,269µm,20.2s						
BBS	**Basel-Blauen**	**82.19**	**30**	*e*P	**P**	**03 03 17.6**	**+1.0**
BBS	**Basel-Blauen**	**82.19**	**30**	⇑*e*P	**P**	**03 03 24.4**	**+7.8**
PECR	**Pechory**	**82.21**	**6**	*e*P	**P**	**03 03 14.6**	**-2.0**
PECR				*i*		03 13 36.7	
PECR				pmax	pmax		
	comp=Z,610nm,2.0s,mb6.2						
PECR				pmax	pmax		
	comp=N,1µm,6.0s						
PECR				MLR	MLR		
	comp=N,35µm,18.0s,MS7.0						
PECR				MLR	MLR		
	comp=E,56µm,17.0s,MS7.0						
LARF	**Larrau**	**82.22**	**38**	*e*P	**P**	**03 03 18.6**	**+1.7**
HDH	**Heidenheim**	**82.23**	**28**	⇑*e*P	**P**	**03 03 24.1**	**+7.3**
KSP	**Ksiaz**	**82.24**	**23**	*e*P	**P**	**03 03 16.9**	**0.0**
KSP				*e**PP	pP	03 03 23.5	+0.9
KSP				*e*		03 13 35.0	
KSP				MLR	MLR		
	comp=Z,342µm,25.4s,MS7.6						
KSP	**Ksiaz**	**82.24**	**23**	*e*P	**P**	**03 03 17.3**	**+0.5**
KSP				*e*PcP	PcP	03 03 24.3	+1.6
KSP				*e*SKS	SKS	03 13 42.3	+3.5
KSP				MLR	MLR	03 36 49.8	
	comp=Z,293µm,25.3s,MS7.5						
GUT	**Gutenstein**	**82.27**	**29**	⇑*e*P	**P**	**03 03 24.4**	**+7.3**
WAR	**Warsaw**	**82.30**	**20**	*e*P	**P**	**03 03 19.0**	**+1.9**
WAR				*e*PcP	PcP	03 03 24.6	+1.6
WAR				*e*SKS	ScS	03 13 50.8	+6.1
WAR				LR	LR		
	comp=Z,185µm,31.0s,MS7.3						
WAR	**Warsaw**	**82.30**	**20**	*e*P	**P**	**03 03 19.0**	**+1.9**
WAR				*e*PcP	PcP	03 03 24.6	+1.6
WAR				*e*SKS	ScS	03 13 50.8	+6.1
WAR				MLR	MLR	03 34 27.1	
	comp=Z,185µm,31.0s,MS7.3						
LBL	**Lubilhac**	**82.33**	**34**	*e*P	**P**	**03 03 19.9**	**+2.5**
CABF	**La Chapelle**	**82.35**	**31**	*e*P	**P**	**03 03 13.7**	**-3.8**
PRA	**Prague**	**82.35**	**25**	⇓P	**P**	**03 03 20.0**	**+2.6**
PRA				*e*x	x	03 14 32.0	
PRA				AMS	AMS	03 41 00.0	
ARU	**Arti**	**82.43**	**358**	*e*P	**P**	**03 03 15.4**	**-2.3**
ARU				*e*		03 06 25.5	
ARU				*e*PPP	PPP	03 08 15.8	-5.5
ARU				*i* S	S	03 13 34.8	+3.0
ARU				MLR	MLR		
	comp=Z,66µm,20.0s,MS7.0						
ARU				MLR	MLR		
	comp=N,65µm,21.0s,MS7.0						
ARU				MLR	MLR		
	comp=E,33µm,19.0s,MS7.0						
UPC	**Upice**	**82.45**	**24**	*e*P	**P**	**03 03 18.0**	**0.0**
UPC				*e*S		03 13 46.2	
PRU	**Pruhonice**	**82.46**	**25**	*e*P	**P**	**03 03 17.1**	**-0.9**
PRU				*e*S	S	03 13 41.8	+10
PRU				*e*x	x	03 14 27.1	
PRU				AMS	AMS	03 39 40.0	
	comp=E,183µm,20.2s						
REYF	**Montagne du Re**	**82.46**	**37**	*e*P	**P**	**03 03 19.0**	**+0.8**
SIV	**San Ignacio**	**82.50**	**119**	P	**P**	**03 03 16.1**	**-2.7**
	comp=E,13nm,0.9s,mb4.9,baz=310,slow=4.8,SNR=35						
SIV				S	S	03 13 40.2	+7.0
	comp=E,2.9nm,1.2s,baz=301,slow=17,SNR=1.6						
ETSF	**Etsaut**	**82.52**	**37**	*e*P	**P**	**03 03 14.6**	**-3.9**
	comp=E,191nm,1.0s,mb5.8						
ETSF	**Etsaut**	**82.52**	**37**	*e*P	**P**	**03 03 14.6**	**-3.9**
ETSF				pmax	pmax		
	comp=Z,96nm,1.0s,mb5.8						
PTEO	**Sao Teotonio**	**82.52**	**46**	*e*P	**P**	**03 03 20.3**	**+1.7**
EBAD	**Badajoz**	**82.53**	**44**	P	**P**	**03 03 18.4**	**-0.2**
	comp=Z,3µm,3.3s						
OBN	**Obninsk**	**82.61**	**10**	⇓*i*P	**P**	**03 03 17.0**	**-1.7**
OBN				*i*		03 03 19.1	
OBN				*i*	pP	03 03 21.2	-3.2
OBN				*i*		03 06 32.9	
OBN				*e*PPP	PPP	03 08 19.6	-3.4
OBN				*i*		03 13 40.8	
OBN				*e*PS	PS	03 14 29.6	+2.6
OBN				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.1						
OBN				MLR	MLR		
	comp=Z,54µm,15.0s,MS7.0						
OBN	**Obninsk**	**82.61**	**10**	⇓*i*P	**P**	**03 03 17.0**	**-1.7**
	comp=Z,26nm,1.2s,mb5.1						
OBN				*i*		03 03 19.1	
OBN				*i*	pP	03 03 21.2	-3.2
OBN				*i*		03 06 32.9	
OBN				*e*PPP	PPP	03 08 19.6	-3.4
OBN				*i*		03 13 40.8	
OBN				*e*PS	PS	03 14 29.6	+2.6
OBN				LR	LR		
	comp=Z,54µm,15.0s,MS7.0						
PBEJ	**Beja**	**82.62**	**45**	*e*P	**P**	**03 03 20.6**	**+1.5**
DPC	**Dobruska-Polom**	**82.69**	**23**	*e*P	**P**	**03 03 18.9**	**-0.3**
DPC				*e*S	S	03 13 40.7	+6.2
DPC				*e*x	x	03 14 30.3	
DPC				AMS	AMS	03 37 00.0	
	comp=Z,180µm,24.3s						
LABF	**Labassere**	**82.69**	**37**	*e*P	**P**	**03 03 22.0**	**+2.6**
VIEF	**Viey**	**82.80**	**37**	*e*P	**P**	**03 03 21.3**	**+1.4**
EPF	**Esparros**	**82.82**	**37**	*e*P	**P**	**03 03 15.5**	**-4.5**
	comp=Z,588nm,1.8s,mb6.0						
EPF	**Esparros**	**82.82**	**37**	*e*P	**P**	**03 03 15.5**	**-4.5**
EPF				pmax	pmax		
	comp=Z,294nm,1.8s,mb6.0						
KHC	**Kasperske Hory**	**82.90**	**26**	*e*P	**P**	**03 03 19.6**	**-0.7**
KHC				*e*		03 03 27.5	
KHC				*e*		03 14 29.9	
KHC				MLR	MLR		
	comp=Z,260µm,18.9s,MS7.6						
KHC	**Kasperske Hory**	**82.90**	**26**	*e*P	**P**	**03 03 19.6**	**-0.7**
KHC				*e*x	x	03 03 27.5	
KHC				*e*S		03 13 48.3	
KHC				*e*x	x	03 14 29.9	
KHC				AMS	AMS	03 41 20.0	
	comp=Z,260µm,18.9s						
FUR	**Furstenfeldbru**	**82.96**	**27**	*e*P	**P**	**03 03 20.9**	**+0.3**
FUR				pmax	pmax		
	comp=Z,275nm,1.1s,mb6.2						
FUR	**Furstenfeldbru**	**82.96**	**27**	*e*P	**P**	**03 03 20.9**	**+0.3**
	comp=Z,275nm,1.1s,mb6.2						
FUR				*e*S	S	03 13 49.5	+12
FUR				*e*SS	SS	03 19 13.9	+10
UBR	**Uberruh**	**82.96**	**28**	⇑*e*P	**P**	**03 03 28.3**	**+7.6**
RESF	**Ens**	**83.00**	**37**	*e*P	**P**	**03 03 22.6**	**+1.6**
EBIE	**Bielsa**	**83.01**	**37**	P	**P**	**03 03 25.7**	**+4.7**
	comp=Z,2µm,3.0s						
HHC	**Hu-ho-hao-te**	**83.09**	**320**	*e*P	**P**	**03 03 18.1**	**-3.4**
HHC				XP	sP	03 03 26.6	-2.5
HHC				PP	PP	03 06 37.5	+3.0
HHC				S	S	03 13 32.6	-6.2
HHC				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
HHC				AMB	AMB		
	comp=Z,5µm,11.4s						
HHC				LR	LR		
	comp=N,71µm,23.8s						
HHC				LR	LR		
	comp=E,57µm,30.9s						
HHC				LR	LR		
	comp=Z,72µm,30.9s						
HHC	**Hu-ho-hao-te**	**83.09**	**320**	*e*P	**P**	**03 03 18.1**	**-3.4**
	comp=Z,29nm,1.4s,mb5.1						
HHC				sP	sP	03 03 26.6	-2.5
HHC				PP	PP	03 06 37.5	+3.0
HHC				S	S	03 13 32.6	-6.2
HHC				SS	SS	03 19 02.0	-4.5
HHC				LR	LR		
	comp=Z,72µm,30.9s,MS6.8						
EMV	**Vieux Emosson**	**83.12**	**31**	*i* P	**P**	**03 03 27.2**	**+5.7**
MELF	**Melles**	**83.14**	**37**	*e*P	**P**	**03 03 26.2**	**+4.5**
GERES	**GERESS Array B**	**83.19**	**26**	P	**P**	**03 03 20.2**	**-1.6**
	comp=Z,2.2nm,0.7s,baz=333,slow=3.0,SNR=15						
EGRO	**El Granado**	**83.19**	**45**	P	**P**	**03 03 26.5**	**+4.5**
	comp=Z,3µm,3.3s						
DAVA	**Damuels**	**83.21**	**29**	⇓*i*P	**P**	**03 03 21.7**	**-0.3**
	comp=Z,5µm,5.5s						
MLS	**Moulis**	**83.22**	**36**	*e*P	**P**	**03 03 22.6**	**+0.5**
VIVF	**Saint-Julien-l**	**83.22**	**33**	*e*P	**P**	**03 03 18.0**	**-4.1**
	comp=Z,687nm,1.7s,mb6.1						
VIVF	**Saint-Julien-l**	**83.22**	**33**	*e*P	**P**	**03 03 18.0**	**-4.1**
VIVF				pmax	pmax		
	comp=Z,344nm,1.7s,mb6.1						
PALC	**Alcoutim**	**83.25**	**45**	*e*P	**P**	**03 03 22.0**	**-0.4**
	comp=Z,88nm,1.4s,mb5.6						
DIX	**Grande Dixence**	**83.31**	**31**	P	**P**	**03 03 25.1**	**+2.6**
GRN	**Grenoble**	**83.34**	**32**	*e*P	**P**	**03 03 25.7**	**+3.0**
ESDC	**Sonseca Array**	**83.39**	**41**	P	**P**	**03 03 21.4**	**-1.6**
	comp=Z,7.6nm,0.7s,mb4.8,baz=312,slow=4.8,SNR=35						
ESDC	**Sonseca Array**	**83.39**	**41**	P	**P**	**03 03 22.8**	**-0.3**
	comp=Z,432nm,2.8s,mb6.0						
MTLF	**Montolieu**	**83.41**	**35**	*e*P	**P**	**03 03 18.7**	**-4.4**
	comp=Z,494nm,1.6s,mb6.0						
MTLF	**Montolieu**	**83.41**	**35**	*e*P	**P**	**03 03 18.7**	**-4.4**
MTLF				pmax	pmax		
	comp=Z,247nm,1.6s,mb6.0						
SALF	**Salau**	**83.42**	**36**	*e*P	**P**	**03 03 26.0**	**+2.9**
EMIN	**Mina Concepcio**	**83.45**	**44**	P	**P**	**03 03 23.5**	**+0.1**
	comp=Z,3µm,2.7s,mb6.8						
RAC	**Raciborz**	**83.47**	**23**	*e*P	**P**	**03 03 22.2**	**-1.0**
RAC				*e*	pP	03 03 28.2	-0.8
RAC				MLR	MLR		
	comp=Z,155µm,23.5s,MS7.3						

RAC	Raciborz	83.47	23	eP	P	03 03 22.2	-1.0
RAC				ePcP	PcP	03 03 28.2	+0.1
RAC				MLR	MLR	03 38 30.2	
RAC				LMN		03 38 38.5	
RAC				LME		03 42 11.8	
	comp=Z,227µm,19.0s						
ESAC	San Caprasio	83.48	38	⇓P	P	03 03 28.2	+4.7
	comp=Z,3µm,3.0s						
LPL	La Plagne	83.51	32	eP	P	03 03 20.3	-3.2
	comp=Z,932nm,1.8s,mb6.3						
LPL	La Plagne	83.51	32	eP	P	03 03 20.3	-3.2
LPL				pmax	pmax		
	comp=Z,466nm,1.8s,mb6.3						
LASF	Ste Croix	83.52	34	eP	P	03 03 19.6	-3.9
	comp=Z,641nm,1.7s,mb6.2						
GDM	Grand'Maison	83.52	32	eP	P	03 03 24.7	+1.2
LPG	La Plagne	83.53	32	eP	P	03 03 20.6	-3.0
	comp=Z,461nm,1.3s,mb6.2						
LPG	La Plagne	83.53	32	eP	P	03 03 20.6	-3.0
LPG				pmax	pmax		
	comp=Z,230nm,1.3s,mb6.2						
MMK	Mattmark	83.54	31	P	P	03 03 26.9	+3.3
MORC	Moravsky Berou	83.56	23	eP	P	03 03 22.9	-0.7
MORC				pmax	pmax		
	comp=Z,140nm,1.3s,mb5.9						
MORC	Moravsky Berou	83.56	23	eP	P	03 03 22.9	-0.7
	comp=Z,140nm,1.3s,mb5.9						
LPEF	Le Peyrat	83.59	36	eP	P	03 03 27.2	+3.3
EHIG	Higuera	83.59	57	P	P	03 03 32.6	+8.3
	comp=Z,5µm,2.3s						
MOTA	Moosalm	83.60	28	⇑iP	P	03 03 24.3	+0.4
	comp=Z,807nm,2.4s,mb6.4						
MOTA	Moosalm	83.60	28	⇑iP	P	03 03 24.3	+0.4
MOTA				pmax	pmax		
	comp=Z,807nm,2.4s,mb6.4						
DAVOX	Davos	83.64	29	P	P	03 03 26.9	+2.8
ORIF	Oris-en-Rattie	83.66	32	eP	P	03 03 20.4	-3.9
	comp=Z,425nm,1.3s,mb6.1						
ORIF				eR			
	comp=Z,211µm,17.5s						
OKC	Ostrava-Krasne	83.68	23	eP	P	03 03 23.5	-0.7
OKC				eS	S	03 13 53.2	+8.7
OKC				ex	x	03 14 43.5	
OKC				AMS	AMS	03 43 50.0	
	comp=Z,104µm,16.7s						
VRAC	Vranov	83.69	24	P	P	03 03 24.9	+0.6
VRAC	Vranov	83.69	24	⇓iP	P	03 03 25.6	+1.3
VRAC				ePcP	PcP	03 03 28.6	-0.3
VRAC				eS	S	03 13 52.4	+7.8
VRAC				eSS	SS	03 19 24.7	+10
VRAC				eLR	LR	03 30 48.8	
TUE	Stuetta	83.71	29	P	P	03 03 26.2	+1.8
LSD	Ceresole Reale	83.72	31	P	P	03 03 26.3	+1.8
TIA	Tai'an	83.74	314	P	P	03 03 21.5	-3.4
TIA				PP	PP	03 06 38.1	-1.7
TIA				S	S	03 13 44.3	-1.1
TIA				AMB	AMB		
	comp=Z,2µm,10.0s						
TIA				LR	LR		
	comp=N,27µm,22.5s,MS6.7						
TIA				LR	LR		
	comp=E,29µm,23.9s,MS6.7						
SQTA	Sankt Quirin	83.74	28	⇑iP	P	03 03 23.3	-1.3
	comp=E,491nm,1.8s,mb6.3						
SQTA	Sankt Quirin	83.74	28	⇑iP	P	03 03 23.3	-1.3
SQTA				pmax	pmax		
	comp=Z,491nm,1.8s,mb6.3						
WATA	Walderalm	83.77	28	⇑iP	P	03 03 25.2	+0.4
	comp=Z,377nm,1.9s,mb6.2						
WATA	Walderalm	83.77	28	⇑iP	P	03 03 25.2	+0.4
WATA				pmax	pmax		
	comp=Z,377nm,1.9s,mb6.2						
OJC	Ojcow	83.81	22	eP	P	03 03 24.2	-0.6
OJC				e		03 03 27.8	
OJC				e		03 06 43.4	
OJC				eS	S	03 13 53.5	+7.8
OJC				MLR	MLR		
	comp=Z,144µm,18.3s,MS7.4						
OJC	Ojcow	83.81	22	eP	P	03 03 24.2	-0.6
OJC				ePcP	PcP	03 03 27.8	-1.6
OJC				ePP	PP	03 06 43.4	+3.5
OJC				eS	S	03 13 53.5	+7.8
OJC				eSS	SS	03 19 25.6	+9.5
OJC				MLR	MLR	03 43 04.1	
	comp=Z,144µm,18.3s,MS7.4						
WTTA	Wattenberg	83.86	28	⇑iP	P	03 03 25.3	+0.1
	comp=Z,2µm,4.0s						
WTTA	Wattenberg	83.86	28	⇑iP	P	03 03 25.3	+0.1
WTTA				pmax	pmax		
	comp=Z,2µm,4.0s						
BNI	Bardonecchia	83.87	32	eP	P	03 03 24.3	-1.0
BNI				pmax	pmax		
	comp=Z,422nm,1.5s,mb6.3						
BNI	Bardonecchia	83.87	32	eP	P	03 03 24.3	-1.0
	comp=Z,422nm,1.5s,mb6.3						
LRDF	Laroque-de-Fa	83.87	36	eP	P	03 03 26.0	+0.6
ORX	Oropa	83.90	31	P	P	03 03 25.5	+0.1
RSP	Reno Superiore	84.02	31	P	P	03 03 26.3	+0.3
BTO	Baotou	84.02	321	eP	P	03 03 28.9	+2.7
BTO				S	S	03 13 43.3	-4.8
BTO				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.5						
BTO	Baotou	84.02	321	eP	P	03 03 28.9	+2.7
	comp=Z,56nm,1.2s,mb5.6						
BTO				S	S	03 13 43.3	-4.8
RRL	Cesana Torines	84.02	32	P	P	03 03 26.8	+0.7
MUGIO	Muggio	84.06	30	P	P	03 03 28.0	+1.8
CHIE	El Hierro	84.06	58	P	P	03 03 34.3	+7.6
	comp=Z,2µm,2.6s,mb6.8						
VALF	Valcebollere	84.07	36	eP	P	03 03 27.6	+1.2
MBDF	Montbardon	84.18	32	eP	P	03 03 23.4	-3.5
	comp=Z,326nm,1.0s,mb6.1						
MBDF	Montbardon	84.18	32	eP	P	03 03 23.4	-3.5
MBDF				pmax	pmax		
	comp=Z,163nm,1.0s,mb6.1						
FILF	Fillols	84.19	36	eP	P	03 03 30.6	+3.6
EADA	Adamuz	84.23	43	P	P	03 03 26.9	-0.4
	comp=Z,2µm,2.7s,mb6.8						
MOA	Molln	84.24	26	⇑iP	P	03 03 27.2	+0.1
	comp=Z,3µm,5.3s						
EGOM	La Gomera	84.24	57	P	P	03 03 33.1	+5.5
	comp=Z,3µm,2.7s						
EMIR	Miracle	84.24	37	P	P	03 03 32.1	+4.8
	comp=Z,3µm,3.0s						
BHB	Bricherasio	84.28	32	P	P	03 03 27.7	+0.3
PRAF	Pradon	84.29	33	eP	P	03 03 31.8	+4.4
SMRF	Simiane la Rot	84.32	33	eP	P	03 03 23.8	-3.8
	comp=Z,549nm,1.7s,mb6.1						
APPI	Appiano	84.39	28	P	P	03 03 27.5	-0.4
	comp=Z,739nm,2.6s,mb6.3						
SJAF	Saint Jean de	84.39	36	eP	P	03 03 30.5	+2.5
SURF	Saint Ours	84.40	32	eP	P	03 03 28.9	+0.9
EJON	La Jonquera	84.42	36	P	P	03 03 32.8	+4.7
	comp=Z,2µm,4.9s						
STOF	St-Etienne Org	84.43	33	eP	P	03 03 29.0	+0.8
ERTA	Horta de San J	84.46	38	P	P	03 03 32.0	+3.7
	comp=Z,3µm,4.3s						
VILF	Villemus	84.47	33	eP	P	03 03 30.6	+2.2
EPOB	Poblet	84.49	37	P	P	03 03 32.5	+4.0
	comp=Z,2µm,4.1s						
MABI	Malga Bissina	84.49	29	P	P	03 03 29.9	+1.5
PZZ	Prazzo	84.50	32	P	P	03 03 29.1	+0.6
SEST	Monte Rota	84.50	28	P	P	03 03 29.4	+1.0
	comp=Z,672nm,2.0s,mb6.4						
EBAJ	Bajamar	84.52	57	⇓P	P	03 03 35.7	+6.7
	comp=Z,6µm,3.2s						
TREF	Trevaresse	84.53	33	eP	P	03 03 30.8	+2.2
VKA	Vienna	84.53	24	⇑iP	P	03 03 28.0	-0.5
VKA				pmax	pmax		
	comp=Z,3µm,5.0s						
VKA				MLR	MLR		
	comp=Z,83µm,15.0s,MS7.2						
VKA	Vienna	84.53	24	⇑iP	P	03 03 28.0	-0.5
	comp=Z,3µm,5.0s						
VKA				LR	LR		
	comp=Z,83µm,15.0s,MS7.2						
EMOS	Mosqueruela	84.55	39	P	P	03 03 33.1	+4.2
	comp=Z,2µm,3.1s						
ESPR	Espera	84.55	44	P	P	03 03 32.6	+3.7
	comp=Z,3µm,3.2s						
DOI	San Damiano	84.55	32	P	P	03 03 30.1	+1.4
CCAN	Las Canadas	84.58	57	P	P	03 03 36.7	+7.5
	comp=Z,2µm,2.4s,mb6.8						
KBA	Koelnbreinsper	84.61	27	⇑iP	P	03 03 29.0	+0.1
	comp=Z,3µm,5.1s						
KBA	Koelnbreinsper	84.61	27	⇑iP	P	03 03 29.0	+0.1
KBA				pmax	pmax		
	comp=Z,3µm,5.1s						
EBR	Ebro Roquetas	84.64	38	eP	P	03 03 29.0	-0.3
SMOL	Smolenice	84.65	24	eP	P	03 03 31.7	+2.6
LIKS	Likavka	84.67	22	eP	P	03 03 37.0	+7.8
LIKS	Likavka	84.67	22	esP	sP	03 03 37.0	+0.2
SFS	San Fernando	84.67	45	P	P	03 03 28.0	-1.5
SFS				pmax	pmax		
	comp=Z,311nm,1.1s,mb6.3						
SFS	San Fernando	84.67	45	P	P	03 03 28.0	-1.5
	comp=Z,311nm,1.1s,mb6.3						
NIE	Niedzica	84.67	22	eP	P	03 03 28.7	-0.5
PUYF	Puyloubier	84.73	33	eP	P	03 03 31.5	+1.8
GELF	Grande-Etoile	84.74	34	eP	P	03 03 31.8	+2.1
HNR	Honiara	84.76	253	P	P	03 03 29.0	-1.5
	comp=Z,139nm,0.6s,mb6.2,baz=27,slow=4.5,SNR=1.9						
HNR	Honiara	84.76	253	P	P	03 03 29.0	-1.5
HNR				LR	LR		
	comp=Z,134µm,22.0s,MS7.3						
STV2	Anna di Valdie	84.80	32	P	P	03 03 32.1	+2.1
STV	Sta Anna Valdi	84.80	32	P	P	03 03 32.7	+2.7
TAVF	Tavernes	84.81	33	eP	P	03 03 34.1	+4.1
ZST	Bratislava	84.83	24	eP	P	03 03 30.2	+0.1
ZST				e	pP	03 03 37.2	+1.4
ZST				eS	S	03 14 03.0	+7.1
ZST				eSS	SS	03 19 37.6	+6.1
ENR	Entracque	84.85	32	P	P	03 03 31.6	+1.4
KOLL	Kolacno	84.88	23	eP	P	03 03 30.5	+0.2
KOLL				esP	sP	03 03 37.0	-0.9
BVAR	Borovoye Array	84.90	350	PKPPKP		03 29 45.1	
	comp=Z,0.3nm,0.4s,baz=162,slow=4.6,SNR=3.2						
CTI	Castel Tesino	84.91	28	P	P	03 03 30.8	+0.3
CTI				pmax	pmax		
	comp=Z,174nm,1.4s,mb6.0						
CTI	Castel Tesino	84.91	28	P	P	03 03 30.8	+0.3
	comp=Z,174nm,1.4s,mb6.0						
BERF	Bertagne	84.91	33	eP	P	03 03 32.7	+2.2
EVIA	Vianos	84.91	41	P	P	03 03 30.8	+0.1
EVIA				pmax	pmax		
	comp=Z,202nm,1.4s,mb6.1						
EVIA	Vianos	84.91	41	P	P	03 03 30.8	+0.1
	comp=Z,202nm,1.4s,mb6.1						
ECHE	Chera	84.92	40	P	P	03 03 36.7	+6.0
ECHE				pmax	pmax		
	comp=Z,111nm,1.2s,mb5.9						
ECHE	Chera	84.92	40	P	P	03 03 36.7	+6.0
	comp=Z,111nm,1.2s,mb5.9						
TOUF	Mont Tournerai	84.96	32	eP	P	03 03 31.1	+0.3
ROB	Roburent	84.97	32	P	P	03 03 32.8	+2.0
MVIF	Mont Vial	85.02	32	eP	P	03 03 31.3	+0.2
PCP	Pian Castagno	85.03	31	P	P	03 03 31.3	+0.2
CALN	Calern	85.04	32	eP	P	03 03 32.9	+1.7
AUTN	L'Aution	85.05	32	eP	P	03 03 33.3	+2.1
VYHS	Vyhne	85.09	23	eP	P	03 03 31.3	0.0
VYHS				esP	sP	03 03 38.1	-0.8
VYHS				e		03 06 52.2	
VYHS				eS	S	03 14 04.4	+6.0
VYHS				eSS	SS	03 19 38.5	+3.3
FRF	La Foret Royal	85.10	33	eP	P	03 03 27.3	-4.2
	comp=Z,645nm,1.5s,mb6.2						
FRF	La Foret Royal	85.10	33	eP	P	03 03 27.3	-4.2
FRF				pmax	pmax		
	comp=Z,323nm,1.5s,mb6.2						
SAOF	Saorge	85.11	32	eP	P	03 03 33.5	+2.0
MONE	Monesi	85.11	32	P	P	03 03 34.8	+3.3
KWP	Kalwaria	85.12	20	eP	P	03 03 31.4	0.0
KWP				epP	pP	03 03 36.2	-1.0
KWP				ePcP	PcP	03 03 38.9	+3.7
KWP				eS	ScS	03 14 11.0	+3.2
KWP	Kalwaria	85.12	20	eP	P	03 03 31.4	-0.1
KWP				epP	pP	03 03 36.2	-1.0
KWP				ePcP	PcP	03 03 38.9	+3.7
KWP				eS	ScS	03 14 11.0	+3.2
KWP				MLR	MLR	03 35 51.4	
	comp=Z,192µm,31.7s,MS7.3						
SOP	Sopron	85.12	25	⇓eP	P	03 03 33.2	+1.7
SOP	Sopron	85.12	25	⇓ePcP	PcP	03 03 33.2	-2.1
SSE	Sheshan	85.15	308	⇑P	P	03 03 33.3	+1.2
SSE				AP	pP	03 03 36.8	-1.0
SSE				PP	PP	03 06 48.8	-2.4
SSE				S	S	03 13 56.3	-3.2
SSE				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.6						
SSE				AMB	AMB		
	comp=Z,3µm,8.9s						
SSE				LR	LR		
	comp=N,74µm,24.5s,MS7.0						
SSE				LR	LR		
	comp=E,26µm,24.5s,MS7.0						
SSE				LR	LR		
	comp=Z,36µm,19.7s,MS6.8						
SSE	Sheshan	85.15	308	⇑P	P	03 03 33.3	+1.2
	comp=Z,64nm,1.2s,mb5.6						
SSE				pP	pP	03 03 36.8	-1.0
SSE				PP	PP	03 06 48.8	-2.4
SSE				S	S	03 13 56.3	-3.2
SSE				LR	LR		
	comp=Z,36µm,19.7s,MS6.8						
SBF	Sospel	85.16	32	eP	P	03 03 27.4	-4.4
	comp=Z,229nm,0.8s,mb6.1						
SBF	Sospel	85.16	32	eP	P	03 03 27.4	-4.4
SBF				pmax	pmax		
	comp=Z,115nm,0.8s,mb6.1						
ARSA	Arzberg	85.18	25	⇓iP	P	03 03 31.6	-0.2
	comp=Z,2µm,3.1s						
FIN	Finale Ligure	85.18	31	P	P	03 03 34.1	+2.2
BOB	Bobbio (Coli)	85.19	30	P	P	03 03 34.6	+2.7
BOB				pmax	pmax		
	comp=Z,2µm,3.4s						
BOB	Bobbio (Coli)	85.19	30	P	P	03 03 34.6	+2.7
	comp=Z,2µm,3.4s						
ELOJ	Sierra Loja	85.22	43	P	P	03 03 33.1	+0.8
ELOJ				pmax	pmax		
	comp=Z,196nm,1.4s,mb6.0						
ELOJ	Sierra Loja	85.22	43	P	P	03 03 33.1	+0.8
	comp=Z,196nm,1.4s,mb6.0						
LMR	La Mourre	85.23	33	eP	P	03 03 27.9	-4.2
	comp=Z,449nm,1.3s,mb6.1						
LMR	La Mourre	85.23	33	eP	P	03 03 27.9	-4.2
LMR				pmax	pmax		
	comp=Z,225nm,1.3s,mb6.1						
REVF	Revere	85.24	32	eP	P	03 03 34.0	+1.8
EQES	Quesada	85.27	42	P	P	03 03 37.2	+4.7
	comp=Z,2µm,3.5s						
LVV	L'vov	85.28	19	eP	P	03 03 31.2	-1.0
LVV				e		03 06 56.8	
LVV				ePPP	PPP	03 08 48.6	+0.6
LVV				eS	S	03 14 02.8	+2.6
LVV				ePS	PS	03 15 04.0	+4.3
LVV				eSS	SS	03 19 45.0	+6.9
LVV				eSSS	SSS	03 23 03.8	-2.5
LVV				MLR	MLR		
	comp=Z,144µm,23.0s,MS7.3						
LVV				MLR	MLR		
	comp=E,30µm,18.0s,MS7.2						
LVV				MLR	MLR		
	comp=N,93µm,20.0s,MS7.2						
NEGI	Negi	85.28	32	P	P	03 03 35.6	+3.2
IMI	Imperia	85.30	32	P	P	03 03 34.7	+2.2
GENL	Genova Univers	85.31	31	P	P	03 03 34.5	+1.9
EOSO	Osorio	85.35	56	⇓P	P	03 03 39.5	+6.3
	comp=N,5µm,3.9s						
EMIJ	Mijas	85.35	44	P	P	03 03 38.0	+5.0
	comp=N,3µm,4.7s						
RAO	Raoul Island	85.36	224	PFAKE		03 03 40.0	+6.8
RAO				LR	LR		
	comp=Z,80µm,22.0s,MS7.1						
ETOB	Tobarra	85.38	41	⇓P	P	03 03 38.1	+5.1
	comp=Z,5µm,5.4s						
ECOG	Cogollos-Vega	85.43	43	P	P	03 03 38.0	+4.7
ECOG				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.1						
ECOG	Cogollos-Vega	85.43	43	P	P	03 03 38.0	+4.7
	comp=Z,21nm,1.2s,mb5.1						
CADS	Cadrg	85.48	27	eP	P	03 03 32.0	-1.3
CADS				e		03 03 39.8	
ERON	Agron	85.50	43	P	P	03 03 38.1	+4.4
	comp=Z,146nm,1.3s,mb6.0						
OBKA	Obir	85.51	26	⇑iP	P	03 03 32.9	-0.6
	comp=Z,2µm,2.9s,mb6.8						
KECS	Kecovo	85.57	22	eP	P	03 03 33.9	+0.2
KECS				epP	pP	03 03 40.4	+0.9
PERS	Pernice	85.58	26	eP	P	03 03 32.9	-0.9
AKASG	Malin Array Be	85.62	16	P	P	03 03 31.3	-2.6
	comp=Z,12nm,0.7s,mb5.2,baz=338,slow=4.0,SNR=55						
AKASG				PKKPbc		03 21 37.8	
	comp=Z,1.1nm,0.7s,baz=133,slow=1.5,SNR=4.7						
AKASG				PKPPKP		03 29 41.6	
	comp=Z,0.4nm,0.5s,baz=166,slow=0.8,SNR=7.2						
KOLS	Kolonicke sedl	85.64	21	eP	P	03 03 33.9	-0.2
KOLS				epP	pP	03 03 38.8	-1.0
KOLS				esS		03 14 15.6	
GRAM		85.65	30	P	P	03 03 36.9	+2.7
VOY	Vojsko	85.70	27	eP	P	03 03 33.5	-0.9
VOY				e	pP	03 03 39.7	-0.5
RAVA	Ravarino	85.82	29	P	P	03 03 40.6	+5.5
NJ2	Nanjing	85.83	310	eP	P	03 03 35.5	+0.1
NJ2				AP	pP	03 03 40.9	-0.3
NJ2				XP	sP	03 03 42.4	-0.6
NJ2				SKS	SKS	03 13 59.0	-4.5
NJ2				S	S	03 14 07.0	+1.0
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,620nm,4.8s						
NJ2				LR	LR		
	comp=N,540µm,24.8s,MS8.0						
NJ2				LR	LR		
	comp=E,442µm,22.3s,MS8.0						
NJ2	Nanjing	85.83	310	eP	P	03 03 35.5	+0.1
	comp=E,20nm,0.6s,mb5.5						
NJ2				pP	pP	03 03 40.9	-0.3
NJ2				sP	sP	03 03 42.4	-0.6
NJ2				SKS	SKS	03 13 59.0	-4.5
NJ2				S	S	03 14 07.0	+1.0
BACM		85.84	30	P	P	03 03 37.4	+2.2
EFAM	Famara	85.85	54	P	P	03 03 42.0	+6.4
	comp=E,8µm,5.2s						
LJU	Ljubljana	85.91	27	eP	P	03 03 34.4	-1.1
LJU				e*PP	pP	03 03 42.5	+1.3
LJU				e		03 07 02.5	
LJU				eS	S	03 14 07.3	+0.9
LJU				eSS	SS	03 19 53.0	+5.4
LJU	Ljubljana	85.91	27	eP	P	03 03 34.4	-1.0
LJU				epP	pP	03 03 42.5	+1.3
LJU				e		03 06 22.3	
LJU				ePP	PP	03 07 02.5	+5.6
LJU				eS	S	03 14 07.2	+0.8
LJU				eSS	SS	03 19 53.0	+5.4
LJU				eSSS	SSS	03 24 12.3	+56
LJU				e		03 26 17.2	
LJU	Ljubljana	85.91	27	eP	P	03 03 34.4	-1.0
LJU				epP	pP	03 03 42.5	+1.3
LJU				e		03 06 22.3	
LJU				ePP	PP	03 07 02.5	+5.6
LJU				eS	S	03 14 07.2	+0.8
LJU				e		03 14 09.5	
LJU				e		03 15 10.8	
LJU				eSS	SS	03 19 53.0	+5.4
LJU				eSSS	SSS	03 24 12.3	+56
LJU				e		03 26 17.2	
PSZ	Piszkesteto	85.91	22	eP	P	03 03 34.8	-0.6
PSZ				pmax	pmax		
	comp=Z,639nm,1.8s,mb6.5						
PSZ	Piszkesteto	85.91	22	⇑ePcP	PcP	03 03 36.3	-2.4
UZH	Uzhgorod	85.93	21	eP	P	03 03 35.0	-0.5
UZH				eS	S	03 14 01.0	-5.5
UZH				MLR	MLR		
	comp=Z,18µm,23.0s,MS6.4						
PKSG		85.94	24	eP	P	03 03 37.1	+1.5
EBEN	Beniarda	85.97	40	P	P	03 03 41.3	+5.3
	comp=Z,2µm,2.9s,mb6.9						
VINC	Vinca	85.98	30	P	P	03 03 39.2	+3.3
CFTV	Fuerteventura	86.02	55	P	P	03 03 45.3	+8.8
	comp=Z,170nm,1.9s,mb6.0						
SARO	Sassorosso	86.04	30	P	P	03 03 38.6	+2.4
BUD	Budapest	86.05	23	eP	P	03 03 41.6	+5.5
BUD	Budapest	86.05	23	epP	pP	03 03 41.6	-0.3
VLC	Villacollemand	86.06	30	P	P	03 03 35.5	-0.8
	comp=Z,128nm,1.2s,mb6.0						
EBER	Berja	86.06	43	P	P	03 03 43.0	+6.5
	comp=Z,2µm,4.2s						
CEY	Cerknica	86.14	27	eP	P	03 03 35.4	-1.2
EMUR	La Murta	86.16	41	⇓P	P	03 03 41.7	+4.8
	comp=Z,2µm,3.4s						
LEGS	Legarje	86.25	26	eP	P	03 03 37.3	+0.1
LEGS				epP	pP	03 03 43.7	+0.7
VOR	Voronezh	86.26	9	P	P	03 03 35.0	-2.1
VOR				e		03 14 17.0	
VOR				pmax	pmax		
	comp=N,280nm,1.6s						
VOR				pmax	pmax		
	comp=E,100nm,1.6s						
VOR				pmax	pmax		
	comp=Z,650nm,1.6s,mb6.6						
MAIM		86.31	30	P	P	03 03 39.0	+1.5
FNVD	Fontana Vidola	86.33	30	P	P	03 03 43.2	+5.6
ENIJ	Nijar	86.35	42	P	P	03 03 43.5	+5.6
ENIJ				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.4						
ENIJ	Nijar	86.35	42	P	P	03 03 43.5	+5.6
	comp=Z,30nm,1.1s,mb5.4						
PKS8	Sarbogard	86.49	24	eP	P	03 03 37.6	-0.7
ETOS	Mallorca	86.55	37	P	P	03 03 44.0	+5.2
	comp=Z,1µm,3.0s						
PKS9	Tamasi	86.63	24	eP	P	03 03 42.3	+3.3
EALB	Alboran	86.73	43	P	P	03 03 45.1	+5.4
	comp=Z,5µm,8.0s						
VRSR	Storozhevoye	86.77	10	eP	P	03 03 37.4	-2.1
VRSR				e*PP	pP	03 03 39.4	-5.9
VRSR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.3						
VRSR				pmax	pmax		
	comp=E,4.0nm,0.5s						
VRSR				MLR	MLR		
	comp=Z,8µm,17.0s,MS6.2						
VRSR				MLR	MLR		
	comp=N,4µm,16.0s,MS6.1						
VRSR				MLR	MLR		
	comp=E,5µm,18.0s,MS6.1						
VRSR	Storozhevoye	86.77	10	eP	P	03 03 37.4	-2.1
	comp=E,20nm,1.0s,mb5.3						
VRSR				epP	pP	03 03 39.4	-5.9
VRSR				LR	LR		
	comp=Z,8µm,17.0s,MS6.2						
PGF	Pioggiola	86.89	32	eP	P	03 03 36.2	-4.2
	comp=Z,678nm,1.7s,mb6.3						
PGF	Pioggiola	86.89	32	eP	P	03 03 36.2	-4.2
PGF				pmax	pmax		
	comp=Z,339nm,1.7s,mb6.3						
RHK1	Bakonya	87.01	24	⇑eP	P	03 03 41.3	+0.4
SISC	Sisak	87.02	26	i P	P	03 03 41.0	0.0
PKSM	Moragy	87.08	24	P	P	03 03 41.7	+0.5
PKSM				⇓iP		03 03 45.0	
NVLJ	Novalja	87.32	27	⇓iP	P	03 03 46.6	+4.2
TLL	Tololo Astrono	87.38	135	eP	P	03 03 36.2	-6.8
TLL	Tololo Astrono	87.38	135	eP	P	03 03 39.4	-3.6
BURAR	Bucovina Array	87.62	19	⇑P	P	03 03 45.5	+1.7
BZS	Buzias	88.50	22	⇓P	P	03 03 46.7	-1.3
MKAR	Makanchi Array	88.71	341	i P	P	03 03 46.2	-2.8
MKAR				pmax	pmax		
	comp=Z,422nm,2.1s						
MKAR	Makanchi Array	88.71	341	P	P	03 03 45.8	-3.2
	comp=Z,0.9nm,0.6s,baz=18,slow=3.8,SNR=12						
MKAR				PKKPbc		03 21 31.9	
	comp=Z,0.6nm,0.6s,baz=243,slow=3.2,SNR=3.5						
MKAR				PKPPKP		03 29 36.1	
	comp=Z,0.4nm,0.6s,baz=153,slow=3.2,SNR=2.8						
AQU	L'Aquila	88.73	29	P	P	03 03 44.8	-4.4
AQU				pmax	pmax		
	comp=Z,64nm,1.0s,mb5.9						
AQU	L'Aquila	88.73	29	P	P	03 03 44.8	-4.4
	comp=Z,64nm,1.0s,mb5.9						
EBNR	Beni Rached	88.73	40	P	P	03 03 57.0	+7.6
ECHF	Ech Chlef	88.75	40	P	P	03 03 56.0	+6.5
ECHA	Ech Chlef	88.77	40	P	P	03 03 56.0	+6.4
EANR	'Ain N'Sour	88.80	41	P	P	03 03 54.0	+4.3
ABA	Alger-Bouzarea	89.04	39	P	P	03 03 58.5	+7.6
KIS	Kishinev	89.05	17	eP	P	03 03 51.0	+0.4
KIS				e		03 07 26.0	
KIS				e		03 14 22.0	
KIS				eS	S	03 14 40.0	+4.0
KIS				ePS	PS	03 15 40.0	-5.6
KIS				eSS	SS	03 20 33.0	+0.4
KIS				pmax	pmax		
	comp=Z,181nm,1.6s,mb6.2						

Code	Station	Dist	Azi	Phase	ISC phase	Time	Res
KIS				pmax	pmax		
	comp=Z,3μm,17.0s						
KIS				pmax	pmax		
	comp=Z,3μm,18.0s						
KIS				smax			
	comp=N,20μm,19.0s						
KIS				smax			
	comp=E,22μm,22.0s						
KIS				MLR	MLR		
	comp=Z,155μm,20.0s,MS7.4						
KIS				MLR	MLR		
	comp=N,78μm,19.0s,MS7.3						
KIS				MLR	MLR		
	comp=E,82μm,19.0s,MS7.3						
KIS				MLR	MLR		
	comp=Z,71μm,20.0s						
KIS	**Kishinev**	**89.05**	**17**	*e*P	**P**	**03 03 51.0**	**+0.4**
	comp=Z,181nm,1.6s,mb6.2						
KIS				*e*		03 07 26.0	
KIS				*e*		03 14 22.0	
KIS				*e*S	S	03 14 40.0	+4.0
KIS				*e*PS	PS	03 15 40.0	-5.6
KIS				*e*SS	SS	03 20 33.0	+0.4
KIS				LR	LR		
	comp=Z,155μm,20.0s,MS7.4						
DZM	**Mont Dzumac**	**89.13**	**239**	*e*P	**P**	**03 03 46.9**	**-4.7**
DZM	**Mont Dzumac**	**89.13**	**239**	P	**P**	**03 03 48.6**	**-3.0**
	comp=Z,17nm,1.1s,mb5.3,baz=102,slow=20,SNR=5.8						
DZM	**Mont Dzumac**	**89.13**	**239**	*e*P	**P**	**03 03 46.9**	**-4.7**
INTR	**Introdacqua**	**89.21**	**29**	P	**P**	**03 03 55.5**	**+4.0**
NOUC	**Port Laguerre**	**89.24**	**239**	*e*P	**P**	**03 03 54.6**	**+2.5**
ETRT	**Tiaret**	**89.34**	**41**	P	**P**	**03 03 55.0**	**+2.7**
TATO	**Taipei**	**89.36**	**303**	PFAKE		03 04 00.0	+7.4
TATO				LR	LR		
	comp=Z,97μm,22.0s,MS7.2						
DIVS	**Divcibare**	**89.40**	**24**	⇓*i*P	**P**	**03 03 51.4**	**-1.0**
BBLS	**Bajina Basta -**	**89.43**	**25**	⇑*i*P	**P**	**03 03 50.8**	**-1.7**
EMHD	**Djebel Mahouad**	**89.49**	**39**	P	**P**	**03 03 58.0**	**+5.0**
WHN	**Wuhan**	**89.51**	**312**	P	**P**	**03 03 49.3**	**-3.9**
WHN				S	S	03 14 38.0	-2.7
WHN				SS	SS	03 20 39.0	-1.1
WHN				LR	LR		
	comp=Z,89μm,20.9s,MS7.2						
GTA	**Gaotai**	**89.54**	**327**	*e*P	**P**	**03 03 50.3**	**-2.8**
GTA				AP	pP	03 03 54.3	-4.6
GTA				XP	sP	03 03 56.6	-4.2
GTA				PP	PP	03 07 27.9	+0.8
GTA				SKS	SKS	03 14 18.6	-8.4
GTA				S	S	03 14 41.5	+0.8
GTA				XS		03 14 49.5	
GTA				SS	SS	03 20 42.8	+2.5
GTA				AMB	AMB		
	comp=Z,2μm,7.3s						
GTA				LR	LR		
	comp=N,115μm,33.3s						
GTA				LR	LR		
	comp=E,167μm,27.9s						
GTA				LR	LR		
	comp=Z,109μm,26.0s						
AB31	**Akbulak array**	**89.55**	**356**	*i* P	**P**	**03 03 51.2**	**-1.7**
AB31				pmax	pmax		
	comp=Z,90nm,0.9s,mb6.1						
AB31	**Akbulak array**	**89.55**	**356**	*i* P	**P**	**03 03 51.2**	**-1.7**
	comp=Z,90nm,0.9s,mb6.1						
SVIS	**Svilajnac**	**89.59**	**23**	*e*P	**P**	**03 03 52.0**	**-1.3**
VOIR		**89.60**	**20**	⇓P	**P**	**03 03 53.1**	**-0.2**
CII	**Carovilli**	**89.61**	**29**	P	**P**	**03 03 51.0**	**-2.4**
	comp=Z,155nm,1.4s,mb6.1						
VSL	**Villasalto**	**89.62**	**33**	P	**P**	**03 03 50.0**	**-3.5**
	comp=Z,76nm,1.0s,mb6.0						
VRI	**Vrincioaia**	**89.62**	**19**	⇓P	**P**	**03 03 53.9**	**+0.5**
MIDA	**Miranda**	**89.66**	**29**	P	**P**	**03 03 58.3**	**+4.6**
XAN	**Xi’an**	**89.72**	**317**	P	**P**	**03 03 49.8**	**-4.3**
XAN				AMB	AMB		
	comp=Z,80nm,1.6s,mb5.8						
XAN				LR	LR		
	comp=N,51μm,27.5s,MS7.0						
XAN				LR	LR		
	comp=E,76μm,29.4s,MS7.0						
XAN				LR	LR		
	comp=Z,66μm,22.7s						
XAN	**Xi’an**	**89.72**	**317**	P	**P**	**03 03 49.8**	**-4.3**
	comp=Z,86nm,1.6s,mb5.8						
XAN				LR	LR		
	comp=Z,66μm,22.7s,MS7.0						
ADJB	**Djebel Djouab**	**89.75**	**39**	P	**P**	**03 04 03.4**	**+9.2**
STON	**Ston**	**89.77**	**26**	*i* P	**P**	**03 03 53.1**	**-1.0**
MLR	**Muntele Rosu**	**89.78**	**20**	P	**P**	**03 03 52.4**	**-1.8**
	comp=Z,0.8nm,0.3s,baz=151,slow=13,SNR=5.5						
MLR	**Muntele Rosu**	**89.78**	**20**	⇓*i*P	**P**	**03 03 54.5**	**+0.4**
CFAA	**Coronel Fontan**	**89.87**	**134**	P	**P**	**03 03 53.5**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=298,slow=3.7,SNR=3.6						
NACB	**Ninganchiao**	**89.87**	**303**	P	**P**	**03 03 49.3**	**-5.7**
WMQ	**Urumqi**	**90.00**	**337**	P	**P**	**03 03 53.6**	**-1.6**
WMQ				AP	pP	03 03 58.4	-2.5
WMQ				XP	sP	03 03 59.6	-3.2
WMQ				PP	PP	03 07 29.0	-1.7
WMQ				SS	SS	03 20 45.7	-1.3
WMQ				LR	LR		
	comp=N,90μm,22.0s,MS7.3						
WMQ				LR	LR		
	comp=E,109μm,24.0s,MS7.3						
WMQ				LR	LR		
	comp=Z,68μm,24.0s,MS7.0						
CLCH	**Cerro Calan**	**90.05**	**137**	*e*P	**P**	**03 03 56.2**	**+0.6**
BOLS	**Boljevac**	**90.23**	**23**	⇑*i*P	**P**	**03 03 56.4**	**+0.2**
JATB	**Jatai**	**90.30**	**114**	*e*P	**P**	**03 03 58.8**	**+1.7**
JATB				*e*		03 04 02.3	
JATB				*e*	pP	03 04 05.6	+2.7
JATB				*i*		03 04 08.3	
JATB				*i*		03 04 24.8	
JATB				*e*		03 06 01.7	
MDZ	**Mendoza**	**90.53**	**135**	PKP	**P**	**03 03 47.9**	**-10**
LZH	**Lanzhou**	**90.54**	**322**	⇑P	**P**	**03 03 59.8**	**+2.0**
LZH				AP	pP	03 04 03.8	+0.2
LZH				XP	sP	03 04 05.3	-0.2
LZH				PP	PP	03 07 36.0	+0.8
LZH				S	S	03 14 50.5	+0.7
LZH				SS	SS	03 20 55.0	+0.2
LZH				AMB	AMB		
	comp=Z,310nm,1.4s,mb6.5						
LZH				AMB	AMB		
	comp=Z,2μm,4.5s						
LZH				LR	LR		
	comp=E,100μm,19.5s						
LZH				LR	LR		
	comp=Z,136μm,20.0s,MS7.4						
LZH	**Lanzhou**	**90.54**	**322**	⇑P	**P**	**03 03 59.8**	**+2.0**
	comp=Z,310nm,1.4s,mb6.5						
LZH				pP	pP	03 04 03.8	+0.2
LZH				sP	sP	03 04 05.3	-0.2
LZH				PP	PP	03 07 36.0	+0.8
LZH				S	S	03 14 50.5	+0.7
LZH				SS	SS	03 20 55.0	+0.2
LZH				LR	LR		
	comp=Z,136μm,20.0s,MS7.4						
DFRA	**Djebel Bou Aff**	**90.57**	**37**	P	**P**	**03 04 09.0**	**+11**
MRLC	**Muro Lucano**	**90.89**	**29**	P	**P**	**03 03 58.8**	**-0.5**
ZAPS	**Zavoj/Pirot**	**90.91**	**23**	⇓*i*P	**P**	**03 03 59.1**	**-0.3**
CKFL	**Kef-Lekhel**	**91.07**	**37**	P	**P**	**03 04 08.0**	**+7.7**
CASM	**Ain Smara**	**91.08**	**37**	P	**P**	**03 04 08.0**	**+7.7**
QZH	**Quanzhou**	**91.19**	**305**	⇑*i*P	**P**	**03 04 02.0**	**+0.9**
QZH				AMB	AMB		
	comp=Z,4μm,8.0s						
QZH				LR	LR		
	comp=N,281μm,27.9s						
QZH				LR	LR		
	comp=E,60μm,21.6s						
QZH				LR	LR		
	comp=Z,182μm,40.5s						
BDFB	**Brasilia**	**91.19**	**110**	P	**P**	**03 04 00.0**	**-1.2**
	comp=Z,1.3nm,0.4s,baz=274,slow=12,SNR=2.7						
BAO	**Brasilia Array**	**91.20**	**110**	P	**P**	**03 04 06.2**	**+4.9**
SLCN	**Sala Consilina**	**91.26**	**29**	P	**P**	**03 04 00.7**	**-0.4**
CS6B	**Jaguaretama**	**91.28**	**96**	*ce*P	**P**	**03 04 04.2**	**+2.4**
CS6B				*i*	pP	03 04 09.3	+1.8
CS6B				*e*		03 04 18.8	
CS6B				*i*		03 04 30.6	
CS6B				*e*		03 04 50.0	
CS6B				*i*		03 07 37.0	
CS6B				*e*		03 09 06.7	
CMER	**Merouana**	**91.34**	**38**	P	**P**	**03 04 07.0**	**+5.5**
TIRR	**Tirgusor**	**91.35**	**18**	⇓P	**P**	**03 04 00.6**	**-0.8**
LTRZ	**Laterza**	**91.49**	**28**	P	**P**	**03 04 05.3**	**+3.2**
SKO	**Skopje**	**91.77**	**24**	⇑*i*P	**P**	**03 04 07.5**	**+4.1**
SKO				*i* PP	PP	03 07 46.0	+1.1
SKO				*i*		03 08 06.6	
SKO	**Skopje**	**91.77**	**24**	⇓*i*P	**P**	**03 04 07.5**	**+4.1**
SKO				*i* PP	PP	03 07 46.0	+1.1
SKO				*i*		03 08 06.6	
SIM	**Simferopol’**	**92.09**	**14**	⇓*e*P	**P**	**03 04 05.6**	**+0.9**
SIM				*e*		03 07 49.7	
SIM						03 14 40.0	
SIM				PS	PS	03 16 24.5	+3.4
SIM				pmax	pmax		
	comp=Z,5μm,16.0s						
SIM	**Simferopol’**	**92.09**	**14**	⇓*e*P	**P**	**03 04 05.6**	**+0.9**
SIM				*e*		03 07 49.7	
SIM				*e*		03 14 40.0	
SIM				PS	PS	03 16 24.5	+3.4
CPUP	**Villa Florida**	**92.35**	**123**	P	**P**	**03 04 04.7**	**-1.7**
	comp=Z,2.5nm,1.0s,baz=337,slow=5.5,SNR=3.8						
CPUP				LR	LR	03 51 09.8	
	comp=Z,30μm,20.3s,MS6.7,baz=348,slow=39						
CPUP	**Villa Florida**	**92.35**	**123**	*e*P	**P**	**03 04 04.0**	**-2.4**
	comp=Z,66nm,1.3s,mb5.8						
CPUP				LR	LR		
	comp=Z,30μm,19.0s,MS6.8						
OHR	**Ohrid**	**92.36**	**25**	⇑*i*P	**P**	**03 04 09.8**	**+3.7**
OHR	**Ohrid**	**92.36**	**25**	⇓*i*P	**P**	**03 04 09.8**	**+3.7**
ENH	**Enshi**	**92.39**	**315**	*e*P	**P**	**03 04 05.4**	**-1.1**
	comp=Z,127nm,1.1s,mb6.2						
VAY	**Valandovo**	**92.71**	**23**	⇑*i*P	**P**	**03 04 12.3**	**+4.6**
VAY				*i* PP	PP	03 07 54.3	+1.9
VAY				*i* S	S	03 15 21.7	+13
VAY				*i* PS	PS	03 16 33.1	+5.0
VAY	**Valandovo**	**92.71**	**23**	⇓*i*P	**P**	**03 04 12.3**	**+4.6**
VAY				*i* PP	PP	03 07 54.3	+1.9
VAY				*i* S	S	03 15 21.7	+13
VAY				*i* PS	PS	03 16 33.1	+5.0
TIP	**Timpagrande**	**92.73**	**28**	*e*P	**P**	**03 04 05.5**	**-2.4**
ANN	**Anapa**	**92.80**	**12**	*d* *i*P	**P**	**03 04 09.7**	**+1.7**
ANN				*i* *PP	pP	03 04 13.5	-0.3
ANN				*i*		03 07 49.3	
ANN				*i* PPP	PPP	03 09 46.2	-8.6
ANN				*e*		03 14 44.6	
ANN				pmax	pmax		
	comp=Z,3μm,19.1s						
ANN				MLR	MLR		
	comp=N,101μm,21.0s,MS7.3						
ANN				MLR	MLR		
	comp=E,44μm,21.0s,MS7.3						
ANN				MLR	MLR		
	comp=Z,110μm,21.0s,MS7.3						
ANN	**Anapa**	**92.80**	**12**	*i* Pr		03 04 09.7	
ANN				*i* pP	pP	03 04 13.5	-0.3
ANN				*i*		03 07 49.3	
ANN				*i* PPP	PPP	03 09 46.2	-8.6
ANN				*e*		03 14 44.6	
ANN				LR	LR		
	comp=Z,110μm,21.0s,MS7.3						
FNA	**Florina**	**92.84**	**24**	*e*P	**P**	**03 04 07.9**	**-0.4**
GRG	**Griva**	**92.99**	**24**	*e*P	**P**	**03 04 09.5**	**+0.4**
SRS	**Serrai**	**93.20**	**23**	*e*P	**P**	**03 04 08.2**	**-1.7**
AAA	**Alma-Ata**	**93.26**	**344**	*e*P	**P**	**03 04 22.0**	**+12**
AAA				*i* S		03 14 44.0	
AAA				*i* SS	SS	03 21 45.0	+11
AAA				pmax	pmax		
	comp=Z,2μm,10.0s						
AAA				MLR	MLR		
	comp=Z,28μm,18.0s,MS6.8						
GOF	**Gofitskoye**	**93.28**	**8**	⇑*i*P	**P**	**03 04 10.0**	**-0.2**
GOF				pmax	pmax		
	comp=Z,150nm,1.3s,mb6.3						
GOF	**Gofitskoye**	**93.28**	**8**	⇑*i*P	**P**	**03 04 10.0**	**-0.2**
	comp=Z,150nm,1.3s,mb6.3						
KEK	**Kerkira**	**93.30**	**26**	*e*P	**P**	**03 04 15.3**	**+4.8**
KZN	**Kozani**	**93.39**	**24**	*e*P	**P**	**03 04 15.5**	**+4.6**
SOH	**Sokhos**	**93.40**	**23**	*e*P	**P**	**03 04 10.6**	**-0.3**
THE	**Thessaloniki**	**93.46**	**23**	*e*P	**P**	**03 04 11.3**	**+0.2**
RCBR	**Riachuelo**	**93.58**	**95**	PFAKE		03 04 20.0	+7.7
RCBR				LR	LR		
	comp=Z,68μm,20.0s,MS7.1						
IGT	**Igoumenitsa**	**93.64**	**26**	*e*P	**P**	**03 04 14.4**	**+2.4**
JAN	**Janina**	**93.69**	**25**	*e*P	**P**	**03 04 16.6**	**+4.3**
MEV	**Metsovon**	**93.70**	**25**	*e*P	**P**	**03 04 12.7**	**+0.4**
RDO	**Rodhopi**	**93.72**	**21**	*e*P	**P**	**03 04 16.1**	**+3.7**
LIT	**Litokhoron**	**93.80**	**24**	*e*P	**P**	**03 04 15.0**	**+2.2**
PLG	**Polygyros**	**93.84**	**23**	*e*P	**P**	**03 04 16.7**	**+3.8**
ALN	**Alexandroupoli**	**94.09**	**21**	*e*P	**P**	**03 04 14.1**	**0.0**
PMG	**Port Moresby**	**94.10**	**261**	P	**P**	**03 04 09.5**	**-5.2**
PMG				pmax	pmax		
	comp=Z,176nm,1.9s						
PMG	**Port Moresby**	**94.10**	**261**	P	**P**	**03 04 13.2**	**-1.5**
	comp=Z,2.8nm,0.3s,mb5.2,baz=315,slow=4.3,SNR=2.5						
PMG	**Port Moresby**	**94.10**	**261**	P	**P**	**03 04 09.5**	**-5.2**
	comp=Z,176nm,1.9s,mb6.2						
FRU	**Bishkek**	**94.15**	**345**	*e*P	**P**	**03 04 14.0**	**-0.3**
FRU				*i*	pP	03 04 20.0	0.0
PAIG	**Paliouri**	**94.32**	**23**	*e*P	**P**	**03 04 13.3**	**-1.8**
SOC	**Sochi**	**94.33**	**11**	*d* *i*P	**P**	**03 04 18.6**	**+3.5**
SOC				*e*S		03 14 52.9	
SOC				*e*		03 15 26.1	
SOC				*e*PS	PS	03 16 42.6	-3.2
SOC				*e*SS	SS	03 21 48.9	+0.3
SOC				pmax	pmax		
	comp=Z,432nm,2.6s,mb6.4						
SOC				pmax	pmax		
	comp=Z,111nm,1.9s,mb6.0						
SOC				pmax	pmax		
	comp=N,64nm,2.6s						
SOC				pmax	pmax		
	comp=E,33nm,1.7s						
SOC	**Sochi**	**94.33**	**11**	*i* Pr	**P**	**03 04 18.6**	**+3.5**
	comp=E,111nm,1.9s,mb6.0						
SOC				*e*S		03 14 52.9	
SOC				*e*		03 15 26.1	
SOC				*e*PS	PS	03 16 42.6	-3.2
SOC				*e*SS	SS	03 21 48.9	+0.3
KIV	**Kislovodsk**	**94.33**	**8**	*e*P	**P**	**03 04 13.7**	**-1.4**
KIV				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.8						
KIV	**Kislovodsk**	**94.33**	**8**	*e*P	**P**	**03 04 13.7**	**-1.4**
	comp=Z,48nm,1.1s,mb5.8						
AAK	**Ala-Archa**	**94.36**	**345**	⇓*i*P	**P**	**03 04 12.0**	**-3.3**
AAK				MLR	MLR		
	comp=Z,15μm,20.0s,MS6.5						
KKAR	**Karatay Array**	**94.59**	**348**	*i* P	**P**	**03 04 20.5**	**+4.2**
KKAR				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.3						
KKAR	**Karatay Array**	**94.59**	**348**	*i* P	**P**	**03 04 20.5**	**+4.2**
	comp=Z,11nm,0.8s,mb5.3						
EVR	**Evrytania**	**94.67**	**25**	*e*P	**P**	**03 04 21.3**	**+4.5**
XOR	**Xorichti**	**94.69**	**24**	*e*P	**P**	**03 04 17.0**	**+0.1**
LOS	**Limnos**	**94.72**	**22**	*e*P	**P**	**03 04 20.0**	**+3.0**
AGG	**Agios Georgios**	**94.74**	**25**	*e*P	**P**	**03 04 18.1**	**+1.0**
NEO	**Neokhori**	**94.76**	**24**	*e*P	**P**	**03 04 21.6**	**+4.4**
CD2	**Chengdu**	**94.81**	**319**	P	**P**	**03 04 20.3**	**+2.7**
CD2				PP	PP	03 08 09.1	+0.4
CD2				SKS	SKS	03 14 53.9	-3.4
CD2				S	S	03 15 32.3	+5.0
CD2				XS		03 15 34.1	
CD2				AMB	AMB		
	comp=Z,2μm,10.2s						
CD2				LR	LR		
	comp=N,42μm,18.0s						
CD2				LR	LR		
	comp=Z,126μm,21.6s,MS7.3						
VLS	**Valsamata**	**94.95**	**26**	*e*P	**P**	**03 04 20.7**	**+2.6**
CAUB	**Caruaru**	**95.03**	**96**	*c* *i*P	**P**	**03 04 28.4**	**+9.4**
CAUB				*e*	pP	03 04 35.7	+11
CAUB				*i*		03 04 49.5	
CAUB				*e*		03 05 37.3	
CAUB				*i*		03 08 17.4	
CAUB				*e*		03 08 50.3	
CAUB				*e*		03 10 02.5	
AOS	**Alonnisos**	**95.08**	**23**	*e*P	**P**	**03 04 20.1**	**+1.4**
BALT	**Daday**	**95.23**	**16**	*i* P	**P**	**03 04 19.1**	**-0.2**
LKR	**Lokris**	**95.29**	**24**	*e*P	**P**	**03 04 23.5**	**+3.9**
RLS	**Riolos of Patr**	**95.35**	**26**	*e*P	**P**	**03 04 22.4**	**+2.5**
ULDT	**Uludag**	**95.61**	**19**	*i* P	**P**	**03 04 19.9**	**-1.1**
ZEI	**Tsey**	**95.63**	**8**	*e*P	**P**	**03 04 27.3**	**+6.2**
ZEI				*i* *PP	pP	03 04 33.9	+7.0
ZEI				*i*		03 08 09.0	
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.1						
PRK	**Paraskevi**	**95.70**	**22**	*e*P	**P**	**03 04 20.1**	**-1.4**
MAK	**Makhachkala**	**95.75**	**5**	*c* *i*P	**P**	**03 04 25.8**	**+4.2**
MAK				pmax	pmax		
	comp=Z,1μm,7.0s						
MAK	**Makhachkala**	**95.75**	**5**	⇑*i*P	**P**	**03 04 25.8**	**+4.2**
GZH	**Guangzhou**	**95.75**	**308**	P	**P**	**03 04 19.4**	**-2.7**
GZH				LR	LR		
	comp=N,28μm,21.2s,MS7.2						
GZH				LR	LR		
	comp=E,74μm,21.8s,MS7.2						
GZH				LR	LR		
	comp=Z,48μm,23.9s,MS6.9						
ONI	**Oni**	**95.77**	**8**	P	**P**	**03 04 23.0**	**+1.2**
PLCA	**Paso Flores**	**95.81**	**141**	P	**P**	**03 04 21.9**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=349,slow=8.5,SNR=2.6						
PLCA				LR	LR	03 37 43.9	
	comp=Z,47μm,21.1s,MS6.9,baz=138,slow=29						
HKC	**Hong Kong**	**95.84**	**306**	⇑*i*P	**P**	**03 04 26.0**	**+3.4**
HKC				S		03 15 04.0	
SGKT	**Sivrigoynuk**	**95.88**	**17**	*i* P	**P**	**03 04 25.1**	**+2.8**
MPAR	**Parnis Oros**	**95.97**	**24**	*e*P	**P**	**03 04 23.0**	**+0.2**
MGER	**Gerania Oros**	**95.98**	**24**	*e*P	**P**	**03 04 22.0**	**-0.8**
NSAL	**Nisos Salamina**	**96.12**	**24**	*e*P	**P**	**03 04 20.5**	**-2.9**
ATH	**Athens Observa**	**96.13**	**24**	*e*P	**P**	**03 04 23.6**	**+0.1**
ELDT	**Eldivan**	**96.25**	**16**	*i* P	**P**	**03 04 25.7**	**+1.7**
NAIG	**Nisos Aigina**	**96.26**	**24**	*e*P	**P**	**03 04 23.5**	**-0.6**
ITM	**Ithomi**	**96.30**	**26**	*e*P	**P**	**03 04 26.5**	**+2.2**
GDZ	**Gediz**	**96.69**	**19**	*i* P	**P**	**03 04 28.4**	**+2.5**
TI2	**Plekhanov**	**96.74**	**7**	*i* P	**P**	**03 04 20.4**	**-5.8**
TBLG	**Delisi**	**96.74**	**7**	*i* P	**P**	**03 04 20.4**	**-5.8**
TBLG	**Delisi**	**96.74**	**7**	P	**P**	**03 04 32.7**	**+6.5**
MTA	**Mtatsminda**	**96.78**	**7**	P	**P**	**03 04 29.8**	**+3.4**
MTA				S	PP	03 08 22.9	-1.1
GYA	**Guiyang**	**96.91**	**314**	⇑*i*P	**P**	**03 04 30.1**	**+2.8**
GYA				SKS	SKS	03 15 05.6	-3.0
GYA				AMB	AMB		
	comp=Z,90nm,1.0s,mb6.2						
GYA				AMB	AMB		
	comp=Z,2μm,8.7s						
GYA				LR	LR		
	comp=N,31μm,23.6s,MS7.0						
GYA				LR	LR		
	comp=E,53μm,20.0s,MS7.0						
GYA				LR	LR		
	comp=Z,49μm,19.7s,MS7.0						
GYA	**Guiyang**	**96.91**	**314**	⇑*i*P	**P**	**03 04 30.1**	**+2.8**
	comp=Z,90nm,1.0s,mb6.2						
GYA				SKS	SKS	03 15 05.6	-3.0
GYA				LR	LR		
	comp=Z,49μm,19.7s,MS7.0						
BR131	**Keskin Array S**	**97.03**	**16**	P	**P**	**03 04 25.2**	**-2.3**
	comp=Z,12nm,1.0s,mb5.3						
VLI	**Veliai**	**97.04**	**25**	*e*P	**P**	**03 04 31.4**	**+3.8**
KSH	**Kashi**	**97.06**	**343**	*e*P	**P**	**03 04 29.3**	**+1.6**
KSH				*e*AP	pP	03 04 36.1	+2.6
KSH				*e*XP	sP	03 04 39.1	+3.8
KSH				*e*PP	PP	03 08 30.3	+4.0
KSH				*e*S	S	03 15 50.3	+4.2
KSH				*e*XS		03 16 04.1	
KSH				AMB	AMB		
	comp=Z,330nm,5.7s						
KSH				LR	LR		
	comp=N,48μm,14.6s,MS7.2						
KSH				LR	LR		
	comp=E,34μm,14.1s,MS7.2						
DGRG	**David-gareji**	**97.08**	**7**	P	**P**	**03 04 29.2**	**+1.5**
CDAG	**Cicekdag**	**97.27**	**15**	*i* P	**P**	**03 04 30.3**	**+1.7**
KYTH	**Kithira**	**97.48**	**25**	*e*P	**P**	**03 04 33.5**	**+3.9**
KDHN	**Kadinhani**	**97.85**	**17**	*i* P	**P**	**03 04 34.1**	**+2.9**
TRQA	**Tornquist**	**98.10**	**134**	PFAKE		03 04 40.0	+7.6
TRQA				LR	LR		
	comp=Z,49μm,19.0s,MS7.0						
SANT	**Santorini**	**98.14**	**23**	P	**P**	**03 04 30.0**	**-2.6**
	comp=Z,116nm,1.1s,mb6.3						
AVNT	**Avonos**	**98.19**	**15**	*i* P	**P**	**03 04 39.2**	**+6.5**
GNI	**Garni**	**98.31**	**7**	⇑*i*P	**P**	**03 04 31.5**	**-1.8**
GNI				pmax	pmax		
	comp=Z,5.0nm,1.5s						
GNI				MLR	MLR		
	comp=Z,48μm,20.0s						
GNI	**Garni**	**98.31**	**7**	⇑*i*P	**P**	**03 04 31.5**	**-1.8**
	comp=Z,5.0nm,1.5s,mb4.8						
GNI				LR	LR		
	comp=Z,48μm,20.0s,MS7.0						
GOLH	**Golhisar**	**98.46**	**20**	*i* P	**P**	**03 04 34.1**	**+0.1**
SNZO	**South Karori**	**98.51**	**221**	PFAKE		03 04 40.0	+5.9
SNZO				LR	LR		
	comp=Z,129μm,20.0s,MS7.4						
VAM	**Vamos**	**98.65**	**25**	*e*P	**P**	**03 04 31.1**	**-3.8**
DAV	**Davao City (W)**	**99.22**	**288**	*e*P	**P**	**03 04 40.0**	**+2.0**
ERMK	**Ermenek**	**99.83**	**17**	*i* P	**P**	**03 04 42.8**	**+2.5**
KMI	**Kunming**	**100.06**	**317**	P	P	03 04 42.9	+1.3
KMI				PP	PP	03 08 47.4	-2.2
KMI				SKS	SKS	03 15 18.8	-5.8
KMI				AMB	AMB		
	comp=Z,800nm,13.9s						
KMI				LR	LR		
	comp=N,73μm,26.0s,MS7.1						
KMI				LR	LR		
	comp=E,43μm,30.4s,MS7.1						
KMI				LR	LR		
	comp=Z,99μm,41.3s						
KMI	**Kunming**	**100.06**	**317**	P	P	03 04 42.9	+1.3
KMI						03 08 47.4	
KMI				PPP	PPP	03 10 57.8	-0.9
KMI						03 15 18.7	
KMI				S	S	03 16 10.1	-1.6
KMI				*SS		03 16 16.1	
KMI				SS	SS	03 23 05.3	-4.0
KMI				SSS	SSS	03 26 54.7	-4.8
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
QIZ	**Qiongzhong**	**100.94**	**307**	P	P	03 04 45.3	-0.4
QIZ				PP	PP	03 08 54.8	-2.0
QIZ				SKS	SKS	03 15 22.8	-6.2
QIZ				S	S	03 16 19.9	+0.7
QIZ				XS		03 16 33.5	
QIZ				SS	SS	03 23 20.6	-1.2
QIZ				LR	LR		
	comp=N,54μm,29.4s,MS6.9						
QIZ				LR	LR		
	comp=E,27μm,29.9s,MS6.9						
QIZ				LR	LR		
	comp=Z,77μm,36.5s						
LSA	**Lhasa**	**101.49**	**328**	P	P	03 04 52.6	+4.7
LSA				S	S	03 16 30.1	+6.6
LSA				LR	LR		
	comp=N,95μm,47.5s,MS7.3						
LSA				LR	LR		
	comp=E,200μm,47.5s,MS7.3						
LSA				LR	LR		
	comp=Z,50μm,53.8s						
CSS	**Prodhromos**	**101.53**	**18**	*e*Pdif	P	03 04 47.1	-0.9
	comp=Z,40nm,1.3s						
CTA	**Charters Tower**	**101.68**	**254**	P	P	03 04 44.4	-4.6
	comp=Z,0.8nm,0.4s,baz=55,slow=2.8,SNR=3.3						
CTAO	**Charters Tower**	**101.68**	**254**	*e*P	P	03 04 43.8	-5.2
CTAO				pmax	pmax		
	comp=Z,18nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,116μm,20.0s,MS7.4						
CTAO	**Charters Tower**	**101.68**	**254**	*e*Pdif	P	03 04 43.8	-5.2
	comp=Z,18nm,1.4s						
CTAO				LR	LR		
	comp=Z,116μm,20.0s,MS7.4						
BHL	**Bhannes**	**103.06**	**16**	*e*P	Pdif	03 04 41.3	-14
SHL	**Shillong**	**104.83**	**325**	*e*x	x	03 05 08.0	
SHL				*e*PP	PP	03 09 22.0	-3.7
ASF	**Jabal al Asfar**	**104.98**	**15**	Pdiff	Pdif	03 05 03.6	+0.3
	comp=Z,1.2nm,0.5s,baz=197,slow=6.9,SNR=3.7						
NDI	**New Delhi**	**107.10**	**339**	*i* PP	PP	03 09 38.9	-3.9
KAKA	**Kakadu**	**107.24**	**268**	*e*P	Pdif	03 05 14.4	+0.8
	comp=Z,17nm,1.1s						
KAKA				*e*PKIKP		03 09 06.7	
CMAR	**Chiang Mai Arr**	**107.53**	**316**	Pdiff	Pdif	03 05 19.2	+4.4
	comp=Z,0.8nm,0.4s,baz=18,slow=2.9,SNR=2.8						
CMAR				PP	PP	03 09 34.1	-12
	comp=Z,3.9nm,0.8s,baz=316,slow=1.6,SNR=6.8						
DBIC	**Dimbokro**	**107.79**	**64**	Pdiff	Pdif	03 05 24.8	+8.7
DBIC				SKSac		03 16 06.9	
DBIC				PS	PS	03 19 12.6	+6.3
DBIC	**Dimbokro**	**107.79**	**64**	PFAKE		03 09 30.0	
DBIC				LR	LR		
	comp=Z,105μm,19.0s,MS7.4						
BOK	**Bokaro**	**108.83**	**330**	*e*P	Pdif	03 05 20.4	-0.1

BOK				*i* x	x	03 09 53.2	
BOK				AMS	AMS	03 21 59.2	
	comp=Z,4µm,16.5s,MS6.0						
BOK				*e*x	x	03 25 10.8	
WRAB	**Tennant Creek**	**110.31**	**261**	PFAKE		03 09 40.0	+9.3
WRAB				LR	LR		
	comp=Z,50µm,22.0s,MS7.0						
WB2	**Warramunga Arr**	**110.31**	**261**	*e*P	Pdif	03 05 22.1	-4.9
WB2				*e*PKIKP	PKPdf	03 09 30.8	+0.1
WB2				*e*SKS	SKS	03 16 04.4	-6.5
WB2				*e*PS	PS	03 19 26.6	-3.8
WRA	**Warramunga Arr**	**110.32**	**261**	Pdiff	Pdif	03 05 30.2	+3.2
	comp=Z,1.8nm,1.1s,baz=43,slow=5.2,SNR=9.1						
WRA				PKiKP		03 09 26.9	
	comp=Z,3.8nm,0.9s,baz=46,slow=1.8,SNR=14						
WRA				PP	PP	03 09 59.7	-6.8
	comp=Z,5.0nm,0.9s,baz=52,slow=7.9,SNR=6.7						
BLSP	**Bilaspur**	**111.72**	**332**	*i* x	x	03 05 44.5	
BLSP				*i* PP	PP	03 10 13.1	-3.2
BWNR	**Bhubaneshwar**	**112.03**	**328**	*i* PP	PP	03 10 14.7	-3.7
STKA	**Stephens Creek**	**112.21**	**247**	*e*PKIKP	PKPdf	03 09 34.4	+0.3
	comp=Z,5.4nm,0.9s						
STKA				*e*SDIFF		03 18 07.4	
STKA				*e*PS	PS	03 19 49.0	+0.9
STKA				*e*SS	SS	03 25 56.5	+2.2
STKA	**Stephens Creek**	**112.21**	**247**	PKiKP		03 09 30.4	
	comp=Z,5.8nm,0.9s,baz=197,slow=3.2,SNR=5.3						
STKA	**Stephens Creek**	**112.21**	**247**	PKPdf	PKPdf	03 09 30.4	-3.7
STKA				*e*PKPdf	PKPdf	03 09 34.4	+0.3
STKA				*e*Sdif		03 18 07.4	
STKA				*e*PS	PS	03 19 49.0	+0.9
STKA				*e*SS	SS	03 25 56.5	+2.2
TOO	**Toolangi**	**112.90**	**240**	*e*PKIKP	PP	03 10 24.5	-0.6
	comp=Z,19nm,1.2s						
TOO				*e*SS	SS	03 26 07.9	+4.1
BANOM	**Banah**	**112.95**	**358**	⇑P	PP	03 10 18.2	-7.6
BANOM				⇓S	PS	03 20 00.4	+4.8
ASHO	**Ashiyiah**	**114.19**	**358**	⇑P	PP	03 10 21.1	-13
ASHO				⇑S	PS	03 20 12.2	+5.2
AKL	**Akola**	**114.71**	**337**	*e*P	PKPdf	03 09 31.3	-7.9
TAU	**Tasmania Unive**	**114.79**	**234**	PFAKE		03 09 40.0	+1.1
TAU				LR	LR		
	comp=Z,22µm,21.0s,MS6.7						
HOQ	**Hoqain**	**115.25**	**357**	⇑P	PP	03 10 32.8	-9.1
VIS	**Vishakhapatnam**	**115.32**	**329**	*e*x	x	03 05 49.2	
VIS				*i* PP	PP	03 10 36.6	-6.0
VIS				AMS	AMS	03 21 29.4	
	comp=Z,5µm,18.7s,MS6.2						
ARQ	**Araqi**	**115.52**	**358**	⇓P	PP	03 10 31.4	-12
FITZ	**Fitzroy Crossi**	**115.71**	**268**	*e*PKIKP	PKPdf	03 09 40.0	-1.3
	comp=Z,10nm,0.8s						
FITZ				*e*SKKS		03 17 41.5	
FITZ				*e*PS	PS	03 20 21.1	-0.5
FITZ				*e*SS	SS	03 26 49.2	+8.4
FITZ	**Fitzroy Crossi**	**115.71**	**268**	PKP	PKPdf	03 09 38.0	-3.3
	comp=Z,11nm,0.8s,baz=47,slow=2.0,SNR=4.9						
PMSA	**Palmer Station**	**116.25**	**155**	PFAKE		03 09 50.0	+8.7
PMSA				LR	LR		
	comp=Z,103µm,22.0s,MS7.4						
PBA	**Port Blair**	**116.45**	**317**	*i* PP	PP	03 10 46.4	-4.1
HYB	**Hyderabad**	**117.31**	**334**	*e*P	Pdif	03 06 00.0	+2.1
HYB				*e*		03 10 53.0	
HYB				*e*PS	PS	03 20 40.0	+3.9
HYB	**Hyderabad**	**117.31**	**334**	*e*Pdif	Pdif	03 06 00.0	+2.1
HYB				*e*PKP	PKPdf	03 09 59.0	+15
HYB				*e*PP	PP	03 10 53.0	-3.4
HYB				*e*SKS		03 18 40.0	
HYB				*e*PS	PS	03 20 40.0	+3.9
HYB				*e*PKKP	PKKP	03 20 48.0	+21
HYB	**Hyderabad**	**117.31**	**334**	*i* Pdiff	Pdif	03 06 00.0	+2.1
HYB				*e*PKP	PKPdf	03 09 42.0	-2.4
HYB				*e*PP	PP	03 10 55.0	-1.4
HYB				*e*SKS		03 18 40.0	
HYB				*e*PS	PS	03 20 30.0	-6.1
HYB				*e*PKKP	PKKP	03 20 48.0	+21
HYB				LR	LR	03 52 40.0	
	comp=Z,81nm,28.0s						
BOM	**Bombay**	**117.59**	**340**	*i* PP	PP	03 10 55.3	-3.1
MBWA	**Marble Bar**	**121.98**	**269**	*e*PKP	PKPdf	03 09 48.0	-5.4
MBWA				LR	LR		
	comp=Z,102µm,20.0s,MS7.5						
MNGI	**Mangalore**	**122.70**	**336**	*i* PP	PP	03 11 29.4	-3.8
SBA	**Scott Base**	**125.73**	**194**	*e*PKIKP	PKPdf	03 09 53.0	-6.2
SBA				MLR	MLR		
	comp=Z,75µm,22.0s,MS7.3						
PALK	**Pallekele**	**125.86**	**327**	PFAKE		03 10 10.0	+8.9
PALK				LR	LR		
	comp=Z,9µm,22.0s,MS6.4						
VNDA	**Vanda**	**126.48**	**195**	PKP	PKPdf	03 09 55.3	-5.3
	comp=Z,2.4nm,1.0s,baz=329,slow=3.2,SNR=6.8						
VNDA	**Vanda**	**126.48**	**195**	*e*PKP	PKPdf	03 09 54.4	-6.2
VNDA				LR	LR		
	comp=Z,50µm,20.0s,MS7.2						
DRV	**Dumont d’Urvil**	**128.89**	**211**	Pdif	Pdif	03 06 46.0	-1.6
DRV	**Dumont d’Urvil**	**128.89**	**211**	PP	PP	03 12 18.0	+4.8
DRV				SKS	SKS	03 17 15.0	+1.8
DRV				SKKS		03 19 07.0	
DRV	**Dumont d’Urvil**	**128.89**	**211**	SS	SS	03 29 30.0	+2.0
TRIS	**Tristan da Cun**	**129.30**	**108**	PFAKE		03 10 10.0	+2.9
TRIS				LR	LR		
	comp=Z,43µm,21.0s,MS7.1						
NWAO	**Narrogin (SRO)**	**130.21**	**258**	PFAKE		03 10 10.0	+1.0
NWAO				LR	LR		
	comp=Z,58µm,20.0s,MS7.3						
QSPA	**South Pole Qui**	**131.25**	**180**	*e*P		03 10 04.6	
MBAR	**Mbarara**	**134.05**	**34**	*e*PKIKP		03 10 11.9	
MBAR				MLR	MLR		
	comp=Z,16µm,21.0s,MS6.7						
VNA3	**Neumayer Olymp**	**136.91**	**155**	*e*	PKPdf	03 10 20.0	-0.3
VNA3	**Neumayer Olymp**	**136.91**	**155**	*e*	PKPdf	03 10 28.5	+8.2
VNA3	**Neumayer Olymp**	**136.91**	**155**	*e*	PKPdf	03 10 32.1	+12
VNA3	**Neumayer Olymp**	**136.91**	**155**	*e*	PP	03 13 02.3	-1.1
VNA3	**Neumayer Olymp**	**136.91**	**155**	*e*	tx	03 13 45.1	
VNA3	**Neumayer Olymp**	**136.91**	**155**	*e*		03 13 49.0	
VNA3	**Neumayer Olymp**	**136.91**	**155**	*e*	tx	03 13 53.4	
VNA3	**Neumayer Olymp**	**136.91**	**155**	*e*	tx	03 13 58.5	
VNA3	**Neumayer Olymp**	**136.91**	**155**	PKPdf	PKPdf	03 10 15.4	-4.9
VNA3				*e*		03 10 20.0	
VNA3				*e*		03 10 28.5	
VNA3				*e*		03 10 32.1	
VNA3				*e*		03 13 02.3	
VNA3				*e*		03 13 45.1	
VNA3				*e*		03 13 49.0	
VNA3				*e*		03 13 53.4	
VNA3				*e*		03 13 58.5	
VNA1	**Neumayer--Stat**	**137.45**	**154**	*e*	PKPdf	03 10 20.9	-0.5
VNA1	**Neumayer--Stat**	**137.45**	**154**	*e*	PKPdf	03 10 29.2	+7.8
VNA1	**Neumayer--Stat**	**137.45**	**154**	*e*	PKPdf	03 10 33.5	+12
VNA1	**Neumayer--Stat**	**137.45**	**154**	*e*	PP	03 13 04.6	-2.5
VNA1	**Neumayer--Stat**	**137.45**	**154**	*e*	tx	03 13 46.2	
VNA1	**Neumayer--Stat**	**137.45**	**154**	*e*		03 13 50.4	
VNA1	**Neumayer--Stat**	**137.45**	**154**	*e*	tx	03 13 55.1	
VNA1	**Neumayer--Stat**	**137.45**	**154**	*e*	tx	03 13 59.8	
VNA1	**Neumayer--Stat**	**137.45**	**154**	⇑*i*PKPdf	PKPdf	03 10 16.8	-4.6
VNA1				*e*		03 10 20.9	
VNA1				*e*		03 10 29.2	
VNA1				*e*		03 10 33.5	
VNA1				*e*		03 13 04.6	
VNA1				*e*		03 13 46.2	
VNA1				*e*		03 13 50.4	
VNA1				*e*		03 13 55.1	
VNA1				*e*		03 13 59.8	
VNA2	**Neumayer--Watz**	**137.69**	**155**	*e*	PKPdf	03 10 21.8	0.0
VNA2	**Neumayer--Watz**	**137.69**	**155**	*e*	PKPdf	03 10 30.3	+8.5
VNA2	**Neumayer--Watz**	**137.69**	**155**	*e*	PKPdf	03 10 33.9	+12
VNA2	**Neumayer--Watz**	**137.69**	**155**	*e*	PP	03 13 04.5	-4.3
VNA2	**Neumayer--Watz**	**137.69**	**155**	*e*	tx	03 13 52.2	
VNA2	**Neumayer--Watz**	**137.69**	**155**	*e*	tx	03 13 55.5	
VNA2	**Neumayer--Watz**	**137.69**	**155**	*e*	tx	03 14 02.0	
VNA2	**Neumayer--Watz**	**137.69**	**155**	⇑*i*PKPdf	PKPdf	03 10 17.4	-4.4
VNA2				*e*		03 10 21.8	
VNA2				*e*		03 10 30.3	
VNA2				*e*		03 10 33.9	
VNA2				*e*		03 13 04.5	
VNA2				*e*		03 13 52.2	
VNA2				*e*		03 13 55.5	
VNA2				*e*		03 14 02.0	
SNAA	**Sanae**	**138.96**	**156**	*e*	PKPdf	03 10 23.9	-0.2
SNAA	**Sanae**	**138.96**	**156**	*e*	PKPdf	03 10 34.5	+10
SNAA	**Sanae**	**138.96**	**156**	*e*	PKPdf	03 10 38.9	+15
SNAA	**Sanae**	**138.96**	**156**	*e*	PP	03 13 07.7	-8.9
SNAA	**Sanae**	**138.96**	**156**	*e*	tx	03 13 52.0	
SNAA	**Sanae**	**138.96**	**156**	*e*	tx	03 13 57.3	
SNAA	**Sanae**	**138.96**	**156**	*e*	tx	03 14 04.7	
SNAA	**Sanae**	**138.96**	**156**	⇑*i*PKIKP	PKPdf	03 10 20.8	-3.3
SNAA				*e*		03 10 23.9	
SNAA				*e*		03 13 07.7	
SNAA	**Sanae**	**138.96**	**156**	PKP	PKPdf	03 10 19.1	-5.1
	comp=Z,7.6nm,1.1s,baz=346,slow=1.8,SNR=9.7						
SNAA	**Sanae**	**138.96**	**156**	⇑*i*PKPdf	PKPdf	03 10 20.8	-3.3
SNAA				*e*		03 10 23.9	
SNAA				*e*		03 10 34.5	
SNAA				*e*		03 10 38.9	
SNAA				*e*		03 13 07.7	
SNAA				*e*		03 13 52.0	
SNAA				*e*		03 13 57.3	
SNAA				*e*		03 14 04.7	
CASY	**Casey**	**140.59**	**212**	PFAKE		03 10 30.0	+2.9
CASY				LR	LR		
	comp=Z,53µm,20.0s,MS7.3						
TSUM	**Tsumeb**	**141.65**	**66**	PKP	PKPdf	03 10 25.6	-4.7
TSUM				LR	LR		
	comp=Z,112µm,21.0s,MS7.6						
DGAR	**Diego Garcia**	**142.51**	**330**	PFAKE		03 10 40.0	+8.0
DGAR				LR	LR		
	comp=Z,11µm,22.0s,MS6.6						
NVL	**N’lazarevskaya**	**143.67**	**158**	⇑*i*PKIKP	PKPdf	03 10 32.9	+0.7
NVL				*i* SSS	SS	03 32 27.2	+3.6
LSZ	**Lusaka**	**145.44**	**49**	*e*PKIKP	PKPdf	03 10 32.1	-4.8
LSZ				MLR	MLR		
	comp=Z,78µm,20.0s,MS7.5						
MIR	**Mirnyy**	**147.08**	**207**	*d* *i*PKP2	PKPab	03 10 39.0	-1.1
MIR				*e*PPP	PPP	03 17 24.0	+0.5
MIR				pmax	pmax		
	comp=Z,2µm,2.4s						
MIR				pmax	pmax		
	comp=Z,11µm,6.0s						
MIR				pmax	pmax		
	comp=E,2µm,12.0s						
MIR				pmax	pmax		
	comp=N,1µm,8.0s						
MATP	**Matopo**	**149.65**	**54**	PKPbc	PKPdf	03 10 42.7	-1.0
	comp=N,9.1nm,1.1s,baz=104,slow=1.5,SNR=9.7						
MATP	**Matopo**	**149.65**	**54**	PKPbc	PKPdf	03 10 42.7	-1.0
LBTB	**Lobatse**	**151.03**	**65**	PKIKP	PKPdf	03 10 45.7	0.0
LBTB				pmax	pmax		
	comp=Z,47nm,1.1s						
LBTB	**Lobatse**	**151.03**	**65**	PKPbc	PKPdf	03 10 45.6	-0.1
	comp=Z,47nm,1.1s,baz=279,slow=4.4,SNR=7.4						
LBTB	**Lobatse**	**151.03**	**65**	*e*PKPbc	PKPdf	03 10 46.8	+1.0
LBTB				LR	LR		
	comp=Z,69µm,20.0s,MS7.5						
SYO	**Syowa Base**	**151.28**	**169**	⇓PKPdf	PKPdf	03 10 39.5	-5.3
SYO	**Syowa Base**	**151.28**	**169**	⇓pPKPdf		03 10 43.2	
SUR	**Sutherland**	**151.79**	**82**	PKPbc	PKPdf	03 10 47.7	+1.0
	comp=Z,11nm,1.1s,baz=151,slow=7.2,SNR=2.7						
SUR	**Sutherland**	**151.79**	**82**	PKPbc	PKPdf	03 10 47.6	+1.0
SUR				PKPab	PKPab	03 10 55.9	-4.6
SUR				LR	LR		
	comp=Z,15µm,20.0s,MS6.8						
BOSA	**Boshof**	**153.05**	**71**	PKIKP	PKPdf	03 10 51.1	+2.6
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOSA	**Boshof**	**153.05**	**71**	PKPbc	PKPdf	03 10 51.1	+2.6
	comp=Z,5.3nm,0.9s,baz=24,slow=3.7,SNR=6.4						
BOSA	**Boshof**	**153.05**	**71**	*e*PKPbc	PKPdf	03 10 51.3	+2.7
BOSA				LR	LR		
	comp=Z,75µm,22.0s,MS7.5						
MAW	**Mawson**	**153.38**	**187**	*e*PKP	PKPdf	03 10 50.1	+2.3
	comp=Z,68nm,1.4s						
MAW				*e*SKP		03 14 42.7	
MAW				*e*SKKS		03 21 32.2	
MAW				*e*SKKS		03 25 02.7	
MAW	**Mawson**	**153.38**	**187**	PKPbc	PKPdf	03 10 52.9	+5.1
	comp=Z,21nm,1.1s,baz=200,slow=2.0,SNR=11						
OPO	**Ambohidratompo**	**156.38**	**17**	PKPbc	PKPdf	03 11 01.4	+8.2
	comp=Z,5.2nm,1.0s,baz=251,slow=0.8,SNR=5.3						

NEIC 15 02:57:00.6, 38.84N×122.80W, h2^{km}, MD3.9(NCEDC), **After NCEDC., Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NSHM	**Saint Helena R**	**0.36**	**155**	*e*P	Pg	02 57 08.0	+0.2
SAC	**San Andreas**	**1.30**	**166**	P	Pb	02 57 25.0	-0.3
CMB	**Columbia Colle**	**2.06**	**112**	*e*P	Pn	02 57 35.3	-1.3
BEKR	**Beckwourth**	**2.15**	**61**	P	Pn	02 57 38.6	+0.7
WCN	**Washoe City**	**2.42**	**78**	Pn	Pn	02 57 41.8	+0.2

*IDC **15** 03:02:37.0±0.9, 14.41S×175.60W, mb4.7/11, mb1 4.9/12, mb1mx4.7/20, mbtmp4.7/12, ML4.2/1, Error ellipse: s-maj=50.1km s-min=17.5km az=156.0*

*BJI **15** 03:02:37.3, 14.30S×174.82W, h22^{km}, mb4.9, Ms5.4, Msz5.1*

*NEIC **15** 03:02:38.0±0.3, 14.54S×175.55W, h10^{km}, mb5.2/14, Error ellipse: s-maj=15.8km s-min=6.3km az=147.0*

ISC 15 03:02:40.2±0.4, **14.6S**±0.1×**175.55W**±0.08, **h33^{km}, n75, σ0^{s}83**/48, **mb4.9**/27, **4C-1D, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.72**	**80**	*e*P	**P**	**03 03 27.4**	**-9.3**
DZM	**Mont Dzumac**	**18.64**	**244**	P	**P**	**03 06 57.9**	**+0.3**
	0.8nm,0.3s,baz=74,slow=16,SNR=14						
NOUC	**Port Laguerre**	**18.77**	**244**	*e*P	**P**	**03 06 59.0**	**-0.2**
CTA	**Charters Tower**	**36.81**	**256**	P	**P**	**03 09 46.4**	**-0.8**
	13nm,0.9s,mb4.8,baz=90,slow=9.3,SNR=9.8						
CTAO	**Charters Tower**	**36.81**	**256**	*e*P	**P**	**03 09 46.0**	**-1.1**
	25nm,1.1s,mb5.0						
WRA	**Warramunga Arr**	**48.01**	**256**	P	**P**	**03 11 16.3**	**-2.2**
	3.9nm,0.9s,mb4.4,baz=92,slow=6.4,SNR=5.9						
SBA	**Scott Base**	**63.91**	**184**	P	**P**	**03 13 14.1**	**+2.4**
VNDA	**Vanda**	**63.99**	**185**	*e*P	**P**	**03 13 11.3**	**-0.9**
	16nm,1.3s,mb4.9						
MJAR	**Matsushiro Arr**	**66.98**	**321**	P	**P**	**03 13 30.7**	**-1.3**
	4.6nm,0.8s,mb4.5,baz=158,slow=7.2,SNR=7.6						
CMB	**Columbia Colle**	**73.54**	**43**	*e*P	**P**	**03 14 11.9**	**0.0**
	31nm,1.6s,mb5.0						
NVAR	**Mina Array Bea**	**75.13**	**43**	P	**P**	**03 14 20.8**	**-0.3**
	9.2nm,1.0s,mb4.7,baz=217,slow=7.8,SNR=17						
MNV	**Mina**	**75.23**	**43**	*e*P	**P**	**03 14 21.2**	**-0.5**
	52nm,1.4s,mb5.3						
QSPA	**South Pole Qui**	**75.46**	**180**	P	**P**	**03 14 22.1**	**0.0**
LDFC	**Landfair**	**75.60**	**47**	P	**P**	**03 14 23.8**	**-0.1**
RSO	**Redoubt South**	**76.99**	**11**	*e*P	**P**	**03 14 29.8**	**-1.5**
MDJ	**Mudanjiang**	**77.11**	**323**	P	**P**	**03 14 32.8**	**+0.6**
MDJ				AMB	AMB		
	comp=Z,10.0nm,2.6s,mb4.3						
SLKM	**Skilak Lake**	**77.54**	**13**	*e*P	**P**	**03 14 33.8**	**-0.5**
NJ2	**Nanjing**	**78.01**	**308**	*e*P	**P**	**03 14 38.3**	**+0.9**
NJ2				AP	pP	03 14 44.0	-3.8
NJ2				XP	sP	03 14 46.1	-5.3
NJ2				S	S	03 24 28.0	+0.5
NJ2				SKS	SKS	03 24 49.0	+5.2
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
ELK	**Elko**	**78.36**	**42**	P	**P**	**03 14 38.9**	**-0.3**
	comp=Z,6.3nm,1.1s,mb4.5,baz=218,slow=19,SNR=3.1						
WUAZ	**Wupatki**	**78.50**	**49**	*e*P	**P**	**03 14 40.6**	**+0.5**
	comp=Z,2µm,3.6s						
CN2	**Changchun**	**79.13**	**321**	*e*P	**P**	**03 14 45.0**	**+1.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
TCUT	**Toone Canyon**	**81.07**	**43**	*e*P	**P**	**03 14 54.1**	**+0.4**
MNTX	**Cornudas Mount**	**81.42**	**54**	*e*P	**P**	**03 14 55.0**	**-0.7**
	comp=Z,56nm,1.7s,mb5.2						
PV10	**Paradox Valley**	**81.45**	**47**	*e*P	**P**	**03 14 54.1**	**-1.6**
ANMO	**Albuquerque**	**81.88**	**51**	P	**P**	**03 14 58.1**	**+0.1**
	comp=Z,9.3nm,1.1s,mb4.6,baz=297,slow=4.5,SNR=3.4						
LTX	**Lajitas**	**81.90**	**57**	*e*P	**P**	**03 14 57.5**	**-0.8**
	comp=Z,7.7nm,0.9s,mb4.6						
TXAR	**Lajitas Array**	**81.90**	**57**	P	**P**	**03 14 58.8**	**+0.5**
	comp=Z,8.2nm,1.0s,mb4.6,baz=236,slow=3.7,SNR=23						
MCMT	**McKenzie Canyo**	**81.94**	**40**	*e*P	**P**	**03 14 58.7**	**+0.5**
ILAR	**Eielson Array**	**82.06**	**12**	P	**P**	**03 14 57.6**	**-0.7**
	comp=Z,5.1nm,1.1s,mb4.4,baz=226,slow=6.2,SNR=13						
RRI2	**Red Ridge**	**82.18**	**42**	*e*P	**P**	**03 14 59.7**	**+0.2**
	comp=Z,28nm,1.3s,mb5.0						
REDW	**Red Top Meadow**	**82.49**	**42**	*e*P	**P**	**03 15 01.0**	**-0.1**
	comp=Z,478nm,2.7s,mb6.0						
SNOW	**Snow King Moun**	**82.60**	**42**	*e*P	**P**	**03 15 01.9**	**+0.3**
	comp=Z,209nm,2.3s,mb5.8						
WUWY	**Wally Ulrich**	**82.64**	**42**	*e*P	**P**	**03 15 02.1**	**+0.3**
IMW	**Indian Meadow**	**82.69**	**41**	*e*P	**P**	**03 15 02.6**	**+0.6**
	comp=Z,43nm,1.4s,mb5.3						
LOHW	**Long Hollow**	**82.77**	**42**	*e*P	**P**	**03 15 02.4**	**0.0**
	comp=Z,12nm,1.4s,mb4.7						
QLMT	**Earthquake Lak**	**82.82**	**40**	P	**P**	**03 15 03.8**	**+1.1**
YMR	**Madison River**	**83.03**	**40**	*e*P	**P**	**03 15 05.0**	**+1.2**
BW06	**Boulder Array**	**83.06**	**43**	*e*P	**P**	**03 15 03.8**	**-0.1**
	comp=Z,61nm,2.0s,mb5.3						
PDAR	**Pinedale Array**	**83.06**	**43**	P	**P**	**03 15 03.8**	**-0.2**
	comp=Z,4.8nm,0.9s,mb4.5,baz=230,slow=3.0,SNR=14						
CPRX	**Cap Rock**	**83.11**	**53**	*e*P	**P**	**03 15 03.8**	**-0.7**
SDCO	**Great Sand Dun**	**83.72**	**49**	*e*P	**P**	**03 15 07.9**	**+0.4**
HIA	**Hailar**	**85.29**	**324**	*e*P	**P**	**03 15 15.6**	**+0.5**
EDM	**Edmonton**	**85.89**	**32**	*e*P	**P**	**03 15 17.2**	**-0.7**
HHC	**Hu-ho-hao-te**	**86.95**	**313**	*e*P	**P**	**03 15 24.6**	**+1.2**
HHC				AP	pP	03 15 29.3	-4.6
HHC				XP	sP	03 15 32.3	-5.1
HHC				PP	PP	03 18 52.6	+3.5
HHC				SKS	SKS	03 25 45.3	0.0
HHC				S	S	03 25 55.9	-1.9
HHC				XS		03 26 12.6	
HHC				SS	SS	03 31 43.6	-0.2
HHC				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.5						
KMI	**Kunming**	**88.80**	**296**	P	**P**	**03 15 33.8**	**+1.2**
KMI				S	S	03 26 20.4	+4.9
KMI	**Kunming**	**88.80**	**296**	P	**P**	**03 15 33.7**	**+1.1**
	comp=Z,9.0nm,1.1s,mb5.0						
KMI				S	S	03 26 20.4	+4.9
YKA	**Yellowknife Ar**	**90.18**	**24**	P	**P**	**03 15 37.6**	**-0.6**
	comp=Z,0.5nm,0.5s,mb4.1,baz=245,slow=3.8,SNR=4.0						
SYO	**Syowa Base**	**92.98**	**192**	⇓pP	pP	03 15 56.0	-5.7
JTS	**JuntasAbangare**	**93.12**	**80**	P	**P**	**03 15 53.3**	**+0.4**
	comp=Z,12nm,1.0s,mb5.3,baz=270,slow=3.0						
ARCES	**ARCESS Array B**	**123.50**	**351**	PKP	PKPdf	03 21 36.4	+2.4
	comp=Z,2.3nm,0.8s,baz=18,slow=5.7,SNR=3.2						
FINES	**FINESS Array B**	**130.68**	**346**	PKP	PKPdf	03 21 50.5	+2.6
	comp=Z,1.4nm,0.9s,slow=4.2,SNR=2.6						
PVCC	**Panska Ves**	**143.21**	**349**	*e*PKP	PKPdf	03 22 10.8	-0.1
MOX	**Moxa**	**143.56**	**352**	*e*PKP	PKPdf	03 22 04.2	-7.3
MOX	**Moxa**	**143.56**	**352**	*i* P	PKPbc	03 22 04.2	-5.9
PRU	**Pruhonice**	**143.74**	**349**	*e*PKP	PKPdf	03 22 07.6	-4.2
VYHS	**Vyhne**	**144.15**	**344**	*e*PKP	PKPdf	03 22 13.0	+0.4
BR131	**Keskin Array S**	**144.20**	**320**	*e*PKPdf	PKPdf	03 22 13.0	0.0
PSZ	**Piszkesteto**	**144.37**	**342**	*e*PKPdf	PKPdf	03 22 13.8	+0.8
SMOL	**Smolenice**	**144.50**	**345**	*e*PKP	PKPdf	03 22 14.4	+1.1
KHC	**Kasperske Hory**	**144.74**	**350**	*e*PKP	PKPdf	03 22 14.6	+0.9
KHC				*e*pPKP		03 22 21.0	
ZST	**Bratislava**	**144.88**	**345**	*e*PKP	PKPdf	03 22 15.6	+1.7
WLF	**Walferdange**	**144.98**	**358**	*e*PKPdf	PKPdf	03 22 15.6	+1.5
GERES	**GERESS Array B**	**144.99**	**349**	PKP	PKPdf	03 22 14.4	+0.3
	comp=Z,4.0nm,0.9s,baz=27,slow=3.0,SNR=10						
ASF	**Jabal al Asfar**	**145.63**	**306**	PKPbc	PKPbc	03 22 18.5	+2.0
	comp=Z,1.0nm,0.3s,baz=346,slow=2.8,SNR=4.7						
STU	**Stuttgart**	**145.68**	**354**	*e*PKPdf	PKPdf	03 22 17.3	+2.0
MOA	**Molln**	**145.84**	**348**	⇑*i*P	PKPdf	03 22 16.3	+0.7
	comp=Z,40nm,1.4s						
ARSA	**Arzberg**	**146.14**	**346**	⇑*i*P	PKPdf	03 22 20.5	+4.4
	comp=Z,14nm,1.2s						
KBA	**Koelnbreinsper**	**146.75**	**349**	⇑*i*P	PKPdf	03 22 21.7	+4.5
	comp=Z,8.7nm,1.0s						
DAVA	**Damuels**	**147.07**	**353**	⇑*i*P	PKPdf	03 22 22.5	+4.8
	comp=Z,33nm,1.1s						
GCIS	**Gornji Cirnik**	**147.42**	**345**	*e*PKP	PKPdf	03 22 24.4	+6.1
LJU	**Ljubljana**	**147.50**	**347**	*e*PKP	PKPdf	03 22 24.4	+6.0
BNI	**Bardonecchia**	**149.56**	**357**	*e*PKPbc	PKPdf	03 22 28.8	+7.0
CII	**Carovilli**	**151.63**	**344**	*e*PKPbc	PKPdf	03 22 37.4	+12
MTE	**Manteigas**	**152.22**	**20**	*e*PKPbc	PKPdf	03 22 34.2	+8.3
ESDC	**Sonseca Array**	**153.93**	**15**	PKPbc	PKPdf	03 22 40.3	+12
	comp=Z,0.4nm,0.6s,baz=214,slow=4.6,SNR=2.9						

*IDC **15** 03:09:40.6±0.9, 8.89S×123.80E, mb4.2/4, mb1 4.6/6, mb1mx4.3/13, mbtmp4.4/6, ML4.8/2, Error ellipse: s-maj=92.7km s-min=18.7km az=62.0*

*NEIC **15** 03:09:43.0±4.5, 8.86S×123.92E, h20^{km}±29^{km}, mb4.8/4, Error ellipse: s-maj=16.7km s-min=9.1km az=57.0*

ISC 15 03:09:42.8±0.5, **8.89S**±0.08×**123.94E**±0.08, **h33^{km}, n22, σ0^{s}64**/25, **mb4.7**/8, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**9.17**	**115**	*e*P	**P**	**03 12 00.8**	**+5.0**
	14nm,0.4s						
KAKA				*e*S	**S**	**03 13 38.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**9.30**	**170**	*e*P	**P**	**03 11 57.2**	**-0.4**
	42nm,0.3s						
FITZ				*e*S	**S**	**03 13 31.6**	**-11**
FITZ	**Fitzroy Crossi**	**9.30**	**170**	Pn	**P**	**03 11 57.4**	**-0.2**
	13nm,0.3s,baz=1.4,slow=9.2,SNR=149						
FITZ				Sn	**Sn**	**03 13 30.3**	**-12**
	61nm,0.3s,baz=193,slow=16,SNR=16						
MBWA	**Marble Bar**	**12.86**	**198**	*e*Pn	**P**	**03 12 46.1**	**+0.2**
MBWA				*e*Sn	**S**	**03 14 49.0**	**-20**
WRA	**Warramunga Arr**	**14.89**	**139**	Pn	**P**	**03 13 13.0**	**+0.2**
	2.5nm,0.3s,baz=304,slow=11,SNR=52						
WRA				Sn	**S**	**03 15 47.0**	**-10**
	4.0nm,0.3s,baz=305,slow=24,SNR=9.9						
WRAB	**Tennant Creek**	**14.90**	**139**	*e*P	**P**	**03 13 12.4**	**-0.5**
	15nm,0.6s						
WB2	**Warramunga Arr**	**14.90**	**139**	*e*P	**P**	**03 13 13.0**	**+0.1**
WB2				*e*S	**S**	**03 15 48.3**	**-9.3**
NWAO	**Narrogin (SRO)**	**24.71**	**194**	*e*P	**P**	**03 15 01.6**	**-0.9**
STKA	**Stephens Creek**	**28.14**	**147**	P	**P**	**03 15 35.7**	**+1.5**
	1.8nm,0.5s,mb4.0,baz=325,slow=11,SNR=5.3						
CMAR	**Chiang Mai Arr**	**36.70**	**318**	P	**P**	**03 16 48.5**	**-0.4**
	1.5nm,0.4s,mb4.2,baz=142,slow=7.7,SNR=5.1						
GUN	**Gumba**	**51.90**	**316**	*e*P	**P**	**03 18 51.0**	**+0.4**
	22nm,0.7s,mb5.2						
PKI	**Pulchoki**	**52.01**	**315**	*e*P	**P**	**03 18 51.5**	**+0.1**
	12nm,0.5s,mb5.1						
KKN	**Kakani**	**52.24**	**316**	*e*P	**P**	**03 18 52.0**	**-1.1**
DMN	**Daman**	**52.24**	**315**	*e*P	**P**	**03 18 53.4**	**+0.2**
GKN	**Gorkha**	**52.81**	**315**	*e*P	**P**	**03 18 56.8**	**-0.6**
	8.0nm,0.3s,mb5.1						
KOLN	**Koldanda**	**53.40**	**314**	*e*P	**P**	**03 19 01.4**	**-0.4**
	12nm,0.7s,mb4.9						
SONM	**Songino Array**	**58.58**	**346**	P	**P**	**03 19 39.1**	**+0.4**
	0.7nm,0.5s,mb3.9,baz=164,slow=7.1,SNR=4.9						
MKAR	**Makanchi Array**	**66.69**	**330**	P	**P**	**03 20 33.3**	**+0.7**
	4.3nm,0.5s,mb4.7,baz=136,slow=7.5,SNR=36						
QSPA	**South Pole Qui**	**81.10**	**180**	*e*P	**P**	**03 21 56.7**	**+0.9**
CPUP	**Villa Florida**	**144.97**	**178**	PKP	PKPdf	03 29 18.9	+1.5
	2.3nm,0.6s,baz=116,slow=0.4,SNR=9.5						
CPUP	**Villa Florida**	**144.97**	**178**	PKP	PKPdf	03 29 18.9	+1.5
LPAZ	**La Paz**	**152.28**	**154**	PKPbc	PKPdf	03 29 39.9	+11
	0.5nm,0.5s,baz=112,slow=5.4,SNR=5.1						
LPAZ				PKPab	PKPab	03 29 49.8	+1.4
	1.0nm,0.6s,baz=299,slow=3.5,SNR=7.6						

IDC 15 03:11:27.6±2.1, **40.86N**×**126.05W, mb3.7**/1, **mb1 3.9**/4, **mb1mx3.5**/23, **mbtmp3.5**/4, **ML3.4**/1, **Error ellipse: s-maj=29.9km s-min=20.0km az=17.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YBH	**Yreka Blue Hor**	**2.66**	**70**	Pn	Pn	03 12 12.0	-0.5
	9.5nm,0.3s,baz=262,slow=10.0,SNR=3.9						
YBH				Sn	Sn	03 12 45.7	-0.3
	4.6nm,0.3s,baz=343,slow=19,SNR=1.8						
NVAR	**Mina Array Bea**	**6.46**	**110**	Pn	Pn	03 13 05.0	-1.3
	0.1nm,0.3s,baz=294,slow=16,SNR=2.3						
PDAR	**Pinedale Array**	**12.46**	**76**	Pn	P	03 14 29.9	+0.9
	0.0nm,0.3s,baz=254,slow=11,SNR=4.7						
ILAR	**Eielson Array**	**26.79**	**340**	P	P	03 17 09.2	-1.6
	1.1nm,0.8s,baz=160,slow=8.0,SNR=7.1						

*IDC **15** 03:16:56.5±1.1, 18.62N×147.34E, mb4.1/8, mb1 4.2/9, mb1mx4.1/19, mbtmp4.1/9, ML4.0/1, Error ellipse: s-maj=43.1km s-min=19.9km az=96.0*

*NEIC **15** 03:16:58.1±0.7, 18.62N×147.32E, h10^{km}, mb4.4/1, Error ellipse: s-maj=25.9km s-min=9.8km az=92.0*

ISC 15 03:16:59.8±1.0, **18.65N**±0.09×**147.3E**±0.2, **h33^{km}, n14, σ0^{s}75**/13, **mb4.1**/9, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**19.54**	**338**	P	**P**	**03 21 26.5**	**-0.9**
	0.4nm,0.3s,baz=161,slow=8.6,SNR=4.9						
WRAB	**Tennant Creek**	**40.38**	**199**	*e*P	**P**	**03 24 36.4**	**0.0**
	4.2nm,0.5s,mb4.4						
WB2	**Warramunga Arr**	**40.39**	**199**	*e*P	**P**	**03 24 36.5**	**0.0**

WRA	Warramunga Arr	40.40	199	P	P	03 24 36.0	-0.5
	1.7nm,0.4s,mb4.1,baz=22,slow=8.0,SNR=38						
FITZ	Fitzroy Crossi	42.26	211	P	P	03 24 52.4	+0.3
	2.0nm,0.5s,mb4.0,baz=12,slow=14,SNR=5.7						
SONM	Songino Array	44.13	321	P	P	03 25 07.6	+0.7
	0.8nm,0.5s,mb3.7,baz=133,slow=9.1,SNR=5.6						
SONM				PcP	PcP	03 26 52.3	+0.2
	0.7nm,0.7s,baz=109,slow=1.6,SNR=3.7						
KULM	Kulim	47.36	260	P	P	03 25 32.9	0.0
MKAR	Makanchi Array	59.59	314	P	P	03 27 01.9	-0.7
	0.7nm,0.6s,mb3.8,baz=96,slow=11,SNR=4.1						
ILAR	Eielson Array	63.03	26	P	P	03 27 25.1	-0.5
	0.8nm,0.5s,mb4.1,baz=257,slow=6.4,SNR=12						
BVAR	Borovoye Array	67.48	320	P	P	03 27 54.4	+0.1
	3.6nm,0.5s,mb4.7,baz=90,slow=7.4,SNR=23						
ARCES	ARCESS Array B	83.00	342	P	P	03 29 24.9	+2.3
	2.1nm,0.9s,mb4.2,baz=56,slow=8.7,SNR=5.7						
ARCES	ARCESS Array B	83.00	342	P	P	03 29 24.9	+2.3
FINES	FINESS Array B	87.56	336	P	P	03 29 45.1	-0.1
	0.7nm,0.4s,mb4.3,baz=72,slow=4.4,SNR=8.8						
DBIC	Dimbokro	142.75	310	*e*PKPpre		03 36 28.6	

IDC 15 03:18:34.4±1.9**,41.08N**×**126.20W,mb3.5**/3**,mb1 3.8**/6**,mb1mx3.6**/23**,mbtmp3.4**/6**,ML3.8**/3**,Error ellipse: s-maj=27.6km s-min=17.9km az=27.0,Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YBH	Yreka Blue Hor	2.71	75	Pn	Pn	03 19 20.5	+0.6
	15nm,0.3s,baz=274,slow=10,SNR=23						
YBH				Sn	Sn	03 19 53.0	-0.8
	3.7nm,0.3s,baz=174,slow=18,SNR=3.3						
NVAR	Mina Array Bea	6.63	111	Pn	Pn	03 20 13.9	-1.7
	0.2nm,0.3s,baz=281,slow=15,SNR=3.0						
PDAR	Pinedale Array	12.51	77	Pn	P	03 21 36.3	-0.2
	0.1nm,0.3s,baz=270,slow=9.0,SNR=2.3						
TXAR	Lajitas Array	21.76	115	P	P	03 23 28.8	-0.7
	0.9nm,0.9s,baz=286,slow=9.1,SNR=6.3						
YKA	Yellowknife Ar	22.54	14	P	P	03 23 35.8	-1.1
	0.8nm,0.6s,baz=201,slow=10,SNR=5.2						
ILAR	Eielson Array	26.55	340	P	P	03 24 13.2	-2.0
	0.7nm,0.9s,baz=154,slow=9.0,SNR=5.0						

IPEC ***15*** *03:27:30.9±0.3,51.59N×16.20E,ML1.9/3,Error ellipse: s-maj=1.9km s-min=1.5km az=43.0*

NEIC ***15*** *03:27:31.6±1.9,51.56N×16.10E,h5*^{km}*,ML3.2(SZGRF), ML2.7(VIE),Error ellipse: s-maj=21.0km s-min=6.4km az=206.0*

BGR ***15*** *03:27:32.8±0.8,51.49N×16.10E,h1*^{km}*,ML3.2/6,Error ellipse: s-maj=14.5km s-min=6.7km az=162.0*

PRU ***15*** *03:27:32.5,51.51N×16.11E,Felt In Harrachov*

CSEM ***15*** *03:27:32.8±0.2,51.50N×16.09E,ML3.0/3,Error ellipse: s-maj=3.5km s-min=1.8km az=12.0*

WAR 15 03:27:32.7,51.54N×16.09E,h1^{km}**,ML2.6,1C,Mining Induced,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.70	169	*e*Pg	Pg	03 27 45.6	-1.2
KSP				*e*Sg	Sg	03 27 55.0	-1.2
KSP	Ksiaz	0.70	169	*e*PG	Pg	03 27 46.0	-0.8
KSP				*e*SG	Sg	03 27 55.0	-1.2
KSP	Ksiaz	0.70	169	*e*Pg	Pg	03 27 45.6	-1.2
KSP				*e*Sg	Sg	03 27 54.4	-1.8
UPC	Upice	1.03	183	*e*PG	Pg	03 27 51.7	-1.6
DPC	Dobruska-Polom	1.20	173	*e*PG	Pg	03 27 54.4	-2.2
DPC				*e*SG	Sg	03 28 09.9	-2.6
	13nm,0.2s						
DPC	Dobruska-Polom	1.20	173	*e*Pg	Pg	03 27 54.4	-2.2
DPC				*e*Sg	Sg	03 28 09.8	-2.7
PVCC	Panska Ves	1.39	224	*e*Pn	Pn	03 27 58.5	-0.8
PVCC	Panska Ves	1.39	224	*e*Pg	Pg	03 27 58.7	-1.8
PVCC				*e*Sg	Sg	03 28 17.5	-1.6
BRG	Berggiesshubel	1.50	245	*e*Pg	Pg	03 28 00.4	-2.3
BRG				*e*Sg	Sg	03 28 20.9	-1.9
BRG	Berggiesshubel	1.50	245	Pn	Pn	03 28 00.4	-0.5
BRG				Pg	Pg	03 28 00.9	-1.8
BRG				Sg	Sg	03 28 20.9	-1.9
BRG	Berggiesshubel	1.50	245	Pg	Pg	03 28 00.9	-1.8
BRG				Sg	Sg	03 28 20.9	-1.9
FBE	Freiberg	1.83	251	Sg	Sg	03 28 30.4	-3.1
PRU	Pruhonice	1.83	213	*e*PN	Pn	03 28 03.1	-2.5
PRU				*e*PG	Pg	03 28 05.7	-3.6
PRU				*e*SG	Sg	03 28 29.9	-3.9
PRU	Pruhonice	1.83	213	*e*Pg	Pg	03 28 05.7	-3.6
PRU				*e*Sg	Sg	03 28 29.9	-3.9
CLL	Collm	1.95	264	*e*Pn	Pn	03 28 06.3	-0.9
CLL				*e*Sg	Sg	03 28 35.2	-2.3
CLL	Collm	1.95	264	*e*Pg	Pg	03 28 08.0	-3.6
CLL				*e*Sg	Sg	03 28 35.0	-2.5
MORC	Moravsky Berou	1.99	152	*e*Pn	Pn	03 28 06.1	-1.7
MORC				*e*Sn	Sn	03 28 31.3	-2.5
MORC	Moravsky Berou	1.99	152	*e*Pn	Pn	03 28 06.0	-1.8
MORC				*e*Sn	Sn	03 28 31.3	-2.4
MORC				*e*Sg	Sg	03 28 34.0	-4.9
	9.0nm,0.2s						
OKC	Ostrava-Krasne	2.15	142	*e*PG	Pg	03 28 12.6	-2.9
OKC				*e*SG	Sg	03 28 39.2	-4.9
VRAC	Vranov	2.25	172	*e*Pn	Pn	03 28 10.6	-1.0
VRAC				*e*Sg	Sg	03 28 42.6	-5.1
	6.7nm,0.3s						
KRUC	Moravsky	2.48	175	*e*Pn	Pn	03 28 13.4	-1.5
KRUC				*e*Sg	Sg	03 28 50.8	-4.6
	5.8nm,0.2s						
TANN	Tannenbergstha	2.55	245	*e*Pn	Pn	03 28 14.1	-1.9
TANN				*e*Sg	Sg	03 28 52.9	-4.8
WERD	Werda	2.63	247	*e*Pn	Pn	03 28 15.4	-1.6
WERD				*e*Sg	Sg	03 28 55.1	-5.1
NKC	Novy Kostel	2.65	242	*e*PN	Pn	03 28 16.0	-1.3
NKC				*e*SG	Sg	03 28 56.2	-4.7
GUNZ	Gunzen	2.65	245	*e*Sg	Sg	03 28 56.0	-4.9
KHC	Kasperske Hory	2.90	215	*e*PN	Pn	03 28 19.4	-1.4
KHC				*e*PG	Pg	03 28 25.2	-5.3
KHC				*e*SG	Sg	03 29 04.1	-5.0
KHC	Kasperske Hory	2.90	215	*e*Pg	Pg	03 28 25.2	-5.3
KHC				*e*Sg	Sg	03 29 04.1	-5.0
MOX	Moxa	2.96	254	*e*Pn	Pn	03 28 21.3	-0.4
MOX				*e*Sg	Sg	03 29 06.5	-4.7
MOX	Moxa	2.96	254	*e*Pg	Pg	03 28 27.6	-4.2
MOX				*e*Sg	Sg	03 29 07.8	-3.4
MOX	Moxa	2.96	254	*e*Pg	Pg	03 28 27.6	-4.2
MOX				Sg	Sg	03 29 06.5	-4.7
NOTT	Nottersdorf	3.06	237	*e*Sg	Sg	03 29 08.6	-5.9
GEC2	GERESS Array S	3.10	211	*e*Pn	Pn	03 28 23.1	-0.6
GEC2	GERESS Array S	3.10	211	*e*Pn	Pn	03 28 23.1	-0.6
GRA1	Grafenberg Arr	3.61	241	Sg	Sg	03 29 27.3	-5.5
GRF	Grafenberg Arr	3.61	241	*e*Sg	Sg	03 29 27.3	-5.6
MOA	Molln	3.88	198	⇑*i*PN	Pn	03 28 33.0	-1.7
MOA				*i* SG	Sg	03 29 37.4	-4.3
	4.7nm,0.5s						

IDC 15 03:44:29.1±5.0**,41.09N**×**125.60W,mb2.7**/1**,mb1 3.5**/4**,mb1mx3.3**/23**,mbtmp3.1**/4**,ML3.6**/3**,Error ellipse: s-maj=59.1km s-min=27.1km az=122.0,Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YBH	Yreka Blue Hor	2.26	73	Pn	Pn	03 45 07.0	-1.3
	10nm,0.3s,baz=273,slow=12,SNR=7.9						
YBH				Sn	Sn	03 45 36.8	-0.4
	11nm,0.3s,baz=108,slow=7.8,SNR=7.7						
NVAR	Mina Array Bea	6.22	113	Pn	Pn	03 46 02.5	-1.8
	0.2nm,0.3s,baz=291,slow=13,SNR=2.8						
PDAR	Pinedale Array	12.07	77	Pn	P	03 47 27.8	+2.5
	0.1nm,0.3s,baz=257,slow=12,SNR=4.3						
TXAR	Lajitas Array	21.35	116	P	P	03 49 18.9	-1.1
	0.3nm,0.8s,baz=294,slow=11,SNR=3.6						

NEIC ***15*** *03:47:08.6±1.6,51.52N×179.40E,h57*^{km}*±6*^{km}*,mb4.3/1, ML3.6(AEIC),Error ellipse: s-maj=55.1km s-min=5.6km az=187.0*

IDC ***15*** *03:47:08.8±4.0,51.50N×179.34E,h59*^{km}*±36*^{km}*,mb3.6/9, mb1 3.8/10,mb1mx3.6/24,mbtmp3.9/10,ML3.5/1,MS3.6/1, Ms1 3.6/1,ms1mx3.6/24,Error ellipse: s-maj=44.7km s-min=15.2km az=1.0*

ISC 15 03:47:06.7±1.3**,51.4N**±0.2×**179.32E**±0.07**,h61**^{km}±9^{km}**, n20,**σ**0**^{s}**81**/23**,mb3.9**/10**,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.19	78	P	P	03 47 41.0	-0.5
KIKV	Kanaga Island	2.25	75	P	P	03 47 42.3	0.0
KIWB	Kanaga Island	2.25	76	*e*P	P	03 47 42.0	-0.4
ADAG	Mount Adagdak	2.61	75	P	P	03 47 47.5	-0.1
GSMY	Great Sitkin M	2.96	75	P	P	03 47 51.9	-0.5
GSMY				S	S	03 48 28.3	+1.5
GSTR	Great Sitkin T	2.96	74	P	P	03 47 52.2	-0.3
SMY	Shemya	3.50	295	P	P	03 48 01.2	+1.1
FX1	Attu Island--F	4.08	294	P	P	03 48 08.0	-0.2
	12nm,0.3s,baz=296,slow=1.8,SNR=20						
FX1				S	S	03 49 04.4	+9.2
	7.6nm,0.3s,baz=81,slow=19,SNR=7.1						
FX1				LR	LR	03 49 48.1	
	comp=Z,862nm,20.3s,baz=178,slow=39						
FX1	Attu Island--F	4.08	294	*e*P	P	03 48 07.8	-0.4
ATKA	Atka Island	4.11	76	P	P	03 48 07.5	-1.1
ATKA				S	S	03 48 56.6	+0.7
ILAR	Eielson Array	22.00	40	P	P	03 51 56.2	-0.5
	0.7nm,0.6s,mb3.3,baz=251,slow=10,SNR=12						
ASAJ	Asahikawa	25.53	268	P	P	03 52 31.7	+0.8
	4.3nm,0.7s,mb4.1,baz=79,slow=5.7,SNR=6.5						
ELK	Elko	45.21	77	P	P	03 55 20.1	+1.0
	0.5nm,0.4s,mb3.7,baz=322,slow=17,SNR=3.7						
SONM	Songino Array	45.59	296	P	P	03 55 22.9	+0.8
	0.7nm,0.7s,mb3.7,baz=51,slow=7.9,SNR=4.7						
BW06	Boulder Array	47.43	71	*e*P	P	03 55 36.7	+0.1
	2.2nm,0.6s,mb4.3						
PDAR	Pinedale Array	47.43	71	P	P	03 55 37.2	+0.6
	3.2nm,0.7s,mb4.3,baz=305,slow=4.1,SNR=20						
MKAR	Makanchi Array	59.11	307	P	P	03 57 01.0	-1.8
	0.7nm,0.4s,mb4.0,baz=51,slow=6.1,SNR=9.4						
TXAR	Lajitas Array	59.82	80	P	P	03 57 07.1	-0.8
	0.3nm,0.5s,mb3.6,baz=313,slow=5.1,SNR=7.7						
BVAR	Borovoye Array	60.13	319	P	P	03 57 10.2	+0.5
	3.9nm,0.7s,mb4.5,baz=56,slow=8.2,SNR=20						
NOA	NORSAR Array B	67.54	354	P	P	03 57 57.0	-0.9
	0.4nm,0.8s,mb3.5,baz=12,slow=4.6,SNR=3.4						

IDC ***15*** *03:48:06.4±2.6,20.11S×68.87W,h121*^{km}*±33*^{km}*,mb3.7/4, mb1 3.6/6,mb1mx3.4/18,mbtmp4.1/6,Error ellipse: s-maj=51.4km s-min=22.3km az=124.0*

ISC 15 03:48:05.7±2.4**,20.2S**±0.2×**68.8W**±0.3**,h125**^{km}±35^{km}**,n6,** σ**1**^{s}**57**/6**,mb4.6**/2**,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.89	9	P	P	03 49 05.1	+0.2
	1.6nm,0.3s,baz=191,slow=8.1,SNR=74						
SIV	San Ignacio	8.40	62	P	P	03 50 05.2	-0.6
	0.6nm,0.3s,baz=250,slow=14,SNR=30						
BDFB	Brasilia	20.24	81	P	P	03 52 34.0	+0.9
	1.6nm,0.5s,baz=248,slow=8.7,SNR=6.5						
PLCA	Paso Flores	20.57	184	P	P	03 52 37.5	+1.2
	0.9nm,0.5s,baz=3.7,slow=12,SNR=4.8						
USHA	Ushuaia	34.62	180	P	P	03 54 43.0	-1.5
	11nm,1.0s,mb4.7,baz=11,slow=8.1,SNR=7.9						
DBIC	Dimbokro	68.22	74	P	P	03 58 55.1	-0.2
	10nm,1.3s,mb4.5,baz=225,slow=11,SNR=4.8						

MDD ***15*** *03:50:46.7±0.5,35.12N×4.01W,mbLg2.8/3,Error ellipse: s-maj=4.8km s-min=3.7km az=80.0,PRXIMO*

CNRM ***15*** *03:50:46.7,35.24N×3.85W,h11*^{km}*,MD3.4*

CSEM ***15*** *03:50:47.9±0.2,35.01N×3.70W,h18*^{km}*±2*^{km}*,ML2.9/2, Error ellipse: s-maj=4.2km s-min=2.8km az=102.0*

INMG ***15*** *03:50:48.8±1.1,35.22N×3.98W,ML2.2,Error ellipse: s-maj=4.3km s-min=2.4km az=6.0*

NEIC ***15*** *03:50:48.5,35.17N×4.01W,MG3.5(MDD),After MDD.*

ISC 15 03:50:47.0±0.6**,35.15N**±0.02×**4.01W**±0.03**,h12**^{km}±4^{km}**, n55,**σ**1**^{s}**26**/93**,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPAL	Palemas	0.09	39	Pg	Pg	03 50 49.0	-0.8
MPAL				Lg		03 50 51.0	
TOU	Touzarine	0.29	132	Pg	Pg	03 50 51.5	-1.6
TOU				Lg		03 50 55.5	
TOU	Touzarine	0.29	132	*e*P	Pg	03 50 51.5	-1.6
EMEL	Melilla	0.88	80	Pg	Pg	03 51 04.1	-0.5
	100nm,0.1s,SNR=12						
EMEL				Lg		03 51 15.6	
	346nm,0.2s,SNR=6.1						
EMLI	Melilla	0.88	80	P	Pb	03 51 04.1	+0.4
	100nm,0.1s,SNR=12						
EMLI				S	Sb	03 51 15.6	+0.4
	346nm,0.2s,SNR=6.1						
ZAI	Zaio	1.06	100	*e*P	Pb	03 51 03.0	-3.7
ZAI				*i* S	Sb	03 51 17.0	-3.2
TZK	Tazeka	1.07	188	*i* P	Pb	03 51 07.0	+0.1
TZK				*i* S	Sb	03 51 22.0	+1.4
EALB	Alboran	1.12	45	P	Pb	03 51 08.4	+0.7
EALB				S	Sb	03 51 22.4	+0.3
EALB	Alboran	1.12	45	Pg	Pg	03 51 08.4	-1.0
	17nm,0.2s,SNR=21						
EALB				Lg		03 51 22.4	
	144nm,0.4s,SNR=7.1						
EALB	Alboran	1.12	45	P	Pb	03 51 08.4	+0.6
	17nm,0.2s,SNR=21						
EALB				S	Sb	03 51 22.4	+0.3
	144nm,0.4s,SNR=7.1						
DKH	Dar Kharkhour	1.15	287	Pg	Pg	03 51 09.0	-1.0
DKH				Lg		03 51 23.0	
EMIJ	Mijas	1.54	337	Pg	Pg	03 51 14.1	-3.6
	0.7nm,0.1s,SNR=12						
EMIJ				Lg		03 51 35.2	
	5.1nm,0.2s,SNR=4.6						
ERON	Agron	1.87	5	P	Pn	03 51 21.6	+2.5
ERON				S	Sn	03 51 43.1	+0.3
ERON	Agron	1.87	5	Pn	Pn	03 51 21.6	+2.5
	2.5nm,0.3s,SNR=7.9						
ERON				Sn	Sn	03 51 44.3	+1.6
	4.2nm,0.2s,SNR=6.2						
ERON	Agron	1.87	5	P	Pn	03 51 21.6	+2.5
	2.5nm,0.3s,SNR=7.9						
ERON				S	Sn	03 51 43.1	+0.3
	4.2nm,0.2s,SNR=6.2						
EBER	Berja	1.96	27	P	Pn	03 51 20.5	0.0
EBER				S	Sn	03 51 43.2	-2.0
EBER	Berja	1.96	27	Pn	Pn	03 51 20.5	0.0
	1.5nm,0.1s,SNR=4.8						
EBER				Sn	Sn	03 51 44.2	-1.0
	11nm,0.3s,SNR=6.4						
EBER	Berja	1.96	27	P	Pn	03 51 20.5	0.0
	1.5nm,0.1s,SNR=4.8						
EBER				S	Sn	03 51 43.2	-2.0
	11nm,0.3s,SNR=6.4						
ELOJ	Sierra Loja	1.99	357	Pn	Pn	03 51 22.4	+1.5
	5.5nm,0.4s,SNR=8.5						
ELOJ				Sn	Sn	03 51 46.3	+0.4
	3.7nm,0.4s,SNR=5.3						
MIF	Mishlifen	2.01	210	*i* P	Pn	03 51 22.0	+0.9
MIF				*i* S	Sn	03 51 46.0	-0.3
ECOG	Cogollos-Vega	2.15	10	P	Pn	03 51 25.4	+2.3
ECOG				S	Sn	03 51 52.0	+2.0
ECOG	Cogollos-Vega	2.15	10	Pn	Pn	03 51 25.5	+2.3
	2.0nm,0.2s,SNR=5.7						
ECOG				Sn	Sn	03 51 52.4	+2.5
	4.7nm,0.3s,SNR=7.9						
ECOG	Cogollos-Vega	2.15	10	P	Pn	03 51 25.5	+2.4
	2.0nm,0.2s,SNR=5.7						
ECOG				S	Sn	03 51 52.0	+2.1
ESPR	Espera	2.27	319	P	Pn	03 51 29.7	+4.8
ESPR				S	Sn	03 51 54.0	+1.0
ESPR	Espera	2.27	319	Pn	Pn	03 51 27.2	+2.4
	2.3nm,0.3s,SNR=8.2						
ESPR				Sn	Sn	03 51 55.8	+2.8
	SNR=7.9						
ESPR	Espera	2.27	319	P	Pn	03 51 29.7	+4.8
CZD	Col de Zad	2.28	202	*i* P	Pn	03 51 26.0	+1.0
CZD				*i* S	Sn	03 51 53.0	-0.2
ENIJ	Nijar	2.33	38	Sn	Sn	03 51 51.5	-3.0
	5.8nm,0.2s,SNR=7.9						
EQES	Quesada	2.75	16	Pn	Pn	03 51 33.5	+1.8
	3.2nm,0.3s,SNR=24						
EQES				Sn	Sn	03 52 06.1	+0.9
	10nm,0.3s,SNR=8.8						
EQES	Quesada	2.75	16	P	Pn	03 51 33.5	+1.8
	3.2nm,0.3s,SNR=24						
EQES				S	Sn	03 52 06.1	+0.9
	10nm,0.3s,SNR=8.8						
EADA	Adamuz	3.04	352	Pn	Pn	03 51 37.3	+1.5
	0.5nm,0.1s,SNR=10						
EADA				Sn	Sn	03 52 13.0	+0.4
	2.0nm,0.3s						
EADA	Adamuz	3.04	352	P	Pn	03 51 37.3	+1.4
	0.5nm,0.1s,SNR=10						
EADA				S	Sn	03 52 13.0	+0.4
	2.0nm,0.3s						
ZFT	Errachidia	3.12	185	*i* P	Pn	03 51 37.0	0.0
ZFT				*i* S	Sn	03 52 13.0	-1.6
EMIN	Mina Concepcio	3.38	321	Pn	Pn	03 51 41.1	+0.5
	1.3nm,0.2s,SNR=14						
EMIN				Sn	Sn	03 52 19.3	-1.7
	0.9nm,0.3s						
EMIN	Mina Concepcio	3.38	321	P	Pn	03 51 41.1	+0.5
	1.3nm,0.2s,SNR=14						
EMUR	La Murta	3.49	39	Sn	Sn	03 52 22.0	-1.9
	4.3nm,0.4s,SNR=7.9						
EMUR	La Murta	3.49	39	S	Sn	03 52 22.0	-1.9
	4.3nm,0.4s,SNR=7.9						
PALC	Alcoutim	3.62	311	*e*Pn	Pn	03 51 44.8	+0.7
PALC				*e*Sn	Sn	03 52 26.8	-0.5
	3.1nm,0.3s						
PALC	Alcoutim	3.62	311	*e*Pn	Pn	03 51 44.8	+0.7
PALC				*e*Sn	Sn	03 52 26.8	-0.5
	3.1nm,0.3s						
EGRO	El Granado	3.67	311	Pn	Pn	03 51 45.1	+0.3
	1.5nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	03 52 27.0	-1.5
	3.1nm,0.3s						
EGRO	El Granado	3.67	311	P	Pn	03 51 45.1	+0.3
	1.5nm,0.2s,SNR=7.9						
ETOB	Tobarra	4.01	29	Pn	Pn	03 51 51.0	+1.5
	0.9nm,0.3s,SNR=7.4						
ETOB				Sn	Sn	03 52 34.8	-2.1
	1.2nm,0.2s						
ETOB	Tobarra	4.01	29	P	Pn	03 51 51.0	+1.4
	0.9nm,0.3s,SNR=7.4						
ETOB				S	Sn	03 52 34.8	-2.1
	1.2nm,0.2s						
PBEJ	Beja	4.22	314	*e*Pn	Pn	03 51 53.8	+1.1
PBEJ				*e*Sn	Sn	03 52 42.3	-0.1
EBAD	Badajoz	4.32	327	Pn	Pn	03 51 54.2	+0.1
	1.9nm,0.2s,SNR=17						
EBAD				Sn	Sn	03 52 42.1	-2.9
	3.0nm,0.3s						
EBAD	Badajoz	4.32	327	P	Pn	03 51 54.2	+0.1
	1.9nm,0.2s,SNR=17						
PTEO	Sao Teotonio	4.49	303	*e*Pn	Pn	03 51 57.3	+0.9
PTEO				*e*Sn	Sn	03 52 47.5	-1.7
	4.9nm,0.8s						
PTEO	Sao Teotonio	4.49	303	*e*Pn	Pn	03 51 57.3	+0.9
PTEO				*e*Sn	Sn	03 52 47.5	-1.7
	4.9nm,0.8s						
ESDC	Sonseca Array	4.51	0	Pn	Pn	03 51 57.5	+0.7
	0.5nm,0.1s,baz=175,slow=12,SNR=9.9						
ESDC	Sonseca Array	4.51	0	P	Pn	03 51 57.5	+0.7
PCBR	Castelo Branco	5.43	331	*e*Pn	Pn	03 52 09.7	0.0
PCBR				*e*Sn	Sn	03 53 08.2	-4.6
PTOM	Tomar	5.67	323	*e*Pn	Pn	03 52 12.9	-0.2
PTOM				*e*Sn	Sn	03 53 14.8	-4.0
MTE	Manteigas	5.94	333	*e*Pn	Pn	03 52 16.4	-0.5
MTE				*e*Sn	Sn	03 53 22.6	-3.0
PVIS	Viseu	6.34	332	*e*Pn	Pn	03 52 22.2	-0.4
PVRL	Vila Real	6.77	336	*e*Pn	Pn	03 52 27.9	-0.7
PVRL				*e*Sn	Sn	03 53 41.5	-4.9

IDC ***15*** *03:50:47.6±1.5,40.82N×126.47W,mb3.1/2,mb1 3.7/6, mb1mx3.5/24,mbtmp3.3/6,MS4.8/1,Ms1 4.8/1, ms1mx4.3/28,Error ellipse: s-maj=27.8km s-min=14.9km az=10.0*

NEIC ***15*** *03:50:53.1,40.78N×126.08W,h5*^{km}*,MD3.1(NCEDC), After NCEDC.*

ISC 15 03:50:47.2±1.0**,40.89N**±0.09×**126.51W**±0.10**,h5**^{km}**,n21,** σ**1**^{s}**02**/23**,mb2.8**/2**,Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHMM	Horse Mountain	2.10	90	*e*P	Pn	03 51 22.8	-0.7
KBO	Bosley Butte	2.16	52	*e*P	Pn	03 51 23.7	-0.6
KEBM	Edson Butte	2.56	39	*e*P	Pn	03 51 29.2	-0.8
YBH	Yreka Blue Hor	2.98	72	Pn	Pn	03 51 37.0	+1.0
	34nm,0.3s,baz=259,slow=13,SNR=109						
YBH				LR	LR	03 52 12.5	
	comp=Z,16μm,18.1s,baz=36,slow=29						
YBH				Sn	Sn	03 52 13.2	+0.6
	4.0nm,0.3s,baz=120,slow=16,SNR=2.1						
WDC	Whiskeytown Da	3.03	95	*e*P	Pn	03 51 35.8	-0.9
WDC				*e*S	Sn	03 52 09.1	-4.7
HUMO	Hull Mountain	3.16	56	*e*P	Pn	03 51 38.5	-0.1
MOD	Modoc	4.78	76	*e*P	Pn	03 52 01.2	-0.3
BEKR	Beckwourth	4.81	100	*e*P	Pn	03 52 01.7	-0.3
WVOR	Wild Horse Val	6.09	73	*e*P	Pn	03 52 18.6	-1.5
NVAR	Mina Array Bea	6.79	109	Pn	Pn	03 52 28.3	-1.7
	0.1nm,0.3s,baz=274,slow=14,SNR=2.7						
NVAR	Mina Array Bea	6.79	109	Pn	Pn	03 52 28.3	-1.7
BMO	Blue Mountains	7.83	57	*e*P	Pn	03 52 44.5	0.0
HLID	Hailey	9.36	69	*e*P	P	03 53 04.9	-0.9
PDAR	Pinedale Array	12.78	76	Pn	P	03 53 54.0	+1.7
	baz=262,slow=10,SNR=10.0						
SDCO	Great Sand Dun	16.55	94	P	P	03 54 42.8	+1.3
ANMO	Albuquerque	16.88	104	Pn	P	03 54 46.9	+1.2
	baz=293,slow=7.7,SNR=3.0						
ANMO	Albuquerque	16.88	104	Pn	P	03 54 46.9	+1.2
FFC	Flin Flon	21.37	41	P	P	03 55 39.6	+2.3
TXAR	Lajitas Array	21.89	115	P	P	03 55 43.6	+0.8
	0.3nm,0.9s,mb2.7,baz=284,slow=10,SNR=4.8						
ILAR	Eielson Array	26.65	341	P	P	03 56 28.4	+0.2
	0.3nm,0.8s,mb2.9,baz=162,slow=7.5,SNR=5.5						
ASAJ	Asahikawa	63.65	307	P	P	04 01 20.6	-0.6
	2.6nm,0.3s,baz=221,slow=23,SNR=4.2						

NEIC ***15*** *03:59:40.4±1.2,51.87N×179.38E,h52*^{km}*±11*^{km}*,mb3.8/2, Error ellipse: s-maj=37.7km s-min=8.8km az=187.0*

IDC ***15*** *03:59:42.7±3.9,52.03N×179.30E,h65*^{km}*±34*^{km}*,mb3.5/8, mb1 3.8/9,mb1mx3.6/23,mbtmp3.9/9,ML3.8/1,Error ellipse: s-maj=52.9km s-min=18.3km az=5.0*

ISC 15 03:59:39.4±1.4**,51.9N**±0.3×**179.4E**±0.1**,h58**^{km}±13^{km}**,n15,** σ**0**^{s}**80**/15**,mb3.9**/10**,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIWB	Kanaga Island	2.16	90	*e*P	P	04 00 13.4	-0.4
SMY	Shemya	3.33	286	*e*P	P	04 00 30.1	-0.2
FX1	Attu Island--F	3.91	287	P	P	04 00 39.5	+1.0
	24nm,0.3s,baz=271,slow=0.9,SNR=20						
FX1				S	S	04 01 33.9	+10
	19nm,0.3s,baz=163,slow=21,SNR=6.7						
FX1	Attu Island--F	3.91	287	*e*P	P	04 00 38.7	+0.2
ILAR	Eielson Array	21.55	40	P	P	04 04 26.1	+0.8
	0.5nm,0.7s,mb3.1,baz=251,slow=9.2,SNR=6.3						
HLID	Hailey	43.89	74	*e*P	P	04 07 41.4	-0.2
	0.9nm,0.7s,mb3.6						
SONM	Songino Array	45.38	295	P	P	04 07 53.7	+0.3
	0.9nm,0.6s,mb3.8,baz=56,slow=8.9,SNR=5.1						
BW06	Boulder Array	47.23	72	*e*P	P	04 08 07.2	-0.9
	1.3nm,0.6s,mb4.0						
PDAR	Pinedale Array	47.23	72	P	P	04 08 07.8	-0.3
	2.0nm,0.7s,mb4.2,baz=302,slow=4.6,SNR=14						
ARCES	ARCESS Array B	57.35	349	P	P	04 09 22.1	-1.1
	1.6nm,0.7s,mb4.2,baz=45,slow=1.7,SNR=10						
MKAR	Makanchi Array	58.79	307	P	P	04 09 32.4	-1.1
	0.8nm,0.5s,mb4.0,baz=56,slow=8.7,SNR=7.3						
TXAR	Lajitas Array	59.70	80	P	P	04 09 41.9	+1.8
	0.3nm,0.6s,mb3.5,baz=312,slow=4.7,SNR=5.2						
BVAR	Borovoye Array	59.73	319	P	P	04 09 40.0	+0.1
	3.3nm,0.7s,mb4.5,baz=54,slow=7.8,SNR=17						
NOA	NORSAR Array B	66.99	354	P	P	04 10 28.1	+0.7
	0.6nm,0.7s,mb3.7,baz=18,slow=2.7,SNR=3.5						
MDRS	Chennai	85.36	285	*e*x	x	04 11 06.0	

NEIC ***15*** *04:01:57.0,33.94S×68.42W,h19*^{km}*,ML3.4(GUC),After GUC.*

GUC 15 04:01:57.0±0.7**,33.94S**×**68.42W,h19**^{km}±6^{km}**,MD3.8, ML3.4,Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCH	Pirque	1.77	280	*e*P	Pn	04 02 27.4	+0.3
PCH				*i* S	Sn	04 02 49.9	+0.6

FSR	Penalolen	1.81	284	eP	Pn	04 02 27.4	-0.3
FSR				i S	Sn	04 02 50.9	+0.6
CACH	El Canelo	1.82	264	eP	Pn	04 02 27.7	-0.1
CACH				i S	Sn	04 02 50.6	+0.2
CLCH	Cerro Calan	1.84	286	eP	Pn	04 02 28.2	+0.1
CLCH				i S	Sn	04 02 51.8	+0.7
CLCH				AMP		04 02 54.3	
	comp=E,711nm,0.6s						
CHCH	Chadas Angostu	1.85	269	eP	Pn	04 02 28.7	+0.4
CHCH				i S	Sn	04 02 52.4	+1.0
DSCH	Colegio Aleman	1.87	286	eP	Pn	04 02 28.3	-0.2
DSCH				i S	Sn	04 02 52.9	+1.2
DSCH				AMP		04 02 54.8	
	comp=E,1μm,0.5s						
ANTU	Antumapu	1.88	281	i S	Sn	04 02 52.6	+0.6
ANTU				AMP		04 02 55.8	
	comp=N,217nm,0.6s						
TACH	Talagante	2.11	277	eP	Pn	04 02 32.4	+0.4
JACH	Jahuel	2.21	304	eP	Pn	04 02 33.8	+0.4
JACH				i S	Sn	04 03 02.2	+1.9
SFDO	San Fernando	2.25	252	eP	Pn	04 02 36.1	+2.1
SFDO				i S	Sn	04 03 04.6	+3.2

CSEM ***15*** *04:07:46.7±0.1, 36.70N×5.53W, h46^{km}±1^{km}, ML3.2/3, Error ellipse: s-maj=1.4km s-min=1.1km az=22.0*

CNRM ***15*** *04:07:48.9, 36.34N×6.43W, h30^{km}, MD3.7*

INMG ***15*** *04:07:49.0±1.3, 36.75N×5.56W, h46^{km}±9^{km}, ML3.2, Error ellipse: s-maj=3.8km s-min=2.3km az=24.0*

MDD ***15*** *04:07:49.4±0.3, 36.72N×5.59W, h38^{km}±3^{km}, mbLg3.5/1, Error ellipse: s-maj=2.7km s-min=2.3km az=26.0, PRXIMO*

NEIC ***15*** *04:07:49.3, 36.73N×5.60W, h42^{km}, MG4.4(MDD), After MDD.*

SFS ***15*** *04:07:49.0, 36.98N×5.41W*

LDG ***15*** *04:07:50.1±0.2, 36.75N×5.63W, h25^{km}, Ml3.4/4, Error ellipse: s-maj=4.8km s-min=1.7km az=173.0*

IGIL ***15*** *04:07:52.2, 37.00N×5.90W, h2^{km}, ML3.6*

ISC 15 04:07:47.3±0.2**, 36.80N**±0.02×**5.54W**±0.02**, h38^{km}, n130, σ1^{s}35**/213**, 3C-7D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIJA	Lijar	0.15	47	⇓Pg	P	04 07 56.3	+2.3
LIJA	Lijar	0.15	47	i P	P	04 07 56.3	+2.3
ESPR	Espera	0.26	285	⇓P	P	04 07 56.9	+1.8
ESPR				S	S	04 08 01.4	+1.0
ESPR	Espera	0.26	285	⇓Pg	P	04 07 56.9	+1.8
	159nm,0.1s,SNR=18						
ESPR				Lg		04 08 01.4	
	2μm,0.2s						
ESPR	Espera	0.26	285	P	P	04 07 56.9	+1.8
	159nm,0.1s,SNR=18						
ESPR				S	S	04 08 01.4	+1.0
	2μm,0.2s						
GIBL	Gibalbin	0.34	275	⇓Pg	P	04 07 57.6	+1.6
GIBL				Lg		04 08 02.0	
GIBL	Gibalbin	0.34	275	i P	P	04 07 57.6	+1.6
REAL	Reales	0.42	140	⇑Pg	P	04 07 58.2	+1.3
REAL	Reales	0.42	140	i P	P	04 07 58.2	+1.3
MOMI	Momias	0.49	197	⇓Pg	P	04 07 59.0	+1.1
MOMI				Lg		04 08 03.0	
MOMI	Momias	0.49	197	i P	P	04 07 59.0	+1.1
SCRT	Cerro San Cris	0.53	252	⇑Pg	P	04 07 59.7	+1.2
SCRT				Lg		04 08 05.7	
SCRT	Cerro San Cris	0.53	252	i P	P	04 07 59.7	+1.2
CNIL	Conil	0.60	224	⇑Pg	P	04 08 00.6	+1.3
CNIL				Lg		04 08 07.9	
CNIL	Conil	0.60	224	i P	P	04 08 00.6	+1.3
CNIL				eS	S	04 08 07.9	-0.1
SFS	San Fernando	0.63	238	eP	P	04 08 01.5	+1.7
SFS	San Fernando	0.63	238	⇓Pg	P	04 08 01.7	+1.9
SFS				Lg		04 08 11.3	
SFS	San Fernando	0.63	238	eP	P	04 08 01.5	+1.7
SFS				eS	S	04 08 11.4	+2.6
EMIJ	Mijas	0.66	111	⇓Pg	P	04 08 01.6	+1.3
	104nm,0.1s,SNR=18						
EMIJ				Lg		04 08 11.2	
	1μm,0.3s,SNR=4.0						
EMIJ	Mijas	0.66	111	P	P	04 08 01.6	+1.3
	104nm,0.1s,SNR=18						
EMIJ				S	S	04 08 11.2	+1.5
	1μm,0.3s,SNR=4.0						
ELOJ	Sierra Loja	1.17	72	Pg	P	04 08 10.0	+2.6
	4.7nm,0.2s,SNR=16						
ELOJ				Lg		04 08 23.4	
	56nm,0.3s,SNR=12						
ELOJ	Sierra Loja	1.17	72	P	P	04 08 10.0	+2.6
	4.7nm,0.2s,SNR=16						
ELOJ				S	S	04 08 23.4	+1.0
	56nm,0.3s,SNR=12						
DKH	Dar Kharkhour	1.32	174	i P	P	04 08 08.0	-1.7
DKH				i S	S	04 08 24.0	-2.3
EMIN	Mina Concepcio	1.32	317	P	P	04 08 10.7	+1.0
EMIN				S	S	04 08 28.6	+2.3
EMIN	Mina Concepcio	1.32	317	Pg	P	04 08 10.7	+1.0
	21nm,0.0s,SNR=433						
EMIN				Lg		04 08 28.6	
	42nm,0.1s,SNR=4.0						
EMIN	Mina Concepcio	1.32	317	P	P	04 08 10.7	+1.0
	21nm,0.0s,SNR=433						
EMIN				S	S	04 08 28.6	+2.3
	42nm,0.1s,SNR=4.0						
ERON	Agron	1.41	81	P	P	04 08 13.5	+2.6
ERON	Agron	1.41	81	Pg	P	04 08 13.5	+2.6
	28nm,0.6s,SNR=10						
EADA	Adamuz	1.56	29	P	P	04 08 15.2	+2.0
EADA				S	S	04 08 34.6	+2.2
EADA	Adamuz	1.56	29	Pg	P	04 08 15.2	+2.0
	2.2nm,0.1s,SNR=34						
EADA				Lg		04 08 34.6	
	10nm,0.0s,SNR=5.0						
EADA	Adamuz	1.56	29	P	P	04 08 15.2	+2.0
	2.2nm,0.1s,SNR=34						
EADA				S	S	04 08 34.6	+2.2
	10nm,0.0s,SNR=5.0						
ECOG	Cogollos-Vega	1.65	73	P	P	04 08 16.9	+2.6
ECOG				S	S	04 08 38.0	+3.5
ECOG	Cogollos-Vega	1.65	73	Pg	P	04 08 16.9	+2.6
	14nm,0.2s,SNR=20						
ECOG				Lg		04 08 35.7	
	39nm,0.2s,SNR=12						
ECOG	Cogollos-Vega	1.65	73	P	P	04 08 16.9	+2.5
	14nm,0.2s,SNR=20						
ECOG				S	S	04 08 38.0	+3.4
	39nm,0.2s,SNR=12						
PALC	Alcoutim	1.68	294	eP	P	04 08 15.4	+0.6
PALC				eS	S	04 08 34.4	-0.9
	96nm,0.1s						
PALC	Alcoutim	1.68	294	P	P	04 08 15.4	+0.6
PALC				S	S	04 08 34.3	-1.0
PALC	Alcoutim	1.68	294	eP	P	04 08 15.4	+0.6
PALC				eS	S	04 08 34.4	-0.9
	96nm,0.1s						
EGRO	El Granado	1.71	296	P	P	04 08 15.9	+0.7
EGRO				S	S	04 08 34.9	-1.2
EGRO	El Granado	1.71	296	Pg	P	04 08 15.9	+0.6
	39nm,0.1s,SNR=484						
EGRO				Lg		04 08 34.9	
	114nm,0.1s,SNR=23						
EGRO	El Granado	1.71	296	P	P	04 08 15.9	+0.6
	39nm,0.1s,SNR=484						
EGRO				S	S	04 08 34.9	-1.2
	114nm,0.1s,SNR=23						
EBER	Berja	2.13	87	P	P	04 08 23.9	+2.7
EBER	Berja	2.13	87	P	P	04 08 24.0	+2.8
	SNR=7.9						
EALB	Alboran	2.20	112	Pn	P	04 08 22.5	+0.3
	2.1nm,0.1s,SNR=7.9						
EALB				Sn	S	04 08 47.7	-0.7
	16nm,0.1s,SNR=7.9						
EALB	Alboran	2.20	112	P	P	04 08 22.5	+0.3
	2.1nm,0.1s,SNR=7.9						
EALB				S	S	04 08 47.7	-0.7
	16nm,0.1s,SNR=7.9						
EQES	Quesada	2.21	62	Pn	P	04 08 24.0	+1.7
	1.8nm,0.0s,SNR=30						
EQES				Sn	S	04 08 49.0	+0.4
	SNR=7.9						
EQES	Quesada	2.21	62	P	P	04 08 24.0	+1.7
	1.8nm,0.0s,SNR=30						
PBEJ	Beja	2.22	304	eP	P	04 08 23.0	+0.6
PBEJ				eS	S	04 08 47.2	-1.6
	59nm,0.1s						
PBEJ	Beja	2.22	304	P	P	04 08 22.9	+0.5
PBEJ				S	S	04 08 47.1	-1.7
EBAD	Badajoz	2.27	330	Pn	P	04 08 24.0	+0.8
	12nm,0.1s,SNR=93						
EBAD				Sn	S	04 08 49.3	-1.0
	31nm,0.1s,SNR=7.9						
EBAD	Badajoz	2.27	330	P	P	04 08 24.0	+0.8
	12nm,0.1s,SNR=93						
EBAD				S	S	04 08 49.3	-0.9
	31nm,0.1s,SNR=7.9						
EMEL	Melilla	2.58	125	Pn	P	04 08 27.3	-0.3
	75nm,0.1s,SNR=7.9						
EMEL				Sn	S	04 08 56.3	-1.7
	120nm,0.2s,SNR=7.9						
EMLI	Melilla	2.58	125	P	P	04 08 27.3	-0.4
	75nm,0.1s,SNR=7.9						
EMLI				S	S	04 08 56.3	-1.8
	120nm,0.2s,SNR=7.9						
EVO	Evora	2.61	312	ePn	P	04 08 29.6	+1.5
EVO				eSn	S	04 08 58.7	-0.2
	218nm,0.4s						
PTEO	Sao Teotonio	2.65	287	eP	P	04 08 28.9	+0.3
PTEO				eS	S	04 08 57.4	-2.4
	102nm,0.2s						
PTEO	Sao Teotonio	2.65	287	eP	P	04 08 28.9	+0.3
PTEO				eS	S	04 08 57.4	-2.4
	102nm,0.2s						
MOE	Montemor	2.81	308	eP	P	04 08 31.4	+0.4
MOE				eS	S	04 09 03.3	-0.7
MOE	Montemor	2.81	308	Pn	P	04 08 31.3	+0.3
MOE				Sn	S	04 09 01.6	-2.4
TZK	Tazeka	2.92	157	i P	P	04 08 31.0	-1.6
TZK				i S	S	04 09 04.0	-2.8
EVIA	Vianos	3.03	52	Pn	P	04 08 34.8	+0.7
	5.5nm,0.1s,SNR=12						
EVIA				Sn	S	04 09 08.8	-0.7
	8.7nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	3.13	23	P	P	04 08 36.7	+1.3
ESDC				S	S	04 09 10.1	-1.8
ESDC	Sonseca Array	3.13	23	Pn	P	04 08 36.7	+1.3
	3.2nm,0.1s,baz=182,slow=12,SNR=28						
ESDC				Sn	S	04 09 10.1	-1.8
	8.4nm,0.1s,baz=206,slow=23,SNR=7.9						
ESDC	Sonseca Array	3.13	23	P	P	04 08 36.7	+1.3
	3.2nm,0.1s,SNR=28						
ESDC				S	S	04 09 10.1	-1.8
	8.4nm,0.1s,SNR=7.9						
ALMR	Almeirim	3.36	315	eP	P	04 08 39.1	+0.4
ALMR				eS	S	04 09 13.3	-4.5
ALMR				eS	S	04 09 13.3	-4.4
ALMR				AML	AML	04 09 19.0	
	comp=N,88nm,0.7s						
PCBR	Castelo Branco	3.39	334	eP	P	04 08 39.7	+0.5
PCBR				S	S	04 09 15.9	-2.8
	comp=N,49nm,0.4s						
PCBR	Castelo Branco	3.39	334	eP	P	04 08 39.7	+0.5
PCBR				S	S	04 09 15.9	-2.8
	comp=N,49nm,0.4s						
MIF	Mishlifen	3.40	176	Pn	P	04 08 35.0	-4.2
MIF				Sn	S	04 09 10.0	-8.8
MIF	Mishlifen	3.40	176	i P	P	04 08 35.0	-4.2
LIS	Lisbon	3.44	305	eP	P	04 08 40.2	+0.4
LIS				eS	S	04 09 15.1	-4.8
LIS				eS	S	04 09 15.1	-4.8
LIS				AML	AML	04 09 20.7	
	comp=E,443nm,0.7s						
PLOU	Loures	3.53	307	eP	P	04 08 41.6	+0.4
PLOU				eS	S	04 09 19.3	-3.0
	comp=E,120nm,0.1s						
PLOU	Loures	3.53	307	Pn	P	04 08 41.5	+0.3
PLOU				Sn	S	04 09 19.3	-3.0
	comp=E,60nm,0.1s						
PLOU	Loures	3.53	307	P	P	04 08 41.5	+0.3
PLOU				S	S	04 09 18.5	-3.8
EMUR	La Murta	3.58	72	P	P	04 08 43.4	+1.5
EMUR				S	S	04 09 22.4	-1.1
EMUR	La Murta	3.58	72	P	P	04 08 43.4	+1.5
	SNR=7.9						
EMUR				S	S	04 09 22.4	-1.2
	SNR=7.9						
PTOM	Tomar	3.61	322	eP	P	04 08 42.6	+0.4
PTOM				eS	S	04 09 22.1	-2.0
	comp=E,32nm,0.4s						
PTOM	Tomar	3.61	322	Pn	P	04 08 42.5	+0.3
PTOM				Sn	S	04 09 22.0	-2.1
PTOM	Tomar	3.61	322	eP	P	04 08 42.6	+0.4
PTOM				S	S	04 09 22.0	-2.1
ETOB	Tobarra	3.66	59	Pn	P	04 08 43.1	+0.1
	comp=E,3.1nm,0.1s,SNR=44						
ETOB				Sn	S	04 09 24.1	-1.5
	comp=E,19nm,0.1s,SNR=14						
ETOB	Tobarra	3.66	59	P	P	04 08 43.2	+0.2
ETOB				S	S	04 09 24.1	-1.5
	comp=E,19nm,0.1s,SNR=14						
CART	Cartagena	3.71	76	P	P	04 08 43.0	-0.7
CART	Cartagena	3.71	76	P	P	04 08 43.0	-0.7
CZD	Col de Zad	3.78	174	Pn	P	04 08 41.0	-3.7
CZD				Sn	S	04 09 19.0	-10
CZD	Col de Zad	3.78	174	i P	P	04 08 41.0	-3.7
AVE	Averroes	3.82	204	P	P	04 08 43.5	-1.7
AVE				S	S	04 09 22.5	-7.0
MTE	Manteigas	3.92	337	eP	P	04 08 47.6	+0.9
MTE				eS	S	04 09 29.6	-2.5
	comp=E,52nm,0.5s						
MTE	Manteigas	3.92	337	Pn	P	04 08 47.6	+0.9
MTE				Sn	S	04 09 29.5	-2.6
MTE	Manteigas	3.92	337	P	P	04 08 47.7	+1.0
MTE				S	S	04 09 29.5	-2.6
KIB	El Ksiba	4.24	186	Pn	P	04 08 45.0	-6.1
KIB				Sn	S	04 09 24.0	-16
KIB	El Ksiba	4.24	186	eP	P	04 08 45.0	-6.1
PVIS	Viseu	4.32	336	eP	P	04 08 52.8	+0.5
PVIS				eS	S	04 09 39.0	-3.1
PVIS	Viseu	4.32	336	Pn	P	04 08 52.5	+0.2
PVIS				Sn	S	04 09 38.8	-3.3
ECHE	Chera	4.55	51	Pn	P	04 08 55.7	0.0
	comp=E,2.4nm,0.2s,SNR=8.2						
ECHE				Sn	S	04 09 45.4	-2.7
	comp=E,1.8nm,0.2s,SNR=7.9						
ECHE	Chera	4.55	51	P	P	04 08 55.7	0.0
	comp=E,2.4nm,0.2s,SNR=8.2						
ECHE				S	S	04 09 45.3	-2.8
EBEN	Beniarda	4.62	64	Pn	P	04 08 56.0	-0.6
	comp=E,0.6nm,0.1s,SNR=10						
EBEN				Sn	S	04 09 46.1	-3.7
	SNR=7.9						
EBEN	Beniarda	4.62	64	P	P	04 08 56.0	-0.6
	comp=E,0.6nm,0.1s,SNR=10						
EBEN				S	S	04 09 46.1	-3.7
	SNR=7.9						
PVRL	Vila Real	4.78	340	eP	P	04 08 58.8	0.0
PVRL				eS	S	04 09 49.3	-4.4
	comp=E,53nm,0.1s						
PVRL	Vila Real	4.78	340	Pn	P	04 08 58.8	0.0
PVRL				Sn	S	04 09 49.3	-4.4
	comp=E,26nm,0.1s						
ZFT	Errachidia	4.86	168	Pn	P	04 08 55.0	-4.9
ZFT				Sn	S	04 09 46.0	-10
ZFT	Errachidia	4.86	168	i P	P	04 08 55.0	-4.9
ECAL	Calabor	5.21	350	Pn	P	04 09 05.7	+0.7
	comp=E,1.5nm,0.1s,SNR=16						
ECAL				Sn	S	04 09 60.0	-4.7
	comp=E,4.7nm,0.1s,SNR=7.9						
ECAL	Calabor	5.21	350	P	P	04 09 05.7	+0.7
	comp=E,1.5nm,0.1s,SNR=16						
EMOS	Mosqueruela	5.33	47	P	P	04 09 07.3	+0.7
EMOS				S	S	04 10 04.1	-3.6
EMOS	Mosqueruela	5.33	47	P	P	04 09 07.3	+0.7
	SNR=7.9						
EMOS				S	S	04 10 04.1	-3.5
	SNR=7.9						
ELOB	Lobios	5.42	340	Pn	P	04 09 07.8	0.0
	comp=E,1.1nm,0.1s,SNR=16						
ELOB				Sn	S	04 10 04.5	-5.3
	comp=E,6.3nm,0.1s,SNR=7.9						
ELOB	Lobios	5.42	340	P	P	04 09 07.8	0.0
	comp=E,1.1nm,0.1s,SNR=16						
ERUA	La Rua	5.72	348	Pn	P	04 09 11.9	0.0
	comp=E,2.3nm,0.1s,SNR=7.9						
ERUA				Sn	S	04 10 12.9	-4.4
	comp=E,5.4nm,0.3s,SNR=8.9						
CIA	Chichaoua	5.86	208	Pn	P	04 09 05.0	-9.0
CIA				Sn	S	04 09 56.5	-24
ERTA	Horta de San J	6.18	46	Pn	P	04 09 14.1	-4.4
	comp=E,0.3nm,0.1s,SNR=7.9						
ECRI	Cripan	6.25	21	Pn	P	04 09 19.8	+0.3
	comp=E,1.3nm,0.2s,SNR=7.9						
ESAC	San Caprasio	6.29	37	Pn	P	04 09 20.3	+0.2
	SNR=7.9						
ESAC				Sn	S	04 10 30.9	-0.7
	comp=E,21nm,0.3s,SNR=7.9						
ESAC	San Caprasio	6.29	37	P	P	04 09 20.4	+0.3
ESAC				S	S	04 10 31.0	-0.7
EARI	Arriondas	6.50	2	Pn	P	04 09 24.0	+1.0
	comp=E,0.1nm,0.1s,SNR=7.9						
EARI				Sn	S	04 10 30.6	-6.1
	SNR=7.9						
EARI	Arriondas	6.50	2	P	P	04 09 24.0	+1.1
	comp=E,0.1nm,0.1s,SNR=7.9						
STS	Santiago	6.50	340	Sn	S	04 10 30.4	-6.4
	comp=E,3.4nm,0.1s,SNR=7.9						
ELAN	Lanestosa	6.62	13	Sn	S	04 10 33.7	-6.2
	comp=E,1.1nm,0.1s,SNR=7.9						
EPON	Pontenova	6.63	350	P	P	04 09 25.5	+0.6
EPON				S	S	04 10 33.4	-6.7
EPON	Pontenova	6.63	350	P	P	04 09 25.5	+0.6
	SNR=7.9						
EPOB	Poblet	6.87	47	P	P	04 09 26.8	-1.4
	SNR=4.0						
ELIZ	Elizondo	7.06	25	Pn	P	04 09 31.3	+0.5
	comp=E,1.1nm,0.2s,SNR=7.9						
EALK	Alkurruntz	7.12	25	Pn	P	04 09 32.2	+0.5
	comp=E,0.4nm,0.1s,SNR=7.9						
EALK				Sn	S	04 10 47.0	-5.2
	comp=E,15nm,0.4s,SNR=7.9						
SJPF	Ste Jean	7.12	26	ePn	P	04 09 31.8	+0.1
SJPF				eSn	S	04 10 46.8	-5.5
	comp=E,1.6nm,0.3s						
ETSF	Etsaut	7.19	31	ePn	P	04 09 32.5	-0.2
ETSF				eSn	S	04 10 48.8	-5.3
	comp=E,3.5nm,0.4s						
EBIE	Bielsa	7.33	35	Pn	P	04 09 34.3	-0.3
	comp=E,0.8nm,0.1s,SNR=7.9						
EBIE				Sn	S	04 10 51.9	-5.5
	comp=E,0.1nm,0.1s,SNR=7.9						
EBIE	Bielsa	7.33	35	P	P	04 09 34.3	-0.3
EPF	Esparros	7.69	34	ePn	P	04 09 39.0	-0.6
EPF				eSn	S	04 11 01.6	-4.8
	comp=E,2.2nm,0.2s						
LFF	La Frestale	9.42	28	ePn	P	04 10 02.2	-1.3
RJF	Les Rejaudoux	10.02	30	ePn	P	04 10 10.7	-1.1
QUIF	Quistinic	11.24	8	ePn	P	04 10 27.2	-1.3
ROSF	Rostrenen	11.65	8	ePn	P	04 10 32.7	-1.2
SGMF	Saint Gilles	11.65	10	ePn	P	04 10 32.9	-1.1
CABF	La Chapelle	13.08	38	ePn	P	04 10 52.4	-0.7

IDC ***15*** *04:17:12.1±1.6, 41.14N×126.24W, mb3.8/4, mb1 3.9/8, mb1mx3.7/24, mbtmp3.7/8, ML3.5/3, Error ellipse: s-maj=28.2km s-min=13.5km az=24.0*

NEIC ***15*** *04:17:15.7, 41.07N×126.01W, h3^{km}, mb4.2/2, MD3.5(NCEDC), After NCEDC.*

ISC 15 04:17:12.9±2.5**, 41.18N**±0.06×**126.11W**±0.09**, h8^{km}**±18^{km}**, n37, σ1^{s}23**/40**, mb3.6**/5**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBO	Bosley Butte	1.75	53	eP	Pn	04 17 43.9	+0.1
KBO				eS	Sn	04 18 02.9	-3.5
KHMM	Horse Mountain	1.82	99	eP	Pn	04 17 44.9	0.0
KEBM	Edson Butte	2.15	37	eP	Pn	04 17 48.7	-0.8
YBH	Yreka Blue Hor	2.61	77	Pn	Pn	04 17 57.9	+1.8
	19nm,0.3s,baz=280,slow=11,SNR=56						
YBH				Sn	Sn	04 18 29.1	+0.7
	38nm,0.3s,baz=90,slow=12,SNR=17						
HUMO	Hull Mountain	2.75	58	eP	Pn	04 17 58.4	+0.2
HUMO				eS	Sn	04 18 26.8	-5.1
WDC	Whiskeytown Da	2.77	101	eP	Pn	04 17 58.1	-0.3
NSHM	Saint Helena R	3.78	133	eP	Pn	04 18 11.4	-1.4
MOD	Modoc	4.42	79	eP	Pn	04 18 21.7	-0.1
WCN	Washoe City	5.21	109	eP	Pn	04 18 31.5	-1.5
CMB	Columbia Colle	5.42	124	eP	Pn	04 18 35.1	-0.9
OMM	Old Mammoth Mi	6.55	121	P	Pn	04 18 52.4	+0.4
NVAR	Mina Array Bea	6.60	112	Pn	Pn	04 18 52.0	-0.7
	0.9nm,0.3s,baz=293,slow=13,SNR=17						
MTUM	Tungsten Hills	6.99	121	P	Pn	04 18 58.9	+0.9
BMO	Blue Mountains	7.42	57	eP	Pn	04 19 04.5	+0.3
ELK	Elko	8.24	89	Pn	P	04 19 17.3	+1.7
	0.1nm,0.3s,baz=279,slow=11,SNR=9.0						
HLID	Hailey	8.98	71	eP	P	04 19 25.0	-0.8
MCMT	McKenzie Canyo	10.37	65	eP	P	04 19 45.0	0.0
MSO	Missoula	10.42	53	eP	P	04 19 44.2	-1.4
CHMT	Chamberlain Mo	10.88	54	eP	P	04 19 51.2	-0.7
HWUT	Hardware Ranch	10.94	83	P	P	04 19 52.6	-0.1
MVU	Marysvale	11.01	100	P	P	04 19 53.6	-0.1
MSU	Marysvale	11.04	99	P	P	04 19 51.6	-2.5
PDAR	Pinedale Array	12.42	77	Pn	P	04 20 16.8	+3.9
	0.1nm,0.3s,baz=262,slow=6.4,SNR=2.5						
EDM	Edmonton	14.81	31	P	P	04 20 48.4	+4.1
LAO	LASA Array	15.33	62	P	P	04 20 53.1	+2.0
	12nm,0.9s						
ANMO	Albuquerque	16.66	106	Pn	P	04 21 11.2	+2.9
	baz=281,slow=16,SNR=2.3						
DLBC	Dease Lake	17.46	353	P	P	04 21 21.1	+3.0
	0.1nm,0.3s,baz=203,slow=13,SNR=3.9						
MNTX	Cornudas Mount	19.13	113	P	P	04 21 39.3	+0.4
FFC	Flin Flon	20.95	42	eP	P	04 21 58.2	-0.3
	8.4nm,0.8s						
TXAR	Lajitas Array	21.73	116	P	P	04 22 08.8	+2.2
	1.5nm,0.8s,mb3.5,baz=297,slow=8.4,SNR=6.3						
YKA	Yellowknife Ar	22.43	14	P	P	04 22 13.2	-0.1
	3.5nm,0.8s,mb3.8,baz=198,slow=9.9,SNR=11						
YKA	Yellowknife Ar	22.43	14	P	P	04 22 13.2	-0.1
YKW3	Yellowknife Ar	22.49	14	eP	P	04 22 15.5	+1.6
ILAR	Eielson Array	26.48	340	P	P	04 22 49.6	-2.4
	1.0nm,0.8s,mb3.4,baz=157,slow=7.9,SNR=8.7						
FINES	FINESS Array B	75.26	13	P	P	04 28 57.3	-0.1
	1.3nm,0.8s,mb3.9,baz=18,slow=6.0,SNR=5.9						
AKASG	Malin Array Be	85.99	15	P	P	04 29 53.9	-0.6
	0.1nm,0.3s,mb3.5,baz=334,slow=4.5,SNR=5.0						
AKASG	Malin Array Be	85.99	15	P	P	04 29 53.9	-0.6

IDC ***15*** *04:37:03.9±2.6, 41.15N×126.07W, mb3.1/2, mb1 3.5/6, mb1mx3.4/25, mbtmp3.2/6, ML3.8/3, Error ellipse: s-maj=28.0km s-min=25.8km az=59.0*

NEIC ***15*** *04:37:04.2±2.3, 41.02N×126.16W, h10^{km}, mb3.9/1, Error ellipse: s-maj=28.9km s-min=11.7km az=82.0*

ISC 15 04:37:01.9±1.4**, 41.03N**±0.06×**126.2W**±0.1**, h10^{km}, n20, σ0^{s}88**/22**, mb3.4**/3**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHMM	Horse Mountain	1.90	94	eP	Pn	04 37 34.5	-0.2
KHMM				eS	Sn	04 37 53.6	-5.3
KBO	Bosley Butte	1.91	51	eP	Pn	04 37 34.1	-0.9
KEBM	Edson Butte	2.32	37	eP	Pn	04 37 39.2	-1.6
YBH	Yreka Blue Hor	2.74	74	Pn	Pn	04 37 47.4	+0.6
	10nm,0.3s,baz=273,slow=12,SNR=29						
YBH				Sn	Sn	04 38 20.8	+0.5
	14nm,0.3s,baz=148,slow=6.5,SNR=14						
WDC	Whiskeytown Da	2.83	98	eP	Pn	04 37 47.7	-0.5
HUMO	Hull Mountain	2.91	56	eP	Pn	04 37 48.4	-0.8
HOPS	Hopland	3.16	129	eP	Pn	04 37 52.0	-0.8
NSHM	Saint Helena R	3.75	131	eP	Pn	04 38 00.7	-0.5
SAC	San Andreas	4.54	138	eP	Pn	04 38 11.2	-1.1
MOD	Modoc	4.54	77	eP	Pn	04 38 12.0	-0.3
BEKR	Beckwourth	4.63	103	P	Pn	04 38 13.9	+0.3
NVAR	Mina Array Bea	6.64	110	Pn	Pn	04 38 42.9	+0.9
	0.3nm,0.3s,baz=292,slow=14,SNR=7.2						
MTUM	Tungsten Hills	6.99	119	P	Pn	04 38 46.8	-0.1
BMO	Blue Mountains	7.58	57	eP	Pn	04 38 54.5	-0.7
ELK	Elko	8.33	88	Pn	P	04 39 06.7	+1.0
	0.1nm,0.3s,baz=272,slow=15,SNR=4.8						
PDAR	Pinedale Array	12.54	77	Pn	P	04 40 04.2	+0.8
	0.1nm,0.3s,baz=270,slow=3.6,SNR=2.6						
FFC	Flin Flon	21.12	41	eP	P	04 41 49.2	+0.2
	4.6nm,0.9s,mb3.8						
TXAR	Lajitas Array	21.75	115	P	P	04 41 57.3	+1.7
	0.6nm,0.7s,mb3.1,baz=297,slow=8.4,SNR=5.9						
WMOK	Wichita Mounta	22.50	97	P	P	04 42 07.3	+4.4
YKA	Yellowknife Ar	22.60	14	P	P	04 42 05.1	+1.6
	0.6nm,0.7s,mb3.1,baz=197,slow=10,SNR=3.4						

ISC 15 04:37:36.7±0.7**, 37.14N**±0.04×**28.34E**±0.05**, h10^{km}, n8, σ1^{s}36**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DALT	Dalyan (Mudla)	0.44	147	PG	Pg	04 37 44.0	-1.7
AYDN	Tasoluk	0.63	325	*i* P	Pb	04 37 48.5	-0.9
AYDN				*i* S	Sg	04 37 57.6	-0.4
BDRM	Kayabasi	0.72	264	*i* P	Pb	04 37 50.5	-0.3
BDRM				*i* S	Sb	04 38 05.0	+4.5
FETY	Fethiye	0.78	130	*e*PG	Pg	04 37 52.2	-0.3
FETY				*e*SG	Sg	04 38 03.9	+0.9
DNZL	Cakiroluk	0.79	46	*i* P	Pb	04 37 51.0	-1.1
DNZL				*i* S	Sb	04 38 01.1	-1.5
BODT	Bodrum	0.82	265	*e*PG	Pg	04 37 53.4	+0.1
MANT	Manisa	1.36	7	*i* P	Pb	04 38 04.1	+2.2
MANT				*i* S	Sb	04 38 20.7	+1.6
AKAS	Kas	1.36	131	*i* P	Pn	04 38 05.3	+3.4
AKAS				*i* S	Sb	04 38 26.7	+7.4

IDC 15 04:42:39.3±1.8, 41.16N×126.14W, mb3.8/4, mb1 3.8/8, mb1mx3.7/24, mbtmp3.6/8, ML3.6/2, Error ellipse: s-maj=29.7km s-min=14.6km az=24.0

NEIC 15 04:42:40.2±1.6, 41.12N×126.16W, h10^{km}, mb4.1/2, Error ellipse: s-maj=20.9km s-min=12.1km az=57.0

ISC 15 04:42:37.9±2.9, 41.14N±0.09×126.2W±0.1, h4^{km}±21^{km}, n24, σ0^{s}73/26, mb3.6/6, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBO	Bosley Butte	1.81	53	*e*P	Pn	04 43 09.7	-0.4
KHMM	Horse Mountain	1.86	97	*e*P	Pn	04 43 10.7	-0.2
KEBM	Edson Butte	2.20	38	*e*P	Pn	04 43 14.8	-0.9
YBH	Yreka Blue Hor	2.67	76	Pn	Pn	04 43 24.0	+1.7
	15nm,0.3s,baz=275,slow=11,SNR=42						
YBH				Sn	Sn	04 43 55.5	0.0
	24nm,0.3s,baz=100,slow=16,SNR=14						
WDC	Whiskeytown Da	2.81	100	*e*P	Pn	04 43 24.0	-0.3
WDC				*e*S	Sn	04 43 53.8	-5.3
HUMO	Hull Mountain	2.81	58	*e*P	Pn	04 43 23.9	-0.5
NSHM	Saint Helena R	3.79	133	*e*P	Pn	04 43 37.5	-0.8
BEKR	Beckwourth	4.61	104	*e*P	Pn	04 43 50.0	+0.1
NVAR	Mina Array Bea	6.63	112	Pn	Pn	04 44 18.6	0.0
	0.3nm,0.3s,baz=296,slow=13,SNR=8.1						
BMO	Blue Mountains	7.48	57	*e*P	Pn	04 44 29.9	-0.5
ELK	Elko	8.28	89	Pn	P	04 44 42.8	+1.1
	0.1nm,0.3s,baz=259,slow=16,SNR=2.3						
MCMT	McKenzie Canyo	10.43	65	*e*P	P	04 45 12.5	+1.3
CHMT	Chamberlain Mo	10.94	54	*e*P	P	04 45 18.0	-0.2
HRY	Holter Researc	11.74	57	*e*P	P	04 45 29.1	+0.1
PDAR	Pinedale Array	12.47	77	Pn	P	04 45 43.1	+4.1
	0.1nm,0.3s,baz=276,slow=15,SNR=5.3						
LAO	LASA Array	15.39	62	P	P	04 46 21.8	+4.4
	7.7nm,0.8s						
ANMO	Albuquerque	16.70	105	Pn	P	04 46 40.6	+6.4
	baz=280,slow=6.1,SNR=2.6						
FFC	Flin Flon	21.01	42	*e*P	P	04 47 24.3	-0.3
	8.7nm,0.8s,mb4.1						
TXAR	Lajitas Array	21.76	116	P	P	04 47 37.5	+5.1
	0.4nm,0.8s,mb2.9,baz=304,slow=9.0,SNR=6.4						
YKA	Yellowknife Ar	22.48	14	P	P	04 47 39.3	0.0
	2.3nm,0.8s,mb3.6,baz=197,slow=10,SNR=8.1						
YKA	Yellowknife Ar	22.48	14	P	P	04 47 39.3	0.0
ULM	Lac du Bonnet	22.90	56	P	P	04 47 42.5	-1.0
	4.0nm,0.8s,mb3.9,baz=269,slow=10,SNR=4.7						
ILAR	Eielson Array	26.50	340	P	P	04 48 18.8	+1.0
	0.6nm,0.8s,mb3.2,baz=160,slow=8.9,SNR=6.2						
FINES	FINESS Array B	75.31	13	P	P	04 54 23.2	-0.1
	1.0nm,0.7s,mb3.9,baz=18,slow=4.4,SNR=4.6						

NEIC 15 05:06:44.7±0.9, 20.00S×69.03W, h105^{km}±9^{km}, mb4.2/3, Error ellipse: s-maj=13.3km s-min=9.0km az=78.0

IDC 15 05:06:46.9±2.6, 19.89S×68.87W, h122^{km}±22^{km}, mb3.6/6, mb1 3.8/9, mb1mx3.6/20, mbtmp4.1/9, MS4.1/1, Ms1 4.3/1, ms1mx4.0/22, Error ellipse: s-maj=27.7km s-min=18.3km az=75.0

ISC 15 05:06:43.0±1.2, 19.97S±0.07×69.0W±0.1, h104^{km}±14^{km}, n24, σ1^{s}11/21, mb4.0/4, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.75	13	P	P	05 07 43.7	+3.6
	4.8nm,0.3s,baz=208,slow=7.3,SNR=219						
LPAZ				LR	LR	05 09 26.9	
	comp=Z,3µm,18.9s,baz=306,slow=44						
LPAZ	La Paz	3.75	13	*e*Pn	P	05 07 43.4	+3.3
LPAZ				LR	LR	05 09 26.9	
ARE	Arequipa	4.21	325	*e*P	P	05 07 47.0	+0.6
SIV	San Ignacio	8.52	64	P	P	05 08 44.4	-0.7
	11nm,0.3s,baz=257,slow=12,SNR=633						
CFAA	Coronel Fontan	11.61	177	P	P	05 09 25.0	-1.4
	0.0nm,0.3s,baz=2.0,slow=15,SNR=2.2						
CFAA	Coronel Fontan	11.61	177	P	P	05 09 25.0	-1.4
SAML	Samuel	12.32	28	*e*Pn	P	05 09 32.8	-3.1
CPUP	Villa Florida	12.46	123	P	P	05 09 38.4	+0.6
	0.3nm,0.3s,baz=326,slow=14,SNR=11						
CPUP	Villa Florida	12.46	123	*e*P	P	05 09 38.9	+1.1
TRQA	Tornquist	19.03	163	*e*P	P	05 10 58.9	-0.3
BDFB	Brasilia	20.44	81	P	P	05 11 14.1	0.0
	4.4nm,0.6s,baz=262,slow=14,SNR=3.8						
PLCA	Paso Flores	20.74	183	P	P	05 11 18.1	+1.1
	2.4nm,0.6s,baz=358,slow=13,SNR=6.7						
PLCA	Paso Flores	20.74	183	*e*P	P	05 11 17.8	+0.7
	3.2nm,0.8s						
RCBR	Riachuelo	35.10	71	*e*P	P	05 13 29.7	+1.4
TXAR	Lajitas Array	59.33	325	P	P	05 16 35.4	-1.2
	0.2nm,0.5s,mb3.4,baz=121,slow=7.3,SNR=3.5						
SNAA	Sanae	63.75	161	P	P	05 17 06.4	+0.9
	0.6nm,0.7s,mb3.5,baz=293,slow=5.3,SNR=7.4						
SNAA	Sanae	63.75	161	*e*P	P	05 17 06.0	+0.5
	2.0nm,0.8s,mb4.0						
DBIC	Dimbokro	68.39	74	P	P	05 17 34.6	-1.4
	3.8nm,0.8s,mb4.3,baz=214,slow=7.3,SNR=5.6						
DBIC	Dimbokro	68.39	74	*e*P	P	05 17 35.2	-0.8
	24nm,1.5s,mb4.8						
YKA	Yellowknife Ar	89.72	341	P	P	05 19 30.7	+0.5
	2.4nm,0.7s,mb4.5,baz=132,slow=4.6,SNR=11						
YKA	Yellowknife Ar	89.72	341	P	P	05 19 30.7	+0.5
WRA	Warramunga Arr	134.22	211	PKP	PKPdf	05 25 51.1	+1.9
	0.4nm,0.6s,baz=151,slow=1.9,SNR=7.5						
MKAR	Makanchi Array	144.44	35	PKP	PKPdf	05 26 06.8	-0.1
	0.2nm,0.4s,baz=270,slow=2.4,SNR=4.6						
SONM	Songino Array	151.95	7	PKPbc	PKPdf	05 26 28.1	+9.2
	1.5nm,0.6s,baz=293,slow=1.0,SNR=8.0						

TRN 15 05:13:26.4, 15.84N×61.62W, h16^{km}, MD3.8, M3.6(FDF), 3C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOG	Dongo Capester	0.20	0	*e*P	Pb	05 13 32.7	+1.4
BCG	Bois Riant Cap	0.25	360	*e*P	Pb	05 13 33.4	+1.3
MGG	Marie-Galante	0.30	74	⇑*i*P	Pb	05 13 34.9	+1.9
BBL	Barber's Block	0.34	155	⇓*e*P	Pb	05 13 35.2	+1.6
DWS	Wesley	0.40	132	*e*P	Pb	05 13 37.4	+2.8
DWS				*e*S	Sb	05 13 43.9	+3.8
SEG	Port Louis	0.57	11	*e*P	Pb	05 13 39.6	+1.9
DEG	La Desirade	0.72	48	⇑*e*P	Pb	05 13 41.3	+1.2
FDF	Fort de France	1.19	158	⇑*i*P	Pb	05 13 48.9	+0.9
BPA	Boggy Peak	1.23	349	*e*S	Sb	05 14 08.1	+4.0
CPB	Codrington	1.81	354	*e*P	Pn	05 13 58.5	+1.3
CPB				*e*S	Sn	05 14 24.1	+4.2

NEIC 15 05:27:09.7±0.3, 6.72N×72.96W, mb3.8/1, Error ellipse: s-maj=11.1km s-min=7.1km az=91.0

IDC 15 05:27:09.7±0.5, 6.72N×72.97W, h155^{km}±5^{km}, mb3.6/13, mb1 3.8/16, mb1mx3.7/24, mbtmp4.1/16, MS4.1/1, Ms1 4.1/1, ms1mx3.9/25, Error ellipse: s-maj=11.2km s-min=6.8km az=120.0

ISC 15 05:27:09.5±0.6, 6.72N±0.04×72.91W±0.07, h169^{km}±6^{km}, n33, σ0^{s}95/36, mb3.6/14, 3C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.33	217	P	P	05 27 50.9	+0.9
	108nm,0.3s,baz=98,slow=23,SNR=793						
ROSC				S	S	05 28 19.5	-1.8
	74nm,0.3s,baz=97,slow=17,SNR=14						
ROSC				LR	LR	05 28 58.5	
	comp=Z,5µm,20.0s,baz=201,slow=47						
SDV	Santo Domingo	3.12	46	P	P	05 28 00.9	+1.2
	112nm,0.3s,baz=264,slow=6.8,SNR=907						
SDV				S	S	05 28 37.8	-0.5
	162nm,0.3s,baz=259,slow=23,SNR=34						
SDV	Santo Domingo	3.12	46	*e*P	P	05 28 00.7	+1.0
SDV				*e*S	S	05 28 37.8	-0.5
HOJ	Hope	11.83	342	⇑*e*P	P	05 29 54.5	+0.7
STH	Stony Hill	11.91	342	⇑*e*P	P	05 29 55.0	0.0
STH				*e*S	S	05 31 54.9	-10
MCJ	Malvern	12.07	338	⇓*i*P	P	05 29 57.7	+0.7
MCJ				*e*S	S	05 31 58.5	-10
BBJ	Bamboo Saint A	12.35	340	⇑*e*P	P	05 30 02.2	+1.7
SJG	San Juan	13.10	30	P	P	05 30 10.0	-0.2
	4.3nm,0.3s,baz=204,slow=15,SNR=11						
SJG				S	S	05 32 30.7	-1.8
	1.8nm,0.3s,baz=340,slow=19,SNR=3.4						
LPAZ	La Paz	23.34	168	P	P	05 32 05.7	+1.9
	1.4nm,0.4s,mb3.7,baz=350,slow=14,SNR=11						
LPAZ				pP		05 32 38.1	
	2.7nm,0.7s,baz=345,slow=14,SNR=4.2						
LPAZ	La Paz	23.34	168	*e*P	P	05 32 04.3	+0.5
	2.6nm,0.7s,mb3.8						
SIV	San Ignacio	25.42	153	P	P	05 32 23.4	0.0
	3.0nm,0.8s,mb3.9,baz=329,slow=9.5,SNR=16						
BDFB	Brasilia	33.19	132	P	P	05 33 33.8	+1.3
	6.0nm,0.6s,mb4.5,baz=298,slow=11,SNR=23						
TXAR	Lajitas Array	36.69	312	P	P	05 34 01.4	-0.5
	0.3nm,0.7s,mb3.0,baz=127,slow=8.6,SNR=5.2						
TXAR				pP	pP	05 34 34.9	-3.4
	0.6nm,0.6s,baz=130,slow=8.9,SNR=5.9						
TXAR				PcP	PcP	05 36 22.2	+0.9
	0.7nm,0.6s,baz=138,slow=5.9,SNR=9.3						
CFAA	Coronel Fontan	38.37	174	P	P	05 34 15.8	-0.1
	0.2nm,0.9s,mb2.7,baz=352,slow=14,SNR=3.1						
CFAA	Coronel Fontan	38.37	174	P	P	05 34 15.8	-0.1
PLCA	Paso Flores	47.26	178	P	P	05 35 25.9	-1.7
	1.4nm,0.8s,mb3.6,slow=10,SNR=2.9						
PLCA	Paso Flores	47.26	178	*e*P	P	05 35 25.8	-1.8
SCHQ	Schefferville	48.23	5	P	P	05 35 34.9	+0.1
	3.5nm,0.5s,mb4.2,baz=166,slow=5.4,SNR=14						
PDAR	Pinedale Array	48.28	324	P	P	05 35 34.4	-1.0
	0.3nm,0.4s,mb3.3,baz=119,slow=9.3,SNR=3.2						
PDAR				pP	pP	05 36 11.3	-2.1
	0.3nm,0.5s,baz=132,slow=11,SNR=2.2						
PDAR				PcP	PcP	05 36 59.5	-0.4
	0.3nm,0.4s,baz=113,slow=6.9,SNR=3.1						
NVAR	Mina Array Bea	51.70	315	P	P	05 36 01.7	+0.2
	0.4nm,0.6s,mb3.2,baz=130,slow=7.0,SNR=3.1						
YKA	Yellowknife Ar	63.43	340	P	P	05 37 21.4	-1.8
	2.0nm,0.6s,mb4.2,baz=129,slow=6.9,SNR=12						
YKA				PcP	PcP	05 37 59.6	+1.3
	0.9nm,0.6s,baz=132,slow=6.9,SNR=5.4						
YKA	Yellowknife Ar	63.43	340	P	P	05 37 21.4	-1.8
YKA				PcP	PcP	05 37 59.6	+1.3
DBIC	Dimbokro	67.53	86	P	P	05 37 49.2	-1.0
	4.5nm,0.6s,mb4.4,baz=266,slow=8.5,SNR=11						
DBIC	Dimbokro	67.53	86	P	P	05 37 49.2	-1.0
ILAR	Eielson Array	77.14	335	P	P	05 38 45.7	0.0
	0.6nm,0.7s,mb3.3,baz=110,slow=4.5,SNR=5.5						
NOA	NORSAR Array B	81.31	29	P	P	05 39 09.1	+1.0
	0.3nm,0.6s,mb3.1,baz=258,slow=7.5,SNR=2.8						
ARCES	ARCESS Array B	86.69	20	P	P	05 39 35.3	+0.4
	1.0nm,0.6s,mb3.8,baz=262,slow=4.3,SNR=7.2						
VNA3	Neumayer Olymp	88.01	163	⇓*i*	P	05 39 41.4	+0.3
VNA1	Neumayer--Stat	88.15	162		P	05 39 42.2	+0.4
VNA2	Neumayer--Watz	88.53	163	⇓*i*	P	05 39 43.8	+0.2
MKAR	Makanchi Array	122.35	20	PKP	PKPdf	05 45 45.7	+1.1
	0.7nm,0.4s,baz=299,slow=2.6,SNR=12						
SONM	Songino Array	125.68	1	PKP	PKPdf	05 45 52.7	+1.6
	1.0nm,0.5s,baz=70,slow=0.6,SNR=5.0						
WRA	Warramunga Arr	150.47	241	PKP	PKPdf	05 46 37.8	+1.6
	3.3nm,0.5s,baz=107,slow=2.6,SNR=8.5						
WRA				PKPbc	PKPdf	05 46 42.9	+6.7
	4.8nm,0.5s,baz=108,slow=2.5,SNR=32						
WRA				pPKPbc		05 47 23.7	
	1.6nm,0.5s,baz=109,slow=2.4,SNR=3.4						

NEIC 15 05:39:02.6, 41.26N×126.12W, h5^{km}, mb3.9/1, MD3.5(NCEDC), After NCEDC.

IDC 15 05:39:04.1±1.8, 41.39N×125.89W, mb3.6/4, mb1 3.9/9, mb1mx3.7/26, mbtmp3.7/9, ML3.7/3, MS3.4/1, Ms1 3.4/1, ms1mx3.4/23, Error ellipse: s-maj=26.5km s-min=14.1km az=37.0

ISC 15 05:39:02.7±0.8, 41.31N±0.05×125.89W±0.08, h5^{km}, n34, σ1^{s}11/39, mb3.5/4, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBO	Bosley Butte	1.54	53	*e*P	Pn	05 39 31.1	+0.1
KBO				*e*S	Sb	05 39 48.7	-2.3
KHMM	Horse Mountain	1.69	104	*e*P	Pn	05 39 33.1	+0.1
KHMM				*e*S	Sn	05 39 55.0	-0.3
KEBM	Edson Butte	1.95	36	*e*P	Pn	05 39 36.4	-0.4
YBH	Yreka Blue Hor	2.42	79	Pn	Pn	05 39 45.0	+1.4
	58nm,0.3s,baz=277,slow=12,SNR=84						
YBH				Sn	Sn	05 40 15.0	+1.0
	25nm,0.3s,baz=71,slow=12,SNR=6.8						
YBH				LR	LR	05 40 27.0	
	comp=Z,752nm,20.2s,baz=333,slow=34						
HUMO	Hull Mountain	2.54	58	*e*P	Pn	05 39 45.6	+0.2
WDC	Whiskeytown Da	2.64	105	*e*P	Pn	05 39 46.5	-0.1
HOPS	Hopland	3.16	136	*e*P	Pn	05 39 52.3	-1.8
COR	Corvallis	3.79	29	*e*P	Pn	05 40 02.2	-0.8
MOD	Modoc	4.23	80	*e*P	Pn	05 40 09.6	+0.2
BEKR	Beckwourth	4.45	107	*e*P	Pn	05 40 12.8	+0.4
SAC	San Andreas	4.59	143	*e*P	Pn	05 40 11.6	-2.8
WCN	Washoe City	5.10	111	*e*P	Pn	05 40 21.1	-0.5
CMB	Columbia Colle	5.36	126	*e*P	Pn	05 40 23.8	-1.4
WVOR	Wild Horse Val	5.53	76	*e*P	Pn	05 40 26.5	-1.2
NVAR	Mina Array Bea	6.50	114	Pn	Pn	05 40 41.4	0.0
	1.5nm,0.3s,baz=284,slow=14,SNR=20						
NVAR				Sn	Sn	05 41 57.3	+0.4
	0.1nm,0.3s,baz=302,slow=20,SNR=2.5						
NVAR	Mina Array Bea	6.50	114	Pn	Pn	05 40 41.4	0.0
NVAR				Sn	Sn	05 41 57.3	+0.4
BMO	Blue Mountains	7.21	58	*e*P	Pn	05 40 51.5	+0.1
ELK	Elko	8.07	90	Pn	P	05 41 05.3	+1.9
	0.2nm,0.3s,baz=275,slow=12,SNR=19						
MCMT	McKenzie Canyo	10.17	65	P	P	05 41 32.8	+0.5
CHMT	Chamberlain Mo	10.67	54	*e*P	P	05 41 39.1	-0.2
MSU	Marysvale	10.90	100	P	P	05 41 43.2	+0.9
BOZ	Bozeman (W)	11.23	63	*e*P	P	05 41 45.2	-1.6
HRY	Holter Researc	11.47	57	*e*P	P	05 41 50.0	-0.2
PDAR	Pinedale Array	12.23	78	Pn	P	05 42 03.5	+3.0
	0.1nm,0.3s,baz=291,slow=13,SNR=9.0						
LAO	LASA Array	15.13	63	P	P	05 42 38.0	-0.7
ANMO	Albuquerque	16.54	106	Pn	P	05 42 58.2	+1.3
	baz=308,slow=12,SNR=5.1						
DLBC	Dease Lake	17.35	353	P	P	05 43 09.2	+2.3
	0.1nm,0.3s,baz=178,slow=16,SNR=3.9						
FFC	Flin Flon	20.75	42	*e*P	P	05 43 46.4	-0.2
	5.1nm,0.8s						
TXAR	Lajitas Array	21.64	116	P	P	05 43 58.2	+2.3
	0.8nm,0.9s,mb3.1,baz=309,slow=9.3,SNR=7.0						
TXAR	Lajitas Array	21.64	116	P	P	05 43 58.2	+2.3
YKA	Yellowknife Ar	22.27	14	P	P	05 44 01.0	-0.8
	2.8nm,0.8s,mb3.8,baz=199,slow=10,SNR=8.4						
YKA	Yellowknife Ar	22.27	14	P	P	05 44 01.0	-0.8
ULM	Lac du Bonnet	22.63	57	P	P	05 44 05.5	0.0
	3.0nm,0.5s,mb4.0,baz=238,slow=5.1,SNR=4.8						
ILAR	Eielson Array	26.42	340	P	P	05 44 41.6	0.0
	0.6nm,0.9s,mb3.1,baz=156,slow=8.1,SNR=6.2						

NEIC 15 05:49:12.7±0.9, 23.92S×66.74W, h189^{km}±10^{km}, mb4.2/4, Error ellipse: s-maj=13.0km s-min=8.2km az=86.0

IDC 15 05:49:13.2±1.6, 23.92S×66.71W, h194^{km}±16^{km}, mb3.2/2, mb1 3.7/8, mb1mx3.5/19, mbtmp4.1/8, Error ellipse: s-maj=21.5km s-min=15.1km az=80.0

ISC 15 05:49:10.7±0.8, 24.00S±0.04×66.81W±0.09, h186^{km}±10^{km}, n22, σ1^{s}01/24, mb3.7/4, 3C, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	7.68	189	P	P	05 51 04.0	+3.3
	1.3nm,0.3s,baz=17,slow=13,SNR=150						
CFAA				S	S	05 52 25.3	-1.1
	2.4nm,0.3s,baz=182,slow=14,SNR=15						
LPAZ	La Paz	7.77	351	P	P	05 51 04.1	+2.3
	11nm,0.3s,baz=168,slow=8.3,SNR=229						
LPAZ				S	S	05 52 29.8	+1.1
	0.3nm,0.3s,baz=273,slow=17,SNR=1.8						
LPAZ	La Paz	7.77	351	*e*Pn	P	05 51 04.0	+2.1
LPAZ				*e*Sn	S	05 52 28.9	+0.2
ARE	Arequipa	8.69	329	*e*P	P	05 51 14.0	+0.1
ARE				*e*S	S	05 52 49.0	-1.2
CPUP	Villa Florida	8.90	107	P	P	05 51 17.1	+0.5
	0.3nm,0.3s,baz=299,slow=16,SNR=11						
CPUP	Villa Florida	8.90	107	*e*P	P	05 51 17.1	+0.5
SIV	San Ignacio	9.62	35	P	P	05 51 25.4	-0.7
	0.9nm,0.3s,baz=241,slow=12,SNR=30						
TRQA	Tornquist	14.61	165	*e*Pn	P	05 52 28.8	-0.9
	12nm,0.6s						
SAML	Samuel	15.37	14	*e*P	P	05 52 38.1	-1.1
	13nm,0.8s						
PLCA	Paso Flores	16.98	190	P	P	05 52 58.3	-0.3
	0.2nm,0.3s,baz=1.3,slow=7.6,SNR=6.6						
PLCA	Paso Flores	16.98	190	*e*P	P	05 52 59.0	+0.3
BDFB	Brasilia	19.53	68	P	P	05 53 25.6	-0.4
	0.8nm,0.3s,baz=246,slow=11,SNR=39						
BAO	Brasilia Array	19.55	68	P	P	05 53 26.0	-0.1
VNA3	Neumayer Olymp	57.09	161	⇑*i*	P	05 58 40.2	+0.8
VNA1	Neumayer--Stat	57.29	160	⇑*i*	P	05 58 42.8	+2.0
VNA2	Neumayer--Watz	57.66	160	⇑*i*	P	05 58 43.6	+0.2
SNAA	Sanae	59.29	161	P	P	05 58 53.9	-0.8
	3.6nm,1.0s,mb4.2						
TXAR	Lajitas Array	63.78	324	P	P	05 59 25.1	-0.1
	0.5nm,0.7s,mb3.4,baz=148,slow=8.2,SNR=7.4						
PDAR	Pinedale Array	77.24	329	P	P	06 00 45.9	+0.1
	0.6nm,0.5s,mb3.5,baz=126,slow=6.9,SNR=4.4						
TSUM	Tsumeb	77.49	106	*e*P	P	06 00 47.0	-0.7
	2.7nm,0.8s,mb3.9						
WRA	Warramunga Arr	131.70	207	PKP	PKPdf	06 08 03.0	+0.6
	0.8nm,0.6s,baz=166,slow=1.6,SNR=16						
MKAR	Makanchi Array	146.42	40	PKPbc	PKPbc	06 08 29.9	+0.5
	1.6nm,0.6s,baz=316,slow=2.1,SNR=17						

NEIC 15 06:09:35.4±0.5, 51.56N×16.18E, h5^{km}, ML3.1(VIE), ML2.7(SZGRF), Error ellipse: s-maj=7.3km s-min=5.0km az=97.0

CSEM 15 06:09:35.9±0.1, 51.51N×16.20E, h1^{km}, ML3.1/5, Error ellipse: s-maj=2.2km s-min=1.6km az=79.0

IPEC 15 06:09:35.7±0.3, 51.51N×16.12E, ML2.0/3, Error ellipse: s-maj=2.0km s-min=1.5km az=30.0

WAR 15 06:09:37.7, 51.45N×16.08E, h1^{km}, ML2.6, Mining Induced

IDC 15 06:09:37.4±0.8, 51.48N×16.02E, mb1 3.3/5, mb1mx3.2/22, mbtmp3.2/5, ML3.0/5, Error ellipse: s-maj=21.6km s-min=8.2km az=100.0

PRU 15 06:09:37.2, 51.45N×16.12E

ISC 15 06:09:36.5±0.8, 51.38N±0.04×16.03E±0.05, n31, σ1^{s}06/61, 1C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.56	163	*i* PG	Pg	06 09 49.1	+1.3
KSP				*e*SG	Sg	06 09 57.1	+1.8
KSP	Ksiaz	0.56	163	*e*Pg	Pg	06 09 49.2	+1.4
KSP				*e*Sg	Sg	06 09 57.8	+2.5
KSP	Ksiaz	0.56	163	⇓*i*Pg	Pg	06 09 49.1	+1.3
KSP				*e*Sg	Sg	06 09 57.5	+2.2
UPC	Upice	0.88	181	*e*Pg	Pg	06 09 55.0	+1.0
DPC	Dobruska-Polom	1.05	170	*e*PG	Pg	06 09 57.9	+0.5
DPC				*e*SG	Sg	06 10 12.4	+1.0
	45nm,0.6s						
PVCC	Panska Ves	1.26	228	*e*Pn	Pg	06 10 02.1	+0.5
PVCC	Panska Ves	1.26	228	*e*Pg	Pg	06 10 02.2	+0.6
PVCC				*e*Sg	Sg	06 10 19.4	+1.1
BRG	Berggiesshubel	1.41	250	Pn	Pn	06 10 04.1	+0.7
BRG				Pg	Pg	06 10 05.0	+0.5
BRG				Sg	Sg	06 10 25.0	+1.6
BRG	Berggiesshubel	1.41	250	Pn	Pn	06 10 04.1	+0.7
BRG	Berggiesshubel	1.41	250	Pg	Pg	06 10 05.0	+0.4
PRU	Pruhonice	1.69	215	*e*PN	Pn	06 10 07.5	+0.1
PRU				*e*PG	Pg	06 10 09.5	-0.6
PRU				*e*SG	Sg	06 10 33.2	+0.6
PRU	Pruhonice	1.69	215	Pg	Pg	06 10 09.5	-0.6
PRU				Sg	Sg	06 10 33.2	+0.6
MORC	Moravsky Berou	1.88	148	*e*Pn	Pn	06 10 10.0	-0.1
MORC				S	Sn	06 10 34.4	-0.4
MORC	Moravsky Berou	1.88	148	*e*Pn	Pn	06 10 09.9	-0.2
MORC				S	Sn	06 10 34.4	-0.4
MORC				*e*Sg	Sg	06 10 37.2	-1.7
	9.4nm,0.2s						
CLL	Collm	1.90	269	*e*Pn	Pn	06 10 10.0	-0.4
CLL				*i* Pg	Pg	06 10 13.0	-1.4
CLL				*i* Sg	Sg	06 10 39.7	0.0
CLL	Collm	1.90	269	*e*PN	Pn	06 10 10.0	-0.4
CLL				*i* PG	Pg	06 10 13.0	-1.4
CLL				*i*		06 10 17.4	
CLL				*i* SG	Sg	06 10 39.7	0.0
VRAC	Vranov	2.11	170	Pn	Pn	06 10 14.2	+0.8
	2.3nm,0.3s,baz=333,slow=18,SNR=10.0						
VRAC				Sn	Sg	06 10 45.0	-1.6
	3.2nm,0.3s,baz=80,slow=20,SNR=5.3						
VRAC	Vranov	2.11	170	*e*Pn	Pn	06 10 14.1	+0.7
VRAC				*e*Sg	Sg	06 10 45.2	-1.4
	6.8nm,0.2s						
KRUC	Moravsky	2.33	174	*e*Pn	Pn	06 10 17.2	+0.5
KRUC				*e*Sg	Sg	06 10 52.7	-1.5
	6.5nm,0.3s						
NKC	Novy Kostel	2.54	245	*e*PN	Pn	06 10 20.1	+0.4
NKC				*e*PG	Pg	06 10 26.3	-1.0
NKC				*e*SG	Sg	06 11 01.4	+0.2
NKC	Novy Kostel	2.54	245	*e*Pg	Pg	06 10 26.3	-1.0
NKC				*e*Sg	Sg	06 11 01.4	+0.2
KHC	Kasperske Hory	2.75	216	*e*PN	Pn	06 10 23.1	+0.5
KHC				*e*PG	Pg	06 10 29.1	-2.2
KHC				*e*SN	Sn	06 10 56.5	-0.5
KHC				*e*SG	Sg	06 11 06.3	-1.6
MOX	Moxa	2.88	257	*e*Pg	Pg	06 10 32.7	-1.3
MOX				*e*Sg	Sg	06 11 12.1	-0.3
GEC2	GERESS Array S	2.95	211	*e*Pn	Pn	06 10 26.6	+1.2
GERES	GERESS Array B	2.95	211	Pn	Pn	06 10 26.3	+0.9
	0.7nm,0.3s,baz=29,slow=14,SNR=5.7						
GERES				Pg	Pg	06 10 32.7	-2.7
	3.2nm,0.3s,baz=32,slow=17,SNR=23						
GERES				Sn	Sn	06 11 11.3	+9.3
	2.0nm,0.3s,baz=32,slow=26,SNR=6.0						
GERES	GERESS Array B	2.95	211	Pg	Pg	06 10 32.7	-2.6
MOA	Molln	3.72	199	⇑*i*PN	Pn	06 10 37.1	+0.8
MOA				*i* SG	Sg	06 11 40.6	+0.4
	5.0nm,0.3s						
HFS	Hagfors	8.87	352	Pn	P	06 11 42.9	-6.0
	0.0nm,0.3s,baz=187,slow=12,SNR=3.1						
FINES	FINESS Array B	11.50	25	Pn	P	06 12 17.4	-7.4
	0.2nm,0.3s,baz=200,slow=10,SNR=7.9						
FINES	FINESS Array B	11.50	25	Pn	P	06 12 17.4	-7.4
ARCES	ARCESS Array B	18.76	10	Pn	P	06 13 51.4	-7.3
	0.2nm,0.3s,baz=191,slow=14,SNR=4.6						

IDC 15 06:11:24.1±1.9, 40.75N×126.35W, mb3.8/4, mb1 3.9/8, mb1mx3.7/27, mbtmp3.6/8, ML3.6/2, MS4.2/1, Ms1 4.2/1, ms1mx3.9/36, Error ellipse: s-maj=27.6km s-min=17.1km az=26.0

NEIC 15 06:11:25.7±1.3, 40.78N×126.36W, h10^{km}, mb4.1/1, Error ellipse: s-maj=17.4km s-min=9.8km az=51.0

ISC 15 06:11:22.1±2.8, 40.64N±0.06×126.5W±0.1, h5^{km}±21^{km}, n27, σ1^{s}14/29, mb3.7/5, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	2.08	83	*e*P	Pn	06 11 58.5	+0.3
KHMM				*e*S	Sn	06 12 18.7	-6.0
KBO	Bosley Butte	2.29	46	*e*P	Pn	06 12 00.6	-0.6
KEBM	Edson Butte	2.73	35	*e*P	Pn	06 12 06.2	-1.2
WDC	Whiskeytown Da	2.98	90	*e*P	Pn	06 12 11.2	+0.2
YBH	Yreka Blue Hor	3.03	68	Pn	Pn	06 12 13.5	+1.9
	24nm,0.3s,baz=266,slow=8.8,SNR=72						
YBH				Sn	Sn	06 12 48.1	-0.7
	5.5nm,0.3s,baz=123,slow=15,SNR=4.0						
YBH				LR	LR	06 13 24.6	
	comp=Z,4µm,19.1s,baz=158,slow=41						
HUMO	Hull Mountain	3.27	52	*e*P	Pn	06 12 15.3	+0.2
SAC	San Andreas	4.38	133	*e*P	Pn	06 12 30.3	-0.6
BEKR	Beckwourth	4.73	97	P	Pn	06 12 33.4	-2.4
MOD	Modoc	4.80	73	*e*P	Pn	06 12 37.2	+0.3
CMB	Columbia Colle	5.38	117	*e*P	Pn	06 12 45.1	+0.2
SAO	San Andreas Ge	5.51	133	*e*P	Pn	06 12 45.3	-1.5
LRV	Little Rabbit	5.99	133	*e*P	Pn	06 12 52.6	-1.0
WVOR	Wild Horse Val	6.13	70	P	Pn	06 12 53.3	-2.4
OMM	Old Mammoth Mi	6.54	115	P	Pn	06 13 03.8	+2.4
NVAR	Mina Array Bea	6.68	107	Pn	Pn	06 13 04.5	+1.2
	0.2nm,0.3s,baz=288,slow=14,SNR=3.2						

BMO	Blue Mountains	7.94	55	*e*P	Pn	06 13 21.1	+0.2
ELK	Elko	8.52	86	Pn	P	06 13 28.1	-1.1
	0.1nm,0.3s,baz=259,slow=10,SNR=2.9						
MCMT	McKenzie Canyo	10.85	63	*e*P	P	06 14 01.9	+0.8
CHMT	Chamberlain Mo	11.41	52	*e*P	P	06 14 09.2	+0.4
PDAR	Pinedale Array	12.81	75	Pn	P	06 14 30.1	+2.4
	0.1nm,0.3s,baz=274,slow=13,SNR=3.2						
ANMO	Albuquerque	16.78	103	Pn	P	06 15 25.1	+5.6
	baz=297,slow=12,SNR=4.5						
FFC	Flin Flon	21.53	41	*e*P	P	06 16 13.2	-0.8
	13nm,1.4s,mb4.2						
TXAR	Lajitas Array	21.75	114	P	P	06 16 17.8	+1.4
	1.6nm,0.9s,mb3.5,baz=291,slow=9.0,SNR=15						
TXAR	Lajitas Array	21.75	114	P	P	06 16 17.8	+1.4
ULM	Lac du Bonnet	23.36	55	P	P	06 16 32.5	+0.4
	4.3nm,0.7s,mb4.0,baz=264,slow=8.6,SNR=4.5						
ILAR	Eielson Array	26.90	341	P	P	06 17 05.7	+0.2
	0.7nm,0.9s,mb3.2,baz=163,slow=6.1,SNR=4.4						
INK	Inuvik	27.99	354	P	P	06 17 15.2	-0.1
	2.9nm,0.8s,mb3.9,baz=135,slow=9.6,SNR=3.3						

*IDC **15** 06:15:17.9±1.2, 12.16N×92.29E, mb4.2/8, mb1 4.4/9, mb1mx4.1/21, mbtmp4.2/9, ML4.3/1, Error ellipse: s-maj=41.6km s-min=18.5km az=58.0*

*NEIC **15** 06:15:22.4±0.7, 12.21N×92.35E, h30^{km}, mb4.5/1, Error ellipse: s-maj=21.1km s-min=8.8km az=55.0*

ISC 15 06:15:17.1±8.6, 12.2N±0.2×92.4E±0.2, h7^{km}±53^{km}, n15, σ0^{s}86/15, mb4.1/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.88	45	Pn	P	06 17 28.5	-0.4
	0.8nm,0.3s,baz=234,slow=15,SNR=14						
PKI	Pulchoki	16.66	338	*e*P	P	06 19 15.4	+2.6
GUN	Gumba	16.80	340	*e*P	P	06 19 15.6	+0.9
GKN	Gorkha	17.34	336	*e*P	P	06 19 20.9	-0.5
KOLN	Koldanda	17.57	333	*e*P	P	06 19 22.2	-2.0
MKAR	Makanchi Array	35.55	348	P	P	06 22 16.3	-0.6
	2.1nm,0.7s,mb4.2,baz=164,slow=8.8,SNR=19						
SONM	Songino Array	37.43	16	P	P	06 22 33.3	+0.5
	1.3nm,0.6s,mb3.9,baz=198,slow=7.8,SNR=8.9						
ZAL	Zalesovo	42.09	353	P	P	06 23 11.8	+0.5
	1.8nm,0.5s,mb4.0,baz=338,slow=4.8,SNR=8.1						
BVAR	Borovoye Array	44.39	341	P	P	06 23 29.9	-0.2
	0.8nm,0.6s,mb3.6,baz=143,slow=7.4,SNR=4.9						
FITZ	Fitzroy Crossi	44.51	132	P	P	06 23 32.2	+0.7
	2.9nm,0.5s,mb4.4,baz=18,slow=7.3,SNR=9.4						
WRA	Warramunga Arr	52.18	127	P	P	06 24 30.8	-0.3
	1.9nm,0.6s,mb4.2,baz=305,slow=8.6,SNR=13						
WRAB	Tennant Creek	52.19	127	*e*P	P	06 24 30.9	-0.2
	3.1nm,0.5s,mb4.5						
WB2	Warramunga Arr	52.19	127	*e*P	P	06 24 31.1	-0.1
ARCES	ARCESS Array B	70.66	340	P	P	06 26 35.0	-0.2
	4.0nm,1.1s,mb4.2,baz=72,slow=7.7,SNR=5.5						
GERES	GERESS Array B	73.50	318	P	P	06 26 52.3	-0.1
	0.5nm,0.2s,mb4.0,baz=37,slow=4.9,SNR=3.2						

*BJI **15** 06:27:02.5, 40.80N×126.50W, h10^{km}, mB5.4, mb5.1, Ms5.2, Msz4.9*

*IDC **15** 06:27:04.6±0.9, 40.96N×126.39W, mb4.0/14, mb1 4.2/20, mb1mx4.2/28, mbtmp4.0/20, ML3.8/3, Error ellipse: s-maj=18.4km s-min=10.6km az=19.0*

*NEIC **15** 06:27:05.6±0.4, 40.83N×126.49W, h10^{km}, mb4.7/15, MW4.6(BRK), Error ellipse: s-maj=6.9km s-min=4.4km az=216.0*

ISC 15 06:27:04.4±0.4, 40.83N±0.04×126.40W±0.04, h10^{km}, (h13^{km}±1.4^{km}:pP-P), n121, σ0^{s}96/117, mb4.4/27, MS4.9/2, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	2.03	88	P	Pn	06 27 37.8	-1.2
KBO	Bosley Butte	2.14	49	*e*P	Pn	06 27 39.7	-0.9
KEBM	Edson Butte	2.56	37	*e*P	Pn	06 27 45.2	-1.4
YBH	Yreka Blue Hor	2.92	71	Pn	Pn	06 27 52.5	+0.6
	59nm,0.3s,baz=269,slow=8.9,SNR=92						
YBH				Sn	Sn	06 28 28.5	+1.1
	46nm,0.3s,baz=68,slow=16,SNR=6.6						
YBH	Yreka Blue Hor	2.92	71	*e*P	Pn	06 27 52.1	+0.2
WDC	Whiskeytown Da	2.95	94	*e*P	Pn	06 27 50.5	-1.6
HUMO	Hull Mountain	3.13	54	*e*P	Pn	06 27 54.5	-0.3
HOPS	Hopland	3.15	125	*e*P	Pn	06 27 53.1	-2.0
NSHM	Saint Helena R	3.73	127	*e*P	Pn	06 28 02.4	-0.9
COR	Corvallis	4.39	30	*e*P	Pn	06 28 11.7	-0.9
SAC	San Andreas	4.49	135	*e*P	Pn	06 28 10.8	-3.2
MOD	Modoc	4.71	75	*e*P	Pn	06 28 16.9	-0.3
BEKR	Beckwourth	4.72	100	*e*Pn	Pn	06 28 17.0	-0.3
WCN	Washoe City	5.33	105	*e*Pn	Pn	06 28 25.1	-0.8
CMB	Columbia Colle	5.43	119	*e*Pn	Pn	06 28 26.7	-0.8
SAO	San Andreas Ge	5.61	135	*e*Pn	Pn	06 28 25.7	-4.3
WVOR	Wild Horse Val	6.04	72	*e*Pn	Pn	06 28 34.6	-1.3
LRV	Little Rabbit	6.10	135	*e*Pn	Pn	06 28 33.2	-3.5
OMM	Old Mammoth Mi	6.59	117	*e*Pn	Pn	06 28 44.3	+0.6
NVAR	Mina Array Bea	6.70	108	Pn	Pn	06 28 46.0	+0.7
	0.7nm,0.3s,baz=278,slow=13,SNR=16						
NVAR	Mina Array Bea	6.70	108	Pn	Pn	06 28 46.0	+0.7
BMN	Battle Mountai	7.00	90	P	Pn	06 28 48.8	-0.7
MTUM	Tungsten Hills	7.02	117	Pn	Pn	06 28 48.7	-1.0
OCWA	Octopus Mounta	7.09	12	Pn	Pn	06 28 50.4	-0.5
BMO	Blue Mountains	7.80	56	*e*Pn	Pn	06 29 00.2	-0.4
ELK	Elko	8.47	87	Pn	P	06 29 10.9	+0.9
	0.1nm,0.3s,baz=270,slow=14,SNR=7.3						
HLID	Hailey	9.31	69	*e*Pn	P	06 29 20.0	-1.7
NEW	Newport	9.95	39	Pn	P	06 29 29.1	-1.3
	0.2nm,0.3s,baz=58,slow=18,SNR=2.3						
NEN	Nelson	10.46	116	P	P	06 29 38.2	+0.7
LDFC	Landfair	10.60	119	P	P	06 29 39.0	-0.4
MCMT	McKenzie Canyo	10.72	64	*e*P	P	06 29 41.2	+0.1
HWUT	Hardware Ranch	11.21	81	*e*P	P	06 29 48.1	+0.4
MSU	Marysvale	11.21	97	*e*P	P	06 29 47.7	0.0
CHMT	Chamberlain Mo	11.27	53	*e*P	P	06 29 47.7	-0.7
BBB	Bella Bella	11.41	355	Pn	P	06 29 51.4	+1.0
	0.3nm,0.3s,baz=199,slow=14,SNR=3.2						
BBB	Bella Bella	11.41	355	Pn	P	06 29 51.4	+1.0
RRI2	Red Ridge	11.49	72	*e*P	P	06 29 52.6	+1.1
AHID	Auburn Hatcher	11.59	75	*e*P	P	06 29 53.0	+0.2
QLMT	Earthquake Lak	11.70	65	*e*P	P	06 29 55.1	+0.8
TPAW	Teton Pass	11.77	72	*e*P	P	06 29 56.5	+1.1
REDW	Red Top Meadow	11.83	73	P	P	06 29 56.3	+0.2
IMW	Indian Meadow	11.84	70	*e*P	P	06 29 57.5	+1.2
SNOW	Snow King Moun	11.91	72	*e*P	P	06 29 58.0	+0.7
MOOW	Moose Ponds	11.96	71	*e*P	P	06 29 58.4	+0.5
YMR	Madison River	11.98	66	P	P	06 29 57.0	-1.1
LOHW	Long Hollow	12.04	71	*e*P	P	06 29 59.1	+0.2
HRY	Holter Researc	12.05	56	*e*P	P	06 29 59.3	+0.1
YNR	Norris Junctio	12.19	66	P	P	06 29 59.9	-1.0
BW06	Boulder Array	12.72	76	*e*P	P	06 30 09.5	+1.4
PDAR	Pinedale Array	12.72	76	Pn	P	06 30 09.3	+1.2
	0.1nm,0.3s,baz=270,slow=12,SNR=17						
WUAZ	Wupatki	12.96	109	P	P	06 30 10.5	-0.7
GCMT	Greycliff	13.15	62	P	P	06 30 12.9	-0.9
PV10	Paradox Valley	13.62	95	*e*P	P	06 30 21.0	+1.1
PV01	Paradox Valley	14.04	95	*e*P	P	06 30 25.6	+0.1
TUC	Tucson	15.15	119	*e*P	P	06 30 40.2	+0.2
	6.2nm,1.1s						
EDM	Edmonton	15.22	31	*e*P	P	06 30 39.0	-1.9
PHWY	Pilot Hill	15.81	81	*e*P	P	06 30 47.5	-1.0
SDCO	Great Sand Dun	16.47	94	*e*P	P	06 30 58.1	+1.1
	21nm,1.3s						
LENM	Lemitar	16.78	107	P	P	06 31 01.3	+0.3
ANMO	Albuquerque	16.79	104	Pn	P	06 31 03.6	+2.5
	baz=301,slow=11,SNR=13						
ANMO	Albuquerque	16.79	104	*e*P	P	06 31 02.7	+1.6
	12nm,1.2s						
LPM	Los Pinos Moun	16.96	106	P	P	06 31 03.8	+0.6
BNM	Barren Site	17.04	107	P	P	06 31 05.8	+1.5
DLBC	Dease Lake	17.77	354	P	P	06 31 15.4	+2.2
	0.1nm,0.3s,baz=177,slow=12,SNR=20						
CPRX	Cap Rock	19.59	106	P	P	06 31 36.4	+0.9
CLNB	Carlsbad	19.98	108	*e*P	P	06 31 39.9	+0.2
CBKS	Cedar Bluff	20.56	87	*e*P	P	06 31 45.9	+0.2
	43nm,1.1s						
FFC	Flin Flon	21.36	41	*e*P	P	06 31 52.0	-1.7
	186nm,1.8s,mb5.1						
TXAR	Lajitas Array	21.79	115	P	P	06 32 00.1	+1.7
	6.0nm,0.9s,mb4.0,baz=299,slow=7.9,SNR=42						
WMOK	Wichita Mounta	22.61	97	*e*P	P	06 32 06.0	-0.4
	7.1nm,1.1s,mb4.0						
YKA	Yellowknife Ar	22.82	14	P	P	06 32 07.5	-0.6
	5.0nm,0.8s,mb4.0,baz=201,slow=10,SNR=13						
KSU1	Kansas State U	22.85	85	*e*P	P	06 32 09.4	+0.6
YKW3	Yellowknife Ar	22.88	14	*e*P	P	06 32 09.0	+0.3
ULM	Lac du Bonnet	23.22	56	P	P	06 32 12.6	+0.4
	30nm,0.9s,mb4.7,baz=262,slow=10,SNR=21						
SML	Sawmill	24.84	335	*e*P	P	06 32 29.3	+1.5
PMR	Palmer	24.94	334	*e*P	P	06 32 30.5	+1.7
	19nm,1.3s,mb4.5						
SPU	Mount Spurr	25.68	331	*e*P	P	06 32 36.2	+0.4
ILAR	Eielson Array	26.73	341	P	P	06 32 45.0	-0.4
	4.4nm,0.7s,mb4.1,baz=158,slow=8.2,SNR=44						
JFWS	Jewell Farm	26.88	73	*e*P	P	06 32 47.1	+0.1
	95nm,1.5s,mb5.1						
FCC	Fort Churchill	27.12	38	*e*P	P	06 32 48.5	-0.5
	8.4nm,0.9s,mb4.3						
SLM	Saint Louis	27.78	83	P	P	06 32 55.6	+0.4
PLAL	Pickwick Lake	30.63	88	*e*P	P	06 33 20.4	-0.3
	18nm,1.2s,mb4.8						
JSC	Jenkinsville	36.06	86	P	P	06 34 08.8	+0.9
RES	Resolute Bay	36.88	13	*e*P	P	06 34 14.2	-0.3
	5.4nm,0.7s,mb4.5						
MIV	Mineville/With	38.59	67	*e*P	P	06 34 28.9	-0.1
SCHQ	Schefferville	41.10	49	P	P	06 34 49.2	-0.4
	4.8nm,0.7s,mb4.2,baz=293,slow=7.4,SNR=7.2						
SUMG	Summit	51.01	23	*e*P	P	06 36 08.0	+0.1
	11nm,0.8s,mb4.8						
MDJ	Mudanjiang	71.05	313	P	P	06 38 21.4	-2.9
MDJ				AMB	AMB		
	comp=Z,880nm,14.1s						
NB2	NORSAR Subarra	72.77	20	P	P	06 38 34.0	-0.1
	comp=Z,1.1nm,0.8s,mb3.8,baz=323,slow=5.8						
NOA	NORSAR Array B	72.77	20	P	P	06 38 34.5	+0.4
	comp=Z,1.0nm,0.7s,mb3.9,baz=330,slow=5.5,SNR=3.9						
FINES	FINESS Array B	75.65	13	P	P	06 38 50.7	-0.1
	comp=Z,1.6nm,0.8s,mb4.0,baz=22,slow=10,SNR=3.9						
LPAZ	La Paz	78.37	123	P	P	06 39 06.5	-0.2
	comp=Z,1.2nm,0.9s,mb3.8,baz=293,slow=6.7,SNR=4.4						
GRR	Gorron	78.96	34	*e*P	P	06 39 09.6	+0.2
GIVF	Givet	79.85	29	*e*P	P	06 39 14.2	0.0
SONM	Songino Array	80.08	327	P	P	06 39 15.5	+0.1
	comp=Z,0.5nm,0.8s,mb3.5,slow=2.9,SNR=3.5						
MEZF	Maizieres J'vi	81.24	30	*e*P	P	06 39 21.7	+0.1
LOR	Lormes	81.78	32	*e*P	P	06 39 25.0	+0.6
SSF	Saint Saulge	81.81	32	*e*P	P	06 39 24.5	0.0
ZAL	Zalesovo	81.86	342	P	P	06 39 25.4	+0.8
	comp=Z,0.9nm,0.5s,mb4.0,baz=300,slow=24,SNR=3.0						
HAU	Haudompre	82.14	30	*e*P	P	06 39 26.3	0.0
SMF	Signal de Mont	82.28	32	*e*P	P	06 39 27.0	0.0
SJPF	Ste Jean	82.91	37	*e*P	P	06 39 30.3	-0.1
HHC	Hu-ho-hao-te	83.16	320	*e*P	P	06 39 30.1	-1.6
HHC				XP	sP	06 39 39.6	+3.7
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
HHC				LR	LR		
	comp=N,240nm,29.7s,MS4.8						
HHC				LR	LR		
	comp=E,640nm,29.7s,MS4.8						
HHC				LR	LR		
	comp=Z,450nm,33.7s,MS4.6						
ETSF	Etsaut	83.38	37	*e*P	P	06 39 32.5	-0.3
GERES	GERESS Array B	84.01	25	P	P	06 39 36.8	+1.1
	comp=Z,0.9nm,0.8s,mb4.0,baz=326,slow=4.8,SNR=7.0						
ESDC	Sonseca Array	84.26	41	P	P	06 39 39.0	+1.7
	comp=Z,0.6nm,0.6s,mb3.9,baz=342,slow=4.1,SNR=3.3						
ORIF	Oris-en-Rattie	84.51	32	*e*P	P	06 39 39.1	+0.7
MBDF	Montbardon	85.03	31	*e*P	P	06 39 42.2	+1.2
	comp=Z,14nm,0.8s,mb4.8						
SSE	Sheshan	85.03	307	*e*P	P	06 39 39.3	-2.0
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,880nm,12.0s						
SSE	Sheshan	85.03	307	*e*P	P	06 39 39.3	-2.0
	comp=Z,26nm,0.7s,mb5.5						
NJ2	Nanjing	85.74	309	*e*P	P	06 39 45.4	+0.6
NJ2				AP	pP	06 39 50.1	+2.0
NJ2				XP	sP	06 39 52.4	+3.3
NJ2				SKS	SKS	06 50 07.0	-5.1
NJ2				S	S	06 50 16.0	+0.1
NJ2				XS		06 50 24.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,220nm,4.8s						
NJ2				LR	LR		
	comp=N,940nm,22.8s,MS5.4						
NJ2				LR	LR		
	comp=E,1μm,21.3s,MS5.4						
NJ2				LR	LR		
	comp=Z,460nm,21.2s,MS4.8						
AKASG	Malin Array Be	86.38	15	P	P	06 39 46.5	-1.0
	comp=Z,0.3nm,0.2s,mb4.1,baz=325,slow=4.8,SNR=4.9						
MKAR	Makanchi Array	89.09	341	P	P	06 40 00.9	+0.2
	comp=Z,0.6nm,0.8s,mb4.0,baz=63,slow=3.2,SNR=2.1						
WMQ	Urumqi	90.31	336	*e*P	P	06 40 06.7	+0.2
WMQ				AP	pP	06 40 10.9	+1.2
WMQ				XP	sP	06 40 12.7	+2.0
WMQ				AMB	AMB		
	comp=Z,100nm,4.4s						
LZH	Lanzhou	90.63	321	*e*P	P	06 40 06.5	-1.7
LZH				AP	pP	06 40 09.8	-1.6
LZH				XP	sP	06 40 11.4	-1.0
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,50nm,4.0s						
LZH	Lanzhou	90.63	321	*e*P	P	06 40 06.5	-1.7
	comp=Z,13nm,1.0s,mb5.2						
LZH				pP	pP	06 40 09.7	-1.7
LZH				sP	sP	06 40 11.4	-1.0
QSPA	South Pole Qui	130.64	180	*e*PKP	PKPdf	06 46 14.4	-3.2
VNA3	Neumayer Olymp	136.62	155	*e*	PKPdf	06 46 32.0	+3.2
VNA3	Neumayer Olymp	136.62	155	PKPdf	PKPdf	06 46 26.9	-1.9
VNA3				*e*		06 46 32.0	
VNA2	Neumayer--Watz	137.40	155	*e*	PKPdf	06 46 34.1	+3.8
VNA2	Neumayer--Watz	137.40	155	PKPdf	PKPdf	06 46 29.8	-0.5
VNA2				*e*		06 46 34.1	

*IDC **15** 06:29:48.5±1.9, 40.93N×126.36W, mb3.4/3, mb1 3.9/6, mb1mx3.7/24, mbtmp3.5/6, ML4.5/2, Error ellipse: s-maj=28.0km s-min=17.5km az=27.0*

*NEIC **15** 06:29:51.4±1.7, 41.08N×126.15W, h10^{km}, mb4.0/2, Error ellipse: s-maj=23.4km s-min=12.0km az=51.0*

ISC 15 06:29:47.9±1.2, 40.92N±0.09×126.4W±0.1, h10^{km}, n19, σ1^{s}13/20, mb3.5/6, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	1.99	91	P	Pn	06 30 23.0	+1.0
KBO	Bosley Butte	2.06	50	*e*P	Pn	06 30 22.4	-0.6
KEBM	Edson Butte	2.47	37	*e*P	Pn	06 30 27.1	-1.7
YBH	Yreka Blue Hor	2.87	72	Pn	Pn	06 30 35.9	+1.4
	8.3nm,0.3s,baz=277,slow=15,SNR=6.1						
YBH				Sn	Sn	06 31 10.4	+0.9
	8.4nm,0.3s,baz=177,slow=18,SNR=2.7						
WDC	Whiskeytown Da	2.92	95	*e*P	Pn	06 30 34.4	-1.0
HUMO	Hull Mountain	3.05	55	*e*P	Pn	06 30 36.6	-0.6
HOPS	Hopland	3.18	126	*e*P	Pn	06 30 37.0	-2.0
WVOR	Wild Horse Val	5.98	73	*e*P	Pn	06 31 17.3	-1.3
NVAR	Mina Array Bea	6.70	109	Pn	Pn	06 31 28.5	-0.3
	baz=281,slow=15,SNR=1.8						
PDAR	Pinedale Array	12.67	76	Pn	P	06 32 56.1	+5.2
	0.4nm,0.3s,baz=246,slow=8.9,SNR=4.7						
ANMO	Albuquerque	16.78	104	Pn	P	06 33 48.6	+4.1
	baz=286,slow=7.4,SNR=4.0						
DLBC	Dease Lake	17.69	354	P	P	06 34 00.3	+4.6
	0.1nm,0.3s,baz=173,slow=17,SNR=3.6						
FFC	Flin Flon	21.27	41	*e*P	P	06 34 37.7	+1.3
	5.7nm,0.8s,mb4.0						
TXAR	Lajitas Array	21.80	115	P	P	06 34 43.4	+1.4
	1.3nm,0.9s,mb3.4,baz=297,slow=8.4,SNR=4.0						
YKA	Yellowknife Ar	22.72	14	P	P	06 34 50.9	+0.1
	0.3nm,0.3s,mb3.2,baz=204,slow=11,SNR=4.0						
YKA	Yellowknife Ar	22.72	14	P	P	06 34 50.9	+0.1
ILAR	Eielson Array	26.66	340	P	P	06 35 28.7	+0.4
	1.5nm,0.8s,mb3.6,baz=158,slow=8.8,SNR=5.4						
FCC	Fort Churchill	27.02	38	P	P	06 35 31.6	-0.1
	2.9nm,0.9s,mb3.8						
SONM	Songino Array	80.03	327	P	P	06 42 04.4	+5.7
	0.5nm,0.8s,mb3.5,baz=56,slow=5.2,SNR=3.9						

IDC 15 06:50:21.8±3.6, 53.07N×169.93E, mb3.5/3, mb1 3.8/3, mb1mx3.5/21, mbtmp3.5/3, Error ellipse: s-maj=128.6km s-min=36.7km az=13.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	53.39	301	P	P	06 59 42.8	-2.2
	0.1nm,0.3s,baz=55,slow=7.9,SNR=5.1						
NB2	NORSAR Subarra	64.98	349	P	P	07 01 02.3	-2.6
	0.6nm,0.5s,baz=14,slow=6.5						
NOA	NORSAR Array B	64.98	349	P	P	07 01 03.0	-2.0
	0.6nm,0.5s,baz=16,slow=6.6,SNR=3.6						
TXAR	Lajitas Array	65.06	74	P	P	07 01 04.0	-2.0
	0.2nm,0.5s,baz=311,slow=5.7,SNR=5.0						

*IDC **15** 06:57:47.8±0.6, 5.89N×126.16E, mb4.2/9, mb1 4.3/9, mb1mx4.1/19, mbtmp4.2/9, Error ellipse: s-maj=48.8km s-min=16.1km az=72.0*

*NEIC **15** 06:57:49.3±0.4, 5.88N×126.19E, h10^{km}, mb4.2/2, Error ellipse: s-maj=31.2km s-min=9.1km az=74.0*

*MAN **15** 06:58:06.4, 6.14N×125.86E, h2^{km}, mb4.4, ML3.3, MS3.1*

ISC 15 06:57:53.7±0.7, 5.68N±0.08×126.9E±0.1, h33^{km}, n21, σ1^{s}15/21, mb4.2/9, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	2.21	307⇓	*e*P	P	06 58 30.3	+1.6
KCP				*i* S	S	06 58 53.2	-2.1
CGP	Cagayan de Oro	3.51	322⇓	*e*P	P	06 58 57.0	+10
CGP				*e*S	S	06 59 29.0	+0.9
SCPH	Surigao	4.31	341	*e*P	P	06 59 04.4	+5.9
SCPH				*e*S	S	06 59 48.8	+0.6
KAKA	Kakadu	19.08	163	*e*P	P	07 02 23.0	+6.6
	8.0nm,0.6s						
FITZ	Fitzroy Crossi	23.66	183	*e*P	P	07 03 03.4	+0.2
	4.3nm,0.6s,mb4.1						
FITZ	Fitzroy Crossi	23.66	183	P	P	07 03 03.3	+0.1
	5.6nm,0.6s,mb4.2,baz=5.8,slow=8.4,SNR=13						
WRAB	Tennant Creek	26.49	164	*e*P	P	07 03 30.2	+0.1
WRA	Warramunga Arr	26.49	164	P	P	07 03 30.3	+0.1
	0.8nm,0.3s,mb3.7,baz=333,slow=11,SNR=13						
WB2	Warramunga Arr	26.50	164	*e*P	P	07 03 30.3	+0.1
STKA	Stephens Creek	39.89	160	P	P	07 05 27.7	+1.5
	2.9nm,0.5s,mb4.2,baz=329,slow=9.0,SNR=9.7						
STKA				PcP	PcP	07 07 29.3	-2.9
	1.3nm,0.4s,baz=333,slow=6.6,SNR=3.5						
STKA	Stephens Creek	39.89	160	P	P	07 05 27.7	+1.4
STKA				PcP	PcP	07 07 29.3	-2.9
MKAR	Makanchi Array	56.06	324	P	P	07 07 25.2	-6.6
	2.2nm,0.4s,mb4.5,baz=118,slow=7.7,SNR=56						
MKAR				PcP	PcP	07 08 24.1	-5.5
	0.8nm,0.6s,baz=123,slow=3.5,SNR=6.0						
BVAR	Borovoye Array	65.78	326	P	P	07 08 31.2	-6.5
	1.3nm,0.5s,mb4.2,baz=131,slow=9.2,SNR=8.8						
ILAR	Eielson Array	83.30	26	P	P	07 10 16.3	-1.9
	0.5nm,0.4s,mb3.9,baz=252,slow=4.8,SNR=10.0						
VNDA	Vanda	85.32	173	P	P	07 10 26.9	-1.3
	0.8nm,0.6s,mb4.0,baz=313,slow=7.8,SNR=5.1						
ARCES	ARCESS Array B	88.69	340	P	P	07 10 40.2	-4.4
	3.5nm,0.9s,mb4.7,baz=82,slow=6.3,SNR=6.7						
ARCES	ARCESS Array B	88.69	340	P	P	07 10 40.2	-4.4
FINES	FINESS Array B	90.20	332	P	P	07 10 46.5	-5.3
	0.5nm,0.7s,mb4.0,baz=90,slow=7.6,SNR=3.4						
TXAR	Lajitas Array	120.29	51	PKP	PKPdf	07 16 42.5	+0.2
	0.1nm,0.3s,baz=267,slow=1.8,SNR=4.5						
JTS	JuntasAbangare	144.56	64	PKPbc	PKPbc	07 17 28.5	+0.9
	7.7nm,1.1s,baz=352,slow=7.1,SNR=4.8						
CFAA	Coronel Fontan	150.57	153	PKPbc	PKPdf	07 17 44.0	+6.7
	0.2nm,0.4s,baz=210,slow=2.5,SNR=6.8						

*BJI **15** 07:14:08.4, 40.90N×126.40W, h10^{km}, mB5.3, mb4.9, Ms4.8, Msz4.5*

*NEIC **15** 07:14:12.4±0.7, 40.91N×126.37W, h10^{km}, mb4.7/14, MW4.7(BRK), Error ellipse: s-maj=10.6km s-min=6.0km az=220.0*

*IDC **15** 07:14:12.2±1.2, 41.09N×126.17W, mb4.1/9, mb1 4.1/13, mb1mx4.0/25, mbtmp3.9/13, ML3.4/3, MS4.0/8, Ms1 4.0/8, ms1mx3.7/37, Error ellipse: s-maj=27.3km s-min=12.1km az=27.0*

ISC 15 07:14:11.2±0.5, 40.92N±0.05×126.28W±0.06, h10^{km}, n88, σ1^{s}23/88, mb4.3/20, MS4.0/3, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	1.93	91	*e*P	Pn	07 14 43.6	-0.9
KBO	Bosley Butte	2.01	49	*e*P	Pn	07 14 45.2	-0.4
KEBM	Edson Butte	2.43	36	*e*Pn	Pn	07 14 51.0	-0.7
YBH	Yreka Blue Hor	2.80	72	Pn	Pn	07 14 56.0	-1.0
	16nm,0.3s,baz=260,slow=9.9,SNR=105						
YBH				Sn	Sn	07 15 35.3	+4.0
	6.8nm,0.3s,baz=266,slow=14,SNR=3.1						
YBH				LR	LR	07 15 59.6	
	comp=Z,2μm,21.9s,baz=209,slow=40						
YBH	Yreka Blue Hor	2.80	72	*e*Pn	Pn	07 14 57.0	0.0
WDC	Whiskeytown Da	2.86	96	*e*Pn	Pn	07 14 56.5	-1.2
HUMO	Hull Mountain	3.00	55	*e*Pn	Pn	07 14 58.0	-1.8
HOPS	Hopland	3.13	127	*e*Pn	Pn	07 14 59.5	-2.1
COR	Corvallis	4.26	30	Pn	Pn	07 15 15.7	-2.0
MOD	Modoc	4.60	76	*e*Pn	Pn	07 15 20.8	-1.7
BEKR	Beckwourth	4.64	101	*e*Pn	Pn	07 15 23.6	+0.5
WCN	Washoe City	5.25	106	*e*Pn	Pn	07 15 30.7	-1.0
CMB	Columbia Colle	5.39	120	*e*Pn	Pn	07 15 31.6	-2.2
SAO	San Andreas Ge	5.61	136	*e*Pn	Pn	07 15 31.6	-5.2
WVOR	Wild Horse Val	5.92	73	*e*Pn	Pn	07 15 40.3	-0.8
LRV	Little Rabbit	6.09	136	*e*Pn	Pn	07 15 39.8	-3.8
OMM	Old Mammoth Mi	6.54	118	*e*Pn	Pn	07 15 50.1	+0.1
NVAR	Mina Array Bea	6.63	109	Pn	Pn	07 15 51.4	+0.1
	0.3nm,0.3s,baz=284,slow=14,SNR=10						
MNV	Mina	6.74	109	Pn	Pn	07 15 51.1	-1.6
BMN	Battle Mountai	6.90	91	Pn	Pn	07 15 58.0	+3.1
MTUM	Tungsten Hills	6.97	118	Pn	Pn	07 15 55.9	-0.1
BMO	Blue Mountains	7.67	56	*e*Pn	Pn	07 16 06.2	+0.5
ELK	Elko	8.37	88	Pn	P	07 16 17.1	+1.6
	0.1nm,0.3s,baz=260,slow=9.4,SNR=9.6						
ELK				LR	LR	07 19 52.2	
	comp=Z,606nm,18.8s,baz=262,slow=41						
HLID	Hailey	9.19	69	*e*Pn	P	07 16 26.7	-0.1
NEW	Newport	9.82	39	LR	LR	07 20 26.8	
	comp=Z,736nm,21.7s,baz=133,slow=39						
NEN	Nelson	10.41	117	P	P	07 16 34.7	-9.0
ARUT	Antelope Range	10.42	103	P	P	07 16 45.2	+1.4
LDFC	Landfair	10.56	120	Pn	P	07 16 44.6	-1.2
MCMT	McKenzie Canyo	10.60	64	*e*Pn	P	07 16 45.8	-0.4
HWUT	Hardware Ranch	11.10	82	*e*Pn	P	07 16 53.3	+0.2
MVU	Marysvale	11.10	98	Pn	P	07 16 53.4	+0.3
MSU	Marysvale	11.12	98	*e*Pn	P	07 16 53.6	+0.1
CHMT	Chamberlain Mo	11.13	53	Pn	P	07 16 52.5	-1.0
BBB	Bella Bella	11.33	354	Pn	P	07 16 56.4	+0.2
	0.2nm,0.3s,baz=157,slow=13,SNR=3.1						
BBB				LR	LR	07 20 22.3	
	comp=Z,1μm,19.0s,baz=215,slow=33						
QLMT	Earthquake Lak	11.57	65	Pn	P	07 17 00.4	+1.0
TPAW	Teton Pass	11.65	72	*e*P	P	07 17 00.4	-0.1
IMW	Indian Meadow	11.72	70	*e*Pn	P	07 17 02.4	+0.8
MOOW	Moose Ponds	11.84	71	P	P	07 17 03.3	+0.2
LOHW	Long Hollow	11.92	72	*e*P	P	07 17 04.1	-0.1
HRY	Holter Researc	11.92	56	*e*P	P	07 17 05.1	+0.8
SRU	San Rafael	12.21	93	P	P	07 17 07.7	-0.5
BW06	Boulder Array	12.61	76	*e*P	P	07 17 13.7	+0.3
PDAR	Pinedale Array	12.61	76	Pn	P	07 17 15.3	+1.9
	0.1nm,0.3s,baz=256,slow=12,SNR=14						
PDAR				LR	LR	07 22 32.1	
	comp=Z,1μm,19.4s,baz=200,slow=40						
WUAZ	Wupatki	12.90	110	P	P	07 17 19.7	+2.4
PV10	Paradox Valley	13.53	95	P	P	07 17 25.7	+0.1
PV01	Paradox Valley	13.95	96	P	P	07 17 29.7	-1.5
EDM	Edmonton	15.10	31	*e*P	P	07 17 44.7	-1.4
SDCO	Great Sand Dun	16.38	94	*e*P	P	07 18 05.0	+2.3
	42nm,1.8s						
LENM	Lemitar	16.71	108	*e*P	P	07 18 10.0	+3.0
ANMO	Albuquerque	16.72	105	Pn	P	07 18 12.3	+5.2
	baz=296,slow=11,SNR=7.1						
ANMO	Albuquerque	16.72	105	*e*P	P	07 18 09.1	+2.0
	10nm,1.2s						
BNM	Barren Site	16.97	107	P	P	07 18 11.6	+1.3
DLBC	Dease Lake	17.69	354	P	P	07 18 21.9	+2.8
	0.1nm,0.3s,baz=174,slow=12,SNR=18						
DLBC	Dease Lake	17.69	354	*e*P	P	07 18 21.1	+2.0
CLNB	Carlsbad	19.91	109	*e*P	P	07 18 44.0	-1.9
AMTX	Amarillo	20.29	99	*e*P	P	07 18 49.7	-0.1
	31nm,1.4s						
CBKS	Cedar Bluff	20.45	87	*e*P	P	07 18 52.4	+0.8

	60nm,1.5s						
FFC	Flin Flon	21.23	41	eP	P	07 18 59.6	+0.3
	81nm,1.6s,mb4.8						
TXAR	Lajitas Array	21.74	115	P	P	07 19 06.4	+1.7
	2.8nm,0.8s,mb3.7,baz=297,slow=7.2,SNR=30						
WMOK	Wichita Mounta	22.53	97	eP	P	07 19 12.2	-0.2
	57nm,2.3s,mb4.6						
YKA	Yellowknife Ar	22.71	14	P	P	07 19 14.3	+0.4
	4.6nm,0.9s,mb3.9,baz=202,slow=10,SNR=15						
YKA				LR	LR	07 28 08.9	
	comp=Z,367nm,18.7s,MS3.8,baz=335,slow=37						
KSU1	Kansas State U	22.75	85	P	P	07 19 18.2	+3.6
YKW3	Yellowknife Ar	22.77	14	eP	P	07 19 12.6	-1.9
ULM	Lac du Bonnet	23.09	56	P	P	07 19 20.6	+2.8
	2.8nm,0.5s,mb4.0,baz=257,slow=9.5,SNR=3.7						
ULM				LR	LR	07 28 32.3	
	comp=Z,543nm,20.8s,MS4.0,baz=313,slow=38						
MENT	Mentasta	24.37	341	eP	P	07 19 32.4	+2.3
SML	Sawmill	24.80	335	eP	P	07 19 34.4	+0.1
PMR	Palmer	24.90	334	eP	P	07 19 36.5	+1.2
	14nm,1.0s,mb4.5						
SPU	Mount Spurr	25.65	331	eP	P	07 19 41.5	-0.8
ILAR	Eielson Array	26.68	340	P	P	07 19 51.9	+0.1
	4.4nm,0.8s,mb4.1,baz=158,slow=8.2,SNR=44						
ILAR				LR	LR	07 28 30.4	
	comp=Z,567nm,19.0s,MS4.1,baz=342,slow=32						
FCC	Fort Churchill	26.99	38	eP	P	07 19 54.2	-0.5
	2.4nm,0.8s,mb3.8						
IMA	Indian Mountai	29.52	338	eP	P	07 20 16.8	-0.7
	21nm,1.0s,mb4.8						
PLAL	Pickwick Lake	30.53	89	eP	P	07 20 26.3	-0.5
	15nm,1.3s,mb4.7						
LRAL	Lakeview Retre	32.14	91	eP	P	07 20 41.8	+0.8
	12nm,1.2s,mb4.6						
SCHQ	Schefferville	40.96	49	P	P	07 21 54.5	-0.9
	3.8nm,0.9s,mb4.0,baz=286,slow=8.4,SNR=3.8						
SUMG	Summit	50.88	23	eP	P	07 23 14.0	+0.2
	6.1nm,0.8s,mb4.6						
MDJ	Mudanjiang	71.06	313	P	P	07 25 27.4	-3.8
NB2	NORSAR Subarra	72.65	20	P	P	07 25 40.6	+0.3
	2.5nm,1.0s,mb4.1,baz=330,slow=5.6						
NOA	NORSAR Array B	72.65	20	P	P	07 25 41.5	+1.2
	1.3nm,1.0s,mb3.8,baz=330,slow=5.5,SNR=3.8						
NOA	NORSAR Array B	72.65	20	P	P	07 25 41.5	+1.2
SONM	Songino Array	80.06	327	P	P	07 26 22.7	+0.5
	1.0nm,0.7s,mb3.8,baz=14,slow=5.9,SNR=3.8						
ZAL	Zalesovo	81.81	342	P	P	07 26 30.5	-0.8
	1.2nm,0.4s,mb4.2,baz=130,slow=7.9,SNR=2.8						
SIV	San Ignacio	82.70	118	P	P	07 26 38.4	+1.8
	0.9nm,1.0s,mb3.8,baz=278,slow=7.0,SNR=4.3						
GERES	GERESS Array B	83.89	25	P	P	07 26 43.7	+1.7
	0.3nm,0.2s,mb4.0,baz=342,slow=4.2,SNR=5.2						
SSE	Sheshan	85.06	307	eP	P	07 26 45.5	-2.8
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,270nm,12.0s						
SSE	Sheshan	85.06	307	eP	P	07 26 45.5	-2.8
	comp=Z,23nm,0.8s,mb5.4						
WMQ	Urumqi	90.27	336	eP	P	07 27 12.7	-0.4
WMQ				AP	pP	07 27 16.9	+0.5
WMQ				XP	sP	07 27 18.7	+1.3
WMQ				AMB	AMB		
	comp=Z,90nm,4.4s						
LZH	Lanzhou	90.62	322	eP	P	07 27 14.5	-0.5
LZH				AP	pP	07 27 17.5	-0.7
LZH				XP	sP	07 27 19.3	+0.1
LZH				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb5.0						
LZH				AMB	AMB		
	comp=Z,70nm,4.0s						
LZH	Lanzhou	90.62	322	eP	P	07 27 14.5	-0.5
	comp=Z,19nm,1.4s,mb5.2						
LZH				pP	pP	07 27 17.5	-0.7
LZH				sP	sP	07 27 19.2	0.0

NIED ***15*** *07:14:00,25.90N×141.40E,h101^{km},Mw5.2 Best double couple: M$_0$6.71×10^{16} NP1:ϕ_s54°,δ47°,λ90°. NP2:ϕ_s234°, δ43°,λ90°.*

CSEM ***15*** *07:14:11.0,22.45N×145.43E,h33^{km},mb5.5*

BJI ***15*** *07:14:38.6,25.56N×141.87E,h110^{km},mB4.9,mb4.9*

MOS ***15*** *07:14:42.8±0.8,25.80N×141.08E,h114^{km},mb5.1/48, Error ellipse: s-maj=12.0km s-min=5.4km az=100.6*

JMA ***15*** *07:14:45.1±0.1,25.85N×141.45E,h104^{km},M5.5*

JMA Felt II J1.

NEIC ***15*** *07:14:45.3±0.2,25.84N×141.24E,mb5.0/70, MW5.2(NIED),Error ellipse: s-maj=5.5km s-min=4.9km az=104.0*

IDC ***15*** *07:14:45.6±0.5,25.93N×141.36E,h122^{km}±3^{km},mb4.6/25, mb1 4.8/27,mb1mx4.8/28,mbtmp5.0/27,MS4.0/4, Ms1 4.1/4,ms1mx3.7/27,Error ellipse: s-maj=10.4km s-min=8.1km az=102.0*

ISC 15 07:14:43.6±0.2**,25.86N**±0.03×**141.31E**±0.03**,h116^{km}, h116^{km}**±2.0^{km}**:pP-P,n302,**σ1§**19**/310**,mb4.9**/103**,25C-4D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHJ	Haha-jima-NKT	1.09	45	⇑P	P	07 15 06.2	-0.4
JHHJ				S	S	07 15 21.8	-2.0
CBIJ	Chichi jima	1.46	32	P	P	07 15 10.8	0.0
	3μm,0.3s,baz=160,slow=4.2,SNR=1021						
CBIJ				S	S	07 15 29.8	-1.5
	11μm,0.3s,baz=270,slow=20,SNR=100						
CBIJ	Chichi jima	1.46	32	⇑P	P	07 15 10.7	-0.1
CBIJ				S	S	07 15 30.0	-1.3
JHJ2	Mitsune	7.34	350	P	P	07 16 30.9	+1.3
JHJ2				eS	S	07 17 48.7	-3.1
JHJ	Hachijo jima 2	7.35	350	P	P	07 16 31.1	+1.3
	83nm,0.3s,baz=247,slow=23,SNR=17						
JHJ				S	S	07 17 49.2	-2.9
	42nm,0.3s,baz=307,slow=20,SNR=2.0						
JKO	Kozu shima	8.51	348	P	P	07 16 47.2	+1.9
NJJJ	Nii jima 2	8.69	349	P	P	07 16 49.1	+1.4
BSO1	Boso 1	8.77	358	P	P	07 16 46.9	-1.9
JWZ	Kozaga	9.06	329	⇑P	P	07 16 57.1	+4.5
JOD2	Odawara 2	9.56	349	P	P	07 16 58.6	-0.9
JOD2				eS	S	07 18 44.7	-0.9
JNY	Yasuok	9.92	343	P	P	07 17 05.8	+1.6
JTO	Tosashimizu	10.18	315	P	P	07 17 14.0	+6.3
JRY	Ryogami san	10.33	349	⇑P	P	07 17 08.3	-1.4
JRY				eS	S	07 19 01.3	-2.6
JHO	Hitachi	10.73	357	⇑P	P	07 17 12.2	-2.9
MJAR	Matsushiro Arr	10.97	347	P	P	07 17 17.7	-0.5
	13nm,0.3s,baz=158,slow=12,SNR=54						
MJAR				S	S	07 19 16.4	-2.8
	baz=160,slow=15,SNR=4.1						
MAJO	Matsushiro	10.97	347	eP	P	07 17 17.6	-0.6
MAJO				pmax	pmax		
	comp=Z,64nm,0.6s						
MAJO	Matsushiro	10.97	347	eP	P	07 17 17.6	-0.7
	comp=Z,64nm,0.6s						
MAT	Matsushiro	10.97	347	eP	P	07 17 17.0	-1.2
MAT				pmax	pmax		
	comp=Z,18nm,0.5s						
MAT	Matsushiro	10.97	347	P	P	07 17 17.2	-1.0
MAT				eS	S	07 19 20.6	+1.4
MAT	Matsushiro	10.97	347	P	P	07 17 17.7	-0.5
JHS	Saijyo	11.52	324	P	P	07 17 30.5	+5.0
JNU	Nakatsue	11.61	311	P	P	07 17 33.8	+7.1
	comp=Z,1.0nm,0.3s,baz=87,slow=13,SNR=9.6						
JNU				LR	LR	07 22 04.0	
	comp=Z,402nm,19.2s,baz=94,slow=38						
JOW	Kunigami	11.73	278	P	P	07 17 33.3	+5.0
	comp=Z,1.2nm,0.3s,baz=110,slow=17,SNR=3.6						
JMK	Ichinoseki	13.05	360	P	P	07 17 43.0	-2.6
JMK				eS	S	07 20 00.7	-7.7
JTU	Tsushima	13.43	313	P	P	07 17 53.0	+2.5
JOT	Ohata	15.48	359	P	P	07 18 16.4	-0.2
KS15	Wonju Array Si	16.23	319	P	P	07 18 29.4	+3.5
NACB	Ninganchiao	17.95	269	eP	P	07 18 48.5	+1.4
YHNB	Yeheng	18.07	271	eP	P	07 18 50.6	+2.0
ASAJ	Asahikawa	18.24	3	P	P	07 18 51.2	+0.9
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ASAJ	Asahikawa	18.24	3	P	P	07 18 51.1	+0.8
	comp=Z,9.7nm,0.3s,baz=234,slow=9.8,SNR=33						
SSE	Sheshan	18.43	291	eP	P	07 18 51.8	-0.7
SSE				AMB	AMB		
	comp=Z,30nm,0.8s						
SSE				AMB	AMB		
	comp=Z,30nm,3.5s						
SSE				LR	LR		
	comp=N,370nm,35.0s						
SSE				LR	LR		
	comp=E,380nm,35.0s						
SSE				LR	LR		
	comp=Z,270nm,31.8s						
SSE	Sheshan	18.43	291	eP	P	07 18 51.8	-0.7
	comp=Z,36nm,0.8s						
CVP	Callao Caves	19.82	250	eP	P	07 19 10.0	+2.6
MDJ	Mudanjiang	20.98	336	P	P	07 19 20.4	+1.5
MDJ				AP		07 19 40.0	
MDJ				PP	PP	07 19 51.0	+5.7
MDJ				XP		07 19 55.0	
MDJ				S	S	07 23 09.8	+9.0
MDJ				PCP	PcP	07 23 21.4	-1.2
MDJ				XS		07 23 42.3	
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,190nm,11.9s						
MDJ				LR	LR		
	comp=Z,350nm,36.2s						
MDJ	Mudanjiang	20.98	336	P	P	07 19 20.9	+1.9
	comp=Z,6.2nm,0.6s						
DL2	Dalian	21.05	313	P	P	07 19 22.6	+2.9
DL2				S	S	07 23 10.4	+8.3
DL2				AMB	AMB		
	comp=Z,280nm,4.7s						
YSS	Yuzh-Sakhalins	21.08	3	eP	P	07 19 21.2	+1.2
YSS				eS	S	07 23 05.0	+2.3
YSS				eSS	SS	07 23 44.0	-1.0
YSS				smax			
	comp=E,600nm,6.0s						
YSS				smax			
	comp=N,1μm,8.0s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
YSS	Yuzh-Sakhalins	21.08	3	eP	P	07 19 21.1	+1.1
	comp=E,113nm,0.8s,mb5.2						
CN2	Changchun	22.06	328	eP	P	07 19 31.8	+2.1
CN2				eAP		07 19 53.4	
CN2				eS	S	07 23 22.4	+2.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.3						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
TIA	Tai’an	23.09	302	eP	P	07 19 41.0	+1.3
TIA				AMB	AMB		
	comp=Z,50nm,1.0s,mb4.8						
WHN	Wuhan	24.19	287	P	P	07 19 53.3	+3.0
KLR	Kul’dur	24.49	345	eP	P	07 19 50.2	-2.8
ENH	Enshi	28.37	286	eP	P	07 20 29.8	+0.8
	comp=Z,15nm,0.6s,mb4.7						
HHC	Hu-ho-hao-te	28.82	309	eP	P	07 20 31.6	-1.3
HHC				AP	pP	07 20 55.5	-2.8
HHC				XP	sP	07 21 07.3	-4.5
HHC				PP	PP	07 21 28.8	-1.6
HHC				PCP	PcP	07 23 36.9	-3.0
HHC				S	S	07 25 12.0	-0.8
HHC				SCP		07 27 08.0	
HHC				SCS	ScS	07 31 05.3	+3.8
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
HHC				AMB	AMB		
	comp=Z,120nm,5.7s						
HHC				LR	LR		
	comp=N,220nm,17.8s						
HHC				LR	LR		
	comp=E,450nm,22.6s						
HHC				LR	LR		
	comp=Z,420nm,20.2s						
XAN	Xi’an	29.13	294	P	P	07 20 36.8	+1.1
XAN				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
KKM	Kota Kinabalu	31.04	235	eP	P	07 20 53.1	+0.3
GYA	Guiyang	31.05	279	⇑iP	P	07 20 53.4	+0.6
GYA				AP	pP	07 21 17.9	-0.6
GYA				XP	sP	07 21 31.1	-0.9
GYA				PP	PP	07 22 01.3	+2.3
GYA				PCP	PcP	07 23 45.6	-0.1
GYA				S	S	07 25 49.8	+1.8
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
GYA				LR	LR		
	comp=N,370nm,16.2s						
GYA				LR	LR		
	comp=E,410nm,15.8s						
GYA				LR	LR		
	comp=Z,390nm,16.0s						
CD2	Chengdu	33.31	287	P	P	07 21 12.6	+0.3
LZH	Lanzhou	33.52	297	eP	P	07 21 15.5	+1.4
LZH				AP	pP	07 21 38.8	-1.4
LZH				XP	sP	07 21 51.5	-2.4
LZH				PP	PP	07 22 30.0	0.0
LZH				S	S	07 26 29.0	+2.6
LZH				AMB	AMB		
	comp=Z,100nm,1.2s,mb5.5						
LZH				AMB	AMB		
	comp=Z,360nm,5.9s						
LZH	Lanzhou	33.52	297	eP	P	07 21 15.5	+1.4
LZH				*PP	pP	07 21 38.7	-1.5
LZH				*SP	sP	07 21 51.5	-2.4
LZH						07 22 30.0	
LZH				S	S	07 26 29.0	+2.6
LZH				*SS		07 27 10.0	
LZH				SS	SS	07 28 41.0	+2.8
LZH				pmax	pmax		
	comp=Z,101nm,1.2s,mb5.5						
LZH	Lanzhou	33.52	297	eP	P	07 21 15.5	+1.4
	comp=Z,101nm,1.2s,mb5.5						
LZH				pP	pP	07 21 38.7	-1.5
LZH				sP	sP	07 21 51.5	-2.4
LZH				PP	PP	07 22 30.0	0.0
LZH				S	S	07 26 29.0	+2.6
LZH				sS		07 27 10.0	
LZH				SS	SS	07 28 41.0	+2.8
ULN	Ulaanbaatar	34.70	318	i P	P	07 21 23.8	-0.2
KMI	Kunming	34.74	277	P	P	07 21 26.4	+1.8
KMI				AP	pP	07 21 51.5	+0.7
KMI				XP	sP	07 22 05.8	+1.3
KMI				S	S	07 26 48.4	+3.1
KMI				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
KMI				LR	LR		
	comp=N,230nm,15.6s						
KMI				LR	LR		
	comp=E,240nm,21.1s						
KMI				LR	LR		
	comp=Z,290nm,18.4s						
KMI	Kunming	34.74	277	P	P	07 21 26.4	+1.8
KMI				*PP	pP	07 21 51.5	+0.7
KMI				*SP	sP	07 22 05.7	+1.2
KMI				S	S	07 26 48.4	+3.1
KMI				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.9						
KMI				MLR	MLR		
	comp=Z,300nm,18.4s						
KMI	Kunming	34.74	277	P	P	07 21 26.4	+1.8
	comp=Z,22nm,1.2s,mb4.9						
KMI				pP	pP	07 21 51.5	+0.7
KMI				sP	sP	07 22 05.7	+1.2
KMI				S	S	07 26 48.4	+3.1
KMI				LR	LR		
	comp=Z,300nm,18.4s						
SONM	Songino Array	35.08	318	P	P	07 21 27.3	+0.1
	comp=Z,3.1nm,0.4s,mb4.5,baz=129,slow=7.9,SNR=12						
SONM				PcP	PcP	07 23 55.9	-0.9
	comp=Z,3.0nm,0.6s,baz=130,slow=2.4,SNR=5.7						
PMG	Port Moresby	35.51	170	P	P	07 21 29.4	-1.8
	comp=Z,12nm,0.4s,mb5.2,baz=356,slow=4.6,SNR=6.9						
PMG				LR	LR	07 33 37.5	
	comp=Z,317nm,18.5s,baz=317,slow=32						
PMG	Port Moresby	35.51	170	eP	P	07 21 28.6	-2.6
	comp=Z,19nm,0.6s,mb5.2						
FX1	Attu Island--F	36.01	33	eP	P	07 21 35.7	+0.6
YAK	Yakutsk	37.00	351	i P	P	07 21 42.9	-0.3
YAK				pmax	pmax		
	comp=Z,22nm,0.5s,mb5.3						
GTA	Gaotai	37.14	302	eP	P	07 21 45.3	+0.6
GTA				AP	pP	07 22 11.8	+0.7
GTA				XP	sP	07 22 25.8	+0.9
GTA				PP	PP	07 23 15.4	+1.6
GTA				PCP	PcP	07 24 02.3	-0.7
GTA				S	S	07 27 21.8	-0.1
GTA				SCP		07 27 39.4	
GTA				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
GTA				AMB	AMB		
	comp=Z,230nm,4.9s						
GTA				LR	LR		
	comp=N,180nm,17.1s						
GTA				LR	LR		
	comp=E,170nm,18.2s						
GTA				LR	LR		
	comp=Z,340nm,15.6s						
SEY	Seymchan	37.79	8	eP	P	07 21 50.3	+0.5
SEY				e	pP	07 22 19.7	+3.4
SEY				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.6						
ZAK	Zakamensk	38.03	320	eP	P	07 21 51.6	-0.4
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
TLY	Talaya	38.41	322	eP	P	07 21 55.6	+0.5
TLY				e	pP	07 22 23.4	+1.7
TLY				e		07 24 06.0	
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
KAKA	Kakadu	39.30	194	eP	P	07 22 00.8	-2.1
	comp=Z,9.2nm,0.4s,mb5.0						
CMAR	Chiang Mai Arr	39.79	268	P	P	07 22 08.3	+1.4
	comp=Z,5.6nm,0.6s,mb4.6,baz=63,slow=7.4,SNR=18						
CMAR				PcP	PcP	07 24 11.8	+0.3
	comp=Z,5.6nm,0.8s,baz=67,slow=1.1,SNR=17						
CMAR				LR	LR	07 38 41.0	
	comp=Z,122nm,18.7s,baz=210,slow=36						
LSA	Lhasa	44.27	287	P	P	07 22 46.4	+3.1
LSA	Lhasa	44.27	287	P	P	07 22 46.3	+3.0
BILL	Bilibino	44.83	13	eP	P	07 22 47.3	0.0
BILL				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.5						
BILL	Bilibino	44.83	13	eP	P	07 22 47.2	-0.1
	comp=Z,8.3nm,0.8s,mb4.5						
CTA	Charters Tower	45.93	174	⇑iP	P	07 22 55.6	-1.0
	comp=Z,15nm,0.4s,mb5.1						
CTA	Charters Tower	45.93	174	⇑iP	P	07 22 55.6	-1.0
CTA				pmax	pmax		
	comp=Z,15nm,0.4s						
CTAO	Charters Tower	45.93	174	eP	P	07 22 55.3	-1.3
CTAO				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.1						
CTAO	Charters Tower	45.93	174	eP	P	07 22 55.3	-1.3
	comp=Z,26nm,0.7s,mb5.1						
WRAB	Tennant Creek	46.02	189c	iP	P	07 22 56.4	-1.0
WRAB				i *PP	sP	07 23 39.6	+1.9
WRAB	Tennant Creek	46.02	189	⇑eP	P	07 22 56.3	-1.0
	comp=Z,246nm,0.6s						
WB2	Warramunga Arr	46.03	189	⇑iP	P	07 22 56.3	-1.1
WB2				eS	S	07 29 27.5	-5.4
WRA	Warramunga Arr	46.03	189	P	P	07 22 56.4	-1.0
WRA				S	S	07 29 28.4	-4.5
WRA	Warramunga Arr	46.03	189	P	P	07 22 56.4	-1.1
	comp=Z,165nm,0.6s,mb5.9,baz=9.3,slow=8.5,SNR=366						
WRA				ScP		07 28 12.7	
	comp=Z,1.9nm,1.0s,baz=5.8,slow=3.9,SNR=5.0						
WRA				S	S	07 29 28.4	-4.5
	comp=Z,4.6nm,0.7s,baz=7.6,slow=14,SNR=13						
FITZ	Fitzroy Crossi	46.28	201	⇑iP	P	07 22 58.6	-0.8
	comp=Z,40nm,0.8s,mb5.2						
FITZ	Fitzroy Crossi	46.28	201	P	P	07 22 58.8	-0.7
	comp=Z,60nm,0.8s,mb5.4,baz=13,slow=8.0,SNR=73						
TIXI	Tiksi	46.35	355	i P	P	07 22 58.7	-0.6
TIXI				i *PP	sP	07 23 42.5	+2.9
TIXI				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.7						
GUN	Gumba	49.12	285	eP	P	07 23 22.6	+1.2
	comp=Z,24nm,0.3s,mb5.6						
PKI	Pulchoki	49.60	285	eP	P	07 23 25.7	+0.6
	comp=Z,5.6nm,0.3s,mb5.0						
KKN	Kakani	49.67	285	eP	P	07 23 26.5	+0.9
	comp=Z,28nm,0.8s,mb5.2						
KKN	Kakani	49.67	285	eP	P	07 23 26.5	+0.9
KKN				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
DMN	Daman	49.85	285	eP	P	07 23 27.7	+0.7
	comp=Z,20nm,0.4s,mb5.4						
ZAL	Zalesovo	49.92	320	P	P	07 23 27.1	-0.1
	comp=Z,2.1nm,0.4s,mb4.5,baz=12,slow=8.7,SNR=9.5						
ZAL				PcP	PcP	07 24 44.5	-1.5
	comp=Z,7.0nm,0.6s,baz=356,slow=3.5,SNR=13						
ZAL				ScP		07 28 29.3	
	comp=Z,1.3nm,0.3s,baz=321,slow=24,SNR=3.3						
ZAL				LR	LR	07 43 00.8	
	comp=Z,291nm,19.4s,baz=254,slow=34						
ZAL	Zalesovo	49.92	320	P	P	07 23 27.1	-0.1
ZAL				PcP	PcP	07 24 44.5	-1.5
ZAL				ScP		07 28 29.3	
ZAL				LR	LR	07 43 00.8	
GKN	Gorkha	50.18	286	eP	P	07 23 29.9	+0.4
	comp=Z,82nm,1.2s,mb5.5						
MKAR	Makanchi Array	50.66	310	P	P	07 23 32.1	-0.8
MKAR						07 24 47.5	
MKAR				S	S	07 30 39.3	+2.0
MKAR	Makanchi Array	50.66	310	P	P	07 23 32.1	-0.8
	comp=Z,7.8nm,0.5s,mb5.0,baz=91,slow=8.8,SNR=85						
MKAR				PcP	PcP	07 24 47.5	-1.4
	comp=Z,8.4nm,0.7s,baz=80,slow=5.6,SNR=15						
MKAR				ScP		07 28 32.5	
	comp=Z,1.5nm,0.5s,baz=90,slow=4.9,SNR=7.6						
MKAR				S	S	07 30 39.3	+1.9
	comp=Z,0.7nm,0.9s,baz=90,slow=16,SNR=4.0						
NVS	Novosibirsk	50.99	321	eP	P	07 23 33.7	-1.6
NVS				i		07 24 47.2	
NVS				i PPP	PPP	07 26 28.0	-8.4
NVS				eS	S	07 30 41.1	-0.6
NVS				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
NVS				pmax	pmax		
	comp=E,12nm,1.4s						
NVS				smax			
	comp=N,49nm,2.4s						
KOLN	Koldanda	51.13	286	eP	P	07 23 37.0	+0.3
	comp=N,44nm,0.9s,mb5.5						
ULHL	Ulahol	55.07	305	P	P	07 24 05.6	-0.1
	SNR=11						
TKM2	Tokmak 2	55.49	306	P	P	07 24 08.9	+0.2
	SNR=11						
KSH	Kashi	55.54	302	eP	P	07 24 09.5	+0.4
KSH				eAP	pP	07 24 36.3	-0.8
KSH				eXP	sP	07 24 48.6	-1.4
KSH				ePCP	PcP	07 25 07.6	+0.3
KSH				ePP	PP	07 26 17.6	+1.9
KSH				eSCP		07 28 54.4	
KSH				ePCS		07 29 06.1	
KSH				eS	S	07 31 44.3	+0.8
KSH				eXS		07 32 31.3	
KSH				eSCS	ScS	07 33 44.3	+1.4
KSH				eSS	SS	07 35 31.5	+1.4
KSH				AMB	AMB		
	comp=Z,140nm,2.2s,mb5.6						
KSH				LR	LR		
	comp=N,430nm,5.1s						
KSH				LR	LR		
	comp=E,360nm,6.3s						
KZA	Kyzart	55.82	305	P	P	07 24 11.9	+0.9
	SNR=17						
USP	Ospenovka	56.26	306	P	P	07 24 13.6	-0.6
	SNR=10						
AAK	Ala-Archa	56.32	305	P	P	07 24 14.4	-0.2
	SNR=5.5						
AAK	Ala-Archa	56.32	305	eP	P	07 24 12.8	-1.8
AAK				e		07 25 07.9	
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
AAK	Ala-Archa	56.32	305	eP	P	07 24 12.8	-1.9
	comp=Z,4.9nm,0.6s,mb4.7						
AAK				ePcP	PcP	07 25 07.9	-2.4
UCH	Uchtor	56.35	305	P	P	07 24 15.8	+0.9
	SNR=22						
IMA	Indian Mountai	56.54	26	eP	P	07 24 17.1	+1.3
IMA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
IMA	Indian Mountai	56.54	26	eP	P	07 24 17.1	+1.3
	comp=Z,3.3nm,0.9s,mb4.4						
EKS2	Erkin-Say	56.84	305	P	PcP	07 25 11.8	-0.6
	SNR=5.8						
AML	Almayashu	56.96	305	P	P	07 24 19.8	+0.6

	SNR=15						
STKA	**Stephens Creek**	**57.42**	**180**	⇑*i*P	**P**	**07 24 20.6**	**-1.9**
	comp=Z,34nm,0.7s,mb5.5						
STKA	**Stephens Creek**	**57.42**	**180**	P	**P**	**07 24 20.6**	**-1.9**
	comp=Z,36nm,0.7s,mb5.5,baz=349,slow=7.0,SNR=96						
PMR	**Palmer**	**57.89**	**32**	*e*P	**P**	**07 24 24.4**	**-1.0**
	comp=Z,16nm,1.0s,mb5.0						
SML	**Sawmill**	**58.29**	**32**	*e*P	**P**	**07 24 26.9**	**-1.2**
ILAR	**Eielson Array**	**59.17**	**28**	P	**P**	**07 24 32.9**	**-1.3**
	comp=Z,10nm,0.9s,mb4.8,baz=261,slow=5.8,SNR=81						
ILAR				pP	pP	07 25 03.6	+1.2
	comp=Z,6.3nm,0.8s,baz=261,slow=5.6,SNR=8.9						
CNB	**Canberra Magne**	**61.32**	**172**	*e*P	**P**	**07 24 47.5**	**-1.8**
	comp=Z,50nm,1.7s,mb5.3						
KLBR	**Kellerberrin**	**61.40**	**203**	*e*P	**P**	**07 24 47.9**	**-2.0**
	comp=Z,20nm,0.9s,mb5.1						
NWAO	**Narrogin (SRO)**	**62.80**	**203**	*e*P	**P**	**07 24 57.3**	**-1.9**
NWAO				pmax	pmax		
	comp=Z,11nm,0.7s						
NWAO	**Narrogin (SRO)**	**62.80**	**203**	*e*P	**P**	**07 24 57.3**	**-1.9**
	comp=Z,11nm,0.7s,mb4.9						
TOO	**Toolangi**	**63.22**	**176**	⇑*i*P	**P**	**07 25 00.9**	**-1.0**
	comp=Z,18nm,0.5s,mb5.2						
TOO	**Toolangi**	**63.22**	**176**	⇑*i*P	**P**	**07 25 00.9**	**-1.0**
TOO				pmax	pmax		
	comp=Z,18nm,0.5s,mb5.3						
SVE	**Sverdlovsk**	**63.73**	**323**	*e*P	**P**	**07 25 03.9**	**-1.0**
INK	**Inuvik**	**64.47**	**24**	*e*P	**P**	**07 25 09.0**	**-0.5**
INK				pmax	pmax		
	comp=Z,13nm,0.8s						
INK	**Inuvik**	**64.47**	**24**	P	**P**	**07 25 08.9**	**-0.6**
	comp=Z,5.3nm,0.3s,mb4.8,baz=304,slow=8.0,SNR=27						
INK	**Inuvik**	**64.47**	**24**	*e*P	**P**	**07 25 09.0**	**-0.5**
	comp=Z,13nm,0.8s,mb4.8						
ARU	**Arti**	**64.92**	**323**	⇑*i*P	**P**	**07 25 10.6**	**-2.0**
ARU				*e*	pP	07 25 41.6	+0.3
ARU				*e*		07 27 34.3	
ARU				*e*S	**S**	**07 33 38.0**	**-5.0**
ARU				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.0						
DLBC	**Dease Lake**	**67.67**	**35**	P	**P**	**07 25 30.9**	**+0.9**
	comp=Z,5.1nm,0.9s,mb4.3,baz=294,slow=6.6,SNR=14						
DLBC	**Dease Lake**	**67.67**	**35**	*e*P	**P**	**07 25 30.4**	**+0.4**
HSP	**Hornsund**	**72.33**	**349**	*e*P	**P**	**07 25 57.7**	**-0.2**
RES	**Resolute Bay**	**73.44**	**13**	*e*P	**P**	**07 26 04.3**	**0.0**
RES				*e**PP	pP	07 26 31.8	-1.9
RES				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.8						
RES	**Resolute Bay**	**73.44**	**13**	*e*P	**P**	**07 26 04.3**	**0.0**
	comp=Z,16nm,1.0s,mb4.8						
RES				*e*pP	pP	07 26 31.8	-1.9
YKW3	**Yellowknife Ar**	**73.56**	**28**	*e*P	**P**	**07 26 04.9**	**-0.3**
YKW3				*e*pP	pP	07 26 31.7	-3.0
YKA	**Yellowknife Ar**	**73.59**	**28**	P	**P**	**07 26 05.3**	**-0.1**
	comp=Z,6.7nm,0.6s,mb4.6,baz=293,slow=5.7,SNR=47						
YKA				pP	pP	07 26 36.9	+2.0
	comp=Z,8.7nm,0.7s,baz=294,slow=6.0,SNR=13						
KEV	**Kevo**	**73.88**	**341**	*e*p	**P**	**07 26 04.7**	**-2.3**
	comp=Z,6.7nm,0.5s,mb4.6						
KEV	**Kevo**	**73.88**	**341**	*e*P	**P**	**07 26 04.7**	**-2.3**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.7						
ARCES	**ARCESS Array B**	**74.44**	**341**	P	**P**	**07 26 09.6**	**-0.6**
	comp=Z,9.4nm,0.5s,mb4.8,baz=71,slow=8.2,SNR=67						
ARCES				PKiKP		07 32 00.7	
	comp=Z,1.8nm,0.9s,SNR=3.5						
MOS	**Moscow**	**76.28**	**326**	*e*P	**P**	**07 26 17.1**	**-3.7**
MOS				*e*	pP	07 26 42.8	-7.7
MOS				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.2						
DAG	**Danmarks Havn**	**76.87**	**355**	⇑*e*P	**P**	**07 26 23.7**	**-0.1**
DAG				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.6						
DAG	**Danmarks Havn**	**76.87**	**355**	⇑*e*P	**P**	**07 26 23.7**	**-0.1**
	comp=Z,14nm,1.2s,mb4.6						
DAG	**Danmarks Havn**	**76.87**	**355**	⇑*i*P	**P**	**07 26 23.7**	**-0.1**
	comp=Z,14nm,1.2s,mb4.6						
OBN	**Obninsk**	**77.09**	**325**	⇓*e*P	**P**	**07 26 24.4**	**-1.0**
OBN				pmax	pmax		
	comp=Z,38nm,1.4s,mb4.9						
ZEI	**Tsey**	**78.00**	**312**	*e*P	**P**	**07 26 21.8**	**-8.9**
ZEI				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
KAF	**Kangasniemi**	**78.24**	**334**	*e*p	**P**	**07 26 29.8**	**-1.8**
	comp=Z,11nm,0.4s,mb4.9,baz=54,slow=5.2						
KAF	**Kangasniemi**	**78.24**	**334**	*e*P	**P**	**07 26 29.8**	**-1.8**
KAF				pmax	pmax		
	comp=Z,11nm,0.4s,mb4.9						
EDM	**Edmonton**	**78.27**	**36**	*e*P	**P**	**07 26 32.1**	**+0.2**
EDM				*e**PP	pP	07 26 58.9	-2.8
KIV	**Kislovodsk**	**78.32**	**313**	*e*P	**P**	**07 26 31.9**	**-0.5**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.6						
KIV				pmax	pmax		
	comp=N,9.0nm,0.8s						
NEW	**Newport**	**78.34**	**42**	P	**P**	**07 26 33.1**	**+0.7**
	comp=N,15nm,0.9s,mb4.7,baz=291,slow=3.7,SNR=21						
NEW				pP	pP	07 27 04.5	+2.3
	comp=N,4.5nm,0.6s,baz=287,slow=6.1,SNR=7.5						
FINES	**FINESS Array B**	**78.70**	**334**	*e*P	**P**	**07 26 33.2**	**-0.9**
FINES	**FINESS Array B**	**78.70**	**334**	P	**P**	**07 26 33.1**	**-1.0**
	comp=N,16nm,0.4s,mb5.2,baz=71,slow=5.3,SNR=217						
MOD	**Modoc**	**79.02**	**49**	*e*P	**P**	**07 26 34.5**	**-1.8**
	comp=N,13nm,0.9s,mb4.8						
BEKR	**Beckwourth**	**79.83**	**51**	*e*P	**P**	**07 26 41.0**	**+0.3**
	comp=N,22nm,1.1s,mb4.9						
VSU	**Vasula**	**80.09**	**331**	*i* P	**P**	**07 26 40.8**	**-0.9**
SOC	**Sochi**	**80.42**	**314**	*e*P	**P**	**07 26 41.1**	**-2.6**
SOC				*e*S	S	07 36 35.6	-3.0
SOC				pmax	pmax		
	comp=N,4.0nm,0.5s						
SOC				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
SOC				pmax	pmax		
	comp=E,6.0nm,0.6s						
CMB	**Columbia Colle**	**80.59**	**52**	*e*P	**P**	**07 26 45.2**	**+0.4**
CMB				*e**PP	pP	07 27 12.1	-2.6
CMB				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.0						
CMB	**Columbia Colle**	**80.59**	**52**	*e*P	**P**	**07 26 45.2**	**+0.4**
	comp=Z,33nm,1.3s,mb5.0						
CMB				*e*pP	pP	07 27 12.1	-2.6
CHMT	**Chamberlain Mo**	**81.29**	**42**	*e*P	**P**	**07 26 48.2**	**0.0**
SUMG	**Summit**	**81.82**	**360**	*e*P	**P**	**07 26 51.7**	**+1.2**
	comp=Z,44nm,1.0s,mb5.2						
NVAR	**Mina Array Bea**	**81.90**	**51**	P	**P**	**07 26 52.4**	**+0.8**
	comp=Z,6.0nm,0.7s,mb4.6,baz=289,slow=4.6,SNR=33						
NVAR				pP	pP	07 27 23.6	+2.0
	comp=Z,3.5nm,0.9s,baz=293,slow=4.5,SNR=4.6						
NVAR	**Mina Array Bea**	**81.90**	**51**	P	**P**	**07 26 52.4**	**+0.8**
NVAR				pP	pP	07 27 23.6	+2.0
MNV	**Mina**	**82.00**	**51**	*e*P	**P**	**07 26 52.6**	**+0.5**
MNV				pmax	pmax		
	comp=Z,24nm,1.5s,mb4.8						
MNV	**Mina**	**82.00**	**51**	*e*P	**P**	**07 26 52.6**	**+0.5**
	comp=Z,24nm,1.5s,mb4.8						
HLID	**Hailey**	**82.16**	**45**	*e*P	**P**	**07 26 53.7**	**+0.9**
	comp=Z,8.6nm,1.0s,mb4.5						
HRY	**Holter Researc**	**82.24**	**42**	*e*P	**P**	**07 26 54.3**	**+1.1**
HRY				*e*pP	pP	07 27 25.4	+2.2
MCMT	**McKenzie Canyo**	**82.54**	**44**	*e*P	**P**	**07 26 54.8**	**0.0**
ELK	**Elko**	**82.95**	**48**	*e*P	**P**	**07 26 57.9**	**+1.0**
ELK				*e**PP	pP	07 27 24.4	-2.5
ELK				pmax	pmax		
	comp=Z,17nm,1.1s						
ELK	**Elko**	**82.95**	**48**	P	**P**	**07 26 58.1**	**+1.2**
	comp=Z,5.0nm,0.6s,mb4.5,baz=299,slow=5.7,SNR=24						
ELK	**Elko**	**82.95**	**48**	*e*P	**P**	**07 26 57.9**	**+1.0**
	comp=Z,17nm,1.1s,mb4.8						
ELK				*e*pP	pP	07 27 24.4	-2.6
AKASG	**Malin Array Be**	**83.14**	**324**	P	**P**	**07 26 56.7**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,15nm,0.5s						
AKASG	**Malin Array Be**	**83.14**	**324**	P	**P**	**07 26 56.7**	**-1.0**
	comp=Z,15nm,0.5s,mb5.1,baz=51,slow=5.2,SNR=91						
FFC	**Flin Flon**	**83.20**	**31**	*e*P	**P**	**07 26 58.4**	**+0.5**
FFC				pmax	pmax		
	comp=Z,60nm,1.4s,mb5.2						
FFC	**Flin Flon**	**83.20**	**31**	*e*P	**P**	**07 26 58.4**	**+0.5**
	comp=Z,60nm,1.4s,mb5.2						
FFC				*e*pP	pP	07 27 22.8	-5.1
QLMT	**Earthquake Lak**	**83.42**	**43**	*e*P	**P**	**07 27 00.7**	**+1.5**
QLMT				*e*pP	pP	07 27 31.6	+2.3
YMR	**Madison River**	**83.79**	**43**	*e*P	**P**	**07 27 03.2**	**+2.2**
TRCR	**Troy Canyon**	**83.83**	**50**	*e*P	**P**	**07 27 02.2**	**+0.7**
YFT	**Old Faithful**	**83.98**	**43**	*e*P	**P**	**07 27 05.4**	**+3.4**
FCC	**Fort Churchill**	**84.05**	**26**	*e*P	**P**	**07 27 01.7**	**-0.3**
FCC				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.8						
FCC	**Fort Churchill**	**84.05**	**26**	*e*P	**P**	**07 27 01.7**	**-0.3**
	comp=Z,19nm,1.3s,mb4.8						
HVU	**Hansel Valley**	**84.08**	**46**	*e*P	**P**	**07 27 03.8**	**+1.2**
LKWY	**Lake**	**84.19**	**43**	*e*P	**P**	**07 27 06.2**	**+3.2**
LKWY				*e**PP	pP	07 27 37.5	+4.3
LKWY				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.1						
LKWY	**Lake**	**84.19**	**43**	*e*P	**P**	**07 27 06.2**	**+3.1**
	comp=Z,29nm,1.0s,mb5.1						
LKWY				*e*pP	pP	07 27 37.5	+4.3
IMW	**Indian Meadow**	**84.19**	**44**	*e*P	**P**	**07 27 05.0**	**+1.9**
	comp=Z,32nm,0.8s,mb5.2						
IMW				*e*pP	pP	07 27 37.6	+4.4
RRI2	**Red Ridge**	**84.23**	**44**	*e*P	**P**	**07 27 04.5**	**+1.2**
	comp=Z,12nm,0.7s,mb4.8						
MOOW	**Moose Ponds**	**84.39**	**44**	*e*P	**P**	**07 27 05.8**	**+1.7**
	comp=Z,22nm,1.1s,mb4.9						
MOOW				*e*pP	pP	07 27 37.5	+3.3
TPAW	**Teton Pass**	**84.39**	**44**	*e*P	**P**	**07 27 05.7**	**+1.6**
	comp=Z,33nm,1.1s,mb5.1						
NB2	**NORSAR Subarra**	**84.46**	**338**	P	**P**	**07 27 02.8**	**-1.2**
	comp=Z,16nm,0.6s,mb5.0,baz=45,slow=5.0						
NB2	**NORSAR Subarra**	**84.46**	**338**	P	**P**	**07 27 02.8**	**-1.2**
	baz=44,slow=5.1						
NOA	**NORSAR Array B**	**84.46**	**338**	P	**P**	**07 27 03.0**	**-1.0**
	comp=Z,20nm,0.8s,mb5.0,baz=46,slow=4.8,SNR=59						
NOA				pP	pP	07 27 35.3	+1.2
	comp=Z,3.6nm,0.5s,baz=45,slow=4.9,SNR=5.0						
WUWY	**Wally Ulrich**	**84.50**	**44**	*e*P	**P**	**07 27 06.3**	**+1.7**
SNOW	**Snow King Moun**	**84.53**	**44**	*e*P	**P**	**07 27 06.4**	**+1.7**
	comp=Z,25nm,1.1s,mb5.1						
SNOW				*e*pP	pP	07 27 36.1	+1.2
LOHW	**Long Hollow**	**84.55**	**44**	*e*P	**P**	**07 27 06.4**	**+1.5**
	comp=Z,27nm,1.1s,mb5.1						
AHID	**Auburn Hatcher**	**84.67**	**45**	*e*P	**P**	**07 27 06.7**	**+1.2**
	comp=Z,10nm,0.8s,mb4.8						
AHID				*e*pP	pP	07 27 37.1	+1.4
NAO01	**NORSAR Array S**	**84.71**	**338**	*e*P	**P**	**07 27 04.0**	**-1.3**
	comp=Z,10nm,0.6s,mb4.9						
HWUT	**Hardware Ranch**	**84.95**	**46**	*e*P	**P**	**07 27 07.8**	**+0.9**
	comp=Z,26nm,1.0s,mb5.1						
CTU	**Camp Tracy**	**85.29**	**47**	*e*P	**P**	**07 27 09.1**	**+0.5**
TCUT	**Toone Canyon**	**85.30**	**46**	*e*P	**P**	**07 27 09.7**	**+1.0**
KIS	**Kishinev**	**85.39**	**321**	*e*P	**P**	**07 27 10.0**	**+1.0**
KIS				*e*		07 39 04.0	
PFO	**Pinyon Flat Ob**	**85.43**	**55**	*e*P	**P**	**07 27 09.7**	**+0.2**
PFO				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0						
PFO	**Pinyon Flat Ob**	**85.43**	**55**	*e*P	**P**	**07 27 09.7**	**+0.2**
	comp=Z,24nm,1.1s,mb5.0						
JLU	**Jordanelle**	**85.53**	**47**	*e*P	**P**	**07 27 11.1**	**+1.2**
ARUT	**Antelope Range**	**85.59**	**50**	*e*P	**P**	**07 27 11.0**	**+0.8**
NEN	**Nelson**	**85.64**	**52**	*e*P	**P**	**07 27 11.2**	**+0.7**
NEN				*e*pP	pP	07 27 42.7	+2.0
BW06	**Boulder Array**	**85.64**	**44**	*e*P	**P**	**07 27 10.4**	**+0.2**
	comp=Z,11nm,0.9s,mb4.8						
BW06				*e*pP	pP	07 27 35.6	-4.9
PDAR	**Pinedale Array**	**85.64**	**44**	P	**P**	**07 27 10.9**	**+0.7**
	comp=Z,13nm,1.0s,mb4.8,baz=270,slow=3.0,SNR=56						
PDAR				pP	pP	07 27 42.5	+1.9
	comp=Z,4.8nm,0.9s,baz=315,slow=4.2,SNR=7.6						
BAR	**Barrett**	**85.70**	**56**	*e*P	**P**	**07 27 10.7**	**-0.2**
LDFC	**Landfair**	**85.72**	**53**	*e*P	**P**	**07 27 11.5**	**+0.7**
DAU	**Daniels Canyon**	**85.75**	**47**	*e*P	**P**	**07 27 12.0**	**+1.1**
MSU	**Marysvale**	**86.09**	**49**	*e*P	**P**	**07 27 13.8**	**+1.2**
MSU				*e**PP	pP	07 27 47.0	+4.1
BR131	**Keskin Array S**	**86.26**	**313**	*e*P	**P**	**07 27 12.5**	**-0.9**
	comp=Z,2.0nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	**86.26**	**313**	P	**P**	**07 27 12.4**	**-0.9**
	comp=Z,3.6nm,0.7s,mb4.4,baz=87,slow=3.4,SNR=14						
TMUT	**Trail Mountain**	**86.35**	**48**	*e*P	**P**	**07 27 14.8**	**+1.0**
SRU	**San Rafael**	**86.90**	**48**	*e*P	**P**	**07 27 17.3**	**+0.8**
SRU				*e**PP	pP	07 27 48.9	+2.0
SFJD	**Kangerlussuaq**	**86.99**	**5**	⇑*i*P	**P**	**07 27 16.9**	**+0.6**
SFJD				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.4						
SFJD	**Kangerlussuaq**	**86.99**	**5**	⇑*i*P	**P**	**07 27 16.9**	**+0.6**
	comp=Z,54nm,1.1s,mb5.4						
TIRR	**Tirgusor**	**87.03**	**319**	⇑P	**P**	**07 27 16.1**	**-0.9**
BURAR	**Bucovina Array**	**87.06**	**323**	⇓P	**P**	**07 27 17.0**	**0.0**
VRI	**Vrincioaia**	**87.22**	**320**	⇓P	**P**	**07 27 16.9**	**-1.0**
MLR	**Muntele Rosu**	**87.89**	**321**	⇓P	**P**	**07 27 20.4**	**-0.7**
WUAZ	**Wupatki**	**88.16**	**51**	*e*P	**P**	**07 27 23.7**	**+1.0**
	comp=Z,24nm,1.2s,mb5.1						
WUAZ				*e*pP	pP	07 27 51.2	-1.9
RSSD	**Black Hills**	**88.27**	**41**	*e*P	**P**	**07 27 23.4**	**+0.5**
RSSD				*e**PP	pP	07 27 51.8	-1.6
RSSD				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.0						
RSSD	**Black Hills**	**88.27**	**41**	*e*P	**P**	**07 27 23.4**	**+0.5**
	comp=Z,21nm,1.3s,mb5.0						
RSSD				*e*pP	pP	07 27 51.8	-1.5
PV10	**Paradox Valley**	**88.28**	**48**	*e*P	**P**	**07 27 24.1**	**+1.0**
PV01	**Paradox Valley**	**88.72**	**48**	*e*P	**P**	**07 27 25.7**	**+0.5**
ULM	**Lac du Bonnet**	**88.90**	**33**	P	**P**	**07 27 24.2**	**-1.6**
	comp=Z,2.4nm,0.5s,mb4.5,baz=327,slow=6.6,SNR=3.6						
ULM	**Lac du Bonnet**	**88.90**	**33**	P	**P**	**07 27 24.2**	**-1.6**
KECS	**Kecovo**	**89.04**	**325**	*e*P	**P**	**07 27 24.0**	**-2.5**
OKC	**Ostrava-Krasne**	**89.34**	**327**	*e*P	**P**	**07 27 27.0**	**-0.8**
KSP	**Ksiaz**	**89.56**	**329**	*e*P	**P**	**07 27 28.2**	**-0.6**
MORC	**Moravsky Berou**	**89.68**	**327**	*e*P	**P**	**07 27 28.6**	**-0.8**
MORC				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
MORC	**Moravsky Berou**	**89.68**	**327**	*e*P	**P**	**07 27 28.6**	**-0.8**
	comp=Z,3.9nm,0.6s,mb4.7						
PSZ	**Piszkesteto**	**89.71**	**325**	*e*P	**P**	**07 27 29.1**	**-0.5**
	comp=Z,9.4nm,0.9s,mb4.9						
ISCO	**Idaho Springs**	**89.74**	**45**	*e*P	**P**	**07 27 31.4**	**+1.4**
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
ISCO	**Idaho Springs**	**89.74**	**45**	*e*P	**P**	**07 27 31.4**	**+1.4**
	comp=Z,4.2nm,0.7s,mb4.7						
DPC	**Dobruska-Polom**	**89.88**	**328**	*e*P	**P**	**07 27 30.0**	**-0.3**
VYHS	**Vyhne**	**89.88**	**326**	*i* P	**P**	**07 27 30.0**	**-0.4**
UPC	**Upice**	**89.92**	**329**	*e*P	**P**	**07 27 29.7**	**-0.8**
BSEG	**Bad Segeberg**	**89.98**	**333**	*e*P	**P**	**07 27 29.8**	**-0.9**
TUC	**Tucson**	**90.22**	**54**	*e*P	**P**	**07 27 33.2**	**+0.8**
TUC				pmax	pmax		
	comp=Z,22nm,1.8s,mb5.0						
TUC	**Tucson**	**90.22**	**54**	*e*P	**P**	**07 27 33.2**	**+0.8**
	comp=Z,22nm,1.8s,mb5.0						
SMOL	**Smolenice**	**90.57**	**326**	*e*P	**P**	**07 27 33.0**	**-0.6**
PVCC	**Panska Ves**	**90.57**	**329**	*e*P	**P**	**07 27 33.4**	**-0.2**
BRG	**Berggiesshubel**	**90.62**	**330**	*i* P	**P**	**07 27 32.9**	**-0.9**
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
BRG	**Berggiesshubel**	**90.62**	**330**	*i* P	**P**	**07 27 32.9**	**-1.0**
	comp=Z,7.9nm,1.0s,mb4.8						
CLL	**Collm**	**90.74**	**330**	*e*P	**P**	**07 27 33.0**	**-1.4**
CLL	**Collm**	**90.74**	**330**	P	**P**	**07 27 33.0**	**-1.4**
PRU	**Pruhonice**	**90.96**	**329**	*e*P	**P**	**07 27 34.4**	**-1.0**
SDCO	**Great Sand Dun**	**90.96**	**47**	*e*P	**P**	**07 27 36.5**	**+0.8**
	comp=Z,4.8nm,0.9s,mb4.6						
CLZ	**Clausthal**	**91.49**	**332**	*e*P	**P**	**07 27 37.1**	**-0.7**
CLZ				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
CLZ	**Clausthal**	**91.49**	**332**	*e*P	**P**	**07 27 37.1**	**-0.7**
	comp=Z,6.0nm,0.9s,mb4.7						
NKC	**Novy Kostel**	**91.75**	**330**	*e*P	**P**	**07 27 38.6**	**-0.5**
MOX	**Moxa**	**91.83**	**331**	*e*P	**P**	**07 27 40.0**	**+0.6**
ANMO	**Albuquerque**	**91.87**	**50**	*e*P	**P**	**07 27 41.0**	**+1.0**
ANMO				*e**PP	pP	07 28 09.4	-1.2
ANMO				pmax	pmax		
	comp=Z,16nm,1.1s						
ANMO	**Albuquerque**	**91.87**	**50**	P	**P**	**07 27 41.1**	**+1.1**
	comp=Z,8.6nm,1.0s,mb4.9,baz=283,slow=4.7,SNR=20						
ANMO	**Albuquerque**	**91.87**	**50**	*e*P	**P**	**07 27 41.0**	**+1.0**
	comp=Z,16nm,1.1s,mb5.2						
ANMO				*e*pP	pP	07 28 09.4	-1.2
KHC	**Kasperske Hory**	**92.01**	**329**	*e*P	**P**	**07 27 39.5**	**-0.8**
GEC2	**GERESS Array S**	**92.15**	**328**	*e*P	**P**	**07 27 39.7**	**-1.2**
GEC2				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.1						
GEC2	**GERESS Array S**	**92.15**	**328**	*e*P	**P**	**07 27 39.7**	**-1.2**
	comp=Z,12nm,1.0s,mb5.1						
GERES	**GERESS Array B**	**92.15**	**328**	P	**P**	**07 27 40.1**	**-0.9**
	comp=Z,5.3nm,0.7s,mb4.9,baz=45,slow=3.8,SNR=35						
GERES				pP	pP	07 28 13.5	+2.0
	comp=Z,1.1nm,0.5s,baz=56,slow=4.8,SNR=3.5						
BNM	**Barren Site**	**92.19**	**50**	*e*P	**P**	**07 27 42.5**	**+1.0**
GRA1	**Grafenberg Arr**	**92.69**	**330**	*e*P	**P**	**07 27 43.0**	**-0.4**
	comp=Z,16nm,1.1s,mb5.3						
GRF	**Grafenberg Arr**	**92.69**	**330**	*e*P	**P**	**07 27 43.0**	**-0.4**
GRF				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.3						
GRF	**Grafenberg Arr**	**92.69**	**330**	*e*P	**P**	**07 27 43.0**	**-0.4**
GRF				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.3						
GRF	**Grafenberg Arr**	**92.69**	**330**	*e*P	**P**	**07 27 43.0**	**-0.4**
	comp=Z,16nm,1.1s,mb5.3						
PERS	**Pernice**	**92.99**	**326**	*i* P	**P**	**07 27 43.7**	**-1.1**
GOLS	**Golise**	**93.16**	**325**	*e*P	**P**	**07 27 44.5**	**-1.2**
PDKS	**Podkum**	**93.45**	**326**	*e*P	**P**	**07 27 45.7**	**-1.2**
TNS	**Taunus Mts**	**93.51**	**332**	*e*P	**P**	**07 27 46.7**	**-0.4**
LJU	**Ljubljana**	**93.70**	**326**	*e*P	**P**	**07 27 46.9**	**-1.1**
FUR	**Furstenfeldbru**	**93.77**	**329**	*e*P	**P**	**07 27 47.7**	**-0.6**
FUR				pmax	pmax		
	comp=Z,24nm,0.4s,mb5.9						
FUR	**Furstenfeldbru**	**93.77**	**329**	*e*P	**P**	**07 27 47.7**	**-0.6**
	comp=Z,24nm,0.4s,mb5.9						
JAVS	**Javornik**	**94.03**	**326**	*e*P	**P**	**07 27 47.9**	**-1.6**
BFO	**Black Forest**	**94.98**	**331**	*e*P	**P**	**07 27 52.8**	**-1.1**
BFO				pmax	pmax		
	comp=Z,12nm,1.3s,mb5.2						
BFO	**Black Forest**	**94.98**	**331**	*e*P	**P**	**07 27 52.8**	**-1.1**
	comp=Z,12nm,1.3s,mb5.2						
CDF	**Champ du Feu**	**95.38**	**331**	*e*P	**P**	**07 27 54.6**	**-1.1**
SCHQ	**Schefferville**	**96.07**	**16**	P	**P**	**07 27 59.0**	**+0.4**
	comp=Z,1.4nm,0.8s,mb4.5,baz=319,slow=9.3,SNR=4.5						
SCHQ				PKKP	PKKP	07 44 43.9	+13
	comp=Z,1.6nm,0.5s,baz=200,slow=9.8,SNR=7.1						
SCHQ	**Schefferville**	**96.07**	**16**	P	**P**	**07 27 59.0**	**+0.4**
SCHQ				PKKP	PKKP	07 44 43.9	+13
TXAR	**Lajitas Array**	**96.97**	**53**	P	**P**	**07 28 04.1**	**+0.7**
	comp=Z,4.3nm,1.1s,mb4.8,baz=301,slow=3.5,SNR=22						
TXAR				pP	pP	07 28 35.0	+1.0
	comp=Z,0.9nm,0.6s,baz=351,slow=2.2,SNR=5.9						
TXAR				PKKP	PKKP	07 44 43.6	+14
	comp=Z,0.4nm,0.7s,baz=135,slow=5.1,SNR=5.3						
TXAR	**Lajitas Array**	**96.97**	**53**	P	**P**	**07 28 04.1**	**+0.7**
TXAR				pP	pP	07 28 35.0	+1.0
TXAR				PKKP	PKKP	07 44 43.6	+14
LOR	**Lormes**	**97.72**	**332**	*e*P	**P**	**07 28 06.4**	**+0.1**
LPL	**La Plagne**	**97.82**	**330**	*e*P	**P**	**07 28 06.0**	**-0.9**
	comp=Z,12nm,0.8s,mb5.2						
LPL	**La Plagne**	**97.82**	**330**	*e*P	**P**	**07 28 06.0**	**-0.9**
LPL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.2						
LPG	**La Plagne**	**97.83**	**330**	*e*P	**P**	**07 28 06.0**	**-0.9**
	comp=Z,9.6nm,0.7s,mb5.2						
LPG	**La Plagne**	**97.83**	**330**	*e*P	**P**	**07 28 06.0**	**-0.9**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb5.2						
QSPA	**South Pole Qui**	**115.64**	**180**	*e*PKP	PKPdf	07 33 11.2	-0.1
JTS	**JuntasAbangare**	**122.41**	**57**	PKP	PKPdf	07 33 26.1	+0.3
	comp=Z,3.9nm,0.5s,baz=230,slow=1.7,SNR=9.2						
JTS	**JuntasAbangare**	**122.41**	**57**	PKP	PKPdf	07 33 26.1	+0.3
TSUM	**Tsumeb**	**127.92**	**265**	PKP	PKPdf	07 33 39.6	+3.1
	comp=Z,3.8nm,0.7s,baz=150,slow=4.8,SNR=4.0						
VNA2	**Neumayer--Watz**	**131.52**	**193**	*e*	PKPdf	07 33 43.5	+1.6
VNA2	**Neumayer--Watz**	**131.52**	**193**	⇑*i*PKPdf	PKPdf	07 33 42.2	+0.3
VNA2				*e*		07 33 43.5	
VNA3	**Neumayer Olymp**	**131.71**	**192**	*e*	PKPdf	07 33 43.5	+1.2
VNA3	**Neumayer Olymp**	**131.71**	**192**	⇑*i*PKPdf	PKPdf	07 33 42.1	-0.2
VNA3				*e*		07 33 43.5	
VNA1	**Neumayer--Stat**	**131.91**	**193**	*e*	PKPdf	07 33 43.9	+1.2
VNA1	**Neumayer--Stat**	**131.91**	**193**	⇑*i*PKPdf	PKPdf	07 33 42.9	+0.2
VNA1				*e*		07 33 43.9	
SDV	**Santo Domingo**	**133.55**	**46**	PKP	PKPdf	07 33 48.5	+1.3
	comp=Z,11nm,0.7s,baz=68,slow=1.3,SNR=22						
SDV				SKPbc		07 37 03.2	
	comp=Z,2.4nm,0.8s,baz=248,slow=5.4,SNR=3.5						
SDV	**Santo Domingo**	**133.55**	**46**	*e*PKPdf	PKPdf	07 33 48.1	+0.9
DBIC	**Dimbokro**	**133.90**	**310**	PKhKP		07 33 43.6	
	comp=Z,1.8nm,0.6s,slow=2.0,SNR=4.0						
DBIC				PKP	PKPdf	07 33 49.5	+1.7
	comp=Z,3.2nm,0.5s,baz=41,slow=2.7,SNR=9.4						
DBIC				SKPbc		07 37 05.3	
	comp=Z,4.4nm,0.8s,baz=344,slow=3.8,SNR=5.3						
DBIC	**Dimbokro**	**133.90**	**310**	PKP	PKPdf	07 33 43.6	-4.2
DBIC				PKP	PKPdf	07 33 49.5	+1.7
DBIC				SKPbc		07 37 05.3	
PLCA	**Paso Flores**	**149.72**	**127**	PKP	PKPdf	07 34 14.0	-0.8
	comp=Z,13nm,1.3s,baz=235,slow=7.8,SNR=6.0						
PLCA				PKPbc	PKPdf	07 34 21.0	+6.2
	comp=Z,15nm,0.6s,baz=233,slow=3.1,SNR=66						
PLCA	**Paso Flores**	**149.72**	**127**	*e*PKPdf	PKPdf	07 34 15.3	+0.6
PLCA				*e*PKPbc	PKPdf	07 34 20.4	+5.6
LPAZ	**La Paz**	**150.98**	**77**	PKIKP	PKPdf	07 34 19.0	+1.6
LPAZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LPAZ				pmax	pmax		
	comp=Z,14nm,0.5s						
LPAZ	**La Paz**	**150.98**	**77**	PKP	PKPdf	07 34 19.0	+1.6
	comp=Z,2.6nm,1.1s,baz=292,slow=0.8,SNR=8.7						
LPAZ				PKPbc	PKPdf	07 34 25.7	+8.3
	comp=Z,14nm,0.5s,baz=308,slow=2.5,SNR=127						
LPAZ	**La Paz**	**150.98**	**77**	*e*PKPdf	PKPdf	07 34 18.9	+1.6
LPAZ				*e*PKPbc	PKPdf	07 34 25.3	+7.9
SAML	**Samuel**	**151.30**	**59**	*e*PKPdf	PKPdf	07 34 18.9	+0.9
SAML				*e*PKPbc	PKPdf	07 34 24.8	+6.9
CPUP	**Villa Florida**	**163.25**	**96**	PKP	PKPdf	07 34 32.4	+0.1
	comp=Z,2.6nm,0.9s,baz=248,slow=5.4,SNR=4.3						
CPUP				PKPab	PKPab	07 35 24.9	-0.8
	comp=Z,2.1nm,0.8s,baz=288,slow=8.6,SNR=6.7						
CPUP	**Villa Florida**	**163.25**	**96**	PKP	PKPdf	07 34 32.4	+0.1
CPUP				PKPab	PKPab	07 35 24.9	-0.8

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*NEIC **15** 07:17:55.8±1.2,20.24S×68.97W,h89^{km}±16^{km},mb3.9/2, Error ellipse: s-maj=20.1km s-min=11.8km az=93.0*

*IDC **15** 07:17:57.3±2.5,20.29S×68.80W,h96^{km}±28^{km},mb3.6/3, mb1 3.8/5,mb1mx3.5/18,mbtmp4.1/5,Error ellipse: s-maj=36.9km s-min=19.4km az=98.0*

ISC 15 07:17:54.3±0.8**,20.24S**±0.07×**68.9W**±0.1**,h89^{km},n13,**
σ**0^{s}91**/14**,mb3.9**/1**,1C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.00**	**11**	P	**P**	**07 18 57.9**	**+3.2**
	5.3nm,0.3s,baz=191,slow=8.1,SNR=175						
LPAZ	**La Paz**	**4.00**	**11**	⇑*i*Pn	**P**	**07 18 57.8**	**+3.1**
ARE	**Arequipa**	**4.47**	**327**	*e*P	**P**	**07 19 00.0**	**-1.2**
ARE				*e*S	**S**	**07 19 47.0**	**-5.4**
SIV	**San Ignacio**	**8.59**	**62**	P	**P**	**07 19 56.9**	**-0.6**
	1.8nm,0.3s,baz=246,slow=12,SNR=81						
CFAA	**Coronel Fontan**	**11.34**	**177**	P	**P**	**07 20 34.0**	**-0.6**
	0.0nm,0.3s,baz=3.4,slow=17,SNR=4.8						
CFAA				S	**S**	**07 22 32.4**	**-7.6**
	0.0nm,0.3s,baz=241,slow=18,SNR=4.0						
SAML	**Samuel**	**12.53**	**27**	*e*P	**P**	**07 20 50.3**	**-0.3**
TRQA	**Tornquist**	**18.75**	**163**	*e*P	**P**	**07 22 09.0**	**+0.3**
BDFB	**Brasilia**	**20.42**	**80**	P	**P**	**07 22 26.3**	**-0.2**
	1.9nm,0.4s,baz=260,slow=10,SNR=5.8						
PLCA	**Paso Flores**	**20.47**	**184**	P	**P**	**07 22 27.9**	**+1.0**
	3.2nm,0.8s,baz=3.7,slow=14,SNR=12						
PLCA	**Paso Flores**	**20.47**	**184**	*e*P	**P**	**07 22 27.2**	**+0.2**
	4.1nm,0.8s						
SDV	**Santo Domingo**	**28.99**	**357**	P	**P**	**07 23 49.0**	**+1.1**
	1.2nm,0.5s,mb3.8,baz=135,slow=2.9,SNR=4.0						
SDV	**Santo Domingo**	**28.99**	**357**	*e*P	**P**	**07 23 49.0**	**+1.0**
	1.8nm,0.5s,mb4.0						
MKAR	**Makanchi Array**	**144.62**	**35**	PKP	PKPdf	07 37 20.2	-0.2
	0.4nm,0.5s,baz=298,slow=4.1,SNR=4.0						

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*IDC **15** 07:18:30.9±1.9,41.10N×126.18W,mb3.4/3,mb1 3.9/8, mb1mx3.7/26,mbtmp3.5/8,ML3.7/4,Error ellipse: s-maj=26.6km s-min=17.5km az=29.0*

*NEIC **15** 07:18:33.4±1.5,41.19N×126.04W,h10^{km},mb3.8/2,Error ellipse: s-maj=20.3km s-min=9.0km az=63.0*

ISC 15 07:18:30.8±1.0**,41.11N**±0.07×**126.2W**±0.1**,h10^{km},n24,**
σ**1^{s}16**/25**,mb3.4**/4**,Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**1.82**	**52**	*e*P	**Pn**	**07 19 02.2**	**-0.2**
KHMM	**Horse Mountain**	**1.85**	**97**	*e*P	**Pn**	**07 19 01.6**	**-1.4**
YBH	**Yreka Blue Hor**	**2.67**	**75**	Pn	**Pn**	**07 19 16.0**	**+1.4**
	16nm,0.3s,baz=272,slow=12,SNR=20						
YBH				Sn	**Sn**	**07 19 48.6**	**+1.3**
	12nm,0.3s,baz=166,slow=22,SNR=9.8						
WDC	**Whiskeytown Da**	**2.80**	**100**	*e*P	**Pn**	**07 19 15.6**	**-0.9**
HUMO	**Hull Mountain**	**2.82**	**57**	*e*P	**Pn**	**07 19 16.1**	**-0.7**
MOD	**Modoc**	**4.47**	**78**	*e*P	**Pn**	**07 19 39.9**	**-0.3**
BEKR	**Beckwourth**	**4.59**	**104**	*e*P	**Pn**	**07 19 41.4**	**-0.6**

CMB	Columbia Colle	5.42	123	eP	Pn	07 19 52.4	-1.2
WVOR	Wild Horse Val	5.78	74	eP	Pn	07 19 57.1	-1.6
OMM	Old Mammoth Mi	6.56	120	eP	Pn	07 20 11.1	+1.4
NVAR	Mina Array Bea	6.62	111	Pn	Pn	07 20 09.8	-0.7
	0.6nm,0.3s,baz=288,slow=15,SNR=10						
OCWA	Octopus Mounta	6.79	11	eP	Pn	07 20 12.2	-0.7
MTUM	Tungsten Hills	6.99	120	P	Pn	07 20 15.4	-0.4
BMO	Blue Mountains	7.49	57	eP	Pn	07 20 21.8	-1.0
ELK	Elko	8.28	89	Pn	P	07 20 34.9	+1.1
	0.1nm,0.3s,baz=285,slow=11,SNR=8.5						
NEW	Newport	9.62	39	P	P	07 20 48.8	-3.5
PDAR	Pinedale Array	12.48	77	Pn	P	07 21 34.2	+3.0
	0.1nm,0.3s,baz=270,slow=10,SNR=12						
ANMO	Albuquerque	16.68	105	Pn	P	07 22 27.5	+1.3
	baz=299,slow=11,SNR=4.4						
DLBC	Dease Lake	17.52	353	P	P	07 22 39.1	+2.6
	0.1nm,0.3s,baz=160,slow=14,SNR=5.1						
CBKS	Cedar Bluff	20.36	88	eP	P	07 23 10.1	+0.1
	5.7nm,0.8s						
FFC	Flin Flon	21.03	41	eP	P	07 23 16.3	-0.6
	2.4nm,0.7s,mb3.6						
TXAR	Lajitas Array	21.74	116	P	P	07 23 25.6	+1.3
	2.2nm,1.0s,mb3.6,baz=299,slow=7.8,SNR=5.5						
YKA	Yellowknife Ar	22.50	14	P	P	07 23 32.3	+0.9
	1.2nm,0.7s,mb3.4,baz=202,slow=12,SNR=4.9						
ILAR	Eielson Array	26.53	340	P	P	07 24 09.4	-0.6
	0.4nm,0.8s,mb3.0,baz=154,slow=8.1,SNR=4.7						

NEIC 15 07:23:44.9,19.08N×64.87W,h6^{km},MD3.5(RSPR),After RSPR.

RSPR 15 07:23:44.9,19.08N×64.87W,h6^{km}±6^{km},MD3.5/15, MD3.5/15,13C-2D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTP	Monte Pirata	1.18	214	⇓eP	Pb	07 24 04.5	-2.8
MTP				eS	Sb	07 24 19.7	-2.9
CBYP	Canovanas	1.23	229	⇑eP	Pb	07 24 05.2	-3.0
CBYP				eS	Sb	07 24 22.2	-2.0
HUMP	Col San Antoni	1.32	225	⇓eP	Pb	07 24 06.8	-2.9
HUMP				eS	Sb	07 24 23.1	-3.6
CDVI	St. Croix	1.33	176	⇑eP	Pb	07 24 07.2	-2.6
CDVI				eS	Sb	07 24 23.9	-3.1
CPD	Cerro la Pandu	1.43	224	⇑eP	Pn	07 24 08.5	-3.1
CPD				eS	Sb	07 24 27.2	-2.9
SJG	San Juan	1.55	232	⇑eP	Pn	07 24 09.9	-3.3
SJG	San Juan	1.55	232	⇑eP	Pn	07 24 10.7	-2.5
SJG				eS	Sb	07 24 29.0	-4.4
AOPR	Arecibo Observ	1.92	248	⇑eP	Pn	07 24 14.9	-3.7
AOPR				eS	Sn	07 24 39.3	-4.0
ICM	Isla Caja Muer	1.96	233	⇑eP	Pn	07 24 16.7	-2.4
ICM				eS	Sn	07 24 40.0	-4.3
PORP	Portuguez	1.96	239	⇑eP	Pn	07 24 14.8	-4.3
PORP				eS	Sn	07 24 40.2	-4.1
LRS	Lares	2.03	248	⇑eP	Pn	07 24 16.1	-3.9
AGPR	Aguadilla, PR	2.21	254	⇑eP	Pn	07 24 19.0	-3.6
LSP	Las Mesas	2.28	247	⇑eP	Pn	07 24 21.0	-2.7
LSP				eS	Sn	07 24 48.1	-4.4
MGP	Maguayo	2.36	243	⇑eP	Pn	07 24 21.8	-3.0
MGP				eS	Sn	07 24 49.6	-4.8
CRPR	Cabo Rojo, PR	2.38	244	⇑eP	Pn	07 24 21.7	-3.4
CRPR				eS	Sn	07 24 50.1	-4.8

NEIC 15 07:38:05.5,19.09N×64.84W,h25^{km},MD3.6(RSPR), After RSPR.

RSPR 15 07:38:05.5,19.09N×64.84W,h25^{km}±25^{km},MD3.6/11, MD3.6/11,10C-2D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTP	Monte Pirata	1.20	215	⇑eP	Pn	07 38 24.2	-2.7
MTP				eS	Sn	07 38 39.6	-2.8
CBYP	Canovanas	1.26	230	⇑eP	Pn	07 38 25.0	-2.8
CBYP				eS	Sn	07 38 40.8	-3.2
HUMP	Col San Antoni	1.34	226	⇑eP	Pn	07 38 26.5	-2.4
HUMP				eS	Sn	07 38 42.2	-3.9
CPD	Cerro la Pandu	1.46	225	⇑eP	Pn	07 38 28.2	-2.4
CPD				eS	Sn	07 38 46.5	-2.6
SJG	San Juan	1.58	232	⇓eP	Pn	07 38 29.8	-2.5
SJG				eS	Sn	07 38 48.8	-3.3
SJG	San Juan	1.58	232	⇑eP	Pn	07 38 29.8	-2.5
SJG				eS	Sn	07 38 48.4	-3.7
AOPR	Arecibo Observ	1.96	248	⇑eP	Pn	07 38 34.9	-2.8
AOPR				eS	Sn	07 38 58.0	-3.6
PORP	Portuguez	1.99	239	⇑eP	Pn	07 38 35.5	-2.7
PORP				eS	Sn	07 38 58.9	-3.7
LRS	Lares	2.06	248	⇑eP	Pn	07 38 37.0	-2.2
AGPR	Aguadilla, PR	2.24	254	⇓eP	Pn	07 38 38.9	-2.9
AGPR				eS	Sn	07 39 05.6	-3.3
MGP	Maguayo	2.39	244	⇑eP	Pn	07 38 41.6	-2.3
CRPR	Cabo Rojo, PR	2.41	244	⇑eP	Pn	07 38 41.7	-2.5
CRPR				eS	Sn	07 39 10.0	-3.1

NEIC 15 07:49:41.1±0.5,23.91N×141.39E,mb4.2/4,Error ellipse: s-maj=23.4km s-min=11.0km az=87.0

IDC 15 07:49:41.2±0.7,24.00N×141.48E,h148^{km}±6^{km},mb3.7/10, mb1 3.9/11,mb1mx3.7/22,mbtmp4.2/11,MS2.9/1, Ms1 2.9/1,ms1mx2.8/20,Error ellipse: s-maj=21.2km s-min=9.5km az=94.0

ISC 15 07:49:39.4±1.4,23.92N±0.08×141.4E±0.2,h150^{km}±15^{km}, h152^{km}±5.1^{km}:pP-P,n21,σ0^{s}93/19,mb3.9/12,1C,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	3.23	12	P	P	07 50 31.6	+1.1
	48nm,0.3s,baz=106,slow=3.9,SNR=40						
CBIJ				S	S	07 51 08.8	-0.8
	101nm,0.3s,baz=268,slow=23,SNR=24						
CBIJ				LR	LR	07 51 10.2	
	comp=Z,181nm,20.4s,baz=341,slow=28						
CTA	Charters Tower	44.00	173	eP	P	07 57 34.3	+0.6
	2.9nm,0.8s,mb4.0						
CTA	Charters Tower	44.00	173	P	P	07 57 34.0	+0.3
	2.6nm,0.5s,mb4.1,baz=345,slow=7.2,SNR=8.2						
WRAB	Tennant Creek	44.13	190	eP	P	07 57 34.8	0.0
	11nm,0.6s,mb4.7						
WB2	Warramunga Arr	44.14	190	⇑iP	P	07 57 35.1	+0.2
WRA	Warramunga Arr	44.14	190	P	P	07 57 35.1	+0.2
	6.4nm,0.6s,mb4.5,baz=11,slow=8.5,SNR=68						
WRA				pP	pP	07 58 08.7	+0.3
	0.7nm,0.4s,baz=343,slow=10,SNR=2.4						
WRA				PcP	PcP	07 59 18.2	+0.4
	0.4nm,0.4s,baz=3.7,slow=3.6,SNR=8.4						
FITZ	Fitzroy Crossi	44.52	202	eP	P	07 57 35.3	-2.6
	4.3nm,1.2s,mb4.0						
MKAR	Makanchi Array	52.01	312	P	P	07 58 36.2	+0.8
	0.4nm,0.4s,mb3.4,baz=84,slow=9.7,SNR=6.7						
MKAR				PcP	PcP	07 59 45.7	+0.1
	0.1nm,0.3s,baz=80,slow=7.4,SNR=3.9						
MKAR	Makanchi Array	52.01	312	P	P	07 58 36.2	+0.8
MKAR				PcP	PcP	07 59 45.7	+0.1
STKA	Stephens Creek	55.48	180	eP	P	07 59 00.6	-0.5
	3.0nm,0.6s,mb4.2						
STKA	Stephens Creek	55.48	180	P	P	07 59 01.0	-0.1
	1.5nm,0.5s,mb4.0,baz=355,slow=11,SNR=11						
STKA				PcP	PcP	07 59 59.2	+0.2
	2.5nm,0.9s,baz=333,slow=9.0,SNR=2.9						
BVAR	Borovoye Array	59.94	319	P	P	07 59 31.2	-0.6
	1.4nm,0.5s,mb4.0,baz=93,slow=9.0,SNR=9.2						
BVAR				pP	pP	08 00 06.7	-0.6
	0.8nm,0.6s,baz=79,slow=7.3,SNR=1.8						
ILAR	Eielson Array	60.82	28	P	P	07 59 36.0	-1.6
	1.0nm,0.8s,mb3.7,baz=266,slow=5.3,SNR=13						
ILAR				pP	pP	08 00 11.8	-1.5
	1.3nm,0.9s,baz=256,slow=5.9,SNR=8.3						
ARCES	ARCESS Array B	76.30	341	P	P	08 01 12.6	-0.1
	2.1nm,0.9s,mb3.7,baz=79,slow=9.2,SNR=5.0						
ARCES				pP	pP	08 01 55.0	+5.1
	3.1nm,0.9s,baz=27,slow=5.4,SNR=2.1						
ARCES	ARCESS Array B	76.30	341	P	P	08 01 12.6	-0.1
ARCES				pP	pP	08 01 55.0	+5.1
FINES	FINESS Array B	80.48	334	P	P	08 01 35.6	-0.1
	0.7nm,0.4s,mb3.6,baz=68,slow=6.0,SNR=18						
FINES				pP	pP	08 02 12.8	-0.3
	0.3nm,0.4s,baz=68,slow=7.5,SNR=1.4						
NVAR	Mina Array Bea	83.03	51	P	P	08 01 50.8	+1.4
	0.4nm,0.6s,mb3.3,baz=268,slow=4.1,SNR=5.2						
PDAR	Pinedale Array	86.95	44	pP	pP	08 02 50.1	+3.5
	0.3nm,0.6s,baz=270,slow=3.0,SNR=3.0						
BRTR	Keskin Array B	87.64	313	P	P	08 02 12.8	+0.8
	1.1nm,0.7s,mb3.8,baz=108,slow=3.7,SNR=4.6						
PLCA	Paso Flores	148.43	130	PKPbc	PKPdf	08 09 10.9	+6.4
	3.7nm,0.6s,baz=234,slow=3.9,SNR=19						
LPAZ	La Paz	151.27	80	PKPbc	PKPdf	08 09 18.6	+9.1
	1.9nm,0.6s,baz=268,slow=2.4,SNR=15						

IDC 15 08:00:10.3±3.7,52.35N×35.46E,mb1 3.4/3, mb1mx3.2/20,mbtmp3.2/3,ML3.2/3,Error ellipse: s-maj=42.5km s-min=14.0km az=114.0,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKASG	Malin Array Be	4.23	250	Pn	Pn	08 01 13.5	-3.9
	0.9nm,0.3s,baz=58,slow=15,SNR=2.5						
AKASG				Sn	Sn	08 02 05.2	-3.1
	2.9nm,0.3s,baz=61,slow=19,SNR=4.4						
FINES	FINESS Array B	10.45	334	Pn	P	08 02 38.0	-6.3
	0.2nm,0.3s,baz=149,slow=13,SNR=4.8						
FINES				Sn	S	08 04 27.5	-16
	0.2nm,0.3s,baz=153,slow=28,SNR=5.4						
ARCES	ARCESS Array B	17.87	349	P	P	08 04 18.0	-3.5
	0.2nm,0.3s,baz=150,slow=12,SNR=8.7						

NIED 15 08:07:00,28.60N×128.40E,h125^{km},Mw4.3 Best double couple: $M_0$2.77×10^{15} NP1:ϕ_s203°,δ69°,λ-80°. NP2: ϕ_s357°,δ23°,λ-114°.

JMA 15 08:07:39.8±0.1,28.63N×128.44E,h121^{km},M3.9

BJI 15 08:07:39.6,28.50N×128.60E,h146^{km},mb4.6

NEIC 15 08:07:39.7±0.5,28.48N×128.60E,mb4.4/1,Error ellipse: s-maj=15.5km s-min=9.2km az=96.0

IDC 15 08:07:39.3±0.6,28.46N×128.66E,h145^{km}±6^{km},mb3.5/9, mb1 3.7/11,mb1mx3.6/22,mbtmp3.9/11,Error ellipse: s-maj=18.7km s-min=7.9km az=93.0

ISC 15 08:07:38.2±0.3,28.51N±0.04×128.60E±0.08,h145^{km}±4^{km}, h150^{km}±3.1^{km}:pP-P,n30,σ0^{s}92/41,mb3.8/10,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	Tokunoshima	0.79	157	P	P	08 08 01.8	+0.7
JTK				S	S	08 08 18.0	-0.7
JAM	Amami Oshima	0.89	96	P	P	08 08 02.2	+0.3
JAM				S	S	08 08 18.6	-1.4
JZK	Kikaishima	1.23	99	P	P	08 08 06.5	+1.6
JZK				S	S	08 08 26.4	+1.0
JIH	Iheya	1.57	201	P	P	08 08 09.4	+0.8
JIH				S	S	08 08 31.5	-0.4
JOW	Kunigami	1.70	190	P	P	08 08 10.7	+0.7
	31nm,0.3s,baz=85,slow=12,SNR=57						
JOW				S	S	08 08 33.6	-0.6
	111nm,0.3s,baz=66,slow=20,SNR=13						
JOW	Kunigami	1.70	190	P	P	08 08 10.6	+0.7
JOW				S	S	08 08 33.7	-0.6
JAGN	Aguni-jima	2.26	212	P	P	08 08 17.3	+0.6
JAGN				S	S	08 08 45.5	-0.6
JKC	Kuchinoerabu	2.39	35	P	P	08 08 18.4	+0.1
JKC				eS	S	08 08 47.0	-1.9
NAH1	Naha	2.44	200	S	S	08 08 49.2	-0.8
JJT2	Tamagusuku 2	2.48	198	P	P	08 08 20.7	+1.2
JJT2				eS	S	08 08 50.9	-0.1
JKE	Kume jima 2	2.71	217	P	P	08 08 22.4	0.0
JTN	Tanegashima 3	2.98	44	P	P	08 08 24.9	-0.9
JSJ	Shimokoshiki	3.30	17	P	P	08 08 30.7	+0.7
JSU	Suzuyama	3.39	28	P	P	08 08 31.6	+0.4
JNAR	Kushima--Naru	3.79	37	P	P	08 08 36.6	+0.1
JTZ	Takazaki	4.01	32	P	P	08 08 39.3	0.0
JTZ				S	S	08 09 25.7	-0.5
JNU	Nakatsue	5.00	23	P	P	08 08 53.5	+1.1
	4.1nm,0.3s,baz=213,slow=8.2,SNR=15						
JNU				S	S	08 09 49.4	-0.3
	2.8nm,0.3s,baz=180,slow=44,SNR=3.8						
MJAR	Matsushiro Arr	11.39	43	P	P	08 10 18.6	+1.1
	0.5nm,0.3s,baz=225,slow=6.9,SNR=3.3						
SONM	Songino Array	25.86	324	P	P	08 12 59.4	+1.6
	1.4nm,0.6s,mb3.7,baz=145,slow=11,SNR=9.8						
SONM				pP	pP	08 13 29.0	+1.1
	2.0nm,0.9s,baz=130,slow=9.6,SNR=4.6						
GTA	Gaotai	26.13	302	eP	P	08 13 00.3	-0.1
GTA				AP	pP	08 13 32.5	+2.0
GTA				XP	sP	08 13 47.8	+0.4
MKAR	Makanchi Array	40.30	310	P	P	08 15 02.8	+0.3
	1.0nm,0.5s,mb3.7,baz=97,slow=9.7,SNR=12						
MKAR				pP	pP	08 15 35.2	+0.4
	0.9nm,0.7s,baz=96,slow=11,SNR=3.6						
MKAR	Makanchi Array	40.30	310	P	P	08 15 02.8	+0.3
MKAR				pP	pP	08 15 35.2	+0.4
WRAB	Tennant Creek	48.48	173	eP	P	08 16 08.2	0.0
	6.3nm,0.8s,mb4.3						
WRA	Warramunga Arr	48.49	173	P	P	08 16 08.1	-0.1
	3.4nm,0.6s,mb4.2,baz=353,slow=8.2,SNR=33						
BVAR	Borovoye Array	48.82	317	P	P	08 16 08.9	-1.4
	0.9nm,0.4s,mb3.7,baz=87,slow=8.9,SNR=7.1						
BVAR				pP	pP	08 16 43.6	+0.1
	3.2nm,0.8s,baz=90,slow=8.9,SNR=8.1						
STKA	Stephens Creek	61.31	167	P	P	08 17 38.1	-2.6
	2.8nm,0.7s,mb4.2,baz=349,slow=9.3,SNR=4.2						
ILAR	Eielson Array	62.28	29	P	P	08 17 45.6	-1.2
	0.4nm,0.6s,mb3.4,baz=290,slow=9.8,SNR=8.1						
FINES	FINESS Array B	71.05	330	P	P	08 18 40.5	-1.3
	0.6nm,0.5s,mb3.6,baz=90,slow=7.6,SNR=6.5						
GERES	GERESS Array B	83.59	323	P	P	08 19 51.7	+0.6
	0.4nm,0.2s,mb3.7,baz=45,slow=3.8,SNR=4.3						
PDAR	Pinedale Array	91.18	39	P	P	08 20 28.8	+1.0
	0.3nm,0.6s,mb3.5,slow=3.0,SNR=3.7						

ISC 15 08:27:21.7±0.8,37.87N±0.06×37.68E±0.07,h11^{km}±8^{km}, n7,σ0^{s}89/11,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GZT	Gaziantep	0.53	190	iP	Pg	08 27 31.9	-0.5
GZT				iS	Sg	08 27 40.0	+0.5
KAHT	Ahir Dag	0.68	250	iP	Pb	08 27 34.6	-0.5
KAHT				iS	Sg	08 27 45.4	+0.7
MYA	Malataya	0.74	52	PG	Pg	08 27 35.7	-0.9
MYA				SG	Sg	08 27 48.0	+1.4
GAZ	Gaziantep	0.79	208	PG	Pg	08 27 37.3	-0.4
URFA	Urfa	1.00	115	ePN	Pn	08 27 41.5	-0.1
ELZG	Elazig	1.20	58	iP	Pb	08 27 43.9	-0.1
COBT	Iskenderun	1.77	221	iP	Pn	08 27 51.0	-1.5
COBT				iS	Sn	08 28 16.5	+1.4

IDC 15 08:27:23.5±3.3,1.29N×97.44E,mb3.6/4,mb1 3.7/4, mb1mx3.6/16,mbtmp3.6/4,Error ellipse: s-maj=135.9km s-min=26.7km az=55.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	41.88	122	P	P	08 35 15.8	-1.7
	0.6nm,0.6s,baz=301,slow=9.1,SNR=12						
SONM	Songino Array	47.01	8	P	P	08 35 56.6	-1.8
	0.3nm,0.4s,baz=180,slow=10,SNR=4.2						
MKAR	Makanchi Array	47.21	346	P	P	08 35 58.6	-1.4
	0.7nm,0.5s,baz=159,slow=8.0,SNR=6.4						
BVAR	Borovoye Array	56.24	341	P	P	08 37 04.8	-3.1
	0.4nm,0.5s,baz=108,slow=9.1,SNR=4.2						

IDC 15 08:32:08.0±4.8,19.42S×68.40W,h168^{km}±52^{km}, mb1 3.2/4,mb1mx3.0/19,mbtmp3.7/4,Error ellipse: s-maj=71.1km s-min=38.7km az=77.0,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.12	5	P	P	08 32 58.1	-0.1
	1.7nm,0.3s,baz=190,slow=8.3,SNR=36						
LPAZ				S	S	08 33 37.9	+1.0
	0.8nm,0.3s,baz=220,slow=12,SNR=4.5						
SIV	San Ignacio	7.77	65	P	P	08 33 57.5	-1.6
	1.0nm,0.3s,baz=256,slow=11,SNR=49						
CPUP	Villa Florida	12.30	126	P	P	08 34 57.9	-0.5
	0.1nm,0.3s,baz=322,slow=12,SNR=4.2						
BDFB	Brasilia	19.79	82	P	P	08 36 26.0	-1.4
	0.7nm,0.3s,baz=264,slow=10,SNR=5.9						

IDC 15 08:33:03.4±4.0,29.90S×177.46W,h46^{km}±30^{km},mb4.3/4, mb1 4.5/4,mb1mx3.9/15,mbtmp4.5/4,Error ellipse: s-maj=46.3km s-min=20.1km az=150.0

NEIC 15 08:33:04.1±2.2,29.84S×177.50W,h57^{km}±17^{km},mb4.8/5, Error ellipse: s-maj=30.7km s-min=19.1km az=160.0

ISC 15 08:32:59.2±1.3,30.38S±0.08×177.5W±0.2,h33^{km},n29, σ1^{s}30/20,mb4.6/6,3C,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.18	341	P	P	08 33 17.8	-1.7
	761nm,0.3s,baz=94,slow=8.7,SNR=25						
RAO				LR	LR	08 33 29.1	
	comp=Z,2μm,18.6s,slow=34						
RAO				S	S	08 33 29.5	-5.2
	3μm,0.3s,baz=146,slow=22,SNR=21						
URZ	Urewera	9.04	208	P	P	08 35 07.5	-3.0
	0.6nm,0.3s,baz=256,slow=12,SNR=7.6						
URZ				S	S	08 36 51.9	-0.3
	5.5nm,0.3s,baz=232,slow=22,SNR=13						
MRZ	Mangatainoka R	11.71	207	SN	S	08 37 49.2	-8.3
TCW	Tory Channel	12.71	209	SN	S	08 38 13.3	-8.3
TUWZ	Tuamarina	13.03	210	SN	S	08 38 20.8	-8.5
NNZ	Nelson	13.11	212	SN	S	08 38 22.8	-8.4
MQZ	McQueen’s Vall	15.45	208	SN	Sx	08 39 13.1	
RPZ	Rata Peaks	16.13	211	P	P	08 36 46.1	+1.2
	0.8nm,0.3s,baz=344,slow=14,SNR=6.9						
DZM	Mont Dzumac	16.61	296	P	P	08 37 03.5	+12
	0.4nm,0.3s,baz=183,slow=23,SNR=7.5						
CTA	Charters Tower	34.24	279	eP	P	08 39 45.3	+1.2
	7.2nm,0.4s,mb5.0						
CTA	Charters Tower	34.24	279	P	P	08 39 45.5	+1.4
	7.7nm,0.4s,mb5.0,baz=98,slow=10,SNR=39						
CTAO	Charters Tower	34.24	279	eP	P	08 39 45.0	+0.8
	9.0nm,0.6s,mb4.9						
STKA	Stephens Creek	34.92	257	eP	P	08 39 51.6	+1.7
	2.4nm,0.4s,mb4.5						
STKA	Stephens Creek	34.92	257	P	P	08 39 51.9	+2.0
	3.2nm,0.4s,mb4.6,baz=99,slow=13,SNR=15						
WB2	Warramunga Arr	44.53	272	eP	P	08 41 09.6	-0.1
WRAB	Tennant Creek	44.54	272	eP	P	08 41 09.0	-0.8
	8.9nm,0.8s,mb4.7						
WRA	Warramunga Arr	44.54	272	P	P	08 41 09.8	0.0
	3.9nm,0.5s,mb4.5,baz=110,slow=8.0,SNR=58						
QSPA	South Pole Qui	59.73	180	eP	P	08 43 06.7	+4.1
	5.7nm,0.6s,mb4.8						
QSPA				e		08 43 13.3	
VNA3	Neumayer Olymp	78.30	176	⇑i	pP	08 45 08.0	+0.7
VNA2	Neumayer--Watz	78.74	177	⇑i	pP	08 45 10.1	+0.4
VNA1	Neumayer--Stat	78.97	176	⇑i	pP	08 45 12.2	+1.2
NVAR	Mina Array Bea	87.92	42	P	P	08 45 47.2	+0.5
	0.8nm,0.7s,mb4.1,baz=213,slow=8.3,SNR=5.1						
BVAR	Borovoye Array	126.70	316	PKP	PKPdf	08 52 00.4	+1.3
	0.8nm,0.5s,baz=45,slow=2.1,SNR=6.8						
KAF	Kangasniemi	144.67	341	epkp	PKPdf	08 52 30.5	-1.2
FINES	FINESS Array B	145.28	340	PKP	PKPdf	08 52 33.7	+0.9
	6.3nm,0.5s,baz=62,slow=3.5,SNR=60						
FINES	FINESS Array B	145.28	340	PKP	PKPdf	08 52 33.7	+0.9
NB2	NORSAR Subarra	148.79	352	PKPabc	PKPdf	08 52 42.4	+3.8
	1.0nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.79	352	PKPbc	PKPdf	08 52 43.2	+4.6
	0.8nm,0.5s,baz=11,slow=4.1,SNR=3.3						
NOA	NORSAR Array B	148.79	352	PKPbc	PKPdf	08 52 43.2	+4.6

GUC 15 08:56:55.3±0.7,32.70S×71.66W,h27^{km}±8^{km},MD3.5, ML2.2,1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	Papudo	0.25	50	⇓iP	Pb	08 57 01.8	0.0
PACH				iS	Sb	08 57 06.9	+0.7
ROCH	El Roble	0.61	117	iS	Sb	08 57 16.4	+0.8
JACH	Jahuel	0.90	89	iP	Pb	08 57 11.4	-0.8
JACH				iS	Sb	08 57 24.3	+0.4
TACH	Talagante	1.13	148	eP	Pn	08 57 15.2	-0.4
TACH				iS	Sn	08 57 29.7	-0.6
DSCH	Colegio Aleman	1.16	128	eP	Pn	08 57 15.8	-0.2
DSCH				iS	Sn	08 57 31.3	+0.4
DSCH				AMP		08 57 32.9	
	comp=N,122nm,0.1s						
CLCH	Cerro Calan	1.18	127	eP	Pn	08 57 15.9	-0.3
CLCH				iS	Sn	08 57 31.6	+0.2
CLCH				AMP		08 57 34.2	
	comp=E,66nm,0.4s						
PCH	Pirque	1.33	134	iP	Pn	08 57 18.7	+0.2
PCH				iS	Sn	08 57 36.7	+1.2

WEL 15 09:11:20.3±0.2,38.91S×175.58E,h134^{km}±1^{km},ML3.7/5, 4C,Error ellipse: s-maj=1.6km s-min=1.6km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATZ	Rangitukua	0.15	74	PN	P	09 11 38.4	-0.3
OTVZ	Oturere	0.26	165	PN	P	09 11 39.3	+0.5
OTVZ				SN	S	09 11 53.4	+0.3
FWVZ	Far West T-bar	0.34	184	PN	P	09 11 39.4	+0.2
FWVZ				SN	S	09 11 53.3	-0.3
TUVZ	Tukino	0.36	171	PN	P	09 11 39.5	+0.3
TUVZ				SN	S	09 11 53.0	-0.6
TRVZ	Turoa	0.39	184	PN	P	09 11 39.6	+0.2
TRVZ				SN	S	09 11 53.8	0.0
WNVZ	Wahianoa	0.42	178	PN	P	09 11 39.6	+0.1
PKVZ	Pokaka	0.42	206	⇑PN	P	09 11 39.4	-0.2
MTVZ	Mangateitei	0.48	190	PN	P	09 11 39.8	-0.1
MTVZ				SN	S	09 11 53.6	-1.1
MOVZ	Moawhango	0.51	165	⇑PN	P	09 11 39.8	-0.2
MOVZ				SN	S	09 11 53.5	-1.5
VRZ	Vera Road	0.68	251	⇑PN	P	09 11 40.6	-0.5
HIZ	Hauiti	0.69	305	⇑PN	P	09 11 40.9	-0.3
HIZ				SN	S	09 11 56.1	-1.0
BKZ	Black Stump Fm	0.76	110	PN	P	09 11 41.8	+0.2
BKZ				SN	S	09 11 56.9	-0.9
WAZ	Wanganui	0.96	208	PN	P	09 11 43.0	-0.4
RAEZ	Rainy Point	1.00	247	PN	P	09 11 43.1	-0.6
TSZ	Takapari Road	1.19	166	PN	P	09 11 45.4	-0.2
TSZ				SN	S	09 12 02.5	-2.3
NEZ	North Egmont	1.21	252	PN	P	09 11 45.4	-0.5
NRZ	Ngariki Road	1.35	251	PN	P	09 11 46.5	-0.9
URZ	Urewera	1.36	62	PN	P	09 11 46.9	-0.6
URZ				SN	S	09 12 06.9	-1.6
MWZ	Matawai	1.63	70	PN	P	09 11 50.4	-0.2
KNZ	Kokohu	1.64	95	PN	P	09 11 50.4	-0.2
MRZ	Mangatainoka R	1.75	180	PN	P	09 11 50.3	-1.6
MRZ				SN	S	09 12 11.8	-4.2
BFZ	Birch Farm	1.84	164	PN	P	09 11 51.8	-1.2
KIW	Kapiti Island	2.02	195	PN	P	09 11 52.9	-2.1
CAW	Cannon Point	2.23	190	PN	P	09 11 55.4	-2.4
MTW	Mount Morrison	2.25	182	PN	P	09 11 55.6	-2.4
DUWZ	D’Urville Isla	2.28	214	PN	P	09 11 55.8	-2.7
DUWZ				SN	S	09 12 24.1	-3.4
MRW	Makara Radio	2.41	196	PN	P	09 11 57.4	-2.8
PAWZ	Paruwai Farm	2.47	183	PN	P	09 11 58.1	-2.8
SNZO	South Karori	2.49	195	PN	P	09 11 58.2	-3.0
TCW	Tory Channel	2.51	203	PN	P	09 11 58.4	-3.0
MSWZ	Moikau Station	2.52	186	PN	P	09 11 58.7	-2.9
BHW	Baring Head	2.55	192	PN	P	09 11 59.0	-3.0
TUWZ	Tuamarina	2.81	206	PN	P	09 12 02.0	-3.4
NNZ	Nelson	2.86	216	PN	P	09 12 02.7	-3.3
QRZ	Quartz Range	3.03	230	PN	P	09 12 04.4	-3.8
THZ	Tophouse	3.51	215	PN	P	09 12 11.3	-3.3
KHZ	Kahutara	3.83	203	PN	P	09 12 14.6	-4.3
DSZ	Denniston Nort	4.04	224	SN	S	09 13 01.4	-7.4
LTZ	Lake Taylor	4.61	212	PN	P	09 12 24.2	-5.1
CRLZ	Canterbury Las	5.17	205	SN	S	09 13 24.9	-11
MQZ	McQueen’s Vall	5.28	204	PN	P	09 12 31.9	-6.2
RPZ	Rata Peaks	5.89	214	SN	S	09 13 41.5	-12
ODZ	Otahua Downs	7.15	209	ePN	P	09 12 57.2	-6.2

CSEM 15 09:32:45.4±0.9,35.09N×26.15E,h2^{km},ML3.0,Error ellipse: s-maj=36.9km s-min=6.5km az=55.0

ATH 15 09:32:46.1,35.50N×25.81E,h52^{km},MD3.1/3

HLW 15 09:32:49.1,35.18N×26.18E,h33^{km},Mb3.0

ISC 15 09:32:47.6±0.9,35.09N±0.06×26.0E±0.1,h33^{km},n9, σ1^{s}16/12,4C-1D,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	Neapolis	0.39	297	eP	P	09 32 55.5	-1.1
KARP	Karpathos	1.03	63	eP	P	09 33 06.2	+0.5

APE	Apeiranthos	2.02	348	eP	P	09 33 13.1	-6.8
ARG	Arkhangelos	2.04	56	eP	P	09 33 19.3	-0.9
SLUM		3.65	191	⇑P	P	09 33 44.9	+1.7
SLUM				S	S	09 34 25.5	-0.2
HMAT	Matruh	4.08	167	⇑P	P	09 33 50.2	+0.9
HMAT				S	S	09 34 34.8	-1.8
SWA1		5.81	183	⇑P	P	09 34 14.7	+1.0
SWA1				S	S	09 35 17.2	-3.0
SWA2		5.85	185	⇓P	P	09 34 15.1	+0.9
HFRF	Wahat Farafira	8.15	166	⇑P	P	09 34 46.4	0.0

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*CSEM **15** 09:33:17.9, 56.28N×13.06E, h13^{km}, ML3.5, Mining explosion. After UPP*

UPP 15 09:33:17.9, 56.28N×13.06E, h13^{km}, ML3.5, Mining explosion., Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLEU	Blekinge	1.54	88	P	Pn	09 33 45.5	+0.3
	baz=262						
BLEU				S	Sb	09 34 05.9	+0.8

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*IDC **15** 09:36:46.2±0.8, 12.53N×125.39E, mb4.0/10, mb1 4.2/10, mb1mx4.0/20, mbtmp4.0/10, MS3.4/2, Ms1 3.5/2, ms1mx3.3/25, Error ellipse: s-maj=39.9km s-min=15.6km az=70.0*

*MAN **15** 09:36:49.9, 12.57N×125.30E, h14^{km}, mb4.9, ML3.8, MS3.8*

*BJI **15** 09:36:53.8, 12.40N×125.30E, h57^{km}, mB4.7, mb4.4*

*NEIC **15** 09:36:53.9±5.9, 12.41N×125.28E, h58^{km}±56^{km}, mb4.4/4, Error ellipse: s-maj=31.2km s-min=8.9km az=65.0*

ISC 15 09:36:48.4±1.2**, 12.62N**±0.03×**125.48E**±0.05**, h27**^{km}±9^{km}**, n36, σ1^{s}11**/39**, mb4.1**/13**, MS3.2**/2**, 4C-3D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	0.80	262	eP	Pb	09 37 01.5	-2.2
BESP	Borongan	1.01	182	eP	Pb	09 37 08.4	+1.2
PLP	Palo	1.52	199	iP	Pn	09 37 14.9	+0.6
PLP				iS	Sn	09 37 33.9	+0.5
PVCP	Virac	1.61	307	eP	Pn	09 37 15.9	+0.4
MMPH	Masbate	1.83	262	⇓iP	Pn	09 37 19.0	+0.4
MMPH				iS	Sn	09 37 40.5	-0.6
LLP	Lapu-Lapu	2.73	213	⇑eP	Pn	09 37 32.3	+0.8
LLP				eS	Sn	09 38 04.5	+0.6
RCP	Roxas	2.87	249	⇑eP	Pn	09 37 33.5	0.0
GQP	Guinayangan	3.21	294	⇓iP	Pn	09 37 39.6	+1.2
GQP				eS	Sn	09 38 14.6	-1.7
TBP	Tagbilaran	3.31	209	eP	Pn	09 37 40.2	+0.4
OTRP	Odiongan	3.38	266	eP	Pn	09 37 40.6	-0.2
BOAC	Boac	3.64	284	eP	Pn	09 37 43.4	-1.0
SNPH	Sibulan	3.93	214	⇑eP	Pn	09 37 48.5	-0.1
SNPH				iS	Sn	09 38 35.8	+1.5
POLP	Polilio Island	4.03	302	eP	Pn	09 37 53.6	+3.6
CGP	Cagayan de Oro	4.21	191	eP	Pn	09 38 06.0	+13
BALP	Baler	4.89	310	eP	Pn	09 38 02.7	+0.5
PCPH	Palayan	5.16	305	⇓eP	Pn	09 38 05.5	-0.5
NBP	Mount Natib	5.35	294	eP	Pn	09 38 09.4	+0.7
CVP	Callao Caves	6.16	326	eP	Pn	09 38 20.0	-0.1
JNU	Nakatsue	21.00	13	LR	LR	09 48 35.6	
	comp=Z,129nm,21.8s,MS3.3,baz=359,slow=34						
KAKA	Kakadu	26.10	164	⇑iP	P	09 42 20.8	-1.3
	14nm,0.8s,mb4.5						
XAN	Xi'an	26.11	327	P	P	09 42 25.4	+3.4
CMAR	Chiang Mai Arr	26.20	286	P	P	09 42 21.8	-1.2
	0.9nm,0.6s,mb3.5,baz=91,slow=7.4,SNR=4.5						
CMAR				LR	LR	09 54 11.9	
	comp=Z,65nm,20.1s,MS3.2,baz=60,slow=40						
FITZ	Fitzroy Crossi	30.53	180	P	P	09 43 00.3	-1.7
	5.9nm,0.5s,mb4.7,baz=6.8,slow=7.6,SNR=17						
WRAB	Tennant Creek	33.51	165	eP	P	09 43 26.3	-1.8
	4.9nm,0.7s,mb4.5						
WRA	Warramunga Arr	33.51	165	P	P	09 43 26.4	-1.7
	1.8nm,0.6s,mb4.2,baz=344,slow=9.5,SNR=41						
WB2	Warramunga Arr	33.52	165	eP	P	09 43 26.6	-1.5
ULN	Ulaanbaatar	38.36	340	eP	P	09 44 12.3	+3.4
	4.8nm,0.9s,mb4.2						
SONM	Songino Array	38.56	339	P	P	09 44 11.9	+1.3
	1.7nm,0.9s,mb3.8,baz=153,slow=5.5,SNR=6.7						
STKA	Stephens Creek	46.86	161	eP	P	09 45 18.3	0.0
	4.6nm,1.1s,mb4.3						
STKA	Stephens Creek	46.86	161	P	P	09 45 18.6	+0.3
	2.4nm,0.6s,mb4.3,baz=335,slow=11,SNR=9.7						
MKAR	Makanchi Array	49.70	322	P	P	09 45 40.8	+0.6
	1.2nm,0.7s,mb4.1,baz=117,slow=8.1,SNR=10						
BVAR	Borovoye Array	59.30	325	P	P	09 46 49.8	-0.4
	1.1nm,0.7s,mb4.0,baz=127,slow=7.4,SNR=5.5						
ILAR	Eielson Array	77.68	26	P	P	09 48 44.5	+0.6
	0.5nm,0.7s,mb3.5,baz=253,slow=4.8,SNR=7.1						
ARCES	ARCESS Array B	81.73	340	P	P	09 49 07.1	+1.4
	1.8nm,0.8s,mb4.1,baz=80,slow=5.5,SNR=3.1						
FINES	FINESS Array B	83.47	332	P	P	09 49 14.8	0.0
	0.4nm,0.5s,mb3.7,baz=72,slow=6.0,SNR=6.6						
PLCA	Paso Flores	148.66	156	PKPbc	PKPdf	09 56 35.5	+1.1
	1.2nm,0.9s,baz=209,slow=7.7,SNR=4.3						

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*NEIC **15** 09:46:49.7±1.1, 19.93S×68.86W, h124^{km}±13^{km}, mb3.9/2, Error ellipse: s-maj=15.7km s-min=10.9km az=218.0*

*IDC **15** 09:46:49.9±2.8, 19.89S×68.88W, h125^{km}±30^{km}, mb3.2/3, mb1 3.6/6, mb1mx3.4/19, mbtmp3.9/6, Error ellipse: s-maj=35.3km s-min=18.7km az=69.0*

ISC 15 09:46:49.3±1.5**, 19.9S**±0.1×**68.9W**±0.1**, h136**^{km}±20^{km}**, n10, σ0^{s}64**/10**, mb3.1**/1**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.67	11	P	P	09 47 46.5	+0.9
	2.7nm,0.3s,baz=186,slow=9.1,SNR=72						
LPAZ				S	S	09 48 28.8	0.0
	0.5nm,0.3s,baz=209,slow=13,SNR=2.2						
ARE	Arequipa	4.24	323	eP	P	09 47 53.0	-0.3
ARE				eS	S	09 49 07.0	+24
SIV	San Ignacio	8.37	64	P	P	09 48 47.5	-1.2
	3.4nm,0.3s,baz=251,slow=14,SNR=115						
CPUP	Villa Florida	12.38	123	P	P	09 49 43.0	+1.2
	0.2nm,0.3s,baz=310,slow=16,SNR=4.5						
CPUP	Villa Florida	12.38	123	eP	P	09 49 41.9	+0.1
	13nm,1.4s						
BDFB	Brasilia	20.29	81	P	P	09 51 16.5	+0.3
	1.7nm,0.3s,baz=263,slow=12,SNR=3.6						
PLCA	Paso Flores	20.81	184	P	P	09 51 21.0	-0.3
	1.2nm,0.8s,baz=1.1,slow=12,SNR=4.3						
PLCA	Paso Flores	20.81	184	eP	P	09 51 20.8	-0.5
	1.8nm,0.9s						
NVAR	Mina Array Bea	74.28	322	P	P	09 58 13.6	+0.1
	0.3nm,0.7s,mb3.1,baz=169,slow=4.6,SNR=3.8						
WRA	Warramunga Arr	134.34	211	PKP	PKPdf	10 05 53.8	+1.9
	0.2nm,0.6s,baz=155,slow=1.7,SNR=6.1						

MAN 15 10:02:13.9, 12.60N×125.36E, h41^{km}, mb4.2, ML3.1, MS2.8, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	Palo	1.47	195	iP	P	10 02 38.4	0.0
PLP				eS	S	10 02 56.7	0.0
MMPH	Masbate	1.71	262	eP	P	10 02 42.0	+0.3
RCP	Roxas	2.75	248	⇑eP	P	10 02 56.9	+0.2

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*IDC **15** 10:07:04.1±1.6, 41.05N×126.33W, mb3.6/6, mb1 3.8/10, mb1mx3.7/27, mbtmp3.6/10, ML3.1/3, MS3.1/5, Ms1 3.0/5, ms1mx2.9/36, Error ellipse: s-maj=32.7km s-min=14.3km az=26.0*

*NEIC **15** 10:07:05.6±0.8, 41.06N×126.32W, h10^{km}, mb4.2/3, Error ellipse: s-maj=11.0km s-min=7.1km az=50.0*

ISC 15 10:07:04.3±1.0**, 41.06N**±0.08×**126.3W**±0.1**, h10**^{km}**, n38, σ1^{s}02**/37**, mb3.7**/7**, MS3.1**/1**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBO	Bosley Butte	1.92	52	eP	Pn	10 07 38.1	+0.7
KHMM	Horse Mountain	1.93	95	eP	Pn	10 07 37.2	-0.4
KEBM	Edson Butte	2.32	38	eP	Pn	10 07 43.4	+0.3
YBH	Yreka Blue Hor	2.76	75	Pn	Pn	10 07 51.1	+1.6
	18nm,0.3s,baz=269,slow=12,SNR=36						
WDC	Whiskeytown Da	2.87	98	eP	Pn	10 07 51.0	-0.1
HUMO	Hull Mountain	2.92	57	eP	Pn	10 07 52.5	+0.8
MOD	Modoc	4.56	77	eP	Pn	10 08 15.6	+0.5
BEKR	Beckwourth	4.67	103	eP	Pn	10 08 16.2	-0.4
CMB	Columbia Colle	5.46	122	eP	Pn	10 08 26.4	-1.4
WVOR	Wild Horse Val	5.87	74	eP	Pn	10 08 33.2	-0.3
	10nm,0.6s						
NVAR	Mina Array Bea	6.68	111	Pn	Pn	10 08 44.2	-0.7
	0.2nm,0.3s,baz=285,slow=13,SNR=5.6						
NVAR				LR	LR	10 11 34.5	
	comp=Z,85nm,18.9s,baz=285,slow=40						
NVAR	Mina Array Bea	6.68	111	Pn	Pn	10 08 44.2	-0.7
NVAR				LR	LR	10 11 34.5	
BMO	Blue Mountains	7.59	57	eP	Pn	10 08 57.9	+0.2
ELK	Elko	8.36	89	Pn	P	10 09 09.3	+0.8
	0.1nm,0.3s,baz=260,slow=11,SNR=5.3						
HLID	Hailey	9.13	70	eP	P	10 09 18.1	-1.1
NEW	Newport	9.71	39	LR	LR	10 13 27.6	
	comp=Z,120nm,19.2s,baz=212,slow=39						
MCMT	McKenzie Canyo	10.54	65	eP	P	10 09 38.5	+0.1
MSO	Missoula	10.59	53	P	P	10 09 37.1	-2.1
CHMT	Chamberlain Mo	11.05	54	P	P	10 09 43.7	-1.8
HRY	Holter Researc	11.85	57	eP	P	10 09 55.5	-0.8
PDAR	Pinedale Array	12.57	77	Pn	P	10 10 08.7	+2.7
	0.0nm,0.3s,baz=270,slow=12,SNR=5.5						
PV10	Paradox Valley	13.54	96	P	P	10 10 18.7	-0.1
PV01	Paradox Valley	13.96	96	P	P	10 10 25.0	+0.6
EDM	Edmonton	14.98	31	P	P	10 10 37.3	-0.3
LAO	LASA Array	15.50	62	P	P	10 10 45.0	+0.5
	16nm,0.9s						
ANMO	Albuquerque	16.75	105	Pn	P	10 11 06.0	+5.5
	baz=290,slow=12,SNR=4.6						
ANMO				LR	LR	10 18 07.1	
	comp=Z,73nm,21.5s,slow=40						
ANMO	Albuquerque	16.75	105	Pn	P	10 11 06.0	+5.4
ANMO				LR	LR	10 18 07.1	
DLBC	Dease Lake	17.56	353	P	P	10 11 14.3	+3.9
	0.1nm,0.3s,baz=183,slow=13,SNR=7.5						
DLBC				LR	LR	10 17 13.9	
	comp=Z,44nm,21.8s,baz=330,slow=35						
AMTX	Amarillo	20.31	100	P	P	10 11 41.9	-1.2
	3.1nm,0.5s						
FFC	Flin Flon	21.12	41	eP	P	10 11 49.7	-1.6
	16nm,1.3s,mb4.2						
TXAR	Lajitas Array	21.80	115	P	P	10 11 60.0	+1.7
	1.5nm,0.9s,mb3.4,baz=294,slow=8.3,SNR=13						
TXAR	Lajitas Array	21.80	115	P	P	10 11 60.0	+1.7
YKA	Yellowknife Ar	22.57	14	P	P	10 12 05.2	-0.4
	2.2nm,0.9s,mb3.6,baz=201,slow=10,SNR=6.0						
YKA	Yellowknife Ar	22.57	14	P	P	10 12 05.2	-0.4
ULM	Lac du Bonnet	23.01	56	P	P	10 12 11.9	+1.8
	3.8nm,0.8s,mb3.9,baz=257,slow=9.7,SNR=3.8						
ULM				LR	LR	10 21 41.7	
	comp=Z,66nm,20.1s,MS3.1,baz=244,slow=38						
ILAR	Eielson Array	26.55	340	P	P	10 12 43.6	-0.1
	1.2nm,1.0s,mb3.4,baz=158,slow=8.0,SNR=9.6						
SONM	Songino Array	79.95	327	P	P	10 19 14.6	-0.1
	0.3nm,0.4s,mb3.5,baz=56,slow=5.2,SNR=3.8						
BVAR	Borovoye Array	85.19	350	P	P	10 19 42.2	+0.7
	0.3nm,0.4s,mb3.8,baz=20,slow=4.1,SNR=3.6						

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*IDC **15** 10:07:43.3±0.6, 13.47N×92.81E, mb4.2/17, mb1 4.3/18, mb1mx4.3/22, mbtmp4.1/18, ML4.4/1, MS3.7/1, Ms1 3.9/1, ms1mx3.7/33, Error ellipse: s-maj=22.9km s-min=13.4km az=58.0*

*BJI **15** 10:07:47.8, 13.50N×92.90E, h30^{km}, mB4.8, mb4.6*

*NEIC **15** 10:07:47.8±0.5, 13.51N×92.87E, h30^{km}, mb4.5/10, Error ellipse: s-maj=14.6km s-min=9.4km az=58.0*

ISC 15 10:07:45.7±0.5**, 13.57N**±0.07×**92.87E**±0.06**, h30**^{km}**, n41, σ1^{s}35**/44**, mb4.2**/21**, 1D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.60	49	Pn	Pn	10 09 36.2	-1.1
	1.5nm,0.3s,baz=240,slow=14,SNR=25						
CMAR				Sn	Sn	10 10 58.6	-4.7
	2.6nm,0.3s,baz=242,slow=28,SNR=6.7						
CMAR				LR	LR	10 13 20.6	
	comp=Z,484nm,19.2s,baz=235,slow=44						
VIS	Vishakhapatnam	10.07	295	iP	P	10 10 09.1	-2.5
VIS				iS	S	10 11 52.3	-12
SHL	Shillong	11.98	356	eP	P	10 10 31.0	-6.5
SHL				eS	S	10 12 39.5	-12
BLSP	Bilaspur	13.30	311	ex	x	10 14 26.0	
HYB	Hyderabad	14.32	287	eP	P	10 11 16.0	+7.4
HYB				eS	S	10 13 46.0	-1.2
HYB	Hyderabad	14.32	287	iP	P	10 11 10.5	+1.9
HYB				eS	S	10 13 49.5	+2.3
PKI	Pulchoki	15.58	335	eP	P	10 11 24.8	-0.2
	40nm,0.7s						
GUN	Gumba	15.69	337	eP	P	10 11 23.2	-3.3
	35nm,0.7s						
DMN	Daman	15.74	334	eP	P	10 11 26.9	-0.2
	42nm,0.6s						
KKN	Kakani	15.83	335	eP	P	10 11 26.4	-1.8
	18nm,0.4s						
LSA	Lhasa	16.14	355	eP	P	10 11 35.9	+3.7
	11nm,0.6s						
GKN	Gorkha	16.29	333	eP	P	10 11 30.4	-3.6
	48nm,0.6s						
KOLN	Koldanda	16.57	330	eP	P	10 11 36.4	-1.2
	41nm,0.7s						
GYA	Guiyang	18.21	43	⇓iP	P	10 12 01.4	+3.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
POO	Poona	18.93	288	ex	x	10 12 20.0	
POO				iS	S	10 15 37.0	+3.6
ENH	Enshi	22.62	40	eP	P	10 12 45.7	+0.2
	comp=Z,24nm,0.9s,mb4.6						
LZH	Lanzhou	24.50	22	eP	P	10 13 08.8	+5.1
LZH				AP		10 13 12.1	
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
LZH				AMB	AMB		
	comp=Z,120nm,4.0s						
LZH	Lanzhou	24.50	22	eP	P	10 13 08.8	+5.1
	comp=Z,25nm,1.0s,mb4.6						
LZH				pP		10 13 12.1	
LZH				sP		10 13 13.6	
XAN	Xi'an	25.06	33	P	P	10 13 09.3	+0.3
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
GTA	Gaotai	26.46	12	eP	P	10 13 27.8	+5.7
GTA				AP	pP	10 13 38.8	+8.0
GTA				XP	sP	10 13 41.9	+7.1
MKAR	Makanchi Array	34.30	347	P	P	10 14 32.0	+0.6
	comp=Z,3.2nm,0.9s,mb4.2,baz=164,slow=8.8,SNR=13						
SONM	Songino Array	35.98	16	P	P	10 14 48.3	+2.5
	comp=Z,1.5nm,0.9s,mb3.9,baz=207,slow=8.3,SNR=8.1						
ZAL	Zalesovo	40.78	353	P	P	10 15 28.4	+2.6
	comp=Z,4.6nm,0.5s,mb4.4,baz=86,slow=22,SNR=15						
BVAR	Borovoye Array	43.24	340	P	P	10 15 48.5	+2.6
	comp=Z,0.6nm,0.5s,mb3.6,baz=153,slow=9.9,SNR=6.4						
FITZ	Fitzroy Crossi	45.11	133	P	P	10 16 01.0	-0.5
	comp=Z,8.0nm,0.8s,mb4.6,baz=336,slow=3.6,SNR=9.2						
MJAR	Matsushiro Arr	46.48	52	P	P	10 16 13.2	+1.1
	comp=Z,0.7nm,0.2s,mb4.2,baz=303,slow=43,SNR=3.3						
NWAO	Narrogin (SRO)	51.76	154	P	P	10 16 52.5	-0.4
	comp=Z,6.5nm,0.7s,mb4.7,baz=208,slow=14,SNR=8.6						
WRA	Warramunga Arr	52.66	128	P	P	10 16 59.1	-0.8
	comp=Z,3.1nm,0.4s,mb4.6,baz=300,slow=9.6,SNR=112						
WRA				PcP	PcP	10 18 09.8	+0.4
	comp=Z,0.5nm,0.4s,baz=324,slow=3.3,SNR=6.0						
WRAB	Tennant Creek	52.67	128	eP	P	10 16 58.5	-1.3
	comp=Z,12nm,0.8s,mb4.9						
BR131	Keskin Array S	57.86	308	eP	P	10 17 36.7	-0.4
	comp=Z,1.3nm,0.6s,mb4.1						
BRTR	Keskin Array B	57.86	308	P	P	10 17 36.8	-0.4
	comp=Z,1.9nm,0.8s,mb4.2,baz=131,slow=7.7,SNR=11						
AKASG	Malin Array Be	62.97	320	P	P	10 18 10.5	-1.4
	comp=Z,0.2nm,0.2s,mb3.8,baz=100,slow=3.6,SNR=4.3						
STKA	Stephens Creek	64.96	135	P	P	10 18 25.1	-0.1
	comp=Z,4.4nm,0.9s,mb4.5,baz=344,slow=11,SNR=3.9						
FINES	FINESS Array B	67.14	331	P	P	10 18 38.5	0.0
	comp=Z,0.5nm,0.4s,mb3.9,baz=104,slow=7.9,SNR=3.9						
ARCES	ARCESS Array B	69.53	340	P	P	10 18 53.4	+0.1
	comp=Z,2.7nm,0.9s,mb4.2,baz=76,slow=5.0,SNR=3.8						
GERES	GERESS Array B	72.80	317	P	P	10 19 14.0	+0.7
	comp=Z,1.4nm,0.7s,mb4.0,baz=90,slow=4.0,SNR=9.8						
NB2	NORSAR Subarra	74.20	330	P	P	10 19 21.3	+0.1
	comp=Z,0.6nm,0.8s,mb3.6,baz=91,slow=5.8						
NOA	NORSAR Array B	74.20	330	P	P	10 19 20.9	-0.3
	comp=Z,0.3nm,0.4s,mb3.6,baz=91,slow=5.4,SNR=2.6						
BOSA	Boshof	77.61	236	P	P	10 19 43.2	+2.0
	comp=Z,1.9nm,0.5s,mb4.3,baz=70,slow=21,SNR=6.4						
ILAR	Eielson Array	89.96	22	P	P	10 20 43.8	+0.7
	comp=Z,0.4nm,0.7s,mb3.9,baz=304,slow=3.5,SNR=4.6						
TXAR	Lajitas Array	134.46	20	PKP	PKPdf	10 27 06.0	-0.9
	comp=Z,0.1nm,0.6s,baz=146,slow=2.5,SNR=3.2						

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*ORF **15** 10:13:34.7, 14.43S×158.30E, h30^{km}, mb6.2*

*MOS **15** 10:13:54.1±1.0, 4.44S×153.14E, h33^{km}, mb6.0/49, MS5.8/20, Error ellipse: s-maj=7.8km s-min=5.5km az=94.0*

*IDC **15** 10:13:55.1±1.0, 4.54S×153.21E, h37^{km}±7^{km}, mb5.5/25, mb1 5.5/26, mb1mx5.5/26, mbtmp5.7/26, ML4.6/1, MS5.6/20, Ms1 5.6/20, ms1mx5.6/20, Error ellipse: s-maj=12.7km s-min=9.5km az=92.0*

*BJI **15** 10:13:56.9, 4.37S×153.50E, h74^{km}, mB6.4, mb6.0, Ms5.9, Msz5.8*

*CRAAG **15** 10:13:57.8, 4.56S×153.11E, Mw6.2*

*SVSA **15** 10:13:59.3, 4.60S×153.19E, h75^{km}, Mb5.7*

*NEIC **15** 10:13:59.4±0.1, 4.60S×153.19E, mb5.7/69, ME5.3, MW6.2, Error ellipse: s-maj=4.4km s-min=3.6km az=103.0 Broadband fault plane solution: P waves. NP1:ϕ_s95°, δ58°, λ90°. NP2:ϕ_s275°, δ32°, λ90°. Principal axes: T Plg77°, Azm5°; N Plg0°, Azm0°; P Plg13°, Azm185°; Moment Tensor Solution. s38 Moment tensor: Scale 10^{18} Nm; M$_{rr}$2.48; M$_{\theta\theta}$-2.15; M$_{\phi\phi}$-0.33; M$_{r\theta}$0.83; M$_{\theta\phi}$0.58; M$_{\phi r}$0.37; Best double couple: M$_0$2.6×10^{18} NP1:ϕ_s297°, δ38°, λ108°. NP2:ϕ_s94°, δ54°, λ76°. Principal axes: T 2.7, Plg76°, Azm320°; N -.28, Plg11°, Azm102°; P -2.42, Plg8°, Azm194°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*HRVD **15** 10:13:59.4±0.1, 4.80S×153.15E, h61^{km}, MW6.2/76, Centroid moment Tensor Solution. LP body waves: s73,c180;Mantle waves: s76,c230; Half duration: 3^{s}1 Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.94±.03; M$_{\theta\theta}$-2.41±.02; M$_{\phi\phi}$0.47±.02; M$_{r\theta}$1.09±.02; M$_{\theta\phi}$0.40±.02; M$_{\phi r}$0.59±.02; Best double couple: M$_0$2.558×10^{18} NP1: ϕ_s299°, δ37°, λ124°. NP2:ϕ_s79°, δ60°, λ67°. Principal axes: T 2.426, Plg66°, Azm306°; N .263, Plg20°, Azm90°; P -2.689, Plg13°, Azm185°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*BGS **15** 10:14:00.2, 4.60S×153.19E, h75^{km}*

ISC 15 10:13:57.8±0.1**, 4.60S**±0.02×**153.19E**±0.03**, h77**^{km}**, h77**^{km}±1.8^{km}**:pP-P, n869, σ0^{s}96**/344**, mb5.8**/119**, 124C-34D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.66	231	eP	P	10 15 47.9	-0.8
PMG				pmax	pmax		
	comp=Z,764nm,0.6s						
PMG	Port Moresby	7.66	231	Pn	P	10 15 47.9	-0.8
	comp=Z,18nm,0.3s,baz=52,slow=5.4,SNR=39						
PMG				Sn	S	10 17 13.9	-0.8
	comp=Z,142nm,0.3s,baz=131,slow=20,SNR=12						
PMG	Port Moresby	7.66	231	ePn	P	10 15 47.9	-0.8
	comp=Z,764nm,0.6s						
HNR	Honiara	8.25	126	P	P	10 15 57.0	+0.2
HNR						10 17 29.0	
HNR				pmax	pmax		
	comp=Z,68nm,0.3s						
HNR				smax			
	comp=E,100nm,0.3s						
HNR	Honiara	8.25	126	Pn	P	10 15 57.0	+0.2
	comp=E,68nm,0.3s,baz=236,slow=5.3,SNR=21						
HNR				Sn	S	10 17 29.0	-0.3
	comp=E,100nm,0.3s,baz=168,slow=3.3,SNR=3.5						
HNR	Honiara	8.25	126	ePn	P	10 15 56.6	-0.3
	comp=E,2µm,0.9s						
CTA	Charters Tower	16.81	203	Pn	P	10 17 49.2	-0.6
	comp=E,1.5nm,0.3s,baz=28,slow=13,SNR=49						
CTA				ScP		10 26 06.2	
	comp=E,0.1nm,0.3s,baz=45,slow=4.5,SNR=5.9						
CTA	Charters Tower	16.81	203	Pn	P	10 17 49.2	-0.6
CTA				ScP		10 26 06.2	
CTAO	Charters Tower	16.81	203	eP	P	10 17 49.1	-0.7
CTAO				pmax	pmax		
	comp=Z,523nm,1.4s						
CTAO	Charters Tower	16.81	203	eP	P	10 17 49.1	-0.7
	comp=Z,523nm,1.4s						
SAPN	Saipan	21.02	340	eP	P	10 18 38.5	+1.3
NOUC	Port Laguerre	21.55	145	eP	P	10 18 40.8	-1.7
DZM	Mont Dzumac	21.61	145	eP	P	10 18 41.7	-1.4
DZM	Mont Dzumac	21.61	145	P	P	10 18 41.9	-1.2
	comp=Z,431nm,1.0s,mb5.7,baz=351,slow=11,SNR=60						
DZM				ScP		10 26 17.2	
	comp=Z,41nm,1.1s,baz=64,slow=6.6,SNR=8.4						
DZM	Mont Dzumac	21.61	145	eP	P	10 18 41.7	-1.4
KAKA	Kakadu	22.02	247	eP	P	10 18 45.4	-1.9
	comp=Z,478nm,0.3s,mb6.3						
KAKA				eS	S	10 22 42.0	+1.7
SARN	Sarigan	22.39	341	⇑eP	P	10 18 51.3	+0.4
WRAB	Tennant Creek	23.85	229	eP	P	10 19 04.9	-0.2
WRAB				pmax	pmax		
	comp=Z,437nm,0.4s,mb6.1						
WRAB	Tennant Creek	23.85	229	eP	P	10 19 04.8	-0.2
	comp=Z,437nm,0.4s,mb6.1						
WB2	Warramunga Arr	23.86	229	⇑iP	P	10 19 04.8	-0.3
WB2				eS	S	10 23 19.2	+6.6
WB2				eSCP		10 26 23.9	
WB2				eSCS	ScS	10 30 08.7	+5.1
WRA	Warramunga Arr	23.87	229	P	P	10 19 05.0	-0.3
	comp=Z,116nm,0.6s,mb5.4,baz=52,slow=10.0,SNR=85						
WRA				S	S	10 23 20.0	+7.3
	comp=Z,52nm,0.9s,baz=47,slow=15,SNR=5.7						
WRA				ScP		10 26 22.3	
	comp=Z,44nm,0.9s,baz=46,slow=2.7,SNR=11						
RIV	Riverview	29.15	183	⇓iP	P	10 19 55.4	+1.5
STKA	Stephens Creek	29.24	200	⇑iP	P	10 19 52.6	-2.2
	comp=Z,67nm,0.7s,mb5.4						
STKA				eSCP		10 26 39.2	
STKA				eSCS	ScS	10 30 30.5	+3.9
STKA	Stephens Creek	29.24	200	P	P	10 19 53.4	-1.4
	comp=Z,88nm,0.7s,mb5.5,baz=20,slow=10,SNR=57						
STKA				ScP		10 26 39.6	
	comp=Z,64nm,1.1s,baz=348,slow=3.0,SNR=12						
STKA				LR	LR	10 31 13.5	
	comp=Z,27µm,20.9s,baz=14,slow=36						
DAV	Davao City (W)	29.89	293	eP	P	10 20 00.0	-0.8
FITZ	Fitzroy Crossi	30.10	241	⇑iP	P	10 20 00.2	-2.3
	comp=Z,425nm,0.6s,mb6.2						
FITZ	Fitzroy Crossi	30.10	241	P	P	10 20 00.3	-2.3
	comp=Z,304nm,0.4s,mb6.3,baz=55,slow=5.7,SNR=259						
FITZ				LR	LR	10 33 38.4	
	comp=Z,14µm,19.8s,baz=75,slow=39						
CNB	Canberra Magne	30.77	186	⇑iP	P	10 20 07.7	-0.6
	comp=Z,80nm,1.1s,mb5.4						
CNB				eS	S	10 25 08.4	+3.7
CNB				eSCP		10 26 44.4	
MSLP	Maasin	31.79	298	eP	P	10 20 17.6	+0.2
PLP	Palo	32.14	299	eP	P	10 20 20.2	-0.3
TBP	Tagbilaran	32.48	296	eP	P	10 20 23.3	-0.1
ADE	Adelaide	33.06	202	eP	P	10 20 27.9	-0.4
CBIJ	Chichi jima	33.25	342	P	P	10 20 27.2	-2.8
	comp=Z,427nm,0.7s,mb6.4,baz=177,slow=3.6,SNR=25						
CBIJ				LR	LR	10 33 50.2	
	comp=Z,2µm,18.1s,baz=172,slow=36						
TOO	Toolangi	33.57	191	eP	P	10 20 35.2	+2.6
	comp=Z,44nm,1.6s,mb5.0						
TOO				eSCP		10 26 53.8	
TOO	Toolangi	33.57	191	eP	P	10 20 35.2	+2.6
TOO				pmax	pmax		
	comp=Z,44nm,1.6s,mb5.0						
RCP	Roxas	34.27	298	⇓eP	P	10 20 39.6	+0.7
TSM	Tawau	36.37	284	P	P	10 20 57.0	+0.3
MBWA	Marble Bar	36.41	240	eP	P	10 20 55.0	-2.0
	comp=Z,0.3nm,1.0s						
PPR	Puerto Princes	37.18	293	⇑eP	P	10 21 05.7	+2.2
BATP	Bataraza	37.71	291	eP	P	10 21 08.6	+0.7
CVP	Callao Caves	38.07	306	⇑eP	P	10 21 11.0	+0.2
BCPH	Baguio City Da	38.39	304	⇓iP	P	10 21 14.8	+1.3
KKM	Kota Kinabalu	38.40	286	eP	P	10 21 12.8	-0.9
KKM				epP	pP	10 21 29.9	-2.5
KKM	Kota Kinabalu	38.40	286	P	P	10 21 13.4	-0.2
TAU	Tasmania Unive	38.51	187	eP	P	10 21 15.9	+1.7
TAU				pmax	pmax		
	comp=Z,182nm,1.1s,mb5.8						
TAU	Tasmania Unive	38.51	187	eP	P	10 21 15.9	+1.6
	comp=Z,182nm,1.1s,mb5.8						
HIZ	Hauiti	39.09	153	pP	pP	10 21 34.2	-3.7

JOW	**Kunigami**	**39.46**	**324**	P	**P**	**10 21 22.9**	**+0.6**
	comp=Z,867nm,0.8s,mb6.6						
JHJ	**Hachijo jima 2**	**39.60**	**342**	P	**P**	**10 21 20.5**	**-3.0**
	comp=Z,250nm,0.6s,mb6.2,baz=176,slow=9.7,SNR=5.7						
URZ	**Urewera**	**39.97**	**150**	P	**P**	**10 21 27.1**	**+0.7**
	comp=Z,15nm,0.3s,mb5.3,baz=12,slow=1.3,SNR=20						
URZ	**Urewera**	**39.97**	**150**	PN	**P**	**10 21 28.2**	**+1.8**
URZ				pP	pP	10 21 47.0	+1.8
QRZ	**Quartz Range**	**40.04**	**157**	PN	**P**	**10 21 27.9**	**+0.9**
QRZ				pP	pP	10 21 49.0	+3.3
NNZ	**Nelson**	**40.71**	**156**	PN	**P**	**10 21 32.6**	**+0.1**
KNZ	**Kokohu**	**40.84**	**150**	pP	pP	10 21 54.1	+1.8
THZ	**Tophouse**	**40.99**	**157**	PN	**P**	**10 21 34.9**	**+0.1**
THZ				pP	pP	10 21 55.4	+1.8
SNZO	**South Karori**	**41.33**	**155**	*e*P	**P**	**10 21 37.7**	**+0.1**
FOZ	**Fox Glacier**	**41.46**	**162**	PN	**P**	**10 21 39.2**	**+0.5**
LTZ	**Lake Taylor**	**41.63**	**159**	PN	**P**	**10 21 40.5**	**+0.4**
LTZ				pP	pP	10 22 01.7	+2.8
NACB	**Ninganchiao**	**42.00**	**314**	*e*P	**P**	**10 21 43.3**	**-0.1**
RPZ	**Rata Peaks**	**42.03**	**161**	PN	**P**	**10 21 43.2**	**-0.2**
LBZ	**Lake Benmore**	**42.36**	**162**	PN	**P**	**10 21 45.7**	**-0.3**
YHNB	**Yeheng**	**42.47**	**315**	*e*P	**P**	**10 21 47.9**	**+0.7**
MQZ	**McQueen’s Vall**	**42.58**	**159**	PN	**P**	**10 21 48.0**	**+0.2**
TATO	**Taipei**	**42.58**	**315**	*e*P	**P**	**10 21 49.0**	**+0.8**
	comp=Z,327nm,0.8s,mb6.1						
KLBR	**Kellerberrin**	**42.73**	**227**	*e*P	**P**	**10 21 48.3**	**-0.9**
	comp=Z,153nm,0.7s,mb5.8						
KLBR				*e*S	**S**	**10 28 06.2**	**-0.6**
JNU	**Nakatsue**	**43.06**	**332**	P	**P**	**10 21 51.8**	**-0.2**
	comp=Z,565nm,0.8s,mb6.3,baz=90,slow=4.1,SNR=221						
JNU				ScP		10 27 27.9	
	comp=Z,24nm,0.9s,baz=68,slow=8.3,SNR=7.4						
JNU				LR	LR	10 36 45.5	
	comp=Z,3µm,21.9s,baz=187,slow=32						
JNU	**Nakatsue**	**43.06**	**332**	P	**P**	**10 21 51.8**	**-0.2**
JNU				ScP		10 27 27.9	
JNU				LR	LR	10 36 45.5	
MIDW	**Midway**	**43.23**	**39**	P	**P**	**10 21 54.2**	**+0.9**
	comp=Z,392nm,1.4s,mb6.0						
MJAR	**Matsushiro Arr**	**43.25**	**342**	P	**P**	**10 21 51.4**	**-2.1**
	comp=Z,65nm,0.9s,mb5.3,baz=166,slow=8.4,SNR=62						
MJAR				PcP	PcP	10 23 42.0	+0.1
	comp=Z,54nm,0.8s,baz=159,slow=3.6,SNR=11						
MJAR				ScP		10 27 28.6	
	comp=Z,12nm,1.0s,baz=167,slow=4.6,SNR=6.0						
MJAR				LR	LR	10 38 13.7	
	comp=Z,5µm,20.8s,baz=170,slow=34						
MAJO	**Matsushiro**	**43.26**	**342**	*e*P	**P**	**10 21 51.4**	**-2.1**
MAJO				*e*		10 23 42.2	
MAJO				pmax	pmax		
	comp=Z,78nm,0.6s,mb5.6						
MAJO	**Matsushiro**	**43.26**	**342**	*e*P	**P**	**10 21 51.4**	**-2.1**
	comp=Z,78nm,0.6s,mb5.6						
MAJO				*e*PcP	PcP	10 23 42.2	+0.2
MAT	**Matsushiro**	**43.26**	**342**	*e*P	**P**	**10 21 52.0**	**-1.5**
MAT				pmax	pmax		
	comp=Z,114nm,1.1s,mb5.5						
MAT				MLR	MLR		
	comp=Z,12µm,22.0s						
MAT	**Matsushiro**	**43.26**	**342**	*e*P	**P**	**10 21 52.0**	**-1.5**
	comp=Z,114nm,1.1s,mb5.5						
MAT				*e*S	**S**	**10 28 04.0**	**-10**
MAT				LR	LR		
	comp=Z,12µm,22.0s						
MAT	**Matsushiro**	**43.26**	**342**	P	**P**	**10 21 51.9**	**-1.6**
MAT				S	**S**	**10 28 16.0**	**+1.6**
KSM	**Kuching**	**43.27**	**277**	*e*P	**P**	**10 21 53.0**	**-0.9**
KSM				*e*ScP		10 27 28.8	
TUZ	**Tuapeka**	**43.62**	**163**	PN	**P**	**10 21 56.3**	**0.0**
TUZ				pP	pP	10 22 16.0	+0.9
NWAO	**Narrogin (SRO)**	**43.80**	**226**	P	**P**	**10 21 58.8**	**+0.8**
NWAO				pmax	pmax		
	comp=Z,33nm,0.7s						
NWAO	**Narrogin (SRO)**	**43.80**	**226**	P	**P**	**10 21 58.1**	**+0.1**
	comp=Z,30nm,0.5s,mb5.3,baz=58,slow=5.9,SNR=17						
NWAO				LR	LR	10 40 03.6	
	comp=Z,12µm,21.6s,baz=50,slow=36						
NWAO	**Narrogin (SRO)**	**43.80**	**226**	*e*P	**P**	**10 21 56.6**	**-1.4**
	comp=Z,32nm,0.6s,mb5.2						
QZH	**Quanzhou**	**44.64**	**313**	⇑*i*P	**P**	**10 22 05.8**	**+1.0**
QZH				S	**S**	**10 28 33.0**	**-1.6**
QZH				AMB	AMB		
	comp=Z,570nm,0.9s,mb6.3						
QZH				AMB	AMB		
	comp=Z,4µm,8.1s						
QZH				LR	LR		
	comp=N,9µm,12.6s						
QZH				LR	LR		
	comp=E,7µm,11.5s						
QZH				LR	LR		
	comp=Z,32µm,29.5s						
SSE	**Sheshan**	**46.82**	**321**	⇑P	**P**	**10 22 22.1**	**+0.1**
SSE				AP	pP	10 22 41.3	+0.3
SSE				XP	sP	10 22 52.5	+2.8
SSE				PCP	PcP	10 23 54.5	+0.2
SSE				PP	PP	10 24 11.4	-1.3
SSE				S	**S**	**10 29 08.8**	**+3.1**
SSE				XS		10 29 41.8	
SSE				AMB	AMB		
	comp=Z,190nm,1.0s,mb5.8						
SSE				AMB	AMB		
	comp=Z,2µm,9.5s						
SSE				LR	LR		
	comp=N,5µm,32.6s						
SSE				LR	LR		
	comp=E,6µm,32.7s						
SSE				LR	LR		
	comp=Z,10µm,30.8s						
SSE	**Sheshan**	**46.82**	**321**	⇑P	**P**	**10 22 22.1**	**+0.1**
	comp=Z,196nm,1.0s,mb5.8						
SSE				pP	pP	10 22 41.3	+0.3
SSE				sP	sP	10 22 52.5	+2.8
SSE				PcP	PcP	10 23 54.5	+0.2
SSE				PP	PP	10 24 11.4	-1.3
SSE				S	**S**	**10 29 08.7**	**+3.0**
SSE				sS		10 29 41.8	
SSE				SS	SS	10 32 39.3	+13
SSE				LR	LR		
	comp=Z,10µm,30.8s						
GZH	**Guangzhou**	**47.64**	**307**	P	**P**	**10 22 29.8**	**+1.3**
GZH				S	**S**	**10 29 21.6**	**+4.3**
GZH				LR	LR		
	comp=N,4µm,22.7s						
GZH				LR	LR		
	comp=E,9µm,23.0s						
GZH				LR	LR		
	comp=Z,16µm,23.6s						
KS15	**Wonju Array Si**	**48.00**	**333**	*e*P	**P**	**10 22 30.9**	**-0.3**
KS15				*e*ScP		10 27 49.0	
INCN	**Inchon**	**48.62**	**332**	*e*P	**P**	**10 22 35.8**	**-0.1**
	comp=Z,870nm,0.8s,mb6.7						
QIZ	**Qiongzhong**	**48.70**	**300**	⇑*i*P	**P**	**10 22 38.1**	**+1.4**
QIZ				AP	pP	10 22 57.0	+1.2
QIZ				XP	sP	10 23 05.6	+1.1
QIZ				PP	PP	10 24 26.6	-3.7
QIZ				S	**S**	**10 29 33.5**	**+1.3**
QIZ				XS		10 30 05.9	
QIZ				AMB	AMB		
	comp=Z,110nm,0.9s,mb5.8						
QIZ				AMB	AMB		
	comp=Z,3µm,13.4s						
QIZ				LR	LR		
	comp=N,5µm,22.2s						
QIZ				LR	LR		
	comp=E,10µm,21.2s						
QIZ				LR	LR		
	comp=Z,16µm,22.6s						
QIZ	**Qiongzhong**	**48.70**	**300**	*e*P	**P**	**10 22 37.1**	**+0.3**
	comp=Z,90nm,0.8s,mb5.8						
YUK	**Yuzh-Kuril’sk**	**48.85**	**353**	*e*P	**P**	**10 22 37.0**	**-0.6**
YUK				*i* S	ScS	10 32 26.0	+6.6
YUK				pmax	pmax		
	comp=Z,170nm,0.5s,mb6.2						
YUK				pmax	pmax		
	comp=N,150nm,0.4s						
YUK				pmax	pmax		
	comp=N,4µm,4.0s						
YUK				pmax	pmax		
	comp=Z,3µm,4.0s						
YUK				smax			
	comp=N,4µm,3.5s						
YUK				smax			
	comp=E,5µm,3.5s						
NJ2	**Nanjing**	**48.93**	**321**	*e*P	**P**	**10 22 39.8**	**+1.4**
NJ2				AP	pP	10 22 58.3	+0.8
NJ2				XP	sP	10 23 07.5	+1.4
NJ2				PP	PP	10 24 35.3	+2.8
NJ2				S	**S**	**10 29 34.0**	**-1.3**
NJ2				XS		10 30 08.0	
NJ2				AMB	AMB		
	comp=Z,300nm,1.3s,mb6.1						
NJ2				AMB	AMB		
	comp=Z,6µm,11.5s						
NJ2				LR	LR		
	comp=N,21µm,24.1s						
NJ2				LR	LR		
	comp=E,17µm,24.4s						
NJ2				LR	LR		
	comp=Z,58µm,24.4s						
ASAJ	**Asahikawa**	**49.42**	**350**	P	**P**	**10 22 41.8**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,191nm,0.7s						
ASAJ	**Asahikawa**	**49.42**	**350**	P	**P**	**10 22 41.8**	**-0.2**
	comp=Z,191nm,0.7s,mb6.1,baz=225,slow=8.6,SNR=189						
KGM	**Kluang**	**50.26**	**276**	P	**P**	**10 22 48.9**	**+0.1**
WHN	**Wuhan**	**50.98**	**316**	⇑P	**P**	**10 22 54.0**	**-0.1**
WHN				XP	sP	10 23 18.0	-3.9
WHN				S	**S**	**10 30 07.0**	**+3.4**
WHN				LR	LR		
	comp=Z,34µm,33.1s						
YSS	**Yuzh-Sakhalins**	**52.15**	**351**	α*i*P	**P**	**10 23 02.0**	**-0.6**
YSS				*e*		10 23 07.8	
YSS				*e*		10 23 15.9	
YSS				*i*		10 24 14.3	
YSS				*e*		10 24 58.0	
YSS				*e*S	**S**	**10 30 14.0**	**-5.5**
YSS				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.9						
YSS				pmax	pmax		
	comp=N,50nm,0.8s						
YSS				MLR	MLR		
	comp=Z,2µm,18.0s						
YSS	**Yuzh-Sakhalins**	**52.15**	**351**	*e*P	**P**	**10 23 01.7**	**-0.9**
	comp=Z,115nm,0.8s,mb6.0						
YSS				*e*PcP	PcP	10 24 14.6	+1.1
DL2	**Dalian**	**52.20**	**329**	⇑*i*P	**P**	**10 23 02.9**	**-0.2**
DL2				AP	pP	10 23 18.8	-3.6
DL2				XP	sP	10 23 27.1	-3.9
DL2				PCP	PcP	10 24 14.8	+1.0
DL2				PP	PP	10 25 03.0	+0.1
DL2				SCP		10 28 06.6	
DL2				AMB	AMB		
	comp=Z,140nm,0.8s,mb6.0						
DL2				AMB	AMB		
	comp=Z,1µm,7.5s						
DL2				LR	LR		
	comp=N,2µm,30.2s						
DL2				LR	LR		
	comp=E,3µm,27.7s						
DL2				LR	LR		
	comp=Z,6µm,30.8s						
TIA	**Tai’an**	**52.78**	**323**	⇑P	**P**	**10 23 06.8**	**-0.7**
TIA				S	**S**	**10 30 32.8**	**+4.6**
TIA				AMB	AMB		
	comp=Z,150nm,0.8s,mb6.1						
TIA				AMB	AMB		
	comp=Z,2µm,6.0s						
TIA				LR	LR		
	comp=E,3µm,16.0s						
TIA				LR	LR		
	comp=N,3µm,27.9s						
TIA				LR	LR		
	comp=E,2µm,27.0s						
IPM	**Ipoh**	**52.90**	**279**	P	**P**	**10 23 08.2**	**-0.6**
MDJ	**Mudanjiang**	**53.37**	**339**	P	**P**	**10 23 11.1**	**-0.7**
MDJ				AP	pP	10 23 28.9	-2.3
MDJ				PCP	PcP	10 24 18.3	+0.2
MDJ				PP	PP	10 25 11.9	-2.2
MDJ				SCP		10 28 08.9	
MDJ				PCS		10 28 16.6	
MDJ				S	**S**	**10 30 36.4**	**+0.3**
MDJ				XS		10 31 09.4	
MDJ				AMB	AMB		
	comp=Z,260nm,1.0s,mb6.2						
MDJ				LR	LR		
	comp=N,3µm,33.2s						
MDJ				LR	LR		
	comp=E,5µm,36.9s						
MDJ				LR	LR		
	comp=Z,8µm,31.4s						
MDJ	**Mudanjiang**	**53.37**	**339**	*e*P	**P**	**10 23 10.9**	**-0.8**
	comp=Z,228nm,0.8s,mb6.3						
KULM	**Kulim**	**53.38**	**280**	*e*P	**P**	**10 23 10.3**	**-2.0**
SNY	**Shenyang**	**53.50**	**333**	⇑P	**P**	**10 23 11.3**	**-1.5**
SNY				AP	pP	10 23 27.5	-4.7
SNY				XP	sP	10 23 37.0	-3.8
SNY				PP	PP	10 25 11.3	-4.1
SNY				S	**S**	**10 30 43.1**	**+5.2**
SNY				XS		10 31 13.8	
SNY				AMB	AMB		
	comp=Z,70nm,3.4s						
SNY				LR	LR		
	comp=N,5µm,18.1s						
SNY				LR	LR		
	comp=Z,8µm,27.4s						
SNG	**Songkhla**	**53.75**	**282**	P	**P**	**10 23 14.0**	**-1.0**
	comp=Z,484nm,0.9s,mb6.5						
CN2	**Changchun**	**54.27**	**335**	*e*P	**P**	**10 23 17.5**	**-0.9**
CN2				*e*AP	pP	10 23 36.8	-1.0
CN2				PCP	PcP	10 24 20.8	-0.7
CN2				PP	PP	10 25 24.6	+2.3
CN2				*e*S	**S**	**10 30 45.8**	**-2.5**
CN2				AMB	AMB		
	comp=Z,220nm,0.9s,mb6.2						
CN2				AMB	AMB		
	comp=Z,2µm,6.0s						
CN2				LR	LR		
	comp=N,6µm,23.0s						
CN2				LR	LR		
	comp=E,3µm,23.0s						
CN2				LR	LR		
	comp=Z,13µm,29.0s						
ENH	**Enshi**	**54.30**	**313**	*e*P	**P**	**10 23 18.1**	**-0.6**
	comp=Z,276nm,1.0s,mb6.2						
ENH				*e*ScP		10 28 17.1	
KIP	**Kipapa**	**54.34**	**60**	P	**P**	**10 23 19.7**	**+0.5**
KIP				pmax	pmax		
	comp=Z,520nm,1.3s,mb6.4						
KIP	**Kipapa**	**54.34**	**60**	*e*P	**P**	**10 23 19.2**	**0.0**
	comp=Z,523nm,1.4s,mb6.4						
GYA	**Guiyang**	**54.58**	**307**	⇑*i*P	**P**	**10 23 21.0**	**+0.1**
GYA				AP	pP	10 23 40.3	0.0
GYA				XP	sP	10 23 48.8	-0.2
GYA				PP	PP	10 25 23.8	-1.5
GYA				S	**S**	**10 30 54.6**	**+1.9**
GYA				AMB	AMB		
	comp=Z,120nm,0.8s,mb6.0						
GYA				AMB	AMB		
	comp=Z,2µm,10.8s						
GYA				LR	LR		
	comp=N,5µm,23.0s						
GYA				LR	LR		
	comp=E,9µm,23.2s						
GYA				LR	LR		
	comp=Z,10µm,23.0s						
SKR	**Severo-Kuril’s**	**55.12**	**2**	*e*P	**P**	**10 23 20.9**	**-3.5**
SKR				*e*		10 25 34.0	
SKR				*e*PPP	PPP	10 26 37.0	-7.1
SKR				*e*		10 31 01.2	
SKR				*e*		10 33 00.0	
SKR				*e*SS	SS	10 34 40.0	-4.2
SKR				pmax	pmax		
	comp=N,90nm,1.0s						
SKR				pmax	pmax		
	comp=Z,270nm,1.0s,mb6.2						
SKR				pmax	pmax		
	comp=Z,3µm,12.0s						
SKR				pmax	pmax		
	comp=N,3µm,10.0s						
SKR				pmax	pmax		
	comp=E,3µm,10.0s						
SKR				pmax	pmax		
	comp=E,3µm,12.0s						
SKR				pmax	pmax		
	comp=N,5µm,14.0s						
SKR				MLR	MLR		
	comp=Z,6µm,16.0s						
SKR				MLR	MLR		
	comp=N,4µm,18.0s						
SKR				MLR	MLR		
	comp=E,4µm,18.0s						
HKL	**Haleakala**	**55.60**	**61**	P	**P**	**10 23 30.0**	**+1.7**
HKL	**Haleakala**	**55.60**	**61**	*e*P	**P**	**10 23 29.7**	**+1.4**
NNT	**Nongplab**	**55.79**	**288**	P	**P**	**10 23 30.6**	**+0.9**
XAN	**Xi’an**	**56.74**	**316**	P	**P**	**10 23 35.1**	**-1.2**
XAN				AP	pP	10 23 54.1	-1.8
XAN				S	**S**	**10 31 19.6**	**-1.7**
XAN				AMB	AMB		
	comp=Z,210nm,0.8s,mb6.2						
XAN				AMB	AMB		
	comp=Z,2µm,14.2s						
XAN				LR	LR		
	comp=N,2µm,21.9s						
XAN				LR	LR		
	comp=E,4µm,20.8s						
XAN				LR	LR		
	comp=Z,7µm,22.3s						
KLR	**Kul’dur**	**56.76**	**343**	⇓*i*P	**P**	**10 23 32.0**	**-4.2**
KLR				*e*S	**S**	**10 31 40.0**	**+19**
KLR				pmax	pmax		
	comp=N,72nm,1.0s						
KLR				pmax	pmax		
	comp=E,64nm,1.0s						
KLR				pmax	pmax		
	comp=Z,180nm,1.0s,mb6.1						
KLR				pmax	pmax		
	comp=N,1µm,9.0s						
KLR				pmax	pmax		
	comp=E,600nm,9.0s						
KLR				pmax	pmax		
	comp=Z,2µm,9.0s						
KLR				MLR	MLR		
	comp=N,2µm,19.0s						
KLR				MLR	MLR		
	comp=E,2µm,19.0s						
KMI	**Kunming**	**57.19**	**304**	⇑P	**P**	**10 23 40.3**	**+0.7**
KMI				AP	pP	10 24 02.3	+3.0
KMI				XP	sP	10 24 09.5	+1.5
KMI				PP	PP	10 25 51.3	+2.5
KMI				S	**S**	**10 31 29.3**	**+1.9**
KMI				PS	PS	10 31 52.3	+0.3
KMI				XS		10 32 04.3	
KMI				SS	SS	10 35 21.9	+3.1
KMI				AMB	AMB		
	comp=Z,80nm,1.1s,mb5.7						
KMI				AMB	AMB		
	comp=Z,2µm,7.8s						
KMI				LR	LR		
	comp=N,5µm,25.4s						
KMI				LR	LR		
	comp=E,7µm,23.8s						
KMI				LR	LR		
	comp=Z,13µm,28.5s						
KMI	**Kunming**	**57.19**	**304**	⇑P	**P**	**10 23 40.2**	**+0.6**
KMI						10 25 51.3	
KMI				S	**S**	**10 31 29.2**	**+1.8**
KMI				PS	PS	10 31 52.3	+0.3
KMI				SS	SS	10 35 21.9	+3.1
KMI				pmax	pmax		
	comp=Z,87nm,1.1s,mb5.7						
KMI				MLR	MLR		
	comp=Z,13µm,28.5s						
KMI	**Kunming**	**57.19**	**304**	⇑P	**P**	**10 23 40.2**	**+0.6**
	comp=Z,87nm,1.1s,mb5.7						
KMI				pP	pP	10 24 02.3	+3.0
KMI				sP	sP	10 24 09.5	+1.5
KMI				PP	PP	10 25 51.3	+2.5
KMI				S	**S**	**10 31 29.2**	**+1.8**
KMI				PS	PS	10 31 52.3	+0.3
KMI				sS		10 32 04.3	
KMI				SS	SS	10 35 21.9	+3.1
KMI				LR	LR		
	comp=Z,13µm,28.5s						
PPT	**Papeete**	**57.42**	**108**	P	**P**	**10 23 41.2**	**-0.1**
	comp=Z,30nm,0.5s,mb5.5,baz=220,slow=4.6,SNR=4.0						
PPT				LR	LR	10 45 40.1	
	comp=Z,3µm,18.7s,baz=271,slow=33						
PET	**Petropavlovsk**	**57.59**	**4**	P	**P**	**10 23 41.8**	**-0.2**
PET				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.7						
PET	**Petropavlovsk**	**57.59**	**4**	*e*P	**P**	**10 23 41.6**	**-0.4**
	comp=Z,64nm,0.8s,mb5.7						
CMAR	**Chiang Mai Arr**	**58.14**	**295**	P	**P**	**10 23 46.4**	**+0.1**
	comp=Z,130nm,0.8s,mb6.0,baz=117,slow=5.3,SNR=282						
CMAR				PKP2bc		10 53 40.4	
	comp=Z,1.7nm,0.8s,baz=288,slow=3.8,SNR=4.5						
CMAR	**Chiang Mai Arr**	**58.14**	**295**	P	**P**	**10 23 46.4**	**+0.1**
CMAR				⇑*e*		10 53 40.4	
CHTO	**Chiang Mai**	**58.25**	**295**	P	**P**	**10 23 46.9**	**-0.2**
CHTO				P’P’ab		10 54 25.6	
TBI	**Tubuai**	**58.29**	**115**	*e*P	**P**	**10 23 39.8**	**-7.5**
	comp=Z,1µm,27.8s						
TBI				*e*S	**S**	**10 31 36.7**	**-5.0**
	comp=Z,3µm,29.5s						
TBI				*e*LQ		10 38 32.0	
	comp=Z,21µm,33.5s						
TBI				*e*LR	LR	10 42 18.0	
	comp=Z,27µm,33.8s,baz=279						
CD2	**Chengdu**	**58.90**	**310**	P	**P**	**10 23 51.3**	**-0.1**
CD2				AP	pP	10 24 11.6	+0.4
CD2				PPP	PPP	10 27 15.3	-13
CD2				S	**S**	**10 31 45.8**	**-3.8**
CD2				AMB	AMB		
	comp=Z,540nm,0.7s,mb6.7						
CD2				AMB	AMB		
	comp=Z,4µm,6.5s						
CD2				LR	LR		
	comp=E,8µm,25.2s						
CD2				LR	LR		
	comp=Z,12µm,26.4s						
HHC	**Hu-ho-hao-te**	**59.11**	**324**	*e*P	**P**	**10 23 52.1**	**-0.6**
HHC				AP	pP	10 24 10.4	-2.1
HHC				XP	sP	10 24 19.3	-1.9
HHC				PP	PP	10 26 08.4	+2.5
HHC				S	**S**	**10 31 48.5**	**-3.6**
HHC				PS	PS	10 32 13.5	-4.8
HHC				XS		10 32 25.5	
HHC				SCS	ScS	10 33 33.3	+1.6
HHC				SS	SS	10 35 43.6	-5.5
HHC				AMB	AMB		
	comp=Z,60nm,2.1s,mb5.3						
HHC				LR	LR		
	comp=N,4µm,21.4s						
HHC				LR	LR		
	comp=E,5µm,28.5s						
HHC				LR	LR		
	comp=Z,10µm,28.6s						
FX1	**Attu Island--F**	**59.70**	**14**	*e*P	**P**	**10 23 56.4**	**-0.3**
BTO	**Baotou**	**59.87**	**323**	*e*P	**P**	**10 23 58.8**	**+0.8**
BTO				AMB	AMB		
	comp=Z,80nm,0.5s,mb6.0						
HIA	**Hailar**	**61.01**	**336**	*e*P	**P**	**10 24 04.6**	**-1.0**
HIA				pmax	pmax		
	comp=Z,121nm,1.0s						
HIA	**Hailar**	**61.01**	**336**	*e*P	**P**	**10 24 04.6**	**-1.0**
	comp=Z,121nm,1.0s,mb5.9						
LZH	**Lanzhou**	**61.35**	**316**	⇑*i*P	**P**	**10 24 08.6**	**+0.5**
LZH				AP	pP	10 24 28.5	+0.5
LZH				XP	sP	10 24 39.0	+2.3
LZH				PP	PP	10 26 27.0	+0.8
LZH				S	**S**	**10 32 23.0**	**+2.0**
LZH				XS		10 32 57.0	
LZH				SS	SS	10 36 25.0	+0.8
LZH				AMB	AMB		
	comp=Z,320nm,1.5s,mb6.1						
LZH				AMB	AMB		
	comp=Z,1µm,4.0s						
LZH				LR	LR		
	comp=E,9µm,18.6s						
LZH				LR	LR		
	comp=Z,14µm,19.8s						
LZH	**Lanzhou**	**61.35**	**316**	⇑*i*P	**P**	**10 24 08.6**	**+0.5**
LZH						10 26 27.0	
LZH				S	**S**	**10 32 23.0**	**+2.0**
LZH				*SS		10 32 57.0	
LZH				SS	SS	10 36 25.0	+0.8
LZH				pmax	pmax		
	comp=Z,320nm,1.5s,mb6.1						
LZH				MLR	MLR		
	comp=Z,14µm,19.8s						
LZH	**Lanzhou**	**61.35**	**316**	⇑*i*P	**P**	**10 24 08.6**	**+0.5**
	comp=Z,320nm,1.5s,mb6.1						
LZH				pP	pP	10 24 28.5	+0.5
LZH				sP	sP	10 24 39.0	+2.3
LZH				PP	PP	10 26 27.0	+0.8

LZH				S	**S**	**10 32 23.0**	**+2.0**
LZH				sS		10 32 57.0	
LZH				SS	SS	10 36 25.0	+0.8
LZH				LR	LR		
	comp=Z,14µm,19.8s						
KIWB	**Kanaga Island**	**61.65**	**20**	*e*P	**P**	**10 24 09.9**	**0.0**
DRV	**Dumont d’Urvil**	**62.64**	**186**	P	**P**	**10 24 29.0**	**+13**
DRV				S	**S**	**10 32 38.0**	**+1.3**
MA2	**Magadan**	**64.00**	**359***c*	*e*P	**P**	**10 24 25.0**	**-0.3**
MA2				*e*		10 32 54.4	
MA2				pmax	pmax		
	comp=Z,200nm,0.8s,mb6.0						
IMP	**Imphal**	**64.53**	**300**	*i* P	**P**	**10 24 29.0**	**-0.4**
IMP				*e*x	x	10 25 00.0	
CLNS	**Chul’man**	**65.42**	**343**	*e*P	**P**	**10 24 34.8**	**+0.2**
CLNS				*e*		10 25 08.7	
CLNS				*e*		10 26 53.2	
CLNS				*e*S	S	10 33 12.5	+1.2
CLNS				pmax	pmax		
	comp=Z,195nm,0.7s,mb6.0						
CLNS				pmax	pmax		
	comp=N,92nm,0.8s						
CLNS				pmax	pmax		
	comp=E,42nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.1						
CLNS				pmax	pmax		
	comp=N,33nm,0.9s						
CLNS				pmax	pmax		
	comp=E,19nm,0.7s						
CLNS				smax			
	comp=N,716nm,17.6s						
CLNS				smax			
	comp=Z,1µm,13.3s						
CLNS				smax			
	comp=E,136nm,14.8s						
NIKO	**Nikolski**	**65.67**	**24**	*e*P	**P**	**10 24 35.3**	**-0.9**
CIT	**Chita**	**65.68**	**334**	*e*P	**P**	**10 24 36.1**	**-0.2**
CIT				*e*		10 25 01.5	
CIT				*e*S	S	10 33 24.6	+10
CIT				pmax	pmax		
	comp=Z,415nm,2.9s,mb5.8						
GTA	**Gaotai**	**65.77**	**317**⇑	*i*P	**P**	**10 24 37.8**	**+0.7**
GTA				PCP	PcP	10 25 10.6	+3.1
GTA				PP	PP	10 27 02.0	-2.9
GTA				PCS		10 29 13.8	
GTA				S	S	10 33 16.8	+0.9
GTA				PS	PS	10 33 43.3	-5.2
GTA				SCS	ScS	10 34 26.3	+4.3
GTA				SS	SS	10 37 31.8	-1.3
GTA				AMB	AMB		
	comp=Z,250nm,1.1s,mb6.0						
GTA				AMB	AMB		
	comp=Z,2µm,9.6s						
GTA				LR	LR		
	comp=N,4µm,20.6s						
GTA				LR	LR		
	comp=E,4µm,26.8s						
GTA				LR	LR		
	comp=Z,9µm,26.0s						
ULN	**Ulaanbaatar**	**66.03**	**328**	P	**P**	**10 24 38.8**	**+0.2**
ULN	**Ulaanbaatar**	**66.03**	**328**⇑	*i*P	**P**	**10 24 38.6**	**0.0**
ULN				pmax	pmax		
	comp=Z,124nm,0.9s,mb5.7						
ULN	**Ulaanbaatar**	**66.03**	**328**⇑	*i*P	**P**	**10 24 38.6**	**0.0**
	comp=Z,124nm,0.9s,mb5.7						
SONM	**Songino Array**	**66.36**	**328**	P	**P**	**10 24 40.7**	**0.0**
	comp=Z,32nm,0.5s,mb5.4,baz=138,slow=5.9,SNR=171						
SONM				PcP	PcP	10 25 10.1	+0.3
	comp=Z,88nm,0.8s,baz=144,slow=3.8,SNR=11						
SONM				LR	LR	10 50 42.2	
	comp=Z,5µm,21.1s,baz=132,slow=33						
SONM				PKP2bc		10 53 15.5	
	comp=Z,1.7nm,0.9s,baz=333,slow=2.8,SNR=6.6						
SONM	**Songino Array**	**66.36**	**328**	P	**P**	**10 24 40.7**	**0.0**
SONM				PcP	PcP	10 25 10.1	+0.3
SONM				LR	LR	10 50 42.1	
SONM			⇑	*e*		10 53 15.5	
SHL	**Shillong**	**66.54**	**300**	*i* P	**P**	**10 24 41.5**	**-0.7**
SHL				*e*S	S	10 33 28.5	+3.1
UNV	**Unalaska Valle**	**67.28**	**25**	*e*P	**P**	**10 24 45.4**	**-0.9**
	comp=Z,280nm,1.0s,mb6.0						
SEY	**Seymchan**	**67.34**	**360**	*i* P	**P**	**10 24 46.7**	**+0.1**
SEY					pP	10 25 11.0	+4.2
SEY						10 27 14.0	
SEY				*e*PPP	PPP	10 28 51.7	-3.1
SEY				*e*S	S	10 33 33.9	-0.6
SEY				*e*PS	PS	10 33 59.2	-10
SEY						10 34 37.2	
SEY				SSS	SSS	10 40 50.1	-6.1
SEY				pmax	pmax		
	comp=E,20nm,0.8s						
SEY				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.3						
SEY				pmax	pmax		
	comp=N,30nm,0.7s						
SEY				smax			
	comp=N,310nm,5.1s						
SEY				smax			
	comp=E,480nm,6.5s						
SEY				MLR	MLR		
	comp=Z,3µm,16.0s						
SEY				MLR	MLR		
	comp=N,2µm,20.0s						
SEY				MLR	MLR		
	comp=E,1µm,17.0s						
CASY	**Casey**	**68.32**	**197**	*e*P	**P**	**10 24 52.5**	**-0.1**
LSA	**Lhasa**	**68.44**	**304**	P	**P**	**10 24 54.4**	**+0.4**
LSA				PCP	PcP	10 25 23.0	+4.1
LSA				SCS	ScS	10 34 47.4	+4.5
LSA				AMB	AMB		
	comp=Z,120nm,0.8s,mb5.8						
LSA				LR	LR		
	comp=N,2µm,25.2s						
LSA				LR	LR		
	comp=E,7µm,27.1s						
LSA				LR	LR		
	comp=Z,9µm,25.6s						
LSA	**Lhasa**	**68.44**	**304**⇑	*e*P	**P**	**10 24 54.8**	**+0.8**
LSA				pmax	pmax		
	comp=Z,91nm,0.8s,mb5.7						
LSA	**Lhasa**	**68.44**	**304**⇑	*e*P	**P**	**10 24 54.8**	**+0.7**
	comp=Z,91nm,0.8s,mb5.7						
YAK	**Yakutsk**	**68.85**	**348***c*	*i*P	**P**	**10 24 55.5**	**-0.5**
YAK				*e**PP	pP	10 25 04.5	-12
YAK				*e*	pP	10 25 13.1	-3.2
YAK				*i* S	S	10 33 55.4	+2.9
YAK				pmax	pmax		
	comp=Z,98nm,1.1s,mb5.5						
YAK				pmax	pmax		
	comp=N,42nm,1.2s						
YAK				pmax	pmax		
	comp=E,22nm,1.1s						
YAK				pmax	pmax		
	comp=N,11nm,0.9s						
YAK				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=E,8.0nm,0.8s						
YAK				smax			
	comp=E,471nm,20.0s						
YAK				smax			
	comp=Z,319nm,19.0s						
YAK				smax			
	comp=N,445nm,18.0s						
YAK	**Yakutsk**	**68.85**	**348**⇑	*i*P	**P**	**10 24 55.4**	**-0.6**
	comp=N,119nm,0.8s,mb5.8						
BOD	**Bodaibo**	**69.74**	**339**	*e*P	**P**	**10 25 01.5**	**0.0**
BOD				pmax	pmax		
	comp=Z,93nm,1.0s,mb5.6						
TLY	**Talaya**	**70.10**	**330***c*	*i*P	**P**	**10 25 03.3**	**-0.5**
TLY				*e*	pP	10 25 20.9	-3.2
TLY				*e*	pP	10 25 25.6	+1.5
TLY				*e*		10 27 36.0	
TLY				*e*S	S	10 34 08.3	+1.0
TLY				*e*PS	PS	10 34 39.3	-5.8
TLY				*e*		10 34 48.9	
TLY				pmax	pmax		
	comp=Z,61nm,1.1s,mb5.3						
TLY	**Talaya**	**70.10**	**330**⇑	*i*P	**P**	**10 25 03.5**	**-0.3**
	comp=Z,78nm,1.6s,mb5.3						
IRK	**Irkutsk**	**70.12**	**330**	*e*P	**P**	**10 25 03.1**	**-0.8**
IRK				*e*	pP	10 25 23.2	-1.1
IRK				*e*S	S	10 34 14.9	+7.3
IRK				pmax	pmax		
	comp=Z,77nm,3.0s						
SDPT	**Sand Point**	**70.87**	**26**	*e*P	**P**	**10 25 07.4**	**-0.9**
	comp=Z,108nm,0.6s,mb5.8						
BOK	**Bokaro**	**71.31**	**297**	*e*P	**P**	**10 25 12.6**	**+1.1**
BOK				AMb	AMB	10 25 15.8	
	comp=Z,98nm,1.3s,mb5.5						
MOY	**Mondy**	**71.44**	**329**	*e*P	**P**	**10 25 11.8**	**0.0**
MOY				pmax	pmax		
	comp=Z,270nm,3.6s						
GUN	**Gumba**	**72.35**	**301**	*e*P	**P**	**10 25 18.1**	**+0.5**
	comp=Z,283nm,0.5s,mb6.3						
VIS	**Vishakhapatnam**	**72.36**	**290**	*e*P	**P**	**10 25 18.6**	**+0.7**
VIS				AMb	AMB	10 25 20.7	
	comp=Z,175nm,0.7s,mb6.0						
PKI	**Pulchoki**	**72.66**	**301**	*e*P	**P**	**10 25 19.6**	**0.0**
	comp=Z,124nm,0.6s,mb6.0						
PKI	**Pulchoki**	**72.66**	**301**	*e*P	**P**	**10 25 19.6**	**0.0**
PKI				pmax	pmax		
	comp=Z,62nm,0.6s,mb5.6						
KKN	**Kakani**	**72.83**	**301**	*e*P	**P**	**10 25 20.6**	**+0.1**
	comp=Z,232nm,0.7s,mb6.1						
KKN	**Kakani**	**72.83**	**301**	*e*P	**P**	**10 25 20.6**	**+0.1**
KKN				pmax	pmax		
	comp=Z,116nm,0.7s,mb5.8						
DMN	**Daman**	**72.93**	**301**	*e*P	**P**	**10 25 21.5**	**+0.4**
	comp=Z,445nm,0.9s,mb6.3						
VNDA	**Vanda**	**73.02**	**178**	P	**P**	**10 25 20.9**	**+0.3**
	comp=Z,29nm,0.6s,mb5.3,baz=331,slow=6.4,SNR=61						
VNDA				LR	LR	10 56 22.7	
	comp=Z,3µm,19.5s,baz=356,slow=35						
VNDA	**Vanda**	**73.02**	**178**	*e*P	**P**	**10 25 20.4**	**-0.3**
	comp=Z,186nm,1.2s,mb5.8						
BILL	**Bilibino**	**73.05**	**5**	αP	**P**	**10 25 18.5**	**-2.5**
BILL				*i*		10 25 31.1	
BILL				*e*	pP	10 25 42.0	+0.5
BILL				*e*		10 28 02.7	
BILL				*i* S	S	10 34 42.2	+1.4
BILL				*e*		10 35 34.9	
BILL				pmax	pmax		
	comp=Z,1µm,3.5s						
BILL				pmax	pmax		
	comp=Z,92nm,0.8s,mb5.7						
BILL	**Bilibino**	**73.05**	**5**⇑	*i*P	**P**	**10 25 20.5**	**-0.5**
	comp=Z,100nm,0.6s,mb5.8						
PALK	**Pallekele**	**73.29**	**279**⇑	*i*P	**P**	**10 25 23.9**	**+0.4**
	comp=Z,91nm,0.8s,mb5.7						
GKN	**Gorkha**	**73.43**	**301**	*e*P	**P**	**10 25 24.1**	**0.0**
	comp=Z,344nm,0.8s,mb6.2						
SBA	**Scott Base**	**73.56**	**177**	*e*P	**P**	**10 25 25.1**	**+1.2**
SBA				pmax	pmax		
	comp=Z,132nm,1.2s,mb5.5						
SBA	**Scott Base**	**73.56**	**177**	*e*P	**P**	**10 25 25.1**	**+1.2**
	comp=Z,132nm,1.2s,mb5.5						
MIR	**Mirnyy**	**74.25**	**201***c*	*i*P	**P**	**10 25 28.0**	**-0.1**
MIR				*e*S	S	10 34 55.0	+0.8
MIR				pmax	pmax		
	comp=Z,2µm,8.8s						
MIR				smax			
	comp=E,5µm,10.0s						
MIR				smax			
	comp=N,1µm,9.0s						
KOLN	**Koldanda**	**74.27**	**300**	*e*P	**P**	**10 25 28.8**	**-0.2**
	comp=N,139nm,0.6s,mb5.8						
BLSP	**Bilaspur**	**74.32**	**294**	AMb	AMB	10 25 32.6	
	comp=Z,171nm,1.1s,mb5.7						
TNA	**Tin City**	**75.50**	**16**	*e*P	**P**	**10 25 34.6**	**-0.6**
	comp=Z,17nm,0.9s,mb4.8						
KDAK	**Kodiak Island**	**75.82**	**27**	*e*P	**P**	**10 25 37.2**	**0.0**
WMQ	**Urumqi**	**75.85**	**317**	P	**P**	**10 25 38.5**	**+0.8**
WMQ				PCP	PcP	10 25 51.1	+0.9
WMQ				AP	pP	10 25 58.6	+0.3
WMQ				XP	sP	10 26 07.1	+0.5
WMQ				PP	PP	10 28 31.4	+1.0
WMQ				S	S	10 35 13.1	+0.7
WMQ				SCS	ScS	10 35 42.4	+0.8
WMQ				SS	SS	10 40 09.1	+0.3
WMQ				AMB	AMB		
	comp=Z,260nm,1.2s,mb5.8						
WMQ				AMB	AMB		
	comp=Z,4µm,4.7s						
WMQ				LR	LR		
	comp=N,5µm,24.0s						
SVW2	**Sparrevohn**	**76.49**	**23**	*e*P	**P**	**10 25 41.6**	**+0.7**
HYB	**Hyderabad**	**76.79**	**289**⇑	*e*P	**P**	**10 25 42.5**	**-1.0**
HYB				*e*S	S	10 35 52.0	+29
HYB				pmax	pmax		
	comp=Z,290nm,1.0s,mb6.0						
HYB	**Hyderabad**	**76.79**	**289**⇑	*e*P	**P**	**10 25 42.5**	**-1.0**
	comp=Z,290nm,1.0s,mb6.0						
HYB				*e*S	S	10 35 52.0	+29
HYB	**Hyderabad**	**76.79**	**289**⇑	*i*P	**P**	**10 25 42.5**	**-1.0**
	comp=Z,290nm,1.0s,mb6.0						
HYB				*e*S	S	10 35 24.0	+0.9
HYB				LR	LR	10 51 36.0	
	comp=Z,7.0nm,28.0s						
TRD	**Trivandrum**	**77.11**	**280**	*e*P	**P**	**10 25 46.3**	**+1.0**
TRD				AMb	AMB	10 25 48.1	
	comp=Z,298nm,0.8s,mb6.1						
RSO	**Redoubt South**	**77.24**	**24**	*e*P	**P**	**10 25 44.5**	**-0.7**
TTA	**Tatalina**	**77.44**	**21**	*e*P	**P**	**10 25 46.5**	**+0.3**
LGTI	**Lohaghat**	**77.52**	**301**	*i* P	**P**	**10 25 49.3**	**+2.0**
PTH	**Pithoragarh**	**77.57**	**301**	*e*P	**P**	**10 25 49.2**	**+1.6**
PTH				*e*x	x	10 27 01.6	
TIXI	**Tiksi**	**77.75**	**352**	*e*P	**P**	**10 25 44.3**	**-3.4**
TIXI				*e**PP	pP	10 26 04.5	-3.9
TIXI				*e*		10 28 40.3	
TIXI				*e*S	S	10 35 28.5	-3.9
TIXI				*e**SS		10 36 01.1	
TIXI				*e*		10 36 21.6	
TIXI				*e*		10 36 31.8	
TIXI				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.2						
TIXI	**Tiksi**	**77.75**	**352**⇑	*i*P	**P**	**10 25 47.3**	**-0.4**
SPU	**Mount Spurr**	**77.93**	**24**	*e*P	**P**	**10 25 47.4**	**-1.5**
SLKM	**Skilak Lake**	**78.32**	**25**	P	**P**	**10 25 51.1**	**0.0**
SLKM	**Skilak Lake**	**78.32**	**25**	*e*P	**P**	**10 25 50.8**	**-0.3**
FIB	**Fire Island**	**78.69**	**24**	P	**P**	**10 25 54.3**	**+1.2**
FIB	**Fire Island**	**78.69**	**24**	*e*P	**P**	**10 25 53.2**	**+0.2**
BHPL	**Bhopal**	**78.80**	**295**	*e*P	**P**	**10 25 54.4**	**0.0**
BHPL				AMb	AMB	10 25 57.8	
	comp=Z,182nm,1.2s,mb5.8						
PWA	**Palmer West**	**79.07**	**24**	*e*P	**P**	**10 25 54.7**	**-0.4**
PWA				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.3						
PWA	**Palmer West**	**79.07**	**24**	*e*P	**P**	**10 25 54.7**	**-0.4**
	comp=Z,43nm,0.9s,mb5.3						
MNGI	**Mangalore**	**79.73**	**284**	*i* P	**P**	**10 26 00.7**	**+1.1**
MNGI				*i* x	x	10 36 00.6	
SML	**Sawmill**	**79.78**	**24**	*e*P	**P**	**10 25 58.5**	**-0.5**
SML	**Sawmill**	**79.78**	**24**	*e*P	**P**	**10 25 58.2**	**-0.8**
NDI	**New Delhi**	**79.96**	**300**	*e*P	**P**	**10 25 59.0**	**-1.7**
NDI				*e*x	x	10 35 56.0	
IMA	**Indian Mountai**	**80.14**	**19**	*e*P	**P**	**10 26 01.5**	**+0.7**
IMA				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.2						
IMA	**Indian Mountai**	**80.14**	**19**	*e*P	**P**	**10 26 01.5**	**+0.7**
	comp=Z,31nm,0.8s,mb5.2						
DGAR	**Diego Garcia**	**80.25**	**263**	*i* P	**P**	**10 26 02.0**	**-0.5**
EYAK	**Cordova Ski Ar**	**80.26**	**26**	*e*P	**P**	**10 26 01.2**	**-0.4**
MKAR	**Makanchi Array**	**80.43**	**319**	*i* P	**P**	**10 26 03.2**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,136nm,0.7s						
MKAR	**Makanchi Array**	**80.43**	**319**	P	**P**	**10 26 03.1**	**+0.4**
	comp=Z,159nm,0.8s,mb5.9,baz=100,slow=7.1,SNR=714						
MKAR				PKPPKP		10 52 55.2	
	comp=Z,0.6nm,0.7s,baz=270,slow=3.6,SNR=3.8						
MKAR				LR	LR	11 00 49.8	
	comp=Z,3µm,21.3s,baz=152,slow=35						
MKAR	**Makanchi Array**	**80.43**	**319**	P	**P**	**10 26 03.1**	**+0.4**
MKAR				P’P’		10 52 55.2	
MKAR				LR	LR	11 00 49.8	
SMLA	**Simla**	**80.47**	**302**	*i* P	**P**	**10 26 01.7**	**-1.7**
DIV	**Divide**	**80.52**	**26**⇑	*e*P	**P**	**10 26 02.3**	**-0.6**
	comp=Z,147nm,0.8s,mb5.9						
SDNR	**Sundarnagar**	**80.71**	**303**	*e*P	**P**	**10 26 04.6**	**0.0**
KAD	**Karad**	**80.90**	**288**	*e*P	**P**	**10 26 05.1**	**-0.7**
KAD				AMb	AMB	10 26 07.3	
	comp=Z,347nm,0.7s,mb6.3						
MNCY	**Minicoy**	**80.95**	**279**	*e*x	x	10 26 10.0	
MNCY				*e*x	x	10 27 03.0	
GOA	**Goa**	**81.01**	**286**	*e*P	**P**	**10 26 04.0**	**-2.4**
ZAL	**Zalesovo**	**81.21**	**326**	P	**P**	**10 26 07.3**	**+0.6**
	comp=Z,29nm,0.6s,mb5.3,baz=4.6,slow=5.9,SNR=69						
ZAL				LR	LR	11 00 53.1	
	comp=Z,5µm,21.7s,baz=351,slow=35						
ZAL	**Zalesovo**	**81.21**	**326**	P	**P**	**10 26 07.3**	**+0.6**
ZAL				LR	LR	11 00 53.1	
POO	**Poona**	**81.38**	**289**	*e*P	**P**	**10 26 08.1**	**-0.2**
POO				AMb	AMB	10 26 09.8	
	comp=Z,216nm,0.8s,mb6.0						
POO				*i* S	S	10 36 16.0	+4.4
THY	**Trims Highway**	**81.61**	**23**	*e*P	**P**	**10 26 09.0**	**+0.4**
PONG	**Pong**	**81.65**	**303**	*e*P	**P**	**10 26 09.0**	**-0.5**
ILAR	**Eielson Array**	**81.83**	**22**	P	**P**	**10 26 08.0**	**-1.7**
	comp=Z,28nm,0.7s,mb5.2,baz=249,slow=5.4,SNR=258						
ILAR				PKKP	PKKP	10 44 41.4	+23
	comp=Z,2.6nm,0.7s,baz=1.1,slow=1.5,SNR=24						
ILAR				PKPPKP		10 52 52.6	
	comp=Z,0.9nm,0.9s,baz=346,slow=1.6,SNR=4.3						
ILAR				LR	LR	10 59 08.5	
	comp=Z,2µm,21.6s,baz=250,slow=33						
AJM	**Ajmer**	**81.83**	**297**	*i* P	**P**	**10 26 11.0**	**+0.5**
THN	**Thein Dam**	**81.93**	**304**	*e*P	**P**	**10 26 10.0**	**-0.9**
MENT	**Mentasta**	**82.21**	**24**	*e*P	**P**	**10 26 12.6**	**+0.9**
NVS	**Novosibirsk**	**82.37**	**327**	*e*P	**P**	**10 26 11.6**	**-1.1**
NVS				*e*		10 29 24.7	
NVS				*e*S	S	10 36 23.5	+2.5
NVS				pmax	pmax		
	comp=N,116nm,1.7s						
NVS				pmax	pmax		
	comp=E,236nm,1.7s						
NVS				pmax	pmax		
	comp=Z,368nm,1.7s,mb5.9						
NVS				smax			
	comp=N,111nm,2.2s						
NVS				smax			
	comp=E,237nm,2.9s						
BOM	**Bombay**	**82.41**	**290**	*e*P	**P**	**10 26 13.5**	**-0.1**
BOM				*e*x	x	10 36 15.3	
KSH	**Kashi**	**83.10**	**311**⇑	*i*P	**P**	**10 26 18.1**	**+1.4**
KSH				*e*AP	pP	10 26 38.3	+0.7
KSH				*e*XP	sP	10 26 46.5	+0.5
KSH				*e*PP	PP	10 29 31.0	+0.9
KSH				PPP	PPP	10 31 24.1	+0.1
KSH				*e*SKS	SKS	10 36 29.3	+1.8
KSH				*e*S	S	10 36 31.4	+2.8
KSH				XS		10 37 04.0	
KSH				*e*PS	PS	10 37 32.3	+0.7
KSH				SS	SS	10 41 58.1	+0.9
KSH				AMB	AMB		
	comp=Z,7µm,4.4s						
KSH				LR	LR		
	comp=N,4µm,18.4s						
KSH				LR	LR		
	comp=E,2µm,13.6s						
AAA	**Alma-Ata**	**83.18**	**314**	*i* P	**P**	**10 26 18.0**	**+0.9**
AAA				*i* S	S	10 36 34.0	+4.7
AAA				pmax	pmax		
	comp=Z,2µm,8.0s						
AAA				smax			
	comp=E,2µm,10.0s						
AAA				MLR	MLR		
	comp=Z,2µm,20.0s						
BHV	**Bhavnagar**	**83.40**	**292**	*e*P	**P**	**10 26 19.0**	**+0.4**
ULHL	**Ulahol**	**83.46**	**313**	P	**P**	**10 26 20.4**	**+1.9**
	SNR=15						
SIT	**Sitka**	**83.90**	**31**	*e*P	**P**	**10 26 20.5**	**+0.1**
SIT				pmax	pmax		
	comp=Z,77nm,1.3s,mb5.4						
SIT	**Sitka**	**83.90**	**31**	*e*P	**P**	**10 26 20.5**	**+0.1**
	comp=Z,77nm,1.3s,mb5.4						
TKM2	**Tokmak 2**	**84.07**	**314**	P	**P**	**10 26 22.8**	**+1.2**
	SNR=421						
KZA	**Kyzart**	**84.15**	**313**	P	**P**	**10 26 24.4**	**+2.4**
	SNR=643						
KBK	**Karagaybulak**	**84.48**	**313**	P	**P**	**10 26 25.0**	**+1.4**
	SNR=253						
CHMS	**Chumysh**	**84.69**	**314**	P	**P**	**10 26 25.6**	**+0.9**
	SNR=420						
UCH	**Uchtor**	**84.72**	**313**	P	**P**	**10 26 27.1**	**+2.2**
	SNR=674						
FRU	**Bishkek**	**84.76**	**314**⇑	*i*P	**P**	**10 26 26.2**	**+1.2**
FRU				*e*		10 36 45.0	
FRU				pmax	pmax		
	comp=Z,960nm,2.0s,mb6.4						
AAK	**Ala-Archa**	**84.81**	**313**	P	**P**	**10 26 26.5**	**+1.2**
	SNR=373						
AAK	**Ala-Archa**	**84.81**	**313**	P	**P**	**10 26 26.6**	**+1.3**
AAK				pmax	pmax		
	comp=Z,507nm,0.8s,mb6.5						
AAK	**Ala-Archa**	**84.81**	**313**	*e*P	**P**	**10 26 25.5**	**+0.2**
	comp=Z,533nm,0.7s,mb6.6						
USP	**Ospenovka**	**84.92**	**314**	P	**P**	**10 26 26.8**	**+0.9**
	SNR=1038						
AML	**Almayashu**	**85.30**	**313**	P	**P**	**10 26 29.6**	**+1.9**
	SNR=1373						
EKS2	**Erkin-Say**	**85.33**	**313**	P	**P**	**10 26 29.4**	**+1.5**
	SNR=672						
QSPA	**South Pole Qui**	**85.36**	**180**	*e*P	**P**	**10 26 28.2**	**+1.0**
	comp=Z,179nm,1.0s,mb6.0						
MAW	**Mawson**	**85.91**	**203**	*e*P	**P**	**10 26 30.1**	**0.0**
	comp=Z,34nm,0.9s,mb5.3						
MAW				*e*SKS	SKS	10 36 49.6	+3.8
MAW	**Mawson**	**85.91**	**203**	*e*P	**P**	**10 26 30.1**	**0.0**
MAW				*e*		10 36 49.6	
MAW				pmax	pmax		
	comp=Z,34nm,0.9s						
MAW	**Mawson**	**85.91**	**203**	P	**P**	**10 26 30.1**	**0.0**
	comp=Z,23nm,0.6s,mb5.3,baz=95,slow=6.8,SNR=26						
BBB	**Bella Bella**	**86.70**	**37**	LR	LR	11 01 18.8	
	comp=Z,2µm,19.5s,baz=272,slow=33						
DLBC	**Dease Lake**	**87.01**	**31**	P	**P**	**10 26 35.4**	**-0.3**
	comp=Z,10nm,0.9s,mb4.8,baz=249,slow=2.8,SNR=18						
DLBC	**Dease Lake**	**87.01**	**31**	*e*P	**P**	**10 26 36.5**	**+0.8**
KKAR	**Karatay Array**	**87.77**	**313**	*i* P	**P**	**10 26 40.1**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,91nm,0.8s,mb5.9						
INK	**Inuvik**	**88.13**	**21**	P	**P**	**10 26 40.9**	**0.0**
	comp=Z,45nm,1.1s,mb5.4,baz=236,slow=6.1,SNR=29						
INK				PKKP	PKKP	10 44 28.0	+21
	comp=Z,7.4nm,0.7s,baz=43,slow=4.6,SNR=11						
INK				LR	LR	11 02 18.0	
	comp=Z,5µm,21.7s,baz=253,slow=33						
INK	**Inuvik**	**88.13**	**21**	*e*P	**P**	**10 26 40.0**	**-0.9**
	comp=Z,56nm,1.0s,mb5.5						
HUMO	**Hull Mountain**	**88.56**	**47**	*e*P	**P**	**10 26 43.4**	**-0.1**
	comp=Z,13nm,1.0s,mb4.9						
YBH	**Yreka Blue Hor**	**88.63**	**48**	P	**P**	**10 26 45.9**	**+2.0**
YBH				pmax	pmax		
	comp=Z,11nm,0.9s						
YBH	**Yreka Blue Hor**	**88.63**	**48**	LR	LR	10 58 58.3	
	comp=Z,6µm,21.7s,baz=264,slow=30						
YBH	**Yreka Blue Hor**	**88.63**	**48**	*e*P	**P**	**10 26 44.6**	**+0.7**
	comp=Z,11nm,0.9s,mb4.9						
BVA0	**Borovoye Array**	**89.31**	**323**	*i* P	**P**	**10 26 46.3**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,82nm,0.8s,mb5.8						
BVAR	**Borovoye Array**	**89.31**	**323**	P	**P**	**10 26 46.8**	**0.0**
	comp=Z,484nm,0.7s,mb6.6,baz=108,slow=5.2,SNR=1080						
BVAR				PKKPbc		10 44 26.5	
	comp=Z,0.9nm,0.7s,baz=270,slow=4.4,SNR=3.6						
MOD	**Modoc**	**90.44**	**48**	P	**P**	**10 26 54.2**	**+1.9**
	comp=Z,18nm,1.0s,mb5.2						
WCN	**Washoe City**	**90.60**	**51**	P	**P**	**10 26 54.8**	**+1.6**
WCN				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
WCN	**Washoe City**	**90.60**	**51**	P	**P**	**10 26 52.6**	**-0.5**
	comp=Z,11nm,1.1s,mb4.9						
MWC	**Mount Wilson**	**91.52**	**56**	*e*P	**P**	**10 26 56.9**	**-0.7**
NVAR	**Mina Array Bea**	**91.66**	**52**	P	**P**	**10 26 58.3**	**+0.2**
	comp=Z,4.3nm,0.8s,mb4.7,baz=254,slow=3.9,SNR=16						
NVAR				PP	PP	10 30 35.0	-4.6
	comp=Z,2.5nm,1.0s,baz=260,slow=6.4,SNR=2.9						
NVAR				PKKPbc		10 44 24.6	
	comp=Z,0.6nm,0.6s,baz=53,slow=4.5,SNR=4.8						
NVAR				PKPPKP		10 52 28.9	
	comp=Z,1.0nm,0.8s,baz=86,slow=5.1,SNR=4.7						
NVAR				LR	LR	11 01 12.4	
	comp=Z,7µm,20.9s,baz=275,slow=31						
WVOR	**Wild Horse Val**	**91.72**	**48**	P	**P**	**10 26 58.9**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.2						
WVOR	**Wild Horse Val**	**91.72**	**48**	*e*P	**P**	**10 26 57.8**	**-0.5**
	comp=Z,15nm,0.9s,mb5.2						
MNV	**Mina**	**91.77**	**52**	P	**P**	**10 26 58.9**	**+0.3**
MNV				pmax	pmax		
	comp=Z,51nm,1.4s,mb5.6						
MNV	**Mina**	**91.77**	**52**	*e*P	**P**	**10 26 58.6**	**-0.1**
	comp=Z,51nm,1.4s,mb5.6						
TPH	**Tonopah**	**92.48**	**52**	*e*P	**P**	**10 27 02.5**	**+0.6**
BAR	**Barrett**	**92.57**	**58**	*e*P	**P**	**10 27 01.1**	**-1.4**

PFO	**Pinyon Flat Ob**	92.81	57	*e*P	P	10 27 02.7	-0.8
PFO				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.4						
PFO	**Pinyon Flat Ob**	92.81	57	*e*P	P	10 27 02.7	-0.8
	comp=Z,20nm,1.1s,mb5.4						
BMO	**Blue Mountains**	92.86	45	*e*P	P	10 27 03.2	-0.3
BMO				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.4						
BMO	**Blue Mountains**	92.86	45	*e*P	P	10 27 02.7	-0.8
	comp=Z,20nm,1.1s,mb5.4						
NEW	**Newport**	93.19	42	P	P	10 27 04.6	-0.3
NEW				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NEW	**Newport**	93.19	42	LR	LR	11 01 20.1	
	comp=Z,3µm,20.9s,baz=266,slow=30						
NEW	**Newport**	93.19	42	*e*P	P	10 27 04.5	-0.3
	comp=Z,7.2nm,0.9s,mb5.0						
SYO	**Syowa Base**	93.99	199	⇑P	P	10 27 06.4	-1.6
LDFC	**Landfair**	94.00	55	*e*P	P	10 27 08.7	-0.2
ELK	**Elko**	94.16	50	P	P	10 27 16.2	+6.7
ELK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ELK	**Elko**	94.16	50	LR	LR	11 02 16.0	
	comp=Z,7µm,21.7s,baz=265,slow=31						
ELK	**Elko**	94.16	50	P	P	10 27 08.6	-0.9
	comp=Z,8.4nm,1.0s,mb5.0						
NEN	**Nelson**	94.25	55	*e*P	P	10 27 10.5	+0.5
HLID	**Hailey**	94.88	47	*e*P	P	10 27 13.2	+0.6
	comp=Z,10nm,1.0s,mb5.2						
YKW3	**Yellowknife Ar**	95.06	28	*e*P	P	10 27 13.3	+0.2
YKA	**Yellowknife Ar**	95.07	28	P	P	10 27 13.2	+0.2
	comp=Z,8.1nm,0.8s,mb5.2,baz=269,slow=4.7,SNR=25						
YKA				PKKPbc		10 44 09.0	
	comp=Z,3.1nm,0.7s,baz=91,slow=3.1,SNR=10.0						
YKA				LR	LR	11 04 03.4	
	comp=Z,3µm,21.6s,baz=325,slow=32						
YKA	**Yellowknife Ar**	95.07	28	P	P	10 27 13.2	+0.2
YKA				PKKPbc		10 44 09.0	
YKA				LR	LR	11 04 03.4	
SVE	**Sverdlovsk**	95.21	327	⇑*i*P	P	10 27 13.0	-0.9
SVE				*e*		10 31 04.0	
SVE				*e*PPP	PPP	10 33 14.0	+1.7
SVE				*e*S	SKS	10 37 44.0	+2.7
SVE				pmax	pmax		
	comp=Z,260nm,2.6s,mb6.2						
SVE				MLR	MLR		
	comp=N,1µm,18.0s						
SVE				MLR	MLR		
	comp=E,2µm,18.0s						
SVE				MLR	MLR		
	comp=Z,3µm,18.0s						
AB31	**Akbulak array**	95.57	319	*i* P	P	10 27 14.3	-1.4
AB31				pmax	pmax		
	comp=Z,72nm,0.8s,mb6.2						
WBK	**Wadi Bani Khal**	95.63	292	⇓P	P	10 27 16.7	+0.1
	SNR=14						
EDM	**Edmonton**	95.73	37	P	P	10 27 16.6	+0.3
EDM	**Edmonton**	95.73	37	*e*P	P	10 27 16.1	-0.1
ARU	**Arti**	96.36	326	⇑*i*P	P	10 27 17.8	-1.3
ARU				*e*		10 31 12.2	
ARU				*e*PPP	PPP	10 33 13.6	-8.3
ARU				*i* S	SKS	10 37 47.9	+0.5
ARU				*e*SP	SP	10 39 51.4	-3.4
ARU				*e*PS	PS	10 40 02.7	-2.4
ARU				*e*SS	SS	10 45 11.8	+4.2
ARU				pmax	pmax		
	comp=Z,143nm,0.9s,mb6.4						
ARU	**Arti**	96.36	326	*e*P	P	10 27 18.0	-1.1
	comp=Z,124nm,0.8s,mb6.4						
JMDO	**Jabal Madar**	96.42	292	P	P	10 27 20.4	+0.2
	SNR=7.0						
BIDO	**Bidbid**	96.45	293	⇓P	P	10 27 20.6	+0.3
	SNR=7.2						
SMDO	**Samad**	96.50	293	P	P	10 27 21.0	+0.4
	SNR=8.3						
BOZ	**Bozeman (W)**	96.89	45	*e*P	P	10 27 21.1	-0.7
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
BOZ	**Bozeman (W)**	96.89	45	*e*P	P	10 27 21.1	-0.7
	comp=Z,3.3nm,0.8s,mb4.8						
WUAZ	**Wupatki**	97.07	55	*e*P	P	10 27 24.0	+1.1
	comp=Z,4.4nm,0.9s,mb4.9						
SOKR	**Solikamsk**	97.18	329	⇑*i*P	P	10 27 20.8	-2.0
SOKR				pmax	pmax		
	comp=Z,60nm,0.9s,mb6.0						
SOKR				MLR	MLR		
	comp=Z,4µm,21.0s						
HOQ	**Hoqain**	97.20	293	P	P	10 27 23.8	+0.1
	SNR=6.9						
TMUT	**Trail Mountain**	97.22	51	P	P	10 27 24.4	+0.9
YMR	**Madison River**	97.37	46	P	P	10 27 25.4	+1.4
YFT	**Old Faithful**	97.46	46	*e*P	P	10 27 26.2	+1.8
MOOW	**Moose Ponds**	97.54	47	*e*P	P	10 27 24.7	-0.1
	comp=Z,2.4nm,0.9s						
ARQ	**Araqi**	97.92	293	P	P	10 27 27.3	+0.4
	SNR=21						
BANOM	**Banah**	98.18	295	P	P	10 27 28.5	+0.4
	SNR=8.1						
ASHO	**Ashiyiah**	98.37	294	P	P	10 27 29.0	0.0
	SNR=6.0						
PDAR	**Pinedale Array**	98.43	48	P	P	10 27 27.9	-0.9
	comp=Z,1.8nm,0.8s,baz=270,slow=3.0,SNR=10						
PDAR				PP	PP	10 31 34.2	+1.9
	comp=Z,3.8nm,1.0s,baz=285,slow=3.4,SNR=4.4						
PDAR				PKKPbc		10 43 59.8	
	comp=Z,0.5nm,0.5s,baz=111,slow=4.9,SNR=4.5						
PDAR				LR	LR	11 06 07.0	
	comp=Z,3µm,21.1s,baz=274,slow=32						
PV10	**Paradox Valley**	98.93	52	P	P	10 27 30.7	-0.5
PV01	**Paradox Valley**	99.30	52	*e*P	P	10 27 32.9	0.0
RBK	**Rabkut**	99.92	287	⇑P	P	10 27 36.1	0.0
RES	**Resolute Bay**	100.11	15	P	P	10 27 35.7	-0.1
RES				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RES	**Resolute Bay**	100.11	15	*e*Pdif	P	10 27 35.1	-0.7
	comp=Z,7.5nm,0.8s						
WHFO	**Wadi Hawf**	100.35	287	⇓P	P	10 27 37.8	-0.3
ABTO	**Aybut**	100.78	287	⇓P	P	10 27 40.3	+0.2
SNAA	**Sanae**	102.28	188	P	Pdif	10 27 45.5	0.0
SNAA				pmax	pmax		
	comp=Z,13nm,1.1s						
SNAA	**Sanae**	102.28	188	*e*Pdif	Pdif	10 27 44.4	-1.1
	comp=Z,13nm,1.1s						
RSSD	**Black Hills**	102.36	46	P	Pdif	10 27 48.1	+1.6
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RSSD	**Black Hills**	102.36	46	Pdif	Pdif	10 27 46.7	+0.3
	comp=Z,3.1nm,0.6s						
VNA3	**Neumayer Olymp**	103.47	186	⇑*i*P	Pdif	10 27 51.7	+1.0
VNA2	**Neumayer--Watz**	103.53	186	⇑*i*P	Pdif	10 27 52.4	+1.4
OPO	**Ambohidratompo**	103.62	250	Pdiff	Pdif	10 27 52.6	0.0
	comp=Z,6.2nm,1.0s,baz=65,slow=6.8,SNR=4.8						
TXAR	**Lajitas Array**	103.69	61	Pdiff	Pdif	10 27 54.1	+1.4
	comp=Z,0.2nm,0.6s,baz=252,slow=4.0,SNR=3.5						
TXAR				PP	PP	10 32 09.3	-3.2
	comp=Z,1.2nm,0.9s,baz=284,slow=5.2,SNR=4.8						
TXAR				PKKPbc		10 43 44.2	
	comp=Z,1.3nm,0.8s,baz=113,slow=3.5,SNR=7.1						
TXAR	**Lajitas Array**	103.69	61	Pdif	Pdif	10 27 54.1	+1.4
TXAR				PP	PP	10 32 09.3	-3.2
TXAR				PKKPbc		10 43 44.2	
VNA1	**Neumayer--Stat**	103.89	186	⇑*i*P	Pdif	10 27 52.8	+0.2
HASS	**Wahat al Ahsa’**	104.15	295	P	Pdif	10 27 55.2	+0.4
MAK	**Makhachkala**	104.59	313	*e*P	Pdif	10 27 56.0	-0.3
MAK				*e*		10 32 14.0	
MAK				*e*PPP	PPP	10 34 35.0	+1.3
MAK				*i*		10 38 33.0	
MAK				*i* PS	PS	10 41 22.0	-8.5
MAK				pmax	pmax		
	comp=Z,800nm,7.0s						
MAK				pmax	pmax		
	comp=Z,2µm,10.0s						
MAK				pmax	pmax		
	comp=N,800nm,6.0s						
MAK				pmax	pmax		
	comp=E,500nm,6.0s						
MAK				pmax	pmax		
	comp=E,3µm,7.0s						
MAK				pmax	pmax		
	comp=N,1µm,5.0s						
MAK				MLR	MLR		
	comp=N,1µm,18.0s						
MAK				MLR	MLR		
	comp=E,2µm,18.0s						
MAK				MLR	MLR		
	comp=Z,1µm,18.0s						
APA	**Apatity**	105.28	340	⇓*i*P	Pdif	10 27 58.0	-0.8
APA				*i*	SKS	10 38 34.0	+3.5
APA				*e*S	tx	10 39 38.0	
APA				*e*SS	SS	10 47 11.0	-0.2
APA				pmax	pmax		
	comp=Z,40nm,0.9s						
FCC	**Fort Churchill**	105.58	30	*e*PKiKP		10 32 14.2	
KEV	**Kevo**	106.23	343	*e*p	Pdif	10 28 01.4	-1.5
	comp=Z,12nm,0.5s						
KEV	**Kevo**	106.23	343	*e*p		10 32 14.9	
KEV	**Kevo**	106.23	343	P	Pdif	10 28 02.7	-0.2
KEV				pmax	pmax		
	comp=Z,13nm,0.6s						
KEV	**Kevo**	106.23	343	*e*P	Pdif	10 28 01.4	-1.5
KEV				*e*P		10 32 14.9	
ARCES	**ARCESS Array B**	106.79	343	Pdiff	Pdif	10 28 05.0	-0.4
	comp=Z,15nm,0.7s,baz=59,slow=7.1,SNR=33						
ARCES				PKiKP		10 32 16.2	
	comp=Z,9.1nm,0.5s,baz=85,slow=2.2,SNR=34						
ARCES				PKKPbc		10 43 32.6	
	comp=Z,2.4nm,0.8s,baz=243,slow=4.0,SNR=5.2						
ULM	**Lac du Bonnet**	106.84	39	Pdiff	Pdif	10 28 05.7	-0.3
	comp=Z,1.4nm,0.4s,baz=161,slow=0.3,SNR=2.5						
ULM	**Lac du Bonnet**	106.84	39	Pdif	Pdif	10 28 05.7	-0.3
GNI	**Garni**	107.03	310	P	Pdif	10 28 13.9	+6.8
GNI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GNI	**Garni**	107.03	310	Pdiff	Pdif	10 28 06.8	-0.3
	comp=Z,3.2nm,0.3s,baz=159,slow=23,SNR=4.0						
GNI				PKiKP		10 32 17.9	
	comp=Z,4.0nm,0.4s,baz=14,slow=13,SNR=3.4						
GNI	**Garni**	107.03	310	*e*Pdif	Pdif	10 28 07.9	+0.7
	comp=Z,16nm,1.2s						
GNI				PKPdf		10 32 17.9	
ZEI	**Tsey**	107.24	313	*e*P	Pdif	10 28 06.0	-2.0
DAG	**Danmarks Havn**	107.74	358	⇑*e*P	Pdif	10 28 09.2	-0.2
DAG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DAG	**Danmarks Havn**	107.74	358	⇑*e*P	Pdif	10 28 09.2	-0.2
	comp=Z,2.2nm,0.8s						
DAG	**Danmarks Havn**	107.74	358	⇑*i*P	Pdif	10 28 09.2	-0.2
	comp=Z,2.2nm,0.8s						
DAG	**Danmarks Havn**	107.74	358	⇑*i*P		10 32 17.2	
	comp=Z,2.0nm,0.6s						
KIV	**Kislovodsk**	107.89	315	*e*P	Pdif	10 28 11.3	+0.5
KIV				pmax	pmax		
	comp=N,11nm,0.9s						
KIV				pmax	pmax		
	comp=Z,15nm,0.9s						
KIV				pmax	pmax		
	comp=E,7.0nm,1.2s						
MOS	**Moscow**	107.99	328	*e*P	Pdif	10 28 11.3	+0.3
MOS				*e*		10 38 46.1	
MOS				*e*SS	SS	10 47 54.3	+5.9
MOS				pmax	pmax		
	comp=Z,118nm,0.9s						
MOS				MLR	MLR		
	comp=E,4µm,21.3s						
MZLS	**Mizel**	108.28	294	P		10 32 20.7	
OBN	**Obninsk**	108.77	327	α*i*P	Pdif	10 28 14.3	-0.1
OBN				*e*		10 32 50.0	
OBN				*e*PPP	PPP	10 35 03.5	-5.3
OBN				*i*		10 38 48.9	
OBN				*i* PS	PS	10 42 10.7	-0.1
OBN				pmax	pmax		
	comp=Z,100nm,1.1s						
OBN				pmax	pmax		
	comp=Z,55nm,0.9s						
OBN				MLR	MLR		
	comp=Z,4µm,22.0s						
OBN	**Obninsk**	108.77	327	*e*Pdif	Pdif	10 28 14.0	-0.4
	comp=Z,73nm,1.0s						
MSL	**Mosul**	108.88	307	*e*P	Pdif	10 28 17.5	+2.1
MSL				*e*PP	PP	10 32 44.0	-7.5
MSL				*e*SKS1		10 38 52.5	
MSL				*e*SKS2		10 39 17.0	
SOC	**Sochi**	110.07	315	*e*P	Pdif	10 28 18.5	-1.9
SOC				*i*		10 32 55.0	
SOC				*e*PS	PS	10 42 20.6	-3.1
SOC				*e*		10 43 31.2	
SOC				*e*SS	SS	10 48 18.1	+1.3
SOC				pmax	pmax		
	comp=N,7.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,6.0nm,0.6s						
SOC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SOC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SOC				pmax	pmax		
	comp=N,13nm,1.1s						
SOC				pmax	pmax		
	comp=E,2.0nm,0.3s						
SOC				MLR	MLR		
	comp=Z,2µm,21.0s						
SOC				MLR	MLR		
	comp=N,2µm,25.0s						
SOC				MLR	MLR		
	comp=E,1µm,21.0s						
KAF	**Kangasniemi**	110.58	336	*e*p	Pdif	10 28 20.7	-1.5
	comp=E,9.5nm,0.8s,baz=62,slow=5.3						
KAF	**Kangasniemi**	110.58	336	*e*p	PKPdf	10 32 22.7	+1.6
FINES	**FINESS Array B**	111.03	336	Pdiff	Pdif	10 28 23.7	-0.5
	comp=E,9.2nm,0.5s,baz=71,slow=5.2,SNR=110						
FINES				PKiKP		10 32 24.2	
	comp=E,9.0nm,0.6s,baz=50,slow=3.2,SNR=15						
FINES				PP	PP	10 33 03.1	-2.9
	comp=E,14nm,0.9s,baz=56,slow=6.9,SNR=6.1						
FINES	**FINESS Array B**	111.03	336	Pdif	Pdif	10 28 23.7	-0.5
FINES				PKPdf	PKPdf	10 32 24.2	+2.3
FINES				PP	PP	10 33 03.1	-2.9
USHA	**Ushuaia**	111.48	156	PKKPbc		10 43 20.0	
	comp=E,12nm,0.8s,baz=72,slow=4.9,SNR=6.0						
BLJS	**Baljurashi**	111.84	289	P	PKPdf	10 32 28.7	+4.2
VSU	**Vasula**	112.27	333	⇓*i*P	Pdif	10 28 30.0	+0.3
GZT	**Gaziantep**	113.05	309	*i* P	PKPdf	10 32 28.7	+2.2
KBRS	**Khaybar**	113.51	296	P	PKPdf	10 32 32.2	+4.4
BOYT	**Boyabat**	114.06	314	*i* P	PKPdf	10 32 31.4	+3.0
SCO	**Scoresbysund**	114.13	358	*i* P	PKPdf	10 32 30.4	+2.5
	comp=E,9.0nm,0.9s						
COBT	**Iskenderun**	114.26	308	*i* P	PKPdf	10 32 30.0	+1.0
AKASG	**Malin Array Be**	114.56	325	PKP	PKPdf	10 32 30.2	+1.0
	comp=E,49nm,0.8s,baz=59,slow=2.1,SNR=105						
AKASG				PKKPbc		10 43 09.9	
	comp=E,0.9nm,0.5s,baz=261,slow=3.6,SNR=5.3						
ASF	**Jabal al Asfar**	114.62	303	PKP	PKPdf	10 32 32.1	+2.2
	comp=E,7.3nm,0.8s,baz=354,slow=2.3,SNR=8.3						
AVNT	**Avonos**	114.80	311	*i* P	PKPdf	10 32 31.3	+1.3
BALT	**Daday**	115.12	314	*i* P	PKPdf	10 32 33.0	+2.5
ELDT	**Eldivan**	115.39	313	*i* P	PKPdf	10 32 31.6	+0.5
BR131	**Keskin Array S**	115.45	312	*e*PKiKP		10 32 32.6	
BRTR	**Keskin Array B**	115.45	312	PKP	PKPdf	10 32 33.1	+1.9
	comp=E,7.6nm,0.6s,baz=140,slow=4.1,SNR=21						
SFJD	**Kangerlussuaq**	115.57	10	*i* PKIKP	PKPdf	10 32 32.8	+2.0
SFJD				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SFJD				MLR	MLR		
	comp=Z,700nm,20.0s						
SFJD	**Kangerlussuaq**	115.57	10	*e*P	Pdif	10 28 41.8	-2.3
SFJD				*i*		10 42 15.1	
SFJD				*i*		10 42 54.9	
SFJD				LR	LR		
	comp=Z,700nm,20.0s						
SFJD	**Kangerlussuaq**	115.57	10	*i* P	Pdif	10 28 41.8	-2.3
SFJD	**Kangerlussuaq**	115.57	10	*i* P	PKPdf	10 32 32.8	+2.0
	comp=Z,7.1nm,0.5s						
SFJD				*i*		10 42 15.1	
SFJD				*i*		10 42 54.9	
	comp=Z,700nm,20.0s						
MEST	**Erdemli**	115.89	309	*i* P	PKPdf	10 32 33.9	+1.8
ANTO	**Ankara**	116.04	312	PKIKP	PKPdf	10 32 34.2	+1.9
SUW	**Suwalki**	116.26	330	*e*Pdif	Pdif	10 28 47.9	+0.5
SUW				*e*PKPdf	PKPdf	10 32 34.6	+2.2
SUW	**Suwalki**	116.26	330	*e*Pdiff	Pdif	10 28 47.9	+0.5
SUW				*e*PKIKP	PKPdf	10 32 34.6	+2.2
SUW				MLR	MLR	11 14 56.2	
	comp=Z,5µm,33.4s						
KIS	**Kishinev**	116.31	321	*e*PKIKP	PKPdf	10 32 33.0	+0.3
KIS				*e*		10 33 40.0	
KIS				MLR	MLR		
	comp=Z,3µm,20.0s						
KIS				MLR	MLR		
	comp=Z,3µm,20.0s						
SGKT	**Sivrigoynuk**	116.37	313	*i* P	PKPdf	10 32 34.4	+1.5
HFS	**Hagfors**	116.63	339	PKP	PKPdf	10 32 34.2	+1.2
	comp=Z,13nm,0.5s,baz=90,slow=3.0,SNR=58						
HFS				PP	PP	10 33 40.3	-6.0
	comp=Z,12nm,0.9s,slow=8.9,SNR=5.4						
JMOS	**Jabal al Moall**	116.67	300	P	PKPdf	10 32 36.7	+2.9
ALWS	**Ilw as Safayha**	116.69	300	P	PKPdf	10 32 36.7	+2.9
EIL	**Elat**	116.72	301	PKP	PKPdf	10 32 36.2	+2.4
	comp=Z,12nm,0.7s,baz=95,slow=5.0,SNR=9.5						
EIL	**Elat**	116.72	301	*e*PKPdf	PKPdf	10 32 34.8	+0.9
BDAS	**Al Bad‘**	116.81	299	P	PKPdf	10 32 36.9	+2.8
HAQS	**Haql**	116.85	300	P	PKPdf	10 32 36.9	+2.7
NB2	**NORSAR Subarra**	116.85	340	PKPdf	PKPdf	10 32 34.7	+1.3
	comp=Z,4.4nm,0.6s,baz=45,slow=1.9						
NB2	**NORSAR Subarra**	116.85	340	PKPd		10 32 34.7	
	baz=44,slow=1.9						
NOA	**NORSAR Array B**	116.85	340	PKP	PKPdf	10 32 34.9	+1.6
	comp=Z,15nm,0.7s,baz=46,slow=1.8,SNR=48						
NOA				PP	PP	10 33 40.5	-7.4
	comp=Z,4.4nm,0.9s,baz=44,slow=6.6,SNR=3.8						
NOA				PKKPbc		10 43 04.8	
	comp=Z,1.0nm,0.7s,baz=226,slow=4.2,SNR=3.4						
NOA	**NORSAR Array B**	116.85	340	PKP	PKPdf	10 32 34.9	+1.6
NOA				PP	PP	10 33 40.5	-7.4
NOA				PKKPbc		10 43 04.8	
CSS	**Prodhromos**	116.94	307	*e*PKPdf	PKPdf	10 32 36.2	+2.0
TAYS	**Tayyib Ism**	116.99	300	P	PKPdf	10 32 36.8	+2.4
NAO01	**NORSAR Array S**	117.11	340	*e*PKPdf	PKPdf	10 32 36.0	+2.1
HENT	**Hendek**	117.12	314	*i* P	PKPdf	10 32 36.2	+1.8
CFR	**Carcaliu**	117.46	319	⇑*i*P	PKPdf	10 32 37.2	+2.3
TIRR	**Tirgusor**	117.56	318	PKIKP	PKPdf	10 32 37.7	+2.6
TIRR	**Tirgusor**	117.56	318	⇓P	PKPdf	10 32 26.9	-8.2
ESKT	**Eskisehir**	117.57	312	*i* P	PKPdf	10 32 36.8	+1.6
HARR	**Harsova**	117.79	319	⇓*i*P	PKPdf	10 32 38.4	+2.9
LVV	**L’vov**	117.93	325	*i* PKIKP	PKPdf	10 32 37.4	+1.7
LVV				*i*		10 33 50.0	
LVV				*e*PS	PS	10 43 36.0	-1.2
BRD	**Bordesti**	118.03	320	⇑*i*P	PKPdf	10 32 40.0	+4.1
BRD	**Bordesti**	118.03	320	⇑*i*P	PKPdf	10 32 40.0	+4.0
VRI	**Vrincioaia**	118.09	320	⇓*i*P	PKPdf	10 32 38.3	+2.2
BURAR	**Bucovina Array**	118.27	323	⇓P	PKPdf	10 32 39.6	+3.2
TKTP	**Tekketepe**	118.42	311	*i* P	PKPdf	10 32 38.8	+1.8
ULDT	**Uludag**	118.62	314	*i* P	PKPdf	10 32 38.8	+1.5
GDZ	**Gediz**	118.72	312	*i* P	PKPdf	10 32 39.4	+1.9
PRD	**Provadia**	118.72	317	P	PKPdf	10 32 40.0	+2.6
MLR	**Muntele Rosu**	118.75	320	PKIKP	PKPdf	10 32 38.8	+1.4
MLR				pmax	pmax		
	comp=Z,12nm,0.6s						
MLR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MLR	**Muntele Rosu**	118.75	320	PKP	PKPdf	10 32 38.8	+1.4
	comp=Z,12nm,0.6s,baz=229,slow=0.8,SNR=15						
MLR				PKKPbc		10 42 55.3	
	comp=Z,2.0nm,0.5s,baz=157,slow=2.2,SNR=3.4						
MLR	**Muntele Rosu**	118.75	320	⇓*i*P	PKPdf	10 32 39.9	+2.5
MLR	**Muntele Rosu**	118.75	320	⇓*i*P	PKPdf	10 32 39.9	+2.5
TZTN	**Tazewell**	119.18	50	*e*PKPdf	PKPdf	10 32 39.7	+1.2
SADO	**Sadowa**	119.33	40	PKP	PKPdf	10 32 40.1	+1.5
	comp=Z,5.2nm,0.5s,baz=273,slow=2.2,SNR=5.0						
VOIR		119.34	321	⇓P	PKPdf	10 32 40.5	+1.9
KOLS	**Kolonicke sedl**	119.36	325	*i* PKP	PKPdf	10 32 41.7	+3.2
KOLS				*e*		10 33 00.2	
DNZL	**Cakiroluk**	119.49	311	*i* P	PKPdf	10 32 41.6	+2.5
UZH	**Uzhgorod**	119.50	325	*i* PKIKP	PKPdf	10 32 41.0	+2.2
BSD	**Bornholm Skovb**	119.51	334	⇓*i*P	PKPdf	10 32 41.1	+2.5
	comp=Z,158nm,0.6s						
AKAS	**Kas**	119.51	309	*i* P	PKPdf	10 32 40.9	+1.8
BTOK	**Tokmak**	119.55	314	*i* P	PKPdf	10 32 40.9	+1.8
MANT	**Manisa**	119.59	312	*i* P	PKPdf	10 32 41.0	+1.8
SZH	**Strazhica**	119.68	318	*e*P	PKPdf	10 32 42.0	+2.7
PLCA	**Paso Flores**	119.71	143	PKIKP	PKPdf	10 32 42.3	+2.9
PLCA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PLCA				pmax	pmax		
	comp=Z,14nm,0.7s						
PLCA	**Paso Flores**	119.71	143	PKP	PKPdf	10 32 42.2	+2.8
	comp=Z,7.3nm,0.6s,baz=230,slow=2.3,SNR=37						
PLCA				PKKPbc		10 42 53.0	
	comp=Z,14nm,0.7s,baz=45,slow=3.5,SNR=28						
PLCA	**Paso Flores**	119.71	143	*e*PKPdf	PKPdf	10 32 41.7	+2.3
BOSA	**Boshof**	120.06	233	PKIKP	PKPdf	10 32 43.0	+2.6
BOSA				pmax	pmax		
	comp=Z,12nm,0.6s						
BOSA				pmax	pmax		
	comp=E,5.0nm,0.8s						
BOSA	**Boshof**	120.06	233	PKP	PKPdf	10 32 43.0	+2.6
	comp=E,12nm,0.6s,baz=86,slow=2.8,SNR=29						
BOSA				SKP		10 36 15.2	
	comp=E,5.2nm,0.8s,baz=88,slow=1.7,SNR=4.4						
BOSA	**Boshof**	120.06	233	*e*PKPdf	PKPdf	10 32 42.7	+2.4
OJC	**Ojcow**	120.06	327	*e*Pdiff	Pdif	10 29 06.1	+1.9
OJC				*e*PKPdf	PKPdf	10 32 42.0	+2.2
OJC				*e*PP	PP	10 34 06.5	-3.0
OJC				⇑*e*SKSa		10 39 30.8	
OJC				MLR	MLR	11 28 03.1	
	comp=E,5µm,21.5s						
PVL	**Pavlikeni**	120.10	318	*e*P	PKPdf	10 32 43.0	+2.9
NIE	**Niedzica**	120.21	326	*e*PKPdf	PKPdf	10 32 43.4	+3.2
AYDN	**Tasoluk**	120.38	311	*i* P	PKPdf	10 32 43.2	+2.4
SCHQ	**Schefferville**	120.44	26	PKP	PKPdf	10 32 42.9	+2.4
	comp=E,1.7nm,0.4s,baz=250,slow=4.0,SNR=11						
DIM	**Dimitrovgrad**	120.44	317	*e*P	PKPdf	10 32 43.0	+2.2
ALN	**Alexandroupoli**	120.54	315	*e*P	PKPdf	10 32 41.8	+0.8
KDAG	**Bornova**	120.58	312	*i* P	PKPdf	10 32 41.8	+0.6
KECS	**Kecovo**	120.61	325	*i* PKP	PKPdf	10 32 42.4	+1.4
CRAR	**CRAIOVA**	120.63	320	PKIKP	PKPdf	10 32 44.3	+3.2
KDZ	**Kurdzhali**	120.68	316	*e*P	PKPdf	10 32 42.5	+1.2
RDO	**Rodhopi**	120.80	316	*e*P	PKPdf	10 32 42.6	+1.1
FWV	**Forest Hill**	120.92	49	*e*PKPdf	PKPdf	10 32 43.4	+1.5
MUD	**Monsted U’grnd**	120.93	338	*i* PKIKP	PKPdf	10 32 43.7	+2.3
MUD				*i*		10 34 15.3	
MUD				*i*		10 44 12.3	
MUD	**Monsted U’grnd**	120.93	338	*i* P	PKPdf	10 32 43.7	+2.3
	comp=E,31nm,1.0s						
MUD				*i*		10 34 15.3	
MUD				*i* S	SKS	10 40 11.1	+39
MUD				*i*		10 44 12.3	
	comp=Z,3µm,23.0s						
RAC	**Raciborz**	120.99	328	*e*PKPdf	PKPdf	10 32 44.8	+3.1
RAC				MLR	MLR	11 20 07.4	
	comp=Z,5µm,29.0s						
PRK	**Paraskevi**	121.00	314	*e*P	PKPdf	10 32 42.9	+0.9
LIKS	**Likavka**	121.08	327	*e*PKP	PKPdf	10 32 45.5	+3.6
URLA	**Izmir**	121.09	313	*i* P	PKPdf	10 32 43.3	+1.1
SMG	**Samos**	121.14	312	*e*P	PKPdf	10 32 44.2	+1.9
RZN	**Rozhen**	121.15	317	P	PKPdf	10 32 44.0	+1.8
OKC	**Ostrava-Krasne**	121.16	328	*e*PKP	PKPdf	10 32 44.1	+2.1
OKC				*e*		10 43 59.2	
OKC	**Ostrava-Krasne**	121.16	328	*e*PKPDF	PKPdf	10 32 44.1	+2.1
OKC				*e*SP	SP	10 43 59.2	+1.8
OKC				AMS	AMS	11 25 50.0	
	comp=Z,2µm,21.7s						
LBTB	**Lobatse**	121.21	237	*e*PKIKP	PKPdf	10 32 44.3	+1.6
PSZ	**Piszkesteto**	121.25	325	*e*PKIKP	PKPdf	10 32 43.5	+1.3
PSZ	**Piszkesteto**	121.25	325	⇑*i*PKP/D	PKPdf	10 32 44.4	+2.2
BLA	**Blacksburg**	121.34	49	*e*PKIKP	PKPdf	10 32 43.4	+0.7
BZS	**Buzias**	121.39	322	PKIKP	PKPdf	10 32 44.5	+1.9
BZS	**Buzias**	121.39	322	⇑P	PKPdf	10 32 44.3	+1.7
MORC	**Moravsky Berou**	121.51	328	*e*PKIKP	PKPdf	10 32 44.4	+1.7
KSP	**Ksiaz**	121.53	329	*e*PKIKP	PKPdf	10 32 45.2	+2.5
KSP				*e*		10 34 16.0	
KSP				*e*SP	SP	10 44 04.0	+3.3
KSP				*e*SS	SS	10 51 01.0	+15
KSP				MLR	MLR		
	comp=Z,14µm,26.0s						
KSP	**Ksiaz**	121.53	329	*e*Pdif	Pdif	10 29 12.3	+1.6
KSP				*e*PKP	PKPdf	10 32 45.2	+2.5
KSP				*e*PP	PP	10 34 16.0	-3.8
KSP				*e*SP	SP	10 44 04.0	+3.3
KSP				*e*SS	SS	10 51 01.0	+15
KSP				LR	LR		
	comp=Z,14µm,26.0s						
KSP	**Ksiaz**	121.53	329	*e*Pdiff	Pdif	10 29 12.5	+1.8
KSP				*e*PKIKP	PKPdf	10 32 45.5	+2.8
KSP				*e*PP	PP	10 34 18.8	-1.0
KSP				*e*SP	tx	10 45 51.1	
KSP				MLR	MLR	11 17 43.3	
	comp=Z,8µm,33.7s						
VYHS	**Vyhne**	121.53	326	*i* PKP	PKPdf	10 32 44.4	+1.6
VYHS				*i* PP	PP	10 34 16.8	-3.1
VYHS				*e*SKSdf		10 39 36.1	
VYHS				*i* PS	PS	10 44 03.8	-5.8
VYHS				*e*SS	tx	10 51 38.6	
LIA	**Limnos Island**	121.54	315	*e*P	PKPdf	10 32 42.7	-0.3
JSC	**Jenkinsville**	121.64	52	*e*PKIKP	PKPdf	10 32 44.7	+1.4

KOLL	**Kolacno**	**121.72**	**326**	*i* PKP	PKPdf	10 32 45.7	+2.6
RUE	**Ruedersdorf**	**121.73**	**332**	*e*PKPdf	PKPdf	10 32 45.5	+2.5
VTS	**Vitosha**	**121.78**	**318**	P	PKPdf	10 32 45.5	+2.1
DPC	**Dobruska-Polom**	**121.81**	**329**	*e*PKIKP	PKPdf	10 32 45.6	+2.4
DPC				*e*		10 44 03.6	
DPC				MLR	MLR		
	comp=Z,5µm,25.2s						
DPC	**Dobruska-Polom**	**121.81**	**329**	*e*PKPDF	PKPdf	10 32 45.6	+2.4
DPC				*e*SP	SP	10 44 03.6	+0.3
DPC				*e*x	x	10 51 45.0	
DPC				AMS	AMS	11 24 20.0	
	comp=Z,5µm,25.2s						
ZAPS	**Zavoj/Pirot**	**121.85**	**319**	⇑*i*PKP	PKPdf	10 32 44.7	+1.2
MMB	**Musomiste**	**121.86**	**317**	P	PKPdf	10 32 44.5	+0.9
NVR	**Nevrokopi**	**121.87**	**317**	*e*P	PKPdf	10 32 45.2	+1.6
UPC	**Upice**	**121.88**	**329**	*e*PKP	PKPdf	10 32 45.8	+2.4
BUD	**Budapest**	**121.97**	**325**	*e*PKP/D	PKPdf	10 32 45.8	+2.2
BOLS	**Boljevac**	**122.03**	**320**	⇓*i*PKP	PKPdf	10 32 45.9	+2.0
LSZ	**Lusaka**	**122.07**	**249**	*e*PKIKP	PKPdf	10 32 46.8	+2.3
JTS	**JuntasAbangare**	**122.14**	**81**	PKP	PKPdf	10 32 47.1	+2.4
	comp=Z,5.3nm,0.5s,baz=328,slow=1.8,SNR=4.4						
SRS	**Serrai**	**122.15**	**317**	*e*P	PKPdf	10 32 44.7	+0.6
KKB	**Krupnik**	**122.18**	**318**	P	PKPdf	10 32 45.0	+0.8
SRO	**Srobarova**	**122.20**	**326**	*e*PKP	PKPdf	10 32 46.1	+2.1
OUR	**Ouranopolis**	**122.21**	**316**	*e*P	PKPdf	10 32 45.6	+1.3
SRO1	**Iza**	**122.27**	**326**	*i* PKP	PKPdf	10 32 47.0	+2.8
MBAR	**Mbarara**	**122.28**	**266**	*e*PKIKP	PKPdf	10 32 46.3	+1.3
SVIS	**Svilajnac**	**122.28**	**321**	*e*PKP	PKPdf	10 32 46.2	+1.9
BSEG	**Bad Segeberg**	**122.28**	**335**	*e*PKIKP	PKPdf	10 32 46.6	+2.6
BSEG				*e*SP	SP	10 44 10.2	+2.8
BSEG	**Bad Segeberg**	**122.28**	**335**	*e*PKPdf	PKPdf	10 32 46.6	+2.6
BSEG				*e*PP	PP	10 34 15.1	-10
BSEG				*e*SP	SP	10 44 10.2	+2.8
VRAC	**Vranov**	**122.29**	**328**	PKIKP	PKPdf	10 32 46.6	+2.4
VRAC	**Vranov**	**122.29**	**328**	PKP	PKPdf	10 32 46.7	+2.6
	comp=Z,40nm,0.9s,baz=70,slow=2.3,SNR=25						
SMOL	**Smolenice**	**122.30**	**327**	*i* PKP	PKPdf	10 32 47.4	+3.2
BEO	**Belgrade**	**122.50**	**322**	⇑*i*PKP	PKPdf	10 32 46.3	+1.6
PLG	**Polygyros**	**122.56**	**316**	*e*P	PKPdf	10 32 45.9	+1.0
BARS	**Barje**	**122.59**	**319**	⇑*i*PKP	Px	10 33 24.0	
PVCC	**Panska Ves**	**122.59**	**330**	*e*PKPDF	PKPdf	10 32 46.7	+2.0
PVCC				AMS	AMS	11 25 20.0	
	comp=Z,3µm,24.3s						
ZST	**Bratislava**	**122.66**	**327**	*i* PKP	PKPdf	10 32 47.8	+2.9
ZST				*e*PP	PP	10 34 23.8	-4.0
ZST				*e*SKSdf		10 39 44.4	
ZST				*i* PS	PS	10 44 13.3	-6.5
ZST				*e*SS	SS	10 51 21.2	+21
BRG	**Berggiesshubel**	**122.68**	**331**	*i* Pdif	Pdif	10 29 17.3	+1.6
BRG				*i* PKP	PKPdf	10 32 46.9	+2.0
BRG				*i*		10 32 52.5	
BRG				PP	PP	10 34 26.1	-1.7
BRG				SKP		10 36 18.7	
BRG				PS	PS	10 44 11.0	-8.9
BRG				*e*		10 46 04.0	
BRG				SS	tx	10 52 04.0	
THE	**Thessaloniki**	**122.79**	**316**	*e*P	PKPdf	10 32 46.2	+0.8
FRNY	**Flat Rock**	**122.80**	**38**	*e*PKPdf	PKPdf	10 32 45.6	+0.4
CLL	**Collm**	**122.86**	**331**	*i* Pdif	Pdif	10 29 17.5	+1.0
CLL				*i* PKP	PKPdf	10 32 47.0	+1.8
CLL				*e*PP	PP	10 34 27.0	-2.1
CLL				LR	LR		
	comp=Z,4µm,20.9s						
CLL	**Collm**	**122.86**	**331**	*i* PDIF	Pdif	10 29 17.5	+1.0
CLL				*i* PKIKP	PKPdf	10 32 47.0	+1.8
CLL				*e*PP	PP	10 34 27.0	-2.1
CLL				*e**SPP		10 34 55.0	
CLL				*e*		10 37 26.0	
CLL				*e*PS	PS	10 44 12.0	-10
CLL				*e*		10 44 36.0	
CLL				*e*PPS	PPS	10 45 44.0	-6.1
CLL				*e**SSS		10 51 56.0	
CLL				*e*		10 56 21.0	
PRU	**Pruhonice**	**122.94**	**329**	*e*PKIKP	PKPdf	10 32 47.3	+1.9
PRU				*e*		10 51 22.3	
PRU				MLR	MLR		
	comp=Z,5µm,24.2s						
PRU	**Pruhonice**	**122.94**	**329**	*e*PKPDF	PKPdf	10 32 47.3	+1.9
PRU				*e*x	x	10 44 03.7	
PRU				*e*x	x	10 51 22.3	
PRU				AMS	AMS	11 25 30.0	
	comp=Z,5µm,24.2s						
VKA	**Vienna**	**123.05**	**327**	(PKP)		10 32 46.0	
DIVS	**Divcibare**	**123.15**	**321**	⇑*i*PKP	PKPdf	10 32 47.7	+1.8
NEO	**Neokhori**	**123.16**	**315**	*e*P	PKPdf	10 32 47.3	+1.2
MIV	**Mineville/With**	**123.21**	**39**	*e*PKPdf	PKPdf	10 32 47.7	+1.6
SKO	**Skopje**	**123.23**	**318**	⇑*i*PKP	PKPdf	10 32 48.4	+2.2
	comp=Z,0.1nm,0.8s						
MLA1	**Latheron**	**123.39**	**345**	⇑*e*P	PKPdf	10 32 47.9	+1.8
IDI	**Anoyia**	**123.45**	**310**	PKP	PKPdf	10 32 49.6	+2.8
	comp=Z,68nm,0.8s,baz=132,slow=4.4,SNR=12						
LKR	**Lokris**	**123.59**	**314**	*e*P	PKPdf	10 32 48.1	+1.1
BBLS	**Bajina Basta -**	**123.63**	**321**	⇑*i*PKP	PKPdf	10 32 48.6	+1.7
CLZ	**Clausthal**	**123.72**	**333**	*e*PKIKP	PKPdf	10 32 49.8	+2.9
CLZ				*e*SP	SP	10 44 19.9	+0.2
CLZ	**Clausthal**	**123.72**	**333**	*e*PKPdf	PKPdf	10 32 49.8	+2.9
CLZ				*e*PP	PP	10 34 26.0	-9.1
CLZ				*e*SP	SP	10 44 19.9	+0.2
KZN	**Kozani**	**123.75**	**316**	*e*P	PKPdf	10 32 48.5	+1.2
FNA	**Florina**	**123.81**	**317**	*e*P	PKPdf	10 32 48.5	+1.1
IVA	**Berane**	**123.81**	**320**	⇓*i*PKP	PKPdf	10 32 48.8	+1.4
NKC	**Novy Kostel**	**123.83**	**331**	*e*PKPDF	PKPdf	10 32 49.5	+2.3
NKC				*e*SP	SP	10 44 19.9	-0.7
NKC				AMS	AMS	11 28 50.0	
	comp=Z,3µm,22.1s						
PVY	**Plav**	**123.90**	**320**	⇓*i*PKP	PKPdf	10 32 48.8	+1.3
PLE	**Pljevlja**	**123.91**	**321**	⇓*i*PKP	PKPdf	10 32 49.7	+2.2
VAM	**Vamos**	**123.93**	**310**	*e*P	PKPdf	10 32 50.8	+3.0
MVH1	**Achvaich**	**123.94**	**346**	⇑*e*P	PKPdf	10 32 48.8	+1.6
MOX	**Moxa**	**123.96**	**332**	*e*PKIKP	PKPdf	10 32 49.5	+2.1
MOX				*e*		10 34 39.0	
MOX				*e*		10 44 29.0	
MOX				MLR	MLR		
	comp=Z,2µm,22.0s						
MOX	**Moxa**	**123.96**	**332**	*e*PKP	PKPdf	10 32 49.5	+2.1
MOX				*e*		10 33 17.8	
MOX				*e*PP	PP	10 34 39.0	+2.2
MOX				*e*SKSP		10 44 29.0	
MOX				*e*SS	tx	10 52 03.0	
MOX				LR	LR		
	comp=Z,2µm,22.0s						
MOX	**Moxa**	**123.96**	**332**	⇓*i*P	PKPdf	10 32 49.5	+2.1
	comp=Z,logA/T=1.7						
MOX				pPKP		10 33 18.0	
MOX				PP	PP	10 34 39.0	+2.2
MOX				*e*		10 44 29.0	
MOX				PPS	tx	10 47 00.0	
MOX				SS	tx	10 52 03.0	
MOX				L		11 29 05.0	
KHC	**Kasperske Hory**	**123.97**	**329**	*e*PKIKP	PKPdf	10 32 49.3	+1.8
KHC				*e*		10 32 58.5	
KHC				*e*		10 33 03.0	
KHC				*e*		10 44 25.2	
KHC				MLR	MLR		
	comp=Z,3µm,25.1s						
KHC	**Kasperske Hory**	**123.97**	**329**	*e*PKP	PKPdf	10 32 49.3	+1.8
KHC				*e*		10 32 58.5	
KHC				*e*		10 33 03.0	
KHC				*e*		10 44 25.2	
KHC				*e*		10 52 05.1	
KHC				LR	LR		
	comp=Z,3µm,25.1s						
KHC	**Kasperske Hory**	**123.97**	**329**	*e*PKPDF	PKPdf	10 32 49.3	+1.8
KHC				x	x	10 32 58.5	
KHC				*e*pPKP		10 33 03.0	
KHC				*e*SP	SP	10 44 25.2	+3.5
KHC				*e*SS	tx	10 52 05.1	
KHC				AMS	AMS	11 25 30.0	
	comp=Z,3µm,25.1s						
MCD	**Coleburn Disti**	**124.00**	**345**	⇑*e*P	PKPdf	10 32 49.2	+1.8
OHR	**Ohrid**	**124.05**	**318**	⇑*i*PKP	PKPdf	10 32 49.8	+2.0
ARSA	**Arzberg**	**124.07**	**326**	⇓*i*P	Pdif	10 29 24.6	+2.7
	comp=Z,6.3nm,0.9s						
ARSA				*i*		10 32 48.3	
ARSA				*i*		10 34 22.3	
	comp=Z,495nm,5.3s						
GEC2	**GERESS Array S**	**124.08**	**329**	*e*PKPdf	PKPdf	10 32 49.9	+2.2
GEC2				*e*PP	PP	10 34 28.8	-8.8
GERES	**GERESS Array B**	**124.08**	**329**	PKP	PKPdf	10 32 49.5	+1.8
	comp=Z,69nm,0.7s,baz=72,slow=1.4,SNR=206						
MME1	**Meikle Cairn**	**124.16**	**345**	*e*P	PKPdf	10 32 49.3	+1.7
GVD	**Gavdhos**	**124.22**	**309**	*e*PKPdf	PKPdf	10 32 50.3	+2.0
UPM	**Unac-Piva**	**124.28**	**321**	⇓*i*PKP	PKPdf	10 32 49.8	+1.6
EVR	**Evrytania**	**124.32**	**315**	*e*P	PKPdf	10 32 51.1	+2.7
VLI	**Veliai**	**124.40**	**312**	*e*P	PKPdf	10 32 50.2	+1.6
MOA	**Molln**	**124.40**	**328**	⇓*i*P	Pdif	10 29 24.4	+1.1
	comp=Z,2.8nm,0.9s						
MOA				*i*		10 34 23.1	
	comp=Z,293nm,3.9s						
MDO	**Dochfour**	**124.41**	**346**	⇑*e*P	PKPdf	10 32 49.6	+1.5
NKY	**Niksic**	**124.42**	**320**	⇓*i*PKP	PKPdf	10 32 50.0	+1.5
TTG	**Podgorica**	**124.44**	**320**	⇓*i*PKP	PKPdf	10 32 49.8	+1.2
KYTH	**Kithira**	**124.49**	**311**	*e*P	PKPdf	10 32 52.0	+3.2
TIR	**Tirane**	**124.56**	**318**	PKIKP	PKPdf	10 32 51.5	+2.6
SISC	**Sisak**	**124.61**	**324**	*i* PKP	PKPdf	10 32 50.9	+2.1
BRY	**Bratogost**	**124.66**	**321**	⇓*i*PKP	PKPdf	10 32 50.1	+1.2
JAN	**Janina**	**124.67**	**316**	*e*P	PKPdf	10 32 51.5	+2.4
ULC	**Ulcinj**	**124.67**	**319**	⇓*i*PKP	PKPdf	10 32 50.6	+1.6
BUM	**Brajici-Budva**	**124.73**	**320**	⇓*i*PKP	PKPdf	10 32 50.4	+1.3
GRA1	**Grafenberg Arr**	**124.78**	**331**	*e*Pdif	Pdif	10 29 27.3	+2.3
GRA1				*e*PKPdf	PKPdf	10 32 51.3	+2.3
GRA1				*e*PP	PP	10 34 33.6	-8.2
GRA1				*e*SKPdf		10 36 21.7	
GRA1				*e*SP	SP	10 44 31.8	+2.8
GRA1				*e*SS	SS	10 52 02.3	+35
GRA1				*e*SSS	SSS	10 56 23.6	+17
GRA1				LR	LR		
	comp=Z,3µm,20.5s						
GRF	**Grafenberg Arr**	**124.78**	**331**	*e*PKIKP	PKPdf	10 32 51.3	+2.3
GRF				*e*SP	SP	10 44 31.8	+2.8
GRF	**Grafenberg Arr**	**124.78**	**331**	*e*Pdif	Pdif	10 29 27.3	+2.3
GRF				*e*PKP	PKPdf	10 32 51.3	+2.3
GRF				*e*PP	PP	10 34 33.6	-8.2
GRF				SKPdf		10 36 21.7	
GRF				*e*SP	SP	10 44 31.8	+2.8
GRF				*e*SS	SS	10 52 02.3	+35
GRF				*e*SSS	SSS	10 56 23.6	+17
GRF				LR	LR		
	comp=Z,3µm,20.5s						
HCY	**Herceg Novi**	**124.92**	**320**	⇓*i*PKP	PKPdf	10 32 50.8	+1.3
RLS	**Riolos of Patr**	**124.93**	**314**	*e*P	PKPdf	10 32 51.9	+2.3
LEGS	**Legarje**	**124.95**	**325**	*e*PKPdf	PKPdf	10 32 51.5	+2.1
ITM	**Ithomi**	**124.96**	**313**	*e*P	PKPdf	10 32 51.0	+1.3
OBKA	**Obir**	**125.05**	**326**	⇑*i*P	Pdif	10 29 27.9	+1.6
OBKA				*i*		10 32 51.3	
OBKA				*i*		10 34 29.5	
	comp=Z,500nm,6.3s						
WTSB	**Winterswijk**	**125.18**	**335**	*e*PKP	PKPdf	10 32 52.0	+2.3
	comp=Z,107nm,0.7s						
BOJS	**Bojanci**	**125.24**	**325**	*e*PKPdf	PKPdf	10 32 52.5	+2.5
LJU	**Ljubljana**	**125.34**	**326**	*i* PKIKP	PKPdf	10 32 52.5	+2.3
LJU				*e*		10 34 45.2	
LJU				*e*		10 39 50.6	
LJU				*e*		10 44 42.9	
LJU				*e*		10 46 18.7	
LJU				*e*SS	SS	10 52 08.9	+35
LJU	**Ljubljana**	**125.34**	**326**	*i* PKPdf	PKPdf	10 32 52.5	+2.3
LJU				*e*PP	PP	10 34 45.2	-0.4
LJU				*e*		10 36 22.9	
LJU				*e*SKSac		10 39 50.6	
LJU				*e*		10 44 42.9	
LJU				*e*		10 46 18.7	
LJU				*e*SS	SS	10 52 08.9	+35
LJU				*e*		10 52 28.2	
KBA	**Koelnbreinsper**	**125.37**	**327**	⇓*i*P	Pdif	10 29 24.0	-3.6
	comp=Z,0.7nm,0.6s						
KBA				*i*		10 32 51.8	
KBA				*i*		10 34 35.2	
	comp=Z,392nm,3.7s						
KEK	**Kerkira**	**125.37**	**317**	PKP	PKPdf	10 32 51.6	+1.2
KEK	**Kerkira**	**125.37**	**317**	*e*P	PKPdf	10 32 51.2	+0.8
MDZ	**Mendoza**	**125.45**	**136**	*e*PKIKP	PKPdf	10 32 54.7	+3.9
VLS	**Valsamata**	**125.50**	**315**	*e*P	PKPdf	10 32 52.9	+2.2
JAVS	**Javornik**	**125.69**	**326**	*e*Pdiff	Pdif	10 29 31.0	+1.9
JAVS				*e*PKPdf	PKPdf	10 32 52.7	+1.8
JAVS				*e*SKSac		10 39 52.2	
JAVS				*e*		10 44 44.5	
VOY	**Vojsko**	**125.70**	**326**	*e*PKPdf	PKPdf	10 32 51.7	+0.8
VOY				*e*		10 33 04.6	
TNS	**Taunus Mts**	**125.72**	**333**	*e*PKIKP	PKPdf	10 32 53.3	+2.5
TNS				*e*SP	SP	10 44 41.7	+4.2
TNS	**Taunus Mts**	**125.72**	**333**	*e*PKPdf	PKPdf	10 32 53.3	+2.5
TNS				*e*PP	PP	10 34 35.7	-12
TNS				*e*SP	SP	10 44 41.7	+4.2
FUR	**Furstenfeldbru**	**125.76**	**329**	*e*PKIKP	PKPdf	10 32 52.3	+1.4
FUR				*e*SP	SP	10 44 40.1	+2.2
FUR	**Furstenfeldbru**	**125.76**	**329**	*e*PKPdf	PKPdf	10 32 52.3	+1.4
FUR				*e*PP	PP	10 34 40.2	-8.3
FUR				*e*SP	SP	10 44 40.1	+2.2
PTCC	**Patocco-Chiusa**	**125.77**	**327**	PKP	PKPdf	10 32 48.9	-2.1
SIND	**Sindeldorf**	**125.79**	**331**	⇑*e*P	PKPdf	10 32 53.1	+2.2
GMNA	**Gemona**	**125.92**	**327**	PKP	PKPdf	10 32 52.7	+1.4
EKA	**Eskdalemuir Ar**	**125.95**	**344**	PKP	PKPdf	10 32 53.5	+2.4
	comp=Z,19nm,0.5s,baz=16,slow=2.7,SNR=67						
FVI	**Forni Avoltri**	**125.97**	**327**	PKIKP	PKPdf	10 32 52.8	+1.4
ESK	**Eskdalemuir**	**125.97**	**344**	*e*PKIKP	PKPdf	10 32 53.5	+2.4
TOD	**Tromm**	**125.99**	**332**	PKIKP	PKPdf	10 32 52.3	+1.0
HDH	**Heidenheim**	**126.02**	**330**	⇑*e*P	PKPdf	10 32 53.5	+2.1
SWS	**Schriesheim**	**126.12**	**332**	*e*P	PKPdf	10 32 53.6	+2.0
WATA	**Walderalm**	**126.14**	**328**	⇑*i*P	PKPdf	10 32 52.9	+1.2
WTTA	**Wattenberg**	**126.16**	**328**	⇑*i*P	Pdif	10 29 30.8	-0.3
WTTA				*i*		10 32 53.0	
WTTA				*i*		10 34 45.6	
	comp=Z,368nm,3.3s						
SEST	**Monte Rota**	**126.18**	**328**	PKP	PKPdf	10 32 53.6	+1.8
LCI	**Lecce**	**126.22**	**318**	PKIKP	PKPdf	10 32 54.3	+2.3
STU	**Stuttgart**	**126.38**	**331**	*e*PKIKP	PKPdf	10 32 54.3	+2.2
HGN	**Heimansgroeve**	**126.44**	**335**	*e*PKP	PKPdf	10 32 53.3	+1.1
	comp=Z,102nm,1.3s						
HGN				*e*x	x	10 32 59.8	
TRQA	**Tornquist**	**126.47**	**146**	*e*PKPdf	PKPdf	10 32 54.2	+1.6
BUCH	**Bad Urach**	**126.53**	**331**	⇑*e*P	PKPdf	10 32 54.7	+2.3
KTD	**Kalmit**	**126.53**	**332**	PKIKP	PKPdf	10 32 54.3	+2.0
KTD	**Kalmit**	**126.53**	**332**	*e*P	PKPdf	10 32 54.7	+2.4
BRT	**Bari-Castellan**	**126.55**	**319**	PKIKP	PKPdf	10 32 55.5	+2.9
CFAA	**Coronel Fontan**	**126.60**	**135**	PKP	PKPdf	10 32 56.5	+3.4
	comp=Z,3.9nm,0.8s,baz=252,slow=2.8,SNR=26						
CFAA				SKKPbc		10 46 12.8	
	comp=Z,0.9nm,0.9s,baz=341,slow=2.7,SNR=6.9						
CFAA	**Coronel Fontan**	**126.60**	**135**	PKP	PKPdf	10 32 56.5	+3.4
CFAA				SKKPbc		10 46 12.8	
LBG	**Lerchenberg**	**126.65**	**331**	⇑*e*P	PKPdf	10 32 55.0	+2.4
UBR	**Uberruh**	**126.67**	**330**	⇑*e*P	PKPdf	10 32 54.7	+2.0
HPK	**Haverah Park**	**126.68**	**342**	⇑*e*P	PKPdf	10 32 54.8	+2.3
HPK				AMb	AMB	10 32 56.4	
	comp=Z,168nm,1.2s						
RUP	**Ruppelstein**	**126.72**	**333**	PKIKP	PKPdf	10 32 53.9	+1.2
RUP	**Ruppelstein**	**126.72**	**333**	⇑*e*P	PKPdf	10 32 55.5	+2.8
APPI	**Appiano**	**126.88**	**328**	PKP	PKPdf	10 32 54.3	+1.2
LANF	**Langenberg**	**126.89**	**332**	PKP	PKPdf	10 32 55.3	+2.2
GUT	**Gutenstein**	**126.90**	**331**	⇑*e*P	PKPdf	10 32 55.0	+1.9
CTI	**Castel Tesino**	**126.92**	**327**	PKIKP	PKPdf	10 32 55.1	+1.9
LTRZ	**Laterza**	**126.94**	**319**	PKP	PKPdf	10 32 55.3	+1.9
SPAK	**Spaichingen**	**127.04**	**331**	PKP	PKPdf	10 32 54.0	+0.6
SPAK	**Spaichingen**	**127.04**	**331**	*e*P	PKPdf	10 32 55.6	+2.2
DAVA	**Damuels**	**127.05**	**329**	⇑*i*P	Pdif	10 29 33.4	-1.6
DAVA				*i*		10 32 55.8	
DAVA				*i*		10 34 45.1	
	comp=Z,286nm,4.0s						
LHO	**Holmfirth**	**127.10**	**342**	⇑*e*P	PKPdf	10 32 55.0	+1.7
BFO	**Black Forest**	**127.10**	**331**	*e*PKIKP	PKPdf	10 32 54.6	+1.1
BFO				*e*SP	SP	10 44 52.9	+3.0
BFO	**Black Forest**	**127.10**	**331**	*e*PKPdf	PKPdf	10 32 54.6	+1.1
BFO				*e*PP	PP	10 34 48.8	-8.1
BFO				*e*SP	SP	10 44 52.9	+3.0
WLF	**Walferdange**	**127.15**	**334**	*e*PKIKP	PKPdf	10 32 55.7	+2.1
RGNG	**Rignano Grg**	**127.17**	**321**	PKP	PKPdf	10 32 55.4	+1.6
LIENZ	**Alp Oberkamor**	**127.24**	**330**	⇑*i*Pdiff	PKPdf	10 32 56.1	+2.3
KBI1	**Birley Grange**	**127.24**	**341**	⇑*e*P	PKPdf	10 32 55.7	+2.0
FUORN	**Ofenpass**	**127.29**	**329**	⇑*i*Pdiff	PKPdf	10 32 56.7	+2.8
BRMO	**Bormio**	**127.33**	**328**	PKP	PKPdf	10 32 55.9	+1.9
WEIN	**Weingarten**	**127.33**	**330**	⇑*i*Pdiff	PKPdf	10 32 55.8	+1.8
FG2	**Serracapriola**	**127.37**	**321**	PKP	PKPdf	10 32 56.3	+2.1
DAVOX	**Davos**	**127.38**	**329**	PKP	PKPdf	10 32 56.8	+2.7
	comp=Z,124nm,0.9s,baz=88,slow=0.9,SNR=60						
DAVOX	**Davos**	**127.38**	**329**	⇑*i*Pdiff	PKPdf	10 32 56.7	+2.6
SLE	**Schleitheim**	**127.41**	**331**	⇑*i*Pdiff	PKPdf	10 32 55.8	+1.7
WILA	**Wila**	**127.45**	**330**	⇑*i*Pdiff	PKPdf	10 32 56.2	+2.0
ORI	**Oriolo Calabro**	**127.45**	**319**	PKIKP	PKPdf	10 32 56.8	+2.3
PLONS	**Plons**	**127.46**	**329**	⇑*i*Pdiff	PKPdf	10 32 56.4	+2.1
WLS	**Welschbruch**	**127.51**	**332**	PKP	PKPdf	10 32 56.0	+1.7
CDF	**Champ du Feu**	**127.55**	**332**	*e*PKIKP		10 32 43.1	
	comp=Z,13nm,0.9s						
KWE	**Weaver Farm**	**127.55**	**341**	⇑*e*P	PKPdf	10 32 56.3	+2.1
BERNI	**Berninapass**	**127.55**	**328**	⇑*i*Pdiff	PKPdf	10 32 56.9	+2.4
KIZ	**Kirchzarten**	**127.56**	**331**	⇑*e*P	PKPdf	10 32 56.3	+1.9
FELD	**Feldberg**	**127.58**	**331**	PKP	PKPdf	10 32 56.3	+1.8
FELD	**Feldberg**	**127.58**	**331**	⇑*e*P	PKPdf	10 32 56.6	+2.1
LIBD	**Limburg**	**127.58**	**331**	*e*P	PKPdf	10 32 56.9	+2.5
FG5	**Orsara di Pugl**	**127.58**	**320**	PKIKP	PKPdf	10 32 56.8	+2.1
NNA	**Nana**	**127.60**	**109**	*e*PKPdf	PKPdf	10 32 56.1	+0.7
ZUR	**Zurich**	**127.64**	**330**	⇑*i*Pdiff	PKPdf	10 32 56.6	+2.0
TIP	**Timpagrande**	**127.69**	**317**	PKP	PKPdf	10 32 56.2	+1.3
BAIF	**Baives**	**127.69**	**335**	*e*PKIKP		10 32 43.2	
MRLC	**Muro Lucano**	**127.72**	**320**	PKP	PKPdf	10 32 54.1	-0.9
ECH	**Echery**	**127.74**	**332**	PKP	PKPdf	10 32 56.1	+1.3
ARV	**Arcevia**	**127.75**	**324**	PKIKP	PKPdf	10 32 57.3	+2.4
SULZ	**Sulz-Cheisache**	**127.76**	**331**	⇑*i*Pdiff	PKPdf	10 32 56.6	+1.8
LLS	**Linth-Limmern**	**127.78**	**329**	⇑*i*PKIKP	PKPdf	10 32 57.1	+2.2
LLS	**Linth-Limmern**	**127.78**	**329**	⇑*i*Pdiff	PKPdf	10 32 57.2	+2.3
RSM	**Repubblica di**	**127.78**	**325**	PKIKP	PKPdf	10 32 58.1	+3.1
VDL	**Val di Lei**	**127.79**	**329**	⇑*i*Pdiff	PKPdf	10 32 57.3	+2.4
SLCN	**Sala Consilina**	**127.82**	**319**	PKP	PKPdf	10 32 57.3	+2.1
MRB1	**Monte Rocchett**	**127.86**	**320**	PKP	PKPdf	10 32 57.0	+1.8
MUO	**Muotathal**	**127.89**	**330**	⇑*i*Pdiff	PKPdf	10 32 57.5	+2.4
SNTG	**Esanatoglia**	**127.90**	**324**	PKP	PKPdf	10 32 57.7	+2.5
PSB1	**Pescosannita**	**127.91**	**321**	PKP	PKPdf	10 32 56.6	+1.3
SGO	**Sicignano**	**127.94**	**320**	PKIKP	PKPdf	10 32 57.3	+1.9
CII	**Carovilli**	**127.95**	**321**	PKP	PKPdf	10 32 53.9	-1.5
CII				*e*PKPdf	PKPdf	10 32 57.1	+1.8
CSSN	**Cassano Irpino**	**127.97**	**320**	PKP	PKPdf	10 32 56.9	+1.5
WME	**Myndd Eilian**	**127.97**	**343**	*e*P	PKPdf	10 32 57.3	+2.2
WPM1	**Penmaenmawr**	**127.97**	**343**	*e*P	PKPdf	10 32 57.3	+2.2
MGR	**Morigerati**	**128.01**	**319**	PKP	PKPdf	10 32 56.8	+1.3
MOF	**Molkenrain**	**128.01**	**331**	PKP	PKPdf	10 32 57.1	+1.8
MIDA	**Miranda**	**128.03**	**321**	PKP	PKPdf	10 32 57.2	+1.7
INTR	**Introdacqua**	**128.03**	**322**	PKP	PKPdf	10 32 57.4	+1.9
NRCA	**Norcia**	**128.04**	**323**	PKP	PKPdf	10 32 57.4	+1.9
RNI2	**Rionero Sannit**	**128.05**	**321**	PKP	PKPdf	10 32 57.8	+2.2
WCB1	**Church Bay**	**128.06**	**343**	*e*P	PKPdf	10 32 57.3	+2.0
WCB1				AMb	AMB	10 32 58.6	
	comp=Z,84nm,1.1s						
BNALP	**Bannalp**	**128.06**	**330**	⇑*i*Pdiff	PKPdf	10 32 57.7	+2.3
SBD1	**Bryn Du**	**128.08**	**342**	*e*P	PKPdf	10 32 57.5	+2.2
SGG	**Gregorio Mates**	**128.09**	**321**	PKP	PKPdf	10 32 57.4	+1.8
WLF1	**Llynfaes**	**128.09**	**343**	*e*P	PKPdf	10 32 57.5	+2.2
WLF1				AMb	AMB	10 32 59.3	
	comp=Z,100nm,1.6s						
BBS	**Basel-Blauen**	**128.10**	**331**	*e*P	PKPdf	10 32 57.6	+2.1
MURB	**Monte Urbino**	**128.14**	**324**	PKP	PKPdf	10 32 57.1	+1.4
SFI	**Santa Sofia**	**128.14**	**325**	PKIKP	PKPdf	10 32 58.1	+2.4
AQU	**L'Aquila**	**128.15**	**323**	PKIKP	PKPdf	10 32 58.1	+2.4
YLL	**Llanberis**	**128.15**	**343**	*e*P	PKPdf	10 32 57.7	+2.3
ASS	**Assisi**	**128.18**	**324**	PKIKP	PKPdf	10 32 57.5	+1.7
FUSIO	**Fusio**	**128.22**	**329**	⇑*i*Pdiff	PKPdf	10 32 58.2	+2.4
HAU	**Haudompre**	**128.27**	**332**	*e*PKIKP		10 32 44.3	
HAU				*e*R			
	comp=Z,3µm,20.5s						
HASLI	**Hasliberg**	**128.28**	**330**	⇑*i*Pdiff	PKPdf	10 32 57.9	+2.1
VMG	**Vicchio**	**128.28**	**325**	PKP	PKPdf	10 32 58.9	+3.0
BOURR	**Bourrignon**	**128.29**	**331**	⇑*i*Pdiff	PKPdf	10 32 58.1	+2.3
VVLD	**Villa Vallelon**	**128.29**	**322**	PKP	PKPdf	10 32 56.7	+0.7
HLM1	**Long Mynd**	**128.30**	**342**	*e*P	PKPdf	10 32 57.9	+2.1
HLM1				AMb	AMB	10 32 59.9	
	comp=Z,93nm,2.0s						
SEI	**Scarperia**	**128.33**	**325**	PKP	PKPdf	10 32 58.8	+2.8
PTQR	**Pietraquaria**	**128.34**	**322**	PKP	PKPdf	10 32 58.1	+2.0
ZCCA	**Zocca**	**128.36**	**326**	PKP	PKPdf	10 32 57.0	+0.9
YRE	**Yr Eifl**	**128.37**	**343**	*e*P	PKPdf	10 32 57.7	+1.9
YRE				AMb	AMB	10 32 59.7	
	comp=Z,113nm,1.7s						
FIAM	**Fiamignano**	**128.37**	**323**	PKP	PKPdf	10 32 58.1	+1.9
RFI	**Roccamonfina**	**128.38**	**321**	PKP	PKPdf	10 32 58.4	+2.2
MUGIO	**Muggio**	**128.39**	**329**	PKP	PKPdf	10 32 57.1	+1.0
MUGIO	**Muggio**	**128.39**	**329**	⇑*i*Pdiff	PKPdf	10 32 57.4	+1.3
FNVD	**Fontana Vidola**	**128.39**	**326**	PKP	PKPdf	10 32 58.7	+2.6
MSC	**Monte Massico**	**128.45**	**321**	PKP	PKPdf	10 32 58.5	+2.2
SSP1	**Stoney Pound**	**128.46**	**342**	⇑*e*P	PKPdf	10 32 58.3	+2.3
SSP1				AMb	AMB	10 32 59.7	
	comp=Z,81nm,1.1s						
LOMF	**Lomont**	**128.51**	**331**	PKP	PKPdf	10 32 58.2	+1.9
GSCL	**Gusciola**	**128.58**	**326**	PKP	PKPdf	10 32 59.1	+2.6
WIMIS	**Wimmis**	**128.60**	**330**	⇑*i*Pdiff	PKPdf	10 32 58.6	+2.1
HAE	**Alders End**	**128.60**	**341**	*e*P	PKPdf	10 32 59.2	+2.8
CERT	**Cerreto**	**128.63**	**322**	PKP	PKPdf	10 32 57.8	+1.1
DLF	**Lyons Farm**	**128.68**	**345**	*e*P	PKPdf	10 32 57.0	+0.6
SOI	**Samo**	**128.72**	**317**	PKIKP	PKPdf	10 32 59.3	+2.4
VALM		**128.77**	**326**	P	PKPdf	10 32 59.4	+2.5
GRAM		**128.78**	**327**	P	PKPdf	10 32 59.1	+2.3
MCH1	**Michaelchurch**	**128.78**	**341**	*e*P	PKPdf	10 32 58.9	+2.2
SARO	**Sassorosso**	**128.79**	**326**	P	PKPdf	10 32 58.8	+1.9
HTR	**Trewern Hill**	**128.80**	**342**	*e*P	PKPdf	10 32 59.1	+2.4
HTR				AMb	AMB	10 33 00.2	
	comp=Z,116nm,1.2s						
VLC	**Villacollemand**	**128.81**	**326**	*e*PKPdf	PKPdf	10 32 59.0	+2.1
DCN	**Croghan**	**128.83**	**345**	*e*P	PKPdf	10 32 58.0	+1.3
MMK	**Mattmark**	**128.85**	**329**	⇑*i*Pdiff	PKPdf	10 32 59.8	+2.8
TORNY	**Torny**	**128.85**	**331**	⇑*i*Pdiff	PKPdf	10 32 59.4	+2.5
MAIM		**128.91**	**326**	P	PKPdf	10 32 58.3	+1.2
BACM		**128.91**	**326**	P	PKPdf	10 32 58.6	+1.5
VINC	**Vinca**	**128.95**	**326**	P	PKPdf	10 32 58.4	+1.2
CODM		**128.96**	**327**	P	PKPdf	10 32 59.0	+1.8
SENIN	**Lac Senin**	**128.97**	**330**	⇑*i*Pdiff	PKPdf	10 32 59.7	+2.5
BRANT	**Les Verrieres**	**128.97**	**331**	⇑*i*Pdiff	PKPdf	10 32 59.7	+2.5
PII	**Pisa**	**129.01**	**326**	PKIKP	PKPdf	10 32 58.4	+1.1
HGH	**Gray Hill**	**129.03**	**341**	*e*P	PKPdf	10 32 59.2	+2.1
HGH				AMb	AMB	10 33 01.1	
	comp=Z,209nm,1.2s						
DIX	**Grande Dixence**	**129.11**	**330**	⇑*i*Pdiff	PKPdf	10 33 00.3	+2.8
ORX	**Oropa**	**129.13**	**329**	P	PKPdf	10 32 60.0	+2.5
ORO	**Oropa**	**129.13**	**329**	PKIKP	PKPdf	10 32 59.4	+1.9
AIGLE	**Aigle**	**129.16**	**330**	⇑*i*Pdiff	PKPdf	10 32 59.9	+2.4
SALAN	**Lac Salanfe**	**129.29**	**330**	⇑*i*Pdiff	PKPdf	10 33 00.3	+2.5
GIMEL	**Gimel**	**129.36**	**331**	⇑*i*Pdiff	PKPdf	10 33 00.7	+2.8
HSA	**Swansea**	**129.36**	**342**	⇑*e*P	PKPdf	10 33 00.6	+2.8
EMV	**Vieux Emosson**	**129.38**	**330**	⇑*i*Pdiff	PKPdf	10 33 00.5	+2.5
CABF	**La Chapelle**	**129.39**	**331**	*e*PKIKP		10 32 46.9	
	comp=Z,17nm,0.8s						
PCP	**Pian Castagno**	**129.57**	**328**	PKIKP	PKPdf	10 33 00.0	+1.6
LSD	**Ceresole Reale**	**129.67**	**329**	PKIKP	PKPdf	10 33 01.8	+3.3
RSP	**Reno Superiore**	**129.83**	**329**	PKIKP	PKPdf	10 33 01.6	+2.8
HEX	**Exmoor**	**129.84**	**341**	*e*P	PKPdf	10 33 00.3	+1.6
LPL	**La Plagne**	**129.85**	**330**	*e*PKIKP		10 32 47.1	
	comp=Z,7.9nm,0.7s						
LPG	**La Plagne**	**129.85**	**330**	*e*PKIKP		10 32 47.2	
	comp=Z,13nm,0.9s						
LOR	**Lormes**	**129.96**	**333**	*e*PKIKP		10 32 47.4	
	comp=Z,3.1nm,0.5s						
LOR				*e*R			
	comp=Z,3µm,21.8s						
FIN	**Finale Ligure**	**129.97**	**327**	PKIKP	PKPdf	10 33 01.1	+2.0
BHB	**Bricherasio**	**130.04**	**329**	P	PKPdf	10 33 00.3	+1.0
ROB	**Roburent**	**130.09**	**328**	PKIKP	PKPdf	10 33 01.3	+1.9
OG05	**Jujurieux**	**130.11**	**331**	PKP	PKPdf	10 33 02.1	+2.8
VAE	**Valguarnera**	**130.14**	**317**	PKP	PKPdf	10 33 02.4	+2.7
	comp=Z,6.1nm,0.3s,baz=191,slow=5.2,SNR=3.6						
VAE				SKPbc		10 36 22.0	
	comp=Z,7.0nm,0.4s,baz=333,slow=4.5,SNR=10						
BNI	**Bardonecchia**	**130.20**	**329**	*e*PKHKP		10 32 48.5	
BNI				*e*		10 33 02.2	
RRL	**Cesana Torines**	**130.24**	**329**	PKIKP	PKPdf	10 33 03.5	+3.9
SSF	**Saint Saulge**	**130.27**	**333**	*e*PKIKP		10 32 47.9	
	comp=Z,16nm,0.8s						
MONE	**Monesi**	**130.30**	**328**	P	PKPdf	10 33 01.9	+2.1
TSUM	**Tsumeb**	**130.32**	**240**	PKP	PKPdf	10 33 03.1	+2.6
	comp=Z,18nm,0.8s,baz=87,slow=3.0,SNR=17						
TSUM				SKPbc		10 36 23.0	
	comp=Z,20nm,0.8s,baz=89,slow=3.7,SNR=7.3						
TSUM	**Tsumeb**	**130.32**	**240**	*e*PKPdf	PKPdf	10 33 02.9	+2.4
IMI	**Imperia**	**130.34**	**327**	P	PKPdf	10 33 02.0	+2.2
PZZ	**Prazzo**	**130.36**	**328**	PKIKP	PKPdf	10 33 02.9	+3.0
MBDF	**Montbardon**	**130.38**	**329**	*e*PKIKP		10 32 48.8	
	comp=Z,7.3nm,0.6s						
GDM	**Grand'Maison**	**130.38**	**330**	PKP	PKPdf	10 33 02.6	+2.7
ENR	**Entracque**	**130.38**	**328**	PKIKP	PKPdf	10 33 01.3	+1.4
STV2	**Anna di Valdie**	**130.41**	**328**	P	PKPdf	10 33 00.9	+0.9
STV	**Sta Anna Valdi**	**130.42**	**328**	PKIKP	PKPdf	10 33 01.2	+1.2
SMF	**Signal de Mont**	**130.43**	**333**	*e*PKIKP		10 32 47.9	
	comp=Z,12nm,0.8s						
SAOF	**Saorge**	**130.47**	**328**	PKP	PKPdf	10 33 01.9	+1.8
SURF	**Saint Ours**	**130.52**	**329**	PKP	PKPdf	10 33 03.5	+3.3
AUTN	**L'Aution**	**130.53**	**328**	PKP	PKPdf	10 33 03.5	+3.3
GRN	**Grenoble**	**130.53**	**330**	PKP	PKPdf	10 33 03.2	+3.0

AVF	**Avril sur Loir**	**130.54**	**333**	*e*PKIKP		10 32 48.3	
	comp=Z,3.9nm,0.6s						
TOUF	**Mont Tournerai**	**130.61**	**328**	PKP	PKPdf	10 33 02.7	+2.3
SBF	**Sospel**	**130.62**	**328**	*e*PKIKP		10 32 48.8	
PGF	**Pioggiola**	**130.62**	**325**	*e*PKIKP		10 32 48.7	
ORIF	**Oris-en-Rattie**	**130.70**	**330**	*e*PKIKP		10 32 48.8	
	comp=Z,17nm,0.8s						
ORIF				*e*R			
	comp=Z,4μm,22.8s						
MVIF	**Mont Vial**	**130.74**	**328**	PKP	PKPdf	10 33 03.2	+2.6
BGF	**Bois d'Agland**	**130.95**	**333**	*e*PKIKP		10 32 48.6	
CALN	**Calern**	**130.98**	**328**	PKP	PKPdf	10 33 03.7	+2.6
PLDF	**La Plantade**	**131.03**	**332**	PKP	PKPdf	10 33 05.1	+4.0
ARE	**Arequipa**	**131.12**	**116**	PKIKP	PKPdf	10 33 03.0	+1.0
AGO	**Saint Agoulin**	**131.20**	**332**	PKP	PKPdf	10 33 05.1	+3.7
OCF	**Saint Nazaire**	**131.23**	**330**	PKP	PKPdf	10 33 04.6	+3.1
OG26	**St.-Nazaire-De**	**131.23**	**330**	PKP	PKPdf	10 33 04.6	+3.1
FRF	**La Foret Royal**	**131.24**	**328**	*e*PKIKP		10 32 50.3	
STOF	**St-Etienne Org**	**131.33**	**329**	PKP	PKPdf	10 33 04.8	+3.1
COLF	**Collangettes**	**131.33**	**332**	PKP	PKPdf	10 33 04.7	+3.0
VIVF	**Saint-Julien-l**	**131.34**	**330**	*e*PKIKP		10 32 50.3	
TCF	**Toulx Ste Croi**	**131.44**	**333**	*e*PKIKP		10 32 49.3	
	comp=Z,39nm,1.2s						
LMR	**La Mourre**	**131.47**	**328**	*e*PKIKP		10 32 50.5	
	comp=Z,6.1nm,0.5s						
PYM	**Petit Puy Mans**	**131.48**	**332**	PKP	PKPdf	10 33 05.9	+3.9
TAVF	**Tavernes**	**131.51**	**328**	PKP	PKPdf	10 33 04.8	+2.7
SMRF	**Simiane la Rot**	**131.51**	**329**	*e*PKIKP		10 32 50.7	
VILF	**Villemus**	**131.53**	**329**	PKP	PKPdf	10 33 05.2	+3.1
PUYF	**Puyloubier**	**131.76**	**328**	PKP	PKPdf	10 33 05.3	+2.7
SGMF	**Saint Gilles**	**131.81**	**338**	*e*PKIKP		10 32 49.9	
PRAF	**Pradon**	**131.84**	**329**	PKP	PKPdf	10 33 05.7	+3.0
TREF	**Trevaresse**	**131.86**	**329**	PKP	PKPdf	10 33 05.4	+2.7
BERF	**Bertagne**	**131.92**	**328**	PKP	PKPdf	10 33 05.6	+2.7
FRNF	**Fournols**	**131.96**	**332**	PKP	PKPdf	10 33 06.2	+3.3
GELF	**Grande-Etoile**	**132.00**	**328**	PKP	PKPdf	10 33 05.5	+2.5
MFF	**Saint Martin d**	**132.21**	**335**	*e*PKIKP		10 32 51.7	
VSL	**Villasalto**	**132.29**	**322**	*e*PKPpre		10 32 56.8	
VSL				*e*PKPdf	PKPdf	10 33 05.0	+1.3
LASF	**Ste Croix**	**132.31**	**330**	*e*PKIKP		10 32 52.4	
	comp=Z,19nm,0.9s						
RJF	**Les Rejaudoux**	**132.50**	**333**	*e*PKIKP		10 32 52.2	
	comp=Z,14nm,0.8s						
RJF				*e*R			
	comp=Z,2μm,21.9s						
CAF	**Calviac**	**132.54**	**332**	*e*PKIKP		10 32 51.9	
ROSC	**El Rosal**	**132.65**	**88**	PKP	PKPdf	10 33 06.6	+1.6
	comp=Z,13nm,0.5s,baz=207,slow=0.7,SNR=5.8						
ROSC				SKPbc		10 36 31.1	
	comp=Z,22nm,0.6s,baz=112,slow=2.9,SNR=8.8						
MTLF	**Montolieu**	**133.66**	**331**	*e*PKIKP		10 32 54.1	
	comp=Z,22nm,0.9s						
LRDF	**Laroque-de-Fa**	**133.80**	**330**	PKP	PKPdf	10 33 08.0	+1.6
LPEF	**Le Peyrat**	**134.10**	**331**	PKP	PKPdf	10 33 08.7	+1.8
LPAZ	**La Paz**	**134.17**	**118**	PKhKP		10 32 56.5	
	comp=Z,0.9nm,0.6s,baz=7.5,slow=10,SNR=4.4						
LPAZ				PKP	PKPdf	10 33 09.2	+1.4
	comp=Z,4.6nm,0.6s,baz=173,slow=5.6,SNR=14						
LPAZ				SKPbc		10 36 36.7	
	comp=Z,29nm,1.1s,baz=305,slow=1.7,SNR=18						
LPAZ	**La Paz**	**134.17**	**118**	*e*PKPpre		10 32 56.6	
LPAZ				PKP	PKPdf	10 33 09.2	+1.4
LPAZ				SKPbc		10 36 36.7	
SALF	**Salau**	**134.59**	**331**	PKP	PKPdf	10 33 10.8	+2.9
EPF	**Esparros**	**134.79**	**332**	*e*PKIKP		10 32 56.9	
	comp=Z,15nm,0.7s						
REYF	**Montagne du Re**	**135.10**	**332**	PKP	PKPdf	10 33 12.4	+3.6
CMAH	**Djebel Manchou**	**135.26**	**320**	P	PKPdf	10 33 10.5	+1.2
ETSF	**Etsaut**	**135.31**	**332**	*e*PKIKP		10 32 58.2	
	comp=Z,16nm,0.6s						
OSSF	**Osses**	**135.35**	**333**	PKP	PKPdf	10 33 10.7	+1.4
LARF	**Larrau**	**135.40**	**333**	PKP	PKPdf	10 33 13.0	+3.7
ABSA	**Djebel Ababsia**	**135.43**	**320**	P	PKPdf	10 33 07.0	-2.6
CAEH	**'Ain El Ouahch**	**135.53**	**321**	P	PKPdf	10 33 11.0	+1.2
CKFL	**Kef-Lekhel**	**135.84**	**320**	P	PKPdf	10 33 13.0	+2.7
CASM	**Ain Smara**	**136.07**	**320**	P	PKPdf	10 33 12.0	+1.2
CTEI	**Djebel Teioual**	**136.25**	**320**	P	PKPdf	10 33 13.0	+1.9
DFRA	**Djebel Bou Aff**	**136.28**	**321**	P	PKPdf	10 33 11.0	-0.1
SDV	**Santo Domingo**	**136.30**	**82**	PKhKP		10 32 58.6	
	comp=Z,1.1nm,0.4s,baz=294,slow=20,SNR=3.0						
SDV				PKP	PKPdf	10 33 12.7	+1.0
	comp=Z,18nm,0.7s,baz=307,slow=0.6,SNR=23						
SDV				SKPbc		10 36 42.0	
	comp=Z,33nm,0.9s,baz=262,slow=3.4,SNR=11						
EBR	**Ebro Roquetas**	**136.39**	**330**	*e*PKIKP	PKPdf	10 33 15.5	+4.3
EBR				*e*Ts		10 36 41.0	
SET	**Setif**	**136.80**	**321**	P	PKPdf	10 33 12.0	-0.1
CMER	**Merouana**	**136.84**	**320**	P	PKPdf	10 33 10.0	-2.2
AKF	**Akfadou**	**137.04**	**322**	P	PKPdf	10 33 22.0	+9.5
CPUP	**Villa Florida**	**137.35**	**138**	*e*PKIKP	PKPdf	10 33 14.7	+1.3
CPUP	**Villa Florida**	**137.35**	**138**	PKP	PKPdf	10 33 15.2	+1.8
	comp=Z,13nm,0.9s,baz=286,slow=2.8,SNR=12						
CPUP				SKPbc		10 36 44.9	
	comp=Z,15nm,1.0s,baz=252,slow=4.3,SNR=6.5						
ATAF	**Djebel Tarf**	**137.71**	**321**	P	PKPdf	10 33 18.1	+4.3
AKET	**Djebel Ketaf**	**137.84**	**322**	P	PKPdf	10 33 17.7	+3.7
ABA	**Alger-Bouzarea**	**137.85**	**323**	P	PKPdf	10 33 10.3	-3.7
ADJB	**Djebel Djouab**	**138.04**	**322**	P	PKPdf	10 33 12.2	-2.2
EMHD	**Djebel Mahouad**	**138.31**	**323**	P	PKPdf	10 33 11.0	-3.9
EBNR	**Beni Rached**	**139.09**	**324**	P	PKPdf	10 33 19.0	+2.7
SJG	**San Juan**	**139.27**	**68**	PKIKP	PKPdf	10 33 19.1	+2.0
SJG				pmax	pmax		
	comp=Z,9.0nm,0.3s						
SJG				pmax	pmax		
	comp=E,8.0nm,0.3s						
SJG	**San Juan**	**139.27**	**68**	PKP	PKPdf	10 33 19.1	+2.1
	comp=E,8.7nm,0.3s,baz=352,slow=21,SNR=7.5						
SJG				SKPbc		10 36 50.3	
	comp=E,7.9nm,0.3s,baz=312,slow=17,SNR=5.5						
SJG	**San Juan**	**139.27**	**68**	*e*PKPdf	PKPdf	10 33 18.3	+1.2
ECHA	**Ech Chlef**	**139.28**	**324**	P	PKPdf	10 33 21.0	+4.4
ECHF	**Ech Chlef**	**139.29**	**324**	P	PKPdf	10 33 21.0	+4.3
ESDC	**Sonseca Array**	**139.43**	**333**	PKhKP		10 33 10.8	
	comp=E,1.8nm,0.5s,baz=49,slow=1.7,SNR=7.1						
ESDC				PKP	PKPdf	10 33 18.8	+2.0
	comp=E,5.9nm,0.5s,baz=14,slow=3.2,SNR=13						
ESDC				SKKPbc		10 45 28.6	
	comp=E,6.1nm,0.9s,baz=233,slow=4.5,SNR=15						
ESDC	**Sonseca Array**	**139.43**	**333**	PKP	PKPdf	10 33 10.8	-6.0
ESDC				PKP	PKPdf	10 33 18.8	+2.0
ESDC				SKKPbc		10 45 28.6	
EANR	**'Ain N'Sour**	**139.57**	**324**	P	PKPdf	10 33 14.0	-3.2
PVRL	**Vila Real**	**139.67**	**338**	*e*PKPdf	PKPdf	10 33 12.5	-4.7
PVRL				*e*-		10 36 47.9	
ETRT	**Tiaret**	**139.84**	**323**	P	PKPdf	10 33 12.5	-5.2
PVIS	**Viseu**	**140.22**	**337**	*e*PKPdf	PKPdf	10 33 13.4	-4.8
PVIS				*e*-		10 36 52.1	
MTE	**Manteigas**	**140.35**	**337**	*e*PKPdf	PKPdf	10 33 13.9	-4.6
MTE	**Manteigas**	**140.35**	**337**	*e*PP	PP	10 36 18.9	-2.0
MTE				*e*-		10 36 52.4	
MTE	**Manteigas**	**140.35**	**337**	*e*LQ		11 15 05.9	
MTE				*e*LR	LR	11 23 29.8	
	comp=E,2μm,19.0s						
MTE	**Manteigas**	**140.35**	**337**	*e*PKPpre		10 33 13.2	
SIV	**San Ignacio**	**140.41**	**122**	PKhKP		10 33 11.6	
	comp=E,2.6nm,0.7s,baz=228,slow=2.2,SNR=10						
SIV				PKP	PKPdf	10 33 21.7	+2.6
	comp=E,14nm,0.6s,baz=237,slow=3.6,SNR=21						
SIV				SKPbc		10 36 53.9	
	comp=E,27nm,0.9s,baz=260,slow=2.7,SNR=14						
PCBR	**Castelo Branco**	**140.81**	**336**	*e*PKPdf	PKPdf	10 33 15.3	-4.0
PCBR	**Castelo Branco**	**140.81**	**336**	*e*PP	PP	10 36 23.7	+0.1
PCBR				*e*-		10 36 52.7	
EBER	**Berja**	**141.08**	**329**	P	PKPdf	10 33 19.0	-0.9
SAML	**Samuel**	**141.32**	**110**	*e*PKPpre		10 33 14.6	
PTOM	**Tomar**	**141.37**	**337**	*e*PKPdf	PKPdf	10 33 16.6	-3.7
PTOM				*e*-		10 36 54.7	
EVO	**Evora**	**142.14**	**336**	*e*PKIKP	PKPdf	10 33 18.9	-2.8
	comp=E,72nm,0.9s						
EVO				*e*R			
	comp=E,2μm,23.0s						
MOE	**Montemor**	**142.28**	**336**	*e*PKPdf	PKPdf	10 33 22.5	+0.6
PLOU	**Loures**	**142.29**	**337**	*e*PKPdf	PKPdf	10 33 19.0	-2.9
PBEJ	**Beja**	**142.50**	**335**	*e*PKPdf	PKPdf	10 33 20.3	-2.0
PBEJ	**Beja**	**142.50**	**335**	*e*PP	PP	10 36 33.5	-0.4
PBEJ				*e*-		10 36 57.7	
PALC	**Alcoutim**	**142.81**	**334**	*e*PKPdf	PKPdf	10 33 21.5	-1.3
PALC	**Alcoutim**	**142.81**	**334**	*e*PP	PP	10 36 34.1	-1.6
PALC				*e*-		10 36 58.9	
PTEO	**Sao Teotonio**	**143.27**	**336**	*e*PKPdf	PKPdf	10 33 22.8	-0.8
PTEO	**Sao Teotonio**	**143.27**	**336**	*e*PP	PP	10 36 35.4	-3.1
PTEO				*e*-		10 36 59.7	
ADH	**Angra Heroismo**	**146.10**	**1**	*e*PKP	PKPdf	10 33 45.0	+17
ADH	**Angra Heroismo**	**146.10**	**1**	*e*LR	LR	11 22 00.0	
JATB	**Jatai**	**146.95**	**133**	⇓*e*P	PKPdf	10 33 33.3	+2.7
JATB				*e*		10 33 35.0	
JATB				*i*		10 33 37.0	
JATB				*i*		10 33 39.4	
JATB				*e*		10 33 55.9	
JATB				*i*		10 34 01.4	
JATB				*i*		10 34 08.0	
JATB				*i*		10 34 12.8	
JATB				*i*		10 34 22.2	
JATB				*i*		10 34 32.3	
PDA	**Ponta Delgada**	**146.99**	**358**	*e*PKP	PKPdf	10 33 29.7	-0.3
PDA	**Ponta Delgada**	**146.99**	**358**	*e*LR	LR	11 22 51.0	
CAM4	**Nova Friburgo**	**149.10**	**151**	*e*P	PKPdf	10 33 33.9	0.0
CAM4				*i*		10 33 36.9	
CAM4				*i*		10 33 41.9	
CAM4				*i*		10 33 46.7	
BDFB	**Brasilia**	**150.93**	**134**	PKP	PKPdf	10 33 39.7	+2.8
	comp=E,43nm,0.7s,baz=198,slow=0.5,SNR=24						
BDFB				PKPbc	PKPdf	10 33 44.6	+7.8
	comp=E,69nm,0.7s,baz=241,slow=1.8,SNR=29						
BAO	**Brasilia Array**	**150.95**	**134**	PKPdf	PKPdf	10 33 41.0	+4.1
DBIC	**Dimbokro**	**158.05**	**276**	PKIKP	PKPdf	10 33 49.3	+2.7
DBIC						10 34 22.7	
DBIC				pmax	pmax		
	comp=Z,19nm,0.8s						
DBIC				pmax	pmax		
	comp=Z,53nm,1.0s						
DBIC	**Dimbokro**	**158.05**	**276**	PKP	PKPdf	10 33 49.3	+2.7
	comp=Z,19nm,0.8s,baz=74,slow=2.1,SNR=16						
DBIC				PKPab	PKPab	10 34 22.7	-0.2
	comp=Z,53nm,1.0s,baz=68,slow=5.8,SNR=6.0						
DBIC	**Dimbokro**	**158.05**	**276**	*e*PKPdf	PKPdf	10 33 48.6	+2.0
CS6B	**Jaguaretama**	**164.49**	**130**	*c i*P	PKPdf	10 33 53.3	0.0
CS6B				*e*		10 34 27.9	

MDD ***15*** *10:19:57.7±0.7, 34.87N×8.66W, mb4.3/18, Error ellipse: s-maj=9.4km s-min=6.0km az=80.0, PRXIMO*

CSEM ***15*** *10:19:58.6±0.2, 34.82N×8.52W, h25*^{km}*, ML3.9/16, Error ellipse: s-maj=5.0km s-min=2.9km az=78.0*

CNRM ***15*** *10:20:00.7, 34.90N×8.49W, h23*^{km}*, MD3.8*

NEIC ***15*** *10:20:01.3±2.5, 35.13N×8.53W, h10*^{km}*, MG4.5(MDD), Error ellipse: s-maj=28.3km s-min=5.2km az=211.0*

SFS ***15*** *10:20:03.0, 35.26N×8.42W*

LDG ***15*** *10:20:04.4±0.2, 35.13N×8.54W, h20*^{km}*, Ml4.0/4, Error ellipse: s-maj=3.8km s-min=2.4km az=23.0*

IGIL ***15*** *10:20:04.3, 35.30N×8.50W, h0*^{km}*, ML3.6*

INMG ***15*** *10:20:05.3±1.6, 35.26N×8.50W, h10*^{km}*, ML3.1, Error ellipse: s-maj=5.9km s-min=4.1km az=37.0*

ISC 15 10:19:58.9±0.5**, 35.09N**±0.03×**8.32W**±0.04**, h10**^{km}**, n92,** σ**1^{s}45**/165**, 2C-3D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AVE	**Averroes**	**1.94**	**157**	P	**Pn**	**10 20 33.5**	**+1.2**
AVE				S	**Sn**	**10 20 50.0**	**-7.0**
DKH	**Dar Kharkhour**	**2.46**	**80**	*i* P	**Pn**	**10 20 41.0**	**+1.3**
DKH				*i* S	**Sn**	**10 21 10.0**	**-0.1**
PALC	**Alcoutim**	**2.46**	**16**	*e*Pn	**Pn**	**10 20 42.2**	**+2.4**
PALC				*e*Sn	**Sn**	**10 21 09.9**	**-0.4**
	105nm,0.3s						
PALC	**Alcoutim**	**2.46**	**16**	⇓Pn	**Pn**	**10 20 42.2**	**+2.4**
PALC				Sn	**Sn**	**10 21 09.9**	**-0.4**
	53nm,0.3s						
PALC	**Alcoutim**	**2.46**	**16**	P	**Pn**	**10 20 42.1**	**+2.3**
PALC				S	**Sn**	**10 21 10.0**	**-0.3**
PTEO	**Sao Teotonio**	**2.47**	**353**	*i* Pn	**Pn**	**10 20 40.7**	**+0.8**
PTEO				*e*Sn	**Sn**	**10 21 08.2**	**-2.2**
	82nm,0.2s						
PTEO	**Sao Teotonio**	**2.47**	**353**	⇓Pn	**Pn**	**10 20 40.7**	**+0.8**
PTEO				Sn	**Sn**	**10 21 08.2**	**-2.2**
	41nm,0.2s						
PTEO	**Sao Teotonio**	**2.47**	**353**	P	**Pn**	**10 20 40.6**	**+0.7**
PTEO				S	**Sn**	**10 21 08.2**	**-2.2**
EGRO	**El Granado**	**2.53**	**15**	⇓Pn	**Pn**	**10 20 43.0**	**+2.2**
	5.3nm,0.1s,SNR=18						
EGRO				Sn	**Sn**	**10 21 11.4**	**-0.5**
	91nm,0.1s,SNR=5.6						
EGRO	**El Granado**	**2.53**	**15**	Pn	**Pn**	**10 20 43.0**	**+2.2**
	5.3nm,0.1s,SNR=18						
EGRO				Sn	**Sn**	**10 21 11.4**	**-0.5**
	91nm,0.1s,SNR=5.6						
ESPR	**Espera**	**2.67**	**48**	⇑Pn	**Pn**	**10 20 46.0**	**+3.2**
	8.0nm,0.1s,SNR=18						
ESPR				Sn	**Sn**	**10 21 17.2**	**+1.6**
	92nm,0.2s,SNR=4.6						
ESPR	**Espera**	**2.67**	**48**	Pn	**Pn**	**10 20 46.0**	**+3.2**
	8.0nm,0.1s,SNR=18						
ESPR				Sn	**Sn**	**10 21 17.2**	**+1.6**
	92nm,0.2s,SNR=4.6						
EJIF	**Jimena Fronter**	**2.69**	**59**	Pn	**Pn**	**10 20 47.5**	**+4.5**
	7.7nm,0.2s,SNR=29						
EJIF				Sn	**Sn**	**10 21 19.8**	**+3.8**
	18nm,0.6s,SNR=6.2						
REAL	**Reales**	**2.89**	**60**	*e*P	**Pn**	**10 20 50.0**	**+4.1**
REAL				*e*S	**Sn**	**10 21 23.0**	**+1.9**
PBEJ	**Beja**	**2.95**	**7**	*e*Pn	**Pn**	**10 20 48.2**	**+1.4**
PBEJ				*e*Sn	**Sn**	**10 21 20.6**	**-2.0**
	63nm,0.3s						
PBEJ	**Beja**	**2.95**	**7**	P	**Pn**	**10 20 48.2**	**+1.4**
PBEJ				S	**Sn**	**10 21 20.5**	**-2.1**
PBEJ	**Beja**	**2.95**	**7**	P	**Pn**	**10 20 48.2**	**+1.4**
PBEJ				*e*Sn	**Sn**	**10 21 20.6**	**-2.0**
	63nm,0.3s						
LIJA	**Lijar**	**2.98**	**52**	*i* P	**Pn**	**10 20 50.0**	**+2.8**
LIJA				*e*S	**Sn**	**10 21 22.0**	**-1.4**
EMIN	**Mina Concepcio**	**2.98**	**26**	Pn	**Pn**	**10 20 49.2**	**+1.9**
	2.2nm,0.1s,SNR=13						
EMIN				Sn	**Sn**	**10 21 22.4**	**-1.0**
	53nm,0.2s						
EMIN	**Mina Concepcio**	**2.98**	**26**	Pn	**Pn**	**10 20 49.2**	**+2.0**
	2.2nm,0.1s,SNR=13						
EMIN				Sn	**Sn**	**10 21 22.4**	**-1.0**
	53nm,0.2s						
MIF	**Mishlifen**	**3.06**	**122**	*i* P	**Pn**	**10 20 48.0**	**-0.4**
MIF				*i* S	**Sn**	**10 21 20.0**	**-5.5**
KIB	**El Ksiba**	**3.15**	**142**	*i* P	**Pn**	**10 20 47.0**	**-2.6**
KIB				*i* S	**Sn**	**10 21 21.0**	**-6.6**
EMIJ	**Mijas**	**3.24**	**62**	⇑Pn	**Pn**	**10 20 53.4**	**+2.5**
	12nm,0.3s,SNR=18						
EMIJ				Sn	**Sn**	**10 21 30.1**	**+0.3**
	38nm,0.3s						
EMIJ	**Mijas**	**3.24**	**62**	Pn	**Pn**	**10 20 53.4**	**+2.6**
	12nm,0.3s,SNR=18						
EMIJ				Sn	**Sn**	**10 21 30.1**	**+0.2**
	38nm,0.3s						
CZD	**Col de Zad**	**3.41**	**126**	*i* P	**Pn**	**10 20 52.0**	**-1.3**
CZD				*i* S	**Sn**	**10 21 30.0**	**-4.3**
MOE	**Montemor**	**3.42**	**360**	*e*Pn	**Pn**	**10 20 54.2**	**+0.7**
MOE				*e*Sn	**Sn**	**10 21 31.8**	**-2.8**
MOE	**Montemor**	**3.42**	**360**	P	**Pn**	**10 20 54.1**	**+0.6**
MOE				S	**Sn**	**10 21 31.7**	**-2.9**
MOE	**Montemor**	**3.42**	**360**	P	**Pn**	**10 20 54.1**	**+0.6**
MOE				*e*Sn	**Sn**	**10 21 31.8**	**-2.8**
EVO	**Evora**	**3.44**	**4**	*e*Pn	**Pn**	**10 20 54.2**	**+0.5**
EVO				*e*Sn	**Sn**	**10 21 30.1**	**-4.9**
	64nm,0.2s						
CIA	**Chichaoua**	**3.54**	**186**	*i* P	**Pn**	**10 20 50.0**	**-5.1**
CIA				*i* S	**Sn**	**10 21 28.0**	**-9.4**
TZK	**Tazeka**	**3.56**	**105**	*i* P	**Pn**	**10 20 55.0**	**-0.4**
TZK				*i* S	**Sn**	**10 21 35.0**	**-3.0**
LIS	**Lisbon**	**3.68**	**350**	*e*P	**Pn**	**10 20 57.3**	**+0.2**
LIS				*e*S	**Sn**	**10 21 36.2**	**-4.8**
LIS				*e*S	**Sn**	**10 21 36.3**	**-4.7**
LIS				AML	AML	10 21 39.8	
	comp=N,189nm,0.4s						
ECAB	**El Cabril**	**3.79**	**37**	Pn	**Pn**	**10 21 00.6**	**+2.0**
	comp=N,9.4nm,0.1s,SNR=53						
ECAB				Sn	**Sn**	**10 21 42.8**	**-1.0**
	comp=N,9.7nm,0.1s						
ECAB	**El Cabril**	**3.79**	**37**	Pn	**Pn**	**10 21 00.6**	**+2.0**
	comp=N,9.4nm,0.1s,SNR=53						
ECAB				Sn	**Sn**	**10 21 42.8**	**-0.9**
	comp=N,9.7nm,0.1s						
EBAD	**Badajoz**	**3.80**	**16**	Pn	**Pn**	**10 21 00.1**	**+1.3**
	comp=N,0.6nm,0.0s,SNR=14						
EBAD				Sn	**Sn**	**10 21 42.6**	**-1.6**
	comp=N,18nm,0.1s,SNR=6.5						
EBAD	**Badajoz**	**3.80**	**16**	Pn	**Pn**	**10 21 00.2**	**+1.3**
	comp=N,0.6nm,0.0s,SNR=14						
EBAD				Sn	**Sn**	**10 21 42.6**	**-1.6**
	comp=N,18nm,0.1s,SNR=6.5						
PLOU	**Loures**	**3.84**	**350**	*e*Pn	**Pn**	**10 21 00.0**	**+0.6**
PLOU				*e*Sn	**Sn**	**10 21 41.8**	**-3.4**
	comp=N,46nm,0.2s						
PLOU	**Loures**	**3.84**	**350**	P	**Pn**	**10 20 59.9**	**+0.5**
PLOU				*e*Sn	**Sn**	**10 21 41.8**	**-3.4**
	comp=N,46nm,0.2s						
ELOJ	**Sierra Loja**	**3.95**	**58**	Sn	**Sn**	**10 21 48.7**	**+0.8**
	comp=N,5.0nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**4.10**	**52**	Pn	**Pn**	**10 21 06.6**	**+3.5**
	comp=N,15nm,0.2s,SNR=7.9						
ELUQ				Sn	**Sn**	**10 21 51.8**	**+0.2**
	comp=N,23nm,0.2s,SNR=7.9						
TIO	**Tiouine**	**4.25**	**168**	S	**Sn**	**10 21 50.0**	**-5.5**
EADA	**Adamuz**	**4.30**	**43**	Pn	**Pn**	**10 21 07.8**	**+1.9**
	comp=N,3.6nm,0.1s,SNR=31						
EADA				Sn	**Sn**	**10 21 56.1**	**-0.7**
	comp=N,13nm,0.1s						
EADA	**Adamuz**	**4.30**	**43**	Pn	**Pn**	**10 21 07.8**	**+1.8**
	comp=N,3.6nm,0.1s,SNR=31						
EADA				Sn	**Sn**	**10 21 56.1**	**-0.7**
	comp=N,13nm,0.1s						
EALB	**Alboran**	**4.40**	**77**	Pn	**Pn**	**10 21 09.9**	**+2.6**
	comp=N,0.5nm,0.0s,SNR=7.9						
EALB				Sn	**Sn**	**10 21 57.8**	**-1.4**
	comp=N,0.4nm,0.0s,SNR=7.9						
EALB	**Alboran**	**4.40**	**77**	Pn	**Pn**	**10 21 09.9**	**+2.6**
	comp=N,0.5nm,0.0s,SNR=7.9						
EALB				Sn	**Sn**	**10 21 57.8**	**-1.4**
	comp=N,0.4nm,0.0s,SNR=7.9						
ECOG	**Cogollos-Vega**	**4.42**	**59**	Pn	**Pn**	**10 21 11.1**	**+3.4**
	comp=N,7.3nm,0.2s,SNR=7.9						
ECOG				Sn	**Sn**	**10 22 00.5**	**+0.6**
	comp=N,14nm,0.3s,SNR=7.9						
ZFT	**Errachidia**	**4.50**	**131**	*i* P	**Pn**	**10 21 06.0**	**-2.8**
ZFT				*i* S	**Sn**	**10 21 57.0**	**-5.0**
PTOM	**Tomar**	**4.52**	**359**	*e*Pn	**Pn**	**10 21 09.3**	**+0.3**
PTOM				*e*Sn	**Sn**	**10 21 57.2**	**-5.1**
	comp=N,38nm,0.2s						
PTOM	**Tomar**	**4.52**	**359**	P	**Pn**	**10 21 09.2**	**+0.2**
PTOM				*e*Sn	**Sn**	**10 21 57.2**	**-5.1**
	comp=N,38nm,0.2s						
EBER	**Berja**	**4.76**	**66**	Sn	**Sn**	**10 22 08.0**	**-0.4**
	comp=N,7.8nm,0.4s,SNR=7.9						
EBER	**Berja**	**4.76**	**66**	Sn	**Sn**	**10 22 08.0**	**-0.4**
	comp=N,7.8nm,0.4s,SNR=7.9						
PCBR	**Castelo Branco**	**4.79**	**8**	*e*Pn	**Pn**	**10 21 13.4**	**+0.5**
PCBR				*e*Sn	**Sn**	**10 22 04.2**	**-4.9**
	comp=N,31nm,0.3s						
PCBR	**Castelo Branco**	**4.79**	**8**	P	**Pn**	**10 21 13.5**	**+0.6**
PCBR				*e*Sn	**Sn**	**10 22 04.2**	**-4.9**
	comp=N,31nm,0.3s						
TAF	**Taforalt**	**4.86**	**92**	P	**Pn**	**10 21 12.0**	**-1.9**
EQES	**Quesada**	**5.03**	**56**	Pn	**Pn**	**10 21 18.0**	**+1.8**
	comp=N,1.8nm,0.1s,SNR=9.1						
EQES				Sn	**Sn**	**10 22 14.0**	**-1.0**
	comp=N,5.8nm,0.1s						
EQES	**Quesada**	**5.03**	**56**	Pn	**Pn**	**10 21 18.0**	**+1.8**
	comp=N,1.8nm,0.1s,SNR=9.1						
EQES				Sn	**Sn**	**10 22 14.0**	**-1.1**
	comp=N,5.8nm,0.1s						
MTE	**Manteigas**	**5.33**	**6**	*e*Pn	**Pn**	**10 21 20.7**	**+0.1**
MTE				*e*Sn	**Sn**	**10 22 17.8**	**-5.0**
	comp=N,20nm,0.3s						
MTE	**Manteigas**	**5.33**	**6**	Pn	**Pn**	**10 21 20.7**	**+0.1**
MTE				Sn	**Sn**	**10 22 17.5**	**-5.3**
PVIS	**Viseu**	**5.62**	**3**	*e*Pn	**Pn**	**10 21 24.6**	**-0.1**
PVIS				*e*Sn	**Sn**	**10 22 23.6**	**-6.5**
	comp=N,9.8nm,0.2s						
PVIS	**Viseu**	**5.62**	**3**	Pn	**Pn**	**10 21 24.6**	**-0.1**
PVIS				Sn	**Sn**	**10 22 23.6**	**-6.5**
	comp=N,4.9nm,0.2s						
ESDC	**Sonseca Array**	**5.74**	**36**	Pn	**Pn**	**10 21 27.5**	**+1.2**
	comp=N,2.4nm,0.1s,baz=223,slow=12,SNR=7.9						
ESDC				Sn	**Sn**	**10 22 28.8**	**-4.2**
	comp=N,3.3nm,0.1s,baz=222,slow=22,SNR=4.2						
ESDC	**Sonseca Array**	**5.74**	**36**	Pn	**Pn**	**10 21 27.5**	**+1.2**
	comp=N,2.4nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**5.86**	**51**	Pn	**Pn**	**10 21 28.7**	**+0.8**
	comp=N,1.2nm,0.1s,SNR=5.1						
EVIA				Sn	**Sn**	**10 22 32.5**	**-3.5**
	comp=N,9.3nm,0.2s						
PVRL	**Vila Real**	**6.19**	**4**	*e*Pn	**Pn**	**10 21 32.6**	**-0.1**
PVRL				*e*Sn	**Sn**	**10 22 37.3**	**-7.0**
	comp=N,11nm,0.1s						
PVRL	**Vila Real**	**6.19**	**4**	Pn	**Pn**	**10 21 32.6**	**-0.1**
PVRL				Sn	**Sn**	**10 22 37.3**	**-7.0**
	comp=N,5.6nm,0.1s						
EMUR	**La Murta**	**6.33**	**62**	Sn	**Sn**	**10 22 46.4**	**-1.5**
	comp=N,9.0nm,0.5s,SNR=7.9						
EMUR	**La Murta**	**6.33**	**62**	Sn	**Sn**	**10 22 46.4**	**-1.4**
	comp=N,9.0nm,0.5s,SNR=7.9						
ETOB	**Tobarra**	**6.49**	**55**	Pn	**Pn**	**10 21 37.2**	**+0.4**
	comp=N,0.7nm,0.1s,SNR=12						
ETOB				Sn	**Sn**	**10 22 47.3**	**-4.4**
	comp=N,5.0nm,0.2s						
ETOB	**Tobarra**	**6.49**	**55**	Pn	**Pn**	**10 21 37.2**	**+0.4**
	comp=N,0.7nm,0.1s,SNR=12						
ELOB	**Lobios**	**6.77**	**2**	Pn	**Pn**	**10 21 40.0**	**-0.7**
	comp=N,2.8nm,0.1s,SNR=19						
ELOB				Sn	**Sn**	**10 22 51.6**	**-7.1**
	comp=N,11nm,0.3s						
ELOB	**Lobios**	**6.77**	**2**	Pn	**Pn**	**10 21 40.0**	**-0.8**
	comp=N,2.8nm,0.1s,SNR=19						
ECAL	**Calabor**	**6.95**	**10**	Pn	**Pn**	**10 21 43.0**	**-0.4**
	comp=N,4.7nm,0.2s,SNR=10.0						
ECAL				Sn	**Sn**	**10 22 57.2**	**-6.1**
	comp=N,10nm,0.2s						
ECAL	**Calabor**	**6.95**	**10**	Pn	**Pn**	**10 21 43.0**	**-0.4**
	comp=N,4.7nm,0.2s,SNR=10.0						
EZAM	**Zamans**	**7.05**	**358**	Pn	**Pn**	**10 21 44.3**	**-0.5**
	comp=N,5.0nm,0.2s,SNR=7.9						
EZAM				Sn	**Sn**	**10 22 59.1**	**-6.8**
	SNR=7.9						
EFAM	**Famara**	**7.41**	**218**	Sn	**Sn**	**10 22 57.1**	**-18**
	comp=N,7.1nm,0.1s,SNR=7.9						
EFAM	**Famara**	**7.41**	**218**	Sn	**Sn**	**10 22 57.1**	**-18**
	comp=N,7.1nm,0.1s,SNR=7.9						
EBEN	**Beniarda**	**7.42**	**59**	Pn	**Pn**	**10 21 52.5**	**+2.6**
	comp=N,0.1nm,0.1s,SNR=7.9						
EBEN				Sn	**Sn**	**10 23 10.5**	**-4.6**
	comp=N,1.3nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**7.86**	**356**	Pn	**Pn**	**10 21 54.8**	**-1.3**
	comp=N,2.4nm,0.1s,SNR=5.4						
EMAZ				Sn	**Sn**	**10 23 17.2**	**-8.9**
	comp=N,30nm,1.1s						
EMAZ	**Mazaricos**	**7.86**	**356**	Pn	**Pn**	**10 21 54.8**	**-1.3**
	comp=N,2.4nm,0.1s,SNR=5.4						
CFUE	**Fuerteventura**	**8.00**	**218**	Sn	**Sn**	**10 23 12.7**	**-17**
	comp=N,23nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**8.15**	**47**	Pn	**P**	**10 22 01.0**	**+0.9**
	SNR=7.9						
EMOS				Sn	**Sn**	**10 23 26.4**	**-6.8**
	comp=N,0.9nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**8.15**	**47**	Pn	**P**	**10 22 01.0**	**+0.9**
	SNR=7.9						
CFTV	**Fuerteventura**	**8.27**	**218**	Sn	**Sn**	**10 23 17.6**	**-19**
	comp=N,2.2nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**8.55**	**15**	Pn	**P**	**10 22 05.4**	**-0.2**
	comp=N,0.2nm,0.1s,SNR=7.9						
EARI				Sn	**Sn**	**10 23 37.1**	**-6.0**
	comp=N,0.8nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**8.55**	**15**	Pn	**P**	**10 22 05.4**	**-0.2**
	comp=N,0.2nm,0.1s,SNR=7.9						
EARI				Sn	**Sn**	**10 23 37.1**	**-6.0**
EALK	**Alkurruntz**	**9.69**	**31**	Sn	**Sn**	**10 24 03.7**	**-7.6**
	comp=N,3.8nm,0.2s,SNR=7.9						
SJPF	**Ste Jean**	**9.72**	**32**	*e*Pn	**P**	**10 22 22.4**	**+0.5**
SJPF				*e*Sn	**Sn**	**10 24 04.9**	**-7.3**
	comp=N,8.0nm,0.4s						
ETSF	**Etsaut**	**9.86**	**35**	*e*Pn	**P**	**10 22 23.8**	**0.0**
ETSF				*e*Sn	**Sn**	**10 24 08.5**	**-7.1**
	comp=N,8.1nm,0.5s						
EBIE	**Bielsa**	**10.05**	**38**	Pn	**P**	**10 22 27.5**	**+1.1**
	comp=N,1.8nm,0.4s,SNR=6.2						
EBIE				Sn	**S**	**10 24 13.4**	**-6.9**
	comp=N,3.0nm,0.4s,SNR=7.9						
EBIE	**Bielsa**	**10.05**	**38**	Pn	**P**	**10 22 27.5**	**+1.2**
	comp=N,1.8nm,0.4s						
EPF	**Esparros**	**10.40**	**38**	*e*Pn	**P**	**10 22 31.2**	**+0.1**
EPF				*e*Sn	**S**	**10 24 21.4**	**-7.4**
	comp=N,9.0nm,0.5s						
CAF	**Calviac**	**12.63**	**36**	*e*Pn	**P**	**10 23 01.2**	**-0.3**

IDC ***15*** *10:24:30.1±1.2, 8.75S×120.08E, mb4.3/5, mb1 4.3/6, mb1mx4.1/17, mbtmp4.2/6, ML3.8/1, MS5.3/2, Ms1 5.3/2,* *ms1mx4.4/27, Error ellipse: s-maj=63.1km s-min=23.0km az=71.0*

ISC 15 10:24:32.8±0.9, 8.6S±0.2×120.3E±0.3, h33^{km}, n9, σ1^{s}02/7, mb4.3/5, MS5.4/2, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.74**	**152**	Pn	**P**	**10 27 00.3**	**-7.1**
	2.7nm,0.3s,baz=179,slow=23,SNR=14						
WRA	**Warramunga Arr**	**17.61**	**131**	P	**P**	**10 28 37.1**	**-0.3**
	0.3nm,0.3s,baz=303,slow=14,SNR=5.8						
NWAO	**Narrogin (SRO)**	**24.36**	**186**	P	**P**	**10 29 49.4**	**+0.4**
	6.7nm,0.8s,mb4.1,baz=17,slow=14,SNR=2.5						
CMAR	**Chiang Mai Arr**	**34.20**	**322**	P	**P**	**10 31 17.4**	**-0.1**
	1.6nm,0.5s,mb4.2,baz=151,slow=7.2,SNR=5.1						
SONM	**Songino Array**	**57.55**	**349**	P	**P**	**10 34 24.0**	**+2.5**
	2.7nm,0.5s,mb4.5,baz=168,slow=8.0,SNR=9.1						
MKAR	**Makanchi Array**	**64.73**	**332**	P	**P**	**10 35 09.5**	**-0.6**
	2.4nm,0.6s,mb4.4,baz=140,slow=7.5,SNR=8.7						
BVAR	**Borovoye Array**	**74.59**	**331**	P	**P**	**10 36 09.1**	**-1.1**
	3.3nm,0.9s,mb4.3,baz=135,slow=6.3,SNR=5.2						
GNI	**Garni**	**84.67**	**312**	LR	LR	11 18 44.3	
	comp=Z,946nm,21.7s,MS5.1,baz=83,slow=38						
MLR	**Muntele Rosu**	**99.16**	**315**	LR	LR	11 28 03.0	
	comp=Z,3μm,21.6s,MS5.7,baz=60,slow=38						

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*CSEM **15** 10:30:33.9±0.5, 38.46N×28.58W, h17^{km}, ML2.3, Error ellipse: s-maj=38.9km s-min=10.6km az=4.0, After PDA*

*PDA **15** 10:30:33.9±0.4, 38.46N×28.58W, h17^{km}±2^{km}, MD2.9, ML2.3, Error ellipse: s-maj=4.9km s-min=1.3km az=14.0*

SVSA 15 10:30:33.9±0.4, 38.46N×28.58W, h17^{km}±2^{km}, MD2.9, ML2.3, Error ellipse: s-maj=4.9km s-min=1.3km az=14.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOR	**Horta**	**0.08**	**332**	*e*P	Pb	10 30 36.6	-0.6
HOR				*e*S	Sb	10 30 38.8	-0.6
PICO	**Pico**	**0.13**	**72**	*e*P	Pb	10 30 37.3	-0.5
PICO				*e*S	Sb	10 30 39.9	-0.5
CALA	**Caldeira**	**0.15**	**323**	*e*P	Pb	10 30 37.6	-0.5
CALA				*e*S	Sb	10 30 40.3	-0.6
PMAN	**Manadas**	**0.42**	**66**	*e*P	Pb	10 30 41.0	-1.5
PMAN				*e*S	Sb	10 30 46.4	-2.0
	75nm,0.1s						

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*IDC **15** 10:42:13.9±0.6, 20.64S×168.41E, h38^{km}±3^{km}, mb4.1/14, mb1 4.3/16, mb1mx4.2/21, mbtmp4.4/16, ML4.5/2, MS3.7/1, Ms1 3.7/1, ms1mx3.5/19, Error ellipse: s-maj=20.7km s-min=13.1km az=145.0*

*NEIC **15** 10:42:14.0±0.5, 20.63S×168.42E, mb4.6/6, Error ellipse: s-maj=11.1km s-min=9.9km az=137.0*

ISC 15 10:42:12.6±0.5, 20.55S±0.05×168.29E±0.07, h41^{km}, h41^{km}±1.1^{km}:pP-P, n57, σ1^{s}00/39, mb4.5/17, 1C-3D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.30**	**228**	*e*P	**P**	**10 42 48.0**	**-0.8**
DZM				*e*S	**S**	**10 43 14.4**	**-1.6**
DZM	**Mont Dzumac**	**2.30**	**228**	Pn	**P**	**10 42 48.5**	**-0.3**
	29nm,0.3s,baz=63,slow=12,SNR=840						
DZM				Sn	**S**	**10 43 16.7**	**+0.7**
	301nm,0.3s,baz=133,slow=22,SNR=24						
DZM				LR	LR	10 43 25.5	
	comp=Z,2μm,19.6s,baz=352,slow=31						
DZM	**Mont Dzumac**	**2.30**	**228**	*e*P	**P**	**10 42 48.0**	**-0.8**
DZM				*e*S	**S**	**10 43 14.4**	**-1.6**
NOUC	**Port Laguerre**	**2.42**	**230**	*e*P	**P**	**10 42 50.2**	**-0.3**
NOUC				*e*S	**S**	**10 43 18.7**	**-0.4**
NOUC	**Port Laguerre**	**2.42**	**230**	*e*P	**P**	**10 42 50.2**	**-0.3**
NOUC				*e*S	**S**	**10 43 18.6**	**-0.4**
HNR	**Honiara**	**13.67**	**323**	Pn	**P**	**10 45 27.3**	**+1.2**
	8.3nm,0.3s,baz=160,slow=23,SNR=4.5						
HNR				Sn	**S**	**10 47 55.6**	**-2.0**
	4.2nm,0.3s,baz=127,slow=9.7,SNR=3.4						
CTA	**Charters Tower**	**20.67**	**267**	P	**P**	**10 46 52.7**	**+1.2**
	3.9nm,0.7s,baz=82,slow=10.0,SNR=4.4						
CTA				sP		10 47 06.5	
	9.1nm,0.7s,baz=97,slow=12,SNR=8.1						
CTA	**Charters Tower**	**20.67**	**267**	P	**P**	**10 46 52.7**	**+1.1**
CTA				sP		10 47 06.5	
CTAO	**Charters Tower**	**20.67**	**267**	*e*P	**P**	**10 46 54.0**	**+2.4**
	18nm,1.0s						
CTAO				*e*		10 47 05.0	
PMG	**Port Moresby**	**23.19**	**295**	P	**P**	**10 47 19.5**	**+2.8**
	3.6nm,0.6s,mb4.0,baz=132,slow=12,SNR=3.1						
STKA	**Stephens Creek**	**26.41**	**239**	*e*P	**P**	**10 47 49.0**	**+1.7**
	7.1nm,0.6s,mb4.4						
STKA				*e*	pP	10 48 02.0	+3.8
STKA	**Stephens Creek**	**26.41**	**239**	P	**P**	**10 47 48.6**	**+1.4**
	8.1nm,0.6s,mb4.4,baz=70,slow=9.1,SNR=18						
STKA				sP	sP	10 48 02.1	-1.1
	6.5nm,0.8s,baz=62,slow=6.7,SNR=4.5						
WB2	**Warramunga Arr**	**31.82**	**265**	*e*P	**P**	**10 48 35.3**	**-0.5**
WB2				*e*	pP	10 48 46.3	-0.8
WRAB	**Tennant Creek**	**31.82**	**265**	*e*P	**P**	**10 48 34.9**	**-1.0**
	12nm,1.0s,mb4.7						
WRAB				*e*	pP	10 48 46.2	-0.9
WRA	**Warramunga Arr**	**31.83**	**265**	P	**P**	**10 48 35.2**	**-0.7**
	0.9nm,0.5s,mb3.8,baz=94,slow=8.5,SNR=25						
WRA				pP	pP	10 48 45.8	-1.3
	3.2nm,0.7s,baz=91,slow=8.5,SNR=17						
FITZ	**Fitzroy Crossi**	**40.24**	**266**	P	**P**	**10 49 48.7**	**+1.4**
	13nm,0.7s,mb4.8,baz=152,slow=7.1,SNR=30						
FITZ				pP	pP	10 49 58.4	-0.3
	29nm,0.8s,baz=147,slow=6.0,SNR=18						
MBWA	**Marble Bar**	**45.24**	**260**	*e*P	**P**	**10 50 29.1**	**+1.1**
KLBR	**Kellerberrin**	**46.35**	**246**	*e*P	**P**	**10 50 36.8**	**+0.1**
	12nm,0.6s,mb5.0						
KLBR				*e*	pP	10 50 48.3	0.0
NWAO	**Narrogin (SRO)**	**46.83**	**244**	P	**P**	**10 50 40.4**	**0.0**
	16nm,0.7s,mb5.0,baz=94,slow=7.9,SNR=15						
NWAO	**Narrogin (SRO)**	**46.83**	**244**	*e*P	**P**	**10 50 40.8**	**+0.4**
NWAO				*e*	pP	10 50 51.9	-0.1
SBA	**Scott Base**	**57.36**	**180**	*e*P	**P**	**10 51 58.6**	**0.0**
	5.5nm,0.9s,mb4.6						
SBA				*e*	pP	10 52 10.3	-0.3
MJAR	**Matsushiro Arr**	**63.50**	**333**	P	**P**	**10 52 40.0**	**-1.0**
	5.8nm,1.2s,mb4.6,baz=156,slow=9.5,SNR=4.4						
MJAR				pP	pP	10 52 52.1	-0.9
	4.4nm,1.0s,baz=170,slow=7.6,SNR=4.9						
QSPA	**South Pole Qui**	**69.52**	**180**	⇑*i*P	**P**	**10 53 18.3**	**-0.1**
	7.3nm,1.0s,mb4.6						
MAW	**Mawson**	**76.89**	**202**	P	**P**	**10 54 01.5**	**-0.4**
	2.2nm,0.8s,mb4.1,baz=111,slow=8.6,SNR=3.9						
CMAR	**Chiang Mai Arr**	**78.23**	**295**	P	**P**	**10 54 12.2**	**+2.0**
	1.7nm,0.4s,mb4.3,baz=134,slow=3.2,SNR=9.7						
CMAR				pP	pP	10 54 22.6	+0.1
	4.8nm,0.9s,baz=127,slow=3.6,SNR=4.5						
SONM	**Songino Array**	**87.73**	**324**	P	**P**	**10 54 57.9**	**-0.4**
	1.5nm,0.8s,mb4.3,baz=142,slow=4.1,SNR=3.9						
SONM				pP	pP	10 55 11.7	+1.0
	2.9nm,0.9s,baz=160,slow=4.6,SNR=5.3						
SNAA	**Sanae**	**87.82**	**183**	P	**P**	**10 54 57.9**	**-0.2**
	2.0nm,1.0s,mb4.3,baz=186,slow=7.8,SNR=12						
SNAA				pP	pP	10 55 11.2	+0.5
	2.0nm,1.1s,baz=189,slow=5.9,SNR=4.0						
VNA3	**Neumayer Olymp**	**88.45**	**181**	⇓*i*P	**P**	**10 55 00.8**	**-0.3**
VNA3				*e*	pP	10 55 13.8	+0.2
VNA2	**Neumayer--Watz**	**88.73**	**181**	⇓*i*P	**P**	**10 55 02.6**	**+0.1**
VNA2				*e*	pP	10 55 15.0	0.0
YBH	**Yreka Blue Hor**	**88.85**	**44**	P	**P**	**10 55 03.7**	**-0.1**
	3.1nm,1.0s,mb4.6,baz=90,slow=1.0,SNR=3.3						
YBH				pP	pP	10 55 16.5	+0.2
	2.8nm,0.9s,baz=217,slow=10,SNR=3.9						
VNA1	**Neumayer--Stat**	**89.02**	**181**	⇓*i*	**P**	**10 55 04.0**	**+0.1**
NVAR	**Mina Array Bea**	**90.33**	**49**	P	**P**	**10 55 10.5**	**-0.3**
	2.2nm,1.0s,mb4.5,baz=216,slow=5.5,SNR=7.7						
NVAR				pP	pP	10 55 23.1	-0.2
	1.7nm,0.7s,baz=214,slow=5.8,SNR=8.3						
ILAR	**Eielson Array**	**91.74**	**18**	P	**P**	**10 55 15.3**	**-1.4**
	0.7nm,0.8s,mb4.0,baz=237,slow=5.6,SNR=4.8						
ARCES	**ARCESS Array B**	**126.09**	**345**	PKP	PKPdf	11 01 11.1	+1.0
	0.6nm,0.5s,baz=90,slow=1.2,SNR=5.3						
CLZ	**Clausthal**	**144.33**	**336**	*e*PKPbc	PKPbc	11 01 44.8	+1.2
CLZ				*e*pPKPbc		11 01 57.6	
MOX	**Moxa**	**144.78**	**334**	*e*P	PKPbc	11 01 46.0	+1.1
SKO	**Skopje**	**144.84**	**315**	*i* P	PKPdf	11 01 47.1	+1.8
KHC	**Kasperske Hory**	**145.05**	**331**	*e*PKP	PKPdf	11 01 47.0	+1.6
GEC2	**GERESS Array S**	**145.20**	**330**	*e*PKPbc	PKPbc	11 01 48.2	+2.2
GEC2				*e*pPKPbc		11 02 00.6	
GERES	**GERESS Array B**	**145.20**	**330**	PKPbc	PKPbc	11 01 47.9	+1.8
	2.5nm,0.8s,baz=63,slow=3.0,SNR=17						
GERES				pPKPbc		11 02 00.1	
	2.9nm,0.7s,baz=45,slow=3.8,SNR=8.2						
GRA1	**Grafenberg Arr**	**145.67**	**333**	*e*PKPbc	PKPbc	11 01 49.6	+2.4
GRA1				*e*pPKPbc		11 02 02.5	
GRF	**Grafenberg Arr**	**145.67**	**333**	*e*PKP	PKPdf	11 01 49.6	+3.2
GRF				pPKPbc		11 02 02.5	
TNS	**Taunus Mts**	**146.36**	**336**	*e*PKPbc	PKPbc	11 01 51.7	+2.9
TNS				*e*pPKPbc		11 02 04.3	
PDKS	**Podkum**	**146.44**	**326**	*e*PKPbc	PKPbc	11 01 51.9	+2.7
FUR	**Furstenfeldbru**	**146.80**	**331**	*e*PKPbc	PKPbc	11 01 53.3	+3.4
FUR				*e*pPKPbc		11 02 05.6	
CEY	**Cerknica**	**146.96**	**326**	*e*PKPbc	PKPbc	11 01 53.0	+2.6
CEY				*e*		11 02 05.6	
BFO	**Black Forest**	**147.93**	**334**	*e*PKPbc	PKPdf	11 01 55.2	+5.0
BFO				*e*pPKPbc		11 02 08.1	
DAVOX	**Davos**	**148.46**	**331**	PKPbc	PKPdf	11 01 57.1	+6.0
	3.5nm,0.4s,baz=38,slow=3.6,SNR=7.2						
DAVOX				pPKPbc		11 02 09.8	
	11nm,0.8s,baz=22,slow=5.4,SNR=9.3						
HAU	**Haudompre**	**148.97**	**336**	*e*PKIKP	PKPdf	11 01 57.5	+5.6
	14nm,0.8s						
CABF	**La Chapelle**	**150.21**	**335**	*e*PKIKP	PKPdf	11 02 01.2	+7.3
	11nm,0.7s						
LOR	**Lormes**	**150.49**	**338**	*e*PKIKP	PKPdf	11 02 01.0	+6.7
	22nm,1.0s						
SSF	**Saint Saulge**	**150.79**	**338**	*e*PKIKP	PKPdf	11 02 01.7	+6.9
	21nm,1.2s						
LPL	**La Plagne**	**150.83**	**333**	*e*PKIKP	PKPdf	11 02 03.1	+8.2
MBDF	**Montbardon**	**151.44**	**332**	*e*PKIKP	PKPdf	11 02 03.4	+7.6
	5.6nm,0.7s						
ORIF	**Oris-en-Rattie**	**151.67**	**333**	*e*PKIKP	PKPdf	11 02 03.8	+7.6
PGF	**Pioggiola**	**151.99**	**326**	*e*PKIKP	PKPdf	11 02 04.3	+7.6
FRF	**La Foret Royal**	**152.40**	**330**	*e*PKIKP	PKPdf	11 02 03.8	+6.5

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*NEIC **15** 11:24:55.2±2.0, 22.15S×179.95W, h667^{km}±25^{km}, mb4.3/9, Error ellipse: s-maj=28.4km s-min=16.5km az=150.0*

*IDC **15** 11:24:56.6±6.4, 21.94S×179.92E, h682^{km}±82^{km}, mb3.2/5, mb1 3.4/6, mb1mx3.1/16, mbtmp4.3/6, Error ellipse: s-maj=61.3km s-min=37.3km az=146.0*

ISC 15 11:24:56.2±3.1, 22.2S±0.3×179.9E±0.2, h699^{km}±39^{km}, n18, σ0^{s}34/17, mb4.0/12, 2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.48**	**268**	P	**P**	**11 27 39.6**	**+0.1**
	0.9nm,0.3s,baz=97,slow=19,SNR=13						
CTA	**Charters Tower**	**31.43**	**267**	⇓*i*P	**P**	**11 30 27.2**	**+0.2**
	3.2nm,0.3s,mb4.3						
CTAO	**Charters Tower**	**31.43**	**267**	*e*P	**P**	**11 30 26.9**	**-0.1**
	5.4nm,0.6s,mb4.2						
TOO	**Toolangi**	**33.35**	**235**	*e*P	**P**	**11 30 42.3**	**-0.4**
	6.3nm,0.5s,mb4.4						
PMG	**Port Moresby**	**33.88**	**287**	P	**P**	**11 30 47.5**	**+0.1**
	4.5nm,0.6s,mb4.2,baz=94,slow=15,SNR=3.5						
STKA	**Stephens Creek**	**35.32**	**246**	⇓*i*P	**P**	**11 30 59.5**	**+0.5**
	5.2nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**35.32**	**246**	P	**P**	**11 30 59.5**	**+0.5**
	6.7nm,0.6s,mb4.4,baz=89,slow=9.3,SNR=19						
WB2	**Warramunga Arr**	**42.46**	**264**	*e*P	**P**	**11 31 55.9**	**-0.3**
WRAB	**Tennant Creek**	**42.46**	**264**	*e*P	**P**	**11 31 55.5**	**-0.7**
	5.8nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**42.47**	**264**	P	**P**	**11 31 56.0**	**-0.3**
	1.9nm,0.3s,mb4.1,baz=96,slow=7.7,SNR=143						
KAKA	**Kakadu**	**46.09**	**274**	*e*P	**P**	**11 32 23.8**	**-0.2**
	3.3nm,0.3s,mb4.2						
FITZ	**Fitzroy Crossi**	**50.90**	**264**	*e*P	**P**	**11 32 59.9**	**+0.6**
	6.6nm,0.9s,mb4.1						
KLBR	**Kellerberrin**	**55.60**	**246**	*e*P	**P**	**11 33 32.1**	**+0.3**
	56nm,1.8s,mb4.5						
MBWA	**Marble Bar**	**55.61**	**259**	*e*P	**P**	**11 33 32.2**	**+0.2**
	8.1nm,0.5s,mb4.2						
NVAR	**Mina Array Bea**	**83.57**	**44**	P	**P**	**11 36 15.4**	**0.0**
	0.6nm,0.8s,mb3.1,baz=217,slow=9.0,SNR=4.1						
TXAR	**Lajitas Array**	**89.59**	**58**	P	**P**	**11 36 44.0**	**0.0**
	0.4nm,0.8s,mb3.1,baz=217,slow=6.3,SNR=4.4						
TXAR	**Lajitas Array**	**89.59**	**58**	P	**P**	**11 36 44.0**	**0.0**
AKASG	**Malin Array Be**	**143.46**	**328**	PKP	PKPdf	11 43 15.1	+1.5
	0.5nm,0.4s,baz=38,slow=4.3,SNR=4.8						

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*IDC **15** 11:44:26.6±2.6, 1.83S×99.11E, mb4.0/7, mb1 4.1/7, mb1mx3.9/17, mbtmp4.0/7, Error ellipse: s-maj=63.7km s-min=57.2km az=99.0*

ISC 15 11:44:30.9±5.2, 1.6S±0.6×99.2E±0.8, h33^{km}, n8, σ0^{s}52/7, mb4.1/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**19.94**	**359**	P	**P**	**11 49 03.1**	**+0.2**
	1.3nm,0.7s,baz=186,slow=9.4,SNR=7.6						
SONM	**Songino Array**	**49.64**	**6**	P	**P**	**11 53 21.1**	**-0.2**
	0.8nm,0.6s,mb3.9,baz=187,slow=8.4,SNR=8.5						
MKAR	**Makanchi Array**	**50.43**	**345**	P	**P**	**11 53 28.1**	**+0.7**
	1.8nm,0.7s,mb4.2,baz=162,slow=7.7,SNR=9.8						
ZAL	**Zalesovo**	**56.62**	**350**	P	**P**	**11 54 12.8**	**-0.2**
	2.4nm,0.3s,mb4.7,baz=318,slow=5.6,SNR=7.9						
BVAR	**Borovoye Array**	**59.53**	**340**	P	**P**	**11 54 32.5**	**-0.9**
	1.7nm,0.7s,mb4.2,baz=140,slow=8.2,SNR=10						
BRTR	**Keskin Array B**	**72.45**	**313**	P	**P**	**11 55 55.9**	**-0.2**
	0.7nm,0.6s,mb3.7,baz=135,slow=5.2,SNR=4.2						
FINES	**FINESS Array B**	**83.38**	**332**	P	**P**	**11 56 56.6**	**+0.7**
	1.0nm,0.7s,mb3.9,baz=90,slow=7.6,SNR=3.5						
TXAR	**Lajitas Array**	**144.88**	**36**	PKPbc	PKPbc	12 04 05.8	+0.3
	1.4nm,0.6s,baz=274,slow=1.4,SNR=20						

IGQ 15 12:21:41.9, 2.64S×79.81W, h12^{km}±8^{km}, mb4.3, Error ellipse: s-maj=10.4km s-min=3.4km az=106.9, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGUA	**Igualata**	**1.64**	**46**	P	Pn	12 22 10.2	-0.6
IGUA				S	Sn	12 22 28.4	-3.5
HOJA	**Cerro de Hojas**	**1.74**	**335**	P	Pn	12 22 13.1	+0.8
HOJA				S	Sn	12 22 34.5	0.0
ARRY	**Arrayan**	**1.76**	**50**	P	Pn	12 22 11.9	-0.7
CUSU	**Cusua**	**1.79**	**48**	P	Pn	12 22 14.2	+1.4
JUIV	**Juive**	**1.81**	**48**	P	Pn	12 22 14.6	+1.4
ULBA	**Ulba**	**1.84**	**50**	P	Pn	12 22 13.3	-0.2
RUN5	**Runtun**	**1.85**	**49**	P	Pn	12 22 15.8	+2.0
PISA	**Pisayambo**	**2.12**	**42**	P	Pn	12 22 18.9	+1.2
CAMI	**Rancho Maria**	**2.35**	**34**	P	Pn	12 22 23.7	+2.8
CAMI				S	Sn	12 22 56.6	+6.7
TAMB	**Tambo**	**2.41**	**37**	P	Pn	12 22 24.2	+2.3
VC1	**Cotopaxi 1**	**2.44**	**35**	P	Pn	12 22 25.5	+3.3
ANTI	**Antisana**	**2.73**	**37**	P	Pn	12 22 31.4	+5.0
GGP	**Refugio Guagua**	**2.74**	**26**	P	Pn	12 22 29.3	+2.9
PINO	**Pino**	**2.75**	**26**	P	Pn	12 22 30.0	+3.4
YANA	**Yana**	**2.80**	**26**	P	Pn	12 22 30.0	+2.7
YANA				S	Sn	12 23 03.0	+1.7
CAYR	**Refugio Cayamb**	**3.20**	**34**	P	Pn	12 22 40.5	+7.5
COTA	**Cotacachi**	**3.30**	**26**	P	Pn	12 22 39.7	+5.2
ECEN	**Cerro Negro**	**3.90**	**28**	P	Pn	12 22 48.4	+5.3
LORE	**San Lorenzo**	**4.03**	**14**	P	Pn	12 22 46.3	+1.4

MAN 15 12:45:43.5, 12.16N×124.96E, h1^{km}, mb4.6, ML3.5, MS3.4, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.99**	**179**	*e*P	Pb	12 46 03.9	+0.7
PLP				*e*S	Sg	12 46 21.2	+4.7
RCP	**Roxas**	**2.25**	**255**	⇑*e*P	Pn	12 46 22.5	+0.1
SCPH	**Surigao**	**2.42**	**168**	*e*P	Pn	12 46 23.1	-1.8
SCPH				*e*S	Sn	12 47 00.6	+5.0
AUQP	**San Andres**	**2.51**	**298**	*e*P	Pn	12 46 26.9	+0.8
TBP	**Tagbilaran**	**2.68**	**204**	*e*P	Pn	12 46 31.8	+3.2

IDC 15 12:58:38.2±2.9, 5.87N×94.68E, mb3.4/3, mb1 3.7/4, mb1mx3.6/19, mbtmp3.5/4, ML4.2/1, MS3.2/1, Ms1 3.4/1, ms1mx3.0/14, Error ellipse: s-maj=96.1km s-min=28.1km az=64.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.19**	**18**	Pn	P	13 01 47.9	-1.7
	0.4nm,0.3s,baz=208,slow=14,SNR=11						
CMAR				LR	LR	13 07 24.1	
	comp=Z,97nm,20.1s,baz=330,slow=40						
MKAR	**Makanchi Array**	**42.15**	**347**	P	P	13 06 32.6	-1.5
	0.3nm,0.7s,baz=180,slow=8.6,SNR=2.6						
SONM	**Songino Array**	**43.00**	**12**	P	P	13 06 38.9	-2.2
	0.3nm,0.7s,baz=180,slow=8.6,SNR=3.8						
WRA	**Warramunga Arr**	**46.68**	**124**	P	P	13 07 09.0	-1.9
	0.6nm,0.7s,baz=305,slow=9.3,SNR=9.5						

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*IDC **15** 13:10:23.3±0.9, 3.58N×126.64E, mb4.1/8, mb1 4.3/8, mb1mx4.1/19, mbtmp4.2/8, Error ellipse: s-maj=65.6km s-min=16.7km az=72.0*

*NEIC **15** 13:10:27.6±0.6, 3.54N×126.69E, h30^{km}, mb4.3/2, Error ellipse: s-maj=49.2km s-min=10.7km az=73.0*

ISC 15 13:10:28.9±6.7, 3.5N±0.2×126.5E±0.4, h57^{km}±63^{km}, n11, σ0^{s}78/11, mb4.1/9, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**17.11**	**160**	*e*P	**P**	**13 14 25.9**	**+0.1**
	7.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.43**	**182**	P	**P**	**13 15 15.5**	**+1.3**
	5.5nm,0.6s,mb4.1,baz=11,slow=9.8,SNR=16						
WRAB	**Tennant Creek**	**24.48**	**162**	*e*P	**P**	**13 15 43.1**	**-1.1**
	24nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	**24.49**	**162**	P	**P**	**13 15 43.9**	**-0.4**
	5.0nm,0.9s,mb4.0,baz=342,slow=9.6,SNR=34						
WB2	**Warramunga Arr**	**24.49**	**162**	*e*P	**P**	**13 15 43.2**	**-1.1**
STKA	**Stephens Creek**	**37.95**	**159**	P	**P**	**13 17 44.0**	**+1.2**
	3.4nm,0.6s,mb4.3,baz=333,slow=12,SNR=8.7						
SONM	**Songino Array**	**47.49**	**342**	P	**P**	**13 19 00.6**	**+0.4**
	1.0nm,0.6s,mb3.9,baz=158,slow=8.0,SNR=11						
MKAR	**Makanchi Array**	**57.65**	**325**	P	**P**	**13 20 15.2**	**-0.6**
	1.9nm,0.5s,mb4.4,baz=122,slow=8.7,SNR=17						
BVAR	**Borovoye Array**	**67.42**	**327**	P	**P**	**13 21 20.1**	**-0.5**
	0.9nm,0.6s,mb4.0,baz=121,slow=8.6,SNR=7.1						
ILAR	**Eielson Array**	**85.46**	**25**	P	**P**	**13 23 02.0**	**+0.6**
	0.3nm,1.0s,mb3.4,baz=251,slow=6.5,SNR=4.4						
ARCES	**ARCESS Array B**	**90.63**	**340**	P	**P**	**13 23 26.1**	**0.0**
	1.6nm,0.6s,mb4.5,baz=56,slow=4.4,SNR=6.7						

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*NEIC **15** 13:12:59.7±2.2, 40.90N×126.40W, h10^{km}, mb3.5/1, Error ellipse: s-maj=29.8km s-min=15.3km az=216.0*

*IDC **15** 13:13:01.1±2.0, 41.28N×126.37W, mb3.0/2, mb1 3.5/5, mb1mx3.3/25, mbtmp3.1/5, ML4.1/2, Error ellipse: s-maj=31.2km s-min=18.8km az=21.0*

ISC 15 13:12:58.3±1.6, 41.0N±0.1×126.5W±0.1, h10^{km}, n15, σ1^{s}24/16, mb3.1/3, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**2.07**	**54**	*e*P	**Pn**	**13 13 34.2**	**+0.5**
KHMM	**Horse Mountain**	**2.09**	**93**	*e*P	**Pn**	**13 13 32.1**	**-1.7**
YBH	**Yreka Blue Hor**	**2.93**	**75**	Pn	**Pn**	**13 13 46.0**	**+0.1**
	12nm,0.3s,baz=271,slow=11,SNR=58						
YBH				Sn	**Sn**	**13 14 23.0**	**+1.5**
	4.1nm,0.3s,baz=46,slow=15,SNR=6.5						
WDC	**Whiskeytown Da**	**3.02**	**97**	*e*P	**Pn**	**13 13 45.6**	**-1.6**
HUMO	**Hull Mountain**	**3.08**	**58**	*e*P	**Pn**	**13 13 48.4**	**+0.4**
MOD	**Modoc**	**4.73**	**77**	*e*P	**Pn**	**13 14 10.8**	**-0.6**
BEKR	**Beckwourth**	**4.81**	**102**	*e*P	**Pn**	**13 14 13.2**	**+0.6**
WVOR	**Wild Horse Val**	**6.04**	**74**	*e*P	**Pn**	**13 14 28.3**	**-1.6**
NVAR	**Mina Array Bea**	**6.81**	**110**	Pn	**Pn**	**13 14 43.6**	**+2.8**
	0.2nm,0.3s,baz=346,slow=30,SNR=3.6						
BMO	**Blue Mountains**	**7.75**	**57**	*e*P	**Pn**	**13 14 54.2**	**+0.3**
MCMT	**McKenzie Canyo**	**10.70**	**65**	P	**P**	**13 15 33.8**	**-0.8**
PDAR	**Pinedale Array**	**12.74**	**77**	Pn	**P**	**13 16 07.7**	**+5.4**
	0.1nm,0.3s,baz=281,slow=15,SNR=4.2						
FFC	**Flin Flon**	**21.26**	**42**	P	**P**	**13 17 45.9**	**-0.8**
	1.3nm,0.6s,mb3.4						
TXAR	**Lajitas Array**	**21.92**	**115**	P	**P**	**13 17 57.5**	**+4.0**
	0.2nm,0.3s,mb3.0,baz=270,slow=9.0,SNR=3.3						
ILAR	**Eielson Array**	**26.54**	**340**	P	**P**	**13 18 38.5**	**+0.9**
	0.3nm,0.9s,mb2.8,baz=157,slow=6.9,SNR=4.5						

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*MOS **15** 13:13:52.4±0.9, 58.09S×25.04W, h10^{km}, mb5.2/18, MS4.6/5, Error ellipse: s-maj=37.4km s-min=12.3km az=106.2*

*BJI **15** 13:13:56.2, 58.00S×24.80W, h26^{km}, mB5.5, Ms5.5, Msz5.3*

*HRVD **15** 13:13:56.3±0.2, 58.27S×24.57W, h21^{km}±1^{km}, MW5.4/63, Centroid moment Tensor Solution. LP body waves: s45,c66;Mantle waves: s63,c110; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.93±.06; M$_{\theta\theta}$-0.16±.04; M$_{\phi\phi}$-0.76±.04; M$_{r\theta}$-1.02±.09; M$_{\theta\phi}$0.80±.03; M$_{\phi r}$0.29±.06; Best double couple: M$_0$1.581×10^{17} NP1: φ$_s$174°, δ34°, λ140°. NP2: φ$_s$298°, δ69°, λ63°. Principal axes: T 1.551, Plg57°, Azm172°; N .06, Plg25°, Azm309°; P -1.612, Plg19°, Azm49°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **15** 13:13:56.3±2.0, 57.99S×24.84W, h26^{km}±13^{km}, mb5.2/22, MS4.9/18 Error ellipse: s-maj=7.7km s-min=5.3km az=218.0*

*IDC **15** 13:13:56.6±2.6, 58.03S×24.98W, h27^{km}±16^{km}, mb4.9/16, mb1 4.9/17, mb1mx4.8/20, mbtmp5.0/17, ML4.7/1, MS4.9/13, Ms1 4.9/13, ms1mx4.8/20, Error ellipse: s-maj=17.4km s-min=11.4km az=35.0*

ISC 15 13:13:52.2±0.3, 57.97S±0.05×24.9W±0.1, h10^{km}, n172, σ0^{s}97/69, mb5.1/28, MS4.9/32, 9C-6D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.53**	**158**	⇓*i*	**P**	**13 17 19.7**	**+0.3**
VNA1	**Neumayer--Stat**	**14.53**	**158**	⇑	**P**	**13 17 35.8**	**+16**
VNA3	**Neumayer Olymp**	**14.75**	**161**	⇓*i*	**P**	**13 17 22.5**	**+0.2**
VNA3	**Neumayer Olymp**	**14.75**	**161**	⇑*i*	**P**	**13 17 30.3**	**+8.0**
VNA3	**Neumayer Olymp**	**14.75**	**161**	⇑*i*	**P**	**13 17 39.4**	**+17**
VNA2	**Neumayer--Watz**	**14.92**	**157**	⇓*i*	**P**	**13 17 24.7**	**+0.2**
VNA2	**Neumayer--Watz**	**14.92**	**157**	⇑*i*	**P**	**13 17 32.5**	**+8.0**
VNA2	**Neumayer--Watz**	**14.92**	**157**	⇑*i*	**P**	**13 17 41.5**	**+17**
SNAA	**Sanae**	**16.46**	**155**	P	**P**	**13 17 44.2**	**-0.2**
SNAA						13 20 47.5	
SNAA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
SNAA				MLR	MLR		
	comp=Z,2μm,20.1s						
SNAA	**Sanae**	**16.46**	**155**	Pn	**P**	**13 17 44.2**	**-0.2**
	comp=Z,2.5nm,0.3s,baz=330,slow=15,SNR=118						
SNAA				Sn	**S**	**13 20 47.5**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=151,slow=22,SNR=2.4						
SNAA				LR	LR	13 22 40.2	
	comp=Z,2μm,20.1s,baz=26,slow=32						
SNAA	**Sanae**	**16.46**	**155**	*e*P	**P**	**13 17 43.5**	**-0.9**
	comp=Z,183nm,0.8s						
PMSA	**Palmer Station**	**19.69**	**233**	*e*P	**P**	**13 18 24.5**	**+0.5**
	comp=Z,58nm,0.8s						
MAIT	**Maitri**	**19.92**	**145**	*e*P	**P**	**13 18 25.3**	**-1.3**
NVL	**N'lazarevskaya**	**19.95**	**145**	⇑*i*P	**P**	**13 18 25.5**	**-1.3**
NVL				*e*S	**S**	**13 22 00.6**	**-4.9**
NVL				pmax	pmax		
	comp=Z,13nm,1.2s						
NVL				MLR	MLR		
	comp=Z,220nm,15.5s						
USHA	**Ushuaia**	**24.01**	**259**	P	**P**	**13 19 08.4**	**+1.0**
	comp=Z,32nm,0.9s,mb4.8,baz=85,slow=7.3,SNR=9.7						
USHA				LR	LR	13 26 27.7	
	comp=Z,5μm,18.6s,MS5.0,baz=76,slow=31						
SYO	**Syowa Base**	**29.29**	**138**	⇑P	**P**	**13 19 54.0**	**-2.2**
SYO	**Syowa Base**	**29.29**	**138**	⇓PnPn		13 20 41.0	
TRQA	**Tornquist**	**31.26**	**293**	*e*P	**P**	**13 20 11.3**	**-2.7**
	comp=Z,6.6nm,0.9s,mb4.5						
TRQA				LR	LR		
	comp=Z,919nm,20.0s,MS4.4						
QSPA	**South Pole Qui**	**32.27**	**180**	*e*P	**P**	**13 20 22.9**	**+0.4**
	comp=Z,42nm,0.7s,mb5.4						
PLCA	**Paso Flores**	**33.61**	**281**	P	**P**	**13 20 32.7**	**-1.8**
PLCA				pmax	pmax		
	comp=Z,19nm,0.9s						
PLCA				pmax	pmax		
	comp=E,7.0nm,0.9s						
PLCA	**Paso Flores**	**33.61**	**281**	P	**P**	**13 20 32.7**	**-1.8**
	comp=E,18nm,0.9s,mb5.0,baz=138,slow=8.1,SNR=42						
PLCA				ScP		13 26 55.8	
	comp=E,6.9nm,0.9s,baz=118,slow=6.2,SNR=9.1						
PLCA	**Paso Flores**	**33.61**	**281**	*e*P	**P**	**13 20 33.7**	**-0.8**
	comp=E,28nm,1.0s,mb5.1						
MAW	**Mawson**	**37.84**	**141**	*e*P	**P**	**13 21 09.8**	**-0.3**
	comp=E,30nm,0.8s,mb5.1						
MAW	**Mawson**	**37.84**	**141**	P	**P**	**13 21 09.5**	**-0.6**
MAW						13 23 26.9	
MAW				pmax	pmax		

```
           comp=Z,35nm,0.8s
MAW                                     pmax     pmax
           comp=Z,4.0nm,0.8s
MAW   Mawson             37.84 141  P        P           13 21 09.5  -0.7
           comp=Z,35nm,0.8s,mb5.2,baz=242,slow=8.4,SNR=54
MAW                                     PcP      PcP         13 23 26.9  -0.2
           comp=Z,4.2nm,0.8s,baz=248,slow=6.8,SNR=5.0
MAW                                     LR       LR          13 34 21.7
           comp=Z,2µm,20.2s,MS4.8,baz=248,slow=32
CPUP  Villa Florida      39.04 310  P        P           13 21 20.3  -0.3
CPUP                                    pmax     pmax
           comp=Z,8.0nm,0.8s
CPUP                                    MLR      MLR
           comp=Z,987nm,19.7s
CPUP  Villa Florida      39.04 310  P        P           13 21 20.3  -0.3
           comp=Z,8.1nm,0.8s,mb4.5,baz=168,slow=11,SNR=12
CPUP                                    LR       LR          13 36 25.2
           comp=Z,987nm,19.6s,MS4.6,baz=181,slow=35
CPUP  Villa Florida      39.04 310 eP        P           13 21 19.7  -0.9
           comp=Z,29nm,0.9s,mb5.0
CPUP                                    LR       LR
           comp=Z,1µm,20.0s,MS4.7
CFAA  Coronel Fontan     39.49 293  P        P           13 21 23.9  -0.5
           comp=Z,0.7nm,0.6s,baz=143,slow=6.3,SNR=13
CFAA                                    PcP      PcP         13 23 33.2  +0.6
           comp=Z,1.1nm,0.7s,baz=191,slow=3.0,SNR=5.6
SUR   Sutherland         39.99  70  P        P           13 21 29.5  +1.0
           comp=Z,18nm,0.9s,mb4.8,baz=242,slow=8.1,SNR=5.6
SUR   Sutherland         39.99  70 eP        P           13 21 28.7  +0.2
SUR                                     LR       LR
           comp=Z,696nm,21.0s,MS4.5
SBA   Scott Base         44.24 184 eP        P           13 22 03.8  +1.2
           comp=Z,64nm,1.5s,mb5.1
SBA                                     LR       LR
           comp=Z,2µm,20.0s,MS5.0
VNDA  Vanda              44.70 182  P        P           13 22 07.3  +1.0
VNDA                                    pmax     pmax
           comp=Z,12nm,0.8s
VNDA                                    MLR      MLR
           comp=Z,1µm,20.4s
VNDA  Vanda              44.70 182  P        P           13 22 07.2  +1.0
           comp=Z,12nm,0.8s,mb4.8,baz=184,slow=6.6,SNR=31
VNDA                                    LR       LR          13 39 46.1
           comp=Z,1µm,20.4s,MS4.9,baz=171,slow=35
VNDA  Vanda              44.70 182 eP        P           13 22 07.1  +0.8
           comp=Z,55nm,1.4s,mb5.2
BOSA  Boshof             45.28  72  P        P           13 22 12.0  +0.5
BOSA                                    pmax     pmax
           comp=Z,42nm,0.9s,mb5.3
BOSA  Boshof             45.28  72  P        P           13 22 12.0  +0.5
           comp=Z,42nm,0.9s,mb5.2,baz=214,slow=7.8,SNR=21
BOSA  Boshof             45.28  72 eP        P           13 22 11.5   0.0
           comp=Z,71nm,1.1s,mb5.4
BAO   Brasilia Array     45.67 328  P        P           13 22 17.2  +2.5
BDFB  Brasilia           45.67 328  P        P           13 22 16.8  +2.1
           comp=Z,14nm,0.8s,mb5.0,baz=162,slow=4.6,SNR=20
BDFB                                    LR       LR          13 39 20.2
           comp=Z,1µm,20.8s,MS4.9,baz=157,slow=33
MIR   Mirnyy             47.49 151 d iP      P           13 22 28.0  -0.4
MIR                                     pmax     pmax
           comp=Z,154nm,1.8s,mb5.6
LBTB  Lobatse            48.41  69 eP        P           13 22 36.4  +0.2
           comp=Z,59nm,0.9s,mb5.6
LBTB                                    LR       LR
           comp=Z,2µm,20.0s,MS5.1
TSUM  Tsumeb             49.58  57 eP        P           13 22 45.9  +0.6
           comp=Z,30nm,1.2s,mb5.2
SIV   San Ignacio        49.82 312  ScP                  13 28 00.4
           comp=Z,14nm,1.1s,baz=180,slow=4.9,SNR=10
CASY  Casey              51.66 159 eP        P           13 23 00.6  +0.1
LPAZ  La Paz             52.52 304  P        P           13 23 07.9  +0.3
LPAZ                                    pmax     pmax
           comp=Z,20nm,0.7s
LPAZ                                    pmax     pmax
           comp=E,4.0nm,0.9s
LPAZ  La Paz             52.52 304  P        P           13 23 07.9  +0.3
           comp=E,20nm,0.7s,mb5.2,baz=144,slow=5.6,SNR=17
LPAZ                                    ScP                  13 28 12.8
           comp=E,3.6nm,0.9s,baz=95,slow=8.0,SNR=6.2
LPAZ  La Paz             52.52 304 eP        P           13 23 07.2  -0.4
LPAZ                                    LR       LR
           comp=Z,579nm,21.0s,MS4.6
DRV   Dumont d'Urvil     55.17 173  P        P           13 23 35.0  +8.6
SAML  Samuel             57.06 313 eP        P           13 23 39.1  -1.7
           comp=Z,37nm,0.8s,mb5.5
SAML                                    LR       LR
           comp=Z,725nm,19.0s,MS4.8
LSZ   Lusaka             57.94  65 eP        P           13 23 46.1  -0.8
           comp=Z,63nm,1.1s,mb5.6
LSZ                                    e                     13 24 00.2
LSZ                                     LR       LR
           comp=Z,2µm,21.0s,MS5.2
OPO   Ambohidratompo     64.93  85  P        P           13 24 35.0  +1.1
           comp=Z,1.3nm,0.3s,mb4.4,baz=254,slow=6.9,SNR=3.9
DBIC  Dimbokro           66.43  22  P        P           13 24 43.6   0.0
           comp=Z,20nm,0.8s,mb5.2,baz=193,slow=8.4,SNR=13
DBIC                                    LR       LR          13 48 40.6
           comp=Z,865nm,18.3s,MS5.0,baz=167,slow=31
DBIC  Dimbokro           66.43  22 eP        P           13 24 43.5  -0.2
           comp=Z,23nm,1.0s,mb5.2
OTAV  Otavalo            71.78 302 eP        P           13 25 17.1  +0.4
           comp=Z,22nm,1.1s,mb5.0
ROSC  El Rosal           74.11 308  LR       LR          14 00 52.6
           comp=Z,458nm,18.3s,MS4.8,baz=204,slow=38
SDV   Santo Domingo      76.27 313  P        P           13 25 42.8  +0.2
           comp=Z,17nm,0.8s,mb5.0,baz=215,slow=4.0,SNR=23
SDV   Santo Domingo      76.27 313 eP        P           13 25 42.2  -0.5
           comp=Z,23nm,0.8s,mb5.2
RPZ   Rata Peaks         77.81 192  LR       LR          13 57 51.4
           comp=Z,629nm,18.4s,MS5.0,baz=73,slow=34
URZ   Urewera            82.38 197  LR       LR          13 56 36.2
           comp=Z,1µm,20.8s,MS5.2,baz=233,slow=31
SJG   San Juan           83.15 321  P        P           13 26 19.4  -0.1
           comp=Z,9.2nm,0.2s,mb5.4,baz=324,slow=20,SNR=4.2
SJG                                     LR       LR          14 04 11.7
           comp=Z,300nm,18.7s,MS4.7,baz=102,slow=36
JTS   JuntasAbangare     83.61 301  P        P           13 26 21.4  -0.6
JTS                                     pmax     pmax
           comp=Z,2.0nm,0.3s
JTS   JuntasAbangare     83.61 301  P        P           13 26 21.4  -0.5
           comp=Z,1.5nm,0.3s,mb4.5,baz=319,slow=23,SNR=4.0
NWAO  Narrogin (SRO)     84.02 149  P        P           13 26 23.3  -0.3
NWAO                                    pmax     pmax
           comp=Z,8.0nm,0.7s
NWAO  Narrogin (SRO)     84.02 149  P        P           13 26 23.3  -0.3
           comp=Z,8.2nm,0.7s,mb5.0,baz=94,slow=2.7,SNR=6.2
NWAO  Narrogin (SRO)     84.02 149 eP        P           13 26 22.7  -0.9
NWAO                                    LR       LR
           comp=Z,526nm,20.0s,MS4.9
TOO   Toolangi           84.47 172 eP        P           13 26 26.5  +0.7
           comp=Z,11nm,0.9s,mb5.0
KLBR  Kellerberrin       85.42 149 eP        P           13 26 30.7   0.0
           comp=Z,44nm,1.6s,mb5.3
TBI   Tubuai             86.83 229 eS        S           13 36 59.6  -14
           comp=Z,553nm,27.5s
TBI                                    eLQ                   13 49 50.0
           comp=Z,230nm,31.2s
TBI                                    eLR       LR          13 53 47.1
           comp=Z,662nm,24.8s,baz=167
CNB   Canberra Magne     86.94 175 eP        P           13 26 38.9  +0.8
           comp=Z,11nm,0.8s,mb5.2
STKA  Stephens Creek     89.78 168 eP        P           13 26 52.3  +0.6
           comp=Z,11nm,0.9s,mb5.2
STKA  Stephens Creek     89.78 168  P        P           13 26 51.9  +0.2
           comp=Z,12nm,0.8s,mb5.3,baz=158,slow=8.7,SNR=13
STKA                                    LR       LR          14 07 07.5
           comp=Z,1µm,18.6s,MS5.4,baz=94,slow=36
PPT   Papeete            92.05 232  LR       LR          13 58 56.4
           comp=Z,1µm,18.9s,MS5.4,baz=159,slow=29
MBWA  Marble Bar         95.84 147  P        P           13 27 19.1  -0.7
WRA   Warramunga Arr    100.47 160  P        P           13 27 40.0  -0.8
WRA                                                          13 31 48.1
WRA                                     pmax     pmax
           comp=Z,2.0nm,0.8s
WRA                                     pmax     pmax
           comp=Z,2.0nm,1.0s
WRA   Warramunga Arr    100.47 160  P        P           13 27 40.0  -0.8
           comp=Z,2.3nm,0.8s,baz=196,slow=4.1,SNR=20
WRA                                     PP       PP          13 31 48.1  -2.1
           comp=Z,1.5nm,0.9s,baz=190,slow=7.4,SNR=4.7
WB2   Warramunga Arr    100.47 160 eP        P           13 27 40.0  -0.8
WRAB  Tennant Creek     100.48 160 ePdif     P           13 27 40.0  -0.8
           comp=Z,3.5nm,0.8s
KHC   Kasperske Hory    111.33  26 ePS       PS          13 42 38.1  +1.4
KHC                                     AMS      AMS         14 14 20.0
           comp=Z,500nm,18.4s
NKC   Novy Kostel       112.11  25 ePS       PS          13 42 34.8  -9.0
NKC                                     AMS      AMS         14 15 00.0
           comp=Z,500nm,21.2s
MOX   Moxa              112.31  24 eP        PKPdf       13 32 40.0  +10
MOX                                    e                     13 42 57.0
MOX                                     PKKP     PKKP        13 43 02.0  -32
MOX                                     L                    14 17 02.0
PRU   Pruhonice         112.36  26 ePS       PS          13 42 49.7  +3.4
PRU                                     AMS      AMS         14 14 50.0
           comp=Z,500nm,23.6s
PVCC  Panska Ves        112.87  26 ePS       PS          13 42 53.5  +2.1
PVCC                                    AMS      AMS         14 16 00.0
           comp=Z,600nm,19.7s
OKC   Ostrava-Krasne    113.11  29 ePS       PS          13 43 04.7  +11
OKC                                     AMS      AMS         14 16 40.0
           comp=Z,300nm,23.2s
DPC   Dobruska-Polom    113.12  27 ePS       PS          13 43 03.7  +10
DPC                                     AMS      AMS         14 15 20.0
           comp=Z,600nm,21.3s
CLL   Collm             113.24  25 ePP       PP          13 33 18.0  -6.3
CLL                                    ePS       PS          13 43 00.0  +5.2
CLL                                    eSS       SS          13 49 24.0  +18
PV10  Paradox Valley    118.73 297 ePKPdf    PKPdf       13 32 42.0  -1.1
SRU   San Rafael        120.02 296 ePKPdf    PKPdf       13 32 42.8  -2.7
MSU   Marysvale         120.35 295 ePKPdf    PKPdf       13 32 45.2  -1.0
MVU   Marysvale         120.36 295 ePKPdf    PKPdf       13 32 44.4  -1.9
MVU                                     LR       LR
           comp=Z,356nm,20.0s,MS5.0
RSSD  Black Hills       121.00 304 ePKPdf    PKPdf       13 32 45.6  -1.8
RSSD                                    LR       LR
           comp=Z,802nm,21.0s,MS5.3
NB2   NORSAR Subarra    121.97  20  PKPdf    PKPdf       13 32 47.1  -1.7
           comp=Z,1.6nm,0.9s,baz=202,slow=1.9
NOA   NORSAR Array B    121.97  20  PKIKP    PKPdf       13 32 46.8  -2.0
NOA                                     pmax     pmax
           comp=Z,2.0nm,0.8s
NOA   NORSAR Array B    121.97  20  PKP      PKPdf       13 32 46.8  -2.1
           comp=Z,1.6nm,0.8s,baz=198,slow=1.8,SNR=5.3
TCUT  Toone Canyon      122.02 297 ePKPdf    PKPdf       13 32 48.2  -1.2
PDAR  Pinedale Array    122.43 300  PKP      PKPdf       13 32 47.9  -2.2
           comp=Z,1.0nm,0.6s,baz=146,slow=5.2,SNR=11
HWUT  Hardware Ranch    122.47 297 ePKPdf    PKPdf       13 32 48.1  -2.0
KOLN  Koldanda          122.79  89 eP        PKPdf       13 32 49.0  -2.1
           comp=Z,22nm,0.8s
OBN   Obninsk           123.10  37 ePKIKP    PKPdf       13 32 49.8  -1.2
OBN                                    e                     13 32 56.8
OBN                                    e                     13 40 00.0
OBN                                     pmax     pmax
           comp=Z,6.0nm,0.8s
OBN                                     MLR      MLR
           comp=Z,200nm,18.0s,MS4.8
CMAR  Chiang Mai Arr    123.20 109  PKIKP    PKPdf       13 32 50.1  -2.0
CMAR                                    pmax     pmax
           comp=Z,9.0nm,0.8s
CMAR  Chiang Mai Arr    123.20 109  PKP      PKPdf       13 32 50.0  -2.1
           comp=Z,8.6nm,0.8s,baz=234,slow=3.7,SNR=46
NVAR  Mina Array Bea    123.30 290  PKP      PKPdf       13 32 50.8  -1.1
           comp=Z,1.3nm,0.7s,baz=114,slow=3.9,SNR=9.3
DMN   Daman             123.47  91 eP        PKPdf       13 32 50.8  -1.7
GKN   Gorkha            123.53  90 eP        PKPdf       13 32 50.4  -2.2
           comp=Z,16nm,0.7s
LOHW  Long Hollow       123.57 300 ePKPdf    PKPdf       13 32 50.9  -1.4
PKI   Pulchoki          123.60  91 eP        PKPdf       13 32 50.9  -1.9
           comp=Z,15nm,0.6s
TPAW  Teton Pass        123.64 299 ePKPdf    PKPdf       13 32 51.6  -0.9
KKN   Kakani            123.70  91 eP        PKPdf       13 32 51.0  -2.0
           comp=Z,19nm,0.8s
MOOW  Moose Ponds       123.74 300 ePKPdf    PKPdf       13 32 51.2  -1.5
IMW   Indian Meadow     123.94 300 ePKPdf    PKPdf       13 32 52.1  -1.0
GUN   Gumba             124.12  91 eP        PKPdf       13 32 52.1  -1.7
           comp=Z,19nm,0.8s
HLID  Hailey            125.32 297 ePKPdf    PKPdf       13 32 54.2  -1.4
HLID                                    LR       LR
           comp=Z,211nm,19.0s,MS4.8
BEKR  Beckwourth        125.42 290 ePKPdf    PKPdf       13 32 52.8  -3.2
FINES FINESS Array B    125.50  27  PKIKP    PKPdf       13 32 53.1  -2.3
FINES                                   pmax     pmax
           comp=Z,6.0nm,0.6s
FINES FINESS Array B    125.50  27  PKP      PKPdf       13 32 53.0  -2.4
           comp=Z,5.9nm,0.6s,baz=180,slow=1.9,SNR=29
MCMT  McKenzie Canyo    125.54 299 ePKPdf    PKPdf       13 32 54.8  -1.2
KAF   Kangasniemi       126.13  27 ep        PKPdf       13 32 54.1  -2.5
HRY   Holter Researc    126.49 301 ePKPdf    PKPdf       13 32 57.4  -0.3
WVOR  Wild Horse Val    126.51 293 ePKPdf    PKPdf       13 32 57.3  -0.6
WVOR                                    LR       LR
           comp=Z,259nm,20.0s,MS4.9
MOD   Modoc             126.93 292  PKPdf    PKPdf       13 32 58.0  -0.6
MOD                                     LR       LR
           comp=Z,231nm,20.0s,MS4.8
CHMT  Chamberlain Mo    127.29 301 ePKPdf    PKPdf       13 32 57.6  -1.7
MSO   Missoula          127.55 300 ePKPdf    PKPdf       13 32 58.2  -1.5
MSO                                     LR       LR
           comp=Z,323nm,19.0s,MS5.0
BMO   Blue Mountains    127.66 296 ePKPdf    PKPdf       13 32 58.6  -1.5
LSA   Lhasa             128.34  94  PKP      PKPdf       13 33 01.6  -0.2
AAK   Ala-Archa         129.41  70⇓iPKIKP    PKPdf       13 33 01.1  -2.4
AAK   Ala-Archa         129.41  70 ePKPdf    PKPdf       13 33 01.7  -1.8
AAK                                     LR       LR
           comp=Z,147nm,20.0s,MS4.7
EDM   Edmonton          131.89 306 ePKPdf    PKPdf       13 33 05.3  -2.6
ARCES ARCESS Array B    132.26  21  PKIKP    PKPdf       13 33 06.2  -2.0
ARCES                                                        13 35 29.0
ARCES                                   pmax     pmax
           comp=Z,5.0nm,0.6s
ARCES                                   pmax     pmax
           comp=Z,5.0nm,1.0s
ARCES ARCESS Array B    132.26  21  PKP      PKPdf       13 33 06.2  -2.1
           comp=Z,5.1nm,0.6s,baz=201,slow=1.5,SNR=20
ARCES                                   PP       PP          13 35 29.0  -2.6
           comp=Z,4.7nm,1.0s,baz=236,slow=4.4,SNR=5.1
ARCES ARCESS Array B    132.26  21  PKP      PKPdf       13 33 06.2  -2.1
ARCES                                   PP       PP          13 35 29.0  -2.6
DAG   Danmarks Havn     134.54   2⇑ePKIKP    PKPdf       13 33 10.1  -2.2
DAG                                     pmax     pmax
           comp=Z,1.0nm,0.6s
DAG   Danmarks Havn     134.54   2⇑iP        PKPdf       13 33 10.1  -2.2
           comp=Z,1.3nm,0.6s
BVAR  Borovoye Array    134.73  58  PKP      PKPdf       13 33 11.2  -2.0
           comp=Z,2.4nm,0.6s,baz=243,slow=3.3,SNR=13
MKAR  Makanchi Array    136.28  72  PKHKP                13 33 05.6
MKAR                                                         13 33 14.2
MKAR                                    pmax     pmax
           comp=Z,1.0nm,0.8s
MKAR                                    pmax     pmax
           comp=Z,3.0nm,0.7s
MKAR  Makanchi Array    136.28  72  PKhKP                13 33 05.5
           comp=Z,1.2nm,0.8s,baz=233,slow=1.8,SNR=5.2
MKAR                                    PKP      PKPdf       13 33 14.2  -2.0
           comp=Z,2.5nm,0.7s,baz=243,slow=2.7,SNR=11
YKA   Yellowknife Ar    138.45 316  PKIKP    PKPdf       13 33 17.3  -2.5
YKA                                                          13 36 06.3
YKA                                     pmax     pmax
           comp=Z,6.0nm,0.7s
YKA                                     pmax     pmax
           comp=Z,2.0nm,0.8s
YKA   Yellowknife Ar    138.45 316  PKP      PKPdf       13 33 17.3  -2.5
           comp=Z,6.1nm,0.7s,baz=132,slow=1.9,SNR=14
YKA                                     PP       PP          13 36 06.3  -4.6
           comp=Z,1.6nm,0.8s,baz=122,slow=5.8,SNR=4.8
YKW3  Yellowknife Ar    138.50 316 ePKPdf    PKPdf       13 33 17.7  -2.2
LZH   Lanzhou           140.00 100 ePKP      PKPdf       13 33 17.8  -5.5
LZH                                     PP       PP
           comp=Z,180nm,4.8s
LZH                                     LR       LR
           comp=E,270nm,19.5s
LZH                                     LR       LR
           comp=Z,370nm,21.0s,MS5.1
LZH   Lanzhou           140.00 100 ePKP      PKPdf       13 33 17.7  -5.6
LZH                                     sPKP                 13 33 21.0
LZH                                     PP       PP          13 36 18.0  -3.0
LZH                                     SKKS                 13 43 05.0
LZH                                     SS       SS          13 54 35.0  -4.8
LZH                                     LR       LR
           comp=Z,380nm,21.0s,MS5.1
GTA   Gaotai            140.34  93 ePKP      PKPdf       13 33 21.6  -2.3
GTA                                     XPKP                 13 33 38.5
ZAL   Zalesovo          142.03  65  PKIKP    PKPdf       13 33 23.7  -2.5
ZAL                                     pmax     pmax
           comp=Z,1.0nm,0.5s
ZAL   Zalesovo          142.03  65  PKP      PKPdf       13 33 23.7  -2.5
           comp=Z,1.4nm,0.5s,baz=235,slow=2.4,SNR=6.7
DLBC  Dease Lake        142.47 304  PKhKP                13 33 20.1
           comp=Z,1.6nm,0.7s,baz=150,slow=2.8,SNR=3.1
DLBC  Dease Lake        142.47 304 ePKPpre               13 33 19.9
HHC   Hu-ho-hao-te      147.58 103 ePKP      PKPdf       13 33 37.4  +1.3
HHC                                     SKS      SKS         13 40 40.9  -3.0
HHC                                     SS       SS          13 56 04.3  -2.6
HHC                                     PP       PP
           comp=Z,140nm,10.4s
HHC                                     LR       LR
           comp=N,170nm,17.8s,MS5.0
HHC                                     LR       LR
           comp=E,160nm,19.0s,MS5.0
HHC                                     LR       LR
           comp=Z,160nm,20.2s,MS4.8
CBIJ  Chichi jima       147.81 158  PKPbc    PKPdf       13 33 37.8  +0.9
           comp=Z,45nm,0.6s,baz=264,slow=21,SNR=3.8
INK   Inuvik            148.10 318  PKP2     PKPab       13 33 38.1  -3.1
INK                                     pmax     pmax
           comp=Z,29nm,0.7s
INK   Inuvik            148.10 318  PKPbc    PKPdf       13 33 38.1  +2.0
           comp=Z,29nm,0.7s,baz=113,slow=1.9,SNR=35
INK   Inuvik            148.10 318 ePKPdf    PKPdf       13 33 34.8  -1.3
INK                                    ePKPbc    PKPdf       13 33 37.8  +1.7
INK                                     PKPbc    PKPdf       13 33 38.1  +2.0
MOY   Mondy             148.91  78 ePKP2     PKPab       13 33 42.1  -2.9
MOY                                     pmax     pmax
           comp=Z,38nm,2.1s
ZAK   Zakamensk         149.39  82 ePKIKP    PKPdf       13 33 36.2  -2.5
ZAK                                    e                     13 33 42.2
ZAK                                     pmax     pmax
           comp=Z,13nm,1.2s
SONM  Songino Array     149.54  88  PKP      PKPdf       13 33 37.3  -1.7
           comp=Z,1.9nm,0.4s,baz=222,slow=2.5,SNR=10
SONM                                    PKPbc    PKPdf       13 33 43.0  +4.0
           comp=Z,15nm,0.8s,baz=264,slow=1.3,SNR=20
ULN   Ulaanbaatar       149.91  88 i PKHKP               13 33 37.8
ULN   Ulaanbaatar       149.91  88 ePKPdf    PKPdf       13 33 38.1  -1.5
ULN                                    ePKPbc    PKPdf       13 33 43.5  +3.9
JNU   Nakatsue          150.21 136  PKPbc    PKPdf       13 33 44.5  +3.9
           comp=Z,17nm,0.8s,baz=157,slow=3.2,SNR=9.1
TLY   Talaya            150.30  80 ePKIKP    PKPdf       13 33 45.2  +5.1
TLY                                     pmax     pmax
           comp=Z,26nm,1.1s
TLY   Talaya            150.30  80 ePKPdf    PKPdf       13 33 45.0  +4.9
TLY                                     LR       LR
           comp=Z,84nm,19.0s,MS4.6
EYAK  Cordova Ski Ar    150.56 300 ePKPbc    PKPdf       13 33 44.7  +4.5
DIV   Divide            150.78 301 ePKPbc    PKPdf       13 33 45.5  +5.0
IRK   Irkutsk           150.93  79 ePKIKP    PKPdf       13 33 45.9  +4.9
IRK                                     pmax     pmax
           comp=Z,21nm,1.1s
SML   Sawmill           152.16 302 ePKPbc    PKPdf       13 33 46.8  +4.3
INCN  Inchon            152.28 125 ePKPbc    PKPdf       13 33 48.1  +4.6
ILAR  Eielson Array     152.34 309  PKIKP    PKPdf       13 33 38.6  -4.1
ILAR                                    pmax     pmax
           comp=Z,1.0nm,0.7s
ILAR                                    pmax     pmax
           comp=Z,11nm,0.8s
ILAR  Eielson Array     152.34 309  PKP      PKPdf       13 33 38.6  -4.1
           comp=Z,0.5nm,0.7s,baz=191,slow=4.6,SNR=7.5
ILAR                                    PKPbc    PKPdf       13 33 47.8  +5.0
           comp=Z,11nm,0.8s,baz=144,slow=3.2,SNR=64
SLKM  Skilak Lake       152.62 299 ePKPbc    PKPdf       13 33 49.5  +6.3
KDAK  Kodiak Island     152.78 292 ePKPbc    PKPdf       13 33 49.3  +5.7
IMA   Indian Mountai    155.35 310 ePKPbc    PKPdf       13 33 55.2  +8.4
MJAR  Matsushiro Arr    155.81 145  PKIKP    PKPdf       13 33 57.0  +8.7
MJAR                                    pmax     pmax
           comp=Z,2.0nm,1.0s
MJAR                                    pmax     pmax
           comp=Z,5.0nm,0.7s
MJAR  Matsushiro Arr    155.81 145  PKPbc    PKPdf       13 33 57.0  +8.7
           comp=Z,2.1nm,1.0s,baz=140,slow=1.7,SNR=4.2
MJAR                                    PKPab    PKPab       13 34 14.4  -0.1
           comp=Z,5.4nm,0.7s,baz=184,slow=5.0,SNR=11
CN2   Changchun         156.75 115 ePKP      PKPdf       13 33 43.5  -5.8
CN2                                     LR       LR
           comp=N,300nm,19.0s,MS5.3
CN2                                     LR       LR
           comp=E,300nm,19.0s,MS5.3
CN2                                     LR       LR
           comp=Z,400nm,21.0s,MS5.2
MDJ   Mudanjiang        159.33 119  PKP      PKPdf       13 33 51.8  -0.7
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*NEIC **15** 13:17:31.4±1.8, 41.20N×126.21W, h10^{km}, mb3.7/2, Error ellipse: s-maj=22.4km s-min=10.5km az=53.0*

*IDC **15** 13:17:31.0±2.1, 41.30N×126.17W, mb3.8/2, mb1 4.0/6, mb1mx3.6/26, mbtmp3.7/6, ML3.3/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/39, Error ellipse: s-maj=35.6km s-min=18.0km az=21.0*

ISC 15 13:17:28.2±2.8, 41.17N±0.09×126.3W±0.1, h3^{km}±23^{km}, n30, σ1ˢ05/30, mb3.7/3, Off coast of northern California

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Code  Station Name        Δ°   AZ°    Phase ID             Time        Res
                                    Op       ISC         h  m  s     ISC
KBO   Bosley Butte        1.84  55 eP        Pn          13 18 01.3  +0.4
KHMM  Horse Mountain      1.93  98 eP        Pn          13 18 01.9  -0.3
KEBM  Edson Butte         2.22  39 eP        Pn          13 18 06.9  +0.6
YBH   Yreka Blue Hor      2.72  77  Pn       Pn          13 18 15.4  +1.9
           15nm,0.3s,baz=275,slow=11,SNR=25
YBH                                 Sn       Sn          13 18 47.2  -0.2
           8.7nm,0.3s,baz=149,slow=14,SNR=6.7
WDC   Whiskeytown Da      2.88 101 eP        Pn          13 18 15.0  -0.8
HOPS  Hopland             3.27 131 eP        Pn          13 18 19.0  -2.3
MOD   Modoc               4.52  79 eP        Pn          13 18 38.9  -0.3
BEKR  Beckwourth          4.68 104 eP        Pn          13 18 42.6  +1.2
WVOR  Wild Horse Val      5.83  75 eP        Pn          13 18 56.2  -1.4
NVAR  Mina Array Bea      6.70 112  Pn       Pn          13 19 11.7  +1.7
           0.2nm,0.3s,baz=287,slow=14,SNR=4.4
OCWA  Octopus Mounta      6.74  12  P        Pn          13 19 10.3  -0.2
BMO   Blue Mountains      7.51  58 eP        Pn          13 19 21.6  +0.3
ELK   Elko                8.35  89  Pn       P           13 19 34.4  +1.5
           0.1nm,0.3s,baz=268,slow=8.7,SNR=9.8
ELK   Elko                8.35  89  Pn       P           13 19 34.4  +1.5
HLID  Hailey              9.08  71 eP        P           13 19 41.8  -1.4
NEW   Newport             9.61  39  LR       LR          13 23 44.0
           comp=Z,70nm,19.0s,baz=125,slow=39
MSO   Missoula           10.51  53 eP        P           13 20 01.9  -0.9
HWUT  Hardware Ranch     11.05  83  P        P           13 20 09.5  -0.6
BOZ   Bozeman (W)        11.53  62 eP        P           13 20 16.5  -0.2
TPAW  Teton Pass         11.56  73  P        P           13 20 17.7  +0.5
TMUT  Trail Mountain     11.65  94  P        P           13 20 18.4  +0.1
MOOW  Moose Ponds        11.74  72 eP        P           13 20 19.9  +0.4
LOHW  Long Hollow        11.83  73  P        P           13 20 20.4  -0.4
PDAR  Pinedale Array     12.53  77  Pn       P           13 20 33.7  +3.5
           0.1nm,0.3s,baz=270,slow=12,SNR=14
LAO   LASA Array         15.43  62 eP        P           13 21 07.6  -0.8
SDCO  Great Sand Dun     16.38  95 eP        P           13 21 20.3  -0.3
           4.9nm,1.2s
FFC   Flin Flon          21.03  42 eP        P           13 22 13.8  -1.5
           7.0nm,1.0s,mb4.0
ULM   Lac du Bonnet      22.94  56  P        P           13 22 36.5  +2.2
           2.1nm,0.5s,mb3.9,baz=268,slow=8.8,SNR=3.7
ILAR  Eielson Array      26.45 340  P        P           13 23 08.1  +0.3
           0.9nm,0.9s,mb3.3,baz=163,slow=8.9,SNR=9.8
ILAR  Eielson Array      26.45 340  P        P           13 23 08.1  +0.3
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NEIC 15 13:22:55.4, 40.94N×126.12W, h38^{km}, MD3.6(NCEDC), After NCEDC., Off coast of northern California

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Code  Station Name        Δ°   AZ°    Phase ID             Time        Res
                                    Op       ISC         h  m  s     ISC
KHMM  Horse Mountain      1.81  91 eP        P           13 23 23.3  -1.4
KBO   Bosley Butte        1.90  48 eP        P           13 23 23.5  -2.5
YBH   Yreka Blue Hor      2.68  72 eP        P           13 23 36.0  -1.1
WDC   Whiskeytown Da      2.74  96 eP        P           13 23 36.7  -1.3
HUMO  Hull Mountain       2.89  54 eP        P           13 23 38.0  -2.1
SAC   San Andreas         4.42 138 eP        P           13 23 59.1  -2.7
BEKR  Beckwourth          4.53 102  P        P           13 24 02.6  -0.7
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OTT 15 13:23:57.9±0.3, 72.00N×76.20W, h18^{km}, MN3.2/4, 1D, 100km southeast from Pond Inlet, Nu Eastern Arctic Background Seismic Zone., Baffin Island region

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Code  Station Name        Δ°   AZ°    Phase ID             Time        Res
                                    Op       ISC         h  m  s     ISC
PINU  Pond Inlet          0.89 323 ⇓PG       Pb          13 24 15.0  +0.6
PINU                                SG       Sb          13 24 25.6  -0.2
PINU                                Trac                 13 24 28.4
           comp=Z,1µm,0.1s
TULEG Thule               4.98  20  PN       Pn          13 25 09.5  -4.3
TULEG                               SN       Sn          13 26 04.0  -7.5
RES   Resolute Bay        6.00 305  PN       Pn          13 25 25.4  -2.6
RES                                 SN       Sn          13 26 28.5  -8.6
RES                                 LG                   13 27 03.1
RES                                 Trac                 13 27 20.2
           comp=Z,9.9nm,0.3s
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QILN	**Qililugaq Expl**	**6.46**	**219**	PN	Pn	13 25 31.1	-3.4
QILN				SN	Sn	13 26 38.9	-10
QILN				LG		13 27 15.2	
QILN				Trac		13 27 24.8	
	comp=Z,18nm,0.1s						
FRB	**Frobisher Bay**	**8.77**	**157**	PN	P	13 26 02.6	-4.2
FRB				SN	Sn	13 27 35.1	-11
FRB				LG		13 28 26.3	
FRB				Trac		13 28 38.6	
	comp=Z,11nm,0.2s						
YRTN	**Rankin Inlet**	**11.02**	**221**	PN	P	13 26 33.5	-4.1
YRTN				SN	S	13 28 26.1	-15
YRTN				LG		13 29 33.5	
YRTN				Trac		13 29 57.2	
	comp=Z,13nm,0.3s						
FCC	**Fort Churchill**	**15.12**	**218**	PN	P	13 27 24.2	-7.7
FCC				SN	S	13 30 06.0	-14
FCC				LG		13 31 43.4	
FCC				Trac		13 31 54.0	
	comp=Z,3.0nm,0.5s						
YKW3	**Yellowknife Ar**	**17.22**	**256**	SN	S	13 30 53.6	-15
YKW3				LG		13 32 45.0	
YKW3				Trac		13 33 22.2	
	comp=Z,4.3nm,0.7s						
SCHQ	**Schefferville**	**17.69**	**162**	PN	P	13 27 59.3	-5.3
SCHQ				SN	S	13 31 05.1	-14
SILO	**Sutton Inlier**	**17.98**	**197**	PN	P	13 28 07.9	-0.3
SILO				SN	S	13 31 11.5	-14
VIMO	**Victor Mine**	**19.54**	**194**	PN	P	13 28 23.2	-3.7

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*IDC **15** 13:38:16.0±5.5, 35.12N×20.84E, mb3.8/3, mb1 3.8/5, mb1mx3.6/24, mbtmp3.8/5, ML3.7/2, Error ellipse: s-maj=105.4km s-min=34.1km az=8.0*
*ATH **15** 13:38:27.3, 35.80N×21.55E, h32^{km}±12^{km}, MD3.8/5*
*NEIC **15** 13:38:27.9, 35.82N×21.58E, h34^{km}, MD3.8(ATH), After ATH.*
*CSEM **15** 13:38:27.1±0.3, 35.77N×21.59E, h80^{km}, MD3.8, Error ellipse: s-maj=6.8km s-min=4.6km az=23.0*
*THE **15** 13:38:32.1, 36.04N×21.71E, h20^{km}, ML3.8*
ISC 15 13:38:30.0±1.1, **35.94N**±0.06×**21.59E**±0.08, **h75**^{km}±10^{km}, **n29**, σ**0$\overset{s}{.}$93**/39, **mb3.6**/3, **Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.22**	**73**	*e*PN	**P**	**13 38 51.5**	**-0.3**
ITM	**Ithomi**	**1.27**	**12**	*e*PB	**P**	**13 38 52.1**	**-0.4**
ITM				*e*SN	**S**	**13 39 11.2**	**+2.0**
VLI	**Veliai**	**1.34**	**54**	*e*PB	**P**	**13 38 52.9**	**-0.6**
VLI				*e*SN	**S**	**13 39 12.3**	**+1.4**
VLI	**Veliai**	**1.34**	**54**	*e*Pb	**P**	**13 38 52.9**	**-0.6**
VLI				*e*Sn	**S**	**13 39 11.6**	**+0.7**
RLS	**Riolos of Patr**	**2.12**	**357**	*e*PB	**P**	**13 39 05.5**	**+1.5**
VAM	**Vamos**	**2.19**	**103**	*e*PN	**P**	**13 39 03.9**	**-1.2**
VLS	**Valsamata**	**2.37**	**341**	*e*PN	**P**	**13 39 07.8**	**+0.2**
MPAR	**Parnis Oros**	**2.80**	**37**	*e*PN	**P**	**13 39 14.2**	**+0.6**
LKD	**Levkas**	**2.86**	**345**	*e*Pn	**P**	**13 39 15.6**	**+1.1**
LKD				*e*Sn	**S**	**13 39 48.2**	**+0.4**
LKD	**Levkas**	**2.86**	**345**	*e*Pn	**P**	**13 39 15.6**	**+1.1**
LKD				*e*Sn	**S**	**13 39 48.2**	**+0.4**
EVR	**Evrytania**	**2.98**	**3**	*e*PN	**P**	**13 39 17.7**	**+1.6**
AGG	**Agios Georgios**	**3.13**	**11**	*e*Pn	**P**	**13 39 19.2**	**+0.9**
AGG				*e*Sn	**S**	**13 39 54.0**	**-0.6**
NEO	**Neokhori**	**3.60**	**21**	*e*PN	**P**	**13 39 24.3**	**-0.5**
XOR	**Xorichti**	**3.65**	**20**	*e*Pn	**P**	**13 39 25.5**	**0.0**
IGT	**Igoumenitsa**	**3.72**	**345**	*e*Pn	**P**	**13 39 26.0**	**-0.4**
IGT				*e*Sn	**S**	**13 40 08.6**	**-0.8**
MEV	**Metsovon**	**3.85**	**356**	*e*Pn	**P**	**13 39 29.1**	**+0.9**
MEV				*e*Sn	**S**	**13 40 12.3**	**-0.2**
LIT	**Litokhoron**	**4.21**	**9**	*e*Pn	**P**	**13 39 33.9**	**+0.6**
LIT				*e*Sn	**S**	**13 40 20.7**	**-0.9**
OUR	**Ouranopolis**	**4.78**	**23**	*e*Pn	**P**	**13 39 39.9**	**-1.2**
FNA	**Florina**	**4.84**	**358**	*e*Pn	**P**	**13 39 41.5**	**-0.5**
FNA				*e*Sn	**S**	**13 40 36.1**	**-1.1**
TIP	**Timpagrande**	**5.02**	**312**	*e*P	**P**	**13 39 43.0**	**-1.4**
TIP	**Timpagrande**	**5.02**	**312**	*e*P	**P**	**13 39 43.0**	**-1.4**
GRG	**Griva**	**5.05**	**7**	*e*Pn	**P**	**13 39 44.2**	**-0.7**
SOH	**Sokhos**	**5.07**	**15**	*e*Pn	**P**	**13 39 44.4**	**-0.7**
SRS	**Serrai**	**5.40**	**16**	*e*Pn	**P**	**13 39 48.5**	**-1.2**
VAE	**Valguarnera**	**5.96**	**287**	Pn	**P**	**13 39 41.8**	**-16**
	7.7nm,0.3s,baz=55,slow=13,SNR=3.7						
BRTR	**Keskin Array B**	**10.25**	**65**	Pn	**P**	**13 40 55.7**	**-0.6**
	0.1nm,0.3s,baz=246,slow=15,SNR=6.8						
FINES	**FINESS Array B**	**25.68**	**5**	P	**P**	**13 43 54.5**	**+0.2**
	1.0nm,0.8s,mb3.3,baz=156,slow=14,SNR=5.0						
ARCES	**ARCESS Array B**	**33.72**	**2**	P	**P**	**13 45 07.0**	**+1.2**
	0.7nm,0.6s,mb3.7,baz=187,slow=9.8,SNR=5.0						
MKAR	**Makanchi Array**	**45.78**	**57**	P	**P**	**13 46 47.0**	**+1.3**
	1.0nm,0.4s,mb3.9,baz=282,slow=6.8,SNR=5.0						

MAN 15 13:39:17.9, 9.24N×122.42E, h35^{km}, mb4.1, ML2.9, MS2.6, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.82**	**83**	⇓*i*P	P	13 39 33.9	+1.0
SNPH				*i* S	S	13 39 44.6	+0.6
DCPH	**Dipolog City**	**1.14**	**125**	*e*P	P	13 39 37.8	+0.3
DCPH				*e*S	S	13 39 51.8	-0.3
GUIM	**Jordan**	**1.38**	**7**	*e*P	P	13 39 41.5	+0.4
CUYO	**Cuyo Island**	**2.11**	**319**	*e*P	P	13 39 50.8	-0.6

TRN 15 13:58:08.1, 15.06N×60.38W, h38^{km}, MD3.8, Md2.6(FDF), **3D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRM	**Caravelle**	**0.60**	**240**	⇓*e*P	P	13 58 21.3	+1.2
MVM	**Montagne Vaucl**	**0.71**	**225**	*e*P	P	13 58 22.9	+1.3
FDF	**Fort de France**	**0.81**	**247**	⇓*e*P	P	13 58 24.4	+1.4
FDF				*e*S	S	13 58 36.4	+2.4
BIM	**Bigot**	**0.86**	**231**	⇓*e*P	P	13 58 25.2	+1.5
BIM				*e*S	S	13 58 37.9	+2.7
BBL	**Barber's Block**	**1.15**	**294**	*e*P	P	13 58 29.8	+2.0
BBL				*e*S	S	13 58 44.8	+2.1
MGG	**Marie-Galante**	**1.24**	**314**	*e*P	P	13 58 30.1	+1.0
SLB	**Belfond**	**1.38**	**208**	*e*P	P	13 58 33.5	+2.2
SLB				*e*S	S	13 58 49.2	+0.6
DEG	**La Desirade**	**1.41**	**332**	*e*P	P	13 58 32.0	+0.3
BCG	**Bois Riant Cap**	**1.57**	**311**	*e*P	P	13 58 35.3	+1.4
SSV	**Crater Summit**	**1.89**	**205**	*e*P	P	13 58 40.2	+1.7
SSV				*e*S	S	13 59 02.4	+1.1

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*NEIC **15** 13:59:03.8±1.6, 20.17S×68.84W, h106^{km}±19^{km}, mb3.7/1, Error ellipse: s-maj=23.4km s-min=14.8km az=105.0*
*IDC **15** 13:59:03.9±2.5, 20.01S×68.90W, h114^{km}±27^{km}, mb3.8/3, mb1 3.8/6, mb1mx3.6/18, mbtmp4.2/6, Error ellipse: s-maj=37.7km s-min=20.2km az=97.0, Incorrectly calculated travel-time residual on T phase at H03N*
ISC 15 13:59:02.1±1.8, **20.12S**±0.10×**68.9W**±0.2, **h111**^{km}±22^{km}, **n11**, σ**1$\overset{s}{.}$17**/13, **mb4.2**/1, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.87**	**11**	P	**P**	**14 00 02.7**	**+1.8**
	2.0nm,0.3s,baz=197,slow=7.8,SNR=43						
LPAZ				S	**S**	**14 00 44.5**	**-1.2**
	2.2nm,0.3s,baz=212,slow=13,SNR=4.0						
LPAZ	**La Paz**	**3.87**	**11**	P	**P**	**14 00 02.7**	**+1.8**
LPAZ				S	**S**	**14 00 44.5**	**-1.2**
SIV	**San Ignacio**	**8.48**	**62**	P	**P**	**14 01 03.2**	**-0.4**
	1.8nm,0.3s,baz=257,slow=12,SNR=56						
CPUP	**Villa Florida**	**12.29**	**122**	P	**P**	**14 01 54.4**	**0.0**
	0.6nm,0.3s,baz=322,slow=12,SNR=12						
TRQA	**Tornquist**	**18.86**	**163**	*e*P	**P**	**14 03 13.8**	**-2.2**
	2.5nm,0.6s						
BDFB	**Brasilia**	**20.35**	**81**	P	**P**	**14 03 32.9**	**+1.1**
	8.3nm,0.5s,baz=261,slow=11,SNR=12						
BAO	**Brasilia Array**	**20.37**	**81**	P	**P**	**14 03 32.8**	**+0.8**
PLCA	**Paso Flores**	**20.60**	**184**	P	**P**	**14 03 35.1**	**+0.9**
	2.5nm,0.8s,baz=355,slow=10,SNR=12						
PLCA	**Paso Flores**	**20.60**	**184**	P	**P**	**14 03 35.1**	**+0.9**
PLCA				*e*P		14 03 35.4	
DBIC	**Dimbokro**	**68.32**	**74**	P	**P**	**14 09 52.9**	**-1.0**
	2.8nm,0.7s,mb4.2,baz=220,slow=6.1,SNR=6.5						
DBIC	**Dimbokro**	**68.32**	**74**	P	**P**	**14 09 52.9**	**-1.0**

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*TEH **15** 14:07:20.5, 30.54N×56.85E, h10^{km}, Mn3.4*
*THR **15** 14:07:20.7±0.9, 30.76N×56.93E, h14^{km}±14^{km}, ML3.4*
ISC 15 14:07:21.2±0.9, **30.75N**±0.05×**56.79E**±0.10, **h10**^{km}, **n20**, σ**1$\overset{s}{.}$07**/21, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.77**	**182**	*e*PG	**Pg**	**14 07 35.6**	**-1.0**
IBAF	**Bafgh**	**1.34**	**309**	Pn	**Pn**	**14 07 45.9**	**-0.2**
IMEH	**Mehriz**	**1.97**	**289**	Pn	**Pn**	**14 07 55.4**	**+0.3**
ICHK	**Chekchek**	**2.52**	**307**	Pn	**Pn**	**14 08 01.9**	**-1.1**
IPAR	**Pars**	**3.36**	**255**	Pn	**Pn**	**14 08 16.1**	**+1.2**
BNDS	**Bandar-Abbas**	**3.38**	**189**	*e*PN	**Pn**	**14 08 16.4**	**+1.1**
BNDS				*e*SG	**Sg**	**14 09 07.2**	**-6.6**
BNDS				AML	AML	14 09 20.9	
	comp=N,90nm,0.5s						
IMOK	**Mook**	**3.92**	**245**	Pn	**Pn**	**14 08 19.8**	**-3.1**
NASN	**Na'in**	**3.96**	**302**	*e*PN	**Pn**	**14 08 24.6**	**+1.1**
NASN				*e*SG	**Sg**	**14 09 26.9**	**-6.1**
NASN				AML	AML	14 09 37.5	
	comp=N,54nm,0.6s						
IGAR	**Garneh**	**4.20**	**292**	Pn	**Pn**	**14 08 27.1**	**+0.3**
IZEF	**Zefreh**	**4.36**	**301**	Pn	**Pn**	**14 08 28.8**	**-0.3**
IKLH	**Kalahroud**	**5.11**	**301**	Pn	**Pn**	**14 08 40.3**	**+0.5**
IMOG	**Moghan**	**5.75**	**21**	Pn	**Pn**	**14 08 47.5**	**-1.3**
IFIR	**Firoozkooh**	**5.94**	**326**	Pn	**Pn**	**14 08 50.5**	**-0.9**
IFIR	**Firoozkooh**	**5.94**	**326**	Lg		14 10 31.6	
IVRN	**Varamin**	**6.00**	**316**	Pn	**Pn**	**14 08 53.1**	**+0.7**
IVRN	**Varamin**	**6.00**	**316**	Sn	**Sn**	**14 09 58.4**	**-3.6**
IKRD	**Kardeh**	**6.18**	**13**	Pn	**Pn**	**14 08 56.5**	**+1.7**
IDMV	**Damavand**	**6.25**	**322**	Pn	**Pn**	**14 08 55.6**	**-0.2**
DAMV	**Damavand**	**6.32**	**322**	*e*PN	**Pn**	**14 08 56.9**	**0.0**
IRAZ	**Razeghan**	**7.39**	**311**	Pn	**Pn**	**14 09 20.8**	**+8.9**

IDC 15 14:08:42.2±15.0, **2.14N**×**125.99E**, **h247**^{km}±170^{km}, **mb3.2**/5, **mb1 3.3**/5, **mb1mx3.1**/17, **mbtmp3.8**/5, **Error ellipse: s-maj=99.3km s-min=24.9km az=60.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.12**	**181**	*e*P	P	14 12 58.3	-0.4
	1.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.12**	**181**	P	P	14 12 58.3	-0.4
	2.5nm,0.7s,baz=3.7,slow=10,SNR=6.0						
WRA	**Warramunga Arr**	**23.43**	**160**	P	P	14 13 28.6	-2.3
	0.8nm,0.4s,baz=335,slow=11,SNR=19						
WB2	**Warramunga Arr**	**23.43**	**160**	*e*P	P	14 13 29.0	-1.9
STKA	**Stephens Creek**	**36.93**	**158**	P	P	14 15 29.0	-0.5
	1.3nm,0.5s,baz=331,slow=12,SNR=3.0						
SONM	**Songino Array**	**48.57**	**342**	P	P	14 17 00.2	-2.3
	0.8nm,0.9s,baz=149,slow=7.2,SNR=6.2						
MKAR	**Makanchi Array**	**58.44**	**326**	P	P	14 18 12.8	-1.5
	0.5nm,0.5s,baz=120,slow=8.6,SNR=6.9						

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*BJI **15** 14:10:05.9, 19.90S×68.90W, h119^{km}*
*NEIC **15** 14:10:05.9±0.9, 19.88S×68.90W, h119^{km}±8^{km}, mb4.0/3, Error ellipse: s-maj=12.2km s-min=7.5km az=61.0*
*IDC **15** 14:10:06.5±2.3, 19.91S×68.90W, h122^{km}±19^{km}, mb3.8/10, mb1 4.0/13, mb1mx3.9/21, mbtmp4.3/13, MS3.0/2, Ms1 3.0/2, ms1mx2.6/25, Error ellipse: s-maj=26.7km s-min=13.9km az=71.0, Incorrectly calculated travel-time residual on T phase at H03N*
ISC 15 14:10:05.1±1.2, **19.94S**±0.07×**68.9W**±0.1, **h128**^{km}±11^{km}, **n35**, σ**0$\overset{s}{.}$90**/28, **mb4.0**/9, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.71**	**12**	P	**P**	**14 11 03.3**	**+1.4**
	8.7nm,0.3s,baz=200,slow=7.8,SNR=235						
LPAZ				S	**S**	**14 11 46.5**	**+1.2**
	3.1nm,0.3s,baz=260,slow=2.3,SNR=4.0						
LPAZ				LR	LR	14 12 04.9	
	comp=Z,115nm,18.1s,baz=174,slow=32						
LPAZ	**La Paz**	**3.71**	**12**	*e*P	**P**	**14 11 03.1**	**+1.2**
ARE	**Arequipa**	**4.24**	**324**	P	**P**	**14 11 08.0**	**-1.1**
CPN1	**Cerro Paranal**	**4.87**	**196**	*e*P	**P**	**14 11 12.8**	**-4.6**
SIV	**San Ignacio**	**8.43**	**63**	P	**P**	**14 12 04.3**	**-1.2**
	10nm,0.3s,baz=257,slow=11,SNR=384						
SAML	**Samuel**	**12.25**	**28**	*e*P	**P**	**14 12 54.0**	**-2.2**
	1.9nm,0.5s						
CPUP	**Villa Florida**	**12.40**	**123**	P	**P**	**14 12 59.0**	**+0.8**
	0.4nm,0.3s,baz=314,slow=13,SNR=12						
CPUP				LR	LR	14 17 30.4	
	comp=Z,101nm,19.8s,baz=197,slow=36						
CPUP	**Villa Florida**	**12.40**	**123**	*e*P	**P**	**14 12 58.9**	**+0.7**
	11nm,0.9s						
TRQA	**Tornquist**	**19.03**	**163**	*e*P	**P**	**14 14 19.4**	**-0.2**
BDFB	**Brasilia**	**20.34**	**81**	P	**P**	**14 14 33.3**	**+0.1**
	3.7nm,0.3s,baz=265,slow=12,SNR=7.2						
PLCA	**Paso Flores**	**20.77**	**184**	P	**P**	**14 14 38.0**	**+0.5**
	2.4nm,0.6s,baz=5.6,slow=11,SNR=9.7						
PLCA	**Paso Flores**	**20.77**	**184**	*e*P	**P**	**14 14 37.6**	**+0.1**
OTAV	**Otavalo**	**22.13**	**334**	*e*P	**P**	**14 14 51.4**	**+0.4**
SDV	**Santo Domingo**	**28.69**	**356**	P	**P**	**14 15 52.7**	**+0.3**
	0.8nm,0.3s,mb3.9,baz=128,slow=20,SNR=3.0						
SDV	**Santo Domingo**	**28.69**	**356**	*e*P	**P**	**14 15 52.5**	**+0.1**
SNAA	**Sanae**	**63.75**	**161**	P	**P**	**14 20 25.2**	**+0.2**
	0.7nm,0.6s,mb3.6,baz=250,slow=9.5,SNR=3.4						
SNAA	**Sanae**	**63.75**	**161**	*e*P	**P**	**14 20 25.7**	**+0.6**
SADO	**Sadowa**	**65.07**	**352**	P	**P**	**14 20 32.8**	**-1.3**
	3.3nm,0.5s,mb4.5,baz=301,slow=0.9,SNR=3.3						
DBIC	**Dimbokro**	**68.30**	**74**	P	**P**	**14 20 55.0**	**+0.1**
	1.9nm,0.4s,mb4.3,baz=197,slow=7.8,SNR=3.6						
PDAR	**Pinedale Array**	**72.77**	**330**	P	**P**	**14 21 21.1**	**-0.2**
	0.5nm,0.9s,mb3.4,baz=124,slow=5.3,SNR=4.3						
ULM	**Lac du Bonnet**	**73.84**	**342**	P	**P**	**14 21 26.7**	**-0.7**
	2.5nm,0.5s,mb4.2,baz=163,slow=4.9,SNR=3.3						
ULM	**Lac du Bonnet**	**73.84**	**342**	P	**P**	**14 21 26.7**	**-0.7**
NVAR	**Mina Array Bea**	**74.27**	**322**	P	**P**	**14 21 30.5**	**+0.4**
	1.1nm,0.8s,mb3.6,baz=175,slow=7.3,SNR=7.5						
NVAR	**Mina Array Bea**	**74.27**	**322**	P	**P**	**14 21 30.5**	**+0.4**
HLID	**Hailey**	**75.73**	**328**	*e*P	**P**	**14 21 39.0**	**+0.7**
	2.1nm,1.0s,mb3.8						
YKA	**Yellowknife Ar**	**89.72**	**341**	P	**P**	**14 22 50.3**	**+0.7**
	4.2nm,0.7s,mb4.7,baz=135,slow=4.6,SNR=16						
YKA	**Yellowknife Ar**	**89.72**	**341**	P	**P**	**14 22 50.3**	**+0.7**
WRA	**Warramunga Arr**	**134.29**	**211**	PKP	PKPdf	14 29 11.0	+2.4
	0.7nm,0.5s,baz=147,slow=1.6,SNR=18						
MKAR	**Makanchi Array**	**144.36**	**35**	PKP	PKPdf	14 29 27.4	+1.5
	0.4nm,0.4s,baz=333,slow=2.7,SNR=4.9						
MKAR	**Makanchi Array**	**144.36**	**35**	PKP	PKPdf	14 29 27.4	+1.5
WMQ	**Urumqi**	**149.19**	**34**	*e*PKP	PKPdf	14 29 35.0	+0.9
MDJ	**Mudanjiang**	**150.98**	**332**	PKP	PKPdf	14 29 37.9	+1.2
MJAR	**Matsushiro Arr**	**151.09**	**311**	PKPbc	PKPdf	14 29 45.8	+8.6
	2.1nm,0.7s,baz=64,slow=3.0,SNR=5.2						
SONM	**Songino Array**	**151.91**	**7**	PKPbc	PKPdf	14 29 47.8	+10
	1.8nm,0.4s,baz=314,slow=1.0,SNR=20						
LZH	**Lanzhou**	**162.70**	**20**	*e*PKP	PKPdf	14 29 52.0	+0.4
LZH				XPKP		14 30 40.5	

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*IDC **15** 14:13:18.1±2.3, 17.26S×174.33W, mb4.1/5, mb1 4.4/5, mb1mx4.0/16, mbtmp4.1/5, Error ellipse: s-maj=161.4km s-min=23.6km az=151.0*
*NEIC **15** 14:13:34.7±2.9, 17.10S×174.62W, h135^{km}±20^{km}, mb4.1/2, Error ellipse: s-maj=95.8km s-min=11.9km az=151.0*
ISC 15 14:13:33.8±4.2, **17.0S**±0.8×**174.7W**±0.5, **h137**^{km}±28^{km}, **n10**, σ**0$\overset{s}{.}$30**/11, **mb3.8**/6, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.19**	**43**	*e*P	**P**	**14 14 37.1**	**0.0**
AFI				*e*S	**S**	**14 15 18.6**	**-7.3**
CTA	**Charters Tower**	**37.07**	**259**	P	**P**	**14 20 33.0**	**+0.5**
	1.9nm,0.6s,mb3.9,baz=83,slow=11,SNR=4.0						
CTAO	**Charters Tower**	**37.07**	**259**	P	**P**	**14 20 33.1**	**+0.6**
	2.2nm,0.8s,mb3.8						
STKA	**Stephens Creek**	**42.15**	**241**	P	**P**	**14 21 14.4**	**0.0**
	2.0nm,0.8s,mb3.8,baz=85,slow=11,SNR=4.4						
WB2	**Warramunga Arr**	**48.25**	**258**	*e*P	**P**	**14 22 02.7**	**-0.2**
WRAB	**Tennant Creek**	**48.25**	**258**	*e*P	**P**	**14 22 02.4**	**-0.5**
	2.6nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**48.26**	**258**	P	**P**	**14 22 03.2**	**+0.2**
	1.4nm,0.4s,mb3.9,baz=96,slow=6.9,SNR=27						
NVAR	**Mina Array Bea**	**76.36**	**42**	P	**P**	**14 25 09.5**	**-0.1**
	0.6nm,0.8s,mb3.3,baz=225,slow=7.7,SNR=3.9						
NVAR	**Mina Array Bea**	**76.36**	**42**	P	**P**	**14 25 09.5**	**-0.1**
PDAR	**Pinedale Array**	**84.30**	**42**	P	**P**	**14 25 51.8**	**+0.2**
	1.1nm,0.7s,mb3.7,baz=214,slow=3.6,SNR=8.2						

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*NEIC **15** 14:24:02.4±0.9, 20.14S×69.05W, h101^{km}±10^{km}, mb4.5/6, Error ellipse: s-maj=12.9km s-min=9.7km az=74.0*
*IDC **15** 14:24:04.2±2.0, 20.20S×68.91W, h109^{km}±17^{km}, mb4.1/5, mb1 4.3/8, mb1mx3.9/19, mbtmp4.6/8, Error ellipse: s-maj=27.3km s-min=13.3km az=89.0, Incorrectly calculated travel-time residual on T phase at H03N*
ISC 15 14:24:00.3±1.2, **20.13S**±0.07×**69.01W**±0.09, **h89**^{km}±14^{km}, **n25**, σ**1$\overset{s}{.}$13**/23, **mb4.4**/3, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.91**	**12**	P	**P**	**14 25 04.3**	**+4.9**
	16nm,0.3s,baz=189,slow=7.6,SNR=364						
LPAZ				S	**S**	**14 25 50.6**	**+6.2**
	3.6nm,0.3s,baz=97,slow=14,SNR=5.0						
LPAZ	**La Paz**	**3.91**	**12**	*e*P	**P**	**14 25 04.2**	**+4.7**
ARE	**Arequipa**	**4.34**	**327**	*e*P	**P**	**14 25 05.0**	**-0.4**
SIV	**San Ignacio**	**8.60**	**63**	P	**P**	**14 26 03.8**	**+0.1**
	9.6nm,0.3s,baz=255,slow=11,SNR=370						
NNA	**Nana**	**11.05**	**316**	P	**P**	**14 26 37.5**	**+0.5**
	25nm,0.8s						
CFAA	**Coronel Fontan**	**11.45**	**177**	P	**P**	**14 26 41.5**	**-0.7**
	0.1nm,0.3s,baz=8.0,slow=13,SNR=6.4						
CPUP	**Villa Florida**	**12.38**	**122**	P	**P**	**14 26 55.7**	**+1.1**
	0.4nm,0.3s,baz=323,slow=15,SNR=11						
CPUP	**Villa Florida**	**12.38**	**122**	*e*P	**P**	**14 26 55.7**	**+1.1**
	10nm,1.1s						
SAML	**Samuel**	**12.46**	**28**	*e*P	**P**	**14 26 55.0**	**-0.8**
	7.0nm,0.7s						
TRQA	**Tornquist**	**18.88**	**163**	*e*P	**P**	**14 28 15.3**	**-0.8**
	66nm,1.5s						
BDFB	**Brasilia**	**20.47**	**81**	P	**P**	**14 28 32.6**	**-0.4**
	9.6nm,0.5s,baz=267,slow=10,SNR=13						
BAO	**Brasilia Array**	**20.49**	**81**	P	**P**	**14 28 33.5**	**+0.2**
PLCA	**Paso Flores**	**20.58**	**183**	P	**P**	**14 28 33.6**	**-0.4**
	14nm,0.7s,baz=8.0,slow=12,SNR=32						
PLCA	**Paso Flores**	**20.58**	**183**	*e*P	**P**	**14 28 34.3**	**+0.2**
	17nm,0.8s						
VNA3	**Neumayer Olymp**	**61.40**	**162**		**P**	**14 34 10.7**	**+1.7**
VNA1	**Neumayer--Stat**	**61.60**	**161**		**P**	**14 34 12.2**	**+1.8**
VNA2	**Neumayer--Watz**	**61.97**	**161**		**P**	**14 34 09.6**	**-3.2**
SNAA	**Sanae**	**63.60**	**161**	P	**P**	**14 34 23.6**	**+0.1**
	1.8nm,0.7s,mb4.0,baz=282,slow=6.3,SNR=23						
SNAA	**Sanae**	**63.60**	**161**	*e*P	**P**	**14 34 23.5**	**-0.1**
	3.9nm,0.6s,mb4.4						
DBIC	**Dimbokro**	**68.44**	**74**	P	**P**	**14 34 54.4**	**-0.8**
	3.8nm,0.4s,mb4.6,baz=215,slow=6.1,SNR=17						
YKA	**Yellowknife Ar**	**89.87**	**341**	P	**P**	**14 36 50.2**	**+0.2**
	2.0nm,0.7s,mb4.4,baz=136,slow=4.4,SNR=6.2						
YKA	**Yellowknife Ar**	**89.87**	**341**	P	**P**	**14 36 50.2**	**+0.2**
ZAL	**Zalesovo**	**140.76**	**24**	PKP	PKPdf	14 43 18.6	-0.9
	0.7nm,0.3s,baz=89,slow=1.1,SNR=3.4						
MKAR	**Makanchi Array**	**144.57**	**35**	PKP	PKPdf	14 43 26.8	+0.5
	0.9nm,0.5s,baz=314,slow=4.1,SNR=11						
SONM	**Songino Array**	**152.11**	**7**	PKPbc	PKPdf	14 43 46.9	+8.5
	0.3nm,0.4s,baz=346,slow=2.4,SNR=5.1						
SONM				PKPab	PKPab	14 43 56.5	-0.8
	0.5nm,0.6s,baz=316,slow=2.5,SNR=5.0						

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*NEIC **15** 14:54:38.7, 36.08S×72.25W, h87^{km}, MD3.4(GUC), After GUC.*
GUC 15 14:54:38.7±0.6, **36.08S**×**72.25W**, **h87**^{km}±6^{km}, **MD3.4, ML3.5, 7C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	**Chillan**	**0.54**	**165**	⇑*i*P	P	14 54 53.7	0.0
CCHI				*i* S	S	14 55 04.5	-0.3
CCHI				AMP		14 55 05.0	
	comp=N,2µm,0.2s						
CCHI				AMP		14 55 05.3	
	comp=N,3µm,0.3s						
LNCH	**Linares**	**0.57**	**66**	⇑*i*P	P	14 54 54.2	+0.2
LNCH				*i* S	S	14 55 05.5	+0.3
TALC	**Talca**	**0.84**	**37**	⇑*i*P	P	14 54 56.8	+0.2
TALC				*i* S	S	14 55 10.0	-0.1
TALC				AMP		14 55 10.4	
	comp=E,6µm,0.1s						
SFDO	**San Fernando**	**1.78**	**35**	⇑*i*P	P	14 55 08.0	-0.3
SFDO				*i* S	S	14 55 29.6	-0.6
CHCH	**Chadas Angostu**	**2.51**	**32**	⇓*i*P	P	14 55 18.1	-0.4
CHCH				*i* S	S	14 55 48.2	+0.1
TACH	**Talagante**	**2.65**	**24**	⇓*i*P	P	14 55 20.0	-0.4
LMEL	**Las Melosas**	**2.79**	**38**	⇑*i*P	P	14 55 22.3	0.0
LMEL				*i* S	S	14 55 55.1	+0.1
LMEL				AMP		14 56 00.6	
	comp=N,105nm,0.1s						
RCDM	**Rinconada Maip**	**2.84**	**25**	⇑*i*P	P	14 55 22.5	-0.6
RCDM				*i* S	S	14 55 55.6	-0.8
RCDM				AMP		14 55 58.1	
	comp=E,180nm,0.1s						
JACH	**Jahuel**	**3.66**	**22**	⇑*i*P	P	14 55 33.7	-0.6

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*IDC **15** 14:58:57.3±0.6, 20.16S×69.04W, h103^{km}±5^{km}, mb4.0/13, mb1 4.2/16, mb1mx4.1/20, mbtmp4.4/16, MS3.0/2, Ms1 2.9/2, ms1mx2.6/17, Error ellipse: s-maj=17.0km s-min=10.5km az=82.0, Incorrectly calculated travel time residual on T phase at H03N*
*NEIC **15** 14:58:58.0±1.1, 20.16S×68.93W, h109^{km}±10^{km}, mb4.5/10, Error ellipse: s-maj=14.3km s-min=9.3km az=60.0*
NEIC Felt [II] at Iquique.
ISC 15 14:58:55.0±1.0, **20.17S**±0.05×**69.09W**±0.07, **h99**^{km}±9^{km}, **h100**^{km}±2.5^{km}**:pP-P, n46**, σ**1$\overset{s}{.}$16**/38, **mb4.2**/16, **1C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.96**	**13**	P	**P**	**14 59 58.3**	**+3.4**
	24nm,0.3s,baz=201,slow=7.1,SNR=232						
LPAZ				S	**S**	**15 00 43.0**	**+2.4**
	9.0nm,0.3s,baz=129,slow=6.5,SNR=5.0						
LPAZ	**La Paz**	**3.96**	**13**	*e*P	**P**	**14 59 59.0**	**+4.1**
ARE	**Arequipa**	**4.34**	**328**	*e*P	**P**	**15 00 00.0**	**0.0**
ARE				*e*S	**S**	**15 00 49.0**	**-0.7**
SIV	**San Ignacio**	**8.68**	**63**	P	**P**	**15 00 58.7**	**-0.6**
	8.6nm,0.3s,baz=255,slow=11,SNR=238						
NNA	**Nana**	**11.03**	**316**	P	**P**	**15 01 39.4**	**+8.3**
	23nm,0.6s						
CFAA	**Coronel Fontan**	**11.41**	**176**	P	**P**	**15 01 37.0**	**+1.0**
	0.3nm,0.3s,baz=353,slow=11,SNR=8.4						
CPUP	**Villa Florida**	**12.42**	**122**	P	**P**	**15 01 49.3**	**-0.2**
	1.1nm,0.3s,baz=320,slow=12,SNR=33						
CPUP				LR	LR	15 07 50.0	
	comp=Z,35nm,20.2s,baz=349,slow=43						
CPUP	**Villa Florida**	**12.42**	**122**	*e*P	**P**	**15 01 48.9**	**-0.5**
	29nm,0.9s						
SAML	**Samuel**	**12.53**	**28**	*e*P	**P**	**15 01 49.6**	**-1.3**
	6.6nm,0.6s						
TRQA	**Tornquist**	**18.86**	**162**	*e*P	**P**	**15 03 09.1**	**-0.8**
	20nm,0.8s						
PLCA	**Paso Flores**	**20.54**	**183**	P	**P**	**15 03 27.1**	**-0.4**
	9.1nm,0.8s,baz=5.5,slow=12,SNR=14						
PLCA	**Paso Flores**	**20.54**	**183**	*e*P	**P**	**15 03 27.5**	**0.0**
	14nm,0.9s						
BDFB	**Brasilia**	**20.55**	**81**	P	**P**	**15 03 27.6**	**-0.1**
	12nm,0.5s,baz=271,slow=12,SNR=16						
BDFB				LR	LR	15 12 21.5	
	comp=Z,73nm,19.0s,baz=334,slow=39						
BDFB	**Brasilia**	**20.55**	**81**	P	**P**	**15 03 27.6**	**-0.1**
BDFB				LR	LR	15 12 21.5	
BAO	**Brasilia Array**	**20.57**	**81**	P	**P**	**15 03 28.0**	**+0.1**
SDV	**Santo Domingo**	**28.91**	**357**	P	**P**	**15 04 45.0**	**-2.0**
	1.6nm,0.3s,mb4.1,baz=344,slow=6.7,SNR=3.6						
TXAR	**Lajitas Array**	**59.45**	**325**	P	**P**	**15 08 49.3**	**-0.6**
	0.8nm,0.5s,mb4.0,baz=154,slow=9.2,SNR=5.4						
FVM	**French Village**	**61.22**	**341**	*e*P	**P**	**15 09 00.2**	**-1.7**
	6.5nm,0.4s,mb5.0						
MNTX	**Cornudas Mount**	**62.21**	**325**	*e*P	**P**	**15 09 06.6**	**-2.0**
	1.0nm,0.7s,mb4.0						
SNAA	**Sanae**	**63.59**	**161**	P	**P**	**15 09 16.7**	**-0.4**
	0.4nm,0.6s,mb3.4,baz=302,slow=7.5,SNR=7.9						
SNAA				pP	pP	15 09 42.4	+0.5
	0.6nm,0.8s,baz=297,slow=6.8,SNR=4.0						
WUAZ	**Wupatki**	**68.36**	**324**	*e*P	**P**	**15 09 48.1**	**+0.1**
	11nm,0.9s,mb4.7						
DBIC	**Dimbokro**	**68.52**	**74**	P	**P**	**15 09 48.7**	**-0.7**
	5.0nm,0.7s,mb4.5,baz=198,slow=6.3,SNR=10.0						
DBIC				pP	pP	15 10 14.6	+0.1
	5.5nm,0.9s,baz=225,slow=7.2,SNR=3.2						
ARUT	**Antelope Range**	**71.15**	**324**	*e*P	**P**	**15 10 07.0**	**+2.0**
PDAR	**Pinedale Array**	**72.88**	**330**	P	**P**	**15 10 15.4**	**+0.3**
	0.3nm,0.5s,mb3.4,baz=124,slow=9.8,SNR=3.5						
HWUT	**Hardware Ranch**	**72.97**	**328**	*e*P	**P**	**15 10 16.0**	**+0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	4.2nm,0.8s,mb4.3						
ULM	**Lac du Bonnet**	74.00	342	P	P	15 10 20.5	-1.0
	4.2nm,0.5s,mb4.4,baz=155,slow=7.8,SNR=6.5						
NVAR	**Mina Array Bea**	74.35	322	P	P	15 10 25.1	+1.4
	1.8nm,0.7s,mb3.9,baz=153,slow=6.8,SNR=14						
SCHQ	**Schefferville**	74.72	1	P	P	15 10 25.7	+0.2
	1.5nm,0.5s,mb4.0,baz=235,slow=2.8,SNR=5.7						
HLID	**Hailey**	75.83	328	eP	P	15 10 33.9	+1.9
	3.7nm,0.9s,mb4.1						
MCMT	**McKenzie Canyo**	76.00	330	eP	P	15 10 35.0	+2.0
SYO	**Syowa Base**	77.80	160	⇓P	pP	15 11 02.6	-5.7
SYO	**Syowa Base**	77.80	160	⇑P	pP	15 11 09.8	+1.5
TSUM	**Tsumeb**	80.58	107	P	P	15 10 59.9	+1.3
	1.1nm,0.4s,mb4.0,baz=199,slow=3.8,SNR=3.6						
EDM	**Edmonton**	82.49	335	eP	P	15 11 07.8	0.0
BOSA	**Boshof**	84.22	118	P	P	15 11 18.0	+0.9
	1.4nm,0.4s,mb4.2,baz=155,slow=14,SNR=4.6						
ESDC	**Sonseca Array**	85.00	45	pP	pP	15 11 48.8	+1.9
	0.5nm,0.5s,baz=256,slow=6.1,SNR=4.1						
YKA	**Yellowknife Ar**	89.88	341	P	P	15 11 44.2	+0.6
	4.9nm,0.6s,mb4.8,baz=134,slow=4.7,SNR=18						
YKA				pP	pP	15 12 09.9	-0.1
	1.1nm,0.6s,baz=133,slow=4.5,SNR=4.5						
YKA	**Yellowknife Ar**	89.88	341	P	P	15 11 44.2	+0.6
YKA				pP	pP	15 12 09.9	-0.1
DLBC	**Dease Lake**	92.95	333	P	P	15 11 55.9	-2.0
WRA	**Warramunga Arr**	134.01	211	PKP	PKPdf	15 18 03.4	+1.8
	0.6nm,0.5s,baz=151,slow=1.7,SNR=9.6						
ZAL	**Zalesovo**	140.82	24	PKP	PKPdf	15 18 16.2	+3.1
	0.9nm,0.4s,baz=320,slow=1.0,SNR=3.5						
ASAJ	**Asahikawa**	144.44	319	PKP	PKPdf	15 18 21.2	+1.5
	6.7nm,0.7s,baz=85,slow=22,SNR=6.2						
MKAR	**Makanchi Array**	144.65	35	PKP	PKPdf	15 18 21.1	+1.1
	1.0nm,0.5s,baz=315,slow=2.7,SNR=20						
MJAR	**Matsushiro Arr**	151.10	310	PKPbc	PKPdf	15 18 39.0	+8.3
	2.6nm,0.7s,baz=103,slow=2.3,SNR=8.0						
SONM	**Songino Array**	152.16	7	PKPbc	PKPdf	15 18 41.3	+9.4
	2.8nm,0.6s,baz=296,slow=1.3,SNR=24						
SONM				pPKPbc		15 19 09.4	
	1.4nm,0.8s,baz=318,slow=2.3,SNR=5.3						
LZH	**Lanzhou**	162.97	20	ePKP	PKPdf	15 18 40.0	-5.4
LZH				pPKP		15 19 18.0	
LZH				sPKP		15 19 30.0	

NIED ***15*** *15:01:00,23.40N×145.00E,h47^{km},Mw5.1 Best double couple: $M_0$5.5×10^{16} NP1:ϕ_s313°,δ69°,λ28°. NP2:ϕ_s213°, δ64°,λ157°.*

MOS ***15*** *15:01:39.5±1.0,22.87N×144.31E,h33^{km},mb5.5/64, MS4.5/18,Error ellipse: s-maj=9.1km s-min=5.3km az=97.8*

JMA ***15*** *15:01:42.5±0.3,23.42N×144.99E,h28^{km},M5.3*

BJI ***15*** *15:01:42.2,22.70N×144.64E,h78^{km},mB5.2,mb5.2, Ms4.6,Msz4.5*

IDC ***15*** *15:01:42.3±0.5,22.93N×144.39E,h44^{km}±3^{km},mb4.8/19, mb1 5.0/22,mb1mx5.0/24,mbtmp5.1/22,MS4.6/17, Ms1 4.6/17,ms1mx4.5/26,Error ellipse: s-maj=14.6km s-min=10.7km az=76.0*

HRVD ***15*** *15:01:46.3±0.2,23.08N×144.64E,h37^{km}±1^{km},MW5.3/66, Centroid moment Tensor Solution. LP body waves: s39,c62;Mantle waves: s66,c128; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.44±.04; $M_{\theta\theta}$0.55±.03; $M_{\phi\phi}$-0.11±.02; $M_{r\theta}$-0.60±.04; $M_{\theta\phi}$-0.23±.01; $M_{\phi r}$0.63±.04; Best double couple: $M_0$1.03×10^{17} NP1: ϕ_s259°,δ22°,λ-141°. NP2:ϕ_s133°,δ76°,λ-72°. Principal axes: T 1.054, Plg29°, Azm208°; N -.047, Plg17°, Azm308°; P -1.006, Plg55°, Azm65°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***15*** *15:01:46.4±0.7,22.84N×144.37E,h81^{km}±6^{km},mb5.4/95, MW5.1(NIED) Error ellipse: s-maj=3.7km s-min=3.4km az=190.0*

ISC 15 15:01:40.9±0.2**,22.92N**±0.03×**144.37E**±0.02**,h42**^{km}**,** **h42**^{km}±2.4^{km}**:pP-P,n406,**σ**0**^{s}**98**/418**,mb5.4**/146**,MS4.5**/45**,** **11C-26D,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	4.20	332	P	P	15 02 45.1	+1.0
JHHJ				eS	S	15 03 33.0	+0.5
CBIJ	**Chichi jima**	4.60	335	P	P	15 02 50.5	+0.6
	287nm,0.3s,baz=158,slow=3.2,SNR=171						
CBIJ				S	S	15 03 41.2	-1.6
	1µm,0.3s,baz=285,slow=22,SNR=18						
CBIJ	**Chichi jima**	4.60	335	P	P	15 02 50.5	+0.6
CBIJ				eS	S	15 03 40.7	-2.1
SARN	**Sarigan**	6.33	168	P	P	15 03 16.3	+2.3
SAPN	**Saipan**	7.78	170	eP	P	15 03 35.4	+1.1
JHJ2	**Mitsune**	10.92	339	P	P	15 04 15.6	-2.0
JHJ2				eS	S	15 06 08.5	-11
JHJ	**Hachijo jima 2**	10.94	339	P	P	15 04 15.2	-2.5
	58nm,0.3s,baz=257,slow=22,SNR=8.4						
JHJ				S	S	15 06 11.1	-8.7
	90nm,0.3s,baz=68,slow=16,SNR=6.1						
BSO1	**Boso 1**	12.06	347	P	P	15 04 30.8	-2.2
BSO1				eS	S	15 06 39.1	-8.0
JKO	**Kozu shima**	12.13	339	P	P	15 04 35.5	+1.6
BSO2	**Boso 2**	12.20	346	eS	S	15 06 45.3	-5.2
JOD2	**Odawara 2**	13.13	341	P	P	15 04 45.2	-2.1
JOD2				eS	S	15 07 06.7	-6.1
JRY	**Ryogami san**	13.89	341	P	P	15 04 56.0	-1.2
JRY				eS	S	15 07 23.5	-7.4
MJAR	**Matsushiro Arr**	14.58	340	P	P	15 05 04.9	-1.4
MJAR				S	S	15 07 41.2	-6.2
MJAR				pmax	pmax		
	comp=Z,15nm,0.3s						
MJAR				smax			
	comp=E,3.0nm,0.3s						
MJAR	**Matsushiro Arr**	14.58	340	P	P	15 05 04.9	-1.4
	comp=E,15nm,0.3s,baz=160,slow=12,SNR=70						
MJAR				S	S	15 07 41.2	-6.2
	comp=E,3.2nm,0.3s,baz=145,slow=17,SNR=6.5						
MAJO	**Matsushiro**	14.59	340	eP	P	15 05 04.3	-2.0
MAJO				pmax	pmax		
	comp=Z,75nm,0.5s						
MAJO	**Matsushiro**	14.59	340	eP	P	15 05 04.3	-2.0
	comp=Z,75nm,0.5s						
MAT	**Matsushiro**	14.59	340	eP	P	15 05 05.0	-1.3
	comp=Z,25nm,0.9s						
MAT				eS	S	15 07 38.0	-9.4
MAT	**Matsushiro**	14.59	340	P	P	15 05 05.0	-1.3
MAT				S	S	15 07 38.1	-9.3
MAT	**Matsushiro**	14.59	340	P	P	15 05 04.7	-1.6
MAT				eS	S	15 07 38.7	-8.7
JOW	**Kunigami**	15.12	288	P	P	15 05 17.1	+3.8
	comp=Z,2.5nm,0.3s,baz=117,slow=7.6,SNR=8.1						
JOW				LR	LR	15 10 35.0	
	comp=Z,3µm,19.5s,baz=132,slow=35						
JOW	**Kunigami**	15.12	288	P	P	15 05 21.2	+7.9
JHS	**Saijyo**	15.53	323	P	P	15 05 20.3	+1.7
JNU	**Nakatsue**	15.64	313	P	P	15 05 24.2	+4.2
	comp=Z,1.4nm,0.3s,baz=129,slow=12,SNR=21						
JMK	**Ichinoseki**	16.20	351	P	P	15 05 25.1	-2.0
JMK				eS	S	15 08 13.1	-12
JTU	**Tsushima**	17.47	315	P	P	15 05 47.1	+4.0
JOT	**Ohata**	18.62	352	P	P	15 05 58.6	+1.4
JKB	**Kayabe**	19.12	352	P	P	15 06 03.7	+0.6
JOSM	**Okushiri--Mats**	19.54	349	P	P	15 06 08.7	+1.0
KS15	**Wonju Array Si**	20.26	319	eP	P	15 06 15.8	+0.3
NEM2	**Nemuro 2**	20.42	3	P	P	15 06 16.9	-0.2
INCN	**Inchon**	21.06	318	P	P	15 06 23.1	-0.5
	comp=Z,40nm,0.8s,mb4.8						
YHNB	**Yeheng**	21.11	279	eP	P	15 06 24.2	-0.1
ASAJ	**Asahikawa**	21.19	356	P	P	15 06 26.7	+1.7
ASAJ				S	S	15 10 14.8	+1.6
ASAJ				pmax	pmax		
	comp=Z,77nm,0.8s						
ASAJ				smax			
	comp=E,20nm,0.7s						
ASAJ				MLR	MLR		
	comp=Z,2µm,21.8s						
ASAJ	**Asahikawa**	21.19	356	P	P	15 06 26.7	+1.7
	comp=Z,77nm,0.8s,mb5.1,baz=225,slow=12,SNR=50						
ASAJ				S	S	15 10 14.8	+1.6
	comp=Z,20nm,0.7s,baz=26,slow=19,SNR=4.5						
ASAJ				LR	LR	15 13 35.8	
	comp=Z,2µm,21.8s,MS4.4,baz=171,slow=34						
CVP	**Callao Caves**	21.76	260	⇓eP	P	15 06 32.5	+1.7
CAUP	**Cauayan**	22.00	258	eP	P	15 06 39.9	+6.7
SSE	**Sheshan**	22.17	297	eP	P	15 06 36.0	+1.2
SSE				S	S	15 10 38.8	+7.4
SSE				AMB	AMB		
	comp=Z,140nm,1.0s,mb5.3						
SSE				AMB	AMB		
	comp=Z,160nm,5.3s						
SSE				LR	LR		
	comp=N,470nm,27.5s,MS4.1						
SSE				LR	LR		
	comp=E,890nm,27.5s,MS4.1						
SSE				LR	LR		
	comp=Z,920nm,31.7s,MS4.0						
SSE	**Sheshan**	22.17	297	eP	P	15 06 36.0	+1.2
	comp=Z,147nm,1.0s,mb5.4						
SSE				pP		15 06 38.6	
SSE				sP		15 06 40.2	
SSE				S	S	15 10 38.7	+7.3
SSE				sS		15 10 44.2	
SSE				LR	LR		
	comp=Z,930nm,31.7s,MS4.0						
YSS	**Yuzh-Sakhalins**	24.01	357	⇓eP	P	15 06 53.6	+0.9
YSS				e		15 07 02.3	
YSS				e		15 07 10.9	
YSS				ePPP	PPP	15 07 38.9	+1.1
YSS				eS	S	15 11 13.0	+9.1
YSS				SS	SS	15 11 50.0	-6.7
YSS				pmax	pmax		
	comp=N,120nm,1.0s						
YSS				pmax	pmax		
	comp=Z,190nm,1.0s,mb5.5						
YSS	**Yuzh-Sakhalins**	24.01	357	eP	P	15 06 53.6	+0.9
	comp=Z,133nm,0.9s,mb5.4						
NJ2	**Nanjing**	24.34	297	eP	P	15 06 55.4	-0.7
NJ2				S	S	15 11 10.0	+0.3
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,480nm,4.0s						
NJ2				LR	LR		
	comp=N,1µm,16.7s,MS4.6						
NJ2				LR	LR		
	comp=E,1µm,20.3s,MS4.6						
NJ2				LR	LR		
	comp=Z,3µm,21.7s,MS4.8						
MDJ	**Mudanjiang**	24.80	334	P	P	15 07 02.5	+2.1
MDJ				AP		15 07 19.1	
MDJ				XP		15 07 27.6	
MDJ				PCP	PcP	15 10 35.3	-1.8
MDJ				S	S	15 11 22.3	+4.9
MDJ				XS		15 11 51.4	
MDJ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,310nm,6.6s						
MDJ				LR	LR		
	comp=N,910nm,26.0s,MS4.3						
MDJ				LR	LR		
	comp=E,630nm,24.2s,MS4.3						
MDJ				LR	LR		
	comp=Z,1µm,26.9s,MS4.2						
MDJ	**Mudanjiang**	24.80	334	eP	P	15 07 02.4	+1.9
	comp=Z,78nm,1.1s,mb5.2						
DL2	**Dalian**	25.09	315	P	P	15 07 04.9	+1.7
DL2				S	S	15 11 29.8	+7.6
DL2				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
DL2				AMB	AMB		
	comp=Z,230nm,3.2s						
DL2				LR	LR		
	comp=N,180nm,16.6s,MS3.8						
DL2				LR	LR		
	comp=E,160nm,13.9s,MS3.8						
DL2				LR	LR		
	comp=Z,370nm,17.7s,MS3.9						
SNY	**Shenyang**	25.65	322	⇑P	P	15 07 07.8	-0.6
SNY				PP	PP	15 07 55.0	+6.0
SNY				AMB	AMB		
	comp=Z,90nm,0.6s,mb5.5						
SNY				AMB	AMB		
	comp=Z,180nm,7.8s						
SNY				LR	LR		
	comp=N,700nm,19.4s						
SNY				LR	LR		
	comp=Z,960nm,22.8s,MS4.3						
CN2	**Changchun**	26.02	328	eP	P	15 07 11.8	-0.1
CN2				eS	S	15 11 41.5	+3.9
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,1µm,19.0s,MS4.5						
CN2				LR	LR		
	comp=E,800nm,19.0s,MS4.5						
CN2				LR	LR		
	comp=Z,800nm,21.0s,MS4.2						
TIA	**Tai'an**	27.04	305	P	P	15 07 21.1	-0.2
WHN	**Wuhan**	27.80	292	⇓P	P	15 07 29.0	+0.6
WHN				S	S	15 12 09.0	+2.3
WHN				LR	LR		
	comp=Z,2µm,22.0s,MS4.7						
KLR	**Kul'dur**	28.09	342	⇑iP	P	15 07 28.2	-2.5
KLR				eS	S	15 12 05.5	-5.5
KLR				e		15 13 51.5	
KLR				pmax	pmax		
	comp=E,22nm,0.8s						
KLR				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.3						
KLR				MLR	MLR		
	comp=Z,600nm,14.0s,MS4.3						
GZH	**Guangzhou**	28.53	276	P	P	15 07 32.4	-2.5
KKM	**Kota Kinabalu**	31.90	243	eP	P	15 08 03.4	-1.5
ENH	**Enshi**	31.95	291	eP	P	15 08 04.3	-0.8
	comp=Z,13nm,0.6s,mb5.0						
PET	**Petropavlovsk**	31.97	16	eP	P	15 08 04.5	-0.6
PET				e*SP	sP	15 08 18.9	-3.0
PET				eS	S	15 13 18.1	+5.7
PET				pmax	pmax		
	comp=Z,64nm,0.4s,mb5.8						
PET				pmax	pmax		
	comp=Z,85nm,1.1s,mb5.5						
PET				smax			
	comp=N,200nm,18.3s						
PET				MLR	MLR		
	comp=Z,700nm,19.0s,MS4.4						
PET	**Petropavlovsk**	31.97	16	eP	P	15 08 04.3	-0.8
	comp=Z,53nm,0.4s,mb5.7						
PMG	**Port Moresby**	32.24	175	P	P	15 08 05.7	-2.2
PMG				pmax	pmax		
	comp=Z,12nm,0.6s						
PMG	**Port Moresby**	32.24	175	eP	P	15 08 05.4	-2.5
	comp=Z,12nm,0.6s,mb4.9						
QIZ	**Qiongzhong**	32.42	270	P	P	15 08 07.1	-2.3
QIZ				S	S	15 13 19.4	-0.4
QIZ				LR	LR		
	comp=E,630nm,20.1s						
QIZ				LR	LR		
	comp=Z,1µm,29.7s						
HIA	**Hailar**	32.69	330	eP	P	15 08 11.8	+0.4
	comp=Z,15nm,0.6s,mb5.1						
HHC	**Hu-ho-hao-te**	32.84	311	eP	P	15 08 14.3	+1.5
HHC				AP	pP	15 08 30.8	+6.6
HHC				PP	PP	15 09 27.5	+4.2
HHC				PCP	PcP	15 10 56.8	-0.2
HHC				S	S	15 13 27.9	+1.8
HHC				SCP		15 14 27.8	
HHC				SS	SS	15 15 31.6	+5.1
HHC				SCS	ScS	15 18 32.3	-2.7
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
HHC				AMB	AMB		
	comp=Z,180nm,5.5s						
HHC				LR	LR		
	comp=N,330nm,17.8s,MS4.2						
HHC				LR	LR		
	comp=E,350nm,19.0s,MS4.2						
HHC				LR	LR		
	comp=Z,520nm,22.6s,MS4.2						
GYA	**Guiyang**	34.36	284	⇑iP	P	15 08 26.4	+0.4
GYA				PP	PP	15 09 44.9	+2.7
GYA				S	S	15 13 49.8	0.0
GYA				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.4						
GYA				AMB	AMB		
	comp=Z,200nm,3.6s						
GYA				LR	LR		
	comp=N,390nm,17.6s,MS4.6						
GYA				LR	LR		
	comp=E,1µm,17.0s,MS4.6						
GYA				LR	LR		
	comp=Z,1µm,17.4s,MS4.7						
CLNS	**Chul'man**	36.75	342	eP	P	15 08 46.3	+0.3
CLNS				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.2						
CLNS				pmax	pmax		
	comp=N,29nm,1.1s						
CLNS				pmax	pmax		
	comp=E,11nm,1.2s						
MA2	**Magadan**	36.90	5	deP	P	15 08 47.3	0.0
MA2				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
CD2	**Chengdu**	36.92	291	P	P	15 08 48.5	+0.8
CD2				S	S	15 14 29.0	-0.1
CD2				AMB	AMB		
	comp=Z,120nm,0.9s,mb5.7						
CD2				LR	LR		
	comp=N,1µm,20.4s						
CD2				LR	LR		
	comp=Z,1µm,18.0s,MS4.7						
FX1	**Attu Island--F**	37.09	29	P	P	15 08 49.1	+0.3
	comp=Z,146nm,0.9s,mb5.8,baz=189,slow=2.2,SNR=18						
FX1				LR	LR	15 21 20.4	
	comp=Z,66nm,20.4s,MS3.4,baz=150,slow=32						
FX1	**Attu Island--F**	37.09	29	eP	P	15 08 49.5	+0.6
KAKA	**Kakadu**	37.29	199	eP	P	15 08 48.8	-2.1
	comp=Z,42nm,0.6s,mb5.4						
LZH	**Lanzhou**	37.37	300	eP	P	15 08 52.5	+1.1
LZH				PP	PP	15 10 20.5	+0.8
LZH				eS	S	15 14 36.0	0.0
LZH				SS	SS	15 17 13.0	+3.5
LZH				AMB	AMB		
	comp=Z,50nm,1.4s,mb5.2						
LZH				AMB	AMB		
	comp=Z,150nm,4.0s						
LZH				LR	LR		
	comp=N,1µm,16.7s						
LZH				LR	LR		
	comp=Z,1µm,18.0s,MS4.8						
LZH	**Lanzhou**	37.37	300	eP	P	15 08 52.5	+1.1
	comp=Z,51nm,1.4s,mb5.2						
LZH				pP	pP	15 08 55.5	-7.5
LZH				sP	sP	15 08 57.0	-11
LZH				PP	PP	15 10 20.5	+0.8
LZH				eS	S	15 14 36.0	0.0
LZH				sS		15 14 43.0	
LZH				SS	SS	15 17 13.0	+3.5
LZH				LR	LR		
	comp=Z,1µm,18.0s,MS4.8						
CIT	**Chita**	37.46	329	eP	P	15 08 53.2	+1.2
CIT				e	pP	15 09 03.8	+0.2
CIT				e		15 14 40.1	
CIT				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.5						
KMI	**Kunming**	37.98	282	⇑P	P	15 08 58.1	+1.5
KMI				S	S	15 14 45.1	-0.3
KMI				SS	SS	15 17 27.8	+4.1
KMI				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
KMI				AMB	AMB		
	comp=Z,70nm,3.1s						
KMI				LR	LR		
	comp=N,410nm,22.0s,MS4.4						
KMI				LR	LR		
	comp=E,500nm,20.0s,MS4.4						
KMI				LR	LR		
	comp=Z,630nm,26.4s						
KMI	**Kunming**	37.98	282	⇑P	P	15 08 58.1	+1.5
	comp=Z,39nm,1.0s,mb5.1						
KMI				sP	pP	15 09 01.0	-7.2
KMI				PP	PP	15 10 22.5	-4.6
KMI				S	S	15 14 45.1	-0.3
KMI				SS	SS	15 17 27.7	+4.0
KMI				LR	LR		
	comp=Z,630nm,26.4s,MS4.3						
ULN	**Ulaanbaatar**	38.74	319	eP	P	15 09 03.3	+0.7
	comp=Z,42nm,1.3s,mb5.0						
ULN				e	pP	15 09 14.8	+0.6
SONM	**Songino Array**	39.12	319	P	P	15 09 06.7	+0.9
	comp=Z,7.7nm,0.6s,mb4.6,baz=131,slow=8.0,SNR=61						
SONM				ScP		15 14 57.6	
	comp=Z,1.6nm,0.9s,baz=108,slow=3.9,SNR=4.6						
SONM				LR	LR	15 25 27.7	
	comp=Z,762nm,21.9s,MS4.5,baz=113,slow=36						
KKTK	**Khon Kaen**	39.58	268	P	P	15 09 11.0	+1.0
	comp=Z,370nm,0.6s,mb6.3						
SEY	**Seymchan**	40.36	6	eP	P	15 09 16.6	+0.6
SEY				e	pP	15 09 30.1	+2.5
SEY				e		15 10 47.8	
SEY				e		15 11 16.9	
SEY				eS	S	15 15 22.2	+1.4
SEY				SS	SS	15 18 13.7	-1.6
SEY				eSSS	SSS	15 18 54.1	+1.3
SEY						15 19 18.8	
SEY				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1						
SEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
SEY				smax			
	comp=N,170nm,25.8s						
SEY				smax			
	comp=E,300nm,23.6s						
SEY				MLR	MLR		
	comp=N,580nm,19.0s,MS4.5						
SEY				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.7						
SEY				MLR	MLR		
	comp=E,350nm,21.0s,MS4.5						
YAK	**Yakutsk**	40.36	349	d iP	P	15 09 16.1	+0.1
YAK				e*PP	pP	15 09 24.8	-2.9
YAK				e		15 11 24.8	
YAK				i S	S	15 15 17.7	-3.2
YAK				eSSS	SSS	15 18 50.1	-2.8
YAK				e		15 19 24.7	
YAK				pmax	pmax		
	comp=Z,139nm,0.9s,mb5.7						
YAK				pmax	pmax		
	comp=N,47nm,1.1s						
YAK				pmax	pmax		
	comp=E,17nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				smax			
	comp=N,2.0nm,1.2s						
YAK				smax			
	comp=E,2.0nm,1.4s						
YAK	**Yakutsk**	40.36	349	eP	P	15 09 15.8	-0.2
	comp=E,277nm,0.8s,mb6.0						
NANT	**Nan**	40.90	273	⇓P	P	15 09 19.0	-1.9
	comp=E,129nm,0.9s,mb5.6						
GTA	**Gaotai**	41.08	304	eP	P	15 09 23.3	+1.1
GTA				PP	PP	15 10 59.5	-0.6
GTA				S	S	15 15 31.3	-0.5
GTA				AMB	AMB		
	comp=Z,90nm,5.4s						
GTA				LR	LR		
	comp=N,330nm,16.1s,MS4.5						
GTA				LR	LR		
	comp=E,490nm,18.7s,MS4.5						
GTA				LR	LR		
	comp=Z,540nm,18.0s,MS4.5						
BOD	**Bodaibo**	41.16	336	eP	P	15 09 22.6	-0.1
BOD				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
ZAK	**Zakamensk**	42.07	321	eP	P	15 09 31.0	+0.8
ZAK				e	pP	15 09 40.9	-0.9
ZAK				pmax	pmax		
	comp=Z,32nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s						
NST	**Nakhon Sawan**	42.24	268	P	P	15 09 32.8	+0.7
IRK	**Irkutsk**	42.35	324	eP	P	15 09 32.6	+0.1
IRK				pmax	pmax		
	comp=Z,43nm,1.6s,mb4.8						
TLY	**Talaya**	42.43	323	eP	P	15 09 34.9	+1.7
TLY				ePPP	PPP	15 11 27.1	-21
TLY				eS	S	15 15 50.8	-0.8
TLY				eSSS	SSS	15 19 48.8	+6.2

TLY				pmax	pmax		
	comp=Z,61nm,1.5s,mb5.0						
TLY				MLR	MLR		
	comp=Z,608nm,20.0s,MS4.5						
TLY	**Talaya**	**42.43**	**323**	P	**P**	**15 09 34.5**	**+1.3**
	comp=Z,34nm,0.9s,mb5.0						
TLY				*e*	pP	15 09 45.5	+0.6
CMAR	**Chiang Mai Arr**	**42.60**	**273**	P	**P**	**15 09 35.6**	**+0.6**
	comp=Z,17nm,0.6s,mb4.9,baz=64,slow=7.5,SNR=157						
CMAR				ScP		15 15 13.8	
	comp=Z,4.0nm,1.2s,baz=110,slow=1.9,SNR=5.0						
CMAR				LR	LR	15 26 07.2	
	comp=Z,434nm,20.2s,MS4.3,baz=85,slow=34						
CTA	**Charters Tower**	**42.79**	**177**	*e*P	**P**	**15 09 35.0**	**-1.5**
	comp=Z,13nm,0.6s,mb4.8						
CTA				*e*		15 09 56.6	
CTAO	**Charters Tower**	**42.79**	**177**	*e*P	**P**	**15 09 34.2**	**-2.2**
	comp=Z,14nm,0.6s,mb4.9						
CTAO				LR	LR		
	comp=Z,531nm,20.0s,MS4.4						
WRAB	**Tennant Creek**	**43.70**	**194**	*e*P	**P**	**15 09 42.4**	**-1.5**
	comp=Z,235nm,0.9s,mb5.9						
WRAB				*e*ScP		15 15 16.9	
WB2	**Warramunga Arr**	**43.71**	**194**	⇑*i*P	**P**	**15 09 42.6**	**-1.4**
WB2				*e*SCP		15 15 18.2	
WB2				*e*S	**S**	**15 16 04.7**	**-6.0**
WRA	**Warramunga Arr**	**43.71**	**194**	P	**P**	**15 09 42.5**	**-1.5**
WRA				pmax	pmax		
	comp=Z,24nm,0.5s						
WRA				pmax	pmax		
	comp=E,19nm,1.2s						
WRA	**Warramunga Arr**	**43.71**	**194**	P	**P**	**15 09 42.5**	**-1.5**
	comp=E,24nm,0.5s,mb5.2,baz=13,slow=8.8,SNR=37						
WRA				ScP		15 15 17.6	
	comp=E,19nm,1.2s,baz=14,slow=4.4,SNR=23						
MOY	**Mondy**	**43.92**	**322**	*e*P	**P**	**15 09 46.4**	**+1.2**
MOY				*e*	pP	15 09 57.4	+0.4
MOY				pmax	pmax		
	comp=Z,46nm,1.8s,mb4.9						
KULM	**Kulim**	**45.65**	**254**	*e*P	**P**	**15 09 59.1**	**-0.5**
BILL	**Bilibino**	**47.11**	**11**	κ*i*P	**P**	**15 10 09.9**	**-0.5**
BILL				*i*		15 10 18.3	
BILL				*i*		15 10 28.4	
BILL				*i*		15 11 40.7	
BILL				*i*		15 12 00.3	
BILL				*e*S	**S**	**15 17 06.7**	**+8.0**
BILL				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.7						
BILL				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.5						
BILL				MLR	MLR		
	comp=Z,600nm,22.0s						
BILL	**Bilibino**	**47.11**	**11**	*e*P	**P**	**15 10 09.3**	**-1.0**
	comp=Z,79nm,1.0s,mb5.6						
BILL				*e*pP	pP	15 10 28.5	+6.4
SHL	**Shillong**	**47.68**	**284**	*i* P	**P**	**15 10 16.0**	**+0.6**
SHL				*e*S	**S**	**15 17 06.0**	**-1.3**
LSA	**Lhasa**	**47.84**	**290**	P	**P**	**15 10 19.0**	**+2.3**
LSA	**Lhasa**	**47.84**	**290**	*e*P	**P**	**15 10 18.7**	**+2.0**
	comp=Z,21nm,0.6s,mb5.3						
UNV	**Unalaska Valle**	**47.98**	**37**	*e*P	**P**	**15 10 15.5**	**-1.9**
TIXI	**Tiksi**	**49.55**	**354**	*e*P	**P**	**15 10 24.3**	**-5.0**
TIXI				*e*SS	SS	15 21 02.5	+1.0
TIXI				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.3						
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
TIXI				pmax	pmax		
	comp=N,1.0nm,1.3s						
TIXI				pmax	pmax		
	comp=E,2.0nm,1.3s						
TIXI				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.2						
TIXI				pmax	pmax		
	comp=N,5.0nm,0.9s						
TIXI				pmax	pmax		
	comp=E,4.0nm,0.9s						
TIXI	**Tiksi**	**49.55**	**354**	⇓*i*P	**P**	**15 10 28.7**	**-0.6**
NOUC	**Port Laguerre**	**49.59**	**153**	*e*P	**P**	**15 10 29.2**	**-1.0**
NOUC	**Port Laguerre**	**49.59**	**153**	*e*P	**P**	**15 10 29.2**	**-1.0**
DZM	**Mont Dzumac**	**49.62**	**153**	*e*P	**P**	**15 10 30.2**	**-0.3**
DZM	**Mont Dzumac**	**49.62**	**153**	*e*P	**P**	**15 10 30.1**	**-0.3**
MBWA	**Marble Bar**	**49.96**	**211**	*e*P	**P**	**15 10 31.4**	**-1.8**
	comp=E,47nm,0.8s,mb5.6						
WMQ	**Urumqi**	**50.67**	**309**	*e*P	**P**	**15 10 39.0**	**+0.8**
WMQ				PCP	PcP	15 11 56.0	+0.7
WMQ				PP	PP	15 12 36.1	+1.0
WMQ				AMB	AMB		
	comp=Z,80nm,1.1s,mb5.6						
WMQ				AMB	AMB		
	comp=Z,340nm,4.2s						
WMQ				LR	LR		
	comp=N,2µm,22.0s,MS5.3						
WMQ				LR	LR		
	comp=E,2µm,22.3s,MS5.3						
WMQ				LR	LR		
	comp=Z,2µm,23.6s,MS5.1						
TNA	**Tin City**	**52.39**	**23**	*e*P	**P**	**15 10 50.3**	**-0.6**
	comp=Z,37nm,1.4s,mb5.1						
GUN	**Gumba**	**52.64**	**288**	*e*P	**P**	**15 10 54.3**	**+1.0**
	comp=Z,100nm,0.7s,mb5.8						
PKI	**Pulchoki**	**53.11**	**288**	*e*P	**P**	**15 10 57.2**	**+0.5**
	comp=Z,30nm,0.5s,mb5.5						
KKN	**Kakani**	**53.19**	**288**	*e*P	**P**	**15 10 57.9**	**+0.6**
	comp=Z,72nm,0.9s,mb5.6						
DMN	**Daman**	**53.37**	**288**	*e*P	**P**	**15 10 59.3**	**+0.6**
	comp=Z,66nm,0.7s,mb5.7						
GKN	**Gorkha**	**53.72**	**289**	*e*P	**P**	**15 11 01.7**	**+0.5**
	comp=Z,125nm,1.0s,mb5.8						
ZAL	**Zalesovo**	**53.96**	**321**	P	**P**	**15 11 02.6**	**0.0**
ZAL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZAL	**Zalesovo**	**53.96**	**321**	P	**P**	**15 11 02.6**	**0.0**
	comp=Z,6.1nm,0.5s,mb4.8,baz=11,slow=8.3,SNR=24						
STKA	**Stephens Creek**	**54.55**	**183**	⇓*i*P	**P**	**15 11 05.4**	**-1.9**
	comp=Z,7.4nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**54.55**	**183**	P	**P**	**15 11 05.5**	**-1.8**
	comp=Z,8.5nm,0.6s,mb5.0,baz=352,slow=6.7,SNR=23						
STKA				LR	LR	15 34 38.8	
	comp=Z,395nm,19.5s,MS4.5,baz=132,slow=36						
KOLN	**Koldanda**	**54.66**	**289**	*e*P	**P**	**15 11 08.6**	**+0.5**
	comp=Z,112nm,1.0s,mb5.8						
MKAR	**Makanchi Array**	**54.69**	**312**	P	**P**	**15 11 07.9**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,246nm,18.5s						
MKAR	**Makanchi Array**	**54.69**	**312**	P	**P**	**15 11 07.9**	**-0.2**
	comp=Z,8.2nm,0.7s,mb4.9,baz=90,slow=8.9,SNR=78						
MKAR				LR	LR	15 35 41.2	
	comp=Z,246nm,18.4s,MS4.3,baz=179,slow=37						
NVS	**Novosibirsk**	**55.02**	**322**	*e*P	**P**	**15 11 08.7**	**-1.6**
NVS				pmax	pmax		
	comp=N,9.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,40nm,1.3s						
NVS				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.2						
SVW2	**Sparrevohn**	**55.80**	**31**	*e*P	**P**	**15 11 15.4**	**-0.5**
TTA	**Tatalina**	**56.11**	**28**	*e*P	**P**	**15 11 17.2**	**-0.9**
KDAK	**Kodiak Island**	**56.58**	**35**	*e*P	**P**	**15 11 20.0**	**-1.5**
RSO	**Redoubt South**	**57.00**	**32**	*e*P	**P**	**15 11 23.3**	**-1.3**
BLSP	**Bilaspur**	**57.09**	**282**	*e*P	**P**	**15 11 25.9**	**+0.1**
BLSP				AMb	AMB	15 11 27.0	
	comp=Z,50nm,0.5s,mb5.8						
VIS	**Vishakhapatnam**	**57.13**	**277**	*e*P	**P**	**15 11 26.7**	**+0.6**
VIS				AMb	AMB	15 11 27.6	
	comp=Z,43nm,0.7s,mb5.6						
SPU	**Mount Spurr**	**57.48**	**31**	*e*P	**P**	**15 11 26.6**	**-1.4**
IMA	**Indian Mountai**	**57.97**	**25**	P	**P**	**15 11 30.8**	**-0.5**
IMA				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.9						
IMA	**Indian Mountai**	**57.97**	**25**	*e*P	**P**	**15 11 31.1**	**-0.2**
	comp=Z,16nm,0.9s,mb5.0						
SLKM	**Skilak Lake**	**58.24**	**32**	P	**P**	**15 11 32.4**	**-0.8**
SLKM	**Skilak Lake**	**58.24**	**32**	*e*P	**P**	**15 11 31.4**	**-1.8**
PMR	**Palmer**	**58.94**	**31**	*e*P	**P**	**15 11 36.3**	**-1.8**
	comp=Z,116nm,1.3s,mb5.8						
ULHL	**Ulahol**	**59.04**	**307**	P	**P**	**15 11 39.6**	**+0.6**
	SNR=13						
SML	**Sawmill**	**59.35**	**31**	P	**P**	**15 11 39.6**	**-1.3**
SML	**Sawmill**	**59.35**	**31**	*e*P	**P**	**15 11 39.2**	**-1.7**
KSH	**Kashi**	**59.47**	**303**	*e*P	**P**	**15 11 38.1**	**-4.0**
KSH				*e*PCP	PcP	15 12 26.5	-2.6
KSH				*e*S	**S**	**15 19 42.0**	**-4.6**
KSH				*e*SCS	ScS	15 21 23.1	-1.8
KSH				AMB	AMB		
	comp=Z,200nm,6.7s						
KSH				LR	LR		
	comp=N,430nm,4.6s						
KSH				LR	LR		
	comp=E,530nm,6.1s						
TKM2	**Tokmak 2**	**59.47**	**307**	P	**P**	**15 11 42.8**	**+0.8**
	SNR=19						
SDNR	**Sundarnagar**	**59.73**	**294**	*e*P	**P**	**15 11 44.4**	**+0.4**
KZA	**Kyzart**	**59.79**	**306**	P	**P**	**15 11 45.6**	**+1.4**
	SNR=24						
KLBR	**Kellerberrin**	**59.90**	**206**	*e*P	**P**	**15 11 42.7**	**-2.4**
	comp=E,47nm,0.7s,mb5.6						
KBK	**Karagaybulak**	**59.97**	**307**	P	**P**	**15 11 46.0**	**+0.5**
	SNR=13						
NDI	**New Delhi**	**60.04**	**291**	*e*P	**P**	**15 11 45.4**	**-0.7**
FRU	**Bishkek**	**60.20**	**307**	*e*P	**P**	**15 11 48.0**	**+1.0**
FRU				*e*		15 11 56.0	
USP	**Ospenovka**	**60.25**	**308**	P	**P**	**15 11 47.3**	**0.0**
	SNR=12						
AAK	**Ala-Archa**	**60.30**	**307**	P	**P**	**15 11 47.4**	**-0.3**
AAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
AAK	**Ala-Archa**	**60.30**	**307**	*e*P	**P**	**15 11 46.8**	**-1.0**
	comp=Z,12nm,0.8s,mb5.0						
UCH	**Uchtor**	**60.32**	**307**	P	**P**	**15 11 49.2**	**+1.3**
	SNR=22						
EYAK	**Cordova Ski Ar**	**60.44**	**32**	*e*P	**P**	**15 11 47.8**	**-0.6**
EYAK				*e*pP	pP	15 12 03.0	+2.5
ILAR	**Eielson Array**	**60.45**	**27**	P	**P**	**15 11 45.9**	**-2.6**
	comp=Z,22nm,0.8s,mb5.2,baz=259,slow=5.6,SNR=122						
ILAR				LR	LR	15 36 05.5	
	comp=Z,656nm,20.3s,MS4.8,baz=248,slow=34						
DIV	**Divide**	**60.49**	**32**	*e*P	**P**	**15 11 48.0**	**-0.7**
	comp=Z,363nm,1.3s,mb6.2						
THY	**Trims Highway**	**60.76**	**29**	*e*P	**P**	**15 11 49.8**	**-0.8**
THY				*e*pP	pP	15 12 08.4	+5.8
AML	**Almayashu**	**60.94**	**307**	P	**P**	**15 11 53.3**	**+1.2**
	SNR=24						
BHPL	**Bhopal**	**61.05**	**285**	*e*P	**P**	**15 11 53.0**	**-0.1**
BHPL				AMb	AMB	15 11 53.4	
	comp=Z,36nm,1.6s,mb5.2						
NWAO	**Narrogin (SRO)**	**61.28**	**206**	P	**P**	**15 11 52.7**	**-1.8**
NWAO				pmax	pmax		
	comp=Z,25nm,0.6s						
NWAO				MLR	MLR		
	comp=Z,404nm,18.3s						
NWAO	**Narrogin (SRO)**	**61.28**	**206**	P	**P**	**15 11 52.7**	**-1.8**
	comp=Z,25nm,0.6s,mb5.5,baz=50,slow=8.4,SNR=24						
NWAO				LR	LR	15 38 04.6	
	comp=Z,404nm,18.3s,MS4.6,baz=215,slow=36						
NWAO	**Narrogin (SRO)**	**61.28**	**206**	P	**P**	**15 11 52.7**	**-1.8**
NWAO				LR	LR	15 38 04.6	
HYB	**Hyderabad**	**61.59**	**278**	*e*P	**P**	**15 11 56.0**	**-0.7**
	comp=Z,70nm,1.0s,mb5.8						
HYB	**Hyderabad**	**61.59**	**278**	*i* P	**P**	**15 11 56.0**	**-0.7**
	comp=Z,70nm,1.0s,mb5.8						
BVA0	**Borovoye Array**	**62.46**	**319**	*i* P	**P**	**15 12 01.1**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
KKAR	**Karatay Array**	**63.17**	**308**	*i* P	**P**	**15 12 06.7**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.2						
POO	**Poona**	**65.54**	**281**	*e*P	**P**	**15 12 23.1**	**+0.3**
POO				AMb	AMB	15 12 24.0	
	comp=Z,67nm,1.2s,mb5.6						
KAD	**Karad**	**65.60**	**279**	*e*P	**P**	**15 12 23.1**	**-0.1**
KAD				AMb	AMB	15 12 23.4	
	comp=Z,83nm,0.2s,mb6.4						
SIT	**Sitka**	**65.85**	**36**	P	**P**	**15 12 24.1**	**0.0**
SIT				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.5						
SIT	**Sitka**	**65.85**	**36**	*e*P	**P**	**15 12 23.8**	**-0.3**
	comp=Z,55nm,1.1s,mb5.5						
SIT				*e*pP	pP	15 12 42.8	+6.4
INK	**Inuvik**	**66.01**	**24**	P	**P**	**15 12 23.9**	**-1.0**
INK				pmax	pmax		
	comp=Z,70nm,1.1s						
INK	**Inuvik**	**66.01**	**24**	*e*P	**P**	**15 12 23.8**	**-1.2**
	comp=Z,70nm,1.1s,mb5.6						
INK				*e*pP	pP	15 12 40.6	+3.3
BOM	**Bombay**	**66.37**	**281**	*e*x	x	15 12 04.8	
MNGI	**Mangalore**	**66.40**	**275**	*e*x	x	15 11 26.0	
SVE	**Sverdlovsk**	**67.74**	**324**	⇓*e*P	**P**	**15 12 34.4**	**-1.6**
SVE				*e*	pP	15 12 47.8	-0.5
SVE				*e*		15 13 05.0	
SVE				*e*S	S	15 21 26.0	-3.1
SVE				pmax	pmax		
	comp=Z,60nm,1.9s,mb5.3						
SVE				MLR	MLR		
	comp=N,100nm,16.0s,MS4.5						
SVE				MLR	MLR		
	comp=E,200nm,16.0s,MS4.5						
SVE				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.4						
DLBC	**Dease Lake**	**68.50**	**34**	LR	LR	15 39 07.9	
	comp=Z,376nm,22.0s,MS4.6,baz=174,slow=33						
ARU	**Arti**	**68.93**	**324**	⇓*i*P	**P**	**15 12 42.5**	**-0.9**
ARU				*i*		15 13 02.2	
ARU				*e*		15 15 11.4	
ARU				*e*PPP	PPP	15 16 50.3	-5.9
ARU				*e*S	S	15 21 45.6	+2.2
ARU				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.5						
ARU				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.5						
ARU				MLR	MLR		
	comp=N,100nm,21.0s,MS4.4						
ARU				MLR	MLR		
	comp=E,200nm,19.0s,MS4.4						
ARU	**Arti**	**68.93**	**324**	*e*P	**P**	**15 12 41.7**	**-1.7**
	comp=E,53nm,0.9s,mb5.5						
SOKR	**Solikamsk**	**69.32**	**327**	⇑*i*P	**P**	**15 12 44.4**	**-1.3**
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
SOKR				MLR	MLR		
	comp=Z,270nm,21.0s,MS4.5						
AB31	**Akbulak array**	**69.44**	**316**	*i* P	**P**	**15 12 45.7**	**-0.9**
AB31				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
OCWA	**Octopus Mounta**	**74.34**	**44**	*e*P	**P**	**15 13 16.8**	**+0.9**
	comp=Z,100nm,1.1s,mb5.7						
PGC	**Sidney**	**74.54**	**43**	*e*P	**P**	**15 13 17.0**	**+0.1**
	comp=Z,32nm,0.6s,mb5.4						
OSR	**Olympics--Salm**	**74.55**	**45**	P	**P**	**15 13 18.2**	**+1.2**
YKW3	**Yellowknife Ar**	**74.84**	**28**	*e*P	**P**	**15 13 17.9**	**-0.5**
YKW3				*e*pP	pP	15 13 37.5	+6.7
YKA	**Yellowknife Ar**	**74.86**	**28**	P	**P**	**15 13 17.3**	**-1.3**
YKA				*PP	pP	15 13 30.7	-0.3
YKA				pmax	pmax		
	comp=Z,25nm,0.6s						
YKA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
YKA				pmax	pmax		
	comp=Z,21nm,0.8s						
YKA	**Yellowknife Ar**	**74.86**	**28**	P	**P**	**15 13 17.3**	**-1.3**
	comp=Z,25nm,0.6s,mb5.3,baz=292,slow=5.7,SNR=62						
YKA				pP	pP	15 13 30.7	-0.2
	comp=Z,5.9nm,0.6s,baz=292,slow=5.7,SNR=5.7						
YKA				sP	sP	15 13 37.2	+1.6
	comp=Z,21nm,0.8s,baz=292,slow=5.7,SNR=9.1						
YKA				LR	LR	15 44 35.6	
	comp=Z,697nm,19.7s,MS5.0,baz=280,slow=34						
YKA	**Yellowknife Ar**	**74.86**	**28**	P	**P**	**15 13 17.3**	**-1.3**
YKA				pP	pP	15 13 30.8	-0.2
YKA				sP	sP	15 13 37.2	+1.6
YKA				LR	LR	15 44 35.6	
KBS	**Kingsbay**	**74.95**	**352**	P	**P**	**15 13 19.6**	**+0.8**
KBS				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
KBS	**Kingsbay**	**74.95**	**352**	*e*P	**P**	**15 13 19.5**	**+0.6**
	comp=Z,24nm,0.8s,mb5.2						
RES	**Resolute Bay**	**75.64**	**14**	P	**P**	**15 13 22.2**	**-0.6**
RES				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.3						
RES	**Resolute Bay**	**75.64**	**14**	*e*P	**P**	**15 13 22.3**	**-0.5**
	comp=Z,38nm,0.9s,mb5.3						
RES				*e*pP	pP	15 13 41.7	+6.5
KEBM	**Edson Butte**	**75.69**	**49**	*e*P	**P**	**15 13 24.5**	**+0.8**
MPOR	**Mary's Peak**	**75.73**	**48**	P	**P**	**15 13 24.9**	**+1.0**
HSP	**Hornsund**	**75.73**	**350**	*e*P	**P**	**15 13 23.3**	**0.0**
COR	**Corvallis**	**75.87**	**47**	P	**P**	**15 13 25.9**	**+1.2**
COR				pmax	pmax		
	comp=Z,81nm,1.1s,mb5.6						
COR	**Corvallis**	**75.87**	**47**	*e*P	**P**	**15 13 25.8**	**+1.1**
	comp=Z,81nm,1.1s,mb5.6						
KBO	**Bosley Butte**	**75.97**	**50**	*e*P	**P**	**15 13 25.0**	**-0.3**
RVC	**Mount Rainier-**	**76.01**	**45**	P	**P**	**15 13 26.2**	**+0.8**
PPT	**Papeete**	**76.07**	**116**	LR	LR	15 41 44.2	
	comp=Z,419nm,18.9s,MS4.8,baz=315,slow=32						
LON	**Longmire**	**76.18**	**45**	P	**P**	**15 13 26.4**	**+0.1**
WRW	**Wenatchee Ridg**	**76.42**	**44**	P	**P**	**15 13 28.2**	**+0.4**
APA	**Apatity**	**76.64**	**338**	⇑*i*P	**P**	**15 13 28.0**	**-0.6**
APA				*i*	pP	15 13 38.4	-2.7
APA				*e*S	S	15 23 12.0	+1.3
APA				pmax	pmax		
	comp=Z,29nm,0.0s						
TWW	**Teanaway**	**76.66**	**44**	P	**P**	**15 13 29.9**	**+0.8**
VLL	**Laurance Lake**	**76.68**	**46**	P	**P**	**15 13 30.1**	**+0.8**
PECR	**Pechory**	**76.71**	**326**	*e*P	**P**	**15 13 28.0**	**-1.2**
PNT	**Penticton**	**76.73**	**42**	P	**P**	**15 13 29.0**	**-0.5**
HUMO	**Hull Mountain**	**76.74**	**49**	*e*P	**P**	**15 13 30.1**	**+0.4**
	comp=Z,33nm,0.8s,mb5.3						
KHMM	**Horse Mountain**	**76.75**	**51**	*e*P	**P**	**15 13 30.7**	**+0.9**
HBO	**Huckleberry Mo**	**76.78**	**48**	P	**P**	**15 13 30.4**	**+0.5**
TBM	**Table Mountain**	**76.83**	**44**	P	**P**	**15 13 30.5**	**+0.4**
BKCOR	**Black Crater**	**77.05**	**47**	P	**P**	**15 13 31.9**	**+0.5**
YBH	**Yreka Blue Hor**	**77.20**	**50**	P	**P**	**15 13 32.3**	**0.0**
YBH				pmax	pmax		
	comp=Z,93nm,1.1s						
YBH	**Yreka Blue Hor**	**77.20**	**50**	*e*P	**P**	**15 13 32.6**	**+0.4**
	comp=Z,93nm,1.2s,mb5.6						
MXC	**Moxie City**	**77.22**	**45**	P	**P**	**15 13 32.8**	**+0.5**
LAMM	**Antelope Mount**	**77.30**	**50**	P	**P**	**15 13 33.5**	**+0.7**
WBK	**Wadi Bani Khal**	**77.50**	**289**	P	**P**	**15 13 35.5**	**+1.2**
	SNR=6.6						
KEV	**Kevo**	**77.55**	**342**	*e*p	**P**	**15 13 33.1**	**-0.6**
	comp=Z,2.4nm,0.7s						
KEV	**Kevo**	**77.55**	**342**	*e*P	**P**	**15 13 33.1**	**-0.6**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SNIWA	**Snively Ranch**	**77.67**	**45**	P	**P**	**15 13 35.2**	**+0.5**
WDC	**Whiskeytown Da**	**77.70**	**51**	P	**P**	**15 13 34.8**	**-0.3**
WDC				pmax	pmax		
	comp=Z,47nm,1.1s,mb5.3						
WDC	**Whiskeytown Da**	**77.70**	**51**	*e*P	**P**	**15 13 34.7**	**-0.4**
	comp=Z,46nm,1.1s,mb5.3						
REDWA	**Red Mountain**	**77.87**	**45**	P	**P**	**15 13 36.3**	**+0.4**
BIDO	**Bidbid**	**77.93**	**291**	P	**P**	**15 13 37.6**	**+0.9**
	SNR=9.4						
ARCES	**ARCESS Array B**	**78.11**	**342**	P	**P**	**15 13 37.2**	**+0.5**
ARCES				pmax	pmax		
	comp=Z,23nm,0.9s						
ARCES	**ARCESS Array B**	**78.11**	**342**	P	**P**	**15 13 37.2**	**+0.4**
	comp=Z,23nm,0.9s,mb5.1,baz=59,slow=7.1,SNR=31						
ARCES	**ARCESS Array B**	**78.11**	**342**	P	**P**	**15 13 37.2**	**+0.4**
LTIM	**Timbered Crate**	**78.25**	**50**	P	**P**	**15 13 38.5**	**+0.5**
HOQ	**Hoqain**	**78.61**	**291**	P	**P**	**15 13 41.1**	**+0.7**
	SNR=8.0						
NEW	**Newport**	**78.64**	**42**	P	**P**	**15 13 39.8**	**-0.3**
NEW				pmax	pmax		
	comp=Z,97nm,1.0s						
NEW	**Newport**	**78.64**	**42**	*e*P	**P**	**15 13 39.5**	**-0.5**
	comp=Z,98nm,1.0s,mb5.7						
MOD	**Modoc**	**78.83**	**49**	⇓*i*P	**P**	**15 13 40.7**	**-0.5**
	comp=Z,82nm,1.3s,mb5.5						
EDM	**Edmonton**	**78.96**	**37**	*e*P	**P**	**15 13 41.9**	**+0.2**
EDM	**Edmonton**	**78.96**	**37**	⇓*i*P	**P**	**15 13 41.0**	**-0.7**
EDM				*e*pP	pP	15 14 00.9	+6.7
BSY	**Bisya**	**78.99**	**290**	P	**P**	**15 13 43.2**	**+0.6**
	SNR=19						
TBI	**Tubuai**	**79.06**	**121**	*e*S	tx	15 22 12.6	
	comp=Z,134nm,42.0s						
TBI				*e*LR	LR	15 36 59.4	
	comp=Z,497nm,32.8s,baz=303						
ARQ	**Araqi**	**79.38**	**291**	P	**P**	**15 13 45.5**	**+0.9**
	SNR=12						
BEKR	**Beckwourth**	**79.51**	**51**	⇓*i*P	**P**	**15 13 44.5**	**-0.6**
	comp=Z,114nm,0.9s,mb5.8						
BMO	**Blue Mountains**	**79.79**	**46**	P	**P**	**15 13 46.3**	**-0.1**
BMO				pmax	pmax		
	comp=Z,79nm,1.0s,mb5.6						
BMO	**Blue Mountains**	**79.79**	**46**	⇓*i*P	**P**	**15 13 45.9**	**-0.5**
	comp=Z,79nm,1.0s,mb5.6						
WVOR	**Wild Horse Val**	**79.79**	**48**	P	**P**	**15 13 46.2**	**-0.3**
WVOR				pmax	pmax		
	comp=Z,75nm,1.0s,mb5.6						
WVOR	**Wild Horse Val**	**79.79**	**48**	*e*P	**P**	**15 13 46.1**	**-0.3**
	comp=Z,74nm,0.9s,mb5.6						
DAG	**Danmarks Havn**	**79.99**	**356**	⇑*e*P	**P**	**15 13 46.2**	**-0.7**
DAG				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
DAG	**Danmarks Havn**	**79.99**	**356**	⇑*e*P	**P**	**15 13 46.2**	**-0.7**
	comp=Z,8.2nm,0.8s,mb4.7						
DAG	**Danmarks Havn**	**79.99**	**356**	⇑*i*P	**P**	**15 13 46.2**	**-0.7**
	comp=Z,8.2nm,0.8s,mb4.7						
WCN	**Washoe City**	**80.15**	**52**	P	**P**	**15 13 49.2**	**+0.8**
WCN				pmax	pmax		
	comp=Z,52nm,1.0s,mb5.4						
WCN	**Washoe City**	**80.15**	**52**	*e*P	**P**	**15 13 48.5**	**0.0**
	comp=Z,52nm,1.1s,mb5.4						
CMB	**Columbia Colle**	**80.15**	**53**	P	**P**	**15 13 48.2**	**-0.3**
CMB				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.8						
CMB	**Columbia Colle**	**80.15**	**53**	*e*P	**P**	**15 13 48.0**	**-0.5**
	comp=Z,116nm,1.0s,mb5.8						
MOS	**Moscow**	**80.26**	**327**	*e*	**P**	**15 13 47.7**	**-1.0**
PAHR	**Pah Rah Range**	**80.27**	**51**	*e*P	**P**	**15 13 49.2**	**+0.2**
	comp=Z,28nm,1.1s,mb5.1						
OBN	**Obninsk**	**81.08**	**326**	κ*i*P	**P**	**15 13 52.6**	**-0.4**
OBN				*i*	pP	15 14 04.9	-0.7
OBN				*e*		15 23 59.6	
OBN				*e*		15 32 35.7	
OBN				pmax	pmax		
	comp=Z,45nm,2.5s,mb5.0						
OBN				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.7						
OBN	**Obninsk**	**81.08**	**326**	*e*P	**P**	**15 13 51.7**	**-1.3**
OBN				LR	LR		
	comp=Z,300nm,17.0s,MS4.7						
MSO	**Missoula**	**81.19**	**43**	*e*P	**P**	**15 13 52.7**	**-1.1**
	comp=Z,28nm,1.4s,mb5.0						
OMM	**Old Mammoth Mi**	**81.33**	**53**	*e*P	**P**	**15 13 55.2**	**+0.5**
VRSR	**Storozhevoye**	**81.42**	**322**	*e*P	**P**	**15 13 54.5**	**-0.3**
VRSR				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
VRSR				pmax	pmax		
	comp=N,10.0nm,0.8s						
VRSR				pmax	pmax		
	comp=E,4.0nm,0.4s						
NVAR	**Mina Array Bea**	**81.53**	**52**	P	**P**	**15 13 55.8**	**+0.1**
	comp=E,78nm,0.7s,mb5.7,baz=273,slow=4.9,SNR=423						
NVAR				LR	LR	15 42 35.9	
	comp=E,627nm,22.0s,MS4.9,baz=275,slow=30						
BMN	**Battle Mountai**	**81.53**	**50**	P	**P**	**15 13 55.8**	**+0.1**
BMN				pmax	pmax		
	comp=Z,66nm,1.2s,mb5.4						
BMN	**Battle Mountai**	**81.53**	**50**	*e*P	**P**	**15 13 55.8**	**+0.1**
	comp=Z,66nm,1.3s,mb5.4						
CHMT	**Chamberlain Mo**	**81.58**	**43**	*e*P	**P**	**15 13 54.6**	**-1.2**
MNV	**Mina**	**81.64**	**52**	P	**P**	**15 13 56.2**	**-0.1**
MNV				pmax	pmax		
	comp=Z,68nm,1.0s,mb5.5						
MNV	**Mina**	**81.64**	**52**	*e*P	**P**	**15 13 56.0**	**-0.3**
	comp=Z,68nm,0.9s,mb5.6						
MTUM	**Tungsten Hills**	**81.75**	**53**	*e*P	**P**	**15 13 57.4**	**+0.5**
ZEI	**Tsey**	**82.03**	**313**	*e*P	**P**	**15 13 58.3**	**+0.1**
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
KAF	**Kangasniemi**	**82.08**	**335**	*e*p	**P**	**15 13 56.4**	**-1.6**
	comp=Z,8.9nm,0.5s,mb5.0,baz=54,slow=4.9						
KAF	**Kangasniemi**	**82.08**	**335**	*e*P	**P**	**15 13 56.4**	**-1.6**
KAF				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
HLID	**Hailey**	**82.21**	**46**	*e*P	**P**	**15 13 59.1**	**0.0**
	comp=Z,32nm,1.0s,mb5.2						
KIV	**Kislovodsk**	**82.36**	**314**	*e*P	**P**	**15 14 00.0**	**+0.1**
KIV				*e*S	S	15 24 13.3	+2.1
KIV				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1						
KIV				pmax	pmax		
	comp=N,12nm,0.9s						
KIV				MLR	MLR		
	comp=N,129nm,17.0s						
KIV				MLR	MLR		
	comp=Z,212nm,17.0s,MS4.6						
KIV	**Kislovodsk**	**82.36**	**314**	*e*P	**P**	**15 14 00.6**	**+0.8**
	comp=Z,29nm,0.8s,mb5.2						
ONI	**Oni**	**82.41**	**313**	P	**P**	**15 14 01.1**	**+1.0**
TPH	**Tonopah**	**82.45**	**52**	P	**P**	**15 14 01.2**	**+0.7**
TPH				pmax	pmax		

	comp=Z,79nm,1.0s,mb5.6						
TPH	Tonopah	82.45	52	eP	P	15 14 00.5	0.0
	comp=Z,79nm,1.0s,mb5.6						
TPH				epP	pP	15 14 20.3	+7.2
GNI	Garni	82.50	310	P	P	15 14 02.1	+1.4
GNI				pmax	pmax		
	comp=Z,60nm,1.4s						
GNI	Garni	82.50	310	P	P	15 14 02.1	+1.4
	comp=Z,60nm,1.4s,mb5.3						
FINES	FINESS Array B	82.55	335	P	P	15 13 59.9	-0.6
FINES				*PP	pP	15 14 12.2	-0.9
FINES				pmax	pmax		
	comp=Z,12nm,0.7s						
FINES				pmax	pmax		
	comp=Z,5.0nm,0.4s						
FINES				MLR	MLR		
	comp=Z,240nm,20.3s						
FINES	FINESS Array B	82.55	335	P	P	15 13 59.9	-0.6
	comp=Z,12nm,0.7s,mb5.0,baz=63,slow=5.3,SNR=101						
FINES				pP	pP	15 14 12.2	-0.9
	comp=Z,4.7nm,0.4s,baz=72,slow=6.0,SNR=8.7						
FINES				LR	LR	15 53 13.0	
	comp=Z,240nm,20.3s,MS4.5,baz=227,slow=37						
HRY	Holter Researc	82.55	42	eP	P	15 14 00.9	+0.1
MCMT	McKenzie Canyo	82.71	44	P	P	15 14 01.6	-0.1
ELK	Elko	82.80	49	P	P	15 14 02.3	+0.1
ELK				pmax	pmax		
	comp=Z,69nm,1.0s						
ELK	Elko	82.80	49	eP	P	15 14 02.2	0.0
	comp=Z,69nm,1.0s,mb5.6						
BOZ	Bozeman (W)	83.14	43	P	P	15 14 03.8	0.0
BOZ				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.3						
BOZ	Bozeman (W)	83.14	43	eP	P	15 14 03.6	-0.2
	comp=Z,20nm,0.6s,mb5.3						
MWC	Mount Wilson	83.33	56	P	P	15 14 05.3	+0.3
MWC	Mount Wilson	83.33	56	eP	P	15 14 04.5	-0.6
QLMT	Earthquake Lak	83.62	44	eP	P	15 14 06.9	+0.7
YMR	Madison River	83.99	44	eP	P	15 14 09.1	+0.9
VSU	Vasula	83.99	332⇓	iP	P	15 14 06.9	-0.9
VSU	Vasula	83.99	332⇓	iP	P	15 14 06.0	-1.8
HVU	Hansel Valley	84.05	47	P	P	15 14 09.6	+1.1
HVU	Hansel Valley	84.05	47⇓	eP	P	15 14 08.8	+0.2
YNR	Norris Junctio	84.15	44	eP	P	15 14 10.4	+1.4
YFT	Old Faithful	84.17	44	eP	P	15 14 11.5	+2.4
FFC	Flin Flon	84.21	32⇓	iP	P	15 14 08.8	-0.2
	comp=Z,92nm,0.8s,mb6.0						
BGU	Big Grassy Mou	84.25	48	eP	P	15 14 09.5	-0.1
RRI2	Red Ridge	84.34	45	eP	P	15 14 10.4	+0.5
	comp=Z,111nm,1.4s,mb5.8						
IMW	Indian Meadow	84.35	45	eP	P	15 14 10.5	+0.5
	comp=Z,57nm,0.9s,mb5.7						
ABTO	Aybut	84.36	286	P	P	15 14 11.6	+1.0
	SNR=8.7						
LKWY	Lake	84.40	44	P	P	15 14 12.6	+2.4
LKWY				pmax	pmax		
	comp=Z,74nm,1.1s,mb5.7						
LKWY	Lake	84.40	44	eP	P	15 14 12.4	+2.2
	comp=Z,74nm,1.1s,mb5.7						
SOC	Sochi	84.46	315	eP	P	15 14 06.5	-4.0
SOC				eS	S	15 24 24.1	-8.2
SOC				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.0						
SOC				pmax	pmax		
	comp=N,9.0nm,0.8s						
SOC				pmax	pmax		
	comp=E,9.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,372nm,23.0s,MS4.7						
SOC				MLR	MLR		
	comp=N,296nm,25.0s,MS4.7						
SOC				MLR	MLR		
	comp=E,245nm,24.0s,MS4.7						
SPUT	South Promonto	84.48	47⇓	eP	P	15 14 10.7	0.0
TPAW	Teton Pass	84.52	45	eP	P	15 14 11.4	+0.6
	comp=E,80nm,1.3s,mb5.7						
MOOW	Moose Ponds	84.54	45⇓	eP	P	15 14 11.1	+0.1
	comp=E,43nm,1.1s,mb5.5						
WUWY	Wally Ulrich	84.63	45	eP	P	15 14 12.2	+0.7
REDW	Red Top Meadow	84.64	45	eP	P	15 14 12.3	+0.9
	comp=E,81nm,1.4s,mb5.7						
SNOW	Snow King Moun	84.66	45	eP	P	15 14 12.3	+0.7
	comp=E,8.5nm,0.5s,mb5.1						
LOHW	Long Hollow	84.69	45	eP	P	15 14 12.1	+0.4
	comp=E,47nm,1.2s,mb5.5						
DUG	Dugway	84.71	49	eP	P	15 14 12.1	+0.2
	comp=E,24nm,0.6s,mb5.5						
SUMG	Summit	84.73	1	eP	P	15 14 12.5	+1.3
	comp=E,44nm,0.9s,mb5.6						
AHID	Auburn Hatcher	84.74	46	eP	P	15 14 12.7	+0.7
	comp=E,69nm,1.3s,mb5.6						
PFO	Pinyon Flat Ob	84.80	56	P	P	15 14 12.2	-0.3
PFO				pmax	pmax		
	comp=Z,66nm,1.1s,mb5.7						
PFO	Pinyon Flat Ob	84.80	56	eP	P	15 14 12.0	-0.5
	comp=Z,66nm,1.1s,mb5.7						
HWUT	Hardware Ranch	84.94	47	eP	P	15 14 12.7	-0.3
	comp=Z,119nm,1.2s,mb5.9						
NOQ	North Oquirrh	84.99	48	eP	P	15 14 13.8	+0.5
BAR	Barrett	85.01	57	eP	P	15 14 13.3	-0.3
NEN	Nelson	85.17	53	eP	P	15 14 14.3	0.0
LDFC	Landfair	85.21	54	eP	P	15 14 14.4	-0.1
CTU	Camp Tracy	85.22	48	eP	P	15 14 14.4	0.0
TCUT	Toone Canyon	85.27	47	eP	P	15 14 15.3	+0.7
ARUT	Antelope Range	85.30	51	P	P	15 14 15.1	+0.3
ARUT	Antelope Range	85.30	51	eP	P	15 14 15.0	+0.1
NLU	North Lily Min	85.32	49	eP	P	15 14 15.7	+0.8
FCC	Fort Churchill	85.46	26	P	P	15 14 14.5	-0.6
FCC				pmax	pmax		
	comp=Z,170nm,1.5s,mb6.0						
FCC	Fort Churchill	85.46	26	eP	P	15 14 14.2	-0.9
	comp=Z,167nm,1.5s,mb6.0						
JLU	Jordanelle	85.47	48	eP	P	15 14 15.8	+0.2
MPU	Maple Canyon	85.60	48	eP	P	15 14 16.8	+0.5
DAU	Daniels Canyon	85.68	48	P	P	15 14 17.2	+0.5
DAU	Daniels Canyon	85.68	48	eP	P	15 14 17.0	+0.3
MNK	Minsk	85.74	328	eP	P	15 14 16.0	-0.6
PDAR	Pinedale Array	85.76	45	P	P	15 14 17.1	+0.1
	comp=Z,12nm,0.6s,mb5.3,baz=266,slow=2.9,SNR=67						
PDAR				LR	LR	15 47 51.2	
	comp=Z,458nm,20.9s,MS4.8,baz=324,slow=32						
MVU	Marysvale	85.86	50⇓	iP	P	15 14 18.0	+0.4
	comp=Z,44nm,0.9s,mb5.7						
MSU	Marysvale	85.88	50	P	P	15 14 18.0	+0.3
MSU	Marysvale	85.88	50	eP	P	15 14 17.9	+0.2
LAO	LASA Array	85.99	41	eP	P	15 14 18.1	+0.1
	comp=Z,201nm,1.1s,mb6.3						
TMUT	Trail Mountain	86.21	49	eP	P	15 14 20.1	+0.9
DGMT	Dagmar	86.29	38	P	P	15 14 19.0	-0.4
	comp=Z,12nm,0.6s,mb5.3						
SRU	San Rafael	86.77	49	P	P	15 14 22.1	+0.1
SRU	San Rafael	86.77	49⇓	iP	P	15 14 21.7	-0.3
AKASG	Malin Array Be	87.15	325	P	P	15 14 22.6	-1.0
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKASG	Malin Array Be	87.15	325	P	P	15 14 22.6	-1.0
	comp=Z,5.5nm,0.6s,mb5.0,baz=49,slow=4.9,SNR=37						
WUAZ	Wupatki	87.78	52	eP	P	15 14 27.6	+0.6
	comp=Z,127nm,1.1s,mb6.1						
RWWY	Rawlins	87.80	45	eP	P	15 14 27.4	+0.4
	comp=Z,71nm,1.3s,mb5.7						
PV10	Paradox Valley	88.14	49	eP	P	15 14 29.2	+0.6
NB2	NORSAR Subarra	88.20	339	P	P	15 14 27.3	-1.1
	comp=Z,9.4nm,0.8s,mb5.1,baz=44,slow=4.8						
NOA	NORSAR Array B	88.20	339	P	P	15 14 27.2	-1.2
NOA						15 17 56.6	
NOA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NOA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	88.20	339	P	P	15 14 27.2	-1.2
	comp=Z,7.0nm,0.8s,mb5.0,baz=48,slow=4.3,SNR=18						
NOA				sP	sP	15 14 47.0	+1.5
	comp=Z,7.1nm,0.9s,baz=46,slow=4.8,SNR=5.9						
NOA				PP	PP	15 17 56.6	-1.6
	comp=Z,1.3nm,0.7s,baz=39,slow=7.8,SNR=4.2						
NOA				LR	LR	16 00 29.0	
	comp=Z,123nm,20.0s,MS4.3,baz=20,slow=40						
SUW	Suwalki	88.23	330	eP	P	15 14 27.6	-1.1
	comp=Z,29nm,0.8s,mb5.5						
PV01	Paradox Valley	88.58	49	eP	P	15 14 31.0	+0.3
RSSD	Black Hills	88.61	42	P	P	15 14 30.9	+0.2
RSSD				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.6						
RSSD	Black Hills	88.61	42	eP	P	15 14 30.7	0.0
	comp=Z,35nm,1.3s,mb5.5						
RW3	Ridgway	89.14	49	P	P	15 14 34.0	+0.6
RW3	Ridgway	89.14	49	eP	P	15 14 33.7	+0.3
PHWY	Pilot Hill	89.14	45	eP	P	15 14 32.8	-0.6
SFJD	Kangerlussuaq	89.65	6	P	P	15 14 35.5	+0.4
SFJD	Kangerlussuaq	89.65	6	eP	P	15 14 34.7	-0.4
TUC	Tucson	89.66	55	P	P	15 14 36.0	0.0
TUC				pmax	pmax		
	comp=Z,49nm,1.3s,mb5.7						
TUC	Tucson	89.66	55	eP	P	15 14 36.1	+0.1
	comp=Z,49nm,1.3s,mb5.7						
ISCO	Idaho Springs	89.79	46	P	P	15 14 37.5	+1.1
ISCO				pmax	pmax		
	comp=Z,60nm,1.6s,mb5.7						
ISCO	Idaho Springs	89.79	46	eP	P	15 14 37.4	+1.0
	comp=Z,60nm,1.7s,mb5.7						
ULM	Lac du Bonnet	89.82	34	P	P	15 14 36.3	0.0
	comp=Z,16nm,0.9s,mb5.4,baz=304,slow=4.8,SNR=15						
BR131	Keskin Array S	90.30	314	eP	P	15 14 38.0	-0.8
	comp=Z,4.5nm,0.8s,mb4.8						
BRTR	Keskin Array B	90.30	314	P	P	15 14 38.0	-0.8
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRTR	Keskin Array B	90.30	314	P	P	15 14 38.0	-0.9
	comp=Z,5.3nm,0.8s,mb4.9,baz=90,slow=3.7,SNR=27						
BRTR				sP	sP	15 14 58.4	+2.5
	comp=Z,9.8nm,0.8s,baz=95,slow=3.7,SNR=10						
SDCO	Great Sand Dun	90.89	48	eP	P	15 14 41.4	-0.2
	comp=Z,29nm,0.9s,mb5.6						
KWP	Kalwaria	91.17	326	eP	P	15 14 42.3	-0.3
	comp=Z,53nm,1.0s,mb5.8						
LAZ	Ladron	91.38	52	eP	P	15 14 44.9	+0.9
ANMO	Albuquerque	91.60	51	eP	P	15 14 45.1	+0.1
ANMO				pmax	pmax		
	comp=Z,42nm,1.0s						
ANMO	Albuquerque	91.60	51	eP	P	15 14 45.1	+0.1
	comp=Z,42nm,1.1s,mb5.7						
LENM	Lemitar	91.61	52	eP	P	15 14 45.2	+0.1
BNM	Barren Site	91.87	52	eP	P	15 14 47.0	+0.8
OKC	Ostrava-Krasne	93.31	328	AMS	AMS	15 59 50.0	
	comp=Z,300nm,21.9s						
DPC	Dobruska-Polom	93.82	330	eP	P	15 14 54.1	-0.6
DPC				MLR	MLR		
	comp=Z,300nm,22.3s,MS4.7						
DPC	Dobruska-Polom	93.82	330	eP	P	15 14 54.1	-0.6
DPC				esP	sP	15 15 24.1	+12
DPC				AMS	AMS	15 56 50.0	
	comp=Z,300nm,22.3s						
UPC	Upice	93.86	330	eP	P	15 14 54.3	-0.6
UPC				esP	sP	15 15 24.3	+12
PVCC	Panska Ves	94.51	331	AMS	AMS	16 01 30.0	
	comp=Z,300nm,20.8s						
PRU	Pruhonice	94.90	330	AMS	AMS	16 00 20.0	
	comp=Z,300nm,20.1s						
AMTX	Amarillo	95.00	49	eP	P	15 15 01.0	+0.4
	comp=Z,25nm,0.8s,mb5.7						
NKC	Novy Kostel	95.67	331	AMS	AMS	15 59 20.0	
	comp=Z,200nm,21.5s						
KHC	Kasperske Hory	95.95	330	eP	P	15 15 03.8	-0.6
KHC				e		15 18 55.0	
KHC				MLR	MLR		
	comp=Z,400nm,22.9s,MS4.8						
KHC	Kasperske Hory	95.95	330	eP	P	15 15 03.8	-0.6
KHC				esP	sP	15 15 34.2	+13
KHC				ex	x	15 18 44.0	
KHC				ePP	PP	15 18 55.0	-4.5
KHC				AMS	AMS	15 58 10.0	
	comp=Z,400nm,22.9s						
KSU1	Kansas State U	96.02	43	eP	P	15 15 04.5	-0.5
GERES	GERESS Array B	96.10	330	P	P	15 15 04.4	-0.7
GERES				*PP	pP	15 15 17.3	-0.6
GERES						15 18 59.2	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES				MLR	MLR		
	comp=Z,401nm,21.2s						
GERES	GERESS Array B	96.10	330	P	P	15 15 04.4	-0.7
	comp=Z,0.4nm,0.6s,baz=45,slow=3.8,SNR=6.5						
GERES				pP	pP	15 15 17.3	-0.6
	comp=Z,0.6nm,0.6s,baz=45,slow=4.2,SNR=2.9						
GERES				PP	PP	15 18 59.2	-1.4
	comp=Z,1.0nm,0.9s,baz=45,slow=5.7,SNR=4.4						
GERES				LR	LR	16 01 48.8	
	comp=Z,401nm,21.2s,baz=42,slow=38						
LTX	Lajitas	96.45	55	P	P	15 15 08.0	+0.8
LTX				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.1						
LTX	Lajitas	96.45	55	eP	P	15 15 07.9	+0.7
	comp=Z,8.4nm,1.1s,mb5.1						
TXAR	Lajitas Array	96.45	55	P	P	15 15 07.8	+0.6
	comp=Z,4.5nm,0.8s,mb4.9,baz=270,slow=2.5,SNR=17						
TXAR				LR	LR	15 50 12.3	
	comp=Z,242nm,21.2s,MS4.7,baz=290,slow=30						
GRA1	Grafenberg Arr	96.60	332	ePdif	P	15 15 06.4	-1.0
GRA1				ePP	PP	15 19 02.6	-2.1
GRA1				LR	LR		
	comp=Z,100nm,21.2s,MS4.3						
GRF	Grafenberg Arr	96.60	332	ePdif	P	15 15 06.4	-1.0
GRF				ePP	PP	15 19 02.6	-2.1
GRF				LR	LR		
	comp=Z,100nm,21.2s,MS4.3						
WMOK	Wichita Mounta	97.08	48	P	P	15 15 09.9	-0.1
WMOK				e	pP	15 15 20.2	-2.6
WMOK				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.3						
WMOK	Wichita Mounta	97.08	48	eP	P	15 15 09.7	-0.4
	comp=Z,12nm,1.2s,mb5.2						
OPO	Ambohidratompo	103.41	255	Pdiff	Pdif	15 15 39.0	+0.2
	comp=Z,3.8nm,0.8s,baz=56,slow=3.6,SNR=5.7						
LSZ	Lusaka	119.60	265	eP	PKPdf	15 20 28.8	+1.7
BOSA	Boshof	125.37	250	PKIKP	PKPdf	15 20 39.0	+1.0
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BOSA	Boshof	125.37	250	PKP	PKPdf	15 20 39.0	+1.0
	comp=Z,2.4nm,0.8s,baz=227,slow=9.1,SNR=3.5						
BOSA	Boshof	125.37	250	PKP	PKPdf	15 20 39.0	+1.0
SNAA	Sanae	127.78	193	PKIKP	PKPdf	15 20 42.6	+1.1
SNAA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SNAA	Sanae	127.78	193	PKP	PKPdf	15 20 42.6	+1.1
	comp=Z,1.1nm,1.0s,baz=294,slow=1.5,SNR=7.8						
SNAA	Sanae	127.78	193	eP	PKPdf	15 20 41.8	+0.3
SDV	Santo Domingo	133.38	51	PKP	PKPdf	15 20 54.9	+1.2
	comp=Z,4.6nm,0.8s,baz=183,slow=2.6,SNR=6.5						
SDV	Santo Domingo	133.38	51	eP	PKPdf	15 20 54.7	+1.0
ARE	Arequipa	145.69	86	eP	PKPdf	15 21 18.0	+2.4
PLCA	Paso Flores	145.71	129	PKP2	PKPab	15 21 16.6	-1.2
PLCA				pmax	pmax		
	comp=Z,17nm,0.8s						
PLCA	Paso Flores	145.71	129	PKPbc	PKPbc	15 21 16.6	+0.9
	comp=Z,17nm,0.8s,baz=232,slow=3.5,SNR=61						
PLCA	Paso Flores	145.71	129	eP	PKPdf	15 21 16.8	+1.8
LPAZ	La Paz	148.73	84	PKIKP	PKPdf	15 21 22.9	+2.3
LPAZ						15 21 27.3	
LPAZ				pmax	pmax		
	comp=Z,29nm,0.9s						
LPAZ				pmax	pmax		
	comp=Z,21nm,0.7s						
LPAZ	La Paz	148.73	84	PKP	PKPdf	15 21 22.9	+2.3
	comp=Z,29nm,0.9s,baz=328,slow=2.9,SNR=13						
LPAZ				PKPbc	PKPdf	15 21 27.2	+6.6
	comp=Z,21nm,0.7s,baz=306,slow=2.8,SNR=55						
LPAZ	La Paz	148.73	84	ePKPdf	PKPdf	15 21 23.1	+2.5
LPAZ				ePKPbc	PKPdf	15 21 26.5	+5.9
SAML	Samuel	150.16	67	ePKPdf	PKPdf	15 21 24.2	+1.2
SAML				ePKPbc	PKPdf	15 21 28.9	+5.9
TRQA	Tornquist	152.86	130	ePKPbc	PKPdf	15 21 34.2	+8.0
BDFB	Brasilia	166.25	60	PKP2	PKPab	15 22 43.1	-2.2
BDFB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BDFB	Brasilia	166.25	60	PKPab	PKPab	15 22 43.1	-2.2
	comp=Z,8.0nm,0.8s,baz=331,slow=3.4,SNR=6.1						

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*NEIC **15** 15:15:51.4±0.5, 52.27N×171.19W, h46^{km}±4^{km}, mb4.2/2, ML3.5(AEIC), Error ellipse: s-maj=13.0km s-min=3.6km az=164.0*
*IDC **15** 15:15:52.5±3.9, 52.24N×171.26W, h56^{km}±34^{km}, mb3.7/14, mb1 4.0/16, mb1mx3.8/25, mbtmp4.0/16, ML3.4/2, Error ellipse: s-maj=25.4km s-min=14.0km az=178.0*
ISC 15 15:15:50.4±0.7**, 52.3N**±0.1×**171.22W**±0.07**, h51**^{km}±6^{km}**, n39, σ0^{s}81**/38**, mb3.9**/16**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKO	Nikolski	1.59	64	eP	P	15 16 15.7	-1.0
ATKA	Atka Island	1.83	268	P	P	15 16 19.3	-0.7
ATKA				S	S	15 16 41.5	-0.5
OKCE	Okmok Cone E	2.17	58	P	P	15 16 24.8	0.0
OKFG	Magazine Ridge	2.29	60	P	P	15 16 26.5	-0.1
GSTR	Great Sitkin T	2.98	268	P	P	15 16 36.6	+0.2
GSMY	Great Sitkin M	2.99	267	P	P	15 16 36.4	-0.1
GSTD	Great Sitkin T	3.04	267	P	P	15 16 37.5	+0.3
GSTD				S	S	15 17 14.0	+1.3
MNAT	Makushin Natee	3.16	58	P	P	15 16 38.9	0.0
UNV	Unalaska Valle	3.24	60	P	P	15 16 39.9	-0.1
ADAG	Mount Adagdak	3.33	266	P	P	15 16 41.2	-0.1
KIWB	Kanaga Island	3.69	265	P	P	15 16 46.7	+0.4
KIKV	Kanaga Island	3.69	266	P	P	15 16 46.8	+0.4
KIMD	Kanaga Island	3.75	264	P	P	15 16 47.3	+0.1
FX1	Attu Island--F	9.52	280	P	P	15 18 06.9	-0.5
	0.8nm,0.3s,baz=68,slow=20,SNR=4.3						
ILAR	Eielson Array	17.65	36	P	P	15 19 54.3	+0.4
	0.1nm,0.3s,baz=236,slow=8.0,SNR=4.4						
DLBC	Dease Lake	23.89	59	P	P	15 21 02.4	+2.8
	4.1nm,0.8s,mb3.9,baz=273,slow=12,SNR=8.5						
INK	Inuvik	24.03	34	P	P	15 21 02.4	+1.5
	2.0nm,0.4s,mb3.9,baz=253,slow=6.4,SNR=13						
INK	Inuvik	24.03	34	P	P	15 21 02.4	+1.5
YKA	Yellowknife Ar	31.14	49	P	P	15 22 04.6	-1.3
	0.5nm,0.4s,mb3.7,baz=320,slow=27,SNR=4.6						
YKA	Yellowknife Ar	31.14	49	P	P	15 22 04.6	-1.3
NVAR	Mina Array Bea	38.80	89	P	P	15 23 12.7	+1.1
	0.4nm,0.5s,mb3.4,baz=297,slow=8.1,SNR=3.5						
BW06	Boulder Array	41.53	78	eP	P	15 23 34.2	+0.2
	0.9nm,0.4s,mb3.8						
PDAR	Pinedale Array	41.53	78	P	P	15 23 34.4	+0.4
	1.0nm,0.6s,mb3.6,baz=311,slow=4.8,SNR=7.2						
FCC	Fort Churchill	41.85	50	eP	P	15 23 36.9	+0.5
	8.7nm,0.9s,mb4.4						
SONM	Songino Array	50.35	300	P	P	15 24 44.4	+0.6
	0.5nm,0.3s,mb4.0,baz=52,slow=5.7,SNR=13						
SONM				PcP	PcP	15 26 01.8	-0.3
	0.6nm,0.7s,baz=55,slow=2.4,SNR=4.2						
TXAR	Lajitas Array	53.89	87	P	P	15 25 09.9	-0.7
	0.6nm,0.5s,mb3.8,baz=288,slow=4.0,SNR=5.2						
ZAL	Zalesovo	56.71	317	PcP	PcP	15 26 26.5	+0.5
	0.7nm,0.4s,baz=29,slow=2.7,SNR=3.5						
ARCES	ARCESS Array B	57.86	353	P	P	15 25 37.8	-0.7
	3.1nm,0.9s,mb4.3,baz=24,slow=8.5,SNR=7.8						
ARCES				PcP	PcP	15 26 30.1	-0.2
	0.8nm,0.6s,baz=14,slow=5.0,SNR=4.8						
MKAR	Makanchi Array	63.01	312	P	P	15 26 12.8	-1.2
	0.7nm,0.5s,mb4.0,baz=45,slow=5.1,SNR=9.4						
MKAR	Makanchi Array	63.01	312	P	P	15 26 12.8	-1.2
KAF	Kangasniemi	65.08	351	ep	P	15 26 25.8	-1.3
FINES	FINESS Array B	65.76	351	P	P	15 26 30.7	-0.8
	0.5nm,0.3s,mb4.1,baz=8.8,slow=8.6,SNR=9.8						
FINES				PcP	PcP	15 27 01.9	-0.3
	0.5nm,0.8s,baz=63,slow=4.3,SNR=4.1						
FINES	FINESS Array B	65.76	351	P	P	15 26 30.7	-0.8
FINES				PcP	PcP	15 27 01.9	-0.3
NOA	NORSAR Array B	66.99	359	P	P	15 26 39.6	+0.4
	0.3nm,0.6s,mb3.5,baz=341,slow=5.1,SNR=2.8						
CMAR	Chiang Mai Arr	75.52	281	P	P	15 27 31.4	+0.3
	5.0nm,0.7s,mb4.6,baz=28,slow=6.3,SNR=37						
WRA	Warramunga Arr	86.08	230	P	P	15 28 25.2	-1.5
	0.8nm,0.8s,mb4.0,baz=34,slow=6.1,SNR=8.2						
ESDC	Sonseca Array	87.73	10	P	P	15 28 35.0	+0.7
	0.3nm,0.3s,mb4.0,baz=358,slow=3.5,SNR=4.3						
PLCA	Paso Flores	126.83	111	PKP	PKPdf	15 34 49.1	+1.1
	1.7nm,0.8s,baz=7.0,slow=3.2,SNR=3.5						
BOSA	Boshof	153.34	326	PKPbc	PKPdf	15 35 44.6	+10
	2.0nm,0.5s,baz=19,slow=6.2,SNR=7.5						

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*NEIC **15** 15:26:59.5±0.8, 24.24S×67.04W, h150^{km}±12^{km}, mb3.7/1, Error ellipse: s-maj=17.1km s-min=8.1km az=123.0*
*GUC **15** 15:27:02.0±0.6, 24.33S×67.39W, h160^{km}, ML4.4*
*IDC **15** 15:27:05.0±3.0, 23.78S×67.00W, h189^{km}±30^{km}, mb1 3.8/4, mb1mx3.5/17, mbtmp4.3/4, Error ellipse: s-maj=31.3km s-min=27.2km az=99.0*
ISC 15 15:26:58.6±1.2**, 24.22S**±0.06×**67.2W**±0.2**, h168**^{km}±39^{km}**, n13, σ1^{s}04**/17**, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPN1	Cerro Paranal	2.98	262⇑	iP	P	15 27 48.7	+1.6
CPN1				i S	S	15 28 24.2	-0.1
CPN1				AMP		15 28 28.3	
	comp=E,454nm,0.3s						
ANCH	Antofagasta	3.02	280⇑	iP	P	15 27 49.3	+1.8
ANCH				i S	S	15 28 24.6	-0.5
ANCH				AMP		15 28 26.2	
	comp=N,790nm,0.3s						
CRCH	Chaqaral	3.78	235⇓	iP	P	15 27 58.0	+0.7
CRCH				i S	S	15 28 41.3	-1.1
CRCH				AMP		15 28 45.9	
	comp=E,692nm,0.4s						
TLL	Tololo Astrono	6.75	208	eP	P	15 28 36.2	-0.1
TLL				i S	S	15 29 51.0	-1.3
LPAZ	La Paz	7.94	353	P	P	15 28 53.2	+1.1
	comp=E,1.3nm,0.3s,baz=184,slow=12,SNR=15						
LPAZ				S	S	15 30 19.0	-1.6
	baz=12,slow=22,SNR=4.3						
LPAZ	La Paz	7.94	353	P	P	15 28 53.2	+1.1
LPAZ				S	S	15 30 19.0	-1.6
SIV	San Ignacio	9.98	36	P	P	15 29 17.7	-1.2
	comp=E,2.1nm,0.3s,baz=220,slow=14,SNR=28						
PLCA	Paso Flores	16.71	189	P	P	15 30 53.1	+8.8
	comp=E,0.4nm,0.3s,baz=2.2,slow=10.0,SNR=12						
PLCA	Paso Flores	16.71	189	P	P	15 30 44.8	+0.5
	comp=E,3.0nm,0.7s						
PLCA				P		15 30 53.1	
BDFB	Brasilia	19.91	68	P	P	15 31 19.2	+0.2
	comp=E,2.2nm,0.3s,baz=248,slow=10,SNR=35						
BAO	Brasilia Array	19.93	68	P	P	15 31 19.6	+0.3
WRA	Warramunga Arr	131.36	207	PKP	PKPdf	15 45 54.5	+2.8
	comp=E,0.5nm,0.5s,baz=156,slow=1.8,SNR=7.8						
MKAR	Makanchi Array	146.79	40	PKPbc	PKPbc	15 46 23.4	+3.2
	comp=E,0.8nm,0.6s,baz=330,slow=2.6,SNR=10						

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*IPEC **15** 15:39:30.2±0.3, 51.56N×16.18E, ML2.1/3, Error ellipse: s-maj=2.0km s-min=1.5km az=33.0*
*WAR **15** 15:39:32.1, 51.50N×16.09E, h1^{km}, ML2.5, Mining Induced*
*PRU **15** 15:39:32.2, 51.45N×16.10E*
*NEIC **15** 15:39:32.5±2.1, 51.42N×16.08E, h5^{km}, ML3.0(VIE), Error ellipse: s-maj=23.9km s-min=7.0km az=213.0*
*CSEM **15** 15:39:33.4±0.2, 51.42N×16.09E, h2^{km}, ML3.2/8, Error ellipse: s-maj=3.8km s-min=2.0km az=20.0*
ISC 15 15:39:31.1±0.8**, 51.40N**±0.04×**16.04E**±0.04**, n23, σ1^{s}21**/45**, 3C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.58	164	ePG	Pg	15 39 44.0	+1.4
KSP				eSG	Sg	15 39 53.0	+2.7
KSP	Ksiaz	0.58	164	ePg	Pg	15 39 44.4	+1.8
KSP				i Sg	Sg	15 39 53.4	+3.1
UPC	Upice	0.89	181	ePG	Pg	15 39 50.5	+1.6
DPC	Dobruska-Polom	1.06	170	ePG	Pg	15 39 53.2	+0.9
DPC				eSG	Sg	15 40 07.9	+1.4
	62nm,0.5s						
PVCC	Panska Ves	1.27	227	ePn	Pn	15 39 57.2	+1.1
PVCC	Panska Ves	1.27	227	ePg	Pg	15 39 57.8	+1.3
PVCC				eSg	Sg	15 40 15.9	+2.4
BRG	Berggiesshubel	1.42	249	Pg	Pg	15 40 00.0	+0.6
BRG				Sg	Sg	15 40 19.6	+1.2
BRG	Berggiesshubel	1.42	249	Pg	Pg	15 40 00.0	+0.6
BRG				Sg	Sg	15 40 19.6	+1.2
PRU	Pruhonice	1.70	215	ePG	Pg	15 40 04.9	-0.2
PRU				eSG	Sg	15 40 28.4	+0.7
	29nm,0.3s						
MORC	Moravsky Berou	1.88	149	eP	Pn	15 40 04.9	+0.1
MORC	Moravsky Berou	1.88	149	eP	Pn	15 40 04.9	+0.1
MORC	Moravsky Berou	1.88	149	ePn	Pn	15 40 05.1	+0.3
MORC				eSg	Sg	15 40 32.6	-1.2
	15nm,0.3s						
CLL	Collm	1.91	269	ePg	Pg	15 40 07.0	-2.1
CLL				eSg	Sg	15 40 34.0	-0.5

CLL	Collm	1.91	269	ePG	Pg	15 40 07.0	-2.1
CLL				e		15 40 12.0	
CLL				eSG	Sg	15 40 34.0	-0.5
OKC	Ostrava-Krasne	2.06	138	ePG	Pg	15 40 11.6	-0.6
OKC				eSG	Sg	15 40 38.6	-1.1
VRAC	Vranov	2.12	170	ePn	Pn	15 40 09.2	+1.0
VRAC				eSg	Sg	15 40 40.9	-0.8
	8.0nm,0.2s						
KRUC	Moravsky	2.35	174	ePn	Pn	15 40 12.3	+0.8
KRUC				eSg	Sg	15 40 48.7	-0.6
	6.9nm,0.3s						
NKC	Novy Kostel	2.56	244	ePN	Pn	15 40 15.2	+0.7
NKC				ePG	Pg	15 40 21.7	-0.5
NKC				eSG	Sg	15 40 56.5	+0.3
	23nm,0.3s						
KHC	Kasperske Hory	2.76	216	ePN	Pn	15 40 18.5	+1.1
KHC				ePG	Pg	15 40 24.0	-2.3
KHC				eSN	Sn	15 40 52.6	+0.6
KHC				eSG	Sg	15 41 01.9	-1.2
	5.1nm,0.2s						
MOX	Moxa	2.89	257	ePg	Pg	15 40 27.0	-1.8
MOX				eSg	Sg	15 41 06.8	-0.6
MOA	Molln	3.73	199	⇑iPN	Pn	15 40 30.6	-0.6
MOA				i SG	Sg	15 41 33.9	-1.5
	4.8nm,0.3s						
ARSA	Arzberg	4.16	185	⇑iPN	Pn	15 40 36.3	-1.0
ARSA				i SG	Sg	15 41 45.2	-4.5
	4.4nm,0.4s						
KBA	Koelnbreinsper	4.67	203	⇑iPN	Pn	15 40 43.7	-0.8
KBA				i SG	Sg	15 42 03.5	-3.0
	3.1nm,0.4s						

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*NEIC **15** 16:14:28.6, 15.74N×95.87W, h31^{km}, MD3.5(MEX), After MEX.*

MEX 15 16:14:28.6±0.6**, 15.74N×95.87W, h31**^{km}±13^{km}**, MD3.5, 1C, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.23	276	⇑iP	Pb	16 14 33.8	-1.6
HUIG				i S	Sb	16 14 38.3	-1.7
VHO	Vista Hermosa	1.56	328	i P	Pn	16 14 52.9	-1.8
VHO				i S	Sn	16 15 10.7	-3.3
OXX	Oaxaca	1.57	328	i P	Pn	16 14 53.0	-1.7
OXX				i S	Sn	16 15 10.0	-4.1
CMIG	Matias Romero	1.64	35	i P	Pn	16 14 53.0	-2.8
CMIG				i S	Sn	16 15 13.6	-2.4

WEL 15 16:29:27.0±0.4**, 38.27S×175.86E, h187**^{km}±3^{km}**, ML3.9**/17**, 1C, Error ellipse: s-maj=3.6km s-min=3.3km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWVZ	Taurewa	0.86	202	PN	P	16 29 54.6	-0.1
WTVZ	West Tongariro	0.87	194	PN	P	16 29 54.8	+0.1
OTVZ	Oturere	0.90	190	PN	P	16 29 55.3	+0.3
NGZ	Ngauruhoe	0.92	193	PN	P	16 29 55.1	+0.1
URZ	Urewera	0.98	90	PN	P	16 29 55.2	-0.3
URZ				SN	S	16 30 16.8	-0.6
TUVZ	Tukino	1.01	189	PN	P	16 29 55.8	+0.2
FWVZ	Far West T-bar	1.01	194	PN	P	16 29 55.7	+0.1
BKZ	Black Stump Fm	1.02	151	⇑PN	P	16 29 55.8	+0.1
BKZ				SN	S	16 30 17.4	-0.5
TRVZ	Turoa	1.05	193	PN	P	16 29 56.1	+0.1
WNVZ	Wahianoa	1.07	191	PN	P	16 29 56.2	+0.1
PKVZ	Pokaka	1.09	201	PN	P	16 29 56.0	-0.3
MOVZ	Moawhango	1.14	184	PN	P	16 29 56.2	-0.5
VRZ	Vera Road	1.21	225	PN	P	16 29 56.7	-0.7
MWZ	Matawai	1.31	93	PN	P	16 29 58.0	-0.2
MWZ				SN	S	16 30 21.7	-0.6
KNZ	Kokohu	1.60	118	PN	P	16 30 01.0	+0.1
WAZ	Wanganui	1.63	204	PN	P	16 30 00.3	-0.9
TSZ	Takapari Road	1.79	177	PN	P	16 30 01.8	-0.9
TSZ				SN	S	16 30 28.2	-2.0
PUZ	Puketiti	1.90	85	PN	P	16 30 03.2	-0.7
MRZ	Mangatainoka R	2.40	185	PN	P	16 30 07.1	-2.3
BFZ	Birch Farm	2.42	173	PN	P	16 30 07.7	-2.1
KIW	Kapiti Island	2.69	196	PN	P	16 30 09.9	-2.9
MTW	Mount Morrison	2.90	185	PN	P	16 30 12.1	-3.2
CAW	Cannon Point	2.90	192	PN	P	16 30 12.3	-3.0
DUWZ	D'Urville Isla	2.94	210	ePN	P	16 30 12.3	-3.5
MRW	Makara Radio	3.08	196	PN	P	16 30 14.3	-3.3
PAWZ	Paruwai Farm	3.12	186	PN	P	16 30 14.6	-3.4
WEL	Wellington	3.12	195	PN	P	16 30 14.6	-3.5
WEL				SN	S	16 30 53.8	-3.6
SNZO	South Karori	3.16	196	PN	P	16 30 14.9	-3.6
MSWZ	Moikau Station	3.17	188	PN	P	16 30 15.2	-3.5
TCW	Tory Channel	3.18	202	PN	P	16 30 15.2	-3.5
TCW				SN	S	16 30 53.3	-5.4
BHW	Baring Head	3.22	193	PN	P	16 30 15.7	-3.6
TUWZ	Tuamarina	3.48	204	PN	P	16 30 18.7	-3.8
NNZ	Nelson	3.51	212	PN	P	16 30 19.0	-3.8
QRZ	Quartz Range	3.62	224	ePN	P	16 30 18.6	-5.6
BSWZ	Blackbirch Sta	3.76	203	ePN	P	16 30 22.2	-3.8
THZ	Tophouse	4.16	212	ePN	P	16 30 26.2	-4.9
KHZ	Kahutara	4.50	202	PN	P	16 30 31.1	-4.4
DSZ	Denniston Nort	4.66	221	PN	P	16 30 31.4	-6.1
LTZ	Lake Taylor	5.27	210	ePN	P	16 30 39.6	-5.7
MQZ	McQueen's Vall	5.95	203	SN	S	16 31 51.3	-11
FOZ	Fox Glacier	7.05	220	ePN	P	16 31 01.3	-7.4
ODZ	Otahua Downs	7.81	208	ePN	P	16 31 12.5	-6.1

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*BJI **15** 16:38:49.3, 20.26S×69.22W, h103^{km}, mB4.4*

*NEIC **15** 16:38:50.6±0.4, 19.84S×69.10W, mb4.7/8, Error ellipse: s-maj=12.9km s-min=8.3km az=60.0*

*IDC **15** 16:38:51.0±0.5, 19.78S×69.10W, h113^{km}±4^{km}, mb4.1/15, mb1 4.3/17, mb1mx4.2/20, mbtmp4.5/17, MS3.5/2, Ms1 3.4/2, ms1mx3.0/26, Error ellipse: s-maj=15.8km s-min=12.1km az=54.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 15 16:38:48.7±0.3**, 19.89S**±0.05×**69.13W**±0.06**, h110**^{km}**, h110**^{km}±2.3^{km}**:pP-P, n67, σ1^{s}34**/54**, mb4.3**/16**, 9C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.70	15	P	P	16 39 49.5	+4.4
	28nm,0.3s,baz=190,slow=8.1,SNR=717						
LPAZ				S	S	16 40 32.2	+4.1
	9.8nm,0.3s,baz=228,slow=21,SNR=2.9						
LPAZ	La Paz	3.70	15	⇑iP	P	16 39 49.4	+4.2
ANCH	Antofagasta	3.96	197	⇑iP	P	16 39 46.8	-1.8
ARE	Arequipa	4.08	326	⇓iP	P	16 39 48.8	-1.5
ARE				i S	S	16 40 31.3	-6.0
CPN1	Cerro Paranal	4.86	194	⇓iP	P	16 39 58.4	-2.5
SIV	San Ignacio	8.59	64	P	P	16 40 51.6	0.0
	8.3nm,0.3s,baz=260,slow=10,SNR=279						
SIV				S	S	16 42 27.1	-0.4
	0.8nm,0.3s,baz=193,slow=23,SNR=4.9						
CFAA	Coronel Fontan	11.70	176	P	P	16 41 31.2	-1.9
	0.6nm,0.3s,baz=355,slow=14,SNR=34						
SAML	Samuel	12.30	29	eP	P	16 41 39.0	-2.2
	12nm,0.8s						
CPUP	Villa Florida	12.61	123	P	P	16 41 45.5	+0.3
	0.6nm,0.3s,baz=323,slow=12,SNR=22						
CPUP				LR	LR	16 47 55.9	
	comp=Z,116nm,20.1s,baz=177,slow=43						
CPUP	Villa Florida	12.61	123	eP	P	16 41 44.6	-0.6
	17nm,0.9s						
TRQA	Tornquist	19.14	163	eP	P	16 43 05.1	-0.6
	63nm,1.1s						
BDFB	Brasilia	20.54	82	P	P	16 43 20.5	+0.1
	18nm,0.6s,baz=257,slow=13,SNR=16						
BAO	Brasilia Array	20.57	82	P	P	16 43 20.9	+0.2
PLCA	Paso Flores	20.81	183	P	P	16 43 24.4	+1.4
	6.1nm,0.7s,baz=354,slow=9.6,SNR=19						
OTAV	Otavalo	21.99	334	eP	P	16 43 37.8	+3.0
	14nm,0.8s,mb4.3						
CAM4	Nova Friburgo	24.89	100	(P)	P	16 44 03.7	+0.8
CAM4				i		16 44 09.6	
SDV	Santo Domingo	28.63	357	P	P	16 44 35.7	-1.5
	4.3nm,0.4s,mb4.5,baz=154,slow=8.9,SNR=6.1						
SDV	Santo Domingo	28.63	357	eP	P	16 44 33.0	-4.2
	8.2nm,0.8s,mb4.4						
SJG	San Juan	37.88	5	P	P	16 45 55.0	-1.8
	12nm,0.3s,mb5.2,baz=168,slow=9.3,SNR=6.3						
JSC	Jenkinsville	55.09	348	eP	P	16 48 09.9	-1.8
JSC				epP	pP	16 48 37.3	-0.9
WVT	Waverly	58.45	342	eP	P	16 48 29.9	-5.6
	7.1nm,0.7s,mb4.8						
TXAR	Lajitas Array	59.20	325	P	P	16 48 40.2	-0.5
	0.3nm,0.3s,mb3.8,baz=156,slow=11,SNR=2.2						
TXAR				pP	pP	16 49 06.3	-1.2
	0.8nm,0.5s,baz=149,slow=7.3,SNR=3.5						
VNA3	Neumayer Olymp	61.66	162	⇑i	P	16 48 59.1	+2.2
VNA3	Neumayer Olymp	61.66	162	⇓i	P	16 49 07.7	+11
VNA3	Neumayer Olymp	61.66	162	⇑i	P	16 49 12.5	+16
GDL2	Guadalupe Moun	61.81	326	eP	P	16 48 57.8	-0.7
GDL2				epP	pP	16 49 24.2	-1.3
VNA1	Neumayer--Stat	61.87	161	⇑i	P	16 49 00.7	+2.4
VNA1	Neumayer--Stat	61.87	161	⇑i	P	16 49 11.6	+13
MNTX	Cornudas Mount	61.96	325	eP	P	16 48 52.2	-7.2
MNTX				epP	pP	16 49 24.1	-2.4
VNA2	Neumayer--Watz	62.23	161	⇑i	P	16 49 02.8	+2.1
VNA2	Neumayer--Watz	62.23	161	⇑i	P	16 49 15.4	+15
SNAA	Sanae	63.87	161	P	P	16 49 12.1	+0.7
	3.8nm,0.8s,mb4.2,baz=280,slow=5.3,SNR=21						
SNAA	Sanae	63.87	161	eP	P	16 49 12.1	+0.7
	25nm,1.4s,mb4.8						
LAZ	Ladron	64.98	326	P	P	16 49 25.6	+6.3
LAZ				e		16 49 46.1	
DBIC	Dimbokro	68.48	74	P	P	16 49 41.0	-0.6
	13nm,0.7s,mb4.9,baz=222,slow=6.0,SNR=19						
MSU	Marysvale	70.74	325	eP	P	16 49 55.7	+0.8
MSU				epP	pP	16 50 23.0	+0.3
MVU	Marysvale	70.75	325	eP	P	16 49 56.4	+1.4
	2.1nm,1.0s,mb3.9						
MVU				epP	pP	16 50 23.2	+0.5
ARUT	Antelope Range	70.90	324	eP	P	16 49 57.8	+1.9
ARUT				epP	pP	16 50 24.2	+0.6
PDAR	Pinedale Array	72.62	330	P	P	16 50 06.7	+0.7
	0.2nm,0.4s,mb3.3,baz=146,slow=9.8,SNR=3.0						
SPUT	South Promonto	72.94	327	P	P	16 50 05.7	-2.2
ULM	Lac du Bonnet	73.72	342	LR	LR	17 27 07.3	
	comp=Z,43nm,18.3s,baz=350,slow=39						
NVAR	Mina Array Bea	74.10	322	P	P	16 50 16.3	+1.5
	1.4nm,0.8s,mb3.7,baz=142,slow=7.9,SNR=7.9						
NVAR				pP	pP	16 50 42.7	-0.1
	2.2nm,0.9s,baz=136,slow=7.1,SNR=5.9						
NVAR	Mina Array Bea	74.10	322	P	P	16 50 16.3	+1.5
NVAR				pP	pP	16 50 42.7	-0.1
SCHQ	Schefferville	74.44	1	P	P	16 50 14.6	-1.8
	3.2nm,0.9s,mb4.0,baz=109,slow=9.6,SNR=3.6						
MCMT	McKenzie Canyo	75.73	330	eP	P	16 50 25.6	+1.7
MCMT				epP	pP	16 50 52.8	+0.8
MCMT				esP	sP	16 51 05.5	+1.5
SYO	Syowa Base	78.08	160	⇑P	P	16 50 36.3	-0.2
TSUM	Tsumeb	80.70	107	P	P	16 50 52.0	+0.4
	11nm,0.8s,mb4.7,baz=238,slow=3.3,SNR=13						
TSUM				pP	pP	16 51 22.8	+2.8
	0.6nm,0.5s,baz=283,slow=5.5,SNR=3.2						
BOSA	Boshof	84.39	118	P	P	16 51 10.7	+0.3
	4.9nm,0.9s,mb4.4,baz=217,slow=9.5,SNR=5.5						
BOSA				pP	pP	16 51 41.3	+2.4
	4.5nm,0.9s,baz=234,slow=5.5,SNR=4.1						
ESDC	Sonseca Array	84.83	45	P	P	16 51 14.2	+1.9
	0.4nm,0.4s,mb3.7,baz=242,slow=5.8,SNR=235						
MAW	Mawson	85.93	163	P	P	16 51 17.2	+0.2
	1.9nm,0.7s,mb4.2,baz=266,slow=6.0,SNR=5.1						
YKA	Yellowknife Ar	89.60	341	P	P	16 51 35.5	+0.8
	6.8nm,0.8s,mb4.8,baz=135,slow=4.7,SNR=22						
YKA				pP	pP	16 52 03.9	+0.3
	5.8nm,0.8s,baz=134,slow=4.7,SNR=8.7						
YKA	Yellowknife Ar	89.60	341	P	P	16 51 35.5	+0.8
YKA				pP	pP	16 52 03.9	+0.3
WRA	Warramunga Arr	134.22	212	PKP	PKPdf	16 57 56.1	+1.8
	1.5nm,0.6s,baz=155,slow=1.8,SNR=19						
ZAL	Zalesovo	140.58	24	PKP	PKPdf	16 58 04.3	-0.7
	2.6nm,0.9s,baz=127,slow=3.8,SNR=5.6						
ZAL	Zalesovo	140.58	24	PKP	PKPdf	16 58 04.3	-0.7
MKAR	Makanchi Array	144.44	34	PKP	PKPdf	16 58 12.9	+1.0
	3.3nm,0.8s,baz=297,slow=2.7,SNR=29						
MKAR				pPKP		16 58 43.7	
	1.6nm,0.8s,baz=315,slow=1.7,SNR=3.4						
MKAR	Makanchi Array	144.44	34	PKP	PKPdf	16 58 12.9	+1.0
MKAR				pPKP		16 58 43.7	
WMQ	Urumqi	149.26	34	ePKP	PKPdf	16 58 21.2	+1.2
HIA	Hailar	149.84	348	ePKPbc	PKPdf	16 58 27.3	+6.6
MDJ	Mudanjiang	150.84	332	PKP	PKPdf	16 58 24.4	+2.0
MJAR	Matsushiro Arr	150.89	311	PKPbc	PKPdf	16 58 29.4	+6.7
	3.7nm,0.8s,baz=79,slow=1.2,SNR=8.4						
MJAR				pPKPbc		16 58 60.0	
	1.7nm,0.8s,baz=140,slow=0.4,SNR=3.3						
SONM	Songino Array	151.89	6	PKP	PKPdf	16 58 27.0	+3.2
	1.1nm,0.8s,baz=309,slow=1.8,SNR=8.7						
SONM				PKPbc	PKPdf	16 58 33.1	+9.2
	5.5nm,0.9s,baz=308,slow=1.5,SNR=40						
SONM				pPKPbc		16 59 04.5	
	2.0nm,0.8s,slow=1.2,SNR=3.7						
ULN	Ulaanbaatar	151.92	5	ePKPdf	PKPdf	16 58 26.8	+2.9
CN2	Changchun	153.22	336	ePKP	PKPdf	16 58 28.0	+2.2
LZH	Lanzhou	162.72	19	ePKP	PKPdf	16 58 41.6	+4.1
LZH				APKP		16 59 11.0	
LZH				XPKP		16 59 23.3	
NJ2	Nanjing	165.93	331	ePKP	PKPdf	16 58 43.1	+2.4
CMAR	Chiang Mai Arr	168.64	95	PKP	PKPdf	16 58 45.9	+3.1
	0.3nm,0.4s,baz=319,slow=2.0,SNR=4.7						
CMAR				PKPab	PKPab	16 59 56.2	+0.8
	1.0nm,0.8s,baz=241,slow=7.4,SNR=4.5						

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*IDC **15** 16:40:00.6±1.4, 2.65S×140.60E, mb3.6/4, mb1 3.9/6, mb1mx3.7/14, mbtmp3.7/6, ML3.8/2, MS3.5/2, Ms1 3.5/2, ms1mx2.7/21, Error ellipse: s-maj=49.2km s-min=23.3km az=95.0*

*NEIC **15** 16:40:05.0±1.2, 2.65S×140.78E, h30^{km}, mb4.0/2, Error ellipse: s-maj=30.1km s-min=14.7km az=89.0*

ISC 15 16:40:03.2±0.9**, 2.63S**±0.09×**140.8E**±0.1**, h33**^{km}**, n11, σ1^{s}08**/11**, mb3.6**/4**, MS3.3**/2**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	13.00	219	eP	P	16 43 08.3	-0.1
	6.5nm,0.4s						
KAKA				eS	S	16 45 34.3	+1.5
CTA	Charters Tower	18.14	163	P	P	16 44 15.8	+1.3
	0.2nm,0.3s,baz=342,slow=16,SNR=3.3						
WRAB	Tennant Creek	18.32	200	eP	P	16 44 16.5	-0.3
	6.5nm,0.8s						
WB2	Warramunga Arr	18.33	200	eP	P	16 44 15.9	-1.0
WRA	Warramunga Arr	18.33	200	P	P	16 44 15.0	-1.9
	0.4nm,0.3s,baz=18,slow=13,SNR=16						
FITZ	Fitzroy Crossi	21.40	223	eP	P	16 44 51.0	+0.6
	4.5nm,0.6s,mb4.0						
FITZ	Fitzroy Crossi	21.40	223	P	P	16 44 48.6	-1.7
	3.8nm,0.7s,mb3.8,baz=28,slow=7.5,SNR=6.7						
FITZ				LR	LR	16 54 00.9	
	comp=Z,119nm,20.7s,MS3.3,baz=80,slow=40						
CBIJ	Chichi jima	29.58	2	LR	LR	16 55 24.3	
	comp=Z,88nm,21.7s,MS3.4,baz=110,slow=31						
SONM	Songino Array	58.57	333	P	P	16 49 58.4	-0.7
	0.1nm,0.4s,mb3.2,baz=150,slow=6.4,SNR=2.6						
MKAR	Makanchi Array	71.02	322	P	P	16 51 20.8	+0.9
	0.5nm,0.8s,mb3.5,baz=95,slow=7.3,SNR=4.7						
ILAR	Eielson Array	84.89	24	P	P	16 52 36.5	+0.7
	0.4nm,0.8s,mb3.6,baz=253,slow=4.4,SNR=4.6						

KRSC 15 16:51:37.9±1.3**, 54.21N×161.47E, h26**^{km}±5^{km}**, ML3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.38	24	i P	Pb	16 51 46.3	+0.1
MKZ				i S	Sb	16 51 52.4	+0.6
KII	Karymskiy	1.20	262	i P	Pn	16 51 59.1	-0.2
KII				i S	Sn	16 52 14.3	-0.5
TUMR	Tumrok	1.32	325	i P	Pn	16 52 00.8	-0.2
TUMR				eS	Sn	16 52 17.4	-0.5
SPN	Mys Shipunski	1.41	218	eP	Pn	16 52 01.4	-0.8
SPN				i S	Sn	16 52 17.2	-2.9
NLC	Nalytchevo	1.64	231	eP	Pn	16 52 04.6	-0.9
NLC				i S	Sn	16 52 24.7	-1.2
KMNR	Kamenistaya	1.71	336	i P	Pn	16 52 07.2	+0.7
KMNR				i S	Sn	16 52 29.1	+1.5
SDLR	Sedlovina	1.80	240	eP	Pn	16 52 08.1	+0.3
SDLR				eS	Sn	16 52 30.1	+0.2
ZLN	Zelenaya	1.85	348	eP	Pn	16 52 09.5	+1.0
ZLN				eS	Sn	16 52 32.4	+1.1
UGLR	Uglovaya	1.86	239	eP	Pn	16 52 08.9	+0.1
UGLR				i S	Sn	16 52 31.6	-0.1
AVH	Avacha	1.88	241	i P	Pn	16 52 09.7	+0.8
AVH				i S	Sn	16 52 32.0	0.0
KPT	Kopyto	1.90	338	i P	Pn	16 52 09.9	+0.6
KPT				eS	Sn	16 52 33.0	+0.4
KOK	Koryaka	1.92	242	i P	Pn	16 52 09.9	+0.4
KOK				eS	Sn	16 52 34.3	+1.3
LGNR	Loginova	1.93	347	eP	Pn	16 52 11.6	+1.9
LGNR				eS	Sn	16 52 36.0	+2.7
PET	Petropavlovsk	2.06	236	eP	Pn	16 52 11.8	+0.3
PET				eS	Sn	16 52 35.9	-0.6
KOZ	Kozyrevsk	2.07	334	i P	Pn	16 52 12.2	+0.6
KOZ				eS	Sn	16 52 36.9	+0.1
KRSR	Krestovskiy	2.08	346	i P	Pn	16 52 11.7	-0.1
KRSR				eS	Sn	16 52 35.9	-1.2
KBTR	Krutoberegovo	2.15	21	eP	Pn	16 52 12.4	-0.4
KBTR				eS	Sn	16 52 37.8	-1.0
GNL	Ganaly	2.15	258	i P	Pn	16 52 13.5	+0.7
GNL				eS	Sn	16 52 39.1	+0.2
KLY	Klyuchi	2.16	348	eP	Pn	16 52 12.3	-0.7
KLY				eS	Sn	16 52 37.9	-1.3
SRDR	Sredinnyy	2.34	335	eP	Pn	16 52 15.2	-0.3
SRDR				eS	Sn	16 52 42.4	-1.3
ESO	Esso	2.34	318	eP	Pn	16 52 15.5	-0.1
ESO				i S	Sn	16 52 45.7	+1.9
RUS	Russkaya	2.51	226	eP	Pn	16 52 18.1	+0.1
RUS				eS	Sn	16 52 47.1	-1.0
GRL	Gorelyy	2.63	232	eP	Pn	16 52 20.9	+1.3
GRL				eS	Sn	16 52 51.9	+0.9
BKI	Bering	2.80	67	eS	Sn	16 52 50.9	-4.4
BKI				Smax			
	10.0nm,0.7s						
APC	Apacha	2.88	245	eP	Pn	16 52 23.7	+0.5
APC				eS	Sn	16 52 57.0	-0.3
PAU	Pauzhetka	3.94	228	eP	Pn	16 52 39.8	+1.5
PAU				eS	Sn	16 53 24.0	-0.3

IDC 15 16:54:59.6±3.4**, 2.62N×93.61E, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.5**/19**, mbtmp3.5**/4**, ML4.0**/1**, Error ellipse: s-maj=106.4km s-min=30.2km az=62.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.58	18	Pn	P	16 58 54.2	-1.0
	0.2nm,0.3s,baz=214,slow=12,SNR=7.9						
MKAR	Makanchi Array	45.09	349	P	P	17 03 17.9	-1.4
	0.7nm,0.5s,baz=165,slow=8.3,SNR=7.9						
WRA	Warramunga Arr	45.83	121	P	P	17 03 23.7	-1.8
	1.3nm,1.0s,baz=296,slow=9.3,SNR=5.7						
SONM	Songino Array	46.38	12	P	P	17 03 27.0	-2.4
	0.3nm,0.7s,baz=191,slow=7.3,SNR=2.6						

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*IDC **15** 17:22:40.8±1.0, 22.89S×169.63E, mb4.3/11, mb1 4.5/12, mb1mx4.4/18, mbtmp4.3/12, ML4.2/1, MS3.8/13, Ms1 3.8/13, ms1mx3.6/27, Error ellipse: s-maj=34.0km s-min=19.9km az=164.0*

*NEIC **15** 17:22:42.6±0.5, 22.83S×169.58E, h10^{km}, mb4.0/1, Error ellipse: s-maj=18.6km s-min=9.4km az=171.0*

*LDG **15** 17:22:50.1±0.6, 20.14S×167.45E, h10^{km}, Mb4.8/1, Error ellipse: s-maj=71.3km s-min=7.4km az=108.0*

ISC 15 17:22:43.7±4.4**, 22.9S**±0.1×**169.56E**±0.08**, h30**^{km}±30^{km}**, n56, σ0^{s}80**/22**, mb4.2**/11**, MS3.8**/11**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	2.98	284	eP	Pn	17 23 30.2	0.0
DZM				eS	Sn	17 24 05.4	+0.1
DZM	Mont Dzumac	2.98	284	Pn	Pn	17 23 30.4	+0.2
	30nm,0.3s,baz=45,slow=21,SNR=1628						
DZM				Sn	Sn	17 24 05.1	-0.2
	58nm,0.3s,baz=80,slow=23,SNR=9.7						
NOUC	Port Laguerre	3.10	283	eP	Pn	17 23 31.6	-0.3
NOUC				eS	Sn	17 24 08.5	+0.2
NOUC	Port Laguerre	3.10	283	eP	Pn	17 23 31.6	-0.3
NOUC				eS	Sn	17 24 08.5	+0.2
HNR	Honiara	16.21	324	LR	LR	17 31 57.9	
	comp=Z,184nm,18.7s,baz=33,slow=34						
URZ	Urewera	16.67	159	LR	LR	17 32 05.6	
	comp=Z,540nm,20.3s,baz=14,slow=34						
RPZ	Rata Peaks	20.85	177	LR	LR	17 34 37.2	
	comp=Z,426nm,19.3s,MS3.8,baz=346,slow=34						
CTA	Charters Tower	21.86	273	P	P	17 27 37.0	+1.1
	5.8nm,1.1s,mb3.9,baz=101,slow=12,SNR=4.9						
CTA				LR	LR	17 35 18.7	
	comp=Z,166nm,20.5s,MS3.4,baz=281,slow=35						
PMG	Port Moresby	25.28	298	P	P	17 28 09.6	+0.2
	8.2nm,0.7s,mb4.4,baz=98,slow=7.1,SNR=4.6						
PMG				LR	LR	17 36 44.6	
	comp=Z,206nm,19.1s,MS3.7,baz=250,slow=33						
STKA	Stephens Creek	26.35	244	eP	P	17 28 19.3	+0.2
	3.5nm,0.9s,mb3.9						
STKA				e		17 28 33.5	
STKA	Stephens Creek	26.35	244	P	P	17 28 19.2	+0.1
	3.8nm,0.9s,mb3.9,baz=118,slow=12,SNR=4.8						
STKA				LR	LR	17 38 20.6	
	comp=Z,245nm,18.7s,MS3.8,baz=30,slow=36						
WRA	Warramunga Arr	32.87	268	P	P	17 29 15.9	-1.5
	0.3nm,0.4s,mb3.5,baz=99,slow=8.4,SNR=10.0						
FITZ	Fitzroy Crossi	41.30	268	P	P	17 30 29.0	+0.5
	4.9nm,0.9s,mb4.1,baz=171,slow=10,SNR=4.0						
MBWA	Marble Bar	46.05	262	eP	P	17 31 06.5	-0.4
VNDA	Vanda	54.85	182	LR	LR	17 53 46.6	
	comp=Z,76nm,20.3s,MS3.8,baz=216,slow=34						
MJAR	Matsushiro Arr	66.07	333	P	P	17 33 29.6	-0.7
	2.7nm,0.8s,mb4.3,baz=162,slow=5.6,SNR=5.0						
ASAJ	Asahikawa	71.07	340	LR	LR	18 01 43.8	
	comp=Z,60nm,20.0s,MS3.9,baz=353,slow=33						
MAW	Mawson	75.22	202	P	P	17 34 24.6	-0.4
	1.7nm,0.8s,mb4.0,baz=174,slow=2.5,SNR=3.5						
ENH	Enshi	78.20	310	eP	P	17 34 41.4	-1.0
CMAR	Chiang Mai Arr	80.26	295	P	P	17 34 55.3	+1.6
	2.7nm,0.7s,mb4.3,baz=129,slow=4.6,SNR=9.5						
YBH	Yreka Blue Hor	89.68	44	P	P	17 35 41.3	+1.0
	0.8nm,0.5s,mb4.3,baz=56,slow=3.7,SNR=4.0						
YBH				LR	LR	18 10 41.7	
	comp=Z,47nm,18.4s,MS4.0,baz=234,slow=32						
SONM	Songino Array	90.27	323	LR	LR	18 17 02.3	
	comp=Z,37nm,18.6s,MS3.8,baz=242,slow=36						
NVAR	Mina Array Bea	90.96	48	P	P	17 35 47.1	+0.7
	3.6nm,0.8s,mb4.8,baz=212,slow=6.2,SNR=19						
ILAR	Eielson Array	93.57	17	P	P	17 35 56.5	-1.2
	1.0nm,0.8s,mb4.3,baz=231,slow=6.2,SNR=6.8						
DLBC	Dease Lake	95.10	27	LR	LR	18 15 32.7	
	comp=Z,38nm,18.3s,MS3.9,baz=118,slow=33						
ANMO	Albuquerque	98.09	56	LR	LR	18 12 37.5	
	comp=Z,63nm,18.1s,MS4.2,slow=31						
TXAR	Lajitas Array	98.22	62	LR	LR	18 10 20.6	
	comp=Z,52nm,21.8s,MS4.0,baz=265,slow=29						
ARCES	ARCESS Array B	128.62	345	PKP	PKPdf	17 41 48.8	-3.9
	2.2nm,0.8s,baz=180,slow=1.2,SNR=5.7						
KSP	Ksiaz	145.18	330	eP	PKPbc	17 42 20.0	+1.5
BSEG	Bad Segeberg	145.22	338	ePKPbc	PKPbc	17 42 20.0	+1.4
VYHS	Vyhne	145.44	325	i PKP	PKPdf	17 42 21.5	-2.3
DPC	Dobruska-Polom	145.50	329	ePKP	PKPdf	17 42 21.7	-2.1
UPC	Upice	145.53	330	ePKP	PKPdf	17 42 21.3	-2.6
PVCC	Panska Ves	146.18	331	ePKP	PKPdf	17 42 23.4	-1.6
CLL	Collm	146.28	333	i P	PKPbc	17 42 23.2	+2.0
PRU	Pruhonice	146.57	330	ePKP	PKPdf	17 42 24.3	-1.4
CLZ	Clausthal	146.90	336	ePKPbc	PKPbc	17 42 25.1	+2.4
NKC	Novy Kostel	147.32	332	ePKP	PKPdf	17 42 25.6	-1.3
KHC	Kasperske Hory	147.63	330	ePKP	PKPdf	17 42 27.5	+0.1
GERES	GERESS Array B	147.77	330	PKPbc	PKPdf	17 42 28.2	+0.5
	5.3nm,0.8s,baz=45,slow=1.9,SNR=41						
GRA1	Grafenberg Arr	148.25	333	ePKPbc	PKPdf	17 42 28.9	+0.5
GRF	Grafenberg Arr	148.25	333	ePKP	PKPdf	17 42 28.9	+0.5
TNS	Taunus Mts	148.93	336	ePKPbc	PKPdf	17 42 30.5	+1.0
BOJS	Bojanci	149.21	323	ePKPbc	PKPdf	17 42 23.3	-6.8
GIVF	Givet	150.28	340	ePKP1	PKPdf	17 42 33.3	+1.7
BFO	Black Forest	150.50	334	ePKPbc	PKPdf	17 42 34.0	+2.0
BAIF	Baives	150.51	341	ePKP1	PKPdf	17 42 33.9	+1.9
CDF	Champ du Feu	150.85	335	ePKP1	PKPdf	17 42 34.6	+2.1
	14nm,1.0s						
HINF	Hinteralfeld	151.50	335	ePKP1	PKPdf	17 42 35.8	+2.3
	10nm,0.9s						
HAU	Haudompre	151.54	336	ePKP1	PKPdf	17 42 36.1	+2.5
	18nm,0.9s						
MEZF	Maizieres J'vi	151.59	338	ePKP1	PKPdf	17 42 36.8	+3.2
CABF	La Chapelle	152.79	335	ePKP1	PKPdf	17 42 40.0	+4.6
FLN	La Foliniere	152.96	345	ePKP1	PKPdf	17 42 38.8	+3.2
LOR	Lormes	153.06	338	ePKP1	PKPdf	17 42 39.6	+3.8

	11nm,0.8s						
SSF	Saint Saulge	153.36	338	*e*PKP1	PKPdf	17 42 40.3	+4.1
	14nm,1.0s						
SMF	Signal de Mont	153.60	338	*e*PKP1	PKPdf	17 42 41.4	+4.8

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*BJI **15** 17:26:19.4, 16.65N×145.68E, h329^{km}, mB4.7, mb4.2*

*IDC **15** 17:26:20.9±2.6, 16.71N×145.52E, h310^{km}±26^{km}, mb3.8/22, mb1 3.9/24, mb1mx3.9/32, mbtmp4.6/24, Error ellipse: s-maj=14.6km s-min=7.7km az=82.0*

*NEIC **15** 17:26:21.8±0.4, 16.65N×145.49E, h322^{km}±4^{km}, mb4.3/20, Error ellipse: s-maj=7.2km s-min=5.6km az=66.0*

ISC 15 17:26:20.8±0.6**, 16.64N**±0.05×**145.46E**±0.08**, h325**^{km}±6^{km}**, n59, σ0**^{s}**.81**/57**, mb4.2**/38**, 3C-2D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARN	Sarigan	0.30	78	⇑*i*P	P	17 27 02.8	+0.6
SAPN	Saipan	1.44	169	⇑*i*P	P	17 27 06.6	+0.2
CBIJ	Chichi jima	10.84	344	P	P	17 28 48.6	-1.4
	5.7nm,0.3s,baz=282,slow=22,SNR=4.3						
JOW	Kunigami	18.90	305	P	P	17 30 20.1	+0.4
	6.6nm,0.3s,baz=131,slow=13,SNR=13						
MJAR	Matsushiro Arr	20.84	343	P	P	17 30 37.6	-1.1
	2.2nm,0.6s,baz=169,slow=10,SNR=6.1						
JNU	Nakatsue	21.04	324	P	P	17 30 42.0	+1.3
	18nm,0.7s,mb4.4,baz=66,slow=11,SNR=11						
TATO	Taipei	23.87	294	P	P	17 31 07.7	+0.3
PMG	Port Moresby	25.93	176	P	P	17 31 25.3	-0.9
	5.1nm,0.5s,mb4.0,baz=303,slow=18,SNR=6.7						
ASAJ	Asahikawa	27.50	356	P	P	17 31 38.3	-1.8
	5.2nm,0.7s,mb3.9,baz=193,slow=7.6,SNR=8.0						
MDJ	Mudanjiang	30.94	338	P	P	17 32 10.0	-0.2
MDJ				AP	pP	17 33 11.0	-1.6
MDJ				PP	PP	17 33 27.8	+0.7
MDJ				XP	sP	17 33 48.4	-1.6
MDJ				S	S	17 36 51.6	+1.6
MDJ				XS		17 38 43.6	
MDJ				SCS	ScS	17 42 06.1	+1.4
MDJ				AMB	AMB		
	comp=Z,40nm,5.4s						
ENH	Enshi	35.52	299	*e*P	P	17 32 48.9	-0.4
	comp=Z,8.8nm,0.9s,mb4.0						
CTA	Charters Tower	36.50	179	*e*P	P	17 32 57.4	-0.2
	comp=Z,8.1nm,0.6s,mb4.1						
CTA	Charters Tower	36.50	179	P	P	17 32 58.2	+0.6
	comp=Z,8.5nm,0.6s,mb4.1,baz=0.4,slow=8.8,SNR=19						
WRAB	Tennant Creek	37.95	197	*e*P	P	17 33 08.7	-0.9
	comp=Z,48nm,1.2s,mb4.6						
WB2	Warramunga Arr	37.95	197	*e*P	P	17 33 09.0	-0.7
WRA	Warramunga Arr	37.96	197	P	P	17 33 09.7	0.0
	comp=Z,5.2nm,0.5s,mb4.0,baz=20,slow=8.2,SNR=40						
HIA	Hailar	38.67	333	*e*P	P	17 33 14.9	-0.3
	comp=Z,4.7nm,0.6s,mb3.9						
FITZ	Fitzroy Crossi	39.66	210	⇓*i*P	P	17 33 23.5	-0.1
	comp=Z,15nm,0.8s,mb4.3						
FITZ	Fitzroy Crossi	39.66	210	P	P	17 33 24.0	+0.4
	comp=Z,20nm,0.7s,mb4.5,baz=20,slow=6.9,SNR=106						
LZH	Lanzhou	41.64	306	⇑P	P	17 33 40.8	+1.2
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.4						
LZH				AMB	AMB		
	comp=Z,170nm,4.0s						
DZM	Mont Dzumac	43.62	151	P	P	17 33 56.5	+0.8
	comp=Z,3.1nm,0.5s,mb3.7,baz=360,slow=21,SNR=7.3						
ULN	Ulaanbaatar	44.26	323	*e*P	P	17 34 00.5	+0.1
	comp=Z,2.7nm,0.6s,mb3.5						
CMAR	Chiang Mai Arr	44.30	280	P	P	17 34 01.7	+0.5
	comp=Z,12nm,0.8s,mb4.1,baz=74,slow=6.5,SNR=88						
SONM	Songino Array	44.62	323	P	P	17 34 03.9	+0.6
	comp=Z,1.7nm,0.6s,mb3.4,baz=135,slow=8.7,SNR=14						
SONM				PcP	PcP	17 35 39.8	-0.6
	comp=Z,1.3nm,0.9s,baz=132,slow=2.7,SNR=3.9						
GTA	Gaotai	45.65	309	*e*P	P	17 34 12.0	+0.5
STKA	Stephens Creek	48.38	184	⇓*i*P	P	17 34 32.2	-0.5
	comp=Z,17nm,0.7s,mb4.4						
STKA	Stephens Creek	48.38	184	P	P	17 34 32.3	-0.4
	comp=Z,13nm,0.5s,mb4.5,baz=351,slow=7.8,SNR=70						
LSA	Lhasa	51.18	295	P	P	17 34 55.0	+1.3
LSA	Lhasa	51.18	295	*e*P	P	17 34 55.2	+1.5
	comp=Z,14nm,0.7s,mb4.3						
WMQ	Urumqi	55.50	312	*e*P	P	17 35 26.2	+1.5
GUN	Gumba	55.80	293	*e*P	P	17 35 27.2	+0.1
	comp=Z,31nm,0.8s,mb4.7						
PKI	Pulchoki	56.23	292	*e*P	P	17 35 29.7	-0.4
	comp=Z,16nm,0.6s,mb4.5						
KKN	Kakani	56.34	293	*e*P	P	17 35 30.4	-0.5
	comp=Z,22nm,0.9s,mb4.5						
DMN	Daman	56.50	292	*e*P	P	17 35 31.7	-0.3
	comp=Z,16nm,0.6s,mb4.5						
GKN	Gorkha	56.90	293	*e*P	P	17 35 34.3	-0.4
	comp=Z,26nm,0.7s,mb4.7						
KOLN	Koldanda	57.83	293	*e*P	P	17 35 40.8	-0.3
	comp=Z,21nm,0.8s,mb4.5						
ZAL	Zalesovo	59.52	323	P	P	17 35 52.0	-0.4
	comp=Z,1.4nm,0.3s,mb3.8,baz=31,slow=5.1,SNR=5.4						
MKAR	Makanchi Array	59.73	315	P	P	17 35 53.8	-0.1
	comp=Z,5.7nm,0.6s,mb4.2,baz=93,slow=7.8,SNR=66						
MKAR				PcP	PcP	17 36 36.2	-1.0
	comp=Z,2.2nm,0.7s,baz=94,slow=4.9,SNR=5.9						
MKAR	Makanchi Array	59.73	315	P	P	17 35 53.8	-0.1
MKAR				PcP	PcP	17 36 36.2	-1.0
ILAR	Eielson Array	65.59	26	P	P	17 36 30.0	-1.7
	comp=Z,1.7nm,0.5s,mb4.1,baz=251,slow=5.9,SNR=15						
BVAR	Borovoye Array	67.92	321	P	P	17 36 46.0	-0.4
	comp=Z,6.0nm,0.5s,mb4.5,baz=99,slow=7.5,SNR=66						
INK	Inuvik	71.35	23	P	P	17 37 05.5	-1.5
	comp=Z,0.6nm,0.4s,mb3.6,baz=274,slow=7.6,SNR=3.6						
DLBC	Dease Lake	73.13	33	P	P	17 37 18.4	+0.7
	comp=Z,1.9nm,0.6s,mb4.0,baz=300,slow=3.9,SNR=7.0						
ARU	Arti	74.61	325	*e*P	P	17 37 25.7	-0.5
	comp=Z,7.5nm,0.6s,mb4.6						
YKA	Yellowknife Ar	79.91	28	P	P	17 37 54.5	-0.4
	comp=Z,1.5nm,0.4s,mb4.1,baz=288,slow=5.1,SNR=6.0						
YKA	Yellowknife Ar	79.91	28	P	P	17 37 54.5	-0.4
YBH	Yreka Blue Hor	80.45	49	P	P	17 37 59.5	+1.2
	comp=Z,2.6nm,0.6s,mb4.1,baz=292,slow=3.9,SNR=6.3						
RES	Resolute Bay	81.47	14	*e*P	P	17 38 03.0	+0.1
BEKR	Beckwourth	82.65	51	*e*P	P	17 38 09.8	+0.2
	comp=Z,3.5nm,0.8s,mb4.2						
BMO	Blue Mountains	83.44	45	*e*P	P	17 38 14.2	+0.7
	comp=Z,4.2nm,1.4s,mb4.1						
ARCES	ARCESS Array B	84.38	342	P	P	17 38 17.3	-0.3
	comp=Z,1.2nm,0.6s,mb3.9,baz=51,slow=7.8,SNR=7.8						
NVAR	Mina Array Bea	84.58	52	P	P	17 38 20.4	+1.0
	comp=Z,12nm,0.5s,mb4.9,baz=270,slow=6.3,SNR=20						
NVAR	Mina Array Bea	84.58	52	P	P	17 38 20.4	+1.0
HLID	Hailey	85.82	46	*e*P	P	17 38 26.1	+0.8
	comp=Z,1.0nm,0.6s,mb3.8						
ELK	Elko	86.14	49	*e*P	P	17 38 27.8	+0.9
	comp=Z,3.4nm,0.8s,mb4.2						
FINES	FINESS Array B	88.65	335	P	P	17 38 37.1	-1.2
	comp=Z,0.5nm,0.3s,mb3.8,baz=63,slow=4.6,SNR=18						
DBIC	Dimbokro	142.61	306	PKhKP		17 45 13.5	
	comp=Z,2.7nm,0.5s,baz=357,slow=2.6,SNR=9.6						
LPAZ	La Paz	147.80	94	PKPbc	PKPdf	17 45 31.6	+6.7
	comp=Z,2.2nm,0.8s,baz=354,slow=19,SNR=11						
SAML	Samuel	151.07	78	*e*PKPdf	PKPdf	17 45 30.6	+0.5
SAML				*e*PKPbc	PKPdf	17 45 37.2	+7.1
SAML				*e*PKPab	PKPab	17 45 45.8	-1.8

GUC 15 17:49:36.8±0.4**, 28.49S**×**70.30W, h89**^{km}±8^{km}**, ML3.6, 3C, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VACH	Vallenar	0.41	258	⇑*i*P	P	17 49 50.9	+0.1
VACH				*i* S	S	17 50 01.6	+0.2
VACH				AMP		17 50 01.9	
	comp=N,9µm,0.1s						
CPCH	Copiapo	1.13	358	⇑*i*P	P	17 49 58.1	-0.1
CPCH				*i* S	S	17 50 14.5	+0.2
CPCH				AMP		17 50 17.0	
	comp=E,7µm,0.1s						
TLL	Tololo Astrono	1.72	195	⇑*i*P	P	17 50 06.5	+0.6
TLL				*i* S	S	17 50 28.7	+1.4
TLL				AMP		17 50 32.0	
	comp=E,119nm,0.4s						
CRCH	Chaqaral	2.16	352	*e*P	P	17 50 11.3	-0.4

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*SOF **15** 17:58:59.9, 39.54N×24.33E, h10^{km}, MD2.7*

*ATH **15** 17:59:05.0, 39.80N×24.18E, h31^{km}±2^{km}, MD3.4/6, ML3.5*

*NEIC **15** 17:59:05.3, 39.83N×24.19E, h31^{km}, ML3.5(ATH), After ATH.*

*CSEM **15** 17:59:05.5±0.1, 39.73N×24.17E, h20^{km}, ML3.0, Error ellipse: s-maj=2.2km s-min=1.8km az=158.0*

*THE **15** 17:59:05.5, 39.73N×24.18E, h13^{km}, ML3.0*

ISC 15 17:59:05.4±0.4**, 39.76N**±0.03×**24.21E**±0.03**, h22**^{km}±4^{km}**, n29, σ0**^{s}**.99**/42**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAIG	Paliouri	0.44	292	*e*Pg	Pb	17 59 14.0	-0.4
PAIG				*e*Sg	Sb	17 59 20.8	+0.2
OUR	Ouranopolis	0.60	343	*e*Pg	Pb	17 59 17.2	+0.1
OUR				*e*Sg	Sb	17 59 26.5	+1.4
AOS	Alonnisos	0.64	203	*e*Pg	Pb	17 59 16.9	-0.9
AOS				*e*Sg	Sb	17 59 26.0	-0.4
LOS	Limnos	0.69	75	*e*Pg	Pb	17 59 19.1	+0.3
LOS				*e*Sg	Sb	17 59 29.9	+2.1
LIA	Limnos Island	0.76	79	*e*PN	Pn	17 59 20.5	-0.3
LIA				*e*SN	Sn	17 59 31.8	+0.1
PLG	Polygyros	0.84	317	*e*PN	Pn	17 59 20.6	-1.4
PLG				*e*SN	Sn	17 59 32.1	-1.6
XOR	Xorichti	0.88	244	*e*Pg	Pb	17 59 21.5	-0.4
XOR				*e*Sg	Sb	17 59 33.7	+0.6
NEO	Neokhori	0.89	239	*e*PB	Pb	17 59 21.5	-0.5
SOH	Sokhos	1.24	329	*e*Pg	Pn	17 59 28.2	+0.5
SOH				*e*Sg	Sb	17 59 45.3	+1.7
THE	Thessaloniki	1.29	313	*e*Pg	Pn	17 59 28.3	0.0
THE				*e*Sg	Sn	17 59 46.3	+1.3
LIT	Litokhoron	1.36	285	*e*Pg	Pn	17 59 29.1	-0.3
LIT				*e*Sg	Sn	17 59 47.2	+0.3
SRS	Serrai	1.43	341	*e*Pg	Pn	17 59 30.4	0.0
SRS				*e*Sg	Sn	17 59 50.2	+1.6
NVR	Nevrokopi	1.61	351	*e*PN	Pn	17 59 33.0	+0.1
AGG	Agios Georgios	1.63	244	*e*Pg	Pn	17 59 32.7	-0.5
AGG				*e*Sg	Sn	17 59 54.0	+0.3
PRK	Paraskevi	1.68	107	*e*PN	Pn	17 59 35.0	+1.1
PRK	Paraskevi	1.68	107	*e*Pn	Pn	17 59 35.8	+1.9
RDO	Rodhopi	1.72	36	*e*PB	Pb	17 59 33.9	-2.2
PTL	Penteli	1.73	189	*e*Pb	Pb	17 59 38.0	+1.7
ALN	Alexandroupoli	1.81	51	*e*Pb	Pb	17 59 35.9	-1.7
ALN				*e*Sb	Sb	17 59 59.4	-0.6
GRG	Griva	1.82	311	*e*Pb	Pb	17 59 35.9	-2.1
ATH	Athens Observa	1.83	192	*e*Pb	Pb	17 59 38.8	+0.8
ATH	Athens Observa	1.83	192	*e*PB	Pb	17 59 37.0	-1.0
MMB	Musomiste	1.86	349	P	Pn	17 59 36.0	-0.5
EVR	Evrytania	2.04	246	*e*PN	Pn	17 59 39.0	-0.1
NAIG	Nisos Aigina	2.08	196	*e*PN	Pn	17 59 40.5	+0.9
KDZ	Kurdzhali	2.10	26	P	Pn	17 59 38.8	-1.1
KKB	Krupnik	2.27	338	P	Pn	17 59 42.0	-0.3
FNA	Florina	2.39	296	*e*Pn	Pn	17 59 43.9	-0.2
VTS	Vitosha	2.93	345	P	Pn	17 59 52.0	+0.3

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*NIED **15** 18:01:00, 44.30N×147.60E, h107^{km}, Mw4.0 Best double couple: $M_0$1.05×10^{15} NP1:ϕ_s274°, δ73°, λ94°. NP2:ϕ_s81°, δ17°, λ78°.*

*MOS **15** 18:01:52.6±1.3, 44.53N×147.36E, h149^{km}, mb4.5/2, Error ellipse: s-maj=21.0km s-min=15.0km az=73.0*

*JMA **15** 18:01:53.9±0.5, 44.30N×147.56E, h116^{km}, M4.2*

*NEIC **15** 18:01:53.9±1.9, 44.54N×147.39E, h141^{km}±18^{km}, mb4.5/2, Error ellipse: s-maj=24.0km s-min=14.1km az=112.0*

*IDC **15** 18:01:55.3±2.7, 44.59N×147.28E, h150^{km}±25^{km}, mb3.4/7, mb1 3.6/9, mb1mx3.4/23, mbtmp3.8/9, Error ellipse: s-maj=27.1km s-min=18.5km az=115.0*

ISC 15 18:01:52.0±0.9**, 44.40N**±0.08×**147.5E**±0.1**, h142**^{km}±8^{km}**, n35, σ1**^{s}**.19**/41**, mb3.8**/8**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	Yuzh-Kuril'sk	1.22	253	⇓*i*PN	P	18 02 17.5	-0.9
YUK				*i* S	S	18 02 36.8	-1.8
YUK				pmax	pmax		
	comp=Z,5µm,0.3s						
YUK				pmax	pmax		
	comp=N,470nm,0.3s						
YUK				pmax	pmax		
	comp=E,860nm,0.3s						
YUK				pmax	pmax		
	comp=Z,3µm,0.3s						
YUK				smax			
	comp=N,5µm,0.7s						
YUK				smax			
	comp=E,2µm,0.7s						
YUK				smax			
	comp=N,2µm,0.4s						
YUK				smax			
	comp=E,1µm,0.4s						
NEM2	Nemuro 2	1.63	231	P	P	18 02 22.5	-0.2
NEM2				*e*S	S	18 02 44.4	-1.8
JRA	Rausu	1.76	256	P	P	18 02 25.0	+0.8
JNK	Nakash	2.15	249	P	P	18 02 29.8	+0.9
JAK	Akkeshi	2.46	236	P	P	18 02 33.0	+0.2
JAK				*e*S	S	18 03 03.1	-0.9
JTKR	Abashiri--Toko	2.61	262	P	P	18 02 35.6	+0.9
JTKR				*e*S	S	18 03 08.2	+0.9
JAR	Ashorobuto	2.90	249	P	P	18 02 39.9	+1.4
JKK2	Kamakawa 2	3.45	263	P	P	18 02 47.1	+1.4
JCH	Churui	3.49	241	P	P	18 02 46.6	+0.4
JCH				*e*S	S	18 03 26.7	-1.0
ASAJ	Asahikawa	3.52	267	PN	P	18 02 48.2	+1.6
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ	Asahikawa	3.52	267	P	P	18 02 48.1	+1.5
	comp=Z,3.9nm,0.3s,baz=65,slow=16,SNR=20						
JSE	Soyaes	3.54	281	P	P	18 02 47.6	+0.7
JFR	Furan	3.75	253	P	P	18 02 51.2	+1.6
JNBK	Urakawa-nobuka	4.05	240	P	P	18 02 53.3	-0.3
JNBK				*e*S	S	18 03 40.4	-0.5
YSS	Yuzh-Sakhalins	4.19	309	*e*PN	P	18 02 54.9	-0.5
JEW	Eniwo	4.65	253	P	P	18 03 03.6	+2.0
JKB	Kayabe	5.34	244	P	P	18 03 10.7	-0.1
JKB				*e*S	S	18 04 09.5	-2.3
JOT	Ohata	5.61	240	P	P	18 03 13.5	-0.8
MJAR	Matsushiro Arr	10.55	225	P	P	18 04 21.2	+1.0
	comp=Z,0.4nm,0.3s,baz=25,slow=13,SNR=6.2						
SONM	Songino Array	28.45	292	pP	pP	18 08 07.1	+1.9
	comp=Z,0.5nm,0.7s,baz=68,slow=6.7,SNR=5.2						
IMA	Indian Mountai	38.01	35	*e*P	P	18 08 57.6	+0.2
IMA				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.7						
IMA	Indian Mountai	38.01	35	*e*P	P	18 08 57.6	+0.2
	comp=Z,8.8nm,0.5s,mb4.7						
ILAR	Eielson Array	40.83	37	P	P	18 09 21.4	+0.8
	comp=Z,0.9nm,0.7s,mb3.5,baz=272,slow=8.5,SNR=8.4						
MKAR	Makanchi Array	44.50	297	P	P	18 09 51.5	+0.9
	comp=Z,0.6nm,0.8s,mb3.3,baz=74,slow=8.8,SNR=3.8						
MKAR	Makanchi Array	44.50	297	P	P	18 09 51.5	+0.9
INK	Inuvik	45.73	31	P	P	18 09 59.9	-0.1
INK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
INK	Inuvik	45.73	31	P	P	18 09 59.9	-0.1
	comp=Z,2.0nm,0.3s,mb4.2,baz=306,slow=7.3,SNR=25						
INK	Inuvik	45.73	31	*e*P	P	18 09 59.6	-0.4
	comp=Z,2.7nm,0.4s,mb4.2						
RES	Resolute Bay	54.28	17	P	P	18 11 02.4	-2.5
ARCES	ARCESS Array B	58.73	340	P	P	18 11 34.2	-2.3
	comp=Z,1.2nm,0.7s,mb3.8,baz=45,slow=8.6,SNR=5.7						
ARCES	ARCESS Array B	58.73	340	P	P	18 11 34.2	-2.3
FINES	FINESS Array B	64.41	333	P	P	18 12 12.6	-1.9
	comp=Z,1.0nm,0.5s,mb3.9,baz=44,slow=6.6,SNR=16						
WRA	Warramunga Arr	65.14	194	P	P	18 12 21.2	+1.3
	comp=Z,0.4nm,0.5s,mb3.5,baz=13,slow=6.7,SNR=4.7						
NOA	NORSAR Array B	69.09	339	P	P	18 12 43.0	-0.9
	comp=Z,0.4nm,0.5s,mb3.5,baz=31,slow=6.3,SNR=3.5						
NOA	NORSAR Array B	69.09	339	P	P	18 12 43.0	-0.9

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*IDC **15** 18:02:09.7±2.1, 43.61N×105.39W, mb4.1/1, mb1 4.0/4, mb1mx3.6/22, mbtmp3.8/4, ML3.6/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/37, Error ellipse: s-maj=63.7km s-min=8.8km az=152.0*

*NEIC **15** 18:02:12.6±1.6, 43.72N×105.40W, ML3.3, Error ellipse: s-maj=20.1km s-min=9.0km az=94.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] S of Gillette.

ISC 15 18:02:07.9±0.9**, 43.63N**±0.07×**105.0W**±0.1**, n33, σ1**^{s}**.22**/32**, mb4.2**/1**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RWWY	Rawlins	2.52	220	*e*P	Pn	18 02 53.7	+3.0
LAO	LASA Array	3.17	345	*e*P	Pn	18 03 01.9	+2.0
BW06	Boulder Array	3.42	257	*e*P	Pn	18 03 03.7	+0.1
PDAR	Pinedale Array	3.42	257	Pn	Pn	18 03 03.9	+0.3
	5.1nm,0.3s,baz=70,slow=15,SNR=53						
PDAR				Lg		18 03 48.4	
	13nm,0.3s,baz=77,slow=26,SNR=16						
LOHW	Long Hollow	4.05	272	*e*P	Pn	18 03 13.2	+0.8
MOOW	Moose Ponds	4.14	274	*e*P	Pn	18 03 12.2	-1.6
WUWY	Wally Ulrich	4.15	271	P	Pn	18 03 16.6	+2.7
SNOW	Snow King Moun	4.16	270	*e*P	Pn	18 03 18.6	+4.4
YNR	Norris Junctio	4.20	287	P	Pn	18 03 23.7	+9.1
REDW	Red Top Meadow	4.24	268	*e*P	Pn	18 03 14.8	-0.4
YFT	Old Faithful	4.26	283	P	Pn	18 03 19.6	+4.1
IMW	Indian Meadow	4.29	276	*e*P	Pn	18 03 17.1	+1.3
TPAW	Teton Pass	4.30	270	*e*P	Pn	18 03 15.5	-0.6
RRI2	Red Ridge	4.58	269	*e*P	Pn	18 03 19.9	-0.1
BOZ	Bozeman (W)	5.12	295	*e*P	Pn	18 03 25.6	-2.1
HWUT	Hardware Ranch	5.23	249	*e*P	Pn	18 03 28.1	-1.1
	13nm,0.5s						
TCUT	Toone Canyon	5.35	244	*e*P	Pn	18 03 30.6	-0.3
DAU	Daniels Canyon	5.64	237	*e*P	Pn	18 03 37.1	+2.1
JLU	Jordanelle	5.65	240	*e*P	Pn	18 03 45.1	+10
CTU	Camp Tracy	5.79	242	*e*P	Pn	18 03 37.0	-0.2
SPUT	South Promonto	5.96	250	*e*P	Pn	18 03 39.4	-0.1
HVU	Hansel Valley	6.00	255	*e*P	Pn	18 03 38.6	-1.5
NOQ	North Oquirrh	6.05	243	*e*P	Pn	18 03 41.5	+0.7
MPU	Maple Canyon	6.11	236	P	Pn	18 03 42.2	+0.5
SRU	San Rafael	6.12	224	*e*P	Pn	18 03 41.2	-0.6
TMUT	Trail Mountain	6.35	229	*e*P	Pn	18 03 45.6	+0.6
NLU	North Lily Min	6.42	237	*e*P	Pn	18 03 49.9	+3.9
MSU	Marysvale	7.44	229	P	Pn	18 03 58.5	-1.8
MVU	Marysvale	7.46	229	*e*P	Pn	18 04 01.1	+0.5
	3.8nm,0.5s						
ELK	Elko	8.11	253	Pn	P	18 04 08.1	-1.6
	0.3nm,0.3s,baz=70,slow=15,SNR=5.9						
ULM	Lac du Bonnet	9.11	40	Pn	P	18 04 22.9	-0.7
	2.7nm,0.3s,baz=233,slow=12,SNR=10						
ULM				Lg		18 07 04.4	
	0.5nm,0.3s,baz=125,slow=19,SNR=3.1						
NEW	Newport	9.61	303	LR	LR	18 08 29.1	
	comp=Z,68nm,18.3s,baz=93,slow=40						
ARCES	ARCESS Array B	61.47	18	P	P	18 12 27.6	-0.3
	1.0nm,0.5s,mb4.2,baz=339,slow=7.7,SNR=8.2						

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*RSPR **15** 18:07:25.2, 19.25N×66.65W, h18^{km}±5^{km}, MD3.5/17, MD3.5/17*

*NEIC **15** 18:07:25.2, 19.25N×66.65W, h18^{km}, MD3.5(RSPR), After RSPR.*

ISC 15 18:07:22.7±1.5**, 19.26N**±0.07×**66.65W**±0.06**, h25**^{km}±7^{km}**, n48, σ0**^{s}**.54**/65**, 19C-11D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.90	209	⇑*e*P	Pb	18 07 39.5	-0.1
AGPR	Aguadilla, PR	0.90	209	*e*S	Sb	18 07 50.6	-0.6
AGPR	Aguadilla, PR	0.90	209	*e*S	Sb	18 07 51.4	+0.2
AGPR	Aguadilla, PR	0.90	209	⇑*e*P	Pb	18 07 39.4	-0.2
AGPR				*e*S	Sb	18 07 51.4	+0.2
AOPR	Arecibo Observ	0.91	186	⇑*e*P	Pb	18 07 39.8	0.0
AOPR	Arecibo Observ	0.91	186	*e*S	Sb	18 07 51.1	-0.5
AOPR	Arecibo Observ	0.91	186	*e*S	Sb	18 07 53.2	+1.6
AOPR	Arecibo Observ	0.91	186	⇓*e*P	Pb	18 07 39.9	+0.1
AOPR				*e*S	Sb	18 07 53.2	+1.6
LRS	Lares	0.98	191	⇑*e*P	Pb	18 07 40.5	-0.4
LRS				*e*S	Sb	18 07 53.0	-0.5
LRS	Lares	0.98	191	⇑*e*P	Pb	18 07 40.6	-0.3
LRS				*e*S	Sb	18 07 53.8	+0.3
LSP	Las Mesas	1.15	201	⇓*e*P	Pn	18 07 43.2	-0.2
LSP	Las Mesas	1.15	201	⇓*e*P	Pn	18 07 43.2	-0.2
CELP	Cerrillos	1.18	177	⇑*e*P	Pn	18 07 44.4	+0.6
CELP	Cerrillos	1.18	177	⇓*e*P	Pn	18 07 44.3	+0.5
PORP	Portuguez	1.20	179	⇑*e*P	Pn	18 07 44.1	+0.1
PORP				*e*S	Sb	18 07 58.8	-1.0
PORP	Portuguez	1.20	179	⇑*e*P	Pn	18 07 43.8	-0.2
PORP				*e*S	Sb	18 07 59.5	-0.3
SJG	San Juan	1.23	157	⇓*e*P	Pn	18 07 45.0	+0.4
SJG	San Juan	1.23	157	*e*S	Sn	18 08 00.8	+0.2
SJG	San Juan	1.23	157	⇓*e*P	Pn	18 07 45.2	+0.6
SJG				*e*S	Sn	18 07 59.5	-1.1
SJG	San Juan	1.23	157	*e*S	Sn	18 08 00.1	-0.5
SJG	San Juan	1.23	157	⇓*e*P	Pn	18 07 45.2	+0.6
SJG				*e*S	Sn	18 08 00.5	0.0
SJG	San Juan	1.23	157	⇓*e*P	Pn	18 07 44.9	+0.3
SJG				*e*S	Sn	18 08 00.1	-0.5
CBYP	Canovanas	1.24	142	⇑*e*P	Pn	18 07 44.4	-0.2
CBYP	Canovanas	1.24	142	*e*S	Sn	18 07 59.1	-1.5
CBYP	Canovanas	1.24	142	*e*S	Sn	18 08 00.9	+0.3
CBYP	Canovanas	1.24	142	⇓*e*P	Pn	18 07 44.3	-0.4
CBYP				*e*S	Sn	18 08 00.9	+0.3
MGP	Maguayo	1.31	199	⇑*e*P	Pn	18 07 45.7	-0.1
MGP				*e*S	Sn	18 08 02.2	-0.4
MGP	Maguayo	1.31	199	⇑*e*P	Pn	18 07 45.5	-0.2
MGP				*e*S	Sn	18 08 02.8	+0.3
CRPR	Cabo Rojo, PR	1.32	199	⇑*e*P	Pn	18 07 45.6	-0.2
CRPR	Cabo Rojo, PR	1.32	199	*e*S	Sn	18 08 02.6	-0.1
CRPR	Cabo Rojo, PR	1.32	199	*e*S	Sn	18 08 02.6	-0.1
CRPR	Cabo Rojo, PR	1.32	199	⇑*e*P	Pn	18 07 45.5	-0.3
CRPR				*e*S	Sn	18 08 02.6	-0.1
HUMP	Col San Antoni	1.34	146	⇑*e*P	Pn	18 07 46.3	+0.1
HUMP	Col San Antoni	1.34	146	*e*S	Sn	18 08 03.1	-0.2
HUMP	Col San Antoni	1.34	146	*e*S	Sn	18 08 04.0	+0.6
HUMP	Col San Antoni	1.34	146	⇓*e*P	Pn	18 07 46.2	0.0
HUMP				*e*S	Sn	18 08 04.0	+0.6
ICM	Isla Caja Muer	1.36	175	⇑*e*P	Pn	18 07 47.5	+1.0
ICM	Isla Caja Muer	1.36	175	*e*S	Sn	18 08 02.8	-1.0
ICM	Isla Caja Muer	1.36	175	*e*S	Sn	18 08 04.8	+1.0
ICM	Isla Caja Muer	1.36	175	⇑*e*P	Pn	18 07 46.7	+0.2
ICM				*e*S	Sn	18 08 04.8	+1.0
CPD	Cerro la Pandu	1.40	150	⇑*e*P	Pn	18 07 47.2	+0.3
CPD	Cerro la Pandu	1.40	150	*e*S	Sn	18 08 03.8	-1.0
CPD	Cerro la Pandu	1.40	150	*e*S	Sn	18 08 05.0	+0.3
CPD	Cerro la Pandu	1.40	150	⇑*e*P	Pn	18 07 47.4	+0.5
CPD				*e*S	Sn	18 08 05.0	+0.3
MTP	Monte Pirata	1.55	138	⇑*e*P	Pn	18 07 48.7	-0.4
MTP	Monte Pirata	1.55	138	*e*S	Sn	18 08 07.8	-0.8
MTP	Monte Pirata	1.55	138	*e*S	Sn	18 08 08.9	+0.2
MTP	Monte Pirata	1.55	138	⇓*e*P	Pn	18 07 48.8	-0.4
MTP				*e*S	Sn	18 08 08.9	+0.2

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*WAR **15** 18:08:35.6, 50.17N×19.30E, h0^{km}, ML2.4, Mining Induced*

*PRU **15** 18:08:35.4, 50.30N×19.24E*

ISC 15 18:08:33.8±0.6**, 50.17N**±0.06×**19.17E**±0.04**, n11, σ1**^{s}**.36**/17**, 1C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.41	83	*e*PG	Pg	18 08 42.0	+0.1
OJC				*e*SG	Sg	18 08 47.0	-0.3
OKC	Ostrava-Krasne	0.74	243	*e*PG	Pg	18 08 50.3	+1.6
OKC				*e*SG	Sg	18 09 02.5	+4.0
	13nm,0.3s						
NIE	Niedzica	1.06	135	*e*PG	Pg	18 08 55.0	+0.1
NIE				*e*SG	Sg	18 09 10.0	+1.0
VYHS	Vyhne	1.69	188	*e*PN	Pn	18 09 05.9	+1.0
DPC	Dobruska-Polom	1.84	277	*e*PG	Pg	18 09 08.6	-1.9
DPC				*e*SG	Sg	18 09 34.6	-0.4
	8.1nm,0.2s						
KSP	Ksiaz	1.96	291	*e*PG	Pg	18 09 13.0	+0.1
KSP				*e*SG	Sg	18 09 40.0	+1.0
KOLS	Kolonicke sedl	2.37	120	*e*SG	Sg	18 09 50.1	-2.6
PRU	Pruhonice	2.99	268	*e*SG	Sg	18 10 11.1	-2.2
KHC	Kasperske Hory	3.78	256	*e*SG	Sg	18 10 37.7	-2.0
MOA	Molln	3.98	236	⇑*i*PN	Pn	18 09 38.9	+1.4
MOA				*i* SG	Sg	18 10 41.9	-4.4
	1.8nm,0.5s						
CLL	Collm	4.08	289	*e*SG	Sg	18 10 51.0	+1.3

MAN 15 18:30:46.7, 16.69N×**120.17E, h27**^{km}**, mb3.7, ML2.4, MS1.9, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	Bolinao	0.39	219	*e*P	Pb	18 30 57.4	+2.1
BCPH	Baguio City Da	0.49	128	*i* P	Pb	18 30 58.0	+1.1
BCPH				*i* S	Sb	18 31 07.6	+3.8
SCZP	Santa Cruz	0.94	196	*e*P	Pn	18 31 03.4	-0.9
ABRA	Dolores	1.09	28	*e*P	Pn	18 31 06.2	-0.2

ABRA				eS	Sn	18 31 22.1	+1.5
APYP	Conner	1.55	41	eP	Pn	18 31 12.4	-0.6
APYP				eS	Sn	18 31 33.0	+0.6

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*NEIC **15** 18:37:37.3,24.72S×70.52W,h48^{km},MD4.1(GUC),After GUC.*

NEIC Felt [III] at Taltal.

GUC 15 18:37:37.3±0.5,**24.72S×70.52W,h48**^{km}±3^{km},**MD4.1, ML3.9,1C,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPN1	Cerro Paranal	0.14	47	eP	P	18 37 46.0	+1.1
CPN1				i S	S	18 37 52.1	+1.7
CPN1				AMP		18 37 53.1	
	comp=E,19µm,0.2s						
ANCH	Antofagasta	1.04	6	eP	P	18 37 59.0	+3.2
ANCH				i S	S	18 38 13.2	+3.7
CRCH	Chaqaral	1.62	183	eP	P	18 38 04.0	+0.1
CRCH				i S	S	18 38 24.4	+0.6
CRCH				AMP		18 38 28.2	
	comp=N,2µm,0.3s						
CPCH	Copiapo	2.63	177⇑	iP	P	18 38 18.2	-0.1
CPCH				i S	S	18 38 49.8	+0.7
TLL	Tololo Astrono	5.43	183	eP	P	18 38 58.6	+0.9
LPAZ	La Paz	8.69	15	eP	P	18 39 44.8	+1.7
	comp=N,3.6nm,0.7s						

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*NEIC **15** 18:40:29.6,38.28S×175.97E,h167^{km},MG3.8(WEL), After WEL.*

WEL 15 18:40:29.9±0.3,**38.28S×175.99E,h162**^{km}±3^{km},**ML3.7**/16,**Error ellipse: s-maj=3.9km s-min=3.2km az=0.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	0.89	89	P	P	18 40 55.0	-0.2
URZ	Urewera	0.89	89	PN	P	18 40 54.9	-0.3
URZ				SN	S	18 41 14.0	-0.7
TWVZ	Taurewa	0.90	208	PN	P	18 40 55.4	+0.1
BKZ	Black Stump Fm	0.97	156	P	P	18 40 56.1	+0.3
BKZ				S	S	18 41 14.7	-1.0
BKZ	Black Stump Fm	0.97	156	PN	P	18 40 56.1	+0.3
BKZ				SN	S	18 41 14.7	-1.0
TUVZ	Tukino	1.02	195	P	P	18 40 56.5	+0.3
TUVZ	Tukino	1.02	195	PN	P	18 40 56.4	+0.2
TUVZ				SN	S	18 41 17.4	+1.0
FWVZ	Far West T-bar	1.03	199	eP	P	18 40 56.8	+0.5
FWVZ	Far West T-bar	1.03	199	PN	P	18 40 56.6	+0.3
TRVZ	Turoa	1.07	198	PN	P	18 40 57.0	+0.4
TRVZ				SN	S	18 41 17.5	+0.2
WNVZ	Wahianoa	1.09	196	P	P	18 40 57.0	+0.2
WNVZ	Wahianoa	1.09	196	PN	P	18 40 56.7	-0.1
WNVZ				SN	S	18 41 18.3	+0.8
PKVZ	Pokaka	1.12	206	PN	P	18 40 57.0	-0.2
PKVZ				SN	S	18 41 19.2	+1.1
MOVZ	Moawhango	1.14	189	P	P	18 40 57.0	-0.3
MOVZ	Moawhango	1.14	189	PN	P	18 40 56.9	-0.4
MOVZ				SN	S	18 41 16.9	-1.4
MWZ	Matawai	1.22	93	eP	P	18 40 58.2	+0.2
MWZ	Matawai	1.22	93	PN	P	18 40 58.0	0.0
MWZ				SN	S	18 41 19.0	-0.7
VRZ	Vera Road	1.28	228	P	P	18 40 58.3	-0.3
VRZ	Vera Road	1.28	228	PN	P	18 40 58.1	-0.4
VRZ				SN	S	18 41 21.4	+0.7
KNZ	Kokohu	1.51	120	PN	P	18 41 01.1	+0.2
WAZ	Wanganui	1.67	208	eP	P	18 41 02.0	-0.5
WAZ	Wanganui	1.67	208	PN	P	18 41 01.9	-0.6
WAZ				SN	S	18 41 27.0	-0.6
TSZ	Takapari Road	1.77	181	P	P	18 41 03.0	-0.6
TSZ	Takapari Road	1.77	181	PN	P	18 41 03.0	-0.6
MRZ	Mangatainoka R	2.40	187	P	P	18 41 09.0	-1.9
MRZ	Mangatainoka R	2.40	187	PN	P	18 41 09.0	-2.0
BFZ	Birch Farm	2.40	175	eP	P	18 41 09.7	-1.3
BFZ	Birch Farm	2.40	175	PN	P	18 41 09.6	-1.5
KIW	Kapiti Island	2.71	198	P	P	18 41 12.1	-2.7
KIW	Kapiti Island	2.71	198	PN	P	18 41 12.0	-2.8
MTW	Mount Morrison	2.90	187	P	P	18 41 14.4	-2.7
MTW	Mount Morrison	2.90	187	PN	P	18 41 14.3	-2.9
CAW	Cannon Point	2.91	194	P	P	18 41 14.5	-2.8
CAW	Cannon Point	2.91	194	PN	P	18 41 14.3	-3.0
DUWZ	D’Urville Isla	2.98	212	PN	P	18 41 14.9	-3.3
MRW	Makara Radio	3.10	198	P	P	18 41 16.5	-3.3
MRW	Makara Radio	3.10	198	PN	P	18 41 16.4	-3.3
PAWZ	Paruwai Farm	3.12	188	PN	P	18 41 16.8	-3.2
MSWZ	Moikau Station	3.18	190	PN	P	18 41 17.4	-3.3
MSWZ				SN	S	18 41 54.0	-5.8
SNZO	South Karori	3.18	198	P	P	18 41 17.3	-3.4
SNZO	South Karori	3.18	198	PN	P	18 41 17.2	-3.5
SNZO				SN	S	18 41 54.3	-5.5
TCW	Tory Channel	3.21	204	P	P	18 41 17.7	-3.4
TCW	Tory Channel	3.21	204	PN	P	18 41 17.6	-3.5
TCW				SN	S	18 41 55.0	-5.4
BHW	Baring Head	3.24	195	P	P	18 41 17.9	-3.6
BHW	Baring Head	3.24	195	PN	P	18 41 17.8	-3.7
BHW				SN	S	18 41 54.5	-6.6
TUWZ	Tuamarina	3.52	206	PN	P	18 41 21.1	-3.9
TUWZ				SN	S	18 42 02.4	-5.0
NNZ	Nelson	3.55	214	eP	P	18 41 21.4	-4.1
NNZ	Nelson	3.55	214	PN	P	18 41 21.1	-4.5
QRZ	Quartz Range	3.69	225	eP	P	18 41 22.5	-4.7
QRZ	Quartz Range	3.69	225	PN	P	18 41 22.4	-4.8
THZ	Tophouse	4.21	213	eP	P	18 41 29.1	-4.9
THZ	Tophouse	4.21	213	ePN	P	18 41 28.9	-5.0
KHZ	Kahutara	4.53	204	P	P	18 41 33.9	-4.4
KHZ	Kahutara	4.53	204	PN	P	18 41 33.9	-4.3
DSZ	Denniston Nort	4.72	222	eP	P	18 41 35.7	-5.0
DSZ	Denniston Nort	4.72	222	ePN	P	18 41 35.3	-5.4
LTZ	Lake Taylor	5.31	211	eP	P	18 41 42.6	-5.9
LTZ	Lake Taylor	5.31	211	ePN	P	18 41 42.6	-5.9
MQZ	McQueen’s Vall	5.98	204	eP	P	18 41 50.5	-6.7
MQZ	McQueen’s Vall	5.98	204	PN	P	18 41 50.4	-6.8
ODZ	Otahua Downs	7.85	209	eP	P	18 42 15.9	-6.3
ODZ	Otahua Downs	7.85	209	PN	P	18 42 15.9	-6.3

IDC 15 18:54:19.4±2.2,**11.77N×92.20E,mb3.7**/2,**mb1 3.8**/3,**mb1mx3.4**/19,**mbtmp3.5**/3,**ML3.5**/1,**Error ellipse: s-maj=49.2km s-min=29.1km az=70.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	9.30	44	Pn	P	18 56 34.6	-3.2
	0.1nm,0.3s,baz=235,slow=16,SNR=8.6						
CMAR				Sn	Sn	18 58 19.6	-4.8
	0.1nm,0.3s,baz=234,slow=29,SNR=4.5						
MKAR	Makanchi Array	35.90	348	P	P	19 01 22.1	-1.1
	0.6nm,0.8s,baz=164,slow=8.8,SNR=4.2						
WRA	Warramunga Arr	52.09	127	P	P	19 03 31.1	-2.6
	0.8nm,0.6s,baz=305,slow=8.5,SNR=20						

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*NEIC **15** 18:58:33.5±0.6,51.70N×177.75E,h73^{km}±5^{km},mb4.5/12, Error ellipse: s-maj=11.7km s-min=4.9km az=184.0*

*IDC **15** 18:58:33.0±2.6,51.80N×177.78E,h66^{km}±19^{km},mb3.9/20, mb1 4.0/21,mb1mx4.0/29,mbtmp4.2/21,MS3.1/2, Ms1 3.1/2,ms1mx2.5/26,Error ellipse: s-maj=24.3km s-min=13.2km az=177.0*

*MOS **15** 18:58:34.4±1.2,51.83N×177.55E,h93^{km},mb4.6/11,Error ellipse: s-maj=15.0km s-min=8.9km az=107.7*

ISC 15 18:58:32.1±0.7,**51.8N**±0.1×**177.78E**±0.05,**h74**^{km}±6^{km},**n71,σ0^{s}95**/73,**mb4.2**/34,**1D,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMY	Shemya	2.46	295	eP	P	18 59 11.1	+0.1
FX1	Attu Island--F	3.05	294	P	P	18 59 19.9	+0.7
FX1				S	S	18 59 53.8	-0.9
FX1				pmax	pmax		
	comp=Z,24nm,0.3s						
FX1				smax			
	comp=E,78nm,0.3s						
FX1	Attu Island--F	3.05	294	P	P	18 59 19.9	+0.7
	comp=E,24nm,0.3s,baz=156,slow=4.4,SNR=41						
FX1				S	S	18 59 53.8	-0.8
	comp=E,78nm,0.3s,baz=80,slow=15,SNR=13						
FX1	Attu Island--F	3.05	294	eP	P	18 59 19.1	-0.2
KIMD	Kanaga Island	3.10	88	P	P	18 59 20.4	+0.5
KIMD				S	S	18 59 56.1	+0.2
KIKV	Kanaga Island	3.14	86	P	P	18 59 20.7	+0.2
KIWB	Kanaga Island	3.15	86	eP	P	18 59 20.6	-0.1
ADAG	Mount Adagdak	3.49	84	P	P	18 59 24.9	-0.5
GSTD	Great Sitkin T	3.78	83	P	P	18 59 29.5	+0.1
GSTR	Great Sitkin T	3.83	82	P	P	18 59 30.1	0.0
ATKA	Atka Island	4.98	82	P	P	18 59 46.2	+0.1
ATKA				S	S	19 00 40.9	-2.0
NIKO	Nikolski	8.28	76	P	P	19 00 32.4	+0.8
BILL	Bilibino	17.27	345	eP	P	19 02 31.4	+2.0
BILL				pmax	pmax		
	comp=Z,11nm,1.4s						
BILL	Bilibino	17.27	345	eP	P	19 02 30.9	+1.5
	comp=Z,5.7nm,0.9s						
SPU	Mount Spurr	18.98	48	eP	P	19 02 50.6	+0.8
SLKM	Skilak Lake	19.69	51	eP	P	19 02 59.5	+2.0
IMA	Indian Mountai	20.29	34	eP	P	19 03 04.7	+0.9
IMA				pmax	pmax		
	comp=Z,53nm,0.8s						
IMA	Indian Mountai	20.29	34	eP	P	19 03 04.7	+0.9
	comp=Z,53nm,0.8s						
ILAR	Eielson Array	22.32	41	P	P	19 03 23.9	-0.2
	comp=Z,1.7nm,0.7s,mb3.5,baz=245,slow=8.8,SNR=14						
ILAR				LR	LR	19 11 33.2	
	comp=Z,33nm,20.1s,baz=358,slow=35						
INK	Inuvik	28.39	36	P	P	19 04 20.9	-0.1
	comp=Z,3.7nm,0.7s,mb4.1,baz=256,slow=7.0,SNR=7.1						
INK	Inuvik	28.39	36	P	P	19 04 20.9	-0.1
KLR	Kul’dur	29.02	283	eP	P	19 04 23.8	-3.0
DLBC	Dease Lake	29.93	56	LR	LR	19 15 35.0	
	comp=Z,51nm,19.4s,baz=287,slow=34						
BOD	Bodaibo	36.03	305	eP	P	19 05 26.1	-1.5
BOD				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
ULN	Ulaanbaatar	44.17	294	eP	P	19 06 35.1	+0.4
ULN				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.5						
ULN	Ulaanbaatar	44.17	294	eP	P	19 06 35.1	+0.4
	comp=Z,2.9nm,0.3s,mb4.5						
SONM	Songino Array	44.56	294	P	P	19 06 38.7	+0.8
	comp=Z,4.8nm,0.5s,mb4.5,baz=63,slow=7.8,SNR=54						
HLID	Hailey	44.88	73	P	P	19 06 40.2	-0.3
ZAK	Zakamensk	44.92	299	eP	P	19 06 40.9	+0.2
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.4						
NVAR	Mina Array Bea	45.61	81	P	P	19 06 47.1	+0.7
	comp=Z,0.8nm,0.6s,mb3.6,baz=302,slow=5.5,SNR=4.7						
BW06	Boulder Array	48.21	71	eP	P	19 07 05.5	-1.2
PDAR	Pinedale Array	48.21	71	P	P	19 07 06.0	-0.8
	comp=Z,0.6nm,0.6s,mb3.6,baz=315,slow=3.8,SNR=3.6						
PDAR				pP	pP	19 07 25.1	-0.3
	comp=Z,0.8nm,0.6s,baz=315,slow=4.2,SNR=4.8						
ZAL	Zalesovo	52.22	312	P	P	19 07 36.0	-1.1
	comp=Z,1.2nm,0.7s,mb4.1,baz=88,slow=5.9						
NVS	Novosibirsk	52.38	313	eP	P	19 07 34.9	-3.3
NVS				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
NVS				pmax	pmax		
	comp=N,2.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.7s						
KEV	Kevo	56.94	348	ep	P	19 08 09.1	-2.2
	comp=E,3.9nm,0.8s,mb4.5						
KEV	Kevo	56.94	348	eP	P	19 08 09.1	-2.2
KEV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
ARCES	ARCESS Array B	57.33	349	P	P	19 08 12.7	-1.3
	comp=Z,2.5nm,0.6s,mb4.4,baz=22,slow=6.5,SNR=9.8						
MKAR	Makanchi Array	58.11	306	P	P	19 08 18.6	-1.2
	comp=Z,2.2nm,0.5s,mb4.5,baz=50,slow=7.0,SNR=20						
BVAR	Borovoye Array	59.20	318	P	P	19 08 26.7	-0.5
	comp=Z,7.3nm,0.6s,mb4.9,baz=50,slow=7.2,SNR=52						
TXAR	Lajitas Array	60.69	79	P	P	19 08 37.5	-0.3
	comp=Z,0.2nm,0.3s,mb3.6,baz=288,slow=4.0,SNR=3.6						
ARU	Arti	61.13	326	eP	P	19 08 40.0	-0.4
ARU				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
ARU	Arti	61.13	326	eP	P	19 08 40.0	-0.4
	comp=Z,3.5nm,0.4s,mb4.7						
KAF	Kangasniemi	64.24	346	ep	P	19 08 59.2	-1.6
	comp=Z,2.3nm,0.6s,mb4.2,baz=15,slow=5.8						
KAF	Kangasniemi	64.24	346	eP	P	19 08 59.2	-1.6
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
ULHL	Ulahol	64.38	306	P	P	19 09 02.5	+0.4
	SNR=6.8						
USP	Ospenovka	64.49	308	P	P	19 09 03.0	+0.3
	SNR=8.6						
FINES	FINESS Array B	64.91	345	P	P	19 09 03.8	-1.4
	comp=Z,1.9nm,0.7s,mb4.1,baz=27,slow=8.5,SNR=12						
AAK	Ala-Archa	64.96	308	eP	P	19 09 05.0	-0.8
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
AAK	Ala-Archa	64.96	308	eP	P	19 09 05.0	-0.8
	comp=Z,3.3nm,0.8s,mb4.2						
KZA	Kyzart	65.00	307	P	P	19 09 06.9	+0.8
	SNR=5.2						
EKS2	Erkin-Say	65.29	308	P	P	19 09 08.5	+0.6
	SNR=8.3						
AML	Almayashu	65.73	308	P	P	19 09 11.7	+1.0
	SNR=5.8						
NB2	NORSAR Subarra	67.04	353	P	P	19 09 18.4	-0.3
	comp=Z,2.0nm,0.6s,mb4.1,baz=7.0,slow=6.2						
NOA	NORSAR Array B	67.04	353	P	P	19 09 18.4	-0.3
	comp=Z,2.3nm,0.6s,mb4.2,baz=9.4,slow=6.3,SNR=15						
HFS	Hagfors	67.73	351	P	P	19 09 22.2	-0.7
	comp=Z,2.3nm,0.5s,mb4.3,baz=45,slow=4.2,SNR=17						
CMAR	Chiang Mai Arr	68.85	273	P	P	19 09 30.9	+0.3
	comp=Z,0.6nm,0.6s,mb3.6,baz=31,slow=7.4,SNR=4.5						
GUN	Gumba	69.73	289	eP	P	19 09 36.8	+0.9
	comp=Z,16nm,0.5s,mb5.1						
KKN	Kakani	70.17	290	eP	P	19 09 39.1	+0.6
	comp=Z,10nm,0.7s,mb4.8						
KKN	Kakani	70.17	290	eP	P	19 09 39.1	+0.6
KKN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
PKI	Pulchoki	70.25	290	eP	P	19 09 39.9	+0.8
	comp=Z,5.9nm,0.5s,mb4.7						
PKI	Pulchoki	70.25	290	eP	P	19 09 39.9	+0.8
PKI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
GKN	Gorkha	70.38	290	eP	P	19 09 40.2	+0.4
	comp=Z,8.4nm,0.6s,mb4.8						
KOLN	Koldanda	71.16	291	eP	P	19 09 45.0	+0.5
	comp=Z,7.1nm,0.7s,mb4.6						
AKASG	Malin Array Be	74.50	340	P	P	19 10 03.8	+0.2
	comp=Z,4.1nm,0.5s,mb4.4,baz=23,slow=5.9,SNR=12						
GOF	Gofitskoye	75.97	329⇓	iP	P	19 10 12.7	+0.6
GOF				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.8						
GERES	GERESS Array B	78.86	349	P	P	19 10 28.5	+0.4
	comp=Z,0.6nm,0.6s,mb3.6,baz=18,slow=4.2,SNR=7.0						
MLR	Muntele Rosu	80.14	340	P	P	19 10 37.0	+2.0
	comp=Z,2.9nm,0.6s,mb4.3,baz=165,slow=0.1,SNR=9.9						
WRA	Warramunga Arr	80.85	221	P	P	19 10 38.8	-0.5
	comp=Z,1.4nm,1.2s,mb3.7,baz=30,slow=5.7,SNR=5.9						
DAVOX	Davos	81.30	352	P	P	19 10 41.6	+0.5
	comp=Z,2.8nm,0.7s,mb4.2,baz=27,slow=5.3,SNR=3.8						
BRTR	Keskin Array B	83.68	333	P	P	19 10 54.8	+1.4
	comp=Z,1.7nm,0.6s,mb4.0,baz=58,slow=3.1,SNR=9.5						
BOSA	Boshof	149.10	308	PKPbc	PKPdf	19 18 13.6	+6.4
	comp=Z,1.3nm,0.5s,baz=80,slow=4.2,SNR=4.1						

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*IDC **15** 19:52:22.9±0.5,44.96S×80.69W,mb4.8/21,mb1 4.9/24, mb1mx4.9/26,mbtmp4.8/24,ML5.5/2,MS5.9/16,Ms1 5.9/16, ms1mx5.8/22,Error ellipse: s-maj=18.0km s-min=12.5km az=100.0*

*SVSA **15** 19:52:24.8,44.87S×80.56W,h10^{km},Mb5.5*

*BJI **15** 19:52:24.8,44.90S×80.60W,h10^{km},mB5.6,Ms6.4, Msz6.3*

*HRVD **15** 19:52:24.8±0.1,44.91S×80.68W,h17^{km},MW6.5/76, Centroid moment Tensor Solution. LP body waves: s76,c192;Mantle waves: s75,c356; Half duration: 4^{s}1 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.42±.04; M$_{θθ}$2.13±.04; M$_{φφ}$-1.70±.04; M$_{rθ}$0.32±.10; M$_{θφ}$-5.54±.03; M$_{φr}$-0.05±.10; Best double couple: M$_0$5.87×10^{18} NP1: φ$_s$170°,δ87°,λ1°. NP2:φ$_s$80°,δ89°,λ177°. Principal axes: T 6.09, Plg3°, Azm35°; N -.431, Plg87°, Azm247°; P -5.651, Plg2°, Azm126°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **15** 19:52:24.8±0.2,44.87S×80.56W,h10^{km},mb5.5/48, MS5.9/97,MW6.4 Error ellipse: s-maj=8.3km s-min=6.6km az=91.0,Moment Tensor Solution. s24 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-1.28; M$_{θθ}$1.89; M$_{φφ}$-0.61; M$_{rθ}$0.40; M$_{θφ}$-4.32; M$_{φr}$2.40; Best double couple: M$_0$5.2×10^{18} NP1: φ$_s$265°,δ61°,λ-165°. NP2:φ$_s$168°,δ77°,λ-30°. Principal axes: T 5.34, Plg10°, Azm219°; N -.23, Plg58°, Azm326°; P -5.12, Plg30°, Azm123°;*

*MOS **15** 19:52:25.4±1.4,44.55S×80.47W,h10^{km},mb5.6/23, MS6.1/34 Error ellipse: s-maj=17.4km s-min=8.6km az=82.6*

ISC 15 19:52:23.4±0.2,**44.89S**±0.04×**80.51W**±0.06,**h10**^{km},**n365, σ1^{s}32**/192,**mb5.2**/59,**MS5.9**/124,**12C-6D,Off coast of southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMCH	Puerto Montt	6.52	61	eP	Pn	19 54 01.3	-0.5
VLCH	Valdivia	7.39	49	eP	Pn	19 54 06.7	-7.4
VLCH	Valdivia	7.39	49	P	Pn	19 54 06.9	-7.2
PLCA	Paso Flores	8.41	64	Pn	P	19 54 27.2	-1.1
PLCA				Sn	Sn	19 56 06.5	+2.2
PLCA	Paso Flores	8.41	64	P	P	19 54 27.6	-0.7
PLCA						19 56 05.6	
PLCA				pmax	pmax		
	comp=Z,18nm,0.3s						
PLCA				MLR	MLR		
	comp=Z,292µm,19.7s						
PLCA	Paso Flores	8.41	64	Pn	P	19 54 27.6	-0.7
	comp=Z,18nm,0.3s,baz=232,slow=14,SNR=393						
PLCA				Sn	Sn	19 56 05.6	+1.3
	baz=216,slow=10,SNR=0.8						
PLCA				LR	LR	19 57 24.1	
	comp=Z,292µm,19.7s,baz=241,slow=35						
PLCA	Paso Flores	8.41	64	eP	P	19 54 27.3	-1.0
	comp=Z,78nm,0.9s						
CCHI	Chillan	10.45	41	eP	P	19 54 53.8	-2.6
CCHI				i S	S	19 56 56.9	+2.2
CCHI				AMP		19 58 35.4	
	comp=Z,148µm,18.1s						
CCHI	Chillan	10.45	41	eP	P	19 54 54.0	-2.4
TALC	Talca	11.65	39	eP	P	19 55 09.5	-3.3
TALC	Talca	11.65	39	P	P	19 55 09.7	-3.1
USHA	Ushuaia	12.62	146	Pn	P	19 55 25.3	-0.4
	comp=Z,16nm,0.3s,baz=291,slow=11,SNR=60						
USHA				LR	LR	19 59 50.6	
	comp=Z,109µm,19.3s,baz=296,slow=36						
USHA	Ushuaia	12.62	146	Pn	P	19 55 25.3	-0.4
USHA				LR	LR	19 59 50.6	
SCR	San Cristobal	13.54	36	eP	P	19 55 37.0	-1.0
SCR				i S	S	19 58 08.8	-0.7
CLCH	Cerro Calan	13.82	37	eP	P	19 55 38.2	-3.6
CLCH				i S	S	19 58 21.3	+5.0
CLCH				AMP		20 00 25.2	
	comp=Z,140µm,18.8s						
MDZ	Mendoza	15.01	41	eP	P	19 56 05.5	+8.2
MDZ				e		19 56 46.4	
TRQA	Tornquist	15.46	70	eP	P	19 56 04.8	+1.7
ZON	Zonda	16.22	39	eP	P	19 56 12.5	-0.4
CFAA	Coronel Fontan	16.37	40	Pn	P	19 56 15.3	+0.5
	comp=Z,2.3nm,0.3s,baz=211,slow=13,SNR=52						
CFAA				Sn	S	19 59 20.8	+4.7
	comp=Z,0.1nm,0.3s,baz=40,slow=14,SNR=1.8						
CFAA				LR	LR	20 01 48.7	
	comp=Z,12µm,18.5s,baz=202,slow=34						
CFAA	Coronel Fontan	16.37	40	Pn	P	19 56 15.3	+0.5
CFAA				Sn	S	19 59 20.8	+4.7
CFAA				LR	LR	20 01 48.7	
TLL	Tololo Astrono	16.57	31	eP	P	19 56 15.6	-1.7
TLL				i S	S	19 59 29.3	+8.5
LPA	La Plata	19.92	68c	eP	P	19 56 59.0	+0.9
LPA				epP		19 57 05.0	
LPA				esP		19 57 08.0	
LPA				ePP	PP	19 57 13.0	-4.1
LPA				eS	S	20 00 43.0	+6.5
LPA				eS	S	20 00 44.0	+7.5
LPA				eS	S	20 00 45.0	+8.5
PMSA	Palmer Station	21.93	161	P	P	19 57 14.1	-4.4
	comp=Z,410nm,1.4s,mb5.7						
PMSA				LR	LR		
	comp=Z,16µm,21.0s,MS5.4						
CPUP	Villa Florida	26.27	53	eP	P	19 58 01.0	+0.4
CPUP				pmax	pmax		
	comp=Z,806nm,1.3s						
CPUP				MLR	MLR		
	comp=Z,122µm,19.0s						
CPUP	Villa Florida	26.27	53	P	P	19 58 01.4	+0.8
	comp=Z,50nm,0.8s,mb5.1,baz=245,slow=14,SNR=52						
CPUP				LR	LR	20 08 39.8	
	comp=Z,125µm,18.4s,MS6.5,baz=236,slow=37						
CPUP	Villa Florida	26.27	53	eP	P	19 58 01.0	+0.4
	comp=Z,806nm,1.3s,mb6.1						
CPUP				LR	LR		
	comp=Z,122µm,19.0s,MS6.5						
RPN	Rapa Nui	29.07	298	LR	LR	20 06 32.1	
	comp=Z,5µm,20.8s,MS5.1,baz=138,slow=29						
ARE	Arequipa	29.34	18	eP	P	19 58 28.0	-0.5
ARE				i		19 58 37.9	
LPAZ	La Paz	30.36	24	eP	P	19 58 37.7	+0.1
LPAZ				pmax	pmax		
	comp=Z,99nm,1.1s						
LPAZ				MLR	MLR		
	comp=Z,45µm,19.0s						
LPAZ	La Paz	30.36	24	P	P	19 58 38.3	+0.7
	comp=Z,17nm,0.9s,mb4.8,baz=186,slow=8.8,SNR=32						
LPAZ	La Paz	30.36	24	eP	P	19 58 37.7	+0.1
	comp=Z,99nm,1.1s,mb5.5						
LPAZ				LR	LR		
	comp=Z,45µm,19.0s,MS6.1						
SIV	San Ignacio	33.14	36	P	P	19 59 01.0	-1.1
	comp=Z,23nm,0.7s,mb5.2,baz=224,slow=9.4,SNR=63						
JATB	Jatai	36.22	51	eP	P	19 59 29.7	+1.3
JATB				i		19 59 38.4	
JATB				i		19 59 48.0	
JATB				i		20 00 01.4	
JATB				e		20 12 06.1	
SAML	Samuel	38.82	28	eP	P	19 59 48.9	-1.4
	comp=Z,56nm,0.9s,mb5.3						
SAML				LR	LR		
	comp=Z,39µm,20.0s,MS6.2						
BDFB	Brasilia	39.99	54	P	P	20 00 00.9	+0.9
	comp=Z,36nm,1.1s,mb5.0,baz=230,slow=6.2,SNR=21						
BDFB				LR	LR	20 17 53.7	
	comp=Z,17µm,18.1s,MS5.9,baz=54,slow=38						
BAO	Brasilia Array	40.01	54	P	P	20 00 00.0	-0.1
VNA3	Neumayer Olymp	42.19	153⇑	iP	P	20 00 18.9	+1.6
VNA3	Neumayer Olymp	42.19	153⇑	i	P	20 00 21.9	+4.6
VNA1	Neumayer--Stat	42.66	152⇑	iP	P	20 00 23.4	+2.2
VNA1	Neumayer--Stat	42.66	152⇑	i	P	20 00 26.2	+5.0
VNA2	Neumayer--Watz	42.94	152⇑	iP	P	20 00 24.7	+1.2
VNA2	Neumayer--Watz	42.94	152⇑	i	P	20 00 28.5	+5.0
VNA2	Neumayer--Watz	42.94	152		P	20 00 29.6	+6.1
SNAA	Sanae	44.34	154	i P	P	20 00 34.8	0.0
SNAA	Sanae	44.34	154	P	P	20 00 34.7	-0.1
	comp=Z,6.9nm,0.9s,mb4.4,baz=266,slow=6.0,SNR=29						
SNAA	Sanae	44.34	154	eP	P	20 00 33.6	-1.3
	comp=Z,191nm,1.4s,mb5.6						
PTCN	Pitcairn Islan	44.41	279	PFAKE		20 00 50.0	+14
PTCN				LR	LR		
	comp=Z,10µm,22.0s,MS5.7						
PAYG	Puerto Ayora	44.87	346	PFAKE		20 00 50.0	+10
PAYG				LR	LR		
	comp=Z,10µm,21.0s,MS5.7						
OTAV	Otavalo	44.97	3	eP	P	20 00 39.6	-1.0
	comp=Z,99nm,1.4s,mb5.5						
OTAV				LR	LR		
	comp=Z,16µm,20.0s,MS6.0						
QSPA	South Pole Qui	45.36	180	eP	P	20 00 42.3	-0.6
	comp=Z,162nm,1.2s,mb5.7						
MAIT	Maitri	49.13	154	eP	P	20 01 07.7	-4.8
MAIT				eS	S	20 08 15.7	-0.9
NVL	N’lazarevskaya	49.16	154⇓	iP	P	20 01 24.5	+12
NVL				i *PP	pP	20 01 32.0	+16
NVL				i		20 02 40.9	
NVL				i		20 03 17.8	
NVL				i PPP	PPP	20 04 14.0	+13
NVL				i S	S	20 08 27.4	+10
NVL				e		20 11 09.4	
NVL				eSS	SS	20 11 52.8	+8.7
NVL				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
NVL				MLR	MLR		
	comp=Z,820nm,14.2s,MS4.9						
ROSC	El Rosal	49.83	8	P	P	20 01 19.5	+0.8

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      comp=Z,3.1nm,0.4s,mb4.7,baz=105,slow=16,SNR=2.3
ROSC                              LR     LR     20 20 16.5
      comp=Z,53µm,19.2s,MS6.6,baz=189,slow=34
TRIS  Tristan da Cun    50.70 106 PFAKE         20 01 40.0  +15
TRIS                              LR     LR
      comp=Z,28µm,22.0s,MS6.2
SBA   Scott Base        51.01 195 eP     P      20 01 24.7 -2.2
SBA                               pmax   pmax
      comp=Z,72nm,1.2s,mb5.5
SBA                               MLR    MLR
      comp=Z,2µm,21.0s,MS5.2
SBA   Scott Base        51.01 195 eP     P      20 01 24.7 -2.2
      comp=Z,72nm,1.2s,mb5.5
SBA                               LR     LR
      comp=Z,2µm,21.0s,MS5.2
VNDA  Vanda             52.07 194 P      P      20 01 33.2 -1.7
VNDA                              pmax   pmax
      comp=Z,14nm,1.1s
VNDA                              MLR    MLR
      comp=Z,3µm,18.5s
VNDA  Vanda             52.07 194 P      P      20 01 33.1 -1.8
      comp=Z,14nm,1.1s,mb4.8,baz=112,slow=3.2,SNR=13
VNDA                              LR     LR     20 23 22.6
      comp=Z,3µm,18.5s,MS5.3,baz=130,slow=36
VNDA  Vanda             52.07 194 eP     P      20 01 31.8 -3.1
      comp=Z,57nm,1.4s,mb5.3
CS6B  Jaguaretama       53.55  56 e      P      20 01 45.3 -1.4
CS6B                              e      pP     20 01 49.6 -0.1
CS6B                              e             20 01 58.7
CS6B                              e             20 02 26.5
CS6B                              e             20 03 33.3
SDV   Santo Domingo     54.26  12 P      P      20 01 50.5 -1.4
      comp=Z,4.6nm,0.6s,mb4.6,baz=231,slow=8.0,SNR=5.6
SDV   Santo Domingo     54.26  12 eP     P      20 01 48.7 -3.2
      comp=Z,111nm,1.3s,mb5.6
SDV                               LR     LR
      comp=Z,27µm,22.0s,MS6.3
RCBR  Riachuelo         54.94  59 PFAKE         20 02 10.0  +13
RCBR                              LR     LR
      comp=Z,48µm,19.0s,MS6.6
JTS   JuntasAbangare    55.06 355 P      P      20 01 56.3 -1.5
JTS                               pmax   pmax
      comp=Z,70nm,1.1s
JTS   JuntasAbangare    55.06 355 P      P      20 01 56.0 -1.8
      comp=Z,7.3nm,0.9s,mb4.7,baz=316,slow=18,SNR=4.1
JTS                               LR     LR     20 19 21.4
      comp=Z,19µm,21.6s,MS6.1,baz=182,slow=29
JTS   JuntasAbangare    55.06 355 eP     P      20 01 56.0 -1.8
      comp=Z,70nm,1.1s,mb5.6
JTS                               LR     LR
      comp=Z,5µm,22.0s,MS5.5
SYO   Syowa Base        58.16 158 ⇓pP    pP     20 02 16.0 -6.2
SYO   Syowa Base        58.16 158 ⇓sP    sP     20 02 18.4 -5.0
SVB   Belmont           60.46  22 eP     sP     20 02 48.1 +8.1
PPT   Papeete           63.05 272 LR     LR     20 24 39.3
      comp=Z,1µm,18.8s,MS5.1,baz=317,slow=31
OXX   Oaxaca            63.41 343 eP     P      20 02 55.0 -0.5
BPA   Boggy Peak        63.93  20 eP     P      20 02 59.1 +0.1
SJG   San Juan          64.05  15 P      P      20 02 58.4 -1.3
SJG                               pmax   pmax
      comp=Z,7.0nm,0.3s
SJG   San Juan          64.05  15 P      P      20 02 58.4 -1.3
      comp=Z,6.5nm,0.3s,mb5.1,baz=313,slow=23,SNR=5.2
SJG   San Juan          64.05  15 eP     P      20 02 58.1 -1.6
      comp=Z,85nm,1.1s,mb5.7
SJG                               LR     LR
      comp=Z,13µm,20.0s,MS6.1
MAW   Mawson            64.47 165 P      P      20 03 00.6 -1.0
      comp=Z,5.7nm,1.0s,mb4.5,baz=214,slow=11,SNR=5.5
MAW                               LR     LR     20 30 17.4
      comp=Z,10µm,20.5s,MS6.0,baz=206,slow=35
CPB   Codrington        64.51  20 eP     P      20 03 01.4 -1.3
DRV   Dumont d’Urvil    64.54 197 P      P      20 03 04.0 +1.8
DRV                               S      S      20 11 45.0 +5.2
DRV                               L             20 19 00.0
DRV                               R             20 23 00.0
STMA  St. Maarten, A    64.60  18 eP     P      20 03 13.9  +11
PPM   Popocatepetl      65.75 341 eP     P      20 03 10.0 -0.7
MIR   Mirnyy            68.78 177 eP     P      20 03 42.0  +13
MIR                               eS     S      20 12 42.0  +11
MIR                               pmax   pmax
      comp=Z,103nm,1.6s,mb5.5
MIR                               pmax   pmax
      comp=Z,500nm,6.0s
MIR                               smax
      comp=E,2µm,16.0s
MIR                               smax
      comp=N,679nm,12.0s
MIR                               MLR    MLR
      comp=N,3µm,22.0s,MS5.7
MIR                               MLR    MLR
      comp=E,4µm,22.0s,MS5.7
MIR                               MLR    MLR
      comp=Z,7µm,22.0s,MS5.9
CASY  Casey             68.84 185 P      P      20 03 27.7 -1.7
      comp=Z,89nm,1.3s,mb5.5
CASY                              LR     LR
      comp=Z,10µm,20.0s,MS6.1
SNZO  South Karori      70.98 230 PFAKE         20 03 50.0 +7.1
SNZO                              LR     LR
      comp=Z,4µm,20.0s,MS5.7
DWPF  Disney            72.65 359 PFAKE         20 04 00.0 +6.9
DWPF                              LR     LR
      comp=Z,2µm,19.0s,MS5.3
RAO   Raoul Island      74.83 244 PFAKE         20 04 20.0  +14
RAO                               LR     LR
      comp=Z,9µm,19.0s,MS6.1
SUR   Sutherland        75.12 121 P      P      20 04 07.1 -0.3
      comp=Z,100nm,1.0s,mb5.7
SUR                               LR     LR
      comp=Z,4µm,20.0s,MS5.7
TXAR  Lajitas Array     76.83 339 P      P      20 04 16.0 -1.0
      comp=Z,7.0nm,1.0s,mb4.6,baz=157,slow=6.3,SNR=17
TXAR                              LR     LR     20 32 40.2
      comp=Z,6µm,21.8s,MS5.9,baz=250,slow=32
TXAR  Lajitas Array     76.83 339 P      P      20 04 16.0 -1.0
TXAR                              LR     LR     20 32 40.2
LTX   Lajitas           76.83 339 eP     P      20 04 15.6 -1.4
LTX                               pmax   pmax
      comp=Z,31nm,1.2s,mb5.1
LTX                               MLR    MLR
      comp=Z,7µm,22.0s,MS5.9
LTX   Lajitas           76.83 339 eP     P      20 04 15.6 -1.4
      comp=Z,31nm,1.2s,mb5.1
LTX                               LR     LR
      comp=Z,7µm,22.0s,MS5.9
NATX  Nacogdoches       77.36 348 eP     P      20 04 18.3 -1.7
NATX                              LR     LR
      comp=Z,2µm,20.0s,MS5.4
NHSC  New Hope          77.62   0 PFAKE         20 04 30.0 +8.6
NHSC                              LR     LR
      comp=Z,7µm,21.0s,MS6.0
LRAL  Lakeview Retre    77.78 354 eP     P      20 04 21.6 -0.6
      comp=Z,47nm,1.2s,mb5.3
LRAL                              LR     LR
      comp=Z,5µm,22.0s,MS5.8
BBSR  BB Station        78.22  14 PFAKE         20 04 40.0  +15
BBSR                              LR     LR
      comp=Z,6µm,20.0s,MS5.9
JSC   Jenkinsville      78.80 359 eP     P      20 04 26.2 -1.6
OXF   Oxford            79.44 353 P      P      20 04 30.7 -0.6
OXF                               pmax   pmax
      comp=Z,67nm,1.0s,mb5.5
OXF                               MLR    MLR
      comp=Z,5µm,21.0s,MS5.8
OXF   Oxford            79.44 353 P      P      20 04 30.7 -0.6
      comp=Z,67nm,1.0s,mb5.5
OXF                               LR     LR
      comp=Z,5µm,21.0s,MS5.8
MNTX  Cornudas Mount    79.52 339 eP     P      20 04 28.8 -3.0
      comp=Z,11nm,1.1s,mb4.7
MNTX                              LR     LR
      comp=Z,3µm,20.0s,MS5.7
CLNB  Carlsbad          79.68 340 eP     P      20 04 33.5 +0.9
GDL2  Guadalupe Moun    79.73 340 eP     P      20 04 30.3 -2.6
PLAL  Pickwick Lake     79.79 354 P      P      20 04 32.9 -0.3
      comp=Z,37nm,1.2s,mb5.2
PLAL                              LR     LR
      comp=Z,4µm,19.0s,MS5.7
SWET  Sewanee           79.88 355 eP     P      20 04 32.9 -0.7
CPCT  Cooper Cave       80.04 357 eP     P      20 04 32.4 -2.1
CPRX  Cap Rock          80.41 340 eP     P      20 04 36.7 +0.2
BOSA  Boshof            80.49 121 P      P      20 04 38.4 +1.4
BOSA                              pmax   pmax
      comp=Z,95nm,1.2s,mb5.6
BOSA  Boshof            80.49 121 P      P      20 04 37.9 +0.9
      comp=Z,8.9nm,0.9s,mb4.7,baz=217,slow=6.0,SNR=8.0
BOSA                              LR     LR     20 36 55.8
      comp=Z,15µm,19.4s,MS6.4,baz=224,slow=33
BOSA  Boshof            80.49 121 P      P      20 04 38.4 +1.4
      comp=Z,95nm,1.2s,mb5.6
WVT   Waverly           80.91 354 eP     P      20 04 39.2 +0.1
WVT                               pmax   pmax
      comp=Z,53nm,1.2s,mb5.3
WVT   Waverly           80.91 354 P      P      20 04 36.8 -2.3
      comp=Z,54nm,1.2s,mb5.3
WVT                               LR     LR
      comp=Z,4µm,21.0s,MS5.7
GNAR  Gosnell           80.94 352 P      P      20 04 41.6 +2.4
WMOK  Wichita Mounta    80.97 345 P      P      20 04 37.5 -1.9
WMOK                              pmax   pmax
      comp=Z,22nm,0.4s,mb5.4
WMOK  Wichita Mounta    80.97 345 eP     P      20 04 37.4 -2.0
      comp=Z,22nm,0.4s,mb5.4
WMOK                              LR     LR
      comp=Z,3µm,21.0s,MS5.6
GLAT  Glass             81.17 353 P      P      20 04 40.3 -0.1
TUC   Tucson            81.62 334 P      P      20 04 44.5 +1.6
TUC                               pmax   pmax
      comp=Z,20nm,1.6s,mb4.8
TUC   Tucson            81.62 334 P      P      20 04 44.5 +1.6
      comp=Z,20nm,1.6s,mb4.8
AMTX  Amarillo          81.69 343 eP     P      20 04 39.8 -3.4
      comp=Z,36nm,1.1s,mb5.2
AMTX                              LR     LR
      comp=Z,4µm,21.0s,MS5.8
ELN   Prospectdale      81.74 360 eP     P      20 04 43.0 -0.4
FWV   Forest Hill       82.09 360 P      P      20 04 43.9 -1.3
BNM   Barren Site       82.16 338 eP     P      20 04 48.2 +2.6
TSUM  Tsumeb            82.22 109 eP     P      20 04 45.3 -0.9
      comp=Z,184nm,1.9s,mb5.7
TSUM                              LR     LR
      comp=Z,10µm,20.0s,MS6.2
LAZ   Ladron            82.54 338 eP     P      20 04 48.0 +0.4
TAU   Tasmania Unive    82.73 213 PFAKE         20 05 00.0  +12
TAU                               LR     LR
      comp=Z,1µm,19.0s,MS5.2
CBN   Corbin            82.76   2 PFAKE         20 05 00.0  +11
CBN                               LR     LR
      comp=Z,8µm,21.0s,MS6.1
ANMO  Albuquerque       82.88 339 P      P      20 04 49.5 +0.1
ANMO                              pmax   pmax
      comp=Z,35nm,1.0s
ANMO  Albuquerque       82.88 339 P      P      20 04 49.5 +0.1
      comp=Z,6.2nm,0.9s,mb4.6,baz=159,slow=8.2,SNR=8.9
ANMO  Albuquerque       82.88 339 eP     P      20 04 48.7 -0.7
      comp=Z,35nm,1.1s,mb5.3
ANMO                              LR     LR
      comp=Z,5µm,22.0s,MS5.9
WCI   Wyandotte Cave    82.90 355 PFAKE         20 05 00.0  +11
WCI                               LR     LR
      comp=Z,1µm,19.0s,MS5.3
FVM   French Village    82.97 352 P      P      20 04 50.6 +0.8
FVM                               pmax   pmax
      comp=Z,35nm,1.1s,mb5.3
FVM   French Village    82.97 352 eP     P      20 04 46.9 -2.9
      comp=Z,35nm,1.1s,mb5.3
CCM   Cathedral Cave    83.13 351 PFAKE         20 05 00.0 +9.4
CCM                               LR     LR
      comp=Z,1µm,22.0s,MS5.3
LBTB  Lobatse           83.29 119 P      P      20 04 52.9 +1.2
LBTB                              pmax   pmax
      comp=Z,140nm,1.2s,mb5.9
LBTB  Lobatse           83.29 119 eP     P      20 04 52.1 +0.4
      comp=Z,138nm,1.3s,mb5.8
SLM   Saint Louis       83.60 352 eP     P      20 04 54.0 +1.1
BLO   Bloomington       83.85 355 eP     P      20 04 54.6 +0.4
BLO                               pmax   pmax
      comp=Z,56nm,1.0s,mb5.7
BLO   Bloomington       83.85 355 eP     P      20 04 54.6 +0.4
      comp=Z,56nm,1.0s,mb5.7
BAR   Barrett           83.91 330 P      P      20 04 53.4 -1.3
MVL   Millersville      84.58   3 P      P      20 04 52.0 -5.9
DBIC  Dimbokro          84.61  75 eP     P      20 04 58.9 +0.3
DBIC                              pmax   pmax
      comp=Z,195nm,1.1s
DBIC  Dimbokro          84.61  75 P      P      20 04 58.9 +0.3
      comp=Z,17nm,1.0s,mb5.1,baz=207,slow=8.1,SNR=8.5
DBIC                              LR     LR     20 35 53.8
      comp=Z,9µm,20.7s,MS6.2,baz=203,slow=31
DBIC  Dimbokro          84.61  75 eP     P      20 04 58.9 +0.3
      comp=Z,195nm,1.1s,mb6.2
PFO   Pinyon Flat Ob    84.68 331 eP     P      20 05 00.5 +2.0
PFO                               pmax   pmax
      comp=Z,37nm,1.1s,mb5.4
PFO                               MLR    MLR
      comp=Z,717nm,19.0s,MS5.1
PFO   Pinyon Flat Ob    84.68 331 eP     P      20 05 00.5 +2.0
      comp=Z,37nm,1.1s,mb5.4
PFO                               LR     LR
      comp=Z,717nm,19.0s,MS5.1
WUAZ  Wupatki           84.78 335 eP     P      20 04 59.7 +0.7
      comp=Z,55nm,1.4s,mb5.5
WUAZ                              LR     LR
      comp=Z,7µm,22.0s,MS6.0
KSU1  Kansas State U    84.86 347 P      P      20 04 59.5 +0.3
CBKS  Cedar Bluff       85.10 345 eP     P      20 05 02.1 +1.6
CBKS                              pmax   pmax
      comp=Z,103nm,1.1s,mb5.9
CBKS                              MLR    MLR
      comp=Z,5µm,22.0s,MS5.9
CBKS  Cedar Bluff       85.10 345 eP     P      20 05 02.0 +1.6
      comp=Z,103nm,1.1s,mb5.9
CBKS                              LR     LR
      comp=Z,5µm,22.0s,MS5.9
NEN   Nelson            85.99 333 P      P      20 05 07.1 +2.1
RW3   Ridgway           86.31 339 P      P      20 05 12.5 +6.0
PV01  Paradox Valley    86.44 338 P      P      20 05 04.9 -2.2
BINY  Binghamton        86.80   3 PFAKE         20 05 20.0  +11
BINY                              LR     LR
      comp=Z,2µm,20.0s,MS5.6
WES   Weston            87.27   7 PFAKE         20 05 20.0 +8.9
WES                               LR     LR
      comp=Z,8µm,20.0s,MS6.1
ISCO  Idaho Springs     87.28 341 eP     P      20 05 13.5 +2.3
ISCO                              pmax   pmax
      comp=Z,47nm,1.4s,mb5.5
ISCO                              MLR    MLR
      comp=Z,4µm,22.0s,MS5.7
ISCO  Idaho Springs     87.28 341 eP     P      20 05 13.5 +2.4
      comp=Z,48nm,1.4s,mb5.5
ISCO                              LR     LR
      comp=Z,4µm,22.0s,MS5.7
GENY  Geneseo           87.30   2 P      P      20 05 09.1 -2.1
HRV   Harvard--Oak R    87.37   7 PFAKE         20 05 20.0 +8.4
HRV                               LR     LR
      comp=Z,7µm,20.0s,MS6.0
ARUT  Antelope Range    87.50 334 P      P      20 05 10.3 -2.0
MSU   Marysvale         87.79 336 eP     P      20 05 15.3 +1.6
MVU   Marysvale         87.80 336 eP     P      20 05 14.0 +0.3
      comp=Z,30nm,1.3s,mb5.4
MVU                               LR     LR
      comp=Z,5µm,21.0s,MS5.9
JFWS  Jewell Farm       87.85 353 eP     P      20 05 13.4 -0.4
JFWS                              pmax   pmax
      comp=Z,152nm,1.1s,mb6.1
JFWS                              MLR    MLR
      comp=Z,11µm,22.0s,MS6.2
JFWS  Jewell Farm       87.85 353 eP     P      20 05 13.4 -0.4
      comp=Z,152nm,1.1s,mb6.1
JFWS                              LR     LR
      comp=Z,11µm,22.0s,MS6.2
SRU   San Rafael        87.88 337 eP     P      20 05 14.9 +0.8
TMUT  Trail Mountain    88.24 337 eP     P      20 05 16.5 +0.7
NCB   Newcomb           88.65   5 PFAKE         20 05 30.0  +12
NCB                               LR     LR
      comp=Z,5µm,21.0s,MS5.9
PHWY  Pilot Hill        88.67 341 eP     P      20 05 19.9 +2.1
TRCR  Troy Canyon       88.69 333 P      P      20 05 20.8 +2.8
TPH   Tonopah           88.98 332 eP     P      20 05 19.4  0.0
TPH                               pmax   pmax
      comp=Z,42nm,1.3s,mb5.6
TPH                               MLR    MLR
      comp=Z,3µm,19.0s,MS5.7
TPH   Tonopah           88.98 332 eP     P      20 05 19.4  0.0
      comp=Z,42nm,1.3s,mb5.6
TPH                               LR     LR
      comp=Z,3µm,19.0s,MS5.7
MPU   Maple Canyon      89.03 337 eP     P      20 05 21.6 +2.0
NLU   North Lily Min    89.10 336 P      P      20 05 20.0 +0.1
SADO  Sadowa            89.28   1 P      P      20 05 21.8 +1.2
      comp=Z,5.2nm,0.7s,mb5.0,baz=201,slow=13,SNR=2.5
DAU   Daniels Canyon    89.29 337 P      P      20 05 22.1 +1.3
SAO   San Andreas Ge    89.31 328 PFAKE         20 05 30.0 +9.1
SAO                               LR     LR
      comp=Z,3µm,21.0s,MS5.7
FRNY  Flat Rock         89.55   5 P      P      20 05 23.1 +1.2
WVL   Waterville        89.58   8 PFAKE         20 05 30.0 +7.9
WVL                               LR     LR
      comp=Z,25µm,20.0s,MS6.6
MNV   Mina              89.62 331 P      P      20 05 24.6 +2.2
MNV                               pmax   pmax
      comp=Z,10.0nm,1.1s,mb5.1
MNV                               MLR    MLR
      comp=Z,2µm,21.0s,MS5.5
MNV   Mina              89.62 331 P      P      20 05 24.6 +2.2
      comp=Z,9.5nm,1.1s,mb5.0
MNV                               LR     LR
      comp=Z,2µm,21.0s,MS5.5
NVAR  Mina Array Bea    89.67 331 P      P      20 05 24.4 +1.8
      comp=Z,1.1nm,0.8s,mb4.2,baz=206,slow=9.3,SNR=5.5
TCUT  Toone Canyon      89.99 337 P      P      20 05 23.2 -0.8
CMB   Columbia Colle    90.04 330 PFAKE         20 05 40.0  +16
CMB                               LR     LR
      comp=Z,2µm,21.0s,MS5.5
SPUT  South Promonto    90.46 337 eP     P      20 05 25.4 -0.8
HWUT  Hardware Ranch    90.49 337 eP     P      20 05 26.0 -0.4
      comp=Z,63nm,1.3s,mb5.8
HWUT                              LR     LR
      comp=Z,4µm,21.0s,MS5.8
ELK   Elko              90.77 334 P      P      20 05 29.3 +1.7
ELK                               pmax   pmax
      comp=Z,1.0nm,0.4s
ELK   Elko              90.77 334 P      P      20 05 29.2 +1.6
      comp=Z,0.5nm,0.4s,mb4.2,baz=48,slow=1.7,SNR=4.7
ELK   Elko              90.77 334 eP     P      20 05 25.1 -2.5
      comp=Z,27nm,1.4s,mb5.4
ELK                               LR     LR
      comp=Z,4µm,21.0s,MS5.8
HVU   Hansel Valley     90.99 336 P      P      20 05 28.8 +0.2
BW06  Boulder Array     91.04 339 eP     P      20 05 29.4 +0.6
      comp=Z,14nm,0.6s,mb5.5
BW06                              LR     LR
      comp=Z,4µm,21.0s,MS5.8
PDAR  Pinedale Array    91.04 339 P      P      20 05 30.4 +1.6
      comp=Z,1.4nm,0.9s,mb4.3,baz=153,slow=3.3,SNR=4.0
PDAR                              LR     LR     20 41 35.8
      comp=Z,4µm,21.8s,MS5.8,baz=152,slow=32
RSSD  Black Hills       91.06 343 eP     P      20 05 30.6 +1.7
RSSD                              pmax   pmax
      comp=Z,7.0nm,0.6s,mb5.2
RSSD                              MLR    MLR
      comp=Z,848nm,20.0s,MS5.2
RSSD  Black Hills       91.06 343 eP     P      20 05 30.6 +1.8
      comp=Z,7.0nm,0.6s,mb5.2
RSSD                              LR     LR
      comp=Z,848nm,20.0s,MS5.2
BMN   Battle Mountai    91.11 333 PFAKE         20 05 40.0  +11
BMN                               LR     LR
      comp=Z,3µm,19.0s,MS5.8
AHID  Auburn Hatcher    91.44 338 PFAKE         20 05 40.0 +9.3
AHID                              LR     LR
      comp=Z,3µm,20.0s,MS5.7
PQI   Presque Isle      91.83   9 PFAKE         20 05 40.0 +7.6
PQI                               LR     LR
      comp=Z,18µm,19.0s,MS6.5
HOPS  Hopland           91.88 328 PFAKE         20 05 40.0 +7.2
HOPS                              LR     LR
      comp=Z,3µm,22.0s,MS5.6
LSZ   Lusaka            92.05 114 eP     P      20 05 34.7 +0.6
LSZ                               pmax   pmax
      comp=Z,23nm,1.0s,mb5.5
LSZ                               MLR    MLR
      comp=Z,14µm,22.0s,MS6.4
LSZ   Lusaka            92.05 114 eP     P      20 05 34.7 +0.7
      comp=Z,23nm,1.0s,mb5.5
LSZ                               LR     LR
      comp=Z,14µm,22.0s,MS6.4
TPAW  Teton Pass        92.08 338 P      P      20 05 34.1 +0.5
      comp=Z,35nm,1.1s,mb5.6
LOHW  Long Hollow       92.10 339 eP     P      20 05 34.5 +0.8
      comp=Z,17nm,1.3s,mb5.2
IMW   Indian Meadow     92.45 338 eP     P      20 05 34.8 -0.5
      comp=Z,25nm,1.2s,mb5.4
LKWY  Lake              92.94 339 PFAKE         20 05 50.0  +12
LKWY                              LR     LR
      comp=Z,8µm,21.0s,MS6.1
YFT   Old Faithful      92.94 339 P      P      20 05 40.8 +3.2
EYMN  Ely               92.95 353 PFAKE         20 05 50.0  +13
EYMN                              LR     LR
      comp=Z,6µm,22.0s,MS6.0
WDC   Whiskeytown Da    93.07 329 PFAKE         20 05 50.0  +12
WDC                               LR     LR
      comp=Z,1µm,20.0s,MS5.4
HLID  Hailey            93.10 336 P      P      20 05 40.0 +1.7
      comp=Z,11nm,1.2s,mb5.2
HLID                              LR     LR
      comp=Z,2µm,20.0s,MS5.6
MOD   Modoc             93.45 331 PFAKE         20 05 50.0  +10
MOD                               LR     LR
      comp=Z,3µm,19.0s,MS5.8
POHA  Pohakuloa         93.63 294 PFAKE         20 05 50.0 +8.7
POHA                              LR     LR
      comp=Z,13µm,20.0s,MS6.4
MCMT  McKenzie Canyo    93.83 338 P      P      20 05 41.3 -0.3
LAO   LASA Array        93.97 343 PFAKE         20 05 50.0 +7.8
LAO                               LR     LR
      comp=Z,5µm,22.0s,MS5.9
YBH   Yreka Blue Hor    94.14 330 P      P      20 05 42.4 -0.7
YBH                               pmax   pmax
      comp=Z,3.0nm,0.8s
YBH                               MLR    MLR
      comp=Z,2µm,20.0s
YBH   Yreka Blue Hor    94.14 330 P      P      20 05 44.0 +0.9
      comp=Z,0.6nm,0.3s,mb4.5,baz=139,slow=9.3,SNR=3.3
YBH   Yreka Blue Hor    94.14 330 P      P      20 05 42.4 -0.7
      comp=Z,3.0nm,0.8s,mb4.8
YBH                               LR     LR
      comp=Z,2µm,20.0s,MS5.6
BOZ   Bozeman (W)       94.26 339 PFAKE         20 05 50.0 +6.4
BOZ                               LR     LR
      comp=Z,5µm,22.0s,MS5.9
STKA  Stephens Creek    94.54 215 P      P      20 05 44.9 -0.3
      comp=Z,3.5nm,0.9s,mb4.8,baz=180,slow=13,SNR=2.7
STKA                              LR     LR     20 43 09.9
      comp=Z,3µm,19.2s,MS5.7,baz=157,slow=32
STKA  Stephens Creek    94.54 215 P      P      20 05 44.9 -0.3
STKA                              LR     LR     20 43 09.9
HUMO  Hull Mountain     95.00 330 PFAKE         20 06 00.0  +13
HUMO                              LR     LR
      comp=Z,2µm,21.0s,MS5.6
BMO   Blue Mountains    95.13 335 PFAKE         20 06 00.0  +12
BMO                               LR     LR
      comp=Z,3µm,20.0s,MS5.7
DGMT  Dagmar            95.26 344 PFAKE         20 06 00.0  +12
DGMT                              LR     LR
      comp=Z,5µm,21.0s,MS5.9
CHMT  Chamberlain Mo    95.86 338 P      P      20 05 56.7 +5.8
MSO   Missoula          95.97 338 PFAKE         20 06 00.0 +8.6
MSO                               LR     LR
      comp=Z,2µm,19.0s,MS5.7
ADH   Angra Heroismo    96.01  39 erx           20 19 20.0
ADH                               eSS    SS     20 23 42.5 +0.7
ADH   Angra Heroismo    96.01  39 i LR   LR     20 37 52.5
CMLA  Cha da Macela     96.06  41 PFAKE         20 06 00.0 +8.0
CMLA                              LR     LR
      comp=Z,3µm,19.0s,MS5.7
KIP   Kipapa            96.44 294 PFAKE         20 06 10.0  +16
KIP                               LR     LR
      comp=Z,3µm,21.0s,MS5.8
COR   Corvallis         96.85 331 PFAKE         20 06 10.0  +15
COR                               LR     LR
      comp=Z,594nm,22.0s,MS5.0
NEW   Newport           98.16 336 PFAKE         20 06 10.0 +8.8
NEW                               LR     LR
      comp=Z,3µm,20.0s,MS5.8
OCWA  Octopus Mounta    99.90 332 PFAKE         20 06 20.0  +11
OCWA                              LR     LR
      comp=Z,4µm,22.0s,MS5.9
NWAO  Narrogin (SRO)   100.89 195 PFAKE         20 06 30.0  +16
NWAO                              LR     LR
      comp=Z,3µm,21.0s,MS5.7
CTAO  Charters Tower   102.57 225 PFAKE         20 06 30.0 +8.2
CTAO                              LR     LR
      comp=Z,2µm,19.0s,MS5.5
HNR   Honiara          103.38 242 PFAKE         20 06 40.0  +14
HNR                               LR     LR
      comp=Z,853nm,19.0s,MS5.3
```

MBAR	**Mbarara**	**104.49**	**106**	PFAKE		20 06 40.0	+10
MBAR				LR	LR		
	comp=Z,5µm,21.0s,MS6.1						
WRA	**Warramunga Arr**	**108.08**	**214**	PKiKP		20 10 55.2	
	comp=Z,0.9nm,1.0s,baz=165,slow=1.3,SNR=5.1						
WRAB	**Tennant Creek**	**108.09**	**214**	PFAKE		20 11 00.0	
WRAB				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
KMBO	**Kilima Mbogo**	**108.50**	**111**	PFAKE		20 11 10.0	
KMBO				LR	LR		
	comp=Z,331µm,20.0s						
PMG	**Port Moresby**	**110.99**	**231**	PFAKE		20 11 10.0	+10
PMG				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
SIT	**Sitka**	**111.42**	**331**	PFAKE		20 11 10.0	+10
SIT				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
KWAJ	**Kwajalein Atol**	**111.64**	**261**	PFAKE		20 11 10.0	+8.7
KWAJ				LR	LR		
	comp=Z,357nm,20.0s,MS5.0						
SFJD	**Kangerlussuaq**	**113.86**	**12**	*i* P	PKPdf	20 11 27.6	+23
	comp=Z,5.4nm,0.6s						
SFJD				*i*		20 21 35.4	
SFJD				*i*		20 27 39.0	
SFJD				*i*		20 38 22.3	
	comp=Z,5µm,19.0s						
ILAR	**Eielson Array**	**120.89**	**333**	PKP	PKPdf	20 11 15.6	-2.7
	comp=Z,0.4nm,0.6s,baz=180,slow=1.8,SNR=4.7						
DAVA	**Damuels**	**121.23**	**53**⇓	*i*P	PKPdf	20 11 26.0	+6.7
WTTA	**Wattenberg**	**122.21**	**54**⇑	*i*P	PKPdf	20 11 29.0	+7.8
VOJS	**Vojsko**	**122.85**	**56**	*e*PKiKP		20 11 26.9	
VOJS				*e*PP	PP	20 13 07.2	+4.8
KBA	**Koelnbreinsper**	**123.10**	**54**⇑	*i*P	PKPdf	20 11 37.2	+14
GRA1	**Grafenberg Arr**	**123.28**	**51**	*e*Pdif	Pdif	20 08 07.4	+15
GRA1				*e*PP	PP	20 13 11.3	+6.0
GRA1				*e*SKSac		20 18 37.8	
GRA1				*e*SP	SP	20 23 00.2	+3.9
GRA1				*e*SS	SS	20 29 56.4	+8.6
GRA1				*e*SSS	SSS	20 34 25.7	+3.1
GRA1				LR	LR		
	comp=Z,15µm,18.2s,MS6.7						
GRF	**Grafenberg Arr**	**123.28**	**51**	*e*Pdif	Pdif	20 08 07.4	+15
GRF				*e*PP	PP	20 13 11.3	+6.0
GRF				*e*SKS	SKS	20 18 37.8	+12
GRF				*e*SP	SP	20 23 00.2	+3.9
GRF				*e*SS	SS	20 29 56.4	+8.6
GRF				*e*SSS	SSS	20 34 25.7	+3.1
GRF				LR	LR		
	comp=Z,15µm,18.2s,MS6.7						
OBKA	**Obir**	**123.50**	**56**⇓	*i*P	PKPdf	20 11 31.5	+7.8
IMA	**Indian Mountai**	**123.93**	**332**	PKIKP	PKPdf	20 11 22.5	-1.6
IMA	**Indian Mountai**	**123.93**	**332**	*e*PKPdf	PKPdf	20 11 22.4	-1.7
MOX	**Moxa**	**123.99**	**50**	*e*PKIKP	PKPdf	20 11 24.7	+0.1
MOX	**Moxa**	**123.99**	**50**	*i* P	PKPdf	20 11 24.7	+0.1
MOX				*i*		20 11 44.0	
MOX				PP	PP	20 13 17.0	+6.8
MOX				*e*		20 23 04.0	
MOX				SS	SS	20 30 10.0	+14
MOX				SSS	SSS	20 34 30.0	-3.3
MOX				LQ		20 44 04.0	
MOX				LR	LR	20 51 00.0	
MOX				L		21 02 18.0	
MOA	**Molln**	**124.03**	**54**⇑	*i*P	PKPdf	20 11 25.3	+0.6
GERES	**GERESS Array B**	**124.23**	**53**	PKP	PKPdf	20 11 21.3	-3.7
	comp=Z,0.9nm,0.7s,baz=180,slow=1.3,SNR=9.9						
NKC	**Novy Kostel**	**124.24**	**51**	*e*PKIKP	PKPdf	20 11 30.6	+5.5
NKC				*e*SS	SS	20 30 00.2	+0.7
NKC	**Novy Kostel**	**124.24**	**51**	*e*PKPDF	PKPdf	20 11 30.6	+5.5
NKC				*e*x	x	20 20 16.2	
NKC				*e*SP	SP	20 23 15.8	+12
NKC				*e*SKKS		20 24 51.8	
NKC				*e*SS	SS	20 30 00.2	+0.7
NKC				*e*x	x	20 34 53.9	
NKC				AMS	AMS	21 01 50.0	
	comp=Z,10µm,21.7s						
KHC	**Kasperske Hory**	**124.30**	**52**	*i* PKIKP	PKPdf	20 11 23.0	-2.2
KHC				*e*		20 11 29.2	
KHC				*e*		20 13 16.2	
KHC				*e*SP	SP	20 23 13.6	+8.8
KHC				*e*SS	SS	20 30 00.4	0.0
KHC				MLR	MLR		
	comp=Z,11µm,19.1s,MS6.5						
KHC	**Kasperske Hory**	**124.30**	**52**	*i* P	PKPdf	20 11 23.0	-2.2
KHC				*e*PKP	PKPdf	20 11 29.2	+4.0
KHC				*e*		20 11 44.0	
KHC				*e*PP	PP	20 13 16.2	+4.1
KHC				*e*SKKS		20 20 17.7	
KHC				*e*SP	SP	20 23 13.6	+8.8
KHC				*e*		20 25 27.8	
KHC				*e*SS	SS	20 30 00.4	0.0
KHC				*e*		20 35 27.4	
KHC				LR	LR		
	comp=Z,11µm,19.1s,MS6.5						
KHC	**Kasperske Hory**	**124.30**	**52**	*e*PKPDF	PKPdf	20 11 29.2	+4.0
KHC				x	x	20 11 44.0	
KHC				*e*PP	PP	20 13 16.2	+4.1
KHC				*e*x	x	20 20 17.7	
KHC				*e*SP	SP	20 23 13.6	+8.8
KHC				*e*SKKP		20 25 27.8	
KHC				*e*SS	SS	20 30 00.4	0.0
KHC				*e*x	x	20 35 27.4	
KHC				AMS	AMS	21 03 50.0	
	comp=Z,11µm,19.1s						
CLL	**Collm**	**125.09**	**50**	*e*PKIKP	PKPdf	20 11 27.0	+0.4
CLL				*e*		20 18 38.0	
CLL				MLR	MLR		
	comp=Z,16µm,19.2s,MS6.7						
CLL	**Collm**	**125.09**	**50**	*e*PKP	PKPdf	20 11 27.0	+0.4
CLL				*e*		20 11 52.0	
CLL				*e*SKS	SKS	20 18 38.0	+7.1
CLL				*e*SKKS		20 20 22.0	
CLL				LR	LR		
	comp=Z,16µm,19.2s,MS6.7						
CLL	**Collm**	**125.09**	**50**	*e*PKIKP	PKPdf	20 11 27.0	+0.4
CLL				*e*		20 11 52.0	
CLL				*e*PP	PP	20 13 21.0	+4.2
CLL				*e*		20 14 42.0	
CLL				*e*PPP	PPP	20 16 09.0	+12
CLL				*e*		20 18 38.0	
CLL				*e*		20 20 22.0	
CLL				*e*		20 21 30.0	
CLL				*e*PS	PS	20 23 18.0	+5.1
CLL				*e*PPS	PPS	20 24 53.0	+8.8
CLL				*e*SS	SS	20 30 15.0	+4.7
CLL				*e*		20 30 47.0	
CLL				*e*SSS	SSS	20 35 07.0	+17
PRA	**Prague**	**125.26**	**52**	AMS	AMS	21 04 00.0	
PRU	**Pruhonice**	**125.28**	**52**	*e*PKIKP	PKPdf	20 11 30.8	+3.8
PRU				*e*		20 13 17.9	
PRU				*e*SP	SP	20 23 12.5	-1.0
PRU				MLR	MLR		
	comp=Z,12µm,24.1s,MS6.5						
PRU	**Pruhonice**	**125.28**	**52**	*e*PKPDF	PKPdf	20 11 30.8	+3.8
PRU				*e*PP	PP	20 13 17.9	-0.3
PRU				*e*SKKS		20 20 23.6	
PRU				*e*SP	SP	20 23 12.5	-1.0
PRU				*e*x	x	20 25 00.7	
PRU				*e*x	x	20 29 56.5	
PRU				*e*x	x	20 35 06.1	
PRU				AMS	AMS	21 00 20.0	
	comp=Z,12µm,24.1s						
BRG	**Berggiesshubel**	**125.39**	**51**	*e*PKIKP	PKPdf	20 11 30.5	+3.3
BRG						20 13 19.9	
BRG						20 18 43.0	
BRG				SP	SP	20 23 23.0	+8.6
BRG				SS	SS	20 30 20.0	+6.1
BRG				pmax	pmax		
	comp=Z,17nm,1.8s						
BRG				MLR	MLR		
	comp=N,8µm,21.4s,MS6.5						
BRG				MLR	MLR		
	comp=E,7µm,21.4s,MS6.5						
BRG				MLR	MLR		
	comp=Z,16µm,21.6s,MS6.7						
PVCC	**Panska Ves**	**125.56**	**51**	*e*PKIKP	PKPdf	20 11 31.3	+3.8
PVCC				*e*SS	SS	20 30 15.6	-0.4
PVCC				MLR	MLR		
	comp=Z,10µm,19.6s,MS6.5						
PVCC	**Panska Ves**	**125.56**	**51**	*e*PKPDF	PKPdf	20 11 31.3	+3.8
PVCC				*e*x	x	20 20 25.7	
PVCC				*e*x	x	20 23 02.4	
PVCC				*e*x	x	20 25 02.1	
PVCC				*e*SS	SS	20 30 15.6	-0.4
PVCC				*e*x	x	20 35 09.7	
PVCC				AMS	AMS	21 04 00.0	
	comp=Z,10µm,19.6s						
BER	**Bergen**	**125.79**	**38**	*e*PP	PP	20 13 21.4	-0.1
BER				*e*SS	SS	20 30 29.0	+11
BER				AMS	AMS	21 09 21.9	
	comp=Z,7µm,18.2s,MS6.4						
JMIC	**Jan Mayen**	**126.33**	**23**	*e*PP	PP	20 13 24.8	+0.2
JMIC				*e*SS	SS	20 30 31.6	+6.5
JMIC				AMS	AMS	20 59 19.2	
	comp=Z,5µm,23.0s,MS6.1						
UPC	**Upice**	**126.36**	**52**	*e*PKPDF	PKPdf	20 11 32.5	+3.6
DPC	**Dobruska-Polom**	**126.45**	**52**	*e*PKIKP	PKPdf	20 11 34.6	+5.5
DPC				*e*SS	SS	20 30 34.9	+7.7
DPC				*e*		20 35 15.9	
DPC				MLR	MLR		
	comp=Z,9µm,20.2s,MS6.4						
DPC	**Dobruska-Polom**	**126.45**	**52**	*e*PKPDF	PKPdf	20 11 34.6	+5.5
DPC				*e*PP	PP	20 13 16.4	-10
DPC				*e*SKKS		20 20 29.4	
DPC				*e*SP	SP	20 23 34.1	+10
DPC				*e*SKKP		20 25 22.8	
DPC				*e*SS	SS	20 30 34.9	+7.7
DPC				*e*x	x	20 35 15.9	
DPC				AMS	AMS	21 05 00.0	
	comp=Z,9µm,20.2s						
MORC	**Moravsky Berou**	**126.87**	**53**	*e*PKIKP	PKPdf	20 11 22.7	-7.2
VYHS	**Vyhne**	**127.01**	**55**	*e*PKIKP	PKPdf	20 11 35.5	+5.3
VYHS				*i* SS	SS	20 30 40.3	+5.9
VYHS	**Vyhne**	**127.01**	**55**	*e*PKP	PKPdf	20 11 35.5	+5.3
VYHS				*e*		20 13 41.1	
VYHS				*e*		20 26 25.8	
VYHS				*i* SS	SS	20 30 40.3	+5.9
OKC	**Ostrava-Krasne**	**127.25**	**54**	*e*PKIKP	PKPdf	20 11 35.5	+4.8
OKC				*e*SP	SP	20 23 34.6	+3.6
OKC				*e*		20 25 08.8	
OKC				*e*SS	SS	20 30 30.9	-6.3
OKC				*e*		20 35 15.6	
OKC	**Ostrava-Krasne**	**127.25**	**54**	*e*PKPDF	PKPdf	20 11 35.5	+4.8
OKC				*e*SKKS		20 20 43.9	
OKC				*e*SP	SP	20 23 34.6	+3.6
OKC				*e*x	x	20 25 08.8	
OKC				*e*SS	SS	20 30 30.9	-6.3
OKC				*e*x	x	20 35 15.6	
OKC				AMS	AMS	21 07 20.0	
	comp=Z,6µm,18.2s						
EIL	**Elat**	**127.76**	**84**	PKPdf	PKPdf	20 11 30.4	-1.9
NB2	**NORSAR Subarra**	**128.67**	**39**	PKPdf	PKPdf	20 11 31.5	-1.7
	comp=Z,3.6nm,1.2s,baz=241,slow=1.9						
NB2	**NORSAR Subarra**	**128.67**	**39**	PKPd		20 11 31.5	
	baz=241,slow=1.9						
NOA	**NORSAR Array B**	**128.67**	**39**	PKP	PKPdf	20 11 31.0	-2.2
	comp=Z,1.2nm,1.0s,baz=321,slow=18,SNR=2.8						
KOLS	**Kolonicke sedl**	**129.23**	**56**	*e*PKHKP		20 11 20.9	
KWP	**Kalwaria**	**129.79**	**55**	PKIKP	PKPdf	20 11 35.4	-0.3
MLR	**Muntele Rosu**	**129.91**	**62**	⇓P	PKPdf	20 11 33.1	-2.9
BURAR	**Bucovina Array**	**130.41**	**59**	⇑P	PKPdf	20 11 43.6	+6.7
LVV	**L’vov**	**130.65**	**56**	*e*PKHKP		20 11 20.2	
LVV				*e*		20 31 44.4	
LVV				MLR	MLR		
	comp=E,4µm,17.0s,MS6.4						
LVV				MLR	MLR		
	comp=Z,5µm,17.0s,MS6.2						
LVV				MLR	MLR		
	comp=N,4µm,16.0s,MS6.4						
BRTR	**Keskin Array B**	**132.22**	**72**	PKP	PKPdf	20 11 38.0	-2.6
	comp=N,0.7nm,0.7s,baz=222,slow=2.9,SNR=3.6						
KIS	**Kishinev**	**132.36**	**61**	*e*PKIKP	PKPdf	20 11 50.0	+9.4
KIS				*e*PS	PS	20 24 20.0	+4.5
KIS				MLR	MLR		
	comp=N,4µm,20.0s,MS6.4						
KIS				MLR	MLR		
	comp=E,5µm,20.0s,MS6.4						
KIS				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.3						
KIS				MLR	MLR		
	comp=Z,6µm,20.0s						
AKASG	**Malin Array Be**	**134.06**	**56**	PKP	PKPdf	20 11 42.1	-1.4
	comp=Z,0.2nm,0.3s,baz=267,slow=2.9,SNR=4.4						
AKASG				PP	PP	20 14 19.4	+3.8
	comp=Z,0.1nm,0.3s,baz=243,slow=8.3,SNR=4.9						
TRO	**Tromso**	**134.40**	**29**	*e*PP	PP	20 14 13.8	-3.3
TRO				*e*SS	SS	20 32 13.2	+8.9
TRO				AMS	AMS	21 21 19.3	
	comp=Z,4µm,17.8s,MS6.2						
MNK	**Minsk**	**134.57**	**51**	*e*PKIKP	PKPdf	20 11 46.0	+1.5
FINES	**FINESS Array B**	**135.59**	**41**	PKP	PKPdf	20 11 45.6	-0.6
	comp=Z,1.4nm,0.8s,baz=153,slow=4.3,SNR=6.9						
KAF	**Kangasniemi**	**135.84**	**40**	*e*p	PKPdf	20 11 43.3	-3.3
ARCES	**ARCESS Array B**	**136.66**	**30**	PKP	PKPdf	20 11 46.7	-1.2
	comp=Z,2.1nm,0.8s,baz=7.6,slow=14,SNR=3.0						
ARCES	**ARCESS Array B**	**136.66**	**30**	PKP	PKPdf	20 11 46.7	-1.2
ANN	**Anapa**	**136.97**	**67**	*i* PKIKP	PKPdf	20 11 56.2	+7.1
ANN				*e*		20 12 00.0	
ANN				pmax	pmax		
	comp=Z,142nm,5.4s						
SOC	**Sochi**	**138.00**	**70**	*e*P	Pdif	20 08 55.9	-1.2
SOC				*e*		20 14 36.7	
SOC				*e*		20 26 53.1	
SOC				*e*SS	SS	20 32 56.4	+8.1
SOC				pmax	pmax		
	comp=N,6.0nm,0.9s						
SOC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SOC				pmax	pmax		
	comp=E,5.0nm,1.1s						
SOC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SOC				pmax	pmax		
	comp=N,9.0nm,1.3s						
SOC				pmax	pmax		
	comp=E,10.0nm,1.5s						
TRD	**Trivandrum**	**138.84**	**145**	*e*x	x	20 14 55.5	
BILL	**Bilibino**	**139.21**	**328**	*i* PKIKP	PKPdf	20 12 05.6	+13
BILL						20 14 45.3	
BILL				*e*SS	SS	20 33 30.7	+30
BILL				pmax	pmax		
	comp=Z,8.0nm,1.5s						
BILL				MLR	MLR		
	comp=Z,4µm,25.0s,MS6.0						
APA	**Apatity**	**139.47**	**33**⇑	*i*PKIKP	PKPdf	20 11 54.5	+1.4
APA				*e*		20 18 53.0	
APA				pmax	pmax		
	comp=Z,64nm,1.5s						
APA				MLR	MLR		
	comp=Z,4µm,17.0s,MS6.3						
OBN	**Obninsk**	**139.60**	**52**	*i* PKIKP	PKPdf	20 11 59.0	+5.3
OBN				*i*		20 12 04.9	
OBN				*e*SS	SS	20 33 05.5	-0.6
OBN				MLR	MLR		
	comp=Z,8µm,17.0s,MS6.5						
OBN	**Obninsk**	**139.60**	**52**	*i* P	PKPdf	20 11 51.6	-2.1
OBN				LR	LR		
	comp=Z,8µm,17.0s,MS6.5						
GNI	**Garni**	**140.01**	**77**	PKIKP	PKPdf	20 11 48.9	-6.0
GNI				*i*		20 11 53.4	
GNI				MLR	MLR		
	comp=Z,6µm,22.0s						
KIV	**Kislovodsk**	**140.13**	**71**	*i* PKIKP	PKPdf	20 11 50.0	-5.0
KIV				*e*SS	SS	20 33 09.7	-3.1
KIV				*e*SSS	SSS	20 38 21.0	-6.3
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				pmax	pmax		
	comp=N,3.0nm,0.6s						
KIV				pmax	pmax		
	comp=E,3.0nm,1.0s						
KIV				MLR	MLR		
	comp=N,2µm,18.0s,MS6.1						
KIV				MLR	MLR		
	comp=E,2µm,18.0s,MS6.1						
KIV				MLR	MLR		
	comp=Z,3µm,18.0s,MS6.1						
KIV	**Kislovodsk**	**140.13**	**71**	*i* PKP	PKPdf	20 11 51.0	-4.0
VRSR	**Storozhevoye**	**140.20**	**59**	*e*PKIKP	PKPdf	20 11 52.7	-2.2
VRSR				*e*		20 14 50.4	
VRSR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
VRSR				pmax	pmax		
	comp=N,2.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,1.0nm,0.7s						
ZEI	**Tsey**	**140.50**	**73**	*e*PKIKP	PKPdf	20 11 53.8	-1.8
GOF	**Gofitskoye**	**140.76**	**69**	*e*PKIKP	PKPdf	20 11 53.5	-2.5
DGRG	**David-gareji**	**140.99**	**75**	P	PKPdf	20 12 06.5	+10
PET	**Petropavlovsk**	**141.32**	**304**	*e*PKIKP	PKPdf	20 12 07.6	+11
PET				*e*		20 33 28.3	
PET				MLR	MLR		
	comp=Z,2µm,23.0s,MS5.8						
MAK	**Makhachkala**	**143.03**	**74**	PKHKP		20 11 42.0	
MAK				pmax	pmax		
	comp=Z,2µm,7.0s						
MAK				pmax	pmax		
	comp=N,500nm,6.0s						
MAK				pmax	pmax		
	comp=E,800nm,6.0s						
MAK				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.9						
PECR	**Pechory**	**143.99**	**51**	*e*PKHKP		20 11 56.0	
PECR				MLR	MLR		
	comp=N,3µm,20.0s,MS6.5						
PECR				MLR	MLR		
	comp=E,8µm,21.0s,MS6.5						
MDRS	**Chennai**	**144.29**	**147**	*e*P	PKPbc	20 12 02.0	+2.6
MDRS				*e*x	x	20 25 47.0	
SEY	**Seymchan**	**145.25**	**320**	*e*PKIKP	PKPdf	20 12 01.7	-1.5
SEY				*e*		20 18 38.9	
SEY				*e*		20 34 13.4	
SEY				pmax	pmax		
	comp=E,6.0nm,0.8s						
SEY				pmax	pmax		
	comp=Z,30nm,0.8s						
SEY				pmax	pmax		
	comp=N,30nm,1.8s						
KAD	**Karad**	**145.27**	**134**	*e*P	PKPbc	20 12 00.0	-2.0
BOM	**Bombay**	**145.87**	**131**	*e*x	PKPdf	20 12 16.7	+11
BOM				*e*x	x	20 18 50.5	
LATR	**Latur**	**147.40**	**137**	*e*P	PKPdf	20 12 08.0	-0.1
HYB	**Hyderabad**	**147.47**	**141**	*e*P	PKPdf	20 12 08.0	-0.3
HYB				*e*		20 12 19.0	
HYB	**Hyderabad**	**147.47**	**141**	*i* PKP	PKPdf	20 12 08.0	-0.3
	comp=N,70nm,1.0s						
HYB				*e*		20 12 19.0	
BHJ	**Bhuj**	**147.48**	**122**	*e*x	PKPdf	20 12 14.0	+5.9
NNT	**Nongplab**	**147.81**	**180**	P	PKPdf	20 12 19.8	+11
MJAR	**Matsushiro Arr**	**149.73**	**268**	PKPbc	PKPdf	20 12 12.1	+0.7
	comp=N,5.6nm,0.9s,baz=161,slow=2.0,SNR=12						
MAJO	**Matsushiro**	**149.73**	**268**	*e*PKIKP	PKPdf	20 12 09.4	-2.0
MAJO				MLR	MLR		
	comp=Z,4µm,22.0s,MS6.1						
MAT	**Matsushiro**	**149.73**	**268**	*e*PKP	PKPdf	20 12 12.0	+0.6
MAT				LR	LR		
	comp=Z,2µm,20.0s,MS6.0						
MAT	**Matsushiro**	**149.73**	**268**	PKP	PKPdf	20 12 11.7	+0.3
YSS	**Yuzh-Sakhalins**	**150.11**	**290**	*e*PKIKP	PKPdf	20 12 11.1	-0.5
YSS				MLR	MLR		
	comp=Z,3µm,21.0s,MS6.1						
NST	**Nakhon Sawan**	**150.87**	**181**	P	PKPdf	20 12 17.0	+3.3
KKTK	**Khon Kaen**	**151.40**	**187**	P	PKPdf	20 12 20.0	+5.6
	comp=Z,556nm,0.8s						
BHPL	**Bhopal**	**151.88**	**133**	*e*P	PKPdf	20 12 14.2	-0.8
BHPL				AMb	AMB	20 12 41.5	
	comp=Z,56nm,0.5s						
ARU	**Arti**	**152.03**	**51**	*i* PKIKP	PKPdf	20 12 19.5	+5.3
ARU				*e*		20 16 01.2	
ARU				*i* SS	SS	20 35 26.2	-0.8
ARU				*e*SSS	SSS	20 41 10.4	-3.0
ARU				MLR	MLR		
	comp=Z,11µm,22.0s,MS6.6						
ARU				MLR	MLR		
	comp=N,2µm,22.5s,MS6.4						
ARU				MLR	MLR		
	comp=E,7µm,22.5s,MS6.4						
ARU	**Arti**	**152.03**	**51**	*e*PKPdf	PKPdf	20 12 12.3	-1.9
QIZ	**Qiongzhong**	**152.81**	**202**	PKP	PKPdf	20 12 11.9	-4.5
QIZ				PKP2	PKPab	20 12 38.0	+4.0
QIZ				PP	PP	20 16 05.0	-2.9
QIZ				LR	LR		
	comp=N,2µm,22.3s,MS6.0						
QIZ				LR	LR		
	comp=E,1µm,22.3s,MS6.0						
QIZ				LR	LR		
	comp=Z,3µm,24.5s,MS6.0						
AJM	**Ajmer**	**152.88**	**124**	*e*x	x	20 12 27.8	
AJM				AMb	AMB	20 12 50.6	
	comp=Z,35nm,1.1s						
SVE	**Sverdlovsk**	**153.10**	**50**	*i* PKIKP	PKPdf	20 12 29.0	+13
SVE				MLR	MLR		
	comp=N,1µm,27.0s,MS6.1						
SVE				MLR	MLR		
	comp=E,4µm,27.0s,MS6.1						
SVE				MLR	MLR		
	comp=Z,6µm,27.0s,MS6.3						
BLSP	**Bilaspur**	**153.19**	**142**	*e*P	PKPdf	20 12 15.6	-1.2
BLSP				AMb	AMB	20 12 58.2	
	comp=Z,58nm,1.4s						
CMAR	**Chiang Mai Arr**	**153.64**	**179**	PKP	PKPdf	20 12 15.8	-1.7
	comp=Z,0.5nm,0.8s,baz=217,slow=4.5,SNR=3.1						
CMAR				PKPbc	PKPdf	20 12 23.2	+5.7
	comp=Z,1.3nm,0.8s,baz=213,slow=3.1,SNR=7.7						
CMAR				PKPab	PKPab	20 12 33.5	-4.0
	comp=Z,12nm,0.9s,baz=219,slow=3.2,SNR=24						
NANT	**Nan**	**153.97**	**183**	P	PKPdf	20 12 31.0	+13
YAK	**Yakutsk**	**155.50**	**325**	*i* PKP2	PKPab	20 12 45.8	+1.8
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
CAL	**Calcutta**	**155.90**	**154**	*e*x	x	20 13 40.9	
NDI	**New Delhi**	**156.04**	**125**	*e*x	x	20 12 36.0	
SSE	**Sheshan**	**158.14**	**238**	*e*PKP	PKPdf	20 12 22.9	-0.3
SSE				PP	PP	20 16 42.5	+5.1
SSE				SS	SS	20 36 35.4	+1.4
SSE				PP	PP		
	comp=Z,230nm,12.0s						
SSE				LR	LR		
	comp=N,2µm,21.0s,MS6.2						
SSE				LR	LR		
	comp=E,3µm,21.0s,MS6.2						
SSE				LR	LR		
	comp=Z,5µm,20.3s,MS6.3						
KOLN	**Koldanda**	**158.72**	**138**	*e*P	PKPdf	20 12 24.6	+0.6
	comp=Z,95nm,1.3s						
DMN	**Daman**	**159.27**	**141**	*e*P	PKPdf	20 12 26.6	+1.9
	comp=Z,42nm,1.0s						
PKI	**Pulchoki**	**159.37**	**142**	*e*P	PKPdf	20 12 26.6	+1.8
	comp=Z,136nm,1.6s						
GKN	**Gorkha**	**159.40**	**140**	*e*P	PKPdf	20 12 27.8	+3.0
	comp=Z,63nm,1.1s						
KKN	**Kakani**	**159.50**	**142**	*e*P	PKPdf	20 12 27.7	+2.8
	comp=Z,109nm,1.3s						
SHL	**Shillong**	**159.76**	**160**	*e*x	x	20 12 34.0	
SHL				*e*x	x	20 16 32.0	
GUN	**Gumba**	**159.87**	**143**	*e*P	PKPdf	20 12 30.2	+4.9
	comp=Z,88nm,1.0s						
KMI	**Kunming**	**160.11**	**189**	PKP	PKPdf	20 12 23.9	-1.7
KMI				PKP2	PKPab	20 13 05.8	+0.8
KMI				PP	PP	20 16 50.6	+3.1
KMI				SKS	SKS	20 19 28.8	-1.5
KMI				SKKS		20 23 35.8	
KMI				SS	SS	20 36 54.4	-0.4
KMI				PP	PP		
	comp=Z,530nm,11.2s						
KMI				LR	LR		
	comp=N,2µm,22.7s						
KMI				LR	LR		
	comp=E,3µm,29.3s						
KMI				LR	LR		
	comp=Z,5µm,39.6s						
NJ2	**Nanjing**	**160.21**	**236**	*e*PKP	PKPdf	20 12 18.6	-6.9
NJ2				APKP		20 12 29.9	
NJ2				XPKP		20 12 33.3	
NJ2				PKP2	PKPab	20 13 01.3	-3.9
NJ2				PKS	PKS	20 15 51.0	-3.7
NJ2				PP	PP		
	comp=Z,2µm,10.4s						
NJ2				LR	LR		
	comp=N,12µm,27.8s						
NJ2				LR	LR		
	comp=E,10µm,25.2s						
CN2	**Changchun**	**161.43**	**276**	*e*PKP	PKPdf	20 12 28.3	+1.9
CN2				PP	PP	20 16 58.4	+4.0
CN2				PP	PP		
	comp=Z,400nm,6.0s						
CN2				LR	LR		
	comp=N,4µm,23.0s						

CN2				LR	LR		
	comp=E,2µm,23.0s						
CN2				LR	LR		
	comp=Z,4µm,23.0s						
AAK	**Ala-Archa**	**161.82**	**88**	PKIKP	PKPdf	20 12 28.8	+2.0
AAK				MLR	MLR		
	comp=Z,2µm,20.0s						
FRU	**Bishkek**	**161.96**	**88**	*e*PKIKP	PKPdf	20 12 34.0	+7.1
FRU				*e*		20 12 42.0	
DL2	**Dalian**	**162.49**	**258**	PKP	PKPdf	20 12 28.8	+1.2
DL2				PP	PP	20 17 01.3	+1.3
DL2				SKKS		20 23 50.3	
DL2				SS	SS	20 37 23.6	+4.4
DL2				PP	PP		
	comp=Z,340nm,9.4s						
DL2				LR	LR		
	comp=N,2µm,19.6s						
DL2				LR	LR		
	comp=E,750nm,25.3s						
DL2				LR	LR		
	comp=Z,2µm,24.9s						
LSA	**Lhasa**	**163.47**	**154**	PKP	PKPdf	20 12 29.3	+0.4
LSA				LR	LR		
	comp=N,3µm,54.7s						
LSA				LR	LR		
	comp=E,12µm,56.4s						
LSA				LR	LR		
	comp=Z,2µm,54.7s						
NVS	**Novosibirsk**	**165.57**	**41**	*e*PKIKP	PKPdf	20 12 33.1	+3.0
NVS				*e*		20 17 10.9	
NVS				pmax	pmax		
	comp=N,19nm,2.1s						
NVS				pmax	pmax		
	comp=E,26nm,2.1s						
NVS				pmax	pmax		
	comp=Z,61nm,2.1s						
NVS				pmax	pmax		
	comp=N,23nm,2.2s						
NVS				pmax	pmax		
	comp=E,13nm,2.2s						
ZAL	**Zalesovo**	**166.85**	**41**	PKP	PKPdf	20 12 27.7	-3.4
	comp=E,1.6nm,0.9s,baz=226,slow=2.5,SNR=9.6						
ZAL				PKPab	PKPab	20 13 35.5	+2.1
	comp=E,1.8nm,0.9s,baz=177,slow=5.5,SNR=1.9						
MKAR	**Makanchi Array**	**167.85**	**75**	PKP	PKPdf	20 12 28.2	-3.8
	comp=E,2.0nm,1.1s,baz=135,slow=2.0,SNR=3.8						
MKAR				PKPab	PKPab	20 13 37.0	-0.9
	comp=E,5.0nm,0.9s,baz=270,slow=3.6,SNR=5.9						
MKAR				PP	PP	20 17 37.6	+10
	comp=E,6.4nm,1.1s,baz=256,slow=5.0,SNR=4.4						
MKAR	**Makanchi Array**	**167.85**	**75**	PKP	PKPdf	20 12 28.2	-3.8
MKAR				PKPab	PKPab	20 13 37.0	-0.9
MKAR				PP	PP	20 17 37.6	+10
LZH	**Lanzhou**	**170.61**	**202**	*e*PKP	PKPdf	20 12 38.0	+4.0
LZH				PP	PP	20 17 48.5	+6.9
LZH				SKKS		20 24 27.0	
LZH				SS	SS	20 38 44.0	+3.2
LZH				PP	PP		
	comp=Z,700nm,4.0s						
LZH				LR	LR		
	comp=N,6µm,20.0s						
LZH				LR	LR		
	comp=Z,10µm,21.0s						
LZH	**Lanzhou**	**170.61**	**202**	*e*PKIKP	PKPdf	20 12 38.0	+4.0
LZH						20 12 43.0	
LZH						20 17 48.5	
LZH				SS	SS	20 38 44.0	+3.2
LZH				MLR	MLR		
	comp=Z,10µm,21.0s						
LZH	**Lanzhou**	**170.61**	**202**	*e*PKP	PKPdf	20 12 38.0	+4.0
LZH				sPKP		20 12 43.0	
LZH				PP	PP	20 17 48.5	+6.9
LZH				SKKS		20 24 27.0	
LZH				SS	SS	20 38 44.0	+3.2
LZH				LR	LR		
	comp=Z,10µm,21.0s						
WMQ	**Urumqi**	**171.48**	**93**	*e*PKP	PKPdf	20 12 33.4	-0.8
WMQ				PP	PP	20 17 47.8	+2.1
WMQ				SKKS		20 24 29.7	
WMQ				SS	SS	20 38 47.8	-1.1
WMQ				PP	PP		
	comp=Z,870nm,10.0s						
WMQ				LR	LR		
	comp=N,7µm,22.3s						
WMQ				LR	LR		
	comp=E,6µm,23.2s						
WMQ				LR	LR		
	comp=Z,8µm,20.0s						
IRK	**Irkutsk**	**171.99**	**338**	*e*PKIKP	PKPdf	20 12 40.5	+6.3
TLY	**Talaya**	**172.66**	**339**	*e*PKIKP	PKPdf	20 12 43.0	+8.4
TLY				pmax	pmax		
	comp=Z,10.0nm,1.7s						
TLY				MLR	MLR		
	comp=Z,9µm,26.0s						
ZAK	**Zakamensk**	**173.94**	**336**	*e*PKIKP	PKPdf	20 12 36.3	+1.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	**Songino Array**	**174.39**	**304**	PKP	PKPdf	20 12 33.6	-1.7
	comp=Z,1.2nm,1.1s,baz=256,slow=1.5,SNR=4.9						
SONM				PKPab	PKPab	20 14 04.9	-2.0
	comp=Z,0.7nm,0.8s,baz=153,slow=10,SNR=5.1						
SONM				PP	PP	20 18 09.6	+9.5
	comp=Z,2.1nm,1.1s,baz=72,slow=3.9,SNR=6.2						
GTA	**Gaotai**	**174.52**	**183**	*e*PKP	PKPdf	20 12 36.1	+0.5
GTA				APKP		20 12 40.0	
GTA				XPKP		20 12 42.8	
GTA				LR	LR		
	comp=N,2µm,21.4s						
GTA				LR	LR		
	comp=E,2µm,22.9s						
GTA				LR	LR		
	comp=Z,3µm,24.5s						

WEL 15 19:55:56.9±0.4,39.85S×177.23E,h43^{km}±5^{km},ML3.5/5, 1C,Error ellipse: s-maj=3.8km s-min=2.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PWZ	**Pawanui**	**0.34**	**238**	⇑PN	P	19 56 05.3	-0.5
PWZ				SN	S	19 56 12.5	+0.5
PWZ				SN	S	19 56 12.8	+0.8
BKZ	**Black Stump Fm**	**0.89**	**320**	PN	P	19 56 12.2	-0.8
BKZ				SN	S	19 56 23.7	-1.3
KNZ	**Kokohu**	**0.90**	**23**	*e*PN	P	19 56 13.5	+0.3
TSZ	**Takapari Road**	**1.00**	**257**	PN	P	19 56 13.9	-0.7
TSZ				SN	S	19 56 26.9	-0.9
BFZ	**Birch Farm**	**1.12**	**222**	*e*PN	P	19 56 16.3	0.0
MOVZ	**Moawhango**	**1.23**	**291**	PN	P	19 56 17.1	-0.7
MOVZ				SN	S	19 56 32.0	-1.5
TUVZ	**Tukino**	**1.35**	**295**	PN	P	19 56 19.9	+0.2
WNVZ	**Wahianoa**	**1.37**	**292**	PN	P	19 56 20.0	+0.1
RITZ	**Rihia Road**	**1.38**	**309**	PN	P	19 56 21.2	+1.1
OTVZ	**Oturere**	**1.39**	**299**	PN	P	19 56 20.6	+0.3
DRZ	**Dome Shelter**	**1.41**	**293**	*e*PN	P	19 56 21.6	+1.1
TRVZ	**Turoa**	**1.41**	**292**	PN	P	19 56 21.0	+0.4
FWVZ	**Far West T-bar**	**1.43**	**294**	PN	P	19 56 21.1	+0.3
FWVZ				SN	S	19 56 39.1	+0.5
NGZ	**Ngauruhoe**	**1.43**	**298**	PN	P	19 56 21.4	+0.6
MTVZ	**Mangateitei**	**1.44**	**288**	*e*PN	P	19 56 21.5	+0.6
KRVZ	**Karewarewa**	**1.44**	**301**	PN	P	19 56 21.5	+0.5
CNZ	**Chateau**	**1.46**	**296**	*e*PN	P	19 56 21.9	+0.7
WTVZ	**West Tongariro**	**1.47**	**299**	PN	P	19 56 21.8	+0.4
MRZ	**Mangatainoka R**	**1.50**	**237**	PN	P	19 56 20.8	-1.0
MWZ	**Matawai**	**1.53**	**9**	*e*PN	P	19 56 22.4	+0.2
PKVZ	**Pokaka**	**1.56**	**290**	*e*PN	P	19 56 23.2	+0.5
URZ	**Urewera**	**1.59**	**357**	*e*PN	P	19 56 22.2	-0.8
KIW	**Kapiti Island**	**2.04**	**240**	*e*PN	P	19 56 28.1	-1.4
VRZ	**Vera Road**	**2.05**	**290**	*e*PN	P	19 56 32.2	+2.7
MRW	**Makara Radio**	**2.37**	**234**	SN	S	19 57 00.4	-1.8
TCW	**Tory Channel**	**2.63**	**238**	SN	S	19 57 06.7	-2.2
MQZ	**McQueen’s Vall**	**5.16**	**220**	SN	S	19 58 04.1	-8.5

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*NIED **15** 20:08:00,23.70N×121.90E,h5^{km},Mw4.0 Best double couple: M$_0$9.59×10^{14} NP1:φ$_s$23°,δ70°,λ88°. NP2:φ$_s$209°,δ20°,λ96°.*

*BJI **15** 20:08:12.8,23.76N×121.94E,h24^{km},ML4.1,Ms4.2, Msz4.2*

*JMA **15** 20:08:16.5±0.6,23.67N×121.90E,M3.8*

*IDC **15** 20:08:16.5±2.0,24.09N×121.88E,mb3.7/4,mb1 3.8/4, mb1mx3.5/20,mbtmp3.7/4,Error ellipse: s-maj=149.8km s-min=26.0km az=64.0*

*NEIC **15** 20:08:18.3±0.7,24.00N×121.68E,h10^{km},mb4.6/1,Error ellipse: s-maj=42.0km s-min=7.4km az=72.0*

*TAP **15** 20:08:18.2,24.03N×121.75E,h4^{km},ML4.2*

ISC 15 20:08:16.5±1.6,23.90N±0.08×121.76E±0.04,h8^{km}±9^{km}, n15,σ1^{s}11/20,mb3.8/5,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.31**	**330**	*e*P	**Pg**	**20 08 22.2**	**-0.6**
YHNB	**Yeheng**	**0.84**	**335**	*e*P	**Pb**	**20 08 32.7**	**-0.2**
TATO	**Taipei**	**1.10**	**347**	*e*P	**Pb**	**20 08 37.6**	**+0.3**
YOJ	**Yonaguni jima**	**1.27**	**64**	P	**Pb**	**20 08 41.0**	**+0.8**
YOJ				*e*S	**Sb**	**20 08 58.8**	**+2.2**
IRIF	**Iriomote-Funau**	**1.85**	**76**	P	**Pn**	**20 08 49.3**	**+0.5**
IRIF				*e*S	**Sn**	**20 09 11.8**	**-0.8**
HATJ	**Hateruma jima**	**1.88**	**85**	*e*S	**Sn**	**20 09 11.4**	**-1.9**
JKRS	**Kuro-shima**	**2.08**	**80**	P	**Pn**	**20 08 52.5**	**+0.3**
JKRS				*e*S	**Sn**	**20 09 19.8**	**+1.3**
JIJ	**Ishigaki jima**	**2.22**	**78**	P	**Pn**	**20 08 54.0**	**-0.2**
JIJ				*e*S	**Sn**	**20 09 21.4**	**-0.8**
QZH	**Quanzhou**	**3.07**	**290**	*e*P	**Pn**	**20 09 07.3**	**+1.0**
QZH				S	**Sn**	**20 09 45.4**	**+1.8**
QZH				Smax			
	comp=N,580nm,0.9s						
QZH				Smax			
	comp=E,390nm,0.9s						
GZH	**Guangzhou**	**7.77**	**266**	P	**Pn**	**20 10 08.9**	**-3.8**
GZH				Smax			
	comp=N,60nm,1.0s						
GZH				Smax			
	comp=E,60nm,0.9s						
GZH				LR	LR		
	comp=N,3µm,20.8s						
GZH				LR	LR		
	comp=E,1µm,22.4s						
SONM	**Songino Array**	**26.83**	**337**	P	**P**	**20 13 57.4**	**-1.7**
	comp=E,1.3nm,0.9s,mb3.5,baz=152,slow=8.9,SNR=5.0						
MKAR	**Makanchi Array**	**38.91**	**316**	P	**P**	**20 15 43.2**	**-1.1**
	comp=E,0.8nm,0.6s,mb3.6,baz=95,slow=9.3,SNR=4.0						
WRAB	**Tennant Creek**	**45.27**	**163**	*e*P	**P**	**20 16 37.3**	**+0.7**
	comp=E,7.7nm,1.1s,mb4.5						
WRA	**Warramunga Arr**	**45.27**	**163**	P	**P**	**20 16 37.1**	**+0.4**
	comp=E,0.4nm,0.7s,mb3.4,baz=345,slow=8.9,SNR=5.1						
BVAR	**Borovoye Array**	**48.22**	**321**	P	**P**	**20 16 58.5**	**-1.0**
	comp=E,0.9nm,0.6s,mb4.0,baz=117,slow=9.7,SNR=3.1						

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*ATH **15** 20:11:33.6,37.00N×27.79E,h27^{km}±2^{km},MD3.2/3*

*ISK **15** 20:11:33.4,37.02N×27.75E,h21^{km},MD3.2*

*NEIC **15** 20:11:33.6,37.00N×27.79E,h27^{km},MD3.2(ATH), MD3.2(ISK),After ATH.*

*CSEM **15** 20:11:33.8±0.1,37.03N×27.80E,h15^{km},MD3.2,Error ellipse: s-maj=2.5km s-min=1.9km az=69.0*

ISC 15 20:11:34.5±0.4,37.01N±0.04×27.71E±0.04,h33^{km},n18, σ1^{s}36/27,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.22**	**285**	*i* P	**P**	**20 11 39.2**	**-2.2**
BDRM				*i* S	**S**	**20 11 44.1**	**-2.0**
MLSB	**Milas**	**0.29**	**11**	*i* PG	**P**	**20 11 39.9**	**-2.2**
MLSB				*i* SG	**Sb**	**20 11 45.1**	**-2.2**
BODT	**Bodrum**	**0.32**	**279**	*i* PG	**P**	**20 11 40.8**	**-1.8**
BODT				*i* SG	**Sb**	**20 11 47.8**	**-0.3**
NISR	**Nisiros**	**0.61**	**230**	*e*PN	**Pn**	**20 11 46.5**	**-0.4**
AYDN	**Tasoluk**	**0.66**	**12**	*i* P	**P**	**20 11 46.9**	**-0.5**
AYDN				*i* S	**S**	**20 11 56.3**	**-0.4**
DALT	**Dalyan (Mudla)**	**0.78**	**108**	PG	**P**	**20 11 48.3**	**-0.8**
DALT				SG	**S**	**20 12 00.3**	**+0.5**
ARG	**Arkhangelos**	**0.86**	**157**	*e*PN	**Pn**	**20 11 49.8**	**-0.6**
ARG				*e*SN	**Sn**	**20 12 02.3**	**+0.4**
SMG	**Samos**	**0.98**	**315**	*e*PN	**Pn**	**20 11 53.5**	**+1.3**
SMG				*e*SN	**Sn**	**20 12 08.5**	**+3.5**
FETY	**Fethiye**	**1.17**	**108**	*e*PN	**Pn**	**20 11 53.7**	**-1.1**
DNZL	**Cakiroluk**	**1.26**	**57**	*i* P	**P**	**20 11 56.7**	**+0.8**
DNZL				*i* S	**S**	**20 12 16.3**	**+4.3**
DENT	**Denizli**	**1.29**	**54**	*e*PN	**Pn**	**20 11 57.1**	**+0.5**
IZM	**Izmir**	**1.43**	**346**	*e*PN	**Pn**	**20 11 59.6**	**+1.0**
KARP	**Karpathos**	**1.53**	**197**	*e*PN	**Pn**	**20 12 01.6**	**+1.7**
MANT	**Manisa**	**1.62**	**24**	*i* P	**P**	**20 12 03.7**	**+2.6**
MANT				*i* S	**S**	**20 12 27.6**	**+6.5**
APE	**Apeiranthos**	**1.74**	**273**	*e*PN	**Pn**	**20 12 05.5**	**+2.5**
ELL	**Elmali**	**1.78**	**98**	*e*PN	**Pn**	**20 12 03.2**	**-0.4**
PRK	**Paraskevi**	**2.50**	**334**	*e*PN	**Pn**	**20 12 14.4**	**+0.5**
LIA	**Limnos Island**	**3.50**	**326**	*e*PN	**Pn**	**20 12 29.3**	**+1.2**

IDC 15 20:15:05.6±2.5,0.94N×97.49E,mb3.7/5,mb1 3.8/6, mb1mx3.6/19,mbtmp3.6/6,ML3.6/1,Error ellipse: s-maj=97.5km s-min=25.8km az=56.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**17.46**	**5**	P	P	20 19 10.7	-1.7
	0.1nm,0.3s,baz=195,slow=12,SNR=4.4						
WRA	**Warramunga Arr**	**41.65**	**122**	P	P	20 22 56.0	-1.7
	0.4nm,0.5s,baz=299,slow=9.2,SNR=4.4						
SONM	**Songino Array**	**47.34**	**8**	P	P	20 23 41.3	-1.8
	0.2nm,0.5s,baz=180,slow=8.6,SNR=4.0						
MKAR	**Makanchi Array**	**47.56**	**346**	P	P	20 23 43.1	-1.8
	1.1nm,0.5s,baz=164,slow=8.5,SNR=17						
ZAL	**Zalesovo**	**53.85**	**351**	P	P	20 24 30.7	-1.9
	1.3nm,0.3s,baz=156,slow=1.8,SNR=3.2						
BVAR	**Borovoye Array**	**56.59**	**341**	P	P	20 24 49.4	-3.0
	0.6nm,0.7s,baz=215,slow=36,SNR=3.4						

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*ATH **15** 20:20:53.8,40.47N×23.60E,h16^{km}±1^{km},MD2.9/3*

*NEIC **15** 20:20:53.8,40.47N×23.60E,h16^{km},MD2.9(ATH),After ATH.*

*THE **15** 20:20:54.0,40.46N×23.60E,h1^{km},ML2.3*

*CSEM **15** 20:20:54.2±0.1,40.47N×23.63E,h2^{km},MD2.9,Error ellipse: s-maj=1.8km s-min=1.5km az=35.0*

ISC 15 20:20:53.5±0.5,40.46N±0.03×23.60E±0.03,h10^{km}±5^{km}, n15,σ0^{s}68/25,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLG	**Polygyros**	**0.14**	**233**	*e*PB	**Pb**	**20 20 57.7**	**-0.1**
PLG				*e*SB	**Sb**	**20 21 00.0**	**-0.6**
OUR	**Ouranopolis**	**0.32**	**113**	*e*Pg	**Pg**	**20 21 00.1**	**-0.1**
OUR				*e*Sg	**Sg**	**20 21 04.5**	**-0.2**
SOH	**Sokhos**	**0.41**	**333**	*e*Pg	**Pg**	**20 21 02.1**	**+0.2**
SOH				*e*Sg	**Sg**	**20 21 07.6**	**+0.2**
THE	**Thessaloniki**	**0.51**	**290**	*e*Pg	**Pg**	**20 21 03.6**	**-0.3**
THE				*e*Sg	**Sg**	**20 21 11.3**	**+0.5**
PAIG	**Paliouri**	**0.54**	**173**	*e*Pg	**Pg**	**20 21 04.1**	**-0.3**
PAIG				*e*Sg	**Sg**	**20 21 12.0**	**+0.4**
SRS	**Serrai**	**0.66**	**360**	*e*Pg	**Pg**	**20 21 06.3**	**-0.5**
SRS				*e*Sg	**Sg**	**20 21 16.3**	**+0.7**
NVR	**Nevrokopi**	**0.91**	**13**	*e*PN	**Pn**	**20 21 10.9**	**-1.3**
LIT	**Litokhoron**	**0.92**	**247**	*e*Pg	**Pg**	**20 21 11.3**	**-0.7**
LIT				*e*Sg	**Sg**	**20 21 24.6**	**+0.3**
GRG	**Griva**	**1.03**	**299**	*e*Pg	**Pg**	**20 21 13.7**	**-0.6**
GRG				*e*Sg	**Sg**	**20 21 28.5**	**+0.4**
NEO	**Neokhori**	**1.19**	**194**	*e*PN	**Pn**	**20 21 16.4**	**+0.2**
LIA	**Limnos Island**	**1.34**	**114**	*e*PN	**Pn**	**20 21 19.2**	**+0.8**
RDO	**Rodhopi**	**1.63**	**64**	*e*PN	**Pn**	**20 21 24.0**	**+1.5**
FNA	**Florina**	**1.72**	**282**	*e*Pb	**Pb**	**20 21 24.5**	**-0.3**
AGG	**Agios Georgios**	**1.74**	**215**	*e*Pb	**Pb**	**20 21 24.6**	**-0.5**
AGG				*e*Sb	**Sb**	**20 21 47.9**	**+1.1**
ALN	**Alexandroupoli**	**1.91**	**76**	*e*Pb	**Pb**	**20 21 26.6**	**-1.6**
ALN				*e*Sb	**Sb**	**20 21 52.5**	**+0.5**

KRSC 15 20:25:59.9±0.8,55.00N×162.73E,h17^{km}±2^{km},ML4.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.73**	**233**	*i* P	Pb	20 26 13.9	+0.1
MKZ				*i* S	Sb	20 26 23.4	+0.1
KBTR	**Krutoberegovo**	**1.21**	**2**	*i* P	Pb	20 26 22.0	0.0
KBTR				*i* S	Sb	20 26 38.0	+0.8
ZLN	**Zelenaya**	**1.50**	**314**	*i* P	Pn	20 26 26.7	+0.5
ZLN				*i* S	Sn	20 26 46.2	+0.8
TUMR	**Tumrok**	**1.51**	**282**	*i* P	Pn	20 26 26.3	-0.1
TUMR				*i* S	Sn	20 26 46.0	+0.2
CIRR	**Tsirk**	**1.59**	**316**	*i* P	Pn	20 26 28.2	+0.7
CIRR				*e*S	Sn	20 26 49.4	+1.7
LGNR	**Loginova**	**1.59**	**314**	*i* P	Pn	20 26 28.4	+0.8
LGNR				*e*S	Sn	20 26 49.4	+1.6
KMNR	**Kamenistaya**	**1.61**	**299**	*i* P	Pn	20 26 28.1	+0.2
KMNR				*e*S	Sn	20 26 48.6	+0.2
KPT	**Kopyto**	**1.73**	**305**	*i* P	Pn	20 26 29.9	+0.4
KPT				*e*S	Sn	20 26 52.2	+0.9
KRSR	**Krestovskiy**	**1.73**	**316**	*i* P	Pn	20 26 29.5	-0.1
KRSR				*e*S	Sn	20 26 50.6	-0.8
KLY	**Klyuchi**	**1.77**	**319**	*i* P	Pn	20 26 28.8	-1.3
KLY				*i* S	Sn	20 26 49.5	-2.8
BKI	**Bering**	**1.87**	**82**	*e*P	Pn	20 26 30.5	-1.1
BKI				*i* S	Sn	20 26 52.2	-2.8
BKI				Smax			
	90nm,0.9s						
KOZ	**Kozyrevsk**	**1.94**	**304**	*e*P	Pn	20 26 33.7	+1.1
KOZ				*e*S	Sn	20 26 58.2	+1.5
KII	**Karymskiy**	**2.14**	**245**	*e*P	Pn	20 26 35.4	-0.1
KII				*e*S	Sn	20 27 01.3	-0.6
SRDR	**Sredinnyy**	**2.16**	**309**	*i* P	Pn	20 26 35.9	+0.2
SRDR				*e*S	Sn	20 27 03.4	+1.1
ESO	**Esso**	**2.48**	**294**	*i* P	Pn	20 26 40.5	+0.3
ESO				*i* S	Sn	20 27 10.8	+0.5
SPN	**Mys Shipunski**	**2.49**	**221**	*e*P	Pn	20 26 39.5	-0.9
SPN				*i* S	Sn	20 27 08.8	-1.8
NLC	**Nalytchevo**	**2.71**	**229**	*e*P	Pn	20 26 44.3	+0.7
NLC				*e*S	Sn	20 27 16.3	+0.1
SDLR	**Sedlovina**	**2.84**	**234**	*e*P	Pn	20 26 47.4	+1.9
SDLR				*e*S	Sn	20 27 21.3	+1.6
UGLR	**Uglovaya**	**2.92**	**234**	*e*P	Pn	20 26 47.0	+0.5
UGLR				*e*S	Sn	20 27 22.7	+1.2
AVH	**Avacha**	**2.92**	**235**	*e*P	Pn	20 26 47.0	+0.4
AVH				*e*S	Sn	20 27 21.8	+0.2
KOK	**Koryaka**	**2.95**	**236**	*e*P	Pn	20 26 47.6	+0.5
KOK				*e*S	Sn	20 27 22.6	+0.1
GNL	**Ganaly**	**3.09**	**247**	*e*P	Pn	20 26 49.4	+0.4
GNL				*e*S	Sn	20 27 25.8	-0.2
PET	**Petropavlovsk**	**3.12**	**232**	*e*P	Pn	20 26 50.1	+0.7
PET				*e*S	Sn	20 27 27.0	+0.5
RUS	**Russkaya**	**3.59**	**226**	*e*P	Pn	20 26 55.5	-0.6
RUS				*e*S	Sn	20 27 35.5	-3.0
GRL	**Gorelyy**	**3.69**	**230**	*e*P	Pn	20 26 59.2	+1.6
GRL				*e*S	Sn	20 27 42.7	+1.5
APC	**Apacha**	**3.89**	**240**	*e*P	Pn	20 27 01.5	+1.1
APC				*e*S	Sn	20 27 45.6	-0.6
APC				Smax			
	20nm,1.0s						
PAU	**Pauzhetka**	**5.02**	**228**	*e*P	Pn	20 27 15.0	-1.3
PAU				*e*S	Sn	20 28 09.3	-5.3
PAU				Smax			
	40nm,1.1s						

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*THR **15** 20:33:09.6±1.1,31.53N×50.27E,h18^{km}±8^{km},ML3.1*

*CSEM **15** 20:33:10.6±0.1,31.57N×50.24E,h30^{km},ML3.1,Error ellipse: s-maj=3.7km s-min=2.9km az=12.0*

*TEH **15** 20:33:11.1,31.54N×50.33E,h16^{km},Mn3.0*

ISC 15 20:33:10.0±0.8,31.56N±0.06×50.28E±0.06,h16^{km},n22, σ0^{s}95/22,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGO	**Shushtar**	**1.37**	**294**	*e*PG	**Pn**	**20 33 35.0**	**+0.3**
SHGR	**Shooshtar-Gavs**	**1.37**	**294**	*e*PG	**Pn**	**20 33 35.0**	**+0.3**
SHGR				AML	AML	20 34 06.4	
	comp=N,348nm,0.7s						
IGAR	**Garneh**	**1.77**	**67**	Pn	**Pn**	**20 33 40.0**	**-0.3**
IKLH	**Kalahroud**	**2.07**	**32**	Pn	**Pn**	**20 33 45.1**	**+0.5**
IZEF	**Zefreh**	**2.19**	**52**	Pn	**Pn**	**20 33 46.6**	**+0.3**
NASN	**Na’in**	**2.48**	**59**	*e*PN	**Pn**	**20 33 52.2**	**+1.7**
NASN				*e*SG	**Sn**	**20 34 28.0**	**+7.5**
IPAR	**Pars**	**2.94**	**125**	Pn	**Pn**	**20 33 54.5**	**-2.5**
ASAO	**Ashtian**	**2.99**	**356**	*e*PN	**Pn**	**20 33 59.1**	**+1.3**
ASAO				*e*SG	**Sn**	**20 34 44.6**	**+11**
ASAO				AML	AML	20 34 51.7	
	comp=N,57nm,0.7s						
IMOK	**Mook**	**3.27**	**139**	Pn	**Pn**	**20 34 07.5**	**+5.7**
IQOM	**Qom**	**3.34**	**11**	Pn	**Pn**	**20 34 02.2**	**-0.5**
IQOM				Sn	**Sn**	**20 34 40.6**	**-1.9**
IKOM	**Komasi**	**3.50**	**319**	Pn	**Pn**	**20 34 04.7**	**-0.3**
IVRN	**Varamin**	**3.64**	**19**	Pn	**Pn**	**20 34 06.8**	**-0.1**
IVRN	**Varamin**	**3.64**	**19**	Lg		20 35 04.5	
IRAZ	**Razeghan**	**3.85**	**356**	Pn	**Pn**	**20 34 24.5**	**+15**
GHIR	**Ghir-Karzin**	**4.02**	**144**	*e*PN	**Pn**	**20 34 12.6**	**+0.2**
IDMV	**Damavand**	**4.27**	**20**	Pn	**Pn**	**20 34 15.1**	**-0.8**
SNGE	**Sanandaj**	**4.29**	**326**	*e*PN	**Pn**	**20 34 15.9**	**-0.4**
DAMV	**Damavand**	**4.30**	**19**	*e*PN	**Pn**	**20 34 16.6**	**+0.2**
DAMV				AML	AML	20 35 36.0	
	comp=N,13nm,0.6s						
IDHR	**Dehrash**	**4.53**	**315**	Pn	**Pn**	**20 34 19.2**	**-0.4**
IFIR	**Firoozkooh**	**4.57**	**26**	Pn	**Pn**	**20 34 21.6**	**+1.5**
IFIR	**Firoozkooh**	**4.57**	**26**	Lg		20 35 33.2	
IGZV	**Gazvin**	**4.82**	**359**	Lg		20 35 42.1	

NEIC 15 20:38:31.9,41.33N×126.01W,h5^{km},MD3.1(NCEDC),1C, After NCEDC.,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRMB	**Red Mountain**	**1.59**	**82**	*e*P	Pn	20 38 58.6	-2.3
KBO	**Bosley Butte**	**1.60**	**56**	*e*P	Pn	20 38 58.4	-2.6
KBO				*e*S	Sb	20 39 15.3	-6.6
KHMM	**Horse Mountain**	**1.78**	**104**	*e*P	Pn	20 39 01.3	-2.2
KEBM	**Edson Butte**	**1.98**	**38**	*e*P	Pn	20 39 03.7	-2.8
YBH	**Yreka Blue Hor**	**2.51**	**80**	*e*P	Pn	20 39 12.7	-1.3
HUMO	**Hull Mountain**	**2.61**	**60**	⇑*e*P	Pn	20 39 13.3	-2.1
WDC	**Whiskeytown Da**	**2.73**	**105**	*e*P	Pn	20 39 15.1	-2.1
MOD	**Modoc**	**4.32**	**80**	*e*P	Pn	20 39 37.1	-2.6
BEKR	**Beckwourth**	**4.54**	**107**	*e*P	Pn	20 39 41.0	-2.0
WVOR	**Wild Horse Val**	**5.61**	**76**	*e*P	Pn	20 39 53.2	-4.8
BMO	**Blue Mountains**	**7.28**	**58**	*e*P	Pn	20 40 19.0	-2.6
MCMT	**McKenzie Canyo**	**10.24**	**66**	*e*P	P	20 41 00.4	-2.2
BOZ	**Bozeman (W)**	**11.30**	**63**	P	P	20 41 13.6	-3.4

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*NEIC **15** 20:45:03.5±0.5,24.99N×122.43E,h147^{km}±5^{km},mb3.9/1, Error ellipse: s-maj=10.9km s-min=10.2km az=197.0*

*IDC **15** 20:45:03.8±3.1,25.05N×122.53E,h149^{km}±32^{km},mb3.3/7, mb1 3.4/8,mb1mx3.3/20,mbtmp3.7/8,Error ellipse: s-maj=26.5km s-min=17.0km az=64.0*

*TAP **15** 20:45:04.6,24.91N×122.39E,h145^{km},ML4.5*

*JMA **15** 20:45:05.7±0.2,24.93N×122.41E,h135^{km}±3^{km},M4.0*

ISC 15 20:45:03.1±0.5,24.96N±0.07×122.39E±0.04,h153^{km}±5^{km}, n26,σ0^{s}94/37,mb3.5/8,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.75**	**131**	P	**P**	**20 45 26.8**	**+0.2**
YOJ				S	**S**	**20 45 43.2**	**-1.4**
TATO	**Taipei**	**0.82**	**272**	*e*P	**P**	**20 45 26.8**	**-0.2**
YHNB	**Yeheng**	**0.97**	**253**	*e*P	**P**	**20 45 28.3**	**+0.2**
NACB	**Ninganchiao**	**1.06**	**223**	*e*P	**P**	**20 45 28.5**	**-0.3**
IRIF	**Iriomote-Funau**	**1.37**	**117**	P	**P**	**20 45 32.3**	**+0.5**
IRIF				S	**S**	**20 45 52.8**	**-1.2**
HATJ	**Hateruma jima**	**1.57**	**125**	P	**P**	**20 45 34.8**	**+0.9**
HATJ				S	**S**	**20 45 57.2**	**-0.5**
JKRS	**Kuro-shima**	**1.64**	**116**	P	**P**	**20 45 35.8**	**+1.1**
JKRS				S	**S**	**20 45 58.4**	**-0.6**
JIJ	**Ishigaki jima**	**1.70**	**110**	P	**P**	**20 45 36.1**	**+0.8**
JIJ				S	**S**	**20 45 58.7**	**-1.5**
JTJ	**Tarama**	**2.12**	**98**	P	**P**	**20 45 41.5**	**+1.3**
JTJ				S	**S**	**20 46 08.6**	**-0.2**
JMJ	**Miyako jima 2**	**2.64**	**92**	P	**P**	**20 45 48.5**	**+1.8**
JMJ				S	**S**	**20 46 20.0**	**0.0**
JOGS	**Gusukube**	**2.75**	**93**	P	**P**	**20 45 49.9**	**+1.9**
JOGS				S	**S**	**20 46 22.6**	**+0.2**
JKE	**Kume jima 2**	**4.19**	**70**	P	**P**	**20 46 07.6**	**+0.8**
JKE				*e*S	**S**	**20 46 56.3**	**+0.5**
JAGN	**Aguni-jima**	**4.67**	**69**	P	**P**	**20 46 14.3**	**+1.3**
JAGN				*e*S	**S**	**20 47 07.1**	**+0.2**
JJT2	**Tamagusuku 2**	**4.98**	**75**	*e*S	**S**	**20 47 14.2**	**-0.1**
JIH	**Iheya**	**5.43**	**66**	*e*S	**S**	**20 47 24.0**	**-1.0**
JOW	**Kunigami**	**5.62**	**69**	P	**P**	**20 46 24.8**	**-0.8**
	1.3nm,0.3s,baz=78,slow=21,SNR=18						
JOW				S	**S**	**20 47 25.6**	**-4.0**
	baz=93,slow=19						
JOW	**Kunigami**	**5.62**	**69**	P	**P**	**20 46 25.5**	**-0.1**
JOW				*e*S	**S**	**20 47 27.0**	**-2.6**

CMAR	**Chiang Mai Arr**	**22.71**	**258**	P	**P**	**20 49 54.0**	**+1.6**
	0.7nm,0.5s,mb3.3,baz=59,slow=8.0,SNR=8.1						
CMAR				PcP	PcP	20 53 41.4	+0.2
	0.6nm,0.7s,baz=18,slow=0.9,SNR=6.9						
SONM	**Songino Array**	**26.11**	**335**	P	**P**	**20 50 24.3**	**0.0**
	0.9nm,0.4s,mb3.8,baz=154,slow=9.9,SNR=17						
MKAR	**Makanchi Array**	**38.56**	**315**	P	**P**	**20 52 11.7**	**-0.7**
	0.4nm,0.6s,mb3.2,baz=97,slow=9.0,SNR=7.0						
MKAR				PcP	PcP	20 54 21.3	-0.9
	0.6nm,0.7s,baz=90,slow=4.9,SNR=6.6						
ZAL	**Zalesovo**	**40.21**	**326**	P	**P**	**20 52 25.5**	**-0.3**
	0.7nm,0.5s,mb3.6,baz=41,slow=4.1,SNR=3.6						
MDRS	**Chennai**	**41.40**	**261**	*e*x	x	20 52 23.0	
MDRS				*e*x	x	20 59 41.0	
MDRS				*e*x	x	21 01 14.0	
WRAB	**Tennant Creek**	**46.11**	**164**	P	**P**	**20 53 13.3**	**-0.4**
	1.6nm,0.6s,mb3.8						
WRA	**Warramunga Arr**	**46.12**	**164**	P	**P**	**20 53 13.4**	**-0.4**
	1.0nm,0.5s,mb3.7,baz=348,slow=9.0,SNR=14						
ARCES	**ARCESS Array B**	**69.24**	**338**	P	**P**	**20 55 53.4**	**-1.4**
	0.6nm,0.8s,mb3.4,baz=90,slow=3.6,SNR=3.5						
FINES	**FINESS Array B**	**71.34**	**330**	P	**P**	**20 56 06.5**	**-1.1**
	0.3nm,0.3s,mb3.5,baz=61,slow=6.1,SNR=10						

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*IDC **15** 20:59:28.8±1.5, 40.75N×126.37W, mb3.6/5, mb1 3.8/10, mb1mx3.7/27, mbtmp3.6/10, ML3.4/3, MS3.8/1, Ms1 3.8/1, ms1mx3.6/29, Error ellipse: s-maj=25.6km s-min=13.4km az=21.0*

*NEIC **15** 20:59:29.9±1.0, 40.72N×126.33W, h10^{km}, mb3.8/4, Error ellipse: s-maj=14.0km s-min=7.9km az=66.0*

ISC 15 20:59:27.9±0.8**, 40.66N**±0.05×**126.38W**±0.09**, h10^{km}, n36,** σ1^{s}**20**/37**, mb3.6**/7**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHMM	**Horse Mountain**	**2.03**	**83**	*e*Pn	**Pn**	**21 00 02.4**	**-0.2**
KRMB	**Red Mountain**	**2.06**	**64**	*e*Pn	**Pn**	**21 00 02.7**	**-0.4**
KBO	**Bosley Butte**	**2.25**	**46**	*e*Pn	**Pn**	**21 00 04.7**	**-1.1**
KEBM	**Edson Butte**	**2.69**	**34**	*e*Pn	**Pn**	**21 00 10.2**	**-1.9**
WDC	**Whiskeytown Da**	**2.93**	**90**	*e*Pn	**Pn**	**21 00 15.4**	**0.0**
YBH	**Yreka Blue Hor**	**2.97**	**68**	Pn	**Pn**	**21 00 17.7**	**+1.6**
	19nm,0.3s,baz=279,slow=9.1,SNR=199						
YBH				Sn	**Sn**	**21 00 53.2**	**+1.0**
	4.8nm,0.3s,baz=230,slow=8.0,SNR=3.7						
YBH				LR	LR	21 01 38.1	
	comp=Z,1μm,19.4s,baz=94,slow=44						
YBH	**Yreka Blue Hor**	**2.97**	**68**	*e*Pn	**Pn**	**21 00 16.6**	**+0.5**
HOPS	**Hopland**	**3.04**	**122**	*e*Pn	**Pn**	**21 00 17.6**	**+0.4**
HUMO	**Hull Mountain**	**3.22**	**52**	*e*Pn	**Pn**	**21 00 19.1**	**-0.6**
SAC	**San Andreas**	**4.35**	**134**	*e*Pn	**Pn**	**21 00 35.4**	**-0.4**
BEKR	**Beckwourth**	**4.68**	**98**	Pn	**Pn**	**21 00 41.5**	**+1.1**
MOD	**Modoc**	**4.75**	**73**	*e*Pn	**Pn**	**21 00 41.3**	**0.0**
CMB	**Columbia Colle**	**5.34**	**117**	*e*Pn	**Pn**	**21 00 48.9**	**-0.7**
SAO	**San Andreas Ge**	**5.48**	**134**	*e*Pn	**Pn**	**21 00 50.2**	**-1.4**
LRV	**Little Rabbit**	**5.96**	**133**	*e*Pn	**Pn**	**21 00 57.9**	**-0.6**
OMM	**Old Mammoth Mi**	**6.50**	**115**	Pn	**Pn**	**21 01 04.0**	**-2.0**
NVAR	**Mina Array Bea**	**6.63**	**107**	Pn	**Pn**	**21 01 08.0**	**+0.1**
	0.3nm,0.3s,baz=302,slow=12,SNR=3.6						
NVAR	**Mina Array Bea**	**6.63**	**107**	Pn	**Pn**	**21 01 08.0**	**+0.1**
MTUM	**Tungsten Hills**	**6.93**	**116**	Pn	**Pn**	**21 01 11.8**	**-0.3**
BMO	**Blue Mountains**	**7.88**	**55**	*e*Pn	**Pn**	**21 01 23.8**	**-1.7**
ELK	**Elko**	**8.47**	**86**	Pn	**P**	**21 01 36.0**	**+2.3**
	0.0nm,0.3s,baz=254,slow=15,SNR=2.8						
MCMT	**McKenzie Canyo**	**10.79**	**63**	*e*P	**P**	**21 02 05.4**	**-0.1**
CHMT	**Chamberlain Mo**	**11.36**	**52**	*e*P	**P**	**21 02 10.2**	**-3.1**
HRY	**Holter Researc**	**12.14**	**55**	*e*P	**P**	**21 02 21.0**	**-2.9**
PDAR	**Pinedale Array**	**12.75**	**75**	Pn	**P**	**21 02 33.4**	**+1.3**
	0.1nm,0.3s,baz=270,slow=11,SNR=3.5						
PV10	**Paradox Valley**	**13.59**	**94**	Pn	**P**	**21 02 44.5**	**+1.4**
LAO	**LASA Array**	**15.77**	**61**	P	**P**	**21 03 12.4**	**+0.9**
	29nm,1.0s						
ANMO	**Albuquerque**	**16.73**	**104**	P	**P**	**21 03 23.3**	**-0.7**
	2.1nm,0.8s						
DLBC	**Dease Lake**	**17.95**	**354**	P	**P**	**21 03 40.6**	**+1.6**
	0.0nm,0.3s,baz=175,slow=15,SNR=6.4						
TXAR	**Lajitas Array**	**21.71**	**114**	P	**P**	**21 04 23.6**	**+2.5**
	1.0nm,0.7s,mb3.4,baz=297,slow=8.4,SNR=6.8						
WMOK	**Wichita Mounta**	**22.58**	**96**	P	**P**	**21 04 32.6**	**+3.0**
	0.7nm,0.5s,mb3.4						
YKA	**Yellowknife Ar**	**22.98**	**14**	P	**P**	**21 04 33.3**	**0.0**
	0.4nm,0.4s,mb3.2,baz=205,slow=12,SNR=3.6						
ULM	**Lac du Bonnet**	**23.31**	**55**	P	**P**	**21 04 37.1**	**+0.4**
	8.4nm,0.9s,mb4.2,baz=260,slow=9.1,SNR=6.3						
ILAR	**Eielson Array**	**26.90**	**341**	P	**P**	**21 05 10.1**	**-0.5**
	1.6nm,0.8s,mb3.6,baz=160,slow=8.0,SNR=12						
SUMG	**Summit**	**51.16**	**23**	P	**P**	**21 08 32.3**	**-0.3**
	2.3nm,0.7s,mb4.2						
SONM	**Songino Array**	**80.24**	**327**	P	**P**	**21 11 41.0**	**+1.1**
	0.2nm,0.5s,mb3.3,baz=56,slow=5.2,SNR=2.2						

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*TIF **15** 21:05:59.0, 43.88N×44.43E, h15^{km}±2^{km}*

*MOS **15** 21:05:59.4±0.4, 43.85N×44.40E, h9^{km}, mb3.8/1, Error ellipse: s-maj=13.8km s-min=9.2km az=81.3*

*CSEM **15** 21:05:59.0±0.3, 43.85N×44.40E, h9^{km}, mb3.8, Error ellipse: s-maj=4.7km s-min=2.7km az=72.0, After OBN*

ISC 15 21:05:55.3±1.6**, 43.98N**±0.05×**44.7E**±0.1**, h4^{km}**±7^{km}**, n12,** σ0^{s}**93**/24**, 4C-2D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARNR	**Ardon**	**0.84**	**200**	⇓*i*PG	**Pg**	**21 06 13.2**	**+1.0**
ARNR				*e*S	**Sg**	**21 06 24.6**	**+1.2**
KUBR	**Kubataba**	**0.93**	**259**	⇓*e*PG	**Pg**	**21 06 14.2**	**+0.3**
KUBR				*i* S	**Sg**	**21 06 26.8**	**+0.5**
KUBR	**Kubataba**	**0.93**	**259**	*e*Pg	**Pg**	**21 06 14.2**	**+0.3**
KUBR				*i* Sg	**Sg**	**21 06 26.8**	**+0.5**
ZEI	**Tsey**	**1.34**	**205**	⇑*i*PG	**Pg**	**21 06 20.5**	**-1.5**
ZEI				*i* S	**Sb**	**21 06 37.6**	**-0.3**
ZEI	**Tsey**	**1.34**	**205**	*i* Pg	**Pg**	**21 06 20.5**	**-1.5**
ZEI				*i* Sg	**Sb**	**21 06 37.6**	**-0.3**
KIV0	**Kislovodsk Arr**	**1.43**	**270**	⇑*i*PG	**Pg**	**21 06 22.8**	**-1.0**
KIV0				*e*S	**Sb**	**21 06 40.6**	**+0.1**
KIV0	**Kislovodsk Arr**	**1.43**	**270**	*i* Pg	**Pg**	**21 06 22.8**	**-1.0**
KIV0				*e*Sg	**Sb**	**21 06 40.6**	**+0.1**
KIV	**Kislovodsk**	**1.43**	**270**	⇑*i*PG	**Pg**	**21 06 23.0**	**-0.9**
KIV				*i* S	**Sb**	**21 06 40.7**	**0.0**
SHAR	**Shatzhatmas**	**1.47**	**261**	⇑*e*PG	**Pg**	**21 06 23.0**	**-1.6**
SHAR				*e*S	**Sb**	**21 06 41.1**	**-0.6**
GOF	**Gofitskoye**	**1.59**	**313**	*e*PG	**Pg**	**21 06 27.0**	**-0.1**
GOF				*i* S	**Sg**	**21 06 50.1**	**+1.8**
GOF				smax			
	comp=N,69nm,0.8s						
GOF	**Gofitskoye**	**1.59**	**313**	*e*Pg	**Pg**	**21 06 27.0**	**-0.1**
	comp=N,69nm,0.8s						
GOF				*i* Sg	**Sg**	**21 06 50.1**	**+1.8**
ONI	**Oni**	**1.66**	**213**	P	**Pn**	**21 06 26.2**	**+0.8**
ONI				S	**Sb**	**21 06 47.6**	**+0.3**

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*IDC **15** 21:17:54.9±1.2, 42.61N×80.23E, mb3.8/4, mb1 4.0/7, mb1mx3.7/23, mbtmp3.9/7, ML3.8/3, Error ellipse: s-maj=25.0km s-min=14.5km az=107.0*

*NEIC **15** 21:17:57.5±0.8, 42.62N×80.18E, h10^{km}, mb3.6/1, Error ellipse: s-maj=14.3km s-min=12.1km az=217.0*

*BJI **15** 21:17:58.5, 42.54N×80.43E, h19^{km}, ML4.1*

*NNC **15** 21:17:58.3±1.4, 42.75N×80.06E, mpv4.1, Error ellipse: s-maj=14.4km s-min=6.3km az=147.0*

*MOS **15** 21:18:01.4±2.0, 42.73N×80.29E, h73^{km}, mb3.8/1, Error ellipse: s-maj=22.5km s-min=15.2km az=109.6*

ISC 15 21:17:56.6±0.7**, 42.65N**±0.06×**80.30E**±0.07**, h10^{km}, n26,** σ1^{s}**48**/33**, mb3.6**/4**, 5C, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAA	**Alma-Ata**	**2.54**	**285**	*i* PN	**Pn**	**21 18 43.9**	**+5.3**
AAA				*i* S	**Sn**	**21 19 14.4**	**+4.5**
AAA				smax			
	comp=N,1.0nm,0.6s						
ULHL	**Ulahol**	**3.03**	**264**	P	**Pn**	**21 18 46.7**	**+1.1**
	SNR=25						
TKM2	**Tokmak 2**	**3.48**	**276**	P	**Pn**	**21 18 53.5**	**+1.6**
	SNR=22						
KZA	**Kyzart**	**3.79**	**263**	P	**Pn**	**21 18 58.0**	**+1.6**
	SNR=18						
KBK	**Karagaybulak**	**3.95**	**272**	P	**Pn**	**21 18 59.8**	**+1.2**
	SNR=9.6						
AAK	**Ala-Archa**	**4.29**	**272**	⇑Pn	**Pn**	**21 19 01.8**	**-1.6**
	comp=N,9.1nm,0.3s						
AAK				⇑Lg		21 20 08.9	
	comp=N,51nm,0.8s						
AAK	**Ala-Archa**	**4.29**	**272**	*e*P	**Pn**	**21 19 02.3**	**-1.1**
USP	**Ospenovka**	**4.30**	**280**	P	**Pn**	**21 19 04.7**	**+1.0**
	SNR=7.1						
UCH	**Uchtor**	**4.31**	**266**	P	**Pn**	**21 19 05.4**	**+1.7**
	SNR=9.3						
MK31	**Makanchi Array**	**4.38**	**18**	⇑Pn	**Pn**	**21 19 06.3**	**+1.6**
	comp=N,12nm,0.2s,baz=201,slow=13,SNR=1800						
MK31				⇑Sn	**Sn**	**21 19 57.7**	**+1.3**
	comp=N,15nm,0.2s,baz=201,slow=22,SNR=3.7						
MK31				⇑Lg		21 20 16.4	
	comp=N,16nm,0.2s,baz=203,slow=26,SNR=4.0						
MKAR	**Makanchi Array**	**4.38**	**18**	Pn	**Pn**	**21 19 06.3**	**+1.6**
	comp=N,19nm,0.3s,baz=201,slow=14,SNR=805						
MKAR				Sn	**Sn**	**21 19 57.8**	**+1.4**
	comp=N,11nm,0.3s,baz=209,slow=22,SNR=6.9						
MKAR				Lg		21 20 13.6	
	comp=N,12nm,0.3s,baz=197,slow=30,SNR=5.9						
KSH	**Kashi**	**4.53**	**228**	*e*PG	**Pg**	**21 19 20.4**	**-6.6**
KSH				SG	**Sg**	**21 20 16.5**	**-11**
KSH				Smax			
	comp=N,240nm,1.2s						
KSH				Smax			
	comp=E,190nm,1.1s						
ZAL	**Zalesovo**	**11.68**	**13**	Pn	**P**	**21 20 44.2**	**-2.1**
	comp=E,0.9nm,0.3s,baz=280,slow=9.9,SNR=7.6						
ZAL				Sn	**S**	**21 22 53.2**	**-4.5**
	comp=E,0.7nm,0.3s,baz=54,slow=18,SNR=4.2						
ZAL				Lg		21 24 10.2	
	comp=E,0.5nm,0.3s,baz=197,slow=19,SNR=2.7						
ZAL	**Zalesovo**	**11.68**	**13**	Pn	**P**	**21 20 44.2**	**-2.1**
ZAL				Sn	**S**	**21 22 53.2**	**-4.5**
ZAL				Lg		21 24 10.2	
BVA0	**Borovoye Array**	**12.32**	**331**	P	**P**	**21 20 53.6**	**-1.3**
	baz=135,slow=14,SNR=4.5						
BVAR	**Borovoye Array**	**12.32**	**331**	Pn	**P**	**21 20 53.3**	**-1.5**
	comp=E,0.1nm,0.3s,baz=135,slow=14,SNR=2.7						
BVAR				Sn	**S**	**21 23 02.8**	**-10**
	comp=E,0.1nm,0.3s,baz=127,slow=20,SNR=1.9						
BVAR				Lg		21 24 19.1	
	comp=E,0.2nm,0.3s,baz=135,slow=33,SNR=3.4						
LSA	**Lhasa**	**15.59**	**142**	P	**P**	**21 21 39.2**	**+1.1**
AB31	**Akbulak array**	**15.60**	**302**	P	**P**	**21 21 37.2**	**-0.8**
	comp=E,0.2nm,0.4s,baz=108,slow=9.5,SNR=5.4						
SONM	**Songino Array**	**19.05**	**65**	P	**P**	**21 22 20.9**	**-0.3**
	comp=E,0.2nm,0.3s,baz=271,slow=11,SNR=7.9						
ARU	**Arti**	**19.61**	**322**	P	**P**	**21 22 25.9**	**-1.7**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	**Arti**	**19.61**	**322**	P	**P**	**21 22 25.9**	**-1.7**
	comp=Z,3.0nm,0.8s						
GNI	**Garni**	**26.67**	**277**	P	**P**	**21 23 36.4**	**-0.9**
	comp=Z,0.7nm,0.3s,mb3.7,baz=294,slow=2.0,SNR=3.9						
ARCES	**ARCESS Array B**	**38.60**	**333**	P	**P**	**21 25 17.8**	**-3.3**
	comp=Z,3.4nm,1.1s,mb4.0,baz=97,slow=9.8,SNR=4.2						
NOA	**NORSAR Array B**	**44.12**	**319**	P	**P**	**21 26 04.5**	**-1.9**
	comp=Z,0.4nm,0.7s,mb3.3,baz=51,slow=14,SNR=2.3						
NOA	**NORSAR Array B**	**44.12**	**319**	P	**P**	**21 26 04.5**	**-1.9**
WRA	**Warramunga Arr**	**79.70**	**129**	P	**P**	**21 30 04.2**	**-2.0**
	comp=Z,0.3nm,0.3s,mb3.6,baz=331,slow=5.3,SNR=15						

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*LDG **15** 21:27:50.5±0.1, 43.13N×0.66W, h7^{km}, Md3.6/2, Ml3.5/38, Error ellipse: s-maj=1.5km s-min=1.2km az=25.0*

*NEIC **15** 21:27:50.5, 43.13N×0.66W, h7^{km}, ML3.5(LDG), ML3.4(STR), MN3.4(MDD), After LDG.*

*STR **15** 21:27:50.4±0.3, 43.01N×0.65W, h10^{km}±1^{km}, Ml3.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*INMG **15** 21:27:51.1±1.1, 43.10N×0.71W, h6^{km}±3^{km}, ML2.8, Error ellipse: s-maj=4.5km s-min=1.8km az=39.0*

*CSEM **15** 21:27:51.1±0.0, 43.15N×0.64W, h12^{km}, ML3.6/54, Error ellipse: s-maj=0.9km s-min=0.7km az=125.0*

MDD 15 21:27:49.7±0.4**, 43.12N×0.63W, h10^{km}**±3^{km}**, mbLg3.2**/21**, 2C-2D, Error ellipse: s-maj=3.9km s-min=3.0km az=4.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
REYF	**Montagne du Re**	**0.18**	**107**	Pg	Pg	21 27 54.6	+0.9
REYF				Sg	Sg	21 28 01.3	+4.9
ETSF	**Etsaut**	**0.23**	**167**	*e*Pg	Pg	21 27 54.7	+0.1
ETSF				*e*Sg	Sg	21 27 57.5	-0.4
	4μm,0.3s						
ORDF	**Ordiarp**	**0.24**	**292**	Pg	Pg	21 27 55.4	+0.6
LARF	**Larrau**	**0.28**	**252**	Pg	Pg	21 27 55.6	+0.1
LARF				Sg	Sg	21 28 00.4	+1.1
FDAF	**Les Forges d'A**	**0.31**	**171**	Pg	Pg	21 27 55.9	-0.2
FDAF				Sg	Sg	21 27 59.8	-0.5
SJPF	**Ste Jean**	**0.44**	**269**	*e*Pg	Pg	21 27 58.5	-0.1
SJPF				*e*Sg	Sg	21 28 04.9	+0.4
	2μm,0.4s						
OSSF	**Osses**	**0.48**	**286**	Pg	Pg	21 27 58.9	-0.6
OSSF				Sg	Sg	21 28 08.4	+2.4
LABF	**Labassere**	**0.52**	**98**	Pg	Pg	21 28 00.8	+0.5
LABF				Sg	Sg	21 28 09.0	+1.7
VIEF	**Viey**	**0.54**	**116**	Pg	Pg	21 28 00.5	0.0
IPRE	**Itoiz**	**0.62**	**240**	Pg	Pg	21 28 02.0	-0.2
	22nm,0.1s,SNR=7.9						
IPRE				Lg		21 28 11.1	
	263nm,0.2s,SNR=7.9						
IPRE	**Itoiz**	**0.62**	**240**	Pg	Pg	21 28 02.0	-0.2
	22nm,0.1s,SNR=7.9						
EALK	**Alkurruntz**	**0.65**	**279**	⇑Pg	Pg	21 28 01.9	-0.9
	49nm,0.1s,SNR=18						
EALK				Lg		21 28 09.9	
	336nm,0.2s,SNR=5.0						
ELIZ	**Elizondo**	**0.66**	**274**	⇓Pg	Pg	21 28 02.2	-0.8
	72nm,0.3s,SNR=18						
ELIZ				Lg		21 28 10.5	
	188nm,0.2s,SNR=19						
EBIE	**Bielsa**	**0.72**	**127**	⇑Pg	Pg	21 28 03.8	-0.3
	60nm,0.1s,SNR=18						
EBIE				Lg		21 28 13.0	
	225nm,0.1s,SNR=120						
EBIE	**Bielsa**	**0.72**	**127**	Pg	Pg	21 28 03.8	-0.3
	60nm,0.1s,SNR=606						
EPF	**Esparros**	**0.72**	**97**	*e*Pg	Pg	21 28 04.4	+0.3
EPF				*e*Sg	Sg	21 28 15.0	+1.3
	287nm,0.2s						
RESF	**Ens**	**0.78**	**114**	Pg	Pg	21 28 05.0	-0.3
RESF				Sg	Sg	21 28 14.3	-1.4
MELF	**Melles**	**1.05**	**103**	Pg	Pg	21 28 10.7	0.0
MELF				Sg	Sg	21 28 24.7	-0.1
MELF				Sg	Sg	21 28 25.3	+0.5
MELF	**Melles**	**1.05**	**103**	Pg	Pg	21 28 10.7	0.0
MELF				Sg	Sg	21 28 25.3	+0.5
MLS	**Moulis**	**1.27**	**97**	Pg	Pg	21 28 15.3	+0.1
SALF	**Salau**	**1.38**	**105**	Pg	Pg	21 28 16.6	-0.8
ESAC	**San Caprasio**	**1.40**	**175**	⇓Pg	Pg	21 28 16.1	-1.7
	544nm,0.2s,SNR=18						
ESAC				Lg		21 28 35.5	
	3μm,0.4s,SNR=6.9						
ESAC	**San Caprasio**	**1.40**	**175**	Pn	Pn	21 28 16.1	+0.6
	544nm,0.2s,SNR=148						
ECRI	**Cripan**	**1.47**	**250**	Pn	Pn	21 28 18.2	+1.7
ECRI				Lg		21 28 37.5	
ECRI	**Cripan**	**1.47**	**250**	Pg	Pg	21 28 18.1	-1.1
	85nm,0.2s,SNR=7.9						
ECRI				Lg		21 28 37.5	
	261nm,0.3s,SNR=7.9						
ECRI	**Cripan**	**1.47**	**250**	Pn	Pn	21 28 18.2	+1.7
	85nm,0.2s,SNR=7.9						
LPEF	**Le Peyrat**	**1.87**	**94**	Pg	Pg	21 28 25.6	-1.5
LPEF				Sg	Sg	21 28 51.4	-0.6
EMIR	**Miracle**	**2.00**	**126**	Pn	Pn	21 28 25.3	+1.3
EMIR				Pg	Pg	21 28 28.0	-1.6
EMIR				Lg		21 28 53.9	
EMIR	**Miracle**	**2.00**	**126**	Pg	Pg	21 28 25.3	-4.3
	2.1nm,0.2s						
EMIR				Lg		21 28 53.9	
	239nm,0.2s,SNR=6.3						
EMIR	**Miracle**	**2.00**	**126**	Pn	Pn	21 28 25.3	+1.3
	2.1nm,0.2s						
EMIR	**Miracle**	**2.00**	**126**	Pg	Pg	21 28 28.0	-1.7
	62nm,0.2s,SNR=73						
CARF	**Carcanieres**	**2.05**	**100**	Pg	Pg	21 28 29.9	-0.8
CARF				Sg	Sg	21 28 56.1	-1.9
ELAN	**Lanestosa**	**2.05**	**274**	Pn	Pn	21 28 26.2	+1.4
ELAN				Lg		21 28 53.6	
ELAN	**Lanestosa**	**2.05**	**274**	Pg	Pg	21 28 26.2	-4.5
	7.4nm,0.2s,SNR=32						
ELAN				Sn	Sn	21 28 51.4	+0.7
	51nm,0.2s,SNR=13						
ELAN	**Lanestosa**	**2.05**	**274**	Pn	Pn	21 28 26.2	+1.4
	7.4nm,0.2s,SNR=32						
LFF	**La Frestale**	**2.07**	**28**	*e*Pn	Pn	21 28 24.4	-0.6
LFF				*e*Pg	Pg	21 28 29.5	-1.5
LFF				*e*Sn	Sn	21 28 48.0	-3.1
	149nm,0.3s						
LFF				*e*Sg	Sg	21 28 55.6	-3.0
	141nm,0.3s						
VALF	**Valcebollere**	**2.08**	**109**	Pg	Pg	21 28 28.6	-2.6
VALF				Sg	Sg	21 28 57.8	-1.2
MTLF	**Montolieu**	**2.09**	**83**	*e*Pn	Pn	21 28 24.5	-0.8
MTLF				*e*Pg	Pg	21 28 28.6	-2.9
MTLF				*e*Sn	Sn	21 28 49.3	-2.4
	71nm,0.3s						
MTLF				*e*Sg	Sg	21 28 56.0	-3.4
	93nm,0.4s						
EPOB	**Poblet**	**2.18**	**144**	Pn	Pn	21 28 26.7	+0.2
	1.7nm,0.1s,SNR=49						
EPOB				Pg	Pg	21 28 30.3	-2.9
	16nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	21 28 53.3	-0.5
	24nm,0.1s,SNR=6.9						
EPOB				Lg		21 28 57.9	
	82nm,0.1s,SNR=15						
EPOB	**Poblet**	**2.18**	**144**	Pn	Pn	21 28 26.7	+0.2
	1.7nm,0.1s,SNR=49						
EPOB	**Poblet**	**2.18**	**144**	Pg	Pg	21 28 30.3	-2.9
	16nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	21 28 53.3	-0.5
	24nm,0.1s,SNR=6.9						
ERTA	**Horta de San J**	**2.28**	**161**	Pn	Pn	21 28 28.0	-0.1
ERTA				Pg	Pg	21 28 32.6	-2.6
ERTA				Sn	Sn	21 28 55.6	-0.8
ERTA				Lg		21 28 59.8	
ERTA	**Horta de San J**	**2.28**	**161**	Pn	Pn	21 28 28.0	-0.1
	3.6nm,0.2s,SNR=27						
ERTA				Pg	Pg	21 28 32.6	-2.7
	19nm,0.2s,SNR=7.9						
ERTA				Sn	Sn	21 28 55.6	-0.8
	47nm,0.2s,SNR=7.9						
ERTA				Lg		21 29 00.3	
	103nm,0.2s,SNR=17						
ERTA	**Horta de San J**	**2.28**	**161**	Pn	Pn	21 28 28.0	0.0
	3.6nm,0.2s,SNR=27						
ERTA	**Horta de San J**	**2.28**	**161**	Pg	Pg	21 28 32.6	-2.6
	19nm,0.2s,SNR=7.9						
ERTA				Sn	Sn	21 28 55.6	-0.8
	47nm,0.2s,SNR=7.9						
LRDF	**Laroque-de-Fa**	**2.33**	**93**	Pg	Pg	21 28 32.0	-4.3
FILF	**Fillols**	**2.41**	**102**	Pg	Pg	21 28 32.6	-5.3
FILF				Sg	Sg	21 29 04.1	-6.0
EBR	**Ebro Roquetas**	**2.45**	**160**	*e*P*	Pb	21 28 35.5	+2.0
EBR				*i* S*	Sb	21 29 08.0	+4.3
CAF	**Calviac**	**2.65**	**46**	*e*Pn	Pn	21 28 31.2	-2.1
CAF				*e*Pg	Pg	21 28 39.9	-2.8
CAF				*e*Sn	Sn	21 29 01.6	-4.3
CAF				*e*Sg	Sg	21 29 14.0	-4.0
	58nm,0.2s						
SJAF	**Saint Jean de**	**2.66**	**103**	Pg	Pg	21 28 35.7	-7.2
RJF	**Les Rejaudoux**	**2.67**	**35**	*e*Pn	Pn	21 28 31.5	-2.1
RJF				*e*Pg	Pg	21 28 40.1	-3.0
RJF				*e*Sn	Sn	21 29 01.4	-5.0
RJF				*e*Sg	Sg	21 29 14.8	-3.9
	101nm,0.3s						
EJON	**La Jonquera**	**2.68**	**103**	Pn	Pn	21 28 35.0	+1.4
EJON				Lg		21 29 15.9	
EJON	**La Jonquera**	**2.68**	**103**	Pg	Pg	21 28 37.9	-5.2
	1.9nm,0.1s,SNR=11						
EJON				Lg		21 29 11.5	
	81nm,0.4s,SNR=8.0						
EJON	**La Jonquera**	**2.68**	**103**	Pn	Pn	21 28 35.0	+1.3
	1.9nm,0.1s,SNR=11						
MATF	**Mathat**	**2.72**	**5**	Pn	Pn	21 28 33.2	-1.1
EMOS	**Mosqueruela**	**2.76**	**177**	Pn	Pn	21 28 34.7	-0.2
EMOS				Pg	Pg	21 28 41.4	-3.4
EMOS				Sn	Sn	21 29 06.8	-1.8
EMOS				Lg		21 29 13.7	
EMOS	**Mosqueruela**	**2.76**	**177**	Pn	Pn	21 28 34.7	-0.2
	1.1nm,0.1s,SNR=34						
EMOS				Pg	Pg	21 28 41.4	-3.4
	17nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	21 29 06.8	-1.8
	13nm,0.2s,SNR=6.8						
EMOS				Lg		21 29 14.1	
	33nm,0.2s,SNR=13						
EMOS	**Mosqueruela**	**2.76**	**177**	Pn	Pn	21 28 34.7	-0.2
	1.1nm,0.1s,SNR=34						
EMOS	**Mosqueruela**	**2.76**	**177**	Pg	Pg	21 28 41.4	-3.4
	17nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	21 29 06.8	-1.8
	13nm,0.2s,SNR=6.8						
FRNF	**Fournols**	**3.22**	**44**	Pn	Pn	21 28 39.5	-2.0
EARI	**Arriondas**	**3.35**	**275**	Pn	Pn	21 28 42.7	-0.6
	1.9nm,0.1s,SNR=39						
EARI				Sn	Sn	21 29 22.6	-1.1
	4.1nm,0.2s,SNR=5.0						
EARI	**Arriondas**	**3.35**	**275**	Pn	Pn	21 28 42.7	-0.6
	1.9nm,0.1s,SNR=39						
EARI				Sn	Sn	21 29 22.6	-1.0
	4.1nm,0.2s,SNR=5.0						
LASF	**Ste Croix**	**3.40**	**72**	*e*Pn	Pn	21 28 42.8	-1.1
LASF				*e*Pg	Pg	21 28 52.8	-4.7
LASF				*e*Sn	Sn	21 29 20.7	-4.0
LASF				*e*Sg	Sg	21 29 37.0	-5.8
	25nm,0.2s						
LBL	**Lubilhac**	**3.50**	**52**	Pn	Pn	21 28 44.7	-0.7
MFF	**Saint Martin d**	**3.50**	**5**	*e*Pn	Pn	21 28 42.8	-2.6
MFF				*e*Pg	Pg	21 28 55.3	-4.2
MFF				*e*Sn	Sn	21 29 22.1	-5.2
MFF				*e*Sg	Sg	21 29 39.8	-6.4
	33nm,0.2s						
ECHE	**Chera**	**3.54**	**184**	Pn	Pn	21 28 45.0	-0.9
	0.5nm,0.1s,SNR=10						
ECHE				Pg	Pg	21 28 56.1	-4.3
	2.3nm,0.2s,SNR=7.9						
ECHE				Lg		21 29 39.5	
	17nm,0.3s,SNR=6.7						
PYM	**Petit Puy Mans**	**3.70**	**44**	Pn	Pn	21 28 47.7	-0.6
TCF	**Toulx Ste Croi**	**3.76**	**32**	*e*Pn	Pn	21 28 45.8	-3.3
TCF				*e*Pg	Pg	21 28 59.9	-4.8
TCF				*e*Sn	Sn	21 29 29.1	-4.8
TCF				*e*Sg	Sg	21 29 48.3	-6.5
	44nm,0.3s						
COLF	**Collangettes**	**3.92**	**51**	Pn	Pn	21 28 48.7	-2.7
AGO	**Saint Agoulin**	**3.98**	**41**	Pn	Pn	21 28 50.9	-1.3
PLDF	**La Plantade**	**4.16**	**45**	Pn	Pn	21 28 54.6	-0.2
VIVF	**Saint-Julien-l**	**4.20**	**64**	*e*Pn	Pn	21 28 53.3	-2.1
VIVF				*e*Sn	Sn	21 29 40.0	-5.1
VIVF				*e*Sg	Sg	21 30 02.6	-7.0
	13nm,0.3s						
BGF	**Bois d'Agland**	**4.23**	**35**	*e*Pn	Pn	21 28 52.8	-3.0
BGF				*e*Sn	Sn	21 29 40.4	-5.5
BGF				*e*Sg	Sg	21 30 02.8	-7.8
	108nm,0.3s						
ETOS	**Mallorca**	**4.23**	**141**	Pn	Pn	21 28 55.1	-0.8
	4.1nm,0.2s,SNR=12						
ETOS				Sn	Sn	21 29 42.3	-3.7
	12nm,0.2s,SNR=5.0						
ETOS	**Mallorca**	**4.23**	**141**	Pn	Pn	21 28 55.1	-0.7
	4.1nm,0.2s,SNR=12						
ETOS				Sn	Sn	21 29 42.3	-3.7
	12nm,0.2s,SNR=5.0						
ESDC	**Sonseca Array**	**4.26**	**217**	Pn	Pn	21 28 54.5	-1.7
	1.6nm,0.3s,baz=40,slow=14,SNR=86						
ESDC				Sn	Sn	21 29 42.3	-4.3
	6.0nm,0.3s,baz=39,slow=24,SNR=10						
ESDC				Lg		21 30 02.1	
	13nm,0.3s,baz=32,slow=28,SNR=9.2						
ESDC	**Sonseca Array**	**4.26**	**217**	Pn	Pn	21 28 54.5	-1.7
	1.6nm,0.3s,SNR=86						
ESDC				Sn	Sn	21 29 42.3	-4.3
	6.0nm,0.3s,SNR=10						
TREF	**Trevaresse**	**4.41**	**81**	Pn	Pn	21 28 58.3	-0.1
EBEN	**Beniarda**	**4.42**	**176**	Pn	Pn	21 28 57.3	-1.3
	2.6nm,0.2s,SNR=18						
EBEN				Sn	Sn	21 29 48.1	-2.7
	8.6nm,0.4s,SNR=5.0						
EBEN				Lg		21 30 03.6	
	4.4nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**4.42**	**176**	Pn	Pn	21 28 57.3	-1.2
	2.6nm,0.2s,SNR=18						
EBEN				Sn	Sn	21 29 48.1	-2.7
	8.6nm,0.4s,SNR=5.0						
ETOB	**Tobarra**	**4.53**	**189**	Pn	Pn	21 28 59.7	-0.3
	1.9nm,0.1s,SNR=24						
ETOB				Sn	Sn	21 29 49.1	-4.3
	7.4nm,0.4s,SNR=7.9						

ETOB				Lg		21 30 16.0	
	12nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**4.53**	**189**	Pn	Pn	21 28 59.7	-0.3
	1.9nm,0.1s,SNR=24						
ETOB				Sn	Sn	21 29 49.1	-4.3
	7.4nm,0.4s,SNR=7.9						
SMRF	**Simiane la Rot**	**4.59**	**77**	ePn	Pn	21 28 57.9	-3.0
SMRF				eSg	Sg	21 30 14.7	-7.9
	7.8nm,0.6s						
AVF	**Avril sur Loir**	**4.63**	**36**	ePn	Pn	21 28 57.9	-3.6
AVF				eSn	Sn	21 29 49.5	-6.5
AVF				eSg	Sg	21 30 15.2	-8.7
	16nm,0.5s						
PUYF	**Puyloubier**	**4.64**	**83**	Pn	Pn	21 29 03.3	+1.7
ECAL	**Calabor**	**4.67**	**257**	Pn	Pn	21 29 01.0	-0.9
	9.5nm,0.2s,SNR=39						
ECAL				Sn	Sn	21 29 51.9	-5.0
	32nm,0.3s,SNR=5.0						
ECAL				Lg		21 30 14.5	
	16nm,0.4s,SNR=7.9						
ECAL	**Calabor**	**4.67**	**257**	Pn	Pn	21 29 01.0	-1.0
	9.5nm,0.2s,SNR=39						
ECAL				Sn	Sn	21 29 51.9	-5.0
	32nm,0.3s,SNR=5.0						
EVIA	**Vianos**	**4.70**	**198**	Pn	Pn	21 29 01.9	-0.5
	7.1nm,0.3s,SNR=8.4						
EVIA				Lg		21 30 17.1	
	12nm,0.4s,SNR=7.9						
SMF	**Signal de Mont**	**4.74**	**41**	ePn	Pn	21 29 00.0	-3.1
SMF				ePg	Pg	21 29 19.0	-5.4
SMF				eSn	Sn	21 29 52.6	-6.2
SMF				eSg	Sg	21 30 19.1	-8.6
	23nm,0.6s						
HYF	**Humbligny**	**4.75**	**28**	ePn	Pn	21 29 00.1	-3.0
HYF				eSn	Sn	21 29 52.8	-6.1
HYF				eSg	Sg	21 30 19.2	-8.6
EPON	**Pontenova**	**4.77**	**275**	Pn	Pn	21 29 01.7	-1.8
	3.7nm,0.2s,SNR=12						
EPON				Sn	Sn	21 29 55.5	-3.9
	7.6nm,0.2s,SNR=5.0						
EPON	**Pontenova**	**4.77**	**275**	Pn	Pn	21 29 01.7	-1.7
	3.7nm,0.2s,SNR=12						
EPON				Sn	Sn	21 29 55.5	-4.0
	7.6nm,0.2s,SNR=5.0						
ERUA	**La Rua**	**4.85**	**264**	Pn	Pn	21 29 03.6	-1.0
	4.7nm,0.2s,SNR=15						
TAVF	**Tavernes**	**4.90**	**82**	Pn	Pn	21 29 06.6	+1.3
SSF	**Saint Saulge**	**4.91**	**35**	ePn	Pn	21 29 02.9	-2.5
SSF				eSn	Sn	21 29 56.3	-6.7
SSF				eSg	Sg	21 30 24.2	-8.9
	6.7nm,0.3s						
ORIF	**Oris-en-Rattie**	**5.03**	**67**	ePn	Pn	21 29 03.9	-3.2
ORIF				eSn	Sn	21 29 59.1	-6.9
	4.7nm,0.3s						
QUIF	**Quistinic**	**5.12**	**341**	ePn	Pn	21 29 05.2	-3.1
QUIF				ePg	Pg	21 29 24.8	-7.0
QUIF				eSn	Sn	21 30 00.5	-7.7
	14nm,0.3s						
LOR	**Lormes**	**5.22**	**36**	ePn	Pn	21 29 06.9	-2.9
	baz=217						
LOR				ePg	Pg	21 29 26.8	-7.1
	baz=218						
LOR				eSn	Sn	21 30 04.0	-6.8
LOR				eSg	Sg	21 30 34.2	-9.3
	22nm,0.5s						
LOR	**Lormes**	**5.22**	**36**	ePg	Pg	21 29 26.8	-7.1
LOR				eSn	Sn	21 30 04.0	-6.8
LOR				eSg	Sg	21 30 34.2	-9.3
	11nm,0.5s						
LMR	**La Mourre**	**5.22**	**85**	ePn	Pn	21 29 08.0	-1.8
LMR				eSn	Sn	21 30 04.1	-6.8
	3.4nm,0.3s						
GRR	**Gorron**	**5.27**	**358**	ePn	Pn	21 29 06.5	-4.0
GRR				ePg	Pg	21 29 28.0	-6.9
GRR				eSn	Sn	21 30 03.6	-8.5
GRR				eSg	Sg	21 30 35.2	-10
	16nm,0.3s						
EMUR	**La Murta**	**5.29**	**185**	Pn	Pn	21 29 09.6	-1.2
	3.7nm,0.3s,SNR=7.8						
EMUR				Lg		21 30 36.7	
	8.7nm,0.5s,SNR=7.9						
EMUR	**La Murta**	**5.29**	**185**	Pn	Pn	21 29 09.6	-1.2
	3.7nm,0.3s,SNR=7.8						
SGMF	**Saint Gilles**	**5.31**	**346**	ePn	Pn	21 29 07.7	-3.3
SGMF				ePg	Pg	21 29 28.0	-7.7
SGMF				eSn	Sn	21 30 05.7	-7.3
	7.4nm,0.3s						
FRF	**La Foret Royal**	**5.33**	**83**	ePn	Pn	21 29 07.4	-3.9
FRF				eSn	Sn	21 30 07.5	-6.0
	3.3nm,0.3s						
ROSF	**Rostrenen**	**5.53**	**341**	ePn	Pn	21 29 10.9	-3.3
ROSF				eSn	Sn	21 30 09.9	-8.8
	4.4nm,0.2s						
PVRL	**Vila Real**	**5.58**	**253**	ePn	Pn	21 29 13.0	-1.8
PVRL				eSn	Sn	21 30 13.8	-6.0
PVRL				eSg	Sg	21 30 42.8	-13
	11nm,0.3s						
PVRL	**Vila Real**	**5.58**	**253**	ePn	Pn	21 29 13.0	-1.8
PVRL				eSn	Sn	21 30 13.8	-6.0
PVRL				eSg	Sg	21 30 42.8	-13
	11nm,0.3s						
MBDF	**Montbardon**	**5.58**	**71**	eP	Pn	21 29 16.5	+1.6
EQES	**Quesada**	**5.63**	**200**	Pn	Pn	21 29 14.6	-0.9
	2.2nm,0.1s,SNR=12						
EQES				Sn	Sn	21 30 15.9	-5.2
	3.0nm,0.2s,SNR=5.0						
EQES				Lg		21 30 46.4	
	3.3nm,0.3s,SNR=7.9						
EQES	**Quesada**	**5.63**	**200**	Pn	Pn	21 29 14.6	-1.0
	2.2nm,0.1s,SNR=12						
EQES				Sn	Sn	21 30 15.9	-5.2
	3.0nm,0.2s,SNR=5.0						
ELOB	**Lobios**	**5.63**	**260**	Pn	Pn	21 29 14.0	-1.7
	1.6nm,0.1s,SNR=12						
ELOB				Sn	Sn	21 30 16.1	-5.2
	8.5nm,0.3s,SNR=5.0						
ELOB				Lg		21 30 47.5	
	5.3nm,0.3s,SNR=7.9						
ELOB	**Lobios**	**5.63**	**260**	Pn	Pn	21 29 14.0	-1.7
	1.6nm,0.1s,SNR=12						
ELOB				Sn	Sn	21 30 16.1	-5.2
	8.5nm,0.3s,SNR=5.0						
FLN	**La Foliniere**	**5.64**	**1**	ePn	Pn	21 29 10.9	-4.9
	baz=178						
FLN				eSn	Sn	21 30 12.1	-9.3
FLN				eSg	Sg	21 30 46.2	-11
	7.9nm,0.2s						
EADA	**Adamuz**	**5.79**	**213**	Pn	Pn	21 29 16.0	-1.8
	4.5nm,0.2s,SNR=32						
EADA				Sn	Sn	21 30 18.1	-7.0
	7.7nm,0.4s,SNR=5.0						
EADA				Lg		21 30 51.6	
	5.6nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**5.79**	**213**	Pn	Pn	21 29 16.0	-1.8
	4.5nm,0.2s,SNR=32						
EADA				Sn	Sn	21 30 18.1	-7.0
	7.7nm,0.4s,SNR=5.0						
LPL	**La Plagne**	**5.80**	**63**	ePn	Pn	21 29 16.9	-1.1
LPL				eSg	Sg	21 30 52.8	-10
	4.5nm,0.5s						
LPG	**La Plagne**	**5.80**	**63**	ePn	Pn	21 29 16.8	-1.2
LPG				eSg	Sg	21 30 52.8	-10
	3.7nm,0.5s						
STS	**Santiago**	**5.81**	**270**	Pn	Pn	21 29 16.6	-1.5
	2.4nm,0.2s,SNR=7.9						
MTE	**Manteigas**	**5.84**	**245**	ePn	Pn	21 29 16.5	-2.1
MTE				eSn	Sn	21 30 20.1	-6.3
MTE				eSg	Sg	21 30 51.5	-13
	13nm,0.5s						
MTE	**Manteigas**	**5.84**	**245**	ePn	Pn	21 29 16.5	-2.1
MTE				eSn	Sn	21 30 20.1	-6.3
MTE				eSg	Sg	21 30 51.5	-13
	13nm,0.5s						
CABF	**La Chapelle**	**5.91**	**52**	ePn	Pn	21 29 17.5	-2.1
CABF				eSg	Sg	21 30 56.3	-10
	15nm,0.7s						
SBF	**Sospel**	**5.91**	**80**	ePn	Pn	21 29 16.7	-2.9
SBF				eSn	Sn	21 30 20.9	-7.3
	11nm,0.4s						
PVIS	**Viseu**	**5.93**	**249**	ePn	Pn	21 29 17.4	-2.4
PVIS				eSn	Sn	21 30 21.8	-6.8
PVIS				eSg	Sg	21 30 52.8	-14
	6.0nm,0.3s						
PVIS	**Viseu**	**5.93**	**249**	ePn	Pn	21 29 17.4	-2.4
PVIS				eSn	Sn	21 30 21.8	-6.8
PVIS				eSg	Sg	21 30 52.8	-14
	6.0nm,0.3s						
PCBR	**Castelo Branco**	**6.10**	**240**	ePn	Pn	21 29 19.3	-2.9
PCBR				eSn	Sn	21 30 25.9	-6.9
PCBR				eSg	Sg	21 31 01.9	-11
	7.6nm,0.6s						
EMAZ	**Mazaricos**	**6.12**	**271**	Pn	Pn	21 29 20.9	-1.6
	2.7nm,0.1s,SNR=12						
EMAZ				Sn	Sn	21 30 26.5	-6.8
	6.4nm,0.2s,SNR=5.0						
EMAZ	**Mazaricos**	**6.12**	**271**	Pn	Pn	21 29 20.9	-1.6
	2.7nm,0.1s,SNR=12						
EMAZ				Sn	Sn	21 30 26.5	-6.9
	6.4nm,0.2s,SNR=5.0						
ELUQ	**Luque**	**6.21**	**208**	Pn	Pn	21 29 22.7	-1.1
	2.2nm,0.2s,SNR=6.9						
ECOG	**Cogollos-Vega**	**6.25**	**202**	Pn	Pn	21 29 23.5	-0.9
	2.2nm,0.2s,SNR=7.9						
SFTF	**Sexfontaines**	**6.45**	**36**	ePn	Pn	21 29 23.9	-3.2
SFTF				eSn	Sn	21 30 33.0	-8.6
SFTF				eSg	Sg	21 31 12.4	-12
	20nm,0.6s						
EBER	**Berja**	**6.45**	**196**	Pn	Pn	21 29 26.3	-0.9
	SNR=7.9						
EBER				Lg		21 31 14.6	
	3.0nm,0.3s,SNR=7.9						
EBER	**Berja**	**6.45**	**196**	Pn	Pn	21 29 26.3	-0.9
	SNR=7.9						
EBAD	**Badajoz**	**6.51**	**230**	Pn	Pn	21 29 25.2	-2.8
	2.4nm,0.2s,SNR=12						
EBAD				Sn	Sn	21 30 36.0	-7.1
	5.6nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**6.51**	**230**	Pn	Pn	21 29 25.2	-2.8
	2.4nm,0.2s,SNR=12						
EBAD				Sn	Sn	21 30 36.0	-7.1
	5.6nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**6.55**	**205**	Pn	Pn	21 29 26.6	-1.9
	1.4nm,0.3s,SNR=7.9						
ELOJ				Sn	Sn	21 30 37.5	-6.6
	0.8nm,0.2s,SNR=7.9						
ERON	**Agron**	**6.56**	**203**	Pn	Pn	21 29 27.5	-1.3
	4.3nm,0.3s,SNR=4.0						
MEZF	**Maizieres J'vi**	**6.69**	**34**	ePn	Pn	21 29 27.5	-3.0
MEZF				eSn	Sn	21 30 39.3	-8.2
	4.2nm,0.3s						
MEZF				eSg	Sg	21 31 19.4	-13
	11nm,0.4s						
PTOM	**Tomar**	**6.82**	**242**	ePn	Pn	21 29 30.1	-2.2
PTOM				eSn	Sn	21 30 44.2	-6.7
PTOM				eSg	Sg	21 31 25.7	-11
	8.9nm,0.3s						
HAU	**Haudompre**	**6.92**	**43**	eSg	Sg	21 31 27.8	-12
	9.2nm,0.6s						
RFYF	**Reffroy**	**6.96**	**36**	ePn	Pn	21 29 30.6	-3.7
RFYF				eSg	Sg	21 31 28.5	-13
	16nm,0.5s						
HINF	**Hinteralfeld**	**7.05**	**46**	ePn	Pn	21 29 32.1	-3.5
EMIN	**Mina Concepcio**	**7.06**	**223**	Pn	Pn	21 29 32.5	-3.2
	0.4nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	21 30 47.7	-9.1
	1.8nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.06**	**223**	Pn	Pn	21 29 32.5	-3.2
	0.4nm,0.1s,SNR=7.9						
PGF	**Pioggiola**	**7.10**	**91**	ePn	Pn	21 29 35.7	-0.6
PGF				eSn	Sn	21 30 50.1	-7.9
	5.3nm,0.4s						
EMIJ	**Mijas**	**7.28**	**207**	Pn	Pn	21 29 37.2	-1.7
	0.7nm,0.2s,SNR=7.9						
EMIJ				Sn	Sn	21 30 56.0	-6.4
	1.1nm,0.3s,SNR=7.9						
EMIJ				Lg		21 31 42.2	
	1.0nm,0.4s,SNR=7.9						
ESPR	**Espera**	**7.42**	**214**	Pn	Pn	21 29 39.1	-1.7
	1.8nm,0.2s,SNR=5.4						
ESPR				Sn	Sn	21 30 58.9	-7.0
	4.1nm,0.4s,SNR=7.9						
ESPR	**Espera**	**7.42**	**214**	Pn	Pn	21 29 39.1	-1.7
ESPR				Sn	Sn	21 30 58.9	-7.0
PBEJ	**Beja**	**7.50**	**230**	ePn	Pn	21 29 38.7	-3.2
PBEJ				eSn	Sn	21 30 59.9	-7.9
CDF	**Champ du Feu**	**7.65**	**44**	eSg	Sg	21 31 50.5	-14
	5.1nm,0.5s						
EGRO	**El Granado**	**7.65**	**225**	Pn	Pn	21 29 40.4	-3.6
	0.6nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	21 31 02.7	-8.9
	3.3nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**7.65**	**225**	Pn	Pn	21 29 40.4	-3.6
BAIF	**Baives**	**7.70**	**24**	ePn	Pn	21 29 40.0	-4.6
BAIF				eSn	Sn	21 31 01.8	-11
	2.8nm,0.5s						
PALC	**Alcoutim**	**7.70**	**225**	ePn	Pn	21 29 41.5	-3.2
PALC				eSn	Sn	21 31 04.5	-8.4
	5.7nm,0.8s						
GIVF	**Givet**	**7.92**	**26**	ePn	Pn	21 29 46.5	-1.3
PTEO	**Sao Teotonio**	**8.32**	**231**	ePn	P	21 29 49.9	-3.4
PTEO				eSn	Sn	21 31 19.3	-9.0

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*ATH **15** 22:11:18.7, 34.10N×25.27E, h18^{km}±8^{km}, MD3.5/4*
*NEIC **15** 22:11:18.9, 34.11N×25.28E, h18^{km}, MD3.5(ATH), After ATH.*
*HLW **15** 22:11:20.2, 34.23N×25.51E, h3^{km}, Mb3.5*
*CSEM **15** 22:11:21.3±0.2, 34.17N×25.47E, h25^{km}, MD3.5, Error ellipse: s-maj=11.7km s-min=4.1km az=87.0*
ISC 15 22:11:20.7±1.7**, 34.15N**±0.03×**25.5E**±0.1**, h17**^{km}±17^{km}**, n11, σ1^{s}08**/16**, 6C, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.74**	**14**	ePB	**Pb**	**22 11 34.5**	**-0.3**
XRY				eSN	**Sn**	**22 11 46.5**	**-0.7**
XRY	**Khrisi**	**0.74**	**14**	ePb	**Pb**	**22 11 34.5**	**-0.3**
XRY				eSn	**Sn**	**22 11 45.7**	**-1.5**
NPS	**Neapolis**	**1.12**	**6**	ePN	**Pn**	**22 11 41.8**	**+0.2**
NPS				eSN	**Sn**	**22 11 57.5**	**+0.9**
VAM	**Vamos**	**1.64**	**320**	ePN	**Pn**	**22 11 48.0**	**-1.1**
KARP	**Karpathos**	**1.96**	**44**	ePN	**Pn**	**22 11 55.8**	**+2.1**
SLUM		**2.66**	**185**	⇑P	**Pn**	**22 12 04.5**	**+0.9**
SLUM				S	**Sn**	**22 12 37.4**	**+1.6**
HMAT	**Matruh**	**3.34**	**155**	⇑P	**Pn**	**22 12 13.8**	**+0.5**
SWA1		**4.88**	**178**	⇑P	**Pn**	**22 12 35.1**	**-0.1**
SWA1				S	**Sn**	**22 13 29.9**	**-2.0**
SWA2		**4.89**	**180**	⇑P	**Pn**	**22 12 35.3**	**-0.1**
HBRG	**Burj al 'Arab**	**5.13**	**133**	⇑P	**Pn**	**22 12 38.5**	**-0.2**
AMAG	**Maghara**	**7.41**	**116**	⇑P	**Pn**	**22 13 09.4**	**-1.4**

IDC 15 22:20:11.5±3.2**, 1.09N**×**97.05E, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.6**/18**, mbtmp3.7**/5**, ML3.8**/1**, Error ellipse: s-maj=113.2km s-min=26.8km az=60.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**17.36**	**6**	P	P	22 24 16.6	-0.4
	0.1nm,0.3s,baz=196,slow=11,SNR=10						
WRA	**Warramunga Arr**	**42.10**	**122**	P	P	22 28 05.7	-1.6
	0.4nm,0.6s,baz=301,slow=9.4,SNR=2.7						
SONM	**Songino Array**	**47.27**	**9**	P	P	22 28 46.3	-2.1
	0.9nm,0.7s,baz=193,slow=9.6,SNR=9.4						
MKAR	**Makanchi Array**	**47.31**	**346**	P	P	22 28 47.0	-1.8
	1.0nm,0.7s,baz=146,slow=8.7,SNR=4.9						
ZAL	**Zalesovo**	**53.64**	**351**	P	P	22 29 34.2	-2.6
	1.1nm,0.5s,baz=282,slow=7.3,SNR=6.4						

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*IDC **15** 23:03:21.0±11.0, 6.27N×126.04E, h152^{km}±117^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.6/20, mbtmp4.2/8, Error ellipse: s-maj=62.5km s-min=18.2km az=74.0*
ISC 15 23:03:10.1±2.0**, 6.48N**±0.09×**126.5E**±0.2**, h72**^{km}±17^{km}**, n16, σ1^{s}00**/18**, mb4.1**/8**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**0.54**	**329**	eP	**P**	**23 03 14.2**	**-9.4**
KCP	**Kidapawan**	**1.53**	**290**	⇑eP	**P**	**23 03 26.1**	**-10**
KCP	**Kidapawan**	**1.53**	**290**	⇑iP	**P**	**23 03 37.1**	**+1.0**
KCP				i S	**S**	**23 03 55.8**	**+0.6**
BUTP	**Butuan**	**2.63**	**340**	eP	**P**	**23 03 56.1**	**+4.8**
PAGZ	**Pagadian**	**3.41**	**294**	eP	**P**	**23 04 01.9**	**-0.3**
SCPH	**Surigao**	**3.44**	**343**	eP	**P**	**23 04 01.6**	**-1.1**
SCPH				eS	**S**	**23 04 52.1**	**+10**
FITZ	**Fitzroy Crossi**	**24.44**	**182**	P	**P**	**23 08 23.3**	**-0.3**
	6.6nm,0.4s,mb4.4,baz=10,slow=8.4,SNR=25						
WRA	**Warramunga Arr**	**27.35**	**164**	P	**P**	**23 08 52.0**	**+1.3**
	1.1nm,0.3s,mb3.8,baz=341,slow=10,SNR=11						
KLBR	**Kellerberrin**	**38.77**	**192**	eP	**P**	**23 10 28.0**	**-1.4**
	46nm,1.2s						
NWAO	**Narrogin (SRO)**	**40.17**	**192**	P	**P**	**23 10 40.5**	**-0.5**
	5.5nm,0.4s,mb4.7,baz=60,slow=4.5,SNR=16						
STKA	**Stephens Creek**	**40.76**	**160**	P	**P**	**23 10 46.3**	**+0.5**
	1.0nm,0.3s,mb4.1,baz=335,slow=10,SNR=5.3						
SONM	**Songino Array**	**44.65**	**341**	P	**P**	**23 11 19.4**	**+2.1**
	0.1nm,0.4s,baz=153,slow=6.4,SNR=2.4						
MKAR	**Makanchi Array**	**55.21**	**324**	P	**P**	**23 12 36.7**	**-1.3**
	0.9nm,0.4s,mb4.1,baz=118,slow=7.2,SNR=12						
BVAR	**Borovoye Array**	**64.93**	**326**	P	**P**	**23 13 43.3**	**-1.1**
	0.5nm,0.4s,mb3.7,baz=120,slow=7.1,SNR=5.4						
ARCES	**ARCESS Array B**	**87.82**	**340**	P	**P**	**23 15 52.8**	**+0.6**
	2.0nm,0.9s,mb4.1,baz=80,slow=7.4,SNR=4.9						
FINES	**FINESS Array B**	**89.33**	**332**	P	**P**	**23 16 00.2**	**+0.7**
	0.8nm,0.9s,mb3.8,baz=90,slow=5.7,SNR=4.3						

JMA 15 23:17:07.4±0.8**, 32.71N**×**142.09E, M3.6, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	**Hitachi**	**4.09**	**343**	P	Pn	23 18 13.2	+0.6
JHO				S	Sn	23 19 01.8	0.0
JAG	**Ashikaga**	**4.30**	**330**	P	Pn	23 18 16.2	+0.7
JMM	**Marumori**	**5.25**	**349**	P	Pn	23 18 28.1	-1.0
JMM				eS	Sn	23 19 27.2	-4.0
JMK	**Ichinoseki**	**6.27**	**354**	P	Pn	23 18 41.2	-2.2
JMK				eS	Sn	23 19 51.3	-5.4

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*IDC **15** 23:20:38.6±1.1, 41.01N×126.33W, mb3.9/8, mb1 4.0/12, mb1mx3.8/27, mbtmp3.8/12, ML2.9/3, MS3.5/5, Ms1 3.5/5, ms1mx3.2/29, Error ellipse: s-maj=24.1km s-min=12.9km az=18.0*
*NEIC **15** 23:20:40.2±0.8, 41.06N×126.32W, h10^{km}, mb4.2/2, Error ellipse: s-maj=11.6km s-min=7.8km az=52.0*
ISC 15 23:20:38.6±0.7**, 41.00N**±0.06×**126.31W**±0.08**, h10**^{km}**, n41, σ1^{s}09**/42**, mb3.9**/10**, MS3.4**/1**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRMB	**Red Mountain**	**1.88**	**73**	eP	**Pn**	**23 21 11.3**	**+0.1**
KHMM	**Horse Mountain**	**1.96**	**93**	eP	**Pn**	**23 21 11.3**	**-0.9**
KBO	**Bosley Butte**	**1.98**	**51**	eP	**Pn**	**23 21 12.4**	**-0.1**
KEBM	**Edson Butte**	**2.38**	**38**	eP	**Pn**	**23 21 17.9**	**-0.4**
YBH	**Yreka Blue Hor**	**2.81**	**74**	Pn	**Pn**	**23 21 25.3**	**+1.0**
	16nm,0.3s,baz=253,slow=12,SNR=55						
YBH				Sn	**Sn**	**23 21 59.7**	**+1.1**
	6.2nm,0.3s,baz=172,slow=18,SNR=5.6						
WDC	**Whiskeytown Da**	**2.89**	**97**	eP	**Pn**	**23 21 25.6**	**0.0**
HUMO	**Hull Mountain**	**2.98**	**56**	eP	**Pn**	**23 21 27.3**	**+0.5**
HOPS	**Hopland**	**3.19**	**128**	eP	**Pn**	**23 21 27.2**	**-2.7**
MOD	**Modoc**	**4.60**	**77**	eP	**Pn**	**23 21 49.8**	**-0.1**
BEKR	**Beckwourth**	**4.68**	**102**	ePn	**Pn**	**23 21 52.1**	**+1.1**
CMB	**Columbia Colle**	**5.45**	**121**	ePn	**Pn**	**23 22 00.7**	**-1.2**
SAO	**San Andreas Ge**	**5.68**	**137**	ePn	**Pn**	**23 22 00.5**	**-4.7**
WVOR	**Wild Horse Val**	**5.92**	**73**	ePn	**Pn**	**23 22 06.7**	**-1.8**
NVAR	**Mina Array Bea**	**6.68**	**110**	Pn	**Pn**	**23 22 18.5**	**-0.8**
	0.3nm,0.3s,baz=281,slow=14,SNR=10						
NVAR				Sn	**Sn**	**23 23 47.6**	**+11**
	baz=277,slow=22,SNR=2.4						
NVAR	**Mina Array Bea**	**6.68**	**110**	Pn	**Pn**	**23 22 18.4**	**-0.8**
NVAR				Sn	**Sn**	**23 23 47.6**	**+11**
MNV	**Mina**	**6.79**	**110**	Pn	**Pn**	**23 22 21.6**	**+0.8**
MTUM	**Tungsten Hills**	**7.03**	**119**	ePn	**Pn**	**23 22 23.1**	**-1.0**
BMO	**Blue Mountains**	**7.64**	**57**	eP	**Pn**	**23 22 32.9**	**+0.1**
ELK	**Elko**	**8.39**	**88**	Pn	**P**	**23 22 44.6**	**+1.4**
	0.1nm,0.3s,baz=271,slow=11,SNR=4.9						
ELK	**Elko**	**8.39**	**88**	Pn	**P**	**23 22 43.8**	**+0.6**
HLID	**Hailey**	**9.18**	**70**	eP	**P**	**23 22 55.4**	**+1.2**
NEW	**Newport**	**9.77**	**39**	LR	LR	23 26 52.7	
	comp=Z,311nm,20.3s,baz=210,slow=38						
MCMT	**McKenzie Canyo**	**10.59**	**64**	eP	**P**	**23 23 13.7**	**+0.3**
MSO	**Missoula**	**10.65**	**53**	P	**P**	**23 23 12.5**	**-1.8**
CHMT	**Chamberlain Mo**	**11.11**	**53**	eP	**P**	**23 23 19.4**	**-1.1**
BBB	**Bella Bella**	**11.26**	**354**	LR	LR	23 26 47.1	
	comp=Z,149nm,21.1s,baz=236,slow=33						
EDM	**Edmonton**	**15.04**	**31**	P	**P**	**23 24 11.1**	**-1.7**
ANMO	**Albuquerque**	**16.76**	**105**	Pn	**P**	**23 24 36.5**	**+1.5**
	baz=313,slow=12,SNR=2.1						
ANMO				LR	LR	23 31 30.3	
	comp=Z,140nm,18.6s,baz=171,slow=39						
ANMO	**Albuquerque**	**16.76**	**105**	Pn	**P**	**23 24 36.5**	**+1.5**
ANMO				LR	LR	23 31 30.3	
DLBC	**Dease Lake**	**17.62**	**354**	P	**P**	**23 24 48.5**	**+3.0**
	0.2nm,0.3s,baz=156,slow=16,SNR=4.3						
DLBC				LR	LR	23 30 13.5	
	comp=Z,163nm,20.1s,baz=301,slow=33						
FFC	**Flin Flon**	**21.19**	**41**	eP	**P**	**23 25 26.3**	**0.0**
	9.2nm,0.9s,mb4.1						
TXAR	**Lajitas Array**	**21.80**	**115**	P	**P**	**23 25 34.3**	**+1.7**
	1.8nm,1.1s,mb3.4,baz=284,slow=5.2,SNR=8.6						
YKA	**Yellowknife Ar**	**22.64**	**14**	P	**P**	**23 25 39.9**	**-0.7**
	0.9nm,0.6s,mb3.4,baz=202,slow=11,SNR=4.5						
YKA	**Yellowknife Ar**	**22.64**	**14**	P	**P**	**23 25 39.9**	**-0.7**
ULM	**Lac du Bonnet**	**23.07**	**56**	P	**P**	**23 25 46.5**	**+1.5**
	5.6nm,0.8s,mb4.0,baz=263,slow=9.0,SNR=5.1						
ULM				LR	LR	23 35 17.9	
	comp=Z,140nm,20.2s,MS3.4,baz=13,slow=38						
SUMG	**Summit**	**50.82**	**23**	eP	**P**	**23 29 39.1**	**-1.6**
	3.0nm,0.9s,mb4.2						
NOA	**NORSAR Array B**	**72.59**	**20**	P	**P**	**23 32 07.1**	**-0.2**
	0.6nm,0.8s,mb3.5,baz=12,slow=18,SNR=3.2						
SONM	**Songino Array**	**79.98**	**327**	P	**P**	**23 32 49.8**	**+0.7**
	0.7nm,0.8s,mb3.6,baz=27,slow=2.8,SNR=5.0						
ZAL	**Zalesovo**	**81.73**	**342**	P	**P**	**23 32 58.4**	**+0.2**
	1.0nm,0.3s,mb4.3,baz=275,slow=5.3,SNR=3.1						
SIV	**San Ignacio**	**82.76**	**118**	P	**P**	**23 33 04.4**	**+0.1**
	1.0nm,0.7s,mb4.0,baz=323,slow=6.6,SNR=5.5						
BVAR	**Borovoye Array**	**85.25**	**350**	P	**P**	**23 33 16.9**	**+0.9**
	1.4nm,0.8s,mb4.1,baz=18,slow=4.7,SNR=9.5						

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*NEIC **15** 23:21:25.0±0.9, 20.23S×69.04W, h98^{km}±9^{km}, mb4.3/3, Error ellipse: s-maj=12.1km s-min=7.9km az=65.0*
*IDC **15** 23:21:25.7±0.7, 20.24S×68.95W, h106^{km}±5^{km}, mb3.9/9, mb1 4.1/12, mb1mx4.0/19, mbtmp4.4/12, MS3.0/2, Ms1 3.1/2, ms1mx3.0/17, Error ellipse: s-maj=20.1km s-min=16.4km az=55.0*
ISC 15 23:21:22.7±0.8**, 20.20S**±0.04×**69.02W**±0.06**, h91**^{km}±9^{km}**, n35, σ0^{s}96**/35**, mb4.0**/8**, 1C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANCH	**Antofagasta**	**3.69**	**200**	eP	**P**	**23 22 19.1**	**+0.3**
LPAZ	**La Paz**	**3.98**	**12**	P	**P**	**23 22 27.7**	**+4.9**
	15nm,0.3s,baz=188,slow=8.3,SNR=332						
LPAZ				S	**S**	**23 23 08.8**	**+0.1**
	0.6nm,0.3s,baz=41,slow=19,SNR=2.6						
LPAZ				LR	LR	23 24 00.1	
	comp=Z,126nm,20.5s,baz=203,slow=38						
LPAZ	**La Paz**	**3.98**	**12**	eP	**P**	**23 22 27.4**	**+4.6**
ARE	**Arequipa**	**4.40**	**327**	eP	**P**	**23 22 28.0**	**-0.5**
ARE				i		23 22 33.3	
ARE				i S	**S**	**23 23 28.4**	**+10**
CPN1	**Cerro Paranal**	**4.58**	**196**	eP	**P**	**23 22 30.5**	**-0.6**
SIV	**San Ignacio**	**8.64**	**62**	P	**P**	**23 23 27.3**	**+0.6**
	9.5nm,0.3s,baz=250,slow=13,SNR=151						
SIV				S	**S**	**23 25 03.6**	**+0.4**
	baz=164,slow=18,SNR=2.8						
CFAA	**Coronel Fontan**	**11.38**	**177**	P	**P**	**23 24 03.6**	**0.0**
	0.1nm,0.3s,baz=351,slow=13,SNR=6.1						
CFAA				S	**S**	**23 26 03.2**	**-6.1**
	0.0nm,0.3s,baz=197,slow=19,SNR=2.4						
CFAA	**Coronel Fontan**	**11.38**	**177**	P	**P**	**23 24 03.6**	**0.0**
CFAA				S	**S**	**23 26 03.2**	**-6.1**
CPUP	**Villa Florida**	**12.35**	**122**	P	**P**	**23 24 17.4**	**+0.9**
	0.8nm,0.3s,baz=327,slow=15,SNR=48						
CPUP				LR	LR	23 30 05.8	
	comp=Z,116nm,18.8s,baz=87,slow=42						
CPUP	**Villa Florida**	**12.35**	**122**	eP	**P**	**23 24 17.6**	**+1.1**
	31nm,0.9s						
SAML	**Samuel**	**12.53**	**28**	eP	**P**	**23 24 16.9**	**-2.0**
	6.1nm,0.8s						
TRQA	**Tornquist**	**18.81**	**163**	eP	**P**	**23 25 37.8**	**+0.2**
	16nm,0.8s						
BDFB	**Brasilia**	**20.49**	**81**	P	**P**	**23 25 54.9**	**-0.6**
	11nm,0.7s,baz=254,slow=12,SNR=13						
PLCA	**Paso Flores**	**20.51**	**183**	P	**P**	**23 25 55.1**	**-0.4**
	10.0nm,0.8s,baz=9.0,slow=12,SNR=14						
PLCA	**Paso Flores**	**20.51**	**183**	eP	**P**	**23 25 54.9**	**-0.6**

	15nm,0.9s						
BAO	**Brasilia Array**	20.52	81	P	P	23 25 56.0	+0.3
OTAV	**Otavalo**	22.31	334	*e*P	P	23 26 16.0	+2.4
	7.5nm,1.0s,mb4.0						
ELN	**Prospectdale**	58.18	349	*e*P	P	23 31 09.2	-0.4
TXAR	**Lajitas Array**	59.51	325	P	P	23 31 18.0	-0.8
	0.6nm,0.7s,mb3.8,baz=144,slow=7.8,SNR=3.0						
DBIC	**Dimbokro**	68.47	74	P	P	23 32 16.4	-1.1
	3.6nm,0.6s,mb4.4,baz=244,slow=8.0,SNR=7.4						
DBIC				pP	pP	23 32 43.2	+2.2
	12nm,1.1s,baz=217,slow=3.6,SNR=4.4						
DBIC				sP	sP	23 32 54.1	+3.4
	5.0nm,0.8s,baz=264,slow=6.0,SNR=2.6						
DBIC	**Dimbokro**	68.47	74	P	P	23 32 16.4	-1.1
DBIC				pP	pP	23 32 43.2	+2.2
DBIC				*e*P	pP	23 32 43.8	+2.7
DBIC				sP	sP	23 32 54.1	+3.4
MSU	**Marysvale**	71.06	325	*e*P	P	23 32 33.5	+0.6
ARUT	**Antelope Range**	71.21	324	*e*P	P	23 32 35.7	+1.8
ULM	**Lac du Bonnet**	74.05	342	P	P	23 32 48.3	-2.0
	2.9nm,0.6s,mb4.2,baz=118,slow=2.5,SNR=3.9						
ELK	**Elko**	74.30	325	P	P	23 32 52.5	+0.5
	1.1nm,0.8s,mb3.7,baz=113,slow=3.6,SNR=4.6						
NVAR	**Mina Array Bea**	74.41	322	P	P	23 32 53.3	+0.6
	1.2nm,0.7s,mb3.7,baz=131,slow=6.5,SNR=6.2						
SCHQ	**Schefferville**	74.75	1	P	P	23 32 53.5	-0.8
	2.0nm,0.9s,mb3.9,baz=282,slow=14,SNR=3.3						
SCHQ	**Schefferville**	74.75	1	P	P	23 32 53.5	-0.8
SYO	**Syowa Base**	77.75	160	⇑X		23 33 31.5	
YKA	**Yellowknife Ar**	89.93	341	P	P	23 34 12.8	+0.3
	3.6nm,0.7s,mb4.6,baz=138,slow=4.5,SNR=13						
YKA				pP	pP	23 34 40.5	+3.5
	0.3nm,0.3s,baz=7.4,slow=21,SNR=2.2						
YKA	**Yellowknife Ar**	89.93	341	P	P	23 34 12.8	+0.3
YKA				pP	pP	23 34 40.5	+3.5
ZAL	**Zalesovo**	140.82	24	PKP	PKPdf	23 40 43.5	+1.7
	0.8nm,0.3s,baz=163,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	144.64	35	PKP	PKPdf	23 40 48.9	+0.3
	0.7nm,0.5s,baz=317,slow=2.9,SNR=14						
MKAR				pPKP		23 41 19.1	
	0.6nm,0.6s,baz=333,slow=2.7,SNR=3.0						
MJAR	**Matsushiro Arr**	151.17	310	PKPbc	PKPdf	23 41 07.1	+7.6
	0.8nm,0.3s,baz=38,slow=2.4,SNR=4.1						
SONM	**Songino Array**	152.19	7	PKP	PKPdf	23 41 03.3	+2.7
	0.5nm,0.8s,baz=270,slow=4.3,SNR=3.8						
SONM				PKPbc	PKPdf	23 41 09.9	+9.3
	1.9nm,0.8s,baz=280,slow=0.9,SNR=12						
SONM				pPKPbc		23 41 38.1	
	1.4nm,0.8s,baz=341,slow=1.7,SNR=4.7						

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*NEIC **16** 00:06:57.1±0.7, 1.30S×138.37E, h35^{km}, mb4.3/5, Error ellipse: s-maj=19.9km s-min=10.9km az=78.0*

*IDC **16** 00:07:02.0±5.0, 1.44S×138.27E, h75^{km}±46^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.8/15, mbtmp4.2/7, ML3.4/1, MS3.7/4, Ms1 3.7/4, ms1mx3.2/20, Error ellipse: s-maj=24.8km s-min=17.0km az=98.0*

ISC 16 00:07:03.0±3.2**, 1.64S**±0.07×**138.0E**±0.2**, h97**^{km}±30^{km}**, n17, σ1^{s}06**/19**, mb3.8**/5**, 2C, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	12.29	206	⇑*i*P	P	00 09 55.0	-0.9
	12nm,0.5s						
KAKA				*e*S	S	00 12 11.0	-0.2
WRAB	**Tennant Creek**	18.52	191	*e*P	P	00 11 15.3	+0.9
	25nm,0.8s						
WB2	**Warramunga Arr**	18.53	191	⇑*i*P	P	00 11 15.4	+0.9
WB2				*e*S	S	00 14 34.5	0.0
WRA	**Warramunga Arr**	18.53	191	P	P	00 11 14.4	-0.1
	0.1nm,0.3s,baz=18,slow=12,SNR=4.5						
WRA				S	S	00 14 33.5	-1.0
	0.3nm,0.3s,baz=13,slow=22,SNR=5.6						
CTA	**Charters Tower**	20.03	157	*e*P	P	00 11 29.6	-1.0
	8.9nm,0.8s						
CTA	**Charters Tower**	20.03	157	P	P	00 11 29.0	-1.6
	12nm,0.7s,baz=333,slow=11,SNR=12						
CTA				LR	LR	00 20 10.0	
	comp=Z,148nm,18.6s,baz=183,slow=39						
CTAO	**Charters Tower**	20.03	157	*e*P	P	00 11 29.2	-1.4
	11nm,0.7s						
FITZ	**Fitzroy Crossi**	20.36	216	*e*P	P	00 11 37.8	+3.8
	5.7nm,0.6s						
FITZ				*e*S	S	00 15 22.9	+11
FITZ	**Fitzroy Crossi**	20.36	216	P	P	00 11 37.1	+3.1
	13nm,1.0s,baz=15,slow=14,SNR=5.2						
FITZ				S	S	00 15 23.6	+12
	12nm,0.9s,baz=190,slow=9.5,SNR=6.5						
FITZ				LR	LR	00 19 53.8	
	comp=Z,118nm,18.5s,baz=262,slow=37						
STKA	**Stephens Creek**	30.26	174	P	P	00 13 08.5	+1.3
	2.0nm,0.8s,mb3.8,baz=320,slow=12,SNR=3.1						
NWAO	**Narrogin (SRO)**	36.72	210	LR	LR	00 30 34.2	
	comp=Z,106nm,20.1s,baz=322,slow=38						
CMAR	**Chiang Mai Arr**	43.29	299	P	P	00 14 58.0	+1.0
	1.6nm,0.7s,mb3.9,baz=112,slow=6.2,SNR=8.4						
AFI	**Afiamalu**	51.12	106	LR	LR	00 34 24.7	
	comp=Z,133nm,18.9s,baz=277,slow=32						
MKAR	**Makanchi Array**	68.51	322	P	P	00 17 55.9	-1.1
	0.5nm,0.7s,mb3.5,baz=108,slow=7.7,SNR=3.9						
VNDA	**Vanda**	76.90	175	P	P	00 18 46.8	+0.9
	1.8nm,0.7s,mb3.9,baz=317,slow=6.3,SNR=8.2						
ARU	**Arti**	85.51	327	P	P	00 19 29.9	-1.3
	2.0nm,0.8s,mb4.1						
LPAZ	**La Paz**	148.65	126	PKPbc	PKPdf	00 26 41.8	+5.9
	2.4nm,0.9s,baz=254,slow=0.9,SNR=9.4						

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*CSEM **16** 00:27:47.7±0.8, 35.41N×3.67W, h30^{km}, MD2.7, Error ellipse: s-maj=24.6km s-min=9.4km az=170.0*

*CNRM **16** 00:27:49.4, 35.39N×3.71W, h30^{km}, MD2.7*

MDD 16 00:26:51.6±1.1**, 35.51N**×**3.79W, mbLg2.1**/6**, Error ellipse: s-maj=9.9km s-min=5.5km az=31.0, PRXIMO, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPAL	**Palemas**	0.31	205	*e*P	Pg	00 27 56.0	+58
TOU	**Touzarine**	0.54	177	*e*P	Pg	00 27 59.0	+57
EMEL	**Melilla**	0.71	107	P	Pg	00 27 04.7	-1.0
	160nm,0.1s,SNR=7.9						
EMEL				S	Sg	00 27 14.4	-0.8
	248nm,0.1s,SNR=7.9						
EALB	**Alboran**	0.75	54	P	Pg	00 27 05.3	-1.3
	8.7nm,0.1s,SNR=42						
EALB				S	Sg	00 27 15.6	-1.0
	77nm,0.2s,SNR=16						
ZAI	**Zaio**	1.00	122	*e*P	Pb	00 28 04.0	+52
ZAI				*i* S	Sg	00 28 16.0	+51
EMIJ	**Mijas**	1.32	323	P	Pb	00 27 13.8	-3.2
	0.6nm,0.1s,SNR=4.0						
EMIJ				S	Sb	00 27 30.9	-3.5
	2.9nm,0.1s,SNR=4.0						
TZK	**Tazeka**	1.45	193	*i* P	Pn	00 28 12.0	+53
TZK				*i* S	Sb	00 28 28.0	+50
EBER	**Berja**	1.57	27	P	Pn	00 27 18.1	-2.7
	SNR=4.0						
EBER				S	Sb	00 27 38.6	-2.9
	7.6nm,0.3s,SNR=7.9						
ELOJ	**Sierra Loja**	1.67	350	P	Pn	00 27 21.5	-0.7
	0.8nm,0.3s,SNR=4.0						
ELOJ				S	Sb	00 27 43.2	-1.1
	1.1nm,0.2s,SNR=4.0						
ECOG	**Cogollos-Vega**	1.78	6	P	Pn	00 27 22.6	-1.3
	0.8nm,0.2s,SNR=4.0						
EQES	**Quesada**	2.36	14	P	Pn	00 27 31.2	-1.0
	0.3nm,0.1s,SNR=7.0						
EQES				S	Sn	00 28 00.6	-1.8
	2.6nm,0.2s						
EADA	**Adamuz**	2.73	347	P	Pn	00 27 35.7	-1.8
	0.3nm,0.2s,SNR=4.0						
EADA				S	Sn	00 28 09.0	-2.7
	0.3nm,0.1s,SNR=4.0						
EMIN	**Mina Concepcio**	3.24	315	P	Pn	00 27 43.2	-1.5
	0.1nm,0.1s,SNR=4.0						
ETOB	**Tobarra**	3.61	29	P	Pn	00 27 48.2	-1.7
	0.3nm,0.2s,SNR=7.9						

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*IDC **16** 00:27:58.1±1.6, 7.40S×130.51E, mb4.0/4, mb1 4.3/6, mb1mx4.1/14, mbtmp4.1/6, Error ellipse: s-maj=52.3km s-min=27.7km az=89.0*

*NEIC **16** 00:28:02.3±1.0, 7.52S×130.50E, h35^{km}, mb3.9/1, Error ellipse: s-maj=29.2km s-min=12.8km az=84.0*

ISC 16 00:27:59.8±0.8**, 7.56S**±0.08×**130.5E**±0.2**, h33**^{km}**, n9, σ1^{s}08**/11**, mb3.9**/4**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	11.51	204	Pn	P	00 30 46.6	+1.7
	1.7nm,0.3s,baz=16,slow=8.8,SNR=28						
FITZ				Sn	S	00 32 46.5	-6.8
	3.3nm,0.3s,baz=29,slow=3.3,SNR=6.0						
WRAB	**Tennant Creek**	12.85	164	*e*P	P	00 31 03.1	+0.1
	8.6nm,0.6s						
WRA	**Warramunga Arr**	12.86	164	Pn	P	00 31 03.2	+0.1
	1.2nm,0.3s,baz=343,slow=13,SNR=18						
WRA				Sn	S	00 33 20.0	-6.0
	3.2nm,0.3s,baz=348,slow=18,SNR=11						
MBWA	**Marble Bar**	17.07	217	P	P	00 31 56.1	-1.6
	10nm,1.1s						
CMAR	**Chiang Mai Arr**	40.48	310	P	P	00 35 37.6	+0.3
	0.6nm,0.3s,mb3.8,baz=134,slow=6.9,SNR=4.7						
MJAR	**Matsushiro Arr**	44.45	9	P	P	00 36 08.6	-1.1
	1.9nm,0.8s,mb3.9,baz=186,slow=11,SNR=4.4						
MJAR	**Matsushiro Arr**	44.45	9	P	P	00 36 08.6	-1.1
SONM	**Songino Array**	59.13	341	P	P	00 37 59.7	+0.1
	0.5nm,0.5s,mb3.8,baz=157,slow=6.4,SNR=5.0						
MKAR	**Makanchi Array**	68.97	327	P	P	00 39 05.0	+1.1
	1.6nm,0.4s,mb4.3,baz=117,slow=8.2,SNR=52						

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*NEIC **16** 01:16:06.6, 33.56S×70.07W, h10^{km}, ML2.8(GUC), After GUC.*

GUC 16 01:16:06.6±0.9**, 33.56S**×**70.07W, h10**^{km}±1^{km}**, MD3.7, ML2.8, 9C-8D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJCH	**San Jose de Ma**	0.25	251	⇓*i*P	Pg	01 16 12.2	+0.4
SJCH				*i* S	Sg	01 16 16.3	+1.0
SJCH				AMP		01 16 17.0	
	comp=N,8μm,0.1s						
FCH	**Farellones**	0.30	322	⇓*i*P	Pg	01 16 13.1	+0.3
LMEL	**Las Melosas**	0.30	201	⇑*i*P	Pg	01 16 13.2	+0.2
LMEL				*i* S	Sg	01 16 18.0	+0.8
LMEL				AMP		01 16 18.3	
	comp=E,5μm,0.1s						
PCH	**Pirque**	0.37	261	⇑*i*P	Pg	01 16 14.9	+0.6
FSR	**Penalolen**	0.39	282	*e*P	Pg	01 16 14.7	+0.2
FSR				*i* S	Sg	01 16 21.2	+1.4
FSR				AMP		01 16 21.8	
	comp=E,2μm,0.2s						
CLCH	**Cerro Calan**	0.42	293	⇓*i*P	Pg	01 16 15.6	+0.5
CLCH				*i* S	Sg	01 16 22.2	+1.3
CLCH				AMP		01 16 22.8	
	comp=E,1μm,0.2s						
CLCH				AMP		01 16 23.4	
	comp=E,1μm,0.2s						
DSCH	**Colegio Aleman**	0.45	291	⇑*i*P	Pg	01 16 16.2	+0.6
DSCH				*i* S	Sg	01 16 23.2	+1.6
ANTU	**Antumapu**	0.47	269	⇓*i*P	Pg	01 16 16.5	+0.4
ANTU				*i* S	Sg	01 16 23.5	+1.1
ANTU				AMP		01 16 23.8	
	comp=N,1μm,0.2s						
STL	**Santa Lucia**	0.49	285	⇑*i*P	Pg	01 16 16.0	-0.5
STL				*i* S	Sg	01 16 23.3	+0.1
SAN	**Santiago**	0.50	282	*i* S	Sg	01 16 24.7	+1.1
SAN				AMP		01 16 29.1	
	comp=E,531nm,0.4s						
PUEX	**Pudahuel**	0.58	282	⇑*i*P	Pg	01 16 19.0	+0.6
PUEX				*i* S	Sg	01 16 28.4	+2.1
PUEX				AMP		01 16 30.9	
	comp=N,990nm,0.6s						
CHCH	**Chadas Angostu**	0.61	232	⇑*i*P	Pb	01 16 19.0	+0.1
CHCH				*i* S	Sg	01 16 27.8	+0.8
PEL	**Peldehue**	0.66	309	⇓*i*P	Pb	01 16 19.7	-0.1
PEL				*i* S	Sb	01 16 28.9	+0.2
CACH	**El Canelo**	0.71	218	⇑*i*P	Pb	01 16 20.8	+0.2
CACH				*i* S	Sb	01 16 31.2	+1.1
TACH	**Talagante**	0.73	263	⇑*i*P	Pb	01 16 21.0	+0.1
TACH				*i* S	Sb	01 16 31.4	+0.7
JACH	**Jahuel**	0.98	333	⇓*i*P	Pb	01 16 25.1	-0.1
JACH				*i* S	Sb	01 16 38.0	0.0
ROCH	**El Roble**	0.98	307	*i* P	Pb	01 16 25.2	0.0
ROCH				*i* S	Sb	01 16 38.7	+0.7
LNV	**Longovilo**	1.18	250	⇓*i*P	Pb	01 16 28.5	-0.2
LNV				*i* S	Sb	01 16 44.7	+0.8
LCCH	**Las Cruces**	1.25	274	⇓*i*P	Pb	01 16 29.8	-0.1
LCCH				*i* S	Sb	01 16 46.9	+1.0
SFDO	**San Fernando**	1.31	216	*i* P	Pb	01 16 31.4	+0.6
SFDO				*i* S	Sb	01 16 49.7	+2.1
PACH	**Papudo**	1.54	311	⇑*i*P	Pn	01 16 34.4	+0.2
PACH				*i* S	Sb	01 16 55.2	+1.1

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*IDC **16** 01:28:36.7±1.4, 27.24N×140.39E, h440^{km}±12^{km}, mb3.3/12, mb1 3.5/13, mb1mx3.4/23, mbtmp4.2/13, Error ellipse: s-maj=58.7km s-min=20.6km az=177.0*

ISC 16 01:28:36.9±1.2**, 27.6N**±0.5×**140.3E**±0.2**, h438**^{km}±18^{km}**, n17, σ0^{s}46**/18**, mb3.7**/14**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	1.72	105	P	P	01 29 36.0	+0.7
	36nm,0.3s,baz=292,slow=23,SNR=13						
CBIJ				S	S	01 30 20.7	-0.6
	46nm,0.3s,baz=98,slow=24,SNR=8.8						
JOW	**Kunigami**	10.75	269	P	P	01 31 04.5	+0.4
	3.5nm,0.3s,baz=338,slow=28,SNR=7.7						
SONM	**Songino Array**	33.25	317	P	P	01 34 37.1	0.0
	0.4nm,0.6s,mb2.9,baz=126,slow=8.4,SNR=4.4						
SONM				PcP	PcP	01 37 06.1	-1.9
	0.3nm,0.4s,baz=152,slow=3.6,SNR=5.0						
ZAL	**Zalesovo**	48.07	319	P	P	01 36 36.8	+0.4
	1.7nm,0.3s,mb3.8,baz=14,slow=6.2,SNR=4.5						
MKAR	**Makanchi Array**	48.91	309	P	P	01 36 42.5	-0.3
	0.7nm,0.4s,mb3.3,baz=92,slow=8.7,SNR=7.3						
BVAR	**Borovoye Array**	56.59	317	P	P	01 37 38.0	-0.2
	8.4nm,0.4s,mb4.4,baz=87,slow=6.9,SNR=66						
ILAR	**Eielson Array**	58.12	29	P	P	01 37 48.6	+0.2
	0.4nm,0.3s,mb3.2,baz=253,slow=5.6,SNR=4.6						
KEV	**Kevo**	72.01	340	*e*p	P	01 39 15.5	-0.3
	1.2nm,0.6s,mb3.6						
YKA	**Yellowknife Ar**	72.53	28	P	P	01 39 19.5	+0.6
	0.9nm,0.5s,mb3.5,baz=296,slow=5.9,SNR=4.8						
ARCES	**ARCESS Array B**	72.57	340	P	P	01 39 19.4	+0.4
	3.2nm,1.0s,mb3.8,baz=71,slow=8.9,SNR=15						
KAF	**Kangasniemi**	76.35	334	*e*p	P	01 39 40.3	-0.1
	2.1nm,0.4s,mb4.1,baz=54,slow=5.2						
FINES	**FINESS Array B**	76.81	333	P	P	01 39 43.3	+0.4
	3.4nm,0.4s,mb4.3,baz=66,slow=5.3,SNR=82						
AKASG	**Malin Array Be**	81.27	323	P	P	01 40 05.7	-1.0
	0.4nm,0.3s,mb3.6,baz=49,slow=5.6,SNR=4.1						
HFS	**Hagfors**	82.35	336	P	P	01 40 11.6	-0.4
	1.1nm,0.4s,mb4.0,baz=90,slow=3.0,SNR=16						
NB2	**NORSAR Subarra**	82.57	338	P	P	01 40 13.3	+0.1
	1.7nm,0.7s,mb3.9,baz=44,slow=5.0						
NOA	**NORSAR Array B**	82.57	338	P	P	01 40 12.8	-0.3
	1.8nm,0.6s,mb4.0,baz=45,slow=5.0,SNR=6.8						
BRTR	**Keskin Array B**	84.48	312	P	P	01 40 23.1	-0.1
	0.5nm,0.6s,mb3.4,baz=57,slow=7.7,SNR=3.6						

GUC 16 01:41:51.3±0.8**, 28.10S**×**69.14W, h110**^{km}**, ML3.9, 3C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPCH	**Copiapo**	1.31	304	⇑*i*P	P	01 42 16.5	+0.2
CPCH				*i* S	S	01 42 34.8	-0.3
CPCH				AMP		01 42 36.9	
	comp=E,4μm,0.1s						
VACH	**Vallenar**	1.51	251	⇑*i*P	P	01 42 18.7	+0.1
VACH				*i* S	S	01 42 39.5	+0.3
VACH				AMP		01 42 42.9	
	comp=N,2μm,0.1s						
LCO	**Las Campanas**	1.65	236	⇑*i*P	P	01 42 20.7	+0.3
LCO				*i* S	S	01 42 43.0	+0.9
LCO				AMP		01 42 44.3	
	comp=N,423nm,0.5s						
CMCH	**Combarbala**	3.46	207	*e*P	P	01 42 42.3	-2.2
CMCH				*i* S	S	01 43 23.1	-1.9
CMCH				AMP		01 43 29.1	
	comp=E,229nm,0.6s						

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*FUNV **16** 01:42:22.0, 10.94N×62.10W, h95^{km}, MW2.3*

*TRN **16** 01:42:23.7, 11.00N×62.13W, h80^{km}, MD2.8*

*NEIC **16** 01:42:23.7, 11.00N×62.13W, h80^{km}, MD2.8(TRN), After TRN.*

ISC 16 01:42:20.9±0.8**, 10.91N**±0.05×**62.20W**±0.03**, h101**^{km}±7^{km}**, n15, σ1^{s}03**/28**, 3C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	0.26	186	⇑*i*P	P	01 42 36.2	+0.6
GUIV				*e*S	S	01 42 45.8	-0.7
TRN	**Trinidad (W)**	0.82	108	⇑*i*P	P	01 42 40.4	+0.5
TRN				*e*S	S	01 42 52.6	-1.3
TPP	**Pointe-a-Pierr**	0.94	129	*e*P	P	01 42 42.8	+1.8
TPP				*e*S	S	01 42 56.3	+0.2
ITEV	**Isla Los Testi**	1.02	296	⇓*i*P	P	01 42 42.6	+0.7
ITEV				*e*S	S	01 42 57.3	-0.4
GUNV	**Guanoco**	1.04	225	*e*P	P	01 42 43.4	+1.3
GUNV				*e*S	S	01 42 59.6	+1.5
CRUV	**Carupano**	1.05	257	*e*P	P	01 42 43.1	+0.9
CRUV				*i* S	S	01 42 58.4	+0.2
TBH	**Brigand Hill**	1.19	111	*e*P	P	01 42 44.6	+0.6
GRW	**Mount Saint Ca**	1.35	23	*e*P	P	01 42 46.7	+0.9
GRW				*e*S	S	01 43 01.7	-2.7
TPR	**Prospect**	1.42	79	⇑*e*P	P	01 42 46.9	+0.2
TPR				*e*S	S	01 43 05.1	-0.8
BOT	**Bacolet**	1.48	80	*e*P	P	01 42 47.3	0.0
PCRV	**Puerto La Cruz**	2.51	253	*e*P	P	01 43 01.6	+0.7
PCRV				*e*S	S	01 43 30.1	-0.7
GURV	**El Guri**	3.25	196	*e*P	P	01 43 10.8	-0.3
GURV				*e*S	S	01 43 46.4	-2.5
CUPV	**Cœpira**	3.63	257	*e*P	P	01 43 16.8	+0.5
CUPV				*e*S	S	01 43 57.3	-1.1
CAOV	**Caicara del Or**	5.41	229	*e*P	P	01 43 40.2	-0.3
CAOV				*e*S	S	01 44 37.2	-4.8
BAUV	**El Baul**	6.08	252	*e*P	P	01 43 48.1	-1.5
BAUV				*e*S	S	01 44 53.0	-5.5

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*IDC **16** 01:47:33.4±1.0, 14.89S×173.50W, mb3.9/6, mb1 4.3/6, mb1mx4.1/15, mbtmp3.9/6, MS4.0/17, Ms1 4.0/17, ms1mx3.9/27, Error ellipse: s-maj=47.1km s-min=22.6km az=145.0*

ISC 16 01:47:36.7±0.8**, 14.9S**±0.2×**173.3W**±0.2**, h33**^{km}**, n36, σ1^{s}25**/8**, mb3.7**/6**, MS4.1**/17**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	1.81	57	Pn	Pn	01 48 06.1	-0.1
	79nm,0.3s,baz=108,slow=1.3,SNR=35						
AFI				Sn	Sn	01 48 27.0	-1.2
	321nm,0.3s,baz=207,slow=22,SNR=32						
PPT	**Papeete**	22.96	100	LR	LR	01 59 28.6	
	comp=Z,340nm,19.8s,MS3.8,baz=15,slow=31						
URZ	**Urewera**	24.74	198	LR	LR	02 01 37.2	
	comp=Z,795nm,19.8s,MS4.2,baz=236,slow=34						
STKA	**Stephens Creek**	44.33	240	LR	LR	02 10 27.2	
	comp=Z,160nm,20.3s,MS3.9,baz=30,slow=31						
WRA	**Warramunga Arr**	50.01	256	P	P	01 56 27.6	-2.7
	1.8nm,0.8s,mb4.1,baz=92,slow=7.1,SNR=8.2						
VNDA	**Vanda**	63.86	186	P	P	01 58 07.6	-0.2
	0.5nm,0.5s,mb3.8,baz=302,slow=9.5,SNR=3.0						
VNDA				LR	LR	02 20 29.6	
	comp=Z,69nm,18.1s,MS3.9,baz=20,slow=31						
MJAR	**Matsushiro Arr**	68.61	320	LR	LR	02 22 13.8	
	comp=Z,124nm,21.2s,MS4.1,baz=115,slow=30						
NVAR	**Mina Array Bea**	73.93	42	P	P	01 59 11.9	+1.4
	0.4nm,0.5s,mb3.6,baz=247,slow=14,SNR=2.1						
NVAR				LR	LR	02 25 25.9	
	comp=Z,128nm,18.3s,MS4.2,baz=190,slow=31						
TXAR	**Lajitas Array**	80.29	56	P	P	01 59 48.4	+2.1
	1.0nm,1.0s,mb3.7,baz=256,slow=3.7,SNR=4.9						
PDAR	**Pinedale Array**	81.86	42	P	P	01 59 54.1	-0.2
	0.2nm,0.3s,mb3.5,baz=214,slow=3.3,SNR=3.1						
PDAR				LR	LR	02 33 23.7	
	comp=Z,110nm,18.1s,MS4.3,baz=260,slow=34						
ILAR	**Eielson Array**	81.96	11	P	P	01 59 54.6	+0.3
	0.4nm,0.5s,mb3.6,baz=233,slow=5.7,SNR=6.3						
ILAR				LR	LR	02 29 10.8	
	comp=Z,61nm,20.3s,MS4.0,baz=186,slow=30						
USHA	**Ushuaia**	86.29	146	LR	LR	02 34 12.5	
	comp=Z,96nm,18.3s,MS4.2,baz=270,slow=32						
MAW	**Mawson**	88.27	199	LR	LR	02 36 44.2	
	comp=Z,147nm,18.4s,MS4.4,baz=236,slow=33						
YKA	**Yellowknife Ar**	89.63	23	LR	LR	02 34 26.9	
	comp=Z,87nm,19.8s,MS4.2,baz=225,slow=31						
PLCA	**Paso Flores**	89.79	132	LR	LR	02 30 40.6	
	comp=Z,112nm,19.8s,MS4.3,baz=184,slow=29						
JTS	**JuntasAbangare**	91.06	80	LR	LR	02 30 47.3	
	comp=Z,57nm,19.1s,MS4.0,baz=243,slow=28						
CMAR	**Chiang Mai Arr**	92.52	288	LR	LR	02 36 03.1	
	comp=Z,56nm,21.7s,MS4.0,baz=110,slow=32						
ULM	**Lac du Bonnet**	93.52	39	LR	LR	02 37 47.7	
	comp=Z,104nm,18.3s,MS4.3,baz=255,slow=32						
SONM	**Songino Array**	94.52	318	LR	LR	02 36 54.2	
	comp=Z,73nm,21.0s,MS4.1,baz=95,slow=31						
CFAA	**Coronel Fontan**	94.68	124	LR	LR	02 33 43.8	
	comp=Z,20nm,18.8s,MS3.6,baz=179,slow=29						
BAIF	**Baives**	144.89	3	*e*PKIKP	PKPdf	02 07 16.5	+6.2
KHC	**Kasperske Hory**	145.41	352	*e*P	PKPdf	02 07 16.8	+5.6
GERES	**GERESS Array B**	145.67	352	PKPbc	PKPbc	02 07 13.1	+0.7
	1.0nm,0.9s,baz=333,slow=3.0,SNR=6.8						
BRTR	**Keskin Array B**	145.82	321	PKPbc	PKPbc	02 07 15.7	+2.6
	1.5nm,0.8s,baz=108,slow=4.6,SNR=7.5						
MEZF	**Maizieres J'vi**	146.48	2	*e*PKIKP	PKPdf	02 07 20.1	+7.0
CDF	**Champ du Feu**	146.59	359	*e*PKIKP	PKPdf	02 07 18.3	+5.0
HAU	**Haudompre**	147.00	0	*e*PKIKP	PKPdf	02 07 19.0	+5.0
	9.9nm,0.9s						
LOR	**Lormes**	147.66	4	*e*PKIKP	PKPdf	02 07 20.8	+5.8
SSF	**Saint Saulge**	147.84	4	*e*PKIKP	PKPdf	02 07 21.5	+6.2
	27nm,1.3s						
AVF	**Avril sur Loir**	148.10	4	*e*PKIKP	PKPdf	02 07 22.8	+7.0
CABF	**La Chapelle**	148.40	1	*e*PKIKP	PKPdf	02 07 23.3	+7.1
	17nm,1.0s						
LPL	**La Plagne**	149.49	360	*e*PKIKP	PKPdf	02 07 23.5	+5.4
LPG	**La Plagne**	149.51	360	*e*PKIKP	PKPdf	02 07 24.5	+6.4
	13nm,1.1s						
ORIF	**Oris-en-Rattie**	150.09	1	*e*PKIKP	PKPdf	02 07 25.7	+6.7
SJPF	**Ste Jean**	151.09	12	*e*PKIKP	PKPdf	02 07 31.0	+10
	28nm,1.3s						
EVO	**Evora**	153.14	26	*e*PKIKP	PKPdf	02 07 35.2	+12
	9.8nm,0.9s						

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*IDC **16** 01:47:48.2±5.4, 19.80S×68.23W, h51^{km}±40^{km}, mb3.9/1, mb1 4.1/5, mb1mx3.6/19, mbtmp4.0/5, ML4.0/3, Error ellipse: s-maj=68.9km s-min=30.8km az=49.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 16 01:47:46.6±3.5**, 19.9S**±0.2×**68.2W**±0.3**, h59**^{km}±29^{km}**, n7, σ1^{s}74**/5**, mb4.2**/1**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	3.54	1	P	P	01 48 40.0	-0.5
	2.4nm,0.3s,baz=192,slow=7.9,SNR=58						
SIV	**San Ignacio**	7.79	62	P	P	01 49 40.7	+1.1
	1.5nm,0.3s,baz=260,slow=10,SNR=55						
CPUP	**Villa Florida**	11.89	125	P	P	01 50 35.7	0.0
	0.3nm,0.3s,baz=334,slow=14,SNR=9.0						
BDFB	**Brasilia**	19.66	81	P	P	01 52 12.4	-1.2
	0.6nm,0.3s,baz=264,slow=8.6,SNR=5.1						
YKA	**Yellowknife Ar**	89.86	340	P	P	02 00 40.5	+0.6
	1.0nm,0.7s,mb4.2,baz=121,slow=5.3,SNR=4.4						
ZAL	**Zalesovo**	140.18	25	PKP	PKPdf	02 07 11.5	+2.9
	1.0nm,0.3s,baz=161,slow=3.2,SNR=3.1						
SONM	**Songino Array**	151.74	8	PKPbc	PKPdf	02 07 37.3	+9.3
	0.5nm,0.4s,baz=280,slow=1.9,SNR=4.2						

WEL 16 01:56:27.3±0.2**, 40.24S**×**173.50E, h182**^{km}±2^{km}**, ML3.6**/7**, 7C, Error ellipse: s-maj=1.8km s-min=1.2km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	0.65	151	⇑PN	P	01 56 53.4	0.0
DUWZ				SN	S	01 57 12.8	-0.6
DUWZ				SN	S	01 57 13.0	-0.4
QRZ	**Quartz Range**	0.94	231	⇑PN	P	01 56 54.5	-0.5
QRZ				SN	S	01 57 14.7	-1.7
NRZ	**Ngariki Road**	0.96	20	PN	P	01 56 55.4	+0.3
NNZ	**Nelson**	0.98	185	⇑PN	P	01 56 54.9	-0.3
NNZ				SN	S	01 57 16.0	-0.9
NEZ	**North Egmont**	1.07	26	PN	P	01 56 54.9	-1.1
PKE	**Pukeiti**	1.11	20	SN	S	01 57 18.5	-0.1
TCW	**Tory Channel**	1.14	149	⇑PN	P	01 56 56.6	+0.1

TCW				SN	S	01 57 18.5	-0.6
TUWZ	Tuamarina	1.24	164	PN	P	01 56 57.3	-0.1
TUWZ				SN	S	01 57 19.2	-1.5
WAZ	Wanganui	1.24	68	PN	P	01 56 58.3	+0.8
WAZ				SN	S	01 57 21.0	+0.3
KIW	Kapiti Island	1.24	121	⥣PN	P	01 56 57.2	-0.2
KIW				SN	S	01 57 18.9	-1.8
MRW	Makara Radio	1.34	138	⥣PN	P	01 56 58.2	-0.2
MRW				SN	S	01 57 20.9	-1.5
SNZO	South Karori	1.41	140	⥣PN	P	01 56 58.5	-0.4
SNZO				SN	S	01 57 22.0	-1.4
CAW	Cannon Point	1.48	127	PN	P	01 56 59.2	-0.4
CAW				SN	S	01 57 23.3	-1.2
VRZ	Vera Road	1.48	42	PN	P	01 56 58.8	-0.8
VRZ				SN	S	01 57 23.1	-1.4
BSWZ	Blackbirch Sta	1.50	169	PN	P	01 56 59.4	-0.4
BSWZ				SN	S	01 57 23.5	-1.5
BHW	Baring Head	1.56	139	PN	P	01 56 59.7	-0.8
BHW				SN	S	01 57 23.8	-2.1
THZ	Tophouse	1.59	196	PN	P	01 56 59.8	-0.9
THZ				SN	S	01 57 24.0	-2.4
MRZ	Mangatainoka R	1.64	106	PN	P	01 57 00.8	-0.4
MRZ				SN	S	01 57 25.1	-2.2
PKVZ	Pokaka	1.71	57	PN	P	01 57 01.2	-0.7
PKVZ				SN	S	01 57 27.2	-1.3
MTW	Mount Morrison	1.78	122	PN	P	01 57 02.0	-0.6
MTW				SN	S	01 57 27.8	-1.9
PAWZ	Paruwai Farm	1.85	129	SN	S	01 57 29.1	-2.0
WNVZ	Wahianoa	1.85	61	PN	P	01 57 02.6	-0.7
FWVZ	Far West T-bar	1.86	59	PN	P	01 57 02.6	-0.8
FWVZ				SN	S	01 57 29.3	-1.9
CNZ	Chateau	1.89	57	PN	P	01 57 02.9	-0.8
MOVZ	Moawhango	1.92	65	PN	P	01 57 02.9	-1.2
MOVZ				SN	S	01 57 29.3	-3.1
TUVZ	Tukino	1.92	60	PN	P	01 57 03.4	-0.6
TUVZ				SN	S	01 57 31.5	-0.8
NGZ	Ngauruhoe	1.94	57	PN	P	01 57 03.3	-0.9
WTVZ	West Tongariro	1.96	56	PN	P	01 57 03.6	-0.9
OTVZ	Oturere	1.98	58	PN	P	01 57 04.0	-0.7
BFZ	Birch Farm	2.14	103	PN	P	01 57 05.8	-0.7
KHZ	Kahutara	2.18	179	PN	P	01 57 05.2	-1.7

*CSEM **16** 02:00:01.8±0.7, 39.04N×28.74W, ML2.8, Error ellipse: s-maj=19.0km s-min=6.5km az=123.0, After PDA*
*PDA **16** 02:00:01.8±0.7, 39.04N×28.74W, MD3.3, ML2.8, Error ellipse: s-maj=6.0km s-min=2.5km az=119.0*
SVSA 16 02:00:01.8±0.7**, 39.04N×28.74W, MD3.3, ML2.8, Error ellipse: s-maj=6.0km s-min=2.5km az=119.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	Caldeira	0.46	177	*e*P	Pg	02 00 10.3	-0.7
CALA				*e*S	Sg	02 00 17.1	0.0
HOR	Horta	0.52	171	*e*P	Pg	02 00 11.0	-1.2
HOR				*i* S	Sg	02 00 18.1	-1.0
PGRA	Graciosa	0.59	91	*e*P	Pg	02 00 12.6	-0.9
PGRA				*e*S	Sg	02 00 20.1	-1.2
	316nm,0.2s						
PICO	Pico	0.59	156	*e*P	Pg	02 00 12.4	-1.2
PICO				*i* S	Sg	02 00 20.5	-1.0
PMAN	Manadas	0.65	129	*e*P	Pg	02 00 13.3	-1.5
PMAN				*e*S	Sg	02 00 21.6	-1.8
	302nm,0.1s						
PSBA	Serra de Santa	1.13	104	*e*rx		02 00 30.7	

TAP 16 02:24:31.8, 22.30N×121.68E, h120^{km}±1^{km}, ML3.5, Taiwan region

*IDC **16** 02:27:16.4±3.2, 20.29S×68.82W, h103^{km}±54^{km}, mb3.4/2, mb1 3.6/5, mb1mx3.4/18, mbtmp3.9/5, Error ellipse: s-maj=43.2km s-min=32.5km az=122.0, Incorrectly calculated travel-time residual on T phase at H03N*
ISC 16 02:27:15.9±2.8**, 20.3S**±0.2×**68.8W**±0.2**, h119**^{km}±44^{km}**, n5, σ1^{s}55**/5**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.02	9	P	P	02 28 17.2	+0.5
	2.7nm,0.3s,baz=189,slow=8.7,SNR=133						
SIV	San Ignacio	8.48	61	P	P	02 29 16.0	-1.2
	1.5nm,0.3s,baz=255,slow=11,SNR=54						
CPUP	Villa Florida	12.13	122	P	P	02 30 06.4	+0.6
	0.3nm,0.3s,baz=281,slow=16,SNR=9.8						
BDFB	Brasilia	20.29	80	P	P	02 31 44.8	+0.5
	2.9nm,0.4s,baz=271,slow=7.7,SNR=8.7						
PLCA	Paso Flores	20.45	184	P	P	02 31 45.3	-0.5
	2.2nm,0.9s,baz=355,slow=9.9,SNR=4.0						

*NEIC **16** 02:30:27.1, 40.43N×125.30W, h3^{km}, mb4.2/3, MD3.7(NCEDC), After NCEDC.*
*IDC **16** 02:30:29.2±1.6, 40.55N×124.96W, mb3.4/4, mb1 3.8/8, mb1mx3.6/26, mbtmp3.5/8, ML3.8/3, MS3.1/5, Ms1 3.1/5, ms1mx2.9/30, Error ellipse: s-maj=18.3km s-min=16.7km az=110.0*
ISC 16 02:30:25.8±1.0**, 40.42N**±0.05×**125.3W**±0.1**, h3**^{km}**, n55, σ1^{s}01**/55**, mb3.6**/4**, MS3.0**/3**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	1.25	68	*e*P	Pb	02 30 50.5	+0.8
KRMB	Red Mountain	1.50	42	*e*P	Pn	02 30 53.1	-0.7
KBO	Bosley Butte	1.95	23	*e*Pn	Pn	02 30 59.6	-0.6
WDC	Whiskeytown Da	2.08	85	*e*Pn	Pn	02 31 01.7	-0.3
HOPS	Hopland	2.21	129	*e*Pn	Pn	02 31 03.3	-0.6
YBH	Yreka Blue Hor	2.33	55	Pn	Pn	02 31 05.5	-0.1
	16nm,0.3s,baz=245,slow=13,SNR=96						
YBH				Lg		02 31 34.2	
	10nm,0.3s,baz=251,slow=19,SNR=3.5						
YBH	Yreka Blue Hor	2.33	55	*e*Pn	Pn	02 31 05.2	-0.4
KEBM	Edson Butte	2.55	16	*e*Pn	Pn	02 31 07.8	-0.9
HUMO	Hull Mountain	2.79	38	*e*Pn	Pn	02 31 11.4	-0.7
NSHM	Saint Helena R	2.80	132	*e*Pn	Pn	02 31 11.5	-0.8
BEKR	Beckwourth	3.80	97	*e*Pn	Pn	02 31 26.1	-0.4
MOD	Modoc	4.03	67	*e*Pn	Pn	02 31 29.1	-0.7
WCN	Washoe City	4.38	103	*e*Pn	Pn	02 31 35.6	+0.8
COR	Corvallis	4.41	19	*e*Pn	Pn	02 31 35.2	+0.1
CMB	Columbia Colle	4.47	121	*e*Pn	Pn	02 31 35.6	-0.5
PAHR	Pah Rah Range	4.56	97	Pn	Pn	02 31 37.5	+0.1
SAO	San Andreas Ge	4.72	139	*e*Pn	Pn	02 31 36.9	-2.6
WVOR	Wild Horse Val	5.37	66	*e*Pn	Pn	02 31 47.0	-1.8
OMM	Old Mammoth Mi	5.63	118	*e*Pn	Pn	02 31 53.2	+0.8
NVAR	Mina Array Bea	5.74	108	Pn	Pn	02 31 53.8	-0.2
	0.7nm,0.3s,baz=282,slow=15,SNR=9.0						
NVAR				Pg	Pg	02 32 05.1	-15
	0.9nm,0.3s,baz=289,slow=14,SNR=11						
NVAR	Mina Array Bea	5.74	108	Pn	Pn	02 31 53.8	-0.2
NVAR				Pg	Pg	02 32 05.1	-15
MNV	Mina	5.85	108	*e*Pn	Pn	02 31 54.6	-1.0
BMN	Battle Mountai	6.13	87	Pn	Pn	02 32 02.0	+2.4
BMO	Blue Mountains	7.35	50	*e*P	Pn	02 32 17.3	+0.6
OCWA	Octopus Mounta	7.37	6	Pn	Pn	02 32 17.6	+0.6
ELK	Elko	7.64	84	*e*P	Pn	02 32 21.6	+0.9
HLID	Hailey	8.67	65	*e*P	P	02 32 35.5	+0.4
SPUT	South Promonto	9.75	81	*e*P	P	02 32 50.2	+0.2
NEW	Newport	9.77	34	Pn	P	02 32 51.4	+1.2
	0.2nm,0.3s,baz=195,slow=11,SNR=2.1						
NEW				LR	LR	02 36 39.9	
	comp=Z,148nm,19.6s,baz=208,slow=39						
MCMT	McKenzie Canyo	10.15	60	*e*P	P	02 32 55.5	0.0
MSO	Missoula	10.40	48	*e*P	P	02 32 59.4	+0.4
HWUT	Hardware Ranch	10.42	79	*e*P	P	02 32 59.8	+0.6
CHMT	Chamberlain Mo	10.85	49	*e*P	P	02 33 05.2	+0.1
TPAW	Teton Pass	11.09	69	P	P	02 33 10.8	+2.4
REDW	Red Top Meadow	11.14	70	P	P	02 33 06.8	-2.2
IMW	Indian Meadow	11.18	67	*e*P	P	02 33 10.5	+0.9
BOZ	Bozeman (W)	11.26	58	*e*P	P	02 33 09.1	-1.6
MOOW	Moose Ponds	11.29	68	*e*P	P	02 33 11.4	+0.3
LOHW	Long Hollow	11.36	69	P	P	02 33 11.3	-0.8
HRY	Holter Researc	11.59	53	*e*P	P	02 33 14.6	-0.6
BW06	Boulder Array	11.99	74	P	P	02 33 19.9	-0.7
PDAR	Pinedale Array	11.99	74	Pn	P	02 33 21.1	+0.5
	0.2nm,0.3s,baz=288,slow=5.7,SNR=3.6						
PV01	Paradox Valley	13.13	95	*e*P	P	02 33 38.3	+2.4
LAO	LASA Array	15.14	59	P	P	02 34 02.2	0.0
	6.1nm,0.8s						
EDM	Edmonton	15.15	28	*e*P	P	02 34 01.1	-1.2
SDCO	Great Sand Dun	15.57	94	*e*P	P	02 34 09.3	+1.4
	16nm,1.2s						
ANMO	Albuquerque	15.85	104	LR	LR	02 39 54.9	
	comp=Z,53nm,19.1s,slow=36						
TXAR	Lajitas Array	20.83	115	P	P	02 35 12.2	+1.2
	1.3nm,0.9s,baz=298,slow=8.9,SNR=11						
TXAR				LR	LR	02 43 59.2	
	comp=Z,39nm,21.5s,MS2.8,baz=155,slow=39						
FFC	Flin Flon	21.11	40	*e*P	P	02 35 12.6	-1.2
	26nm,1.4s,mb4.4						
WMOK	Wichita Mounta	21.70	97	P	P	02 35 19.6	-0.2
ULM	Lac du Bonnet	22.74	55	P	P	02 35 29.6	-0.5
	4.7nm,0.7s,mb4.0,baz=266,slow=9.2,SNR=5.8						
YKA	Yellowknife Ar	23.02	13	P	P	02 35 33.7	+1.1
	0.2nm,0.3s,mb3.0,baz=269,slow=10.0,SNR=3.3						
YKA	Yellowknife Ar	23.02	13	P	P	02 35 33.7	+1.1
ILAR	Eielson Array	27.41	340	P	P	02 36 15.7	+1.5
	0.3nm,0.6s,mb3.0,baz=156,slow=8.2,SNR=4.5						
ILAR				LR	LR	02 45 13.8	
	comp=Z,58nm,19.1s,MS3.2,baz=186,slow=32						
SCHQ	Schefferville	40.71	49	LR	LR	02 54 27.0	
	comp=Z,34nm,19.7s,MS3.2,baz=57,slow=36						

*NEIC **16** 02:47:07.9, 18.92N×100.00W, h112^{km}, MD3.7(MEX), After MEX.*
MEX 16 02:47:07.9±0.6**, 18.92N×100.00W, h112**^{km}±17^{km}**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLIG	Platanillo	0.70	138	*i* P	P	02 47 25.3	-1.3
PLIG				*i* S	S	02 47 39.0	-1.8
PPM	Popocatepetl	1.31	83	*e*P	P	02 47 31.0	-2.0
PPM				*e*S	S	02 47 51.0	-1.0
PPM	Popocatepetl	1.31	83	*e*P	P	02 47 31.0	-2.0
PPM				*i* P		02 47 32.1	
PPM				*e*S	S	02 47 51.0	-1.0
PPM				*i* S	S	02 47 51.2	-0.8
CAIG	El Cayaco	1.88	188	*i* P	P	02 47 38.4	-1.5
CAIG				*i* S	S	02 48 00.6	-3.3
ACX	Acapulco	2.04	178	*e*P	P	02 47 41.0	-1.0
ACX				*i* S	S	02 48 04.5	-3.1

JMA 16 02:58:32.3±0.2**, 30.93N×142.92E, h48**^{km}**, M4.1, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.42	310	P	P	02 59 25.1	+0.6
JHJ2				S	S	03 00 01.0	-3.1
BSO1	Boso 1	4.06	337	P	P	02 59 33.3	-0.2
BSO2	Boso 2	4.22	335	*e*S	S	03 00 23.6	-0.9
BSO3	Boso 3	4.36	333	P	P	02 59 39.0	+1.2
BSO3				S	S	03 00 26.6	-1.3
BSO4	Boso 4	4.59	332	P	P	02 59 42.2	+1.1
JOD2	Odawara 2	5.39	324	P	P	02 59 52.3	+0.2
JHU	Hanno	5.78	329	P	P	02 59 57.9	+0.4
JHU				*e*S	S	03 00 59.0	-4.4
JHO	Hitachi	5.99	342	P	P	03 00 00.2	-0.4
JRY	Ryogami san	6.08	328	P	P	03 00 02.4	+0.5
JAG	Ashikaga	6.20	333	P	P	03 00 04.0	+0.6

AUST 16 04:29:06.3, 34.13S×135.59E, h10^{km}, ML3.6, Near coast of South Australia

*TAP **16** 04:39:14.9, 24.04N×122.77E, h8^{km}±1^{km}, ML2.9*
JMA 16 04:39:14.1±0.1**, 24.08N×122.89E, h14**^{km}±4^{km}**, M2.4, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.40	16	P	Pb	04 39 22.0	-0.3
YOJ				S	Sg	04 39 27.5	-0.4
IRIF	Iriomote-Funau	0.81	72	P	Pb	04 39 29.1	-0.3
IRIF				S	Sb	04 39 40.6	+0.7
HATJ	Hateruma jima	0.84	91	P	Pb	04 39 29.9	0.0
HATJ				*e*S	Sb	04 39 40.7	0.0
JKRS	Kuro-shima	1.03	81	P	Pb	04 39 33.5	+0.2
JKRS				*e*S	Sb	04 39 47.5	+1.0
JIJ	Ishigaki jima	1.18	76	P	Pb	04 39 35.4	-0.3
JIJ				S	Sb	04 39 50.8	+0.2
JTJ	Tarama	1.74	71	P	Pn	04 39 43.9	-0.4
JTJ				*e*S	Sn	04 40 06.6	+0.2

IDC 16 04:56:46.8±1.8**, 16.69S×178.06W, mb4.0**/4**, mb1 4.3**/4**, mb1mx4.0**/15**, mbtmp4.0**/4**, MS4.2**/1**, Ms1 4.2**/1**, ms1mx3.1**/21**, Error ellipse: s-maj=106.7km s-min=27.7km az=148.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	12.50	179	LR	LR	05 03 52.1	
	comp=Z,1μm,20.1s,baz=168,slow=34						
STKA	Stephens Creek	39.51	240	P	P	05 04 19.4	-1.6
	3.7nm,0.6s,baz=100,slow=12,SNR=6.6						
WB2	Warramunga Arr	45.18	258	*e*P	P	05 05 05.4	-2.1
WRA	Warramunga Arr	45.19	258	P	P	05 05 05.7	-1.9
	1.7nm,0.3s,baz=94,slow=7.4,SNR=73						
ILAR	Eielson Array	84.63	13	P	P	05 09 21.9	-1.2
	0.3nm,0.5s,baz=222,slow=5.0,SNR=4.5						
TXAR	Lajitas Array	85.07	58	P	P	05 09 24.9	-1.2
	0.3nm,0.7s,baz=224,slow=5.8,SNR=5.4						

*CSEM **16** 05:04:04.5±0.1, 37.49N×23.13E, h87^{km}±2^{km}, MD3.1, Error ellipse: s-maj=6.9km s-min=3.1km az=92.0*
*ATH **16** 05:04:07.5, 37.60N×23.00E, h25^{km}, MD3.1/4*
*NEIC **16** 05:04:07.5, 37.60N×23.00E, h25^{km}, MD3.1(ATH), After ATH.*
*HLW **16** 05:04:11.3, 37.06N×23.27E, h33^{km}, Mb3.2*
ISC 16 05:04:07.9±2.9**, 37.5N**±0.1×**22.96E**±0.10**, h80**^{km}±33^{km}**, n12, σ0^{s}50**/10**, 3C, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NSAL	Nisos Salamina	0.57	45	*e*PB	P	05 04 22.5	+0.1
ATH	Athens Observa	0.77	52	*e*PB	P	05 04 25.0	+0.5
VLI	Veliai	0.78	181	*e*PN	P	05 04 24.6	-0.1
VLI				*e*SN	S	05 04 36.8	-0.3
ITM	Ithomi	0.88	249	*e*PN	P	05 04 25.8	+0.1
ITM				*e*SN	S	05 04 39.3	+0.2
MPAR	Parnis Oros	0.90	43	*e*PB	P	05 04 25.7	-0.2
PTL	Penteli	0.91	52	*e*PB	P	05 04 26.5	+0.5
LKR	Lokris	1.15	2	*e*PN	P	05 04 27.7	-1.3
EVR	Evrytania	1.68	328	*e*PN	P	05 04 36.5	+0.5
HMAT	Matruh	7.25	151	P	Px	05 05 48.7	
HMAT				S	Sx	05 06 59.4	
SWA2		8.50	165	⥣P	Px	05 06 05.8	
SWA1		8.53	164	⥣P	Px	05 06 06.6	
HFRF	Wahat Farafira	11.27	155	⥣P	Px	05 06 43.7	

*IDC **16** 05:41:25.1±1.2, 13.37S×111.97W, mb3.9/11, mb1 4.2/11, mb1mx4.1/18, mbtmp3.9/11, MS4.2/16, Ms1 4.2/16, ms1mx4.2/19, Error ellipse: s-maj=41.0km s-min=19.3km az=54.0, Incorrectly calculated travel-time residual on T phase at H03N*
*BJI **16** 05:41:27.6, 13.50S×111.80W, h10^{km}, mB5.5, Ms5.2, Msz4.8*
*NEIC **16** 05:41:27.6±0.6, 13.52S×111.80W, h10^{km}, mb4.7/22, Error ellipse: s-maj=22.2km s-min=10.9km az=69.0*
ISC 16 05:41:26.6±0.6**, 13.46S**±0.08×**111.8W**±0.1**, h10**^{km}**, n74, σ1^{s}53**/53**, mb4.5**/29**, MS4.3**/17**, 2C, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	13.79	171	LR	LR	05 48 33.2	
	comp=Z,2μm,18.3s,baz=336,slow=31						
PAYG	Puerto Ayora	24.76	61	P	P	05 46 50.8	+0.8
	59nm,1.1s,mb5.0						
OTAV	Otavalo	35.69	70	P	P	05 48 21.2	-6.2
	4.3nm,1.1s,mb4.3						
PPT	Papeete	36.64	259	*e*LR	LR	05 57 51.7	
	227nm,26.2s						
PPT	Papeete	36.64	259	LR	LR	05 57 46.0	
	comp=Z,161nm,21.0s,MS3.8,baz=125,slow=27						
LPAZ	La Paz	42.19	99	P	P	05 49 22.6	+0.9
	2.0nm,0.9s,mb3.8,baz=283,slow=9.9,SNR=3.1						
LPAZ				LR	LR	06 02 60.0	
	comp=Z,377nm,21.2s,MS4.2,baz=146,slow=30						
LPAZ	La Paz	42.19	99	*e*P	P	05 49 22.1	+0.5
	4.6nm,0.8s,mb4.2						
TXAR	Lajitas Array	43.25	10	P	P	05 49 28.2	-1.9
	1.3nm,1.0s,mb3.6,baz=186,slow=13,SNR=5.7						
TXAR				LR	LR	06 04 10.1	
	comp=Z,135nm,19.3s,MS3.9,baz=200,slow=32						
CFAA	Coronel Fontan	43.73	122	P	P	05 49 34.9	+0.9
	0.4nm,1.0s,baz=262,slow=8.1,SNR=5.8						
PLCA	Paso Flores	45.04	135	P	P	05 49 45.1	+0.7
	2.1nm,0.8s,mb4.0,baz=295,slow=8.7,SNR=4.9						
PLCA				LR	LR	06 04 00.0	
	comp=Z,730nm,18.1s,MS4.7,baz=359,slow=30						
PLCA	Paso Flores	45.04	135	*e*P	P	05 49 44.0	-0.4
	13nm,1.4s,mb4.6						
MNTX	Cornudas Mount	45.31	8	*e*P	P	05 49 44.2	-2.5
	9.8nm,1.2s,mb4.5						
BAR	Barrett	46.12	354	*e*P	P	05 49 56.4	+3.3
SDV	Santo Domingo	46.46	64	P	P	05 49 56.0	0.0
	5.7nm,0.9s,mb4.5,baz=279,slow=7.2,SNR=6.6						
SDV	Santo Domingo	46.46	64	*e*P	P	05 49 55.9	-0.1
	13nm,1.0s,mb4.8						
CPRX	Cap Rock	46.83	9	*e*P	P	05 49 58.7	0.0
BNM	Barren Site	47.59	6	*e*P	P	05 50 07.7	+2.9
MWC	Mount Wilson	47.79	353	*e*P	P	05 50 10.0	+3.7
MTUM	Tungsten Hills	50.94	353	*e*P	P	05 50 31.0	+0.6
ARUT	Antelope Range	51.00	358	*e*P	P	05 50 30.0	-0.8
SDCO	Great Sand Dun	51.27	6	*e*P	P	05 50 31.0	-1.9
	13nm,1.3s,mb4.7						
PV10	Paradox Valley	51.62	3	*e*P	P	05 50 37.0	+1.4
PV10				*e*		05 50 54.0	
MVU	Marysvale	51.69	360	*e*P	P	05 50 36.8	+0.8
	10nm,1.6s,mb4.5						
MSU	Marysvale	51.70	360	*e*P	P	05 50 39.2	+3.0
MNV	Mina	51.96	354	*e*P	P	05 50 37.0	-1.1
	15nm,1.4s,mb4.7						
NVAR	Mina Array Bea	51.98	353	P	P	05 50 36.3	-2.0
	8.1nm,0.8s,mb4.7,baz=182,slow=12,SNR=16						
NVAR				LR	LR	06 07 36.2	
	comp=Z,284nm,18.3s,MS4.3,baz=170,slow=30						
SRU	San Rafael	52.30	1	*e*P	P	05 50 41.1	+0.3
CPUP	Villa Florida	52.41	113	LR	LR	06 08 25.0	
	comp=Z,356nm,21.9s,MS4.4,baz=293,slow=31						
PLAL	Pickwick Lake	53.15	24	*e*P	P	05 50 43.9	-3.2
	9.7nm,1.1s,mb4.7						
DAU	Daniels Canyon	53.59	0	P	P	05 50 48.1	-2.1
CTU	Camp Tracy	53.87	360	*e*P	P	05 50 54.3	+2.1
ELK	Elko	54.02	357	*e*P	P	05 50 52.0	-1.3
	11nm,1.1s,mb4.7						
WDC	Whiskeytown Da	54.69	350	*e*P	P	05 50 58.7	+0.4
	13nm,1.1s,mb4.9						
HWUT	Hardware Ranch	54.78	0	*e*P	P	05 51 00.8	+1.8
	6.7nm,1.1s,mb4.6						
MYNC	Murphy	54.91	28	P	P	05 51 03.2	+3.2
KHMM	Horse Mountain	55.18	349	*e*P	P	05 51 04.8	+2.8
MOD	Modoc	55.64	352	*e*P	P	05 51 05.0	-0.3
	7.8nm,1.2s,mb4.6						
WVOR	Wild Horse Val	55.97	354	*e*P	P	05 51 07.2	-0.4
	15nm,1.1s,mb4.9						
WVOR				*e*	pP	05 51 10.6	0.0
PDAR	Pinedale Array	55.98	2	P	P	05 51 04.0	-3.7
	0.5nm,0.5s,mb3.8,baz=176,slow=6.8,SNR=4.4						
PDAR				LR	LR	06 11 24.4	
	comp=Z,140nm,18.2s,MS4.1,baz=199,slow=32						
HUMO	Hull Mountain	56.73	350	*e*P	P	05 51 15.1	+2.1
	7.7nm,1.2s,mb4.6						
HLID	Hailey	56.79	358	*e*P	P	05 51 10.5	-3.0
	4.7nm,1.0s,mb4.5						
LOHW	Long Hollow	56.80	1	*e*P	P	05 51 14.4	+0.9
	3.9nm,1.0s,mb4.4						
IMW	Indian Meadow	57.08	1	*e*P	P	05 51 15.3	-0.2
	14nm,1.0s,mb4.9						
MCMT	McKenzie Canyo	58.01	359	*e*P	P	05 51 20.0	-2.1
BMO	Blue Mountains	58.25	355	*e*P	P	05 51 23.6	0.0
	13nm,1.1s,mb4.9						
GCMT	Greycliff	59.00	2	*e*P	P	05 51 30.6	+1.8
BDFB	Brasilia	61.52	101	P	P	05 51 44.6	-1.9
	0.9nm,0.5s,mb4.2,baz=256,slow=8.3,SNR=2.4						
BDFB				LR	LR	06 16 38.2	
	comp=Z,114nm,18.1s,MS4.1,baz=23,slow=34						
PGC	Sidney	62.70	351	*e*P	P	05 51 53.8	-0.2
	20nm,0.9s,mb5.2						
ULM	Lac du Bonnet	64.94	11	LR	LR	06 15 47.6	
	comp=Z,92nm,18.1s,MS4.0,baz=47,slow=32						
EDM	Edmonton	66.42	359	*e*P	P	05 52 19.5	+1.4
DLBC	Dease Lake	73.19	350	*e*P	P	05 53 02.1	+2.7
YKA	Yellowknife Ar	75.74	359	P	P	05 53 13.2	-0.7
	2.4nm,1.0s,mb4.1,baz=176,slow=5.7,SNR=5.6						
YKA				LR	LR	06 23 24.9	
	comp=Z,233nm,18.6s,MS4.5,baz=180,slow=33						
YKA	Yellowknife Ar	75.74	359	P	P	05 53 13.2	-0.7
YKA				LR	LR	06 23 24.9	
VNDA	Vanda	76.17	193	LR	LR	06 21 25.3	
	comp=Z,89nm,19.0s,MS4.1,baz=355,slow=32						
QSPA	South Pole Qui	76.65	180	*e*P	P	05 53 18.2	-0.6
	6.5nm,1.0s,mb4.5						
SCHQ	Schefferville	77.88	25	P	P	05 53 24.1	-1.9
	3.8nm,0.8s,mb4.4,baz=185,slow=2.8,SNR=4.3						
SCHQ				LR	LR	06 25 44.4	
	comp=Z,114nm,18.9s,MS4.2,baz=125,slow=34						
VNA3	Neumayer Olymp	81.20	161	⥣*i*P	P	05 53 42.8	-0.9
VNA2	Neumayer--Watz	82.00	161	⥣*i*P	P	05 53 49.1	+1.3
ILAR	Eielson Array	82.41	346	P	P	05 53 47.0	-3.0
	0.5nm,0.9s,mb3.4,baz=162,slow=4.8,SNR=4.2						
ILAR				LR	LR	06 21 39.2	
	comp=Z,77nm,18.3s,MS4.1,baz=180,slow=29						
STKA	Stephens Creek	96.65	235	LR	LR	06 28 42.0	
	comp=Z,176nm,19.8s,MS4.5,baz=259,slow=29						
MAW	Mawson	99.07	178	LR	LR	06 35 32.9	
	comp=Z,134nm,18.1s,MS4.5,baz=44,slow=33						
CN2	Changchun	122.76	314	*e*PKP	PKPdf	06 00 21.0	-5.1
SSE	Sheshan	128.45	299	PKP	PKPdf	06 00 37.0	-0.6
SSE	Sheshan	128.45	299	PKP	PKPdf	06 00 37.2	-0.4
NJ2	Nanjing	130.28	301	*e*PKP	PKPdf	06 00 35.4	-5.6
SONM	Songino Array	133.35	325	PKP	PKPdf	06 00 42.8	-3.5
	0.2nm,0.3s,baz=18,slow=4.6,SNR=2.8						
HHC	Hu-ho-hao-te	133.45	314	*e*PKP	PKPdf	06 00 41.6	-5.1
HHC				SKS	SKS	06 07 53.9	-3.2
HHC				PP	PP		
	comp=Z,170nm,7.3s						
HHC				LR	LR		
	comp=N,200nm,17.8s,MS5.0						
HHC				LR	LR		
	comp=E,150nm,19.0s,MS5.0						
HHC				LR	LR		
	comp=Z,140nm,15.7s,MS4.8						
BVAR	Borovoye Array	140.49	358	PKP	PKPdf	06 00 54.9	-4.4
	comp=Z,0.7nm,0.7s,slow=1.5,SNR=5.0						
ZRNK	Zerenda	140.60	359	*e*PKPdf	PKPdf	06 00 58.1	-1.4
MKAR	Makanchi Array	144.74	343	PKP	PKPdf	06 01 02.3	-4.5
	comp=Z,0.8nm,0.7s,baz=342,slow=4.6,SNR=10						
EIL	Elat	145.24	57	*e*PKPdf	PKPdf	06 01 05.3	-3.0
WMQ	Urumqi	145.45	335	*e*PKP	PKPdf	06 01 05.6	-2.6
WMQ				LR	LR		
	comp=Z,180nm,22.4s,MS4.8						
GNI	Garni	146.34	33	*e*PKPbc	PKPbc	06 01 11.9	+4.0
CMAR	Chiang Mai Arr	150.10	284	PKPbc	PKPdf	06 01 17.9	+1.4
	comp=Z,0.6nm,0.4s,baz=90,slow=0.9,SNR=3.7						

*IDC **16** 05:54:37.6±2.2, 6.10N×93.35E, mb4.0/3, mb1 4.2/4, mb1mx3.7/19, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=88.9km s-min=25.9km az=63.0*
*NEIC **16** 05:54:48.7±0.9, 6.57N×93.36E, h35^{km}, mb4.3/8, Error ellipse: s-maj=16.6km s-min=10.9km az=210.0*
ISC 16 05:54:46.0±1.1**, 6.5N**±0.1×**93.37E**±0.10**, h33**^{km}**, n17, σ1^{s}26**/17**, mb4.3**/11**, 1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	7.33	99	⥣*e*P	P	05 56 32.9	-0.5
PALK	Pallekele	12.61	274	P	P	05 57 44.4	-1.5
	99nm,1.6s						
CMAR	Chiang Mai Arr	13.11	24	Pn	P	05 57 50.5	-1.9
	0.2nm,0.3s,baz=211,slow=14,SNR=7.2						
PKI	Pulchoki	22.32	341	*e*P	P	05 59 43.8	+1.5
	7.4nm,0.3s,mb4.5						
DMN	Daman	22.46	340	*e*P	P	05 59 44.2	+0.6
GUN	Gumba	22.49	342	*e*P	P	05 59 43.8	-0.2
	20nm,0.5s,mb4.8						
KKN	Kakani	22.57	341	*e*P	P	05 59 45.1	+0.3

	25nm,0.8s,mb4.7						
GKN	**Gorkha**	**22.98**	**340**	*e*P	**P**	**05 59 49.4**	**+0.6**
	8.4nm,0.4s,mb4.5						
LSA	**Lhasa**	**23.22**	**355**	*e*P	**P**	**05 59 52.0**	**+0.8**
	6.2nm,0.6s,mb4.2						
NACB	**Ninganchiao**	**32.31**	**54**	P	**P**	**06 01 07.3**	**-7.1**
AAK	**Ala-Archa**	**39.71**	**338**	P	**P**	**06 02 17.8**	**+0.9**
	4.1nm,1.1s,mb4.1						
MKAR	**Makanchi Array**	**41.31**	**348**	P	**P**	**06 02 28.0**	**-2.1**
	1.1nm,0.5s,mb3.8,baz=160,slow=9.8,SNR=11						
ZAL	**Zalesovo**	**47.85**	**353**	P	**P**	**06 03 18.9**	**-3.6**
	1.9nm,0.3s,mb4.6,baz=315,slow=2.5,SNR=3.1						
ZAL	**Zalesovo**	**47.85**	**353**	P	**P**	**06 03 18.9**	**-3.6**
WRA	**Warramunga Arr**	**48.08**	**124**	P	**P**	**06 03 18.2**	**-6.6**
	0.2nm,0.3s,mb3.6,baz=301,slow=9.9,SNR=6.3						
WRA				PcP	PcP	06 04 46.5	-6.0
	0.3nm,0.5s,baz=317,slow=2.8,SNR=7.9						
WRAB	**Tennant Creek**	**48.09**	**124**	P	**P**	**06 03 27.1**	**+2.3**
	8.8nm,1.1s,mb4.7						
ZRNK	**Zerenda**	**50.46**	**341**	*e*P	**P**	**06 03 43.3**	**+0.7**
	2.9nm,0.9s,mb4.3						

BJI 16 06:06:20.9, 13.00S×111.60W, h10^{km}, mB5.4, Msz4.5

NEIC 16 06:06:22.9±0.7, 12.97S×111.58W, h10^{km}, mb4.4/13, Error ellipse: s-maj=21.1km s-min=13.4km az=61.0

IDC 16 06:06:22.2±2.1, 12.80S×111.58W, mb3.9/9, mb1 4.2/9, mb1mx4.0/18, mbtmp3.9/9, MS3.8/12, Ms1 3.8/12, ms1mx3.7/17, Error ellipse: s-maj=61.8km s-min=23.5km az=53.0, Incorrectly calculated travel-time residual on T phase at H03N

ISC 16 06:06:22.2±0.9, 12.8S±0.1×111.6W±0.2, h10^{km}, n37, σ0^{s}97/26, mb4.2/19, MS3.9/13, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**14.40**	**172**	LR	LR	06 13 26.2	
	comp=Z,880nm,18.7s,baz=123,slow=29						
NNA	**Nana**	**33.90**	**92**	P	**P**	**06 13 00.7**	**-6.9**
	22nm,1.3s,mb4.9						
LPAZ	**La Paz**	**42.12**	**100**	P	**P**	**06 14 16.7**	**+0.1**
	1.2nm,0.8s,mb3.5,baz=268,slow=6.2,SNR=5.7						
LPAZ				LR	LR	06 28 03.1	
	comp=Z,84nm,19.5s,MS3.6,baz=141,slow=31						
LPAZ	**La Paz**	**42.12**	**100**	*e*P	**P**	**06 14 16.3**	**-0.3**
	3.8nm,1.0s,mb4.0						
LTX	**Lajitas**	**42.58**	**10**	*e*P	**P**	**06 14 21.3**	**+1.0**
	7.1nm,1.1s,mb4.3						
TXAR	**Lajitas Array**	**42.58**	**10**	P	**P**	**06 14 20.7**	**+0.5**
	1.1nm,1.1s,mb3.5,baz=201,slow=11,SNR=8.5						
TXAR				LR	LR	06 29 03.5	
	comp=Z,54nm,19.3s,MS3.5,baz=175,slow=32						
CFAA	**Coronel Fontan**	**43.91**	**122**	LR	LR	06 28 06.1	
	comp=Z,24nm,18.6s,MS3.1,baz=272,slow=30						
PLCA	**Paso Flores**	**45.37**	**136**	P	**P**	**06 14 43.5**	**+0.9**
	1.3nm,0.9s,mb3.8,baz=295,slow=5.8,SNR=3.0						
PLCA				LR	LR	06 28 33.4	
	comp=Z,280nm,19.5s,MS4.2,baz=4.3,slow=29						
PLCA	**Paso Flores**	**45.37**	**136**	*e*P	**P**	**06 14 44.4**	**+1.8**
	3.4nm,0.9s,mb4.2						
SDV	**Santo Domingo**	**46.01**	**64**	P	**P**	**06 14 48.9**	**+0.9**
	5.7nm,1.0s,mb4.5,baz=278,slow=7.7,SNR=7.0						
SDV	**Santo Domingo**	**46.01**	**64**	*e*P	**P**	**06 14 48.6**	**+0.6**
	6.2nm,1.0s,mb4.5						
SAML	**Samuel**	**47.61**	**90**	*e*P	**P**	**06 14 58.5**	**-2.2**
	11nm,1.3s,mb4.7						
ANMO	**Albuquerque**	**47.74**	**6**	P	**P**	**06 15 02.2**	**+0.8**
	1.8nm,1.0s,mb4.1						
WMOK	**Wichita Mounta**	**48.81**	**14**	P	**P**	**06 15 09.9**	**+0.2**
	2.7nm,1.1s,mb4.2						
SDCO	**Great Sand Dun**	**50.60**	**6**	*e*P	**P**	**06 15 23.8**	**+0.3**
	9.5nm,1.5s,mb4.5						
CMB	**Columbia Colle**	**51.25**	**351**	P	**P**	**06 15 27.4**	**-0.9**
	1.9nm,0.6s,mb4.2						
NVAR	**Mina Array Bea**	**51.36**	**353**	P	**P**	**06 15 30.1**	**+0.9**
	1.3nm,0.6s,mb4.0,baz=173,slow=10,SNR=9.3						
NVAR				LR	LR	06 31 44.0	
	comp=Z,90nm,19.8s,MS3.8,baz=115,slow=30						
CPUP	**Villa Florida**	**52.49**	**113**	LR	LR	06 32 52.2	
	comp=Z,119nm,21.1s,MS3.9,baz=84,slow=30						
YBH	**Yreka Blue Hor**	**55.23**	**350**	P	**P**	**06 15 57.4**	**-0.5**
	0.9nm,0.7s,mb3.9,baz=122,slow=19,SNR=2.4						
PDAR	**Pinedale Array**	**55.33**	**2**	P	**P**	**06 15 57.4**	**-1.1**
	0.4nm,0.5s,mb3.7,baz=166,slow=6.1,SNR=3.9						
PDAR				LR	LR	06 35 48.1	
	comp=Z,80nm,19.1s,MS3.8,baz=294,slow=32						
HLID	**Hailey**	**56.16**	**357**	*e*P	**P**	**06 16 04.7**	**+0.2**
	2.7nm,1.0s,mb4.2						
HLID				*e*		06 16 10.4	
MCMT	**McKenzie Canyo**	**57.37**	**359**	*e*P	**P**	**06 16 12.8**	**-0.3**
MCMT				*e*		06 16 19.1	
BDFB	**Brasilia**	**61.46**	**101**	LR	LR	06 41 29.4	
	comp=Z,54nm,18.7s,MS3.7,baz=168,slow=34						
BBSR	**BB Station**	**63.45**	**44**	*e*P	**P**	**06 16 55.3**	**+0.6**
	30nm,1.1s,mb5.3						
DLBC	**Dease Lake**	**72.58**	**350**	*e*P	**P**	**06 17 55.7**	**+4.3**
YKA	**Yellowknife Ar**	**75.10**	**359**	P	**P**	**06 18 04.5**	**-1.4**
	0.3nm,0.5s,mb3.5,baz=169,slow=6.3,SNR=3.8						
YKA				LR	LR	06 48 09.2	
	comp=Z,80nm,19.1s,MS4.0,baz=165,slow=33						
YKA	**Yellowknife Ar**	**75.10**	**359**	P	**P**	**06 18 04.5**	**-1.4**
YKA				LR	LR	06 48 09.2	
SCHQ	**Schefferville**	**77.21**	**25**	P	**P**	**06 18 16.2**	**-1.8**
	1.7nm,0.8s,mb4.1,baz=233,slow=8.3,SNR=3.6						
SCHQ				LR	LR	06 50 48.4	
	comp=Z,51nm,18.4s,MS3.9,baz=64,slow=34						
QSPA	**South Pole Qui**	**77.29**	**180**	*e*P	**P**	**06 18 17.8**	**-0.1**
	5.7nm,1.0s,mb4.5						
ILAR	**Eielson Array**	**81.83**	**345**	LR	LR	06 50 09.2	
	comp=Z,50nm,18.3s,MS3.9,baz=180,slow=32						
INK	**Inuvik**	**82.42**	**352**	P	**P**	**06 18 46.8**	**+1.1**
CN2	**Changchun**	**122.45**	**314**	*e*PKP	PKPdf	06 25 15.4	-5.7
HHC	**Hu-ho-hao-te**	**133.13**	**315**	*e*PKP	PKPdf	06 25 33.0	-8.7
HHC				PP	PP		
	comp=Z,80nm,5.7s						
HHC				LR	LR		
	comp=Z,90nm,21.4s,MS4.5						
LZH	**Lanzhou**	**140.64**	**312**	*e*PKP	PKPdf	06 25 52.3	-3.4
LZH				XPKP		06 25 57.6	
LZH	**Lanzhou**	**140.64**	**312**	*e*PKP	PKPdf	06 25 52.2	-3.5
LZH				pPKP		06 25 55.4	
LZH				sPKP		06 25 57.6	
MKAR	**Makanchi Array**	**144.17**	**344**	PKP	PKPdf	06 25 59.5	-1.8
	comp=Z,0.5nm,0.6s,baz=34,slow=4.4,SNR=4.4						
WMQ	**Urumqi**	**144.94**	**335**	*e*PKP	PKPdf	06 26 00.8	-2.1
WMQ				LR	LR		
	comp=Z,60nm,23.2s,MS4.3						

IDC 16 06:10:25.7±2.3, 7.11N×93.28E, mb3.6/4, mb1 3.8/5, mb1mx3.6/20, mbtmp3.6/5, Error ellipse: s-maj=76.2km s-min=26.9km az=62.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.55**	**26**	Pn	P	06 13 27.7	-0.8
	baz=210,slow=12,SNR=7.5						
MKAR	**Makanchi Array**	**40.65**	**348**	P	P	06 18 07.9	-1.3
	0.2nm,0.4s,baz=180,slow=7.3,SNR=4.6						
SONM	**Songino Array**	**42.09**	**13**	P	P	06 18 18.2	-2.8
	0.2nm,0.4s,baz=196,slow=10,SNR=3.1						
WRA	**Warramunga Arr**	**48.53**	**124**	P	P	06 19 11.0	-1.9
	0.6nm,0.4s,baz=304,slow=8.6,SNR=13						
BVAR	**Borovoye Array**	**49.44**	**342**	P	P	06 19 17.3	-2.1
	0.3nm,0.4s,baz=135,slow=6.1,SNR=2.8						

KNET 16 06:17:35.1±0.3, 43.03N×74.90E, h13^{km}±2^{km}, ml1.9, Error ellipse: s-maj=2.3km s-min=1.8km az=14.0

NNC 16 06:17:35.7±1.5, 42.99N×74.98E, mpv2.6, Error ellipse: s-maj=18.1km s-min=9.0km az=124.0

ISC 16 06:17:35.4±0.7, 43.06N±0.04×74.92E±0.04, h6^{km}±5^{km}, n12, σ0^{s}48/22, 17C-5D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMS	**Chumysh**	**0.14**	**243**	⇑P	**Pg**	**06 17 38.2**	**-0.2**
	228nm,0.2s,SNR=404						
CHMS				⇑S	**Sg**	**06 17 40.2**	**-0.1**
	251nm,0.1s						
USP	**Ospenovka**	**0.37**	**304**	⇑P	**Pg**	**06 17 43.1**	**+0.2**
	83nm,0.1s,SNR=190						
USP				⇓S	**Sg**	**06 17 48.5**	**+0.7**
	169nm,0.2s						
KBK	**Karagaybulak**	**0.40**	**177**	P	**Pg**	**06 17 43.7**	**+0.1**
	177nm,0.2s,SNR=168						
KBK				⇑S	**Sg**	**06 17 49.7**	**+0.7**
	438nm,0.4s						
TKM2	**Tokmak 2**	**0.52**	**105**	⇑P	**Pg**	**06 17 45.5**	**-0.3**
	24nm,0.1s,SNR=38						
TKM2				⇑S	**Sg**	**06 17 52.8**	**+0.1**
	111nm,0.1s						
AAK	**Ala-Archa**	**0.53**	**216**	⇑P	**Pg**	**06 17 45.6**	**-0.4**
	20nm,0.2s,SNR=18						
AAK				⇑S	**Sg**	**06 17 52.9**	**-0.3**
	100nm,0.3s						
AAK	**Ala-Archa**	**0.53**	**216**	⇑P	**Pg**	**06 17 45.6**	**-0.4**
	5.1nm,0.2s						
AAK				⇑S	**Sg**	**06 17 52.9**	**-0.3**
	27nm,0.2s						
UCH	**Uchtor**	**0.88**	**200**	⇑P	**Pb**	**06 17 52.2**	**-0.6**
	5.1nm,0.1s,SNR=31						
UCH				⇓S	**Sb**	**06 18 04.1**	**-0.5**
	12nm,0.2s						
EKS2	**Erkin-Say**	**0.93**	**245**	⇑P	**Pb**	**06 17 53.3**	**-0.2**
	16nm,0.1s,SNR=46						
EKS2				⇑S	**Sb**	**06 18 06.2**	**+0.3**
	18nm,0.3s						
KZA	**Kyzart**	**1.01**	**166**	⇓P	**Pb**	**06 17 54.9**	**-0.1**
	10nm,0.2s,SNR=40						
KZA				⇓S	**Sb**	**06 18 09.1**	**+0.8**
	14nm,0.2s						
ULHL	**Ulahol**	**1.27**	**129**	⇑P	**Pb**	**06 17 59.1**	**-0.2**
	5.1nm,0.1s,SNR=10.0						
AML	**Almayashu**	**1.30**	**225**	⇑P	**Pb**	**06 17 59.8**	**0.0**
	5.0nm,0.2s,SNR=27						
AML				⇓S	**Sb**	**06 18 16.8**	**+0.3**
	22nm,0.2s						
KK31	**Karatay Array**	**3.23**	**272**	⇑Pg	**Pg**	**06 18 36.2**	**-3.7**
	1.4nm,0.7s,baz=91,slow=16						
KK31				⇑Lg		06 19 17.4	
	1.6nm,0.3s,baz=94,slow=26						

IDC 16 06:23:28.2±2.7, 19.99S×68.54W, h107^{km}±27^{km}, mb2.9/2, mb1 2.9/5, mb1mx2.9/19, mbtmp3.1/5, Error ellipse: s-maj=34.1km s-min=19.8km az=72.0

ISC 16 06:23:27.6±1.7, 20.0S±0.1×68.5W±0.2, h125^{km}±22^{km}, n5, σ1^{s}20/6, mb3.0/1, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.72**	**6**	P	**P**	**06 24 25.6**	**+1.1**
	0.4nm,0.3s,baz=195,slow=8.3,SNR=20						
LPAZ				S	**S**	**06 25 07.0**	**-1.0**
	0.3nm,0.3s,baz=224,slow=8.4,SNR=5.0						
SIV	**San Ignacio**	**8.14**	**62**	P	**P**	**06 25 24.7**	**+0.6**
	0.4nm,0.3s,baz=252,slow=12,SNR=24						
CFAA	**Coronel Fontan**	**11.55**	**179**	P	**P**	**06 26 09.2**	**-0.4**
	0.0nm,0.3s,baz=352,slow=11,SNR=3.2						
BDFB	**Brasilia**	**20.00**	**81**	P	**P**	**06 27 52.0**	**-0.5**
	1.1nm,0.5s,baz=253,slow=6.2,SNR=3.3						
TXAR	**Lajitas Array**	**59.62**	**324**	P	**P**	**06 33 21.1**	**+0.2**
	0.1nm,0.6s,mb3.0,baz=156,slow=11,SNR=2.6						

BJI 16 06:27:06.1, 23.50N×121.76E, h29^{km}, ML4.1

IDC 16 06:27:08.4±1.3, 23.91N×121.84E, mb3.7/4, mb1 3.9/5, mb1mx3.7/20, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=40.0km s-min=25.9km az=63.0

NEIC 16 06:27:10.1±0.9, 23.94N×121.74E, h10^{km}, mb4.0/1, ML4.1(TAP), Error ellipse: s-maj=18.6km s-min=9.8km az=56.0

NEIC Recorded [4 TAP] in Hua-lien and [1 TAP] in Nan-t'ou Counties.

TAP 16 06:27:10.7, 23.96N×121.62E, h8^{km}, ML4.2

TAP Felt IV J at Hualien, II J at Chiawan, III J at Shilin, I J at Hehuanshan, I J at Nanau, I J at Nanshan.

JMA 16 06:27:12.6±0.3, 24.12N×121.59E, h70^{km}, M3.0

ISC 16 06:27:10.4±0.4, 23.95N±0.01×121.68E±0.02, h2^{km}±3^{km}, n73, σ1^{s}00/112, mb3.6/5, 7C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.08**	**288**	⇓P	**Pg**	**06 27 12.5**	**+0.6**
TWD	**Chiawan**	**0.15**	**327**	⇑*i*P	**Pg**	**06 27 13.7**	**+0.4**
TWD				S	**Sg**	**06 27 15.8**	**+0.5**
ESF	**Shoufeng Towns**	**0.18**	**243**	*e*P	**Pg**	**06 27 14.0**	**0.0**
ESF				S	**Sg**	**06 27 16.4**	**0.0**
NACB	**Ninganchiao**	**0.23**	**340**	*e*Pg	**Pg**	**06 27 14.6**	**-0.5**
ESL	**Shilin**	**0.27**	**239**	*e*P	**Pg**	**06 27 15.2**	**-0.5**
ESL				S	**Sg**	**06 27 18.4**	**-1.0**
TEGC	**Jichi Village**	**0.28**	**208**	*e*P	**Pg**	**06 27 17.6**	**+1.7**
TEGC				S	**Sg**	**06 27 22.4**	**+2.8**
WHF	**Hehuan Shan**	**0.43**	**296**	⇓P	**Pg**	**06 27 18.2**	**-0.7**
WHF				S	**Sg**	**06 27 23.8**	**-0.8**
ENA	**Nanau**	**0.47**	**6**	*i* P	**Pg**	**06 27 20.2**	**+0.4**
ENA				S	**Sg**	**06 27 26.8**	**+0.6**
TWT	**Tachien**	**0.55**	**303**	P	**Pg**	**06 27 21.1**	**-0.3**
TWT				S	**Sg**	**06 27 28.7**	**0.0**
NNS	**Nan Shan**	**0.56**	**330**	⇑*i*P	**Pg**	**06 27 21.4**	**-0.1**
NNS				S	**Sg**	**06 27 28.2**	**-0.9**
TWC	**Suao**	**0.67**	**13**	P	**Pg**	**06 27 24.2**	**+0.5**
TWC				S	**Sg**	**06 27 35.1**	**+2.5**
ENTT	**Nioudou**	**0.69**	**351**	P	**Pg**	**06 27 24.2**	**+0.1**
ENTT				S	**Sg**	**06 27 33.7**	**+0.3**
TWF1	**Yuli**	**0.70**	**211**	*e*P	**Pg**	**06 27 23.7**	**-0.6**
SMLT	**Sun Moon Lake**	**0.72**	**265**	⇑*i*P	**Pg**	**06 27 24.1**	**-0.7**
SMLT				S	**Sg**	**06 27 32.5**	**-1.8**
TYC	**Yuchr**	**0.76**	**266**	⇑*i*P	**Pg**	**06 27 24.5**	**-1.0**
TYC				S	**Sg**	**06 27 33.4**	**-2.2**
TWE	**Neicheng**	**0.76**	**359**	P	**Pg**	**06 27 25.8**	**+0.2**
TWE				S	**Sg**	**06 27 35.9**	**+0.1**
YHNB	**Yeheng**	**0.77**	**339**	*e*Pg	**Pg**	**06 27 25.0**	**-0.6**
NSK	**Sanguang**	**0.78**	**338**	⇑*i*P	**Pg**	**06 27 25.7**	**-0.2**
NSK				S	**Sg**	**06 27 35.3**	**-1.0**
CHKT	**Chengkung**	**0.90**	**199**	*e*P	**Pg**	**06 27 28.1**	**-0.2**
NSTT	**Nanjuang**	**0.92**	**317**	*e*P	**Pb**	**06 27 28.1**	**-0.6**
NSTT				S	**Sg**	**06 27 40.1**	**-0.8**
WNT	**Mingjian**	**0.92**	**265**	*e*P	**Pb**	**06 27 28.7**	**0.0**
WNT				S	**Sg**	**06 27 41.8**	**+0.9**
ALS	**Alishan**	**0.92**	**241**	⇑*i*P	**Pb**	**06 27 28.0**	**-0.7**
ALS				S	**Sg**	**06 27 40.3**	**-0.7**
TWQ1	**Liyutan**	**0.92**	**295**	*e*P	**Pb**	**06 27 28.4**	**-0.4**
TWQ1				S	**Sg**	**06 27 40.7**	**-0.3**
TCU	**Taichung**	**0.94**	**282**	*e*P	**Pb**	**06 27 29.4**	**+0.3**
TCU				S	**Sg**	**06 27 43.0**	**+1.3**
ELDTW	**Lidau**	**0.98**	**219**	*e*P	**Pb**	**06 27 28.1**	**-1.6**
CHN5	**Tsauling**	**0.99**	**249**	P	**Pb**	**06 27 29.6**	**-0.3**
CHN5				S	**Sb**	**06 27 43.8**	**+0.6**
TWA	**Mucha**	**1.03**	**355**	*e*P	**Pb**	**06 27 30.8**	**+0.2**
TWA				S	**Sb**	**06 27 44.0**	**-0.3**
TATO	**Taipei**	**1.03**	**350**	*e*Pg	**Pg**	**06 27 30.9**	**-0.1**
WGK	**Gukeng**	**1.06**	**256**	*e*P	**Pb**	**06 27 31.4**	**+0.3**
HSN	**Hsinchu**	**1.07**	**322**	*e*P	**Pb**	**06 27 32.1**	**+0.8**
TWB1	**Santiao Chiao**	**1.09**	**15**	*e*P	**Pb**	**06 27 31.8**	**+0.3**
TWB1				S	**Sb**	**06 27 46.0**	**0.0**
TAP1	**Taipei**	**1.09**	**352**	*e*P	**Pb**	**06 27 31.8**	**+0.2**
TAP1				S	**Sb**	**06 27 45.7**	**-0.4**
TAP	**Taipei**	**1.09**	**351**	*e*P	**Pb**	**06 27 34.5**	**+2.8**
TAP				S	**Sb**	**06 27 46.0**	**-0.3**
NCU	**National Centr**	**1.11**	**336**	*e*P	**Pb**	**06 27 32.7**	**+0.8**
NCU				S	**Sb**	**06 27 48.7**	**+2.0**
NWF	**Wu-fen Shan**	**1.12**	**5**	⇓P	**Pb**	**06 27 32.7**	**+0.6**
NWF				S	**Sb**	**06 27 46.6**	**-0.3**
CHN4	**Tsaushan**	**1.17**	**239**	⇑P	**Pb**	**06 27 33.3**	**+0.3**
CHN4				S	**Sb**	**06 27 49.5**	**+1.1**
TWS1	**Kuangyinshan**	**1.17**	**348**	*e*P	**Pb**	**06 27 33.6**	**+0.7**
TWS1				S	**Sb**	**06 27 51.5**	**+3.1**
CHN2	**Minshiung**	**1.19**	**249**	*e*P	**Pb**	**06 27 33.9**	**+0.6**
CHN2				S	**Sb**	**06 27 50.3**	**+1.4**
WTP	**Ta-pu**	**1.21**	**235**	*e*P	**Pb**	**06 27 33.7**	**0.0**
WTP				S	**Sb**	**06 27 50.3**	**+0.7**
CHY	**Chiayi**	**1.24**	**249**	*e*P	**Pb**	**06 27 34.1**	**-0.2**
TWG	**Pinlang**	**1.26**	**207**	*e*P	**Pb**	**06 27 31.6**	**-2.9**
TWK	**Hsinying**	**1.29**	**238**	*e*P	**Pb**	**06 27 36.0**	**+0.9**
CHN1	**Nanshi**	**1.31**	**234**	*e*P	**Pb**	**06 27 35.6**	**+0.3**
CHN1				S	**Sb**	**06 27 53.7**	**+1.2**
YOJ	**Yonaguni jima**	**1.31**	**67**	P	**Pb**	**06 27 35.8**	**+0.4**
YOJ				*e*S	**Sb**	**06 27 53.0**	**+0.4**
TWY	**Chenhua**	**1.32**	**357**	*e*P	**Pb**	**06 27 36.1**	**+0.5**
SGST	**Jiashian**	**1.33**	**230**	*e*P	**Pb**	**06 27 35.9**	**+0.1**
SGST				S	**Sb**	**06 27 54.8**	**+1.6**
CHN8	**Yiju**	**1.48**	**246**	*e*P	**Pn**	**06 27 38.2**	**0.0**
ECL	**Taimali**	**1.51**	**207**	*e*P	**Pn**	**06 27 38.0**	**-0.5**
SSD	**Sandimen**	**1.54**	**219**	*e*P	**Pn**	**06 27 38.8**	**-0.3**
SCLT	**Jiali**	**1.57**	**241**	*e*P	**Pn**	**06 27 40.4**	**+0.9**
TWM1	**Shoushan**	**1.62**	**226**	*e*P	**Pn**	**06 27 41.1**	**+1.1**
SGLT	**Jiouru**	**1.64**	**222**	*e*P	**Pn**	**06 27 42.5**	**+2.0**
PCYT	**Pengchaiyu**	**1.71**	**12**	*e*P	**Pn**	**06 27 41.8**	**+0.5**
EAST	**Anshuo**	**1.74**	**206**	*e*P	**Pn**	**06 27 43.0**	**+1.1**
SCZT	**Fangliau**	**1.85**	**212**	*e*P	**Pn**	**06 27 45.5**	**+2.0**
IRIF	**Iriomote-Funau**	**1.91**	**78**	P	**Pn**	**06 27 44.3**	**+0.1**
IRIF				*e*S	**Sn**	**06 28 07.9**	**-1.3**
LAY	**Lan-yu**	**1.91**	**184**	*e*P	**Pn**	**06 27 41.2**	**-3.0**
HATJ	**Hateruma jima**	**1.94**	**87**	*e*S	**Sn**	**06 28 09.5**	**-0.6**
WDGT	**Dungji**	**1.98**	**250**	*e*P	**Pn**	**06 27 44.2**	**-1.1**
WDGT				S	**Sn**	**06 28 10.7**	**-0.4**
PNG	**Penghu**	**1.99**	**259**	*e*P	**Pn**	**06 27 44.1**	**-1.3**
PNG				S	**Sn**	**06 28 08.4**	**-2.8**
JKRS	**Kuro-shima**	**2.14**	**82**	P	**Pn**	**06 27 48.1**	**+0.5**
JIJ	**Ishigaki jima**	**2.28**	**79**	P	**Pn**	**06 27 49.0**	**-0.6**
JIJ				*e*S	**Sn**	**06 28 17.5**	**-1.2**
JTJ	**Tarama**	**2.84**	**75**	*e*S	**Sn**	**06 28 32.7**	**-0.1**
QZH	**Quanzhou**	**2.98**	**290**	*e*P	**Pn**	**06 27 58.0**	**-1.7**
QZH				S	**Sn**	**06 28 32.4**	**-4.2**
QZH				Smax			
	comp=N,490nm,0.6s						
QZH				Smax			
	comp=E,400nm,1.0s						
KNM	**Kinmen**	**3.00**	**279**	*e*P	**Pn**	**06 28 00.3**	**+0.4**
JOW	**Kunigami**	**6.61**	**63**	Pn	**Pn**	**06 28 47.0**	**-4.0**
	comp=E,4.5nm,0.3s,baz=259,slow=5.2,SNR=5.9						
GZH	**Guangzhou**	**7.70**	**265**	P	**Pn**	**06 28 59.3**	**-7.0**
GZH				Smax			
	comp=N,70nm,0.9s						
GZH				Smax			
	comp=E,40nm,1.1s						
NJ2	**Nanjing**	**8.45**	**343**	*e*P	**P**	**06 29 17.1**	**+0.4**
NJ2				PP	PP	06 29 24.6	+0.2
NJ2				S	**Sn**	**06 30 54.4**	**+0.6**
NJ2				Smax			
	comp=N,180nm,1.0s						
NJ2				Smax			
	comp=E,200nm,1.0s						
ULN	**Ulaanbaatar**	**26.55**	**338**	P	**P**	**06 32 49.4**	**-2.0**
	comp=E,1.9nm,0.6s,mb3.8						
SONM	**Songino Array**	**26.76**	**337**	P	**P**	**06 32 51.4**	**-1.9**
	comp=E,0.4nm,0.5s,mb3.2,baz=164,slow=9.0,SNR=4.4						
MKAR	**Makanchi Array**	**38.82**	**316**	P	**P**	**06 34 36.1**	**-2.2**
	comp=E,0.7nm,0.6s,mb3.6,baz=100,slow=9.7,SNR=7.1						
WRA	**Warramunga Arr**	**45.34**	**163**	P	**P**	**06 35 27.9**	**-4.1**
	comp=E,0.9nm,0.7s,mb3.7,baz=345,slow=8.8,SNR=7.8						
YKA	**Yellowknife Ar**	**83.00**	**23**	P	**P**	**06 39 34.1**	**-4.0**
	comp=E,0.5nm,0.6s,mb3.7,baz=311,slow=5.7,SNR=2.9						

TAP 16 06:27:29.4, 23.96N×121.61E, h8^{km}±1^{km}, ML3.6, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.12**	**354**	*i* P	Pg	06 27 32.1	0.0
TWD				S	Sg	06 27 33.9	-0.1
ESF	**Shoufeng Towns**	**0.13**	**227**	P	Pg	06 27 32.2	-0.1
ESF				S	Sg	06 27 34.3	0.0
ESL	**Shilin**	**0.22**	**228**	P	Pg	06 27 33.6	-0.3
ESL				S	Sg	06 27 37.1	+0.1
WHF	**Hehuan Shan**	**0.36**	**300**	*e*P	Pg	06 27 36.5	-0.2

TAP 16 06:27:51.6, 23.97N×121.58E, h6^{km}, ML3.6, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.02**	**73**	P	Pg	06 27 53.3	+0.4
TWD	**Chiawan**	**0.11**	**8**	*i* P	Pg	06 27 54.4	+0.3
TWD				S	Sg	06 27 56.2	+0.4
ESF	**Shoufeng Towns**	**0.12**	**214**	P	Pg	06 27 54.4	+0.1
ESF				S	Sg	06 27 56.6	+0.6
ESL	**Shilin**	**0.20**	**221**	*i* P	Pg	06 27 55.9	+0.1
ESL				S	Sg	06 27 58.8	+0.1
TEGC	**Jichi Village**	**0.26**	**188**	*e*P	Pg	06 27 57.6	+0.7
TEGC				S	Sg	06 28 03.7	+3.2
WHF	**Hehuan Shan**	**0.34**	**301**	P	Pg	06 27 58.8	+0.3
WHF				S	Sg	06 28 03.9	+0.9
TWT	**Tachien**	**0.47**	**307**	P	Pg	06 28 01.5	+0.6
TWT				S	Sg	06 28 09.0	+1.8
ENA	**Nanau**	**0.48**	**18**	*e*P	Pg	06 28 00.8	-0.4
ENA				S	Sg	06 28 07.0	-0.6
NNS	**Nan Shan**	**0.51**	**338**	P	Pg	06 28 02.0	+0.3
NNS				S	Sg	06 28 08.5	0.0
EHY	**Hungye**	**0.52**	**207**	*e*P	Pg	06 28 01.7	-0.3
SMLT	**Sun Moon Lake**	**0.63**	**262**	*e*P	Pg	06 28 04.2	-0.1
SMLT				S	Sg	06 28 14.0	+1.3
ENTT	**Nioudou**	**0.67**	**359**	*e*P	Pg	06 28 04.9	-0.1
ENTT				S	Sg	06 28 14.4	+0.5
TWC	**Suao**	**0.68**	**21**	*e*P	Pg	06 28 06.1	+0.9
NSK	**Sanguang**	**0.73**	**344**	*e*P	Pg	06 28 06.4	+0.2
NSK				S	Sg	06 28 15.9	-0.2
TWE	**Neicheng**	**0.75**	**6**	*e*P	Pg	06 28 06.5	-0.2
CHN5	**Tsauling**	**0.91**	**246**	*e*P	Pb	06 28 10.6	+1.2
NWF	**Wu-fen Shan**	**1.11**	**9**	*e*P	Pb	06 28 14.8	+2.0

IDC 16 06:31:01.5±2.5, 5.30N×94.80E, mb3.9/5, mb1 4.1/5, mb1mx3.8/18, mbtmp3.9/5, MS3.2/2, Ms1 3.2/2, ms1mx3.0/24, Error ellipse: s-maj=105.6km s-min=27.3km az=57.0

ISC 16 06:31:04.7±2.3, 5.3N±0.4×94.9E±0.6, h33^{km}, n7, σ0^{s}09/5, mb3.9/5, MS3.6/1, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.65**	**17**	LR	LR	06 39 19.8	
	comp=Z,32nm,19.9s,baz=185,slow=36						
MKAR	**Makanchi Array**	**42.72**	**347**	P	**P**	**06 39 00.3**	**-0.1**
	0.5nm,0.4s,mb3.6,baz=167,slow=7.3,SNR=9.0						
MKAR				LR	LR	07 01 08.8	
	comp=Z,70nm,18.4s,MS3.6,baz=9.2,slow=42						
SONM	**Songino Array**	**43.49**	**11**	P	**P**	**06 39 06.7**	**0.0**
	0.7nm,0.7s,mb3.5,baz=194,slow=5.2,SNR=5.7						
WRA	**Warramunga Arr**	**46.23**	**124**	P	**P**	**06 39 29.0**	**0.0**
	1.3nm,0.6s,mb4.0,baz=303,slow=9.4,SNR=7.7						
ZAL	**Zalesovo**	**49.15**	**352**	P	**P**	**06 39 51.5**	**+0.1**
	1.7nm,0.4s,mb4.5,baz=347,slow=6.0,SNR=5.2						
ARCES	**ARCESS Array B**	**77.89**	**340**	P	**P**	**06 43 00.6**	**0.0**
	0.6nm,0.6s,mb3.7,baz=100,slow=5.5,SNR=6.3						
TXAR	**Lajitas Array**	**141.21**	**26**	PKP	PKPdf	06 50 36.4	+3.6
	0.1nm,0.3s,baz=346,slow=3.7,SNR=3.5						

ISK 16 06:52:35.8, 36.04N×28.73E, h53^{km}, MD3.5

NEIC 16 06:52:35.6±0.7, 36.12N×28.85E, h10^{km}, MD3.3(ATH), ML3.5(NIC), Error ellipse: s-maj=24.4km s-min=7.3km az=191.0

CSEM 16 06:52:35.1±0.1, 35.99N×28.72E, h40^{km}, Mw3.1, Error ellipse: s-maj=2.4km s-min=1.3km az=67.0

HLW 16 06:52:37.5, 35.99N×28.88E, h23^{km}, Mb3.8

NIC 16 06:52:39.5±0.3, 35.95N×28.97E, h40^{km}, ML3.5, MW3.0

ATH 16 06:52:42.1, 36.27N×28.15E, h43^{km}, MD3.3/3

ISC 16 06:52:35.6±0.3, 36.05N±0.03×28.77E±0.03, h74^{km}±8^{km}, n59, σ0^{s}93/83, 9C-8D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.55**	**288**	*e*P	**P**	**06 52 49.5**	**+0.1**
FETY	**Fethiye**	**0.64**	**24**	*i* PG	**P**	**06 52 50.0**	**-0.4**
AKAS	**Kas**	**0.70**	**74**	*i* P	**P**	**06 52 51.9**	**+0.9**
AKAS				*i* S	**S**	**06 53 02.3**	**-0.2**
DALT	**Dalyan (Mudla)**	**0.73**	**352**	*i* PG	**P**	**06 52 51.3**	**0.0**
DALT				*i* SG	**S**	**06 53 01.1**	**-1.9**
ELL	**Elmali**	**1.16**	**52**	*i* PN	**P**	**06 52 57.0**	**+0.4**
ELL				*i* SN	**S**	**06 53 11.7**	**-0.6**
GOLH	**Golhisar**	**1.35**	**28**	*i* P	**P**	**06 53 01.2**	**+1.9**
GOLH				*i* S	**S**	**06 53 18.2**	**+1.5**
KARP	**Karpathos**	**1.40**	**250**	*e*P	**P**	**06 53 01.9**	**+2.0**
BDRM	**Kayabasi**	**1.47**	**314**	*i* P	**P**	**06 53 01.4**	**+0.5**
BDRM				*i* S	**S**	**06 53 17.2**	**-2.3**
MLSB	**Milas**	**1.48**	**328**	*i* PN	**P**	**06 53 01.3**	**+0.3**
MLSB				*i* SN	**S**	**06 53 19.4**	**-0.3**
BODT	**Bodrum**	**1.55**	**311**	*i* PN	**P**	**06 53 02.4**	**+0.5**
BODT				*i* SN	**S**	**06 53 19.9**	**-1.4**
DNZL	**Cakiroluk**	**1.66**	**8**	*i* P	**P**	**06 53 04.1**	**+0.8**
DNZL				*i* S	**S**	**06 53 22.8**	**-0.9**
DENT	**Denizli**	**1.72**	**7**	PN	**P**	**06 53 04.7**	**+0.6**
AYDN	**Tasoluk**	**1.76**	**336**	*i* P	**P**	**06 53 06.4**	**+1.7**
AYDN				*i* S	**S**	**06 53 25.6**	**-0.5**
SMG	**Samos**	**2.27**	**318**	*e*P	**P**	**06 53 11.7**	**0.0**
TKTP	**Tekketepe**	**2.35**	**32**	*i* P	**P**	**06 53 13.4**	**+0.5**

MANT	Manisa	2.45	356	*i* P	P	06 53 13.9	-0.3
MANT				*i* S	S	06 53 40.4	-2.6
IZM	Izmir	2.64	333	PN	P	06 53 16.9	0.0
KDAG	Bornova	2.64	333	*i* P	P	06 53 17.4	+0.5
KDAG				*i* S	S	06 53 42.9	-5.0
NPS	Neapolis	2.68	254	*e*P	P	06 53 18.7	+1.1
BLCB	Balcova	2.71	330	PN	P	06 53 17.9	-0.1
URLA	Izmir	2.89	324	*i* P	P	06 53 20.3	-0.1
URLA				*i* S	S	06 53 52.6	-1.5
AKS	Akhisar	2.93	345	PN	P	06 53 21.2	+0.2
HDMB	Hadim	3.13	72	PN	P	06 53 24.8	+0.9
PPCY	Paphos	3.14	111	P	P	06 53 24.7	+0.7
ALFC	Alevga	3.25	105	P	P	06 53 25.8	+0.3
	7.8nm,0.3s						
ALFC				S	S	06 54 02.7	-0.4
KONT	Konya--Tatoy	3.45	56	PN	P	06 53 29.5	+1.3
LEF	Lefka	3.49	104	PN	P	06 53 28.9	+0.1
SZAC	Souni-Zanaja	3.60	110	P	P	06 53 31.0	+0.6
	12nm,0.2s						
SZAC				S	S	06 54 10.9	-1.0
KDHN	Kadinhani	3.64	46	*i* P	P	06 53 31.8	+0.9
KDHN				*i* S	S	06 54 12.7	-0.2
KIZT	Kizilcal	3.76	40	PN	P	06 53 33.3	+0.7
CSS	Prodhromos	3.88	105	P	P	06 53 34.6	+0.4
	1.7nm,0.2s						
CSS				S	S	06 54 17.5	-1.4
IKL	Isikli	3.99	86	PN	P	06 53 36.7	+0.9
MEST	Erdemli	4.38	81	*i* P	P	06 53 43.0	+1.8
MEST				*i* S	S	06 54 30.8	-0.5
PHNC	Paralimni	4.42	102	P	P	06 53 42.9	+1.1
DABA	Dabaa	5.04	185	⇑P	P	06 53 50.7	+0.4
HMAT	Matruh	5.13	196	⇑P	P	06 53 52.0	+0.4
HMAT				S	S	06 54 47.0	-3.2
SLUM		5.42	214	⇓P	P	06 53 56.4	+0.8
HNTI	Hanita	6.06	117	Pn	P	06 54 04.5	+0.1
HNTI				Sn	S	06 55 07.9	-5.2
COBT	Iskenderun	6.07	83	*i* P	P	06 54 03.1	-1.4
COBT				*i* S	S	06 55 10.5	-2.9
KSDI	Kefar Szold	6.36	115	Pn	P	06 54 08.3	-0.3
KSDI				Sn	S	06 55 15.1	-5.4
AMAG	Maghara	6.54	144	⇓P	P	06 54 11.2	-0.1
KSHT	Keshet	6.57	116	Pn	P	06 54 12.8	+1.2
HNAT	Natroun	6.58	166	⇑P	P	06 54 11.6	-0.1
MMLI	Mount Malkishu	6.58	121	Pn	P	06 54 11.7	-0.1
KOT	Kottamia	6.62	156	⇓P	P	06 54 12.1	-0.2
KOT				S	S	06 55 20.5	-6.5
HHAG	Hagoal	6.69	154	⇑P	P	06 54 13.1	-0.1
HSAF	As Saff	6.83	159	⇑P	P	06 54 14.8	-0.3
GLL	Jalalah	6.91	158	⇓P	P	06 54 16.0	-0.3
SUZ		7.07	150	⇑P	P	06 54 18.2	-0.3
SWA1		7.24	202	⇓P	P	06 54 20.4	-0.4
SWA1				S	S	06 55 37.2	-4.9
SWA2		7.33	203	⇓P	P	06 54 22.6	+0.5
ZNM		7.50	151	⇓P	P	06 54 24.0	-0.4
HNKL	Nakhl	7.51	143	⇑P	P	06 54 23.8	-0.8
PRNI	Paran	7.72	136	Pn	P	06 54 25.8	-1.6
PRNI				Sn	S	06 55 46.0	-8.0
KMTI	Karmit	7.75	138	Pn	P	06 54 26.3	-1.6
EIL	Elat	8.21	139	Pn	P	06 54 33.8	-0.4
GRB	Gharib	8.47	155	⇓P	P	06 54 37.6	0.0
HKAT	Jabal Katrina	8.71	148	⇑P	P	06 54 41.0	+0.1
HFRF	Wahat Farafira	8.88	183	⇑P	P	06 54 42.9	-0.3

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*IDC **16** 07:08:36.1±1.1, 8.74S×130.53E, mb4.2/4, mb1 4.4/6, mb1mx4.1/14, mbtmp4.2/6, ML3.9/2, Error ellipse: s-maj=46.6km s-min=22.1km az=82.0*

*NEIC **16** 07:08:38.4±0.7, 8.75S×130.26E, h10^{km}, mb4.1/2, Error ellipse: s-maj=17.0km s-min=10.7km az=84.0*

ISC 16 07:08:42.0±2.1**, 8.94S**±0.07×**130.29E**±0.09**, h57**^{km}±22^{km}**, n16, σ1**^{s}**40**/21**, mb4.2**/5**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	4.30	151	*e*P	P	07 09 49.1	+2.5
	43nm,0.7s						
KAKA				*e*S	S	07 10 45.0	+9.0
FITZ	Fitzroy Crossi	10.17	206	*e*P	P	07 11 08.8	+0.9
	8.0nm,0.4s						
FITZ				*e*S	S	07 13 02.5	+1.1
FITZ	Fitzroy Crossi	10.17	206	Pn	P	07 11 08.3	+0.4
	2.9nm,0.3s,baz=23,slow=11,SNR=32						
FITZ				Sn	S	07 13 00.8	-0.6
	5.8nm,0.3s,baz=142,slow=11,SNR=8.2						
WRAB	Tennant Creek	11.62	161	*e*P	P	07 11 25.3	-2.1
WRAB				*e*S	S	07 13 27.5	-8.9
WRA	Warramunga Arr	11.62	161	Pn	P	07 11 25.7	-1.8
	0.3nm,0.3s,baz=340,slow=13,SNR=28						
WRA				Sn	S	07 13 35.6	-0.9
	1.2nm,0.3s,baz=338,slow=21,SNR=6.6						
WB2	Warramunga Arr	11.62	161	*e*P	P	07 11 26.7	-0.9
WB2				*e*S	S	07 13 36.7	+0.1
MBWA	Marble Bar	15.85	219	*e*P	P	07 12 22.7	-0.3
PMG	Port Moresby	16.66	93	P	P	07 12 35.0	+1.9
	10nm,0.8s						
NWAO	Narrogin (SRO)	26.75	205	P	P	07 14 20.8	+2.4
MJAR	Matsushiro Arr	45.84	9	P	P	07 16 57.2	-3.1
	2.5nm,0.6s,mb4.3,baz=181,slow=10,SNR=6.4						
ULN	Ulaanbaatar	60.18	342	*e*P	P	07 18 45.2	-1.1
	1.9nm,0.8s,mb4.2						
SONM	Songino Array	60.36	342	P	P	07 18 46.9	-0.6
	1.1nm,0.5s,mb4.2,baz=157,slow=7.0,SNR=11						
MKAR	Makanchi Array	70.00	327	P	P	07 19 49.6	0.0
	3.5nm,0.6s,mb4.4,baz=125,slow=7.9,SNR=36						
SBA	Scott Base	71.39	172	P	P	07 19 59.3	+1.8
BVAR	Borovoye Array	79.85	328	P	P	07 20 46.5	+0.6
	1.2nm,0.8s,mb3.9,baz=127,slow=7.4,SNR=8.7						
LPAZ	La Paz	149.01	144	PKPbc	PKPdf	07 28 26.7	+6.3
	0.5nm,0.6s,baz=78,slow=2.3,SNR=2.5						

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*IDC **16** 07:20:40.5±1.6, 40.72N×126.38W, mb3.5/6, mb1 3.7/10, mb1mx3.6/27, mbtmp3.5/10, ML3.5/3, MS3.2/8, Ms1 3.2/8, ms1mx3.0/21, Error ellipse: s-maj=27.1km s-min=15.0km az=16.0*

*NEIC **16** 07:20:41.2, 40.71N×126.45W, h7^{km}, mb3.7/3, MD3.5(NCEDC), After NCEDC.*

ISC 16 07:20:40.2±0.8**, 40.68N**±0.05×**126.35W**±0.08**, h10**^{km}**, n40, σ1**^{s}**14**/38**, mb3.5**/8**, MS3.0**/4**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	2.00	84	*e*P	Pn	07 21 14.0	-0.4
KBO	Bosley Butte	2.21	46	*e*P	Pn	07 21 16.2	-1.3
KEBM	Edson Butte	2.66	34	*e*P	Pn	07 21 21.8	-2.1
WDC	Whiskeytown Da	2.90	91	*e*P	Pn	07 21 27.1	-0.3
YBH	Yreka Blue Hor	2.94	68	Pn	Pn	07 21 28.7	+0.7
	19nm,0.3s,baz=266,slow=9.7,SNR=274						
YBH				Sn	Sn	07 22 05.6	+2.0
	11nm,0.3s,baz=41,slow=10,SNR=6.8						
YBH				LR	LR	07 22 51.2	
	comp=Z,571nm,19.0s,baz=259,slow=44						
HOPS	Hopland	3.03	123	*e*P	Pn	07 21 29.6	+0.3
HUMO	Hull Mountain	3.19	52	*e*P	Pn	07 21 30.8	-0.7
SAC	San Andreas	4.35	134	*e*P	Pn	07 21 46.5	-1.5
BEKR	Beckwourth	4.65	98	*e*P	Pn	07 21 53.5	+1.2
MOD	Modoc	4.71	73	*e*P	Pn	07 21 52.8	-0.4
CMB	Columbia Colle	5.32	118	*e*P	Pn	07 22 02.5	+0.7
SAO	San Andreas Ge	5.48	134	*e*P	Pn	07 22 01.9	-2.0
LRV	Little Rabbit	5.96	134	*e*P	Pn	07 22 10.0	-0.7
WVOR	Wild Horse Val	6.04	71	*e*P	Pn	07 22 10.6	-1.3
NVAR	Mina Array Bea	6.61	107	Pn	Pn	07 22 19.5	-0.4
	0.2nm,0.3s,baz=281,slow=15,SNR=3.4						
NVAR	Mina Array Bea	6.61	107	Pn	Pn	07 22 19.5	-0.4
MTUM	Tungsten Hills	6.91	116	P	Pn	07 22 24.5	+0.4
BMO	Blue Mountains	7.85	55	*e*P	Pn	07 22 36.7	-0.6
ELK	Elko	8.44	86	Pn	P	07 22 50.9	+5.4
	0.1nm,0.3s,baz=280,slow=12,SNR=1.8						
HLID	Hailey	9.32	68	*e*P	P	07 22 57.1	-0.7
NEW	Newport	10.04	38	LR	LR	07 26 57.3	
	comp=Z,139nm,19.2s,baz=241,slow=38						
MCMT	McKenzie Canyo	10.75	63	*e*P	P	07 23 17.2	-0.1
MSO	Missoula	10.87	51	*e*P	P	07 23 17.9	-1.0
BBB	Bella Bella	11.57	355	LR	LR	07 26 53.6	
	comp=Z,87nm,20.1s,baz=262,slow=32						
HRY	Holter Researc	12.10	55	*e*P	P	07 23 35.5	-0.2
PDAR	Pinedale Array	12.72	75	Pn	P	07 23 47.5	+3.6
	0.1nm,0.3s,baz=246,slow=8.9,SNR=2.4						
EDM	Edmonton	15.33	31	*e*P	P	07 24 18.8	+0.6
SDCO	Great Sand Dun	16.42	94	P	P	07 24 34.2	+2.0
	4.8nm,1.3s						
ANMO	Albuquerque	16.71	104	Pn	P	07 24 41.1	+5.1
	baz=291,slow=12,SNR=4.2						
DLBC	Dease Lake	17.93	354	P	P	07 24 51.9	+0.8
	0.1nm,0.3s,baz=178,slow=12,SNR=4.4						
DLBC				LR	LR	07 30 43.1	
	comp=Z,52nm,19.7s,baz=38,slow=34						
FFC	Flin Flon	21.44	41	*e*P	P	07 25 29.3	-1.2
	2.3nm,0.7s,mb3.6						
TXAR	Lajitas Array	21.69	114	P	P	07 25 35.4	+2.2
	1.0nm,0.8s,mb3.3,baz=294,slow=7.7,SNR=13						
YKA	Yellowknife Ar	22.95	14	P	P	07 25 46.8	+1.4
	0.3nm,0.6s,mb2.9,baz=209,slow=11,SNR=3.5						
YKA				LR	LR	07 34 22.0	
	comp=Z,54nm,19.1s,MS3.0,baz=80,slow=36						
YKA	Yellowknife Ar	22.95	14	P	P	07 25 46.8	+1.4
YKA				LR	LR	07 34 22.0	
ULM	Lac du Bonnet	23.27	55	P	P	07 25 50.0	+1.4
	2.0nm,0.6s,mb3.7,baz=257,slow=11,SNR=4.0						
ULM				LR	LR	07 35 14.3	
	comp=Z,84nm,18.8s,MS3.2,baz=259,slow=38						
ILAR	Eielson Array	26.89	341	P	P	07 26 21.4	-1.4
	0.6nm,0.8s,mb3.2,baz=158,slow=8.3,SNR=7.9						
ILAR				LR	LR	07 35 08.1	
	comp=Z,42nm,18.1s,MS3.0,baz=2.6,slow=32						
INK	Inuvik	27.95	354	LR	LR	07 38 11.8	
	comp=Z,28nm,21.9s,MS2.8,baz=78,slow=38						
SUMG	Summit	51.13	23	*e*P	P	07 29 45.0	+0.3
	0.8nm,0.5s,mb3.9						
BVAR	Borovoye Array	85.55	350	P	P	07 33 19.8	+0.5
	0.4nm,0.4s,mb4.0,baz=36,slow=12,SNR=3.4						
MKAR	Makanchi Array	89.24	341	P	P	07 33 38.7	+1.4
	0.1nm,0.4s,mb3.5,baz=53,slow=7.2,SNR=2.1						

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*BJI **16** 07:31:27.1, 44.12N×102.90E, h17^{km}, ML4.1*

*IDC **16** 07:31:28.2±3.2, 43.71N×103.54E, mb3.8/3, mb1 3.9/5, mb1mx3.7/20, mbtmp3.7/5, ML3.6/2, MS3.3/2, Ms1 3.4/2, ms1mx2.8/20, Error ellipse: s-maj=65.1km s-min=27.2km az=140.0*

ISC 16 07:31:28.9±0.8**, 43.77N**±0.07×**103.2E**±0.1**, h10**^{km}**, n9, σ1**^{s}**51**/11**, mb3.6**/4**, MS4.0**/1**, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	4.65	28	Pn	Pn	07 32 40.2	-0.7
	7.1nm,0.3s,baz=211,slow=15,SNR=180						
SONM				Lg		07 33 53.3	
	37nm,0.3s,baz=219,slow=32,SNR=18						
SONM				LR	LR	07 34 45.2	
	comp=Z,102nm,18.4s,baz=243,slow=43						
GTA	Gaotai	5.03	211	P	Pn	07 32 47.3	+1.0
GTA				PG	Pg	07 33 01.4	-8.0
GTA				S	Sn	07 33 43.9	-1.3
GTA				SG	Sg	07 34 05.4	-11
GTA				Smax			
	comp=N,90nm,0.8s						
GTA				Smax			
	comp=E,150nm,0.9s						
HHC	Hu-ho-hao-te	6.87	112	*e*P	Pn	07 33 14.1	+1.8
HHC				Smax			
	comp=N,100nm,0.6s						
HHC				Smax			
	comp=E,100nm,0.6s						
MKAR	Makanchi Array	15.00	289	Pn	P	07 35 04.4	+1.8
	comp=E,0.1nm,0.3s,baz=90,slow=13,SNR=3.4						
BVAR	Borovoye Array	23.47	305	P	P	07 36 36.5	-2.6
	comp=E,0.4nm,0.5s,mb3.1,baz=90,slow=12,SNR=3.5						
FINES	FINESS Array B	46.98	320	P	P	07 40 01.6	+0.2
	comp=E,0.8nm,0.8s,mb3.7,baz=84,slow=14,SNR=3.8						
NOA	NORSAR Array B	53.83	323	P	P	07 40 55.1	+1.4
	comp=E,0.6nm,0.4s,mb3.9,baz=65,slow=7.4,SNR=3.8						
YKA	Yellowknife Ar	69.84	18	P	P	07 42 39.3	-1.8
	comp=E,0.4nm,0.4s,mb3.8,baz=332,slow=6.6,SNR=4.9						
DBIC	Dimbokro	98.23	287	LR	LR	08 39 50.1	
	comp=E,44nm,19.8s,MS4.0,baz=170,slow=42						

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*MOS **16** 07:37:55.1±0.8, 1.25N×97.07E, h33^{km}, mb4.5/15, Error ellipse: s-maj=25.0km s-min=10.3km az=105.9*

*BJI **16** 07:37:55.4, 1.30N×97.10E, h30^{km}, mB5.1, mb4.8, Ms4.6, Msz4.4*

*IDC **16** 07:37:55.2±0.8, 1.19N×97.06E, h22^{km}±3^{km}, mb4.2/15, mb1 4.3/16, mb1mx4.2/22, mbtmp4.3/16, ML4.4/1, MS3.7/5, Ms1 3.8/5, ms1mx3.6/15, Error ellipse: s-maj=30.5km s-min=12.8km az=51.0*

*NEIC **16** 07:37:56.4±0.4, 1.26N×97.14E, h30^{km}, mb4.5/6, Error ellipse: s-maj=10.4km s-min=7.6km az=49.0*

ISC 16 07:37:53.5±0.6**, 1.23N**±0.08×**97.15E**±0.07**, h23**^{km}**, h23**^{km}±.9^{km}**:pP-P, n67, σ0**^{s}**85**/64**, mb4.5**/34**, MS4.1**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.33	41	*e*Pn	Pn	07 39 14.3	+0.5
CMAR	Chiang Mai Arr	17.21	6	P	P	07 41 53.6	-0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,342nm,18.8s						
CMAR	Chiang Mai Arr	17.21	6	P	P	07 41 53.6	-0.6
	comp=Z,0.5nm,0.3s,baz=192,slow=11,SNR=7.6						
CMAR				LR	LR	07 49 29.6	
	comp=Z,342nm,18.8s,baz=190,slow=40						
KKM	Kota Kinabalu	19.61	75	P	P	07 42 23.1	-0.3
QIZ	Qiongzhong	21.62	34	P	P	07 42 43.7	-0.5
	comp=Z,14nm,0.9s,mb4.4						
KMI	Kunming	24.36	12	P	P	07 43 12.8	+1.7
KMI				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
KMI				LR	LR		
	comp=N,860nm,16.0s,MS4.4						
KMI				LR	LR		
	comp=E,510nm,14.1s,MS4.4						
KMI				LR	LR		
	comp=Z,970nm,15.4s,MS4.4						
KMI	Kunming	24.36	12	P	P	07 43 12.7	+1.6
KMI				S	S	07 47 21.5	-4.6
KMI				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.5						
KMI				MLR	MLR		
	comp=Z,970nm,15.4s,MS4.4						
KMI	Kunming	24.36	12	P	P	07 43 12.7	+1.6
	comp=Z,25nm,1.2s,mb4.5						
KMI				S	S	07 47 21.5	-4.6
KMI				LR	LR		
	comp=Z,970nm,15.4s,MS4.4						
GYA	Guiyang	26.70	19	P	P	07 43 33.1	0.0
GYA				AP	pP	07 43 40.8	+0.9
GYA				XP	sP	07 43 43.6	+0.6
GYA				S	S	07 48 08.5	+3.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
GYA				AMB	AMB		
	comp=Z,200nm,7.2s						
GYA				LR	LR		
	comp=N,860nm,14.7s,MS4.5						
GYA				LR	LR		
	comp=E,200nm,14.1s,MS4.5						
GYA				LR	LR		
	comp=Z,840nm,14.4s,MS4.4						
PKI	Pulchoki	28.50	338	*e*P	P	07 43 49.8	+0.3
	comp=Z,14nm,0.6s,mb4.8						
GUN	Gumba	28.64	339	*e*P	P	07 43 51.5	+0.8
	comp=Z,46nm,0.7s,mb5.3						
DMN	Daman	28.66	337	*e*P	P	07 43 51.4	+0.6
	comp=Z,24nm,0.8s,mb5.0						
KKN	Kakani	28.75	338	*e*P	P	07 43 51.7	0.0
	comp=Z,48nm,1.2s,mb5.1						
LSA	Lhasa	28.88	349	*e*P	P	07 43 54.1	+1.3
LSA				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
LSA	Lhasa	28.88	349	*e*P	P	07 43 54.1	+1.3
	comp=Z,14nm,0.9s,mb4.7						
GKN	Gorkha	29.19	337	*e*P	P	07 43 56.2	+0.6
	comp=Z,38nm,0.9s,mb5.1						
KOLN	Koldanda	29.41	335	*e*P	P	07 43 58.0	+0.4
	comp=Z,24nm,0.8s,mb5.0						
ENH	Enshi	31.16	21	*e*P	P	07 44 11.4	-1.7
	comp=Z,22nm,0.6s,mb5.2						
ENH				*e*pP	pP	07 44 18.7	-1.4
NACB	Ninganchiao	32.86	44	P	P	07 44 23.8	-4.2
FITZ	Fitzroy Crossi	33.98	126	P	P	07 44 36.8	-1.1
	comp=Z,2.5nm,0.5s,mb4.4,baz=337,slow=10,SNR=8.9						
GTA	Gaotai	38.07	3	P	P	07 45 12.5	+0.2
GTA				AP	pP	07 45 20.8	+1.5
GTA				XP	sP	07 45 24.9	+2.7
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
JOW	Kunigami	39.25	47	P	P	07 45 22.8	+0.5
	comp=Z,10nm,0.3s,mb5.1,baz=186,slow=13,SNR=3.6						
WRA	Warramunga Arr	42.09	122	P	P	07 45 46.2	+0.4
WRA				*PP	pP	07 45 53.2	+0.4
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	42.09	122	P	P	07 45 46.2	+0.4
	comp=Z,2.4nm,0.5s,mb4.1,baz=301,slow=9.1,SNR=18						
WRA				pP	pP	07 45 53.2	+0.4
	comp=Z,2.3nm,0.5s,baz=301,slow=9.1,SNR=12						
WRAB	Tennant Creek	42.10	122	*e*P	P	07 45 46.6	+0.8
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
WRAB	Tennant Creek	42.10	122	*e*P	P	07 45 46.6	+0.8
	comp=Z,5.5nm,0.6s,mb4.4						
KS15	Wonju Array Si	45.82	35	*e*P	P	07 46 14.8	-0.9
AAK	Ala-Archa	45.95	337	P	P	07 46 20.6	+4.0
AAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
AAK	Ala-Archa	45.95	337	P	P	07 46 20.6	+4.0
	comp=Z,5.8nm,1.2s,mb4.4						
SONM	Songino Array	47.10	8	P	P	07 46 26.2	+0.6
	comp=Z,4.4nm,0.7s,mb4.5,baz=189,slow=9.1,SNR=44						
SONM				pP	pP	07 46 32.9	+0.2
	comp=Z,3.1nm,0.6s,baz=189,slow=9.0,SNR=13						
SONM				PcP	PcP	07 47 57.5	-0.2
	comp=Z,1.0nm,0.5s,baz=203,slow=4.2,SNR=5.5						
MKAR	Makanchi Array	47.20	346	P	P	07 46 26.9	+0.5
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MKAR				MLR	MLR		
	comp=Z,60nm,21.5s						
MKAR	Makanchi Array	47.20	346	P	P	07 46 26.9	+0.4
	comp=Z,3.8nm,0.5s,mb4.6,baz=159,slow=8.4,SNR=50						
MKAR				LR	LR	08 10 25.3	
	comp=Z,60nm,21.4s,MS3.5,baz=165,slow=41						
ZAK	Zakamensk	49.24	5	*e*P	P	07 46 34.5	-7.7
ZAK				*e*		07 48 09.6	
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.7						
CN2	Changchun	49.30	27	*e*P	P	07 46 42.5	-0.2
CN2				LR	LR		
	comp=N,200nm,15.0s,MS4.5						
CN2				LR	LR		
	comp=E,300nm,15.0s,MS4.5						
CN2				LR	LR		
	comp=Z,300nm,17.0s,MS4.4						
TLY	Talaya	50.56	5	*e*P	P	07 46 53.0	+0.7
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
TLY				MLR	MLR		
	comp=Z,177nm,17.0s,MS4.2						
CIT	Chita	52.45	13	*e*P	P	07 47 06.7	+0.1
STKA	Stephens Creek	53.41	132	P	P	07 47 15.0	+1.0
	comp=Z,1.5nm,0.5s,mb4.2,baz=39,slow=17,SNR=3.8						
STKA				pP	pP	07 47 21.6	+0.4
	comp=Z,2.5nm,0.6s,baz=66,slow=14,SNR=2.9						
STKA	Stephens Creek	53.41	132	P	P	07 47 15.0	+1.0
STKA				pP	pP	07 47 21.6	+0.4
ZAL	Zalesovo	53.51	351	P	P	07 47 14.9	+0.5
ZAL				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ZAL	Zalesovo	53.51	351	P	P	07 47 14.9	+0.5
	comp=Z,8.9nm,0.4s,mb5.0,baz=304,slow=4.6,SNR=24						
VOSK	Vostochnaya	55.76	341	P	P	07 47 30.0	-0.8
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
BVA0	Borovoye Array	56.20	341	P	P	07 47 32.9	-1.1
BVAR	Borovoye Array	56.20	341	P	P	07 47 33.1	-0.9
	comp=Z,4.7nm,0.6s,mb4.7,baz=149,slow=9.0,SNR=31						
KLR	Kul'dur	56.24	27	*e*P	P	07 47 31.8	-2.6
ZRNK	Zerenda	56.60	340	P	P	07 47 35.8	-1.1
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
AB31	Akbulak array	57.46	332	P	P	07 47 42.0	-1.1
AB31				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
GNI	Garni	61.24	316	P	P	07 48 09.1	-0.1
GNI				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GNI	Garni	61.24	316	P	P	07 48 09.1	-0.1
	comp=Z,2.3nm,0.4s,mb4.7,baz=339,slow=19,SNR=3.1						
BRTR	Keskin Array B	69.06	312	P	P	07 48 59.1	-0.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	69.06	312	P	P	07 48 59.0	-0.7
	comp=Z,0.6nm,0.5s,mb3.8,baz=135,slow=5.2,SNR=3.6						
AKASG	Malin Array Be	75.20	322	P	P	07 49 35.1	-0.9
	comp=Z,0.3nm,0.4s,mb3.6,baz=82,slow=4.9,SNR=4.5						
FINES	FINESS Array B	79.95	333	P	P	07 50 02.2	+0.1
FINES				*PP	pP	07 50 08.8	-0.7
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	79.95	333	P	P	07 50 02.2	+0.1
	comp=Z,1.0nm,0.5s,mb4.0,baz=108,slow=6.0,SNR=7.0						
FINES				pP	pP	07 50 08.8	-0.8
	comp=Z,0.7nm,0.6s,baz=72,slow=6.0,SNR=3.1						
FINES				LR	LR	08 32 19.2	
	comp=Z,24nm,18.4s,MS3.6,baz=148,slow=41						
FINES	FINESS Array B	79.95	333	P	P	07 50 02.2	+0.1
FINES				pP	pP	07 50 08.8	-0.8
FINES				LR	LR	08 32 19.2	
ARCES	ARCESS Array B	82.49	340	P	P	07 50 15.8	+0.5
ARCES				*PP	pP	07 50 23.0	+0.3
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARCES	ARCESS Array B	82.49	340	P	P	07 50 15.8	+0.5
	comp=Z,1.1nm,0.6s,mb3.9,baz=100,slow=4.5,SNR=18						
ARCES				pP	pP	07 50 23.0	+0.3
	comp=Z,2.1nm,0.9s,baz=104,slow=5.0,SNR=2.6						
ARCES				LR	LR	08 33 06.7	
	comp=Z,60nm,19.0s,MS4.0,baz=286,slow=40						
ARCES	ARCESS Array B	82.49	340	P	P	07 50 15.8	+0.5
ARCES				pP	pP	07 50 23.0	+0.3
ARCES				LR	LR	08 33 06.7	
GERES	GERESS Array B	84.76	319	P	P	07 50 27.9	+0.7
GERES				*PP	pP	07 50 35.2	+0.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	84.76	319	P	P	07 50 27.9	+0.6
	comp=Z,0.4nm,0.2s,mb4.1,baz=72,slow=4.2,SNR=5.0						
GERES				pP	pP	07 50 35.2	+0.5
	comp=Z,0.6nm,0.7s,baz=117,slow=3.0,SNR=2.4						
VNDA	Vanda	85.87	169	LR	LR	08 27 40.2	
	comp=Z,71nm,18.1s,MS4.1,baz=316,slow=35						
NOA	NORSAR Array B	86.95	331	P	P	07 50 38.3	+0.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	86.95	331	P	P	07 50 38.3	+0.5
	comp=Z,0.5nm,0.7s,mb3.8,baz=96,slow=5.1,SNR=2.7						
NVAR	Mina Array Bea	128.78	36	PKP	PKPdf	07 57 00.3	-3.9
	comp=Z,0.2nm,0.3s,baz=345,slow=2.5,SNR=3.7						
TXAR	Lajitas Array	143.66	32	PKP	PKPdf	07 57 27.2	-4.5
	comp=Z,0.3nm,0.5s,baz=178,slow=0.2,SNR=12						
CPUP	Villa Florida	145.00	222	PKIKP	PKPdf	07 57 31.3	-2.9
CPUP				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CPUP	Villa Florida	145.00	222	PKP	PKPdf	07 57 31.3	-2.9
	comp=Z,2.5nm,0.9s,baz=128,slow=7.9,SNR=4.6						
LRAL	Lakeview Retre	145.69	6	*e*PKPdf	PKPdf	07 57 32.2	-2.9

TAP 16 07:38:18.3, 23.97N×121.60E, h8^{km}**, ML3.6, 9C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.01	33	⇓*i*P	Pg	07 38 20.2	+0.3
TWD	Chiawan	0.11	358	⇑*i*P	Pg	07 38 21.4	+0.4
TWD				S	Sg	07 38 23.1	+0.3
ESF	Shoufeng Towns	0.13	221	*e*P	Pg	07 38 21.7	+0.3
ESF				S	Sg	07 38 24.0	+0.6
ESL	Shilin	0.22	225	P	Pg	07 38 22.9	-0.1
ESL				S	Sg	07 38 25.8	-0.2
TEGC	Jichi Village	0.27	192	*e*P	Pg	07 38 25.5	+1.7

TEGC				S	Sg	07 38 31.1	+3.6
WHF	Hehuan Shan	0.35	300	⇑iP	Pg	07 38 25.8	+0.3
WHF				S	Sg	07 38 31.1	+0.8
ENA	Nanau	0.47	16	⇑iP	Pg	07 38 27.7	-0.2
ENA				S	Sg	07 38 34.0	-0.4
TWT	Tachien	0.48	306	⇑iP	Pg	07 38 28.5	+0.5
TWT				S	Sg	07 38 35.9	+1.4
NNS	Nan Shan	0.51	336	⇑iP	Pg	07 38 28.7	0.0
NNS				S	Sg	07 38 35.2	-0.3
EHY	Hungye	0.53	209	P	Pg	07 38 28.5	-0.5
EHY				S	Sg	07 38 34.5	-1.5
SMLT	Sun Moon Lake	0.65	262	⇑iP	Pg	07 38 31.3	0.0
SMLT				S	Sg	07 38 40.0	0.0
ENTT	Nioudou	0.67	357	P	Pg	07 38 31.6	-0.1
ENTT				S	Sg	07 38 40.7	0.0
TWF1	Yuli	0.68	204	⇓iP	Pb	07 38 31.1	-0.7
TWF1				S	Sg	07 38 40.2	-0.8
TWC	Suao	0.68	20	eP	Pb	07 38 31.3	-0.6
TWC				S	Sg	07 38 41.3	+0.3
TYC	Yuchr	0.68	265	⇑iP	Pb	07 38 31.8	-0.3
TYC				S	Sg	07 38 40.9	-0.4
NSK	Sanguang	0.74	343	⇑iP	Pb	07 38 32.9	-0.1
NSK				S	Sb	07 38 42.8	-0.1
TWE	Neicheng	0.75	5	P	Pb	07 38 33.1	0.0
TWE				S	Sb	07 38 43.5	+0.2
WNT	Mingjian	0.84	264	eP	Pb	07 38 36.1	+1.4
WNT				S	Sb	07 38 48.5	+2.5
TWQ1	Liyutan	0.84	297	eP	Pb	07 38 35.7	+1.0
TWQ1				S	Sb	07 38 49.1	+3.1
NSTT	Nanjuang	0.85	320	eP	Pb	07 38 35.6	+0.6
NSTT				S	Sb	07 38 47.4	+1.0
ALS	Alishan	0.86	238	⇑iP	Pb	07 38 35.4	+0.3
ALS				S	Sb	07 38 48.4	+1.9
TCU	Taichung	0.86	282	eP	Pb	07 38 36.7	+1.6
TCU				S	Sb	07 38 50.9	+4.3
CHKT	Chengkung	0.89	194	eP	Pb	07 38 35.9	+0.2
CHN5	Tsauling	0.92	246	P	Pb	07 38 37.1	+1.0
CHN5				S	Sb	07 38 52.0	+3.7
ELDTW	Lidau	0.94	215	eP	Pb	07 38 35.4	-1.1
WGK	Gukeng	0.99	254	eP	Pb	07 38 38.9	+1.6
TWA	Mucha	1.01	359	eP	Pb	07 38 37.4	-0.2
TWA				S	Sb	07 38 52.1	+1.4
TWB1	Santiao Chiao	1.09	19	eP	Pb	07 38 40.4	+1.3
NWF	Wu-fen Shan	1.11	9	eP	Pb	07 38 39.7	+0.4
CHN4	Tsaushan	1.11	236	eP	Pb	07 38 40.0	+0.6
CHN4				S	Sb	07 38 59.3	+5.5
CHN2	Minshiung	1.12	247	eP	Pb	07 38 40.5	+1.0
TWS1	Kuangyinshan	1.14	352	eP	Pb	07 38 41.0	+1.2
WTP	Ta-pu	1.16	232	eP	Pb	07 38 40.9	+0.8
WTP				S	Sb	07 38 58.7	+3.7
CHY	Chiayi	1.18	247	eP	Pb	07 38 42.1	+1.6
TWK	Hsinying	1.24	236	eP	Pb	07 38 42.6	+1.1
TWG	Pinlang	1.24	203	eP	Pb	07 38 40.1	-1.5
CHN1	Nanshi	1.26	232	eP	Pb	07 38 43.0	+1.2
CHN1				S	Sb	07 39 01.2	+3.2
SGST	Jiashian	1.29	227	eP	Pb	07 38 43.3	+1.0
ECL	Taimali	1.49	204	eP	Pn	07 38 46.0	+0.5
SSD	Sandimen	1.51	216	eP	Pn	07 38 46.6	+0.8
TWM1	Shoushan	1.57	224	eP	Pn	07 38 48.7	+2.0
EAST	Anshuo	1.73	204	eP	Pn	07 38 50.4	+1.6
SCZT	Fangliau	1.83	210	eP	Pn	07 38 52.5	+2.1
WDGT	Dungji	1.92	249	eP	Pn	07 38 51.8	+0.2

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*IDC **16** 07:41:57.0±2.2, 1.11N×96.85E, mb4.0/6, mb1 4.2/7, mb1mx3.9/19, mbtmp4.0/7, Error ellipse: s-maj=82.4km s-min=26.3km az=56.0*

*NEIC **16** 07:42:01.6±0.9, 1.27N×97.22E, mb4.8/3, Error ellipse: s-maj=20.1km s-min=13.1km az=67.0*

ISC 16 07:41:59.8±0.9**, 1.3N**±0.1×**97.3E**±0.1**, h26^{km}, n13, σ1^{s}06**/13**, mb4.2**/9**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.22	40	ePn	Pn	07 43 18.8	+0.5
CMAR	Chiang Mai Arr	17.13	5	P	P	07 46 01.9	+2.6
	baz=197,slow=11,SNR=6.7						
KKM	Kota Kinabalu	19.50	76	eP	P	07 46 26.9	-1.3
ENH	Enshi	31.07	21	eP	P	07 48 16.8	-1.5
	12nm,0.9s,mb4.7						
NWAO	Narrogin (SRO)	38.92	153	P	P	07 49 25.4	0.0
	85nm,1.6s,mb5.2						
WRA	Warramunga Arr	42.04	122	P	P	07 49 52.6	+1.3
	1.3nm,0.8s,mb3.6,baz=300,slow=9.0,SNR=6.9						
WRA				pP	pP	07 50 00.1	+1.0
	0.6nm,0.4s,baz=306,slow=8.8,SNR=7.5						
SONM	Songino Array	47.02	8	P	P	07 50 31.5	+0.5
	2.6nm,0.8s,mb4.2,baz=189,slow=9.1,SNR=15						
ULN	Ulaanbaatar	47.15	9	eP	P	07 50 31.6	-0.4
	2.6nm,0.9s,mb4.2						
MKAR	Makanchi Array	47.16	346	P	P	07 50 31.7	-0.4
	1.3nm,0.6s,mb4.1,baz=160,slow=8.9,SNR=11						
MKAR				pP	pP	07 50 39.6	-0.3
	1.1nm,0.6s,baz=158,slow=6.5,SNR=6.6						
MKAR	Makanchi Array	47.16	346	P	P	07 50 31.7	-0.4
MKAR				pP	pP	07 50 39.6	-0.3
ZAL	Zalesovo	53.46	351	P	P	07 51 20.6	+0.5
	2.8nm,0.6s,mb4.4,baz=269,slow=2.1,SNR=7.8						
BVAR	Borovoye Array	56.17	341	P	P	07 51 38.3	-1.5
	1.2nm,0.6s,mb4.1,baz=135,slow=10,SNR=7.9						
ARCES	ARCESS Array B	82.46	340	P	P	07 54 21.6	+0.5
	0.9nm,0.8s,mb3.8,baz=101,slow=6.2,SNR=4.8						

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*LDG **16** 08:10:03.8±0.1, 49.33N×6.82E, h1^{km}, Md3.4/1, Ml3.3/19, Error ellipse: s-maj=1.1km s-min=0.9km az=113.0, Suspected Mining induced.*

*BGR **16** 08:10:03.5±0.4, 49.35N×6.83E, h1^{km}, ML2.6, Error ellipse: s-maj=4.4km s-min=4.4km az=19.0*

*NEIC **16** 08:10:03.3, 49.33N×6.80E, h1^{km}, ML3.3(LDG), ML3.2(VIE), ML2.8(STR), ML2.6(SZGRF), After STR.*

*CSEM **16** 08:10:03.6±0.0, 49.33N×6.84E, h2^{km}, ML3.3/20, Error ellipse: s-maj=0.9km s-min=0.7km az=133.0*

*STR **16** 08:10:03.3±0.1, 49.33N×6.80E, h1^{km}±1^{km}, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*BNS **16** 08:10:04.2±0.4, 49.35N×6.86E, h1^{km}, ML2.5*

ISC 16 08:10:01.3±0.2**, 49.30N**±0.01×**6.77E**±0.02**, n64, σ1^{s}28**/132**, 1C-1D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.45	25	Pg	Pg	08 10 11.3	+1.1
RUP				Sg	Sg	08 10 17.1	+0.9
WLF	Walferdange	0.55	313	ePg	Pg	08 10 14.6	+2.4
WLF				eSg	Sg	08 10 20.4	+1.0
WLF	Walferdange	0.55	313	ePg	Pg	08 10 14.5	+2.4
WLF				eSg	Sg	08 10 21.4	+2.0
WLF	Walferdange	0.55	313	Pg	Pg	08 10 14.6	+2.5
WLF				eSg	Sg	08 10 21.4	+2.0
LANF	Langenberg	0.75	114	Pg	Pg	08 10 17.0	+0.7
ABH	Alteburg	0.78	41	Pg	Pg	08 10 16.9	+0.2
ABH				Sg	Sg	08 10 27.2	+0.1
KTD	Kalmit	0.86	88	Pg	Pg	08 10 19.9	+1.4
KTD				Sg	Sg	08 10 30.7	+0.8
CDF	Champ du Feu	0.95	159	ePg	Pg	08 10 21.2	+1.0
CDF				ePn	Pn	08 10 22.3	+0.7
CDF				eSn	Sn	08 10 36.4	+0.4
	226nm,0.2s						
WLS	Welschbruch	0.96	156	Pg	Pg	08 10 22.3	+1.8
BGG	Burgeitz	0.98	22	ePg	Pg	08 10 21.4	+0.5
BGG				eSg	Sg	08 10 34.3	+0.3
	141nm,0.4s						
RFYF	Reffroy	1.08	232	ePg	Pg	08 10 25.4	+2.5
	baz=53						
RFYF				eSg	Sg	08 10 39.5	+2.2
	144nm,0.3s						
ECH	Echery	1.11	166	Pg	Pg	08 10 25.0	+1.5
THEF	They Montfort	1.19	206	Pg	Pg	08 10 26.3	+1.3
THEF				Sg	Sg	08 10 43.0	+2.2
STB	Steinbach	1.30	2	ePg	Pg	08 10 27.0	-0.2
STB				eSg	Sg	08 10 44.3	-0.2
	62nm,0.6s						
HAU	Haudompre	1.32	192	ePn	Pn	08 10 28.0	+1.0
HAU				ePg	Pg	08 10 29.2	+1.6
HAU				eSg	Sg	08 10 46.7	+1.4
	131nm,0.3s						
TOD	Tromm	1.36	76	Pg	Pg	08 10 28.3	-0.2
KLL	Kalltalsperre	1.38	348	ePg	Pg	08 10 28.7	-0.2
KLL				eSg	Sg	08 10 46.2	-1.1
MEZF	Maizieres J’vi	1.38	236	ePn	Pn	08 10 29.6	+1.7
	baz=55						
MEZF				eSg	Sg	08 10 49.1	+1.8
	31nm,0.2s						
MEM	Membach	1.40	340	S	Sb	08 10 46.0	-0.4
BFO	Black Forest	1.41	133	ePn	Pn	08 10 28.9	+0.7
BFO				ePg	Pg	08 10 30.3	+0.8
BFO				eSg	Sg	08 10 48.9	+0.5
BFO	Black Forest	1.41	133	ePn	Pn	08 10 28.9	+0.6
BFO				ePg	Pg	08 10 30.3	+0.8
BFO				eSg	Sg	08 10 48.9	+0.6
BFO	Black Forest	1.41	133	Pg	Pg	08 10 30.3	+0.8
BFO				Sg	Sg	08 10 48.9	+0.6
TNS	Taunus Mts	1.43	49	ePn	Pn	08 10 28.1	-0.4
TNS				ePg	Pg	08 10 29.2	-0.6
TNS				eSg	Sg	08 10 47.8	-1.1
TNS	Taunus Mts	1.43	49	ePn	Pn	08 10 28.1	-0.4
TNS				ePg	Pg	08 10 29.2	-0.6
TNS				eSg	Sg	08 10 47.8	-1.1
TNS	Taunus Mts	1.43	49	Pg	Pg	08 10 29.2	-0.6
TNS				Sg	Sg	08 10 47.8	-1.1
MOF	Molkenrain	1.47	170	Pg	Pg	08 10 31.6	+1.1
MOF				Sg	Sg	08 10 51.6	+1.5
HINF	Hinteralfeld	1.48	178	ePn	Pn	08 10 30.4	+1.1
HINF				ePg	Pg	08 10 31.7	+0.9
HINF				eSn	Sn	08 10 48.8	-0.8
HINF				eSg	Sg	08 10 51.2	+0.6
	128nm,0.2s						
GIVF	Givet	1.50	303	ePn	Pn	08 10 30.8	+1.3
GIVF				eSn	Sn	08 10 49.9	-0.1
GIVF				eSg	Sg	08 10 52.2	+1.0
	92nm,0.6s						
HGN	Heimansgroeve	1.56	340	ePn	Pn	08 10 31.1	+0.6
	baz=150						
HGN				eSn	Sn	08 10 49.4	-2.4
SFTF	Sexfontaines	1.58	227	ePn	Pn	08 10 32.1	+1.4
	baz=44						
SFTF				eSn	Sn	08 10 52.3	+0.2
SFTF				eSg	Sg	08 10 55.0	+1.1
	41nm,0.3s						
FELD	Feldberg	1.64	150	Pg	Pg	08 10 34.6	+0.6
FELD				Sg	Sg	08 10 55.7	-0.2
STU	Stuttgart	1.68	107	ePn	Pn	08 10 32.4	+0.3
STU				eSg	Sg	08 10 55.8	-1.5
BAIF	Baives	1.83	296	ePn	Pn	08 10 35.4	+1.2
BAIF				eSn	Sn	08 10 57.9	-0.6
BAIF				eSg	Sg	08 11 02.2	0.0
	40nm,0.4s						
WTSB	Winterswijk	2.67	0	eSg	Sg	08 11 25.7	-4.6
	37nm,0.7s						
CABF	La Chapelle	2.73	190	ePn	Pn	08 10 47.5	+0.5
CABF				ePg	Pg	08 10 55.7	0.0
CABF				eSn	Sn	08 11 19.5	-1.7
CABF				eSg	Sg	08 11 31.6	-0.4
	31nm,0.5s						
LOR	Lormes	2.81	225	ePn	Pn	08 10 48.3	+0.1
	baz=45						
LOR				eSn	Sn	08 11 21.0	-2.3
LOR				eSg	Sg	08 11 33.5	-1.3
	26nm,0.4s						
DAVA	Damuels	2.89	133	⇓iPN	Pn	08 10 50.9	+1.5
DAVA				i SN	Sn	08 11 22.9	-2.5
DAVA				i SG	Sg	08 11 33.9	-3.6
	9.7nm,0.3s						
GRF	Grafenberg Arr	2.93	81	eSg	Sg	08 11 35.4	-3.4
SSF	Saint Saulge	3.12	226	ePn	Pn	08 10 52.5	-0.2
SSF				eSn	Sn	08 11 28.9	-2.4
SSF				eSg	Sg	08 11 43.1	-2.2
	9.6nm,0.4s						
SMF	Signal de Mont	3.30	218	ePn	Pn	08 10 54.6	-0.7
SMF				ePg	Pg	08 11 05.8	-1.4
SMF				eSn	Sn	08 11 32.6	-3.2
SMF				eSg	Sg	08 11 47.7	-3.5
	10nm,0.2s						
MOX	Moxa	3.41	65	ePg	Pg	08 11 05.6	-3.7
MOX				eSg	Sg	08 11 49.8	-5.0
MOX	Moxa	3.41	65	ePg	Pg	08 11 05.6	-3.7
MOX				eSg	Sg	08 11 50.3	-4.4
HYF	Humbligny	3.42	235	ePn	Pn	08 10 57.5	+0.5
CLZ	Clausthal	3.43	41	eSg	Sg	08 11 49.5	-6.0
MOTA	Moosalm	3.49	122	⇑iPN	Pn	08 11 00.0	+2.1
MOTA				i SN	Sn	08 11 38.9	-1.7
MOTA				i SG	Sg	08 11 54.9	-2.6
	8.2nm,0.3s						
GUNZ	Gunzen	3.76	71	eSg	Sg	08 12 01.3	-5.1
WERD	Werda	3.76	70	eSg	Sg	08 12 00.9	-5.7
LPL	La Plagne	3.78	180	ePn	Pn	08 11 02.0	-0.1
LPG	La Plagne	3.80	180	ePn	Pn	08 11 02.5	+0.2
LPG				ePg	Pg	08 11 15.3	-1.8
LPG				eSn	Sn	08 11 45.3	-3.1
	4.0nm,0.4s						
BGF	Bois d’Agland	3.80	225	ePn	Pn	08 11 01.6	-0.8
BGF				eSn	Sn	08 11 45.4	-3.1
BGF				eSg	Sg	08 12 04.0	-3.9
	33nm,0.4s						
TCF	Toulx Ste Croi	4.30	227	ePn	Pn	08 11 09.1	-0.3
TCF				eSn	Sn	08 11 57.5	-3.6
ORIF	Oris-en-Rattie	4.42	188	ePn	Pn	08 11 10.7	-0.5
ORIF				eSg	Sg	08 12 23.9	-4.6
	4.6nm,0.3s						
GEC2	GERESS Array S	4.58	93	ePn	Pn	08 11 13.3	-0.2
GEC2				e(Sn)	Sn	08 12 01.8	-6.4
GEC2	GERESS Array S	4.58	93	ePn	Pn	08 11 13.3	-0.1
GEC2				Sn	Sn	08 12 01.8	-6.4
VIVF	Saint-Julien-l	4.67	199	ePn	Pn	08 11 13.9	-0.7
FLN	La Foliniere	4.80	266	ePn	Pn	08 11 16.5	0.0
	baz=86						
FLN				eSn	Sn	08 12 09.0	-4.7
FLN				eSg	Sg	08 12 35.5	-5.6
	10nm,0.5s						
GRR	Gorron	5.12	263	ePn	Pn	08 11 20.0	-1.0
GRR				eSn	Sn	08 12 16.8	-4.9
RJF	Les Rejaudoux	5.36	224	ePn	Pn	08 11 23.1	-1.3
RJF				eSn	Sn	08 12 22.1	-5.6
MFF	Saint Martin d	5.37	242	ePn	Pn	08 11 23.4	-1.2
MFF				eSg	Sg	08 12 52.8	-7.2
	3.7nm,0.4s						
CAF	Calviac	5.42	218	ePn	Pn	08 11 24.0	-1.3
LASF	Ste Croix	5.59	202	ePn	Pn	08 11 26.5	-1.2
SGMF	Saint Gilles	6.25	264	ePn	Pn	08 11 36.1	-0.9
ROSF	Rostrenen	6.70	266	ePn	Pn	08 11 41.6	-1.8
QUIF	Quistinic	6.73	262	ePn	Pn	08 11 41.9	-1.9

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*BJI **16** 08:23:56.2, 18.75N×145.50E, h413^{km}, mB4.2, mb4.0*

*NEIC **16** 08:23:58.6±1.2, 19.14N×145.51E, h396^{km}±13^{km}, mb4.2/8, Error ellipse: s-maj=12.1km s-min=9.8km az=90.0*

*IDC **16** 08:24:12.6±1.7, 19.08N×145.13E, h566^{km}±21^{km}, mb3.4/11, mb1 3.6/13, mb1mx3.4/24, mbtmp4.3/13, Error ellipse: s-maj=16.9km s-min=10.5km az=87.0*

ISC 16 08:24:11.3±0.7**, 19.02N**±0.05×**145.1E**±0.1**, h562**^{km}±9^{km}**, n36, σ0^{s}94**/34**, mb3.9**/18**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.41	182	P	Px	08 25 25.9	
GUMO				eS	S	08 27 01.4	+0.4
CBIJ	Chichi jima	8.46	342	P	P	08 26 14.7	+0.1
	22nm,0.3s,baz=293,slow=21,SNR=8.5						
CBIJ				S	S	08 27 52.4	-0.7
	7.0nm,0.3s,baz=265,slow=23,SNR=5.6						
MJAR	Matsushiro Arr	18.46	342	P	P	08 27 54.1	+0.7
	0.3nm,0.3s,baz=171,slow=10,SNR=3.0						
MAJO	Matsushiro	18.47	342	P	P	08 27 54.8	+1.4
PMG	Port Moresby	28.32	176	P	P	08 29 18.8	-3.4
	21nm,1.0s,mb4.7						
MDJ	Mudanjiang	28.60	337	P	P	08 29 21.4	-2.9
MDJ				AMB	AMB		
	comp=Z,40nm,3.5s						
CN2	Changchun	29.69	331	eP	P	08 29 32.0	-1.7
QIZ	Qiongzhong	33.26	276	P	P	08 30 04.6	+0.5
CTA	Charters Tower	38.88	178	P	P	08 30 50.6	+0.2
	comp=Z,2.1nm,0.5s,mb3.9,baz=340,slow=13,SNR=6.0						
CTAO	Charters Tower	38.88	178	eP	P	08 30 48.6	-1.8
	comp=Z,13nm,1.0s,mb4.4						
LZH	Lanzhou	39.97	304	eP	P	08 30 59.5	+0.5
LZH				AP		08 32 16.5	
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.4						
WRAB	Tennant Creek	40.11	196	eP	P	08 31 00.0	-0.3
WB2	Warramunga Arr	40.12	196	eP	P	08 31 00.0	-0.4
WRA	Warramunga Arr	40.12	196	P	P	08 31 00.4	+0.1
	comp=Z,1.3nm,0.3s,mb3.9,baz=17,slow=8.7,SNR=82						
WRA				ScP		08 35 46.7	
	comp=Z,0.3nm,0.6s,baz=12,slow=4.2,SNR=4.6						
FITZ	Fitzroy Crossi	41.53	208	eP	P	08 31 11.5	-0.3
	comp=Z,5.9nm,0.6s,mb4.3						
FITZ	Fitzroy Crossi	41.53	208	P	P	08 31 11.5	-0.2
	comp=Z,6.8nm,0.3s,mb4.7,baz=21,slow=8.6,SNR=33						
SONM	Songino Array	42.52	321	P	P	08 31 20.0	+0.9
	comp=Z,0.4nm,0.6s,mb3.1,baz=136,slow=6.9,SNR=3.7						
CMAR	Chiang Mai Arr	43.58	277	P	P	08 31 28.1	+0.3
	comp=Z,5.0nm,0.8s,mb4.1,baz=64,slow=6.4,SNR=18						
DZM	Mont Dzumac	45.88	152	P	P	08 31 45.8	+0.2
	comp=Z,4.1nm,0.5s,mb4.2,baz=326,slow=7.3,SNR=22						
WMQ	Urumqi	53.64	311	eP	P	08 32 44.3	+1.9
MKAR	Makanchi Array	57.81	314	P	P	08 33 10.8	-0.4
	comp=Z,0.4nm,0.4s,mb3.0,baz=87,slow=9.8,SNR=6.7						
ILAR	Eielson Array	63.62	26	P	P	08 33 47.0	-2.0
	comp=Z,1.1nm,0.6s,mb3.5,baz=250,slow=6.2,SNR=16						
YKA	Yellowknife Ar	77.98	28	P	P	08 35 12.5	-0.1
	comp=Z,1.4nm,0.5s,mb3.6,baz=287,slow=5.1,SNR=5.8						
WVOR	Wild Horse Val	81.90	48	eP	P	08 35 33.9	+0.5
	comp=Z,1.8nm,0.8s,mb3.5						
ARCES	ARCESS Array B	82.00	342	P	P	08 35 33.0	-0.3
	comp=Z,1.9nm,0.8s,mb3.5,baz=83,slow=9.8,SNR=6.0						
BMO	Blue Mountains	82.05	45	eP	P	08 35 34.0	0.0
	comp=Z,3.6nm,1.0s,mb3.8						
NVAR	Mina Array Bea	83.41	52	P	P	08 35 41.8	+0.7
	comp=Z,2.8nm,0.6s,mb4.0,baz=273,slow=6.6,SNR=24						
TPH	Tonopah	84.33	52	eP	P	08 35 45.9	+0.3
ELK	Elko	84.86	49	eP	P	08 35 48.5	+0.4
	comp=Z,5.3nm,1.0s,mb4.0						
FINES	FINESS Array B	86.34	335	P	P	08 35 53.2	-1.6
	comp=Z,0.3nm,0.3s,mb3.4,baz=72,slow=4.4,SNR=6.3						
NEN	Nelson	86.97	53	eP	P	08 35 59.1	+0.8
LDFC	Landfair	86.97	54	eP	P	08 35 59.2	+0.9
HWUT	Hardware Ranch	87.12	47	eP	P	08 35 58.6	-0.3
	comp=Z,2.9nm,1.0s,mb3.9						
PLCA	Paso Flores	142.66	133	PKP	PKPdf	08 42 39.6	-1.1
	comp=Z,4.4nm,0.7s,baz=239,slow=4.3,SNR=8.8						
LPAZ	La Paz	148.28	90	PKP	PKPdf	08 42 52.5	+1.8
	comp=Z,3.4nm,0.6s,baz=292,slow=8.5,SNR=4.0						
LPAZ				PKPbc	PKPdf	08 42 57.1	+6.4
	comp=Z,3.4nm,0.6s,baz=311,slow=4.0,SNR=29						
LPAZ	La Paz	148.28	90	ePKPbc	PKPdf	08 42 57.4	+6.6

IDC 16 08:24:27.1±2.2**, 19.08N**×**145.17E, h574**^{km}±32^{km}**, mb3.4**/6**, mb1 3.6**/8**, mb1mx3.3**/23**, mbtmp4.5**/8**, Error ellipse: s-maj=23.3km s-min=12.6km az=89.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	8.44	342	P	P	08 26 29.1	-1.3
	31nm,0.3s,baz=280,slow=21,SNR=6.9						
MJAR	Matsushiro Arr	18.44	342	P	P	08 28 08.1	-0.5
	0.7nm,0.3s,baz=167,slow=10,SNR=9.5						
CTA	Charters Tower	38.94	178	P	P	08 31 04.8	-1.2
	2.9nm,0.4s,baz=344,slow=12,SNR=5.3						
WB2	Warramunga Arr	40.20	196	eP	P	08 31 14.3	-1.8
WRA	Warramunga Arr	40.21	196	P	P	08 31 14.3	-1.8
	3.2nm,0.4s,baz=20,slow=8.4,SNR=46						
FITZ	Fitzroy Crossi	41.63	209	eP	P	08 31 25.9	-1.7
	3.2nm,0.3s						
FITZ	Fitzroy Crossi	41.63	209	P	P	08 31 25.9	-1.7
	4.4nm,0.3s,baz=27,slow=8.4,SNR=9.6						
SONM	Songino Array	42.53	321	P	P	08 31 36.0	+1.7
	0.4nm,0.4s,baz=137,slow=6.5,SNR=3.7						
CMAR	Chiang Mai Arr	43.67	277	P	P	08 31 42.3	-1.3
	1.7nm,0.6s,baz=78,slow=6.7,SNR=4.5						
DZM	Mont Dzumac	45.89	152	P	P	08 31 59.7	-0.9
	4.1nm,0.5s,baz=285,slow=6.5,SNR=12						
MKAR	Makanchi Array	57.84	314	P	P	08 33 25.1	-1.2
	0.2nm,0.3s,baz=95,slow=8.1,SNR=3.3						
ILAR	Eielson Array	63.53	26	P	P	08 34 01.2	-1.9
	1.1nm,0.6s,baz=248,slow=5.9,SNR=11						
PLCA	Paso Flores	142.63	133	PKP	PKPdf	08 42 54.2	-1.0
	1.2nm,0.5s,baz=177,slow=6.7,SNR=2.8						

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*NEIC **16** 08:26:10.0±0.7, 19.98S×68.99W, h90^{km}±7^{km}, mb4.1/12, Error ellipse: s-maj=8.4km s-min=5.7km az=68.0*

*IDC **16** 08:26:12.6±2.0, 20.04S×68.92W, h117^{km}±17^{km}, mb3.9/9, mb1 4.1/12, mb1mx3.9/18, mbtmp4.4/12, MS3.0/2, Ms1 2.9/2, ms1mx2.5/22, Error ellipse: s-maj=21.4km s-min=13.3km az=71.0, Incorrectly calculated travel-time residual for T phase at H03N*

ISC 16 08:26:08.9±0.8**, 20.02S**±0.05×**68.97W**±0.07**, h99**^{km}±8^{km}**, n48, σ0^{s}96**/46**, mb4.1**/18**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.79	12	P	P	08 27 11.5	+5.0
	7.4nm,0.3s,baz=200,slow=7.4,SNR=203						
LPAZ				S	S	08 27 55.5	+5.1
	2.3nm,0.3s,baz=174,slow=15,SNR=3.7						
LPAZ	La Paz	3.79	12	ePn	P	08 27 11.4	+4.9
ANCH	Antofagasta	3.89	200	eP	P	08 27 07.6	-0.2
ARE	Arequipa	4.27	325	eP	P	08 27 12.0	-1.1
ARE				e		08 27 18.0	
ARE				eS	S	08 28 04.0	+1.9
CPN1	Cerro Paranal	4.78	196	eP	P	08 27 19.0	-0.9
SIV	San Ignacio	8.51	63	P	P	08 28 11.1	+0.1
	14nm,0.3s,baz=257,slow=11,SNR=606						
CFAA	Coronel Fontan	11.56	177	P	P	08 28 52.7	+0.7
	0.0nm,0.3s,baz=354,slow=14,SNR=7.5						
CFAA	Coronel Fontan	11.56	177	P	P	08 28 52.7	+0.7
SAML	Samuel	12.34	28	eP	P	08 29 01.8	-0.6
	3.0nm,0.6s						
CPUP	Villa Florida	12.41	123	P	P	08 29 04.0	+0.8
	1.9nm,0.3s,baz=320,slow=15,SNR=36						
CPUP				LR	LR	08 34 36.4	
	comp=Z,46nm,20.8s,baz=196,slow=41						
CPUP	Villa Florida	12.41	123	eP	P	08 29 03.4	+0.2
	44nm,1.2s						
TRQA	Tornquist	18.97	163	eP	P	08 30 23.8	-1.2
BDFB	Brasilia	20.41	81	P	P	08 30 40.7	+0.4
	9.3nm,0.6s,baz=272,slow=8.9,SNR=17						
BDFB				LR	LR	08 38 09.7	
	comp=Z,63nm,19.3s,baz=182,slow=35						
BAO	Brasilia Array	20.43	81	P	P	08 30 41.0	+0.5
PLCA	Paso Flores	20.69	183	P	P	08 30 44.0	+1.0
	2.8nm,0.7s,baz=0.5,slow=9.8,SNR=6.1						
PLCA	Paso Flores	20.69	183	P	P	08 30 44.0	+1.0
OTAV	Otavalo	22.17	334	eP	P	08 31 00.7	+2.9
	5.3nm,0.9s,mb3.9						
SDV	Santo Domingo	28.77	357	P	P	08 31 58.4	-1.4
	3.2nm,0.9s,mb4.0						
RCBR	Riachuelo	35.08	71	eP	P	08 32 55.4	+0.8
	40nm,1.4s,mb5.0						
DWPF	Disney	49.34	345	eP	P	08 34 48.6	-1.7
	206nm,2.0s						
SWET	Sewanee	57.24	343	eP	P	08 35 46.8	-1.7
OXF	Oxford	57.61	340	eP	P	08 35 49.2	-1.8
ELN	Prospectdale	58.01	349	eP	P	08 35 53.8	0.0
TXAR	Lajitas Array	59.39	325	P	P	08 36 02.5	-1.0
	0.4nm,0.7s,mb3.5,baz=151,slow=7.3,SNR=6.9						
SNAA	Sanae	63.69	161	eP	P	08 36 31.9	+0.1
	2.4nm,1.0s,mb4.0						
ANMO	Albuquerque	65.24	327	eP	P	08 36 41.9	-0.5
	0.7nm,0.6s,mb3.7						
SDCO	Great Sand Dun	66.95	329	eP	P	08 36 53.2	0.0
	1.9nm,0.7s,mb4.0						
DBIC	Dimbokro	68.37	74	P	P	08 37 01.9	-0.5
	7.3nm,0.6s,mb4.7,baz=253,slow=5.3,SNR=13						
DBIC	Dimbokro	68.37	74	eP	P	08 37 01.9	-0.4
	16nm,0.9s,mb4.8						
QSPA	South Pole Qui	70.17	180	eP	P	08 37 12.3	0.0
	4.0nm,1.0s,mb4.2						
SRU	San Rafael	70.51	327	eP	P	08 37 15.1	+0.1
ARUT	Antelope Range	71.10	324	eP	P	08 37 19.7	+1.2
RSSD	Black Hills	71.44	334	eP	P	08 37 19.7	-0.9
	2.8nm,0.8s,mb4.1						
PDAR	Pinedale Array	72.81	330	P	P	08 37 28.9	+0.3
	0.3nm,0.4s,mb3.5,baz=135,slow=4.2,SNR=4.5						
HWUT	Hardware Ranch	72.90	328	P	P	08 37 29.1	-0.1
ULM	Lac du Bonnet	73.89	342	P	P	08 37 33.4	-1.5
	2.4nm,0.5s,mb4.2,baz=144,slow=3.6,SNR=4.4						
NVAR	Mina Array Bea	74.30	322	P	P	08 37 38.5	+1.1
	1.1nm,0.8s,mb3.7,baz=137,slow=7.2,SNR=7.1						
DGMT	Dagmar	75.10	337	P	P	08 37 41.7	-0.1
	6.7nm,0.7s,mb4.5						
HLID	Hailey	75.77	328	eP	P	08 37 46.8	+1.1
	2.8nm,0.9s,mb4.0						
MCMT	McKenzie Canyo	75.92	329	eP	P	08 37 47.8	+1.2
BMO	Blue Mountains	78.15	327	eP	P	08 37 59.6	+0.8
	1.6nm,0.8s,mb3.8						
FCC	Fort Churchill	81.18	347	P	P	08 38 15.1	+0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	84.19	118	P	P	08 38 31.6	+0.7
	4.0nm,0.9s,mb4.2,baz=156,slow=3.6,SNR=3.8						
YKA	Yellowknife Ar	89.78	341	P	P	08 38 57.7	+0.6
	4.1nm,0.7s,mb4.7,baz=136,slow=4.5,SNR=24						
YKA				pP	pP	08 39 25.1	+1.7
	0.9nm,0.6s,baz=129,slow=5.2,SNR=2.9						
YKA				sP	sP	08 39 35.9	+2.0
	1.7nm,0.8s,baz=132,slow=4.9,SNR=5.9						
WRA	Warramunga Arr	134.19	211	PKP	PKPdf	08 45 17.5	+1.6
	0.3nm,0.5s,baz=162,slow=1.6,SNR=6.9						
ZAL	Zalesovo	140.64	24	PKP	PKPdf	08 45 29.1	+2.3
	1.2nm,0.3s,baz=196,slow=2.0,SNR=4.5						
MJAR	Matsushiro Arr	151.09	310	PKPbc	PKPdf	08 45 52.3	+7.7
	0.5nm,0.3s,slow=1.3,SNR=4.4						
SONM	Songino Array	152.00	7	PKPbc	PKPdf	08 45 54.9	+9.2
	0.9nm,0.5s,baz=315,slow=1.0,SNR=6.5						

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*IDC **16** 09:45:01.9±1.2, 2.18N×96.77E, mb4.2/10, mb1 4.4/11, mb1mx4.1/20, mbtmp4.2/11, ML4.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.9/23, Error ellipse: s-maj=47.2km s-min=18.6km az=53.0*

*NEIC **16** 09:45:06.1±0.7, 2.10N×96.72E, h30^{km}, mb4.3/3, Error ellipse: s-maj=18.3km s-min=11.3km az=63.0*

ISC 16 09:45:05.1±0.8**, 2.1N**±0.1×**96.8E**±0.1**, h33^{km}, n17, σ0^{s}86**/15**, mb4.2**/12**, MS3.3**/1**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	4.98	51	*e*P	P	09 46 20.1	+0.5
CM31	Chiang Mai Arr	16.36	7	*e*P	P	09 48 56.2	+2.3
	16nm,0.9s						
CMAR	Chiang Mai Arr	16.36	7	Pn	P	09 48 52.6	-1.3
	0.3nm,0.3s,baz=200,slow=11,SNR=30						
FITZ	Fitzroy Crossi	34.83	126	P	P	09 51 55.0	-0.3
	3.5nm,0.7s,mb4.4,baz=259,slow=4.2,SNR=6.1						
WRA	Warramunga Arr	42.90	123	P	P	09 53 03.0	+0.3
	1.7nm,0.6s,mb3.9,baz=301,slow=9.2,SNR=16						
WRAB	Tennant Creek	42.91	123	*e*P	P	09 53 02.7	0.0
	6.6nm,1.0s,mb4.3						
MKAR	Makanchi Array	46.23	346	P	P	09 53 28.4	-0.6
	6.2nm,0.7s,mb4.7,baz=159,slow=8.0,SNR=40						
MKAR				LR	LR	10 16 44.6	
	comp=Z,31nm,19.1s,MS3.3,baz=7.6,slow=41						
SONM	Songino Array	46.27	9	P	P	09 53 29.4	+0.1
	2.6nm,0.7s,mb4.3,baz=189,slow=8.4,SNR=19						
ULN	Ulaanbaatar	46.41	10	*e*P	P	09 53 30.0	-0.3
	2.8nm,0.8s,mb4.2						
MJAR	Matsushiro Arr	51.30	43	P	P	09 54 07.2	-1.1
	2.8nm,1.1s,mb4.1,baz=207,slow=8.2,SNR=4.4						
ZAL	Zalesovo	52.56	351	P	P	09 54 17.8	+0.3
	4.1nm,0.5s,mb4.6,baz=316,slow=8.4,SNR=6.9						
BVAR	Borovoye Array	55.22	341	P	P	09 54 36.0	-1.1
	1.3nm,0.6s,mb4.2,baz=151,slow=9.1,SNR=10						
FINES	FINESS Array B	78.97	332	P	P	09 57 06.8	-0.1
	0.8nm,0.7s,mb3.8,baz=143,slow=6.9,SNR=4.2						
ARCES	ARCESS Array B	81.51	340	P	P	09 57 20.8	+0.5
	0.6nm,0.6s,mb3.7,baz=108,slow=3.8,SNR=7.3						
GERES	GERESS Array B	83.82	319	P	P	09 57 33.9	+1.3
	0.3nm,0.2s,mb4.0,baz=90,slow=4.0,SNR=3.7						
TXAR	Lajitas Array	143.09	31	PKP	PKPdf	10 04 36.2	-0.2
	0.1nm,0.4s,baz=207,slow=4.0,SNR=2.7						
TXAR	Lajitas Array	143.09	31	PKP	PKPdf	10 04 36.2	-0.2

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*NEIC **16** 09:49:01.5±1.2, 32.90S×178.97W, h40^{km}±10^{km}, mb4.8/12, Error ellipse: s-maj=18.5km s-min=11.2km az=107.0*

*IDC **16** 09:49:06.5±2.8, 32.55S×178.91W, h82^{km}±24^{km}, mb4.2/6, mb1 4.3/7, mb1mx4.1/14, mbtmp4.5/7, MS3.6/8, Ms1 3.6/8, ms1mx3.4/23, Error ellipse: s-maj=25.2km s-min=17.4km az=131.0*

ISC 16 09:49:00.6±1.0**, 32.92S**±0.06×**179.1W**±0.1**, h36^{km}**±9^{km}**, n109, σ1^{s}76**/107**, mb4.6**/14**, MS3.6**/6**, 1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.81	16	P	P	09 49 57.1	-1.2
	79nm,0.3s,baz=73,slow=19,SNR=3.9						
RAO				S	S	09 50 36.7	-5.8
	143nm,0.3s,baz=90,slow=20,SNR=3.4						
RAO				LR	LR	09 50 43.0	
	comp=Z,522nm,20.6s,baz=140,slow=28						
PUZ	Puketiti	5.56	202	*e*P	P	09 50 26.4	+3.3
PUZ	Puketiti	5.56	202	PN	P	09 50 25.0	+1.9
PUZ				SN	S	09 51 31.6	+4.8
MWZ	Matawai	6.05	206	*e*P	P	09 50 31.6	+1.7
MWZ				S	S	09 51 41.3	+2.4
MWZ	Matawai	6.05	206	PN	P	09 50 31.6	+1.6
MWZ				SN	S	09 51 42.0	+3.1
URZ	Urewera	6.14	209	P	P	09 50 32.9	+1.6
	13nm,0.3s,baz=295,slow=1.6,SNR=63						
URZ				S	S	09 51 45.3	+4.0
	21nm,0.3s,baz=140,slow=22,SNR=13						
URZ	Urewera	6.14	209	*e*P	P	09 50 33.0	+1.7
URZ	Urewera	6.14	209	PN	P	09 50 33.0	+1.7
URZ				SN	S	09 51 41.7	+0.4
WCZ	Waipu Caves	6.17	239	PN	P	09 50 38.8	+7.0
OUZ	Omahuta	6.45	247	PN	P	09 50 41.6	+5.9
KNZ	Kokohu	6.61	202	*e*P	P	09 50 39.5	+1.6
KNZ				S	S	09 51 49.5	-3.5
KNZ	Kokohu	6.61	202	PN	P	09 50 39.5	+1.6
KNZ				SN	S	09 51 49.5	-3.5
BKZ	Black Stump Fm	7.17	208	*e*P	P	09 50 46.1	+0.4
BKZ				S	S	09 52 05.9	-0.9
BKZ	Black Stump Fm	7.17	208	PN	P	09 50 46.1	+0.4
BKZ				SN	S	09 52 05.9	-0.9
OTVZ	Oturere	7.52	213	PN	P	09 50 53.2	+2.7
NGZ	Ngauruhoe	7.56	213	P	P	09 50 53.6	+2.5
NGZ	Ngauruhoe	7.56	213	PN	P	09 50 52.3	+1.2
CNZ	Chateau	7.60	213	PN	P	09 50 54.8	+3.1
TUVZ	Tukino	7.61	212	P	P	09 50 54.9	+3.1
TUVZ	Tukino	7.61	212	PN	P	09 50 54.9	+3.1
FWVZ	Far West T-bar	7.64	213	*e*P	P	09 50 54.6	+2.3
FWVZ	Far West T-bar	7.64	213	PN	P	09 50 54.6	+2.3
MOVZ	Moawhango	7.68	211	P	P	09 50 54.4	+1.6
MOVZ	Moawhango	7.68	211	PN	P	09 50 54.4	+1.6
WNVZ	Wahianoa	7.68	212	P	P	09 50 54.5	+1.7
WNVZ	Wahianoa	7.68	212	PN	P	09 50 52.9	+0.1
PKVZ	Pokaka	7.77	214	PN	P	09 50 56.8	+2.7
MTVZ	Mangateitei	7.79	213	PN	P	09 50 55.9	+1.6
PWZ	Pawanui	7.79	203	*e*P	P	09 50 54.3	0.0
PWZ	Pawanui	7.79	203	PN	P	09 50 54.3	0.0
VRZ	Vera Road	7.92	217	PN	P	09 51 00.5	+4.3
WAZ	Wanganui	8.30	213	P	P	09 51 01.8	+0.3
WAZ	Wanganui	8.30	213	PN	P	09 51 01.8	+0.3
BFZ	Birch Farm	8.58	204	*e*P	P	09 51 04.3	-1.1
BFZ				S	S	09 52 33.3	-8.7
BFZ	Birch Farm	8.58	204	PN	P	09 51 04.3	-1.0
BFZ				SN	S	09 52 36.7	-5.4
MRZ	Mangatainoka R	8.81	207	*e*P	P	09 51 06.3	-2.2
MRZ				S	S	09 52 37.8	-10
MRZ	Mangatainoka R	8.81	207	PN	P	09 51 06.3	-2.3
MRZ				SN	S	09 52 37.8	-10
KIW	Kapiti Island	9.25	209	P	P	09 51 12.9	-1.7
KIW	Kapiti Island	9.25	209	PN	P	09 51 12.9	-1.7
MTW	Mount Morrison	9.27	206	P	P	09 51 12.4	-2.5
MTW	Mount Morrison	9.27	206	PN	P	09 51 12.4	-2.5
CAW	Cannon Point	9.39	208	P	P	09 51 14.3	-2.2
CAW	Cannon Point	9.39	208	PN	P	09 51 14.3	-2.2
PAWZ	Paruwai Farm	9.49	206	PN	P	09 51 16.1	-1.8
MSWZ	Moikau Station	9.59	206	P	P	09 51 17.0	-2.2
MSWZ	Moikau Station	9.59	206	PN	P	09 51 17.0	-2.2
MRW	Makara Radio	9.64	209	P	P	09 51 16.7	-3.3
MRW	Makara Radio	9.64	209	PN	P	09 51 17.9	-2.1
SNZO	South Karori	9.71	209	*e*Pn	P	09 51 18.1	-2.8
SNZO				*e*Sn	S	09 53 04.8	-5.1
SNZO	South Karori	9.71	209	PN	P	09 51 17.8	-3.1
BHW	Baring Head	9.72	208	P	P	09 51 17.9	-3.2
BHW	Baring Head	9.72	208	PN	P	09 51 17.9	-3.2
TCW	Tory Channel	9.80	211	P	P	09 51 19.6	-2.6
QRZ	Quartz Range	10.33	218	PN	P	09 51 27.1	-2.4
THZ	Tophouse	10.86	213	*e*P	P	09 51 34.1	-2.6
THZ	Tophouse	10.86	213	PN	P	09 51 34.1	-2.6
KHZ	Kahutara	11.11	209	*e*P	P	09 51 37.1	-3.0
KHZ	Kahutara	11.11	209	PN	P	09 51 37.1	-3.0
DSZ	Denniston Nort	11.38	217	PN	P	09 51 40.7	-3.0
LTZ	Lake Taylor	11.95	212	*e*P	P	09 51 47.3	-4.2
LTZ	Lake Taylor	11.95	212	PN	P	09 51 47.3	-4.2
RPZ	Rata Peaks	13.23	213	P	P	09 52 04.3	-4.3
	0.8nm,0.3s,baz=63,slow=4.5,SNR=3.7						
RPZ				S	S	09 54 27.7	-7.7
	1.1nm,0.3s,baz=14,slow=22,SNR=6.3						
ODZ	Otahua Downs	14.46	210	*e*P	P	09 52 20.9	-3.8
DZM	Mont Dzumac	16.73	307	P	P	09 52 57.4	+3.6
	0.2nm,0.3s,baz=126,slow=14,SNR=5.5						
DZM				LR	LR	09 58 02.2	
	comp=Z,409nm,21.1s,baz=197,slow=32						
PPT	Papeete	30.66	67	LR	LR	10 03 27.2	
	comp=Z,30nm,19.8s,MS3.0,baz=265,slow=28						
STKA	Stephens Creek	33.05	261	P	P	09 55 36.5	+1.5
	2.4nm,1.0s,mb4.1,baz=115,slow=11,SNR=5.7						
STKA				LR	LR	10 06 46.1	
	comp=Z,132nm,19.9s,MS3.6,baz=197,slow=32						
STKA	Stephens Creek	33.05	261	*e*P	P	09 55 34.4	-0.5
CTA	Charters Tower	33.35	284	*e*P	P	09 55 38.8	+1.1
	8.4nm,0.6s,mb4.8						
CTA	Charters Tower	33.35	284	P	P	09 55 39.3	+1.6
	10nm,0.6s,mb5.0,baz=106,slow=9.3,SNR=24						
CTAO	Charters Tower	33.35	284	*e*P	P	09 55 38.8	+1.2
	11nm,0.6s,mb5.0						
PMG	Port Moresby	38.90	299	LR	LR	10 07 56.0	
	comp=Z,76nm,21.7s,MS3.5,baz=198,slow=29						
WB2	Warramunga Arr	43.29	275	*e*P	P	09 57 00.4	-0.4
WRAB	Tennant Creek	43.29	275	*e*P	P	09 57 00.7	-0.2
	30nm,0.7s,mb5.1						
WRA	Warramunga Arr	43.30	275	P	P	09 57 00.7	-0.2
	13nm,0.4s,mb5.1,baz=114,slow=7.9,SNR=319						
SBA	Scott Base	45.46	184	*e*P	P	09 57 21.9	+4.4
	3.0nm,0.9s,mb4.1						
VNDA	Vanda	45.50	186	P	P	09 57 21.2	+3.3
	0.5nm,0.6s,mb3.5,baz=6.2,slow=7.7,SNR=3.7						
VNDA	Vanda	45.50	186	*e*P	P	09 57 20.5	+2.7
	2.2nm,1.2s,mb3.9						
KAKA	Kakadu	48.48	283	*e*P	P	09 57 41.0	-1.0
	5.9nm,0.4s,mb5.0						
FITZ	Fitzroy Crossi	51.44	272	⇓*i*P	P	09 58 04.1	-0.5
	2.9nm,0.3s,mb4.7						
FITZ	Fitzroy Crossi	51.44	272	P	P	09 58 04.1	-0.5
	3.6nm,0.3s,mb4.7,baz=169,slow=6.5,SNR=27						
CASY	Casey	52.47	209	*e*P	P	09 58 11.3	-0.4
	7.4nm,0.7s,mb4.7						
QSPA	South Pole Qui	57.20	180	*e*P	P	09 58 48.4	+2.4
	13nm,0.8s,mb5.0						
MAW	Mawson	69.61	201	P	P	10 00 08.1	+0.4
	1.3nm,0.6s,mb4.0,baz=191,slow=5.6,SNR=6.7						
MAW				LR	LR	10 31 17.1	
	comp=Z,66nm,19.4s,MS3.9,baz=69,slow=36						
MAW	Mawson	69.61	201	*e*P	P	10 00 07.6	0.0
	4.3nm,0.9s,mb4.4						
PMSA	Palmer Station	70.37	156	*e*P	P	10 00 07.0	-5.4
	34nm,0.8s,mb5.3						
SNAA	Sanae	75.67	179	*e*P	P	10 00 44.0	+0.7
	4.8nm,0.9s,mb4.4						
VNA3	Neumayer Olymp	75.86	177	*e*	P	10 00 45.2	+0.8
VNA3	Neumayer Olymp	75.86	177	*e*	P	10 00 50.4	+6.0
VNA2	Neumayer--Watz	76.28	177	*e*	P	10 00 48.7	+1.9
VNA2	Neumayer--Watz	76.28	177	*e*	P	10 00 53.1	+6.3
VNA1	Neumayer--Stat	76.52	177	*e*	P	10 00 48.4	+0.3
VNA1	Neumayer--Stat	76.52	177	*e*	P	10 00 54.6	+6.5
NVAR	Mina Array Bea	90.74	43	P	P	10 02 01.1	-0.1
	0.9nm,0.9s,mb4.1,baz=205,slow=4.4,SNR=5.9						
ANMO	Albuquerque	95.90	52	LR	LR	10 40 27.2	
	comp=Z,37nm,19.1s,MS3.9,slow=32						
NEW	Newport	97.97	37	LR	LR	10 35 39.3	
	comp=Z,32nm,21.5s,MS3.8,baz=221,slow=29						
BOSA	Boshof	114.57	204	PKP	PKPdf	10 07 38.8	+1.4
	0.7nm,0.4s,baz=308,slow=4.1,SNR=3.6						
MATP	Matopo	120.74	210	PKP	PKPdf	10 07 50.0	+0.5
	2.8nm,0.6s,baz=205,slow=1.9,SNR=12						
BVAR	Borovoye Array	127.50	314	PKP	PKPdf	10 08 00.5	-1.2
	0.4nm,0.4s,baz=135,slow=4.2,SNR=3.9						
ARCES	ARCESS Array B	140.83	347	PKhKP		10 08 19.5	
	1.4nm,0.8s,baz=90,slow=1.8,SNR=4.4						
KAF	Kangasniemi	146.57	338	*e*pkp	PKPdf	10 08 35.9	-0.1
FINES	FINESS Array B	147.14	338	PKPbc	PKPdf	10 08 38.0	+1.0
	6.1nm,0.4s,baz=43,slow=3.9,SNR=50						
FINES	FINESS Array B	147.14	338	PKPbc	PKPdf	10 08 38.0	+1.0
NB2	NORSAR Subarra	151.07	350	PKPabc	PKPdf	10 08 48.8	+5.6
	1.5nm,0.5s,baz=18,slow=2.6						
NOA	NORSAR Array B	151.07	350	PKPbc	PKPdf	10 08 48.6	+5.5
	2.1nm,0.6s,baz=16,slow=4.1,SNR=12						
HFS	Hagfors	151.49	347	PKPbc	PKPdf	10 08 49.3	+5.5
	3.2nm,0.7s,baz=117,slow=3.3,SNR=9.6						
HFS				PKPab	PKPab	10 08 58.1	-2.6
	2.0nm,0.5s,baz=90,slow=4.4,SNR=8.2						
AKASG	Malin Array Be	152.64	319	PKPbc	PKPdf	10 08 51.7	+5.9
	0.5nm,0.4s,baz=68,slow=2.6,SNR=5.6						
AKASG	Malin Array Be	152.64	319	PKPbc	PKPdf	10 08 51.7	+5.9
BRTR	Keskin Array B	152.84	294	PKPbc	PKPdf	10 08 53.4	+6.9
	0.8nm,0.5s,baz=152,slow=2.9,SNR=5.0						
BRTR				PKPab	PKPab	10 09 05.0	-2.1
	0.6nm,0.6s,baz=135,slow=1.7,SNR=3.8						
DBIC	Dimbokro	153.34	167	PKPbc	PKPdf	10 08 56.9	+9.0
	2.4nm,0.5s,baz=243,slow=4.5,SNR=3.2						

IDC 16 09:52:02.2±2.8**, 14.33S**×**65.84E, mb4.0**/3**, mb1 4.3**/3**, mb1mx3.7**/19**, mbtmp4.0**/3**, MS3.5**/2**, Ms1 3.6**/2**, ms1mx3.1**/27**, Error ellipse: s-maj=107.4km s-min=36.3km az=46.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	40.15	243	LR	LR	10 13 45.5	
	comp=Z,96nm,18.2s,baz=215,slow=32						
CMAR	Chiang Mai Arr	46.11	46	LR	LR	10 15 32.9	
	comp=Z,37nm,19.6s,baz=240,slow=31						
FITZ	Fitzroy Crossi	57.34	102	P	P	10 01 52.5	-2.4
	4.8nm,0.8s,baz=247,slow=3.3,SNR=4.2						
MKAR	Makanchi Array	62.62	13	P	P	10 02 28.4	-2.3
	0.2nm,0.3s,baz=198,slow=9.1,SNR=4.0						
WRA	Warramunga Arr	65.32	106	P	P	10 02 46.7	-2.1
	1.6nm,0.8s,baz=271,slow=5.8,SNR=9.5						
PDAR	Pinedale Array	151.39	353	PKPbc	PKPdf	10 11 58.2	+4.5
	1.7nm,0.7s,baz=63,slow=2.0,SNR=13						
NVAR	Mina Array Bea	155.72	8	PKPbc	PKPdf	10 12 08.3	+8.5
	0.1nm,0.5s,baz=281,slow=7.6,SNR=3.6						

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*MOS **16** 10:17:59.4±1.0, 81.66N×4.83W, h10^{km}, mb5.0/63, MS4.0/27, Error ellipse: s-maj=37.3km s-min=4.4km az=92.6*

*BJI **16** 10:17:59.2, 81.70N×4.60W, h10^{km}, mB5.1, mb5.0, Ms4.8, Msz4.4*

*IDC **16** 10:17:59.2±0.4, 81.57N×4.87W, mb4.3/26, mb1 4.5/28, mb1mx4.5/31, mbtmp4.3/28, ML4.6/2, MS4.2/26, Ms1 4.2/26, ms1mx4.2/27, Error ellipse: s-maj=14.6km s-min=9.1km az=36.0*

*HRVD **16** 10:18:01.3±0.2, 81.56N×4.92W, h12^{km}, MW5.0/57, Centroid moment Tensor Solution. LP body waves: s33,c51;Mantle waves: s57,c112; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.00±.11; $M_{\theta\theta}$-1.06±.13; $M_{\phi\phi}$4.07±.08; $M_{r\theta}$0.21±.40; $M_{\theta\phi}$0.54±.09; $M_{\phi r}$-1.77±.25; Best double couple: $M_0$3.997×10^{16} NP1: ϕ_s197°, δ33°, λ-73°. NP2:ϕ_s357°, δ59°, λ-100°. Principal axes: T 4.529, Plg13°, Azm95°; N -1.054, Plg9°, Azm3°; P -3.465, Plg74°, Azm239°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **16** 10:18:01.3±0.1, 81.69N×4.64W, h10^{km}, mb4.9/92, MS4.0/32 Error ellipse: s-maj=4.6km s-min=2.7km az=224.0*

*ZUR_RM **16** 10:18:01, 81.69N×4.64W, h12^{km}, Mw5.1/6, Moment Tensor Solution. s6 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.16; $M_{\theta\theta}$0.38; $M_{\phi\phi}$3.79; $M_{r\theta}$1.48; $M_{\theta\phi}$0.97; $M_{\phi r}$-1.94; Best double couple: $M_0$4.73×10^{16} NP1:ϕ_s354°, δ59°, λ-112°. NP2:ϕ_s212°, δ38°, λ-58°. Principal axes: T 4.336, Plg11°, Azm100°; N .779, Plg19°, Azm6°; P -5.115, Plg68°, Azm219°;*

*BER **16** 10:18:01.7±5.3, 81.66N×2.42W, MD3.3, ML3.3, ML3.1(NAO)*

*NAO **16** 10:18:03.2±6.4, 81.39N×2.41W, ML3.1*

ISC 16 10:17:59.5±0.1**, 81.71N**±0.03×**4.6W**±0.2**, h10^{km}, (h14^{km}**±1.4^{km}**:pP-P), n340, σ1^{s}09**/334**, mb4.8**/134**, MS4.2**/61**, 13C-11D, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	3.94	127	⇑*i*P	Pn	10 18 57.0	-4.4
KBS				*e*S	Sn	10 19 37.1	-11
KBS	Kingsbay	3.94	127	⇑*i*P	Pn	10 18 57.0	-4.4
KBS				*e*S	Sn	10 19 37.2	-11
KBS				AML	AML	10 19 50.3	
	comp=Z,103nm,0.8s						
SPA0	Spitsbergen Ar	5.07	123	Pn	Pn	10 19 12.8	-4.6
	baz=349,slow=11						
SPA0				Sn	Sn	10 20 04.9	-12
DAG	Danmarks Havn	5.59	215	⇓*i*P	Pn	10 19 19.3	-5.5
DAG				pmax	pmax		
	comp=Z,90nm,0.8s						
DAG	Danmarks Havn	5.59	215	⇓*i*P	Pn	10 19 19.3	-5.5
	comp=Z,90nm,0.8s						
HSP	Hornsund	5.97	131	*e*P	Pn	10 19 25.3	-4.8
HOPEN	Hopen	7.53	118	*e*P	Pn	10 19 46.0	-6.0
HOPEN				*e*S	Sn	10 21 05.2	-13
HOPEN				AML	AML	10 21 09.9	
	comp=Z,89nm,0.5s						
JNW	Jan Mayen West	10.78	187	*e*P	P	10 20 31.3	-5.4
JMIC	Jan Mayen	10.82	187	Pn	P	10 20 31.6	-5.7
	comp=Z,17nm,0.3s,baz=309,slow=2.0,SNR=63						
JMIC				Sn	S	10 22 21.8	-18
	comp=Z,3.1nm,0.3s,baz=189,slow=19,SNR=7.1						
JMIC				LR	LR	10 23 47.3	
	comp=Z,507nm,19.7s,baz=313,slow=33						
JMI	Jan Mayen	10.89	187	*e*P	P	10 20 33.4	-4.8
SUMG	Summit	11.55	237	*e*P	P	10 20 37.2	-10
	comp=Z,145nm,0.9s						
SUMG				*e*S	S	10 22 38.6	-19
KEV	Kevo	13.94	131	*e*p	P	10 21 13.0	-5.8
	comp=Z,12nm,0.8s						
KEV	Kevo	13.94	131	*e*P	P	10 21 13.0	-5.8
KEV				pmax	pmax		
	comp=Z,12nm,0.8s						
ARA0	ARCESS Array S	13.99	133	Pn	P	10 21 14.5	-5.0
	baz=355,slow=12						
ARA0				Sn	S	10 23 39.5	-16
	baz=348,slow=22						
ARCES	ARCESS Array B	13.99	133	Pn	P	10 21 15.0	-4.4
	comp=Z,2.4nm,0.3s,baz=348,slow=8.5,SNR=48						
ARCES				LR	LR	10 26 44.6	
	comp=Z,720nm,18.1s,baz=331,slow=38						
ARE0	ARCESS Array S	13.99	133	*e*P	P	10 21 15.8	-3.7
LOF	Lofoten	14.30	152	*e*Pn	P	10 21 22.5	-1.1
APA0	Apatity Array	16.68	125	Pn	P	10 21 48.4	-5.9
	baz=338,slow=10						
APA	Apatity	16.76	125	⇑*i*P	P	10 21 49.7	-5.7
APA				*i*		10 25 11.0	
APA				pmax	pmax		
	comp=Z,24nm,0.8s						
APA				MLR	MLR		
	comp=Z,1µm,12.0s						
RES	Resolute Bay	17.51	298	*e*P	P	10 21 58.3	-6.5
RES				pmax	pmax		
	comp=Z,102nm,1.1s						
RES	Resolute Bay	17.51	298	*e*P	P	10 21 58.3	-6.5
	comp=Z,102nm,1.1s						
RES				*e*		10 22 06.5	
RES				*e*S	S	10 24 59.1	-19
SFJD	Kangerlussuaq	18.30	244	*i* P	P	10 22 06.0	-8.7
SFJD				*i* S	S	10 25 13.6	-22
	comp=Z,1µm,17.0s						
NB2	NORSAR Subarra	21.21	158	P	P	10 22 45.3	-1.8
	comp=Z,28nm,1.2s,mb4.5,baz=354,slow=10						
NB2	NORSAR Subarra	21.21	158	P	P	10 22 45.6	-1.5
	slow=9.3						
NOA	NORSAR Array B	21.21	158	P	P	10 22 44.4	-2.7
	comp=Z,15nm,1.1s,mb4.3,baz=351,slow=11,SNR=10						
NOA				LR	LR	10 29 31.9	
	comp=Z,243nm,18.3s,MS3.6,baz=350,slow=33						
KAF	Kangasniemi	21.29	138	*e*p	P	10 22 44.7	-3.2
	comp=Z,20nm,0.9s,mb4.5,baz=344,slow=12						
KAF	Kangasniemi	21.29	138	*e*P	P	10 22 44.7	-3.2
KAF				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
NAO01	NORSAR Array S	21.39	159	*e*P	P	10 22 41.9	-7.0
	comp=Z,14nm,0.9s,mb4.3						
FIA0	FINESS Array S	21.93	139	P	P	10 22 52.9	-1.5
	baz=355,slow=12						
FINES	FINESS Array B	21.93	139	P	P	10 22 52.7	-1.6
	comp=Z,8.8nm,0.8s,mb4.2,baz=350,slow=12,SNR=34						
FINES				LR	LR	10 30 48.6	
	comp=Z,656nm,20.9s,MS4.0,baz=349,slow=35						
HFS	Hagfors	22.25	155	P	P	10 22 56.0	-1.6
	baz=350,slow=11						
HFS	Hagfors	22.25	155	P	P	10 22 55.9	-1.7
	comp=Z,11nm,0.9s,mb4.3,baz=350,slow=9.0,SNR=19						
HFS				LR	LR	10 29 57.7	
	comp=Z,388nm,20.0s,MS3.8,baz=353,slow=32						
KONO	Kongsberg	22.52	161	⇑*e*P	P	10 23 00.2	+0.2
KONO	Kongsberg	22.52	161	*e*P	P	10 22 59.8	-0.2
	comp=Z,25nm,1.2s,mb4.5						
KONO				LR	LR		
	comp=Z,272nm,19.0s,MS3.7						
TIXI	Tiksi	24.93	33	*e*P	P	10 23 20.1	-3.2
TIXI				*e*S	S	10 27 48.0	+4.2
TIXI				pmax	pmax		
	comp=Z,43nm,1.1s,mb4.9						
TIXI	Tiksi	24.93	33	PFAKE		10 23 40.0	+17
TIXI				LR	LR		
	comp=Z,240nm,22.0s,MS3.7						
VSU	Vasula	24.93	140	*i* P	P	10 23 25.1	+1.7
EKA	Eskdalemuir Ar	26.51	178	P	P	10 23 37.7	-0.6
	comp=Z,2.1nm,1.0s,baz=5.2,slow=7.8,SNR=2.7						
ESK	Eskdalemuir	26.52	178	PFAKE		10 23 50.0	+12
ESK				LR	LR		
	comp=Z,83nm,19.0s,MS3.3						
SOKR	Solikamsk	27.50	105	⇑*i*P	P	10 23 52.2	+4.9
SOKR				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.9						
SOKR				MLR	MLR		
	comp=Z,660nm,18.0s,MS4.2						
INK	Inuvik	27.80	322	*e*P	P	10 23 49.7	-0.2
INK				*e*		10 27 05.3	
INK				pmax	pmax		
	comp=Z,14nm,1.1s						
INK	Inuvik	27.80	322	P	P	10 23 49.4	-0.5
	comp=Z,3.9nm,1.0s,mb4.0,baz=7.5,slow=11,SNR=5.4						
INK				PcP	PcP	10 27 04.8	-1.7
	comp=Z,5.7nm,1.0s,baz=56,slow=6.7,SNR=4.5						
INK				LR	LR	10 36 48.6	
	comp=Z,218nm,19.7s,MS3.7,baz=149,slow=40						
INK	Inuvik	27.80	322	*e*P	P	10 23 49.7	-0.2
	comp=Z,14nm,1.1s,mb4.5						
INK				*e*PcP	PcP	10 27 05.3	-1.3
OBN	Obninsk	29.24	129	⇓*e*P	P	10 24 03.5	+0.5
OBN				*i* S	S	10 28 58.6	+4.2
OBN				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.1						
OBN				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.2						
OBN	Obninsk	29.24	129	P	P	10 24 03.9	+0.8
	comp=Z,43nm,1.0s,mb5.1						
OBN				LR	LR		
	comp=Z,148nm,20.0s,MS3.6						
BILL	Bilibino	30.36	7	⇓*i*P	P	10 24 13.2	+0.3
BILL				*i*		10 24 20.9	
BILL				pmax	pmax		
	comp=Z,36nm,1.3s,mb4.9						
BILL				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.0						
BILL	Bilibino	30.36	7	*e*P	P	10 24 12.9	0.0
	comp=Z,37nm,1.3s,mb5.0						
BILL				*e*		10 24 20.9	
SVE	Sverdlovsk	30.70	102	*e*P	P	10 24 16.0	+0.1
SVE				*e*		10 24 23.9	
SVE				*e*		10 25 24.5	
SVE				*e*S	S	10 29 22.0	+4.6
SVE				pmax	pmax		
	comp=Z,80nm,1.5s,mb5.3						
SVE				MLR	MLR		
	comp=N,600nm,14.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,100nm,14.0s,MS4.4						
SVE				MLR	MLR		
	comp=Z,1µm,14.0s,MS4.6						
CLL	Collm	31.02	158	*e*P	P	10 24 18.0	-0.8
CLL				*i* *PP	pP	10 24 19.4	-2.4
CLL				*e*		10 27 15.0	
CLL				MLR	MLR		
	comp=Z,300nm,17.4s,MS4.0						
CLL	Collm	31.02	158	P	P	10 24 18.0	-0.8
CLL				*i* *PP	pP	10 24 19.4	-2.4
CLL				*e*		10 24 28.0	
CLL				*e*PCP	PcP	10 27 15.0	+0.2
YKW3	Yellowknife Ar	31.37	303	*e*P	P	10 24 19.6	-2.2
YKA	Yellowknife Ar	31.43	303	P	P	10 24 22.3	-0.1
	comp=Z,1.7nm,0.8s,mb3.9,baz=14,slow=9.3,SNR=6.5						
YKA				PcP	PcP	10 27 13.6	-2.3
	comp=Z,3.3nm,0.8s,baz=9.7,slow=2.7,SNR=8.7						
YKA				LR	LR	10 37 00.2	

	comp=Z,1µm,18.9s,MS4.6,baz=350,slow=36						
BRG	**Berggiesshubel**	**31.50**	**157**	*i* P	**P**	**10 24 23.8**	**+0.7**
BRG				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.7						
BRG				MLR	MLR		
	comp=Z,390nm,17.7s,MS4.1						
BRG	**Berggiesshubel**	**31.50**	**157**	*i* P	**P**	**10 24 23.8**	**+0.7**
	comp=Z,17nm,1.3s,mb4.7						
BRG				*e*		10 24 34.6	
BRG				*e*		10 30 54.0	
BRG				LR	LR		
	comp=Z,390nm,17.7s,MS4.1						
MOX	**Moxa**	**31.61**	**160**	*e*P	**P**	**10 24 24.9**	**+0.9**
MOX				MLR	MLR		
	comp=Z,200nm,18.0s,MS3.8						
MOX	**Moxa**	**31.61**	**160**	*i* P	**P**	**10 24 24.9**	**+0.9**
MOX				L		10 37 23.0	
KSP	**Ksiaz**	**31.67**	**154**	*e*P	**P**	**10 24 25.1**	**+0.5**
PVCC	**Panska Ves**	**31.88**	**157**	*e*P	**P**	**10 24 30.0**	**+3.6**
PVCC				AMS	AMS	10 36 00.0	
	comp=Z,400nm,21.2s						
GIVF	**Givet**	**31.88**	**168**	*e*P	**P**	**10 24 26.1**	**-0.4**
TNS	**Taunus Mts**	**31.89**	**164**	*e*P	**P**	**10 24 26.3**	**-0.2**
TNS				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.6						
TNS	**Taunus Mts**	**31.89**	**164**	*e*P	**P**	**10 24 26.3**	**-0.2**
	comp=Z,16nm,1.5s,mb4.6						
BAIF	**Baives**	**31.91**	**169**	*e*P	**P**	**10 24 26.4**	**-0.3**
	comp=Z,16nm,1.1s,mb4.4						
BAIF	**Baives**	**31.91**	**169**	*e*P	**P**	**10 24 26.4**	**-0.3**
BAIF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
UPC	**Upice**	**31.99**	**155**	*e*P	**P**	**10 24 28.3**	**+0.9**
NKC	**Novy Kostel**	**32.06**	**159**	*e*P	**P**	**10 24 27.0**	**-1.0**
NKC				AMS	AMS	10 37 30.0	
	comp=Z,200nm,17.6s						
DPC	**Dobruska-Polom**	**32.16**	**155**	*e*P	**P**	**10 24 29.7**	**+0.8**
DPC				AMS	AMS	10 36 10.0	
	comp=Z,300nm,18.0s						
SCHQ	**Schefferville**	**32.21**	**254**	P	**P**	**10 24 27.7**	**-1.6**
	comp=Z,2.0nm,0.6s,mb4.2,baz=25,slow=6.1,SNR=9.8						
SCHQ				LR	LR	10 37 30.0	
	comp=Z,680nm,20.6s,MS4.3,baz=16,slow=36						
SCHQ	**Schefferville**	**32.21**	**254**	*e*P	**P**	**10 24 27.5**	**-1.7**
	comp=Z,32nm,1.4s,mb5.0						
SCHQ				LR	LR		
	comp=Z,1µm,21.0s,MS4.5						
FCC	**Fort Churchill**	**32.31**	**283**	*e*P	**P**	**10 24 29.1**	**-1.0**
FCC				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.9						
FCC	**Fort Churchill**	**32.31**	**283**	*e*P	**P**	**10 24 29.1**	**-1.1**
	comp=Z,26nm,1.2s,mb4.9						
ILAR	**Eielson Array**	**32.35**	**331**	P	**P**	**10 24 31.8**	**+1.3**
	comp=Z,6.6nm,0.8s,mb4.5,baz=5.4,slow=7.6,SNR=83						
ILAR				PcP	PcP	10 27 16.6	-1.7
	comp=Z,2.4nm,0.8s,baz=338,slow=3.3,SNR=12						
ILAR				LR	LR	10 36 33.3	
	comp=Z,106nm,21.6s,MS3.5,baz=19,slow=34						
PRU	**Pruhonice**	**32.42**	**157**	*e*P	**P**	**10 24 32.2**	**+1.1**
PRU				AMS	AMS	10 36 20.0	
	comp=Z,300nm,18.5s						
OJC	**Ojcow**	**32.53**	**150**	*e*P	**P**	**10 24 30.8**	**-1.3**
GRA1	**Grafenberg Arr**	**32.54**	**161**	*e*P	**P**	**10 24 33.5**	**+1.3**
	comp=Z,8.0nm,0.7s,mb4.8						
GRA1				LR	LR		
	comp=Z,200nm,21.7s,MS3.8						
GRF	**Grafenberg Arr**	**32.54**	**161**	*e*P	**P**	**10 24 33.5**	**+1.3**
GRF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
GRF				MLR	MLR		
	comp=Z,200nm,21.7s,MS3.8						
GRF	**Grafenberg Arr**	**32.54**	**161**	*e*P	**P**	**10 24 33.5**	**+1.3**
GRF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
GRF				MLR	MLR		
	comp=Z,200nm,21.7s,MS3.8						
GRF	**Grafenberg Arr**	**32.54**	**161**	*e*P	**P**	**10 24 33.5**	**+1.3**
	comp=Z,8.0nm,0.7s,mb4.8						
GRF				LR	LR		
	comp=Z,200nm,21.7s,MS3.8						
OKC	**Ostrava-Krasne**	**32.79**	**152**	*e*P	**P**	**10 24 34.8**	**+0.4**
OKC				AMS	AMS	10 36 20.0	
	comp=Z,200nm,17.8s						
MORC	**Moravsky Berou**	**32.81**	**153**	*e*P	**P**	**10 24 31.9**	**-2.7**
MORC				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0						
MORC	**Moravsky Berou**	**32.81**	**153**	*e*P	**P**	**10 24 31.9**	**-2.7**
	comp=Z,23nm,1.3s,mb4.9						
AKASG	**Malin Array Be**	**32.84**	**139**	P	**P**	**10 24 31.8**	**-2.9**
	comp=Z,4.6nm,0.9s,mb4.4,baz=344,slow=8.9,SNR=14						
AKASG				PcP	PcP	10 27 17.4	-2.3
	comp=Z,0.2nm,0.3s,baz=329,slow=2.3,SNR=3.4						
WET	**Wettzell**	**33.17**	**159**	*e*P	**P**	**10 24 39.3**	**+1.6**
WET				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.8						
WET	**Wettzell**	**33.17**	**159**	*e*P	**P**	**10 24 39.3**	**+1.6**
	comp=Z,18nm,1.5s,mb4.8						
KHC	**Kasperske Hory**	**33.22**	**158**	*e*P	**P**	**10 24 36.5**	**-1.6**
KHC				*e*pP	pP	10 24 39.7	-1.4
KHC				AMS	AMS	10 37 00.0	
	comp=Z,200nm,21.4s						
NIE	**Niedzica**	**33.36**	**150**	*e*P	**P**	**10 24 39.0**	**-0.3**
VRSR	**Storozhevoye**	**33.38**	**128**	*e*P	**P**	**10 24 44.8**	**+5.3**
VRSR				*e**PP	pP	10 24 50.0	+7.6
VRSR				*e**SP	sP	10 24 52.1	+8.4
VRSR				*e*		10 25 55.4	
VRSR				*e*		10 27 28.6	
VRSR				pmax	pmax		
	comp=N,20nm,0.8s						
VRSR				pmax	pmax		
	comp=E,9.0nm,0.8s						
VRSR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
VRSR				MLR	MLR		
	comp=Z,50nm,20.0s,MS3.2						
VRSR				MLR	MLR		
	comp=N,60nm,19.0s,MS3.4						
VRSR				MLR	MLR		
	comp=E,20nm,19.0s,MS3.4						
GEC2	**GERESS Array S**	**33.51**	**158**	*e*P	**P**	**10 24 42.4**	**+1.7**
GEC2				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
GEC2	**GERESS Array S**	**33.51**	**158**	*e*P	**P**	**10 24 42.4**	**+1.7**
	comp=Z,15nm,1.2s,mb4.8						
GERES	**GERESS Array B**	**33.51**	**158**	P	**P**	**10 24 39.7**	**-1.0**
	comp=Z,4.5nm,0.9s,mb4.4,slow=6.7,SNR=24						
GERES				PcP	PcP	10 27 19.5	-2.2
	comp=Z,1.0nm,0.7s,baz=27,slow=3.0,SNR=4.4						
GERES				LR	LR	10 37 36.5	
	comp=Z,172nm,18.2s,MS3.8,baz=359,slow=35						
CDF	**Champ du Feu**	**33.65**	**166**	*e*P	**P**	**10 24 42.1**	**+0.2**
	comp=Z,22nm,1.2s,mb4.7						
CDF	**Champ du Feu**	**33.65**	**166**	*e*P	**P**	**10 24 42.1**	**+0.2**
CDF				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
BFO	**Black Forest**	**33.77**	**164**	*e*P	**P**	**10 24 44.0**	**+1.1**
BFO				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
BFO	**Black Forest**	**33.77**	**164**	*e*P	**P**	**10 24 44.0**	**+1.1**
	comp=Z,9.0nm,1.1s,mb4.6						
MENT	**Mentasta**	**33.93**	**328**	*e*P	**P**	**10 24 45.7**	**+1.5**
KOLS	**Kolonicke sedl**	**33.99**	**148**	*e*P	**P**	**10 24 46.3**	**+1.5**
HAU	**Haudompre**	**34.03**	**167**	*e*P	**P**	**10 24 45.3**	**+0.2**
HAU				*e*R			
	comp=Z,190nm,19.1s						
VYHS	**Vyhne**	**34.18**	**152**	*i* P	**P**	**10 24 47.6**	**+1.2**
HINF	**Hinteralfeld**	**34.23**	**166**	*e*P	**P**	**10 24 47.0**	**+0.1**
KECS	**Kecovo**	**34.30**	**150**	*i* P	**P**	**10 24 46.6**	**-0.9**
YAK	**Yakutsk**	**34.43**	**37**	*d* *i*P	**P**	**10 24 48.4**	**-0.1**
YAK				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.3						
YAK				pmax	pmax		
	comp=N,14nm,1.2s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK	**Yakutsk**	**34.43**	**37**	*e*P	**P**	**10 24 48.2**	**-0.3**
	comp=E,82nm,0.9s,mb5.7						
YAK				LR	LR		
	comp=Z,121nm,20.0s,MS3.6						
LOR	**Lormes**	**34.69**	**170**	*e*P	**P**	**10 24 50.3**	**-0.6**
LOR				*e*R			
	comp=Z,178nm,23.0s						
SSF	**Saint Saulge**	**34.89**	**170**	*e*P	**P**	**10 24 52.1**	**-0.5**
SSF				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
SSF	**Saint Saulge**	**34.89**	**170**	*e*P	**P**	**10 24 52.1**	**-0.5**
	comp=Z,13nm,1.3s,mb4.7						
AVF	**Avril sur Loir**	**35.16**	**170**	*e*P	**P**	**10 24 54.4**	**-0.4**
	comp=Z,27nm,1.3s,mb4.7						
AVF	**Avril sur Loir**	**35.16**	**170**	*e*P	**P**	**10 24 54.4**	**-0.4**
AVF				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
SMF	**Signal de Mont**	**35.31**	**170**	*e*P	**P**	**10 24 55.9**	**-0.3**
BGF	**Bois d'Agland**	**35.38**	**171**	*e*P	**P**	**10 24 56.4**	**-0.3**
SML	**Sawmill**	**35.40**	**331**	*e*P	**P**	**10 24 57.6**	**+0.9**
CABF	**La Chapelle**	**35.41**	**167**	*e*P	**P**	**10 24 57.2**	**+0.2**
	comp=Z,79nm,1.7s,mb5.1						
CABF	**La Chapelle**	**35.41**	**167**	*e*P	**P**	**10 24 57.2**	**+0.2**
CABF				pmax	pmax		
	comp=Z,40nm,1.7s,mb5.1						
BURAR	**Bucovina Array**	**35.54**	**145**	⇑P	**P**	**10 24 58.9**	**+0.8**
TCF	**Toulx Ste Croi**	**35.63**	**172**	*e*P	**P**	**10 24 58.3**	**-0.6**
	comp=Z,28nm,1.3s,mb4.7						
TCF	**Toulx Ste Croi**	**35.63**	**172**	*e*P	**P**	**10 24 58.3**	**-0.6**
TCF				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
PWA	**Palmer West**	**35.66**	**332**	*e*P	**P**	**10 24 59.1**	**+0.1**
ZRNK	**Zerenda**	**35.66**	**95**	P	**P**	**10 24 59.8**	**+0.7**
ZRNK				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
ZRNK	**Zerenda**	**35.66**	**95**	*e*P	**P**	**10 24 59.6**	**+0.6**
	comp=Z,86nm,1.6s,mb5.4						
BRVK	**Borovoye**	**35.74**	**94**	P	**P**	**10 24 56.9**	**-2.8**
BRVK				MLR	MLR		
	comp=Z,1.0nm,22.0s						
BVA0	**Borovoye Array**	**35.79**	**94**	*i* P	**P**	**10 25 01.4**	**+1.3**
BVA0				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
BVAR	**Borovoye Array**	**35.79**	**94**	P	**P**	**10 25 01.3**	**+1.1**
	comp=Z,2.2nm,0.8s,mb4.1,baz=350,slow=9.0,SNR=13						
PERS	**Pernice**	**35.79**	**157**	*e*P	**P**	**10 25 01.6**	**+1.4**
NVS	**Novosibirsk**	**35.88**	**80**	*e*P	**P**	**10 25 01.3**	**+0.4**
NVS				*i*		10 26 23.2	
NVS				pmax	pmax		
	comp=N,24nm,1.4s						
NVS				pmax	pmax		
	comp=Z,39nm,1.4s,mb5.1						
NVS				pmax	pmax		
	comp=E,4.0nm,0.9s						
DIV	**Divide**	**35.88**	**329**	*e*P	**P**	**10 25 01.7**	**+0.8**
	comp=E,38nm,1.2s,mb5.2						
VOSK	**Vostochnaya**	**36.17**	**93**	P	**P**	**10 25 04.0**	**+0.7**
VOSK				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
EYAK	**Cordova Ski Ar**	**36.45**	**329**	*e*P	**P**	**10 25 06.0**	**+0.3**
KIS	**Kishinev**	**36.47**	**141**	*e*P	**P**	**10 25 05.0**	**-0.9**
KIS				*e*		10 33 43.0	
KIS				MLR	MLR		
	comp=Z,400nm,15.0s,MS4.3						
KIS				MLR	MLR		
	comp=Z,400nm,16.0s						
LPL	**La Plagne**	**36.53**	**167**	*e*P	**P**	**10 25 07.5**	**+1.1**
	comp=Z,15nm,1.0s,mb4.5						
LPL	**La Plagne**	**36.53**	**167**	*e*P	**P**	**10 25 07.5**	**+1.1**
LPL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
LPG	**La Plagne**	**36.55**	**167**	*e*P	**P**	**10 25 08.0**	**+1.4**
	comp=Z,24nm,1.1s,mb4.7						
LPG	**La Plagne**	**36.55**	**167**	*e*P	**P**	**10 25 08.0**	**+1.4**
LPG				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.6						
SVW2	**Sparrevohn**	**36.57**	**337**	*e*P	**P**	**10 25 07.4**	**+0.8**
RJF	**Les Rejaudoux**	**36.60**	**173**	*e*P	**P**	**10 25 06.8**	**-0.3**
	comp=Z,32nm,1.2s,mb4.7						
RJF				*e*R			
	comp=Z,173nm,21.5s						
RJF	**Les Rejaudoux**	**36.60**	**173**	*e*P	**P**	**10 25 06.8**	**-0.3**
RJF				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.7						
RJF				MLR	MLR		
	comp=Z,170nm,21.5s,MS3.8						
BOJS	**Bojanci**	**36.93**	**157**	*e*P	**P**	**10 25 11.3**	**+1.5**
ZAL	**Zalesovo**	**36.98**	**79**	P	**P**	**10 25 10.4**	**+0.2**
	comp=Z,2.0nm,0.4s,mb4.3,baz=126,slow=9.3,SNR=5.3						
ZAL				LR	LR	10 44 21.1	
	comp=Z,564nm,20.1s,MS4.3,baz=122,slow=43						
BOD	**Bodaibo**	**37.00**	**51**	*e*P	**P**	**10 25 09.0**	**-1.3**
BOD				pmax	pmax		
	comp=Z,79nm,1.0s,mb5.5						
ORIF	**Oris-en-Rattie**	**37.10**	**168**	*e*P	**P**	**10 25 11.8**	**+0.6**
	comp=Z,13nm,0.9s,mb4.4						
ORIF				*e*R			
	comp=Z,214nm,20.8s						
VIVF	**Saint-Julien-l**	**37.12**	**169**	*e*P	**P**	**10 25 11.8**	**+0.3**
	comp=Z,14nm,1.0s,mb4.5						
VIVF	**Saint-Julien-l**	**37.12**	**169**	*e*P	**P**	**10 25 11.8**	**+0.3**
VIVF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
DLBC	**Dease Lake**	**37.13**	**315**	*e*P	**P**	**10 25 13.2**	**+1.9**
DLBC				*e*		10 25 21.1	
BZS	**Buzias**	**37.24**	**149**	⇑P	**P**	**10 25 14.3**	**+1.9**
MBDF	**Montbardon**	**37.32**	**167**	*e*P	**P**	**10 25 14.2**	**+1.1**
	comp=Z,22nm,1.1s,mb4.6						
MBDF	**Montbardon**	**37.32**	**167**	*e*P	**P**	**10 25 14.2**	**+1.1**
MBDF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
FFC	**Flin Flon**	**37.33**	**288**	P	**P**	**10 25 13.6**	**+0.5**
FFC				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.7						
FFC	**Flin Flon**	**37.33**	**288**	P	**P**	**10 25 13.6**	**+0.5**
	comp=Z,14nm,1.2s,mb4.7						
VRI	**Vrincioaia**	**37.40**	**143**	⇑P	**P**	**10 25 15.5**	**+1.7**
AB31	**Akbulak array**	**37.97**	**106**	*i* P	**P**	**10 25 18.8**	**+0.2**
AB31				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.9						
SMRF	**Simiane la Rot**	**38.03**	**168**	*e*P	**P**	**10 25 19.9**	**+0.8**
	comp=Z,55nm,1.5s,mb4.8						
SBF	**Sospel**	**38.20**	**166**	*e*P	**P**	**10 25 21.4**	**+0.9**
	comp=Z,64nm,1.1s,mb5.0						
SBF	**Sospel**	**38.20**	**166**	*e*P	**P**	**10 25 21.4**	**+0.9**
SBF				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.0						
FRF	**La Foret Royal**	**38.48**	**167**	*e*P	**P**	**10 25 23.3**	**+0.4**
	comp=Z,22nm,1.1s,mb4.5						
FRF	**La Foret Royal**	**38.48**	**167**	*e*P	**P**	**10 25 23.3**	**+0.4**
FRF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
LMR	**La Mourre**	**38.70**	**167**	*e*P	**P**	**10 25 25.5**	**+0.8**
SJPF	**Ste Jean**	**38.75**	**176**	*e*P	**P**	**10 25 24.9**	**-0.3**
	comp=Z,18nm,1.1s,mb4.4						
SJPF	**Ste Jean**	**38.75**	**176**	*e*P	**P**	**10 25 24.9**	**-0.3**
SJPF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
EPF	**Esparros**	**38.85**	**174**	*e*P	**P**	**10 25 25.7**	**-0.3**
TIRR	**Tirgusor**	**38.95**	**142**	⇑P	**P**	**10 25 26.0**	**-0.8**
CLNS	**Chul'man**	**39.12**	**42**	*e*P	**P**	**10 25 26.7**	**-1.4**
CLNS				pmax	pmax		
	comp=Z,102nm,0.9s,mb5.5						
CLNS				pmax	pmax		
	comp=N,43nm,0.8s						
CLNS				pmax	pmax		
	comp=E,13nm,0.8s						
ANN	**Anapa**	**39.51**	**131**	*e*P	**P**	**10 25 36.9**	**+5.4**
ANN				pmax	pmax		
	comp=Z,68nm,1.1s,mb5.3						
ANN				MLR	MLR		
	comp=N,500nm,18.0s,MS4.5						
ANN				MLR	MLR		
	comp=E,296nm,18.0s,MS4.5						
ANN				MLR	MLR		
	comp=Z,252nm,18.0s,MS4.1						
PGF	**Pioggiola**	**39.57**	**164**	*e*P	**P**	**10 25 32.5**	**+0.5**
KDAK	**Kodiak Island**	**39.69**	**334**	*e*P	**P**	**10 25 33.3**	**+0.5**
GOF	**Gofitskoye**	**39.89**	**125**	⇓*i*P	**P**	**10 25 37.9**	**+3.3**
GOF				pmax	pmax		
	comp=Z,50nm,1.7s,mb5.0						
AQU	**L'Aquila**	**39.97**	**159**	P	**P**	**10 25 36.3**	**+1.0**
EDM	**Edmonton**	**40.31**	**298**	*e*P	**P**	**10 25 38.6**	**+0.6**
ULM	**Lac du Bonnet**	**40.84**	**281**	P	**P**	**10 25 41.6**	**-0.7**
	comp=Z,4.1nm,0.6s,mb4.3,baz=12,slow=4.9,SNR=5.3						
ULM				LR	LR	10 42 25.0	
	comp=Z,596nm,20.4s,MS4.4,baz=122,slow=36						
ULM	**Lac du Bonnet**	**40.84**	**281**	*e*P	**P**	**10 25 41.6**	**-0.8**
	comp=Z,31nm,1.0s,mb4.9						
ULM				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
KIV	**Kislovodsk**	**40.94**	**126**	*e*P	**P**	**10 25 50.5**	**+7.3**
KIV				*e*		10 27 20.9	
KIV				*e*S	**S**	**10 32 00.0**	**+5.2**
KIV				pmax	pmax		
	comp=N,10.0nm,0.8s						
KIV				pmax	pmax		
	comp=E,7.0nm,0.8s						
KIV				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
KIV				MLR	MLR		
	comp=N,204nm,19.0s,MS4.0						
KIV				MLR	MLR		
	comp=E,58nm,19.0s,MS4.0						
KIV				MLR	MLR		
	comp=Z,210nm,19.0s,MS4.0						
KIV	**Kislovodsk**	**40.94**	**126**	PFAKE		10 26 00.0	+17
KIV				LR	LR		
	comp=Z,77nm,20.0s,MS3.6						
SOC	**Sochi**	**40.96**	**129**	*e*P	**P**	**10 25 40.8**	**-2.6**
SOC				*e*PPP	PPP	10 27 41.7	-8.6
SOC				*e*S	**S**	**10 31 53.6**	**-1.6**
SOC				*e*SSS	SSS	10 35 36.5	+6.2
SOC				pmax	pmax		
	comp=Z,31nm,1.4s,mb4.8						
SOC				pmax	pmax		
	comp=N,5.0nm,0.5s						
SOC				pmax	pmax		
	comp=E,7.0nm,0.5s						
SOC				MLR	MLR		
	comp=Z,281nm,13.0s,MS4.3						
SOC				MLR	MLR		
	comp=N,401nm,22.0s						
SOC				MLR	MLR		
	comp=E,197nm,21.0s						
IRK	**Irkutsk**	**41.29**	**62**	*e*P	**P**	**10 25 45.8**	**-0.2**
IRK				*e*		10 27 27.9	
IRK				pmax	pmax		
	comp=Z,36nm,1.5s,mb4.8						
MOY	**Mondy**	**41.43**	**65**	*e*P	**P**	**10 25 49.3**	**+2.1**
MOY				pmax	pmax		
	comp=Z,49nm,1.8s,mb4.8						
TLY	**Talaya**	**41.76**	**63**	*e*P	**P**	**10 25 50.4**	**+0.7**
TLY				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.6						
TLY				MLR	MLR		
	comp=Z,128nm,19.0s,MS3.8						
TLY	**Talaya**	**41.76**	**63**	*e*P	**P**	**10 25 50.4**	**+0.8**
	comp=Z,17nm,1.1s,mb4.6						
TLY				LR	LR		
	comp=Z,128nm,19.0s,MS3.8						
ESDC	**Sonseca Array**	**42.17**	**179**	P	**P**	**10 25 51.1**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=357,slow=8.7,SNR=5.1						
ESLA	**Sonseca Array**	**42.17**	**179**	P	**P**	**10 25 50.4**	**-2.9**
ZEI	**Tsey**	**42.25**	**125**	*e*P	**P**	**10 25 49.0**	**-4.8**
ZEI				*i* *PP	pP	10 25 56.4	-0.4
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
EYMN	**Ely**	**42.46**	**276**	*e*P	**P**	**10 25 55.7**	**+0.2**
	comp=Z,80nm,1.2s,mb5.2						
EYMN				*e*		10 26 02.9	
EYMN				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
CIT	**Chita**	**42.64**	**54**	*e*P	**P**	**10 25 58.3**	**+1.4**
CIT				*e*		10 27 43.6	
CIT				pmax	pmax		
	comp=Z,35nm,2.1s,mb4.7						
FRNY	**Flat Rock**	**42.92**	**257**	*e*P	**P**	**10 25 58.8**	**-0.5**
MSNY	**Massena**	**42.94**	**259**	P	**P**	**10 25 59.4**	**-0.1**
MSNY				*e*		10 26 06.7	
MKAR	**Makanchi Array**	**43.59**	**84**	P	**P**	**10 26 05.4**	**+0.7**
	comp=Z,3.3nm,0.7s,mb4.2,baz=338,slow=6.5,SNR=25						
MKAR				PP	PP	10 27 48.2	0.0
	comp=Z,2.4nm,1.0s,baz=338,slow=7.8,SNR=2.9						
MKAR				LR	LR	10 47 55.4	
	comp=Z,362nm,18.6s,MS4.3,baz=356,slow=41						
MIV	**Mineville/With**	**43.66**	**257**	P	**P**	**10 26 05.1**	**-0.2**
SADO	**Sadowa**	**43.78**	**263**	LR	LR	10 44 48.7	
	comp=Z,864nm,18.0s,MS4.7,baz=0.6,slow=37						
BRTR	**Keskin Array B**	**44.14**	**137**	P	**P**	**10 26 09.4**	**+0.2**
	comp=Z,4.4nm,1.0s,mb4.2,baz=346,slow=5.1,SNR=11						
BRTR				PP	PP	10 27 53.8	+0.1
	comp=Z,1.5nm,0.9s,baz=27,slow=6.4,SNR=3.6						
GNI	**Garni**	**44.94**	**125**	P	**P**	**10 26 20.5**	**+4.8**
GNI				MLR	MLR		
	comp=Z,223nm,21.0s						
KKAR	**Karatay Array**	**45.50**	**97**	*i* P	**P**	**10 26 21.3**	**+1.2**
KKAR				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
NEW	**Newport**	**45.65**	**300**	*e*P	**P**	**10 26 22.2**	**+1.0**
NEW				pmax	pmax		
	comp=Z,12nm,0.9s						
NEW				MLR	MLR		
	comp=Z,1µm,21.0s						
NEW	**Newport**	**45.65**	**300**	P	**P**	**10 26 21.9**	**+0.7**
	comp=Z,3.5nm,0.8s,mb4.3,baz=6.9,slow=8.4,SNR=5.5						
NEW	**Newport**	**45.65**	**300**	*e*P	**P**	**10 26 22.2**	**+1.0**
	comp=Z,12nm,0.9s,mb4.8						
NEW				LR	LR		
	comp=Z,1µm,21.0s,MS4.8						
LAO	**LASA Array**	**45.77**	**290**	*e*P	**P**	**10 26 22.7**	**+0.5**
	comp=Z,21nm,0.9s,mb5.1						
BINY	**Binghamton**	**45.85**	**259**	*e*P	**P**	**10 26 23.4**	**+0.5**
	comp=Z,28nm,1.0s,mb5.2						
SONM	**Songino Array**	**45.89**	**61**	P	**P**	**10 26 24.0**	**+0.9**
	comp=Z,10nm,1.0s,mb4.7,baz=333,slow=8.3,SNR=53						
SONM				LR	LR	10 46 14.8	
	comp=Z,440nm,20.2s,MS4.4,baz=357,slow=37						
ULN	**Ulaanbaatar**	**45.94**	**61**	*e*P	**P**	**10 26 24.5**	**+1.0**
ULN				*e*		10 26 33.0	
ULN				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.4						
ULN				MLR	MLR		
	comp=Z,283nm,20.0s,MS4.2						
ULN	**Ulaanbaatar**	**45.94**	**61**	*e*P	**P**	**10 26 24.5**	**+1.0**
	comp=Z,41nm,0.9s,mb5.4						
ULN				*e*		10 26 33.0	
ULN				LR	LR		
	comp=Z,283nm,20.0s,MS4.2						
HIA	**Hailar**	**46.06**	**49**	*e*P	**P**	**10 26 25.8**	**+1.4**
HIA				pmax	pmax		
	comp=Z,40nm,1.2s						
HIA				MLR	MLR		
	comp=Z,191nm,19.0s						
HIA	**Hailar**	**46.06**	**49**	*e*P	**P**	**10 26 25.8**	**+1.4**
	comp=Z,40nm,1.2s,mb5.2						
HIA				LR	LR		
	comp=Z,191nm,19.0s,MS4.1						
FRU	**Bishkek**	**46.36**	**93**	*e*P	**P**	**10 26 29.0**	**+2.1**
FRU				*e*		10 28 17.6	
FRU				pmax	pmax		
	comp=Z,130nm,1.8s,mb5.6						
FRU				MLR	MLR		
	comp=Z,900nm,18.0s,MS4.8						
CHMT	**Chamberlain Mo**	**46.49**	**296**	*e*P	**P**	**10 26 28.0**	**+0.2**
HRY	**Holter Researc**	**46.50**	**295**	*e*P	**P**	**10 26 28.0**	**0.0**
AAK	**Ala-Archa**	**46.53**	**93**	P	**P**	**10 26 30.4**	**+2.1**
AAK				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.4						
AAK	**Ala-Archa**	**46.53**	**93**	*e*P	**P**	**10 26 29.0**	**+0.7**
	comp=Z,51nm,1.2s,mb5.3						
AAK				LR	LR		
	comp=Z,168nm,19.0s,MS4.0						
MSO	**Missoula**	**46.66**	**297**	*e*P	**P**	**10 26 29.0**	**-0.2**
	comp=Z,29nm,1.3s,mb5.0						
ALLY	**Alegheny Colle**	**46.98**	**263**	P	**P**	**10 26 31.5**	**-0.4**
JFWS	**Jewell Farm**	**47.21**	**273**	*e*P	**P**	**10 26 33.4**	**-0.2**
JFWS				pmax	pmax		
	comp=Z,89nm,1.1s,mb5.6						
JFWS	**Jewell Farm**	**47.21**	**273**	*e*P	**P**	**10 26 33.4**	**-0.2**
	comp=Z,89nm,1.1s,mb5.6						
WMQ	**Urumqi**	**47.28**	**80**	P	**P**	**10 26 35.4**	**+1.2**
WMQ				AP	pP	10 26 39.4	+2.2
WMQ				XP	sP	10 26 41.4	+3.0
WMQ				PCP	PcP	10 28 06.4	+0.7
WMQ				PP	PP	10 28 26.0	+1.2
WMQ				PPP	PPP	10 29 13.8	+1.6
WMQ				*e*S	**S**	**10 33 27.5**	**+1.0**
WMQ				SCS	ScS	10 36 26.3	+0.4
WMQ				SS	SS	10 36 49.4	+2.0
WMQ				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,150nm,4.3s						
WMQ				LR	LR		
	comp=N,840nm,18.8s,MS4.9						
WMQ				LR	LR		
	comp=E,840nm,18.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,850nm,18.8s,MS4.7						
KLR	**Kul'dur**	**47.29**	**38**	*e*P	**P**	**10 26 31.0**	**-3.2**
BOZ	**Bozeman (W)**	**47.52**	**295**	*e*P	**P**	**10 26 36.2**	**+0.2**
BOZ				*e*		10 26 44.1	

BOZ				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.1						
BOZ	**Bozeman (W)**	**47.52**	**295**	eP	**P**	**10 26 36.2**	**+0.2**
	comp=Z,28nm,1.5s,mb5.1						
BOZ				e		10 26 44.1	
RSSD	**Black Hills**	**47.99**	**287**	eP	**P**	**10 26 37.2**	**-2.5**
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
RSSD	**Black Hills**	**47.99**	**287**	eP	**P**	**10 26 37.2**	**-2.5**
	comp=Z,10.0nm,0.9s,mb4.8						
MCMT	**McKenzie Canyo**	**48.48**	**295**	eP	**P**	**10 26 44.4**	**+0.8**
MSL	**Mosul**	**48.55**	**127**	e	**P**	**10 26 52.5**	**+8.3**
BMO	**Blue Mountains**	**49.03**	**300**	eP	**P**	**10 26 47.8**	**0.0**
	comp=Z,20nm,1.3s,mb5.0						
IMW	**Indian Meadow**	**49.15**	**293**	eP	**P**	**10 26 49.9**	**+1.2**
	comp=Z,29nm,1.4s,mb5.1						
MOOW	**Moose Ponds**	**49.27**	**293**	eP	**P**	**10 26 49.9**	**+0.3**
	comp=Z,16nm,1.4s,mb4.9						
LOHW	**Long Hollow**	**49.38**	**293**	eP	**P**	**10 26 51.2**	**+0.7**
	comp=Z,14nm,1.3s,mb4.8						
WUWY	**Wally Ulrich**	**49.47**	**293**	eP	**P**	**10 26 53.0**	**+1.8**
WUWY				ePcP	PcP	10 28 13.8	+0.2
WUWY				e		10 28 21.6	
SNOW	**Snow King Moun**	**49.55**	**293**	eP	**P**	**10 26 50.6**	**-1.2**
	comp=Z,11nm,1.1s,mb4.8						
SNOW				ePcP	PcP	10 28 13.8	-0.1
SNOW				e		10 28 21.6	
REDW	**Red Top Meadow**	**49.66**	**293**	eP	**P**	**10 26 50.8**	**-1.8**
	comp=Z,18nm,1.2s,mb5.0						
RRI2	**Red Ridge**	**49.74**	**294**	P	**P**	**10 26 49.1**	**-4.1**
	comp=Z,21nm,1.2s,mb5.0						
KSH	**Kashi**	**49.80**	**92**	eP	**P**	**10 26 54.4**	**+0.6**
KSH				eAP	pP	10 26 58.0	+1.1
KSH				eXP	sP	10 27 01.0	+3.0
KSH				ePCP	PcP	10 28 17.0	+2.1
KSH				ePP	PP	10 28 49.1	-0.3
KSH				ePPP	PPP	10 29 42.3	-2.0
KSH				eSCP		10 32 10.0	
KSH				ePCS		10 32 12.6	
KSH				eS	**S**	**10 34 00.3**	**-1.7**
KSH				eSCS	ScS	10 36 43.3	+0.7
KSH				AMB	AMB		
	comp=Z,290nm,4.3s						
HLID	**Hailey**	**49.93**	**297**	eP	**P**	**10 26 54.7**	**0.0**
	comp=Z,6.4nm,1.0s,mb4.6						
HLID				ePP	PP	10 28 56.8	+6.1
HLID				e		10 29 09.2	
HLID				LR	LR		
	comp=Z,1μm,19.0s,MS4.9						
PDAR	**Pinedale Array**	**50.07**	**292**	P	**P**	**10 26 55.6**	**-0.2**
	comp=Z,2.0nm,1.1s,mb4.1,baz=34,slow=5.3,SNR=9.2						
PDAR				LR	LR	10 48 32.4	
	comp=Z,787nm,19.8s,MS4.7,baz=15,slow=37						
YSS	**Yuzh-Sakhalins**	**50.42**	**29**	eP	**P**	**10 26 57.8**	**-0.6**
YSS				MLR	MLR		
	comp=Z,163nm,20.0s,MS4.0						
BLA	**Blacksburg**	**51.38**	**262**	eP	**P**	**10 27 05.3**	**-0.5**
BLA				e		10 27 12.9	
BLA				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.3						
BLA	**Blacksburg**	**51.38**	**262**	eP	**P**	**10 27 05.3**	**-0.5**
	comp=Z,44nm,1.1s,mb5.3						
BLA				e		10 27 12.9	
ELN	**Prospectdale**	**51.41**	**263**	eP	**P**	**10 27 06.2**	**+0.2**
HWUT	**Hardware Ranch**	**51.48**	**294**	eP	**P**	**10 27 06.2**	**-0.4**
	comp=Z,17nm,1.3s,mb4.8						
HWUT				e		10 27 14.1	
MDJ	**Mudanjiang**	**51.66**	**41**	P	**P**	**10 27 07.5**	**-0.4**
MDJ				AP	pP	10 27 12.1	+1.2
MDJ				PCP	PcP	10 28 19.8	-1.8
MDJ				PP	PP	10 29 05.1	-1.1
MDJ				S	**S**	**10 34 26.8**	**-0.8**
MDJ				SS	SS	10 38 07.0	+5.0
MDJ				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,70nm,5.0s						
MDJ				LR	LR		
	comp=N,90nm,16.3s						
MDJ				LR	LR		
	comp=E,70nm,7.9s						
MDJ				LR	LR		
	comp=Z,110nm,12.6s,MS4.1						
MDJ	**Mudanjiang**	**51.66**	**41**	eP	**P**	**10 27 08.1**	**+0.2**
	comp=Z,26nm,1.0s,mb5.1						
KSU1	**Kansas State U**	**51.86**	**279**	eP	**P**	**10 27 08.2**	**-1.3**
KSU1				e		10 27 16.0	
ASF	**Jabal al Asfar**	**51.94**	**134**	P	**P**	**10 27 09.8**	**-0.4**
	comp=Z,3.6nm,0.8s,mb4.3,baz=49,slow=10,SNR=3.4						
CN2	**Changchun**	**52.06**	**45**	eP	**P**	**10 27 11.1**	**+0.2**
CN2				eAP	pP	10 27 16.0	+2.0
CN2				eS	**S**	**10 34 32.0**	**-1.1**
CN2				eSS	SS	10 38 07.0	-1.4
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
CN2				LR	LR		
	comp=N,200nm,16.0s,MS4.5						
CN2				LR	LR		
	comp=E,300nm,16.0s,MS4.5						
CN2				LR	LR		
	comp=Z,200nm,16.0s,MS4.2						
CCM	**Cathedral Cave**	**52.12**	**273**	eP	**P**	**10 27 09.5**	**-1.9**
CCM				e		10 27 16.1	
CCM				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
CCM	**Cathedral Cave**	**52.12**	**273**	eP	**P**	**10 27 09.5**	**-1.9**
	comp=Z,9.5nm,1.0s,mb4.7						
CCM				e		10 27 16.1	
MOD	**Modoc**	**52.31**	**302**	eP	**P**	**10 27 13.6**	**+0.8**
	comp=Z,9.3nm,1.0s,mb4.7						
MOD				e		10 27 21.1	
ISCO	**Idaho Springs**	**52.45**	**287**	eP	**P**	**10 27 15.2**	**+1.3**
ISCO				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6						
ISCO	**Idaho Springs**	**52.45**	**287**	eP	**P**	**10 27 15.2**	**+1.3**
	comp=Z,12nm,1.4s,mb4.6						
TZTN	**Tazewell**	**52.48**	**265**	eP	**P**	**10 27 16.1**	**+1.9**
TZTN				e	pP	10 27 20.8	+3.5
CBKS	**Cedar Bluff**	**52.59**	**282**	eP	**P**	**10 27 15.2**	**+0.2**
CBKS				e		10 27 21.5	
CBKS				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.3						
CBKS	**Cedar Bluff**	**52.59**	**282**	eP	**P**	**10 27 15.2**	**+0.2**
	comp=Z,42nm,1.1s,mb5.3						
CBKS				e		10 27 21.4	
YBH	**Yreka Blue Hor**	**52.77**	**304**	P	**P**	**10 27 16.1**	**-0.1**
	comp=Z,0.5nm,0.3s,mb3.9,baz=14,slow=8.3,SNR=1.9						
ELK	**Elko**	**52.81**	**297**	eP	**P**	**10 27 16.2**	**-0.4**
ELK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ELK	**Elko**	**52.81**	**297**	eP	**P**	**10 27 16.2**	**-0.4**
	comp=Z,7.9nm,1.1s,mb4.6						
GTA	**Gaotai**	**53.30**	**69**	P	**P**	**10 27 20.3**	**+0.1**
GTA				AP	pP	10 27 24.0	+0.7
GTA				XP	sP	10 27 28.1	+3.7
GTA				PCP	PcP	10 28 26.0	-1.8
GTA				PP	PP	10 29 23.6	+1.5
GTA				PPP	PPP	10 30 33.0	+4.4
GTA				SCP		10 32 22.4	
GTA				S	**S**	**10 34 53.3**	**+3.3**
GTA				XS		10 35 02.4	
GTA				SCS	ScS	10 37 06.3	-0.3
GTA				SS	SS	10 38 33.9	+4.7
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
GTA				AMB	AMB		
	comp=Z,70nm,12.5s						
GTA				LR	LR		
	comp=N,380nm,16.3s,MS4.6						
GTA				LR	LR		
	comp=E,330nm,19.0s,MS4.6						
GTA				LR	LR		
	comp=Z,330nm,23.9s,MS4.3						
HHC	**Hu-ho-hao-te**	**53.41**	**58**	eP	**P**	**10 27 19.6**	**-1.4**
HHC				AP	pP	10 27 25.3	+1.3
HHC				XP	sP	10 27 29.8	+4.6
HHC				PP	PP	10 29 26.9	+3.9
HHC				S	**S**	**10 34 47.3**	**-4.2**
HHC				XS		10 35 00.8	
HHC				SCS	ScS	10 37 07.3	-0.1
HHC				SS	SS	10 38 31.4	+0.4
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
HHC				AMB	AMB		
	comp=Z,90nm,6.1s						
HHC				LR	LR		
	comp=Z,390nm,13.4s,MS4.6						
TMUT	**Trail Mountain**	**53.70**	**293**	eP	**P**	**10 27 23.5**	**+0.4**
TMUT				e		10 27 31.0	
PV10	**Paradox Valley**	**54.32**	**290**	eP	**P**	**10 27 28.5**	**+0.8**
JSC	**Jenkinsville**	**54.38**	**262**	eP	**P**	**10 27 29.2**	**+1.1**
SDCO	**Great Sand Dun**	**54.45**	**287**	eP	**P**	**10 27 28.1**	**-0.5**
	comp=Z,20nm,1.4s,mb4.8						
PV01	**Paradox Valley**	**54.49**	**290**	eP	**P**	**10 27 29.2**	**+0.3**
MSU	**Marysvale**	**54.61**	**293**	eP	**P**	**10 27 30.5**	**+0.7**
MVU	**Marysvale**	**54.62**	**293**	P	**P**	**10 27 26.4**	**-3.5**
	comp=Z,3.9nm,0.9s,mb4.4						
PLAL	**Pickwick Lake**	**54.67**	**269**	eP	**P**	**10 27 30.4**	**+0.1**
	comp=Z,21nm,1.1s,mb5.1						
PLAL				e	pP	10 27 35.4	+2.0
WCN	**Washoe City**	**54.81**	**301**	eP	**P**	**10 27 31.8**	**+0.5**
WCN				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
WCN	**Washoe City**	**54.81**	**301**	eP	**P**	**10 27 31.8**	**+0.6**
	comp=Z,9.1nm,1.3s,mb4.7						
OXF	**Oxford**	**55.33**	**271**	P	**P**	**10 27 32.5**	**-2.6**
OXF				e		10 27 41.0	
OXF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
OXF	**Oxford**	**55.33**	**271**	P	**P**	**10 27 32.5**	**-2.6**
	comp=Z,18nm,0.9s,mb5.1						
OXF				e		10 27 41.0	
MNV	**Mina**	**55.46**	**299**	eP	**P**	**10 27 35.8**	**-0.3**
MNV				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
MNV	**Mina**	**55.46**	**299**	eP	**P**	**10 27 35.8**	**-0.2**
	comp=Z,14nm,1.3s,mb4.8						
NVAR	**Mina Array Bea**	**55.48**	**299**	P	**P**	**10 27 35.3**	**-0.9**
	comp=Z,2.4nm,0.8s,mb4.3,baz=34,slow=6.8,SNR=8.7						
NVAR				PP	PP	10 29 36.2	-5.5
	comp=Z,0.5nm,0.8s,baz=13,slow=12,SNR=1.7						
NVAR				LR	LR	10 52 15.0	
	comp=Z,551nm,19.1s,MS4.7,baz=30,slow=37						
ARUT	**Antelope Range**	**55.49**	**294**	P	**P**	**10 27 36.0**	**-0.2**
UALR	**University of**	**55.49**	**273**	P	**P**	**10 27 35.9**	**-0.5**
	comp=Z,26nm,1.3s,mb5.1						
OMM	**Old Mammoth Mi**	**56.37**	**300**	eP	**P**	**10 27 43.1**	**+0.5**
WMOK	**Wichita Mounta**	**56.46**	**280**	eP	**P**	**10 27 42.5**	**-0.8**
WMOK				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
WMOK				MLR	MLR		
	comp=Z,250nm,21.0s,MS4.3						
WMOK	**Wichita Mounta**	**56.46**	**280**	eP	**P**	**10 27 42.5**	**-0.8**
	comp=Z,15nm,1.0s,mb5.0						
WMOK				LR	LR		
	comp=Z,250nm,21.0s,MS4.3						
MTUM	**Tungsten Hills**	**56.58**	**299**	P	**P**	**10 27 45.1**	**+1.0**
LZH	**Lanzhou**	**57.11**	**66**	⇓P	**P**	**10 27 47.5**	**-0.4**
LZH				PP	PP	10 29 55.5	-0.9
LZH				eS	**S**	**10 35 39.5**	**-1.5**
LZH				SS	SS	10 39 28.8	-2.5
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,100nm,5.6s						
LZH				LR	LR		
	comp=Z,1μm,18.2s,MS5.0						
LZH	**Lanzhou**	**57.11**	**66**	⇓P	**P**	**10 27 47.5**	**-0.4**
LZH				*PP	pP	10 27 50.7	-0.3
LZH				*SP	sP	10 27 54.1	+1.9
LZH						10 29 55.5	
LZH				eS	**S**	**10 35 39.5**	**-1.5**
LZH				*SS		10 35 46.6	
LZH				SS	SS	10 39 28.7	-2.6
LZH				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.1						
LZH				MLR	MLR		
	comp=Z,1μm,18.2s,MS5.0						
LZH	**Lanzhou**	**57.11**	**66**	⇓P	**P**	**10 27 47.5**	**-0.4**
	comp=Z,28nm,1.5s,mb5.1						
LZH				pP	pP	10 27 50.7	-0.3
LZH				sP	sP	10 27 54.1	+1.9
LZH				PP	PP	10 29 55.5	-0.9
LZH				eS	**S**	**10 35 39.5**	**-1.5**
LZH				sS		10 35 46.6	
LZH				SS	SS	10 39 28.7	-2.6
LZH				LR	LR		
	comp=Z,1μm,18.2s,MS5.0						
ANMO	**Albuquerque**	**57.33**	**287**	eP	**P**	**10 27 49.0**	**-0.5**
ANMO				pmax	pmax		
	comp=Z,12nm,1.4s						
ANMO	**Albuquerque**	**57.33**	**287**	P	**P**	**10 27 48.8**	**-0.7**
	comp=Z,1.7nm,0.7s,mb4.2,baz=8.5,slow=6.0,SNR=6.8						
ANMO	**Albuquerque**	**57.33**	**287**	eP	**P**	**10 27 49.0**	**-0.5**
	comp=Z,12nm,1.4s,mb4.7						
WUAZ	**Wupatki**	**57.45**	**292**	eP	**P**	**10 27 50.5**	**+0.2**
	comp=Z,9.6nm,0.9s,mb4.8						
NEN	**Nelson**	**57.78**	**295**	eP	**P**	**10 27 52.5**	**-0.1**
BNM	**Barren Site**	**58.14**	**287**	P	**P**	**10 27 54.4**	**-0.7**
BNM				e		10 28 01.8	
LENM	**Lemitar**	**58.18**	**288**	P	**P**	**10 27 56.0**	**+0.6**
TIA	**Tai'an**	**58.65**	**54**	eP	**P**	**10 27 58.3**	**-0.4**
TIA				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.3						
NATX	**Nacogdoches**	**58.79**	**275**	eP	**P**	**10 28 01.8**	**+2.0**
	comp=Z,42nm,0.8s,mb5.5						
MWC	**Mount Wilson**	**59.60**	**298**	eP	**P**	**10 28 05.6**	**+0.3**
MWC				e		10 28 12.6	
CLNB	**Carlsbad**	**59.61**	**284**	eP	**P**	**10 28 04.8**	**-0.6**
GDL2	**Guadalupe Moun**	**59.74**	**285**	eP	**P**	**10 28 03.4**	**-2.9**
MNTX	**Cornudas Mount**	**60.38**	**286**	eP	**P**	**10 28 08.1**	**-2.6**
	comp=Z,3.6nm,0.8s,mb4.5						
MJAR	**Matsushiro Arr**	**60.43**	**34**	P	**P**	**10 28 09.8**	**-1.1**
	comp=Z,2.7nm,0.8s,mb4.3,baz=346,slow=7.7,SNR=9.9						
MJAR				LR	LR	10 53 36.1	
	comp=Z,96nm,18.4s,MS4.0,baz=330,slow=35						
LSA	**Lhasa**	**61.64**	**80**	eP	**P**	**10 28 19.8**	**+0.6**
LSA				e		10 28 28.0	
LSA				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1						
LSA	**Lhasa**	**61.64**	**80**	eP	**P**	**10 28 19.8**	**+0.6**
	comp=Z,12nm,0.8s,mb5.1						
LSA				e		10 28 28.0	
GKN	**Gorkha**	**62.37**	**86**	eP	**P**	**10 28 23.4**	**-0.8**
	comp=Z,85nm,0.9s,mb5.9						
KOLN	**Koldanda**	**62.45**	**87**	eP	**P**	**10 28 23.0**	**-1.7**
	comp=Z,42nm,1.0s,mb5.5						
LTX	**Lajitas**	**62.47**	**283**	P	**P**	**10 28 24.8**	**0.0**
LTX				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
LTX				MLR	MLR		
	comp=Z,624nm,19.0s,MS4.8						
LTX	**Lajitas**	**62.47**	**283**	P	**P**	**10 28 24.8**	**0.0**
	comp=Z,11nm,0.8s,mb5.0						
LTX				LR	LR		
	comp=Z,624nm,19.0s,MS4.8						
TXAR	**Lajitas Array**	**62.47**	**283**	P	**P**	**10 28 23.6**	**-1.2**
	comp=Z,3.9nm,1.1s,mb4.5,baz=33,slow=3.9,SNR=23						
TXAR				LR	LR	10 56 04.9	
	comp=Z,511nm,18.1s,MS4.7,baz=315,slow=37						
GUN	**Gumba**	**62.64**	**85**	eP	**P**	**10 28 25.9**	**-0.1**
	comp=Z,130nm,1.1s						
KKN	**Kakani**	**62.67**	**86**	eP	**P**	**10 28 25.8**	**-0.4**
	comp=Z,128nm,0.9s						
KKN	**Kakani**	**62.67**	**86**	eP	**P**	**10 28 25.8**	**-0.4**
KKN				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.8						
DMN	**Daman**	**62.82**	**86**	eP	**P**	**10 28 26.7**	**-0.5**
	comp=Z,54nm,0.9s,mb5.7						
PKI	**Pulchoki**	**62.90**	**86**	eP	**P**	**10 28 27.0**	**-0.7**
	comp=Z,64nm,1.0s,mb5.7						
PKI	**Pulchoki**	**62.90**	**86**	eP	**P**	**10 28 27.0**	**-0.7**
PKI				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.4						
NJ2	**Nanjing**	**62.96**	**53**	eP	**P**	**10 28 28.1**	**+0.1**
NJ2				AP	pP	10 28 32.6	+1.5
NJ2				XP	sP	10 28 35.4	+3.1
NJ2				PCP	PcP	10 29 03.4	-2.5
NJ2				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.5						
ENH	**Enshi**	**63.58**	**62**	eP	**P**	**10 28 31.9**	**-0.1**
	comp=Z,56nm,1.3s,mb5.4						
ENH				e		10 28 41.2	
SSE	**Sheshan**	**64.17**	**51**	P	**P**	**10 28 34.6**	**-1.3**
SSE				PP	PP	10 30 57.0	-1.9
SSE				S	**S**	**10 37 08.8**	**-2.6**
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.6						
SSE				AMB	AMB		
	comp=Z,50nm,4.1s						
SSE				LR	LR		
	comp=N,30nm,20.7s,MS4.0						
SSE				LR	LR		
	comp=E,100nm,20.6s,MS4.0						
SSE				LR	LR		
	comp=Z,60nm,19.1s,MS3.8						
SSE	**Sheshan**	**64.17**	**51**	P	**P**	**10 28 33.6**	**-2.3**
	comp=Z,41nm,0.7s,mb5.6						
SSE				sP	sP	10 28 37.7	-2.4
SSE				PP	PP	10 30 57.0	-1.9
SSE				S	**S**	**10 37 08.7**	**-2.7**
SSE				sS		10 37 13.6	
SSE				SS	SS	10 41 17.1	-5.1
SSE				LR	LR		
	comp=Z,70nm,19.1s,MS3.9						
GYA	**Guiyang**	**66.97**	**65**	⇓iP	**P**	**10 28 53.8**	**-0.1**
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
KMI	**Kunming**	**67.76**	**69**	P	**P**	**10 28 57.8**	**-1.1**
KMI				PCP	PcP	10 29 24.8	-0.9
KMI				PP	PP	10 31 29.0	-1.3
KMI				PPP	PPP	10 33 06.1	-1.2
KMI				SCP		10 33 27.0	
KMI				PCS		10 33 28.3	
KMI				S	S	10 37 53.9	-1.3
KMI				SCS	ScS	10 38 52.8	-1.1
KMI				SS	SS	10 42 16.3	-1.6
KMI				SSS	SSS	10 45 15.4	-1.8
KMI				LR	LR		
	comp=N,250nm,18.7s,MS4.6						
KMI				LR	LR		
	comp=E,180nm,14.8s,MS4.6						
KMI				LR	LR		
	comp=Z,370nm,20.2s						
KMI	**Kunming**	**67.76**	**69**	P	**P**	**10 28 57.8**	**-1.1**
KMI				*PP	pP	10 29 00.9	-1.1
KMI				*SP	sP	10 29 02.1	-1.1
KMI						10 29 24.7	
KMI						10 31 29.0	
KMI				PPP	PPP	10 33 06.1	-1.2
KMI				S	S	10 37 53.9	-1.3
KMI				PS	PS	10 38 18.3	-2.1
KMI						10 38 52.8	
KMI				SS	SS	10 42 16.3	-1.6
KMI				SSS	SSS	10 45 15.4	-1.8
KMI				MLR	MLR		
	comp=Z,380nm,20.2s,MS4.6						
KMI	**Kunming**	**67.76**	**69**	P	**P**	**10 28 57.8**	**-1.1**
KMI				pP	pP	10 29 00.9	-1.1
KMI				sP	sP	10 29 02.1	-1.1
KMI				PcP	PcP	10 29 24.7	-1.0
KMI				PP	PP	10 31 29.0	-1.3
KMI				PPP	PPP	10 33 06.1	-1.2
KMI				ScP		10 33 27.0	
KMI				PcS		10 33 28.2	
KMI				S	S	10 37 53.9	-1.3
KMI				sS		10 37 58.9	
KMI				PS	PS	10 38 18.3	-2.1
KMI				SKS	SKS	10 38 51.8	-6.0
KMI				ScS	ScS	10 38 52.8	-1.1
KMI				SS	SS	10 42 16.3	-1.6
KMI				SSS	SSS	10 45 15.4	-1.8
KMI				LR	LR		
	comp=Z,380nm,20.2s,MS4.6						
SJG	**San Juan**	**68.19**	**244**	LR	LR	10 57 53.2	
	comp=Z,122nm,21.7s,MS4.1,baz=9.5,slow=35						
SJG	**San Juan**	**68.19**	**244**	PFAKE		10 29 10.0	+8.3
SJG				LR	LR		
	comp=Z,177nm,21.0s,MS4.3						
JOW	**Kunigami**	**69.15**	**44**	LR	LR	10 59 03.0	
	comp=Z,107nm,19.1s,MS4.1,baz=293,slow=36						
CBIJ	**Chichi jima**	**70.12**	**31**	LR	LR	10 57 47.9	
	comp=Z,84nm,21.0s,MS4.0,baz=106,slow=34						
HYB	**Hyderabad**	**71.89**	**94**	eP	**P**	**10 29 23.0**	**-1.3**
HYB	**Hyderabad**	**71.89**	**94**	i P	**P**	**10 29 23.0**	**-1.3**
HYB				esP	sP	10 29 30.0	+1.5
CM31	**Chiang Mai Arr**	**73.80**	**74**	eP	**P**	**10 29 32.8**	**-2.5**
CMAR	**Chiang Mai Arr**	**73.80**	**74**	P	**P**	**10 29 34.0**	**-1.3**
	comp=Z,8.4nm,0.9s,mb4.7,baz=346,slow=7.2,SNR=32						
CMAR				LR	LR	11 05 11.0	
	comp=Z,140nm,19.4s,MS4.3,baz=350,slow=38						
DBIC	**Dimbokro**	**75.03**	**180**	LR	LR	11 02 34.1	
	comp=Z,75nm,19.7s,MS4.0,baz=357,slow=36						
DBIC	**Dimbokro**	**75.03**	**180**	PFAKE		10 29 50.0	+7.4
DBIC				LR	LR		
	comp=Z,212nm,22.0s,MS4.4						
SDV	**Santo Domingo**	**77.87**	**247**	eP	**P**	**10 29 59.5**	**+1.0**
	comp=Z,6.3nm,0.8s,mb4.6						
ROSC	**El Rosal**	**82.34**	**251**	LR	LR	11 10 35.1	
	comp=Z,119nm,18.9s,MS4.3,baz=337,slow=38						
MBAR	**Mbarara**	**83.80**	**144**	eP	**P**	**10 30 28.6**	**-1.2**
MBAR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
MBAR	**Mbarara**	**83.80**	**144**	eP	**P**	**10 30 28.6**	**-1.2**
	comp=Z,9.5nm,1.1s,mb4.8						
OTAV	**Otavalo**	**87.45**	**254**	eP	**P**	**10 30 48.9**	**+1.0**
	comp=Z,12nm,1.2s,mb5.0						
BDFB	**Brasilia**	**99.41**	**222**	LR	LR	11 10 12.6	
	comp=Z,86nm,20.3s,MS4.2,baz=24,slow=32						
VNA1	**Neumayer--Stat**	**152.20**	**183**	e	PKPdf	10 38 01.0	+12
VNA1	**Neumayer--Stat**	**152.20**	**183**	e	PKPdf	10 38 06.6	+17
VNA1	**Neumayer--Stat**	**152.20**	**183**	e	PKPdf	10 38 12.2	+23
VNA1	**Neumayer--Stat**	**152.20**	**183**	⇑iP	PKPdf	10 37 54.3	+5.1
VNA1				e		10 38 01.0	
VNA1				e		10 38 06.6	
VNA1				e		10 38 12.2	
SYO	**Syowa Base**	**152.31**	**147**	⇓pPKPdf		10 37 52.3	
SYO	**Syowa Base**	**152.31**	**147**	⇑P	PKPdf	10 38 10.7	+21
VNA2	**Neumayer--Watz**	**152.47**	**182**	e	PKPdf	10 38 01.8	+12
VNA2	**Neumayer--Watz**	**152.47**	**182**	e	PKPdf	10 38 05.2	+16
VNA2	**Neumayer--Watz**	**152.47**	**182**	e	PKPdf	10 38 08.1	+19
VNA2	**Neumayer--Watz**	**152.47**	**182**	e	PKPdf	10 38 12.0	+22
VNA2	**Neumayer--Watz**	**152.47**	**182**	⇑iP	PKPdf	10 37 54.8	+5.3
VNA2				e		10 38 01.8	
VNA2				e		10 38 05.2	
VNA2				e		10 38 08.1	
VNA2				e		10 38 12.0	
VNA3	**Neumayer Olymp**	**152.81**	**184**	e	PKPdf	10 38 02.2	+12
VNA3	**Neumayer Olymp**	**152.81**	**184**	e	PKPdf	10 38 05.7	+16
VNA3	**Neumayer Olymp**	**152.81**	**184**	e	PKPdf	10 38 09.1	+19
VNA3	**Neumayer Olymp**	**152.81**	**184**	e	PKPdf	10 38 14.1	+24
VNA3	**Neumayer Olymp**	**152.81**	**184**	⇑iP	PKPdf	10 37 55.2	+5.2
VNA3				e		10 38 02.2	
VNA3				e		10 38 05.7	
VNA3				e		10 38 09.1	
VNA3				e		10 38 14.1	
MAW	**Mawson**	**153.20**	**128**	PKPbc	PKPdf	10 37 56.1	+5.5
	comp=Z,3.6nm,1.0s,baz=337,slow=4.6,SNR=4.8						
SNAA	**Sanae**	**153.22**	**179**	eP	PKPdf	10 37 56.1	+5.5

NEIC ***16*** *10:31:00.3±2.4, 1.11N×127.26E, h130^{km}±24^{km}, mb4.5/4,*
Error ellipse: s-maj=17.6km s-min=7.7km az=61.0
IDC ***16*** *10:31:04.2±3.9, 1.05N×127.21E, h167^{km}±35^{km}, mb3.8/7,*
mb1 3.9/8, mb1mx3.6/18, mbtmp4.3/8, Error ellipse:
s-maj=57.8km s-min=11.6km az=72.0
ISC 16 10:30:57.5±2.9**, 1.2N**±0.1×**127.3E**±0.2**, h116**^{km}±27^{km}**, n16,**
σ**0^{s}.80**/17**, mb4.3**/9**, 1C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**14.72**	**160**	⇓iP	**P**	**10 34 20.9**	**-0.2**
	16nm,0.9s						
KSM	**Kuching**	**16.95**	**271**	eP	**P**	**10 34 49.9**	**+0.8**
FITZ	**Fitzroy Crossi**	**19.22**	**185**	eP	**P**	**10 35 13.7**	**-1.3**
	6.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.22**	**185**	P	**P**	**10 35 13.5**	**-1.6**
	2.4nm,0.3s,baz=13,slow=9.8,SNR=37						
WRAB	**Tennant Creek**	**22.09**	**162**	eP	**P**	**10 35 44.7**	**+0.6**
	35nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**22.10**	**162**	P	**P**	**10 35 44.9**	**+0.8**
	12nm,0.5s,mb4.5,baz=340,slow=11,SNR=145						
WRA				S	**S**	**10 39 36.6**	**+1.4**
	0.9nm,0.9s,baz=346,slow=17,SNR=3.8						
WB2	**Warramunga Arr**	**22.10**	**162**	⇑iP	**P**	**10 35 45.0**	**+0.8**
MBWA	**Marble Bar**	**23.39**	**198**	eP	**P**	**10 35 56.4**	**-0.3**
	38nm,1.4s,mb4.5						
NWAO	**Narrogin (SRO)**	**35.21**	**195**	P	**P**	**10 37 41.8**	**-0.8**
	14nm,1.1s,mb4.7,baz=1.0,slow=12,SNR=5.8						
STKA	**Stephens Creek**	**35.56**	**159**	P	**P**	**10 37 45.0**	**-0.5**
	1.8nm,0.3s,mb4.4,baz=336,slow=8.9,SNR=4.4						
LSA	**Lhasa**	**44.54**	**313**	P	**P**	**10 39 00.7**	**+1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ULN	Ulaanbaatar	49.70	342	P	P	10 39 39.9	+0.2
SONM	Songino Array	49.88	342	P	P	10 39 41.2	+0.2
	0.4nm,0.5s,mb3.6,baz=164,slow=9.0,SNR=3.6						
MKAR	Makanchi Array	59.95	326	P	P	10 40 53.4	-0.5
	1.6nm,0.3s,mb4.5,baz=124,slow=8.1,SNR=17						
BVAR	Borovoye Array	69.75	327	P	P	10 41 55.5	-1.4
	0.7nm,0.5s,mb3.8,baz=135,slow=6.3,SNR=5.4						
VNDA	Vanda	80.84	173	P	P	10 42 59.3	-0.2
	0.9nm,0.6s,mb3.8,baz=318,slow=7.8,SNR=8.0						

IDC 16 10:39:16.4±3.3, 13.66N×45.06W, mb3.7/5, mb1 4.0/5, mb1mx3.7/21, mbtmp3.7/5, MS3.5/3, Ms1 3.6/3, ms1mx3.0/27, Error ellipse: s-maj=101.2km s-min=29.4km az=94.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIV	San Ignacio	33.44	209	P	P	10 45 57.6	-1.8
	1.1nm,0.8s,baz=41,slow=11,SNR=4.0						
LPAZ	La Paz	37.49	218	P	P	10 46 32.3	-1.5
	0.8nm,0.7s,baz=4.8,slow=12,SNR=3.2						
TXAR	Lajitas Array	56.19	296	P	P	10 48 58.5	-2.2
	0.3nm,0.8s,baz=116,slow=8.6,SNR=5.1						
NOA	NORSAR Array B	62.12	27	LR	LR	11 10 09.4	
	comp=Z,27nm,19.5s,baz=90,slow=30						
PDAR	Pinedale Array	62.17	311	P	P	10 49 40.2	-1.7
	0.2nm,0.4s,baz=112,slow=4.9,SNR=4.5						
ARCES	ARCESS Array B	70.52	21	LR	LR	11 13 18.4	
	comp=Z,43nm,21.8s,baz=329,slow=29						
EIL	Elat	74.79	63	LR	LR	11 22 32.4	
	comp=Z,38nm,18.9s,baz=120,slow=35						
ILAR	Eielson Array	82.73	335	P	P	10 51 41.9	-1.2
	1.6nm,0.9s,baz=70,slow=5.0,SNR=17						

CASC 16 11:22:25.5±2.3, 11.10N×86.60W, h28^{km}±36^{km}, MD3.9, ML3.0, 4C-4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	El Crucero	0.93	19⇓	eP	Pn	11 22 43.1	+0.3
APON	Apoyo	0.97	33	eP	Pn	11 22 43.3	-0.1
TICN	Ticuantepe	1.00	21	eP	Pn	11 22 44.1	+0.3
TICN				eS	Sb	11 22 57.6	+0.6
XAVN	Gruta Xavier	1.08	14⇓	eP	Pn	11 22 44.9	0.0
MGAN	Managua	1.10	18⇑	eP	Pn	11 22 45.0	-0.3
MGAN				eS	Sn	11 23 00.4	+0.9
MGAN				i		11 23 00.5	
	comp=E,292nm,0.3s						
WILN	Americas 2	1.13	21⇓	eP	Pn	11 22 45.6	-0.1
WILN				eS	Sn	11 23 01.4	+1.0
APYN	Apoyeque	1.16	12⇑	eP	Pn	11 22 45.9	-0.1
APYN				eS	Sn	11 23 01.4	+0.4
LEON	Leon	1.34	348⇑	eP	Pn	11 22 48.1	-0.5
VCR	Vista de Mar	1.36	135	eP	Pn	11 22 46.9	-2.0
CNGN	Cerro Negro	1.40	356⇑	eP	Pn	11 22 48.9	-0.6
TEL3	Telica 3	1.49	351⇓	eP	Pn	11 22 50.3	-0.4
TELN	Telica	1.52	352	eP	Pn	11 22 50.9	-0.3
PYTN	Playitas	1.53	20	eP	Pn	11 22 50.2	-1.2
JCR	Jicaral	1.92	130	eP	Pn	11 22 58.4	+1.5
PRS1	Puriscal	2.51	116	eP	Pn	11 23 07.6	+2.2
TRTC	Tortuguero	2.88	100	eP	Pn	11 23 12.2	+1.5
URSC	Urasca	3.05	114	eP	Pn	11 23 14.2	+1.2

NEIC 16 11:37:51.0, 36.09N×120.14W, h16^{km}, ML3.5(NCEDC), After NCEDC., Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LRV	Little Rabbit	0.78	296	eP	Pb	11 38 06.3	+0.6
SAO	San Andreas Ge	1.25	303	eP	Pb	11 38 13.6	-0.1
OMM	Old Mammoth Mi	1.79	31	eP	Pn	11 38 22.5	+0.9
MTUM	Tungsten Hills	1.79	45	eP	Pn	11 38 22.9	+1.3
CMB	Columbia Colle	1.96	354	ePn	Pn	11 38 23.9	-0.2
CMB				eS	Sn	11 38 49.1	+0.8
SAC	San Andreas	2.36	310	Pn	Pn	11 38 28.1	-1.7
MWC	Mount Wilson	2.52	137	ePn	Pn	11 38 31.5	-0.7
MNV	Mina	2.83	34	ePn	Pn	11 38 37.0	+0.4
TPH	Tonopah	3.07	49	ePn	Pn	11 38 40.3	+0.4
NSHM	Saint Helena R	3.12	322	ePn	Pn	11 38 39.4	-1.3
WCN	Washoe City	3.23	5	ePn	Pn	11 38 41.6	-0.5
PAHR	Pah Rah Range	3.66	9	Pn	Pn	11 38 47.8	-0.6
HOPS	Hopland	3.72	322	Pn	Pn	11 38 48.6	-0.5
BEKR	Beckwourth	3.78	357	ePn	Pn	11 38 48.1	-1.9
PFO	Pinyon Flat Ob	3.91	128	ePn	Pn	11 38 49.9	-2.0
LDFC	Landfair	4.22	102	Pn	Pn	11 38 55.6	-0.8
TRCR	Troy Canyon	4.28	57	Pn	Pn	11 38 55.2	-2.0
NEN	Nelson	4.33	94	Pn	Pn	11 38 57.9	+0.1
BAR	Barrett	4.45	139	ePn	Pn	11 38 57.0	-2.5
WDC	Whiskeytown Da	4.87	338	Pn	Pn	11 39 05.5	0.0
BMN	Battle Mountai	4.91	27	Pn	Pn	11 39 04.4	-1.6
ARUT	Antelope Range	5.63	70	Pn	Pn	11 39 16.4	+0.2
MOD	Modoc	5.81	359	Pn	Pn	11 39 17.5	-1.2
ELK	Elko	6.04	38	ePn	Pn	11 39 21.0	-1.0
MVU	Marysvale	6.77	67	Pn	Pn	11 39 28.0	-4.2
MSU	Marysvale	6.80	67	Pn	Pn	11 39 30.3	-2.3
WUAZ	Wupatki	7.15	92	Pn	Pn	11 39 34.2	-3.4
JLU	Jordanelle	8.18	54	Pn	P	11 39 50.3	-1.8
SRU	San Rafael	8.21	66	Pn	P	11 39 50.2	-2.2
HWUT	Hardware Ranch	8.67	48	Pn	P	11 39 57.1	-1.6

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*NEIC **16** 12:11:17.0±1.1, 40.79N×126.47W, h10^{km}, mb3.9/7, MD3.5(NCEDC), Error ellipse: s-maj=14.8km s-min=8.4km az=69.0*

*IDC **16** 12:11:17.4±1.9, 41.02N×126.32W, mb3.6/4, mb1 3.8/10, mb1mx3.7/27, mbtmp3.6/10, ML3.6/3, MS3.2/10, Ms1 3.2/10, ms1mx3.0/30, Error ellipse: s-maj=27.6km s-min=16.0km az=32.0*

ISC 16 12:11:16.5±0.7, 40.83N±0.05×126.36W±0.08, h10^{km}, n58, σ1§29/56, mb3.7/6, MS3.1/4, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHMM	Horse Mountain	2.00	88	eP	Pn	12 11 50.2	-0.5
KHMM				eS	Sn	12 12 15.5	-0.4
KBO	Bosley Butte	2.11	49	ePn	Pn	12 11 51.4	-0.9
KEBM	Edson Butte	2.54	36	ePn	Pn	12 11 56.7	-1.7
YBH	Yreka Blue Hor	2.89	71	Pn	Pn	12 12 04.1	+0.6
	23nm,0.3s,baz=251,slow=11,SNR=347						
YBH				Sn	Sn	12 12 39.5	+0.8
	7.7nm,0.3s,baz=37,slow=18,SNR=5.5						
YBH				LR	LR	12 13 04.7	
	comp=Z,378nm,21.7s,baz=199,slow=38						
YBH	Yreka Blue Hor	2.89	71	ePn	Pn	12 12 03.9	+0.4
WDC	Whiskeytown Da	2.91	94	ePn	Pn	12 12 03.0	-0.8
HUMO	Hull Mountain	3.10	54	ePn	Pn	12 12 06.1	-0.4
HOPS	Hopland	3.12	125	ePn	Pn	12 12 05.8	-1.0
NSHM	Saint Helena R	3.70	127	Pn	Pn	12 12 17.3	+2.3
SAC	San Andreas	4.46	135	ePn	Pn	12 12 23.5	-2.3
MOD	Modoc	4.68	75	ePn	Pn	12 12 28.7	-0.2
BEKR	Beckwourth	4.69	100	ePn	Pn	12 12 27.9	-1.1
WCN	Washoe City	5.29	105	Pn	Pn	12 12 37.4	-0.2
CMB	Columbia Colle	5.40	119	ePn	Pn	12 12 39.5	+0.4
	12nm,0.8s						
SAO	San Andreas Ge	5.59	135	ePn	Pn	12 12 38.6	-3.1
	11nm,0.6s						
WVOR	Wild Horse Val	6.00	72	ePn	Pn	12 12 44.9	-2.6
LRV	Little Rabbit	6.07	135	ePn	Pn	12 12 45.7	-2.8
OMM	Old Mammoth Mi	6.56	117	Pn	Pn	12 12 54.2	-1.2
NVAR	Mina Array Bea	6.67	108	Pn	Pn	12 12 58.0	+1.1
	0.3nm,0.3s,baz=286,slow=16,SNR=8.1						
NVAR	Mina Array Bea	6.67	108	Pn	Pn	12 12 58.0	+1.1
MTUM	Tungsten Hills	6.99	117	Pn	Pn	12 13 01.7	+0.3
BMO	Blue Mountains	7.77	56	ePn	Pn	12 13 11.1	-1.3
ELK	Elko	8.44	87	Pn	P	12 13 23.2	+1.5
	0.1nm,0.3s,baz=282,slow=13,SNR=4.3						
ELK				LR	LR	12 16 47.2	
	comp=Z,192nm,19.2s,baz=41,slow=39						
ELK	Elko	8.44	87	Pn	P	12 13 21.6	-0.2
HLID	Hailey	9.28	69	eP	P	12 13 32.7	-0.6
NEW	Newport	9.93	38	LR	LR	12 17 40.5	
	comp=Z,142nm,18.2s,baz=226,slow=39						
MCMT	McKenzie Canyo	10.70	64	eP	P	12 13 52.6	-0.2
MSO	Missoula	10.78	52	eP	P	12 13 54.5	+0.6
HWUT	Hardware Ranch	11.17	81	eP	P	12 13 60.0	+0.7
MSU	Marysvale	11.18	97	Pn	P	12 14 01.5	+2.1
CHMT	Chamberlain Mo	11.24	53	eP	P	12 13 58.8	-1.4
BBB	Bella Bella	11.42	355	LR	LR	12 17 27.6	
	comp=Z,139nm,19.5s,baz=213,slow=33						
TPAW	Teton Pass	11.74	72	P	P	12 14 06.0	-1.1
BOZ	Bozeman (W)	11.77	61	eP	P	12 14 05.3	-2.1
REDW	Red Top Meadow	11.80	73	P	P	12 14 08.8	+1.0
IMW	Indian Meadow	11.81	70	eP	P	12 14 08.8	+0.8
HRY	Holter Researc	12.03	56	eP	P	12 14 10.9	0.0
BW06	Boulder Array	12.69	76	eP	P	12 14 21.1	+1.3
PDAR	Pinedale Array	12.69	76	Pn	P	12 14 20.8	+1.0
	0.1nm,0.3s,baz=260,slow=10,SNR=5.3						
EDM	Edmonton	15.21	31	eP	P	12 14 57.0	+4.2
LAO	LASA Array	15.67	61	P	P	12 15 02.3	+3.6
	45nm,0.9s						
SDCO	Great Sand Dun	16.44	94	eP	P	12 15 10.8	+2.1
	8.5nm,1.4s						
ANMO	Albuquerque	16.76	104	Pn	P	12 15 15.6	+2.8
	baz=290,slow=12,SNR=2.4						
ANMO				LR	LR	12 21 31.9	
	comp=Z,43nm,18.2s,slow=37						
ANMO	Albuquerque	16.76	104	eP	P	12 15 15.1	+2.3
	1.9nm,1.0s						
DLBC	Dease Lake	17.78	354	P	P	12 15 25.9	+0.5
	0.1nm,0.3s,baz=188,slow=7.1,SNR=4.7						
DLBC				LR	LR	12 20 42.4	
	comp=Z,59nm,21.4s,baz=143,slow=32						
DLBC	Dease Lake	17.78	354	eP	P	12 15 27.9	+2.5
MNTX	Cornudas Mount	19.18	112	P	P	12 15 42.0	-0.7
	0.7nm,0.7s						
TXAR	Lajitas Array	21.76	115	P	P	12 16 12.1	+1.9
	0.9nm,0.9s,mb3.2,baz=297,slow=8.4,SNR=5.8						
WMOK	Wichita Mounta	22.58	97	eP	P	12 16 20.4	+2.2
	3.4nm,1.2s,mb3.6						
YKA	Yellowknife Ar	22.81	14	P	P	12 16 18.9	-1.3
	2.1nm,1.0s,mb3.5,baz=202,slow=10.0,SNR=3.9						
ULM	Lac du Bonnet	23.19	56	P	P	12 16 25.0	+1.0
	8.2nm,0.8s,mb4.2,baz=270,slow=9.9,SNR=8.6						
ULM				LR	LR	12 25 57.6	
	comp=Z,102nm,18.7s,MS3.3,baz=273,slow=38						
ULM	Lac du Bonnet	23.19	56	eP	P	12 16 24.9	+0.9
	11nm,0.8s,mb4.3						
MENT	Mentasta	24.43	341	eP	P	12 16 37.0	+1.0
ILAR	Eielson Array	26.74	340	P	P	12 16 56.8	-0.8
	1.0nm,0.9s,mb3.4,baz=158,slow=7.7,SNR=7.1						
ILAR				LR	LR	12 25 45.0	
	comp=Z,47nm,19.1s,MS3.1,baz=1.8,slow=33						
FCC	Fort Churchill	27.10	38	P	P	12 17 01.2	+0.3
INK	Inuvik	27.80	354	LR	LR	12 27 12.7	
	comp=Z,21nm,19.0s,MS2.8,baz=256,slow=35						
SCHQ	Schefferville	41.07	49	LR	LR	12 36 45.1	
	comp=Z,33nm,21.8s,MS3.2,baz=81,slow=37						
SUMG	Summit	50.99	23	eP	P	12 20 20.2	+0.4
	4.3nm,0.8s,mb4.4						

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*IDC **16** 12:17:54.9±0.5, 2.15N×99.03E, mb4.5/14, mb1 4.6/14, mb1mx4.5/17, mbtmp4.5/14, MS4.0/14, Ms1 4.1/14, ms1mx3.9/23, Error ellipse: s-maj=30.2km s-min=13.8km az=61.0*

*BJI **16** 12:17:57.5, 1.70N×98.84E, h48^{km}, mB4.8, mb4.5, Ms4.7, Msz4.4*

*MOS **16** 12:17:58.5±1.4, 2.10N×98.93E, h33^{km}, mb5.0/24, MS4.2/9, Error ellipse: s-maj=16.8km s-min=7.1km az=108.3*

*NEIC **16** 12:17:59.5±0.3, 2.00N×98.98E, h30^{km}, mb4.7/16, Error ellipse: s-maj=11.8km s-min=7.3km az=64.0*

NEIC Felt [II] at Padangsidempuan, Sibolga and Tarutung.

ISC 16 12:17:58.4±0.3, 1.96N±0.04×98.98E±0.05, h36^{km}, h36^{km}±3.1^{km}:pP-P, n137, σ1§25/124, mb4.7/48, MS4.3/32, 9C-7D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim	3.71	27	ePn	P	12 18 54.0	-0.8
SNG	Songkhla	5.44	17	P	P	12 19 18.0	-1.1
	714nm,0.9s						
NST	Nakhon Sawan	13.68	5	P	P	12 21 09.2	-3.2
KKTK	Khon Kaen	14.78	15	P	P	12 21 33.0	+6.1
	432nm,1.0s						
CM31	Chiang Mai Arr	16.40	360	eP	P	12 21 49.7	+2.2
	38nm,1.3s						
CMAR	Chiang Mai Arr	16.40	360	P	P	12 21 49.0	+1.4
CMAR				MLR	MLR		
	comp=Z,610nm,19.0s						
CMAR	Chiang Mai Arr	16.40	360	Pn	P	12 21 49.0	+1.5
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=40						
CMAR				Sn	S	12 25 00.9	+13
	baz=194,slow=29,SNR=2.3						
CMAR				PcP	PcP	12 26 41.0	+1.1
	comp=Z,0.1nm,0.3s,baz=216,slow=3.6,SNR=7.5						
CMAR				LR	LR	12 28 06.5	
	comp=Z,610nm,19.0s,baz=180,slow=38						
CHG	Chiang Mai	16.75	360	⇑P	P	12 21 54.5	+2.5
	comp=Z,46nm,1.3s						
NANT	Nan	16.82	6	P	P	12 21 55.0	+2.1
QIZ	Qiongzhong	20.03	31	eP	P	12 22 32.0	+0.8
QIZ				S	S	12 26 17.3	+7.9
QIZ				AMB	AMB		
	comp=Z,30nm,1.6s						
QIZ				LR	LR		
	comp=N,450nm,18.0s,MS4.0						
QIZ				LR	LR		
	comp=E,540nm,18.3s,MS4.0						
QIZ				LR	LR		
	comp=Z,600nm,14.0s,MS4.1						
KMI	Kunming	23.32	9	P	P	12 23 06.3	+2.0
KMI				AP		12 23 14.8	
KMI				PP	PP	12 23 38.0	+2.0
KMI				PCP	PcP	12 26 54.4	+2.0
KMI				S	S	12 27 13.4	+2.8
KMI				SS	SS	12 28 00.8	+2.7
KMI				PCS		12 30 32.3	
KMI				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.3						
KMI				AMB	AMB		
	comp=Z,120nm,3.1s						
KMI				LR	LR		
	comp=N,510nm,13.1s,MS4.3						
KMI				LR	LR		
	comp=E,470nm,14.3s,MS4.3						
KMI				LR	LR		
	comp=Z,680nm,14.3s,MS4.2						
KMI	Kunming	23.32	9	P	P	12 23 06.3	+2.0
	comp=Z,24nm,1.5s,mb4.4						
KMI				pP		12 23 14.7	
KMI				sP		12 23 18.3	
KMI				PP	PP	12 23 38.0	+2.0
KMI				PPP	PPP	12 23 48.3	+2.2
KMI				PcP	PcP	12 26 54.4	+2.0
KMI				S	S	12 27 13.4	+2.8
KMI				sS		12 27 27.7	
KMI				SS	SS	12 28 00.8	+2.7
KMI				SSS	SSS	12 28 16.3	+2.1
KMI				ScP		12 30 28.8	
KMI				PcS		12 30 32.3	
SHL	Shillong	24.45	344	eP	P	12 23 14.0	-1.3
GYA	Guiyang	25.45	16	P	P	12 23 27.5	+2.6
GYA				AP	pP	12 23 36.8	+1.9
GYA				XP	sP	12 23 41.3	+2.2
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
GYA				AMB	AMB		
	comp=Z,160nm,6.8s						
GYA				LR	LR		
	comp=N,630nm,14.7s,MS4.5						
GYA				LR	LR		
	comp=E,720nm,11.3s,MS4.5						
GYA				LR	LR		
	comp=Z,660nm,15.1s,MS4.3						
FITZ	Fitzroy Crossi	32.97	128	P	P	12 24 32.0	-0.3
	comp=Z,4.7nm,0.9s,mb4.4,baz=348,slow=7.0,SNR=6.5						
FITZ				LR	LR	12 38 09.1	
	comp=Z,181nm,21.8s,MS3.7,baz=287,slow=37						
XAN	Xi’an	33.24	15	P	P	12 24 31.9	-2.6
LZH	Lanzhou	34.26	7	eP	P	12 24 42.3	-0.9
LZH				AP	pP	12 24 55.6	+2.1
LZH				PP	PP	12 26 00.5	+1.7
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,70nm,5.7s						
LZH				LR	LR		
	comp=N,630nm,13.2s						
LZH				LR	LR		
	comp=Z,1μm,16.8s,MS4.6						
LZH	Lanzhou	34.26	7	eP	P	12 24 42.2	-1.0
	comp=Z,26nm,1.5s,mb4.9						
LZH				pP	pP	12 24 51.5	-2.0
LZH				sP	sP	12 24 55.6	-2.6
LZH				PP	PP	12 26 00.5	+1.7
NJ2	Nanjing	35.31	30	eP	P	12 24 51.6	-0.7
NJ2				AP	pP	12 25 00.5	-2.1
NJ2				PP	PP	12 26 11.3	-0.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
SSE	Sheshan	35.79	34	P	P	12 24 56.0	-0.4
SSE				S	S	12 30 30.9	+0.4
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,60nm,3.8s						
SSE				LR	LR		
	comp=N,270nm,23.4s,MS4.2						
SSE				LR	LR		
	comp=E,390nm,23.3s,MS4.2						
SSE				LR	LR		
	comp=Z,180nm,20.6s,MS3.8						
SSE	Sheshan	35.79	34	P	P	12 24 56.0	-0.4
	comp=Z,23nm,0.7s,mb5.2						
SSE				pP	pP	12 25 04.9	-1.8
SSE				sP	sP	12 25 09.8	-1.6
SSE				S	S	12 30 30.9	+0.4
SSE				sS		12 30 46.8	
SSE				SS	SS	12 33 06.6	+14
KAKA	Kakadu	36.28	115	eP	P	12 25 00.0	-0.6
	comp=Z,21nm,1.0s,mb5.0						
GTA	Gaotai	37.28	1	P	P	12 25 08.3	-0.6
GTA				AP	pP	12 25 20.5	+1.2
GTA				XP	sP	12 25 24.8	+0.9
GTA				PP	PP	12 26 37.3	+0.6
GTA				PPP	PPP	12 26 59.0	+1.6
GTA				PCP	PcP	12 27 29.3	+1.0
GTA				S	S	12 30 54.8	+1.5
GTA				SCP		12 31 09.0	
GTA				XS		12 31 14.6	
GTA				SS	SS	12 33 29.8	+4.0
GTA				SCS	ScS	12 35 15.3	-2.5
GTA				AMB	AMB		
	comp=Z,90nm,10.6s						
GTA				LR	LR		
	comp=N,220nm,17.5s,MS4.3						
GTA				LR	LR		
	comp=E,330nm,14.8s,MS4.3						
GTA				LR	LR		
	comp=Z,290nm,25.1s						
NWAO	Narrogin (SRO)	38.75	155	P	P	12 25 23.1	+1.9
NWAO				pmax	pmax		
	comp=Z,22nm,1.2s						
NWAO				MLR	MLR		
	comp=Z,647nm,18.6s						
NWAO	Narrogin (SRO)	38.75	155	P	P	12 25 23.1	+1.9
	comp=Z,22nm,1.2s,mb4.8,baz=331,slow=10,SNR=3.3						
NWAO				LR	LR	12 40 30.9	
	comp=Z,647nm,18.6s,MS4.5,baz=150,slow=35						
NWAO	Narrogin (SRO)	38.75	155	eP	P	12 25 23.8	+2.6
WRA	Warramunga Arr	40.95	124	P	P	12 25 39.3	-0.3
WRA				pmax	pmax		
	comp=Z,30nm,0.9s						
WRA	Warramunga Arr	40.95	124	P	P	12 25 39.3	-0.2
	comp=Z,30nm,0.9s,mb4.9,baz=302,slow=9.1,SNR=110						
WRAB	Tennant Creek	40.96	124⇑	eP	P	12 25 39.5	-0.1
WRAB	Tennant Creek	40.96	124	eP	P	12 25 39.1	-0.4
	comp=Z,50nm,0.9s,mb5.1						
WB2	Warramunga Arr	40.96	124⇑	iP	P	12 25 39.2	-0.4
WMQ	Urumqi	42.87	348	eP	P	12 25 54.4	-0.7
WMQ				AP	pP	12 26 04.1	-1.5
WMQ				PP	PP	12 27 36.3	-0.8
WMQ				PCP	PcP	12 27 46.9	+0.7
WMQ				PPP	PPP	12 28 10.0	-1.7
WMQ				eS	S	12 32 15.3	-1.5
WMQ				SCS	ScS	12 35 50.8	+0.2
WMQ				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,240nm,4.2s						
WMQ				LR	LR		
	comp=N,990nm,20.4s,MS4.8						
WMQ				LR	LR		
	comp=E,840nm,24.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,990nm,20.0s,MS4.7						
KZA	Kyzart	45.27	335	P	P	12 26 17.3	+2.9
	SNR=7.2						
UCH	Uchtor	45.70	335	P	P	12 26 19.0	+1.1
	SNR=8.3						
TKM2	Tokmak 2	45.82	336	P	P	12 26 19.5	+0.7
	SNR=7.4						
KBK	Karagaybulak	45.87	335	P	P	12 26 20.1	+0.9
	SNR=12						
AML	Almayashu	45.98	334	P	P	12 26 20.5	+0.4
	SNR=15						
AAK	Ala-Archa	46.04	335	i P	P	12 26 20.2	-0.4
AAK				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.8						
AAK				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.1						
AAK	Ala-Archa	46.04	335	eP	P	12 26 20.4	-0.2
	comp=Z,18nm,1.4s,mb4.8						
SONM	Songino Array	46.15	7	P	P	12 26 20.6	-0.7
	comp=Z,5.7nm,1.0s,mb4.5,baz=190,slow=7.5,SNR=33						
SONM				PcP	PcP	12 27 58.0	+0.6
	comp=Z,2.5nm,0.9s,baz=180,slow=3.7,SNR=6.2						
FRU	Bishkek	46.15	335	P	P	12 26 21.0	-0.4
FRU				e		12 26 27.0	
ULN	Ulaanbaatar	46.26	8⇓	eP	P	12 26 21.9	-0.3
ULN	Ulaanbaatar	46.26	8	eP	P	12 26 22.0	-0.2
	comp=Z,13nm,1.3s,mb4.7						
EKS2	Erkin-Say	46.37	334	P	P	12 26 23.7	+0.6
	SNR=5.4						
USP	Ospenovka	46.56	335	P	P	12 26 24.4	-0.2
	SNR=12						
MKAR	Makanchi Array	46.97	344	i P	P	12 26 27.5	-0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	46.97	344	P	P	12 26 26.6	-1.1
	comp=Z,1.4nm,0.5s,mb4.1,baz=158,slow=6.5,SNR=20						
CN2	Changchun	47.84	26	eP	P	12 26 35.5	+0.8
CN2				eAP	pP	12 26 45.5	+0.3
CN2				eS	S	12 33 29.5	+1.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CN2				LR	LR		
	comp=N,400nm,16.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,16.0s,MS4.6						
CN2				LR	LR		
	comp=Z,400nm,15.0s,MS4.5						
KKAR	Karatay Array	48.19	332	i P	P	12 26 37.2	-0.2
ZAK	Zakamensk	48.38	4	eP	P	12 26 38.0	-0.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.9						
TLY	Talaya	49.70	4	eP	P	12 26 48.0	-1.0
TLY				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
TLY				MLR	MLR		
	comp=Z,255nm,17.0s,MS4.3						
MJAR	Matsushiro Arr	49.94	42	PcP	PcP	12 28 10.7	-0.4
	comp=Z,2.4nm,1.0s,baz=207,slow=2.8,SNR=4.6						
IRK	Irkutsk	50.31	4	eP	P	12 26 53.5	-0.1
IRK				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
MDJ	Mudanjiang	50.35	28	P	P	12 26 53.5	-0.5
MDJ				AP	pP	12 27 06.5	+1.9
MDJ				PCP	PcP	12 28 11.3	-1.2
MDJ				PP	PP	12 28 49.3	-1.2
MDJ				PCS		12 32 08.8	
MDJ				S	S	12 34 05.3	+2.1
MDJ				SS	SS	12 37 38.1	+4.0
MDJ				AMB	AMB		
	comp=Z,50nm,4.8s						
MDJ				LR	LR		
	comp=N,320nm,15.6s,MS4.6						
MDJ				LR	LR		
	comp=E,290nm,15.6s,MS4.6						
MDJ				LR	LR		
	comp=Z,350nm,16.9s,MS4.4						
CTA	Charters Tower	51.27	118	eP	P	12 27 01.5	+0.2
	comp=Z,4.6nm,0.8s,mb4.5						
CTA	Charters Tower	51.27	118	LR	LR	12 51 23.7	
	comp=Z,116nm,18.8s,MS3.9,baz=56,slow=39						
CIT	Chita	51.36	11	eP	P	12 27 01.6	0.0
STKA	Stephens Creek	52.56	133	P	P	12 27 10.0	-0.9

	comp=Z,2.3nm,0.5s,mb4.4,baz=316,slow=8.0,SNR=6.2						
STKA				LR	LR	12 51 16.6	
	comp=Z,273nm,20.8s,MS4.3,baz=242,slow=38						
STKA	**Stephens Creek**	**52.56**	**133**	*e*P	**P**	**12 27 07.7**	**-3.1**
NVS	**Novosibirsk**	**54.26**	**349**	*i* P	**P**	**12 27 20.3**	**-2.8**
KLR	**Kul'dur**	**54.80**	**26**	*e*P	**P**	**12 27 24.8**	**-2.3**
KLR				MLR	MLR		
	comp=E,500nm,14.0s						
KLR				MLR	MLR		
	comp=Z,700nm,14.0s,MS4.9						
VOSK	**Vostochnaya**	**55.69**	**340**	P	**P**	**12 27 30.9**	**-2.6**
VOSK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
KAMS	**Al Khamasin**	**56.09**	**293**	P	**P**	**12 27 36.4**	**-0.4**
BVA0	**Borovoye Array**	**56.14**	**340**	P	**P**	**12 27 34.6**	**-2.1**
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
MZLS	**Mizel**	**56.37**	**298**	P	**P**	**12 27 39.4**	**+0.6**
ZRNK	**Zerenda**	**56.57**	**339**	P	**P**	**12 27 37.6**	**-2.2**
ZRNK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
ZRNK	**Zerenda**	**56.57**	**339**	*e*P	**P**	**12 27 37.4**	**-2.4**
	comp=Z,11nm,1.1s,mb4.8						
DJNS	**Zahran al Janu**	**56.58**	**290**	P	**P**	**12 27 41.7**	**+1.3**
AB31	**Akbulak array**	**57.70**	**331**	*i* P	**P**	**12 27 45.8**	**-2.1**
AB31				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
YSS	**Yuzh-Sakhalins**	**58.73**	**34**	*e*P	**P**	**12 27 56.5**	**+1.4**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
HNR	**Honiara**	**61.77**	**102**	LR	LR	12 57 35.0	
	comp=Z,86nm,19.0s,MS3.9,baz=88,slow=38						
GNI	**Garni**	**61.99**	**315**	*d* *i*P	**P**	**12 28 17.2**	**-0.2**
GNI				pmax	pmax		
	comp=Z,25nm,1.4s						
SVE	**Sverdlovsk**	**62.66**	**337**	*e*P	**P**	**12 28 21.0**	**-0.6**
SVE				*e*		12 28 38.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.3						
SVE				MLR	MLR		
	comp=N,100nm,16.0s,MS4.2						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.2						
SVE				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.4						
YAK	**Yakutsk**	**64.21**	**16**	*i* P	**P**	**12 28 31.1**	**-0.6**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
YAK				MLR	MLR		
	comp=Z,200nm,11.0s,MS4.6						
KIV	**Kislovodsk**	**64.91**	**318**	*e*P	**P**	**12 28 35.9**	**-0.7**
KIV				*e*		12 29 07.4	
KIV				*e*S	**S**	**12 37 16.3**	**+2.4**
KIV				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
KIV				MLR	MLR		
	comp=N,44nm,20.0s,MS3.9						
KIV				MLR	MLR		
	comp=E,60nm,20.0s,MS3.9						
KIV				MLR	MLR		
	comp=Z,60nm,20.0s,MS3.8						
GOF	**Gofitskoye**	**65.12**	**320**	⇑*i*P	**P**	**12 28 35.3**	**-2.7**
GOF				pmax	pmax		
	comp=Z,30nm,1.7s,mb5.0						
SOC	**Sochi**	**66.76**	**317**	*e*P	**P**	**12 28 45.3**	**-3.1**
SOC				*e*S		12 37 53.7	
SOC				pmax	pmax		
	comp=N,29nm,1.0s						
SOC				pmax	pmax		
	comp=E,20nm,1.0s						
SOC				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.3						
BRTR	**Keskin Array B**	**69.92**	**312**	P	**P**	**12 29 06.4**	**-1.7**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRTR	**Keskin Array B**	**69.92**	**312**	P	**P**	**12 29 06.4**	**-1.7**
	comp=Z,5.1nm,0.8s,mb4.5,baz=126,slow=6.4,SNR=23						
VRSR	**Storozhevoye**	**69.96**	**325**	*e*P	**P**	**12 29 07.0**	**-1.1**
VRSR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
VRSR				pmax	pmax		
	comp=N,6.0nm,0.4s						
VRSR				pmax	pmax		
	comp=E,20nm,0.9s						
TIXI	**Tiksi**	**72.14**	**10**	*d* *i*P	**P**	**12 29 19.6**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,47nm,1.3s,mb5.3						
TIXI				MLR	MLR		
	comp=Z,200nm,23.0s,MS4.3						
SEY	**Seymchan**	**72.38**	**23**	*e*P	**P**	**12 29 22.9**	**+0.5**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
SEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
MATP	**Matopo**	**72.45**	**248**	LR	LR	12 55 46.0	
	comp=N,103nm,18.5s,MS4.1,baz=255,slow=31						
OBN	**Obninsk**	**72.92**	**328**	⇑*i*P	**P**	**12 29 25.3**	**-0.5**
OBN				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.2						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.1						
MAW	**Mawson**	**73.85**	**194**	⇑*i*P	**P**	**12 29 33.4**	**+2.4**
	comp=Z,4.0nm,0.9s,mb4.3						
MAW	**Mawson**	**73.85**	**194**	P	**P**	**12 29 33.1**	**+2.2**
	comp=Z,5.3nm,0.9s,mb4.5,baz=19,slow=10,SNR=8.2						
MAW				LR	LR	12 54 32.6	
	comp=Z,156nm,20.3s,MS4.3,baz=50,slow=30						
TIRR	**Tirgusor**	**74.82**	**316**	⇓P	**P**	**12 29 37.2**	**+0.2**
AKASG	**Malin Array Be**	**75.75**	**322**	P	**P**	**12 29 41.3**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**75.75**	**322**	P	**P**	**12 29 41.3**	**-0.9**
	comp=Z,2.8nm,0.7s,mb4.3,baz=86,slow=5.0,SNR=21						
LBTB	**Lobatse**	**75.81**	**244**	P	**P**	**12 29 41.1**	**-2.0**
	comp=Z,9.4nm,1.1s,mb4.6						
VRI	**Vrincioaia**	**76.28**	**317**	⇓P	**P**	**12 29 45.8**	**+0.5**
MLR	**Muntele Rosu**	**76.74**	**316**	⇑P	**P**	**12 29 48.4**	**+0.4**
BURAR	**Bucovina Array**	**77.64**	**318**	⇓P	**P**	**12 29 53.5**	**+0.6**
APA	**Apatity**	**79.05**	**339**	⇑*e*P	**P**	**12 30 07.2**	**+6.9**
APA				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.8						
KOLS	**Kolonicke sedl**	**79.80**	**319**	*e*P	**P**	**12 30 05.8**	**+1.1**
BILL	**Bilibino**	**79.83**	**21**	*i* P	**P**	**12 30 04.6**	**+0.1**
BILL				pmax	pmax		
	comp=Z,11nm,1.6s,mb4.5						
BILL				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.6						
SUW	**Suwalki**	**80.09**	**324**	*e*P	**P**	**12 30 05.9**	**-0.2**
FINES	**FINESS Array B**	**80.16**	**332**	P	**P**	**12 30 06.2**	**-0.1**
	comp=Z,2.5nm,0.7s,mb4.2,baz=117,slow=8.5,SNR=12						
FINES				LR	LR	13 11 25.1	
	comp=Z,60nm,20.1s,MS3.9,baz=113,slow=40						
KAF	**Kangasniemi**	**80.22**	**333**	*e*p	**P**	**12 30 02.5**	**-4.2**
	comp=Z,3.7nm,0.7s,mb4.4,baz=101,slow=5.1						
KAF	**Kangasniemi**	**80.22**	**333**	*e*P	**P**	**12 30 02.5**	**-4.2**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
SYO	**Syowa Base**	**81.27**	**198**	⇓P	**P**	**12 30 13.5**	**+1.4**
SYO	**Syowa Base**	**81.27**	**198**	⇑sP	sP	12 30 26.0	-1.2
OJC	**Ojcow**	**81.57**	**320**	*e*P	**P**	**12 30 14.7**	**+0.7**
ARCES	**ARCESS Array B**	**82.43**	**340**	P	**P**	**12 30 17.5**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ARCES	**ARCESS Array B**	**82.43**	**340**	P	**P**	**12 30 17.5**	**-0.6**
	comp=Z,8.7nm,1.1s,mb4.6,baz=90,slow=4.9,SNR=10						
DPC	**Dobruska-Polom**	**83.80**	**320**	*e*P	**P**	**12 30 25.9**	**+0.4**
UPC	**Upice**	**84.01**	**320**	*e*P	**P**	**12 30 27.7**	**+1.2**
BRG	**Berggiesshubel**	**85.35**	**321**	*e*P	**P**	**12 30 34.5**	**+1.3**
BRG				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.8						
BRG	**Berggiesshubel**	**85.35**	**321**	*e*P	**P**	**12 30 34.5**	**+1.4**
	comp=Z,10nm,1.2s,mb4.8						
GERES	**GERESS Array B**	**85.42**	**319**	P	**P**	**12 30 34.0**	**+0.4**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES				MLR	MLR		
	comp=Z,34nm,19.3s						
GERES	**GERESS Array B**	**85.42**	**319**	P	**P**	**12 30 34.0**	**+0.5**
	comp=Z,0.5nm,0.3s,mb4.2,baz=101,slow=6.8,SNR=9.4						
GERES				LR	LR	13 09 56.7	
	comp=Z,34nm,19.3s,MS3.8,baz=111,slow=37						
HFS	**Hagfors**	**85.95**	**330**	LR	LR	13 13 53.3	
	comp=Z,118nm,18.6s,MS4.3,baz=247,slow=39						
VNDA	**Vanda**	**86.22**	**169**	P	**P**	**12 30 38.1**	**+1.2**
	comp=Z,2.1nm,1.1s,mb4.3,baz=324,slow=6.0,SNR=4.4						
VNDA				LR	LR	13 01 49.9	
	comp=Z,108nm,20.4s,MS4.2,baz=278,slow=30						
MOX	**Moxa**	**86.82**	**320**	*e*P	**P**	**12 30 42.0**	**+1.6**
GRA1	**Grafenberg Arr**	**87.06**	**319**	*e*P	**P**	**12 30 43.4**	**+1.8**
	comp=Z,6.0nm,1.1s,mb4.7						
GRF	**Grafenberg Arr**	**87.06**	**319**	*e*P	**P**	**12 30 43.4**	**+1.8**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.7						
GRF	**Grafenberg Arr**	**87.06**	**319**	*e*P	**P**	**12 30 43.4**	**+1.8**
	comp=Z,6.0nm,1.1s,mb4.7						
NB2	**NORSAR Subarra**	**87.21**	**331**	P	**P**	**12 30 42.2**	**+0.2**
	comp=Z,8.9nm,1.2s,mb4.9,baz=91,slow=5.0						
NOA	**NORSAR Array B**	**87.21**	**331**	P	**P**	**12 30 42.0**	**0.0**
	comp=Z,3.3nm,0.9s,mb4.6,baz=92,slow=4.9,SNR=6.1						
NOA				LR	LR	13 14 26.7	
	comp=Z,61nm,19.9s,MS4.0,baz=95,slow=39						
JMIC	**Jan Mayen**	**93.81**	**342**	LR	LR	13 15 48.9	
	comp=Z,76nm,19.7s,MS4.2,baz=79,slow=37						
SCHQ	**Schefferville**	**122.20**	**350**	PKP	PKPdf	12 36 51.4	+1.7
	comp=Z,1.3nm,0.9s,baz=50,slow=5.1,SNR=3.9						
SCHQ	**Schefferville**	**122.20**	**350**	PKP	PKPdf	12 36 51.4	+1.7
MSO	**Missoula**	**123.46**	**27**	*e*PKPdf	PKPdf	12 36 53.6	+1.3
MCMT	**McKenzie Canyo**	**125.48**	**27**	*e*PKPdf	PKPdf	12 36 58.9	+2.7
ULM	**Lac du Bonnet**	**126.45**	**12**	PKP	PKPdf	12 37 00.2	+2.2
	comp=Z,1.8nm,0.5s,baz=181,slow=4.0,SNR=3.2						
NVAR	**Mina Array Bea**	**127.13**	**37**	PKP	PKPdf	12 37 02.3	+2.6
	comp=Z,1.9nm,0.9s,baz=98,slow=0.6,SNR=13						
PDAR	**Pinedale Array**	**128.58**	**27**	PKP	PKPdf	12 37 02.8	+0.5
	comp=Z,1.0nm,0.8s,baz=90,slow=1.5,SNR=9.1						
PV10	**Paradox Valley**	**132.26**	**30**	*e*PKPdf	PKPdf	12 37 14.1	+4.7
WVT	**Waverly**	**141.58**	**9**	*e*PKPdf	PKPdf	12 37 28.7	+2.2
TXAR	**Lajitas Array**	**142.08**	**33**	PKIKP	PKPdf	12 37 24.7	-2.9
TXAR						12 37 30.0	
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR	**Lajitas Array**	**142.08**	**33**	PKhKP		12 37 24.7	
	comp=Z,0.2nm,0.3s,baz=284,slow=3.7,SNR=4.3						
TXAR				PKP	PKPdf	12 37 30.0	+2.4
	comp=Z,1.7nm,0.8s,baz=225,slow=1.8,SNR=7.6						
BDFB	**Brasilia**	**144.74**	**245**	PKIKP	PKPdf	12 37 34.7	+2.2
BDFB				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BDFB	**Brasilia**	**144.74**	**245**	PKP	PKPdf	12 37 34.7	+2.2
	comp=Z,1.4nm,0.3s,baz=117,slow=4.1,SNR=5.2						
CPUP	**Villa Florida**	**146.75**	**221**	PKP2	PKPab	12 37 39.9	-0.9
CPUP				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CPUP	**Villa Florida**	**146.75**	**221**	PKPbc	PKPbc	12 37 39.9	+2.7
	comp=Z,6.9nm,0.8s,baz=134,slow=4.4,SNR=11						
CPUP	**Villa Florida**	**146.75**	**221**	*e*PKPbc	PKPbc	12 37 40.0	+2.8
LPAZ	**La Paz**	**160.92**	**221**	PKP	PKPdf	12 37 59.5	+4.0
	comp=Z,0.9nm,0.5s,baz=78,slow=2.7,SNR=6.7						
LPAZ				PKPab	PKPab	12 38 42.4	+1.9
	comp=Z,0.4nm,0.3s,baz=90,slow=3.0,SNR=4.1						

IDC ***16*** *12:37:20.8±0.8, 2.06N×98.98E, mb4.2/10, mb1 4.4/10, mb1mx4.2/17, mbtmp4.2/10, MS3.7/2, Ms1 3.9/2, ms1mx3.2/23, Error ellipse: s-maj=32.0km s-min=22.0km az=56.0*

MOS ***16*** *12:37:23.3±1.1, 1.79N×98.72E, h33^{km}, mb4.7/14, Error ellipse: s-maj=22.5km s-min=9.9km az=109.6*

BJI ***16*** *12:37:23.9, 1.90N×98.90E, h30^{km}, mB4.8, mb4.4, Ms4.3, Msz4.0*

NEIC ***16*** *12:37:24.9±0.5, 1.89N×98.93E, h30^{km}, mb4.6/8, Error ellipse: s-maj=14.3km s-min=10.0km az=71.0*

ISC 16 12:37:24.4±1.3, 1.91N±0.07×98.98E±0.08, h37^{km}±11^{km}, n67, σ0^{s}95/65, mb4.5/22, MS3.8/3, 4C-4D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**3.35**	**38**	P	**P**	**12 38 15.5**	**-0.1**
KULM	**Kulim**	**3.75**	**26**	*e*Pn	**P**	**12 38 20.6**	**-0.6**
KULM				*e*Sn	**S**	**12 39 15.9**	**+11**
KGM	**Kluang**	**4.34**	**89**	P	**P**	**12 38 29.6**	**-0.1**
CM31	**Chiang Mai Arr**	**16.44**	**360**	*e*P	**P**	**12 41 15.9**	**+1.9**
	18nm,1.1s						
CM31				*e*		12 41 29.8	
CMAR	**Chiang Mai Arr**	**16.44**	**360**	Pn	**P**	**12 41 14.9**	**+0.8**
	0.1nm,0.3s,baz=195,slow=13,SNR=21						
CMAR				LR	LR	12 47 23.8	
	comp=Z,247nm,18.5s,baz=185,slow=37						
KKM	**Kota Kinabalu**	**17.67**	**76**	P	**P**	**12 41 29.4**	**-0.2**
KMI	**Kunming**	**23.36**	**9**	P	**P**	**12 42 32.8**	**+2.2**
KMI	**Kunming**	**23.36**	**9**	P	**P**	**12 42 32.7**	**+2.1**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.0						
KMI	**Kunming**	**23.36**	**9**	P	**P**	**12 42 32.7**	**+2.1**
	comp=Z,8.0nm,1.3s,mb4.0						
SSE	**Sheshan**	**35.83**	**34**	P	**P**	**12 44 21.4**	**-1.2**
SSE				AP	pP	12 44 30.5	-2.6
SSE				XP	sP	12 44 33.9	-3.9
SSE				S	**S**	**12 49 57.4**	**+0.5**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,60nm,2.9s,mb5.0						
SSE				LR	LR		
	comp=N,110nm,19.0s,MS3.7						
SSE				LR	LR		
	comp=E,50nm,18.9s,MS3.7						
SSE				LR	LR		
	comp=Z,110nm,19.5s,MS3.6						
SSE	**Sheshan**	**35.83**	**34**	P	**P**	**12 44 21.4**	**-1.2**
	comp=Z,38nm,0.7s,mb5.4						
SSE				pP	pP	12 44 30.5	-2.6
SSE				sP	sP	12 44 33.9	-3.9
SSE				S	**S**	**12 49 57.4**	**+0.5**
SSE				sS		12 50 11.8	
SSE				SS	SS	12 52 34.5	+15
GTA	**Gaotai**	**37.33**	**1**	P	**P**	**12 44 34.8**	**-0.3**
GTA				XP	sP	12 44 46.4	-3.9
GTA				PP	PP	12 46 04.0	+0.8
GTA				S	**S**	**12 50 21.1**	**+1.3**
GTA				AMB	AMB		
	comp=Z,80nm,11.4s						
GTA				LR	LR		
	comp=N,120nm,19.4s,MS4.1						
GTA				LR	LR		
	comp=E,260nm,17.9s,MS4.1						
GTA				LR	LR		
	comp=Z,180nm,19.0s,MS3.9						
WRA	**Warramunga Arr**	**40.92**	**124**	P	**P**	**12 45 05.0**	**-0.2**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WRA	**Warramunga Arr**	**40.92**	**124**	P	**P**	**12 45 05.0**	**-0.2**
	comp=Z,8.2nm,0.7s,mb4.5,baz=302,slow=9.2,SNR=53						
WRAB	**Tennant Creek**	**40.93**	**124**	*i* P	**P**	**12 45 06.5**	**+1.3**
WRAB	**Tennant Creek**	**40.93**	**124**	*e*P	**P**	**12 45 05.5**	**+0.3**
	comp=Z,18nm,1.0s,mb4.7						
WB2	**Warramunga Arr**	**40.94**	**124**	⇑*i*P	**P**	**12 45 06.0**	**+0.7**
UCH	**Uchtor**	**45.74**	**335**	P	**P**	**12 45 45.2**	**+1.1**
	SNR=8.9						
TKM2	**Tokmak 2**	**45.86**	**336**	P	**P**	**12 45 45.4**	**+0.3**
	SNR=6.0						
KBK	**Karagaybulak**	**45.91**	**335**	P	**P**	**12 45 46.6**	**+1.2**
	SNR=9.1						
AML	**Almayashu**	**46.02**	**334**	P	**P**	**12 45 46.8**	**+0.4**
	SNR=6.4						
AAK	**Ala-Archa**	**46.08**	**335**	*e*P	**P**	**12 45 46.4**	**-0.4**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
AAK	**Ala-Archa**	**46.08**	**335**	*e*P	**P**	**12 45 46.4**	**-0.4**
	comp=Z,8.3nm,1.1s,mb4.6						
SONM	**Songino Array**	**46.19**	**7**	P	**P**	**12 45 46.9**	**-0.6**
	comp=Z,3.6nm,1.0s,mb4.2,baz=198,slow=7.8,SNR=19						
SONM				PcP	PcP	12 47 23.3	-0.1
	comp=Z,1.4nm,1.0s,baz=194,slow=5.1,SNR=4.7						
ULN	**Ulaanbaatar**	**46.30**	**8**	*e*P	**P**	**12 45 48.2**	**-0.2**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
ULN	**Ulaanbaatar**	**46.30**	**8**	*e*P	**P**	**12 45 48.2**	**-0.3**
	comp=Z,7.3nm,1.2s,mb4.5						
EKS2	**Erkin-Say**	**46.41**	**334**	P	**P**	**12 45 50.4**	**+1.0**
	SNR=5.1						
USP	**Ospenovka**	**46.60**	**335**	P	**P**	**12 45 50.7**	**-0.1**
	SNR=14						
MKAR	**Makanchi Array**	**47.01**	**344**	P	**P**	**12 45 53.4**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**47.01**	**344**	P	**P**	**12 45 53.4**	**-0.6**
	comp=Z,2.2nm,0.8s,mb4.1,baz=162,slow=7.7,SNR=12						
MJAR	**Matsushiro Arr**	**49.98**	**42**	LR	LR	13 08 25.0	
	comp=Z,89nm,18.3s,MS3.8,baz=240,slow=37						
ZRNK	**Zerenda**	**56.62**	**339**	*e*P	**P**	**12 47 04.0**	**-2.0**
ZRNK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
ZRNK	**Zerenda**	**56.62**	**339**	*e*P	**P**	**12 47 04.0**	**-2.1**
	comp=Z,6.4nm,1.0s,mb4.6						
YSS	**Yuzh-Sakhalins**	**58.77**	**34**	*i* P	**P**	**12 47 21.5**	**+0.3**
GNI	**Garni**	**62.03**	**315**	*i* P	**P**	**12 47 42.8**	**-0.8**
SVE	**Sverdlovsk**	**62.70**	**337**	*e*P	**P**	**12 47 47.0**	**-0.8**
SVE				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.3						
ARU	**Arti**	**63.24**	**336**	⇓*i*P	**P**	**12 47 48.7**	**-2.7**
ARU				*e*		12 48 25.2	
ARU				*e*		12 50 04.5	
ARU				*e*S	**S**	**12 56 18.5**	**-0.3**
ARU				*e*SS	SS	13 00 27.3	0.0
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
ARU	**Arti**	**63.24**	**336**	*e*P	**P**	**12 47 47.8**	**-3.6**
	comp=Z,12nm,1.0s,mb5.0						
KIV	**Kislovodsk**	**64.94**	**318**	*e*P	**P**	**12 48 02.8**	**+0.1**
KIV				pmax	pmax		
	comp=E,5.0nm,1.1s						
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
GOF	**Gofitskoye**	**65.16**	**320**	*e*P	**P**	**12 48 01.6**	**-2.5**
MALT	**Malatya**	**65.98**	**311**	*e*P	**P**	**12 48 21.1**	**+12**
BRTR	**Keskin Array B**	**69.96**	**312**	P	**P**	**12 48 33.3**	**-0.9**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**69.96**	**312**	P	**P**	**12 48 33.2**	**-0.9**
	comp=Z,3.1nm,0.8s,mb4.3,baz=121,slow=7.2,SNR=19						
TIXI	**Tiksi**	**72.19**	**10**	*c* *i*P	**P**	**12 48 46.4**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
MATP	**Matopo**	**72.44**	**248**	P	**P**	**12 48 51.1**	**+1.7**
	comp=Z,2.4nm,0.8s,mb4.2,baz=90,slow=6.5,SNR=6.1						
OBN	**Obninsk**	**72.96**	**328**	⇓*i*P	**P**	**12 48 51.7**	**-0.2**
OBN				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
TIRR	**Tirgusor**	**74.86**	**316**	⇓P	**P**	**12 49 03.9**	**+0.8**
AKASG	**Malin Array Be**	**75.79**	**322**	P	**P**	**12 49 07.2**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**75.79**	**322**	P	**P**	**12 49 07.2**	**-1.1**
	comp=Z,0.8nm,0.4s,mb4.0,baz=86,slow=5.4,SNR=8.8						
VRI	**Vrincioaia**	**76.31**	**317**	⇑P	**P**	**12 49 12.2**	**+0.8**
MLR	**Muntele Rosu**	**76.78**	**316**	⇑P	**P**	**12 49 14.6**	**+0.5**
BURAR	**Bucovina Array**	**77.67**	**318**	⇓P	**P**	**12 49 20.3**	**+1.3**
BILL	**Bilibino**	**79.87**	**21**	*e*P	**P**	**12 49 29.8**	**-0.8**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.2						
FINES	**FINESS Array B**	**80.20**	**332**	P	**P**	**12 49 32.0**	**-0.4**
	comp=Z,2.4nm,0.8s,mb4.2,baz=104,slow=7.9,SNR=8.4						
KAF	**Kangasniemi**	**80.26**	**333**	*e*p	**P**	**12 49 31.5**	**-1.3**
ARCES	**ARCESS Array B**	**82.47**	**340**	P	**P**	**12 49 44.6**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	**82.47**	**340**	P	**P**	**12 49 44.6**	**+0.4**
	comp=Z,2.5nm,0.9s,mb4.1,baz=82,slow=8.6,SNR=7.1						
GERES	**GERESS Array B**	**85.46**	**319**	P	**P**	**12 49 59.2**	**-0.4**
	comp=Z,0.3nm,0.2s,mb4.0,baz=90,slow=6.7,SNR=4.1						
NB2	**NORSAR Subarra**	**87.25**	**331**	P	**P**	**12 50 08.4**	**+0.3**
	comp=Z,1.4nm,0.8s,mb4.2,baz=90,slow=4.8						
NOA	**NORSAR Array B**	**87.25**	**331**	P	**P**	**12 50 07.9**	**-0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	**NORSAR Array B**	**87.25**	**331**	P	**P**	**12 50 07.9**	**-0.2**
	comp=Z,1.4nm,0.9s,mb4.2,baz=94,slow=5.3,SNR=5.1						
NVAR	**Mina Array Bea**	**127.16**	**37**	PKP	PKPdf	12 56 28.5	+2.9
	comp=Z,0.7nm,0.8s,baz=58,slow=0.7,SNR=4.9						
PDAR	**Pinedale Array**	**128.62**	**27**	PKP	PKPdf	12 56 30.2	+2.0
	comp=Z,0.2nm,0.4s,baz=333,slow=2.0,SNR=3.3						
TXAR	**Lajitas Array**	**142.12**	**33**	PKIKP	PKPdf	12 56 55.3	+1.8
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**142.12**	**33**	PKP	PKPdf	12 56 55.3	+1.8
	comp=Z,0.5nm,0.7s,baz=297,slow=2.0,SNR=3.4						
CPUP	**Villa Florida**	**146.72**	**221**	PKP2	PKPab	12 57 05.7	-0.8
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CPUP	**Villa Florida**	**146.72**	**221**	PKPbc	PKPbc	12 57 05.7	+2.8
	comp=Z,2.2nm,0.8s,baz=153,slow=2.3,SNR=3.2						

NNC 16 12:56:17.6±4.7, 37.08N×70.71E, h203^{km}±96^{km}, mpv3.8, 4C-2D, Error ellipse: s-maj=63.5km s-min=47.5km az=48.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.55**	**24**	P	P	12 57 38.5	-1.2
	SNR=88						
UCH	**Uchtor**	**5.92**	**29**	P	P	12 57 43.5	-1.1
	SNR=17						
KK31	**Karatay Array**	**6.02**	**359**	⇓P	P	12 57 45.0	-0.8
	1.8nm,0.2s,baz=194,slow=14,SNR=102						
KK31				⇑S	S	12 58 55.2	+0.7
	6.0nm,0.6s,baz=186,slow=19,SNR=12						
EKS2	**Erkin-Say**	**6.05**	**22**	P	P	12 57 45.2	-1.1
	SNR=6.5						
AAK	**Ala-Archa**	**6.26**	**27**	P	P	12 57 47.9	-1.1
	SNR=5.4						
AAK	**Ala-Archa**	**6.26**	**27**	⇑P	P	12 57 47.6	-1.5
	2.2nm,0.3s						
AAK				⇑S	S	12 59 01.7	+1.4
	9.6nm,1.1s						
USP	**Ospenovka**	**6.83**	**24**	P	P	12 57 54.6	-1.7
	SNR=12						
TKM2	**Tokmak 2**	**6.93**	**31**	P	P	12 57 55.8	-1.9
	SNR=13						
AB31	**Akbulak array**	**14.47**	**331**	⇓P	P	12 59 34.8	+0.8
	0.3nm,0.3s,baz=144,slow=13,SNR=22						
AB31				⇑S	S	13 02 09.7	+0.4
	0.2nm,0.4s,baz=159,slow=22,SNR=2.7						

IDC ***16*** *13:25:14.7±1.0, 8.58S×130.54E, mb4.2/5, mb1 4.3/7, mb1mx4.1/13, mbtmp4.2/7, ML4.0/2, MS3.7/3, Ms1 3.6/3, ms1mx3.3/14, Error ellipse: s-maj=53.9km s-min=19.7km az=78.0*

NEIC ***16*** *13:25:19.2±0.7, 8.78S×130.32E, h35^{km}, mb4.6/2, Error ellipse: s-maj=21.1km s-min=9.4km az=73.0*

ISC 16 13:25:16.8±0.6, 8.94S±0.04×130.30E±0.08, h33^{km}, n22, σ1^{s}15/26, mb4.3/7, MS3.5/2, 1C, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**4.30**	**151**	*e*P	**P**	**13 26 26.2**	**+4.7**
	39nm,0.6s						
FITZ	**Fitzroy Crossi**	**10.17**	**206**	*e*P	**P**	**13 27 46.0**	**+2.4**
	9.1nm,0.3s						
FITZ				*e*S	**S**	**13 29 36.2**	**-1.3**
FITZ	**Fitzroy Crossi**	**10.17**	**206**	Pn	**P**	**13 27 47.0**	**+3.5**
	2.6nm,0.3s,baz=12,slow=12,SNR=27						
FITZ				Sn	**S**	**13 29 38.9**	**+1.4**
	6.3nm,0.3s,baz=189,slow=16,SNR=6.9						
WRAB	**Tennant Creek**	**11.61**	**161**	*e*P	**P**	**13 28 03.2**	**0.0**
	8.4nm,0.5s						
WRAB				*e*S	**S**	**13 30 10.2**	**-2.4**
WRA	**Warramunga Arr**	**11.61**	**161**	Pn	**P**	**13 28 03.5**	**+0.3**
	0.5nm,0.3s,baz=335,slow=12,SNR=39						
WRA				Sn	**S**	**13 30 13.5**	**+0.8**
	1.5nm,0.3s,baz=337,slow=22,SNR=8.9						
WB2	**Warramunga Arr**	**11.62**	**161**	⇑*i*P	**P**	**13 28 04.0**	**+0.7**
WB2				*e*S	**S**	**13 30 12.7**	**-0.2**
MBWA	**Marble Bar**	**15.85**	**219**	*e*P	**P**	**13 29 00.0**	**+0.9**
MBWA				*e*S	**S**	**13 31 51.8**	**-1.9**
CTA	**Charters Tower**	**18.99**	**127**	LR	LR	13 37 37.6	
	comp=Z,215nm,18.5s,baz=252,slow=39						
KSM	**Kuching**	**22.45**	**296**	P	**P**	**13 30 14.4**	**0.0**
STKA	**Stephens Creek**	**25.12**	**157**	*e*P	**P**	**13 30 46.5**	**+6.2**
	6.8nm,1.4s,mb4.0						
STKA	**Stephens Creek**	**25.12**	**157**	P	**P**	**13 30 44.5**	**+4.2**
	5.1nm,0.8s,mb4.1,baz=332,slow=6.7,SNR=7.3						
STKA				LR	LR	13 40 55.1	
	comp=Z,156nm,20.9s,MS3.5,baz=203,slow=37						
STKA	**Stephens Creek**	**25.12**	**157**	*e*P	**P**	**13 30 45.3**	**+5.0**
NWAO	**Narrogin (SRO)**	**26.75**	**205**	LR	LR	13 42 35.9	
	comp=Z,121nm,18.1s,MS3.5,baz=185,slow=38						
MJAR	**Matsushiro Arr**	**45.85**	**9**	P	**P**	**13 33 34.4**	**-3.4**
	3.5nm,0.9s,mb4.3,baz=191,slow=9.7,SNR=6.5						
ULN	**Ulaanbaatar**	**60.19**	**342**	*e*P	**P**	**13 35 22.3**	**-1.5**
	4.5nm,0.7s,mb4.6						
SONM	**Songino Array**	**60.37**	**342**	P	**P**	**13 35 24.4**	**-0.7**
	1.6nm,0.5s,mb4.3,baz=158,slow=7.2,SNR=15						
SONM	**Songino Array**	**60.37**	**342**	P	**P**	**13 35 24.4**	**-0.7**

MKAR	Makanchi Array	70.00	327	P	P	13 36 27.8	+0.7
	3.9nm,0.6s,mb4.5,baz=121,slow=7.9,SNR=22						
MKAR	Makanchi Array	70.00	327	P	P	13 36 27.8	+0.7
AAK	Ala-Archa	72.21	320	P	P	13 36 40.9	+0.5
	3.3nm,0.8s,mb4.3						
BVAR	Borovoye Array	79.85	328	P	P	13 37 23.7	+0.2
	1.4nm,0.8s,mb4.0,baz=135,slow=6.1,SNR=8.9						
BRVK	Borovoye	79.93	328	P	P	13 37 24.7	+0.7

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*BEO **16** 13:42:46.9±0.3, 43.26N×18.60E, h8^{km}±1^{km}*
*CSEM **16** 13:42:46.9±0.1, 43.26N×18.56E, h2^{km}, ML3.1, Error ellipse: s-maj=1.5km s-min=0.9km az=55.0*
*NEIC **16** 13:42:47.5, 43.26N×18.59E, ML3.1(PDG), After PDG.*
*PDG **16** 13:42:47.5±0.2, 43.26N×18.59E*
ISC 16 13:42:47.4±0.3, **43.26N**±0.02×**18.58E**±0.03, **h10^{km}, n33, σ1^{s}15**/55, **12C-8D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPM	Unac-Piva	0.25	103	⇑iPg	Pg	13 42 52.5	-0.2
UPM				eSg	Sg	13 42 55.6	-0.6
BRY	Bratogost	0.36	185	⇑iPg	Pg	13 42 54.2	-0.6
BRY				eSg	Sg	13 42 59.8	0.0
NKY	Niksic	0.54	145	⇑iPg	Pg	13 42 57.3	-1.0
NKY				eSg	Sg	13 43 05.7	+0.1
PLE	Pljevlja	0.60	83	ePg	Pg	13 42 58.2	-1.3
PLE				eSg	Sg	13 43 07.4	-0.2
STON	Ston	0.75	239	⇓iPg	Pg	13 43 01.2	-1.3
STON				i Sg	Sg	13 43 13.9	+1.2
HCY	Herceg Novi	0.81	184	⇑iPg	Pg	13 43 02.8	-0.9
HCY				eSg	Sg	13 43 15.4	+0.8
NVSS	Nova Varos 2	0.85	73	⇓iPg	Pg	13 43 04.5	0.0
NVSS				Sg	Sg	13 43 18.7	+2.8
BBLS	Bajina Basta -	0.86	44	⇑iPg	Pg	13 43 04.2	-0.4
BBLS				Sg	Sg	13 43 15.5	-0.6
TTG	Podgorica	0.97	149	⇑iPg	Pg	13 43 04.2	-2.6
TTG				eSg	Sg	13 43 19.7	-0.1
BUM	Brajici-Budva	0.98	166	⇓iPg	Pg	13 43 05.3	-1.9
BUM				eSg	Sg	13 43 21.1	+0.8
IVA	Berane	1.04	111	⇑iPg	Pg	13 43 06.7	-1.6
IVA				eSg	Sg	13 43 22.5	+0.3
PVY	Plav	1.22	122	⇑iPg	Pg	13 43 10.2	-1.6
PVY				eSg	Sg	13 43 29.0	+0.9
DIVS	Divcibare	1.32	50	⇑iPn	Pn	13 43 12.9	+0.9
DIVS				Sn	Sn	13 43 30.0	+0.2
ULC	Ulcinj	1.38	159	⇑iPg	Pg	13 43 12.8	-2.3
ULC				eSg	Sg	13 43 35.0	+1.4
PUK	Puka	1.55	141	i Pn	Pn	13 43 16.3	+1.0
PUK	Puka	1.55	141	ePg	Pn	13 43 16.3	+1.0
QSH	Qafa e Shtames	1.99	150	i Pn	Pn	13 43 26.8	+5.2
QSH				i Sn	Sn	13 43 54.8	+8.0
SVIS	Svilajnac	2.17	61	ePn	Pn	13 43 24.7	+0.4
SVIS				eSn	Sn	13 43 54.1	+2.6
SKO	Skopje	2.47	120	ePn	Pn	13 43 31.3	+2.9
RHK3	Tenkes	2.64	355	⇓eP	Pn	13 43 31.4	+0.5
RHK1	Bakonya	2.86	353	⇓eP	Pn	13 43 34.3	+0.3
RHK1				eS	Sn	13 44 08.1	-0.7
PKSM	Moragy	2.95	1	⇓iP	Pn	13 43 35.4	+0.1
BOJS	Bojanci	3.28	314	ePn	Pn	13 43 43.0	+3.0
KOGS	Kog	3.59	333	ePn	Pn	13 43 45.1	+0.7
PERS	Pernice	4.18	325	ePn	Pn	13 43 53.7	+1.0
OBKA	Obir	4.33	320	⇑iPN	Pn	13 43 55.9	+1.0
OBKA				i SN	Sn	13 44 45.8	-0.4
VOY	Vojsko	4.35	311	ePn	Pn	13 43 56.7	+1.6
VOY				eSn	Sn	13 44 52.4	+6.0
VOY				e		13 45 14.5	
ARSA	Arzberg	4.54	333	⇓iPN	Pn	13 43 58.5	+0.6
ARSA				i SN	Sn	13 44 50.0	-1.3
VYHS	Vyhne	5.24	2	eSN	Sn	13 45 06.2	-2.8
KBA	Koelnbreinsper	5.32	318	⇓iPN	Pn	13 44 09.6	+0.7
KBA				i SN	Sn	13 45 10.2	-0.8
MOA	Molln	5.50	328	⇑iPN	Pn	13 44 12.0	+0.5
MOA				i SN	Sn	13 45 14.2	-1.4
KHC	Kasperske Hory	6.82	331	eP	Pn	13 44 30.5	+0.4
KHC				e		13 44 33.5	
KHC	Kasperske Hory	6.82	331	ePKP	Pn	13 44 30.5	+0.4
KHC				x	x	13 44 33.5	

JMA 16 13:59:19.4±0.5, **33.82N**×**141.99E, h85^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.18	315	eS	S	13 59 56.7	-0.9
BSO2	Boso 2	1.38	313	eS	S	14 00 02.5	+0.5
BSO3	Boso 3	1.57	309	P	P	13 59 46.7	+0.4
BSO3				eS	S	14 00 08.2	+2.1
BSO4	Boso 4	1.80	311	eS	S	14 00 12.8	+1.5
JHJ2	Mitsune	1.95	249	P	P	13 59 51.5	+0.2
JHJ2				S	S	14 00 15.4	+0.6
JIZS	Izushimoda	2.73	290	P	P	14 00 01.1	-1.1
JIZS				eS	S	14 00 34.1	0.0
JAG	Ashikaga	3.33	322	P	P	14 00 09.0	-1.5

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*ROM **16** 14:05:05.2±0.3, 46.22N×7.26E, h12^{km}, Md2.4/5, Ml1.9/2, Error ellipse: s-maj=5.0km s-min=2.0km az=2.0*
*LDG **16** 14:05:05.3±0.1, 46.23N×7.35E, h5^{km}, Md2.7/2, Ml2.7/16, Error ellipse: s-maj=1.9km s-min=1.3km az=111.0*
*NEIC **16** 14:05:05.0, 46.30N×7.30E, h4^{km}, ML2.7(LDG), ML2.4(GEN), ML2.3(STR), ML2.2(ZUR), After ZUR.*
*CSEM **16** 14:05:05.3±0.0, 46.22N×7.32E, h5^{km}, ML2.7/15, Error ellipse: s-maj=0.9km s-min=0.9km az=105.0*
*ZUR **16** 14:05:05.0, 46.28N×7.27E, h4^{km}, ML2.2/7*
*STR **16** 14:05:07.2±0.3, 46.34N×7.35E, h10^{km}±1^{km}, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*GEN **16** 14:05:08.3, 46.12N×7.28E, h0^{km}, ML0.2*
ISC 16 14:05:04.4±0.2, **46.27N**±0.01×**7.21E**±0.02, **h10^{km}**±2^{km}, **n62, σ1^{s}11**/121, **13C-2D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRYON	Gryon	0.07	253	⇑iPg	Pg	14 05 07.6	+0.9
GRYON				i Sg	Sg	14 05 09.5	+1.3
GRYON	Gryon	0.07	253	⇑iPg	Pg	14 05 07.6	+0.9
GRYON				i Sg	Sg	14 05 09.5	+1.3
SENIN	Lac Senin	0.11	34	⇑iPg	Pg	14 05 07.2	0.0
SENIN				i Sg	Sg	14 05 08.6	-0.5
SENIN	Lac Senin	0.11	34	⇑iPg	Pg	14 05 07.2	0.0
SENIN				i Sg	Sg	14 05 08.6	-0.5
AIGLE	Aigle	0.19	291	⇓iPg	Pg	14 05 09.7	+1.1
AIGLE				i Sg	Sg	14 05 13.2	+1.8
AIGLE	Aigle	0.19	291	⇓iPg	Pg	14 05 09.7	+1.1
AIGLE				i Sg	Sg	14 05 13.2	+1.8
SALAN	Lac Salanfe	0.21	232	⇑iPg	Pg	14 05 10.3	+1.4
SALAN				i Sg	Sg	14 05 13.9	+1.9
SALAN	Lac Salanfe	0.21	232	⇑iPg	Pg	14 05 10.3	+1.4
SALAN				i Sg	Sg	14 05 13.9	+1.9
DIX	Grande Dixence	0.24	144	Pg	Pg	14 05 10.1	+0.7
DIX				Sg	Sg	14 05 13.4	+0.6
DIX	Grande Dixence	0.24	144	⇑iPg	Pg	14 05 10.1	+0.7
DIX				eSg	Sg	14 05 13.5	+0.7
DIX	Grande Dixence	0.24	144	⇑iPg	Pg	14 05 10.1	+0.7
DIX				eSg	Sg	14 05 13.5	+0.7
EMV	Vieux Emosson	0.30	226	⇑ePg	Pg	14 05 11.9	+1.2
EMV				Sg	Sg	14 05 15.9	+1.0
EMV	Vieux Emosson	0.30	226	⇑iPg	Pg	14 05 11.9	+1.2
EMV	Vieux Emosson	0.30	226	⇑iPg	Pg	14 05 11.9	+1.2
EMV				Sg	Sg	14 05 15.9	+1.0
LKBD	Leukerbad	0.31	68	⇑iPg	Pg	14 05 10.5	-0.3
LKBD				i Sg	Sg	14 05 14.7	-0.4
LKBD	Leukerbad	0.31	68	⇑iPg	Pg	14 05 10.5	-0.3
LKBD				i Sg	Sg	14 05 14.7	-0.4
WIMIS	Wimmis	0.48	36	ePg	Pg	14 05 14.3	+0.1
WIMIS	Wimmis	0.48	36	ePg	Pg	14 05 14.3	+0.1
MMK	Mattmark	0.57	113	Pg	Pg	14 05 15.9	0.0
MMK				Sg	Sg	14 05 23.4	-0.1
MCGN	Macugnaga	0.62	120	Pg	Pg	14 05 16.9	-0.1
MCGN				Sg	Sg	14 05 25.2	-0.2
	30nm,0.3s						
LSD	Ceresole Reale	0.82	183	P	Pb	14 05 21.1	+0.9
LSD				S	Sb	14 05 30.6	-0.4
LSD	Ceresole Reale	0.82	183	P	Pb	14 05 21.1	+0.9
LSD				S	Sb	14 05 30.6	-0.4
LPL	La Plagne	0.83	204	ePg	Pg	14 05 21.1	+0.1
LPL				eSg	Sg	14 05 31.9	-0.2
	18nm,0.3s						
ORX	Oropa	0.83	140	P	Pb	14 05 21.5	+1.0
ORX				S	Sb	14 05 31.2	-0.4
ORX	Oropa	0.83	140	P	Pb	14 05 21.5	+0.9
ORX				S	Sb	14 05 31.2	-0.4
LPG	La Plagne	0.84	203	ePg	Pg	14 05 21.3	+0.1
LPG				ePn	Pn	14 05 22.5	+0.4
LPG				eSg	Sg	14 05 32.2	-0.3
	13nm,0.2s						
CABF	La Chapelle	0.85	294	ePg	Pg	14 05 22.7	+1.3
CABF				ePn	Pn	14 05 23.7	+1.5
CABF				eSg	Sg	14 05 35.3	+2.5
CABF				eSn	Sn	14 05 37.3	+2.5
	16nm,0.2s						
LOMF	Lomont	1.11	346	Pg	Pg	14 05 27.3	+0.7
LOMF				Sg	Sg	14 05 42.3	+0.8
RSP	Reno Superiore	1.12	178	P	Pb	14 05 27.4	+1.9
RSP				S	Sb	14 05 39.4	-0.6
RSP	Reno Superiore	1.12	178	P	Pb	14 05 27.4	+2.0
RSP				S	Sb	14 05 39.4	-0.5
VAI	Varese	1.16	110	Pg	Pg	14 05 26.8	-0.8
	13nm,0.3s						
BBS	Basel-Blauen	1.21	10	Pg	Pg	14 05 29.0	+0.4
BNI	Bardonecchia	1.28	197	ePn	Pn	14 05 29.0	+0.6
BNI	Bardonecchia	1.28	197	ePn	Pn	14 05 29.0	+0.7
RRL	Cesana Torines	1.39	193	P	Pn	14 05 32.3	+2.4
RRL	Cesana Torines	1.39	193	P	Pn	14 05 32.3	+2.4
BHB	Bricherasio	1.43	179	P	Pn	14 05 31.9	+1.3
BHB				S	Sb	14 05 47.5	-1.4
BHB	Bricherasio	1.43	179	P	Pn	14 05 31.9	+1.3
TUE	Stuetta	1.49	82	Pg	Pg	14 05 33.2	-1.0
	20nm,0.3s						
HINF	Hinteralfeld	1.56	351	ePn	Pn	14 05 33.1	+0.6
HINF				eSn	Sn	14 05 53.3	+0.4
	11nm,0.2s						
MBDF	Montbardon	1.58	191	ePg	Pg	14 05 34.4	-1.5
MBDF				eSg	Sg	14 05 54.5	-2.4
	28nm,0.7s						
MOF	Molkenrain	1.58	358	Pn	Pn	14 05 33.3	+0.6
MOF				Pg	Pg	14 05 35.6	-0.4
MOF				Sg	Sg	14 05 57.1	0.0
MOF	Molkenrain	1.58	358	Pg	Pg	14 05 35.6	-0.4
MOF				Sg	Sg	14 05 57.1	0.0
ORIF	Oris-en-Rattie	1.65	215	ePg	Pg	14 05 36.1	-1.2
ORIF				eSg	Sg	14 05 58.1	-1.2
	9.3nm,0.3s						
FELD	Feldberg	1.69	18	Pn	Pn	14 05 34.2	-0.1
FELD				Pg	Pg	14 05 36.9	-1.3
FELD				Sg	Sg	14 05 59.5	-1.3
FELD	Feldberg	1.69	18	Pg	Pg	14 05 36.9	-1.3
FELD				Sg	Sg	14 05 59.5	-1.3
PZZ	Prazzo	1.77	183	P	Pn	14 05 37.1	+1.7
PZZ	Prazzo	1.77	183	P	Pn	14 05 37.1	+1.7
HAU	Haudompre	1.83	342	ePn	Pn	14 05 36.9	+0.6
HAU				ePg	Pg	14 05 40.3	-0.7
HAU				eSn	Sn	14 05 59.8	+0.1
	36nm,0.3s						
ECH	Echery	1.94	359	Pn	Pn	14 05 37.8	-0.1
CDF	Champ du Feu	2.14	1	ePn	Pn	14 05 40.6	-0.1
CDF				eSg	Sg	14 06 14.0	-1.7
	5.7nm,0.3s						
WLS	Welschbruch	2.14	3	Pn	Pn	14 05 40.9	+0.1
VIVF	Saint-Julien-l	2.28	232	ePn	Pn	14 05 43.0	+0.3
VIVF				ePg	Pg	14 05 48.4	-1.5
VIVF				eSg	Sg	14 06 18.1	-2.2
	12nm,0.3s						
SMF	Signal de Mont	2.36	280	ePn	Pn	14 05 44.6	+0.7
SMF				eSn	Sn	14 06 12.9	-0.3
SMF				eSg	Sg	14 06 22.1	-0.9
	5.5nm,0.2s						
SBF	Sospel	2.41	176	ePn	Pn	14 05 42.9	-1.7
SBF				eSg	Sg	14 06 20.6	-4.2
	13nm,0.4s						
LOR	Lormes	2.51	295	ePn	Pn	14 05 46.5	+0.5
LOR				ePg	Pg	14 05 53.5	-1.0
	baz=113						
LOR				eSg	Sg	14 06 26.7	-1.3
	9.0nm,0.3s						
LOR	Lormes	2.51	295	ePg	Pg	14 05 53.5	-1.0
LOR				eSg	Sg	14 06 26.7	-1.3
	4.5nm,0.3s						
SSF	Saint Saulge	2.67	289	ePn	Pn	14 05 48.7	+0.4
SSF				eSg	Sg	14 06 31.2	-2.2
	2.8nm,0.3s						
AVF	Avril sur Loir	2.71	282	ePn	Pn	14 05 50.1	+1.2
AVF				eSn	Sn	14 06 21.1	-1.1
AVF				eSg	Sg	14 06 32.7	-2.1
	2.8nm,0.2s						
BGF	Bois d'Agland	3.03	277	ePn	Pn	14 05 54.2	+0.7
BGF				eSn	Sn	14 06 28.7	-1.5
BGF				eSg	Sg	14 06 42.9	-2.5
	7.2nm,0.3s						
LASF	Ste Croix	3.23	228	ePn	Pn	14 05 55.7	-0.6
LASF				ePg	Pg	14 06 05.6	-3.4
LASF				eSg	Sg	14 06 47.3	-4.8
	3.7nm,0.4s						
TCF	Toulx Ste Croi	3.47	272	ePn	Pn	14 06 00.1	+0.5
TCF				eSn	Sn	14 06 40.8	-0.5
	2.0nm,0.2s						

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*NEIC **16** 14:08:53.6±0.3, 27.39S×113.28W, h10^{km}, mb4.8/31, Error ellipse: s-maj=12.4km s-min=7.9km az=79.0*
*BJI **16** 14:08:53.6, 27.40S×113.30W, h10^{km}, mB5.1, Ms5.0, Msz4.8*
*IDC **16** 14:08:53.0±0.8, 27.29S×113.23W, mb4.4/12, mb1 4.6/12, mb1mx4.5/20, mbtmp4.4/12, MS4.1/22, Ms1 4.1/22, ms1mx4.1/29, Error ellipse: s-maj=28.8km s-min=21.0km az=60.0, Incorrectly calculated travel-time residual on T phase at H03N*
ISC 16 14:08:52.2±0.4, **27.32S**±0.07×**113.3W**±0.1, **h10^{km}, n100, σ1^{s}05**/70, **mb4.6**/39, **MS4.2**/24, **6C, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAOE	Nuku Hiva Isla	31.35	301	eP	Px	14 14 48.3	
	754nm,34.4s						
TAOE				eLR	LR	14 23 15.6	
	6µm,23.8s,baz=127						
PPT	Papeete	34.83	278	eS	S	14 20 58.4	-17
	1µm,35.0s						
PPT				eLR	LR	14 24 35.7	
	771nm,26.5s,baz=101						
PPT	Papeete	34.83	278	LR	LR	14 25 38.2	
	comp=Z,456nm,18.4s,MS4.2,baz=4.4,slow=29						
PLCA	Paso Flores	37.48	122	LR	LR	14 27 34.1	
	comp=Z,426nm,20.2s,MS4.2,baz=244,slow=30						
PLCA	Paso Flores	37.48	122	P	P	14 16 03.5	-4.2
CFAA	Coronel Fontan	39.23	107	LR	LR	14 28 36.4	
	comp=Z,85nm,20.6s,MS3.6,baz=261,slow=30						
LPAZ	La Paz	43.11	85	P	P	14 16 56.5	+2.0
	6.9nm,1.1s,mb4.3,baz=248,slow=5.5,SNR=16						
LPAZ				LR	LR	14 31 13.1	
	comp=Z,207nm,19.5s,MS4.0,baz=56,slow=31						
LPAZ	La Paz	43.11	85	eP	P	14 16 56.3	+1.8
	15nm,1.2s,mb4.6						
LPAZ				e		14 17 05.7	
OTAV	Otavalo	43.23	56	P	P	14 16 58.0	+2.5
	9.3nm,1.3s,mb4.3						
TRQA	Tornquist	43.98	118	eP	P	14 17 00.5	-0.8
	15nm,1.0s,mb4.7						
JTS	JuntasAbangare	46.38	40	P	P	14 17 21.2	+0.5
	36nm,1.3s,mb5.1						
ROSC	El Rosal	49.36	56	LR	LR	14 35 53.5	
	comp=Z,186nm,18.5s,MS4.1,baz=198,slow=33						
CPUP	Villa Florida	49.56	102	P	P	14 17 44.1	-1.3
	2.6nm,0.8s,mb4.3,baz=287,slow=9.0,SNR=4.0						
CPUP				LR	LR	14 35 13.8	
	comp=Z,300nm,18.7s,MS4.3,baz=284,slow=32						
SAML	Samuel	50.60	79	eP	P	14 17 54.4	+0.8
	5.5nm,1.1s,mb4.4						
SDV	Santo Domingo	54.77	55	LR	LR	14 37 53.2	
	comp=Z,145nm,18.1s,MS4.1,baz=197,slow=32						
SDV	Santo Domingo	54.77	55	P	P	14 18 20.9	-3.8
TXAR	Lajitas Array	57.07	10	P	P	14 18 41.3	+0.2
	0.4nm,0.3s,mb3.9,baz=180,slow=11,SNR=5.0						
TXAR				LR	LR	14 38 46.6	
	comp=Z,80nm,19.0s,MS3.8,baz=205,slow=31						
URZ	Urewera	58.31	240	LR	LR	14 38 48.5	
	comp=Z,398nm,18.9s,MS4.5,baz=168,slow=31						
MNTX	Cornudas Mount	59.16	8	eP	P	14 18 54.5	-1.2
	6.7nm,1.2s,mb4.5						
CPRX	Cap Rock	60.67	9	eP	P	14 19 06.6	+0.6
BDFB	Brasilia	61.23	94	P	P	14 19 10.3	+0.3
	3.5nm,0.6s,mb4.7,baz=219,slow=4.1,SNR=4.0						
BDFB				LR	LR	14 43 10.3	
	comp=Z,145nm,20.1s,MS4.1,baz=145,slow=34						
SBA	Scott Base	61.39	194	eP	P	14 19 11.4	+1.1
	11nm,1.3s,mb4.8						
LENM	Lemitar	61.44	6	P	P	14 19 13.4	+2.3
LAZ	Ladron	61.66	6	eP	P	14 19 12.8	+0.1
RPZ	Rata Peaks	61.72	233	LR	LR	14 41 28.4	
	comp=Z,227nm,19.9s,MS4.3,baz=350,slow=32						
LDFC	Landfair	62.08	358	eP	P	14 19 16.9	+1.3
ANMO	Albuquerque	62.26	6	LR	LR	14 41 27.1	
	comp=Z,121nm,21.9s,MS4.0,slow=31						
VNDA	Vanda	62.43	194	P	P	14 19 18.5	+1.2
	1.8nm,1.0s,mb4.2,baz=82,slow=6.0,SNR=4.7						
VNDA				LR	LR	14 39 29.8	
	comp=Z,234nm,19.4s,MS4.4,baz=73,slow=29						
VNDA	Vanda	62.43	194	P	P	14 19 17.8	+0.5
	8.2nm,1.6s,mb4.6						
NEN	Nelson	62.65	359	eP	P	14 19 19.3	+0.1
AMTX	Amarillo	62.83	11	eP	P	14 19 18.7	-1.7
	9.8nm,0.9s,mb4.9						
SDCO	Great Sand Dun	65.13	7	eP	P	14 19 35.1	-0.3
	6.4nm,1.2s,mb4.5						
TPH	Tonopah	65.15	357	eP	P	14 19 36.2	+0.5
	5.9nm,0.7s,mb4.7						
MSU	Marysvale	65.49	1	P	P	14 19 35.1	-2.6
MNV	Mina	65.56	356	eP	P	14 19 38.8	+0.5
	11nm,1.0s,mb4.8						
NVAR	Mina Array Bea	65.57	356	P	P	14 19 39.1	+0.8
	6.6nm,0.8s,mb4.7,baz=186,slow=8.2,SNR=38						
NVAR				LR	LR	14 42 42.0	
	comp=Z,108nm,18.2s,MS4.1,baz=220,slow=31						
SRU	San Rafael	66.13	2	eP	P	14 19 41.1	-0.8
DAU	Daniels Canyon	67.41	2	eP	P	14 19 51.2	+1.3
BMN	Battle Mountai	67.50	357	eP	P	14 19 50.4	-0.1
	18nm,1.2s,mb5.0						
JLU	Jordanelle	67.59	1	eP	P	14 19 51.4	+0.3
CTU	Camp Tracy	67.68	1	eP	P	14 19 51.0	-0.6
ELK	Elko	67.74	358	P	P	14 19 53.8	+1.8
	2.2nm,0.8s,mb4.2,baz=177,slow=5.7,SNR=9.2						
ELK				LR	LR	14 43 20.0	
	comp=Z,113nm,20.6s,MS4.1,baz=85,slow=30						
ELK	Elko	67.74	358	eP	P	14 19 52.1	+0.1
	6.8nm,1.3s,mb4.5						
WDC	Whiskeytown Da	68.10	352	eP	P	14 19 52.7	-1.6
	13nm,1.1s,mb4.9						
CCM	Cathedral Cave	68.22	19	eP	P	14 19 52.3	-2.8
	7.3nm,0.9s,mb4.7						
HWUT	Hardware Ranch	68.59	1	eP	P	14 19 57.8	+0.4
	7.9nm,1.3s,mb4.5						
VNA3	Neumayer Olymp	68.64	160	⇑i	P	14 19 55.6	-1.5
VNA3	Neumayer Olymp	68.64	160	⇑i	P	14 19 58.3	+1.2
VNA3	Neumayer Olymp	68.64	160	⇑i	P	14 20 00.5	+3.4
VNA3	Neumayer Olymp	68.64	160		PcP	14 20 20.6	-1.6
MOD	Modoc	69.18	354	eP	P	14 20 00.7	-0.3
	12nm,1.2s,mb4.7						
YBH	Yreka Blue Hor	69.25	352	LR	LR	14 43 21.3	
	comp=Z,150nm,21.3s,MS4.2,baz=176,slow=30						
TZTN	Tazewell	69.41	25	eP	P	14 20 00.9	-1.6
VNA2	Neumayer--Watz	69.44	160	⇑i	P	14 19 59.6	-2.5
VNA2	Neumayer--Watz	69.44	160	⇑i	P	14 20 03.4	+1.3
VNA2	Neumayer--Watz	69.44	160	⇑i	P	14 20 05.8	+3.7
VNA2	Neumayer--Watz	69.44	160		PcP	14 20 24.2	-1.4
WVOR	Wild Horse Val	69.58	356	eP	P	14 20 03.4	0.0
	20nm,1.2s,mb4.9						
PDAR	Pinedale Array	69.82	3	P	P	14 20 04.0	-0.8
	3.6nm,0.9s,mb4.3,baz=166,slow=6.1,SNR=17						
PDAR				LR	LR	14 45 19.0	
	comp=Z,78nm,18.3s,MS4.0,baz=21,slow=31						
SNAA	Sanae	70.44	162	eP	P	14 20 05.7	-2.5
	9.7nm,1.3s,mb4.6						
TPAW	Teton Pass	70.49	2	eP	P	14 20 07.4	-1.6
	10nm,0.8s,mb4.8						
HLID	Hailey	70.54	359	eP	P	14 20 09.3	+0.1
	15nm,1.0s,mb4.9						
LOHW	Long Hollow	70.62	2	eP	P	14 20 09.0	-0.7
	8.9nm,1.2s,mb4.6						
IMW	Indian Meadow	70.90	2	eP	P	14 20 11.0	-0.4
	8.9nm,0.9s,mb4.7						
MCMT	McKenzie Canyo	71.80	0	eP	P	14 20 16.9	+0.1
QLMT	Earthquake Lak	71.82	1	eP	P	14 20 17.9	+1.0
BMO	Blue Mountains	71.91	357	eP	P	14 20 17.4	-0.1
	8.0nm,1.3s,mb4.5						
BOZ	Bozeman (W)	72.63	1	eP	P	14 20 21.4	-0.3
	2.4nm,0.8s,mb4.2						
HRY	Holter Researc	73.69	1	eP	P	14 20 28.6	+0.8
MSO	Missoula	73.80	360	P	P	14 20 28.7	+0.2
	4.2nm,0.9s,mb4.4						
CHMT	Chamberlain Mo	73.88	0	eP	P	14 20 29.1	+0.1
LAO	LASA Array	73.93	5	eP	P	14 20 29.5	+0.3
	9.2nm,0.8s,mb4.8						
NEW	Newport	75.31	357	P	P	14 20 37.6	+0.4
	6.7nm,0.9s,mb4.6,baz=186,slow=4.6,SNR=5.8						
NEW	Newport	75.31	357	eP	P	14 20 38.0	+0.8
	11nm,1.0s,mb4.7						
DGMT	Dagmar	75.88	6	P	P	14 20 39.9	-0.5
	15nm,0.9s,mb4.9						
EYMN	Ely	77.43	15	eP	P	14 20 48.3	-0.8
	14nm,1.2s,mb4.8						
SADO	Sadowa	78.21	24	LR	LR	14 51 60.0	
	comp=Z,169nm,19.3s,MS4.4,baz=124,slow=33						
TAU	Tasmania Unive	78.31	228	eP	P	14 20 53.9	-0.2
ULM	Lac du Bonnet	78.75	11	P	P	14 20 56.6	+0.3
	1.5nm,0.5s,mb4.2,baz=200,slow=7.4,SNR=2.9						
EDM	Edmonton	80.20	360	eP	P	14 21 04.0	-0.1
MAW	Mawson	85.33	179	LR	LR	14 55 48.8	
	comp=Z,270nm,18.9s,MS4.7,baz=344,slow=33						
DLBC	Dease Lake	86.57	351	P	P	14 21 38.0	+1.5
	4.3nm,0.8s,mb4.7,baz=179,slow=6.1,SNR=9.9						
STKA	Stephens Creek	87.59	235	LR	LR	14 56 24.7	
	comp=Z,160nm,18.4s,MS4.5,baz=272,slow=32						
STKA	Stephens Creek	87.59	235	P	P	14 21 42.0	0.0
SCHQ	Schefferville	91.00	25	LR	LR	15 01 45.3	
	comp=Z,79nm,20.3s,MS4.2,baz=228,slow=35						
ILAR	Eielson Array	95.45	346	P	P	14 22 18.1	+0.3
	0.7nm,0.7s,mb4.2,baz=186,slow=4.0,SNR=7.0						
FRB	Frobisher Bay	97.33	18	LR	LR	15 03 08.3	
	comp=Z,117nm,20.1s,MS4.4,baz=318,slow=34						
SSE	Sheshan	132.72	288	PKP	PKPdf	14 28 10.0	-1.0
SSE	Sheshan	132.72	288	PKP	PKPdf	14 28 10.6	-0.4
ULN	Ulaanbaatar	142.59	314	ePKPpre		14 28 23.2	
SONM	Songino Array	143.02	314	PKhKP		14 28 23.0	
	0.7nm,0.8s,baz=102,slow=3.0,SNR=6.1						
AKASG	Malin Array Be	143.23	40	PKhKP		14 28 22.7	
	0.4nm,0.3s,baz=296,slow=3.4,SNR=5.1						
AKASG	Malin Array Be	143.23	40	PKP		14 28 22.7	
LZH	Lanzhou	147.40	295	ePKP	PKPdf	14 28 37.0	+0.1
LZH				APKP		14 28 40.3	
LZH				XPKP		14 28 41.5	
LZH				LR	LR		
	comp=N,140nm,18.2s						
LZH				LR	LR		
	comp=Z,340nm,20.0s,MS5.1						
LZH	Lanzhou	147.40	295	ePKP	PKPdf	14 28 37.0	+0.1
LZH				pPKP		14 28 40.2	
LZH				sPKP		14 28 41.5	
CMAR	Chiang Mai Arr	149.12	260	PKPbc	PKPdf	14 28 42.8	+2.6
	comp=Z,1.4nm,0.6s,baz=139,slow=0.5,SNR=10						
BRTR	Keskin Array B	149.93	57	PKP	PKPdf	14 28 40.8	-0.1
	comp=Z,3.4nm,1.0s,baz=225,slow=4.1,SNR=3.6						
BRTR				PKPbc	PKPdf	14 28 44.9	+4.0
	comp=Z,4.8nm,1.0s,baz=225,slow=5.2,SNR=3.6						
ZRNK	Zerenda	154.34	357	ePKPdf	PKPdf	14 28 45.5	-1.2
ZRNK				ePKPab	PKPab	14 29 08.7	0.0
WMQ	Urumqi	156.40	320	ePKP	PKPdf	14 28 47.9	-1.9
WMQ				PP	PP	14 32 57.9	+1.3
WMQ				PPP	PPP	14 36 35.1	+1.7
WMQ				PP	PP		
	comp=Z,130nm,5.0s						
WMQ				LR	LR		
	comp=N,100nm,21.0s,MS4.7						
WMQ				LR	LR		
	comp=E,80nm,22.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,100nm,20.6s,MS4.6						
MKAR	Makanchi Array	157.01	332	PKPab	PKPab	14 29 19.1	-1.2
	comp=Z,0.6nm,0.7s,baz=53,slow=6.1,SNR=3.9						

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*CASC **16** 14:20:49.8±1.7, 10.40N×86.38W, h20^{km}, MD4.5, mb4.2(NEIC)*
*IDC **16** 14:20:50.3±1.0, 11.18N×85.74W, mb3.8/5, mb1 4.1/5, mb1mx3.8/20, mbtmp3.8/5, MS3.5/1, Ms1 3.5/1, ms1mx2.7/28, Error ellipse: s-maj=57.1km s-min=15.4km az=51.0*

*NEIC **16** 14:20:52.5±0.7,11.23N×85.55W,h20^{km},mb4.2/4,Error ellipse: s-maj=24.0km s-min=12.0km az=60.0*

ISC 16 14:20:49.1±0.8,10.39N±0.07×86.42W±0.06,h20^{km},n42,σ0^{s}87/42,mb3.8/8,MS3.5/1,8C-1D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCR	**Vista de Mar**	**0.82**	**108**	⇑*e*P	**Pb**	**14 21 03.5**	**-1.0**
VCR				*e*S	**Sb**	**14 21 15.7**	**+0.5**
CONN	**Concepcion**	**1.41**	**34**	⇑*e*P	**Pn**	**14 21 13.0**	**-0.9**
JTS	**JuntasAbangare**	**1.45**	**94**	Pg	**Pn**	**14 21 13.1**	**-1.5**
	11nm,0.3s,baz=312,slow=12,SNR=64						
JTS				Lg		14 21 35.5	
	41nm,0.3s,baz=302,slow=18,SNR=8.3						
JTS	**JuntasAbangare**	**1.45**	**94**	*e*Pn	**Pn**	**14 21 12.8**	**-1.8**
JTS				Pg	**Pn**	**14 21 13.1**	**-1.5**
JTS				Lg		14 21 35.5	
APON	**Apoyo**	**1.56**	**13**	*e*P	**Pn**	**14 21 16.9**	**+0.8**
CRUN	**El Crucero**	**1.59**	**4**	*e*P	**Pn**	**14 21 17.5**	**+0.9**
MASN	**Masaya**	**1.61**	**9**	*e*P	**Pn**	**14 21 17.9**	**+1.0**
TICN	**Ticuantepe**	**1.65**	**6**	*e*P	**Pn**	**14 21 17.7**	**+0.3**
FORC	**Fortuna**	**1.73**	**87**	*e*P	**Pn**	**14 21 19.9**	**+1.4**
XAVN	**Gruta Xavier**	**1.75**	**3**	⇓*e*P	**Pn**	**14 21 18.7**	**-0.2**
WILN	**Americas 2**	**1.78**	**7**	⇑*e*P	**Pn**	**14 21 19.0**	**-0.2**
APYN	**Apoyeque**	**1.83**	**2**	*e*P	**Pn**	**14 21 20.3**	**+0.2**
CGA2	**Cerro Gallo 2**	**1.96**	**101**	*e*P	**Pn**	**14 21 21.4**	**-0.4**
MOMJ	**Momotombo**	**2.01**	**357**	⇑*e*P	**Pn**	**14 21 22.0**	**-0.6**
MIRN	**Miramar**	**2.06**	**352**	⇑*e*P	**Pn**	**14 21 23.2**	**-0.1**
LEON	**Leon**	**2.07**	**347**	⇑*e*P	**Pn**	**14 21 23.2**	**-0.2**
CNGN	**Cerro Negro**	**2.12**	**353**	*e*P	**Pn**	**14 21 24.1**	**0.0**
PRS1	**Puriscal**	**2.12**	**101**	*e*P	**Pn**	**14 21 23.0**	**-1.1**
PYTN	**Playitas**	**2.17**	**9**	⇑*e*P	**Pn**	**14 21 24.1**	**-0.7**
TEL3	**Telica 3**	**2.21**	**349**	⇑*e*P	**Pn**	**14 21 25.3**	**-0.1**
TELN	**Telica**	**2.24**	**350**	*e*P	**Pn**	**14 21 25.8**	**-0.1**
LAJ	**Bijagual**	**2.32**	**103**	*e*P	**Pn**	**14 21 20.9**	**-6.1**
SJS	**Escuela Geolog**	**2.37**	**101**	*e*S	**Sn**	**14 21 58.4**	**+1.8**
CRIN	**San Cristobal**	**2.38**	**345**	*e*P	**Pn**	**14 21 26.9**	**-0.9**
URSC	**Urasca**	**2.66**	**102**	*e*P	**Pn**	**14 21 32.1**	**+0.2**
TRTC	**Tortuguero**	**2.67**	**86**	*e*P	**Pn**	**14 21 31.2**	**-0.8**
BUS	**Buena Vista**	**2.75**	**107**	*e*P	**Pn**	**14 21 33.4**	**+0.2**
DWPF	**Disney**	**18.24**	**14**	P	**P**	**14 24 50.9**	**-12**
	100nm,1.5s						
SWET	**Sewanee**	**24.72**	**1**	P	**P**	**14 26 05.1**	**-5.5**
LTX	**Lajitas**	**24.80**	**322**	P	**P**	**14 26 12.0**	**+0.6**
	6.0nm,0.8s,mb4.2						
TXAR	**Lajitas Array**	**24.80**	**322**	P	**P**	**14 26 12.3**	**+0.9**
	2.0nm,0.6s,mb3.8,baz=144,slow=11,SNR=14						
TXAR				PcP	PcP	14 29 51.2	+2.4
	0.5nm,0.5s,baz=135,slow=1.3,SNR=4.1						
TXAR				pPcP		14 29 57.0	
	0.2nm,0.3s,baz=146,slow=3.3,SNR=3.4						
TXAR	**Lajitas Array**	**24.80**	**322**	P	**P**	**14 26 12.3**	**+0.9**
TXAR				PcP	PcP	14 29 51.2	+2.4
TXAR				pPcP		14 29 57.0	
WMOK	**Wichita Mounta**	**26.74**	**337**	*e*P	**P**	**14 26 29.9**	**+0.5**
	3.6nm,0.8s,mb4.0						
SDCO	**Great Sand Dun**	**32.19**	**331**	*e*P	**P**	**14 27 17.4**	**-0.7**
	1.7nm,0.9s,mb3.9						
PDAR	**Pinedale Array**	**38.05**	**332**	P	**P**	**14 28 06.8**	**-1.4**
	0.2nm,0.3s,mb3.3,baz=135,slow=12,SNR=2.2						
HWUT	**Hardware Ranch**	**38.15**	**329**	P	**P**	**14 28 08.0**	**-0.9**
ELK	**Elko**	**39.52**	**325**	P	**P**	**14 28 21.3**	**+0.9**
	0.8nm,0.6s,mb3.6,baz=142,slow=12,SNR=5.8						
NVAR	**Mina Array Bea**	**39.91**	**320**	P	**P**	**14 28 26.2**	**+2.5**
	1.4nm,0.7s,mb3.8,baz=120,slow=9.9,SNR=8.3						
NVAR				pP	pP	14 28 31.7	+2.0
	0.6nm,0.7s,baz=112,slow=9.1,SNR=3.4						
NVAR				PcP	PcP	14 30 32.0	+2.3
	1.4nm,0.7s,baz=170,slow=3.6,SNR=7.7						
NVAR				pPcP		14 30 37.6	
	1.1nm,0.7s,baz=153,slow=3.9,SNR=5.9						
NVAR	**Mina Array Bea**	**39.91**	**320**	P	**P**	**14 28 26.2**	**+2.5**
NVAR				pP	pP	14 28 31.7	+2.0
NVAR				PcP	PcP	14 30 32.0	+2.3
NVAR				pPcP		14 30 37.6	
CPUP	**Villa Florida**	**46.17**	**143**	LR	LR	14 48 49.8	
	comp=Z,52nm,18.2s,MS3.5,baz=333,slow=36						
SCHQ	**Schefferville**	**46.97**	**15**	P	**P**	**14 29 16.1**	**-4.5**
	2.7nm,0.7s,mb4.3,baz=191,slow=6.5,SNR=4.9						
CMAR	**Chiang Mai Arr**	**150.85**	**350**	PKPbc	PKPdf	14 40 42.0	+2.4
	1.4nm,0.9s,baz=337,slow=3.5,SNR=6.1						

MAN 16 14:23:03.4,12.58N×123.56E,h1^{km},mb4.2,ML3.1,MS2.9,2C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.23**	**164**	⇑*i*P	Pg	14 23 08.0	0.0
MMPH				*i* S	Sg	14 23 12.0	+1.0
CNP	**Catarman**	**1.08**	**93**	*e*P	Pb	14 23 24.3	-0.2
CNP				*e*S	Sb	14 23 40.7	+1.7
RCP	**Roxas**	**1.29**	**218**	⇑*e*P	Pb	14 23 28.2	+0.1
RCP				*e*S	Sb	14 23 46.0	+0.9

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*BGR **16** 14:33:13.5±0.8,51.50N×16.14E,h1^{km},ML3.0/9,Error ellipse: s-maj=23.3km s-min=8.9km az=170.0*

*PRU **16** 14:33:14.6,51.48N×16.08E*

*NEIC **16** 14:33:14.4±1.5,51.48N×16.07E,h5^{km},ML3.2(VIE),ML3.1(SZGRF),Error ellipse: s-maj=15.7km s-min=6.7km az=206.0*

*CSEM **16** 14:33:14.7±0.2,51.48N×16.09E,h1^{km},ML3.3/5,Error ellipse: s-maj=3.1km s-min=1.7km az=13.0*

*IPEC **16** 14:33:15.2±0.3,51.46N×16.11E,h9^{km}±1^{km},ML2.3/2,Error ellipse: s-maj=2.0km s-min=0.7km az=25.0*

WAR 16 14:33:14.5,51.52N×16.07E,h1^{km},ML3.0,3C,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**168**	*e*Pg	Pg	14 33 27.1	-1.2
KSP				*i* Sg	Sg	14 33 36.1	-1.4
KSP	**Ksiaz**	**0.69**	**168**	*e*PG	Pg	14 33 27.0	-1.3
KSP				*i* SG	Sg	14 33 36.1	-1.4
KSP	**Ksiaz**	**0.69**	**168**	*e*Pg	Pg	14 33 27.1	-1.2
KSP				*e*Sg	Sg	14 33 36.3	-1.2
KSP	**Ksiaz**	**0.69**	**168**	*e*Pg	Pg	14 33 27.0	-1.3
KSP				*e*Sg	Sg	14 33 36.0	-1.5
UPC	**Upice**	**1.01**	**182**	*e*PG	Pg	14 33 33.0	-1.7
DPC	**Dobruska-Polom**	**1.18**	**172**	*e*PG	Pg	14 33 35.8	-2.2
DPC				*e*SG	Sg	14 33 50.6	-3.2
	44nm,0.3s						
PVCC	**Panska Ves**	**1.37**	**224**	*e*PG	Pg	14 33 39.7	-2.1
PVCC	**Panska Ves**	**1.37**	**224**	*e*Pn	Pn	14 33 40.1	-0.7
PVCC				*e*Sg	Sg	14 33 58.3	-1.8
BRG	**Berggiesshubel**	**1.48**	**245**	*e*Pn	Pn	14 33 41.8	-0.6
BRG				*e*Sg	Sg	14 34 01.9	-2.0
BRG	**Berggiesshubel**	**1.48**	**245**	Pn	Pn	14 33 41.8	-0.7
BRG				Pg	Pg	14 33 42.2	-2.0
BRG				Sg	Sg	14 34 02.0	-1.9
BRG	**Berggiesshubel**	**1.48**	**245**	Pg	Pg	14 33 42.2	-1.9
BRG				Sg	Sg	14 34 01.9	-2.0
FBE	**Freiberg**	**1.81**	**252**	Pn	Pn	14 33 47.0	0.0
FBE				Sg	Sg	14 34 11.6	-3.1
PRU	**Pruhonice**	**1.81**	**213**	*e*PG	Pg	14 33 47.2	-3.5
PRU				*e*SG	Sg	14 34 11.0	-3.8
PRU	**Pruhonice**	**1.81**	**213**	*e*Pn	Pn	14 33 46.2	-0.9
PRU	**Pruhonice**	**1.81**	**213**	Pg	Pg	14 33 47.2	-3.5
PRU				*e*Sg	Sg	14 34 10.9	-3.9
CLL	**Collm**	**1.93**	**265**	*i* Pn	Pn	14 33 46.8	-2.0
CLL				*i* Pg	Pg	14 33 49.8	-3.3
CLL				*i* Sg	Sg	14 34 16.3	-2.5
CLL	**Collm**	**1.93**	**265**	*i* PN	Pn	14 33 46.8	-2.0
CLL				*i* PG	Pg	14 33 49.8	-3.3
CLL				*e*		14 33 54.0	
CLL				*i* SG	Sg	14 34 16.3	-2.5
CLL	**Collm**	**1.93**	**265**	*i* Pg	Pg	14 33 49.8	-3.3
CLL				Sg	Sg	14 34 16.6	-2.2
MORC	**Moravsky Berou**	**1.98**	**151**	*e*Pn	Pn	14 33 47.5	-2.0
MORC				*e*Sn	Sn	14 34 14.1	-1.2
MORC	**Moravsky Berou**	**1.98**	**151**	*e*Pn	Pn	14 33 47.5	-2.0
MORC				*e*Sn	Sn	14 34 14.1	-1.2
MORC				*e*Sg	Sg	14 34 15.2	-5.2
	14nm,0.3s						
OKC	**Ostrava-Krasne**	**2.14**	**141**	*e*PG	Pg	14 33 54.5	-2.7
OKC				*e*SG	Sg	14 34 20.8	-4.9
VRAC	**Vranov**	**2.24**	**171**	*e*Pn	Pn	14 33 51.6	-1.6
VRAC				*e*Sg	Sg	14 34 22.7	-6.3
	21nm,0.3s						
KRUC	**Moravsky**	**2.47**	**175**	*e*Pn	Pn	14 33 55.4	-1.1
TANN	**Tannenbergstha**	**2.53**	**246**	*e*Pn	Pn	14 33 54.2	-3.2
TANN				*e*Sg	Sg	14 34 32.9	-6.0
WERD	**Werda**	**2.61**	**247**	*e*Pn	Pn	14 33 56.6	-1.9
NKC	**Novy Kostel**	**2.63**	**242**	*e*PN	Pn	14 33 57.5	-1.3
NKC				*e*PG	Pg	14 34 04.4	-2.6
NKC				*e*SG	Sg	14 34 37.9	-4.1
NKC	**Novy Kostel**	**2.63**	**242**	*e*Pn	Pn	14 33 57.4	-1.4
NKC	**Novy Kostel**	**2.63**	**242**	*e*Pg	Pg	14 34 04.4	-2.6
NKC				*e*Sg	Sg	14 34 37.6	-4.4
GUNZ	**Gunzen**	**2.63**	**245**	*e*Pn	Pn	14 33 57.8	-1.0
OJC	**Ojcow**	**2.70**	**117**	*e*PG	Pg	14 34 05.0	-3.3
OJC				*e*SG	Sg	14 34 40.0	-4.3
OJC	**Ojcow**	**2.70**	**117**	*e*Pg	Pg	14 34 04.8	-3.5
OJC				*e*Sg	Sg	14 34 39.8	-4.5
KHC	**Kasperske Hory**	**2.87**	**215**	*e*PN	Pn	14 34 00.6	-1.7
KHC				*e*PG	Pg	14 34 06.0	-5.8
KHC				*e*SG	Sg	14 34 43.6	-6.5
KHC	**Kasperske Hory**	**2.87**	**215**	*e*Pn	Pn	14 34 00.5	-1.8
KHC	**Kasperske Hory**	**2.87**	**215**	*e*Pg	Pg	14 34 06.0	-5.8
KHC				Sg	Sg	14 34 43.6	-6.5
MOX	**Moxa**	**2.94**	**254**	*e*Sg	Sg	14 34 49.2	-3.2
MOX	**Moxa**	**2.94**	**254**	*e*Pg	Pg	14 34 09.2	-4.0
MOX				*e*Sg	Sg	14 34 47.3	-5.1
GEC2	**GERESS Array S**	**3.08**	**211**	*e*Pn	Pn	14 34 04.2	-0.9
GEC2	**GERESS Array S**	**3.08**	**211**	*e*Pn	Pn	14 34 04.2	-1.0
ZST	**Bratislava**	**3.39**	**168**	*e*SG	Sg	14 35 02.4	-5.0
GRA1	**Grafenberg Arr**	**3.59**	**241**	Sg	Sg	14 35 09.1	-4.8
GRF	**Grafenberg Arr**	**3.59**	**241**	*e*Sg	Sg	14 35 09.1	-4.8
MOA	**Molln**	**3.85**	**198**	⇑*i*PN	Pn	14 34 14.6	-1.6
MOA				*i* SG	Sg	14 35 17.8	-5.0
	20nm,0.6s						
ARSA	**Arzberg**	**4.29**	**185**	⇑*i*PN	Pn	14 34 20.9	-1.5
ARSA				*i* SG	Sg	14 35 30.1	-7.1
	9.3nm,0.5s						
KBA	**Koelnbreinsper**	**4.79**	**203**	⇑*i*PN	Pn	14 34 27.5	-2.0
KBA				*i* SG	Sg	14 35 47.6	-6.2
	11nm,0.7s						

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*NIED **16** 14:42:00,43.00N×145.60E,h41^{km},Mw4.7 Best double couple: $M_0$1.32×10^{16} NP1:ϕ_s16°,δ71°,λ-126°. NP2: ϕ_s262°,δ40°,λ-30°.*

*BJI **16** 14:42:16.5,42.91N×145.58E,h35^{km},mB5.1,mb4.8,Ms4.2,Msz4.0*

*MOS **16** 14:42:17.1±0.9,42.93N×145.54E,h39^{km},mb5.0/40,MS4.1/11,Error ellipse: s-maj=8.1km s-min=4.7km az=102.0*

MOS Felt (II) at Yuzhno-Kuril'sk.

*SKHL **16** 14:42:17.5±1.4,42.96N×145.70E,h49^{km}±18^{km},mb4.2/1,Ms4.3/5,msh5.2/3*

SKHL Felt (II) at Yushno-Kurilsk.

*JMA **16** 14:42:18.5±0.1,42.95N×145.59E,h43^{km}±1^{km},M4.7*

JMA Felt II J1.

*NEIC **16** 14:42:18.7±0.2,42.95N×145.58E,mb4.8/55,MS4.1/4,MW4.7(NIED),Error ellipse: s-maj=6.3km s-min=3.8km az=146.0*

NEIC Felt [II] at Yuzhno-Kuril'sk, Kunashir. Recorded [2 JMA] in eastern Hokkaido.

*IDC **16** 14:42:19.3±0.8,43.00N×145.50E,h38^{km}±5^{km},mb4.3/24,mb1 4.5/25,mb1mx4.4/29,mbtmp4.6/25,ML4.3/1,MS3.9/17,Ms1 3.9/17,ms1mx3.7/33,Error ellipse: s-maj=16.5km s-min=11.3km az=153.0*

ISC 16 14:42:16.8±0.2,42.90N±0.03×145.63E±0.03,h37^{km},h37^{km}±1.4^{km}:pP-P,n265,σ0^{s}96/273,mb4.7/92,MS4.0/25,16C-7D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.47**	**10**	⇑P	**P**	**14 42 28.4**	**+1.4**
NEM2				*e*S	**S**	**14 42 35.4**	**+1.1**
JAK	**Akkeshi**	**0.69**	**278**	⇑P	**P**	**14 42 31.5**	**+1.4**
JAK				*e*S	**S**	**14 42 41.3**	**+1.6**
JNK	**Nakash**	**0.95**	**316**	⇑P	**P**	**14 42 34.7**	**+0.9**
JNK				*e*S	**S**	**14 42 46.3**	**-0.1**
JRA	**Rausu**	**1.10**	**341**	⇑P	**P**	**14 42 37.0**	**+1.1**
JRA				*e*S	**S**	**14 42 50.9**	**+0.7**
YUK	**Yuzh-Kuril'sk**	**1.15**	**8**	*e*PN	**P**	**14 42 36.4**	**-0.2**
YUK				*i* S	**S**	**14 42 49.8**	**-1.5**
YUK				pmax	pmax		
	comp=Z,8μm,6.0s						
YUK				pmax	pmax		
	comp=N,2μm,1.0s						
YUK				pmax	pmax		
	comp=E,2μm,1.0s						
YUK				pmax	pmax		
	comp=Z,8μm,0.4s						
YUK				pmax	pmax		
	comp=N,3μm,0.4s						
YUK				pmax	pmax		
	comp=E,2μm,0.5s						
YUK				smax			
	comp=N,89μm,1.0s						
YUK				smax			
	comp=E,258μm,1.0s						
YUK	**Yuzh-Kuril'sk**	**1.15**	**8**	*e*P	**P**	**14 42 36.4**	**-0.2**
YUK				AMB	AMB	14 42 37.1	
	comp=E,2μm,1.0s						
YUK				AMB	AMB	14 42 37.1	
	comp=E,8μm,0.6s						
YUK				AMB	AMB	14 42 39.0	
	comp=E,2μm,0.5s						
YUK				AMB	AMB	14 42 39.0	
	comp=E,8μm,0.4s						
YUK				AMB	AMB	14 42 39.0	
	comp=E,3μm,0.3s						
YUK				*i* S	**S**	**14 42 49.8**	**-1.5**
YUK				A		14 42 50.8	
	comp=E,89μm,1.0s						
YUK				A		14 42 50.8	
	comp=E,258μm,1.0s						
JOB	**Onbets**	**1.32**	**271**	P	**P**	**14 42 39.9**	**+0.8**
JOB				*e*S	**S**	**14 42 56.4**	**+0.8**
JAR	**Ashorobuto**	**1.42**	**287**	⇑P	**P**	**14 42 41.7**	**+1.2**
JAR				*e*S	**S**	**14 42 58.9**	**+0.7**
JTKR	**Abashiri--Toko**	**1.65**	**311**	⇑P	**P**	**14 42 45.2**	**+1.4**
JTKR				*e*S	**S**	**14 43 05.2**	**+1.3**
ASAJ	**Asahikawa**	**2.52**	**300**	PN	**P**	**14 42 58.4**	**+2.2**
ASAJ						14 43 30.0	
ASAJ				pmax	pmax		
	comp=Z,44nm,0.3s						
ASAJ				smax			
	comp=N,109nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,3μm,19.4s						
ASAJ	**Asahikawa**	**2.52**	**300**	Pn	**P**	**14 42 58.4**	**+2.2**
	comp=Z,44nm,0.3s,baz=116,slow=10,SNR=200						
ASAJ				Sn	**S**	**14 43 30.0**	**+4.0**
	comp=Z,108nm,0.3s,baz=11,slow=19,SNR=18						
ASAJ				LR	LR	14 44 02.4	
	comp=Z,3μm,19.4s,baz=101,slow=43						
KUR	**Kuril'sk**	**2.84**	**34**	⇑*i*PN	**P**	**14 42 59.5**	**-1.3**
KUR				*i* S	**S**	**14 43 32.0**	**-2.1**
KUR				pmax	pmax		
	comp=N,150nm,0.5s						
KUR				pmax	pmax		
	comp=E,300nm,0.5s						
KUR				pmax	pmax		
	comp=Z,690nm,0.5s						
KUR				pmax	pmax		
	comp=N,2μm,1.0s						
KUR				pmax	pmax		
	comp=Z,4μm,1.0s						
KUR				smax			
	comp=N,2μm,0.5s						
KUR				smax			
	comp=E,1μm,0.5s						
KUR				smax			
	comp=N,12μm,2.0s						
KUR				smax			
	comp=E,8μm,2.0s						
KUR	**Kuril'sk**	**2.84**	**34**	⇑*i*P	**P**	**14 42 59.5**	**-1.3**
KUR				AMB	AMB	14 43 09.4	
	comp=E,150nm,0.5s						
KUR				AMB	AMB	14 43 09.4	
	comp=E,300nm,0.5s						
KUR				AMB	AMB	14 43 09.4	
	comp=E,690nm,0.5s						
KUR				AMB	AMB	14 43 21.8	
	comp=E,2μm,1.0s						
KUR				AMB	AMB	14 43 21.8	
	comp=E,2μm,1.0s						
KUR				AMB	AMB	14 43 21.8	
	comp=E,4μm,1.0s						
KUR				*i* S	**S**	**14 43 32.0**	**-2.1**
KUR				A		14 43 36.2	
	comp=E,2μm,0.5s						
KUR				A		14 43 36.2	
	comp=E,1μm,0.5s						
KUR				A		14 43 49.0	
	comp=E,12μm,2.0s						
KUR				A		14 43 49.0	
	comp=E,8μm,2.0s						
YSS	**Yuzh-Sakhalins**	**4.54**	**334**	*c* *i*PN	**P**	**14 43 25.2**	**+0.3**
YSS	**Yuzh-Sakhalins**	**4.54**	**334**	*e*Pn	**P**	**14 43 24.8**	**-0.1**
YSS	**Yuzh-Sakhalins**	**4.54**	**334**	⇑*i*P	**P**	**14 43 24.8**	**-0.1**
YSS				AMB	AMB	14 43 26.8	
	comp=E,40nm,1.0s						
YSS				*e*S	**S**	**14 44 16.0**	**-1.2**
YSS				A		14 44 23.0	
	comp=E,190nm,1.0s						
YSS				AMS	AMS	14 45 30.0	
	comp=E,1μm,15.0s						
YSS				AMS	AMS	14 45 30.0	
	comp=E,800nm,15.0s						
UGL	**Uglegorsk**	**6.66**	**339**	*e*PN	**P**	**14 43 55.0**	**+0.3**
UGL				S	**S**	**14 45 16.0**	**+5.7**
UGL				pmax	pmax		
	comp=Z,81nm,0.8s						
UGL				smax			
	comp=N,700nm,4.0s						
UGL				smax			
	comp=E,450nm,4.0s						
UGL				smax			
	comp=Z,500nm,4.0s						
UGL				MLR	MLR		
	comp=Z,800nm,15.0s						
UGL				MLR	MLR		
	comp=N,750nm,16.0s						
UGL				MLR	MLR		
	comp=E,400nm,16.0s						
UGL	**Uglegorsk**	**6.66**	**339**	*e*P	**P**	**14 43 55.0**	**+0.3**
UGL				AMB	AMB	14 43 56.0	
	comp=E,81nm,0.8s						
UGL				AMB	AMB	14 43 59.0	
	comp=E,400nm,1.6s						
UGL				A		14 45 21.0	
	comp=E,700nm,4.0s						
UGL				A		14 45 21.0	
	comp=E,450nm,4.0s						
UGL				A		14 45 21.0	
	comp=E,500nm,4.0s						
UGL				AMS	AMS	14 46 55.0	
	comp=E,750nm,16.0s						
UGL				AMS	AMS	14 46 55.0	
	comp=E,400nm,16.0s						
UGL				AMS	AMS	14 46 55.0	
	comp=E,800nm,16.0s						
TEY	**Ternei**	**6.85**	**291**	*e*P	**P**	**14 43 57.0**	**-0.4**
TEY				AMS	AMS	14 46 44.0	
	comp=E,2μm,16.0s						
TYV	**Tymovskoe**	**8.22**	**347**	*e*P	**P**	**14 44 13.0**	**-3.5**
TYV				AMB	AMB	14 44 18.3	
	comp=E,28nm,0.9s						
TYV				AMB	AMB	14 44 28.8	
	comp=E,15nm,2.0s						
TYV				A		14 45 56.4	
	comp=E,20nm,0.8s						
TYV				A		14 45 56.4	
	comp=E,10.0nm,0.8s						
TYV				AMS	AMS	14 47 22.0	
	comp=E,500nm,20.0s						
TYV				AMS	AMS	14 47 22.0	
	comp=E,600nm,20.0s						
TYV				AMS	AMS	14 48 06.0	
	comp=E,500nm,13.0s						
MAJO	**Matsushiro**	**8.54**	**224**	*e*PN	**P**	**14 44 19.7**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,26nm,0.5s						
MAJO	**Matsushiro**	**8.54**	**224**	*e*P	**P**	**14 44 19.7**	**-1.2**
	comp=Z,26nm,0.5s						
MAT	**Matsushiro**	**8.54**	**224**	*e*PN	**P**	**14 44 20.0**	**-0.9**
MAT				pmax	pmax		
	comp=Z,28nm,0.5s						
MAT	**Matsushiro**	**8.54**	**224**	*e*P	**P**	**14 44 20.0**	**-0.9**
	comp=Z,28nm,0.5s						
MAT				S	**S**	**14 45 52.0**	**-5.1**
MAT	**Matsushiro**	**8.54**	**224**	P	**P**	**14 44 19.6**	**-1.3**
MAT				*e*S	**S**	**14 45 51.9**	**-5.2**
MJAR	**Matsushiro Arr**	**8.54**	**224**	Pn	**P**	**14 44 19.6**	**-1.3**
	comp=Z,3.3nm,0.3s,baz=31,slow=13,SNR=55						
MJAR				LR	LR	14 48 35.1	
	comp=Z,338nm,18.5s,baz=45,slow=44						
GRNR	**Gornyy**	**10.08**	**325**	*e*P	**P**	**14 44 38.0**	**-4.1**
GRNR				AMB	AMB	14 44 41.2	
	comp=Z,130nm,1.0s						
SKR	**Severo-Kuril's**	**10.59**	**39**	*e*P	**P**	**14 44 43.9**	**-5.2**
SKR				AMB	AMB	14 44 44.5	
	comp=Z,80nm,0.4s						
OKH	**Okha**	**10.81**	**351**	AMS	AMS	14 49 08.2	
	comp=Z,1μm,19.0s						
OKH				AMS	AMS	14 49 08.2	
	comp=Z,600nm,19.0s						
KLR	**Kul'dur**	**11.53**	**308**	*e*PN	**P**	**14 45 00.0**	**-1.7**
KLR				*e*		14 47 15.0	
KLR				MLR	MLR		
	comp=E,900nm,15.0s						
KLR				MLR	MLR		
	comp=Z,1μm,15.0s						
KLR	**Kul'dur**	**11.53**	**308**	*e*P	**P**	**14 45 00.0**	**-1.7**
KLR				*e*rx	rx	14 49 57.5	
MDJ	**Mudanjiang**	**11.73**	**284**	P	**P**	**14 45 02.9**	**-1.6**
MDJ				AP		14 45 06.4	
MDJ				S	**S**	**14 47 08.1**	**-7.0**
MDJ				PCP	PcP	14 50 49.9	-1.8
MDJ				PCS		14 54 24.1	
MDJ				SCS	ScS	14 57 54.1	-0.6
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,80nm,5.3s						
MDJ				LR	LR		
	comp=N,190nm,11.3s						
MDJ				LR	LR		
	comp=E,300nm,17.4s						
MDJ				LR	LR		
	comp=Z,440nm,18.4s						
MDJ	**Mudanjiang**	**11.73**	**284**	*e*P	**P**	**14 45 04.5**	**+0.1**
	comp=Z,15nm,1.0s						
MDJ				*e*		14 45 18.2	
PET	**Petropavlovsk**	**13.35**	**36**	*e*PN	**P**	**14 45 19.8**	**-6.3**
KS15	**Wonju Array Si**	**14.61**	**254**	*e*P	**P**	**14 45 42.9**	**+0.3**
CN2	**Changchun**	**14.71**	**280**	*e*P	**P**	**14 45 43.5**	**-0.4**
CN2				*e*XP		14 45 59.6	
CN2				*e*S	**S**	**14 48 24.8**	**-1.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
CN2				LR	LR		
	comp=N,300nm,14.0s						
CN2				LR	LR		
	comp=E,500nm,14.0s						
CN2				LR	LR		
	comp=Z,500nm,19.0s						
JNU	**Nakatsue**	**15.16**	**235**	LR	LR	14 51 41.8	
	comp=Z,546nm,21.8s,baz=10,slow=37						
YASR	**Yasnyy**	**15.67**	**318**	*e*P	**P**	**14 45 55.2**	**-1.1**
YASR				AMB	AMB	14 46 08.2	
	comp=Z,10.0nm,0.9s						
YASR				AMB	AMB	14 46 08.2	
	comp=Z,20nm,0.9s						
BMKR	**Bomnak**	**16.13**	**323**	*e*P	**P**	**14 46 00.5**	**-1.7**
BMKR				AMB	AMB	14 46 02.4	
	comp=Z,10.0nm,1.0s						
ZEA	**Zeya**	**16.29**	**318**	AMB	AMB	14 44 11.7	
	comp=Z,30nm,1.2s						
ZEA				AMB	AMB	14 44 11.7	
	comp=Z,40nm,1.2s						
ZEA				A		14 49 14.0	
	comp=Z,300nm,12.0s						
ZEA				A		14 49 14.0	
	comp=Z,200nm,12.0s						
ZEA				AMS	AMS	14 52 52.0	
	comp=Z,300nm,1.5s						
ZEA				AMS	AMS	14 52 52.0	
	comp=Z,400nm,1.5s						
ZEA				AMS	AMS	14 52 52.0	
	comp=Z,500nm,1.5s						
KROS	**Kirovskiy**	**16.82**	**320**	*e*P	**P**	**14 46 11.8**	**+1.0**

KROS				AMB	AMB	14 46 12.1	
	comp=Z,5.0nm,0.6s						
MA2	**Magadan**	**17.00**	**9**	P	**P**	**14 46 12.9**	**-0.1**
MA2				pmax	pmax		
	comp=Z,49nm,1.3s						
MA2	**Magadan**	**17.00**	**9**	P	**P**	**14 46 12.9**	**-0.1**
	comp=Z,49nm,1.3s						
DL2	**Dalian**	**18.56**	**266**	P	**P**	**14 46 32.0**	**-0.6**
DL2				AMB	AMB		
	comp=Z,20nm,0.9s						
HIA	**Hailar**	**19.00**	**299**	*e*P	**P**	**14 46 35.0**	**-2.8**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HIA	**Hailar**	**19.00**	**299**	*e*P	**P**	**14 46 35.0**	**-2.9**
	comp=Z,10.0nm,0.8s						
CLNS	**Chul'man**	**19.21**	**324**	*e*P	**P**	**14 46 47.8**	**+7.7**
CLNS				pmax	pmax		
	comp=Z,39nm,1.0s						
CLNS				pmax	pmax		
	comp=N,27nm,0.9s						
CLNS				pmax	pmax		
	comp=E,22nm,1.0s						
SEY	**Seymchan**	**20.46**	**9**	*e*P	**P**	**14 46 52.1**	**-1.4**
SEY				*e*		14 47 11.8	
SEY				*e*S	**S**	**14 50 31.1**	**-4.4**
SEY				*e*		14 51 09.9	
SEY				*e*SS	SS	14 51 17.1	+11
SEY				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SEY				MLR	MLR		
	comp=Z,200nm,19.0s,MS3.5						
SEY				MLR	MLR		
	comp=N,200nm,17.0s,MS3.5						
SEY				MLR	MLR		
	comp=E,90nm,20.0s,MS3.5						
FX1	**Attu Island--F**	**20.87**	**52**	P	**P**	**14 46 59.5**	**+1.6**
FX1				pmax	pmax		
	comp=Z,37nm,0.6s						
FX1				MLR	MLR		
	comp=Z,9.0nm,18.6s						
FX1	**Attu Island--F**	**20.87**	**52**	P	**P**	**14 46 59.5**	**+1.6**
	comp=Z,37nm,0.6s,baz=263,slow=6.6,SNR=11						
FX1				LR	LR	14 54 30.8	
	comp=Z,9.2nm,18.6s,baz=255,slow=35						
FX1	**Attu Island--F**	**20.87**	**52**	*e*P	**P**	**14 46 59.1**	**+1.2**
YAK	**Yakutsk**	**21.37**	**339**	*e*P	**P**	**14 47 02.3**	**-0.5**
YAK				*e**PP		14 47 15.4	
YAK				*e*S	**S**	**14 50 50.3**	**-2.7**
YAK				*e*		14 51 10.2	
YAK				*e*		14 58 27.5	
YAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.1						
YAK				pmax	pmax		
	comp=N,13nm,1.2s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.2						
YAK				pmax	pmax		
	comp=N,9.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				smax			
	comp=N,12nm,1.1s						
YAK				smax			
	comp=E,10.0nm,1.0s						
YAK				smax			
	comp=Z,10.0nm,1.0s						
YAK	**Yakutsk**	**21.37**	**339**	*e*P	**P**	**14 47 02.4**	**-0.4**
	comp=Z,29nm,0.9s,mb4.6						
YAK				*e*S	**S**	**14 50 43.4**	**-10**
JOW	**Kunigami**	**21.37**	**227**	P	**P**	**14 47 04.1**	**+1.0**
	comp=Z,64nm,1.0s,mb4.9,baz=20,slow=11,SNR=6.0						
SSE	**Sheshan**	**22.71**	**247**	P	**P**	**14 47 14.5**	**-1.9**
SSE				AP		14 47 28.0	
SSE				S	**S**	**14 51 16.4**	**-1.4**
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
SSE				AMB	AMB		
	comp=Z,100nm,3.9s						
SSE				LR	LR		
	comp=N,130nm,23.1s,MS3.5						
SSE				LR	LR		
	comp=E,130nm,23.1s,MS3.5						
SSE				LR	LR		
	comp=Z,230nm,24.1s,MS3.5						
SSE	**Sheshan**	**22.71**	**247**	P	**P**	**14 47 14.5**	**-1.9**
	comp=Z,22nm,0.8s,mb4.6						
SSE				pP		14 47 28.0	
SSE				sP		14 47 35.7	
SSE				S	**S**	**14 51 16.4**	**-1.4**
SSE				sS		14 51 39.2	
SSE				LR	LR		
	comp=Z,230nm,24.1s,MS3.5						
CIT	**Chita**	**23.36**	**304**	*e*P	**P**	**14 47 23.4**	**+0.9**
CIT				*e*		14 51 35.4	
CIT				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.5						
HHC	**Hu-ho-hao-te**	**25.35**	**277**	*e*P	**P**	**14 47 42.5**	**+0.7**
HHC				AP	pP	14 47 51.1	-0.7
HHC				XP	sP	14 47 55.8	-0.3
HHC				PP	PP	14 48 23.0	+2.0
HHC				S	**S**	**14 52 10.0**	**+6.9**
HHC				SCP		14 54 44.8	
HHC				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
HHC				AMB	AMB		
	comp=Z,250nm,5.4s						
HHC				LR	LR		
	comp=N,220nm,12.4s,MS4.3						
HHC				LR	LR		
	comp=E,580nm,12.5s,MS4.3						
HHC				LR	LR		
	comp=Z,420nm,23.8s						
BTO	**Baotou**	**26.54**	**277**	*e*P	**P**	**14 47 52.8**	**-0.1**
BTO				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
ULN	**Ulaanbaatar**	**27.34**	**294**	*d i*P	**P**	**14 47 59.9**	**-0.3**
ULN	**Ulaanbaatar**	**27.34**	**294**	*e*P	**P**	**14 47 59.3**	**-0.9**
	comp=Z,23nm,1.1s,mb4.6						
BILL	**Bilibino**	**27.49**	**17**	P	**P**	**14 48 01.4**	**+0.1**
WHN	**Wuhan**	**27.77**	**254**	*e*P	**P**	**14 48 04.3**	**0.0**
SONM	**Songino Array**	**27.79**	**294**	P	**P**	**14 48 03.9**	**-0.3**
	comp=Z,20nm,0.6s,mb4.9,baz=84,slow=8.4,SNR=200						
SONM				LR	LR	15 00 04.3	
	comp=Z,475nm,19.7s,MS4.1,baz=85,slow=38						
TLY	**Talaya**	**29.44**	**302**	*e*P	**P**	**14 48 22.1**	**+3.2**
TLY				*e*S	**S**	**14 52 59.6**	**-10**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
TLY				MLR	MLR		
	comp=Z,443nm,16.0s,MS4.2						
TLY	**Talaya**	**29.44**	**302**	*e*P	**P**	**14 48 20.2**	**+1.3**
	comp=Z,4.3nm,0.8s,mb4.2						
ZAK	**Zakamensk**	**29.69**	**299**	⇓*i*P	**P**	**14 48 20.5**	**-0.6**
ZAK				*e*		14 51 24.6	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
XAN	**Xi'an**	**29.88**	**265**	P	**P**	**14 48 22.8**	**-0.2**
XAN				AP	pP	14 48 33.8	+0.6
XAN				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
TIXI	**Tiksi**	**29.98**	**349**	*e*P	**P**	**14 48 23.4**	**-0.1**
TIXI				*e*S	**S**	**14 53 21.4**	**+3.8**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ENH	**Enshi**	**31.40**	**258**	*e*P	**P**	**14 48 36.0**	**-0.5**
	comp=Z,46nm,1.2s,mb5.2						
ENH				*e*	pP	14 48 47.5	+0.6
LZH	**Lanzhou**	**32.69**	**272**	⇑P	**P**	**14 48 48.0**	**+0.2**
LZH				AP	pP	14 49 01.0	+2.9
LZH				XP	sP	14 49 06.5	+3.6
LZH				*e*PP	PP	14 49 57.9	+0.4
LZH				*e*S	**S**	**14 53 57.8**	**-2.7**
LZH				XS		14 54 20.5	
LZH				SS	SS	14 55 58.1	-1.2
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,80nm,5.2s						
LZH				LR	LR		
	comp=N,950nm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,17.1s,MS4.6						
LZH	**Lanzhou**	**32.69**	**272**	⇑P	**P**	**14 48 48.0**	**+0.2**
	comp=Z,23nm,1.5s,mb4.9						
LZH				pP	pP	14 49 01.0	+2.9
LZH				sP	sP	14 49 06.5	+3.6
LZH				*e*PP	PP	14 49 57.9	+0.4
LZH				*e*S	**S**	**14 53 57.8**	**-2.7**
LZH				sS		14 54 20.5	
LZH				SS	SS	14 55 58.1	-1.2
LZH				LR	LR		
	comp=Z,1µm,17.1s,MS4.6						
GTA	**Gaotai**	**34.34**	**280**	P	**P**	**14 49 01.9**	**-0.1**
GTA				AP	pP	14 49 11.8	-0.6
GTA				XP	sP	14 49 15.9	-1.2
GTA				PP	PP	14 50 18.3	+0.4
GTA				PPP	PPP	14 50 36.5	+0.6
GTA				PCP	PcP	14 51 38.5	+0.9
GTA				S	**S**	**14 54 27.3**	**+1.2**
GTA				XS		14 54 42.1	
GTA				SCP		14 55 18.5	
GTA				PCS		14 55 23.1	
GTA				SS	SS	14 56 38.1	+0.9
GTA				SCS	ScS	14 59 19.5	-0.2
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
GTA				AMB	AMB		
	comp=Z,80nm,9.1s						
GTA				LR	LR		
	comp=N,100nm,24.7s						
GTA				LR	LR		
	comp=E,170nm,16.4s						
GTA				LR	LR		
	comp=Z,180nm,19.4s						
CD2	**Chengdu**	**35.21**	**264**	⇓*i*P	**P**	**14 49 09.4**	**-0.1**
CD2				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.6						
GYA	**Guiyang**	**35.63**	**255**	⇑*i*P	**P**	**14 49 13.6**	**+0.5**
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
KMI	**Kunming**	**39.25**	**257**	P	**P**	**14 49 44.4**	**+1.0**
KMI				S	**S**	**14 55 40.0**	**-1.2**
KMI				LR	LR		
	comp=N,130nm,14.1s,MS4.0						
KMI				LR	LR		
	comp=E,130nm,17.0s,MS4.0						
KMI				LR	LR		
	comp=Z,150nm,15.0s,MS4.0						
IMA	**Indian Mountai**	**40.01**	**34**	*e*P	**P**	**14 49 50.5**	**+1.2**
IMA				pmax	pmax		
	comp=Z,110nm,0.8s,mb5.6						
IMA	**Indian Mountai**	**40.01**	**34**	*e*P	**P**	**14 49 50.5**	**+1.2**
	comp=Z,110nm,0.8s,mb5.6						
SPU	**Mount Spurr**	**40.65**	**41**	*e*P	**P**	**14 49 50.4**	**-4.3**
SPU				*e*		14 50 06.1	
WMQ	**Urumqi**	**41.38**	**292**	P	**P**	**14 50 01.5**	**+0.7**
WMQ				AP	pP	14 50 15.3	+3.9
WMQ				PP	PP	14 51 41.0	+1.5
WMQ				PCP	PcP	14 51 59.8	+0.6
WMQ				PPP	PPP	14 52 11.9	+1.6
WMQ				S	**S**	**14 56 11.0**	**-1.9**
WMQ				SS	SS	14 59 11.5	-1.2
WMQ				SCS	ScS	14 59 57.8	-1.7
WMQ				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,170nm,4.4s						
WMQ				LR	LR		
	comp=N,820nm,20.4s,MS4.8						
WMQ				LR	LR		
	comp=E,890nm,18.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,810nm,18.0s,MS4.6						
NVS	**Novosibirsk**	**41.39**	**309**	*i* P	**P**	**14 49 59.4**	**-1.4**
SML	**Sawmill**	**42.39**	**40**	*e*P	**P**	**14 50 09.5**	**+0.7**
ILAR	**Eielson Array**	**42.83**	**36**	P	**P**	**14 50 12.8**	**+0.5**
	comp=Z,2.2nm,0.5s,mb4.2,baz=245,slow=5.4,SNR=18						
ILAR				LR	LR	15 10 17.4	
	comp=Z,72nm,18.0s,MS3.6,baz=211,slow=39						
DIV	**Divide**	**43.69**	**41**	*e*P	**P**	**14 50 20.2**	**+0.8**
	comp=Z,61nm,1.1s,mb5.2						
MKAR	**Makanchi Array**	**44.00**	**298**	P	**P**	**14 50 22.0**	**-0.1**
	comp=Z,20nm,0.7s,mb5.0,baz=81,slow=9.1,SNR=123						
MKAR				sP	sP	14 50 37.2	0.0
	comp=Z,11nm,0.8s,baz=76,slow=10.0,SNR=6.9						
MKAR				PcP	PcP	14 52 07.5	-0.4
	comp=Z,2.1nm,0.8s,baz=88,slow=4.0,SNR=3.1						
MKAR				LR	LR	15 09 47.7	
	comp=Z,194nm,19.6s,MS4.0,baz=6.5,slow=38						
LSA	**Lhasa**	**45.10**	**272**	*e*P	**P**	**14 50 32.4**	**+1.2**
LSA				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
LSA	**Lhasa**	**45.10**	**272**	*e*P	**P**	**14 50 32.4**	**+1.2**
	comp=Z,9.0nm,1.0s,mb4.5						
CM31	**Chiang Mai Arr**	**46.22**	**253**	*e*P	**P**	**14 50 39.7**	**-0.5**
	comp=Z,50nm,1.9s,mb5.1						
CMAR	**Chiang Mai Arr**	**46.22**	**253**	P	**P**	**14 50 41.1**	**+0.9**
	comp=Z,2.4nm,0.8s,mb4.2,baz=41,slow=7.4,SNR=15						
CMAR				PcP	PcP	14 52 16.8	+0.9
	comp=Z,1.0nm,0.8s,baz=17,slow=1.2,SNR=4.1						
CMAR				LR	LR	15 10 16.7	
	comp=Z,85nm,19.3s,MS3.7,baz=60,slow=36						
INK	**Inuvik**	**47.70**	**30**	*e*P	**P**	**14 50 51.2**	**0.0**
INK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
INK	**Inuvik**	**47.70**	**30**	P	**P**	**14 50 51.6**	**+0.4**
	comp=Z,7.9nm,0.5s,mb5.0,baz=293,slow=6.7,SNR=32						
INK				LR	LR	15 13 51.0	
	comp=Z,80nm,19.5s,MS3.7,baz=94,slow=40						
INK	**Inuvik**	**47.70**	**30**	*e*P	**P**	**14 50 51.1**	**0.0**
	comp=Z,7.1nm,0.6s,mb4.9						
VOSK	**Vostochnaya**	**48.95**	**309**	P	**P**	**14 51 00.4**	**-0.7**
VOSK				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
BVA0	**Borovoye Array**	**49.19**	**309**	*e*P	**P**	**14 51 02.5**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**49.19**	**309**	P	**P**	**14 51 02.7**	**-0.2**
	comp=Z,3.6nm,0.4s,mb4.8,baz=80,slow=8.9,SNR=29						
BVAR				PcP	PcP	14 52 25.8	-0.2
	comp=Z,1.8nm,0.6s,baz=63,slow=3.3,SNR=4.9						
ULHL	**Ulahol**	**49.73**	**294**	P	**P**	**14 51 07.3**	**+0.1**
	SNR=12						
TKM2	**Tokmak 2**	**49.87**	**295**	P	**P**	**14 51 08.6**	**+0.4**
	SNR=26						
GUN	**Gumba**	**49.95**	**273**	*e*P	**P**	**14 51 09.3**	**+0.2**
	comp=Z,57nm,0.8s,mb5.7						
ZRNK	**Zerenda**	**49.99**	**310**	P	**P**	**14 51 08.7**	**-0.4**
ZRNK				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
ZRNK	**Zerenda**	**49.99**	**310**	*e*P	**P**	**14 51 07.9**	**-1.2**
	comp=Z,8.9nm,0.8s,mb4.8						
KBK	**Karagaybulak**	**50.41**	**295**	P	**P**	**14 51 12.5**	**+0.1**
	SNR=13						
KKN	**Kakani**	**50.46**	**273**	*e*P	**P**	**14 51 12.8**	**-0.2**
	comp=Z,37nm,0.9s,mb5.4						
KKN	**Kakani**	**50.46**	**273**	*e*P	**P**	**14 51 12.8**	**-0.2**
KKN				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
KZA	**Kyzart**	**50.47**	**295**	P	**P**	**14 51 14.0**	**+1.1**
	SNR=15						
PKI	**Pulchoki**	**50.49**	**273**	*e*P	**P**	**14 51 12.7**	**-0.5**
	comp=Z,26nm,1.0s,mb5.2						
PKI	**Pulchoki**	**50.49**	**273**	*e*P	**P**	**14 51 12.7**	**-0.5**
PKI				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
DMN	**Daman**	**50.69**	**273**	*e*P	**P**	**14 51 14.4**	**-0.3**
	comp=Z,38nm,0.9s,mb5.3						
AAK	**Ala-Archa**	**50.72**	**296**	*d i*P	**P**	**14 51 13.5**	**-1.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
AAK				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.9						
AAK	**Ala-Archa**	**50.72**	**296**	*e*P	**P**	**14 51 11.9**	**-2.9**
	comp=Z,4.2nm,0.6s,mb4.5						
GKN	**Gorkha**	**50.81**	**274**	*e*P	**P**	**14 51 15.2**	**-0.5**
	comp=Z,18nm,0.7s,mb5.1						
EKS2	**Erkin-Say**	**51.19**	**296**	P	**P**	**14 51 18.2**	**-0.1**
	SNR=13						
AML	**Almayashu**	**51.48**	**295**	P	**P**	**14 51 21.0**	**+0.5**
	SNR=12						
KOLN	**Koldanda**	**51.70**	**274**	*e*P	**P**	**14 51 22.1**	**-0.3**
	comp=Z,62nm,1.2s,mb5.4						
DLBC	**Dease Lake**	**52.05**	**42**	P	**P**	**14 51 26.3**	**+1.7**
	comp=Z,1.6nm,0.6s,mb4.1,baz=249,slow=6.3,SNR=5.2						
DLBC				pP	pP	14 51 36.8	+1.5
	comp=Z,3.7nm,0.6s,baz=301,slow=8.5,SNR=7.4						
DLBC	**Dease Lake**	**52.05**	**42**	*e*P	**P**	**14 51 23.9**	**-0.7**
SVE	**Sverdlovsk**	**53.00**	**317**	*e*P	**P**	**14 51 31.0**	**-0.7**
SVE				*e*		14 51 46.0	
SVE				*e*		14 52 41.0	
KKAR	**Karatay Array**	**53.13**	**298**	*i* P	**P**	**14 51 32.0**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
HNR	**Honiara**	**53.69**	**162**	LR	LR	15 12 25.4	
	comp=Z,112nm,18.8s,MS4.0,baz=341,slow=34						
ARU	**Arti**	**54.21**	**317**	⇓*i*P	**P**	**14 51 39.0**	**-1.6**
ARU				*e*		14 53 38.8	
ARU				*e*S	**S**	**14 59 09.4**	**-4.2**
ARU				*e*SS	SS	15 02 52.6	-2.5
ARU				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
BBB	**Bella Bella**	**55.67**	**48**	LR	LR	15 13 35.8	
	comp=Z,68nm,18.8s,MS3.8,baz=42,slow=34						
RES	**Resolute Bay**	**56.10**	**16**	*e*P	**P**	**14 51 53.0**	**-1.1**
RES				*e*	pP	14 52 01.5	-3.5
RES				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
RES	**Resolute Bay**	**56.10**	**16**	*e*P	**P**	**14 51 53.0**	**-1.1**
	comp=Z,14nm,0.7s,mb5.1						
RES				*e*	pP	14 52 01.5	-3.5
AB31	**Akbulak array**	**56.73**	**309**	*i* P	**P**	**14 51 57.9**	**-1.0**
AB31				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
YKA	**Yellowknife Ar**	**57.12**	**33**	P	**P**	**14 52 01.2**	**-0.3**
	comp=Z,1.0nm,0.6s,mb4.0,baz=299,slow=6.8,SNR=4.4						
YKA				pP	pP	14 52 11.5	-1.0
	comp=Z,3.0nm,0.8s,baz=301,slow=6.7,SNR=5.0						
YKA	**Yellowknife Ar**	**57.12**	**33**	P	**P**	**14 52 01.2**	**-0.3**
YKA				pP	pP	14 52 11.5	-1.0
KEV	**Kevo**	**59.12**	**339**	*e*p	**P**	**14 52 13.5**	**-1.9**
	comp=Z,2.0nm,0.5s,mb4.4						
KEV	**Kevo**	**59.12**	**339**	*e*P	**P**	**14 52 13.5**	**-1.9**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ARCES	**ARCESS Array B**	**59.66**	**339**	P	**P**	**14 52 18.1**	**-1.0**
	comp=Z,0.8nm,0.4s,mb4.1,baz=43,slow=7.6,SNR=20						
DAG	**Danmarks Havn**	**60.19**	**356**	*e*P	**P**	**14 52 20.0**	**-2.8**
DAG				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
DAG	**Danmarks Havn**	**60.19**	**356**	*e*P	**P**	**14 52 20.0**	**-2.8**
	comp=Z,2.5nm,0.9s,mb4.2						
DAG	**Danmarks Havn**	**60.19**	**356**	*i* P	**P**	**14 52 20.0**	**-2.8**
	comp=Z,2.5nm,0.9s,mb4.2						
WRAB	**Tennant Creek**	**63.38**	**192**	*e*P	**P**	**14 52 44.3**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.9						
WRAB	**Tennant Creek**	**63.38**	**192**	*e*P	**P**	**14 52 44.3**	**-0.5**
	comp=Z,13nm,1.3s,mb4.9						
WRA	**Warramunga Arr**	**63.38**	**192**	P	**P**	**14 52 44.3**	**-0.6**
	comp=Z,1.7nm,0.7s,mb4.3,baz=14,slow=6.9,SNR=16						
NEW	**Newport**	**63.73**	**48**	LR	LR	15 17 22.3	
	comp=Z,72nm,19.7s,MS3.9,baz=323,slow=33						
YBH	**Yreka Blue Hor**	**64.29**	**56**	LR	LR	15 15 37.7	
	comp=Z,73nm,19.3s,MS3.9,baz=342,slow=31						
KAF	**Kangasniemi**	**64.57**	**333**	*e*p	**P**	**14 52 49.4**	**-2.5**
	comp=Z,1.7nm,0.5s,mb4.3,baz=45,slow=6.2						
KAF	**Kangasniemi**	**64.57**	**333**	*e*P	**P**	**14 52 49.4**	**-2.5**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
SUMG	**Summit**	**64.79**	**1**	*e*P	**P**	**14 52 53.0**	**-0.2**
	comp=Z,17nm,0.8s,mb5.1						
FINES	**FINESS Array B**	**65.12**	**333**	P	**P**	**14 52 54.3**	**-1.2**
	comp=Z,5.8nm,0.5s,mb4.9,baz=46,slow=6.9,SNR=47						
FINES				LR	LR	15 25 23.3	
	comp=Z,80nm,20.1s,MS3.9,baz=119,slow=40						
OBN	**Obninsk**	**65.34**	**323**	⇑*e*P	**P**	**14 52 56.0**	**-1.0**
OBN				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.4						
VRSR	**Storozhevoye**	**66.64**	**319**	*e*P	**P**	**14 53 04.2**	**-1.1**
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
VRSR				pmax	pmax		
	comp=N,4.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,1.0nm,0.3s						
VSU	**Vasula**	**67.02**	**330**	*i* P	**P**	**14 53 06.8**	**-0.8**
FCC	**Fort Churchill**	**67.31**	**29**	P	**P**	**14 53 08.9**	**-0.5**
FCC				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
FCC	**Fort Churchill**	**67.31**	**29**	P	**P**	**14 53 08.9**	**-0.5**
	comp=Z,5.3nm,0.6s,mb4.8						
CMB	**Columbia Colle**	**67.93**	**58**	*e*P	**P**	**14 53 11.8**	**-1.8**
HLID	**Hailey**	**68.08**	**51**	*e*P	**P**	**14 53 15.4**	**+1.0**
	comp=Z,1.5nm,0.8s,mb4.1						
BOZ	**Bozeman (W)**	**68.31**	**47**	*e*P	**P**	**14 53 16.9**	**+1.0**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
BOZ	**Bozeman (W)**	**68.31**	**47**	*e*P	**P**	**14 53 16.9**	**+1.0**
	comp=Z,3.1nm,0.6s,mb4.5						
GOF	**Gofitskoye**	**68.60**	**312**	⇑*i*P	**P**	**14 53 16.4**	**-1.3**
GOF				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
NVAR	**Mina Array Bea**	**68.97**	**57**	P	**P**	**14 53 21.1**	**+0.9**
	comp=Z,3.3nm,0.8s,mb4.3,baz=279,slow=7.2,SNR=18						
ELK	**Elko**	**69.37**	**53**	*e*P	**P**	**14 53 23.8**	**+1.3**
ELK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ELK	**Elko**	**69.37**	**53**	*e*P	**P**	**14 53 23.8**	**+1.3**
	comp=Z,1.5nm,0.9s,mb3.9						
KIV	**Kislovodsk**	**69.50**	**311**	*e*P	**P**	**14 53 23.7**	**+0.5**
KIV				*e*		14 53 39.5	
KIV				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.3						
KIV	**Kislovodsk**	**69.50**	**311**	*e*P	**P**	**14 53 23.7**	**+0.4**
	comp=Z,32nm,0.8s,mb5.3						
KIV				*e*		14 53 39.5	
ZEI	**Tsey**	**69.58**	**310**	*e*P	**P**	**14 53 22.7**	**-1.1**
ZEI				*i* *PP	pP	14 53 33.9	-1.0
ZEI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
TI2	**Plekhanov**	**69.76**	**308**	*e*P	**P**	**14 53 15.0**	**-10**
IMW	**Indian Meadow**	**69.81**	**49**	*e*P	**P**	**14 53 25.7**	**+0.6**
	comp=Z,7.4nm,0.9s,mb4.6						
NB2	**NORSAR Subarra**	**69.99**	**338**	P	**P**	**14 53 25.1**	**-0.8**
	comp=Z,3.5nm,0.4s,mb4.6,baz=33,slow=6.2						
NOA	**NORSAR Array B**	**69.99**	**338**	P	**P**	**14 53 25.1**	**-0.8**
	comp=Z,7.2nm,0.7s,mb4.7,baz=35,slow=6.1,SNR=41						
NOA				LR	LR	15 28 13.9	
	comp=Z,60nm,18.8s,MS3.9,baz=20,slow=39						
MOOW	**Moose Ponds**	**70.01**	**49**	*e*P	**P**	**14 53 24.2**	**-2.2**
	comp=Z,2.6nm,0.8s,mb4.2						
GNI	**Garni**	**70.78**	**307**	*i* P	**P**	**14 53 31.7**	**+0.6**
GNI				MLR	MLR		
	comp=Z,100nm,13.0s						
HWUT	**Hardware Ranch**	**70.94**	**51**	*e*P	**P**	**14 53 33.2**	**+1.1**
BW06	**Boulder Array**	**71.31**	**49**	P	**P**	**14 53 33.2**	**-1.0**
	comp=Z,2.6nm,0.6s,mb4.3						
PDAR	**Pinedale Array**	**71.31**	**49**	P	**P**	**14 53 34.8**	**+0.6**
	comp=Z,1.4nm,0.5s,mb4.2,baz=286,slow=0.6,SNR=11						
SOC	**Sochi**	**71.36**	**312**	*e*P	**P**	**14 53 31.0**	**-3.6**
SOC				*e*		14 56 09.7	
SOC				*e*PPP	PPP	14 57 52.8	-3.6
SOC				*e*S	S	15 02 44.6	-4.0
SOC				*e*		15 03 17.5	
SOC				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1						
SOC				pmax	pmax		
	comp=N,14nm,0.9s						
SOC				pmax	pmax		
	comp=E,15nm,0.9s						
AKASG	**Malin Array Be**	**71.60**	**323**	P	**P**	**14 53 35.1**	**-0.7**
	comp=E,7.6nm,0.5s,mb4.9,baz=41,slow=6.3,SNR=32						
ANN	**Anapa**	**71.76**	**315**	*e*P	**P**	**14 53 36.5**	**-0.4**
ANN				*e*S	S	15 02 52.5	-0.7
ANN				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.1						
DAU	**Daniels Canyon**	**71.90**	**51**	P	**P**	**14 53 29.0**	**-8.8**
RSSD	**Black Hills**	**73.35**	**45**	*e*P	**P**	**14 53 46.8**	**+0.6**
RSSD				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
RSSD	**Black Hills**	**73.35**	**45**	*e*P	**P**	**14 53 46.8**	**+0.6**
	comp=Z,14nm,1.3s,mb4.7						
BURAR	**Bucovina Array**	**75.66**	**323**	⇓P	**P**	**14 54 00.2**	**+0.7**
OJC	**Ojcow**	**75.91**	**328**	⇓*i*P	**P**	**14 54 01.2**	**+0.3**
OJC				*e*PcP	PcP	14 54 12.0	-1.6
KOLS	**Kolonicke sedl**	**75.91**	**325**	*e*P	**P**	**14 54 01.2**	**+0.3**
NIE	**Niedzica**	**76.34**	**327**	*e*P	**P**	**14 54 04.7**	**+1.4**
EYMN	**Ely**	**76.47**	**36**	*e*P	**P**	**14 54 02.2**	**-1.9**
	comp=Z,9.9nm,0.9s,mb4.7						
KSP	**Ksiaz**	**76.75**	**330**	*e*P	**P**	**14 54 05.6**	**0.0**

KSP				*e*	pP	14 54 16.9	+0.1
OKC	**Ostrava-Krasne**	**76.86**	**328**	*e*P	**P**	**14 54 07.5**	**+1.2**
OKC				*e*pP	pP	14 54 18.2	+0.7
OKC				AMS	AMS	15 30 00.0	
	comp=Z,100nm,23.7s						
MLR	**Muntele Rosu**	**76.93**	**321**	P	**P**	**14 54 07.0**	**+0.3**
	comp=Z,4.7nm,0.9s,mb4.4,baz=162,slow=3.4,SNR=6.7						
MLR	**Muntele Rosu**	**76.93**	**321**	⇑P	**P**	**14 54 08.0**	**+1.2**
SDCO	**Great Sand Dun**	**77.00**	**50**	*e*P	**P**	**14 54 08.7**	**+1.4**
UPC	**Upice**	**77.13**	**330**	*e*P	**P**	**14 54 08.4**	**+0.6**
UPC				*e*pP	pP	14 54 19.4	+0.4
DPC	**Dobruska-Polom**	**77.14**	**329**	*e*P	**P**	**14 54 08.5**	**+0.7**
DPC				*e*pP	pP	14 54 19.8	+0.8
DPC				AMS	AMS	15 30 40.0	
	comp=Z,100nm,21.0s						
MORC	**Moravsky Berou**	**77.14**	**328**	*e*P	**P**	**14 54 08.4**	**+0.5**
MORC				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
MORC	**Moravsky Berou**	**77.14**	**328**	*e*P	**P**	**14 54 08.4**	**+0.5**
	comp=Z,21nm,1.2s,mb4.9						
BRTR	**Keskin Array B**	**77.32**	**313**	P	**P**	**14 54 09.4**	**+0.3**
	comp=Z,3.4nm,0.8s,mb4.3,baz=77,slow=3.8,SNR=16						
CLL	**Collm**	**77.55**	**332**	*i* P	**P**	**14 54 09.6**	**-0.5**
CLL				*i*	pP	14 54 20.9	-0.4
CLL				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
CLL	**Collm**	**77.55**	**332**	*i* P	**P**	**14 54 09.6**	**-0.5**
	comp=Z,18nm,1.1s,mb4.9						
CLL				*i*		14 54 15.1	
CLL				*i*	pP	14 54 20.9	-0.4
CLL	**Collm**	**77.55**	**332**	P	**P**	**14 54 09.6**	**-0.5**
	comp=Z,logA/T=1.2,mb4.9						
CLL				*i*		14 54 15.1	
CLL				*i* *PP	pP	14 54 20.9	-0.4
CLL				*i* *SP	sP	14 54 25.4	+0.1
BRG	**Berggiesshubel**	**77.58**	**331**	*e*P	**P**	**14 54 10.3**	**0.0**
BRG				*e*	pP	14 54 21.8	+0.3
BRG				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.5						
BRG	**Berggiesshubel**	**77.58**	**331**	*e*P	**P**	**14 54 10.3**	**+0.1**
	comp=Z,10nm,1.6s,mb4.5						
BRG				*e*	pP	14 54 21.8	+0.3
PVCC	**Panska Ves**	**77.64**	**330**	*e*P	**P**	**14 54 13.7**	**+3.1**
PVCC				AMS	AMS	15 30 30.0	
	comp=Z,200nm,27.4s						
VYHS	**Vyhne**	**77.66**	**327**	*e*P	**P**	**14 54 11.0**	**+0.2**
VYHS				*e*	pP	14 54 19.9	-2.1
PRU	**Pruhonice**	**78.09**	**330**	*e*P	**P**	**14 54 13.8**	**+0.7**
PRU				*e**PP	pP	14 54 25.0	+0.7
PRU				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.1						
PRU	**Pruhonice**	**78.09**	**330**	*e*P	**P**	**14 54 13.8**	**+0.7**
PRU				*e*PCP	PcP	14 54 17.8	-5.2
PRU				*e*pP	pP	14 54 25.0	+0.7
PRU				AMS	AMS	15 31 10.0	
	comp=Z,100nm,21.0s						
ANMO	**Albuquerque**	**78.40**	**53**	LR	LR	15 28 26.1	
	comp=Z,44nm,18.1s,MS3.8,slow=35						
MOX	**Moxa**	**78.58**	**332**	*e*P	**P**	**14 54 16.0**	**+0.2**
MOX				*e**PP	pP	14 54 28.0	+1.0
MOX				*e**SP	sP	14 54 34.0	+3.0
MOX	**Moxa**	**78.58**	**332**	*e*P	**P**	**14 54 16.0**	**+0.2**
MOX				pP	pP	14 54 28.0	+1.0
MOX				sP	sP	14 54 34.0	+3.0
NKC	**Novy Kostel**	**78.64**	**331**	*e*P	**P**	**14 54 16.5**	**+0.4**
NKC				AMS	AMS	15 31 50.0	
	comp=Z,100nm,19.9s						
SCHQ	**Schefferville**	**78.79**	**18**	P	**P**	**14 54 16.8**	**0.0**
	comp=Z,3.2nm,0.8s,mb4.3,baz=4.8,slow=7.9,SNR=6.8						
SCHQ				LR	LR	15 34 40.5	
	comp=Z,47nm,19.2s,MS3.8,baz=259,slow=40						
SCHQ	**Schefferville**	**78.79**	**18**	*e*P	**P**	**14 54 16.0**	**-0.8**
	comp=Z,12nm,1.2s,mb4.7						
KHC	**Kasperske Hory**	**79.16**	**330**	*e*P	**P**	**14 54 19.4**	**+0.4**
KHC				*e*PCP	PcP	14 54 24.0	-3.6
KHC				*e*pP	pP	14 54 32.3	+2.1
KHC				AMS	AMS	15 32 30.0	
	comp=Z,200nm,15.4s						
GERES	**GERESS Array B**	**79.35**	**330**	P	**P**	**14 54 20.1**	**+0.1**
	comp=Z,0.7nm,0.4s,mb4.0,baz=53,slow=6.7,SNR=9.2						
GERES				LR	LR	15 32 56.2	
	comp=Z,163nm,19.5s,MS4.4,baz=358,slow=38						
GRA1	**Grafenberg Arr**	**79.53**	**332**	*e*P	**P**	**14 54 21.5**	**+0.6**
	comp=Z,11nm,1.0s,mb4.7						
GRA1				*e*pP	pP	14 54 32.8	+0.6
GRA1				*e*sP	sP	14 54 37.1	+0.9
GRF	**Grafenberg Arr**	**79.53**	**332**	*e*P	**P**	**14 54 21.5**	**+0.6**
GRF				*e**PP	pP	14 54 32.8	+0.6
GRF				*e**SP	sP	14 54 37.1	+0.9
GRF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**79.53**	**332**	*e*P	**P**	**14 54 21.5**	**+0.6**
GRF				*e**PP	pP	14 54 32.8	+0.6
GRF				*e**SP	sP	14 54 37.1	+0.9
GRF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**79.53**	**332**	*e*P	**P**	**14 54 21.5**	**+0.6**
	comp=Z,11nm,1.0s,mb4.7						
GRF				*e*pP	pP	14 54 32.8	+0.6
GRF				*e*sP	sP	14 54 37.1	+0.9
ASF	**Jabal al Asfar**	**80.83**	**306**	P	**P**	**14 54 29.2**	**+0.9**
	comp=Z,3.1nm,0.7s,mb4.4,baz=254,slow=3.6,SNR=6.6						
MZLS	**Mizel**	**81.19**	**294**	P	**P**	**14 54 31.0**	**+0.6**
SKO	**Skopje**	**81.72**	**321**	*i* P	**P**	**14 54 34.0**	**+1.3**
CDF	**Champ du Feu**	**81.96**	**333**	*e*P	**P**	**14 54 33.9**	**+0.1**
	comp=Z,3.8nm,0.5s,mb4.3						
CDF	**Champ du Feu**	**81.96**	**333**	*e*P	**P**	**14 54 33.9**	**+0.1**
CDF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
WMOK	**Wichita Mounta**	**82.92**	**48**	*e*P	**P**	**14 54 39.0**	**0.0**
WMOK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
WMOK	**Wichita Mounta**	**82.92**	**48**	*e*P	**P**	**14 54 39.0**	**0.0**
	comp=Z,2.2nm,1.0s,mb4.1						
JMQS	**Jabal Moqyreh**	**83.79**	**304**	P	**P**	**14 54 44.7**	**+1.2**
TXAR	**Lajitas Array**	**84.05**	**55**	P	**P**	**14 54 46.3**	**+1.4**
	comp=Z,1.9nm,0.8s,mb4.2,baz=304,slow=4.5,SNR=8.0						
LOR	**Lormes**	**84.06**	**335**	*e*P	**P**	**14 54 44.8**	**+0.3**
	comp=Z,12nm,1.0s,mb4.7						
LOR				*e*R			
	comp=Z,105nm,20.5s						
LOR	**Lormes**	**84.06**	**335**	*e*P	**P**	**14 54 44.8**	**+0.3**
LOR				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
LOR				MLR	MLR		
	comp=Z,110nm,20.5s,MS4.2						
BDAS	**Al Bad‘**	**84.59**	**304**	P	**P**	**14 54 48.4**	**+0.8**
SMF	**Signal de Mont**	**84.62**	**335**	*e*P	**P**	**14 54 47.0**	**-0.3**
AVF	**Avril sur Loir**	**84.64**	**335**	*e*P	**P**	**14 54 47.1**	**-0.3**
	comp=Z,9.8nm,0.7s,mb4.7						
AVF	**Avril sur Loir**	**84.64**	**335**	*e*P	**P**	**14 54 47.1**	**-0.3**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
LPL	**La Plagne**	**84.67**	**332**	*e*P	**P**	**14 54 48.0**	**+0.5**
LPG	**La Plagne**	**84.68**	**332**	*e*P	**P**	**14 54 48.0**	**+0.4**
SGMF	**Saint Gilles**	**85.00**	**339**	*e*P	**P**	**14 54 49.1**	**0.0**
ROSF	**Rostrenen**	**85.11**	**340**	*e*P	**P**	**14 54 49.9**	**+0.2**
IDI	**Anoyia**	**85.25**	**315**	P	**P**	**14 54 50.6**	**-0.1**
	comp=Z,9.7nm,0.5s,mb5.2,baz=40,slow=8.0,SNR=9.0						
MBDF	**Montbardon**	**85.34**	**332**	*e*P	**P**	**14 54 51.5**	**+0.6**
	comp=Z,8.5nm,0.8s,mb4.6						
MBDF	**Montbardon**	**85.34**	**332**	*e*P	**P**	**14 54 51.5**	**+0.6**
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
TATS	**Tathlith**	**85.43**	**292**	P	**P**	**14 54 53.3**	**+1.4**
QUIF	**Quistinic**	**85.47**	**340**	*e*P	**P**	**14 54 51.5**	**+0.1**
ORIF	**Oris-en-Rattie**	**85.48**	**333**	*e*P	**P**	**14 54 52.3**	**+0.7**
ORIF				*e*R			
	comp=Z,152nm,22.8s						
MFF	**Saint Martin d**	**85.85**	**337**	*e*P	**P**	**14 54 53.5**	**+0.1**
	comp=Z,20nm,1.0s,mb5.0						
MFF	**Saint Martin d**	**85.85**	**337**	*e*P	**P**	**14 54 53.5**	**+0.1**
MFF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
SBF	**Sospel**	**85.86**	**331**	*e*P	**P**	**14 54 53.4**	**-0.1**
	comp=Z,11nm,0.6s,mb5.0						
SBF	**Sospel**	**85.86**	**331**	*e*P	**P**	**14 54 53.4**	**-0.1**
SBF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.9						
VIVF	**Saint-Julien-l**	**85.94**	**333**	*e*P	**P**	**14 54 54.0**	**+0.2**
	comp=Z,7.4nm,0.7s,mb4.7						
VIVF	**Saint-Julien-l**	**85.94**	**333**	*e*P	**P**	**14 54 54.0**	**+0.2**
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
PGF	**Pioggiola**	**86.43**	**329**	*e*P	**P**	**14 54 55.9**	**-0.4**
	comp=Z,26nm,1.1s,mb5.1						
PGF	**Pioggiola**	**86.43**	**329**	*e*P	**P**	**14 54 55.9**	**-0.4**
PGF				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.1						
RJF	**Les Rejaudoux**	**86.54**	**336**	*e*P	**P**	**14 54 56.8**	**0.0**
RJF				*e*R			
	comp=Z,95nm,21.0s						
LMR	**La Mourre**	**86.65**	**331**	*e*P	**P**	**14 54 57.3**	**-0.1**
	comp=Z,9.7nm,0.7s,mb4.8						
LMR	**La Mourre**	**86.65**	**331**	*e*P	**P**	**14 54 57.3**	**-0.1**
LMR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
CAF	**Calviac**	**86.71**	**335**	*e*P	**P**	**14 54 58.4**	**+0.8**
LASF	**Ste Croix**	**86.90**	**333**	*e*P	**P**	**14 54 58.9**	**+0.3**
LFF	**La Frestale**	**87.10**	**336**	*e*P	**P**	**14 55 00.0**	**+0.5**
MTLF	**Montolieu**	**88.09**	**334**	*e*P	**P**	**14 55 04.6**	**+0.3**
SWET	**Sewanee**	**89.12**	**40**	*e*P	**P**	**14 55 09.5**	**+0.1**
SWET				*e*	pP	14 55 19.0	-1.9
ETSF	**Etsaut**	**89.35**	**336**	*e*P	**P**	**14 55 10.0**	**-0.3**
	comp=Z,5.9nm,0.7s,mb4.7						
VNDA	**Vanda**	**120.56**	**176**	PKP	PKPdf	15 01 05.6	+1.9
	comp=Z,0.6nm,0.9s,baz=83,slow=1.4,SNR=3.6						
MAW	**Mawson**	**126.22**	**208**	PKP	PKPdf	15 01 17.6	+3.0
	comp=Z,1.2nm,0.7s,baz=326,slow=5.8,SNR=3.6						
SNAA	**Sanae**	**147.31**	**198**	*e*PKP2	PKPab	15 01 56.8	-2.2
VNA2	**Neumayer--Watz**	**148.85**	**197**		PKPdf	15 02 02.3	+7.1
VNA2	**Neumayer--Watz**	**148.85**	**197**		PKPdf	15 02 06.0	+11
VNA2	**Neumayer--Watz**	**148.85**	**197**		PKPdf	15 02 15.0	+20
VNA2	**Neumayer--Watz**	**148.85**	**197**		PKPdf	15 02 18.1	+23
VNA2	**Neumayer--Watz**	**148.85**	**197**		PKPdf	15 02 20.1	+25
VNA2	**Neumayer--Watz**	**148.85**	**197**		PKPdf	15 02 22.1	+27
VNA2	**Neumayer--Watz**	**148.85**	**197**		PKPdf	15 02 25.5	+30
VNA3	**Neumayer Olymp**	**149.06**	**195**		PKPdf	15 02 02.3	+6.8
VNA3	**Neumayer Olymp**	**149.06**	**195**		PKPdf	15 02 06.0	+10
VNA3	**Neumayer Olymp**	**149.06**	**195**		PKPdf	15 02 16.4	+21
VNA3	**Neumayer Olymp**	**149.06**	**195**		PKPdf	15 02 25.7	+30
BDFB	**Brasilia**	**150.43**	**27**	PKPbc	PKPdf	15 02 06.7	+7.5
	comp=Z,3.4nm,0.7s,baz=296,slow=3.3,SNR=6.0						
PLCA	**Paso Flores**	**153.08**	**98**	PKPbc	PKPdf	15 02 11.2	+8.8
	comp=Z,1.9nm,0.6s,baz=304,slow=1.5,SNR=7.5						

*NIED **16** 14:59:00,25.30N×126.00E,h11^{km},Mw4.0 Best double couple: $M_0$9.57×10^{14} NP1:ϕ_s183°,δ70°,λ-28°. NP2: ϕ_s283°,δ64°,λ-157°.*

*IDC **16** 14:59:18.0±1.1,25.31N×125.68E,mb3.7/7,mb1 3.8/8, mb1mx3.7/20,mbtmp3.7/8,ML3.8/1,MS3.6/3,Ms1 3.6/3, ms1mx3.0/27,Error ellipse: s-maj=28.5km s-min=24.7km az=50.0*

*JMA **16** 14:59:22.0,25.26N×125.96E,h41^{km}±3^{km},M4.0*

*NEIC **16** 14:59:24.5±1.1,25.35N×125.86E,h49^{km}±11^{km},mb3.7/2, Error ellipse: s-maj=19.0km s-min=11.9km az=158.0*

ISC 16 14:59:22.7±0.4,**25.32N**±0.08×**125.89E**±0.06,**h48**^{km}±7^{km},**n34,**σ**0**^{s}**92**/44,**mb3.6**/9,**MS4.6**/1,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.71**	**218**	P	**P**	**14 59 35.6**	**-1.0**
JOGS				S	**S**	**14 59 45.6**	**-1.2**
JMJ	**Miyako jima 2**	**0.74**	**227**	P	**P**	**14 59 36.1**	**-0.9**
JMJ				S	**S**	**14 59 46.8**	**-0.6**
JTJ	**Tarama**	**1.27**	**238**	P	**P**	**14 59 44.1**	**-0.4**
JTJ				S	**S**	**15 00 00.8**	**+0.1**
JKE	**Kume jima 2**	**1.29**	**39**	P	**P**	**14 59 44.2**	**-0.5**
JKE				S	**S**	**15 00 01.0**	**0.0**
JAGN	**Aguni-jima**	**1.75**	**44**	P	**P**	**14 59 50.6**	**-0.7**
JAGN				*e*S	**S**	**15 00 12.6**	**+0.1**
NAH1	**Naha**	**1.84**	**61**	P	**P**	**14 59 54.1**	**+1.5**
NAH1				S	**S**	**15 00 19.8**	**+5.0**
JIJ	**Ishigaki jima**	**1.85**	**239**	P	**P**	**14 59 52.5**	**-0.2**
JIJ				S	**S**	**15 00 17.0**	**+2.1**
JJT2	**Tamagusuku 2**	**1.86**	**64**	P	**P**	**14 59 54.8**	**+2.0**
JJT2				*e*S	**S**	**15 00 20.7**	**+5.5**
JKRS	**Kuro-shima**	**2.02**	**238**	P	**P**	**14 59 55.0**	**-0.1**
IRIF	**Iriomote-Funau**	**2.19**	**244**	P	**P**	**14 59 57.8**	**+0.3**
HATJ	**Hateruma jima**	**2.28**	**237**	P	**P**	**14 59 59.9**	**+1.2**
JIH	**Iheya**	**2.53**	**47**	P	**P**	**15 00 01.9**	**-0.4**
JOW	**Kunigami**	**2.62**	**54**	Pn	**P**	**15 00 04.5**	**+0.9**
	26nm,0.3s,baz=220,slow=13,SNR=38						
JOW				Sn	**S**	**15 00 40.2**	**+5.9**
JOW				LR	LR	15 01 27.5	
	comp=Z,208nm,21.2s,baz=262,slow=46						
JOW	**Kunigami**	**2.62**	**54**	P	**P**	**15 00 04.3**	**+0.7**
YOJ	**Yonaguni jima**	**2.75**	**253**	P	**P**	**15 00 06.4**	**+0.9**
YOJ				*e*S	**S**	**15 00 38.6**	**+0.9**
JTK	**Tokunoshima**	**3.68**	**47**	P	**P**	**15 00 18.5**	**-0.1**
TATO	**Taipei**	**4.00**	**266**	Pn	**P**	**15 00 20.7**	**-2.5**
NACB	**Ninganchiao**	**4.07**	**255**	*e*Pn	**P**	**15 00 24.1**	**0.0**
YHNB	**Yeheng**	**4.15**	**262**	*e*Pn	**P**	**15 00 26.8**	**+1.6**
JAM	**Amami Oshima**	**4.53**	**46**	P	**P**	**15 00 29.7**	**-0.9**
JZK	**Kikaishima**	**4.71**	**50**	P	**P**	**15 00 32.5**	**-0.7**
JZK				*e*S	**S**	**15 01 27.8**	**+0.6**
JMZ	**Minamidaito 2**	**4.84**	**83**	P	**P**	**15 00 30.6**	**-4.4**
JMZ				S	**S**	**15 01 22.1**	**-8.3**
CBIJ	**Chichi jima**	**14.73**	**80**	LR	LR	15 07 22.5	
	comp=Z,171nm,21.2s,baz=114,slow=32						
ULN	**Ulaanbaatar**	**26.97**	**331**	*e*P	**P**	**15 05 02.6**	**+0.8**
	0.6nm,0.6s,mb3.3						
SONM	**Songino Array**	**27.24**	**331**	P	**P**	**15 05 02.9**	**-1.3**
	0.3nm,0.4s,mb3.2,baz=148,slow=7.5,SNR=2.5						
MKAR	**Makanchi Array**	**40.59**	**313**	P	**P**	**15 06 59.4**	**+0.1**
	0.2nm,0.4s,mb3.1,baz=97,slow=9.8,SNR=3.6						
WRA	**Warramunga Arr**	**45.73**	**169**	P	**P**	**15 07 41.4**	**0.0**
	0.6nm,0.7s,mb3.6,baz=351,slow=8.0,SNR=7.0						
BVAR	**Borovoye Array**	**49.56**	**319**	P	**P**	**15 08 10.1**	**-0.7**
	0.5nm,0.3s,mb4.0,baz=105,slow=8.3,SNR=7.6						
ZRNK	**Zerenda**	**50.37**	**319**	*e*P	**P**	**15 08 16.4**	**-0.6**
	1.1nm,0.7s,mb4.0						
FINES	**FINESS Array B**	**72.61**	**330**	P	**P**	**15 10 45.8**	**-0.7**
	0.3nm,0.4s,mb3.6,baz=76,slow=7.9,SNR=7.3						
BRTR	**Keskin Array B**	**75.92**	**307**	P	**P**	**15 11 06.9**	**+0.8**
	1.0nm,0.9s,mb3.7,baz=56,slow=4.5,SNR=4.8						
NB2	**NORSAR Subarra**	**79.19**	**333**	P	**P**	**15 11 23.9**	**+0.1**
	0.7nm,0.7s,mb3.7,baz=56,slow=5.3						
NOA	**NORSAR Array B**	**79.19**	**333**	P	**P**	**15 11 22.9**	**-0.9**
	0.8nm,0.7s,mb3.7,baz=59,slow=8.3,SNR=4.3						
PPT	**Papeete**	**92.60**	**108**	LR	LR	15 52 24.4	
	comp=Z,196nm,19.2s,MS4.6,baz=223,slow=34						

*NEIC **16** 15:27:38.3±1.1,20.21S×68.81W,h116^{km}±15^{km},mb4.2/4, Error ellipse: s-maj=15.2km s-min=11.4km az=222.0*

*IDC **16** 15:27:41.1±2.7,20.05S×68.64W,h129^{km}±24^{km},mb3.6/3, mb1 3.7/6,mb1mx3.5/19,mbtmp4.1/6,Error ellipse: s-maj=37.3km s-min=25.7km az=102.0*

ISC 16 15:27:38.6±1.5,**20.1S**±0.1×**68.7W**±0.1,**h129**^{km}±21^{km},**n14,** σ**1**^{s}**21**/14,**mb4.2**/1,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.79**	**9**	P	**P**	**15 28 38.6**	**+2.1**
	5.1nm,0.3s,baz=192,slow=8.3,SNR=109						
LPAZ	**La Paz**	**3.79**	**9**	*e*Pn	**P**	**15 28 38.2**	**+1.6**
ARE	**Arequipa**	**4.43**	**323**	*e*P	**P**	**15 28 44.0**	**-1.2**
ARE				*e*S	**S**	**15 29 31.0**	**-5.3**
SIV	**San Ignacio**	**8.32**	**62**	P	**P**	**15 29 37.4**	**-0.2**
	2.9nm,0.3s,baz=248,slow=15,SNR=102						
NNA	**Nana**	**11.19**	**315**	*e*P	**P**	**15 30 16.6**	**+0.8**
	22nm,1.2s						
CPUP	**Villa Florida**	**12.20**	**123**	P	**P**	**15 30 29.0**	**0.0**
	0.5nm,0.3s,baz=312,slow=15,SNR=7.8						
CPUP	**Villa Florida**	**12.20**	**123**	*e*P	**P**	**15 30 28.7**	**-0.3**
	9.6nm,1.0s						
SAML	**Samuel**	**12.27**	**27**	*e*P	**P**	**15 30 27.5**	**-2.5**
	2.4nm,0.7s						
SAML				*e*		15 30 38.5	
TRQA	**Tornquist**	**18.87**	**163**	*e*P	**P**	**15 31 46.6**	**-4.7**
BDFB	**Brasilia**	**20.19**	**81**	P	**P**	**15 32 06.0**	**+0.8**
	4.0nm,0.5s,baz=245,slow=12,SNR=6.3						
PLCA	**Paso Flores**	**20.67**	**184**	P	**P**	**15 32 11.3**	**+1.4**
	1.6nm,0.8s,baz=360,slow=5.6,SNR=3.7						
PLCA	**Paso Flores**	**20.67**	**184**	P	**P**	**15 32 08.3**	**-1.6**
	5.0nm,1.2s						
DBIC	**Dimbokro**	**68.16**	**74**	P	**P**	**15 38 27.5**	**0.0**
	2.0nm,0.4s,mb4.2,baz=218,slow=8.1,SNR=7.9						
MKAR	**Makanchi Array**	**144.36**	**35**	PKP	PKPdf	15 47 00.3	+1.1
	0.2nm,0.3s,baz=327,slow=2.7,SNR=4.1						

*BJI **16** 16:06:34.3,7.63N×92.22E,h32^{km},mB4.8,mb4.6,Ms4.2, Msz4.0*

*MOS **16** 16:06:35.1±0.8,7.76N×92.22E,h33^{km},mb4.8/31, MS4.0/8,Error ellipse: s-maj=14.1km s-min=7.0km az=102.1*

*HRVD **16** 16:06:36.5±0.6,7.73N×92.13E,h17^{km}±1^{km},MW4.8/44, Centroid moment Tensor Solution. LP body waves: s10,c12;Mantle waves: s44,c73; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.85±.13; $M_{\theta\theta}$-0.68±.07; $M_{\phi\phi}$1.53±.10; $M_{r\theta}$0.20±.23; $M_{\theta\phi}$-1.42±.08; $M_{\phi r}$-0.47±.23; Best double couple: $M_0$1.842×10^{16} NP1:ϕ_s108°,δ81°, λ176°. NP2:ϕ_s199°,δ86°,λ9°. Principal axes: T 2.306, Plg9°, Azm64°; N -.931, Plg80°, Azm222°; P -1.377, Plg4°, Azm333°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **16** 16:06:36.5±0.2,7.71N×92.13E,mb4.9/22 Error ellipse: s-maj=6.4km s-min=4.8km az=216.0*

*IDC **16** 16:06:36.4±0.7,7.76N×92.09E,h30^{km}±4^{km},mb4.1/12, mb1 4.2/13,mb1mx4.1/19,mbtmp4.2/13,ML4.0/1,MS4.0/11, Ms1 4.0/11,ms1mx4.0/14,Error ellipse: s-maj=29.1km s-min=14.8km az=58.0*

ISC 16 16:06:34.4±0.4,**7.66N**±0.05×**92.09E**±0.04,**h31**^{km}**, h31**^{km}±.7^{km}**:pP-P,n129,**σ**0**^{s}**99**/121,**mb4.5**/48,**MS4.1**/22, **8C-6D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKT	**Phuket**	**6.05**	**86**	P	**Sn**	**16 09 14.5**	**+1.2**
SNG	**Songkhla**	**8.47**	**93**	P	**P**	**16 08 48.5**	**+10**
KULM	**Kulim**	**8.82**	**105**	*e*Pn	**P**	**16 08 41.6**	**-1.4**
KULM				*e*Sn	**Sn**	**16 10 13.6**	**-8.7**
PALK	**Pallekele**	**11.30**	**269**	*e*P	**P**	**16 09 15.3**	**-1.8**
	32nm,0.6s						
PALK				*e*S	**S**	**16 11 07.1**	**-16**
CM31	**Chiang Mai Arr**	**12.63**	**31**	*e*P	**P**	**16 09 33.1**	**-1.9**
	17nm,0.9s						
CMAR	**Chiang Mai Arr**	**12.63**	**31**	Pn	**P**	**16 09 33.1**	**-1.9**
	0.3nm,0.3s,baz=231,slow=15,SNR=38						
CMAR				LR	LR	16 15 00.6	
	comp=Z,365nm,19.4s,baz=225,slow=40						
MDRS	**Chennai**	**12.83**	**296**	*e*x	x	16 09 26.0	
MDRS				*e*x	x	16 13 25.0	
CHG	**Chiang Mai**	**12.93**	**30**	P	**P**	**16 09 49.2**	**+10**
VIS	**Vishakhapatnam**	**13.15**	**320**	*i* P	**P**	**16 09 37.9**	**-3.9**
VIS				*i* S	x	16 11 51.8	
KKTK	**Khon Kaen**	**13.57**	**50**	⇓P	**P**	**16 09 56.5**	**+9.0**
	309nm,0.9s						
NANT	**Nan**	**13.88**	**36**	P	**P**	**16 09 53.0**	**+1.5**
HYB	**Hyderabad**	**16.38**	**308**	*e*P	**P**	**16 10 36.5**	**+13**
HYB				*e*S	**S**	**16 13 23.0**	**-1.1**
IMP	**Imphal**	**17.11**	**6**	*e*x	**P**	**16 10 36.0**	**+2.8**
SHL	**Shillong**	**17.80**	**359**	*e*P	**P**	**16 10 41.5**	**-0.3**
SHL				*e*x	x	16 13 45.0	
KMI	**Kunming**	**20.12**	**29**	P	**P**	**16 11 08.5**	**-0.3**
KMI				AMB	AMB		
	comp=Z,20nm,1.1s						
KMI				LR	LR		
	comp=N,350nm,15.9s,MS3.9						
KMI				LR	LR		
	comp=E,180nm,16.5s,MS3.9						
KMI				LR	LR		
	comp=Z,340nm,16.5s,MS3.8						
QIZ	**Qiongzhong**	**20.61**	**55**	P	**P**	**16 11 14.4**	**+0.5**
QIZ				S	**S**	**16 14 57.4**	**-0.4**
QIZ				AMB	AMB		
	comp=Z,30nm,1.3s						
QIZ				LR	LR		
	comp=N,810nm,15.6s,MS4.2						
QIZ				LR	LR		
	comp=E,350nm,16.7s,MS4.2						
QIZ				LR	LR		
	comp=Z,450nm,13.8s,MS4.0						
QIZ	**Qiongzhong**	**20.61**	**55**	*e*P	**P**	**16 11 13.6**	**-0.3**
	comp=Z,64nm,1.1s						
POO	**Poona**	**20.77**	**303**	⇑*i*x	x	16 11 23.0	
	comp=Z,40nm,1.0s						
POO				*i* x	x	16 14 52.0	
PKI	**Pulchoki**	**20.79**	**343**	*e*P	**P**	**16 11 16.5**	**+0.8**
	comp=Z,33nm,0.4s						
DMN	**Daman**	**20.91**	**342**	*e*P	**P**	**16 11 17.5**	**+0.5**
	comp=Z,34nm,0.4s						
GUN	**Gumba**	**20.98**	**344**	*e*P	**P**	**16 11 18.2**	**+0.5**
	comp=Z,115nm,0.9s						
KKN	**Kakani**	**21.03**	**343**	*e*P	**P**	**16 11 18.5**	**+0.3**
	comp=Z,17nm,0.4s,mb4.8						
GKN	**Gorkha**	**21.42**	**342**	*e*P	**P**	**16 11 22.2**	**0.0**
	comp=Z,56nm,0.5s,mb5.2						
KOLN	**Koldanda**	**21.55**	**339**	*e*P	**P**	**16 11 23.8**	**+0.3**
	comp=Z,200nm,1.3s,mb5.4						
LSA	**Lhasa**	**21.94**	**358**	P	**P**	**16 11 30.0**	**+2.7**
LSA				XP		16 11 45.0	
LSA				S	**S**	**16 15 23.1**	**+0.4**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
LSA				AMB	AMB		
	comp=Z,70nm,4.0s						
LSA				LR	LR		
	comp=N,200nm,19.7s,MS3.9						
LSA				LR	LR		
	comp=E,410nm,18.0s,MS3.9						
LSA				LR	LR		
	comp=Z,390nm,18.0s,MS3.9						
LSA	**Lhasa**	**21.94**	**358**	*e*P	**P**	**16 11 27.4**	**+0.1**
LSA				*e*S	**S**	**16 15 30.2**	**+7.5**
LSA				pmax	pmax		
	comp=Z,60nm,1.2s,mb4.9						
LSA	**Lhasa**	**21.94**	**358**	*e*P	**P**	**16 11 27.4**	**+0.1**
	comp=Z,60nm,1.2s,mb4.9						
LSA				*e*S	**S**	**16 15 30.2**	**+7.5**
GYA	**Guiyang**	**23.27**	**35**	⇑*i*P	**P**	**16 11 40.6**	**+0.1**
GYA				AP		16 11 47.9	
GYA				XP		16 11 50.8	
GYA				S	**S**	**16 15 51.9**	**+5.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
GYA				AMB	AMB		
	comp=Z,150nm,5.1s						
GYA				LR	LR		
	comp=N,330nm,15.9s,MS4.1						
GYA				LR	LR		
	comp=E,340nm,14.1s,MS4.1						
GYA				LR	LR		
	comp=Z,580nm,16.5s,MS4.1						
KKM	**Kota Kinabalu**	**24.00**	**92**	P	**P**	**16 11 48.0**	**+0.3**
NDI	**New Delhi**	**25.18**	**328**	*e*P	**P**	**16 12 02.0**	**+3.1**
CD2	**Chengdu**	**25.57**	**24**	⇑*i*P	**P**	**16 12 02.6**	**0.0**
CD2				S	**S**	**16 16 27.1**	**+1.2**
CD2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.0						
CD2				LR	LR		
	comp=N,430nm,13.2s						
CD2				LR	LR		
	comp=Z,450nm,16.8s,MS4.1						
ENH	**Enshi**	**27.78**	**34**	*e*P	**P**	**16 12 19.3**	**-3.5**
	comp=Z,24nm,1.0s,mb4.8						
LZH	**Lanzhou**	**30.26**	**19**	⇑P	**P**	**16 12 43.5**	**-1.5**
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.7						
LZH				LR	LR		
	comp=N,380nm,12.9s						
LZH				LR	LR		
	comp=Z,580nm,17.2s,MS4.3						
LZH	**Lanzhou**	**30.26**	**19**	⇑P	**P**	**16 12 43.5**	**-1.5**
	comp=Z,27nm,1.4s,mb4.8						
LZH				pP	pP	16 12 46.7	-7.3
LZH				sP	sP	16 12 48.1	-10
LZH				PP	PP	16 13 56.5	+12
LZH				LR	LR		
	comp=Z,590nm,17.2s,MS4.3						
GTA	**Gaotai**	**32.36**	**11**	P	**P**	**16 13 03.4**	**0.0**
GTA				AP	pP	16 13 09.1	-3.4
GTA				XP	sP	16 13 12.8	-3.6
GTA				S	**S**	**16 18 04.6**	**-10**
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
GTA				AMB	AMB		
	comp=Z,140nm,10.3s						
GTA				LR	LR		
	comp=N,100nm,18.6s,MS3.8						
GTA				LR	LR		
	comp=E,160nm,16.0s,MS3.8						
GTA				LR	LR		
	comp=Z,190nm,19.4s,MS3.8						
WMQ	**Urumqi**	**36.22**	**355**	P	**P**	**16 13 37.5**	**+1.0**

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WMQ                                  AP     pP       16 13 47.3 +1.7
WMQ                                  XP     sP       16 13 51.3 +1.8
WMQ                                  PP     PP       16 15 00.6 +0.9
WMQ                                  PPP    PPP      16 15 20.6 +0.9
WMQ                                  PCP    PcP      16 16 02.8 +1.1
WMQ                                  S      S        16 19 14.8 +0.7
WMQ                                  SS     SS       16 21 39.4 +0.6
WMQ                                  SCS    ScS      16 23 49.8 +0.7
WMQ                                  AMB    AMB
       comp=Z,10.0nm,0.7s,mb4.8
WMQ                                  AMB    AMB
       comp=Z,170nm,5.2s
WMQ                                  LR     LR
       comp=N,140nm,22.0s,MS4.0
WMQ                                  LR     LR
       comp=E,240nm,24.0s,MS4.0
WMQ                                  LR     LR
       comp=Z,180nm,22.0s,MS3.8
AAK    Ala-Archa          38.13 339 eP      P        16 13 53.5 +0.9
AAK                                  pmax   pmax
       comp=Z,53nm,1.4s,mb5.1
AAK    Ala-Archa          38.13 339 eP      P        16 13 53.5 +0.9
       comp=Z,53nm,1.4s,mb5.1
FRU    Bishkek            38.26 339  P      P        16 13 55.4 +1.7
FRU                                 e       pP       16 14 06.0 +3.2
FRU                                 e                16 15 30.0
MKAR   Makanchi Array     39.88 349  P      P        16 14 07.0 -0.2
MKAR                                 pmax   pmax
       comp=Z,2.0nm,0.5s
MKAR                                 MLR    MLR
       comp=Z,149nm,18.5s
MKAR   Makanchi Array     39.88 349  P      P        16 14 07.0 -0.2
       comp=Z,1.9nm,0.5s,mb4.1,baz=168,slow=8.3,SNR=21
MKAR                                 LR     LR       16 34 31.8
       comp=Z,149nm,18.5s,MS3.9,baz=0.2,slow=42
KKAR   Karatay Array      40.07 335 i P     P        16 14 09.7 +1.0
KKAR                                 pmax   pmax
       comp=Z,4.0nm,0.7s,mb4.3
SONM   Songino Array      41.84  14  P      P        16 14 23.0 -0.2
       comp=Z,6.1nm,0.9s,mb4.2,baz=193,slow=7.3,SNR=32
SONM                                 LR     LR       16 34 28.1
       comp=Z,255nm,20.7s,MS4.1,baz=192,slow=40
FITZ   Fitzroy Crossi     41.86 128 eP      P        16 14 15.6 -8.2
       comp=Z,14nm,0.6s,mb4.8
FITZ   Fitzroy Crossi     41.86 128  P      P        16 14 24.1 +0.3
       comp=Z,15nm,0.8s,mb4.7,baz=318,slow=4.9,SNR=12
ULN    Ulaanbaatar        42.03  15 eP      P        16 14 24.7 -0.1
ULN                                  pmax   pmax
       comp=Z,6.0nm,0.9s,mb4.2
ULN    Ulaanbaatar        42.03  15 eP      P        16 14 24.6 -0.2
       comp=Z,5.5nm,0.9s,mb4.2
ZAK    Zakamensk          43.59  10 eP      P        16 14 37.7 +0.2
ZAK                                  pmax   pmax
       comp=Z,5.0nm,1.3s,mb4.1
TLY    Talaya             44.90  10 eP      P        16 14 47.8 -0.3
TLY                                 e                16 21 18.0
TLY                                  pmax   pmax
       comp=Z,7.0nm,1.3s,mb4.3
IRK    Irkutsk            45.55  10 eP      P        16 14 53.2  0.0
IRK                                  pmax   pmax
       comp=Z,10.0nm,2.3s,mb4.3
NVS    Novosibirsk        47.58 353 eP      P        16 15 08.0 -1.2
VOSK   Vostochnaya        48.12 343  P      P        16 15 12.6 -0.8
VOSK                                 pmax   pmax
       comp=Z,26nm,1.7s,mb5.0
BVA0   Borovoye Array     48.56 343 i P     P        16 15 16.4 -0.4
BVA0                                 pmax   pmax
       comp=Z,3.0nm,1.6s,mb4.1
BVAR   Borovoye Array     48.56 343  P      P        16 15 16.2 -0.6
       comp=Z,1.0nm,0.5s,mb4.1,baz=147,slow=8.9,SNR=8.2
BVAR                                 pP     pP       16 15 25.5 -0.6
       comp=Z,2.1nm,0.7s,baz=149,slow=8.6,SNR=9.0
ZRNK   Zerenda            48.91 342 eP      P        16 15 18.7 -0.8
ZRNK                                e*PP    pP       16 15 28.5 -0.3
ZRNK                                 pmax   pmax
       comp=Z,6.0nm,0.8s,mb4.7
ZRNK   Zerenda            48.91 342 eP      P        16 15 18.7 -0.8
       comp=Z,6.5nm,0.8s,mb4.7
ZRNK                                epP     pP       16 15 28.5 -0.4
AB31   Akbulak array      49.46 333  P      P        16 15 24.1 +0.3
AB31                                 pmax   pmax
       comp=Z,1.0nm,0.4s,mb4.2
WRA    Warramunga Arr     49.81 124  P      P        16 15 26.5 -0.4
WRA                                  pmax   pmax
       comp=Z,3.0nm,0.8s
WRA    Warramunga Arr     49.81 124  P      P        16 15 26.5 -0.3
       comp=Z,3.0nm,0.8s,mb4.4,baz=303,slow=8.7,SNR=25
WRAB   Tennant Creek      49.81 124 eP      P        16 15 26.7 -0.2
WRAB                                e*PP    pP       16 15 36.9 +0.7
WRAB                                 pmax   pmax
       comp=Z,12nm,0.8s,mb5.0
WRAB   Tennant Creek      49.81 124 eP      P        16 15 26.7 -0.2
       comp=Z,12nm,0.8s,mb5.0
WRAB                                epP     pP       16 15 36.9 +0.6
WB2    Warramunga Arr     49.82 124 eP      P        16 15 26.4 -0.5
MJAR   Matsushiro Arr     50.81  48  LR     LR       16 38 18.0
       comp=Z,119nm,19.8s,MS3.9,baz=255,slow=38
BOD    Bodaibo            52.84  15 eP      P        16 15 48.5 -0.8
BOD                                  pmax   pmax
       comp=Z,10.0nm,1.3s,mb4.6
SVE    Sverdlovsk         54.87 339 eP      P        16 16 03.5 -0.7
SVE                                 e       pP       16 16 14.0 +0.4
SVE                                  pmax   pmax
       comp=Z,20nm,1.7s,mb4.9
SVE                                  MLR    MLR
       comp=N,200nm,14.0s,MS4.4
SVE                                  MLR    MLR
       comp=E,100nm,14.0s,MS4.4
SVE                                  MLR    MLR
       comp=Z,200nm,14.0s,MS4.3
ARU    Arti               55.31 338⇓iP      P        16 16 06.8 -0.6
ARU                                 e                16 18 06.7
ARU                                  pmax   pmax
       comp=Z,21nm,1.2s,mb5.0
ARU    Arti               55.31 338 eP      P        16 16 07.0 -0.5
       comp=Z,25nm,1.2s,mb5.1
ARU                                 epP     pP       16 16 16.0 -0.8
KIV    Kislovodsk         56.12 319  P      P        16 16 12.0 -1.4
KIV                                  pmax   pmax
       comp=Z,6.0nm,0.8s,mb4.7
KIV    Kislovodsk         56.12 319  P      P        16 16 12.0 -1.4
       comp=Z,5.9nm,0.8s,mb4.7
YSS    Yuzh-Sakhalins     58.20  39 eP      P        16 16 27.2 -0.9
YSS    Yuzh-Sakhalins     58.20  39  P      P        16 16 23.2 -4.9
       comp=Z,5.2nm,0.7s,mb4.7
YAK    Yakutsk            60.85  19c iP     P        16 16 44.8 -1.3
YAK                                  pmax   pmax
       comp=Z,17nm,1.5s,mb5.0
YAK                                  MLR    MLR
       comp=Z,200nm,23.0s,MS4.2
BRTR   Keskin Array B     61.03 311  P      P        16 16 46.3 -1.4
BRTR                                 *PP    pP       16 16 56.4 -0.9
BRTR                                 pmax   pmax
       comp=Z,1.0nm,0.4s
BRTR                                 pmax   pmax
       comp=Z,2.0nm,0.7s
BRTR   Keskin Array B     61.03 311  P      P        16 16 46.2 -1.5
       comp=Z,0.8nm,0.4s,mb4.2,baz=132,slow=6.1,SNR=4.9
BRTR                                 pP     pP       16 16 56.4 -0.9
       comp=Z,1.6nm,0.7s,baz=112,slow=6.7,SNR=5.5
STKA   Stephens Creek     61.44 133  P      P        16 16 50.8 +0.2
       comp=Z,2.0nm,0.9s,mb4.3,baz=314,slow=12,SNR=3.0
STKA                                 LR     LR       16 46 16.1
       comp=Z,163nm,20.4s,MS4.2,baz=205,slow=39
STKA   Stephens Creek     61.44 133  P      P        16 16 50.8 +0.2
OBN    Obninsk            64.48 328⇓iP      pP       16 17 18.8 -1.1
OBN                                  pmax   pmax
       comp=Z,21nm,1.6s,mb4.9
OBN                                  MLR    MLR
       comp=Z,100nm,16.0s,MS4.1
VRI    Vrincioaia         67.45 317 ⇑P      pP       16 17 39.4 +0.3
TIXI   Tiksi              67.84  12c iP     P        16 17 30.5 -1.1
TIXI                                 pmax   pmax
       comp=Z,26nm,1.4s,mb5.1
MLR    Muntele Rosu       67.91 316 ⇓P      P        16 17 32.7 +0.3
VSU    Vasula             70.73 330 i P     pP       16 17 58.9 -0.2
FINES  FINESS Array B     71.95 333  P      P        16 17 55.4 -1.4
FINES                                *PP    pP       16 18 05.1 -1.3
FINES                                pmax   pmax
       comp=Z,1.0nm,0.6s
FINES                                pmax   pmax
       comp=Z,1.0nm,0.5s
FINES                                MLR    MLR
       comp=Z,85nm,18.7s
FINES  FINESS Array B     71.95 333  P      P        16 17 55.4 -1.4
       comp=Z,1.1nm,0.6s,mb4.0,baz=108,slow=6.0,SNR=12
```

```
FINES                                pP     pP       16 18 05.1 -1.3
       comp=Z,0.9nm,0.5s,baz=104,slow=7.9,SNR=4.6
FINES                                LR     LR       16 55 14.2
       comp=Z,85nm,18.7s,MS4.0,baz=154,slow=41
KAF    Kangasniemi        72.06 333 ep      pP       16 18 05.2 -1.8
VYHS   Vyhne              73.21 318 eP      pP       16 18 13.9 -0.1
VYHS   Vyhne              73.21 318 epP     pP       16 18 13.9 -0.1
BOSA   Boshof             73.76 237  LR     LR       16 44 49.1
       comp=Z,116nm,19.7s,MS4.2,baz=270,slow=31
MORC   Moravsky Berou     74.21 320 eP      P        16 18 10.7 +0.5
MORC                                e*PP    pP       16 18 19.8  0.0
MORC                                 pmax   pmax
       comp=Z,13nm,1.4s,mb4.7
MORC   Moravsky Berou     74.21 320 eP      P        16 18 10.7 +0.5
       comp=Z,13nm,1.4s,mb4.7
MORC                                epP     pP       16 18 19.8 -0.1
ZST    Bratislava         74.32 318 eP      pP       16 18 20.6 +0.1
ZST    Bratislava         74.32 318 epP     pP       16 18 20.6 +0.1
ARCES  ARCESS Array B     74.78 340  P      P        16 18 12.5 -0.6
ARCES                                *PP    pP       16 18 22.4 -0.3
ARCES                                pmax   pmax
       comp=Z,2.0nm,1.0s
ARCES                                pmax   pmax
       comp=Z,5.0nm,1.2s
ARCES                                MLR    MLR
       comp=Z,163nm,20.9s
ARCES  ARCESS Array B     74.78 340  P      P        16 18 12.4 -0.6
       comp=Z,1.7nm,0.9s,mb4.0,baz=98,slow=6.4,SNR=7.0
ARCES                                pP     pP       16 18 22.4 -0.4
       comp=Z,5.2nm,1.2s,baz=104,slow=10.0,SNR=3.2
ARCES                                LR     LR       16 53 30.8
       comp=Z,163nm,20.9s,MS4.3,baz=258,slow=38
DPC    Dobruska-Polom     75.06 320 eP      P        16 18 16.2 +1.1
DPC                                 ex      x        16 18 25.8
DPC                                  AMS    AMS      16 55 50.0
UPC    Upice              75.27 320 eP      pP       16 18 27.1 +1.2
UPC                                 ex      x        16 18 36.2
PRU    Pruhonice          76.17 320 eP      sP       16 18 33.4 -0.9
PRU                                  MLR    MLR
       comp=Z,100nm,19.1s,MS4.1
PRU    Pruhonice          76.17 320 ex      sP       16 18 33.4 -0.9
PRU                                  AMS    AMS      16 56 50.0
       comp=Z,100nm,19.1s
PVCC   Panska Ves         76.19 320  AMS    AMS      16 56 40.0
       comp=Z,100nm,21.1s
BRG    Berggiesshubel     76.62 320 eP      P        16 18 24.1 +0.2
BRG                                 i       pP       16 18 33.7 +0.2
BRG                                  pmax   pmax
       comp=Z,13nm,1.7s,mb4.6
BRG    Berggiesshubel     76.62 320 eP      P        16 18 24.1 +0.2
       comp=Z,13nm,1.7s,mb4.6
BRG                                 i       pP       16 18 33.7 +0.2
GEC2   GERESS Array S     76.63 318 eP      P        16 18 24.3 +0.3
GEC2                                e*PP    pP       16 18 33.7  0.0
GEC2                                 pmax   pmax
       comp=Z,8.0nm,1.1s,mb4.6
GEC2   GERESS Array S     76.63 318 eP      P        16 18 24.3 +0.3
       comp=Z,8.0nm,1.1s,mb4.6
GEC2                                epP     pP       16 18 33.7  0.0
GERES  GERESS Array B     76.63 318  P      P        16 18 24.5 +0.5
GERES                                *PP    pP       16 18 33.9 +0.2
GERES                                pmax   pmax
       comp=Z,2.0nm,0.6s
GERES                                pmax   pmax
       comp=Z,3.0nm,0.8s
GERES                                MLR    MLR
       comp=Z,49nm,18.1s
GERES  GERESS Array B     76.63 318  P      P        16 18 24.5 +0.5
       comp=Z,1.5nm,0.6s,mb4.1,baz=90,slow=5.3,SNR=18
GERES                                pP     pP       16 18 33.9 +0.3
       comp=Z,3.4nm,0.8s,baz=90,slow=5.3,SNR=13
GERES                                LR     LR       16 55 37.0
       comp=Z,49nm,18.1s,MS3.9,baz=348,slow=38
KHC    Kasperske Hory     76.73 319 eP      P        16 18 24.7 +0.1
KHC                                 e       pP       16 18 34.6 +0.4
KHC    Kasperske Hory     76.73 319 eP      P        16 18 24.7 +0.1
KHC                                 ex      x        16 18 34.6
KHC                                  AMS    AMS      16 55 40.0
BILL   Bilibino           77.03  22 eP      P        16 18 31.9 +6.0
BILL                                 pmax   pmax
       comp=Z,4.0nm,1.7s,mb4.1
CLL    Collm              77.24 321⇓eP      P        16 18 28.0 +0.7
CLL                                 e       pP       16 18 38.0 +1.0
CLL    Collm              77.24 321 ⇓P      P        16 18 28.0 +0.7
CLL                                 e*PP    pP       16 18 38.0 +1.0
NKC    Novy Kostel        77.53 320 eP      P        16 18 30.2 +1.3
NKC                                 ex      x        16 18 39.9
NKC                                  AMS    AMS      16 57 30.0
MAW    Mawson             77.93 191  P      P        16 18 32.3 +1.5
MAW                                  pmax   pmax
       comp=Z,2.0nm,0.7s
MAW    Mawson             77.93 191  P      P        16 18 32.3 +1.5
       comp=Z,2.3nm,0.7s,mb4.2,baz=343,slow=7.9,SNR=5.0
MOX    Moxa               78.08 320 eP      P        16 18 33.0 +1.1
MOX    Moxa               78.08 320 i P     P        16 18 33.0 +1.1
MOX                                  pP     pP       16 18 42.0 +0.4
GRA1   Grafenberg Arr     78.30 319 eP      P        16 18 34.0 +0.8
       comp=Z,15nm,1.0s,mb4.9
GRA1                                epP     pP       16 18 43.8 +1.0
GRF    Grafenberg Arr     78.30 319 eP      P        16 18 34.0 +0.8
GRF                                 e*PP    pP       16 18 43.8 +1.0
GRF                                  pmax   pmax
       comp=Z,15nm,1.0s,mb4.9
GRF    Grafenberg Arr     78.30 319 eP      P        16 18 34.1 +0.9
GRF                                 e*PP    pP       16 18 43.8 +1.0
GRF                                  pmax   pmax
       comp=Z,15nm,1.0s,mb4.9
GRF    Grafenberg Arr     78.30 319 eP      P        16 18 34.1 +0.9
       comp=Z,15nm,1.0s,mb4.9
GRF                                 epP     pP       16 18 43.8 +1.0
CLZ    Clausthal          78.90 321 eP      P        16 18 37.3 +0.8
CLZ                                 e*PP    pP       16 18 46.7 +0.5
CLZ                                  pmax   pmax
       comp=Z,16nm,1.3s,mb4.8
CLZ    Clausthal          78.90 321 eP      P        16 18 37.3 +0.8
       comp=Z,16nm,1.3s,mb4.8
CLZ                                 epP     pP       16 18 46.7 +0.5
NB2    NORSAR Subarra     78.92 331  P      P        16 18 34.8 -1.5
       comp=Z,1.5nm,1.1s,mb3.8,baz=91,slow=5.3
NOA    NORSAR Array B     78.92 331  pP     pP       16 18 45.0 -1.0
       comp=Z,1.0nm,0.7s,baz=94,slow=5.7,SNR=4.2
NOA                                  LR     LR       16 57 02.6
       comp=Z,120nm,21.9s,MS4.2,baz=90,slow=38
BSEG   Bad Segeberg       79.01 323 eP      P        16 18 38.6 +1.6
LPG    La Plagne          81.33 315 eP      P        16 18 50.6 +1.1
       comp=Z,19nm,1.0s,mb4.7
LPG    La Plagne          81.33 315 eP      P        16 18 50.6 +1.1
LPG                                  pmax   pmax
       comp=Z,10.0nm,1.0s,mb4.7
ILAR   Eielson Array      95.69  22  P      P        16 19 58.8 +0.6
ILAR                                 pmax   pmax
       comp=Z,1.0nm,0.7s
ILAR                                 MLR    MLR
       comp=Z,60nm,18.3s
ILAR   Eielson Array      95.69  22  P      P        16 19 58.8 +0.6
       comp=Z,0.5nm,0.7s,mb4.1,baz=310,slow=4.7,SNR=5.0
ILAR                                 LR     LR       17 08 57.5
       comp=Z,60nm,18.3s,MS4.1,baz=179,slow=39
PDAR   Pinedale Array    126.07  20  PKP    PKPdf    16 25 35.7 -3.6
       comp=Z,0.3nm,0.5s,baz=14,slow=6.1,SNR=3.7
PDAR                                 pPKP            16 25 46.1
       comp=Z,1.1nm,0.8s,baz=45,slow=2.1,SNR=5.2
NVAR   Mina Array Bea    126.12  29  PKP    PKPdf    16 25 37.4 -2.2
       comp=Z,0.7nm,0.5s,baz=23,slow=1.6,SNR=4.8
```

ISC 16 16:32:28.4±1.8**, 44.76N**±0.08×**15.5E**±0.1**, n7,** σ1^{s}07/13**, 1C, Northwestern Balkan Peninsula**

```
Code   Station Name        Δ°   AZ°   Phase ID         Time      Res
                                    Op      ISC       h  m  s    ISC
VBY    Vinica-Bojanci      0.76 349 ePg     Pg       16 32 43.2 -0.3
VBY                                 eSg     Sg       16 32 53.7  0.0
VBY                                 e(Rg)            16 32 59.2
GCIS   Gornji Cirnik       1.11   6 i Pg    Pg       16 32 50.0 -0.6
GCIS                                i Sg    Sg       16 33 07.0 +1.5
       comp=Z,18nm,0.4s
VISS   Visnje              1.14 337 i Pg    Pg       16 32 50.9 -0.1
VISS                                i Sg    Sg       16 33 06.0 -0.1
       comp=Z,13nm,0.3s
LEGS   Legarje             1.19 355 i Pg    Pg       16 32 52.6 +0.5
CEY    Cerknica            1.23 323 i Pg    Pg       16 32 52.8 -0.1
CEY                                 eSg     Sg       16 33 09.3 +0.2
       comp=Z,14nm,0.3s
VOY    Vojsko              1.69 319 ePn     Pn       16 33 00.3 +1.0
VOY                                 eSn     Sn       16 33 25.0 +3.0
OBKA   Obir                1.87 340⇑iPG     Pg       16 33 03.5 -2.1
OBKA                                i SG    Sg       16 33 28.9 -1.6
       comp=Z,9.3nm,0.4s
```

MAN 16 16:45:07.8, 9.43N×125.62E, h12^{km}, mb4.5, ML3.4, MS3.3, 2C-2D, Mindanao

```
Code   Station Name        Δ°   AZ°   Phase ID         Time      Res
                                    Op      ISC       h  m  s    ISC
SCPH   Surigao             0.37 340 eP      Pg       16 45 16.7 +1.3
SCPH                                eS      Sg       16 45 24.0 +3.5
BUTP   Butuan              0.46 179 eP      Pg       16 45 16.7 -0.5
MSLP   Maasin              1.02 313 eP      Pb       16 45 27.2 +0.3
CGP    Cagayan de Oro      1.33 223⇑iP      Pb       16 45 31.3 -0.9
CGP                                 i S     Sb       16 45 48.3 -0.7
BUKP   Musuan              1.64 200 eP      Pn       16 45 36.5 -0.2
TBP    Tagbilaran          1.75 279 eP      Pn       16 45 37.3 -0.9
TBP                                 eS      Sn       16 45 58.8 -1.8
PLP    Palo                1.83 340 eP      Pn       16 45 40.7 +1.3
PLP                                 eS      Sn       16 46 07.7 +5.0
LLP    Lapu-Lapu           1.85 299⇓eP      Pn       16 45 39.3 -0.4
LLP                                 i S     Sn       16 46 03.4 +0.3
BESP   Borongan            2.16 355 eP      Pn       16 45 45.5 +1.4
SNPH   Sibulan             2.35 268⇑iP      Pn       16 45 46.6 -0.2
SNPH                                i S     Sn       16 46 16.7 +0.8
DCPH   Dipolog City        2.39 250⇓eP      Pn       16 45 46.2 -1.2
DCPH                                eS      Sn       16 46 28.5  +12
PAGZ   Pagadian            2.71 235 eP      Pn       16 45 51.8 -0.3
CNP    Catarman            3.20 343 eP      Pn       16 46 00.6 +1.6
GUIM   Jordan              3.21 292 eP      Pn       16 45 58.0 -1.1
IPIL   Ipil                3.43 242 eP      Pn       16 46 03.8 +1.6
```

MAN 16 16:52:04.4, 13.70N×120.64E, h150^{km}, mb3.7, ML2.4, MS1.9, Mindoro

```
Code   Station Name        Δ°   AZ°   Phase ID         Time      Res
                                    Op      ISC       h  m  s    ISC
LUBP   Lubang              0.39 276 eP      P        16 52 26.1 +0.4
LUBP                                eS      S        16 52 41.3 -0.7
LBPH   Los Banos           0.69  49 eP      P        16 52 27.8 +0.6
ARP    Angono              0.97  31 eP      P        16 52 28.9 -0.1
ARP    Angono              0.97  31 eP      P        16 52 34.6 +5.5
NBP    Mount Natib         1.06 348 eP      P        16 52 29.9 +0.1
BOAC   Boac                1.19 101 eP      P        16 52 32.0 +0.8
SJMP   San Jose            1.31 159 eP      P        16 52 32.6 +0.3
SJMP                                eS      S        16 52 54.0 +0.1
BUSP   Coron               1.74 194 eP      P        16 52 37.5 +0.6
CUYO   Cuyo Island         2.85 173 eP      P        16 52 50.7 +0.1
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*NEIC **16** 17:01:47.4, 34.98S×70.46W, MD3.5(GUC), After GUC.*

GUC 16 17:01:47.4±0.8**, 34.98S×70.46W, MD3.5, 1D, Chile-Argentina border region**

```
Code   Station Name        Δ°   AZ°   Phase ID         Time      Res
                                    Op      ISC       h  m  s    ISC
SFDO   San Fernando        0.59 308⇓iP      Pg       17 01 59.4 +0.3
SFDO                                i S     Sg       17 02 08.4 +1.4
CACH   El Canelo           0.87 352 i P     Pg       17 02 04.4 -0.4
CACH                                i S     Sg       17 02 17.8 +1.4
CHCH   Chadas Angostu      1.06 351 eP      Pb       17 02 07.3 -1.0
CHCH                                i S     Sb       17 02 23.3 +0.8
LNV    Longovilo           1.29 322 i P     Pb       17 02 11.4 -0.9
LNV                                 i S     Sb       17 02 30.0 +0.7
PCH    Pirque              1.36 358 eP      Pb       17 02 13.2 -0.3
TACH   Talagante           1.39 343 i P     Pb       17 02 13.3 -0.5
```

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*NIED **16** 17:02:00, 29.40N×130.80E, h35^{km}, Mw4.2 Best double couple: $M_0$2.66×10^{15} NP1:ϕ_s13°, δ88°, λ70°. NP2:ϕ_s278°, δ20°, λ175°.*

*JMA **16** 17:02:19.1±0.1, 29.42N×130.82E, h70^{km}±3^{km}, M3.7*

*NEIC **16** 17:02:20.7±1.6, 29.48N×130.59E, mb4.4/8, Error ellipse: s-maj=35.4km s-min=10.1km az=116.0*

*IDC **16** 17:02:20.4±5.2, 29.43N×130.72E, h36^{km}±33^{km}, mb3.5/6, mb1 3.6/8, mb1mx3.5/21, mbtmp3.7/8, ML3.4/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/22, Error ellipse: s-maj=81.5km s-min=23.7km az=111.0*

*BJI **16** 17:02:29.2, 29.65N×129.68E, h26^{km}, mB4.2, mb4.4, Ms3.8, Msz3.5*

ISC 16 17:02:19.0±1.1**, 29.39N**±0.06×**130.9E**±0.1**, h49^{km}**±6^{km}**, n34,** σ0^{s}75/38**, mb4.2**/13**, MS3.5**/1**, Ryukyu Islands**

```
Code   Station Name        Δ°   AZ°   Phase ID         Time      Res
                                    Op      ISC       h  m  s    ISC
JNN    Nakanoshima         0.98 298  P      P        17 02 36.7 +0.1
JKC    Kuchinoerabu        1.22 332  P      P        17 02 40.0  0.0
JTN    Tanegashima 3       1.27   4  P      P        17 02 40.5 -0.2
JTN                                  S      S        17 02 57.0 +0.1
JZK    Kikaishima          1.33 217  P      P        17 02 42.1 +0.4
JAM    Amami Oshima        1.47 229  P      P        17 02 43.9 +0.2
JAM                                 eS      S        17 03 02.8 +0.8
JTSR   Tashiro 2           1.77   1  P      P        17 02 48.1 +0.2
JTSR                                 S      S        17 03 10.1 +0.8
JSU    Suzuyama            2.14 351  P      P        17 02 52.6 -0.5
JNAR   Kushima--Naru       2.16   9  P      P        17 02 53.7 +0.3
JTK    Tokunoshima         2.32 227  P      P        17 02 56.0 +0.3
JSJ    Shimokoshiki        2.49 337  P      P        17 02 57.3 -0.8
JTZ    Takazaki            2.51   4  P      P        17 02 58.3 -0.1
JOW    Kunigami            3.42 223  Pn     P        17 03 10.2 -1.1
       5.3nm,0.3s,baz=103,slow=21,SNR=18
JOW                                  Sn     S        17 03 49.9 -1.2
       4.8nm,0.3s,baz=78,slow=29,SNR=3.9
JOW    Kunigami            3.42 223  P      P        17 03 10.8 -0.5
JNU    Nakatsue            3.72   0  Pn     P        17 03 15.2 -0.3
       5.8nm,0.3s,baz=212,slow=5.2,SNR=41
JNU                                  Sn     S        17 03 58.4 -0.2
       4.9nm,0.3s,baz=151,slow=28,SNR=3.6
CBIJ   Chichi jima        10.24 100  LR     LR       17 08 32.1
       comp=Z,60nm,19.8s,baz=184,slow=36
CN2    Changchun          15.02 345 eP      P        17 05 55.4 +5.8
CN2                                 eXP              17 06 04.9
CN2                                  AMB    AMB
       comp=Z,10.0nm,0.7s
CN2                                  LR     LR
       comp=N,300nm,16.0s
CN2                                  LR     LR
       comp=E,200nm,16.0s
CN2                                  LR     LR
       comp=Z,200nm,15.0s
ENH    Enshi              18.57 278  P      P        17 06 35.7 +1.4
       comp=Z,15nm,1.1s
QIZ    Qiongzhong         21.74 246  P      P        17 07 08.2 +0.2
       comp=Z,16nm,1.1s,mb4.3
SONM   Songino Array      26.37 321  P      P        17 07 51.7 -0.7
       comp=Z,0.4nm,0.5s,mb3.2,baz=134,slow=10,SNR=6.3
GUN    Gumba              39.33 279 eP      P        17 09 46.6 +1.5
       comp=Z,9.0nm,0.4s,mb4.8
PKI    Pulchoki           39.81 279 eP      P        17 09 49.2 +0.1
       comp=Z,12nm,0.8s,mb4.7
KKN    Kakani             39.87 279 eP      P        17 09 49.0 -0.6
       comp=Z,17nm,0.9s,mb4.8
DMN    Daman              40.06 279 eP      P        17 09 50.5 -0.7
       comp=Z,6.8nm,0.6s,mb4.5
GKN    Gorkha             40.37 280 eP      P        17 09 52.9 -0.8
       comp=Z,9.4nm,0.8s,mb4.5
MKAR   Makanchi Array     41.28 309  P      P        17 10 01.2 +0.1
       comp=Z,0.6nm,0.5s,mb3.5,baz=90,slow=10,SNR=8.1
MKAR   Makanchi Array     41.28 309  P      P        17 10 01.2 +0.1
KOLN   Koldanda           41.32 280 eP      P        17 09 56.7 -4.8
ZRNK   Zerenda            50.38 316 eP      P        17 11 11.8 -1.3
       comp=Z,67nm,0.6s
ZRNK                                epP     pP       17 11 21.8 -4.7
ARU    Arti               56.41 321 eP      P        17 11 56.5 -1.0
       comp=Z,5.9nm,0.8s,mb4.7
ARU                                 epP     pP       17 12 06.7 -4.6
ARCES  ARCESS Array B     67.93 339  P      P        17 13 15.0 +0.8
       comp=Z,0.7nm,0.7s,mb3.8,baz=66,slow=12,SNR=3.5
FINES  FINESS Array B     71.27 331  P      P        17 13 34.8 +0.1
       comp=Z,0.3nm,0.4s,mb3.5,baz=78,slow=7.1,SNR=9.3
FINES                                LR     LR       17 49 31.1
       comp=Z,27nm,18.1s,MS3.5,baz=130,slow=40
BRTR   Keskin Array B     76.93 308  P      P        17 14 10.2 +2.3
       comp=Z,0.7nm,0.6s,mb3.8,baz=90,slow=7.4,SNR=3.9
NB2    NORSAR Subarra     77.51 334  P      P        17 14 10.4 -0.3
       comp=Z,0.5nm,0.5s,mb3.7,baz=49,slow=5.3
NOA    NORSAR Array B     77.51 334  P      P        17 14 10.8 +0.1
       comp=Z,0.6nm,0.6s,mb3.7,baz=48,slow=5.5,SNR=3.5
```

IDC **16** *17:35:36.7±12.0, 35.20N×70.39E, mb3.6/2, mb1 3.5/4, mb1mx3.3/20, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=203.8km s-min=51.9km az=157.0*

NNC **16** *17:36:09.8±2.8, 36.98N×70.78E, h187^{km}±24^{km}, mpv3.5, Error ellipse: s-maj=31.1km s-min=21.1km az=52.0*

ISC 16 17:36:07.9±3.7**, 36.9N**±0.2×**70.9E**±0.2**, h205**^{km}±30^{km}**, n8, σ0ˢ60**/10**, mb3.2**/2**, 2C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.20	358	⇑P	P	17 37 38.8	+0.2
	1.0nm,0.3s,baz=176,slow=12,SNR=22						
KK31				⇑S	S	17 38 48.7	-0.4
	6.2nm,0.6s,baz=185,slow=20,SNR=18						
AAK	Ala-Archa	6.37	25	P	P	17 37 40.8	+0.2
	3.1nm,0.5s						
AAK				S	S	17 38 52.9	-0.1
	5.4nm,0.7s						
MKAR	Makanchi Array	13.03	37	Pn	P	17 39 05.6	-0.7
	0.1nm,0.3s,baz=217,slow=12,SNR=4.1						
AB31	Akbulak array	14.69	331	⇓P	P	17 39 26.4	-0.5
	1.4nm,0.9s,baz=135,slow=13,SNR=8.0						
ZRNK	Zerenda	16.11	356	⇓P	P	17 39 44.6	+0.4
	0.6nm,0.5s						
BVAR	Borovoye Array	16.13	359	P	P	17 39 46.0	+1.5
	0.4nm,0.3s,baz=180,slow=13,SNR=4.9						
FINES	FINESS Array B	37.10	326	P	P	17 42 59.2	-0.5
	0.3nm,0.4s,mb3.2,baz=104,slow=7.9,SNR=4.6						
ARCES	ARCESS Array B	40.74	337	P	P	17 43 29.6	-0.1
	0.6nm,0.5s,mb3.2,baz=113,slow=9.2,SNR=7.5						

BJI **16** *18:10:58.6, 19.98S×178.24W, h348^{km}, mB4.7, mb4.3*

NEIC **16** *18:11:00.9±1.2, 19.95S×177.83W, h369^{km}±12^{km}, mb4.6/34, Error ellipse: s-maj=11.5km s-min=7.6km az=143.0*

IDC **16** *18:11:03.8±4.4, 20.06S×177.96W, h394^{km}±47^{km}, mb4.0/14, mb1 4.2/15, mb1mx4.0/21, mbtmp4.7/15, Error ellipse: s-maj=19.0km s-min=16.5km az=6.0*

ISC 16 18:10:59.3±1.3**, 19.99S**±0.07×**177.87W**±0.07**, h362**^{km}±13^{km}**, h364**^{km}±3.2^{km}**:pP-P, n133, σ1ˢ15**/76**, mb4.5**/39**, 10C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	8.40	45	ePn	P	18 12 58.7	-0.5
	41nm,0.6s						
AFI				eS	S	18 14 28.2	-5.4
DZM	Mont Dzumac	14.79	259	eP	P	18 14 17.5	+3.8
DZM	Mont Dzumac	14.79	259	P	P	18 14 16.9	+3.2
	1.7nm,0.3s,baz=78,slow=16,SNR=38						
NOUC	Port Laguerre	14.93	259	eP	P	18 14 16.0	+0.8
NOUC	Port Laguerre	14.93	259	eP	P	18 14 16.0	+0.8
URZ	Urewera	18.72	192	P	P	18 14 53.8	-0.1
	2.6nm,0.3s,baz=349,slow=4.2,SNR=14						
CTA	Charters Tower	33.67	264	⇑iP	P	18 17 09.9	+0.7
	28nm,0.6s,mb4.7						
CTA	Charters Tower	33.67	264	P	P	18 17 10.0	+0.8
	38nm,0.7s,mb4.8,baz=93,slow=10,SNR=44						
CTAO	Charters Tower	33.67	264	eP	P	18 17 09.7	+0.6
	41nm,0.7s,mb4.8						
PMG	Port Moresby	35.35	282	P	P	18 17 24.1	+0.7
	23nm,0.8s,mb4.5,baz=111,slow=5.5,SNR=5.9						
PMG	Port Moresby	35.35	282	eP	P	18 17 23.8	+0.3
STKA	Stephens Creek	38.12	244	eP	P	18 17 46.9	+0.6
	6.5nm,0.9s,mb3.9						
STKA	Stephens Creek	38.12	244	P	P	18 17 44.4	-1.8
	4.1nm,0.5s,mb3.9,baz=94,slow=13,SNR=16						
GUMO	Guam	49.58	309	eP	P	18 19 13.9	-3.2
	94nm,1.0s,mb5.0						
GUMO				ePP	PP	18 21 09.1	-6.5
MBWA	Marble Bar	58.09	257	eP	P	18 20 16.4	-1.6
	31nm,0.8s,mb4.7						
SBA	Scott Base	58.38	184	eP	P	18 20 20.4	+1.0
	2.3nm,0.6s,mb3.7						
VNDA	Vanda	58.42	185	P	P	18 20 20.1	+0.4
	0.8nm,0.6s,baz=355,slow=7.9,SNR=11						
VNDA	Vanda	58.42	185	eP	P	18 20 19.2	-0.5
	0.9nm,0.6s						
MJAR	Matsushiro Arr	69.88	323	P	P	18 21 33.3	-0.2
	5.1nm,0.6s,mb4.4,baz=157,slow=6.3,SNR=17						
MAJO	Matsushiro	69.88	323	eP	P	18 21 33.0	-0.5
	9.8nm,0.7s,mb4.7						
MAT	Matsushiro	69.88	323	eP	P	18 21 33.0	-0.5
	8.7nm,0.6s,mb4.7						
MAT	Matsushiro	69.88	323	P	P	18 21 33.3	-0.2
QSPA	South Pole Qui	70.07	180	⇑iP	P	18 21 34.4	+0.4
	14nm,1.0s,mb4.7						
KSM	Kuching	73.47	278	eP	P	18 21 54.6	-0.6
CMB	Columbia Colle	79.01	43	eP	P	18 22 26.8	+1.5
	6.5nm,0.8s,mb4.4						
MTUM	Tungsten Hills	79.79	44	eP	P	18 22 28.0	-1.5
YBH	Yreka Blue Hor	79.82	39	P	P	18 22 31.7	+2.2
	10.0nm,0.8s,mb4.6,baz=178,slow=2.7,SNR=13						
MDJ	Mudanjiang	80.18	325	P	P	18 22 31.9	+0.5
MDJ				AP	pP	18 23 53.9	-0.6
MDJ				XP	sP	18 24 31.8	-0.4
MDJ				AMB	AMB		
	comp=Z,30nm,4.1s						
MDJ	Mudanjiang	80.18	325	eP	P	18 22 30.4	-0.9
	comp=Z,5.5nm,0.9s,mb4.3						
NVAR	Mina Array Bea	80.57	43	P	P	18 22 34.3	+0.8
	comp=Z,5.1nm,0.8s,mb4.3,baz=216,slow=7.0,SNR=25						
MNV	Mina	80.67	43	eP	P	18 22 32.5	-1.6
	comp=Z,10nm,1.0s,mb4.5						
TPH	Tonopah	81.08	44	eP	P	18 22 34.5	-1.6
	comp=Z,31nm,1.3s,mb4.9						
CN2	Changchun	81.98	322	eP	P	18 22 42.8	+2.1
BMN	Battle Mountai	82.39	42	eP	P	18 22 43.8	+0.9
	comp=Z,21nm,1.3s,mb4.8						
TUC	Tucson	82.57	52	eP	P	18 22 45.1	+1.2
	comp=Z,13nm,1.1s,mb4.7						
WVOR	Wild Horse Val	82.66	40	eP	P	18 22 42.0	-2.2
	comp=Z,17nm,0.8s,mb4.9						
OCWA	Octopus Mounta	82.82	33	eP	P	18 22 44.7	-0.1
	comp=Z,48nm,1.0s,mb5.3						
SLKM	Skilak Lake	83.29	13	eP	P	18 22 47.4	+0.4
ELK	Elko	83.83	43	P	P	18 22 50.8	+0.7
	comp=Z,4.3nm,0.9s,mb4.3,baz=244,slow=5.2,SNR=15						
ELK	Elko	83.83	43	eP	P	18 22 50.5	+0.3
	comp=Z,9.8nm,1.2s,mb4.5						
BMO	Blue Mountains	84.84	38	eP	P	18 22 55.4	+0.3
	comp=Z,3.9nm,0.9s,mb4.2						
DIV	Divide	84.86	15	eP	P	18 22 54.7	-0.1
	comp=Z,8.1nm,0.6s,mb4.7						
ENH	Enshi	85.86	304	eP	P	18 23 00.5	+0.2
	comp=Z,11nm,1.0s,mb4.6						
HLID	Hailey	85.86	41	eP	P	18 23 01.3	+1.3
	comp=Z,6.2nm,1.0s,mb4.4						
SRU	San Rafael	86.08	46	eP	P	18 23 01.0	-0.2
MNTX	Cornudas Mount	86.36	55	eP	P	18 23 02.2	-0.4
	comp=Z,3.2nm,1.0s,mb4.1						
MNTX				epP	pP	18 24 28.0	+0.9
BNM	Barren Site	86.51	52	eP	P	18 23 01.0	-2.3
TXAR	Lajitas Array	86.68	57	P	P	18 23 05.1	+0.9
	comp=Z,1.6nm,0.6s,mb4.0,baz=211,slow=7.3,SNR=15						
PV01	Paradox Valley	86.95	48	eP	P	18 23 01.1	-4.2
ANMO	Albuquerque	86.99	51	P	P	18 23 07.2	+1.5
	comp=Z,2.2nm,0.9s,mb4.0,baz=206,slow=7.0,SNR=4.8						
ANMO	Albuquerque	86.99	51	P	P	18 23 04.0	-1.6
	comp=Z,3.8nm,1.0s,mb4.2						
SYO	Syowa Base	87.25	193	⇓P	P	18 23 03.0	-3.0
GDL2	Guadalupe Moun	87.35	54	eP	P	18 23 08.5	+1.1
MCMT	McKenzie Canyo	87.49	40	eP	P	18 23 08.7	+1.0
ILAR	Eielson Array	87.80	13	P	P	18 23 08.8	0.0
	comp=Z,3.4nm,0.7s,mb4.3,baz=232,slow=5.8,SNR=22						
TPAW	Teton Pass	87.98	42	eP	P	18 23 10.7	+0.6
	comp=Z,3.2nm,0.3s,mb4.6						
LOHW	Long Hollow	88.26	42	eP	P	18 23 13.3	+1.8
	comp=Z,5.7nm,1.1s,mb4.3						
CHMT	Chamberlain Mo	88.34	38	eP	P	18 23 09.4	-2.3
QLMT	Earthquake Lak	88.36	41	eP	P	18 23 13.5	+1.6
PDAR	Pinedale Array	88.51	43	P	P	18 23 12.6	-0.1
	comp=Z,3.6nm,0.8s,mb4.3,baz=225,slow=4.2,SNR=21						
SNAA	Sanae	88.51	178	eP	P	18 23 10.8	-1.2
	comp=Z,4.8nm,1.2s,mb4.2						
VNA3	Neumayer Olymp	88.64	176		P	18 23 12.3	-0.3
BOZ	Bozeman (W)	88.65	40	eP	P	18 23 13.9	+0.8
	comp=Z,10nm,1.0s,mb4.6						
SDCO	Great Sand Dun	88.93	49	eP	P	18 23 14.6	-0.1
HRY	Holter Researc	89.07	39	P	P	18 23 12.8	-2.3
VNA2	Neumayer--Watz	89.08	177		P	18 23 14.9	+0.3
KMI	Kunming	89.23	297	P	P	18 23 16.0	-0.4
	comp=Z,6.0nm,1.0s,mb4.4						
VNA1	Neumayer--Stat	89.31	177		P	18 23 15.7	0.0
CMAR	Chiang Mai Arr	90.06	290	P	P	18 23 21.7	+1.3
	comp=Z,4.5nm,0.9s,mb4.4,baz=116,slow=2.9,SNR=12						
LZH	Lanzhou	92.56	307	eP	P	18 23 31.0	-0.6
LZH				XP	sP	18 25 34.1	+0.6
LZH				PP	PP	18 27 21.3	+0.6
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
LZH	Lanzhou	92.56	307	eP	P	18 23 31.0	-0.6
	comp=Z,21nm,1.4s,mb5.0						
LZH				pP	pP	18 24 47.1	-10
LZH				sP	sP	18 25 34.1	+0.6
LZH				PP	PP	18 27 21.2	+0.5
RSSD	Black Hills	92.70	44	eP	P	18 23 28.4	-3.7
	comp=Z,6.0nm,1.0s,mb4.6						
INK	Inuvik	93.75	15	P	P	18 23 36.2	-0.1
	comp=Z,4.1nm,0.9s,mb4.4,baz=225,slow=4.2,SNR=5.0						
INK	Inuvik	93.75	15	eP	P	18 23 34.8	-1.4
	comp=Z,7.7nm,1.4s,mb4.5						
GTA	Gaotai	96.75	309	P	P	18 23 50.1	-0.5
GTA				AP	pP	18 25 16.3	+0.4
GTA				XP	sP	18 25 51.8	-0.8
GTA				PP	PP	18 27 49.3	-3.4
GTA				PPP	PPP	18 29 59.4	-1.2
LSA	Lhasa	100.46	298	eP	P	18 24 03.3	-4.3
	comp=Z,2.2nm,0.4s						
MKAR	Makanchi Array	110.94	314	PKiKP		18 28 49.4	
	comp=Z,0.7nm,0.6s,baz=197,slow=0.4,SNR=4.2						
ARU	Arti	124.86	326	ePKPdf	PKPdf	18 29 15.9	-0.5
ARCES	ARCESS Array B	128.45	350	PKP	PKPdf	18 29 22.9	0.0
	comp=Z,1.2nm,0.4s,baz=19,slow=1.3,SNR=25						
KAF	Kangasniemi	134.70	344	epkp	PKPdf	18 29 34.7	-0.2
FINES	FINESS Array B	135.32	344	PKP	PKPdf	18 29 36.8	+0.7
	comp=Z,0.7nm,0.5s,baz=63,slow=4.3,SNR=9.2						
NOA	NORSAR Array B	138.50	353	PKhKP		18 29 35.5	
	comp=Z,0.4nm,0.6s,baz=56,slow=1.6,SNR=3.4						
NOA	NORSAR Array B	138.50	353	PKP	PKPdf	18 29 35.5	-6.4
AKASG	Malin Array Be	142.63	332	PKhKP		18 29 45.7	
	comp=Z,1.5nm,0.4s,baz=43,slow=4.6,SNR=12						
HILS	Ha’il	143.06	289	P	PKPbc	18 29 49.9	+0.7
MBAR	Mbarara	145.29	237	ePKPdf	PKPdf	18 29 55.0	-0.2
BSEG	Bad Segeberg	145.54	351	ePKPbc	PKPbc	18 29 56.0	+0.7
BRTR	Keskin Array B	146.59	313	PKPbc	PKPbc	18 29 58.8	+0.5
	comp=Z,3.0nm,0.8s,baz=135,slow=3.5,SNR=14						
KOLS	Kolonicke sedl	146.91	335	ePKP	PKPdf	18 30 00.4	+3.7
CLZ	Clausthal	147.57	350	ePKPbc	PKPdf	18 30 02.0	+4.3
CLL	Collm	147.60	347	ePKP	PKPdf	18 29 59.0	+1.2
CLL				⇓iPKP	PKPdf	18 30 02.0	+4.2
CLL				ePKP	PKPdf	18 30 06.0	+8.2
CLL	Collm	147.60	347	ePKIKP	PKPdf	18 29 59.0	+1.2
	comp=Z,logA/T=0.6						
CLL				i PKP1	PKPdf	18 30 02.0	+4.2
CLL				ePKP2	PKPab	18 30 06.0	-0.7
UPC	Upice	147.62	343	⇑ePKPB		18 30 02.4	
DPC	Dobruska-Polom	147.68	343	⇑ePKPB		18 30 02.8	
DPC				ePKPAB	PKPab	18 30 07.2	+0.2
BRG	Berggiesshubel	147.80	346	eP	PKPdf	18 29 59.5	+1.4
BRG				i		18 30 02.6	
KECS	Kecovo	147.96	337	eP	PKPdf	18 29 54.0	-4.4
KECS	Kecovo	147.96	337	e	PKPdf	18 29 54.0	-4.4
PVCC	Panska Ves	147.98	345	eP	PKPdf	18 30 03.0	+4.6
PVCC				e		18 30 08.3	
PVCC	Panska Ves	147.98	345	⇑ePKPB	PKPdf	18 30 03.0	+4.6
PVCC				ePKPAB	PKPab	18 30 08.3	+0.1
DBAS	Duba	148.24	290	P	PKPdf	18 30 03.8	+4.2
PRU	Pruhonice	148.48	345	⇑ePKPB	PKPdf	18 30 04.5	+5.3
PRU				ePKPAB	PKPab	18 30 09.5	-0.8
MOX	Moxa	148.51	348	ePKP	PKPdf	18 30 04.2	+5.0
MOX	Moxa	148.51	348	i P	PKPdf	18 30 04.2	+5.0
	comp=Z,logA/T=1.2						
VYHS	Vyhne	148.54	339	ePKP	PKPdf	18 30 03.9	+4.5
BDAS	Al Bad‘	148.86	292	P	PKPdf	18 30 05.7	+5.2
TAYS	Tayyib Ism	149.04	292	P	PKPdf	18 30 06.3	+5.4
TNS	Taunus Mts	149.42	352	ePKPbc	PKPdf	18 30 07.3	+6.6
GRA1	Grafenberg Arr	149.49	348	ePKPbc	PKPdf	18 30 07.2	+6.3
GRA1				ePKPab	PKPab	18 30 13.9	-0.5
GRF	Grafenberg Arr	149.49	348	ePKP	PKPdf	18 30 07.2	+6.3
GRF				ePKP	PKPdf	18 30 13.9	+13
KHC	Kasperske Hory	149.51	345	⇑ePKPB		18 30 07.3	
KHC				ePKPAB	PKPab	18 30 11.9	-2.6
WET	Wettzell	149.66	346	ePKPbc	PKPdf	18 30 07.1	+5.9
GERES	GERESS Array B	149.75	345	PKPbc	PKPdf	18 30 07.2	+5.9
	comp=Z,0.7nm,0.5s,baz=27,slow=2.2,SNR=3.8						
GIVF	Givet	149.88	357	ePKP1	PKPdf	18 30 07.2	+5.7
BAIF	Baives	149.96	357	ePKP1	PKPdf	18 30 07.6	+6.0
	comp=Z,20nm,0.8s						
FLN	La Foliniere	151.22	4	ePKP1	PKPdf	18 30 10.0	+6.5
	comp=Z,11nm,0.5s						
BFO	Black Forest	151.29	351	ePKPbc	PKPdf	18 30 11.5	+7.9
CDF	Champ du Feu	151.35	353	ePKP1	PKPdf	18 30 10.5	+6.8
	comp=Z,11nm,0.8s						
ROSF	Rostrenen	151.39	8	ePKP1	PKPdf	18 30 10.1	+6.3
	comp=Z,20nm,1.0s						
MEZF	Maizieres J’vi	151.46	356	ePKP1	PKPdf	18 30 11.0	+7.1
KBA	Koelnbreinsper	151.48	344	⇑iP	PKPdf	18 30 07.5	+3.5
SGMF	Saint Gilles	151.55	7	ePKP1	PKPdf	18 30 10.6	+6.6
	comp=Z,50nm,1.1s						
GRR	Gorron	151.57	4	ePKP1	PKPdf	18 30 10.9	+6.8
	comp=Z,12nm,0.5s						
WTTA	Wattenberg	151.72	346	⇑iP	PKPdf	18 30 11.5	+7.2
QUIF	Quistinic	151.82	8	ePKP1	PKPdf	18 30 11.1	+6.7
	comp=Z,35nm,1.2s						
HAU	Haudompre	151.85	354	ePKP1	PKPdf	18 30 11.4	+6.9
HINF	Hinteralfeld	151.98	353	ePKP1	PKPdf	18 30 11.8	+7.1
DAVA	Damuels	152.05	349	⇑iP	PKPdf	18 30 13.2	+8.4
LOR	Lormes	152.76	357	ePKP1	PKPdf	18 30 13.6	+7.8
SSF	Saint Saulge	152.98	358	ePKP1	PKPdf	18 30 14.3	+8.2
	comp=Z,15nm,1.1s						
CABF	La Chapelle	153.25	354	ePKP1	PKPdf	18 30 16.3	+10
	comp=Z,5.6nm,0.6s						
MFF	Saint Martin d	153.40	4	ePKP1	PKPdf	18 30 14.7	+8.0
TCF	Toulx Ste Croi	153.78	360	ePKP1	PKPdf	18 30 15.7	+8.5
	comp=Z,10nm,1.0s						
ESDC	Sonseca Array	159.70	14	PKPab	PKPab	18 30 57.8	-0.2
	comp=Z,0.2nm,0.3s,slow=4.4,SNR=5.3						

MOS **16** *18:15:06.0±1.3, 6.17S×130.17E, h95^{km}, mb4.5/10, Error ellipse: s-maj=23.2km s-min=10.0km az=114.5*

IDC **16** *18:15:06.5±4.7, 6.20S×130.47E, h83^{km}±42^{km}, mb4.1/6, mb1 4.4/8, mb1mx4.2/12, mbtmp4.6/8, ML4.8/2, Error ellipse: s-maj=42.4km s-min=16.6km az=77.0*

NEIC **16** *18:15:09.2±1.5, 6.20S×130.41E, h114^{km}±16^{km}, mb4.6/14, Error ellipse: s-maj=16.1km s-min=9.4km az=62.0*

ISC 16 18:15:11.8±1.6**, 6.46S**±0.06×**130.26E**±0.08**, h159**^{km}±17^{km}**, n57, σ1ˢ22**/59**, mb4.4**/21**, 1C-3D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	6.57	161	⇓iP	P	18 16 48.1	+1.0
	91nm,0.2s						
KAKA				eS	S	18 18 01.1	0.0
FITZ	Fitzroy Crossi	12.42	201	P	P	18 18 04.3	+0.2
	8.5nm,0.3s,baz=21,slow=9.1,SNR=119						
FITZ				S	S	18 20 18.3	-1.1
	14nm,0.3s,baz=200,slow=20,SNR=7.5						
WRAB	Tennant Creek	13.97	164	i P	P	18 18 24.1	+0.2
WRAB	Tennant Creek	13.97	164	ePn	P	18 18 23.8	-0.1
	30nm,0.6s						
WRA	Warramunga Arr	13.97	164	P	P	18 18 23.9	-0.1
WRA				S	S	18 20 53.6	-1.8
WRA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
WRA				smax			
	comp=E,5.0nm,0.3s						
WRA	Warramunga Arr	13.97	164	P	P	18 18 23.9	-0.1
	comp=E,3.4nm,0.3s,baz=338,slow=14,SNR=93						
WRA				S	S	18 20 53.6	-1.8
	comp=E,5.1nm,0.3s,baz=349,slow=20,SNR=8.9						
WB2	Warramunga Arr	13.97	164	eP	P	18 18 24.7	+0.6
WB2				eS	S	18 20 54.2	-1.3
PMG	Port Moresby	16.99	101	eP	P	18 19 02.5	+1.1
PMG				pmax	pmax		
	comp=Z,15nm,0.6s						
PMG	Port Moresby	16.99	101	eP	P	18 19 02.5	+1.0
	comp=Z,15nm,0.6s						
MBWA	Marble Bar	17.82	214	eP	P	18 19 14.0	+2.9
	comp=Z,12nm,0.7s						
KKM	Kota Kinabalu	18.73	311	eP	P	18 19 19.9	-1.1
KSM	Kuching	21.42	291	eP	P	18 19 48.6	+0.4
KULM	Kulim	31.78	291	eP	P	18 21 22.3	-1.3
CM31	Chiang Mai Arr	39.59	309	eP	P	18 22 29.8	+0.4
	comp=Z,3.2nm,0.6s,mb4.1						
CMAR	Chiang Mai Arr	39.59	309	P	P	18 22 29.9	+0.5
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CMAR	Chiang Mai Arr	39.59	309	P	P	18 22 29.9	+0.5
	comp=Z,6.6nm,0.6s,mb4.4,baz=134,slow=7.1,SNR=50						
MAJO	Matsushiro	43.42	9	eP	P	18 22 57.5	-3.0
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
MAJO	Matsushiro	43.42	9	eP	P	18 22 57.5	-3.0
	comp=Z,5.0nm,0.7s,mb4.2						
MJAR	Matsushiro Arr	43.42	9	P	P	18 22 58.0	-2.5
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MJAR	Matsushiro Arr	43.42	9	P	P	18 22 58.0	-2.5
	comp=Z,1.9nm,0.6s,mb3.9,baz=186,slow=8.8,SNR=5.6						
XAN	Xi’an	45.06	335	P	P	18 23 10.0	-3.7
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
GUN	Gumba	54.80	311	eP	P	18 24 27.4	-0.3
	comp=Z,26nm,0.6s,mb5.2						
PKI	Pulchoki	54.98	310	eP	P	18 24 28.2	-0.8
	comp=Z,9.4nm,0.7s,mb4.6						
PKI	Pulchoki	54.98	310	eP	P	18 24 28.2	-0.8
PKI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
KKN	Kakani	55.19	310	eP	P	18 24 29.8	-0.7
	comp=Z,24nm,0.9s,mb4.9						
KKN	Kakani	55.19	310	eP	P	18 24 29.8	-0.7
KKN				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
DMN	Daman	55.23	310	eP	P	18 24 30.2	-0.6
	comp=Z,29nm,0.9s,mb5.0						
GKN	Gorkha	55.79	310	eP	P	18 24 34.3	-0.5
	comp=Z,16nm,0.4s,mb5.2						
KOLN	Koldanda	56.46	309	eP	P	18 24 39.3	-0.3
	comp=Z,29nm,0.9s,mb5.1						
ULN	Ulaanbaatar	57.84	342	⇑eP	P	18 24 48.8	-0.1
ULN	Ulaanbaatar	57.84	342	eP	P	18 24 48.5	-0.4
	comp=Z,6.0nm,0.8s,mb4.5						
SONM	Songino Array	58.02	341	P	P	18 24 50.1	-0.1
	comp=Z,2.0nm,0.6s,mb4.1,baz=163,slow=6.8,SNR=25						
ZAK	Zakamensk	61.25	341	eP	P	18 25 09.7	-2.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.6						
MKAR	Makanchi Array	67.92	327	P	P	18 25 55.6	+0.2
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MKAR	Makanchi Array	67.92	327	P	P	18 25 55.6	+0.1
	comp=Z,9.5nm,0.5s,mb4.8,baz=120,slow=8.2,SNR=95						
YAK	Yakutsk	68.29	360	i P	P	18 26 05.9	+8.5
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
KZA	Kyzart	69.54	319	P	P	18 26 07.1	+1.7
	SNR=9.0						
TKM2	Tokmak 2	69.74	320	P	P	18 26 07.5	+0.9
	SNR=8.3						
UCH	Uchtor	70.09	319	P	P	18 26 10.7	+2.0
	SNR=11						
AAK	Ala-Archa	70.30	320	⇓eP	P	18 26 10.5	+0.5
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
AAK	Ala-Archa	70.30	320	eP	P	18 26 10.1	+0.1
	comp=Z,13nm,1.1s,mb4.6						
AAK				e		18 26 16.3	
CHMS	Chumysh	70.32	320	P	P	18 26 22.3	+12
	SNR=5.4						
AML	Almayashu	70.58	319	P	P	18 26 13.2	+1.6
	SNR=12						
USP	Ospenovka	70.61	320	P	P	18 26 12.5	+0.7
	SNR=10						
EKS2	Erkin-Say	70.78	319	P	P	18 26 14.2	+1.4
	SNR=9.2						
NVS	Novosibirsk	72.51	334	i P	P	18 26 21.0	-1.8
VNDA	Vanda	72.95	173	P	P	18 26 27.9	+2.8
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VNDA	Vanda	72.95	173	P	P	18 26 27.9	+2.8
	comp=Z,1.4nm,0.8s,mb3.7,baz=291,slow=7.4,SNR=9.2						
MAW	Mawson	75.54	201	P	P	18 26 43.3	+3.2
MAW				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MAW	Mawson	75.54	201	P	P	18 26 43.3	+3.2
	comp=Z,1.4nm,0.4s,mb3.9,baz=87,slow=9.9,SNR=5.6						
ZRNK	Zerenda	78.46	327	eP	P	18 26 56.3	-0.2
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
ZRNK	Zerenda	78.46	327	eP	P	18 26 56.3	-0.2
	comp=Z,4.4nm,0.9s,mb4.1						
ARU	Arti	85.39	328	⇓eP	P	18 27 32.1	-0.1
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
ARU	Arti	85.39	328	eP	P	18 27 31.9	-0.3
	comp=Z,4.2nm,0.9s,mb4.2						
LPAZ	La Paz	150.98	141	PKIKP	PKPdf	18 34 51.7	+11
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
LPAZ	La Paz	150.98	141	PKPbc	PKPdf	18 34 51.7	+11
	comp=Z,0.8nm,0.3s,baz=308,slow=1.7,SNR=4.6						
LPAZ	La Paz	150.98	141	PKPbc	PKPdf	18 34 51.7	+11

JMA **16** *18:34:51.3±0.3, 23.88N×121.68E, h82^{km}, M2.7*

TAP 16 18:34:50.1, 23.71N×121.67E, h38^{km}±1^{km}**, ML3.5, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	1.44	58	P	P	18 35 15.0	+0.9
YOJ				eS	S	18 35 32.9	+1.0
IRIF	Iriomote-Funau	1.98	71	P	P	18 35 22.9	+1.1
IRIF				eS	S	18 35 47.0	+1.3
HATJ	Hateruma jima	1.98	80	P	P	18 35 23.1	+1.2
HATJ				eS	S	18 35 46.7	+1.0
JKRS	Kuro-shima	2.20	76	P	P	18 35 26.2	+1.2
JKRS				eS	S	18 35 52.8	+1.6
JIJ	Ishigaki jima	2.35	73	P	P	18 35 27.5	+0.4
JIJ				eS	S	18 35 54.4	-0.6
JTJ	Tarama	2.92	71	P	P	18 35 35.4	+0.2
JTJ				eS	S	18 36 09.7	+0.2

CASC **16** *18:57:09.6±1.7, 7.66N×78.24W, h3^{km}±10^{km}, MD4.4, MW4.5, mb4.4(NEIC)*

NEIC **16** *18:57:11.9±4.6, 7.53N×78.19W, h20^{km}±29^{km}, mb4.4/9, Error ellipse: s-maj=14.7km s-min=8.8km az=54.0*

IDC **16** *18:57:13.7±5.5, 7.47N×78.15W, h32^{km}±42^{km}, mb3.7/11, mb1 4.0/12, mb1mx3.8/22, mbtmp3.9/12, ML4.3/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/20, Error ellipse: s-maj=30.2km s-min=15.3km az=55.0*

ISC 16 18:57:08.5±1.9**, 7.59N**±0.04×**78.23W**±0.04**, h5**^{km}±13^{km}**, n44, σ1ˢ14**/47**, mb4.1**/17**, MS3.3**/3**, 5C-4D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPD1	Univ de Panama	0.98	12	⇑iP	Pb	18 57 26.7	-0.7
UPD1				eS	Sb	18 57 40.0	-0.4
AZU2	Pedas	1.79	268	⇑iP	Pn	18 57 40.9	+0.7
AZU2				eS	Sn	18 58 03.4	-0.1
UPA	Univ. de Panam	1.89	317	⇓iP	Pn	18 57 42.0	+0.3
UPA				eS	Sn	18 58 06.3	0.0
ZANG	Zanguenga, Cho	2.12	310	⇓eP	Pn	18 57 45.1	+0.1
ZANG				eS	Sn	18 58 12.0	+0.1
ACLA	Agua Clara, Si	2.29	320	⇓eP	Pn	18 57 46.4	-1.0
PINA	Piqa, Costa Ab	2.46	312	⇑eP	Pn	18 57 49.0	-0.8
PINA				eS	Sn	18 58 21.3	+0.8
TOLC	Tolima	4.14	136	eP	Pn	18 58 15.6	+1.9
ROSC	El Rosal	4.73	125	Pn	Pn	18 58 26.8	+4.6
	8.5nm,0.3s,baz=100,slow=14,SNR=9.1						
OCAC	Ocana	4.90	82	⇑eP	Pn	18 58 25.1	+0.5
BARC	Barichara	5.10	100	⇑iP	Pn	18 58 29.0	+1.7
RUSC	La Rusia	5.38	108	⇓iP	Pn	18 58 33.6	+2.3
JTS	JuntasAbangare	7.17	292	Pn	Pn	18 58 56.3	-0.2
	1.8nm,0.3s,baz=358,slow=12,SNR=5.7						
JTS				LR	LR	19 01 38.8	
	comp=Z,224nm,20.3s,baz=132,slow=36						
JTS	JuntasAbangare	7.17	292	ePn	Pn	18 58 54.7	-1.8
	25nm,0.8s						
OTAV	Otavalo	7.31	182	ePn	Pn	18 58 58.3	-0.2
	7.9nm,0.6s						
GUVC	San Jose del G	7.50	132	eP	Pn	18 59 00.0	-1.1
SDV	Santo Domingo	7.62	80	Pn	Pn	18 59 02.4	-0.6
	14nm,0.3s,baz=253,slow=9.1,SNR=52						
SDV				Sn	Sn	19 00 24.9	-5.8
	1.8nm,0.3s,baz=98,slow=20,SNR=1.8						
SDV				LR	LR	19 02 07.7	
	comp=Z,140nm,20.0s,baz=186,slow=39						

SDV	Santo Domingo	7.62	80	*e*Pn	Pn	18 59 02.1	-0.8
	132nm,0.6s						
SDV				*e*Sn	Sn	19 00 25.8	-4.8
SAML	Samuel	22.24	137	*e*P	P	19 02 05.3	-2.6
	5.1nm,0.8s,mb4.0						
LPAZ	La Paz	25.74	157	P	P	19 02 41.1	-0.7
	0.8nm,0.5s,mb3.5,baz=345,slow=12,SNR=3.5						
LPAZ				LR	LR	19 13 21.0	
	comp=Z,49nm,21.1s,MS3.0,baz=263,slow=38						
LPAZ	La Paz	25.74	157	P	P	19 02 43.2	+1.4
	2.5nm,0.8s,mb3.8						
BBSR	BB Station	27.68	25	P	P	19 03 00.0	+0.5
	37nm,1.1s,mb4.9						
SIV	San Ignacio	28.94	144	P	P	19 03 08.3	-2.6
	1.0nm,0.4s,mb3.9,baz=314,slow=13,SNR=8.0						
TXAR	Lajitas Array	32.26	315	P	P	19 03 40.1	-0.2
	0.4nm,0.4s,mb3.6,baz=135,slow=7.1,SNR=4.8						
CCM	Cathedral Cave	32.54	341	*e*P	P	19 03 40.1	-2.5
	8.8nm,0.7s,mb4.8						
ANMO	Albuquerque	37.60	320	P	P	19 04 27.0	+1.1
	2.5nm,0.7s,mb4.0,baz=103,slow=8.5,SNR=4.0						
ANMO	Albuquerque	37.60	320	P	P	19 04 26.8	+0.9
LAZ	Ladron	37.69	319	P	P	19 04 28.1	+1.5
BDFB	Brasilia	37.79	128	LR	LR	19 20 32.4	
	comp=Z,63nm,19.9s,MS3.4,baz=310,slow=37						
CPUP	Villa Florida	39.35	150	LR	LR	19 22 40.0	
	comp=Z,62nm,19.0s,MS3.5,baz=122,slow=39						
PDAR	Pinedale Array	44.57	327	P	P	19 05 24.0	+0.7
	1.2nm,0.6s,mb3.9,baz=126,slow=12,SNR=4.3						
HWUT	Hardware Ranch	44.94	324	P	P	19 05 26.6	+0.4
	2.9nm,0.8s,mb4.2						
NVAR	Mina Array Bea	47.39	317	P	P	19 05 47.2	+1.6
	0.9nm,0.7s,mb3.8,baz=113,slow=6.9,SNR=3.8						
HLID	Hailey	47.80	325	P	P	19 05 50.5	+1.6
	3.2nm,1.0s,mb4.3						
PLCA	Paso Flores	48.60	172	P	P	19 05 54.6	-0.4
	2.3nm,0.9s,mb4.2,baz=332,slow=6.5,SNR=4.2						
PLCA	Paso Flores	48.60	172	*e*P	P	19 05 54.5	-0.5
	3.2nm,0.9s,mb4.3						
YKA	Yellowknife Ar	60.87	342	P	P	19 07 24.0	-0.1
	3.7nm,0.7s,mb4.6,baz=129,slow=7.4,SNR=8.7						
DLBC	Dease Lake	64.28	333	*e*P	P	19 07 45.9	-0.9
INK	Inuvik	70.63	341	*e*P	P	19 08 24.3	-2.3
	2.0nm,0.8s,mb4.1						
ILAR	Eielson Array	74.15	335	P	P	19 08 48.6	+1.2
	0.6nm,0.6s,mb3.7,baz=85,slow=4.7,SNR=4.3						
GERES	GERESS Array B	85.61	41	P	P	19 09 49.6	+0.3
	0.3nm,0.6s,mb3.7,baz=265,slow=11,SNR=3.1						
FINES	FINESS Array B	90.15	28	P	P	19 10 10.0	-0.8
	0.2nm,0.6s,mb3.7,baz=288,slow=6.0,SNR=3.8						
SNAA	Sanae	92.60	162	*e*P	P	19 10 21.1	-0.8
	22nm,1.8s						
WRA	Warramunga Arr	146.15	245	PKPbc	PKPbc	19 16 50.1	-0.7
	1.9nm,0.7s,baz=98,slow=2.7,SNR=24						
CMAR	Chiang Mai Arr	153.97	6	PKP	PKPdf	19 17 03.0	-1.3
	0.5nm,0.8s,baz=315,slow=3.8,SNR=3.2						
CMAR				PKPbc	PKPdf	19 17 09.7	+5.4
	0.6nm,0.6s,baz=327,slow=3.1,SNR=4.6						

IDC ***16*** *19:00:27.9±2.7, 43.32N×105.22W, mb3.8/1, mb1 4.0/3, mb1mx3.5/21, mbtmp3.9/3, ML3.7/2, Error ellipse: s-maj=66.1km s-min=8.3km az=155.0*

NEIC ***16*** *19:00:30.6±0.4, 43.75N×105.23W, ML3.2, Error ellipse: s-maj=9.6km s-min=5.0km az=143.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

ISC 16 19:00:28.7±0.6**, 43.81N**±0.07×**105.23W**±0.09**, n17, σ1^{s}.25**/18**, mb3.9**/1**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.92	70	*e*P	Pg	19 00 49.8	+2.7
PHWY	Pilot Hill	2.51	184	*e*P	Pn	19 01 12.0	+0.6
RWWY	Rawlins	2.57	215	*e*P	Pn	19 01 13.7	+1.4
BW06	Boulder Array	3.33	253	*e*P	Pn	19 01 23.2	+0.2
PDAR	Pinedale Array	3.33	253	Pn	Pn	19 01 23.7	+0.7
	4.3nm,0.3s,baz=73,slow=15,SNR=32						
PDAR				Pg	Pg	19 01 29.1	-5.9
	11nm,0.3s,baz=69,slow=20,SNR=44						
PDAR				Lg		19 02 08.6	
	10.0nm,0.3s,baz=82,slow=34,SNR=8.8						
GCMT	Greycliff	3.73	304	*e*P	Pn	19 01 30.7	+1.9
ISCO	Idaho Springs	4.01	184	*e*P	Pn	19 01 32.7	-0.1
SNOW	Snow King Moun	4.03	267	*e*P	Pn	19 01 26.9	-6.0
HWUT	Hardware Ranch	5.16	247	P	Pn	19 01 48.4	-0.6
TCUT	Toone Canyon	5.30	242	*e*P	Pn	19 01 51.5	+0.5
DAU	Daniels Canyon	5.62	235	P	Pn	19 01 54.2	-1.3
SRU	San Rafael	6.15	222	*e*P	Pn	19 02 01.4	-1.5
TMUT	Trail Mountain	6.35	227	*e*P	Pn	19 02 05.5	-0.4
ULM	Lac du Bonnet	9.07	41	Pn	P	19 02 42.6	-1.3
	2.3nm,0.3s,baz=233,slow=9.8,SNR=9.8						
ULM				Lg		19 05 19.9	
	0.3nm,0.3s,baz=139,slow=19,SNR=2.8						
EYMN	Ely	10.43	62	P	P	19 03 00.8	-1.7
ALLY	Alegheny Colle	18.54	88	*e*P	P	19 04 52.8	+4.3
ARCES	ARCESS Array B	61.35	18	P	P	19 10 47.4	-0.6
	0.6nm,0.6s,mb3.9,baz=330,slow=7.3,SNR=7.1						

IDC 16 19:55:37.7±1.8**, 8.83S×130.12E, mb3.6**/2**, mb1 3.6**/4**, mb1mx3.5**/12**, mbtmp3.5**/4**, ML3.1**/2**, Error ellipse: s-maj=60.9km s-min=25.4km az=91.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.19	205	Pn	P	19 58 07.4	-1.1
	0.2nm,0.3s,baz=26,slow=21,SNR=4.7						
FITZ				Sn	S	20 00 00.5	-4.3
	0.7nm,0.3s,baz=193,slow=16,SNR=5.9						
WRA	Warramunga Arr	11.78	160	Pn	P	19 58 25.9	-4.3
	0.1nm,0.3s,baz=338,slow=13,SNR=12						
WRA				Sn	S	20 00 35.2	-8.4
	0.4nm,0.3s,baz=331,slow=21,SNR=6.5						
SONM	Songino Array	60.20	342	P	P	20 05 47.5	-2.3
	0.2nm,0.6s,baz=169,slow=8.9,SNR=3.3						
MKAR	Makanchi Array	69.81	327	P	P	20 06 50.1	-2.0
	0.5nm,0.6s,baz=128,slow=6.9,SNR=4.9						

LDG ***16*** *20:32:23.6±0.1, 46.57N×1.31E, h4^{km}, Md3.5/3, Ml3.3/36, Error ellipse: s-maj=1.0km s-min=0.9km az=159.0*

NEIC ***16*** *20:32:23.7, 46.50N×1.29E, h10^{km}, ML3.4(STR), ML3.3(LDG), After STR.*

STR ***16*** *20:32:23.7±0.6, 46.50N×1.29E, h10^{km}±1^{km}, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

CSEM ***16*** *20:32:23.8±0.1, 46.57N×1.31E, h10^{km}, ML3.2/35, Error ellipse: s-maj=1.4km s-min=1.2km az=149.0*

ISC 16 20:32:20.3±0.3**, 46.60N**±0.01×**1.30E**±0.02**, h6^{km}**±2^{km}**, n70, σ1^{s}.65**/176**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCF	Toulx Ste Croi	0.70	116	*e*Pg	Pg	20 32 36.5	+2.1
TCF				*e*Sg	Sg	20 32 45.2	+1.4
	195nm,0.2s						
TCF				*e*Sn	Sn	20 32 48.7	+1.0
MFF	Saint Martin d	1.00	271	*e*Pg	Pg	20 32 42.1	+1.9
MFF				*e*Pn	Pn	20 32 42.7	+2.1
MFF				*e*Sg	Sg	20 32 55.1	+1.6
	138nm,0.2s						
MFF	Saint Martin d	1.00	271	*e*Pn	Pn	20 32 42.7	+2.1
MFF				*e*Sg	Sg	20 32 55.1	+1.6
	69nm,0.2s						
BGF	Bois d'Agland	1.07	92	*e*Pg	Pg	20 32 43.4	+1.7
BGF				*e*Pn	Pn	20 32 44.3	+2.6
BGF				*e*Sg	Sg	20 32 57.2	+1.3
	2µm,0.2s						
HYF	Humbligny	1.14	54	*e*Pg	Pg	20 32 45.1	+2.1
HYF				*e*Sg	Sg	20 32 59.9	+1.8
VERF	Verneugheol	1.19	136	Pg	Pg	20 32 45.0	+1.0
VERF				Sg	Sg	20 32 59.8	0.0
RJF	Les Rejaudoux	1.31	173	*e*Pn	Pn	20 32 46.4	+1.3
RJF				*e*Pg	Pg	20 32 47.4	+1.0
RJF				*e*Sg	Sg	20 33 03.7	-0.2
	377nm,0.3s						
MATF	Mathat	1.34	236	Pg	Pg	20 32 49.5	+2.3
MATF				Sg	Sg	20 33 06.9	+1.8
AGO	Saint Agoulin	1.38	113	Pg	Pg	20 32 50.0	+2.0
AVF	Avril sur Loir	1.43	82	*e*Pn	Pn	20 32 48.8	+2.0
AVF				*e*Pg	Pg	20 32 50.2	+1.4
AVF				*e*Sn	Sn	20 33 06.3	+0.3
	80nm,0.3s						
PYM	Petit Puy Mans	1.46	125	Pg	Pg	20 32 51.2	+1.7
FRNF	Fournols	1.50	144	Pg	Pg	20 32 50.8	+0.5
FRNF				Sg	Sg	20 33 09.2	-1.1
SSF	Saint Saulge	1.58	72	*e*Pn	Pn	20 32 51.0	+2.0
SSF				*e*Pg	Pg	20 32 52.7	+0.8
SSF				*e*Sn	Sn	20 33 10.4	+0.4
SSF				*e*Sg	Sg	20 33 13.5	+0.4
	34nm,0.2s						
SSF	Saint Saulge	1.58	72	*e*Pg	Pg	20 32 52.7	+0.8
SSF				*e*Sn	Sn	20 33 10.4	+0.4
SSF				*e*Sg	Sg	20 33 13.5	+0.4
	17nm,0.2s						
LFF	La Frestale	1.71	193	*e*Pn	Pn	20 32 51.9	+1.1
LFF				*e*Pg	Pg	20 32 54.7	+0.3
LFF				*e*Sn	Sn	20 33 11.9	-1.3
LFF				*e*Sg	Sg	20 33 16.2	-1.0
	196nm,0.3s						
PLDF	La Plantade	1.73	111	Pn	Pn	20 32 53.7	+2.6
PLDF				Pg	Pg	20 32 56.2	+1.3
PLDF				Sg	Sg	20 33 18.0	+0.1
PLDF	La Plantade	1.73	111	Pg	Pg	20 32 56.2	+1.3
PLDF				Sg	Sg	20 33 18.0	+0.1
SMF	Signal de Mont	1.75	88	*e*Pn	Pn	20 32 52.9	+1.4
SMF				*e*Pg	Pg	20 32 55.9	+0.6
SMF				*e*Sg	Sg	20 33 18.0	-0.7
	61nm,0.2s						
CAF	Calviac	1.76	162	*e*Pn	Pn	20 32 52.6	+1.0
CAF				*e*Pg	Pg	20 32 55.6	+0.1
CAF				*e*Sg	Sg	20 33 18.0	-0.9
	98nm,0.2s						
LOR	Lormes	1.88	68	*e*Pn	Pn	20 32 55.0	+1.8
	baz=251						
LOR				*e*Pg	Pg	20 32 58.1	+0.3
	baz=251						
LOR				*e*Sn	Sn	20 33 16.9	-0.6
LOR				*e*Sg	Sg	20 33 22.1	-0.7
	32nm,0.2s						
LBL	Lubilhac	1.93	135	Pn	Pn	20 32 56.1	+2.1
LBL				Pg	Pg	20 32 59.8	+0.9
OLEF	Ile d'Oleron	1.95	251	Pg	Pg	20 33 00.5	+1.2
LRYF	La Roche-sur-Y	1.96	270	Pg	Pg	20 33 00.1	+0.6
LRYF				Sg	Sg	20 33 24.8	-0.9
COLF	Collangettes	1.99	122	Pg	Pg	20 32 59.8	-0.2
GRR	Gorron	2.31	321	*e*Pn	Pn	20 33 00.0	+0.6
GRR				*e*Pg	Pg	20 33 06.6	+0.2
GRR				*e*Sg	Sg	20 33 37.1	-0.1
	35nm,0.3s						
FLN	La Foliniere	2.47	332	*e*Pn	Pn	20 33 03.8	+2.0
	baz=142						
FLN				*e*Pg	Pg	20 33 10.2	+0.5
	baz=155						
FLN				*e*Sn	Sn	20 33 31.7	-0.9
FLN				*e*Sg	Sg	20 33 41.5	-1.2
	17nm,0.2s						
VIVF	Saint-Julien-l	2.94	125	*e*Pn	Pn	20 33 09.4	+1.0
VIVF				*e*Pg	Pg	20 33 17.9	-1.1
VIVF				*e*Sg	Sg	20 33 53.8	-4.3
	22nm,0.3s						
SFTF	Sexfontaines	3.00	56	*e*Pn	Pn	20 33 10.5	+1.2
SFTF				*e*Pg	Pg	20 33 17.9	-2.4
	baz=233						
SFTF				*e*Sn	Sn	20 33 44.2	-1.9
SFTF				*e*Sg	Sg	20 33 57.6	-2.7
	17nm,0.2s						
SGMF	Saint Gilles	3.10	304	*e*Pn	Pn	20 33 12.2	+1.6
SGMF				*e*Sn	Sn	20 33 46.7	-1.7
SGMF				*e*Sg	Sg	20 34 01.0	-2.4
	9.8nm,0.2s						
LASF	Ste Croix	3.10	144	*e*Pn	Pn	20 33 11.3	+0.5
LASF				*e*Pg	Pg	20 33 20.4	-1.9
LASF				*e*Sg	Sg	20 33 59.7	-4.0
	24nm,0.3s						
MEZF	Maizieres J'vi	3.17	52	*e*Pn	Pn	20 33 13.2	+1.4
	baz=230						
MEZF				*e*Pg	Pg	20 33 22.9	-0.8
	baz=233						
MEZF				*e*Sg	Sg	20 34 04.0	-2.0
	20nm,0.4s						
CABF	La Chapelle	3.30	88	*e*Pn	Pn	20 33 15.0	+1.4
CABF				*e*Pg	Pg	20 33 24.9	-1.3
CABF				*e*Sn	Sn	20 33 49.0	-4.6
CABF				*e*Sg	Sg	20 34 07.6	-2.6
	17nm,0.5s						
QUIF	Quistinic	3.31	295	*e*Pn	Pn	20 33 15.4	+1.7
QUIF				*e*Sn	Sn	20 33 51.5	-2.4
QUIF				*e*Sg	Sg	20 34 06.9	-3.7
	14nm,0.2s						
MTLF	Montolieu	3.33	168	*e*Pn	Pn	20 33 14.0	+0.1
MTLF				*e*Pg	Pg	20 33 24.2	-2.5
MTLF				*e*Sn	Sn	20 33 50.7	-3.5
MTLF				*e*Sg	Sg	20 34 06.2	-4.8
	30nm,0.3s						
RFYF	Reffroy	3.48	53	*e*Pn	Pn	20 33 16.8	+0.7
RFYF				*e*Pg	Pg	20 33 29.3	-0.4
	baz=233						
RFYF				*e*Sg	Sg	20 34 13.0	-3.1
	19nm,0.2s						
ROSF	Rostrenen	3.55	301	*e*Pn	Pn	20 33 18.9	+1.7
ROSF				*e*Sn	Sn	20 33 56.6	-3.4
ROSF				*e*Sg	Sg	20 34 15.2	-3.4
	4.6nm,0.3s						
ORIF	Oris-en-Rattie	3.62	116	*e*Sn	Sn	20 33 57.7	-4.0
ORIF	Oris-en-Rattie	3.62	116	*e*Pn	Pn	20 33 18.9	+0.8
ORIF				*e*Sn	Sn	20 33 57.7	-4.0
ORIF				*e*Sg	Sg	20 34 16.3	-4.6
ORIF	Oris-en-Rattie	3.62	116	*e*Pn	Pn	20 33 18.9	+0.8
ORIF				*e*Sg	Sg	20 34 16.3	-4.6
	5.0nm,0.5s						
EPF	Esparros	3.64	191	*e*Pn	Pn	20 33 17.9	-0.4
EPF				*e*Pg	Pg	20 33 30.4	-2.5
EPF				*e*Sn	Sn	20 33 58.3	-3.8
EPF				*e*Sg	Sg	20 34 16.3	-5.1
	19nm,0.3s						
HAU	Haudompre	3.71	66	*e*Pn	Pn	20 33 20.1	+0.7
HAU				*e*Pg	Pg	20 33 32.2	-2.2
HAU				*e*Sn	Sn	20 34 01.1	-2.9
	19nm,0.4s						
SJPF	Ste Jean	3.92	208	*e*Pn	Pn	20 33 22.0	-0.4
SJPF				*e*Pg	Pg	20 33 35.5	-3.1
SJPF				*e*Sn	Sn	20 34 05.1	-4.2
SJPF				*e*Sg	Sg	20 34 25.4	-5.5
	4.8nm,0.2s						
EALK	Alkurruntz	3.93	212	Pn	Pn	20 33 24.0	+1.6
EALK				Pg	Pg	20 33 35.3	-3.4
EALK				Sn	Sn	20 34 05.7	-3.7
EALK				Lg		20 34 23.3	
EALK	Alkurruntz	3.93	212	Pn	Pn	20 33 24.0	+1.6
	1.0nm,0.3s,SNR=7.9						
EALK	Alkurruntz	3.93	212	Pg	Pg	20 33 35.3	-3.4
	0.4nm,0.1s,SNR=7.9						
EALK				Sn	Sn	20 34 05.7	-3.7
	9.9nm,0.4s,SNR=7.9						
ETSF	Etsaut	3.93	200	*e*Pn	Pn	20 33 21.7	-0.8
ETSF				*e*Pg	Pg	20 33 35.9	-2.9
ETSF				*e*Sn	Sn	20 34 05.0	-4.6
ETSF				*e*Sg	Sg	20 34 25.7	-5.5
	8.3nm,0.3s						
LPL	La Plagne	3.94	104	*e*Pn	Pn	20 33 22.7	+0.1
LPL				*e*Sg	Sg	20 34 26.6	-4.7
	3.1nm,0.3s						
LPG	La Plagne	3.95	104	*e*Pn	Pn	20 33 23.2	+0.4
LPG				*e*Sg	Sg	20 34 27.6	-4.4
	5.9nm,0.4s						
BAIF	Baives	3.97	28	*e*Pn	Pn	20 33 23.4	+0.4
BAIF				*e*Pg	Pg	20 33 37.0	-2.5
BAIF				*e*Sn	Sn	20 34 07.6	-2.8
BAIF				*e*Sg	Sg	20 34 28.0	-4.4
	6.0nm,0.4s						
HINF	Hinteralfeld	3.98	70	*e*Pn	Pn	20 33 23.9	+0.8
HINF				*e*Pg	Pg	20 33 37.3	-2.4
HINF				*e*Sn	Sn	20 34 07.6	-3.1
HINF				*e*Sg	Sg	20 34 27.8	-4.9
	10nm,0.3s						
ELIZ	Elizondo	3.98	211	Pn	Pn	20 33 24.8	+1.5
ELIZ				Pg	Pg	20 33 35.5	-4.3
ELIZ				Sn	Sn	20 34 06.7	-4.1
ELIZ				Lg		20 34 25.7	
ELIZ	Elizondo	3.98	211	Pn	Pn	20 33 24.8	+1.6
	1.5nm,0.5s,SNR=7.9						
ELIZ	Elizondo	3.98	211	Pg	Pg	20 33 35.5	-4.3
	0.8nm,0.2s,SNR=7.9						
ELIZ				Sn	Sn	20 34 06.7	-4.1
	1.6nm,0.2s,SNR=7.9						
SMRF	Simiane la Rot	4.00	129	*e*Pg	Pg	20 33 37.0	-3.2
SMRF				*e*Sg	Sg	20 34 28.4	-5.1
	9.1nm,0.6s						
EBIE	Bielsa	4.00	192	Pn	Pn	20 33 27.6	+4.1
EBIE				Pg	Pg	20 33 36.6	-3.6
EBIE				Sn	Sn	20 34 12.2	+0.9
EBIE				Lg		20 34 27.3	
EBIE	Bielsa	4.00	192	Pn	Pn	20 33 27.6	+4.1
	1.5nm,0.1s,SNR=7.9						
EBIE	Bielsa	4.00	192	Pg	Pg	20 33 36.6	-3.6
	1.2nm,0.2s,SNR=7.9						
EBIE				Sn	Sn	20 34 12.2	+0.9
	2.3nm,0.2s,SNR=5.5						
GIVF	Givet	4.22	33	*e*Pn	Pn	20 33 27.9	+1.3
GIVF				*e*Sn	Sn	20 34 13.6	-3.2
GIVF				*e*Sg	Sg	20 34 36.3	-4.4
	7.1nm,0.3s						
MBDF	Montbardon	4.27	114	*e*Sg	Sg	20 34 37.0	-5.5
	7.9nm,0.6s						
EJON	La Jonquera	4.31	164	Pg	Pg	20 33 43.3	-3.0
	1.0nm,0.2s,SNR=11						
CDF	Champ du Feu	4.44	64	*e*Pn	Pn	20 33 29.8	+0.1
CDF				*e*Pg	Pg	20 33 46.1	-2.8
CDF				*e*Sn	Sn	20 34 17.6	-4.8
CDF				*e*Sg	Sg	20 34 42.9	-5.1
	10nm,0.4s						
EMIR	Miracle	4.69	178	Pn	Pn	20 33 35.9	+2.6
EMIR				Sn	Sn	20 34 26.5	-2.2
EMIR	Miracle	4.69	178	Pn	Pn	20 33 35.9	+2.6
	1.1nm,0.3s,SNR=7.9						
EMIR				Sn	Sn	20 34 26.5	-2.3
	2.2nm,0.2s,SNR=7.9						
ELAN	Lanestosa	4.76	227	Pn	Pn	20 33 36.5	+2.2
ELAN				Sn	Sn	20 34 26.6	-3.9
ELAN	Lanestosa	4.76	227	Pn	Pn	20 33 36.5	+2.2
	0.8nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	20 34 26.6	-3.9
	1.2nm,0.2s,SNR=7.9						
FRF	La Foret Royal	4.86	127	*e*Pg	Pg	20 33 52.7	-4.6
LMR	La Mourre	4.93	130	*e*Pg	Pg	20 33 54.3	-4.5
EARI	Arriondas	5.68	237	Pn	Pn	20 33 49.7	+2.4
EARI				Sn	Sn	20 34 46.2	-7.3
EARI	Arriondas	5.68	237	Pn	Pn	20 33 49.7	+2.5
	1.5nm,0.5s,SNR=7.9						
EPON	Pontenova	6.83	244	Pn	Pn	20 34 03.8	+0.3
EPON				Sn	Sn	20 35 14.4	-8.0

MOS ***16*** *20:53:24.1±0.9, 34.08N×116.99W, h10^{km}, mb4.9/25, MS4.5/17, Error ellipse: s-maj=6.2km s-min=4.3km az=82.1*

BJI ***16*** *20:53:25.0, 34.10N×117.00W, h11^{km}, mB5.2, mb4.9, Ms5.1, Msz4.7*

HRVD ***16*** *20:53:26.0±0.6, 34.09N×116.99W, h12^{km}, MW4.9/49, Centroid moment Tensor Solution. LP body waves: s20,c33;Mantle waves: s49,c83; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.99±.10; M$_{\theta\theta}$-2.38±.09; M$_{\phi\phi}$1.39±.08; M$_{r\theta}$1.42±.26; M$_{\theta\phi}$0.79±.09; M$_{\phi r}$0.36±.27; Best double couple: M$_0$2.544×10^{16} NP1:φ$_s$324°, δ47°, λ162°. NP2:φ$_s$66°, δ77°, λ44°. Principal axes: T 2.099, Plg40°, Azm295°; N .888, Plg44°, Azm80°; P -2.988, Plg19°, Azm189°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***16*** *20:53:26.0, 34.06N×117.01W, h12^{km}, mb4.8/39, MS4.7/3, MW4.9(PAS), After PAS.*

NEIC Two people injured at San Bernardino and one person at Lake Arrowhead. Felt [VI] at Angelus Oaks, Calimesa and Grand Terrace; [V] at Banning, Beaumont, Bloomington, Colton, Corona, Fontana, Forest Falls, Highland, Loma Linda, Mentone, Moreno Valley, Perris, Redlands, Riverside, San Bernardino, San Jacinto, Sun City and Yucaipa. Felt [III-IV] in much of southern California. Also felt at Bullhead City, Arizona and Laughlin, Nevada.

IDC ***16*** *20:53:30.0±2.0, 34.10N×116.93W, h38^{km}±14^{km}, mb4.0/14, mb1 4.3/22, mb1mx4.2/31, mbtmp4.3/22, ML4.3/5, MS4.3/24, Ms1 4.3/24, ms1mx4.3/25, Error ellipse: s-maj=21.9km s-min=11.0km az=42.0*

ISC 16 20:53:23.5±1.0**, 34.06N**±0.03×**117.01W**±0.03**, h7^{km}**±6^{km}**, n256, σ0^{s}.98**/240**, mb4.6**/48**, MS4.5**/31**, 1C-1D, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFO	Pinyon Flat Ob	0.64	134	*e*P	Pg	20 53 37.6	+1.2
MWC	Mount Wilson	0.89	281	*e*P	Pb	20 53 41.4	+0.6
BAR	Barrett	1.41	168	*e*P	Pn	20 53 49.4	-0.2
LDFC	Landfair	1.86	56	*e*P	Pn	20 53 56.4	+0.2
NEN	Nelson	2.38	48	*e*Pn	Pn	20 54 04.0	+0.4
MTUM	Tungsten Hills	3.52	339	*e*Pn	Pn	20 54 21.1	+1.3
OMM	Old Mammoth Mi	3.90	336	*e*Pn	Pn	20 54 27.1	+1.9
TPH	Tonopah	4.01	358	*e*P	Pn	20 54 27.6	+0.9
LRV	Little Rabbit	4.04	307	*e*Pn	Pn	20 54 26.8	-0.4
TRCR	Troy Canyon	4.43	15	*e*Pn	Pn	20 54 33.4	+0.7
MNV	Mina	4.46	348	*e*P	Pn	20 54 34.0	+0.9
NVAR	Mina Array Bea	4.48	347	Pn	Pn	20 54 34.7	+1.2
	41nm,0.3s,baz=166,slow=15,SNR=162						
NVAR				Pg	Pg	20 54 48.8	-4.2
	143nm,0.3s,baz=163,slow=16,SNR=81						
NVAR				Lg		20 55 50.9	
	36nm,0.3s,baz=193,slow=13,SNR=3.3						
NVAR	Mina Array Bea	4.48	347	Pn	Pn	20 54 34.6	+1.2
NVAR				Pg	Pg	20 54 48.8	-4.2
NVAR				Lg		20 55 50.9	
SAO	San Andreas Ge	4.52	308	*e*P	Pn	20 54 33.1	-0.9
ARUT	Antelope Range	4.71	37	*e*P	Pn	20 54 37.1	+0.4
CMB	Columbia Colle	4.82	326	*e*P	Pn	20 54 38.7	+0.5
WUAZ	Wupatki	4.86	71	*e*Pn	Pn	20 54 39.3	+0.5
TUC	Tucson	5.50	107	*e*P	Pn	20 54 45.2	-2.6
SAC	San Andreas	5.63	310	*e*P	Pn	20 54 48.2	-1.4
WCN	Washoe City	5.68	338	P	Pn	20 54 51.8	+1.5
MVU	Marysvale	5.88	40	*e*Pn	Pn	20 54 54.2	+1.0
MSU	Marysvale	5.91	40	*e*P	Pn	20 54 53.8	+0.2
PAHR	Pah Rah Range	5.95	342	*e*Pn	Pn	20 54 53.6	-0.6
NSHM	Saint Helena R	6.34	316	*e*Pn	Pn	20 54 58.2	-1.5
BMN	Battle Mountai	6.36	359	*e*P	Pn	20 54 59.8	-0.2
BEKR	Beckwourth	6.39	336	*e*Pn	Pn	20 55 00.2	-0.2
ELK	Elko	6.82	11	Pn	Pn	20 55 07.5	+1.0
	24nm,0.3s,baz=202,slow=11,SNR=262						
ELK				Lg		20 56 60.0	
	21nm,0.3s,baz=302,slow=18,SNR=5.2						
ELK	Elko	6.82	11	*e*Pn	Pn	20 55 07.0	+0.5
HOPS	Hopland	6.93	317	*e*Pn	Pn	20 55 06.3	-1.8
TMUT	Trail Mountain	7.00	40	*e*Pn	Pn	20 55 09.7	+0.7
NLU	North Lily Min	7.08	32	Pn	Pn	20 55 11.8	+1.7
SRU	San Rafael	7.25	44	P	Pn	20 55 12.2	-0.3
MPU	Maple Canyon	7.33	34	*e*Pn	Pn	20 55 13.1	-0.5
BGU	Big Grassy Mou	7.54	24	*e*Pn	Pn	20 55 16.5	-0.1
NOQ	North Oquirrh	7.64	29	Pn	Pn	20 55 17.4	-0.6
PV10	Paradox Valley	7.74	54	*e*Pn	Pn	20 55 19.9	+0.5
DAU	Daniels Canyon	7.82	34	*e*P	Pn	20 55 21.8	+1.3
CTU	Camp Tracy	7.83	31	Pn	Pn	20 55 20.4	-0.1
WDC	Whiskeytown Da	7.86	327	*e*P	Pn	20 55 18.6	-2.4
JLU	Jordanelle	7.88	32	*e*Pn	Pn	20 55 21.6	+0.2
PV01	Paradox Valley	7.94	57	*e*Pn	Pn	20 55 23.4	+1.1
SPUT	South Promonto	8.09	25	*e*Pn	P	20 55 23.2	-1.0
LAZ	Ladron	8.18	85	*e*Pn	P	20 55 25.3	-0.2
MOD	Modoc	8.25	343	Pn	P	20 55 26.8	+0.3
LENM	Lemitar	8.32	86	Pn	P	20 55 27.4	-0.1
TCUT	Toone Canyon	8.33	31	Pn	P	20 55 27.9	+0.4
HVU	Hansel Valley	8.40	22	*e*P	P	20 55 28.0	-0.5
WVOR	Wild Horse Val	8.46	352	*e*P	P	20 55 28.9	-0.4
LPM	Los Pinos Moun	8.60	85	Pn	P	20 55 36.0	+4.7
BNM	Barren Site	8.61	87	*e*Pn	P	20 55 30.2	-1.3
RW3	Ridgway	8.62	58	*e*P	P	20 55 31.0	-0.5
HWUT	Hardware Ranch	8.67	28	Pn	P	20 55 32.1	-0.3
ANMO	Albuquerque	8.75	81	*e*P	P	20 55 32.9	-0.5
ANMO	Albuquerque	8.75	81	Pn	P	20 55 33.6	+0.2
	baz=268,slow=12,SNR=10.0						
ANMO				Lg		20 58 00.2	
	baz=174,slow=22,SNR=7.1						
ANMO				LR	LR	20 59 24.6	
	comp=Z,1µm,20.0s,slow=41						
YBH	Yreka Blue Hor	8.88	331	Pn	P	20 55 38.0	+2.7
	0.3nm,0.3s,baz=139,slow=6.0,SNR=18						
YBH				Lg		20 58 08.4	
	0.5nm,0.3s,baz=84,slow=21,SNR=5.3						
YBH				LR	LR	20 59 28.4	
	comp=Z,964nm,18.9s,baz=340,slow=40						
HLID	Hailey	9.70	11	*e*Pn	P	20 55 46.6	+0.1
HUMO	Hull Mountain	9.73	333	*e*Pn	P	20 55 45.0	-1.9

AHID	Auburn Hatcher	9.85	26	Pn	P	20 55 49.5	+1.0
SDCO	Great Sand Dun	10.03	65	*e*Pn	P	20 55 50.7	-0.3
MNTX	Cornudas Mount	10.05	100	*e*Pn	P	20 55 49.4	-2.0
RRI2	Red Ridge	10.28	24	*e*Pn	P	20 55 54.6	+0.2
REDW	Red Top Meadow	10.45	26	*e*Pn	P	20 55 54.8	-2.0
PDAR	Pinedale Array	10.47	32	Pn	P	20 55 59.4	+2.3
	0.2nm,0.3s,baz=230,slow=12,SNR=64						
PDAR				Lg		20 59 03.6	
	0.3nm,0.3s,baz=225,slow=32,SNR=6.0						
TPAW	Teton Pass	10.53	25	*e*Pn	P	20 55 59.2	+1.3
SNOW	Snow King Moun	10.57	26	*e*Pn	P	20 55 58.2	-0.3
HBO	Huckleberry Mo	10.61	339	P	P	20 56 05.0	+6.1
WUWY	Wally Ulrich	10.65	25	*e*Pn	P	20 55 57.7	-1.8
WIFE	Three Sisters-	10.66	341	P	P	20 56 04.9	+5.3
LOHW	Long Hollow	10.76	26	Pn	P	20 56 00.4	-0.7
GDL2	Guadalupe Moun	10.76	96	*e*Pn	P	20 56 01.1	0.0
ISCO	Idaho Springs	10.76	55	*e*P	P	20 56 00.9	-0.2
BMO	Blue Mountains	10.78	359	*e*Pn	P	20 55 59.9	-1.4
VIPM	Ingram Point	10.80	346	P	P	20 56 06.9	+5.3
MOOW	Moose Ponds	10.83	25	Pn	P	20 55 60.0	-2.0
RWWY	Rawlins	10.85	43	Pn	P	20 56 01.2	-1.1
IMW	Indian Meadow	10.89	24	*e*Pn	P	20 56 03.0	+0.1
CPRX	Cap Rock	11.01	92	*e*Pn	P	20 56 02.6	-2.0
BROR	Big Rock Looko	11.03	339	P	P	20 56 09.4	+4.7
CLNB	Carlsbad	11.15	96	*e*Pn	P	20 56 05.9	-0.5
MCMT	McKenzie Canyo	11.22	15	Pn	P	20 56 06.8	-0.5
CROR	Criterion Ridg	11.33	345	P	P	20 56 13.8	+4.9
YFT	Old Faithful	11.42	23	Pn	P	20 56 11.0	+0.9
QLMT	Earthquake Lak	11.58	20	Pn	P	20 56 12.9	+0.6
PHWY	Pilot Hill	11.65	48	*e*Pn	P	20 56 13.2	0.0
YNR	Norris Junctio	11.71	23	*e*Pn	P	20 56 13.2	-0.7
VFP	Flag Point	11.75	344	P	P	20 56 19.4	+4.8
LNOR	Lincton Mounta	11.84	356	P	P	20 56 20.8	+5.1
BOZ	Bozeman (W)	12.28	18	P	P	20 56 21.2	-0.5
TXAR	Lajitas Array	12.29	109	Pn	P	20 56 23.8	+1.8
	0.7nm,0.3s,baz=293,slow=14,SNR=6.5						
TXAR				Lg		20 59 54.1	
	0.1nm,0.3s,baz=281,slow=27,SNR=6.1						
TXAR				LR	LR	21 01 51.0	
	comp=Z,2µm,19.5s,baz=50,slow=41						
RSW	Rattlesnake Hi	12.48	352	P	P	20 56 29.6	+5.3
AMTX	Amarillo	12.68	82	Pn	P	20 56 27.6	+0.6
MSO	Missoula	12.96	9	*e*Pn	P	20 56 30.1	-0.7
GCMT	Greycliff	12.99	23	*e*Pn	P	20 56 29.1	-2.1
CHMT	Chamberlain Mo	13.15	11	Pn	P	20 56 34.8	+1.5
HRY	Holter Researc	13.23	16	*e*Pn	P	20 56 33.8	-0.6
NEW	Newport	14.19	360	*e*P	P	20 56 49.1	+2.2
NEW				pmax	pmax		
	comp=Z,55nm,1.3s						
NEW	Newport	14.19	360	Pn	P	20 56 49.6	+2.7
	comp=Z,0.2nm,0.3s,baz=168,slow=14,SNR=28						
NEW				Lg		21 00 55.0	
	comp=Z,0.3nm,0.3s,baz=14,slow=3.2,SNR=3.6						
NEW				LR	LR	21 02 36.5	
	comp=Z,2µm,18.1s,baz=189,slow=39						
NEW	Newport	14.19	360	*e*Pn	P	20 56 49.1	+2.1
	comp=Z,55nm,1.3s						
RSSD	Black Hills	14.21	41	*e*P	P	20 56 46.9	-0.3
RSSD				pmax	pmax		
	comp=Z,18nm,1.0s						
RSSD	Black Hills	14.21	41	*e*Pn	P	20 56 46.9	-0.3
	comp=Z,18nm,1.0s						
CBKS	Cedar Bluff	14.68	66	P	P	20 56 51.7	-1.8
CBKS				pmax	pmax		
	comp=Z,36nm,1.1s						
CBKS	Cedar Bluff	14.68	66	Pn	P	20 56 51.6	-1.8
	comp=Z,36nm,1.1s						
OCWA	Octopus Mounta	14.70	341	*e*Pn	P	20 56 55.1	+1.5
	comp=Z,293nm,1.8s						
LAO	LASA Array	15.03	30	*e*Pn	P	20 56 58.4	+0.5
	comp=Z,22nm,0.7s						
WMOK	Wichita Mounta	15.06	82	*e*P	P	20 56 58.7	+0.2
WMOK				pmax	pmax		
	comp=Z,229nm,0.7s						
WMOK	Wichita Mounta	15.06	82	*e*Pn	P	20 56 58.7	+0.2
	comp=Z,229nm,0.7s						
PGC	Sidney	15.35	344	*e*Pn	P	20 57 01.9	-0.2
	comp=Z,110nm,1.2s						
KSU1	Kansas State U	17.13	67	*e*Pn	P	20 57 26.1	+1.2
DGMT	Dagmar	17.28	30	*e*Pn	P	20 57 27.9	+1.1
	comp=Z,80nm,1.3s						
NATX	Nacogdoches	18.90	91	Pn	P	20 57 48.5	+1.6
EDM	Edmonton	19.33	7	*e*P	P	20 57 49.6	-2.3
BBB	Bella Bella	19.80	340	P	P	20 57 57.5	+0.2
	comp=Z,0.3nm,0.3s,baz=148,slow=12,SNR=5.1						
BBB				LR	LR	21 05 38.8	
	comp=Z,983nm,20.6s,baz=161,slow=37						
BBB	Bella Bella	19.80	340	P	P	20 57 57.5	+0.2
BBB				LR	LR	21 05 38.8	
CCM	Cathedral Cave	21.18	72	P	P	20 58 13.1	+1.4
CCM				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.4						
CCM	Cathedral Cave	21.18	72	P	P	20 58 13.1	+1.4
	comp=Z,26nm,1.3s,mb4.4						
FVM	French Village	21.82	72	*e*P	P	20 58 16.7	-1.5
FVM				pmax	pmax		
	comp=Z,36nm,1.1s,mb4.7						
FVM	French Village	21.82	72	*e*P	P	20 58 16.7	-1.5
	comp=Z,36nm,1.1s,mb4.7						
SLM	Saint Louis	22.01	70	P	P	20 58 22.2	+2.2
SLM				pmax	pmax		
	comp=Z,158nm,1.3s,mb5.3						
SLM	Saint Louis	22.01	70	P	P	20 58 22.2	+2.2
	comp=Z,158nm,1.3s,mb5.3						
ULM	Lac du Bonnet	22.40	37	P	P	20 58 24.1	+0.3
	comp=Z,18nm,0.9s,mb4.5,baz=235,slow=11,SNR=13						
ULM				LR	LR	21 07 36.6	
	comp=Z,2µm,18.2s,MS4.5,baz=33,slow=38						
ULM	Lac du Bonnet	22.40	37	*e*P	P	20 58 23.1	-0.7
	comp=Z,48nm,1.1s,mb4.8						
JFWS	Jewell Farm	22.66	59	*e*P	P	20 58 25.3	-1.1
OXF	Oxford	22.78	81	*e*P	P	20 58 26.9	-0.9
OXF				pmax	pmax		
	comp=Z,55nm,1.1s,mb4.9						
OXF	Oxford	22.78	81	*e*P	P	20 58 26.9	-0.8
	comp=Z,55nm,1.1s,mb4.9						
EYMN	Ely	23.59	46	*e*P	P	20 58 35.2	-0.3
	comp=Z,14nm,1.1s,mb4.3						
LRAL	Lakeview Retre	24.99	84	*e*P	P	20 58 48.3	-0.9
	comp=Z,7.8nm,0.9s,mb4.2						
DLBC	Dease Lake	25.90	344	P	P	20 58 58.6	+1.2
	comp=Z,6.0nm,0.8s,mb4.2,baz=164,slow=8.4,SNR=14						
DLBC				PP	PP	20 59 31.1	-6.9
	comp=Z,3.5nm,0.7s,baz=158,slow=7.5,SNR=3.4						
DLBC				LR	LR	21 09 38.5	
	comp=Z,1µm,21.0s,MS4.5,baz=158,slow=37						
DLBC	Dease Lake	25.90	344	*e*P	P	20 58 57.8	+0.4
CPCT	Cooper Cave	26.66	78	P	P	20 59 05.7	+0.9
YKA	Yellowknife Ar	28.49	2	P	P	20 59 20.8	-0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA				MLR	MLR		
	comp=Z,1µm,18.1s						
YKA	Yellowknife Ar	28.49	2	P	P	20 59 20.8	-0.3
	comp=Z,1.3nm,0.6s,mb3.8,baz=180,slow=8.6,SNR=3.7						
YKA				LR	LR	21 11 43.3	
	comp=Z,1µm,18.1s,MS4.5,baz=180,slow=38						
YKA	Yellowknife Ar	28.49	2	P	P	20 59 20.8	-0.3
YKA				LR	LR	21 11 43.4	
EYAK	Cordova Ski Ar	32.40	334	P	P	20 59 54.8	-1.0
BINY	Binghamton	33.02	64	P	P	21 00 02.3	+1.0
	comp=Z,15nm,1.0s,mb4.9						
SLKM	Skilak Lake	34.09	331	*e*P	P	21 00 08.2	-2.3
SML	Sawmill	34.17	334	*e*P	P	21 00 09.8	-1.3
RSO	Redoubt South	35.11	330	*e*P	P	21 00 19.1	0.0
SPU	Mount Spurr	35.22	331	*e*P	P	21 00 20.3	+0.2
INK	Inuvik	35.57	350	*e*P	P	21 00 22.6	-0.4
INK				pmax	pmax		
	comp=Z,23nm,1.1s						
INK	Inuvik	35.57	350	P	P	21 00 23.9	+0.8
	comp=Z,5.7nm,0.8s,mb4.5,baz=159,slow=10,SNR=15						
INK	Inuvik	35.57	350	*e*P	P	21 00 22.6	-0.4
	comp=Z,23nm,1.1s,mb5.0						
ILAR	Eielson Array	35.69	339	P	P	21 00 24.6	+0.5
ILAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ILAR				MLR	MLR		
	comp=Z,255nm,20.6s						
ILAR	Eielson Array	35.69	339	P	P	21 00 24.6	+0.5
	comp=Z,6.0nm,0.7s,mb4.6,baz=153,slow=7.5,SNR=58						
ILAR				LR	LR	21 13 46.0	
	comp=Z,255nm,20.6s,MS4.0,baz=156,slow=34						
SVW2	Sparrevohn	36.62	329	*e*P	P	21 00 31.9	-0.1
JTS	JuntasAbangare	37.68	121	LR	LR	21 17 01.6	
	comp=Z,349nm,20.5s,MS4.2,baz=313,slow=38						
TTA	Tatalina	37.73	332	*e*P	P	21 00 42.0	+0.7
IMA	Indian Mountai	38.68	337	*e*P	P	21 00 49.4	+0.1
SCHQ	Schefferville	40.33	43	P	P	21 01 02.9	-0.2
	comp=Z,7.7nm,1.0s,mb4.4,baz=298,slow=10,SNR=4.2						
SCHQ				LR	LR	21 18 27.0	
	comp=Z,303nm,18.6s,MS4.2,baz=86,slow=37						
RES	Resolute Bay	42.11	9	*e*P	P	21 01 16.6	-0.7
RES				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.5						
RES	Resolute Bay	42.11	9	*e*P	P	21 01 16.6	-0.7
	comp=Z,14nm,1.1s,mb4.5						
SJG	San Juan	47.88	96	*e*P	P	21 02 04.2	-0.1
SJG				pmax	pmax		
	comp=Z,13nm,0.5s						
SJG	San Juan	47.88	96	P	P	21 02 04.6	+0.3
	comp=Z,6.7nm,0.5s,mb4.9,baz=329,slow=12,SNR=5.4						
SJG				LR	LR	21 25 01.6	
	comp=Z,177nm,19.4s,MS4.0,baz=93,slow=40						
SJG	San Juan	47.88	96	*e*P	P	21 02 04.2	0.0
	comp=Z,13nm,0.5s,mb5.2						
SDV	Santo Domingo	49.34	109	P	P	21 02 15.6	0.0
	comp=Z,9.6nm,0.8s,mb4.9,baz=348,slow=4.7,SNR=8.3						
SDV	Santo Domingo	49.34	109	*e*P	P	21 02 14.9	-0.7
	comp=Z,13nm,0.9s,mb5.0						
OTAV	Otavalo	49.34	125	*e*P	P	21 02 16.9	+1.2
	comp=Z,13nm,1.3s,mb4.8						
SFJD	Kangerlussuaq	49.96	28	*i* P	P	21 02 19.7	0.0
SFJD				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
SFJD				MLR	MLR		
	comp=Z,370nm,16.0s,MS4.5						
SFJD	Kangerlussuaq	49.96	28	*i* P	P	21 02 19.7	0.0
	comp=Z,17nm,1.0s,mb5.0						
SFJD				*i* S	S	21 09 08.0	-21
SFJD				*i*		21 13 13.6	
	comp=Z,370nm,16.0s						
BILL	Bilibino	53.97	333	*e*P	P	21 02 49.2	-0.5
BILL				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
BILL	Bilibino	53.97	333	*e*P	P	21 02 49.2	-0.5
	comp=Z,12nm,1.3s,mb4.7						
SUMG	Summit	54.46	21	*e*P	P	21 02 52.5	-0.8
	comp=Z,8.1nm,0.9s,mb4.7						
PPT	Papeete	59.99	216	*e*S	S	21 12 00.2	+16
	comp=Z,96nm,26.2s						
PPT				*e*LQ		21 18 31.4	
	comp=Z,310nm,24.8s						
PPT				*e*LR	LR	21 21 07.8	
	comp=Z,285nm,21.8s						
PPT	Papeete	59.99	216	LR	LR	21 23 13.0	
	comp=Z,341nm,18.8s,MS4.5,baz=140,slow=30						
PET	Petropavlovsk	60.41	316	*e*P	P	21 03 42.7	+7.0
PET				pmax	pmax		
	comp=Z,100nm,13.4s						
TBI	Tubuai	64.90	213	*e*S	S	21 12 49.3	+3.2
	comp=Z,358nm,36.8s						
TBI				*e*LQ		21 20 15.3	
	comp=Z,288nm,35.8s						
TBI				*e*LR	LR	21 23 24.9	
	comp=Z,175nm,23.5s						
TIXI	Tiksi	65.08	341	*d i*P	P	21 04 05.8	-0.5
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
TIXI				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.3						
SAML	Samuel	66.55	120	*e*P	P	21 04 14.4	-2.2
	comp=Z,6.8nm,1.2s,mb4.5						
LPAZ	La Paz	68.35	129	LR	LR	21 31 44.1	
	comp=Z,123nm,20.6s,MS4.1,baz=84,slow=34						
YSS	Yuzh-Sakhalins	72.24	315	*i* P	P	21 04 52.8	+1.7
YSS				MLR	MLR		
	comp=Z,100nm,22.0s,MS4.0						
ARCES	ARCESS Array B	73.13	13	LR	LR	21 38 50.3	
	comp=Z,268nm,18.7s,MS4.5,baz=71,slow=37						
APA	Apatity	76.25	11⇑	*e*P	P	21 05 16.8	+3.0
APA				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.9						
NB2	NORSAR Subarra	76.29	23	P	P	21 05 14.3	+0.1
	comp=Z,0.9nm,0.8s,mb3.8,baz=318,slow=5.8						
NOA	NORSAR Array B	76.29	23	P	P	21 05 13.7	-0.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,155nm,18.5s						
NOA	NORSAR Array B	76.29	23	P	P	21 05 13.7	-0.5
	comp=Z,1.1nm,0.8s,mb3.8,baz=319,slow=5.8,SNR=5.4						
NOA				LR	LR	21 39 42.8	
	comp=Z,155nm,18.5s,MS4.3,baz=300,slow=36						
ROSF	Rostrenen	78.91	38	*e*P	P	21 05 29.1	+0.2
	comp=Z,73nm,1.5s,mb5.1						
ROSF	Rostrenen	78.91	38	*e*P	P	21 05 29.1	+0.2
ROSF				pmax	pmax		
	comp=Z,37nm,1.5s,mb5.1						
FLN	La Foliniere	80.06	37	*e*P	P	21 05 35.4	+0.3
FLN				*e*R			
	comp=Z,259nm,19.0s						
GRR	Gorron	80.11	37	*e*P	P	21 05 36.2	+0.8
FINES	FINESS Array B	80.21	17	P	P	21 05 35.5	-0.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES				MLR	MLR		
	comp=Z,141nm,18.2s						
FINES	FINESS Array B	80.21	17	P	P	21 05 35.5	-0.2
	comp=Z,1.6nm,0.9s,mb4.0,baz=27,slow=4.3,SNR=7.1						
FINES				LR	LR	21 42 32.4	
	comp=Z,141nm,18.2s,MS4.3,baz=120,slow=37						
MJAR	Matsushiro Arr	80.80	308	LR	LR	21 35 00.2	
	comp=Z,123nm,21.5s,MS4.2,baz=85,slow=31						
MDJ	Mudanjiang	81.10	318	P	P	21 05 40.1	-0.6
MDJ				AP	pP	21 05 44.6	+1.7
MDJ				S	S	21 15 49.0	-0.3
MDJ				AMB	AMB		
	comp=Z,70nm,5.7s						
MDJ				LR	LR		
	comp=N,100nm,19.7s,MS4.3						
MDJ				LR	LR		
	comp=E,60nm,16.9s,MS4.3						
MDJ				LR	LR		
	comp=Z,190nm,18.6s,MS4.5						
BAIF	Baives	81.43	34	*e*P	P	21 05 42.4	+0.1
MFF	Saint Martin d	81.65	38	*e*P	P	21 05 44.1	+0.6
	comp=Z,30nm,1.4s,mb4.7						
MFF	Saint Martin d	81.65	38	*e*P	P	21 05 44.1	+0.6
MFF				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
BDFB	Brasilia	82.10	115	LR	LR	21 44 59.6	
	comp=Z,118nm,18.2s,MS4.3,baz=298,slow=38						
CPUP	Villa Florida	82.52	129	LR	LR	21 41 06.7	
	comp=Z,82nm,18.2s,MS4.1,baz=147,slow=35						
MEZF	Maizieres J'vi	82.92	35	*e*P	P	21 05 49.8	-0.3
TCF	Toulx Ste Croi	83.07	38	*e*P	P	21 05 50.7	-0.2
SSF	Saint Saulge	83.18	36	*e*P	P	21 05 51.7	+0.2
SSF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
SSF	Saint Saulge	83.18	36	*e*P	P	21 05 51.7	+0.2
	comp=Z,5.2nm,1.1s,mb4.5						
BGF	Bois d'Agland	83.20	37	*e*P	P	21 05 51.3	-0.3
LOR	Lormes	83.21	36	*e*P	P	21 05 51.6	0.0
	comp=Z,12nm,0.9s,mb4.6						
LOR				*e*R			
	comp=Z,209nm,17.2s						
LOR	Lormes	83.21	36	*e*P	P	21 05 51.6	0.0
LOR				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
LOR				MLR	MLR		
	comp=Z,210nm,17.3s,MS4.6						
LFF	La Frestale	83.23	39	*e*P	P	21 05 51.8	+0.1
AVF	Avril sur Loir	83.30	37	*e*P	P	21 05 53.4	+1.4
SJPF	Ste Jean	83.38	42	*e*P	P	21 05 52.1	-0.5
	comp=Z,18nm,1.2s,mb4.7						
SJPF	Ste Jean	83.38	42	*e*P	P	21 05 52.1	-0.5
SJPF				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
SMF	Signal de Mont	83.64	37	*e*P	P	21 05 53.4	-0.4
	comp=Z,15nm,1.0s,mb4.8						
SMF	Signal de Mont	83.64	37	*e*P	P	21 05 53.4	-0.4
SMF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
HAU	Haudompre	83.88	34	*e*P	P	21 05 54.6	-0.4
HAU				*e*R			
	comp=Z,454nm,18.8s						
CN2	Changchun	83.89	320	*e*P	P	21 05 55.0	-0.1
ETSF	Etsaut	83.89	41	*e*P	P	21 05 55.5	+0.4
CAF	Calviac	83.93	39	*e*P	P	21 05 55.0	-0.3
	comp=Z,21nm,1.2s,mb4.8						
CAF	Calviac	83.93	39	*e*P	P	21 05 55.0	-0.3
CAF				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.9						
CDF	Champ du Feu	84.02	34	*e*P	P	21 05 54.5	-1.1
HINF	Hinteralfeld	84.25	34	*e*P	P	21 05 56.4	-0.4
	comp=Z,9.5nm,0.9s,mb4.6						
HINF	Hinteralfeld	84.25	34	*e*P	P	21 05 56.4	-0.4
HINF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
MOX	Moxa	84.26	30	*e*P	P	21 05 57.1	+0.3
MOX				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.9						
MOX	Moxa	84.26	30	*i* P	P	21 05 57.1	+0.3
MOX				L		21 45 19.0	
EPF	Esparros	84.29	41	*e*P	P	21 05 57.3	+0.1
CLL	Collm	84.32	29	*e*P	P	21 05 58.0	+0.9
CLL				*e**SP	sP	21 06 02.0	+2.0
CLL				*e*S	S	21 16 24.0	+2.3
CLL	Collm	84.32	29	P	P	21 05 58.0	+0.9
CLL				*e**SP	sP	21 06 02.0	+2.0
CLL				*e*S	S	21 16 24.0	+2.3
CABF	La Chapelle	84.76	35	*e*P	P	21 05 59.5	+0.1
	comp=Z,10.0nm,0.9s,mb4.6						
CABF	La Chapelle	84.76	35	*e*P	P	21 05 59.5	+0.1
CABF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
BRG	Berggiesshubel	85.03	29	*i* P	P	21 06 01.7	+1.1
BRG				*e*		21 06 06.6	
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
BRG				MLR	MLR		
	comp=Z,320nm,18.1s,MS4.8						
BRG	Berggiesshubel	85.03	29	*i* P	P	21 06 01.7	+1.0
	comp=Z,2.8nm,0.7s,mb4.5						
BRG				*e*		21 06 06.6	
BRG				S	S	21 16 41.0	+12
BRG				LR	LR		
	comp=Z,320nm,18.1s,MS4.8						
MTLF	Montolieu	85.09	40	*e*P	P	21 06 01.0	-0.1
	comp=Z,27nm,1.4s,mb4.9						
MTLF	Montolieu	85.09	40	*e*P	P	21 06 01.0	-0.1
MTLF				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.9						
VIVF	Saint-Julien-l	85.31	37	*e*P	P	21 06 02.0	-0.2
LASF	Ste Croix	85.44	38	*e*P	P	21 06 02.9	0.0
PLCA	Paso Flores	85.86	146	P	P	21 06 06.0	+1.0
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PLCA				MLR	MLR		
	comp=Z,153nm,19.1s						
PLCA	Paso Flores	85.86	146	P	P	21 06 06.0	+1.0
	comp=Z,1.7nm,0.9s,mb4.3,baz=331,slow=4.8,SNR=2.8						
PLCA				LR	LR	21 40 05.2	
	comp=Z,153nm,19.1s,MS4.4,baz=86,slow=33						
PLCA	Paso Flores	85.86	146	P	P	21 06 06.0	+1.0
PLCA				LR	LR	21 40 05.2	
LPL	La Plagne	85.86	36	*e*P	P	21 06 04.8	-0.1
	comp=Z,5.6nm,0.9s,mb4.5						
LPL	La Plagne	85.86	36	*e*P	P	21 06 04.8	-0.1
LPL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5						
ORIF	Oris-en-Rattie	85.87	37	*e*P	P	21 06 04.9	-0.1
	comp=Z,16nm,1.1s,mb4.9						
ORIF				*e*R			
	comp=Z,288nm,20.5s						
LPG	La Plagne	85.88	36	*e*P	P	21 06 04.5	-0.5
SMRF	Simiane la Rot	86.39	38	*e*P	P	21 06 07.2	-0.4
	comp=Z,38nm,1.4s,mb5.1						
MBDF	Montbardon	86.45	36	*e*P	P	21 06 07.5	-0.3
	comp=Z,12nm,1.1s,mb4.7						
MBDF	Montbardon	86.45	36	*e*P	P	21 06 07.5	-0.3
MBDF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.7						
GERES	GERESS Array B	86.51	30	P	P	21 06 08.4	+0.4
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES				MLR	MLR		
	comp=Z,401nm,19.4s						
GERES	GERESS Array B	86.51	30	P	P	21 06 08.4	+0.4
	comp=Z,0.5nm,0.7s,mb3.9,baz=304,slow=4.8,SNR=5.4						
GERES				LR	LR	21 44 42.6	
	comp=Z,401nm,19.4s,MS4.8,baz=320,slow=36						
LMR	La Mourre	87.32	38	*e*P	P	21 06 11.4	-0.7
	comp=Z,20nm,1.2s,mb4.9						
LMR	La Mourre	87.32	38	*e*P	P	21 06 11.4	-0.7
LMR				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.9						
SBF	Sospel	87.40	37	*e*P	P	21 06 12.0	-0.5
TLY	Talaya	87.47	336	*i* P	P	21 06 14.0	+1.4
TLY				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.3						
TLY				MLR	MLR		
	comp=Z,400nm,24.0s,MS4.8						
PGF	Pioggiola	89.14	37	*e*P	P	21 06 19.7	-1.2
SONM	Songino Array	89.68	332	P	P	21 06 24.2	+1.0
	comp=Z,0.2nm,0.5s,mb3.8,baz=45,slow=2.0,SNR=2.8						
SONM				LR	LR	21 46 50.1	
	comp=Z,734nm,18.7s,MS5.1,baz=17,slow=36						
ARU	Arti	89.79	2	*i* P	P	21 06 23.6	+0.1
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.6						
ARU				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.3						
AKASG	Malin Array Be	90.49	21	P	P	21 06 26.7	-0.2
	comp=Z,0.2nm,0.3s,mb4.0,baz=320,slow=3.7,SNR=4.1						
SSE	Sheshan	95.10	313	P	P	21 06 48.0	-0.6
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,20nm,4.0s						
SSE	Sheshan	95.10	313	P	P	21 06 48.0	-0.6
	comp=Z,16nm,0.8s,mb5.5						
NJ2	Nanjing	95.81	315	*e*P	P	21 06 53.1	+1.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.5						
MKAR	Makanchi Array	97.66	347	LR	LR	21 52 13.7	
	comp=Z,154nm,20.7s,MS4.5,baz=179,slow=36						
WMQ	Urumqi	99.28	342	*e*P	P	21 07 08.8	+1.6
WMQ				AP	pP	21 07 12.8	+3.4
WMQ				XP	sP	21 07 14.8	+4.7
WMQ				PP	PP	21 11 14.1	+1.6
WMQ				PPP	PPP	21 13 23.1	+1.6
WMQ				S	S	21 18 36.9	+1.2
WMQ				AMB	AMB		
	comp=Z,20nm,5.2s						
WMQ				LR	LR		
	comp=N,220nm,24.0s,MS4.8						
WMQ				LR	LR		
	comp=E,220nm,22.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,200nm,24.0s,MS4.5						
LZH	Lanzhou	100.47	327	*e*P	P	21 07 13.5	+0.6
LZH				AP		21 07 18.0	
LZH				PP	PP	21 11 22.8	+0.6
LZH				AMB	AMB		
	comp=Z,20nm,1.5s						
LZH				AMB	AMB		
	comp=Z,60nm,5.7s						
LZH				LR	LR		
	comp=N,430nm,15.2s						
LZH				LR	LR		
	comp=Z,490nm,17.5s,MS5.1						
LZH	Lanzhou	100.47	327	*e*P	P	21 07 13.5	+0.6
LZH						21 11 22.7	
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
LZH				MLR	MLR		
	comp=Z,500nm,17.5s,MS5.1						
LZH	Lanzhou	100.47	327	*e*P	P	21 07 13.5	+0.6
	comp=Z,21nm,1.5s						
LZH				pP		21 07 16.8	
LZH				sP		21 07 18.0	
LZH				PP	PP	21 11 22.7	+0.5
LZH				LR	LR		
	comp=Z,500nm,17.5s,MS5.1						
WRA	Warramunga Arr	116.03	263	PKP	PKPdf	21 12 08.2	-2.2
	comp=Z,0.3nm,0.5s,baz=56,slow=2.0,SNR=12						
VNA3	Neumayer Olymp	127.41	157		PKPdf	21 12 39.4	+8.4
VNA2	Neumayer--Watz	128.18	157		PKPdf	21 12 37.8	+5.2
MAW	Mawson	146.41	180	PKP2	PKPab	21 13 05.3	-1.9
MAW				pmax	pmax		
	comp=Z,13nm,0.9s						
MAW	Mawson	146.41	180	PKPbc	PKPbc	21 13 05.3	+1.2
	comp=Z,13nm,0.9s,baz=235,slow=4.3,SNR=17						
BOSA	Boshof	147.44	91	PKP2	PKPab	21 13 09.1	-3.3
BOSA				pmax	pmax		

	comp=Z,2.0nm,0.8s						
BOSA	**Boshof**	**147.44**	**91**	PKPbc	PKPdf	21 13 09.1	+0.6
	comp=Z,2.2nm,0.8s,baz=234,slow=5.2,SNR=4.1						

NEIC 16 20:54:19.9, 34.05N×117.02W, h17^{km}, ML3.5(PAS)**, After PAS., Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFO	**Pinyon Flat Ob**	**0.65**	**133**	P	Pb	20 54 31.2	-1.2
MWC	**Mount Wilson**	**0.88**	**282**	P	Pb	20 54 34.4	-1.9
BAR	**Barrett**	**1.40**	**168**	P	Pn	20 54 42.9	-2.1
LDFC	**Landfair**	**1.88**	**57**	P	Pn	20 54 48.6	-3.2

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*NIED **16** 20:56:00, 36.10N×139.90E, h47^{km}, Mw3.5 Best double couple: M$_0$1.98×10^{14} NP1:ϕ_s169°, δ89°, λ-78°. NP2: ϕ_s263°, δ12°, λ-175°.*

JMA 16 20:56:42.3±0.1**, 36.09N×139.89E, h47**^{km}±1^{km}**, M3.6, 6D Broadband fault plane solution: P waves. NP1:**ϕ_s235°, δ11°, λ153°. **NP2:**ϕ_s352°, δ85°, λ80°. **Principal axes:** T Plg49°, Azm251°; N Plg10°, Azm353°; P Plg39°, Azm91°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.28**	**61**	P	P	20 56 51.1	+0.1
JYT				S	S	20 56 57.1	0.0
JAG	**Ashikaga**	**0.49**	**314**	⇓P	P	20 56 53.5	+0.3
JAG				S	S	20 57 01.3	+0.3
JHU	**Hanno**	**0.55**	**244**	⇓P	P	20 56 53.7	-0.3
JRY	**Ryogami san**	**0.80**	**265**	⇓P	P	20 56 57.3	-0.1
JRY				S	S	20 57 08.1	-0.4
JKT	**Katashina**	**0.85**	**323**	⇓P	P	20 56 58.0	0.0
JOD2	**Odawara 2**	**1.05**	**219**	P	P	20 57 01.1	+0.2
JYN	**Shimob**	**1.24**	**242**	P	P	20 57 04.0	+0.4
JFY	**Yanaizu**	**1.32**	**354**	P	P	20 57 05.0	+0.2
JHK	**Hiroka**	**1.35**	**329**	⇓P	P	20 57 05.2	0.0
JIM2	**Oshima 3**	**1.42**	**195**	⇓P	P	20 57 05.3	-0.9
MAT	**Matsushiro**	**1.43**	**289**	P	P	20 57 05.4	-1.0
MAT				*e*S	S	20 57 23.3	-0.9
MAT	**Matsushiro**	**1.43**	**289**	P	P	20 57 06.5	+0.1

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*IDC **16** 21:15:39.9±0.9, 1.07N×97.08E, mb4.2/13, mb1 4.4/14, mb1mx4.2/20, mbtmp4.2/14, MS3.8/2, Ms1 3.9/2, ms1mx3.5/12 Error ellipse: s-maj=34.4km s-min=15.9km az=51.0*

*BJI **16** 21:15:42.2, 0.97N×97.25E, h31^{km}, mB5.0, mb4.9, Ms4.6, Msz4.3*

*MOS **16** 21:15:42.9±1.2, 1.09N×97.08E, h33^{km}, mb4.9/22, MS4.1/8, Error ellipse: s-maj=17.6km s-min=7.7km az=100.5*

*NEIC **16** 21:15:44.3±0.5, 1.10N×97.13E, mb4.8/20, Error ellipse: s-maj=12.1km s-min=6.8km az=45.0*

ISC 16 21:15:42.6±0.5**, 1.07N**±0.06×**97.13E**±0.05**, h28**^{km}**, h28**^{km}±2.2^{km}**:pP-P, n110,** σ1**§11**/118**, mb4.6**/55**, MS4.2**/17**, 7C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.23**	**48**	P	**Pn**	**21 17 01.2**	**+0.2**
KULM	**Kulim**	**5.47**	**40**	*e*Pn	**Pn**	**21 17 03.8**	**-0.6**
KULM				*e*		21 17 09.2	
KGM	**Kluang**	**6.26**	**81**	P	**Pn**	**21 17 16.8**	**+1.2**
KSM	**Kuching**	**13.18**	**88**	*e*P	**P**	**21 18 52.5**	**+1.7**
KSM				*e*		21 19 01.5	
NST	**Nakhon Sawan**	**14.81**	**11**	P	**P**	**21 19 05.7**	**-6.5**
KKTK	**Khon Kaen**	**16.18**	**20**	P	**P**	**21 19 32.0**	**+2.2**
	309nm,1.0s						
CM31	**Chiang Mai Arr**	**17.37**	**6**	P	**P**	**21 19 43.4**	**-1.5**
	7.4nm,0.8s						
CM31				*e*		21 19 57.2	
CMAR	**Chiang Mai Arr**	**17.37**	**6**	Pn	**P**	**21 19 43.1**	**-1.7**
	baz=195,slow=12,SNR=7.8						
CMAR				LR	LR	21 26 21.5	
	comp=Z,333nm,20.5s,baz=190,slow=37						
NANT	**Nan**	**17.97**	**11**	⇓P	**P**	**21 19 51.0**	**-1.3**
	188nm,0.8s						
KKM	**Kota Kinabalu**	**19.68**	**75**	*e*P	**P**	**21 20 11.7**	**-0.9**
KKM	**Kota Kinabalu**	**19.68**	**75**	P	**P**	**21 20 13.4**	**+0.8**
TSM	**Tawau**	**20.97**	**81**	P	**P**	**21 20 26.7**	**+0.6**
QIZ	**Qiongzhong**	**21.77**	**34**	*e*P	**P**	**21 20 33.0**	**-1.2**
QIZ				S	**S**	**21 24 29.4**	**+1.0**
QIZ				XS		21 24 40.8	
QIZ				LR	LR		
	comp=N,440nm,14.1s,MS4.3						
QIZ				LR	LR		
	comp=E,660nm,14.5s,MS4.3						
QIZ				LR	LR		
	comp=Z,600nm,12.1s,MS4.2						
KMI	**Kunming**	**24.52**	**12**	P	**P**	**21 21 02.6**	**+1.4**
KMI				AP		21 21 09.0	
KMI				XP		21 21 11.6	
KMI				AMB	AMB		
	comp=Z,50nm,1.2s,mb4.9						
KMI				AMB	AMB		
	comp=Z,170nm,3.1s						
KMI				LR	LR		
	comp=N,1μm,15.6s,MS4.6						
KMI				LR	LR		
	comp=E,620nm,14.3s,MS4.6						
KMI				LR	LR		
	comp=Z,1μm,14.8s,MS4.5						
KMI	**Kunming**	**24.52**	**12**	P	**P**	**21 21 02.6**	**+1.4**
KMI				*SP		21 21 11.6	
KMI				PPP	PPP	21 21 34.9	-13
KMI						21 25 09.3	
KMI				SS	**S**	**21 25 23.5**	**+6.5**
KMI				pmax	pmax		
	comp=Z,56nm,1.2s,mb5.0						
KMI				MLR	MLR		
	comp=Z,1μm,14.8s,MS4.5						
KMI	**Kunming**	**24.52**	**12**	P	**P**	**21 21 02.6**	**+1.4**
	comp=Z,56nm,1.2s,mb5.0						
KMI				pP		21 21 09.0	
KMI				sP		21 21 11.6	
KMI				PP	PP	21 21 25.7	-12
KMI				PPP	PPP	21 21 34.9	-13
KMI				S	S	21 24 50.5	-27
KMI				sS		21 25 00.9	
KMI				PcP	PcP	21 25 09.3	+29
KMI				SS	**S**	**21 25 23.5**	**+6.5**
KMI				ScP		21 28 43.5	
KMI				PcS		21 28 46.2	
KMI				LR	LR		
	comp=Z,1μm,14.8s,MS4.5						
SHL	**Shillong**	**24.88**	**349**	*i* P	**P**	**21 21 05.0**	**+0.4**
SHL				*e*S	**S**	**21 25 32.0**	**+9.0**
GYA	**Guiyang**	**26.86**	**19**	P	**P**	**21 21 22.3**	**-0.7**
GYA				AP	pP	21 21 31.8	+0.5
GYA				XP	sP	21 21 35.4	+0.4
GYA				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.5						
GYA				AMB	AMB		
	comp=Z,360nm,6.9s						
GYA				LR	LR		
	comp=N,690nm,13.8s,MS4.4						
GYA				LR	LR		
	comp=E,360nm,12.9s,MS4.4						
GYA				LR	LR		
	comp=Z,1μm,13.2s,MS4.6						
PKI	**Pulchoki**	**28.65**	**338**	*e*P	**P**	**21 21 41.1**	**+1.9**
	comp=Z,73nm,1.5s,mb5.2						
PKI	**Pulchoki**	**28.65**	**338**	*e*P	**P**	**21 21 41.1**	**+1.9**
PKI				pmax	pmax		
	comp=Z,36nm,1.5s,mb4.9						
GUN	**Gumba**	**28.78**	**339**	*e*P	**P**	**21 21 41.2**	**+0.8**
	comp=Z,91nm,1.2s,mb5.4						
DMN	**Daman**	**28.80**	**337**	*e*P	**P**	**21 21 42.6**	**+2.1**
KKN	**Kakani**	**28.89**	**338**	*e*P	**P**	**21 21 42.1**	**+0.7**
	comp=Z,46nm,1.1s,mb5.1						
KKN	**Kakani**	**28.89**	**338**	*e*P	**P**	**21 21 42.1**	**+0.7**
KKN				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8						
LSA	**Lhasa**	**29.04**	**349**	*e*P	**P**	**21 21 44.3**	**+1.6**
LSA				XP	sP	21 21 57.3	+2.6
LSA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
LSA				AMB	AMB		
	comp=Z,60nm,4.0s						
LSA				LR	LR		
	comp=N,160nm,19.0s,MS3.9						
LSA				LR	LR		
	comp=E,250nm,18.0s,MS3.9						
LSA				LR	LR		
	comp=Z,270nm,18.0s,MS3.9						
LSA	**Lhasa**	**29.04**	**349**	*e*P	**P**	**21 21 43.2**	**+0.5**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
LSA	**Lhasa**	**29.04**	**349**	*e*P	**P**	**21 21 43.2**	**+0.5**
	comp=Z,6.1nm,0.8s,mb4.4						
GKN	**Gorkha**	**29.33**	**337**	*e*P	**P**	**21 21 45.4**	**0.0**
	comp=Z,36nm,1.0s,mb5.1						
KOLN	**Koldanda**	**29.55**	**335**	*e*P	**P**	**21 21 48.2**	**+0.9**
	comp=Z,72nm,1.4s,mb5.2						
ENH	**Enshi**	**31.33**	**21**	*e*P	**P**	**21 21 59.3**	**-3.7**
	comp=Z,33nm,0.9s,mb5.2						
ENH				*e*pP	pP	21 22 07.7	-3.6
FITZ	**Fitzroy Crossi**	**33.91**	**126**	*e*P	**P**	**21 22 25.1**	**-0.5**
	comp=Z,5.1nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**33.91**	**126**	P	**P**	**21 22 25.6**	**0.0**
	comp=Z,5.8nm,0.7s,mb4.6,baz=262,slow=1.4,SNR=8.3						
XAN	**Xi'an**	**34.61**	**17**	P	**P**	**21 22 30.0**	**-1.5**
XAN				S	**S**	**21 27 53.4**	**-4.6**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
XAN				LR	LR		
	comp=N,370nm,11.4s,MS4.5						
XAN				LR	LR		
	comp=E,390nm,16.0s,MS4.5						
XAN				LR	LR		
	comp=Z,590nm,16.0s,MS4.4						
LZH	**Lanzhou**	**35.40**	**9**	⇑P	**P**	**21 22 37.6**	**-0.6**
LZH				AP	pP	21 22 45.1	-1.5
LZH				XP	sP	21 22 48.3	-1.9
LZH				AMB	AMB		
	comp=Z,30nm,1.4s,mb5.0						
LZH	**Lanzhou**	**35.40**	**9**	⇑P	**P**	**21 22 37.6**	**-0.6**
LZH				*SP	sP	21 22 48.3	-1.9
LZH				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.0						
LZH	**Lanzhou**	**35.40**	**9**	⇑P	**P**	**21 22 37.6**	**-0.6**
	comp=Z,31nm,1.4s,mb5.0						
LZH				pP	pP	21 22 45.1	-1.5
LZH				sP	sP	21 22 48.3	-1.9
SSE	**Sheshan**	**37.56**	**35**	P	**P**	**21 22 56.1**	**-0.4**
SSE				AP	pP	21 23 04.9	0.0
SSE				XP	sP	21 23 08.8	+0.3
SSE				PP	PP	21 24 21.5	-3.7
SSE				S	**S**	**21 28 45.1**	**+1.6**
SSE				XS		21 28 59.8	
SSE				SCS	ScS	21 33 05.3	-0.3
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
SSE				AMB	AMB		
	comp=Z,50nm,3.7s						
SSE				LR	LR		
	comp=N,100nm,20.9s,MS3.8						
SSE				LR	LR		
	comp=E,110nm,20.9s,MS3.8						
SSE				LR	LR		
	comp=Z,160nm,16.5s,MS3.9						
SSE	**Sheshan**	**37.56**	**35**	P	**P**	**21 22 56.1**	**-0.4**
	comp=Z,26nm,0.8s,mb5.0						
SSE				pP	pP	21 23 04.9	0.0
SSE				sP	sP	21 23 08.7	+0.2
SSE				PP	PP	21 24 21.5	-3.7
SSE				S	**S**	**21 28 45.1**	**+1.6**
SSE				sS		21 28 59.8	
SSE				SS	SS	21 31 30.8	+13
SSE				ScS	ScS	21 33 05.3	-0.3
SSE				LR	LR		
	comp=Z,170nm,16.5s,MS3.9						
KAKA	**Kakadu**	**37.62**	**112**	*e*P	**P**	**21 22 55.7**	**-1.4**
	comp=Z,10nm,0.9s,mb4.5						
GTA	**Gaotai**	**38.24**	**3**	P	**P**	**21 23 01.8**	**-0.3**
GTA				AP	pP	21 23 13.1	+2.6
GTA				XP	sP	21 23 16.6	+2.5
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,80nm,9.9s						
GTA				LR	LR		
	comp=N,300nm,22.4s						
GTA				LR	LR		
	comp=E,300nm,16.0s						
GTA				LR	LR		
	comp=Z,350nm,20.5s,MS4.2						
HHC	**Hu-ho-hao-te**	**41.70**	**17**	*e*P	**P**	**21 23 33.0**	**+2.3**
HHC				AP	pP	21 23 38.9	-0.3
HHC				XP	sP	21 23 41.3	-1.4
HHC				PP	PP	21 25 05.9	-4.4
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
HHC				AMB	AMB		
	comp=Z,160nm,6.0s						
HHC				LR	LR		
	comp=N,340nm,15.0s,MS4.5						
HHC				LR	LR		
	comp=E,450nm,16.4s,MS4.5						
HHC				LR	LR		
	comp=Z,410nm,18.0s,MS4.3						
WRA	**Warramunga Arr**	**42.03**	**122**	P	**P**	**21 23 34.0**	**+0.4**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRA	**Warramunga Arr**	**42.03**	**122**	P	**P**	**21 23 34.0**	**+0.3**
	comp=Z,4.4nm,0.6s,mb4.2,baz=300,slow=9.1,SNR=42						
WRAB	**Tennant Creek**	**42.03**	**122**	*e*P	**P**	**21 23 34.2**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**42.03**	**122**	*e*P	**P**	**21 23 34.2**	**+0.5**
	comp=Z,11nm,0.8s,mb4.5						
WB2	**Warramunga Arr**	**42.04**	**122**	*e*P	**P**	**21 23 33.9**	**+0.2**
WMQ	**Urumqi**	**43.39**	**350**	P	**P**	**21 23 45.5**	**+1.0**
WMQ				AP	pP	21 23 52.8	-0.2
WMQ				XP	sP	21 23 56.3	-0.2
WMQ				PP	PP	21 25 28.5	+1.1
WMQ				PPP	PPP	21 26 03.8	+0.4
WMQ				*e*S	**S**	**21 30 11.0**	**+0.8**
WMQ				SS	SS	21 33 17.5	0.0
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,150nm,4.0s						
WMQ				LR	LR		
	comp=N,620nm,24.0s,MS4.6						
WMQ				LR	LR		
	comp=E,620nm,22.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,600nm,24.0s,MS4.4						
JNU	**Nakatsue**	**44.95**	**41**	P	**P**	**21 23 57.0**	**-0.2**
	comp=Z,8.5nm,0.9s,mb4.6,baz=148,slow=4.4,SNR=5.1						
ULHL	**Ulahol**	**45.09**	**338**	P	**P**	**21 23 59.3**	**+1.1**
	SNR=6.2						
UCH	**Uchtor**	**45.74**	**336**	P	**P**	**21 24 04.9**	**+1.6**
	SNR=9.2						
TKM2	**Tokmak 2**	**45.91**	**338**	P	**P**	**21 24 05.9**	**+1.2**
	SNR=5.4						
KS15	**Wonju Array Si**	**45.97**	**34**	*e*P	**P**	**21 24 05.1**	**-0.1**
AML	**Almayashu**	**45.99**	**336**	P	**P**	**21 24 07.1**	**+1.7**
	SNR=6.8						
AAK	**Ala-Archa**	**46.09**	**337**	*i* P	**P**	**21 24 04.9**	**-1.2**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
AAK				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.8						
EKS2	**Erkin-Say**	**46.40**	**336**	P	**P**	**21 24 10.1**	**+1.5**
	SNR=5.1						
USP	**Ospenovka**	**46.63**	**337**	P	**P**	**21 24 11.7**	**+1.4**
	SNR=12						
SONM	**Songino Array**	**47.27**	**8**	P	**P**	**21 24 15.7**	**+0.3**
	comp=Z,6.4nm,1.0s,mb4.5,baz=190,slow=8.4,SNR=33						
MKAR	**Makanchi Array**	**47.35**	**346**	P	**P**	**21 24 16.3**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**47.35**	**346**	P	**P**	**21 24 16.3**	**+0.2**
	comp=Z,4.2nm,0.8s,mb4.4,baz=158,slow=8.0,SNR=42						
MKAR	**Makanchi Array**	**47.35**	**346**	P	**P**	**21 24 16.3**	**+0.2**
ULN	**Ulaanbaatar**	**47.40**	**9**	*e*P	**P**	**21 24 16.5**	**+0.1**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ULN	**Ulaanbaatar**	**47.40**	**9**	*e*P	**P**	**21 24 16.4**	**0.0**
	comp=Z,5.4nm,0.9s,mb4.5						
KKAR	**Karatay Array**	**48.14**	**334**	*i* P	**P**	**21 24 22.1**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
ZAK	**Zakamensk**	**49.41**	**5**	*e*P	**P**	**21 24 31.9**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
CN2	**Changchun**	**49.45**	**27**	*e*P	**P**	**21 24 31.9**	**-0.5**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
CN2				LR	LR		
	comp=N,300nm,14.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,14.0s,MS4.6						
CN2				LR	LR		
	comp=Z,400nm,14.0s,MS4.6						
TLY	**Talaya**	**50.73**	**5**	*e*P	**P**	**21 24 41.8**	**-0.2**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
TLY				MLR	MLR		
	comp=Z,252nm,17.0s,MS4.3						
HIA	**Hailar**	**51.79**	**19**	*e*P	**P**	**21 24 49.6**	**-0.4**
HIA				pmax	pmax		
	comp=Z,16nm,0.9s						
HIA	**Hailar**	**51.79**	**19**	*e*P	**P**	**21 24 49.6**	**-0.4**
	comp=Z,16nm,0.9s,mb5.0						
MJAR	**Matsushiro Arr**	**51.84**	**42**	P	**P**	**21 24 49.3**	**-1.3**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**51.84**	**42**	P	**P**	**21 24 49.3**	**-1.3**
	comp=Z,1.6nm,0.8s,mb4.0,baz=213,slow=7.1,SNR=6.7						
CTA	**Charters Tower**	**52.51**	**116**	*e*P	**P**	**21 25 03.0**	**+7.1**
	comp=Z,7.8nm,1.0s,mb4.6						
CIT	**Chita**	**52.62**	**13**	*e*P	**P**	**21 24 55.4**	**-0.8**
CIT				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.0						
STKA	**Stephens Creek**	**53.32**	**132**	*e*P	**P**	**21 25 02.9**	**+1.2**
	comp=Z,4.5nm,0.8s,mb4.5						
STKA				*i*	pP	21 25 09.7	-0.7
STKA	**Stephens Creek**	**53.32**	**132**	P	**P**	**21 25 01.1**	**-0.6**
	comp=Z,6.2nm,0.9s,mb4.6,baz=321,slow=4.9,SNR=10						
STKA	**Stephens Creek**	**53.32**	**132**	*e*P	**P**	**21 25 03.0**	**+1.3**
STKA				*e*pP	pP	21 25 09.6	-0.8
NVS	**Novosibirsk**	**54.79**	**350**	*e*P	**P**	**21 25 10.6**	**-1.6**
NVS				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
NVS				pmax	pmax		
	comp=N,4.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.8s						
VOSK	**Vostochnaya**	**55.90**	**341**	P	**P**	**21 25 19.3**	**-1.0**
VOSK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
BVAR	**Borovoye Array**	**56.35**	**341**	P	**P**	**21 25 22.5**	**-1.0**
	comp=Z,4.7nm,0.9s,mb4.5,baz=143,slow=7.4,SNR=19						
KLR	**Kul'dur**	**56.40**	**27**	*e*P	**P**	**21 25 21.0**	**-2.9**
ZRNK	**Zerenda**	**56.75**	**340**	*e*P	**P**	**21 25 24.8**	**-1.6**
ZRNK				*e*		21 25 37.8	
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ZRNK	**Zerenda**	**56.75**	**340**	*e*P	**P**	**21 25 24.8**	**-1.5**
	comp=Z,3.2nm,0.8s,mb4.4						
ZRNK				*e*		21 25 37.8	
AB31	**Akbulak array**	**57.60**	**332**	*i* P	**P**	**21 25 31.3**	**-1.1**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
BOD	**Bodaibo**	**58.15**	**11**	*e*P	**P**	**21 25 29.9**	**-6.2**
BOD				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
YSS	**Yuzh-Sakhalins**	**60.50**	**34**	*i* P	**P**	**21 25 52.7**	**+0.2**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
YSS				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.0						
SVE	**Sverdlovsk**	**62.78**	**338**	*e*P	**P**	**21 26 07.0**	**-0.7**
SVE				pmax	pmax		
	comp=Z,20nm,1.5s,mb5.0						
ARU	**Arti**	**63.28**	**337**	⇑*i*P	**P**	**21 26 09.3**	**-1.7**
ARU				*e*		21 26 44.6	
ARU				*e*		21 28 26.6	
ARU				*e*PPP	PPP	21 29 55.5	-7.5
ARU				*e*S	**S**	**21 34 40.9**	**+1.5**
ARU				*e*SS	SS	21 38 49.5	+1.7
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.6						
ARU	**Arti**	**63.28**	**337**	*e*P	**P**	**21 26 09.4**	**-1.5**
	comp=Z,5.9nm,1.1s,mb4.6						
KIV	**Kislovodsk**	**64.36**	**319**	*e*P	**P**	**21 26 15.0**	**-3.3**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
KIV				MLR	MLR		
	comp=N,96nm,20.0s,MS4.1						
KIV				MLR	MLR		
	comp=Z,138nm,20.0s,MS4.1						
KIV				MLR	MLR		
	comp=E,30nm,15.0s,MS4.1						
YAK	**Yakutsk**	**65.57**	**16***c*	*i*P	**P**	**21 26 24.8**	**-1.0**
YAK				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.3						
YAK				MLR	MLR		
	comp=Z,200nm,13.0s,MS4.5						
YAK	**Yakutsk**	**65.57**	**16**	P	**P**	**21 26 24.6**	**-1.2**
	comp=Z,32nm,0.9s,mb5.3						
SOC	**Sochi**	**66.17**	**318**	*e*P	**P**	**21 26 26.6**	**-3.3**
SOC				pmax	pmax		
	comp=Z,55nm,1.9s,mb5.3						
SOC				pmax	pmax		
	comp=N,97nm,1.7s						
SOC				pmax	pmax		
	comp=E,46nm,1.2s						
ANN	**Anapa**	**68.15**	**319**	*e*P	**P**	**21 26 52.8**	**+10**
ANN				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.3						
BRTR	**Keskin Array B**	**69.15**	**312**	P	**P**	**21 26 47.3**	**-1.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**69.15**	**312**	P	**P**	**21 26 47.3**	**-1.4**
	comp=Z,0.7nm,0.8s,mb3.7,baz=141,slow=7.9,SNR=3.7						
OBN	**Obninsk**	**72.69**	**328**	⇓*e*P	**P**	**21 27 09.7**	**-0.1**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
TIXI	**Tiksi**	**73.33**	**10***c*	*i*P	**P**	**21 27 12.3**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.4						
FINES	**FINESS Array B**	**80.08**	**333**	P	**P**	**21 27 51.5**	**+0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**80.08**	**333**	P	**P**	**21 27 51.5**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.7,baz=135,slow=5.4,SNR=6.3						
KAF	**Kangasniemi**	**80.17**	**333**	*e*p	**P**	**21 27 51.1**	**-0.5**
	comp=Z,2.2nm,0.9s,mb4.1,baz=104,slow=5.1						
KAF	**Kangasniemi**	**80.17**	**333**	*e*P	**P**	**21 27 51.1**	**-0.5**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
ARCES	**ARCESS Array B**	**82.64**	**340**	P	**P**	**21 28 05.1**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARCES	**ARCESS Array B**	**82.64**	**340**	P	**P**	**21 28 05.1**	**+0.7**
	comp=Z,1.7nm,0.9s,mb4.0,baz=28,slow=18,SNR=3.5						
ARCES	**ARCESS Array B**	**82.64**	**340**	P	**P**	**21 28 05.1**	**+0.7**
GERES	**GERESS Array B**	**84.86**	**319**	P	**P**	**21 28 16.7**	**+0.6**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	**GERESS Array B**	**84.86**	**319**	P	**P**	**21 28 16.7**	**+0.6**
	comp=Z,0.9nm,0.9s,mb3.9,baz=104,slow=5.5,SNR=7.9						
NB2	**NORSAR Subarra**	**87.09**	**331**	P	**P**	**21 28 26.8**	**0.0**
	comp=Z,1.8nm,1.0s,mb4.3,baz=91,slow=4.8						
NOA	**NORSAR Array B**	**87.09**	**331**	P	**P**	**21 28 27.3**	**+0.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,40nm,19.9s						
NOA	**NORSAR Array B**	**87.09**	**331**	P	**P**	**21 28 27.3**	**+0.5**
	comp=Z,1.3nm,0.9s,mb4.2,baz=94,slow=4.8,SNR=3.8						
NOA				LR	LR	22 13 17.4	
	comp=Z,40nm,19.9s,MS3.8,baz=40,slow=40						
NVL	**N'lazarevskaya**	**89.44**	**199**	⇑*i*P	**P**	**21 28 49.3**	**+11**
NVL				*i* *PP	pP	21 29 00.6	+14
NVL				*i* *SP	sP	21 29 04.3	+14
NVL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.5						
TXAR	**Lajitas Array**	**143.82**	**32**	PKP	PKPdf	21 35 16.5	-4.3
	comp=Z,0.2nm,0.3s,baz=333,slow=2.8,SNR=5.7						

SKHL 16 21:32:56.4±0.1**, 54.46N×135.23E, h9**^{km}±1^{km}**, mb3.5**/3**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKMR	**Ekimchan**	**1.94**	**225**	*e*Pn	Pn	21 33 30.2	+0.2
EKMR				*i* Pg	Pg	21 33 32.5	-2.7
EKMR				AMB	AMB	21 33 32.7	
	15nm,0.3s						
EKMR				AMB	AMB	21 33 32.7	
	24nm,0.3s						
EKMR				AMB	AMB	21 33 32.7	
	38nm,0.3s						
EKMR				sPg		21 33 38.4	
EKMR				*e*Sg	Sg	21 33 59.0	-2.1
EKMR				A		21 33 59.5	
	65nm,0.4s						
EKMR				A		21 33 59.5	
	13nm,0.4s						
NKL	**Nikolayevsk**	**3.49**	**110**	*e*rx	rx	21 33 45.0	
NKL				*e*Sg	Sg	21 34 44.2	-8.3
NKL				A		21 34 47.9	
	50nm,1.0s						
BMKR	**Bomnak**	**3.73**	**276**	*e*Pn	Pn	21 33 53.1	-2.3
BMKR				*e*Pg	Pg	21 34 02.0	-8.8
BMKR				AMB	AMB	21 34 04.5	
	5.0nm,0.5s						
BMKR				*e*Sn	Sn	21 34 39.5	-0.4
BMKR				*e*Sg	Sg	21 34 50.6	-10
BMKR				A		21 34 53.5	
	24nm,0.4s						
BMKR				A		21 34 53.5	
	30nm,0.4s						
BMKR				A		21 34 53.5	
	12nm,0.4s						
GRNR	**Gornyy**	**3.77**	**168**	*e*Pg	Pg	21 34 03.8	-7.8
GRNR				*e*Sg	Sg	21 34 53.0	-8.9
YASR	**Yasnyy**	**4.45**	**258**	*e*rx	rx	21 34 13.0	
YASR				*e*Pg	Pg	21 34 16.0	-9.2
YASR				AMB	AMB	21 34 17.1	
	2.0nm,0.5s						
YASR				pPg		21 34 20.2	
YASR				*e*Sg	Sg	21 35 14.5	-10
YASR				A		21 35 24.9	
	7.0nm,0.6s						
YASR				A		21 35 24.9	
	6.0nm,0.6s						
ZEA	**Zeya**	**4.75**	**264**	*e*Sg	Sg	21 35 23.7	-11
KROS	**Kirovskiy**	**4.82**	**273**	*e*rx	rx	21 34 16.1	
KROS				*e*Sg	Sg	21 35 25.4	-12
KROS				A		21 35 28.0	
	10.0nm,0.5s						
KROS				A		21 35 28.0	
	6.0nm,0.5s						

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*IDC **16** 22:38:57.5±0.7, 10.23N×69.71E, mb4.0/16, mb1 4.2/16, mb1mx4.1/20, mbtmp4.0/16, Error ellipse: s-maj=19.4km s-min=16.3km az=101.0*

*BJI **16** 22:38:58.7, 10.30N×69.70E, h10^{km}, mB4.7, mb4.4, Ms4.3, Msz4.1*

*NEIC **16** 22:38:58.8±0.3, 10.26N×69.70E, h10^{km}, mb4.5/29, MS4.2/1, Error ellipse: s-maj=7.8km s-min=5.8km az=164.0*

ISC 16 22:38:56.8±0.4**, 10.23N**±0.07×**69.65E**±0.05**, h10^{km}, n70, σ0^{s}83**/71**, mb4.3**/46**, MS4.1**/2**, Arabian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNCY	**Minicoy**	**3.87**	**120**	*i* P	**Pn**	**22 39 57.0**	**-0.6**
HYB	**Hyderabad**	**11.21**	**49**	*i* P	**P**	**22 41 44.0**	**+3.6**
HYB				*e*S	**S**	**22 43 51.5**	**+4.7**
PALK	**Pallekele**	**11.31**	**104**	*e*P	**P**	**22 41 36.1**	**-5.6**
KOLN	**Koldanda**	**21.84**	**35**	*e*P	**P**	**22 43 51.7**	**+0.3**
	15nm,0.7s,mb4.5						
DMN	**Daman**	**22.60**	**38**	*e*P	**P**	**22 43 57.8**	**-1.3**
	33nm,1.0s,mb4.7						
GKN	**Gorkha**	**22.61**	**36**	*e*P	**P**	**22 43 59.1**	**-0.1**
	10nm,0.7s,mb4.3						
PKI	**Pulchoki**	**22.76**	**39**	*e*P	**P**	**22 44 00.3**	**-0.3**
	36nm,1.3s,mb4.6						
KKN	**Kakani**	**22.84**	**38**	*e*P	**P**	**22 44 00.8**	**-0.6**
	13nm,0.8s,mb4.4						
GUN	**Gumba**	**23.29**	**39**	*e*P	**P**	**22 44 06.9**	**+1.1**
	17nm,0.8s,mb4.5						
LSA	**Lhasa**	**27.90**	**43**	P	**P**	**22 44 48.5**	**-0.7**
	5.6nm,1.0s,mb4.2						
WMQ	**Urumqi**	**36.95**	**22**	*e*P	**P**	**22 46 08.8**	**+0.8**
WMQ				AP	pP	22 46 12.8	+1.8
WMQ				XP	sP	22 46 14.8	+2.6
WMQ				AMB	AMB		
	comp=Z,70nm,4.2s						
WMQ				LR	LR		
	comp=N,320nm,20.0s						
WMQ				LR	LR		
	comp=Z,310nm,19.0s,MS4.1						
GNI	**Garni**	**37.10**	**328**	P	**P**	**22 46 12.9**	**+3.7**
	comp=Z,10nm,0.9s,mb4.7,baz=94,slow=4.0,SNR=10						
GNI	**Garni**	**37.10**	**328**	*e*P	**P**	**22 46 09.5**	**+0.2**
	comp=Z,19nm,1.0s,mb4.9						
MKAR	**Makanchi Array**	**38.00**	**14**	P	**P**	**22 46 16.5**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.2,baz=190,slow=7.4,SNR=4.7						
MKAR				PcP	PcP	22 48 32.6	-0.2
	comp=Z,0.7nm,0.9s,baz=236,slow=4.4,SNR=5.2						
MBAR	**Mbarara**	**40.18**	**257**	*e*P	**P**	**22 46 36.4**	**+1.1**
	comp=Z,2.1nm,0.6s,mb4.0						
LZH	**Lanzhou**	**40.28**	**45**	*e*P	**P**	**22 46 37.0**	**+1.2**
LZH				AP	pP	22 46 40.3	+1.5
LZH				XP	sP	22 46 41.8	+1.7
LZH				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.4						
LZH				LR	LR		
	comp=N,190nm,14.9s						
LZH				LR	LR		
	comp=Z,270nm,18.2s,MS4.1						
LZH	**Lanzhou**	**40.28**	**45**	*e*P	**P**	**22 46 37.0**	**+1.2**
	comp=Z,19nm,1.3s,mb4.7						
LZH				pP	pP	22 46 40.2	+1.4
LZH				sP	sP	22 46 41.7	+1.6
LZH				LR	LR		
	comp=Z,280nm,18.2s,MS4.2						
BVAR	**Borovoye Array**	**42.69**	**1**	P	**P**	**22 46 56.3**	**+1.0**
	comp=Z,0.3nm,0.6s,mb3.2,baz=180,slow=7.2,SNR=2.8						
BVAR				PcP	PcP	22 48 48.2	+0.3
	comp=Z,0.8nm,0.9s,baz=194,slow=6.1,SNR=4.2						
BRTR	**Keskin Array B**	**43.42**	**319**	P	**P**	**22 47 03.9**	**+2.3**
	comp=Z,2.6nm,0.8s,mb4.0,baz=135,slow=10,SNR=15						
BR131	**Keskin Array S**	**43.42**	**319**	*e*P	**P**	**22 47 03.6**	**+2.0**
	comp=Z,2.1nm,0.6s,mb4.0						
ARU	**Arti**	**46.90**	**352**	*e*P	**P**	**22 47 28.4**	**-0.7**
	comp=Z,2.7nm,0.7s,mb4.3						
SONM	**Songino Array**	**48.57**	**33**	P	**P**	**22 47 44.1**	**+1.8**
	comp=Z,2.3nm,0.8s,mb4.2,baz=226,slow=8.1,SNR=22						
ULN	**Ulaanbaatar**	**48.94**	**33**	P	**P**	**22 47 46.5**	**+1.4**
	comp=Z,12nm,1.6s,mb4.7						
TLY	**Talaya**	**49.75**	**27**	*e*P	**P**	**22 47 53.0**	**+1.7**
	comp=Z,2.6nm,0.8s,mb4.3						
MATP	**Matopo**	**50.66**	**233**	P	**P**	**22 47 59.8**	**+1.1**
	comp=Z,3.9nm,0.6s,mb4.5,baz=40,slow=7.5,SNR=16						
AKASG	**Malin Array Be**	**52.22**	**329**	P	**P**	**22 48 10.2**	**0.0**
	comp=Z,2.9nm,0.8s,mb4.3,baz=130,slow=6.2,SNR=7.4						
LBTB	**Lobatse**	**55.41**	**230**	P	**P**	**22 48 35.1**	**+1.1**
	comp=Z,3.8nm,0.6s,mb4.6,baz=70,slow=5.8,SNR=9.4						
LBTB	**Lobatse**	**55.41**	**230**	*e*P	**P**	**22 48 34.7**	**+0.7**
	comp=Z,9.4nm,1.0s,mb4.8						
SUW	**Suwalki**	**57.15**	**329**	P	**P**	**22 48 45.1**	**-0.9**
	comp=Z,16nm,1.1s,mb5.0						
BOSA	**Boshof**	**57.70**	**227**	P	**P**	**22 48 51.0**	**+0.7**
	comp=Z,1.2nm,0.7s,mb4.0,baz=48,slow=14,SNR=3.1						
MBWA	**Marble Bar**	**58.24**	**123**	*e*P	**P**	**22 48 52.8**	**-1.3**
	comp=Z,1.3nm,0.6s,mb4.1						
MORC	**Moravsky Berou**	**58.25**	**323**	P	**P**	**22 48 51.3**	**-2.5**
	comp=Z,4.2nm,1.0s,mb4.4						
CN2	**Changchun**	**58.52**	**45**	*e*P	**P**	**22 48 56.0**	**+0.2**
FINES	**FINESS Array B**	**60.18**	**338**	P	**P**	**22 49 06.3**	**-0.7**
	comp=Z,1.5nm,0.8s,mb4.1,baz=117,slow=8.5,SNR=11						
GERES	**GERESS Array B**	**60.23**	**321**	P	**P**	**22 49 07.8**	**+0.3**
	comp=Z,0.2nm,0.5s,mb3.4,baz=101,slow=5.0,SNR=3.2						
KHC	**Kasperske Hory**	**60.41**	**321**	*e*P	**P**	**22 49 08.0**	**-0.7**
KAF	**Kangasniemi**	**60.51**	**338**	*e*p	**P**	**22 49 08.3**	**-1.0**
	comp=Z,3.8nm,1.0s,mb4.5,baz=129,slow=6.6						
CLL	**Collm**	**61.51**	**323**	P	**P**	**22 49 16.6**	**+0.4**
	comp=Z,logA/T=0.7,mb4.6						
PGF	**Pioggiola**	**61.62**	**313**	*e*P	**P**	**22 49 16.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**62.02**	**117**	P	**P**	**22 49 19.4**	**-0.7**
	comp=Z,5.1nm,0.9s,mb4.7,baz=298,slow=4.2,SNR=3.5						
SBF	**Sospel**	**63.02**	**314**	*e*P	**P**	**22 49 26.3**	**-0.1**
	comp=Z,18nm,1.1s,mb4.8						
FRF	**La Foret Royal**	**63.52**	**314**	*e*P	**P**	**22 49 29.5**	**-0.2**
	comp=Z,12nm,0.9s,mb4.6						
LMR	**La Mourre**	**63.57**	**313**	*e*P	**P**	**22 49 29.9**	**-0.1**
MBDF	**Montbardon**	**63.67**	**315**	*e*P	**P**	**22 49 31.0**	**+0.3**
	comp=Z,7.2nm,0.8s,mb4.5						
LPG	**La Plagne**	**63.85**	**316**	*e*P	**P**	**22 49 31.6**	**-0.2**
	comp=Z,8.1nm,0.9s,mb4.5						
LPL	**La Plagne**	**63.87**	**316**	*e*P	**P**	**22 49 31.6**	**-0.3**
	comp=Z,5.7nm,0.7s,mb4.4						
CDF	**Champ du Feu**	**64.18**	**319**	*e*P	**P**	**22 49 33.7**	**-0.2**
	comp=Z,5.4nm,0.9s,mb4.3						
ORIF	**Oris-en-Rattie**	**64.33**	**315**	*e*P	**P**	**22 49 34.9**	**-0.1**
	comp=Z,2.4nm,0.6s,mb4.1						
SMRF	**Simiane la Rot**	**64.36**	**314**	*e*P	**P**	**22 49 34.8**	**-0.4**
CABF	**La Chapelle**	**64.54**	**317**	*e*P	**P**	**22 49 36.1**	**-0.2**
	comp=Z,11nm,0.8s,mb4.6						
ARCES	**ARCESS Array B**	**65.57**	**344**	P	**P**	**22 49 42.4**	**-0.2**
	comp=Z,1.8nm,0.7s,mb4.2,baz=135,slow=6.9,SNR=11						
ARE0	**ARCESS Array S**	**65.57**	**344**	*e*P	**P**	**22 49 40.9**	**-1.8**
LASF	**Ste Croix**	**65.60**	**314**	*e*P	**P**	**22 49 43.5**	**+0.3**
	comp=Z,81nm,1.7s,mb5.2						
SMF	**Signal de Mont**	**66.06**	**317**	*e*P	**P**	**22 49 45.9**	**-0.2**
NB2	**NORSAR Subarra**	**66.12**	**333**	P	**P**	**22 49 45.4**	**-0.8**
	comp=Z,1.6nm,0.8s,mb4.1,baz=111,slow=6.5						
NOA	**NORSAR Array B**	**66.12**	**333**	P	**P**	**22 49 45.9**	**-0.3**
	comp=Z,1.6nm,0.8s,mb4.1,baz=112,slow=6.8,SNR=5.3						
GIVF	**Givet**	**66.14**	**320**	*e*P	**P**	**22 49 45.9**	**-0.6**
LOR	**Lormes**	**66.17**	**317**	*e*P	**P**	**22 49 46.9**	**+0.1**
	comp=Z,4.8nm,0.7s,mb4.3						
SSF	**Saint Saulge**	**66.37**	**317**	*e*P	**P**	**22 49 47.7**	**-0.4**
AVF	**Avril sur Loir**	**66.42**	**317**	*e*P	**P**	**22 49 48.2**	**-0.2**
BAIF	**Baives**	**66.52**	**320**	*e*P	**P**	**22 49 48.5**	**-0.4**
BGF	**Bois d'Agland**	**66.72**	**316**	*e*P	**P**	**22 49 50.1**	**-0.2**
TCF	**Toulx Ste Croi**	**67.11**	**316**	*e*P	**P**	**22 49 52.5**	**-0.3**
WRA	**Warramunga Arr**	**70.36**	**115**	P	**P**	**22 50 13.0**	**-0.3**
	comp=Z,1.5nm,0.7s,mb4.0,baz=296,slow=5.5,SNR=12						
WRAB	**Tennant Creek**	**70.37**	**115**	*e*P	**P**	**22 50 12.9**	**-0.4**
ESDC	**Sonseca Array**	**70.95**	**308**	P	**P**	**22 50 16.6**	**0.0**
	comp=Z,1.4nm,0.7s,mb4.0,baz=90,slow=6.1,SNR=5.4						
ROSF	**Rostrenen**	**71.08**	**318**	*e*P	**P**	**22 50 17.0**	**-0.3**
DBIC	**Dimbokro**	**73.65**	**274**	P	**P**	**22 50 33.4**	**+0.2**
	comp=Z,3.6nm,0.9s,mb4.3,baz=68,slow=5.4,SNR=4.3						
EVO	**Evora**	**74.08**	**307**	*e*P	**P**	**22 50 36.2**	**+1.1**
	comp=Z,24nm,1.4s,mb4.6						
BILL	**Bilibino**	**83.07**	**22**	*e*P	**P**	**22 51 24.7**	**+1.1**
	comp=Z,2.5nm,0.8s,mb4.3						

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*IDC **16** 22:57:24.1±1.6, 8.70S×130.70E, mb4.1/3, mb1 4.2/5, mb1mx4.0/12, mbtmp4.1/5, ML3.8/2, MS3.6/3, Ms1 3.6/3, ms1mx3.2/20, Error ellipse: s-maj=58.4km s-min=26.7km az=91.0*

*NEIC **16** 22:57:29.4±0.7, 8.75S×130.45E, h35^{km}, mb4.4/4, Error ellipse: s-maj=30.6km s-min=10.0km az=75.0*

ISC 16 22:57:26.6±0.6**, 8.92S**±0.05×**130.4E**±0.1**, h33^{km}, n16, σ1^{s}00**/19**, mb4.1**/7**, MS3.7**/1**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**4.26**	**153**	*e*P	**P**	**22 58 36.4**	**+5.6**
	37nm,0.5s						
FITZ	**Fitzroy Crossi**	**10.25**	**207**	*e*P	**P**	**22 59 56.4**	**+1.9**
	7.4nm,0.3s						
FITZ				*e*S	**S**	**23 01 48.0**	**-1.4**
FITZ	**Fitzroy Crossi**	**10.25**	**207**	Pn	**P**	**22 59 56.1**	**+1.6**
	1.1nm,0.3s,baz=23,slow=12,SNR=21						
FITZ				Sn	**S**	**23 01 48.2**	**-1.1**
	2.8nm,0.3s,baz=197,slow=14,SNR=7.2						
FITZ				LR	LR	23 04 35.2	
	comp=Z,236nm,21.4s,baz=48,slow=41						
WRAB	**Tennant Creek**	**11.59**	**161**	*e*P	**P**	**23 00 13.4**	**+0.7**
	15nm,0.8s						
WRAB				*e*S	**S**	**23 02 20.5**	**-1.6**
WRA	**Warramunga Arr**	**11.60**	**161**	Pn	**P**	**23 00 13.2**	**+0.4**
	0.4nm,0.3s,baz=346,slow=13,SNR=20						
WRA				Sn	**S**	**23 02 22.0**	**-0.2**
	1.6nm,0.3s,baz=345,slow=22,SNR=13						
WB2	**Warramunga Arr**	**11.60**	**161**	*e*P	**P**	**23 00 14.2**	**+1.3**
WB2				*e*S	**S**	**23 02 22.6**	**+0.3**
CTA	**Charters Tower**	**18.90**	**128**	LR	LR	23 08 33.9	
	comp=Z,151nm,19.2s,baz=51,slow=36						
KSM	**Kuching**	**22.55**	**296**	P	**P**	**23 02 20.9**	**-4.5**
NWAO	**Narrogin (SRO)**	**26.83**	**205**	LR	LR	23 14 01.6	
	comp=Z,183nm,18.2s,MS3.7,baz=129,slow=37						
MJAR	**Matsushiro Arr**	**45.80**	**9**	P	**P**	**23 05 45.2**	**-2.0**
	0.8nm,0.3s,mb4.1,baz=188,slow=9.8,SNR=6.3						
ULN	**Ulaanbaatar**	**60.20**	**342**	*e*P	**P**	**23 07 33.6**	**-0.2**
	2.7nm,0.8s,mb4.3						
SONM	**Songino Array**	**60.38**	**342**	P	**P**	**23 07 35.0**	**0.0**
	0.7nm,0.6s,mb3.9,baz=157,slow=6.4,SNR=7.5						
MKAR	**Makanchi Array**	**70.05**	**327**	P	**P**	**23 08 37.7**	**+0.5**
	2.9nm,0.7s,mb4.3,baz=126,slow=7.8,SNR=36						
AAK	**Ala-Archa**	**72.27**	**320**	P	**P**	**23 08 50.4**	**-0.2**
	4.1nm,0.9s,mb4.4						
BRVK	**Borovoye**	**79.97**	**328**	*e*P	**P**	**23 09 27.1**	**-6.9**
	0.4nm,0.7s,mb3.5						
ARU	**Arti**	**87.55**	**328**	P	**P**	**23 10 12.7**	**+0.5**
	3.0nm,1.1s,mb4.4						

NNC 16 23:00:44.7±5.1**, 38.07N×71.87E, h212^{km}**±77^{km}**, mpv3.4, 5C, Error ellipse: s-maj=75.4km s-min=54.3km az=57.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.98**	**23**	⇑P	P	23 01 57.5	-2.2
	2.8nm,0.5s						
AAK				⇑S	S	23 02 59.7	+1.7
	4.3nm,0.6s						
KK31	**Karatay Array**	**5.13**	**349**	⇑P	P	23 02 00.9	-0.8
	1.3nm,0.3s,baz=154,slow=10,SNR=77						
KK31				S	S	23 03 03.1	+1.5
	0.9nm,0.2s,baz=173,slow=16,SNR=8.4						
AB31	**Akbulak array**	**14.11**	**326**	⇑P	P	23 03 57.5	+1.3
	0.6nm,0.6s,baz=128,slow=11,SNR=11						
AB31				⇑S	S	23 06 28.8	+1.0
	0.7nm,0.7s,baz=220,slow=11,SNR=4.0						

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*IDC **16** 23:44:48.7±0.8, 15.15S×173.47W, mb4.2/7, mb1 4.5/7, mb1mx4.3/16, mbtmp4.2/7, MS3.9/15, Ms1 3.9/15, ms1mx3.8/25, Error ellipse: s-maj=38.9km s-min=21.7km az=129.0*

*NEIC **16** 23:44:51.0±0.4, 15.24S×173.56W, h10^{km}, mb4.8/14, MS4.4/3, Error ellipse: s-maj=21.6km s-min=12.1km az=136.0*

ISC 16 23:44:52.0±0.4**, 15.2S**±0.1×**173.6W**±0.1**, h33^{km}, n75, σ0^{s}98**/30**, mb4.5**/20**, MS3.9**/15**, 3C-3D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.15**	**55**	Pn	**Pn**	**23 45 19.1**	**-7.3**
	100nm,0.3s,baz=240,slow=20,SNR=56						
AFI				Sn	**Sn**	**23 45 38.0**	**-14**
	578nm,0.3s,baz=58,slow=20,SNR=21						
AFI	**Afiamalu**	**2.15**	**55**	Pn	**Pn**	**23 45 19.1**	**-7.3**
AFI				*e*Sn	**Sn**	**23 45 35.6**	**-17**
DZM	**Mont Dzumac**	**20.12**	**247**	LR	LR	23 54 08.9	
	comp=Z,244nm,20.9s,MS3.5,baz=30,slow=28						
PPT	**Papeete**	**23.17**	**99**	*e*LR	LR	23 55 01.4	
	320nm,24.8s,baz=264						
PPT	**Papeete**	**23.17**	**99**	LR	LR	23 56 07.3	
	comp=Z,280nm,20.2s,MS3.7,baz=281,slow=29						
TBI	**Tubuai**	**24.17**	**113**	*e*LR	LR	23 55 35.6	
	baz=278						
URZ	**Urewera**	**24.43**	**198**	LR	LR	23 58 14.6	
	comp=Z,348nm,18.1s,MS3.9,baz=256,slow=33						
HNR	**Honiara**	**26.46**	**279**	LR	LR	23 59 42.8	
	comp=Z,172nm,18.0s,MS3.6,baz=130,slow=34						
CTA	**Charters Tower**	**38.52**	**257**	LR	LR	00 04 40.6	
	comp=Z,120nm,21.5s,MS3.7,baz=50,slow=31						
CTAO	**Charters Tower**	**38.52**	**257**	P	**P**	**23 52 14.4**	**+1.2**
	11nm,1.1s,mb4.5						
PMG	**Port Moresby**	**38.73**	**274**	LR	LR	00 04 47.6	
	comp=Z,134nm,20.3s,MS3.8,baz=84,slow=31						
STKA	**Stephens Creek**	**44.00**	**240**	*e*P	**P**	**23 52 58.4**	**+0.2**
	6.4nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**44.00**	**240**	P	**P**	**23 52 58.6**	**+0.4**
	2.5nm,0.3s,mb4.4,baz=63,slow=9.7,SNR=11						
STKA	**Stephens Creek**	**44.00**	**240**	*e*P	**P**	**23 52 58.1**	**-0.1**
WB2	**Warramunga Arr**	**49.71**	**257**	*e*P	**P**	**23 53 43.0**	**-0.2**
WRAB	**Tennant Creek**	**49.71**	**257**	*e*P	**P**	**23 53 42.5**	**-0.7**
	14nm,1.1s,mb4.9						
WRA	**Warramunga Arr**	**49.72**	**257**	P	**P**	**23 53 43.1**	**-0.2**
	3.5nm,0.9s,mb4.4,baz=95,slow=6.6,SNR=28						
FITZ	**Fitzroy Crossi**	**58.08**	**258**	LR	LR	00 17 23.9	
	comp=Z,186nm,19.1s,MS4.2,baz=239,slow=34						
SBA	**Scott Base**	**63.48**	**185**	*e*P	**P**	**23 55 21.2**	**+0.5**
	10.0nm,1.0s,mb4.9						
VNDA	**Vanda**	**63.60**	**186**	P	**P**	**23 55 21.4**	**0.0**
	4.1nm,1.0s,mb4.4,baz=13,slow=6.2,SNR=16						
VNDA	**Vanda**	**63.60**	**186**	*e*P	**P**	**23 55 21.1**	**-0.3**
VNDA				P		23 55 21.4	
NWAO	**Narrogin (SRO)**	**64.58**	**241**	LR	LR	00 19 51.0	
	comp=Z,154nm,19.9s,MS4.2,baz=249,slow=32						
CASY	**Casey**	**70.55**	**205**	P	**P**	**23 56 02.7**	**-2.6**
	26nm,1.1s,mb5.1						
CMB	**Columbia Colle**	**72.70**	**41**	P	**P**	**23 56 20.4**	**+1.7**
	2.0nm,0.6s,mb4.2						
PFO	**Pinyon Flat Ob**	**72.89**	**47**	P	**P**	**23 56 24.1**	**+4.2**
	3.9nm,0.9s,mb4.3						
NVAR	**Mina Array Bea**	**74.27**	**42**	LR	LR	00 23 26.1	
	comp=Z,115nm,18.7s,MS4.2,baz=135,slow=31						
QSPA	**South Pole Qui**	**74.89**	**180**	⇑*i*P	**P**	**23 56 31.3**	**+0.7**
	16nm,0.9s,mb5.0						
WVOR	**Wild Horse Val**	**76.36**	**39**	*e*P	**P**	**23 56 38.1**	**-1.6**
	7.2nm,0.6s,mb4.8						
HLID	**Hailey**	**79.56**	**39**	*e*P	**P**	**23 56 57.5**	**+0.2**
	1.6nm,0.7s,mb4.1						
TXAR	**Lajitas Array**	**80.63**	**56**	P	**P**	**23 57 03.1**	**-0.3**
	0.8nm,1.1s,mb3.6,baz=260,slow=5.5,SNR=3.5						
TXAR				LR	LR	00 24 53.7	
	comp=Z,63nm,19.6s,MS4.0,baz=205,slow=30						
GDL2	**Guadalupe Moun**	**81.23**	**53**	P	**P**	**23 57 05.7**	**-0.8**
PDAR	**Pinedale Array**	**82.21**	**42**	P	**P**	**23 57 10.7**	**-0.7**
	1.3nm,0.9s,mb3.8,baz=225,slow=2.1,SNR=6.1						
PDAR				LR	LR	00 28 11.8	
	comp=Z,103nm,18.6s,MS4.2,baz=240,slow=32						
PDAR	**Pinedale Array**	**82.21**	**42**	P	**P**	**23 57 10.7**	**-0.7**
PDAR				LR	LR	00 28 11.8	
ILAR	**Eielson Array**	**82.24**	**11**	P	**P**	**23 57 11.2**	**+0.1**
	0.7nm,0.9s,mb3.6,baz=209,slow=6.6,SNR=4.8						
SDCO	**Great Sand Dun**	**82.69**	**48**	*e*P	**P**	**23 57 13.6**	**-0.2**
	15nm,1.0s,mb5.0						
ISCO	**Idaho Springs**	**83.50**	**46**	P	**P**	**23 57 20.3**	**+2.3**
	2.5nm,0.8s,mb4.3						
ENH	**Enshi**	**86.63**	**302**	P	**P**	**23 57 27.6**	**-6.2**
	13nm,1.2s,mb5.0						
MAW	**Mawson**	**87.96**	**199**	P	**P**	**23 57 40.0**	**+0.7**
	4.1nm,0.8s,mb4.7,baz=104,slow=3.8,SNR=6.5						
YKA	**Yellowknife Ar**	**89.95**	**23**	LR	LR	00 31 34.3	
	comp=Z,75nm,19.4s,MS4.1,baz=180,slow=31						
CMAR	**Chiang Mai Arr**	**92.36**	**288**	LR	LR	00 39 13.5	
	comp=Z,34nm,18.6s,MS3.8,baz=185,slow=35						
SNAA	**Sanae**	**93.16**	**177**	*e*P	**P**	**23 58 03.3**	**-0.3**
	6.0nm,1.2s,mb4.9						
ULM	**Lac du Bonnet**	**93.86**	**39**	LR	LR	00 32 58.0	
	comp=Z,75nm,20.9s,MS4.1,baz=334,slow=31						
SONM	**Songino Array**	**94.54**	**318**	LR	LR	00 34 09.0	
	comp=Z,50nm,20.3s,MS4.0,baz=72,slow=31						
FINES	**FINESS Array B**	**131.67**	**347**	PKP	PKPdf	00 04 03.9	+2.5
	0.5nm,0.7s,baz=27,slow=3.1,SNR=3.8						
FINES	**FINESS Array B**	**131.67**	**347**	PKP	PKPdf	00 04 03.9	+2.5
BURAR	**Bucovina Array**	**144.07**	**338**	⇓P	PKPbc	00 04 26.1	+2.6
TNS	**Taunus Mts**	**144.99**	**358**	*e*PKPbc	PKPbc	00 04 28.0	+2.0
BAIF	**Baives**	**145.14**	**2**	*e*PKIKP	PKPdf	00 04 27.6	+1.6
GRA1	**Grafenberg Arr**	**145.33**	**354**	*e*PKPbc	PKPbc	00 04 29.0	+2.2
GRF	**Grafenberg Arr**	**145.33**	**354**	*e*PKP	PKPdf	00 04 29.0	+2.6
TIRR	**Tirgusor**	**145.34**	**332**	⇓P	PKPdf	00 04 29.4	+2.9
MLR	**Muntele Rosu**	**145.57**	**335**	⇑P	PKPdf	00 04 31.0	+4.1
KHC	**Kasperske Hory**	**145.61**	**352**	*e*PKP	PKPdf	00 04 30.0	+3.1
BR131	**Keskin Array S**	**145.85**	**321**	*e*PKPdf	PKPdf	00 04 31.1	+3.5
BR131				*e*		00 04 44.9	
BRTR	**Keskin Array B**	**145.85**	**321**	PKPbc	PKPbc	00 04 31.1	+2.6
	6.8nm,0.9s,baz=90,slow=1.4,SNR=35						
GERES	**GERESS Array B**	**145.88**	**351**	PKPbc	PKPbc	00 04 29.7	+1.5
	1.0nm,0.7s,baz=27,slow=3.0,SNR=14						
ROSF	**Rostrenen**	**145.96**	**12**	*e*PKIKP	PKPdf	00 04 32.9	+5.4
	95nm,1.5s						
VOIR		**145.97**	**336**	⇑P	PKPdf	00 04 32.6	+5.0
CDF	**Champ du Feu**	**146.83**	**359**	*e*PKIKP	PKPdf	00 04 32.9	+3.9
	17nm,1.3s						
BFO	**Black Forest**	**146.88**	**358**	*e*PKPbc	PKPbc	00 04 33.6	+3.0
BZS	**Buzias**	**147.04**	**340**	⇓P	PKPdf	00 04 34.5	+5.1
HAU	**Haudompre**	**147.25**	**0**	*e*PKIKP	PKPdf	00 04 34.1	+4.4
	13nm,1.0s						
HAU				*e*R			
	47nm,21.3s						
LOR	**Lormes**	**147.91**	**3**	*e*PKIKP	PKPdf	00 04 35.8	+5.1
	7.4nm,0.9s						
LOR				*e*R			
	60nm,19.2s						
SSF	**Saint Saulge**	**148.10**	**4**	*e*PKIKP	PKPdf	00 04 36.4	+5.3
	10nm,1.0s						
SMF	**Signal de Mont**	**148.53**	**3**	*e*PKIKP	PKPdf	00 04 37.3	+5.5
	12nm,1.1s						
CABF	**La Chapelle**	**148.64**	**0**	*e*PKIKP	PKPdf	00 04 38.5	+6.6
	20nm,1.1s						
TCF	**Toulx Ste Croi**	**148.76**	**6**	*e*PKIKP	PKPdf	00 04 38.0	+5.9
	40nm,1.7s						
RJF	**Les Rejaudoux**	**149.66**	**7**	*e*PKIKP	PKPdf	00 04 38.8	+5.2
RJF				*e*R			
	67nm,19.2s						
LPL	**La Plagne**	**149.74**	**360**	*e*PKIKP	PKPdf	00 04 38.3	+4.6
LPG	**La Plagne**	**149.75**	**360**	*e*PKIKP	PKPdf	00 04 38.4	+4.6
LFF	**La Frestale**	**149.93**	**8**	*e*PKIKP	PKPdf	00 04 39.6	+5.5
ORIF	**Oris-en-Rattie**	**150.33**	**1**	*e*PKIKP	PKPdf	00 04 39.4	+4.7
ORIF				*e*R			
	51nm,21.5s						
MBDF	**Montbardon**	**150.52**	**359**	*e*PKIKP	PKPdf	00 04 39.4	+4.4
PGF	**Pioggiola**	**152.61**	**356**	*e*PKIKP	PKPdf	00 04 42.8	+4.7
	50nm,1.4s						
EVO	**Evora**	**153.47**	**26**	*e*P	PKPdf	00 04 45.5	+6.1
	12nm,1.0s						
EVO				*e*R			
	72nm,21.8s						

IDC 17 00:03:04.0±19.0**, 16.99S×179.15W, h455^{km}**±228^{km}**, mb3.1**/3**, mb1 3.4**/3**, mb1mx3.1**/15**, mbtmp3.9**/3**, Error ellipse: s-maj=145.6km s-min=52.1km az=176.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.46**	**240**	P	P	00 09 45.7	-1.0
	2.2nm,0.5s,baz=99,slow=11,SNR=6.9						
WRA	**Warramunga Arr**	**44.10**	**259**	P	P	00 10 30.6	-1.6
	0.7nm,0.6s,baz=95,slow=7.4,SNR=18						
TXAR	**Lajitas Array**	**86.11**	**58**	P	P	00 14 56.1	-0.9
	0.4nm,0.8s,baz=214,slow=4.5,SNR=5.5						
GERES	**GERESS Array B**	**146.55**	**345**	PKPbc	PKPbc	00 21 53.0	+0.3
	0.7nm,0.5s,baz=27,slow=3.0,SNR=8.2						

NEIC 17 00:06:41.9±6.3**, 41.09N×126.43W, h10^{km}, mb3.7**/1**, Error ellipse: s-maj=70.7km s-min=15.8km az=64.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	**Horse Mountain**	**2.06**	**95**	*e*P	Pn	00 07 16.6	-0.3
KEBM	**Edson Butte**	**2.37**	**41**	P	Pn	00 07 19.1	-2.3
YBH	**Yreka Blue Hor**	**2.87**	**76**	P	Pn	00 07 28.6	0.0
LAMM	**Antelope Mount**	**2.91**	**78**	P	Pn	00 07 29.4	+0.2
WDC	**Whiskeytown Da**	**3.00**	**99**	*e*P	Pn	00 07 26.6	-3.8
HUMO	**Hull Mountain**	**3.01**	**59**	P	Pn	00 07 28.7	-1.8
DBO	**Dodson Butte**	**3.12**	**48**	P	Pn	00 07 30.3	-1.9
LHEM	**Herd Peak**	**3.22**	**79**	P	Pn	00 07 33.9	+0.3
BBOR	**Butler Butte**	**3.32**	**56**	P	Pn	00 07 33.7	-1.3
BUOR	**Burton Butte**	**3.35**	**68**	P	Pn	00 07 35.7	+0.2
HSO	**Harness Mounta**	**3.47**	**44**	P	Pn	00 07 35.2	-1.9
VSP	**Spence Mountai**	**3.58**	**68**	P	Pn	00 07 38.2	-0.5
LASM	**Arnica Sink**	**3.69**	**80**	P	Pn	00 07 40.2	0.0
HOG	**Hogback Mounta**	**3.72**	**70**	P	Pn	00 07 40.3	-0.4
IRO	**Indian Ridge**	**4.24**	**45**	P	Pn	00 07 46.8	-1.3
FRIS	**Frissel Point**	**4.46**	**44**	P	Pn	00 07 49.6	-1.7
MOD	**Modoc**	**4.67**	**78**	P	Pn	00 07 52.8	-1.4
BKCOR	**Black Crater**	**4.74**	**46**	P	Pn	00 07 53.6	-1.5
VIPM	**Ingram Point**	**5.47**	**49**	P	Pn	00 08 03.9	-1.6
WVOR	**Wild Horse Val**	**5.98**	**74**	*e*P	Pn	00 08 09.0	-3.7
FFC	**Flin Flon**	**21.18**	**42**	*e*P	P	00 11 29.4	-0.1
	2.5nm,0.7s						

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*IDC **17** 00:07:48.0±16.0, 37.25N×71.29E, h85^{km}±99^{km}, mb3.5/7, mb1 3.6/9, mb1mx3.4/22, mbtmp3.8/9, ML3.6/2, Error ellipse: s-maj=162.4km s-min=26.7km az=8.0*

*NEIC **17** 00:07:52.5±6.1, 37.61N×71.31E, h108^{km}±36^{km}, mb3.9/2,*

Error ellipse: s-maj=63.5km s-min=16.5km az=193.0
*NNC **17** 00:07:53.6±5.4, 37.71N×70.97E, h140^{km}±37^{km}, mpv4.0, Error ellipse: s-maj=58.7km s-min=28.2km az=10.0*
*MOS **17** 00:07:54.9±1.0, 37.90N×71.05E, h125^{km}, mb3.6/1, Error ellipse: s-maj=28.9km s-min=10.6km az=92.3*
ISC 17 00:07:44.5±1.1, 37.07N±0.04×71.2E±0.1, h83^{km}±12^{km}, n42, σ1^{s}28/55, mb3.6/7, 8C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.40**	**20**	P	**P**	**00 09 04.8**	**+0.8**
	SNR=46						
UCH	**Uchtor**	**5.74**	**25**	P	**P**	**00 09 09.8**	**+1.1**
	SNR=11						
KZA	**Kyzart**	**5.88**	**31**	P	**P**	**00 09 11.7**	**+1.0**
	SNR=7.5						
EKS2	**Erkin-Say**	**5.91**	**18**	P	**P**	**00 09 12.1**	**+0.9**
	SNR=18						
THN	**Thein Dam**	**5.91**	**140**	eP	**P**	**00 09 14.1**	**+2.9**
THN				eS	**S**	**00 10 18.0**	**-0.3**
	57nm,0.4s						
KK31	**Karatay Array**	**6.05**	**355**	⇓P	**P**	**00 09 12.6**	**-0.4**
	14nm,0.3s,baz=180,slow=13,SNR=619						
KK31				⇑S	**S**	**00 10 16.1**	**-5.5**
	9.2nm,0.3s,baz=190,slow=25,SNR=5.4						
KKAR	**Karatay Array**	**6.05**	**355**	PN	**P**	**00 09 12.6**	**-0.5**
KKAR				S	**S**	**00 10 15.1**	**-6.5**
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KKAR				smax			
	comp=N,5.0nm,0.3s						
AAK	**Ala-Archa**	**6.09**	**23**	⇑P	**P**	**00 09 14.8**	**+1.1**
	comp=N,3.7nm,0.3s						
AAK				⇑S	**S**	**00 10 19.6**	**-3.1**
	comp=N,15nm,0.5s						
AAK	**Ala-Archa**	**6.09**	**23**	PN	**P**	**00 09 14.5**	**+0.8**
AAK				S	**S**	**00 10 19.0**	**-3.7**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AAK				smax			
	comp=N,8.0nm,0.5s						
AAK	**Ala-Archa**	**6.09**	**23**	ePn	**P**	**00 09 13.5**	**-0.2**
	comp=N,8.4nm,0.4s						
PONG	**Pong**	**6.42**	**141**	eP	**P**	**00 09 22.0**	**+3.8**
PONG				eS	**S**	**00 10 32.0**	**+1.3**
CHMS	**Chumysh**	**6.50**	**23**	P	**P**	**00 09 19.9**	**+0.5**
	SNR=11						
USP	**Ospenovka**	**6.67**	**21**	P	**P**	**00 09 21.6**	**-0.1**
	SNR=10						
TKM2	**Tokmak 2**	**6.73**	**28**	P	**P**	**00 09 23.2**	**+0.6**
	SNR=8.7						
BHK	**Bhakra**	**7.08**	**141**	ex	**S**	**00 10 46.1**	**-1.0**
SDNR	**Sundarnagar**	**7.30**	**138**	eP	**P**	**00 09 32.8**	**+2.3**
SDNR				ex	**S**	**00 10 58.2**	**+5.7**
SMLA	**Simla**	**7.70**	**139**	iP	**P**	**00 09 35.4**	**-0.5**
SMLA				iS	**S**	**00 10 59.4**	**-2.8**
KLP	**Kalpa**	**8.01**	**132**	eP	**P**	**00 09 42.0**	**+1.9**
KLP				eS	**S**	**00 11 05.8**	**-4.0**
KLP				AML	AML	00 11 15.0	
	comp=E,116nm,0.3s						
KLP				AML	AML	00 11 16.5	
	comp=N,134nm,0.3s						
JOSI	**Joshimath**	**9.49**	**131**	eP	**P**	**00 09 57.5**	**-2.8**
KUDL	**Kundal**	**9.94**	**152**	eP	**P**	**00 10 07.2**	**+0.8**
KUDL				eS	**S**	**00 11 53.1**	**-3.8**
SONA	**Sohna**	**10.08**	**149**	eP	**P**	**00 10 07.5**	**-0.7**
SONA				eS	**S**	**00 11 55.2**	**-5.0**
SONA				AML	AML	00 12 01.3	
	comp=N,12nm,0.2s						
SONA				AML	AML	00 12 01.4	
	comp=E,35nm,0.3s						
AGRA	**Agra**	**11.33**	**148**	eS	**S**	**00 12 26.1**	**-4.3**
MK31	**Makanchi Array**	**12.72**	**37**	⇑P	**P**	**00 10 42.8**	**-0.6**
	comp=E,1.1nm,0.6s,baz=224,slow=14,SNR=7.2						
MKAR	**Makanchi Array**	**12.72**	**37**	P	**P**	**00 10 43.1**	**-0.3**
	comp=E,0.2nm,0.3s,baz=225,slow=14,SNR=9.8						
AB31	**Akbulak array**	**14.68**	**330**	⇑P	**P**	**00 11 05.9**	**-3.0**
	comp=E,1.4nm,0.3s						
AB31				⇑S	**S**	**00 13 36.0**	**-14**
	comp=E,3.9nm,0.6s						
AB31	**Akbulak array**	**14.68**	**330**	P	**P**	**00 11 05.8**	**-3.1**
AB31				S	**S**	**00 13 36.0**	**-14**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AB31				smax			
	comp=N,1.0nm,0.5s						
VOSK	**Vostochnaya**	**15.65**	**359**	⇑P	**P**	**00 11 18.6**	**-2.6**
	comp=N,1.9nm,0.8s						
VOSK	**Vostochnaya**	**15.65**	**359**	P	**P**	**00 11 18.6**	**-2.6**
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZRNK	**Zerenda**	**15.96**	**355**	⇑P	**P**	**00 11 22.7**	**-2.4**
	comp=Z,3.7nm,1.4s						
ZRNK	**Zerenda**	**15.96**	**355**	eP	**P**	**00 11 22.9**	**-2.1**
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZRNK	**Zerenda**	**15.96**	**355**	eP	**P**	**00 11 22.9**	**-2.2**
	comp=Z,1.3nm,0.4s						
BVA0	**Borovoye Array**	**15.96**	**358**	P	**P**	**00 11 24.5**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=176,slow=13,SNR=6.7						
BVAR	**Borovoye Array**	**15.96**	**358**	P	**P**	**00 11 24.8**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=170,slow=13,SNR=9.0						
SONM	**Songino Array**	**27.86**	**56**	P	**P**	**00 13 28.6**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.1,baz=264,slow=12,SNR=5.0						
FINES	**FINESS Array B**	**37.12**	**326**	P	**P**	**00 14 49.1**	**+0.8**
	comp=Z,0.2nm,0.4s,mb3.4,baz=108,slow=9.1,SNR=5.1						
FINES				pP	pP	00 15 12.0	+3.8
	comp=Z,0.3nm,0.5s,baz=114,slow=7.6,SNR=4.6						
FINES	**FINESS Array B**	**37.12**	**326**	P	**P**	**00 14 49.1**	**+0.8**
FINES				pP	pP	00 15 12.0	+3.8
ARCES	**ARCESS Array B**	**40.69**	**337**	P	**P**	**00 15 18.6**	**+0.7**
	comp=Z,0.6nm,0.5s,mb3.7,baz=117,slow=8.1,SNR=7.8						
HFS	**Hagfors**	**42.74**	**322**	P	**P**	**00 15 35.4**	**+0.7**
	comp=Z,2.0nm,0.5s,mb4.1,baz=90,slow=12,SNR=14						
NB2	**NORSAR Subarra**	**44.04**	**323**	P	**P**	**00 15 45.3**	**+0.1**
	comp=Z,0.8nm,0.5s,mb3.7,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.04**	**323**	P	**P**	**00 15 45.6**	**+0.3**
	comp=Z,1.0nm,0.5s,mb3.8,baz=94,slow=7.9,SNR=8.3						
INK	**Inuvik**	**73.31**	**9**	P	**P**	**00 19 09.2**	**+1.2**
	comp=Z,1.1nm,0.6s,mb3.9,baz=337,slow=8.7,SNR=3.1						
ILAR	**Eielson Array**	**74.18**	**16**	P	**P**	**00 19 13.2**	**0.0**
	comp=Z,0.4nm,0.8s,mb3.2,baz=315,slow=6.1,SNR=4.3						

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*IDC **17** 00:11:14.3±1.3, 10.97N×94.70E, mb3.8/5, mb1 3.9/6, mb1mx3.7/18, mbtmp3.7/6, ML4.0/1, MS3.5/3, Ms1 3.5/3, ms1mx3.0/19, Error ellipse: s-maj=40.9km s-min=25.5km az=55.0*
*NEIC **17** 00:11:18.9±1.1, 11.04N×94.81E, h30^{km}, mb4.3/2, Error ellipse: s-maj=25.4km s-min=21.9km az=79.0*
*BJI **17** 00:11:20.6, 10.83N×94.69E, h44^{km}, mb4.2, Ms3.9, Msz3.5*
ISC 17 00:11:16.5±1.2, 10.8N±0.2×94.6E±0.2, h30^{km}, n13, σ1^{s}23/11, mb4.0/7, MS3.9/2, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.69**	**29**	Pn	**P**	**00 13 17.9**	**-5.4**
	0.5nm,0.3s,baz=220,slow=14,SNR=4.1						
CMAR				LR	LR	00 16 36.2	
	comp=Z,59nm,18.0s,baz=216,slow=38						
KMI	**Kunming**	**16.20**	**28**	P	**P**	**00 15 06.3**	**+2.5**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s						
KMI				LR	LR		
	comp=N,140nm,10.8s						
KMI				LR	LR		
	comp=E,220nm,9.1s						
KMI				LR	LR		
	comp=Z,110nm,8.5s						
KMI	**Kunming**	**16.20**	**28**	P	**P**	**00 15 06.2**	**+2.4**
	comp=Z,11nm,1.2s						
KMI				pP		00 15 10.4	
LZH	**Lanzhou**	**26.52**	**17**	eP	**P**	**00 16 48.0**	**-5.5**
	comp=Z,23nm,1.3s,mb4.5						
LZH				pP	pP	00 16 57.1	-5.1
LZH				sP	sP	00 17 01.5	-4.7
GTA	**Gaotai**	**28.84**	**8**	P	**P**	**00 17 19.0**	**+4.5**
GTA				AP	pP	00 17 23.6	+0.3
MKAR	**Makanchi Array**	**37.32**	**346**	P	**P**	**00 18 26.8**	**-1.2**
	comp=Z,0.7nm,0.8s,mb3.5,baz=162,slow=7.7,SNR=6.3						
SONM	**Songino Array**	**38.21**	**13**	P	**P**	**00 18 35.1**	**-0.3**
	comp=Z,2.6nm,1.1s,mb3.9,baz=211,slow=7.2,SNR=6.9						
CN2	**Changchun**	**42.34**	**34**	eP	**P**	**00 19 13.1**	**+3.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**49.69**	**128**	P	**P**	**00 20 07.9**	**-0.3**
	comp=Z,1.5nm,0.8s,mb4.1,baz=306,slow=8.5,SNR=15						
BRTR	**Keskin Array B**	**60.85**	**309**	P	**P**	**00 21 28.1**	**-0.6**
	comp=Z,0.7nm,0.8s,mb3.8,baz=101,slow=6.3,SNR=3.9						
FINES	**FINESS Array B**	**70.31**	**332**	LR	LR	01 00 37.6	
	comp=Z,23nm,18.3s,MS3.5,baz=309,slow=42						
GERES	**GERESS Array B**	**75.92**	**318**	P	**P**	**00 23 04.1**	**+1.9**
	comp=Z,0.7nm,0.8s,mb3.6,baz=108,slow=3.1,SNR=6.8						
BOSA	**Boshof**	**77.50**	**237**	LR	LR	00 58 06.5	
	comp=Z,133nm,18.1s,MS4.3,baz=213,slow=36						

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*FUNV **17** 00:15:29.6, 10.20N×60.83W, h4^{km}, MW2.5*
*TRN **17** 00:15:33.3, 10.35N×60.75W, h31^{km}, MD3.3*
*NEIC **17** 00:15:33.3, 10.35N×60.75W, h31^{km}, MD3.3(TRN), After TRN.*
ISC 17 00:15:30.1±1.5, 10.09N±0.08×60.89W±0.09, h33^{km}, n14, σ1^{s}55/25, 1C, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.43**	**336**	iP	**P**	**00 15 42.8**	**+3.1**
TBH				eS	**S**	**00 15 46.9**	**+0.5**
TPP	**Pointe-a-Pierr**	**0.60**	**292**	eP	**P**	**00 15 47.1**	**+5.0**
TRN	**Trinidad (W)**	**0.75**	**318**	eP	**P**	**00 15 46.5**	**+2.2**
TRN				eS	**S**	**00 15 58.4**	**+3.7**
BOT	**Bacolet**	**1.08**	**9**	eP	**P**	**00 15 49.1**	**+0.1**
TPR	**Prospect**	**1.10**	**6**	eP	**P**	**00 15 49.4**	**+0.2**
TPR				eS	**S**	**00 16 00.7**	**-2.7**
GUIV	**Guiria**	**1.43**	**293**	⇑eP	**P**	**00 15 55.9**	**+2.0**
GUIV				eS	**S**	**00 16 15.3**	**+3.5**
GUNV	**Guanoco**	**2.02**	**272**	eP	**P**	**00 16 04.7**	**+2.2**
GUNV				eS	**S**	**00 16 30.6**	**+3.8**
GRW	**Mount Saint Ca**	**2.19**	**340**	eP	**P**	**00 16 04.9**	**0.0**
GRW				eS	**S**	**00 16 26.3**	**-4.9**
GRHS	**Sauteurs**	**2.25**	**341**	eP	**P**	**00 16 04.7**	**-1.1**
GRHS				eS	**S**	**00 16 26.3**	**-6.2**
CRUV	**Carupano**	**2.38**	**284**	eP	**P**	**00 16 08.4**	**+0.8**
CUPV	**Cœpira**	**4.83**	**270**	eP	**P**	**00 16 42.4**	**0.0**
CUPV				eS	**S**	**00 17 36.2**	**-1.7**
BIRV	**Birongo**	**5.31**	**275**	eP	**P**	**00 16 48.7**	**-0.5**
BIRV				eS	**S**	**00 17 47.2**	**-2.8**
CAOV	**Caicara del Or**	**6.03**	**243**	eP	**P**	**00 16 59.0**	**-0.3**
CAOV				eS	**S**	**00 18 05.3**	**-2.9**
BAUV	**El Baul**	**7.15**	**261**	eP	**P**	**00 17 13.6**	**-1.4**
BAUV				eS	**S**	**00 18 30.5**	**-5.4**

IDC 17 01:01:21.3±10.0, 14.44S×178.43W, h401^{km}±100^{km}, mb2.9/3, mb1 3.3/3, mb1mx3.1/15, mbtmp3.7/3, Error ellipse: s-maj=103.7km s-min=30.6km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.34**	**256**	P	P	01 09 01.7	-1.7
	0.3nm,0.2s,baz=92,slow=6.5,SNR=13						
WRA				PcP	PcP	01 10 34.1	-1.4
	0.3nm,0.5s,baz=90,slow=3.9,SNR=6.3						
ILAR	**Eielson Array**	**82.53**	**13**	P	P	01 13 00.2	-0.9
	1.1nm,0.8s,baz=228,slow=6.3,SNR=9.1						
TXAR	**Lajitas Array**	**84.17**	**58**	P	P	01 13 09.2	-1.1
	0.3nm,0.7s,baz=226,slow=7.9,SNR=4.7						
ARCES	**ARCESS Array B**	**122.91**	**350**	PKP	PKPdf	01 19 29.7	-0.4
	0.6nm,0.4s,baz=10,slow=1.3,SNR=14						
BRTR	**Keskin Array B**	**142.27**	**318**	PKP	PKPdf	01 20 05.0	-1.9
	0.8nm,0.8s,baz=180,slow=3.7,SNR=4.7						
GERES	**GERESS Array B**	**144.26**	**346**	PKP	PKPdf	01 20 10.3	+0.3
	0.5nm,0.5s,baz=18,slow=4.2,SNR=7.0						

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*MEX **17** 01:13:51.6±0.8, 15.34N×94.69W, h20^{km}±23^{km}, MD4.4*
*NEIC **17** 01:13:51.6, 15.34N×94.69W, h20^{km}, mb3.8/3, MD4.4(MEX), After MEX.*
*IDC **17** 01:13:52.1±4.3, 14.98N×94.84W, h62^{km}±35^{km}, mb3.7/8, mb1 3.8/10, mb1mx3.6/23, mbtmp4.0/10, ML3.7/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/29, Error ellipse: s-maj=80.8km s-min=17.6km az=50.0*
*CASC **17** 01:13:53.8±3.2, 15.37N×94.33W, MD4.9, mb3.8(NEIC)*
ISC 17 01:13:50.6±0.5, 15.39N±0.05×94.69W±0.03, h41^{km}±7^{km}, n42, σ1^{s}42/53, mb3.9/10, MS3.4/2, 1C-2D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.42**	**285**	iP	**P**	**01 14 13.5**	**-0.9**
HUIG				iS	**S**	**01 14 29.7**	**-2.4**
CMIG	**Matias Romero**	**1.70**	**354**	iP	**P**	**01 14 17.9**	**-0.5**
CMIG				iS	**S**	**01 14 38.6**	**-0.5**
SCX	**San Cristobal**	**2.38**	**56**	eP	**P**	**01 14 27.5**	**-0.6**
SCX				iS	**S**	**01 14 55.5**	**-0.8**
OXX	**Oaxaca**	**2.58**	**311**	iP	**P**	**01 14 33.0**	**+2.1**
OXX				iS	**S**	**01 15 02.5**	**+1.2**
OXX	**Oaxaca**	**2.58**	**311**	iP	**P**	**01 14 33.0**	**+2.1**
OXX				iS	**S**	**01 15 02.0**	**+0.7**
VHO	**Vista Hermosa**	**2.58**	**311**	iP	**P**	**01 14 32.4**	**+1.4**
VHO				iS	**S**	**01 15 01.6**	**+0.3**
CCIG	**Comitan**	**2.61**	**70**	iP	**P**	**01 14 30.5**	**-0.9**
CCIG				iS	**S**	**01 15 01.3**	**-0.7**
TUIG	**Tuzandepetl**	**2.64**	**5**	iP	**P**	**01 14 31.6**	**-0.2**
TUIG				iS	**S**	**01 15 03.3**	**+0.4**
PNIG	**Pinotepa**	**3.46**	**287**	iP	**P**	**01 14 42.8**	**-0.6**
PNIG				iS	**S**	**01 15 19.3**	**-4.3**
IXG	**Ixpaco**	**4.27**	**106**	⇑eP2		01 14 53.3	
IXG				eS	**S**	**01 15 42.9**	**-1.3**
MRL	**Marmol**	**4.83**	**93**	eP	**P**	**01 15 02.1**	**-0.8**
MRL				eS	**S**	**01 15 57.4**	**-0.9**
RBDL	**Robledal**	**5.00**	**104**	eP	**P**	**01 15 06.7**	**+1.4**
RTR	**El Retiro**	**5.10**	**106**	eP	**P**	**01 15 08.7**	**+2.0**
SBLS	**San Blas**	**5.14**	**107**	eP	**P**	**01 15 09.3**	**+2.2**
SNJE	**San Jose**	**5.15**	**106**	eP	**P**	**01 15 09.1**	**+1.8**
ACX	**Acapulco**	**5.24**	**287**	iP	**P**	**01 15 07.5**	**-1.0**
PPM	**Popocatepetl**	**5.25**	**315**	eP	**P**	**01 15 08.4**	**-0.2**
PPM				iS	**S**	**01 16 05.9**	**-2.8**
PPM	**Popocatepetl**	**5.25**	**315**	eP	**P**	**01 15 08.4**	**-0.2**
PPM				iP		01 15 13.5	
PPM				iS	**S**	**01 16 05.9**	**-2.8**
CAIG	**El Cayaco**	**5.61**	**288**	iP	**P**	**01 15 13.3**	**-0.4**
CAIG				iS	**S**	**01 16 10.7**	**-7.1**
LFRS	**El Faro**	**5.72**	**107**	⇓eP	**P**	**01 15 17.8**	**+2.4**
LCBS	**La Ceiba**	**5.79**	**107**	⇓eP	**P**	**01 15 17.4**	**+1.1**
ZIIG	**Zihuatanejo**	**6.87**	**290**	iP	**P**	**01 15 31.7**	**+0.4**
ZIIG				iS	**S**	**01 16 47.0**	**-2.1**
MOIG	**Morelia**	**7.53**	**305**	iP	**P**	**01 15 43.0**	**+2.5**
JTS	**JuntasAbangare**	**10.76**	**117**	P	**P**	**01 16 22.2**	**-3.1**
	1.1nm,0.3s,baz=329,slow=18,SNR=5.0						
JTS	**JuntasAbangare**	**10.76**	**117**	Pn	**P**	**01 16 22.7**	**-2.6**
TXAR	**Lajitas Array**	**16.16**	**331**	P	**P**	**01 17 38.5**	**+2.1**
	0.0nm,0.3s,baz=148,slow=14,SNR=3.9						
AMTX	**Amarillo**	**20.40**	**343**	P	**P**	**01 18 28.7**	**+1.9**
WVT	**Waverly**	**21.54**	**15**	P	**P**	**01 18 36.6**	**-1.8**
	3.2nm,1.0s,mb3.7						
ANMO	**Albuquerque**	**22.16**	**334**	P	**P**	**01 18 46.7**	**+2.1**
	0.5nm,0.4s,mb3.3,baz=163,slow=14,SNR=2.7						
ROSC	**El Rosal**	**22.58**	**115**	P	**P**	**01 18 48.7**	**-0.2**
	7.8nm,0.7s,mb4.3,baz=98,slow=22,SNR=8.3						
SDCO	**Great Sand Dun**	**24.24**	**339**	eP	**P**	**01 19 07.1**	**+2.3**
	1.9nm,0.8s,mb3.6						
SDCO				epP		01 19 17.6	
SDV	**Santo Domingo**	**24.37**	**103**	P	**P**	**01 19 04.9**	**-1.5**
	4.4nm,0.8s,mb4.0,baz=315,slow=2.7,SNR=5.9						
SDV	**Santo Domingo**	**24.37**	**103**	eP	**P**	**01 19 05.0**	**-1.4**
	3.0nm,0.7s,mb3.8						
YBH	**Yreka Blue Hor**	**35.69**	**323**	LR	LR	01 36 50.1	
	comp=Z,65nm,18.2s,MS3.4,baz=249,slow=38						
SCHQ	**Schefferville**	**44.88**	**23**	LR	LR	01 43 02.9	
	comp=Z,37nm,18.5s,MS3.3,baz=55,slow=39						
SIV	**San Ignacio**	**45.54**	**132**	P	**P**	**01 22 03.9**	**-4.7**
	0.8nm,0.7s,mb3.8,baz=319,slow=12,SNR=6.5						
BDFB	**Brasilia**	**55.46**	**122**	P	**P**	**01 23 20.9**	**-3.0**
	1.8nm,0.5s,mb4.4,baz=304,slow=8.8,SNR=4.4						
INK	**Inuvik**	**58.39**	**344**	pP	pP	01 23 54.9	-1.1
	0.9nm,0.6s,baz=95,slow=5.5,SNR=3.6						
NB2	**NORSAR Subarra**	**84.16**	**28**	P	**P**	**01 26 17.9**	**-0.7**
	0.9nm,0.7s,mb4.0,baz=292,slow=5.0						
NOA	**NORSAR Array B**	**84.16**	**28**	P	**P**	**01 26 18.5**	**0.0**
	0.6nm,0.7s,mb3.9,baz=292,slow=5.2,SNR=6.1						
ARCES	**ARCESS Array B**	**85.62**	**18**	P	**P**	**01 26 25.9**	**+0.3**
	1.2nm,0.9s,mb4.1,baz=315,slow=5.1,SNR=4.2						
ARCES				pP	pP	01 26 38.6	+0.6
	1.0nm,0.5s,baz=304,slow=4.4,SNR=11						
GERES	**GERESS Array B**	**90.17**	**39**	P	**P**	**01 26 47.4**	**-0.6**
	0.2nm,0.3s,mb3.9,baz=297,slow=6.0,SNR=4.3						

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*IDC **17** 01:16:57.9±12.0, 31.33N×50.75E, mb3.7/5, mb1 3.7/7, mb1mx3.5/22, mbtmp3.7/7, ML3.5/2, Error ellipse: s-maj=218.0km s-min=41.7km az=152.0*
*CSEM **17** 01:17:04.4±0.1, 31.92N×50.29E, h2^{km}, ML3.2, Error ellipse: s-maj=2.7km s-min=1.9km az=13.0*
*THR **17** 01:17:05.6±0.6, 31.79N×50.28E, h14^{km}±5^{km}, ML3.0*
*TEH **17** 01:17:07.9, 31.93N×50.29E, h10^{km}, Mn3.2*
ISC 17 01:17:05.2±0.6, 31.88N±0.07×50.19E±0.05, h10^{km}, n25, σ1^{s}30/26, mb3.6/5, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGO	**Shushtar**	**1.21**	**281**	ePG	**Pg**	**01 17 29.5**	**+0.1**
SHGR	**Shooshtar-Gavs**	**1.21**	**281**	ePG	**Pg**	**01 17 29.4**	**+0.1**
SHGR				AML	AML	01 17 55.7	
	comp=N,295nm,0.5s						
IGAR	**Garneh**	**1.74**	**77**	Pn	**Pn**	**01 17 34.3**	**-1.5**
IKLH	**Kalahroud**	**1.85**	**39**	Pn	**Pn**	**01 17 36.7**	**-0.7**
IZEF	**Zefreh**	**2.07**	**60**	Pn	**Pn**	**01 17 40.8**	**+0.2**
NASN	**Na'in**	**2.40**	**67**	ePN	**Pn**	**01 17 46.6**	**+1.4**
NASN				eSG	**Sg**	**01 18 20.1**	**-5.0**
ASAO	**Ashtian**	**2.67**	**357**	ePN	**Pn**	**01 17 51.9**	**+2.8**
ASAO				AML	AML	01 18 37.5	
	comp=N,48nm,0.6s						
IQOM	**Qom**	**3.05**	**14**	Pn	**Pn**	**01 17 54.6**	**+0.1**
IPAR	**Pars**	**3.18**	**129**	Pn	**Pn**	**01 17 56.9**	**+0.5**
IKOM	**Komasi**	**3.21**	**316**	Pn	**Pn**	**01 17 58.6**	**+1.8**
IVRN	**Varamin**	**3.37**	**22**	Pn	**Pn**	**01 18 00.0**	**+1.0**
IRAZ	**Razeghan**	**3.53**	**356**	Pn	**Pn**	**01 18 08.0**	**+6.7**
IMOK	**Mook**	**3.56**	**142**	Pn	**Pn**	**01 18 03.1**	**+1.3**
IVIS	**Veys**	**3.85**	**314**	Pn	**Pn**	**01 18 07.0**	**+1.1**
IGHG	**Ghaleghazi**	**3.90**	**310**	Pn	**Pn**	**01 18 07.3**	**+0.7**
IDMV	**Damavand**	**4.00**	**22**	Pn	**Pn**	**01 18 07.9**	**-0.1**
IDHR	**Dehrash**	**4.25**	**312**	Pn	**Pn**	**01 18 11.7**	**+0.1**
IFIR	**Firoozkooh**	**4.32**	**29**	Pn	**Pn**	**01 18 12.1**	**-0.4**
ASF	**Jabal al Asfar**	**11.29**	**275**	Pn	**P**	**01 19 46.7**	**-3.0**
	comp=N,0.8nm,0.3s,baz=225,slow=2.2,SNR=12						
BRTR	**Keskin Array B**	**15.53**	**305**	Pn	**P**	**01 20 47.9**	**+2.0**
	comp=N,0.1nm,0.3s,baz=139,slow=14,SNR=2.4						
IDI	**Anoyia**	**21.34**	**286**	P	**P**	**01 21 53.8**	**-0.9**
	comp=N,2.9nm,0.7s,mb3.7,baz=98,slow=16,SNR=6.2						
FINES	**FINESS Array B**	**33.49**	**339**	P	**P**	**01 23 44.2**	**-2.3**
	comp=N,0.5nm,0.5s,mb3.7,baz=127,slow=9.5,SNR=6.1						
HFS	**Hagfors**	**37.13**	**330**	P	**P**	**01 24 15.8**	**-1.8**
	comp=N,0.5nm,0.3s,mb3.8,baz=135,slow=8.4,SNR=7.4						
NOA	**NORSAR Array B**	**38.65**	**331**	P	**P**	**01 24 28.4**	**-1.9**
	comp=N,0.3nm,0.6s,mb3.2,baz=119,slow=8.2,SNR=3.2						
ARCES	**ARCESS Array B**	**40.20**	**347**	P	**P**	**01 24 41.2**	**-1.9**
	comp=N,0.5nm,0.5s,mb3.5,baz=135,slow=6.9,SNR=5.0						

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*TRN **17** 01:22:36.3, 18.72N×64.35W, h35^{km}, MD3.7*
*RSPR **17** 01:22:38.5, 18.89N×64.39W, h41^{km}±23^{km}, MD3.6/8, MD3.6/8*
*NEIC **17** 01:22:38.5, 18.89N×64.39W, h41^{km}, MD3.6(RSPR), After RSPR.*
ISC 17 01:22:36.3±1.2, 18.8N±0.2×64.34W±0.04, h81^{km}±24^{km}, n13, σ0^{s}70/21, 6C-3D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDVI	**St. Croix**	**1.09**	**202**	⇓eP	**P**	**01 22 57.4**	**+0.7**
CDVI				eS	**S**	**01 23 12.3**	**+0.3**
STMA	**St. Maarten, A**	**1.37**	**122**	eP	**P**	**01 23 00.6**	**+0.2**
STMA				eS	**S**	**01 23 18.1**	**-0.2**
HUMP	**Col San Antoni**	**1.57**	**247**	⇑eP	**P**	**01 23 02.5**	**-0.5**
HUMP				eS	**S**	**01 23 22.2**	**-0.5**
SJG	**San Juan**	**1.84**	**250**	⇑eP	**P**	**01 23 06.5**	**-0.2**
SJG	**San Juan**	**1.84**	**250**	⇓eP	**P**	**01 23 06.3**	**-0.4**
SJG				eS	**S**	**01 23 28.2**	**-0.8**
ICM	**Isla Caja Muer**	**2.25**	**248**	⇑eP	**P**	**01 23 13.9**	**+1.6**
ICM				eS	**S**	**01 23 39.9**	**+0.9**
PORP	**Portuguez**	**2.30**	**252**	⇓eP	**P**	**01 23 13.2**	**+0.2**
AOPR	**Arecibo Observ**	**2.33**	**260**	⇑eP	**P**	**01 23 13.3**	**-0.1**
AOPR				eS	**S**	**01 23 39.8**	**-1.1**
MGP	**Maguayo**	**2.72**	**254**	⇑eP	**P**	**01 23 19.2**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.74**	**254**	⇑eP	**P**	**01 23 19.4**	**+0.3**
CRPR				eS	**S**	**01 23 50.8**	**-0.4**
SEG	**Port Louis**	**3.58**	**131**	eP	**P**	**01 23 30.9**	**+0.1**
BCG	**Bois Riant Cap**	**3.72**	**135**	eP	**P**	**01 23 33.9**	**+1.2**
DEG	**La Desirade**	**3.96**	**127**	eP	**P**	**01 23 35.5**	**-0.6**
DEG				eS	**S**	**01 24 20.5**	**-1.1**

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*BJI **17** 01:32:51.6, 21.30N×121.10E, h26^{km}, mB4.6, mb4.4, Ms4.4, Msz4.1*
*MAN **17** 01:32:52.6, 21.18N×121.21E, h20^{km}, mb4.8, ML3.7, MS3.7*
*MOS **17** 01:32:52.1±1.1, 21.27N×121.20E, h33^{km}, mb4.8/26, MS4.3/5, Error ellipse: s-maj=13.8km s-min=7.9km az=109.1*
*NEIC **17** 01:32:53.3±2.3, 21.27N×121.24E, h30^{km}±15^{km}, mb4.7/21, Error ellipse: s-maj=8.8km s-min=7.0km az=88.0*
*JMA **17** 01:32:54.6±0.2, 21.55N×121.18E, h203^{km}*
*IDC **17** 01:32:55.4±4.4, 21.26N×121.23E, h47^{km}±42^{km}, mb4.1/14, mb1 4.3/14, mb1mx4.2/19, mbtmp4.3/14, MS4.1/6, Ms1 4.1/6, ms1mx3.6/27, Error ellipse: s-maj=23.3km s-min=13.4km az=69.0*
ISC 17 01:32:51.8±1.2, 21.28N±0.02×121.11E±0.03, h29^{km}±9^{km}, h27^{km}±2.2^{km}:pP-P, n120, σ1^{s}07/140, mb4.5/43, MS4.1/14, 4C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	**Basco**	**1.16**	**136**	iP	**Pn**	**01 33 10.8**	**-1.4**
BBP				eS	**Sn**	**01 33 25.8**	**-1.4**
NACB	**Ninganchiao**	**2.92**	**9**	ePn	**Pn**	**01 33 36.9**	**-0.5**
YHNB	**Yeheng**	**3.38**	**4**	ePn	**Pn**	**01 33 44.5**	**+0.4**
YOJ	**Yonaguni jima**	**3.62**	**29**	P	**Pn**	**01 33 49.0**	**+1.6**
YOJ				S	**Sn**	**01 34 31.0**	**+1.3**
CVP	**Callao Caves**	**3.62**	**169**	⇑eP	**Pn**	**01 33 47.2**	**-0.2**
CVP				iS	**Sn**	**01 34 31.0**	**+1.3**
TATO	**Taipei**	**3.69**	**5**	Pn	**Pn**	**01 33 46.2**	**-2.3**
HATJ	**Hateruma jima**	**3.72**	**42**	P	**Pn**	**01 33 50.5**	**+1.6**
HATJ				S	**Sn**	**01 34 33.3**	**+1.0**
JKRS	**Kuro-shima**	**3.98**	**42**	P	**Pn**	**01 33 53.5**	**+1.0**
JKRS				S	**Sn**	**01 34 39.5**	**+0.7**
JIJ	**Ishigaki jima**	**4.16**	**42**	P	**Pn**	**01 33 55.9**	**+0.9**
JIJ				S	**Sn**	**01 34 43.3**	**0.0**
QZH	**Quanzhou**	**4.32**	**328**	eP	**Pn**	**01 33 55.8**	**-1.5**
QZH				S	**Sn**	**01 34 42.0**	**-5.4**
QZH				LR	LR		
	comp=N,1µm,7.8s						
QZH				LR	LR		
	comp=E,4µm,9.4s						
QZH				LR	LR		
	comp=Z,4µm,17.8s						
CAUP	**Cauayan**	**4.37**	**171**	eP	**Pn**	**01 34 02.8**	**+4.8**
JTJ	**Tarama**	**4.71**	**44**	P	**Pn**	**01 34 02.9**	**0.0**
JTJ				S	**Sn**	**01 34 56.0**	**-1.2**
BALP	**Baler**	**5.53**	**175**	eP	**Pn**	**01 34 16.5**	**+2.1**
JOW	**Kunigami**	**8.57**	**48**	LR	LR	01 38 39.3	
	comp=Z,721nm,18.9s,baz=294,slow=40						
SSE	**Sheshan**	**9.78**	**0**	P	**P**	**01 35 12.4**	**-1.3**
SSE				AP		01 35 19.4	
SSE				S	**Sn**	**01 37 02.5**	**-1.1**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s						
SSE				AMB	AMB		
	comp=Z,40nm,7.8s						
SSE				LR	LR		
	comp=N,330nm,26.5s						
SSE				LR	LR		
	comp=E,900nm,26.5s						
SSE				LR	LR		
	comp=Z,630nm,18.5s						
SSE	**Sheshan**	**9.78**	**0**	P	**P**	**01 35 12.4**	**-1.3**
	comp=Z,12nm,0.7s						
SSE				pP		01 35 19.4	
SSE				S	**Sn**	**01 37 02.5**	**-1.1**
NJ2	**Nanjing**	**10.91**	**350**	eP	**P**	**01 35 28.6**	**-0.7**
NJ2				AP		01 35 36.0	
NJ2				XP		01 35 39.3	
NJ2				S	**S**	**01 37 29.0**	**-2.5**
NJ2				XS		01 37 45.0	

NJ2				LR	LR		
	comp=N,430nm,8.8s						
NJ2				LR	LR		
	comp=E,540nm,8.3s						
NJ2				LR	LR		
	comp=Z,620nm,11.4s						
GYA	**Guiyang**	**14.18**	**294**	P	**P**	**01 36 14.4**	**+1.4**
GYA				AP		01 36 20.6	
GYA				XP		01 36 23.8	
GYA				AMB	AMB		
	comp=Z,90nm,2.1s						
GYA				LR	LR		
	comp=N,1µm,15.9s						
GYA				LR	LR		
	comp=E,600nm,16.2s						
GYA				LR	LR		
	comp=Z,730nm,16.5s						
TIA	**Tai'an**	**15.28**	**348**	*e*P	**P**	**01 36 28.3**	**+1.0**
XAN	**Xi'an**	**16.66**	**322**	P	**P**	**01 36 44.1**	**-0.8**
XAN				AP		01 36 52.5	
XAN				S	**S**	**01 39 40.0**	**-8.0**
XAN				LR	LR		
	comp=N,330nm,9.8s						
XAN				LR	LR		
	comp=E,480nm,12.4s						
XAN				LR	LR		
	comp=Z,600nm,13.9s						
CD2	**Chengdu**	**18.27**	**305**	P	**P**	**01 37 04.4**	**-0.8**
CD2				S	**S**	**01 40 22.4**	**-2.5**
CD2				AMB	AMB		
	comp=Z,20nm,1.2s						
CD2				AMB	AMB		
	comp=Z,120nm,6.0s						
CD2				LR	LR		
	comp=N,1µm,16.8s						
CD2				LR	LR		
	comp=Z,580nm,14.4s						
CBIJ	**Chichi jima**	**20.07**	**69**	LR	LR	01 42 56.4	
	comp=Z,168nm,21.2s,MS3.4,baz=324,slow=30						
SNY	**Shenyang**	**20.59**	**5**	⇓P	**P**	**01 37 33.3**	**+2.1**
SNY				AMB	AMB		
	comp=Z,10.0nm,1.0s						
SNY				AMB	AMB		
	comp=Z,80nm,6.3s						
SNY				LR	LR		
	comp=N,520nm,19.8s,MS4.1						
SNY				LR	LR		
	comp=E,600nm,18.3s,MS4.1						
SNY				LR	LR		
	comp=Z,580nm,17.2s,MS4.0						
CMAR	**Chiang Mai Arr**	**21.03**	**266**	P	**P**	**01 37 36.2**	**+0.4**
CMAR						01 41 42.0	
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,265nm,18.5s						
CMAR	**Chiang Mai Arr**	**21.03**	**266**	P	**P**	**01 37 36.1**	**+0.3**
	comp=Z,2.2nm,0.6s,mb3.6,baz=67,slow=9.9,SNR=8.2						
CMAR				PcP	PcP	01 41 42.0	-0.3
	comp=Z,1.3nm,0.8s,baz=14,slow=1.2,SNR=4.6						
CMAR				LR	LR	01 46 34.6	
	comp=Z,265nm,18.5s,MS3.6,baz=85,slow=39						
CMAR	**Chiang Mai Arr**	**21.03**	**266**	P	**P**	**01 37 36.1**	**+0.3**
CMAR				PcP	PcP	01 41 42.0	-0.3
CMAR				LR	LR	01 46 34.6	
LZH	**Lanzhou**	**21.09**	**318**	⇓P	**P**	**01 37 37.0**	**+0.7**
LZH				AP		01 37 44.5	
LZH				XP		01 37 49.6	
LZH				PP	PP	01 38 00.5	+0.9
LZH				*e*S	**S**	**01 41 25.0**	**+0.4**
LZH				SS	SS	01 42 00.0	+2.0
LZH				AMB	AMB		
	comp=Z,60nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,190nm,4.7s						
LZH				LR	LR		
	comp=N,650nm,10.0s						
LZH				LR	LR		
	comp=Z,1µm,13.2s,MS4.5						
LZH	**Lanzhou**	**21.09**	**318**	⇓P	**P**	**01 37 37.0**	**+0.7**
LZH				*SP		01 37 49.6	
LZH						01 38 00.5	
LZH				*e*S	**S**	**01 41 25.0**	**+0.4**
LZH				SS	SS	01 42 00.0	+2.0
LZH				pmax	pmax		
	comp=Z,61nm,1.3s,mb4.8						
LZH				MLR	MLR		
	comp=Z,1µm,13.2s,MS4.5						
LZH	**Lanzhou**	**21.09**	**318**	⇓P	**P**	**01 37 37.0**	**+0.7**
	comp=Z,61nm,1.3s,mb4.8						
LZH				pP		01 37 44.5	
LZH				sP		01 37 49.6	
LZH				PP	PP	01 38 00.5	+0.9
LZH				*e*S	**S**	**01 41 25.0**	**+0.4**
LZH				sS		01 41 29.8	
LZH				SS	SS	01 42 00.0	+2.0
LZH				LR	LR		
	comp=Z,1µm,13.2s,MS4.5						
HHC	**Hu-ho-hao-te**	**21.12**	**340**	*e*P	**P**	**01 37 37.6**	**+1.0**
HHC				AP		01 37 44.9	
HHC				XP		01 37 49.0	
HHC				PP	PP	01 37 57.8	-2.2
HHC				S	**S**	**01 41 18.3**	**-6.9**
HHC				SS	SS	01 41 56.8	-1.9
HHC				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.5						
HHC				AMB	AMB		
	comp=Z,160nm,5.7s						
HHC				LR	LR		
	comp=N,1µm,17.8s,MS4.4						
HHC				LR	LR		
	comp=E,810nm,14.3s,MS4.4						
HHC				LR	LR		
	comp=Z,930nm,17.1s,MS4.2						
MAJO	**Matsushiro**	**21.29**	**41**	*e*P	**P**	**01 37 35.4**	**-2.9**
MAJO				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.5						
MAJO	**Matsushiro**	**21.29**	**41**	*e*P	**P**	**01 37 35.4**	**-3.0**
	comp=Z,32nm,1.3s,mb4.5						
MAT	**Matsushiro**	**21.29**	**41**	*e*P	**P**	**01 37 39.0**	**+0.7**
MAT				S	**S**	**01 41 41.0**	**+13**
MAT				pmax	pmax		
	comp=Z,58nm,1.5s,mb4.7						
MAT	**Matsushiro**	**21.29**	**41**	*e*P	**P**	**01 37 39.0**	**+0.7**
	comp=Z,58nm,1.5s,mb4.7						
MAT				S	**S**	**01 41 41.0**	**+13**
MAT	**Matsushiro**	**21.29**	**41**	P	**P**	**01 37 39.2**	**+0.9**
MAT				*e*S	**S**	**01 41 41.0**	**+13**
MJAR	**Matsushiro Arr**	**21.29**	**41**	P	**P**	**01 37 38.8**	**+0.5**
MJAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MJAR	**Matsushiro Arr**	**21.29**	**41**	P	**P**	**01 37 38.8**	**+0.5**
	comp=Z,9.8nm,0.9s,mb4.1,baz=233,slow=9.1,SNR=21						
BTO	**Baotou**	**21.45**	**336**	*e*P	**P**	**01 37 40.3**	**+0.4**
BTO				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb4.5						
CN2	**Changchun**	**22.75**	**8**	*e*P	**P**	**01 37 53.9**	**+1.1**
CN2				*e*XP		01 38 04.0	
CN2				*e*S	**S**	**01 41 56.0**	**+0.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
CN2				LR	LR		
	comp=N,700nm,18.0s,MS4.3						
CN2				LR	LR		
	comp=E,700nm,18.0s,MS4.3						
CN2				LR	LR		
	comp=Z,700nm,17.0s,MS4.2						
MDJ	**Mudanjiang**	**24.31**	**15**	P	**P**	**01 38 08.8**	**+0.8**
MDJ				AP		01 38 14.1	
MDJ				XP		01 38 17.5	
MDJ				PCP	PcP	01 41 47.4	-1.3
MDJ				S	**S**	**01 42 27.8**	**+5.6**
MDJ				SCP		01 45 25.0	
MDJ				PCS		01 45 27.5	
MDJ				SCS	ScS	01 49 13.1	+3.1
MDJ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,40nm,4.3s						
MDJ				LR	LR		
	comp=N,190nm,23.0s,MS4.0						
MDJ				LR	LR		
	comp=E,460nm,21.9s,MS4.0						
MDJ				LR	LR		
	comp=Z,300nm,16.5s						
MDJ	**Mudanjiang**	**24.31**	**15**	*e*P	**P**	**01 38 08.8**	**+0.8**
	comp=Z,15nm,0.9s,mb4.4						
KULM	**Kulim**	**25.42**	**234**	P	**P**	**01 38 21.4**	**+2.5**
GTA	**Gaotai**	**25.66**	**319**	P	**P**	**01 38 21.4**	**+0.5**
GTA				AP	pP	01 38 30.3	+1.0
GTA				XP	sP	01 38 35.0	+1.9
GTA				PP	PP	01 39 03.8	+2.8
GTA				PPP	PPP	01 39 15.8	+3.1
GTA				PCP	PcP	01 41 48.3	-3.4
GTA				S	**S**	**01 42 48.8**	**+3.8**
GTA				XS		01 43 05.3	
GTA				SCP		01 45 24.3	
GTA				PCS		01 45 27.3	
GTA				SCS	ScS	01 49 11.8	-3.7
GTA				AMB	AMB		
	comp=Z,70nm,8.7s						
GTA				LR	LR		
	comp=N,260nm,22.1s,MS3.9						
GTA				LR	LR		
	comp=E,240nm,17.9s,MS3.9						
GTA				LR	LR		
	comp=Z,330nm,18.2s,MS3.9						
ULN	**Ulaanbaatar**	**28.84**	**340**	*e*P	**P**	**01 38 49.3**	**-0.5**
ULN				pmax	pmax		
	comp=Z,29nm,1.3s,mb4.8						
ULN	**Ulaanbaatar**	**28.84**	**340**	*e*P	**P**	**01 38 49.3**	**-0.5**
	comp=Z,29nm,1.3s,mb4.8						
SONM	**Songino Array**	**29.03**	**339**	P	**P**	**01 38 51.1**	**-0.3**
	comp=Z,6.1nm,0.9s,mb4.3,baz=164,slow=9.0,SNR=30						
SONM				LR	LR	01 52 20.0	
	comp=Z,959nm,18.6s,MS4.4,baz=151,slow=40						
YSS	**Yuzh-Sakhalins**	**31.05**	**29**	*e*P	**P**	**01 39 08.0**	**-1.5**
YSS				*e*	pP	01 39 15.0	-2.9
YSS				MLR	MLR		
	comp=Z,200nm,16.0s,MS3.9						
CIT	**Chita**	**31.24**	**351**	*e*P	**P**	**01 39 09.9**	**-1.2**
CIT				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.9						
ZAK	**Zakamensk**	**32.26**	**338**	*e*P	**P**	**01 39 18.8**	**-1.2**
ZAK				*e*		01 40 27.7	
ZAK				*e*		01 42 06.9	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.5						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.5						
TLY	**Talaya**	**33.25**	**340**	*e*P	**P**	**01 39 28.2**	**-0.4**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
TLY	**Talaya**	**33.25**	**340**	*e*P	**P**	**01 39 28.2**	**-0.5**
	comp=Z,7.2nm,1.1s,mb4.5						
WMQ	**Urumqi**	**35.66**	**317**	*e*P	**P**	**01 39 51.8**	**+2.4**
WMQ				AP	pP	01 40 01.0	+3.0
WMQ				XP	sP	01 40 05.9	+4.3
WMQ				LR	LR		
	comp=N,140nm,22.0s,MS4.0						
WMQ				LR	LR		
	comp=E,240nm,24.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,180nm,22.0s,MS3.8						
FITZ	**Fitzroy Crossi**	**39.39**	**173**	*e*P	**P**	**01 40 19.8**	**-1.2**
	comp=Z,8.0nm,1.0s,mb4.4						
FITZ	**Fitzroy Crossi**	**39.39**	**173**	P	**P**	**01 40 20.0**	**-1.0**
	comp=Z,4.5nm,0.7s,mb4.3,baz=49,slow=5.2,SNR=7.3						
MKAR	**Makanchi Array**	**40.41**	**318**	P	**P**	**01 40 29.8**	**+0.7**
MKAR						01 42 31.9	
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**40.41**	**318**	P	**P**	**01 40 29.8**	**+0.8**
	comp=Z,5.1nm,0.9s,mb4.2,baz=111,slow=10,SNR=8.0						
MKAR				PcP	PcP	01 42 31.9	-0.5
	comp=Z,1.8nm,0.9s,baz=90,slow=6.1,SNR=3.7						
WRAB	**Tennant Creek**	**42.96**	**162**	*e*P	**P**	**01 40 49.6**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
WRAB	**Tennant Creek**	**42.96**	**162**	*e*P	**P**	**01 40 49.6**	**-0.7**
	comp=Z,13nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**42.97**	**162**	P	**P**	**01 40 48.7**	**-1.7**
WRA						01 42 40.6	
WRA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WRA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	**42.97**	**162**	P	**P**	**01 40 48.7**	**-1.7**
	comp=Z,6.2nm,0.7s,mb4.4,baz=344,slow=8.8,SNR=33						
WRA				PcP	PcP	01 42 40.6	-0.6
	comp=Z,2.5nm,0.8s,baz=343,slow=3.7,SNR=11						
WB2	**Warramunga Arr**	**42.97**	**162**	*e*P	**P**	**01 40 48.7**	**-1.7**
NVS	**Novosibirsk**	**43.93**	**329**	*i* P	**P**	**01 40 56.5**	**-1.2**
KKAR	**Karatay Array**	**47.21**	**310**	*i* P	**P**	**01 41 24.5**	**+0.5**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
VOSK	**Vostochnaya**	**49.45**	**322**	P	**P**	**01 41 40.8**	**-0.5**
VOSK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
BVAR	**Borovoye Array**	**49.89**	**322**	P	**P**	**01 41 45.0**	**+0.4**
	comp=Z,4.0nm,0.8s,mb4.5,baz=111,slow=12,SNR=16						
BVAR				PcP	PcP	01 43 05.2	+0.1
	comp=Z,1.8nm,0.7s,baz=242,slow=38,SNR=4.8						
TIXI	**Tiksi**	**50.58**	**3**	*e*P	**P**	**01 41 43.4**	**-6.3**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,347nm,17.0s,MS4.4						
ZRNK	**Zerenda**	**50.66**	**322**	P	**P**	**01 41 50.4**	**-0.1**
ZRNK				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
AB31	**Akbulak array**	**55.44**	**316**	P	**P**	**01 42 25.4**	**-0.6**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
STKA	**Stephens Creek**	**56.38**	**159**	*e*P	**P**	**01 42 32.2**	**-0.9**
	comp=Z,3.8nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**56.38**	**159**	P	**P**	**01 42 32.1**	**-1.0**
	comp=Z,5.9nm,0.8s,mb4.7,baz=326,slow=6.0,SNR=8.5						
ARU	**Arti**	**57.39**	**324**	⇓*i*P	**P**	**01 42 38.3**	**-1.6**
ARU				*e*		01 43 30.1	
ARU				*e*		01 44 47.5	
ARU				*e*S	**S**	**01 50 34.2**	**+1.3**
ARU				*e*SS	SS	01 54 24.0	0.0
ARU				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
ARU	**Arti**	**57.39**	**324**	*e*P	**P**	**01 42 38.8**	**-1.1**
	comp=Z,15nm,1.1s,mb4.9						
HASS	**Wahat al Ahsa'**	**65.03**	**289**	P	**P**	**01 43 31.7**	**-0.3**
MZLS	**Mizel**	**69.28**	**289**	P	**P**	**01 43 59.0**	**+0.3**
SPU	**Mount Spurr**	**70.09**	**31**	*e*P	**P**	**01 44 02.5**	**-0.5**
ARSS	**Ar Rass**	**70.54**	**291**	P	**P**	**01 44 11.0**	**+4.6**
HILS	**Ha'il**	**71.41**	**293**	P	**P**	**01 44 12.3**	**+0.6**
MALT	**Malatya**	**71.56**	**305**	*e*P	**P**	**01 44 13.1**	**+0.7**
MALT				*e*		01 44 24.4	
MALT				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
MALT	**Malatya**	**71.56**	**305**	*e*P	**P**	**01 44 13.1**	**+0.7**
	comp=Z,9.7nm,1.0s,mb4.7						
MALT				*e*		01 44 24.4	
KEV	**Kevo**	**71.64**	**339**	*e*p	**P**	**01 44 12.1**	**-0.2**
	comp=Z,4.1nm,0.9s,mb4.4						
KEV	**Kevo**	**71.64**	**339**	*e*P	**P**	**01 44 12.1**	**-0.2**
KEV				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
SML	**Sawmill**	**71.75**	**30**	*e*P	**P**	**01 44 12.5**	**-0.6**
SML				*e*	pP	01 44 21.7	-0.4
ILAR	**Eielson Array**	**71.82**	**27**	P	**P**	**01 44 12.1**	**-1.4**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**71.82**	**27**	P	**P**	**01 44 12.1**	**-1.4**
	comp=Z,2.4nm,0.8s,mb4.2,baz=278,slow=5.8,SNR=20						
ARCES	**ARCESS Array B**	**72.20**	**338**	P	**P**	**01 44 15.8**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**72.20**	**338**	P	**P**	**01 44 15.8**	**+0.1**
	comp=Z,2.2nm,0.8s,mb4.2,baz=79,slow=6.2,SNR=8.6						
DIV	**Divide**	**73.09**	**30**	*e*P	**P**	**01 44 20.4**	**-0.6**
	comp=Z,22nm,1.0s,mb5.0						
KAF	**Kangasniemi**	**73.64**	**331**	*e*p	**P**	**01 44 23.1**	**-1.0**
	comp=Z,4.8nm,0.9s,mb4.4,baz=73,slow=5.4						
KAF	**Kangasniemi**	**73.64**	**331**	*e*P	**P**	**01 44 23.1**	**-1.0**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
FINES	**FINESS Array B**	**73.91**	**330**	P	**P**	**01 44 25.6**	**-0.1**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES				MLR	MLR		
	comp=Z,117nm,19.6s						
FINES	**FINESS Array B**	**73.91**	**330**	P	**P**	**01 44 25.6**	**-0.1**
	comp=Z,4.0nm,0.9s,mb4.4,baz=76,slow=7.9,SNR=20						
FINES				LR	LR	02 21 03.5	
	comp=Z,117nm,19.6s,MS4.2,baz=122,slow=39						
BRTR	**Keskin Array B**	**74.84**	**307**	P	**P**	**01 44 31.8**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**74.84**	**307**	P	**P**	**01 44 31.8**	**+0.2**
	comp=Z,1.3nm,0.9s,mb3.9,baz=112,slow=6.7,SNR=8.4						
INK	**Inuvik**	**75.94**	**22**	*e*P	**P**	**01 44 36.4**	**-0.9**
INK				pmax	pmax		
	comp=Z,21nm,1.3s						
INK	**Inuvik**	**75.94**	**22**	*e*P	**P**	**01 44 36.4**	**-0.8**
	comp=Z,21nm,1.3s,mb4.9						
EIL	**Elat**	**76.58**	**297**	*e*P	**P**	**01 44 41.8**	**+0.1**
	comp=Z,10nm,1.3s,mb4.6						
DAG	**Danmarks Havn**	**79.21**	**351**	⇑*e*P	**P**	**01 44 55.2**	**-0.1**
DAG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
DAG	**Danmarks Havn**	**79.21**	**351**	⇑*e*P	**P**	**01 44 55.2**	**-0.1**
	comp=Z,3.0nm,0.8s,mb4.3						
DAG	**Danmarks Havn**	**79.21**	**351**	⇑*i*P	**P**	**01 44 55.2**	**-0.1**
	comp=Z,3.0nm,0.8s,mb4.3						
NB2	**NORSAR Subarra**	**80.75**	**332**	P	**P**	**01 45 03.0**	**-0.7**
	comp=Z,0.7nm,0.9s,mb3.6,baz=65,slow=5.6						
NOA	**NORSAR Array B**	**80.75**	**332**	P	**P**	**01 45 03.1**	**-0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,261nm,18.6s						
NOA	**NORSAR Array B**	**80.75**	**332**	P	**P**	**01 45 03.1**	**-0.6**
	comp=Z,1.1nm,0.8s,mb3.8,baz=59,slow=5.5,SNR=5.4						
NOA				LR	LR	02 24 54.0	
	comp=Z,261nm,18.6s,MS4.6,baz=60,slow=39						
RES	**Resolute Bay**	**81.53**	**9**	*e*P	**P**	**01 45 07.4**	**-0.2**
RES				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
RES	**Resolute Bay**	**81.53**	**9**	*e*P	**P**	**01 45 07.4**	**-0.1**
	comp=Z,16nm,1.0s,mb4.9						
DPC	**Dobruska-Polom**	**82.84**	**321**	*e*P	**P**	**01 45 16.4**	**+1.6**
PRU	**Pruhonice**	**84.03**	**322**	*e*P	**P**	**01 45 21.9**	**+1.0**
CLL	**Collm**	**84.32**	**323**	*e*P	**P**	**01 45 23.0**	**+0.7**
CLL				*e**PP	pP	01 45 30.0	-1.5
CLL	**Collm**	**84.32**	**323**	P	**P**	**01 45 23.0**	**+0.7**
CLL				*e**PP	pP	01 45 30.0	-1.5
KHC	**Kasperske Hory**	**84.98**	**321**	*e*P	**P**	**01 45 26.2**	**+0.6**
GERES	**GERESS Array B**	**85.03**	**321**	P	**P**	**01 45 26.7**	**+0.8**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	**GERESS Array B**	**85.03**	**321**	P	**P**	**01 45 26.7**	**+0.8**
	comp=Z,1.0nm,0.9s,mb3.9,baz=53,slow=6.7,SNR=8.2						
NKC	**Novy Kostel**	**85.13**	**322**	*e*P	**P**	**01 45 27.6**	**+1.3**
SUMG	**Summit**	**85.37**	**354**	*e*P	**P**	**01 45 28.4**	**+1.3**
	comp=Z,6.0nm,0.9s,mb4.7						
YKW3	**Yellowknife Ar**	**85.62**	**23**	*e*P	**P**	**01 45 28.9**	**+0.4**
BNI	**Bardonecchia**	**91.08**	**320**	*e*P	**P**	**01 45 55.7**	**+0.7**
BNI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.5						
BNI	**Bardonecchia**	**91.08**	**320**	*e*P	**P**	**01 45 55.7**	**+0.7**
	comp=Z,1.9nm,0.8s,mb4.5						
FFC	**Flin Flon**	**95.81**	**23**	*e*P	**P**	**01 46 16.9**	**+0.4**
FFC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.6						
FFC	**Flin Flon**	**95.81**	**23**	*e*P	**P**	**01 46 16.9**	**+0.4**
	comp=Z,2.1nm,0.8s,mb4.6						
SDV	**Santo Domingo**	**147.88**	**22**	PKPbc	PKPdf	01 52 33.8	-3.3
	comp=Z,4.2nm,0.6s,baz=25,slow=3.6,SNR=6.7						
SDV	**Santo Domingo**	**147.88**	**22**	*e*PKPbc	PKPdf	01 52 34.0	-3.1

NEIC ***17*** *01:47:35.3±0.6, 52.35N×170.10W, h49^{km}±5^{km}, mb3.8/5, ML3.6(AEIC), Error ellipse: s-maj=11.9km s-min=4.0km az=163.0*

IDC ***17*** *01:47:36.6±4.1, 52.39N×170.13W, h60^{km}±36^{km}, mb3.6/11, mb1 3.8/13, mb1mx3.6/24, mbtmp3.8/13, ML3.7/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/26, Error ellipse: s-maj=29.4km s-min=16.7km az=175.0*

ISC 17 01:47:34.1±0.7**, 52.4N**±0.1×**170.13W**±0.07**, h54**^{km}±6^{km}**, n36, σ0.^{s}82**/38**, mb3.8**/15**, MS3.3**/1**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.99**	**51**	P	**P**	**01 47 50.6**	**-1.5**
NIKO				S	**S**	**01 48 04.0**	**-1.4**
OKFG	**Magazine Ridge**	**1.71**	**51**	P	**P**	**01 48 02.1**	**-0.1**
OKFG				S	**S**	**01 48 23.9**	**+1.0**
ATKA	**Atka Island**	**2.50**	**268**	P	**P**	**01 48 12.3**	**-1.0**
ATKA				S	**S**	**01 48 44.5**	**+1.7**
MTBL	**Makushin Table**	**2.63**	**51**	P	**P**	**01 48 15.7**	**+0.5**
UNV	**Unalaska Valle**	**2.65**	**54**	P	**P**	**01 48 15.2**	**-0.3**
UNV				S	**S**	**01 48 48.1**	**+1.6**
AKGG	**Akutan Green G**	**3.10**	**52**	P	**P**	**01 48 22.6**	**+0.9**
GSTR	**Great Sitkin T**	**3.66**	**268**	P	**P**	**01 48 30.0**	**+0.3**
GSMY	**Great Sitkin M**	**3.66**	**267**	P	**P**	**01 48 29.8**	**+0.1**
GSTD	**Great Sitkin T**	**3.71**	**268**	P	**P**	**01 48 30.3**	**-0.1**
GSTD				S	**S**	**01 49 14.1**	**+0.7**
ADAG	**Mount Adagdak**	**4.00**	**267**	P	**P**	**01 48 34.5**	**0.0**
KIWB	**Kanaga Island**	**4.36**	**266**	*e*P	**P**	**01 48 39.0**	**-0.6**
KIMD	**Kanaga Island**	**4.43**	**265**	P	**P**	**01 48 40.0**	**-0.5**
SPIA	**Saint Paul Isl**	**4.84**	**359**	P	**P**	**01 48 46.6**	**+0.3**
FX1	**Attu Island--F**	**10.18**	**280**	P	**P**	**01 49 59.5**	**-0.5**
	3.3nm,0.3s,baz=144,slow=3.3,SNR=12						
FX1	**Attu Island--F**	**10.18**	**280**	P	**P**	**01 50 00.2**	**+0.2**
ILAR	**Eielson Array**	**17.23**	**35**	P	**P**	**01 51 31.0**	**-1.1**
	0.1nm,0.3s,baz=228,slow=11,SNR=4.1						
INK	**Inuvik**	**23.62**	**34**	P	**P**	**01 52 41.6**	**+1.3**
	0.8nm,0.4s,mb3.5,baz=255,slow=11,SNR=6.5						
YBH	**Yreka Blue Hor**	**33.45**	**89**	LR	LR	02 03 52.8	
	comp=Z,58nm,20.7s,MS3.3,baz=334,slow=29						
HLID	**Hailey**	**37.48**	**81**	*e*P	**P**	**01 54 44.6**	**+0.6**
	0.5nm,0.5s,mb3.6						
BW06	**Boulder Array**	**40.86**	**79**	P	**P**	**01 55 12.5**	**+0.5**
PDAR	**Pinedale Array**	**40.86**	**79**	P	**P**	**01 55 13.1**	**+1.1**
	1.4nm,0.8s,mb3.6,baz=326,slow=5.3,SNR=7.9						
SDCO	**Great Sand Dun**	**46.39**	**82**	*e*P	**P**	**01 55 57.5**	**+0.9**
	0.9nm,0.7s,mb3.8						
MNTX	**Cornudas Mount**	**50.50**	**88**	*e*P	**P**	**01 56 28.4**	**-0.2**
	0.7nm,0.6s,mb3.8						
SONM	**Songino Array**	**50.91**	**300**	P	**P**	**01 56 32.1**	**+0.6**
	0.5nm,0.4s,mb3.8,baz=58,slow=6.6,SNR=6.3						
WMOK	**Wichita Mounta**	**52.44**	**80**	*e*P	**P**	**01 56 42.5**	**-0.7**
TXAR	**Lajitas Array**	**53.21**	**88**	P	**P**	**01 56 49.0**	**-0.1**
	1.2nm,0.7s,mb3.9,baz=297,slow=4.9,SNR=10						
SCHQ	**Schefferville**	**55.77**	**43**	P	**P**	**01 57 06.4**	**-0.9**
	2.4nm,0.9s,mb4.2,baz=318,slow=7.0,SNR=3.7						
ARCES	**ARCESS Array B**	**57.89**	**354**	P	**P**	**01 57 21.6**	**-0.6**
	0.6nm,0.6s,mb3.8,baz=9.5,slow=7.4,SNR=7.2						
MKAR	**Makanchi Array**	**63.48**	**313**	P	**P**	**01 57 59.4**	**-1.0**
	0.2nm,0.4s,mb3.6,baz=51,slow=7.8,SNR=3.5						
KAF	**Kangasniemi**	**65.14**	**352**	*e*p	**P**	**01 58 10.3**	**-0.5**
	0.8nm,0.4s,mb4.1,baz=7.9,slow=6.0						
FINES	**FINESS Array B**	**65.82**	**352**	P	**P**	**01 58 14.7**	**-0.5**
	0.3nm,0.4s,mb3.7,baz=14,slow=7.9,SNR=9.8						
CMAR	**Chiang Mai Arr**	**76.17**	**282**	P	**P**	**01 59 19.1**	**+1.0**
	3.2nm,0.7s,mb4.3,baz=31,slow=7.0,SNR=9.2						
GERES	**GERESS Array B**	**79.13**	**357**	P	**P**	**01 59 33.2**	**-0.7**
	0.2nm,0.5s,mb3.3,baz=27,slow=3.0,SNR=3.7						
WRA	**Warramunga Arr**	**86.63**	**231**	P	**P**	**02 00 12.1**	**-0.7**
	0.4nm,0.8s,mb3.7,baz=34,slow=5.8,SNR=5.6						
MATP	**Matopo**	**145.00**	**329**	PKP	PKPdf	02 07 06.7	+1.6
	1.9nm,0.6s,baz=11,slow=2.2,SNR=8.2						
MATP	**Matopo**	**145.00**	**329**	PKP	PKPdf	02 07 06.7	+1.6

NEIC ***17*** *02:00:51.2, 15.47N×94.79W, h22^{km}, MD4.3(MEX), After MEX.*

MEX 17 02:00:51.2±0.9**, 15.47N×94.79W, h22**^{km}±44^{km}**, MD4.3, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.30**	**283**	*i* P	Pn	02 01 11.1	-3.3
HUIG				*i* S	Sb	02 01 25.9	-5.2
CMIG	**Matias Romero**	**1.61**	**357**	*i* P	Pn	02 01 15.4	-3.5
CMIG				*i* S	Sn	02 01 34.6	-4.6
SCX	**San Cristobal**	**2.43**	**58**	*i* P	Pn	02 01 27.5	-3.0
SCX				*i* S	Sn	02 01 55.5	-4.3
OXX	**Oaxaca**	**2.45**	**311**	*e*P	Pn	02 01 30.0	-0.8
OXX				*i* S	Sn	02 01 57.0	-3.4
VHO	**Vista Hermosa**	**2.45**	**311**	*i* P	Pn	02 01 29.9	-0.9

VHO				i S	Sn	02 01 56.4	-4.1
CCIG	Comitan	2.68	72	i P	Pn	02 01 31.1	-3.0
CCIG				i S	Sn	02 02 01.4	-4.9
ACX	Acapulco	5.12	286	eP	Pn	02 02 03.0	-5.6
PPM	Popocatepetl	5.12	315	i P	Pn	02 02 09.0	+0.3
PPM				i S	Sn	02 03 02.1	-5.8
PPM	Popocatepetl	5.12	315	i P	Pn	02 02 09.0	+0.3
PPM				eP		02 02 10.5	
PPM				i S	Sn	02 03 02.1	-5.8

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*BJI **17** 02:08:06.0, 29.90N×82.86E, h24^{km}, mB4.5, mb4.1, Ms4.1, Msz3.8*
*NDI **17** 02:08:16.4±4.2, 30.60N×83.64E, h10^{km}, ML3.2, mb4.0(NEIC)*
*NEIC **17** 02:08:18.1±0.7, 30.60N×83.53E, h10^{km}, mb4.0/2, Error ellipse: s-maj=15.1km s-min=12.0km az=67.0*
*IDC **17** 02:08:18.2±1.0, 30.76N×83.48E, mb3.7/9, mb1 3.8/11, mb1mx3.7/21, mbtmp3.6/11, ML3.8/2, MS3.4/3, Ms1 3.5/3, ms1mx3.0/35, Error ellipse: s-maj=30.8km s-min=20.3km az=52.0*
*MOS **17** 02:08:19.6±2.0, 30.62N×83.48E, h33^{km}, mb4.2/3, Error ellipse: s-maj=18.6km s-min=12.2km az=102.9*
ISC 17 02:08:15.7±1.1**, 30.47N**±0.05×**83.52E**±0.05**, h10**^{km}±7^{km}**, n40, σ1^{s}.19**/42**, mb3.8**/12**, MS3.4**/2**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	Pithoragarh	3.01	253	ePG	Pg	02 09 15.4	-0.4
PTH				eSG	Sg	02 10 00.0	+4.0
KALG	Kalgarh	4.25	258	eP	Pn	02 09 23.7	+1.7
KALG				eS	Sn	02 10 12.3	+0.1
SDNR	Sundarnagar	5.72	282	ex	x	02 09 50.4	
NDI	New Delhi	5.77	254	ex	x	02 09 48.5	
NDI				ex	Pg	02 10 09.5	-1.5
AGRA	Agra	5.86	238	eP	Pn	02 09 44.8	0.0
AYAN	Aya Nagar	5.92	252	eP	Pn	02 09 45.5	-0.1
AYAN				AMb	AMB	02 09 53.3	
	comp=Z,0.9nm,0.6s						
SONA	Sohna	6.04	250	eP	Pn	02 09 47.7	+0.4
SONA				AMb	AMB	02 09 56.2	
	comp=Z,39nm,0.5s						
SONA				eS	Sn	02 10 55.5	-1.8
SONA				AML	AML	02 11 46.9	
	comp=N,30nm,0.5s						
SONA				AML	AML	02 11 47.4	
	comp=E,25nm,0.3s						
BHK	Bhakra	6.18	281	ePG	Pg	02 10 19.6	+0.6
BHK				eSG	Sg	02 11 41.8	+0.4
LSA	Lhasa	6.65	95	eP	Pn	02 09 56.3	+0.3
LSA				pmax	pmax		
	comp=Z,30nm,0.8s						
LSA	Lhasa	6.65	95	ePn	Pn	02 09 56.3	+0.4
	comp=Z,30nm,0.8s						
BLSP	Bilaspur	8.40	189	ex	Sn	02 11 56.0	-0.2
SHL	Shillong	8.85	121	eP	P	02 10 22.2	-4.5
SHL				eS	Sn	02 11 56.0	-12
HYB	Hyderabad	13.76	200	eP	P	02 11 33.0	-0.3
HYB				pmax	pmax		
	comp=Z,50nm,1.0s						
HYB	Hyderabad	13.76	200	eP	P	02 11 33.0	-0.3
	comp=Z,50nm,1.0s						
HYB	Hyderabad	13.76	200	i P	P	02 11 33.0	-0.3
	comp=Z,50nm,1.0s						
POO	Poona	14.78	219	ex	x	02 14 21.0	
GTA	Gaotai	16.05	52	P	P	02 12 04.0	+1.0
GTA				AP		02 12 10.4	
GTA				PP	PP	02 12 18.3	+2.2
GTA				PPP	PPP	02 12 27.1	+3.0
GTA				AMB	AMB		
	comp=Z,100nm,9.9s						
GTA				LR	LR		
	comp=N,180nm,14.1s						
GTA				LR	LR		
	comp=E,220nm,12.2s						
GTA				LR	LR		
	comp=Z,320nm,14.8s						
MKAR	Makanchi Array	16.33	357	Pn	P	02 12 04.3	-2.3
	comp=Z,0.1nm,0.3s,baz=172,slow=10,SNR=2.2						
CMAR	Chiang Mai Arr	18.41	127	P	P	02 12 36.1	+3.3
	comp=Z,0.3nm,0.3s,baz=310,slow=11,SNR=7.4						
CMAR				LR	LR	02 20 23.0	
	comp=Z,117nm,18.2s,baz=310,slow=39						
GYA	Guiyang	20.72	95	P	P	02 12 54.8	-4.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
XAN	Xi’an	21.75	74	P	P	02 13 04.5	-4.8
BVAR	Borovoye Array	24.50	341	P	P	02 13 36.8	+0.7
	comp=Z,0.8nm,0.5s,mb3.5,baz=152,slow=13,SNR=5.0						
SONM	Songino Array	24.66	39	P	P	02 13 37.1	-0.6
	comp=Z,1.7nm,0.6s,mb3.7,baz=225,slow=11,SNR=16						
ZAK	Zakamensk	24.80	31	eP	P	02 13 31.3	-7.7
ZRNK	Zerenda	24.85	339	eP	P	02 13 39.3	-0.1
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
ZRNK	Zerenda	24.85	339	eP	P	02 13 39.3	-0.1
	comp=Z,3.4nm,0.9s,mb3.9						
ULN	Ulaanbaatar	25.04	39	eP	P	02 13 39.9	-1.4
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
ULN	Ulaanbaatar	25.04	39	eP	P	02 13 39.9	-1.4
	comp=Z,2.0nm,0.6s,mb3.8						
ASF	Jabal al Asfar	39.63	285	LR	LR	02 34 27.5	
	comp=Z,46nm,21.0s,MS3.3,baz=43,slow=40						
AKASG	Malin Array Be	44.79	313	P	P	02 16 30.4	-0.7
	comp=Z,0.4nm,0.4s,mb3.6,baz=78,slow=7.7,SNR=4.0						
AKASG	Malin Array Be	44.79	313	P	P	02 16 30.4	-0.7
TIXI	Tiksi	47.88	18	eP	P	02 16 51.6	-3.7
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
FINES	FINESS Array B	48.27	327	P	P	02 16 57.8	-0.7
	comp=Z,0.8nm,0.6s,mb3.9,baz=90,slow=11,SNR=6.2						
ARCES	ARCESS Array B	50.72	337	P	P	02 17 18.0	+0.8
	comp=Z,1.4nm,0.9s,mb3.9,baz=101,slow=6.2,SNR=4.9						
ARCES	ARCESS Array B	50.72	337	P	P	02 17 18.0	+0.8
NB2	NORSAR Subarra	55.36	326	P	P	02 17 53.1	+1.3
	comp=Z,0.1nm,0.6s,mb3.0,baz=89,slow=7.4						
NOA	NORSAR Array B	55.36	326	P	P	02 17 53.1	+1.3
	comp=Z,0.7nm,0.7s,mb3.8,baz=89,slow=7.4,SNR=5.3						
NOA				LR	LR	02 42 43.7	
	comp=Z,42nm,20.2s,MS3.5,baz=60,slow=38						
WRA	Warramunga Arr	69.99	129	P	P	02 19 34.8	+5.1
	comp=Z,0.7nm,0.7s,mb3.7,baz=325,slow=6.4,SNR=4.6						
ILAR	Eielson Array	77.29	20	P	P	02 20 12.9	+1.5
	comp=Z,0.7nm,1.0s,mb3.5,baz=289,slow=5.2,SNR=4.1						
BOSA	Boshof	80.86	229	P	P	02 20 34.0	+2.5
	comp=Z,2.6nm,1.1s,mb4.1,baz=98,slow=7.1,SNR=3.7						

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*IDC **17** 02:11:26.3±4.5, 24.79S×179.87E, h469^{km}±45^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.7/15, mbtmp4.5/9, Error ellipse: s-maj=30.5km s-min=16.9km az=61.0*
*NEIC **17** 02:11:29.0±2.0, 24.93S×179.85E, h506^{km}±20^{km}, mb4.5/7, Error ellipse: s-maj=21.0km s-min=11.7km az=55.0*
ISC 17 02:11:29.5±2.7**, 25.0S**±0.1×**179.7E**±0.2**, h511**^{km}±27^{km}**, n45, σ1^{s}.11**/29**, mb4.2**/13**, 2C-8D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.48	281	P	P	02 14 15.7	+1.8
	0.5nm,0.3s,baz=92,slow=16,SNR=6.7						
URZ	Urewera	13.36	189	P	P	02 14 21.3	-1.6
	1.4nm,0.3s,baz=133,slow=12,SNR=5.7						
URZ				S	S	02 16 49.9	+7.4
	2.1nm,0.3s,baz=84,slow=23,SNR=17						
RPZ	Rata Peaks	19.92	199	P	P	02 15 27.3	-0.1
	7.9nm,0.4s,baz=53,slow=23,SNR=8.8						
CTA	Charters Tower	31.20	272	⇓iP	P	02 17 08.7	+0.8
	9.2nm,0.4s,mb4.7						
STKA	Stephens Creek	34.03	250	⇓iP	P	02 17 32.8	+1.1
	3.9nm,0.4s,mb4.3						
STKA	Stephens Creek	34.03	250	P	P	02 17 32.9	+1.2
	4.4nm,0.4s,mb4.4,baz=97,slow=10,SNR=19						
STKA				PcP	PcP	02 19 55.5	0.0
	1.5nm,0.5s,baz=51,slow=6.5,SNR=4.0						
WB2	Warramunga Arr	42.03	268	⇓iP	P	02 18 36.9	-0.2
WRAB	Tennant Creek	42.03	268	eP	P	02 18 36.6	-0.6
	18nm,1.1s,mb4.5						
WRA	Warramunga Arr	42.04	268	P	P	02 18 36.9	-0.3
	4.9nm,0.3s,mb4.5,baz=100,slow=7.1,SNR=184						
KAKA	Kakadu	46.12	276	⇓iP	P	02 19 08.0	-1.2
	4.0nm,0.3s,mb4.4						
FITZ	Fitzroy Crossi	50.45	267	eP	P	02 19 41.4	-0.3
	14nm,0.6s,mb4.6						
VNDA	Vanda	53.22	185	P	P	02 20 01.4	+0.4
	1.1nm,0.5s,mb3.5,baz=353,slow=5.7,SNR=15						
VNDA				PcP	PcP	02 21 00.6	-0.1
	0.9nm,0.8s,baz=338,slow=4.9,SNR=4.9						
VNDA	Vanda	53.22	185	eP	P	02 20 01.2	+0.2
	1.7nm,0.8s,mb3.4						
MBWA	Marble Bar	54.89	261	eP	P	02 20 12.2	-1.3
	3.5nm,0.3s,mb4.1						
CASY	Casey	58.96	206	⇓iP	P	02 20 40.1	-0.6
QSPA	South Pole Qui	65.05	180	eP	P	02 21 20.5	+0.6
	13nm,0.8s,mb4.4						
KSM	Kuching	72.01	280	P	P	02 22 02.6	-0.4
MJAR	Matsushiro Arr	72.67	326	P	P	02 22 04.8	-1.6
	2.0nm,0.5s,mb3.8,baz=132,slow=6.1,SNR=6.4						
MAW	Mawson	76.58	201	P	P	02 22 28.7	+1.2
	6.6nm,0.6s,mb4.2,baz=117,slow=7.8,SNR=16						
SYO	Syowa Base	81.84	194	⇑P	P	02 22 53.6	-1.5
SYO	Syowa Base	81.84	194	⇑PcP	PcP	02 22 56.4	-3.4
SNAA	Sanae	83.54	179	⇓i	P	02 23 03.2	-0.3
SNAA	Sanae	83.54	179	e	P	02 23 06.0	+2.5
VNA3	Neumayer Olymp	83.76	177	⇓i	P	02 23 04.6	0.0
VNA3	Neumayer Olymp	83.76	177	e	P	02 23 07.7	+3.1
VNA2	Neumayer--Watz	84.17	178	⇓i	P	02 23 06.9	+0.2
VNA2	Neumayer--Watz	84.17	178	e	P	02 23 09.8	+3.1
CMAR	Chiang Mai Arr	89.64	290	P	P	02 23 35.5	+1.7
	2.3nm,0.8s,mb4.1,baz=134,slow=3.1,SNR=7.5						
TXAR	Lajitas Array	91.29	58	P	P	02 23 41.1	0.0
	0.2nm,0.6s,mb3.2,baz=218,slow=9.7,SNR=4.5						
BVAR	Borovoye Array	121.09	318	PKP	PKPdf	02 29 23.2	-0.1
	1.3nm,0.4s,baz=110,slow=2.5,SNR=9.6						
ARCES	ARCESS Array B	132.94	348	PKP	PKPdf	02 29 45.2	-0.3
	1.3nm,0.7s,baz=90,slow=1.2,SNR=9.8						
KAF	Kangasniemi	138.83	341	epkp	PKPdf	02 29 55.8	-0.7
FINES	FINESS Array B	139.42	341	PKhKP		02 29 49.2	
	0.5nm,0.4s,baz=46,slow=4.2,SNR=15						
FINES				PKP	PKPdf	02 29 58.4	+0.8
	0.5nm,0.4s,baz=120,slow=3.5,SNR=7.2						
NB2	NORSAR Subarra	143.16	351	PKPabc	PKPdf	02 30 01.3	-2.7
	0.6nm,0.5s,baz=16,slow=3.1						
NOA	NORSAR Array B	143.16	351	PKhKP		02 30 01.6	
	1.6nm,0.8s,baz=15,slow=4.9,SNR=8.6						
AKASG	Malin Array Be	145.75	326	PKPbc	PKPbc	02 30 10.2	0.0
	2.9nm,0.5s,baz=45,slow=4.4,SNR=18						
BR131	Keskin Array S	148.01	306	ePKPbc	PKPdf	02 30 17.3	+4.5
BRTR	Keskin Array B	148.01	306	PKPbc	PKPdf	02 30 17.5	+4.7
	2.0nm,0.6s,baz=132,slow=3.4,SNR=14						
EIL	Elat	148.40	286	ePKPbc	PKPdf	02 30 19.2	+5.4
KWP	Kalwaria	149.61	330	eP	PKPdf	02 30 21.3	+6.2
KWP	Kalwaria	149.61	330	ePKP	PKPdf	02 30 21.3	+6.3
KSP	Ksiaz	151.23	338	ePKP	PKPdf	02 30 25.1	+7.6
MORC	Moravsky Berou	151.66	335	ePKPbc	PKPdf	02 30 25.9	+7.8
CLL	Collm	151.85	342	ePKP1	PKPdf	02 30 26.0	+7.7
GERES	GERESS Array B	153.81	339	PKPbc	PKPdf	02 30 31.1	+10
	0.2nm,0.4s,baz=22,slow=5.3,SNR=2.7						
GERES				PKPab	PKPab	02 30 46.0	-1.5
	0.2nm,0.4s,baz=39,slow=8.5,SNR=3.5						

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*NIED **17** 02:26:00, 21.50N×121.00E, h47^{km}, Mw5.2 Best double couple: $M_0$8.15×10^{16} NP1:ϕ_s48°, δ89°, λ83°. NP2:ϕ_s312°, δ7°, λ174°.*
*BJI **17** 02:26:51.5, 21.38N×121.01E, h13^{km}, mB4.8, mb4.6, ML4.2, Ms4.8, Msz4.4*
*MOS **17** 02:26:53.6±1.0, 21.26N×121.12E, h33^{km}, mb4.9/41, MS4.4/13, Error ellipse: s-maj=10.3km s-min=6.4km az=112.4*
*NEIC **17** 02:26:53.9±1.4, 21.23N×121.11E, h24^{km}±9^{km}, mb4.8/32, Error ellipse: s-maj=5.4km s-min=4.9km az=132.0*
*JMA **17** 02:26:54.3±0.4, 21.46N×120.95E, h141^{km}, M4.3*
*IDC **17** 02:26:54.4±3.2, 21.27N×121.10E, h24^{km}±20^{km}, mb4.3/21, mb1 4.4/23, mb1mx4.4/26, mbtmp4.4/23, ML3.8/2, MS4.5/5, Ms1 4.5/5, ms1mx3.9/24, Error ellipse: s-maj=16.8km s-min=14.1km az=75.0*
ISC 17 02:26:51.9±0.8**, 21.24N**±0.02×**121.12E**±0.03**, h21**^{km}±6^{km}**, n183, σ0^{s}.98**/208**, mb4.7**/64**, MS4.5**/20**, 18C-6D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	1.12	135	i P	Pb	02 27 12.2	-0.4
BBP				eS	Sb	02 27 28.5	+1.8
NACB	Ninganchiao	2.95	8	ePn	Pn	02 27 37.1	-1.6
NACB				eSn	Sn	02 28 13.4	-0.5
APYP	Conner	3.37	178	eP	Pn	02 27 45.6	+1.0
APYP				eS	Sn	02 28 24.9	+0.4
YHNB	Yeheng	3.42	4	ePn	Pn	02 27 45.0	-0.3
YHNB				eSn	Sn	02 28 27.1	+1.3
CVP	Callao Caves	3.58	169	⇑eP	Pn	02 27 48.7	+1.0
CVP				i S	Sn	02 28 48.7	+19
YOJ	Yonaguni jima	3.65	28	P	Pn	02 27 48.7	+0.1
YOJ				S	Sn	02 28 30.7	-0.8
TATO	Taipei	3.73	5	ePn	Pn	02 27 50.7	+0.9
HATJ	Hateruma jima	3.74	41	P	Pn	02 27 50.7	+0.7
HATJ				S	Sn	02 28 33.9	0.0
IRIF	Iriomote-Funau	3.91	38	P	Pn	02 27 53.3	+1.0
IRIF				S	Sn	02 28 38.5	+0.4
JKRS	Kuro-shima	4.00	41	P	Pn	02 27 54.5	+0.9
JKRS				S	Sn	02 28 40.9	+0.4
JIJ	Ishigaki jima	4.17	41	P	Pn	02 27 56.4	+0.3
JIJ				S	Sn	02 28 44.0	-0.9
CAUP	Cauayan	4.33	171	eP	Pn	02 27 55.3	-3.0
QZH	Quanzhou	4.36	328	⇑iP	Pn	02 27 54.1	-4.6
QZH				S	Sn	02 28 43.0	-6.5
QZH				LR	LR		
	comp=N,4µm,15.8s						
QZH				LR	LR		
	comp=E,7µm,11.2s						
QZH				LR	LR		
	comp=Z,8µm,18.0s						
JTJ	Tarama	4.73	44	P	Pn	02 28 04.5	+0.5
JTJ				S	Sn	02 28 59.6	+0.8
JMJ	Miyako jima 2	5.24	46	P	Pn	02 28 10.2	-0.9
JMJ				eS	Sn	02 29 10.7	-1.0
JOGS	Gusukube	5.28	48	P	Pn	02 28 11.5	-0.2
BALP	Baler	5.49	175	eP	Pn	02 28 17.9	+3.1
JKE	Kume jima 2	7.25	45	P	Pn	02 28 37.9	-1.6
GZH	Guangzhou	7.44	286	P	Pn	02 28 36.8	-5.3
GZH				Smax			
	comp=N,120nm,1.0s						
GZH				Smax			
	comp=E,80nm,0.8s						
JOW	Kunigami	8.58	48	Pn	P	02 28 57.7	-0.4
	comp=E,1.5nm,0.3s,baz=158,slow=18,SNR=2.8						
JOW				LR	LR	02 32 49.1	
	comp=E,2µm,18.1s,baz=270,slow=41						
SSE	Sheshan	9.81	0	P	P	02 29 13.5	-1.6
SSE				XP		02 29 25.3	
SSE				S	Sn	02 31 05.8	+0.1
SSE				XS		02 31 15.3	
SSE				AMB	AMB		
	comp=Z,10.0nm,0.9s						
SSE				AMB	AMB		
	comp=Z,70nm,8.7s						
SSE				LR	LR		
	comp=N,830nm,26.6s						
SSE				LR	LR		
	comp=E,2µm,26.7s						
SSE				LR	LR		
	comp=Z,1µm,18.5s						
SSE	Sheshan	9.81	0	P	P	02 29 13.5	-1.6
	comp=Z,15nm,0.9s						
SSE				sP		02 29 25.3	
SSE				S	Sn	02 31 05.8	+0.1
SSE				sS		02 31 15.3	
QIZ	Qiongzhong	10.82	260	eP	P	02 29 33.0	+4.1
QIZ				eS	S	02 31 34.3	+3.9
QIZ				LR	LR		
	comp=N,3µm,15.0s						
QIZ				LR	LR		
	comp=E,620nm,18.7s						
QIZ				LR	LR		
	comp=Z,2µm,12.4s						
NJ2	Nanjing	10.95	350	eP	P	02 29 31.5	+0.8
NJ2				AP		02 29 35.1	
NJ2				XP		02 29 37.5	
NJ2				PP	PP	02 29 40.1	+1.3
NJ2				S	S	02 31 36.0	+2.3
NJ2				XS		02 31 42.0	
NJ2				LR	LR		
	comp=N,5µm,20.0s						
NJ2				LR	LR		
	comp=E,4µm,14.8s						
NJ2				LR	LR		
	comp=Z,560nm,16.0s						
BATP	Bataraza	12.78	195	eP	P	02 30 01.8	+6.3
ENH	Enshi	13.80	313	Pn	P	02 30 08.0	-0.9
	comp=Z,12nm,0.9s						
GYA	Guiyang	14.20	294	P	P	02 30 12.9	-1.3
GYA				AP		02 30 17.3	
GYA				XP		02 30 19.6	
GYA				AMB	AMB		
	comp=Z,100nm,2.4s						
GYA				LR	LR		
	comp=N,2µm,15.0s						
GYA				LR	LR		
	comp=E,900nm,17.4s						
GYA				LR	LR		
	comp=Z,1µm,17.0s						
JNU	Nakatsue	14.66	34	Pn	P	02 30 20.8	+0.6
	comp=Z,0.5nm,0.3s,baz=70,slow=24,SNR=3.1						
TIA	Tai’an	15.32	348	eP	P	02 30 29.3	+0.6
KKM	Kota Kinabalu	15.84	198	P	P	02 30 34.1	-1.6
XAN	Xi’an	16.69	322	P	P	02 30 45.0	-1.3
XAN				AMB	AMB		
	comp=Z,10.0nm,1.7s						
XAN				LR	LR		
	comp=N,740nm,10.9s						
XAN				LR	LR		
	comp=E,930nm,13.0s						
XAN				LR	LR		
	comp=Z,1µm,13.5s						
KS15	Wonju Array Si	17.18	19	eP	P	02 30 52.5	+0.1
KMI	Kunming	17.33	286	P	P	02 30 55.3	+0.9
KMI				PP	PP	02 31 06.4	-2.5
KMI				LR	LR		
	comp=Z,390nm,22.0s						
KMI	Kunming	17.33	286	P	P	02 30 55.2	+0.8
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI	Kunming	17.33	286	P	P	02 30 55.2	+0.8
	comp=Z,8.0nm,0.5s						
KMI				PP	PP	02 31 06.4	-2.5
CD2	Chengdu	18.31	305	P	P	02 31 05.3	-1.3
CD2				S	S	02 34 28.8	+1.7
CD2				AMB	AMB		
	comp=Z,40nm,1.2s						
CD2				LR	LR		
	comp=N,3µm,16.8s						
CD2				LR	LR		
	comp=Z,2µm,12.0s						
JHJ	Hachijo jima 2	20.35	51	LR	LR	02 39 18.6	
	comp=Z,403nm,18.8s,MS3.8,baz=95,slow=36						
SNY	Shenyang	20.63	5	⇓P	P	02 31 34.5	+1.8
SNY				S	S	02 35 17.4	+0.1
SNY				AMB	AMB		
	comp=Z,20nm,0.7s						
SNY				AMB	AMB		
	comp=Z,150nm,9.3s						
SNY				LR	LR		
	comp=N,1µm,19.5s,MS4.5						
SNY				LR	LR		
	comp=E,2µm,18.6s,MS4.5						
SNY				LR	LR		
	comp=Z,1µm,15.9s,MS4.3						
CMAR	Chiang Mai Arr	21.04	266	P	P	02 31 37.4	+0.3
CMAR						02 35 43.8	
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	Chiang Mai Arr	21.04	266	P	P	02 31 37.4	+0.3
	comp=Z,3.3nm,0.7s,mb3.8,baz=73,slow=9.6,SNR=9.0						
CMAR				PcP	PcP	02 35 43.8	0.0
	comp=Z,1.0nm,0.4s,baz=93,slow=1.9,SNR=5.7						
LZH	Lanzhou	21.13	318	⇓P	P	02 31 37.8	0.0
LZH				AP		02 31 41.3	
LZH				XP		02 31 43.5	
LZH				PP	PP	02 32 01.3	+0.1
LZH				eS	S	02 35 29.0	+2.0
LZH				XS		02 35 37.1	
LZH				AMB	AMB		
	comp=Z,90nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,350nm,4.8s						
LZH				LR	LR		
	comp=N,910nm,10.0s						
LZH				LR	LR		
	comp=Z,2µm,13.3s,MS4.6						
LZH	Lanzhou	21.13	318	⇓P	P	02 31 37.8	0.0
LZH						02 32 01.3	
LZH				eS	S	02 35 29.0	+2.0
LZH				*SS		02 35 37.1	
LZH				SS	SS	02 36 05.3	+4.9
LZH				pmax	pmax		
	comp=Z,93nm,1.3s,mb5.0						
LZH				MLR	MLR		
	comp=Z,2µm,13.3s,MS4.6						
LZH	Lanzhou	21.13	318	⇓P	P	02 31 37.8	0.0
	comp=Z,93nm,1.3s,mb5.0						
LZH				pP		02 31 41.2	
LZH				sP		02 31 43.5	
LZH				PP	PP	02 32 01.3	+0.1
LZH				eS	S	02 35 29.0	+2.0
LZH				sS		02 35 37.1	
LZH				SS	SS	02 36 05.3	+4.9
LZH				LR	LR		
	comp=Z,2µm,13.3s,MS4.6						
HHC	Hu-ho-hao-te	21.16	340	eP	P	02 31 38.8	+0.7
HHC				AP		02 31 48.3	
HHC				AMB	AMB		
	comp=Z,60nm,1.0s,mb4.9						
HHC				LR	LR		
	comp=N,3µm,17.3s,MS4.7						
HHC				LR	LR		
	comp=E,1µm,22.1s,MS4.7						
HHC				LR	LR		
	comp=Z,2µm,19.0s,MS4.5						
MAJO	Matsushiro	21.31	41	eP	P	02 31 40.4	+0.8
MAJO				pmax	pmax		
	comp=Z,91nm,1.8s,mb4.8						
MAJO	Matsushiro	21.31	41	eP	P	02 31 40.4	+0.8
	comp=Z,91nm,1.8s,mb4.8						
MAT	Matsushiro	21.31	41	P	P	02 31 40.0	+0.4
MAT				eS	S	02 35 31.0	+0.6
MAT				pmax	pmax		
	comp=Z,40nm,1.4s,mb4.6						
MAT	Matsushiro	21.31	41	P	P	02 31 40.0	+0.4
	comp=Z,40nm,1.4s,mb4.5						
MAT				eS	S	02 35 31.0	+0.6
MAT	Matsushiro	21.31	41	P	P	02 31 39.7	+0.1
MAT				S	S	02 35 31.2	+0.8
MJAR	Matsushiro Arr	21.31	41	P	P	02 31 40.8	+1.1
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MJAR	Matsushiro Arr	21.31	41	P	P	02 31 40.8	+1.2
	comp=Z,6.0nm,0.6s,mb4.1,baz=234,slow=9.7,SNR=16						
BTO	Baotou	21.48	336	eP	P	02 31 41.6	+0.2
BTO				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.5						
BTO				LR	LR		
	comp=N,2µm,13.9s						
BTO				LR	LR		
	comp=E,2µm,19.4s						
CN2	Changchun	22.78	8	eP	P	02 31 55.1	+0.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
MDJ	Mudanjiang	24.34	15	P	P	02 32 09.9	+0.4
MDJ				AP		02 32 12.9	
MDJ				XP		02 32 14.3	
MDJ				PCP	PcP	02 35 47.5	-2.7
MDJ				S	S	02 36 30.8	+6.2
MDJ				SCP		02 39 25.5	
MDJ				PCS		02 39 27.8	
MDJ				SCS	ScS	02 43 14.1	+1.6
MDJ				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,70nm,3.8s						
MDJ				LR	LR		
	comp=N,510nm,24.5s,MS4.3						
MDJ				LR	LR		
	comp=E,1µm,24.5s,MS4.3						
MDJ				LR	LR		
	comp=Z,990nm,17.8s						
MDJ	Mudanjiang	24.34	15	eP	P	02 32 10.1	+0.7
	comp=Z,8.5nm,0.8s,mb4.2						

GTA	**Gaotai**	**25.70**	**320**	P	**P**	**02 32 22.6**	**+0.2**
GTA				AP	pP	02 32 27.3	-1.2
GTA				XP	sP	02 32 30.1	-1.2
GTA				PP	PP	02 33 05.3	+2.7
GTA				PPP	PPP	02 33 17.3	+3.0
GTA				PCP	PcP	02 35 50.1	-3.1
GTA				S	**S**	**02 36 52.0**	**+4.5**
GTA				XS		02 36 58.8	
GTA				SCP		02 39 27.4	
GTA				SCS	ScS	02 43 16.3	-1.7
GTA				AMB	AMB		
	comp=Z,110nm,7.2s						
GTA				LR	LR		
	comp=N,730nm,20.2s,MS4.3						
GTA				LR	LR		
	comp=E,580nm,17.1s,MS4.3						
GTA				LR	LR		
	comp=Z,880nm,16.0s,MS4.4						
ULN	**Ulaanbaatar**	**28.88**	**340**c	*i*P	**P**	**02 32 50.9**	**-0.4**
ULN	**Ulaanbaatar**	**28.88**	**340**	*e*P	**P**	**02 32 50.6**	**-0.8**
	comp=Z,34nm,1.2s,mb5.0						
ASAJ	**Asahikawa**	**28.94**	**33**	P	**P**	**02 32 53.1**	**+1.2**
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ASAJ				MLR	MLR		
	comp=Z,507nm,21.6s						
ASAJ	**Asahikawa**	**28.94**	**33**	P	**P**	**02 32 53.1**	**+1.2**
	comp=Z,9.5nm,0.7s,mb4.7,baz=197,slow=5.6,SNR=7.8						
ASAJ				LR	LR	02 44 35.5	
	comp=Z,507nm,21.6s,MS4.1,baz=229,slow=37						
SONM	**Songino Array**	**29.07**	**339**	P	**P**	**02 32 52.5**	**-0.5**
	comp=Z,8.1nm,0.9s,mb4.5,baz=157,slow=9.4,SNR=46						
SONM				ScP		02 39 40.9	
	comp=Z,0.3nm,0.3s,baz=158,slow=6.7,SNR=4.7						
SONM				LR	LR	02 46 21.0	
	comp=Z,2µm,18.2s,MS4.8,baz=149,slow=40						
YSS	**Yuzh-Sakhalins**	**31.08**	**29**	*e*P	**P**	**02 33 10.0**	**-0.9**
YSS				*e*		02 33 28.0	
YSS				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.1						
ZAK	**Zakamensk**	**32.30**	**338**	*e*P	**P**	**02 33 20.7**	**-0.9**
ZAK				*e*		02 36 09.7	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
GUN	**Gumba**	**32.65**	**289**	*e*P	**P**	**02 33 25.1**	**+0.3**
	comp=Z,47nm,1.0s,mb5.4						
PKI	**Pulchoki**	**33.04**	**288**	*e*P	**P**	**02 33 27.8**	**-0.5**
	comp=Z,31nm,1.2s,mb5.1						
PKI	**Pulchoki**	**33.04**	**288**	*e*P	**P**	**02 33 27.8**	**-0.5**
PKI				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
KKN	**Kakani**	**33.17**	**289**	*e*P	**P**	**02 33 28.0**	**-1.4**
	comp=Z,39nm,1.1s,mb5.3						
KKN	**Kakani**	**33.17**	**289**	*e*P	**P**	**02 33 28.0**	**-1.4**
KKN				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
TLY	**Talaya**	**33.29**	**340**	*e*P	**P**	**02 33 29.0**	**-1.2**
TLY				*e*S	**S**	**02 38 56.6**	**+8.3**
TLY				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
TLY				MLR	MLR		
	comp=Z,1µm,18.0s,MS4.7						
TLY	**Talaya**	**33.29**	**340**	*e*P	**P**	**02 33 29.8**	**-0.4**
	comp=Z,4.5nm,0.6s,mb4.6						
DMN	**Daman**	**33.31**	**288**	*e*P	**P**	**02 33 30.1**	**-0.5**
	comp=Z,15nm,0.6s,mb5.1						
IRK	**Irkutsk**	**33.59**	**341**	*e*P	**P**	**02 33 32.0**	**-0.7**
IRK				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.2						
GKN	**Gorkha**	**33.75**	**289**	*e*P	**P**	**02 33 33.6**	**-0.8**
	comp=Z,14nm,0.6s,mb5.1						
MOY	**Mondy**	**34.17**	**338**	*e*P	**P**	**02 33 37.8**	**0.0**
MOY				pmax	pmax		
	comp=Z,43nm,2.1s,mb5.0						
KOLN	**Koldanda**	**34.66**	**288**	*e*P	**P**	**02 33 41.0**	**-1.2**
	comp=Z,26nm,0.9s,mb5.2						
WMQ	**Urumqi**	**35.70**	**317**	*e*P	**P**	**02 33 50.3**	**-0.6**
WMQ				AP	pP	02 33 54.8	-2.3
WMQ				XP	sP	02 33 57.3	-2.5
WMQ				PP	PP	02 35 11.0	-0.8
WMQ				PPP	PPP	02 35 29.3	-1.9
WMQ				*e*S	**S**	**02 39 22.0**	**-3.7**
WMQ				SS	SS	02 41 44.9	-1.3
WMQ				AMB	AMB		
	comp=Z,160nm,5.4s						
WMQ				LR	LR		
	comp=N,1µm,18.0s,MS4.9						
WMQ				LR	LR		
	comp=E,1µm,18.6s,MS4.9						
WMQ				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
FITZ	**Fitzroy Crossi**	**39.35**	**173**	P	**P**	**02 34 23.5**	**+1.7**
	comp=Z,7.3nm,0.9s,mb4.4,baz=344,slow=5.0,SNR=4.0						
MKAR	**Makanchi Array**	**40.44**	**318**	P	**P**	**02 34 31.1**	**+0.5**
MKAR						02 36 33.2	
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**40.44**	**318**	P	**P**	**02 34 31.1**	**+0.5**
	comp=Z,7.2nm,0.9s,mb4.4,baz=111,slow=10,SNR=10.0						
MKAR				PcP	PcP	02 36 33.1	-0.8
	comp=Z,1.4nm,0.8s,baz=101,slow=6.2,SNR=4.3						
YAK	**Yakutsk**	**41.19**	**6**⇑	*e*P	**P**	**02 34 36.1**	**-0.4**
YAK				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.8						
YAK				MLR	MLR		
	comp=Z,500nm,11.0s,MS4.6						
WRAB	**Tennant Creek**	**42.92**	**162**	*i* P	**P**	**02 34 50.7**	**-0.6**
WRAB	**Tennant Creek**	**42.92**	**162**	*e*P	**P**	**02 34 49.9**	**-1.4**
	comp=Z,34nm,1.3s,mb4.9						
WRA	**Warramunga Arr**	**42.93**	**162**	P	**P**	**02 34 50.2**	**-1.1**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WRA				pmax	pmax		
	comp=E,3.0nm,1.1s						
WRA	**Warramunga Arr**	**42.93**	**162**	P	**P**	**02 34 50.2**	**-1.1**
	comp=E,7.5nm,0.8s,mb4.5,baz=345,slow=8.9,SNR=37						
WRA				ScP		02 40 32.2	
	comp=E,3.0nm,1.1s,baz=341,slow=3.7,SNR=7.2						
WB2	**Warramunga Arr**	**42.93**	**162**	*e*P	**P**	**02 34 50.1**	**-1.2**
ULHL	**Ulahol**	**42.94**	**310**	P	**P**	**02 34 52.6**	**+1.6**
	SNR=12						
TKM2	**Tokmak 2**	**43.57**	**310**	P	**P**	**02 34 57.7**	**+1.5**
	SNR=9.0						
KZA	**Kyzart**	**43.61**	**309**	P	**P**	**02 34 58.6**	**+2.0**
	SNR=9.0						
NVS	**Novosibirsk**	**43.97**	**329**	*i* P	**P**	**02 34 58.0**	**-1.3**
NVS				pmax	pmax		
	comp=Z,29nm,2.0s,mb4.7						
NVS				pmax	pmax		
	comp=N,19nm,1.8s						
NVS				pmax	pmax		
	comp=E,11nm,1.0s						
UCH	**Uchtor**	**44.17**	**309**	P	**P**	**02 35 03.5**	**+2.4**
	SNR=18						
AAK	**Ala-Archa**	**44.28**	**310**c	*i*P	**P**	**02 35 01.9**	**-0.1**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
AAK				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.5						
AAK	**Ala-Archa**	**44.28**	**310**	*e*P	**P**	**02 35 01.8**	**-0.2**
	comp=Z,1.9nm,0.3s,mb4.3						
AML	**Almayashu**	**44.75**	**309**	P	**P**	**02 35 07.8**	**+2.0**
	SNR=20						
BVAR	**Borovoye Array**	**49.93**	**322**	P	**P**	**02 35 46.2**	**+0.1**
	comp=Z,5.6nm,0.9s,mb4.6,baz=113,slow=11,SNR=32						
BVAR				PcP	PcP	02 37 05.3	-1.2
	comp=Z,1.2nm,0.7s,baz=104,slow=6.1,SNR=3.8						
TIXI	**Tiksi**	**50.62**	**3**c	*i*P	**P**	**02 35 48.7**	**-2.5**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,700nm,18.0s,MS4.7						
FX1	**Attu Island--F**	**50.64**	**38**	P	**P**	**02 35 51.8**	**+0.3**
FX1				pmax	pmax		
	comp=Z,17nm,0.6s						
FX1	**Attu Island--F**	**50.64**	**38**	P	**P**	**02 35 51.8**	**+0.3**
	comp=Z,17nm,0.6s,mb5.2,baz=202,slow=10,SNR=7.1						
FX1	**Attu Island--F**	**50.64**	**38**	*e*P	**P**	**02 35 50.9**	**-0.6**
ZRNK	**Zerenda**	**50.70**	**322**	*e*P	**P**	**02 35 51.5**	**-0.5**
ZRNK				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
ZRNK	**Zerenda**	**50.70**	**322**	*e*P	**P**	**02 35 51.5**	**-0.5**
	comp=Z,24nm,1.0s,mb5.1						
BILL	**Bilibino**	**54.46**	**19**⇓	*i*P	**P**	**02 36 18.2**	**-1.7**
BILL				*i*		02 37 22.7	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
BILL				MLR	MLR		
	comp=Z,400nm,23.0s,MS4.4						
STKA	**Stephens Creek**	**56.34**	**159**	P	**P**	**02 36 33.6**	**-0.4**
	comp=Z,6.5nm,0.7s,mb4.8,baz=328,slow=5.7,SNR=9.2						
SVE	**Sverdlovsk**	**56.39**	**325**	*e*P	**P**	**02 36 33.0**	**-1.0**
SVE				*e*		02 36 47.2	
SVE				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
SVE				MLR	MLR		
	comp=N,200nm,16.0s,MS4.7						
SVE				MLR	MLR		
	comp=E,400nm,16.0s,MS4.7						
SVE				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.7						
ARU	**Arti**	**57.43**	**324**⇑	*i*P	**P**	**02 36 40.1**	**-1.3**
ARU				*e*		02 37 28.2	
ARU				*e*		02 38 45.7	
ARU				*e*S	**S**	**02 44 36.6**	**+1.2**
ARU				*e*SS	SS	02 48 26.5	-0.1
ARU				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
ARU				MLR	MLR		
	comp=Z,200nm,16.5s,MS4.3						
ARU				MLR	MLR		
	comp=N,100nm,19.0s,MS4.3						
ARU				MLR	MLR		
	comp=E,200nm,16.0s,MS4.3						
ARU	**Arti**	**57.43**	**324**	*e*P	**P**	**02 36 40.2**	**-1.2**
	comp=E,8.1nm,0.7s,mb4.9						
GNI	**Garni**	**66.44**	**306**	*i* P	**P**	**02 37 43.2**	**+1.2**
GNI				pmax	pmax		
	comp=Z,13nm,1.0s						
GNI				MLR	MLR		
	comp=Z,200nm,21.0s						
KIV	**Kislovodsk**	**67.40**	**310**c	*i*P	**P**	**02 37 47.9**	**-0.2**
KIV				*e*S	S	02 46 31.4	-10
KIV				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
KIV				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.4						
VRSR	**Storozhevoye**	**68.75**	**318**	*e*P	**P**	**02 37 55.3**	**-1.1**
VRSR				pmax	pmax		
	comp=N,3.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,4.0nm,0.6s						
VRSR				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
IMA	**Indian Mountai**	**68.86**	**26**	*e*P	**P**	**02 37 56.6**	**-0.2**
IMA				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
IMA	**Indian Mountai**	**68.86**	**26**	*e*P	**P**	**02 37 56.6**	**-0.1**
	comp=Z,32nm,1.1s,mb5.2						
MZLS	**Mizel**	**69.30**	**289**	P	**P**	**02 38 00.5**	**+0.3**
SOC	**Sochi**	**69.59**	**310**	*e*P	**P**	**02 37 50.1**	**-12**
SOC				*e*PPP	PPP	02 42 13.7	-3.0
SOC				*e*SS	SS	02 51 29.7	-7.1
SOC				*e*SSS	SSS	02 54 42.4	+1.9
SOC				MLR	MLR		
	comp=Z,242nm,22.0s,MS4.4						
SOC				MLR	MLR		
	comp=N,168nm,18.0s,MS4.5						
SOC				MLR	MLR		
	comp=E,168nm,20.0s,MS4.5						
OBN	**Obninsk**	**69.77**	**322**c	*e*P	**P**	**02 38 01.5**	**-1.1**
OBN				*e*		02 40 33.9	
OBN				*e*S	S	02 47 00.3	-8.8
OBN				*e*SS	SS	02 51 31.4	-8.0
OBN				pmax	pmax		
	comp=Z,22nm,1.8s,mb4.8						
KAMS	**Al Khamasin**	**70.85**	**285**	P	**P**	**02 38 08.9**	**-0.8**
MALT	**Malatya**	**71.59**	**305**	*e*P	**P**	**02 38 14.7**	**+0.8**
MALT				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
MALT	**Malatya**	**71.59**	**305**	*e*P	**P**	**02 38 14.7**	**+0.7**
	comp=Z,12nm,1.1s,mb4.7						
KEV	**Kevo**	**71.67**	**339**	*e*p	**P**	**02 38 12.5**	**-1.4**
	comp=Z,6.6nm,0.6s,mb4.7						
KEV	**Kevo**	**71.67**	**339**	*e*P	**P**	**02 38 12.5**	**-1.4**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
SML	**Sawmill**	**71.77**	**30**	*e*P	**P**	**02 38 13.7**	**-0.9**
ILAR	**Eielson Array**	**71.85**	**27**	P	**P**	**02 38 13.3**	**-1.7**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR	**Eielson Array**	**71.85**	**27**	P	**P**	**02 38 13.2**	**-1.7**
	comp=Z,2.4nm,0.7s,mb4.2,baz=292,slow=6.4,SNR=7.6						
ARCES	**ARCESS Array B**	**72.23**	**338**	P	**P**	**02 38 17.2**	**0.0**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ARCES	**ARCESS Array B**	**72.23**	**338**	P	**P**	**02 38 17.2**	**0.0**
	comp=Z,3.6nm,0.7s,mb4.4,baz=63,slow=8.1,SNR=14						
DJNS	**Zahran al Janu**	**72.53**	**283**	P	**P**	**02 38 20.2**	**+0.3**
DIV	**Divide**	**73.12**	**30**	*e*P	**P**	**02 38 22.2**	**-0.2**
	comp=Z,24nm,0.6s,mb5.3						
KAF	**Kangasniemi**	**73.67**	**331**	*e*p	**P**	**02 38 24.1**	**-1.6**
	comp=Z,5.2nm,0.9s,mb4.5,baz=72,slow=5.4						
KAF	**Kangasniemi**	**73.67**	**331**	*e*P	**P**	**02 38 24.1**	**-1.6**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
FINES	**FINESS Array B**	**73.95**	**330**	P	**P**	**02 38 26.9**	**-0.3**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FINES	**FINESS Array B**	**73.95**	**330**	P	**P**	**02 38 26.9**	**-0.3**
	comp=Z,4.9nm,0.8s,mb4.5,baz=76,slow=7.9,SNR=26						
ASF	**Jabal al Asfar**	**74.30**	**299**	P	**P**	**02 38 30.2**	**+0.2**
	comp=Z,4.7nm,0.9s,mb4.4,baz=318,slow=4.0,SNR=5.9						
VSU	**Vasula**	**74.40**	**327**c	*i*P	**P**	**02 38 29.2**	**-0.7**
BRTR	**Keskin Array B**	**74.87**	**307**	P	**P**	**02 38 33.5**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BRTR	**Keskin Array B**	**74.87**	**307**	P	**P**	**02 38 33.5**	**+0.4**
	comp=Z,4.7nm,1.2s,mb4.3,baz=112,slow=6.7,SNR=12						
AKASG	**Malin Array Be**	**75.03**	**319**	P	**P**	**02 38 34.0**	**+0.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=60,slow=6.1,SNR=6.9						
INK	**Inuvik**	**75.96**	**22**	P	**P**	**02 38 38.4**	**-0.3**
INK				pmax	pmax		
	comp=Z,12nm,1.0s						
INK	**Inuvik**	**75.96**	**22**	P	**P**	**02 38 38.4**	**-0.4**
	comp=Z,12nm,1.0s,mb4.8,baz=294,slow=5.5,SNR=13						
INK	**Inuvik**	**75.96**	**22**	*e*P	**P**	**02 38 38.0**	**-0.7**
	comp=Z,14nm,1.0s,mb4.8						
EIL	**Elat**	**76.61**	**297**	*e*P	**P**	**02 38 43.0**	**-0.1**
	comp=Z,11nm,1.2s,mb4.7						
TIRR	**Tirgusor**	**77.30**	**313**	⇑P	**P**	**02 38 46.5**	**-0.1**
BURAR	**Bucovina Array**	**78.44**	**317**	⇑P	**P**	**02 38 56.7**	**+3.8**
MLR	**Muntele Rosu**	**78.65**	**314**	P	**P**	**02 38 54.5**	**+0.5**
MLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MLR	**Muntele Rosu**	**78.65**	**314**	P	**P**	**02 38 54.5**	**+0.4**
	comp=Z,1.7nm,0.9s,mb4.0,baz=211,slow=7.3,SNR=4.2						
MLR	**Muntele Rosu**	**78.65**	**314**	⇓P	**P**	**02 38 55.4**	**+1.4**
DAG	**Danmarks Havn**	**79.25**	**351**⇑	*e*P	**P**	**02 38 56.3**	**-0.5**
DAG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
DAG	**Danmarks Havn**	**79.25**	**351**⇑	*e*P	**P**	**02 38 56.3**	**-0.5**
	comp=Z,3.7nm,0.8s,mb4.4						
DAG	**Danmarks Havn**	**79.25**	**351**⇑	*i*P	**P**	**02 38 56.3**	**-0.5**
	comp=Z,3.7nm,0.8s,mb4.4						
NB2	**NORSAR Subarra**	**80.79**	**332**	P	**P**	**02 39 04.0**	**-1.2**
	comp=Z,3.6nm,1.0s,mb4.3,baz=59,slow=5.3						
NOA	**NORSAR Array B**	**80.79**	**332**	P	**P**	**02 39 04.6**	**-0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA				MLR	MLR		
	comp=Z,637nm,18.1s						
NOA	**NORSAR Array B**	**80.79**	**332**	P	**P**	**02 39 04.6**	**-0.6**
	comp=Z,0.7nm,0.6s,mb3.8,baz=66,slow=5.4,SNR=6.7						
NOA				LR	LR	03 18 55.3	
	comp=Z,637nm,18.1s,MS5.0,baz=55,slow=39						
OJC	**Ojcow**	**80.88**	**320**	*e*P	**P**	**02 39 06.5**	**+0.6**
RES	**Resolute Bay**	**81.56**	**9**	*e*P	**P**	**02 39 08.8**	**-0.2**
RES				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
RES	**Resolute Bay**	**81.56**	**9**	*e*P	**P**	**02 39 08.8**	**-0.3**
	comp=Z,15nm,0.9s,mb4.9						
MORC	**Moravsky Berou**	**82.40**	**321**	*e*P	**P**	**02 39 13.0**	**-0.8**
MORC				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
MORC	**Moravsky Berou**	**82.40**	**321**	*e*P	**P**	**02 39 12.9**	**-0.9**
	comp=Z,2.1nm,1.1s,mb4.0						
DPC	**Dobruska-Polom**	**82.88**	**321**	*e*P	**P**	**02 39 16.9**	**+0.6**
UPC	**Upice**	**82.99**	**322**	*e*P	**P**	**02 39 18.3**	**+1.4**
PVCC	**Panska Ves**	**83.82**	**322**	*e*P	**P**	**02 39 21.9**	**+0.8**
BRG	**Berggiesshubel**	**84.02**	**323**	*e*P	**P**	**02 39 22.9**	**+0.8**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.5						
BRG	**Berggiesshubel**	**84.02**	**323**	*e*P	**P**	**02 39 22.9**	**+0.7**
	comp=Z,6.2nm,1.4s,mb4.5						
PRU	**Pruhonice**	**84.07**	**322**	*e*P	**P**	**02 39 23.0**	**+0.6**
CLL	**Collm**	**84.36**	**323**	*e*P	**P**	**02 39 24.0**	**+0.2**
CLL	**Collm**	**84.36**	**323**	P	**P**	**02 39 24.0**	**+0.2**
KHC	**Kasperske Hory**	**85.01**	**321**	*i* P	**P**	**02 39 27.2**	**+0.1**
KHC	**Kasperske Hory**	**85.01**	**321**	*e*P	**P**	**02 39 26.3**	**-0.8**
GERES	**GERESS Array B**	**85.07**	**321**	P	**P**	**02 39 26.8**	**-0.6**
GERES				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GERES	**GERESS Array B**	**85.07**	**321**	P	**P**	**02 39 26.8**	**-0.6**
	comp=Z,1.2nm,1.0s,mb4.0,baz=34,slow=4.8,SNR=10						
NKC	**Novy Kostel**	**85.16**	**322**	*e*P	**P**	**02 39 28.9**	**+1.1**
SUMG	**Summit**	**85.41**	**354**	*e*P	**P**	**02 39 29.6**	**+1.0**
	comp=Z,14nm,1.0s,mb5.0						
YKW3	**Yellowknife Ar**	**85.65**	**23**	*e*P	**P**	**02 39 30.1**	**+0.1**
YKA	**Yellowknife Ar**	**85.69**	**23**	P	**P**	**02 39 30.4**	**+0.2**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	**Yellowknife Ar**	**85.69**	**23**	P	**P**	**02 39 30.4**	**+0.2**
	comp=Z,2.1nm,0.6s,mb4.5,baz=306,slow=4.9,SNR=7.0						
YKA	**Yellowknife Ar**	**85.69**	**23**	P	**P**	**02 39 30.4**	**+0.2**
GRA1	**Grafenberg Arr**	**86.12**	**322**	*e*P	**P**	**02 39 33.7**	**+1.1**
	comp=Z,4.0nm,1.1s,mb4.6						
GRF	**Grafenberg Arr**	**86.12**	**322**	*e*P	**P**	**02 39 33.7**	**+1.1**
GRF				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.6						
GRF	**Grafenberg Arr**	**86.12**	**322**	*e*P	**P**	**02 39 33.7**	**+1.1**
GRF				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.6						
GRF	**Grafenberg Arr**	**86.12**	**322**	*e*P	**P**	**02 39 33.7**	**+1.1**
	comp=Z,4.0nm,1.1s,mb4.6						
EDM	**Edmonton**	**92.19**	**29**	*e*P	**P**	**02 40 01.9**	**+0.7**
FFC	**Flin Flon**	**95.84**	**23**	*e*P	**P**	**02 40 17.7**	**-0.3**
FFC				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.5						
FFC	**Flin Flon**	**95.84**	**23**	*e*P	**P**	**02 40 17.7**	**-0.2**
	comp=Z,2.3nm,0.9s,mb4.6						
VNA2	**Neumayer--Watz**	**122.08**	**198**⇑	*i*	PKPdf	02 45 46.0	-2.9
VNA1	**Neumayer--Stat**	**122.47**	**198**⇑	*i*	PKPdf	02 45 47.2	-2.4
VNA3	**Neumayer Olymp**	**122.55**	**197**⇑	*i*	PKPdf	02 45 46.7	-3.0
SDV	**Santo Domingo**	**147.91**	**22**	*e*PKPbc	PKPdf	02 46 37.2	-0.6

CSEM ***17*** *02:37:33.7, 6.04N×94.62E, h10^{km}, mb5.6*

CRAAG ***17*** *02:37:36.6, 6.03N×94.64E, Mb5.5*

BJI ***17*** *02:37:37.9, 5.37N×94.60E, h77^{km}, mB5.3, mb5.4, Ms4.9, Msz4.7*

MOS ***17*** *02:37:37.4±0.9, 5.70N×94.80E, h56^{km}, mb5.7/54, MS4.7/19, Error ellipse: s-maj=10.8km s-min=5.1km az=118.2*

HRVD ***17*** *02:37:39.2±0.2, 5.33N×94.64E, h46^{km}, MW5.3/65, Centroid moment Tensor Solution. LP body waves: s57,c100;Mantle waves: s65,c132; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.80±.02; $M_{\theta\theta}$-0.24±.02; $M_{\phi\phi}$-0.56±.02; $M_{r\theta}$0.47±.01; $M_{\theta\phi}$0.45±.01; $M_{\phi r}$-0.33±.02; Best double couple: $M_0$1.022×10^{17} NP1: ϕ_s337°,δ30°,λ111°. NP2:ϕ_s133°,δ62°,λ79°. Principal axes: T 1.003, Plg70°, Azm19°; N .038, Plg10°, Azm139°; P -1.041, Plg17°, Azm232°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***17*** *02:37:39.2±0.1, 5.62N×94.75E, mb5.4/158, MW5.3 Error ellipse: s-maj=4.5km s-min=2.9km az=207.0, Moment Tensor Solution. s9 Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.3×10^{17} NP1:ϕ_s19°,δ28°,λ132°. NP2:ϕ_s154°,δ69°,λ70°. Principal axes: T 1.39, Plg61°, Azm35°; N -.08, Plg18°, Azm161°; P -1.31, Plg22°, Azm259°;*

NEIC Felt [III] at Banda Aceh.

IDC ***17*** *02:37:39.5±0.6, 5.60N×94.79E, h59^{km}±5^{km}, mb4.9/32, mb1 4.9/32, mb1mx4.9/32, mbtmp5.2/32, MS4.4/9, Ms1 4.4/9, ms1mx4.3/15 Error ellipse: s-maj=13.1km s-min=8.2km az=48.0*

ISC 17 02:37:38.1±0.1**, 5.57N**±0.03×**94.74E**±0.02**, h62**^{km}**,**
h62^{km}±2.8^{km}**:pP-P, n711,** σ**1**^{s}**06**/647**, mb5.4**/218**, 194C-15D,**
Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.89**	**92**⇓	*i*Pn	**P**	**02 39 04.8**	**+0.1**
SNG	**Songkhla**	**6.06**	**74**	P	**P**	**02 39 06.5**	**-0.5**
	2µm,1.0s						
IPM	**Ipoh**	**6.34**	**99**	P	**P**	**02 39 11.5**	**+0.5**
NNT	**Nongplab**	**8.54**	**35**	P	**P**	**02 39 44.5**	**+3.0**
KGM	**Kluang**	**9.26**	**112**	P	**P**	**02 39 51.1**	**-0.2**
NST	**Nakhon Sawan**	**11.35**	**27**	P	**P**	**02 40 22.0**	**+2.1**
	125nm,0.6s						
KKTK	**Khon Kaen**	**13.32**	**36**	PG	**P**	**02 40 50.0**	**+4.0**
KKTK				SG	rx	02 40 57.5	
CM31	**Chiang Mai Arr**	**13.45**	**17**	Pn	**P**	**02 40 45.8**	**-2.0**
	202nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.45**	**17**	P	**P**	**02 40 51.4**	**+3.6**
	4.2nm,0.3s,baz=212,slow=14,SNR=62						
CMAR				LR	LR	02 45 52.5	
	comp=Z,1µm,21.0s,baz=200,slow=37						
CMAR				ScP		02 49 40.2	
	0.1nm,0.3s,baz=228,slow=3.2,SNR=5.6						
CHG	**Chiang Mai**	**13.79**	**17**	⇑P	**P**	**02 40 54.7**	**+2.4**
	150nm,0.8s						
CHTO	**Chiang Mai**	**13.79**	**17**	Pn	**P**	**02 40 54.8**	**+2.6**
PALK	**Pallekele**	**14.05**	**278**	Pn	**P**	**02 40 53.4**	**-2.3**
	106nm,0.9s						
PALK				*e*Sn	**S**	**02 43 14.8**	**-16**
NANT	**Nan**	**14.38**	**23**	PG	**P**	**02 41 05.0**	**+5.0**
NANT				SG	rx	02 41 09.5	
KSM	**Kuching**	**16.06**	**104**	*e*P	**P**	**02 41 22.9**	**+1.4**
VIS	**Vishakhapatnam**	**16.44**	**318**	*e*P	**P**	**02 41 25.7**	**-0.6**
VIS				AMb	AMB	02 42 08.7	
	comp=Z,145nm,1.2s						
VIS				*e*x	x	02 44 14.8	
VIS				AML	AML	02 44 19.5	
	comp=N,120nm,0.6s						
VIS				AML	AML	02 44 19.5	
	comp=E,150nm,0.4s						
BWNR	**Bhubaneshwar**	**17.02**	**330**	*e*x	x	02 41 38.9	
BWNR				AMb	AMB	02 41 58.0	
	comp=Z,170nm,0.4s						
BWNR				*e*S	**S**	**02 44 37.2**	**-2.2**
VJD	**Vijayawada**	**17.58**	**309**	*e*x	**S**	**02 44 37.5**	**-14**
TRD	**Trivandrum**	**17.89**	**280**	*e*x	**P**	**02 41 50.5**	**+6.1**
TRD				*i* S	**S**	**02 45 02.5**	**+3.8**
IMP	**Imphal**	**19.12**	**358**	*e*P	**P**	**02 41 57.0**	**-1.9**
IMP				*e*x	x	02 44 52.0	
HYB	**Hyderabad**	**19.73**	**308**⇑	*e*P	**P**	**02 42 05.5**	**0.0**
HYB	**Hyderabad**	**19.73**	**308**⇑	*i*P	**P**	**02 42 05.5**	**0.0**
HYB				*e*S	**S**	**02 45 40.0**	**+0.6**
QIZ	**Qiongzhong**	**19.89**	**46**	⇑P	**P**	**02 42 09.0**	**+1.8**
QIZ				AP		02 42 20.5	
QIZ				XP		02 42 30.3	
QIZ				S	**S**	**02 45 49.3**	**+6.7**
QIZ				SS	SS	02 46 14.8	+1.5
QIZ				AMB	AMB		
	comp=Z,80nm,1.3s						
QIZ				LR	LR		
	comp=N,2µm,17.1s						
QIZ				LR	LR		
	comp=E,2µm,16.9s						
QIZ				LR	LR		
	comp=Z,3µm,18.8s						
QIZ	**Qiongzhong**	**19.89**	**46**	*e*P	**P**	**02 42 05.7**	**-1.5**
	comp=Z,192nm,1.4s						
BOK	**Bokaro**	**20.03**	**336**	*e*P	**P**	**02 42 08.2**	**-0.4**
BOK				AMb	AMB	02 42 12.9	
	comp=Z,456nm,0.9s						
SHL	**Shillong**	**20.07**	**352**	*e*P	**P**	**02 42 05.0**	**-4.1**
SHL				*e*S	**S**	**02 45 47.0**	**+0.8**
SHL				*e*x	x	02 49 54.0	
BLSP	**Bilaspur**	**20.49**	**325**	*e*P	**P**	**02 42 13.8**	**+0.3**
BLSP				AMb	AMB	02 42 19.0	
	comp=Z,288nm,1.1s						
BLSP				*e*x	**S**	**02 45 58.0**	**+3.7**
KMI	**Kunming**	**20.91**	**21**	P	**P**	**02 42 20.3**	**+2.6**
KMI				PP	PP	02 42 45.4	+3.8
KMI				PPP	PPP	02 42 54.9	+3.4
KMI				PCP	PcP	02 46 21.8	-2.2
KMI				LR	LR		

	comp=N,1μm,19.6s						
KMI				LR	LR		
	comp=E,1μm,19.6s						
KMI				LR	LR		
	comp=Z,2μm,24.4s						
KMI	**Kunming**	**20.91**	**21**	P	**P**	**02 42 20.3**	**+2.6**
KMI				pP		02 42 23.1	
KMI				sP		02 42 24.3	
KMI				PP	PP	02 42 45.4	+3.8
KMI				PPP	PPP	02 42 54.9	+3.4
KMI				S	**S**	**02 46 15.7**	**+14**
KMI				sS		02 46 20.2	
KMI				PcP	PcP	02 46 21.7	-2.3
KMI				SS	SS	02 46 51.7	+14
KMI				SSS	SSS	02 47 06.2	+13
KMI				LR	LR		
	comp=Z,2μm,24.4s						
KKM	**Kota Kinabalu**	**21.37**	**88**	*e*P	**P**	**02 42 22.5**	**+0.1**
KKM	**Kota Kinabalu**	**21.37**	**88**	P	**P**	**02 42 24.7**	**+2.3**
NGP	**Nagpur**	**21.71**	**317**	*e*P	**P**	**02 42 27.2**	**+1.4**
NGP				*e*S	**S**	**02 46 22.6**	**+5.4**
LATR	**Latur**	**21.86**	**307**	*i* P	**P**	**02 42 29.0**	**+1.7**
LATR				*e*x	x	02 46 14.0	
GOA	**Goa**	**22.78**	**297**	*e*x	**P**	**02 42 43.0**	**+6.6**
GOA				*e*S	**S**	**02 46 40.0**	**+3.4**
TSM	**Tawau**	**23.08**	**92**	P	**P**	**02 42 39.6**	**+0.2**
KAD	**Karad**	**23.25**	**302**	*e*P	**P**	**02 42 44.5**	**+3.6**
KAD				*i* x	x	02 46 54.4	
PKI	**Pulchoki**	**23.62**	**339**	*e*P	**P**	**02 42 44.6**	**+0.2**
	comp=Z,82nm,0.6s,mb5.4						
GYA	**Guiyang**	**23.69**	**27**	⇑*i*P	**P**	**02 42 46.8**	**+1.7**
GYA				XP		02 43 08.9	
GYA				PP	PP	02 43 26.0	+6.3
GYA				S	**S**	**02 47 02.9**	**+11**
GYA				XS		02 47 28.4	
GYA				AMB	AMB		
	comp=Z,290nm,0.8s,mb5.8						
GYA				AMB	AMB		
	comp=Z,390nm,6.3s						
GYA				LR	LR		
	comp=N,2μm,19.1s						
GYA				LR	LR		
	comp=E,1μm,13.8s						
GYA				LR	LR		
	comp=Z,2μm,20.9s						
DMN	**Daman**	**23.76**	**338**	*e*P	**P**	**02 42 46.5**	**+0.7**
	comp=Z,174nm,0.7s,mb5.6						
GUN	**Gumba**	**23.77**	**340**	*e*P	**P**	**02 42 46.0**	**+0.2**
	comp=Z,195nm,0.6s,mb5.7						
KKN	**Kakani**	**23.86**	**339**	*e*P	**P**	**02 42 46.5**	**-0.2**
	comp=Z,183nm,0.9s,mb5.5						
POO	**Poona**	**24.11**	**304**	*e*P	**P**	**02 42 52.1**	**+2.8**
POO				*i* x	x	02 47 14.0	
BHPL	**Bhopal**	**24.24**	**318**	*e*P	**P**	**02 42 52.0**	**+1.5**
LSA	**Lhasa**	**24.24**	**352**	P	**P**	**02 42 50.4**	**-0.1**
LSA				AP		02 43 05.1	
LSA				AMB	AMB		
	comp=Z,100nm,1.1s,mb5.2						
LSA				AMB	AMB		
	comp=Z,300nm,3.0s						
LSA				LR	LR		
	comp=Z,1μm,30.0s						
LSA	**Lhasa**	**24.24**	**352**	*e*P	**P**	**02 42 50.7**	**+0.3**
	comp=Z,85nm,0.6s,mb5.3						
GKN	**Gorkha**	**24.29**	**338**	*e*P	**P**	**02 42 50.9**	**-0.1**
	comp=Z,98nm,0.4s,mb5.6						
KOLN	**Koldanda**	**24.49**	**336**	*e*P	**P**	**02 42 53.7**	**+0.8**
	comp=Z,396nm,0.9s,mb5.8						
BOM	**Bombay**	**25.15**	**304**	*e*P	**P**	**02 43 01.0**	**+1.7**
	comp=Z,96nm,0.5s,mb5.6						
BOM				*e*x	x	02 47 43.4	
CD2	**Chengdu**	**26.60**	**18**	P	**P**	**02 43 12.3**	**-0.4**
CD2				S	**S**	**02 47 46.3**	**+5.4**
CD2				AMB	AMB		
	comp=Z,130nm,1.0s,mb5.4						
CD2				LR	LR		
	comp=E,1μm,15.6s						
CD2				LR	LR		
	comp=Z,930nm,18.0s						
ENH	**Enshi**	**28.23**	**28**	*e*P	**P**	**02 43 26.7**	**-0.8**
	comp=Z,41nm,0.6s,mb5.2						
NDI	**New Delhi**	**28.36**	**326**	*i* P	**P**	**02 43 26.0**	**-2.7**
QZH	**Quanzhou**	**29.91**	**47**	*e*P	**P**	**02 43 43.3**	**+0.8**
QZH				S	**S**	**02 48 39.8**	**+5.8**
QZH				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.3						
QZH				LR	LR		
	comp=N,2μm,16.3s						
QZH				LR	LR		
	comp=E,2μm,16.7s						
QZH				LR	LR		
	comp=Z,3μm,21.6s						
SMLA	**Simla**	**30.31**	**329**	*i* P	**P**	**02 43 42.8**	**-3.3**
WHN	**Wuhan**	**30.95**	**34**	⇑P	**P**	**02 43 52.0**	**+0.4**
WHN				LR	LR		
	comp=Z,4μm,15.4s						
XAN	**Xi’an**	**31.24**	**23**	P	**P**	**02 43 53.5**	**-0.6**
XAN				PP	PP	02 45 01.0	+2.2
XAN				AMB	AMB		
	comp=Z,170nm,0.8s,mb5.9						
XAN				LR	LR		
	comp=N,700nm,19.0s						
XAN				LR	LR		
	comp=E,820nm,16.5s						
XAN				LR	LR		
	comp=Z,1μm,20.4s						
LZH	**Lanzhou**	**31.51**	**14**	⇑P	**P**	**02 43 55.8**	**-0.7**
LZH				AP	pP	02 44 17.5	+5.6
LZH				PP	PP	02 45 02.1	-0.1
LZH				*e*S	**S**	**02 48 59.0**	**0.0**
LZH				SS	SS	02 50 50.6	-0.2
LZH				AMB	AMB		
	comp=Z,100nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,310nm,5.1s						
LZH				LR	LR		
	comp=N,2μm,13.0s						
LZH				LR	LR		
	comp=Z,5μm,17.2s						
LZH	**Lanzhou**	**31.51**	**14**	⇑P	**P**	**02 43 55.8**	**-0.7**
	comp=Z,102nm,1.5s,mb5.4						
LZH				pP	pP	02 44 10.3	-1.6
LZH				sP	sP	02 44 17.5	-2.0
LZH				PP	PP	02 45 02.1	-0.1
LZH				*e*S	**S**	**02 48 59.0**	**0.0**
LZH				sS		02 49 23.5	
LZH				SS	SS	02 50 50.6	-0.2
LZH				LR	LR		
	comp=Z,5μm,17.2s						
YHNB	**Yeheng**	**31.85**	**51**	*e*P	**P**	**02 44 01.4**	**+1.9**
THN	**Thein Dam**	**32.10**	**329**	*e*P	**P**	**02 43 59.8**	**-1.8**
GTA	**Gaotai**	**34.00**	**7**	⇑*i*P	**P**	**02 44 18.1**	**0.0**
GTA				AP	pP	02 44 37.5	+3.8
GTA				PP	PP	02 45 34.3	+0.8
GTA				PPP	PPP	02 45 52.3	+0.5
GTA				PCP	PcP	02 46 55.4	+0.4
GTA				S	**S**	**02 49 40.3**	**+2.5**
GTA				XS		02 50 06.3	
GTA				SCP		02 50 35.1	
GTA				PCS		02 50 40.6	
GTA				SS	SS	02 51 54.4	+5.8
GTA				SCS	ScS	02 54 36.0	+2.2
GTA				AMB	AMB		
	comp=Z,100nm,0.8s,mb5.8						
GTA				AMB	AMB		
	comp=Z,550nm,11.9s						
GTA				LR	LR		
	comp=N,530nm,25.9s						
GTA				LR	LR		
	comp=E,430nm,31.2s						
GTA				LR	LR		
	comp=Z,700nm,26.2s						
NJ2	**Nanjing**	**34.68**	**38**	*e*P	**P**	**02 44 25.3**	**+1.4**
NJ2				S	**S**	**02 49 43.0**	**-5.3**
NJ2				AMB	AMB		
	comp=Z,850nm,5.8s						
NJ2				LR	LR		
	comp=N,6μm,27.0s						
NJ2				LR	LR		
	comp=E,9μm,32.0s						
NJ2				LR	LR		
	comp=Z,11μm,28.0s						
SSE	**Sheshan**	**35.51**	**41**	P	**P**	**02 44 30.8**	**-0.2**
SSE				PP	PP	02 45 51.1	-1.6
SSE				S	**S**	**02 50 04.3**	**+3.1**
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,240nm,6.5s						
SSE				LR	LR		
	comp=N,590nm,22.1s						
SSE				LR	LR		
	comp=E,840nm,22.1s						
SSE				LR	LR		
	comp=Z,1μm,21.4s						
SSE	**Sheshan**	**35.51**	**41**	P	**P**	**02 44 30.7**	**-0.3**
	comp=Z,33nm,0.8s,mb5.3						
SSE				sP	sP	02 44 43.1	-11
SSE				PP	PP	02 45 51.1	-1.6
SSE				S	**S**	**02 50 04.3**	**+3.1**
SSE				sS		02 50 18.7	
SSE				SS	SS	02 52 39.7	+17
SSE				ScS	ScS	02 54 47.4	+5.5
SSE				LR	LR		
	comp=Z,1μm,21.4s						
MBWA	**Marble Bar**	**36.15**	**138**	*e*P	**P**	**02 44 35.0**	**-1.5**
	comp=Z,66nm,1.3s,mb5.4						
TIA	**Tai’an**	**36.77**	**31**	*e*P	**P**	**02 44 42.0**	**+0.3**
TIA				AMB	AMB		
	comp=Z,80nm,1.0s,mb5.5						
BTO	**Baotou**	**37.49**	**19**	*e*P	**P**	**02 44 47.8**	**+0.2**
BTO				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
KSH	**Kashi**	**37.81**	**336**	P	**P**	**02 44 49.6**	**-0.7**
KSH				AP	pP	02 45 04.1	-1.9
KSH				PP	PP	02 46 20.3	0.0
KSH				PPP	PPP	02 46 42.4	-0.5
KSH				PCP	PcP	02 47 04.1	-2.2
KSH				*e*S	**S**	**02 50 35.1**	**-1.1**
KSH				SCP		02 50 46.4	
KSH				*e*PCS		02 50 53.3	
KSH				*e*SS	SS	02 53 14.5	-0.2
KSH				*e*SCS	ScS	02 54 52.8	-1.8
KSH				AMB	AMB		
	comp=Z,890nm,2.9s,mb6.0						
KSH				LR	LR		
	comp=N,970nm,12.9s						
KSH				LR	LR		
	comp=E,2μm,15.9s						
HHC	**Hu-ho-hao-te**	**38.23**	**21**	*e*P	**P**	**02 44 54.6**	**+0.9**
HHC				PP	PP	02 46 22.1	-3.1
HHC				PCP	PcP	02 47 10.6	+3.0
HHC				S	**S**	**02 50 40.0**	**-2.6**
HHC				AMB	AMB		
	comp=Z,90nm,1.1s,mb5.4						
HHC				AMB	AMB		
	comp=Z,410nm,12.3s						
HHC				LR	LR		
	comp=N,1μm,13.5s						
HHC				LR	LR		
	comp=E,2μm,14.2s						
HHC				LR	LR		
	comp=Z,1μm,15.2s						
WBK	**Wadi Bani Khal**	**38.46**	**300**	P	**P**	**02 44 58.6**	**+2.8**
	SNR=5.6						
FITZ	**Fitzroy Crossi**	**38.50**	**128**	⇑*i*P	**P**	**02 44 55.0**	**-1.2**
	comp=Z,45nm,0.6s,mb5.4						
FITZ	**Fitzroy Crossi**	**38.50**	**128**	P	**P**	**02 44 55.2**	**-1.0**
	comp=Z,62nm,0.7s,mb5.5,baz=325,slow=4.0,SNR=64						
WMQ	**Urumqi**	**38.60**	**352**	⇑P	**P**	**02 44 57.3**	**+0.5**
WMQ				AP	pP	02 45 12.3	-0.3
WMQ				PP	PP	02 46 30.6	+1.1
WMQ				PPP	PPP	02 46 54.0	+0.7
WMQ				PCP	PcP	02 47 06.6	-2.2
WMQ				*e*S	**S**	**02 50 48.8**	**+0.6**
WMQ				SS	SS	02 53 32.5	+0.4
WMQ				SCS	ScS	02 54 59.8	+0.6
WMQ				AMB	AMB		
	comp=Z,110nm,0.8s,mb5.6						
WMQ				AMB	AMB		
	comp=Z,360nm,3.2s						
WMQ				LR	LR		
	comp=N,4μm,24.0s						
WMQ				LR	LR		
	comp=E,5μm,28.0s						
WMQ				LR	LR		
	comp=Z,5μm,28.0s						
JMDO	**Jabal Madar**	**39.12**	**299**	P	**P**	**02 45 03.7**	**+2.4**
	SNR=7.7						
SMDO	**Samad**	**39.41**	**300**	P	**P**	**02 45 06.1**	**+2.4**
	SNR=17						
BIDO	**Bidbid**	**39.51**	**301**	P	**P**	**02 45 07.2**	**+2.7**
	SNR=23						
BSY	**Bisya**	**40.04**	**299**	P	**P**	**02 45 11.5**	**+2.6**
	SNR=19						
ULHL	**Ulahol**	**40.06**	**339**	P	**P**	**02 45 10.0**	**+1.1**
	SNR=155						
HOQ	**Hoqain**	**40.23**	**300**	P	**P**	**02 45 13.2**	**+2.7**
	SNR=13						
KZA	**Kyzart**	**40.28**	**337**	P	**P**	**02 45 12.3**	**+1.6**
	SNR=97						
UCH	**Uchtor**	**40.70**	**337**	P	**P**	**02 45 15.7**	**+1.5**
	SNR=279						
ARQ	**Araqi**	**40.82**	**300**	P	**P**	**02 45 18.1**	**+2.7**
	SNR=8.8						
TKM2	**Tokmak 2**	**40.88**	**338**	P	**P**	**02 45 16.9**	**+1.3**
	SNR=112						
KBK	**Karagaybulak**	**40.89**	**338**	P	**P**	**02 45 17.6**	**+1.9**
	SNR=212						
AML	**Almayashu**	**40.94**	**336**	P	**P**	**02 45 17.9**	**+1.7**
	SNR=344						
AAK	**Ala-Archa**	**41.05**	**337**	P	**P**	**02 45 18.6**	**+1.6**
AAK				pmax	pmax		
	comp=Z,141nm,0.9s,mb5.6						
AAK	**Ala-Archa**	**41.05**	**337**	⇑*i*P	**P**	**02 45 17.3**	**+0.2**
	comp=Z,92nm,0.8s,mb5.5						
DL2	**Dalian**	**41.16**	**32**	⇓P	**P**	**02 45 20.0**	**+2.0**
DL2				*e*S	**S**	**02 51 26.0**	**-0.5**
DL2				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.4						
DL2				LR	LR		
	comp=N,750nm,18.0s						
FRU	**Bishkek**	**41.17**	**337**	⇑*i*P	**P**	**02 45 19.5**	**+1.4**
FRU				pmax	pmax		
	comp=Z,420nm,2.1s,mb5.7						
CHMS	**Chumysh**	**41.26**	**338**	P	**P**	**02 45 19.5**	**+0.7**
	SNR=37						
EKS2	**Erkin-Say**	**41.35**	**336**	P	**P**	**02 45 21.1**	**+1.6**
	SNR=121						
USP	**Ospenovka**	**41.59**	**338**	P	**P**	**02 45 22.5**	**+1.0**
	SNR=271						
KAKA	**Kakadu**	**41.63**	**116**	*e*P	**P**	**02 45 20.5**	**-1.7**
	comp=Z,24nm,0.6s,mb5.0						
WHFO	**Wadi Hawf**	**41.84**	**291**	P	**P**	**02 45 25.6**	**+1.7**
	SNR=6.4						
MKAR	**Makanchi Array**	**42.46**	**347**	P	**P**	**02 45 28.9**	**+0.3**
	comp=Z,66nm,0.8s,mb5.3,baz=164,slow=8.8,SNR=293						
MKAR				LR	LR	03 08 35.3	
	comp=Z,180nm,18.8s,slow=44						
INCN	**Inchon**	**43.06**	**38**	⇑*i*P	**P**	**02 45 33.5**	**-0.1**
	comp=Z,25nm,0.6s,mb5.1						
KKAR	**Karatay Array**	**43.08**	**334**	*i* P	**P**	**02 45 33.7**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.1						
SONM	**Songino Array**	**43.28**	**11**	P	**P**	**02 45 35.5**	**+0.1**
	comp=Z,59nm,0.8s,mb5.4,baz=191,slow=8.0,SNR=390						
SONM				PcP	PcP	02 47 24.2	+0.2
	comp=Z,7.8nm,0.5s,baz=196,slow=3.8,SNR=6.7						
SONM				ScP		02 51 09.0	
	comp=Z,1.1nm,0.9s,baz=207,slow=2.8,SNR=10.0						
SONM				LR	LR	03 05 48.8	
	comp=Z,571nm,20.3s,baz=200,slow=39						
ULN	**Ulaanbaatar**	**43.44**	**12**	P	**P**	**02 45 36.6**	**0.0**
ULN	**Ulaanbaatar**	**43.44**	**12**	⇑*i*P	**P**	**02 45 36.6**	**-0.1**
KS15	**Wonju Array Si**	**43.81**	**39**	*e*P	**P**	**02 45 39.7**	**-0.1**
NWAO	**Narrogin (SRO)**	**43.84**	**152**	P	**P**	**02 45 40.6**	**+0.5**
NWAO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NWAO	**Narrogin (SRO)**	**43.84**	**152**	P	**P**	**02 45 40.5**	**+0.5**
	comp=Z,6.3nm,1.0s,mb4.3,baz=329,slow=5.9,SNR=2.8						
ZAK	**Zakamensk**	**45.24**	**8**	⇓*i*P	**P**	**02 45 50.4**	**-0.6**
ZAK				*e*		02 47 30.6	
ZAK				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.8						
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.5						
MOY	**Mondy**	**46.24**	**5**	*e*P	**P**	**02 45 59.0**	**0.0**
MOY				pmax	pmax		
	comp=Z,29nm,2.2s,mb4.8						
WRA	**Warramunga Arr**	**46.46**	**124**	P	**P**	**02 46 00.5**	**-0.6**
WRA				S	**S**	**02 52 41.5**	**-2.2**
WRA				pmax	pmax		
	comp=Z,49nm,0.6s						
WRA				pmax	pmax		
	comp=N,4.0nm,0.8s						
WRA				smax			
	comp=N,6.0nm,1.1s						
WRA	**Warramunga Arr**	**46.46**	**124**	P	**P**	**02 46 00.5**	**-0.6**
	comp=N,49nm,0.6s,mb5.6,baz=303,slow=9.1,SNR=355						
WRA				ScP		02 51 22.5	
	comp=N,4.0nm,0.8s,baz=313,slow=3.8,SNR=9.3						
WRA				S	**S**	**02 52 41.5**	**-2.1**
	comp=N,5.8nm,1.1s,baz=292,slow=16,SNR=5.1						
WRAB	**Tennant Creek**	**46.47**	**124**	*c* *i*P	**P**	**02 46 00.6**	**-0.5**
WRAB	**Tennant Creek**	**46.47**	**124**	⇑*i*P	**P**	**02 46 00.6**	**-0.5**
	comp=N,140nm,0.7s,mb6.0						
WB2	**Warramunga Arr**	**46.47**	**124**	⇑*i*P	**P**	**02 46 00.6**	**-0.6**
TLY	**Talaya**	**46.56**	**8**	*e*P	**P**	**02 46 01.8**	**+0.4**
TLY				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
TLY				MLR	MLR		
	comp=Z,813nm,23.0s						
TLY	**Talaya**	**46.56**	**8**	⇑*i*P	**P**	**02 46 01.7**	**+0.3**
	comp=Z,20nm,0.8s,mb5.1						
CN2	**Changchun**	**46.68**	**31**	*e*P	**P**	**02 46 02.9**	**+0.4**
CN2				*e*S	**S**	**02 52 48.9**	**+2.5**
CN2				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.6						
CN2				LR	LR		
	comp=N,600nm,18.0s						
CN2				LR	LR		
	comp=E,600nm,18.0s						
CN2				LR	LR		
	comp=Z,600nm,21.0s						
IRK	**Irkutsk**	**47.19**	**8**	*e*P	**P**	**02 46 06.2**	**-0.2**
IRK				pmax	pmax		
	comp=Z,102nm,2.0s,mb5.4						
HASS	**Wahat al Ahsa’**	**47.32**	**299**	P	**P**	**02 46 08.8**	**+1.0**
HIA	**Hailar**	**48.42**	**22**	⇑*i*P	**P**	**02 46 15.8**	**-0.2**
	comp=Z,20nm,0.5s,mb5.4						
MDJ	**Mudanjiang**	**49.40**	**33**	P	**P**	**02 46 24.3**	**+0.7**
MDJ				AP	pP	02 46 44.0	+4.3
MDJ				PCP	PcP	02 47 45.3	-0.2
MDJ				SCP		02 51 35.4	
MDJ				PCS		02 51 43.4	
MDJ				S	**S**	**02 53 31.0**	**+6.4**
MDJ				AMB	AMB		
	comp=Z,60nm,1.3s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,560nm,11.6s						
MDJ				LR	LR		
	comp=N,290nm,22.9s						
MDJ				LR	LR		
	comp=E,520nm,20.0s						
MDJ				LR	LR		
	comp=Z,570nm,23.8s						
RYDS	**Riyadh**	**49.74**	**297**	P	**P**	**02 46 28.3**	**+1.8**
CBIJ	**Chichi jima**	**49.93**	**59**	P	**P**	**02 46 27.4**	**-0.5**
	comp=Z,68nm,0.6s,mb5.9,baz=294,slow=13,SNR=5.0						
NVS	**Novosibirsk**	**50.00**	**351**	*i* P	**P**	**02 46 26.8**	**-1.3**
NVS				*i*	pP	02 46 40.3	-4.0
NVS				*i* S	**S**	**02 53 32.9**	**+0.1**
NVS				pmax	pmax		
	comp=Z,81nm,1.0s,mb5.7						
NVS				pmax	pmax		
	comp=N,60nm,1.0s						
NVS				pmax	pmax		
	comp=E,36nm,1.0s						
NVS				smax			
	comp=N,38nm,1.7s						
NVS				smax			
	comp=E,80nm,1.9s						
MAJO	**Matsushiro**	**50.29**	**46**	*e*P	**P**	**02 46 30.8**	**+0.1**
	comp=E,13nm,0.8s,mb5.0						
MAT	**Matsushiro**	**50.29**	**46**	P	**P**	**02 46 29.0**	**-1.6**
	comp=E,33nm,1.2s,mb5.2						
MAT				S	**S**	**02 53 54.0**	**+17**
MAT				LR	LR		
	comp=Z,710nm,20.0s						
MAT	**Matsushiro**	**50.29**	**46**	P	**P**	**02 46 29.1**	**-1.5**
MAT				*e*S	**S**	**02 53 36.6**	**-0.5**
MJAR	**Matsushiro Arr**	**50.29**	**46**	P	**P**	**02 46 31.3**	**+0.7**
MJAR						02 47 48.9	
MJAR				pmax	pmax		
	comp=Z,13nm,0.8s						
MJAR				pmax	pmax		
	comp=Z,11nm,0.9s						
MJAR				MLR	MLR		
	comp=Z,657nm,21.2s						
MJAR	**Matsushiro Arr**	**50.29**	**46**	P	**P**	**02 46 31.3**	**+0.6**
	comp=Z,13nm,0.8s,mb5.0,baz=248,slow=8.7,SNR=22						
MJAR				PcP	PcP	02 47 48.9	+0.1
	comp=Z,11nm,0.9s,baz=241,slow=3.3,SNR=6.8						
MJAR				LR	LR	03 08 31.4	
	comp=Z,657nm,21.1s,baz=250,slow=37						
MJAR	**Matsushiro Arr**	**50.29**	**46**	P	**P**	**02 46 31.3**	**+0.6**
MJAR				PcP	PcP	02 47 48.9	0.0
MJAR				LR	LR	03 08 31.4	
KAMS	**Al Khamasin**	**50.82**	**292**	P	**P**	**02 46 34.6**	**-0.2**
BVAR	**Borovoye Array**	**51.35**	**341**	P	**P**	**02 46 38.0**	**-0.4**
	comp=Z,51nm,0.6s,mb5.6,baz=149,slow=8.6,SNR=332						
BVAR				S	**S**	**02 53 52.8**	**+1.3**
	comp=Z,3.0nm,0.8s,baz=127,slow=15,SNR=6.3						
DJNS	**Zahran al Janu**	**51.41**	**288**	P	**P**	**02 46 40.4**	**+1.1**
TATS	**Tathlith**	**51.73**	**290**	P	**P**	**02 46 41.9**	**+0.2**
AB31	**Akbulak array**	**52.53**	**332**	P	**P**	**02 46 47.0**	**-0.3**
AB31				pmax	pmax		
	comp=Z,43nm,0.7s,mb5.5						
KLR	**Kul’dur**	**53.57**	**29**	⇓*i*P	**P**	**02 46 52.2**	**-2.8**
KLR				*e*S	**S**	**02 54 31.0**	**+9.2**
KLR				pmax	pmax		
	comp=N,28nm,1.4s						
KLR				pmax	pmax		
	comp=E,48nm,1.4s						
KLR				pmax	pmax		
	comp=Z,67nm,1.4s,mb5.4						
KLR				MLR	MLR		
	comp=Z,900nm,14.0s						
BHD	**Baghdad**	**54.23**	**307**	*e*P	**P**	**02 46 57.0**	**-3.0**
BOD	**Bodaibo**	**54.25**	**13**	*e*P	**P**	**02 46 58.1**	**-1.8**
BOD				pmax	pmax		
	comp=Z,68nm,1.0s,mb5.5						
PMG	**Port Moresby**	**54.31**	**106**	P	**P**	**02 47 00.1**	**-0.8**
PMG				pmax	pmax		
	comp=Z,41nm,0.7s						
PMG	**Port Moresby**	**54.31**	**106**	P	**P**	**02 47 00.1**	**-0.8**
	comp=Z,41nm,0.7s,mb5.5,baz=289,slow=4.6,SNR=12						
PMG	**Port Moresby**	**54.31**	**106**	⇑*i*P	**P**	**02 46 59.9**	**-1.0**
	comp=Z,55nm,1.0s,mb5.4						
MSL	**Mosul**	**56.24**	**310**	*e*P	**P**	**02 47 11.5**	**-3.1**
CLNS	**Chul’man**	**56.39**	**19**	*e*P	**P**	**02 47 13.5**	**-1.8**
CLNS				*e*		02 48 06.3	
CLNS				*e*		02 49 16.1	
CLNS				*e*PPP	PPP	02 50 36.4	-4.4
CLNS				*e*S	**S**	**02 55 08.1**	**+8.7**
CLNS				*e*PS	PS	02 55 24.4	+3.4
CLNS				*e*		02 56 57.1	
CLNS				pmax	pmax		
	comp=N,15nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
CLNS				pmax	pmax		
	comp=E,12nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.7s						
CLNS				smax			
	comp=E,3.0nm,0.6s						
CLNS				smax			
	comp=N,5.0nm,0.7s						
CLNS				MLR	MLR		
	comp=N,1μm,21.0s						
CLNS				MLR	MLR		
	comp=Z,2μm,21.0s						
CLNS				MLR	MLR		
	comp=E,500nm,17.0s						
GNI	**Garni**	**56.47**	**315**	*c* *i*P	**P**	**02 47 15.4**	**-0.8**
GNI				pmax	pmax		
	comp=Z,61nm,1.2s						
GNI				MLR	MLR		
	comp=Z,100nm,15.0s						

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GNI   Garni              56.47 315  P       P       02 47 15.1 -1.1
      comp=Z,17nm,0.7s,mb5.2,baz=26,slow=8.3,SNR=16
GNI   Garni              56.47 315⇑iP       P       02 47 15.2 -1.0
      comp=Z,64nm,1.2s,mb5.5
GNI                                 LR      LR
      comp=Z,168nm,19.0s
CLDR  Caldiran           56.66 314 eP       P       02 47 15.9 -1.6
CTA   Charters Tower     56.68 118 eP       P       02 47 15.5 -2.4
      comp=Z,14nm,0.8s,mb5.1
CTA   Charters Tower     56.68 118  P       P       02 47 17.3 -0.6
CTA                                 pmax    pmax
      comp=Z,19nm,0.9s
CTA   Charters Tower     56.68 118  P       P       02 47 17.2 -0.7
      comp=Z,19nm,0.9s,mb5.1,baz=299,slow=9.2,SNR=14
CTAO  Charters Tower     56.68 118 eP       P       02 47 15.2 -2.7
      comp=Z,38nm,1.1s,mb5.3
CTAO                                LR      LR
      comp=Z,565nm,21.0s
ASAJ  Asahikawa          56.78  40  P       P       02 47 18.2 -0.1
ASAJ                                pmax    pmax
      comp=Z,9.0nm,0.5s
ASAJ  Asahikawa          56.78  40  P       P       02 47 18.2 -0.1
      comp=Z,8.8nm,0.5s,mb5.0,baz=268,slow=11,SNR=7.9
SVE   Sverdlovsk         57.75 339⇑iP       P       02 47 24.6 -0.4
SVE                                e        pP      02 47 44.5 +3.0
SVE                                e                02 55 16.0
SVE                                e                02 55 40.0
SVE                                 pmax    pmax
      comp=Z,224nm,2.1s,mb5.8
SVE                                 MLR     MLR
      comp=N,200nm,16.0s
SVE                                 MLR     MLR
      comp=E,200nm,16.0s
SVE                                 MLR     MLR
      comp=Z,200nm,16.0s
ADE   Adelaide           57.77 138 eP       P       02 47 25.1 -0.3
BTMT  Batman             58.09 312 eP       P       02 47 27.0 -0.6
STKA  Stephens Creek     58.10 133⇑iP       P       02 47 26.6 -1.1
      comp=Z,14nm,0.6s,mb5.2
STKA  Stephens Creek     58.10 133  P       P       02 47 26.6 -1.1
      comp=Z,18nm,0.9s,mb5.1,baz=306,slow=7.2,SNR=20
STKA                                LR      LR      03 13 13.0
      comp=Z,278nm,19.6s,baz=218,slow=37
ZEI   Tsey               58.13 318 eP       P       02 47 26.6 -1.2
ZEI                                i *PP    pP      02 47 44.9 +0.5
ZEI                                 pmax    pmax
      comp=Z,31nm,0.8s,mb5.4
ARU   Arti               58.23 337⇑iP       P       02 47 27.1 -1.2
ARU                                e                02 48 16.9
ARU                                e                02 49 33.3
ARU                                ePPP     PPP     02 50 54.7 -8.1
ARU                                eS       S       02 55 28.3 +4.7
ARU                                e                02 57 09.6
ARU                                 pmax    pmax
      comp=Z,60nm,0.9s,mb5.6
ARU   Arti               58.23 337⇑iP       P       02 47 27.2 -1.1
      comp=Z,81nm,1.0s,mb5.7
YSS   Yuzh-Sakhalins     58.24  37⇑iP       P       02 47 28.0 -0.5
YSS                                i        pP      02 47 48.2 +3.1
YSS                                 pmax    pmax
      comp=Z,100nm,1.0s,mb5.8
YSS                                 MLR     MLR
      comp=Z,600nm,20.0s
YSS   Yuzh-Sakhalins     58.24  37⇑iP       P       02 47 28.5  0.0
      comp=Z,104nm,1.1s,mb5.8
ERZM  Erzurum            58.78 314 i P      P       02 47 31.5 -0.9
EZM   Erzurum            58.78 314 eP       P       02 47 31.9 -0.4
KIV   Kislovodsk         59.42 319c iP      P       02 47 35.5 -1.3
KIV                                 pmax    pmax
      comp=Z,61nm,0.9s,mb5.6
KIV   Kislovodsk         59.42 319⇑iP       P       02 47 35.2 -1.5
      comp=Z,82nm,1.1s,mb5.7
KIV                                 LR      LR
      comp=Z,65nm,21.0s
GOF   Gofitskoye         59.66 320⇑iP       P       02 47 35.6 -2.8
GOF                                e                02 55 34.7
GOF                                 pmax    pmax
      comp=Z,90nm,1.7s,mb5.5
ASF   Jabal al Asfar     59.98 304  P       P       02 47 41.6 +0.8
      comp=Z,19nm,0.8s,mb5.2,baz=341,slow=4.9,SNR=26
GUMT  Gumushane          60.33 314 eP       P       02 47 40.9 -2.1
MALT  Malatya            60.41 311⇑iP       P       02 47 43.0 -0.7
      comp=Z,11nm,0.8s,mb5.0
MYA   Malataya           60.42 311 eP       P       02 47 38.2 -5.5
GZT   Gaziantep          60.78 310 i P      P       02 47 45.7 -0.5
GAZ   Gaziantep          61.00 310 eP       P       02 47 46.6 -1.0
EIL   Elat               61.10 301⇑iP       P       02 47 48.4  0.0
      comp=Z,15nm,0.8s,mb5.2
SOKR  Solikamsk          61.15 339c iP      P       02 47 46.3 -2.0
SOKR                               e        pP      02 48 01.4 -3.6
SOKR                                pmax    pmax
      comp=Z,50nm,0.8s,mb5.7
SOC   Sochi              61.26 317 eP       P       02 47 50.3 +1.0
SOC                                eS       S       02 56 18.5 +16
SOC                                 pmax    pmax
      comp=Z,85nm,1.4s,mb5.7
SOC                                 pmax    pmax
      comp=N,82nm,1.6s
SOC                                 pmax    pmax
      comp=E,77nm,1.4s
SOC                                 MLR     MLR
      comp=N,246nm,19.0s
SOC                                 MLR     MLR
      comp=Z,319nm,19.0s
SOC                                 MLR     MLR
      comp=E,168nm,17.0s
BHL   Bhannes            61.40 306 eP       P       02 47 51.1 +0.8
COBT  Iskenderun         61.56 309 i P      P       02 47 51.2 -0.2
YAK   Yakutsk            61.99  18 i P      P       02 47 52.3 -1.6
YAK                                 pmax    pmax
      comp=Z,54nm,0.5s,mb5.9
YAK                                 MLR     MLR
      comp=Z,600nm,23.0s
YAK   Yakutsk            61.99  18 i P      P       02 47 52.4 -1.5
PHNC  Paralimni          62.95 306  P       P       02 48 00.0 -0.7
MEST  Erdemli            63.22 308 i P      P       02 48 00.9 -1.6
CSS   Prodhromos         63.50 306 ⇑P       P       02 48 04.0 -0.4
      comp=Z,1.1nm,0.8s
CSS   Prodhromos         63.50 306 eP       P       02 48 02.1 -2.3
CSS   Prodhromos         63.50 306⇑eP       P       02 48 04.0 -0.4
MAMC  Mammari            63.64 307  P       P       02 48 05.5 +0.2
TOO   Toolangi           63.77 137 eP       P       02 48 06.5 +0.3
      comp=Z,27nm,1.0s,mb5.2
CDAG  Cicekdag           63.81 312 i P      P       02 48 04.8 -1.6
SZAC  Souni-Zanaja       63.82 306 ⇑P       P       02 48 06.4 -0.1
SZAC  Souni-Zanaja       63.82 306⇑eP       P       02 48 06.4 -0.1
LEF   Lefka              63.89 306 eP       P       02 48 05.8 -1.2
BOYT  Boyabat            63.92 314 i P      P       02 48 06.0 -1.0
ALFC  Alevga             64.13 306 ⇑P       P       02 48 07.8 -0.7
      comp=Z,1.8nm,0.6s,mb4.3
ALFC  Alevga             64.13 306⇑eP       P       02 48 07.8 -0.7
MBAR  Mbarara            64.20 267 eP       P       02 48 10.0 +0.8
      comp=Z,12nm,1.0s,mb4.9
ERMK  Ermenek            64.20 308 i P      P       02 48 10.1 +1.2
KAMT  Kaman              64.24 311 eP       P       02 48 07.9 -1.2
BRTR  Keskin Array B     64.39 312  P       P       02 48 08.6 -1.5
BRTR                                pmax    pmax
      comp=Z,20nm,0.8s
BRTR  Keskin Array B     64.39 312  P       P       02 48 08.6 -1.5
      comp=Z,20nm,0.8s,mb5.2,baz=127,slow=7.3,SNR=130
BR131 Keskin Array S     64.39 312⇑iP       P       02 48 08.4 -1.7
      comp=Z,17nm,0.7s,mb5.2
BR131                               LR      LR
      comp=Z,120nm,19.0s
TOS   Tosya              64.45 313 eP       P       02 48 10.4 -0.1
VRSR  Storozhevoye       64.59 325 eP       P       02 48 08.7 -2.5
VRSR                                pmax    pmax
      comp=Z,50nm,0.8s,mb5.6
VRSR                                pmax    pmax
      comp=N,10.0nm,0.6s
VRSR                                pmax    pmax
      comp=E,90nm,0.9s
HDMB  Hadim              64.61 308 eP       P       02 48 10.1 -1.4
CANT  Cankiri            64.63 312 eP       P       02 48 09.6 -2.1
BZK   Bozkurt            64.72 314 eP       P       02 48 10.4 -1.8
ELDT  Eldivan            64.74 312 i P      P       02 48 10.6 -1.7
VOR   Voronezh           64.81 325 eP       P       02 48 11.0 -1.6
VOR                                 pmax    pmax
      comp=E,80nm,1.3s
VOR                                 pmax    pmax
      comp=Z,120nm,1.3s,mb5.8
BALT  Daday              65.05 313 i P      P       02 48 13.2 -1.1
LOD   Lodumlu            65.08 312 eP       P       02 48 10.4 -4.2
ARMA  Armidale           65.09 127⇑iP       P       02 48 15.4 +0.6
SAFT  Safranbolu         65.48 313 eP       P       02 48 12.9 -4.2
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KIZT  Kizilcal           65.50 310 eP       P       02 48 15.0 -2.3
SIM   Simferopol’        65.51 317ceP       P       02 48 16.1 -1.1
SIM                                eS       S       02 56 54.0 -1.7
SIM                                 pmax    pmax
      comp=Z,48nm,0.9s,mb5.5
SGKT  Sivrigoynuk        65.77 312 i P      P       02 48 18.0 -1.0
ISP   Isparta            66.33 309 eP       P       02 48 17.8 -4.8
ISP   Isparta            66.33 309c iP      P       02 48 21.1 -1.5
ISP   Isparta            66.33 309⇑iP       P       02 48 21.1 -1.5
MDU   Mudurnu            66.37 312 eP       P       02 48 22.1 -0.7
ESKT  Eskisehir          66.43 311 eP       P       02 48 22.2 -1.0
ESKT  Eskisehir          66.43 311 i P      P       02 48 21.5 -1.7
TKTP  Tekketepe          66.52 309 i P      P       02 48 22.3 -1.4
ELL   Elmali             66.58 308 eP       P       02 48 23.7 -0.5
ALT   Altintas           66.89 310 eP       P       02 48 25.0 -1.1
GOLH  Golhisar           66.95 308 i P      P       02 48 25.5 -1.0
FETY  Fethiye            67.22 307 eP       P       02 48 23.5 -4.7
MOS   Moscow             67.35 329⇑iP       P       02 48 28.0 -0.7
MOS                                e        pP      02 48 46.9 +1.3
MOS                                e                02 48 58.8
MOS                                eS       S       02 57 14.2 -3.6
MOS                                 pmax    pmax
      comp=Z,149nm,1.0s,mb6.0
MOS                                 pmax    pmax
      comp=Z,400nm,1.6s,mb6.2
GDZ   Gediz              67.38 310 i P      P       02 48 28.1 -1.0
DENT  Denizli            67.46 309 eP       P       02 48 26.1 -3.6
DALT  Dalyan (Mudla)     67.59 307 eP       P       02 48 28.5 -2.0
OBN   Obninsk            67.64 328c iP      P       02 48 29.1 -1.4
OBN                                e*PP     pP      02 48 49.9 +2.5
OBN                                e                02 50 57.2
OBN                                i S      S       02 57 20.6 -0.7
OBN                                 pmax    pmax
      comp=Z,153nm,1.4s,mb5.8
OBN   Obninsk            67.64 328⇑iP       P       02 48 28.9 -1.6
      comp=Z,156nm,1.4s,mb5.8
YLV   Yalova             67.76 312 eP       P       02 48 25.2 -6.3
ULDT  Uludag             67.85 311 i P      P       02 48 30.8 -1.2
DST   Dursunbey          68.13 310 eP       P       02 48 29.4 -4.4
MA2   Magadan            68.53  27ceP       P       02 48 35.5 -0.4
MA2                                 pmax    pmax
      comp=Z,30nm,0.8s,mb5.3
MA2   Magadan            68.53  27 eP       P       02 48 35.3 -0.7
      comp=Z,41nm,0.8s,mb5.4
KARP  Karpathos          68.57 306 ePB      P       02 48 36.0 -0.6
AKS   Akhisar            68.61 310 eP       P       02 48 36.0 -0.8
KDAG  Bornova            68.95 309 i P      P       02 48 38.5 -0.4
IZM   Izmir              68.95 309 eP       P       02 48 36.8 -2.1
LSZ   Lusaka             69.08 251 eP       P       02 48 40.7 +0.6
      comp=Z,37nm,1.3s,mb5.2
TIRR  Tirgusor           69.30 315  P       P       02 48 40.2 -0.8
TIRR  Tirgusor           69.30 315 ⇓P       P       02 48 40.3 -0.7
TIXI  Tiksi              69.37  11c iP      P       02 48 39.3 -1.6
TIXI                                pmax    pmax
      comp=Z,47nm,0.7s,mb5.5
TIXI                                MLR     MLR
      comp=Z,700nm,20.0s
TIXI  Tiksi              69.37  11⇑iP       P       02 48 39.3 -1.6
URLA  Izmir              69.46 309 i P      P       02 48 41.7 -0.4
KIS   Kishinev           69.62 318 eP       P       02 48 39.0 -3.9
KIS                                e        pP      02 48 55.0 -5.0
KIS                                e                02 57 40.0
KIS                                e                02 58 20.0
KIS                                 MLR     MLR
      comp=Z,200nm,17.0s
CFR   Carcaliu           69.66 316⇑iP       P       02 48 42.3 -0.9
CFR   Carcaliu           69.66 316⇑iP       P       02 48 42.3 -0.8
HARR  Harsova            69.69 316⇑iP       P       02 48 42.6 -0.7
HARR  Harsova            69.69 316⇑iP       P       02 48 42.6 -0.7
NPS   Neapolis           69.78 305 ePG      P       02 48 44.5 +0.4
EDRB  Edirne             69.96 312 eP       P       02 48 35.1  -10
PET   Petropavlovsk      70.05  35 eP       P       02 48 44.0 -1.4
PET                                eS       S       02 57 58.6 +8.7
PET                                 pmax    pmax
      comp=Z,52nm,1.0s,mb5.4
PET   Petropavlovsk      70.05  35 eP       P       02 48 44.0 -1.4
      comp=Z,25nm,1.0s,mb5.1
PET                                 LR      LR
      comp=Z,504nm,21.0s
SANT  Santorini          70.06 307⇑iP       P       02 48 44.3 -1.4
      comp=Z,40nm,0.7s,mb5.5
THR1  Thera Island       70.06 307 eP       P       02 48 44.6 -1.1
THR3  Thira Island,      70.11 307 eP       P       02 48 44.9 -1.1
ALN   Alexandroupoli     70.31 311 eP       P       02 48 46.4 -0.7
AKASG Malin Array Be     70.33 322  P       P       02 48 45.3 -1.8
AKASG                               pmax    pmax
      comp=Z,15nm,0.5s
AKASG Malin Array Be     70.33 322  P       P       02 48 45.3 -1.8
      comp=Z,15nm,0.5s,mb5.1,baz=86,slow=5.3,SNR=74
SEY   Seymchan           70.77  24 eP       P       02 48 48.6 -0.9
SEY                                 pmax    pmax
      comp=Z,10.0nm,0.9s,mb4.8
VRI   Vrincioaia         70.77 317  P       P       02 48 49.9  0.0
VRI   Vrincioaia         70.77 317⇑iP       P       02 48 50.0 +0.2
VRI   Vrincioaia         70.77 317⇑iP       P       02 48 50.0 +0.1
VAM   Vamos              70.95 305 ePB      P       02 48 52.5 +1.4
GVD   Gavdhos            70.97 305⇑iP       P       02 48 50.3 -1.0
      comp=Z,79nm,1.0s,mb5.6
MLR   Muntele Rosu       71.23 316  P       P       02 48 52.7 +0.1
MLR   Muntele Rosu       71.23 316  P       P       02 48 52.6  0.0
      comp=Z,42nm,0.8s,mb5.5,baz=97,slow=1.6,SNR=108
MLR   Muntele Rosu       71.23 316⇑iP       P       02 48 52.6 -0.1
MLR   Muntele Rosu       71.23 316⇑iP       P       02 48 52.6  0.0
OUR   Ouranopolis        71.77 311 eP       P       02 48 54.3 -1.6
VOIR                     71.84 316 ⇑P       P       02 48 55.8 -0.5
PAIG  Paliouri           71.94 310 eP       P       02 48 57.2 +0.2
VLI   Veliai             72.11 307 ePn      P       02 48 54.0 -4.1
BURAR Bucovina Array     72.15 318  P       P       02 48 58.3 +0.2
BURAR Bucovina Array     72.15 318 ⇓P       P       02 48 58.6 +0.5
SRS   Serrai             72.17 311 eP       P       02 48 56.9 -1.4
MNK   Minsk              72.18 326 eP       P       02 48 56.0 -2.1
SOH   Sokhos             72.31 311 eP       P       02 48 57.6 -1.6
PUL   Pulkovo            72.51 331 i P      P       02 48 58.8 -1.1
PUL                                i S      S       02 58 15.8 -2.3
PUL                                i                02 58 59.2
PUL                                 pmax    pmax
      comp=N,140nm,0.7s
PUL                                 pmax    pmax
      comp=Z,76nm,0.7s,mb5.7
PUL                                 pmax    pmax
      comp=E,55nm,0.8s
PUL                                 smax
      comp=N,118nm,14.3s
PUL                                 smax
      comp=Z,16nm,6.1s
PUL                                 smax
      comp=E,109nm,12.5s
PUL   Pulkovo            72.51 331 i P      P       02 49 00.0 +0.1
THE   Thessaloniki       72.58 311 eP       P       02 48 59.0 -1.7
VTS   Vitosha            72.67 313  P       P       02 49 00.7 -0.6
AGG   Agios Georgios     72.86 309 eP       P       02 48 60.0 -2.5
LIT   Litokhoron         72.87 310 eP       P       02 49 00.9 -1.6
ITM   Ithomi             72.97 307 ePn      P       02 49 03.0 -0.1
GRG   Griva              73.05 311 eP       P       02 49 02.0 -1.5
ZAPS  Zavoj/Pirot        73.21 313⇑iP       P       02 49 03.4 -1.0
LVV   L’vov              73.36 320 eP       P       02 49 04.0 -1.1
LVV                                eS       S       02 58 33.2 +5.4
LBTB  Lobatse            73.68 242 eP       P       02 49 07.7 +0.2
      comp=E,34nm,0.8s,mb5.3
LBTB                                LR      LR
      comp=Z,744nm,19.0s
BOLS  Boljevac           73.76 314⇑iP       P       02 49 06.5 -1.1
FNA   Florina            73.80 311 eP       P       02 49 05.9 -2.0
VSU   Vasula             73.86 330c iP      P       02 49 07.0 -0.9
VSU   Vasula             73.86 330⇑iP       P       02 49 07.1 -0.8
SKO   Skopje             73.89 312 i P      P       02 49 06.5 -1.9
LKD   Levkas             74.13 309 eP       P       02 49 08.6 -1.3
KWP   Kalwaria           74.17 320⇑eP       P       02 49 09.8 -0.1
BZS   Buzias             74.25 316  P       P       02 49 10.3 -0.1
BZS   Buzias             74.25 316 ⇓P       P       02 49 10.1 -0.3
UZH   Uzhgorod           74.26 319 eP       P       02 49 10.0 -0.4
UZH                                eS       S       02 58 37.0 -0.9
KOLS  Kolonicke sedl     74.33 319 eP       P       02 49 11.1 +0.3
KOLS                               e                02 49 22.4
SVIS  Svilajnac          74.35 314⇓iP       P       02 49 10.1 -0.9
IGT   Igoumenitsa        74.46 309 eP       P       02 49 10.2 -1.6
SUW   Suwalki            74.72 325⇑eP       P       02 49 12.1 -0.8
BOSA  Boshof             74.88 239  P       P       02 49 15.0 +0.6
BOSA                                *PP     pP      02 49 30.8 -0.8
BOSA                                pmax    pmax
      comp=Z,13nm,1.0s,mb4.8
BOSA                                pmax    pmax
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      comp=Z,27nm,0.7s,mb5.3
BOSA  Boshof             74.88 239  P       P       02 49 15.0 +0.6
      comp=Z,13nm,1.0s,mb4.8,baz=85,slow=5.8,SNR=16
BOSA                                pP      pP      02 49 30.8 -0.9
      comp=Z,27nm,0.7s,baz=79,slow=7.1,SNR=14
BOSA                                LR      LR      03 16 00.5
      comp=Z,586nm,21.5s,baz=65,slow=31
BOSA  Boshof             74.88 239 eP       P       02 49 14.9 +0.5
      comp=Z,34nm,0.8s,mb5.3
FINES FINESS Array B     75.02 332  P       P       02 49 13.8 -0.7
FINES                               *PP     pP      02 49 29.8 -1.9
FINES                               pmax    pmax
      comp=Z,9.0nm,0.5s
FINES                               pmax    pmax
      comp=Z,7.0nm,0.4s
FINES FINESS Array B     75.02 332  P       P       02 49 13.8 -0.7
      comp=Z,8.9nm,0.5s,mb5.0,baz=99,slow=4.9,SNR=88
FINES                               pP      pP      02 49 29.8 -1.9
      comp=Z,7.1nm,0.4s,baz=100,slow=5.4,SNR=8.7
KAF   Kangasniemi        75.11 333 ep       P       02 49 13.3 -1.7
      comp=Z,9.6nm,0.5s,mb5.0,baz=104,slow=5.3
KAF   Kangasniemi        75.11 333 eP       P       02 49 13.3 -1.7
KAF                                 pmax    pmax
      comp=Z,10.0nm,0.5s,mb5.0
DIVS  Divcibare          75.20 314⇑iP       P       02 49 15.1 -0.9
DZM   Mont Dzumac        75.29 114  P       P       02 49 18.0 +1.1
      comp=Z,28nm,1.1s,mb5.1,baz=308,slow=4.6,SNR=10.0
KECS  Kecovo             75.43 319 eP       P       02 49 16.8 -0.3
KECS                               epP      pP      02 49 33.7 -0.6
BBLS  Bajina Basta -     75.59 314⇓iP       P       02 49 17.7 -0.4
NIE   Niedzica           75.67 320 i PC     P       02 49 18.6 +0.1
PSZ   Piszkesteto        75.74 318  P       P       02 49 18.9  0.0
PSZ   Piszkesteto        75.74 318⇑iP       P       02 49 18.5 -0.4
      comp=Z,49nm,0.9s,mb5.4
PSZ   Piszkesteto        75.74 318⇑iP       P       02 49 18.8 -0.1
OJC   Ojcow              76.12 320⇑iP       P       02 49 20.9 -0.1
OJC                                ePcP     PcP     02 49 35.9 +2.6
LIKS  Likavka            76.41 319 eP       P       02 49 17.5 -5.2
LIKS  Likavka            76.41 319 e        P       02 49 17.5 -5.2
MAW   Mawson             76.41 192  P       P       02 49 23.4 +1.1
MAW                                 pmax    pmax
      comp=Z,2.0nm,0.6s
MAW   Mawson             76.41 192  P       P       02 49 23.4 +1.1
      comp=Z,2.3nm,0.6s,mb4.3,baz=28,slow=9.3,SNR=4.6
MAW   Mawson             76.41 192 eP       P       02 49 23.9 +1.5
      comp=Z,14nm,0.8s,mb5.0
VYHS  Vyhne              76.52 318 i P      P       02 49 23.1 -0.2
VYHS                               e        pP      02 49 37.6 -3.0
SRO   Srobarova          76.78 318 eP       P       02 49 25.4 +0.6
SRO1  Iza                76.83 318 i P      P       02 49 25.1  0.0
OKC   Ostrava-Krasne     77.12 320⇑iP       P       02 49 26.8 +0.1
OKC                                 AMS     AMS     03 20 20.0
      comp=Z,200nm,19.1s
TIP   Timpagrande        77.19 309⇑iP       P       02 49 27.0 -0.3
KEV   Kevo               77.20 341 ep       P       02 49 25.7 -1.0
      comp=Z,46nm,0.7s,mb5.5
KEV   Kevo               77.20 341 eP       P       02 49 25.7 -1.0
KEV                                 pmax    pmax
      comp=Z,46nm,0.7s,mb5.5
ORI   Oriolo Calabro     77.48 310  P       P       02 49 29.5 +0.6
      comp=Z,36nm,0.8s,mb5.3
MORC  Moravsky Berou     77.51 320  P       P       02 49 29.1 +0.3
MORC  Moravsky Berou     77.51 320⇑iP       P       02 49 28.8  0.0
      comp=Z,62nm,1.2s,mb5.4
ARCES ARCESS Array B     77.62 340  P       P       02 49 29.0 -0.1
ARCES                                               02 52 25.7
ARCES                               pmax    pmax
      comp=Z,27nm,0.7s
ARCES                               pmax    pmax
      comp=Z,11nm,0.9s
ARCES ARCESS Array B     77.62 340  P       P       02 49 29.0  0.0
      comp=Z,27nm,0.7s,mb5.3,baz=92,slow=5.7,SNR=215
ARCES                               PP      PP      02 52 25.6 -0.7
      comp=Z,11nm,0.9s,baz=97,slow=9.8,SNR=4.8
ARCES ARCESS Array B     77.62 340  P       P       02 49 29.0  0.0
ARCES                               PP      PP      02 52 25.6 -0.7
ARE0  ARCESS Array S     77.62 340⇑iP       P       02 49 28.7 -0.4
ARE0                               ePP      PP      02 52 24.3 -2.1
ZST   Bratislava         77.63 318 eP       P       02 49 29.9 +0.4
ZST                                ePP      PP      02 52 27.4 +0.6
BILL  Bilibino           78.00  21c iP      P       02 49 30.6 -0.5
BILL                                pmax    pmax
      comp=Z,17nm,0.8s,mb5.0
BILL                                MLR     MLR
      comp=Z,1µm,23.0s
BILL  Bilibino           78.00  21 eP       P       02 49 30.1 -1.0
      comp=Z,9.3nm,0.6s,mb4.9
KOGS  Kog                78.06 316⇑iP       P       02 49 31.9  0.0
VRAC  Vranov             78.07 319  P       P       02 49 32.1 +0.2
SLCN  Sala Consilina     78.12 310  P       P       02 49 33.1 +0.7
VKA   Vienna             78.16 318⇑iP       P       02 49 32.7 +0.3
      comp=Z,299nm,2.0s,mb5.9
MRLC  Muro Lucano        78.25 310  P       P       02 49 33.0 -0.1
DPC   Dobruska-Polom     78.35 320⇑iP       P       02 49 34.0 +0.6
DPC                                 AMS     AMS     03 21 30.0
      comp=Z,300nm,16.0s
SGO   Sicignano          78.38 310  P       P       02 49 33.7 -0.1
      comp=Z,33nm,1.3s,mb5.1
KSP   Ksiaz              78.41 321⇑eP       P       02 49 34.1 +0.4
KSP                                eS       S       02 59 19.0 -4.1
KSP   Ksiaz              78.41 321⇑eP       P       02 49 34.4 +0.7
UPC   Upice              78.56 320⇑iP       P       02 49 35.1 +0.6
FX1   Attu Island--F     78.60  37  P       P       02 49 35.3 +0.6
FX1                                 pmax    pmax
      comp=Z,49nm,0.6s
FX1   Attu Island--F     78.60  37  P       P       02 49 35.3 +0.6
      comp=Z,49nm,0.6s,mb5.6,baz=303,slow=1.2,SNR=19
FX1   Attu Island--F     78.60  37 eP       P       02 49 35.0 +0.2
CSSN  Cassano Irpino     78.61 310  P       P       02 49 34.7 -0.3
ARSA  Arzberg            78.62 317⇑iP       P       02 49 35.2 +0.3
      comp=Z,159nm,1.9s,mb5.6
PERS  Pernice            78.85 316⇑iP       P       02 49 36.5 +0.3
      comp=Z,73nm,0.8s,mb5.7
VAE   Valguarnera        78.97 307  P       P       02 49 39.2 +2.1
      comp=Z,12nm,0.4s,mb5.2,baz=275,slow=1.6,SNR=6.7
DRV   Dumont d’Urvil     79.01 163  P       pP      02 49 48.0 -6.0
LJU   Ljubljana          79.22 316⇑eP       P       02 49 38.7 +0.4
      comp=Z,240nm,1.5s,mb5.9
OBKA  Obir               79.23 316⇑iP       P       02 49 38.7 +0.3
      comp=Z,218nm,2.3s,mb5.7
MSC   Monte Massico      79.41 311  P       P       02 49 39.0 -0.4
PRU   Pruhonice          79.46 320⇑iP       P       02 49 39.7 +0.2
PRU                                ex       x       02 49 58.0
PRU                                 AMS     AMS     03 22 10.0
      comp=Z,300nm,22.4s
PVCC  Panska Ves         79.48 320⇑iP       P       02 49 39.8 +0.2
PVCC                                AMS     AMS     03 22 20.0
      comp=Z,300nm,18.0s
MOA   Molln              79.50 318⇑iP       P       02 49 39.5 -0.3
      comp=Z,136nm,3.0s
SUR   Sutherland         79.53 236 eP       P       02 49 42.1 +1.8
      comp=Z,50nm,0.8s,mb5.5
BSD   Bornholm Skovb     79.64 325⇓iP       P       02 49 39.8 -0.5
BSD                                i        pP      02 49 54.7 -3.0
BSD                                 pmax    pmax
      comp=Z,29nm,0.7s,mb5.3
BSD   Bornholm Skovb     79.64 325⇓iP       P       02 49 39.8 -0.5
      comp=Z,29nm,0.7s,mb5.3
BSD                                i        pP      02 49 54.7 -3.0
VOY   Vojsko             79.66 316⇑eP       P       02 49 40.5 -0.2
VOY                                e        pP      02 49 53.6 -4.4
VOY                                e        pP      02 50 00.7 +2.7
VVLD  Villa Vallelon     79.70 311  P       P       02 49 40.3 -0.7
      comp=Z,28nm,0.9s,mb5.2
TERO  Teramo             79.73 312  P       P       02 49 40.7 -0.4
      comp=Z,18nm,1.0s,mb5.0
TSUM  Tsumeb             79.77 249 eP       P       02 49 43.0 +1.2
      comp=Z,18nm,1.2s,mb4.9
CADS  Cadrg              79.78 316⇑eP       P       02 49 41.1 -0.3
      comp=Z,230nm,1.7s,mb5.8
PTQR  Pietraquaria       79.87 312  P       P       02 49 41.7 -0.2
AQU   L’Aquila           79.88 312  P       P       02 49 42.1 +0.2
      comp=Z,40nm,0.8s,mb5.4
TRO   Tromso             79.88 340 eP       P       02 49 39.6 -1.8
      comp=Z,52nm,1.7s,mb5.2
TRO                                 LR      LR
      comp=Z,198µm,17.4s
TRO   Tromso             79.88 340 eP       P       02 49 39.6 -1.8
TRO                                 AMb     AMB     02 49 41.1
      comp=Z,52nm,1.7s,mb5.2
TRO                                eS       S       02 59 39.4 +1.1
TRO                                 AMS     AMS     03 19 57.9
      comp=Z,198nm,17.4s
BRG   Berggiesshubel     79.90 321⇑iP       P       02 49 42.0 +0.2
BRG                                 S       S       02 59 41.0 +2.1
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BRG				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
BRG				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1						
BRG				MLR	MLR		
	comp=E,299nm,15.2s						
BRG				MLR	MLR		
	comp=N,105nm,15.2s						
BRG				MLR	MLR		
	comp=Z,345nm,15.9s						
BRG	Berggiesshubel	79.90	321	⇑iP	P	02 49 42.0	+0.2
	comp=Z,26nm,0.9s,mb5.2						
BRG				e		02 50 09.3	
BRG				S	S	02 59 41.0	+2.1
BRG				LR	LR		
	comp=Z,350nm,15.9s						
GEC2	GERESS Array S	79.94	318	eP	P	02 49 42.5	+0.4
GEC2				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.5						
GEC2	GERESS Array S	79.94	318	eP	P	02 49 42.5	+0.4
	comp=Z,60nm,1.0s,mb5.5						
GERES	GERESS Array B	79.94	318	P	P	02 49 42.4	+0.3
GERES				pmax	pmax		
	comp=Z,30nm,0.7s						
GERES	GERESS Array B	79.94	318	P	P	02 49 42.4	+0.3
	comp=Z,30nm,0.7s,mb5.3,baz=90,slow=5.3,SNR=316						
KHC	Kasperske Hory	80.03	319	⇑iP	P	02 49 42.5	-0.1
KHC				e	pP	02 49 58.5	-1.4
KHC				e		02 50 08.5	
KHC				MLR	MLR		
	comp=Z,200nm,15.8s						
KHC	Kasperske Hory	80.03	319	⇑iP	P	02 49 42.5	-0.1
KHC				pP	pP	02 49 58.5	-1.4
KHC				ex	x	02 50 08.5	
KHC				AMS	AMS	03 22 50.0	
	comp=Z,200nm,15.8s						
PTCC	Patocco-Chiusa	80.06	316	P	P	02 49 42.8	0.0
CING	Cingoli	80.06	313	P	P	02 49 43.1	+0.2
	comp=Z,49nm,1.3s,mb5.3						
FIAM	Fiamignano	80.08	312	P	P	02 49 42.9	-0.1
	comp=Z,32nm,0.9s,mb5.3						
KBA	Koelnbreinsper	80.09	317	⇑iP	P	02 49 42.7	-0.2
	comp=Z,189nm,3.3s						
NRCA	Norcia	80.10	312	P	P	02 49 42.9	-0.2
RUE	Ruedersdorf	80.10	322	⇑iP	P	02 49 42.7	-0.2
	comp=Z,29nm,0.3s,mb5.7						
GMNA	Gemona	80.13	316	P	P	02 49 43.4	+0.2
CERT	Cerreto	80.18	311	P	P	02 49 42.7	-0.8
	comp=Z,18nm,0.6s,mb5.2						
SNTG	Esanatoglia	80.24	313	P	P	02 49 43.9	+0.1
ARV	Arcevia	80.25	313	P	P	02 49 44.4	+0.5
	comp=Z,60nm,0.8s,mb5.6						
FSSB	Fossombrone	80.37	313	P	P	02 49 45.1	+0.6
MNS	Montasola	80.41	312	P	P	02 49 44.0	-0.8
	comp=Z,87nm,1.4s,mb5.5						
ASS	Assisi	80.45	313	P	P	02 49 44.2	-0.7
	comp=Z,7.1nm,0.6s,mb4.8						
FVI	Forni Avoltri	80.46	316	P	P	02 49 44.8	-0.1
	comp=Z,23nm,0.6s,mb5.3						
WET	Wettzell	80.49	319	eP	P	02 49 45.3	+0.3
WET				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2						
WET	Wettzell	80.49	319	eP	P	02 49 45.3	+0.3
	comp=Z,32nm,1.0s,mb5.2						
CLL	Collm	80.52	321	⇑iP	P	02 49 44.9	-0.2
CLL				e	pP	02 50 06.0	+3.5
CLL				eS	S	02 59 42.0	-3.3
CLL				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
CLL				MLR	MLR		
	comp=Z,400nm,17.3s						
CLL	Collm	80.52	321	⇑iP	P	02 49 44.9	-0.2
	comp=Z,26nm,1.1s,mb5.1						
CLL				epP	pP	02 49 52.0	-10
CLL				e	pP	02 50 06.0	+3.5
CLL				eS	S	02 59 42.0	-3.3
CLL				LR	LR		
	comp=Z,400nm,17.3s						
CLL	Collm	80.52	321	P	P	02 49 41.0	-4.1
CLL				i		02 49 44.9	
CLL				e*PP	pP	02 49 52.0	-10
CLL				e		02 50 06.0	
CLL				eS	S	02 59 42.0	-3.3
CLL				ePS	PS	03 00 36.0	-4.1
MURB	Monte Urbino	80.55	313	P	P	02 49 47.0	+1.6
	comp=Z,93nm,1.3s,mb5.6						
RSM	Repubblica di	80.61	313	P	P	02 49 46.9	+1.1
	comp=Z,620nm,1.8s,mb6.2						
NKC	Novy Kostel	80.82	320	⇑iP	P	02 49 47.1	+0.4
NKC				AMS	AMS	03 21 10.0	
	comp=Z,300nm,17.9s						
SEST	Monte Rota	80.85	316	P	P	02 49 44.8	-2.2
TOLF	Tolfa	80.91	312	P	P	02 49 47.1	-0.3
	comp=Z,30nm,0.8s,mb5.3						
SFI	Santa Sofia	81.05	313	P	P	02 49 49.3	+1.2
	comp=Z,89nm,0.7s,mb5.8						
PGD	Poggio Sodo	81.14	313	P	P	02 49 50.4	+1.8
CTI	Castel Tesino	81.23	316	P	P	02 49 49.4	+0.4
	comp=Z,91nm,1.5s,mb5.5						
WTTA	Wattenberg	81.26	317	⇑iP	P	02 49 48.8	-0.3
	comp=Z,155nm,2.1s,mb5.6						
VMG	Vicchio	81.27	313	P	P	02 49 50.2	+1.0
WATA	Walderalm	81.30	317	⇑iP	P	02 49 48.9	-0.4
	comp=Z,30nm,1.2s,mb5.1						
MOX	Moxa	81.36	320	eP	P	02 49 49.6	0.0
MOX				pmax	pmax		
	comp=Z,32nm,1.6s,mb5.0						
MOX				MLR	MLR		
	comp=Z,300nm,20.0s						
MOX	Moxa	81.36	320	eP	P	02 49 49.6	0.0
	comp=Z,32nm,1.6s,mb5.0						
MOX				LR	LR		
	comp=Z,300nm,20.0s						
MOX	Moxa	81.36	320	i P	P	02 49 49.6	0.0
	comp=Z,logA/T=1.3,mb5.0						
MOX				L		03 23 07.0	
SEI	Scarperia	81.41	314	P	P	02 49 51.8	+1.9
FUR	Furstenfeldbru	81.52	318	eP	P	02 49 50.2	-0.3
FUR				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.2						
FUR	Furstenfeldbru	81.52	318	eP	P	02 49 50.2	-0.3
	comp=Z,31nm,0.9s,mb5.2						
APPI	Appiano	81.53	316	P	P	02 49 49.7	-0.8
	comp=Z,17nm,0.7s,mb5.1						
SQTA	Sankt Quirin	81.55	317	⇑iP	P	02 49 50.3	-0.3
	comp=Z,18nm,0.8s,mb5.0						
MAON	Monte Argentar	81.56	312	P	P	02 49 50.7	-0.1
FNVD	Fontana Vidola	81.58	314	P	P	02 49 52.1	+1.3
	comp=Z,248nm,2.0s,mb5.8						
LOF	Lofoten	81.58	338	eP	P	02 49 49.6	-0.8
	comp=Z,42nm,2.0s,mb5.0						
LOF	Lofoten	81.58	338	eP	P	02 49 49.6	-0.8
LOF				AMb	AMB	02 49 51.5	
	comp=Z,42nm,2.0s,mb5.0						
GRA1	Grafenberg Arr	81.59	319	eP	P	02 49 51.4	+0.6
	comp=Z,46nm,1.0s,mb5.4						
GRA1				LR	LR		
	comp=Z,300nm,20.5s						
GRF	Grafenberg Arr	81.59	319	eP	P	02 49 51.4	+0.6
	comp=Z,46nm,1.0s,mb5.4						
GRF				LR	LR		
	comp=Z,300nm,20.5s						
GRFO	Grafenberg	81.59	319	P	P	02 49 51.4	+0.6
ZCCA	Zocca	81.68	314	P	P	02 49 53.1	+1.7
BDI	Bagni Di Lucca	81.95	314	P	P	02 49 52.0	-0.8
	comp=Z,19nm,0.9s,mb5.0						
GSCL	Gusciola	81.96	314	P	P	02 49 54.0	+1.2
SAL	Salo	82.01	315	P	P	02 49 54.2	+1.2
	comp=Z,109nm,0.8s,mb5.8						
MABI	Malga Bissina	82.02	316	P	P	02 49 53.6	+0.5
	comp=Z,21nm,0.7s,mb5.2						
NB2	NORSAR Subarra	82.02	331	P	P	02 49 51.7	-1.1
	comp=Z,16nm,1.0s,mb4.9,baz=97,slow=5.3						
NB2	NORSAR Subarra	82.02	331	P	P	02 49 51.7	-1.1
	baz=97,slow=5.3						
NOA	NORSAR Array B	82.02	331	P	P	02 49 52.0	-0.8
NOA						02 53 02.8	
NOA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	NORSAR Array B	82.02	331	P	P	02 49 52.0	-0.8
	comp=Z,7.8nm,0.9s,mb4.6,baz=94,slow=5.7,SNR=22						
NOA				PP	PP	02 53 02.8	-0.1
	comp=Z,2.3nm,0.8s,baz=92,slow=9.0,SNR=4.3						
BRMO	Bormio	82.12	316	P	P	02 49 54.1	+0.5
NAO01	NORSAR Array S	82.17	331	eP	P	02 49 52.9	-0.7
	comp=Z,9.7nm,0.9s,mb4.7						
CLZ	Clausthal	82.17	321	eP	P	02 49 54.0	+0.2
	comp=Z,32nm,1.0s,mb5.2						
FUORN	Ofenpass	82.19	316	⇑iP	P	02 49 54.6	+0.6
BSEG	Bad Segeberg	82.25	324	eP	P	02 49 54.5	+0.4
BSEG				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
BERNI	Berninapass	82.36	316	⇑iP	P	02 49 55.6	+0.8
DAVA	Damuels	82.46	317	⇑iP	P	02 49 55.6	+0.3
	comp=Z,118nm,2.1s,mb5.5						
DAVOX	Davos	82.46	316	P	P	02 49 55.7	+0.4
	comp=Z,43nm,0.6s,mb5.5,baz=119,slow=6.1,SNR=75						
DAVOX	Davos	82.46	316	⇑iP	P	02 49 55.9	+0.6
LIENZ	Alp Oberkamor	82.72	317	⇑iP	P	02 49 57.0	+0.4
BOB	Bobbio (Coli)	82.77	314	P	P	02 49 57.6	+0.6
	comp=Z,169nm,2.2s,mb5.7						
KONO	Kongsberg	82.77	329	⇑eP	P	02 49 55.2	-1.4
PLONS	Plons	82.80	317	⇑iP	P	02 49 57.3	+0.3
TUE	Stuetta	82.83	316	P	P	02 49 58.3	+1.1
	comp=Z,75nm,1.9s,mb5.4						
STU	Stuttgart	82.91	318	eP	P	02 49 57.3	-0.3
	comp=Z,13nm,0.6s,mb5.1						
VSL	Villasalto	82.92	309	⇑iP	P	02 49 57.6	-0.2
	comp=Z,44nm,1.0s,mb5.5						
MUD	Monsted U'grnd	82.94	326	i P	P	02 49 58.0	+0.4
MUD				e	pP	02 50 17.8	+2.8
MUD				i S	S	03 00 12.4	+2.4
MUD				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.0						
MUD				MLR	MLR		
	comp=Z,730nm,17.0s						
MUD	Monsted U'grnd	82.94	326	i P	P	02 49 58.0	+0.4
	comp=Z,18nm,1.2s,mb5.0						
MUD				e	pP	02 50 17.8	+2.8
MUD				i S	S	03 00 12.4	+2.4
	comp=Z,730nm,17.0s						
MUGIO	Muggio	83.05	315	⇑iP	P	02 49 57.5	-0.8
LLS	Linth-Limmern	83.06	316	⇑iP	P	02 49 58.6	+0.3
WEIN	Weingarten	83.06	317	⇑iP	P	02 49 58.2	-0.2
WILA	Wila	83.12	317	⇑iP	P	02 49 58.6	0.0
PGF	Pioggiola	83.14	312	eP	P	02 49 59.1	+0.3
	comp=Z,38nm,0.8s,mb5.2						
STEIN	Stein am Rhein	83.14	317	⇑iP	P	02 49 58.6	-0.2
TOD	Tromm	83.16	319	⇑eP	P	02 49 58.8	0.0
KBS	Kingsbay	83.19	349	eP	P	02 49 55.7	-2.8
	comp=Z,44nm,1.3s,mb5.3						
KBS				LR	LR		
	comp=Z,409µm,17.4s						
KBS	Kingsbay	83.19	349	eP	P	02 49 55.7	-2.8
KBS				AMb	AMB	02 49 59.9	
	comp=Z,44nm,1.3s,mb5.3						
KBS				AMS	AMS	03 16 16.7	
	comp=Z,409nm,17.4s						
MUO	Muotathal	83.31	317	⇑iP	P	02 50 00.1	+0.5
TNS	Taunus Mts	83.39	320	eP	P	02 50 00.4	+0.5
TNS				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
TNS	Taunus Mts	83.39	320	eP	P	02 50 00.4	+0.5
	comp=Z,27nm,1.2s,mb5.2						
SYO	Syowa Base	83.39	197	⇑PcP	PcP	02 50 03.0	-1.3
SYO	Syowa Base	83.39	197	⇓pP	pP	02 50 16.4	-0.7
PCP	Pian Castagno	83.42	314	P	P	02 49 59.2	-1.0
BNALP	Bannalp	83.46	316	⇑iP	P	02 50 00.7	+0.3
BFO	Black Forest	83.49	318	eP	P	02 50 00.3	-0.2
BFO				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
BFO	Black Forest	83.49	318	eP	P	02 50 00.3	-0.2
	comp=Z,19nm,0.9s,mb5.1						
HASLI	Hasliberg	83.65	316	⇑iP	P	02 50 01.5	+0.1
SULZ	Sulz-Cheisache	83.65	317	⇑iP	P	02 50 01.1	-0.3
FIN	Finale Ligure	83.67	314	P	P	02 50 01.0	-0.5
FELD	Feldberg	83.72	317	⇑eP	P	02 50 01.4	-0.3
MCGN	Macugnaga	83.78	316	P	P	02 50 02.4	+0.3
ORX	Oropa	83.79	315	P	P	02 50 00.3	-1.8
LANF	Langenberg	83.83	319	⇑eP	P	02 50 02.5	+0.3
IMI	Imperia	83.91	313	P	P	02 50 02.4	-0.4
ROB	Roburent	83.91	314	P	P	02 50 02.2	-0.5
BALST	Balsthal	83.94	317	⇑iP	P	02 50 02.8	0.0
TRAV		83.96	315	P	P	02 50 00.2	-2.8
ABH	Alteburg	83.97	319	⇑eP	P	02 50 03.5	+0.6
LIBD	Limburg	83.98	318	⇑eP	P	02 50 03.1	+0.1
MONE	Monesi	84.00	314	P	P	02 50 01.6	-1.7
WIMIS	Wimmis	84.01	316	⇑iP	P	02 50 03.3	+0.1
LKBD	Leukerbad	84.02	316	⇑iP	P	02 50 03.6	+0.4
NEGI	Negi	84.05	313	P	P	02 50 01.6	-1.9
BBS	Basel-Blauen	84.06	317	⇑eP	P	02 50 03.1	-0.3
WLS	Welschbruch	84.14	318	⇑eP	P	02 50 03.5	-0.3
SAOF	Saorge	84.15	314	⇑eP	P	02 50 04.2	+0.2
DIX	Grande Dixence	84.18	316	P	P	02 50 05.2	+1.2
DIX	Grande Dixence	84.18	316	⇑iP	P	02 50 05.0	+1.0
CDF	Champ du Feu	84.19	318	eP	P	02 50 03.8	-0.3
	comp=Z,34nm,1.1s,mb5.1						
ENR	Entracque	84.24	314	P	P	02 50 03.7	-0.7
SBF	Sospel	84.24	313	eP	P	02 50 04.6	+0.2
	comp=Z,94nm,0.7s,mb5.7						
AUTN	L'Aution	84.24	314	⇑eP	P	02 50 05.2	+0.8
SENIN	Lac Senin	84.25	316	⇑iP	P	02 50 04.9	+0.5
ECH	Echery	84.28	318	⇑eP	P	02 50 04.2	-0.3
REVF	Revere	84.29	313	⇑eP	P	02 50 04.9	+0.2
RUP	Ruppelstein	84.29	319	⇑eP	P	02 50 05.1	+0.6
STV2	Anna di Valdie	84.30	314	P	P	02 50 03.6	-1.1
MOF	Molkenrain	84.31	317	⇑eP	P	02 50 04.2	-0.4
RSP	Reno Superiore	84.32	315	P	P	02 50 03.1	-1.7
TOUF	Mont Tournerai	84.37	314	⇑eP	P	02 50 05.7	+0.6
LSD	Ceresole Reale	84.38	315	P	P	02 50 05.1	0.0
GRYON	Gryon	84.38	316	⇑iP	P	02 50 05.4	+0.3
MVIF	Mont Vial	84.44	313	⇑eP	P	02 50 06.0	+0.6
PZZ	Prazzo	84.45	314	P	P	02 50 02.8	-2.7
FENE	Fenestrelle	84.46	315	P	P	02 50 04.3	-1.2
TORNY	Torny	84.47	316	⇑iP	P	02 50 05.8	+0.3
SALAN	Lac Salanfe	84.48	316	⇑iP	P	02 50 06.0	+0.4
HINF	Hinteralfeld	84.50	317	eP	P	02 50 05.6	0.0
LOMF	Lomont	84.53	317	⇑eP	P	02 50 05.5	-0.3
EMV	Vieux Emosson	84.53	316	P	P	02 50 06.5	+0.7
EMV	Vieux Emosson	84.53	316	⇑iP	P	02 50 06.4	+0.6
ABSA	Djebel Ababsia	84.54	306	P	P	02 50 08.0	+1.9
CMAH	Djebel Manchou	84.57	306	P	P	02 50 08.0	+1.8
CALN	Calern	84.64	313	⇑eP	P	02 50 07.1	+0.7
SURF	Saint Ours	84.66	314	⇑eP	P	02 50 07.3	+0.8
RRL	Cesana Torines	84.66	315	P	P	02 50 05.5	-1.0
MBDF	Montbardon	84.68	314	eP	P	02 50 06.2	-0.4
	comp=Z,24nm,0.8s,mb5.0						
BNI	Bardonecchia	84.73	315	eP	P	02 50 06.9	+0.1
	comp=Z,29nm,0.9s,mb5.4						
FRF	La Foret Royal	84.82	313	⇑iP	P	02 50 07.7	+0.4
	comp=Z,99nm,1.0s,mb5.6						
HAU	Haudompre	84.83	318	eP	P	02 50 07.0	-0.2
	comp=Z,43nm,0.7s,mb5.4						
HAU				eR			
	comp=Z,433nm,20.9s						
WLF	Walferdange	84.88	319	eP	P	02 50 07.7	+0.3
	comp=Z,116nm,1.9s,mb5.7						
BER	Bergen	84.91	330	AMS	AMS	03 21 06.0	
	comp=Z,681nm,17.4s						
LMR	La Mourre	84.94	313	⇑iP	P	02 50 08.1	+0.2
	comp=Z,47nm,0.9s,mb5.3						
THEF	They Montfort	85.06	318	⇑eP	P	02 50 08.3	-0.1
CABF	La Chapelle	85.07	316	⇑iP	P	02 50 08.9	+0.4
	comp=Z,45nm,0.9s,mb5.3						
GDM	Grand'Maison	85.12	315	⇑eP	P	02 50 09.1	+0.3
CKFL	Kef-Lekhel	85.14	306	P	P	02 50 09.0	-0.1
TAVF	Tavernes	85.25	313	⇑eP	P	02 50 10.2	+0.8
ORIF	Oris-en-Rattie	85.31	315	⇑iP	P	02 50 10.2	+0.5
	comp=Z,20nm,0.7s,mb5.1						
ORIF				eR			
	comp=Z,341nm,19.5s						
STOF	St-Etienne Org	85.33	314	⇑eP	P	02 50 11.3	+1.4
CASM	Ain Smara	85.34	306	P	P	02 50 12.0	+1.9
GRN	Grenoble	85.38	315	⇑eP	P	02 50 10.9	+0.8
CTEI	Djebel Teioual	85.42	306	P	P	02 50 12.0	+1.5
VILF	Villemus	85.48	313	⇑eP	P	02 50 11.8	+1.2
PUYF	Puyloubier	85.51	313	⇑eP	P	02 50 11.8	+1.1
BERF	Bertagne	85.53	313	⇑eP	P	02 50 11.5	+0.7
SMRF	Simiane la Rot	85.58	314	⇑iP	P	02 50 11.9	+0.9
	comp=Z,35nm,0.8s,mb5.3						
MEZF	Maizieres J'vi	85.67	318	eP	P	02 50 11.5	+0.1
GELF	Grande-Etoile	85.72	313	⇑eP	P	02 50 12.6	+0.8
GIVF	Givet	85.72	320	eP	P	02 50 11.9	+0.3
TREF	Trevaresse	85.74	313	⇑eP	P	02 50 12.2	+0.4
DFRA	Djebel Bou Aff	85.81	306	P	P	02 50 15.0	+2.6
PRAF	Pradon	85.88	313	⇑eP	P	02 50 13.7	+1.2
BAIF	Baives	86.12	320	eP	P	02 50 14.0	+0.5
	comp=Z,45nm,1.1s,mb5.3						
VIVF	Saint-Julien-l	86.17	315	⇑iP	P	02 50 14.2	+0.3
	comp=Z,44nm,1.0s,mb5.3						
SET	Setif	86.22	306	P	P	02 50 17.0	+2.6
LOR	Lormes	86.55	317	⇑iP	P	02 50 15.8	+0.1
	comp=Z,63nm,1.0s,mb5.5						
LOR				eR			
	comp=Z,283nm,17.8s						
SMF	Signal de Mont	86.61	316	⇑iP	P	02 50 16.0	-0.1
	comp=Z,61nm,1.0s,mb5.5						
LASF	Ste Croix	86.81	314	⇑iP	P	02 50 17.7	+0.6
	comp=Z,38nm,1.1s,mb5.2						
SSF	Saint Saulge	86.81	317	eP	P	02 50 17.0	0.0
	comp=Z,32nm,1.0s,mb5.2						
PLDF	La Plantade	86.82	316	⇑eP	P	02 50 18.8	+1.7
AVF	Avril sur Loir	86.94	317	⇑iP	P	02 50 17.6	0.0
	comp=Z,44nm,1.2s,mb5.3						
LBL	Lubilhac	87.14	315	⇑eP	P	02 50 20.4	+1.7
AGO	Saint Agoulin	87.15	316	⇑eP	P	02 50 20.1	+1.4
PYM	Petit Puy Mans	87.27	316	⇑eP	P	02 50 20.8	+1.5
BGF	Bois d'Agland	87.31	316	eP	P	02 50 19.9	+0.5
	comp=Z,62nm,1.2s,mb5.4						
URZ	Urewera	87.44	129	P	P	02 50 19.9	-0.4
	comp=Z,9.9nm,0.8s,mb5.1,baz=153,slow=4.6,SNR=3.8						
EJON	La Jonquera	87.65	312	P	P	02 50 21.2	0.0
	comp=Z,72nm,1.6s,mb5.7						
TCF	Toulx Ste Croi	87.77	316	⇑iP	P	02 50 22.1	+0.4
ETOS	Mallorca	87.96	310	P	P	02 50 24.3	+1.5
	comp=Z,33nm,0.8s,mb5.6						
CAF	Calviac	88.01	315	eP	P	02 50 23.5	+0.7
	comp=Z,48nm,1.4s,mb5.2						
MTLF	Montolieu	88.06	313	⇑iP	P	02 50 23.6	+0.5
	comp=Z,61nm,1.2s,mb5.4						
ABA	Alger-Bouzarea	88.07	307	P	P	02 50 25.0	+1.7
RJF	Les Rejaudoux	88.35	315	eP	P	02 50 25.2	+0.7
	comp=Z,43nm,1.0s,mb5.3						
RJF				eR			
	comp=Z,272nm,21.0s						
EMIR	Miracle	88.71	312	P	P	02 50 27.2	+1.0
	comp=Z,37nm,0.9s,mb5.7						
LFF	La Frestale	88.94	315	⇑iP	P	02 50 28.1	+0.8
	comp=Z,66nm,1.3s,mb5.5						
JMIC	Jan Mayen	89.07	341	AMS	AMS	03 17 50.5	
	comp=Z,162nm,21.0s						
EPOB	Poblet	89.11	311	⇑P	P	02 50 28.9	+0.8
	comp=Z,27nm,0.7s,mb5.7						
EIBI	Ibiza	89.17	309	⇑P	P	02 50 30.1	+1.6
	comp=Z,22nm,0.7s,mb5.6						
FLN	La Foliniere	89.30	319	eP	P	02 50 29.1	+0.3
	comp=Z,48nm,0.9s,mb5.5						
FLN				eR			
	comp=Z,410nm,18.5s						
MFF	Saint Martin d	89.35	317	⇑iP	P	02 50 29.5	+0.3
	comp=Z,93nm,1.6s,mb5.6						
EPF	Esparros	89.45	313	eP	P	02 50 30.1	+0.4
GRR	Gorron	89.59	318	eP	P	02 50 30.7	+0.5
	comp=Z,20nm,0.9s,mb5.2						
EBR	Ebro Roquetas	89.61	311	i P	P	02 50 32.2	+1.7
EBIE	Bielsa	89.64	313	⇑P	P	02 50 31.7	+1.0
	comp=Z,7.6nm,0.7s,mb5.1						
ERTA	Horta de San J	89.72	311	P	P	02 50 32.1	+1.1
	comp=Z,150nm,1.8s,mb6.0						
DAG	Danmarks Havn	89.84	348	⇓eP	P	02 50 30.2	-0.6
DAG				pmax	pmax		
	comp=Z,13nm,0.3s,mb5.7						
DAG	Danmarks Havn	89.84	348	⇓eP	P	02 50 30.2	-0.6
	comp=Z,13nm,0.3s,mb5.7						
DAG	Danmarks Havn	89.84	348	⇓iP	P	02 50 30.2	-0.6
	comp=Z,13nm,0.3s,mb5.7						
ETSF	Etsaut	90.13	313	eP	P	02 50 33.5	+0.6
	comp=Z,16nm,0.7s,mb5.2						
ESAC	San Caprasio	90.22	312	P	P	02 50 34.1	+0.8
	comp=Z,43nm,0.7s,mb5.9						
EMOS	Mosqueruela	90.40	310	⇑P	P	02 50 36.3	+2.1
	comp=Z,78nm,1.0s,mb6.0						
VNDA	Vanda	90.56	168	P	P	02 50 34.6	+0.5
	comp=Z,1.6nm,0.8s,mb4.4,baz=277,slow=3.0,SNR=8.8						
VNDA				LR	LR	03 27 21.4	
	comp=Z,279nm,18.9s,baz=288,slow=33						
VNDA	Vanda	90.56	168	⇑eP	P	02 50 34.5	+0.3
	comp=Z,14nm,1.1s,mb5.2						
VNDA				LR	LR		
	comp=Z,367nm,20.0s						
SJPF	Ste Jean	90.58	313	⇑iP	P	02 50 36.1	+1.1
	comp=Z,26nm,1.1s,mb5.2						
SGMF	Saint Gilles	90.73	318	⇑iP	P	02 50 36.0	+0.4
	comp=Z,14nm,0.8s,mb5.0						
ECHE	Chera	90.88	310	P	P	02 50 37.9	+1.3
	comp=Z,12nm,0.7s,mb5.3						
QUIF	Quistinic	91.19	318	⇑iP	P	02 50 37.8	0.0
	comp=Z,31nm,0.9s,mb5.3						
ROSF	Rostrenen	91.19	319	⇑iP	P	02 50 38.1	+0.3
	comp=Z,89nm,1.5s,mb5.6						
ETOB	Tobarra	91.46	309	P	P	02 50 40.9	+1.7
	comp=Z,10nm,0.7s,mb5.3						
ECRI	Cripan	91.59	313	P	P	02 50 41.1	+1.4
	comp=Z,6.7nm,0.6s,mb5.2						
SBA	Scott Base	91.67	168	eP	P	02 50 40.5	+1.2
	comp=Z,17nm,1.0s,mb5.3						
ELAN	Lanestosa	92.16	314	P	P	02 50 43.1	+0.8
	comp=Z,30nm,0.9s,mb5.6						
EVIA	Vianos	92.20	309	P	P	02 50 43.8	+1.2
	comp=Z,19nm,0.8s,mb5.5						
EBER	Berja	92.77	307	P	P	02 50 44.9	-0.4
	comp=Z,135nm,1.8s,mb6.1						
EQES	Quesada	92.77	308	P	P	02 50 45.8	+0.5
	comp=Z,38nm,1.3s,mb5.7						
ESDC	Sonseca Array	93.15	310	P	P	02 50 47.8	+0.8
	comp=Z,4.6nm,0.6s,mb5.1,baz=63,slow=4.0,SNR=30						
ESDC	Sonseca Array	93.15	310	P	P	02 50 47.7	+0.7
	comp=Z,12nm,0.7s,mb5.4						
ESLA	Sonseca Array	93.15	310	eP	P	02 50 47.8	+0.9
	comp=Z,3.7nm,1.1s,mb4.7						
IMA	Indian Mountai	93.52	22	eP	P	02 50 49.3	+1.4
	comp=Z,120nm,0.8s,mb6.4						
EMIJ	Mijas	94.32	307	P	P	02 50 51.7	-0.6
	comp=Z,15nm,1.0s,mb5.4						
SPU	Mount Spurr	96.07	27	eP	P	02 50 59.8	+0.1
SUMG	Summit	96.51	347	eP	P	02 51 02.5	+1.0
	comp=Z,9.4nm,0.9s,mb5.2						
SUMG				ePP	PP	02 54 57.0	-1.6
ILAR	Eielson Array	96.64	22	P	P	02 51 01.1	-1.1
ILAR						02 54 57.9	
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ILAR	Eielson Array	96.64	22	P	P	02 51 01.1	-1.2
	comp=Z,2.3nm,0.7s,mb4.7,baz=289,slow=4.2,SNR=26						
ILAR				PP	PP	02 54 57.9	-1.9
	comp=Z,1.7nm,1.1s,baz=277,slow=7.4,SNR=6.1						
ILAR				LR	LR	03 40 43.1	
	comp=Z,132nm,18.3s,baz=326,slow=39						
SML	Sawmill	97.43	25	eP	P	02 51 06.6	+0.8
SNAA	Sanae	97.64	198	⇑iP	P	02 51 03.9	-2.7
SNAA				e	pP	02 51 20.2	-4.2
SNAA				e		02 51 26.8	
DBIC	Dimbokro	98.84	278	P	P	02 51 15.1	+1.7
DBIC				*PP	pP	02 51 31.3	+0.1
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DBIC	Dimbokro	98.84	278	P	P	02 51 15.1	+1.7
	comp=Z,3.9nm,0.8s,mb5.0,baz=136,slow=9.7,SNR=3.3						
DBIC				pP	pP	02 51 31.3	+0.1
	comp=Z,4.3nm,0.7s,baz=86,slow=7.0,SNR=2.9						
DBIC				LR	LR	03 32 00.6	
	comp=Z,224nm,22.0s,baz=63,slow=33						
INK	Inuvik	99.03	16	ePdif	P	02 51 13.2	+0.2
	comp=Z,25nm,1.4s,mb5.6						
VNA2	Neumayer--Watz	99.19	199	⇑iP	P	02 51 13.5	-0.2
VNA2				e	pP	02 51 27.4	-4.1
VNA2				e	pP	02 51 33.0	+1.5
RES	Resolute Bay	99.67	3	ePdif	P	02 51 16.9	+1.1
FCC	Fort Churchill	115.49	5	ePKPdf	PKPdf	02 56 13.8	+0.9
FCC				ePP	PP	02 57 13.4	-6.8
EDM	Edmonton	116.81	18	ePKPdf	PKPdf	02 56 17.0	+1.4
SCHQ	Schefferville	117.89	348	PKP	PKPdf	02 56 19.3	+1.7
	comp=Z,4.3nm,0.6s,baz=313,slow=2.5,SNR=17						
FFC	Flin Flon	118.33	11	ePKPdf	PKPdf	02 56 19.0	+0.5
NEW	Newport	119.55	24	PKIKP	PKPdf	02 56 22.1	+1.1
NEW				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NEW	Newport	119.55	24	PKP	PKPdf	02 56 22.1	+1.1
	comp=Z,3.9nm,0.7s,baz=335,slow=0.8,SNR=7.4						
NEW	Newport	119.55	24	ePKPdf	PKPdf	02 56 22.2	+1.2

MSO	**Missoula**	**121.97**	**23**	*e*PKPdf	PKPdf	02 56 26.6	+0.9
CHMT	**Chamberlain Mo**	**122.17**	**22**	*e*PKPdf	PKPdf	02 56 27.4	+1.3
WVOR	**Wild Horse Val**	**123.41**	**29**	*e*PKPdf	PKPdf	02 56 30.9	+2.3
ULM	**Lac du Bonnet**	**123.66**	**8**	PKP	PKPdf	02 56 30.0	+1.1
	comp=Z,16nm,0.6s,baz=353,slow=2.7,SNR=20						
ULM	**Lac du Bonnet**	**123.66**	**8**	*e*PKPdf	PKPdf	02 56 29.5	+0.6
DGMT	**Dagmar**	**123.69**	**15**	*e*PKPdf	PKPdf	02 56 30.9	+1.9
BOZ	**Bozeman (W)**	**123.84**	**22**	*e*PKPdf	PKPdf	02 56 31.0	+1.6
BEKR	**Beckwourth**	**124.42**	**32**	*e*PKPdf	PKPdf	02 56 32.3	+1.6
HLID	**Hailey**	**124.45**	**25**	*e*PKPdf	PKPdf	02 56 32.5	+1.9
QLMT	**Earthquake Lak**	**124.61**	**22**	*e*PKPdf	PKPdf	02 56 33.2	+2.2
LAO	**LASA Array**	**124.75**	**17**	*e*PKPdf	PKPdf	02 56 33.4	+2.2
YMR	**Madison River**	**124.92**	**22**	*e*PKPdf	PKPdf	02 56 34.1	+2.5
YFT	**Old Faithful**	**125.15**	**22**	*e*PKPdf	PKPdf	02 56 35.5	+3.5
IMW	**Indian Meadow**	**125.59**	**23**	*e*PKPdf	PKPdf	02 56 35.2	+2.4
BMN	**Battle Mountai**	**125.62**	**30**	*e*PKPdf	PKPdf	02 56 34.9	+1.9
MOOW	**Moose Ponds**	**125.79**	**23**	*e*PKPdf	PKPdf	02 56 34.6	+1.4
RRI2	**Red Ridge**	**125.90**	**23**	*e*PKPdf	PKPdf	02 56 35.9	+2.4
TPAW	**Teton Pass**	**125.93**	**23**	*e*PKPdf	PKPdf	02 56 35.4	+1.9
LOHW	**Long Hollow**	**125.96**	**23**	*e*PKPdf	PKPdf	02 56 35.6	+2.0
SNOW	**Snow King Moun**	**126.03**	**23**	*e*PKPdf	PKPdf	02 56 36.0	+2.4
REDW	**Red Top Meadow**	**126.07**	**23**	*e*PKPdf	PKPdf	02 56 36.1	+2.3
ELK	**Elko**	**126.33**	**28**	*e*PKPdf	PKPdf	02 56 36.3	+1.9
EYMN	**Ely**	**126.44**	**5**	*e*PKPdf	PKPdf	02 56 35.5	+1.1
NVAR	**Mina Array Bea**	**126.56**	**32**	PKP	PKPdf	02 56 37.8	+2.9
	comp=Z,6.2nm,0.7s,baz=328,slow=0.8,SNR=19						
NVAR				pPKP		02 56 53.8	
	comp=Z,5.8nm,0.8s,baz=202,slow=1.1,SNR=5.3						
BW06	**Boulder Array**	**127.08**	**22**	*e*PKPdf	PKPdf	02 56 36.8	+1.0
PDAR	**Pinedale Array**	**127.08**	**22**	PKP	PKPdf	02 56 37.5	+1.7
	comp=Z,9.7nm,0.9s,baz=45,slow=2.1,SNR=44						
HWUT	**Hardware Ranch**	**127.26**	**25**	*e*PKPdf	PKPdf	02 56 37.5	+1.4
RSSD	**Black Hills**	**127.73**	**17**	*e*PKPdf	PKPdf	02 56 38.7	+1.7
TRCR	**Troy Canyon**	**128.02**	**30**	*e*PKPdf	PKPdf	02 56 40.5	+2.8
RWWY	**Rawlins**	**128.88**	**21**	*e*PKPdf	PKPdf	02 56 40.3	+1.0
TMUT	**Trail Mountain**	**129.32**	**26**	*e*PKPdf	PKPdf	02 56 43.4	+3.2
MVU	**Marysvale**	**129.52**	**27**	*e*PKPdf	PKPdf	02 56 43.2	+2.6
MSU	**Marysvale**	**129.53**	**27**	*e*PKPdf	PKPdf	02 56 43.4	+2.8
SRU	**San Rafael**	**129.78**	**26**	*e*PKPdf	PKPdf	02 56 42.9	+1.9
NEN	**Nelson**	**130.47**	**32**	*e*PKPdf	PKPdf	02 56 44.7	+2.3
PV10	**Paradox Valley**	**131.02**	**25**	*e*PKPdf	PKPdf	02 56 45.3	+1.9
ISCO	**Idaho Springs**	**131.11**	**21**	*e*PKPdf	PKPdf	02 56 45.3	+1.7
BINY	**Binghamton**	**131.72**	**351**	*e*PKPdf	PKPdf	02 56 45.1	+0.5
WUAZ	**Wupatki**	**132.33**	**29**	*e*PKPdf	PKPdf	02 56 49.0	+3.0
SDCO	**Great Sand Dun**	**132.97**	**22**	*e*PKPdf	PKPdf	02 56 48.9	+1.7
ANMO	**Albuquerque**	**135.02**	**25**	*e*PKPdf	PKPdf	02 56 53.6	+2.6
TUC	**Tucson**	**135.18**	**31**	*e*PKPdf	PKPdf	02 56 52.7	+1.3
BLO	**Bloomington**	**135.47**	**1**	*e*PKPdf	PKPdf	02 56 53.0	+1.3
BNM	**Barren Site**	**135.63**	**26**	*e*PKPdf	PKPdf	02 56 54.2	+2.1
CCM	**Cathedral Cave**	**136.25**	**7**	*e*PKPdf	PKPdf	02 56 54.0	+0.9
WCI	**Wyandotte Cave**	**136.42**	**1**	*e*PKPdf	PKPdf	02 56 54.5	+1.1
FWV	**Forest Hill**	**136.88**	**355**	*e*PKPdf	PKPdf	02 56 55.7	+1.4
ELN	**Prospectdale**	**137.22**	**355**	*e*PKPdf	PKPdf	02 56 56.6	+1.6
CPRX	**Cap Rock**	**137.75**	**23**	*e*PKPdf	PKPdf	02 56 58.0	+2.0
WMOK	**Wichita Mounta**	**137.93**	**17**	*e*PKPpre		02 56 47.0	
WMOK				*e*PKPdf	PKPdf	02 56 57.8	+1.4
TZTN	**Tazewell**	**138.08**	**358**	*e*PKPdf	PKPdf	02 56 58.1	+1.6
MNTX	**Cornudas Mount**	**138.27**	**26**	*e*PKPpre		02 56 51.4	
MNTX				*e*PKPdf	PKPdf	02 56 59.0	+2.0
GDL2	**Guadalupe Moun**	**138.27**	**25**	*e*PKPdf	PKPdf	02 56 58.7	+1.7
WVT	**Waverly**	**138.46**	**3**	*e*PKPpre		02 56 48.8	
WVT				*e*PKPdf	PKPdf	02 56 58.5	+1.2
CPCT	**Cooper Cave**	**139.20**	**359**	*e*PKPdf	PKPdf	02 57 00.1	+1.4
PLAL	**Pickwick Lake**	**139.58**	**4**	*e*PKPdf	PKPdf	02 56 59.9	+0.5
LTX	**Lajitas**	**141.05**	**26**	*e*PKPdf	PKPdf	02 57 02.6	+0.4
TXAR	**Lajitas Array**	**141.05**	**26**	PKHKP		02 56 57.6	
TXAR						02 57 04.5	
TXAR						03 00 04.8	
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TXAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR				pmax	pmax		
	comp=N,3.0nm,1.0s						
TXAR	**Lajitas Array**	**141.05**	**26**	PKhKP		02 56 57.6	
	comp=N,1.2nm,0.7s,baz=255,slow=1.0,SNR=16						
TXAR				PKP	PKPdf	02 57 04.5	+2.2
	comp=N,3.7nm,0.6s,baz=180,slow=0.9,SNR=28						
TXAR				PP	PP	03 00 04.8	-2.8
	comp=N,1.9nm,1.0s,baz=326,slow=3.3,SNR=4.9						
TXAR				SKPbc		03 00 34.5	
	comp=N,3.4nm,1.0s,baz=270,slow=0.9,SNR=4.2						
TXAR	**Lajitas Array**	**141.05**	**26**	PKP	PKPdf	02 56 57.6	-4.6
TXAR				PKP	PKPdf	02 57 04.5	+2.2
TXAR				PP	PP	03 00 04.8	-2.8
TXAR				SKPbc		03 00 34.5	
LRAL	**Lakeview Retre**	**141.58**	**2**	*e*PKPdf	PKPdf	02 57 03.7	+0.7
BAO	**Brasilia Array**	**142.09**	**252**	PKPdf	PKPdf	02 57 07.0	+2.7
BDFB	**Brasilia**	**142.11**	**252**	PKIKP	PKPdf	02 57 06.9	+2.6
BDFB				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BDFB				pmax	pmax		
	comp=N,3.0nm,0.8s						
BDFB	**Brasilia**	**142.11**	**252**	PKP	PKPdf	02 57 06.9	+2.6
	comp=N,3.7nm,0.7s,baz=102,slow=5.9,SNR=5.4						
BDFB				SKPbc		03 00 37.5	
	comp=N,3.2nm,0.8s,baz=220,slow=2.3,SNR=3.9						
PLCA	**Paso Flores**	**142.58**	**199**	PKIKP	PKPdf	02 57 02.4	-2.1
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PLCA	**Paso Flores**	**142.58**	**199**	PKhKP		02 57 02.4	
	comp=Z,2.0nm,0.7s,baz=157,slow=7.7,SNR=4.5						
DWPF	**Disney**	**146.32**	**354**	*e*PKPbc	PKPbc	02 57 14.5	+1.9
BCG	**Bois Riant Cap**	**148.22**	**313**	*e*P	PKPdf	02 57 19.7	+5.0
BBL	**Barber's Block**	**148.47**	**312**	*e*P	PKPdf	02 57 20.9	+5.8
CRM	**Caravelle**	**148.53**	**310**	⇑*e*P	PKPdf	02 57 20.4	+5.2
MVM	**Montagne Vaucl**	**148.64**	**310**	⇑*e*P	PKPdf	02 57 20.9	+5.6
FDF	**Fort de France**	**148.72**	**310**	⇑*e*P	PKPdf	02 57 21.4	+5.8
BIM	**Bigot**	**148.80**	**310**	⇑*e*P	PKPdf	02 57 21.6	+6.0
SLB	**Belfond**	**149.19**	**309**	*e*P	PKPdf	02 57 23.0	+6.7
SLB	**Belfond**	**149.19**	**309**	*e*	Px	02 57 40.9	
CFAA	**Coronel Fontan**	**149.58**	**210**	PKP	PKPdf	02 57 19.9	+3.4
	comp=Z,2.0nm,0.6s,baz=220,slow=3.8,SNR=5.4						
CFAA				PKPbc	PKPdf	02 57 24.2	+7.7
	comp=Z,2.0nm,0.6s,baz=158,slow=2.3,SNR=36						
SVB	**Belmont**	**149.69**	**308**	*e*P	PKPdf	02 57 25.9	+8.8
SJG	**San Juan**	**149.85**	**322**	*e*PKPbc	PKPdf	02 57 23.7	+6.4
TRN	**Trinidad (W)**	**151.30**	**304**	*e*P	PKPdf	02 57 18.0	-1.6
SIV	**San Ignacio**	**154.11**	**244**	PKP	PKPdf	02 57 25.7	+2.3
	comp=Z,1.6nm,0.8s,baz=122,slow=2.1,SNR=8.8						
SIV				PKPbc	PKPdf	02 57 33.1	+10
	comp=Z,1.8nm,0.6s,baz=146,slow=3.4,SNR=16						
SIV				PKPab	PKPab	02 57 47.5	-0.4
	comp=Z,3.1nm,0.6s,baz=122,slow=6.8,SNR=5.7						
SAML	**Samuel**	**157.85**	**260**	*e*PKPdf	PKPdf	02 57 30.2	+1.8
SDV	**Santo Domingo**	**159.54**	**314**	*e*PKPdf	PKPdf	02 57 31.9	+1.4
LPAZ	**La Paz**	**160.11**	**236**	PKIKP	PKPdf	02 57 34.1	+3.1
LPAZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LPAZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LPAZ	**La Paz**	**160.11**	**236**	PKP	PKPdf	02 57 34.1	+3.1
	comp=Z,3.8nm,0.8s,baz=360,slow=1.2,SNR=18						
LPAZ				PKPab	PKPab	02 58 15.9	+2.3
	comp=Z,6.3nm,1.0s,baz=107,slow=5.5,SNR=4.4						
LPAZ	**La Paz**	**160.11**	**236**	*e*PKPdf	PKPdf	02 57 33.8	+2.8
ROSC	**El Rosal**	**164.96**	**313**	PKP	PKPdf	02 57 39.4	+3.4
	comp=Z,7.0nm,0.7s,baz=81,slow=20,SNR=9.3						

IDC 17 02:43:37.1±10.0**, 15.14S**×**173.79W, mb3.7**/1**, mb1 4.1**/1**, mb1mx3.6**/15**, mbtmp3.7**/1**, Error ellipse: s-maj=494.6km s-min=58.3km az=144.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.54**	**257**	P	P	02 52 30.1	-1.9
	0.9nm,0.7s,baz=93,slow=7.0,SNR=4.7						
BRTR	**Keskin Array B**	**145.72**	**321**	PKPbc	PKPbc	03 03 17.1	-1.4
	3.0nm,1.0s,baz=45,slow=2.3,SNR=12						
GERES	**GERESS Array B**	**145.83**	**351**	PKPbc	PKPbc	03 03 18.1	-0.4
	0.1nm,0.3s,slow=2.9,SNR=3.8						

IGQ 17 02:54:43.9, 1.48S×**77.90W, h207**^{km}±3^{km}**, mb4.0, 3C-10D, Error ellipse: s-maj=3.0km s-min=1.7km az=54.0, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULBA	**Ulba**	**0.51**	**273**	⇑P	P	02 55 12.6	+0.3
RUN5	**Runtun**	**0.53**	**276**	⇑P	P	02 55 12.7	+0.4
ARRY	**Arrayan**	**0.56**	**267**	⇑P	P	02 55 12.5	+0.1
ARRY				S	S	02 55 33.0	-1.4
JUIV	**Juive**	**0.57**	**275**	P	P	02 55 12.9	+0.4
CUSU	**Cusua**	**0.59**	**273**	P	P	02 55 13.1	+0.5
PISA	**Pisayambo**	**0.64**	**310**	⇓P	P	02 55 13.5	+0.8
IGUA	**Igualata**	**0.74**	**269**	P	P	02 55 14.1	+0.9
TAMB	**Tambo**	**0.91**	**329**	⇓P	P	02 55 14.9	+0.8
VC1	**Cotopaxi 1**	**0.97**	**328**	⇓P	P	02 55 15.4	+1.0
CAMI	**Rancho Maria**	**1.00**	**322**	⇓P	P	02 55 16.0	+1.4
NAS1	**Nasa**	**1.02**	**325**	P	P	02 55 16.1	+1.4
ANTI	**Antisana**	**1.05**	**345**	P	P	02 55 15.7	+0.7
JUA2	**San Juan 2**	**1.44**	**330**	⇓P	P	02 55 18.9	+0.7
ELAGU	**Cayambe Volc**	**1.45**	**356**	P	P	02 55 18.9	+0.7
GGP	**Refugio Guagua**	**1.47**	**332**	⇓P	P	02 55 19.3	+0.9
TERV	**Terraza Guagua**	**1.47**	**331**	P	P	02 55 19.4	+0.9
CAYR	**Refugio Cayamb**	**1.48**	**356**	⇓P	P	02 55 19.5	+0.9
PINO	**Pino**	**1.49**	**331**	P	P	02 55 19.6	+1.0
YANA	**Yana**	**1.51**	**333**	⇓P	P	02 55 19.5	+0.7
CAYA	**Cayambe**	**1.54**	**356**	⇓P	P	02 55 20.0	+1.0
JOR1	**San Jorge 1**	**1.64**	**333**	⇓P	P	02 55 18.8	-1.1
ECEN	**Cerro Negro**	**2.29**	**358**	P	P	02 55 27.7	+1.3
JAMA	**Jama**	**2.61**	**298**	P	P	02 55 29.9	-0.1
HOJA	**Cerro de Hojas**	**2.68**	**279**	P	P	02 55 30.5	-0.3
HOJA				S	S	02 56 04.1	-3.0
LORE	**San Lorenzo**	**2.91**	**341**	P	P	02 55 34.1	+0.7

NEIC ***17*** *02:58:46.5±4.2, 20.43S×69.11W, h94*^{km}*±28*^{km}*, Error ellipse: s-maj=55.0km s-min=16.2km az=196.0*

IDC ***17*** *02:58:51.0±7.0, 20.11S×68.96W, h122*^{km}*±50*^{km}*, mb3.4/3, mb1 3.5/5, mb1mx3.3/17, mbtmp3.9/5, Error ellipse: s-maj=65.8km s-min=25.5km az=33.0*

ISC 17 02:58:46.7±3.1**, 20.3S**±0.2×**69.1W**±0.1**, h110**^{km}±27^{km}**, n8, σ0**^{s}**86**/11**, mb3.6**/2**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.08**	**13**	P	**P**	**02 59 50.9**	**+2.6**
	3.1nm,0.3s,baz=200,slow=7.3,SNR=37						
LPAZ				S	**S**	**03 00 35.5**	**0.0**
	1.0nm,0.3s,baz=82,slow=2.1,SNR=3.6						
LPAZ	**La Paz**	**4.08**	**13**	P	**P**	**02 59 50.9**	**+2.6**
LPAZ				S	**S**	**03 00 35.5**	**0.0**
ARE	**Arequipa**	**4.42**	**329**	*e*P	**P**	**02 59 53.0**	**+0.1**
ARE				*e*S	**S**	**03 00 43.0**	**-0.7**
SIV	**San Ignacio**	**8.76**	**62**	P	**P**	**03 00 50.5**	**-1.3**
	3.2nm,0.3s,baz=256,slow=12,SNR=33						
SAML	**Samuel**	**12.64**	**28**	*e*Pn	**P**	**03 01 43.7**	**0.0**
	1.2nm,0.5s						
BDFB	**Brasilia**	**20.59**	**80**	P	**P**	**03 03 18.9**	**0.0**
	2.2nm,0.4s,baz=269,slow=8.5,SNR=5.9						
TXAR	**Lajitas Array**	**59.53**	**325**	P	**P**	**03 08 41.0**	**0.0**
	0.1nm,0.4s,mb3.2,baz=156,slow=9.3,SNR=3.7						
DBIC	**Dimbokro**	**68.58**	**74**	P	**P**	**03 09 40.5**	**+0.3**
	2.6nm,0.9s,mb4.0,baz=256,slow=4.2,SNR=3.5						

CASC 17 03:27:01.9±2.7**, 11.85N**×**87.68W, h11**^{km}±13^{km}**, MD4.3, ML3.5, 7C-9D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEON	**Leon**	**0.95**	**54**	*e*P	Pb	03 27 18.6	-1.3
CRIN	**San Cristobal**	**1.04**	**36**	⇑*e*P	Pb	03 27 19.7	-1.8
CRIN				*e*S	Sb	03 27 34.8	-0.2
TEL3	**Telica 3**	**1.08**	**48**	⇓*e*P	Pb	03 27 20.3	-1.9
TEL3				*e*S	Sb	03 27 39.7	+3.6
MIRN	**Miramar**	**1.11**	**58**	⇓*e*P	Pb	03 27 21.4	-1.3
TELN	**Telica**	**1.12**	**48**	⇑*e*P	Pb	03 27 20.9	-1.8
CNGN	**Cerro Negro**	**1.15**	**56**	*e*P	Pb	03 27 20.3	-3.1
CNGN				*e*S	Sb	03 27 38.8	+0.6
MOMJ	**Momotombo**	**1.24**	**63**	⇑*e*P	Pb	03 27 23.5	-1.4
APYN	**Apoyeque**	**1.35**	**73**	⇓*e*P	Pb	03 27 25.6	-1.2
CRUN	**El Crucero**	**1.35**	**84**	*e*P	Pb	03 27 25.2	-1.6
XAVN	**Gruta Xavier**	**1.35**	**77**	⇑*e*P	Pb	03 27 25.8	-1.0
TICN	**Ticuantepe**	**1.43**	**82**	*e*P	Pn	03 27 27.0	-0.9
CNCH	**Conchagua**	**1.43**	**354**	⇓*e*P	Pn	03 27 28.1	+0.2
CNCH				*e*S	Sb	03 27 47.8	+1.7
MGAN	**Managua**	**1.43**	**78**	*e*P	Pn	03 27 26.5	-1.4
MGAN				*e*S	Sb	03 27 46.4	+0.2
MGAN				*i*		03 27 52.3	
	comp=E,731nm,0.5s						
WILN	**Americas 2**	**1.49**	**78**	⇓*e*P	Pn	03 27 27.3	-1.5
WILN				*e*S	Sb	03 27 47.6	-0.3
APON	**Apoyo**	**1.58**	**87**	⇑*e*P	Pn	03 27 28.7	-1.3
APON				*e*S	Sb	03 27 53.2	+2.8
VSM	**San Miguel**	**1.68**	**340**	⇓*e*P	Pn	03 27 31.9	+0.5
VSM				*e*S	Sn	03 27 53.1	+0.2
BLLM	**Bellamira**	**1.68**	**341**	⇓*e*P	Pn	03 27 31.3	-0.1
BLLM				*e*S	Sn	03 27 52.1	-0.9
PYTN	**Playitas**	**1.72**	**66**	*e*P	Pn	03 27 30.1	-2.0
CAHU	**Cacacuatique**	**1.98**	**345**	*e*P	Pn	03 27 37.2	+1.4
CONN	**Concepcion**	**2.03**	**98**	*e*P	Pn	03 27 35.0	-1.5
LCBS	**La Ceiba**	**2.20**	**325**	⇓*e*P	Pn	03 27 38.5	-0.4
LFRS	**El Faro**	**2.22**	**323**	⇓*e*P	Pn	03 27 38.9	-0.4
LFRS				*e*S	Sn	03 28 05.2	-1.7
LBRS	**Las Brisas**	**2.30**	**325**	*e*P	Pn	03 27 40.3	-0.1
LBRS				*e*S	Sn	03 28 07.4	-1.5
LFU	**La Fuente**	**2.35**	**324**	⇑*e*P	Pn	03 27 41.0	-0.1
BOQS	**Boqueron**	**2.44**	**320**	*e*P	Pn	03 27 42.7	+0.3
BOQS				*e*S	Sn	03 28 11.3	-1.2
SBLS	**San Blas**	**2.74**	**316**	⇑*e*P	Pn	03 27 47.3	+0.6
RBDL	**Robledal**	**2.98**	**319**	*e*P	Pn	03 27 50.6	+0.5
RBDL				*e*S	Sn	03 28 27.2	+1.0

IDC 17 03:41:13.8±3.5**, 16.47S**×**173.70W, mb3.8**/3**, mb1 4.3**/3**, mb1mx3.8**/16**, mbtmp3.8**/3**, Error ellipse: s-maj=304.8km s-min=33.2km az=156.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.33**	**258**	P	P	03 50 05.1	-2.0
	0.2nm,0.4s,baz=96,slow=6.1,SNR=9.7						
TXAR	**Lajitas Array**	**81.44**	**56**	P	P	03 53 34.2	-0.3
	0.2nm,0.7s,baz=225,slow=8.8,SNR=3.5						
PDAR	**Pinedale Array**	**83.25**	**42**	P	P	03 53 41.8	-1.8
	0.6nm,0.6s,baz=226,slow=3.2,SNR=4.4						

BJI ***17*** *03:52:27.8, 51.60N×16.00E, h5*^{km}*, mB4.8, mb4.6, Ms4.1, Msz3.9*

MOS ***17*** *03:52:28.4±1.0, 51.62N×15.96E, h10*^{km}*, mb4.6/6, Error ellipse: s-maj=4.9km s-min=2.5km az=70.9*

IPEC ***17*** *03:52:28.5±0.2, 51.64N×16.22E, ML4.0/4, Error ellipse: s-maj=1.5km s-min=1.3km az=10.0*

BGR ***17*** *03:52:29.2±0.4, 51.59N×16.19E, h1*^{km}*, ML4.5/5, Error ellipse: s-maj=5.6km s-min=3.3km az=13.0*

CSEM ***17*** *03:52:29.7, 51.54N×16.12E, h10*^{km}*, ML4.5*

NEIC ***17*** *03:52:29.8±0.2, 51.63N×16.04E, h5*^{km}*, mb4.4/7, ML4.7(LDG), ML4.5(SZGRF), ML4.3(VIE), ML4.2(CLL), ML4.1(STR), ML4.0(BRG), Error ellipse: s-maj=2.7km s-min=2.3km az=132.0*

ZUR_RM ***17*** *03:52:29, 51.63N×16.04E, h12*^{km}*, Mw3.6/12, Moment Tensor Solution. s12 Moment tensor: Scale 10*^{14}*Nm;* M_{rr}*-5.23;* $M_{\theta\theta}$*-0.44;* $M_{\phi\phi}$*-0.36;* $M_{r\theta}$*-1.15;* $M_{\theta\phi}$*-0.02;* $M_{\phi r}$*-0.65; Best double couple:* M_0*2.73×10*^{14} *NP1:*ϕ_s*57°, δ59°, λ-89°. NP2:*ϕ_s*234°, δ31°, λ-92°. Principal axes: T 1.909, Plg14°, Azm146°; N 1.647, Plg1°, Azm236°; P -3.557, Plg76°, Azm331°;*

LDG ***17*** *03:52:30.7±0.2, 51.57N×16.19E, h1*^{km}*, Ml4.7/36, ms2.6/6 Error ellipse: s-maj=4.9km s-min=3.1km az=2.0, Suspected Mining induced.*

WAR ***17*** *03:52:31.0, 51.54N×16.09E, h1*^{km}*, ML4.1, Mining Induced*

IDC ***17*** *03:52:32.5±1.4, 51.51N×16.03E, h15*^{km}*±11*^{km}*, mb4.0/13, mb1 4.1/23, mb1mx4.1/28, mbtmp4.1/23, ML4.1/8, Error ellipse: s-maj=9.2km s-min=6.7km az=88.0*

NAO ***17*** *03:52:33.1±2.7, 51.81N×15.47E, ML3.5*

STR ***17*** *03:52:50.7±0.6, 50.76N×13.95E, h5*^{km}*±1*^{km}*, Ml4.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 17 03:52:27.2±0.2**, 51.59N**±0.01×**16.05E**±0.02**, n310, σ1**^{s}**40**/434**, mb4.3**/23**, MS4.0**/1**, 27C-19D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.77**	**168**	*e*Pn	**Pn**	**03 52 43.9**	**-1.0**
KSP	**Ksiaz**	**0.77**	**168**	⇓*e*P	**Pg**	**03 52 43.9**	**+1.4**
KSP				*e*		03 52 57.0	
KSP	**Ksiaz**	**0.77**	**168**	⇓*e*Pg	**Pg**	**03 52 43.9**	**+1.4**
KSP				*i*		03 52 44.5	
KSP				*e*Sg	**Sg**	**03 52 53.6**	**+0.9**
KSP				*e*		03 52 57.0	
KSP	**Ksiaz**	**0.77**	**168**	⇓*e*Pg	**Pg**	**03 52 44.4**	**+1.9**
KSP				*e*Sg	**Sg**	**03 52 55.5**	**+2.8**
KSP	**Ksiaz**	**0.77**	**168**	⇓*e*Pg	**Pg**	**03 52 43.9**	**+1.4**
KSP				*e*Sg	**Sg**	**03 52 53.6**	**+0.9**
UPC	**Upice**	**1.08**	**181**	*e*PG	**Pg**	**03 52 50.1**	**+1.2**
DPC	**Dobruska-Polom**	**1.25**	**172**	*e*PG	**Pg**	**03 52 52.8**	**+0.5**
DPC				*e*SG	**Sg**	**03 53 08.3**	**-0.7**
	1μm,0.6s						
PVCC	**Panska Ves**	**1.41**	**222**	*e*Pn	**Pn**	**03 52 56.9**	**+2.7**
PVCC				*e*Sg	**Sg**	**03 53 15.7**	**+1.4**
PVCC	**Panska Ves**	**1.41**	**222**	*e*Pg	**Pn**	**03 52 56.6**	**+1.1**
PVCC	**Panska Ves**	**1.41**	**222**	Pn	**Pn**	**03 52 56.9**	**+2.7**
PVCC				Sg	**Sg**	**03 53 15.7**	**+1.4**
BRG	**Berggiesshubel**	**1.50**	**242**	⇓*i*P	**Pn**	**03 52 57.5**	**+2.0**
BRG						03 53 19.8	
BRG	**Berggiesshubel**	**1.50**	**242**	⇓*i*Pn	**Pn**	**03 52 57.5**	**+2.0**
BRG				Pg	**Pg**	**03 52 59.7**	**+2.5**
BRG				Sg	**Sg**	**03 53 19.8**	**+2.5**
BRG	**Berggiesshubel**	**1.50**	**242**	*i* P	**Pn**	**03 52 57.5**	**+2.0**
BRG				S	**Sb**	**03 53 19.8**	**+4.5**
RUE	**Ruedersdorf**	**1.66**	**303**	*e*Pn	**Pn**	**03 53 00.4**	**+2.7**
RUE	**Ruedersdorf**	**1.66**	**303**	*e*Pn	**Pn**	**03 53 00.4**	**+2.7**
PRA	**Prague**	**1.83**	**215**	PG	**Pg**	**03 53 02.0**	**-1.8**
PRA				SG	**Sg**	**03 53 27.0**	**-1.3**
PRU	**Pruhonice**	**1.87**	**211**	*e*P	**Pn**	**03 53 02.3**	**+1.6**
PRU				*e*		03 53 28.1	
PRU	**Pruhonice**	**1.87**	**211**	*e*PN	**Pn**	**03 53 02.3**	**+1.6**
PRU				*e*PG	**Pg**	**03 53 04.5**	**0.0**
PRU				*e*SG	**Sg**	**03 53 28.1**	**-1.3**
	1μm,0.7s						
CLL	**Collm**	**1.93**	**263**	*e*Pn	**Pn**	**03 53 03.4**	**+1.8**
CLL				*e*Sg	**Sg**	**03 53 33.1**	**+1.8**
CLL	**Collm**	**1.93**	**263**	⇓*i*P	**Pn**	**03 53 03.6**	**+2.0**
CLL				*i*		03 53 33.7	
CLL	**Collm**	**1.93**	**263**	⇓*i*Pn	**Pn**	**03 53 03.6**	**+2.0**
CLL				*i* Pg	**Pg**	**03 53 07.6**	**+1.9**
CLL				*i* Sg	**Sg**	**03 53 33.7**	**+2.4**
CLL	**Collm**	**1.93**	**263**	⇓*i*PN	**Pn**	**03 53 03.6**	**+2.0**
	logA/T=2.6						
CLL				*i* PG	**Pg**	**03 53 07.6**	**+1.9**
CLL				*i*		03 53 10.9	
CLL				*i* SG	**Sg**	**03 53 33.7**	**+2.4**
CLL	**Collm**	**1.93**	**263**	*i* Pg	**Pg**	**03 53 07.6**	**+1.9**
CLL				Sg	**Sg**	**03 53 33.1**	**+1.8**
RAC	**Raciborz**	**2.03**	**137**	*e*P	**Pn**	**03 53 03.4**	**+0.3**
RAC				*e*		03 53 33.3	
RAC	**Raciborz**	**2.03**	**137**	*e*Pn	**Pn**	**03 53 03.4**	**+0.3**
RAC				*e*Pg	**Pg**	**03 53 07.0**	**-0.8**
RAC				*e*Sg	**Sg**	**03 53 33.3**	**-1.6**
RAC	**Raciborz**	**2.03**	**137**	*e*PN	**Pn**	**03 53 03.0**	**-0.1**
RAC				*e*PN	**Pg**	**03 53 07.0**	**-0.8**
RAC				*e*S	**Sn**	**03 53 33.0**	**+3.4**
RAC	**Raciborz**	**2.03**	**137**	*e*Pg	**Pg**	**03 53 07.0**	**-0.8**
RAC				*e*Sg	**Sg**	**03 53 33.3**	**-1.6**
MORC	**Moravsky Berou**	**2.05**	**152**	*e*Pn	**Pn**	**03 53 04.2**	**+0.9**
MORC				*e*Sn	**Sn**	**03 53 30.0**	**0.0**
MORC	**Moravsky Berou**	**2.05**	**152**	Pn	**Pn**	**03 53 04.6**	**+1.3**
MORC				*e*Sn	**Sn**	**03 53 30.0**	**0.0**
MORC				*e*Sg	**Sg**	**03 53 32.5**	**-3.0**
OKC	**Ostrava-Krasne**	**2.21**	**142**	*e*Pn	**Pn**	**03 53 05.8**	**+0.3**
OKC	**Ostrava-Krasne**	**2.21**	**142**	*e*P	**Pn**	**03 53 05.9**	**+0.3**
OKC				*e*		03 53 39.0	
OKC	**Ostrava-Krasne**	**2.21**	**142**	*e*PN	**Pn**	**03 53 05.9**	**+0.3**
OKC				*e*PG	**Pg**	**03 53 10.6**	**-0.7**
OKC				*e*SG	**Sg**	**03 53 39.0**	**-1.7**
OKC	**Ostrava-Krasne**	**2.21**	**142**	*e*Pg	**Pg**	**03 53 10.6**	**-0.7**
OKC				*e*Sg	**Sg**	**03 53 39.0**	**-1.7**
VRAC	**Vranov**	**2.31**	**171**	Pn	**Pn**	**03 53 08.4**	**+1.3**
	21nm,0.3s,baz=343,slow=14,SNR=80						
VRAC				Lg		03 53 41.1	
	47nm,0.3s,baz=90,slow=23,SNR=6.9						
VRAC	**Vranov**	**2.31**	**171**	*e*Pn	**Pn**	**03 53 08.4**	**+1.3**
VRAC				*e*Sg	**Sg**	**03 53 41.8**	**-2.4**
KRUC	**Moravsky**	**2.54**	**175**	P	**Pn**	**03 53 11.6**	**+1.2**
KRUC	**Moravsky**	**2.54**	**175**	*e*Pn	**Pn**	**03 53 11.5**	**+1.1**
KRUC				*e*Sg	**Sg**	**03 53 49.5**	**-2.3**
	353nm,0.6s						
WERD	**Werda**	**2.62**	**246**	*e*Pn	**Pn**	**03 53 13.6**	**+2.0**
GUNZ	**Gunzen**	**2.65**	**244**	*e*Pn	**Pn**	**03 53 14.0**	**+2.1**
NKC	**Novy Kostel**	**2.65**	**241**	*e*PN	**Pn**	**03 53 13.9**	**+1.9**
NKC				*e*PG	**Pg**	**03 53 20.8**	**+0.6**
NKC				*e*SG	**Sg**	**03 53 56.1**	**+0.6**
	2μm,0.5s						
OJC	**Ojcow**	**2.74**	**119**	*e*P	**Pn**	**03 53 12.7**	**-0.6**
OJC				*e*		03 53 56.8	
OJC	**Ojcow**	**2.74**	**119**	*e*Pn	**Pn**	**03 53 12.7**	**-0.6**
OJC				*e*Pg	**Pg**	**03 53 21.7**	**-0.3**
OJC				*e*Sg	**Sg**	**03 53 56.8**	**-1.8**
OJC	**Ojcow**	**2.74**	**119**	*e*Pg	**Pg**	**03 53 21.7**	**-0.3**
OJC				*e*Sg	**Sg**	**03 53 56.8**	**-1.8**
KHC	**Kasperske Hory**	**2.93**	**214**	*e*Pn	**Pn**	**03 53 16.7**	**+0.8**
KHC	**Kasperske Hory**	**2.93**	**214**	*e*PN	**Pn**	**03 53 17.1**	**+1.2**
KHC				*e*PG	**Pg**	**03 53 23.6**	**-2.0**
KHC				*e*SG	**Sg**	**03 54 03.3**	**-1.3**
	499nm,1.0s						
JAVC	**Velka Javorina**	**2.93**	**158**	P	**Pn**	**03 53 17.9**	**+2.0**
MOX	**Moxa**	**2.95**	**253**	*e*Pn	**Pn**	**03 53 17.8**	**+1.6**
MOX				*e*Sg	**Sg**	**03 54 06.7**	**+1.3**
MOX	**Moxa**	**2.95**	**253**	*e*Pn	**Pn**	**03 53 17.9**	**+1.7**
MOX				*e*Pg	**Pg**	**03 53 26.7**	**+0.6**
MOX				*e*Sg	**Sg**	**03 54 06.0**	**+0.6**
MOX	**Moxa**	**2.95**	**253**	*i* P	**Pn**	**03 53 17.9**	**+1.7**
MOX				Pg	**Pg**	**03 53 27.0**	**+0.9**
MOX				Sg	**Sg**	**03 54 06.0**	**+0.6**
MOX	**Moxa**	**2.95**	**253**	*e*Pg	**Pg**	**03 53 26.7**	**+0.6**
MOX				Sg	**Sg**	**03 54 06.7**	**+1.3**
NOTT	**Nottersdorf**	**3.06**	**236**	*e*Pn	**Pn**	**03 53 19.7**	**+1.8**
GERES	**GERESS Array B**	**3.13**	**210**	Pn	**Pn**	**03 53 20.1**	**+1.2**
	20nm,0.3s,baz=32,slow=11,SNR=435						
GERES				Pg	**Pg**	**03 53 28.8**	**-1.0**
	32nm,0.3s,baz=23,slow=15,SNR=55						
GERES				Lg		03 54 08.9	
	44nm,0.3s,baz=35,slow=28,SNR=11						
GERES	**GERESS Array B**	**3.13**	**210**	Pg	**Pg**	**03 53 28.8**	**-1.0**
WET	**Wettzell**	**3.18**	**221**	*e*Pn	**Pn**	**03 53 20.8**	**+1.3**
WET	**Wettzell**	**3.18**	**221**	*e*Pn	**Pn**	**03 53 20.8**	**+1.3**
SMOL	**Smolenice**	**3.21**	**163**	*e*PN	**Pn**	**03 53 21.6**	**+1.7**
SMOL				*e*PG	**Pg**	**03 53 29.7**	**-1.5**
SMOL				*e*SG	**Sg**	**03 54 11.5**	**-2.5**
SMOL	**Smolenice**	**3.21**	**163**	*e*Pg	**Pg**	**03 53 29.7**	**-1.5**
SMOL				*e*Sg	**Sg**	**03 54 11.5**	**-2.5**
LIKS	**Likavka**	**3.21**	**141**	*e*Pn	**Pn**	**03 53 22.2**	**+2.3**
LIKS				*e*		03 53 32.2	
LIKS				*e*Sg	**Sg**	**03 54 15.0**	**+0.9**
VKA	**Vienna**	**3.33**	**177**	⇑*i*PN	**Pn**	**03 53 23.0**	**+1.3**
VKA				*i* PG	**Pg**	**03 53 31.6**	**-2.2**
VKA				*i* SG	**Sg**	**03 54 16.1**	**-2.1**
VKA	**Vienna**	**3.33**	**177**	*i* Pg	**Pg**	**03 53 31.6**	**-2.2**
VKA				*i* Sg	**Sg**	**03 54 16.1**	**-2.1**
KOLL	**Kolacno**	**3.38**	**152**	*e*Pn	**Pn**	**03 53 23.1**	**+0.8**
KOLL				*e*Pg	**Pg**	**03 53 33.6**	**-1.0**
KOLL				*e*Sg	**Sg**	**03 54 17.9**	**-1.7**
RGN	**Rugen**	**3.39**	**332**	*e*Pn	**Pn**	**03 53 21.4**	**-1.1**
RGN	**Rugen**	**3.39**	**332**	*e*Pn	**Pn**	**03 53 21.4**	**-1.0**
ZST	**Bratislava**	**3.47**	**168**	*e*Pn	**Pn**	**03 53 25.7**	**+2.2**
ZST				*e*Pg	**Pg**	**03 53 34.8**	**-1.6**
ZST				*e*Sg	**Sg**	**03 54 18.8**	**-3.8**
ZST	**Bratislava**	**3.47**	**168**	*e*Pg	**Pg**	**03 53 34.8**	**-1.6**
ZST				*e*Sg	**Sg**	**03 54 18.8**	**-3.8**
NIE	**Niedzica**	**3.48**	**127**	*e*PN	**Pn**	**03 53 23.0**	**-0.8**
NIE				*e*PN	**Pg**	**03 53 34.0**	**-2.8**
NIE				*e*S	**Sg**	**03 54 19.0**	**-4.2**
NIE	**Niedzica**	**3.48**	**127**	*e*Pn	**Pn**	**03 53 23.5**	**-0.3**
NIE				*e*		03 53 27.8	
NIE				*e*Pg	**Pg**	**03 53 33.9**	**-2.9**
NIE				*e*Sg	**Sg**	**03 54 18.8**	**-4.4**
VYHS	**Vyhne**	**3.58**	**149**	*e*PN	**Pn**	**03 53 25.6**	**+0.4**
VYHS				*e*PG	**Pg**	**03 53 36.5**	**-2.3**
VYHS				*e*SG	**Sg**	**03 54 27.4**	**+0.9**
BSD	**Bornholm Skovb**	**3.59**	**350**	*i* P	**Pn**	**03 53 26.1**	**+0.7**
BSD				*i* S	**Sn**	**03 54 08.1**	**-1.1**
BSD				*e*S	**Sg**	**03 54 25.7**	**-1.2**
GRA1	**Grafenberg Arr**	**3.61**	**240**	*e*Pn	**Pn**	**03 53 27.0**	**+1.4**
GRA1	**Grafenberg Arr**	**3.61**	**240**	Pn	**Pn**	**03 53 27.0**	**+1.4**

GRF	Grafenberg Arr	3.61	240	ePn	Pn	03 53 27.0	+1.4
GRFO	Grafenberg	3.61	240	P	Pn	03 53 27.4	+1.8
MOA	Molln	3.92	198	⇑iPN	Pn	03 53 31.3	+1.3
MOA				i SG	Sg	03 54 34.1	-3.6
	381nm,0.9s						
SOP	Sopron	3.93	175	P	Pn	03 53 31.0	+0.9
SOP	Sopron	3.93	175	⇓iPn	Pn	03 53 30.5	+0.4
SOP				eSn	Sn	03 54 27.1	+10
BSEG	Bad Segeberg	4.20	306	ePn	Pn	03 53 34.2	+0.3
BSEG	Bad Segeberg	4.20	306	ePn	Pn	03 53 34.2	+0.3
KECS	Kecovo	4.23	136	P	Pn	03 53 36.4	+2.1
PENC	Penc	4.34	150	⇑eP	Pn	03 53 37.0	+1.0
ARSA	Arzberg	4.36	185	⇑iPN	Pn	03 53 37.8	+1.6
ARSA				i SG	Sg	03 54 45.4	-6.9
	225nm,0.8s						
PSZ	Piszkesteto	4.44	144	⇓ePn	Pn	03 53 37.8	+0.4
PSZ				ePg	Pg	03 53 57.9	+2.0
PSZ	Piszkesteto	4.44	144	ePn	Pn	03 53 37.3	-0.1
PKSG		4.47	159	⇑iP	Pn	03 53 38.4	+0.6
FUR	Furstenfeldbru	4.61	224	ePn	Pn	03 53 40.8	+1.0
FUR	Furstenfeldbru	4.61	224	ePn	Pn	03 53 40.8	+1.0
COP	Copenhagen	4.63	334	i P	Px	03 54 05.1	
COP				i S	Sx	03 54 52.9	
COP				i		03 55 15.5	
KWP	Kalwaria	4.67	112	ePn	Pn	03 53 40.2	-0.5
KWP				ePg	Pg	03 53 55.5	-5.0
KWP				eSg	Sg	03 55 08.6	+5.8
KWP	Kalwaria	4.67	112	ePN	Pn	03 53 40.0	-0.7
KWP				ePG	Pg	03 53 55.0	-5.5
KWP				eS	Sg	03 55 09.0	+6.2
SIND	Sindeldorf	4.69	244	P	Pn	03 53 41.7	+0.8
KOLS	Kolonicke sedl	4.80	121	ePN	Pn	03 53 41.9	-0.6
KOLS				e		03 54 03.7	
KBA	Koelnbreinsper	4.85	202	⇑iPN	Pn	03 53 44.6	+1.4
KBA				i SG	Sg	03 55 03.7	-5.0
	157nm,0.6s						
SUW	Suwalki	4.96	58	ePn	Pn	03 53 45.3	+0.5
SUW				ePg	Pg	03 54 04.7	-1.6
SUW				eSg	Sg	03 55 17.8	+5.4
SUW	Suwalki	4.96	58	ePn	Pn	03 53 45.3	+0.5
SUW				ePg	Pg	03 54 04.7	-1.6
SUW				eSg	Sg	03 55 17.8	+5.3
	200nm,0.7s						
UZH	Uzhgorod	4.99	124	eP	Pn	03 53 46.0	+0.8
PERS	Pernice	5.00	187	ePn	Pn	03 53 46.2	+1.0
PERS				e		03 54 01.9	
TNS	Taunus Mts	5.00	257	ePn	Pn	03 53 46.4	+1.0
TNS	Taunus Mts	5.00	257	ePn	Pn	03 53 46.4	+1.1
TOD	Tromm	5.02	250	P	Pn	03 53 45.5	-0.1
TOD				S	Sn	03 54 30.6	-15
SWS	Schriesheim	5.14	249	P	Pn	03 53 47.8	+0.6
WATA	Walderalm	5.16	216	⇑iPN	Pn	03 53 48.8	+1.2
WATA				i SG	Sg	03 55 15.7	-3.3
	134nm,0.6s						
WATA	Walderalm	5.16	216	⇑iPn	Pn	03 53 48.8	+1.2
	134nm,0.6s						
WATA				i Sg	Sg	03 55 15.7	-3.3
OBKA	Obir	5.18	192	⇑iPN	Pn	03 53 48.7	+0.8
OBKA				i SG	Sg	03 55 13.5	-6.2
	115nm,0.8s						
OBKA	Obir	5.18	192	⇑iPn	Pn	03 53 48.7	+0.8
	115nm,0.8s						
OBKA				i Sg	Sg	03 55 13.5	-6.2
WTTA	Wattenberg	5.20	215	⇑iPN	Pn	03 53 49.4	+1.3
WTTA				i SG	Sg	03 55 16.6	-3.7
	153nm,0.7s						
WTTA	Wattenberg	5.20	215	⇑iPn	Pn	03 53 49.4	+1.3
	153nm,0.7s						
WTTA				i Sg	Sg	03 55 16.6	-3.7
PKS9	Tamasi	5.22	163	⇑eP	Pn	03 53 50.0	+1.6
STU	Stuttgart	5.23	240	eP	Pn	03 53 47.3	-1.2
STU				pmax	pmax		
	comp=Z,56nm,0.6s						
STU	Stuttgart	5.23	240	ePn	Pn	03 53 47.3	-1.2
	comp=Z,56nm,0.6s						
STU				ePg	Pg	03 54 09.4	-2.1
STU				eSg	Sg	03 55 16.4	-4.8
STU	Stuttgart	5.23	240	ePn	Pn	03 53 47.3	-1.2
	comp=Z,56nm,0.6s						
STU	Stuttgart	5.23	240	ePg	Pg	03 54 09.4	-2.2
BUCH	Bad Urach	5.34	237	P	Pn	03 53 51.0	+0.9
LVV	L’vov	5.38	106	eP	Pn	03 53 49.0	-1.6
LVV				eS	Sn	03 54 51.2	-2.9
LVV				MLR	MLR		
	comp=N,70nm,8.9s						
LVV				MLR	MLR		
	comp=E,110nm,8.9s						
LVV				MLR	MLR		
	comp=Z,70nm,8.9s						
LSR	Lussari	5.38	199	⇑iP	Pn	03 53 51.0	+0.3
PLRO	Paularo	5.39	202	⇑iP	Pn	03 53 52.0	+1.1
SQTA	Sankt Quirin	5.39	218	⇑iPN	Pn	03 53 52.2	+1.3
SQTA				i SG	Sg	03 55 22.2	-4.6
	comp=Z,91nm,0.6s						
SQTA	Sankt Quirin	5.39	218	⇑iPn	Pn	03 53 52.2	+1.3
	comp=Z,91nm,0.6s						
SQTA				i Sg	Sg	03 55 22.2	-4.6
ZOU	Zoufplan	5.43	203	⇑iP	Pn	03 53 52.0	+0.7
FVI	Forni Avoltri	5.44	204	P	Pn	03 53 52.8	+1.3
FVI				pmax	pmax		
	comp=Z,314nm,0.8s						
FVI	Forni Avoltri	5.44	204	Pn	Pn	03 53 52.8	+1.3
	comp=Z,314nm,0.8s						
SEST	Monte Rota	5.46	209	Pn	Pn	03 53 53.6	+1.8
	comp=Z,739nm,1.0s						
PTCC	Patocco-Chiusa	5.48	200	Pn	Pn	03 53 53.2	+1.1
UBR	Uberruh	5.49	227	P	Pn	03 53 52.9	+0.6
LBG	Lerchenberg	5.50	241	P	Pn	03 53 52.7	+0.3
CSMI	Casera Mimoias	5.55	205	⇓eP	Pn	03 53 54.0	+0.9
GMNA	Gemona	5.63	200	Pn	Pn	03 53 55.3	+1.1
LJU	Ljubljana	5.64	191	ePn	Pn	03 53 55.2	+0.8
DRE	Drenchia	5.65	197	⇑eP	Pn	03 53 54.0	-0.5
PKSM	Moragy	5.65	161	P	Pn	03 53 55.4	+0.9
ABH	Alteburg	5.66	256	P	Pn	03 53 54.6	0.0
BAD	Bernadia	5.67	200	⇑eP	Pn	03 53 56.0	+1.3
COLI	Coloredo	5.74	199	⇓eP	Pn	03 53 57.0	+1.3
VOY	Vojsko	5.74	195	ePn	Pn	03 53 55.7	-0.1
VOY				e		03 54 21.5	
VOY				eSn	Sg	03 55 34.0	-4.4
WTSB	Winterswijk	5.75	277	ePn	Pn	03 53 57.4	+1.4
	comp=Z,48nm,0.8s						
WTSB				eSg	Sg	03 55 37.6	-1.1
DAVA	Damuels	5.89	225	⇑iPN	Pn	03 53 57.9	0.0
DAVA				i SG	Sg	03 55 41.0	-2.4
	comp=Z,164nm,0.7s						
DAVA	Damuels	5.89	225	⇑iPn	Pn	03 53 57.9	0.0
	comp=Z,164nm,0.7s						
DAVA				i Sg	Sg	03 55 41.0	-2.4
LANF	Langenberg	5.89	247	P	Pn	03 53 57.8	-0.1
BFO	Black Forest	5.95	240	P	Pn	03 53 58.3	-0.5
APPI	Appiano	6.02	214	Pn	Pn	03 54 01.0	+1.3
RUP	Ruppelstein	6.02	255	P	Pn	03 54 00.1	+0.4
SISB	Singen-Sch Ber	6.03	232	P	Pn	03 54 00.2	+0.3
BOJS	Bojanci	6.11	185	i Pn	Pn	03 54 01.7	+0.7
FUORN	Ofenpass	6.26	220	Pn	Pn	03 54 04.1	+1.1
CTI	Castel Tesino	6.26	209	P	Pn	03 54 05.2	+2.1
CTI				pmax	pmax		
	comp=Z,112nm,0.6s						
CTI	Castel Tesino	6.26	209	Pn	Pn	03 54 05.2	+2.1
	comp=Z,112nm,0.6s						
DAVOX	Davos	6.28	222	Pn	Pn	03 54 04.0	+0.6
	comp=Z,2.6nm,0.3s,baz=23,slow=9.6,SNR=27						
DAVOX				Lg		03 55 49.5	
	comp=Z,3.9nm,0.3s,baz=260,slow=22,SNR=5.0						
DAVOX	Davos	6.28	222	Pn	Pn	03 54 04.4	+1.0
BRMO	Bormio	6.33	218	Pn	Pn	03 54 06.0	+1.9
MUD	Monsted U’grnd	6.33	323	i P	Pn	03 54 10.2	+6.1
MUD				i		03 54 37.6	
MUD				i S	rx	03 56 15.9	
	comp=Z,60nm,18.0s						
FELD	Feldberg	6.40	238	P	Pn	03 54 04.1	-1.0
HGN	Heimansgroeve	6.42	267	ePn	Pn	03 54 05.6	+0.3
	comp=Z,10nm,0.7s						
HGN				eSg	Sg	03 55 53.6	-7.2
HGN				ex	x	04 04 13.2	
	comp=Z,13nm,0.9s						
WLS	Welschbruch	6.44	244	P	Pn	03 54 04.7	-1.0
CDF	Champ du Feu	6.49	244	ePn	Pn	03 54 05.6	-0.7
CDF				ePg	Pg	03 54 32.8	-3.9
CDF				eSg	Sg	03 55 55.5	-7.7
	comp=Z,428nm,1.1s						
WLF	Walferdange	6.58	257	eP	Pn	03 54 05.6	-2.1
WLF				pmax	pmax		
	comp=Z,18nm,0.7s						
WLF	Walferdange	6.58	257	ePn	Pn	03 54 05.6	-2.1
	comp=Z,18nm,0.7s						
WLF				eSg	Sg	03 56 00.3	-6.1
MABI	Malga Bissina	6.63	216	Pn	Pn	03 54 09.9	+1.5
	comp=Z,53nm,1.2s						
ECH	Echery	6.66	243	P	Pn	03 54 07.1	-1.6
TUE	Stuetta	6.75	223	Pn	Pn	03 54 11.4	+1.3
	comp=Z,37nm,0.7s						
MOF	Molkenrain	6.88	241	P	Pn	03 54 10.3	-1.6
SAL	Salo	7.02	214	P	Pn	03 54 14.6	+0.9
SAL				pmax	pmax		
	comp=Z,59nm,0.1s						
SAL	Salo	7.02	214	Pn	Pn	03 54 14.6	+0.9
	comp=Z,59nm,0.1s						
BZS	Buzias	7.03	146	⇓P	Pn	03 54 14.5	+0.6
HINF	Hinteralfeld	7.06	241	ePn	Pn	03 54 13.6	-0.7
HINF				ePg	Pg	03 54 43.0	-5.1
HINF				eSg	Sg	03 56 11.6	-11
	comp=Z,267nm,1.0s						
BURAR	Bucovina Array	7.16	120	⇑P	Pn	03 54 15.8	0.0
HAU	Haudompre	7.23	244	ePn	Pn	03 54 15.1	-1.6
HAU				ePg	Pg	03 54 45.6	-5.9
HAU				eSg	Sg	03 56 14.8	-13
	comp=Z,250nm,0.9s						
HAU				eR			
	comp=Z,64nm,20.4s						
GIVF	Givet	7.26	263	ePn	Pn	03 54 17.2	0.0
GIVF				eSg	Sg	03 56 19.4	-10
	comp=Z,151nm,0.9s						
THEF	They Montfort	7.32	247	P	Pn	03 54 17.4	-0.5
MUGIO	Muggio	7.32	222	Pn	Pn	03 54 18.8	+0.8
RFYF	Reffroy	7.42	251	ePn	Pn	03 54 17.7	-1.7
	baz=73						
RFYF				eSg	Sg	03 56 25.2	-8.9
	comp=Z,175nm,0.9s						
VAI	Varese	7.48	223	P	Pn	03 54 20.9	+0.7
VAI				pmax	pmax		
	comp=Z,26nm,0.7s						
VAI	Varese	7.48	223	Pn	Pn	03 54 20.9	+0.7
	comp=Z,26nm,0.7s						
BAIF	Baives	7.65	263	ePn	Pn	03 54 21.8	-0.9
BAIF				eSg	Sg	03 56 32.3	-10
	comp=Z,283nm,1.3s						
MEZF	Maizieres J’vi	7.72	251	eSg	Sg	03 56 34.2	-10
	comp=Z,422nm,1.2s						
MCGN	Macugnaga	7.75	226	Pn	Pn	03 54 25.3	+1.3
SFTF	Sexfontaines	7.87	249	ePn	Pn	03 54 24.5	-1.3
	baz=65						
SFTF				eSg	Sg	03 56 38.2	-11
	comp=Z,566nm,1.4s						
GSCL	Gusciola	8.12	209	P	P	03 54 33.7	+4.6
BOB	Bobbio (Coli)	8.12	215	P	P	03 54 29.9	+0.6
BOB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BOB	Bobbio (Coli)	8.12	215	Pn	P	03 54 29.9	+0.6
	comp=Z,9.7nm,1.2s						
SFI	Santa Sofia	8.19	202	P	P	03 54 29.2	-1.0
SFI				pmax	pmax		
	comp=Z,15nm,1.0s						
SFI	Santa Sofia	8.19	202	Pn	P	03 54 29.2	-1.0
	comp=Z,15nm,1.0s						
CABF	La Chapelle	8.21	237	ePn	P	03 54 29.1	-1.4
CABF				eSg	Sg	03 56 49.5	-11
	comp=Z,506nm,1.3s						
AKASG	Malin Array Be	8.34	91	Pn	P	03 54 29.5	-2.7
	comp=Z,8.6nm,0.3s,baz=279,slow=12,SNR=28						
AKASG				Sn	Sn	03 55 59.2	-9.1
	comp=Z,3.4nm,0.3s,baz=270,slow=23,SNR=5.7						
AKASG				Lg		03 57 04.7	
	comp=Z,1.7nm,0.3s,baz=280,slow=28,SNR=5.4						
AKASG	Malin Array Be	8.34	91	Pn	P	03 54 29.5	-2.7
AKASG				Sn	Sn	03 55 59.2	-9.1
AKASG				Lg		03 57 04.7	
ARV	Arcevia	8.36	196	Pn	P	03 54 31.2	-1.4
	comp=Z,11nm,1.0s						
LSD	Ceresole Reale	8.51	227	P	P	03 54 36.8	+2.2
SNTG	Esanatoglia	8.60	195	Pn	P	03 54 34.7	-1.2
PCP	Pian Castagno	8.65	218	P	P	03 54 36.9	+0.3
LPL	La Plagne	8.66	229	ePn	P	03 54 36.1	-0.6
LPL				eSn	Sn	03 56 09.4	-6.9
LPL				eSg	Sg	03 57 03.3	-12
	comp=Z,130nm,1.3s						
HFS	Hagfors	8.66	352	Pn	P	03 54 35.2	-1.6
	baz=166,slow=18						
HFS				Sn	Sn	03 56 04.1	-12
HFS				Lg		03 57 02.0	
HFS	Hagfors	8.66	352	Pn	P	03 54 35.5	-1.2
	comp=Z,0.2nm,0.3s,baz=174,slow=15,SNR=23						
HFS				Sn	Sn	03 56 11.3	-5.1
	comp=Z,0.1nm,0.3s,baz=177,slow=26,SNR=3.2						
HFS				Lg		03 57 16.4	
	comp=Z,0.3nm,0.3s,baz=186,slow=30,SNR=3.7						
MURB	Monte Urbino	8.67	197	P	P	03 54 36.5	-0.3
	comp=Z,24nm,0.7s						
LPG	La Plagne	8.67	229	ePn	P	03 54 37.7	+0.9
LPG				eSg	Sg	03 57 04.3	-11
	comp=Z,262nm,1.3s						
HFA0	Hagfors New Ar	8.67	352	Pn	P	03 54 35.1	-1.8
RSP	Reno Superiore	8.70	226	P	P	03 54 38.4	+1.2
KONO	Kongsberg	8.86	338	i P	P	03 54 37.2	-2.2
MLR	Muntele Rosu	8.96	129	Pn	P	03 54 45.9	+5.0
	comp=Z,0.2nm,0.3s,baz=318,slow=5.0,SNR=3.6						
MLR	Muntele Rosu	8.96	129	⇓P	P	03 54 40.6	-0.3
NRCA	Norcia	8.98	194	Pn	P	03 54 39.8	-1.4
BNI	Bardonecchia	9.04	227	eP	P	03 54 40.7	-1.2
BNI				pmax	pmax		
	comp=Z,12nm,0.9s						
BNI	Bardonecchia	9.04	227	ePn	P	03 54 40.7	-1.3
	comp=Z,12nm,0.9s						
LOR	Lormes	9.04	246	ePn	P	03 54 40.0	-2.0
	baz=65						
LOR				eSg	Sg	03 57 15.1	-13
	comp=Z,120nm,1.0s						
LOR				eR			
	comp=Z,84nm,20.5s						
FIN	Finale Ligure	9.06	218	P	P	03 54 42.3	0.0
RRL	Cesana Torines	9.09	226	P	P	03 54 43.2	+0.5
ROB	Roburent	9.13	220	P	P	03 54 42.6	-0.6
DOI	San Damiano	9.21	223	P	P	03 54 43.2	-1.2
VSU	Vasula	9.21	38	⇑eP	P	03 54 44.5	+0.1
MBDF	Montbardon	9.24	226	ePn	P	03 54 43.9	-0.9
MBDF				eSg	Sg	03 57 22.2	-13
	comp=Z,69nm,1.0s						
PZZ	Prazzo	9.28	224	P	P	03 54 44.0	-1.2
MONE	Monesi	9.35	220	P	P	03 54 45.3	-1.0
SSF	Saint Saulge	9.36	246	ePn	P	03 54 44.7	-1.6
SSF				eSg	Sg	03 57 26.1	-13
ENR	Entracque	9.37	221	P	P	03 54 45.4	-1.1
SMF	Signal de Mont	9.41	243	ePn	P	03 54 45.2	-1.8
SMF				eSg	Sg	03 57 25.3	-15
	comp=Z,205nm,1.3s						
IMI	Imperia	9.44	219	Pn	P	03 54 46.9	-0.6
MNS	Montasola	9.49	195	P	P	03 54 46.7	-1.5
MNS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MNS	Montasola	9.49	195	Pn	P	03 54 46.7	-1.5
	comp=Z,10nm,0.7s						
ORIF	Oris-en-Rattie	9.51	229	ePn	P	03 54 48.1	-0.3
ORIF				eSg	Sg	03 57 28.7	-15
	comp=Z,90nm,1.1s						
ORIF				eR			
	comp=Z,67nm,17.2s						
SAOF	Saorge	9.51	220	P	P	03 54 47.3	-1.1
KIS	Kishinev	9.52	114	eP	P	03 55 03.0	+14
AUTN	L’Aution	9.55	221	P	P	03 54 48.0	-1.0
NEGI	Negi	9.57	219	P	P	03 54 48.1	-1.0
AVF	Avril sur Loir	9.60	245	ePn	P	03 54 47.7	-1.8
AVF				eSg	Sg	03 57 33.4	-13
	comp=Z,100nm,1.0s						
SBF	Sospel	9.66	220	ePn	P	03 54 49.2	-1.2
SBF				eSg	Sg	03 57 35.4	-13
	comp=Z,63nm,1.1s						
NAO01	NORSAR Array S	9.71	345	ePn	P	03 54 47.9	-3.1
	comp=Z,4.5nm,0.7s						
PTQR	Pietraquaria	9.74	192	P	P	03 54 52.1	+0.5
MVIF	Mont Vial	9.75	221	P	P	03 54 51.5	-0.2
REVF	Revere	9.79	220	P	P	03 54 51.7	-0.5
NB2	NORSAR Subarra	9.84	346	Pn	P	03 54 50.3	-2.6
	baz=168,slow=14						
NB2				Sn	Sn	03 56 39.1	-6.3
NB2				Lg		03 57 46.3	
NOA	NORSAR Array B	9.84	346	Pn	P	03 54 50.5	-2.4
	comp=Z,0.5nm,0.3s,baz=164,slow=12,SNR=10.0						
NOA				Sn	Sn	03 56 31.5	-14
	comp=Z,0.4nm,0.3s,baz=266,slow=17,SNR=3.4						
NOA				Lg		03 57 45.4	
	comp=Z,1.0nm,0.3s,baz=117,slow=14,SNR=5.3						
NOA	NORSAR Array B	9.84	346	Pn	P	03 54 50.5	-2.4
NOA				Sn	Sn	03 56 31.5	-14
NOA				Lg		03 57 45.4	
CALN	Calern	9.97	222	P	P	03 54 54.0	-0.8
BGF	Bois d’Agland	10.01	245	ePn	P	03 54 52.7	-2.6
BGF				eSg	S	03 57 44.8	+55
	comp=Z,15nm,0.6s						
VIVF	Saint-Julien-l	10.14	233	ePn	P	03 54 55.8	-1.3
VIVF				eSg	S	03 57 49.3	+57
	comp=Z,196nm,1.5s						
FRF	La Foret Royal	10.23	222	ePn	P	03 54 57.3	-1.0
FRF				eSg	S	03 57 49.4	+54
	comp=Z,58nm,1.3s						
PGF	Pioggiola	10.24	211	ePn	P	03 54 57.0	-1.4
SMRF	Simiane la Rot	10.37	227	ePn	P	03 54 59.3	-0.9
SMRF				eSg	S	03 57 52.4	+54
	comp=Z,76nm,1.3s						
LMR	La Mourre	10.48	222	ePn	P	03 55 00.2	-1.5
LMR				eSg	S	03 57 57.7	+57
	comp=Z,96nm,1.7s						
TCF	Toulx Ste Croi	10.53	245	ePn	P	03 55 00.4	-2.0
TCF				eSg	S	03 58 02.1	+60
	comp=Z,49nm,0.9s						
FLN	La Foliniere	10.97	262	ePn	P	03 55 07.3	-1.1
	baz=83						
FLN				eSg	S	03 58 13.9	+61
	comp=Z,77nm,1.2s						
FLN				eR			
	comp=Z,91nm,21.0s						
LASF	Ste Croix	11.11	232	ePn	P	03 55 09.0	-1.3
LASF				eSg	S	03 58 19.3	+63
	comp=Z,174nm,1.5s						
FIA0	FINESS Array S	11.31	25	Pn	P	03 55 10.5	-2.5
	baz=196,slow=12						
FIA0				Sn	S	03 57 11.1	-10
	baz=211,slow=22						
FIA0				Lg		03 58 30.9	
FINES	FINESS Array B	11.31	25	Pn	P	03 55 10.6	-2.4
	comp=Z,1.2nm,0.3s,baz=201,slow=11,SNR=46						
FINES				Sn	S	03 57 10.0	-11
	comp=Z,1.6nm,0.3s,baz=211,slow=21,SNR=5.4						
FINES				Lg		03 58 38.7	
	comp=Z,0.6nm,0.3s,baz=212,slow=25,SNR=6.0						
FINES	FINESS Array B	11.31	25	Pn	P	03 55 10.6	-2.4
FINES				Sn	S	03 57 10.0	-11
FINES				Lg		03 58 38.7	
GRR	Gorron	11.34	260	eSg	Sx	03 58 26.5	
	comp=Z,54nm,1.2s						
CAF	Calviac	11.45	240	eSg	Sx	03 58 32.6	
	comp=Z,62nm,1.3s						
RJF	Les Rejaudoux	11.51	243	eSg	Sx	03 58 33.9	
	comp=Z,111nm,1.3s						
RJF				eR			
	comp=Z,73nm,20.0s						
MFF	Saint Martin d	11.72	251	ePn	P	03 55 16.6	-2.1
MFF				eSg	S	03 58 41.3	+70
	comp=Z,68nm,1.2s						
KAF	Kangasniemi	11.93	24	ep	P	03 55 18.3	-3.1
EKA	Eskdalemuir Ar	12.04	296	Pn	P	03 55 19.1	-3.8
	comp=Z,0.6nm,0.3s,baz=101,slow=13,SNR=22						
EKA				Sn	S	03 57 28.7	-10
	comp=Z,0.4nm,0.3s,baz=102,slow=26,SNR=3.7						
ESK	Eskdalemuir	12.06	296	eP	P	03 55 19.2	-4.0
ESK				pmax	pmax		
	comp=Z,48nm,1.4s						
ESK	Eskdalemuir	12.06	296	ePn	P	03 55 19.2	-4.0
	comp=Z,48nm,1.4s						
LFF	La Frestale	12.16	243	eSg	Sx	03 58 53.5	
	comp=Z,140nm,1.2s						
TIP	Timpagrande	12.42	177	ePn	P	03 55 28.3	+0.1
SGMF	Saint Gilles	12.44	262	ePn	P	03 55 27.2	-1.1
SGMF				eSg		03 59 01.6	
	comp=Z,86nm,1.4s						
MTLF	Montolieu	12.46	234	eSg	Sx	03 58 59.6	
	comp=Z,24nm,1.0s						
OBN	Obninsk	12.75	66	ceP	P	03 55 28.3	-4.1
OBN				pmax	pmax		
	comp=Z,15nm,0.7s						
MOS	Moscow	13.43	64	eP	P	03 55 35.6	-5.9
ETSF	Etsaut	14.21	239	ePn	P	03 55 51.3	-0.5
ETSF				eSg		03 59 56.7	
	comp=Z,30nm,1.2s						
VRSR	Storozhevoye	14.44	82	eP	P	03 55 48.4	-6.3
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRSR				pmax	pmax		
	comp=N,9.0nm,0.7s						
VRSR				pmax	pmax		
	comp=E,30nm,1.2s						
BRTR	Keskin Array B	17.04	127	Pn	P	03 56 28.9	+0.7
	comp=E,0.1nm,0.3s,baz=304,slow=10,SNR=4.8						
APA0	Apatity Array	18.09	21	Pn	P	03 56 38.8	-2.4
	baz=224,slow=8.6						
APA0				Lg		04 02 06.3	
APA	Apatity	18.16	22	⇓iP	P	03 56 39.4	-2.6
APA				pmax	pmax		
	comp=Z,22nm,1.2s						
ESDC	Sonseca Array	18.31	237	P	P	03 56 45.6	+1.4
	comp=Z,0.3nm,0.3s,baz=47,slow=10,SNR=6.3						
ARA0	ARCESS Array S	18.55	10	Pn	P	03 56 44.9	-2.0
	baz=193,slow=12						
ARA0				Lg		04 02 15.9	
	baz=198,slow=37						
ARCES	ARCESS Array B	18.55	10	Pn	P	03 56 44.8	-2.1
	comp=Z,1.4nm,0.3s,baz=195,slow=12,SNR=38						
ARE0	ARCESS Array S	18.55	10	eP	P	03 56 44.5	-2.4
KEV	Kevo	18.94	12	ep	P	03 56 51.2	-0.4
GOF	Gofitskoye	19.03	99	eP	P	03 56 52.0	-0.9
ZEI	Tsey	20.78	104	eP	P	03 57 12.1	-0.1
ZEI				i *PP		03 57 16.8	
GNI	Garni	22.87	109	⇓eP	P	03 57 36.4	+3.3
GNI				pmax	pmax		
	comp=Z,21nm,1.3s						
ASF	Jabal al Asfar	24.69	134	P	P	03 57 51.3	+0.4
	comp=Z,1.4nm,0.5s,mb4.0,baz=254,slow=3.5,SNR=5.6						
ARU	Arti	25.14	62	⇓iP	P	03 57 55.5	+0.6
ARU				e		03 58 26.2	
ARU				eS	S	04 02 20.9	+2.9
ARU				eSSS	SSS	04 03 20.2	-13
ARU				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.6						
ARU	Arti	25.14	62	eP	P	03 57 55.4	+0.5
	comp=Z,10nm,0.6s,mb4.7						
EIL	Elat	26.03	140	P	P	03 58 03.8	+0.2
	comp=Z,5.7nm,0.8s,mb4.2,baz=52,slow=15,SNR=4.1						
EIL	Elat	26.03	140	eP	P	03 58 02.6	-1.0
	comp=Z,7.6nm,0.9s,mb4.3						
SVE	Sverdlovsk	26.22	61	eP	P	03 58 05.0	-0.1
SVE				e		03 58 41.0	
SPA0	Spitsbergen Ar	26.70	0	P	P	03 58 10.5	+1.2
	baz=164,slow=14						
SUMG	Summit	31.31	332	eP	P	03 58 49.6	-1.1
	comp=Z,2.1nm,0.6s,mb4.2						
AAK	Ala-Archa	39.80	79	eP	P	04 00 04.9	+1.5
AAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4						
AAK	Ala-Archa	39.80	79	eP	P	04 00 04.9	+1.5
	comp=Z,8.9nm,0.9s,mb4.4						
MKAR	Makanchi Array	42.22	69	P	P	04 00 24.9	+1.7
	comp=Z,2.0nm,0.8s,mb3.9,baz=301,slow=7.1,SNR=11						
SCHQ	Schefferville	46.98	308	P	P	04 01 01.4	+0.2
	comp=Z,2.0nm,0.7s,mb4.4,baz=34,slow=3.4,SNR=4.4						
SCHQ	Schefferville	46.98	308	P	P	04 01 01.4	+0.1
WMQ	Urumqi	47.05	70	eP	P	04 01 04.5	+2.6
TIXI	Tiksi	48.34	23	i P	P	04 01 14.9	+3.2
TLY	Talaya	51.11	53	⇓eP	P	04 01 34.9	+1.7
ZAK	Zakamensk	51.71	55	eP	P	04 01 41.0	+3.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
SONM	Songino Array	54.90	55	P	P	04 02 03.3	+1.9
	comp=Z,3.2nm,0.9s,mb4.3,baz=294,slow=8.3,SNR=19						
YAK	Yakutsk	55.16	32	i P	P	04 02 03.2	+0.1
ULN	Ulaanbaatar	55.22	55	⇑eP	P	04 02 05.7	+1.9
ULN	Ulaanbaatar	55.22	55	eP	P	04 02 04.2	+0.4
	comp=Z,1.0nm,0.5s,mb4.1						
FCC	Fort Churchill	56.28	324	eP	P	04 02 11.3	0.0
FCC				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
FCC	Fort Churchill	56.28	324	eP	P	04 02 11.2	0.0
	comp=Z,1.9nm,0.6s,mb4.3						
BILL	Bilibino	58.64	13	⇑eP	P	04 02 28.7	+0.9
BILL				e		04 04 42.5	
BILL				pmax	pmax		

	comp=Z,3.0nm,0.8s,mb4.4						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.0						
YKA	Yellowknife Ar	59.77	336	P	P	04 02 37.0	+1.3
	comp=Z,3.4nm,0.7s,mb4.5,baz=31,slow=6.5,SNR=6.3						
YKA	Yellowknife Ar	59.77	336	P	P	04 02 37.0	+1.3
LZH	Lanzhou	61.46	67	eP	P	04 02 49.1	+1.5
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb5.1						
LZH	Lanzhou	61.46	67	eP	P	04 02 49.1	+1.5
LZH				*PP	pP	04 02 50.6	+3.0
LZH				*SP	sP	04 02 51.4	+3.8
LZH				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.1						
LZH	Lanzhou	61.46	67	eP	P	04 02 49.1	+1.5
	comp=Z,21nm,1.3s,mb5.1						
LZH				pP	pP	04 02 50.6	+3.0
LZH				sP	sP	04 02 51.4	+3.8
ILAR	Eielson Array	63.22	352	P	P	04 03 01.0	+2.1
	comp=Z,0.4nm,0.6s,mb3.7,baz=360,slow=5.8,SNR=5.1						
CN2	Changchun	67.11	48	eP	P	04 03 22.0	-2.3
MDJ	Mudanjiang	68.34	45	P	P	04 03 30.0	-2.0
MDJ				AMB	AMB		
	comp=Z,20nm,5.2s						
CMAR	Chiang Mai Arr	71.39	84	P	P	04 03 52.2	+1.2
	comp=Z,1.7nm,0.6s,mb4.4,baz=310,slow=7.2,SNR=7.4						
NJ2	Nanjing	72.82	60	eP	P	04 03 58.9	-0.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
SSE	Sheshan	74.82	59	P	P	04 04 10.1	-0.8
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,60nm,3.7s						
PDAR	Pinedale Array	74.85	322	P	P	04 04 12.9	+2.1
	comp=Z,1.1nm,0.6s,mb4.0,baz=56,slow=5.3,SNR=9.3						
MJAR	Matsushiro Arr	78.70	44	P	P	04 04 34.3	+1.8
	comp=Z,0.7nm,0.4s,mb4.1,baz=314,slow=4.4,SNR=5.2						
BOSA	Boshof	80.27	172	P	P	04 04 42.9	+1.8
	comp=Z,1.9nm,0.8s,mb4.1,baz=285,slow=18,SNR=5.7						
BOSA	Boshof	80.27	172	P	P	04 04 42.9	+1.8
TXAR	Lajitas Array	83.63	310	P	P	04 05 01.5	+2.9
	comp=Z,0.6nm,0.7s,mb4.0,baz=63,slow=2.8,SNR=12						
BDFB	Brasilia	86.93	240	P	P	04 05 17.3	+2.0
	comp=Z,1.0nm,0.6s,mb4.3,baz=153,slow=8.1,SNR=3.3						

IPEC ***17*** *03:56:11.5±0.3, 51.59N×16.21E, ML2.4/3, Error ellipse: s-maj=1.9km s-min=1.5km az=42.0*
WAR ***17*** *03:56:12.8, 51.54N×16.09E, h1^{km}, ML3.0, Mining Induced*
CSEM ***17*** *03:56:13.4±0.2, 51.48N×16.10E, h0^{km}, ML3.6/5, Error ellipse: s-maj=4.4km s-min=2.1km az=15.0*
NEIC ***17*** *03:56:14.8±1.7, 51.39N×15.90E, h5^{km}, ML3.5(VIE), ML3.0(CLL), Error ellipse: s-maj=18.9km s-min=7.6km az=211.0*
ISC 17 03:56:11.3±0.7**, 51.45N**±0.03×**16.10E**±0.04**, n31,** σ**1§29**/60**, 2C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.61	168	⇓iPg	Pg	03 56 25.7	+2.1
KSP				eSg	Sg	03 56 35.2	+3.4
KSP				e		03 56 40.7	
KSP	Ksiaz	0.61	168	i PG	Pg	03 56 25.7	+2.1
KSP				eSG	Sg	03 56 35.7	+3.9
KSP	Ksiaz	0.61	168	ePg	Pg	03 56 25.8	+2.2
KSP				eSg	Sg	03 56 35.3	+3.5
KSP	Ksiaz	0.61	168	ePg	Pg	03 56 25.7	+2.1
KSP				eSg	Sg	03 56 35.2	+3.4
UPC	Upice	0.94	183	ePG	Pg	03 56 31.7	+1.7
DPC	Dobruska-Polom	1.10	173	ePG	Pg	03 56 34.5	+1.2
DPC				eSG	Sg	03 56 49.9	+1.8
	77nm,0.3s						
DPC	Dobruska-Polom	1.10	173	ePg	Pg	03 56 34.5	+1.2
DPC				eSg	Sg	03 56 50.2	+2.1
PVCC	Panska Ves	1.33	227	ePG	Pg	03 56 38.8	+0.9
PVCC	Panska Ves	1.33	227	ePg	Pg	03 56 38.6	+0.7
PVCC				eSg	Sg	03 56 57.6	+1.9
BRG	Berggiesshubel	1.47	248	Pn	Pn	03 56 40.4	+1.3
BRG				Pg	Pg	03 56 41.1	+0.4
BRG				Sg	Sg	03 57 01.1	+0.8
BRG	Berggiesshubel	1.47	248	Pn	Pn	03 56 40.4	+1.2
BRG	Berggiesshubel	1.47	248	Pg	Pg	03 56 41.1	+0.4
PRU	Pruhonice	1.76	215	ePN	Pn	03 56 44.2	+0.9
PRU				ePG	Pg	03 56 46.9	+0.4
PRU				eSG	Sg	03 57 09.5	-0.5
PRU	Pruhonice	1.76	215	ePg	Pg	03 56 46.9	+0.4
PRU				eSg	Sg	03 57 09.5	-0.5
MORC	Moravsky Berou	1.91	151	ePn	Pn	03 56 46.5	+1.2
MORC				eSg	Sg	03 57 13.9	-0.8
	25nm,0.2s						
CLL	Collm	1.94	267	i Pn	Pn	03 56 45.1	-0.8
CLL				i Pg	Pg	03 56 48.1	-2.0
CLL				i Sg	Sg	03 57 14.4	-1.6
CLL	Collm	1.94	267	i PN	Pn	03 56 45.1	-0.8
CLL				i PG	Pg	03 56 48.1	-2.0
CLL				i		03 56 52.3	
CLL				i SG	Sg	03 57 14.4	-1.6
OKC	Ostrava-Krasne	2.07	140	ePG	Pg	03 56 52.1	-0.5
OKC				eSG	Sg	03 57 19.3	-0.9
VRAC	Vranov	2.16	171	ePn	Pn	03 56 50.9	+1.9
VRAC				eSg	Sg	03 57 23.4	+0.1
	21nm,0.2s						
KRUC	Moravsky	2.39	175	ePn	Pn	03 56 53.9	+1.6
KRUC				eSg	Sg	03 57 30.6	-0.4
	16nm,0.3s						
NKC	Novy Kostel	2.61	244	ePN	Pn	03 56 55.8	+0.3
NKC				ePG	Pg	03 57 02.8	-0.6
NKC				eSG	Sg	03 57 36.4	-1.9
	133nm,0.4s						
OJC	Ojcow	2.65	116	ePg	Pg	03 57 03.9	-0.2
OJC				eSg	Sg	03 57 37.8	-1.6
KHC	Kasperske Hory	2.83	216	ePN	Pn	03 56 59.5	+1.0
KHC				ePG	Pg	03 57 05.2	-2.5
KHC				eSG	Sg	03 57 42.6	-2.7
KHC	Kasperske Hory	2.83	216	Pg	Pg	03 57 05.2	-2.5
KHC				Sg	Sg	03 57 42.6	-2.7
SMOL	Smolenice	3.06	163	ePG	Pg	03 57 09.8	-2.5
SMOL				eSG	Sg	03 57 53.7	+0.6
VKA	Vienna	3.19	177	⇑iPG	Pg	03 57 14.0	-0.9
VKA				i SG	Sg	03 57 57.4	0.0
KOLL	Kolacno	3.23	152	eSG	Sg	03 57 57.1	-1.7
KOLL	Kolacno	3.23	152	eSg	Sg	03 57 57.1	-1.7
ZST	Bratislava	3.32	168	eSG	Sg	03 58 01.0	-0.7
ZST	Bratislava	3.32	168	eSg	Sg	03 58 01.0	-0.7
MOA	Molln	3.79	199	⇑iPN	Pn	03 57 13.0	+0.8
MOA				i SG	Sg	03 58 16.6	-0.9
	29nm,0.7s						

MDD ***17*** *04:06:47.9±0.3, 43.11N×0.20W, h9^{km}±3^{km}, mbLg2.7/38, Error ellipse: s-maj=3.5km s-min=1.9km az=5.0, PRXIMO*
LDG ***17*** *04:06:48.5±0.1, 43.13N×0.21W, h7^{km}, Md3.3/2, Ml3.3/20, Error ellipse: s-maj=1.4km s-min=1.2km az=14.0*
NEIC ***17*** *04:06:48.6, 43.02N×0.23W, h10^{km}, ML3.3(LDG), ML3.0(STR), MN2.8(MDD), After STR.*
STR ***17*** *04:06:48.5±0.1, 43.01N×0.23W, h10^{km}±1^{km}, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
CSEM ***17*** *04:06:48.4±0.0, 43.11N×0.20W, h8^{km}, ML3.3/35, Error ellipse: s-maj=0.8km s-min=0.7km az=158.0*
MRB ***17*** *04:06:51.9, 42.98N×0.11W, h10^{km}±4^{km}, ML2.6/7*
ISC 17 04:06:46.2±0.2**, 43.20N**±0.01×**0.18W**±0.02**, h10^{km}, n124,** σ**1§31**/200**, 1D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
REYF	Montagne du Re	0.20	230	Pg	Pg	04 06 51.8	+1.2
LABF	Labassere	0.24	129	Pg	Pg	04 06 52.7	+1.4
LABF				Sg	Sg	04 06 56.1	+1.4
LABF	Labassere	0.24	129	Pg	Pg	04 06 52.7	+1.4
LABF				Lg		04 06 56.1	
VIEF	Viey	0.35	155	Pg	Pg	04 06 53.5	+0.1
VIEF	Viey	0.35	155	Pg	Pg	04 06 53.6	+0.2
VIEF				Lg		04 06 57.0	
ATE	Arette	0.40	254	Pg	Pg	04 06 55.4	+1.1
ATE				Lg		04 07 01.0	
ETSF	Etsaut	0.41	223	ePg	Pg	04 06 54.6	0.0
ETSF				eSg	Sg	04 06 58.7	-1.5
	1µm,0.2s						
EPF	Esparros	0.42	114	ePg	Pg	04 06 56.2	+1.5
EPF				eSg	Sg	04 07 01.7	+1.3
	479nm,0.4s						
FDAF	Les Forges d'A	0.47	217	Pg	Pg	04 06 55.5	-0.3
FDAF				Sg	Sg	04 06 59.4	-2.9
FDAF	Les Forges d'A	0.47	217	Pg	Pg	04 06 55.5	-0.3
FDAF				Lg		04 07 00.6	
RESF	Ens	0.55	136	Pg	Pg	04 06 57.7	+0.5
RESF				Sg	Sg	04 07 04.0	-0.6
RESF	Ens	0.55	136	Pg	Pg	04 06 57.6	+0.4
RESF				Lg		04 07 04.2	
ORDF	Ordiarp	0.55	272	Pg	Pg	04 06 59.2	+1.8
ORDF				Sg	Sg	04 07 07.5	+2.7
ORDF	Ordiarp	0.55	272	Pg	Pg	04 06 59.1	+1.8
ORDF				Lg		04 07 07.6	
EBIE	Bielsa	0.56	155	⇓Pg	Pg	04 06 57.3	-0.3
	14nm,0.1s,SNR=18						
EBIE				Lg		04 07 03.5	
	79nm,0.0s,SNR=10						
EBIE	Bielsa	0.56	155	Pg	Pg	04 06 57.3	-0.3
	14nm,0.1s,SNR=18						
EBIE				Lg		04 07 03.5	
	79nm,0.0s,SNR=10						
LARF	Larrau	0.61	255	Pg	Pg	04 06 59.5	+0.9
LARF				Sg	Sg	04 07 07.8	+1.0
LARF	Larrau	0.61	255	Pg	Pg	04 06 59.4	+0.8
LARF				Lg		04 07 07.7	
MELF	Melles	0.76	115	Pg	Pg	04 07 02.2	+0.7
MELF				Sg	Sg	04 07 12.9	+1.2
MELF	Melles	0.76	115	Pg	Pg	04 07 02.2	+0.7
MELF				Lg		04 07 12.2	
SJPF	Ste Jean	0.77	264	ePg	Pg	04 07 02.2	+0.5
SJPF				ePn	Pn	04 07 03.8	+0.9
SJPF				eSg	Sg	04 07 12.5	+0.5
	145nm,0.3s						
OSSF	Osses	0.79	274	Pg	Pg	04 07 03.0	+0.9
OSSF	Osses	0.79	274	Pg	Pg	04 07 02.9	+0.7
OSSF				Lg		04 07 13.9	
IPRE	Itoiz	0.95	246	Pg	Pg	04 07 06.0	+0.8
	5.7nm,0.1s,SNR=7.9						
IPRE				Lg		04 07 17.9	
	60nm,0.2s,SNR=7.9						
IPRE	Itoiz	0.95	246	Pg	Pg	04 07 06.0	+0.8
	5.7nm,0.1s,SNR=7.9						
MLS	Moulis	0.96	104	Pg	Pg	04 07 07.2	+1.7
MLS	Moulis	0.96	104	Pg	Pg	04 07 05.9	+0.3
MLS				Lg		04 07 19.8	
EALK	Alkurruntz	0.97	272	Pg	Pg	04 07 05.6	-0.1
EALK				Lg		04 07 19.8	
EALK	Alkurruntz	0.97	272	Pg	Pg	04 07 06.7	+1.0
	5.7nm,0.1s,SNR=66						
EALK				Lg		04 07 19.8	
	89nm,0.2s,SNR=18						
EALK	Alkurruntz	0.97	272	Pg	Pg	04 07 05.6	-0.1
	5.7nm,0.1s,SNR=66						
ELIZ	Elizondo	0.99	268	Pg	Pg	04 07 06.7	+0.7
	2.3nm,0.1s,SNR=27						
ELIZ				Lg		04 07 20.4	
	38nm,0.1s,SNR=14						
SALF	Salau	1.10	113	Pg	Pg	04 07 08.5	+0.3
SALF				Sg	Sg	04 07 23.5	+0.7
SALF	Salau	1.10	113	Pg	Pg	04 07 08.4	+0.2
SALF				Lg		04 07 23.7	
CSOR	Sort	1.27	130	Pn	Pn	04 07 11.2	+1.2
CSOR				Sg	Sg	04 07 28.5	-0.1
	86nm,0.2s						
PAND	Andorre	1.44	117	Pg	Pg	04 07 15.7	+0.7
PAND				Lg		04 07 34.8	
CORG	Organya	1.47	131	Pg	Pg	04 07 14.7	-0.9
CORG				Lg		04 07 34.2	
	11nm,0.1s						
CORG	Organya	1.47	131	Pn	Pn	04 07 14.8	+1.9
CORG				Sg	Sg	04 07 34.3	-0.9
	22nm,0.1s						
CAVN	Les Avellanes	1.48	152	Pn	Pn	04 07 14.7	+1.6
CAVN				Lg		04 07 32.9	
	68nm,0.1s						
CAVN	Les Avellanes	1.48	152	Pn	Pn	04 07 14.7	+1.6
CAVN				Sg	Sg	04 07 33.0	-2.7
	135nm,0.1s						
ESAC	San Caprasio	1.49	188	Pg	Pg	04 07 14.7	-1.3
ESAC				Lg		04 07 32.5	
ESAC	San Caprasio	1.49	188	Pg	Pg	04 07 14.6	-1.5
	98nm,0.2s,SNR=88						
ESAC				Lg		04 07 32.5	
	188nm,0.1s,SNR=18						
ESAC	San Caprasio	1.49	188	Pg	Pg	04 07 14.7	-1.3
	98nm,0.2s,SNR=88						
LPEF	Le Peyrat	1.55	99	Pg	Pg	04 07 20.0	+2.8
LPEF				Sg	Sg	04 07 41.1	+3.2
LPEF	Le Peyrat	1.55	99	Pg	Pg	04 07 19.4	+2.2
LPEF				Lg		04 07 41.0	
CLLI	Llivia	1.74	114	Pn	Pn	04 07 20.5	+3.7
CLLI				Sg	Sg	04 07 44.2	0.0
	34nm,0.1s						
CARF	Carcanieres	1.75	105	Pn	Pn	04 07 21.0	+4.2
CARF	Carcanieres	1.75	105	Pg	Pg	04 07 21.9	+0.8
CARF				Lg		04 07 44.9	
MTLF	Montolieu	1.76	85	ePn	Pn	04 07 17.8	+0.8
MTLF				ePg	Pg	04 07 21.8	+0.5
MTLF				eSn	Sn	04 07 39.5	-0.1
MTLF				eSg	Sg	04 07 45.1	+0.3
	23nm,0.2s						
EMIR	Miracle	1.80	135	Pg	Pg	04 07 20.9	-1.2
	12nm,0.1s,SNR=41						
EMIR				Lg		04 07 44.1	
	56nm,0.2s,SNR=5.0						
EMIR	Miracle	1.80	135	Pg	Pg	04 07 20.9	-1.3
	12nm,0.1s,SNR=41						
VALF	Valcebollere	1.80	115	Pg	Pg	04 07 22.9	+0.7
VALF	Valcebollere	1.80	115	Pg	Pg	04 07 21.6	-0.6
VALF				Lg		04 07 46.0	
ECRI	Cripan	1.81	252	Pg	Pg	04 07 20.6	-1.8
	5.8nm,0.2s,SNR=7.9						
ECRI				Lg		04 07 45.6	
	40nm,0.3s,SNR=7.9						
LFF	La Frestale	1.86	21	ePn	Pn	04 07 20.4	+1.9
LFF				ePg	Pg	04 07 26.2	+2.8
LFF				eSn	Sn	04 07 43.7	+1.4
LFF				eSg	Sg	04 07 50.1	+1.8
	101nm,0.3s						
CBRU	Bruguera	1.96	117	Pg	Pg	04 07 25.4	0.0
CBRU				Lg		04 07 50.7	
	39nm,0.3s						
CBRU	Bruguera	1.96	117	Pg	Pg	04 07 25.5	+0.1
CBRU				Sg	Sg	04 07 50.7	-0.9
	77nm,0.3s						
LRDF	Laroque-de-Fa	2.01	97	Lg		04 07 52.2	
EPOB	Poblet	2.07	153	Pn	Pn	04 07 22.5	+1.0
	SNR=4.0						
EPOB				Pg	Pg	04 07 24.7	-2.9
	7.8nm,0.2s,SNR=28						
EPOB				Lg		04 07 50.7	
	22nm,0.2s,SNR=11						
EPOB	Poblet	2.07	153	Pn	Pn	04 07 22.5	+1.0
	SNR=4.0						
EPOB	Poblet	2.07	153	Pg	Pg	04 07 24.7	-2.8
	7.8nm,0.2s,SNR=28						
FILF	Fillols	2.11	107	Pg	Pg	04 07 27.2	-1.2
FILF	Fillols	2.11	107	Pg	Pg	04 07 25.6	-2.8
FILF				Lg		04 07 52.6	
CGAR	Garraf	2.14	152	Lg		04 08 03.6	
	8.9nm,0.2s						
ERTA	Horta de San J	2.27	170	Pn	Pn	04 07 25.1	+0.7
	0.1nm,0.1s,SNR=7.9						
ERTA				Pg	Pg	04 07 27.9	-3.7
	2.8nm,0.2s,SNR=7.9						
ERTA				Sn	Sn	04 07 51.4	-1.3
	7.2nm,0.1s,SNR=7.9						
ERTA				Lg		04 07 55.8	
	24nm,0.2s,SNR=7.9						
ERTA	Horta de San J	2.27	170	Pn	Pn	04 07 25.1	+0.7
	0.1nm,0.1s,SNR=7.9						
ERTA	Horta de San J	2.27	170	Pg	Pg	04 07 27.9	-3.7
	2.8nm,0.2s,SNR=7.9						
ERTA				Sn	Sn	04 07 51.4	-1.3
	7.2nm,0.1s,SNR=7.9						
SJAF	Saint Jean de	2.36	107	Lg		04 08 04.0	
CAF	Calviac	2.37	42	ePn	Pn	04 07 26.5	+0.8
CAF				ePg	Pg	04 07 34.1	+0.6
CAF				eSn	Sn	04 07 55.4	+0.3
CAF				eSg	Sg	04 08 05.7	+0.7
	60nm,0.2s						
EJON	La Jonquera	2.38	107	Pg	Pg	04 07 29.8	-3.9
EJON				Lg		04 08 03.9	
EJON	La Jonquera	2.38	107	Pg	Pg	04 07 29.8	-3.9
	SNR=4.0						
EJON				Lg		04 08 03.9	
	24nm,0.2s,SNR=7.9						
EJON	La Jonquera	2.38	107	Pg	Pg	04 07 29.8	-3.9
	SNR=4.0						
ELAN	Lanestosa	2.38	272	Pn	Pn	04 07 28.5	+2.6
	1.3nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	04 07 57.2	+1.8
	3.3nm,0.2s,SNR=7.9						
ELAN				Lg		04 08 03.4	
	4.6nm,0.2s,SNR=7.9						
ELAN	Lanestosa	2.38	272	Pn	Pn	04 07 28.5	+2.6
	1.3nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	04 07 57.2	+1.8
	3.3nm,0.2s,SNR=7.9						
CFON	Fontmartina	2.41	126	Pn	Pn	04 07 28.9	+2.6
CFON				Lg		04 08 03.2	
	62nm,0.2s						
CFON	Fontmartina	2.41	126	Pn	Pn	04 07 29.0	+2.7
CFON				Sg	Sg	04 08 03.3	-3.2
	123nm,0.2s						
EBR	Ebro Roquetas	2.43	168	eSN	Sn	04 07 59.5	+2.8
RJF	Les Rejaudoux	2.43	29	ePn	Pn	04 07 27.1	+0.4
RJF				ePg	Pg	04 07 35.2	+0.4
RJF				eSg	Sg	04 08 07.5	+0.3
	50nm,0.2s						
EMOS	Mosqueruela	2.84	185	Pn	Pn	04 07 32.7	+0.2
	0.6nm,0.1s,SNR=7.9						
EMOS				Pg	Pg	04 07 38.2	-4.7
	1.6nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	04 08 04.6	-2.5
	2.6nm,0.1s,SNR=7.9						
EMOS				Lg		04 08 12.5	
	7.9nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	2.84	185	Pn	Pn	04 07 32.7	+0.2
	0.6nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	2.84	185	Pg	Pg	04 07 38.2	-4.8
	1.6nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	04 08 04.6	-2.5
	2.6nm,0.1s,SNR=7.9						
LASF	Ste Croix	3.06	72	ePn	Pn	04 07 35.5	-0.1
LASF				eSn	Sn	04 08 11.5	-1.1
LASF				eSg	Sg	04 08 25.0	-3.1
	8.9nm,0.2s						
LBL	Lubilhac	3.19	49	Pn	Pn	04 07 38.9	+1.4
MFF	Saint Martin d	3.40	0	ePn	Pn	04 07 40.9	+0.4
MFF				ePg	Pg	04 07 53.3	-0.9
MFF				eSn	Sn	04 08 20.4	-0.9
MFF				eSg	Sg	04 08 37.8	-1.7
	13nm,0.2s						
PYM	Petit Puy Mans	3.42	41	Pn	Pn	04 07 42.9	+2.1
TCF	Toulx Ste Croi	3.53	28	ePn	Pn	04 07 41.9	-0.3
TCF				ePg	Pg	04 07 55.2	-1.4
TCF				eSn	Sn	04 08 22.7	-1.8
TCF				eSg	Sg	04 08 41.1	-2.5
	24nm,0.3s						
ECHE	Chera	3.65	190	Pn	Pn	04 07 43.6	-0.4
	0.4nm,0.1s,SNR=7.9						
ECHE				Pg	Pg	04 07 53.9	-5.2
	0.3nm,0.1s,SNR=7.9						
ECHE				Lg		04 08 37.4	
	SNR=4.0						
EARI	Arriondas	3.68	273	Pn	Pn	04 07 46.3	+1.9
	3.2nm,0.2s,SNR=7.9						
EARI				Sn	Sn	04 08 27.9	-0.4
	2.0nm,0.2s,SNR=7.9						
EARI	Arriondas	3.68	273	Pn	Pn	04 07 46.3	+1.9
	3.2nm,0.2s,SNR=7.9						
EARI				Sn	Sn	04 08 27.9	-0.4
	2.0nm,0.2s,SNR=7.9						
AGO	Saint Agoulin	3.71	38	Pn	Pn	04 07 46.5	+1.7
VIVF	Saint-Julien-l	3.87	63	ePn	Pn	04 07 46.9	-0.2
VIVF				eSg	Sg	04 08 50.6	-4.5
	12nm,0.3s						
PLDF	La Plantade	3.88	43	Pn	Pn	04 07 49.2	+2.0
BGF	Bois d'Agland	3.99	32	ePn	Pn	04 07 48.4	-0.4
BGF				ePg	Pg	04 08 03.9	-1.9
BGF				eSg	Sg	04 08 55.6	-3.4
	61nm,0.3s						
ETOS	Mallorca	4.10	146	Pn	Pn	04 07 49.5	-0.9
	SNR=7.9						
ETOS				Sn	Sn	04 08 35.3	-3.7
	SNR=7.9						
SMRF	Simiane la Rot	4.25	78	ePn	Pn	04 07 52.4	-0.2
EIBI	Ibiza	4.32	164	Pn	Pn	04 07 52.1	-1.5
	0.4nm,0.1s,SNR=4.0						
EIBI				Sn	Sn	04 08 37.9	-6.7
	1.1nm,0.1s,SNR=7.9						
EIBI	Ibiza	4.32	164	Pn	Pn	04 07 52.1	-1.5
	0.4nm,0.1s,SNR=4.0						
EIBI				Sn	Sn	04 08 37.9	-6.8
	1.1nm,0.1s,SNR=7.9						
AVF	Avril sur Loir	4.38	34	ePn	Pn	04 07 53.9	-0.5
AVF				eSg	Sg	04 09 08.2	-3.8
	9.5nm,0.3s						
SMF	Signal de Mont	4.47	38	ePn	Pn	04 07 55.4	-0.3
SMF				eSg	Sg	04 09 11.6	-3.6
	7.1nm,0.2s						
ESDC	Sonseca Array	4.53	220	Pn	Pn	04 07 55.2	-1.3
	0.4nm,0.2s,baz=42,slow=14,SNR=10						
ESDC				Sn	Sn	04 08 44.7	-5.1
	0.9nm,0.3s,baz=41,slow=24,SNR=5.5						
ESDC	Sonseca Array	4.53	220	Pn	Pn	04 07 55.2	-1.2
	0.4nm,0.2s,SNR=10						
ESDC				Sn	Sn	04 08 44.7	-5.1
	0.9nm,0.3s,SNR=5.5						
SSF	Saint Saulge	4.66	33	ePn	Pn	04 07 57.5	-0.8
SSF				eSn	Sn	04 08 51.1	-2.1
SSF				eSg	Sg	04 09 16.7	-4.7
	5.3nm,0.4s						
ETOB	Tobarra	4.67	193	Pn	Pn	04 07 58.4	0.0
	0.6nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	04 08 48.9	-4.4
	0.8nm,0.2s,SNR=4.0						
ETOB	Tobarra	4.67	193	Pn	Pn	04 07 58.4	0.0
	0.6nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	04 08 48.9	-4.4
	0.8nm,0.2s,SNR=4.0						
ORIF	Oris-en-Rattie	4.69	66	ePn	Pn	04 07 58.5	-0.3
LOR	Lormes	4.97	34	ePn	Pn	04 08 02.4	-0.3
LOR				eSg	Sg	04 09 27.3	-4.3
	12nm,0.3s						
FRF	La Foret Royal	4.99	84	ePn	Pn	04 08 01.8	-1.2
ECAL	Calabor	5.00	258	Pn	Pn	04 08 02.9	-0.3
	1.2nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	04 08 57.8	-4.0
	3.1nm,0.1s,SNR=7.9						
ECAL	Calabor	5.00	258	Pn	Pn	04 08 02.9	-0.3
	1.2nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	04 08 57.8	-4.0
	3.1nm,0.1s,SNR=7.9						
EPON	Pontenova	5.09	274	Pn	Pn	04 08 05.4	+1.0
	1.4nm,0.2s,SNR=7.9						
EPON				Sn	Sn	04 09 01.8	-2.2
	5.3nm,0.4s,SNR=7.9						
EPON	Pontenova	5.09	274	Pn	Pn	04 08 05.4	+1.0
	1.4nm,0.2s,SNR=7.9						
EPON				Sn	Sn	04 09 01.8	-2.2
	5.3nm,0.4s,SNR=7.9						
QUIF	Quistinic	5.16	337	ePn	Pn	04 08 05.3	-0.1
QUIF				eSn	Sn	04 09 02.1	-3.7
	2.6nm,0.2s						
GRR	Gorron	5.21	355	ePn	Pn	04 08 05.5	-0.6
GRR				eSn	Sn	04 09 03.7	-3.4
	4.2nm,0.3s						
SGMF	Saint Gilles	5.32	343	ePn	Pn	04 08 07.5	-0.2
SGMF				eSn	Sn	04 09 05.7	-4.1
	3.3nm,0.3s						
FLN	La Foliniere	5.57	358	ePn	Pn	04 08 10.3	-0.9
FLN				eSn	Sn	04 09 11.2	-4.8
	1.8nm,0.2s						
ROSF	Rostrenen	5.58	338	ePn	Pn	04 08 10.5	-0.8
ROSF				eSn	Sn	04 09 11.8	-4.4
	2.0nm,0.2s						
CABF	La Chapelle	5.61	50	eSg	Sg	04 09 46.4	-6.5
	2.7nm,0.3s						
EQES	Quesada	5.82	203	Pn	Pn	04 08 14.1	-0.7
	0.6nm,0.1s,SNR=7.9						
EQES				Lg		04 09 50.6	
	3.5nm,0.6s,SNR=7.9						
EQES	Quesada	5.82	203	Pn	Pn	04 08 14.1	-0.7
	0.6nm,0.1s,SNR=7.9						
ELOB	Lobios	5.97	260	Pn	Pn	04 08 15.9	-1.0
ELOB				Sn	Sn	04 09 21.0	-5.2
ELOB	Lobios	5.97	260	Pn	Pn	04 08 15.9	-1.0

ELOB				Sn	Sn	04 09 21.0	-5.2
EADA	Adamuz	6.04	215	Pn	Pn	04 08 16.5	-1.3
	1.9nm,0.3s,SNR=7.9						
EADA				Sn	Sn	04 09 20.6	-7.1
	1.0nm,0.2s,SNR=7.9						
EADA				Lg		04 09 56.4	
	1.9nm,0.3s,SNR=7.9						
EADA	Adamuz	6.04	215	Pn	Pn	04 08 16.5	-1.3
	1.9nm,0.3s,SNR=7.9						
EADA				Sn	Sn	04 09 20.6	-7.1
	1.0nm,0.2s,SNR=7.9						
EBAD	Badajoz	6.81	232	Pn	Pn	04 08 27.0	-1.7
	0.4nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	04 09 39.7	-7.5
	0.8nm,0.2s,SNR=7.9						
EBAD	Badajoz	6.81	232	Pn	Pn	04 08 27.0	-1.7
EBAD				Sn	Sn	04 09 39.7	-7.5

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*NNC **17** 04:18:16.4±38.0, 37.00N×70.32E, h206^{km}±810^{km}, mpv3.5, Error ellipse: s-maj=516.4km s-min=280.4km az=20.0*

ISC 17 04:18:13.3±2.2**, 36.8N**±0.2×**70.3E**±0.2**, h200**^{km}**, n8, σ0^{s}53**/10**, 1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.91	25	P	P	04 19 40.0	-0.2
	SNR=47						
KK31	Karatay Array	6.27	1	P	P	04 19 45.8	+1.0
	0.8nm,0.2s						
KK31				S	S	04 20 55.3	-0.8
	1.6nm,0.4s						
UCH	Uchtor	6.30	30	P	P	04 19 45.0	-0.1
	SNR=22						
EKS2	Erkin-Say	6.41	24	P	P	04 19 46.9	+0.2
	SNR=8.9						
KZA	Kyzart	6.49	35	P	P	04 19 46.9	-0.7
	SNR=13						
AAK	Ala-Archa	6.63	28	P	P	04 19 49.3	-0.2
	2.0nm,0.4s						
AAK				⇓S	S	04 21 05.3	+0.8
	8.0nm,0.8s						
TKM2	Tokmak 2	7.32	32	P	P	04 19 58.4	-0.1
	SNR=13						
AB31	Akbulak array	14.53	332	P	P	04 21 30.7	+0.1
	0.1nm,0.2s,baz=163,slow=11,SNR=11						

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*IDC **17** 04:37:47.1±1.2, 19.14N×122.26E, mb3.7/5, mb1 3.9/5, mb1mx3.7/19, mbtmp3.7/5, MS3.0/3, Ms1 3.0/3, ms1mx2.6/32, Error ellipse: s-maj=115.2km s-min=18.8km az=70.0*

*MAN **17** 04:37:54.2, 19.08N×121.21E, h69^{km}, mb4.3, ML3.1, MS2.9*

ISC 17 04:37:55.1±0.7**, 19.10N**±0.05×**121.17E**±0.09**, h66**^{km}±12^{km}**, n16, σ1^{s}15**/21**, mb3.6**/5**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	1.20	136	*e*P	P	04 38 15.1	-1.1
SGCP				*e*S	S	04 38 31.4	-0.6
APYP	Conner	1.24	177	*e*P	P	04 38 15.6	-1.2
APYP				*e*S	S	04 38 33.0	0.0
ABRA	Dolores	1.51	197	*e*P	P	04 38 19.4	-1.1
ABRA				*e*S	S	04 38 41.0	+1.5
CVP	Callao Caves	1.52	156	⇓*i*P	P	04 38 20.0	-0.8
CVP				*i* S	S	04 38 40.5	+0.7
BBP	Basco	1.53	29	*e*P	P	04 38 20.1	-0.8
BBP				*e*S	S	04 38 41.0	+1.1
CAUP	Cauayan	2.24	164	*e*P	P	04 38 32.5	+1.9
CAUP				*e*S	S	04 39 04.7	+7.6
BOLP	Bolinao	2.96	204	*e*P	P	04 38 40.6	-0.2
BOLP				*e*S	S	04 39 14.4	-0.9
BALP	Baler	3.37	173	*e*P	P	04 38 47.1	+0.5
BALP				*e*S	S	04 39 27.2	+1.7
JNU	Nakatsue	16.45	30	LR	LR	04 48 12.1	
	comp=Z,23nm,18.7s,baz=189,slow=39						
CBIJ	Chichi jima	20.89	64	LR	LR	04 49 05.7	
	comp=Z,24nm,19.4s,baz=104,slow=34						
SONM	Songino Array	31.08	341	P	P	04 44 10.2	+1.1
	0.1nm,0.4s,mb2.9,baz=160,slow=8.8,SNR=2.5						
FITZ	Fitzroy Crossi	37.23	173	P	P	04 44 58.7	-3.5
	3.9nm,1.0s,mb4.3,baz=359,slow=4.8,SNR=4.4						
WRA	Warramunga Arr	40.90	161	P	P	04 45 29.0	-3.6
	0.5nm,0.3s,mb3.8,baz=342,slow=9.1,SNR=19						
WRA				PcP	PcP	04 47 32.6	-0.1
	0.4nm,0.5s,baz=342,slow=3.1,SNR=5.1						
MKAR	Makanchi Array	42.08	320	P	P	04 45 46.8	+4.8
	0.5nm,0.7s,mb3.4,baz=112,slow=7.8,SNR=2.1						
ARCES	ARCESS Array B	74.23	339	P	P	04 49 26.1	-0.1
	1.2nm,0.9s,mb3.6,baz=66,slow=8.9,SNR=6.1						
NOA	NORSAR Array B	82.70	333	LR	LR	05 30 36.8	
	comp=Z,22nm,19.4s,baz=35,slow=38						

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*NEIC **17** 04:44:47.9±1.1, 20.25S×69.15W, h100^{km}±11^{km}, mb4.4/3, Error ellipse: s-maj=16.1km s-min=10.6km az=93.0*

*IDC **17** 04:44:51.2±2.5, 20.18S×68.95W, h124^{km}±20^{km}, mb4.0/6, mb1 4.0/8, mb1mx3.7/18, mbtmp4.5/8, MS3.4/2, Ms1 3.4/2, ms1mx2.7/27, Error ellipse: s-maj=29.4km s-min=17.8km az=82.0*

ISC 17 04:44:47.1±0.9**, 20.30S**±0.06×**69.2W**±0.1**, h111**^{km}±12^{km}**, n22, σ1^{s}27**/19**, mb4.3**/5**, 1C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANCH	Antofagasta	3.56	199	*e*P	P	04 45 41.9	+0.2
LPAZ	La Paz	4.11	14	P	P	04 45 51.6	+2.5
	6.1nm,0.3s,baz=189,slow=9.0,SNR=315						
LPAZ				S	S	04 46 38.0	+1.5
	3.2nm,0.3s,baz=179,slow=2.6,SNR=4.2						
LPAZ	La Paz	4.11	14	*e*Pn	P	04 45 51.3	+2.2
ARE	Arequipa	4.41	329	*e*P	P	04 45 51.0	-2.2
SIV	San Ignacio	8.80	62	P	P	04 46 50.6	-2.2
	3.9nm,0.3s,baz=253,slow=12,SNR=200						
CFAA	Coronel Fontan	11.29	176	P	P	04 47 25.4	-0.7
	0.1nm,0.3s,baz=2.0,slow=15,SNR=14						
SAML	Samuel	12.67	28	*e*Pn	P	04 47 44.3	-0.2
	2.7nm,0.6s						
TRQA	Tornquist	18.76	162	*e*P	P	04 48 59.8	-0.1
	5.9nm,0.7s						
PLCA	Paso Flores	20.41	183	P	P	04 49 19.6	+2.4
	11nm,0.8s,baz=1.7,slow=12,SNR=13						
PLCA	Paso Flores	20.41	183	*e*P	P	04 49 19.6	+2.4
	15nm,0.9s						
BDFB	Brasilia	20.63	80	P	P	04 49 18.9	-0.7
	12nm,0.4s,baz=262,slow=10,SNR=35						
BDFB				LR	LR	04 58 47.0	
	comp=Z,62nm,18.1s,baz=102,slow=41						
BAO	Brasilia Array	20.66	80	P	P	04 49 20.0	+0.1
RCBR	Riachuelo	35.34	71	*e*P	P	04 51 34.3	+0.4
	8.8nm,0.5s,mb4.8						
SJG	San Juan	38.28	5	P	P	04 51 56.8	-1.7
	3.9nm,0.5s,mb4.5,baz=102,slow=5.9,SNR=4.0						
DBIC	Dimbokro	68.62	74	P	P	04 55 40.3	-0.4
	1.5nm,0.3s,mb4.3,baz=221,slow=7.0,SNR=12						
NVAR	Mina Array Bea	74.41	322	LR	LR	05 30 04.9	
	comp=Z,37nm,19.0s,baz=190,slow=36						
SCHQ	Schefferville	74.85	1	P	P	04 56 17.1	+0.1
	1.1nm,0.6s,mb3.8,baz=153,slow=4.5,SNR=4.6						
SYO	Syowa Base	77.70	160	⇑X		04 56 53.5	
BOSA	Boshof	84.22	118	P	P	04 57 09.1	+1.3
	2.9nm,1.0s,mb4.1,baz=270,slow=7.6,SNR=3.6						
BOSA	Boshof	84.22	118	P	P	04 57 09.1	+1.3
MKAR	Makanchi Array	144.79	35	PKP	PKPdf	05 04 12.9	+2.1
	0.9nm,0.4s,baz=315,slow=3.4,SNR=6.1						
SONM	Songino Array	152.29	6	PKPbc	PKPdf	05 04 32.5	+10
	0.5nm,0.4s,baz=289,slow=2.5,SNR=6.3						

IGQ 17 04:51:50.9, 1.00S×81.40W, h7^{km}±4^{km}, mb4.6, 8C-6D, Error ellipse: s-maj=6.2km s-min=3.6km az=19.8, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.86	94	⇓P	Pb	04 52 06.2	-1.5
SALI	Salinas	1.25	161	P	Pb	04 52 15.4	+1.0
JAMA	Jama	1.40	59	⇓P	Pn	04 52 17.7	+0.7
JAMA				S	Sb	04 52 35.6	+0.5
IGUA	Igualata	2.81	100	P	Pn	04 52 38.4	+1.3
IGUA				S	Sn	04 53 11.8	+0.2
JUA2	San Juan 2	2.90	74	⇑P	Pn	04 52 39.5	+0.9
CAMI	Rancho Maria	2.92	84	⇓P	Pn	04 52 40.4	+1.8
TERV	Terraza Guagua	2.92	74	P	Pn	04 52 39.9	+1.2
PINO	Pino	2.92	73	⇓P	Pn	04 52 39.7	+1.0
GGP	Refugio Guagua	2.92	74	⇑P	Pn	04 52 39.4	+0.6
JOR1	San Jorge 1	2.94	70	P	Pn	04 52 38.4	-0.5
CUSU	Cusua	2.96	99	P	Pn	04 52 41.6	+2.4
YANA	Yana	2.96	73	⇓P	Pn	04 52 40.3	+1.0
JUIV	Juive	2.97	98	P	Pn	04 52 41.3	+1.8
ARRY	Arrayan	2.99	100	⇑P	Pn	04 52 40.7	+1.0
ARRY				S	Sn	04 53 15.2	-1.1
RUN5	Runtun	3.01	98	P	Pn	04 52 41.6	+1.7
PISA	Pisayambo	3.02	91	⇑P	Pn	04 52 41.8	+1.6
PISA				S	Sn	04 53 17.0	0.0
VC1	Cotopaxi 1	3.02	83	P	Pn	04 52 42.1	+2.0
ULBA	Ulba	3.03	99	⇑P	Pn	04 52 42.1	+1.9
TAMB	Tambo	3.05	84	P	Pn	04 52 42.5	+1.9
ANTI	Antisana	3.29	80	⇑P	Pn	04 52 46.2	+2.3
COTA	Cotacachi	3.34	67	⇓P	Pn	04 52 46.2	+1.5
COTA				S	Sn	04 53 23.9	-1.2
LORE	San Lorenzo	3.42	48	P	Pn	04 52 50.9	+5.0
CAYR	Refugio Cayamb	3.54	74	⇑P	Pn	04 52 50.9	+3.3
CAYR				S	Sn	04 53 33.0	+2.7
CAYA	Cayambe	3.57	73	⇑P	Pn	04 52 51.0	+3.0
CAYA				S	Sn	04 53 33.2	+2.2
ECEN	Cerro Negro	3.88	62	P	Pn	04 52 53.4	+1.1

IGQ 17 04:55:59.8, 1.06S×81.29W, h8^{km}±6^{km}, mb4.2, 2C-2D, Error ellipse: s-maj=11.1km s-min=4.5km az=12.0, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.74	89	P	Pb	04 56 13.5	-1.1
JAMA	Jama	1.34	54	⇓P	Pb	04 56 25.0	+0.2
JAMA				S	Sb	04 56 42.5	+0.5
IGUA	Igualata	2.69	99	P	Pn	04 56 45.5	+1.4
CAMI	Rancho Maria	2.81	82	P	Pn	04 56 47.0	+1.1
JUA2	San Juan 2	2.81	73	⇓P	Pn	04 56 47.4	+1.5
TERV	Terraza Guagua	2.83	72	P	Pn	04 56 44.4	-1.7
PINO	Pino	2.83	72	P	Pn	04 56 46.9	+0.8
GGP	Refugio Guagua	2.83	72	P	Pn	04 56 47.3	+1.1
JOR1	San Jorge 1	2.85	68	P	Pn	04 56 45.4	-1.0
ARRY	Arrayan	2.87	99	⇑P	Pn	04 56 48.2	+1.5
YANA	Yana	2.88	71	P	Pn	04 56 47.7	+0.9
RUN5	Runtun	2.89	97	P	Pn	04 56 49.1	+2.1
PISA	Pisayambo	2.91	90	P	Pn	04 56 49.2	+2.0
ULBA	Ulba	2.91	98	P	Pn	04 56 49.5	+2.2
VC1	Cotopaxi 1	2.92	82	P	Pn	04 56 50.2	+2.8
TAMB	Tambo	2.94	83	P	Pn	04 56 50.2	+2.4
ANTI	Antisana	3.19	79	P	Pn	04 56 52.8	+1.6
COTA	Cotacachi	3.26	65	P	Pn	04 56 53.9	+1.6
CAYR	Refugio Cayamb	3.45	72	⇑P	Pn	04 56 58.4	+3.4
CAYA	Cayambe	3.49	71	P	Pn	04 56 58.0	+2.5
ECEN	Cerro Negro	3.81	61	P	Pn	04 57 02.4	+2.3

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*NEIC **17** 05:08:03.1, 36.39S×177.89E, h207^{km}, MG4.1(WEL), After WEL.*

WEL 17 05:08:02.8±0.5**, 36.35S×177.94E, h205**^{km}±9^{km}**, ML3.9**/11**, Error ellipse: s-maj=10.3km s-min=9.2km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	1.74	172	*e*P	P	05 08 39.2	-0.3
PUZ				S	S	05 09 06.0	-1.8
PUZ	Puketiti	1.74	172	PN	P	05 08 39.1	-0.3
PUZ				SN	S	05 09 06.0	-1.7
MWZ	Matawai	2.01	189	P	P	05 08 42.3	+0.2
MWZ				S	S	05 09 12.7	+0.3
MWZ	Matawai	2.01	189	PN	P	05 08 42.2	0.0
MWZ				SN	S	05 09 12.7	+0.3
URZ	Urewera	2.02	199	P	P	05 08 41.8	-0.4
URZ	Urewera	2.02	199	PN	P	05 08 41.8	-0.4
URZ				SN	S	05 09 11.4	-1.2
URZ				SN	S	05 09 11.5	-1.1
KNZ	Kokohu	2.67	185	P	P	05 08 48.9	-0.5
KNZ	Kokohu	2.67	185	PN	P	05 08 48.9	-0.5
BKZ	Black Stump Fm	3.04	202	P	P	05 08 53.2	-0.4
BKZ	Black Stump Fm	3.04	202	PN	P	05 08 53.0	-0.6
MOVZ	Moawhango	3.51	209	PN	P	05 08 58.4	-0.9
TSZ	Takapari Road	4.02	202	PN	P	05 09 03.7	-1.9
BFZ	Birch Farm	4.52	197	PN	P	05 09 10.2	-1.8
BFZ				SN	S	05 10 02.7	-2.8
MRZ	Mangatainoka R	4.69	203	P	P	05 09 11.5	-2.5
MRZ	Mangatainoka R	4.69	203	PN	P	05 09 11.5	-2.5
MRZ				SN	S	05 10 05.2	-4.1
KIW	Kapiti Island	5.09	207	P	P	05 09 16.6	-2.6
KIW	Kapiti Island	5.09	207	PN	P	05 09 16.5	-2.7
MTW	Mount Morrison	5.17	201	P	P	05 09 17.1	-3.0
MTW	Mount Morrison	5.17	201	PN	P	05 09 17.1	-3.0
SNZO	South Karori	5.56	206	P	P	05 09 21.8	-3.4
SNZO	South Karori	5.56	206	PN	P	05 09 21.7	-3.4
SNZO				SN	S	05 10 25.2	-4.0
TCW	Tory Channel	5.64	209	P	P	05 09 23.1	-3.1
TCW	Tory Channel	5.64	209	PN	P	05 09 23.1	-3.0
TCW				*e*SN	S	05 10 26.0	-5.0
TUWZ	Tuamarina	5.96	210	PN	P	05 09 26.9	-3.4
THZ	Tophouse	6.68	214	*e*PN	P	05 09 36.7	-3.0
KHZ	Kahutara	6.95	208	PN	P	05 09 39.5	-3.7
MQZ	McQueen's Vall	8.39	207	SN	S	05 11 26.2	-8.9

CASC 17 05:19:28.4±2.0**, 14.74N×91.32W, MD4.0, 2C-5D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	1.01	124	⇓*e*P	Pb	05 19 46.6	-1.8
IXG				*e*S	Sg	05 20 02.4	+0.4
MRL	Marmol	1.60	78	*e*P	Pn	05 19 57.7	-0.4
MRL				*e*S	Sb	05 20 20.5	+1.2
RBDL	Robledal	1.70	111	⇑*e*P	Pn	05 20 00.4	+0.9
RBDL				*e*S	Sb	05 20 24.7	+2.6
RTR	El Retiro	1.82	117	⇓*e*P	Pn	05 20 01.7	+0.4
RTR				*e*S	Sn	05 20 28.0	+2.5
SBLS	San Blas	1.87	119	⇓*e*P	Pn	05 20 02.0	0.0
SBLS				*e*S	Sn	05 20 28.5	+1.9
SNJE	San Jose	1.87	117	⇓*e*P	Pn	05 20 02.2	+0.3
SNJE				*e*S	Sn	05 20 28.9	+2.3
BOQS	Boqueron	2.21	117	*e*P	Pn	05 20 06.6	-0.3
LFRS	El Faro	2.45	117	⇑*e*P	Pn	05 20 09.5	-0.8
LFRS				*e*S	Sn	05 20 41.5	+0.1
LCBS	La Ceiba	2.51	115	⇓*e*P	Pn	05 20 10.2	-0.9
LCBS				*e*S	Sn	05 20 43.1	+0.1

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*BJI **17** 05:26:24.7, 5.65N×92.84E, h32^{km}, mB4.8, mb4.6, Ms4.3, Msz4.2*

*NEIC **17** 05:26:31.2±0.3, 6.21N×92.94E, mb4.6/11, Error ellipse: s-maj=8.8km s-min=6.1km az=224.0*

*IDC **17** 05:26:31.4±0.7, 6.28N×92.93E, h32^{km}±4^{km}, mb4.2/22, mb1 4.3/23, mb1mx4.3/25, mbtmp4.4/23, ML4.7/1, MS3.5/5, Ms1 3.5/5, ms1mx3.4/18, Error ellipse: s-maj=20.5km s-min=12.8km az=61.0*

ISC 17 05:26:25.9±2.5**, 6.14N**±0.05×**92.94E**±0.05**, h7**^{km}±16^{km}**, n83, σ1^{s}11**/78**, mb4.5**/34**, MS3.8**/7**, 1C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	7.70	82	P	Pn	05 28 22.0	+0.8
KULM	Kulim	7.72	96	*e*Pn	Pn	05 28 20.8	-0.7
PALK	Pallekele	12.21	276	*e*Pn	P	05 29 20.5	-2.8
CM31	Chiang Mai Arr	13.57	25	Pn	P	05 29 38.6	-2.9
	29nm,0.8s						
CMAR	Chiang Mai Arr	13.57	25	Pn	P	05 29 41.8	+0.3
	1.1nm,0.3s,baz=230,slow=13,SNR=12						
CMAR				LR	LR	05 34 48.2	
	comp=Z,83nm,19.3s,baz=205,slow=37						
CHG	Chiang Mai	13.89	24	⇑P	P	05 29 50.0	+4.3
	1.5nm,0.7s						
KKTK	Khon Kaen	14.01	43	P	P	05 29 56.0	+8.6
NANT	Nan	14.68	30	P	P	05 30 00.0	+3.9
VIS	Vishakhapatnam	14.85	322	*e*P	P	05 29 57.4	-1.0
VIS				AMb	AMB	05 30 04.1	
	comp=Z,25nm,0.4s						
VIS				*i* x	x	05 32 29.9	
BWNR	Bhubaneshwar	15.68	334	*e*P	P	05 30 09.5	+0.3
BWNR				AMb	AMB	05 30 12.5	
	comp=Z,8.9nm,0.2s						
BWNR				*e*x	x	05 32 55.2	
KSM	Kuching	17.94	104	*e*P	P	05 30 38.4	+0.7
HYB	Hyderabad	17.98	310	*e*P	P	05 30 38.5	+0.3
HYB				*e*S	S	05 33 51.0	-5.5
HYB	Hyderabad	17.98	310	*i* P	P	05 30 38.5	+0.3
HYB				*e*S	S	05 33 55.5	-1.0
SHL	Shillong	19.34	357	*e*P	P	05 30 52.0	-2.8
SHL				*e*x	x	05 34 15.0	
QIZ	Qiongzhong	20.86	51	P	P	05 31 12.0	+0.9
QIZ				*e*S	S	05 35 01.3	+2.2
QIZ				LR	LR		
	comp=N,340nm,13.7s						
QIZ				LR	LR		
	comp=Z,380nm,13.1s,MS4.0						
POO	Poona	22.31	305	*e*x	x	05 31 39.0	
PKI	Pulchoki	22.48	342	*e*P	P	05 31 29.4	+2.0
	comp=Z,16nm,0.4s,mb4.8						
DMN	Daman	22.61	342	*e*P	P	05 31 31.0	+2.2
	comp=Z,18nm,0.5s,mb4.8						
BHPL	Bhopal	22.63	320	*e*P	P	05 31 29.8	+0.7
BHPL				AMb	AMB	05 31 33.5	
	comp=Z,16nm,0.7s,mb4.6						
GUN	Gumba	22.66	344	*e*P	P	05 31 29.6	+0.3
	comp=Z,60nm,0.9s,mb5.0						
KKN	Kakani	22.73	342	*e*P	P	05 31 31.5	+1.6
	comp=Z,70nm,0.9s,mb5.1						
GKN	Gorkha	23.12	341	*e*P	P	05 31 34.2	+0.4
	comp=Z,146nm,0.9s,mb5.4						
KOLN	Koldanda	23.27	339	*e*P	P	05 31 36.0	+0.8
	comp=Z,120nm,1.3s,mb5.2						
LSA	Lhasa	23.49	356	*e*P	P	05 31 39.8	+2.4
LSA	Lhasa	23.49	356	*e*P	P	05 31 38.7	+1.4
	comp=Z,6.9nm,0.7s,mb4.2						
GYA	Guiyang	24.07	31	P	P	05 31 43.8	+0.7
GYA				S	S	05 36 04.1	+6.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
GYA				AMB	AMB		
	comp=Z,170nm,7.0s						
GYA				LR	LR		
	comp=N,210nm,14.3s,MS3.9						
GYA				LR	LR		
	comp=E,150nm,14.4s,MS3.9						
GYA				LR	LR		
	comp=Z,350nm,14.1s,MS4.0						
NDI	New Delhi	26.91	328	*e*x	P	05 32 08.5	-1.2
XAN	Xi'an	31.46	26	P	P	05 32 48.6	-1.9
GTA	Gaotai	33.70	10	*e*P	P	05 33 08.8	-1.1
WMQ	Urumqi	37.81	354	*e*P	P	05 33 43.9	-0.9
WMQ				AMB	AMB		
	comp=Z,20nm,4.2s						
WMQ				LR	LR		
	comp=N,550nm,18.2s						
WMQ				LR	LR		
	comp=Z,540nm,16.0s,MS4.5						
ULHL	Ulahol	38.89	340	P	P	05 33 54.0	+0.1
	SNR=5.9						
KZA	Kyzart	39.08	339	P	P	05 33 55.3	-0.2
	SNR=9.1						
JOW	Kunigami	39.42	54	LR	LR	05 52 47.8	
	comp=Z,126nm,19.8s,MS3.8,baz=129,slow=40						
UCH	Uchtor	39.48	338	P	P	05 33 59.6	+0.8
	SNR=12						
KBK	Karagaybulak	39.70	339	P	P	05 34 01.6	+1.0
	SNR=6.2						
AML	Almayashu	39.70	337	P	P	05 34 01.6	+0.9
	SNR=22						
AAK	Ala-Archa	39.84	339	*e*P	P	05 34 01.2	-0.6
	comp=Z,9.0nm,1.0s,mb4.5						
EKS2	Erkin-Say	40.13	338	P	P	05 34 05.0	+0.8
	SNR=5.7						
FITZ	Fitzroy Crossi	40.27	127	*e*P	P	05 34 05.1	-0.4
	comp=Z,8.5nm,1.3s,mb4.3						
FITZ	Fitzroy Crossi	40.27	127	P	P	05 34 04.6	-0.9
	comp=Z,2.3nm,0.5s,mb4.2,baz=358,slow=2.2,SNR=4.0						
USP	Ospenovka	40.39	339	P	P	05 34 06.2	-0.1
	SNR=13						
MKAR	Makanchi Array	41.53	349	P	P	05 34 14.8	-0.9
	comp=Z,2.7nm,0.5s,mb4.2,baz=162,slow=7.7,SNR=19						
MKAR				pP	pP	05 34 24.6	+7.1
	comp=Z,1.5nm,0.5s,baz=165,slow=7.5,SNR=5.1						
SONM	Songino Array	43.11	13	P	P	05 34 28.2	-0.3
	comp=Z,1.0nm,0.6s,mb3.7,baz=193,slow=7.8,SNR=9.3						
SONM				PcP	PcP	05 36 18.4	-0.6
	comp=Z,2.1nm,0.6s,baz=197,slow=3.7,SNR=7.7						
SONM				ScP		05 40 07.2	
	comp=Z,0.2nm,0.5s,baz=225,slow=5.2,SNR=4.3						
JNU	Nakatsue	44.28	48	LR	LR	05 55 17.8	
	comp=Z,43nm,18.6s,MS3.4,baz=182,slow=39						
WRA	Warramunga Arr	48.27	124	P	P	05 35 09.1	-0.9
	comp=Z,3.8nm,0.8s,mb4.5,baz=302,slow=9.2,SNR=25						
WRAB	Tennant Creek	48.27	124	*e*P	P	05 35 09.4	-0.6
	comp=Z,16nm,0.8s,mb5.1						
WB2	Warramunga Arr	48.28	124	⇓*i*P	P	05 35 09.5	-0.6
MZLS	Mizel	49.11	296	P	P	05 35 17.3	+0.8
DJNS	Zahran al Janu	49.53	288	P	P	05 35 21.2	+1.4
TATS	Tathlith	49.85	290	P	P	05 35 22.2	+0.1
BVAR	Borovoye Array	50.25	342	P	P	05 35 23.1	-1.7
	comp=Z,4.1nm,0.8s,mb4.5,baz=162,slow=9.4,SNR=20						
BVAR				PcP	PcP	05 36 43.1	-1.0
	comp=Z,1.9nm,0.8s,baz=162,slow=4.7,SNR=4.9						
JHJ	Hachijo jima 2	51.06	52	LR	LR	05 59 52.3	
	comp=Z,54nm,20.8s,MS3.5,baz=58,slow=39						
MJAR	Matsushiro Arr	51.20	47	LR	LR	05 59 46.0	
	comp=Z,65nm,18.5s,MS3.7,baz=340,slow=39						
OPO	Ambohidratompo	51.35	240	P	P	05 35 34.7	+1.1
	comp=Z,0.4nm,0.4s,mb3.8,baz=56,slow=10,SNR=4.4						
BLJS	Baljurashi	51.65	290	P	P	05 35 36.9	+1.1
HILS	Ha'il	52.89	300	P	P	05 35 46.2	+1.1
TBKS	Tabuk	57.61	300	P	P	05 36 20.3	+1.0
ASF	Jabal al Asfar	58.17	304	P	P	05 36 23.3	+0.1
	comp=Z,3.7nm,0.7s,mb4.5,baz=23,slow=6.2,SNR=6.1						
STKA	Stephens Creek	59.80	132	P	P	05 36 35.1	+0.6
	comp=Z,1.7nm,0.8s,mb4.2,baz=336,slow=4.3,SNR=5.2						
BR131	Keskin Array S	62.67	312	*e*P	P	05 36 51.7	-2.1
	comp=Z,2.5nm,0.7s,mb4.5						
BRTR	Keskin Array B	62.67	312	P	P	05 36 52.0	-1.8
	comp=Z,3.7nm,0.7s,mb4.6,baz=125,slow=7.7,SNR=21						
AKASG	Malin Array Be	68.77	322	P	P	05 37 30.1	-2.7
	comp=Z,3.1nm,0.7s,mb4.3,baz=91,slow=4.8,SNR=11						
BOSA	Boshof	73.66	238	P	P	05 38 02.6	0.0
	comp=Z,3.4nm,0.7s,mb4.4,baz=88,slow=6.1,SNR=6.6						
FINES	FINESS Array B	73.68	333	P	P	05 38 00.5	-1.6
	comp=Z,4.5nm,0.8s,mb4.5,baz=117,slow=8.5,SNR=16						
FINES				pP	pP	05 38 10.2	+6.0
	comp=Z,4.1nm,0.7s,baz=124,slow=6.9,SNR=9.6						
FINES	FINESS Array B	73.68	333	P	P	05 38 00.5	-1.6
FINES				pP	pP	05 38 10.2	+6.0
ARCES	ARCESS Array B	76.48	340	P	P	05 38 17.1	-0.8
	comp=Z,4.1nm,0.7s,mb4.5,baz=90,slow=4.7,SNR=17						
MAW	Mawson	76.61	191	P	P	05 38 19.8	+1.1
	comp=Z,4.5nm,0.8s,mb4.5,baz=18,slow=7.7,SNR=5.8						
GERES	GERESS Array B	78.32	318	P	P	05 38 28.0	-0.5
	comp=Z,4.7nm,0.7s,mb4.5,baz=90,slow=5.3,SNR=21						
HFS	Hagfors	79.34	330	P	P	05 38 32.5	-1.3
	comp=Z,2.2nm,0.6s,mb4.3,baz=68,slow=8.0,SNR=7.1						
HFS	Hagfors	79.34	330	P	P	05 38 32.5	-1.3
GRA1	Grafenberg Arr	79.99	319	*e*P	P	05 38 38.0	+0.5
	comp=Z,7.0nm,1.2s,mb4.5						
GRF	Grafenberg Arr	79.99	319	*e*P	P	05 38 38.0	+0.5
NB2	NORSAR Subarra	80.65	331	P	P	05 38 39.2	-1.6
	comp=Z,0.2nm,0.7s,mb3.2,baz=93,slow=6.5						
NOA	NORSAR Array B	80.65	331	P	P	05 38 39.5	-1.3
	comp=Z,1.7nm,0.8s,mb4.0,baz=94,slow=5.5,SNR=6.7						
DAVOX	Davos	80.81	316	P	P	05 38 41.8	-0.2
	comp=Z,9.5nm,0.6s,mb4.9,baz=132,slow=8.1,SNR=4.7						
EKA	Eskdalemuir Ar	88.46	325	P	P	05 39 20.2	0.0
	comp=Z,3.9nm,0.7s,mb4.8,baz=96,slow=5.3,SNR=14						
ESDC	Sonseca Array	91.41	310	P	P	05 39 34.2	-0.2
	comp=Z,1.3nm,0.7s,mb4.4,baz=111,slow=4.5,SNR=5.5						
VNDA	Vanda	91.48	168	P	P	05 39 34.8	+0.9
	comp=Z,0.8nm,0.5s,mb4.3,baz=334,slow=5.6,SNR=11						
ILAR	Eielson Array	96.79	22	P	P	05 39 57.6	-0.8
	comp=Z,0.2nm,0.5s,mb3.8,baz=315,slow=3.8,SNR=3.5						
NVAR	Mina Array Bea	127.01	31	PKP	PKPdf	05 45 33.3	-0.7
	comp=Z,0.3nm,0.4s,baz=0.9,slow=0.5,SNR=5.4						
NVAR				pPKP		05 45 43.7	
	comp=Z,1.1nm,0.7s,baz=346,slow=1.1,SNR=3.5						
NVAR	Mina Array Bea	127.01	31	PKP	PKPdf	05 45 33.3	-0.7
NVAR				pPKP		05 45 43.7	
PDAR	Pinedale Array	127.20	21	PKP	PKPdf	05 45 33.0	-1.2
	comp=Z,2.1nm,1.0s,slow=1.5,SNR=9.8						
PDAR				pPKP		05 45 43.0	
	comp=Z,1.1nm,0.7s,baz=7.3,slow=1.4,SNR=5.0						
TXAR	Lajitas Array	141.28	24	PKP	PKPdf	05 46 01.2	+0.2
	comp=Z,0.6nm,0.5s,SNR=3.8						
TXAR				pPKP		05 46 11.2	
	comp=Z,0.6nm,0.5s,baz=182,slow=0.3,SNR=6.4						

NEIC 17 05:30:34.3, 10.15N×84.20W, h1^{km}, MD4.0(CASC)**, 4C-5D, After CASC., Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VPS2	**Volcan Poas 2**	**0.05**	**317**	⇓ePg	Pg	05 30 36.4	+1.0
PRS1	**Puriscal**	**0.20**	**214**	⇑iP	Pg	05 30 41.8	+3.6
SJS	**Escuela Geolog**	**0.25**	**146**	⇑iP	Pg	05 30 40.5	+1.1
SJS				eS	Sg	05 30 44.8	+2.1
CGA2	**Cerro Gallo 2**	**0.29**	**243**	⇑eP	Pg	05 30 41.3	+1.2
CGA2				eS	Sg	05 30 46.3	+2.2
LAJ	**Bijagual**	**0.30**	**165**	⇓eP	Pg	05 30 46.8	+6.6
URSC	**Urasca**	**0.52**	**127**	⇓eP	Pg	05 30 45.0	+0.3
FORC	**Fortuna**	**0.56**	**305**	eP	Pg	05 30 46.5	+1.0
TRTC	**Tortuguero**	**0.64**	**49**	⇓eP	Pg	05 30 46.3	-0.7
BUS	**Buena Vista**	**0.73**	**144**	⇓eP	Pg	05 30 48.8	-0.1
BUS				eS	Sg	05 31 02.4	+3.7
JTS	**JuntasAbangare**	**0.76**	**281**	ePg	Pg	05 30 49.0	-0.4
VCR	**Vista de Mar**	**1.41**	**269**	⇑eP	Pb	05 31 00.4	-0.7

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*TIR **17** 05:31:17.9, 41.89N×19.74E, h19^{km}, Ml2.4*
*CSEM **17** 05:31:18.5±0.2, 41.86N×19.72E, h20^{km}, MD2.6, Error ellipse: s-maj=4.0km s-min=2.8km az=55.0*
*NEIC **17** 05:31:19.7, 41.91N×19.68E, h11^{km}, MD2.6(PDG), After PDG.*
*PDG **17** 05:31:19.7±0.2, 41.91N×19.68E, h11^{km}±1^{km}*
ISC 17 05:31:18.9±0.4**, 41.88N**±0.02×**19.70E**±0.03**, h10^{km}, n20, σ1^{s}10**/37**, 7C-2D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDA	**Shkodra**	**0.23**	**319**	ePg	**Pg**	**05 31 24.4**	**+0.6**
SDA				i Sg	**Sg**	**05 31 29.0**	**+1.9**
ULC	**Ulcinj**	**0.35**	**285**	⇓iPg	**Pg**	**05 31 25.8**	**-0.3**
ULC				eSg	**Sg**	**05 31 31.5**	**+0.7**
QSH	**Qafa e Shtames**	**0.39**	**157**	ePg	**Pg**	**05 31 26.0**	**-0.8**
QSH				i Sg	**Sg**	**05 31 33.0**	**+0.9**
TIR	**Tirane**	**0.54**	**167**	i Pg	**Pg**	**05 31 29.8**	**-0.1**
TIR				i Sg	**Sg**	**05 31 39.3**	**+2.1**
TIR	**Tirane**	**0.54**	**167**	ePg	**Pg**	**05 31 29.8**	**-0.1**
TIR				i Sg	**Sg**	**05 31 39.3**	**+2.1**
BCI	**Bajram Curri**	**0.56**	**29**	i pg?	**Pg**	**05 31 20.0**	**-10**
BCI	**Bajram Curri**	**0.56**	**29**	i Sg	**Sg**	**05 31 39.2**	**+1.4**
KKS	**Kukesi**	**0.57**	**69**	ePg	**Pg**	**05 31 29.1**	**-1.2**
KKS				i Sg	**Sg**	**05 31 38.9**	**+0.9**
TTG	**Podgorica**	**0.64**	**330**	⇑iPg	**Pg**	**05 31 31.0**	**-0.8**
TTG				eSg	**Sg**	**05 31 41.3**	**+0.8**
BUM	**Brajici-Budva**	**0.73**	**306**	⇑iPg	**Pg**	**05 31 33.2**	**-0.4**
BUM				eSg	**Sg**	**05 31 44.3**	**+0.9**
PVY	**Plav**	**0.74**	**16**	ePg	**Pg**	**05 31 32.8**	**-1.1**
PVY				eSg	**Sg**	**05 31 45.0**	**+1.1**
IVA	**Berane**	**1.00**	**8**	⇑iPg	**Pg**	**05 31 37.8**	**-1.2**
IVA				eSg	**Sg**	**05 31 53.5**	**+1.1**
HCY	**Herceg Novi**	**1.06**	**303**	⇑iPg	**Pg**	**05 31 39.0**	**-1.2**
HCY				eSg	**Sg**	**05 31 55.1**	**+0.8**
NKY	**Niksic**	**1.07**	**331**	⇑iPg	**Pg**	**05 31 38.8**	**-1.6**
NKY				eSg	**Sg**	**05 31 55.6**	**+0.9**
SKO	**Skopje**	**1.30**	**85**	i Pn	**Pn**	**05 31 43.7**	**+0.5**
BRY	**Bratogost**	**1.33**	**320**	⇑iPg	**Pg**	**05 31 43.5**	**-2.1**
BRY				eSg	**Sg**	**05 32 03.9**	**+0.5**
UPM	**Unac-Piva**	**1.45**	**336**	ePg	**Pg**	**05 31 46.0**	**-1.8**
UPM				eSg	**Sg**	**05 32 07.4**	**+0.2**
PLE	**Pljevlja**	**1.47**	**351**	⇑iPg	**Pg**	**05 31 47.0**	**-1.3**
PLE				eSg	**Sg**	**05 32 08.2**	**+0.3**
STON	**Ston**	**1.79**	**305**	i Pn	**Pn**	**05 31 50.1**	**0.0**
STON				i Sg	**Sg**	**05 32 12.4**	**-6.0**
BBLS	**Bajina Basta -**	**2.00**	**354**	⇓iPn	**Pn**	**05 31 53.2**	**+0.1**
BBLS				Sn	**Sn**	**05 32 16.2**	**-2.3**

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*PRU **17** 05:33:00.4, 41.78N×19.82E, M3.7*
*TIR **17** 05:33:02.4, 41.92N×19.69E, h18^{km}, Ml3.6*
*LDG **17** 05:33:02.8±0.2, 41.86N×19.77E, h10^{km}, Ml3.9/3, Error ellipse: s-maj=4.7km s-min=3.6km az=163.0*
*BEO **17** 05:33:02.1±0.2, 41.88N×19.71E, h18^{km}*
*THE **17** 05:33:03.9, 42.04N×19.62E, h20^{km}, ML3.9*
*CSEM **17** 05:33:03.2±0.1, 41.96N×19.65E, h15^{km}, mb3.7/1, Error ellipse: s-maj=1.4km s-min=1.1km az=18.0*
*NEIC **17** 05:33:03.1, 41.92N×19.68E, h11^{km}, mb3.7/1, ML3.8(PDG), After PDG.*
*PDG **17** 05:33:03.1±0.1, 41.92N×19.68E, h11^{km}*
*IDC **17** 05:33:08.1±4.5, 42.04N×19.57E, h79^{km}±31^{km}, mb3.3/3, mb1 3.3/11, mb1mx3.3/26, mbtmp3.5/11, MS2.7/1, Ms1 2.7/1, ms1mx2.1/17, Error ellipse: s-maj=45.3km s-min=16.4km az=7.0*
ISC 17 05:33:02.8±0.2**, 41.90N**±0.01×**19.56E**±0.02**, h28^{km}**±2^{km}**, n154, σ1^{s}26**/230**, mb3.5**/3**, 20C-14D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDA	**Shkodra**	**0.16**	**343**	ePg	**Pb**	**05 33 08.1**	**-0.3**
SDA				i Sg	**Sb**	**05 33 12.4**	**+0.1**
ULC	**Ulcinj**	**0.24**	**286**	⇓iPg	**Pb**	**05 33 09.4**	**0.0**
ULC				eSg	**Sb**	**05 33 14.5**	**+0.7**
PUK	**Puka**	**0.29**	**59**	i Pg	**Pb**	**05 33 08.2**	**-1.7**
PUK				i Sg	**Sb**	**05 33 13.3**	**-1.5**
QSH	**Qafa e Shtames**	**0.46**	**145**	i Pg	**Pb**	**05 33 13.0**	**+0.6**
QSH				i Sg	**Sb**	**05 33 21.0**	**+2.0**
TTG	**Podgorica**	**0.58**	**337**	⇑iPg	**Pb**	**05 33 14.3**	**0.0**
TTG				eSg	**Sb**	**05 33 24.4**	**+2.1**
TIR	**Tirane**	**0.59**	**157**	Pg	**Pb**	**05 33 12.8**	**-1.9**
TIR				Sg	**Sb**	**05 33 22.7**	**-0.1**
TIR	**Tirane**	**0.59**	**157**	i Pg	**Pb**	**05 33 13.1**	**-1.6**
TIR				i Sg	**Sb**	**05 33 22.7**	**-0.1**
BCI	**Bajram Curri**	**0.60**	**39**	i Pg	**Pb**	**05 33 13.5**	**-1.3**
BUM	**Brajici-Budva**	**0.64**	**309**	⇑iPg	**Pb**	**05 33 16.0**	**+0.7**
BUM				eSg	**Sb**	**05 33 27.2**	**+3.2**
KKS	**Kukesi**	**0.66**	**74**	ePg	**Pb**	**05 33 13.2**	**-2.5**
KKS				i Sg	**Sb**	**05 33 22.9**	**-1.6**
PVY	**Plav**	**0.76**	**24**	⇑iPg	**Pb**	**05 33 16.3**	**-1.1**
PVY				eSg	**Sb**	**05 33 27.6**	**+0.2**
HCY	**Herceg Novi**	**0.96**	**305**	⇑iPg	**Pn**	**05 33 21.8**	**+1.2**
HCY				eSg	**Sb**	**05 33 38.2**	**+5.0**
IVA	**Berane**	**1.00**	**14**	⇑iPg	**Pn**	**05 33 21.0**	**-0.2**
IVA				eSg	**Sb**	**05 33 36.9**	**+2.4**
NKY	**Niksic**	**1.01**	**336**	⇓iPg	**Pn**	**05 33 21.9**	**+0.7**
NKY				eSg	**Sb**	**05 33 38.2**	**+3.7**
OHR	**Ohrid**	**1.22**	**130**	i Pg	**Pn**	**05 33 23.2**	**-1.0**
OHR				i		05 33 25.6	
OHR				i Sg	**Sn**	**05 33 40.5**	**+0.7**
OHR	**Ohrid**	**1.22**	**130**	i Pg	**Pn**	**05 33 23.2**	**-1.0**
OHR				i Sg	**Sn**	**05 33 40.5**	**+0.7**
BRY	**Bratogost**	**1.25**	**323**	⇑iPg	**Pn**	**05 33 26.9**	**+2.2**
BRY				eSg	**Sn**	**05 33 47.2**	**+6.4**
UPM	**Unac-Piva**	**1.39**	**340**	⇑iPg	**Pn**	**05 33 29.2**	**+2.5**
UPM				eSg	**Sn**	**05 33 50.9**	**+6.6**
SKO	**Skopje**	**1.40**	**86**	⇓iPn	**Pn**	**05 33 26.2**	**-0.7**
SKO				i		05 33 27.3	
SKO				i Sn	**Sn**	**05 33 45.4**	**+0.8**
SKO				Lg		05 33 47.0	
SKO	**Skopje**	**1.40**	**86**	⇑iPn	**Pn**	**05 33 26.2**	**-0.7**
SKO				⇓i		05 33 27.3	
	comp=Z,0.3nm,0.4s						
SKO				i Sn	**Sn**	**05 33 45.4**	**+0.8**
SKO				Lg		05 33 47.0	
	comp=Z,0.4nm,0.6s						
SKO	**Skopje**	**1.40**	**86**	⇑iPn	**Pn**	**05 33 26.2**	**-0.7**
SKO				i Sn	**Sn**	**05 33 45.4**	**+0.8**
PLE	**Pljevlja**	**1.44**	**355**	⇓iPg	**Pn**	**05 33 29.4**	**+2.0**
PLE				eSg	**Sn**	**05 33 51.4**	**+5.9**
KBN	**Korca**	**1.57**	**144**	i Pn	**Pn**	**05 33 31.9**	**+2.6**
NVSS	**Nova Varos 2**	**1.61**	**4**	⇑iPg	**Pn**	**05 33 31.2**	**+1.4**
NVSS				Sg	**Sn**	**05 33 53.3**	**+3.4**
NVSS	**Nova Varos 2**	**1.61**	**4**	Pg	**Pn**	**05 33 31.2**	**+1.3**
NVSS				Sg	**Sn**	**05 33 53.3**	**+3.4**
STON	**Ston**	**1.69**	**306**	i Pn	**Pn**	**05 33 32.4**	**+1.5**
STON				i Sg	**Sn**	**05 33 55.7**	**+3.9**
FNA	**Florina**	**1.76**	**129**	ePb	**Pb**	**05 33 33.2**	**-1.1**
FNA				eSb	**Sb**	**05 33 55.2**	**-1.0**
LCI	**Lecce**	**1.91**	**216**	Pn	**Pn**	**05 33 33.1**	**-1.0**
LCI				Sn	**Sn**	**05 34 04.5**	**+7.1**
PE1	**Pezze di Greco**	**1.94**	**237**	ePn	**Pn**	**05 33 34.6**	**0.0**
BBLS	**Bajina Basta -**	**1.97**	**357**	⇑iPn	**Pn**	**05 33 36.7**	**+1.7**
BBLS				Sn	**Sn**	**05 34 03.5**	**+4.4**
BRT	**Bari-Castellan**	**2.05**	**241**	Pn	**Pn**	**05 33 41.2**	**+5.1**
BRT				Sn	**Sn**	**05 34 08.1**	**+7.2**
GRUS	**Gruza**	**2.16**	**23**	⇓iPn	**Pn**	**05 33 38.6**	**+0.8**
GRUS				Sn	**Sn**	**05 34 06.3**	**+2.4**
BAI	**Bari**	**2.16**	**249**	ePn	**Pn**	**05 33 37.8**	**0.0**
KEK	**Kerkira**	**2.19**	**175**	Pn	**Pn**	**05 33 37.5**	**-0.6**
KEK				Sn	**Sn**	**05 34 16.9**	**+12**
DIVS	**Divcibare**	**2.22**	**8**	⇑iPn	**Pn**	**05 33 39.6**	**+1.0**
DIVS				Sn	**Sn**	**05 34 08.8**	**+3.4**
VAY	**Valandovo**	**2.33**	**103**	⇓iPn	**Pn**	**05 33 39.6**	**-0.5**
VAY				i Sn	**Sn**	**05 34 10.0**	**+1.9**
GRG	**Griva**	**2.33**	**113**	ePn	**Pn**	**05 33 40.2**	**0.0**
GRG				eSn	**Sn**	**05 34 08.5**	**+0.3**
SG1	**Sgolgore (BA)**	**2.41**	**245**	ePn	**Pn**	**05 33 41.4**	**+0.1**
IGT	**Igoumenitsa**	**2.43**	**166**	ePn	**Pn**	**05 33 43.6**	**+2.0**
IGT				eSn	**Sn**	**05 34 13.6**	**+2.8**
LTRZ	**Laterza**	**2.44**	**239**	P	**Pn**	**05 33 41.3**	**-0.4**
LTRZ				Sn	**Sn**	**05 34 26.2**	**+15**
MEV	**Metsovon**	**2.46**	**149**	ePn	**Pn**	**05 33 43.1**	**+1.1**
CDT	**Castel del Mon**	**2.60**	**253**	ePn	**Pn**	**05 33 44.0**	**0.0**
BOLS	**Boljevac**	**2.62**	**42**	⇑iPn	**Pn**	**05 33 44.7**	**+0.5**
BOLS				Sn	**Sn**	**05 34 17.2**	**+1.9**
ZAPS	**Zavoj/Pirot**	**2.65**	**57**	⇑iPn	**Pn**	**05 33 44.5**	**-0.2**
ZAPS				Sn	**Sn**	**05 34 17.1**	**+0.8**
SVIS	**Svilajnac**	**2.69**	**26**	⇓iPn	**Pn**	**05 33 45.9**	**+0.6**
SVIS				Sn	**Sn**	**05 34 18.0**	**+0.8**
MS1	**Monte Sant'Ang**	**2.71**	**267**	ePn	**Pn**	**05 33 45.5**	**-0.1**
LIT	**Litokhoron**	**2.85**	**128**	ePn	**Pn**	**05 33 48.2**	**+0.7**
LIT				eSn	**Sn**	**05 34 22.0**	**+0.7**
THE	**Thessaloniki**	**2.86**	**115**	ePn	**Pn**	**05 33 47.4**	**-0.3**
THE				eSn	**Sn**	**05 34 21.7**	**+0.1**
THE	**Thessaloniki**	**2.86**	**115**	ePn	**Pn**	**05 33 47.3**	**-0.4**
THE				eSn	**Sn**	**05 34 21.7**	**+0.1**
RGNG	**Rignano Grg**	**2.98**	**267**	Pn	**Pn**	**05 33 49.2**	**-0.2**
RGNG				Sn	Sn	05 34 50.8	+26
ORI	**Oriolo Calabro**	**2.98**	**233**	Pn	**Pn**	**05 33 59.4**	**+10**
SOH	**Sokhos**	**3.05**	**109**	ePn	**Pn**	**05 33 50.4**	**0.0**
SOH				eSn	**Sn**	**05 34 25.9**	**-0.5**
SRS	**Serrai**	**3.13**	**103**	ePn	**Pn**	**05 33 50.9**	**-0.5**
SRS				eSn	**Sn**	**05 34 27.6**	**-0.7**
FG4	**Candela**	**3.13**	**257**	Pn	**Pn**	**05 33 52.0**	**+0.5**
MRLC	**Muro Lucano**	**3.27**	**251**	Pn	**Pn**	**05 33 53.4**	**-0.1**
MRLC				Sn	**Sn**	**05 34 45.0**	**+13**
FG5	**Orsara di Pugl**	**3.28**	**261**	Pn	**Pn**	**05 33 56.0**	**+2.4**
FG2	**Serracapriola**	**3.29**	**270**	Pn	**Pn**	**05 33 54.9**	**+1.1**
SLCN	**Sala Consilina**	**3.33**	**244**	Pn	**Pn**	**05 33 54.3**	**0.0**
TIP	**Timpagrande**	**3.46**	**219**	Pn	**Pn**	**05 33 55.0**	**-1.1**
SGO	**Sicignano**	**3.48**	**249**	Pn	**Pn**	**05 33 56.2**	**-0.2**
MGR	**Morigerati**	**3.50**	**241**	Pn	**Pn**	**05 33 57.1**	**+0.3**
MGR				Sn	**Sn**	**05 34 39.9**	**+2.0**
MRB1	**Monte Rocchett**	**3.53**	**259**	Pn	**Pn**	**05 33 58.0**	**+0.8**
AGG	**Agios Georgios**	**3.56**	**143**	ePn	**Pn**	**05 33 57.9**	**+0.2**
CSSN	**Cassano Irpino**	**3.57**	**255**	Pn	**Pn**	**05 33 58.6**	**+0.9**
CSSN				Sn	**Sn**	**05 34 40.3**	**+0.8**
PSB1	**Pescosannita**	**3.63**	**261**	Pn	**Pn**	**05 34 00.2**	**+1.6**
OUR	**Ouranopolis**	**3.69**	**114**	ePn	**Pn**	**05 33 59.2**	**-0.2**
PAIG	**Paliouri**	**3.69**	**121**	ePn	**Pn**	**05 33 59.2**	**-0.2**
PAIG	**Paliouri**	**3.69**	**121**	ePn	**Pn**	**05 33 59.2**	**-0.3**
XOR	**Xorichti**	**3.75**	**131**	ePn	**Pn**	**05 33 59.8**	**-0.5**
SGG	**Gregorio Mates**	**3.92**	**264**	Pn	**Pn**	**05 34 03.2**	**+0.5**
CII	**Carovilli**	**3.93**	**269**	Pn	**Pn**	**05 34 03.7**	**+0.8**
MIDA	**Miranda**	**3.98**	**268**	Pn	**Pn**	**05 34 03.9**	**+0.3**
BZS	**Buzias**	**4.00**	**21**	⇑P	**Pn**	**05 34 03.8**	**-0.2**
RNI2	**Rionero Sannit**	**4.05**	**269**	Pn	**Pn**	**05 34 05.4**	**+0.8**
RFI	**Roccamonfina**	**4.22**	**264**	Pn	**Pn**	**05 34 08.2**	**+1.1**
MSC	**Monte Massico**	**4.25**	**262**	Pn	**Pn**	**05 34 07.4**	**-0.1**
SDI	**San Donato**	**4.30**	**269**	Pn	**Pn**	**05 34 09.2**	**+1.0**
NVLJ	**Novalja**	**4.34**	**309**	i Pn	**Pn**	**05 34 08.6**	**-0.1**
NVLJ				i Sn	**Sn**	**05 34 59.6**	**+0.6**
NVLJ	**Novalja**	**4.34**	**309**	i Pn	**Pn**	**05 34 08.6**	**-0.1**
NVLJ				i Sn	**Sn**	**05 34 59.6**	**+0.5**
PKSM	**Moragy**	**4.36**	**352**	⇓eP	**Pn**	**05 34 09.7**	**+0.6**
PKSM				eS	**Sn**	**05 34 58.9**	**-0.7**
VVLD	**Villa Vallelon**	**4.43**	**272**	Pn	**Pn**	**05 34 10.7**	**+0.6**
TERO	**Teramo**	**4.48**	**281**	Pn	**Pn**	**05 34 11.2**	**+0.5**
PTQR	**Pietraquaria**	**4.60**	**274**	Pn	**Pn**	**05 34 13.3**	**+1.0**
AQU	**L'Aquila**	**4.60**	**278**	ePn	**Pn**	**05 34 12.6**	**+0.2**
AQU	**L'Aquila**	**4.60**	**278**	ePn	**Pn**	**05 34 12.6**	**+0.1**
SOI	**Samo**	**4.67**	**216**	Pn	**Pn**	**05 34 11.2**	**-2.2**
FIAM	**Fiamignano**	**4.81**	**277**	Pn	**Pn**	**05 34 16.5**	**+1.1**
NRCA	**Norcia**	**4.87**	**283**	Pn	**Pn**	**05 34 16.5**	**+0.3**
NRCA				Sn	**Sn**	**05 35 12.1**	**-0.2**
CERT	**Cerreto**	**4.91**	**273**	Pn	**Pn**	**05 34 17.3**	**+0.5**
CING	**Cingoli**	**4.92**	**290**	Pn	**Pn**	**05 34 17.1**	**+0.1**
CING				Sn	**Sn**	**05 35 11.3**	**-2.4**
ALN	**Alexandroupoli**	**4.98**	**99**	ePn	**Pn**	**05 34 16.5**	**-1.2**
SNTG	**Esanatoglia**	**5.07**	**288**	Pn	**Pn**	**05 34 18.6**	**-0.5**
SNTG				Sn	**Sn**	**05 35 14.9**	**-2.6**
ARV	**Arcevia**	**5.13**	**290**	Pn	**Pn**	**05 34 19.4**	**-0.5**
	comp=Z,46nm,0.8s						
ARV				Sn	**Sn**	**05 35 17.8**	**-1.2**
MNS	**Montasola**	**5.14**	**278**	Pn	**Pn**	**05 34 20.5**	**+0.5**
	comp=Z,109nm,0.3s						
ASS	**Assisi**	**5.24**	**285**	Pn	**Pn**	**05 34 21.7**	**+0.3**
	comp=Z,43nm,0.3s						
FSSB	**Fossombrone**	**5.30**	**292**	Pn	**Pn**	**05 34 21.8**	**-0.5**
FSSB				Sn	**Sn**	**05 35 21.3**	**-2.0**
VOIR		**5.33**	**47**	⇓P	**Pn**	**05 34 22.7**	**+0.1**
MURB	**Monte Urbino**	**5.37**	**287**	Pn	**Pn**	**05 34 23.7**	**+0.4**
	comp=Z,152nm,0.4s						
MURB				Sn	**Sn**	**05 35 25.5**	**+0.5**
VOY	**Vojsko**	**5.81**	**317**	ePn	**Pn**	**05 34 29.7**	**+0.2**
VOY				eSn	**Sn**	**05 35 35.5**	**-0.5**
OBKA	**Obir**	**5.85**	**324**	⇑iPN	**Pn**	**05 34 31.3**	**+1.3**
OBKA				i SN	**Sn**	**05 35 40.7**	**+3.7**
MLR	**Muntele Rosu**	**5.86**	**50**	P	**Pn**	**05 34 31.3**	**+1.2**
	comp=Z,2.4nm,0.3s,baz=184,slow=6.2,SNR=14						
MLR				S	**Sn**	**05 35 36.6**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=132,slow=20,SNR=6.4						
MLR				LR	LR	05 37 02.5	
	comp=Z,68nm,20.3s,baz=271,slow=41						
MLR	**Muntele Rosu**	**5.86**	**50**	⇓iP	**Pn**	**05 34 31.5**	**+1.4**
ISR	**Istrita**	**6.01**	**55**	⇓iP	**Pn**	**05 34 32.6**	**+0.3**
SFI	**Santa Sofia**	**6.01**	**292**	Pn	**Pn**	**05 34 32.8**	**+0.5**
	comp=Z,5.5nm,0.2s						
PSZ	**Piszkesteto**	**6.03**	**2**	ePn	**Pn**	**05 34 31.7**	**-0.8**
	comp=Z,20nm,0.8s						
PSZ				eSn	**Sn**	**05 35 38.8**	**-2.6**
PSZ	**Piszkesteto**	**6.03**	**2**	ePn	**Pn**	**05 34 31.7**	**-0.8**
	comp=Z,20nm,0.8s						
PSZ				eSn	**Sn**	**05 35 38.8**	**-2.5**
ARSA	**Arzberg**	**6.08**	**333**	⇑iPN	**Pn**	**05 34 35.8**	**+2.5**
ARSA				i SN	**Sn**	**05 35 47.3**	**+4.6**
VMG	**Vicchio**	**6.24**	**292**	Pn	**Pn**	**05 34 36.3**	**+0.8**
MAON	**Monte Argentar**	**6.29**	**278**	Pn	**Pn**	**05 34 35.4**	**-0.8**
	comp=Z,25nm,1.1s						
PTCC	**Patocco-Chiusa**	**6.34**	**317**	Pn	**Pn**	**05 34 37.2**	**+0.2**
PTCC				Sn	**Sn**	**05 35 49.3**	**0.0**
ZST	**Bratislava**	**6.54**	**345**	eSN	**Sn**	**05 35 50.7**	**-3.3**
VYHS	**Vyhne**	**6.62**	**356**	ePN	**Pn**	**05 34 42.7**	**+1.9**
VYHS				eSN	**Sn**	**05 35 54.5**	**-1.6**
KECS	**Kecovo**	**6.62**	**5**	ePN	**Pn**	**05 34 41.1**	**+0.2**
KECS				eSN	**Sn**	**05 35 53.5**	**-2.6**
FVI	**Forni Avoltri**	**6.76**	**316**	Pn	**Pn**	**05 34 43.7**	**+0.8**
	comp=Z,5.7nm,0.3s						
KBA	**Koelnbreinsper**	**6.83**	**321**	⇓iPN	**Pn**	**05 34 43.9**	**+0.1**
KBA				i SN	**Sn**	**05 36 03.3**	**+2.0**
BDI	**Bagni Di Lucca**	**6.92**	**291**	Pn	**Pn**	**05 34 43.5**	**-1.6**
	comp=Z,3.7nm,0.2s						
BURAR	**Bucovina Array**	**6.99**	**33**	⇓P	**Pn**	**05 34 47.8**	**+1.7**
MOA	**Molln**	**7.04**	**330**	⇑iPN	**Pn**	**05 34 48.6**	**+1.8**
MOA				i SN	**Sn**	**05 36 10.4**	**+3.7**
KOLS	**Kolonicke sedl**	**7.29**	**14**	ePn	**Pn**	**05 34 50.4**	**+0.1**
KOLS				eSn	**Sn**	**05 36 09.0**	**-3.9**
KOLS				e		05 37 26.5	
WTTA	**Wattenberg**	**7.79**	**316**	⇑iPN	**Pn**	**05 34 56.8**	**-0.5**
WTTA				i SN	**Sn**	**05 36 24.3**	**-1.2**
PGF	**Pioggiola**	**7.87**	**278**	ePn	**Pn**	**05 34 57.4**	**-0.9**
WATA	**Walderalm**	**7.87**	**316**	⇑iPN	**Pn**	**05 34 58.0**	**-0.4**
WATA				i SN	**Sn**	**05 36 27.6**	**+0.1**
GERES	**GERESS Array B**	**8.08**	**331**	P	**P**	**05 35 01.1**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=155,slow=14,SNR=4.6						
GERES				S	**Sn**	**05 36 28.8**	**-3.8**
	comp=Z,0.3nm,0.3s,baz=148,slow=22,SNR=3.4						
KHC	**Kasperske Hory**	**8.36**	**332**	ePn	**P**	**05 35 07.1**	**+1.9**
KHC				e		05 35 14.5	
KHC				eSn	**Sn**	**05 36 35.2**	**-4.5**
KHC				e		05 36 52.0	
KHC	**Kasperske Hory**	**8.36**	**332**	ePN	**P**	**05 35 07.1**	**+1.9**
KHC				x	x	05 35 14.5	
KHC				eSN	**Sn**	**05 36 35.2**	**-4.5**
KHC				x	x	05 36 52.0	
KHC	**Kasperske Hory**	**8.36**	**332**	Pn	**P**	**05 35 07.1**	**+1.9**
KHC				Sn	**Sn**	**05 36 35.2**	**-4.5**
DAVOX	**Davos**	**8.48**	**308**	P	**P**	**05 35 07.1**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=135,slow=20,SNR=4.4						
DPC	**Dobruska-Polom**	**8.75**	**346**	eSN	**Sn**	**05 36 49.4**	**+0.1**
SBF	**Sospel**	**9.12**	**287**	ePn	**P**	**05 35 13.5**	**-2.2**
FRF	**La Foret Royal**	**9.65**	**284**	ePn	**P**	**05 35 21.4**	**-1.6**
LMR	**La Mourre**	**9.73**	**283**	ePn	**P**	**05 35 22.1**	**-2.0**
MBDF	**Montbardon**	**9.74**	**291**	ePn	**P**	**05 35 21.2**	**-3.0**
MBDF				eSn	**Sn**	**05 37 07.9**	**-5.9**
	comp=Z,10nm,0.9s						
LPG	**La Plagne**	**9.95**	**296**	ePn	**P**	**05 35 25.8**	**-1.3**
LPG				eSn	**Sn**	**05 37 11.6**	**-7.3**
	comp=Z,9.5nm,0.5s						
LPL	**La Plagne**	**9.97**	**296**	ePn	**P**	**05 35 25.4**	**-1.9**
LPL				eSn	**Sn**	**05 37 12.2**	**-7.1**
	comp=Z,6.1nm,0.4s						
ORIF	**Oris-en-Rattie**	**10.40**	**291**	ePn	**P**	**05 35 31.6**	**-1.7**
CABF	**La Chapelle**	**10.75**	**301**	ePn	**P**	**05 35 36.0**	**-2.0**
HINF	**Hinteralfeld**	**10.78**	**308**	ePn	**P**	**05 35 36.0**	**-2.5**
CDF	**Champ du Feu**	**10.84**	**311**	ePn	**P**	**05 35 36.7**	**-2.6**
AKASG	**Malin Array Be**	**11.05**	**34**	P	**P**	**05 35 41.1**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=227,slow=13,SNR=5.2						
HAU	**Haudompre**	**11.17**	**308**	ePn	**P**	**05 35 41.6**	**-2.2**
VIVF	**Saint-Julien-l**	**11.23**	**290**	ePn	**P**	**05 35 42.9**	**-1.7**
SMF	**Signal de Mont**	**12.22**	**298**	ePn	**P**	**05 35 56.0**	**-2.0**
LOR	**Lormes**	**12.41**	**301**	ePn	**P**	**05 35 58.7**	**-1.8**
HFS	**Hagfors**	**18.62**	**351**	P	**P**	**05 37 17.9**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=157,slow=11,SNR=4.9						
NB2	**NORSAR Subarra**	**19.83**	**348**	P	**P**	**05 37 31.2**	**-2.9**
	comp=Z,0.3nm,0.6s,baz=165,slow=12						
NOA	**NORSAR Array B**	**19.83**	**348**	P	**P**	**05 37 31.3**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=153,slow=11,SNR=3.1						
FINES	**FINESS Array B**	**19.97**	**9**	P	**P**	**05 37 31.9**	**-3.7**
	comp=Z,0.3nm,0.3s,baz=194,slow=7.9,SNR=10.0						
EKA	**Eskdalemuir Ar**	**20.04**	**320**	P	**P**	**05 37 33.4**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=110,slow=9.4,SNR=6.5						
EKA	**Eskdalemuir Ar**	**20.04**	**320**	P	**P**	**05 37 33.3**	**-2.9**
KAF	**Kangasniemi**	**20.65**	**9**	ep	**P**	**05 37 34.8**	**-7.7**
	comp=Z,1.2nm,0.3s,baz=106,slow=5.6						
BVAR	**Borovoye Array**	**35.41**	**54**	P	**P**	**05 39 55.8**	**-2.2**
	comp=Z,0.4nm,0.4s,mb3.7,baz=304,slow=10,SNR=2.6						
MKAR	**Makanchi Array**	**44.08**	**61**	P	**P**	**05 41 06.3**	**-3.5**
	comp=Z,0.2nm,0.4s,mb3.2,baz=289,slow=5.4,SNR=2.7						
MKAR	**Makanchi Array**	**44.08**	**61**	P	**P**	**05 41 06.3**	**-3.5**
SONM	**Songino Array**	**58.71**	**52**	P	**P**	**05 42 57.2**	**-2.8**
	comp=Z,0.6nm,0.7s,mb3.8,baz=278,slow=8.7,SNR=3.6						

JMA 17 05:33:28.0±0.5**, 45.23N×149.94E, h140^{km}, M3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.54**	**240**	P	P	05 34 22.7	-0.2
NEM2				eS	S	05 35 04.9	0.0
JNK	**Nakash**	**4.09**	**248**	P	P	05 34 29.6	-0.5
JAK	**Akkeshi**	**4.39**	**241**	P	P	05 34 33.9	-0.1
JAK				eS	S	05 35 24.3	-0.5
JTKR	**Abashiri--Toko**	**4.49**	**256**	P	P	05 34 35.0	-0.4
JAR	**Ashorobuto**	**4.83**	**249**	P	P	05 34 40.4	+0.4
JOB	**Onbets**	**4.98**	**244**	P	P	05 34 42.1	+0.2
JOB				eS	S	05 35 38.8	-0.1
JCH	**Churui**	**5.42**	**243**	P	P	05 34 47.5	-0.3
JCH				eS	S	05 35 47.2	-2.4
JEM	**Erimo**	**5.88**	**239**	eS	S	05 35 58.1	-2.5
JNBK	**Urakawa-nobuka**	**5.98**	**243**	P	P	05 34 55.0	-0.3
JNBK				eS	S	05 36 00.9	-2.2
JBT2	**Biratori 2**	**5.99**	**249**	P	P	05 34 55.1	-0.3
JBT2				eS	S	05 36 03.0	-0.3
JANG	**Nango**	**7.87**	**235**	eS	S	05 36 43.9	-4.7
JTM	**Tenmabayashi**	**7.87**	**239**	eS	S	05 36 43.1	-5.6
OFUJ	**Ofunato**	**8.69**	**228**	eS	S	05 37 06.0	-2.2
JRG	**Rokugo**	**9.03**	**233**	eS	S	05 37 13.0	-3.3
JIO	**Ouri**	**9.32**	**226**	eS	S	05 37 20.2	-3.1

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*BJI **17** 06:01:17.2, 20.44S×68.26W, h98^{km}, mB4.6*
*NEIC **17** 06:01:23.3±1.0, 20.07S×69.04W, h98^{km}±10^{km}, mb4.3/5, Error ellipse: s-maj=12.8km s-min=9.8km az=68.0*
*IDC **17** 06:01:23.5±0.8, 20.10S×69.11W, h103^{km}±6^{km}, mb4.0/10, mb1 4.2/12, mb1mx4.0/19, mbtmp4.5/12, MS3.2/1, Ms1 3.1/1, ms1mx2.5/24, Error ellipse: s-maj=20.7km s-min=12.8km az=93.0*
ISC 17 06:01:21.3±0.9**, 20.03S**±0.05×**69.01W**±0.08**, h93^{km}**±11^{km}**, n28, σ1^{s}15**/27**, mb4.2**/10**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.82**	**13**	P	**P**	**06 02 24.0**	**+4.8**
	10nm,0.3s,baz=201,slow=7.4,SNR=286						
LPAZ				S	**S**	**06 03 09.1**	**+5.9**
	3.9nm,0.3s,baz=206,slow=15,SNR=3.6						
LPAZ	**La Paz**	**3.82**	**13**	ePn	**P**	**06 02 23.7**	**+4.5**
ANCH	**Antofagasta**	**3.86**	**199**	eP	**P**	**06 02 20.4**	**+0.7**
ARE	**Arequipa**	**4.26**	**326**	eP	**P**	**06 02 25.0**	**-0.3**
ARE				eS	**S**	**06 03 14.0**	**-0.2**
SIV	**San Ignacio**	**8.55**	**63**	P	**P**	**06 03 24.5**	**+0.4**
	24nm,0.3s,baz=256,slow=12,SNR=1115						
NNA	**Nana**	**10.98**	**316**	Pn	**P**	**06 03 59.6**	**+2.7**
CFAA	**Coronel Fontan**	**11.54**	**177**	P	**P**	**06 04 02.5**	**-1.9**
	0.1nm,0.3s,baz=1.1,slow=13,SNR=13						
SAML	**Samuel**	**12.38**	**28**	ePn	**P**	**06 04 13.9**	**-1.6**
	7.3nm,1.0s						
TRQA	**Tornquist**	**18.97**	**163**	eP	**P**	**06 05 37.7**	**-0.1**
	4.1nm,0.6s						
BDFB	**Brasilia**	**20.45**	**81**	P	**P**	**06 05 53.7**	**+0.1**
	14nm,0.6s,baz=265,slow=10,SNR=30						
BDFB				LR	LR	06 15 01.5	
	comp=Z,73nm,20.9s,baz=39,slow=40						
BAO	**Brasilia Array**	**20.48**	**81**	P	**P**	**06 05 54.5**	**+0.7**
PLCA	**Paso Flores**	**20.68**	**183**	P	**P**	**06 05 56.0**	**+0.3**
	9.0nm,0.6s,baz=356,slow=11,SNR=18						
PLCA	**Paso Flores**	**20.68**	**183**	eP	**P**	**06 05 55.9**	**+0.2**
	8.7nm,0.6s						
OTAV	**Otavalo**	**22.17**	**334**	eP	**P**	**06 06 12.6**	**+1.9**
	3.3nm,1.0s,mb3.6						
SDV	**Santo Domingo**	**28.78**	**357**	P	**P**	**06 07 12.4**	**-0.4**
	1.4nm,0.3s,mb4.1,baz=196,slow=4.5,SNR=3.4						
RCBR	**Riachuelo**	**35.12**	**71**	eP	**P**	**06 08 09.0**	**+1.0**
	6.5nm,0.6s,mb4.6						
SJG	**San Juan**	**38.01**	**4**	P	**P**	**06 08 30.4**	**-1.8**
	7.2nm,0.6s,mb4.7,baz=144,slow=4.9,SNR=4.5						
SJG	**San Juan**	**38.01**	**4**	eP	**P**	**06 08 29.1**	**-3.1**
	17nm,1.1s,mb4.8						
TXAR	**Lajitas Array**	**59.38**	**325**	P	**P**	**06 11 14.6**	**-1.8**
	0.3nm,0.6s,mb3.5,baz=149,slow=7.2,SNR=4.4						
DBIC	**Dimbokro**	**68.41**	**74**	P	**P**	**06 12 15.2**	**-0.5**
	9.4nm,0.6s,mb4.8,baz=222,slow=7.4,SNR=20						
ULM	**Lac du Bonnet**	**73.90**	**342**	P	**P**	**06 12 46.8**	**-1.2**
	2.5nm,0.6s,mb4.1,baz=187,slow=3.6,SNR=3.6						
BOSA	**Boshof**	**84.22**	**118**	P	**P**	**06 13 44.7**	**+0.5**
	5.6nm,1.0s,mb4.3,baz=129,slow=4.3,SNR=4.2						
ESDC	**Sonseca Array**	**84.86**	**45**	P	**P**	**06 13 48.2**	**+1.1**
	0.2nm,0.3s,mb3.5,baz=248,slow=8.0,SNR=4.2						
YKA	**Yellowknife Ar**	**89.78**	**341**	P	**P**	**06 14 10.8**	**+0.6**
	2.6nm,0.7s,mb4.5,baz=136,slow=4.6,SNR=7.8						
YKA				pP	pP	06 14 36.2	+1.1
	1.9nm,0.8s,baz=132,slow=5.5,SNR=2.9						
YKA				sP	sP	06 14 47.2	+2.3
	1.6nm,0.7s,baz=126,slow=4.3,SNR=3.4						
YKA	**Yellowknife Ar**	**89.78**	**341**	P	**P**	**06 14 10.8**	**+0.7**
YKA				pP	pP	06 14 36.2	+1.1
YKA				sP	sP	06 14 47.2	+2.3
MKAR	**Makanchi Array**	**144.50**	**35**	PKP	PKPdf	06 20 47.6	+0.8
	0.7nm,0.7s,baz=326,slow=3.2,SNR=7.2						
WMQ	**Urumqi**	**149.32**	**34**	ePKP	PKPdf	06 20 50.8	-4.1
SONM	**Songino Array**	**152.02**	**7**	PKPbc	PKPdf	06 21 07.0	+8.1
	0.6nm,0.5s,baz=314,slow=1.9,SNR=6.6						
SONM				pPKPbc		06 21 36.2	
	0.8nm,0.7s,baz=298,slow=1.4,SNR=3.4						

MAN 17 06:09:57.4, 10.90N×126.60E, h28^{km}, mb4.5, ML3.3, MS3.2, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.33**	**302**	eP	Pn	06 10 19.9	-0.5
BESP				eS	Sn	06 10 40.9	+3.5
SCPH	**Surigao**	**1.56**	**225**	eP	Pn	06 10 22.9	-0.7
SCPH				eS	Sn	06 10 42.5	-0.6
PLP	**Palo**	**1.61**	**279**	eP	Pn	06 10 24.4	0.0
PLP				eS	Sn	06 10 44.1	-0.3
BUTP	**Butuan**	**2.15**	**207**	eP	Pn	06 10 36.8	+4.7
BUTP				eS	Sn	06 10 58.8	+0.7

CNP	**Catarman**	**2.48**	**310**	*e*P	Pn	06 10 36.2	-0.6
CNP				*e*S	Sn	06 11 06.4	-0.1
BUKP	**Musuan**	**3.36**	**207**	*e*P	Pn	06 10 58.5	+9.1
GUIM	**Jordan**	**3.95**	**266**	*e*P	Pn	06 10 58.1	+0.4

CASC 17 06:14:02.9±2.1**, 14.47N×91.41W, MD3.9, 3C-2D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.97**	**108**	*e*P	Pb	06 14 22.9	+0.6
IXG				*e*S	Sg	06 14 35.7	+0.4
RBDL	**Robledal**	**1.71**	**102⇑**	*e*P	Pn	06 14 35.1	+0.9
MRL	**Marmol**	**1.77**	**70**	*e*P	Pn	06 14 34.6	-0.4
RTR	**El Retiro**	**1.81**	**108⇓**	*e*P	Pn	06 14 35.7	+0.2
SBLS	**San Blas**	**1.84**	**110**	*e*P	Pn	06 14 35.4	-0.7
SBLS				*e*S	Sn	06 15 02.8	+2.3
SNJE	**San Jose**	**1.85**	**109⇓**	*e*P	Pn	06 14 36.2	0.0
SNJE				*e*S	Sn	06 15 02.5	+1.9
BOQS	**Boqueron**	**2.19**	**109**	*e*P	Pn	06 14 40.7	-0.4
BOQS				*e*S	Sn	06 15 10.0	+0.7
LFU	**La Fuente**	**2.34**	**108⇑**	*e*P	Pn	06 14 42.9	-0.3
LFRS	**El Faro**	**2.43**	**110**	*e*P	Pn	06 14 43.8	-0.6
LFRS				*e*S	Sn	06 15 16.1	+0.8
LCBS	**La Ceiba**	**2.50**	**109⇑**	*e*P	Pn	06 14 45.6	+0.2

BJI ***17*** *06:21:40.2, 40.80N×126.60W, h10^{km}, mB6.3, mb5.6, Ms6.7, Msz6.4*

CRAAG ***17*** *06:21:40.9, 40.74N×126.48W, Mw6.6*

IDC ***17*** *06:21:40.1±0.5, 40.78N×126.52W, mb5.5/22, mb1 5.6/30, mb1mx5.6/30, mbtmp5.5/30, ML4.9/5, MS6.4/31, Ms1 6.4/31, ms1mx6.4/35, Error ellipse: s-maj=9.4km s-min=7.7km az=23.0*

MOS ***17*** *06:21:41.0±0.9, 40.77N×126.49W, h10^{km}, mb6.4/114, MS6.6/63, Error ellipse: s-maj=5.0km s-min=3.4km az=67.0*

HRVD ***17*** *06:21:42.3±0.1, 40.64N×126.76W, h16^{km}, MW6.6/79, Centroid moment Tensor Solution. LP body waves: s76,c196;Mantle waves: s79,c400; Half duration: 5^{s}1 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.01±.01; $M_{\theta\theta}$-0.77±.01; $M_{\phi\phi}$0.78±.01; $M_{r\theta}$0.09±.02; $M_{\theta\phi}$-0.82±.01; $M_{\phi r}$0.14±.02; Best double couple: $M_0$1.141×10^{19} NP1: ϕ_s292°,δ82°,λ-179°. NP2:ϕ_s202°,δ89°,λ-8°. Principal axes: T 1.143, Plg5°, Azm247°; N -.004, Plg82°, Azm13°; P -1.139, Plg7°, Azm156°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***17*** *06:21:42.6±0.1, 40.77N×126.57W, h12^{km}, mb6.2/246, ME7.2, MS6.6/118, MW6.6, MW6.6(BRK) Error ellipse: s-maj=3.3km s-min=2.0km az=205.0 Broadband fault plane solution: P waves. NP1:ϕ_s295°,δ89°,λ-173°. NP2: ϕ_s205°,δ83°,λ-1°. Principal axes: T Plg4°, Azm70°; N Plg0°, Azm0°; P Plg6°, Azm160°; Moment Tensor Solution. s43 Moment tensor: Scale 10^{18} Nm; M_{rr}-0.04; $M_{\theta\theta}$-6.67; $M_{\phi\phi}$6.71; $M_{r\theta}$-0.04; $M_{\theta\phi}$-6.75; $M_{\phi r}$-2.69; Best double couple: $M_0$9.9×10^{18} NP1:ϕ_s112°,δ76°,λ175°. NP2:ϕ_s203°,δ85°,λ15°. Principal axes: T 10.1, Plg14°, Azm68°; N -.5, Plg75°, Azm221°; P -9.6, Plg7°, Azm337°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [III] at Aptos, Arcata, Bayside, Burlingame, Crescent City, Daly City, Emeryville, Eureka, Felton, Ferndale, Garberville, Los Gatos, Millbrae, Redwood City, San Bruno, San Francisco, San Mateo, Santa Cruz, South San Francisco and Trinidad. Also felt [III] at Grants Pass, Oregon. Felt from southwestern Oregon south as far as the San Francisco Bay area.

BGS ***17*** *06:21:47.6±1.4, 40.91N×124.33W, h10^{km}, mb6.0*

ISC 17 06:21:41.4±0.1**, 40.75N**±0.02×**126.47W**±0.02**, h12**^{km}**, (h16**^{km}±1.9^{km}**:pP-P), n1175,** σ**1^{s}08**/1107**, mb6.1**/301**, MS6.5**/162**, 176C-62D, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRMB	**Red Mountain**	**2.08**	**68**	*e*Pn	**Pn**	**06 22 15.5**	**-1.2**
KHMM	**Horse Mountain**	**2.09**	**86**	*e*Pn	**Pn**	**06 22 15.5**	**-1.2**
KBO	**Bosley Butte**	**2.23**	**48**	*e*Pn	**Pn**	**06 22 18.2**	**-0.6**
KEBM	**Edson Butte**	**2.65**	**36**	*e*Pn	**Pn**	**06 22 23.9**	**-1.0**
WDC	**Whiskeytown Da**	**3.00**	**92⇑**	*e*P	**Pn**	**06 22 28.1**	**-1.6**
YBH	**Yreka Blue Hor**	**3.00**	**70**	P	**Pn**	**06 22 28.8**	**-1.0**
YBH						06 23 08.4	
YBH				smax			
	comp=N,828nm,0.3s						
YBH				MLR	MLR		
	comp=Z,153µm,20.8s						
YBH	**Yreka Blue Hor**	**3.00**	**70**	Pn	**Pn**	**06 22 28.8**	**-1.0**
	comp=Z,4µm,0.3s,baz=272,slow=9.0,SNR=1317						
YBH				Sn	**Sn**	**06 23 08.4**	**+2.4**
	comp=Z,828nm,0.3s,baz=74,slow=18,SNR=2.0						
YBH				LR	LR	06 23 34.7	
	comp=Z,1153µm,20.8s,baz=210,slow=38						
YBH	**Yreka Blue Hor**	**3.00**	**70⇑**	*e*Pn	**Pn**	**06 22 29.7**	**-0.1**
HOPS	**Hopland**	**3.15**	**123**	*e*Pn	**Pn**	**06 22 29.0**	**-3.0**
HUMO	**Hull Mountain**	**3.22**	**54⇑**	*e*Pn	**Pn**	**06 22 32.6**	**-0.3**
NSHM	**Saint Helena R**	**3.73**	**126**	*e*Pn	**Pn**	**06 22 38.2**	**-1.9**
SAC	**San Andreas**	**4.47**	**134**	*e*Pn	**Pn**	**06 22 46.4**	**-4.3**
COR	**Corvallis**	**4.49**	**30**	Pn	**Pn**	**06 22 50.1**	**-0.8**
COR	**Corvallis**	**4.49**	**30**	*e*Pn	**Pn**	**06 22 49.5**	**-1.4**
BEKR	**Beckwourth**	**4.76**	**99**	*e*Pn	**Pn**	**06 22 53.2**	**-1.6**
MOD	**Modoc**	**4.79**	**74**	*e*Pn	**Pn**	**06 22 53.8**	**-1.4**
WCN	**Washoe City**	**5.36**	**104**	*e*P	**Pn**	**06 23 01.7**	**-1.5**
CMB	**Columbia Colle**	**5.44**	**118**	P	**Pn**	**06 23 03.1**	**-1.3**
CMB				pmax	pmax		
	comp=Z,180nm,1.3s						
CMB	**Columbia Colle**	**5.44**	**118**	*e*Pn	**Pn**	**06 23 03.0**	**-1.4**
PAHR	**Pah Rah Range**	**5.53**	**99**	*e*Pn	**Pn**	**06 23 04.0**	**-1.6**
SAO	**San Andreas Ge**	**5.59**	**134**	*e*Pn	**Pn**	**06 23 01.1**	**-5.5**
LRV	**Little Rabbit**	**6.08**	**134**	*e*Pn	**Pn**	**06 23 08.6**	**-4.8**
WVOR	**Wild Horse Val**	**6.11**	**71**	*e*P	**Pn**	**06 23 11.8**	**-2.0**
OMM	**Old Mammoth Mi**	**6.60**	**116**	*e*Pn	**Pn**	**06 23 20.2**	**-0.6**
NVAR	**Mina Array Bea**	**6.72**	**108**	Pn	**Pn**	**06 23 20.3**	**-2.2**
	comp=Z,15nm,0.3s,baz=283,slow=15,SNR=151						
NVAR				LR	LR	06 25 30.0	
	comp=Z,195µm,19.6s,baz=185,slow=34						
MNV	**Mina**	**6.83**	**107**	P	**Pn**	**06 23 22.2**	**-1.8**
MNV				pmax	pmax		
	comp=Z,3µm,1.6s						
MNV	**Mina**	**6.83**	**107**	*e*Pn	**Pn**	**06 23 21.8**	**-2.2**
MTUM	**Tungsten Hills**	**7.03**	**116**	*e*Pn	**Pn**	**06 23 26.7**	**-0.1**
BMN	**Battle Mountai**	**7.05**	**90**	P	**Pn**	**06 23 26.1**	**-1.0**
BMN	**Battle Mountai**	**7.05**	**90**	*e*Pn	**Pn**	**06 23 25.8**	**-1.3**
OCWA	**Octopus Mounta**	**7.18**	**12**	*e*Pn	**Pn**	**06 23 28.3**	**-0.7**
TPH	**Tonopah**	**7.64**	**107**	P	**Pn**	**06 23 34.0**	**-1.4**
TPH	**Tonopah**	**7.64**	**107**	*e*Pn	**Pn**	**06 23 32.9**	**-2.5**
BMO	**Blue Mountains**	**7.89**	**56⇑**	*e*Pn	**Pn**	**06 23 38.4**	**-0.4**
	comp=Z,2µm,1.5s						
PGC	**Sidney**	**8.18**	**14**	*e*Pn	**P**	**06 23 42.2**	**-0.7**
ELK	**Elko**	**8.53**	**86**	P	**P**	**06 23 48.3**	**+0.6**
ELK				pmax	pmax		
	comp=Z,2µm,1.6s						
ELK	**Elko**	**8.53**	**86**	Pn	**P**	**06 23 46.0**	**-1.8**
	comp=Z,1.5nm,0.3s,baz=272,slow=13,SNR=73						
ELK				LR	LR	06 27 13.8	
	comp=Z,246µm,21.1s,baz=262,slow=39						
ELK	**Elko**	**8.53**	**86**	*e*Pn	**P**	**06 23 48.0**	**+0.3**
TRCR	**Troy Canyon**	**8.75**	**102**	*e*Pn	**P**	**06 23 49.4**	**-1.4**
MWC	**Mount Wilson**	**9.34**	**132**	*e*Pn	**P**	**06 23 53.9**	**-5.0**
HLID	**Hailey**	**9.39**	**69**	*e*Pn	**P**	**06 23 57.7**	**-1.9**
NEW	**Newport**	**10.04**	**39**	P	**P**	**06 24 06.8**	**-1.7**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.3s						
NEW				MLR	MLR		
	comp=Z,402µm,20.2s						
NEW	**Newport**	**10.04**	**39**	Pn	**P**	**06 24 06.8**	**-1.8**
	comp=Z,3.1nm,0.3s,baz=208,slow=14,SNR=42						
NEW				LR	LR	06 28 03.8	
	comp=Z,402µm,20.2s,baz=226,slow=38						
NEW	**Newport**	**10.04**	**39**	*e*Pn	**P**	**06 24 06.2**	**-2.3**
BGU	**Big Grassy Mou**	**10.19**	**85**	*e*Pn	**P**	**06 24 10.4**	**-0.3**
HVU	**Hansel Valley**	**10.37**	**80**	P	**P**	**06 24 13.1**	**+0.1**
HVU	**Hansel Valley**	**10.37**	**80**	*e*Pn	**P**	**06 24 12.9**	**-0.1**
NEN	**Nelson**	**10.47**	**115**	*e*Pn	**P**	**06 24 14.8**	**+0.3**
ARUT	**Antelope Range**	**10.53**	**102**	*e*P	**P**	**06 24 15.4**	**+0.1**
LDFC	**Landfair**	**10.61**	**119**	*e*Pn	**P**	**06 24 15.2**	**-1.2**
SPUT	**South Promonto**	**10.61**	**82**	*e*Pn	**P**	**06 24 16.5**	**+0.1**
PFO	**Pinyon Flat Ob**	**10.71**	**129**	*e*Pn	**P**	**06 24 13.0**	**-4.7**
MCMT	**McKenzie Canyo**	**10.81**	**63⇑**	*e*P	**P**	**06 24 18.4**	**-0.6**
MSO	**Missoula**	**10.90**	**52⇑**	*e*P	**P**	**06 24 19.8**	**-0.5**
NOQ	**North Oquirrh**	**10.90**	**86**	*e*P	**P**	**06 24 20.2**	**-0.1**
NLU	**North Lily Min**	**11.02**	**89**	*e*P	**P**	**06 24 22.1**	**+0.2**
CTU	**Camp Tracy**	**11.18**	**86**	*e*P	**P**	**06 24 23.4**	**-0.7**
MVU	**Marysvale**	**11.23**	**97**	*e*P	**P**	**06 24 23.8**	**-1.1**
MSU	**Marysvale**	**11.25**	**97**	P	**P**	**06 24 25.3**	**+0.2**
MSU	**Marysvale**	**11.25**	**97**	*e*P	**P**	**06 24 24.8**	**-0.3**
BAR	**Barrett**	**11.25**	**133**	*e*P	**P**	**06 24 19.1**	**-6.1**
HWUT	**Hardware Ranch**	**11.27**	**81**	*e*P	**P**	**06 24 25.3**	**-0.1**
MPU	**Maple Canyon**	**11.35**	**89**	*e*P	**P**	**06 24 26.3**	**-0.1**
CHMT	**Chamberlain Mo**	**11.36**	**53**	*e*P	**P**	**06 24 25.8**	**-0.7**
TCUT	**Toone Canyon**	**11.41**	**83**	*e*P	**P**	**06 24 27.5**	**+0.3**
JLU	**Jordanelle**	**11.41**	**86**	*e*P	**P**	**06 24 26.8**	**-0.5**
BBB	**Bella Bella**	**11.49**	**355**	Pn	**P**	**06 24 26.2**	**-2.1**
	comp=Z,7.1nm,0.3s,baz=182,slow=13,SNR=61						
BBB				Sn	**S**	**06 26 39.8**	**+2.2**
	baz=113,slow=15,SNR=1.0						
BBB				LR	LR	06 27 59.1	
	comp=Z,317µm,19.9s,baz=179,slow=33						
BBB	**Bella Bella**	**11.49**	**355**	Pn	**P**	**06 24 26.2**	**-2.1**
BBB				Sn	**S**	**06 26 39.8**	**+2.2**
BBB				LR	LR	06 27 59.1	
RRI2	**Red Ridge**	**11.56**	**72**	*e*P	**P**	**06 24 29.7**	**+0.3**
DAU	**Daniels Canyon**	**11.58**	**87**	P	**P**	**06 24 30.3**	**+0.7**
DAU	**Daniels Canyon**	**11.58**	**87**	*e*P	**P**	**06 24 30.1**	**+0.5**
AHID	**Auburn Hatcher**	**11.66**	**75**	*e*P	**P**	**06 24 30.4**	**-0.2**
QLMT	**Earthquake Lak**	**11.78**	**65**	*e*P	**P**	**06 24 31.6**	**-0.6**
TMUT	**Trail Mountain**	**11.80**	**92**	*e*P	**P**	**06 24 31.4**	**-1.1**
TPAW	**Teton Pass**	**11.85**	**72**	*e*P	**P**	**06 24 33.7**	**+0.5**
BOZ	**Bozeman (W)**	**11.88**	**61**	P	**P**	**06 24 32.3**	**-1.4**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BOZ	**Bozeman (W)**	**11.88**	**61⇑**	*e*P	**P**	**06 24 32.2**	**-1.4**
REDW	**Red Top Meadow**	**11.90**	**72**	*e*P	**P**	**06 24 34.3**	**+0.3**
IMW	**Indian Meadow**	**11.92**	**70⇑**	*e*P	**P**	**06 24 35.0**	**+0.9**
SNOW	**Snow King Moun**	**11.99**	**72**	*e*P	**P**	**06 24 35.5**	**+0.4**
MOOW	**Moose Ponds**	**12.04**	**70**	*e*P	**P**	**06 24 36.1**	**+0.4**
YMR	**Madison River**	**12.06**	**66**	*e*P	**P**	**06 24 36.0**	**0.0**
YFT	**Old Faithful**	**12.10**	**67**	*e*P	**P**	**06 24 37.5**	**+0.9**
LOHW	**Long Hollow**	**12.12**	**71**	*e*P	**P**	**06 24 37.2**	**+0.3**
HRY	**Holter Researc**	**12.14**	**56**	*e*P	**P**	**06 24 36.4**	**-0.8**
YNR	**Norris Junctio**	**12.27**	**66**	*e*P	**P**	**06 24 38.9**	**+0.1**
SRU	**San Rafael**	**12.36**	**92**	*e*P	**P**	**06 24 41.2**	**+1.1**
LKWY	**Lake**	**12.43**	**67**	P	**P**	**06 24 42.7**	**+1.7**
LKWY				pmax	pmax		
	comp=Z,6µm,1.6s						
LKWY	**Lake**	**12.43**	**67**	*e*P	**P**	**06 24 42.3**	**+1.3**
BW06	**Boulder Array**	**12.79**	**75⇑**	*e*P	**P**	**06 24 45.4**	**-0.5**
PDAR	**Pinedale Array**	**12.79**	**75**	Pn	**P**	**06 24 46.0**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=260,slow=9.0,SNR=222						
PDAR				LR	LR	06 29 57.3	
	comp=Z,543µm,21.3s,baz=261,slow=39						
PDAR				PcP	PcP	06 30 20.4	-1.1
	comp=Z,0.2nm,0.3s,baz=207,slow=2.0,SNR=3.3						
WUAZ	**Wupatki**	**12.98**	**109⇑**	*e*P	**P**	**06 24 49.9**	**+1.4**
GCMT	**Greycliff**	**13.24**	**62**	*e*P	**P**	**06 24 50.6**	**-1.1**
PV10	**Paradox Valley**	**13.66**	**94**	*e*P	**P**	**06 24 58.6**	**+1.3**
PV01	**Paradox Valley**	**14.08**	**95**	*e*P	**P**	**06 25 03.7**	**+0.8**
RWWY	**Rawlins**	**14.53**	**80**	*e*P	**P**	**06 25 07.1**	**-1.7**
	comp=Z,4µm,1.6s						
TUC	**Tucson**	**15.15**	**119**	Pn	**P**	**06 25 17.3**	**+0.4**
TUC	**Tucson**	**15.15**	**119⇓**	*e*P	**P**	**06 25 17.3**	**+0.3**
TUC				pmax	pmax		
	comp=Z,2µm,1.6s						
TUC	**Tucson**	**15.15**	**119⇓**	*e*P	**P**	**06 25 17.3**	**+0.3**
	comp=Z,2µm,1.6s						
EDM	**Edmonton**	**15.32**	**31**	*e*P	**P**	**06 25 16.9**	**-2.1**
PHWY	**Pilot Hill**	**15.87**	**81⇑**	*e*P	**P**	**06 25 24.3**	**-1.9**
ISCO	**Idaho Springs**	**15.95**	**87**	*e*P	**P**	**06 25 27.1**	**-0.1**
ISCO				pmax	pmax		
	comp=Z,960nm,1.4s						
ISCO	**Idaho Springs**	**15.95**	**87**	*e*P	**P**	**06 25 26.7**	**-0.5**
	comp=Z,963nm,1.4s						
SDCO	**Great Sand Dun**	**16.52**	**94⇑**	*e*P	**P**	**06 25 35.8**	**+1.3**
	comp=Z,2µm,1.3s						
LAZ	**Ladron**	**16.57**	**106**	*e*P	**P**	**06 25 36.4**	**+1.2**
LENM	**Lemitar**	**16.81**	**107**	*e*P	**P**	**06 25 40.7**	**+2.6**
ANMO	**Albuquerque**	**16.82**	**104**	Pn	**P**	**06 25 39.2**	**+0.9**
ANMO	**Albuquerque**	**16.82**	**104**	Pn	**P**	**06 25 39.3**	**+1.0**
	baz=302,slow=11,SNR=101						
ANMO				LR	LR	06 31 40.1	
	comp=Z,125µm,19.9s,slow=36						
ANMO	**Albuquerque**	**16.82**	**104**	*e*P	**P**	**06 25 38.9**	**+0.5**
	comp=Z,1µm,1.4s						
RSSD	**Black Hills**	**16.89**	**71⇑**	*e*P	**P**	**06 25 36.2**	**-2.9**
RSSD				pmax	pmax		
	comp=Z,2µm,1.5s						
RSSD	**Black Hills**	**16.89**	**71⇑**	*e*P	**P**	**06 25 36.2**	**-2.9**
	comp=Z,2µm,1.5s						
LPM	**Los Pinos Moun**	**16.99**	**106**	*e*P	**P**	**06 25 43.0**	**+2.6**
BNM	**Barren Site**	**17.07**	**106**	*e*P	**P**	**06 25 43.6**	**+2.2**
SIT	**Sitka**	**17.30**	**344**	P	**P**	**06 25 43.5**	**-0.6**
SIT				pmax	pmax		
	comp=Z,5µm,1.9s						
SIT	**Sitka**	**17.30**	**344**	*e*P	**P**	**06 25 43.1**	**-1.1**
	comp=Z,5µm,1.9s						
DGMT	**Dagmar**	**17.60**	**57**	*e*P	**P**	**06 25 46.6**	**-1.4**
	comp=Z,21µm,1.7s						
DLBC	**Dease Lake**	**17.85**	**354**	P	**P**	**06 25 50.9**	**-0.1**
	comp=Z,2.2nm,0.3s,baz=179,slow=12,SNR=104						
DLBC				S	**S**	**06 29 20.7**	**+13**
	comp=Z,0.1nm,0.3s,baz=41,slow=19,SNR=1.6						
DLBC				LR	LR	06 31 49.2	
	comp=Z,167µm,20.1s,baz=170,slow=34						
DLBC	**Dease Lake**	**17.85**	**354**	*e*P	**P**	**06 25 51.5**	**+0.5**
MNTX	**Cornudas Mount**	**19.23**	**111**	*e*P	**P**	**06 26 08.7**	**+0.6**
	comp=Z,2.3nm,0.3s						
CPRX	**Cap Rock**	**19.62**	**106**	*e*P	**P**	**06 26 12.9**	**+0.3**
GDL2	**Guadalupe Moun**	**19.68**	**109**	*e*P	**P**	**06 26 14.1**	**+0.8**
CLNB	**Carlsbad**	**20.00**	**108**	*e*P	**P**	**06 26 17.5**	**+0.7**
AMTX	**Amarillo**	**20.41**	**99**	*e*P	**P**	**06 26 21.3**	**+0.3**
	comp=Z,736nm,0.9s						
AMTX				LR	LR		
	comp=Z,90µm,20.0s,MS6.1						
CBKS	**Cedar Bluff**	**20.61**	**87**	P	**P**	**06 26 22.5**	**-0.6**
CBKS				pmax	pmax		
	comp=Z,6µm,1.7s						
CBKS	**Cedar Bluff**	**20.61**	**87**	*e*P	**P**	**06 26 22.4**	**-0.7**
	comp=Z,7µm,1.7s						
CBKS				LR	LR		
	comp=Z,137µm,19.0s,MS6.3						
LPIG	**La Paz**	**21.43**	**136⇓**	*i*P	**P**	**06 26 32.1**	**+0.5**
FFC	**Flin Flon**	**21.45**	**41⇑**	*e*P	**P**	**06 26 30.6**	**-0.9**
FFC				pmax	pmax		
	comp=Z,10µm,1.7s,mb6.9						
FFC	**Flin Flon**	**21.45**	**41⇑**	*e*P	**P**	**06 26 30.6**	**-0.9**
	comp=Z,10µm,1.7s,mb6.9						
LTX	**Lajitas**	**21.81**	**114**	P	**P**	**06 26 36.7**	**+1.4**
LTX				pmax	pmax		
	comp=Z,3µm,1.6s,mb6.5						
LTX	**Lajitas**	**21.81**	**114**	*e*P	**P**	**06 26 36.6**	**+1.3**
	comp=Z,3µm,1.6s,mb6.5						
LTX				LR	LR		
	comp=Z,151µm,20.0s,MS6.4						
TXAR	**Lajitas Array**	**21.81**	**114**	P	**P**	**06 26 35.7**	**+0.4**
	comp=Z,205nm,0.9s,mb5.6,baz=297,slow=7.4,SNR=575						
TXAR				PcP	PcP	06 30 33.1	-2.8
	comp=Z,7.6nm,0.7s,baz=237,slow=0.8,SNR=4.9						
TXAR				S	**S**	**06 30 42.5**	**+11**
	comp=Z,6.4nm,0.8s,baz=306,slow=15,SNR=5.2						
TXAR				LR	LR	06 35 47.9	
	comp=Z,134µm,19.9s,MS6.3,baz=225,slow=39						
TXAR	**Lajitas Array**	**21.81**	**114**	P	**P**	**06 26 35.7**	**+0.4**
TXAR				PcP	PcP	06 30 33.1	-2.8
TXAR				S	**S**	**06 30 42.5**	**+11**
TXAR				LR	LR	06 35 47.9	
WMOK	**Wichita Mounta**	**22.66**	**96**	P	**P**	**06 26 44.0**	**+0.4**
WMOK				pmax	pmax		
	comp=Z,190nm,0.7s,mb5.6						
WMOK	**Wichita Mounta**	**22.66**	**96**	*e*P	**P**	**06 26 43.7**	**0.0**
	comp=Z,195nm,0.7s,mb5.6						
WMOK				LR	LR		
	comp=Z,107µm,21.0s,MS6.3						
YKA	**Yellowknife Ar**	**22.91**	**14**	P	**P**	**06 26 45.2**	**-0.6**
	comp=Z,206nm,1.0s,mb5.5,baz=202,slow=9.8,SNR=61						
YKA				PcP	PcP	06 30 35.5	-2.3
	comp=Z,6.3nm,0.8s,baz=204,slow=2.1,SNR=4.2						
YKA				S	**S**	**06 30 57.8**	**+7.0**
	comp=Z,3.4nm,0.7s,baz=191,slow=21,SNR=2.6						
YKA	**Yellowknife Ar**	**22.91**	**14**	P	**P**	**06 26 45.2**	**-0.6**
YKA				PcP	PcP	06 30 35.5	-2.3
YKA				S	**S**	**06 30 57.9**	**+7.0**
KSU1	**Kansas State U**	**22.91**	**84**	*e*P	**P**	**06 26 46.8**	**+0.7**
YKW3	**Yellowknife Ar**	**22.97**	**14**	*e*P	**P**	**06 26 45.8**	**-0.6**
EYAK	**Cordova Ski Ar**	**23.11**	**335**	*e*P	**P**	**06 26 48.3**	**+0.5**
ULM	**Lac du Bonnet**	**23.31**	**56**	P	**P**	**06 26 49.8**	**-0.1**
	comp=Z,1µm,1.2s,mb6.2,baz=261,slow=10,SNR=318						
ULM				S	**S**	**06 31 07.6**	**+10**
	comp=Z,12nm,0.9s,baz=252,slow=19,SNR=1.7						
ULM				LR	LR	06 36 29.8	
	comp=Z,285µm,18.8s,MS6.8,baz=260,slow=38						
ULM	**Lac du Bonnet**	**23.31**	**56**	*e*P	**P**	**06 26 49.8**	**0.0**
	comp=Z,2µm,1.5s,mb6.2						
ULM				LR	LR		
	comp=Z,380µm,20.0s,MS6.8						
DIV	**Divide**	**23.57**	**336**	*e*P	**P**	**06 26 53.3**	**+1.0**
	comp=Z,3µm,1.6s,mb6.5						
DIV				LR	LR		
	comp=Z,753µm,19.0s,MS7.2						
KDAK	**Kodiak Island**	**23.86**	**324⇓**	*e*P	**P**	**06 26 55.8**	**+0.7**
	comp=Z,2µm,1.7s,mb6.2						
KDAK				LR	LR		
	comp=Z,13µm,21.0s						
MAIG	**Mazatlaan**	**24.32**	**130⇓**	*i*P	**P**	**06 26 59.6**	**-0.3**
SLKM	**Skilak Lake**	**24.61**	**331**	P	**P**	**06 27 03.3**	**+0.9**
SLKM	**Skilak Lake**	**24.61**	**331**	*e*P	**P**	**06 27 02.7**	**+0.4**
SML	**Sawmill**	**24.89**	**335**	P	**P**	**06 27 05.5**	**+0.4**
SML	**Sawmill**	**24.89**	**335**	*e*P	**P**	**06 27 05.2**	**+0.1**
FIB	**Fire Island**	**25.04**	**333**	*e*P	**P**	**06 27 06.8**	**+0.3**
	comp=Z,1µm,1.6s,mb6.2						
FIB				LR	LR		
	comp=Z,134µm,21.0s,MS6.4						
THY	**Trims Highway**	**25.39**	**340**	*e*P	**P**	**06 27 10.5**	**+0.7**
RSO	**Redoubt South**	**25.53**	**329**	*e*P	**P**	**06 27 10.9**	**-0.2**
SPU	**Mount Spurr**	**25.73**	**331⇓**	*e*P	**P**	**06 27 13.0**	**+0.1**
EYMN	**Ely**	**25.86**	**62⇑**	*e*P	**P**	**06 27 14.0**	**-0.3**
	comp=Z,4µm,1.5s,mb6.7						
EYMN				LR	LR		
	comp=Z,403µm,19.0s,MS7.0						
ILAR	**Eielson Array**	**26.79**	**341**	P	**P**	**06 27 22.4**	**-0.4**
	comp=Z,61nm,0.8s,mb5.2,baz=157,slow=7.8,SNR=427						
ILAR				PcP	PcP	06 30 44.0	-2.2
	comp=Z,12nm,0.7s,baz=183,slow=2.1,SNR=11						
ILAR				LR	LR	06 36 18.3	
	comp=Z,120µm,21.0s,MS6.4,baz=168,slow=33						
JFWS	**Jewell Farm**	**26.95**	**73**	P	**P**	**06 27 24.7**	**+0.3**
JFWS				pmax	pmax		
	comp=Z,9µm,1.8s,mb7.0						
JFWS	**Jewell Farm**	**26.95**	**73**	*e*P	**P**	**06 27 24.4**	**0.0**
	comp=Z,9µm,1.8s,mb7.0						
JFWS				LR	LR		
	comp=Z,496µm,21.0s,MS7.0						
NATX	**Nacogdoches**	**27.06**	**99**	*e*P	**P**	**06 27 26.4**	**+0.9**
	comp=Z,3µm,1.7s,mb6.5						
NATX				LR	LR		
	comp=Z,146µm,19.0s,MS6.6						
FCC	**Fort Churchill**	**27.21**	**38**	P	**P**	**06 27 25.6**	**-1.1**
FCC	**Fort Churchill**	**27.21**	**38**	*e*P	**P**	**06 27 25.5**	**-1.1**
	comp=Z,487nm,1.0s,mb6.0						
CCM	**Cathedral Cave**	**27.25**	**84⇑**	*e*P	**P**	**06 27 26.8**	**-0.4**
CCM				pmax	pmax		
	comp=Z,2µm,1.6s,mb6.4						
CCM				MLR	MLR		
	comp=Z,25µm,20.0s,MS5.8						
CCM	**Cathedral Cave**	**27.25**	**84⇑**	*e*P	**P**	**06 27 26.8**	**-0.4**
	comp=Z,2µm,1.6s,mb6.4						
CCM				LR	LR		
	comp=Z,25µm,20.0s,MS5.8						
UALR	**University of**	**27.52**	**91**	*e*P	**P**	**06 27 29.0**	**-0.7**
	comp=Z,1µm,1.8s,mb6.2						
SLM	**Saint Louis**	**27.84**	**82**	P	**P**	**06 27 32.2**	**-0.4**
SLM				pmax	pmax		
	comp=Z,580nm,1.0s,mb6.2						
SLM	**Saint Louis**	**27.84**	**82**	*e*P	**P**	**06 27 31.9**	**-0.7**
	comp=Z,577nm,1.0s,mb6.2						
INK	**Inuvik**	**27.87**	**354**	P	**P**	**06 27 31.4**	**-1.2**
INK				pmax	pmax		
	comp=Z,28nm,1.0s						
INK				MLR	MLR		
	comp=Z,36µm,20.5s						
INK	**Inuvik**	**27.87**	**354**	P	**P**	**06 27 31.4**	**-1.2**
	comp=Z,28nm,1.0s,baz=171,slow=11,SNR=21						
INK				LR	LR	06 37 43.3	
	comp=Z,36µm,20.5s,MS5.9,baz=171,slow=35						
INK	**Inuvik**	**27.87**	**354**	*e*P	**P**	**06 27 31.2**	**-1.3**
	comp=Z,68nm,1.0s,mb5.2						
FVM	**French Village**	**27.89**	**84**	P	**P**	**06 27 32.3**	**-0.7**
FVM				pmax	pmax		
	comp=Z,3µm,2.2s,mb6.5						
FVM	**French Village**	**27.89**	**84**	*e*P	**P**	**06 27 32.1**	**-0.9**
	comp=Z,3µm,2.2s,mb6.5						
CJM	**Chamela**	**28.01**	**133⇓**	*i*P	**P**	**06 27 33.6**	**-0.7**
SFJM	**Santa Fe**	**28.39**	**128⇑**	*i*P	**P**	**06 27 38.0**	**+0.3**
HBAR	**Harrisburg**	**28.51**	**89**	*e*P	**P**	**06 27 38.3**	**-0.3**
PARMO	**Parma**	**28.81**	**86**	*e*P	**P**	**06 27 40.2**	**-1.1**
GNAR	**Gosnell**	**28.85**	**88**	*e*P	**P**	**06 27 41.6**	**-0.1**
	comp=Z,3µm,1.6s,mb6.7						
COLM	**Colima**	**29.03**	**131**	*e*P	**P**	**06 27 43.0**	**-0.5**
MET	**Memphis--Engin**	**29.22**	**89**	*e*P	**P**	**06 27 44.2**	**-0.9**
GLAT	**Glass**	**29.30**	**87**	*e*P	**P**	**06 27 45.1**	**-0.6**
HALT	**Halls**	**29.38**	**87**	*e*P	**P**	**06 27 46.3**	**-0.2**
UTMT	**University of**	**29.59**	**86**	*e*P	**P**	**06 27 47.9**	**-0.5**
	comp=Z,777nm,1.1s,mb6.3						
IMA	**Indian Mountai**	**29.62**	**338**	P	**P**	**06 27 48.0**	**-0.3**
IMA				pmax	pmax		
	comp=Z,2µm,1.5s,mb6.5						
UNV	**Unalaska Valle**	**29.71**	**310**	*e*P	**P**	**06 27 47.0**	**-2.3**
	comp=Z,1µm,1.0s,mb6.6						
UNV				LR	LR		
	comp=Z,273µm,20.0s,MS6.9						
OXF	**Oxford**	**29.85**	**90⇑**	*e*P	**P**	**06 27 50.6**	**-0.1**
OXF				pmax	pmax		
	comp=Z,1µm,1.2s,mb6.5						
OXF				MLR	MLR		
	comp=Z,104µm,19.0s,MS6.5						
OXF	**Oxford**	**29.85**	**90⇑**	*e*P	**P**	**06 27 50.6**	**-0.1**
	comp=Z,1µm,1.2s,mb6.5						
OXF				LR	LR		
	comp=Z,104µm,19.0s,MS6.5						
MOIG	**Morelia**	**30.12**	**127⇓**	*i*P	**P**	**06 27 55.5**	**+2.2**
WVT	**Waverly**	**30.45**	**86**	*e*P	**P**	**06 27 55.2**	**-0.8**
WVT				pmax	pmax		
	comp=Z,1µm,1.8s,mb6.3						
WVT				MLR	MLR		
	comp=Z,45µm,19.0s,MS6.1						
WVT	**Waverly**	**30.45**	**86**	*e*P	**P**	**06 27 55.2**	**-0.8**
	comp=Z,1µm,1.8s,mb6.3						
WVT				LR	LR		
	comp=Z,45µm,19.0s,MS6.1						
BLO	**Bloomington**	**30.48**	**80**	P	**P**	**06 27 55.2**	**-1.1**
BLO				pmax	pmax		
	comp=Z,3µm,2.1s,mb6.7						
BLO	**Bloomington**	**30.48**	**80**	*e*P	**P**	**06 27 55.1**	**-1.2**
	comp=Z,3µm,2.1s,mb6.7						
PLAL	**Pickwick Lake**	**30.68**	**88**	*e*P	**P**	**06 27 57.4**	**-0.6**
	comp=Z,2µm,1.6s,mb6.8						
PLAL				LR	LR		
	comp=Z,44µm,20.0s,MS6.1						
WCI	**Wyandotte Cave**	**30.93**	**81**	*e*P	**P**	**06 27 59.3**	**-0.9**
WCI				pmax	pmax		
	comp=Z,2µm,1.9s,mb6.6						
WCI				MLR	MLR		
	comp=Z,56µm,21.0s,MS6.2						
WCI	**Wyandotte Cave**	**30.93**	**81**	*e*P	**P**	**06 27 59.2**	**-0.9**
	comp=Z,2µm,1.9s,mb6.6						
WCI				LR	LR		
	comp=Z,56µm,21.0s,MS6.2						
NIKO	**Nikolski**	**30.99**	**308**	*e*P	**P**	**06 27 58.0**	**-2.5**
ZIIG	**Zihuatanejo**	**31.56**	**130⇓**	*i*P	**P**	**06 28 05.8**	**-0.2**
UNM	**Universidad Na**	**31.63**	**124**	*i* P	**P**	**06 28 08.1**	**+1.5**
UNM				*i*		06 28 09.0	
UNM	**Universidad Na**	**31.63**	**124**	*i* P	**P**	**06 28 08.1**	**+1.6**
AAM	**Ann Arbor**	**31.85**	**73**	*e*P	**P**	**06 28 07.8**	**-0.5**
AAM				pmax	pmax		
	comp=Z,1µm,1.7s,mb6.5						
AAM	**Ann Arbor**	**31.85**	**73**	*e*P	**P**	**06 28 07.8**	**-0.4**
	comp=Z,1µm,1.7s,mb6.5						
YAIG	**Yautepec**	**32.05**	**125⇓**	*i*P	**P**	**06 28 10.9**	**+0.7**
PLIG	**Platanillo**	**32.13**	**126⇓**	*i*P	**P**	**06 28 11.1**	**+0.2**
PPM	**Popocatepetl**	**32.17**	**124**	*i* P	**P**	**06 28 12.0**	**+0.7**
SWET	**Sewanee**	**32.22**	**87**	*e*P	**P**	**06 28 10.5**	**-1.1**
HKL	**Haleakala**	**32.24**	**241**	P	**P**	**06 28 13.0**	**+1.2**
HKL	**Haleakala**	**32.24**	**241**	*e*P	**P**	**06 28 10.8**	**-1.1**
LRAL	**Lakeview Retre**	**32.28**	**91**	*e*P	**P**	**06 28 11.3**	**-0.8**
	comp=Z,214nm,0.8s,mb6.0						
LRAL				LR	LR		
	comp=Z,190µm,19.0s,MS6.8						
IIB	**San Bernardino**	**32.42**	**124**	*e*P	**P**	**06 28 13.5**	**0.0**

POHA	**Pohakuloa**	**32.44**	**239**	PFAKE		06 28 20.0	+6.4
POHA				LR	LR		
	comp=Z,101µm,22.0s,MS6.5						
CAIG	**El Cayaco**	**32.70**	**129**	⇓*i*P	**P**	**06 28 16.9**	**+1.0**
KKH	**Kailua Kona**	**32.83**	**239**	*e*P	**P**	**06 28 16.9**	**-0.1**
KKH	**Kailua Kona**	**32.83**	**239**	P	**P**	**06 28 16.2**	**-0.8**
KIP	**Kipapa**	**32.92**	**244**	*e*P	**P**	**06 28 16.1**	**-1.7**
KIP				pmax	pmax		
	comp=Z,1µm,1.5s,mb6.5						
KIP				MLR	MLR		
	comp=Z,114µm,22.0s,MS6.5						
KIP	**Kipapa**	**32.92**	**244**	*e*P	**P**	**06 28 16.1**	**-1.7**
	comp=Z,1µm,1.5s,mb6.5						
KIP				LR	LR		
	comp=Z,114µm,22.0s,MS6.5						
HON	**Honolulu**	**32.98**	**244**	P	**P**	**06 28 18.3**	**0.0**
HON	**Honolulu**	**32.98**	**244**	*e*P	**P**	**06 28 17.4**	**-0.9**
ACX	**Acapulco**	**33.05**	**128**	*e*P	**P**	**06 28 20.0**	**+1.0**
LVIG	**Laguna Verde**	**33.12**	**120**	*i* P	**P**	**06 28 19.2**	**-0.3**
CPCT	**Cooper Cave**	**33.20**	**85**	⇑*e*P	**P**	**06 28 19.8**	**-0.3**
TZTN	**Tazewell**	**33.54**	**83**	*e*P	**P**	**06 28 22.2**	**-0.8**
TNA	**Tin City**	**34.08**	**331**	*e*P	**P**	**06 28 26.2**	**-1.3**
	comp=Z,99nm,1.4s,mb5.5						
TNA				LR	LR		
	comp=Z,57µm,19.0s,MS6.3						
PNIG	**Pinotepa**	**34.50**	**126**	⇓*i*P	**P**	**06 28 33.2**	**+1.7**
ALLY	**Alegheny Colle**	**34.55**	**73**	*e*P	**P**	**06 28 31.1**	**-0.6**
SADO	**Sadowa**	**34.60**	**67**	P	**P**	**06 28 31.7**	**-0.4**
	comp=Z,183nm,0.8s,mb6.1,baz=300,slow=9.1,SNR=113						
OXX	**Oaxaca**	**34.85**	**124**	*i* P	**P**	**06 28 36.0**	**+1.5**
VHO	**Vista Hermosa**	**34.85**	**124**	⇓*i*P	**P**	**06 28 35.6**	**+1.1**
FWV	**Forest Hill**	**35.24**	**80**	⇑*e*P	**P**	**06 28 37.2**	**-0.5**
MCWV	**Mont Chateau**	**35.30**	**76**	*e*P	**P**	**06 28 37.5**	**-0.7**
	comp=Z,1µm,1.6s,mb6.6						
MCWV				LR	LR		
	comp=Z,415µm,20.0s,MS7.2						
GSTR	**Great Sitkin T**	**35.35**	**306**	*e*P	**P**	**06 28 36.3**	**-2.2**
ELN	**Prospectdale**	**35.41**	**81**	⇑*e*P	**P**	**06 28 38.3**	**-0.8**
TUIG	**Tuzandepetl**	**35.63**	**120**	*i* P	**P**	**06 28 43.4**	**+2.1**
BLA	**Blacksburg**	**35.66**	**80**	*e*P	**P**	**06 28 41.0**	**-0.2**
	comp=Z,5.2nm,0.4s						
BLA				LR	LR		
	comp=Z,124µm,20.0s,MS6.7						
GENY	**Geneseo**	**35.95**	**70**	*e*P	**P**	**06 28 42.2**	**-1.5**
CMIG	**Matias Romero**	**36.02**	**122**	⇓*e*P	**P**	**06 28 44.4**	**0.0**
JSC	**Jenkinsville**	**36.12**	**85**	P	**P**	**06 28 44.5**	**-0.7**
JSC	**Jenkinsville**	**36.12**	**85**	*e*P	**P**	**06 28 44.2**	**-1.0**
HUIG	**Huatulco**	**36.22**	**125**	*i* P	**P**	**06 28 48.1**	**+1.9**
COW	**Cow Castle Cre**	**36.92**	**87**	*e*P	**P**	**06 28 51.0**	**-0.9**
RES	**Resolute Bay**	**36.97**	**13**	P	**P**	**06 28 52.2**	**+0.3**
RES	**Resolute Bay**	**36.97**	**13**	*e*P	**P**	**06 28 51.5**	**-0.5**
	comp=Z,0.7nm,0.8s						
BINY	**Binghamton**	**37.41**	**71**	*e*P	**P**	**06 28 55.4**	**-0.5**
	comp=Z,3µm,1.7s,mb6.8						
BINY				LR	LR		
	comp=Z,284µm,21.0s,MS7.0						
NHSC	**New Hope**	**37.43**	**87**	*e*P	**P**	**06 28 55.2**	**-1.0**
	comp=Z,1µm,1.4s,mb6.6						
NHSC				LR	LR		
	comp=Z,161µm,19.0s,MS6.8						
TWB	**Tillmans-White**	**37.49**	**87**	*e*P	**P**	**06 28 55.8**	**-0.8**
RGRS	**Roger Stewart**	**37.51**	**87**	*e*P	**P**	**06 28 56.2**	**-0.6**
MSNY	**Massena**	**37.54**	**66**	*e*P	**P**	**06 28 56.4**	**-0.5**
CSU	**Charleston Sou**	**37.57**	**87**	*e*P	**P**	**06 28 56.9**	**-0.4**
CBN	**Corbin**	**37.59**	**77**	*e*P	**P**	**06 28 57.5**	**0.0**
	comp=Z,2µm,1.4s,mb6.6						
CBN				LR	LR		
	comp=Z,320µm,21.0s,MS7.1						
SDMD	**Soldier's Deli**	**37.59**	**75**	*e*P	**P**	**06 28 57.0**	**-0.5**
NCB	**Newcomb**	**38.21**	**67**	*e*P	**P**	**06 29 02.1**	**-0.6**
	comp=Z,2µm,1.2s,mb6.8						
NCB				LR	LR		
	comp=Z,176µm,22.0s,MS6.8						
TEIG	**Tepich**	**38.36**	**111**	P	**P**	**06 29 03.6**	**-0.5**
TEIG				S	**S**	**06 34 59.6**	**+1.6**
CCIG	**Comitan**	**38.40**	**119**	⇓*i*P	**P**	**06 29 07.4**	**+2.9**
FRNY	**Flat Rock**	**38.45**	**66**	*e*P	**P**	**06 29 03.8**	**-0.8**
MIV	**Mineville/With**	**38.67**	**67**	*e*P	**P**	**06 29 06.3**	**-0.2**
ACCN	**Adirondack Com**	**38.75**	**68**	*e*P	**P**	**06 29 06.5**	**-0.7**
DWPF	**Disney**	**38.83**	**95**	*e*P	**P**	**06 29 08.2**	**+0.1**
	comp=Z,1µm,1.6s,mb6.3						
DWPF				LR	LR		
	comp=Z,23µm,20.0s,MS6.0						
BRNJ	**Basking Ridge**	**38.86**	**73**	*e*P	**P**	**06 29 08.6**	**+0.5**
PAL	**Palisades**	**39.24**	**72**	P	**P**	**06 29 11.4**	**+0.1**
PAL				pmax	pmax		
	comp=Z,1µm,1.8s,mb6.4						
PAL	**Palisades**	**39.24**	**72**	*e*P	**P**	**06 29 10.8**	**-0.5**
	comp=Z,1µm,1.8s,mb6.3						
CPNY	**Central Park**	**39.27**	**72**	*e*P	**P**	**06 29 11.5**	**0.0**
HNH	**Hanover**	**39.64**	**67**	⇑*e*P	**P**	**06 29 15.7**	**+1.1**
	comp=Z,107nm,1.4s,mb5.4						
QUA2	**Belchertown**	**39.98**	**69**	*e*P	**P**	**06 29 17.1**	**-0.3**
	comp=Z,1µm,1.7s,mb6.4						
FFD	**Franklin Falls**	**40.14**	**67**	*e*P	**P**	**06 29 14.4**	**-4.3**
	comp=Z,1µm,1.5s,mb6.5						
HRV	**Harvard--Oak R**	**40.48**	**69**	P	**P**	**06 29 21.8**	**+0.3**
HRV				S	**S**	**06 35 37.3**	**+7.5**
HRV	**Harvard--Oak R**	**40.48**	**69**	*e*P	**P**	**06 29 21.0**	**-0.5**
HRV				pmax	pmax		
	comp=Z,652nm,1.5s,mb6.1						
HRV				MLR	MLR		
	comp=Z,99µm,20.0s,MS6.7						
HRV	**Harvard--Oak R**	**40.48**	**69**	*e*P	**P**	**06 29 21.0**	**-0.5**
	comp=Z,652nm,1.5s,mb6.1						
HRV				LR	LR		
	comp=Z,99µm,20.0s,MS6.7						
BRYW	**Bryant College**	**40.66**	**70**	*e*P	**P**	**06 29 22.6**	**-0.4**
	comp=Z,2µm,1.5s,mb6.5						
WES	**Weston**	**40.68**	**69**	*e*P	**P**	**06 29 23.3**	**+0.2**
WES				pmax	pmax		
	comp=Z,1µm,1.6s,mb6.2						
WES				MLR	MLR		
	comp=Z,114µm,21.0s,MS6.7						
WES	**Weston**	**40.68**	**69**	*e*P	**P**	**06 29 23.3**	**+0.1**
	comp=Z,1µm,1.6s,mb6.2						
WES				LR	LR		
	comp=Z,114µm,21.0s,MS6.7						
SCHQ	**Schefferville**	**41.19**	**49**	P	**P**	**06 29 26.4**	**-0.8**
	comp=Z,93nm,0.7s,mb5.5,baz=282,slow=7.5,SNR=112						
SCHQ				PP	PP	06 30 58.7	-6.8
	comp=Z,65nm,1.1s,baz=257,slow=16,SNR=1.4						
SCHQ				S	**S**	**06 35 41.3**	**+1.2**
	comp=Z,15nm,1.0s,baz=180,slow=20,SNR=1.9						
SCHQ				LR	LR	06 46 43.1	
	comp=Z,68µm,18.4s,MS6.5,baz=276,slow=36						
SCHQ	**Schefferville**	**41.19**	**49**	⇑*e*P	**P**	**06 29 26.0**	**-1.1**
	comp=Z,379nm,1.2s,mb5.9						
SCHQ				LR	LR		
	comp=Z,96µm,20.0s,MS6.7						
WVL	**Waterville**	**41.24**	**65**	*e*P	**P**	**06 29 27.7**	**0.0**
	comp=Z,2µm,1.6s,mb6.5						
WVL				LR	LR		
	comp=Z,1171µm,19.0s						
SMY	**Shemya**	**41.30**	**308**	P	**P**	**06 29 25.2**	**-2.9**
SMY				MLR	MLR		
	comp=Z,110µm,21.0s,MS6.7						
PQI	**Presque Isle**	**41.82**	**62**	*e*P	**P**	**06 29 31.7**	**-0.7**
	comp=Z,499nm,1.6s,mb5.9						
PQI				LR	LR		
	comp=Z,991µm,20.0s						
FX1	**Attu Island--F**	**41.85**	**308**	*e*P	**P**	**06 29 31.9**	**-0.6**
EMMW	**East Machias**	**42.71**	**64**	*e*P	**P**	**06 29 39.3**	**-0.4**
	comp=Z,2µm,1.2s,mb6.7						
EMMW				LR	LR		
	comp=Z,989µm,19.0s						
MIDW	**Midway**	**43.22**	**270**	*e*P	**P**	**06 29 42.8**	**-1.3**
	comp=Z,388nm,1.1s,mb6.0						
MIDW				LR	LR		
	comp=Z,87µm,21.0s,MS6.6						
CNCH	**Conchagua**	**43.44**	**118**	*e*P	**P**	**06 29 44.4**	**-1.6**
BILL	**Bilibino**	**44.52**	**330**	⇓*i*P	**P**	**06 29 52.6**	**-1.5**
BILL				*e*		06 31 45.7	
BILL				*i* S	**S**	**06 36 33.1**	**+4.5**
BILL				pmax	pmax		
	comp=Z,350nm,1.9s,mb5.9						
BILL				MLR	MLR		
	comp=Z,88µm,15.0s,MS6.8						
BILL	**Bilibino**	**44.52**	**330**	⇓*i*P	**P**	**06 29 52.6**	**-1.5**
	comp=Z,350nm,1.9s,mb5.9						
BILL				*e*		06 31 45.7	
BILL				*i* S	**S**	**06 36 33.1**	**+4.5**
BILL				LR	LR		
	comp=Z,88µm,15.0s,MS6.8						
TEL3	**Telica 3**	**44.61**	**118**	⇑*e*P	**P**	**06 29 58.1**	**+2.6**
LEON	**Leon**	**44.69**	**118**	⇓*e*P	**P**	**06 29 57.4**	**+1.2**
CNGN	**Cerro Negro**	**44.76**	**117**	*e*P	**P**	**06 29 58.5**	**+1.7**
MIRN	**Miramar**	**44.80**	**118**	⇑*e*P	**P**	**06 29 58.3**	**+1.3**
MOMJ	**Momotombo**	**44.93**	**117**	*e*P	**P**	**06 29 59.0**	**+0.9**
PYTN	**Playitas**	**45.17**	**117**	*e*P	**P**	**06 30 01.8**	**+1.8**
CONN	**Concepcion**	**46.16**	**117**	⇑*e*P	**P**	**06 30 08.2**	**+0.4**
VCR	**Vista de Mar**	**47.20**	**119**	*e*P	**P**	**06 30 15.4**	**-0.6**
VCR	**Vista de Mar**	**47.20**	**119**	*e*P	**P**	**06 30 14.9**	**-1.1**
MCJ	**Malvern**	**47.51**	**104**	⇑*e*P	**P**	**06 30 20.0**	**+1.5**
JTS	**JuntasAbangare**	**47.53**	**118**	P	**P**	**06 30 17.0**	**-1.7**
JTS				pmax	pmax		
	comp=Z,400nm,1.6s						
JTS	**JuntasAbangare**	**47.53**	**118**	LR	LR	06 53 43.1	
	comp=Z,33µm,19.4s,MS6.3,baz=318,slow=40						
JTS	**JuntasAbangare**	**47.53**	**118**	*e*P	**P**	**06 30 16.8**	**-1.9**
	comp=Z,402nm,1.6s,mb6.2						
JTS				LR	LR		
	comp=Z,8µm,20.0s,MS5.7						
BBJ	**Bamboo Saint A**	**47.53**	**103**	⇑*e*P	**P**	**06 30 18.5**	**-0.1**
FORC	**Fortuna**	**47.59**	**117**	*e*P	**P**	**06 30 18.6**	**-0.5**
SFJD	**Kangerlussuaq**	**47.86**	**31**	P	**P**	**06 30 20.4**	**-0.2**
SFJD				S	**S**	**06 37 21.4**	**+5.1**
SFJD	**Kangerlussuaq**	**47.86**	**31**	*i* P	**P**	**06 30 20.0**	**-0.6**
SFJD				*i* S	**S**	**06 37 20.3**	**+4.0**
SFJD				pmax	pmax		
	comp=Z,1µm,1.9s,mb6.6						
SFJD				MLR	MLR		
	comp=Z,39µm,17.0s,MS6.5						
SFJD	**Kangerlussuaq**	**47.86**	**31**	*i* P	**P**	**06 30 20.0**	**-0.6**
	comp=Z,1µm,1.9s,mb6.6						
SFJD				*i* S	**S**	**06 37 20.3**	**+4.0**
SFJD				*i*		06 40 57.4	
	comp=Z,39µm,17.0s						
PCJ	**Portland Cotta**	**48.02**	**104**	⇑*e*P	**P**	**06 30 21.7**	**-0.7**
STH	**Stony Hill**	**48.06**	**103**	⇑*e*P	**P**	**06 30 23.1**	**+0.3**
GWJ	**Greenwich**	**48.13**	**103**	⇑*e*P	**P**	**06 30 23.6**	**+0.3**
HOJ	**Hope**	**48.15**	**103**	⇑*e*P	**P**	**06 30 24.7**	**+1.2**
TRTC	**Tortuguero**	**48.17**	**116**	*e*P	**P**	**06 30 22.2**	**-1.4**
TRTC	**Tortuguero**	**48.17**	**116**	*e*P	**P**	**06 30 22.4**	**-1.3**
PRS1	**Puriscal**	**48.19**	**117**	*e*P	**P**	**06 30 26.0**	**+2.2**
SJS	**Escuela Geolog**	**48.39**	**117**	*e*P	**P**	**06 30 26.0**	**+0.6**
LAJ	**Bijagual**	**48.40**	**117**	*e*P	**P**	**06 30 24.4**	**-1.0**
LAJ	**Bijagual**	**48.40**	**117**	*e*P	**P**	**06 30 24.5**	**-0.9**
YHJ	**Yallahs**	**48.41**	**103**	*e*P	**P**	**06 30 26.0**	**+0.5**
URSC	**Urasca**	**48.66**	**117**	*e*P	**P**	**06 30 27.7**	**+0.3**
URSC	**Urasca**	**48.66**	**117**	*e*P	**P**	**06 30 25.5**	**-1.9**
BUS	**Buena Vista**	**48.87**	**117**	*e*P	**P**	**06 30 28.4**	**-0.7**
BUS	**Buena Vista**	**48.87**	**117**	*e*P	**P**	**06 30 28.0**	**-1.1**
BBSR	**BB Station**	**49.42**	**79**	P	**P**	**06 30 32.5**	**-0.6**
BBSR				PP	PP	06 32 28.0	+0.2
BBSR				S	**S**	**06 37 46.1**	**+7.4**
BBSR	**BB Station**	**49.42**	**79**	*e*P	**P**	**06 30 32.4**	**-0.7**
	comp=Z,777nm,1.3s,mb6.6						
BBSR				LR	LR		
	comp=Z,119µm,21.0s,MS6.9						
PET	**Petropavlovsk**	**50.36**	**311**	κ *i*P	**P**	**06 30 37.8**	**-2.2**
PET				*e*		06 32 33.7	
PET				*e*S	**S**	**06 37 44.2**	**-7.2**
PET				*e*SS	SS	06 41 22.4	+0.1
PET				pmax	pmax		
	comp=Z,479nm,0.9s,mb6.5						
PET				pmax	pmax		
	comp=N,299nm,0.9s						
PET				pmax	pmax		
	comp=Z,4µm,12.7s						
PET				pmax	pmax		
	comp=Z,4µm,13.9s						
PET				pmax	pmax		
	comp=E,2µm,14.2s						
PET				pmax	pmax		
	comp=Z,4µm,21.9s						
PET				pmax	pmax		
	comp=Z,4µm,9.4s						
PET				pmax	pmax		
	comp=Z,59nm,2.1s,mb5.2						
PET				smax			
	comp=E,28µm,15.0s						
PET				smax			
	comp=N,32µm,22.5s						
PET				smax			
	comp=N,21µm,21.1s						
PET				smax			
	comp=E,25µm,11.6s						
PET	**Petropavlovsk**	**50.36**	**311**	*i* Pdr	**P**	**06 30 37.8**	**-2.2**
	comp=E,479nm,0.9s,mb6.5						
PET				*e*		06 32 33.7	
PET				*e*S	**S**	**06 37 44.2**	**-7.2**
PET				*e*SS	SS	06 41 22.4	+0.1
DVD	**David**	**50.57**	**117**	*e*P	**P**	**06 30 43.3**	**+1.2**
PTP1	**Petroterminal**	**50.75**	**117**	*e*P	**P**	**06 30 41.8**	**-1.6**
SEY	**Seymchan**	**50.82**	**324**	*i* P	**P**	**06 30 41.4**	**-1.9**
SEY						06 31 55.9	
SEY						06 32 41.6	
SEY				*i* S	**S**	**06 37 59.8**	**+2.2**
SEY				PS	PS	06 38 20.3	+13
SEY						06 40 30.3	
SEY				pmax	pmax		
	comp=N,30nm,1.1s						
SEY				pmax	pmax		
	comp=Z,150nm,1.1s,mb5.8						
SEY				pmax	pmax		
	comp=E,110nm,1.2s						
SEY				smax			
	comp=N,10µm,12.5s						
SEY				smax			
	comp=E,24µm,17.4s						
SEY				MLR	MLR		
	comp=N,40µm,15.0s,MS6.6						
SEY				MLR	MLR		
	comp=E,12µm,15.0s,MS6.6						
SEY				MLR	MLR		
	comp=Z,49µm,15.0s,MS6.7						
SEY	**Seymchan**	**50.82**	**324**	*i* P	**P**	**06 30 41.4**	**-1.9**
	comp=Z,0.2nm,1.1s						
SEY				*e*		06 31 55.9	
SEY				*e*		06 32 41.6	
SEY				*i* S	**S**	**06 37 59.8**	**+2.2**
SEY				PS	PS	06 38 20.3	+13
SEY				*e*		06 40 30.3	
SEY				LR	LR		
	comp=Z,49µm,15.0s,MS6.7						
SUMG	**Summit**	**51.10**	**23**	⇑*e*P	**P**	**06 30 45.0**	**-0.3**
	comp=Z,403nm,1.1s,mb6.3						
UPA	**Univ. de Panam**	**52.17**	**114**	*e*P	**P**	**06 30 54.6**	**+0.4**
MA2	**Magadan**	**52.52**	**320**	*de*P	**P**	**06 30 54.6**	**-1.6**
MA2				*e*		06 32 55.1	
MA2				*e*PPP	PPP	06 34 06.3	+5.5
MA2				*e*S	**S**	**06 38 17.5**	**-3.5**
MA2				*e*SS	SS	06 41 59.9	+2.0
MA2				pmax	pmax		
	comp=E,20nm,0.9s						
MA2				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.4						
MA2				pmax	pmax		
	comp=N,30nm,1.4s						
MA2				MLR	MLR		
	comp=Z,20µm,20.0s,MS6.2						
MA2	**Magadan**	**52.52**	**320**	*e*Pr		06 30 54.6	
MA2				*e*		06 32 55.1	
MA2				*e*PPP	PPP	06 34 06.3	+5.5
MA2				*e*S	**S**	**06 38 17.5**	**-3.5**
MA2				*e*SS	SS	06 41 59.9	+2.0
MA2				LR	LR		
	comp=Z,20µm,20.0s,MS6.2						
SKR	**Severo-Kuril's**	**52.62**	**309**	*e*P	**P**	**06 30 52.5**	**-4.6**
SKR				*e*PPP	PPP	06 33 55.0	-7.1
SKR				*e*S	**S**	**06 38 22.0**	**-0.5**
SKR				pmax	pmax		
	comp=N,130nm,0.9s						
SKR				pmax	pmax		
	comp=E,130nm,0.9s						
SKR				pmax	pmax		
	comp=Z,230nm,0.9s,mb6.1						
SKR				pmax	pmax		
	comp=Z,4µm,12.0s						
SKR				smax			
	comp=N,26µm,16.0s						
SKR				smax			
	comp=E,26µm,16.0s						
SKR				MLR	MLR		
	comp=N,12µm,16.0s,MS6.2						
SKR				MLR	MLR		
	comp=Z,14µm,16.0s,MS6.1						
SKR				MLR	MLR		
	comp=E,13µm,18.0s,MS6.2						
SKR	**Severo-Kuril's**	**52.62**	**309**	*e*P	**P**	**06 30 52.5**	**-4.6**
	comp=E,230nm,0.9s,mb6.1						
SKR				*e*PPP	PPP	06 33 55.0	-7.1
SKR				*e*S	**S**	**06 38 22.0**	**-0.5**
SKR				LR	LR		
	comp=Z,14µm,16.0s,MS6.1						
PAYG	**Puerto Ayora**	**52.74**	**132**	*e*P	**P**	**06 30 57.3**	**-1.2**
	comp=Z,281nm,1.3s,mb6.0						
PAYG				LR	LR		
	comp=Z,16µm,19.0s,MS6.1						
DAG	**Danmarks Havn**	**54.60**	**16**	⇓*e*P	**P**	**06 31 10.0**	**-1.4**
	comp=Z,314nm,1.5s,mb6.1						
DAG				LR	LR		
	comp=Z,65µm,17.0s,MS6.8						
DAG	**Danmarks Havn**	**54.60**	**16**	⇓*i*P	**P**	**06 31 10.0**	**-1.4**
	comp=Z,313nm,1.5s,mb6.1						
	comp=Z,65µm,17.0s						
TIXI	**Tiksi**	**56.23**	**338**	*d i*P	**P**	**06 31 20.6**	**-2.6**
TIXI				pmax	pmax		
	comp=Z,146nm,1.2s,mb5.9						
TIXI				MLR	MLR		
	comp=Z,71µm,20.0s,MS6.8						
TIXI	**Tiksi**	**56.23**	**338**	*i* Pr	**P**	**06 31 20.6**	**-2.6**
	comp=Z,146nm,1.2s,mb5.9						
TIXI				LR	LR		
	comp=Z,71µm,20.0s,MS6.8						
SCO	**Scoresbysund**	**56.74**	**23**	*i* P	**P**	**06 31 24.6**	**-2.3**
SCO				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.4						
SCO	**Scoresbysund**	**56.74**	**23**	*i* P	**P**	**06 31 24.6**	**-2.3**
	comp=Z,43nm,1.0s,mb5.4						
KBS	**Kingsbay**	**58.12**	**9**	P	**P**	**06 31 36.7**	**+0.1**
KBS				S	**S**	**06 39 40.4**	**+4.8**
KBS	**Kingsbay**	**58.12**	**9**	P	**P**	**06 31 37.2**	**+0.7**
KBS	**Kingsbay**	**58.12**	**9**	⇑*i*P	**P**	**06 31 36.6**	**+0.1**
KBS				AMb	AMB	06 31 42.1	
	comp=Z,118nm,2.0s,mb5.6						
KBS				*e*S	**S**	**06 39 37.5**	**+1.8**
KBS				*e*SS	SS	06 43 30.6	+1.7
KBS				AMS	AMS	06 57 29.0	
	comp=Z,16µm,17.1s,MS6.2						
STMA	**St. Maarten, A**	**58.38**	**93**	*e*P	**P**	**06 31 39.0**	**-0.1**
SDV	**Santo Domingo**	**58.58**	**107**	LR	LR	07 00 43.7	
	comp=Z,22µm,19.3s,MS6.3,baz=337,slow=40						
SDV	**Santo Domingo**	**58.58**	**107**	*e*P	**P**	**06 31 39.3**	**-1.3**
	comp=Z,145nm,1.2s,mb5.9						
SDV				LR	LR		
	comp=Z,21µm,19.0s,MS6.3						
ROSC	**El Rosal**	**58.72**	**113**	P	**P**	**06 31 41.4**	**-0.2**
	comp=Z,36nm,0.7s,mb5.5,baz=104,slow=4.8,SNR=46						
ROSC				S	**S**	**06 39 52.5**	**+8.2**
	comp=Z,0.9nm,0.3s,baz=270,slow=20,SNR=1.9						
ROSC				LR	LR	06 57 07.8	
	comp=Z,20µm,21.4s,MS6.2,baz=349,slow=36						
SKDB	**Saint Kitts 2**	**59.00**	**93**	*e*P	**P**	**06 31 42.8**	**-0.6**
SKI	**Saint Kitts**	**59.09**	**93**	*e*P	**P**	**06 31 42.3**	**-1.8**
SKTB	**Turtle Beach**	**59.26**	**93**	*e*P	**P**	**06 31 44.6**	**-0.7**
OTAV	**Otavalo**	**59.28**	**120**	*e*P	**P**	**06 31 45.6**	**0.0**
	comp=Z,570nm,1.5s,mb6.4						
OTAV				LR	LR		
	comp=Z,20µm,22.0s,MS6.2						
NVBH	**Bath Hotel, Ne**	**59.32**	**93**	*e*P	**P**	**06 31 45.0**	**-0.7**
CPB	**Codrington**	**59.60**	**92**	*e*P	**P**	**06 31 47.5**	**-0.1**
BPA	**Boggy Peak**	**59.94**	**93**	*e*P	**P**	**06 31 47.1**	**-2.8**
HSP	**Hornsund**	**60.14**	**9**	*e*P	**P**	**06 31 50.4**	**-0.2**
JMIC	**Jan Mayen**	**60.16**	**19**	*e*P	**P**	**06 31 49.2**	**-1.5**
JMIC				AMb	AMB	06 32 11.8	
	comp=Z,384nm,1.5s,mb6.2						
JMIC				*e*S	**S**	**06 40 09.1**	**+7.0**
JMIC				*e*SS	SS	06 44 07.6	+7.2
JMIC				AMS	AMS	06 57 55.7	
	comp=Z,33µm,21.8s,MS6.4						
WAKE	**Wake Island**	**60.31**	**271**	*e*P	**P**	**06 31 50.1**	**-2.3**
	comp=Z,2µm,2.3s,mb6.7						
WAKE				LR	LR		
	comp=Z,69µm,21.0s,MS6.8						
SEG	**Port Louis**	**60.59**	**93**	*e*P	**P**	**06 31 52.4**	**-2.0**
YAK	**Yakutsk**	**60.81**	**328**	*e*P	**P**	**06 31 53.0**	**-2.3**
YAK				*e*		06 32 36.8	
YAK				*e*		06 34 07.1	
YAK				*e*S	**S**	**06 40 08.6**	**-2.0**
YAK				*e*		06 41 41.4	
YAK				*e*SS	SS	06 44 08.2	-2.8
YAK				pmax	pmax		
	comp=Z,97nm,1.0s,mb5.9						
YAK				pmax	pmax		
	comp=N,36nm,1.2s						
YAK				pmax	pmax		
	comp=E,73nm,1.3s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,12nm,1.4s						
YAK				smax			
	comp=E,2.0nm,0.9s						
YAK				smax			
	comp=N,3.0nm,1.0s						
YAK	**Yakutsk**	**60.81**	**328**	*e*P	**P**	**06 31 53.0**	**-2.3**
	comp=N,97nm,1.0s,mb5.9						
YAK				*e*		06 32 36.8	
YAK				*e*		06 34 07.1	
YAK				*e*S	**S**	**06 40 08.6**	**-2.0**
YAK				*e*		06 41 41.4	
YAK				*e*SS	SS	06 44 08.2	-2.8
DEG	**La Desirade**	**60.99**	**93**	*e*P	**P**	**06 31 55.8**	**-1.3**
MGG	**Marie-Galante**	**61.03**	**94**	*e*P	**P**	**06 31 54.7**	**-2.6**
BBL	**Barber's Block**	**61.16**	**94**	*e*P	**P**	**06 31 54.9**	**-3.3**
DWS	**Wesley**	**61.25**	**94**	*e*P	**P**	**06 31 58.9**	**+0.1**
YUK	**Yuzh-Kuril'sk**	**61.79**	**305**	P	**P**	**06 31 52.5**	**-10**
YUK				*i* S	**S**	**06 40 24.0**	**+0.7**
YUK				*e*PS	PS	06 40 41.0	-0.1
YUK				*e*SS	SS	06 44 23.0	-3.9
YUK				pmax	pmax		
	comp=Z,1µm,1.2s,mb6.9						
YUK				pmax	pmax		
	comp=N,2µm,3.0s						
YUK				pmax	pmax		
	comp=E,3µm,3.0s						
YUK				smax			
	comp=N,27µm,14.0s						
YUK				smax			
	comp=E,9µm,12.0s						
YUK	**Yuzh-Kuril'sk**	**61.79**	**305**	P	**P**	**06 31 52.5**	**-10**
	comp=E,1µm,1.2s,mb6.9						
YUK				*i* S	**S**	**06 40 24.0**	**+0.7**
YUK				*e*PS	PS	06 40 41.0	-0.1
YUK				*e*SS	SS	06 44 23.0	-3.9
PPT	**Papeete**	**61.87**	**205**	P	**P**	**06 32 02.1**	**-0.9**
	comp=E,120nm,0.8s,mb6.1,baz=61,slow=6.9,SNR=12						
PPT				LR	LR	06 53 19.5	
	comp=E,15µm,21.9s,MS6.1,baz=22,slow=31						
FDF	**Fort de France**	**61.89**	**95**	⇓*e*P	**P**	**06 32 02.5**	**-0.7**
CRM	**Caravelle**	**62.05**	**94**	⇓*e*P	**P**	**06 32 02.8**	**-1.5**
BIM	**Bigot**	**62.08**	**95**	⇓*e*P	**P**	**06 32 04.7**	**+0.2**
YSS	**Yuzh-Sakhalins**	**62.18**	**309**	*de*P	**P**	**06 32 00.0**	**-4.8**
YSS				*i* *SP	sP	06 32 05.0	-4.8
YSS				*e*		06 34 22.0	
YSS				*e*PPP	PPP	06 35 46.0	-7.2
YSS				*e*S	**S**	**06 40 24.0**	**-4.2**
YSS				*e*PPS	PPS	06 40 52.0	-3.5
YSS				*e*SS	SS	06 44 32.0	-1.1
YSS				*e*SSS	SSS	06 47 09.0	-6.0
YSS				pmax	pmax		
	comp=Z,2µm,8.0s						
YSS	**Yuzh-Sakhalins**	**62.18**	**309**	*e*Pr		06 32 00.0	
YSS				*i* sP	sP	06 32 05.0	-4.8
YSS				*e*		06 34 22.0	
YSS				*e*PPP	PPP	06 35 46.0	-7.2
YSS				*e*S	**S**	**06 40 24.0**	**-4.2**
YSS				*e*PPS	PPS	06 40 52.0	-3.5
YSS				*e*SS	SS	06 44 32.0	-1.1
YSS				*e*SSS	SSS	06 47 09.0	-6.0
MVM	**Montagne Vaucl**	**62.19**	**95**	⇓*e*P	**P**	**06 32 06.0**	**+0.7**
SVB	**Belmont**	**62.72**	**96**	*e*P	**P**	**06 32 07.5**	**-1.3**
GRHS	**Sauteurs**	**63.09**	**97**	*e*P	**P**	**06 32 11.4**	**+0.2**
ASAJ	**Asahikawa**	**63.75**	**307**	S	**S**	**06 40 51.9**	**+3.9**
	comp=Z,2.2nm,0.3s,baz=108,slow=19,SNR=1.4						
TRN	**Trinidad (W)**	**64.27**	**98**	*e*P	**P**	**06 32 17.6**	**-1.4**
TPP	**Pointe-a-Pierr**	**64.45**	**99**	*e*P	**P**	**06 32 18.7**	**-1.5**
TBH	**Brigand Hill**	**64.63**	**98**	*e*P	**P**	**06 32 20.3**	**-1.0**
PTCN	**Pitcairn Islan**	**65.57**	**184**	PFAKE		06 32 40.0	+13

PTCN				LR	LR		
	comp=Z,26µm,19.0s,MS6.5						
CLNS	**Chul’man**	**65.80**	**325**	*e*P	**P**	**06 32 25.9**	**-2.3**
CLNS				*e**PP	pP	06 32 33.1	+1.2
CLNS				*e*		06 32 54.0	
CLNS				*e*		06 34 48.3	
CLNS				*e*PPP	PPP	06 36 25.4	-4.8
CLNS				*e*S	S	06 41 14.5	+1.5
CLNS				*e*PS	PS	06 41 36.7	+0.8
CLNS				*e*		06 42 17.7	
CLNS				*e*SS	SS	06 45 26.6	-2.5
CLNS				pmax	pmax		
	comp=E,30nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,73nm,1.0s,mb5.7						
CLNS				pmax	pmax		
	comp=N,17nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
CLNS				pmax	pmax		
	comp=N,40nm,1.2s						
CLNS				pmax	pmax		
	comp=E,11nm,1.0s						
CLNS				smax			
	comp=N,9µm,9.0s						
CLNS				smax			
	comp=Z,4µm,10.5s						
CLNS				smax			
	comp=E,1µm,6.3s						
CLNS				MLR	MLR		
	comp=Z,33µm,17.0s,MS6.6						
CLNS				MLR	MLR		
	comp=N,18µm,16.0s,MS6.3						
CLNS				MLR	MLR		
	comp=E,5µm,21.0s,MS6.3						
KWAJ	**Kwajalein Atol**	**66.09**	**261**	*e*P	**P**	**06 32 29.2**	**-1.5**
	comp=E,278nm,1.1s,mb6.2						
KWAJ				LR	LR		
	comp=Z,17µm,20.0s,MS6.2						
TRO	**Tromso**	**67.03**	**12**	*e*P	**P**	**06 32 32.3**	**-3.6**
TRO				AMb	AMB	06 32 53.0	
	comp=Z,315nm,1.9s,mb6.0						
TRO				*e*S	S	06 41 28.1	+0.4
TRO				*e*SS	SS	06 45 53.6	+5.2
TRO				AMS	AMS	07 02 47.0	
	comp=Z,15µm,18.9s,MS6.2						
KLR	**Kul’dur**	**67.08**	**316**	*e*P	**P**	**06 32 30.5**	**-6.0**
KLR				*e*		06 32 30.8	
KLR				MLR	MLR		
	comp=Z,14µm,14.0s,MS6.3						
LOF	**Lofoten**	**67.37**	**15**	*e*P	**P**	**06 32 37.1**	**-0.9**
	comp=Z,495nm,1.6s,mb6.3						
LOF	**Lofoten**	**67.37**	**15**	*e*P	**P**	**06 32 37.1**	**-0.9**
LOF				AMb	AMB	06 32 48.2	
	comp=Z,495nm,1.6s,mb6.3						
KEV	**Kevo**	**68.10**	**10**	*e*p	**P**	**06 32 40.9**	**-1.6**
	comp=Z,96nm,1.0s,mb5.8						
KEV	**Kevo**	**68.10**	**10**	P	**P**	**06 32 41.6**	**-0.9**
ARCES	**ARCESS Array B**	**68.11**	**10**	P	**P**	**06 32 41.5**	**-1.1**
	comp=Z,13nm,0.7s,mb5.1,baz=342,slow=7.7,SNR=34						
ARCES				S	S	06 41 43.5	+2.9
	comp=Z,1.5nm,0.8s,baz=30,slow=22,SNR=3.1						
ARCES				LR	LR	07 03 30.1	
	comp=Z,39µm,18.9s,MS6.7,baz=337,slow=37						
ARE0	**ARCESS Array S**	**68.11**	**10**	*e*P	**P**	**06 32 41.4**	**-1.2**
MELSS	**Ber_school_2**	**68.49**	**16**	*e*P	**P**	**06 32 44.2**	**-0.7**
AFI	**Afiamalu**	**68.68**	**228**	*e*P	**P**	**06 32 45.1**	**-1.9**
AFI				pmax	pmax		
	comp=Z,169nm,0.8s,mb6.0						
AFI				MLR	MLR		
	comp=Z,41µm,20.0s,MS6.7						
AFI	**Afiamalu**	**68.68**	**228**	*e*P	**P**	**06 32 45.1**	**-2.0**
	comp=Z,169nm,0.8s,mb6.0						
AFI				LR	LR		
	comp=Z,41µm,20.0s,MS6.7						
RAR	**Rarotonga**	**68.99**	**213**	PFAKE		06 33 00.0	+11
RAR				LR	LR		
	comp=Z,26µm,20.0s,MS6.5						
RPN	**Rapa Nui**	**69.39**	**164**	LR	LR	06 56 42.4	
	comp=Z,18µm,18.4s,MS6.3,baz=336,slow=30						
RPN	**Rapa Nui**	**69.39**	**164**	PFAKE		06 33 00.0	+8.8
RPN				LR	LR		
	comp=Z,6µm,21.0s,MS5.8						
BOD	**Bodaibo**	**69.58**	**330**	*e*P	**P**	**06 32 48.8**	**-3.0**
BOD				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.5						
BOD	**Bodaibo**	**69.58**	**330**	*e*P	**P**	**06 32 48.8**	**-3.0**
	comp=Z,70nm,1.1s,mb5.5						
NNA	**Nana**	**69.68**	**127**	*e*P	**P**	**06 32 52.0**	**-1.2**
	comp=Z,596nm,1.6s,mb6.3						
NNA				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
KSK	**Scoval**	**69.92**	**30**	⇑*e*P	**P**	**06 32 53.2**	**-0.7**
NSS	**Namsos**	**70.09**	**18**	*e*P	**P**	**06 32 52.7**	**-2.1**
NSS				AMb	AMB	06 32 56.9	
	comp=Z,281nm,1.9s,mb5.9						
NSS				AMS	AMS	07 01 56.1	
	comp=Z,29µm,23.5s,MS6.5						
KAC	**Achnashellach**	**70.42**	**29**	⇑*e*P	**P**	**06 32 56.0**	**-1.0**
KSB	**Sheil Bridge**	**70.59**	**30**	⇑*e*P	**P**	**06 32 56.7**	**-1.3**
KAR1	**Arisaig**	**70.65**	**30**	⇑*e*P	**P**	**06 32 57.5**	**-0.9**
LVZ	**Lovozero**	**70.74**	**7**	*e*P	**P**	**06 32 57.7**	**-1.0**
LVZ				*e*S	S	06 42 13.8	+2.1
LVZ				pmax	pmax		
	comp=Z,2µm,3.5s						
LVZ				pmax	pmax		
	comp=N,540nm,3.1s						
LVZ				pmax	pmax		
	comp=E,200nm,4.7s						
LVZ				pmax	pmax		
	comp=N,90nm,1.2s						
LVZ				pmax	pmax		
	comp=Z,270nm,1.2s,mb6.0						
LVZ				pmax	pmax		
	comp=E,30nm,1.4s						
LVZ				smax			
	comp=Z,4µm,14.3s						
LVZ				smax			
	comp=N,9µm,13.2s						
LVZ				smax			
	comp=E,8µm,11.8s						
LVZ				MLR	MLR		
	comp=N,22µm,17.0s						
LVZ				MLR	MLR		
	comp=Z,26µm,17.0s,MS6.6						
MAJO	**Matsushiro**	**70.80**	**302**	*e*P	**P**	**06 32 57.1**	**-2.6**
MAJO				pmax	pmax		
	comp=Z,84nm,0.9s,mb5.7						
MAJO				MLR	MLR		
	comp=Z,22µm,20.0s,MS6.4						
MAJO	**Matsushiro**	**70.80**	**302**	*e*P	**P**	**06 32 57.1**	**-2.6**
	comp=Z,84nm,0.9s,mb5.7						
MAJO				LR	LR		
	comp=Z,22µm,20.0s,MS6.4						
MAT	**Matsushiro**	**70.80**	**302**	P	**P**	**06 32 56.0**	**-3.7**
MAT				*e*S	S	06 42 12.0	-1.0
MAT				pmax	pmax		
	comp=Z,144nm,1.2s,mb5.8						
MAT				MLR	MLR		
	comp=Z,21µm,20.0s,MS6.4						
MAT	**Matsushiro**	**70.80**	**302**	P	**P**	**06 32 56.0**	**-3.7**
	comp=Z,144nm,1.2s,mb5.8						
MAT				*e*S	S	06 42 12.0	-1.0
MAT				LR	LR		
	comp=Z,21µm,20.0s,MS6.4						
MAT	**Matsushiro**	**70.80**	**302**	P	**P**	**06 32 56.4**	**-3.3**
MAT				S	S	06 42 12.0	-1.0
MJAR	**Matsushiro Arr**	**70.80**	**302**	P	**P**	**06 32 57.4**	**-2.3**
	comp=Z,22nm,0.9s,mb5.1,baz=49,slow=5.2,SNR=27						
MJAR				LR	LR	06 58 21.2	
	comp=Z,18µm,20.1s,MS6.3,baz=95,slow=31						
MJAR	**Matsushiro Arr**	**70.80**	**302**	P	**P**	**06 32 57.4**	**-2.3**
MJAR				LR	LR	06 58 21.2	
APA	**Apatity**	**70.93**	**8**	⇑*i*P	**P**	**06 32 59.5**	**-0.4**
APA				*i*	pP	06 33 05.0	+1.3
APA				*i*		06 33 18.0	
APA				*i*		06 35 40.0	
APA				*i* S	S	06 42 13.0	-0.9
APA				*i*		06 42 37.0	
APA				*i* SS	SS	06 46 47.0	-1.8
APA				MLR	MLR		
	comp=Z,30µm,20.0s,MS6.5						
MDJ	**Mudanjiang**	**71.06**	**313**	P	**P**	**06 32 58.4**	**-2.7**
MDJ				AP	pP	06 33 03.1	-1.8
MDJ				PCP	PcP	06 33 17.8	-3.7
MDJ				S	S	06 42 11.5	-4.3
MDJ				AMB	AMB		
	comp=Z,2µm,11.3s						
MDJ				LR	LR		
	comp=N,31µm,32.2s,MS6.4						
MDJ				LR	LR		
	comp=E,14µm,28.2s,MS6.4						
MDJ				LR	LR		
	comp=Z,30µm,25.8s,MS6.4						
BER	**Bergen**	**71.77**	**23**	*e*P	**P**	**06 33 04.0**	**-1.0**
BER				AMb	AMB	06 33 08.8	
	comp=Z,242nm,1.5s,mb5.9						
BER				*e*S	S	06 42 27.9	+4.2
BER				*e*SS	SS	06 47 02.7	+1.2
BER				AMS	AMS	07 02 06.4	
	comp=Z,19µm,16.4s,MS6.4						
GCL	**Cushendall**	**71.86**	**31**	⇑*e*P	**P**	**06 33 04.4**	**-1.3**
GMK	**Mull of Kintyr**	**71.88**	**31**	⇑*e*P	**P**	**06 33 04.5**	**-1.3**
ADH	**Angra Heroismo**	**72.00**	**54**	*e*		06 42 42.5	
ADH				*e*SS	SS	06 47 25.0	+20
ADH				*i* LR	LR	06 55 17.5	
VAL	**Valentia**	**72.37**	**36**	*e*P	**P**	**06 33 04.8**	**-4.0**
VAL				*e*S	S	06 42 34.9	+4.2
EDI	**Edinburgh**	**72.38**	**30**	⇑*e*P	**P**	**06 33 07.3**	**-1.4**
GMM	**Mts of Mourne**	**72.54**	**32**	⇑*e*P	**P**	**06 33 08.2**	**-1.5**
GAL1	**Galloway**	**72.58**	**31**	⇑*e*P	**P**	**06 33 08.5**	**-1.4**
ESK	**Eskdalemuir**	**72.82**	**30**	*e*P	**P**	**06 33 09.9**	**-1.4**
ESK				pmax	pmax		
	comp=Z,153nm,1.4s,mb5.7						
ESK				MLR	MLR		
	comp=Z,9µm,21.0s,MS6.0						
ESK	**Eskdalemuir**	**72.82**	**30**	*e*P	**P**	**06 33 09.9**	**-1.4**
	comp=Z,153nm,1.4s,mb5.7						
ESK				LR	LR		
	comp=Z,9µm,21.0s,MS6.0						
NB2	**NORSAR Subarra**	**72.86**	**20**	P	**P**	**06 33 10.5**	**-0.9**
	comp=Z,273nm,1.4s,mb6.0,baz=328,slow=5.6						
NB2	**NORSAR Subarra**	**72.86**	**20**	P	**P**	**06 33 11.4**	**0.0**
NB2	**NORSAR Subarra**	**72.86**	**20**	P	**P**	**06 33 10.5**	**-0.9**
	baz=328,slow=5.9						
NOA	**NORSAR Array B**	**72.86**	**20**	P	**P**	**06 33 10.2**	**-1.2**
	comp=Z,15nm,0.7s,mb5.0,baz=330,slow=5.5,SNR=68						
NOA				LR	LR	07 03 59.2	
	comp=Z,19µm,21.5s,MS6.3,baz=320,slow=35						
GCD	**Castle Douglas**	**72.88**	**31**	⇑*e*P	**P**	**06 33 10.4**	**-1.2**
NAO01	**NORSAR Array S**	**72.94**	**20**	*e*P	**P**	**06 33 11.2**	**-0.7**
	comp=Z,276nm,1.2s,mb6.1						
NAO01				LR	LR		
	comp=Z,17µm,20.0s,MS6.3						
DSB	**Dublin**	**73.09**	**33**	*e*P	**P**	**06 33 12.1**	**-0.9**
	comp=Z,143nm,1.3s,mb5.7						
HIA	**Hailar**	**73.10**	**321**	*e*P	**P**	**06 33 10.7**	**-2.4**
HIA				pmax	pmax		
	comp=Z,120nm,1.5s						
HIA	**Hailar**	**73.10**	**321**	*e*P	**P**	**06 33 10.7**	**-2.4**
	comp=Z,120nm,1.5s,mb5.6						
WIM	**Isle of Man**	**73.12**	**32**	⇑*e*P	**P**	**06 33 12.1**	**-1.0**
WIM				AMb	AMB	06 33 17.1	
	comp=Z,323nm,1.6s,mb6.0						
PDA	**Ponta Delgada**	**73.53**	**54**	*e*P	PcP	06 33 32.0	-0.1
PDA				*e*S	S	06 42 54.0	+10
PDA				*e*LQ		06 52 20.0	
PDA				*e*LR	LR	06 56 54.0	
KONO	**Kongsberg**	**73.60**	**22**	⇑*i*P	**P**	**06 33 14.6**	**-1.2**
KONO				LR	LR		
	comp=Z,250nm,20.2s						
CMLA	**Cha da Macela**	**73.61**	**54**	PFAKE		06 33 30.0	+14
CMLA				LR	LR		
	comp=Z,11µm,21.0s,MS6.1						
OSL	**Oslo**	**73.67**	**21**	*e*P	**P**	**06 33 16.9**	**+0.7**
	comp=Z,369nm,1.4s,mb6.1						
OSL	**Oslo**	**73.67**	**21**	*e*P	**P**	**06 33 16.9**	**+0.7**
OSL				AMb	AMB	06 33 26.9	
	comp=Z,369nm,1.4s,mb6.1						
WCB1	**Church Bay**	**73.74**	**32**	⇑*e*P	**P**	**06 33 15.1**	**-1.6**
WCB1				AMb	AMB	06 33 20.0	
	comp=Z,518nm,1.8s,mb6.2						
CBIJ	**Chichi jima**	**73.81**	**292**	LR	LR	06 59 15.9	
	comp=Z,44µm,20.0s,MS6.7,baz=48,slow=31						
YRC	**Rhoscolyn**	**73.83**	**32**	⇑*e*P	**P**	**06 33 15.6**	**-1.6**
YRC				AMb	AMB	06 33 21.3	
	comp=Z,316nm,1.8s,mb6.0						
CN2	**Changchun**	**73.87**	**314**	⇓P	**P**	**06 33 15.1**	**-2.5**
CN2				*e*XP	sP	06 33 23.4	+0.7
CN2				*e*PP	PP	06 36 01.8	-2.5
CN2				*e*S	S	06 42 43.3	-4.4
CN2				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.4						
CN2				AMB	AMB		
	comp=Z,2µm,9.0s						
CN2				LR	LR		
	comp=N,13µm,20.0s,MS6.4						
CN2				LR	LR		
	comp=E,16µm,20.0s,MS6.4						
CN2				LR	LR		
	comp=Z,19µm,21.0s,MS6.4						
CN2	**Changchun**	**73.87**	**314**	⇓P	**P**	**06 33 15.1**	**-2.5**
	comp=Z,60nm,1.2s,mb5.4						
CN2				*e*sP	sP	06 33 23.4	+0.7
CN2				*e*PP	PP	06 36 01.8	-2.5
CN2				*e*S	S	06 42 43.3	-4.4
CN2				LR	LR		
	comp=Z,19µm,21.0s,MS6.4						
WLF1	**Llynfaes**	**73.87**	**32**	*e*P	**P**	**06 33 17.0**	**-0.5**
WLF1				AMb	AMB	06 33 21.6	
	comp=Z,300nm,1.7s,mb5.9						
YLL	**Llanberis**	**74.07**	**32**	*e*P	**P**	**06 33 17.6**	**-1.0**
YRE	**Yr Eifl**	**74.09**	**32**	⇑*e*P	**P**	**06 33 17.2**	**-1.5**
WPM1	**Penmaenmawr**	**74.09**	**32**	⇑*e*P	**P**	**06 33 17.7**	**-1.0**
WPM1				AMb	AMB	06 33 23.0	
	comp=Z,290nm,1.8s,mb5.9						
HFA0	**Hagfors New Ar**	**74.27**	**19**	P	**P**	**06 33 18.6**	**-1.0**
HPK	**Haverah Park**	**74.45**	**30**	⇑*e*P	**P**	**06 33 20.2**	**-0.6**
LWH	**Whinny Nab**	**74.53**	**30**	⇑*e*P	**P**	**06 33 20.7**	**-0.5**
SBD1	**Bryn Du**	**74.61**	**32**	⇑*e*P	**P**	**06 33 20.9**	**-0.8**
LHO	**Holmfirth**	**74.68**	**31**	⇑*e*P	**P**	**06 33 21.1**	**-1.0**
KBI1	**Birley Grange**	**75.03**	**31**	⇑*e*P	**P**	**06 33 23.1**	**-1.0**
SSP1	**Stoney Pound**	**75.04**	**32**	⇑*e*P	**P**	**06 33 23.4**	**-0.8**
HLM1	**Long Mynd**	**75.06**	**32**	⇑*e*P	**P**	**06 33 23.0**	**-1.3**
KWE	**Weaver Farm**	**75.09**	**31**	⇑*e*P	**P**	**06 33 23.9**	**-0.6**
HSA	**Swansea**	**75.12**	**33**	⇑*e*P	**P**	**06 33 23.5**	**-1.2**
KAF	**Kangasniemi**	**75.15**	**13**	*e*p	**P**	**06 33 23.5**	**-1.2**
	comp=Z,70nm,1.1s,mb5.5,baz=336,slow=5.6						
KAF	**Kangasniemi**	**75.15**	**13**	*e*P	**P**	**06 33 23.5**	**-1.2**
KAF				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.5						
HTR	**Trewern Hill**	**75.23**	**32**	⇑*e*P	**P**	**06 33 24.4**	**-0.9**
HTR				AMb	AMB	06 33 28.8	
	comp=Z,324nm,1.8s,mb6.0						
MCH1	**Michaelchurch**	**75.40**	**32**	⇑*e*P	**P**	**06 33 25.6**	**-0.8**
HAE	**Alders End**	**75.55**	**32**	⇑*e*P	**P**	**06 33 26.6**	**-0.5**
HAE				AMb	AMB	06 33 31.0	
	comp=Z,424nm,1.8s,mb6.1						
FINES	**FINESS Array B**	**75.74**	**13**	P	**P**	**06 33 26.9**	**-1.2**
	comp=Z,15nm,0.7s,mb5.0,slow=7.6,SNR=78						
FINES				S	S	06 43 12.0	+3.9
	comp=Z,0.9nm,0.5s,baz=185,slow=32,SNR=2.1						
FINES				LR	LR	07 06 58.7	
	comp=Z,28µm,20.5s,MS6.5,baz=152,slow=36						
FINES	**FINESS Array B**	**75.74**	**13**	P	**P**	**06 33 26.9**	**-1.2**
FINES				S	S	06 43 12.0	+3.9
FINES				LR	LR	07 06 58.7	
HGH	**Gray Hill**	**75.75**	**32**	⇑*e*P	**P**	**06 33 27.9**	**-0.5**
HGH				AMb	AMB	06 33 31.9	
	comp=Z,242nm,1.9s,mb5.8						
HEX	**Exmoor**	**75.78**	**33**	⇑*e*P	**P**	**06 33 27.4**	**-1.0**
MUD	**Monsted U’grnd**	**76.16**	**24**	⇑*i*P	**P**	**06 33 30.3**	**-0.2**
MUD				pmax	pmax		
	comp=Z,392nm,1.8s,mb6.0						
MUD	**Monsted U’grnd**	**76.16**	**24**	⇑*i*P	**P**	**06 33 30.3**	**-0.2**
	comp=Z,392nm,1.8s,mb6.0						
MUD				*i* S	S	06 43 20.4	+7.6
	comp=Z,27µm,18.0s						
DYA	**Yadsworthy**	**76.20**	**34**	⇑*e*P	**P**	**06 33 30.2**	**-0.7**
SNY	**Shenyang**	**76.21**	**314**	⇓P	**P**	**06 33 29.6**	**-1.5**
SNY				AP	pP	06 33 32.8	-2.1
SNY				XP	sP	06 33 36.3	+0.1
SNY				S	S	06 43 14.8	+1.1
SNY				AMB	AMB		
	comp=Z,80nm,2.5s,mb5.2						
SNY				AMB	AMB		
	comp=Z,3µm,10.8s						
SNY				LR	LR		
	comp=N,9µm,16.2s,MS6.3						
SNY				LR	LR		
	comp=E,9µm,16.2s,MS6.3						
SNY				LR	LR		
	comp=Z,17µm,34.1s						
SNY	**Shenyang**	**76.21**	**314**	⇓P	**P**	**06 33 29.6**	**-1.5**
	comp=Z,80nm,2.5s,mb5.2						
SNY				pP	pP	06 33 32.8	-2.1
SNY				sP	sP	06 33 36.3	+0.1
SNY				S	S	06 43 14.8	+1.1
SNY				LR	LR		
	comp=Z,17µm,34.1s,MS6.1						
SAML	**Samuel**	**76.30**	**115**	*e*P	**P**	**06 33 29.5**	**-2.7**
	comp=Z,298nm,1.6s,mb6.0						
SAML				LR	LR		
	comp=Z,30µm,21.0s,MS6.6						
DCO	**Combe Farm**	**76.31**	**34**	⇑*e*P	**P**	**06 33 30.6**	**-0.8**
ARE	**Arequipa**	**76.40**	**126**	⇓*i*P	**P**	**06 33 34.0**	**+1.4**
KS15	**Wonju Array Si**	**76.67**	**308**	*e*P	**P**	**06 33 31.9**	**-1.9**
INCN	**Inchon**	**77.38**	**309**	PFAKE		06 33 50.0	+12
INCN				LR	LR		
	comp=Z,11µm,21.0s,MS6.2						
IRK	**Irkutsk**	**77.45**	**331**	*e*P	**P**	**06 33 36.6**	**-1.2**
IRK				*e*S	S	06 43 30.5	+3.5
IRK				pmax	pmax		
	comp=Z,532nm,1.8s,mb6.2						
IRK	**Irkutsk**	**77.45**	**331**	*e*P	**P**	**06 33 36.6**	**-1.2**
	comp=Z,532nm,1.8s,mb6.2						
IRK				*e*S	S	06 43 30.5	+3.5
COP	**Copenhagen**	**77.78**	**22**	⇑*i*P	**P**	**06 33 39.3**	**-0.2**
COP				*i* S	S	06 43 39.8	+9.4
COP				*i*		06 48 26.9	
COP				pmax	pmax		
	comp=Z,57nm,0.8s,mb5.5						
COP				MLR	MLR		
	comp=Z,20µm,18.0s,MS6.5						
COP	**Copenhagen**	**77.78**	**22**	⇑*i*P	**P**	**06 33 39.3**	**-0.2**
	comp=Z,57nm,0.8s,mb5.5						
COP				*i* S	S	06 43 39.8	+9.4
COP				*i*		06 48 26.9	
	comp=Z,20µm,18.0s						
PUL	**Pulkovo**	**78.02**	**12**	*i* P	**P**	**06 33 37.9**	**-2.9**
PUL				*i* S	S	06 43 31.8	-1.1
PUL				*i* SS	SS	06 48 44.5	+7.3
PUL				pmax	pmax		
	comp=N,961nm,2.0s						
PUL				pmax	pmax		
	comp=Z,976nm,2.0s,mb6.4						
PUL				pmax	pmax		
	comp=E,203nm,1.1s						
PUL				smax			
	comp=N,6µm,16.2s						
PUL				smax			
	comp=Z,2µm,17.4s						
PUL				smax			
	comp=E,9µm,14.4s						
PUL				MLR	MLR		
	comp=Z,40µm,22.0s,MS6.7						
PUL				MLR	MLR		
	comp=N,28µm,24.0s,MS6.6						
PUL				MLR	MLR		
	comp=E,17µm,23.0s,MS6.6						
ROSF	**Rostrenen**	**78.07**	**35**	*e*P	**P**	**06 33 40.8**	**-0.4**
	comp=E,328nm,1.4s,mb5.8						
ROSF	**Rostrenen**	**78.07**	**35**	*e*P	**P**	**06 33 40.8**	**-0.4**
ROSF				pmax	pmax		
	comp=Z,164nm,1.4s,mb5.8						
TLY	**Talaya**	**78.14**	**331**	*e*P	**P**	**06 33 40.6**	**-1.0**
TLY				*e*		06 36 35.2	
TLY				*e*PPP	PPP	06 38 34.6	+5.2
TLY				*e*S	S	06 43 31.8	-2.5
TLY				*e*PS	PS	06 44 18.6	+1.3
TLY				*e*SS	SS	06 48 39.1	0.0
TLY				pmax	pmax		
	comp=Z,235nm,1.5s,mb5.9						
TLY				MLR	MLR		
	comp=Z,57µm,20.0s,MS6.9						
LPAZ	**La Paz**	**78.37**	**123**	P	**P**	**06 33 43.4**	**-0.1**
LPAZ				S	S	06 43 38.7	+1.2
LPAZ				pmax	pmax		
	comp=Z,42nm,0.9s						
LPAZ				smax			
	comp=N,1.0nm,0.9s						
LPAZ	**La Paz**	**78.37**	**123**	P	**P**	**06 33 43.4**	**-0.1**
	comp=N,42nm,0.8s,mb5.4,baz=345,slow=7.5,SNR=80						
LPAZ				S	S	06 43 38.6	+1.2
	comp=N,0.9nm,0.9s,baz=94,slow=13,SNR=2.3						
LPAZ				LR	LR	07 06 56.8	
	comp=N,11µm,21.1s,MS6.2,baz=330,slow=35						
LPAZ	**La Paz**	**78.37**	**123**	*e*P	**P**	**06 33 42.9**	**-0.6**
	comp=N,269nm,1.5s,mb6.0						
LPAZ				LR	LR		
	comp=Z,9µm,21.0s,MS6.1						
WIT	**Witteveen**	**78.38**	**27**	*e*P	**P**	**06 33 45.3**	**+2.4**
QUIF	**Quistinic**	**78.43**	**35**	*e*P	**P**	**06 33 42.9**	**-0.4**
	comp=Z,658nm,1.8s,mb6.0						
QUIF	**Quistinic**	**78.43**	**35**	*e*P	**P**	**06 33 42.9**	**-0.4**
QUIF				pmax	pmax		
	comp=Z,329nm,1.8s,mb6.0						
SGMF	**Saint Gilles**	**78.44**	**34**	*e*P	**P**	**06 33 42.8**	**-0.5**
	comp=Z,436nm,1.5s,mb5.9						
SGMF	**Saint Gilles**	**78.44**	**34**	*e*P	**P**	**06 33 42.8**	**-0.5**
SGMF				pmax	pmax		
	comp=Z,218nm,1.5s,mb5.9						
BSEG	**Bad Segeberg**	**78.64**	**24**	*e*P	**P**	**06 33 44.5**	**+0.2**
BSEG				*e*		06 36 42.3	
BSEG				*e*S	S	06 43 46.1	+6.5
VSU	**Vasula**	**78.65**	**14**	⇑*i*P	**P**	**06 33 43.5**	**-0.7**
FLN	**La Foliniere**	**78.92**	**33**	*e*P	**P**	**06 33 45.6**	**-0.3**
	comp=Z,348nm,1.5s,mb5.8						
FLN				*e*R			
	comp=Z,55µm,22.0s						
FLN	**La Foliniere**	**78.92**	**33**	*e*P	**P**	**06 33 45.6**	**-0.3**
FLN				pmax	pmax		
	comp=Z,174nm,1.5s,mb5.8						
FLN				MLR	MLR		
	comp=Z,55µm,22.0s,MS6.8						
BSD	**Bornholm Skovb**	**78.98**	**21**	⇓*i*P	**P**	**06 33 46.2**	**+0.1**
BSD				pmax	pmax		
	comp=Z,116nm,1.0s,mb5.8						
BSD	**Bornholm Skovb**	**78.98**	**21**	⇓*i*P	**P**	**06 33 46.2**	**+0.1**
	comp=Z,116nm,1.0s,mb5.8						
RGN	**Rugen**	**79.02**	**23**	*e*P	**P**	**06 33 46.9**	**+0.5**
	comp=Z,692nm,1.5s,mb6.4						
GRR	**Gorron**	**79.06**	**33**	*e*P	**P**	**06 33 46.8**	**+0.1**
	comp=Z,640nm,1.5s,mb6.0						
GRR	**Gorron**	**79.06**	**33**	*e*P	**P**	**06 33 46.8**	**+0.1**
GRR				pmax	pmax		
	comp=Z,320nm,1.5s,mb6.0						
MOY	**Mondy**	**79.11**	**332**	*e*P	**P**	**06 33 46.3**	**-0.6**
MOY				*e*		06 36 47.4	
MOY				pmax	pmax		
	comp=Z,277nm,2.2s,mb5.8						
MOY	**Mondy**	**79.11**	**332**	*e*P	**P**	**06 33 46.3**	**-0.6**
	comp=Z,277nm,2.2s,mb5.8						
MOY				*e*		06 36 47.4	
WTSB	**Winterswijk**	**79.12**	**27**	*e*P	**P**	**06 33 46.9**	**-0.1**
	comp=Z,226nm,2.2s,mb5.7						
DL2	**Dalian**	**79.30**	**313**	*e*P	**P**	**06 33 48.0**	**-0.2**
DL2				S	S	06 43 47.0	0.0
DL2				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.3						
DL2				LR	LR		
	comp=E,17µm,18.0s						
DL2	**Dalian**	**79.30**	**313**	*e*P	**P**	**06 33 48.0**	**-0.2**
	comp=E,47nm,1.1s,mb5.3						
DL2				S	S	06 43 47.0	0.0
ZAK	**Zakamensk**	**79.32**	**330**	⇓*i*P	**P**	**06 33 46.8**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.3						
ZAK	**Zakamensk**	**79.32**	**330**	⇓*i*P	**P**	**06 33 46.8**	**-1.3**
	comp=Z,45nm,1.2s,mb5.3						
EMAZ	**Mazaricos**	**79.40**	**41**	P	**P**	**06 33 46.6**	**-2.1**
	comp=Z,202nm,2.2s,mb5.7						
STS	**Santiago**	**79.66**	**41**	P	**P**	**06 33 49.6**	**-0.5**
STS				pmax	pmax		
	comp=Z,160nm,1.5s,mb5.7						
STS	**Santiago**	**79.66**	**41**	P	**P**	**06 33 49.6**	**-0.5**
	comp=Z,160nm,1.5s,mb5.7						
BAIF	**Baives**	**79.75**	**30**	*e*P	**P**	**06 33 50.4**	**0.0**
	comp=Z,753nm,1.6s,mb6.1						
BAIF	**Baives**	**79.75**	**30**	*e*P	**P**	**06 33 50.4**	**0.0**
BAIF				pmax	pmax		
	comp=Z,377nm,1.6s,mb6.1						
HGN	**Heimansgroeve**	**79.81**	**28**	⇑*e*P	**P**	**06 33 49.9**	**-0.7**
	comp=Z,241nm,2.2s,mb5.7						
HGN	**Heimansgroeve**	**79.81**	**28**	*e*S	S	06 43 55.8	+3.8
HGN				*e*SS	SS	06 48 52.3	-12
ULN	**Ulaanbaatar**	**79.82**	**327**	*e*P	**P**	**06 33 49.3**	**-1.5**

	comp=Z,198nm,1.7s,mb5.8						
ULN				LR	LR		
	comp=Z,36µm,22.0s,MS6.7						
GIVF	**Givet**	**79.94**	**29**	*e*P	**P**	**06 33 51.4**	**0.0**
	comp=Z,995nm,1.6s,mb6.2						
GIVF	**Givet**	**79.94**	**29**	*e*P	**P**	**06 33 51.4**	**0.0**
GIVF				pmax	pmax		
	comp=Z,498nm,1.6s,mb6.2						
SOKR	**Solikamsk**	**80.00**	**358**	⇓*i*P	**P**	**06 33 49.9**	**-1.6**
SOKR				pmax	pmax		
	comp=Z,160nm,1.1s,mb5.9						
SOKR				MLR	MLR		
	comp=Z,15µm,21.0s,MS6.3						
SOKR	**Solikamsk**	**80.00**	**358**	⇓*i*P	**P**	**06 33 49.9**	**-1.6**
	comp=Z,160nm,1.1s,mb5.9						
SOKR				LR	LR		
	comp=Z,15µm,21.0s,MS6.3						
EPON	**Pontenova**	**80.03**	**40**	P	**P**	**06 33 50.0**	**-2.0**
	comp=Z,218nm,1.5s,mb5.9						
SONM	**Songino Array**	**80.12**	**327**	P	**P**	**06 33 51.5**	**-1.0**
	comp=Z,44nm,1.0s,mb5.3,baz=45,slow=3.5,SNR=78						
SONM				LR	LR	07 09 08.6	
	comp=Z,43µm,21.1s,MS6.8,baz=42,slow=36						
EZAM	**Zamans**	**80.13**	**42**	P	**P**	**06 33 49.7**	**-2.9**
EZAM				pmax	pmax		
	comp=Z,80nm,1.4s,mb5.5						
EZAM	**Zamans**	**80.13**	**42**	P	**P**	**06 33 49.7**	**-2.9**
	comp=Z,80nm,1.4s,mb5.5						
LRYF	**La Roche-sur-Y**	**80.17**	**35**	*e*P	**P**	**06 33 52.1**	**-0.6**
GUMO	**Guam**	**80.26**	**279**	PFAKE		06 34 00.0	+6.2
GUMO				LR	LR		
	comp=Z,28µm,21.0s,MS6.6						
CLZ	**Clausthal**	**80.44**	**25**	*e*P	**P**	**06 33 54.6**	**+0.6**
CLZ				*e*S	S	06 44 05.0	+6.4
CLZ				pmax	pmax		
	comp=Z,684nm,1.7s,mb6.3						
CLZ	**Clausthal**	**80.44**	**25**	*e*P	**P**	**06 33 54.6**	**+0.6**
	comp=Z,684nm,1.7s,mb6.3						
CLZ				*e*S	S	06 44 05.0	+6.4
LCHF	**La Chataignera**	**80.45**	**35**	*e*P	**P**	**06 33 55.4**	**+1.2**
ELOB	**Lobios**	**80.66**	**42**	P	**P**	**06 33 54.4**	**-1.0**
	comp=Z,198nm,1.7s,mb5.8						
ERUA	**La Rua**	**80.73**	**41**	P	**P**	**06 33 54.6**	**-1.2**
ERUA				pmax	pmax		
	comp=Z,164nm,1.3s,mb5.8						
ERUA	**La Rua**	**80.73**	**41**	P	**P**	**06 33 54.6**	**-1.2**
	comp=Z,164nm,1.3s,mb5.8						
OLEF	**Ile d'Oleron**	**80.75**	**35**	*e*P	**P**	**06 33 54.9**	**-0.9**
MFF	**Saint Martin d**	**80.75**	**34**	*e*P	**P**	**06 33 55.7**	**-0.1**
	comp=Z,594nm,1.6s,mb6.0						
MFF	**Saint Martin d**	**80.75**	**34**	*e*P	**P**	**06 33 55.7**	**-0.1**
MFF				pmax	pmax		
	comp=Z,297nm,1.6s,mb6.0						
WLF	**Walferdange**	**80.79**	**29**	*e*P	**P**	**06 33 56.1**	**+0.1**
WLF				pmax	pmax		
	comp=Z,435nm,1.7s,mb6.1						
WLF	**Walferdange**	**80.79**	**29**	*e*P	**P**	**06 33 56.1**	**+0.2**
	comp=Z,435nm,1.7s,mb6.1						
RUE	**Ruedersdorf**	**80.95**	**23**	*e*P	**P**	**06 33 56.6**	**-0.1**
	comp=Z,148nm,1.1s,mb5.8						
EARI	**Arriondas**	**80.99**	**39**	P	**P**	**06 33 55.9**	**-1.3**
	comp=Z,306nm,1.5s,mb6.0						
RUP	**Ruppelstein**	**81.09**	**28**	*e*P	**P**	**06 33 58.1**	**+0.6**
RUP	**Ruppelstein**	**81.09**	**28**	*e*P	**P**	**06 33 58.0**	**+0.5**
ABH	**Alteburg**	**81.12**	**28**	*e*P	**P**	**06 33 57.8**	**+0.1**
TNS	**Taunus Mts**	**81.15**	**27**	*e*P	**P**	**06 33 58.0**	**+0.2**
TNS				*e*		06 37 01.6	
TNS				*e*S	S	06 44 13.1	+7.0
TNS				*e*SS	SS	06 49 28.3	+3.9
TNS				pmax	pmax		
	comp=Z,248nm,1.6s,mb5.9						
TNS	**Taunus Mts**	**81.15**	**27**	*e*P	**P**	**06 33 58.0**	**+0.2**
	comp=Z,248nm,1.6s,mb5.9						
TNS				*e*PP	PP	06 37 01.6	-3.8
TNS				*e*S	S	06 44 13.1	+7.0
TNS				*e*SS	SS	06 49 28.3	+3.9
ECAL	**Calabor**	**81.27**	**41**	P	**P**	**06 33 57.6**	**-1.0**
	comp=Z,265nm,1.4s,mb6.0						
PVRL	**Vila Real**	**81.27**	**42**	*e*P	**P**	**06 33 59.2**	**+0.6**
	comp=Z,372nm,1.6s,mb6.1						
MEZF	**Maizieres J'vi**	**81.34**	**30**	*e*P	**P**	**06 33 58.8**	**0.0**
	comp=Z,566nm,1.7s,mb5.9						
HYF	**Humbligny**	**81.39**	**32**	*e*P	**P**	**06 33 59.2**	**+0.1**
NVS	**Novosibirsk**	**81.44**	**343**	*i* P	**P**	**06 33 57.5**	**-1.7**
NVS				*i*		06 37 11.0	
NVS				*i* S	S	06 44 11.6	+2.6
NVS				pmax	pmax		
	comp=Z,793nm,1.8s,mb6.3						
NVS				pmax	pmax		
	comp=N,275nm,1.4s						
NVS				pmax	pmax		
	comp=E,174nm,1.4s						
NVS				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.3						
NVS				pmax	pmax		
	comp=N,44nm,0.8s						
NVS				pmax	pmax		
	comp=E,27nm,0.8s						
NVS				smax			
	comp=N,97nm,2.5s						
NVS				smax			
	comp=E,95nm,2.5s						
NVS	**Novosibirsk**	**81.44**	**343**	*i* P	**P**	**06 33 57.5**	**-1.7**
	comp=E,793nm,1.8s,mb6.3						
NVS				*i*		06 37 11.0	
NVS				*i* S	S	06 44 11.6	+2.6
PVIS	**Viseu**	**81.59**	**42**	*e*P	**P**	**06 34 01.6**	**+1.3**
	comp=E,244nm,2.0s,mb5.8						
CLL	**Collm**	**81.74**	**24**	*i* P	**P**	**06 34 01.0**	**+0.2**
CLL				*e*S	S	06 44 18.0	+6.0
CLL				pmax	pmax		
	comp=Z,254nm,1.4s,mb6.0						
CLL				MLR	MLR		
	comp=Z,43µm,19.5s,MS6.8						
CLL	**Collm**	**81.74**	**24**	*i* P	**P**	**06 34 01.0**	**+0.2**
	comp=Z,254nm,1.4s,mb6.0						
CLL				*i*		06 34 10.4	
CLL				*e*S	S	06 44 18.0	+6.0
CLL				LR	LR		
	comp=Z,43µm,19.5s,MS6.8						
CLL	**Collm**	**81.74**	**24**	P	**P**	**06 34 01.0**	**+0.2**
	comp=Z,logA/T=2.3,mb6.0						
CLL				*i*		06 34 10.4	
CLL				*e*S	S	06 44 18.0	+6.0
CLL				*e*PS	PS	06 45 05.0	+2.6
CLL				*e*SS	SS	06 49 35.0	+1.9
CLL				*e*SSS	SSS	06 53 00.0	+4.2
KTD	**Kalmit**	**81.78**	**28**	*e*P	**P**	**06 34 01.6**	**+0.5**
KTD	**Kalmit**	**81.78**	**28**	*e*P	**P**	**06 34 01.5**	**+0.4**
TOD	**Tromm**	**81.80**	**28**	*e*P	**P**	**06 34 01.6**	**+0.4**
SWS	**Schriesheim**	**81.86**	**28**	P	**P**	**06 34 03.6**	**+2.1**
SWS	**Schriesheim**	**81.86**	**28**	*e*P	**P**	**06 34 01.7**	**+0.2**
MOX	**Moxa**	**81.87**	**25**	*e*P	**P**	**06 34 01.7**	**+0.2**
MOX				*e*S	S	06 44 22.0	+8.6
MOX				pmax	pmax		
	comp=Z,400nm,2.0s,mb6.0						
MOX				MLR	MLR		
	comp=Z,42µm,20.0s,MS6.8						
MOX	**Moxa**	**81.87**	**25**	*e*P	**P**	**06 34 01.7**	**+0.2**
	comp=Z,400nm,2.0s,mb6.0						
MOX				*e*S	S	06 44 22.0	+8.6
MOX				*e*LQ		06 55 49.0	
MOX				LR	LR		
	comp=Z,42µm,20.0s,MS6.8						
MOX	**Moxa**	**81.87**	**25**	*i* P	**P**	**06 34 01.7**	**+0.2**
	comp=Z,logA/T=2.3,mb6.0						
MOX				S	S	06 44 22.0	+8.6
MOX				LQ		06 55 49.0	
MOX				L		07 11 19.0	
LOR	**Lormes**	**81.88**	**32**	*e*P	**P**	**06 34 01.7**	**+0.1**
	comp=Z,374nm,1.2s,mb5.9						
LOR				*e*R			
	comp=Z,78µm,19.2s						
LOR	**Lormes**	**81.88**	**32**	*e*P	**P**	**06 34 01.7**	**+0.1**
LOR				pmax	pmax		
	comp=Z,187nm,1.2s,mb5.9						
LOR				MLR	MLR		
	comp=Z,78µm,19.3s,MS7.1						
ELAN	**Lanestosa**	**81.89**	**38**	P	**P**	**06 34 01.0**	**-0.8**
	comp=Z,218nm,1.3s,mb5.9						
SSF	**Saint Saulge**	**81.90**	**32**	*e*P	**P**	**06 34 01.7**	**-0.1**
SSF				pmax	pmax		
	comp=Z,130nm,1.1s,mb5.8						
SSF	**Saint Saulge**	**81.90**	**32**	*e*P	**P**	**06 34 01.7**	**-0.1**
	comp=Z,130nm,1.1s,mb5.8						
THEF	**They Montfort**	**81.92**	**30**	*e*P	**P**	**06 34 02.0**	**+0.2**
LANF	**Langenberg**	**81.97**	**28**	*e*P	**P**	**06 34 02.5**	**+0.4**
TCF	**Toulx Ste Croi**	**82.00**	**33**	*e*P	**P**	**06 34 01.9**	**-0.4**
	comp=Z,230nm,1.2s,mb5.7						
TCF	**Toulx Ste Croi**	**82.00**	**33**	*e*P	**P**	**06 34 01.9**	**-0.4**
TCF				pmax	pmax		
	comp=Z,115nm,1.2s,mb5.7						
MTE	**Manteigas**	**82.00**	**42**	*e*P	**P**	**06 34 03.1**	**+0.7**
	comp=Z,212nm,1.6s,mb5.8						
MTE	**Manteigas**	**82.00**	**42**	*e*PP	PP	06 37 08.9	-3.5
MTE				*e*S	S	06 44 18.4	+3.4
MTE	**Manteigas**	**82.00**	**42**	*e*LQ		06 55 15.0	
MTE				*e*LR	LR	06 59 54.5	
	comp=Z,47µm,19.5s						
MTE	**Manteigas**	**82.00**	**42**	*e*P	**P**	**06 34 01.7**	**-0.8**
	comp=Z,369nm,1.6s,mb6.1						
BGF	**Bois d'Agland**	**82.04**	**33**	*e*P	**P**	**06 34 02.3**	**-0.2**
	comp=Z,378nm,1.2s,mb5.9						
BGF	**Bois d'Agland**	**82.04**	**33**	*e*P	**P**	**06 34 02.3**	**-0.2**
BGF				pmax	pmax		
	comp=Z,189nm,1.2s,mb5.9						
AVF	**Avril sur Loir**	**82.06**	**32**	*e*P	**P**	**06 34 02.2**	**-0.4**
	comp=Z,509nm,1.5s,mb5.9						
AVF	**Avril sur Loir**	**82.06**	**32**	*e*P	**P**	**06 34 02.2**	**-0.4**
AVF				pmax	pmax		
	comp=Z,255nm,1.5s,mb5.9						
SUW	**Suwalki**	**82.07**	**18**	*e*P	**P**	**06 34 02.8**	**+0.3**
SUW				*e*PcP	PcP	06 34 07.7	-0.9
SUW				*e*S	S	06 44 19.9	+4.5
SUW				*e*SKS	SKS	06 44 23.0	-0.7
SUW				MLR	MLR	07 09 14.1	
	comp=Z,47µm,21.5s,MS6.8						
PTOM	**Tomar**	**82.13**	**43**	*e*P	**P**	**06 34 03.8**	**+0.7**
	comp=Z,276nm,2.1s,mb5.8						
PTOM	**Tomar**	**82.13**	**43**	*e*P	**P**	**06 34 03.7**	**+0.6**
HAU	**Haudompre**	**82.24**	**30**	*e*P	**P**	**06 34 03.5**	**0.0**
	comp=Z,185nm,1.2s,mb5.6						
HAU				*e*R			
	comp=Z,48µm,20.9s						
HAU	**Haudompre**	**82.24**	**30**	*e*P	**P**	**06 34 03.5**	**0.0**
HAU				pmax	pmax		
	comp=Z,92nm,1.2s,mb5.6						
HAU				MLR	MLR		
	comp=Z,48µm,20.9s,MS6.8						
CDF	**Champ du Feu**	**82.25**	**29**	*e*P	**P**	**06 34 03.7**	**+0.2**
	comp=Z,675nm,1.7s,mb6.0						
CDF	**Champ du Feu**	**82.25**	**29**	*e*P	**P**	**06 34 03.7**	**+0.2**
CDF				pmax	pmax		
	comp=Z,337nm,1.7s,mb6.0						
WLS	**Welschbruch**	**82.27**	**29**	*e*P	**P**	**06 34 04.0**	**+0.3**
PLOU	**Loures**	**82.28**	**44**	*e*P	**P**	**06 34 05.5**	**+1.6**
	comp=Z,321nm,1.8s,mb6.0						
PLOU	**Loures**	**82.28**	**44**	*e*P	**P**	**06 34 05.4**	**+1.5**
SIND	**Sindeldorf**	**82.29**	**27**	P	**P**	**06 34 05.7**	**+1.9**
SIND	**Sindeldorf**	**82.29**	**27**	*e*P	**P**	**06 34 03.9**	**+0.1**
PMPS	**Porto Santo**	**82.34**	**53**	*e*P	**P**	**06 34 05.6**	**+1.2**
	comp=Z,206nm,1.7s,mb5.8						
PMPS	**Porto Santo**	**82.34**	**53**	*e*P	**P**	**06 34 06.7**	**+2.3**
ECH	**Echery**	**82.37**	**29**	*e*P	**P**	**06 34 04.4**	**+0.2**
SMF	**Signal de Mont**	**82.38**	**32**	*e*P	**P**	**06 34 03.9**	**-0.4**
	comp=Z,343nm,1.4s,mb5.8						
SMF	**Signal de Mont**	**82.38**	**32**	*e*P	**P**	**06 34 03.9**	**-0.4**
SMF				pmax	pmax		
	comp=Z,172nm,1.4s,mb5.8						
LIS	**Lisbon**	**82.40**	**45**	*e*P	**P**	**06 34 06.1**	**+1.5**
LIS				*e*S	S	06 44 24.2	+5.1
LIS				*e*S	S	06 44 24.3	+5.2
LIS				AMS	AMS	07 12 28.5	
	comp=Z,23µm,19.7s,MS6.6						
BRG	**Berggiesshubel**	**82.41**	**24**	*i* P	**P**	**06 34 04.6**	**+0.3**
BRG				S	S	06 44 26.0	+7.1
BRG				SP	SP	06 45 13.0	+3.8
BRG				SS	SS	06 49 49.0	+5.8
BRG				pmax	pmax		
	comp=Z,676nm,1.9s,mb6.2						
BRG				MLR	MLR		
	comp=Z,34µm,19.4s,MS6.7						
BRG	**Berggiesshubel**	**82.41**	**24**	*i* P	**P**	**06 34 04.6**	**+0.3**
	comp=Z,676nm,1.9s,mb6.2						
BRG				*e*		06 34 14.2	
BRG				S	S	06 44 26.0	+7.1
BRG				SP	SP	06 45 13.0	+3.8
BRG				SS	SS	06 49 49.0	+5.8
BRG				*e*		06 55 52.0	
BRG				LR	LR		
	comp=Z,34µm,19.4s,MS6.7						
LFF	**La Frestale**	**82.45**	**35**	*e*P	**P**	**06 34 04.7**	**0.0**
	comp=Z,693nm,1.5s,mb6.1						
LFF	**La Frestale**	**82.45**	**35**	*e*P	**P**	**06 34 04.7**	**0.0**
LFF				pmax	pmax		
	comp=Z,346nm,1.5s,mb6.1						
PCBR	**Castelo Branco**	**82.45**	**43**	*e*P	**P**	**06 34 05.3**	**+0.5**
	comp=Z,256nm,1.8s,mb5.8						
PCBR	**Castelo Branco**	**82.45**	**43**	*e*P	**P**	**06 34 05.9**	**+1.1**
RJF	**Les Rejaudoux**	**82.49**	**34**	*e*P	**P**	**06 34 04.5**	**-0.4**
	comp=Z,602nm,1.5s,mb6.0						
RJF				*e*R			
	comp=Z,92µm,20.5s						
RJF	**Les Rejaudoux**	**82.49**	**34**	*e*P	**P**	**06 34 04.5**	**-0.4**
RJF				pmax	pmax		
	comp=Z,301nm,1.5s,mb6.0						
RJF				MLR	MLR		
	comp=Z,92µm,20.5s,MS7.1						
NKC	**Novy Kostel**	**82.49**	**25**	*e*P	**P**	**06 34 04.9**	**+0.1**
NKC				*e*S	S	06 44 22.5	+2.7
NKC				AMS	AMS	07 11 30.0	
	comp=Z,41µm,19.5s						
BERN	**Bernov**	**82.51**	**25**	⇑P	**P**	**06 34 19.0**	**+14**
GRA1	**Grafenberg Arr**	**82.55**	**26**	*e*P	**P**	**06 34 05.8**	**+0.7**
	comp=Z,318nm,1.4s,mb6.2						
GRA1				*e*S	S	06 44 28.2	+7.8
GRA1				*e*SS	SS	06 49 47.3	+1.9
GRA1				LR	LR		
	comp=Z,39µm,21.0s,MS6.8						
GRF	**Grafenberg Arr**	**82.55**	**26**	*e*P	**P**	**06 34 05.8**	**+0.7**
GRF				*e*S	S	06 44 28.2	+7.8
GRF				*e*SS	SS	06 49 47.3	+1.9
GRF				pmax	pmax		
	comp=Z,318nm,1.4s,mb6.2						
GRF				MLR	MLR		
	comp=Z,39µm,21.0s,MS6.8						
GRF	**Grafenberg Arr**	**82.55**	**26**	*e*P	**P**	**06 34 05.8**	**+0.7**
GRF				*e*S	S	06 44 28.2	+7.8
GRF				*e*SS	SS	06 49 47.3	+1.9
GRF				pmax	pmax		
	comp=Z,318nm,1.4s,mb6.2						
GRF				MLR	MLR		
	comp=Z,39µm,21.0s,MS6.8						
GRF	**Grafenberg Arr**	**82.55**	**26**	*e*P	**P**	**06 34 05.8**	**+0.7**
	comp=Z,318nm,1.4s,mb6.2						
GRF				*e*S	S	06 44 28.2	+7.8
GRF				*e*SS	SS	06 49 47.3	+1.9
GRF				LR	LR		
	comp=Z,39µm,21.0s,MS6.8						
GRFO	**Grafenberg**	**82.55**	**26**	P	**P**	**06 34 05.8**	**+0.7**
GRFO				SKSac		06 44 27.6	
GRFO				SPn		06 45 20.8	
AGO	**Saint Agoulin**	**82.57**	**33**	*e*P	**P**	**06 34 05.1**	**-0.2**
HINF	**Hinteralfeld**	**82.58**	**30**	*e*P	**P**	**06 34 05.3**	**0.0**
	comp=Z,465nm,1.6s,mb6.0						
HINF	**Hinteralfeld**	**82.58**	**30**	*e*P	**P**	**06 34 05.3**	**0.0**
HINF				pmax	pmax		
	comp=Z,233nm,1.6s,mb6.0						
LIBD	**Limburg**	**82.58**	**29**	*e*P	**P**	**06 34 05.7**	**+0.4**
LBG	**Lerchenberg**	**82.59**	**28**	P	**P**	**06 34 07.7**	**+2.4**
LBG	**Lerchenberg**	**82.59**	**28**	*e*P	**P**	**06 34 05.7**	**+0.4**
MNK	**Minsk**	**82.59**	**15**	⇓*e*P	**P**	**06 34 06.0**	**+0.8**
SVE	**Sverdlovsk**	**82.60**	**356**	⇑*e*P	**P**	**06 34 04.8**	**-0.4**
SVE				*e*		06 34 11.0	
SVE				*e*		06 37 15.0	
SVE				*e*S	S	06 44 16.0	-4.8
SVE				*e*		06 45 08.0	
SVE				pmax	pmax		
	comp=Z,368nm,1.7s,mb6.1						
SVE				MLR	MLR		
	comp=N,15µm,18.0s,MS6.4						
SVE				MLR	MLR		
	comp=E,4µm,18.0s,MS6.4						
SVE				MLR	MLR		
	comp=Z,20µm,18.0s,MS6.5						
SVE	**Sverdlovsk**	**82.60**	**356**	⇑*e*P	**P**	**06 34 04.8**	**-0.4**
	comp=Z,368nm,1.7s,mb6.1						
SVE				*e*		06 34 11.0	
SVE				*e*		06 37 15.0	
SVE				*e*S	S	06 44 16.0	-4.8
SVE				*e*		06 45 08.0	
SVE				LR	LR		
	comp=Z,20µm,18.0s,MS6.5						
STU	**Stuttgart**	**82.64**	**28**	*e*P	**P**	**06 34 05.9**	**+0.3**
STU				pmax	pmax		
	comp=Z,165nm,1.4s,mb5.9						
STU	**Stuttgart**	**82.64**	**28**	*e*P	**P**	**06 34 05.9**	**+0.4**
	comp=Z,165nm,1.4s,mb5.9						
MOF	**Molkenrain**	**82.66**	**29**	*e*P	**P**	**06 34 05.7**	**0.0**
BFO	**Black Forest**	**82.70**	**29**	*e*P	**P**	**06 34 06.2**	**+0.3**
BFO				*e*		06 37 14.8	
BFO				*e*S	S	06 44 26.9	+4.9
BFO				*e*SS	SS	06 49 51.4	+3.8
BFO				pmax	pmax		
	comp=Z,438nm,1.9s,mb6.2						
BFO	**Black Forest**	**82.70**	**29**	*e*P	**P**	**06 34 06.2**	**+0.3**
	comp=Z,438nm,1.9s,mb6.2						
BFO				*e*PP	PP	06 37 14.8	-3.0
BFO				*e*S	S	06 44 26.9	+4.9
BFO				*e*SS	SS	06 49 51.4	+3.8
SIV	**San Ignacio**	**82.76**	**118**	P	**P**	**06 34 03.5**	**-3.3**
EALK	**Alkurruntz**	**82.79**	**37**	P	**P**	**06 34 05.1**	**-1.4**
	comp=Z,512nm,1.9s,mb6.2						
ECRI	**Cripan**	**82.80**	**38**	P	**P**	**06 34 06.6**	**0.0**
ECRI				pmax	pmax		
	comp=Z,286nm,1.7s,mb6.0						
ECRI	**Cripan**	**82.80**	**38**	P	**P**	**06 34 06.6**	**0.0**
	comp=Z,286nm,1.7s,mb6.0						
ELIZ	**Elizondo**	**82.83**	**37**	P	**P**	**06 34 06.6**	**-0.1**
ELIZ				pmax	pmax		
	comp=Z,265nm,2.2s,mb5.9						
ELIZ	**Elizondo**	**82.83**	**37**	P	**P**	**06 34 06.6**	**-0.1**
	comp=Z,265nm,2.2s,mb5.9						
PLDF	**La Plantade**	**82.83**	**33**	*e*P	**P**	**06 34 06.4**	**-0.3**
KIZ	**Kirchzarten**	**82.86**	**29**	P	**P**	**06 34 08.5**	**+1.7**
KIZ	**Kirchzarten**	**82.86**	**29**	⇑*e*P	**P**	**06 34 06.5**	**-0.3**
FRNF	**Fournols**	**82.87**	**33**	*e*P	**P**	**06 34 08.1**	**+1.3**
OSSF	**Osses**	**82.88**	**37**	*e*P	**P**	**06 34 06.3**	**-0.6**
PVCC	**Panska Ves**	**82.90**	**24**	*e*P	**P**	**06 34 07.4**	**+0.5**
PVCC				*e*S	S	06 44 29.0	+5.0
PVCC				AMS	AMS	07 11 00.0	
	comp=Z,25µm,19.8s						
MOS	**Moscow**	**82.93**	**9**	*e*P	**P**	**06 34 07.8**	**+0.9**
MOS				*i*		06 34 14.5	
MOS				*i*		06 37 22.2	
MOS				*i* S	S	06 44 27.6	+3.5
MOS				*i* SS	SS	06 49 50.8	-0.1
MOS				pmax	pmax		
	comp=Z,283nm,1.6s,mb6.0						
MOS				MLR	MLR		
	comp=N,29µm,23.4s						
MOS				MLR	MLR		
	comp=Z,26µm,23.4s,MS6.5						
MOS	**Moscow**	**82.93**	**9**	*e*P	**P**	**06 34 07.8**	**+0.9**
	comp=Z,283nm,1.6s,mb6.0						
MOS				*i*		06 34 14.5	
MOS				*i*		06 37 22.2	
MOS				*i* S	S	06 44 27.6	+3.5
MOS				*i* SS	SS	06 49 50.8	-0.1
MOS				LR	LR		
	comp=Z,26µm,23.4s,MS6.5						
LOMF	**Lomont**	**82.96**	**30**	*e*P	**P**	**06 34 07.4**	**+0.1**
FELD	**Feldberg**	**82.96**	**29**	⇑*e*P	**P**	**06 34 07.4**	**+0.1**
BUCH	**Bad Urach**	**82.97**	**28**	P	**P**	**06 34 09.1**	**+1.8**
BUCH	**Bad Urach**	**82.97**	**28**	*e*P	**P**	**06 34 08.1**	**+0.8**
MOE	**Montemor**	**82.97**	**44**	*e*P	**P**	**06 34 08.3**	**+0.8**
SJPF	**Ste Jean**	**83.01**	**37**	*e*P	**P**	**06 34 07.4**	**-0.2**
	comp=Z,251nm,1.5s,mb5.7						
SJPF	**Ste Jean**	**83.01**	**37**	*e*P	**P**	**06 34 07.4**	**-0.2**
SJPF				pmax	pmax		
	comp=Z,126nm,1.5s,mb5.7						
CAF	**Calviac**	**83.03**	**34**	*e*P	**P**	**06 34 07.3**	**-0.4**
	comp=Z,428nm,1.5s,mb6.0						
CAF	**Calviac**	**83.03**	**34**	*e*P	**P**	**06 34 07.3**	**-0.4**
CAF				pmax	pmax		
	comp=Z,214nm,1.5s,mb6.0						
SPAK	**Spaichingen**	**83.06**	**28**	*e*P	**P**	**06 34 08.1**	**+0.3**
SPAK	**Spaichingen**	**83.06**	**28**	*e*P	**P**	**06 34 08.4**	**+0.6**
ORDF	**Ordiarp**	**83.06**	**37**	*e*P	**P**	**06 34 08.6**	**+0.7**
BOURR	**Bourrignon**	**83.08**	**30**	⇑*i*P	**P**	**06 34 08.3**	**+0.4**
ARU	**Arti**	**83.09**	**357**	⇓*i*P	**P**	**06 34 06.5**	**-1.3**
ARU				*i*		06 37 17.5	
ARU				*i* PPP	PPP	06 39 10.4	-3.6
ARU				*i* S	S	06 44 26.8	+1.0
ARU				*e*PS	PS	06 45 23.9	+4.4
ARU				pmax	pmax		
	comp=Z,268nm,1.9s,mb6.0						
ARU	**Arti**	**83.09**	**357**	⇓*i*P	**P**	**06 34 06.5**	**-1.3**
	comp=Z,268nm,1.9s,mb6.0						
ARU				*i*		06 37 17.5	
ARU				*i* PPP	PPP	06 39 10.4	-3.6
ARU				*i* S	S	06 44 26.8	+1.0
ARU				*e*PS	PS	06 45 23.9	+4.4
BBS	**Basel-Blauen**	**83.12**	**29**	*e*P	**P**	**06 34 08.3**	**+0.2**
BBS	**Basel-Blauen**	**83.12**	**29**	*e*P	**P**	**06 34 08.5**	**+0.4**
EVO	**Evora**	**83.14**	**44**	⇑*i*P	**P**	**06 34 08.0**	**-0.4**
	comp=Z,1µm,1.6s,mb6.4						
EVO				*e*R			
	comp=Z,38µm,21.2s						
KSP	**Ksiaz**	**83.14**	**23**	⇑*e*P	**P**	**06 34 08.5**	**+0.4**
KSP				*e**PP	pP	06 34 16.0	+4.0
KSP				*e*		06 44 30.0	
KSP				MLR	MLR		
	comp=Z,51µm,19.0s,MS6.9						
KSP	**Ksiaz**	**83.14**	**23**	⇑*e*P	**P**	**06 34 08.5**	**+0.4**
KSP				*e*pP	pP	06 34 16.0	+4.0
KSP				*e*PP	PP	06 37 08.5	-13
KSP				*e*SKS	SKS	06 44 30.0	-1.2
KSP				*e*SS	SS	06 49 40.0	-14
KSP				LR	LR		
	comp=Z,51µm,19.0s,MS6.9						
KSP	**Ksiaz**	**83.14**	**23**	*e*P	**P**	**06 34 08.9**	**+0.7**
KSP				*e*SKS	SKS	06 44 34.6	+3.4
KSP				*e*SS	SS	06 49 42.3	-12
KSP				MLR	MLR	07 12 06.6	
HDH	**Heidenheim**	**83.15**	**27**	P	**P**	**06 34 10.5**	**+2.3**
HDH	**Heidenheim**	**83.15**	**27**	*e*P	**P**	**06 34 08.4**	**+0.2**
BRANT	**Les Verrieres**	**83.17**	**30**	⇑*i*P	**P**	**06 34 09.0**	**+0.6**
LARF	**Larrau**	**83.17**	**37**	*e*P	**P**	**06 34 10.3**	**+1.8**
WAR	**Warsaw**	**83.17**	**19**	*e*P	**P**	**06 34 09.8**	**+1.5**
WAR				*e*S	S	06 44 35.6	+8.9
WAR				MLR	MLR	07 11 09.6	
	comp=Z,28µm,20.9s,MS6.6						
HHC	**Hu-ho-hao-te**	**83.19**	**320**	*e*P	**P**	**06 34 06.9**	**-1.7**
HHC				AP	pP	06 34 11.0	-1.4
HHC				XP	sP	06 34 14.6	+0.9
HHC				S	S	06 44 19.3	-7.8
HHC				SKS	SKS	06 44 23.9	-7.8
HHC				AMB	AMB		
	comp=Z,60nm,1.6s,mb5.4						
HHC				AMB	AMB		
	comp=Z,2µm,9.0s						
HHC				LR	LR		
	comp=N,13µm,22.6s,MS6.5						
HHC				LR	LR		
	comp=E,21µm,23.8s,MS6.5						
HHC				LR	LR		
	comp=Z,21µm,25.0s,MS6.4						
HHC	**Hu-ho-hao-te**	**83.19**	**320**	*e*P	**P**	**06 34 06.9**	**-1.7**
	comp=Z,68nm,1.6s,mb5.4						
HHC				pP	pP	06 34 11.0	-1.4
HHC				sP	sP	06 34 14.6	+0.9
HHC				S	S	06 44 19.3	-7.8
HHC				SKS	SKS	06 44 23.9	-7.8
HHC				LR	LR		
	comp=Z,21µm,25.0s,MS6.4						
GUT	**Gutenstein**	**83.20**	**28**	P	**P**	**06 34 09.5**	**+1.0**
GUT	**Gutenstein**	**83.20**	**28**	⇑*e*P	**P**	**06 34 09.0**	**+0.5**
COLF	**Collangettes**	**83.23**	**33**	*e*P	**P**	**06 34 08.6**	**-0.1**
SLE	**Schleitheim**	**83.23**	**29**	⇑P	**P**	**06 34 09.0**	**+0.3**
SLE	**Schleitheim**	**83.23**	**29**	⇑*i*P	**P**	**06 34 08.9**	**+0.2**
PRA	**Prague**	**83.26**	**24**	P	**P**	**06 34 09.0**	**+0.2**
PRA				AMS	AMS	07 11 30.0	
LBL	**Lubilhac**	**83.28**	**33**	*e*P	**P**	**06 34 09.0**	**0.0**
CABF	**La Chapelle**	**83.29**	**31**	*e*P	**P**	**06 34 09.5**	**+0.5**
	comp=Z,2µm,1.5s,mb6.5						
CABF	**La Chapelle**	**83.29**	**31**	*e*P	**P**	**06 34 09.5**	**+0.5**
CABF				pmax	pmax		
	comp=Z,758nm,1.5s,mb6.5						
SULZ	**Sulz-Cheisache**	**83.30**	**29**	⇑P	**P**	**06 34 09.7**	**+0.7**
SULZ	**Sulz-Cheisache**	**83.30**	**29**	⇑*i*P	**P**	**06 34 09.3**	**+0.3**
BALST	**Balsthal**	**83.30**	**29**	⇑*i*P	**P**	**06 34 09.4**	**+0.4**
UPC	**Upice**	**83.36**	**23**	*e*P	**P**	**06 34 09.5**	**+0.3**

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PRU   Pruhonice        83.37  24 eP     P      06 34 09.6 +0.3
PRU                              eS     S      06 44 33.4 +4.7
PRU                               AMS   AMS    07 11 10.0
      comp=Z,40µm,18.8s
OBN   Obninsk          83.41  10c iP    P      06 34 09.0 -0.4
OBN                              i S    S      06 44 31.5 +2.5
OBN                              i SS   SS     06 49 55.3 -2.4
OBN                               pmax  pmax
      comp=Z,448nm,1.8s,mb6.2
OBN                               MLR   MLR
      comp=Z,24µm,17.0s,MS6.6
OBN   Obninsk          83.41  10⇑iP     P      06 34 09.0 -0.4
      comp=Z,448nm,1.8s,mb6.2
OBN                              i S    S      06 44 31.5 +2.5
OBN                              i SS   SS     06 49 55.3 -2.4
OBN                               LR    LR
      comp=Z,24µm,17.0s,MS6.6
REYF  Montagne du Re   83.42  37 eP     P      06 34 11.0 +1.3
GIMEL Gimel            83.42  31⇑iP     P      06 34 10.4 +0.7
STEIN Stein am Rhein   83.45  29⇑iP     P      06 34 10.2 +0.4
SISB  Singen-Sch Ber   83.47  29  P     P      06 34 12.2 +2.3
ETSF  Etsaut           83.48  37 eP     P      06 34 10.5 +0.5
      comp=Z,875nm,1.8s,mb6.2
ETSF  Etsaut           83.48  37 eP     P      06 34 10.5 +0.5
ETSF                              pmax  pmax
      comp=Z,437nm,1.8s,mb6.2
PTEO  Sao Teotonio     83.49  45 eP     P      06 34 11.0 +0.8
      comp=Z,621nm,1.8s,mb6.3
TORNY Torny            83.49  30⇑iP     P      06 34 10.5 +0.5
EBAD  Badajoz          83.50  43  P     P      06 34 08.8 -1.4
      comp=Z,549nm,1.6s,mb6.3
FDAF  Les Forges d'A   83.54  37 eP     P      06 34 10.8 +0.5
WET   Wettzell         83.58  25 eP     P      06 34 10.6 +0.3
WET                              eS     S      06 44 38.3 +7.6
WET                               pmax  pmax
      comp=Z,239nm,1.6s,mb6.1
WET   Wettzell         83.58  25 eP     P      06 34 10.6 +0.3
      comp=Z,239nm,1.6s,mb6.1
WET                              eS     S      06 44 38.3 +7.6
DPC   Dobruska-Polom   83.59  23 eP     P      06 34 10.9 +0.5
DPC                              eS     S      06 44 36.3 +5.5
DPC                               AMS   AMS    07 12 10.0
      comp=Z,26µm,17.5s
PBEJ  Beja             83.59  44 eP     P      06 34 12.1 +1.4
      comp=Z,290nm,1.9s,mb6.1
ZUR   Zurich           83.60  29 ⇑P     P      06 34 11.5 +1.0
ZUR   Zurich           83.60  29⇑iP     P      06 34 11.2 +0.7
WEIN  Weingarten       83.61  29⇑iP     P      06 34 11.0 +0.4
LABF  Labassere        83.65  36 eP     P      06 34 10.3 -0.5
WILA  Wila             83.68  29 ⇑P     P      06 34 11.7 +0.8
WILA  Wila             83.68  29⇑iP     P      06 34 11.5 +0.6
TIA   Tai'an           83.73 313 eP     P      06 34 09.3 -2.1
TIA                               AMB   AMB
      comp=Z,70nm,1.2s,mb5.7
TIA                               LR    LR
      comp=N,11µm,18.0s
TIA                               LR    LR
      comp=E,4µm,12.0s
TIA   Tai'an           83.73 313 eP     P      06 34 09.3 -2.1
      comp=E,75nm,1.2s,mb5.7
EPF   Esparros         83.78  36 eP     P      06 34 11.3 -0.2
      comp=E,1µm,1.8s,mb6.3
EPF   Esparros         83.78  36 eP     P      06 34 11.3 -0.2
EPF                               pmax  pmax
      comp=Z,504nm,1.8s,mb6.3
KHC   Kasperske Hory   83.81  25 eP     P      06 34 12.0 +0.5
KHC                              e             06 34 19.0
KHC                              eS     S      06 44 39.0 +5.9
KHC                               MLR   MLR
      comp=Z,44µm,20.6s,MS6.8
KHC   Kasperske Hory   83.81  25 eP     P      06 34 12.0 +0.5
KHC                               pP    pP     06 34 19.0 +3.6
KHC                              eS     S      06 44 39.0 +5.9
KHC                               AMS   AMS    07 09 30.0
      comp=Z,44µm,20.6s
WIMIS Wimmis           83.83  30⇑iP     P      06 34 12.4 +0.7
AIGLE Aigle            83.85  30⇑iP     P      06 34 12.4 +0.6
FUR   Furstenfeldbru   83.88  27 eP     P      06 34 12.6 +0.7
FUR                              eS     S      06 44 41.2 +7.4
FUR                              eSS    SS     06 50 05.5 +1.1
FUR                               pmax  pmax
      comp=Z,920nm,1.8s,mb6.6
FUR   Furstenfeldbru   83.88  27 eP     P      06 34 12.6 +0.7
      comp=Z,920nm,1.8s,mb6.6
FUR                              eS     S      06 44 41.2 +7.4
FUR                              eSS    SS     06 50 05.5 +1.1
UBR   Uberruh          83.89  28  P     P      06 34 13.8 +1.9
UBR   Uberruh          83.89  28⇑eP     P      06 34 12.8 +0.9
HNR   Honiara          83.91 252  LR    LR     07 05 52.8
      comp=Z,14µm,19.4s,MS6.3,baz=77,slow=32
HNR   Honiara          83.91 252  PFAKE        06 34 20.0 +7.1
HNR                               LR    LR
      comp=Z,15µm,19.0s,MS6.4
RESF  Ens              83.96  36 eP     P      06 34 13.4 +1.0
HASLI Hasliberg        83.96  29⇑iP     P      06 34 13.3 +1.0
MUO   Muotathal        83.96  29 ⇑P     P      06 34 13.6 +1.3
MUO   Muotathal        83.96  29⇑iP     P      06 34 13.4 +1.1
BNALP Bannalp          83.96  29⇑iP     P      06 34 13.4 +1.1
EBIE  Bielsa           83.96  37  P     P      06 34 11.3 -1.2
      comp=Z,423nm,2.2s,mb6.2
SENIN Lac Senin        83.96  30⇑iP     P      06 34 13.4 +1.0
GRYON Gryon            83.99  30⇑iP     P      06 34 13.3 +0.8
LIENZ Alp Oberkamor    84.00  28⇑iP     P      06 34 13.5 +1.0
SALAN Lac Salanfe      84.02  30⇑iP     P      06 34 13.6 +0.9
EMV   Vieux Emosson    84.06  31  P     P      06 34 13.9 +1.0
EMV   Vieux Emosson    84.06  31⇑iP     P      06 34 13.8 +0.9
LKBD  Leukerbad        84.07  30 ⇑P     P      06 34 14.2 +1.3
LKBD  Leukerbad        84.07  30⇑iP     P      06 34 13.8 +0.9
GEC2  GERESS Array S   84.10  25 eP     P      06 34 13.2 +0.2
GEC2                             e             06 37 28.5
GEC2                             eS     S      06 44 41.0 +5.1
GEC2                             eSS    SS     06 50 08.9 +1.3
GEC2                              pmax  pmax
      comp=Z,260nm,1.5s,mb6.1
GEC2  GERESS Array S   84.10  25 eP     P      06 34 13.2 +0.2
      comp=Z,260nm,1.5s,mb6.1
GEC2                             ePP    PP     06 37 28.5 -0.5
GEC2                             eS     S      06 44 41.0 +5.1
GEC2                             eSS    SS     06 50 08.9 +1.3
GERES GERESS Array B   84.10  25  P     P      06 34 13.2 +0.2
      comp=Z,22nm,0.8s,mb5.3,baz=333,slow=3.0,SNR=140
GERES                             S     S      06 44 41.9 +6.0
      comp=Z,0.2nm,0.3s,baz=226,slow=37,SNR=3.1
GERES                             PKKPbc       06 52 25.1
      comp=Z,0.3nm,0.2s,baz=117,slow=6.0,SNR=3.5
GERES                             LR    LR     07 12 59.1
      comp=Z,37µm,20.1s,MS6.8,baz=330,slow=37
BTO   Baotou           84.13 320 eP     P      06 34 14.3 +1.0
BTO                               AMB   AMB
      comp=Z,50nm,1.3s,mb5.5
BTO   Baotou           84.13 320 eP     P      06 34 14.3 +1.0
      comp=Z,53nm,1.3s,mb5.5
DAVA  Damuels          84.14  28⇑iP     P      06 34 14.4 +1.2
      comp=Z,3µm,4.9s
PLONS Plons            84.16  29⇑iP     P      06 34 14.2 +0.8
VIVF  Saint-Julien-l   84.17  33 eP     P      06 34 13.6 +0.2
      comp=Z,1µm,1.6s,mb6.5
VIVF  Saint-Julien-l   84.17  33 eP     P      06 34 13.6 +0.2
VIVF                              pmax  pmax
      comp=Z,579nm,1.6s,mb6.5
MLS   Moulis           84.17  36 eP     P      06 34 13.4 -0.1
LLS   Linth-Limmern    84.20  29 ⇑P     P      06 34 14.8 +1.3
LLS   Linth-Limmern    84.20  29⇑iP     P      06 34 14.6 +1.1
PALC  Alcoutim         84.21  44 eP     P      06 34 14.9 +1.0
      comp=Z,649nm,1.9s,mb6.4
PALC  Alcoutim         84.21  44 eP     P      06 34 14.8 +0.9
DIX   Grande Dixence   84.24  30  P     P      06 34 16.8 +3.0
DIX   Grande Dixence   84.24  30⇑iP     P      06 34 15.2 +1.4
GRN   Grenoble         84.29  32 eP     P      06 34 15.6 +1.6
ESDC  Sonseca Array    84.36  41  P     P      06 34 14.4 -0.1
      comp=Z,43nm,1.0s,mb5.5,baz=313,slow=4.1,SNR=103
ESDC  Sonseca Array    84.36  41  P     P      06 34 11.7 -2.8
      comp=Z,286nm,2.0s,mb6.0
ESDC                              P            06 34 12.3
ESLA  Sonseca Array    84.36  41 eP     P      06 34 14.3 -0.2
      comp=Z,168nm,1.6s,mb5.9
ESLA                              LR    LR
      comp=Z,173µm,22.0s,MS7.4
MTLF  Montolieu        84.36  35 eP     P      06 34 14.4  0.0
      comp=Z,713nm,1.5s,mb6.3
MTLF  Montolieu        84.36  35 eP     P      06 34 14.4  0.0
MTLF                              pmax  pmax
      comp=Z,357nm,1.5s,mb6.3
SALF  Salau            84.38  36 eP     P      06 34 16.0 +1.5
RAO   Raoul Island     84.40 223  PFAKE        06 34 20.0 +5.0
RAO                               LR    LR
      comp=Z,11µm,20.0s,MS6.2
FUSIO Fusio            84.40  29⇑iP     P      06 34 15.9 +1.3
EMIN  Mina Concepcio   84.41  44  P     P      06 34 14.1 -0.8
      comp=Z,840nm,1.5s,mb6.7
ESAC  San Caprasio     84.44  37  P     P      06 34 14.3 -0.6
      comp=Z,814nm,1.8s,mb6.6
LPL   La Plagne        84.45  31 eP     P      06 34 16.0 +1.2
      comp=Z,1µm,1.7s,mb6.5
LPL   La Plagne        84.45  31 eP     P      06 34 16.0 +1.2
LPL                               pmax  pmax
      comp=Z,605nm,1.7s,mb6.5
MORC  Moravsky Berou   84.46  23 eP     P      06 34 14.8  0.0
MORC                              pmax  pmax
      comp=Z,516nm,1.7s,mb6.4
MORC  Moravsky Berou   84.46  23 eP     P      06 34 14.8 +0.1
      comp=Z,516nm,1.7s,mb6.4
GDM   Grand'Maison     84.47  32 eP     P      06 34 15.5 +0.6
LASF  Ste Croix        84.47  34 eP     P      06 34 15.3 +0.3
      comp=Z,1µm,1.9s,mb6.3
LPG   La Plagne        84.47  31 eP     P      06 34 16.2 +1.3
      comp=Z,1µm,1.4s,mb6.5
LPG   La Plagne        84.47  31 eP     P      06 34 16.2 +1.3
LPG                               pmax  pmax
      comp=Z,514nm,1.4s,mb6.5
MMK   Mattmark         84.48  30  P     P      06 34 17.4 +2.4
MMK   Mattmark         84.48  30⇑iP     P      06 34 16.8 +1.8
EHIG  Higuera          84.53  57  P     P      06 34 16.5 +0.9
      comp=Z,1µm,1.6s,mb6.8
LPEF  Le Peyrat        84.54  35 eP     P      06 34 15.5 +0.1
MCGN  Macugnaga        84.57  30  P     P      06 34 17.8 +2.4
DAVOX Davos            84.57  28  P     P      06 34 17.3 +1.9
DAVOX Davos            84.57  28⇑iP     P      06 34 16.8 +1.4
OKC   Ostrava-Krasne   84.58  22 eP     P      06 34 15.7 +0.3
OKC                              eS     S      06 44 41.4 +0.8
OKC                               AMS   AMS    07 11 20.0
      comp=Z,19µm,19.2s
VRAC  Vranov           84.59  23  P     P      06 34 16.4 +0.9
VRAC  Vranov           84.59  23 i P    P      06 34 16.0 +0.5
VRAC                             eS     S      06 44 46.3 +5.5
ORIF  Oris-en-Rattie   84.61  32 eP     P      06 34 16.1 +0.5
      comp=Z,2µm,1.7s,mb6.7
ORIF                             eR
      comp=Z,58µm,20.5s
TUE   Stuetta          84.64  29  P     P      06 34 18.1 +2.3
OG26  St.-Nazaire-De   84.66  32 eP     P      06 34 16.6 +0.7
LSD   Ceresole Reale   84.66  31  P     P      06 34 17.5 +1.6
SQTA  Sankt Quirin     84.67  27⇑iP     P      06 34 16.9 +1.0
      comp=Z,614nm,1.7s,mb6.5
SQTA  Sankt Quirin     84.67  27⇑iP     P      06 34 16.9 +1.0
SQTA                              pmax  pmax
      comp=Z,614nm,1.7s,mb6.5
VDL   Val di Lei       84.67  29 ⇑P     P      06 34 17.6 +1.7
VDL   Val di Lei       84.67  29⇑iP     P      06 34 17.5 +1.6
OJC   Ojcow            84.69  21 eP     P      06 34 16.1 +0.2
OJC                              ePP    PP     06 37 32.1 -1.6
OJC                              eS     S      06 44 39.7 -2.1
OJC                              eSS    SS     06 50 11.6 -4.8
OJC                               MLR   MLR    07 10 28.7
      comp=Z,22µm,22.4s,MS6.5
WATA  Walderalm        84.70  27⇑iP     P      06 34 16.9 +0.9
      comp=Z,521nm,1.6s,mb6.4
WATA  Walderalm        84.70  27⇑iP     P      06 34 16.9 +0.9
WATA                              pmax  pmax
      comp=Z,521nm,1.6s,mb6.4
KRUC  Moravsky         84.75  23  P     P      06 34 16.8 +0.5
WTTA  Wattenberg       84.78  27⇑iP     P      06 34 17.4 +1.0
      comp=Z,2µm,2.5s,mb6.7
WTTA  Wattenberg       84.78  27⇑iP     P      06 34 17.4 +1.0
WTTA                              pmax  pmax
      comp=Z,2µm,2.5s,mb6.7
BNI   Bardonecchia     84.81  31  P     P      06 34 17.9 +1.2
BNI   Bardonecchia     84.81  31  P     P      06 34 20.1 +3.4
LRDF  Laroque-de-Fa    84.83  35 eP     P      06 34 17.1 +0.3
ECAB  El Cabril        84.83  43  P     P      06 34 16.1 -0.8
      comp=Z,590nm,1.8s,mb6.4
ORX   Oropa            84.84  30  P     P      06 34 17.8 +1.1
ORO   Oropa            84.84  30  P     P      06 34 19.5 +2.7
      comp=Z,1µm,1.6s,mb6.8
TRAV                   84.85  30  P     P      06 34 17.8 +1.0
FUORN Ofenpass         84.85  28  P     P      06 34 19.1 +2.3
FUORN Ofenpass         84.85  28⇑iP     P      06 34 18.3 +1.5
VAI   Varese           84.94  30  P     P      06 34 18.4 +1.2
VAI                               pmax  pmax
      comp=Z,674nm,1.6s,mb6.5
VAI   Varese           84.94  30  P     P      06 34 18.4 +1.2
      comp=Z,674nm,1.6s,mb6.5
BERNI Berninapass      84.94  29⇑iP     P      06 34 18.8 +1.6
RSP   Reno Superiore   84.96  31  P     P      06 34 18.7 +1.3
RRL   Cesana Torines   84.97  31  P     P      06 34 18.8 +1.4
FENE  Fenestrelle      84.98  31  P     P      06 34 19.1 +1.6
MUGIO Muggio           84.99  29  P     P      06 34 19.0 +1.5
MUGIO Muggio           84.99  29⇑iP     P      06 34 18.1 +0.6
CHIE  El Hierro        85.00  58  P     P      06 34 18.8 +0.8
      comp=Z,361nm,1.5s,mb6.3
BRMO  Bormio           85.01  28  P     P      06 34 19.7 +2.1
VALF  Valcebollere     85.03  36 eP     P      06 34 18.6 +0.8
SSE   Sheshan          85.04 307  P     P      06 34 15.3 -2.8
SSE                               AP    pP     06 34 19.8 -2.2
SSE                               S     S      06 44 41.9 -3.7
SSE                               AMB   AMB
      comp=Z,30nm,0.8s,mb5.5
SSE                               AMB   AMB
      comp=Z,380nm,8.7s
SSE                               LR    LR
      comp=N,19µm,27.8s,MS6.5
SSE                               LR    LR
      comp=E,18µm,28.1s,MS6.5
SSE                               LR    LR
      comp=Z,9µm,22.9s
SSE   Sheshan          85.04 307  P     P      06 34 15.3 -2.8
      comp=Z,36nm,0.8s,mb5.5
SSE                               pP    pP     06 34 19.8 -2.2
SSE                               S     S      06 44 41.9 -3.7
SSE                               LR    LR
      comp=Z,9µm,22.9s,MS6.1
OG22  Abries           85.11  31 eP     P      06 34 21.1 +3.0
MBDF  Montbardon       85.12  31 eP     P      06 34 19.1 +0.9
      comp=Z,495nm,1.0s,mb6.3
MBDF  Montbardon       85.12  31 eP     P      06 34 19.1 +0.9
MBDF                              pmax  pmax
      comp=Z,247nm,1.0s,mb6.3
OG25  Le Caire         85.14  32 eP     P      06 34 19.4 +1.1
FILF  Fillols          85.14  35 eP     P      06 34 17.8 -0.5
MOA   Molln            85.16  25⇑iP     P      06 34 18.7 +0.4
      comp=Z,1µm,2.2s,mb6.6
EGOM  La Gomera        85.18  57  P     P      06 34 18.1 -0.8
      comp=Z,710nm,1.8s,mb6.5
EADA  Adamuz           85.19  42  P     P      06 34 17.1 -1.6
      comp=Z,728nm,1.8s,mb6.5
EMIR  Miracle          85.20  36  P     P      06 34 18.1 -0.5
      comp=Z,509nm,1.8s,mb6.3
BHB   Bricherasio      85.22  31  P     P      06 34 19.5 +0.8
PRAF  Pradon           85.24  33 eP     P      06 34 19.5 +0.7
SMRF  Simiane la Rot   85.26  33 eP     P      06 34 19.6 +0.7
      comp=Z,1µm,1.7s,mb6.4
APPI  Appiano          85.31  28  P     P      06 34 20.6 +1.5
      comp=Z,737nm,2.3s,mb6.4
SJAF  Saint Jean de    85.34  35 eP     P      06 34 19.5 +0.1
SURF  Saint Ours       85.34  32 eP     P      06 34 20.8 +1.5
EJON  La Jonquera      85.37  35  P     P      06 34 18.2 -1.3
      comp=Z,167nm,1.4s,mb6.0
STOF  St-Etienne Org   85.38  32 eP     P      06 34 19.8 +0.3
ERTA  Horta de San J   85.42  37  P     P      06 34 19.0 -0.8
      comp=Z,608nm,2.0s,mb6.4
MABI  Malga Bissina    85.42  28  P     P      06 34 21.9 +2.2
      comp=Z,242nm,1.3s,mb6.2
VILF  Villemus         85.42  33 eP     P      06 34 20.6 +0.9
SEST  Monte Rota       85.43  27  P     P      06 34 22.0 +2.3
      comp=Z,439nm,1.3s,mb6.4
PZZ   Prazzo           85.44  31  P     P      06 34 20.9 +1.1
EPOB  Poblet           85.45  37  P     P      06 34 19.0 -0.9
      comp=Z,282nm,1.6s,mb6.2
BVAR  Borovoye Array   85.47 350  PKKPbc       06 52 22.1
      comp=Z,1.0nm,0.7s,baz=180,slow=1.5,SNR=4.4
EBAJ  Bajamar          85.47  56  P     P      06 34 19.9 -0.4
      comp=Z,637nm,2.1s,mb6.4
TREF  Trevaresse       85.47  33 eP     P      06 34 20.4 +0.4
DOI   San Damiano      85.50  31  P     P      06 34 20.7 +0.6
DOI                               pmax  pmax
      comp=Z,384nm,1.3s,mb6.4
DOI   San Damiano      85.50  31  P     P      06 34 20.7 +0.6
      comp=Z,384nm,1.3s,mb6.4
EMOS  Mosqueruela      85.51  38  P     P      06 34 20.0 -0.3
      comp=Z,368nm,1.6s,mb6.4
ESPR  Espera           85.52  44  P     P      06 34 18.4 -2.0
      comp=Z,372nm,1.7s,mb6.3
CCAN  Las Canadas      85.52  56  P     P      06 34 21.9 +1.3
      comp=Z,409nm,1.6s,mb6.4
KBA   Koelnbreinsper   85.53  26⇑iP     P      06 34 20.8 +0.6
      comp=Z,2µm,2.5s,mb6.8
KBA   Koelnbreinsper   85.53  26⇑iP     P      06 34 20.8 +0.6
KBA                               pmax  pmax
      comp=Z,2µm,2.5s,mb6.8
SMOL  Smolenice        85.55  23 eP     P      06 34 22.5 +2.2
SMOL                             e             06 34 31.3
LIKS  Likavka          85.56  22 eP     P      06 34 30.9  +11
LIKS  Likavka          85.56  22 e      P      06 34 30.9  +11
NIE   Niedzica         85.56  21 eP     P      06 34 21.4 +1.1
EBR   Ebro Roquetas    85.60  37 eP     P      06 34 21.0 +0.3
SFS   San Fernando     85.64  44  P     P      06 34 21.0  0.0
PUYF  Puyloubier       85.68  33 eP     P      06 34 21.5 +0.5
GELF  Grande-Etoile    85.69  33 eP     P      06 34 21.5 +0.4
ZST   Bratislava       85.74  23 i P    P      06 34 22.6 +1.4
ZST                              e             06 34 31.3
ZST                              eS     S      06 44 53.8 +1.8
ZST                              eSS    SS     06 50 30.1 -2.1
STV2  Anna di Valdie   85.74  31  P     P      06 34 21.7 +0.4
STV   Sta Anna Valdi   85.74  31  P     P      06 34 20.4 -0.9
NJ2   Nanjing          85.75 309 eP     P      06 34 21.5 -0.1
NJ2                               AP    pP     06 34 26.5 +1.0
NJ2                               XP    sP     06 34 28.9 +2.2
NJ2                               S     S      06 44 51.0 -1.5
NJ2                               XS           06 45 00.0
NJ2                               AMB   AMB
      comp=Z,70nm,1.2s,mb5.8
NJ2                               AMB   AMB
      comp=Z,250nm,6.2s
NJ2                               LR    LR
      comp=N,105µm,24.8s,MS7.2
NJ2                               LR    LR
      comp=E,72µm,23.8s,MS7.2
NJ2                               LR    LR
      comp=Z,10µm,21.4s,MS6.2
NJ2   Nanjing          85.75 309 eP     P      06 34 21.5 -0.1
      comp=Z,70nm,1.2s,mb5.8
NJ2                               pP    pP     06 34 26.5 +1.0
NJ2                               sP    sP     06 34 28.9 +2.2
NJ2                               S     S      06 44 51.0 -1.5
NJ2                               sS           06 45 00.0
NJ2                               LR    LR
      comp=Z,10µm,21.4s,MS6.2
FVI   Forni Avoltri    85.75  27  P     P      06 34 22.9 +1.6
FVI                               pmax  pmax
      comp=Z,295nm,2.0s,mb6.2
FVI   Forni Avoltri    85.75  27  P     P      06 34 22.9 +1.6
      comp=Z,295nm,2.0s,mb6.2
TAVF  Tavernes         85.75  32 eP     P      06 34 22.1 +0.7
ENR   Entracque        85.80  31  P     P      06 34 21.0 -0.6
SAL   Salo             85.81  29  P     P      06 34 22.8 +1.2
SAL                               pmax  pmax
      comp=Z,3µm,2.0s
SAL   Salo             85.81  29  P     P      06 34 22.8 +1.2
      comp=Z,3µm,2.0s
ELUQ  Luque            85.82  42  P     P      06 34 21.9  0.0
ELUQ                              pmax  pmax
      comp=Z,142nm,1.6s,mb6.0
ELUQ  Luque            85.82  42  P     P      06 34 21.9  0.0
      comp=Z,142nm,1.6s,mb6.0
CTI   Castel Tesino    85.83  28  P     P      06 34 22.6 +0.9
CTI                               pmax  pmax
      comp=Z,818nm,2.2s,mb6.6
CTI   Castel Tesino    85.83  28  P     P      06 34 22.6 +0.9
      comp=Z,818nm,2.2s,mb6.6
BERF  Bertagne         85.86  33 eP     P      06 34 22.6 +0.7
CSO   Casso            85.88  27⇓eP     P      06 34 22.0 +0.1
EVIA  Vianos           85.88  41  P     P      06 34 21.9 -0.2
EVIA                              pmax  pmax
      comp=Z,335nm,1.8s,mb6.3
EVIA  Vianos           85.88  41  P     P      06 34 21.9 -0.3
      comp=Z,334nm,1.8s,mb6.3
ECHE  Chera            85.88  39  P     P      06 34 22.0 -0.1
ECHE                              pmax  pmax
      comp=Z,190nm,1.6s,mb6.1
ECHE  Chera            85.88  39  P     P      06 34 22.0 -0.1
      comp=Z,190nm,1.6s,mb6.1
TOUF  Mont Tournerai   85.91  32 eP     P      06 34 22.3 +0.2
ROB   Roburent         85.92  31  P     P      06 34 22.0 -0.2
MVIF  Mont Vial        85.97  32 eP     P      06 34 22.7 +0.3
PCP   Pian Castagno    85.97  30  P     P      06 34 22.1 -0.3
CALN  Calern           85.98  32 eP     P      06 34 22.8 +0.3
VYHS  Vyhne            85.98  22 eP     P      06 34 22.7 +0.3
VYHS                             e             06 37 42.0
VYHS                             eS     S      06 44 53.8 -0.6
VYHS                             eSS    SS     06 50 29.7 -6.1
VYHS  Vyhne            85.98  22 eP     P      06 34 22.7 +0.3
VYHS                             e             06 34 32.1
VYHS                             ePP    PP     06 37 42.0 -2.0
VYHS                             eS     S      06 44 53.8 -0.6
VYHS                             eSS    SS     06 50 29.7 -6.1
AUTN  L'Aution         85.99  31 eP     P      06 34 23.2 +0.6
KWP   Kalwaria         86.00  20 eP     P      06 34 23.1 +0.7
KWP                              ePcP   PcP    06 34 31.7 +6.0
KWP                              eSKS   SKS    06 44 44.0 -6.3
KWP                              eS     S      06 44 54.1 -0.4
KWP                              eSS    SS     06 50 44.6 +8.6
KWP   Kalwaria         86.00  20 eP     P      06 34 23.1 +0.7
KWP                              ePcP   PcP    06 34 31.7 +6.0
KWP                              eSKS   SKS    06 44 44.0 -6.3
KWP                              eS     S      06 44 54.1 -0.4
KWP                              eSS    SS     06 50 44.5 +8.6
KWP                               MLR   MLR    07 11 37.6
      comp=Z,24µm,22.6s,MS6.5
FRF   La Foret Royal   86.04  32 eP     P      06 34 22.7 -0.1
SAOF  Saorge           86.05  31 eP     P      06 34 23.2 +0.4
MONE  Monesi           86.05  31  P     P      06 34 22.9  0.0
MLNI  Malnisio         86.08  27⇑eP     P      06 34 24.0 +1.0
ARSA  Arzberg          86.09  25⇓iP     P      06 34 23.2 +0.2
      comp=Z,1µm,2.9s,mb6.7
SBF   Sospel           86.11  31 eP     P      06 34 23.0 -0.1
      comp=Z,972nm,1.5s,mb6.5
SBF   Sospel           86.11  31 eP     P      06 34 23.0 -0.1
SBF                               pmax  pmax
      comp=Z,486nm,1.5s,mb6.5
LSR   Lussari          86.11  26⇓eP     P      06 34 25.0 +1.9
FIN   Finale Ligure    86.12  31  P     P      06 34 23.4 +0.2
BOB   Bobbio (Coli)    86.12  30  P     P      06 34 24.8 +1.6
BOB                               pmax  pmax
      comp=Z,166nm,1.7s,mb6.0
BOB   Bobbio (Coli)    86.12  30  P     P      06 34 24.8 +1.6
      comp=Z,166nm,1.7s,mb6.0
MPRI  Monte Prat       86.13  27⇓eP     P      06 34 23.0 -0.2
CAE   Caneva           86.14  27⇑eP     P      06 34 24.0 +0.7
LVV   L'vov            86.15  19 i P    P      06 34 23.8 +0.6
LVV                              e             06 37 52.8
LVV                              e             06 44 53.2
LVV                              i S    S      06 45 00.0 +4.0
LVV                              ePS    PS     06 46 00.2 +2.9
LVV                              eSS    SS     06 50 39.4 +1.2
LVV                               pmax  pmax
      comp=Z,1µm,8.9s
LVV                               MLR   MLR
      comp=Z,39µm,21.6s,MS6.8
LVV                               MLR   MLR
      comp=N,24µm,19.8s,MS6.7
LVV                               MLR   MLR
      comp=E,18µm,21.0s,MS6.7
LMR   La Mourre        86.17  32 eP     P      06 34 23.4 -0.1
      comp=E,863nm,1.6s,mb6.4
LMR   La Mourre        86.17  32 eP     P      06 34 23.4 -0.1
LMR                               pmax  pmax
      comp=Z,431nm,1.6s,mb6.4
REVF  Revere           86.18  32 eP     P      06 34 23.5  0.0
GMNA  Gemona           86.19  27  P     P      06 34 23.3 -0.2
ELOJ  Sierra Loja      86.19  43  P     P      06 34 22.8 -0.9
ELOJ                              pmax  pmax
      comp=Z,259nm,1.8s,mb6.2
ELOJ  Sierra Loja      86.19  43  P     P      06 34 22.8 -1.0
      comp=Z,259nm,1.8s,mb6.2
BUA   Buia             86.20  27⇓eP     P      06 34 25.0 +1.5
BAD   Bernadia         86.22  27⇑iP     P      06 34 24.0 +0.3
NEGI  Negi             86.22  31  P     P      06 34 22.6 -1.1
EQES  Quesada          86.24  42  P     P      06 34 23.2 -0.7
      comp=Z,269nm,2.2s,mb6.1
IMI   Imperia          86.25  31  P     P      06 34 24.0 +0.2
EMIJ  Mijas            86.31  43  P     P      06 34 24.2 -0.2
      comp=Z,259nm,1.9s,mb6.1
ETOB  Tobarra          86.34  40  P     P      06 34 24.7 +0.3
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      comp=Z,222nm,1.9s,mb6.1
COLI  Coloredo          86.36  27⇑eP    P      06 34 25.0 +0.7
ECOG  Cogollos-Vega     86.39  42   P   P      06 34 24.3 -0.4
ECOG                              pmax  pmax
      comp=Z,47nm,1.6s,mb5.5
ECOG  Cogollos-Vega     86.39  42   P   P      06 34 24.3 -0.4
      comp=Z,47nm,1.6s,mb5.5
CADS  Cadrg             86.40  26  eP   P      06 34 24.0 -0.5
      comp=Z,930nm,2.1s,mb6.7
OBKA  Obir              86.42  26⇑iP    P      06 34 24.3 -0.3
      comp=Z,1µm,2.5s,mb6.6
SRO   Srobarova         86.44  23  eP   P      06 34 26.2 +1.5
TLI   Talmassons        86.45  27⇓eP    P      06 34 27.0 +2.2
KECS  Kecovo            86.46  21  i P  P      06 34 25.3 +0.5
KECS                               e           06 34 34.7
ERON  Agron             86.47  42   P   P      06 34 25.0  0.0
      comp=Z,98nm,1.5s,mb5.8
AKASG Malin Array Be    86.47  15   P   P      06 34 23.7 -1.0
      comp=Z,61nm,1.0s,mb5.8,baz=329,slow=3.9,SNR=133
KOLS  Kolonicke sedl    86.53  20  eP   P      06 34 26.5 +1.4
KOLS                               e           06 34 34.5
KOLS                               ePP  PP     06 37 50.3 +1.4
KOLS                               eS   S      06 45 06.4 +6.8
VOY   Vojsko            86.62  26  eP   P      06 34 24.8 -0.8
RAVA  Ravarino          86.75  29   P   P      06 34 30.4 +4.1
ERBM  Eremo             86.78  29   P   P      06 34 28.4 +2.0
PSZ   Piszkesteto       86.81  22  eP   P      06 34 26.6 +0.1
PSZ                               pmax  pmax
      comp=Z,465nm,1.7s,mb6.4
PSZ   Piszkesteto       86.81  22⇑e     P      06 34 27.2 +0.7
UZH   Uzhgorod          86.81  20  eP   P      06 34 27.0 +0.5
LJU   Ljubljana         86.83  26  eP   P      06 34 26.4 -0.2
LJU                                e*PP pP     06 34 35.2 +4.7
LJU                                eS   S      06 44 57.4 -5.1
LJU                                eSS  SS     06 50 41.8 -5.9
LJU   Ljubljana         86.83  26  eP   P      06 34 26.4 -0.2
LJU                                epP  pP     06 34 35.2 +4.7
LJU                                e           06 36 00.2
LJU                                eS   S      06 44 57.4 -5.2
LJU                                eSS  SS     06 50 41.8 -5.9
LJU                                e           06 57 10.9
GSCL  Gusciola          86.91  29   P   P      06 34 28.3 +1.3
EBEN  Beniarda          86.94  39   P   P      06 34 24.6 -2.7
      comp=Z,353nm,2.1s,mb6.2
BUD   Budapest          86.95  23   P   P      06 34 30.0 +2.8
FIU   Minerbio Fiu      86.99  29   P   P      06 34 31.7 +4.3
VLC   Villacollemand    86.99  30   P   P      06 34 29.1 +1.6
      comp=Z,593nm,2.2s,mb6.4
EBER  Berja             87.03  42   P   P      06 34 27.4 -0.4
      comp=Z,119nm,1.7s,mb5.8
ZCCA  Zocca             87.05  29   P   P      06 34 30.9 +3.2
VOR   Voronezh          87.05   9  eP   P      06 34 27.0 -0.5
VOR                                 S   S      06 45 05.0 +0.5
VOR                               pmax  pmax
      comp=N,280nm,1.6s
VOR                               pmax  pmax
      comp=E,230nm,1.6s
VOR                               pmax  pmax
      comp=Z,480nm,1.6s,mb6.5
VOR                               smax
      comp=N,150nm,3.0s
VOR                               smax
      comp=E,400nm,3.0s
EMUR  La Murta          87.12  40   P   P      06 34 28.4 +0.2
      comp=E,194nm,2.2s,mb6.0
BDI   Bagni Di Lucca    87.15  29   P   P      06 34 28.5 +0.3
BDI                               pmax  pmax
      comp=Z,161nm,1.5s,mb6.0
BDI   Bagni Di Lucca    87.15  29   P   P      06 34 28.5 +0.3
      comp=Z,161nm,1.5s,mb6.0
FNVD  Fontana Vidola    87.26  29   P   P      06 34 31.6 +2.9
      comp=Z,930nm,2.1s,mb6.7
TLL   Tololo Astrono    87.37 134  i P  P      06 34 30.8 +1.2
PII   Pisa              87.42  30   P   P      06 34 29.9 +0.4
PII                               pmax  pmax
      comp=Z,57nm,0.8s,mb5.8
PII   Pisa              87.42  30   P   P      06 34 29.9 +0.4
      comp=Z,57nm,0.8s,mb5.8
EIBI  Ibiza             87.42  38   P   P      06 34 29.8 +0.2
      comp=Z,339nm,1.9s,mb6.2
SEI   Scarperia         87.44  29   P   P      06 34 32.8 +3.2
ETOS  Mallorca          87.50  37   P   P      06 34 27.8 -2.2
      comp=Z,174nm,1.9s,mb6.0
BOJS  Bojanci           87.54  26  eP   P      06 34 30.2 +0.2
BOJS                               e           06 57 22.1
VRSR  Storozhevoye      87.56   9  eP   P      06 34 29.2 -0.8
VRSR                              pmax  pmax
      comp=Z,60nm,1.1s,mb5.7
VRSR                              pmax  pmax
      comp=N,40nm,0.8s
VRSR                              pmax  pmax
      comp=E,70nm,2.4s
VRSR  Storozhevoye      87.56   9  eP   P      06 34 29.2 -0.8
      comp=E,60nm,1.1s,mb5.7
VMG   Vicchio           87.59  29   P   P      06 34 32.0 +1.6
PGD   Poggio Sodo       87.73  29   P   P      06 34 32.2 +1.2
PGD                               pmax  pmax
      comp=Z,181nm,1.3s,mb6.1
PGD   Poggio Sodo       87.73  29   P   P      06 34 32.2 +1.2
      comp=Z,181nm,1.3s,mb6.1
SFI   Santa Sofia       87.75  29   P   P      06 34 32.8 +1.7
SFI                               pmax  pmax
      comp=Z,2µm,2.6s,mb6.8
SFI   Santa Sofia       87.75  29   P   P      06 34 32.8 +1.7
      comp=Z,2µm,2.6s,mb6.8
PGF   Pioggiola         87.83  31  eP   P      06 34 31.4 -0.1
      comp=Z,312nm,1.2s,mb6.1
PGF   Pioggiola         87.83  31  eP   P      06 34 31.4 -0.1
PGF                               pmax  pmax
      comp=Z,156nm,1.2s,mb6.1
SISC  Sisak             87.94  25  i P  P      06 34 31.8 -0.2
SISC  Sisak             87.94  25  i P  P      06 34 31.9  0.0
SISC  Sisak             87.94  25  i P  P      06 34 31.9 -0.1
RSM   Repubblica di     87.95  28   P   P      06 34 35.7 +3.6
PKSM  Moragy            87.98  23⇓eP    P      06 34 32.5 +0.3
GRFL  Gerfalco          88.08  30   P   P      06 34 33.4 +0.7
      comp=Z,35nm,1.0s,mb5.5
DZM   Mont Dzumac       88.20 239  eP   P      06 34 34.2 +0.5
DZM   Mont Dzumac       88.20 239  eP   P      06 34 34.2 +0.5
BADI  Badiali           88.24  29   P   P      06 34 35.2 +1.7
      comp=Z,266nm,1.6s,mb6.2
NVLJ  Novalja           88.24  27  i P  P      06 34 33.4  0.0
FSSB  Fossombrone       88.27  28   P   P      06 34 35.3 +1.7
NOUC  Port Laguerre     88.31 239  eP   P      06 34 34.4 +0.1
NOUC  Port Laguerre     88.31 239  eP   P      06 34 34.4 +0.1
ARV   Arcevia           88.50  28   P   P      06 34 35.9 +1.2
      comp=Z,337nm,1.6s,mb6.4
MURB  Monte Urbino      88.55  29   P   P      06 34 36.5 +1.5
      comp=Z,418nm,1.9s,mb6.4
CING  Cingoli           88.70  28   P   P      06 34 37.4 +1.7
      comp=Z,214nm,1.9s,mb6.2
SNTG  Esanatoglia       88.71  28   P   P      06 34 36.1 +0.4
ASS   Assisi            88.77  29   P   P      06 34 35.9 -0.1
ASS                               pmax  pmax
      comp=Z,126nm,1.3s,mb6.1
ASS   Assisi            88.77  29   P   P      06 34 35.9 -0.1
      comp=Z,126nm,1.3s,mb6.1
NRCA  Norcia            89.14  28   P   P      06 34 38.3 +0.5
MKAR  Makanchi Array    89.14 341  i P  P      06 34 36.7 -1.0
MKAR                              pmax  pmax
      comp=Z,839nm,2.0s
MKAR  Makanchi Array    89.14 341   P   P      06 34 36.0 -1.7
      comp=Z,39nm,1.2s,mb5.6,baz=45,slow=5.1,SNR=44
MKAR                              PKKPbc       06 52 13.3
      comp=Z,0.7nm,0.8s,baz=225,slow=1.7,SNR=7.1
MKAR                              LR    LR     07 17 54.9
      comp=Z,20µm,18.1s,MS6.6,baz=9.6,slow=38
TATO  Taipei            89.18 303 PFAKE        06 34 50.0  +12
TATO                              LR    LR
      comp=Z,10µm,20.0s,MS6.2
MNS   Montasola         89.37  29   P   P      06 34 38.5 -0.4
MNS                               pmax  pmax
      comp=Z,194nm,1.8s,mb6.1
MNS   Montasola         89.37  29   P   P      06 34 38.5 -0.4
      comp=Z,194nm,1.8s,mb6.1
TOLF  Tolfa             89.40  30   P   P      06 34 40.6 +1.6
      comp=Z,148nm,1.7s,mb6.0
WHN   Wuhan             89.47 311  ⇓P   P      06 34 38.4 -1.2
WHN                               LR    LR
      comp=Z,28µm,23.1s,MS6.6
YHNB  Yeheng            89.47 303  eP   P      06 34 39.5 -0.3
TERO  Teramo            89.50  28   P   P      06 34 41.2 +1.7
FIAM  Fiamignano        89.63  29   P   P      06 34 41.6 +1.5
      comp=Z,155nm,1.4s,mb6.2
AQU   L'Aquila          89.66  29   P   P      06 34 39.8 -0.5
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EBNR  Beni Rached       89.70  40   P   P      06 34 43.0 +2.4
MTCE  Montecelio        89.71  29   P   P      06 34 41.8 +1.3
      comp=Z,83nm,0.6s,mb6.2
ECHF  Ech Chlef         89.71  40   P   P      06 34 45.0 +4.3
ECHA  Ech Chlef         89.73  40   P   P      06 34 45.0 +4.3
GTA   Gaotai            89.74 326   P   P      06 34 40.0 -0.7
GTA                                AP   pP     06 34 43.4 -1.2
GTA                                XP   sP     06 34 46.0 +0.2
GTA                                SKS  SKS    06 45 08.8 -5.6
GTA                                S    S      06 45 31.8 +1.9
GTA                                AMB  AMB
      comp=Z,40nm,1.3s,mb5.6
GTA                                AMB  AMB
      comp=Z,2µm,10.3s
GTA                                LR   LR
      comp=N,29µm,19.9s,MS6.9
GTA                                LR   LR
      comp=E,29µm,18.0s,MS6.9
GTA                                LR   LR
      comp=Z,52µm,19.1s,MS7.0
GTA   Gaotai            89.74 326   P   P      06 34 40.0 -0.7
      comp=Z,42nm,1.3s,mb5.6
GTA                                pP   pP     06 34 43.4 -1.2
GTA                                sP   sP     06 34 46.0 +0.2
GTA                                SKS  SKS    06 45 08.8 -5.6
GTA                                S    S      06 45 31.8 +1.9
GTA                                LR   LR
      comp=Z,52µm,19.1s,MS7.0
EANR  'Ain N'Sour       89.76  40   P   P      06 34 42.0 +1.1
XAN   Xi'an             89.77 317   P   P      06 34 39.4 -1.6
XAN                                AP   pP     06 34 46.5 +1.7
XAN                                S    S      06 45 30.4 +0.2
XAN                                AMB  AMB
      comp=Z,50nm,1.7s,mb5.6
XAN                                LR   LR
      comp=N,12µm,21.6s
XAN                                LR   LR
      comp=E,19µm,15.9s
XAN                                LR   LR
      comp=Z,20µm,21.6s,MS6.5
XAN   Xi'an             89.77 317   P   P      06 34 39.4 -1.6
      comp=Z,59nm,1.7s,mb5.6
XAN                                pP   pP     06 34 46.5 +1.7
XAN                                S    S      06 45 30.4 +0.2
XAN                                LR   LR
      comp=Z,20µm,21.6s,MS6.5
CERT  Cerreto           89.86  29   P   P      06 34 42.0 +0.8
      comp=Z,259nm,2.0s,mb6.2
KIS   Kishinev          89.90  17  eP   P      06 34 40.0 -1.3
KIS                                i           06 34 49.0
KIS                                e           06 38 13.0
KIS                                e           06 40 20.0
KIS                                e           06 45 12.0
KIS                                eS   S      06 45 33.0 +1.8
KIS                                ePS  PS     06 46 40.0 -1.5
KIS                               pmax  pmax
      comp=Z,220nm,1.5s,mb6.3
KIS                               pmax  pmax
      comp=Z,2µm,8.0s
KIS                               pmax  pmax
      comp=Z,1µm,8.0s
KIS                               MLR   MLR
      comp=N,12µm,18.0s,MS6.7
KIS                               MLR   MLR
      comp=Z,26µm,18.0s,MS6.7
KIS                               MLR   MLR
      comp=E,21µm,17.0s,MS6.7
KIS                               MLR   MLR
      comp=Z,25µm,18.0s
KIS   Kishinev          89.90  17  eP   P      06 34 40.0 -1.3
      comp=Z,220nm,1.5s,mb6.3
KIS                                i           06 34 49.0
KIS                                e           06 38 13.0
KIS                                e           06 40 20.0
KIS                                e           06 45 12.0
KIS                                eS   S      06 45 33.0 +1.8
KIS                                ePS  PS     06 46 40.0 -1.5
KIS                               LR    LR
      comp=Z,26µm,18.0s,MS6.7
PTQR  Pietraquaria      89.95  29   P   P      06 34 42.9 +1.3
DGI   Dorgali Grotta    89.96  32   P   P      06 34 42.7 +1.0
      comp=Z,96nm,1.9s,mb5.8
ABA   Alger-Bouzarea    90.00  38   P   P      06 34 41.5 -0.5
CLCH  Cerro Calan       90.02 136⇓iP    P      06 34 42.3 +0.2
VVLD  Villa Vallelon    90.16  29   P   P      06 34 42.4 -0.2
      comp=Z,235nm,1.6s,mb6.3
AB31  Akbulak array     90.19 356  i P  P      06 34 42.6  0.0
AB31                              pmax  pmax
      comp=Z,952nm,1.5s,mb6.9
AB31  Akbulak array     90.19 356  i P  P      06 34 42.6  0.0
      comp=Z,952nm,1.5s,mb6.9
DIVS  Divcibare         90.30  23⇑iP    P      06 34 43.1 -0.1
ETRT  Tiaret            90.30  40   P   P      06 34 45.0 +1.6
BBLS  Bajina Basta -    90.33  24⇑iP    P      06 34 43.5 +0.1
WMQ   Urumqi            90.36 336  ⇓P   P      06 34 43.4 -0.1
WMQ                                AP   pP     06 34 47.4 +0.1
WMQ                                XP   sP     06 34 49.4 +0.8
WMQ                                SKS  SKS    06 45 12.1 -5.9
WMQ                                S    S      06 45 35.0 -0.4
WMQ                                AMB  AMB
      comp=Z,190nm,1.0s,mb6.4
WMQ                                AMB  AMB
      comp=Z,2µm,6.0s
WMQ                                LR   LR
      comp=N,27µm,20.0s,MS6.8
WMQ                                LR   LR
      comp=E,29µm,22.0s,MS6.8
WMQ                                LR   LR
      comp=Z,38µm,21.2s,MS6.8
WMQ   Urumqi            90.36 336  ⇓P   P      06 34 43.4 -0.1
      comp=Z,200nm,1.0s,mb6.4
WMQ                                pP   pP     06 34 47.4 +0.1
WMQ                                sP   sP     06 34 49.4 +0.8
WMQ                                SKS  SKS    06 45 12.1 -5.9
WMQ                                S    S      06 45 35.0 -0.4
WMQ                                LR   LR
      comp=Z,38µm,21.2s,MS6.8
EMHD  Djebel Mahouad    90.45  39   P   P      06 34 50.0 +5.9
VOIR                    90.48  20  ⇑P   P      06 34 44.4 +0.4
SVIS  Svilajnac         90.49  23⇑iP    P      06 34 44.1 +0.1
VRI   Vrincioaia        90.49  18⇑iP    P      06 34 44.6 +0.6
RNI2  Rionero Sannit    90.50  28   P   P      06 34 46.0 +1.8
      comp=Z,865nm,2.9s,mb6.6
CII   Carovilli         90.54  28   P   P      06 34 46.2 +1.9
VSL   Villasalto        90.56  33   P   P      06 34 44.9 +0.4
MIDA  Miranda           90.59  28   P   P      06 34 45.1 +0.5
      comp=Z,332nm,1.7s,mb6.4
JATB  Jatai             90.64 113  e    P      06 34 46.6 +1.3
JATB                               i           06 34 48.1
JATB                               i           06 34 56.8
MLR   Muntele Rosu      90.66  19⇑iP    P      06 34 45.6 +0.8
LZH   Lanzhou           90.66 321  ⇑P   P      06 34 44.5 -0.6
LZH                                AP   pP     06 34 47.8 -1.1
LZH                                PP   PP     06 38 20.5 -2.3
LZH                                SKS  SKS    06 45 13.5 -6.5
LZH                                S    S      06 45 36.8 -1.5
LZH                                AMB  AMB
      comp=Z,520nm,1.5s,mb6.6
LZH                                AMB  AMB
      comp=Z,3µm,7.3s
LZH                                LR   LR
      comp=E,21µm,16.3s
LZH                                LR   LR
      comp=Z,35µm,19.1s,MS6.8
LZH   Lanzhou           90.66 321  ⇑P   P      06 34 44.5 -0.6
LZH                                *PP  pP     06 34 47.8 -1.1
LZH                                *SP  sP     06 34 49.2 -1.0
LZH                                            06 38 20.5
LZH                                            06 45 13.5
LZH                                S    S      06 45 36.7 -1.6
LZH                                PS   PS     06 46 47.5 -3.3
LZH                                SS   SS     06 51 39.5 -4.2
LZH                               pmax  pmax
      comp=Z,523nm,1.5s,mb6.6
LZH                               MLR   MLR
      comp=Z,35µm,19.1s,MS6.8
LZH   Lanzhou           90.66 321  ⇑P   P      06 34 44.5 -0.6
      comp=Z,520nm,1.5s,mb6.6
LZH                                pP   pP     06 34 47.8 -1.1
LZH                                PP   PP     06 38 20.5 -2.3
LZH                                SKS  SKS    06 45 13.5 -6.5
LZH                                S    S      06 45 36.8 -1.5
LZH                                LR   LR
      comp=Z,35µm,19.1s,MS6.8
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STON  Ston              90.69  25  i P  P      06 34 45.4 +0.4
SGG   Gregorio Mates    90.86  28   P   P      06 34 46.5 +0.7
MSC   Monte Massico     90.89  29   P   P      06 34 47.4 +1.5
QZH   Quanzhou          91.03 305   PR  P      06 34 44.3 -2.7
QZH                                SKS  SKS    06 45 17.0 -5.4
QZH                                S    S      06 45 43.1 +1.3
QZH                                LR   LR
      comp=N,7µm,14.0s,MS6.4
QZH                                LR   LR
      comp=E,10µm,18.3s,MS6.4
QZH                                LR   LR
      comp=Z,24µm,26.3s
QZH   Quanzhou          91.03 305  ⇓P   P      06 34 44.3 -2.7
QZH                                SKS  SKS    06 45 17.0 -5.4
QZH                                S    S      06 45 43.1 +1.3
QZH                                LR   LR
      comp=Z,24µm,26.3s,MS6.5
BOLS  Boljevac          91.13  22⇑iP    P      06 34 46.2 -0.8
CFR   Carcaliu          91.47  18⇓iP    P      06 34 48.5  0.0
DFRA  Djebel Bou Aff    91.53  37   P   P      06 34 51.0 +2.0
SET   Setif             91.59  37   P   P      06 34 51.0 +1.7
BDFB  Brasilia          91.59 109   P   P      06 34 49.2 -0.6
      comp=Z,14nm,1.0s,mb5.3,baz=330,slow=3.6,SNR=15
BDFB                               PP   PP     06 38 31.4 +0.8
      comp=Z,20nm,1.2s,baz=290,slow=7.7,SNR=3.8
BDFB                               LR   LR     07 19 17.2
      comp=Z,17µm,18.3s,MS6.5,baz=317,slow=38
BAO   Brasilia Array    91.61 109   P   P      06 34 50.5 +0.7
ZAPS  Zavoj/Pirot       91.81  22⇑iP    P      06 34 48.8 -1.3
HARR  Harsova           91.89  18⇑iP    P      06 34 51.0 +0.5
CKFL  Kef-Lekhel        92.02  36   P   P      06 34 53.0 +1.7
CASM  Ain Smara         92.04  36   P   P      06 34 53.0 +1.6
CMAH  Djebel Manchou    92.15  35   P   P      06 34 53.5 +1.6
CTEI  Djebel Teioual    92.16  36   P   P      06 34 53.0 +1.1
CMER  Merouana          92.30  37   P   P      06 34 55.0 +2.4
ENH   Enshi             92.39 314  eP   P      06 34 51.7 -1.5
      comp=Z,171nm,1.4s,mb6.2
LTRZ  Laterza           92.42  27   P   P      06 34 53.7 +0.7
ABSA  Djebel Ababsia    92.47  36   P   P      06 34 55.0 +1.7
CPUP  Villa Florida     92.53 123   LR  LR     07 18 30.7
      comp=Z,8µm,21.4s,MS6.2,baz=2.2,slow=37
VTS   Vitosha           92.62  22  eP   P      06 34 54.0 +0.1
SKO   Skopje            92.68  23⇑iP    P      06 34 55.4 +1.2
SKO                                i PP PP     06 38 36.0 -2.7
SIM   Simferopol'       92.92  14ceP    P      06 34 56.6 +1.4
SIM                                e           06 38 40.0
SIM                                e           06 45 33.0
SIM                                eS   S      06 46 01.0 +3.1
SIM                                eS   S      06 46 06.0 +8.1
SIM                                ePS  PS     06 47 21.0 +4.3
SIM                                eSS  SS     06 52 18.0 +2.0
SIM                               pmax  pmax
      comp=Z,18nm,0.5s,mb5.8
SIM                               pmax  pmax
      comp=Z,600nm,10.0s
SIM   Simferopol'       92.92  14⇑eP    P      06 34 56.6 +1.4
      comp=Z,18nm,0.5s,mb5.8
SIM                                e           06 38 40.0
SIM                                e           06 45 33.0
SIM                                eS   S      06 46 01.0 +3.1
SIM                                eS   S      06 46 06.0 +8.1
SIM                                ePS  PS     06 47 21.0 +4.3
SIM                                eSS  SS     06 52 18.0 +2.0
PGB   Panagyurishte     92.93  21  eP   P      06 34 56.0 +0.7
PRD   Provadia          93.17  19  eP   P      06 34 58.0 +1.6
KKB   Krupnik           93.26  22  eP   P      06 34 57.0 +0.2
OHR   Ohrid             93.27  24⇑iP    P      06 34 56.5 -0.4
PMG   Port Moresby      93.33 261  eP   P      06 34 57.2 -0.6
PMG                               MLR   MLR
      comp=Z,39µm,21.0s
PLD   Plovdiv           93.49  21  eP   P      06 34 59.0 +1.1
VAY   Valandovo         93.61  23⇓iP    P      06 34 59.0 +0.5
ANN   Anapa             93.61  11c iP   P      06 34 58.8 +0.4
ANN                                e*PP pP     06 35 01.5 -0.7
ANN                                e           06 38 44.9
ANN                                ePPP PPP    06 40 47.6 -1.2
ANN                                i           06 45 37.9
ANN                                e           06 46 04.6
ANN                                i SP SP     06 47 25.8 +3.3
ANN                                eSS  SS     06 52 22.9 -2.8
ANN                               pmax  pmax
      comp=Z,146nm,2.5s,mb6.0
ANN                               MLR   MLR
      comp=N,8µm,22.0s,MS6.5
ANN                               MLR   MLR
      comp=E,16µm,22.0s,MS6.5
ANN                               MLR   MLR
      comp=Z,24µm,22.0s,MS6.6
ANN   Anapa             93.61  11⇑iP    P      06 34 58.8 +0.4
      comp=Z,146nm,2.5s,mb6.0
ANN                                epP  pP     06 35 01.5 -0.7
ANN                                e           06 38 44.9
ANN                                ePPP PPP    06 40 47.6 -1.2
ANN                                i           06 45 37.9
ANN                                e           06 46 04.6
ANN                                i SP SP     06 47 25.8 +3.3
ANN                                eSS  SS     06 52 22.9 -2.8
ANN                               LR    LR
      comp=Z,24µm,22.0s,MS6.6
JMB   Yambol            93.65  20  eP   P      06 34 59.0 +0.4
TIP   Timpagrande       93.66  28  eP   P      06 34 57.7 -1.1
MMB   Musomiste         93.70  22  eP   P      06 34 59.0 +0.1
AAA   Alma-Ata          93.73 343  eP   P      06 35 04.0 +5.0
AAA                                e           06 38 47.0
AAA                               MLR   MLR
      comp=Z,12µm,18.0s,MS6.4
DIM   Dimitrovgrad      93.77  21  eP   P      06 34 59.0 -0.2
RZN   Rozhen            93.88  21  eP   P      06 35 00.0 +0.3
GOF   Gofitskoye        94.06   7⇓iP    P      06 35 00.1 -0.3
GOF                                i           06 38 54.5
GOF                               pmax  pmax
      comp=Z,200nm,1.7s,mb6.3
GOF   Gofitskoye        94.06   7⇓iP    P      06 35 00.1 -0.3
      comp=Z,200nm,1.7s,mb6.3
GOF                                i           06 38 54.5
KDZ   Kurdzhali         94.11  21  eP   P      06 35 00.0 -0.8
RCBR  Riachuelo         94.19  94 PFAKE        06 35 10.0 +8.2
RCBR                              LR    LR
      comp=Z,17µm,20.0s,MS6.5
USP   Ospenovka         94.25 345   P   P      06 35 01.1 -0.2
      SNR=12
TKM2  Tokmak 2          94.36 344   P   P      06 35 01.8 -0.1
      SNR=30
CHMS  Chumysh           94.45 345   P   P      06 35 04.8 +2.5
      SNR=10
RDO   Rodhopi           94.61  21   P   P      06 35 03.8 +0.7
FRU   Bishkek           94.64 345  eP   P      06 35 05.0 +1.8
FRU                                e           06 35 11.0
FRU                                e           06 38 49.0
FRU                                 S   S      06 46 20.0 +7.2
FRU                                i PS PS     06 47 41.0 +5.3
FRU                               MLR   MLR
      comp=N,28µm,22.0s
FRU                               MLR   MLR
      comp=Z,30µm,22.0s,MS6.7
KBK   Karagaybulak      94.74 344   P   P      06 35 06.3 +2.7
      SNR=6.8
AAK   Ala-Archa         94.86 345   P   P      06 35 06.7 +2.5
      SNR=5.5
AAK   Ala-Archa         94.86 345⇑iP    P      06 35 02.8 -1.4
AAK                               pmax  pmax
      comp=Z,31nm,1.4s,mb5.5
AAK                               MLR   MLR
      comp=Z,19µm,15.0s,MS6.7
AAK   Ala-Archa         94.86 345⇑iP    P      06 35 02.8 -1.4
      comp=Z,31nm,1.4s,mb5.5
AAK                               LR    LR
      comp=Z,19µm,15.0s,MS6.7
ULHL  Ulahol            94.86 343   P   P      06 35 00.5 -3.7
      SNR=18
CD2   Chengdu           94.89 318   P   P      06 35 06.3 +1.7
CD2                                PP   PP     06 38 53.6 -2.2
CD2                                AMB  AMB
      comp=Z,30nm,1.7s,mb5.5
CD2                                AMB  AMB
      comp=Z,1µm,8.8s
CD2                                LR   LR
      comp=E,18µm,18.0s
CD2                                LR   LR
      comp=Z,19µm,19.2s,MS6.6
CD2   Chengdu           94.89 318   P   P      06 35 06.3 +1.7
      comp=Z,30nm,1.7s,mb5.5
CD2                                PP   PP     06 38 53.6 -2.2
CD2                                LR   LR
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	comp=Z,19µm,19.2s,MS6.6						
KIV	**Kislovodsk**	**95.11**	**8**	*d* *i*P	**P**	**06 35 05.5**	**+0.2**
KIV				*e*S	SKS	06 45 46.5	+1.8
KIV				*i* PS	PS	06 47 39.7	-1.2
KIV				*i* SS	SS	06 52 48.0	+1.3
KIV				pmax	pmax		
	comp=Z,83nm,1.7s,mb5.9						
KIV				MLR	MLR		
	comp=Z,22µm,24.0s,MS6.5						
KIV	**Kislovodsk**	**95.11**	**8**	*i* Pr	**P**	**06 35 05.5**	**+0.2**
	comp=Z,83nm,1.7s,mb5.9						
KIV				*e*S	SKS	06 45 46.5	+1.8
KIV				*i* PS	PS	06 47 39.7	-1.2
KIV				*i* SS	SS	06 52 48.0	+1.3
KIV				LR	LR		
	comp=Z,22µm,24.0s,MS6.5						
SOC	**Sochi**	**95.13**	**10**	*d* *i*P	**P**	**06 35 06.6**	**+1.2**
SOC				*e**SP	sP	06 35 09.4	-1.1
SOC				*i*		06 38 56.4	
SOC				*i*		06 45 47.1	
SOC				*e*		06 46 21.5	
SOC				*e*PS	PS	06 47 41.2	+0.2
SOC				*e*SS	SS	06 52 45.3	-1.7
SOC				*e*SSS	SSS	06 56 34.3	+5.1
SOC				pmax	pmax		
	comp=Z,350nm,1.5s,mb6.6						
SOC				pmax	pmax		
	comp=Z,212nm,2.1s,mb6.2						
SOC				pmax	pmax		
	comp=N,50nm,1.0s						
SOC				pmax	pmax		
	comp=E,76nm,1.6s						
SOC				MLR	MLR		
	comp=Z,30µm,22.0s,MS6.7						
SOC				MLR	MLR		
	comp=N,10µm,20.0s,MS6.5						
SOC				MLR	MLR		
	comp=E,12µm,21.0s,MS6.5						
SOC	**Sochi**	**95.13**	**10**	*i* Pr	**P**	**06 35 06.6**	**+1.2**
	comp=E,212nm,2.1s,mb6.2						
SOC				*e*sP	sP	06 35 09.4	-1.1
SOC				*i*		06 38 56.4	
SOC				*i*		06 45 47.1	
SOC				*e*		06 46 21.5	
SOC				*e*PS	PS	06 47 41.2	+0.2
SOC				*e*SS	SS	06 52 45.3	-1.7
SOC				*e*SSS	SSS	06 56 34.3	+5.1
SOC				LR	LR		
	comp=Z,30µm,22.0s,MS6.7						
KZA	**Kyzart**	**95.23**	**344**	P	**P**	**06 35 06.2**	**+0.3**
	SNR=24						
UCH	**Uchtor**	**95.24**	**345**	P	**P**	**06 35 09.0**	**+3.0**
	SNR=9.4						
AML	**Almayashu**	**95.50**	**345**	P	**P**	**06 35 07.3**	**+0.1**
	SNR=13						
GZH	**Guangzhou**	**95.63**	**307**	P	**P**	**06 35 06.5**	**-1.7**
GZH				S	S	06 46 18.9	-2.8
GZH				LR	LR		
	comp=N,10µm,20.8s,MS6.5						
GZH				LR	LR		
	comp=E,13µm,22.8s,MS6.5						
GZH				LR	LR		
	comp=Z,14µm,23.9s,MS6.3						
PLCA	**Paso Flores**	**95.69**	**141**	P	**P**	**06 35 07.8**	**-0.3**
	comp=Z,5.9nm,1.0s,mb5.0,baz=306,slow=8.2,SNR=6.2						
PLCA				PP	PP	06 38 59.8	-2.1
	comp=Z,15nm,1.3s,baz=301,slow=6.4,SNR=4.5						
PLCA				LR	LR	07 10 23.4	
	comp=Z,16µm,18.8s,MS6.5,baz=356,slow=30						
ZEI	**Tsey**	**96.41**	**7**	*e*P	**P**	**06 35 09.8**	**-1.5**
ZEI				*i* *PP	pP	06 35 13.6	-1.5
ZEI				*i*		06 39 01.2	
ZEI				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.3						
MAK	**Makhachkala**	**96.49**	**4**	*e*P	**P**	**06 35 14.0**	**+2.4**
MAK				*e*		06 39 14.0	
MAK				*e*PPP	PPP	06 41 20.0	+6.3
MAK				pmax	pmax		
	comp=Z,1µm,8.0s						
MAK				pmax	pmax		
	comp=Z,2µm,10.0s						
ONI	**Oni**	**96.55**	**7**	P	**P**	**06 35 13.2**	**+1.2**
GYA	**Guiyang**	**96.91**	**314**	⇑*i*P	**P**	**06 35 13.4**	**-0.5**
GYA				AP	pP	06 35 18.3	+0.5
GYA				XP	sP	06 35 20.9	+1.9
GYA				S	S	06 46 35.5	+3.0
GYA				AMB	AMB		
	comp=Z,900nm,11.4s						
GYA				LR	LR		
	comp=N,9µm,22.2s,MS6.3						
GYA				LR	LR		
	comp=E,10µm,23.7s,MS6.3						
GYA				LR	LR		
	comp=Z,15µm,22.2s,MS6.4						
ITM	**Ithomi**	**97.21**	**25**	P	**P**	**06 35 15.8**	**+0.8**
TBLG	**Delisi**	**97.51**	**7**	P	**P**	**06 35 17.1**	**+0.9**
SNZO	**South Karori**	**97.55**	**221**	PFAKE		06 35 30.0	+14
SNZO				LR	LR		
	comp=Z,17µm,20.0s,MS6.5						
ANTO	**Ankara**	**97.56**	**16**	P	**P**	**06 35 18.4**	**+1.9**
BR131	**Keskin Array S**	**97.88**	**15**	*e*P	**P**	**06 35 18.1**	**+0.1**
	comp=Z,11nm,1.1s,mb5.3						
BR131				LR	LR		
	comp=Z,15µm,20.0s,MS6.5						
BRTR	**Keskin Array B**	**97.88**	**15**	P	**P**	**06 35 18.0**	**+0.1**
	comp=Z,4.7nm,1.0s,mb5.0,baz=333,slow=2.8,SNR=22						
BRTR				PP	PP	06 39 14.7	-4.7
	comp=Z,6.4nm,1.1s,baz=315,slow=1.7,SNR=6.9						
TRQA	**Tornquist**	**98.10**	**134**	PFAKE		06 35 30.0	+11
TRQA				LR	LR		
	comp=Z,18µm,22.0s,MS6.5						
LPA	**La Plata**	**98.17**	**129**	*c* *e*P	**P**	**06 35 19.0**	**-0.4**
LPA				*e*PP	PP	06 39 18.0	-3.7
LPA				*e*S	tx	06 45 46.0	
LPA				*e*SKS	SKS	06 45 55.0	-6.1
LPA				*e*S	S	06 46 45.0	+2.2
LPA				*e*SP	SP	06 48 11.0	-0.9
LPA				*e*SS	SS	06 53 34.0	+4.3
	comp=Z,16µm,22.0s						
DAV	**Davao City (W)**	**98.79**	**287**	*e*P	**P**	**06 35 24.0**	**+1.4**
SANT	**Santorini**	**99.04**	**23**	*e*P	**P**	**06 35 21.5**	**-1.8**
	comp=Z,61nm,1.1s,mb6.0						
GNI	**Garni**	**99.08**	**7**	PFAKE		06 35 30.0	+6.6
GNI				LR	LR		
	comp=Z,17µm,22.0s,MS6.5						
GVD	**Gavdhos**	**100.04**	**24**	*e*Pdif	P	06 35 27.9	-0.1
	comp=Z,105nm,1.4s						
KMI	**Kunming**	**100.09**	**316**	P	P	06 35 24.0	-4.4
KMI						06 39 33.7	
KMI				PPP	PPP	06 41 43.3	-2.3
KMI						06 45 59.1	
KMI				S	S	06 46 54.3	-5.0
KMI				PS	PS	06 48 32.8	-1.0
KMI				SS	SS	06 53 54.4	-2.6
KMI				SSS	SSS	06 57 45.4	-1.8
KMI				MLR	MLR		
	comp=Z,17µm,20.4s,MS6.5						
KMI	**Kunming**	**100.09**	**316**	Pr	P	06 35 24.0	-4.4
KMI				pP		06 35 34.9	
KMI				sP		06 35 38.8	
KMI				PP	PP	06 39 33.7	-2.8
KMI				PPP	PPP	06 41 43.3	-2.3
KMI				SKS	SKS	06 45 59.1	-12
KMI				S	S	06 46 54.3	-5.0
KMI				sS		06 47 11.6	
KMI				PS	PS	06 48 32.8	-1.0
KMI				SS	SS	06 53 54.4	-2.6
KMI				SSS	SSS	06 57 45.4	-1.8
KMI				LR	LR		
	comp=Z,17µm,20.4s,MS6.5						
MALT	**Malatya**	**100.11**	**12**	*e*P	P	06 35 29.2	+1.1
MALT				pmax	pmax		
	comp=Z,60nm,1.7s						
MALT	**Malatya**	**100.11**	**12**	*e*Pdif	P	06 35 29.1	+1.0
	comp=Z,60nm,1.7s						
QIZ	**Qiongzhong**	**100.83**	**307**	P	P	06 35 32.9	+1.1
QIZ				PP	PP	06 39 40.3	-2.1
QIZ				SKS	SKS	06 46 06.4	-8.2
QIZ				S	S	06 47 00.3	-5.2
QIZ				LR	LR		
	comp=N,17µm,30.3s,MS6.4						
QIZ				LR	LR		
	comp=E,8µm,33.2s,MS6.4						
QIZ				LR	LR		
	comp=Z,8µm,23.8s						
CTAO	**Charters Tower**	**100.84**	**253**	PFAKE		06 35 40.0	+8.2
CTAO				LR	LR		
	comp=Z,23µm,21.0s,MS6.7						
VAN	**Vannovskaya**	**101.56**	**356**	P	P	06 35 36.5	+1.8
VAN				S		06 46 16.6	
BHL	**Bhannes**	**103.91**	**15**	*e*P	Px	06 39 51.4	
NDI	**New Delhi**	**107.50**	**338**	*e*x	x	06 40 23.0	
CM31	**Chiang Mai Arr**	**107.55**	**315**	PFAKE		06 40 20.0	
CM31				LR	LR		
	comp=Z,10µm,20.0s,MS6.4						
CMAR	**Chiang Mai Arr**	**107.55**	**315**	P	Pdif	06 36 07.8	+6.2
CMAR						06 40 29.5	
CMAR	**Chiang Mai Arr**	**107.55**	**315**	Pdiff	Pdif	06 36 07.8	+6.2
	comp=Z,0.8nm,0.3s,baz=23,slow=5.0,SNR=5.2						
CMAR				PKiKP		06 40 09.4	
	comp=Z,1.0nm,0.4s,slow=0.9,SNR=3.3						
CMAR				PP	PP	06 40 29.5	-3.2
	comp=Z,2.3nm,0.8s,baz=5.7,slow=9.1,SNR=2.9						
EIL	**Elat**	**107.85**	**17**	*e*PKP		06 40 07.7	
DBIC	**Dimbokro**	**108.70**	**63**	PP	PP	06 40 34.6	-6.9
	comp=Z,15nm,1.3s,baz=286,slow=11,SNR=3.4						
CAL	**Calcutta**	**109.20**	**326**	*e*x	x	06 40 56.6	
WRAB	**Tennant Creek**	**109.53**	**260**	PFAKE		06 40 20.0	
WRAB				LR	LR		
	comp=Z,6µm,22.0s,MS6.1						
WB2	**Warramunga Arr**	**109.54**	**260**	*e*PKIKP		06 40 14.1	
WRA	**Warramunga Arr**	**109.55**	**260**	P	Pdif	06 36 12.1	+1.8
WRA						06 40 43.9	
WRA	**Warramunga Arr**	**109.55**	**260**	Pdiff	Pdif	06 36 12.1	+1.8
	comp=Z,0.5nm,0.9s,baz=42,slow=5.5,SNR=3.5						
WRA				PKiKP		06 40 12.9	
	comp=Z,2.1nm,0.7s,baz=39,slow=1.8,SNR=13						
WRA				PP	PP	06 40 43.9	-3.8
	comp=Z,2.3nm,1.0s,baz=52,slow=6.0,SNR=5.3						
STKA	**Stephens Creek**	**111.32**	**246**	PKiKP		06 40 15.0	
	comp=Z,2.6nm,0.7s,baz=136,slow=1.9,SNR=4.2						
BLSP	**Bilaspur**	**112.02**	**331**	*i* x	Pdif	06 36 20.8	-0.4
BHPL	**Bhopal**	**112.56**	**336**	*e*x	x	06 40 59.4	
BHPL				*i* PP	PP	06 41 06.0	-3.2
BHPL				*i* x	x	06 43 28.1	
BHPL				*e*x	x	06 50 23.4	
BHPL				*e*x	x	06 50 44.0	
TAU	**Tasmania Unive**	**113.84**	**233**	PFAKE		06 40 30.0	+6.9
TAU				LR	LR		
	comp=Z,4µm,22.0s,MS6.0						
BHJ	**Bhuj**	**114.58**	**344**	*i* x	x	06 41 12.8	
BHJ				*i* PP	PP	06 41 17.1	-6.7
BHJ				*e*x	x	06 50 51.8	
VIS	**Vishakhapatnam**	**115.57**	**328**	*e*x	x	06 40 48.1	
VIS				*i* PP	PP	06 41 28.8	-2.0
PMSA	**Palmer Station**	**115.90**	**155**	PFAKE		06 40 30.0	+3.4
PMSA				LR	LR		
	comp=Z,25µm,21.0s,MS6.8						
HYB	**Hyderabad**	**117.63**	**333**	*e*PKP	PKPdf	06 40 39.0	+8.0
HYB				*e*PP	PP	06 41 42.0	-3.3
HYB				*e*PS	PS	06 51 20.0	-5.5
HYB				*e*SS	SSP	06 58 08.0	-0.6
HYB	**Hyderabad**	**117.63**	**333**	*i* PKP	PKPdf	06 40 39.0	+8.0
HYB				*e*PP	PP	06 41 42.0	-3.3
HYB				*e*PS	PS	06 51 20.0	-5.5
HYB				*e*SS	SS	06 57 53.0	+0.1
HYB				*e*SSP	SSP	06 58 08.0	-0.6
HYB				LR	LR	07 32 08.0	
	comp=Z,36nm,24.6s						
POO	**Poona**	**118.07**	**338**	*e*x	x	06 41 37.0	
KAD	**Karad**	**119.13**	**337**	*i* PP	PP	06 41 48.5	-7.1
KAD				*e*x	x	06 51 38.1	
KAD				*e*x	x	06 51 38.1	
MDRS	**Chennai**	**121.01**	**329**	*e*x	x	06 42 45.0	
MDRS				*e*x	x	06 44 45.0	
MBWA	**Marble Bar**	**121.30**	**268**	PFAKE		06 40 50.0	+12
MBWA				LR	LR		
	comp=Z,20µm,22.0s,MS6.7						
SBA	**Scott Base**	**124.89**	**194**	*e*PKIKP	PKPdf	06 40 41.3	-2.3
SBA				MLR	MLR		
	comp=Z,9µm,19.0s,MS6.5						
VNDA	**Vanda**	**125.64**	**195**	PKP	PKPdf	06 40 42.6	-2.4
	comp=Z,5.6nm,1.1s,baz=346,slow=3.6,SNR=17						
VNDA	**Vanda**	**125.64**	**195**	*e*PKP	PKPdf	06 40 42.5	-2.6
VNDA				LR	LR		
	comp=Z,8µm,21.0s,MS6.4						
PALK	**Pallekele**	**126.06**	**326**	PFAKE		06 41 00.0	+13
PALK				LR	LR		
	comp=Z,4µm,22.0s,MS6.0						
TRD	**Trivandrum**	**126.43**	**331**	*i* PP	PP	06 42 38.3	-6.3
TRD				*e*x	x	06 54 21.8	
TRD				*e*x	x	06 54 21.8	
NWAO	**Narrogin (SRO)**	**129.41**	**257**	PFAKE		06 41 00.0	+6.6
NWAO				LR	LR		
	comp=Z,11µm,20.0s,MS6.6						
TRIS	**Tristan da Cun**	**129.72**	**108**	PFAKE		06 41 00.0	+6.1
TRIS				LR	LR		
	comp=Z,8µm,20.0s,MS6.4						
QSPA	**South Pole Qui**	**130.56**	**180**	*e*P	PKPdf	06 40 52.9	-1.5
MBAR	**Mbarara**	**135.00**	**33**	*e*PKIKP	PKPdf	06 41 02.6	-1.9
MBAR				MLR	MLR		
	comp=Z,4µm,20.0s,MS6.1						
VNA3	**Neumayer Olymp**	**136.56**	**155**	*e*	PKPdf	06 41 03.4	-2.3
VNA3	**Neumayer Olymp**	**136.56**	**155**	*e*	PKPdf	06 41 08.1	+2.4
VNA3	**Neumayer Olymp**	**136.56**	**155**	⇑*i*P	PKPdf	06 41 01.1	-4.6
VNA3				*e*		06 41 03.4	
VNA3				*e*		06 41 08.1	
VNA3				*e*		06 43 47.6	
VNA3				*e*		06 44 27.2	
VNA3				*e*		06 44 32.1	
VNA3				*e*		06 44 35.2	
VNA1	**Neumayer--Stat**	**137.12**	**154**	*e*	PKPdf	06 41 04.8	-1.9
VNA1	**Neumayer--Stat**	**137.12**	**154**	*e*	PKPdf	06 41 07.3	+0.6
VNA1	**Neumayer--Stat**	**137.12**	**154**	*e*	PKPdf	06 41 10.4	+3.7
VNA1	**Neumayer--Stat**	**137.12**	**154**	⇑*i*P	PKPdf	06 41 02.1	-4.6
VNA1				*e*		06 41 04.8	
VNA1				*e*		06 41 07.3	
VNA1				*e*		06 41 10.4	
VNA1				*e*		06 43 49.2	
VNA1				*e*		06 44 28.9	
VNA1				*e*		06 44 33.3	
VNA1				*e*		06 44 35.4	
VNA1				*e*		06 52 51.3	
VNA2	**Neumayer--Watz**	**137.35**	**155**	*e*	PKPdf	06 41 05.1	-2.1
VNA2	**Neumayer--Watz**	**137.35**	**155**	*e*	PKPdf	06 41 07.1	-0.1
VNA2	**Neumayer--Watz**	**137.35**	**155**	*e*	PKPdf	06 41 10.0	+2.8
VNA2	**Neumayer--Watz**	**137.35**	**155**	⇑*i*P	PKPdf	06 41 02.9	-4.3
VNA2				*e*		06 41 05.1	
VNA2				*e*		06 41 07.1	
VNA2				*e*		06 41 10.0	
VNA2				*e*		06 43 50.6	
VNA2				*e*		06 44 30.6	
VNA2				*e*		06 44 35.5	
VNA2				*e*		06 44 38.7	
SNAA	**Sanae**	**138.59**	**157**	⇑*i*	PKPdf	06 41 03.8	-5.7
SNAA	**Sanae**	**138.59**	**157**	*e*	PKPdf	06 41 06.9	-2.6
SNAA	**Sanae**	**138.59**	**157**	*e*	PKPdf	06 41 09.3	-0.2
SNAA	**Sanae**	**138.59**	**157**	*e*	PKPdf	06 41 10.6	+1.1
SNAA	**Sanae**	**138.59**	**157**	*e*PKHKP		06 40 56.3	
SNAA				*e*		06 41 06.9	
SNAA				*e*		06 41 09.3	
SNAA				*e*		06 41 10.6	
SNAA				*e*		06 43 55.4	
SNAA	**Sanae**	**138.59**	**157**	*e*PKP		06 40 56.2	
SNAA				⇑*i*P		06 41 03.8	
SNAA				*e*		06 41 06.9	
SNAA				*e*		06 41 09.3	
SNAA				*e*		06 41 10.6	
SNAA				*e*		06 43 55.4	
SNAA				*e*		06 44 35.0	
SNAA				*e*		06 44 38.3	
SNAA				*e*		06 44 42.0	
SNAA				*e*		06 52 57.0	
CASY	**Casey**	**139.64**	**212**	PFAKE		06 41 20.0	+8.5
CASY				LR	LR		
	comp=Z,8µm,20.0s,MS6.5						
TSUM	**Tsumeb**	**142.55**	**66**	*e*PKP	PKPdf	06 41 11.7	-6.1
TSUM				LR	LR		
	comp=Z,18µm,22.0s,MS6.8						
DGAR	**Diego Garcia**	**142.75**	**328**	PFAKE		06 41 30.0	+12
DGAR				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
NVL	**N'lazarevskaya**	**143.28**	**158**	⇑*i*PKIKP	PKPdf	06 41 14.1	-3.5
NVL				*i*		06 41 19.2	
NVL				*i* SS		06 57 02.9	
MIR	**Mirnyy**	**146.16**	**207**	*i* PKIKP	PKPdf	06 41 19.4	-3.3
MIR				pmax	pmax		
	comp=Z,585nm,2.0s						
MIR				pmax	pmax		
	comp=Z,4µm,6.8s						
MIR				pmax	pmax		
	comp=N,600nm,6.0s						
MIR				pmax	pmax		
	comp=E,500nm,4.8s						
LSZ	**Lusaka**	**146.40**	**48**	*e*PKP2	PKPab	06 41 23.6	-2.0
LSZ				MLR	MLR		
	comp=Z,34µm,21.0s,MS7.1						
SYO	**Syowa Base**	**150.73**	**170**	⇑PKPdf	PKPdf	06 41 25.7	-4.2
SYO	**Syowa Base**	**150.73**	**170**	⇑pPKPdf		06 41 32.0	
SYO	**Syowa Base**	**150.73**	**170**	⇑P	Px	06 41 51.9	
LBTB	**Lobatse**	**151.94**	**65**	*e*PKIKP	PKPdf	06 41 30.8	-2.3
LBTB				MLR	MLR		
	comp=Z,24µm,20.0s,MS7.0						
SUR	**Sutherland**	**152.55**	**83**	*e*PKPdf	PKPdf	06 41 31.2	-2.6
SUR				LR	LR		
	comp=Z,6µm,22.0s,MS6.4						
MAW	**Mawson**	**152.61**	**188**	*e*PKP	PKPdf	06 41 37.7	+5.0
	comp=Z,46nm,1.0s						
MAW	**Mawson**	**152.61**	**188**	PKPbc	PKPdf	06 41 35.9	+3.1
	comp=Z,18nm,0.8s,baz=152,slow=2.4,SNR=17						
MAW	**Mawson**	**152.61**	**188**	PKPdf	PKPdf	06 41 30.1	-2.6
MAW				*e*PKPbc	PKPdf	06 41 37.4	+4.7
MAW				*e*PKP	PKPdf	06 41 37.7	+5.0
MAW				LR	LR		
	comp=Z,28µm,22.0s,MS7.0						
BOSA	**Boshof**	**153.91**	**71**	PKIKP	PKPdf	06 41 34.1	-1.6
BOSA						06 41 42.3	
BOSA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BOSA	**Boshof**	**153.91**	**71**	PKP	PKPdf	06 41 34.1	-1.7
	comp=Z,9.1nm,1.0s,baz=22,slow=1.7,SNR=9.0						
BOSA				PKPbc	PKPdf	06 41 42.3	+6.5
	comp=Z,19nm,0.7s,baz=295,slow=1.6,SNR=18						
BOSA	**Boshof**	**153.91**	**71**	*e*PKPdf	PKPdf	06 41 33.5	-2.2
BOSA				LR	LR		
	comp=Z,24µm,20.0s,MS7.0						

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*IDC **17** 06:38:30.0±1.7,40.69N×126.49W,mb3.5/3,mb1 3.9/7, mb1mx3.7/25,mbtmp3.6/7,ML3.7/3,Error ellipse: s-maj=26.4km s-min=16.9km az=19.0*

*NEIC **17** 06:38:31.8±1.4,40.67N×126.48W,h10^{km},mb3.9/5,Error ellipse: s-maj=19.2km s-min=8.0km az=64.0*

ISC 17 06:38:29.7±1.8,**40.61N**±0.05×**126.51W**±0.08, **h12**^{km}±14^{km},**n41**,σ1§**30**/44,**mb3.8**/6,**Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	**Horse Mountain**	**2.13**	**82**	*e*Pn	**Pn**	**06 39 05.3**	**-0.3**
KHMM				*e*S	**Sn**	**06 39 30.4**	**-1.7**
KBO	**Bosley Butte**	**2.35**	**46**	*e*Pn	**Pn**	**06 39 08.3**	**-0.5**
KEBM	**Edson Butte**	**2.79**	**35**	*e*Pn	**Pn**	**06 39 14.2**	**-0.8**
WDC	**Whiskeytown Da**	**3.02**	**89**	*e*Pn	**Pn**	**06 39 18.8**	**+0.5**
WDC				*e*S	**Sn**	**06 39 53.6**	**-1.2**
YBH	**Yreka Blue Hor**	**3.08**	**67**	Pn	**Pn**	**06 39 21.0**	**+1.8**
	31nm,0.3s,baz=274,slow=9.2,SNR=16						
YBH				Sn	**Sn**	**06 39 57.1**	**+0.8**
	20nm,0.3s,baz=144,slow=17,SNR=4.7						
YBH	**Yreka Blue Hor**	**3.08**	**67**	*e*Pn	**Pn**	**06 39 19.9**	**+0.7**
HOPS	**Hopland**	**3.10**	**120**	*e*Pn	**Pn**	**06 39 18.4**	**-1.0**
HUMO	**Hull Mountain**	**3.33**	**52**	*e*Pn	**Pn**	**06 39 22.9**	**+0.2**
NSHM	**Saint Helena R**	**3.67**	**123**	*e*Pn	**Pn**	**06 39 27.5**	**0.0**
SAC	**San Andreas**	**4.39**	**132**	*e*Pn	**Pn**	**06 39 35.9**	**-1.9**
COR	**Corvallis**	**4.62**	**30**	*e*Pn	**Pn**	**06 39 39.4**	**-1.7**
BEKR	**Beckwourth**	**4.76**	**97**	*e*Pn	**Pn**	**06 39 43.2**	**+0.1**
MOD	**Modoc**	**4.85**	**73**	*e*Pn	**Pn**	**06 39 44.3**	**-0.1**
WCN	**Washoe City**	**5.35**	**102**	*e*Pn	**Pn**	**06 39 50.4**	**-1.0**
CMB	**Columbia Colle**	**5.40**	**116**	*e*P	**Pn**	**06 39 52.6**	**+0.5**
SAO	**San Andreas Ge**	**5.51**	**133**	*e*Pn	**Pn**	**06 39 50.8**	**-2.9**
PAHR	**Pah Rah Range**	**5.53**	**97**	Pn	**Pn**	**06 39 57.5**	**+3.5**
LRV	**Little Rabbit**	**6.00**	**132**	*e*Pn	**Pn**	**06 39 58.5**	**-2.1**
WVOR	**Wild Horse Val**	**6.18**	**70**	*e*Pn	**Pn**	**06 40 02.2**	**-0.9**
OMM	**Old Mammoth Mi**	**6.56**	**115**	*e*Pn	**Pn**	**06 40 08.0**	**-0.5**
NVAR	**Mina Array Bea**	**6.71**	**106**	Pn	**Pn**	**06 40 10.5**	**0.0**
	1.6nm,0.3s,baz=288,slow=14,SNR=15						
NVAR	**Mina Array Bea**	**6.71**	**106**	Pn	**Pn**	**06 40 10.5**	**0.0**
MTUM	**Tungsten Hills**	**6.99**	**115**	Pn	**Pn**	**06 40 15.7**	**+1.2**
OCWA	**Octopus Mounta**	**7.33**	**12**	*e*Pn	**Pn**	**06 40 19.5**	**+0.2**
BMO	**Blue Mountains**	**7.99**	**55**	*e*Pn	**Pn**	**06 40 28.9**	**+0.4**
PGC	**Sidney**	**8.33**	**14**	*e*Pn	**P**	**06 40 31.9**	**-1.3**
MWC	**Mount Wilson**	**9.26**	**131**	*e*Pn	**P**	**06 40 42.9**	**-3.2**
ARUT	**Antelope Range**	**10.53**	**101**	P	**P**	**06 41 06.5**	**+2.9**
MCMT	**McKenzie Canyo**	**10.90**	**63**	*e*P	**P**	**06 41 10.2**	**+1.6**
PDAR	**Pinedale Array**	**12.85**	**75**	Pn	**P**	**06 41 35.8**	**+0.8**
	0.1nm,0.3s,baz=276,slow=8.2,SNR=2.3						
EDM	**Edmonton**	**15.46**	**31**	P	**P**	**06 42 09.8**	**+0.7**
SDCO	**Great Sand Dun**	**16.54**	**93**	*e*P	**P**	**06 42 26.2**	**+3.2**
	4.1nm,0.8s						
ANMO	**Albuquerque**	**16.81**	**103**	Pn	**P**	**06 42 28.9**	**+2.4**
	baz=308,slow=12,SNR=1.6						
MNTX	**Cornudas Mount**	**19.20**	**111**	P	**P**	**06 42 59.0**	**+2.9**
	5.6nm,1.1s						
FFC	**Flin Flon**	**21.58**	**41**	*e*P	**P**	**06 43 20.7**	**-0.4**
	14nm,1.1s,mb4.3						
TXAR	**Lajitas Array**	**21.77**	**114**	P	**P**	**06 43 25.6**	**+2.4**
	0.9nm,0.7s,mb3.3,baz=293,slow=8.2,SNR=6.9						
WMOK	**Wichita Mounta**	**22.66**	**96**	*e*P	**P**	**06 43 34.9**	**+2.8**
	2.0nm,0.5s,mb3.8						
ILAR	**Eielson Array**	**26.92**	**341**	P	**P**	**06 44 12.2**	**0.0**
	0.4nm,0.7s,mb3.1,baz=144,slow=7.8,SNR=3.6						
FCC	**Fort Churchill**	**27.34**	**37**	P	**P**	**06 44 15.4**	**-0.8**
	3.1nm,0.7s,mb4.0						
SUMG	**Summit**	**51.24**	**23**	P	**P**	**06 47 34.5**	**-0.2**
BVAR	**Borovoye Array**	**85.60**	**350**	P	**P**	**06 51 08.9**	**+0.2**
	1.1nm,0.6s,mb4.3,baz=27,slow=3.2,SNR=3.5						

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*BJI **17** 06:40:13.0,40.90N×126.30W,h10^{km},mB4.5,mb4.7, Ms4.6,Msz4.4*

*IDC **17** 06:40:13.7±1.0,40.87N×126.36W,mb4.1/13,mb1 4.3/20, mb1mx4.2/28,mbtmp4.1/20,ML3.6/5,Error ellipse: s-maj=20.9km s-min=10.8km az=21.0*

*NEIC **17** 06:40:16.0±0.4,40.93N×126.28W,h10^{km},mb4.7/26, Error ellipse: s-maj=6.7km s-min=4.1km az=212.0*

ISC 17 06:40:14.7±0.4,**40.97N**±0.05×**126.26W**±0.05,**h10**^{km}, **n125**,σ1§**23**/122,**mb4.4**/28,**MS5.3**/1,**3C,Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	**Horse Mountain**	**1.92**	**92**	*e*Pn	**Pn**	**06 40 47.2**	**-0.6**
KHMM				*e*S	**Sn**	**06 41 13.7**	**+1.5**
KBO	**Bosley Butte**	**1.97**	**50**	*e*Pn	**Pn**	**06 40 48.2**	**-0.3**
KEBM	**Edson Butte**	**2.38**	**36**	*e*Pn	**Pn**	**06 40 53.8**	**-0.7**
YBH	**Yreka Blue Hor**	**2.78**	**73**	Pn	**Pn**	**06 41 00.9**	**+0.7**
	38nm,0.3s,baz=266,slow=9.5,SNR=15						
YBH				Sn	**Sn**	**06 41 36.9**	**+2.9**
	21nm,0.3s,baz=45,slow=19,SNR=3.3						
YBH	**Yreka Blue Hor**	**2.78**	**73**	*e*Pn	**Pn**	**06 41 00.7**	**+0.5**
YBH				*e*Sg	**Sg**	**06 41 40.3**	**-6.9**
WDC	**Whiskeytown Da**	**2.85**	**97**	*e*Pn	**Pn**	**06 40 59.3**	**-1.9**
HUMO	**Hull Mountain**	**2.96**	**55**	*e*Pn	**Pn**	**06 41 02.7**	**0.0**
HOPS	**Hopland**	**3.14**	**128**	*e*Pn	**Pn**	**06 41 01.3**	**-4.0**
COR	**Corvallis**	**4.22**	**30**	Pn	**Pn**	**06 41 19.5**	**-1.1**
MOD	**Modoc**	**4.57**	**76**	*e*Pn	**Pn**	**06 41 24.9**	**-0.7**
CMB	**Columbia Colle**	**5.40**	**121**	*e*Pn	**Pn**	**06 41 34.5**	**-2.8**
WVOR	**Wild Horse Val**	**5.89**	**73**	*e*Pn	**Pn**	**06 41 42.3**	**-1.9**
NVAR	**Mina Array Bea**	**6.64**	**110**	Pn	**Pn**	**06 41 53.9**	**-0.9**
	0.6nm,0.3s,baz=295,slow=15,SNR=2.5						
BMN	**Battle Mountai**	**6.89**	**92**	Pn	**Pn**	**06 41 55.3**	**-3.0**
OCWA	**Octopus Mounta**	**6.94**	**12**	*e*Pn	**Pn**	**06 41 59.2**	**+0.2**
BMO	**Blue Mountains**	**7.63**	**56**	*e*Pn	**Pn**	**06 42 08.5**	**-0.2**
PGC	**Sidney**	**7.94**	**14**	P	**Pn**	**06 42 12.6**	**-0.3**
ELK	**Elko**	**8.36**	**88**	Pn	**P**	**06 42 20.3**	**+1.5**
	0.1nm,0.3s,baz=208,slow=15,SNR=2.0						
HLID	**Hailey**	**9.16**	**70**	*e*Pn	**P**	**06 42 29.6**	**-0.3**
MWC	**Mount Wilson**	**9.36**	**133**	*e*Pn	**P**	**06 42 27.9**	**-4.8**
NEW	**Newport**	**9.78**	**39**	Pn	**P**	**06 42 42.4**	**+4.0**
BGU	**Big Grassy Mou**	**10.01**	**86**	Pn	**P**	**06 42 40.2**	**-1.5**
HVU	**Hansel Valley**	**10.17**	**81**	P	**P**	**06 42 43.5**	**-0.3**
MCMT	**McKenzie Canyo**	**10.57**	**64**	*e*P	**P**	**06 42 49.5**	**+0.3**
MSO	**Missoula**	**10.64**	**52**	*e*P	**P**	**06 42 50.0**	**-0.2**
NLU	**North Lily Min**	**10.86**	**91**	Pn	**P**	**06 42 56.1**	**+2.9**
HWUT	**Hardware Ranch**	**11.08**	**82**	Pn	**P**	**06 42 52.9**	**-3.4**
MVU	**Marysvale**	**11.09**	**98**	Pn	**P**	**06 42 53.2**	**-3.3**
CHMT	**Chamberlain Mo**	**11.10**	**53**	*e*P	**P**	**06 42 56.0**	**-0.5**
JLU	**Jordanelle**	**11.24**	**87**	Pn	**P**	**06 42 54.3**	**-4.1**

BBB	Bella Bella	11.29	354	Pn	P	06 42 58.7	-0.4
	0.2nm,0.3s,baz=180,slow=12,SNR=5.0						
BBB	Bella Bella	11.29	354	Pn	P	06 42 58.7	-0.4
RRI2	Red Ridge	11.34	73	P	P	06 42 57.6	-2.2
AHID	Auburn Hatcher	11.45	76	*e*P	P	06 43 00.8	-0.5
QLMT	Earthquake Lak	11.54	66	*e*P	P	06 42 59.5	-3.1
TPAW	Teton Pass	11.63	72	*e*P	P	06 43 06.8	+3.1
BOZ	Bozeman (W)	11.64	61	*e*P	P	06 43 02.1	-1.7
TMUT	Trail Mountain	11.64	93	Pn	P	06 43 00.7	-3.2
REDW	Red Top Meadow	11.68	73	*e*P	P	06 43 02.1	-2.4
IMW	Indian Meadow	11.70	70	*e*P	P	06 43 02.9	-1.8
SNOW	Snow King Moun	11.77	73	*e*P	P	06 43 09.1	+3.5
MOOW	Moose Ponds	11.81	71	*e*P	P	06 43 07.0	+0.8
YMR	Madison River	11.82	67	*e*P	P	06 43 09.3	+2.9
YFT	Old Faithful	11.87	68	P	P	06 43 06.2	-0.8
HRY	Holter Researc	11.89	56	*e*P	P	06 43 05.5	-1.7
LOHW	Long Hollow	11.89	72	*e*P	P	06 43 09.7	+2.3
LKWY	Lake	12.20	68	*e*P	P	06 43 13.9	+2.5
SRU	San Rafael	12.21	94	Pn	P	06 43 12.1	+0.6
BW06	Boulder Array	12.58	76	P	P	06 43 14.4	-2.2
PDAR	Pinedale Array	12.58	76	Pn	P	06 43 18.1	+1.5
	0.1nm,0.3s,baz=280,slow=9.0,SNR=10						
WUAZ	Wupatki	12.90	110	P	P	06 43 25.9	+5.1
PV10	Paradox Valley	13.52	95	Pn	P	06 43 30.0	+1.0
PV01	Paradox Valley	13.94	96	Pn	P	06 43 32.5	-2.0
EDM	Edmonton	15.05	31	*e*P	P	06 43 49.0	0.0
TUC	Tucson	15.12	120	*e*P	P	06 43 49.3	-0.7
	8.1nm,1.4s						
LAO	LASA Array	15.54	62	*e*P	P	06 43 57.5	+2.1
	143nm,1.1s						
PHWY	Pilot Hill	15.68	82	*e*P	P	06 43 57.5	+0.2
ISCO	Idaho Springs	15.78	87	P	P	06 43 58.8	+0.3
	28nm,1.6s						
SDCO	Great Sand Dun	16.37	95	*e*P	P	06 44 07.0	+0.9
	41nm,1.3s						
RSSD	Black Hills	16.67	72	P	P	06 44 10.8	+1.0
	2µm,3.8s						
LENM	Lemitar	16.71	108	P	P	06 44 13.2	+2.8
ANMO	Albuquerque	16.72	105	Pn	P	06 44 12.1	+1.6
	baz=256,slow=8.8,SNR=4.3						
ANMO	Albuquerque	16.72	105	*e*P	P	06 44 12.4	+1.9
	24nm,1.5s						
LPM	Los Pinos Moun	16.89	107	*e*P	P	06 44 14.8	+2.1
DGMT	Dagmar	17.34	57	*e*P	P	06 44 17.9	-0.4
	130nm,1.3s						
DLBC	Dease Lake	17.65	353	P	P	06 44 23.0	+0.9
	0.2nm,0.3s,baz=176,slow=12,SNR=18						
DLBC	Dease Lake	17.65	353	*e*P	P	06 44 23.0	+0.9
MNTX	Cornudas Mount	19.16	112	P	P	06 44 40.1	-0.6
	107nm,2.2s						
GDL2	Guadalupe Moun	19.60	110	*e*P	P	06 44 46.9	+1.1
AMTX	Amarillo	20.29	99	*e*P	P	06 44 52.6	-0.6
	32nm,1.3s						
CBKS	Cedar Bluff	20.44	87	*e*P	P	06 44 54.6	-0.2
	66nm,1.3s						
FFC	Flin Flon	21.19	41	*e*P	P	06 45 02.1	-0.2
	41nm,1.1s,mb4.7						
LTX	Lajitas	21.75	115	*e*P	P	06 45 08.9	+0.7
	65nm,1.6s,mb4.8						
TXAR	Lajitas Array	21.75	115	P	P	06 45 08.9	+0.6
	5.9nm,1.0s,mb4.0,baz=297,slow=8.4,SNR=16						
WMOK	Wichita Mounta	22.52	97	P	P	06 45 16.3	+0.4
	15nm,1.2s,mb4.3						
YKA	Yellowknife Ar	22.66	14	P	P	06 45 18.0	+1.1
	7.2nm,0.9s,mb4.1,baz=202,slow=10,SNR=12						
YKW3	Yellowknife Ar	22.72	14	*e*P	P	06 45 18.2	+0.6
KSU1	Kansas State U	22.73	85	P	P	06 45 20.1	+2.2
EYAK	Cordova Ski Ar	22.99	335	*e*P	P	06 45 20.2	0.0
ULM	Lac du Bonnet	23.05	56	P	P	06 45 22.3	+1.4
	19nm,1.0s,mb4.5,baz=255,slow=11,SNR=10						
ULM	Lac du Bonnet	23.05	56	*e*P	P	06 45 22.0	+1.0
	37nm,1.0s,mb4.8						
DIV	Divide	23.45	336	*e*P	P	06 45 25.7	+1.1
	65µm,1.2s						
SLKM	Skilak Lake	24.50	331	*e*P	P	06 45 35.2	+0.3
SML	Sawmill	24.77	335	*e*P	P	06 45 38.0	+0.6
EYMN	Ely	25.61	62	*e*P	P	06 45 46.7	+1.1
	43nm,1.3s,mb4.8						
SPU	Mount Spurr	25.62	331	*e*P	P	06 45 45.7	+0.1
ILAR	Eielson Array	26.64	340	P	P	06 45 54.8	-0.2
	7.2nm,0.9s,mb4.2,baz=157,slow=7.8,SNR=41						
JFWS	Jewell Farm	26.73	74	*e*P	P	06 45 56.8	+0.7
	36nm,1.1s,mb4.8						
NATX	Nacogdoches	26.93	100	P	P	06 45 57.0	-1.0
FCC	Fort Churchill	26.94	38	*e*P	P	06 45 57.2	-0.5
	13nm,1.4s,mb4.3						
CCM	Cathedral Cave	27.06	85	*e*P	P	06 45 58.4	-0.7
	60nm,1.8s,mb4.8						
INK	Inuvik	27.68	354	*e*P	P	06 46 04.3	-0.1
	5.0nm,1.0s,mb4.1						
IMA	Indian Mountai	29.48	338	*e*P	P	06 46 20.3	-0.4
	4.9nm,0.7s,mb4.3						
OXF	Oxford	29.69	91	P	P	06 46 23.4	+0.6
	9.3nm,0.7s,mb4.6						
LRAL	Lakeview Retre	32.13	91	*e*P	P	06 46 44.2	-0.2
	18nm,1.3s,mb4.7						
CPCT	Cooper Cave	33.02	86	*e*P	P	06 46 51.9	-0.2
ALLY	Alegheny Colle	34.33	73	P	P	06 47 06.5	+3.1
BLA	Blacksburg	35.46	81	*e*P	P	06 47 13.2	+0.1
	8.2nm,1.0s,mb4.6						
SCHQ	Schefferville	40.93	50	P	P	06 47 57.6	-1.0
	2.9nm,1.1s,mb3.8,baz=270,slow=11,SNR=3.6						
SCHQ	Schefferville	40.93	50	P	P	06 47 57.7	-0.9
	8.9nm,0.9s,mb4.4						
SUMG	Summit	50.84	23	*e*P	P	06 49 17.0	0.0
	6.8nm,0.8s,mb4.6						
NB2	NORSAR Subarra	72.61	20	P	P	06 51 43.0	-0.5
	0.6nm,0.7s,mb3.6,baz=330,slow=5.8						
NOA	NORSAR Array B	72.61	20	P	P	06 51 43.4	-0.1
	1.6nm,0.9s,mb4.0,baz=330,slow=5.6,SNR=3.9						
NOA	NORSAR Array B	72.61	20	P	P	06 51 43.4	-0.1
CN2	Changchun	73.84	314	*e*P	P	06 51 50.8	-0.2
FINES	FINESS Array B	75.50	13	P	P	06 51 59.2	-1.0
	0.9nm,0.7s,mb3.8,baz=14,slow=7.9,SNR=4.8						
FINES	FINESS Array B	75.50	13	P	P	06 51 59.2	-1.0
LPAZ	La Paz	78.35	124	P	P	06 52 16.5	-0.5
	1.6nm,0.8s,mb4.0,baz=337,slow=13,SNR=4.6						
LPAZ	La Paz	78.35	124	P	P	06 52 16.5	-0.5
SONM	Songino Array	80.03	327	P	P	06 52 24.2	-1.3
	5.7nm,1.4s,mb4.3,baz=72,slow=3.9,SNR=8.1						
CLL	Collm	81.47	24	*e*P	P	06 52 34.0	+0.9
CLL				*e*		06 52 46.0	
CLL	Collm	81.47	24	P	P	06 52 34.0	+0.9
CLL				*e*		06 52 46.0	
GERES	GERESS Array B	83.84	25	P	P	06 52 47.1	+1.8
	0.9nm,0.4s,mb4.2,baz=297,slow=6.0,SNR=8.2						
ESDC	Sonseca Array	84.09	41	P	P	06 52 47.6	+0.8
	0.3nm,0.4s,mb3.8,baz=304,slow=9.3,SNR=3.1						
SSE	Sheshan	85.04	307	P	P	06 52 50.8	-0.9
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.4						
SSE	Sheshan	85.04	307	P	P	06 52 50.8	-0.9
	comp=Z,21nm,0.7s,mb5.4						
BVAR	Borovoye Array	85.28	350	P	P	06 52 52.7	+0.4
	comp=Z,2.2nm,0.7s,mb4.4,slow=4.4,SNR=8.5						
AKASG	Malin Array Be	86.22	15	P	P	06 52 56.3	-0.8
	comp=Z,0.3nm,0.3s,mb4.0,baz=331,slow=3.7,SNR=6.3						
LZH	Lanzhou	90.60	322	*e*P	P	06 53 18.5	+0.1
	comp=Z,22nm,1.5s,mb5.3						
LZH				pP	pP	06 53 21.7	+0.1
LZH				sP	sP	06 53 23.2	+0.6
LZH				PP	PP	06 56 54.5	-1.3
LZH				LR	LR		
	comp=Z,980nm,17.8s,MS5.3						
VNA3	Neumayer Olymp	136.69	155	*e*	PKPdf	06 59 44.7	+5.5
VNA3	Neumayer Olymp	136.69	155	⇑*i*P	PKPdf	06 59 36.8	-2.4
VNA3				*e*		06 59 44.7	
VNA2	Neumayer--Watz	137.47	155	*e*	PKPdf	06 59 47.0	+6.2
VNA2	Neumayer--Watz	137.47	155	⇑*i*P	PKPdf	06 59 39.4	-1.4
VNA2				*e*		06 59 47.0	
SNAA	Sanae	138.72	156	*e*	PKPdf	06 59 47.9	+4.8
SNAA	Sanae	138.72	156	⇑*i*P	PKPdf	06 59 40.4	-2.7
SNAA				*e*		06 59 47.9	

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*BJI **17** 06:41:12.5, 40.90N×126.30W, h10^{km}, mB4.7, mb4.9, Ms4.9, Msz4.6*

*IDC **17** 06:41:15.7±1.2, 40.89N×126.34W, mb4.1/12, mb1 4.4/17, mb1mx4.3/26, mbtmp4.2/17, ML3.8/4, Error ellipse: s-maj=24.1km s-min=11.7km az=19.0*

*NEIC **17** 06:41:16.5±0.7, 40.88N×126.27W, h10^{km}, mb4.5/15, Error ellipse: s-maj=10.9km s-min=5.3km az=48.0*

ISC 17 06:41:14.7±0.5**, 40.82N**±0.05×**126.32W**±0.06**, h10^{km}, n69, σ1^{s}31**/70**, mb4.3**/20**, MS4.8**/1**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	1.97	88	Pn	Pn	06 41 49.1	+0.6
KBO	Bosley Butte	2.10	48	*e*Pn	Pn	06 41 49.6	-0.7
KEBM	Edson Butte	2.53	35	*e*Pn	Pn	06 41 55.4	-1.1
YBH	Yreka Blue Hor	2.87	70	Pn	Pn	06 42 02.4	+1.0
	61nm,0.3s,baz=324,slow=5.8,SNR=5.8						
YBH				Sn	Sn	06 42 37.5	+1.2
	32nm,0.3s,baz=201,slow=14,SNR=2.6						
YBH	Yreka Blue Hor	2.87	70	*e*Pn	Pn	06 42 02.6	+1.3
WDC	Whiskeytown Da	2.88	94	*e*Pn	Pn	06 42 02.4	+0.8
HUMO	Hull Mountain	3.09	54	*e*Pn	Pn	06 42 04.2	-0.3
HOPS	Hopland	3.10	125	Pn	Pn	06 42 04.9	+0.3
MOD	Modoc	4.66	75	*e*Pn	Pn	06 42 25.7	-1.1
CMB	Columbia Colle	5.37	119	Pn	Pn	06 42 37.6	+0.7
WVOR	Wild Horse Val	5.98	72	*e*Pn	Pn	06 42 44.9	-0.5
LRV	Little Rabbit	6.04	135	Pn	Pn	06 42 45.6	-0.7
OMM	Old Mammoth Mi	6.53	117	Pn	Pn	06 42 52.5	-0.7
NVAR	Mina Array Bea	6.63	109	Pn	Pn	06 42 55.7	+1.0
	0.9nm,0.3s,baz=290,slow=18,SNR=3.5						
BMO	Blue Mountains	7.75	56	P	Pn	06 43 09.5	-0.9
PGC	Sidney	8.09	14	P	P	06 43 12.8	-2.3
MWC	Mount Wilson	9.29	132	*e*Pn	P	06 43 30.2	-1.6
HVU	Hansel Valley	10.24	80	P	P	06 43 44.5	-0.2
BBB	Bella Bella	11.43	354	Pn	P	06 44 00.4	-0.6
	0.2nm,0.3s,baz=156,slow=19,SNR=2.6						
SNOW	Snow King Moun	11.86	72	*e*P	P	06 44 10.5	+3.7
YMR	Madison River	11.93	66	*e*P	P	06 44 10.4	+2.6
YFT	Old Faithful	11.97	67	P	P	06 44 11.4	+3.1
LOHW	Long Hollow	11.98	71	P	P	06 44 06.7	-1.8
BW06	Boulder Array	12.66	76	P	P	06 44 18.8	+1.1
PDAR	Pinedale Array	12.66	76	Pn	P	06 44 23.1	+5.4
	0.1nm,0.3s,baz=270,slow=15,SNR=6.2						
EDM	Edmonton	15.20	31	P	P	06 44 51.0	+0.1
LAO	LASA Array	15.64	61	*e*P	P	06 45 03.7	+7.0
	99nm,1.0s						
SDCO	Great Sand Dun	16.41	94	*e*P	P	06 45 08.7	+2.1
	13nm,1.0s						
ANMO	Albuquerque	16.73	104	*e*P	P	06 45 09.8	-0.8
	9.8nm,1.2s						
RSSD	Black Hills	16.76	71	P	P	06 45 09.2	-1.8
DGMT	Dagmar	17.46	57	*e*P	P	06 45 23.0	+3.3
	220nm,1.6s						
DLBC	Dease Lake	17.79	354	P	P	06 45 25.2	+1.4
	0.2nm,0.3s,baz=180,slow=13,SNR=7.3						
DLBC	Dease Lake	17.79	354	*e*P	P	06 45 24.9	+1.1
MNTX	Cornudas Mount	19.15	112	P	P	06 45 38.2	-2.4
	12nm,1.2s						
CBKS	Cedar Bluff	20.50	87	*e*P	P	06 45 53.9	-1.5
	36nm,1.0s						
FFC	Flin Flon	21.33	41	*e*P	P	06 46 03.2	-0.5
	42nm,1.1s,mb4.7						
TXAR	Lajitas Array	21.73	115	P	P	06 46 10.3	+2.2
	2.9nm,0.8s,mb3.7,baz=283,slow=9.4,SNR=4.3						
TXAR	Lajitas Array	21.73	115	P	P	06 46 10.3	+2.2
WMOK	Wichita Mounta	22.55	97	P	P	06 46 15.8	-0.3
	5.7nm,0.8s,mb4.0						
YKA	Yellowknife Ar	22.81	14	P	P	06 46 18.8	+0.4
	8.4nm,0.8s,mb4.2,baz=201,slow=10.0,SNR=4.3						
YKA	Yellowknife Ar	22.81	14	P	P	06 46 18.8	+0.4
EYAK	Cordova Ski Ar	23.10	335	*e*P	P	06 46 20.6	-0.7
ULM	Lac du Bonnet	23.18	56	P	P	06 46 22.9	+0.8
	13nm,0.9s,mb4.4,baz=255,slow=11,SNR=4.8						
ULM	Lac du Bonnet	23.18	56	*e*P	P	06 46 22.5	+0.4
	16nm,0.8s,mb4.5						
DIV	Divide	23.56	336	*e*P	P	06 46 27.8	+2.1
	23nm,0.8s,mb4.7						
SML	Sawmill	24.88	335	*e*P	P	06 46 38.0	-0.5
EYMN	Ely	25.72	62	*e*P	P	06 46 47.9	+1.3
	79nm,1.6s,mb5.0						
SPU	Mount Spurr	25.72	331	*e*P	P	06 46 47.6	+1.1
ILAR	Eielson Array	26.76	340	P	P	06 46 55.8	-0.3
	5.7nm,0.8s,mb4.2,baz=158,slow=8.1,SNR=12						
FCC	Fort Churchill	27.09	38	P	P	06 46 56.7	-2.4
	8.4nm,0.9s,mb4.3						
CCM	Cathedral Cave	27.12	84	P	P	06 47 00.3	+0.6
INK	Inuvik	27.82	354	P	P	06 47 03.3	-2.4
	3.4nm,0.9s,mb4.0						
CPCT	Cooper Cave	33.08	86	*e*P	P	06 47 50.6	-2.0
FRNY	Flat Rock	38.32	66	*e*P	P	06 48 34.1	-3.0
SCHQ	Schefferville	41.06	49	P	P	06 48 59.6	0.0
	4.3nm,1.0s,mb4.0,baz=263,slow=8.1,SNR=2.3						
SCHQ	Schefferville	41.06	49	*e*P	P	06 48 58.8	-0.8
	8.9nm,0.9s,mb4.4						
SUMG	Summit	50.99	23	*e*P	P	06 50 17.9	-0.1
	6.9nm,0.6s,mb4.8						
ARCES	ARCESS Array B	68.02	10	P	P	06 52 15.6	0.0
	1.3nm,0.7s,mb4.1,baz=342,slow=8.6,SNR=3.1						
MDJ	Mudanjiang	71.10	313	P	P	06 52 31.1	-3.8
MDJ				AMB	AMB		
	comp=Z,4µm,20.1s						
NB2	NORSAR Subarra	72.76	20	P	P	06 52 45.6	+1.2
	comp=Z,1.8nm,0.8s,mb4.0,baz=330,slow=5.8						
NOA	NORSAR Array B	72.76	20	P	P	06 52 44.6	+0.3
	comp=Z,2.0nm,0.9s,mb4.0,baz=330,slow=5.6,SNR=5.3						
CN2	Changchun	73.91	314	*e*P	P	06 52 50.5	-0.9
FINES	FINESS Array B	75.65	13	P	P	06 53 01.9	+0.8
	comp=Z,1.3nm,0.7s,mb3.9,baz=90,slow=1.9,SNR=4.7						
SONM	Songino Array	80.13	327	P	P	06 53 27.4	+1.3
	comp=Z,1.4nm,0.9s,mb3.9,baz=353,slow=3.3,SNR=2.0						
ESDC	Sonseca Array	84.23	41	P	P	06 53 50.3	+2.8
	comp=Z,0.2nm,0.3s,mb3.8,baz=307,slow=6.4,SNR=2.9						
SSE	Sheshan	85.09	307	P	P	06 53 50.8	-1.2
SSE				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
SSE				AMB	AMB		
	comp=Z,360nm,11.8s						
BVAR	Borovoye Array	85.42	350	P	P	06 53 54.1	+1.1
	comp=Z,2.5nm,0.7s,mb4.5,baz=4.6,slow=3.7,SNR=6.7						
MKAR	Makanchi Array	89.12	341	P	P	06 54 11.5	+0.4
	comp=Z,0.4nm,0.6s,mb4.0,baz=16,slow=4.2,SNR=2.6						
WMQ	Urumqi	90.34	336	*e*P	P	06 54 18.6	+1.6
WMQ				AP	pP	06 54 22.6	+2.4
WMQ				XP	sP	06 54 24.6	+3.4
WMQ				AMB	AMB		
	comp=Z,30nm,4.0s						
WMQ				LR	LR		
	comp=N,290nm,18.8s,MS4.9						
WMQ				LR	LR		
	comp=E,300nm,19.6s,MS4.9						
WMQ				LR	LR		
	comp=Z,310nm,19.0s,MS4.8						

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*NEIC **17** 06:47:23.6±0.7, 3.94S×142.74E, mb4.3/4, Error ellipse: s-maj=14.8km s-min=12.6km az=83.0*

*IDC **17** 06:47:24.1±0.7, 3.95S×142.88E, h135^{km}±6^{km}, mb3.9/7, mb1 4.0/10, mb1mx3.8/17, mbtmp4.3/10, Error ellipse: s-maj=23.0km s-min=14.4km az=77.0*

ISC 17 06:47:22.6±2.8**, 4.0S**±0.1×**142.7E**±0.1**, h134^{km}**±26^{km}**, h132^{km}**±2.1^{km}**:pP-P, n16, σ0^{s}93**/15**, mb4.0**/7**, 1C, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.92	141	P	P	06 49 02.6	0.0
	1.6nm,0.3s,baz=314,slow=8.1,SNR=4.0						
KAKA	Kakadu	13.34	229	*e*P	P	06 50 27.0	-0.7
	12nm,0.4s						
CTA	Charters Tower	16.33	168	P	P	06 51 07.3	+1.8
	0.4nm,0.3s,baz=315,slow=9.5,SNR=4.6						
CTAO	Charters Tower	16.33	168	*e*P	P	06 51 08.2	+2.8
	8.6nm,0.9s						
WRAB	Tennant Creek	17.80	207	*e*P	P	06 51 22.6	-0.8
	13nm,0.6s						
WB2	Warramunga Arr	17.80	207	⇑*i*P	P	06 51 23.2	-0.2
WRA	Warramunga Arr	17.81	207	P	P	06 51 22.8	-0.7
	1.5nm,0.3s,baz=27,slow=13,SNR=27						
WRA				pP		06 51 56.2	
	0.6nm,0.3s,baz=26,slow=12,SNR=4.2						
FITZ	Fitzroy Crossi	21.81	229	P	P	06 52 07.4	+2.5
	13nm,0.6s,mb4.5,baz=29,slow=5.9,SNR=20						
STKA	Stephens Creek	27.72	182	P	P	06 53 00.5	-0.1
	0.9nm,0.4s,mb3.8,baz=349,slow=13,SNR=3.3						
DZM	Mont Dzumac	29.16	130	P	P	06 53 13.2	-0.3
	4.2nm,0.7s,mb4.3,baz=323,slow=22,SNR=6.6						
MKAR	Makanchi Array	73.30	321	P	P	06 58 41.5	+0.2
	1.9nm,0.7s,mb3.9,baz=102,slow=8.0,SNR=16						
MKAR				pP	pP	06 59 13.6	-1.0
	0.3nm,0.5s,baz=108,slow=7.2,SNR=2.2						
MKAR	Makanchi Array	73.30	321	P	P	06 58 41.5	+0.2
MKAR				pP	pP	06 59 13.6	-1.0
VNDA	Vanda	74.15	176	P	P	06 58 45.0	-0.6
	0.7nm,0.6s,mb3.5,baz=342,slow=8.5,SNR=5.7						
BVAR	Borovoye Array	82.70	325	P	P	06 59 33.1	+0.6
	3.1nm,0.8s,mb4.1,baz=124,slow=5.3,SNR=13						
BVAR				pP	pP	07 00 07.5	+0.9
	1.3nm,0.6s,baz=117,slow=6.6,SNR=3.9						
ILAR	Eielson Array	85.38	24	P	P	06 59 45.0	-0.7
	1.9nm,0.7s,mb3.9,baz=262,slow=4.8,SNR=17						
ILAR				pP	pP	07 00 18.9	-1.1
	0.7nm,0.7s,baz=247,slow=5.0,SNR=3.6						
LPAZ	La Paz	143.41	124	PKP	PKPdf	07 06 42.5	+0.5
	1.5nm,0.6s,baz=240,slow=2.9,SNR=7.6						

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*IDC **17** 06:51:39.6±1.6, 40.86N×126.39W, mb3.9/7, mb1 4.0/10, mb1mx3.8/25, mbtmp3.9/10, ML3.8/3, Error ellipse: s-maj=37.0km s-min=12.9km az=4.0*

*NEIC **17** 06:51:42.0±1.0, 40.92N×126.28W, h10^{km}, mb4.2/3, Error ellipse: s-maj=16.1km s-min=9.6km az=199.0*

ISC 17 06:51:40.0±1.0**, 40.9N**±0.1×**126.34W**±0.08**, h10^{km}, n22, σ1^{s}14**/23**, mb3.9**/10**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	2.46	37	*e*P	Pn	06 52 20.2	-0.7
YBH	Yreka Blue Hor	2.85	72	Pn	Pn	06 52 27.5	+1.0
	8.5nm,0.3s,baz=262,slow=9.0,SNR=13						
YBH				Sn	Sn	06 53 02.8	+1.7
	6.8nm,0.3s,baz=22,slow=13,SNR=5.0						
WDC	Whiskeytown Da	2.90	95	*e*P	Pn	06 52 27.1	0.0
HUMO	Hull Mountain	3.04	55	*e*P	Pn	06 52 28.8	-0.3
WVOR	Wild Horse Val	5.96	73	*e*P	Pn	06 53 08.7	-1.8
BMO	Blue Mountains	7.71	56	*e*P	Pn	06 53 35.0	0.0
HLID	Hailey	9.23	69	*e*P	P	06 53 56.1	-0.1
MCMT	McKenzie Canyo	10.64	64	*e*P	P	06 54 13.4	-2.2
MSO	Missoula	10.72	52	*e*P	P	06 54 16.6	0.0
CHMT	Chamberlain Mo	11.18	53	*e*P	P	06 54 21.7	-1.2
PDAR	Pinedale Array	12.65	76	Pn	P	06 54 46.0	+3.2
	0.1nm,0.3s,baz=292,slow=8.0,SNR=6.4						
DLBC	Dease Lake	17.70	354	P	P	06 55 49.3	+1.4
	0.1nm,0.3s,baz=230,slow=13,SNR=4.1						
FFC	Flin Flon	21.27	41	*e*P	P	06 56 27.7	-0.7
	14nm,1.3s,mb4.2						
TXAR	Lajitas Array	21.78	115	P	P	06 56 34.5	+0.7
	1.3nm,1.0s,mb3.3,baz=301,slow=9.3,SNR=7.6						
ULM	Lac du Bonnet	23.13	56	P	P	06 56 48.5	+1.5
	1.7nm,0.4s,mb3.9,baz=266,slow=11,SNR=3.1						
EYMN	Ely	25.69	62	P	P	06 57 10.3	-1.3
	8.8nm,1.4s,mb4.1						
ILAR	Eielson Array	26.67	340	P	P	06 57 21.3	+0.8
	1.7nm,0.9s,mb3.6,baz=157,slow=8.0,SNR=12						
SCHQ	Schefferville	41.01	49	P	P	06 59 24.4	-0.1
	1.4nm,0.9s,mb3.6,baz=270,slow=11,SNR=2.4						
SUMG	Summit	50.91	23	P	P	07 00 43.0	+0.3
	2.0nm,0.7s,mb4.2						
ASAJ	Asahikawa	63.74	307	P	P	07 02 11.8	-2.1
	3.5nm,0.4s,mb4.8,baz=22,slow=18,SNR=4.8						
SONM	Songino Array	80.04	327	P	P	07 03 51.2	+0.3
	0.7nm,1.1s,mb3.5,baz=76,slow=5.1,SNR=3.9						
BVAR	Borovoye Array	85.33	350	P	P	07 04 19.0	+1.2
	0.3nm,0.4s,mb3.8,baz=45,slow=8.4,SNR=6.4						

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*IDC **17** 07:08:56.9±1.8, 40.89N×126.26W, mb3.8/4, mb1 3.9/10, mb1mx3.7/27, mbtmp3.6/10, ML3.5/4, Error ellipse: s-maj=27.2km s-min=16.8km az=29.0*

*NEIC **17** 07:08:59.2±1.1, 40.95N×126.11W, h10^{km}, mb4.2/3, Error ellipse: s-maj=15.3km s-min=8.2km az=61.0*

ISC 17 07:08:56.4±1.0**, 40.89N**±0.07×**126.2W**±0.1**, h10^{km}, n34, σ1^{s}26**/35**, mb3.9**/7**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	1.90	90	*e*P	Pn	07 09 29.0	-0.3
KBO	Bosley Butte	2.00	48	*e*P	Pn	07 09 29.7	-1.0
KEBM	Edson Butte	2.44	35	*e*P	Pn	07 09 35.5	-1.4
YBH	Yreka Blue Hor	2.79	71	Pn	Pn	07 09 43.6	+1.7
	18nm,0.3s,baz=264,slow=9.5,SNR=72						
YBH				Sn	Sn	07 10 18.2	+2.2
	15nm,0.3s,baz=15,slow=18,SNR=4.4						
WDC	Whiskeytown Da	2.83	95	*e*P	Pn	07 09 42.7	+0.2
HUMO	Hull Mountain	2.99	54	*e*P	Pn	07 09 44.7	-0.2
NSHM	Saint Helena R	3.67	129	P	Pn	07 09 54.6	+0.2
SAC	San Andreas	4.44	137	*e*P	Pn	07 10 02.4	-3.0
MOD	Modoc	4.58	75	*e*P	Pn	07 10 07.3	-0.1
BEKR	Beckwourth	4.61	101	*e*P	Pn	07 10 08.2	+0.4
CMB	Columbia Colle	5.35	120	*e*P	Pn	07 10 17.1	-1.2
SAO	San Andreas Ge	5.57	136	*e*P	Pn	07 10 17.2	-4.1
NVAR	Mina Array Bea	6.60	109	Pn	Pn	07 10 35.5	-0.4
	0.4nm,0.3s,baz=290,slow=11,SNR=3.9						
BMO	Blue Mountains	7.66	56	*e*P	Pn	07 10 50.8	0.0
ELK	Elko	8.35	87	Pn	P	07 11 02.0	+1.7
	0.1nm,0.3s,baz=305,slow=9.5,SNR=4.2						
MSO	Missoula	10.68	52	*e*P	P	07 11 32.1	-0.3
CHMT	Chamberlain Mo	11.13	53	*e*P	P	07 11 37.8	-0.9
TPAW	Teton Pass	11.64	72	P	P	07 11 44.2	-1.3
SNOW	Snow King Moun	11.77	72	P	P	07 11 46.4	-1.0
MOOW	Moose Ponds	11.82	71	P	P	07 11 45.9	-2.1
LOHW	Long Hollow	11.90	72	P	P	07 11 47.2	-1.9
PDAR	Pinedale Array	12.59	76	Pn	P	07 12 01.4	+3.2
	0.1nm,0.3s,baz=243,slow=9.9,SNR=3.9						
EDM	Edmonton	15.11	31	*e*P	P	07 12 31.1	-0.3
ANMO	Albuquerque	16.68	104	Pn	P	07 12 54.3	+2.5
	baz=326,slow=14,SNR=2.8						
DLBC	Dease Lake	17.73	353	P	P	07 13 07.0	+2.4
	0.1nm,0.3s,baz=134,slow=14,SNR=3.1						
FFC	Flin Flon	21.23	41	*e*P	P	07 13 44.0	-0.5
	14nm,1.1s,mb4.2						
TXAR	Lajitas Array	21.70	115	P	P	07 13 51.6	+2.1
	3.3nm,1.1s,mb3.7,baz=304,slow=7.5,SNR=10						
ULM	Lac du Bonnet	23.08	56	P	P	07 14 03.9	+1.0
	5.9nm,0.9s,mb4.0,baz=278,slow=9.5,SNR=4.2						
ULM	Lac du Bonnet	23.08	56	P	P	07 14 03.9	+1.0
EYMN	Ely	25.64	62	P	P	07 14 28.1	+0.6
	4.8nm,1.0s,mb4.0						
ILAR	Eielson Array	26.72	340	P	P	07 14 37.5	+0.1
	1.2nm,0.9s,mb3.4,baz=158,slow=7.8,SNR=7.9						
SCHQ	Schefferville	40.96	49	P	P	07 16 40.2	-0.3
	2.1nm,1.0s,mb3.7,baz=272,slow=17,SNR=2.6						
SCHQ	Schefferville	40.96	49	P	P	07 16 40.2	-0.3
SUMG	Summit	50.90	23	P	P	07 17 59.5	+0.4
	2.2nm,0.8s,mb4.1						

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*IDC **17** 07:37:05.7±1.9, 21.55S×169.65E, mb3.9/3, mb1 4.1/4, mb1mx3.8/14, mbtmp3.9/4, ML3.4/1, Error ellipse: s-maj=113.2km s-min=27.5km az=156.0*

ISC 17 07:37:11.2±3.1**, 21.3S**±0.7×**169.4E**±0.3**, h45^{km}**±26^{km}**, n8, σ0^{s}41**/9**, mb3.8**/3**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.86	253	*e*P	P	07 37 55.6	+0.1
DZM				*e*S	S	07 38 29.3	+0.3
DZM	Mont Dzumac	2.86	253	Pn	P	07 37 55.5	0.0
	5.5nm,0.3s,baz=61,slow=18,SNR=97						
DZM				Sn	S	07 38 29.7	+0.7
	29nm,0.3s,baz=356,slow=19,SNR=9.8						
NOUC	Port Laguerre	3.00	253	*e*P	P	07 37 57.1	-0.4
NOUC				*e*S	S	07 38 32.5	+0.1
STKA	Stephens Creek	26.95	241	P	P	07 42 50.5	-0.1
	1.2nm,0.7s,mb3.5,baz=97,slow=17,SNR=3.1						
WRA	Warramunga Arr	32.80	266	P	P	07 43 42.0	-0.7
	0.3nm,0.4s,mb3.5,baz=101,slow=8.3,SNR=7.9						
NVAR	Mina Array Bea	90.03	48	P	P	07 50 08.1	+0.6
	0.5nm,0.3s,mb4.3,baz=234,slow=9.7,SNR=5.1						
ARCES	ARCESS Array B	127.06	345	PKP	PKPdf	07 56 11.6	+1.4
	0.6nm,0.5s,baz=90,slow=2.4,SNR=7.7						
GERES	GERESS Array B	146.34	331	PKPbc	PKPbc	07 56 48.3	+1.3
	0.5nm,0.2s,baz=27,slow=2.2,SNR=3.3						

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*NEIC **17** 07:38:27.0±1.8, 11.92N×86.77W, h59^{km}±20^{km}, mb3.7/1, MD4.3(CASC), Error ellipse: s-maj=27.5km s-min=15.8km az=66.0*

*IDC **17** 07:38:27.1±3.2, 12.02N×86.65W, h57^{km}±36^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.6/20, mbtmp3.9/7, ML3.6/2, Error ellipse: s-maj=48.3km s-min=20.4km az=58.0*

*CASC **17** 07:38:27.0±2.2, 11.77N×86.86W, h52^{km}±32^{km}, MD4.4, mb3.7(NEIC)*

ISC 17 07:38:28.2±0.3**, 11.72N**±0.03×**86.70W**±0.03**, h52^{km}, n56, σ1^{s}24**/73**, mb3.8**/5**, 9C-11D, Near coast of Nicaragua**

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

CRUN	El Crucero	0.47	56	⇑eP	P	07 38 39.4	+0.1
TICN	Ticuantepe	0.55	56	⇓eP	P	07 38 40.3	+0.1
XAVN	Gruta Xavier	0.56	41	⇓iP	P	07 38 40.1	-0.2
MASN	Masaya	0.60	64	eP	P	07 38 40.5	-0.3
MASN				⇑eP		07 38 40.9	
MGAN	Managua	0.61	46	⇓eP	P	07 38 40.9	-0.1
MGAN				eS	S	07 38 51.3	+0.9
APYN	Apoyeque	0.61	34	⇑iP	P	07 38 40.7	-0.3
APON	Apoyo	0.65	72	⇓iP	P	07 38 41.7	+0.2
WILN	Americas 2	0.67	49	⇓eP	P	07 38 41.7	0.0
WILN				eS	S	07 38 52.3	+0.7
LEON	Leon	0.72	345	⇓iP	P	07 38 40.0	-2.3
CNGN	Cerro Negro	0.78	0	⇓eP	P	07 38 41.3	-1.8
CNGN				eS	S	07 38 54.4	+0.3
TEL3	Telica 3	0.86	350	⇓eP	P	07 38 42.1	-2.2
TELN	Telica	0.89	352	⇑eP	P	07 38 42.4	-2.3
PYTN	Playitas	1.03	38	⇓eP	P	07 38 46.2	-0.3
PYTN				eS	S	07 39 02.4	+2.2
CRIN	San Cristobal	1.03	341	eP	P	07 38 44.0	-2.7
CRIN				eS	S	07 38 58.2	-2.1
CONN	Concepcion	1.06	98	⇓eP	P	07 38 47.2	+0.1
VCR	Vista de Mar	1.90	146	eP	P	07 38 57.1	-1.7
VCR	Vista de Mar	1.90	146	eP	P	07 39 00.3	+1.5
VCR				eS	S	07 39 27.0	+5.4
CNCH	Conchagua	1.90	325	⇑eP	P	07 39 01.1	+2.2
CNCH				eS	S	07 39 23.3	+1.6
JTS	JuntasAbangare	2.23	129	P	P	07 39 03.1	-0.4
	21nm,0.3s,baz=315,slow=19,SNR=65						
JTS				S	S	07 39 32.8	+3.0
	44nm,0.3s,baz=300,slow=20,SNR=10.0						
JTS	JuntasAbangare	2.23	129	ePn	P	07 39 02.6	-0.9
BLLM	Bellamira	2.28	319	⇑eP	P	07 39 06.3	+2.0
BLLM				eS	S	07 39 31.4	+0.3
VSM	San Miguel	2.29	318	eP	P	07 39 06.8	+2.4
VSM				eS	S	07 39 30.6	-0.8
FORC	Fortuna	2.35	122	eP	P	07 39 05.7	+0.5
FORC	Fortuna	2.35	122	⇑eP	P	07 39 05.7	+0.4
CGA2	Cerro Gallo 2	2.77	127	eP	P	07 39 11.1	-0.2
CGA2	Cerro Gallo 2	2.77	127	eP	P	07 39 10.9	-0.4
PRS1	Puriscal	2.91	126	eP	P	07 39 13.3	+0.1
PRS1	Puriscal	2.91	126	eP	P	07 39 13.1	-0.2
LCBS	La Ceiba	2.94	311	eP	P	07 39 14.8	+1.1
LCBS				eS	S	07 39 47.3	-0.7
LFRS	El Faro	2.98	310	eP	P	07 39 15.2	+0.9
LFRS				eS	S	07 39 48.1	-0.9
LBRS	Las Brisas	3.04	312	eP	P	07 39 15.1	-0.1
LBRS				eS	S	07 39 50.8	+0.2
LFU	La Fuente	3.10	311	eP	P	07 39 17.5	+1.6
LFU				eS	S	07 39 51.9	-0.1
LAJ	Bijagual	3.13	126	eP	P	07 39 13.3	-3.1
LAJ	Bijagual	3.13	126	eP	P	07 39 12.6	-3.8
TRTC	Tortuguero	3.14	111	eP	P	07 39 15.5	-1.1
TRTC	Tortuguero	3.14	111	⇓eP	P	07 39 20.6	+4.1
SJS	Escuela Geolog	3.14	124	eP	P	07 39 17.7	+1.2
SJS				eS	S	07 40 09.7	+17
SJS	Escuela Geolog	3.14	124	eP	P	07 39 16.9	+0.4
BOQS	Boqueron	3.22	309	eP	P	07 39 18.8	+1.2
BOQS				eS	S	07 39 54.7	-0.3
URSC	Urasca	3.43	123	eP	P	07 39 21.5	+0.9
URSC	Urasca	3.43	123	⇑eP	P	07 39 21.5	+1.0
SBLS	San Blas	3.55	307	eP	P	07 39 23.3	+1.1
SBLS				eS	S	07 40 02.7	-0.6
RTR	El Retiro	3.60	307	eP	P	07 39 24.4	+1.5
RTR				eS	S	07 40 04.9	+0.3
BUS	Buena Vista	3.60	126	eP	P	07 39 24.3	+1.3
BUS	Buena Vista	3.60	126	⇑eP	P	07 39 23.2	+0.2
SVTC	San Vito de Co	4.70	128	eP	P	07 39 37.9	-0.5
OTAV	Otavalo	14.04	144	ePn	P	07 41 44.0	-2.2
SDV	Santo Domingo	16.06	99	P	P	07 42 11.0	-1.2
	0.2nm,0.3s,baz=236,slow=3.6,SNR=3.7						
SDV	Santo Domingo	16.06	99	eP	P	07 42 11.1	-1.1
	6.6nm,1.0s						
TXAR	Lajitas Array	23.60	320	P	P	07 43 32.0	-3.3
	1.8nm,0.8s,mb3.6,baz=139,slow=10,SNR=24						
PDAR	Pinedale Array	36.76	331	P	P	07 45 27.5	-5.1
	0.6nm,0.5s,mb3.7,baz=117,slow=9.9,SNR=4.3						
SCHQ	Schefferville	45.77	16	P	P	07 46 40.5	-5.8
	1.0nm,0.6s,mb3.9,baz=232,slow=12,SNR=3.6						
PLCA	Paso Flores	54.28	165	P	P	07 47 49.9	-1.6
	0.8nm,0.6s,mb3.9,baz=20,slow=12,SNR=2.9						
PLCA	Paso Flores	54.28	165	P	P	07 47 49.9	-1.7
ILAR	Eielson Array	66.98	336	P	P	07 49 10.9	-6.5
	1.3nm,1.1s,mb3.9,baz=154,slow=6.0,SNR=7.4						
WRA	Warramunga Arr	139.77	253	PKP	PKPdf	07 57 49.7	-1.7
	0.8nm,0.8s,baz=89,slow=2.3,SNR=9.8						

IDC 17 07:42:24.5±2.7**, 2.81N**×**96.22E, mb3.7**/4**, mb1 3.8**/4**, mb1mx3.6**/16**, mbtmp3.7**/4**, Error ellipse: s-maj=107.8km s-min=29.5km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	43.72	123	P	P	07 50 31.8	-1.7
	0.2nm,0.4s,baz=300,slow=9.2,SNR=5.3						
MKAR	Makanchi Array	45.46	347	P	P	07 50 45.6	-1.6
	0.9nm,0.5s,baz=159,slow=9.2,SNR=18						
SONM	Songino Array	45.70	10	P	P	07 50 47.3	-1.8
	0.3nm,0.4s,baz=195,slow=8.6,SNR=3.2						
ARCES	ARCESS Array B	80.70	340	P	P	07 54 39.0	-1.7
	0.4nm,0.5s,baz=90,slow=6.1,SNR=6.0						

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*IDC **17** 07:43:28.0±4.3, 41.70N×126.59W, mb3.0/1, mb1 3.5/5, mb1mx3.3/24, mbtmp3.1/5, ML3.6/3, Error ellipse: s-maj=56.1km s-min=35.8km az=147.0*

*NEIC **17** 07:43:28.1±4.4, 40.78N×126.54W, h10^{km}, mb3.9/1, Error ellipse: s-maj=50.5km s-min=17.6km az=75.0*

ISC 17 07:43:28.2±2.0**, 40.9N**±0.1×**126.4W**±0.2**, h10^{km}, n18, σ0^{s}94**/19**, mb3.4**/2**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRMB	Red Mountain	2.01	70	eP	Pn	07 44 03.4	+0.7
KHMM	Horse Mountain	2.04	89	eP	Pn	07 44 02.2	-0.9
KBO	Bosley Butte	2.13	50	eP	Pn	07 44 03.7	-0.7
KEBM	Edson Butte	2.55	37	eP	Pn	07 44 09.6	-0.7
YBH	Yreka Blue Hor	2.93	71	Pn	Pn	07 44 17.0	+1.2
	6.5nm,0.3s,baz=272,slow=7.7,SNR=25						
YBH				Sn	Sn	07 44 51.4	-0.1
	6.4nm,0.3s,baz=112,slow=18,SNR=3.8						
WDC	Whiskeytown Da	2.97	94	eP	Pn	07 44 16.2	-0.1
HUMO	Hull Mountain	3.13	55	eP	Pn	07 44 18.4	-0.2
HOPS	Hopland	3.18	125	eP	Pn	07 44 18.0	-1.3
MOD	Modoc	4.72	75	eP	Pn	07 44 41.0	-0.3
WVOR	Wild Horse Val	6.04	72	eP	Pn	07 44 58.6	-1.3
NVAR	Mina Array Bea	6.72	109	Pn	Pn	07 45 15.1	+5.7
	0.4nm,0.3s,baz=290,slow=13,SNR=3.9						
BMO	Blue Mountains	7.80	56	eP	Pn	07 45 24.1	-0.4
ELK	Elko	8.49	87	Pn	P	07 45 35.3	+1.2
	0.0nm,0.3s,baz=264,slow=18,SNR=2.9						
HLID	Hailey	9.31	69	P	P	07 45 45.0	-0.6
BW06	Boulder Array	12.73	76	P	P	07 46 32.8	+0.7
PDAR	Pinedale Array	12.73	76	Pn	P	07 46 33.6	+1.6
	0.0nm,0.3s,baz=266,slow=14,SNR=2.5						
FFC	Flin Flon	21.35	41	eP	P	07 48 18.3	+0.7
	5.4nm,1.0s,mb3.8						
TXAR	Lajitas Array	21.82	115	P	P	07 48 26.6	+4.1
	0.6nm,0.8s,mb3.0,baz=311,slow=8.3,SNR=7.2						

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*NEIC **17** 08:09:57.7±1.4, 20.03S×68.89W, h123^{km}±13^{km}, mb3.5/1, Error ellipse: s-maj=16.7km s-min=14.5km az=204.0*

*IDC **17** 08:09:58.4±2.9, 20.00S×68.85W, h128^{km}±25^{km}, mb3.4/4, mb1 3.6/6, mb1mx3.4/17, mbtmp3.9/6, MS3.6/1, Ms1 3.7/1, ms1mx3.5/12, Error ellipse: s-maj=33.5km s-min=20.7km az=71.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 17 08:09:56.8±1.7**, 20.1S**±0.1×**68.9W**±0.1**, h132^{km}**±18^{km}**, n10, σ1^{s}01**/12**, mb3.7**/2**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.81	11	P	P	08 10 56.5	+1.4
	1.4nm,0.3s,baz=189,slow=6.7,SNR=38						
LPAZ				S	S	08 11 39.9	+0.2
	1.0nm,0.3s,baz=201,slow=12,SNR=5.6						
LPAZ				LR	LR	08 11 56.1	
	comp=Z,811nm,19.3s,baz=134,slow=31						
LPAZ	La Paz	3.81	11	P	P	08 10 56.5	+1.4
LPAZ				S	S	08 11 39.9	+0.2
LPAZ				LR	LR	08 11 56.1	
ARE	Arequipa	4.33	325	eP	P	08 11 01.0	-1.1
ARE				eS	S	08 11 45.0	-7.1
SIV	San Ignacio	8.47	63	P	P	08 11 56.1	-1.6
	2.6nm,0.3s,baz=256,slow=11,SNR=106						
SAML	Samuel	12.34	27	ePn	P	08 12 49.8	+0.8
	0.9nm,0.7s						
BDFB	Brasilia	20.36	81	P	P	08 14 24.5	-0.3
	2.6nm,0.7s,baz=263,slow=11,SNR=5.4						
PLCA	Paso Flores	20.67	184	P	P	08 14 28.6	+0.8
	1.6nm,0.5s,baz=6.6,slow=15,SNR=3.1						
TXAR	Lajitas Array	59.45	325	P	P	08 19 47.0	-1.3
	0.2nm,0.5s,mb3.2,baz=148,slow=8.2,SNR=4.3						
YKA	Yellowknife Ar	89.83	341	P	P	08 22 42.1	+0.8
	1.7nm,0.6s,mb4.2,baz=132,slow=5.1,SNR=6.3						
SONM	Songino Array	152.02	7	PKPbc	PKPdf	08 29 38.7	+9.2
	0.5nm,0.4s,baz=334,slow=1.8,SNR=6.4						

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*NEIC **17** 08:19:49.5±4.2, 40.93N×126.13W, h10^{km}, mb3.1/1, Error ellipse: s-maj=50.7km s-min=19.4km az=74.0*

*IDC **17** 08:19:49.9±4.6, 41.18N×126.11W, mb2.5/1, mb1 3.5/4, mb1mx3.3/23, mbtmp3.1/4, ML3.3/2, Error ellipse: s-maj=55.2km s-min=28.6km az=126.0*

ISC 17 08:19:48.2±1.9**, 41.0N**±0.1×**126.2W**±0.2**, h10^{km}, n13, σ1^{s}22**/14**, mb2.8**/2**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHMM	Horse Mountain	1.87	93	eP	Pn	08 20 19.1	-1.5
KBO	Bosley Butte	1.92	50	eP	Pn	08 20 21.9	+0.6
KEBM	Edson Butte	2.34	36	eP	Pn	08 20 27.3	-0.1
YBH	Yreka Blue Hor	2.73	73	Pn	Pn	08 20 34.3	+1.5
	22nm,0.3s,baz=270,slow=9.0,SNR=26						
YBH				Sn	Sn	08 21 05.9	-0.3
	baz=140,slow=17,SNR=1.4						
WDC	Whiskeytown Da	2.80	97	eP	Pn	08 20 31.9	-2.1
HUMO	Hull Mountain	2.91	55	eP	Pn	08 20 36.0	+0.5
MOD	Modoc	4.52	76	eP	Pn	08 20 58.2	-0.2
WVOR	Wild Horse Val	5.84	73	eP	Pn	08 21 15.7	-1.3
NVAR	Mina Array Bea	6.60	110	Pn	Pn	08 21 29.7	+1.9
	0.2nm,0.3s,baz=288,slow=14,SNR=3.4						
BMO	Blue Mountains	7.58	56	eP	Pn	08 21 42.0	+0.5
PDAR	Pinedale Array	12.53	76	Pn	P	08 22 51.5	+2.2
	0.0nm,0.3s,baz=264,slow=16,SNR=2.2						
FFC	Flin Flon	21.14	41	P	P	08 24 33.7	-1.6
	0.6nm,0.6s,mb3.1						
TXAR	Lajitas Array	21.72	115	P	P	08 24 41.5	+0.1
	0.1nm,0.5s,mb2.5,baz=288,slow=7.9,SNR=3.8						

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*IDC **17** 08:21:03.6±1.3, 41.20N×126.36W, mb3.6/8, mb1 3.8/13, mb1mx3.8/26, mbtmp3.6/13, ML3.8/2, MS3.9/2, Ms1 3.9/2, ms1mx3.6/33, Error ellipse: s-maj=26.4km s-min=10.5km az=24.0*

*NEIC **17** 08:21:04.8±1.0, 41.11N×126.22W, h10^{km}, mb4.2/3, Error ellipse: s-maj=15.4km s-min=9.5km az=217.0*

ISC 17 08:21:03.3±0.8**, 41.17N**±0.08×**126.31W**±0.09**, h10^{km}, n33, σ1^{s}23**/36**, mb3.7**/11**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRMB	Red Mountain	1.84	78	eP	Pn	08 21 35.2	0.0
KHMM	Horse Mountain	1.97	98	eP	Pn	08 21 34.9	-2.2
YBH	Yreka Blue Hor	2.76	77	Pn	Pn	08 21 49.3	+0.9
	24nm,0.3s,baz=277,slow=8.6,SNR=12						
YBH				Sn	Sn	08 22 24.5	+2.3
	4.0nm,0.3s,baz=212,slow=19,SNR=2.7						
YBH				LR	LR	08 22 33.0	
	comp=Z,2μm,21.5s,baz=311,slow=32						
HUMO	Hull Mountain	2.88	59	eP	Pn	08 21 50.0	-0.1
WDC	Whiskeytown Da	2.91	100	eP	Pn	08 21 48.2	-2.4
MOD	Modoc	4.56	79	eP	Pn	08 22 12.8	-1.3
WVOR	Wild Horse Val	5.87	75	eP	Pn	08 22 29.6	-2.9
NVAR	Mina Array Bea	6.74	111	Pn	Pn	08 22 45.7	+0.9
	0.4nm,0.3s,baz=285,slow=16,SNR=5.3						
NVAR				Sn	Sn	08 24 03.7	+1.3
	0.0nm,0.3s,baz=287,slow=22,SNR=2.5						
NVAR	Mina Array Bea	6.74	111	Pn	Pn	08 22 45.7	+0.9
NVAR				Sn	Sn	08 24 03.7	+1.3
BMO	Blue Mountains	7.55	58	eP	Pn	08 22 56.4	+0.2
ELK	Elko	8.39	89	Pn	P	08 23 10.3	+2.5
	0.1nm,0.3s,baz=257,slow=18,SNR=2.4						
ELK				LR	LR	08 26 38.0	
	comp=Z,903nm,21.0s,baz=256,slow=40						
MCMT	McKenzie Canyo	10.51	65	eP	P	08 23 36.8	-0.2
CHMT	Chamberlain Mo	11.01	54	eP	P	08 23 42.7	-1.1
HRY	Holter Researc	11.81	57	P	P	08 23 54.9	+0.2
PDAR	Pinedale Array	12.57	77	Pn	P	08 24 08.5	+3.5
	0.1nm,0.3s,baz=277,slow=12,SNR=5.0						
PV10	Paradox Valley	13.57	96	P	P	08 24 18.0	-0.2
PV01	Paradox Valley	14.00	97	P	P	08 24 24.4	+0.5
EDM	Edmonton	14.90	32	eP	P	08 24 33.8	-1.7
ANMO	Albuquerque	16.80	105	Pn	P	08 25 00.8	+0.6
	baz=307,slow=9.8,SNR=5.8						
BNM	Barren Site	17.07	108	P	P	08 25 02.6	-0.9
GDL2	Guadalupe Moun	19.70	110	eP	P	08 25 34.9	-0.7
FFC	Flin Flon	21.06	42	eP	P	08 25 48.1	-1.5
	18nm,1.4s,mb4.2						
TXAR	Lajitas Array	21.87	116	P	P	08 25 56.9	-1.1
	1.4nm,1.0s,mb3.3,baz=301,slow=7.3,SNR=11						
YKA	Yellowknife Ar	22.47	14	P	P	08 26 04.6	+0.9
	1.0nm,0.7s,mb3.4,baz=199,slow=10,SNR=4.3						
YKA	Yellowknife Ar	22.47	14	P	P	08 26 04.6	+0.9
WMOK	Wichita Mounta	22.58	98	P	P	08 26 04.9	-0.1
	1.4nm,0.6s,mb3.6						
ULM	Lac du Bonnet	22.97	56	P	P	08 26 10.3	+1.6
	1.8nm,0.4s,mb3.8,baz=288,slow=9.8,SNR=3.5						
ILAR	Eielson Array	26.44	340	P	P	08 26 42.4	+0.8
	0.9nm,0.8s,mb3.4,baz=159,slow=8.5,SNR=10						
SUMG	Summit	50.67	23	eP	P	08 30 04.2	0.0
	2.7nm,0.7s,mb4.3						
NOA	NORSAR Array B	72.43	20	P	P	08 32 29.9	-1.2
	0.3nm,0.7s,mb3.4,baz=116,slow=18,SNR=2.6						
SONM	Songino Array	79.84	327	P	P	08 33 14.9	+1.8
	0.2nm,0.4s,mb3.4,baz=45,slow=2.0,SNR=3.0						
GERES	GERESS Array B	83.67	25	P	P	08 33 33.6	+0.6
	0.3nm,0.2s,mb4.0,baz=350,slow=8.1,SNR=4.2						
BVAR	Borovoye Array	85.08	350	P	P	08 33 40.5	+0.6
	1.0nm,0.6s,mb4.1,slow=4.3,SNR=3.8						

NEIC 17 08:30:56.4±2.8**, 40.71N**×**125.86W, h10^{km}, mb3.6**/1**, Error ellipse: s-maj=34.6km s-min=11.5km az=87.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHMM	Horse Mountain	1.62	84	eP	Pn	08 31 24.9	-0.3
WDC	Whiskeytown Da	2.52	92	eP	Pn	08 31 38.0	-0.2
YBH	Yreka Blue Hor	2.58	66	eP	Pn	08 31 39.2	+0.3
HUMO	Hull Mountain	2.88	48	eP	Pn	08 31 40.9	-2.4
BEKR	Beckwourth	4.29	100	P	Pn	08 32 01.7	-1.5
MOD	Modoc	4.35	72	eP	Pn	08 32 02.1	-2.0
CMB	Columbia Colle	5.01	120	P	Pn	08 32 12.1	-1.4
SAO	San Andreas Ge	5.23	137	P	Pn	08 32 14.1	-2.5
WVOR	Wild Horse Val	5.68	70	eP	Pn	08 32 20.9	-2.1
BMO	Blue Mountains	7.53	54	eP	Pn	08 32 46.4	-2.5
FFC	Flin Flon	21.18	41	eP	P	08 35 42.5	-1.4
	2.9nm,1.1s						

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*NEIC **17** 08:35:22.8±1.6, 41.07N×126.22W, h10^{km}, mb3.5/1, Error ellipse: s-maj=21.0km s-min=13.0km az=50.0*

*IDC **17** 08:35:22.4±2.0, 41.24N×126.32W, mb3.4/3, mb1 3.8/6, mb1mx3.6/23, mbtmp3.5/6, ML3.4/2, MS3.5/1, Ms1 3.5/1, ms1mx3.3/14, Error ellipse: s-maj=30.4km s-min=19.4km az=23.0*

ISC 17 08:35:20.5±1.4**, 41.1N**±0.1×**126.4W**±0.1**, h10^{km}, n16, σ1^{s}07**/17**, mb3.4**/4**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRMB	Red Mountain	1.91	75	eP	Pn	08 35 53.3	-0.3
KBO	Bosley Butte	1.98	54	eP	Pn	08 35 54.4	0.0
KEBM	Edson Butte	2.36	39	eP	Pn	08 36 00.1	+0.1
YBH	Yreka Blue Hor	2.83	75	Pn	Pn	08 36 07.9	+1.2
	21nm,0.3s,baz=273,slow=9.4,SNR=30						
YBH				Sn	Sn	08 36 42.3	+1.0
	10nm,0.3s,baz=6.9,slow=9.5,SNR=5.1						
YBH				LR	LR	08 37 12.7	
	comp=Z,855nm,20.6s,baz=199,slow=40						
WDC	Whiskeytown Da	2.94	98	P	Pn	08 36 06.3	-2.0
HUMO	Hull Mountain	2.98	58	eP	Pn	08 36 09.0	+0.2
MOD	Modoc	4.63	78	eP	Pn	08 36 31.2	-1.1
BEKR	Beckwourth	4.74	103	eP	Pn	08 36 33.8	0.0
WVOR	Wild Horse Val	5.95	74	eP	Pn	08 36 48.7	-2.1
NVAR	Mina Array Bea	6.75	110	Pn	Pn	08 37 04.9	+2.8
	0.2nm,0.3s,baz=289,slow=16,SNR=3.4						
BMO	Blue Mountains	7.65	57	eP	Pn	08 37 14.9	+0.1
PDAR	Pinedale Array	12.64	77	Pn	P	08 38 27.4	+4.3
	0.0nm,0.3s,baz=281,slow=15,SNR=5.4						
FFC	Flin Flon	21.17	42	eP	P	08 40 07.0	-1.0
	1.3nm,0.5s,mb3.5						
TXAR	Lajitas Array	21.86	115	P	P	08 40 15.4	+0.2
	0.6nm,0.9s,mb3.0,baz=292,slow=7.4,SNR=5.1						
ULM	Lac du Bonnet	23.07	56	P	P	08 40 27.6	+0.6
	2.5nm,0.9s,mb3.6,baz=269,slow=9.8,SNR=3.3						
ILAR	Eielson Array	26.53	340	P	P	08 41 00.4	+0.7
	0.6nm,0.7s,mb3.2,baz=163,slow=9.4,SNR=5.5						

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*IDC **17** 08:43:44.9±0.5, 7.70N×93.94E, mb4.3/20, mb1 4.4/21, mb1mx4.3/25, mbtmp4.2/21, ML4.2/1, Error ellipse: s-maj=24.1km s-min=13.6km az=55.0*

*BJI **17** 08:43:49.5, 7.70N×94.00E, h30^{km}, mb4.5*

*NEIC **17** 08:43:49.6±0.3, 7.72N×94.01E, h30^{km}, mb4.6/12, Error ellipse: s-maj=10.3km s-min=5.1km az=54.0*

ISC 17 08:43:48.1±0.5**, 7.64N**±0.07×**93.98E**±0.06**, h33^{km}, n43, σ0^{s}87**/42**, mb4.4**/32**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	Songkhla	6.60	94	P	P	08 45 26.0	+0.7
	160nm,0.8s						
KULM	Kulim	7.03	109	ePn	Pn	08 45 31.2	-0.3
KULM				eSn	Sn	08 46 49.4	-1.6
NNT	Nongplab	7.50	49	P	P	08 45 39.5	+1.6
CMAR	Chiang Mai Arr	11.79	24	Pn	P	08 46 34.2	-2.8
	0.5nm,0.3s,baz=204,slow=14,SNR=2.7						
PKI	Pulchoki	21.42	339	eP	P	08 48 35.1	-0.4
	26nm,0.6s,mb4.8						
DMN	Daman	21.57	338	eP	P	08 48 36.9	0.0
	53nm,0.7s,mb5.1						
GUN	Gumba	21.57	340	eP	P	08 48 36.7	-0.3
	52nm,0.6s,mb5.1						
KKN	Kakani	21.67	339	eP	P	08 48 37.9	0.0
	34nm,0.8s,mb4.8						
GKN	Gorkha	22.10	338	eP	P	08 48 42.3	+0.1
	31nm,0.5s,mb5.0						
LSA	Lhasa	22.11	353	eP	P	08 48 42.1	-0.2
	28nm,0.6s,mb4.9						
GYA	Guiyang	22.27	31	P	P	08 48 45.6	+1.7
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
KOLN	Koldanda	22.30	335	eP	P	08 48 44.9	+0.6
	comp=Z,66nm,1.1s,mb5.0						
GTA	Gaotai	32.07	9	P	P	08 50 14.9	+0.6
GTA				AP	pP	08 50 21.4	-2.5
GTA				XP	sP	08 50 24.3	-4.0
WMQ	Urumqi	36.46	352	eP	P	08 50 52.0	+0.1
AAK	Ala-Archa	38.86	337	eP	P	08 51 11.4	-0.6
	comp=Z,3.7nm,0.8s,mb4.2						
MKAR	Makanchi Array	40.28	348	P	P	08 51 23.2	-0.5
	comp=Z,1.3nm,0.7s,mb3.8,baz=162,slow=7.7,SNR=8.8						
FITZ	Fitzroy Crossi	40.38	130	P	P	08 51 25.3	+0.4
	comp=Z,4.2nm,0.8s,mb4.2,baz=354,slow=9.2,SNR=6.0						
SONM	Songino Array	41.43	13	P	P	08 51 33.5	+0.3
	comp=Z,3.0nm,0.7s,mb4.0,baz=194,slow=8.5,SNR=22						
SONM				PcP	PcP	08 53 32.1	+0.7
	comp=Z,0.6nm,0.5s,baz=192,slow=4.4,SNR=4.0						
WRA	Warramunga Arr	48.26	125	P	P	08 52 27.9	-0.4
	comp=Z,1.5nm,0.5s,mb4.3,baz=305,slow=8.6,SNR=20						
WRA				PcP	PcP	08 53 55.2	-0.1
	comp=Z,0.4nm,0.5s,baz=316,slow=2.9,SNR=2.9						
WRAB	Tennant Creek	48.26	125	eP	P	08 52 28.0	-0.3
	comp=Z,5.2nm,0.5s,mb4.8						
BVAR	Borovoye Array	49.16	341	P	P	08 52 33.2	-1.6
	comp=Z,0.9nm,0.8s,mb3.9,baz=150,slow=12,SNR=3.2						
BVAR				PcP	PcP	08 53 57.5	-0.7
	comp=Z,1.1nm,0.6s,baz=146,slow=5.3,SNR=4.3						
STKA	Stephens Creek	60.06	134	P	P	08 53 54.5	0.0
	comp=Z,1.3nm,0.5s,mb4.2,baz=223,slow=8.9,SNR=8.7						
BRTR	Keskin Array B	62.46	311	P	P	08 54 09.0	-1.6
	comp=Z,1.4nm,0.6s,mb4.3,baz=128,slow=7.3,SNR=6.6						
AKASG	Malin Array Be	68.24	322	P	P	08 54 45.6	-2.0
	comp=Z,0.3nm,0.3s,mb3.8,baz=91,slow=4.3,SNR=4.4						
MLR	Muntele Rosu	69.23	316	P	P	08 54 54.1	+0.4
	comp=Z,3.0nm,0.6s,mb4.4,baz=192,slow=2.6,SNR=7.7						
FINES	FINESS Array B	72.84	332	P	P	08 55 15.1	-0.2
	comp=Z,5.7nm,0.6s,mb4.7,baz=104,slow=7.9,SNR=33						
KAF	Kangasniemi	72.93	333	ep	P	08 55 15.2	-0.5
	comp=Z,3.2nm,0.5s,mb4.5,baz=105,slow=5.6						
BOSA	Boshof	75.32	238	P	P	08 55 32.2	+1.9
	comp=Z,4.8nm,0.6s,mb4.6,baz=90,slow=4.5,SNR=11						
ARCES	ARCESS Array B	75.43	340	P	P	08 55 30.5	+0.4
	comp=Z,1.3nm,0.6s,mb4.0,baz=102,slow=5.2,SNR=13						
FX1	Attu Island--F	77.42	38	P	P	08 55 42.8	+1.1
	comp=Z,12nm,0.6s,mb5.0,baz=120,slow=22,SNR=5.5						
GERES	GERESS Array B	77.89	318	P	P	08 55 44.6	+0.3
	comp=Z,2.2nm,0.6s,mb4.3,baz=72,slow=4.2,SNR=15						
HFS	Hagfors	78.58	330	P	P	08 55 48.0	+0.1
	comp=Z,1.5nm,0.4s,mb4.3,baz=90,slow=5.9,SNR=11						
GRA1	Grafenberg Arr	79.54	319	eP	P	08 55 54.3	+0.9
	comp=Z,5.0nm,0.8s,mb4.5						
GRF	Grafenberg Arr	79.54	319	eP	P	08 55 54.3	+0.9
	comp=Z,5.0nm,0.8s,mb4.5						
NB2	NORSAR Subarra	79.86	331	P	P	08 55 54.5	-0.3
	comp=Z,3.5nm,1.0s,mb4.2,baz=91,slow=5.3						
NOA	NORSAR Array B	79.86	331	P	P	08 55 54.2	-0.6
	comp=Z,2.5nm,0.8s,mb4.2,baz=93,slow=5.7,SNR=8.9						
DAVOX	Davos	80.45	316	P	P	08 55 58.4	+0.1
	comp=Z,5.1nm,0.7s,mb4.6,baz=17,slow=7.6,SNR=4.2						
DAVOX	Davos	80.45	316	P	P	08 55 58.4	+0.1
EKA	Eskdalemuir Ar	87.82	325	P	P	08 56 35.1	-0.1
	comp=Z,1.0nm,0.8s,mb4.1,baz=101,slow=4.3,SNR=4.9						
VNDA	Vanda	92.73	168	P	P	08 56 58.1	+0.3
	comp=Z,0.4nm,0.8s,mb3.9,baz=280,slow=6.8,SNR=3.4						
ILAR	Eielson Array	95.02	22	P	P	08 57 09.1	+0.7
	comp=Z,0.2nm,0.5s,mb3.9,baz=126,slow=26,SNR=4.3						
PDAR	Pinedale Array	125.44	21	PKP	PKPdf	09 02 47.7	+1.4
	comp=Z,0.4nm,0.6s,baz=225,slow=3.8,SNR=2.8						
TXAR	Lajitas Array	139.51	24	PKP	PKPdf	09 03 15.3	+2.2
	comp=Z,0.2nm,0.7s,baz=18,slow=2.9,SNR=4.1						

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*IDC **17** 08:49:55.4±0.8, 7.74N×93.95E, mb4.1/10, mb1 4.3/11, mb1mx4.1/20, mbtmp4.1/11, ML4.2/1, Error ellipse: s-maj=29.8km s-min=21.4km az=61.0*

*NEIC **17** 08:50:00.1±0.6, 7.70N×93.93E, h30^{km}, mb4.3/6, Error ellipse: s-maj=17.7km s-min=10.1km az=51.0*

ISC 17 08:49:58.3±0.7**, 7.8N**±0.1×**94.0E**±0.1**, h30^{km}, n20, σ0^{s}98**/20**, mb4.2**/16**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	7.04	110	Pn	Pn	08 51 43.8	+1.7
CMAR	Chiang Mai Arr	11.67	24	Pn	P	08 52 44.3	-1.7
	0.5nm,0.3s,baz=211,slow=13,SNR=2.6						
PKI	Pulchoki	21.32	339	eP	P	08 54 45.7	+0.6
	11nm,0.6s,mb4.4						
DMN	Daman	21.47	338	eP	P	08 54 46.6	0.0
	17nm,0.7s,mb4.5						
GUN	Gumba	21.47	340	eP	P	08 54 47.1	+0.5
	32nm,0.8s,mb4.7						
KKN	Kakani	21.57	339	eP	P	08 54 47.7	+0.1
LSA	Lhasa	21.99	353	eP	P	08 54 55.7	+3.9
	11nm,0.7s,mb4.4						
KOLN	Koldanda	22.21	335	eP	P	08 54 54.7	+0.7
	14nm,0.7s,mb4.5						
MKAR	Makanchi Array	40.17	348	P	P	08 57 33.4	-0.1
	0.7nm,0.7s,mb3.5,baz=180,slow=8.5,SNR=4.6						
SONM	Songino Array	41.30	13	P	P	08 57 43.9	+1.1
	1.9nm,0.8s,mb3.8,baz=193,slow=9.1,SNR=14						
WRA	Warramunga Arr	48.30	125	P	P	08 58 38.4	-0.8
	1.3nm,0.5s,mb4.2,baz=305,slow=8.5,SNR=22						
WRA				PcP	PcP	09 00 06.0	-0.1
	0.3nm,0.8s,baz=309,slow=3.0,SNR=3.0						
WRAB	Tennant Creek	48.30	125	eP	P	08 58 37.9	-1.3
	2.0nm,0.6s,mb4.3						
BRTR	Keskin Array B	62.41	311	P	P	09 00 19.1	-1.8
	0.9nm,0.6s,mb4.1,baz=146,slow=8.9,SNR=3.6						
MLR	Muntele Rosu	69.16	316	P	P	09 01 03.1	-1.0
	1.7nm,0.5s,mb4.2,baz=158,slow=12,SNR=4.3						
FINES	FINESS Array B	72.75	332	P	P	09 01 25.1	-0.3
	3.5nm,0.6s,mb4.5,baz=108,slow=6.0,SNR=6.3						
BOSA	Boshof	75.41	238	P	P	09 01 42.6	+1.0
	1.5nm,0.5s,mb4.2,baz=108,slow=5.0,SNR=5.8						
GERES	GERESS Array B	77.83	318	P	P	09 01 55.1	+0.5

	1.8nm,0.7s,mb4.1,baz=90,slow=4.0,SNR=8.4						
HFS	Hagfors	78.49	330	P	P	09 01 58.2	+0.2
	1.1nm,0.6s,mb4.0,baz=101,slow=7.6,SNR=5.2						
NB2	NORSAR Subarra	79.77	331	P	P	09 02 04.8	-0.1
	1.7nm,0.8s,mb4.0,baz=93,slow=5.6						
NOA	NORSAR Array B	79.77	331	P	P	09 02 04.8	-0.1
	1.3nm,0.8s,mb3.9,baz=95,slow=5.4,SNR=4.3						

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*IDC **17** 08:58:53.5±3.1, 64.68N×31.82E, mb1 2.9/4, mb1mx2.8/21, mbtmp2.8/4, ML2.6/4, Error ellipse: s-maj=42.4km s-min=10.7km az=101.0*

*BER **17** 08:58:59.1±4.8, 64.77N×30.63E, ML2.0, ML2.1(NAO), Suspected explosion*

NAO 17 08:58:56.6±2.1**, 64.70N×31.16E, ML2.1, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	Apatity Array	3.01	13	Pn	Pn	08 59 46.8	+0.4
	baz=195,slow=14						
APA0				Lg		09 00 33.5	
FIA0	FINESS Array S	4.01	218	Pn	Pn	08 59 58.2	-2.4
	baz=41,slow=14						
FIA0				Sn	Sn	09 00 45.5	-3.5
FIA0				Lg		09 00 57.6	
	baz=35,slow=37						
FINES	FINESS Array B	4.01	218	Pn	Pn	08 59 57.3	-3.3
	0.2nm,0.3s,baz=33,slow=13,SNR=8.1						
FINES				Sn	Sn	09 00 47.2	-1.7
	0.3nm,0.3s,baz=39,slow=20,SNR=3.5						
FINES				Lg		09 00 55.2	
	0.7nm,0.3s,baz=55,slow=26,SNR=3.8						
ARA0	ARCESS Array S	5.33	338	Pn	Pn	09 00 14.3	-5.0
	baz=150,slow=12						
ARA0				Sn	Sn	09 01 14.3	-8.0
	baz=158,slow=28						
ARA0				Lg		09 01 35.4	
	baz=145,slow=37						
ARCES	ARCESS Array B	5.33	338	Pn	Pn	09 00 14.0	-5.4
	0.2nm,0.3s,baz=150,slow=12,SNR=16						
ARCES				Sn	Sn	09 01 13.7	-8.7
	0.2nm,0.3s,baz=152,slow=25,SNR=3.1						
ARCES				Lg		09 01 36.8	
	0.4nm,0.3s,baz=145,slow=36,SNR=5.7						
KTK1	Kautokeino	5.33	328	eP	Pn	09 00 16.6	-2.8
KTK1				AML	AML	09 01 44.3	
	comp=Z,4.1nm,0.5s						
HFS	Hagfors	9.29	249	Pn	P	09 01 09.3	-5.5
	baz=67,slow=12						
HFS				Lg		09 03 37.2	
	baz=49,slow=28						
HFS	Hagfors	9.29	249	Pn	P	09 01 07.5	-7.4
	comp=Z,0.0nm,0.3s,baz=54,slow=12,SNR=3.1						
NB2	NORSAR Subarra	9.80	257	Pn	P	09 01 17.4	-4.3
NB2				Lg		09 03 59.1	
NOA	NORSAR Array B	9.80	257	Pn	P	09 01 14.5	-7.2
	comp=Z,0.1nm,0.3s,baz=52,slow=23,SNR=2.4						

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*MAN **17** 09:12:46.5, 12.45N×125.14E, h26^{km}, mb4.6, ML3.5, MS3.4*

ISC 17 09:12:46.4±0.9**, 12.48N**±0.05×**125.21E**±0.07**, h33^{km}, n17, $\sigma 0^{s}.76$**/26**, mb4.4**/2**, 1D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	0.53	273	eP	P	09 12 57.4	+0.1
CNP				eS	S	09 13 04.3	-0.9
BESP	Borongan	0.91	166	eP	P	09 13 03.0	+0.3
BESP				eS	S	09 13 15.3	+0.6
PLP	Palo	1.33	190	i P	P	09 13 08.0	-0.8
PLP				eS	S	09 13 25.9	+0.4
PVCP	Virac	1.51	317	eP	P	09 13 11.8	+0.4
PVCP				eS	S	09 13 34.4	+4.3
MMPH	Masbate	1.55	266	⇓eP	P	09 13 13.0	+1.0
MMPH				i S	S	09 13 31.8	+0.7
MSLP	Maasin	2.36	188	eP	P	09 13 24.5	+0.9
MSLP				eS	S	09 13 56.6	+5.0
AUQP	San Andres	2.61	289	eP	P	09 13 38.3	+11
SCPH	Surigao	2.70	174	eP	P	09 13 26.4	-2.0
SCPH				eS	S	09 13 44.0	-16
OTRP	Odiongan	3.12	268	eP	P	09 13 33.7	-0.6
BOAC	Boac	3.42	287	eP	P	09 13 38.5	-0.2
BALP	Baler	4.78	313	eP	P	09 13 58.9	+0.8
BALP				eS	S	09 14 43.5	-10
PAGZ	Pagadian	4.95	201	eP	P	09 14 00.1	-0.2
LUBP	Lubang	4.99	285	eP	P	09 14 00.4	-0.6
CAUP	Cauayan	5.51	324	eP	P	09 14 07.9	-0.3
CAUP				eS	S	09 15 04.6	-6.7
KAKA	Kakadu	26.04	164	eP	P	09 18 12.5	-6.2
	10nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	30.39	179	eP	P	09 18 52.6	-5.3
	2.7nm,0.4s,mb4.3						
WB2	Warramunga Arr	33.45	164	eP	P	09 19 18.6	-6.1

ISC 17 09:52:49.9±2.1**, 23.6N**±0.2×**93.3E**±0.1**, h100^{km}, n8, $\sigma 0^{s}.82$**/9**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	Imphal	1.33	27	ex	P	09 53 14.0	-0.5
SHL	Shillong	2.33	328	ePN	P	09 53 29.5	+2.0
SHL				eSN	S	09 53 55.0	-0.5
GUN	Gumba	7.92	304	eP	P	09 54 44.6	+0.6
	23nm,0.2s						
PKI	Pulchoki	8.12	301	eP	P	09 54 46.9	+0.2
	18nm,0.4s						
KKN	Kakani	8.33	302	eP	P	09 54 49.8	+0.3
	18nm,0.2s						
DMN	Daman	8.38	300	eP	P	09 54 49.8	-0.4
	7.0nm,0.2s						
GKN	Gorkha	8.93	301	eP	P	09 54 57.4	-0.2
	44nm,0.3s						
KOLN	Koldanda	9.66	297	eP	P	09 55 06.3	-1.2
	16nm,0.2s						

IDC 17 10:08:18.1±2.6**, 5.98S×103.41E, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.6**/16**, mbtmp3.6**/5**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx3.2**/24**, Error ellipse: s-maj=123.5km s-min=22.2km az=53.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	29.75	156	LR	LR	10 25 46.6	
	comp=Z,142nm,19.2s,baz=30,slow=35						
WRA	Warramunga Arr	33.10	118	P	P	10 14 55.6	-2.5
	0.4nm,0.9s,baz=306,slow=8.8,SNR=3.3						
STKA	Stephens Creek	43.99	131	P	P	10 16 26.8	-2.3
	1.9nm,0.6s,baz=305,slow=8.7,SNR=4.8						
SONM	Songino Array	53.64	2	P	P	10 17 42.6	-1.0
	0.9nm,0.7s,baz=176,slow=9.0,SNR=5.2						
MKAR	Makanchi Array	55.78	343	P	P	10 17 57.0	-2.2
	0.3nm,0.6s,baz=166,slow=5.9,SNR=2.7						
BVAR	Borovoye Array	65.08	339	P	P	10 18 58.9	-3.8
	0.3nm,0.5s,baz=149,slow=8.4,SNR=2.7						
TXAR	Lajitas Array	145.46	45	PKPbc	PKPbc	10 27 59.7	+0.4
	1.1nm,0.7s,baz=279,slow=1.4,SNR=15						

NNC 17 10:10:37.8±4.3**, 36.67N×71.01E, h114^{km}**±445^{km}**, mpv3.6, 3C-1D, Error ellipse: s-maj=50.7km s-min=39.4km az=1.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.44	357	⇑P	P	10 12 10.3	-1.2
	2.6nm,0.3s,baz=177,slow=13						
KK31				⇑S	S	10 13 21.8	-2.3
	1.9nm,0.3s,baz=187,slow=24						
AAK	Ala-Archa	6.53	23	⇑P	P	10 12 11.4	-1.4
	1.1nm,0.3s						
AAK				⇓S	S	10 13 25.7	-0.7
	5.6nm,0.6s						
AB31	Akbulak array	14.94	331	P	P	10 14 03.0	-1.0
	0.4nm,0.3s,baz=171,slow=11,SNR=7.9						

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*GUC **17** 10:20:27.9±0.8, 27.92S×66.95W, h180^{km}, ML4.9*

*NEIC **17** 10:20:28.7±1.8, 27.92S×66.85W, h155^{km}±48^{km}, mb3.9/2, Error ellipse: s-maj=42.4km s-min=12.7km az=82.0*

ISC 17 10:20:28.7±1.2**, 27.93S**±0.07×**67.0W**±0.2**, h184^{km}**±30^{km}**, n10, $\sigma 0^{s}.64$**/14**, 3C-1D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPCH	Copiapo	3.02	280	⇑iP	P	10 21 18.6	+0.3
CPCH				i S	S	10 21 56.2	-0.3
CPCH				AMP		10 21 57.6	
	comp=E,2μm,0.1s						
VACH	Vallenar	3.37	258	i S	S	10 22 04.0	-0.2
ZON	Zonda	3.88	202	⇑iP	P	10 21 28.0	-1.1
ZON				eS	S	10 22 16.0	+0.2
TLL	Tololo Astrono	4.00	235	⇑iP	P	10 21 31.4	+0.8
TLL				i S	S	10 22 19.8	+1.4
LSCH	La Serena	4.20	241	i S	S	10 22 22.5	-0.5
CMCH	Combarbala	4.74	226	⇓iP	P	10 21 39.3	-0.9
CMCH				i S	S	10 22 35.0	-0.5
MDZ	Mendoza	5.18	197	eP	P	10 21 46.2	+0.3
JACH	Jahuel	5.66	212	i P	P	10 21 52.5	+0.4
LPAZ	La Paz	11.63	355	eP	P	10 23 10.4	+0.3
	comp=E,2.1nm,0.4s						
SAML	Samuel	19.23	12	eP	P	10 24 40.7	-0.2
	comp=E,3.4nm,0.7s						

MEX 17 10:31:54.6±0.6**, 16.98N×99.27W, h23^{km}**±167^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.63	260	i P	Pb	10 32 05.0	-1.9
ACX				i S	Sb	10 32 13.0	-2.3
CAIG	El Cayaco	0.96	274	i P	Pb	10 32 11.0	-1.5
CAIG				i S	Sb	10 32 20.7	-4.0
PPM	Popocatepetl	2.17	16	i P	Pn	10 32 26.9	-3.1
PPM				i S	Sn	10 32 54.0	-2.4

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*IDC **17** 10:58:13.3±1.0, 6.17S×146.91E, mb4.1/5, mb1 4.3/8, mb1mx4.1/15, mbtmp4.2/8, ML3.7/3, MS3.8/1, Ms1 3.8/1, ms1mx2.8/19, Error ellipse: s-maj=37.6km s-min=16.9km az=92.0*

*NEIC **17** 10:58:18.7±0.7, 6.24S×146.82E, h35^{km}, mb4.1/7, Error ellipse: s-maj=15.1km s-min=11.1km az=97.0*

ISC 17 10:58:18.5±3.1**, 6.3S**±0.2×**146.8E**±0.1**, h47^{km}**±24^{km}**, n23, $\sigma 0^{s}.85$**/20**, mb4.1**/8**, MS3.7**/1**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.07	174	Pn	P	10 59 06.3	+0.6
	28nm,0.3s,baz=357,slow=5.5,SNR=100						
PMG				Lg		10 59 55.5	
	36nm,0.3s,baz=165,slow=20,SNR=6.7						
PMG	Port Moresby	3.07	174	ePn	P	10 59 05.8	+0.1
CTA	Charters Tower	13.68	182	eP	P	11 01 32.7	+0.8
	2.3nm,0.4s						
CTA	Charters Tower	13.68	182	Pn	P	11 01 32.2	+0.3
	0.6nm,0.3s,baz=352,slow=15,SNR=6.2						
CTAO	Charters Tower	13.68	182	eP	P	11 01 32.1	+0.2
	2.2nm,0.4s						
KAKA	Kakadu	15.55	245	eP	P	11 01 56.8	+0.6
	12nm,0.5s						
WRAB	Tennant Creek	18.17	221	eP	P	11 02 28.3	-0.8
	8.8nm,0.8s						
WB2	Warramunga Arr	18.17	221	eP	P	11 02 28.5	-0.7
WRA	Warramunga Arr	18.18	221	P	P	11 02 28.1	-1.1
	0.3nm,0.3s,baz=46,slow=12,SNR=35						
WRA				PcP	PcP	11 07 00.8	-0.5
	baz=22,slow=2.3,SNR=2.9						
FITZ	Fitzroy Crossi	23.76	239	eP	P	11 03 28.4	+0.8
	10nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	23.76	239	P	P	11 03 29.1	+1.5
	8.7nm,0.8s,mb4.2,baz=109,slow=5.9,SNR=10						
DZM	Mont Dzumac	24.56	132	LR	LR	11 10 22.7	
	comp=Z,239nm,20.8s,MS3.7,baz=18,slow=30						
STKA	Stephens Creek	25.88	190	eP	P	11 03 48.3	+0.5
	1.8nm,0.6s,mb3.8						
STKA	Stephens Creek	25.88	190	P	P	11 03 47.9	+0.1
	2.6nm,0.8s,mb3.8,baz=23,slow=9.7,SNR=6.4						
CMAR	Chiang Mai Arr	53.27	299	P	P	11 07 41.0	+5.9
	2.0nm,0.8s,mb4.1,baz=119,slow=5.9,SNR=6.5						
VNDA	Vanda	71.59	177	P	P	11 09 36.9	+0.5
	1.0nm,0.5s,mb4.0,baz=328,slow=6.9,SNR=15						
VNDA	Vanda	71.59	177	eP	P	11 09 36.6	+0.3
	0.8nm,0.5s,mb3.9						
SBA	Scott Base	72.24	176	P	P	11 09 38.8	-1.4
	0.7nm,0.6s,mb3.8						
QSPA	South Pole Qui	83.64	180	eP	P	11 10 43.7	+1.0
	2.9nm,0.7s,mb4.5						
ILAR	Eielson Array	85.85	23	P	P	11 10 52.9	-1.1
	1.3nm,0.7s,mb4.2,baz=263,slow=5.3,SNR=12						
BVAR	Borovoye Array	86.95	324	P	P	11 11 00.3	+0.7
	0.4nm,0.4s,mb4.0,baz=100,slow=9.0,SNR=3.6						
SIV	San Ignacio	144.56	129	PKP	PKPdf	11 17 54.1	+3.4
	2.7nm,0.8s,baz=247,slow=4.2,SNR=15						
DBIC	Dimbokro	151.88	272	PKPbc	PKPdf	11 18 12.1	+9.4
	2.6nm,0.8s,baz=84,slow=10,SNR=3.6						

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*NEIC **17** 11:18:39.0±0.7, 7.01S×130.72E, h10^{km}, mb4.1/1, Error ellipse: s-maj=30.4km s-min=9.0km az=77.0*

*IDC **17** 11:18:38.4±2.1, 7.02S×130.30E, mb3.8/2, mb1 4.1/4, mb1mx3.8/13, mbtmp3.9/4, ML3.6/2, Error ellipse: s-maj=87.4km s-min=29.9km az=85.0*

ISC 17 11:18:49.9±2.0**, 7.51S**±0.08×**130.6E**±0.1**, h148^{km}**±22^{km}**, n10, $\sigma 0^{s}.89$**/16**, mb3.7**/3**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	5.48	161	eP	P	11 20 10.1	-0.4
	14nm,0.6s						
KAKA				eS	S	11 21 16.3	+3.2
FITZ	Fitzroy Crossi	11.57	204	eP	P	11 21 31.4	-0.1
	2.7nm,0.4s						
FITZ				eS	S	11 23 36.8	-1.4
FITZ	Fitzroy Crossi	11.57	204	Pn	P	11 21 30.9	-0.5
	0.6nm,0.3s,baz=26,slow=9.3,SNR=15						
FITZ				Sn	S	11 23 39.9	+1.7
	1.0nm,0.3s,baz=196,slow=20,SNR=6.0						
WRAB	Tennant Creek	12.88	164	ePn	P	11 21 47.5	-0.9
	1.9nm,0.5s						
WRAB				eSn	S	11 24 08.4	-0.5
WRA	Warramunga Arr	12.88	164	Pn	P	11 21 48.9	+0.4
	0.2nm,0.3s,baz=344,slow=14,SNR=19						
WRA				Sn	S	11 24 08.5	-0.5
	0.2nm,0.3s,baz=342,slow=22,SNR=6.3						
WB2	Warramunga Arr	12.89	164	eP	P	11 21 48.7	+0.1
WB2				eS	S	11 24 09.5	+0.5
ULN	Ulaanbaatar	58.92	342	eP	P	11 28 35.8	0.0
	1.1nm,0.6s,mb3.9						
SONM	Songino Array	59.11	341	P	P	11 28 36.3	-0.8
	0.2nm,0.3s,mb3.4,baz=158,slow=7.8,SNR=3.8						
MKAR	Makanchi Array	68.96	327	P	P	11 29 42.4	+1.3
	0.9nm,0.4s,mb3.8,baz=129,slow=7.8,SNR=7.9						
MKAR	Makanchi Array	68.96	327	P	P	11 29 42.4	+1.3

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*ISK **17** 11:36:07.7, 34.87N×27.55E, h56^{km}, MD3.5*

*CSEM **17** 11:36:14.5±0.3, 35.43N×27.77E, h20^{km}, MD3.6, Error ellipse: s-maj=8.1km s-min=3.1km az=158.0*

*ATH **17** 11:36:16.5, 35.85N×27.33E, h7^{km}±5^{km}, MD3.6/6*

*NEIC **17** 11:36:16.5, 35.84N×27.34E, h7^{km}, MD3.6(ATH), After ATH.*

ISC 17 11:36:12.5±0.8**, 35.34N**±0.06×**27.72E**±0.06**, h7^{km}, n27, $\sigma 0^{s}.95$**/32**, 1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.50	294	⇑iPB	Pb	11 36 23.0	-0.2
ARG	Arkhangelos	0.93	20	ePB	Pb	11 36 30.7	+0.2
DALT	Dalyan (Mudla)	1.60	27	i PN	Pn	11 36 41.6	+0.2
DALT				i SN	Sn	11 37 06.3	+3.8
FETY	Fethiye	1.70	40	i PN	Pn	11 36 42.6	-0.1
NPS	Neapolis	1.73	268	ePG	Pg	11 36 45.0	-2.0
XRY	Khrisi	1.73	255	ePG	Pg	11 36 47.0	0.0
XRY	Khrisi	1.73	255	ePn	Pn	11 36 45.7	+2.5
BDRM	Kayabasi	1.73	353	i P	Pn	11 36 42.9	-0.4
BDRM				i S	Sn	11 37 06.6	+0.7
BODT	Bodrum	1.75	349	PN	Pn	11 36 43.3	-0.2
YER	Yerkesik	1.84	14	ePN	Pn	11 36 45.3	+0.5
MLSB	Milas	1.95	1	ePN	Pn	11 36 46.2	-0.1
SANT	Santorini	2.11	300	ePn	Pn	11 36 49.0	+0.4
SANT	Santorini	2.11	300	ePn	Pn	11 36 49.0	+0.4
ELL	Elmali	2.26	51	ePN	Pn	11 36 50.5	-0.3
AYDN	Tasoluk	2.32	3	i P	Pn	11 36 52.0	+0.4
AYDN				i S	Sn	11 37 19.4	-1.2
GOLH	Golhisar	2.40	38	i P	Pn	11 36 53.3	+0.4
GOLH				i S	Sn	11 37 23.4	+0.6
APE	Apeiranthos	2.47	315	ePN	Pn	11 36 50.4	-3.4
DNZL	Cakiroluk	2.57	24	i P	Pn	11 36 58.7	+3.4
DNZL				i S	Sn	11 37 34.5	+7.3
DENT	Denizli	2.63	23	ePN	Pn	11 36 56.3	+0.3
VAM	Vamos	2.88	272	ePN	Pn	11 37 01.1	+1.4
GVD	Gavdhos	3.02	261	ePn	Pn	11 37 01.8	0.0
GVD	Gavdhos	3.02	261	ePn	Pn	11 37 01.8	+0.1
IZM	Izmir	3.07	353	ePN	Pn	11 37 02.3	-0.1
VLI	Veliai	4.12	291	ePN	Pn	11 37 16.5	-0.7
KONT	Konya--Tatoy	4.54	54	ePN	Pn	11 37 22.1	-1.2
KIZT	Kizilcal	4.85	42	ePN	Pn	11 37 26.8	-0.8
IKL	Isikli	4.93	78	ePN	Pn	11 37 24.7	-4.0

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*IDC **17** 11:40:43.4±1.7, 7.34S×106.92E, mb4.0/6, mb1 4.2/6, mb1mx3.9/15, mbtmp4.0/6, Error ellipse: s-maj=98.7km s-min=23.3km az=48.0*

*NEIC **17** 11:40:57.2±8.0, 7.07S×107.30E, h107^{km}±67^{km}, mb4.1/1, Error ellipse: s-maj=86.8km s-min=12.0km az=48.0*

NEIC Felt [III] at Ciwidey and [II] at Kamojang.

ISC 17 11:40:55.0±1.6**, 6.9S**±0.4×**107.5E**±0.4**, h100^{km}, n10, $\sigma 0^{s}.57$**/8**, mb3.9**/7**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	26.58	342	P	P	11 46 26.6	+0.7
	1.0nm,0.7s,mb3.5,baz=176,slow=8.3,SNR=8.3						
WRA	Warramunga Arr	29.11	119	P	P	11 46 48.7	0.0
	0.8nm,0.5s,mb3.6,baz=290,slow=11,SNR=22						
WRA				PcP	PcP	11 49 54.8	+0.5
	0.2nm,0.4s,baz=313,slow=1.9,SNR=4.8						
WRAB	Tennant Creek	29.12	119	eP	P	11 46 48.9	+0.1
	1.9nm,0.4s,mb4.1						
WB2	Warramunga Arr	29.13	119	eP	P	11 46 48.8	-0.1
SONM	Songino Array	54.53	359	PcP	PcP	11 51 18.4	+1.5
	1.9nm,0.5s,baz=178,slow=3.3,SNR=18						
MKAR	Makanchi Array	57.97	340	P	P	11 50 38.4	-1.1
	0.9nm,0.5s,mb4.0,baz=156,slow=6.7,SNR=7.4						
BVAR	Borovoye Array	67.48	337	P	P	11 51 41.7	-0.5
	1.4nm,0.5s,mb4.1,baz=143,slow=10,SNR=7.5						
BRTR	Keskin Array B	82.11	312	P	P	11 53 06.3	+0.1
	0.7nm,0.6s,mb3.7,baz=134,slow=7.1,SNR=4.3						
ARCES	ARCESS Array B	93.62	340	P	P	11 54 01.7	+0.9
	0.9nm,0.6s,mb4.3,baz=90,slow=4.9,SNR=3.9						
TXAR	Lajitas Array	143.18	49	PKP	PKPdf	12 00 20.0	+2.0
	0.4nm,0.5s,baz=280,slow=1.9,SNR=6.2						

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*NEIC **17** 11:41:41.8, 17.63N×94.08W, h86^{km}, MD4.0(MEX), After MEX.*

MEX 17 11:41:41.8±0.9**, 17.63N×94.08W, h86^{km}**±17^{km}**, MD4.0, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUIG	Tuzandepetl	0.52	321	i P	P	11 41 55.1	-1.4
TUIG				i S	S	11 42 05.5	-1.9
CMIG	Matias Romero	0.94	235	i P	P	11 41 59.2	-1.5
CMIG				i S	S	11 42 12.3	-2.7
SCX	San Cristobal	1.64	123	i P	P	11 42 08.0	-1.7
SCX				i S	S	11 42 29.5	-0.8
CCIG	Comitan	2.29	126	eP	P	11 42 15.4	-3.1
CCIG				i S	S	11 42 44.6	-1.1
OXX	Oaxaca	2.58	258	eP	P	11 42 21.0	-1.6
OXX				i S	S	11 42 54.0	+1.0
HUIG	Huatulco	2.69	227	i P	P	11 42 23.0	-1.0
HUIG				i S	S	11 42 54.1	-1.5

NNC 17 11:54:17.1±7.6**, 36.62N×70.40E, h111^{km}**±62^{km}**, mpv3.4, 2C-2D, Error ellipse: s-maj=102.8km s-min=27.5km az=142.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.47	1	⇑P	P	11 55 49.9	-1.4
	0.7nm,0.3s,baz=181,slow=13,SNR=21						
KK31				⇑S	S	11 57 01.2	-3.0
	1.3nm,0.4s,baz=189,slow=24,SNR=5.1						
AAK	Ala-Archa	6.78	26	⇓P	P	11 55 52.8	-2.8
	1.9nm,0.5s						
AAK				⇓S	S	11 57 10.7	-1.1
	4.4nm,0.5s						
AB31	Akbulak array	14.75	332	P	P	11 57 40.0	-1.0
	1.7nm,0.7s,baz=142,slow=13,SNR=15						

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*NEIC **17** 11:54:21.8, 37.34S×176.49E, h265^{km}, MG3.8(WEL), After WEL.*

WEL 17 11:54:21.8±0.2**, 37.30S×176.48E, h263^{km}**±2^{km}**, ML3.9**/15**, 3C, Error ellipse: s-maj=4.4km s-min=3.6km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	1.08	153	P	P	11 54 58.5	-0.3
URZ	Urewera	1.08	153	⇑PN	P	11 54 58.5	-0.3
URZ				SN	S	11 55 27.0	-0.7
MWZ	Matawai	1.32	141	P	P	11 55 00.3	-0.1
MWZ				eS	S	11 55 30.4	-0.1
MWZ	Matawai	1.32	141	PN	P	11 55 00.3	-0.1
MWZ				SN	S	11 55 30.4	-0.1
PUZ	Puketiti	1.60	119	eP	P	11 55 02.1	-0.3
PUZ				S	S	11 55 33.4	-0.6
PUZ	Puketiti	1.60	119	PN	P	11 55 02.1	-0.3
PUZ				eSN	S	11 55 32.8	-1.2
BKZ	Black Stump Fm	1.86	180	P	P	11 55 04.3	-0.1
BKZ	Black Stump Fm	1.86	180	PN	P	11 55 04.3	-0.2
BKZ				SN	S	11 55 37.4	-0.2
KNZ	Kokohu	1.96	152	eP	P	11 55 05.0	-0.2
KNZ	Kokohu	1.96	152	PN	P	11 55 05.0	-0.3
NGZ	Ngauruhoe	1.99	200	PN	P	11 55 06.0	+0.5
CNZ	Chateau	2.03	201	P	P	11 55 06.1	+0.2
CNZ	Chateau	2.03	201	PN	P	11 55 06.1	+0.3
TUVZ	Tukino	2.07	198	P	P	11 55 06.4	+0.2
TUVZ	Tukino	2.07	198	PN	P	11 55 06.4	+0.2
FWVZ	Far West T-bar	2.08	200	eP	P	11 55 06.6	+0.2
FWVZ	Far West T-bar	2.08	200	PN	P	11 55 06.6	+0.3
WNVZ	Wahianoa	2.14	199	P	P	11 55 06.9	0.0
WNVZ	Wahianoa	2.14	199	⇑PN	P	11 55 06.9	0.0
MOVZ	Moawhango	2.18	195	P	P	11 55 06.7	-0.6
MOVZ	Moawhango	2.18	195	PN	P	11 55 06.7	-0.6
MTVZ	Mangateitei	2.23	201	PN	P	11 55 07.6	-0.1
PWZ	Pawanui	2.74	174	eP	P	11 55 11.7	-1.1
PWZ	Pawanui	2.74	174	PN	P	11 55 11.7	-1.0
PWZ				SN	S	11 55 52.3	-0.1
TSZ	Takapari Road	2.78	188	PN	P	11 55 11.9	-1.3
BFZ	Birch Farm	3.38	183	P	P	11 55 17.8	-1.9
BFZ	Birch Farm	3.38	183	PN	P	11 55 17.8	-1.9
MRZ	Mangatainoka R	3.43	192	P	P	11 55 17.9	-2.3
MRZ	Mangatainoka R	3.43	192	⇑PN	P	11 55 17.9	-2.3
MRZ				SN	S	11 56 03.0	-2.6
KIW	Kapiti Island	3.76	198	P	P	11 55 21.5	-2.4
CAW	Cannon Point	3.96	196	P	P	11 55 23.5	-2.7
MRW	Makara Radio	4.16	199	P	P	11 55 25.8	-2.7
SNZO	South Karori	4.23	198	P	P	11 55 26.5	-2.9
TCW	Tory Channel	4.26	203	P	P	11 55 27.1	-2.7
BHW	Baring Head	4.29	196	P	P	11 55 27.2	-2.8
NNZ	Nelson	4.59	211	P	P	11 55 30.2	-3.4
QRZ	Quartz Range	4.67	220	eP	P	11 55 32.0	-2.6
THZ	Tophouse	5.24	211	eP	P	11 55 38.0	-3.5
KHZ	Kahutara	5.59	203	eP	P	11 55 42.7	-3.0
LTZ	Lake Taylor	6.35	209	eP	P	11 55 51.2	-4.0

CASC 17 11:58:55.6±2.7**, 13.99N×91.43W, h28^{km}**±71^{km}**, MD4.2, 6C-5D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.96	79	⇓eP	Pn	11 59 06.2	-7.1
IXG				eS	Sb	11 59 27.4	+1.4
RBDL	Robledal	1.70	86	⇓eP	Pn	11 59 24.7	+0.9
RBDL				eS	Sn	11 59 45.7	+1.0
RTR	El Retiro	1.73	93	⇓eP	Pn	11 59 24.5	+0.1
RTR				eS	Sn	11 59 45.0	-0.7
SBLS	San Blas	1.76	95	⇓eP	Pn	11 59 24.3	-0.4
SNJE	San Jose	1.77	94	⇓eP	Pn	11 59 24.7	-0.2
SNJE				eS	Sn	11 59 46.0	-0.8
MRL	Marmol	2.00	57	⇑eP	Pn	11 59 24.3	-3.8

MTO2	Montecristo 2	2.05	78	eP	Pn	11 59 28.7	-0.1
BOQS	Boqueron	2.10	97	⇑eP	Pn	11 59 29.1	-0.5
BOQS				eS	Sn	11 59 54.7	-0.4
LFU	La Fuente	2.26	96	⇑eP	Pn	11 59 31.6	-0.4
LFRS	El Faro	2.33	99	⇑eP	Pn	11 59 32.3	-0.6
LFRS				eS	Sn	12 00 01.8	+1.0
LBRS	Las Brisas	2.33	96	⇑eP	Pn	11 59 33.6	+0.7
LCBS	La Ceiba	2.40	98	⇑eP	Pn	11 59 33.6	-0.3
LCBS				eS	Sn	12 00 04.2	+1.5
CNCH	Conchagua	3.57	101	eP	Pn	11 59 48.9	-1.6

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*NEIC **17** 12:21:19.3, 36.84N×23.23E, h5^{km}, ML3.3(ATH), After ATH.*

*ATH **17** 12:21:20.0, 36.86N×23.14E, h13^{km}±1^{km}, MD3.5/10, ML3.3*

*CSEM **17** 12:21:20.0±0.1, 36.82N×23.21E, h2^{km}, ML3.3, Error ellipse: s-maj=1.6km s-min=0.9km az=105.0*

*HLW **17** 12:21:26.0, 36.60N×27.30E, h33^{km}, Mb3.3*

ISC 17 12:21:17.7±0.5**, 36.81N**±0.03×**23.27E**±0.07**, h5^{km}, n23, σ1^{s}28**/25**, 2C-3D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLI	Veliai	0.28	252	⇓iPG	Pg	12 21 24.5	+1.0
KYTH	Kithira	0.56	200	ePB	Pb	12 21 31.3	+1.7
NAIG	Nisos Aigina	0.97	10	ePN	Pn	12 21 38.2	+0.4
NSAL	Nisos Salamina	1.11	8	ePB	Pb	12 21 40.2	+1.2
ITM	Ithomi	1.14	290	⇓iPB	Pb	12 21 39.4	-0.2
MGER	Gerania Oros	1.18	360	ePB	Pb	12 21 41.5	+1.3
ATH	Athens Observa	1.22	17	ePN	Pn	12 21 42.1	+0.7
PTL	Penteli	1.33	21	ePN	Pn	12 21 43.7	+0.7
MPAR	Parnis Oros	1.39	15	ePb	Pb	12 21 42.7	-1.2
VAM	Vamos	1.58	151	ePg	Pg	12 21 48.7	-0.7
APE	Apeiranthos	1.83	81	ePN	Pn	12 21 55.0	+4.9
GVD	Gavdhos	2.07	161	ePn	Pn	12 21 54.5	+0.9
GVD				ePg	Pg	12 21 59.4	+0.3
GVD	Gavdhos	2.07	161	ePn	Pn	12 21 54.5	+0.9
GVD	Gavdhos	2.07	161	ePg	Pg	12 21 59.4	+0.3
EVR	Evrytania	2.41	332	ePb	Pb	12 21 59.0	-2.2
EVR	Evrytania	2.41	332	ePB	Pb	12 21 59.5	-1.7
VLS	Valsamata	2.54	303	ePg	Pg	12 22 06.1	-2.3
XRY	Khrisi	2.75	134	ePg	Pg	12 22 10.2	-2.5
KARP	Karpathos	3.39	111	ePN	Pn	12 22 16.5	+4.1
SLUM		5.54	163	⇑P	Pn	12 22 44.3	+1.4
SLUM				S	Sn	12 23 41.3	-6.4
SWA2		7.76	166	⇓P	Pn	12 23 12.9	-1.2
SWA1		7.79	164	⇑P	Pn	12 23 13.2	-1.3
SWA1		7.79	164	P	Pn	12 23 13.2	-1.4

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*HEL **17** 12:23:34.9±0.3, 60.12N×25.27E, ML1.6, ML2.1(UPP), Explosion*

*IDC **17** 12:23:35.9±1.6, 60.29N×25.19E, mb1 2.9/3, mb1mx2.8/20, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=17.0km s-min=6.4km az=146.0*

ISC 17 12:23:32.7±0.9**, 60.09N**±0.06×**25.23E**±0.08**, n13, σ1^{s}34**/24**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVF	Pernaja	0.55	35	eP	Pg	12 23 43.6	-0.2
PVF				eS	Sg	12 23 49.6	-1.6
VJF	Virojoki	1.24	68	eP	Pb	12 23 56.5	-0.2
VJF				eS	Sb	12 24 12.9	-0.2
FIA0	FINESS Array S	1.42	17	eP	Pb	12 23 59.2	-0.5
FIA0				eSN	Sn	12 24 21.1	+1.7
FINES	FINESS Array B	1.42	17	Pg	Pg	12 23 58.8	-2.2
	2.1nm,0.3s,baz=207,slow=16,SNR=94						
FINES				Pn	Pn	12 24 01.2	+1.4
	2.1nm,0.3s,baz=204,slow=12,SNR=92						
FINES				Lg		12 24 15.5	
	1.2nm,0.3s,baz=204,slow=27,SNR=14						
FINES				Sn	Sn	12 24 20.5	+1.0
	5.1nm,0.3s,baz=198,slow=22,SNR=15						
FINES				Rg		12 24 23.6	
	23nm,0.8s,baz=192,slow=33,SNR=47						
KEF	Keuruu	2.09	355	eP	Pn	12 24 11.1	+1.6
KEF				eS	Sn	12 24 37.5	+1.0
KEF				MSG		12 24 39.0	
	comp=Z,3.7nm,0.1s						
KAF	Kangasniemi	2.09	14	eP	Pn	12 24 10.8	+1.3
KAF				eS	Sn	12 24 37.6	+1.0
KAF				MSG		12 24 40.2	
	comp=Z,2.5nm,0.1s						
AAL	Aland	2.62	274	eP	Pn	12 24 18.7	+1.7
SUF	Sumiainen	2.67	9	eSB	Sb	12 24 53.4	-1.3
GRAU	Graesoe	3.35	277	eP	Pn	12 24 26.9	-0.5
GRAU				eS	Sn	12 25 07.7	-0.8
NRTU	Norrtaelje	3.35	266	eP	Pn	12 24 28.8	+1.4
HFS	Hagfors	5.77	275	Pn	Pn	12 25 01.2	-0.5
	comp=Z,0.0nm,0.3s,baz=120,slow=12,SNR=4.0						
HFS				Sn	Sn	12 26 06.1	-3.5
	comp=Z,0.1nm,0.3s,baz=79,slow=28,SNR=6.4						
HFS				Lg		12 26 32.2	
	comp=Z,0.1nm,0.3s,baz=85,slow=33,SNR=4.2						
NOA	NORSAR Array B	6.97	284	Pn	Pn	12 25 15.8	-2.9
	comp=Z,0.1nm,0.3s,baz=129,slow=13,SNR=2.0						
NOA				Sn	Sn	12 26 32.4	-7.2
	comp=Z,0.1nm,0.3s,baz=141,slow=25,SNR=2.2						
ARCES	ARCESS Array B	9.48	1	Pn	P	12 25 49.8	-3.8
	comp=Z,0.1nm,0.3s,baz=181,slow=12,SNR=5.7						
ARCES				Sn	Sn	12 27 30.0	-12
	comp=Z,0.1nm,0.3s,baz=171,slow=24,SNR=2.7						

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*NEIC **17** 12:27:49.5±1.1, 33.04N×137.77E, h319^{km}±10^{km}, mb3.7/3, Error ellipse: s-maj=19.0km s-min=15.1km az=135.0*

*JMA **17** 12:27:50.3±0.4, 33.27N×137.82E, h346^{km}±5^{km}, M3.0*

*IDC **17** 12:27:50.5±0.8, 33.16N×137.70E, h328^{km}±10^{km}, mb2.9/5, mb1 3.1/6, mb1mx2.9/21, mbtmp3.6/6, Error ellipse: s-maj=22.9km s-min=13.3km az=70.0*

ISC 17 12:27:49.9±0.6**, 33.20N**±0.07×**137.85E**±0.07**, h340^{km}**±4^{km}**, n26, σ0^{s}93**/34**, mb3.3**/8**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIE	Ise	1.52	322	P	P	12 28 37.9	+0.3
JIE				eS	S	12 29 14.6	-0.2
JHJ	Hachijo jima 2	1.63	92	P	P	12 28 36.6	-1.6
	11nm,0.3s,baz=194,slow=19,SNR=3.4						
JHJ				S	S	12 29 17.3	+1.3
	5.4nm,0.3s,baz=234,slow=19,SNR=4.0						
JHJ2	Mitsune	1.66	93	P	P	12 28 40.1	+1.7
JWZ	Kozaga	1.81	281	P	P	12 28 39.3	-0.1
JIM2	Oshima 3	2.01	41	P	P	12 28 41.0	+0.3
JWY	Kouya	2.13	299	P	P	12 28 42.4	+0.7
JOD2	Odawara 2	2.30	26	P	P	12 28 43.1	+0.1
JOD2				eS	S	12 29 25.1	+0.6
JYN	Shimob	2.36	14	P	P	12 28 44.2	+0.7
JGM	Miyama	2.66	340	P	P	12 28 46.6	+0.6
JAI	Aioi	2.90	283	P	P	12 28 48.1	+0.1
JWT	Wachi	2.90	316	P	P	12 28 48.3	+0.3
JWT				eS	S	12 29 33.2	-0.3
JRY	Ryogami san	2.94	17	P	P	12 28 49.0	+0.6
BSO1	Boso 1	2.98	60	P	P	12 28 46.7	-2.1
BSO1				eS	S	12 29 31.6	-3.2
MJAR	Matsushiro Arr	3.35	5	P	P	12 28 51.2	-1.1
	0.6nm,0.3s,baz=182,slow=10,SNR=21						
MJAR				S	S	12 29 40.8	-0.3
	0.5nm,0.3s,baz=194,slow=18,SNR=6.8						
MJAR	Matsushiro Arr	3.35	5	P	P	12 28 51.2	-1.1
MJAR				S	S	12 29 40.8	-0.3
MAJO	Matsushiro	3.35	5	ePn	P	12 28 52.0	-0.3
MAT	Matsushiro	3.35	5	P	P	12 28 52.4	+0.1
MAT				eS	S	12 29 39.6	-1.5
JTO	Tosashimizu	4.25	267	P	P	12 29 01.7	+0.3
ENH	Enshi	24.26	271	eP	P	12 32 38.1	-0.7
	7.2nm,0.4s,mb4.3						
ULN	Ulaanbaatar	27.39	311	P	P	12 33 07.7	+0.8
	1.1nm,0.5s,mb3.3						
SONM	Songino Array	27.79	311	P	P	12 33 11.0	+0.6
	1.6nm,0.7s,mb3.4,baz=110,slow=7.1,SNR=9.7						
CMAR	Chiang Mai Arr	37.73	257	P	P	12 34 34.5	-1.0
	0.6nm,0.4s,mb3.2,baz=37,slow=7.4,SNR=4.8						
BILL	Bilibino	38.53	17	eP	P	12 34 43.4	+1.9
	1.5nm,0.5s,mb3.5						
MKAR	Makanchi Array	43.80	305	P	P	12 35 23.8	-0.6
	0.3nm,0.3s,mb2.8,baz=89,slow=10,SNR=3.6						
WRA	Warramunga Arr	52.95	184	P	P	12 36 33.2	-1.1
	0.4nm,0.6s,mb2.9,baz=359,slow=7.7,SNR=6.3						
ILAR	Eielson Array	54.28	31	P	P	12 36 43.8	+0.5
	0.7nm,0.7s,mb3.1,baz=285,slow=5.2,SNR=6.7						

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*IDC **17** 12:53:30.2±1.7, 0.64S×96.13E, mb3.8/6, mb1 3.9/7, mb1mx3.8/17, mbtmp3.8/7, ML3.7/1, Error ellipse: s-maj=69.0km s-min=26.0km az=54.0*

*NEIC **17** 12:53:36.4±1.1, 0.26S×96.61E, h30^{km}, Error ellipse: s-maj=26.6km s-min=21.9km az=54.0*

ISC 17 12:53:34.9±1.3**, 0.2S**±0.2×**96.7E**±0.2**, h30^{km}, n9, σ1^{s}25**/8**, mb3.8**/6**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	6.78	36	ePn	Pn	12 55 14.3	-0.8
CMAR	Chiang Mai Arr	18.71	7	P	P	12 57 56.9	+3.3
	0.1nm,0.3s,baz=198,slow=11,SNR=8.4						
WRA	Warramunga Arr	41.75	120	P	P	13 01 23.6	+0.2
	0.6nm,1.0s,mb3.2,baz=299,slow=9.3,SNR=3.6						
MKAR	Makanchi Array	48.51	347	P	P	13 02 17.3	+0.3
	2.0nm,0.6s,mb4.3,baz=159,slow=8.1,SNR=14						
SONM	Songino Array	48.62	9	P	P	13 02 18.6	+0.7
	1.0nm,0.6s,mb4.0,baz=194,slow=8.2,SNR=6.9						
SONM				PcP	PcP	13 03 42.4	-1.1
	0.2nm,0.5s,baz=180,slow=4.3,SNR=2.3						
BVAR	Borovoye Array	57.43	341	P	P	13 03 20.6	-2.6
	0.3nm,0.5s,mb3.6,baz=135,slow=8.2,SNR=2.7						
FINES	FINESS Array B	81.02	333	P	P	13 05 47.2	-0.9
	0.3nm,0.5s,mb3.5,baz=108,slow=6.0,SNR=4.8						
ARCES	ARCESS Array B	83.70	340	P	P	13 06 03.1	+1.3
	1.1nm,0.7s,mb4.1,baz=101,slow=4.6,SNR=2.8						
TXAR	Lajitas Array	145.16	32	PKPbc	PKPbc	13 13 11.8	+1.2
	0.3nm,0.3s,baz=263,slow=1.0,SNR=4.4						

IDC 17 13:03:45.3±2.0**, 1.60S**×**99.85E, mb3.6**/5**, mb1 3.7**/6**, mb1mx3.6**/16**, mbtmp3.6**/6**, ML3.5**/1**, Error ellipse: s-maj=83.6km s-min=25.8km az=55.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	19.95	357	P	P	13 08 19.2	-2.8
	0.1nm,0.3s,baz=186,slow=8.2,SNR=2.6						
WRA	Warramunga Arr	38.33	121	P	P	13 11 08.1	-1.7
	0.3nm,0.4s,baz=304,slow=9.1,SNR=7.5						
SONM	Songino Array	49.57	6	P	P	13 12 37.7	-2.4
	0.3nm,0.6s,baz=180,slow=7.2,SNR=3.0						
MKAR	Makanchi Array	50.61	344	P	P	13 12 47.2	-0.9
	0.8nm,0.5s,baz=141,slow=7.8,SNR=6.4						
BVAR	Borovoye Array	59.76	340	P	P	13 13 51.2	-3.2
	0.3nm,0.4s,baz=127,slow=7.4,SNR=3.6						
FINES	FINESS Array B	83.69	332	P	P	13 16 15.6	-1.5
	0.3nm,0.5s,baz=117,slow=3.1,SNR=3.8						
TXAR	Lajitas Array	144.48	37	PKP	PKPdf	13 23 24.4	-1.8
	0.3nm,0.4s,SNR=4.8						

CASC 17 13:14:37.6±4.7**, 15.10N**×**89.26W, MD4.3, ML4.0, 4C-13D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRL	Marmol	0.42	266	⇑eP	Pg	13 14 36.7	-9.3
MRL				eS	Sg	13 14 43.0	-8.5
MRL				AML	AML	13 14 43.6	
	comp=E,8μm,0.3s						
MTO2	Montecristo 2	0.70	188	⇓eP	Pg	13 14 51.4	-0.2
MTO2				eS	Sg	13 15 02.9	+2.0
RBDL	Robledal	1.06	203	⇑iP	Pb	13 14 58.0	-0.5
RBDL				eS	Sb	13 15 14.3	+1.5
RTR	El Retiro	1.25	197	⇓eP	Pb	13 15 01.1	-0.6
SNJE	San Jose	1.27	195	⇓eP	Pb	13 15 01.5	-0.6
SBLS	San Blas	1.30	196	⇓eP	Pb	13 15 01.7	-0.9
LFU	La Fuente	1.35	174	⇓eP	Pb	13 15 02.8	-0.6
LFU				eS	Sb	13 15 22.4	+1.2
BOQS	Boqueron	1.35	181	⇓iP	Pb	13 15 02.8	-0.7
BOQS				eS	Sb	13 15 22.5	+1.2
LBRS	Las Brisas	1.37	171	⇑eP	Pb	13 15 03.0	-0.7
LBRS				eS	Sb	13 15 23.4	+1.7
SNET	Serv Nac Est T	1.40	179	eP	Pb	13 15 02.8	-1.6
SNET				⇓eP		13 15 03.7	
SNET				eS	Sb	13 15 24.4	+1.6
SNET				e		13 15 26.5	
	comp=Z,3μm,0.5s						
LCBS	La Ceiba	1.46	169	⇓eP	Pn	13 15 04.2	-1.1
LCBS				eS	Sb	13 15 25.1	+0.7
IXG	Ixpaco	1.48	232	⇑eP	Pn	13 14 57.2	-8.3
IXG				eS	Sb	13 15 17.2	-7.6
LFRS	El Faro	1.48	172	⇓eP	Pn	13 15 04.6	-0.9
LFRS				eS	Sb	13 15 27.0	+2.1
CAHU	Cacacuatique	1.67	142	⇓eP	Pn	13 15 07.5	-0.7
CAHU				eS	Sb	13 15 31.5	+1.1
TP2	Tecpan 2	1.73	260	⇓eP	Pn	13 14 59.2	-10
TP2				eS	Sb	13 15 32.3	+0.1
TP2				AML	AML	13 15 34.6	
	comp=E,3μm,0.7s						
VSM	San Miguel	1.92	150	⇓eP	Pn	13 15 11.6	-0.2
VSM				eS	Sn	13 15 39.1	+2.2
BLLM	Bellamira	1.92	149	eP	Pn	13 15 12.7	+0.9
BLLM				eS	Sn	13 15 38.7	+1.6
CNCH	Conchagua	2.28	142	⇓eP	Pn	13 15 17.5	+0.5
CNCH				eS	Sn	13 15 47.8	+1.6

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*IDC **17** 13:14:22.8±1.8, 5.84S×130.84E, mb4.0/3, mb1 4.4/5, mb1mx4.0/12, mbtmp4.3/5, ML4.4/2, MS3.0/1, Ms1 3.2/1, ms1mx2.8/16, Error ellipse: s-maj=77.4km s-min=23.2km az=67.0*

*NEIC **17** 13:14:30.5±3.1, 6.03S×130.60E, h59^{km}±31^{km}, mb3.9/1, Error ellipse: s-maj=29.6km s-min=16.3km az=224.0*

ISC 17 13:14:40.5±1.9**, 6.62S**±0.09×**130.2E**±0.1**, h178^{km}**±21^{km}**, n13, σ1^{s}07**/20**, mb3.8**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	6.44	160	eP	P	13 16 14.8	+0.8
	83nm,0.5s						
KAKA				eS	S	13 17 26.2	-0.7
FITZ	Fitzroy Crossi	12.26	201	eP	P	13 17 31.7	+1.5
	9.5nm,0.3s						
FITZ				eS	S	13 19 43.0	-0.6
FITZ	Fitzroy Crossi	12.26	201	Pn	P	13 17 30.6	+0.5
	4.9nm,0.3s,baz=19,slow=12,SNR=28						
FITZ				Sn	S	13 19 41.6	-2.0
	2.7nm,0.3s,baz=194,slow=23,SNR=3.5						
WRAB	Tennant Creek	13.83	164	ePn	P	13 17 50.3	+0.1
	14nm,0.6s						
WRAB				eSn	S	13 20 20.3	+0.5
WRA	Warramunga Arr	13.84	164	Pn	P	13 17 49.3	-1.0
	0.8nm,0.3s,baz=352,slow=13,SNR=64						
WRA				Sn	S	13 20 16.1	-3.8
	1.6nm,0.3s,baz=340,slow=22,SNR=7.6						
WRA	Warramunga Arr	13.84	164	Pn	P	13 17 49.3	-1.0
WRA				Sn	S	13 20 16.1	-3.8
WB2	Warramunga Arr	13.84	164	eP	P	13 17 49.7	-0.6
WB2				eS	S	13 20 20.3	+0.3
MBWA	Marble Bar	17.67	214	eP	P	13 18 40.2	+3.3
STKA	Stephens Creek	27.29	159	P	P	13 20 13.6	+3.1
	4.6nm,1.2s,mb4.0,baz=345,slow=9.4,SNR=5.2						
STKA	Stephens Creek	27.29	159	P	P	13 20 13.6	+3.1
CMAR	Chiang Mai Arr	39.66	309	P	P	13 21 56.8	0.0
	0.9nm,0.6s,mb3.6,baz=136,slow=7.8,SNR=7.0						
CMAR				LR	LR	13 38 19.7	
	comp=Z,20nm,21.3s,baz=212,slow=36						
MKAR	Makanchi Array	68.03	327	P	P	13 25 22.1	-0.5
	1.4nm,0.5s,mb4.0,baz=126,slow=8.0,SNR=10						
ZRNK	Zerenda	78.56	327	P	P	13 26 23.0	-0.6
	1.0nm,0.6s,mb3.6						

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*NEIC **17** 13:45:03.1, 39.11S×175.03E, h218^{km}, MG3.7(WEL), After WEL.*

WEL 17 13:45:03.1±0.2**, 39.07S**×**175.06E, h219^{km}**±1^{km}**, ML3.8**/4**, 6C-2D, Error ellipse: s-maj=3.5km s-min=2.1km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNZ	Chateau	0.40	109	P	P	13 45 31.9	-0.5
CNZ	Chateau	0.40	109	⇑PN	P	13 45 31.9	-0.4
FWVZ	Far West T-bar	0.43	116	P	P	13 45 32.1	-0.3
FWVZ				S	S	13 45 54.1	-1.0
FWVZ	Far West T-bar	0.43	116	PN	P	13 45 32.1	-0.4
FWVZ				SN	S	13 45 54.1	-1.0
NGZ	Ngauruhoe	0.44	105	P	P	13 45 32.1	-0.3
NGZ	Ngauruhoe	0.44	105	PN	P	13 45 31.9	-0.6
MTVZ	Mangateitei	0.45	135	PN	P	13 45 32.0	-0.5
MTVZ				SN	S	13 45 54.3	-1.0
MTVZ				SN	S	13 45 54.4	-0.9
WNVZ	Wahianoa	0.49	122	PN	P	13 45 32.5	-0.1
TUVZ	Tukino	0.51	114	P	P	13 45 32.4	-0.3
TUVZ	Tukino	0.51	114	PN	P	13 45 32.4	-0.2
MOVZ	Moawhango	0.64	123	P	P	13 45 32.6	-0.5
MOVZ				S	S	13 45 54.6	-1.9
MOVZ	Moawhango	0.64	123	PN	P	13 45 32.6	-0.5
MOVZ				SN	S	13 45 54.6	-1.8
WAZ	Wanganui	0.69	185	PN	P	13 45 33.0	-0.3
WAZ				SN	S	13 45 56.1	-0.8
BKZ	Black Stump Fm	1.12	96	P	P	13 45 35.3	-0.5
BKZ				S	S	13 45 59.6	-1.6
BKZ	Black Stump Fm	1.12	96	PN	P	13 45 35.3	-0.5
BKZ				SN	S	13 45 59.8	-1.4
TSZ	Takapari Road	1.21	145	P	P	13 45 36.5	0.0
TSZ				S	S	13 46 01.8	-0.6
TSZ	Takapari Road	1.21	145	PN	P	13 45 36.5	0.0
TSZ				SN	S	13 46 01.9	-0.5
MRZ	Mangatainoka R	1.64	166	eP	P	13 45 39.2	-0.9
MRZ				S	S	13 46 07.2	-1.4
MRZ	Mangatainoka R	1.64	166	PN	P	13 45 39.2	-0.9
MRZ				SN	S	13 46 07.2	-1.4
PWZ	Pawanui	1.69	125	eP	P	13 45 40.4	-0.1
PWZ	Pawanui	1.69	125	PN	P	13 45 40.4	-0.1
PWZ				SN	S	13 46 09.3	-0.1
URZ	Urewera	1.80	64	P	P	13 45 39.4	-2.0
URZ	Urewera	1.80	64	⇓PN	P	13 45 39.4	-2.1
KIW	Kapiti Island	1.80	184	P	P	13 45 40.2	-1.2
KIW	Kapiti Island	1.80	184	⇑PN	P	13 45 40.2	-1.2
KIW				SN	S	13 46 08.4	-2.6
BFZ	Birch Farm	1.85	151	PN	P	13 45 41.5	-0.5
BFZ				SN	S	13 46 10.8	-1.2
DUWZ	D’Urville Isla	1.94	206	PN	P	13 45 41.1	-1.7
KNZ	Kokohu	2.04	90	P	P	13 45 43.2	-0.5
KNZ	Kokohu	2.04	90	PN	P	13 45 43.1	-0.6
CAW	Cannon Point	2.04	180	P	P	13 45 42.5	-1.3
CAW	Cannon Point	2.04	180	PN	P	13 45 42.5	-1.3
CAW				SN	S	13 46 13.0	-2.2
MWZ	Matawai	2.06	70	P	P	13 45 42.4	-1.6
MWZ	Matawai	2.06	70	PN	P	13 45 42.3	-1.7
MWZ				SN	S	13 46 12.2	-3.4
MTW	Mount Morrison	2.12	171	P	P	13 45 43.2	-1.4
MTW	Mount Morrison	2.12	171	PN	P	13 45 43.1	-1.4
MRW	Makara Radio	2.18	187	P	P	13 45 43.6	-1.6
MRW	Makara Radio	2.18	187	⇑PN	P	13 45 43.6	-1.6
MRW				SN	S	13 46 14.9	-2.8
TCW	Tory Channel	2.23	195	P	P	13 45 44.1	-1.6
TCW	Tory Channel	2.23	195	⇑PN	P	13 45 44.1	-1.6
TCW				SN	S	13 46 15.3	-3.3
SNZO	South Karori	2.26	187	P	P	13 45 44.2	-1.8
SNZO	South Karori	2.26	187	⇑PN	P	13 45 44.2	-1.8
PAWZ	Paruwai Farm	2.33	173	PN	P	13 45 45.3	-1.5
BHW	Baring Head	2.34	183	P	P	13 45 45.1	-1.8
BHW	Baring Head	2.34	183	PN	P	13 45 45.2	-1.8
MSWZ	Moikau Station	2.35	177	P	P	13 45 45.4	-1.6
MSWZ	Moikau Station	2.35	177	PN	P	13 45 45.4	-1.6
NNZ	Nelson	2.51	210	P	P	13 45 46.0	-2.7
NNZ	Nelson	2.51	210	⇑PN	P	13 45 46.0	-2.7
NNZ				SN	S	13 46 19.9	-4.1
TUWZ	Tuamarina	2.51	200	PN	P	13 45 46.7	-2.0
QRZ	Quartz Range	2.62	227	P	P	13 45 46.3	-3.6
QRZ	Quartz Range	2.62	227	⇓PN	P	13 45 46.3	-3.6
BSWZ	Blackbirch Sta	2.80	198	P	P	13 45 49.8	-2.0
THZ	Tophouse	3.16	211	eP	P	13 45 52.9	-3.1
KHZ	Kahutara	3.54	199	P	P	13 45 57.8	-2.8
DSZ	Denniston Nort	3.65	222	eP	P	13 45 57.6	-4.3
LTZ	Lake Taylor	4.27	209	P	P	13 46 05.5	-4.0
MQZ	McQueen’s Vall	4.98	201	eP	P	13 46 13.4	-4.9

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*CSEM **17** 14:06:40.7±1.1, 38.65N×28.56W, ML1.6, Error ellipse: s-maj=39.9km s-min=19.9km az=157.0, After PDA*

*PDA **17** 14:06:40.7±0.9, 38.65N×28.56W, MD2.7, ML1.6, Error ellipse: s-maj=4.2km s-min=3.4km az=25.0*

SVSA 17 14:06:40.7±0.9**, 38.65N**×**28.56W, MD2.7, ML1.6, Error ellipse: s-maj=4.2km s-min=3.4km az=25.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	Caldeira	0.13	240	i P	Pg	14 06 43.2	-0.1
CALA				eS	Sg	14 06 45.6	+0.6
HOR	Horta	0.13	205	eP	Pg	14 06 43.0	-0.3
HOR				eS	Sg	14 06 45.2	+0.1
PICO	Pico	0.18	144	i P	Pg	14 06 44.1	-0.2
PICO				eS	Sg	14 06 47.3	+0.6
PMAN	Manadas	0.37	92	eP	Pg	14 06 47.6	-0.5
PMAN				eS	Sg	14 06 53.0	0.0
	32nm,0.1s						

NDI 17 14:25:30.1±2.4**, 17.19N**×**73.78E, h5^{km}, MD3.4, ML3.1, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAD	Karad	0.41	74	eP	Pg	14 25 38.1	-0.2
KAD				eS	Sg	14 25 44.1	+0.4
KAD				AML	AML	14 25 44.2	
	comp=E,2μm,0.1s						
KAD				AML	AML	14 25 44.5	
	comp=N,2μm,0.2s						
POO	Poona	1.33	3	eP	Pb	14 25 54.8	-0.4
POO				eS	Sb	14 26 12.9	+0.5
BOM	Bombay	1.93	332	eP	Pn	14 26 04.0	+0.1
BOM				eS	Sn	14 26 29.3	+0.5
LATR	Latur	2.92	65	eP	Pn	14 26 16.8	-1.3
LATR				eS	Sn	14 26 52.0	-1.9
BHPL	Bhopal	6.92	29	ex	x	14 27 07.2	
BHPL				eS	Sn	14 28 26.2	-8.5
VIS	Vishakhapatnam	9.13	85	i x	x	14 30 08.2	
AJM	Ajmer	9.28	5	eS	Sn	14 29 23.2	-10
AJM				AML	AML	14 29 23.5	
	comp=E,3.7nm,0.2s						
AJM				AML	AML	14 29 24.4	
	comp=N,3.0nm,0.3s						
BLSP	Bilaspur	9.28	57	ex	x	14 30 15.0	
NDI	New Delhi	11.87	15	ex	x	14 30 48.5	
NDI				ex	x	14 31 39.0	
SHL	Shillong	18.79	61	ex	x	14 34 00.0	

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*ATH **17** 14:32:18.8, 34.79N×26.11E, h13^{km}±1^{km}, MD3.6/5*

*NEIC **17** 14:32:18.8, 34.79N×26.10E, h14^{km}, MD3.6(ATH), After ATH.*

*CSEM **17** 14:32:20.3±0.4, 34.89N×26.09E, h15^{km}, MD3.6, Error ellipse: s-maj=11.1km s-min=4.6km az=167.0*

ISC 17 14:32:19.2±1.6**, 34.8N**±0.1×**26.08E**±0.08**, h15^{km}, n10, σ0^{s}67**/12**, 1C, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	Khrisi	0.33	284	⇑iPB	Pb	14 32 26.0	-0.2
XRY				eSB	Sb	14 32 30.9	0.0
NPS	Neapolis	0.61	321	ePB	Pb	14 32 30.3	-0.6
NPS				eSB	Sb	14 32 39.0	0.0
KARP	Karpathos	1.16	49	ePB	Pb	14 32 40.5	+0.1
GVD	Gavdhos	1.64	272	ePg	Pg	14 32 51.2	-0.9
GVD	Gavdhos	1.64	272	ePg	Pg	14 32 51.2	-0.9
SANT	Santorini	1.65	342	ePn	Pn	14 32 47.3	-0.6
SANT	Santorini	1.65	342	ePn	Pn	14 32 47.3	-0.6
VAM	Vamos	1.66	292	ePB	Pb	14 32 50.2	+1.2
KYTH	Kithira	2.89	302	ePg	Pg	14 33 11.0	-6.0
VLI	Veliai	3.20	308	ePN	Pn	14 33 11.0	+1.0

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*NEIC **17** 14:53:07.6±0.8, 23.89S×66.77W, h186^{km}±9^{km}, mb4.0/3, Error ellipse: s-maj=13.7km s-min=7.0km az=100.0*

*IDC **17** 14:53:07.4±1.8, 23.91S×66.71W, h184^{km}±18^{km}, mb3.6/4, mb1 3.8/8, mb1mx3.6/18, mbtmp4.1/8, Error ellipse: s-maj=23.3km s-min=14.0km az=89.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 17 14:53:06.9±1.0**, 23.92S**±0.06×**66.7W**±0.1**, h196^{km}**±13^{km}**,**

n18,σ0^{s}70/17,mb3.6/4,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	7.70	350	P	P	14 54 58.6	+1.6
	0.6nm,0.3s,baz=166,slow=11,SNR=12						
LPAZ				S	S	14 56 22.9	-0.2
	0.2nm,0.3s,baz=74,slow=22,SNR=3.2						
LPAZ	La Paz	7.70	350	*e*Pn	P	14 54 57.7	+0.7
	2.7nm,0.6s						
CFAA	Coronel Fontan	7.78	189	P	P	14 54 57.3	-0.8
	0.2nm,0.3s,baz=360,slow=11,SNR=11						
SIV	San Ignacio	9.51	35	P	P	14 55 20.1	-0.7
	4.2nm,0.3s,baz=246,slow=13,SNR=122						
SIV				S	S	14 56 54.2	-11
	baz=222,slow=15,SNR=3.9						
TRQA	Tornquist	14.67	165	Pn	P	14 56 27.2	+0.9
SAML	Samuel	15.27	13	*e*P	P	14 56 33.1	-0.7
	18nm,0.9s						
PLCA	Paso Flores	17.07	190	P	P	14 56 55.5	+0.1
	0.2nm,0.3s,baz=327,slow=14,SNR=4.5						
PLCA	Paso Flores	17.07	190	*e*P	P	14 56 55.4	0.0
	3.8nm,0.7s						
BDFB	Brasilia	19.43	68	P	P	14 57 20.7	+0.4
	2.4nm,0.3s,baz=245,slow=11,SNR=43						
BAO	Brasilia Array	19.46	68	P	P	14 57 21.5	+0.9
SNAA	Sanae	59.35	161	P	P	15 02 49.6	-0.6
	0.5nm,0.6s,mb3.3,baz=288,slow=7.3,SNR=15						
TXAR	Lajitas Array	63.75	324	P	P	15 03 20.1	+0.1
	0.2nm,0.3s,mb3.2,baz=149,slow=7.3,SNR=4.1						
DBIC	Dimbokro	67.55	71	P	P	15 03 43.6	-1.0
	3.2nm,0.7s,mb4.1,baz=202,slow=7.6,SNR=4.6						
YKA	Yellowknife Ar	94.12	340	P	P	15 06 04.2	+0.5
	0.8nm,0.5s,mb4.0,baz=139,slow=4.4,SNR=6.1						
YKA	Yellowknife Ar	94.12	340	P	P	15 06 04.2	+0.5
WRA	Warramunga Arr	131.81	207	PKP	PKPdf	15 11 59.2	+1.8
	0.5nm,0.3s,baz=153,slow=2.0,SNR=31						
MKAR	Makanchi Array	146.31	40	PKPbc	PKPbc	15 12 25.7	+1.6
	0.7nm,0.5s,baz=328,slow=2.6,SNR=6.4						
MKAR	Makanchi Array	146.31	40	PKPbc	PKPbc	15 12 25.7	+1.6

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*HEL **17** 15:32:18.6±0.1,67.08N×20.93E,ML1.5,ML1.9(UPP), Explosion*

*IDC **17** 15:32:18.6±1.0,67.10N×21.24E,mb1 2.7/4, mb1mx2.7/21,mbtmp2.7/4,ML2.6/4,Error ellipse: s-maj=18.6km s-min=7.3km az=108.0*

ISC 17 15:32:17.4±0.4,67.05N±0.03×20.9E±0.1,n23,σ1^{s}20/27, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.14	300	*i* P	Pg	15 32 21.1	+0.9
MASU	Masugnsbyn	0.60	46	*i* P	Pg	15 32 28.7	-0.6
ERTU	Ertsjaerv	0.72	133	*i* P	Pg	15 32 31.4	-0.3
PAJU	Pajala	0.87	91	*i* P	Pg	15 32 33.8	-1.0
KUA	Kurravaara	0.93	347	*e*P	Pg	15 32 34.7	-1.3
SALU	Saltoluokta	0.98	291	*e*P	Pb	15 32 36.5	-0.5
LANU	Lannavaara	1.09	22	*e*P	Pb	15 32 37.2	-1.6
LILU	Lilltraesk	1.82	194	*e*P	Pn	15 32 51.3	+1.1
KIF	Kilpisjarvi	1.96	359	*e*P	Pn	15 32 53.6	+1.4
KIF				*e*S	Sn	15 33 20.4	+2.4
KTK1	Kautokeino	2.16	23	*e*P	Pn	15 32 56.0	+1.0
SGF	Sodankyl	2.23	77	*e*P	Pn	15 32 56.8	+0.7
SGF				*e*S	Sn	15 33 27.7	+3.0
SGF				MSG		15 33 29.5	
	comp=Z,2.7nm,0.1s						
BURU	Burvik	2.48	175	*e*P	Pn	15 33 01.1	+1.3
SVAU	Svanoeiden	2.62	193	*e*P	Pn	15 33 02.6	+0.9
OUL	Oulu	2.84	132	*e*P	Pn	15 33 06.1	+1.3
ARCES	ARCESS Array B	3.03	32	Pn	Pn	15 33 06.8	-0.7
	comp=Z,0.3nm,0.3s,baz=211,slow=14,SNR=70						
ARCES				Sn	Sn	15 33 44.0	-1.0
	comp=Z,0.3nm,0.3s,baz=216,slow=23,SNR=4.3						
ARCES				Lg		15 33 48.7	
	comp=Z,0.4nm,0.3s,baz=208,slow=27,SNR=7.7						
UMAU	Umeaa	3.18	182	*e*P	Pn	15 33 10.3	+0.7
BREU	Bredtraesk	3.31	198	*e*P	Pn	15 33 11.9	+0.4
MSF	Maaselka	3.46	105	*e*P	Pn	15 33 13.8	+0.1
KEV	Kevo	3.54	37	*e*P	Pn	15 33 14.1	-0.6
KEV				MSG		15 34 09.5	
	comp=Z,0.5nm,0.1s						
KJN	Kajaani	4.11	133	*e*P	Pn	15 33 23.2	+0.4
FINES	FINESS Array B	6.06	156	Pn	Pn	15 33 50.0	-0.4
	comp=Z,0.2nm,0.3s,baz=346,slow=13,SNR=5.5						
FINES				Sn	Sn	15 34 58.8	-2.8
	comp=Z,0.2nm,0.3s,baz=348,slow=26,SNR=4.5						
FINES				Lg		15 35 27.8	
	comp=Z,0.1nm,0.3s,baz=351,slow=27,SNR=2.8						
NOA	NORSAR Array B	7.37	220	Pn	Pn	15 34 06.7	-2.1
	comp=Z,0.1nm,0.3s,baz=336,slow=18,SNR=2.1						
HFS	Hagfors	7.64	208	Pn	Pn	15 34 10.6	-2.0
	comp=Z,0.1nm,0.3s,baz=27,slow=14,SNR=3.5						

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*CSEM **17** 15:44:34.7±0.2,37.88N×25.48W,ML2.5,After PDA*

*PDA **17** 15:44:34.7±0.7,37.88N×25.48W,MD2.4,ML2.5,Error ellipse: s-maj=5.8km s-min=2.9km az=140.0*

SVSA 17 15:44:34.7±0.7,37.88N×25.48W,MD2.4,ML2.5,Error ellipse: s-maj=5.8km s-min=2.9km az=140.0,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMAT	Coroa da Mata	0.07	176	*i* P	Pg	15 44 37.0	+0.9
PMAT				*e*S	Sg	15 44 38.6	+1.6
PMAT	Coroa da Mata	0.07	176	*e*S	Sg	15 44 38.6	+1.6
PVER	Pico Vermelho	0.09	199	*i* P	Pg	15 44 38.2	+1.7
PVER				*e*S	Sg	15 44 40.7	+2.9
PVER	Pico Vermelho	0.09	199	*e*S	Sg	15 44 40.7	+2.9
MESC	Monte Escuro	0.09	165	*e*P	Pg	15 44 37.7	+1.1
MESC				*e*S	Sg	15 44 40.1	+2.3
LFA	Lagoa do Fogo	0.11	182	*i* P	Pg	15 44 38.2	+1.3
CML	Cha da Macela	0.12	206	*i* P	Pg	15 44 39.1	+1.9
CML				*e*S	Sg	15 44 41.9	+3.0
PFAD	Fenais da Ajud	0.13	110	*e*P	Pg	15 44 39.4	+2.1
PFAD				*e*S	Sg	15 44 42.4	+3.4
PCNG	Congro	0.13	151	*e*P	Pg	15 44 38.7	+1.3
PCNG				*e*S	Sg	15 44 41.4	+2.3
	613nm,0.2s						
PCNG	Congro	0.13	151	*e*P	Pg	15 44 38.7	+1.3
PCNG				*e*S	Sg	15 44 41.4	+2.3
	613nm,0.2s						
VIF	Vila Franca	0.14	168	*e*P	Pg	15 44 38.9	+1.4
VIF				*e*S	Sg	15 44 41.8	+2.4
	642nm,0.2s						
VIF	Vila Franca	0.14	168	*e*P	Pg	15 44 38.9	+1.4
VIF				*e*S	Sg	15 44 41.8	+2.4
	642nm,0.2s						
PRCH	Ribeira Ch	0.16	181	*e*P	Pg	15 44 39.0	+1.2
PRCH				*e*S	Sg	15 44 41.8	+1.9
	1μm,0.2s						
PRCH	Ribeira Ch	0.16	181	*e*P	Pg	15 44 39.0	+1.2
PRCH				*e*S	Sg	15 44 41.8	+1.9
	1μm,0.2s						
FRA1	Furnas	0.17	146	*e*P	Pg	15 44 39.6	+1.5
FRA1				*e*S	Sg	15 44 42.9	+2.5
FAC	Faja de Cima	0.18	231	*e*P	Pg	15 44 41.3	+3.1
MIRA	Miradouro	0.18	122	*e*P	Pg	15 44 40.3	+1.9
MIRA				*e*S	Sg	15 44 43.9	+3.0
PSAN	Santo Antonio	0.20	261	*e*P	Pg	15 44 41.5	+2.8
PDA	Ponta Delgada	0.20	227	*e*P	Pg	15 44 39.5	+0.8
PDA				*i* S	Sg	15 44 43.5	+2.1
PFET	Feteiras	0.26	255	*e*P	Pg	15 44 42.1	+2.3
SET4	Mosteiros	0.26	268	*e*P	Pg	15 44 44.2	+4.4
SET2	Ginetes	0.26	261	*e*P	Pg	15 44 43.6	+3.6

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*NEIC **17** 15:51:31.5,41.23S×172.64E,h219^{km},MG3.8(WEL), After WEL.*

WEL 17 15:51:31.5±0.3,41.24S×172.66E,h219^{km}±2^{km},ML3.8/15, 13C,Error ellipse: s-maj=2.2km s-min=2.2km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRZ	Quartz Range	0.43	346	P	P	15 52 00.2	-0.6
QRZ				S	S	15 52 21.5	-2.1
QRZ	Quartz Range	0.43	346	PN	P	15 52 00.2	-0.6
QRZ				SN	S	15 52 21.5	-2.1
NNZ	Nelson	0.54	88	P	P	15 52 00.8	-0.4
NNZ				S	S	15 52 22.8	-1.4
NNZ	Nelson	0.54	88	⇑PN	P	15 52 00.8	-0.4
NNZ				SN	S	15 52 22.8	-1.4
THZ	Tophouse	0.55	161	P	P	15 52 01.2	0.0
THZ				S	S	15 52 23.1	-1.2
THZ	Tophouse	0.55	161	⇑PN	P	15 52 01.2	0.0
THZ				SN	S	15 52 23.1	-1.2
DSZ	Denniston Nort	0.82	232	*e*P	P	15 52 01.8	-0.6
DSZ	Denniston Nort	0.82	232	PN	P	15 52 01.7	-0.6
TUWZ	Tuamarina	0.98	102	⇑PN	P	15 52 03.2	-0.1
TUWZ				SN	S	15 52 27.3	-0.6
BSWZ	Blackbirch Sta	1.03	118	P	P	15 52 03.5	0.0
BSWZ	Blackbirch Sta	1.03	118	PN	P	15 52 03.5	0.0
DUWZ	D'Urville Isla	1.05	66	PN	P	15 52 03.5	-0.2
DUWZ				SN	S	15 52 28.4	-0.2
TCW	Tory Channel	1.22	89	P	P	15 52 04.7	-0.3
TCW	Tory Channel	1.22	89	⇑PN	P	15 52 04.7	-0.2
TCW				SN	S	15 52 29.5	-1.3
KHZ	Kahutara	1.35	151	*e*P	P	15 52 05.5	-0.5
KHZ	Kahutara	1.35	151	⇑PN	P	15 52 05.5	-0.5
KHZ				SN	S	15 52 31.2	-1.5
MRW	Makara Radio	1.54	90	P	P	15 52 07.0	-0.6
MRW	Makara Radio	1.54	90	⇑PN	P	15 52 07.0	-0.6
MRW				SN	S	15 52 33.0	-2.4
SNZO	South Karori	1.54	93	P	P	15 52 07.0	-0.6
SNZO	South Karori	1.54	93	⇑PN	P	15 52 07.0	-0.6
SNZO				SN	S	15 52 33.7	-1.8
LTZ	Lake Taylor	1.57	191	*e*P	P	15 52 07.2	-0.6
LTZ	Lake Taylor	1.57	191	PN	P	15 52 07.2	-0.7
WEL	Wellington	1.59	92	P	P	15 52 07.5	-0.5
WEL	Wellington	1.59	92	PN	P	15 52 07.4	-0.6
BHW	Baring Head	1.67	96	⇑PN	P	15 52 08.1	-0.6
KIW	Kapiti Island	1.74	78	P	P	15 52 08.8	-0.6
KIW	Kapiti Island	1.74	78	⇑PN	P	15 52 08.8	-0.5
KIW				SN	S	15 52 36.6	-2.0
CAW	Cannon Point	1.82	87	P	P	15 52 09.5	-0.6
CAW	Cannon Point	1.82	87	⇑PN	P	15 52 09.5	-0.6
CAW				SN	S	15 52 37.6	-2.3
MSWZ	Moikau Station	1.96	96	P	P	15 52 10.8	-0.5
MSWZ	Moikau Station	1.96	96	⇑PN	P	15 52 10.8	-0.5
PAWZ	Paruwai Farm	2.09	95	PN	P	15 52 12.1	-0.6
MTW	Mount Morrison	2.14	89	P	P	15 52 12.7	-0.6
MTW	Mount Morrison	2.14	89	⇑PN	P	15 52 12.7	-0.5
MRZ	Mangatainoka R	2.28	76	P	P	15 52 13.9	-0.8
MRZ	Mangatainoka R	2.28	76	⇑PN	P	15 52 13.9	-0.9
MRZ				SN	S	15 52 45.7	-2.4
WAZ	Wanganui	2.31	51	PN	P	15 52 14.3	-0.7
WVZ	Waitaha Valley	2.33	217	*e*P	P	15 52 13.8	-1.4
MQZ	McQueen's Vall	2.46	180	*e*PN	P	15 52 15.2	-1.4
VRZ	Vera Road	2.65	38	P	P	15 52 16.5	-2.2
VRZ	Vera Road	2.65	38	PN	P	15 52 16.5	-2.2
RPZ	Rata Peaks	2.74	205	*e*P	P	15 52 18.4	-1.3
BFZ	Birch Farm	2.77	80	*e*P	P	15 52 19.4	-0.6
TSZ	Takapari Road	2.77	66	P	P	15 52 19.0	-1.0
WNVZ	Wahianoa	2.95	51	P	P	15 52 20.8	-1.2
FWVZ	Far West T-bar	2.97	49	*e*P	P	15 52 20.8	-1.4
FOZ	Fox Glacier	3.20	223	*e*P	P	15 52 21.7	-3.2
BKZ	Black Stump Fm	3.59	56	*e*P	P	15 52 27.4	-2.2
LBZ	Lake Benmore	3.63	209	*e*P	P	15 52 27.6	-2.5
ODZ	Otahua Downs	4.08	201	*e*P	P	15 52 34.0	-1.5
EAZ	Earnscleugh	4.68	210	*e*P	P	15 52 39.6	-3.4

MAN 17 15:52:23.2,10.41N×126.03E,h6^{km},mb4.3,ML3.1,MS2.8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.82	220	*i* P	Pb	15 52 38.8	-0.6
SCPH				*e*S	Sb	15 52 51.9	+1.4
MSLP	Maasin	1.18	257	*e*P	Pb	15 52 45.3	-0.4
MSLP				*e*S	Sb	15 53 02.1	+1.1
BESP	Borongan	1.32	334	*e*P	Pb	15 52 48.1	+0.1
BESP				*e*S	Sb	15 53 04.8	-0.2
BUTP	Butuan	1.48	196	*e*P	Pn	15 52 49.7	-0.9
BUTP				*e*S	Sb	15 53 07.6	-2.3
TBP	Tagbilaran	2.25	252	*e*P	Pn	15 53 01.9	+0.4
TBP				*i* S	Sn	15 53 29.9	+0.1
CNP	Catarman	2.48	328	*e*P	Pn	15 53 03.3	-1.6
CNP				*e*S	Sn	15 53 34.2	-1.6
GUIM	Jordan	3.39	274	*e*P	Pn	15 53 17.0	-0.7
GUIM				*e*S	Sn	15 53 52.0	-6.8
PVCP	Virac	3.66	330	*e*P	Pn	15 53 21.3	-0.4

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*CSEM **17** 16:10:30.6±0.3,37.86N×25.44W,h1^{km},ML2.9,Error ellipse: s-maj=10.9km s-min=3.1km az=173.0,After PDA*

*PDA **17** 16:10:30.6±1.1,37.86N×25.44W,h1^{km}±2^{km},MD2.9, ML2.9,Error ellipse: s-maj=4.0km s-min=2.9km az=61.0*

SVSA 17 16:10:30.6±1.1,37.86N×25.44W,h1^{km}±2^{km},MD2.9, ML2.9,Error ellipse: s-maj=4.0km s-min=2.9km az=61.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMAT	Coroa da Mata	0.05	207	*i* P	Pg	16 10 32.1	+0.6
MESC	Monte Escuro	0.07	181	*i* P	Pg	16 10 32.8	+0.9
MESC				*i* S	Sg	16 10 34.9	+2.1
MESC	Monte Escuro	0.07	181	*i* S	Sg	16 10 34.9	+2.1
PVER	Pico Vermelho	0.08	222	*i* P	Pg	16 10 34.7	+2.5
PVER				*i* S	Sg	16 10 36.6	+3.3
PVER	Pico Vermelho	0.08	222	*i* S	Sg	16 10 36.6	+3.3
LFA	Lagoa do Fogo	0.09	200	*i* P	Pg	16 10 33.3	+0.9
PCNG	Congro	0.10	157	*i* P	Pg	16 10 33.8	+1.2
PCNG				*i* S	Sg	16 10 36.0	+2.1
	3μm,0.2s						
PCNG	Congro	0.10	157	*i* S	Sg	16 10 36.0	+2.1
	3μm,0.2s						
PFAD	Fenais da Ajud	0.10	101	*i* P	Pg	16 10 35.9	+3.3
PFAD				*i* S	Sg	16 10 38.1	+4.2
VIF	Vila Franca	0.11	178	*e*P	Pg	16 10 34.0	+1.1
VIF				*i* S	Sg	16 10 36.6	+2.2
	2μm,0.3s						
VIF	Vila Franca	0.11	178	*e*P	Pg	16 10 34.0	+1.1
VIF				*i* S	Sg	16 10 36.6	+2.2
	2μm,0.3s						
CML	Cha da Macela	0.12	223	*e*P	Pg	16 10 35.6	+2.6
PRCH	Ribeira Ch	0.13	192	*e*P	Pg	16 10 34.1	+0.8
PRCH				*e*S	Sg	16 10 36.7	+1.7
	3μm,0.2s						
PRCH	Ribeira Ch	0.13	192	*e*P	Pg	16 10 34.1	+0.8
PRCH				*e*S	Sg	16 10 36.7	+1.7
	3μm,0.2s						
FRA1	Furnas	0.13	149	*i* P	Pg	16 10 34.7	+1.4
MIRA	Miradouro	0.15	119	*i* P	Pg	16 10 36.9	+3.3
MIRA				*i* S	Sg	16 10 39.8	+4.2
FAC	Faja de Cima	0.18	243	*e*P	Pg	16 10 37.2	+2.9
PDA	Ponta Delgada	0.21	237	*e*P	Pg	16 10 36.0	+1.3
PDA				*e*S	Sg	16 10 39.5	+2.0
PSAN	Santo Antonio	0.22	268	*e*P	Pg	16 10 38.0	+2.9
PFET	Feteiras	0.28	262	*e*P	Pg	16 10 38.3	+2.2
SET4	Mosteiros	0.28	274	*e*P	Pg	16 10 39.7	+3.5
SET2	Ginetes	0.29	267	*e*P	Pg	16 10 39.0	+2.7
PSMN	Pico do Norte,	0.91	160	*e*P	Pg	16 10 48.8	+0.1
PSMN				*e*S	Sg	16 11 00.1	-0.6
PFAV	Pico das Favas	1.55	304	*e*S	Sb	16 11 16.9	-2.9
PSCM	Serra do Cume	1.56	303	*e*S	Sb	16 11 13.8	-6.5
	37nm,0.3s						
PSCM	Serra do Cume	1.56	303	*e*S	Sb	16 11 13.8	-6.5
	37nm,0.3s						
RIB2	Ribeirinha	1.58	301	*e*S	Sb	16 11 15.5	-5.4
	25nm,0.2s						
PPAD	Pico dos Padre	1.68	301	*e*S	Sb	16 11 18.7	-4.9
	22nm,0.3s						
ASBA	Santa Barbara	1.71	301	*e*S	Sb	16 11 19.5	-5.1
	27nm,0.3s						

IDC 17 16:10:47.9±12.0,15.53S×174.69W,h218^{km}±115^{km}, mb3.5/5,mb1 3.9/5,mb1mx3.5/15,mbtmp4.0/5,Error ellipse: s-maj=132.2km s-min=26.1km az=153.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	48.60	257	P	P	16 19 09.7	-1.9
	1.2nm,0.5s,baz=91,slow=6.9,SNR=23						
NVAR	Mina Array Bea	75.26	43	P	P	16 22 07.3	-1.4
	1.0nm,0.7s,baz=213,slow=5.9,SNR=4.2						
ILAR	Eielson Array	82.82	12	P	P	16 22 46.8	-1.8
	0.4nm,0.4s,baz=218,slow=7.5,SNR=5.8						
PDAR	Pinedale Array	83.19	42	P	P	16 22 50.8	-0.2
	1.3nm,0.8s,baz=225,slow=4.2,SNR=6.9						
CMAR	Chiang Mai Arr	91.47	289	P	P	16 23 31.1	-0.1
	0.5nm,0.7s,baz=131,slow=3.1,SNR=4.2						
ARCES	ARCESS Array B	124.56	352	PKP	PKPdf	16 29 19.5	-1.3
	0.8nm,0.5s,baz=27,slow=2.0,SNR=5.0						
BRTR	Keskin Array B	145.46	320	PKPbc	PKPbc	16 30 00.2	-0.6
	1.4nm,0.6s,baz=84,slow=2.4,SNR=9.8						
GERES	GERESS Array B	146.07	350	PKPbc	PKPbc	16 30 01.4	-0.6
	0.4nm,0.6s,slow=1.3,SNR=9.8						

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*NEIC **17** 16:21:37.4±1.5,8.21N×94.64E,h30^{km},Error ellipse: s-maj=61.8km s-min=11.9km az=214.0*

*IDC **17** 16:21:38.0±9.2,8.48N×93.22E,mb3.9/4,mb1 3.9/5, mb1mx3.6/18,mbtmp3.7/5,ML3.4/1,Error ellipse: s-maj=223.8km s-min=56.9km az=139.0*

ISC 17 16:21:33.1±1.3,7.6N±0.2×94.3E±0.1,h30^{km},n8,σ1^{s}05/8, mb3.7/4,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	6.73	109	*e*Pn	Pn	16 23 13.5	+0.9
CMAR	Chiang Mai Arr	11.73	22	Pn	P	16 24 22.4	+0.8
	0.1nm,0.3s,baz=211,slow=14,SNR=4.4						
KKM	Kota Kinabalu	21.84	93	P	P	16 26 23.6	-1.6
MKAR	Makanchi Array	40.40	347	P	P	16 29 08.8	-1.4
	0.4nm,0.5s,mb3.4,baz=164,slow=7.1,SNR=5.0						
FINES	FINESS Array B	73.03	332	P	P	16 33 01.6	-0.2
	0.8nm,0.6s,mb3.8,baz=112,slow=7.5,SNR=9.8						
KAF	Kangasniemi	73.11	333	*e*p	P	16 33 01.8	-0.5
ARCES	ARCESS Array B	75.59	340	P	P	16 33 17.0	+0.5
	1.3nm,0.8s,mb3.9,baz=80,slow=5.5,SNR=4.3						
GERES	GERESS Array B	78.13	318	P	P	16 33 32.5	+1.5
	0.8nm,0.6s,mb3.9,baz=90,slow=4.9,SNR=5.5						

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*IDC **17** 16:29:18.2±2.6,7.86S×13.91W,mb4.0/7,mb1 4.1/7, mb1mx3.9/20,mbtmp4.0/7,MS3.7/10,Ms1 3.7/10, ms1mx3.5/21,Error ellipse: s-maj=72.7km s-min=35.0km az=50.0*

*NEIC **17** 16:29:19.1±0.8,7.98S×13.98W,h10^{km},mb4.3/2,Error ellipse: s-maj=23.6km s-min=16.5km az=73.0*

ISC 17 16:29:17.2±1.0,8.0S±0.2×14.0W±0.2,h10^{km},n18, σ0^{s}69/10,mb4.0/9,MS3.7/10,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSUM	Tsumeb	32.59	113	LR	LR	16 45 53.9	
	comp=Z,205nm,19.1s,MS3.8,baz=311,slow=31						
BDFB	Brasilia	34.13	254	LR	LR	16 47 09.4	
	comp=Z,193nm,21.7s,MS3.8,baz=117,slow=31						
BOSA	Boshof	42.26	124	LR	LR	16 52 04.4	
	comp=Z,109nm,18.8s,MS3.8,baz=295,slow=32						
MATP	Matopo	42.87	111	P	P	16 37 18.6	+0.7
	1.1nm,0.6s,mb3.8,baz=282,slow=5.3,SNR=3.6						
MBAR	Mbarara	45.16	83	*e*P	P	16 37 36.6	+0.2
	2.7nm,0.9s,mb4.1						
LPAZ	La Paz	53.45	256	LR	LR	16 59 25.1	
	comp=Z,66nm,18.2s,MS3.7,baz=112,slow=34						
PLCA	Paso Flores	59.72	227	LR	LR	17 02 26.5	
	comp=Z,47nm,19.9s,MS3.6,baz=275,slow=33						
GERES	GERESS Array B	61.58	20	P	P	16 39 36.9	-0.2
	0.8nm,0.7s,mb4.0,baz=207,slow=6.0,SNR=5.5						
GERES				LR	LR	17 06 24.5	
	comp=Z,34nm,19.6s,MS3.5,baz=342,slow=36						
SNAA	Sanae	64.02	176	P	P	16 39 52.2	-0.8
	2.2nm,0.9s,mb4.2						
BRTR	Keskin Array B	64.71	39	P	P	16 39 57.7	-0.3
	0.6nm,0.8s,mb3.7,baz=214,slow=8.9,SNR=3.6						
AKASG	Malin Array Be	69.34	28	P	P	16 40 25.9	-1.1
	0.3nm,0.3s,mb3.7,baz=312,slow=46,SNR=5.2						
NOA	NORSAR Array B	71.59	13	P	P	16 40 40.2	-0.3
	1.2nm,0.9s,mb3.8,baz=203,slow=7.0,SNR=3.5						
NOA				LR	LR	17 12 52.1	
	comp=Z,25nm,21.1s,MS3.5,baz=220,slow=37						
NOA	NORSAR Array B	71.59	13	P	P	16 40 40.2	-0.3
NOA				LR	LR	17 12 52.1	
JTS	JuntasAbangare	72.94	283	LR	LR	17 13 40.2	
	comp=Z,42nm,20.9s,MS3.7,baz=171,slow=36						
FINES	FINESS Array B	75.91	19	P	P	16 41 06.3	+0.7
	1.2nm,1.0s,mb3.8,baz=225,slow=2.7,SNR=4.2						
ULM	Lac du Bonnet	90.91	321	P	P	16 42 23.6	+1.1
	3.0nm,0.8s,mb4.7,baz=162,slow=4.3,SNR=3.0						
VNDA	Vanda	94.61	179	LR	LR	17 21 38.3	
	comp=Z,44nm,19.4s,MS3.9,baz=39,slow=33						
PDAR	Pinedale Array	99.44	312	LR	LR	17 18 21.5	
	comp=Z,46nm,21.8s,MS3.9,baz=245,slow=30						

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*NEIC **17** 16:32:15.4,37.98S×176.35E,h153^{km},MG3.9(WEL), After WEL.*

WEL 17 16:32:15.2±0.2,37.99S×176.38E,h155^{km}±2^{km},ML3.8/19, 2C,Error ellipse: s-maj=1.8km s-min=1.6km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	0.64	116	P	P	16 32 37.9	-0.4
URZ	Urewera	0.64	116	⇑PN	P	16 32 37.9	-0.4
URZ				SN	S	16 32 55.2	-0.8
MWZ	Matawai	0.97	111	P	P	16 32 40.4	0.0
MWZ				S	S	16 32 59.5	-0.3
MWZ	Matawai	0.97	111	PN	P	16 32 40.5	+0.1
MWZ				SN	S	16 32 59.5	-0.2
BKZ	Black Stump Fm	1.18	176	*e*P	P	16 32 42.1	-0.2
BKZ				S	S	16 33 02.7	-0.6
BKZ	Black Stump Fm	1.18	176	⇑PN	P	16 32 42.1	-0.2
BKZ				SN	S	16 33 02.7	-0.5
HIZ	Hauiti	1.31	246	PN	P	16 32 43.4	-0.1
CNZ	Chateau	1.38	208	PN	P	16 32 44.1	-0.1
TUVZ	Tukino	1.40	204	P	P	16 32 44.4	-0.1
TUVZ	Tukino	1.40	204	PN	P	16 32 44.4	-0.1
FWVZ	Far West T-bar	1.42	207	PN	P	16 32 44.7	0.0
KNZ	Kokohu	1.45	136	P	P	16 32 44.9	-0.1
KNZ	Kokohu	1.45	136	PN	P	16 32 44.9	-0.1
KNZ				SN	S	16 33 07.0	-1.0
WNVZ	Wahianoa	1.47	204	PN	P	16 32 45.1	-0.1
PUZ	Puketiti	1.49	94	*e*P	P	16 32 44.9	-0.5
PUZ	Puketiti	1.49	94	PN	P	16 32 44.9	-0.5
PUZ				SN	S	16 33 06.9	-1.8
MOVZ	Moawhango	1.50	199	P	P	16 32 44.7	-0.8
MOVZ	Moawhango	1.50	199	PN	P	16 32 44.7	-0.8
MTVZ	Mangateitei	1.57	207	PN	P	16 32 45.8	-0.4
MTVZ				SN	S	16 33 10.1	0.0
MXZ	Matakaoa Point	1.59	75	P	P	16 32 46.3	-0.1
MXZ	Matakaoa Point	1.59	75	PN	P	16 32 46.3	-0.1
MXZ				SN	S	16 33 09.7	-0.7
PWZ	Pawanui	2.08	170	P	P	16 32 51.0	-0.9
PWZ	Pawanui	2.08	170	PN	P	16 32 51.0	-0.9
PWZ				SN	S	16 33 18.9	-1.2
TSZ	Takapari Road	2.10	189	P	P	16 32 50.8	-1.3
TSZ	Takapari Road	2.10	189	PN	P	16 32 50.8	-1.4
TSZ				SN	S	16 33 18.1	-2.5
BFZ	Birch Farm	2.69	182	*e*P	P	16 32 57.3	-2.3
BFZ	Birch Farm	2.69	182	PN	P	16 32 57.3	-2.3
BFZ				SN	S	16 33 30.1	-3.4
MRZ	Mangatainoka R	2.75	193	P	P	16 32 57.5	-2.7
KIW	Kapiti Island	3.09	201	P	P	16 33 01.3	-3.3
MTW	Mount Morrison	3.24	192	P	P	16 33 03.0	-3.6
CAW	Cannon Point	3.28	198	P	P	16 33 03.5	-3.5
MRW	Makara Radio	3.49	201	P	P	16 33 06.1	-3.7
WEL	Wellington	3.52	200	P	P	16 33 06.6	-3.6
MSWZ	Moikau Station	3.54	194	P	P	16 33 06.4	-4.0
SNZO	South Karori	3.56	201	P	P	16 33 06.7	-4.0
TCW	Tory Channel	3.61	206	P	P	16 33 07.4	-3.9
BHW	Baring Head	3.61	198	P	P	16 33 07.2	-4.1
KHZ	Kahutara	4.93	205	*e*P	P	16 33 23.7	-4.9
LTZ	Lake Taylor	5.73	212	*e*P	P	16 33 33.0	-6.1

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*NEIC **17** 16:36:42.0,32.53S×71.67W,h38^{km},MD4.1(GUC),After GUC.*

GUC 17 16:36:42.0±0.8,32.53S×71.67W,h38^{km}±3^{km},MD4.1, ML3.6,4C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	Papudo	0.20	93	⇓*i*P	P	16 36 49.1	0.0
ROCH	El Roble	0.71	129	⇑*i*P	P	16 36 56.5	+0.9
ROCH				*i* S	S	16 37 06.7	+1.1
JACH	Jahuel	0.93	100	⇑*i*P	P	16 36 59.6	+1.0
JACH				*i* S	S	16 37 12.3	+1.4
LCCH	Las Cruces	0.95	175	*e*P	P	16 36 59.3	+0.3
ILCH	Illapel	0.98	26	⇑*i*P	P	16 37 00.4	+0.9
ILCH				*i* S	S	16 37 13.5	+1.1
ILCH				AMP		16 37 14.0	

	comp=E,2µm,0.2s						
STL	**Santa Lucia**	1.25	137	eP	P	16 37 03.8	+0.5
STL				i S	S	16 37 20.4	+1.1
DSCH	**Colegio Aleman**	1.27	133	eP	P	16 37 04.7	+1.1
DSCH				i S	S	16 37 21.7	+1.9
DSCH				AMP		16 37 23.5	
	comp=E,2µm,0.7s						
TACH	**Talagante**	1.28	151	eP	P	16 37 05.2	+1.5
TACH				i S	S	16 37 21.9	+1.9
CLCH	**Cerro Calan**	1.29	133	⇓iP	P	16 37 05.1	+1.3
CLCH				i S	S	16 37 21.9	+1.6
CLCH				AMP		16 37 29.2	
	comp=E,1µm,0.7s						
FSR	**Penalolen**	1.35	135	eP	P	16 37 05.7	+0.9
FSR				i S	S	16 37 24.2	+2.4
ANTU	**Antumapu**	1.36	140	eP	P	16 37 05.5	+0.6
ANTU				i S	S	16 37 23.8	+1.9
ANTU				AMP		16 37 30.9	
	comp=N,1µm,0.5s						
LNV	**Longovilo**	1.44	171	eP	P	16 37 06.5	+0.4
PCH	**Pirque**	1.46	139	eP	P	16 37 07.5	+1.2
CMCH	**Combarbala**	1.47	23	⇑iP	P	16 37 07.1	+0.7
CMCH				i S	S	16 37 26.3	+1.7
CMCH				AMP		16 37 32.8	
	comp=N,4µm,0.5s						
CHCH	**Chadas Angostu**	1.64	149	eP	P	16 37 10.7	+1.7
CHCH				i S	S	16 37 31.5	+2.4
CACH	**El Canelo**	1.82	151	eP	P	16 37 13.2	+1.7
TLL	**Tololo Astrono**	2.47	18	eP	P	16 37 21.6	+1.0
TLL				i S	S	16 37 51.6	+1.7
TLL				AMP		16 38 05.9	
	comp=E,608nm,0.5s						
ZON	**Zonda**	2.72	70	eP	P	16 37 27.5	+3.1
ZON				eS	S	16 38 07.5	+11

JMA ***17*** *16:38:24.8±0.3, 23.42N×121.70E, h74^{km}, M2.8*

TAP 17 16:38:24.1, 23.41N×121.59E, h38^{km}, ML3.4, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	1.67	51	P	P	16 38 51.5	+0.1
YOJ				eS	S	16 39 11.3	-0.5
HATJ	**Hateruma jima**	2.13	72	P	P	16 38 57.4	-0.6
HATJ				eS	S	16 39 22.1	-1.3
IRIF	**Iriomote-Funau**	2.17	64	P	P	16 38 58.2	-0.3
IRIF				eS	S	16 39 23.8	-0.5
JKRS	**Kuro-shima**	2.36	69	P	P	16 39 01.2	-0.1
JKRS				eS	S	16 39 28.5	-0.9
JIJ	**Ishigaki jima**	2.52	67	P	P	16 39 02.8	-0.8
JIJ				S	S	16 39 31.1	-2.3
JTJ	**Tarama**	3.10	66	P	P	16 39 10.7	-1.1
JTJ				eS	S	16 39 45.6	-2.4

IDC ***17*** *16:43:28.8±3.1, 0.38S×96.65E, mb3.9/3, mb1 3.9/4, mb1mx3.7/16, mbtmp3.8/4, ML3.6/1, MS2.9/1, Ms1 3.1/1, ms1mx2.8/18, Error ellipse: s-maj=111.5km s-min=27.3km az=60.0*

NEIC ***17*** *16:43:33.5±1.3, 0.32S×96.72E, h30^{km}, mb4.3/1, Error ellipse: s-maj=25.9km s-min=17.3km az=61.0*

ISC 17 16:43:32.1±1.8, **0.3S**±0.2×**96.8E**±0.2, **h30^{km}, n8, σ0^{s}66**/7, **mb4.0**/4, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	6.72	35	ePn	Pn	16 45 10.5	-0.9
CMAR	**Chiang Mai Arr**	18.71	6	P	P	16 47 51.8	+1.0
	0.1nm,0.3s,baz=199,slow=9.9,SNR=5.9						
CMAR				LR	LR	16 56 18.4	
	comp=Z,37nm,18.1s,baz=155,slow=41						
KKM	**Kota Kinabalu**	20.38	72	eP	P	16 48 10.0	+0.7
ENH	**Enshi**	32.67	21	eP	P	16 50 03.7	-0.4
	1.7nm,0.4s,mb4.3						
WRA	**Warramunga Arr**	41.64	120	P	P	16 51 19.6	-0.2
	0.8nm,0.7s,mb3.5,baz=303,slow=8.8,SNR=8.6						
MKAR	**Makanchi Array**	48.55	347	P	P	16 52 13.9	-0.7
	1.4nm,0.6s,mb4.2,baz=154,slow=8.6,SNR=22						
SONM	**Songino Array**	48.62	9	P	P	16 52 15.5	+0.4
	1.0nm,0.7s,mb4.0,baz=187,slow=9.4,SNR=8.8						
TXAR	**Lajitas Array**	145.11	32	PKPbc	PKPbc	17 03 08.3	+0.6
	0.4nm,0.5s,baz=270,slow=0.9,SNR=3.6						

NIED ***17*** *16:43:00, 32.00N×130.00E, h5^{km}, Mw3.6 Best double couple: $M_0$2.97×10^{14} NP1:ϕ_s199°, δ76°, λ-153°. NP2: ϕ_s102°, δ63°, λ-15°.*

JMA 17 16:43:33.6, 31.99N×130.00E, h11^{km}±1^{km}, M3.6, 3C-3D Broadband fault plane solution: P waves. NP1:ϕ_s282°, δ60°, λ-29°. NP2:ϕ_s28°, δ65°, λ-146°. Principal axes: T Plg3°, Azm154°; N Plg49°, Azm61°; P Plg41°, Azm247°; **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	0.39	218	⇓P	Pg	16 43 41.4	-0.3
JSJ				S	Sg	16 43 47.0	-0.1
JHD	**Hondo**	0.49	14	⇑P	Pg	16 43 43.3	-0.2
JHD				S	Sg	16 43 50.1	-0.1
JZO	**Okuchi**	0.53	73	⇓P	Pg	16 43 44.1	-0.3
JZO				S	Sg	16 43 51.3	-0.2
JSU	**Suzuyama**	0.62	141	⇑P	Pb	16 43 45.4	-0.5
JSU				S	Sb	16 43 53.7	-0.7
JIU2	**Izumi 2**	0.89	51	⇓P	Pb	16 43 50.1	-0.4
JIU2				S	Sb	16 44 02.1	0.0
JTZ	**Takazaki**	0.93	95	S	Sb	16 44 03.6	+0.2
JTA	**Tamana**	1.07	25	⇑P	Pb	16 43 53.4	-0.3

NEIC ***17*** *17:00:08.6, 17.38N×101.01W, h25^{km}, MD4.2(MEX), After MEX.*

MEX 17 17:00:08.6±0.9, **17.38N×101.01W, h25^{km}**±21^{km}, **MD4.2, 2C-1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	0.49	298	⇑iP	Pb	17 00 16.5	-2.1
ZIIG				i S	Sb	17 00 24.1	-1.3
CAIG	**El Cayaco**	0.78	115	⇑iP	Pb	17 00 20.5	-2.9
CAIG				i S	Sb	17 00 30.2	-3.4
ACX	**Acapulco**	1.16	116	i P	Pn	17 00 27.2	-2.3
ACX				i S	Sb	17 00 41.5	-3.1
PLIG	**Platanillo**	1.75	55	⇓iP	Pn	17 00 35.0	-3.0
PLIG				i S	Sn	17 00 56.0	-3.8
MOIG	**Morelia**	2.29	356	i P	Pn	17 00 43.5	-2.2
MOIG				eS	Sn	17 01 09.8	-3.6
YAIG	**Yautepec**	2.37	51	eP	Pn	17 00 43.1	-3.6
YAIG				eS	Sn	17 01 10.5	-4.7
UNM	**Universidad Na**	2.61	42	eP	Pn	17 00 52.2	+2.0
UNM				eS	Sn	17 01 18.5	-2.9
UNM	**Universidad Na**	2.61	42	eP	Pn	17 00 48.0	-2.2
UNM				eP		17 00 52.2	
UNM				eS	Sn	17 01 17.9	-3.4
UNM				eS	Sn	17 01 18.5	-2.9
PPM	**Popocatepetl**	2.82	53	eP	Pn	17 00 50.1	-3.2
PPM				i S	Sn	17 01 24.5	-2.3
PPM	**Popocatepetl**	2.82	53	eP	Pn	17 00 50.1	-3.2
PPM				i P		17 00 50.1	
PPM				eS	Sn	17 01 23.4	-3.4
PPM				i S	Sn	17 01 24.5	-2.3
PNIG	**Pinotepa**	2.93	109	i P	Pn	17 00 52.6	-2.2
PNIG				i S	Sn	17 01 23.4	-6.1
SFJM	**Santa Fe**	3.64	328	eP	Pn	17 01 02.6	-2.2
SFJM				eS	Sn	17 01 43.5	-4.1
IISM	**Ciudad Serdan**	3.81	65	eP	Pn	17 01 04.5	-2.7
IISM				i S	Sn	17 01 47.8	-3.9
VHO	**Vista Hermosa**	4.10	94	i P	Pn	17 01 14.7	+3.3
VHO				i S	Sn	17 01 53.8	-5.4
OXX	**Oaxaca**	4.11	93	eP	Pn	17 01 07.1	-4.4
OXX				i S	Sn	17 01 54.2	-5.2
CMIG	**Matias Romero**	5.86	92	eS	Sn	17 02 37.8	-5.7

CSEM ***17*** *17:11:23.2±0.1, 38.13N×16.19E, h12^{km}, ML3.5/1, Error ellipse: s-maj=2.7km s-min=1.6km az=144.0, After ROM*

ROM 17 17:11:23.2±0.3, **38.13N×16.19E, h12^{km}, Md2.5**/5, **Ml2.4**/5, **1D, Error ellipse: s-maj=3.4km s-min=2.5km az=144.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOI	**Samo**	0.12	244	⇓iPg	Pg	17 11 27.2	+0.7
SOI				Sg	Sg	17 11 29.7	+1.0
	511nm,0.2s						
GMB	**Gambarie**	0.29	278	Pg	Pg	17 11 29.9	+0.5
GMB				Sg	Sg	17 11 34.9	+1.3
	104nm,0.1s						
SCLL	**Scilla**	0.40	289	Pg	Pg	17 11 31.7	+0.2
SCLL				Sg	Sg	17 11 38.4	+1.4
	98nm,0.3s						
MTTG	**Motta San Giov**	0.41	253	Pg	Pg	17 11 31.8	0.0
	106nm,0.5s						
MSRU	**Castanea**	0.56	284	Pg	Pg	17 11 34.0	-0.5
MSRU				Sg	Sg	17 11 42.8	+0.7
	189nm,0.3s						
GRI	**Girifalco**	0.72	14	Pg	Pg	17 11 37.8	+0.1
	258nm,1.5s						
VPL	**Vulcano Piano**	0.99	285	Pg	Pg	17 11 42.5	-0.5
VPL				Sg	Sg	17 11 58.3	+2.1
	129nm,0.5s						
LLI	**Lipari**	1.03	288	Pg	Pg	17 11 44.6	+0.7
	285nm,0.6s						

NNC ***17*** *17:19:14.5±9.6, 37.71N×71.55E, h242^{km}±116^{km}, mpv3.6, Error ellipse: s-maj=108.3km s-min=65.5km az=2.0*

ISC 17 17:19:14.5±3.8, **37.7N**±0.2×**71.8E**±0.3, **h200^{km}, n13, σ0^{s}94**/15, **1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	4.67	17	P	P	17 20 26.1	+0.8
	SNR=116						
UCH	**Uchtor**	4.99	24	P	P	17 20 29.8	+0.4
	SNR=21						
KZA	**Kyzart**	5.12	30	P	P	17 20 30.6	-0.5
	SNR=21						
EKS2	**Erkin-Say**	5.19	16	P	P	17 20 33.2	+1.2
	SNR=8.8						
AAK	**Ala-Archa**	5.35	22	P	P	17 20 34.8	+0.7
	SNR=7.0						
AAK	**Ala-Archa**	5.35	22	⇓P	P	17 20 34.7	+0.6
	5.3nm,0.4s						
AAK				⇓S	S	17 21 41.0	+5.2
	6.0nm,0.6s						
KK31	**Karatay Array**	5.50	350	P	P	17 20 36.6	+0.6
	1.7nm,0.5s,baz=172,slow=13,SNR=21						
KK31				⇑S	S	17 21 38.8	-0.5
	15nm,0.8s,baz=166,slow=16,SNR=20						
KBK	**Karagaybulak**	5.51	25	P	P	17 20 36.9	+0.7
	SNR=5.7						
ULHL	**Ulahol**	5.68	35	P	P	17 20 37.3	-1.1
	SNR=11						
CHMS	**Chumysh**	5.76	22	P	P	17 20 37.9	-1.4
	SNR=5.3						
TKM2	**Tokmak 2**	5.97	28	P	P	17 20 42.0	-0.1
	SNR=18						
MK31	**Makanchi Array**	11.95	37	P	P	17 21 55.7	-3.7
	0.9nm,0.8s,baz=219,slow=13,SNR=7.2						
ZRNK	**Zerenda**	15.39	354	P	P	17 22 41.6	-0.7

NEIC ***17*** *18:06:49.1, 15.27N×94.61W, h17^{km}, MD4.0(MEX), After MEX.*

MEX 17 18:06:49.1±0.8, **15.27N×94.61W, h17^{km}**±16^{km}, **MD4.0, 1D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	1.53	289	i P	Pn	18 07 12.6	-3.3
HUIG				i S	Sn	18 07 29.6	-5.8
CMIG	**Matias Romero**	1.83	352	⇓iP	Pn	18 07 16.4	-3.8
CMIG				i S	Sn	18 07 38.2	-4.9
SCX	**San Cristobal**	2.39	52	eP	Pn	18 07 23.5	-4.8
SCX				i S	Sn	18 07 53.5	-3.9
CCIG	**Comitan**	2.58	67	i P	Pn	18 07 28.1	-2.9
CCIG				i S	Sn	18 07 57.4	-4.9
OXX	**Oaxaca**	2.71	312	i P	Pn	18 07 33.0	+0.2
OXX				i S	Sn	18 08 05.0	-0.5
TUIG	**Tuzandepetl**	2.75	4	i P	Pn	18 07 29.9	-3.5
TUIG				i S	Sn	18 08 03.2	-3.3

BJI ***17*** *18:08:48.9, 2.68N×93.99E, h31^{km}, mb4.5*

NEIC ***17*** *18:08:50.5±0.7, 2.67N×94.03E, mb4.1/5, Error ellipse: s-maj=16.2km s-min=9.9km az=187.0*

IDC ***17*** *18:08:50.4±0.9, 2.64N×94.09E, h29^{km}±4^{km}, mb3.8/8, mb1 4.0/9, mb1mx3.8/20, mbtmp4.0/9, ML4.5/1, MS2.9/1, Ms1 3.1/1, ms1mx2.7/21, Error ellipse: s-maj=30.5km s-min=18.6km az=42.0*

ISC 17 18:08:48.5±0.8, **2.6N**±0.1×**94.01E**±0.08, **h29^{km}, h29^{km}**±.6^{km}**:pP-P, n20, σ0^{s}99**/20, **mb4.0**/12, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	7.12	68	ePn	Pn	18 10 30.6	-3.0
PALK	**Pallekele**	14.03	290	ePn	P	18 12 07.6	-0.2
KSM	**Kuching**	16.33	94	eP	P	18 12 40.0	+2.4
CM31	**Chiang Mai Arr**	16.44	17	eP	P	18 12 39.2	+0.2
	5.3nm,0.7s						
CM31				epP		18 12 48.9	
CMAR	**Chiang Mai Arr**	16.44	17	Pn	P	18 12 40.0	+1.0
	0.6nm,0.3s,baz=214,slow=12,SNR=36						
CMAR				LR	LR	18 18 46.5	
	comp=Z,38nm,19.2s,baz=205,slow=36						
LSA	**Lhasa**	27.04	355	eP	P	18 14 30.8	+0.3
LSA	**Lhasa**	27.04	355	eP	P	18 14 31.2	+0.7
	7.8nm,0.9s,mb4.2						
LSA				epP	pP	18 14 40.1	+1.2
GTA	**Gaotai**	36.97	7	P	P	18 15 57.0	-0.3
GTA				AP	pP	18 16 05.6	-0.2
GTA				XP	sP	18 16 08.3	-1.2
MKAR	**Makanchi Array**	45.14	349	P	P	18 17 04.8	+0.4
	3.7nm,0.6s,mb4.4,baz=166,slow=9.2,SNR=41						
MKAR				pP	pP	18 17 13.4	+0.4
	3.6nm,0.8s,baz=166,slow=8.6,SNR=18						
WRA	**Warramunga Arr**	45.50	121	P	P	18 17 07.0	-0.6
	1.8nm,1.0s,mb3.9,baz=299,slow=9.2,SNR=7.1						
WRA				pP	pP	18 17 15.8	-0.4
	3.3nm,1.1s,baz=297,slow=9.1,SNR=8.2						
SONM	**Songino Array**	46.27	12	P	P	18 17 12.6	-0.6
	1.9nm,0.7s,mb4.1,baz=193,slow=8.5,SNR=21						
SONM				pP	pP	18 17 21.9	-0.1
	2.7nm,0.8s,baz=189,slow=8.6,SNR=16						
ULN	**Ulaanbaatar**	46.43	12	eP	P	18 17 13.9	-0.7
	1.6nm,0.9s,mb4.0						
ZRNK	**Zerenda**	54.25	342	eP	P	18 18 13.2	-0.9
	1.6nm,0.9s,mb4.0						
EIL	**Elat**	61.99	302	eP	P	18 19 07.6	-1.1
	5.0nm,1.0s,mb4.6						
BRTR	**Keskin Array B**	65.79	313	P	P	18 19 33.8	+0.4
	0.5nm,0.6s,mb3.8,baz=124,slow=8.9,SNR=4.3						
BRTR				pP	pP	18 19 41.7	-0.7
	0.3nm,0.4s,baz=128,slow=9.6,SNR=1.8						
IDI	**Anoyia**	71.48	306	P	P	18 20 09.1	+0.3
	1.8nm,0.7s,mb4.1,baz=76,slow=12,SNR=3.0						
IDI				pP	pP	18 20 18.6	+0.8
	2.1nm,0.6s,baz=85,slow=12,SNR=2.6						
MLR	**Muntele Rosu**	72.84	317	P	P	18 20 17.2	+0.5
	0.7nm,0.4s,mb4.0,baz=94,slow=14,SNR=2.4						
MLR				pP	pP	18 20 26.4	+0.7
	1.0nm,0.5s,baz=93,slow=3.3,SNR=2.9						
MLR	**Muntele Rosu**	72.84	317	P	P	18 20 17.2	+0.5
MLR				pP	pP	18 20 26.4	+0.7
FINES	**FINESS Array B**	77.26	333	P	P	18 20 40.9	-0.7
	0.3nm,0.7s,mb3.3,baz=90,slow=7.6,SNR=4.3						
GERES	**GERESS Array B**	81.63	319	P	P	18 21 07.1	+1.7
	0.6nm,0.7s,mb3.6,baz=104,slow=5.5,SNR=6.4						
GERES				pP	pP	18 21 15.5	+0.9
	0.6nm,0.7s,baz=90,slow=8.0,SNR=3.7						

CASC ***17*** *18:29:35.0±2.8, 11.32N×88.12W, h33^{km}±17^{km}, MD4.3, ML4.0, mb4.1(NEIC)*

NEIC ***17*** *18:29:39.2±2.3, 11.73N×87.67W, h51^{km}±22^{km}, mb4.1/2, Error ellipse: s-maj=38.8km s-min=12.1km az=58.0*

IDC ***17*** *18:29:40.1±3.4, 11.78N×87.71W, h51^{km}±32^{km}, mb3.7/8, mb1 4.0/9, mb1mx3.7/21, mbtmp3.9/9, ML3.5/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/26, Error ellipse: s-maj=38.8km s-min=14.7km az=54.0*

ISC 17 18:29:38.3±0.5, **11.25N**±0.03×**87.89W**±0.03, **h33^{km}, n56, σ1^{s}60**/77, **mb4.0**/10, **MS3.1**/2, **17C-6D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEON	**Leon**	1.51	40	⇑eP	P	18 30 00.8	-2.6
LEON				eS	S	18 30 22.5	+0.5
MIRN	**Miramar**	1.65	44	⇓eP	P	18 30 02.7	-2.6
MIRN				eS	S	18 30 25.9	+0.4
CRIN	**San Cristobal**	1.66	30	⇓eP	P	18 30 02.4	-3.0
CRIN				eS	S	18 30 25.4	-0.3
TEL3	**Telica 3**	1.66	38	⇑eP	P	18 30 02.5	-3.0
TELN	**Telica**	1.69	37	⇓eP	P	18 30 03.0	-2.9
TELN				eS	S	18 30 28.5	+1.8
CNGN	**Cerro Negro**	1.70	43	⇑eP	P	18 30 03.2	-2.9
CRUN	**El Crucero**	1.72	65	⇑eP	P	18 30 05.0	-1.3
MOMJ	**Momotombo**	1.75	49	⇑eP	P	18 30 04.1	-2.7
MOMJ				eS	S	18 30 29.7	+1.7
XAVN	**Gruta Xavier**	1.77	60	⇑eP	P	18 30 05.2	-1.8
APYN	**Apoyeque**	1.79	57	⇑eP	P	18 30 05.5	-1.8
TICN	**Ticuantepe**	1.80	64	eP	P	18 30 05.3	-2.1
MGAN	**Managua**	1.83	61	⇓eP	P	18 30 06.2	-1.8
MGAN				eS	S	18 30 31.3	+1.0
WILN	**Americas 2**	1.89	61	⇑eP	P	18 30 06.9	-1.9
WILN				eS	S	18 30 32.5	+0.8
APON	**Apoyo**	1.90	69	⇑eP	P	18 30 08.9	0.0
APON				eS	S	18 30 33.8	+1.9
CNCH	**Conchagua**	2.01	1	eP	P	18 30 15.9	+5.4
CNCH				eS	S	18 30 39.8	+5.0
VSM	**San Miguel**	2.20	350	⇓iP	P	18 30 18.8	+5.6
VSM				eS	S	18 30 46.0	+6.5
PYTN	**Playitas**	2.20	54	⇑eP	P	18 30 10.6	-2.6
PYTN				eS	S	18 30 40.1	+0.6
BLLM	**Bellamira**	2.21	351	eP	P	18 30 18.6	+5.3
BLLM				eS	S	18 30 45.1	+5.4
CONN	**Concepcion**	2.24	82	⇑eP	P	18 30 12.5	-1.2
VCR	**Vista de Mar**	2.48	117	⇑eP	P	18 30 16.4	-0.9
VCR				eS	S	18 30 47.8	+1.2
LCBS	**La Ceiba**	2.62	336	eP	P	18 30 23.1	+4.0
LFRS	**El Faro**	2.62	334	eP	P	18 30 23.2	+4.0
LBRS	**Las Brisas**	2.72	336	eP	P	18 30 25.6	+5.0
SNET	**Serv Nac Est T**	2.75	332	e	S	18 30 57.3	+3.7
	comp=Z,1µm,0.4s						
LFU	**La Fuente**	2.76	334	⇑eP	P	18 30 26.0	+4.8
PICS	**Picacho**	2.81	332	eP	P	18 30 16.2	-5.8
BOQS	**Boqueron**	2.82	331	eP	P	18 30 26.3	+4.3
BOQS				eS	S	18 30 56.6	+1.4
JTS	**JuntasAbangare**	3.04	108	P	P	18 30 25.3	+0.1
	comp=Z,5.9nm,0.3s,baz=309,slow=20,SNR=12						
JTS				S	S	18 31 02.9	+2.2
	comp=Z,18nm,0.3s,baz=253,slow=22,SNR=11						
JCR	**Jicaral**	3.06	117	⇑eP	P	18 30 25.4	-0.1
JCR				eS	S	18 31 02.1	+0.7
SBLS	**San Blas**	3.08	327	eP	P	18 30 29.7	+3.9
SBLS				eS	S	18 31 02.2	+0.3
SNJE	**San Jose**	3.10	327	⇓eP	P	18 30 29.9	+3.9
SNJE				eS	S	18 31 03.5	+1.2
RTR	**El Retiro**	3.14	327	⇑iP	P	18 30 31.1	+4.5
RTR				eS	S	18 31 06.4	+3.0
RBDL	**Robledal**	3.34	328	eP	P	18 30 34.0	+4.5
RBDL				eS	S	18 31 10.3	+1.7
CGA2	**Cerro Gallo 2**	3.58	110	eP	P	18 30 33.8	+0.9
CGA2				eS	S	18 31 16.4	+1.8
PRS1	**Puriscal**	3.73	109	eP	P	18 30 35.7	+0.6
PRS1				eS	S	18 31 17.7	-0.8
LAJ	**Bijagual**	3.95	110	⇑eP	P	18 30 34.4	-3.7
LAJ				eS	S	18 31 15.2	-8.8
TRTC	**Tortuguero**	4.15	99	eP	P	18 30 41.7	+0.6
URSC	**Urasca**	4.28	109	eP	P	18 30 43.8	+1.0
BUS	**Buena Vista**	4.40	112	⇑eP	P	18 30 45.4	+0.9
BUS				eS	S	18 31 36.8	+1.6
OTAV	**Otavalo**	14.41	139	ePn	P	18 33 03.2	+1.1
TXAR	**Lajitas Array**	23.25	323	P	P	18 34 38.7	-5.0
	comp=Z,1.9nm,0.8s,mb3.6,baz=135,slow=11,SNR=11						
TXAR	**Lajitas Array**	23.25	323	P	P	18 34 38.7	-5.1
WMOK	**Wichita Mounta**	25.40	339	eP	P	18 34 57.2	-7.3
	comp=Z,3.6nm,1.1s,mb3.8						
SAML	**Samuel**	31.72	128	eP	P	18 35 58.4	-3.3
	comp=Z,7.6nm,1.2s,mb4.4						
SIV	**San Ignacio**	37.91	135	P	P	18 36 53.1	-1.4
	comp=Z,0.5nm,0.5s,mb3.5,baz=310,slow=11,SNR=4.4						
NVAR	**Mina Array Bea**	38.33	320	P	P	18 36 54.9	-2.9
	comp=Z,3.5nm,0.8s,mb4.2,baz=119,slow=9.7,SNR=18						
ULM	**Lac du Bonnet**	39.44	352	LR	LR	18 56 29.9	
	comp=Z,22nm,21.2s,MS3.0,baz=57,slow=41						
SCHQ	**Schefferville**	46.54	17	P	P	18 37 58.0	-6.6
	comp=Z,1.1nm,0.5s,mb4.0,baz=235,slow=12,SNR=3.4						
PLCA	**Paso Flores**	54.15	164	P	P	18 39 04.1	+1.4
	comp=Z,2.2nm,1.0s,mb4.0,slow=4.0,SNR=2.9						
YKA	**Yellowknife Ar**	54.65	345	P	P	18 38 59.5	-6.5
	comp=Z,1.1nm,0.7s,mb4.0,baz=140,slow=7.4,SNR=12						
YKA				LR	LR	19 03 23.1	
	comp=Z,24nm,19.4s,MS3.3,baz=250,slow=37						
YKA	**Yellowknife Ar**	54.65	345	P	P	18 38 59.5	-6.5
YKA				LR	LR	19 03 23.1	
DLBC	**Dease Lake**	56.80	335	P	P	18 39 17.5	-4.1
	comp=Z,2.1nm,0.6s,mb4.3,baz=148,slow=8.9,SNR=5.5						
DLBC	**Dease Lake**	56.80	335	P	P	18 39 17.5	-4.1
ILAR	**Eielson Array**	66.94	336	P	P	18 40 24.4	-5.0
	comp=Z,1.8nm,0.9s,mb4.1,baz=135,slow=4.0,SNR=14						
WRA	**Warramunga Arr**	138.52	253	PKP	PKPdf	18 48 58.9	-2.7
	comp=Z,0.5nm,0.9s,baz=101,slow=2.5,SNR=5.8						
CMAR	**Chiang Mai Arr**	149.72	347	PKPbc	PKPdf	18 49 23.7	+2.8
	comp=Z,1.4nm,0.8s,baz=1.0,slow=3.8,SNR=8.7						

FUNV ***17*** *18:39:32.5, 10.41N×62.31W, MW2.8*

TRN ***17*** *18:39:38.9, 10.60N×61.85W, h12^{km}, MD3.0*

NEIC ***17*** *18:39:38.9, 10.60N×61.85W, h12^{km}, MD3.0(TRN), After TRN.*

ISC 17 18:39:31.4±0.9, **10.39N**±0.03×**62.29W**±0.03, **h9^{km}**±7^{km}, **n23, σ1^{s}14**/33, **1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	0.27	14	eP	Pg	18 39 37.1	+0.1
GUIV				eS	Sg	18 39 41.6	+0.8
GUNV	**Guanoco**	0.68	251	⇓iP	Pb	18 39 44.7	-0.3
GUNV				eS	Sb	18 39 55.6	+1.4
TPP	**Pointe-a-Pierr**	0.83	95	eP	Pb	18 39 48.6	+1.1
TPP				eS	Sb	18 39 55.6	-2.9
TRN	**Trinidad (W)**	0.91	73	eP	Pb	18 39 47.8	-1.1
TRN				eS	Sb	18 39 54.0	-6.8
CRUV	**Carupano**	0.97	287	eP	Pb	18 39 49.2	-0.8
CRUV				eS	Sb	18 40 01.8	-1.0
TBH	**Brigand Hill**	1.21	85	eP	Pb	18 39 55.0	+1.1
ITEV	**Isla Los Testi**	1.27	319	eP	Pb	18 39 55.2	+0.1
ITEV				eS	Sb	18 40 12.2	+0.8
TPR	**Prospect**	1.69	62	eP	Pn	18 40 01.6	+0.3
ORIV	**Oritupano**	1.71	220	eP	Pn	18 40 03.5	+1.9
ORIV				eS	Sn	18 40 26.2	+2.3
BOT	**Bacolet**	1.73	63	eP	Pn	18 40 01.9	0.0
GRW	**Mount Saint Ca**	1.87	19	eP	Pn	18 40 06.2	+2.3
GRW				eS	Sn	18 40 27.8	0.0
PCRV	**Puerto La Cruz**	2.32	265	eP	Pn	18 40 11.0	+0.6
PCRV				eS	Sn	18 40 39.5	+0.2
IBAV	**Isla La Blanqu**	2.66	303	eP	Pn	18 40 15.1	-0.1
GURV	**El Guri**	2.73	197	eP	Pn	18 40 16.7	+0.5
GURV				eS	Sn	18 40 50.2	+0.6
CUPV	**Cœpira**	3.46	265	eP	Pn	18 40 27.1	+0.4
BIRV	**Birongo**	3.92	272	eP	Pn	18 40 33.0	-0.1
ORCV	**Isla La Orchil**	4.09	291	eP	Pn	18 40 34.1	-1.5
MERV	**Las Mercedes**	4.11	254	eP	Pn	18 40 35.4	-0.5
LUEV	**Luepa**	4.59	170	eP	Pn	18 40 41.1	-1.5
CAOV	**Caicara del Or**	5.01	233	eP	Pn	18 40 47.3	-1.4
TURV	**Turiamo**	5.46	271	eP	Pn	18 40 53.9	-1.1
BAUV	**El Baul**	5.85	256	eP	Pn	18 40 58.5	-2.0
MONV	**Montecano**	7.70	282	eP	Pn	18 41 23.0	-3.4

NEIC ***17*** *19:06:22.3, 34.47S×70.47W, h118^{km}, MD3.9(GUC), After GUC.*

GUC ***17*** *19:06:22.3±0.7, 34.47S×70.47W, h118^{km}±2^{km}, MD3.9, ML4.0*

IDC ***17*** *19:06:23.3±2.0, 34.59S×69.97W, h132^{km}±18^{km}, mb3.8/3, mb1 3.7/6, mb1mx3.6/17, mbtmp4.0/6, Error ellipse: s-maj=43.0km s-min=16.7km az=108.0*

ISC 17 19:06:21.4±0.5, **34.49S**±0.03×**70.42W**±0.08, **h123^{km}**±4^{km}, **n36, σ0^{s}59**/57, **mb4.0**/2, **14C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CACH	**El Canelo**	0.40	338	⇓iP	P	19 06 39.5	+0.2

CACH				*i*S	S	19 06 53.0	+0.3
SFDO	**San Fernando**	0.51	255	⇓*i*P	P	19 06 40.1	+0.2
SFDO				*i*S	S	19 06 53.4	-0.4
CHCH	**Chadas Angostu**	0.59	341	⇑*i*P	P	19 06 40.4	0.0
CHCH				*i*S	S	19 06 54.0	-0.7
NICH	**Los Niches**	0.84	232	*e*P	P	19 06 42.4	-0.1
NICH				*e*S	S	19 06 58.4	+0.2
SJCH	**San Jose de Ma**	0.85	4	*e*P	P	19 06 42.6	+0.1
SJCH				*i*S	S	19 06 58.5	+0.1
SJCH				AMP		19 06 59.5	
	comp=E,2μm,0.6s						
PCH	**Pirque**	0.87	355	⇑*i*P	P	19 06 43.1	+0.4
PCH				*i*S	S	19 06 58.5	-0.3
ANTU	**Antumapu**	0.93	349	*i*P	P	19 06 43.5	+0.2
ANTU				*i*S	S	19 06 59.7	0.0
ANTU				AMP		19 07 00.3	
	comp=N,8μm,0.3s						
TACH	**Talagante**	0.94	333	⇑*i*P	P	19 06 43.4	0.0
TACH				*i*S	S	19 06 59.4	-0.5
LNV	**Longovilo**	0.98	303	⇑*i*P	P	19 06 43.6	-0.2
FSR	**Penalolen**	1.01	355	⇑*i*P	P	19 06 44.4	+0.2
FSR				*i*S	S	19 07 01.2	+0.1
FSR				AMP		19 07 02.4	
	comp=E,3μm,0.5s						
SAN	**Santiago**	1.05	349	*i*P	P	19 06 44.6	+0.1
SAN				*i*S	S	19 07 01.4	-0.4
SAN				AMP		19 07 03.1	
	comp=E,3μm,0.6s						
STL	**Santa Lucia**	1.07	350	*i*P	P	19 06 43.9	-0.8
STL				*i*S	S	19 07 00.9	-1.1
STL				AMP		19 07 01.6	
	comp=E,1μm,0.3s						
PUEX	**Pudahuel**	1.08	345	⇑*i*P	P	19 06 45.2	+0.4
PUEX				*i*S	S	19 07 02.3	-0.1
PUEX				AMP		19 07 03.6	
	comp=E,7μm,0.6s						
CLCH	**Cerro Calan**	1.09	355	AMP		19 07 07.3	
	comp=N,3μm,0.4s						
DSCH	**Colegio Aleman**	1.09	354	*e*P	P	19 06 45.5	+0.6
DSCH				*i*S	S	19 07 02.7	+0.1
DSCH				AMP		19 07 06.7	
	comp=N,2μm,0.3s						
FCH	**Farellones**	1.16	5	⇑*i*P	P	19 06 46.6	+0.9
FCH				*i*S	S	19 07 05.2	+1.4
TALC	**Talca**	1.35	227	⇑*i*P	P	19 06 47.6	-0.2
TALC				*i*S	S	19 07 07.5	-0.2
TALC				AMP		19 07 10.3	
	comp=E,10μm,0.1s						
PEL	**Peldehue**	1.36	351	*e*P	P	19 06 48.4	+0.5
PEL				*e*S	S	19 07 07.9	0.0
LCCH	**Las Cruces**	1.39	316	*e*P	P	19 06 47.9	-0.4
LCCH				*i*S	S	19 07 07.2	-1.4
ROCH	**El Roble**	1.59	342	⇑*i*P	P	19 06 50.9	+0.3
ROCH				*i*S	S	19 07 13.0	+0.5
LNCH	**Linares**	1.67	215	⇑*i*P	P	19 06 51.5	+0.1
LNCH				*i*S	S	19 07 14.8	+0.7
LNCH				AMP		19 07 16.2	
	comp=N,2μm,0.4s						
JACH	**Jahuel**	1.81	355	⇑*i*P	P	19 06 53.7	+0.6
JACH				*i*S	S	19 07 17.4	+0.4
MDZ	**Mendoza**	2.07	40	*e*P	P	19 06 56.0	-0.4
MDZ				*e*		19 07 24.2	
PACH	**Papudo**	2.12	336	⇓*i*P	P	19 06 56.9	-0.2
CCHI	**Chillan**	2.50	212	⇑*i*P	P	19 07 02.1	0.0
CCHI				*i*S	S	19 07 32.9	0.0
CCHI				AMP		19 07 34.2	
	comp=E,1μm,0.2s						
ILCH	**Illapel**	2.91	347	⇑*i*P	P	19 07 07.8	+0.2
ILCH				AMP		19 07 42.3	
	comp=N,1μm,0.2s						
ZON	**Zonda**	3.28	27	⇑*i*P	P	19 07 12.0	-0.4
ZON				*e*S	S	19 07 38.0	-13
CFAA	**Coronel Fontan**	3.41	33	P	P	19 07 14.8	+0.6
	comp=N,10nm,0.3s,baz=206,slow=15,SNR=366						
CFAA				S	S	19 07 53.5	-0.8
	comp=N,4.0nm,0.3s,baz=100,slow=18,SNR=21						
TLL	**Tololo Astrono**	4.32	356	*e*P	P	19 07 27.1	+0.7
PLCA	**Paso Flores**	6.23	181	P	P	19 07 51.7	-0.5
	comp=N,0.5nm,0.3s,baz=346,slow=14,SNR=8.3						
LPAZ	**La Paz**	18.24	7	P	P	19 10 28.5	+0.7
	comp=N,0.2nm,0.3s,baz=190,slow=6.3,SNR=8.3						
LPAZ	**La Paz**	18.24	7	P	P	19 10 28.5	+0.7
SIV	**San Ignacio**	20.25	27	P	P	19 10 47.2	-1.8
	comp=N,8.5nm,0.8s,baz=217,slow=12,SNR=21						
BDFB	**Brasilia**	27.53	53	P	P	19 11 55.3	-3.4
	comp=N,3.2nm,0.5s,mb4.1,baz=211,slow=6.2,SNR=5.8						
TXAR	**Lajitas Array**	70.82	330	P	P	19 17 27.2	+0.6
	comp=N,0.8nm,0.5s,mb3.8,baz=151,slow=8.8,SNR=4.2						
WRA	**Warramunga Arr**	120.97	207	PKP	PKPdf	19 25 00.6	+0.9
	comp=N,0.3nm,0.6s,baz=164,slow=1.6,SNR=11						

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*TAP **17** 19:06:25.1,24.04N×122.76E,h12^{km}±1^{km},ML3.0*

JMA 17 19:06:24.1±0.1**,24.08N×122.90E,h10**^{km}**,M3.0,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	0.39	15	P	Pg	19 06 32.0	-0.2
YOJ				*e*S	Sg	19 06 37.4	-0.1
IRIF	**Iriomote-Funau**	0.80	71	P	Pb	19 06 39.2	-0.4
IRIF				*e*S	Sb	19 06 50.8	+0.6
HATJ	**Hateruma jima**	0.83	91	P	Pb	19 06 39.6	-0.5
HATJ				*e*S	Sb	19 06 50.3	-0.8
JKRS	**Kuro-shima**	1.02	81	P	Pb	19 06 43.5	0.0
JKRS				*e*S	Sb	19 06 57.2	+0.4
JIJ	**Ishigaki jima**	1.17	76	P	Pb	19 06 45.5	-0.5
JIJ				*e*S	Sb	19 07 01.2	+0.2
JTJ	**Tarama**	1.74	71	P	Pn	19 06 54.4	-0.2
JTJ				*e*S	Sn	19 07 17.5	+0.6

JMA 17 19:20:42.5±0.2**,43.65N×147.28E,h31**^{km}**,M3.6,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	1.15	256	P	Pn	19 21 03.0	+0.2
NEM2				S	Sn	19 21 17.8	+0.2
JRA	**Rausu**	1.59	281	P	Pn	19 21 09.3	+0.3
JRA				*e*S	Sn	19 21 29.6	+1.0
JNK	**Nakash**	1.86	269	P	Pn	19 21 13.0	+0.1
JNK				*e*S	Sn	19 21 36.3	+0.8
JAK	**Akkeshi**	2.00	252	P	Pn	19 21 14.9	+0.1
JAK				*e*S	Sn	19 21 38.9	0.0
JTKR	**Abashiri--Toko**	2.46	279	P	Pn	19 21 22.1	+0.6
JAR	**Ashorobuto**	2.58	263	P	Pn	19 21 23.9	+0.8
JAR				*e*S	Sn	19 21 55.3	+1.5
JOB	**Onbets**	2.62	255	P	Pn	19 21 24.2	+0.4
JOB				*e*S	Sn	19 21 54.7	-0.2
JMP	**Maruseppu**	2.86	279	P	Pn	19 21 27.7	+0.6
JCH	**Churui**	3.05	251	P	Pn	19 21 29.7	-0.1
JCH				*e*S	Sn	19 22 05.5	-0.1
JEM	**Erimo**	3.44	243	P	Pn	19 21 37.3	+1.9
JNBK	**Urakawa-nobuka**	3.59	249	P	Pn	19 21 37.4	-0.1

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*CSEM **17** 19:22:07.8±0.0,35.80N×26.72E,h80^{km},Mw3.8,Error ellipse: s-maj=1.4km s-min=0.8km az=52.0*

*GRAL **17** 19:22:08.9±3.4,35.66N×26.88E,MD4.6*

*ATH **17** 19:22:09.7,35.93N×26.61E,h89^{km}±3^{km},ML4.2*

*MOS **17** 19:22:09.6±1.4,35.84N×26.49E,h98^{km},mb3.5/8,Error ellipse: s-maj=6.9km s-min=3.4km az=116.3*

*NEIC **17** 19:22:09.7,35.93N×26.61E,h89^{km},mb3.5/14,After ATH.*

*HLW **17** 19:22:09.6,35.60N×26.82E,h8^{km},Mb4.8*

*ISK **17** 19:22:09.6,35.92N×26.57E,h82^{km},ML3.9*

*IDC **17** 19:22:10.6±1.3,36.01N×26.46E,h87^{km}±12^{km},mb3.7/8, mb1 3.8/12,mb1mx3.6/24,mbtmp4.0/12,Error ellipse: s-maj=23.3km s-min=12.1km az=139.0*

*THE **17** 19:22:12.6,36.01N×26.68E,h20^{km},ML4.4*

*NIC **17** 19:22:13.5±0.3,36.33N×27.24E,h40^{km},mb4.6,ML4.2, MW3.4*

ISC 17 19:22:08.2±0.2**,35.78N**±0.02×**26.65E**±0.02**,h97**^{km}±2^{km}**, n258,**σ1§**14**/299**,mb3.8**/14**,20C-8D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	0.48	118	⇑*i*P	P	19 22 25.6	+1.8
NISR	**Nisiros**	0.92	25	*e*P	P	19 22 27.7	-0.1
NPS	**Neapolis**	0.99	239	*e*P	P	19 22 30.5	+2.0
SANT	**Santorini**	1.13	302	*e*Pn	P	19 22 30.0	-0.3
SANT				*e*Sn	S	19 22 43.0	-3.8
SANT	**Santorini**	1.13	302	*e*Pn	P	19 22 30.0	-0.3
THR1	**Thera Island**	1.13	302	*e*Pg	P	19 22 30.1	-0.2
THR1				*e*Sg	S	19 22 44.0	-2.8
XRY	**Khrisi**	1.19	221	*e*P	P	19 22 33.8	+2.8
THR3	**Thira Island,**	1.19	302	*e*Pg	P	19 22 31.0	-0.1
THR4	**Thira Island,**	1.22	304	*e*Pg	P	19 22 31.8	+0.4
THR5	**Thira Island,**	1.23	302	*e*Pg	P	19 22 31.8	+0.2
ARG	**Arkhangelos**	1.28	69	⇓*i*P	P	19 22 34.5	+2.4
ARG				*e*S	S	19 22 50.5	+0.5
BODT	**Bodrum**	1.39	22	*i*PN	P	19 22 33.5	+0.1
BODT				*i*SN	S	19 22 49.9	-2.2
BDRM	**Kayabasi**	1.44	26	*i*P	P	19 22 34.3	+0.2
BDRM				*i*S	S	19 22 51.6	-1.6
IDI	**Anoyia**	1.51	252	P	P	19 22 36.2	+1.3
	196nm,0.3s,baz=82,slow=5.6,SNR=1220						
IDI				S	S	19 22 54.6	-0.1
	434nm,0.3s,baz=336,slow=18,SNR=24						
APE	**Apeiranthos**	1.57	325	*i*PN	P	19 22 34.9	-0.8
APE				*i*SN	S	19 22 53.0	-3.0
APE	**Apeiranthos**	1.57	325	⇑*i*P	P	19 22 35.5	-0.2
APE				*e*S	S	19 22 53.8	-2.2
APE	**Apeiranthos**	1.57	325	⇑*i*P	P	19 22 35.5	-0.2
APE				*i*Sn	S	19 22 53.0	-3.0
MLSB	**Milas**	1.77	31	*i*PN	P	19 22 38.9	+0.7
MLSB				*i*SN	S	19 22 59.5	-0.8
DALT	**Dalyan (Mudla)**	1.89	58	*i*PN	P	19 22 41.2	+1.5
YER	**Yerkesik**	1.89	44	*i*PN	P	19 22 41.4	+1.6
SMG	**Samos**	1.94	4	*e*P	P	19 22 40.0	-0.3
VAM	**Vamos**	2.03	260	*e*P	P	19 22 42.5	+1.0
VAM	**Vamos**	2.03	260	*e*P	P	19 22 42.0	+0.5
AYDN	**Tasoluk**	2.13	27	*i*P	P	19 22 43.9	+1.0
FETY	**Fethiye**	2.15	66	*i*PN	P	19 22 44.6	+1.4
GVD	**Gavdhos**	2.29	247	*e*P	P	19 22 47.8	+2.6
KSL	**Kastellorizon**	2.41	80	⇓*i*P	P	19 22 48.5	+1.6
AKAS	**Kas**	2.44	78	*i*P	P	19 22 48.8	+1.5
AKAS				*i*S	S	19 23 17.5	+1.1
URLA	**Izmir**	2.58	359	*i*P	P	19 22 48.6	-0.6
URLA				*i*S	S	19 23 17.5	-2.3
BLCB	**Balcova**	2.62	7	PN	P	19 22 49.6	-0.2
IZM	**Izmir**	2.66	10	*i*PN	P	19 22 50.5	+0.2
KDAG	**Bornova**	2.67	11	*i*P	P	19 22 50.6	+0.2
DNZL	**Cakiroluk**	2.71	45	*i*P	P	19 22 52.1	+1.1
DNZL				*i*S	S	19 23 19.3	-3.8
DENT	**Denizli**	2.75	43	PN	P	19 22 52.6	+1.1
GOLH	**Golhisar**	2.77	57	*i*P	P	19 22 53.3	+1.6
GOLH				*i*S	S	19 23 24.4	+0.1
ELL	**Elmali**	2.81	69	PN	P	19 22 53.9	+1.6
KYTH	**Kithira**	2.97	281	*e*P	P	19 22 55.0	+0.5
KYTH	**Kithira**	2.97	281	*e*P	P	19 22 54.5	0.0
MANT	**Manisa**	3.11	29	*i*P	P	19 22 56.9	+0.4
MANT				*i*S	S	19 23 29.5	-3.3
VLI	**Veliai**	3.14	289	⇓*i*P	P	19 22 57.0	+0.1
PTL	**Penteli**	3.18	316	*e*P	P	19 22 58.1	+0.7
ATH	**Athens Observa**	3.21	314	*e*P	P	19 22 58.5	+0.6
NAIG	**Nisos Aigina**	3.22	309	*e*P	P	19 22 58.4	+0.5
AKS	**Akhisar**	3.23	16	PN	P	19 22 58.1	-0.1
NSAL	**Nisos Salamina**	3.32	311	*e*P	P	19 23 00.0	+0.6
MPAR	**Parnis Oros**	3.33	316	*e*P	P	19 23 00.5	+1.1
ANTB	**Antalya**	3.42	70	*e*PN	P	19 23 02.3	+1.5
KHL	**Karahalli**	3.43	41	PN	P	19 23 01.4	+0.6
PRK	**Paraskevi**	3.48	355	*e*P	P	19 23 01.0	-0.5
MGER	**Gerania Oros**	3.50	310	*e*P	P	19 23 02.5	+0.7
BCK	**Bucak**	3.59	61	PN	P	19 23 04.2	+1.2
TKTP	**Tekketepe**	3.71	51	*i*P	P	19 23 04.7	0.0
TKTP				*i*S	S	19 23 34.6	-13
ISP	**Isparta**	3.72	55	*e*PN	P	19 23 05.2	+0.3
ISP	**Isparta**	3.72	55	*i*P	P	19 23 05.3	+0.4
BALB	**Balikesir**	3.98	14	PN	P	19 23 08.4	0.0
GDZ	**Gediz**	4.00	33	*i*P	P	19 23 09.9	+1.2
GDZ				*i*S	S	19 23 52.3	-2.5
EZN	**Ezine**	4.05	357	PN	P	19 23 08.7	-0.6
ITM	**Ithomi**	4.05	292	*e*P	P	19 23 10.3	+0.9
DST	**Dursunbey**	4.13	22	*e*PN	P	19 23 10.5	0.0
CANB	**Canakkale**	4.25	4	*e*PN	P	19 23 11.7	-0.3
LOS	**Limnos**	4.33	344	*e*Pn	P	19 23 13.1	-0.1
SLUM		4.44	196	⇑P	P	19 23 15.6	+1.0
SLUM				S	S	19 24 02.7	-2.7
XOR	**Xorichti**	4.51	324	*e*Pn	P	19 23 16.1	+0.4
BNT	**Bandirma**	4.68	12	*e*PN	P	19 23 17.7	-0.3
AKMC	**Akamas**	4.70	97	P	P	19 23 18.2	-0.1
AGG	**Agios Georgios**	4.72	315	*e*Pn	P	19 23 19.7	+1.2
AGG				*e*Sn	S	19 24 11.6	-0.9
PPCY	**Paphos**	4.74	99	P	P	19 23 18.4	-0.4
PAIG	**Paliouri**	4.76	331	*e*Pn	P	19 23 19.1	0.0
ULDT	**Uludag**	4.78	24	*i*P	P	19 23 18.7	-0.7
HDMB	**Hadim**	4.86	74	*e*PN	P	19 23 21.5	+1.1
MRMT	**Marmara Adasi**	4.88	9	*e*PN	P	19 23 20.4	-0.3
ALFC	**Alevga**	4.90	96	P	P	19 23 20.3	-0.6
	19nm,0.3s						
ALFC				S	S	19 24 12.7	-4.1
DABA	**Dabaa**	4.95	163	P	P	19 23 21.4	-0.1
EVR	**Evrytania**	4.97	311	*e*P	P	19 23 24.0	+2.1
ESKT	**Eskisehir**	5.01	40	*i*P	P	19 23 23.5	+1.0
OUR	**Ouranopolis**	5.01	336	*e*Pn	P	19 23 22.4	-0.1
MFT	**Murefte**	5.03	6	*e*PN	P	19 23 22.2	-0.5
KONT	**Konya--Tatoy**	5.07	63	*e*PN	P	19 23 24.0	+0.8
ALN	**Alexandroupoli**	5.13	355	*e*Pn	P	19 23 23.6	-0.6
ERMK	**Ermenek**	5.14	78	*i*P	P	19 23 26.5	+2.3
ERMK				*i*S	S	19 24 23.7	+0.9
KIZT	**Kizilcal**	5.20	52	*e*PN	P	19 23 25.8	+0.8
SZAC	**Souni-Zanaja**	5.20	99	P	P	19 23 24.9	-0.2
SZAC				S	S	19 24 21.7	-2.6
MAMC	**Mammari**	5.40	95	P	P	19 23 27.4	-0.3
VLS	**Valsamata**	5.41	298	*e*P	P	19 23 28.5	+0.7
LIT	**Litokhoron**	5.42	324	*e*Pn	P	19 23 28.8	+0.7
LIT				*e*Sn	S	19 24 28.4	-1.4
RDO	**Rodhopi**	5.43	351	*e*P	P	19 23 28.0	-0.2
CSS	**Prodhromos**	5.52	97	P	P	19 23 28.7	-0.7
	5.3nm,0.4s						
CSS				S	S	19 24 28.0	-4.2
LKD	**Levkas**	5.61	303	*e*Pn	P	19 23 29.9	-0.6
THE	**Thessaloniki**	5.65	330	*e*Pn	P	19 23 32.1	+0.9
SOH	**Sokhos**	5.66	334	*e*Pn	P	19 23 31.9	+0.6
IKL	**Isikli**	5.72	83	*e*PN	P	19 23 33.0	+0.8
IKL	**Isikli**	5.72	83	*e*Pn	P	19 23 32.7	+0.5
HBRG	**Burj al ‘Arab**	5.84	152	⇑P	P	19 23 33.3	-0.3
SRS	**Serrai**	5.85	337	*e*Pn	P	19 23 34.0	+0.2
KDZ	**Kurdzhali**	5.94	351	*e*P	P	19 23 35.0	-0.2
EDRB	**Edirne**	6.06	1	*e*PN	P	19 23 36.0	-0.8
PHNC	**Paralimni**	6.08	95	P	P	19 23 37.6	+0.5
RZN	**Rozhen**	6.09	346	*e*P	P	19 23 37.0	-0.2
MEST	**Erdemli**	6.12	80	*i*P	P	19 23 38.8	+1.2
MEST				*i*S	S	19 24 46.7	-0.2
GRG	**Griva**	6.15	328	*e*Pn	P	19 23 38.9	+0.8
MMB	**Musomiste**	6.24	339	*e*P	P	19 23 39.0	-0.2
LOD	**Lodumlu**	6.35	48	*e*PN	P	19 23 40.9	+0.1
ANTO	**Ankara**	6.35	48	*e*PN	P	19 23 41.2	+0.3
SGKT	**Sivrigoynuk**	6.41	40	*i*P	P	19 23 42.8	+1.2
FNA	**Florina**	6.49	322	*e*Pn	P	19 23 44.2	+1.4
FNA				*e*Sn	S	19 24 54.5	-1.5
PLD	**Plovdiv**	6.50	347	*e*P	P	19 23 43.0	+0.1
SWA1		6.54	187	⇑P	P	19 23 44.3	+0.8
SWA1				S	S	19 24 52.4	-4.8
SWA2		6.59	189	⇑P	P	19 23 44.8	+0.6
KAMT	**Kaman**	6.66	55	*e*PN	P	19 23 45.2	+0.1
JMB	**Yambol**	6.68	360	*e*P	P	19 23 45.0	-0.4
KKB	**Krupnik**	6.69	337	*e*P	P	19 23 46.0	+0.5
KEK	**Kerkira**	6.70	308	*e*P	P	19 23 46.5	+0.8
BR131	**Keskin Array S**	6.80	52	*e*Pn	P	19 23 46.8	-0.3
	4.8nm,0.7s						
BR131				*e*Sn	S	19 24 59.1	-4.4
BR131	**Keskin Array S**	6.80	52	*e*Pn	P	19 23 46.8	-0.3
	4.8nm,0.7s						
BRTR	**Keskin Array B**	6.80	52	P	P	19 23 47.5	+0.4
	0.6nm,0.3s,baz=213,slow=14,SNR=12						
BRTR				S	S	19 25 00.8	-2.7
	0.6nm,0.3s,baz=221,slow=24,SNR=12						
HMYD	**Mayadein**	6.91	148	⇑P	P	19 23 48.2	-0.4
HNAT	**Natroun**	6.98	150	⇓P	P	19 23 49.3	-0.2
SQR		7.01	146	⇑P	P	19 23 49.5	-0.5
FYM	**Al Fayyum**	7.11	147	⇑P	P	19 23 50.9	-0.4
AYT	**Al ‘Ayyat**	7.14	147	⇑P	P	19 23 51.8	0.0
KOT	**Kottamia**	7.28	142	⇑P	P	19 23 53.0	-0.6
KOT				S	S	19 25 09.4	-5.9
KOT	**Kottamia**	7.28	142	P	P	19 23 53.0	-0.6
VTS	**Vitosha**	7.31	340	*e*P	P	19 23 54.0	-0.1
HHAG	**Hagoal**	7.40	140	⇑P	P	19 23 54.8	-0.5
HSAF	**As Saff**	7.40	145	⇑P	P	19 23 55.0	-0.3
PRD	**Provadia**	7.44	4	*e*P	P	19 23 55.0	-0.8
GLL	**Jalalah**	7.51	144	⇑P	P	19 23 56.0	-0.7
GLL	**Jalalah**	7.51	144	P	P	19 23 56.0	-0.8
AMAG	**Maghara**	7.51	131	P	P	19 23 56.4	-0.4
MATL	**Matirih**	7.51	105	Sn	S	19 25 17.4	-3.6
HNTI	**Hanita**	7.54	108	Pn	P	19 23 55.7	-1.5
HAF	**Haifa**	7.55	111	Pn	P	19 23 55.9	-1.4
BHL	**Bhannes**	7.64	102	*e*Pn	P	19 23 56.5	-2.0
BHL				Sn	S	19 25 15.9	-8.2
HWQ	**Hawqa**	7.77	98	*e*Pn	P	19 23 59.7	-0.6
HWQ				Sn	S	19 25 20.8	-6.6
COBT	**Iskenderun**	7.81	82	*i*P	P	19 24 00.4	-0.5
COBT				*i*S	S	19 25 26.4	-1.9
SLTI	**Sal’it**	7.81	114	Pn	P	19 23 59.6	-1.2
KSDI	**Kefar Szold**	7.88	107	Pn	P	19 23 59.8	-1.9
SUZ		7.88	137	⇑P	P	19 24 01.4	-0.4
MMLI	**Mount Malkishu**	8.00	112	Pn	P	19 24 02.7	-0.7
KSHT	**Keshet**	8.07	108	Pn	P	19 24 03.0	-1.4
KZIT	**Kziot**	8.10	125	Pn	P	19 24 03.0	-1.8
ZAPS	**Zavoj/Pirot**	8.13	339	⇑*i*Pn	P	19 24 06.1	+1.0
FKH	**Fakeheh**	8.15	98	*e*Pn	P	19 24 04.8	-0.6
FKH				Sn	S	19 25 31.2	-5.4
RTMM	**Retamin**	8.21	123	Pn	P	19 24 04.7	-1.5
ZNM		8.27	139	⇓P	P	19 24 06.9	-0.1
HNKL	**Nakhl**	8.49	131	P	P	19 24 09.7	-0.2
MZDA	**Masada**	8.53	119	Pn	P	19 24 09.9	-0.7
TIP	**Timpagrande**	8.56	296	Pn	P	19 24 08.8	-2.2
	12nm,0.4s						
GRI	**Girifalco**	8.70	293	P	P	19 24 11.2	-1.6
GRI				pmax	pmax		
	comp=Z,11nm,0.2s						
GRI	**Girifalco**	8.70	293	Pn	P	19 24 11.2	-1.6
	comp=Z,11nm,0.2s						
HFRF	**Wahat Farafira**	8.72	170	⇓P	P	19 24 13.4	+0.3
SOI	**Samo**	8.79	288	P	P	19 24 11.3	-2.7
SOI				pmax	pmax		
	comp=Z,13nm,0.3s						
SOI	**Samo**	8.79	288	Pn	P	19 24 11.3	-2.7
	comp=Z,13nm,0.3s						
ZFRI	**Zfri**	8.84	124	Pn	P	19 24 13.5	-1.3
PRNI	**Paran**	8.86	125	Pn	P	19 24 13.7	-1.3
MTTG	**Motta San Giov**	9.05	287	Pn	P	19 24 16.0	-1.6
ORI	**Oriolo Calabro**	9.12	301	P	P	19 24 18.1	-0.5
ORI				pmax	pmax		
	comp=Z,11nm,0.2s						
ORI	**Oriolo Calabro**	9.12	301	Pn	P	19 24 18.1	-0.5
	comp=Z,11nm,0.2s						
ASF	**Jabal al Asfar**	9.24	110	P	P	19 24 20.6	+0.4
	comp=Z,1.3nm,0.3s,baz=184,slow=9.6,SNR=7.4						
ASF				S	S	19 25 59.7	-3.4
	comp=Z,2.0nm,0.3s,baz=252,slow=20,SNR=4.0						
EIL	**Elat**	9.27	129	P	P	19 24 19.6	-1.0
	comp=Z,3.3nm,0.3s,baz=286,slow=7.7,SNR=80						
EIL				S	S	19 25 55.3	-8.5
	comp=Z,20nm,0.3s,baz=320,slow=28,SNR=14						
EIL	**Elat**	9.27	129	*e*Pn	P	19 24 19.0	-1.6
	comp=Z,12nm,0.6s						
EIL				*e*Sn	S	19 25 48.5	-15
SSY	**Sortino**	9.43	282	Pn	P	19 24 20.5	-2.2
	comp=Z,102nm,1.2s						
HBST	**Basata**	9.45	132	⇑P	P	19 24 23.1	+0.1
PZI	**Palazzolo**	9.52	281	P	P	19 24 20.3	-3.6
PZI				pmax	pmax		
	comp=Z,18nm,0.1s						
PZI	**Palazzolo**	9.52	281	Pn	P	19 24 20.3	-3.6
	comp=Z,18nm,0.1s						
NUB		9.54	133	⇓P	P	19 24 24.3	+0.1
HKAT	**Jabal Katrina**	9.54	137	P	P	19 24 24.5	+0.2
ALWS	**Ilw as Safayha**	9.59	130	P	P	19 24 25.0	+0.1
HAQS	**Haql**	9.69	131	P	P	19 24 26.6	+0.4
JMOS	**Jabal al Moall**	9.72	130	P	P	19 24 26.6	0.0
MLR	**Muntele Rosu**	9.72	357	P	P	19 24 24.5	-2.1
	comp=Z,0.2nm,0.3s,baz=190,slow=8.1,SNR=8.4						
MGR	**Morigerati**	9.78	300	Pn	P	19 24 24.8	-2.6
	comp=Z,3.6nm,0.2s						
SLCN	**Sala Consilina**	9.83	301	Pn	P	19 24 26.0	-2.0
STON	**Ston**	9.91	318	*i*Pn	P	19 24 25.6	-3.6
STON				*i*Sn	S	19 26 06.4	-13
VAE	**Valguarnera**	9.98	283	P	P	19 24 30.1	0.0
	comp=Z,3.0nm,0.3s,baz=101,slow=20,SNR=5.9						
VAE				S	S	19 26 09.7	-11
	comp=Z,2.8nm,0.3s,baz=281,slow=5.2,SNR=5.2						
MRLC	**Muro Lucano**	10.08	303	Pn	P	19 24 29.9	-1.6
SGO	**Sicignano**	10.12	302	P	P	19 24 30.3	-1.7
SGO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SGO	**Sicignano**	10.12	302	Pn	P	19 24 30.3	-1.7
	comp=Z,2.0nm,0.4s						
BDAS	**Al Bad‘**	10.24	133	P	P	19 24 33.4	-0.3
JMQS	**Jabal Moqyreh**	10.40	129	P	P	19 24 35.7	0.0
HDK1	**Dakhla**	10.47	166	P	P	19 24 37.8	+1.0
AYUS	**‘Aynunah**	10.52	134	P	P	19 24 37.4	0.0
AKRG	**Al Kharijah**	10.76	161	⇑P	P	19 24 41.4	+0.7
GTR	**Jabal at Tayr**	10.77	161	⇑P	P	19 24 40.5	-0.3
TBKS	**Tabuk**	11.28	129	P	P	19 24 47.6	+0.1
KOLS	**Kolonicke sedl**	13.54	348	*e*P	P	19 25 24.4	+7.3
UMJS	**Umm Lajj**	13.95	136	P	P	19 25 25.4	+2.8
KIV	**Kislovodsk**	14.76	52	*e*P	P	19 25 37.4	+4.4
KIV				*e*S	S	19 28 09.3	-5.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.4s						
GNI	**Garni**	14.93	68	*i*P	P	19 25 38.7	+3.6
GNI				pmax	pmax		
	comp=Z,11nm,1.5s						
AKASG	**Malin Array Be**	15.04	6	P	P	19 25 36.5	+0.1
	comp=Z,4.6nm,0.3s,baz=195,slow=11,SNR=25						
PGF	**Pioggiola**	15.26	302	*e*P	P	19 25 36.2	-3.1
OJC	**Ojcow**	15.27	343	*e*P	P	19 25 42.4	+3.0
MORC	**Moravsky Berou**	15.49	337	*e*P	P	19 25 44.1	+1.9
MORC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MORC	**Moravsky Berou**	15.49	337	*e*P	P	19 25 44.1	+2.0
	comp=Z,4.2nm,0.7s						
MORC	**Moravsky Berou**	15.49	337	*e*P	P	19 25 44.1	+1.9
	comp=Z,4.2nm,0.7s						
GERES	**GERESS Array B**	16.16	328	P	P	19 25 52.6	+2.0
	comp=Z,0.4nm,0.3s,baz=144,slow=12,SNR=24						
DPC	**Dobruska-Polom**	16.38	336	*e*P	P	19 25 54.1	+0.8
KHC	**Kasperske Hory**	16.43	328	*e*P	P	19 25 56.2	+2.3
UPC	**Upice**	16.62	336	*e*P	P	19 25 57.7	+1.5
PRU	**Pruhonice**	16.71	332	*e*P	P	19 25 51.0	-6.4
PRU	**Pruhonice**	16.71	332	*e*P	P	19 25 58.3	+0.9
SBF	**Sospel**	16.80	305	*e*P	P	19 25 56.5	-2.0
	comp=Z,3.6nm,0.4s						
SBF	**Sospel**	16.80	305	*e*P	P	19 25 56.5	-2.0
SBF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MBDF	**Montbardon**	17.57	307	*e*P	P	19 26 03.9	-4.3
BRG	**Berggiesshubel**	17.66	333	*e*P	P	19 26 10.4	+1.3
BRG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRG	**Berggiesshubel**	17.66	333	*e*P	P	19 26 10.4	+1.3
	comp=Z,2.0nm,0.6s						
BRG	**Berggiesshubel**	17.66	333	*e*P	P	19 26 10.4	+1.3
	comp=Z,2.0nm,0.6s						
LPG	**La Plagne**	17.91	309	*e*P	P	19 26 09.2	-3.0
	comp=Z,2.9nm,0.4s						
LPG	**La Plagne**	17.91	309	*e*P	P	19 26 09.2	-3.0
LPG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
LPL	**La Plagne**	17.93	309	*e*P	P	19 26 09.1	-3.4
	comp=Z,2.3nm,0.4s						
LPL	**La Plagne**	17.93	309	*e*P	P	19 26 09.1	-3.4
LPL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ORIF	**Oris-en-Rattie**	18.23	306	*e*P	P	19 26 12.6	-3.4
CABF	**La Chapelle**	18.83	311	*e*P	P	19 26 21.3	-1.4
	comp=Z,6.0nm,0.6s						
CABF	**La Chapelle**	18.83	311	*e*P	P	19 26 21.3	-1.4
CABF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HINF	**Hinteralfeld**	18.98	315	*e*P	P	19 26 23.3	-1.0
VIVF	**Saint-Julien-l**	19.01	305	*e*P	P	19 26 24.0	-0.7
CDF	**Champ du Feu**	19.07	317	*e*P	P	19 26 24.0	-1.3
	comp=Z,5.1nm,0.8s						
CDF	**Champ du Feu**	19.07	317	*e*P	P	19 26 24.0	-1.3
CDF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LASF	**Ste Croix**	19.30	302	*e*P	P	19 26 27.8	0.0
HAU	**Haudompre**	19.36	315	*e*P	P	19 26 27.7	-0.8
SMF	**Signal de Mont**	20.23	309	*e*P	P	19 26 36.2	-1.4
	comp=Z,4.2nm,0.4s						
SMF	**Signal de Mont**	20.23	309	*e*P	P	19 26 36.2	-1.4
SMF				pmax	pmax		

	comp=Z,2.0nm,0.4s						
MTLF	**Montolieu**	20.25	299	*e*P	P	19 26 36.6	-1.1
	comp=Z,13nm,1.2s						
MTLF	**Montolieu**	20.25	299	*e*P	P	19 26 36.6	-1.1
MTLF				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MEZF	**Maizieres J'vi**	20.36	315	*e*P	P	19 26 38.9	0.0
LOR	**Lormes**	20.49	311	*e*P	P	19 26 40.9	+0.7
	comp=Z,1.4nm,0.3s						
LOR	**Lormes**	20.49	311	*e*P	P	19 26 40.9	+0.7
LOR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
OBN	**Obninsk**	20.52	16	*d* *i*P	P	19 26 41.8	+1.4
OBN				*e*S	S	19 30 23.8	+4.4
OBN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	**Obninsk**	20.52	16	*i* P	P	19 26 41.8	+1.4
	comp=Z,10.0nm,0.9s						
AVF	**Avril sur Loir**	20.60	309	*e*P	P	19 26 40.6	-0.7
	comp=Z,1.8nm,0.4s						
AVF	**Avril sur Loir**	20.60	309	*e*P	P	19 26 40.6	-0.7
AVF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CAF	**Calviac**	20.78	304	*e*P	P	19 26 43.5	+0.3
BGF	**Bois d'Agland**	20.83	308	*e*P	P	19 26 43.7	+0.1
TCF	**Toulx Ste Croi**	21.14	307	*e*P	P	19 26 47.8	+1.1
	comp=Z,1.4nm,0.5s,mb3.3						
TCF	**Toulx Ste Croi**	21.14	307	*e*P	P	19 26 47.8	+1.1
TCF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.5						
RJF	**Les Rejaudoux**	21.27	304	*e*P	P	19 26 49.1	+1.1
BAIF	**Baives**	21.65	318	*e*P	P	19 26 52.0	+0.2
ETSF	**Etsaut**	22.15	297	*e*P	P	19 26 58.2	+1.4
	comp=Z,1.1nm,0.4s,mb3.2						
ETSF	**Etsaut**	22.15	297	*e*P	P	19 26 58.2	+1.4
ETSF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.5						
MFF	**Saint Martin d**	22.77	307	*e*P	P	19 27 03.7	+1.0
	comp=Z,3.7nm,0.8s,mb3.5						
MFF	**Saint Martin d**	22.77	307	*e*P	P	19 27 03.7	+1.0
MFF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.5						
FLN	**La Foliniere**	23.76	312	*e*P	P	19 27 12.4	+0.2
GRR	**Gorron**	23.85	310	*e*P	P	19 27 12.9	-0.1
ESDC	**Sonseca Array**	24.46	288	P	P	19 27 20.2	+1.1
	comp=Z,1.8nm,0.6s,mb3.6,baz=87,slow=11,SNR=8.7						
SGMF	**Saint Gilles**	24.86	309	*e*P	P	19 27 24.4	+1.5
QUIF	**Quistinic**	25.14	308	*e*P	P	19 27 26.0	+0.5
FINES	**FINESS Array B**	25.69	359	P	P	19 27 29.8	-0.7
	comp=Z,1.0nm,0.4s,mb3.6,baz=159,slow=12,SNR=16						
FINES	**FINESS Array B**	25.69	359	P	P	19 27 29.8	-0.7
HFS	**Hagfors**	25.77	345	P	P	19 27 30.3	-1.0
	comp=Z,0.9nm,0.3s,mb3.7,baz=150,slow=12,SNR=16						
EVO	**Evora**	27.66	286	*e*P	P	19 27 51.6	+2.7
	comp=Z,4.3nm,0.7s,mb3.8						
EKA	**Eskdalemuir Ar**	28.26	323	P	P	19 27 57.1	+3.1
	comp=Z,0.4nm,0.3s,mb3.4,baz=116,slow=9.5,SNR=3.6						
ARCES	**ARCESS Array B**	33.82	359	P	P	19 28 40.8	-1.8
	comp=Z,1.2nm,0.8s,mb3.8,baz=170,slow=7.4,SNR=5.0						
DBIC	**Dimbokro**	40.90	232	P	P	19 29 44.5	+2.1
	comp=Z,2.5nm,0.3s,mb4.5,baz=37,slow=8.7,SNR=11						
MKAR	**Makanchi Array**	42.42	57	P	P	19 29 56.6	+2.0
	comp=Z,2.3nm,0.3s,mb4.4,baz=268,slow=8.6,SNR=51						
MKAR				ScP		19 35 29.6	
	comp=Z,0.2nm,0.5s,baz=247,slow=4.9,SNR=4.6						
SONM	**Songino Array**	58.16	51	P	P	19 31 55.4	+1.4
	comp=Z,0.4nm,0.5s,mb3.7,baz=291,slow=7.4,SNR=8.3						
SCHQ	**Schefferville**	63.50	320	P	P	19 32 29.6	-0.3
	comp=Z,1.2nm,0.4s,mb4.1,baz=55,slow=5.3,SNR=9.6						
SCHQ	**Schefferville**	63.50	320	P	P	19 32 29.6	-0.4
SSE	**Sheshan**	75.88	62	P	P	19 33 46.7	+1.0
	comp=Z,10.0nm,0.7s,mb4.7						

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*NEIC **17** 20:18:45.5±1.1,21.16S×179.10W,h592^{km}±12^{km}, mb4.5/11,Error ellipse: s-maj=13.8km s-min=8.7km az=220.0*

*IDC **17** 20:18:45.1±2.4,21.10S×179.06W,h582^{km}±28^{km}, mb3.7/13,mb1 3.9/16,mb1mx3.8/22,mbtmp4.7/16,Error ellipse: s-maj=20.6km s-min=14.2km az=45.0*

ISC 17 20:18:45.1±1.5**,21.2S**±0.1×**179.2W**±0.1**,h599**^{km}±17^{km}**, n41,**σ**0^{s}96**/39**,mb4.3**/19**,1C-4D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	8.08	172	P	P	20 20 44.6	-0.9
	51nm,0.3s,baz=236,slow=22,SNR=2.2						
DZM	**Mont Dzumac**	13.40	264	P	P	20 21 40.3	+2.7
	1.3nm,0.3s,baz=75,slow=22,SNR=19						
URZ	**Urewera**	17.28	190	P	P	20 22 14.4	-0.5
	5.0nm,0.3s,baz=217,slow=1.6,SNR=20						
HNR	**Honiara**	23.26	297	P	P	20 23 08.9	-0.9
	23nm,0.5s,mb5.0,baz=180,slow=10,SNR=2.9						
RPZ	**Rata Peaks**	23.86	198	P	P	20 23 15.0	+0.1
	11nm,0.7s,mb4.6,baz=337,slow=15,SNR=6.1						
CTA	**Charters Tower**	32.33	266	⇓*i*P	P	20 24 29.2	+1.1
	13nm,0.4s,mb4.9						
CTA	**Charters Tower**	32.33	266	P	P	20 24 29.3	+1.2
	18nm,0.4s,mb5.0,baz=92,slow=10,SNR=47						
CTAO	**Charters Tower**	32.33	266	*e*P	P	20 24 28.9	+0.9
	18nm,0.5s,mb5.0						
PMG	**Port Moresby**	34.44	285	P	P	20 24 46.6	+0.9
	28nm,0.7s,mb5.0,baz=67,slow=4.9,SNR=8.6						
PMG	**Port Moresby**	34.44	285	*e*P	P	20 24 46.4	+0.6
	27nm,0.8s,mb4.9						
STKA	**Stephens Creek**	36.48	245	P	P	20 25 03.9	+1.5
	2.5nm,0.5s,mb4.0,baz=102,slow=12,SNR=14						
STKA	**Stephens Creek**	36.48	245	P	P	20 25 03.9	+1.5
WB2	**Warramunga Arr**	43.40	263	⇓*i*P	P	20 25 57.7	-0.3
WB2				*e*S	S	20 31 40.0	-4.3
WRAB	**Tennant Creek**	43.40	263	*e*P	P	20 25 57.4	-0.6
	29nm,1.0s,mb4.8						
WRA	**Warramunga Arr**	43.41	263	P	P	20 25 57.8	-0.3
	7.4nm,0.3s,mb4.7,baz=97,slow=7.5,SNR=807						
WRA				S	S	20 31 39.6	-4.9
	0.6nm,0.7s,baz=98,slow=13,SNR=5.1						
KAKA	**Kakadu**	46.89	272	⇓*i*P	P	20 26 24.3	-0.5
	10nm,0.3s,mb4.8						
FITZ	**Fitzroy Crossi**	51.84	263	⇑*i*P	P	20 27 01.2	0.0
	5.3nm,0.3s,mb4.3						
MBWA	**Marble Bar**	56.62	258	*e*P	P	20 27 33.6	-0.9
	8.8nm,0.5s,mb4.2						
NWAO	**Narrogin (SRO)**	57.06	244	P	P	20 27 36.5	-0.8
	18nm,1.1s,mb4.2,baz=90,slow=1.0,SNR=2.8						
SBA	**Scott Base**	57.09	184	*e*P	P	20 27 38.4	+1.5
	8.2nm,0.8s,mb4.0						
VNDA	**Vanda**	57.10	185	P	P	20 27 38.0	+0.9
	2.1nm,0.5s,mb3.6,baz=353,slow=8.1,SNR=23						
VNDA	**Vanda**	57.10	185	*e*P	P	20 27 37.6	+0.5
	2.0nm,0.6s,mb3.5						
CASY	**Casey**	62.84	205	*e*P	P	20 28 14.4	-0.6
	5.0nm,0.8s,mb3.9						
KKM	**Kota Kinabalu**	68.88	286	*e*P	P	20 28 52.9	-0.2
KSM	**Kuching**	72.42	279	*e*P	P	20 29 13.4	-0.3
YHNB	**Yeheng**	73.61	305	*e*P	P	20 29 20.0	-0.3
PMSA	**Palmer Station**	81.07	157	*e*P	P	20 29 59.6	+0.2
	8.0nm,0.6s,mb4.3						
NVAR	**Mina Array Bea**	82.30	44	P	P	20 30 06.5	+0.3
	0.4nm,0.5s,baz=225,slow=6.4,SNR=2.9						
SYO	**Syowa Base**	85.78	193	⇓P	P	20 30 20.2	-2.4
SNAA	**Sanae**	87.32	179		P	20 30 28.7	-1.1
VNA3	**Neumayer Olymp**	87.50	177		P	20 30 31.2	+0.6
VNA2	**Neumayer--Watz**	87.92	177		P	20 30 31.6	-1.0
VNA1	**Neumayer--Stat**	88.16	177		P	20 30 35.0	+1.3
TXAR	**Lajitas Array**	88.37	58	P	P	20 30 36.6	+0.9
	1.6nm,0.8s,mb3.8,baz=219,slow=8.0,SNR=3.5						
ILAR	**Eielson Array**	89.26	13	P	P	20 30 37.6	-1.3
	0.5nm,0.5s,mb3.6,baz=213,slow=5.4,SNR=5.3						
CMAR	**Chiang Mai Arr**	89.32	290	P	P	20 30 41.5	+1.2
	2.2nm,0.9s,mb4.0,baz=132,slow=3.5,SNR=11						
PLCA	**Paso Flores**	89.58	134	P	P	20 30 41.9	+0.8
	2.5nm,0.7s,mb4.2,baz=236,slow=7.7,SNR=4.9						
FINES	**FINESS Array B**	136.14	343	PKP	PKPdf	20 36 59.9	+1.3
	0.5nm,0.6s,baz=14,slow=5.7,SNR=2.6						
AKASG	**Malin Array Be**	143.09	330	PKhKP		20 37 07.9	
	3.9nm,0.5s,baz=44,slow=4.2,SNR=20						
AKASG				PKP	PKPdf	20 37 11.3	0.0
	0.7nm,0.5s,baz=43,slow=4.2,SNR=7.1						
BRTR	**Keskin Array B**	146.49	311	PKPbc	PKPbc	20 37 20.8	+1.3
	0.8nm,0.5s,baz=156,slow=4.1,SNR=3.8						
DBIC	**Dimbokro**	164.53	158	PKP	PKPdf	20 37 42.5	+1.2
	3.6nm,1.1s,baz=195,slow=5.8,SNR=3.4						

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*SKHL **17** 20:23:59.0±0.5,45.99N×143.17E,h360^{km}±18^{km}, mb5.3/10,Ms3.8/3,msh5.4/1*

*NIED **17** 20:24:00,45.90N×143.20E,h360^{km},Mw4.9 Best double couple: $M_0$2.33×10^{16} NP1:ϕ_s146°,δ85°,λ77°. NP2:ϕ_s35°, δ14°,λ158°.*

*BJI **17** 20:24:00.3,46.14N×143.13E,h342^{km},mB4.7,mb4.8*

*MOS **17** 20:24:00.7±0.9,46.09N×143.05E,h337^{km},mb4.8/67, Error ellipse: s-maj=8.2km s-min=4.8km az=94.8*

*JMA **17** 20:24:01.2±0.2,45.92N×143.18E,h353^{km}±2^{km},M4.9*

*NEIC **17** 20:24:01.9±0.3,46.09N×143.05E,h336^{km}±3^{km}, mb4.8/126,Error ellipse: s-maj=3.4km s-min=2.4km az=156.0*

*IDC **17** 20:24:01.9±0.6,46.11N×142.99E,h336^{km}±5^{km},mb4.2/27, mb1 4.4/32,mb1mx4.4/33,mbtmp5.0/32,Error ellipse: s-maj=9.4km s-min=7.1km az=119.0*

ISC 17 20:24:01.0±0.1**,46.09N**±0.02×**143.05E**±0.03**,h338**^{km}±1^{km}**, h346**^{km}±2.2^{km}**:pP-P,n431,**σ**0^{s}96**/476**,mb4.6**/157**,78C-37D, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	0.88	347	⇓*i*PN	P	20 24 47.3	+2.1
YSS	**Yuzh-Sakhalins**	0.88	347	⇓*i*Pn	P	20 24 47.2	+2.1
YSS	**Yuzh-Sakhalins**	0.88	347	⇓*i*P	P	20 24 47.2	+2.0
YSS				⇓*i*P		20 24 47.2	
YSS				AMB	AMB	20 24 48.0	
	1μm,0.6s						
YSS				*e*rx	rx	20 24 53.3	
YSS				*i* S	S	20 25 21.6	+1.8
YSS				A		20 25 23.5	
	4μm,1.0s						
YSS				A		20 25 24.0	
	10μm,3.0s						
YSS				A		20 25 24.0	
	13μm,3.0s						
JWK2	**Keihoku**	1.12	227	P	P	20 24 47.9	+1.7
JWK2				S	S	20 25 23.1	+1.5
JSE	**Soyaes**	1.18	196	P	P	20 24 47.4	+0.9
JSE				*e*S	S	20 25 23.6	+1.4
JRR	**Rishiri**	1.55	233	P	P	20 24 49.9	+1.4
JRR				S	S	20 25 28.1	+2.3
JSS	**Shosan**	1.89	207	P	P	20 24 51.9	+1.2
ASAJ	**Asahikawa**	2.00	189	PN	P	20 24 52.5	+1.0
ASAJ				S	S	20 25 32.6	+1.6
ASAJ				pmax	pmax		
	comp=Z,263nm,0.3s						
ASAJ	**Asahikawa**	2.00	189	P	P	20 24 52.5	+0.9
	comp=Z,263nm,0.3s,baz=12,slow=4.1,SNR=2402						
ASAJ				S	S	20 25 32.5	+1.5
	baz=121,slow=33,SNR=7.5						
ASAJ	**Asahikawa**	2.00	189	P	P	20 24 52.3	+0.8
ASAJ				*e*S	S	20 25 32.8	+1.8
JYG	**Yagishiri**	2.02	215	P	P	20 24 52.5	+0.8
JYG				*e*S	S	20 25 32.7	+1.4
JMP	**Maruseppu**	2.10	174	P	P	20 24 52.6	+0.4
JTKR	**Abashiri--Toko**	2.21	164	P	P	20 24 53.5	+0.4
JTKR				*e*S	S	20 25 34.3	+0.4
JKK2	**Kamakawa 2**	2.23	186	P	P	20 24 53.9	+0.6
JKK2				*e*S	S	20 25 35.7	+1.5
JHR	**Hokuryu**	2.53	202	P	P	20 24 56.4	+0.7
JRA	**Rausu**	2.61	145	P	P	20 24 56.7	+0.3
JRA				S	S	20 25 40.9	+1.2
JAR	**Ashorobuto**	2.84	169	P	P	20 24 58.6	+0.2
JAR				*e*S	S	20 25 43.3	-0.1
YUK	**Yuzh-Kuril'sk**	2.87	135	*e*PN	P	20 24 57.7	-0.9
YUK				*i* S	S	20 25 43.2	-0.5
YUK				pmax	pmax		
	comp=Z,360nm,0.3s						
YUK				smax			
	comp=E,3μm,0.6s						
YUK				smax			
	comp=N,1900μm,0.6s						
YUK				smax			
	comp=N,18μm,3.0s						
YUK				smax			
	comp=E,18μm,3.0s						
YUK	**Yuzh-Kuril'sk**	2.87	135	*e*P	P	20 24 58.0	-0.6
YUK				AMB	AMB	20 24 59.5	
	comp=E,360nm,0.3s						
YUK				*e*rx	rx	20 25 14.5	
YUK				*i* S	S	20 25 43.2	-0.5
YUK				A		20 25 46.5	
	comp=E,2μm,0.6s						
YUK				A		20 25 46.5	
	comp=E,3μm,0.6s						
YUK				A		20 25 46.5	
	comp=E,18μm,3.0s						
JFR	**Furan**	2.95	187	P	P	20 24 59.5	+0.2
JFR				*e*S	S	20 25 45.0	0.0
UGL	**Uglegorsk**	3.06	348	⇓*i*PN	P	20 25 02.6	+2.2
UGL				*e*S	S	20 25 49.0	+2.1
UGL				pmax	pmax		
	comp=Z,2μm,0.7s						
UGL				pmax	pmax		
	comp=N,580nm,0.6s						
UGL				pmax	pmax		
	comp=E,910nm,0.6s						
UGL				pmax	pmax		
	comp=N,1μm,0.8s						
UGL				pmax	pmax		
	comp=E,3μm,0.8s						
UGL				pmax	pmax		
	comp=Z,5μm,0.8s						
UGL				smax			
	comp=N,320nm,0.7s						
UGL				smax			
	comp=E,600nm,1.1s						
UGL				smax			
	comp=N,2μm,4.0s						
UGL				smax			
	comp=E,4μm,2.4s						
UGL	**Uglegorsk**	3.06	348	⇓*i*P	P	20 25 02.6	+2.2
UGL				⇓*i*P		20 25 02.6	
UGL				AMB	AMB	20 25 03.5	
	comp=E,1μm,0.8s						
UGL				AMB	AMB	20 25 03.5	
	comp=E,3μm,0.8s						
UGL				AMB	AMB	20 25 03.5	
	comp=E,5μm,0.8s						
UGL				AMB	AMB	20 25 03.5	
	comp=E,580nm,0.6s						
UGL				AMB	AMB	20 25 03.5	
	comp=E,910nm,0.6s						
UGL				AMB	AMB	20 25 03.5	
	comp=E,2μm,0.6s						
UGL				*i* S	S	20 25 50.0	+3.1
UGL				*e*S	S	20 25 50.0	+3.1
UGL				A		20 25 51.5	
	comp=E,600nm,1.1s						
UGL				A		20 25 51.5	
	comp=E,320nm,0.7s						
UGL				A		20 25 52.0	
	comp=E,4μm,2.4s						
UGL				A		20 25 52.0	
	comp=E,2μm,4.0s						
UGL				A		20 25 52.0	
	comp=E,1μm,4.0s						
JSK	**Shakotan**	3.30	215	P	P	20 25 03.3	+0.6
JAK	**Akkeshi**	3.31	159	P	P	20 25 00.8	-2.0
JAK				*e*S	S	20 25 48.2	-3.1
NEM2	**Nemuro 2**	3.33	144	P	P	20 25 00.5	-2.5
NEM2				*e*S	S	20 25 47.4	-4.2
JEW	**Eniwo**	3.45	200	P	P	20 25 04.8	+0.7
JEW				*e*S	S	20 25 53.1	-0.5
KUR	**Kuril'sk**	3.48	103	⇓*i*P	P	20 25 02.2	-2.3
KUR				AMB	AMB	20 25 02.4	
	comp=E,2μm,1.0s						
KUR				AMB	AMB	20 25 03.4	
	comp=E,190nm,1.0s						
KUR				AMB	AMB	20 25 03.4	
	comp=E,130nm,1.0s						
KUR				AMB	AMB	20 25 03.4	
	comp=E,550nm,1.0s						
KUR				*e*S	S	20 25 52.0	-2.3
KUR				A		20 25 54.0	
	comp=E,5μm,4.0s						
KUR				A		20 25 54.0	
	comp=E,2μm,4.0s						
KUR				A		20 26 12.0	
	comp=E,150nm,0.5s						
KUR				A		20 26 12.0	
	comp=E,120nm,0.5s						
JCH	**Churui**	3.49	176	P	P	20 25 02.9	-1.6
JCH				*e*S	S	20 25 49.6	-4.7
JNBK	**Urakawa-nobuka**	3.82	183	P	P	20 25 06.4	-1.4
JNBK				*e*S	S	20 25 57.5	-2.8
JKB	**Kayabe**	4.45	200	P	P	20 25 13.3	-1.2
JKB				*e*S	S	20 26 06.7	-5.5
TEY	**Ternei**	4.65	259	⇑*i*P	P	20 25 15.8	-0.9
TEY				AMB	AMB	20 25 16.5	
	comp=E,80nm,0.6s						
TEY				AMB	AMB	20 25 16.5	
	comp=E,290nm,0.6s						
TEY				AMB	AMB	20 25 16.5	
	comp=E,420nm,0.6s						
TEY				*i* S	S	20 26 15.0	-1.1
TEY				A		20 26 16.0	
	comp=E,3μm,4.0s						
TEY				A		20 26 16.0	
	comp=E,2μm,4.0s						
TEY				A		20 26 17.0	
	comp=E,138nm,1.0s						
TEY				A		20 26 17.0	
	comp=E,172nm,1.0s						
JOSM	**Okushiri--Mats**	4.76	214	P	P	20 25 17.4	-0.5
JOSM				*e*S	S	20 26 17.1	-1.3
TYV	**Tymovskoe**	4.78	357	⇓*i*P	P	20 25 16.6	-1.5
TYV				AMB	AMB	20 25 17.0	
	comp=E,500nm,1.0s						
TYV				AMB	AMB	20 25 17.0	
	comp=E,900nm,1.0s						
TYV				AMB	AMB	20 25 17.0	
	comp=E,55nm,0.6s						
TYV				AMB	AMB	20 25 17.0	
	comp=E,109nm,0.6s						
TYV				AMB	AMB	20 25 17.0	
	comp=E,188nm,0.6s						
TYV				*i* S	S	20 26 17.8	-0.9
TYV				A		20 26 20.0	
	comp=E,493nm,1.0s						
TYV				A		20 26 20.0	
	comp=E,330nm,1.0s						
TYV				A		20 26 21.0	
	comp=E,2μm,3.0s						
TYV				A		20 26 21.0	
	comp=E,5μm,5.0s						
TYV				AMS	AMS	20 28 05.0	
	comp=E,500nm,10.0s						
JOT	**Ohata**	4.93	198	P	P	20 25 17.9	-1.8
JOT				*e*S	S	20 26 16.0	-5.6
GRNR	**Gornyy**	6.43	319	⇓*i*P	P	20 25 34.0	-3.0
GRNR				AMB	AMB	20 25 34.8	
	comp=E,170nm,1.0s						
GRNR				AMB	AMB	20 25 34.8	
	comp=E,110nm,1.0s						
GRNR				AMB	AMB	20 25 34.8	
	comp=E,390nm,1.0s						
GRNR				*e*S	S	20 26 51.8	-0.6
GRNR				A		20 26 52.2	
	comp=E,84nm,1.0s						
NKL	**Nikolayevsk**	7.23	349	*e*P	P	20 25 43.0	-3.5
NKL				AMB	AMB	20 25 44.0	
	comp=E,15nm,0.5s						
NKL				AMB	AMB	20 25 44.0	
	comp=E,25nm,0.5s						
NKL				*i* S	S	20 27 10.8	+1.3
NKL				A		20 27 13.6	
	comp=E,380nm,2.0s						
NKL				A		20 27 14.0	
	comp=E,1μm,3.0s						
NKL				A		20 27 14.0	
	comp=E,500nm,3.0s						
OKH	**Okha**	7.46	359	*i* S	S	20 27 13.8	-0.7
OKH				A		20 27 14.0	
	comp=E,2μm,5.0s						
KLR	**Kul'dur**	8.25	296	*e*P	P	20 25 56.8	-1.9
KLR				*e*S	S	20 27 34.0	+2.6
KLR				A		20 27 36.7	
	comp=E,45nm,2.0s						
KLR				A		20 27 36.7	
	comp=E,72nm,2.0s						
EKMR	**Ekimchan**	9.57	320	⇓*i*P	P	20 26 13.6	-0.9
EKMR				AMB	AMB	20 26 16.3	
	comp=E,20nm,0.6s						
EKMR				AMB	AMB	20 26 16.3	
	comp=E,8.0nm,0.6s						
EKMR				AMB	AMB	20 26 16.3	
	comp=E,28nm,0.6s						
MDJ	**Mudanjiang**	9.59	266	P	P	20 26 15.6	+0.8
MDJ				S	S	20 28 02.8	+2.2
MDJ				PCP	PcP	20 31 54.8	-2.3
MDJ				SCP		20 34 53.3	
MDJ				PCS		20 35 28.3	
MDJ				SCS	ScS	20 38 30.0	+0.9
MDJ				AMB	AMB		
	comp=Z,190nm,0.8s						
MDJ				AMB	AMB		
	comp=Z,120nm,4.3s						
MDJ	**Mudanjiang**	9.59	266	*e*Pn	P	20 26 15.3	+0.6
	comp=Z,125nm,0.6s						
MDJ				*e*S	S	20 28 02.3	+1.8
SKR	**Severo-Kuril's**	9.83	57	*e*PN	P	20 26 15.0	-2.6
SKR				S	S	20 28 04.0	-1.7
SKR				pmax	pmax		
	comp=N,150nm,0.5s						
SKR				pmax	pmax		
	comp=E,120nm,0.5s						
SKR				pmax	pmax		
	comp=Z,770nm,0.5s						
SKR				pmax	pmax		
	comp=Z,2μm,2.0s						
SKR				smax			
	comp=N,310nm,0.5s						
SKR				smax			
	comp=E,150nm,0.5s						
SKR				smax			
	comp=N,2μm,5.0s						
SKR				smax			
	comp=E,2μm,5.0s						
SKR	**Severo-Kuril's**	9.83	57	*e*P	P	20 26 15.0	-2.6
SKR				AMB	AMB	20 26 16.4	
	comp=E,150nm,0.5s						
SKR				AMB	AMB	20 26 16.4	
	comp=E,120nm,0.5s						
SKR				AMB	AMB	20 26 16.4	
	comp=E,770nm,0.5s						
SKR				AMB	AMB	20 26 16.4	
	comp=E,2μm,2.0s						
SKR				*e*S	S	20 28 04.0	-1.7
SKR				A		20 28 09.5	
	comp=E,310nm,0.5s						
SKR				A		20 28 09.5	
	comp=E,150nm,0.5s						
SKR				A		20 28 09.5	
	comp=E,80nm,0.5s						
SKR				A		20 28 09.5	
	comp=E,2μm,5.0s						
SKR				AMS	AMS	20 30 10.0	
	comp=E,1μm,10.0s						
MAJO	**Matsushiro**	10.21	203	*e*PN	P	20 26 20.9	-1.4
MAJO				pmax	pmax		
	comp=Z,90nm,0.6s						
MAJO	**Matsushiro**	10.21	203	*e*Pn	P	20 26 20.9	-1.4
	comp=Z,90nm,0.6s						
MAT	**Matsushiro**	10.21	203	*e*PN	P	20 26 20.0	-2.3
MAT				S	S	20 28 11.0	-3.1
MAT				pmax	pmax		
	comp=Z,103nm,0.9s						
MAT	**Matsushiro**	10.21	203	*e*P	P	20 26 20.0	-2.3
	comp=Z,102nm,0.9s						
MAT				S	S	20 28 11.0	-3.1
MAT	**Matsushiro**	10.21	203	P	P	20 26 20.1	-2.2
MAT				*e*S	S	20 28 11.1	-3.0
MJAR	**Matsushiro Arr**	10.21	203	P	P	20 26 22.3	0.0
	comp=Z,11nm,0.3s,baz=18,slow=11,SNR=121						
YASR	**Yasnyy**	12.11	312	*e*P	P	20 26 43.7	-1.5
YASR				AMB	AMB	20 26 47.3	
	comp=Z,3.0nm,0.7s						
YASR				AMB	AMB	20 26 47.3	
	comp=Z,7.0nm,0.7s						
YASR				AMB	AMB	20 26 47.3	
	comp=Z,13nm,0.7s						
PET	**Petropavlovsk**	12.26	50	*e*PN	P	20 26 46.2	-0.8
PET				*e*S	S	20 28 58.2	-0.4
PET				pmax	pmax		
	comp=Z,400nm,3.9s						
PET				pmax	pmax		
	comp=Z,100nm,3.3s						
PET				pmax	pmax		
	comp=Z,91nm,1.3s						

PET				pmax	pmax		
	comp=E,74nm,0.7s						
PET				pmax	pmax		
	comp=N,63nm,0.8s						
PET				smax			
	comp=E,300nm,3.6s						
PET				smax			
	comp=N,108nm,0.6s						
PET				smax			
	comp=E,200nm,6.7s						
PET				MLR	MLR		
	comp=Z,100nm,15.0s						
BMKR	**Bomnak**	**12.49**	**319**	⇑*i*P	**P**	**20 26 48.5**	**-1.3**
BMKR				AMB	AMB	20 26 50.0	
	comp=Z,15nm,0.6s						
BMKR				AMB	AMB	20 26 50.0	
	comp=Z,25nm,0.6s						
CN2	**Changchun**	**12.68**	**266**	⇓P	**P**	**20 26 50.8**	**-1.3**
CN2				*e*XP		20 28 11.1	
CN2				*e*S	**S**	**20 29 06.5**	**-1.3**
CN2				AMB	AMB		
	comp=Z,80nm,0.9s						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
ZEA	**Zeya**	**12.72**	**313**	*e*P	**P**	**20 26 50.4**	**-2.1**
ZEA				AMB	AMB	20 26 51.6	
	comp=Z,52nm,0.8s						
ZEA				AMB	AMB	20 26 51.6	
	comp=Z,42nm,0.8s						
ZEA				AMB	AMB	20 26 51.6	
	comp=Z,61nm,0.8s						
ZEA				*e*S	**S**	**20 29 09.0**	**+0.5**
ZEA				A		20 29 13.0	
	comp=Z,600nm,6.0s						
JHJ	**Hachijo jima 2**	**13.20**	**192**	P	**P**	**20 26 58.6**	**+0.3**
	comp=Z,50nm,0.3s,baz=77,slow=21,SNR=12						
JHJ				S	**S**	**20 29 20.9**	**+1.8**
	comp=Z,19nm,0.3s,baz=248,slow=22,SNR=5.0						
KROS	**Kirovskiy**	**13.22**	**315**	*e*P	**P**	**20 26 55.9**	**-2.6**
KROS				AMB	AMB	20 26 56.6	
	comp=Z,6.0nm,0.5s						
KS15	**Wonju Array Si**	**14.22**	**238**	*e*P	**P**	**20 27 09.4**	**-0.6**
MA2	**Magadan**	**14.27**	**16**	*e*P	**P**	**20 27 09.3**	**-1.1**
MA2				pmax	pmax		
	comp=Z,144nm,0.7s						
MA2	**Magadan**	**14.27**	**16**	*e*P	**P**	**20 27 09.2**	**-1.1**
	comp=Z,144nm,0.7s						
SNY	**Shenyang**	**14.65**	**260**	⇓P	**P**	**20 27 14.3**	**-0.3**
SNY				S	**S**	**20 29 49.8**	**0.0**
SNY				AMB	AMB		
	comp=Z,50nm,0.8s						
SNY				LR	LR		
	comp=E,230nm,12.0s						
INCN	**Inchon**	**14.95**	**241**	*e*P	**P**	**20 27 17.4**	**-0.4**
	comp=E,62nm,0.8s						
CLNS	**Chul’man**	**15.55**	**320**	*e*P	**P**	**20 27 24.1**	**-0.2**
CLNS				*e*		20 30 10.1	
CLNS				pmax	pmax		
	comp=N,14nm,0.9s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,24nm,0.9s						
CLNS				pmax	pmax		
	comp=N,61nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,21nm,1.1s						
JNU	**Nakatsue**	**15.97**	**220**	P	**P**	**20 27 27.9**	**-0.9**
	comp=E,5.6nm,0.3s,baz=63,slow=2.7,SNR=50						
HIA	**Hailar**	**16.00**	**290**	⇓*i*P	**P**	**20 27 27.2**	**-1.9**
HIA				pmax	pmax		
	comp=Z,18nm,0.6s						
HIA	**Hailar**	**16.00**	**290**	⇓*i*P	**P**	**20 27 27.2**	**-1.9**
	comp=Z,18nm,0.6s						
SEY	**Seymchan**	**17.69**	**14**	*i* P	**P**	**20 27 46.4**	**0.0**
SEY				*e*S	**S**	**20 30 52.2**	**+3.8**
SEY				pmax	pmax		
	comp=Z,60nm,0.6s						
SEY				pmax	pmax		
	comp=N,30nm,0.7s						
SEY				pmax	pmax		
	comp=E,40nm,0.7s						
YAK	**Yakutsk**	**17.73**	**339**	*c* *i*P	**P**	**20 27 45.0**	**-1.8**
YAK				*i* S	**S**	**20 30 47.0**	**-2.2**
YAK				pmax	pmax		
	comp=Z,20nm,0.9s						
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=E,11nm,1.2s						
YAK				smax			
	comp=N,39nm,1.1s						
YAK				smax			
	comp=Z,22nm,1.5s						
YAK				smax			
	comp=E,62nm,1.0s						
CBIJ	**Chichi jima**	**18.97**	**182**	P	**P**	**20 27 58.7**	**-0.8**
	comp=E,16nm,0.3s,baz=327,slow=8.1,SNR=12						
CIT	**Chita**	**20.13**	**298**	*e*P	**P**	**20 28 10.9**	**+0.2**
CIT				*e*		20 31 37.6	
FX1	**Attu Island--F**	**20.60**	**60**	P	**P**	**20 28 16.9**	**+1.6**
FX1				pmax	pmax		
	comp=Z,195nm,0.5s						
FX1	**Attu Island--F**	**20.60**	**60**	P	**P**	**20 28 16.9**	**+1.6**
	comp=Z,195nm,0.5s,baz=293,slow=2.7,SNR=131						
FX1	**Attu Island--F**	**20.60**	**60**	*e*P	**P**	**20 28 16.4**	**+1.1**
TIA	**Tai’an**	**21.79**	**252**	*e*P	**P**	**20 28 27.0**	**+0.1**
TIA				AMB	AMB		
	comp=Z,120nm,1.3s,mb5.0						
JOW	**Kunigami**	**22.53**	**216**	P	**P**	**20 28 33.9**	**0.0**
	comp=Z,56nm,0.6s,mb5.0,baz=26,slow=6.1						
SSE	**Sheshan**	**22.62**	**236**	P	**P**	**20 28 35.3**	**+0.6**
SSE				S	**S**	**20 32 16.9**	**+1.7**
SSE				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.7						
SSE				AMB	AMB		
	comp=Z,40nm,3.6s						
SSE				LR	LR		
	comp=N,40nm,14.5s						
SSE				LR	LR		
	comp=E,60nm,14.5s						
SSE				LR	LR		
	comp=Z,140nm,16.8s						
SSE	**Sheshan**	**22.62**	**236**	P	**P**	**20 28 35.2**	**+0.5**
	comp=Z,40nm,0.8s,mb4.7						
SSE				pP		20 29 29.0	
SSE				S	**S**	**20 32 16.9**	**+1.7**
SSE				sS		20 33 56.5	
SSE				LR	LR		
	comp=Z,150nm,16.8s						
NJ2	**Nanjing**	**23.32**	**242**	*e*P	**P**	**20 28 41.3**	**+0.1**
NJ2				XP		20 30 22.9	
NJ2				PCP	PcP	20 32 16.1	-2.3
NJ2				S	**S**	**20 32 27.0**	**+0.1**
NJ2				PCS		20 35 56.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,450nm,6.0s						
NJ2				LR	LR		
	comp=N,250nm,14.6s						
NJ2				LR	LR		
	comp=E,170nm,19.4s						
NJ2				LR	LR		
	comp=Z,310nm,30.9s						
HHC	**Hu-ho-hao-te**	**23.35**	**268**	*i* P	**P**	**20 28 42.8**	**+1.4**
HHC				AMB	AMB		
	comp=Z,90nm,1.4s,mb4.8						
HHC				AMB	AMB		
	comp=Z,90nm,3.9s						
HHC				LR	LR		
	comp=N,210nm,13.1s						
HHC				LR	LR		
	comp=E,520nm,15.5s						
HHC				LR	LR		
	comp=Z,90nm,6.3s						
BTO	**Baotou**	**24.52**	**269**	*e*P	**P**	**20 28 52.5**	**+0.4**
BTO				AMB	AMB		
	comp=Z,60nm,0.8s,mb4.9						
SONM	**Songino Array**	**24.93**	**287**	P	**P**	**20 28 56.0**	**+0.3**
	comp=Z,9.8nm,0.8s,mb4.1,baz=82,slow=8.7,SNR=68						
SONM				ScP		20 35 26.9	
	comp=Z,5.6nm,0.8s,baz=131,slow=1.8,SNR=29						
BILL	**Bilibino**	**25.05**	**21**	*d* *i*P	**P**	**20 28 55.0**	**-1.5**
BILL				pmax	pmax		
	comp=Z,25nm,2.0s,mb4.1						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s						
BILL	**Bilibino**	**25.05**	**21**	*e*P	**P**	**20 28 54.3**	**-2.2**
	comp=Z,4.9nm,0.4s,mb4.1						
TLY	**Talaya**	**26.27**	**297**	*e*P	**P**	**20 29 06.7**	**-1.1**
TLY				*e*S	**S**	**20 33 06.8**	**-7.6**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,29nm,10.0s						
TIXI	**Tiksi**	**26.51**	**350**	⇓*i*P	**P**	**20 29 07.2**	**-2.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb3.8						
ZAK	**Zakamensk**	**26.61**	**294**	*e*P	**P**	**20 29 08.1**	**-2.8**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GSTR	**Great Sitkin T**	**27.16**	**62**	*e*P	**P**	**20 29 15.5**	**-0.3**
XAN	**Xi’an**	**28.54**	**257**	P	**P**	**20 29 27.1**	**-1.2**
QZH	**Quanzhou**	**28.81**	**231**	⇑*i*P	**P**	**20 29 31.3**	**+0.6**
QZH				AMB	AMB		
	comp=Z,110nm,0.8s,mb5.1						
LZH	**Lanzhou**	**30.92**	**265**	⇓*i*P	**P**	**20 29 49.5**	**+0.6**
LZH				AP	pP	20 30 54.5	+1.1
LZH				PP	PP	20 31 08.5	+2.2
LZH				XP	sP	20 31 34.8	+2.6
LZH				S	**S**	**20 34 27.5**	**-0.2**
LZH				XS		20 36 23.4	
LZH				AMB	AMB		
	comp=Z,70nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,270nm,5.3s						
LZH	**Lanzhou**	**30.92**	**265**	⇓*i*P	**P**	**20 29 49.5**	**+0.6**
LZH				*PP	pP	20 30 54.5	+1.1
LZH						20 31 08.5	
LZH				*SP	sP	20 31 34.7	+2.5
LZH				S	**S**	**20 34 27.5**	**-0.2**
LZH				*SS		20 36 23.4	
LZH				pmax	pmax		
	comp=Z,79nm,1.3s,mb4.8						
LZH	**Lanzhou**	**30.92**	**265**	⇓*i*P	**P**	**20 29 49.5**	**+0.6**
	comp=Z,79nm,1.3s,mb4.8						
LZH				pP	pP	20 30 54.5	+1.1
LZH				PP	PP	20 31 08.5	+2.2
LZH				sP	sP	20 31 34.7	+2.5
LZH				S	**S**	**20 34 27.5**	**-0.2**
LZH				sS		20 36 23.4	
GTA	**Gaotai**	**32.13**	**274**	⇓*i*P	**P**	**20 30 00.3**	**+1.0**
GTA				AP	pP	20 31 06.8	+2.5
GTA				PP	PP	20 31 23.1	+2.3
GTA				XP	sP	20 31 48.8	+5.6
GTA				PCP	PcP	20 32 40.1	+0.4
GTA				S	**S**	**20 34 46.8**	**+0.3**
GTA				SCP		20 35 50.9	
GTA				PCS		20 36 26.3	
GTA				XS		20 36 44.9	
GTA				SS	SS	20 37 12.8	-0.1
GTA				SCS	ScS	20 39 49.9	+1.9
GTA				AMB	AMB		
	comp=Z,60nm,0.7s,mb4.9						
GTA				AMB	AMB		
	comp=Z,110nm,7.6s						
GTA				LR	LR		
	comp=N,130nm,12.9s						
GTA				LR	LR		
	comp=E,90nm,15.2s						
GTA				LR	LR		
	comp=Z,190nm,6.8s						
CD2	**Chengdu**	**33.90**	**257**	⇓*i*P	**P**	**20 30 14.3**	**-0.2**
CD2				AMB	AMB		
	comp=Z,50nm,1.0s,mb4.7						
GYA	**Guiyang**	**34.87**	**248**	⇓*i*P	**P**	**20 30 21.9**	**-0.7**
GYA				AP	pP	20 31 29.4	+0.7
GYA				XP	sP	20 32 08.6	+1.2
GYA				PCP	PcP	20 32 49.0	+1.3
GYA				S	**S**	**20 35 24.5**	**-4.2**
GYA				SCP		20 35 57.3	
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.3						
GYA				AMB	AMB		
	comp=Z,90nm,3.2s						
GYA				LR	LR		
	comp=N,460nm,16.2s						
GYA				LR	LR		
	comp=E,490nm,16.8s						
GYA				LR	LR		
	comp=Z,380nm,16.0s						
KMI	**Kunming**	**38.35**	**251**	P	**P**	**20 30 52.1**	**+0.5**
KMI				AP	pP	20 32 00.3	+1.7
KMI				PP	PP	20 32 30.9	+2.4
KMI				XP	sP	20 32 37.1	+0.8
KMI				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.5						
KMI	**Kunming**	**38.35**	**251**	P	**P**	**20 30 52.1**	**+0.5**
	comp=Z,33nm,0.9s,mb4.6						
KMI				pP	pP	20 32 00.3	+1.7
KMI				PP	PP	20 32 30.9	+2.4
KMI				sP	sP	20 32 37.1	+0.8
QIZ	**Qiongzhong**	**38.41**	**237**	*e*P	**P**	**20 30 53.0**	**+0.8**
IMA	**Indian Mountai**	**38.43**	**36**	*e*P	**P**	**20 30 50.8**	**-1.1**
IMA				pmax	pmax		
	comp=Z,477nm,0.9s,mb5.7						
IMA	**Indian Mountai**	**38.43**	**36**	*e*P	**P**	**20 30 50.8**	**-1.1**
	comp=Z,477nm,0.9s,mb5.7						
WMQ	**Urumqi**	**38.57**	**287**	*e*P	**P**	**20 30 53.8**	**+0.6**
WMQ				AP	pP	20 32 02.8	+2.5
WMQ				XP	sP	20 32 41.9	+4.0
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.1						
WMQ				AMB	AMB		
	comp=Z,140nm,6.2s						
SPU	**Mount Spurr**	**39.53**	**44**	*e*P	**P**	**20 31 00.6**	**-0.3**
KDAK	**Kodiak Island**	**39.85**	**49**	*e*P	**P**	**20 31 02.2**	**-1.4**
	comp=Z,23nm,0.8s,mb4.5						
SLKM	**Skilak Lake**	**40.53**	**44**	*e*P	**P**	**20 31 07.4**	**-1.6**
MKAR	**Makanchi Array**	**40.95**	**294**	P	**P**	**20 31 12.3**	**-0.3**
	comp=Z,4.3nm,0.6s,mb3.9,baz=79,slow=8.5,SNR=52						
MKAR				ScP		20 36 21.9	
	comp=Z,0.8nm,0.6s,baz=62,slow=4.0,SNR=8.3						
MKAR	**Makanchi Array**	**40.95**	**294**	P	**P**	**20 31 12.3**	**-0.3**
MKAR				ScP		20 36 21.9	
SML	**Sawmill**	**41.19**	**42**	⇑*i*P	**P**	**20 31 13.2**	**-1.2**
ILAR	**Eielson Array**	**41.36**	**38**	P	**P**	**20 31 15.0**	**-0.8**
	comp=Z,14nm,0.6s,mb4.4,baz=258,slow=5.4,SNR=114						
ILAR				PcP	PcP	20 33 05.1	-2.5
	comp=Z,2.6nm,0.5s,baz=278,slow=3.5,SNR=8.7						
DIV	**Divide**	**42.54**	**43**	*e*P	**P**	**20 31 24.4**	**-0.7**
	comp=Z,61nm,0.5s,mb5.0						
EYAK	**Cordova Ski Ar**	**42.68**	**44**	⇑*e*P	**P**	**20 31 25.8**	**-0.6**
LSA	**Lhasa**	**43.31**	**266**	P	**P**	**20 31 33.4**	**+1.6**
LSA	**Lhasa**	**43.31**	**266**	⇓*i*P	**P**	**20 31 33.3**	**+1.5**
LSA				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.2						
LSA	**Lhasa**	**43.31**	**266**	⇓*i*P	**P**	**20 31 33.3**	**+1.5**
	comp=Z,11nm,0.5s,mb4.3						
SHL	**Shillong**	**45.38**	**261**	⇓*i*P	**P**	**20 31 47.5**	**-0.8**
VOSK	**Vostochnaya**	**45.55**	**306**	P	**P**	**20 31 48.6**	**-0.6**
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CM31	**Chiang Mai Arr**	**45.55**	**248**	*e*P	**P**	**20 31 49.4**	**-0.2**
	comp=Z,3.9nm,0.6s,mb3.7						
CMAR	**Chiang Mai Arr**	**45.55**	**248**	P	**P**	**20 31 49.7**	**+0.1**
	comp=Z,5.4nm,0.8s,mb3.7,baz=27,slow=7.3,SNR=26						
CMAR				PcP	PcP	20 33 22.4	0.0
	comp=Z,1.6nm,0.8s,baz=350,slow=1.1,SNR=6.4						
CMAR				ScP		20 36 42.2	
	comp=Z,2.7nm,0.9s,baz=18,slow=3.7,SNR=12						
INK	**Inuvik**	**45.87**	**31**	⇑*i*P	**P**	**20 31 50.0**	**-1.5**
INK				pmax	pmax		
	comp=Z,17nm,0.5s						
INK	**Inuvik**	**45.87**	**31**	⇑*i*P	**P**	**20 31 50.0**	**-1.5**
	comp=Z,17nm,0.5s,mb4.4						
KKM	**Kota Kinabalu**	**46.16**	**218**	*e*P	**P**	**20 31 53.8**	**-0.6**
ZRNK	**Zerenda**	**46.57**	**307**	*e*P	**P**	**20 31 56.5**	**-0.6**
ZRNK				pmax	pmax		
	comp=Z,68nm,0.6s,mb5.0						
ZRNK	**Zerenda**	**46.57**	**307**	*e*P	**P**	**20 31 56.5**	**-0.6**
	comp=Z,68nm,0.6s,mb5.0						
AAK	**Ala-Archa**	**47.75**	**292**	*c* *i*P	**P**	**20 32 05.8**	**-0.5**
AAK				pmax	pmax		
	comp=Z,12nm,1.9s,mb3.8						
GUN	**Gumba**	**48.07**	**268**	*e*P	**P**	**20 32 09.0**	**0.0**
	comp=Z,36nm,0.5s,mb4.8						
KSH	**Kashi**	**48.34**	**288**	*e*P	**P**	**20 32 11.5**	**+0.7**
KSH				*e*AP	pP	20 33 22.6	+2.0
KSH				*e*PCP	PcP	20 33 33.1	+1.0
KSH				*e*XP	sP	20 34 01.1	+2.9
KSH				*e*PP	PP	20 34 07.8	+1.4
KSH				*e*SCP		20 36 53.0	
KSH				*e*PCS		20 37 28.1	
KSH				*e*S	**S**	**20 38 42.4**	**-1.8**
KSH				*e*XS		20 40 48.4	
KSH				*e*SCS	ScS	20 41 23.8	-0.7
KSH				*e*SS	SS	20 42 13.1	-3.8
KSH				AMB	AMB		
	comp=Z,440nm,6.2s						
KSH				LR	LR		
	comp=N,440nm,7.5s						
KSH				LR	LR		
	comp=E,440nm,6.4s						
KKN	**Kakani**	**48.56**	**269**	*e*P	**P**	**20 32 12.6**	**-0.1**
	comp=E,63nm,1.3s,mb4.7						
KKN	**Kakani**	**48.56**	**269**	*e*P	**P**	**20 32 12.6**	**-0.1**
KKN				pmax	pmax		
	comp=Z,31nm,1.3s,mb4.4						
PKI	**Pulchoki**	**48.60**	**268**	*e*P	**P**	**20 32 12.8**	**-0.2**
	comp=Z,16nm,0.6s,mb4.4						
PKI	**Pulchoki**	**48.60**	**268**	*e*P	**P**	**20 32 12.8**	**-0.2**
PKI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.1						
DMN	**Daman**	**48.79**	**269**	*e*P	**P**	**20 32 14.3**	**-0.2**
	comp=Z,32nm,0.8s,mb4.6						
GKN	**Gorkha**	**48.87**	**269**	*e*P	**P**	**20 32 15.0**	**-0.1**
	comp=Z,36nm,0.5s,mb4.8						
KOLN	**Koldanda**	**49.74**	**270**	*e*P	**P**	**20 32 21.8**	**+0.2**
	comp=Z,42nm,0.8s,mb4.7						
ARU	**Arti**	**50.63**	**314**	*e*P	**P**	**20 32 26.4**	**-1.4**
ARU				*e*	pP	20 33 38.4	0.0
ARU				*e*S	**S**	**20 39 12.1**	**-3.4**
ARU				*e*		20 41 37.9	
ARU				*e*SS	SS	20 42 49.5	-5.1
ARU	**Arti**	**50.63**	**314**	*e*P	**P**	**20 32 26.3**	**-1.5**
	comp=Z,9.3nm,0.9s,mb4.0						
SMLA	**Simla**	**52.17**	**278**	*i* P	**P**	**20 32 35.8**	**-3.8**
SMLA				*i* S	**S**	**20 39 31.6**	**-5.1**
KSM	**Kuching**	**52.88**	**223**	⇓*i*P	**P**	**20 32 44.7**	**-0.3**
AB31	**Akbulak array**	**53.33**	**306**	*e*P	**P**	**20 32 46.8**	**-0.9**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.6						
RES	**Resolute Bay**	**53.55**	**16**	⇑*i*P	**P**	**20 32 47.2**	**-1.8**
RES				pmax	pmax		
	comp=Z,58nm,0.6s,mb5.1						
RES	**Resolute Bay**	**53.55**	**16**	⇑*i*P	**P**	**20 32 47.2**	**-1.8**
	comp=Z,58nm,0.6s,mb5.1						
KULM	**Kulim**	**54.73**	**235**	⇓*i*P	**P**	**20 32 58.0**	**-0.2**
PMG	**Port Moresby**	**55.37**	**175**	P	**P**	**20 33 02.2**	**-0.5**
PMG				pmax	pmax		
	comp=Z,14nm,0.9s						
PMG	**Port Moresby**	**55.37**	**175**	P	**P**	**20 33 02.2**	**-0.5**
	comp=Z,14nm,0.9s,mb4.3,baz=347,slow=7.6,SNR=4.5						
PMG	**Port Moresby**	**55.37**	**175**	*e*P	**P**	**20 33 01.8**	**-0.9**
YKW3	**Yellowknife Ar**	**55.42**	**33**	⇑*i*P	**P**	**20 33 01.1**	**-1.3**
YKA	**Yellowknife Ar**	**55.46**	**33**	P	**P**	**20 33 01.6**	**-1.1**
	comp=Z,31nm,0.6s,mb4.8,baz=305,slow=6.7,SNR=147						
YKA				PcP	PcP	20 33 57.4	-1.1
	comp=Z,2.1nm,0.6s,baz=307,slow=3.6,SNR=4.0						
YKA	**Yellowknife Ar**	**55.46**	**33**	P	**P**	**20 33 01.6**	**-1.1**
YKA				PcP	PcP	20 33 57.4	-1.1
ARCES	**ARCESS Array B**	**56.01**	**338**	P	**P**	**20 33 05.6**	**-1.0**
	comp=Z,2.0nm,0.6s,mb3.6,baz=33,slow=7.1,SNR=5.0						
DAG	**Danmarks Havn**	**56.86**	**355**	⇓*e*P	**P**	**20 33 10.0**	**-2.4**
DAG				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.1						
DAG	**Danmarks Havn**	**56.86**	**355**	⇓*e*P	**P**	**20 33 10.0**	**-2.4**
	comp=Z,11nm,1.0s,mb4.1						
DAG	**Danmarks Havn**	**56.86**	**355**	⇓*i*P	**P**	**20 33 10.0**	**-2.4**
	comp=Z,11nm,1.0s,mb4.1						
KAKA	**Kakadu**	**59.31**	**192**	*e*P	**P**	**20 33 28.8**	**-1.2**
	comp=Z,9.9nm,0.5s,mb4.5						
PGC	**Sidney**	**59.38**	**50**	*e*P	**P**	**20 33 29.7**	**-0.4**
	comp=Z,22nm,0.6s,mb4.8						
RPW	**Rockport**	**60.53**	**50**	P	**P**	**20 33 37.6**	**-0.2**
KAF	**Kangasniemi**	**60.89**	**331**	*e*p	**P**	**20 33 37.9**	**-2.0**
FINES	**FINESS Array B**	**61.44**	**331**	P	**P**	**20 33 42.1**	**-1.4**
	comp=Z,14nm,0.6s,mb4.6,baz=46,slow=8.0,SNR=138						
EDM	**Edmonton**	**61.61**	**42**	⇑*i*P	**P**	**20 33 44.3**	**-0.5**
SUMG	**Summit**	**61.63**	**1**	⇑*i*P	**P**	**20 33 44.2**	**-0.5**
	comp=Z,26nm,0.7s,mb4.9						
TWW	**Teanaway**	**61.68**	**50**	P	**P**	**20 33 46.2**	**+0.9**
OBN	**Obninsk**	**61.68**	**321**	*e*P	**P**	**20 33 43.2**	**-2.1**
OBN				*e**PP	pP	20 35 00.2	+0.7
OBN				*e*		20 36 07.9	
OBN				*e*S	**S**	**20 41 39.5**	**-0.4**
OBN				pmax	pmax		
	comp=Z,15nm,1.8s,mb4.2						
EBG	**Ellensburg**	**61.98**	**51**	P	**P**	**20 33 47.8**	**+0.5**
VFP	**Flag Point**	**62.49**	**52**	P	**P**	**20 33 51.3**	**+0.6**
OD2	**Odessa Site #2**	**62.67**	**49**	P	**P**	**20 33 51.5**	**-0.3**
NEW	**Newport**	**62.94**	**48**	*e*P	**P**	**20 33 53.2**	**-0.4**
NEW				pmax	pmax		
	comp=Z,22nm,0.8s						
NEW	**Newport**	**62.94**	**48**	*e*P	**P**	**20 33 53.2**	**-0.4**
	comp=Z,22nm,0.8s,mb4.7						
HUMO	**Hull Mountain**	**63.35**	**55**	*e*P	**P**	**20 33 56.4**	**+0.1**
	comp=Z,12nm,1.0s,mb4.4						
YBH	**Yreka Blue Hor**	**64.04**	**56**	P	**P**	**20 34 01.7**	**+1.0**
	comp=Z,13nm,0.6s,mb4.7,baz=328,slow=3.2						
MOD	**Modoc**	**65.31**	**55**	⇑*i*P	**P**	**20 34 09.3**	**+0.5**
	comp=Z,12nm,0.5s,mb4.8						
LBCM	**Butte Creek Ri**	**65.40**	**56**	P	**P**	**20 34 09.8**	**+0.4**
FCC	**Fort Churchill**	**65.41**	**29**	⇑*i*P	**P**	**20 34 08.2**	**-0.9**
FCC				pmax	pmax		
	comp=Z,69nm,1.0s,mb5.2						
FCC	**Fort Churchill**	**65.41**	**29**	⇑*i*P	**P**	**20 34 08.2**	**-0.9**
	comp=Z,69nm,1.0s,mb5.2						
MSO	**Missoula**	**65.51**	**47**	⇑*i*P	**P**	**20 34 09.9**	**0.0**
	comp=Z,16nm,1.0s,mb4.7						
FFC	**Flin Flon**	**65.51**	**35**	⇑*i*P	**P**	**20 34 09.5**	**-0.3**
FFC				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.4						
FFC	**Flin Flon**	**65.51**	**35**	⇑*i*P	**P**	**20 34 09.5**	**-0.3**
	comp=Z,59nm,0.8s,mb5.4						
CHMT	**Chamberlain Mo**	**65.81**	**47**	⇑*i*P	**P**	**20 34 11.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**65.81**	**198**	⇓*i*P	**P**	**20 34 11.9**	**-0.4**
	comp=Z,44nm,2.0s,mb4.8						
CTA	**Charters Tower**	**65.93**	**177**	P	**P**	**20 34 11.6**	**-1.4**
	comp=Z,2.1nm,0.3s,mb4.3,baz=18,slow=2.6,SNR=5.2						
KIV	**Kislovodsk**	**66.03**	**309**	⇓*i*P	**P**	**20 34 14.1**	**+0.9**
KIV				*e**PP	pP	20 35 28.2	-0.6
KIV				*e*S	S	20 42 29.5	-3.6
KIV				*e*SS	SS	20 47 02.2	+5.1
KIV				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
KIV	**Kislovodsk**	**66.03**	**309**	*e*P	**P**	**20 34 14.2**	**+1.0**
	comp=Z,8.2nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**66.18**	**189**	⇓*e*P	**P**	**20 34 13.3**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.0						
WRAB	**Tennant Creek**	**66.18**	**189**	⇓*e*P	**P**	**20 34 13.3**	**-1.3**
	comp=Z,23nm,0.7s,mb5.0						
WB2	**Warramunga Arr**	**66.19**	**189**	⇓*i*P	**P**	**20 34 13.3**	**-1.3**
WB2				*i*		20 34 41.4	
WRA	**Warramunga Arr**	**66.19**	**189**	P	**P**	**20 34 13.4**	**-1.3**
	comp=Z,19nm,0.6s,mb5.0,baz=5.3,slow=6.6,SNR=259						
WRA				PcP	PcP	20 34 41.4	-1.0
	comp=Z,4.9nm,0.6s,baz=358,slow=4.5,SNR=12						
NB2	**NORSAR Subarra**	**66.33**	**337**	P	**P**	**20 34 13.7**	**-1.1**
	comp=Z,7.1nm,0.7s,mb4.5,baz=34,slow=6.2						
NOA	**NORSAR Array B**	**66.33**	**337**	P	**P**	**20 34 13.8**	**-1.0**
	comp=Z,5.7nm,0.7s,mb4.4,baz=35,slow=6.2,SNR=30						
NOA	**NORSAR Array B**	**66.33**	**337**	P	**P**	**20 34 13.8**	**-1.0**
BEKR	**Beckwourth**	**66.61**	**56**	⇑*i*P	**P**	**20 34 17.2**	**+0.2**
	comp=Z,27nm,0.8s,mb5.0						
HRY	**Holter Researc**	**66.66**	**46**	*e*P	**P**	**20 34 17.6**	**+0.5**
LCCM	**Lewis and Clar**	**67.23**	**47**	P	**P**	**20 34 21.0**	**+0.2**
MCMT	**McKenzie Canyo**	**67.42**	**48**	*e*P	**P**	**20 34 21.7**	**-0.3**
HLID	**Hailey**	**67.46**	**50**	*e*P	**P**	**20 34 22.8**	**+0.6**
	comp=Z,7.0nm,0.8s,mb4.4						
BOZ	**Bozeman (W)**	**67.49**	**47**	*e*P	**P**	**20 34 22.9**	**+0.6**
BOZ				pmax	pmax		
	comp=Z,26nm,0.6s,mb5.1						
BOZ	**Bozeman (W)**	**67.49**	**47**	*e*P	**P**	**20 34 22.9**	**+0.5**
	comp=Z,26nm,0.6s,mb5.1						
CMB	**Columbia Colle**	**67.80**	**58**	⇑*i*P	**P**	**20 34 24.5**	**+0.1**
CMB				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8						
CMB	**Columbia Colle**	**67.80**	**58**	⇑*i*P	**P**	**20 34 24.5**	**+0.2**
	comp=Z,23nm,1.1s,mb4.8						

AKASG	Malin Array Be	67.95	321	P	P	20 34 23.9	-1.1
	comp=Z,1.2nm,0.4s,mb4.0,baz=39,slow=6.0,SNR=10						
AKASG	Malin Array Be	67.95	321	P	P	20 34 23.9	-1.1
BMN	Battle Mountai	68.03	54⇑	*e*P	P	20 34 26.5	+0.8
BMN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.7						
BMN	Battle Mountai	68.03	54⇑	*e*P	P	20 34 26.5	+0.8
	comp=Z,7.8nm,0.5s,mb4.7						
QLMT	Earthquake Lak	68.16	48	*e*P	P	20 34 26.8	+0.4
YMR	Madison River	68.51	47	*e*P	P	20 34 29.0	+0.5
YFT	Old Faithful	68.72	48	*e*P	P	20 34 32.0	+2.1
NVAR	Mina Array Bea	68.76	56	P	P	20 34 31.1	+0.9
	comp=Z,24nm,0.6s,mb5.1,baz=292,slow=6.6,SNR=116						
MNV	Mina	68.84	56⇑	*i*P	P	20 34 31.1	+0.4
MNV				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.9						
MNV	Mina	68.84	56⇑	*i*P	P	20 34 31.1	+0.4
	comp=Z,19nm,0.7s,mb4.9						
ELK	Elko	68.93	53	P	P	20 34 32.3	+1.1
ELK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ELK	Elko	68.93	53	P	P	20 34 32.3	+1.1
	comp=Z,6.0nm,0.5s,mb4.6,baz=312,slow=5.4,SNR=32						
ELK	Elko	68.93	53	*e*P	P	20 34 32.1	+1.0
	comp=Z,8.1nm,0.6s,mb4.6						
IMW	Indian Meadow	69.06	48⇑	*i*P	P	20 34 33.1	+1.2
	comp=Z,10nm,0.7s,mb4.7						
RRI2	Red Ridge	69.24	49⇑	*i*P	P	20 34 34.3	+1.3
	comp=Z,49nm,0.8s,mb5.3						
MOOW	Moose Ponds	69.26	48	*e*P	P	20 34 34.1	+1.0
	comp=Z,32nm,1.4s,mb4.9						
TPAW	Teton Pass	69.34	48	*e*P	P	20 34 34.9	+1.3
	comp=Z,44nm,1.2s,mb5.1						
LOHW	Long Hollow	69.43	48⇑	*i*P	P	20 34 35.1	+0.9
	comp=Z,37nm,1.4s,mb4.9						
TPH	Tonopah	69.62	56⇑	*i*P	P	20 34 36.1	+0.6
TPH				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.0						
TPH	Tonopah	69.62	56⇑	*i*P	P	20 34 36.1	+0.6
	comp=Z,16nm,0.5s,mb5.0						
MBWA	Marble Bar	70.20	203⇓	*e*P	P	20 34 38.6	-0.7
HWUT	Hardware Ranch	70.33	50⇑	*i*P	P	20 34 40.4	+0.7
	comp=Z,22nm,0.8s,mb4.9						
TRCR	Troy Canyon	70.37	55	*e*P	P	20 34 40.5	+0.4
BW06	Boulder Array	70.57	48⇑	*i*P	P	20 34 41.3	+0.2
	comp=Z,25nm,0.7s,mb5.0						
PDAR	Pinedale Array	70.57	48	P	P	20 34 41.4	+0.3
	comp=Z,24nm,0.7s,mb5.0,baz=306,slow=1.7,SNR=118						
NOQ	North Oquirrh	70.70	51	*e*P	P	20 34 42.6	+0.7
CTU	Camp Tracy	70.87	51	*e*P	P	20 34 43.3	+0.4
DZM	Mont Dzumac	71.08	157	P	P	20 34 45.5	+0.9
	comp=Z,8.2nm,0.7s,mb4.6,baz=67,slow=7.2,SNR=9.4						
NLU	North Lily Min	71.22	52⇑	*i*P	P	20 34 45.9	+0.9
ULM	Lac du Bonnet	71.34	35	P	P	20 34 44.9	-0.7
	comp=Z,26nm,0.6s,mb5.2,baz=318,slow=6.2,SNR=28						
ULM	Lac du Bonnet	71.34	35⇑	*i*P	P	20 34 44.6	-1.0
	comp=Z,36nm,0.6s,mb5.3						
MPU	Maple Canyon	71.41	51⇑	*i*P	P	20 34 46.9	+0.7
KWP	Kalwaria	71.52	324	*e*P	P	20 34 46.9	+0.3
MSU	Marysvale	72.17	53	*e*P	P	20 34 51.8	+1.1
OJC	Ojcow	72.23	326	*e*P	P	20 34 50.7	-0.1
MALT	Malatya	72.23	307	*e*P	P	20 34 52.3	+1.2
RSSD	Black Hills	72.36	44⇑	*i*P	P	20 34 51.5	-0.2
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
RSSD	Black Hills	72.36	44⇑	*i*P	P	20 34 51.5	-0.2
	comp=Z,10nm,0.5s,mb4.8						
BSEG	Bad Segeberg	72.55	333	*e*P	P	20 34 52.6	+0.1
SRU	San Rafael	72.66	51⇑	*i*P	P	20 34 53.8	+0.3
PFO	Pinyon Flat Ob	73.15	59	*e*P	P	20 34 56.5	0.0
PFO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
PFO	Pinyon Flat Ob	73.15	59	*e*P	P	20 34 56.5	0.0
	comp=Z,2.3nm,0.6s,mb4.1						
UPC	Upice	73.44	328	*e*P	P	20 34 58.4	+0.6
DPC	Dobruska-Polom	73.45	328	*e*P	P	20 34 58.4	+0.5
MORC	Moravsky Berou	73.46	327	*e*P	P	20 34 58.9	+0.9
MORC				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
MORC	Moravsky Berou	73.46	327	*e*P	P	20 34 58.9	+0.9
	comp=Z,12nm,1.1s,mb4.5						
BR131	Keskin Array S	73.81	311	*e*P	P	20 35 00.4	+0.1
	comp=Z,0.6nm,0.3s,mb3.8						
BRTR	Keskin Array B	73.81	311	P	P	20 35 00.7	+0.4
	comp=Z,2.1nm,0.5s,mb4.1,baz=65,slow=4.0,SNR=16						
CLL	Collm	73.86	330⇑	*i*P	P	20 34 59.7	-0.6
CLL				*e**PP	pP	20 36 19.0	+1.7
CLL				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.9						
CLL	Collm	73.86	330⇑	*i*P	P	20 34 59.7	-0.6
	comp=Z,21nm,0.9s,mb4.9						
CLL				*e*pP	pP	20 36 19.0	+1.7
CLL	Collm	73.86	330	⇑P	P	20 34 59.7	-0.6
	comp=Z,logA/T=1.4,mb4.9						
CLL				*e**PP	pP	20 36 19.0	+1.7
BRG	Berggiesshubel	73.89	329	*e*P	P	20 34 59.8	-0.7
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
BRG	Berggiesshubel	73.89	329	*e*P	P	20 34 59.8	-0.6
	comp=Z,4.3nm,1.0s,mb4.1						
PVCC	Panska Ves	73.95	329	*e*P	P	20 35 01.2	+0.4
VYHS	Vyhne	73.98	325	*e*P	P	20 35 01.0	0.0
PV10	Paradox Valley	73.99	51	*e*P	P	20 35 01.9	+0.5
PSZ	Piszkesteto	74.02	324	*e*P	P	20 35 01.6	+0.4
CLZ	Clausthal	74.30	332	*e*P	P	20 35 03.0	+0.2
CLZ				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
CLZ	Clausthal	74.30	332	*e*P	P	20 35 03.0	+0.2
	comp=Z,15nm,1.0s,mb4.7						
PRU	Pruhonice	74.41	328	*e*P	P	20 35 03.5	+0.1
PV01	Paradox Valley	74.42	51	*e*P	P	20 35 04.0	+0.2
WUAZ	Wupatki	74.76	55⇑	*e*P	P	20 35 06.5	+0.8
	comp=Z,39nm,1.4s,mb4.9						
RW3	Ridgway	74.81	50	*e*P	P	20 35 06.5	+0.5
MOX	Moxa	74.90	330	*e*P	P	20 35 05.7	-0.5
MOX				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.6						
MOX	Moxa	74.90	330	*e*P	P	20 35 05.7	-0.5
	comp=Z,19nm,1.6s,mb4.6						
MOX	Moxa	74.90	330	*i* P	P	20 35 05.7	-0.5
	comp=Z,logA/T=1.1,mb4.6						
ZST	Bratislava	74.91	326	*e*P	P	20 35 07.5	+1.2
EYMN	Ely	74.92	35⇑	*i*P	P	20 35 05.4	-1.0
	comp=Z,33nm,0.9s,mb5.1						
NKC	Novy Kostel	74.95	330	*e*P	P	20 35 06.6	+0.1
WTSB	Winterswijk	75.34	334	*e*P	P	20 35 08.3	-0.4
	comp=Z,16nm,1.1s,mb4.7						
KHC	Kasperske Hory	75.47	328	*e*P	P	20 35 09.8	+0.3
GEC2	GERESS Array S	75.66	328	*e*P	P	20 35 10.6	0.0
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.3						
GEC2	GERESS Array S	75.66	328	*e*P	P	20 35 10.6	0.0
	comp=Z,7.0nm,1.2s,mb4.3						
GERES	GERESS Array B	75.66	328	P	P	20 35 10.6	0.0
	comp=Z,2.1nm,0.8s,mb3.9,baz=34,slow=4.8,SNR=21						
WET	Wettzell	75.71	329	*e*P	P	20 35 11.3	+0.5
WET				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
WET	Wettzell	75.71	329	*e*P	P	20 35 11.3	+0.5
	comp=Z,13nm,1.0s,mb4.6						
GRA1	Grafenberg Arr	75.84	330	*e*P	P	20 35 12.0	+0.5
	comp=Z,27nm,1.0s,mb4.9						
GRF	Grafenberg Arr	75.84	330	*e*P	P	20 35 12.0	+0.5
GRF				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.9						
GRF	Grafenberg Arr	75.84	330	*e*P	P	20 35 12.0	+0.5
GRF				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.9						
GRF	Grafenberg Arr	75.84	330	*e*P	P	20 35 12.0	+0.5
	comp=Z,27nm,1.0s,mb4.9						
MOA	Molln	76.28	327⇑	*i*P	P	20 35 14.3	+0.3
	comp=Z,5.5nm,0.9s,mb4.3						
ARSA	Arzberg	76.30	326⇑	*i*P	P	20 35 14.7	+0.6
	comp=Z,5.2nm,0.9s,mb4.3						
SCHQ	Schefferville	76.31	17	P	P	20 35 13.5	-0.5
	comp=Z,13nm,0.6s,mb4.8,baz=357,slow=6.1,SNR=41						
SCHQ	Schefferville	76.31	17⇑	*i*P	P	20 35 13.4	-0.6
	comp=Z,8.2nm,0.6s,mb4.6						
TNS	Taunus Mts	76.32	332	*e*P	P	20 35 14.3	+0.1
TNS				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
TNS	Taunus Mts	76.32	332	*e*P	P	20 35 14.3	+0.1
	comp=Z,9.0nm,0.9s,mb4.5						
HGN	Heimansgroeve	76.65	334	*e*P	P	20 35 15.5	-0.5
	comp=Z,18nm,0.8s,mb4.8						
TOD	Tromm	76.73	331	*e*P	P	20 35 16.3	-0.2
ABH	Alteburg	76.91	332	*e*P	P	20 35 17.4	0.0
FUR	Furstenfeldbru	77.11	329	*e*P	P	20 35 18.9	+0.4
FUR				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.9						
FUR	Furstenfeldbru	77.11	329	*e*P	P	20 35 18.9	+0.4
	comp=Z,25nm,1.0s,mb4.9						
KBA	Koelnbreinsper	77.27	327⇑	*i*P	P	20 35 20.5	+1.1
	comp=Z,19nm,0.8s,mb4.9						
KBA	Koelnbreinsper	77.27	327⇑	*i*P	P	20 35 20.5	+1.1
KBA				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.9						
TUC	Tucson	77.41	56⇑	*e*P	P	20 35 20.9	+0.4
TUC				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.5						
TUC	Tucson	77.41	56⇑	*e*P	P	20 35 20.9	+0.3
	comp=Z,15nm,1.4s,mb4.5						
LEGS	Legarje	77.45	326⇑	*i*P	P	20 35 20.3	-0.1
	comp=Z,26nm,0.9s,mb5.0						
PDKS	Podkum	77.48	326⇑	*i*P	P	20 35 20.6	-0.1
GIVF	Givet	77.57	334	*e*P	P	20 35 20.6	-0.4
LANF	Langenberg	77.60	332	*e*P	P	20 35 21.3	+0.1
STKA	Stephens Creek	77.61	181	P	P	20 35 21.6	-0.1
	comp=Z,2.5nm,0.5s,mb4.2,baz=349,slow=6.1,SNR=13						
WATA	Walderalm	77.70	329⇑	*i*P	P	20 35 22.4	+0.6
	comp=Z,11nm,0.9s,mb4.6						
WATA	Walderalm	77.70	329⇑	*i*P	P	20 35 22.4	+0.6
WATA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
FORT	Forrest	77.71	193⇑	*i*P	P	20 35 21.9	-0.3
	comp=Z,18nm,0.5s,mb5.0						
WTTA	Wattenberg	77.74	328⇑	*i*P	P	20 35 22.8	+0.8
	comp=Z,20nm,0.9s,mb4.8						
WTTA	Wattenberg	77.74	328⇑	*i*P	P	20 35 22.8	+0.8
WTTA				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
BAIF	Baives	77.80	334	*e*P	P	20 35 22.0	-0.2
	comp=Z,15nm,0.9s,mb4.4						
BAIF	Baives	77.80	334	*e*P	P	20 35 22.0	-0.2
BAIF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
PTCC	Patocco-Chiusa	77.83	327	P	P	20 35 21.9	-0.6
ANMO	Albuquerque	77.91	52	P	P	20 35 24.0	+0.8
ANMO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ANMO	Albuquerque	77.91	52	P	P	20 35 24.0	+0.8
	comp=Z,8.2nm,0.8s,mb4.5,baz=319,slow=7.9,SNR=19						
ANMO	Albuquerque	77.91	52⇑	*i*P	P	20 35 23.9	+0.7
	comp=Z,18nm,1.1s,mb4.7						
SQTA	Sankt Quirin	77.94	329⇑	*i*P	P	20 35 23.8	+0.8
	comp=Z,12nm,0.9s,mb4.6						
SQTA	Sankt Quirin	77.94	329⇑	*i*P	P	20 35 23.8	+0.8
SQTA				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
LAZ	Ladron	77.94	53	*e*P	P	20 35 24.2	+0.9
CEY	Cerknica	77.97	326⇑	*i*P	P	20 35 22.9	-0.3
BFO	Black Forest	77.99	331	*e*P	P	20 35 23.4	+0.1
BFO				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
BFO	Black Forest	77.99	331	*e*P	P	20 35 23.4	+0.1
	comp=Z,12nm,1.0s,mb4.6						
WLS	Welschbruch	78.25	332	*e*P	P	20 35 24.7	0.0
CDF	Champ du Feu	78.27	332	*e*P	P	20 35 24.9	+0.1
	comp=Z,37nm,1.0s,mb4.8						
CDF	Champ du Feu	78.27	332	*e*P	P	20 35 24.9	+0.1
CDF				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
DAVA	Damuels	78.35	330⇑	*i*P	P	20 35 25.8	+0.5
	comp=Z,19nm,1.0s,mb4.8						
BNM	Barren Site	78.41	53	*e*P	P	20 35 26.7	+0.8
ECH	Echery	78.48	332	*e*P	P	20 35 25.8	-0.1
CBKS	Cedar Bluff	78.48	45	*e*P	P	20 35 25.0	-1.1
CBKS				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.9						
CBKS	Cedar Bluff	78.48	45	*e*P	P	20 35 24.9	-1.2
	comp=Z,19nm,0.7s,mb4.9						
FELD	Feldberg	78.49	331	*e*P	P	20 35 26.0	0.0
CTI	Castel Tesino	78.77	328	P	P	20 35 27.1	-0.4
CTI				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
CTI	Castel Tesino	78.77	328	P	P	20 35 27.1	-0.4
	comp=Z,9.9nm,0.7s,mb4.7						
FUORN	Ofenpass	78.79	329	P	P	20 35 28.7	+1.1
MOF	Molkenrain	78.81	331	*e*P	P	20 35 27.5	-0.1
THEF	They Montfort	78.86	332	*e*P	P	20 35 28.0	+0.1
BRMO	Bormio	78.87	329	P	P	20 35 29.2	+1.2
MEZF	Maizieres J’vi	78.91	333	*e*P	P	20 35 28.5	+0.3
HINF	Hinteralfeld	78.93	332	*e*P	P	20 35 28.0	-0.3
	comp=Z,13nm,0.9s,mb4.4						
HINF	Hinteralfeld	78.93	332	*e*P	P	20 35 28.0	-0.3
HINF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
HAU	Haudompre	78.93	332	*e*P	P	20 35 28.1	-0.2
	comp=Z,22nm,0.9s,mb4.6						
HAU	Haudompre	78.93	332	*e*P	P	20 35 28.1	-0.2
HAU				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
BBS	Basel-Blauen	79.02	331	*e*P	P	20 35 28.6	-0.2
LOMF	Lomont	79.34	331	*e*P	P	20 35 30.4	-0.1
MUGIO	Muggio	79.82	329	P	P	20 35 32.8	-0.3
VAI	Varese	79.97	329	P	P	20 35 33.5	-0.3
VAI				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.8						
VAI	Varese	79.97	329	P	P	20 35 33.5	-0.3
	comp=Z,8.0nm,0.4s,mb4.8						
CABF	La Chapelle	80.24	331	*e*P	P	20 35 35.4	+0.2
	comp=Z,30nm,1.3s,mb4.6						
CABF	La Chapelle	80.24	331	*e*P	P	20 35 35.4	+0.2
CABF				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.6						
FLN	La Foliniere	80.32	336	*e*P	P	20 35 35.5	-0.1
	comp=Z,19nm,0.7s,mb4.6						
FLN	La Foliniere	80.32	336	*e*P	P	20 35 35.5	-0.1
FLN				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
FSSB	Fossombrone	80.33	326	P	P	20 35 36.4	+0.6
LDF	La Druitiere	80.37	336	*e*P	P	20 35 35.7	-0.2
	comp=Z,11nm,0.7s,mb4.4						
LDF	La Druitiere	80.37	336	*e*P	P	20 35 35.7	-0.2
LDF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
LOR	Lormes	80.38	333	*e*P	P	20 35 35.9	-0.1
	comp=Z,36nm,0.9s,mb4.8						
LOR	Lormes	80.38	333	*e*P	P	20 35 35.9	-0.1
LOR				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
SFI	Santa Sofia	80.51	327	P	P	20 35 38.0	+1.3
SFI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
SFI	Santa Sofia	80.51	327	P	P	20 35 38.0	+1.3
	comp=Z,7.8nm,0.7s,mb4.5						
AMTX	Amarillo	80.53	49⇑	*i*P	P	20 35 37.2	+0.2
	comp=Z,28nm,0.8s,mb5.0						
VMG	Vicchio	80.58	327	P	P	20 35 38.9	+1.8
BOB	Bobbio (Coli)	80.67	328	P	P	20 35 38.0	+0.5
	comp=Z,11nm,0.6s,mb4.8						
HYF	Humbligny	80.76	334	*e*P	P	20 35 38.4	+0.5
GRR	Gorron	80.77	337	*e*P	P	20 35 38.1	+0.2
	comp=Z,40nm,0.9s,mb4.8						
CPRX	Cap Rock	80.77	52	*e*P	P	20 35 38.8	+0.5
MURB	Monte Urbino	80.79	326	P	P	20 35 30.2	-8.0
ASS	Assisi	80.91	326	P	P	20 35 39.2	+0.4
	comp=Z,5.2nm,0.7s,mb4.4						
NRCA	Norcia	80.92	325	P	P	20 35 39.7	+0.8
SMF	Signal de Mont	80.94	333	*e*P	P	20 35 39.0	+0.1
	comp=Z,63nm,1.0s,mb5.0						
MNTX	Cornudas Mount	80.94	53⇑	*i*P	P	20 35 39.8	+0.6
	comp=Z,16nm,1.0s,mb4.7						
AVF	Avril sur Loir	80.96	333	*e*P	P	20 35 39.2	+0.2
	comp=Z,42nm,0.9s,mb4.9						
LPL	La Plagne	80.98	331	*e*P	P	20 35 39.9	+0.8
	comp=Z,18nm,0.7s,mb4.6						
LPG	La Plagne	80.99	331	*e*P	P	20 35 40.0	+0.8
	comp=Z,23nm,0.7s,mb4.7						
GDL2	Guadalupe Moun	81.13	52	*e*P	P	20 35 40.8	+0.6
AQU	L’Aquila	81.21	325	*e*P	P	20 35 41.2	+0.9
BGF	Bois d’Agland	81.33	333	*e*P	P	20 35 41.2	+0.3
	comp=Z,15nm,0.7s,mb4.5						
CLNB	Carlsbad	81.35	52	*e*P	P	20 35 41.1	-0.2
SGMF	Saint Gilles	81.35	338	*e*P	P	20 35 41.5	+0.5
	comp=Z,26nm,0.9s,mb4.7						
BNI	Bardonecchia	81.40	330	*e*P	P	20 35 41.9	+0.6
BNI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
BNI	Bardonecchia	81.40	330	*e*P	P	20 35 41.9	+0.5
	comp=Z,3.7nm,0.7s,mb4.2						
ROSF	Rostrenen	81.46	338	*e*P	P	20 35 42.2	+0.6
	comp=Z,58nm,0.9s,mb5.0						
ROSF	Rostrenen	81.46	338	*e*P	P	20 35 42.2	+0.6
ROSF				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
MBDF	Montbardon	81.66	330	*e*P	P	20 35 42.9	+0.3
	comp=Z,9.3nm,0.6s,mb4.5						
MBDF	Montbardon	81.66	330	*e*P	P	20 35 42.9	+0.3
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
TCF	Toulx Ste Croi	81.77	334	*e*P	P	20 35 43.5	+0.3
	comp=Z,15nm,0.8s,mb4.5						
TCF	Toulx Ste Croi	81.77	334	*e*P	P	20 35 43.5	+0.3
TCF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
ORIF	Oris-en-Rattie	81.79	331	*e*P	P	20 35 43.9	+0.5
	comp=Z,13nm,0.7s,mb4.6						
ORIF	Oris-en-Rattie	81.79	331	*e*P	P	20 35 43.9	+0.5
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
QUIF	Quistinic	81.82	338	*e*P	P	20 35 43.8	+0.4
	comp=Z,15nm,0.8s,mb4.6						
QUIF	Quistinic	81.82	338	*e*P	P	20 35 43.8	+0.4
QUIF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
IMI	Imperia	81.97	329	P	P	20 35 44.5	+0.2
WMOK	Wichita Mounta	82.14	47⇑	*i*P	P	20 35 45.2	-0.2
WMOK				pmax	pmax		
	comp=Z,23nm,1.3s,mb4.8						
WMOK	Wichita Mounta	82.14	47⇑	*i*P	P	20 35 45.2	-0.2
	comp=Z,23nm,1.3s,mb4.8						
SBF	Sospel	82.18	329	*e*P	P	20 35 45.0	-0.4
	comp=Z,17nm,0.8s,mb4.6						
SBF	Sospel	82.18	329	*e*P	P	20 35 45.0	-0.4
SBF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
MFF	Saint Martin d	82.19	335	*e*P	P	20 35 46.0	+0.6
	comp=Z,34nm,0.8s,mb4.9						
MFF	Saint Martin d	82.19	335	*e*P	P	20 35 46.0	+0.6
MFF				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.9						
VIVF	Saint-Julien-l	82.25	332	*e*P	P	20 35 46.2	+0.5
	comp=Z,16nm,0.8s,mb4.6						
VIVF	Saint-Julien-l	82.25	332	*e*P	P	20 35 46.2	+0.5
VIVF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
TIP	Timpagrande	82.43	321	*e*P	P	20 35 47.2	+0.4
FRF	La Foret Royal	82.72	330	*e*P	P	20 35 48.2	+0.1
SMRF	Simiane la Rot	82.73	331	*e*P	P	20 35 48.5	+0.4
	comp=Z,8.9nm,0.9s,mb4.3						
PGF	Pioggiola	82.75	328	*e*P	P	20 35 47.9	-0.3
	comp=Z,25nm,1.2s,mb4.6						
PGF	Pioggiola	82.75	328	*e*P	P	20 35 47.9	-0.3
PGF				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.6						
RJF	Les Rejaudoux	82.86	334	*e*P	P	20 35 49.3	+0.5
	comp=Z,20nm,0.9s,mb4.7						
RJF	Les Rejaudoux	82.86	334	*e*P	P	20 35 49.3	+0.5
RJF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
LMR	La Mourre	82.97	330	*e*P	P	20 35 49.3	0.0
	comp=Z,40nm,1.1s,mb4.8						
LMR	La Mourre	82.97	330	*e*P	P	20 35 49.3	0.0
LMR				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.9						
CAF	Calviac	83.03	333	*e*P	P	20 35 50.7	+1.1
	comp=Z,22nm,0.8s,mb4.8						
CAF	Calviac	83.03	333	*e*P	P	20 35 50.7	+1.1
CAF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
CCM	Cathedral Cave	83.10	40⇑	*i*P	P	20 35 49.5	-0.6
CCM				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
CCM	Cathedral Cave	83.10	40⇑	*i*P	P	20 35 49.5	-0.6
	comp=Z,10nm,0.5s,mb4.9						
LASF	Ste Croix	83.22	332	*e*P	P	20 35 51.4	+0.9
	comp=Z,12nm,0.9s,mb4.4						
LFF	La Frestale	83.43	334	*e*P	P	20 35 52.6	+1.0
	comp=Z,26nm,0.8s,mb4.8						
LFF	La Frestale	83.43	334	*e*P	P	20 35 52.6	+1.0
LFF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
LTX	Lajitas	83.69	54⇑	*i*P	P	20 35 53.8	+0.5
LTX				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.9						
LTX	Lajitas	83.69	54⇑	*i*P	P	20 35 53.8	+0.5
	comp=Z,23nm,1.2s,mb4.9						
TXAR	Lajitas Array	83.69	54	P	P	20 35 54.0	+0.8
	comp=Z,7.9nm,0.5s,mb4.8,baz=288,slow=4.0,SNR=71						
MTLF	Montolieu	84.41	332	*e*P	P	20 35 57.6	+1.1
	comp=Z,13nm,0.9s,mb4.5						
MTLF	Montolieu	84.41	332	*e*P	P	20 35 57.6	+1.1
MTLF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
EPF	Esparros	85.28	334	*e*P	P	20 36 01.0	+0.2
	comp=Z,14nm,0.9s,mb4.5						
EPF	Esparros	85.28	334	*e*P	P	20 36 01.0	+0.2
EPF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
ETSF	Etsaut	85.68	334	*e*P	P	20 36 04.2	+1.5
	comp=Z,22nm,0.7s,mb4.8						
ETSF	Etsaut	85.68	334	*e*P	P	20 36 04.2	+1.5
ETSF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
SJPF	Ste Jean	85.68	335	*e*P	P	20 36 03.9	+1.2
NATX	Nacogdoches	86.59	46	*e*P	P	20 36 08.4	+1.1
PLAL	Pickwick Lake	87.06	40⇑	*i*P	P	20 36 09.4	-0.2
	comp=Z,5.6nm,0.6s,mb4.6						
CPCT	Cooper Cave	88.21	37⇑	*e*P	P	20 36 15.0	0.0
ESDC	Sonseca Array	89.65	335	P	P	20 36 21.2	-0.3
	comp=Z,0.8nm,0.5s,mb3.9,baz=14,slow=5.0,SNR=7.5						
EVO	Evora	91.84	338	*e*P	P	20 36 33.4	+1.6
SDV	Santo Domingo	117.52	38	*e*PKPdf	PKPdf	20 42 07.6	+0.7
DBIC	Dimbokro	120.18	322	PKP	PKPdf	20 42 13.1	+1.0
	comp=Z,3.6nm,0.8s,baz=180,slow=2.0,SNR=2.9						
VNDA	Vanda	123.89	175	PKP	PKPdf	20 42 18.4	+0.5
	comp=Z,0.5nm,0.7s,baz=315,slow=1.4,SNR=3.9						
VNDA	Vanda	123.89	175	*e*PKPdf	PKPdf	20 42 18.3	+0.4
SAML	Samuel	136.69	40	*e*PKPdf	PKPdf	20 42 44.6	+1.1
LPAZ	La Paz	140.53	51	PKP	PKPdf	20 42 50.8	+0.4
	comp=Z,1.3nm,0.7s,baz=26,slow=10,SNR=6.7						
LPAZ	La Paz	140.53	51	*e*PKPdf	PKPdf	20 42 52.7	+2.3
BAO	Brasilia Array	148.26	21	PKPdf	PKPdf	20 42 59.5	-4.0
BDFB	Brasilia	148.26	21	PKP	PKPdf	20 43 02.7	-0.7
	comp=Z,2.7nm,0.5s,baz=323,slow=10,SNR=4.3						
BDFB				PKPbc	PKPdf	20 43 09.1	+5.6
	comp=Z,12nm,0.8s,baz=239,slow=7.2,SNR=11						
SNAA	Sanae	149.72	201⇑	*i*	PKPab	20 43 17.3	-0.8
SNAA	Sanae	149.72	201	PKPbc	PKPdf	20 43 09.7	+5.5
	comp=Z,1.1nm,0.6s,baz=167,slow=3.2,SNR=18						
SNAA				PKPab	PKPab	20 43 17.2	-0.9
	comp=Z,2.9nm,0.6s,baz=183,slow=5.8,SNR=40						
SNAA	Sanae	149.72	201	*e*PKPbc	PKPdf	20 43 10.1	+5.9
SNAA				*e*PKPab	PKPab	20 43 17.3	-0.9
VNA2	Neumayer--Watz	151.31	200⇑	*i*	PKPdf	20 43 15.6	+9.0
VNA3	Neumayer Olymp	151.59	198⇑	*i*	PKPdf	20 43 15.8	+8.8

CASC 17 20:36:11.3±1.8, 14.52N×91.33W, h107^{km}±12^{km}, MD3.7, ML3.4, 1C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TP2	Tecpan 2	0.40	49⇓	*e*P	P	20 36 27.1	-0.3
TP2				*e*S	S	20 36 40.9	+1.6
TP2				AML	AML	20 36 42.0	
	comp=N,505nm,0.4s						
IXG	Ixpaco	0.92	112⇓	*e*P	P	20 36 31.7	+0.1
IXG				*e*S	S	20 36 48.1	+1.2
IXG				AML	AML	20 36 50.9	
	comp=E,3μm,0.3s						
RBDL	Robledal	1.65	104	*e*P	P	20 36 54.3	+14
RBDL				*e*S	S	20 37 16.4	+15
MRL	Marmol	1.68	71⇑	*e*P	P	20 36 41.6	+1.1
MRL				*e*S	S	20 37 02.8	+0.4
RTR	El Retiro	1.75	110	*e*P	P	20 36 55.1	+14
RTR				*e*S	S	20 37 19.0	+15
SBLS	San Blas	1.79	112	*e*P	P	20 36 54.6	+13
SBLS				*e*S	S	20 37 19.2	+14
LFRS	El Faro	2.38	112	*e*P	P	20 37 03.5	+14
LFRS				*e*S	S	20 37 33.2	+15

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*IDC **17** 20:45:07.5±0.6, 17.40S×172.73W, h33^{km}±4^{km}, mb4.2/16, mb1 4.3/16, mb1mx4.3/22, mbtmp4.4/16, MS3.9/8, Ms1 3.9/8, ms1mx3.6/28, Error ellipse: s-maj=20.8km* *s-min=14.4km az=132.0*

*BJI **17** 20:45:08.6, 17.40S×172.70W, h45^{km}, mB5.2, mb5.0, Ms5.1, Msz4.6*

*NEIC **17** 20:45:08.6±0.2, 17.39S×172.73W, h45^{km}, mb4.5/16, Error ellipse: s-maj=11.7km s-min=7.5km az=135.0*

ISC 17 20:45:05.4±0.3**, 17.38S**±0.08×**172.75W**±0.08**, h32^{km}, h32^{km}**±1.9^{km}**:pP-P, n116,** σ1^{s}**03**/45**, mb4.4**/31**, MS3.9**/8**, 3C-7D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	3.58	15	*e*Pn	Pn	20 45 51.7	-8.4
DZM	**Mont Dzumac**	20.13	253	LR	LR	20 56 09.2	
	comp=Z,299nm,18.4s,MS3.7,baz=264,slow=33						
PPT	**Papeete**	22.11	94	LR	LR	20 57 51.6	
	comp=Z,390nm,18.4s,MS3.9,baz=347,slow=35						
URZ	**Urewera**	22.62	201	P	P	20 50 05.0	+0.2
	26nm,0.6s,mb4.8,baz=335,slow=5.0,SNR=17						
HNR	**Honiara**	27.68	283	LR	LR	21 00 52.4	
	comp=Z,156nm,18.7s,MS3.6,baz=146,slow=34						
RPZ	**Rata Peaks**	29.61	204	P	P	20 51 10.0	0.0
	11nm,0.8s,mb4.6,baz=45,slow=13,SNR=3.0						
CTA	**Charters Tower**	38.85	259	P	P	20 52 29.5	-0.2
	4.7nm,0.8s,mb4.2,baz=108,slow=11,SNR=5.7						
CTAO	**Charters Tower**	38.85	259	*e*P	P	20 52 28.3	-1.3
	5.9nm,0.8s,mb4.4						
STKA	**Stephens Creek**	43.62	242	P	P	20 53 08.5	-0.2
	2.4nm,0.7s,mb4.0,baz=31,slow=7.2,SNR=6.6						
STKA				LR	LR	21 10 10.4	
	comp=Z,150nm,19.9s,MS3.9,baz=115,slow=34						
STKA	**Stephens Creek**	43.62	242	P	P	20 53 08.5	-0.2
STKA				LR	LR	21 10 10.4	
WB2	**Warramunga Arr**	50.02	258	*e*P	P	20 53 57.0	-2.2
WRAB	**Tennant Creek**	50.02	258	*e*P	P	20 53 57.0	-2.2
	6.0nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	50.03	258	P	P	20 53 57.4	-1.8
	3.7nm,0.7s,mb4.5,baz=96,slow=7.8,SNR=42						
SBA	**Scott Base**	61.34	185	*e*P	P	20 55 20.1	0.0
	1.2nm,0.6s,mb4.2						
VNDA	**Vanda**	61.48	186	P	P	20 55 21.6	+0.6
	0.8nm,0.7s,mb3.9,baz=8.4,slow=6.8,SNR=3.9						
VNDA	**Vanda**	61.48	186	*e*P	P	20 55 21.1	+0.1
	1.5nm,1.0s,mb4.1						
MBWA	**Marble Bar**	63.42	255	P	P	20 55 34.1	-0.6
	2.1nm,0.5s,mb4.5						
CASY	**Casey**	68.88	205	*e*P	P	20 56 08.1	-0.7
	7.7nm,1.0s,mb4.6						
MJAR	**Matsushiro Arr**	70.85	320	P	P	20 56 21.6	+0.2
	3.9nm,0.9s,mb4.3,baz=156,slow=6.3,SNR=8.5						
MJAR				pP	pP	20 56 32.1	+0.8
	2.6nm,0.9s,baz=153,slow=4.9,SNR=4.2						
KKM	**Kota Kinabalu**	73.88	282	*e*P	P	20 56 40.0	+0.3
YBH	**Yreka Blue Hor**	74.80	36	P	P	20 56 45.2	+0.7
	4.0nm,0.8s,mb4.4,baz=245,slow=2.9,SNR=4.3						
YBH				LR	LR	21 27 04.8	
	comp=Z,159nm,18.2s,MS4.3,baz=241,slow=34						
NVAR	**Mina Array Bea**	75.39	41	P	P	20 56 47.5	-0.4
	2.7nm,0.8s,mb4.2,baz=232,slow=13,SNR=11						
NVAR				pP	pP	20 56 57.9	-0.1
	2.1nm,0.7s,baz=231,slow=11,SNR=6.8						
YSS	**Yuzh-Sakhalins**	75.50	330	*e*P	P	20 56 49.6	+1.2
	5.5nm,0.3s,mb5.0						
TUC	**Tucson**	77.17	50	*e*P	P	20 56 57.5	-0.6
	2.4nm,0.7s,mb4.2						
KSM	**Kuching**	77.99	275	*e*P	P	20 57 04.1	+1.2
ELK	**Elko**	78.66	41	*e*P	P	20 57 05.0	-1.1
	3.2nm,1.0s,mb4.2						
HLID	**Hailey**	80.77	39	*e*P	P	20 57 17.1	-0.3
	3.5nm,0.9s,mb4.3						
HLID				*e*pP	pP	20 57 25.7	-1.8
MNTX	**Cornudas Mount**	80.91	53	*e*P	P	20 57 17.5	-0.9
	2.9nm,0.9s,mb4.2						
BNM	**Barren Site**	81.10	50	*e*P	P	20 57 19.4	+0.1
TXAR	**Lajitas Array**	81.20	56	P	P	20 57 20.7	+0.8
	0.4nm,0.6s,mb3.6,baz=220,slow=9.8,SNR=4.7						
ANMO	**Albuquerque**	81.60	49	LR	LR	21 23 45.7	
	comp=Z,41nm,20.9s,MS3.8,slow=28						
ANMO	**Albuquerque**	81.60	49	*e*P	P	20 57 21.7	-0.1
	2.6nm,0.8s,mb4.2						
NEW	**Newport**	81.99	34	LR	LR	21 24 50.2	
	comp=Z,46nm,21.6s,MS3.8,baz=133,slow=29						
CPRX	**Cap Rock**	82.65	52	*e*P	P	20 57 27.2	-0.1
CN2	**Changchun**	83.00	320	*e*P	P	20 57 30.5	+1.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
DLBC	**Dease Lake**	83.31	21	LR	LR	21 31 37.3	
	comp=Z,67nm,18.2s,MS4.1,baz=271,slow=34						
CHMT	**Chamberlain Mo**	83.33	36	*e*P	P	20 57 29.4	-1.2
ILAR	**Eielson Array**	84.26	11	P	P	20 57 34.1	-0.8
	comp=Z,1.8nm,0.7s,mb4.3,baz=227,slow=5.3,SNR=12						
AMTX	**Amarillo**	85.09	51	*e*P	P	20 57 39.0	-0.7
	comp=Z,4.9nm,0.7s,mb4.8						
BILL	**Bilibino**	86.55	352	*e*P	P	20 57 46.0	-0.1
	comp=Z,6.2nm,1.0s,mb4.8						
PLCA	**Paso Flores**	87.73	132	P	P	20 57 52.5	0.0
	comp=Z,1.7nm,0.8s,mb4.3,baz=222,slow=0.5,SNR=4.1						
PLCA				pP	pP	20 58 04.2	+1.5
	comp=Z,2.0nm,0.9s,baz=287,slow=5.8,SNR=2.7						
PLCA	**Paso Flores**	87.73	132	P	P	20 57 52.5	0.0
PLCA				pP	pP	20 58 04.2	+1.5
ENH	**Enshi**	88.50	302	*e*P	P	20 57 59.0	+2.5
	comp=Z,5.3nm,0.6s,mb5.0						
INK	**Inuvik**	90.04	14	*e*P	P	20 58 02.2	-0.6
	comp=Z,4.4nm,0.8s,mb4.8						
VNA3	**Neumayer Olymp**	90.84	175		P	20 58 08.4	+2.0
VNA3	**Neumayer Olymp**	90.84	175		pP	20 58 17.9	+1.2
SNAA	**Sanae**	90.91	177		P	20 58 06.6	-0.1
SNAA	**Sanae**	90.91	177		pP	20 58 17.5	+0.5
JTS	**JuntasAbangare**	90.95	80	P	P	20 58 08.0	-0.2
	comp=Z,6.1nm,0.8s,mb5.0,baz=88,slow=20,SNR=4.7						
VNA2	**Neumayer--Watz**	91.34	175		P	20 58 10.6	+1.9
VNA2	**Neumayer--Watz**	91.34	175		pP	20 58 19.9	+0.9
YKA	**Yellowknife Ar**	91.66	23	P	P	20 58 10.3	-0.1
	comp=Z,0.2nm,0.3s,mb4.0,baz=231,slow=4.0,SNR=4.2						
CMAR	**Chiang Mai Arr**	93.82	288	P	P	20 58 22.9	+1.6
	comp=Z,1.2nm,0.9s,mb4.3,baz=114,slow=4.3,SNR=6.8						
CMAR				pP	pP	20 58 32.2	+0.6
	comp=Z,1.6nm,0.9s,baz=80,slow=1.9,SNR=7.0						
SONM	**Songino Array**	96.73	318	P	P	20 58 36.2	+2.2
	comp=Z,0.3nm,0.5s,mb3.9,baz=133,slow=3.5,SNR=5.0						
ZRNK	**Zerenda**	120.65	322	*e*PKPdf	PKPdf	21 03 54.9	-4.5
ZRNK				*e*		21 04 05.4	
ARU	**Arti**	125.34	328	*e*PKPdf	PKPdf	21 04 04.1	-4.2
FINES	**FINESS Array B**	134.00	348	PKP	PKPdf	21 04 21.0	-3.6
	comp=Z,1.3nm,0.8s,baz=53,slow=9.5,SNR=6.0						
KWP	**Kalwaria**	145.49	342	*e*P	PKPbc	21 04 42.6	+1.8
MALT	**Malatya**	145.69	314	*e*PKPbc	PKPbc	21 04 44.9	+3.3
OJC	**Ojcow**	145.72	346	*e*P	PKPbc	21 04 43.1	+1.8
CLL	**Collm**	145.84	354	⇑*i*PKP1	PKPbc	21 04 43.4	+1.8
CLL				*e*		21 05 04.0	
UPC	**Upice**	146.21	350	*e*PKP	PKPdf	21 04 44.8	-1.9
KOLS	**Kolonicke sedl**	146.24	342	*e*PKP	PKPdf	21 04 55.7	+8.9
KOLS				*e*		21 05 19.1	
DPC	**Dobruska-Polom**	146.31	350	*e*PKP	PKPdf	21 04 45.3	-1.6
PVCC	**Panska Ves**	146.42	352	*e*PKP	PKPdf	21 04 45.6	-1.4
BURAR	**Bucovina Array**	146.43	338	⇓P	PKPbc	21 04 45.1	+2.0
OKC	**Ostrava-Krasne**	146.45	347	*e*PKP	PKPdf	21 04 45.7	-1.4
MOX	**Moxa**	146.63	355	*e*PKP	PKPdf	21 04 46.0	-1.4
MOX				*e*		21 05 06.0	
MORC	**Moravsky Berou**	146.63	348	*e*PKPbc	PKPbc	21 04 45.9	+2.4
PRU	**Pruhonice**	146.95	351	*e*PKP	PKPdf	21 04 46.9	-1.0
NKC	**Novy Kostel**	146.96	354	*e*PKP	PKPdf	21 04 47.2	-0.8
VRI	**Vrincioaia**	147.29	334	⇓P	PKPdf	21 04 48.3	-0.3
GIVF	**Givet**	147.30	3	*e*PKP1	PKPdf	21 04 46.4	-2.1
BAIF	**Baives**	147.31	4	*e*PKP1	PKPdf	21 04 46.7	-1.8
	comp=Z,22nm,1.1s						
VYHS	**Vyhne**	147.56	346	*e*PKP	PKPdf	21 04 48.1	-0.9
GRA1	**Grafenberg Arr**	147.61	355	*e*PKP	PKPdf	21 04 49.0	0.0
WLF	**Walferdange**	147.79	1	*e*PKPbc	PKPdf	21 04 49.3	0.0
WLF				*e*		21 04 59.9	
KHC	**Kasperske Hory**	147.92	352	*e*PKP	PKPdf	21 04 49.7	+0.2
MLR	**Muntele Rosu**	147.92	335	⇓P	PKPdf	21 04 49.5	-0.2
BR131	**Keskin Array S**	148.07	320	*e*PKPbc	PKPdf	21 04 50.6	+0.5
BRTR	**Keskin Array B**	148.07	320	PKPbc	PKPdf	21 04 51.0	+0.9
	comp=Z,2.6nm,0.7s,baz=131,slow=2.3,SNR=18						
FLN	**La Foliniere**	148.07	10	*e*PKP1	PKPdf	21 04 48.2	-1.6
	comp=Z,18nm,0.8s						
GERES	**GERESS Array B**	148.18	352	PKPbc	PKPdf	21 04 50.6	+0.6
	comp=Z,3.8nm,0.8s,baz=27,slow=3.0,SNR=34						
GERES				pPKPbc		21 05 00.3	
	comp=Z,2.4nm,0.8s,baz=27,slow=3.0,SNR=7.9						
SGMF	**Saint Gilles**	148.18	12	*e*PKP1	PKPdf	21 04 48.3	-1.7
LDF	**La Druitiere**	148.29	9	*e*PKP1	PKPdf	21 04 48.9	-1.3
	comp=Z,12nm,0.9s						
VOIR		148.32	336	⇑P	PKPdf	21 04 50.8	+0.5
QUIF	**Quistinic**	148.37	13	*e*PKP1	PKPdf	21 04 49.7	-0.6
	comp=Z,9.8nm,0.9s						
GRR	**Gorron**	148.37	10	*e*PKP1	PKPdf	21 04 49.2	-1.1
	comp=Z,14nm,0.8s						
MEZF	**Maizieres J'vi**	148.91	3	*e*PKP1	PKPdf	21 04 51.1	0.0
CDF	**Champ du Feu**	149.05	360	*e*PKP1	PKPdf	21 04 51.3	-0.1
	comp=Z,29nm,1.3s						
BZS	**Buzias**	149.40	340	⇓P	PKPdf	21 04 53.4	+1.4
ARSA	**Arzberg**	149.44	349	⇓*i*P	PKPdf	21 04 54.3	+2.3
HAU	**Haudompre**	149.45	1	*e*PKP1	PKPdf	21 04 52.4	+0.4
	comp=Z,21nm,1.0s						
KBA	**Koelnbreinsper**	149.96	352	⇑*i*P	PKPdf	21 04 54.6	+1.7
WTTA	**Wattenberg**	149.98	354	⇓*i*P	PKPdf	21 04 55.1	+2.2
LOR	**Lormes**	150.07	5	*e*PKP1	PKPdf	21 04 53.9	+0.9
	comp=Z,29nm,1.4s						
DAVA	**Damuels**	150.10	356	⇓*i*P	PKPdf	21 04 54.6	+1.5
MFF	**Saint Martin d**	150.22	10	*e*PKP1	PKPdf	21 04 53.9	+0.6
AVF	**Avril sur Loir**	150.50	5	*e*PKP1	PKPdf	21 04 54.6	+0.9
	comp=Z,9.7nm,1.0s						
BGF	**Bois d'Agland**	150.68	6	*e*PKP1	PKPdf	21 04 55.2	+1.2
	comp=Z,10nm,0.9s						
SMF	**Signal de Mont**	150.68	5	*e*PKP1	PKPdf	21 04 55.0	+1.0
MBAR	**Mbarara**	150.76	235	*e*PKPbc	PKPdf	21 04 57.7	+2.5
CABF	**La Chapelle**	150.84	2	*e*PKP1	PKPdf	21 04 56.4	+2.2
	comp=Z,18nm,1.0s						
TCF	**Toulx Ste Croi**	150.88	7	*e*PKP1	PKPdf	21 04 55.5	+1.2
	comp=Z,7.4nm,0.9s						
RJF	**Les Rejaudoux**	151.75	9	*e*PKP1	PKPdf	21 04 57.6	+2.0
EIL	**Elat**	151.89	301	*e*PKPbc	PKPdf	21 05 00.3	+4.0
EIL				*e*PKPab	PKPab	21 05 10.0	+0.9
LPL	**La Plagne**	151.95	1	*e*PKP1	PKPdf	21 04 59.2	+3.3
LPG	**La Plagne**	151.97	1	*e*PKP1	PKPdf	21 04 59.2	+3.3
	comp=Z,8.1nm,0.8s						
BNI	**Bardonecchia**	152.41	1	*e*PKPab	PKPab	21 05 10.3	-0.4
ORIF	**Oris-en-Rattie**	152.52	2	*e*PKP1	PKPdf	21 04 59.9	+3.2
	comp=Z,6.9nm,0.8s						
VIVF	**Saint-Julien-l**	152.52	4	*e*PKP1	PKPdf	21 04 59.8	+3.0
MBDF	**Montbardon**	152.74	1	*e*PKP1	PKPdf	21 05 00.4	+3.4
	comp=Z,5.6nm,0.7s						
LASF	**Ste Croix**	153.24	5	*e*PKP1	PKPdf	21 05 01.6	+3.8
	comp=Z,10nm,1.1s						
SMRF	**Simiane la Rot**	153.45	3	*e*PKP1	PKPdf	21 05 02.3	+4.2
	comp=Z,19nm,1.2s						
ETSF	**Etsaut**	153.71	13	*e*PKP1	PKPdf	21 05 02.7	+4.2
MTLF	**Montolieu**	153.77	8	*e*PKP1	PKPdf	21 05 02.1	+3.6
	comp=Z,3.5nm,0.9s						

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*IDC **17** 21:15:30.4±0.9, 6.20S×147.16E, mb4.1/8, mb1 4.3/10, mb1mx4.2/15, mbtmp4.1/10, ML3.5/2, MS3.6/2, Ms1 3.5/2, ms1mx3.1/22, Error ellipse: s-maj=29.8km s-min=13.1km az=81.0*

*NEIC **17** 21:15:31.3±9.7, 6.28S×146.93E, h6^{km}±60^{km}, mb4.3/6, Error ellipse: s-maj=24.8km s-min=13.8km az=215.0*

ISC 17 21:15:30.3±0.6**, 6.29S**±0.07×**146.9E**±0.1**, h10^{km}, n20,** σ**1^{s}23**/22**, mb4.0**/11**, MS3.5**/1**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.11	176	Pn	Pn	21 16 21.8	+1.4
	15nm,0.3s,baz=347,slow=6.9,SNR=28						
PMG				Pg	Pg	21 16 29.2	-3.2
	57nm,0.3s,baz=355,slow=13,SNR=48						
PMG				Sn	Sn	21 17 03.1	+5.1
	20nm,0.3s,baz=168,slow=20,SNR=3.9						
PMG				Lg		21 17 11.0	
	33nm,0.3s,baz=170,slow=22,SNR=6.4						
CTA	**Charters Tower**	13.73	183	Pn	P	21 18 47.5	-0.2
	0.5nm,0.3s,baz=5.6,slow=14,SNR=6.9						
CTA				LR	LR	21 24 12.3	
	comp=Z,187nm,18.4s,baz=44,slow=38						
CTAO	**Charters Tower**	13.73	183	*e*Pn	P	21 18 46.6	-1.1
KAKA	**Kakadu**	15.63	245	*e*P	P	21 19 13.2	+0.6
	18nm,0.6s						
WRAB	**Tennant Creek**	18.25	221	*e*P	P	21 19 44.1	-1.4
	18nm,0.9s						
WB2	**Warramunga Arr**	18.25	221	*e*P	P	21 19 44.6	-1.0
WRA	**Warramunga Arr**	18.26	221	P	P	21 19 44.7	-1.0
	0.3nm,0.3s,baz=45,slow=12,SNR=50						
WRA				S	S	21 23 23.9	+17
	0.1nm,0.3s,baz=46,slow=24,SNR=3.4						
WRA				ScP		21 27 56.3	
	baz=33,slow=2.2,SNR=6.3						
FITZ	**Fitzroy Crossi**	23.85	239	P	P	21 20 46.7	+1.9
	9.0nm,0.7s,mb4.3,baz=19,slow=6.8,SNR=9.6						
DZM	**Mont Dzumac**	24.54	132	P	P	21 20 51.7	+0.2
	5.8nm,0.9s,mb4.1,baz=349,slow=7.2,SNR=5.8						
STKA	**Stephens Creek**	25.94	190	P	P	21 21 07.1	+2.4
	3.8nm,0.8s,mb4.0,baz=20,slow=5.5,SNR=7.4						
STKA				LR	LR	21 32 22.0	
	comp=Z,152nm,20.5s,MS3.5,baz=24,slow=39						
CM31	**Chiang Mai Arr**	53.31	298	*e*P	P	21 24 50.8	-1.4
	4.2nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	53.31	298	P	P	21 24 53.6	+1.4
	1.3nm,0.8s,mb3.9,baz=117,slow=6.1,SNR=8.7						
ULN	**Ulaanbaatar**	64.32	331	*e*P	P	21 26 09.2	+0.8
	1.3nm,0.6s,mb4.1						
SONM	**Songino Array**	64.61	331	P	P	21 26 10.7	+0.4
	0.2nm,0.4s,mb3.5,baz=158,slow=7.8,SNR=5.2						
VNDA	**Vanda**	71.63	177	P	P	21 26 53.0	-0.7
	1.3nm,0.6s,mb4.0,baz=323,slow=6.9,SNR=12						
VNDA	**Vanda**	71.63	177	*e*P	P	21 26 52.8	-0.9
	1.1nm,0.6s,mb4.0						
MKAR	**Makanchi Array**	77.66	321	P	P	21 27 29.1	+0.4
	0.2nm,0.5s,mb3.4,baz=105,slow=7.6,SNR=6.2						
ILAR	**Eielson Array**	85.78	23	P	P	21 28 09.6	-1.2
	1.3nm,0.8s,mb4.2,baz=273,slow=4.8,SNR=8.3						
ZRNK	**Zerenda**	87.75	324	*e*P	P	21 28 19.5	-1.1
	0.8nm,0.5s,mb4.2						
SAML	**Samuel**	146.40	116	*e*PKPbc	PKPbc	21 35 14.0	+1.3

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*BJI **17** 21:26:00.6, 2.15N×96.79E, h24^{km}, mB5.5, mb5.3, Ms5.3, Msz5.1*

*MOS **17** 21:26:02.9±1.0, 2.23N×96.82E, h37^{km}, mb5.3/46, MS4.9/33, Error ellipse: s-maj=12.5km s-min=5.7km az=110.4*

*HRVD **17** 21:26:03.1±0.3, 1.80N×96.69E, h24^{km}, MW5.3/63, Centroid moment Tensor Solution. LP body waves: s56,c99;Mantle waves: s63,c122; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.66±.03; $M_{\theta\theta}$-0.44±.02; $M_{\phi\phi}$-0.21±.02; $M_{r\theta}$0.61±.03; $M_{\theta\phi}$0.48±.01; $M_{\phi r}$-0.70±.03; Best double couple: $M_0$1.185×10^{17} NP1: ϕ_s296°, δ20°, λ70°. NP2: ϕ_s138°, δ71°, λ97°. Principal axes: T 1.114, Plg63°, Azm59°; N .144, Plg7°, Azm315°; P -1.257, Plg26°, Azm222°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **17** 21:26:03.1±0.1, 2.14N×96.80E, mb5.3/99, MS4.7/20 Error ellipse: s-maj=4.5km s-min=3.2km az=210.0*

*IDC **17** 21:26:03.3±0.4, 2.12N×96.74E, h28^{km}±2^{km}, mb4.8/21, mb1 4.9/22, mb1mx4.8/23, mbtmp5.0/22, ML5.2/1, MS4.9/11, Ms1 4.9/11, ms1mx4.7/14, Error ellipse: s-maj=14.9km s-min=10.2km az=54.0*

ISC 17 21:26:01.5±0.2**, 2.14N**±0.03×**96.82E**±0.03**, h27^{km}, h27^{km}**±.5^{km}**:pP-P, n410,** σ**0^{s}89**/398**, mb5.2**/157**, MS5.0**/69**, 27C-20D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	4.85	60	P	Pn	21 27 16.4	+1.7
KULM	**Kulim**	4.94	51	⇑*i*Pn	Pn	21 27 17.1	+1.1
SNG	**Songkhla**	6.28	37	P	Pn	21 27 35.0	+0.2
	1µm,1.0s						
KGM	**Kluang**	6.50	91	P	Pn	21 27 39.3	+1.3
NNT	**Nongplab**	10.78	15	P	P	21 28 28.7	-8.7
KSM	**Kuching**	13.50	93	*e*Pn	P	21 29 15.1	+1.3
NST	**Nakhon Sawan**	13.84	13	P	P	21 29 13.0	-5.5
KKTK	**Khon Kaen**	15.30	22	PG	P	21 29 38.0	+0.4
KKTK				SG		21 29 48.0	
CM31	**Chiang Mai Arr**	16.36	7	*e*P	P	21 29 50.8	-0.2
	136nm,0.8s						
CMAR	**Chiang Mai Arr**	16.36	7	P	P	21 29 50.6	-0.5
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
CMAR	**Chiang Mai Arr**	16.36	7	Pn	P	21 29 50.5	-0.5
	comp=Z,3.3nm,0.3s,baz=198,slow=13,SNR=76						
CHG	**Chiang Mai**	16.71	7	⇓P	P	21 29 55.9	+0.4
	comp=Z,66nm,1.1s						
PALK	**Pallekele**	16.85	288	*e*P	P	21 29 58.5	+1.2
	comp=Z,110nm,1.2s						
PALK				*e*		21 30 08.7	
MDRS	**Chennai**	19.67	304	*e*P	P	21 30 31.0	-0.6
MDRS				*e*x	x	21 35 43.0	
MDRS				*e*x	x	21 36 08.0	
KKM	**Kota Kinabalu**	19.73	78	*e*P	P	21 30 31.5	-0.7
KKM	**Kota Kinabalu**	19.73	78	P	P	21 30 33.0	+0.8
VIS	**Vishakhapatnam**	20.38	320	*e*P	P	21 30 40.9	+1.9
VIS				AMb	AMB	21 30 43.6	
	comp=Z,160nm,0.6s						
VIS				*e*x	x	21 34 12.9	
TRD	**Trivandrum**	20.75	289	*e*P	P	21 30 40.5	-2.4
TRD				*i* x	x	21 34 40.5	
QIZ	**Qiongzhong**	21.09	36	⇓P	P	21 30 45.8	-0.5
QIZ				XP		21 30 57.4	
QIZ				S	S	21 34 41.4	+6.8
QIZ				XS		21 34 51.8	
QIZ				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.3						
QIZ				LR	LR		
	comp=N,5µm,20.4s,MS5.0						
QIZ				LR	LR		
	comp=E,4µm,20.4s,MS5.0						
QIZ				LR	LR		
	comp=Z,5µm,15.3s						
TSM	**Tawau**	21.13	84	P	P	21 30 47.0	+0.3
CAL	**Calcutta**	21.89	339	*e*x	x	21 37 36.7	
CAL				*e*x	x	21 42 20.1	
IMP	**Imphal**	22.69	353	*e*x	P	21 31 03.0	+0.6
HYB	**Hyderabad**	23.51	311	*e*P	P	21 31 12.0	+1.6
	comp=Z,70nm,1.0s,mb5.0						
HYB				*e*S	S	21 35 22.0	+3.2
HYB	**Hyderabad**	23.51	311	*i* P	P	21 31 12.0	+1.6
	comp=Z,70nm,1.0s,mb5.0						
HYB				*e*S	S	21 35 20.0	+1.2
HYB				LR	LR	21 39 20.0	
	comp=Z,5.1nm,22.0s						
KMI	**Kunming**	23.56	14	P	P	21 31 11.8	+1.0
KMI				AP		21 31 19.8	
KMI				XP		21 31 23.5	
KMI				PP	PP	21 31 45.8	+2.5
KMI				PPP	PPP	21 31 56.4	+3.1
KMI				PCP	PcP	21 34 55.0	-2.3
KMI				S	S	21 35 23.6	+4.0
KMI				XS		21 35 37.6	
KMI				SSS	SSS	21 36 31.5	+7.2
KMI				SCP		21 38 29.8	
KMI				PCS		21 38 33.3	
KMI				AMB	AMB		
	comp=Z,80nm,1.4s,mb5.0						
KMI				AMB	AMB		
	comp=Z,940nm,4.6s						
KMI				LR	LR		
	comp=N,3µm,14.4s,MS5.0						
KMI				LR	LR		
	comp=E,3µm,16.8s,MS5.0						
KMI				LR	LR		
	comp=Z,3µm,14.4s,MS5.0						
KMI	**Kunming**	23.56	14	P	P	21 31 11.7	+0.9
	comp=Z,85nm,1.4s,mb5.0						
KMI				pP		21 31 19.8	
KMI				sP		21 31 23.5	
KMI				PP	PP	21 31 45.8	+2.5
KMI				PPP	PPP	21 31 56.4	+3.1
KMI				PcP	PcP	21 34 55.0	-2.3
KMI				S	S	21 35 23.6	+4.0
KMI				sS		21 35 37.6	
KMI				SS	SS	21 36 15.6	+7.4
KMI				SSS	SSS	21 36 31.5	+7.2
KMI				ScP		21 38 29.8	
KMI				PcS		21 38 33.2	
KMI				LR	LR		
	comp=Z,3µm,14.4s,MS5.0						
SHL	**Shillong**	23.78	349	*e*P	P	21 31 12.0	-0.9
SHL				*e*S	S	21 35 27.0	+3.6
BOK	**Bokaro**	23.99	335	*i* P	P	21 31 14.1	-0.9
BOK				*i* S	S	21 35 30.1	+3.0
BLSP	**Bilaspur**	24.47	325	*e*P	P	21 31 21.0	+1.2
BLSP				*e*P		21 31 21.1	
BLSP				AMb	AMB	21 31 30.7	
	comp=Z,104nm,0.9s,mb5.2						
BLSP				*e*x	x	21 35 24.4	
GYA	**Guiyang**	25.97	20	⇓*i*P	P	21 31 33.5	-0.3
GYA				AP	pP	21 31 40.8	-1.0
GYA				XP	sP	21 31 43.3	-2.2
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
GYA				AMB	AMB		
	comp=Z,490nm,9.0s						
GYA				LR	LR		
	comp=N,3µm,17.3s,MS5.0						
GYA				LR	LR		
	comp=E,3µm,15.5s,MS5.0						
GYA				LR	LR		
	comp=Z,4µm,15.2s,MS5.1						
HKC	**Hong Kong**	26.20	39	P	P	21 31 42.0	+6.0
KAD	**Karad**	26.87	306	*e*P	P	21 31 39.0	-3.2
PKI	**Pulchoki**	27.55	338	*e*P	P	21 31 48.5	+0.2
	comp=Z,50nm,0.7s,mb5.3						
GUN	**Gumba**	27.68	339	*e*P	P	21 31 49.6	+0.1
	comp=Z,183nm,0.8s,mb5.8						
DMN	**Daman**	27.70	337	*e*P	P	21 31 49.5	-0.2
	comp=Z,62nm,0.7s,mb5.3						
POO	**Poona**	27.79	307	*e*P	P	21 31 50.0	-0.6
KKN	**Kakani**	27.80	338	*e*P	P	21 31 50.2	-0.3
	comp=Z,223nm,1.2s,mb5.7						
LSA	**Lhasa**	27.94	349	P	P	21 31 51.8	0.0
LSA				S	S	21 36 31.9	-0.4
LSA				AMB	AMB		
	comp=Z,110nm,0.9s,mb5.5						
LSA				AMB	AMB		
	comp=Z,360nm,7.0s						
LSA				LR	LR		
	comp=N,1µm,21.0s,MS4.7						
LSA				LR	LR		
	comp=E,2µm,21.0s,MS4.7						
LSA				LR	LR		
	comp=Z,3µm,23.0s,MS4.8						
LSA	**Lhasa**	27.94	349	*e*P	P	21 31 51.6	-0.2
	comp=Z,71nm,0.8s,mb5.3						
BHPL	**Bhopal**	28.17	320	*e*P	P	21 31 55.0	+1.1
BHPL				AMb	AMB	21 32 01.0	
	comp=Z,24nm,0.8s,mb4.9						
BHPL				*e*x	x	21 36 28.6	
GKN	**Gorkha**	28.24	337	*e*P	P	21 31 54.2	-0.3
	comp=Z,110nm,0.7s,mb5.6						
KOLN	**Koldanda**	28.45	335	*e*P	P	21 31 56.5	0.0
	comp=Z,188nm,1.0s,mb5.7						
BOM	**Bombay**	28.81	307	*e*x	x	21 32 35.9	
DAV	**Davao City (W)**	29.07	79	*e*P	P	21 32 04.5	+2.3
CD2	**Chengdu**	29.36	12	P	P	21 32 03.4	-1.3
CD2				PP	PP	21 32 56.3	-3.9
CD2				PPP	PPP	21 33 14.3	+0.8
CD2				S	S	21 36 52.4	-2.8
CD2				SS	SS	21 38 23.6	-3.9
CD2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.3						
CD2				AMB	AMB		
	comp=Z,410nm,14.4s						
CD2				LR	LR		
	comp=E,7µm,16.8s						
CD2				LR	LR		
	comp=Z,3µm,21.6s,MS4.9						
ENH	**Enshi**	30.45	22	*e*P	P	21 32 12.6	-1.8
	comp=Z,26nm,0.6s,mb5.1						
QZH	**Quanzhou**	30.91	41	⇑*i*P	P	21 32 18.0	-0.4
QZH				S	S	21 37 28.0	+8.3
QZH				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.3						
QZH				AMB	AMB		
	comp=Z,860nm,3.1s						
QZH				LR	LR		
	comp=N,12µm,18.3s						
QZH				LR	LR		
	comp=E,3µm,12.8s						
QZH				LR	LR		
	comp=Z,10µm,15.9s,MS5.6						
MBWA	**Marble Bar**	32.23	137	*e*P	P	21 32 29.5	-0.5
	comp=Z,89nm,1.3s,mb5.4						
MBWA				*e*pP	pP	21 32 38.6	+0.4
AJM	**Ajmer**	32.24	321	*i* P	P	21 32 30.0	0.0
NDI	**New Delhi**	32.35	327	*e*P	P	21 32 29.5	-1.5
NDI				*e*x	x	21 37 30.5	
WHN	**Wuhan**	32.77	29	⇓P	P	21 32 35.0	+0.3
WHN				LR	LR		
	comp=N,4µm,19.5s,MS5.5						
WHN				LR	LR		

	comp=E,8µm,20.2s,MS5.5						
WHN				LR	LR		
	comp=Z,6µm,13.5s						
XAN	**Xi’an**	**33.70**	**18**	P	**P**	**21 32 41.0**	**-1.6**
XAN				AP	pP	21 32 52.6	+1.8
XAN				S	**S**	**21 38 07.0**	**+4.0**
XAN				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
XAN				LR	LR		
	comp=N,1µm,18.7s,MS5.1						
XAN				LR	LR		
	comp=E,3µm,15.9s,MS5.1						
XAN				LR	LR		
	comp=Z,3µm,16.6s,MS5.1						
SMLA	**Simla**	**34.30**	**329**	*i* P	**P**	**21 32 44.8**	**-3.1**
SMLA				*i* x	x	21 38 08.6	
LZH	**Lanzhou**	**34.40**	**10**	⇓P	**P**	**21 32 47.5**	**-1.2**
LZH				AP	pP	21 32 55.3	-1.6
LZH				XP	sP	21 32 58.5	-1.9
LZH				PP	PP	21 34 04.6	0.0
LZH				*e*S	**S**	**21 38 14.5**	**+0.6**
LZH				XS		21 38 27.0	
LZH				SS	SS	21 40 26.5	+1.5
LZH				AMB	AMB		
	comp=Z,80nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,320nm,5.2s						
LZH				LR	LR		
	comp=N,2µm,12.9s						
LZH				LR	LR		
	comp=Z,3µm,16.8s,MS5.0						
LZH	**Lanzhou**	**34.40**	**10**	⇓P	**P**	**21 32 47.5**	**-1.2**
	comp=Z,83nm,1.5s,mb5.4						
LZH				pP	pP	21 32 55.3	-1.6
LZH				sP	sP	21 32 58.5	-1.9
LZH				PP	PP	21 34 04.6	0.0
LZH				*e*S	**S**	**21 38 14.5**	**+0.6**
LZH				sS		21 38 27.0	
LZH				SS	SS	21 40 26.5	+1.5
LZH				LR	LR		
	comp=Z,3µm,16.8s,MS5.0						
SDNR	**Sundarnagar**	**34.70**	**329**	*e*P	**P**	**21 32 51.5**	**+0.2**
FITZ	**Fitzroy Crossi**	**34.78**	**127**	*e*P	**P**	**21 32 50.9**	**-1.3**
	comp=Z,27nm,0.9s,mb5.2						
FITZ	**Fitzroy Crossi**	**34.78**	**127**	P	**P**	**21 32 50.9**	**-1.2**
	comp=Z,44nm,1.0s,mb5.3,baz=320,slow=3.8,SNR=15						
FITZ				pP	pP	21 32 60.0	-0.3
	comp=Z,29nm,0.8s,baz=271,slow=1.6,SNR=6.6						
THN	**Thein Dam**	**36.09**	**329**	*e*P	**P**	**21 33 01.4**	**-1.7**
NJ2	**Nanjing**	**36.28**	**33**	*e*P	**P**	**21 33 05.1**	**+0.4**
NJ2				AP	pP	21 33 15.3	+2.4
NJ2				XP	sP	21 33 18.4	+2.0
NJ2				PP	PP	21 34 32.6	+4.5
NJ2				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,140nm,6.5s						
NJ2				LR	LR		
	comp=N,6µm,18.6s,MS5.5						
NJ2				LR	LR		
	comp=E,7µm,20.1s,MS5.5						
NJ2				LR	LR		
	comp=Z,3µm,13.9s						
SSE	**Sheshan**	**36.88**	**36**	P	**P**	**21 33 10.9**	**+1.1**
SSE				XP	sP	21 33 23.9	+2.5
SSE				PP	PP	21 34 34.5	-1.4
SSE				S	**S**	**21 38 54.6**	**+2.5**
SSE				XS		21 39 09.4	
SSE				SCS	ScS	21 43 23.3	+2.4
SSE				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,240nm,7.7s						
SSE				LR	LR		
	comp=N,3µm,20.9s,MS5.1						
SSE				LR	LR		
	comp=E,2µm,20.9s,MS5.1						
SSE				LR	LR		
	comp=Z,3µm,17.0s,MS5.2						
SSE	**Sheshan**	**36.88**	**36**	P	**P**	**21 33 10.9**	**+1.1**
	comp=Z,49nm,0.8s,mb5.4						
SSE				sP	sP	21 33 23.9	+2.5
SSE				PP	PP	21 34 34.5	-1.4
SSE				S	**S**	**21 38 54.6**	**+2.5**
SSE				sS		21 39 09.4	
SSE				ScS	ScS	21 43 23.3	+2.4
SSE				LR	LR		
	comp=Z,3µm,17.0s,MS5.2						
GTA	**Gaotai**	**37.20**	**4**	⇑P	**P**	**21 33 12.0**	**-0.4**
GTA				AP	pP	21 33 21.4	+0.8
GTA				PP	PP	21 34 39.4	-0.4
GTA				PPP	PPP	21 34 59.0	-1.2
GTA				PCP	PcP	21 35 33.4	+1.0
GTA				S	**S**	**21 38 55.3**	**-1.7**
GTA				XS		21 39 10.8	
GTA				SCP		21 39 18.8	
GTA				SS	SS	21 41 25.3	-3.0
GTA				SCS	ScS	21 43 23.4	+0.8
GTA				AMB	AMB		
	comp=Z,170nm,0.8s,mb5.9						
GTA				AMB	AMB		
	comp=Z,720nm,6.9s						
GTA				LR	LR		
	comp=N,870nm,24.0s,MS4.7						
GTA				LR	LR		
	comp=E,1µm,21.7s,MS4.7						
GTA				LR	LR		
	comp=Z,980nm,29.7s						
KAKA	**Kakadu**	**38.32**	**114**	*e*P	**P**	**21 33 20.3**	**-1.7**
	comp=Z,34nm,0.7s,mb5.2						
TIA	**Tai’an**	**38.77**	**27**	*e*P	**P**	**21 33 24.6**	**-1.0**
TIA				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.0						
JOW	**Kunigami**	**38.89**	**48**	P	**P**	**21 33 27.6**	**+0.8**
	comp=Z,34nm,0.6s,mb5.3,baz=222,slow=9.8,SNR=16						
BTO	**Baotou**	**40.12**	**16**	*e*P	**P**	**21 33 37.8**	**+1.1**
HHC	**Hu-ho-hao-te**	**40.78**	**17**	*e*P	**P**	**21 33 43.3**	**+1.2**
HHC				AP	pP	21 33 49.6	-0.8
HHC				XP	sP	21 33 53.3	-0.5
HHC				PCP	PcP	21 35 46.8	+3.2
HHC				SCP		21 39 30.3	
HHC				PCS		21 39 35.1	
HHC				S	**S**	**21 39 50.5**	**-0.4**
HHC				XS		21 40 03.6	
HHC				SS	SS	21 42 46.5	-1.1
HHC				SCS	ScS	21 43 46.0	+2.7
HHC				AMB	AMB		
	comp=Z,50nm,1.3s,mb5.0						
HHC				AMB	AMB		
	comp=Z,540nm,7.1s						
HHC				LR	LR		
	comp=N,2µm,16.1s,MS5.3						
HHC				LR	LR		
	comp=E,3µm,18.2s,MS5.3						
HHC				LR	LR		
	comp=Z,2µm,20.2s,MS4.9						
KSH	**Kashi**	**41.77**	**336**	*e*P	**P**	**21 33 50.8**	**+0.5**
KSH				AP	pP	21 33 57.3	-1.2
KSH				XP	sP	21 34 01.3	-0.6
KSH				PP	PP	21 35 29.1	-0.9
KSH				PCP	PcP	21 35 47.6	+0.7
KSH				PPP	PPP	21 36 00.3	-1.1
KSH				*e*SCP		21 39 34.8	
KSH				*e*PCS		21 39 38.0	
KSH				S	**S**	**21 40 05.3**	**-0.3**
KSH				*e*SS	SS	21 43 06.1	-0.6
KSH				SCS	ScS	21 43 50.0	+0.7
KSH				AMB	AMB		
	comp=Z,860nm,5.0s						
KSH				LR	LR		
	comp=N,2µm,15.1s						
KSH				LR	LR		
	comp=E,4µm,20.9s						
WMQ	**Urumqi**	**42.29**	**350**	P	**P**	**21 33 55.8**	**+1.2**
WMQ				AP	pP	21 34 03.1	+0.3
WMQ				XP	sP	21 34 06.5	+0.3
WMQ				PP	PP	21 35 37.1	+1.7
WMQ				PCP	PcP	21 35 49.8	+1.2
WMQ				PPP	PPP	21 36 09.4	+1.3
WMQ				S	**S**	**21 40 14.9**	**+1.6**
WMQ				SS	SS	21 43 17.8	+1.3
WMQ				SCS	ScS	21 43 53.8	+1.4
WMQ				AMB	AMB		
	comp=Z,80nm,1.0s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,590nm,4.6s						
WMQ				LR	LR		
	comp=N,930nm,20.0s,MS4.8						
WMQ				LR	LR		
	comp=E,830nm,20.6s,MS4.8						
WMQ				LR	LR		
	comp=Z,740nm,20.6s,MS4.5						
WRA	**Warramunga Arr**	**42.85**	**123**	P	**P**	**21 33 58.5**	**-1.0**
WRA				pmax	pmax		
	comp=Z,46nm,1.0s						
WRA	**Warramunga Arr**	**42.85**	**123**	P	**P**	**21 33 58.5**	**-1.0**
	comp=Z,46nm,1.0s,mb5.2,baz=300,slow=9.1,SNR=148						
WRAB	**Tennant Creek**	**42.86**	**123**	*d* *i*P	**P**	**21 33 58.1**	**-1.4**
WRAB	**Tennant Creek**	**42.86**	**123**	*e*P	**P**	**21 33 58.7**	**-0.8**
	comp=Z,83nm,1.0s,mb5.4						
WB2	**Warramunga Arr**	**42.86**	**123**	*e*P	**P**	**21 33 58.5**	**-1.0**
DL2	**Dalian**	**43.04**	**29**	*e*P	**P**	**21 34 02.0**	**+1.3**
DL2				*e*S	**S**	**21 40 30.0**	**+5.7**
DL2				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.3						
DL2				LR	LR		
	comp=E,2µm,15.0s						
ULHL	**Ulahol**	**43.99**	**338**	P	**P**	**21 34 04.0**	**-4.4**
	SNR=31						
KZA	**Kyzart**	**44.23**	**337**	P	**P**	**21 34 10.8**	**+0.5**
	SNR=25						
FORT	**Forrest**	**44.23**	**140**	*e*P	**P**	**21 34 12.1**	**+1.6**
	comp=E,45nm,0.6s,mb5.4						
INCN	**Inchon**	**44.59**	**34**	*e*P	**P**	**21 34 12.4**	**-1.0**
	comp=E,12nm,0.7s,mb4.8						
UCH	**Uchtor**	**44.65**	**336**	P	**P**	**21 34 14.6**	**+0.9**
	SNR=65						
TKM2	**Tokmak 2**	**44.81**	**338**	P	**P**	**21 34 15.5**	**+0.5**
	SNR=44						
KBK	**Karagaybulak**	**44.84**	**337**	P	**P**	**21 34 16.8**	**+1.5**
	SNR=38						
AML	**Almayashu**	**44.90**	**336**	P	**P**	**21 34 16.6**	**+0.8**
	SNR=45						
AAK	**Ala-Archa**	**44.99**	**337**	P	**P**	**21 34 18.1**	**+1.6**
	SNR=12						
AAK	**Ala-Archa**	**44.99**	**337**	*c* *i*P	**P**	**21 34 16.4**	**-0.1**
AAK				pmax	pmax		
	comp=Z,63µm,1.5s						
AAK				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.0						
AAK	**Ala-Archa**	**44.99**	**337**	*e*P	**P**	**21 34 16.6**	**+0.1**
	comp=Z,38nm,1.0s,mb5.2						
FRU	**Bishkek**	**45.12**	**337**	⇑*e*P	**P**	**21 34 18.0**	**+0.6**
FRU				*i*		21 34 35.0	
FRU				*e*S	**S**	**21 40 57.5**	**+3.2**
FRU				pmax	pmax		
	comp=Z,160nm,2.1s,mb5.5						
FRU				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.1						
CHMS	**Chumysh**	**45.20**	**337**	P	**P**	**21 34 18.1**	**-0.1**
	SNR=20						
KS15	**Wonju Array Si**	**45.27**	**35**	*e*P	**P**	**21 34 18.2**	**-0.5**
EKS2	**Erkin-Say**	**45.31**	**336**	P	**P**	**21 34 19.7**	**+0.7**
	SNR=62						
USP	**Ospenovka**	**45.53**	**337**	P	**P**	**21 34 20.7**	**0.0**
	SNR=100						
MKAR	**Makanchi Array**	**46.25**	**346**	*i* P	**P**	**21 34 25.8**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,47nm,0.7s						
MKAR	**Makanchi Array**	**46.25**	**346**	P	**P**	**21 34 25.8**	**-0.6**
	comp=Z,94nm,0.7s,mb5.8,baz=162,slow=7.1,SNR=588						
MKAR				pP	pP	21 34 35.1	+0.5
	comp=Z,44nm,0.8s,baz=162,slow=7.5,SNR=12						
MKAR				LR	LR	21 57 44.3	
	comp=Z,1µm,20.8s,MS4.9,baz=172,slow=41						
SNY	**Shenyang**	**46.25**	**28**	⇑P	**P**	**21 34 25.6**	**-0.8**
SNY				AP	pP	21 34 34.5	-0.2
SNY				PP	PP	21 36 14.9	-0.2
SNY				AMB	AMB		
	comp=Z,80nm,0.7s,mb5.8						
SNY				AMB	AMB		
	comp=Z,390nm,6.3s						
SNY				LR	LR		
	comp=N,2µm,16.8s						
SNY				LR	LR		
	comp=Z,2µm,17.8s,MS5.2						
SONM	**Songino Array**	**46.27**	**9**	P	**P**	**21 34 26.6**	**+0.1**
	comp=Z,45nm,0.8s,mb5.5,baz=190,slow=7.7,SNR=298						
SONM				pP	pP	21 34 35.6	+0.9
	comp=Z,18nm,0.8s,baz=192,slow=9.0,SNR=8.4						
SONM				PcP	PcP	21 36 01.6	-0.6
	comp=Z,2.9nm,0.6s,baz=201,slow=1.9,SNR=4.5						
SONM				ScP		21 39 54.9	
	comp=Z,2.0nm,1.1s,baz=217,slow=6.2,SNR=4.4						
ULN	**Ulaanbaatar**	**46.41**	**10**	⇑*i*P	**P**	**21 34 27.5**	**-0.1**
ULN	**Ulaanbaatar**	**46.41**	**10**	*e*P	**P**	**21 34 27.3**	**-0.2**
	comp=Z,35nm,0.9s,mb5.3						
ULN				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
KKAR	**Karatay Array**	**47.05**	**334**	*i* P	**P**	**21 34 33.0**	**+0.2**
KKAR				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0						
ZAK	**Zakamensk**	**48.38**	**6**	*e*P	**P**	**21 34 42.9**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,22nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s						
CN2	**Changchun**	**48.65**	**28**	*e*P	**P**	**21 34 44.3**	**-0.9**
CN2				*e*AP	pP	21 34 51.8	-1.8
CN2				*e*XP	sP	21 34 55.1	-1.8
CN2				*e*S	**S**	**21 41 44.9**	**+0.4**
CN2				SS	SS	21 45 10.8	+0.7
CN2				AMB	AMB		
	comp=Z,80nm,0.7s,mb5.9						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,3µm,17.0s,MS5.4						
CN2				LR	LR		
	comp=E,1µm,17.0s,MS5.4						
CN2				LR	LR		
	comp=Z,2µm,15.0s,MS5.3						
MOY	**Mondy**	**49.48**	**3**	*e*P	**P**	**21 34 52.1**	**+0.6**
MOY				pmax	pmax		
	comp=Z,112nm,2.6s,mb5.4						
TLY	**Talaya**	**49.70**	**6**	*e*P	**P**	**21 34 53.2**	**0.0**
TLY				*e*		21 36 50.2	
TLY				*e*S	**S**	**21 41 59.8**	**+0.7**
TLY				*e*PS	PS	21 42 16.9	+6.0
TLY				*e*		21 44 41.4	
TLY				*e*SSS	SSS	21 47 00.5	+5.0
TLY				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.3						
TLY				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.2						
TLY	**Talaya**	**49.70**	**6**	*e*P	**P**	**21 34 53.9**	**+0.7**
	comp=Z,16nm,0.8s,mb5.1						
TLY				*e*pP	pP	21 35 04.9	+3.3
IRK	**Irkutsk**	**50.32**	**6**	*e*P	**P**	**21 34 58.1**	**+0.2**
IRK				*e*		21 36 51.4	
IRK				*e*		21 42 10.8	
IRK				pmax	pmax		
	comp=Z,172nm,2.2s,mb5.7						
HASS	**Wahat al Ahsa’**	**50.83**	**301**	P	**P**	**21 35 02.5**	**+0.4**
HIA	**Hailar**	**50.88**	**19**	*e*P	**P**	**21 35 01.3**	**-0.9**
	comp=Z,53nm,0.8s,mb5.5						
MDJ	**Mudanjiang**	**51.24**	**30**	P	**P**	**21 35 06.0**	**+1.0**
MDJ				AP	pP	21 35 12.5	-0.9
MDJ				XP	sP	21 35 14.9	-1.8
MDJ				PCP	PcP	21 36 20.4	+0.2
MDJ				PP	PP	21 37 02.3	-0.4
MDJ				SCP		21 40 15.3	
MDJ				PCS		21 40 18.0	
MDJ				S	**S**	**21 42 29.0**	**+8.5**
MDJ				SCS	ScS	21 44 54.3	+3.9
MDJ				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.4						
MDJ				AMB	AMB		
	comp=Z,330nm,5.8s						
MDJ				LR	LR		
	comp=N,570nm,14.9s,MS5.1						
MDJ				LR	LR		
	comp=E,2µm,19.1s,MS5.1						
MDJ				LR	LR		
	comp=Z,2µm,17.4s,MS5.1						
MDJ	**Mudanjiang**	**51.24**	**30**	*e*P	**P**	**21 35 04.9**	**-0.2**
	comp=Z,44nm,0.9s,mb5.4						
MAJO	**Matsushiro**	**51.27**	**43**	*e*P	**P**	**21 35 05.6**	**+0.3**
	comp=Z,15nm,0.7s,mb5.0						
MAJO				*e*pP	pP	21 35 14.7	+1.0
MAJO				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
MAT	**Matsushiro**	**51.27**	**43**	*e*P	**P**	**21 35 05.0**	**-0.3**
	comp=Z,52nm,1.0s,mb5.4						
MAT				*e*S	**S**	**21 42 28.0**	**+7.1**
MAT				LR	LR		
	comp=Z,1µm,18.0s,MS5.0						
MAT	**Matsushiro**	**51.27**	**43**	P	**P**	**21 35 04.8**	**-0.5**
MAT				S	**S**	**21 42 27.0**	**+6.1**
MJAR	**Matsushiro Arr**	**51.27**	**43**	P	**P**	**21 35 05.3**	**0.0**
MJAR				*PP	pP	21 35 14.6	+0.9
MJAR						21 36 20.2	
MJAR				pmax	pmax		
	comp=Z,26nm,0.9s						
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MJAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MJAR				MLR	MLR		
	comp=Z,1µm,19.9s						
MJAR	**Matsushiro Arr**	**51.27**	**43**	P	**P**	**21 35 05.3**	**0.0**
	comp=Z,26nm,0.9s,mb5.2,baz=215,slow=6.6,SNR=54						
MJAR				pP	pP	21 35 14.6	+0.9
	comp=Z,4.5nm,0.8s,baz=16,slow=31,SNR=3.8						
MJAR				PcP	PcP	21 36 20.1	-0.2
	comp=Z,7.3nm,0.9s,baz=239,slow=3.7,SNR=4.7						
MJAR				LR	LR	21 57 46.8	
	comp=Z,1µm,19.9s,MS4.9,baz=255,slow=37						
MJAR	**Matsushiro Arr**	**51.27**	**43**	P	**P**	**21 35 05.3**	**0.0**
MJAR				pP	pP	21 35 14.6	+0.9
MJAR				PcP	PcP	21 36 20.1	-0.2
MJAR				LR	LR	21 57 46.8	
PMG	**Port Moresby**	**51.44**	**104**	*e*P	**P**	**21 35 06.3**	**-0.7**
	comp=Z,114nm,0.8s,mb5.8						
CIT	**Chita**	**51.65**	**13**	*e*P	**P**	**21 35 07.8**	**-0.2**
CIT				*e*		21 42 31.1	
CIT				pmax	pmax		
	comp=Z,286nm,2.1s,mb5.8						
CTA	**Charters Tower**	**53.26**	**117**	*e*P	**P**	**21 35 20.2**	**-0.3**
	comp=Z,37nm,1.0s,mb5.3						
CTAO	**Charters Tower**	**53.26**	**117**	*e*P	**P**	**21 35 20.2**	**-0.2**
	comp=Z,72nm,1.1s,mb5.5						
CTAO				*e*pP	pP	21 35 29.9	+1.0
CTAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
KAMS	**Al Khamasin**	**54.05**	**294**	P	**P**	**21 35 25.3**	**-0.9**
STKA	**Stephens Creek**	**54.26**	**132**	P	**P**	**21 35 27.7**	**0.0**
	comp=Z,21nm,1.0s,mb5.0,baz=314,slow=7.1,SNR=17						
STKA				pP	pP	21 35 36.1	+0.1
	comp=Z,16nm,0.8s,baz=323,slow=8.0,SNR=9.0						
STKA				LR	LR	22 01 07.2	
	comp=Z,1µm,21.7s,MS5.0,baz=296,slow=39						
STKA	**Stephens Creek**	**54.26**	**132**	*e*P	**P**	**21 35 27.3**	**-0.4**
STKA				*e*pP	pP	21 35 35.7	-0.4
MZLS	**Mizel**	**54.38**	**298**	P	**P**	**21 35 29.1**	**+0.4**
DJNS	**Zahran al Janu**	**54.49**	**290**	P	**P**	**21 35 30.8**	**+1.2**
VOSK	**Vostochnaya**	**54.80**	**341**	P	**P**	**21 35 29.9**	**-1.4**
VOSK				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.4						
TATS	**Tathlith**	**54.90**	**292**	P	**P**	**21 35 33.5**	**+0.9**
BVA0	**Borovoye Array**	**55.25**	**341**	*i* P	**P**	**21 35 32.9**	**-1.7**
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
KLR	**Kul’dur**	**55.60**	**27**	*e*P	**P**	**21 35 33.5**	**-3.7**
KLR				*e*S	**S**	**21 43 21.0**	**+1.6**
KLR				pmax	pmax		
	comp=N,80nm,2.0s						
KLR				pmax	pmax		
	comp=E,100nm,2.0s						
KLR				pmax	pmax		
	comp=Z,130nm,2.0s,mb5.6						
KLR				MLR	MLR		
	comp=E,1µm,15.0s						
KLR				MLR	MLR		
	comp=Z,4µm,15.0s,MS5.6						
ZRNK	**Zerenda**	**55.65**	**340**	P	**P**	**21 35 35.7**	**-1.8**
ZRNK				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
AFFS	**‘Afif**	**56.30**	**297**	P	**P**	**21 35 42.9**	**+0.3**
AB31	**Akbulak array**	**56.52**	**332**	*i* P	**P**	**21 35 42.4**	**-1.4**
AB31				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.4						
ARSS	**Ar Rass**	**56.60**	**300**	P	**P**	**21 35 44.6**	**-0.1**
BLJS	**Baljurashi**	**56.70**	**292**	P	**P**	**21 35 46.5**	**+1.0**
BOD	**Bodaibo**	**57.17**	**11**	*e*P	**P**	**21 35 47.4**	**-0.9**
BOD				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.4						
BHD	**Baghdad**	**57.96**	**308**	*e*P	**P**	**21 36 04.0**	**+10**
ASAJ	**Asahikawa**	**58.15**	**37**	P	**P**	**21 35 55.3**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,11nm,0.6s						
ASAJ	**Asahikawa**	**58.15**	**37**	P	**P**	**21 35 55.3**	**-0.1**
	comp=Z,11nm,0.6s,mb5.1,baz=240,slow=11,SNR=13						
CLNS	**Chul’man**	**58.97**	**18**	*e*P	**P**	**21 36 00.6**	**-0.3**
CLNS				*e**PP	pP	21 36 06.6	-2.8
CLNS				*e*S	**S**	**21 43 57.3**	**-6.4**
CLNS				*e*		21 45 40.2	
CLNS				pmax	pmax		
	comp=Z,43nm,0.7s,mb5.6						
CLNS				pmax	pmax		
	comp=N,22nm,0.8s						
CLNS				pmax	pmax		
	comp=E,12nm,0.6s						
CLNS				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.3						
CLNS				smax			
	comp=N,6.0nm,1.3s						
CLNS				smax			
	comp=E,3.0nm,1.2s						
CLNS				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.5						
CLNS				MLR	MLR		
	comp=N,2µm,17.0s,MS5.2						
CLNS				MLR	MLR		
	comp=E,200nm,15.0s,MS5.2						
YSS	**Yuzh-Sakhalins**	**59.80**	**35**	*e*P	**P**	**21 36 05.7**	**-1.1**
YSS				*e*	pP	21 36 14.0	-1.3
YSS				S	**S**	**21 44 25.0**	**+10**
YSS				pmax	pmax		
	comp=Z,50nm,0.6s,mb5.7						
YSS				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.8						
YSS				MLR	MLR		
	comp=N,500nm,17.0s,MS5.0						
YSS				MLR	MLR		
	comp=E,800nm,18.0s,MS5.0						
YSS	**Yuzh-Sakhalins**	**59.80**	**35**	*e*P	**P**	**21 36 06.2**	**-0.5**
	comp=E,45nm,0.8s,mb5.5						
GNI	**Garni**	**60.36**	**316**	*e*P	**P**	**21 36 10.6**	**-0.1**
	comp=E,43nm,1.2s,mb5.3						
GNI				LR	LR		
	comp=Z,626nm,20.0s,MS4.8						
DGRG	**David-gareji**	**60.49**	**318**	P	**P**	**21 36 17.8**	**+6.2**
ARMA	**Armidale**	**61.39**	**126**	*e*P	**P**	**21 36 19.3**	**+1.5**
UMJS	**Umm Lajj**	**61.64**	**298**	P	**P**	**21 36 20.6**	**+1.0**
SVE	**Sverdlovsk**	**61.68**	**338**	*e*P	**P**	**21 36 18.0**	**-1.5**
SVE				*e*	pP	21 36 26.0	-2.0
SVE				*e*		21 38 41.0	
SVE				*e*S	**S**	**21 44 40.0**	**+1.5**
SVE				*e*		21 45 07.0	
SVE				*e*		21 46 08.0	
SVE				pmax	pmax		
	comp=Z,120nm,2.0s,mb5.7						
SVE				MLR	MLR		
	comp=N,600nm,19.0s,MS4.9						
SVE				MLR	MLR		
	comp=E,500nm,19.0s,MS4.9						
SVE				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.0						
ZEI	**Tsey**	**62.05**	**318**	*e*P	**P**	**21 36 19.9**	**-2.2**
ZEI				*i* *PP	pP	21 36 28.6	-2.1
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0						
ARU	**Arti**	**62.18**	**337**	⇑*i*P	**P**	**21 36 21.5**	**-1.3**
ARU				*e*		21 36 59.8	
ARU				*e*		21 38 40.0	
ARU				*i* PPP	PPP	21 40 04.3	-6.8
ARU				*e*S	**S**	**21 44 46.3**	**+1.6**
ARU				*e*		21 46 14.5	
ARU				*e*SS	SS	21 48 46.6	-3.1
ARU				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.3						
ARU				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.0						
ARU				MLR	MLR		

	comp=N,700nm,20.0s,MS4.9						
ARU				MLR	MLR		
	comp=E,400nm,20.0s,MS4.9						
ARU	**Arti**	62.18	337	*e*P	P	21 36 21.0	-1.8
	comp=E,22nm,0.8s,mb5.3						
ERZM	**Erzurum**	62.64	314	*i* P	P	21 36 26.7	+0.6
TBKS	**Tabuk**	62.95	301	P	P	21 36 28.8	+0.5
KIV	**Kislovodsk**	63.35	319*c*	*i*P	P	21 36 29.3	-1.4
KIV				*i* S	S	21 44 58.3	-1.4
KIV				*i* SS	SS	21 49 01.6	-6.7
KIV				pmax	pmax		
	comp=Z,40nm,2.0s,mb5.2						
KIV	**Kislovodsk**	63.35	319	*e*P	P	21 36 29.4	-1.3
	comp=Z,37nm,0.9s,mb5.5						
KIV				*e*pP	pP	21 36 37.2	-2.1
KIV				LR	LR		
	comp=Z,114nm,21.0s,MS4.0						
GOF	**Gofitskoye**	63.60	320⇑	*i*P	P	21 36 37.2	+4.8
GOF				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
JMQS	**Jabal Moqyreh**	63.68	301	P	P	21 36 33.1	0.0
HNR	**Honiara**	63.92	102	*e*P	P	21 36 33.8	-1.2
	comp=Z,87nm,1.0s,mb5.7						
AYUS	**‘Aynunah**	64.05	300	P	P	21 36 35.6	0.0
MALT	**Malatya**	64.22	312	*e*P	P	21 36 36.4	-0.2
	comp=Z,13nm,1.0s,mb4.9						
MALT				*e*pP	pP	21 36 45.4	+0.2
BDAS	**Al Bad‘**	64.24	301	P	P	21 36 37.0	+0.1
JMOS	**Jabal al Moall**	64.39	301	P	P	21 36 37.2	-0.6
ALWS	**Ilw as Safayha**	64.46	301	P	P	21 36 38.8	+0.5
HAQS	**Haql**	64.52	301	P	P	21 36 39.1	+0.4
GZT	**Gaziantep**	64.57	311	*i* P	P	21 36 38.0	-0.8
YAK	**Yakutsk**	64.64	16	*e*P	P	21 36 37.5	-1.3
YAK				*e**PP	pP	21 36 47.7	+0.3
YAK				*e*		21 37 11.3	
YAK				*e*		21 38 59.6	
YAK				*e*PPP	PPP	21 40 31.3	-4.9
YAK				*i* S	S	21 45 15.3	0.0
YAK				*e*		21 46 29.2	
YAK				*e*SS	SS	21 49 27.1	-0.8
YAK				pmax	pmax		
	comp=N,25nm,0.9s						
YAK				pmax	pmax		
	comp=Z,90nm,0.9s,mb5.8						
YAK				pmax	pmax		
	comp=E,18nm,1.1s						
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
YAK				pmax	pmax		
	comp=N,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				smax			
	comp=N,86nm,2.0s						
YAK				smax			
	comp=E,27nm,1.9s						
YAK				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.2						
YAK				MLR	MLR		
	comp=N,857nm,16.0s,MS5.2						
YAK				MLR	MLR		
	comp=E,853nm,18.0s,MS5.2						
EIL	**Elat**	64.64	302	*e*P	P	21 36 39.1	-0.4
	comp=E,14nm,0.8s,mb5.0						
EIL				*e*pP	pP	21 36 47.9	-0.1
SOKR	**Solikamsk**	65.08	339⇑	*i*P	P	21 36 39.6	-2.1
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,960nm,19.0s,MS5.0						
SOC	**Sochi**	65.17	318	*e*P	P	21 36 41.3	-1.3
SOC				*e*		21 37 12.0	
SOC				*e*		21 39 04.2	
SOC				*e*S	S	21 45 13.0	-9.2
SOC				*e*		21 46 25.2	
SOC				*e*SS	SS	21 49 31.1	-5.6
SOC				pmax	pmax		
	comp=Z,31nm,0.6s,mb5.5						
SOC				pmax	pmax		
	comp=N,8.0nm,0.7s						
SOC				pmax	pmax		
	comp=E,12nm,0.9s						
SOC				pmax	pmax		
	comp=Z,235nm,3.7s						
SOC				MLR	MLR		
	comp=N,224nm,16.0s						
SOC				MLR	MLR		
	comp=Z,176nm,16.0s,MS4.3						
SOC				MLR	MLR		
	comp=E,289nm,24.0s						
COBT	**Iskenderun**	65.32	309	*i* P	P	21 36 51.0	+7.3
MBAR	**Mbarara**	66.12	268	P	P	21 36 48.5	-0.7
	comp=E,38nm,1.6s,mb5.2						
MBAR				*e*pP	pP	21 36 56.4	-1.4
ANN	**Anapa**	67.15	318	*e*P	P	21 36 46.8	-8.4
ANN				*e*S	S	21 45 36.9	-9.3
ANN				pmax	pmax		
	comp=Z,115nm,1.6s,mb5.7						
ANN				MLR	MLR		
	comp=N,695nm,21.0s,MS4.9						
ANN				MLR	MLR		
	comp=E,231nm,21.0s,MS4.9						
ANN				MLR	MLR		
	comp=Z,532nm,21.0s,MS4.7						
BOYT	**Boyabat**	67.78	314	*i* P	P	21 36 58.7	-0.5
BR131	**Keskin Array S**	68.20	312	*e*P	P	21 37 00.5	-1.5
	comp=Z,3.4nm,0.6s,mb4.5						
BR131				LR	LR		
	comp=Z,440nm,19.0s,MS4.7						
BRTR	**Keskin Array B**	68.20	312	P	P	21 37 00.4	-1.5
BRTR				*PP	pP	21 37 10.1	-0.4
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRTR	**Keskin Array B**	68.20	312	P	P	21 37 00.3	-1.6
	comp=Z,4.5nm,0.7s,mb4.6,baz=132,slow=6.6,SNR=32						
BRTR				pP	pP	21 37 10.1	-0.4
	comp=Z,5.3nm,0.8s,baz=124,slow=6.4,SNR=9.9						
PECR	**Pechory**	68.42	332	*e*P	P	21 37 01.4	-1.5
PECR				pmax	pmax		
	comp=Z,600nm,1.6s						
VOR	**Voronezh**	68.79	326	*e*P	P	21 37 04.5	-0.8
VOR				pmax	pmax		
	comp=Z,50nm,2.0s,mb5.1						
CASY	**Casey**	68.97	174	*e*P	P	21 37 06.2	0.0
	comp=Z,29nm,1.3s,mb5.0						
CASY				*e*pP	pP	21 37 13.1	-1.7
SKR	**Severo-Kuril’s**	69.32	36	*e*P	P	21 37 05.0	-3.6
SKR				*e*		21 46 13.0	
SKR				pmax	pmax		
	comp=Z,2µm,4.0s						
SKR				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.4						
SIM	**Simferopol’**	69.42	318*c*	*e*P	P	21 37 08.8	-0.5
SIM				*e*S	S	21 46 12.0	-1.3
SIM				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
LSZ	**Lusaka**	70.02	253	*e*P	P	21 37 13.3	-0.1
	comp=Z,34nm,1.5s,mb5.0						
LSZ				*e*pP	pP	21 37 21.8	-0.2
MA2	**Magadan**	70.66	26	*e*P	P	21 37 16.7	+0.1
MA2				*e*S	S	21 46 27.3	-0.3
MA2				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
MA2	**Magadan**	70.66	26	*e*P	P	21 37 16.8	+0.2
	comp=Z,18nm,0.8s,mb5.1						
GOLH	**Golhisar**	70.69	309	*i* P	P	21 37 16.2	-1.0
MOS	**Moscow**	71.34	329	*e*P	P	21 37 18.8	-2.0
MOS				*e*	pP	21 37 29.3	-0.1
MOS				*e*		21 37 42.9	
MOS				*e*		21 39 54.4	
MOS				*e*S	S	21 46 30.4	-5.1
MOS				pmax	pmax		
	comp=Z,63nm,0.7s,mb5.7						
MOS				MLR	MLR		
	comp=Z,2µm,23.4s,MS5.2						
MOS				MLR	MLR		
	comp=N,1µm,21.0s						
OBN	**Obninsk**	71.63	328*c*	*i*P	P	21 37 21.4	-1.1
OBN				*i*		21 40 01.5	
OBN				*i* S	S	21 46 33.4	-5.4
OBN				pmax	pmax		
	comp=Z,90nm,1.9s,mb5.4						
OBN				MLR	MLR		
	comp=Z,600nm,20.0s,MS4.9						
OBN	**Obninsk**	71.63	328	*e*P	P	21 37 20.4	-2.1
	comp=Z,31nm,0.8s,mb5.3						
PET	**Petropavlovsk**	71.67	34*j*	*i*P	P	21 37 22.4	-0.4
PET				*e*		21 40 09.7	
PET				*e*S	S	21 46 41.4	+2.0
PET				*e*PS	PS	21 47 11.4	-1.2
PET				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.5						
PET				pmax	pmax		
	comp=Z,300nm,5.7s						
PET				smax			
	comp=N,200nm,5.1s						
PET				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.1						
PET	**Petropavlovsk**	71.67	34	*e*P	P	21 37 22.4	-0.4
	comp=Z,48nm,1.0s,mb5.4						
DZM	**Mont Dzumac**	72.01	114	P	P	21 37 25.8	+0.4
	comp=Z,12nm,1.1s,mb4.7,baz=256,slow=8.3,SNR=3.2						
DZM				pP	pP	21 37 34.7	+0.7
	comp=Z,5.2nm,0.8s,baz=241,slow=21,SNR=3.0						
TIXI	**Tiksi**	72.34	10	*e*P	P	21 37 23.0	-3.5
TIXI				*e*		21 40 04.2	
TIXI				*e*S	S	21 46 38.9	-7.8
TIXI				*e*SS	SS	21 51 20.2	-6.8
TIXI				*e*SSS	SSS	21 54 34.5	-1.9
TIXI				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
TIXI	**Tiksi**	72.34	10⇑	*i*P	P	21 37 25.1	-1.4
SEY	**Seymchan**	73.06	23	*e*P	P	21 37 30.8	0.0
SEY						21 37 46.3	
SEY						21 40 15.2	
SEY				*e*PPP	PPP	21 41 59.4	+0.6
SEY				*e*S	S	21 46 56.7	+1.8
SEY				*e*		21 47 32.8	
SEY				pmax	pmax		
	comp=E,620nm,1.2s						
SEY				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.1						
SEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
SEY				smax			
	comp=N,190nm,5.8s						
SEY				smax			
	comp=E,300nm,10.3s						
SEY				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.5						
SEY				MLR	MLR		
	comp=N,2µm,25.0s,MS5.4						
SEY				MLR	MLR		
	comp=E,1µm,24.0s,MS5.4						
MAW	**Mawson**	73.53	193	P	P	21 37 33.6	+0.1
MAW				*PP	pP	21 37 42.2	+0.1
MAW				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAW				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MAW				MLR	MLR		
	comp=Z,382nm,21.9s						
MAW	**Mawson**	73.53	193	P	P	21 37 33.6	+0.1
	comp=Z,2.5nm,0.6s,mb4.3,baz=37,slow=9.6,SNR=3.8						
MAW				pP	pP	21 37 42.2	+0.1
	comp=Z,4.5nm,0.7s,baz=329,slow=4.4,SNR=4.3						
MAW				LR	LR	22 03 36.3	
	comp=Z,382nm,21.9s,MS4.6,baz=49,slow=31						
MAW	**Mawson**	73.53	193	P	P	21 37 33.6	+0.1
MAW				pP	pP	21 37 42.2	0.0
MAW				LR	LR	22 03 36.3	
KIS	**Kishinev**	73.55	319	*e*P	P	21 37 30.0	-4.0
KIS				*e*	pP	21 37 40.0	-2.6
KIS				*e*		21 37 48.0	
KIS				*e*S	S	21 46 54.0	-6.8
KIS				*e*		21 47 46.0	
KIS				MLR	MLR		
	comp=E,300nm,21.0s						
KIS				MLR	MLR		
	comp=Z,300nm,21.0s,MS4.5						
KIS				MLR	MLR		
	comp=Z,300nm,21.0s						
CFR	**Carcaliu**	73.55	317⇓	*i*P	P	21 37 33.8	-0.3
CFR	**Carcaliu**	73.55	317⇓	*i*P	P	21 37 33.8	-0.3
LBTB	**Lobatse**	73.96	243	*e*P	P	21 37 37.0	+0.1
	comp=Z,238nm,2.3s,mb5.7						
LBTB				*e*pP	pP	21 37 45.3	-0.2
LBTB				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
AKASG	**Malin Array Be**	74.29	322	P	P	21 37 37.0	-1.2
AKASG				*PP	pP	21 37 46.2	-0.6
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AKASG	**Malin Array Be**	74.29	322	P	P	21 37 37.0	-1.2
	comp=Z,8.7nm,0.6s,mb4.8,baz=91,slow=4.6,SNR=24						
AKASG				pP	pP	21 37 46.1	-0.7
	comp=Z,7.4nm,0.6s,baz=88,slow=5.0,SNR=8.8						
AKASG	**Malin Array Be**	74.29	322	P	P	21 37 37.0	-1.2
AKASG				pP	pP	21 37 46.1	-0.7
GVD	**Gavdhos**	74.63	305	*e*P	P	21 37 40.1	-0.5
	comp=Z,12nm,0.8s,mb4.9						
GVD				*e*pP	pP	21 37 48.2	-1.0
VRI	**Vrincioaia**	74.68	317⇑	*i*P	P	21 37 41.0	+0.4
BOSA	**Boshof**	74.92	240	P	P	21 37 42.1	-0.2
BOSA				*PP	pP	21 37 51.0	0.0
BOSA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
BOSA				MLR	MLR		
	comp=Z,1µm,18.2s,MS5.2						
BOSA	**Boshof**	74.92	240	P	P	21 37 42.1	-0.2
	comp=Z,5.6nm,0.9s,mb4.5,baz=114,slow=5.1,SNR=6.1						
BOSA				pP	pP	21 37 51.0	0.0
	comp=Z,5.2nm,0.8s,baz=82,slow=8.5,SNR=4.7						
BOSA				LR	LR	22 07 40.9	
	comp=Z,1µm,18.2s,MS5.2,baz=58,slow=33						
BOSA	**Boshof**	74.92	240	*e*P	P	21 37 41.5	-0.8
MLR	**Muntele Rosu**	75.13	317⇑	*i*P	P	21 37 43.2	+0.1
MLR	**Muntele Rosu**	75.13	317⇑	*i*P	P	21 37 43.3	+0.1
DRV	**Dumont d’Urvil**	75.15	164	S	S	21 47 24.0	+5.7
BURAR	**Bucovina Array**	76.08	319	⇓P	P	21 37 49.0	+0.5
MNK	**Minsk**	76.17	326	*e*P	P	21 37 47.0	-1.9
LVZ	**Lovozero**	77.83	340	*e*P	P	21 37 56.3	-1.5
LVZ				*e*S	S	21 47 45.2	-2.2
LVZ				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
LVZ				pmax	pmax		
	comp=N,2.0nm,0.9s						
LVZ				pmax	pmax		
	comp=E,2.0nm,0.5s						
LVZ				pmax	pmax		
	comp=Z,340nm,3.3s						
LVZ				pmax	pmax		
	comp=N,80nm,2.9s						
LVZ				pmax	pmax		
	comp=E,70nm,3.6s						
LVZ				smax			
	comp=E,110nm,3.0s						
LVZ				MLR	MLR		
	comp=Z,820nm,21.0s,MS5.0						
LVZ				MLR	MLR		
	comp=N,560nm,22.0s,MS5.0						
LVZ				MLR	MLR		
	comp=E,490nm,21.0s,MS5.0						
VSU	**Vasula**	77.85	330⇑	*i*P	P	21 37 58.0	-0.1
VSU	**Vasula**	77.85	330⇑	*i*P	P	21 37 58.1	0.0
KWP	**Kalwaria**	78.11	320	*e*P	P	21 38 00.4	+0.7
APA	**Apatity**	78.12	339	*e*P	P	21 38 00.0	+0.5
APA				*i*		21 38 04.7	
APA				*i* S	S	21 47 50.0	-0.6
APA				*i* PS		21 48 06.0	
APA				*e*SS	SS	21 52 54.0	-1.5
APA				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
APA				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.2						
BZS	**Buzias**	78.14	316	⇓P	P	21 37 59.2	-0.8
KOLS	**Kolonicke sedl**	78.26	320	*e*P	P	21 38 01.2	+0.6
KOLS				*e*sP	sP	21 38 14.4	+2.2
SUW	**Suwalki**	78.70	325	*e*P	P	21 38 02.2	-0.7
FINES	**FINESS Array B**	79.00	332	P	P	21 38 04.0	-0.4
FINES				pmax	pmax		
	comp=Z,13nm,0.7s						
FINES				MLR	MLR		
	comp=Z,704nm,21.1s						
FINES	**FINESS Array B**	79.00	332	P	P	21 38 04.0	-0.4
	comp=Z,13nm,0.7s,mb5.0,baz=104,slow=7.9,SNR=82						
FINES				LR	LR	22 17 34.6	
	comp=Z,704nm,21.1s,MS5.0,baz=300,slow=39						
FINES	**FINESS Array B**	79.00	332	P	P	21 38 04.0	-0.4
FINES				LR	LR	22 17 34.6	
KAF	**Kangasniemi**	79.08	333	*e*p	P	21 38 04.2	-0.6
	comp=Z,14nm,0.6s,mb5.1,baz=103,slow=5.2						
KAF	**Kangasniemi**	79.08	333	*e*P	P	21 38 04.2	-0.6
KAF				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1						
SUR	**Sutherland**	79.35	237	P	P	21 38 07.4	+0.5
	comp=Z,24nm,0.8s,mb5.2						
PSZ	**Piszkesteto**	79.66	318	*e*P	P	21 38 07.5	-0.8
	comp=Z,20nm,1.1s,mb5.0						
PSZ	**Piszkesteto**	79.66	318⇓	*e*P	P	21 38 07.3	-0.9
OJC	**Ojcow**	80.06	321	*e*P	P	21 38 08.6	-1.7
OJC				*e*S	S	21 48 05.4	-6.0
OJC				MLR	MLR		
	comp=Z,500nm,20.6s,MS4.8						
FX1	**Attu Island--F**	80.07	37	P	P	21 38 10.9	+0.6
FX1				pmax	pmax		
	comp=Z,21nm,0.5s						
FX1	**Attu Island--F**	80.07	37	P	P	21 38 10.9	+0.6
	comp=Z,21nm,0.5s,mb5.3,baz=342,slow=6.1,SNR=16						
FX1	**Attu Island--F**	80.07	37	*e*P	P	21 38 10.9	+0.6
BILL	**Bilibino**	80.43	21*d*	*e*P	P	21 38 12.1	+0.1
BILL				pmax	pmax		
	comp=Z,36nm,2.6s,mb4.8						
BILL				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
BILL	**Bilibino**	80.43	21	*e*P	P	21 38 12.1	+0.1
	comp=Z,8.8nm,0.9s,mb4.7						
VYHS	**Vyhne**	80.44	319	*e*P	P	21 38 12.5	+0.1
VYHS				*e*		21 38 27.9	
VYHS				*e*S	S	21 48 08.6	-6.8
SYO	**Syowa Base**	80.77	198	⇑P	P	21 38 13.0	-0.7
SYO	**Syowa Base**	80.77	198	⇓PcP	PcP	21 38 19.0	-1.7
SYO	**Syowa Base**	80.77	198	⇑X		21 38 32.6	
TIP	**Timpagrande**	80.95	309	*e*P	P	21 38 15.6	+0.3
OKC	**Ostrava-Krasne**	81.07	320	*e*P	P	21 38 16.0	+0.4
OKC				*e**PP	pP	21 38 24.1	-0.3
OKC				*e*		21 48 21.0	
OKC				MLR	MLR		
	comp=Z,300nm,17.3s,MS4.7						
OKC	**Ostrava-Krasne**	81.07	320	*e*P	P	21 38 16.0	+0.4
OKC				*e*pP	pP	21 38 24.1	-0.3
OKC				*e*S	S	21 48 21.0	-0.9
OKC				*e*x	x	21 48 35.5	
OKC				AMS	AMS	22 19 20.0	
	comp=Z,300nm,17.3s						
KEV	**Kevo**	81.10	341	*e*p	P	21 38 14.9	-0.5
	comp=Z,14nm,0.8s,mb5.0						
KEV	**Kevo**	81.10	341	*e*P	P	21 38 14.9	-0.5
KEV				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
MORC	**Moravsky Berou**	81.45	320	*e*P	P	21 38 17.8	+0.2
	comp=Z,24nm,1.4s,mb4.9						
MORC				*e*pP	pP	21 38 25.9	-0.4
ARCES	**ARCESS Array B**	81.53	340	P	P	21 38 17.6	-0.1
ARCES				*PP	pP	21 38 27.0	+0.5
ARCES				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARCES				MLR	MLR		
	comp=Z,866nm,20.1s						
ARCES	**ARCESS Array B**	81.53	340	P	P	21 38 17.6	-0.1
	comp=Z,7.8nm,0.6s,mb4.8,baz=103,slow=4.0,SNR=45						
ARCES				pP	pP	21 38 27.0	+0.5
	comp=Z,5.5nm,0.7s,baz=86,slow=5.2,SNR=6.0						
ARCES				LR	LR	22 17 35.5	
	comp=Z,866nm,20.1s,MS5.1,baz=121,slow=38						
ARE0	**ARCESS Array S**	81.53	340	*e*P	P	21 38 18.0	+0.3
ZST	**Bratislava**	81.56	318	*e*P	P	21 38 18.7	+0.5
ZST				*e*		21 38 34.3	
ZST				*e*		21 48 40.4	
SLCN	**Sala Consilina**	81.90	310	P	P	21 38 23.0	+2.8
SGO	**Sicignano**	82.16	310	P	P	21 38 22.3	+0.7
	comp=Z,19nm,1.2s,mb4.9						
KTK1	**Kautokeino**	82.17	340	*e*P	P	21 38 21.4	+0.4
	comp=Z,44nm,1.9s,mb5.1						
KTK1	**Kautokeino**	82.17	340	*e*P	P	21 38 21.1	+0.1
KTK1				AMb	AMB	21 38 23.7	
	comp=Z,44nm,1.9s,mb5.1						
DPC	**Dobruska-Polom**	82.29	320	*e*P	P	21 38 22.9	+0.9
DPC				*e**PP	pP	21 38 30.3	-0.5
DPC				*e*		21 48 33.7	
DPC				MLR	MLR		
	comp=Z,300nm,19.3s,MS4.7						
DPC	**Dobruska-Polom**	82.29	320	*e*P	P	21 38 22.9	+0.9
DPC				*e*pP	pP	21 38 30.3	-0.5
DPC				*e*S	S	21 48 33.7	-0.7
DPC				*e*x	x	21 48 50.1	
DPC				AMS	AMS	22 21 30.0	
	comp=Z,300nm,19.3s						
GOLS	**Golise**	82.35	316	*e*P	P	21 38 23.1	+0.7
KSP	**Ksiaz**	82.36	321	*e*P	P	21 38 23.6	+1.2
KSP				*e*S	S	21 48 35.0	-0.1
CSSN	**Cassano Irpino**	82.40	311	P	P	21 38 23.4	+0.6
GROS	**Grobnik**	82.47	316	*e*P	P	21 38 23.5	+0.4
UPC	**Upice**	82.51	321	*e*P	P	21 38 23.5	+0.4
UPC				*e*pP	pP	21 38 30.3	-1.6
ARSA	**Arzberg**	82.52	317⇓	*i*P	P	21 38 23.8	+0.5
	comp=Z,6.7nm,0.9s,mb4.7						
LJU	**Ljubljana**	83.11	316	*e*P	P	21 38 26.3	0.0
PRU	**Pruhonice**	83.40	320	*e*P	P	21 38 28.3	+0.6
PRU				*e*pP	pP	21 38 36.0	-0.5
PRU				AMS	AMS	22 21 20.0	
	comp=Z,300nm,20.8s						
MOA	**Molln**	83.42	318⇓	*i*P	P	21 38 27.5	-0.4
	comp=Z,4.0nm,0.7s,mb4.6						
PVCC	**Panska Ves**	83.42	320	*e*P	P	21 38 28.3	+0.4
PVCC				AMS	AMS	22 21 20.0	
	comp=Z,300nm,20.0s						
VOY	**Vojsko**	83.55	316	*e*P	P	21 38 28.7	+0.1
VOY				*e*	pP	21 38 36.3	-1.1
PTQR	**Pietraquaria**	83.68	312	P	P	21 38 29.7	+0.3
AQU	**L’Aquila**	83.70	312	P	P	21 38 30.3	+0.8
	comp=Z,37nm,0.9s,mb5.5						
TRO	**Tromso**	83.80	340	*e*P	P	21 38 28.9	-0.5
TRO				LR	LR		
	comp=Z,638µm,21.3s						
TRO	**Tromso**	83.80	340	*e*P	P	21 38 28.9	-0.5
TRO				*e*SKSa		21 48 48.8	
TRO				AMS	AMS	22 19 07.5	
	comp=Z,638nm,21.3s,MS5.0						
BRG	**Berggiesshubel**	83.85	321	*i* P	P	21 38 30.6	+0.6
BRG				*e*		21 38 46.3	
BRG				S	S	21 48 52.0	+1.9
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
BRG				pmax	pmax		
	comp=Z,33nm,1.8s,mb5.2						
BRG				MLR	MLR		
	comp=Z,405nm,22.3s,MS4.8						
BRG				MLR	MLR		
	comp=N,475nm,22.2s,MS4.9						
BRG				MLR	MLR		
	comp=E,261nm,22.2s,MS4.9						
BRG	**Berggiesshubel**	83.85	321	*i* P	P	21 38 30.6	+0.6
	comp=E,7.5nm,1.0s,mb4.8						
BRG				*e*		21 38 46.3	
BRG				S	S	21 48 52.0	+1.8
BRG				LR	LR		
	comp=Z,410nm,22.3s,MS4.8						
GEC2	**GERESS Array S**	83.86	319	*e*P	P	21 38 31.0	+0.9
GEC2				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
GEC2	**GERESS Array S**	83.86	319	*e*P	P	21 38 31.0	+0.9
	comp=Z,14nm,1.0s,mb5.0						
GERES	**GERESS Array B**	83.86	319	P	P	21 38 30.5	+0.4
GERES				*PP	pP	21 38 39.6	+0.7
GERES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GERES				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GERES				MLR	MLR		
	comp=Z,218nm,20.1s						
GERES	**GERESS Array B**	83.86	319	P	P	21 38 30.5	+0.4
	comp=Z,6.0nm,0.8s,mb4.8,baz=90,slow=5.3,SNR=53						
GERES				pP	pP	21 38 39.6	+0.7
	comp=Z,10nm,1.0s,baz=135,slow=3.8,SNR=15						
GERES				LR	LR	22 22 23.0	
	comp=Z,218nm,20.1s,MS4.5,baz=181,slow=40						

CING	Cingoli	83.90	313	P	P	21 38 31.3	+0.8
	comp=Z,29nm,1.2s,mb5.3						
FIAM	Fiamignano	83.91	312	P	P	21 38 30.9	+0.4
	comp=Z,64nm,1.9s,mb5.4						
NRCA	Norcia	83.93	313	P	P	21 38 31.1	+0.4
PTCC	Patocco-Chiusa	83.95	316	P	P	21 38 30.6	0.0
KHC	Kasperske Hory	83.96	319	*e*P	P	21 38 30.4	-0.2
KHC				*e**PP	pP	21 38 39.1	-0.3
KHC				*e*		21 48 50.1	
KHC				MLR	MLR		
	comp=Z,300nm,20.4s,MS4.7						
KHC	Kasperske Hory	83.96	319	*e*P	P	21 38 30.4	-0.2
KHC				*e*pP	pP	21 38 39.1	-0.3
KHC				*e*SKS	SKS	21 48 50.1	-6.0
KHC				*e*x	x	21 49 07.4	
KHC				AMS	AMS	22 23 00.0	
	comp=Z,300nm,20.4s						
KBA	Koelnbreinsper	83.99	317	⇓*i*P	P	21 38 30.3	-0.5
	comp=Z,4.8nm,0.9s,mb4.6						
GMNA	Gemona	84.02	316	P	P	21 38 31.4	+0.4
ARV	Arcevia	84.09	313	P	P	21 38 31.9	+0.5
	comp=Z,86nm,1.6s,mb5.6						
FSSB	Fossombrone	84.22	314	P	P	21 38 33.3	+1.2
FVI	Forni Avoltri	84.36	316	P	P	21 38 33.3	+0.6
WET	Wettzell	84.42	319	*e*P	P	21 38 33.8	+0.8
WET				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
WET	Wettzell	84.42	319	*e*P	P	21 38 33.8	+0.8
	comp=Z,9.0nm,0.8s,mb5.0						
CLL	Collm	84.47	321	*i* P	P	21 38 33.4	+0.3
CLL				*i* *PP	pP	21 38 41.7	-0.2
CLL				*i*		21 38 48.5	
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.8						
CLL				MLR	MLR		
	comp=Z,400nm,17.4s,MS4.9						
CLL	Collm	84.47	321	*i* P	P	21 38 33.4	+0.3
	comp=Z,10.0nm,1.2s,mb4.8						
CLL				*i* pP	pP	21 38 41.7	-0.2
CLL				*i*		21 38 48.5	
CLL				LR	LR		
	comp=Z,400nm,17.4s,MS4.9						
CLL	Collm	84.47	321	P	P	21 38 33.4	+0.3
	comp=Z,logA/T=0.9,mb4.8						
CLL				*i* *PP	pP	21 38 41.7	-0.2
CLL				*i* *SP	sP	21 38 48.5	+3.7
CLL				*e*		21 39 09.0	
HFS	Hagfors	84.73	330	P	P	21 38 34.8	+0.6
HFS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HFS	Hagfors	84.73	330	P	P	21 38 34.8	+0.6
	comp=Z,5.8nm,0.9s,mb4.7,baz=117,slow=3.3,SNR=7.5						
NKC	Novy Kostel	84.76	320	*e*P	P	21 38 35.1	+0.5
NKC				*e*pP	pP	21 38 43.8	+0.4
SFI	Santa Sofia	84.90	314	P	P	21 38 37.1	+1.6
	comp=Z,41nm,1.0s,mb5.5						
PGD	Poggio Sodo	84.99	314	P	P	21 38 38.2	+2.3
	comp=Z,55nm,1.3s,mb5.5						
CTI	Castel Tesino	85.11	316	P	P	21 38 37.4	+0.9
	comp=Z,77nm,1.5s,mb5.6						
VMG	Vicchio	85.12	314	P	P	21 38 38.5	+1.9
WTTA	Wattenberg	85.17	317	⇓*i*P	P	21 38 36.4	-0.3
	comp=Z,9.5nm,0.7s,mb5.0						
MOX	Moxa	85.31	320	*e*P	P	21 38 38.0	+0.7
MOX				*e*	pP	21 38 46.3	+0.1
MOX				pmax	pmax		
	comp=Z,22nm,1.6s,mb5.0						
MOX				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.5						
MOX	Moxa	85.31	320	*e*P	P	21 38 38.0	+0.7
	comp=Z,22nm,1.6s,mb5.0						
MOX				*e*S	S	21 49 07.0	+2.4
MOX				LR	LR		
	comp=Z,200nm,18.0s,MS4.5						
MOX	Moxa	85.31	320	*i* P	P	21 38 38.0	+0.7
	comp=Z,logA/T=1.1,mb5.0						
MOX				*i*	pP	21 38 46.0	-0.2
MOX				S	S	21 49 07.0	+2.4
MOX				L		22 21 39.0	
SQTA	Sankt Quirin	85.46	317	⇑*i*P	P	21 38 38.2	0.0
	comp=Z,5.2nm,0.8s,mb4.7						
GRFL	Gerfalco	85.51	313	P	P	21 38 38.8	+0.3
	comp=Z,14nm,1.2s,mb5.1						
LOF	Lofoten	85.52	338	*e*P	P	21 38 38.1	+0.1
LOF	Lofoten	85.52	338	⇑*i*P	P	21 38 38.1	+0.2
GRA1	Grafenberg Arr	85.53	319	*e*P	P	21 38 39.5	+1.0
	comp=Z,16nm,0.8s,mb5.3						
GRA1				*e*pP	pP	21 38 47.9	+0.6
GRA1				LR	LR		
	comp=Z,300nm,19.6s,MS4.7						
GRF	Grafenberg Arr	85.53	319	*e*P	P	21 38 39.5	+1.0
GRF				*e**PP	pP	21 38 47.9	+0.6
GRF				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.3						
GRF				MLR	MLR		
	comp=Z,300nm,19.6s,MS4.7						
GRF	Grafenberg Arr	85.53	319	*e*P	P	21 38 39.5	+1.0
	comp=Z,16nm,0.8s,mb5.3						
GRF				*e*pP	pP	21 38 47.9	+0.6
GRF				LR	LR		
	comp=Z,300nm,19.6s,MS4.7						
NSS	Namsos	85.86	334	*e*P	P	21 38 39.1	-0.7
NB2	NORSAR Subarra	86.01	331	P	P	21 38 40.7	+0.1
	comp=Z,7.5nm,0.8s,mb5.0,baz=91,slow=5.0						
NB2	NORSAR Subarra	86.01	331	P	P	21 38 40.7	+0.1
	baz=91,slow=5.3						
NOA	NORSAR Array B	86.01	331	P	P	21 38 40.9	+0.3
NOA						21 42 00.0	
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,643nm,20.4s						
NOA	NORSAR Array B	86.01	331	P	P	21 38 40.9	+0.4
	comp=Z,4.2nm,0.8s,mb4.8,baz=94,slow=5.0,SNR=17						
NOA				PP	PP	21 41 60.0	-2.3
	comp=Z,1.8nm,0.8s,baz=95,slow=8.3,SNR=5.4						
NOA				LR	LR	22 21 45.0	
	comp=Z,642nm,20.4s,MS5.0,baz=55,slow=39						
NOA	NORSAR Array B	86.01	331	P	P	21 38 40.9	+0.3
NOA				PP	PP	21 41 60.0	-2.3
NOA				LR	LR	22 21 45.0	
BRMO	Bormio	86.01	316	P	P	21 38 41.8	+0.9
FUORN	Ofenpass	86.09	316	P	P	21 38 42.8	+1.5
CLZ	Clausthal	86.13	322	*e*P	P	21 38 41.4	0.0
	comp=Z,6.0nm,0.8s,mb4.9						
BSEG	Bad Segeberg	86.22	324	*e*P	P	21 38 42.7	+0.9
BSEG				pmax	pmax		
	comp=Z,72nm,2.3s,mb5.5						
DAVA	Damuels	86.36	317	⇑*i*P	P	21 38 43.4	+0.7
	comp=Z,11nm,0.9s,mb5.1						
VSL	Villasalto	86.68	309	*e*P	P	21 38 43.9	-0.5
	comp=Z,19nm,1.1s,mb5.2						
VNDA	Vanda	86.81	169	P	P	21 38 45.8	+1.6
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VNDA				MLR	MLR		
	comp=Z,874nm,18.2s						
VNDA	Vanda	86.81	169	P	P	21 38 45.8	+1.6
	comp=Z,1.0nm,0.8s,mb4.1,baz=269,slow=3.9,SNR=3.1						
VNDA				LR	LR	22 13 30.6	
	comp=Z,874nm,18.2s,MS5.2,baz=306,slow=33						
KBS	Kingsbay	86.93	349	AMS	AMS	22 23 28.1	
	comp=Z,488nm,22.3s,MS4.9						
PGF	Pioggiola	86.96	312	*e*P	P	21 38 45.2	-0.5
	comp=Z,22nm,1.1s,mb5.0						
TNS	Taunus Mts	87.33	320	*e*P	P	21 38 48.2	+0.9
TNS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.1						
TNS	Taunus Mts	87.33	320	*e*P	P	21 38 48.2	+0.9
	comp=Z,10.0nm,0.8s,mb5.1						
FIN	Finale Ligure	87.53	314	P	P	21 38 48.7	+0.3
MOL	Molde	87.78	332	*e*P	P	21 38 57.4	+8.3
MOL				AMb	AMB	21 38 59.2	
	comp=Z,31nm,1.8s,mb5.2						
DIX	Grande Dixence	88.07	316	P	P	21 38 52.4	+1.5
SBF	Sospel	88.09	314	*e*P	P	21 38 50.4	-0.7
	comp=Z,33nm,0.9s,mb5.3						
CDF	Champ du Feu	88.11	318	*e*P	P	21 38 50.3	-0.8
LPG	La Plagne	88.54	315	*e*P	P	21 38 53.0	-0.2
	comp=Z,16nm,0.9s,mb5.1						
MBDF	Montbardon	88.55	315	*e*P	P	21 38 52.3	-0.9
LPL	La Plagne	88.55	315	*e*P	P	21 38 53.0	-0.3
	comp=Z,18nm,0.8s,mb5.1						
FRF	La Foret Royal	88.67	313	*e*P	P	21 38 53.4	-0.5
	comp=Z,52nm,1.5s,mb5.3						
HAU	Haudompre	88.75	318	*e*P	P	21 38 53.4	-0.7
	comp=Z,26nm,0.9s,mb5.3						
HAU				*e*R			
	comp=Z,314nm,21.6s						
LMR	La Mourre	88.78	313	*e*P	P	21 38 53.9	-0.5
	comp=Z,46nm,1.4s,mb5.3						
BER	Bergen	88.90	330	*e*P	P	21 39 01.5	+7.0
BER				*e*		21 49 41.1	
BER				AMS	AMS	22 23 28.2	
	comp=Z,476nm,22.8s,MS4.8						
CABF	La Chapelle	88.97	316	*e*P	P	21 38 55.0	-0.2
	comp=Z,54nm,1.6s,mb5.3						
ORIF	Oris-en-Rattie	89.17	315	*e*P	P	21 38 56.1	-0.1
ORIF				*e*R			
	comp=Z,286nm,21.5s						
SMRF	Simiane la Rot	89.43	314	*e*P	P	21 38 57.7	+0.2
	comp=Z,44nm,1.5s,mb5.3						
MEZF	Maizieres J'vi	89.59	318	*e*P	P	21 38 57.9	-0.2
GIVF	Givet	89.66	320	*e*P	P	21 38 58.1	-0.3
VIVF	Saint-Julien-l	90.03	315	*e*P	P	21 38 59.8	-0.5
	comp=Z,13nm,1.0s,mb4.9						
BAIF	Baives	90.06	320	*e*P	P	21 39 00.3	0.0
	comp=Z,37nm,1.0s,mb5.4						
LOR	Lormes	90.46	317	*e*P	P	21 39 01.8	-0.4
LOR				*e*R			
	comp=Z,352nm,20.5s						
SMF	Signal de Mont	90.51	317	*e*P	P	21 39 02.0	-0.4
	comp=Z,68nm,1.6s,mb5.4						
LASF	Ste Croix	90.66	314	*e*P	P	21 39 03.1	-0.1
	comp=Z,13nm,1.0s,mb4.9						
AVF	Avril sur Loir	90.84	317	*e*P	P	21 39 03.6	-0.3
	comp=Z,63nm,1.5s,mb5.4						
BGF	Bois d'Agland	91.20	316	*e*P	P	21 39 05.7	+0.1
	comp=Z,83nm,1.5s,mb5.6						
HYF	Humbligny	91.29	317	*e*P	P	21 39 06.4	+0.4
TCF	Toulx Ste Croi	91.66	316	*e*P	P	21 39 07.7	0.0
CAF	Calviac	91.88	315	*e*P	P	21 39 09.0	+0.2
MTLF	Montolieu	91.90	313	*e*P	P	21 39 09.0	+0.1
	comp=Z,63nm,1.7s,mb5.4						
RJF	Les Rejaudoux	92.23	315	*e*P	P	21 39 10.6	+0.2
RJF				*e*R			
	comp=Z,269nm,20.2s						
LFF	La Frestale	92.81	315	*e*P	P	21 39 13.3	+0.2
JMIC	Jan Mayen	92.96	342	AMS	AMS	22 26 49.2	
	comp=Z,446nm,20.0s,MS4.9						
LDF	La Druitiere	93.01	319	*e*P	P	21 39 13.8	-0.1
	comp=Z,26nm,1.1s,mb5.3						
FLN	La Foliniere	93.23	319	*e*P	P	21 39 14.6	-0.2
	comp=Z,42nm,1.2s,mb5.4						
FLN				*e*R			
	comp=Z,379nm,21.0s						
MFF	Saint Martin d	93.25	317	*e*P	P	21 39 15.0	0.0
	comp=Z,70nm,1.5s,mb5.6						
EPF	Esparros	93.30	313	*e*P	P	21 39 15.9	+0.6
GRR	Gorron	93.52	319	*e*P	P	21 39 16.3	+0.1
	comp=Z,39nm,1.3s,mb5.4						
DAG	Danmarks Havn	93.61	348	⇑*e*P	P	21 39 15.5	-0.5
DAG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
DAG	Danmarks Havn	93.61	348	⇑*e*P	P	21 39 15.5	-0.5
	comp=Z,3.0nm,0.8s,mb4.8						
DAG	Danmarks Havn	93.61	348	⇑*i*P	P	21 39 15.5	-0.5
	comp=Z,3.0nm,0.8s,mb4.8						
EKA	Eskdalemuir Ar	93.93	326	P	P	21 39 18.8	+0.9
EKA				*PP	pP	21 39 27.8	+1.1
EKA						21 43 02.3	
EKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
EKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
EKA	Eskdalemuir Ar	93.93	326	P	P	21 39 18.8	+0.9
	comp=Z,3.1nm,0.7s,mb4.8,baz=96,slow=6.0,SNR=14						
EKA				pP	pP	21 39 27.8	+1.0
	comp=Z,3.7nm,0.8s,baz=103,slow=5.2,SNR=10.0						
EKA				PP	PP	21 43 02.3	-4.5
	comp=Z,1.2nm,0.8s,baz=79,slow=8.5,SNR=3.7						
ETSF	Etsaut	93.97	313	*e*P	P	21 39 18.6	+0.2
SJPF	Ste Jean	94.43	313	*e*P	P	21 39 20.2	-0.3
	comp=Z,24nm,1.3s,mb5.2						
IMA	Indian Mountai	95.87	23	*e*P	P	21 39 27.4	+0.8
	comp=Z,217nm,1.8s						
IMA				*e*pP	pP	21 39 37.1	+1.6
ILAR	Eielson Array	98.99	23	P	P	21 39 40.9	+0.2
ILAR						21 43 39.4	
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR				MLR	MLR		
	comp=Z,463nm,18.0s						
ILAR	Eielson Array	98.99	23	P	P	21 39 40.9	+0.2
	comp=Z,0.2nm,0.5s,baz=249,slow=2.8,SNR=4.3						
ILAR				PP	PP	21 43 39.4	-5.6
	comp=Z,1.4nm,0.9s,baz=297,slow=7.7,SNR=4.8						
ILAR				LR	LR	22 33 19.2	
	comp=Z,463nm,18.0s,MS5.0,baz=167,slow=41						
INK	Inuvik	101.70	17	PP	PP	21 44 03.5	-2.4
	comp=Z,2.4nm,0.6s,baz=70,slow=8.8,SNR=4.2						
YKA	Yellowknife Ar	111.30	15	PP	PP	21 45 13.3	-3.9
	comp=Z,0.6nm,0.6s,baz=333,slow=6.3,SNR=4.3						
SCHQ	Schefferville	121.64	349	PKP	PKPdf	21 44 54.7	-3.1
	comp=Z,1.4nm,0.7s,baz=47,slow=4.2,SNR=4.1						
SCHQ				pPKP		21 45 03.2	
	comp=Z,2.3nm,0.7s,baz=234,slow=1.1,SNR=4.4						
SCHQ	Schefferville	121.64	349	PKP	PKPdf	21 44 54.7	-3.1
SCHQ				pPKP		21 45 03.2	
NEW	Newport	121.77	26	*e*PKPdf	PKPdf	21 44 55.1	-3.0
MSO	Missoula	124.25	25	*e*PKPdf	PKPdf	21 44 58.9	-4.1
MSO				*e*pPKPdf		21 45 07.9	
CHMT	Chamberlain Mo	124.47	25	*e*PKPdf	PKPdf	21 44 59.3	-4.2
BOZ	Bozeman (W)	126.16	24	*e*PKPdf	PKPdf	21 45 03.5	-3.2
BOZ				*e*pPKPdf		21 45 12.4	
HLID	Hailey	126.57	28	*e*PKPdf	PKPdf	21 45 04.8	-2.8
HLID				*e*pPKPdf		21 45 13.5	
ULM	Lac du Bonnet	126.69	10	PKP	PKPdf	21 45 04.3	-3.3
	comp=Z,5.0nm,0.8s,baz=330,slow=1.3,SNR=4.5						
ULM				pPKP		21 45 12.9	
	comp=Z,9.4nm,0.8s,baz=337,slow=4.9,SNR=6.3						
ULM	Lac du Bonnet	126.69	10	*e*PKPdf	PKPdf	21 45 03.5	-4.0
ULM				*e*pPKPdf		21 45 12.1	
TPAW	Teton Pass	128.18	26	*e*PKPdf	PKPdf	21 45 07.8	-3.0
LOHW	Long Hollow	128.23	25	*e*PKPdf	PKPdf	21 45 07.8	-3.1
NVAR	Mina Array Bea	128.25	35	PKP	PKPdf	21 45 08.5	-2.5
	comp=Z,2.5nm,0.9s,baz=151,slow=0.5,SNR=10						
NVAR				pPKP		21 45 16.7	
	comp=Z,4.2nm,0.8s,baz=66,slow=1.4,SNR=11						
NVAR	Mina Array Bea	128.25	35	PKP	PKPdf	21 45 08.5	-2.5
NVAR				pPKP		21 45 16.7	
ELK	Elko	128.28	31	*e*PKPdf	PKPdf	21 45 08.7	-2.3
ELK				*e*pPKPdf		21 45 17.3	
PDAR	Pinedale Array	129.37	25	PKP	PKPdf	21 45 09.5	-3.5
	comp=Z,1.3nm,0.7s,baz=262,slow=1.5,SNR=8.9						
PDAR				pPKP		21 45 18.6	
	comp=Z,2.1nm,0.6s,baz=5.5,slow=0.6,SNR=10						
HWUT	Hardware Ranch	129.41	27	*e*PKPdf	PKPdf	21 45 10.0	-3.2
EYMN	Ely	129.60	7	*e*PKPdf	PKPdf	21 45 10.1	-3.2
EYMN				*e*pPKPdf		21 45 18.6	
TRCR	Troy Canyon	129.83	33	*e*PKPdf	PKPdf	21 45 11.9	-2.1
NOQ	North Oquirrh	129.90	29	*e*PKPdf	PKPdf	21 45 09.5	-4.5
RSSD	Black Hills	130.31	20	*e*PKPdf	PKPdf	21 45 11.0	-3.7
NEN	Nelson	132.17	35	*e*PKPdf	PKPdf	21 45 16.3	-2.2
ANMO	Albuquerque	137.14	29	*e*PKPdf	PKPdf	21 45 24.4	-3.2
BNM	Barren Site	137.70	29	*e*PKPdf	PKPdf	21 45 25.5	-3.3
MNTX	Cornudas Mount	140.29	30	*e*PKPdf	PKPdf	21 45 30.1	-3.5
WMOK	Wichita Mounta	140.51	20	*e*PKPpre		21 45 22.4	
LTX	Lajitas	143.07	31	*e*PKPdf	PKPdf	21 45 33.3	-5.2
TXAR	Lajitas Array	143.07	31	PKIKP	PKPdf	21 45 33.1	-5.4
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TXAR	Lajitas Array	143.07	31	PKP	PKPdf	21 45 33.0	-5.4
	comp=Z,1.5nm,0.6s,baz=288,slow=4.0,SNR=15						
NATX	Nacogdoches	144.57	17	*e*PKPdf	PKPdf	21 45 37.2	-3.9
LRAL	Lakeview Retre	144.84	6	*e*PKPdf	PKPdf	21 45 36.5	-4.9
JATB	Jatai	145.19	241	⇓*e*P	PKPbc	21 45 48.0	+10
JATB				*i*		21 45 50.1	
JATB				*i*		21 45 53.4	
JATB				*i*		21 46 03.5	
JATB				*i*		21 46 05.9	
SAML	Samuel	158.99	250	*e*PKPdf	PKPdf	21 45 59.5	-3.3
LPAZ	La Paz	159.57	226	PKIKP	PKPdf	21 46 01.1	-2.2
LPAZ						21 46 10.5	
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LPAZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
LPAZ	La Paz	159.57	226	PKP	PKPdf	21 46 01.1	-2.3
	comp=Z,0.6nm,0.8s,baz=94,slow=2.9,SNR=4.6						
LPAZ				pPKP		21 46 10.5	
	comp=Z,5.5nm,1.2s,baz=20,slow=1.3,SNR=8.3						
LPAZ	La Paz	159.57	226	*e*PKPdf	PKPdf	21 46 00.7	-2.6
OTAV	Otavalo	174.72	296	*e*PKPdf	PKPdf	21 46 11.8	-2.8
OTAV				*e*pPKPdf		21 46 21.1	

NNC 17 21:57:48.4±1.6**, 37.57N**×**70.21E, mpv3.2, 1D, Error ellipse: s-maj=97.5km s-min=13.4km az=92.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	5.53	2	P	Pn	21 59 12.0	-2.0
	0.9nm,0.3s,baz=176,slow=12,SNR=35						
KK31				⇓S	Sn	22 00 17.5	-1.8
	0.7nm,0.5s,baz=174,slow=23,SNR=8.0						
MK31	Makanchi Array	12.84	40	P	P	22 00 55.4	+0.5
	0.4nm,0.5s,baz=183,slow=23,SNR=2.8						
AB31	Akbulak array	13.84	331	P	P	22 01 07.1	-1.0
	0.2nm,0.3s,baz=128,slow=12,SNR=7.7						

*IDC **17** 22:45:45.5±1.1, 52.65N×179.75W, mb3.8/9, mb1 4.1/10, mb1mx3.9/23, mbtmp3.9/10, ML4.0/1, MS3.8/8, Ms1 3.8/8, ms1mx3.5/24, Error ellipse: s-maj=34.7km s-min=14.0km az=175.0*

*MOS **17** 22:45:46.6±2.5, 51.73N×179.86E, h54^{km}, mb4.5/2, Error ellipse: s-maj=28.4km s-min=16.5km az=131.2*

*NEIC **17** 22:45:50.7±0.7, 52.58N×179.97W, h36^{km}±9^{km}, mb4.4/4, ML4.1(AEIC), Error ellipse: s-maj=18.4km s-min=6.9km az=192.0*

ISC 17 22:45:49.8±0.7**, 52.6N**±0.1×**179.97E**±0.09**, h43**^{km}±10^{km}**, n38, σ1^{s}08**/34**, mb4.0**/13**, MS3.8**/9**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIKV	Kanaga Island	1.89	110	P	P	22 46 20.9	+0.7
KIMD	Kanaga Island	1.90	114	P	P	22 46 18.9	-1.4
KIWB	Kanaga Island	1.91	111	*e*P	P	22 46 20.2	-0.3
ADAG	Mount Adagdak	2.18	104	P	P	22 46 25.4	+1.0
GSTD	Great Sitkin T	2.44	100	P	P	22 46 29.1	+1.1
GSTR	Great Sitkin T	2.48	99	*e*P	P	22 46 26.6	-2.0
GSMY	Great Sitkin M	2.49	100	P	P	22 46 29.7	+0.9
SMY	Shemya	3.58	275	P	P	22 46 43.9	-0.4
ATKA	Atka Island	3.59	93	P	P	22 46 45.1	+0.7
FX1	Attu Island--F	4.15	277	P	P	22 46 51.9	-0.5
FX1						22 47 44.8	
FX1				pmax	pmax		
	comp=Z,31nm,0.3s						
FX1	Attu Island--F	4.15	277	Pn	P	22 46 51.9	-0.5
	comp=Z,31nm,0.3s,baz=227,slow=4.0,SNR=102						
FX1				Sn	S	22 47 44.8	+4.5
	baz=279,slow=19,SNR=2.4						
FX1	Attu Island--F	4.15	277	P	P	22 46 51.8	-0.6
NIKO	Nikolski	6.79	82	P	P	22 47 25.6	-3.9
BILL	Bilibino	16.87	342	P	P	22 49 44.5	+0.6
	comp=Z,17nm,1.1s						
ASAJ	Asahikawa	25.99	266	LR	LR	23 00 42.5	
	comp=Z,101nm,19.3s,MS3.4,baz=349,slow=34						
INK	Inuvik	26.94	37	LR	LR	23 03 57.9	
	comp=Z,140nm,18.3s,MS3.6,baz=342,slow=41						
KLR	Kul'dur	30.15	283	*e*P	P	22 51 51.2	-6.3
MJAR	Matsushiro Arr	33.26	258	LR	LR	23 07 28.9	
	comp=Z,59nm,18.2s,MS3.3,baz=290,slow=39						
YKA	Yellowknife Ar	34.98	47	P	P	22 52 38.2	-1.2
	comp=Z,0.6nm,0.5s,mb3.8,baz=282,slow=7.8,SNR=2.8						
YKA				LR	LR	23 09 17.7	
	comp=Z,205nm,18.2s,MS3.9,baz=270,slow=41						
BOZ	Bozeman (W)	43.77	71	*e*P	P	22 53 52.9	+0.4
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
BOZ	Bozeman (W)	43.77	71	*e*P	P	22 53 52.9	+0.4
	comp=Z,7.4nm,1.0s,mb4.4						
TLY	Talaya	44.80	301	*e*P	P	22 54 01.1	+0.5
TLY				*e*		23 00 43.6	
TLY				MLR	MLR		
	comp=Z,128nm,15.0s,MS4.0						
SONM	Songino Array	45.45	295	P	P	22 54 05.1	-0.8
	comp=Z,1.1nm,1.0s,mb3.6,baz=50,slow=9.6,SNR=10						
SONM				LR	LR	23 14 54.7	
	comp=Z,177nm,18.2s,MS4.0,baz=76,slow=38						
ZAK	Zakamensk	45.70	299	*e*P	P	22 54 01.8	-6.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
BW06	Boulder Array	46.67	73	P	P	22 54 15.9	+0.3
	comp=Z,2.4nm,0.6s,mb4.3						
PDAR	Pinedale Array	46.67	73	P	P	22 54 15.3	-0.3
	comp=Z,2.1nm,0.6s,mb4.2,baz=304,slow=5.3,SNR=12						
ULM	Lac du Bonnet	49.67	57	LR	LR	23 15 31.7	
	comp=Z,97nm,18.3s,MS3.8,baz=39,slow=36						
MKAR	Makanchi Array	58.71	307	P	P	22 55 43.5	-1.5
	comp=Z,0.7nm,0.3s,mb4.1,baz=46,slow=6.6,SNR=24						
MKAR				LR	LR	23 23 40.1	
	comp=Z,87nm,18.3s,MS3.9,baz=348,slow=39						
TXAR	Lajitas Array	59.22	81	P	P	22 55 46.3	-2.5
	comp=Z,0.3nm,0.5s,mb3.6,baz=306,slow=7.8,SNR=2.7						
ZRNK	Zerenda	60.11	319	*e*P	P	22 55 55.3	+0.7
ZRNK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
ZRNK	Zerenda	60.11	319	*e*P	P	22 55 55.2	+0.6
	comp=Z,7.8nm,1.0s,mb4.7						
ARU	Arti	61.20	327	*e*P	P	22 56 03.6	+1.6
FINES	FINESS Array B	64.46	346	P	P	22 56 24.3	+1.0
	comp=Z,0.3nm,0.6s,mb3.5,baz=44,slow=5.7,SNR=4.3						
NB2	NORSAR Subarra	66.39	354	P	P	22 56 34.0	-1.7
	comp=Z,3.5nm,1.1s,mb4.3,baz=6.0,slow=6.2						
NOA	NORSAR Array B	66.39	354	P	P	22 56 34.5	-1.2
	comp=Z,1.0nm,0.8s,mb3.9,baz=21,slow=5.8,SNR=2.6						
PPT	Papeete	74.67	150	LR	LR	23 21 57.5	
	comp=Z,146nm,22.0s,MS4.2,baz=11,slow=29						
WRA	Warramunga Arr	82.35	223	P	P	22 58 09.8	+1.3
	comp=Z,0.5nm,0.6s,mb3.6,baz=34,slow=6.2,SNR=6.3						
BRTR	Keskin Array B	83.55	335	P	P	22 58 14.9	+0.8
	comp=Z,0.3nm,0.6s,mb3.6,baz=27,slow=2.8,SNR=3.8						

*ROM **17** 23:22:58.8±0.2, 45.01N×7.51E, h33^{km}±4^{km}, Md2.7/11, Ml2.2/5, Error ellipse: s-maj=4.7km s-min=4.3km az=35.0*

*LDG **17** 23:22:59.0±0.1, 44.97N×7.71E, h2^{km}, Md2.9/1, Ml2.7/26, Error ellipse: s-maj=3.0km s-min=1.8km az=104.0*

*STR **17** 23:22:59.6±0.3, 44.93N×7.62E, h5^{km}±1^{km}, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **17** 23:22:59.2±0.1, 44.97N×7.62E, h15^{km}, ML2.8/6, Error ellipse: s-maj=1.3km s-min=1.1km az=26.0*

*NEIC **17** 23:23:00.2, 45.02N×7.50E, h27^{km}, ML2.9(GEN), ML2.7(LDG), ML2.6(STR), ML2.2(ROM), After GEN.*

*GEN **17** 23:23:00.2, 45.02N×7.50E, h27^{km}, ML0.2*

ISC 17 23:22:59.7±0.2**, 44.99N**±0.01×**7.57E**±0.02**, h24**^{km}±2^{km}**, n108, σ0^{s}98**/163**, 3C-1D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHB	Bricherasio	0.27	236	P	Pb	23 23 06.2	0.0
BHB				S	Sb	23 23 10.6	+0.1
BHB	Bricherasio	0.27	236	P	Pb	23 23 06.2	0.0
MONC	Moncucco Torin	0.27	71	⇑*e*Pg	Pb	23 23 07.7	+1.5
MONC				Sg	Sb	23 23 13.5	+3.0
	1µm,0.3s						
RSP	Reno Superiore	0.28	306	P	Pb	23 23 06.1	-0.2
RSP				S	Sb	23 23 10.1	-0.7
RSP	Reno Superiore	0.28	306	P	Pb	23 23 06.1	-0.2
FENE	Fenestrelle	0.36	277	P	Pb	23 23 07.9	+0.3
FENE				S	Sb	23 23 12.5	-0.5
FENE	Fenestrelle	0.36	277	P	Pb	23 23 07.9	+0.2
OG22	Abries	0.48	250	Pg	Pb	23 23 09.8	+0.3
OG22				Sg	Sb	23 23 15.9	-0.2
TRAV		0.54	13	P	Pb	23 23 10.0	-0.5
TRAV				S	Sb	23 23 17.2	-0.6
TRAV		0.54	13	P	Pb	23 23 10.0	-0.5
DOI	San Damiano	0.54	206	Pg	Pb	23 23 10.1	-0.4
	190nm,0.3s						
LSD	Ceresole Reale	0.55	328	P	Pb	23 23 10.8	0.0
LSD				S	Sb	23 23 17.9	-0.3
LSD	Ceresole Reale	0.55	328	P	Pb	23 23 10.8	+0.1
RRL	Cesana Torines	0.56	263	P	Pb	23 23 11.2	+0.2
RRL				S	Sb	23 23 18.3	-0.3

RRL	Cesana Torines	0.56	263	P	Pb	23 23 11.2	+0.3
PZZ	Prazzo	0.59	215	P	Pb	23 23 10.8	-0.6
PZZ				S	Sb	23 23 18.7	-0.6
PZZ	Prazzo	0.59	215	P	Pb	23 23 10.8	-0.5
MBDF	Montbardon	0.63	246	ePg	Pb	23 23 12.4	+0.4
MBDF				eSg	Sb	23 23 21.3	+0.9
	101nm,0.2s						
BNI	Bardonecchia	0.64	276	⇑ePg	Pb	23 23 12.6	+0.4
BNI				Sg	Sb	23 23 21.0	+0.4
	52nm,0.5s						
ORO	Oropa	0.70	24	Pg	Pb	23 23 12.5	-0.7
	43nm,0.2s						
ORX	Oropa	0.70	24	P	Pb	23 23 12.6	-0.7
ORX				S	Sb	23 23 21.4	-1.1
ORX	Oropa	0.70	24	P	Pb	23 23 12.6	-0.7
ROB	Roburent	0.73	163	P	Pb	23 23 14.2	+0.5
ROB				S	Sb	23 23 24.0	+0.8
ROB	Roburent	0.73	163	P	Pb	23 23 14.2	+0.6
ROB				S	Sb	23 23 24.0	+0.8
SURF	Saint Ours	0.74	227	Pg	Pb	23 23 14.1	+0.2
SURF				Sg	Sb	23 23 24.1	+0.4
STV2	Anna di Valdie	0.77	193	P	Pb	23 23 13.6	-0.7
STV2				S	Sb	23 23 23.3	-1.0
STV2	Anna di Valdie	0.77	193	P	Pb	23 23 13.6	-0.7
STV	Sta Anna Valdi	0.77	194	P	Pb	23 23 13.7	-0.7
STV				S	Sb	23 23 23.1	-1.2
STV	Sta Anna Valdi	0.77	194	P	Pb	23 23 13.6	-0.7
ENR	Entracque	0.77	188	P	Pb	23 23 13.9	-0.5
ENR				S	Sb	23 23 23.7	-0.8
ENR	Entracque	0.77	188	P	Pb	23 23 13.9	-0.5
LPG	La Plagne	0.77	311	ePg	Pb	23 23 14.8	+0.4
LPG				eSg	Sb	23 23 25.9	+1.4
	38nm,0.2s						
LPL	La Plagne	0.79	312	ePg	Pb	23 23 15.1	+0.3
LPL				ePn	Pn	23 23 16.2	+0.8
LPL				eSg	Sb	23 23 26.1	+1.0
	26nm,0.2s						
PCP	Pian Castagno	0.82	123	P	Pb	23 23 15.9	+0.6
PCP				S	Sb	23 23 26.9	+0.9
PCP	Pian Castagno	0.82	123	P	Pb	23 23 15.9	+0.6
PCP				S	Sb	23 23 26.9	+0.9
FIN	Finale Ligure	0.90	150	Pg	Pb	23 23 17.3	+0.7
	69nm,0.3s						
FIN	Finale Ligure	0.90	150	P	Pb	23 23 16.9	+0.3
FIN	Finale Ligure	0.90	150	Pg	Pb	23 23 17.3	+0.7
	69nm,0.3s						
FIN				S	Sb	23 23 27.4	-0.8
MONE	Monesi	0.92	172	P	Pb	23 23 16.8	-0.1
MONE				S	Sb	23 23 28.0	-0.7
MONE	Monesi	0.92	172	P	Pb	23 23 16.8	-0.1
RSL	Roselend	0.97	317	Pg	Pb	23 23 18.7	+1.0
AUTN	L'Aution	1.00	186	Pg	Pb	23 23 17.7	-0.6
SAOF	Saorge	1.00	181	Pg	Pb	23 23 17.7	-0.6
TOUF	Mont Tournerai	1.00	194	Pg	Pb	23 23 17.4	-0.9
MCGN	Macugnaga	1.01	17	Pg	Pb	23 23 17.5	-1.0
	19nm,0.2s						
DIX	Grande Dixence	1.10	354	⇓ePg	Pn	23 23 19.4	-0.4
MMK	Mattmark	1.10	14	Pg	Pn	23 23 19.1	-0.7
IMI	Imperia	1.10	168	Pg	Pn	23 23 20.4	+0.5
	56nm,0.4s						
IMI	Imperia	1.10	168	P	Pn	23 23 19.6	-0.3
IMI	Imperia	1.10	168	Pg	Pn	23 23 20.4	+0.5
	56nm,0.4s						
SBF	Sospel	1.13	185	ePn	Pn	23 23 19.8	-0.5
SBF				eSg	Sb	23 23 34.0	-0.8
	43nm,0.2s						
MVIF	Mont Vial	1.13	196	Pg	Pn	23 23 19.6	-0.7
NEGI	Negi	1.15	175	P	Pn	23 23 20.0	-0.5
NEGI	Negi	1.15	175	P	Pn	23 23 20.0	-0.5
EMV	Vieux Emosson	1.17	336	Pg	Pn	23 23 22.1	+1.2
ORIF	Oris-en-Rattie	1.20	267	ePn	Pn	23 23 22.7	+1.4
ORIF				eSn	Sn	23 23 38.5	+1.5
	110nm,0.5s						
VAI	Varese	1.22	43	Pg	Pn	23 23 21.2	-0.3
	14nm,0.2s						
OG25	Le Caire	1.24	240	Pg	Pn	23 23 23.9	+2.1
OG25				Sg	Sn	23 23 39.5	+1.7
REVF	Revere	1.26	187	Pg	Pn	23 23 22.7	+0.6
CALN	Calern	1.33	202	Pg	Pn	23 23 23.6	+0.5
BOB	Bobbio (Coli)	1.35	99	Pg	Pn	23 23 25.9	+2.5
MUGIO	Muggio	1.39	47	Pg	Pn	23 23 23.7	-0.3
STOF	St-Etienne Org	1.55	231	Pg	Pn	23 23 31.1	+4.8
STOF				Sg	Sn	23 23 50.6	+4.8
FRF	La Foret Royal	1.58	205	ePn	Pn	23 23 27.2	+0.6
FRF				eSn	Sn	23 23 46.7	+0.3
	24nm,0.2s						
CODM		1.73	109	P	Pn	23 23 28.8	-0.1
CODM		1.73	109	P	Pn	23 23 28.8	0.0
TAVF	Tavernes	1.75	219	Pg	Pn	23 23 32.0	+2.9
TAVF				Sg	Sn	23 23 54.9	+4.0
VILF	Villemus	1.75	230	Pg	Pn	23 23 33.4	+4.3
SMRF	Simiane la Rot	1.75	235	ePn	Pn	23 23 29.7	+0.5
SMRF				ePg	Pn	23 23 32.9	+3.7
SMRF				eSn	Sn	23 23 51.6	+0.7
SMRF				eSg	Sn	23 23 56.1	+5.2
	13nm,0.3s						
OG05	Jujurieux	1.82	306	Pn	Pn	23 23 32.0	+1.9
OG05				Pg	Pn	23 23 35.0	+4.9
LMR	La Mourre	1.82	205	ePn	Pn	23 23 30.1	-0.1
LMR				eSn	Sn	23 23 52.1	-0.6
	16nm,0.2s						
GRAM		1.84	105	P	Pn	23 23 30.4	-0.1
GRAM		1.84	105	P	Pn	23 23 30.4	-0.1
BACM		1.92	111	P	Pn	23 23 31.8	+0.3
BACM		1.92	111	P	Pn	23 23 31.8	+0.2
CABF	La Chapelle	1.93	328	ePn	Pn	23 23 33.3	+1.7
CABF				ePg	Pn	23 23 36.7	+5.1
CABF				eSn	Sn	23 23 56.1	+0.8
	7.1nm,0.2s						
TUE	Stuetta	1.93	39	Pg	Pn	23 23 31.9	+0.1
	9.0nm,0.1s						
VALM		2.01	108	P	Pn	23 23 32.5	-0.4
VALM		2.01	108	P	Pn	23 23 32.5	-0.4
VINC	Vinca	2.03	114	P	Pn	23 23 33.0	-0.1
VINC	Vinca	2.03	114	P	Pn	23 23 33.0	-0.1
VINC	Vinca	2.03	114	P	Pn	23 23 33.0	-0.1
VIVF	Saint-Julien-l	2.06	267	ePn	Pn	23 23 34.7	+1.1
VIVF				eSn	Sn	23 23 59.6	+0.7
	8.4nm,0.3s						
SARO	Sassorosso	2.17	111	P	Pn	23 23 35.2	0.0
SARO	Sassorosso	2.17	111	P	Pn	23 23 35.2	0.0
SARO	Sassorosso	2.17	111	P	Pn	23 23 35.2	0.0
MAIM		2.35	116	P	Pn	23 23 37.6	-0.1
MAIM		2.35	116	P	Pn	23 23 37.6	-0.1
PGF	Pioggiola	2.65	157	ePn	Pn	23 23 40.6	-1.4
PGF				eSn	Sn	23 24 09.9	-3.8
	2.4nm,0.2s						
DAVA	Damuels	2.80	34	⇑iPN	Pn	23 23 45.5	+1.3
DAVA				i SN	Sn	23 24 18.3	+0.7
LASF	Ste Croix	2.81	252	ePn	Pn	23 23 44.3	0.0
LASF				eSn	Sn	23 24 16.2	-1.6
	2.3nm,0.2s						
HINF	Hinteralfeld	2.87	350	ePn	Pn	23 23 45.2	+0.1
HINF				eSn	Sn	23 24 17.3	-2.0
HINF				eSg	Sn	23 24 29.3	+10
	4.0nm,0.3s						
MOF	Molkenrain	2.88	354	Pn	Pn	23 23 45.0	-0.3
SMF	Signal de Mont	3.09	304	ePn	Pn	23 23 49.4	+1.1
SMF				eSn	Sn	23 24 22.7	-2.2
	3.4nm,0.2s						
HAU	Haudompre	3.13	345	ePn	Pn	23 23 48.9	0.0
HAU				eSn	Sn	23 24 23.4	-2.5
	4.5nm,0.2s						
ECH	Echery	3.24	355	Pn	Pn	23 23 49.2	-1.2
THEF	They Montfort	3.42	342	Pn	Pn	23 23 53.0	+0.1
CDF	Champ du Feu	3.43	357	ePn	Pn	23 23 52.5	-0.6
CDF				eSn	Sn	23 24 30.2	-3.2
CDF				eSg	Sn	23 24 48.3	+15
	1.7nm,0.3s						
LOR	Lormes	3.44	313	ePn	Pn	23 23 54.0	+0.7
	baz=134						
LOR				eSn	Sn	23 24 31.8	-2.0
	2.9nm,0.2s,baz=143						
AVF	Avril sur Loir	3.45	303	ePn	Pn	23 23 54.2	+0.8
AVF				eSn	Sn	23 24 32.8	-1.3
	1.8nm,0.4s						
BGF	Bois d'Agland	3.66	297	ePn	Pn	23 23 56.9	+0.6
BGF				ePg	Pn	23 24 09.6	+13
BGF				eSn	Sn	23 24 36.8	-2.5
	6.4nm,0.3s						
CAF	Calviac	3.91	271	ePn	Pn	23 24 00.8	+0.9
MEZF	Maizieres J'vi	3.92	335	ePn	Pn	23 24 00.9	+0.9
	18nm,1.2s						
MEZF				eSn	Sn	23 24 42.3	-3.5
	3.8nm,0.2s,baz=155						
MEZF				ePn	Pn		
	3.0nm,0.6s						
MEZF				ePn	Pn		
	8.8nm,1.0s						
TCF	Toulx Ste Croi	3.98	291	ePn	Pn	23 24 01.5	+0.6
TCF				eSn	Sn	23 24 44.8	-2.6
	1.2nm,0.2s						
MTLF	Montolieu	4.19	249	ePn	Pn	23 24 03.8	-0.1
MTLF				eSn	Sn	23 24 50.1	-2.6
	0.6nm,0.2s						
RJF	Les Rejaudoux	4.30	276	ePn	Pn	23 24 06.5	+1.1
MFF	Saint Martin d	5.63	289	ePn	Pn	23 24 24.7	+0.4
GRR	Gorron	6.72	303	ePn	Pn	23 24 37.3	-2.3

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*ATH **17** 23:52:10.6, 34.82N×26.13E, h5^{km}±3^{km}, MD3.7/6*
*NEIC **17** 23:52:11.0, 34.84N×26.14E, h5^{km}, MD3.7(ATH), After ATH.*
*CSEM **17** 23:52:12.1±0.4, 34.90N×26.13E, h10^{km}, MD3.7, Error ellipse: s-maj=11.5km s-min=4.7km az=171.0*
ISC 17 23:52:11.1±1.6**, 34.9N**±0.1×**26.10E**±0.09**, h5^{km}, n11, σ1^{s}32**/12**, 1D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.34	274	⇓iPB	Pb	23 52 17.8	-1.4
NPS	Neapolis	0.58	316	ePG	Pg	23 52 22.2	-0.5
NPS				eSB	Sb	23 52 30.9	-0.6
KARP	Karpathos	1.11	51	ePB	Pb	23 52 32.0	-0.4
VAM	Vamos	1.66	290	ePB	Pb	23 52 43.0	+1.2
VAM	Vamos	1.66	290	ePb	Pb	23 52 44.5	+2.7
GVD	Gavdhos	1.66	270	ePg	Pg	23 52 43.5	-0.8
GVD	Gavdhos	1.66	270	ePg	Pg	23 52 43.5	-0.7
KYTH	Kithira	2.88	301	ePn	Pn	23 53 01.5	+3.0
KYTH	Kithira	2.88	301	ePN	Pn	23 53 01.0	+2.5
VLI	Veliai	3.18	307	ePN	Pn	23 53 05.0	+2.2
VLI	Veliai	3.18	307	ePn	Pn	23 53 02.2	-0.6

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*NEIC **17** 23:59:52.5, 16.04N×97.13W, h8^{km}, MD4.0(MEX), After MEX.*
MEX 17 23:59:52.5±0.6**, 16.04N×97.13W, h8^{km}**±7^{km}**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.02	105	eP	Pb	00 00 09.2	-2.8
HUIG				eS	Sb	00 00 22.6	-2.6
PNIG	Pinotepa	1.02	290	i P	Pb	00 00 09.0	-3.0
PNIG				i S	Sb	00 00 22.4	-3.0
VHO	Vista Hermosa	1.10	20	i P	Pb	00 00 10.5	-2.8
VHO				i S	Sb	00 00 24.1	-3.5
OXX	Oaxaca	1.11	21	i P	Pb	00 00 11.0	-2.5
OXX				i S	Sb	00 00 25.0	-2.9
CMIG	Matias Romero	2.40	64	eP	Pn	00 00 29.6	-3.0
CMIG				i S	Sn	00 00 55.9	-6.6
ACX	Acapulco	2.80	288	eP	Pn	00 00 36.0	-2.4
ACX				i S	Sn	00 01 08.0	-4.7
IISM	Ciudad Serdan	2.94	355	eP	Pn	00 00 41.5	+1.0
IISM				i S	Sn	00 01 19.0	+2.6
CAIG	El Cayaco	3.17	289	eP	Pn	00 00 40.1	-3.7
CAIG				i S	Sn	00 01 17.2	-4.9
PPM	Popocatepetl	3.33	335	eP	Pn	00 00 44.6	-1.4
PPM				eS	Sn	00 01 27.0	+0.7
PPM	Popocatepetl	3.33	335	eP	Pn	00 00 44.6	-1.4
PPM				eP		00 00 49.0	
PPM				eS	Sn	00 01 21.9	-4.4
PPM				eS	Sn	00 01 27.0	+0.7

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*IDC **18** 00:25:48.7±11.0, 27.76S×66.71W, h155^{km}±92^{km}, mb3.2/1, mb1 3.4/2, mb1mx3.1/15, mbtmp3.8/2, Error ellipse: s-maj=82.7km s-min=43.2km az=5.0*
*NEIC **18** 00:25:49.1±1.0, 27.85S×66.63W, h162^{km}±13^{km}, mb3.8/1, Error ellipse: s-maj=19.9km s-min=9.9km az=106.0*
*GUC **18** 00:25:49.3±0.7, 27.85S×66.77W, h170^{km}, ML5.0*
ISC 18 00:25:48.6±1.3**, 27.84S**±0.06×**66.8W**±0.2**, h182^{km}**±34^{km}**, n11, σ0^{s}82**/15**, mb3.6**/1**, 4C, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPCH	Copiapo	3.21	278	⇑iP	P	00 26 41.5	+1.0
CPCH				i S	S	00 27 19.9	-0.6
CPCH				AMP		00 27 22.4	
	comp=E,2µm,0.2s						
VACH	Vallenar	3.59	257	i S	S	00 27 28.9	0.0
ZON	Zonda	4.05	204	⇑iP	P	00 26 51.0	0.0
ZON				eS	S	00 27 38.0	-1.3
TLL	Tololo Astrono	4.22	236	⇑iP	P	00 26 54.4	+1.1
TLL				i S	S	00 27 44.2	+1.0
CMCH	Combarbala	4.96	227	⇑iP	P	00 27 02.5	-0.3
CMCH				i S	S	00 27 59.6	-0.6
LPAZ	La Paz	11.56	353	P	P	00 28 30.3	+1.1
	comp=E,0.4nm,0.3s,baz=176,slow=15,SNR=11						
LPAZ				S	S	00 30 34.0	-1.3
	comp=E,0.1nm,0.3s,baz=227,slow=25,SNR=3.6						
LPAZ	La Paz	11.56	353	P	P	00 28 30.3	+1.1
LPAZ				S	S	00 30 34.0	-1.3
SAML	Samuel	19.09	11	eP	P	00 29 59.2	-0.4
	comp=E,1.9nm,0.4s						
BDFB	Brasilia	21.20	59	P	P	00 30 21.2	+0.3
	comp=E,1.1nm,0.3s,mb3.6,baz=203,slow=11,SNR=4.7						
WRA	Warramunga Arr	128.29	206	PKP	PKPdf	00 44 36.8	+2.8
	comp=E,0.2nm,0.3s,baz=154,slow=2.0,SNR=12						
MKAR	Makanchi Array	149.25	44	PKPbc	PKPdf	00 45 18.6	+7.9
	comp=E,1.3nm,0.6s,baz=285,slow=3.5,SNR=11						

NEIC 18 00:44:48.6±5.5**, 40.50N×127.72W, h10^{km}, mb3.2**/1**, Error ellipse: s-maj=61.1km s-min=15.5km az=57.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	3.06	82	eP	Pn	00 45 36.2	-1.7
KHMM				eS	Sn	00 45 56.5	-18
KBO	Bosley Butte	3.14	56	eP	Pn	00 45 36.6	-2.6
KEBM	Edson Butte	3.47	46	eP	Pn	00 45 41.8	-2.0
WDC	Whiskeytown Da	3.95	87	eP	Pn	00 45 49.8	-0.8
WDC				eS	Sn	00 46 21.8	-16
YBH	Yreka Blue Hor	3.98	70	eP	Pn	00 45 49.7	-1.4
YBH				eS	Sn	00 46 15.6	-23
LAMM	Antelope Mount	4.01	72	P	Pn	00 45 50.9	-0.6
HUMO	Hull Mountain	4.15	58	P	Pn	00 45 51.2	-2.3
DBO	Dodson Butte	4.25	50	P	Pn	00 45 53.0	-1.9
LHEM	Herd Peak	4.31	73	P	Pn	00 45 55.4	-0.4
BBOR	Butler Butte	4.46	56	P	Pn	00 45 56.2	-1.7
BUOR	Burton Butte	4.49	65	P	Pn	00 45 57.7	-0.5
HSO	Harness Mounta	4.59	47	P	Pn	00 45 58.0	-1.7
HBO	Huckleberry Mo	5.22	48	P	Pn	00 46 07.8	-0.9
COR	Corvallis	5.23	37	P	Pn	00 46 05.8	-3.0
IRO	Indian Ridge	5.36	47	P	Pn	00 46 09.5	-1.1
BROR	Big Rock Looko	5.42	44	P	Pn	00 46 11.5	0.0
FRIS	Frissel Point	5.58	46	P	Pn	00 46 12.6	-1.0
HUOR	Husband	5.66	48	P	Pn	00 46 13.8	-1.1
MOD	Modoc	5.77	74	eP	Pn	00 46 13.3	-3.1
EDM	Edmonton	16.04	33	P	P	00 48 35.2	-0.5
FFC	Flin Flon	22.27	42	P	P	00 49 45.0	-2.2
	0.5nm,0.6s						

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*TEH **18** 00:51:59.7, 33.20N×46.56E, h10^{km}, Mn3.2*
*CSEM **18** 00:52:00.7±0.2, 33.28N×46.70E, h25^{km}, ML3.2, Error ellipse: s-maj=4.6km s-min=3.4km az=36.0*
*THR **18** 00:52:01.7±1.1, 33.36N×46.89E, h14^{km}±14^{km}, ML3.0*
ISC 18 00:51:56.9±0.6**, 33.12N**±0.05×**46.62E**±0.05**, h10^{km}, n16, σ1^{s}07**/20**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGHG	Ghaleghazi	1.21	358	Pg	Pg	00 52 19.9	-1.2
IKOM	Komasi	1.30	35	Pg	Pg	00 52 22.1	-0.7
IVIS	Veys	1.42	8	Pg	Pg	00 52 24.2	-1.1
ILIN	Laeen	1.82	9	Pn	Pn	00 52 30.4	+1.8
BHD	Baghdad	1.88	275	ePn	Pn	00 52 30.0	+0.6
BHD				eSn	Sn	00 52 53.0	-0.4
BHD				i Sg	Sg	00 52 55.5	-4.0
SNGE	Sanandaj	2.06	17	ePG	Pg	00 52 33.8	-4.3
SNGE				AML	AML	00 53 06.0	
	comp=N,116nm,0.7s						
SHGO	Shushtar	2.10	118	ePG	Pg	00 52 38.9	+0.1
SHGO				AML	AML	00 53 22.2	
	comp=N,176nm,0.8s						
SHGR	Shooshtar-Gavs	2.10	118	ePG	Pg	00 52 38.9	0.0
SHGR				eSG	Sg	00 53 05.5	-1.4
ASAO	Ashtian	3.18	62	ePN	Pn	00 52 49.9	+1.9
ASAO				AML	AML	00 53 48.9	
	comp=N,48nm,0.6s						
IRAZ	Razeghan	3.57	49	Pn	Pn	00 53 02.3	+8.8
IVRN	Varamin	4.64	65	Pn	Pn	00 53 09.1	+0.4
DAMV	Damavand	5.09	59	ePN	Pn	00 53 15.5	+0.4
IDMV	Damavand	5.11	60	Pn	Pn	00 53 15.6	+0.2
IFIR	Firoozkooh	5.67	62	Pn	Pn	00 53 23.1	-0.1
IFIR				Sn	Sn	00 54 25.1	-4.0
IPAR	Pars	6.39	119	Pn	Pn	00 53 32.2	-1.2
IMOK	Mook	6.62	126	Pn	Pn	00 53 38.3	+1.6

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*NEIC **18** 01:07:44.1±1.5, 24.15S×179.91E, h550^{km}±18^{km}, mb4.4/4, Error ellipse: s-maj=19.3km s-min=11.1km az=179.0*
*IDC **18** 01:07:45.6±2.3, 24.12S×179.83E, h560^{km}±27^{km}, mb3.9/9, mb1 4.0/11, mb1mx3.8/17, mbtmp4.7/11, Error ellipse: s-maj=33.9km s-min=14.7km az=167.0*
ISC 18 01:07:45.2±1.6**, 24.2S**±0.2×**179.80E**±0.09**, h574^{km}**±22^{km}**, n27, σ0^{s}67**/24**, mb4.4**/14**, 1C-3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.47	277	P	P	01 10 29.1	+0.4
	0.3nm,0.3s,baz=82,slow=17,SNR=7.5						
URZ	Urewera	14.22	189	P	P	01 10 45.6	-0.4
	2.2nm,0.3s,baz=25,slow=7.0,SNR=14						
CTA	Charters Tower	31.30	271	⇓iP	P	01 13 21.4	+0.7
	36nm,0.6s,mb5.2						
CTA	Charters Tower	31.30	271	P	P	01 13 21.4	+0.6
	44nm,0.5s,mb5.3,baz=96,slow=11,SNR=64						
PMG	Port Moresby	34.42	290	P	P	01 13 46.6	-0.3
	30nm,0.7s,mb5.0,baz=105,slow=5.8,SNR=8.5						
STKA	Stephens Creek	34.45	248	P	P	01 13 47.7	+0.6
	3.8nm,0.4s,mb4.3,baz=86,slow=11,SNR=7.6						
WB2	Warramunga Arr	42.20	267	⇓iP	P	01 14 49.8	-0.3
WB2				i SCP		01 19 35.1	
WB2				eS	S	01 20 29.9	-0.2
WRAB	Tennant Creek	42.20	267	eP	P	01 14 49.4	-0.7
	38nm,0.6s,mb5.1						
WRA	Warramunga Arr	42.21	267	P	P	01 14 49.9	-0.3
	32nm,0.6s,mb5.0,baz=103,slow=8.1,SNR=232						
WRA				ScP		01 19 34.6	
	3.9nm,0.7s,baz=98,slow=3.7,SNR=19						
WRA				S	S	01 20 29.9	-0.3
	0.6nm,0.5s,baz=100,slow=14,SNR=4.7						
FORT	Forrest	46.04	250	⇑iP	P	01 15 19.8	0.0
	51nm,0.6s,mb5.2						
KAKA	Kakadu	46.15	276	⇓iP	P	01 15 19.8	-1.0
	27nm,0.8s,mb4.8						
FITZ	Fitzroy Crossi	50.63	266	P	P	01 15 54.7	+0.5
	baz=105,slow=4.4						
MJAR	Matsushiro Arr	72.03	326	P	P	01 18 12.5	-0.6
	1.6nm,0.4s,mb3.9,baz=158,slow=6.0,SNR=5.3						
NVAR	Mina Array Bea	85.08	44	P	P	01 19 21.9	-0.1
	1.3nm,0.7s,mb3.7,baz=220,slow=6.7,SNR=6.3						
NVAR	Mina Array Bea	85.08	44	P	P	01 19 21.9	-0.1
MNV	Mina	85.18	44	eP	P	01 19 21.9	-0.6
	0.7nm,0.4s,mb3.6						
ELK	Elko	88.35	44	eP	P	01 19 37.0	-0.4
CMAR	Chiang Mai Arr	89.45	290	P	P	01 19 45.6	+2.5
	1.7nm,0.4s,mb4.2,baz=132,slow=3.4,SNR=12						
MNTX	Cornudas Mount	90.52	55	eP	P	01 19 47.8	+0.1
	1.1nm,0.8s,mb3.8						
TXAR	Lajitas Array	90.74	58	P	P	01 19 49.4	+0.6
	2.3nm,0.7s,mb4.2,baz=215,slow=6.8,SNR=40						
BW06	Boulder Array	93.02	44	eP	P	01 19 58.5	-0.4
PDAR	Pinedale Array	93.02	44	P	P	01 19 59.4	+0.5
	0.9nm,0.9s,mb3.8,baz=225,slow=2.6,SNR=5.4						
ARCES	ARCESS Array B	132.13	348	PKhKP		01 25 44.9	
	1.9nm,0.8s,baz=8.7,slow=2.3,SNR=2.8						
ARCES				PKP	PKPdf	01 25 54.2	+0.8
	1.2nm,0.7s,baz=72,slow=3.8,SNR=4.0						
ARCES	ARCESS Array B	132.13	348	PKP	PKPdf	01 25 44.9	-8.6
ARCES				PKP	PKPdf	01 25 54.2	+0.8
FINES	FINESS Array B	138.66	341	PKhKP		01 25 58.9	
	0.4nm,0.9s,baz=315,slow=1.0,SNR=3.1						
FINES				PKP	PKPdf	01 26 07.9	+2.3
	0.4nm,0.5s,baz=108,slow=4.4,SNR=4.1						
AKASG	Malin Array Be	145.11	327	PKPbc	PKPbc	01 26 18.9	+0.8
	1.2nm,0.4s,baz=39,slow=4.4,SNR=11						
BRTR	Keskin Array B	147.60	307	PKPbc	PKPdf	01 26 27.2	+5.6
	1.9nm,0.6s,baz=124,slow=4.9,SNR=6.1						

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*TEH **18** 01:22:39.2, 27.61N×55.85E, h10^{km}, Mn3.5*
*THR **18** 01:22:43.5±0.9, 28.14N×55.59E, h14^{km}±11^{km}, ML3.6*
*CSEM **18** 01:22:44.3±0.1, 28.09N×55.59E, h20^{km}, ML3.6, Error ellipse: s-maj=4.5km s-min=3.3km az=48.0*
ISC 18 01:22:44.0±0.8**, 28.16N**±0.06×**55.71E**±0.07**, h14^{km}, n13, σ1^{s}26**/14**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.86	152	ePG	Pg	01 23 00.5	-0.8
BNDS				AML	AML	01 23 24.1	
	comp=N,2µm,0.4s						
KRBR	Kerman	2.03	27	ePG	Pg	01 23 21.3	-3.3
KRBR				eSG	Sg	01 23 50.3	-1.5
KRBR				AML	AML	01 24 02.9	
	comp=E,388nm,0.5s						
GHIR	Ghir-Karzin	2.41	274	ePN	Pn	01 23 23.1	-0.5
GHIR				AML	AML	01 24 16.6	
	comp=N,423nm,0.6s						
IMOK	Mook	2.78	289	Pn	Pn	01 23 27.9	-1.0
IPAR	Pars	2.87	306	Pn	Pn	01 23 31.1	+0.9
IMEH	Mehriz	3.35	344	Pn	Pn	01 23 39.1	+2.0
IBAF	Bafgh	3.42	358	Pn	Pn	01 23 39.8	+1.8
ICHK	Chekchek	4.22	345	Pn	Pn	01 23 50.8	+1.4
ZHSF	Zahedan	4.67	71	ePN	Pn	01 23 57.5	+1.7
NASN	Na'in	5.26	332	ePN	Pn	01 24 03.8	-0.3
IVRN	Varamin	7.61	334	Pn	Pn	01 24 36.4	-0.8
IFIR	Firoozkooh	7.87	342	Pn	Pn	01 24 40.1	-0.7
IDMV	Damavand	8.03	338	Pn	P	01 24 42.1	-0.9

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*NEIC **18** 01:32:43.3±1.0, 19.92S×69.08W, h106^{km}±8^{km}, mb4.0/6, Error ellipse: s-maj=12.8km s-min=8.0km az=58.0*
*IDC **18** 01:32:43.5±0.9, 19.95S×69.13W, h104^{km}±7^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.7/17, mbtmp4.1/9, MS3.1/1, Ms1 3.0/1, ms1mx2.6/14, Error ellipse: s-maj=22.6km s-min=12.8km az=93.0*
ISC 18 01:32:41.9±1.1**, 20.01S**±0.06×**69.1W**±0.1**, h111^{km}**±10^{km}**, n31, σ1^{s}04**/30**, mb4.0**/10**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.82	14	P	P	01 33 42.1	+2.1
	5.5nm,0.3s,baz=202,slow=7.8,SNR=146						
LPAZ				S	S	01 34 25.1	+0.9
	4.0nm,0.3s,baz=189,slow=6.5,SNR=5.7						
LPAZ	La Paz	3.82	14	eP	P	01 33 41.6	+1.6
ARE	Arequipa	4.19	327	eP	P	01 33 44.0	-1.0
ARE				e		01 33 48.0	
ARE				eS	S	01 34 38.0	+4.7
SIV	San Ignacio	8.63	64	P	P	01 34 43.3	-2.1
	9.1nm,0.3s,baz=261,slow=10,SNR=311						
SIV				S	S	01 36 30.0	+8.3
	0.3nm,0.3s,baz=339,slow=23,SNR=5.6						
CFAA	Coronel Fontan	11.57	176	P	P	01 35 24.0	-0.7
	0.0nm,0.3s,baz=343,slow=7.2,SNR=3.4						
CFAA				S	S	01 37 25.9	-6.3
	0.0nm,0.3s,baz=56,slow=23,SNR=2.7						
SAML	Samuel	12.40	28	eP	P	01 35 31.6	-4.1
	1.7nm,0.6s						
TRQA	Tornquist	19.02	162	P	P	01 36 57.7	+0.1
BDFB	Brasilia	20.55	81	P	P	01 37 13.8	+0.2
	2.0nm,0.4s,baz=238,slow=12,SNR=4.9						
BDFB				LR	LR	01 46 55.6	
	comp=Z,47nm,19.9s,baz=194,slow=42						
PLCA	Paso Flores	20.69	183	P	P	01 37 16.4	+1.4
	4.5nm,1.0s,baz=353,slow=11,SNR=3.1						
PLCA	Paso Flores	20.69	183	eP	P	01 37 16.1	+1.2
OTAV	Otavalo	22.10	334	eP	P	01 37 28.9	-0.1
	2.7nm,0.8s,mb3.6						
SDV	Santo Domingo	28.75	357	P	P	01 38 27.3	-4.1
TXAR	Lajitas Array	59.30	325	P	P	01 42 33.1	-1.4

	0.3nm,0.8s,mb3.4,baz=149,slow=7.3,SNR=5.0						
WMOK	**Wichita Mounta**	61.31	332	P	P	01 42 47.1	-1.1
MNTX	**Cornudas Mount**	62.07	325	*e*P	P	01 42 51.9	-1.3
	1.1nm,0.8s,mb3.9						
SNAA	**Sanae**	63.75	161	P	P	01 43 05.3	+1.6
	1.1nm,0.8s,mb3.7,baz=289,slow=5.9,SNR=14						
SNAA	**Sanae**	63.75	161	*e*P	P	01 43 04.6	+0.9
	2.1nm,0.6s,mb4.1						
ANMO	**Albuquerque**	65.16	327	P	P	01 43 13.9	+0.5
DBIC	**Dimbokro**	68.50	74	P	P	01 43 33.9	-1.0
	5.0nm,1.0s,mb4.3,baz=199,slow=8.4,SNR=8.2						
ISCO	**Idaho Springs**	68.56	331	*e*P	P	01 43 35.1	+0.3
	2.8nm,0.3s,mb4.6						
PDAR	**Pinedale Array**	72.73	330	P	P	01 44 00.2	+0.5
	0.4nm,0.4s,mb3.6,baz=141,slow=5.8,SNR=3.4						
ULM	**Lac du Bonnet**	73.84	342	P	P	01 44 05.8	-0.3
	2.0nm,0.5s,mb4.1,baz=146,slow=9.0,SNR=3.2						
HLID	**Hailey**	75.68	328	*e*P	P	01 44 17.8	+1.1
	2.2nm,1.1s,mb3.8						
EDM	**Edmonton**	82.33	335	*e*P	P	01 44 52.4	-0.1
YKA	**Yellowknife Ar**	89.72	341	P	P	01 45 29.5	+1.2
	3.3nm,0.7s,mb4.6,baz=135,slow=4.7,SNR=20						
YKA				pP	pP	01 45 56.8	-0.9
	1.5nm,0.7s,baz=136,slow=4.6,SNR=3.3						
YKA	**Yellowknife Ar**	89.72	341	P	P	01 45 29.6	+1.2
YKA				pP	pP	01 45 56.8	-0.9
WRA	**Warramunga Arr**	134.13	211	PKP	PKPdf	01 51 49.9	+2.7
	0.5nm,0.5s,baz=158,slow=1.8,SNR=13						
WRA				pPKP		01 52 17.2	
	0.4nm,0.6s,baz=155,slow=1.9,SNR=2.3						
MKAR	**Makanchi Array**	144.53	35	PKP	PKPdf	01 52 06.2	+1.1
	0.5nm,0.5s,baz=315,slow=3.4,SNR=4.7						
MKAR				pPKP		01 52 34.4	
	0.6nm,0.7s,baz=34,slow=4.4,SNR=3.3						
MKAR	**Makanchi Array**	144.53	35	PKP	PKPdf	01 52 06.2	+1.1
MKAR				pPKP		01 52 34.4	
MJAR	**Matsushiro Arr**	150.98	310	PKPbc	PKPdf	01 52 23.8	+7.9
	0.8nm,0.3s,baz=198,slow=4.0,SNR=4.4						
SONM	**Songino Array**	152.00	6	PKPbc	PKPdf	01 52 26.9	+10
	1.7nm,0.5s,baz=337,slow=0.7,SNR=7.0						
SONM				PKPab	PKPab	01 52 36.2	+0.3
	0.6nm,0.3s,baz=315,slow=2.0,SNR=2.2						

IDC 18 01:58:56.7±1.7, 13.23N×92.38E, mb3.7/4, mb1 3.9/5, mb1mx3.6/18, mbtmp3.7/5, ML3.9/1, MS2.8/1, Ms1 3.0/1, ms1mx2.6/16, Error ellipse: s-maj=55.1km s-min=28.3km az=50.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	8.18	50	Pn	P	02 00 56.8	-2.7
	0.4nm,0.3s,baz=238,slow=16,SNR=8.5						
CMAR				LR	LR	02 04 21.8	
	comp=Z,63nm,19.8s,baz=339,slow=40						
MKAR	**Makanchi Array**	34.51	348	P	P	02 05 44.9	-3.8
	0.7nm,0.8s,baz=166,slow=10.0,SNR=6.1						
WRA	**Warramunga Arr**	52.84	128	P	P	02 08 14.6	-2.0
	0.9nm,0.9s,baz=299,slow=10.0,SNR=4.4						
FINES	**FINESS Array B**	67.20	331	P	P	02 09 53.1	-1.4
	0.7nm,0.8s,baz=104,slow=5.7,SNR=5.0						
ARCES	**ARCESS Array B**	69.67	340	P	P	02 10 08.4	-1.4
	4.4nm,1.1s,baz=90,slow=4.9,SNR=3.7						

*INMG **18** 02:00:04.4±1.0, 41.79N×8.63W, h15^{km}±3^{km}, ML2.2, Error ellipse: s-maj=3.0km s-min=1.6km az=79.0*

*CSEM **18** 02:00:04.0±0.1, 41.79N×8.63W, h10^{km}, ML2.8/8, Error ellipse: s-maj=3.0km s-min=1.6km az=78.0*

MDD 18 02:00:04.0±0.4, 41.77N×8.62W, h10^{km}, mbLg2.1/14, 1C-1D, Error ellipse: s-maj=4.0km s-min=2.2km az=56.0, PRXIMO, Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZAM	**Zamans**	0.38	352	⇓Pg	Pg	02 00 11.2	-0.6
	11nm,0.2s,SNR=18						
EZAM				Lg		02 00 16.2	
	30nm,0.2s,SNR=7.6						
ELOB	**Lobios**	0.43	77	Pg	Pg	02 00 11.8	-1.0
	12nm,0.3s,SNR=74						
ELOB				Lg		02 00 18.3	
	70nm,0.5s,SNR=6.1						
ELOB	**Lobios**	0.43	77	Pg	Pg	02 00 11.9	-0.8
	12nm,0.3s,SNR=74						
PVRL	**Vila Real**	0.84	126	*e*Pg	Pg	02 00 20.1	-0.8
PVRL				*e*Sg	Sg	02 00 31.6	-0.6
	84nm,0.2s						
PVRL	**Vila Real**	0.84	126	*e*Pg	Pg	02 00 20.1	-0.8
PVRL				*e*Sg	Sg	02 00 31.6	-0.6
	84nm,0.2s						
STS	**Santiago**	1.11	3	Pg	Pg	02 00 24.4	-1.9
	5.0nm,0.3s,SNR=11						
STS				Lg		02 00 39.0	
	17nm,0.3s,SNR=16						
PVIS	**Viseu**	1.19	152	*e*P	Pb	02 00 25.7	-0.4
PVIS				*e*S	Sb	02 00 42.1	+0.7
	38nm,0.2s						
PVIS	**Viseu**	1.19	152	*e*P	Pb	02 00 25.7	-0.4
PVIS				*e*S	Sb	02 00 42.1	+0.7
	38nm,0.2s						
EMAZ	**Mazaricos**	1.20	348	Pg	Pg	02 00 25.5	-2.5
	5.9nm,0.3s,SNR=34						
EMAZ				Sn	Sn	02 00 40.7	-2.5
	26nm,0.1s,SNR=7.9						
EMAZ				Lg		02 00 42.3	
	20nm,0.3s,SNR=25						
EMAZ	**Mazaricos**	1.20	348	Pg	Pg	02 00 25.5	-2.5
	5.9nm,0.3s,SNR=34						
EMAZ				Sn	Sn	02 00 40.7	-2.5
	26nm,0.1s,SNR=7.9						
ERUA	**La Rua**	1.26	60	⇑Pg	Pg	02 00 27.7	-1.5
	19nm,0.2s,SNR=18						
ERUA				Lg		02 00 44.5	
	21nm,0.3s,SNR=16						
ERUA	**La Rua**	1.26	60	Pg	Pg	02 00 27.8	-1.4
	19nm,0.2s,SNR=14						
ECAL	**Calabor**	1.42	83	Pn	Pn	02 00 28.3	-1.5
	6.6nm,0.3s,SNR=32						
ECAL				Pg	Pg	02 00 30.4	-2.0
	2.9nm,0.2s,SNR=7.9						
ECAL				Lg		02 00 49.1	
	43nm,0.3s,SNR=23						
ECAL	**Calabor**	1.42	83	Pn	Pn	02 00 28.3	-1.6
	6.6nm,0.3s,SNR=32						
ECAL	**Calabor**	1.42	83	Pg	Pg	02 00 30.4	-1.9
	2.9nm,0.2s,SNR=7.9						
MTE	**Manteigas**	1.60	149	*e*Pn	Pn	02 00 30.9	-1.5
MTE	**Manteigas**	1.60	149	*e*Pg	Pg	02 00 32.8	-3.1
MTE				*e*Sn	Sn	02 00 50.8	-2.4
MTE				*e*Sg	Sg	02 00 54.4	-2.8
	29nm,0.4s						
MTE	**Manteigas**	1.60	149	Pn	Pn	02 00 30.9	-1.5
MTE				Pg	Pg	02 00 32.8	-3.1
MTE				Sn	Sn	02 00 50.8	-2.4
MTE				Lg		02 00 54.4	
	15nm,0.4s						
MTE	**Manteigas**	1.60	149	*e*Pg	Pg	02 00 32.8	-3.1
MTE				*e*Sn	Sn	02 00 50.8	-2.4
MTE				*e*Sg	Sg	02 00 54.4	-2.8
	29nm,0.4s						
EPON	**Pontenova**	1.90	35	Pn	Pn	02 00 34.6	-2.1
	3.8nm,0.7s,SNR=9.4						
EPON				Pg	Pg	02 00 37.7	-4.1
	0.7nm,0.1s,SNR=7.9						
EPON				Sn	Sn	02 00 57.6	-3.2
	2.9nm,0.2s,SNR=7.9						
EPON				Lg		02 01 03.7	
	7.3nm,0.3s,SNR=4.8						
EPON	**Pontenova**	1.90	35	Pn	Pn	02 00 34.6	-2.1
	3.8nm,0.7s,SNR=9.4						
EPON	**Pontenova**	1.90	35	Pg	Pg	02 00 37.7	-4.1
	0.7nm,0.1s,SNR=7.9						
EPON				Sn	Sn	02 00 57.6	-3.2
	2.9nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	2.12	155	*e*Pn	Pn	02 00 38.2	-1.7
PCBR	**Castelo Branco**	2.12	155	*e*Pg	Pg	02 00 42.9	-3.4
PCBR				*e*Sn	Sn	02 01 03.8	-2.6
PCBR				*e*Sg	Sg	02 01 10.2	-4.4
	9.3nm,0.2s						
PCBR	**Castelo Branco**	2.12	155	Pn	Pn	02 00 38.2	-1.7
PCBR				Pg	Pg	02 00 42.9	-3.4
PCBR				Sn	Sn	02 01 03.8	-2.6
PCBR				Lg		02 01 10.2	
	4.7nm,0.2s						
PCBR	**Castelo Branco**	2.12	155	*e*Pg	Pg	02 00 42.9	-3.4
PCBR				*e*Sn	Sn	02 01 03.8	-2.6
PTOM	**Tomar**	2.16	176	*e*Pg	Pg	02 00 42.6	-4.5
PTOM				*e*Sg	Sg	02 01 10.4	-5.5
	16nm,0.4s						
PTOM	**Tomar**	2.16	176	Pg	Pg	02 00 42.6	-4.5
PTOM				Lg		02 01 10.4	
	8.2nm,0.4s						
EARI	**Arriondas**	2.95	58	Pn	Pn	02 00 50.8	-0.9
	6.9nm,1.0s,SNR=22						
EARI				Pg	Pg	02 00 58.2	-4.6
	0.8nm,0.2s,SNR=7.9						
EARI				Sn	Sn	02 01 24.5	-3.0
	0.5nm,0.2s,SNR=7.9						
EARI				Lg		02 01 37.2	
	1.0nm,0.2s,SNR=5.6						
EARI	**Arriondas**	2.95	58	Pn	Pn	02 00 50.8	-0.9
	6.9nm,1.0s,SNR=22						
EARI	**Arriondas**	2.95	58	Pg	Pg	02 00 58.2	-4.6
	0.8nm,0.2s,SNR=7.9						
EARI				Sn	Sn	02 01 24.5	-3.0
	0.5nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	3.26	157	Pn	Pn	02 00 54.6	-1.5
	2.2nm,0.9s,SNR=6.3						
EBAD				Sn	Sn	02 01 30.6	-4.7
	1.7nm,0.2s,SNR=7.9						
EBAD				Lg		02 01 47.3	
	3.3nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	3.26	157	Pn	Pn	02 00 54.6	-1.5
	2.2nm,0.9s,SNR=6.3						
EBAD				Sn	Sn	02 01 30.6	-4.7
	1.7nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	4.10	67	Pn	Pn	02 01 06.2	-1.9
	0.3nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	02 01 51.9	-4.9
	0.3nm,0.2s,SNR=7.9						
ELAN				Lg		02 02 14.2	
	0.3nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	4.10	67	Pn	Pn	02 01 06.2	-1.9
	0.3nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	02 01 51.9	-4.8
	0.3nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	4.12	119	Pn	Pn	02 01 05.7	-2.6
	2.0nm,0.2s,baz=308,slow=13,SNR=7.9						
ESDC	**Sonseca Array**	4.12	119	Pn	Pn	02 01 05.7	-2.6
	2.0nm,0.2s,slow=13,SNR=7.9						
EMIN	**Mina Concepcio**	4.28	159	Pn	Pn	02 01 08.2	-2.4
	0.5nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	02 01 54.6	-6.4
	0.3nm,0.2s,SNR=7.9						
EMIN				Lg		02 02 20.5	
	0.4nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	4.28	159	Pn	Pn	02 01 08.2	-2.4
	0.5nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	02 01 54.6	-6.5
	0.3nm,0.2s,SNR=7.9						

IDC 18 02:24:44.7±3.7, 2.42N×96.62E, mb3.6/3, mb1 3.9/4, mb1mx3.6/17, mbtmp3.7/4, ML4.1/1, MS2.8/1, Ms1 3.0/1, ms1mx2.6/20, Error ellipse: s-maj=124.6km s-min=30.6km az=62.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	16.10	8	Pn	P	02 28 34.7	+0.5
	0.3nm,0.3s,baz=194,slow=11,SNR=8.8						
CMAR				LR	LR	02 34 57.6	
	comp=Z,36nm,19.7s,baz=89,slow=38						
WRA	**Warramunga Arr**	43.18	123	P	P	02 32 47.6	-1.6
	0.2nm,0.5s,baz=303,slow=9.2,SNR=4.2						
MKAR	**Makanchi Array**	45.92	346	P	P	02 33 08.9	-2.0
	0.6nm,0.5s,baz=157,slow=9.2,SNR=5.4						
SONM	**Songino Array**	46.02	9	P	P	02 33 09.6	-2.1
	0.3nm,0.4s,baz=225,slow=6.1,SNR=2.4						

CASC 18 02:43:16.3±1.6, 8.39N×82.41W, h24^{km}±4^{km}, MD3.6, MW4.2, 2C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	0.06	315	⇑*i*P	Pb	02 43 20.9	+0.3
PTP1	**Petroterminal**	0.19	187	*e*P	Pb	02 43 25.9	+4.2
BRU2	**Volcan**	0.49	325	*e*P	Pb	02 43 27.3	+1.0
BRU2				*e*S	Sb	02 43 34.8	+1.7
ACR	**Cerro Adams**	0.80	289	*e*P	Pb	02 43 30.0	-1.4
BUS	**Buena Vista**	1.77	311	⇑*e*P	Pn	02 43 45.9	0.0
BUS				*e*S	Sn	02 44 09.0	+1.2
URSC	**Urasca**	1.97	317	*e*P	Pn	02 43 49.5	+0.6
URSC				*e*S	Sn	02 44 13.8	+0.7

*NEIC **18** 02:56:09.2, 40.86N×15.13E, h14^{km}, ML2.5(ROM), After ROM.*

*CSEM **18** 02:56:09.4±0.1, 40.86N×15.12E, h12^{km}, MD2.9/16, Error ellipse: s-maj=1.8km s-min=1.1km az=48.0*

ROM 18 02:56:09.2±0.1, 40.86N×15.13E, h14^{km}±2^{km}, Md2.9/16, Ml2.5/7, 2C-3D, Error ellipse: s-maj=1.8km s-min=1.3km az=126.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSSN	**Cassano Irpino**	0.08	273	⇑*i*Pg	Pg	02 56 12.7	+0.4
CSSN				Sg	Sg	02 56 13.8	-0.6
SNAL	**S. Angelo Dei**	0.09	39	⇓*e*Pg	Pg	02 56 12.7	+0.3
SNAL				Sg	Sg	02 56 15.0	+0.5
	7µm,0.6s						
MRLC	**Muro Lucano**	0.29	110	⇓*e*Pg	Pg	02 56 15.8	+0.3
MRLC				Sg	Sg	02 56 20.9	+1.2
MRB1	**Monte Rocchett**	0.30	336	⇓*e*Pg	Pg	02 56 15.9	+0.2
	850nm,0.5s						
SGO	**Sicignano**	0.32	156	⇑*e*Pg	Pg	02 56 16.5	+0.3
SGO				Sg	Sg	02 56 22.4	+1.6
FG4	**Candela**	0.40	46	Pg	Pg	02 56 17.5	-0.1
FG4				Sg	Sg	02 56 24.0	+0.8
	57nm,0.2s						
FG5	**Orsara di Pugl**	0.44	13	Pg	Pg	02 56 18.7	+0.4
	148nm,0.2s						
IPES	**Pescosannita**	0.44	329	Pg	Pg	02 56 18.4	0.0
PSB1	**Pescosannita**	0.44	326	Pg	Pg	02 56 18.8	+0.4
PSB1				Sg	Sg	02 56 25.9	+1.4
	228nm,0.7s						
OVO	**Vesuviano**	0.56	267	Pg	Pg	02 56 22.4	+1.7
SLCN	**Sala Consilina**	0.60	141	Pg	Pg	02 56 22.3	+0.8
	122nm,0.3s						
SACR	**S. Croce Del S**	0.63	329	Pg	Pg	02 56 22.0	0.0
	86nm,0.6s						
ISOR	**Termini**	0.67	246	Pg	Pg	02 56 22.2	-0.6
SGG	**Gregorio Mates**	0.78	313	Pg	Pg	02 56 25.8	+0.8
MGR	**Morigerati**	0.79	156	Pg	Pg	02 56 24.8	-0.3
	75nm,0.3s						
BSSO	**Busso**	0.80	330	Pg	Pg	02 56 25.3	-0.1
	74nm,0.3s						
CIGN	**Sant'Elia a Pi**	0.82	348	Pg	Pg	02 56 25.5	-0.2
VAGA	**Valle Agricola**	0.88	310	Pg	Pg	02 56 27.8	+0.8
RGNG	**Rignano Grg**	0.89	22	Pg	Pg	02 56 26.5	-0.6
CDT	**Castel del Mon**	0.89	75	*e*Pg	Pg	02 56 26.9	-0.3
CDT				*e*Sg	Sg	02 56 40.0	+0.8
MSC	**Monte Massico**	0.94	291	Pg	Pg	02 56 28.1	-0.1
FG2	**Serracapriola**	0.95	1	Pg	Pg	02 56 28.4	+0.1
	371nm,0.3s						
TRIV	**Trivento**	1.01	334	Pg	Pg	02 56 29.2	-0.3
MS1	**Monte Sant'Ang**	1.04	35	*e*Pg	Pg	02 56 29.8	-0.4
MS1				*e*Sg	Sg	02 56 45.7	+1.5
CII	**Carovilli**	1.07	324	Pg	Pg	02 56 31.2	+0.5
	37nm,0.4s						
RNI2	**Rionero Sannit**	1.12	319	Pg	Pg	02 56 31.1	-0.7
	64nm,0.6s						
SG1	**Sgolgore (BA)**	1.17	90	*e*Pg	Pg	02 56 31.7	-1.0
SG1				*e*Sg	Sg	02 56 47.7	-0.8
LTRZ	**Laterza**	1.30	101	Pg	Pg	02 56 34.1	-1.3
	62nm,0.2s						
SDI	**San Donato**	1.31	311	Pg	Pg	02 56 33.2	-2.3
	20nm,0.2s						
BAI	**Bari**	1.34	79	*e*Pg	Pg	02 56 35.1	-1.1
BAI				*e*Sg	Sg	02 56 51.5	-2.7
VVLD	**Villa Vallelon**	1.52	312	Pg	Pg	02 56 36.8	-2.9

*MDD **18** 03:00:52.5±1.1, 36.64N×7.85W, mbLg2.3/3, Error ellipse: s-maj=11.0km s-min=4.2km az=34.0, PRXIMO*

*NEIC **18** 03:00:52.4, 36.53N×8.02W, h18^{km}, MN2.5(MDD), After MDD.*

*INMG **18** 03:00:53.2±1.1, 36.44N×8.02W, h25^{km}±15^{km}, ML2.2, Error ellipse: s-maj=10.7km s-min=4.6km az=37.0*

ISC 18 03:00:53.2±1.0, 36.76N±0.06×7.72W±0.05, h11^{km}±6^{km}, n27, σ1^{s}18/48, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	1.12	315	*e*P	**Pb**	**03 01 13.1**	**-1.1**
PTEO				*e*S	**Sb**	**03 01 28.9**	**+0.3**
PBEJ	**Beja**	1.27	355	*e*Pn	**Pg**	**03 01 18.4**	**-0.2**
PBEJ				*e*Sn	**Sn**	**03 01 37.1**	**+3.1**
	18nm,0.1s						
PBEJ	**Beja**	1.27	355	Pg	**Pg**	**03 01 18.4**	**-0.2**
PBEJ				Lg		03 01 37.1	
	8.8nm,0.1s						
EMIN	**Mina Concepcio**	1.30	39	P	**Pb**	**03 01 19.4**	**+2.1**
EMIN				S	**Sb**	**03 01 39.5**	**+5.6**
EMIN	**Mina Concepcio**	1.30	39	Pg	**Pg**	**03 01 19.4**	**+0.1**
	0.9nm,0.1s,SNR=22						
EMIN				Lg		03 01 39.5	
	4.2nm,0.1s,SNR=5.8						
ESPR	**Espera**	1.50	85	P	**Pn**	**03 01 20.8**	**+0.6**
ESPR				S	**Sb**	**03 01 41.2**	**+1.7**
ESPR	**Espera**	1.50	85	Pg	**Pg**	**03 01 20.8**	**-2.4**
	2.1nm,0.1s,SNR=23						
ESPR				Lg		03 01 41.2	
	21nm,0.2s,SNR=6.2						
MOE	**Montemor**	1.83	344	*e*Sn	**Sn**	**03 01 49.1**	**+0.9**
EBAD	**Badajoz**	2.07	15	Pn	**Pn**	**03 01 29.7**	**+1.3**
	0.1nm,0.1s,SNR=19						
EBAD				Sn	**Sn**	**03 01 58.4**	**+4.1**
	4.5nm,0.0s,SNR=7.7						
EMIJ	**Mijas**	2.38	94	Pn	**Pn**	**03 01 32.2**	**-0.5**
	0.2nm,0.2s,SNR=7.9						
EMIJ				Sn	**Sn**	**03 02 01.8**	**-0.4**
	2.2nm,0.2s,SNR=7.9						
PLOU	**Loures**	2.41	332	*e*Pn	**Pn**	**03 01 32.7**	**-0.5**
PLOU				*e*Sn	**Sn**	**03 02 02.0**	**-0.9**
EADA	**Adamuz**	2.87	60	Pn	**Pn**	**03 01 40.7**	**+0.9**
	2.8nm,0.2s,SNR=31						
EADA				Sn	**Sn**	**03 02 16.5**	**+1.9**
	4.7nm,0.1s,SNR=9.7						
ELOJ	**Sierra Loja**	2.88	81	Pn	**Pn**	**03 01 40.5**	**+0.5**
	0.3nm,0.2s,SNR=7.9						
ELOJ				Sn	**Sn**	**03 02 16.0**	**+1.1**
	0.9nm,0.2s,SNR=7.9						
PTOM	**Tomar**	2.90	349	*e*Pn	**Pn**	**03 01 40.3**	**0.0**
PTOM				*e*Sn	**Sn**	**03 02 15.1**	**-0.4**
	11nm,0.3s						
PTOM	**Tomar**	2.90	349	Pn	**Pn**	**03 01 40.3**	**0.0**
PTOM				Sn	**Sn**	**03 02 15.1**	**-0.4**
	5.4nm,0.3s						
PCBR	**Castelo Branco**	3.08	3	*e*Pn	**Pn**	**03 01 43.5**	**+0.7**
PCBR				*e*Sn	**Sn**	**03 02 21.9**	**+1.9**
	3.3nm,0.1s						
PCBR	**Castelo Branco**	3.08	3	Pn	**Pn**	**03 01 43.5**	**+0.7**
PCBR				Sn	**Sn**	**03 02 21.9**	**+1.9**
	1.6nm,0.1s						
ECOG	**Cogollos-Vega**	3.36	80	Pn	**Pn**	**03 01 47.4**	**+0.7**
	0.7nm,0.2s,SNR=7.9						
ECOG				Sn	**Sn**	**03 02 27.9**	**+0.8**
	1.7nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	3.43	65	Pn	**Pn**	**03 01 47.9**	**+0.1**
	0.2nm,0.1s,SNR=7.9						
EBAN				Sn	**Sn**	**03 02 28.1**	**-0.7**
	1.8nm,0.1s,SNR=7.9						
EQES	**Quesada**	3.85	73	Pn	**Pn**	**03 01 54.6**	**+0.9**
	0.7nm,0.2s,SNR=8.5						
EQES				Sn	**Sn**	**03 02 38.8**	**-0.6**
	2.0nm,0.2s,SNR=5.8						
EBER	**Berja**	3.88	87	Sn	**Sn**	**03 02 39.4**	**-0.7**
	0.5nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	4.15	44	Pn	**Pn**	**03 01 58.5**	**+0.6**
	445µm,0.1s,baz=226,slow=13,SNR=7.1						
ESDC				Sn	**Sn**	**03 02 45.9**	**-1.1**
	0.5nm,0.2s,baz=228,slow=24,SNR=6.4						
EVIA	**Vianos**	4.54	64	Sn	**Sn**	**03 02 56.2**	**-0.8**
	0.8nm,0.2s,SNR=7.9						
ELOB	**Lobios**	5.11	357	Pn	**Pn**	**03 02 10.7**	**-0.8**
	0.3nm,0.2s,SNR=7.9						
ELOB				Sn	**Sn**	**03 03 09.2**	**-2.0**
	2.2nm,0.1s,SNR=7.9						
ECAL	**Calabor**	5.23	8	Pn	**Pn**	**03 02 13.3**	**+0.1**
	1.3nm,0.3s,SNR=7.9						
ECAL				Sn	**Sn**	**03 03 11.8**	**-2.5**
	0.7nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	5.24	67	Pn	**Pn**	**03 02 12.3**	**-1.1**
	0.4nm,0.1s,SNR=7.9						
ETOB				Sn	**Sn**	**03 03 12.3**	**-2.3**
	1.4nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	6.72	55	Pn	**Pn**	**03 02 33.7**	**-0.6**
	0.1nm,0.1s,SNR=7.9						
EMOS				Sn	**Sn**	**03 03 49.8**	**-1.8**
	1.8nm,0.4s,SNR=7.9						

*NEIC **18** 03:08:52.3±0.9, 51.31N×179.57E, h62^{km}±5^{km}, mb4.1/1, ML3.9(AEIC), Error ellipse: s-maj=24.7km s-min=4.9km az=184.0*

*IDC **18** 03:08:52.4±4.3, 51.35N×179.52E, h60^{km}±35^{km}, mb3.5/10, mb1 3.7/10, mb1mx3.5/24, mbtmp3.8/10, ML3.9/1, Error ellipse: s-maj=50.4km s-min=18.0km az=3.0*

ISC 18 03:08:48.8±1.4, 50.9N±0.2×179.49E±0.06, h66^{km}±8^{km}, n26, σ0^{s}92/31, mb3.8/11, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	2.23	66	P	**P**	**03 09 23.8**	**-0.6**
KIMD				S	**S**	**03 09 50.8**	**0.0**
KIKV	**Kanaga Island**	2.32	63	P	**P**	**03 09 25.2**	**-0.3**
KIKV				S	**S**	**03 09 53.9**	**+1.0**
KIWB	**Kanaga Island**	2.32	64	P	**P**	**03 09 25.1**	**-0.4**
KIWB				S	**S**	**03 09 55.3**	**+2.4**
KINC	**Kanaga Island**	2.36	62	P	**P**	**03 09 25.9**	**-0.3**
ADAG	**Mount Adagdak**	2.68	64	P	**P**	**03 09 30.4**	**-0.3**
GSTD	**Great Sitkin T**	2.97	65	P	**P**	**03 09 34.9**	**+0.2**
GSMY	**Great Sitkin M**	3.02	66	P	**P**	**03 09 34.7**	**-0.7**
GSTR	**Great Sitkin T**	3.03	65	P	**P**	**03 09 35.4**	**-0.2**
GSIG	**Igitkin Island**	3.07	67	P	**P**	**03 09 36.6**	**+0.4**
GSIG				S	**S**	**03 10 11.4**	**-0.5**
SMY	**Shemya**	3.82	301	P	**P**	**03 09 46.5**	**-0.2**
ATKA	**Atka Island**	4.16	69	P	**P**	**03 09 50.3**	**-1.0**
FX1	**Attu Island--F**	4.40	299	P	**P**	**03 09 53.8**	**-0.9**
	22nm,0.3s,baz=163,slow=3.3,SNR=45						
FX1				S	**S**	**03 10 46.7**	**+1.6**
	4.5nm,0.3s,baz=290,slow=21,SNR=2.1						
FX1	**Attu Island--F**	4.40	299	P	**P**	**03 09 54.8**	**0.0**
UNV	**Unalaska Valle**	9.07	65	P	**P**	**03 10 59.7**	**+0.5**
ILAR	**Eielson Array**	22.30	39	P	**P**	**03 13 40.0**	**-1.4**
	0.4nm,0.5s,mb3.0,baz=239,slow=7.4,SNR=7.1						
INK	**Inuvik**	28.48	35	P	**P**	**03 14 38.8**	**-0.5**
	2.5nm,0.7s,mb3.8,baz=188,slow=8.0,SNR=3.1						
SONM	**Songino Array**	45.90	296	P	**P**	**03 17 07.0**	**+0.9**
	0.6nm,0.6s,mb3.5,baz=68,slow=6.7,SNR=4.8						
BW06	**Boulder Array**	47.49	71	*e*P	**P**	**03 17 19.7**	**+1.1**
	1.0nm,0.4s,mb3.9						
PDAR	**Pinedale Array**	47.49	71	P	**P**	**03 17 20.4**	**+1.8**
	1.6nm,0.6s,mb3.9,baz=339,slow=3.1,SNR=9.9						
ARCES	**ARCESS Array B**	58.39	350	P	**P**	**03 18 37.4**	**-1.6**
	1.4nm,0.9s,mb4.0,baz=24,slow=8.0,SNR=5.1						
MKAR	**Makanchi Array**	59.49	308	P	**P**	**03 18 46.8**	**-0.1**
	0.7nm,0.3s,mb4.1,baz=46,slow=6.8,SNR=11						
TXAR	**Lajitas Array**	59.80	80	P	**P**	**03 18 50.2**	**+0.9**
	0.1nm,0.4s,mb3.2,baz=315,slow=3.5,SNR=4.3						
BVAR	**Borovoye Array**	60.56	319	P	**P**	**03 18 54.8**	**+0.6**
	3.1nm,0.5s,mb4.6,baz=44,slow=6.9,SNR=20						
FINES	**FINESS Array B**	66.02	346	P	**P**	**03 19 28.2**	**-1.6**
	0.3nm,0.4s,mb3.5,baz=56,slow=6.9,SNR=4.9						
NB2	**NORSAR Subarra**	68.03	354	P	**P**	**03 19 41.7**	**-0.7**
	1.4nm,0.8s,mb3.8,baz=6.0,slow=5.8						
NOA	**NORSAR Array B**	68.03	354	P	**P**	**03 19 42.1**	**-0.3**
	1.2nm,0.7s,mb3.8,baz=7.8,slow=6.3,SNR=4.9						

KRSC 18 03:36:12.8±0.7, 53.69N×160.72E, h35^{km}±4^{km}, ML4.1, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	0.72	215	*i* P	P	03 36 26.6	0.0
SPN				*i* S	S	03 36 36.7	+0.1
KII	**Karymskiy**	0.83	295	*i* P	P	03 36 28.3	+0.3
KII				*i* S	S	03 36 39.5	+0.3
NLC	**Nalytchevo**	0.97	238	*i* P	P	03 36 30.3	+0.2
NLC				*i* S	S	03 36 43.2	+0.3
MKZ	**Mys Kozlova**	1.05	34	*i* P	P	03 36 30.6	-0.6
MKZ				*e*S	S	03 36 42.9	-2.0

SDLR	**Sedlovina**	1.17	250	*i* P	P	03 36 33.6	+0.7
SDLR				*i* S	S	03 36 48.6	+0.6
UGLR	**Uglovaya**	1.23	248	*i* P	P	03 36 34.4	+0.6
UGLR				*i* S	S	03 36 50.2	+0.7
AVH	**Avacha**	1.26	251	*i* P	P	03 36 35.0	+0.9
AVH				*i* S	S	03 36 51.2	+1.0
KOK	**Koryaka**	1.31	253	*e*P	P	03 36 35.7	+0.8
KOK				*e*S	S	03 36 51.5	+0.1
PET	**Petropavlovsk**	1.41	243	*i* P	P	03 36 36.7	+0.4
PET				*i* S	S	03 36 54.3	+0.4
TUMR	**Tumrok**	1.63	348	*i* P	P	03 36 40.1	+0.6
TUMR				*i* S	S	03 37 00.1	+0.6
GNL	**Ganaly**	1.65	271	*i* P	P	03 36 40.4	+0.6
GNL				*e*S	S	03 37 01.0	+0.9
RUS	**Russkaya**	1.83	227	*e*P	P	03 36 42.0	-0.4
RUS				*e*S	S	03 37 03.5	-1.1
GRL	**Gorelyy**	1.96	236	*e*P	P	03 36 44.9	+0.7
GRL				*e*S	S	03 37 08.9	+1.0
KMNR	**Kamenistaya**	2.09	352	*e*P	P	03 36 46.9	+0.8
KMNR				*e*S	S	03 37 12.3	+1.2
APC	**Apacha**	2.27	252	*e*P	P	03 36 50.8	+2.1
APC				*i* S	S	03 37 18.0	+2.3
APC				Smax			
	100nm,0.8s						
KPT	**Kopyto**	2.30	353	*e*P	P	03 36 49.7	+0.6
KPT				*e*S	S	03 37 17.4	+0.9
ZLN	**Zelenaya**	2.33	1	*i* P	P	03 36 50.7	+1.1
ZLN				*e*S	S	03 37 18.5	+1.2
LGNR	**Loginova**	2.40	360	*i* P	P	03 36 51.9	+1.4
LGNR				*e*S	S	03 37 20.9	+1.9
KOZ	**Kozyrevsk**	2.42	349	*i* P	P	03 36 51.1	+0.2
KOZ				*e*S	S	03 37 19.7	+0.1
CIRR	**Tsirk**	2.43	0	*e*P	P	03 36 51.9	+0.9
CIRR				*e*S	S	03 37 21.5	+1.7
ESO	**Esso**	2.53	333	*e*P	P	03 36 52.8	+0.5
ESO				*e*S	S	03 37 22.2	0.0
ESO				Smax			
	110nm,1.0s						
KRSR	**Krestovskiy**	2.53	358	*i* P	P	03 36 53.0	+0.6
KRSR				*e*S	S	03 37 22.4	0.0
KLY	**Klyuchi**	2.63	359	*e*P	P	03 36 54.1	+0.3
KLY				*e*S	S	03 37 24.2	-0.6
SRDR	**Sredinnyy**	2.70	348	*i* P	P	03 36 54.3	-0.5
SRDR				*i* S	S	03 37 24.5	-2.0
KBTR	**Krutoberegovo**	2.80	25	*e*P	P	03 36 57.6	+1.4
KBTR				*e*S	S	03 37 31.7	+2.5
PAU	**Pauzhetka**	3.26	229	*e*P	P	03 37 03.7	+0.9
PAU				*e*S	S	03 37 41.7	+0.8
PAU				Smax			
	120nm,0.8s						
BKI	**Bering**	3.42	62	*i* P	P	03 37 03.8	-1.3
BKI				*i* S	S	03 37 39.8	-5.2
BKI				Smax			
	90nm,0.2s						
ALID	**Alaid**	4.25	230	*e*P	P	03 37 17.5	+0.7
ALID				*e*S	S	03 38 04.8	-1.1

NEIC ***18*** *03:36:54.2±0.9, 28.59S×67.39W, h130^{km}±12^{km}, mb3.5/1, Error ellipse: s-maj=15.8km s-min=10.6km az=77.0*
GUC ***18*** *03:36:54.8±0.9, 28.54S×67.56W, h130^{km}, ML4.6*
IDC ***18*** *03:36:54.8±1.9, 28.62S×67.22W, h133^{km}±21^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.4/16, mbtmp3.7/5, Error ellipse: s-maj=32.6km s-min=20.1km az=111.0*
ISC 18 03:36:53.7±0.9**, 28.60S**±0.05×**67.52W**±0.09**, h140**^{km}±13^{km}**, n18,** σ1^{s}**19**/25**, mb3.6**/3**, 4C-2D, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPCH	**Copiapo**	2.79	296	*e*P	P	03 37 39.0	+0.3
CPCH				*i* S	S	03 38 11.4	-1.6
CPCH				AMP		03 38 14.8	
	comp=E,6μm,0.1s						
VACH	**Vallenar**	2.84	270	⇑*i*P	P	03 37 39.8	+0.4
VACH				*i* S	S	03 38 13.6	-0.7
VACH				AMP		03 38 16.7	
	comp=E,3μm,0.1s						
CFAA	**Coronel Fontan**	3.06	192	P	P	03 37 44.2	+2.0
	comp=E,1.4nm,0.3s,baz=2.4,slow=13,SNR=107						
CFAA				S	S	03 38 20.3	+1.2
	comp=E,11nm,0.3s,baz=311,slow=20,SNR=14						
CFAA	**Coronel Fontan**	3.06	192	P	P	03 37 44.2	+2.0
CFAA				S	S	03 38 20.3	+1.2
ZON	**Zonda**	3.10	199	⇑*i*P	P	03 37 43.5	+0.8
ZON				*e*S	S	03 38 18.5	-1.6
TLL	**Tololo Astrono**	3.26	241	⇑*i*P	P	03 37 45.8	+1.0
TLL				*i* S	S	03 38 25.1	+1.2
TLL				AMP		03 38 30.4	
	comp=N,449nm,0.7s						
LSCH	**La Serena**	3.50	247	⇓*i*P	P	03 38 00.6	+13
LSCH				*i* S	S	03 38 41.8	+12
LSCH				AMP		03 38 47.3	
	comp=N,269nm,0.3s						
CMCH	**Combarbala**	3.96	229	⇓*i*P	P	03 37 53.3	-0.8
CMCH				*i* S	S	03 38 39.6	-0.8
CLCH	**Cerro Calan**	5.43	208	⇑*i*P	P	03 38 13.9	+0.2
CLCH				*i* S	S	03 39 14.7	-0.9
TRQA	**Tornquist**	10.51	155	*e*P	P	03 39 20.2	-1.1
LPAZ	**La Paz**	12.27	357	P	P	03 39 46.8	+2.2
	comp=N,0.1nm,0.3s,baz=164,slow=12,SNR=4.8						
SAML	**Samuel**	19.97	13	*e*P	P	03 41 15.7	-1.4
	comp=N,1.1nm,0.6s						
BDFB	**Brasilia**	22.16	59	P	P	03 41 37.0	-1.8
	comp=N,1.9nm,0.3s,mb4.0,baz=230,slow=7.3,SNR=6.4						
TXAR	**Lajitas Array**	67.17	326	P	P	03 47 35.4	+0.6
	comp=N,0.4nm,0.7s,mb3.4,baz=140,slow=7.0,SNR=4.9						
TXAR	**Lajitas Array**	67.17	326	P	P	03 47 35.4	+0.6
PDAR	**Pinedale Array**	80.86	330	P	P	03 48 54.6	+1.2
	comp=N,0.8nm,0.5s,mb3.6,baz=125,slow=7.8,SNR=6.3						
WRA	**Warramunga Arr**	127.32	206	PKP	PKPdf	03 55 43.8	+1.4
	comp=N,0.6nm,0.5s,baz=156,slow=2.1,SNR=5.8						
MKAR	**Makanchi Array**	150.26	44	PKPbc	PKPdf	03 56 30.1	+7.7
	comp=N,0.9nm,0.7s,baz=297,slow=3.2,SNR=8.5						
MKAR				PKPab	PKPab	03 56 36.0	-0.7
	comp=N,0.3nm,0.6s,baz=297,slow=3.2,SNR=2.2						
MKAR				pPKPbc		03 57 05.1	
	comp=N,0.4nm,0.7s,baz=297,slow=2.7,SNR=2.7						

NEIC 18 03:41:30.0±2.6**, 40.49N×126.65W, h10**^{km}**, mb3.5**/1**, MD3.4**(NCEDC)**, 1C-1D, Error ellipse: s-maj=32.8km s-min=8.3km az=81.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHMM	**Horse Mountain**	2.25	79	*e*P	Pn	03 42 06.0	-1.8
KHMM				*e*S	Sn	03 42 30.1	-5.8
WDC	**Whiskeytown Da**	3.13	87	*e*P	Pn	03 42 18.8	-1.6
WDC				*e*S	Sn	03 42 50.8	-7.5
YBH	**Yreka Blue Hor**	3.22	66	*e*P	Pn	03 42 20.1	-1.6
HUMO	**Hull Mountain**	3.48	51	⇑P	Pn	03 42 23.5	-2.0
BUOR	**Burton Butte**	3.76	60	⇓P	Pn	03 42 29.7	+0.3
BBOR	**Butler Butte**	3.81	50	P	Pn	03 42 28.6	-1.5
HSO	**Harness Mounta**	4.03	40	P	Pn	03 42 30.7	-2.5
LBCM	**Butte Creek Ri**	4.04	83	P	Pn	03 42 33.1	-0.2
SAC	**San Andreas**	4.39	130	*e*P	Pn	03 42 36.3	-2.1
HBO	**Huckleberry Mo**	4.64	42	P	Pn	03 42 40.4	-1.5
IRO	**Indian Ridge**	4.79	41	P	Pn	03 42 42.0	-2.0
BEKR	**Beckwourth**	4.86	95	*e*P	Pn	03 42 43.7	-1.3
FRIS	**Frissel Point**	5.02	41	P	Pn	03 42 45.2	-2.0
HUOR	**Husband**	5.08	43	P	Pn	03 42 46.4	-1.7
BKCOR	**Black Crater**	5.28	42	P	Pn	03 42 48.9	-2.0
CMB	**Columbia Colle**	5.45	115	*e*P	Pn	03 42 52.8	-0.5
SAO	**San Andreas Ge**	5.52	131	*e*P	Pn	03 42 51.2	-3.1
VIPM	**Ingram Point**	6.00	46	P	Pn	03 42 58.9	-2.1
BMO	**Blue Mountains**	8.14	55	*e*P	P	03 43 29.1	-2.1
FFC	**Flin Flon**	21.74	41	*e*P	P	03 46 22.9	-0.3
	1.2nm,0.7s						

NDI ***18*** *04:01:42.0±3.5, 33.01N×76.05E, h68^{km}±34^{km}, ML3.4*
IDC ***18*** *04:01:52.8±7.8, 33.20N×76.42E, h68^{km}±71^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.5/21, mbtmp3.8/8, ML3.7/1, Error ellipse: s-maj=41.4km s-min=22.1km az=36.0*
ISC 18 04:01:45.0±0.5**, 32.84N**±0.04×**76.26E**±0.06**, h33**^{km}**, n20,** σ1^{s}**09**/27**, mb3.7**/6**, Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	0.61	229	*e*P	P	04 01 56.1	-1.0
	989nm,0.2s						
THN				*e*S	S	04 02 07.3	+1.4
PONG	**Pong**	0.92	197	*e*P	P	04 02 01.0	-0.5
PONG				*e*x	S	04 02 22.0	+8.2
BHK	**Bhakra**	1.43	175	*e*P	P	04 02 07.8	-1.0
BHK				*e*S	S	04 02 27.2	+0.7
SDNR	**Sundarnagar**	1.47	156	*e*P	P	04 02 08.4	-0.9
SDNR				*e*S	S	04 02 28.6	+1.1
SMLA	**Simla**	1.87	156	*i* P	P	04 02 14.6	-0.6
SMLA				*i* S	S	04 02 38.5	+0.7
KLP	**Kalpa**	2.13	127	*e*P	P	04 02 20.0	+1.2
KLP				*e*S	S	04 02 45.5	+1.1
KLP				AML	AML	04 02 51.6	
	comp=N,1μm,0.7s						
KLP				AML	AML	04 02 54.7	
	comp=E,3μm,0.8s						
NDI	**New Delhi**	4.22	169	*e*P	P	04 02 58.0	+9.3
NDI				*e*S	S	04 03 47.0	+9.5
AYAN	**Aya Nagar**	4.41	170	*e*P	P	04 02 50.1	-1.2
SONA	**Sohna**	4.63	171	AML	AML	04 04 24.2	
	comp=N,19nm,0.3s						
SONA				AML	AML	04 04 24.5	
	comp=E,56nm,0.3s						
KUDL	**Kundal**	4.69	178	*e*P	P	04 02 53.6	-1.6
KHET	**Khetri**	4.77	185	AML	AML	04 04 11.3	
	comp=N,28nm,0.4s						
KHET				AML	AML	04 04 11.8	
	comp=E,33nm,0.6s						
KHET				*e*x	Sx	04 04 15.3	
LGTI	**Lohaghat**	4.80	134	*i* P	P	04 02 55.0	-1.9
LGTI				*e*S	S	04 03 48.0	-4.2
MKAR	**Makanchi Array**	14.68	17	P	P	04 05 11.3	-0.6
	comp=E,0.4nm,0.3s,baz=199,slow=14,SNR=5.8						
MKAR				S	S	04 07 47.4	-6.8
	comp=E,0.1nm,0.3s,baz=193,slow=21,SNR=12						
BVAR	**Borovoye Array**	20.61	350	P	P	04 06 23.0	-0.7
	comp=E,1.0nm,0.6s,baz=238,slow=39,SNR=4.4						
CMAR	**Chiang Mai Arr**	24.89	120	P	P	04 07 09.8	+3.5
	comp=E,1.5nm,0.4s,mb3.9,baz=307,slow=9.6,SNR=4.7						
SONM	**Songino Array**	27.20	48	P	P	04 07 27.8	+0.2
	comp=E,0.7nm,0.6s,mb3.4,baz=242,slow=9.5,SNR=9.2						
MLR	**Muntele Rosu**	40.38	303	P	P	04 09 23.5	+2.2
	comp=E,0.7nm,0.5s,mb3.7,baz=102,slow=10,SNR=3.7						
FINES	**FINESS Array B**	42.92	327	P	P	04 09 42.3	+0.4
	comp=E,1.0nm,0.9s,mb3.5,baz=135,slow=7.9,SNR=5.2						
ARCES	**ARCESS Array B**	46.17	338	P	P	04 10 08.2	+0.4
	comp=E,0.9nm,0.6s,mb3.9,baz=113,slow=9.2,SNR=5.1						
YKA	**Yellowknife Ar**	84.60	5	P	P	04 14 15.9	+0.3
	comp=E,0.7nm,0.6s,mb4.0,baz=342,slow=4.4,SNR=4.6						

BJI ***18*** *04:06:41.0, 0.14N×97.02E, h30^{km}, mb4.9, Ms4.0, Msz3.8*
IDC ***18*** *04:06:46.0±1.4, 1.04N×97.09E, mb4.1/8, mb1 4.2/9, mb1mx4.0/19, mbtmp4.1/9, ML4.2/1, Error ellipse: s-maj=60.9km s-min=19.4km az=54.0*
NEIC ***18*** *04:06:50.5±0.7, 1.06N×97.17E, h30^{km}, mb4.5/6, Error ellipse: s-maj=19.1km s-min=10.9km az=58.0*
ISC 18 04:06:49.6±0.8**, 1.1N**±0.1×**97.2E**±0.1**, h33**^{km}**, n21,** σ0^{s}**96**/20**, mb4.3**/15**, MS3.8**/1**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	5.39	39	*e*P	P	04 08 09.5	-0.4
CMAR	**Chiang Mai Arr**	17.34	5	P	P	04 10 50.0	-0.9
	0.3nm,0.3s,baz=197,slow=9.4,SNR=6.5						
KMI	**Kunming**	24.47	12	P	P	04 12 09.0	+1.9
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
KMI				LR	LR		
	comp=N,220nm,14.3s,MS3.8						
KMI				LR	LR		
	comp=E,70nm,14.3s,MS3.8						
KMI				LR	LR		
	comp=Z,200nm,14.3s,MS3.8						
KMI	**Kunming**	24.47	12	P	P	04 12 09.0	+1.9
	comp=Z,18nm,1.2s,mb4.4						
KMI				LR	LR		
	comp=Z,200nm,14.3s,MS3.8						
GUN	**Gumba**	28.79	339	*e*P	P	04 12 47.5	+0.6
	comp=Z,17nm,0.7s,mb4.9						
KKN	**Kakani**	28.90	338	*e*P	P	04 12 50.4	+2.5
	comp=Z,20nm,0.9s,mb4.8						
GKN	**Gorkha**	29.34	337	*e*P	P	04 12 50.9	-0.9
	comp=Z,4.9nm,0.3s,mb4.7						
KOLN	**Koldanda**	29.56	335	*e*P	P	04 12 53.8	+0.1
	comp=Z,11nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	33.85	126	P	P	04 13 31.5	0.0
	comp=Z,8.1nm,1.0s,mb4.6,baz=22,slow=3.2,SNR=3.9						
GTA	**Gaotai**	38.20	3	P	P	04 14 08.0	-0.1
GTA				AP	pP	04 14 14.6	-3.3
GTA				XP	sP	04 14 17.3	-4.8
WRA	**Warramunga Arr**	41.96	122	P	P	04 14 39.4	-0.1
	comp=Z,1.8nm,0.5s,mb3.9,baz=300,slow=9.1,SNR=11						
WRAB	**Tennant Creek**	41.97	122	*e*P	P	04 14 39.5	0.0
	comp=Z,2.5nm,0.5s,mb4.1						
AAK	**Ala-Archa**	46.10	337	P	P	04 15 10.9	-1.7
SONM	**Songino Array**	47.23	8	P	P	04 15 21.5	+0.1
	comp=Z,1.0nm,0.5s,mb4.0,baz=191,slow=9.4,SNR=17						
SONM				PcP	PcP	04 16 52.8	0.0
	comp=Z,0.4nm,0.4s,baz=181,slow=3.0,SNR=4.7						
MKAR	**Makanchi Array**	47.34	346	P	P	04 15 22.2	-0.1
	comp=Z,1.7nm,0.5s,mb4.2,baz=160,slow=8.7,SNR=14						
ULN	**Ulaanbaatar**	47.36	9	P	P	04 15 23.0	+0.6
	comp=Z,3.1nm,0.4s,mb4.6						
BVAR	**Borovoye Array**	56.35	341	P	P	04 16 28.6	-1.2
	comp=Z,0.9nm,0.4s,mb4.1,baz=153,slow=6.6,SNR=7.1						
FINES	**FINESS Array B**	80.10	333	P	P	04 18 56.5	-1.1
	comp=Z,1.3nm,1.1s,mb3.8,baz=124,slow=6.9,SNR=4.4						
ARCES	**ARCESS Array B**	82.64	340	P	P	04 19 11.1	+0.4
	comp=Z,2.0nm,1.0s,mb4.1,baz=101,slow=6.2,SNR=3.7						
GERES	**GERESS Array B**	84.90	319	P	P	04 19 23.8	+1.2
	comp=Z,0.2nm,0.8s,mb3.3,baz=76,slow=8.1,SNR=3.8						
TXAR	**Lajitas Array**	143.75	32	PKP	PKPdf	04 26 21.4	-0.6
	comp=Z,0.2nm,0.5s,baz=225,slow=3.5,SNR=4.6						

IPEC ***18*** *04:07:51.9±0.3, 51.53N×16.17E, ML1.9/3, Error ellipse: s-maj=2.1km s-min=1.5km az=29.0*
NEIC ***18*** *04:07:53.2±0.9, 51.48N×16.16E, h5^{km}, ML2.9(VIE), ML2.5(SZGRF), ML2.4(FUR), Error ellipse: s-maj=10.7km s-min=4.7km az=201.0*
WAR ***18*** *04:07:54.3, 51.46N×16.10E, h1^{km}, ML2.7, Mining Induced*
IDC ***18*** *04:07:54.4±0.8, 51.44N×16.10E, mb1 3.2/5, mb1mx3.2/21, mbtmp3.0/5, ML2.7/5, Error ellipse: s-maj=17.3km s-min=7.6km az=103.0*
CSEM ***18*** *04:07:54.0±0.1, 51.44N×16.15E, h0^{km}, ML3.0/6, Error ellipse: s-maj=2.6km s-min=1.5km az=15.0*
PRU ***18*** *04:07:54.1, 51.43N×16.11E*
ISC 18 04:07:52.2±0.6**, 51.41N**±0.03×**16.09E**±0.03**, n38,** σ1^{s}**27**/73**, 1C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.58	167	⇓*i*Pg	Pg	04 08 05.7	+1.9
KSP				*i*		04 08 07.1	
KSP				*e*Sg	Sg	04 08 14.0	+2.5
KSP	**Ksiaz**	0.58	167	*i* PG	Pg	04 08 05.7	+1.9
KSP				*e*SG	Sg	04 08 14.7	+3.2
KSP	**Ksiaz**	0.58	167	*e*Pg	Pg	04 08 05.7	+1.9
KSP				*e*Sg	Sg	04 08 14.9	+3.4
KSP	**Ksiaz**	0.58	167	*e*Pg	Pg	04 08 05.5	+1.7
KSP				*e*Sg	Sg	04 08 14.0	+2.5
UPC	**Upice**	0.90	183	*e*PG	Pg	04 08 11.7	+1.5
DPC	**Dobruska-Polom**	1.07	172	*e*PG	Pg	04 08 14.5	+1.0
DPC				*e*SG	Sg	04 08 29.2	+1.4
	21nm,0.4s						
PVCC	**Panska Ves**	1.30	228	*e*PG	Pg	04 08 19.0	+0.8
PVCC	**Panska Ves**	1.30	228	*e*Pn	Pn	04 08 18.8	+1.2
PVCC	**Panska Ves**	1.30	228	*e*Pg	Pg	04 08 19.0	+0.8
PVCC				*e*Sg	Sg	04 08 36.7	+1.1
BRG	**Berggiesshubel**	1.46	249	Pg	Pg	04 08 21.6	+0.4
BRG				Sg	Sg	04 08 41.8	+1.2
BRG	**Berggiesshubel**	1.46	249	Pg	Pg	04 08 21.6	+0.4
BRG				Sg	Sg	04 08 41.8	+1.2
PRU	**Pruhonice**	1.73	215	*e*Pn	Pn	04 08 24.5	+0.8
PRU				*e*Pg	Pg	04 08 26.3	-0.4
PRU				*e*Sg	Sg	04 08 49.9	+0.2
PRU	**Pruhonice**	1.73	215	*e*Pg	Pg	04 08 26.3	-0.4
PRU				*e*Sg	Sg	04 08 49.9	+0.2
MORC	**Moravsky Berou**	1.88	150	*e*P	Pn	04 08 26.3	+0.5
MORC	**Moravsky Berou**	1.88	150	*e*P	Pn	04 08 26.3	+0.5
MORC	**Moravsky Berou**	1.88	150	*e*Pn	Pn	04 08 26.5	+0.7
MORC				*e*Sg	Sg	04 08 53.5	-1.2
	8.2nm,0.2s						
CLL	**Collm**	1.94	268	*e*Pn	Pn	04 08 27.0	+0.3
CLL				*i* Pg	Pg	04 08 29.4	-1.5
CLL				*e*Sg	Sg	04 08 56.0	-0.7
CLL	**Collm**	1.94	268	*e*PN	Pn	04 08 27.0	+0.3
CLL				*i* PG	Pg	04 08 29.4	-1.5
CLL				*i*		04 08 33.6	
CLL				*e*SG	Sg	04 08 56.0	-0.7
OKC	**Ostrava-Krasne**	2.05	139	*e*PG	Pg	04 08 32.0	-1.0
OKC				*e*SG	Sg	04 08 58.0	-2.3
VRAC	**Vranov**	2.13	171	Pn	Pn	04 08 31.3	+1.9
	1.1nm,0.3s,baz=337,slow=15,SNR=13						
VRAC				Lg		04 09 02.1	
	1.6nm,0.3s,baz=81,slow=22,SNR=9.2						
VRAC	**Vranov**	2.13	171	*e*Pn	Pn	04 08 30.5	+1.1
VRAC				*e*Sg	Sg	04 09 02.1	-0.9
	8.3nm,0.2s						
KRUC	**Moravsky**	2.36	175	*e*Sg	Sg	04 09 09.6	-1.1
	3.8nm,0.2s						
NKC	**Novy Kostel**	2.59	244	*e*PN	Pn	04 08 36.8	+0.8
NKC				*e*PG	Pg	04 08 43.3	-0.6
NKC				*e*SG	Sg	04 09 17.6	-0.9
	22nm,0.3s						
OJC	**Ojcow**	2.64	115	*e*PN	Pn	04 08 36.0	-0.7
OJC				*e*PG	Pg	04 08 45.0	+0.2
OJC				*e*SG	Sg	04 09 19.0	-0.9
OJC	**Ojcow**	2.64	115	*e*Pg	Pg	04 08 44.6	-0.2
OJC				*e*Sg	Sg	04 09 19.3	-0.6
KHC	**Kasperske Hory**	2.79	216	*e*PN	Pn	04 08 39.5	+0.6
KHC				*e*PG	Pg	04 08 45.7	-2.2
KHC				*e*SN	Sn	04 09 14.1	+0.3
KHC				*e*SG	Sg	04 09 23.2	-1.9
MOX	**Moxa**	2.93	257	*e*Pn	Pn	04 08 41.2	+0.4
MOX				*e*Pg	Pg	04 08 49.3	-1.3
MOX				*e*Sg	Sg	04 09 29.3	-0.3
MOX	**Moxa**	2.93	257	*i* P	Pn	04 08 41.2	+0.4
MOX				Pg	Pg	04 08 49.0	-1.6
MOX				Sg	Sg	04 09 29.0	-0.6
GEC2	**GERESS Array S**	2.99	212	*e*Pn	Pn	04 08 43.6	+1.9
GERES	**GERESS Array B**	2.99	212	Pn	Pn	04 08 43.5	+1.8
	0.4nm,0.3s,baz=32,slow=12,SNR=14						
GERES				Pg	Pg	04 08 49.2	-2.7
	1.6nm,0.3s,baz=31,slow=17,SNR=36						
GERES				Sn	Sn	04 09 21.9	+3.0
	0.9nm,0.3s,baz=32,slow=26,SNR=4.3						
GERES				Lg		04 09 29.2	
	1.8nm,0.3s,baz=29,slow=28,SNR=6.6						
GERES	**GERESS Array B**	2.99	212	Pg	Pg	04 08 49.2	-2.7
WET	**Wettzell**	3.06	224	*e*Pn	Pn	04 08 43.0	+0.2
GRA1	**Grafenberg Arr**	3.55	243	*e*Pn	Pn	04 08 50.2	+0.5
GRA1				*e*Sg	Sg	04 09 47.7	-2.6
GRF	**Grafenberg Arr**	3.55	243	*e*Pn	Pn	04 08 50.2	+0.5
GRF				*e*Sg	Sg	04 09 47.7	-2.6
MOA	**Molln**	3.75	199	⇑*i*PN	Pn	04 08 53.5	+0.9
MOA				*i* SG	Sg	04 09 55.6	-1.6
	4.1nm,0.4s						
NOA	**NORSAR Array B**	10.03	346	Pn	P	04 10 16.2	-4.2
	0.1nm,0.3s,baz=200,slow=20,SNR=2.7						
FINES	**FINESS Array B**	11.46	25	Pn	P	04 10 34.7	-5.3
	0.1nm,0.3s,baz=212,slow=13,SNR=4.2						
ARCES	**ARCESS Array B**	18.73	10	Pn	P	04 12 09.2	-4.8
	0.1nm,0.3s,baz=191,slow=14,SNR=3.0						

IDC ***18*** *04:25:24.1±0.5, 55.21N×162.02E, mb4.8/20, mb1 5.0/21, mb1mx5.0/22, mbtmp4.8/21, ML4.9/1, MS4.2/17, Ms1 4.2/17, ms1mx4.1/18, Error ellipse: s-maj=15.3km s-min=10.5km az=179.0*
BJI ***18*** *04:25:26.8, 55.50N×161.91E, h29^{km}, mB4.8, mb4.5, Ms4.8, Msz4.5*
MOS ***18*** *04:25:28.8±1.0, 55.24N×161.92E, h41^{km}, mb5.2/95, MS4.3/25, Error ellipse: s-maj=8.8km s-min=3.9km az=90.2*
KRSC ***18*** *04:25:28.5±0.8, 55.12N×162.39E, h35^{km}±4^{km}, ML5.6*
HRVD ***18*** *04:25:29.7±0.4, 55.16N×162.51E, h40^{km}±1^{km}, MW5.0/51, Centroid moment Tensor Solution. LP body waves: s45,c67;Mantle waves: s51,c84; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.22±.17; $M_{\theta\theta}$-0.14±.15; $M_{\phi\phi}$-3.08±.14; $M_{r\theta}$1.93±.16; $M_{\theta\phi}$-1.94±.10; $M_{\phi r}$0.89±.14; Best double couple: $M_0$4.258×10^{16} NP1:ϕ_s185°,δ37°,λ54°. NP2:ϕ_s47°,δ61°,λ114°. Principal axes: T 4.098, Plg66°, Azm360°; N .317, Plg21°, Azm215°; P -4.419, Plg13°, Azm120°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***18*** *04:25:29.7±0.1, 55.20N×162.09E, mb5.0/152, MS4.3/14 Error ellipse: s-maj=4.0km s-min=2.8km az=181.0*
ISC 18 04:25:28.1±0.1**, 55.18N**±0.02×**162.31E**±0.03**, h37**^{km}**, h37**^{km}±1.2^{km}**:pP-P, n512,** σ1^{s}**13**/554**, mb4.9**/191**, MS4.3**/50**, 69C-11D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	0.70	209	P	P	04 25 41.6	0.0
MKZ				S	S	04 25 50.6	-0.8
MKZ	**Mys Kozlova**	0.70	209	*i* P	P	04 25 41.6	0.0
MKZ				*e*S	S	04 25 50.5	-0.9
KBTR	**Krutoberegovo**	1.07	15	P	P	04 25 48.4	+1.5
KBTR	**Krutoberegovo**	1.07	15	*i* P	P	04 25 48.5	+1.6
KBTR				*e*S	S	04 26 03.2	+2.4
ZLN	**Zelenaya**	1.20	315	*i* P	P	04 25 51.4	+2.8
TUMR	**Tumrok**	1.24	276	*i* P	P	04 25 51.2	+2.0
TUMR				*e*S	S	04 26 07.6	+2.5
CIRR	**Tsirk**	1.29	317	*i* P	P	04 25 52.9	+3.0
LGNR	**Loginova**	1.29	315	*e*P	P	04 25 53.2	+3.3
LGNR				*e*S	S	04 26 10.5	+4.1
KMNR	**Kamenistaya**	1.31	297	*i* P	P	04 25 52.6	+2.2
KMNR				*e*S	S	04 26 09.1	+2.2
KPT	**Kopyto**	1.43	305	*i* P	P	04 25 54.3	+2.4
KRSR	**Krestovskiy**	1.44	317	*i* P	P	04 25 54.2	+2.1
KRSR				*e*S	S	04 26 13.1	+3.1
KLY	**Klyuchi**	1.48	321	P	P	04 25 54.1	+1.5
KLY				S	S	04 26 12.4	+1.5
KLY	**Klyuchi**	1.48	321	*i* P	P	04 25 54.0	+1.4
KLY				*e*S	S	04 26 12.4	+1.5
SVLR	**Shiveluch**	1.53	337	*i* P	P	04 25 53.3	-0.2
SVLR				*e*S	S	04 26 13.0	+0.6
KOZR	**Kozyr**	1.63	304	PN	P	04 25 58.0	+3.1
KOZ	**Kozyrevsk**	1.64	304	P	P	04 25 58.0	+3.0
KOZ	**Kozyrevsk**	1.64	304	*i* P	P	04 25 57.8	+2.8
KOZ				*e*S	S	04 26 18.9	+3.8
SRDR	**Sredinnyy**	1.86	309	*i* P	P	04 26 00.7	+2.6
SRDR				*e*S	S	04 26 23.1	+2.5
KII	**Karymskiy**	2.02	237	*i* P	P	04 26 01.6	+1.2
KII				*e*S	S	04 26 25.8	+1.2
BKI	**Bering**	2.10	88	*i* P	P	04 26 01.9	+0.3
BKI				*i* S	S	04 26 24.9	-1.8
BKI				Smax			
	4μm,1.4s						
ESO	**Esso**	2.18	292	*i* P	P	04 26 04.2	+1.5
ESO				*e*S	S	04 26 29.1	+0.3
ESO				Smax			
	5μm,1.1s						
SPN	**Mys Shipunski**	2.48	214	P	P	04 26 05.8	-1.2
SPN				S	S	04 26 32.4	-3.9
SPN	**Mys Shipunski**	2.48	214	*i* P	P	04 26 05.8	-1.2
SPN				*i* S	S	04 26 33.2	-3.1
NLC	**Nalytchevo**	2.66	222	P	P	04 26 09.8	+0.3
NLC				S	S	04 26 39.7	-1.2
NLC	**Nalytchevo**	2.66	222	*i* P	P	04 26 09.7	+0.2
NLC				*i* S	S	04 26 39.7	-1.2
SDLR	**Sedlovina**	2.77	228	*i* P	P	04 26 12.3	+1.2
SDLR				*i* S	S	04 26 44.9	+1.3
AVH	**Avacha**	2.84	229	*i* P	P	04 26 13.1	+1.0
AVH				*i* S	S	04 26 45.8	+0.4
UGLR	**Uglovaya**	2.84	228	*i* P	P	04 26 14.0	+1.9
UGLR				*e*S	S	04 26 47.2	+1.7
KOK	**Koryaka**	2.87	230	*e*P	P	04 26 13.5	+1.0
KOK				*e*S	S	04 26 46.0	-0.1
GNL	**Ganaly**	2.95	242	*i* P	P	04 26 15.1	+1.4
GNL				*e*S	S	04 26 48.7	+0.4
PET	**Petropavlovsk**	3.05	226	P	P	04 26 16.4	+1.3
PET				S	S	04 26 51.2	+0.5
PET	**Petropavlovsk**	3.05	226	*e*P	P	04 26 15.7	+0.6
PET				*e*S	S	04 26 50.7	0.0
PET	**Petropavlovsk**	3.05	226	*e*P	P	04 26 16.3	+1.2
PET				*i* S	S	04 26 51.1	+0.4
RUS	**Russkaya**	3.55	221	*e*P	P	04 26 23.0	+0.8
RUS				*e*S	S	04 27 02.5	-1.0

GRL	**Gorelyy**	**3.63**	**225**	*e*P	**P**	**04 26 24.8**	**+1.4**
GRL				*e*S	**S**	**04 27 06.5**	**+0.9**
APC	**Apacha**	**3.78**	**236**	*i* P	**P**	**04 26 27.1**	**+1.6**
APC				*e*S	**S**	**04 27 09.1**	**-0.3**
APC				Smax			
	890nm,1.0s						
OSSR	**Ossora**	**4.11**	**5**	*i* P	**P**	**04 26 29.2**	**-0.9**
OSSR				Smax			
	730nm,1.0s						
PAU	**Pauzhetka**	**4.96**	**224**	*i* P	**P**	**04 26 44.1**	**+1.8**
PAU				*e*S	**S**	**04 27 38.4**	**-0.8**
PAU				Smax			
	1µm,0.9s						
SKR	**Severo-Kuril's**	**5.85**	**222**	*e*PN	**P**	**04 26 51.9**	**-2.8**
SKR				*e*S	**S**	**04 28 02.5**	**+1.0**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,480nm,0.8s						
SKR				smax			
	comp=E,190nm,0.9s						
SKR				smax			
	comp=Z,2µm,2.0s						
ALID	**Alaid**	**5.94**	**226**	*e*P	**P**	**04 26 57.2**	**+1.4**
ALID				*e*S	**S**	**04 28 00.1**	**-3.5**
FX1	**Attu Island--F**	**6.80**	**105**	Pn	**P**	**04 27 05.6**	**-2.3**
	comp=Z,69nm,0.3s,baz=323,slow=6.3,SNR=100						
FX1				Sn	**S**	**04 28 19.1**	**-5.8**
	comp=Z,169nm,0.3s,baz=205,slow=18,SNR=14						
FX1	**Attu Island--F**	**6.80**	**105**	P	**P**	**04 27 06.0**	**-2.0**
SMY	**Shemya**	**7.38**	**105**	PN	**P**	**04 27 14.6**	**-1.5**
KAMR	**Kamenskoye**	**7.58**	**14**	*i* P	**P**	**04 27 20.9**	**+2.1**
KAMR				*i* S	**S**	**04 28 42.3**	**-2.1**
KAMR				Smax			
	comp=Z,120nm,1.3s						
MA2	**Magadan**	**7.63**	**310**	*e*PN	**P**	**04 27 18.9**	**-0.8**
SEY	**Seymchan**	**9.30**	**331**	*e*PN	**P**	**04 27 46.5**	**+3.8**
SEY				*e*S	**S**	**04 29 34.4**	**+7.2**
SEY				pmax	pmax		
	comp=N,20nm,1.4s						
SEY				pmax	pmax		
	comp=Z,40nm,1.4s						
SEY				pmax	pmax		
	comp=E,20nm,1.1s						
SEY				smax			
	comp=N,80nm,4.3s						
SEY				smax			
	comp=E,30nm,3.8s						
KIMD	**Kanaga Island**	**12.65**	**97**	P	**P**	**04 28 26.8**	**-1.4**
BILL	**Bilibino**	**13.04**	**7***c*	*i*PN	**P**	**04 28 36.8**	**+3.5**
BILL				pmax	pmax		
	comp=Z,86nm,1.2s						
BILL				MLR	MLR		
	comp=Z,1µm,12.0s						
BILL	**Bilibino**	**13.04**	**7**	*e*P	**P**	**04 28 33.6**	**+0.3**
	comp=Z,76nm,1.1s						
UGL	**Uglegorsk**	**13.83**	**252**	*e*P	**P**	**04 28 46.0**	**+2.5**
UGL				pmax	pmax		
	comp=Z,112nm,1.0s						
UGL				pmax	pmax		
	comp=Z,400nm,8.0s						
UGL				MLR	MLR		
	comp=N,800nm,15.0s						
UGL				MLR	MLR		
	comp=E,1µm,15.0s						
UGL				MLR	MLR		
	comp=Z,900nm,15.0s						
YSS	**Yuzh-Sakhalins**	**14.75**	**244**⇑	*e*P	**P**	**04 28 58.0**	**+2.3**
YSS				S	**S**	**04 31 41.0**	**+2.3**
YSS				pmax	pmax		
	comp=N,30nm,1.0s						
YSS				pmax	pmax		
	comp=E,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=N,1µm,15.0s						
YSS				MLR	MLR		
	comp=E,600nm,15.0s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
YSS	**Yuzh-Sakhalins**	**14.75**	**244**	*e*P	**P**	**04 28 55.4**	**-0.3**
	comp=Z,38nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**15.38**	**230**	P	**P**	**04 29 00.5**	**-3.3**
YUK				pmax	pmax		
	comp=N,190nm,0.5s						
YUK				pmax	pmax		
	comp=E,190nm,0.5s						
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
ASAJ	**Asahikawa**	**16.83**	**237**	P	**P**	**04 29 22.8**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,897nm,20.4s						
ASAJ	**Asahikawa**	**16.83**	**237**	Pn	**P**	**04 29 22.8**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=40,slow=6.8,SNR=18						
ASAJ				LR	LR	04 35 15.0	
	comp=Z,897nm,20.4s,baz=354,slow=35						
UNV	**Unalaska Valle**	**18.09**	**81**	*e*P	**P**	**04 29 39.0**	**+1.1**
	comp=Z,335nm,1.2s						
YAK	**Yakutsk**	**18.17**	**305**	*e*P	**P**	**04 29 38.4**	**-0.5**
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,31nm,1.1s						
YAK				pmax	pmax		
	comp=E,26nm,1.3s						
YAK				MLR	MLR		
	comp=E,608nm,14.0s						
YAK				MLR	MLR		
	comp=Z,674nm,14.0s						
YAK				MLR	MLR		
	comp=N,199nm,15.0s						
YAK	**Yakutsk**	**18.17**	**305**	*e*P	**P**	**04 29 38.8**	**-0.1**
	comp=N,26nm,0.6s						
KLR	**Kul'dur**	**19.55**	**265**	*e*P	**P**	**04 29 51.2**	**-3.9**
KLR				*e*S	**S**	**04 33 31.0**	**+2.7**
KLR				MLR	MLR		
	comp=E,600nm,15.0s						
KLR				MLR	MLR		
	comp=Z,1µm,15.0s						
CLNS	**Chul'man**	**20.82**	**290**	*e*P	**P**	**04 30 09.4**	**+0.9**
CLNS				*e*		04 30 21.6	
CLNS				*e*PPP	PPP	04 30 30.0	-10
CLNS				*e*S	**S**	**04 33 47.6**	**-6.2**
CLNS				*e*SS	SS	04 34 18.4	-7.9
CLNS				*e*		04 34 23.9	
CLNS				pmax	pmax		
	comp=E,6.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,19nm,0.9s						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.6s						
CLNS				smax			
	comp=N,9.0nm,1.0s						
CLNS				smax			
	comp=E,10.0nm,0.9s						
CLNS				smax			
	comp=Z,4.0nm,0.9s						
CLNS				MLR	MLR		
	comp=E,200nm,13.0s,MS3.8						
CLNS				MLR	MLR		
	comp=Z,700nm,13.0s,MS4.2						
CLNS				MLR	MLR		
	comp=N,200nm,12.0s,MS3.8						
TIXI	**Tiksi**	**21.79**	**332**	*e*P	**P**	**04 30 15.1**	**-3.1**
TIXI				*e*S	**S**	**04 34 10.3**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.1						
TIXI				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.4						
MDJ	**Mudanjiang**	**23.36**	**257**	P	**P**	**04 30 31.0**	**-2.7**
MDJ				AP		04 30 42.1	
MDJ				XP		04 30 48.5	
MDJ				PP	PP	04 31 04.1	-1.6
MDJ				S	**S**	**04 34 39.5**	**-0.8**
MDJ				XS		04 34 54.0	
MDJ				SS	SS	04 35 26.5	-1.7
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,30nm,4.2s						
MDJ				LR	LR		
	comp=N,470nm,20.2s,MS4.1						
MDJ				LR	LR		
	comp=E,490nm,21.5s,MS4.1						
MDJ				LR	LR		
	comp=Z,680nm,18.9s,MS4.1						
IMA	**Indian Mountai**	**23.63**	**45**	P	**P**	**04 30 38.8**	**+2.7**
IMA				pmax	pmax		
	comp=Z,260nm,1.2s,mb5.5						
IMA	**Indian Mountai**	**23.63**	**45**	*e*P	**P**	**04 30 37.8**	**+1.6**
	comp=Z,264nm,1.2s,mb5.5						
RSO	**Redoubt South**	**24.12**	**59**	*e*P	**P**	**04 30 43.6**	**+2.6**
SPU	**Mount Spurr**	**24.38**	**57**	*e*P	**P**	**04 30 45.4**	**+1.9**
KDAK	**Kodiak Island**	**24.70**	**65**	*e*P	**P**	**04 30 46.2**	**-0.4**
	comp=Z,22nm,0.6s,mb4.9						
MAJO	**Matsushiro**	**24.87**	**231**	P	**P**	**04 30 48.3**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,24nm,0.6s,mb4.9						
MAJO	**Matsushiro**	**24.87**	**231**	*e*P	**P**	**04 30 47.9**	**-0.5**
	comp=Z,24nm,0.6s,mb4.9						
MAT	**Matsushiro**	**24.87**	**231**	*e*P	**P**	**04 30 48.0**	**-0.5**
MAT				pmax	pmax		
	comp=Z,37nm,1.0s,mb4.9						
MAT				MLR	MLR		
	comp=Z,740nm,22.0s,MS4.1						
MAT	**Matsushiro**	**24.87**	**231**	*e*P	**P**	**04 30 48.0**	**-0.5**
	comp=Z,37nm,1.0s,mb4.9						
MAT				*e*S	**S**	**04 35 15.0**	**+8.7**
MAT				LR	LR		
	comp=Z,740nm,22.0s,MS4.1						
MAT	**Matsushiro**	**24.87**	**231**	P	**P**	**04 30 48.2**	**-0.3**
MAT				S	**S**	**04 35 14.0**	**+7.7**
MJAR	**Matsushiro Arr**	**24.87**	**231**	P	**P**	**04 30 47.7**	**-0.8**
	comp=Z,32nm,1.1s,mb4.8,baz=24,slow=8.1,SNR=50						
SML	**Sawmill**	**26.07**	**55**	P	**P**	**04 31 00.1**	**+0.6**
SML	**Sawmill**	**26.07**	**55**	*e*P	**P**	**04 30 59.2**	**-0.2**
CN2	**Changchun**	**26.20**	**260**	*e*P	**P**	**04 31 00.6**	**-0.3**
CN2				*e*AP	pP	04 31 10.0	-0.9
CN2				*e*S	**S**	**04 35 26.0**	**-2.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s,MS4.2						
CN2				LR	LR		
	comp=E,500nm,14.0s,MS4.2						
CN2				LR	LR		
	comp=Z,800nm,16.0s,MS4.3						
BOD	**Bodaibo**	**26.35**	**296**	*e*P	**P**	**04 31 11.3**	**+9.2**
BOD				*e*		04 31 25.5	
ILAR	**Eielson Array**	**26.44**	**48**	P	**P**	**04 31 02.9**	**0.0**
	comp=Z,11nm,0.9s,mb4.4,baz=266,slow=8.2,SNR=64						
ILAR				LR	LR	04 41 51.5	
	comp=Z,326nm,20.5s,MS3.9,baz=63,slow=37						
DIV	**Divide**	**27.39**	**56**	*e*P	**P**	**04 31 11.8**	**+0.2**
	comp=Z,46nm,0.8s,mb5.1						
INK	**Inuvik**	**31.43**	**40**	P	**P**	**04 31 48.0**	**+0.4**
INK				pmax	pmax		
	comp=Z,73nm,1.6s						
INK	**Inuvik**	**31.43**	**40**	P	**P**	**04 31 47.9**	**+0.4**
	comp=Z,6.8nm,0.4s,mb4.8,baz=293,slow=6.7,SNR=16						
INK	**Inuvik**	**31.43**	**40**	*e*P	**P**	**04 31 47.6**	**0.0**
	comp=Z,73nm,1.6s,mb5.3						
ULN	**Ulaanbaatar**	**34.34**	**281**	*e*P	**P**	**04 32 11.8**	**-1.2**
SONM	**Songino Array**	**34.73**	**282**	P	**P**	**04 32 14.9**	**-1.5**
	comp=Z,0.7nm,0.5s,mb3.9,baz=57,slow=8.9,SNR=6.3						
SONM				PcP	PcP	04 34 48.9	-0.9
	comp=Z,4.2nm,0.7s,baz=73,slow=1.8,SNR=11						
SONM				ScP		04 38 33.1	
	comp=Z,0.8nm,1.0s,baz=45,slow=1.7,SNR=4.3						
SONM				LR	LR	04 48 07.2	
	comp=Z,351nm,18.1s,MS4.2,baz=226,slow=39						
ZAK	**Zakamensk**	**35.09**	**287**	*e*P	**P**	**04 32 16.6**	**-2.9**
ZAK				*e*		04 34 49.4	
DLBC	**Dease Lake**	**35.78**	**56**	*e*P	**P**	**04 32 26.0**	**+0.8**
HHC	**Hu-ho-hao-te**	**36.00**	**268**	*e*P	**P**	**04 32 29.9**	**+2.7**
HHC				XP	sP	04 32 43.3	+0.9
HHC				PP	PP	04 33 43.9	-5.7
HHC				S	**S**	**04 37 52.5**	**-10**
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,150nm,6.9s						
HHC				LR	LR		
	comp=N,630nm,11.8s,MS5.0						
HHC				LR	LR		
	comp=E,1µm,12.7s,MS5.0						
HHC				LR	LR		
	comp=Z,600nm,12.3s,MS4.6						
SSE	**Sheshan**	**37.66**	**247**	*e*P	**P**	**04 32 40.0**	**-1.3**
SSE				AP	pP	04 32 50.5	-1.3
SSE				XP	sP	04 32 55.8	-0.6
SSE				PP	PP	04 34 05.4	-5.1
SSE				PCP	PcP	04 34 58.3	-0.4
SSE				S	**S**	**04 38 27.4**	**-0.9**
SSE				XS		04 38 46.0	
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,70nm,6.2s						
SSE				LR	LR		
	comp=N,150nm,20.6s,MS3.9						
SSE				LR	LR		
	comp=E,160nm,20.7s,MS3.9						
SSE				LR	LR		
	comp=Z,270nm,20.5s,MS4.0						
SSE	**Sheshan**	**37.66**	**247**	*e*P	**P**	**04 32 40.0**	**-1.3**
	comp=Z,24nm,0.7s,mb5.0						
SSE				pP	pP	04 32 50.5	-1.3
SSE				sP	sP	04 32 55.8	-0.6
SSE				PP	PP	04 34 05.4	-5.1
SSE				PcP	PcP	04 34 58.2	-0.5
SSE				S	**S**	**04 38 27.4**	**-0.9**
SSE				sS		04 38 46.0	
SSE				SS	SS	04 41 19.4	+16
SSE				ScS	ScS	04 42 37.9	-11
SSE				LR	LR		
	comp=Z,280nm,20.5s,MS4.0						
NJ2	**Nanjing**	**38.17**	**251**	*e*P	**P**	**04 32 44.3**	**-1.2**
NJ2				AP	pP	04 32 59.5	+3.5
NJ2				PP	PP	04 34 12.1	-4.4
NJ2				S	**S**	**04 38 32.0**	**-4.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				LR	LR		
	comp=N,1µm,19.8s,MS4.8						
NJ2				LR	LR		
	comp=E,620nm,17.3s,MS4.8						
NJ2				LR	LR		
	comp=Z,440nm,15.9s,MS4.4						
YKW3	**Yellowknife Ar**	**40.72**	**45**	*e*P	**P**	**04 33 07.1**	**+0.7**
YKW3				*e*pP	pP	04 33 18.6	+1.6
YKA	**Yellowknife Ar**	**40.76**	**45**	P	**P**	**04 33 07.6**	**+0.9**
	comp=Z,15nm,0.6s,mb4.8,baz=299,slow=8.1,SNR=58						
YKA				PcP	PcP	04 35 07.6	-0.6
	comp=Z,1.5nm,0.6s,baz=309,slow=3.5,SNR=3.9						
YKA				LR	LR	04 51 27.9	
	comp=Z,125nm,18.7s,MS3.8,baz=285,slow=38						
YKA	**Yellowknife Ar**	**40.76**	**45**	P	**P**	**04 33 07.6**	**+0.9**
YKA				PcP	PcP	04 35 07.6	-0.6
YKA				LR	LR	04 51 27.9	
NVS	**Novosibirsk**	**43.03**	**304**	*i* P	**P**	**04 33 21.4**	**-3.9**
NVS				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.5						
NVS				pmax	pmax		
	comp=N,9.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,11nm,1.6s						
LZH	**Lanzhou**	**43.67**	**269**	⇑P	**P**	**04 33 23.8**	**-7.0**
LZH				*PP	pP	04 33 34.3	-7.1
LZH				*SP	sP	04 33 38.2	-7.7
LZH						04 35 06.0	
LZH				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.8						
LZH				MLR	MLR		
	comp=Z,980nm,17.9s,MS4.8						
LZH	**Lanzhou**	**43.67**	**269**	⇑P	**P**	**04 33 23.8**	**-7.0**
	comp=Z,26nm,1.2s,mb4.8						
LZH				pP	pP	04 33 34.3	-7.1
LZH				sP	sP	04 33 38.2	-7.7
LZH				PP	PP	04 35 06.0	-8.2
LZH				LR	LR		
	comp=Z,980nm,17.9s,MS4.8						
GTA	**Gaotai**	**43.68**	**276**	P	**P**	**04 33 28.3**	**-2.5**
GTA				AP	pP	04 33 38.9	-2.5
GTA				XP	sP	04 33 43.6	-2.4
GTA				PP	PP	04 35 11.4	-2.9
GTA				PCP	PcP	04 35 17.5	-0.5
GTA				PPP	PPP	04 35 47.8	-3.6
GTA				SCP		04 39 04.3	
GTA				PCS		04 39 09.6	
GTA				S	**S**	**04 39 53.5**	**-4.3**
GTA				XS		04 40 09.9	
GTA				SS	SS	04 43 00.3	-5.7
GTA				SCS	ScS	04 43 23.8	-0.9
GTA				AMB	AMB		
	comp=Z,130nm,9.5s						
GTA				LR	LR		
	comp=N,600nm,17.9s,MS4.6						
GTA				LR	LR		
	comp=E,440nm,19.8s,MS4.6						
GTA				LR	LR		
	comp=Z,750nm,13.7s						
KBS	**Kingsbay**	**44.99**	**352**	P	**P**	**04 33 40.5**	**-0.3**
KBS				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.9						
KBS	**Kingsbay**	**44.99**	**352**	P	**P**	**04 33 40.5**	**-0.4**
	comp=Z,26nm,1.3s,mb4.9						
KBS	**Kingsbay**	**44.99**	**352**	AMS	AMS	04 52 15.2	
	comp=Z,206nm,16.6s,MS4.1						
EDM	**Edmonton**	**46.49**	**56**	P	**P**	**04 33 54.5**	**+1.5**
EDM	**Edmonton**	**46.49**	**56**	*e*P	**P**	**04 33 54.0**	**+1.0**
WMQ	**Urumqi**	**47.52**	**289**	*e*P	**P**	**04 33 59.8**	**-1.5**
WMQ				AP	pP	04 34 09.8	-2.1
WMQ				XP	sP	04 34 13.6	-2.8
WMQ				PCP	PcP	04 35 30.5	-0.8
WMQ				PP	PP	04 35 50.4	-1.7
WMQ				PPP	PPP	04 36 39.0	-2.2
WMQ				*e*S	**S**	**04 40 50.8**	**-1.8**
WMQ				SCS	ScS	04 43 48.3	-0.9
WMQ				SS	SS	04 44 12.0	-2.5
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,200nm,5.0s						
WMQ				LR	LR		
	comp=N,830nm,20.4s,MS4.8						
WMQ				LR	LR		
	comp=E,890nm,22.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,830nm,22.4s,MS4.7						
NEW	**Newport**	**47.76**	**63**	*e*P	**P**	**04 34 03.9**	**+0.8**
DAG	**Danmarks Havn**	**48.32**	**0**⇓	*e*P	**P**	**04 34 06.0**	**-1.1**
DAG				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
DAG	**Danmarks Havn**	**48.32**	**0**⇓	*e*P	**P**	**04 34 06.0**	**-1.1**
	comp=Z,6.3nm,1.1s,mb4.6						
DAG	**Danmarks Havn**	**48.32**	**0**⇓	*i*P	**P**	**04 34 06.0**	**-1.1**
	comp=Z,6.3nm,1.1s,mb4.6						
MKAR	**Makanchi Array**	**48.44**	**295**	P	**P**	**04 34 05.8**	**-2.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**48.44**	**295**	P	**P**	**04 34 05.6**	**-2.7**
	comp=Z,2.1nm,0.5s,mb4.4,baz=59,slow=7.1,SNR=12						
MKAR				ScP		04 39 27.1	
	comp=Z,0.3nm,0.5s,baz=53,slow=6.1,SNR=3.6						
MKAR				LR	LR	04 55 47.9	
	comp=Z,602nm,19.4s,MS4.6,baz=12,slow=38						
VOSK	**Vostochnaya**	**50.05**	**308**	P	**P**	**04 34 17.2**	**-3.5**
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
BVA0	**Borovoye Array**	**50.12**	**308**	*i* P	**P**	**04 34 18.3**	**-2.9**
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
MSO	**Missoula**	**50.33**	**62**	*e*P	**P**	**04 34 23.4**	**+0.5**
	comp=Z,4.5nm,1.0s,mb4.5						
MSO				*e*pP	pP	04 34 34.8	+1.3
CHMT	**Chamberlain Mo**	**50.62**	**62**	*e*P	**P**	**04 34 25.7**	**+0.6**
FFC	**Flin Flon**	**50.65**	**48**	*e*P	**P**	**04 34 25.3**	**+0.1**
FFC				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.0						
FFC	**Flin Flon**	**50.65**	**48**	*e*P	**P**	**04 34 25.2**	**0.0**
	comp=Z,26nm,1.3s,mb5.0						
ZRNK	**Zerenda**	**50.79**	**309**	P	**P**	**04 34 23.5**	**-2.8**
ZRNK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
ZRNK	**Zerenda**	**50.79**	**309**	*e*P	**P**	**04 34 23.3**	**-3.0**
	comp=Z,6.9nm,0.6s,mb4.8						
FCC	**Fort Churchill**	**51.04**	**41**	P	**P**	**04 34 28.4**	**+0.3**
FCC				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.3						
FCC	**Fort Churchill**	**51.04**	**41**	*e*P	**P**	**04 34 28.0**	**-0.1**
	comp=Z,33nm,0.8s,mb5.3						
KEV	**Kevo**	**51.25**	**342**	*e*p	**P**	**04 34 27.2**	**-2.4**
	comp=Z,3.6nm,0.5s,mb4.6						
KEV	**Kevo**	**51.25**	**342**	*e*P	**P**	**04 34 27.2**	**-2.4**
KEV				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
HRY	**Holter Researc**	**51.48**	**61**	*e*P	**P**	**04 34 32.3**	**+0.7**
SVE	**Sverdlovsk**	**51.65**	**317**	*e*P	**P**	**04 34 31.0**	**-1.7**
SVE				MLR	MLR		
	comp=N,500nm,16.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,400nm,16.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.9						
ARCES	**ARCESS Array B**	**51.71**	**342**	P	**P**	**04 34 31.1**	**-1.9**
	comp=Z,2.5nm,0.5s,mb4.4,baz=33,slow=6.7,SNR=17						
ARCES				PcP	PcP	04 35 44.6	-1.6
	comp=Z,6.0nm,0.7s,baz=26,slow=4.6,SNR=8.1						
ARCES				LR	LR	04 59 09.3	
	comp=Z,200nm,20.4s,MS4.1,baz=261,slow=39						
SUMG	**Summit**	**51.73**	**8**	*e*P	**P**	**04 34 32.8**	**-0.3**
	comp=Z,38nm,1.1s,mb5.2						
APA	**Apatity**	**51.82**	**338**⇑	*e*P	**P**	**04 34 45.6**	**+12**
APA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
APA				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.6						
MCMT	**McKenzie Canyo**	**52.25**	**64**	*e*P	**P**	**04 34 37.8**	**+0.4**
HLID	**Hailey**	**52.32**	**66**	*e*P	**P**	**04 34 38.6**	**+0.7**
	comp=Z,1.6nm,0.6s,mb4.1						
KMI	**Kunming**	**52.47**	**260**	P	**P**	**04 34 37.3**	**-2.0**
KMI				AP	pP	04 34 47.4	-2.6
KMI				XP	sP	04 34 51.3	-3.1
KMI				PP	PP	04 36 39.9	+0.6
KMI				S	**S**	**04 41 58.3**	**-3.2**
KMI				XS		04 42 18.6	
KMI				SS	SS	04 45 32.5	-5.8
KMI				AMB	AMB		
	comp=Z,80nm,4.3s						
KMI				LR	LR		
	comp=N,440nm,20.4s,MS4.6						
KMI				LR	LR		
	comp=E,440nm,22.4s,MS4.6						
KMI				LR	LR		
	comp=Z,350nm,18.4s,MS4.4						
KMI	**Kunming**	**52.47**	**260**	P	**P**	**04 34 37.2**	**-2.1**
KMI				*PP	pP	04 34 47.4	-2.6
KMI				*SP	sP	04 34 51.2	-3.2
KMI						04 36 39.9	
KMI				S	**S**	**04 41 58.2**	**-3.3**
KMI				*SS		04 42 18.6	
KMI				SS	SS	04 45 32.5	-5.8
KMI				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
KMI				MLR	MLR		
	comp=Z,360nm,18.4s,MS4.5						
KMI	**Kunming**	**52.47**	**260**	P	**P**	**04 34 37.2**	**-2.1**
	comp=Z,6.0nm,1.4s,mb4.3						
KMI				pP	pP	04 34 47.4	-2.6
KMI				sP	sP	04 34 51.2	-3.2
KMI				PP	PP	04 36 39.9	+0.6
KMI				S	**S**	**04 41 58.2**	**-3.3**
KMI				sS		04 42 18.6	
KMI				SS	SS	04 45 32.5	-5.8
KMI				LR	LR		
	comp=Z,360nm,18.4s,MS4.5						
KTK1	**Kautokeino**	**52.56**	**343**	*e*P	**P**	**04 34 37.8**	**-1.6**
	comp=Z,32nm,1.7s,mb5.0						
KTK1	**Kautokeino**	**52.56**	**343**	*e*P	**P**	**04 34 37.6**	**-1.8**
KTK1				AMb	AMB	04 34 41.1	
	comp=Z,32nm,1.7s,mb5.0						
TRO	**Tromso**	**52.70**	**345**	*e*P	**P**	**04 34 37.8**	**-2.6**
TRO				AMS	AMS	05 00 48.5	
	comp=Z,94nm,19.5s,MS3.8						
ARU	**Arti**	**52.75**	**317**⇓	*i*P	**P**	**04 34 38.1**	**-2.8**
ARU				*e*		04 35 47.2	
ARU				*e*		04 36 34.0	
ARU				*e*S	**S**	**04 42 01.0**	**-3.9**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						

ARU				MLR	MLR		
	comp=Z,800nm,19.0s,MS4.8						
ARU				MLR	MLR		
	comp=N,500nm,18.0s,MS4.8						
ARU				MLR	MLR		
	comp=E,500nm,18.0s,MS4.8						
ARU	**Arti**	**52.75**	**317**	*e*P	**P**	**04 34 38.0**	**-3.0**
	comp=E,6.0nm,0.4s,mb4.9						
QLMT	**Earthquake Lak**	**52.98**	**63**	*e*P	**P**	**04 34 44.1**	**+1.3**
YMR	**Madison River**	**53.33**	**63**	*e*P	**P**	**04 34 46.4**	**+1.0**
QIZ	**Qiongzhong**	**53.41**	**249**	⇑P	**P**	**04 34 47.3**	**+0.9**
YFT	**Old Faithful**	**53.55**	**63**	*e*P	**P**	**04 34 48.5**	**+1.4**
NVAR	**Mina Array Bea**	**53.84**	**73**	P	**P**	**04 34 51.2**	**+1.9**
	comp=E,3.7nm,0.6s,mb4.5,baz=313,slow=6.4,SNR=21						
NVAR				LR	LR	04 55 43.6	
	comp=E,151nm,20.1s,MS4.0,baz=290,slow=34						
IMW	**Indian Meadow**	**53.88**	**63**	*e*P	**P**	**04 34 51.0**	**+1.4**
	comp=E,19nm,1.1s,mb4.9						
JMIC	**Jan Mayen**	**53.97**	**356**	AMS	AMS	04 57 30.5	
	comp=Z,110nm,24.3s,MS3.8						
MOOW	**Moose Ponds**	**54.09**	**63**	*e*P	**P**	**04 34 52.1**	**+1.0**
	comp=Z,8.7nm,1.0s,mb4.6						
MOOW				*e*pP	pP	04 35 03.5	+1.7
TPAW	**Teton Pass**	**54.16**	**64**	*e*P	**P**	**04 34 52.9**	**+1.3**
	comp=Z,12nm,0.9s,mb4.8						
LOHW	**Long Hollow**	**54.26**	**63**	*e*P	**P**	**04 34 53.5**	**+1.2**
	comp=Z,17nm,1.0s,mb4.9						
LAO	**LASA Array**	**54.27**	**58**	*e*P	**P**	**04 34 53.0**	**+0.7**
	comp=Z,53nm,1.0s,mb5.4						
SNOW	**Snow King Moun**	**54.28**	**64**	*e*P	**P**	**04 34 53.7**	**+1.2**
	comp=Z,5.8nm,0.9s,mb4.5						
TPH	**Tonopah**	**54.69**	**73**	P	**P**	**04 34 57.5**	**+1.9**
TPH				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
TPH	**Tonopah**	**54.69**	**73**	*e*P	**P**	**04 34 56.4**	**+0.8**
	comp=Z,8.4nm,0.7s,mb4.9						
LOF	**Lofoten**	**54.85**	**346**	*e*P	**P**	**04 34 54.9**	**-1.5**
	comp=Z,109nm,1.4s,mb5.7						
LOF	**Lofoten**	**54.85**	**346**	*e*P	**P**	**04 34 54.7**	**-1.6**
LOF				AMb	AMB	04 34 57.4	
	comp=Z,109nm,1.4s,mb5.7						
HWUT	**Hardware Ranch**	**55.19**	**66**	*e*P	**P**	**04 34 59.8**	**+0.7**
	comp=Z,19nm,0.9s,mb5.1						
AAK	**Ala-Archa**	**55.33**	**296**	P	**P**	**04 34 59.6**	**-0.5**
AAK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
TRCR	**Troy Canyon**	**55.39**	**71**	P	**P**	**04 35 00.3**	**-0.3**
BW06	**Boulder Array**	**55.40**	**63**	*e*P	**P**	**04 35 01.4**	**+0.8**
	comp=Z,20nm,1.1s,mb5.1						
PDAR	**Pinedale Array**	**55.40**	**63**	P	**P**	**04 35 01.6**	**+1.1**
	comp=Z,11nm,0.8s,mb4.9,baz=315,slow=4.2,SNR=63						
PDAR				LR	LR	04 57 59.9	
	comp=Z,123nm,21.7s,MS4.0,baz=137,slow=35						
CTU	**Camp Tracy**	**55.75**	**67**	*e*P	**P**	**04 35 04.0**	**+0.8**
NLU	**North Lily Min**	**56.11**	**67**	*e*P	**P**	**04 35 07.2**	**+1.4**
MPU	**Maple Canyon**	**56.30**	**67**	*e*P	**P**	**04 35 08.2**	**+1.1**
MPU				*e*pP	pP	04 35 19.5	+1.4
ULM	**Lac du Bonnet**	**56.45**	**49**	P	**P**	**04 35 08.4**	**+0.3**
	comp=Z,13nm,0.5s,mb5.2,baz=315,slow=7.1,SNR=16						
ULM				LR	LR	05 00 44.7	
	comp=Z,166nm,18.3s,MS4.2,slow=38						
ULM	**Lac du Bonnet**	**56.45**	**49**	*e*P	**P**	**04 35 07.9**	**-0.2**
	comp=Z,38nm,1.1s,mb5.3						
MOR8	**Moi Rana**	**56.56**	**345**	*e*P	**P**	**04 35 05.6**	**-3.1**
	comp=Z,23nm,1.3s,mb5.0						
MOR8	**Moi Rana**	**56.56**	**345**	*e*P	**P**	**04 35 05.3**	**-3.3**
MOR8				AMb	AMB	04 35 07.3	
	comp=Z,23nm,1.3s,mb5.1						
KSH	**Kashi**	**56.81**	**293**	*e*P	**P**	**04 35 09.8**	**-1.0**
KSH				AP	pP	04 35 19.3	-2.4
KSH				XP	sP	04 35 24.3	-1.7
KSH				*e*PCP	PcP	04 36 07.1	+1.0
KSH				*e*PP	PP	04 37 16.8	-1.9
KSH				*e*PPP	PPP	04 38 35.8	-2.2
KSH				*e*SCP		04 40 02.0	
KSH				*e*PCS		04 40 05.3	
KSH				*e*S	**S**	**04 42 57.0**	**-2.6**
KSH				*e*PS	PS	04 43 10.8	-6.2
KSH				XS		04 43 12.3	
KSH				*e*SCS	ScS	04 44 52.5	-0.9
KSH				*e*SS	SS	04 46 45.3	-3.6
KSH				AMB	AMB		
	comp=Z,250nm,11.8s						
KSH				LR	LR		
	comp=N,1µm,17.6s,MS5.2						
KSH				LR	LR		
	comp=E,1µm,16.1s,MS5.2						
ARUT	**Antelope Range**	**56.95**	**70**	P	**P**	**04 35 13.5**	**+1.6**
ARUT	**Antelope Range**	**56.95**	**70**	*e*P	**P**	**04 35 12.7**	**+0.8**
KKAR	**Karatay Array**	**57.01**	**299**	*i* P	**P**	**04 35 08.3**	**-3.9**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
TMUT	**Trail Mountain**	**57.05**	**67**	*e*P	**P**	**04 35 13.4**	**+0.9**
MSU	**Marysvale**	**57.10**	**69**	P	**P**	**04 35 13.8**	**+0.9**
RSSD	**Black Hills**	**57.19**	**59**	P	**P**	**04 35 14.2**	**+0.8**
RSSD				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.4						
RSSD	**Black Hills**	**57.19**	**59**	*e*P	**P**	**04 35 13.6**	**+0.2**
	comp=Z,38nm,1.0s,mb5.4						
AB31	**Akbulak array**	**57.43**	**311**	P	**P**	**04 35 11.9**	**-3.2**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
SRU	**San Rafael**	**57.54**	**67**	P	**P**	**04 35 17.8**	**+1.8**
SRU	**San Rafael**	**57.54**	**67**	*e*P	**P**	**04 35 17.1**	**+1.1**
NEN	**Nelson**	**57.76**	**73**	*e*P	**P**	**04 35 17.9**	**+0.3**
KAF	**Kangasniemi**	**58.07**	**337**	*e*p	**P**	**04 35 16.9**	**-2.5**
	comp=Z,2.7nm,0.4s,mb4.6,baz=27,slow=6.5						
KAF	**Kangasniemi**	**58.07**	**337**	*e*P	**P**	**04 35 16.9**	**-2.5**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
FINES	**FINESS Array B**	**58.72**	**337**	P	**P**	**04 35 22.1**	**-1.7**
	comp=Z,6.1nm,0.5s,mb4.9,baz=36,slow=8.3,SNR=87						
FINES				LR	LR	05 02 25.6	
	comp=Z,220nm,21.6s,MS4.2,baz=207,slow=38						
PV10	**Paradox Valley**	**58.87**	**67**	*e*P	**P**	**04 35 26.8**	**+1.6**
PV01	**Paradox Valley**	**59.30**	**66**	*e*P	**P**	**04 35 28.9**	**+0.6**
ISCO	**Idaho Springs**	**59.59**	**63**	P	**P**	**04 35 32.1**	**+1.9**
ISCO				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.2						
ISCO	**Idaho Springs**	**59.59**	**63**	*e*P	**P**	**04 35 31.5**	**+1.3**
	comp=Z,30nm,1.3s,mb5.2						
ISCO				LR	LR		
	comp=Z,278nm,19.0s,MS4.4						
WUAZ	**Wupatki**	**59.75**	**70**	*e*P	**P**	**04 35 31.9**	**+0.5**
	comp=Z,24nm,1.3s,mb5.1						
WUAZ				LR	LR		
	comp=Z,197nm,19.0s,MS4.3						
CMAR	**Chiang Mai Arr**	**59.88**	**259**	P	**P**	**04 35 31.1**	**-1.3**
	comp=Z,8.0nm,0.7s,mb4.9,baz=26,slow=6.7,SNR=26						
CMAR				PcP	PcP	04 36 17.6	-0.7
	comp=Z,2.9nm,0.5s,baz=18,slow=4.4,SNR=7.2						
CMAR				LR	LR	05 04 27.3	
	comp=Z,244nm,19.1s,MS4.4,baz=50,slow=39						
GUN	**Gumba**	**59.97**	**276**	*e*P	**P**	**04 35 30.2**	**-2.8**
	comp=Z,19nm,0.5s,mb5.4						
EYMN	**Ely**	**60.08**	**48**	*e*P	**P**	**04 35 32.6**	**-0.9**
	comp=Z,24nm,0.9s,mb5.2						
EYMN				*e*pP	pP	04 35 44.9	+0.5
KKN	**Kakani**	**60.40**	**277**	*e*P	**P**	**04 35 33.3**	**-2.6**
	comp=Z,16nm,0.5s,mb5.3						
KKN	**Kakani**	**60.40**	**277**	*e*P	**P**	**04 35 33.3**	**-2.6**
KKN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.0						
PKI	**Pulchoki**	**60.49**	**277**	*e*P	**P**	**04 35 32.7**	**-3.9**
	comp=Z,17nm,0.7s,mb5.2						
PKI	**Pulchoki**	**60.49**	**277**	*e*P	**P**	**04 35 32.7**	**-3.9**
PKI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
GKN	**Gorkha**	**60.60**	**277**	*e*P	**P**	**04 35 35.2**	**-2.1**
	comp=Z,6.5nm,0.4s,mb5.2						
DMN	**Daman**	**60.64**	**277**	*e*P	**P**	**04 35 33.3**	**-4.3**
	comp=Z,7.0nm,0.4s,mb5.2						
VSU	**Vasula**	**61.22**	**335**	⇓*i*P	**P**	**04 35 39.7**	**-1.4**
KOLN	**Koldanda**	**61.37**	**278**	*e*P	**P**	**04 35 40.1**	**-2.4**
	comp=Z,22nm,0.9s,mb5.3						
OBN	**Obninsk**	**61.45**	**328**	*i* P	**P**	**04 35 41.6**	**-1.1**
OBN				*e**PP	pP	04 35 55.3	+1.7
OBN						04 36 23.0	
OBN				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.2						
OBN				MLR	MLR		
	comp=Z,500nm,22.0s,MS4.6						
NB2	**NORSAR Subarra**	**61.89**	**345**	P	**P**	**04 35 43.5**	**-2.0**
	comp=Z,12nm,0.7s,mb5.1,baz=18,slow=7.0						
NB2	**NORSAR Subarra**	**61.89**	**345**	P	**P**	**04 35 43.5**	**-2.0**
	baz=18,slow=6.9						
NOA	**NORSAR Array B**	**61.89**	**345**	P	**P**	**04 35 43.9**	**-1.7**
	comp=Z,13nm,0.8s,mb5.1,baz=18,slow=6.9,SNR=40						
NOA				PcP	PcP	04 36 24.4	-1.5
	comp=Z,2.9nm,0.8s,baz=21,slow=2.8,SNR=4.1						
NOA				LR	LR	05 05 48.1	
	comp=Z,94nm,19.6s,MS4.0,baz=20,slow=39						
NOA	**NORSAR Array B**	**61.89**	**345**	P	**P**	**04 35 43.9**	**-1.7**
NOA				PcP	PcP	04 36 24.4	-1.5
NOA				LR	LR	05 05 48.1	
ANMO	**Albuquerque**	**62.81**	**67**	P	**P**	**04 35 53.4**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANMO	**Albuquerque**	**62.81**	**67**	*e*P	**P**	**04 35 52.9**	**+0.9**
	comp=Z,7.3nm,1.0s,mb4.8						
SCHQ	**Schefferville**	**63.20**	**29**	P	**P**	**04 35 53.3**	**-1.0**
	comp=Z,10.0nm,0.7s,mb5.1,baz=348,slow=7.0,SNR=40						
SCHQ				LR	LR	05 04 59.0	
	comp=Z,106nm,18.1s,MS4.1,baz=26,slow=38						
SCHQ	**Schefferville**	**63.20**	**29**	*e*P	**P**	**04 35 52.8**	**-1.5**
	comp=Z,8.8nm,0.6s,mb5.1						
BNM	**Barren Site**	**63.33**	**68**	*e*P	**P**	**04 35 56.5**	**+1.0**
BNM				*e*pP	pP	04 36 07.9	+1.4
BER	**Bergen**	**63.34**	**347**	*e*P	**P**	**04 35 54.4**	**-0.8**
BER				AMS	AMS	05 02 50.3	
	comp=Z,165nm,22.3s,MS4.2						
CPRX	**Cap Rock**	**65.66**	**67**	*e*P	**P**	**04 36 11.0**	**+0.5**
MNTX	**Cornudas Mount**	**65.88**	**69**	*e*P	**P**	**04 36 12.3**	**+0.4**
	comp=Z,16nm,1.1s,mb5.0						
MNTX				*e*pP	pP	04 36 23.9	+0.8
MNTX				LR	LR		
	comp=Z,199nm,20.0s,MS4.3						
GDL2	**Guadalupe Moun**	**66.04**	**68**	*e*P	**P**	**04 36 13.4**	**+0.4**
CLNB	**Carlsbad**	**66.25**	**67**	*e*P	**P**	**04 36 14.3**	**0.0**
WMOK	**Wichita Mounta**	**66.96**	**62**	*e*P	**P**	**04 36 19.1**	**+0.4**
WMOK				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.1						
WMOK	**Wichita Mounta**	**66.96**	**62**	*e*P	**P**	**04 36 18.7**	**0.0**
	comp=Z,22nm,1.0s,mb5.2						
WMOK				LR	LR		
	comp=Z,191nm,21.0s,MS4.3						
AKASG	**Malin Array Be**	**67.48**	**330**	P	**P**	**04 36 19.9**	**-1.8**
	comp=Z,1.5nm,0.3s,mb4.5,baz=28,slow=6.3,SNR=15						
GOF	**Gofitskoye**	**67.73**	**318**	*e*P	**P**	**04 36 20.7**	**-2.7**
CCM	**Cathedral Cave**	**68.00**	**55**	P	**P**	**04 36 24.7**	**-0.5**
CCM				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.1						
CCM	**Cathedral Cave**	**68.00**	**55**	*e*P	**P**	**04 36 24.2**	**-1.0**
	comp=Z,24nm,1.1s,mb5.2						
CCM				LR	LR		
	comp=Z,142nm,19.0s,MS4.2						
KSM	**Kuching**	**68.04**	**238**	*e*P	**P**	**04 36 25.3**	**-0.6**
KSM				*e*pP	pP	04 36 35.0	-2.0
FVM	**French Village**	**68.44**	**54**	P	**P**	**04 36 28.0**	**+0.1**
FVM				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.4						
FVM	**French Village**	**68.44**	**54**	*e*P	**P**	**04 36 27.4**	**-0.5**
	comp=Z,44nm,1.2s,mb5.4						
LTX	**Lajitas**	**68.65**	**69**	P	**P**	**04 36 30.9**	**+1.5**
LTX				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
LTX	**Lajitas**	**68.65**	**69**	*e*P	**P**	**04 36 30.1**	**+0.8**
	comp=Z,21nm,1.2s,mb4.9						
TXAR	**Lajitas Array**	**68.65**	**69**	P	**P**	**04 36 30.6**	**+1.2**
	comp=Z,12nm,0.8s,mb4.9,baz=298,slow=4.7,SNR=133						
TXAR				LR	LR	05 04 01.8	
	comp=Z,73nm,21.5s,MS3.9,baz=330,slow=34						
BSEG	**Bad Segeberg**	**68.83**	**343**	*e*P	**P**	**04 36 29.5**	**-0.6**
BSEG				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
ZEI	**Tsey**	**69.32**	**316**	*e*P	**P**	**04 36 31.3**	**-2.0**
ZEI				*i* *PP	pP	04 36 51.5	+7.1
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
KULM	**Kulim**	**69.75**	**249**	*e*P	**P**	**04 36 35.4**	**-1.0**
KULM				*e*pP	pP	04 36 44.9	-2.6
PARMO	**Parma**	**69.83**	**55**	*e*P	**P**	**04 36 36.4**	**-0.1**
WCI	**Wyandotte Cave**	**70.13**	**51**	P	**P**	**04 36 38.1**	**-0.2**
WCI				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
WCI	**Wyandotte Cave**	**70.13**	**51**	*e*P	**P**	**04 36 37.3**	**-1.0**
	comp=Z,14nm,0.8s,mb4.9						
SOC	**Sochi**	**70.24**	**319**	*e*P	**P**	**04 36 34.5**	**-4.3**
SOC				*e*		04 39 12.4	
SOC				*e*S	S	04 45 39.3	-7.3
SOC				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0						
SOC				pmax	pmax		
	comp=N,18nm,1.0s						
SOC				pmax	pmax		
	comp=E,12nm,0.9s						
SOC				MLR	MLR		
	comp=E,125nm,18.0s,MS4.5						
SOC				MLR	MLR		
	comp=Z,251nm,18.0s,MS4.5						
SOC				MLR	MLR		
	comp=N,180nm,15.0s,MS4.5						
GNAR	**Gosnell**	**70.27**	**55**	*e*P	**P**	**04 36 39.3**	**+0.2**
KSP	**Ksiaz**	**70.62**	**338**	*e*P	**P**	**04 36 40.3**	**-0.7**
CLZ	**Clausthal**	**70.83**	**342**	*e*P	**P**	**04 36 42.1**	**-0.2**
CLZ				pmax	pmax		
	comp=Z,32nm,1.3s,mb5.1						
CLZ	**Clausthal**	**70.83**	**342**	*e*P	**P**	**04 36 42.1**	**-0.2**
	comp=Z,32nm,1.3s,mb5.1						
CLL	**Collm**	**70.85**	**340**	*i* P	**P**	**04 36 41.3**	**-1.2**
CLL				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.2						
CLL	**Collm**	**70.85**	**340**	*i* P	**P**	**04 36 41.3**	**-1.2**
	comp=Z,37nm,1.2s,mb5.2						
CLL	**Collm**	**70.85**	**340**	P	**P**	**04 36 41.3**	**-1.2**
	comp=Z,logA/T=1.5,mb5.2						
CLL				*e**PP	pP	04 36 55.0	+1.4
CLL				*e*PP	PP	04 39 14.0	-7.8
KOLS	**Kolonicke sedl**	**70.99**	**333**	*e*P	**P**	**04 36 42.0**	**-1.3**
KOLS				*e*pP	pP	04 36 54.8	+0.4
UPC	**Upice**	**71.00**	**338**	*e*P	**P**	**04 36 41.8**	**-1.5**
DPC	**Dobruska-Polom**	**71.08**	**338**	*e*P	**P**	**04 36 43.5**	**-0.3**
DPC				*e*pP	pP	04 36 55.5	+0.5
DPC				AMS	AMS	05 13 40.0	
	comp=Z,200nm,14.3s						
BRG	**Berggiesshubel**	**71.08**	**339**	*i* P	**P**	**04 36 42.9**	**-0.9**
BRG				*i*		04 36 57.8	
BRG				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
BRG	**Berggiesshubel**	**71.08**	**339**	*i* P	**P**	**04 36 42.9**	**-0.9**
	comp=Z,20nm,1.2s,mb4.9						
BRG				*i*		04 36 57.8	
OKC	**Ostrava-Krasne**	**71.15**	**336**	*e*P	**P**	**04 36 44.0**	**-0.3**
OKC				AMS	AMS	05 09 20.0	
	comp=Z,200nm,20.1s						
WVT	**Waverly**	**71.15**	**54**	P	**P**	**04 36 44.9**	**+0.4**
WVT				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
WVT	**Waverly**	**71.15**	**54**	*e*P	**P**	**04 36 44.3**	**-0.3**
	comp=Z,23nm,1.3s,mb5.0						
GNI	**Garni**	**71.18**	**314**	*d* *i*P	**P**	**04 36 44.5**	**-0.1**
GNI				pmax	pmax		
	comp=Z,24nm,1.4s						
GNI				MLR	MLR		
	comp=Z,200nm,20.0s						
PVCC	**Panska Ves**	**71.28**	**339**	*e*P	**P**	**04 36 44.5**	**-0.5**
PVCC				*e*pP	pP	04 36 55.0	-1.2
PVCC				AMS	AMS	05 13 10.0	
	comp=Z,300nm,13.1s						
WTSB	**Winterswijk**	**71.31**	**344**	*e*P	**P**	**04 36 43.5**	**-1.6**
	comp=Z,14nm,0.7s,mb5.0						
MORC	**Moravsky Berou**	**71.34**	**337**	P	**P**	**04 36 45.1**	**-0.3**
MORC				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
MORC	**Moravsky Berou**	**71.34**	**337**	*e*P	**P**	**04 36 44.4**	**-1.0**
	comp=Z,22nm,1.2s,mb5.0						
BURAR	**Bucovina Array**	**71.41**	**331**	⇑P	**P**	**04 36 45.5**	**-0.3**
DLF	**Lyons Farm**	**71.50**	**353**	*e*P	**P**	**04 36 45.3**	**-1.0**
DCN	**Croghan**	**71.50**	**353**	*e*P	**P**	**04 36 45.5**	**-0.8**
OXF	**Oxford**	**71.74**	**56**	P	**P**	**04 36 48.2**	**+0.2**
OXF				pmax	pmax		
	comp=Z,59nm,1.2s,mb5.4						
OXF	**Oxford**	**71.74**	**56**	*e*P	**P**	**04 36 47.8**	**-0.3**
	comp=Z,59nm,1.3s,mb5.4						
MOX	**Moxa**	**71.75**	**341**	*e*P	**P**	**04 36 47.0**	**-0.8**
MOX				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.0						
MOX				MLR	MLR		
	comp=Z,200nm,23.0s,MS4.3						
MOX	**Moxa**	**71.75**	**341**	*e*P	**P**	**04 36 47.0**	**-0.8**
	comp=Z,28nm,1.4s,mb5.0						
MOX				LR	LR		
	comp=Z,200nm,23.0s,MS4.3						
MOX	**Moxa**	**71.75**	**341**	*i* P	**P**	**04 36 47.0**	**-0.8**
	comp=Z,logA/T=1.3,mb5.0						
MOX				L		05 08 17.0	
PRU	**Pruhonice**	**71.80**	**339**	*e*P	**P**	**04 36 47.4**	**-0.7**
PRU				*e*pP	pP	04 36 58.0	-1.2
PRU				*e*sP	sP	04 37 01.1	-2.2
PRU				AMS	AMS	05 13 10.0	
	comp=Z,300nm,10.7s						
NKC	**Novy Kostel**	**71.99**	**340**	*e*P	**P**	**04 36 48.0**	**-1.2**
KAKA	**Kakadu**	**72.16**	**211**	*e*P	**P**	**04 36 50.4**	**-0.4**
	comp=Z,15nm,0.8s,mb5.0						
KAKA				*e*	pP	04 36 59.8	-2.2
VYHS	**Vyhne**	**72.25**	**335**	*e*P	**P**	**04 36 50.0**	**-0.8**
VYHS				*e*pP	pP	04 37 00.9	-1.0
PSZ	**Piszkesteto**	**72.53**	**335**	*e*P	**P**	**04 36 51.9**	**-0.4**
PSZ				*e**PP	pP	04 37 04.3	+0.8
PSZ				pmax	pmax		
	comp=Z,23nm,1.7s,mb4.8						
PSZ	**Piszkesteto**	**72.53**	**335**	*e*P	**P**	**04 36 51.9**	**-0.4**
	comp=Z,23nm,1.7s,mb4.8						
PSZ				*e*pP	pP	04 37 04.3	+0.8
SMOL	**Smolenice**	**72.56**	**336**	*e*P	**P**	**04 36 53.2**	**+0.7**
HGN	**Heimansgroeve**	**72.61**	**345**	⇑*e*P	**P**	**04 36 51.9**	**-0.8**
	comp=Z,20nm,1.5s,mb4.8						
HGN				*e*x	x	04 37 03.4	
HGN				*e*S	S	04 46 18.0	+4.2
TNS	**Taunus Mts**	**72.73**	**343**	*e*P	**P**	**04 36 53.2**	**-0.3**
TNS				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
TNS	**Taunus Mts**	**72.73**	**343**	*e*P	**P**	**04 36 53.2**	**-0.3**
	comp=Z,9.0nm,1.0s,mb4.7						
GRA1	**Grafenberg Arr**	**72.74**	**341**	*e*P	**P**	**04 36 53.7**	**+0.1**
	comp=Z,32nm,0.9s,mb5.2						
GRA1				LR	LR		
	comp=Z,200nm,21.9s,MS4.3						
GRF	**Grafenberg Arr**	**72.74**	**341**	*e*P	**P**	**04 36 53.7**	**+0.1**
GRF				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.2						
GRF				MLR	MLR		
	comp=Z,200nm,21.9s,MS4.3						
GRF	**Grafenberg Arr**	**72.74**	**341**	*e*P	**P**	**04 36 53.7**	**+0.1**
GRF				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.2						
GRF				MLR	MLR		
	comp=Z,200nm,21.9s,MS4.3						
GRF	**Grafenberg Arr**	**72.74**	**341**	*e*P	**P**	**04 36 53.7**	**+0.1**
	comp=Z,32nm,0.9s,mb5.2						
GRF				LR	LR		
	comp=Z,200nm,21.9s,MS4.3						
TZTN	**Tazewell**	**72.74**	**50**	*e*P	**P**	**04 36 53.4**	**-0.5**
TZTN				*e*pP	pP	04 37 03.9	-1.1
SWET	**Sewanee**	**72.78**	**53**	*e*P	**P**	**04 36 53.5**	**-0.6**
KHC	**Kasperske Hory**	**72.81**	**339**	*e*P	**P**	**04 36 53.4**	**-0.6**
KHC				*e*pP	pP	04 37 05.2	0.0
KHC				AMS	AMS	05 13 50.0	
	comp=Z,300nm,14.6s						
ZST	**Bratislava**	**72.93**	**336**	*e*P	**P**	**04 36 54.9**	**+0.1**
ZST				*e*sP	sP	04 37 08.9	-1.1
WET	**Wettzell**	**72.94**	**340**	*e*P	**P**	**04 36 54.9**	**+0.1**
WET				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1						
WET	**Wettzell**	**72.94**	**340**	*e*P	**P**	**04 36 54.9**	**+0.1**
	comp=Z,25nm,1.1s,mb5.1						
GEC2	**GERESS Array S**	**73.06**	**339**	*e*P	**P**	**04 36 55.2**	**-0.3**
GEC2				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
GEC2	**GERESS Array S**	**73.06**	**339**	*e*P	**P**	**04 36 55.2**	**-0.3**
	comp=Z,14nm,1.1s,mb4.8						
GERES	**GERESS Array B**	**73.06**	**339**	P	**P**	**04 36 55.2**	**-0.3**
	comp=Z,6.5nm,0.9s,mb4.5,baz=45,slow=3.8,SNR=46						
GERES				LR	LR	05 14 16.3	
	comp=Z,198nm,18.7s,MS4.4,baz=12,slow=40						
FWV	**Forest Hill**	**73.06**	**48**	*e*P	**P**	**04 36 55.3**	**-0.4**
MLR	**Muntele Rosu**	**73.13**	**330**	⇓P	**P**	**04 36 56.8**	**+0.8**
CPCT	**Cooper Cave**	**73.22**	**52**	*e*P	**P**	**04 36 55.8**	**-1.0**
TOD	**Tromm**	**73.26**	**342**	*e*P	**P**	**04 36 56.0**	**-0.7**
ELN	**Prospectdale**	**73.38**	**48**	*e*P	**P**	**04 36 57.0**	**-0.7**
GIVF	**Givet**	**73.42**	**345**	*e*P	**P**	**04 36 56.7**	**-0.9**
BAIF	**Baives**	**73.55**	**345**	⇑*i*P	**P**	**04 36 57.6**	**-0.7**
	comp=Z,14nm,0.9s,mb4.6						
BAIF	**Baives**	**73.55**	**345**	⇑*i*P	**P**	**04 36 57.6**	**-0.7**
BAIF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
BOYT	**Boyabat**	**73.87**	**322**	*i* P	**P**	**04 37 00.5**	**+0.1**
LANF	**Langenberg**	**74.03**	**343**	*e*P	**P**	**04 37 00.5**	**-0.7**
LRAL	**Lakeview Retre**	**74.09**	**55**	*e*P	**P**	**04 37 01.0**	**-0.9**
	comp=Z,8.0nm,0.7s,mb4.8						
LRAL				LR	LR		
	comp=Z,205nm,22.0s,MS4.4						
ARSA	**Arzberg**	**74.18**	**337**	⇑*i*P	**P**	**04 37 02.3**	**+0.3**
	comp=Z,12nm,1.2s,mb4.7						
FUR	**Furstenfeldbru**	**74.19**	**340**	*e*P	**P**	**04 37 01.9**	**-0.2**
FUR				pmax	pmax		
	comp=Z,15nm,0.4s,mb5.3						
FUR	**Furstenfeldbru**	**74.19**	**340**	*e*P	**P**	**04 37 01.9**	**-0.2**
	comp=Z,15nm,0.4s,mb5.3						
BZS	**Buzias**	**74.22**	**332**	⇓P	**P**	**04 37 01.3**	**-1.0**
BALT	**Daday**	**74.31**	**323**	*i* P	**P**	**04 37 03.0**	**0.0**
BFO	**Black Forest**	**74.57**	**342**	*e*P	**P**	**04 37 03.8**	**-0.5**
BFO				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
BFO	**Black Forest**	**74.57**	**342**	*e*P	**P**	**04 37 03.8**	**-0.5**
	comp=Z,13nm,1.2s,mb4.7						
WLS	**Welschbruch**	**74.66**	**343**	*e*P	**P**	**04 37 04.2**	**-0.6**
CDF	**Champ du Feu**	**74.67**	**343**	⇑*i*P	**P**	**04 37 04.4**	**-0.5**
	comp=Z,36nm,1.0s,mb5.0						
CDF	**Champ du Feu**	**74.67**	**343**	⇑*i*P	**P**	**04 37 04.4**	**-0.5**
CDF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
KBA	**Koelnbreinsper**	**74.81**	**339**	⇑*i*P	**P**	**04 37 06.6**	**+0.9**
	comp=Z,36nm,0.9s,mb5.3						
KBA	**Koelnbreinsper**	**74.81**	**339**	⇑*i*P	**P**	**04 37 06.6**	**+0.9**
KBA				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3						
PERS	**Pernice**	**74.85**	**337**	*e*P	**P**	**04 37 05.9**	**-0.1**
LIBD	**Limburg**	**74.87**	**343**	*e*P	**P**	**04 37 05.7**	**-0.3**
ECH	**Echery**	**74.88**	**343**	*e*P	**P**	**04 37 05.7**	**-0.4**
MEZF	**Maizieres J'vi**	**74.94**	**345**	*e*P	**P**	**04 37 06.0**	**-0.4**
	comp=Z,16nm,0.9s,mb4.7						
WTTA	**Wattenberg**	**74.98**	**340**	⇑*i*P	**P**	**04 37 07.0**	**+0.3**
	comp=Z,23nm,1.0s,mb5.1						
WTTA	**Wattenberg**	**74.98**	**340**	⇑*i*P	**P**	**04 37 07.0**	**+0.3**
WTTA				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
THEF	**They Montfort**	**75.06**	**344**	*e*P	**P**	**04 37 06.3**	**-0.8**
FELD	**Feldberg**	**75.07**	**342**	*e*P	**P**	**04 37 06.1**	**-1.1**
OBKA	**Obir**	**75.10**	**338**	⇑*i*P	**P**	**04 37 07.5**	**+0.1**
	comp=Z,33nm,1.1s,mb5.2						
SQTA	**Sankt Quirin**	**75.11**	**340**	⇑*i*P	**P**	**04 37 07.7**	**+0.3**
	comp=Z,19nm,0.8s,mb5.1						
SQTA	**Sankt Quirin**	**75.11**	**340**	⇑*i*P	**P**	**04 37 07.7**	**+0.3**
SQTA				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
ELDT	**Eldivan**	**75.22**	**322**	*i* P	**P**	**04 37 08.3**	**+0.1**
HAU	**Haudompre**	**75.22**	**344**	⇑*i*P	**P**	**04 37 07.4**	**-0.7**
	comp=Z,24nm,1.0s,mb4.8						
HAU				*e*R			
	comp=Z,192nm,21.6s						
HAU	**Haudompre**	**75.22**	**344**	⇑*i*P	**P**	**04 37 07.4**	**-0.7**
HAU				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
HAU				MLR	MLR		
	comp=Z,190nm,21.6s,MS4.4						
MOF	**Molkenrain**	**75.24**	**343**	*e*P	**P**	**04 37 07.4**	**-0.8**
MALT	**Malatya**	**75.28**	**318**	P	**P**	**04 37 08.8**	**+0.2**
MALT				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.6						
MALT	**Malatya**	**75.28**	**318**	*e*P	**P**	**04 37 08.2**	**-0.4**
	comp=Z,13nm,1.5s,mb4.6						
DAVA	**Damuels**	**75.30**	**341**	⇑*i*P	**P**	**04 37 08.2**	**-0.3**
	comp=Z,8.5nm,1.0s,mb4.6						
HINF	**Hinteralfeld**	**75.32**	**343**	⇑*i*P	**P**	**04 37 07.8**	**-0.8**
	comp=Z,16nm,0.9s,mb4.7						
HINF	**Hinteralfeld**	**75.32**	**343**	⇑*i*P	**P**	**04 37 07.8**	**-0.8**
HINF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
SEST	**Monte Rota**	**75.36**	**339**	P	**P**	**04 37 13.1**	**+4.2**
	comp=Z,330nm,3.6s						
FLN	**La Foliniere**	**75.43**	**348**	⇑*i*P	**P**	**04 37 08.2**	**-1.0**
	comp=Z,30nm,0.9s,mb4.9						
FLN				*e*R			
	comp=Z,123nm,21.2s						
FLN	**La Foliniere**	**75.43**	**348**	⇑*i*P	**P**	**04 37 08.2**	**-1.0**

FLN				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
FLN				MLR	MLR		
	comp=Z,120nm,21.3s,MS4.2						
PTCC	Patocco-Chiusa	75.45	338	P	P	04 37 09.2	-0.2
BBS	Basel-Blauen	75.55	343	eP	P	04 37 09.4	-0.6
ROBS	Robic	75.57	338	eP	P	04 37 09.3	-0.8
SGKT	Sivrigoynuk	75.62	323	i P	P	04 37 09.8	-0.7
BR131	Keskin Array S	75.82	322	eP	P	04 37 10.9	-0.8
	comp=Z,2.1nm,0.5s,mb4.3						
BRTR	Keskin Array B	75.82	322	P	P	04 37 11.0	-0.7
	comp=Z,2.7nm,0.5s,mb4.4,baz=63,slow=2.8,SNR=20						
GRR	Gorron	75.84	349	⇑iP	P	04 37 10.8	-0.8
	comp=Z,44nm,1.0s,mb5.0						
GRR	Gorron	75.84	349	⇑iP	P	04 37 10.8	-0.8
GRR				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0						
BOJS	Bojanci	75.89	337	i P	P	04 37 11.6	-0.3
BRMO	Bormio	75.98	340	P	P	04 37 13.1	+0.7
ROSF	Rostrenen	76.15	350	eP	P	04 37 12.7	-0.6
	comp=Z,54nm,1.4s,mb5.0						
ROSF	Rostrenen	76.15	350	eP	P	04 37 12.7	-0.6
ROSF				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.0						
SGMF	Saint Gilles	76.16	350	⇑iP	P	04 37 12.9	-0.5
	comp=Z,14nm,0.8s,mb4.6						
SGMF	Saint Gilles	76.16	350	⇑iP	P	04 37 12.9	-0.5
SGMF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
CTA	Charters Tower	76.20	196	eP	P	04 37 14.0	-0.2
	comp=Z,6.3nm,1.0s,mb4.5						
CTA				e	pP	04 37 23.2	-2.2
CTA	Charters Tower	76.20	196	eP	P	04 37 14.0	-0.2
CTA				e	pP	04 37 23.2	-2.2
CTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CTAO	Charters Tower	76.20	196	eP	P	04 37 13.8	-0.4
AVNT	Avonos	76.22	320	i P	P	04 37 13.8	-0.1
LOR	Lormes	76.33	345	⇑iP	P	04 37 13.5	-0.9
	comp=Z,24nm,1.0s,mb4.8						
LOR				eR			
	comp=Z,191nm,22.5s						
LOR	Lormes	76.33	345	⇑iP	P	04 37 13.5	-0.9
LOR				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
LOR				MLR	MLR		
	comp=Z,190nm,22.5s,MS4.3						
BBLS	Bajina Basta -	76.42	333	⇑iP	P	04 37 13.4	-1.6
QUIF	Quistinic	76.56	350	⇑iP	P	04 37 15.0	-0.7
CABF	La Chapelle	76.62	343	⇑iP	P	04 37 15.8	-0.2
	comp=Z,29nm,1.0s,mb4.9						
CABF	La Chapelle	76.62	343	⇑iP	P	04 37 15.8	-0.2
CABF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
AVF	Avril sur Loir	76.87	345	⇑iP	P	04 37 16.8	-0.6
	comp=Z,27nm,1.1s,mb4.8						
AVF	Avril sur Loir	76.87	345	⇑iP	P	04 37 16.8	-0.6
AVF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
SMF	Signal de Mont	76.94	345	⇑iP	P	04 37 17.1	-0.7
	comp=Z,27nm,1.1s,mb4.8						
SMF	Signal de Mont	76.94	345	⇑iP	P	04 37 17.1	-0.7
SMF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
ESKT	Eskisehir	76.98	323	i P	P	04 37 17.4	-0.8
ULDT	Uludag	76.99	325	i P	P	04 37 16.8	-1.5
BGF	Bois d'Agland	77.17	346	eP	P	04 37 18.5	-0.6
	comp=Z,38nm,1.4s,mb4.8						
BGF	Bois d'Agland	77.17	346	eP	P	04 37 18.5	-0.6
BGF				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
MFF	Saint Martin d	77.52	348	⇑iP	P	04 37 20.6	-0.5
	comp=Z,33nm,1.2s,mb4.9						
MFF	Saint Martin d	77.52	348	⇑iP	P	04 37 20.6	-0.5
MFF				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
TCF	Toulx Ste Croi	77.52	346	⇑iP	P	04 37 20.6	-0.5
	comp=Z,16nm,1.2s,mb4.5						
TCF	Toulx Ste Croi	77.52	346	⇑iP	P	04 37 20.6	-0.5
TCF				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
LPL	La Plagne	77.57	343	⇑iP	P	04 37 22.1	+0.7
	comp=Z,53nm,1.0s,mb5.1						
LPL	La Plagne	77.57	343	⇑iP	P	04 37 22.1	+0.7
LPL				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
LPG	La Plagne	77.59	343	⇑iP	P	04 37 22.3	+0.8
	comp=Z,63nm,1.0s,mb5.2						
LPG	La Plagne	77.59	343	⇑iP	P	04 37 22.3	+0.8
LPG				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2						
AGO	Saint Agoulin	77.62	345	eP	P	04 37 22.7	+1.0
PLDF	La Plantade	77.63	345	eP	P	04 37 22.7	+1.0
BTOK	Tokmak	77.70	326	i P	P	04 37 21.7	-0.5
BOB	Bobbio (Coli)	77.81	341	P	P	04 37 23.6	+0.9
BOB				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
BOB	Bobbio (Coli)	77.81	341	P	P	04 37 23.6	+0.9
	comp=Z,21nm,1.1s,mb5.0						
ZCCA	Zocca	77.91	339	P	P	04 37 25.1	+1.8
PYM	Petit Puy Mans	77.93	345	eP	P	04 37 24.1	+0.7
GSCL	Gusciola	77.98	340	P	P	04 37 25.0	+1.3
BNI	Bardonecchia	78.03	343	P	P	04 37 24.7	+0.8
BNI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
BNI	Bardonecchia	78.03	343	eP	P	04 37 24.0	+0.1
	comp=Z,9.6nm,1.0s,mb4.7						
SFI	Santa Sofia	78.16	339	P	P	04 37 25.7	+1.1
SFI				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
SFI	Santa Sofia	78.16	339	P	P	04 37 25.7	+1.1
	comp=Z,30nm,1.0s,mb5.2						
FSSB	Fossombrone	78.16	338	P	P	04 37 25.4	+0.7
VMG	Vicchio	78.16	339	P	P	04 37 26.1	+1.4
PGD	Poggio Sodo	78.21	339	P	P	04 37 26.6	+1.7
PGD				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.4						
PGD	Poggio Sodo	78.21	339	P	P	04 37 26.6	+1.7
	comp=Z,48nm,0.9s,mb5.4						
BDI	Bagni Di Lucca	78.26	340	P	P	04 37 24.9	-0.3
BDI				pmax	pmax		
	comp=Z,68nm,1.1s,mb5.5						
BDI	Bagni Di Lucca	78.26	340	P	P	04 37 24.9	-0.3
	comp=Z,68nm,1.1s,mb5.5						
ORIF	Oris-en-Rattie	78.30	343	⇑iP	P	04 37 25.9	+0.5
	comp=Z,28nm,0.9s,mb4.9						
ORIF				eR			
	comp=Z,256nm,21.8s						
ARV	Arcevia	78.31	338	P	P	04 37 25.8	+0.3
	comp=Z,24nm,0.8s,mb5.2						
MBDF	Montbardon	78.33	342	⇑iP	P	04 37 25.8	+0.2
	comp=Z,11nm,0.8s,mb4.5						
MBDF	Montbardon	78.33	342	⇑iP	P	04 37 25.8	+0.2
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LBL	Lubilhac	78.41	345	eP	P	04 37 26.9	+0.9
TKTP	Tekketepe	78.49	323	i P	P	04 37 25.4	-1.1
WRAB	Tennant Creek	78.51	207	eP	P	04 37 26.2	-0.9
WRAB				e*PP	pP	04 37 35.8	-2.5
WRAB				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
WRAB	Tennant Creek	78.51	207	eP	P	04 37 26.2	-0.9
	comp=Z,16nm,0.8s,mb5.0						
WRAB				epP	pP	04 37 35.8	-2.5
WB2	Warramunga Arr	78.52	207	eP	P	04 37 26.8	-0.3
WB2				e	pP	04 37 37.2	-1.1
WRA	Warramunga Arr	78.53	207	P	P	04 37 27.1	0.0
	comp=Z,7.7nm,0.8s,mb4.7,baz=20,slow=5.9,SNR=28						
SNTG	Esanatoglia	78.54	338	P	P	04 37 27.5	+0.7
VIVF	Saint-Julien-l	78.56	344	⇑iP	P	04 37 26.9	+0.1
	comp=Z,27nm,1.0s,mb4.8						
VIVF	Saint-Julien-l	78.56	344	⇑iP	P	04 37 26.9	+0.1
VIVF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
FIN	Finale Ligure	78.58	341	P	P	04 37 26.2	-0.7
RJF	Les Rejaudoux	78.58	346	eP	P	04 37 26.6	-0.3
	comp=Z,29nm,1.2s,mb4.8						
RJF				eR			
	comp=Z,147nm,21.0s						
RJF	Les Rejaudoux	78.58	346	eP	P	04 37 26.6	-0.3
RJF				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
RJF				MLR	MLR		
	comp=Z,150nm,21.0s,MS4.3						
PII	Pisa	78.60	340	P	P	04 37 26.4	-0.7
PII				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
PII	Pisa	78.60	340	P	P	04 37 26.4	-0.7
	comp=Z,14nm,0.8s,mb5.0						
MURB	Monte Urbino	78.63	338	P	P	04 37 28.6	+1.4
	comp=Z,87nm,1.7s,mb5.4						
ASS	Assisi	78.79	338	P	P	04 37 27.9	-0.2
ASS				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
ASS	Assisi	78.79	338	P	P	04 37 27.9	-0.2
	comp=Z,13nm,1.1s,mb4.8						
CAF	Calviac	78.88	346	⇑iP	P	04 37 28.8	+0.2
	comp=Z,24nm,0.9s,mb4.8						
CAF	Calviac	78.88	346	⇑iP	P	04 37 28.8	+0.2
CAF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
NRCA	Norcia	78.91	337	P	P	04 37 29.3	+0.5
SAOF	Saorge	78.91	342	eP	P	04 37 28.0	-0.8
IMI	Imperia	78.92	341	P	P	04 37 28.8	-0.1
AUTN	L'Aution	78.93	342	eP	P	04 37 28.6	-0.3
LFF	La Frestale	79.04	347	⇑iP	P	04 37 29.5	0.0
	comp=Z,22nm,0.7s,mb4.9						
LFF	La Frestale	79.04	347	⇑iP	P	04 37 29.5	0.0
LFF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
SBF	Sospel	79.05	342	eP	P	04 37 29.1	-0.5
	comp=Z,14nm,0.7s,mb4.7						
SBF	Sospel	79.05	342	eP	P	04 37 29.1	-0.5
SBF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
GRFL	Gerfalco	79.06	339	P	P	04 37 29.3	-0.3
	comp=Z,18nm,1.0s,mb5.0						
MVIF	Mont Vial	79.07	342	eP	P	04 37 29.5	-0.2
REVF	Revere	79.18	342	eP	P	04 37 29.7	-0.6
CALN	Calern	79.26	342	eP	P	04 37 30.6	-0.1
SMRF	Simiane la Rot	79.27	343	eP	P	04 37 31.2	+0.5
AQU	L'Aquila	79.30	337	P	P	04 37 32.4	+1.5
AQU				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
AQU	L'Aquila	79.30	337	eP	P	04 37 30.7	-0.2
	comp=Z,26nm,0.9s,mb5.2						
FITZ	Fitzroy Crossi	79.36	215	eP	P	04 37 31.5	-0.2
	comp=Z,13nm,0.6s,mb5.0						
FITZ				e	pP	04 37 41.2	-1.7
MNS	Montasola	79.43	338	P	P	04 37 31.5	-0.1
MNS				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.2						
MNS	Montasola	79.43	338	P	P	04 37 31.5	-0.1
	comp=Z,27nm,0.9s,mb5.2						
LASF	Ste Croix	79.44	344	⇑iP	P	04 37 32.1	+0.4
FRF	La Foret Royal	79.49	342	⇑iP	P	04 37 31.5	-0.4
PRAF	Pradon	79.50	343	eP	P	04 37 33.0	+1.0
PTQR	Pietraquaria	79.62	337	P	P	04 37 32.0	-0.7
AYDN	Tasoluk	79.65	325	i P	P	04 37 31.6	-1.4
PUYF	Puyloubier	79.68	343	eP	P	04 37 33.0	+0.1
LMR	La Mourre	79.73	342	⇑iP	P	04 37 33.1	-0.1
	comp=Z,23nm,1.0s,mb4.8						
LMR	La Mourre	79.73	342	⇑iP	P	04 37 33.1	-0.1
LMR				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
BERF	Bertagne	79.89	343	eP	P	04 37 34.5	+0.4
PGF	Pioggiola	80.03	340	⇑iP	P	04 37 34.7	-0.2
	comp=Z,37nm,0.9s,mb5.0						
PGF	Pioggiola	80.03	340	⇑iP	P	04 37 34.7	-0.2
PGF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
MTLF	Montolieu	80.41	345	⇑iP	P	04 37 37.3	+0.4
	comp=Z,18nm,0.9s,mb4.7						
MTLF	Montolieu	80.41	345	⇑iP	P	04 37 37.3	+0.4
MTLF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
MGR	Morigerati	80.90	335	P	P	04 37 39.6	+0.1
	comp=Z,14nm,1.0s,mb4.8						
EPF	Esparros	80.97	347	eP	P	04 37 39.6	-0.2
	comp=Z,14nm,1.0s,mb4.5						
EPF	Esparros	80.97	347	eP	P	04 37 39.6	-0.2
EPF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
EALK	Alkurruntz	81.02	348	P	P	04 37 43.2	+3.2
	comp=Z,11nm,0.8s,mb4.8						
SJPF	Ste Jean	81.09	348	eP	P	04 37 41.2	+0.8
	comp=Z,8.3nm,0.7s,mb4.5						
SJPF	Ste Jean	81.09	348	eP	P	04 37 41.2	+0.8
SJPF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
EJON	La Jonquera	81.18	345	P	P	04 37 41.9	+0.9
	comp=Z,6.5nm,0.9s,mb4.6						
ETSF	Etsaut	81.22	347	⇑iP	P	04 37 41.8	+0.7
	comp=Z,14nm,0.7s,mb4.7						
ETSF	Etsaut	81.22	347	⇑iP	P	04 37 41.8	+0.7
ETSF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
ELAN	Lanestosa	81.22	350	P	P	04 37 41.4	+0.2
	comp=Z,26nm,1.0s,mb5.1						
EARI	Arriondas	81.33	351	P	P	04 37 40.7	-1.0
	comp=Z,93nm,3.1s						
EBIE	Bielsa	81.34	347	P	P	04 37 41.8	0.0
	comp=Z,7.4nm,0.8s,mb4.7						
EPON	Pontenova	81.46	352	P	P	04 37 41.9	-0.5
	comp=Z,6.2nm,0.6s,mb4.7						
TIP	Timpagrande	81.51	334	eP	P	04 37 41.9	-0.9
QURS	Qurayyt al Mil	81.77	315	P	P	04 37 44.7	+0.5
EMIR	Miracle	81.91	346	P	P	04 37 46.7	+1.9
	comp=Z,8.7nm,0.6s,mb4.9						
STS	Santiago	82.00	353	P	P	04 37 45.0	-0.2
STS				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.7						
STS	Santiago	82.00	353	P	P	04 37 45.0	-0.2
	comp=Z,15nm,1.6s,mb4.7						
ESAC	San Caprasio	82.36	347	P	P	04 37 48.1	+1.0
	comp=Z,27nm,0.8s,mb5.2						
EPOB	Poblet	82.52	346	P	P	04 37 49.0	+1.1
	comp=Z,12nm,0.8s,mb5.0						
ECAL	Calabor	82.81	352	P	P	04 37 49.4	0.0
	comp=Z,7.9nm,0.9s,mb4.7						
ELOB	Lobios	82.98	353	P	P	04 37 48.1	-2.2
	comp=Z,4.9nm,0.7s,mb4.7						
ERTA	Horta de San J	83.01	346	P	P	04 37 51.4	+1.0
	comp=Z,6.1nm,0.7s,mb4.7						
PPT	Papeete	83.13	134	eSS	SS	04 53 28.2	-6.9
	comp=Z,58nm,25.0s						
PPT				eLR	LR	05 03 32.7	
	comp=Z,431nm,30.8s,baz=340						
PPT	Papeete	83.13	134	LR	LR	05 10 47.9	
	comp=Z,264nm,18.2s,MS4.7,baz=334,slow=33						
HILS	Ha'il	83.36	310	P	P	04 37 52.4	0.0
GVD	Gavdhos	83.46	327	eP	P	04 37 51.0	-1.8
	comp=Z,32nm,1.4s,mb5.2						
PVRL	Vila Real	83.55	352	eP	P	04 37 53.8	+0.8
	comp=Z,16nm,0.8s,mb5.2						
EMOS	Mosqueruela	83.70	347	P	P	04 37 55.4	+1.5
	comp=Z,9.0nm,0.7s,mb5.0						
ETOS	Mallorca	83.82	344	P	P	04 37 55.8	+1.4
	comp=Z,15nm,0.9s,mb5.1						
ARSS	Ar Rass	84.00	308	P	P	04 37 54.8	-0.9
PVIS	Viseu	84.11	353	eP	P	04 37 56.7	+0.8
	comp=Z,23nm,1.2s,mb5.2						
EIL	Elat	84.24	316	eP	P	04 37 55.7	-1.1
	comp=Z,29nm,1.3s,mb5.2						
MTE	Manteigas	84.40	352	eP	P	04 37 58.1	+0.7
	comp=Z,47nm,1.5s,mb5.4						
ALWS	Ilw as Safayha	84.51	316	P	P	04 37 58.6	+0.4
ECHE	Chera	84.53	347	P	P	04 37 59.5	+1.5
ECHE				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
ECHE	Chera	84.53	347	P	P	04 37 59.5	+1.5
	comp=Z,6.4nm,0.7s,mb4.9						
JMQS	Jabal Moqyreh	84.56	315	P	P	04 37 58.7	+0.3
JMOS	Jabal al Moall	84.62	316	P	P	04 37 58.9	+0.2
MZLS	Mizel	84.68	305	P	P	04 37 58.5	-0.6
HAQS	Haql	84.79	316	P	P	04 37 60.0	+0.4
ESDC	Sonseca Array	84.79	349	P	P	04 37 59.9	+0.5
	comp=Z,17nm,0.7s,mb5.3,baz=2.0,slow=4.7,SNR=64						
ESDC	Sonseca Array	84.79	349	P	P	04 38 00.2	+0.8
	comp=Z,13nm,0.6s,mb5.2						
ESLA	Sonseca Array	84.79	349	eP	P	04 37 59.5	+0.2
	comp=Z,19nm,1.3s,mb5.1						
TBKS	Tabuk	84.86	314	P	P	04 38 00.4	+0.4
PCBR	Castelo Branco	84.95	352	eP	P	04 38 00.8	+0.7
	comp=Z,27nm,0.7s,mb5.5						
PTOM	Tomar	85.24	353	eP	P	04 38 02.7	+1.1
	comp=Z,37nm,1.5s,mb5.3						
EBEN	Beniarda	85.30	346	P	P	04 38 02.2	+0.4
	comp=Z,13nm,1.9s,mb4.7						
AYUS	'Aynunah	85.42	315	P	P	04 38 03.1	+0.4
ETOB	Tobarra	85.53	347	P	P	04 38 03.9	+0.9
	comp=Z,2.9nm,1.7s,mb4.2						
EVIA	Vianos	85.66	348	P	P	04 38 04.1	+0.5
EVIA				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.2						
EVIA	Vianos	85.66	348	P	P	04 38 04.1	+0.5
	comp=Z,15nm,0.9s,mb5.2						
EBAD	Badajoz	85.99	352	P	P	04 38 04.0	-1.2
	comp=Z,7.3nm,2.7s,mb4.4						
EBAN	Banos Encina	86.27	349	P	P	04 38 07.4	+0.8
EBAN				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
EBAN	Banos Encina	86.27	349	P	P	04 38 07.4	+0.8
	comp=Z,10nm,0.9s,mb5.1						
EVO	Evora	86.30	352	eP	P	04 38 07.6	+0.9
	comp=Z,15nm,0.8s,mb5.0						
EVO				eR			
	comp=Z,111nm,20.2s						
EADA	Adamuz	86.35	350	P	P	04 38 07.3	+0.3
	comp=Z,3.1nm,1.0s,mb4.5						
EQES	Quesada	86.55	348	P	P	04 38 08.0	0.0
	comp=Z,3.5nm,0.8s,mb4.6						
EMIN	Mina Concepcio	86.94	351	P	P	04 38 08.5	-1.4
	comp=Z,504nm,3.7s						
ELOJ	Sierra Loja	87.31	349	P	P	04 38 12.0	+0.2
ELOJ				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9						
ELOJ	Sierra Loja	87.31	349	P	P	04 38 12.0	+0.2
	comp=Z,8.2nm,1.0s,mb4.9						
ESPR	Espera	87.76	351	P	P	04 38 13.7	-0.2
	comp=Z,9.7nm,1.1s,mb5.0						
EMIJ	Mijas	87.96	350	P	P	04 38 15.2	+0.3
	comp=Z,9.0nm,0.9s,mb5.0						
STKA	Stephens Creek	88.51	198	P	P	04 38 17.8	+0.2
	comp=Z,3.1nm,0.9s,mb4.6,slow=6.1,SNR=4.0						
STKA				LR	LR	05 18 54.8	
	comp=Z,195nm,18.7s,MS4.5,baz=26,slow=36						
STKA	Stephens Creek	88.51	198	eP	P	04 38 17.5	-0.1
LPAZ	La Paz	125.39	65	PKP	PKPdf	04 44 27.2	+2.0
	comp=Z,0.7nm,0.9s,baz=19,slow=3.8,SNR=4.4						
SIV	San Ignacio	128.70	58	PKP	PKPdf	04 44 32.6	+1.0
	comp=Z,2.6nm,0.9s,baz=322,slow=1.2,SNR=5.6						
VNDA	Vanda	132.43	180	PKP	PKPdf	04 44 38.5	+1.3
	comp=Z,0.7nm,0.7s,baz=297,slow=8.0,SNR=4.5						
BOSA	Boshof	139.41	293	PKP	PKPdf	04 44 54.5	+3.2
	comp=Z,2.1nm,0.5s,baz=179,slow=3.4,SNR=7.1						
PLCA	Paso Flores	142.71	90	PKP	PKPdf	04 44 59.6	+3.0
	comp=Z,3.1nm,0.9s,baz=297,slow=2.2,SNR=4.1						
QSPA	South Pole Qui	144.93	180	⇑iP	PKPdf	04 44 59.8	+0.4
SYO	Syowa Base	151.14	219	⇓P	PKPdf	04 45 15.8	+6.1
VNA3	Neumayer Olymp	163.50	189	⇓iPKPdf	PKPdf	04 45 29.1	+4.3
VNA3				e		04 45 41.7	
VNA3				e		04 46 17.1	
VNA2	Neumayer--Watz	163.56	192	⇓iPKPdf	PKPdf	04 45 27.1	+2.2
VNA2				e		04 45 39.5	
VNA2				e		04 46 17.2	

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*NEIC **18** 04:28:38.1,36.27N×10.40W,MG4.5(MDD),After MDD.*

*CSEM **18** 04:28:40.4±0.5,36.37N×10.25W,h136^{km}±12^{km},mb4.5/4, Error ellipse: s-maj=12.7km s-min=10.9km az=60.0*

MDD 18 04:28:38.1±4.1**,36.27N×10.40W,mb2.4**/4**,Error ellipse: s-maj=44.0km s-min=35.4km az=155.0,PRXIMO, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMIN	Mina Concepcio	3.34	62	Pn	Pn	04 29 30.6	-2.0
	0.7nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	04 30 09.1	-4.4
	0.8nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	3.34	62	P	Pn	04 29 30.6	-2.0
	134nm,2.7s,SNR=7.9						
EMIN				S	Sn	04 30 09.1	-4.4
	0.2nm,0.1s,SNR=7.9						
EBAD	Badajoz	3.66	46	Pn	Pn	04 29 34.5	-2.7
	0.0nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	04 30 16.9	-4.8
	1.0nm,0.0s,SNR=6.1						
EBAD	Badajoz	3.66	46	P	Pn	04 29 34.5	-2.7
	272nm,4.3s,SNR=7.9						
EBAD				S	Sn	04 30 16.9	-4.8
	0.3nm,0.0s,SNR=6.1						
ESPR	Espera	3.71	79	Pn	Pn	04 29 35.7	-2.1
	0.1nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	04 30 17.1	-5.8
	5.8nm,0.3s,SNR=7.9						
ESPR	Espera	3.71	79	P	Pn	04 29 35.7	-2.1
	119nm,3.0s,SNR=7.9						
ESPR				S	Sn	04 30 17.1	-5.8
	SNR=7.9						
EADA	Adamuz	5.02	66	Pn	Pn	04 29 53.0	-3.4
	0.0nm,0.3s,SNR=4.0						
EADA				Sn	Sn	04 30 48.8	-7.3
	0.6nm,0.1s,SNR=7.9						
EADA	Adamuz	5.02	66	P	Pn	04 29 53.0	-3.5
	208nm,3.8s,SNR=4.0						
EADA				S	Sn	04 30 48.8	-7.3
	0.2nm,0.0s,SNR=7.9						

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*MDD **18** 04:44:42.8±1.1,37.06N×3.90E,mb3.6/7,Error ellipse: s-maj=11.5km s-min=9.4km az=36.0,PRXIMO*

*CRAAG **18** 04:44:42.1,37.10N×3.94E,Ml3.0*

*CSEM **18** 04:44:42.4±0.1,37.07N×3.88E,h10^{km},ML3.0,Error ellipse: s-maj=4.1km s-min=2.0km az=56.0*

*NEIC **18** 04:44:43.6±0.4,37.01N×3.90E,h10^{km},ML3.0(ALG), Error ellipse: s-maj=5.3km s-min=3.7km az=63.0*

ISC 18 04:44:42.6±0.6**,37.11N**±0.04×**3.85E**±0.06**,h10^{km},n23, σ0^{s}.94**/35**,Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABMS	Boumerdes	0.46	220	P	Pg	04 44 51.4	-0.6
ABA	Alger-Bouzarea	0.72	245	P	Pb	04 44 57.7	+0.9
AKF	Akfadou	0.75	129	P	Pb	04 44 55.9	-1.3
ADJB	Djebel Djouab	1.00	199	P	Pb	04 45 01.3	-0.3
AKET	Djebel Ketaf	1.06	178	P	Pb	04 45 02.7	+0.1
EMHD	Djebel Mahouad	1.15	219	P	Pb	04 45 05.0	+0.8
ATAF	Djebel Tarf	1.28	164	P	Pb	04 45 06.0	-0.3
SET	Setif	1.54	125	P	Pn	04 45 10.0	-0.4
EIBI	Ibiza	2.75	315	Pn	Pn	04 45 29.2	+1.6
	1.3nm,0.1s,SNR=12						
EIBI				Sn	Sn	04 46 01.0	-0.3
	8.3nm,0.7s,SNR=7.7						
EIBI	Ibiza	2.75	315	P	Pn	04 45 29.2	+1.5
	1.3nm,0.1s,SNR=12						
EIBI				S	Sn	04 46 01.0	-0.3
	8.3nm,0.7s,SNR=7.7						
ETOS	Mallorca	2.78	343	Pn	Pn	04 45 29.5	+1.4
	1.3nm,0.1s,SNR=13						
ETOS				Sn	Sn	04 46 01.2	-0.8
	1.0nm,0.1s,SNR=7.9						
ETOS	Mallorca	2.78	343	P	Pn	04 45 29.5	+1.5
	1.3nm,0.1s,SNR=13						
ETOS				S	Sn	04 46 01.2	-0.8
	1.0nm,0.1s,SNR=7.9						
EBEN	Beniarda	3.59	298	Pn	Pn	04 45 40.2	+0.6
	0.5nm,0.1s,SNR=7.9						
EBEN				Sn	Sn	04 46 22.0	-0.6
	0.6nm,0.2s,SNR=7.9						
EBEN	Beniarda	3.59	298	P	Pn	04 45 40.2	+0.6
	0.5nm,0.1s,SNR=7.9						
EBEN				S	Sn	04 46 22.0	-0.6
	0.6nm,0.2s,SNR=7.9						
ECHE	Chera	4.53	305	Pn	Pn	04 45 53.7	+0.8
	1.7nm,0.4s,SNR=7.9						
ETOB	Tobarra	4.54	291	P	Pn	04 45 54.1	+1.1
ETOB				S	Sn	04 46 45.0	-1.5
ETOB	Tobarra	4.54	291	Pn	Pn	04 45 53.0	-0.1
	0.4nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	04 46 45.0	-1.5
	0.5nm,0.2s,SNR=7.9						
ETOB	Tobarra	4.54	291	P	Pn	04 45 54.2	+1.2
	0.4nm,0.1s,SNR=7.9						
ETOB				S	Sn	04 46 45.0	-1.5
	0.5nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.69	315	P	Pn	04 45 55.8	+0.6
EMOS				S	Sn	04 46 48.2	-2.1
EMOS	Mosqueruela	4.69	315	Pn	Pn	04 45 55.2	+0.1
	0.3nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	04 46 48.2	-2.1
	0.5nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.69	315	P	Pn	04 45 55.8	+0.6
EMOS				S	Sn	04 46 48.2	-2.1
	0.5nm,0.2s,SNR=7.9						

EJON	**La Jonquera**	**5.39**	**352**	Pn	**Pn**	**04 46 05.6**	**+0.5**
	2.0nm,0.3s,SNR=8.5						
EJON	**La Jonquera**	**5.39**	**352**	P	**Pn**	**04 46 05.6**	**+0.6**
	2.0nm,0.3s,SNR=8.5						

THR **18** *04:52:16.5±0.4,30.19N×57.48E,h15^{km}±5^{km},ML3.7*
TEH **18** *04:52:45.6,31.20N×55.60E,h22^{km},Mn3.3*
CSEM **18** *04:52:45.6±0.3,31.20N×55.60E,h22^{km},ML3.3,Error ellipse: s-maj=10.1km s-min=7.3km az=179.0,After TEH*
ISC 18 04:52:17.5±1.0,30.20N±0.08×57.45E±0.07,h15^{km},n19, σ0^{s}.78/21,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.64**	**250**	*e*PG	**Pg**	**04 52 29.5**	**-1.0**
KRBR				*e*SG	**Sg**	**04 52 38.6**	**-0.5**
KRBR				AML	AML	04 52 39.3	
	comp=E,5µm,0.2s						
KRBR	**Kerman**	**0.64**	**250**	*e*Pg	**Pg**	**04 52 29.5**	**-1.0**
	SNR=91						
KRBR				*e*Sg	**Sg**	**04 52 38.6**	**-0.6**
	comp=E,5µm,0.2s,SNR=91						
IBAF	**Bafgh**	**2.13**	**311**	Pg	**Pn**	**04 52 53.4**	**+0.3**
IMEH	**Mehriz**	**2.72**	**297**	Pg	**Pn**	**04 53 01.5**	**0.0**
ZHSF	**Zahedan**	**2.94**	**101**	*e*PN	**Pn**	**04 53 04.6**	**-0.1**
ZHSF				AML	AML	04 53 56.9	
	comp=N,201nm,0.4s						
ICHK	**Chekchek**	**3.31**	**309**	Pn	**Pn**	**04 53 09.3**	**-0.6**
IPAR	**Pars**	**3.84**	**266**	Pn	**Pb**	**04 53 25.0**	**+0.5**
IMOK	**Mook**	**4.28**	**256**	Pn	**Pn**	**04 53 25.1**	**+1.4**
GHIR	**Ghir-Karzin**	**4.34**	**245**	*e*PN	**Pn**	**04 53 24.6**	**0.0**
NASN	**Na'in**	**4.74**	**304**	*e*PN	**Pn**	**04 53 30.2**	**0.0**
NASN				*e*SG	**Sb**	**04 54 44.3**	**+7.0**
IGAR	**Garneh**	**4.94**	**296**	Pn	**Pn**	**04 53 39.9**	**+6.8**
IZEF	**Zefreh**	**5.13**	**303**	Pn	**Pn**	**04 53 25.9**	**-10**
IKLH	**Kalahroud**	**5.89**	**303**	Pn	**Pn**	**04 53 38.8**	**-7.6**
IMOG	**Moghan**	**6.10**	**15**	Pn	**Pb**	**04 54 09.9**	**+6.6**
IMYA	**Miamay**	**6.51**	**19**	Pn	**Pb**	**04 54 17.6**	**+7.3**
IKRD	**Kardeh**	**6.62**	**7**	Pn	**Pg**	**04 54 26.3**	**-3.3**
IVRN	**Varamin**	**6.80**	**316**	Pn	**Pn**	**04 54 00.0**	**+0.8**
IDMV	**Damavand**	**7.04**	**321**	Pn	**Pn**	**04 53 58.7**	**-3.9**
IQOM	**Qom**	**7.11**	**312**	Lg		04 55 25.3	

IDC **18** *05:50:40.2±4.5,5.80S×146.25E,h83^{km}±48^{km},mb3.4/5, mb1 3.5/7,mb1mx3.5/15,mbtmp3.7/7,ML3.0/2,MS3.1/4, Ms1 3.1/4,ms1mx2.9/11,Error ellipse: s-maj=41.4km s-min=27.3km az=107.0*
ISC 18 05:50:37.6±3.7,5.7S±0.2×146.2E±0.2,h73^{km}±38^{km},n8, σ0^{s}.82/8,mb3.4/5,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.76**	**166**	P	**P**	**05 51 34.4**	**-0.2**
	4.6nm,0.3s,baz=302,slow=6.3,SNR=8.7						
PMG				S	**S**	**05 52 18.3**	**+0.4**
	15nm,0.3s,baz=250,slow=23,SNR=10.0						
PMG				LR	LR	05 53 05.0	
	comp=Z,121nm,18.6s,baz=340,slow=39						
CTA	**Charters Tower**	**14.26**	**180**	LR	LR	05 57 54.8	
	comp=Z,59nm,20.2s,baz=227,slow=31						
WRA	**Warramunga Arr**	**18.23**	**218**	P	**P**	**05 54 46.6**	**-0.7**
	0.1nm,0.3s,baz=41,slow=12,SNR=4.8						
FITZ	**Fitzroy Crossi**	**23.54**	**237**	P	**P**	**05 55 42.5**	**+0.3**
	4.2nm,0.7s,mb3.9,baz=32,slow=9.3,SNR=5.4						
FITZ				LR	LR	06 07 14.8	
	comp=Z,68nm,18.0s,baz=94,slow=42						
STKA	**Stephens Creek**	**26.36**	**189**	P	**P**	**05 56 08.9**	**+0.1**
	0.8nm,0.4s,mb3.5,baz=8.1,slow=7.1,SNR=2.7						
STKA				LR	LR	06 06 48.8	
	comp=Z,76nm,19.4s,baz=117,slow=37						
SONM	**Songino Array**	**63.80**	**331**	P	**P**	**06 01 05.6**	**+1.2**
	0.2nm,0.5s,mb3.2,baz=149,slow=8.4,SNR=2.3						
MKAR	**Makanchi Array**	**76.80**	**321**	P	**P**	**06 02 22.9**	**-0.3**
	0.2nm,0.7s,mb3.0,baz=101,slow=7.3,SNR=2.9						
ILAR	**Eielson Array**	**85.56**	**23**	P	**P**	**06 03 08.0**	**-0.7**
	0.5nm,0.9s,mb3.5,baz=248,slow=5.2,SNR=4.1						

IDC 18 06:16:55.2±1.3,8.73S×130.19E,mb4.0/3,mb1 4.0/4, mb1mx3.9/11,mbtmp3.9/4,ML3.5/1,Error ellipse: s-maj=93.9km s-min=23.1km az=66.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**11.84**	**161**	Pn	P	06 19 43.6	-5.0
	0.3nm,0.3s,baz=340,slow=13,SNR=8.6						
WRA				Sn	S	06 21 52.8	-10
	1.2nm,0.3s,baz=186,slow=11,SNR=12						
STKA	**Stephens Creek**	**25.35**	**157**	P	P	06 22 24.7	-0.9
	2.3nm,0.6s,baz=335,slow=14,SNR=2.7						
SONM	**Songino Array**	**60.13**	**342**	P	P	06 27 04.6	-2.3
	0.5nm,0.5s,baz=162,slow=6.3,SNR=4.8						
MKAR	**Makanchi Array**	**69.77**	**327**	P	P	06 28 07.3	-2.1
	1.3nm,0.7s,baz=124,slow=7.7,SNR=13						

NEIC **18** *06:17:38.2±1.2,20.05S×69.19W,h100^{km}±13^{km},Error ellipse: s-maj=19.2km s-min=14.7km az=78.0*
IDC **18** *06:17:39.2±2.6,20.09S×69.02W,h104^{km}±23^{km},mb3.4/3, mb1 3.4/6,mb1mx3.3/19,mbtmp3.7/6,Error ellipse: s-maj=31.7km s-min=18.7km az=102.0*
ISC 18 06:17:36.6±0.9,19.93S±0.07×69.09W±0.09,h100^{km},n11, σ0^{s}.89/13,mb3.7/2,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.73**	**14**	P	**P**	**06 18 38.6**	**+5.2**
	4.3nm,0.3s,baz=201,slow=6.8,SNR=56						
LPAZ				S	**S**	**06 19 15.3**	**-1.1**
	baz=188,slow=2.2,SNR=1.9						
LPAZ	**La Paz**	**3.73**	**14**	*e*P	**P**	**06 18 38.4**	**+5.0**
LPAZ				S	**S**	**06 19 15.3**	**-1.1**
ARE	**Arequipa**	**4.13**	**326**	*e*P	**P**	**06 18 39.0**	**+0.2**
SIV	**San Ignacio**	**8.58**	**64**	P	**P**	**06 19 40.7**	**+1.2**
	0.8nm,0.3s,baz=268,slow=9.9,SNR=14						
SIV				S	**S**	**06 21 15.0**	**-0.3**
	0.1nm,0.3s,baz=2.2,slow=18,SNR=3.0						
CFAA	**Coronel Fontan**	**11.66**	**176**	P	**P**	**06 20 19.5**	**-1.4**
	0.1nm,0.3s,baz=7.1,slow=15,SNR=10						
CFAA				S	**S**	**06 22 23.4**	**-5.9**
	0.0nm,0.3s,baz=236,slow=15,SNR=5.5						
BDFB	**Brasilia**	**20.52**	**81**	P	**P**	**06 22 09.1**	**+0.2**
	0.8nm,0.3s,baz=81,slow=1.5,SNR=3.6						
SNAA	**Sanae**	**63.82**	**161**	P	**P**	**06 28 00.6**	**+0.5**
	0.5nm,1.0s,mb3.3,baz=359,slow=22,SNR=4.0						
YKA	**Yellowknife Ar**	**89.65**	**341**	P	**P**	**06 30 24.7**	**+0.7**
	0.8nm,0.5s,mb4.1,baz=128,slow=4.7,SNR=5.7						
YKA				pP	pP	06 30 53.2	+2.5
	0.3nm,0.4s,baz=132,slow=4.7,SNR=4.3						
YKA	**Yellowknife Ar**	**89.65**	**341**	P	**P**	**06 30 24.7**	**+0.7**
YKA				pP	pP	06 30 53.2	+2.5
MKAR	**Makanchi Array**	**144.45**	**34**	PKP	PKPdf	06 37 01.9	+0.9
	0.2nm,0.5s,baz=291,slow=2.3,SNR=3.5						
SONM	**Songino Array**	**151.92**	**6**	PKPbc	PKPdf	06 37 22.2	+9.2
	0.6nm,0.5s,baz=294,slow=1.8,SNR=5.3						

CSEM **18** *06:44:35.2±0.1,37.85N×25.47W,h1^{km},ML2.9,Error ellipse: s-maj=3.7km s-min=1.6km az=12.0,After PDA*
PDA **18** *06:44:35.2±0.8,37.85N×25.47W,h1^{km}±1^{km},MD2.7, ML2.9,Error ellipse: s-maj=2.5km s-min=0.9km az=55.0*
SVSA 18 06:44:35.2±0.8,37.85N×25.47W,h1^{km}±1^{km},MD2.7, ML2.9,Error ellipse: s-maj=2.5km s-min=0.9km az=55.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMAT	**Coroa da Mata**	**0.03**	**177**	*i* P	Pg	06 44 36.3	+0.5
PMAT				*e*S	Sg	06 44 36.9	+0.6
PMAT	**Coroa da Mata**	**0.03**	**177**	*e*S	Sg	06 44 36.9	+0.6
MESC	**Monte Escuro**	**0.06**	**158**	*i* P	Pg	06 44 37.0	+0.6
MESC				*e*S	Sg	06 44 39.0	+1.9
MESC	**Monte Escuro**	**0.06**	**158**	*e*S	Sg	06 44 39.0	+1.9
PVER	**Pico Vermelho**	**0.06**	**213**	*e*P	Pg	06 44 36.8	+0.4
LFA	**Lagoa do Fogo**	**0.07**	**186**	*i* P	Pg	06 44 37.6	+0.9
CML	**Cha da Macela**	**0.10**	**217**	*i* P	Pg	06 44 37.7	+0.6
PCNG	**Congro**	**0.10**	**143**	*e*P	Pg	06 44 38.0	+0.8
PCNG				*e*S	Sg	06 44 40.1	+1.5
	3µm,0.4s						
PCNG	**Congro**	**0.10**	**143**	*e*P	Pg	06 44 38.0	+0.8
PCNG				*e*S	Sg	06 44 40.1	+1.5
	3µm,0.4s						
VIF	**Vila Franca**	**0.10**	**165**	*e*P	Pg	06 44 38.3	+1.0
VIF				*e*S	Sg	06 44 40.7	+2.0
	1µm,0.4s						
VIF	**Vila Franca**	**0.10**	**165**	*e*P	Pg	06 44 38.3	+1.0
VIF				*e*S	Sg	06 44 40.7	+2.0
	1µm,0.4s						
PFAD	**Fenais da Ajud**	**0.12**	**94**	*e*P	Pg	06 44 39.7	+2.1
PRCH	**Ribeira Ch**	**0.12**	**183**	*e*P	Pg	06 44 38.4	+0.8
PRCH				*e*S	Sg	06 44 40.9	+1.7
	4µm,0.3s						
PRCH	**Ribeira Ch**	**0.12**	**183**	*e*P	Pg	06 44 38.4	+0.8
PRCH				*e*S	Sg	06 44 40.9	+1.7
	4µm,0.3s						
FRA1	**Furnas**	**0.14**	**138**	*e*P	Pg	06 44 38.9	+0.9
FAC	**Faja de Cima**	**0.16**	**242**	*e*P	Pg	06 44 39.4	+1.0
MIRA	**Miradouro**	**0.17**	**112**	*e*P	Pg	06 44 40.6	+2.1
PDA	**Ponta Delgada**	**0.18**	**236**	*i* P	Pg	06 44 39.6	+0.8
PDA				*i* S	Sg	06 44 43.0	+1.8
PDA	**Ponta Delgada**	**0.18**	**236**	*i* S	Sg	06 44 43.0	+1.8
PSAN	**Santo Antonio**	**0.20**	**271**	*e*P	Pg	06 44 40.1	+0.9
PFET	**Feteiras**	**0.25**	**263**	*e*P	Pg	06 44 40.9	+0.7
SET4	**Mosteiros**	**0.26**	**276**	*e*P	Pg	06 44 41.1	+0.7
SET2	**Ginetes**	**0.26**	**269**	*e*P	Pg	06 44 41.1	+0.6
PFAV	**Pico das Favas**	**1.53**	**305**	*e*S	Sb	06 45 19.7	-4.3
PSCM	**Serra do Cume**	**1.55**	**304**	*e*P	Pn	06 45 00.2	-3.9
PSCM				*e*S	Sb	06 45 19.7	-4.8
	63nm,0.2s						
PSCM	**Serra do Cume**	**1.55**	**304**	*e*P	Pn	06 45 00.2	-3.9
PSCM				*e*S	Sb	06 45 19.7	-4.8
	63nm,0.2s						
RIB2	**Ribeirinha**	**1.57**	**302**	*e*S	Sb	06 45 20.3	-4.8
	39nm,0.2s						
RIB2	**Ribeirinha**	**1.57**	**302**	*e*S	Sb	06 45 20.3	-4.8
	39nm,0.2s						
PPAD	**Pico dos Padre**	**1.66**	**301**	*e*S	Sb	06 45 23.2	-4.5
ASBA	**Santa Barbara**	**1.70**	**301**	*e*S	Sb	06 45 24.4	-4.4
	30nm,0.2s						
ASBA	**Santa Barbara**	**1.70**	**301**	*e*S	Sb	06 45 24.4	-4.4
	30nm,0.2s						
PSBA	**Serra de Santa**	**1.72**	**303**	*e*P	Pn	06 45 02.9	-3.6
PSBA				*e*S	Sb	06 45 24.6	-4.9
	55nm,0.3s						
PMAN	**Manadas**	**2.20**	**292**	*e*S	Sn	06 45 34.8	-6.9
	16nm,0.3s						
PGRA	**Graciosa**	**2.30**	**302**	*e*rx		06 45 24.9	
PICO	**Pico**	**2.42**	**287**	*e*P	Pn	06 45 12.9	-3.6
PICO				*e*S	Sn	06 45 40.5	-6.6
CALA	**Caldeira**	**2.65**	**287**	*e*P	Pn	06 45 15.6	-4.2
CALA				*e*S	Sn	06 45 46.0	-7.0

IDC **18** *06:59:53.9±1.0,6.12S×146.78E,mb3.9/7,mb1 4.1/10, mb1mx4.1/16,mbtmp3.9/10,ML3.4/3,MS3.5/8,Ms1 3.5/8, ms1mx3.4/18,Error ellipse: s-maj=34.2km s-min=13.5km az=82.0*
NEIC **18** *06:59:55.2±0.6,6.15S×146.81E,h10^{km},mb4.3/2,Error ellipse: s-maj=16.9km s-min=9.5km az=95.0*
ISC 18 06:59:53.5±0.7,6.09S±0.07×146.8E±0.1,h10^{km},n21, σ1^{s}.05/18,mb3.8/7,MS3.7/6,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.32**	**173**	Pn	**Pn**	**07 00 47.1**	**+0.5**
	8.8nm,0.3s,baz=55,slow=4.7,SNR=18						
PMG				Pg	**Pg**	**07 00 54.7**	**-5.0**
	38nm,0.3s,baz=9.2,slow=10,SNR=24						
PMG				Sn	**Sn**	**07 01 28.7**	**+2.2**
	18nm,0.3s,baz=181,slow=23,SNR=3.0						
PMG				Lg		07 01 37.6	
	40nm,0.3s,baz=168,slow=22,SNR=8.3						
HNR	**Honiara**	**13.48**	**105**	LR	LR	07 06 35.5	
	comp=Z,31nm,21.6s,baz=86,slow=30						
CTA	**Charters Tower**	**13.93**	**182**	Pn	**P**	**07 03 13.2**	**-0.2**
	0.2nm,0.3s,baz=348,slow=13,SNR=3.4						
CTA				LR	LR	07 06 52.9	
	comp=Z,69nm,21.8s,baz=37,slow=30						
CTAO	**Charters Tower**	**13.93**	**182**	P	**P**	**07 03 10.5**	**-2.9**
WRAB	**Tennant Creek**	**18.30**	**220**	*e*P	**P**	**07 04 07.9**	**-1.5**
	22nm,1.1s						
WB2	**Warramunga Arr**	**18.31**	**220**	*e*P	**P**	**07 04 09.5**	**0.0**
WRA	**Warramunga Arr**	**18.31**	**220**	P	**P**	**07 04 09.4**	**-0.2**
	0.2nm,0.3s,baz=44,slow=12,SNR=14						
FITZ	**Fitzroy Crossi**	**23.82**	**238**	*e*P	**P**	**07 05 08.8**	**+1.1**
	11nm,0.9s,mb4.3						
FITZ	**Fitzroy Crossi**	**23.82**	**238**	P	**P**	**07 05 08.4**	**+0.7**
	5.9nm,0.6s,mb4.2,baz=32,slow=6.9,SNR=17						
FITZ				LR	LR	07 16 24.0	
	comp=Z,203nm,18.7s,MS3.6,baz=76,slow=42						
STKA	**Stephens Creek**	**26.11**	**190**	P	**P**	**07 05 29.2**	**-0.2**
	2.5nm,0.8s,mb3.8,baz=5.4,slow=9.6,SNR=5.2						
CBIJ	**Chichi jima**	**33.28**	**353**	LR	LR	07 18 38.0	
	comp=Z,54nm,21.2s,MS3.2,baz=112,slow=34						
NWAO	**Narrogin (SRO)**	**38.30**	**222**	LR	LR	07 24 38.3	
	comp=Z,250nm,18.2s,MS4.1,baz=55,slow=39						
JNU	**Nakatsue**	**41.81**	**340**	LR	LR	07 24 17.9	
	comp=Z,41nm,19.1s,MS3.3,baz=0.3,slow=35						
CMAR	**Chiang Mai Arr**	**53.08**	**298**	P	**P**	**07 09 14.9**	**+1.2**
	0.9nm,0.3s,mb4.1,baz=126,slow=6.8,SNR=4.2						
SONM	**Songino Array**	**64.36**	**331**	P	**P**	**07 10 31.4**	**-0.4**
	0.1nm,0.3s,mb3.3,baz=162,slow=4.6,SNR=2.7						
VNDA	**Vanda**	**71.84**	**177**	P	**P**	**07 11 17.1**	**-0.9**
	0.6nm,0.6s,mb3.7,baz=332,slow=4.9,SNR=5.7						
VNDA				LR	LR	07 40 57.6	
	comp=Z,70nm,21.1s,MS3.9,baz=99,slow=34						
MKAR	**Makanchi Array**	**77.41**	**321**	P	**P**	**07 11 51.2**	**+0.6**
	0.2nm,0.5s,mb3.3,baz=93,slow=8.0,SNR=4.2						
MKAR	**Makanchi Array**	**77.41**	**321**	P	**P**	**07 11 51.2**	**+0.6**
ILAR	**Eielson Array**	**85.65**	**23**	P	**P**	**07 12 34.4**	**+1.0**
	0.7nm,0.6s,mb4.1,baz=256,slow=1.4,SNR=5.9						
ILAR				LR	LR	07 46 48.8	
	comp=Z,37nm,18.6s,MS3.8,baz=211,slow=33						
TRCR	**Troy Canyon**	**99.74**	**52**	*e*P	**P**	**07 13 38.3**	**-1.2**
SIV	**San Ignacio**	**144.78**	**129**	PKP	PKPdf	07 19 34.6	-0.1
	1.9nm,0.6s,baz=241,slow=3.3,SNR=12						

INMG **18** *08:04:45.9±1.0,41.79N×8.63W,h16^{km}±3^{km},ML2.0,Error ellipse: s-maj=3.9km s-min=1.3km az=80.0*
CSEM **18** *08:04:45.9±0.1,41.77N×8.64W,h15^{km},ML2.8/7,Error ellipse: s-maj=4.1km s-min=1.9km az=72.0*
MDD 18 08:04:45.6±0.4,41.78N×8.63W,h11^{km},mbLg2.2/18,2C, Error ellipse: s-maj=4.4km s-min=2.3km az=53.0, PRXIMO,Portugal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZAM	**Zamans**	**0.38**	**353**	⇑Pg	Pg	08 04 52.7	-0.7
	0.6nm,0.2s,SNR=18						
EZAM				Lg		08 04 57.8	
	22nm,0.2s,SNR=5.2						
ELOB	**Lobios**	**0.44**	**78**	⇑Pg	Pg	08 04 53.9	-0.7
	7.3nm,0.1s,SNR=18						
ELOB				Lg		08 04 59.7	
	175nm,0.2s,SNR=6.2						
ELOB	**Lobios**	**0.44**	**78**	Pg	Pg	08 04 53.9	-0.7
	7.3nm,0.1s,SNR=39						
ELOB				Lg		08 04 59.7	
	175nm,0.2s,SNR=6.2						
PVRL	**Vila Real**	**0.85**	**126**	*e*Pg	Pg	08 05 01.5	-1.3
PVRL				*e*Sg	Sg	08 05 13.1	-1.1
	63nm,0.1s						
PVRL	**Vila Real**	**0.85**	**126**	*e*Pg	Pg	08 05 01.5	-1.3
PVRL				*e*Sg	Sg	08 05 13.1	-1.1
	63nm,0.1s						
STS	**Santiago**	**1.11**	**3**	Pg	Pg	08 05 06.3	-1.6
	5.6nm,0.1s,SNR=7.9						
STS				Lg		08 05 20.8	
	13nm,0.1s,SNR=5.9						
EMAZ	**Mazaricos**	**1.20**	**348**	Pg	Pg	08 05 07.5	-2.2
	1.6nm,0.1s,SNR=7.7						
EMAZ				Sn	Sn	08 05 22.0	-2.6
	1.6nm,0.1s,SNR=6.7						
EMAZ				Lg		08 05 23.5	
	9.9nm,0.1s,SNR=13						
EMAZ	**Mazaricos**	**1.20**	**348**	Pg	Pg	08 05 07.5	-2.2
	1.6nm,0.1s,SNR=7.7						
EMAZ				Sn	Sn	08 05 22.0	-2.6
	1.6nm,0.1s,SNR=6.7						
PVIS	**Viseu**	**1.20**	**152**	*e*P	Pb	08 05 07.1	-0.8
PVIS				*e*S	Sb	08 05 23.2	0.0
	36nm,0.1s						
PVIS	**Viseu**	**1.20**	**152**	*e*P	Pb	08 05 07.1	-0.8
PVIS				*e*S	Sb	08 05 23.2	0.0
	36nm,0.1s						
ERUA	**La Rua**	**1.27**	**61**	Pg	Pg	08 05 09.2	-1.9
	8.3nm,0.2s,SNR=12						
ERUA				Lg		08 05 24.8	
	13nm,0.2s,SNR=11						
ECAL	**Calabor**	**1.43**	**83**	Pn	Pn	08 05 09.8	-1.8
	1.8nm,0.2s,SNR=6.2						
ECAL				Pg	Pg	08 05 11.8	-2.4
	2.1nm,0.1s,SNR=17						
ECAL				Sn	Sn	08 05 27.7	-2.7
	2.4nm,0.1s,SNR=4.0						
ECAL				Lg		08 05 30.4	
	10.0nm,0.1s,SNR=19						
ECAL	**Calabor**	**1.43**	**83**	Pn	Pn	08 05 09.8	-1.8
	1.8nm,0.2s,SNR=6.2						
ECAL	**Calabor**	**1.43**	**83**	Pg	Pg	08 05 11.8	-2.4
	2.1nm,0.1s,SNR=17						
ECAL				Sn	Sn	08 05 27.7	-2.7
	2.4nm,0.1s,SNR=4.0						
MTE	**Manteigas**	**1.60**	**149**	*e*Pg	Pg	08 05 14.3	-3.4
MTE				*e*Sn	Sn	08 05 32.4	-2.5
MTE				*e*Sg	Sg	08 05 35.9	-3.2
	16nm,0.4s						
MTE	**Manteigas**	**1.60**	**149**	*e*Pg	Pg	08 05 14.3	-3.4
MTE				*e*Sn	Sn	08 05 32.4	-2.5
MTE				*e*Sg	Sg	08 05 35.9	-3.2
	16nm,0.4s						
EPON	**Pontenova**	**1.90**	**35**	Pg	Pg	08 05 19.9	-3.7
	0.7nm,0.1s,SNR=7.9						
EPON				Lg		08 05 45.0	
	9.1nm,0.3s,SNR=9.8						
PCBR	**Castelo Branco**	**2.12**	**155**	*e*Pg	Pg	08 05 23.4	-4.7
PCBR				*e*Sg	Sg	08 05 52.1	-4.4
	5.5nm,0.2s						
PCBR	**Castelo Branco**	**2.12**	**155**	Pg	Pg	08 05 23.4	-4.7
PCBR				Lg		08 05 52.1	
	2.8nm,0.2s						
PTOM	**Tomar**	**2.16**	**175**	*e*Sg	Sg	08 05 52.7	-5.0
	10nm,0.2s						
PTOM	**Tomar**	**2.16**	**175**	Lg		08 05 52.7	
	5.1nm,0.2s						
EARI	**Arriondas**	**2.95**	**58**	Pn	Pn	08 05 32.7	-0.7
	0.7nm,0.1s,SNR=7.9						
EARI				Lg		08 06 18.7	
	1.8nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**2.95**	**58**	Pn	Pn	08 05 32.7	-0.7
	0.7nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.26**	**157**	Pn	Pn	08 05 35.8	-2.0
	0.8nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	08 06 12.0	-5.0
	1.1nm,0.2s,SNR=7.9						
EBAD				Lg		08 06 27.4	
	6.7nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**3.26**	**157**	Pn	Pn	08 05 35.8	-2.0
	0.8nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	08 06 12.0	-5.0
	1.1nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**4.11**	**68**	Lg		08 06 53.1	
	1.8nm,0.4s,SNR=4.0						
EMIN	**Mina Concepcio**	**4.28**	**159**	Pn	Pn	08 05 49.6	-2.7
	0.5nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	08 06 37.9	-4.9
	1.0nm,0.2s,SNR=15						
EMIN				Lg		08 06 59.2	
	1.8nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.28**	**159**	Pn	Pn	08 05 49.6	-2.7
	0.5nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	08 06 37.9	-4.9
	1.0nm,0.2s,SNR=15						
ECAB	**El Cabril**	**4.45**	**145**	Pn	Pn	08 05 51.9	-2.7
	0.3nm,0.2s,SNR=4.0						
ECAB				Sn	Sn	08 06 40.5	-6.6
	SNR=8.1						
ECAB				Lg		08 07 05.1	
	1.1nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**4.45**	**145**	Pn	Pn	08 05 51.9	-2.8
	0.3nm,0.2s,SNR=4.0						
ECAB				Sn	Sn	08 06 40.5	-6.5
	SNR=8.1						
ECRI	**Cripan**	**4.62**	**78**	Lg		08 07 10.6	
	1.1nm,0.3s,SNR=4.0						
EADA	**Adamuz**	**4.76**	**138**	Pn	Pn	08 05 57.4	-1.7
	0.4nm,0.2s,SNR=4.0						
EADA				Sn	Sn	08 06 48.4	-6.7
	0.4nm,0.3s,SNR=4.0						
EADA				Lg		08 07 14.5	
	0.9nm,0.3s,SNR=4.0						
EADA	**Adamuz**	**4.76**	**138**	Pn	Pn	08 05 57.4	-1.8
	0.4nm,0.2s,SNR=4.0						
EADA				Sn	Sn	08 06 48.4	-6.7
	0.4nm,0.3s,SNR=4.0						

MAN 18 08:35:31.0,13.23N×120.51E,h9^{km},mb3.8,ML2.5,MS2.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.56**	**333**	*e*P	Pg	08 35 41.9	-0.4
LUBP				*e*S	Sg	08 35 54.9	+5.0
SJMP	**San Jose**	**0.97**	**142**	*e*P	Pb	08 35 49.0	-0.5
SJMP				*e*S	Sb	08 36 08.7	+6.5
BUSP	**Coron**	**1.25**	**194**	*e*P	Pb	08 35 53.7	-0.7
BUSP				*e*S	Sb	08 36 16.3	+5.8

IDC **18** *08:43:23.7±2.0,21.67N×143.19E,h306^{km}±18^{km},mb3.3/8, mb1 3.5/9,mb1mx3.3/23,mbtmp4.0/9,Error ellipse: s-maj=25.0km s-min=15.8km az=91.0*
ISC 18 08:43:23.8±1.7,21.7N±0.1×143.2E±0.3,h322^{km}±15^{km}, n11,σ0^{s}.81/11,mb3.5/8,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.46**	**351**	P	**P**	**08 44 48.0**	**0.0**
	8.3nm,0.3s,baz=7.6,slow=17,SNR=9.4						
CBIJ				S	**S**	**08 45 54.2**	**+0.1**
	7.8nm,0.3s,baz=313,slow=23,SNR=6.2						
WB2	**Warramunga Arr**	**42.26**	**192**	*e*P	**P**	**08 50 48.5**	**+0.5**
WRA	**Warramunga Arr**	**42.26**	**192**	P	**P**	**08 50 47.3**	**-0.7**
	0.5nm,0.3s,mb3.1,baz=15,slow=9.3,SNR=32						
MKAR	**Makanchi Array**	**54.70**	**313**	P	**P**	**08 52 21.7**	**-0.4**
	0.4nm,0.6s,mb2.9,baz=106,slow=8.8,SNR=2.9						
ILAR	**Eielson Array**	**62.06**	**27**	P	**P**	**08 53 10.7**	**-1.6**
	0.5nm,0.6s,mb3.2,baz=260,slow=5.4,SNR=5.6						
BVAR	**Borovoye Array**	**62.67**	**320**	P	**P**	**08 53 16.5**	**+0.1**
	2.3nm,0.3s,mb4.1,baz=98,slow=7.8,SNR=15						
YKA	**Yellowknife Ar**	**76.48**	**28**	P	**P**	**08 54 39.4**	**-0.3**
	0.7nm,0.5s,mb3.7,baz=276,slow=13,SNR=5.2						
ARCES	**ARCESS Array B**	**78.93**	**341**	P	**P**	**08 54 54.3**	**+1.5**
	1.1nm,0.5s,mb3.9,baz=75,slow=8.5,SNR=15						
NVAR	**Mina Array Bea**	**83.17**	**51**	P	**P**	**08 55 16.6**	**+1.2**
	0.5nm,0.8s,mb3.4,baz=280,slow=4.2,SNR=3.8						
FINES	**FINESS Array B**	**83.19**	**334**	P	**P**	**08 55 14.5**	**-0.5**
	0.7nm,0.4s,mb3.8,baz=63,slow=4.4,SNR=15						
LPAZ	**La Paz**	**149.95**	**85**	PKPbc	PKPdf	09 02 41.0	+10
	0.6nm,0.5s,baz=345,slow=1.5,SNR=5.2						

IDC **18** *08:46:23.6±0.5,3.63N×93.19E,mb4.4/20,mb1 4.5/21, mb1mx4.4/25,mbtmp4.4/21,ML4.4/1,MS3.9/10,Ms1 3.9/10, ms1mx3.6/31,Error ellipse: s-maj=17.4km s-min=13.5km az=63.0*
MOS **18** *08:46:27.0±1.1,3.71N×93.25E,h33^{km},mb4.7/21, MS4.0/6,Error ellipse: s-maj=18.0km s-min=8.9km az=89.5*
BJI **18** *08:46:28.6,3.58N×93.27E,h51^{km},mB4.9,mb5.0,Ms4.4, Msz4.1*
HRVD **18** *08:46:30.2±0.5,3.71N×93.15E,h16^{km}±2^{km},MW4.9/50, Centroid moment Tensor Solution. LP body waves: s19,c22;Mantle waves: s50,c76; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.66±.13; M$_{\theta\theta}$-0.85±.09; M$_{\phi\phi}$1.50±.13; M$_{r\theta}$0.51±.28; M$_{\theta\phi}$-1.81±.10; M$_{\phi r}$-1.83±.46; Best double couple: M$_0$2.721×10^{16} NP1:ϕ_s103°,δ49°, λ-175°. NP2:ϕ_s9°,δ86°,λ-42°. Principal axes: T 3.347, Plg25°, Azm64°; N -1.257, Plg48°, Azm185°; P -2.094, Plg31°, Azm317°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC **18** *08:46:30.2±1.2,3.67N×93.18E,h44^{km}±11^{km},mb4.9/18 Error ellipse: s-maj=8.8km s-min=6.3km az=218.0*
ISC 18 08:46:27.5±0.3,3.66N±0.05×93.20E±0.04,h37^{km}, h37^{km}±2.8^{km}:pP-P,n119,σ1^{s}.03/128,mb4.7/58,MS4.1/24, 7C-3D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**7.61**	**77**	*e*P	**P**	**08 48 17.9**	**-0.6**
KULM				*e*S	**S**	**08 49 36.9**	**-7.6**
IPM	**Ipoh**	**7.86**	**83**	P	**P**	**08 48 22.1**	**0.0**
SNG	**Songkhla**	**8.17**	**64**	P	**P**	**08 48 26.0**	**-0.5**
	480nm,0.9s						
KGM	**Kluang**	**10.24**	**99**	P	**P**	**08 48 55.2**	**0.0**
NNT	**Nongplab**	**10.98**	**36**	P	**P**	**08 49 05.0**	**-0.3**
PALK	**Pallekele**	**12.94**	**287**	*e*P	**P**	**08 49 31.2**	**-0.5**
	28nm,0.7s						
NST	**Nakhon Sawan**	**13.75**	**29**	P	**P**	**08 49 42.0**	**-0.4**
CM31	**Chiang Mai Arr**	**15.75**	**21**	*e*P	**P**	**08 50 07.9**	**-0.4**
	58nm,0.8s						
CMAR	**Chiang Mai Arr**	**15.75**	**21**	Pn	**P**	**08 50 06.7**	**-1.7**
	0.6nm,0.3s,baz=216,slow=13,SNR=61						
CMAR				Sn	**S**	**08 53 14.4**	**+13**
	0.4nm,0.3s,baz=212,slow=29,SNR=2.9						
CMAR				LR	LR	08 56 47.3	
	comp=Z,239nm,19.8s,baz=210,slow=40						
KKTK	**Khon Kaen**	**15.76**	**36**	P	**P**	**08 50 08.0**	**-0.5**
NANT	**Nan**	**16.74**	**25**	P	**P**	**08 50 22.5**	**+1.5**
	138nm,0.9s						
VIS	**Vishakhapatnam**	**17.00**	**326**	*i* P	**P**	**08 50 22.6**	**-1.6**
VIS				*i* x	x	08 53 16.6	
KSM	**Kuching**	**17.23**	**97**	*e*P	**P**	**08 50 30.0**	**+2.8**
HYB	**Hyderabad**	**19.83**	**315**	*e*P	**P**	**08 50 59.0**	**+1.0**
HYB				*e*S	**S**	**08 54 34.0**	**-0.2**
HYB	**Hyderabad**	**19.83**	**315**	*i* P	**P**	**08 50 59.0**	**+1.0**
HYB				*e*S	**S**	**08 54 35.0**	**+0.8**
SHL	**Shillong**	**21.82**	**357**	*e*P	**P**	**08 51 18.0**	**-0.4**
SHL				*e*S	**S**	**08 55 16.0**	**+3.5**
QIZ	**Qiongzhong**	**22.32**	**46**	*e*P	**P**	**08 51 24.3**	**+0.9**
QIZ				S	**S**	**08 55 27.8**	**+6.2**
QIZ				LR	LR		
	comp=N,960nm,17.2s,MS4.3						
QIZ				LR	LR		
	comp=E,590nm,17.5s,MS4.3						
QIZ				LR	LR		
	comp=Z,350nm,14.9s,MS3.9						
KKM	**Kota Kinabalu**	**23.06**	**83**	*e*P	**P**	**08 51 34.3**	**+3.4**
KKM	**Kota Kinabalu**	**23.06**	**83**	P	**P**	**08 51 34.4**	**+3.6**
KMI	**Kunming**	**23.23**	**22**	P	**P**	**08 51 34.4**	**+1.9**
KMI				AP		08 51 43.3	
KMI				XP		08 51 46.8	
KMI				PP	PP	08 52 08.0	+4.1
KMI				S	**S**	**08 55 41.6**	**+3.5**
KMI				XS		08 55 55.3	
KMI				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.6						
KMI				AMB	AMB		
	comp=Z,100nm,5.3s						
KMI				LR	LR		
	comp=N,370nm,16.0s,MS4.2						
KMI				LR	LR		
	comp=E,600nm,16.9s,MS4.2						
KMI				LR	LR		
	comp=Z,420nm,12.2s,MS4.1						
KMI	**Kunming**	**23.23**	**22**	P	**P**	**08 51 34.4**	**+1.9**
	comp=Z,31nm,1.1s,mb4.7						
KMI				pP		08 51 43.3	
KMI				sP		08 51 46.8	
KMI				PP	PP	08 52 08.0	+4.1
KMI				S	**S**	**08 55 41.6**	**+3.5**
KMI				sS		08 55 55.2	
KMI				LR	LR		
	comp=Z,420nm,12.2s,MS4.1						
POO	**Poona**	**24.02**	**309**	*e*x	x	08 52 25.0	
PKI	**Pulchoki**	**24.92**	**343**	*e*P	**P**	**08 51 48.7**	**-0.1**
	comp=Z,104nm,1.2s,mb5.2						
DMN	**Daman**	**25.04**	**343**	*e*P	**P**	**08 51 49.6**	**-0.4**
	comp=Z,96nm,0.9s,mb5.3						
GUN	**Gumba**	**25.11**	**345**	*e*P	**P**	**08 51 51.5**	**+0.9**
	comp=Z,49nm,1.1s,mb5.0						
KKN	**Kakani**	**25.16**	**343**	*e*P	**P**	**08 51 51.5**	**+0.4**
	comp=Z,100nm,1.0s,mb5.3						
GKN	**Gorkha**	**25.55**	**342**	*e*P	**P**	**08 51 55.6**	**+0.8**
	comp=Z,62nm,0.8s,mb5.2						
KOLN	**Koldanda**	**25.67**	**340**	*e*P	**P**	**08 51 56.6**	**+0.7**
	comp=Z,112nm,1.2s,mb5.3						
LSA	**Lhasa**	**25.97**	**356**	P	**P**	**08 52 00.8**	**+2.1**
LSA				S	**S**	**08 56 27.9**	**+3.4**
LSA				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.1						
LSA				AMB	AMB		
	comp=Z,70nm,5.0s						
LSA				LR	LR		
	comp=N,140nm,23.0s,MS3.9						
LSA				LR	LR		
	comp=E,380nm,22.0s,MS3.9						
LSA				LR	LR		
	comp=Z,290nm,17.0s,MS3.9						
LSA	**Lhasa**	**25.97**	**356**	*e*P	**P**	**08 52 00.6**	**+1.9**
	comp=Z,64nm,0.8s,mb5.2						
GYA	**Guiyang**	**26.09**	**28**	⇑*i*P	**P**	**08 52 00.3**	**+0.5**
GYA				AP	pP	08 52 07.8	-2.1
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=N,420nm,17.4s,MS4.2						
GYA				LR	LR		
	comp=E,470nm,15.9s,MS4.2						
GYA				LR	LR		
	comp=Z,480nm,18.2s,MS4.1						
LGTI	**Lohaghat**	**28.44**	**336**	*e*x	x	08 52 32.0	
CD2	**Chengdu**	**28.88**	**19**	⇑*i*P	**P**	**08 52 24.6**	**-0.5**
CD2				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.3						
ENH	**Enshi**	**30.63**	**28**	*e*P	**P**	**08 52 39.5**	**-1.2**
	comp=Z,19nm,0.8s,mb5.0						
WHN	**Wuhan**	**33.38**	**34**	P	**P**	**08 53 05.0**	**+0.3**
WHN				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
XAN	**Xi’an**	**33.59**	**24**	P	**P**	**08 53 05.3**	**-1.2**
XAN				AP	pP	08 53 16.4	-0.5
XAN				S	**S**	**08 58 18.9**	**-6.5**
XAN				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
XAN				LR	LR		
	comp=N,170nm,13.2s,MS4.2						
XAN				LR	LR		
	comp=E,250nm,14.6s,MS4.2						
XAN				LR	LR		
	comp=Z,360nm,13.2s,MS4.3						
LZH	**Lanzhou**	**33.73**	**16**	⇑P	**P**	**08 53 06.1**	**-1.6**
LZH				AP	pP	08 53 21.0	+2.9
LZH				XP	sP	08 53 26.9	+4.0
LZH				AMB	AMB		
	comp=Z,40nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,80nm,6.3s						
LZH				LR	LR		
	comp=N,250nm,13.3s						
LZH				LR	LR		
	comp=Z,440nm,17.4s,MS4.2						
LZH	**Lanzhou**	**33.73**	**16**	⇑P	**P**	**08 53 06.1**	**-1.6**
	comp=Z,43nm,1.5s,mb5.2						
LZH				pP	pP	08 53 21.0	+2.9
LZH				sP	sP	08 53 26.9	+4.0
LZH				LR	LR		
	comp=Z,440nm,17.4s,MS4.2						
GTA	**Gaotai**	**36.09**	**9**	P	**P**	**08 53 28.5**	**+0.7**
GTA				AP	pP	08 53 39.5	+1.2
GTA				XP	sP	08 53 43.1	+0.1
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GTA				AMB	AMB		
	comp=Z,110nm,10.3s						
GTA				LR	LR		
	comp=N,140nm,15.2s						
GTA				LR	LR		
	comp=E,270nm,22.1s						
GTA				LR	LR		
	comp=Z,190nm,14.8s,MS4.0						
NJ2	**Nanjing**	**37.12**	**38**	*e*P	**P**	**08 53 37.5**	**+0.9**
NJ2				AP	pP	08 53 47.3	+0.2
NJ2				XP	sP	08 53 51.1	-0.6
NJ2				PP	PP	08 55 00.6	-3.3
NJ2				S	**S**	**08 59 14.0**	**-5.9**
NJ2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,530nm,5.8s						
NJ2				LR	LR		
	comp=N,930nm,20.5s,MS4.7						
NJ2				LR	LR		
	comp=E,1μm,25.5s,MS4.7						
NJ2				LR	LR		
	comp=Z,250nm,23.4s,MS3.9						
SSE	**Sheshan**	**37.95**	**41**	*e*P	**P**	**08 53 33.6**	**-10**
SSE				pP	pP	08 53 42.4	-12
SSE				sP	sP	08 53 46.5	-12
SSE				PP	PP	08 55 00.6	-13
SSE				S	**S**	**08 59 17.8**	**-15**
SSE				sS		08 59 32.5	
SSE				SS	SS	09 02 24.7	+14
SSE				ScS	ScS	09 03 47.2	-3.3
SSE				LR	LR		
	comp=Z,320nm,14.1s,MS4.3						
FITZ	**Fitzroy Crossi**	**38.60**	**125**	P	**P**	**08 53 48.2**	**-0.8**
	comp=Z,14nm,0.7s,mb4.8,baz=321,slow=5.4,SNR=14						
WMQ	**Urumqi**	**40.29**	**354**	*e*P	**P**	**08 54 04.9**	**+2.1**
WMQ				AP	pP	08 54 14.6	+1.2
WMQ				XP	sP	08 54 18.6	+0.6
WMQ				PP	PP	08 55 42.0	+2.8
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,110nm,4.2s						
WMQ				LR	LR		
	comp=N,920nm,21.8s						
WMQ				LR	LR		
	comp=Z,900nm,21.8s,MS4.6						
HHC	**Hu-ho-hao-te**	**40.55**	**22**	*e*P	**P**	**08 54 06.0**	**+1.0**
HHC				AP	pP	08 54 18.8	+3.2
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,130nm,5.9s						
HHC				LR	LR		
	comp=N,220nm,14.3s,MS4.5						
HHC				LR	LR		
	comp=E,520nm,17.1s,MS4.5						
HHC				LR	LR		
	comp=Z,210nm,17.8s,MS4.0						
FRU	**Bishkek**	**42.37**	**340**	*e*P	**P**	**08 54 26.0**	**+6.0**
NWAO	**Narrogin (SRO)**	**42.92**	**150**	LR	LR	09 11 49.9	
	comp=Z,111nm,19.4s,MS3.8,baz=139,slow=36						
MKAR	**Makanchi Array**	**44.00**	**349**	P	**P**	**08 54 33.2**	**0.0**
MKAR						08 56 18.0	
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,154nm,18.5s						
MKAR	**Makanchi Array**	**44.00**	**349**	P	**P**	**08 54 33.2**	**0.0**
	comp=Z,5.7nm,0.6s,mb4.5,baz=164,slow=8.8,SNR=48						
MKAR				PP	PP	08 56 18.0	+0.7
	comp=Z,1.0nm,0.8s,baz=180,slow=8.6,SNR=1.8						
MKAR				LR	LR	09 16 45.7	
	comp=Z,154nm,18.5s,MS4.0,baz=170,slow=41						
MKAR	**Makanchi Array**	**44.00**	**349**	P	**P**	**08 54 33.2**	**0.0**
MKAR				PP	PP	08 56 18.0	+0.7
MKAR				LR	LR	09 16 45.7	
SONM	**Songino Array**	**45.46**	**12**	P	**P**	**08 54 44.9**	**+0.1**
	comp=Z,12nm,0.8s,mb4.8,baz=193,slow=8.7,SNR=78						
SONM				LR	LR	09 15 52.1	
	comp=Z,109nm,18.2s,MS3.8,baz=224,slow=39						
ULN	**Ulaanbaatar**	**45.63**	**13*c***	*i*P	**P**	**08 54 46.4**	**+0.2**
ULN	**Ulaanbaatar**	**45.63**	**13**	*e*P	**P**	**08 54 46.4**	**+0.2**
	comp=Z,6.3nm,0.8s,mb4.6						
JNU	**Nakatsue**	**45.79**	**46**	P	**P**	**08 54 47.3**	**-0.4**
	comp=Z,9.7nm,0.8s,mb4.8,baz=114,slow=7.3,SNR=8.1						
WRA	**Warramunga Arr**	**46.72**	**122**	P	**P**	**08 54 54.8**	**-0.3**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
WRA	**Warramunga Arr**	**46.72**	**122**	P	**P**	**08 54 54.8**	**-0.3**
	comp=Z,7.9nm,0.6s,mb4.8,baz=298,slow=8.9,SNR=107						
WRAB	**Tennant Creek**	**46.73**	**122**	*e*P	**P**	**08 54 55.3**	**+0.1**
	comp=Z,14nm,0.6s,mb5.0						
WB2	**Warramunga Arr**	**46.73**	**122**	*e*P	**P**	**08 54 55.5**	**+0.3**
ZAK	**Zakamensk**	**47.33**	**9**	*e*P	**P**	**08 55 00.2**	**+0.6**
ZAK				*e*	pP	08 55 11.2	+1.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
TLY	**Talaya**	**48.65**	**9**	*e*P	**P**	**08 55 10.6**	**+0.8**
TLY				*e*S	**S**	**09 02 05.4**	**-2.9**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
TLY				MLR	MLR		
	comp=Z,130nm,21.0s,MS3.9						
ZAL	**Zalesovo**	**50.59**	**354**	*i* P	**P**	**08 55 25.7**	**+1.0**
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ZAL	**Zalesovo**	**50.59**	**354**	P	**P**	**08 55 24.9**	**+0.2**
	comp=Z,5.3nm,0.5s,mb4.8,baz=306,slow=4.9,SNR=18						
ZAL				LR	LR	09 22 29.7	
	comp=Z,177nm,18.9s,MS4.1,baz=289,slow=43						
HIA	**Hailar**	**50.75**	**22**	*e*P	**P**	**08 55 26.2**	**+0.3**
	comp=Z,13nm,0.8s,mb4.9						
CIT	**Chita**	**51.10**	**16**	*e*P	**P**	**08 55 27.6**	**-0.9**
CIT				*e*	pP	08 55 39.2	-0.1
CIT				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.2						
NVS	**Novosibirsk**	**51.66**	**353**	*i* P	**P**	**08 55 31.6**	**-1.2**
NVS				pmax	pmax		
	comp=N,6.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
NVS				pmax	pmax		
	comp=E,9.0nm,1.1s						
MDJ	**Mudanjiang**	**51.83**	**33**	P	**P**	**08 55 34.8**	**+0.7**
MDJ				AP	pP	08 55 44.1	-0.8
MDJ				PP	PP	08 57 33.8	+1.1
MDJ				PCS		09 00 40.0	
MDJ				S	**S**	**09 02 56.1**	**+3.7**
MDJ				XS		09 03 15.1	
MDJ				AMB	AMB		
	comp=Z,70nm,4.1s						
MDJ				LR	LR		
	comp=N,130nm,19.6s						
MDJ				LR	LR		
	comp=E,160nm,14.5s						
MDJ				LR	LR		
	comp=Z,200nm,16.2s,MS4.2						
MDJ	**Mudanjiang**	**51.83**	**33**	P	**P**	**08 55 34.9**	**+0.8**
	comp=Z,5.8nm,0.7s,mb4.6						
VOSK	**Vostochnaya**	**52.25**	**343**	P	**P**	**08 55 35.9**	**-1.2**
VOSK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
BVA0	**Borovoye Array**	**52.69**	**343**	P	**P**	**08 55 39.6**	**-0.8**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
BVAR	**Borovoye Array**	**52.69**	**343**	P	**P**	**08 55 38.4**	**-2.1**
	comp=Z,2.4nm,0.7s,mb4.2,baz=143,slow=7.4,SNR=10						
MAT	**Matsushiro**	**52.72**	**46**	*e*P	**P**	**08 55 41.0**	**+0.1**
	comp=Z,4.1nm,0.7s,mb4.5						
MAT	**Matsushiro**	**52.72**	**46**	P	**P**	**08 55 41.6**	**+0.7**
MJAR	**Matsushiro Arr**	**52.72**	**46**	P	**P**	**08 55 40.5**	**-0.4**
MJAR						08 56 50.9	
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR				MLR	MLR		
	comp=Z,122nm,19.5s						
MJAR	**Matsushiro Arr**	**52.72**	**46**	P	**P**	**08 55 40.5**	**-0.4**
	comp=Z,3.5nm,0.6s,mb4.5,baz=247,slow=7.0,SNR=17						
MJAR				PcP	PcP	08 56 50.9	+0.6
	comp=Z,2.0nm,0.7s,baz=233,slow=5.6,SNR=4.4						
MJAR				LR	LR	09 19 03.6	
	comp=Z,122nm,19.4s,MS4.0,baz=275,slow=37						
MJAR	**Matsushiro Arr**	**52.72**	**46**	P	**P**	**08 55 40.5**	**-0.4**
MJAR				PcP	PcP	08 56 50.9	+0.6
MJAR				LR	LR	09 19 03.6	
ZRNK	**Zerenda**	**53.04**	**342**	P	**P**	**08 55 42.1**	**-1.0**
ZRNK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
ZRNK	**Zerenda**	**53.04**	**342**	*e*P	**P**	**08 55 42.0**	**-1.1**
	comp=Z,4.7nm,0.9s,mb4.4						
AB31	**Akbulak array**	**53.51**	**333**	P	**P**	**08 55 45.6**	**-1.0**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
KLR	**Kul’dur**	**55.98**	**30**	*e*P	**P**	**08 56 01.7**	**-2.9**
BOD	**Bodaibo**	**56.44**	**13**	⇓*i*P	**P**	**08 56 07.2**	**-0.6**
BOD				*e*	pP	08 56 18.3	-0.4
BOD				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
BOD				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
GNI	**Garni**	**56.77**	**317**	*e*P	**P**	**08 56 19.9**	**+10**
GNI				pmax	pmax		
	comp=Z,13nm,1.7s						
STKA	**Stephens Creek**	**57.97**	**131**	P	**P**	**08 56 18.2**	**-0.7**
	comp=Z,4.9nm,0.7s,mb4.7,baz=301,slow=7.5,SNR=13						
STKA	**Stephens Creek**	**57.97**	**131**	*e*P	**P**	**08 56 19.2**	**+0.2**
SVE	**Sverdlovsk**	**58.98**	**340**	*e*P	**P**	**08 56 25.0**	**-0.7**
SVE				*e*		08 56 42.0	
ASAJ	**Asahikawa**	**59.22**	**40**	P	**P**	**08 56 26.8**	**-0.7**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ASAJ	**Asahikawa**	**59.22**	**40**	P	**P**	**08 56 26.8**	**-0.8**
	comp=Z,3.8nm,0.5s,mb4.7,baz=262,slow=12,SNR=4.6						
ARU	**Arti**	**59.41**	**338**	⇓*i*P	**P**	**08 56 35.4**	**+6.7**
ARU				*e*		08 57 15.5	
ARU				*e*		08 58 46.7	
ARU				*e*S	**S**	**09 04 50.0**	**+17**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
ASF	**Jabal al Asfar**	**59.79**	**305**	P	**P**	**08 56 35.5**	**+3.9**
	comp=Z,2.1nm,0.6s,mb4.3,baz=27,slow=4.9,SNR=4.2						
YSS	**Yuzh-Sakhalins**	**60.69**	**37**	P	**P**	**08 56 38.2**	**+0.7**
YAK	**Yakutsk**	**64.27**	**18**	*e*P	**P**	**08 57 00.1**	**-1.0**
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
BR131	**Keskin Array S**	**64.51**	**313**	P	**P**	**08 57 07.4**	**+4.3**
BRTR	**Keskin Array B**	**64.51**	**313**	P	**P**	**08 57 04.0**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**64.51**	**313**	P	**P**	**08 57 04.0**	**+0.9**
	comp=Z,0.6nm,0.5s,mb3.9,baz=158,slow=6.7,SNR=3.9						
MATP	**Matopo**	**67.78**	**246**	P	**P**	**08 57 24.0**	**-0.2**
	comp=Z,1.6nm,0.6s,mb4.2,baz=28,slow=2.4,SNR=4.7						
MATP				LR	LR	09 20 58.2	
	comp=Z,110nm,20.9s,MS4.1,baz=38,slow=31						
OBN	**Obninsk**	**68.45**	**329**	P	**P**	**08 57 37.0**	**+9.3**
OBN				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.0						
KIS	**Kishinev**	**70.03**	**319**	*e*P	**P**	**08 57 40.0**	**+2.5**
KIS				*e*		09 01 50.0	
IDI	**Anoyia**	**70.23**	**306**	P	**P**	**08 57 39.9**	**+0.9**
	comp=Z,3.0nm,0.6s,mb4.4,baz=99,slow=13,SNR=2.4						
AKASG	**Malin Array Be**	**70.89**	**323**	P	**P**	**08 57 40.9**	**-1.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**70.89**	**323**	P	**P**	**08 57 40.9**	**-1.8**
	comp=Z,1.4nm,0.7s,mb4.0,baz=80,slow=5.9,SNR=4.4						
TIXI	**Tiksi**	**71.53**	**11**	⇑*i*P	**P**	**08 57 45.7**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
BOSA	**Boshof**	**72.58**	**239**	P	**P**	**08 57 52.8**	**-0.5**
	comp=Z,2.8nm,0.6s,mb4.3,baz=109,slow=6.6,SNR=7.8						
BOSA				LR	LR	09 23 05.1	
	comp=Z,119nm,20.6s,MS4.2,baz=46,slow=30						
MAW	**Mawson**	**74.24**	**192**	P	**P**	**08 58 01.6**	**-0.6**
MAW				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAW	**Mawson**	**74.24**	**192**	P	**P**	**08 58 01.6**	**-0.5**
	comp=Z,3.4nm,0.6s,mb4.4,baz=33,slow=9.2,SNR=5.3						
FINES	**FINESS Array B**	**75.99**	**333**	P	**P**	**08 58 11.5**	**-0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	**FINESS Array B**	**75.99**	**333**	P	**P**	**08 58 11.5**	**-0.9**
	comp=Z,1.2nm,0.9s,mb3.8,baz=102,slow=18,SNR=3.2						
KAF	**Kangasniemi**	**76.11**	**334**	*e*p	**P**	**08 58 17.8**	**+4.8**
	comp=Z,1.4nm,0.7s,mb4.0,baz=106,slow=5.3						
KAF	**Kangasniemi**	**76.11**	**334**	*e*P	**P**	**08 58 17.8**	**+4.8**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
ARCES	**ARCESS Array B**	**78.90**	**341**	P	**P**	**08 58 30.1**	**+1.7**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES				MLR	MLR		
	comp=Z,125nm,21.3s						
ARCES	**ARCESS Array B**	**78.90**	**341**	P	**P**	**08 58 30.1**	**+1.7**
	comp=Z,1.3nm,0.7s,mb4.0,baz=90,slow=3.6,SNR=4.4						
ARCES				LR	LR	09 36 05.2	
	comp=Z,125nm,21.3s,MS4.2,baz=91,slow=38						
BILL	**Bilibino**	**80.33**	**21**	*e*P	**P**	**08 58 36.8**	**+0.7**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
BILL				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.2						
GERES	**GERESS Array B**	**80.34**	**319**	P	**P**	**08 58 37.2**	**+0.6**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**80.34**	**319**	P	**P**	**08 58 37.2**	**+0.6**
	comp=Z,0.8nm,0.8s,mb3.7,baz=101,slow=6.8,SNR=6.3						
KHC	**Kasperske Hory**	**80.45**	**319**	*e*P	**P**	**08 58 45.2**	**+8.1**
SYO	**Syowa Base**	**81.12**	**197**	⇑P	**P**	**08 58 40.5**	**+0.2**
SYO	**Syowa Base**	**81.12**	**197**	⇓pP	pP	08 58 52.0	+0.4
VNDA	**Vanda**	**89.02**	**168**	P	**P**	**08 59 20.5**	**+1.2**
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	**89.02**	**168**	P	**P**	**08 59 20.5**	**+1.2**
	comp=Z,0.8nm,0.6s,mb4.2,baz=314,slow=4.1,SNR=8.4						
VNDA	**Vanda**	**89.02**	**168**	P	**P**	**08 59 20.5**	**+1.2**
JMIC	**Jan Mayen**	**90.38**	**341**	LR	LR	09 42 31.6	
	comp=Z,56nm,21.1s,MS4.0,baz=249,slow=37						
TXAR	**Lajitas Array**	**143.43**	**25**	PKhKP		09 05 54.5	
	comp=Z,0.1nm,0.5s,baz=204,slow=1.3,SNR=4.1						

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*NEIC **18** 08:49:04.8, 41.77N×8.64W, h11^{km}, MN2.6(MDD), After MDD.*

*CSEM **18** 08:49:04.6±0.1, 41.76N×8.64W, h10^{km}, ML3.0/9, Error ellipse: s-maj=2.8km s-min=1.4km az=74.0*

*INMG **18** 08:49:05.1±1.3, 41.79N×8.63W, h15^{km}±3^{km}, ML2.5, Error ellipse: s-maj=4.3km s-min=1.6km az=83.0*

MDD 18 08:49:04.8±0.4**, 41.77N×8.64W, h11^{km}, mbLg2.6**/18**, 3C-2D, Error ellipse: s-maj=3.8km s-min=1.8km az=59.0, PRXIMO, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZAM	**Zamans**	**0.38**	**354**	Pg	Pg	08 49 11.9	-0.7
EZAM				Lg		08 49 17.3	
EZAM	**Zamans**	**0.38**	**354**	⇓Pg	Pg	08 49 11.8	-0.8
	12nm,0.1s,SNR=18						
EZAM				Lg		08 49 17.3	
	93nm,0.1s,SNR=51						
EZAM	**Zamans**	**0.38**	**354**	Pg	Pg	08 49 11.9	-0.7
	12nm,0.1s,SNR=13						
EZAM				Lg		08 49 17.3	
	93nm,0.1s,SNR=51						
ELOB	**Lobios**	**0.44**	**77**	Pg	Pg	08 49 13.1	-0.7
ELOB				Lg		08 49 19.0	
ELOB	**Lobios**	**0.44**	**77**	⇑Pg	Pg	08 49 13.1	-0.7
	0.3nm,0.0s,SNR=18						
ELOB				Lg		08 49 19.0	
	570nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**0.44**	**77**	Pg	Pg	08 49 13.1	-0.7
	11nm,0.1s,SNR=154						
PVRL	**Vila Real**	**0.85**	**125**	*e*Pg	Pg	08 49 20.6	-1.3
PVRL				*e*Sg	Sg	08 49 32.3	-1.0
	166nm,0.1s						
PVRL	**Vila Real**	**0.85**	**125**	*e*Pg	Pg	08 49 20.6	-1.3
PVRL				*e*Sg	Sg	08 49 32.3	-1.0
	166nm,0.1s						
STS	**Santiago**	**1.12**	**3**	Pg	Pg	08 49 25.3	-1.8
	24nm,0.1s,SNR=13						
STS				Lg		08 49 39.9	
	45nm,0.2s,SNR=15						
PVIS	**Viseu**	**1.20**	**152**	*e*P	Pb	08 49 26.1	-0.9
PVIS				*e*S	Sb	08 49 42.4	+0.2
	103nm,0.1s						
PVIS	**Viseu**	**1.20**	**152**	*e*P	Pb	08 49 26.1	-0.9
PVIS				*e*S	Sb	08 49 42.4	+0.2
	103nm,0.1s						
EMAZ	**Mazaricos**	**1.20**	**348**	Pn	Pn	08 49 26.1	-1.5
	0.5nm,0.1s,SNR=42						
EMAZ				Pg	Pg	08 49 26.9	-1.9
	10nm,0.1s,SNR=7.9						
EMAZ				Sn	Sn	08 49 41.2	-2.7
	9.6nm,0.1s,SNR=7.9						
EMAZ				Lg		08 49 42.8	
	41nm,0.2s,SNR=5.0						

EMAZ	**Mazaricos**	**1.20**	**348**	Pn	Pn	08 49 26.1	-1.4
	0.5nm,0.1s,SNR=42						
EMAZ	**Mazaricos**	**1.20**	**348**	Pg	Pg	08 49 26.9	-1.9
	10nm,0.1s,SNR=7.9						
EMAZ				Sn	Sn	08 49 41.2	-2.7
	9.6nm,0.1s,SNR=7.9						
ERUA	**La Rua**	**1.28**	**60**	⇑Pg	Pg	08 49 28.4	-1.9
ERUA				Lg		08 49 44.9	
ERUA	**La Rua**	**1.28**	**60**	⇓Pg	Pg	08 49 28.3	-2.0
	41nm,0.2s,SNR=18						
ERUA				Lg		08 49 44.9	
	38nm,0.2s,SNR=16						
ERUA	**La Rua**	**1.28**	**60**	Pg	Pg	08 49 28.4	-1.9
	41nm,0.2s,SNR=18						
ECAL	**Calabor**	**1.43**	**83**	⇑Pn	Pn	08 49 29.0	-1.8
	5.7nm,0.2s,SNR=18						
ECAL				Pg	Pg	08 49 31.0	-2.4
	19nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	08 49 47.4	-2.3
	5.5nm,0.1s,SNR=7.9						
ECAL				Lg		08 49 49.7	
	98nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**1.43**	**83**	Pn	Pn	08 49 29.0	-1.8
	5.7nm,0.2s,SNR=18						
ECAL	**Calabor**	**1.43**	**83**	Pg	Pg	08 49 31.0	-2.4
	19nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	08 49 47.4	-2.3
	5.5nm,0.1s,SNR=7.9						
MTE	**Manteigas**	**1.60**	**148**	*e*Pn	Pn	08 49 31.6	-1.6
MTE	**Manteigas**	**1.60**	**148**	*e*Pg	Pg	08 49 33.4	-3.4
MTE				*e*Sg	Sg	08 49 54.5	-3.7
	46nm,0.5s						
MTE	**Manteigas**	**1.60**	**148**	Pn	Pn	08 49 31.6	-1.6
MTE				Pg	Pg	08 49 33.4	-3.4
MTE				Lg		08 49 54.5	
	23nm,0.5s						
MTE	**Manteigas**	**1.60**	**148**	*e*Pg	Pg	08 49 33.4	-3.4
MTE				*e*Sg	Sg	08 49 54.5	-3.7
	46nm,0.5s						
EPON	**Pontenova**	**1.91**	**35**	Pn	Pn	08 49 35.3	-2.3
	1.6nm,0.1s,SNR=114						
EPON				Pg	Pg	08 49 40.0	-2.8
	4.4nm,0.1s,SNR=7.9						
EPON				Sn	Sn	08 49 58.7	-3.1
	3.6nm,0.1s,SNR=7.9						
EPON				Lg		08 50 03.4	
	26nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**1.91**	**35**	Pn	Pn	08 49 35.3	-2.3
	1.6nm,0.1s,SNR=114						
EPON	**Pontenova**	**1.91**	**35**	Pg	Pg	08 49 40.0	-2.8
	4.4nm,0.1s,SNR=7.9						
EPON				Sn	Sn	08 49 58.7	-3.0
	3.6nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**2.12**	**155**	*e*Pn	Pn	08 49 39.8	-0.9
PCBR	**Castelo Branco**	**2.12**	**155**	*e*Pg	Pg	08 49 43.3	-3.9
PCBR				*e*Sn	Sn	08 50 04.8	-2.4
PCBR				*e*Sg	Sg	08 50 10.6	-4.9
	17nm,0.3s						
PCBR	**Castelo Branco**	**2.12**	**155**	Pn	Pn	08 49 39.8	-0.9
PCBR				Pg	Pg	08 49 43.3	-3.9
PCBR				Sn	Sn	08 50 04.8	-2.4
PCBR				Lg		08 50 10.6	
	8.4nm,0.3s						
PCBR	**Castelo Branco**	**2.12**	**155**	*e*Pg	Pg	08 49 43.3	-3.9
PCBR				*e*Sn	Sn	08 50 04.8	-2.4
PTOM	**Tomar**	**2.16**	**175**	*e*Pg	Pg	08 49 43.6	-4.3
PTOM				*e*Sg	Sg	08 50 11.8	-4.9
	21nm,0.3s						
PTOM	**Tomar**	**2.16**	**175**	Pg	Pg	08 49 43.6	-4.3
PTOM				Lg		08 50 11.8	
	10nm,0.3s						
EARI	**Arriondas**	**2.96**	**58**	Pn	Pn	08 49 51.9	-0.7
	2.5nm,0.1s,SNR=7.9						
EARI				Sn	Sn	08 50 26.4	-2.1
	0.7nm,0.2s,SNR=7.9						
EARI				Lg		08 50 38.1	
	2.1nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**2.96**	**58**	Pn	Pn	08 49 51.9	-0.7
	2.5nm,0.1s,SNR=7.9						
EARI				Sn	Sn	08 50 26.4	-2.1
	0.7nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.26**	**157**	Pn	Pn	08 49 54.9	-2.0
	1.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	08 50 30.9	-5.1
	3.3nm,0.2s,SNR=7.9						
EBAD				Lg		08 50 46.7	
	8.9nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.26**	**157**	Pn	Pn	08 49 54.9	-2.0
	1.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	08 50 30.9	-5.2
	3.3nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**4.12**	**68**	Pn	Pn	08 50 07.4	-1.6
	0.6nm,0.1s,SNR=7.9						
ELAN				Lg		08 51 13.0	
	3.1nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**4.12**	**68**	Pn	Pn	08 50 07.4	-1.7
	0.6nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**4.12**	**119**	Pn	Pn	08 50 09.4	+0.2
	3.4nm,0.2s,baz=305,slow=13,SNR=6.9						
ESDC				Sn	Sn	08 50 52.9	-5.1
	2.2nm,0.1s,baz=302,slow=23,SNR=6.0						
ESDC				Lg		08 51 11.9	
	1.6nm,0.1s,baz=307,slow=28,SNR=6.9						
ESDC	**Sonseca Array**	**4.12**	**119**	Sn	Sn	08 50 52.9	-5.1
	2.2nm,0.1s,SNR=6.0						
EMIN	**Mina Concepcio**	**4.28**	**159**	Pn	Pn	08 50 08.8	-2.5
	1.7nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	08 50 55.0	-6.8
	0.5nm,0.2s,SNR=7.9						
EMIN				Lg		08 51 17.9	
	4.1nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.28**	**159**	Pn	Pn	08 50 08.8	-2.5
	1.7nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	08 50 55.0	-6.8
	0.5nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**4.45**	**145**	Pn	Pn	08 50 10.9	-2.8
	0.7nm,0.2s,SNR=7.9						
ECAB				Sn	Sn	08 50 59.5	-6.6
	3.3nm,0.3s,SNR=7.9						
ECAB				Lg		08 51 23.4	
	3.3nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**4.45**	**145**	Pn	Pn	08 50 10.9	-2.8
	0.7nm,0.2s,SNR=7.9						
ECAB				Sn	Sn	08 50 59.5	-6.6
	3.3nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**4.76**	**138**	Pn	Pn	08 50 15.2	-3.0
	0.7nm,0.1s,SNR=7.9						
EADA				Sn	Sn	08 51 06.6	-7.5
	0.4nm,0.1s,SNR=7.9						
EADA				Lg		08 51 33.7	
	1.5nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**4.76**	**138**	Pn	Pn	08 50 15.2	-3.1
	0.7nm,0.1s,SNR=7.9						
EADA				Sn	Sn	08 51 06.7	-7.5
EQES	**Quesada**	**5.84**	**131**	Pn	Pn	08 50 30.7	-2.7
EQES				Lg		08 52 00.5	
EQES	**Quesada**	**5.84**	**131**	Pn	Pn	08 50 30.7	-2.7
	0.2nm,0.2s,SNR=4.0						

IDC 18 08:57:33.9±3.0**,4.55N**×**93.83E,mb3.7**/5**,mb1 3.9**/5**, mb1mx3.7**/19**,mbtmp3.7**/5**,Error ellipse: s-maj=116.2km s-min=25.6km az=57.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.70**	**19**	Pn	P	09 01 10.5	+5.3
	baz=180,slow=10.0,SNR=2.1						
MKAR	**Makanchi Array**	**43.25**	**348**	P	P	09 05 36.6	-2.1
	0.4nm,0.4s,baz=153,slow=8.1,SNR=3.7						
SONM	**Songino Array**	**44.45**	**12**	P	P	09 05 46.7	-1.8
	0.2nm,0.4s,baz=207,slow=6.4,SNR=2.5						
WRA	**Warramunga Arr**	**46.66**	**123**	P	P	09 06 04.6	-1.9
	1.8nm,0.6s,baz=299,slow=9.0,SNR=17						
ZAL	**Zalesovo**	**49.78**	**353**	P	P	09 06 28.7	-1.6
	1.1nm,0.5s,baz=321,slow=8.7,SNR=4.3						
BVAR	**Borovoye Array**	**52.02**	**342**	P	P	09 06 44.9	-2.4
	0.5nm,0.6s,baz=166,slow=12,SNR=3.9						

IDC ***18*** *09:25:41.0±1.2, 0.41N×96.78E, mb4.0/7, mb1 4.1/8, mb1mx3.9/18, mbtmp4.0/8, ML3.7/1, Error ellipse: s-maj=54.7km s-min=24.5km az=65.0*

NEIC ***18*** *09:25:45.7±0.6, 0.40N×96.84E, h30*^{km}*, mb4.2/1, Error ellipse: s-maj=14.5km s-min=11.4km az=100.0*

ISC 18 09:25:44.3±0.8**,0.4N**±0.1×**96.9E**±0.1**,h33**^{km}**,n15, σ0**^{s}**85**/13**,mb4.1**/8**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.11**	**38**	*e*P	**P**	**09 27 14.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**18.01**	**6**	P	**P**	**09 29 54.7**	**+0.7**
	0.1nm,0.3s,baz=197,slow=10,SNR=5.7						
KKM	**Kota Kinabalu**	**20.08**	**74**	*e*P	**P**	**09 30 17.0**	**-1.0**
KMI	**Kunming**	**25.18**	**13**	P	**P**	**09 31 11.7**	**+3.2**
	8.0nm,1.2s,mb4.1						
KMI				sP	sP	09 31 22.4	+0.8
WRA	**Warramunga Arr**	**41.91**	**121**	P	**P**	**09 33 34.1**	**+0.2**
	1.4nm,0.6s,mb3.7,baz=304,slow=9.0,SNR=5.8						
MKAR	**Makanchi Array**	**47.89**	**347**	P	**P**	**09 34 20.6**	**-0.7**
	1.6nm,0.6s,mb4.3,baz=153,slow=8.1,SNR=11						
SONM	**Songino Array**	**47.92**	**9**	P	**P**	**09 34 21.9**	**+0.4**
	0.3nm,0.5s,mb3.6,baz=312,slow=18,SNR=4.3						
ZAL	**Zalesovo**	**54.24**	**351**	P	**P**	**09 35 09.2**	**0.0**
	1.9nm,0.4s,mb4.4,baz=320,slow=4.2,SNR=6.6						
BVAR	**Borovoye Array**	**56.85**	**341**	P	**P**	**09 35 26.9**	**-1.2**
	2.4nm,0.7s,mb4.3,baz=233,slow=39,SNR=4.3						
LBTB	**Lobatse**	**73.27**	**244**	*e*P	**P**	**09 37 14.2**	**-0.6**
FINES	**FINESS Array B**	**80.52**	**333**	P	**P**	**09 37 54.3**	**-0.3**
	1.6nm,1.0s,mb3.9,baz=117,slow=3.1,SNR=3.8						
ARCES	**ARCESS Array B**	**83.13**	**340**	P	**P**	**09 38 08.6**	**+0.7**
	2.1nm,0.8s,mb4.2,baz=104,slow=5.0,SNR=8.7						
VNDA	**Vanda**	**85.15**	**169**	P	**P**	**09 38 18.9**	**+0.9**
TXAR	**Lajitas Array**	**144.47**	**32**	PKP	PKPdf	09 45 18.1	0.0
	0.2nm,0.6s,baz=214,slow=0.8,SNR=4.4						
CFAA	**Coronel Fontan**	**145.96**	**203**	PKPbc	PKPbc	09 45 23.4	+1.9
	0.2nm,0.6s,baz=162,slow=2.3,SNR=5.1						

NIED ***18*** *09:31:00, 24.00N×121.40E, h5*^{km}*, Mw4.8 Best double couple:* M_0*1.88×10*^{16} *NP1:*ϕ_s*41°, δ79°, λ105°. NP2:*ϕ_s*167°, δ19°, λ37°.*

JMA ***18*** *09:31:05.3±0.3, 23.98N×121.41E, h78*^{km}*, M4.9*

IDC ***18*** *09:31:05.1±0.5, 23.85N×121.63E, mb4.4/24, mb1 4.5/27, mb1mx4.5/32, mbtmp4.4/27, ML4.0/3, MS3.9/18, Ms1 3.9/18, ms1mx3.7/44, Error ellipse: s-maj=15.1km s-min=12.9km az=70.0*

TAP ***18*** *09:31:05.6, 23.95N×121.53E, h2*^{km}*, ML5.0*

TAP Felt V J at Hualien, II J at Chiawan, V J at Shilin, II J at Tachien, I J at Hungye, I J at Nanshan, II J at Nanau, II J at Ryuetan, I J at Nioudou, I J at Mingjian, I J at Alishan, II J at Tsauling, I J at Chenggung, I J at Lidau, II J at Gukeng, I J at Tsaushan, I J at Chiayi.

BJI ***18*** *09:31:06.1, 23.97N×121.56E, h6*^{km}*, mB4.9, mb4.5, ML5.1, Ms5.0, Msz4.8*

NEIC ***18*** *09:31:06.3±1.4, 23.96N×121.66E, h6*^{km}*±7*^{km}*, mb4.8/18, ML4.9(TAP), Error ellipse: s-maj=9.1km s-min=7.5km az=145.0*

NEIC Recorded [5 TAP] in Hua-lien; [2 TAP] in I-lan, Nan-t'ou and T'ai-chung; [1 TAP] in T'ai-tung Counties.

MAN ***18*** *09:31:53.7, 20.25N×121.76E, h1*^{km}*, mb5.0, ML3.9, MS3.9*

ISC 18 09:31:05.2±0.3**,23.89N**±0.01×**121.70E**±0.01**,h4**^{km}±2^{km}**, n195,σ1**^{s}**33**/238**,mb4.6**/44**,MS4.2**/18**,14C-2D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.12**	**314**	⇑*i*P	**Pg**	**09 31 08.1**	**+0.4**
ESF	**Shoufeng Towns**	**0.18**	**263**	*e*P	**Pg**	**09 31 07.9**	**-0.9**
ESF				S	**Sg**	**09 31 10.4**	**-0.8**
TWD	**Chiawan**	**0.21**	**333**	⇑*i*P	**Pg**	**09 31 09.6**	**+0.2**
TWD				S	**Sg**	**09 31 12.7**	**+0.5**
TEGC	**Jichi Village**	**0.23**	**218**	*e*P	**Pg**	**09 31 11.3**	**+1.4**
TEGC				S	**Sg**	**09 31 16.5**	**+3.5**
ESL	**Shilin**	**0.26**	**252**	⇑*i*P	**Pg**	**09 31 09.2**	**-1.1**
NACB	**Ninganchiao**	**0.29**	**341**	*e*P	**Pg**	**09 31 10.7**	**-0.5**
EHP	**Heping Village**	**0.42**	**5**	*e*P	**Pg**	**09 31 15.6**	**+2.0**
WHF	**Hehuan Shan**	**0.47**	**302**	⇑*i*P	**Pg**	**09 31 13.3**	**-1.3**
EHY	**Hungye**	**0.52**	**222**	*e*P	**Pg**	**09 31 14.8**	**-0.8**
ENA	**Nanau**	**0.53**	**4**	⇑P	**Pg**	**09 31 16.2**	**+0.3**
TWT	**Tachien**	**0.60**	**307**	*e*P	**Pg**	**09 31 16.3**	**-0.8**
NNS	**Nan Shan**	**0.62**	**331**	⇑*i*P	**Pg**	**09 31 17.1**	**-0.5**
NNS				S	**Sg**	**09 31 25.8**	**0.0**
TWF1	**Yuli**	**0.65**	**214**	*e*P	**Pg**	**09 31 17.7**	**-0.5**
TWC	**Suao**	**0.73**	**11**	*e*P	**Pg**	**09 31 19.9**	**+0.2**
SMLT	**Sun Moon Lake**	**0.73**	**269**	⇑*i*P	**Pg**	**09 31 18.6**	**-1.2**
SMLT				S	**Sg**	**09 31 28.3**	**-1.3**
ENTT	**Nioudou**	**0.75**	**351**	⇑*i*P	**Pg**	**09 31 20.1**	**-0.1**
ENTT				S	**Sg**	**09 31 31.6**	**+1.3**
TYC	**Yuchr**	**0.77**	**271**	⇑*i*P	**Pg**	**09 31 19.1**	**-1.5**
TWE	**Neicheng**	**0.82**	**358**	*e*P	**Pg**	**09 31 21.6**	**0.0**
TWE				S	**Sg**	**09 31 33.9**	**+1.3**
YHNB	**Yeheng**	**0.83**	**339**	*e*P	**Pg**	**09 31 20.7**	**-1.0**
NSK	**Sanguang**	**0.84**	**338**	⇑*i*P	**Pb**	**09 31 21.5**	**-0.5**
NSK				S	**Sg**	**09 31 32.9**	**-0.2**
CHKT	**Chengkung**	**0.85**	**201**	*e*P	**Pb**	**09 31 22.0**	**-0.1**
CHKT				S	**Sg**	**09 31 36.0**	**+2.6**
ILA	**Ilan**	**0.87**	**3**	*e*P	**Pb**	**09 31 23.1**	**+0.6**
ALS	**Alishan**	**0.90**	**245**	*e*P	**Pb**	**09 31 22.1**	**-1.0**
WNT	**Mingjian**	**0.93**	**269**	*e*P	**Pb**	**09 31 23.5**	**0.0**
WNT				S	**Sb**	**09 31 36.2**	**+0.2**
ELDTW	**Lidau**	**0.94**	**222**	*e*P	**Pb**	**09 31 23.9**	**+0.2**
ELDTW				S	**Sb**	**09 31 35.7**	**-0.6**
TWQ1	**Liyutan**	**0.96**	**298**	*e*P	**Pb**	**09 31 23.7**	**-0.3**
TCU	**Taichung**	**0.97**	**285**	*e*P	**Pb**	**09 31 24.4**	**+0.2**
NSTT	**Nanjuang**	**0.97**	**319**	P	**Pb**	**09 31 23.8**	**-0.4**
NSTT				S	**Sb**	**09 31 36.6**	**-0.6**
CHN5	**Tsauling**	**0.98**	**253**	⇑*i*P	**Pb**	**09 31 24.0**	**-0.4**
NSY	**Sanyi**	**1.00**	**301**	*e*P	**Pb**	**09 31 24.8**	**+0.1**
WGK	**Gukeng**	**1.06**	**259**	*e*P	**Pb**	**09 31 26.1**	**+0.3**
WGK				S	**Sb**	**09 31 41.1**	**+1.3**
TWA	**Mucha**	**1.09**	**355**	*e*P	**Pb**	**09 31 26.8**	**+0.6**
TATO	**Taipei**	**1.09**	**350**	*e*P	**Pb**	**09 31 26.5**	**+0.2**
HSN	**Hsinchu**	**1.12**	**324**	*e*P	**Pb**	**09 31 28.1**	**+1.3**
HSN				S	**Sb**	**09 31 43.8**	**+2.2**
TWB1	**Santiao Chiao**	**1.14**	**13**	*e*P	**Pb**	**09 31 28.6**	**+1.5**
TWB1				S	**Sb**	**09 31 45.6**	**+3.5**
CHN4	**Tsaushan**	**1.15**	**242**	*e*P	**Pb**	**09 31 27.3**	**0.0**
CHN4				S	**Sb**	**09 31 43.6**	**+1.3**
TAP1	**Taipei**	**1.15**	**352**	*e*P	**Pb**	**09 31 27.8**	**+0.5**
TAP1				S	**Sb**	**09 31 43.9**	**+1.4**
TAP	**Taipei**	**1.15**	**351**	*e*P	**Pb**	**09 31 28.6**	**+1.2**
NCU	**National Centr**	**1.17**	**337**	*e*P	**Pb**	**09 31 29.0**	**+1.4**
NCU				S	**Sb**	**09 31 45.4**	**+2.5**
NWF	**Wu-fen Shan**	**1.18**	**4**	*e*P	**Pb**	**09 31 28.6**	**+0.9**
CHN2	**Minshiung**	**1.18**	**252**	*e*P	**Pb**	**09 31 28.6**	**+0.9**
CHN2				S	**Sb**	**09 31 45.1**	**+1.9**
WTP	**Ta-pu**	**1.19**	**237**	⇑P	**Pb**	**09 31 27.8**	**-0.1**
WTP				S	**Sb**	**09 31 44.8**	**+1.4**
TWG	**Pinlang**	**1.21**	**208**	*e*P	**Pb**	**09 31 27.0**	**-1.4**
TWS1	**Kuangyinshan**	**1.23**	**348**	*e*P	**Pb**	**09 31 29.3**	**+0.7**
TWS1				S	**Sb**	**09 31 47.8**	**+3.2**
CHY	**Chiayi**	**1.23**	**252**	*e*P	**Pb**	**09 31 29.1**	**+0.5**
CHY				S	**Sb**	**09 31 45.0**	**+0.2**
TTN	**Taitung**	**1.24**	**204**	*e*P	**Pb**	**09 31 29.5**	**+0.6**
TWK	**Hsinying**	**1.27**	**241**	⇑P	**Pb**	**09 31 29.4**	**+0.1**
TWK				S	**Sb**	**09 31 46.0**	**+0.1**
CHN1	**Nanshi**	**1.28**	**237**	⇑P	**Pb**	**09 31 29.9**	**+0.3**
CHN1				S	**Sb**	**09 31 48.8**	**+2.5**
WTCT	**Ta-ch'eng**	**1.30**	**269**	*e*P	**Pb**	**09 31 29.9**	**+0.1**
WTCT				S	**Sb**	**09 31 45.1**	**-1.6**
SGST	**Jiashian**	**1.30**	**232**	*e*P	**Pb**	**09 31 30.1**	**+0.2**
SGST				S	**Sb**	**09 31 49.7**	**+2.9**
YOJ	**Yonaguni jima**	**1.32**	**64**	P	**Pb**	**09 31 31.5**	**+1.2**
YOJ				S	**Sb**	**09 31 51.3**	**+3.8**
TWY	**Chenhua**	**1.38**	**356**	*e*P	**Pb**	**09 31 32.8**	**+1.6**
ECL	**Taimali**	**1.46**	**208**	*e*P	**Pn**	**09 31 30.5**	**-2.0**
ECL				S	**Sb**	**09 31 54.8**	**+3.4**
CHN8	**Yiju**	**1.47**	**249**	*e*P	**Pn**	**09 31 33.0**	**+0.5**
CHN8				S	**Sb**	**09 31 53.4**	**+1.7**
CHN3	**Shinhua**	**1.47**	**237**	*e*P	**Pn**	**09 31 33.5**	**+1.0**
CHN3				S	**Sb**	**09 31 54.5**	**+2.8**
SCLT	**Jiali**	**1.56**	**243**	*e*P	**Pn**	**09 31 34.7**	**+0.9**
SCLT				S	**Sb**	**09 31 55.8**	**+1.7**
TWM1	**Shoushan**	**1.58**	**228**	*e*P	**Pn**	**09 31 35.0**	**+0.8**
TAI1	**Yung-k'ang**	**1.59**	**238**	*e*P	**Pn**	**09 31 35.7**	**+1.3**
TAI1				S	**Sb**	**09 31 57.2**	**+1.9**
SGLT	**Jiouru**	**1.61**	**224**	*e*P	**Pn**	**09 31 36.7**	**+2.2**
EAST	**Anshuo**	**1.69**	**208**	*e*P	**Pn**	**09 31 34.2**	**-1.6**
TAW	**Tawu**	**1.70**	**206**	*e*P	**Pn**	**09 31 37.6**	**+1.8**
PCYT	**Pengchaiyu**	**1.76**	**11**	*e*P	**Pn**	**09 31 37.5**	**+0.8**
SCZT	**Fangliau**	**1.81**	**213**	*e*P	**Pn**	**09 31 38.9**	**+1.5**
SCZT				S	**Sn**	**09 32 02.9**	**+1.8**
LAY	**Lan-yu**	**1.85**	**184**	*e*P	**Pn**	**09 31 36.0**	**-2.0**
IRIF	**Iriomote-Funau**	**1.91**	**76**	P	**Pn**	**09 31 39.4**	**+0.6**
IRIF				*e*S	**Sn**	**09 32 05.3**	**+1.7**
HATJ	**Hateruma jima**	**1.93**	**85**	P	**Pn**	**09 31 40.7**	**+1.5**
HATJ				*e*S	**Sn**	**09 32 06.3**	**+2.1**
TWP	**Hsiaoliuchiu**	**1.97**	**219**	*e*P	**Pn**	**09 31 40.9**	**+1.2**
WDGT	**Dungji**	**1.97**	**252**	*e*P	**Pn**	**09 31 39.3**	**-0.5**
WDGT				S	**Sn**	**09 32 03.3**	**-2.0**
PNG	**Penghu**	**1.99**	**261**	*e*P	**Pn**	**09 31 39.2**	**-0.8**
PNG				S	**Sn**	**09 32 04.8**	**-0.9**
HEN	**Hengchun**	**2.08**	**205**	*e*P	**Pn**	**09 31 43.8**	**+2.6**
TSEB	**Hengchuen, Pin**	**2.12**	**201**	*e*P	**Pn**	**09 31 41.4**	**-0.5**
JKRS	**Kuro-shima**	**2.14**	**80**	P	**Pn**	**09 31 43.2**	**+1.1**
JKRS				*e*S	**Sn**	**09 32 11.9**	**+2.4**
JIJ	**Ishigaki jima**	**2.28**	**78**	P	**Pn**	**09 31 44.3**	**+0.1**
JIJ				*e*S	**Sn**	**09 32 12.4**	**-0.7**
JTJ	**Tarama**	**2.84**	**74**	P	**Pn**	**09 31 53.3**	**+1.1**
JTJ				*e*S	**Sn**	**09 32 29.8**	**+2.5**
QZH	**Quanzhou**	**3.02**	**291**	P	**Pn**	**09 31 53.0**	**-1.7**
QZH				S	**Sn**	**09 32 27.6**	**-4.2**
QZH				Smax			
	comp=N,5µm,0.8s						
QZH				Smax			
	comp=E,8µm,1.4s						
QZH				LR	LR		
	comp=N,21µm,6.9s						
QZH				LR	LR		
	comp=E,42µm,7.3s						
QZH				LR	LR		
	comp=Z,23µm,8.5s						
KNM	**Kinmen**	**3.03**	**281**	*e*P	**Pn**	**09 31 54.8**	**-0.1**
JMJ	**Miyako jima 2**	**3.41**	**74**	*e*S	**Sn**	**09 32 42.0**	**+0.5**
BBP	**Basco**	**3.44**	**176**	*e*P	**Pn**	**09 31 59.2**	**-1.5**
BBP				*e*S	**Sn**	**09 32 41.4**	**-1.1**
JOGS	**Gusukube**	**3.49**	**75**	P	**Pn**	**09 32 01.9**	**+0.5**
JOGS				*e*S	**Sn**	**09 32 44.4**	**+0.7**
JKE	**Kume jima 2**	**5.21**	**61**	P	**Pn**	**09 32 25.0**	**-0.8**
SGCP	**Mt. Cagua**	**5.63**	**177**	*e*P	**Pn**	**09 32 28.8**	**-3.0**
APYP	**Conner**	**6.02**	**184**	*e*P	**Pn**	**09 32 34.7**	**-2.4**
CVP	**Callao Caves**	**6.16**	**179**	*i* P	**Pn**	**09 32 38.0**	**-1.2**
ABRA	**Dolores**	**6.28**	**189**	*e*P	**Pn**	**09 32 41.7**	**+0.8**
JIH	**Iheya**	**6.47**	**60**	P	**Pn**	**09 32 42.1**	**-1.5**
JOW	**Kunigami**	**6.63**	**62**	Pn	**Pn**	**09 32 43.1**	**-2.7**
	comp=Z,15nm,0.3s,baz=109,slow=18,SNR=26						
JOW				Sn	**Sn**	**09 34 00.8**	**-1.9**
	baz=185,slow=26,SNR=2.2						
JOW	**Kunigami**	**6.63**	**62**	P	**Pn**	**09 32 43.1**	**-2.7**
CAUP	**Cauayan**	**6.92**	**179**	*e*P	**Pn**	**09 32 50.9**	**+1.1**
JTK	**Tokunoshima**	**7.60**	**58**	P	**Pn**	**09 32 56.8**	**-2.6**
BOLP	**Bolinao**	**7.66**	**193**	*e*P	**Pn**	**09 33 00.4**	**+0.2**
BALP	**Baler**	**8.11**	**181**	*e*P	**P**	**09 33 07.5**	**+0.9**
SCZP	**Santa Cruz**	**8.25**	**192**	*e*P	**P**	**09 33 13.8**	**+5.3**
JAM	**Amami Oshima**	**8.41**	**56**	P	**P**	**09 33 07.0**	**-3.7**
NJ2	**Nanjing**	**8.51**	**343**	*e*P	**P**	**09 33 09.8**	**-2.3**
NJ2				AP		09 33 13.0	
NJ2				XP		09 33 15.8	
NJ2				S	**Sn**	**09 34 45.0**	**-4.6**
NJ2				XS		09 34 50.0	
NJ2				AMB	AMB		
	comp=Z,60nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,530nm,3.5s						
NJ2				Smax			
	comp=N,750nm,0.9s						
NJ2				Smax			
	comp=E,1µm,1.0s						
NJ2				LR	LR		
	comp=N,14µm,10.0s						
NJ2				LR	LR		
	comp=E,6µm,8.4s						
NJ2				LR	LR		
	comp=Z,8µm,9.1s						
WHN	**Wuhan**	**9.31**	**317**	*e*P	**P**	**09 33 20.5**	**-2.7**
WHN				S	**Sn**	**09 35 00.5**	**-9.0**
WHN				Smax			
	comp=N,2µm,1.7s						
WHN				Smax			
	comp=E,780nm,1.4s						
WHN				LR	LR		
	comp=N,6µm,10.4s						
WHN				LR	LR		
	comp=E,13µm,8.6s						
WHN				LR	LR		
	comp=Z,16µm,10.3s						
LUBP	**Lubang**	**10.20**	**188**	*e*P	**P**	**09 33 41.2**	**+5.6**
SJMP	**San Jose**	**11.38**	**183**	*e*P	**P**	**09 33 56.1**	**+4.3**
QIZ	**Qiongzhong**	**12.05**	**249**	*e*P	**P**	**09 33 59.0**	**-1.8**
QIZ				S	**S**	**09 36 09.4**	**-7.4**
QIZ				LR	LR		
	comp=N,2µm,14.0s						
QIZ				LR	LR		
	comp=E,650nm,9.3s						
QIZ				LR	LR		
	comp=Z,1µm,11.7s						
JNU	**Nakatsue**	**12.23**	**39**	Pn	**P**	**09 34 02.1**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=269,slow=41,SNR=3.5						
JNU				LR	LR	09 39 31.5	
	comp=Z,443nm,18.3s,baz=210,slow=41						
ENH	**Enshi**	**12.59**	**303**	P	**P**	**09 34 01.7**	**-6.3**
	comp=Z,28nm,1.2s						
TIA	**Tai'an**	**12.90**	**343**	*e*P	**P**	**09 34 10.6**	**-1.5**
TIA				*e*S	**S**	**09 36 35.3**	**-1.9**
TIA				LR	LR		
	comp=N,4µm,10.0s						
TIA				LR	LR		
	comp=E,3µm,9.0s						
GYA	**Guiyang**	**13.85**	**284**	P	**P**	**09 34 22.8**	**-2.0**
GYA				S	**S**	**09 36 54.1**	**-6.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s						
GYA				AMB	AMB		
	comp=Z,80nm,3.6s						
GYA				LR	LR		
	comp=N,2µm,8.1s						
GYA				LR	LR		
	comp=E,6µm,10.2s						
GYA				LR	LR		
	comp=Z,8µm,9.9s						
KS15	**Wonju Array Si**	**14.51**	**20**	*e*P	**P**	**09 34 38.2**	**+4.9**
DL2	**Dalian**	**14.97**	**360**	P	**P**	**09 34 39.5**	**+0.2**
DL2				AMB	AMB		
	comp=Z,270nm,5.0s						
DL2				LR	LR		
	comp=N,750nm,11.5s						
DL2				LR	LR		
	comp=E,580nm,10.1s						
DL2				LR	LR		
	comp=Z,910nm,13.7s						
XAN	**Xi'an**	**15.06**	**315**	P	**P**	**09 34 38.3**	**-2.3**
XAN				AP		09 34 48.1	
XAN				S	**S**	**09 37 24.4**	**-4.4**
XAN				LR	LR		
	comp=N,2µm,7.6s						
XAN				LR	LR		
	comp=E,3µm,10.2s						
XAN				LR	LR		
	comp=Z,5µm,10.2s						
KMI	**Kunming**	**17.30**	**278**	P	**P**	**09 35 12.3**	**+3.0**
KMI				XP		09 35 20.6	
KMI				PP	PP	09 35 26.5	+2.8
KMI				S	**S**	**09 38 27.1**	**+6.3**
KMI				AMB	AMB		
	comp=Z,270nm,5.3s						
KMI				LR	LR		
	comp=N,2µm,7.7s						
KMI				LR	LR		
	comp=E,3µm,9.6s						
KMI				LR	LR		
	comp=Z,4µm,9.6s						
KMI	**Kunming**	**17.30**	**278**	P	**P**	**09 35 12.3**	**+3.0**
	comp=Z,7.0nm,1.4s						
KMI				pP		09 35 15.9	
KMI				sP		09 35 20.6	
KMI				PP	PP	09 35 26.5	+2.8
KMI				S	**S**	**09 38 27.1**	**+6.3**
KMI				sS		09 38 35.8	
KMI				SS	SS	09 38 51.8	+10
CD2	**Chengdu**	**17.39**	**298**	P	**P**	**09 35 09.0**	**-1.3**
CD2				AMB	AMB		
	comp=Z,60nm,1.0s						
CD2				LR	LR		
	comp=E,6µm,9.6s						
CD2				LR	LR		
	comp=Z,7µm,8.4s						
SNY	**Shenyang**	**17.95**	**5**	PR		09 35 21.4	
SNY				S	**S**	**09 38 41.9**	**+6.3**

SNY				LR	LR		
	comp=N,2µm,10.5s						
SNY				LR	LR		
	comp=E,620nm,8.4s						
SNY				LR	LR		
	comp=Z,2µm,11.4s						
KKM	Kota Kinabalu	18.51	197	eP	P	09 35 24.1	-0.4
KKM	Kota Kinabalu	18.51	197	P	P	09 35 27.2	+2.7
CBIJ	Chichi jima	18.77	76	LR	LR	09 41 50.6	
	comp=Z,451nm,21.5s,baz=203,slow=34						
HHC	Hu-ho-hao-te	18.93	336	eP	P	09 35 31.8	+2.5
HHC				XP		09 35 40.0	
HHC				AMB	AMB		
	comp=Z,30nm,1.3s						
HHC				AMB	AMB		
	comp=Z,50nm,5.8s						
HHC				LR	LR		
	comp=N,2µm,12.2s						
HHC				LR	LR		
	comp=E,900nm,10.8s						
HHC				LR	LR		
	comp=Z,2µm,12.0s						
MAJO	Matsushiro	19.00	45	eP	P	09 35 28.4	-1.9
	comp=Z,20nm,1.1s						
MAT	Matsushiro	19.00	45	eP	P	09 35 27.0	-3.3
MAT	Matsushiro	19.00	45	P	P	09 35 27.0	-3.3
MJAR	Matsushiro Arr	19.00	45	P	P	09 35 28.2	-2.1
	comp=Z,0.2nm,0.3s,baz=238,slow=9.9,SNR=14						
MJAR				LR	LR	09 43 54.7	
	comp=Z,238nm,18.4s,baz=225,slow=40						
BTO	Baotou	19.34	332	eP	P	09 35 36.3	+2.1
BTO				AMB	AMB		
	comp=Z,10.0nm,0.5s						
BTO				LR	LR		
	comp=N,6µm,9.8s						
BTO				LR	LR		
	comp=E,2µm,9.9s						
LZH	Lanzhou	19.63	312	⇓P	P	09 35 39.0	+1.4
LZH				AP		09 35 43.5	
LZH				XP		09 35 46.0	
LZH				AMB	AMB		
	comp=Z,80nm,1.3s						
LZH				AMB	AMB		
	comp=Z,470nm,5.2s						
LZH				LR	LR		
	comp=N,3µm,10.0s						
LZH				LR	LR		
	comp=Z,4µm,13.5s						
LZH	Lanzhou	19.63	312	⇓P	P	09 35 39.0	+1.4
	comp=Z,83nm,1.3s						
LZH				pP		09 35 43.5	
LZH				sP		09 35 46.0	
LZH				PP	PP	09 36 02.2	+6.6
LZH				eS	S	09 39 29.1	+16
LZH				sS		09 39 38.0	
LZH				SS	SS	09 40 03.5	+23
CN2	Changchun	20.10	8	eP	P	09 35 43.1	+0.5
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,500nm,14.0s,MS4.5						
CN2				LR	LR		
	comp=E,1µm,14.0s,MS4.5						
CN2				LR	LR		
	comp=Z,1µm,15.0s,MS4.4						
MDJ	Mudanjiang	21.66	15	P	P	09 35 58.5	-0.2
MDJ				XP		09 36 04.6	
MDJ				PP	PP	09 36 24.8	+1.6
MDJ				S	S	09 39 57.1	+3.1
MDJ				XS		09 40 04.3	
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,30nm,3.2s						
MDJ				LR	LR		
	comp=N,560nm,15.1s,MS4.5						
MDJ				LR	LR		
	comp=E,1µm,15.1s,MS4.5						
MDJ				LR	LR		
	comp=Z,880nm,11.8s,MS4.4						
MDJ	Mudanjiang	21.66	15	eP	P	09 35 55.3	-3.4
	comp=Z,23nm,1.1s,mb4.5						
CMAR	Chiang Mai Arr	21.89	260	P	P	09 36 00.9	-0.2
	comp=Z,8.5nm,0.9s,mb4.2,baz=61,slow=8.5,SNR=29						
CMAR				LR	LR	09 44 58.0	
	comp=Z,352nm,18.1s,MS3.8,baz=80,slow=38						
GTA	Gaotai	24.12	315	P	P	09 36 25.0	+2.0
GTA				AP		09 36 31.8	
GTA				XP		09 36 35.4	
GTA				PCP	PcP	09 40 02.8	-3.0
GTA				S	S	09 40 43.0	+4.8
GTA				SCP		09 43 38.5	
GTA				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.0						
GTA				AMB	AMB		
	comp=Z,250nm,8.7s						
GTA				LR	LR		
	comp=N,1µm,12.2s,MS4.9						
GTA				LR	LR		
	comp=E,2µm,11.4s,MS4.9						
GTA				LR	LR		
	comp=Z,3µm,12.2s,MS4.9						
KSM	Kuching	24.87	208	eP	P	09 36 30.1	-0.4
HIA	Hailar	25.37	357	eP	P	09 36 34.5	-0.3
	comp=Z,6.1nm,0.3s,mb4.6						
ASAJ	Asahikawa	26.45	35	P	P	09 36 44.7	-0.3
	comp=Z,1.5nm,0.3s,mb4.0,baz=276,slow=14,SNR=4.1						
SONM	Songino Array	26.82	337	P	P	09 36 46.7	-1.6
	comp=Z,5.1nm,0.7s,mb4.2,baz=135,slow=8.2,SNR=17						
SONM				LR	LR	09 48 43.3	
	comp=Z,459nm,21.6s,MS4.0,baz=277,slow=39						
SHL	Shillong	27.11	280	eP	P	09 36 51.0	-0.2
LSA	Lhasa	27.82	289	P	P	09 36 55.1	-2.6
	comp=Z,8.8nm,0.6s,mb4.6						
GUN	Gumba	32.40	285	eP	P	09 37 37.0	-1.3
	comp=Z,49nm,1.1s,mb5.2						
PKI	Pulchoki	32.82	284	eP	P	09 37 40.9	-1.1
	comp=Z,29nm,1.1s,mb5.1						
KKN	Kakani	32.93	285	eP	P	09 37 42.3	-0.7
	comp=Z,20nm,0.8s,mb5.1						
GKN	Gorkha	33.49	285	eP	P	09 37 47.7	-0.2
	comp=Z,39nm,1.0s,mb5.3						
WMQ	Urumqi	34.20	314	eP	P	09 37 53.4	-0.4
WMQ				AP	pP	09 37 56.4	+1.4
WMQ				XP	sP	09 37 58.4	+2.9
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,140nm,4.6s						
WMQ				LR	LR		
	comp=N,640nm,13.0s,MS4.7						
WMQ				LR	LR		
	comp=E,620nm,13.8s,MS4.7						
WMQ				LR	LR		
	comp=Z,610nm,13.0s,MS4.5						
KOLN	Koldanda	34.42	285	eP	P	09 37 54.7	-1.2
	comp=Z,29nm,1.0s,mb5.2						
KAKA	Kakadu	37.87	163	eP	P	09 38 20.9	-4.2
	comp=Z,16nm,0.8s,mb4.8						
MKAR	Makanchi Array	38.87	316	P	P	09 38 32.2	-1.1
	comp=Z,2.8nm,0.6s,mb4.2,baz=104,slow=11,SNR=5.4						
MKAR				PcP	PcP	09 40 42.8	-2.0
	comp=Z,1.3nm,0.8s,baz=124,slow=4.4,SNR=3.3						
MKAR				ScP		09 44 31.1	
	comp=Z,0.7nm,0.6s,baz=79,slow=6.2,SNR=5.0						
MKAR	Makanchi Array	38.87	316	P	P	09 38 32.2	-1.1
MKAR				PcP	PcP	09 40 42.8	-2.0
MKAR				ScP		09 44 31.1	
ZAL	Zalesovo	40.75	327	P	P	09 38 47.8	-0.9
	comp=Z,3.9nm,0.8s,mb4.1,baz=352,slow=6.1,SNR=9.9						
ZAL				LR	LR	09 57 30.1	
	comp=Z,384nm,21.6s,MS4.2,baz=247,slow=39						
PMG	Port Moresby	41.41	140	LR	LR	09 53 47.5	
	comp=Z,120nm,20.2s,MS3.8,baz=212,slow=33						
FITZ	Fitzroy Crossi	41.92	174	P	P	09 38 55.3	-3.4
	comp=Z,6.9nm,0.8s,mb4.3,baz=13,slow=2.2,SNR=3.2						
WRAB	Tennant Creek	45.27	163	eP	P	09 39 23.1	-2.9
	comp=Z,18nm,0.9s,mb4.9						
WRA	Warramunga Arr	45.28	163	P	P	09 39 22.8	-3.2
	comp=Z,9.2nm,0.8s,mb4.7,baz=344,slow=8.7,SNR=31						
WB2	Warramunga Arr	45.28	163	eP	P	09 39 22.9	-3.1
BVAR	Borovoye Array	48.20	321	P	P	09 39 47.1	-1.5
	comp=Z,2.1nm,0.5s,mb4.4,baz=104,slow=10,SNR=5.7						
FX1	Attu Island--F	48.24	39	LR	LR	09 59 01.5	
	comp=Z,3.3nm,20.9s,baz=280,slow=35						
ZRNK	Zerenda	48.98	320	eP	P	09 39 52.1	-2.5
	comp=Z,15nm,1.1s,mb4.9						
CTA	Charters Tower	49.84	149	eP	P	09 40 02.4	+0.8
	comp=Z,4.8nm,0.7s,mb4.6						
CTA	Charters Tower	49.84	149	P	P	09 40 00.8	-0.9
	comp=Z,6.3nm,0.8s,mb4.7,baz=39,slow=16,SNR=3.3						
CTA				LR	LR	09 59 24.5	
	comp=Z,213nm,18.8s,MS4.2,baz=41,slow=34						
HNR	Honiara	49.94	127	LR	LR	09 59 48.7	
	comp=Z,146nm,18.6s,MS4.0,baz=135,slow=34						
BILL	Bilibino	51.80	20	eP	P	09 40 15.9	0.0
	comp=Z,7.8nm,1.1s,mb4.5						
STKA	Stephens Creek	58.63	160	P	P	09 41 04.3	-1.6
	comp=Z,4.6nm,0.5s,mb4.8,baz=327,slow=6.3,SNR=10.0						
STKA	Stephens Creek	58.63	160	eP	P	09 41 04.2	-1.8
DZM	Mont Dzumac	63.09	133	P	P	09 41 36.0	-0.4
	comp=Z,6.0nm,1.1s,mb4.6,baz=79,slow=16,SNR=3.1						
SPU	Mount Spurr	67.58	32	P	P	09 42 03.7	-1.0
ILAR	Eielson Array	69.25	27	P	P	09 42 15.7	+0.6
	comp=Z,1.0nm,0.5s,mb4.0,baz=269,slow=5.2,SNR=19						
MALT	Malatya	70.55	304	P	P	09 42 21.3	-2.1
	comp=Z,5.6nm,0.8s,mb4.5						
DIV	Divide	70.58	31	eP	P	09 42 22.5	-0.7
	comp=Z,111nm,1.5s,mb5.6						
FINES	FINESS Array B	71.93	330	P	P	09 42 29.6	-1.7
	comp=Z,0.5nm,0.5s,mb3.7,baz=42,slow=6.3,SNR=5.0						
FINES				LR	LR	10 16 54.5	
	comp=Z,196nm,18.7s,MS4.4,baz=102,slow=38						
INK	Inuvik	73.32	22	P	P	09 42 38.2	-1.2
	comp=Z,13nm,1.0s,mb4.8,baz=298,slow=5.6,SNR=12						
INK				LR	LR	10 19 43.1	
	comp=Z,85nm,18.3s,MS4.1,baz=311,slow=40						
INK	Inuvik	73.32	22	eP	P	09 42 38.0	-1.3
	comp=Z,23nm,1.1s,mb5.0						
AKASG	Malin Array Be	73.40	318	P	P	09 42 37.4	-2.7
	comp=Z,0.2nm,0.2s,mb3.6,baz=360,slow=2.8,SNR=2.9						
AKASG	Malin Array Be	73.40	318	P	P	09 42 37.4	-2.7
ASF	Jabal al Asfar	73.52	298	LR	LR	10 19 36.4	
	comp=Z,103nm,20.6s,MS4.1,baz=280,slow=40						
BR131	Keskin Array S	73.72	307	eP	P	09 42 44.8	+2.5
	comp=Z,1.5nm,0.6s,mb4.1						
BRTR	Keskin Array B	73.72	307	P	P	09 42 41.5	-0.8
	comp=Z,3.3nm,0.9s,mb4.3,baz=108,slow=3.9,SNR=13						
AFI	Afiamalu	75.06	113	LR	LR	10 09 36.8	
	comp=Z,55nm,21.0s,MS3.8,baz=78,slow=31						
HFS	Hagfors	78.05	331	LR	LR	10 20 35.2	
	comp=Z,334nm,19.4s,MS4.7,baz=303,slow=38						
NB2	NORSAR Subarra	78.70	332	P	P	09 43 10.1	+0.2
	comp=Z,0.4nm,0.6s,mb3.5,baz=58,slow=5.6						
NOA	NORSAR Array B	78.70	332	P	P	09 43 09.9	0.0
	comp=Z,1.3nm,0.9s,mb3.9,baz=66,slow=5.0,SNR=3.8						
NOA				LR	LR	10 19 42.8	
	comp=Z,101nm,20.8s,MS4.1,baz=45,slow=37						
DLBC	Dease Lake	78.96	31	P	P	09 43 11.4	+0.1
	comp=Z,12nm,1.2s,mb4.7,baz=313,slow=5.8,SNR=6.7						
DLBC	Dease Lake	78.96	31	P	P	09 43 10.7	-0.6
RPZ	Rata Peaks	81.09	146	LR	LR	10 16 53.9	
	comp=Z,148nm,20.8s,MS4.3,baz=179,slow=34						
CLL	Collm	82.57	323	P	P	09 43 32.0	+1.5
YKW3	Yellowknife Ar	83.01	23	P	P	09 43 30.6	-2.0
YKA	Yellowknife Ar	83.05	23	P	P	09 43 32.4	-0.4
	comp=Z,5.7nm,0.8s,mb4.7,baz=315,slow=5.0,SNR=21						
YKA	Yellowknife Ar	83.05	23	P	P	09 43 32.4	-0.4
GERES	GERESS Array B	83.36	321	P	P	09 43 33.3	-1.5
	comp=Z,1.9nm,0.8s,mb4.2,baz=315,slow=1.9,SNR=4.4						
OPO	Ambohidratompo	84.01	247	P	P	09 43 38.2	-0.5
	comp=Z,2.9nm,0.9s,mb4.4,baz=22,slow=7.9,SNR=4.3						
GRA1	Grafenberg Arr	84.36	322	eP	P	09 43 42.1	+2.4
	comp=Z,8.0nm,1.4s,mb4.7						
GRF	Grafenberg Arr	84.36	322	eP	P	09 43 42.1	+2.4
	comp=Z,8.0nm,1.4s,mb4.7						
EDM	Edmonton	89.63	30	eP	P	09 44 04.8	-0.5
NEW	Newport	90.97	35	P	P	09 44 12.1	+0.4
	comp=Z,5.9nm,1.0s,mb4.9						
NEW	Newport	90.97	35	P	P	09 44 12.1	+0.4
YBH	Yreka Blue Hor	91.65	42	P	P	09 44 16.0	+1.1
	comp=Z,6.6nm,1.1s,mb4.9,baz=307,slow=10,SNR=2.3						
BMO	Blue Mountains	92.99	38	eP	P	09 44 23.1	+2.1
	comp=Z,3.3nm,0.9s,mb4.8						
MOD	Modoc	93.03	41	eP	P	09 44 21.6	+0.3
	comp=Z,16nm,1.2s,mb5.3						
FFC	Flin Flon	93.21	24	eP	P	09 44 23.2	+1.5
	comp=Z,9.3nm,1.0s,mb5.2						
PPT	Papeete	95.82	107	LR	LR	10 22 08.1	
	comp=Z,12nm,19.5s,MS3.4,baz=298,slow=32						
NVAR	Mina Array Bea	96.32	43	P	P	09 44 36.6	+0.1
	comp=Z,2.3nm,0.9s,mb4.6,baz=292,slow=3.4,SNR=9.2						
SDV	Santo Domingo	145.26	22	PKP	PKPdf	09 50 44.0	-3.4
	comp=Z,17nm,1.0s,baz=14,slow=3.5,SNR=11						
SDV	Santo Domingo	145.26	22	ePKPdf	PKPdf	09 50 44.2	-3.2
OTAV	Otavalo	149.05	42	ePKPbc	PKPdf	09 51 00.0	+6.4

BJI **18** *09:31:41.0, 32.47N×47.44E, h42^{km}, mB5.1, mb4.9, Ms5.1, Msz4.8*

SNSN **18** *09:31:45.0, 32.71N×48.60E, h10^{km}*

OMAN **18** *09:31:47.7, 33.31N×48.26E, h99^{km}, Error ellipse: s-maj=578.9km s-min=84.0km az=330.0*

CSEM **18** *09:31:47.6±0.0, 32.97N×48.46E, h25^{km}, mb4.7/51, ML5.4/1, Ms3.6, Error ellipse: s-maj=1.8km s-min=1.3km az=37.0*

THR **18** *09:31:50.3±0.9, 33.14N×48.54E, h14^{km}±7^{km}, ML4.5*

TEH **18** *09:31:52.3, 33.06N×48.57E, h10^{km}, Mn4.6*

ZUR_RM **18** *09:31:52, 33.12N×48.42E, h18^{km}, Mw4.7/7, Moment Tensor Solution. s7 Moment tensor: Scale 10^{16}Nm; M_{rr}0.96; $M_{\theta\theta}$-0.94; $M_{\phi\phi}$-0.02; $M_{r\theta}$0.28; $M_{\theta\phi}$0.78; $M_{\phi r}$-0.14; Best double couple: $M_0$1.21×10^{16} NP1:ϕ_s118°, δ52°, λ87°. NP2:ϕ_s302°, δ38°, λ94°. Principal axes: T 1.002, Plg82°, Azm13°; N .4216, Plg2°, Azm119°; P -1.4235, Plg7°, Azm210°;*

MOS **18** *09:31:53.8±1.0, 33.22N×48.38E, h68^{km}, mb4.9/40 Error ellipse: s-maj=7.0km s-min=3.7km az=123.6*

NEIC **18** *09:31:53.1±0.4, 33.10N×48.45E, h50^{km}±3^{km}, mb4.8/65, MS3.7/2, Error ellipse: s-maj=4.8km s-min=2.8km az=190.0*

IDC **18** *09:31:55.2±3.0, 33.22N×48.38E, h60^{km}±26^{km}, mb4.1/27, mb1 4.2/30, mb1mx4.2/31, mbtmp4.4/30, ML2.9/3, MS3.7/9, Ms1 3.7/9, ms1mx3.5/33, Error ellipse: s-maj=13.0km s-min=11.5km az=127.0*

ISC 18 09:31:50.3±0.3**, 32.97N**±0.02×**48.43E**±0.02**, h45**^{km}±4^{km}**, n339,** σ1^{s}**14**/344**, mb4.6**/92**, MS3.8**/12**, 51C-11D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGO	Shushtar	0.92	160	ePG	P	09 32 09.8	+2.9
SHGO				AML	AML	09 32 44.1	
	comp=E,10µm,0.6s						
IVIS	Veys	2.03	320	Pn	P	09 32 29.9	+7.1
ASAO	Ashtian	2.06	40	ePg	P	09 32 24.0	+0.9
ASAO				eSg	S	09 32 49.0	+1.4
ASAO	Ashtian	2.06	40	ePG	P	09 32 24.1	+1.0
ASAO				eSG	S	09 32 50.0	+2.4
ASAO				AML	AML	09 32 57.2	
	comp=N,5µm,0.6s						
ASAO	Ashtian	2.06	40	ePg	P	09 32 24.1	+1.0
	SNR=90						
ASAO				eSg	S	09 32 50.0	+2.4
	comp=N,5µm,0.6s,SNR=90						
IGHG	Ghaleghazi	2.06	312	Pn	P	09 32 27.2	+4.0
IPIR	Pirpir	2.09	97	Pn	P	09 32 25.0	+1.4
IDHR	Dehrash	2.42	316	Pn	P	09 32 29.1	+0.7
IKLH	Kalahroud	2.66	82	Pn	P	09 32 30.7	-1.1
IRAZ	Razeghan	2.72	27	Pn	P	09 32 37.1	+4.4
QAM	Qamsar	2.96	71	Pn	P	09 32 34.0	-2.1
IGAR	Garneh	3.26	102	Pn	P	09 32 36.9	-3.3
IMHD	Mahdasht	3.28	34	Pn	P	09 32 41.4	+0.9
IZEF	Zefreh	3.28	90	Pn	P	09 32 38.7	-1.8
IVRN	Varamin	3.40	53	Pn	P	09 32 43.1	+0.9
IVRN				Lg		09 33 33.8	
BHD	Baghdad	3.41	276	ePn	x	09 32 41.0	
BHD				ePg	x	09 32 51.0	
BHD				eSn	x	09 33 17.5	
BHD				eSb	x	09 33 23.0	
BHD				i Lg	x	09 33 26.5	
BHD				eSg	x	09 33 28.0	
THKV	Tehran--Karaj	3.56	34	ePn	P	09 32 45.0	+0.5
THKV	Tehran--Karaj	3.56	34	ePN	P	09 32 45.4	+0.9
NASN	Na’in	3.69	92	ePn	P	09 32 48.0	+1.7
NASN	Na’in	3.69	92	ePN	P	09 32 48.2	+2.0
NASN	Na’in	3.69	92	ePn	P	09 32 48.2	+1.9
	SNR=52						
KBD	Kabd	3.84	190	eP	P	09 32 52.7	+4.3
KBD				eS	S	09 33 40.3	+7.5
DAMV	Damavand	3.95	47	ePn	P	09 32 50.0	0.0
DAMV	Damavand	3.95	47	ePN	P	09 32 50.4	+0.4
DAMV				AML	AML	09 34 00.2	
	comp=E,808nm,0.6s						
IDMV	Damavand	3.95	48	Pn	P	09 32 50.5	+0.5
RDF	Al-Radifah	4.11	191	eP	P	09 32 56.2	+4.0
RDF				eS	S	09 33 45.4	+5.8
ILAS	Lasjerd	4.46	56	Pn	P	09 32 57.2	0.0
IFIR	Firoozkooh	4.46	52	Pn	P	09 32 57.3	+0.1
IFIR				Lg		09 34 08.3	
ISAD	Sadrabad	4.56	102	Pn	P	09 33 00.0	+1.3
ISHM	Shahmirzad	4.91	54	Pn	P	09 33 03.7	+0.1
IPAR	Pars	5.03	127	Pn	P	09 33 05.7	+0.5
ICHK	Chekchek	5.09	97	Pn	P	09 33 06.1	0.0
IANJ	Anjiloo	5.18	60	Pn	P	09 33 06.7	-0.6
IMOK	Mook	5.37	136	Pn	P	09 33 12.1	+2.2
IMEH	Mehriz	5.47	105	Pn	P	09 33 12.2	+0.8
MSL	Mosul	5.51	308	ePn	x	09 33 10.5	
MSL				ePg	x	09 33 33.5	
MSL				i Sn	x	09 34 10.0	
MSL				i Sg	x	09 34 42.5	
GRMI	Germi	5.84	356	ePn	P	09 33 16.0	-0.5
GRMI				eSg	S	09 34 46.0	+23
GRMI	Germi	5.84	356	ePN	P	09 33 16.7	+0.2
GRMI				eSG	S	09 34 46.0	+23
IBAF	Bafgh	6.20	101	Pn	P	09 33 22.4	+0.9
TVAN	Van	6.89	325	i P	P	09 33 31.0	-0.2
BEST	Besiri	7.63	312	i P	P	09 33 46.7	+5.1
GNI	Garni	7.75	339	eP	P	09 33 43.5	+0.3
GNI				pmax	pmax		
	comp=Z,39nm,0.8s						
GNI	Garni	7.75	339	P	P	09 33 43.6	+0.3
	comp=Z,0.6nm,0.3s,baz=184,slow=13,SNR=2.8						
GNI				LR	LR	09 36 57.7	
	comp=Z,402nm,21.4s,baz=155,slow=40						
GNI	Garni	7.75	339	eP	P	09 33 43.5	+0.3
	comp=Z,39nm,0.8s						
HASS	Wahat al Ahsa’	7.83	172	P	P	09 33 45.1	+0.7
HILS	Ha’il	8.00	228	S	S	09 35 12.1	-4.7
HILS				P		09 33 45.6	
ARSS	Ar Rass	8.39	214	P	P	09 33 50.9	-1.2
TI2	Plekhanov	9.22	343	eP	P	09 34 03.2	-0.3
TI2				MLR	MLR		
	comp=N,2µm,20.0s						
TI2				MLR	MLR		
	comp=E,2µm,20.0s						
TI2				MLR	MLR		
	comp=Z,2µm,20.0s						
TBLG	Delisi	9.22	342	eP	P	09 34 03.2	-0.3
MZLS	Mizel	9.35	198	P	P	09 34 04.4	-1.0
ELZG	Elazig	9.45	308	i P	P	09 34 07.8	+1.1
QURS	Qurayyt al Mil	9.55	263	P	P	09 34 06.3	-1.7
MALT	Malatya	9.73	306	eP	P	09 34 08.7	-1.8
MALT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MALT	Malatya	9.73	306	eP	P	09 34 08.7	-1.8
	comp=Z,9.4nm,0.7s						
ASF	Jabal al Asfar	9.77	268	P	P	09 34 08.9	-2.2
	comp=Z,2.4nm,0.3s,baz=317,slow=7.8,SNR=21						
ASF				LR	LR	09 38 57.7	
	comp=Z,316nm,19.1s,baz=309,slow=43						
BANOM	Banah	9.81	134	⇑P	P	09 34 10.6	-1.1
	SNR=70						
GZT	Gaziantep	9.91	299	i P	P	09 34 10.7	-2.3
KELT	Kelkit	10.28	317	i P	P	09 34 20.1	+2.1
ZEI	Tsey	10.41	341	eP	P	09 34 23.2	+3.3
KAHT	Ahir Dag	10.53	299	i P	P	09 34 16.4	-5.0
ASHO	Ashiyiah	10.62	139	P	P	09 34 21.8	-1.0
	SNR=12						
COBT	Iskenderun	10.62	293	i P	P	09 34 18.7	-4.0
KIV	Kislovodsk	11.85	339	eP	P	09 34 40.5	+1.2
ARQ	Araqi	11.96	141	⇑P	P	09 34 39.6	-1.2
EIL	Elat	11.99	258	eP	P	09 34 38.3	-2.9
	comp=Z,14nm,0.6s						
EIL	Elat	11.99	258	eP	P	09 34 38.3	-2.9
	comp=Z,14nm,0.6s						
DBAS	Duba	12.21	245	P	P	09 34 42.3	-1.9
MEST	Erdemli	12.29	291	i P	P	09 34 46.0	+0.8
AVNT	Avonos	12.44	302	i P	P	09 34 46.4	-0.8
SOC	Sochi	12.60	330	eP	P	09 34 49.9	+0.5
SOC				e		09 37 03.3	
SOC				pmax	pmax		
	comp=Z,30nm,1.0s						
SOC				pmax	pmax		
	comp=N,47nm,1.1s						
SOC				pmax	pmax		
	comp=E,14nm,1.1s						
SOC				MLR	MLR		
	comp=N,695nm,18.0s						
SOC				MLR	MLR		
	comp=E,549nm,18.0s						
SOC				MLR	MLR		
	comp=Z,587nm,18.0s						
SOC	Sochi	12.60	330	eP	P	09 34 49.9	+0.5
	comp=Z,30nm,1.0s						
SOC				e		09 37 03.3	
GOF	Gofitskoye	12.77	342	⇑iP	P	09 34 51.6	-0.1
GOF				pmax	pmax		
	comp=Z,30nm,1.3s						
GOF	Gofitskoye	12.77	342	⇑iP	P	09 34 51.6	-0.1
	comp=Z,30nm,1.3s						
BSY	Bisya	12.80	141	⇓P	P	09 34 51.0	-1.0
	SNR=17						
BSYO	Bisya	12.83	140	P	P	09 34 51.0	-1.5
	SNR=17						
SMDO	Samad	13.02	137	⇓P	P	09 34 53.5	-1.5
	SNR=8.7						
KAMS	Al Khamasin	13.07	196	P	P	09 34 56.2	+0.5
JMDO	Jabal Madar	13.59	139	⇑P	P	09 35 01.1	-1.4
BOYT	Boyabat	13.68	312	i P	P	09 35 03.0	-0.5
BR131	Keskin Array S	13.69	304	eP	P	09 35 03.4	-0.3
	comp=Z,1.7nm,0.6s						
BRTR	Keskin Array B	13.69	304	P	P	09 35 03.9	+0.2
	comp=Z,0.1nm,0.3s,baz=127,slow=12,SNR=13						
WBK	Wadi Bani Khal	13.90	135	⇑P	P	09 35 05.0	-1.6
TATS	Tathlith	14.09	200	P	P	09 35 10.0	+0.9
ELDT	Eldivan	14.17	306	i P	P	09 35 13.4	+3.4
BALT	Daday	14.70	310	i P	P	09 35 17.5	+0.6
SGKT	Sivrigoynuk	15.14	305	i P	P	09 35 23.8	+1.1
ISP	Isparta	15.40	293c	iP	P	09 35 30.9	+4.9
TKTP	Tekketepe	15.59	294	i P	P	09 35 32.4	+4.0
ESKT	Eskisehir	15.61	300	i P	P	09 35 34.3	+5.6
WHFO	Wadi Hawf	15.74	161	⇓P	P	09 35 28.9	-1.6
	SNR=12						
DJNS	Zahran al Janu	15.83	197	P	P	09 35 33.3	+1.7
ABTO	Aybut	16.16	163	⇓P	P	09 35 34.6	-1.2
	SNR=12						
RBK	Rabkut	16.26	160	⇓P	P	09 35 35.9	-1.1
	SNR=24						
MANT	Manisa	17.04	294	i P	P	09 35 49.2	+2.4
ULDT	Uludag	17.06	300	i P	P	09 35 46.3	-0.6
BDRM	Kayabasi	17.66	289	i P	P	09 35 50.8	-3.8
AB31	Akbulak array	18.40	24	eP	P	09 36 01.9	-1.7
AB31				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AB31	Akbulak array	18.40	24	eP	P	09 36 01.9	-1.7
	comp=Z,7.0nm,0.8s						
MUKL	Al Mukalla	18.42	178	⇑eP	P	09 36 00.0	-4.1
LBOS		19.24	189	⇑eP	P	09 36 16.6	+3.0
PRD	Provadia	19.40	308	P	P	09 36 15.5	+0.3
VRSR	Storozhevoye	19.45	342	eP	P	09 36 12.5	-3.2
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRSR				pmax	pmax		
	comp=N,20nm,0.8s						
VRSR				pmax	pmax		
	comp=E,60nm,0.9s						
VRSR	Storozhevoye	19.45	342	eP	P	09 36 12.5	-3.2
	comp=E,10.0nm,0.9s						
ALN	Alexandroupoli	19.53	300	eP	P	09 36 16.4	-0.3
IDI	Anoyia	19.62	283	P	P	09 36 18.3	+0.6
	comp=E,2.5nm,0.3s,baz=83,slow=12,SNR=23						
VOR	Voronezh	19.92	343	eP	P	09 36 19.5	-1.3
VOR				pmax	pmax		
	comp=N,70nm,1.3s						
VOR				pmax	pmax		
	comp=E,50nm,1.3s						
VOR				pmax	pmax		
	comp=Z,70nm,1.3s						
KKAR	Karatay Array	20.06	53	P	P	09 36 21.2	-1.2
KKAR				pmax	pmax		

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      comp=Z,1.0nm,0.5s
KKAR  Karatay Array     20.06  53   P      P      09 36 21.2 -1.2
      comp=Z,1.0nm,0.5s
KDZ   Kurdzhali         20.21 302  i P     P      09 36 24.0 +0.1
GVD   Gavdhos           20.28 282  eP      P      09 36 24.4 -0.3
      comp=Z,24nm,0.6s
GVD   Gavdhos           20.28 282  eP      P      09 36 24.4 -0.3
      comp=Z,24nm,0.6s
KIS   Kishinev          20.47 319  eP      P      09 36 21.0 -5.5
KIS                                e              09 36 48.0
KIS                                 MLR    MLR
      comp=Z,300nm,13.0s,MS3.8
KIS                                 MLR    MLR
      comp=Z,300nm,12.0s
RZN   Rozhen            20.72 302  i P     P      09 36 27.0 -2.2
PAIG  Paliouri          21.05 296  eP      P      09 36 32.4 -0.1
XOR   Xorichti          21.32 295  eP      P      09 36 35.4 +0.1
MLR   Muntele Rosu      21.36 312   P      P      09 36 36.6 +1.0
      comp=Z,30nm,0.8s,mb4.7,baz=98,slow=2.4,SNR=13
PGB   Panagyurishte     21.37 304   P      P      09 36 33.5 -2.3
SRS   Serrai            21.38 299  eP      P      09 36 35.0 -0.8
MMB   Musomiste         21.40 301  i P     P      09 36 36.0 -0.1
SOH   Sokhos            21.48 299  eP      P      09 36 37.1 +0.2
AGG   Agios Georgios    21.93 293  eP      P      09 36 41.7 +0.4
KKB   Krupnik           21.94 301  i P     P      09 36 40.3 -1.2
LIT   Litokhoron        21.98 296  eP      P      09 36 41.5 -0.3
GRG   Griva             22.22 298  eP      P      09 36 46.9 +2.7
AKASG Malin Array Be    22.66 327   P      P      09 36 46.9 -1.5
      comp=Z,8.8nm,0.8s,mb4.2,baz=132,slow=9.4,SNR=21
AKASG                               PcP    PcP    09 40 40.9 -0.4
      comp=Z,1.4nm,0.5s,baz=70,slow=2.3,SNR=5.0
AKASG Malin Array Be    22.66 327   P      P      09 36 46.9 -1.5
AKASG                              e              09 40 40.9
AAK   Ala-Archa         22.66  57   P      P      09 36 48.6  0.0
AAK                                 pmax   pmax
      comp=Z,11nm,1.2s,mb4.2
AAK   Ala-Archa         22.66  57   P      P      09 36 48.6  0.0
      comp=Z,11nm,1.2s,mb4.2
FRU   Bishkek           22.81  57  eP      P      09 36 53.0 +3.0
FNA   Florina           22.94 298  eP      P      09 36 51.6 +0.2
SKO   Skopje            23.16 301  eP      P      09 36 55.8 +2.4
LKD   Levkas            23.19 292  eP      P      09 36 53.6 -0.1
BOLS  Boljevac          23.31 305⇓iP      P      09 36 55.5 +0.7
IGT   Igoumenitsa       23.53 294  eP      P      09 36 56.7 -0.4
OBN   Obninsk           23.66 343αiP      P      09 36 58.5 +0.4
OBN                                e              09 37 20.2
OBN                                e              09 37 29.6
OBN                                 pmax   pmax
      comp=Z,88nm,1.4s,mb5.0
OBN                                 MLR    MLR
      comp=Z,200nm,15.0s,MS3.7
OBN   Obninsk           23.66 343  i Pcu          09 36 58.5
      comp=Z,88nm,1.4s
OBN                                e              09 37 20.2
OBN                                e              09 37 29.6
OBN                                 LR     LR
      comp=Z,200nm,15.0s,MS3.7
OBN   Obninsk           23.66 343  i P     P      09 36 58.5 +0.4
      comp=Z,88nm,1.4s,mb5.0
MOS   Moscow            23.98 345  eP      P      09 37 00.8 -0.4
MOS                                 pmax   pmax
      comp=Z,101nm,1.5s,mb5.0
MOS   Moscow            23.98 345  eP      P      09 37 00.8 -0.4
      comp=Z,101nm,1.5s,mb5.0
ARU   Arti              24.48  14⇓iP      P      09 37 06.3 +0.2
ARU                                e              09 37 43.8
ARU                                eS      S      09 41 16.7 -3.8
ARU                                 pmax   pmax
      comp=Z,20nm,0.8s,mb4.6
ARU   Arti              24.48  14⇓iP      P      09 37 06.3 +0.2
      comp=Z,20nm,0.8s,mb4.6
ARU                                e              09 37 43.8
ARU                                eS      S      09 41 16.7 -3.8
LVV   L'vov             24.70 320  eP      P      09 37 07.0 -1.3
ZRNK  Zerenda           24.84  30   P      P      09 37 10.2 +0.5
ZRNK                                pmax   pmax
      comp=Z,11nm,0.9s,mb4.4
UZH   Uzhgorod          25.05 316  eP      P      09 37 08.0 -3.7
BBLS  Bajina Basta -    25.08 304⇑iP      P      09 37 12.3 +0.3
KOLS  Kolonicke sedl    25.21 317  i P     P      09 37 14.5 +1.3
KOLS                               e              09 37 19.8
SVE   Sverdlovsk        25.29  16  eP      P      09 37 13.0 -0.9
SVE                                 pmax   pmax
      comp=Z,32nm,1.5s,mb4.6
SVE   Sverdlovsk        25.29  16  eP      P      09 37 13.0 -0.9
      comp=Z,32nm,1.5s,mb4.6
BVA0  Borovoye Array    25.50  32   P      P      09 37 15.8  0.0
BVA0                                pmax   pmax
      comp=Z,3.0nm,0.9s,mb3.8
BVA0  Borovoye Array    25.50  32   P      P      09 37 15.8  0.0
      comp=Z,3.0nm,0.9s,mb3.8
BVAR  Borovoye Array    25.50  32   P      P      09 37 16.3 +0.5
      comp=Z,16nm,0.7s,mb4.6,baz=225,slow=8.4,SNR=58
BVAR                                PcP    PcP    09 40 47.6 +0.3
      comp=Z,1.8nm,0.6s,baz=90,slow=1.5,SNR=3.2
VOSK  Vostochnaya       25.56  33   P      P      09 37 16.4  0.0
VOSK                                pmax   pmax
      comp=Z,17nm,1.5s,mb4.3
VOSK  Vostochnaya       25.56  33   P      P      09 37 16.4  0.0
      comp=Z,17nm,1.5s,mb4.3
KECS  Kecovo            26.05 315  eP      P      09 37 21.9 +0.9
PSZ   Piszkesteto       26.16 313  eP      P      09 37 21.8 -0.3
PSZ                                 pmax   pmax
      comp=Z,19nm,0.8s,mb4.7
PSZ   Piszkesteto       26.16 313  eP      P      09 37 21.8 -0.3
      comp=Z,19nm,0.8s,mb4.7
PSZ   Piszkesteto       26.16 313⇑eP      P      09 37 24.4 +2.3
TIP   Timpagrande       26.25 293  eP      P      09 37 23.3 +0.3
VYHS  Vyhne             27.05 314  eP      P      09 37 29.9 -0.3
OJC   Ojcow             27.24 318  eP      P      09 37 31.7 -0.3
OKC   Ostrava-Krasne    28.02 316  eP      P      09 37 38.7 -0.3
OKC   Ostrava-Krasne    28.02 316   P      P      09 37 38.7 -0.3
MKAR  Makanchi Array    29.17  52   P      P      09 37 49.9 +0.6
MKAR                                pmax   pmax
      comp=Z,5.0nm,0.7s
MKAR  Makanchi Array    29.17  52   P      P      09 37 50.1 +0.8
      comp=Z,4.2nm,0.6s,mb4.4,baz=248,slow=8.6,SNR=29
DPC   Dobruska-Polom    29.30 316  eP      P      09 37 50.1 -0.3
VSU   Vasula            29.39 337  eP      P      09 37 49.5 -1.6
UPC   Upice             29.55 316  eP      P      09 37 52.4 -0.2
UPC   Upice             29.55 316   P      P      09 37 52.4 -0.2
MOA   Molln             29.68 310⇑iP      P      09 37 53.6 -0.2
      comp=Z,7.0nm,0.7s,mb4.5
KBA   Koelnbreinsper    30.06 308⇑iP      P      09 37 57.4 +0.2
      comp=Z,13nm,0.6s,mb4.8
KBA   Koelnbreinsper    30.06 308⇑iP      P      09 37 57.4 +0.2
KBA                                 pmax   pmax
      comp=Z,13nm,0.6s,mb4.8
GERES GERESS Array B    30.34 312   P      P      09 37 59.0 -0.7
      comp=Z,1.8nm,0.8s,mb3.9,baz=117,slow=9.0,SNR=11
GERES                               PcP    PcP    09 40 59.4 +0.3
      comp=Z,0.8nm,0.7s,baz=124,slow=4.8,SNR=4.4
GERES                               LR     LR     09 51 07.0
      comp=Z,69nm,18.9s,MS3.3,baz=325,slow=38
KHC   Kasperske Hory    30.51 312  eP      P      09 38 00.4 -0.8
WTTA  Wattenberg        31.23 308⇑iP      P      09 38 07.2 -0.4
      comp=Z,13nm,0.5s,mb5.0
WTTA  Wattenberg        31.23 308⇑iP      P      09 38 07.2 -0.4
WTTA                                pmax   pmax
      comp=Z,13nm,0.5s,mb5.0
WATA  Walderalm         31.29 308⇑iP      P      09 38 07.4 -0.7
      comp=Z,8.4nm,0.5s,mb4.8
WATA  Walderalm         31.29 308⇑iP      P      09 38 07.4 -0.7
WATA                                pmax   pmax
      comp=Z,8.0nm,0.5s,mb4.8
SQTA  Sankt Quirin      31.51 308⇑iP      P      09 38 09.4 -0.6
      comp=Z,22nm,0.5s,mb5.2
SQTA  Sankt Quirin      31.51 308⇑iP      P      09 38 09.4 -0.6
SQTA                                pmax   pmax
      comp=Z,22nm,0.5s,mb5.2
CLL   Collm             31.61 316   P      P      09 38 10.3 -0.6
      comp=Z,logA/T=0.8,mb4.4
CLL                                e              09 38 16.0
FINES FINESS Array B    31.94 340   P      P      09 38 12.2 -1.4
      comp=Z,1.7nm,0.5s,mb4.1,baz=142,slow=7.7,SNR=12
FINES                               PcP    PcP    09 41 03.0 -0.2
      comp=Z,1.4nm,0.6s,baz=117,slow=4.3,SNR=4.8
FINES                               LR     LR     09 52 41.0
      comp=Z,116nm,19.5s,MS3.6,baz=163,slow=39
FINES FINESS Array B    31.94 340   P      P      09 38 12.2 -1.4
FINES                               PcP    PcP    09 41 03.0 -0.3
FINES                               LR     LR     09 52 41.0
VSL   Villasalto        31.98 293  eP      P      09 38 15.5 +1.3
      comp=Z,19nm,0.7s,mb5.0
GRA1  Grafenberg Arr    32.15 312  eP      P      09 38 14.7 -0.9
      comp=Z,7.0nm,0.8s,mb4.5
GRF   Grafenberg Arr    32.15 312  eP      P      09 38 14.7 -0.9
GRF                                 pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.5
GRF   Grafenberg Arr    32.15 312  eP      P      09 38 14.7 -0.9
GRF                                 pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.5
DAVOX Davos             32.30 307   P      P      09 38 16.6 -0.4
      comp=Z,3.3nm,0.5s,mb4.4,baz=171,slow=16,SNR=3.7
WMQ   Urumqi            32.35  59  eP      P      09 38 16.4 -1.0
WMQ                                 PP     PP     09 39 24.3 -1.7
WMQ                                eS      S      09 43 29.3 +2.3
WMQ                                 AMB    AMB
      comp=Z,10.0nm,1.1s,mb4.6
WMQ                                 AMB    AMB
      comp=Z,290nm,6.4s
WMQ                                 LR     LR
      comp=N,640nm,15.0s,MS4.7
WMQ                                 LR     LR
      comp=E,840nm,14.6s,MS4.7
WMQ                                 LR     LR
      comp=Z,810nm,14.0s,MS4.6
WMQ   Urumqi            32.35  59  eP      P      09 38 16.4 -1.0
      comp=Z,11nm,1.1s,mb4.6
WMQ                                 PP     PP     09 39 07.4  -19
WMQ                                 PP     PP     09 39 24.3 -1.7
WMQ                                eS      S      09 43 17.4  -10
WMQ                                eS      S      09 43 29.3 +2.3
PGF   Pioggiola         32.36 299  eP      P      09 38 17.3 -0.2
      comp=Z,7.7nm,0.8s,mb4.3
PGF   Pioggiola         32.36 299  eP      P      09 38 17.3 -0.2
PGF                                 pmax   pmax
      comp=Z,4.0nm,0.8s,mb4.3
DAVA  Damuels           32.40 308⇑iP      P      09 38 17.1 -0.8
      comp=Z,26nm,0.5s,mb5.3
KAF   Kangasniemi       32.41 341  ep      P      09 38 15.6 -2.2
NVS   Novosibirsk       32.74  38  eP      P      09 38 18.5 -2.2
ZAL   Zalesovo          33.17  40   P      P      09 38 24.9 +0.4
      comp=Z,2.4nm,0.5s,mb4.4,baz=222,slow=5.1,SNR=7.4
ZAL   Zalesovo          33.17  40   P      P      09 38 24.9 +0.5
SBF   Sospel            33.60 301  eP      P      09 38 28.2  0.0
      comp=Z,31nm,0.8s,mb5.0
SBF   Sospel            33.60 301  eP      P      09 38 28.2  0.0
SBF                                 pmax   pmax
      comp=Z,15nm,0.8s,mb5.0
FRF   La Foret Royal    34.15 300  eP      P      09 38 32.6 -0.4
MBDF  Montbardon        34.15 302⇑iP      P      09 38 32.7 -0.3
      comp=Z,12nm,0.6s,mb4.7
MBDF  Montbardon        34.15 302⇑iP      P      09 38 32.7 -0.3
MBDF                                pmax   pmax
      comp=Z,6.0nm,0.6s,mb4.7
LPG   La Plagne         34.25 304⇑iP      P      09 38 33.5 -0.3
      comp=Z,16nm,0.8s,mb4.7
LPG   La Plagne         34.25 304⇑iP      P      09 38 33.5 -0.3
LPG                                 pmax   pmax
      comp=Z,8.0nm,0.8s,mb4.7
BNI   Bardonecchia      34.25 303  eP      P      09 38 33.5 -0.3
BNI                                 pmax   pmax
      comp=Z,15nm,0.6s,mb5.1
BNI   Bardonecchia      34.25 303  eP      P      09 38 33.5 -0.3
      comp=Z,15nm,0.6s,mb5.1
LPL   La Plagne         34.26 304⇑iP      P      09 38 33.6 -0.3
      comp=Z,11nm,0.6s,mb4.7
LPL   La Plagne         34.26 304⇑iP      P      09 38 33.6 -0.3
LPL                                 pmax   pmax
      comp=Z,6.0nm,0.6s,mb4.7
CDF   Champ du Feu      34.35 309  eP      P      09 38 33.6 -1.0
ORIF  Oris-en-Rattie    34.80 303  eP      P      09 38 37.0 -1.6
      comp=Z,6.4nm,0.7s,mb4.4
ORIF                               eR
      comp=Z,110nm,20.5s
CABF  La Chapelle       34.85 306⇑iP      P      09 38 38.7 -0.2
      comp=Z,28nm,0.7s,mb5.0
CABF  La Chapelle       34.85 306⇑iP      P      09 38 38.7 -0.2
CABF                                pmax   pmax
      comp=Z,14nm,0.7s,mb5.0
HFS   Hagfors           35.45 331   P      P      09 38 43.1 -0.8
      comp=Z,16nm,0.8s,mb5.0,baz=129,slow=9.5,SNR=22
HFS                                 LR     LR     09 54 25.5
      comp=Z,122nm,20.6s,MS3.6,baz=311,slow=38
VIVF  Saint-Julien-l    35.65 302  eP      P      09 38 44.9 -0.9
MEZF  Maizieres J'vi    35.82 309  eP      P      09 38 46.6 -0.6
      comp=Z,14nm,0.7s,mb4.7
LASF  Ste Croix         36.19 301  eP      P      09 38 49.6 -0.8
      comp=Z,7.7nm,0.9s,mb4.3
GIVF  Givet             36.26 311  eP      P      09 38 50.6 -0.3
SMF   Signal de Mont    36.39 305⇑iP      P      09 38 51.3 -0.7
      comp=Z,32nm,0.8s,mb5.0
SMF   Signal de Mont    36.39 305⇑iP      P      09 38 51.3 -0.7
SMF                                 pmax   pmax
      comp=Z,16nm,0.8s,mb5.0
LOR   Lormes            36.44 306  eP      P      09 38 52.3 -0.2
LOR                                eR
      comp=Z,143nm,17.5s
BAIF  Baives            36.64 311  eP      P      09 38 54.0 -0.1
AVF   Avril sur Loir    36.74 306⇑iP      P      09 38 54.0 -0.9
      comp=Z,18nm,1.0s,mb4.5
AVF   Avril sur Loir    36.74 306⇑iP      P      09 38 54.0 -0.9
AVF                                 pmax   pmax
      comp=Z,9.0nm,1.0s,mb4.5
KONO  Kongsberg         36.95 328  i P     P      09 38 55.6 -1.0
NB2   NORSAR Subarra    36.97 331   P      P      09 38 55.8 -0.9
      comp=Z,7.2nm,0.9s,mb4.5,baz=123,slow=8.6
NOA   NORSAR Array B    36.97 331   P      P      09 38 56.0 -0.7
      comp=Z,4.0nm,0.8s,mb4.3,baz=123,slow=8.6,SNR=16
NOA                                 LR     LR     09 56 32.5
      comp=Z,65nm,18.3s,MS3.5,baz=90,slow=40
ETOS  Mallorca          37.03 294   P      P      09 38 58.8 +1.3
      comp=Z,8.8nm,0.7s,mb4.7
ETOS  Mallorca          37.03 294   P      P      09 38 58.8 +1.3
      comp=Z,8.8nm,0.7s,mb4.7,SNR=6.5
TCF   Toulx Ste Croi    37.48 305  eP      P      09 39 00.8 -0.4
RJF   Les Rejaudoux     37.91 303  eP      P      09 39 04.6 -0.2
RJF                                eR
      comp=Z,93nm,19.2s
EIBI  Ibiza             38.23 293   P      P      09 39 09.3 +1.8
      comp=Z,18nm,0.6s,mb5.0
EIBI  Ibiza             38.23 293   P      P      09 39 09.3 +1.8
      comp=Z,18nm,0.6s,mb5.0,SNR=4.8
EPOB  Poblet            38.26 297   P      P      09 39 11.4 +3.8
LFF   La Frestale       38.45 302  eP      P      09 39 08.9 -0.3
ARCES ARCESS Array B    38.80 347   P      P      09 39 11.9  0.0
      comp=Z,1.6nm,0.6s,mb4.0,baz=157,slow=9.2,SNR=6.8
ARCES                               LR     LR     09 56 48.9
      comp=Z,126nm,20.4s,MS3.7,baz=106,slow=39
ERTA  Horta de San J    38.84 296   P      P      09 39 13.5 +1.0
      comp=Z,7.1nm,0.6s,mb4.6
ERTA  Horta de San J    38.84 296   P      P      09 39 13.5 +0.9
      comp=Z,7.1nm,0.6s,mb4.6,SNR=7.0
MFF   Saint Martin d    39.12 305⇑iP      P      09 39 14.0 -0.8
      comp=Z,15nm,0.8s,mb4.5
MFF   Saint Martin d    39.12 305⇑iP      P      09 39 14.0 -0.8
MFF                                 pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.4
LDF   La Druitiere      39.24 308⇑iP      P      09 39 14.7 -1.1
      comp=Z,8.2nm,0.7s,mb4.3
LDF   La Druitiere      39.24 308⇑iP      P      09 39 14.7 -1.1
LDF                                 pmax   pmax
      comp=Z,4.0nm,0.7s,mb4.3
EBEN  Beniarda          39.49 293   P      P      09 39 19.7 +1.7
      comp=Z,20nm,0.7s,mb5.0
EBEN  Beniarda          39.49 293   P      P      09 39 19.7 +1.8
      comp=Z,20nm,0.7s,mb5.0,SNR=7.7
FLN   La Foliniere      39.50 308⇑iP      P      09 39 17.0 -0.9
      comp=Z,23nm,0.9s,mb4.6
FLN                                eR
      comp=Z,113nm,18.8s
FLN   La Foliniere      39.50 308⇑iP      P      09 39 17.0 -0.9
FLN                                 pmax   pmax
      comp=Z,12nm,0.9s,mb4.6
FLN                                 MLR    MLR
      comp=Z,110nm,18.8s,MS3.7
EMOS  Mosqueruela       39.50 295   P      P      09 39 20.2 +2.1
      comp=Z,26nm,0.6s,mb5.1
EMOS  Mosqueruela       39.50 295   P      P      09 39 20.2 +2.2
      comp=Z,26nm,0.6s,mb5.2,SNR=28
GRR   Gorron            39.72 308  eP      P      09 39 19.0 -0.7
      comp=Z,28nm,0.8s,mb4.7
GRR   Gorron            39.72 308  eP      P      09 39 19.0 -0.7
GRR                                 pmax   pmax
      comp=Z,14nm,0.8s,mb4.7
SJPF  Ste Jean          39.88 299  eP      P      09 39 20.4 -0.8
ECHE  Chera             39.96 294   P      P      09 39 24.2 +2.4
ECHE                                pmax   pmax
      comp=Z,14nm,0.7s,mb4.8
ECHE  Chera             39.96 294   P      P      09 39 24.2 +2.3
      comp=Z,14nm,0.7s,mb4.8
ECHE  Chera             39.96 294   P      P      09 39 24.2 +2.4
      comp=Z,14nm,0.7s,mb4.8,SNR=12
ELIZ  Elizondo          40.10 300   P      P      09 39 29.7 +6.7
ETOB  Tobarra           40.52 293   P      P      09 39 28.4 +1.8
      comp=Z,16nm,0.6s,mb4.8
ETOB  Tobarra           40.52 293   P      P      09 39 28.3 +1.8
      comp=Z,16nm,0.6s,mb4.8,SNR=12
SGMF  Saint Gilles      40.84 307⇑iP      P      09 39 28.4 -0.6
      comp=Z,19nm,0.8s,mb4.5
SGMF  Saint Gilles      40.84 307⇑iP      P      09 39 28.4 -0.6
SGMF                                pmax   pmax
      comp=Z,10.0nm,0.8s,mb4.5
QUIF  Quistinic         41.23 307⇑iP      P      09 39 31.4 -0.9
      comp=Z,27nm,1.0s,mb4.5
QUIF  Quistinic         41.23 307⇑iP      P      09 39 31.4 -0.9
QUIF                                pmax   pmax
      comp=Z,14nm,1.0s,mb4.5
EVIA  Vianos            41.26 293   P      P      09 39 34.5 +1.9
EVIA                                pmax   pmax
      comp=Z,19nm,0.8s,mb4.8
EVIA  Vianos            41.26 293   P      P      09 39 34.5 +1.9
      comp=Z,19nm,0.8s,mb4.8
EVIA  Vianos            41.26 293   P      P      09 39 34.5 +1.9
      comp=Z,19nm,0.8s,mb4.8,SNR=9.3
ENIJ  Nijar             41.30 290   P      P      09 39 34.2 +1.3
ENIJ                                pmax   pmax
      comp=Z,9.0nm,0.4s,mb4.8
ENIJ  Nijar             41.30 290   P      P      09 39 34.2 +1.3
      comp=Z,8.8nm,0.4s,mb4.7,SNR=4.7
ROSF  Rostrenen         41.32 308⇑iP      P      09 39 32.2 -0.8
      comp=Z,31nm,0.9s,mb4.6
ROSF  Rostrenen         41.32 308⇑iP      P      09 39 32.2 -0.8
ROSF                                pmax   pmax
      comp=Z,16nm,0.9s,mb4.7
EQES  Quesada           41.83 292   P      P      09 39 38.7 +1.4
      comp=Z,18nm,0.9s,mb4.7
EQES  Quesada           41.83 292   P      P      09 39 38.7 +1.4
      comp=Z,18nm,0.9s,mb4.7,SNR=11
EKA   Eskdalemuir Ar    42.02 318   P      P      09 39 38.4 -0.2
      comp=Z,2.3nm,0.7s,mb3.9,baz=108,slow=8.3,SNR=14
EKA                                 PcP    PcP    09 41 34.1 +0.5
      comp=Z,1.8nm,0.9s,baz=124,slow=3.0,SNR=5.1
ESDC  Sonseca Array     42.24 295   P      P      09 39 40.9 +0.3
      comp=Z,1.6nm,0.5s,mb3.9,baz=80,slow=8.3,SNR=11
ESDC  Sonseca Array     42.24 295   P      P      09 39 41.4 +0.8
      comp=Z,1.6nm,0.5s,mb3.9
ESDC  Sonseca Array     42.24 295   P      P      09 39 41.4 +0.7
      comp=Z,1.6nm,0.5s,mb3.9,SNR=9.9
EBAN  Banos Encina      42.33 292   P      P      09 39 42.9 +1.5
EBAN                                pmax   pmax
      comp=Z,13nm,0.6s,mb4.7
EBAN  Banos Encina      42.33 292   P      P      09 39 42.9 +1.5
      comp=Z,13nm,0.6s,mb4.7,SNR=8.8
ERON  Agron             42.55 291   P      P      09 39 43.8 +0.6
ERON  Agron             42.55 291   P      P      09 39 43.7 +0.5
      SNR=7.9
ELOJ  Sierra Loja       42.80 291   P      P      09 39 45.6 +0.4
ELOJ                                pmax   pmax
      comp=Z,4.0nm,0.6s,mb4.3
ELOJ  Sierra Loja       42.80 291   P      P      09 39 45.6 +0.4
      comp=Z,3.8nm,0.6s,mb4.3
ELOJ  Sierra Loja       42.80 291   P      P      09 39 45.6 +0.4
      comp=Z,3.8nm,0.6s,mb4.3,SNR=6.5
ELUQ  Luque             42.81 292   P      P      09 39 45.5 +0.2
ELUQ                                pmax   pmax
      comp=Z,4.0nm,0.5s,mb4.4
ELUQ  Luque             42.81 292   P      P      09 39 45.5 +0.2
      comp=Z,4.3nm,0.5s,mb4.4
ELUQ  Luque             42.81 292   P      P      09 39 45.5 +0.2
      comp=Z,4.3nm,0.5s,mb4.4,SNR=5.0
EADA  Adamuz            42.95 292   P      P      09 39 46.6 +0.1
      comp=Z,8.6nm,0.6s,mb4.7
EADA  Adamuz            42.95 292   P      P      09 39 46.6 +0.2
      comp=Z,8.6nm,0.6s,mb4.7,SNR=11
EMIJ  Mijas             43.40 290   P      P      09 39 49.6 -0.5
EMIJ  Mijas             43.40 290   P      P      09 39 49.6 -0.5
      SNR=7.9
ZAK   Zakamensk         43.45  50  eP      P      09 39 50.0 -0.4
ZAK                                e              09 41 38.8
ZAK                                 pmax   pmax
      comp=Z,2.0nm,1.3s,mb3.7
ZAK                                 pmax   pmax
      comp=Z,8.0nm,1.0s,mb4.4
ZAK   Zakamensk         43.45  50  eP      P      09 39 50.0 -0.4
      comp=Z,2.0nm,1.3s,mb3.7
ZAK                                e              09 41 38.8
ECAB  El Cabril         43.62 293   P      P      09 39 52.9 +1.0
      comp=Z,16nm,0.7s,mb4.8,SNR=16
TLY   Talaya            43.74  48⇓iP      P      09 39 51.6 -1.1
TLY                                 pmax   pmax
      comp=Z,2.0nm,0.8s,mb3.9
TLY                                 MLR    MLR
      comp=Z,100nm,17.0s,MS3.8
EPON  Pontenova         44.19 300   P      P      09 39 57.8 +1.4
EPON  Pontenova         44.19 300   P      P      09 39 57.8 +1.4
      SNR=7.9
ERUA  La Rua            44.28 299   P      P      09 39 58.2 +1.0
      SNR=7.9
EMIN  Mina Concepcio    44.65 292   P      P      09 40 00.7 +0.6
      comp=Z,6.0nm,0.5s,mb4.7
EMIN  Mina Concepcio    44.65 292   P      P      09 40 00.7 +0.5
      comp=Z,6.0nm,0.5s,mb4.7,SNR=15
EBAD  Badajoz           44.73 294   P      P      09 40 01.1 +0.3
      comp=Z,5.3nm,0.5s,mb4.6
EBAD  Badajoz           44.73 294   P      P      09 40 01.1 +0.3
      comp=Z,5.3nm,0.5s,mb4.6,SNR=6.5
MTE   Manteigas         44.86 296  eP      P      09 40 03.2 +1.4
STS   Santiago          45.26 300   P      P      09 40 05.7 +0.7
      SNR=7.9
EZAM  Zamans            45.46 299   P      P      09 40 07.7 +1.1
SONM  Songino Array     45.52  53   P      P      09 40 08.0 +1.0
      comp=Z,1.1nm,0.6s,mb3.9,baz=279,slow=7.5,SNR=4.7
PBEJ  Beja              45.52 293  eP      P      09 40 08.3 +1.1
      comp=Z,15nm,0.6s,mb5.1
ULN   Ulaanbaatar       45.96  53  i P     P      09 40 11.6 +1.1
CMAR  Chiang Mai Arr    47.32  95   P      P      09 40 22.6 +1.1
      comp=Z,2.9nm,0.8s,mb4.3,baz=295,slow=9.6,SNR=8.8
OPO   Ambohidratompo    51.27 182   P      P      09 40 55.5 +3.6
      comp=Z,2.6nm,0.8s,mb4.2,baz=292,slow=5.4,SNR=3.0
DBIC  Dimbokro          55.83 254   P      P      09 41 26.1 +0.4
      comp=Z,5.4nm,0.7s,mb4.7,baz=55,slow=7.6,SNR=10
DBIC                                LR     LR     10 05 15.5
      comp=Z,108nm,18.6s,MS4.0,baz=122,slow=36
TIXI  Tiksi             56.08  22⇑iP      P      09 41 25.5 -1.2
TIXI                                pmax   pmax
      comp=Z,9.0nm,1.1s,mb4.7
TIXI  Tiksi             56.08  22⇑iP      P      09 41 25.5 -1.2
      comp=Z,9.0nm,1.1s,mb4.7
MATP  Matopo            56.41 203   P      P      09 41 32.2 +2.4
      comp=Z,8.3nm,0.8s,mb4.8,baz=22,slow=7.4,SNR=11
MATP                                LR     LR     10 07 17.5
      comp=Z,114nm,19.4s,MS4.0,baz=207,slow=38
MATP  Matopo            56.41 203   P      P      09 41 32.2 +2.4
MATP                                LR     LR     10 07 17.5
YAK   Yakutsk           57.45  34  i P     P      09 41 35.6 -1.0
SUMG  Summit            57.98 339  eP      P      09 41 39.5 -0.6
      comp=Z,11nm,0.6s,mb5.1
NJ2   Nanjing           58.31  70  eP      P      09 41 43.4 +0.4
NJ2                                 AMB    AMB
      comp=Z,10.0nm,0.5s,mb5.1
NJ2   Nanjing           58.31  70  eP      P      09 41 43.4 +0.4
      comp=Z,10.0nm,0.5s,mb5.1
TSUM  Tsumeb            59.67 214   P      P      09 41 55.0 +2.4
      comp=Z,2.9nm,0.8s,mb4.4,baz=50,slow=24,SNR=4.6
SSE   Sheshan           60.52  70  eP      P      09 41 54.8 -3.4
SSE                                 AMB    AMB
      comp=Z,40nm,0.7s,mb5.7
SSE                                 AMB    AMB
      comp=Z,70nm,3.5s
SSE   Sheshan           60.52  70  eP      P      09 41 54.8 -3.4
      comp=Z,46nm,0.7s,mb5.7
LBTB  Lobatse           61.63 204   P      P      09 42 08.7 +2.9
LBTB                                pmax   pmax
      comp=Z,9.0nm,0.9s,mb4.9
LBTB  Lobatse           61.63 204   P      P      09 42 08.7 +2.8
      comp=Z,8.6nm,0.9s,mb4.9,baz=37,slow=6.1,SNR=5.5
LBTB  Lobatse           61.63 204  eP      P      09 42 08.6 +2.7
      comp=Z,10nm,0.9s,mb5.0
BOSA  Boshof            65.08 202   P      P      09 42 30.4 +2.0
      comp=Z,4.4nm,0.7s,mb4.6,baz=32,slow=7.6,SNR=5.2
BILL  Bilibino          69.25  21⇓eP      P      09 42 54.3 +0.3
BILL                                pmax   pmax
      comp=Z,7.0nm,1.0s,mb4.5
BILL  Bilibino          69.25  21⇓eP      P      09 42 54.3 +0.3
      comp=Z,7.0nm,1.0s,mb4.5
YSS   Yuzh-Sakhalins    69.44  47⇑iP      P      09 42 55.4 -0.1
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YSS				pmax	pmax		
	comp=Z,45nm,1.7s,mb5.1						
YSS	Yuzh-Sakhalins	69.44	47	⇑iP	P	09 42 55.4	-0.1
	comp=Z,45nm,1.7s,mb5.1						
MJAR	Matsushiro Arr	71.11	58	P	P	09 43 06.2	+0.3
	comp=Z,0.5nm,0.8s,mb3.5,baz=284,slow=16,SNR=4.2						
SCHQ	Schefferville	76.45	327	P	P	09 43 36.5	0.0
	comp=Z,3.1nm,0.7s,mb4.4,baz=57,slow=6.9,SNR=11						
SCHQ	Schefferville	76.45	327	eP	P	09 43 36.5	-0.1
	comp=Z,2.9nm,0.7s,mb4.3						
ILAR	Eielson Array	81.84	7	P	P	09 44 07.4	+1.9
	comp=Z,0.6nm,0.8s,mb3.6,baz=322,slow=3.2,SNR=4.9						
FX1	Attu Island--F	81.92	30	P	P	09 44 06.8	+0.6
FX1				pmax	pmax		
	comp=Z,14nm,0.5s						
FX1	Attu Island--F	81.92	30	P	P	09 44 06.8	+0.6
	comp=Z,14nm,0.5s,mb5.2						
FX1	Attu Island--F	81.92	30	eP	P	09 44 06.6	+0.4
FCC	Fort Churchill	83.42	341	eP	P	09 44 14.9	+1.2
FCC				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
FCC	Fort Churchill	83.42	341	eP	P	09 44 14.9	+1.2
	comp=Z,12nm,1.2s,mb4.8						
YKA	Yellowknife Ar	83.89	352	P	P	09 44 16.8	+0.8
	comp=Z,1.8nm,0.8s,mb4.3,baz=11,slow=5.9,SNR=5.5						
WRA	Warramunga Arr	97.31	109	P	P	09 45 20.4	+0.4
	comp=Z,0.7nm,0.6s,mb4.3,baz=317,slow=4.1,SNR=9.8						
WRAB	Tennant Creek	97.31	109	i P	P	09 45 17.3	-2.8
CFAA	Coronel Fontan	127.19	253	PKP	PKPdf	09 50 53.6	+3.4
	comp=Z,0.3nm,0.7s,baz=53,slow=1.3,SNR=6.1						
PLCA	Paso Flores	131.42	242	PKP	PKPdf	09 51 01.3	+3.4
	comp=Z,2.8nm,1.1s,baz=340,slow=8.3,SNR=4.3						

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*NEIC **18** 09:33:16.5, 41.77N×8.66W, h11^{km}, MN2.6(MDD), After MDD.*

*INMG **18** 09:33:17.2±1.6, 41.80N×8.63W, h16^{km}±6^{km}, ML2.5, Error ellipse: s-maj=10.4km s-min=2.1km az=74.0*

MDD 18 09:33:16.5±0.4, **41.78N×8.64W, h11**^{km}**, mbLg2.6**/18, **1C-1D, Error ellipse: s-maj=4.1km s-min=2.3km az=54.0, PRXIMO, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZAM	Zamans	0.38	354	Pg	Pg	09 33 23.7	-0.6
EZAM				Lg		09 33 28.9	
EZAM	Zamans	0.38	354	⇓Pg	Pg	09 33 23.6	-0.7
	6.5nm,0.2s,SNR=18						
EZAM				Lg		09 33 28.9	
	60nm,0.2s,SNR=5.0						
ELOB	Lobios	0.44	78	⇑Pg	Pg	09 33 24.9	-0.7
	SNR=18						
ELOB				Lg		09 33 30.8	
	193nm,0.4s,SNR=7.9						
PVRL	Vila Real	0.85	125	ePg	Pg	09 33 32.6	-1.1
PVRL				eSg	Sg	09 33 44.1	-1.1
	192nm,0.1s						
PVRL	Vila Real	0.85	125	Pg	Pg	09 33 32.6	-1.1
PVRL				Lg		09 33 44.1	
	96nm,0.1s						
STS	Santiago	1.11	3	Pg	Pg	09 33 36.8	-2.0
	22nm,0.1s,SNR=11						
STS				Lg		09 33 50.8	
	29nm,0.2s,SNR=15						
PVIS	Viseu	1.20	152	eP	Pb	09 33 38.0	-0.8
PVIS				eS	Sb	09 33 53.8	-0.3
	62nm,0.1s						
PVIS	Viseu	1.20	152	Pg	Pg	09 33 38.0	-2.5
PVIS				Lg		09 33 53.8	
	31nm,0.1s						
EMAZ	Mazaricos	1.20	348	Pg	Pg	09 33 37.8	-2.7
	7.8nm,0.2s,SNR=16						
EMAZ				Sn	Sn	09 33 53.2	-2.3
	11nm,0.1s,SNR=8.7						
EMAZ				Lg		09 33 54.8	
	26nm,0.1s,SNR=23						
ERUA	La Rua	1.27	61	Pg	Pg	09 33 40.1	-1.9
ERUA				Lg		09 33 56.0	
ERUA	La Rua	1.27	61	Pg	Pg	09 33 39.1	-3.0
	34nm,0.2s,SNR=42						
ERUA				Lg		09 33 56.0	
	43nm,0.3s,SNR=28						
ECAL	Calabor	1.43	83	Pn	Pn	09 33 40.8	-1.7
	7.6nm,0.3s,SNR=32						
ECAL				Pg	Pg	09 33 42.8	-2.4
	19nm,0.2s,SNR=9.8						
ECAL				Lg		09 34 01.6	
	96nm,0.2s,SNR=5.0						
MTE	Manteigas	1.60	149	ePn	Pn	09 33 43.4	-1.6
MTE				eSn	Sn	09 34 02.7	-3.1
MTE				eSg	Sg	09 34 06.4	-3.7
	69nm,0.6s						
MTE	Manteigas	1.60	149	Pn	Pn	09 33 43.4	-1.6
MTE				Sn	Sn	09 34 02.7	-3.1
MTE				Lg		09 34 06.4	
	34nm,0.6s						
EPON	Pontenova	1.90	35	Pn	Pn	09 33 47.1	-2.1
	1.3nm,0.1s,SNR=9.3						
EPON				Pg	Pg	09 33 51.6	-2.9
	4.6nm,0.2s,SNR=14						
EPON				Lg		09 34 15.7	
	27nm,0.2s,SNR=5.8						
PCBR	Castelo Branco	2.12	155	ePg	Pg	09 33 55.3	-3.7
PCBR				eSg	Sg	09 34 21.9	-5.4
	22nm,0.2s						
PCBR	Castelo Branco	2.12	155	Pg	Pg	09 33 55.3	-3.7
PCBR				Lg		09 34 21.9	
	11nm,0.2s						
PTOM	Tomar	2.16	175	ePg	Pg	09 33 55.9	-3.8
PTOM				eSg	Sg	09 34 22.6	-6.0
	22nm,0.3s						
PTOM	Tomar	2.16	175	Pg	Pg	09 33 55.9	-3.8
PTOM				Lg		09 34 22.6	
	11nm,0.3s						
EARI	Arriondas	2.96	58	Pn	Pn	09 34 03.8	-0.6
	2.6nm,0.2s,SNR=5.5						
EARI				Lg		09 34 48.5	
	9.0nm,0.4s,SNR=5.0						
EBAD	Badajoz	3.26	157	Pn	Pn	09 34 06.6	-2.0
	1.8nm,0.2s,SNR=4.4						
EBAD				Sn	Sn	09 34 43.1	-4.8
	4.6nm,0.2s,SNR=7.9						
EBAD				Lg		09 34 56.3	
	16nm,0.2s,SNR=6.1						
ELAN	Lanestosa	4.12	68	Pn	Pn	09 34 19.5	-1.3
	0.5nm,0.2s,SNR=7.9						
ELAN				Lg		09 35 24.5	
	6.3nm,0.4s,SNR=6.0						
ESDC	Sonseca Array	4.13	119	Pn	Pn	09 34 18.6	-2.3
	1.6nm,0.1s,baz=304,slow=13,SNR=7.1						
ESDC				Sn	Sn	09 35 04.0	-5.7
	1.7nm,0.1s,baz=301,slow=23,SNR=7.7						
ESDC				Lg		09 35 23.8	
	1.5nm,0.3s,baz=302,slow=30,SNR=6.0						
EMIN	Mina Concepcio	4.28	159	Pn	Pn	09 34 20.6	-2.6
	0.9nm,0.2s,SNR=7.2						
EMIN				Sn	Sn	09 35 06.4	-7.2
	0.7nm,0.2s,SNR=5.7						
EMIN				Lg		09 35 29.5	
	2.3nm,0.3s,SNR=5.6						
ECAB	El Cabril	4.45	145	Pn	Pn	09 34 22.5	-3.0
	0.9nm,0.2s,SNR=7.9						
ECAB				Sn	Sn	09 35 10.7	-7.1
	2.2nm,0.2s,SNR=23						
ECAB				Lg		09 35 35.0	
	3.1nm,0.3s,SNR=5.0						
EADA	Adamuz	4.77	138	Pn	Pn	09 34 27.3	-2.8
	0.3nm,0.1s,SNR=5.9						
EADA				Sn	Sn	09 35 19.2	-6.8
	1.3nm,0.2s,SNR=4.2						
EADA				Lg		09 35 43.5	
	4.3nm,0.5s,SNR=5.0						

NEIC 18 09:58:41.5, 40.59N×125.82W, h6^{km}**, MD3.2**(NCEDC), **After NCEDC., Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHMM	Horse Mountain	1.61	79	eP	Pn	09 59 08.2	-2.5
WDC	Whiskeytown Da	2.49	89	eP	Pn	09 59 21.3	-2.0
YBH	Yreka Blue Hor	2.61	63	eP	Pn	09 59 22.6	-2.3
LHEM	Herd Peak	2.91	68	P	Pn	09 59 27.4	-1.8
HUMO	Hull Mountain	2.94	46	P	Pn	09 59 25.7	-4.0
BUOR	Burton Butte	3.17	57	P	Pn	09 59 31.7	-1.3
BBOR	Butler Butte	3.29	45	P	Pn	09 59 30.9	-3.7
LBCM	Butte Creek Ri	3.40	84	P	Pn	09 59 35.2	-1.0
HSO	Harness Mounta	3.57	34	P	Pn	09 59 32.9	-5.6
HBO	Huckleberry Mo	4.16	37	P	Pn	09 59 42.7	-4.3
BEKR	Beckwourth	4.24	98	eP	Pn	09 59 46.0	-2.1
IRO	Indian Ridge	4.32	37	P	Pn	09 59 44.3	-4.9
MOD	Modoc	4.36	71	P	Pn	09 59 47.3	-2.5
COR	Corvallis	4.41	24	P	Pn	09 59 47.3	-3.2
FRIS	Frissel Point	4.55	36	P	Pn	09 59 47.5	-5.0
HUOR	Husband	4.59	38	P	Pn	09 59 48.7	-4.5
WCN	Washoe City	4.83	103	P	Pn	09 59 54.9	-1.6
CMB	Columbia Colle	4.92	119	eP	Pn	09 59 55.6	-2.2
SAO	San Andreas Ge	5.12	137	eP	Pn	09 59 54.2	-6.5
BMO	Blue Mountains	7.58	53	eP	Pn	10 00 31.1	-4.1
CHMT	Chamberlain Mo	11.07	51	eP	P	10 01 19.2	-4.1

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*BJI **18** 09:59:56.6, 34.54N×70.20E, h17^{km}, mB5.0, mb4.8, ML4.9, Ms4.6, Msz4.4*

*NDI **18** 09:59:59.5±5.0, 34.33N×70.26E, h10^{km}, mb4.8, ML4.5, mb4.7(NEIC)*

*NEIC **18** 10:00:00.4±2.5, 34.47N×70.69E, h17^{km}±16^{km}, mb4.7/36, Error ellipse: s-maj=7.0km s-min=4.2km az=218.0*

*NNC **18** 10:00:05.5±2.3, 34.50N×70.23E, h86^{km}±18^{km}, mpv5.1, Error ellipse: s-maj=25.4km s-min=16.9km az=91.0*

*MOS **18** 10:00:07.4±1.0, 34.76N×70.59E, h79^{km}, mb4.9/34, MS4.0/7, Error ellipse: s-maj=8.2km s-min=4.9km az=115.5*

*IDC **18** 10:00:08.6±3.8, 34.72N×70.60E, h77^{km}±34^{km}, mb4.3/30, mb1 4.4/32, mb1mx4.4/34, mbtmp4.6/32, MS3.6/6, Ms1 3.7/6, ms1mx3.3/33, Error ellipse: s-maj=13.2km s-min=10.6km az=1.0*

ISC 18 10:00:01.3±0.6, **34.38N**±0.02×**70.66E**±0.04, **h41**^{km}±6^{km}, **h20**^{km}±5.1^{km}**:pP-P, n218,** σ1^{s}**18**/232, **mb4.6**/77, **MS3.8**/12, **46C-8D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	1.17	118	⇑P	P	10 00 24.9	+3.5
SBDP	Sheikh Budin	2.07	177	⇑P	P	10 00 38.4	+4.1
CHCP	Chirah Chowk	2.28	108	P	P	10 00 42.7	+5.4
DRP	Derazinda	2.65	188	⇓P	P	10 00 46.4	+3.8
SARP	Sargodha	2.97	145	⇓P	P	10 00 50.4	+3.2
JMU	Jammu	3.91	114	ex	x	10 01 20.5	
THN	Thein Dam	4.65	113	eP	P	10 01 14.1	+3.2
THN				ex	x	10 02 30.3	
PONG	Pong	5.05	117	eP	P	10 01 21.0	+4.4
PONG				ex	S	10 02 20.0	+5.6
BHK	Bhakra	5.67	120	ex	P	10 01 31.8	+6.6
BHK				ex	S	10 02 33.1	+3.1
SDNR	Sundarnagar	6.03	117	eP	P	10 01 32.0	+1.8
SDNR				eS	S	10 02 37.4	-1.5
SMLA	Simla	6.37	119	i P	P	10 01 34.4	-0.5
SMLA				i S	S	10 02 46.5	-0.8
KLP	Kalpa	6.98	112	eP	P	10 01 45.8	+2.2
KLP				eS	S	10 03 05.8	+3.2
KLP				AML	AML	10 03 47.5	
	comp=E,1μm,0.3s						
KLP				AML	AML	10 03 48.6	
	comp=N,938nm,0.3s						
KHET	Khetri	7.67	144	eP	P	10 01 52.8	-0.4
KHET				eS	S	10 03 15.2	-4.6
KHET				AML	AML	10 03 21.2	
	comp=E,100nm,0.3s						
KHET				AML	AML	10 03 21.8	
	comp=N,98nm,0.3s						
NDI	New Delhi	7.97	134	eP	P	10 01 56.5	-0.8
NDI				eP		10 01 57.9	
NDI				ex	x	10 02 08.5	
NDI				eS	S	10 03 24.0	-3.1
AYAN	Aya Nagar	8.06	135	eP	P	10 01 58.8	+0.2
AYAN				eS	S	10 03 26.4	-3.1
AML	Almayashu	8.10	16	P	P	10 02 00.1	+0.9
	SNR=290						
SONA	Sohna	8.21	136	eP	P	10 02 00.9	+0.2
SONA				eS	S	10 03 30.8	-2.4
SONA				AML	AML	10 03 37.8	
	comp=E,224nm,0.4s						
SONA				AML	AML	10 03 39.8	
	comp=N,176nm,0.4s						
UCH	Uchtor	8.40	20	P	P	10 02 04.5	+1.1
	SNR=144						
KZA	Kyzart	8.49	24	P	P	10 02 05.4	+0.8
	SNR=40						
AJM	Ajmer	8.59	155	i P	P	10 02 05.0	-0.9
EKS2	Erkin-Say	8.63	16	P	P	10 02 07.1	+0.7
	SNR=76						
KK31	Karatay Array	8.72	359	P	P	10 02 06.9	-0.8
	comp=N,42nm,0.6s,baz=186,slow=14,SNR=694						
KK31				⇑S	S	10 03 45.0	-0.8
	comp=N,51nm,0.5s,baz=194,slow=20,SNR=7.5						
KKAR	Karatay Array	8.72	359	i P	P	10 02 06.9	-0.8
KKAR				S	S	10 03 44.9	-0.9
KKAR				pmax	pmax		
	comp=Z,11nm,0.3s						
KKAR				smax			
	comp=N,8.0nm,0.3s						
AAK	Ala-Archa	8.78	19	P	P	10 02 09.6	+1.1
	SNR=43						
AAK	Ala-Archa	8.78	19	⇑P	P	10 02 09.3	+0.7
	comp=N,36nm,0.5s						
AAK				⇑S	S	10 03 46.8	-0.5
	comp=N,69nm,0.7s						
AAK	Ala-Archa	8.78	19	P	P	10 02 09.2	+0.7
AAK				S	S	10 03 46.7	-0.5
AAK				pmax	pmax		
	comp=Z,16nm,0.5s						
AAK				smax			
	comp=N,48nm,0.7s						
KBK	Karagaybulak	8.92	21	P	P	10 02 12.0	+1.4
	SNR=33						
FRU	Bishkek	8.99	19	eP	P	10 02 12.5	+1.0
FRU				eS	S	10 03 48.0	-4.6
FRU				pmax	pmax		
	comp=Z,80nm,2.0s						
FRU				pmax	pmax		
	comp=N,200nm,1.2s						
ULHL	Ulahol	9.00	28	P	P	10 02 12.8	+1.2
	SNR=15						
CHMS	Chumysh	9.18	19	P	P	10 02 14.9	+0.7
	SNR=22						
TKM2	Tokmak 2	9.36	23	P	P	10 02 17.5	+0.9
	SNR=73						
USP	Ospenovka	9.37	17	P	P	10 02 16.9	+0.2
	SNR=27						
LGTI	Lohaghat	9.51	118	eP	P	10 02 19.5	+0.8
LGTI				ex	x	10 04 01.5	
BHJ	Bhuj	11.12	185	eP	P	10 02 38.6	-2.1
BHJ				ex	x	10 02 55.5	
BHJ				ex	x	10 04 39.5	
JHNI	Jhansi	11.20	140	i P	P	10 02 40.0	-1.8
JHNI				ex	x	10 04 42.0	
BHPL	Bhopal	12.57	150	eP	P	10 02 58.3	-1.9
BHPL				eS	S	10 05 10.9	-9.0
BHPL				AML	AML	10 05 17.0	
	comp=E,55nm,0.4s						
BHPL				AML	AML	10 05 17.0	
	comp=N,38nm,0.4s						
KOLN	Koldanda	12.89	117	eP	P	10 03 03.8	-0.7
	comp=N,47nm,0.4s						
GKN	Gorkha	13.54	114	eP	P	10 03 11.7	-1.3
	comp=N,86nm,0.4s						
DMN	Daman	14.10	115	eP	P	10 03 19.2	-1.2
	comp=N,93nm,0.6s						
KKN	Kakani	14.14	114	eP	P	10 03 19.7	-1.1
	comp=N,118nm,0.6s						
PKI	Pulchoki	14.35	114	eP	P	10 03 22.0	-1.6
	comp=N,118nm,0.7s						
GUN	Gumba	14.53	112	eP	P	10 03 26.7	+0.7
	comp=N,132nm,0.8s						
AKL	Akola	14.73	156	eP	P	10 03 29.1	+0.4
NGP	Nagpur	15.11	149	eP	P	10 03 31.9	-1.7
NGP				ex	x	10 03 32.4	
NGP				ex	x	10 06 11.8	
MK31	Makanchi Array	15.21	32	⇑P	P	10 03 37.1	+2.4
	comp=N,38nm,0.7s						
MKAR	Makanchi Array	15.21	32	P	P	10 03 33.4	-1.3
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MKAR	Makanchi Array	15.21	32	P	P	10 03 34.6	-0.1
	comp=Z,2.3nm,0.3s,baz=229,slow=13,SNR=77						
MKAR				LR	LR	10 10 05.9	
	comp=Z,352nm,22.0s,baz=180,slow=40						
POO	Poona	16.04	169	ex	x	10 04 05.0	
WMQ	Urumqi	16.22	49	eP	P	10 03 46.4	-1.2
WMQ				AP		10 03 56.1	
WMQ				eS	S	10 06 43.3	-2.5
WMQ				PCP	PcP	10 08 43.6	+2.0
WMQ				AMB	AMB		
	comp=Z,40nm,0.8s						
WMQ				AMB	AMB		
	comp=Z,140nm,3.2s						
AB31	Akbulak array	16.85	335	⇓P	P	10 03 52.9	-2.6
	comp=Z,5.1nm,0.3s						
AB31				⇑S	S	10 06 55.5	-4.9
	comp=Z,11nm,0.6s						
AB31	Akbulak array	16.85	335	P	P	10 03 52.9	-2.7
AB31				S	S	10 06 51.1	-9.3
AB31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AB31				smax			
	comp=N,3.0nm,0.4s						
KAD	Karad	17.29	169	eP	P	10 04 00.8	-0.4
KAD				AMb	AMB	10 04 17.0	
	comp=Z,52nm,1.2s						
LSA	Lhasa	17.98	99	eP	P	10 04 11.9	+2.1
LSA				pmax	pmax		
	comp=Z,22nm,0.7s						
LSA	Lhasa	17.98	99	eP	P	10 04 11.9	+2.1
	comp=Z,22nm,0.7s						
HYB	Hyderabad	18.31	155	eP	P	10 04 12.0	-2.0
HYB	Hyderabad	18.31	155	i P	P	10 04 16.0	+2.0
HYB				eS	S	10 07 38.0	+4.5
HYB				eSS	SS	10 08 02.0	+4.1
VOSK	Vostochnaya	18.34	1	⇓P	P	10 04 11.6	-2.6
	comp=Z,31nm,1.2s						
VOSK	Vostochnaya	18.34	1	P	P	10 04 11.6	-2.6
VOSK				pmax	pmax		
	comp=Z,39nm,1.3s						
ZRNK	Zerenda	18.61	357	⇓P	P	10 04 14.9	-2.6
	comp=Z,21nm,0.7s						
ZRNK	Zerenda	18.61	357	P	P	10 04 14.8	-2.6
ZRNK				S	S	10 07 37.0	-3.1
ZRNK				pmax	pmax		
	comp=Z,14nm,0.7s						
ZRNK				smax			
	comp=N,7.0nm,0.9s						
ZRNK	Zerenda	18.61	357	eP	P	10 04 15.1	-2.3
BVA0	Borovoye Array	18.64	359	⇑P	P	10 04 15.1	-2.8
	comp=N,5.3nm,1.1s,baz=172,slow=14,SNR=161						
BVA0				⇓S	S	10 07 41.9	+1.0
	comp=N,2.1nm,1.1s,baz=176,slow=18,SNR=3.5						
BVA0	Borovoye Array	18.64	359	i P	P	10 04 15.0	-2.9
BVA0				i S	S	10 07 41.9	+1.0
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BVA0				smax			
	comp=N,2.0nm,1.1s						
BVAR	Borovoye Array	18.64	359	P	P	10 04 15.7	-2.2
	comp=N,3.1nm,0.3s,baz=173,slow=12,SNR=101						
SHL	Shillong	20.34	110	ex	x	10 04 38.0	
	comp=N,50nm,1.0s						
SHL				ex	x	10 08 18.0	
GNI	Garni	21.38	293c	iP	P	10 04 48.9	+1.6
GNI				pmax	pmax		
	comp=Z,47nm,1.3s						
GNI				MLR	MLR		
	comp=Z,100nm,16.0s						
GNI	Garni	21.38	293	P	P	10 04 49.2	+1.9
	comp=Z,18nm,0.6s,mb4.6,baz=50,slow=5.9,SNR=11						
GNI				LR	LR	10 14 43.5	
	comp=Z,96nm,19.8s,MS3.2,baz=17,slow=41						
GNI	Garni	21.38	293	eP	P	10 04 49.3	+2.0
	comp=Z,30nm,0.9s,mb4.6						
TI2	Plekhanov	21.63	297	i P	P	10 04 49.0	-0.8
ZAL	Zalesovo	21.95	23	P	P	10 04 52.5	-0.3
	comp=Z,47nm,0.3s,mb5.4,baz=259,slow=6.9,SNR=63						
ZAL				LR	LR	10 14 44.7	
	comp=Z,213nm,21.5s,MS3.5,baz=248,slow=40						
NVS	Novosibirsk	22.27	19	eP	P	10 04 54.2	-1.8
NVS				eS	S	10 08 39.6	-14
NVS				pmax	pmax		
	comp=Z,61nm,1.1s,mb4.9						
NVS				pmax	pmax		
	comp=N,57nm,1.2s						
NVS				pmax	pmax		
	comp=E,17nm,0.9s						
NVS				smax			
	comp=N,11nm,1.4s						
ZEI	Tsey	22.47	300	eP	P	10 04 59.5	+1.4
ZEI				i *PP		10 05 17.6	
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
SVE	Sverdlovsk	23.47	346	eP	P	10 05 09.0	+1.3
SVE				e		10 05 37.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.7s,mb4.6						
ARU	Arti	23.57	343	⇓iP	P	10 05 08.9	+0.3
ARU				e		10 05 34.0	
ARU				eS	S	10 09 11.8	-4.7
ARU				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
ARU				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.0						
ARU				MLR	MLR		
	comp=N,300nm,17.0s,MS3.9						
ARU				MLR	MLR		
	comp=E,200nm,17.0s,MS3.9						
ARU	Arti	23.57	343	eP	P	10 05 09.3	+0.7
	comp=E,14nm,0.6s,mb4.6						
KIV	Kislovodsk	23.61	302	⇓iP	P	10 05 10.0	+0.8
KIV				e		10 05 37.3	
KIV				e		10 05 51.0	
KIV				e		10 05 58.5	
KIV				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.3						
KIV				MLR	MLR		
	comp=Z,100nm,12.0s,MS3.5						
KIV	Kislovodsk	23.61	302	P	P	10 05 09.4	+0.3
	comp=Z,17nm,0.8s,mb4.5						
GOF	Gofitskoye	23.67	305	⇑iP	P	10 05 09.8	0.0
GOF				pmax	pmax		
	comp=Z,30nm,1.7s,mb4.5						
GTA	Gaotai	23.80	69	P	P	10 05 14.8	+3.8
GTA				AP		10 05 20.1	
GTA				XP		10 05 23.3	
GTA				PP	PP	10 05 42.5	-2.6
GTA				PCP	PcP	10 08 56.8	+1.4
GTA				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
MALT	Malatya	26.19	288	eP	P	10 05 33.5	-0.3
MALT				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
MALT	Malatya	26.19	288	eP	P	10 05 33.5	-0.4
	comp=Z,4.8nm,0.7s,mb4.1						
ASF	Jabal al Asfar	28.24	275	P	P	10 05 54.0	+1.4
	comp=Z,1.9nm,0.4s,mb4.1,baz=182,slow=0.8,SNR=2.5						
ZAK	Zakamensk	28.63	46	eP	P	10 05 57.6	+1.7
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
TLY	Talaya	29.33	44	⇑iP	P	10 06 04.1	+1.9
CMAR	Chiang Mai Arr	29.75	115	P	P	10 06 11.2	+5.0
	comp=Z,1.2nm,0.3s,mb4.0,baz=302,slow=8.5,SNR=6.6						
CMAR				LR	LR	10 21 11.9	
	comp=Z,72nm,19.1s,MS3.3,baz=310,slow=42						
SONM	Songino Array	29.81	52	P	P	10 06 07.2	+0.8
	comp=Z,2.0nm,0.6s,mb4.0,baz=255,slow=9.5,SNR=16						
SONM				LR	LR	10 19 28.1	
	comp=Z,152nm,18.4s,MS3.7,baz=79,slow=39						
BR131	Keskin Array S	29.88	291	eP	P	10 06 07.4	+0.2
	comp=Z,4.0nm,0.8s,mb4.2						
BRTR	Keskin Array B	29.88	291	P	P	10 06 07.2	0.0
	comp=Z,4.7nm,0.8s,mb4.3,baz=98,slow=8.7,SNR=28						
ULN	Ulaanbaatar	30.25	52c	iP	P	10 06 11.8	+1.5
OBN	Obninsk	31.40	322c	iP	P	10 06 19.5	-1.0
OBN				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.2						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s,MS3.8						
OBN	Obninsk	31.40	322	eP	P	10 06 19.6	-0.8
	comp=Z,12nm,0.4s,mb5.1						
GYA	Guiyang	31.91	94	P	P	10 06 25.8	+0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
AKASG	Malin Array Be	34.10	311	P	P	10 06 42.4	-1.6

	comp=Z,3.1nm,0.4s,mb4.6,baz=105,slow=8.2,SNR=15						
CIT	Chita	35.28	47	eP	P	10 06 55.6	+1.6
CIT				pmax	pmax		
	comp=Z,25nm,1.6s,mb4.9						
MLR	Muntele Rosu	35.62	302	P	P	10 06 58.5	+1.5
	comp=Z,11nm,0.7s,mb4.9,baz=116,slow=2.2,SNR=21						
IDI	Anoyia	37.33	285	P	P	10 07 10.7	-0.8
	comp=Z,4.0nm,0.4s,mb4.6,baz=338,slow=16,SNR=6.9						
VSU	Vasula	37.70	323	c iP	P	10 07 13.5	-0.8
FINES	FINESS Array B	39.11	328	i P	P	10 07 25.6	-0.4
FINES				pmax	pmax		
	comp=Z,8.0nm,0.5s						
FINES	FINESS Array B	39.11	328	P	P	10 07 25.4	-0.7
	comp=Z,7.9nm,0.5s,mb4.7,baz=112,slow=10,SNR=62						
KAF	Kangasniemi	39.28	329	ep	P	10 07 26.6	-0.8
	comp=Z,5.9nm,0.4s,mb4.7,baz=113,slow=8.4						
KAF	Kangasniemi	39.28	329	eP	P	10 07 26.6	-0.8
KAF				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.7						
SSE	Sheshan	42.28	80	eP	P	10 07 56.1	+3.6
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,40nm,4.5s						
SSE	Sheshan	42.28	80	eP	P	10 07 56.1	+3.6
	comp=Z,43nm,0.7s,mb5.2						
KEV	Kevo	42.68	339	ep	P	10 07 54.3	-1.0
	comp=Z,4.2nm,0.4s,mb4.5						
KEV	Kevo	42.68	339	eP	P	10 07 54.3	-1.0
KEV				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.5						
CN2	Changchun	42.86	60	eP	P	10 07 58.3	+1.1
ARCES	ARCESS Array B	43.01	339	P	P	10 07 57.6	-0.3
	comp=Z,10nm,0.7s,mb4.7,baz=114,slow=8.4,SNR=58						
ARE0	ARCESS Array S	43.01	339	eP	P	10 07 57.3	-0.7
BRG	Berggiesshubel	43.75	310	i P	P	10 08 06.1	+1.9
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
BRG				MLR	MLR		
	comp=N,262nm,15.9s,MS4.3						
BRG				MLR	MLR		
	comp=Z,340nm,11.5s,MS4.5						
BRG				MLR	MLR		
	comp=E,216nm,15.9s,MS4.3						
BRG	Berggiesshubel	43.75	310	i P	P	10 08 06.1	+1.9
	comp=E,5.1nm,0.8s,mb4.3						
BRG				LR	LR		
	comp=Z,340nm,11.5s,MS4.5						
GERES	GERESS Array B	43.96	307	P	P	10 08 06.0	0.0
	comp=Z,0.4nm,0.5s,mb3.4,baz=79,slow=6.8,SNR=5.6						
GERES				PcP	PcP	10 09 52.4	+0.6
	comp=Z,2.1nm,0.7s,baz=63,slow=3.0,SNR=9.6						
KHC	Kasperske Hory	44.03	307	ePP	PP	10 09 43.0	-7.8
CLL	Collm	44.34	311	P	P	10 08 09.0	0.0
HFS	Hagfors	44.58	323	P	P	10 08 10.0	-0.8
	comp=Z,14nm,0.6s,mb4.9,baz=108,slow=9.4,SNR=34						
MOX	Moxa	45.23	310	eP	P	10 08 16.0	-0.1
MOX				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.3						
MOX	Moxa	45.23	310	eP	P	10 08 16.0	-0.1
MOX				epP	pP	10 08 24.0	-3.6
MOX				LR	LR		
	comp=Z,300nm,17.0s,MS4.3						
MOX	Moxa	45.23	310	eP	P	10 08 16.0	-0.1
MOX				pP	pP	10 08 24.0	-3.6
MOX				PcP	PcP	10 09 55.0	-1.1
MOX				L		10 25 42.0	
GRA1	Grafenberg Arr	45.53	308	eP	P	10 08 20.0	+1.4
	comp=Z,7.0nm,1.2s,mb4.5						
GRA1				epP	pP	10 08 26.8	-3.2
GRF	Grafenberg Arr	45.53	308	eP	P	10 08 20.0	+1.4
GRF				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
GRF	Grafenberg Arr	45.53	308	eP	P	10 08 20.0	+1.4
GRF				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
GRF	Grafenberg Arr	45.53	308	eP	P	10 08 20.0	+1.4
	comp=Z,7.0nm,1.2s,mb4.5						
GRF				epP	pP	10 08 26.8	-3.2
MDJ	Mudanjiang	45.71	59	P	P	10 08 18.0	-2.1
MDJ				AMB	AMB		
	comp=Z,50nm,4.3s						
YAK	Yakutsk	45.87	34	c iP	P	10 08 20.7	-0.3
NB2	NORSAR Subarra	45.92	324	P	P	10 08 20.4	-1.1
	comp=Z,8.9nm,0.7s,mb4.8,baz=99,slow=7.9						
NOA	NORSAR Array B	45.92	324	P	P	10 08 19.9	-1.7
	comp=Z,8.8nm,0.7s,mb4.8,baz=98,slow=7.8,SNR=41						
DAVOX	Davos	46.71	305	P	P	10 08 27.7	-0.1
	comp=Z,2.8nm,0.5s,mb4.4,baz=66,slow=10,SNR=4.1						
DAVOX				PcP	PcP	10 10 02.1	+0.8
	comp=Z,2.9nm,0.7s,baz=328,slow=4.3,SNR=3.7						
TIXI	Tiksi	47.85	21	eP	P	10 08 33.8	-2.7
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
PGF	Pioggiola	48.03	299	⇑iP	P	10 08 37.8	-0.5
	comp=Z,9.2nm,0.7s,mb4.6						
CDF	Champ du Feu	48.24	307	eP	P	10 08 40.3	+0.4
	comp=Z,2.8nm,0.5s,mb4.2						
CDF	Champ du Feu	48.24	307	eP	P	10 08 40.3	+0.4
CDF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
HINF	Hinteralfeld	48.60	306	eP	P	10 08 42.7	0.0
	comp=Z,5.3nm,0.6s,mb4.5						
HINF	Hinteralfeld	48.60	306	eP	P	10 08 42.7	0.0
HINF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
SBF	Sospel	48.88	301	eP	P	10 08 44.8	-0.1
	comp=Z,10nm,0.6s,mb4.7						
HAU	Haudompre	48.91	307	eP	P	10 08 45.0	0.0
HAU				eR			
	comp=Z,152nm,21.9s						
LPG	La Plagne	49.05	303	⇑iP	P	10 08 46.7	+0.5
	comp=Z,17nm,0.6s,mb4.9						
LPL	La Plagne	49.06	303	⇑iP	P	10 08 46.7	+0.5
	comp=Z,29nm,0.6s,mb5.2						
MBDF	Montbardon	49.18	302	⇑iP	P	10 08 46.9	-0.3
	comp=Z,12nm,0.7s,mb4.8						
BNI	Bardonecchia	49.19	303	eP	P	10 08 47.1	-0.1
BNI				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
BNI	Bardonecchia	49.19	303	eP	P	10 08 47.1	0.0
	comp=Z,10nm,1.1s,mb4.8						
CABF	La Chapelle	49.31	305	⇑iP	P	10 08 48.7	+0.6
	comp=Z,29nm,0.9s,mb5.0						
CABF	La Chapelle	49.31	305	⇑iP	P	10 08 48.7	+0.6
CABF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
GIVF	Givet	49.61	310	eP	P	10 08 51.2	+0.8
MEZF	Maizieres J’vi	49.69	307	⇑iP	P	10 08 51.6	+0.5
	comp=Z,12nm,0.6s,mb4.8						
ORIF	Oris-en-Rattie	49.77	303	eP	P	10 08 51.4	-0.3
ORIF				eR			
	comp=Z,162nm,17.5s						
BAIF	Baives	50.01	310	eP	P	10 08 54.2	+0.8
	comp=Z,16nm,1.0s,mb4.7						
BAIF	Baives	50.01	310	eP	P	10 08 54.2	+0.8
BAIF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
SMRF	Simiane la Rot	50.18	302	eP	P	10 08 54.8	0.0
	comp=Z,1.7nm,0.5s,mb4.0						
VIVF	Saint-Julien-l	50.62	303	⇑iP	P	10 08 58.2	0.0
	comp=Z,24nm,0.9s,mb4.8						
VIVF	Saint-Julien-l	50.62	303	⇑iP	P	10 08 58.2	0.0
VIVF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
LOR	Lormes	50.70	306	⇑iP	P	10 08 58.9	+0.2
	comp=Z,5.0nm,0.5s,mb4.4						
LOR				eR			
	comp=Z,104nm,22.2s						
SMF	Signal de Mont	50.83	305	⇑iP	P	10 08 59.8	+0.1
	comp=Z,51nm,0.8s,mb5.2						
SMF	Signal de Mont	50.83	305	⇑iP	P	10 08 59.8	+0.1
SMF				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
AVF	Avril sur Loir	51.13	305	⇑iP	P	10 09 01.9	-0.1
	comp=Z,37nm,0.8s,mb5.0						
AVF	Avril sur Loir	51.13	305	⇑iP	P	10 09 01.9	-0.1
AVF				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
LASF	Ste Croix	51.36	302	⇑iP	P	10 09 03.9	+0.1
	comp=Z,23nm,1.0s,mb4.8						
HYF	Humbligny	51.51	306	eP	P	10 09 05.2	+0.3
BGF	Bois d’Agland	51.52	305	eP	P	10 09 04.8	-0.1
TCF	Toulx Ste Croi	52.00	305	⇑iP	P	10 09 08.9	+0.3
	comp=Z,38nm,0.9s,mb5.0						
TCF	Toulx Ste Croi	52.00	305	⇑iP	P	10 09 08.9	+0.3
TCF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
CAF	Calviac	52.41	303	⇑iP	P	10 09 12.1	+0.5
	comp=Z,25nm,0.8s,mb4.9						
CAF	Calviac	52.41	303	⇑iP	P	10 09 12.1	+0.5
CAF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
MTLF	Montolieu	52.69	301	⇑iP	P	10 09 13.7	-0.1
	comp=Z,14nm,1.0s,mb4.5						
MTLF	Montolieu	52.69	301	⇑iP	P	10 09 13.7	-0.1
MTLF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
RJF	Les Rejaudoux	52.70	304	⇑iP	P	10 09 14.2	+0.4
	comp=Z,24nm,0.8s,mb4.9						
RJF				eR			
	comp=Z,98nm,18.8s						
RJF	Les Rejaudoux	52.70	304	⇑iP	P	10 09 14.2	+0.4
RJF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
RJF				MLR	MLR		
	comp=Z,100nm,18.8s,MS3.9						
LDF	La Druitiere	53.06	308	eP	P	10 09 15.9	-0.5
FLN	La Foliniere	53.25	309	eP	P	10 09 17.2	-0.7
	comp=Z,14nm,0.7s,mb4.7						
FLN				eR			
	comp=Z,179nm,17.2s						
FLN	La Foliniere	53.25	309	eP	P	10 09 17.2	-0.7
FLN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
FLN				MLR	MLR		
	comp=Z,180nm,17.3s,MS4.2						
LFF	La Frestale	53.32	304	⇑iP	P	10 09 18.7	+0.3
	comp=Z,33nm,0.5s,mb5.2						
LFF	La Frestale	53.32	304	⇑iP	P	10 09 18.7	+0.3
LFF				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.2						
MFF	Saint Martin d	53.52	306	⇑iP	P	10 09 19.3	-0.6
	comp=Z,13nm,0.7s,mb4.7						
MFF	Saint Martin d	53.52	306	⇑iP	P	10 09 19.3	-0.6
MFF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
GRR	Gorron	53.58	308	eP	P	10 09 19.6	-0.7
	comp=Z,14nm,0.8s,mb4.7						
GRR	Gorron	53.58	308	eP	P	10 09 19.6	-0.7
GRR				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
EKA	Eskdalemuir Ar	53.63	317	P	P	10 09 19.1	-1.6
	comp=Z,1.7nm,0.7s,mb4.1,baz=93,slow=7.1,SNR=10						
EKA				PcP	PcP	10 10 27.1	+0.5
	comp=Z,1.2nm,0.7s,baz=101,slow=4.3,SNR=3.8						
MJAR	Matsushiro Arr	54.02	67	P	P	10 09 24.4	+0.7
	comp=Z,2.8nm,0.8s,mb4.3,baz=289,slow=9.5,SNR=10.0						
MJAR	Matsushiro Arr	54.02	67	P	P	10 09 24.4	+0.7
EPF	Esparros	54.10	302	eP	P	10 09 23.7	-0.5
SGMF	Saint Gilles	54.71	308	eP	P	10 09 28.2	-0.4
ETSF	Etsaut	54.77	302	⇑iP	P	10 09 29.2	+0.1
	comp=Z,13nm,0.5s,mb4.9						
ETSF	Etsaut	54.77	302	⇑iP	P	10 09 29.2	+0.1
ETSF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
ROSF	Rostrenen	55.16	309	eP	P	10 09 31.2	-0.6
	comp=Z,19nm,0.8s,mb4.9						
ROSF	Rostrenen	55.16	309	eP	P	10 09 31.2	-0.6
ROSF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
SJPF	Ste Jean	55.18	302	eP	P	10 09 32.0	-0.1
ESDC	Sonseca Array	58.22	299	P	P	10 09 52.9	-0.8
	comp=Z,1.5nm,0.5s,mb4.3,baz=61,slow=7.6,SNR=5.8						
SUMG	Summit	62.98	341	eP	P	10 10 25.7	0.0
	comp=Z,5.9nm,1.0s,mb4.7						
MATP	Matopo	67.66	223	P	P	10 10 57.2	+0.7
	comp=Z,7.0nm,0.6s,mb4.9,baz=27,slow=8.2,SNR=15						
MATP	Matopo	67.66	223	P	P	10 10 57.2	+0.7
LBTB	Lobatse	72.92	222	eP	P	10 11 29.3	+1.0
LBTB				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
LBTB	Lobatse	72.92	222	P	P	10 11 31.4	+3.0
	comp=Z,3.3nm,0.6s,mb4.4,baz=20,slow=3.7,SNR=6.2						
LBTB	Lobatse	72.92	222	eP	P	10 11 29.3	+1.0
	comp=Z,8.5nm,0.8s,mb4.7						
TSUM	Tsumeb	73.39	232	P	P	10 11 32.7	+1.5
	comp=Z,1.7nm,0.6s,mb4.1,baz=334,slow=8.1,SNR=4.3						
DBIC	Dimbokro	74.32	267	P	P	10 11 37.5	+0.8
	comp=Z,3.4nm,0.8s,mb4.3,baz=27,slow=9.0,SNR=3.4						
DBIC				LR	LR	10 48 09.7	
	comp=Z,59nm,18.1s,MS3.9,baz=356,slow=39						
BOSA	Boshof	75.95	220	P	P	10 11 50.2	+4.4
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
BOSA	Boshof	75.95	220	P	P	10 11 50.1	+4.4
	comp=Z,3.2nm,0.5s,mb4.5,baz=45,slow=2.9,SNR=10						
BOSA	Boshof	75.95	220	P	P	10 11 51.3	+5.6
INK	Inuvik	76.04	9	P	P	10 11 45.2	-0.3
INK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
INK	Inuvik	76.04	9	P	P	10 11 45.2	-0.3
	comp=Z,4.7nm,0.5s,mb4.7,baz=4.0,slow=6.7,SNR=26						
INK	Inuvik	76.04	9	eP	P	10 11 45.5	0.0
	comp=Z,16nm,1.1s,mb4.9						
ILAR	Eielson Array	76.90	16	P	P	10 11 49.5	-1.0
	comp=Z,2.6nm,0.8s,mb4.2,baz=318,slow=4.5,SNR=26						
NWAO	Narrogin (SRO)	79.97	142	P	P	10 12 11.3	+3.4
	comp=Z,19nm,1.1s,mb4.9,baz=118,slow=11,SNR=2.3						
NWAO	Narrogin (SRO)	79.97	142	P	P	10 12 11.3	+3.4
EYAK	Cordova Ski Ar	80.82	17	P	P	10 12 11.8	0.0
WRA	Warramunga Arr	81.11	121	P	P	10 12 15.4	+1.2
	comp=Z,4.7nm,0.7s,mb4.5,baz=318,slow=5.1,SNR=11						
YKA	Yellowknife Ar	83.38	2	P	P	10 12 24.8	-0.1
	comp=Z,4.3nm,0.4s,mb4.8,baz=350,slow=5.3,SNR=34						
YKA	Yellowknife Ar	83.38	2	P	P	10 12 24.8	-0.1
SCHQ	Schefferville	83.94	337	P	P	10 12 28.2	+0.3
	comp=Z,2.9nm,0.7s,mb4.5,baz=38,slow=3.4,SNR=9.1						
SCHQ	Schefferville	83.94	337	P	P	10 12 28.2	+0.3
DLBC	Dease Lake	85.93	11	P	P	10 12 38.4	+0.7
	comp=Z,1.9nm,0.6s,mb4.5,baz=316,slow=8.7,SNR=4.4						
DLBC	Dease Lake	85.93	11	P	P	10 12 38.4	+0.7
CTA	Charters Tower	89.91	114	P	P	10 12 58.9	+1.1
	comp=Z,2.1nm,0.5s,mb4.7,baz=2.3,slow=9.9,SNR=6.0						
EDM	Edmonton	92.70	2	eP	P	10 13 10.7	+0.9
VNA2	Neumayer--Watz	118.33	201	⇑iP	PKPdf	10 18 45.9	+2.3
VNA3	Neumayer Olymp	119.13	201	⇑iP	PKPdf	10 18 47.1	+1.9
SIV	San Ignacio	133.11	281	PKP	PKPdf	10 19 15.7	+2.4
	comp=Z,0.7nm,0.6s,baz=104,slow=3.3,SNR=3.6						
CFAA	Coronel Fontan	145.58	263	PKPbc	PKPbc	10 19 39.3	+3.4
	comp=Z,0.4nm,0.4s,baz=85,slow=4.5,SNR=11						
PLCA	Paso Flores	148.79	247	PKPbc	PKPdf	10 19 48.0	+7.7
	comp=Z,2.4nm,0.8s,baz=162,slow=18,SNR=4.2						
PLCA	Paso Flores	148.79	247	PKPbc	PKPdf	10 19 48.0	+7.7

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*IDC **18** 10:10:55.6±2.1, 20.29S×68.89W, h82^{km}±25^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.5/18, mbtmp4.1/5, Error ellipse: s-maj=38.2km s-min=15.3km az=98.0*

ISC 18 10:10:53.8±1.6**, 20.41S**±0.07×**68.7W**±0.2**, h67**^{km}±26^{km}**, n7, σ1^{s}18**/8**, mb3.6**/1**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.14	8	P	P	10 11 56.1	+0.1
	1.5nm,0.3s,baz=187,slow=8.8,SNR=62						
LPAZ				S	S	10 12 42.9	-0.7
	1.3nm,0.3s,baz=164,slow=20,SNR=4.3						
SIV	San Ignacio	8.47	60	P	P	10 12 56.4	+0.3
	2.4nm,0.3s,baz=257,slow=11,SNR=122						
CFAA	Coronel Fontan	11.15	178	P	P	10 13 33.7	+1.1
	0.0nm,0.3s,baz=9.6,slow=13,SNR=5.9						
CFAA				S	S	10 15 34.9	-1.6
	0.0nm,0.3s,baz=234,slow=19,SNR=3.7						
BDFB	Brasilia	20.23	80	P	P	10 15 26.1	+0.1
	5.1nm,0.4s,baz=262,slow=8.4,SNR=8.8						
PLCA	Paso Flores	20.32	184	P	P	10 15 27.8	+1.1
	3.7nm,0.6s,baz=5.9,slow=14,SNR=15						
SNAA	Sanae	63.24	161	P	P	10 21 16.6	-0.6
	0.8nm,0.9s,mb3.6,baz=271,slow=7.6,SNR=7.8						
WRA	Warramunga Arr	133.99	211	PKP	PKPdf	10 30 01.8	-2.6
	0.2nm,0.5s,baz=164,slow=1.7,SNR=6.4						

NEIC 18 10:17:40.9, 40.69N×125.74W, h3^{km}**, mb3.6**/1**, MD3.0**(NCEDC)**, After NCEDC., Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	1.54	82	eP	Pn	10 18 06.5	-2.8
KBO	Bosley Butte	1.90	36	eP	Pn	10 18 07.8	-6.7
KEBM	Edson Butte	2.42	25	ePn	Pn	10 18 11.7	-10
WDC	Whiskeytown Da	2.43	92	ePn	Pn	10 18 20.7	-1.5
YBH	Yreka Blue Hor	2.51	64	P	Pn	10 18 21.3	-2.0
LAMM	Antelope Mount	2.52	68	P	Pn	10 18 22.0	-1.5
LHEM	Herd Peak	2.82	69	P	Pn	10 18 26.3	-1.3
HUMO	Hull Mountain	2.83	46	P	Pn	10 18 22.4	-5.4
BUOR	Burton Butte	3.07	58	P	Pn	10 18 28.8	-2.4
BBOR	Butler Butte	3.17	45	P	Pn	10 18 27.9	-4.8
HOG	Hogback Mounta	3.40	62	P	Pn	10 18 33.3	-2.7
HBO	Huckleberry Mo	4.05	38	P	Pn	10 18 39.2	-5.9
BEKR	Beckwourth	4.20	100	ePn	Pn	10 18 45.9	-1.3
IRO	Indian Ridge	4.20	37	P	Pn	10 18 40.7	-6.6
MOD	Modoc	4.27	72	ePn	Pn	10 18 45.0	-3.3
FRIS	Frissel Point	4.43	36	P	Pn	10 18 44.0	-6.6
WCN	Washoe City	4.80	105	Pn	Pn	10 18 52.7	-3.1
CMB	Columbia Colle	4.92	121	ePn	Pn	10 18 53.8	-3.7
FFC	Flin Flon	21.14	40	P	P	10 22 25.2	-3.9
	1.9nm,0.7s						

KRSC 18 10:25:24.7±0.5**, 54.77N**×**161.91E, h21**^{km}±3^{km}**, ML3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.24	206	i P	Pb	10 25 31.4	+0.9
MKZ				i S	Sb	10 25 35.7	+1.3
TUMR	Tumrok	1.14	298	i P	Pb	10 25 45.4	-0.1
TUMR				i S	Sb	10 26 00.4	+0.5
KMNR	Kamenistaya	1.38	317	i P	Pn	10 25 49.2	+0.2
KMNR				i S	Sn	10 26 07.5	+0.8
ZLN	Zelenaya	1.40	334	eP	Pn	10 25 50.1	+0.8
ZLN				eS	Sn	10 26 08.3	+1.0
LGNR	Loginova	1.49	333	eP	Pn	10 25 51.3	+0.7
LGNR				i S	Sn	10 26 11.2	+1.7
CIRR	Tsirk	1.50	334	eP	Pn	10 25 51.3	+0.5
CIRR				eS	Sn	10 26 10.5	+0.6
KBTR	Krutoberegovo	1.53	19	eP	Pn	10 25 51.0	-0.2
KBTR				eS	Sn	10 26 10.0	-0.6
KPT	Kopyto	1.54	322	i P	Pn	10 25 51.6	+0.3
KPT				eS	Sn	10 26 11.5	+0.7
KII	Karymskiy	1.62	244	i P	Pn	10 25 52.9	+0.5
KII				i S	Sn	10 26 13.4	+0.6
KRSR	Krestovskiy	1.64	333	eP	Pn	10 25 52.7	0.0
KRSR				eS	Sn	10 26 13.0	-0.4
KLY	Klyuchi	1.70	336	i P	Pn	10 25 53.1	-0.6
KLY				i S	Sn	10 26 13.7	-1.3
KOZ	Kozyrevsk	1.74	319	i P	Pn	10 25 54.7	+0.6
KOZ				i S	Sn	10 26 17.0	+1.2
SRDR	Sredinnyy	1.99	322	i P	Pn	10 25 57.7	0.0
SRDR				eS	Sn	10 26 21.8	-0.5
SPN	Mys Shipunski	2.01	214	eP	Pn	10 25 56.7	-1.4
SPN				i S	Sn	10 26 20.0	-2.9
ESO	Esso	2.17	304	eP	Pn	10 26 00.5	+0.2
ESO				eS	Sn	10 26 27.1	+0.3
ESO				Smax			
	60nm,0.7s						
NLC	Nalytchevo	2.21	224	eP	Pn	10 26 00.5	-0.3
NLC				i S	Sn	10 26 26.6	-1.2
SDLR	Sedlovina	2.33	231	eP	Pn	10 26 03.3	+0.7
SDLR				eS	Sn	10 26 31.0	+0.1
BKI	Bering	2.38	78	eP	Pn	10 26 03.1	-0.3
BKI				eS	Sn	10 26 30.8	-1.4
BKI				Smax			
	30nm,0.8s						
UGLR	Uglovaya	2.40	231	eP	Pn	10 26 04.4	+0.7
UGLR				eS	Sn	10 26 32.7	0.0
AVH	Avacha	2.40	232	eP	Pn	10 26 04.6	+0.9
AVH				eS	Sn	10 26 33.5	+0.7
KOK	Koryaka	2.43	234	eP	Pn	10 26 05.0	+0.9
KOK				eS	Sn	10 26 34.6	+1.0
GNL	Ganaly	2.57	247	eP	Pn	10 26 06.6	+0.6
GNL				eS	Sn	10 26 37.2	+0.3
PET	Petropavlovsk	2.60	229	eP	Pn	10 26 07.0	+0.5
PET				i S	Sn	10 26 38.1	+0.3
RUS	Russkaya	3.10	222	eP	Pn	10 26 13.0	-0.5
RUS				eS	Sn	10 26 48.1	-2.2
GRL	Gorelyy	3.19	227	eP	Pn	10 26 15.6	+0.8
GRL				eS	Sn	10 26 52.3	-0.3
APC	Apacha	3.37	239	eP	Pn	10 26 18.4	+1.0
APC				eS	Sn	10 26 57.4	+0.2

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*TEH **18** 10:40:16.6, 32.81N×48.57E, h19^{km}, Mn3.4*

*THR **18** 10:40:17.5±0.3, 33.14N×48.37E, h35^{km}±3^{km}, ML3.4*

*CSEM **18** 10:40:19.7±0.1, 33.03N×48.48E, h46^{km}, ML3.4, Error ellipse: s-maj=3.3km s-min=2.6km az=80.0*

ISC 18 10:40:20.1±0.7**, 33.08N**±0.06×**48.57E**±0.06**, h33**^{km}**, n19, σ0^{s}99**/19**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGO	Shushtar	0.99	169	ePG	P	10 40 37.8	+0.1
SHGR	Shooshtar-Gavs	0.99	169	ePG	P	10 40 37.8	+0.1
IKOM	Komasi	1.40	321	Pn	Pn	10 40 41.6	-2.1
ASAO	Ashtian	1.90	39	ePG	P	10 40 52.7	+2.1
ASAO				eSG	S	10 41 18.6	+5.0
ASAO				AML	AML	10 41 24.4	
	comp=N,424nm,0.6s						
IPIR	Pirpir	1.99	101	Pn	Pn	10 40 50.9	-1.3
IVIS	Veys	2.03	316	Pn	Pn	10 40 52.4	-0.3
SNGE	Sanandaj	2.25	333	ePG	P	10 40 55.5	-0.1
SNGE				AML	AML	10 41 35.7	
	comp=N,208nm,0.5s						
ILIN	Laeen	2.27	324	Pn	Pn	10 40 56.1	0.0
IDHR	Dehrash	2.43	312	Pn	Pn	10 40 59.7	+1.3
IKLH	Kalahroud	2.53	84	Pn	Pn	10 40 55.2	-4.7
IRAZ	Razeghan	2.57	26	Lg		10 41 44.5	
IRAZ	Razeghan	2.57	26	Pn	Pn	10 41 06.3	+5.8
IZEF	Zefreh	3.16	92	Pn	Pn	10 41 05.1	-3.8
IGAR	Garneh	3.17	104	Pn	Pn	10 41 02.2	-6.8
IVRN	Varamin	3.24	53	Pn	Pn	10 41 10.6	+0.6
IVRN				Sn	Sn	10 41 47.1	-0.8
NASN	Na’in	3.57	93	ePN	Pn	10 41 15.3	+0.6
IDMV	Damavand	3.79	48	Pn	Pn	10 41 17.8	0.0
IFIR	Firoozkooh	4.30	52	Pn	Pn	10 41 24.9	-0.1
IFIR	Firoozkooh	4.30	52	Lg		10 42 36.3	

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*NEIC **18** 10:42:25.9, 43.01N×0.06E, h5^{km}, ML2.5(LDG), ML2.3(STR), MN2.0(MDD), After STR.*

*LDG **18** 10:42:26.0±0.1, 43.02N×0.07E, h2^{km}, Md2.6/2, Ml2.5/10, Error ellipse: s-maj=1.2km s-min=1.0km az=1.0*

*MDD **18** 10:42:26.4±0.2, 43.01N×0.07E, mbLg1.8/21, Error ellipse: s-maj=1.6km s-min=1.4km az=23.0, PRXIMO*

*CSEM **18** 10:42:26.1±0.1, 43.02N×0.06E, h5^{km}, ML2.4/11, Error ellipse: s-maj=1.2km s-min=1.0km az=152.0*

STR 18 10:42:25.9±0.1**, 43.01N**×**0.06E, h5**^{km}±1^{km}**, Ml2.3, 1C, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LABF	Labassere	0.04	15	Pg	Pg	10 42 27.5	+0.4
LABF				Sg	Sg	10 42 28.8	+0.9
LABF	Labassere	0.04	15	Pg	Pg	10 42 27.5	+0.4
LABF				Lg		10 42 29.0	
VIEF	Viey	0.13	192	Pg	Pg	10 42 29.0	+0.4
VIEF				Sg	Sg	10 42 31.5	+1.1
VIEF	Viey	0.13	192	Pg	Pg	10 42 29.0	+0.4
VIEF				Lg		10 42 31.5	
EPF	Esparros	0.21	84	ePg	Pg	10 42 29.5	-0.6
EPF				eSg	Sg	10 42 33.0	+0.1
	76nm,0.3s						
RESF	Ens	0.29	135	Pg	Pg	10 42 31.6	-0.1
RESF				Sg	Sg	10 42 36.0	+0.4
RESF	Ens	0.29	135	Pg	Pg	10 42 31.6	-0.1
RESF				Lg		10 42 36.0	
EBIE	Bielsa	0.33	169	⇑Pg	Pg	10 42 32.4	-0.1
	11nm,0.0s,SNR=18						
EBIE				Lg		10 42 37.2	
	60nm,0.1s,SNR=10.0						
EBIE	Bielsa	0.33	169	Pg	Pg	10 42 32.4	-0.1
	11nm,0.0s,SNR=18						
EBIE				Lg		10 42 37.2	
	60nm,0.1s,SNR=10.0						
REYF	Montagne du Re	0.34	280	Pg	Pg	10 42 32.1	-0.6
REYF				Sg	Sg	10 42 37.1	-0.1
REYF	Montagne du Re	0.34	280	Pg	Pg	10 42 32.0	-0.7
REYF				Lg		10 42 37.2	
ETSF	Etsaut	0.47	256	ePg	Pg	10 42 34.7	-0.6
ETSF				eSg	Sg	10 42 41.1	-0.5

	16nm,0.2s						
MELF	**Melles**	**0.53**	**105**	Pg	Pg	10 42 35.7	-0.8
MELF				Sg	Sg	10 42 43.9	+0.2
ATE	**Arette**	**0.56**	**278**	Pg	Pg	10 42 37.0	-0.1
ATE				Lg		10 42 44.4	
MLS	**Moulis**	**0.76**	**94**	Lg		10 42 49.7	
LARF	**Larrau**	**0.77**	**272**	Pg	Pg	10 42 40.9	-0.4
LARF				Sg	Sg	10 42 51.6	+0.1
LARF	**Larrau**	**0.77**	**272**	Pg	Pg	10 42 40.6	-0.7
LARF				Lg		10 42 51.2	
SALF	**Salau**	**0.87**	**106**	Pg	Pg	10 42 42.0	-1.2
SALF	**Salau**	**0.87**	**106**	Pg	Pg	10 42 41.7	-1.6
SALF				Lg		10 42 53.7	
SJPF	**Ste Jean**	**0.95**	**277**	*e*Pg	Pg	10 42 44.1	-0.7
SJPF				*e*Pn	Pn	10 42 44.9	-0.8
SJPF				*e*Sg	Sg	10 42 56.9	-0.6
	3.2nm,0.2s						
SJPF	**Ste Jean**	**0.95**	**277**	*e*Pn	Pn	10 42 44.9	-0.8
SJPF				*e*Sg	Sg	10 42 56.9	-0.6
	1.6nm,0.2s						
CSOR	**Sort**	**1.01**	**128**	Pg	Pg	10 42 45.1	-1.1
CSOR				Lg		10 42 59.2	
	2.7nm,0.1s						
EALK	**Alkurruntz**	**1.17**	**281**	Pg	Pg	10 42 49.3	+0.1
EALK				Lg		10 43 06.7	
EALK	**Alkurruntz**	**1.17**	**281**	Pg	Pg	10 42 49.3	+0.1
	0.8nm,0.1s,SNR=7.9						
EALK				Lg		10 43 05.2	
	5.0nm,0.2s,SNR=7.7						
ELIZ	**Elizondo**	**1.17**	**278**	Pg	Pg	10 42 50.5	+1.1
ELIZ				Lg		10 43 05.1	
ELIZ	**Elizondo**	**1.17**	**278**	Pg	Pg	10 42 50.5	+1.1
	2.9nm,0.4s,SNR=7.9						
ELIZ				Lg		10 43 04.5	
	1.7nm,0.1s,SNR=7.9						
CORG	**Organya**	**1.21**	**130**	Pg	Pg	10 42 48.9	-1.2
CORG				Lg		10 43 06.2	
	1.4nm,0.1s						
CAVN	**Les Avellanes**	**1.24**	**155**	Pg	Pg	10 42 49.2	-1.4
CAVN				Lg		10 43 06.3	
	10nm,0.1s						
ESAC	**San Caprasio**	**1.35**	**197**	Pg	Pg	10 42 52.0	-0.7
	25nm,0.2s,SNR=12						
ESAC				Lg		10 43 11.3	
	26nm,0.2s,SNR=6.6						
ESAC	**San Caprasio**	**1.35**	**197**	Pg	Pg	10 42 52.0	-0.8
	25nm,0.2s,SNR=12						
CLLI	**Llivia**	**1.51**	**110**	Pg	Pg	10 42 54.0	-2.0
CLLI				Lg		10 43 14.8	
	1.9nm,0.2s						
EMIR	**Miracle**	**1.54**	**135**	Pg	Pg	10 42 55.1	-1.6
	1.2nm,0.1s,SNR=4.0						
EMIR				Lg		10 43 15.7	
	8.6nm,0.1s,SNR=5.0						
VALF	**Valcebollere**	**1.57**	**112**	Lg		10 43 17.4	
MTLF	**Montolieu**	**1.61**	**77**	*e*Pn	Pn	10 42 55.5	+0.3
MTLF				*e*Sn	Sn	10 43 14.2	-2.4
MTLF				*e*Sg	Sg	10 43 15.9	-3.7
	11nm,0.2s						
EPOB	**Poblet**	**1.82**	**155**	Pg	Pg	10 42 59.8	-2.5
	0.8nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	10 43 20.8	-1.1
	0.7nm,0.1s,SNR=7.9						
EPOB				Lg		10 43 23.5	
	3.5nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**1.82**	**155**	Pg	Pg	10 42 59.8	-2.5
	0.8nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	10 43 20.8	-1.1
	0.7nm,0.1s,SNR=7.9						
LRDF	**Laroque-de-Fa**	**1.82**	**91**	Lg		10 43 22.9	
ECRI	**Cripan**	**1.93**	**259**	Lg		10 43 28.0	
	1.8nm,0.3s,SNR=4.0						
LFF	**La Frestale**	**1.99**	**14**	*e*Pg	Pg	10 43 03.0	-2.6
LFF				*e*Sn	Sn	10 43 22.8	-3.4
LFF				*e*Sg	Sg	10 43 27.8	-4.4
	16nm,0.4s						
ERTA	**Horta de San J**	**2.06**	**174**	Pg	Pg	10 43 05.1	-2.0
	0.7nm,0.2s,SNR=4.0						
ERTA				Lg		10 43 30.5	
	2.0nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**2.06**	**174**	Pg	Pg	10 43 05.1	-2.0
	0.7nm,0.2s,SNR=4.0						
CFON	**Fontmartina**	**2.16**	**125**	Lg		10 43 34.6	
	4.2nm,0.2s						
CAF	**Calviac**	**2.40**	**36**	*e*Pg	Pg	10 43 10.3	-3.5
CAF				*e*Sg	Sg	10 43 41.0	-4.8
	4.1nm,0.2s						
RJF	**Les Rejaudoux**	**2.52**	**24**	*e*Pg	Pg	10 43 12.0	-4.3
RJF				*e*Sn	Sn	10 43 35.5	-4.2
RJF				*e*Sg	Sg	10 43 45.0	-4.9
	4.0nm,0.2s						
EMOS	**Mosqueruela**	**2.67**	**189**	Pg	Pg	10 43 15.1	-4.2
	0.7nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	10 43 41.5	-2.1
	0.1nm,0.1s,SNR=4.0						
EMOS				Lg		10 43 50.8	
	0.4nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**2.67**	**189**	Pg	Pg	10 43 15.1	-4.2
	0.7nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	10 43 41.5	-2.1
	0.1nm,0.1s,SNR=4.0						
LASF	**Ste Croix**	**2.96**	**68**	*e*Pn	Pn	10 43 11.8	-2.7
LASF				*e*Pg	Pg	10 43 21.1	-3.9
LASF				*e*Sn	Sn	10 43 45.9	-4.9
LASF				*e*Sg	Sg	10 43 58.8	-5.6
	1.2nm,0.2s						
MFF	**Saint Martin d**	**3.59**	**358**	*e*Pg	Pg	10 43 32.4	-5.3
MFF				*e*Sg	Sg	10 44 18.4	-7.2
	2.2nm,0.3s						
VIVF	**Saint-Julien-l**	**3.81**	**59**	*e*Pn	Pn	10 43 23.6	-2.9
VIVF				*e*Sg	Sg	10 44 25.2	-7.5
	1.6nm,0.3s						
BGF	**Bois d’Agland**	**4.06**	**28**	*e*Sg	Sg	10 44 33.1	-8.1
	8.8nm,0.3s						
ORIF	**Oris-en-Rattie**	**4.61**	**64**	*e*Pn	Pn	10 43 34.5	-3.5
LPL	**La Plagne**	**5.41**	**60**	*e*Pn	Pn	10 43 45.9	-3.3

IDC 18 10:46:10.2±3.1, 51.66N×175.12E, mb3.6/4, mb1 4.0/4, mb1mx3.5/24, mbtmp3.6/4, MS2.9/2, Ms1 2.9/2, ms1mx2.6/28, Error ellipse: s-maj=70.5km s-min=16.6km az=22.0, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**1.72**	**316**	Pn	Pn	10 46 39.5	-2.0
	141nm,0.3s,baz=241,slow=13,SNR=214						
FX1				Sn	Sn	10 46 57.5	-7.0
	296nm,0.3s,baz=288,slow=20,SNR=29						
ILAR	**Eielson Array**	**23.48**	**41**	P	P	10 51 20.6	-1.1
	0.5nm,0.4s,baz=254,slow=6.0,SNR=12						
ILAR				LR	LR	11 01 22.8	
	comp=Z,24nm,18.2s,baz=317,slow=39						
INK	**Inuvik**	**29.44**	**36**	P	P	10 52 15.8	-1.4
	0.8nm,0.6s,baz=254,slow=7.4,SNR=3.9						
JNU	**Nakatsue**	**36.88**	**257**	LR	LR	11 07 52.4	
	comp=Z,19nm,21.2s,baz=179,slow=35						
PDAR	**Pinedale Array**	**49.80**	**69**	P	P	10 55 03.6	-2.6
	0.5nm,0.7s,baz=304,slow=5.3,SNR=4.0						
TXAR	**Lajitas Array**	**62.33**	**77**	P	P	10 56 34.6	-1.9
	0.9nm,0.7s,baz=300,slow=4.5,SNR=18						

*NEIC **18** 11:33:02.9, 18.83N×64.46W, h25^{km}, MD3.5(RSPR), After RSPR.*

RSPR 18 11:33:02.9, 18.83N×64.46W, h25^{km}±32^{km}, MD3.5/10, MD3.5/10, 6C-5D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MTP	**Monte Pirata**	**1.27**	**235**	⇓*e*P	Pn	11 33 22.6	-2.7
MTP				*e*S	Sn	11 33 38.6	-3.1
CBYP	**Canovanas**	**1.44**	**248**	⇓*e*P	Pn	11 33 24.7	-3.0
CBYP				*e*S	Sn	11 33 42.5	-3.3
HUMP	**Col San Antoni**	**1.48**	**243**	⇓*e*P	Pn	11 33 25.5	-2.8
HUMP				*e*S	Sn	11 33 44.0	-3.1
CPD	**Cerro la Pandu**	**1.59**	**241**	⇑*e*P	Pn	11 33 27.4	-2.5
CPD				*e*S	Sn	11 33 47.1	-2.6
SJG	**San Juan**	**1.75**	**246**	⇑*e*P	Pn	11 33 29.3	-2.9
SJG				*e*S	Sn	11 33 50.0	-4.0
CELP	**Cerrillos**	**2.15**	**250**	⇓*e*P	Pn	11 33 35.6	-2.2
PORP	**Portuguez**	**2.21**	**250**	⇑*e*P	Pn	11 33 36.2	-2.5
AOPR	**Arecibo Observ**	**2.22**	**258**	⇑*e*P	Pn	11 33 37.0	-1.9
AOPR				*e*S	Sn	11 34 02.8	-3.1
LRS	**Lares**	**2.32**	**257**	⇑*e*P	Pn	11 33 37.9	-2.4
LRS				*e*S	Sn	11 34 04.3	-4.1
MGP	**Maguayo**	**2.63**	**252**	⇓*e*P	Pn	11 33 42.3	-2.4
CRPR	**Cabo Rojo, PR**	**2.65**	**252**	⇑*e*P	Pn	11 33 42.5	-2.5
CRPR				*e*S	Sn	11 34 13.2	-3.3

*BJI **18** 11:44:57.3, 40.80N×126.40W, h10^{km}, mB4.7, mb4.7, Ms4.0*

*IDC **18** 11:44:57.7±1.2, 40.77N×126.34W, mb3.8/9, mb1 4.0/16, mb1mx3.9/28, mbtmp3.8/16, ML3.8/7, MS3.3/11, Ms1 3.3/11, ms1mx3.2/31, Error ellipse: s-maj=21.3km s-min=12.1km az=34.0*

*NEIC **18** 11:44:59.4±0.5, 40.78N×126.37W, h10^{km}, mb4.2/11, Error ellipse: s-maj=6.3km s-min=3.8km az=64.0*

ISC 18 11:44:57.9±0.5, 40.79N±0.04×126.33W±0.05, h10^{km}, n92, σ0^{s}91/91, mb4.0/15, MS3.1/5, 5C-2D, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KRMB	**Red Mountain**	**1.97**	**67**	*e*Pn	**Pn**	**11 45 32.0**	**+0.2**
KHMM	**Horse Mountain**	**1.98**	**87**	*e*Pn	**Pn**	**11 45 32.2**	**+0.4**
KBO	**Bosley Butte**	**2.13**	**47**	*e*Pn	**Pn**	**11 45 33.6**	**-0.4**
KEBM	**Edson Butte**	**2.56**	**35**	*e*Pn	**Pn**	**11 45 38.8**	**-1.4**
YBH	**Yreka Blue Hor**	**2.89**	**70**	Pn	**Pn**	**11 45 45.5**	**+0.6**
	173nm,0.3s,baz=266,slow=9.4,SNR=1704						
YBH				Sn	**Sn**	**11 46 19.6**	**-0.4**
	29nm,0.3s,baz=216,slow=21,SNR=3.9						
YBH				LR	LR	11 46 57.5	
	comp=Z,846nm,20.3s,baz=320,slow=41						
YBH	**Yreka Blue Hor**	**2.89**	**70**	*e*Pn	**Pn**	**11 45 45.7**	**+0.9**
WDC	**Whiskeytown Da**	**2.89**	**93**	*e*Pn	**Pn**	**11 45 44.7**	**-0.2**
LAMM	**Antelope Mount**	**2.92**	**72**	P	**Pn**	**11 45 46.2**	**+0.9**
HOPS	**Hopland**	**3.08**	**125**	*e*Pn	**Pn**	**11 45 47.4**	**-0.3**
HUMO	**Hull Mountain**	**3.11**	**53**	*e*Pn	**Pn**	**11 45 47.9**	**-0.1**
LHEM	**Herd Peak**	**3.21**	**74**	P	**Pn**	**11 45 50.8**	**+1.3**
DBO	**Dodson Butte**	**3.28**	**44**	P	**Pn**	**11 45 50.2**	**-0.2**
BUOR	**Burton Butte**	**3.41**	**63**	⇓P	**Pn**	**11 45 54.4**	**+2.1**
BBOR	**Butler Butte**	**3.44**	**51**	⇓P	**Pn**	**11 45 53.2**	**+0.5**
VSP	**Spence Mountai**	**3.64**	**63**	⇑P	**Pn**	**11 45 57.2**	**+1.7**
HSO	**Harness Mounta**	**3.65**	**40**	⇑P	**Pn**	**11 45 55.2**	**-0.4**
HOG	**Hogback Mounta**	**3.77**	**66**	⇑P	**Pn**	**11 45 58.8**	**+1.5**
HBO	**Huckleberry Mo**	**4.26**	**43**	P	**Pn**	**11 46 04.8**	**+0.4**
COR	**Corvallis**	**4.40**	**29**	*e*Pn	**Pn**	**11 46 06.4**	**+0.1**
IRO	**Indian Ridge**	**4.41**	**42**	⇑P	**Pn**	**11 46 06.6**	**+0.1**
SAC	**San Andreas**	**4.42**	**135**	*e*Pn	**Pn**	**11 46 04.9**	**-1.7**
FRIS	**Frissel Point**	**4.64**	**41**	⇑P	**Pn**	**11 46 09.8**	**+0.1**
BEKR	**Beckwourth**	**4.66**	**99**	*e*Pn	**Pn**	**11 46 10.2**	**+0.1**
MOD	**Modoc**	**4.67**	**74**	*e*Pn	**Pn**	**11 46 10.0**	**-0.2**
HUOR	**Husband**	**4.70**	**43**	P	**Pn**	**11 46 10.9**	**+0.3**
BKCOR	**Black Crater**	**4.90**	**43**	P	**Pn**	**11 46 13.3**	**-0.1**
WCN	**Washoe City**	**5.26**	**104**	*e*Pn	**Pn**	**11 46 18.3**	**-0.2**
CMB	**Columbia Colle**	**5.37**	**119**	*e*Pn	**Pn**	**11 46 20.0**	**0.0**
SAO	**San Andreas Ge**	**5.54**	**135**	*e*Pn	**Pn**	**11 46 20.3**	**-2.2**
VIPM	**Ingram Point**	**5.62**	**47**	P	**Pn**	**11 46 23.4**	**-0.2**
LRV	**Little Rabbit**	**6.03**	**135**	*e*Pn	**Pn**	**11 46 27.6**	**-1.7**
BMW	**Boistfort Moun**	**6.11**	**21**	P	**Pn**	**11 46 29.7**	**-0.9**
OMM	**Old Mammoth Mi**	**6.52**	**117**	*e*Pn	**Pn**	**11 46 37.0**	**+0.8**
NVAR	**Mina Array Bea**	**6.63**	**108**	Pn	**Pn**	**11 46 38.2**	**+0.3**
	1.0nm,0.3s,baz=285,slow=14,SNR=20						
NVAR				Lg		11 48 11.6	
	0.6nm,0.3s,baz=256,slow=34,SNR=3.3						
LON	**Longmire**	**6.80**	**27**	P	**Pn**	**11 46 39.8**	**-0.4**
MTUM	**Tungsten Hills**	**6.95**	**117**	*e*Pn	**Pn**	**11 46 42.3**	**-0.1**
LNOR	**Lincton Mounta**	**7.76**	**46**	P	**Pn**	**11 46 53.6**	**0.0**
BMO	**Blue Mountains**	**7.78**	**56**	*e*Pn	**Pn**	**11 46 53.8**	**-0.1**
RPW	**Rockport**	**8.39**	**23**	P	**P**	**11 47 01.7**	**-0.8**
ELK	**Elko**	**8.42**	**87**	Pn	**P**	**11 47 02.4**	**-0.5**
	0.1nm,0.3s,baz=189,slow=14,SNR=3.2						
ELK				LR	LR	11 50 27.9	
	comp=Z,239nm,20.1s,baz=268,slow=39						
HLID	**Hailey**	**9.27**	**69**	*e*Pn	**P**	**11 47 13.4**	**-1.3**
NEW	**Newport**	**9.95**	**38**	Pn	**P**	**11 47 26.2**	**+2.2**
	0.2nm,0.3s,baz=209,slow=13,SNR=2.2						
NEW				LR	LR	11 51 11.8	
	comp=Z,196nm,19.0s,baz=226,slow=38						
NEW	**Newport**	**9.95**	**38**	Pn	**P**	**11 47 26.2**	**+2.2**
NEW				LR	LR	11 51 11.8	
MCMT	**McKenzie Canyo**	**10.70**	**63**	*e*P	**P**	**11 47 34.3**	**+0.1**
MSO	**Missoula**	**10.79**	**52**	*e*P	**P**	**11 47 35.0**	**-0.5**
CHMT	**Chamberlain Mo**	**11.25**	**53**	*e*P	**P**	**11 47 40.8**	**-0.9**
RRI2	**Red Ridge**	**11.45**	**72**	*e*P	**P**	**11 47 44.6**	**+0.2**
BBB	**Bella Bella**	**11.46**	**354**	Pn	**P**	**11 47 43.9**	**-0.7**
	0.3nm,0.3s,baz=191,slow=14,SNR=3.5						
BBB				LR	LR	11 51 18.1	
	comp=Z,118nm,18.5s,baz=64,slow=33						
QLMT	**Earthquake Lak**	**11.67**	**65**	P	**P**	**11 47 45.9**	**-1.6**
TMUT	**Trail Mountain**	**11.69**	**92**	*e*P	**P**	**11 47 46.4**	**-1.4**
TPAW	**Teton Pass**	**11.74**	**72**	*e*P	**P**	**11 47 47.7**	**-0.7**
BOZ	**Bozeman (W)**	**11.77**	**61**	*e*P	**P**	**11 47 47.5**	**-1.3**
IMW	**Indian Meadow**	**11.81**	**70**	*e*P	**P**	**11 47 48.8**	**-0.5**
SNOW	**Snow King Moun**	**11.87**	**72**	P	**P**	**11 47 50.1**	**-0.2**
MOOW	**Moose Ponds**	**11.92**	**71**	*e*P	**P**	**11 47 50.6**	**-0.3**
LOHW	**Long Hollow**	**12.00**	**71**	P	**P**	**11 47 51.2**	**-0.8**
HRY	**Holter Researc**	**12.04**	**56**	P	**P**	**11 47 50.7**	**-1.7**
SRU	**San Rafael**	**12.25**	**93**	*e*P	**P**	**11 47 54.0**	**-1.3**
PDAR	**Pinedale Array**	**12.68**	**76**	Pn	**P**	**11 48 01.9**	**+0.9**
	0.2nm,0.3s,baz=270,slow=12,SNR=8.8						
EDM	**Edmonton**	**15.23**	**31**	P	**P**	**11 48 35.1**	**+0.6**
LAO	**LASA Array**	**15.67**	**61**	P	**P**	**11 48 40.2**	**0.0**
	38nm,1.0s						
LAZ	**Ladron**	**16.48**	**107**	P	**P**	**11 48 51.7**	**+1.0**
ANMO	**Albuquerque**	**16.73**	**104**	Pn	**P**	**11 48 56.1**	**+2.3**
	baz=289,slow=11,SNR=7.3						
ANMO				LR	LR	11 55 52.8	
	comp=Z,74nm,20.1s,baz=209,slow=39						
ANMO	**Albuquerque**	**16.73**	**104**	*e*P	**P**	**11 48 55.1**	**+1.3**
	3.8nm,0.9s						
RSSD	**Black Hills**	**16.78**	**71**	*e*P	**P**	**11 48 55.4**	**+1.0**
	2.7nm,0.7s						
BNM	**Barren Site**	**16.97**	**107**	*e*P	**P**	**11 48 57.6**	**+0.7**
DGMT	**Dagmar**	**17.49**	**57**	P	**P**	**11 49 02.6**	**-0.7**
	13nm,0.8s						
DLBC	**Dease Lake**	**17.82**	**354**	P	**P**	**11 49 07.6**	**+0.3**
	0.1nm,0.3s,baz=154,slow=12,SNR=5.3						
DLBC				LR	LR	11 56 02.1	
	comp=Z,65nm,18.3s,baz=298,slow=37						
DLBC	**Dease Lake**	**17.82**	**354**	*e*P	**P**	**11 49 08.1**	**+0.8**
MNTX	**Cornudas Mount**	**19.14**	**112**	*e*P	**P**	**11 49 25.2**	**+1.4**
	7.5nm,1.4s						
FFC	**Flin Flon**	**21.36**	**41**	*e*P	**P**	**11 49 46.5**	**-0.8**
	12nm,1.0s,mb4.2						
TXAR	**Lajitas Array**	**21.73**	**115**	P	**P**	**11 49 52.0**	**+0.8**
	2.6nm,0.9s,mb3.7,baz=301,slow=7.3,SNR=16						
WMOK	**Wichita Mounta**	**22.55**	**97**	*e*P	**P**	**11 50 00.5**	**+1.1**
	8.3nm,1.5s,mb3.9						
YKA	**Yellowknife Ar**	**22.85**	**14**	P	**P**	**11 50 01.6**	**-0.4**
	3.6nm,0.9s,mb3.8,baz=203,slow=10,SNR=5.6						
YKA				LR	LR	11 59 32.9	
	comp=Z,42nm,18.8s,MS2.9,baz=270,slow=38						
ULM	**Lac du Bonnet**	**23.20**	**56**	P	**P**	**11 50 06.8**	**+1.2**
	13nm,0.8s,mb4.4,baz=260,slow=10,SNR=11						
ULM				LR	LR	11 59 50.7	
	comp=Z,75nm,18.5s,MS3.2,baz=29,slow=38						
ULM	**Lac du Bonnet**	**23.20**	**56**	*e*P	**P**	**11 50 06.7**	**+1.1**
	16nm,0.8s,mb4.5						
MENT	**Mentasta**	**24.48**	**341**	*e*P	**P**	**11 50 19.4**	**+1.6**
EYMN	**Ely**	**25.75**	**62**	*e*P	**P**	**11 50 31.5**	**+1.5**
	12nm,1.2s,mb4.3						
ILAR	**Eielson Array**	**26.79**	**340**	P	**P**	**11 50 38.5**	**-0.9**
	2.9nm,0.8s,mb3.8,baz=160,slow=7.9,SNR=6.8						
ILAR				LR	LR	11 59 18.4	
	comp=Z,74nm,21.7s,MS3.2,baz=0.2,slow=32						
FCC	**Fort Churchill**	**27.12**	**38**	P	**P**	**11 50 42.5**	**-0.1**
INK	**Inuvik**	**27.85**	**354**	LR	LR	12 02 33.6	
	comp=Z,22nm,18.4s,MS2.8,baz=90,slow=38						
SCHQ	**Schefferville**	**41.09**	**49**	P	**P**	**11 52 42.6**	**-0.5**
	0.8nm,0.5s,mb3.6,baz=258,slow=8.0,SNR=4.6						
SUMG	**Summit**	**51.02**	**23**	*e*P	**P**	**11 54 01.5**	**0.0**
	4.5nm,0.8s,mb4.5						
ARCES	**ARCESS Array B**	**68.05**	**10**	LR	LR	12 28 59.7	
	comp=Z,26nm,20.5s,MS3.4,baz=234,slow=39						
NOA	**NORSAR Array B**	**72.79**	**20**	P	**P**	**11 56 28.6**	**+0.9**
	0.7nm,0.9s,mb3.6,baz=330,slow=7.6,SNR=2.7						
CN2	**Changchun**	**73.92**	**314**	*e*P	**P**	**11 56 34.1**	**-0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
FINES	**FINESS Array B**	**75.68**	**13**	P	**P**	**11 56 45.1**	**+0.7**
	comp=Z,1.1nm,0.8s,mb3.8,baz=326,slow=5.0,SNR=2.4						
LPAZ	**La Paz**	**78.30**	**124**	P	**P**	**11 57 00.3**	**+0.5**
	comp=Z,0.5nm,0.6s,mb3.6,baz=3.7,slow=25,SNR=4.2						
SONM	**Songino Array**	**80.15**	**327**	P	**P**	**11 57 08.6**	**-0.7**
	comp=Z,0.2nm,0.4s,mb3.4,baz=243,slow=2.8,SNR=2.5						
SSE	**Sheshan**	**85.10**	**307**	*e*P	**P**	**11 57 34.0**	**-1.2**
SSE				AMB	AMB		
	comp=Z,30nm,5.4s						
ZRNK	**Zerenda**	**85.70**	**351**	*e*P	**P**	**11 57 38.8**	**+1.2**
	comp=Z,3.3nm,0.8s,mb4.6						
WMQ	**Urumqi**	**90.37**	**336**	*e*P	**P**	**11 58 01.6**	**+1.3**
WMQ				AP	pP	11 58 05.6	+2.1
WMQ				XP	sP	11 58 07.6	+3.1

*HEL **18** 11:53:19.9±0.1, 60.19N×25.31E, ML1.5, Explosion*

*IDC **18** 11:53:19.1±1.9, 60.22N×25.32E, mb1 3.1/3, mb1mx2.9/21, mbtmp3.0/3, ML2.4/3, Error ellipse: s-maj=21.4km s-min=7.5km az=141.0*

ISC 18 11:53:16.3±0.7, 60.20N±0.04×24.99E±0.07, n11, σ1^{s}38/21, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PVF	**Pernaja**	**0.55**	**51**	*e*P	**Pg**	**11 53 27.8**	**+0.4**
PVF				*e*S	**Sg**	**11 53 33.8**	**-0.9**
VJF	**Virojoki**	**1.32**	**74**	*e*P	**Pb**	**11 53 40.7**	**-0.8**
VJF				*e*SB	**Sb**	**11 53 56.8**	**-2.2**
FIA0	**FINESS Array S**	**1.36**	**23**	*e*P	**Pb**	**11 53 43.5**	**+1.2**
FIA0				*e*S	**Sb**	**11 54 00.3**	**+0.3**
FINES	**FINESS Array B**	**1.36**	**23**	Pg	**Pg**	**11 53 43.3**	**-0.1**
	1.2nm,0.3s,baz=211,slow=17,SNR=56						
FINES				Pn	**Pn**	**11 53 45.5**	**+3.1**
	1.2nm,0.3s,baz=203,slow=12,SNR=57						
FINES				Lg		11 53 59.6	
	0.8nm,0.3s,baz=189,slow=29,SNR=15						
FINES				Sn	**Sn**	**11 54 04.7**	**+3.2**
	3.4nm,0.3s,baz=197,slow=22,SNR=39						
FINES				Rg		11 54 07.4	
	20nm,0.8s,baz=194,slow=31,SNR=32						
VSU	**Vasula**	**1.96**	**152**	*e*S	**Sn**	**11 54 17.4**	**+0.7**
KEF	**Keuruu**	**1.98**	**358**	*e*PB	**Pb**	**11 53 54.9**	**+2.1**
KEF				*e*SG	**Sg**	**11 54 21.3**	**-0.8**
KEF				MSG		11 54 24.5	
	comp=Z,2.1nm,0.1s						
KAF	**Kangasniemi**	**2.02**	**18**	*e*PB	**Pb**	**11 53 55.0**	**+1.3**
KAF				*e*SG	**Sg**	**11 54 21.1**	**-2.5**
KAF				MSG		11 54 25.7	
	comp=Z,1.6nm,0.1s						
SUF	**Sumiainen**	**2.59**	**12**	*e*PB	**Pb**	**11 54 04.2**	**+0.9**
SUF				*e*SB	**Sb**	**11 54 37.2**	**+1.4**
SUF				MSG		11 54 39.8	
	comp=Z,1.7nm,0.2s						
HFS	**Hagfors**	**5.64**	**274**	Pn	**Pn**	**11 54 44.5**	**+1.0**
	comp=Z,0.0nm,0.3s,baz=180,slow=13,SNR=3.7						
HFS				Sn	**Sn**	**11 55 49.5**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=87,slow=28,SNR=4.1						
NOA	**NORSAR Array B**	**6.83**	**283**	Pn	**Pn**	**11 54 59.2**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=98,slow=20,SNR=2.3						
NOA				Sn	**Sn**	**11 56 17.9**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=60,slow=23,SNR=2.6						
ARCES	**ARCESS Array B**	**9.38**	**1**	Pn	**P**	**11 55 33.5**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=180,slow=12,SNR=3.7						

*IDC **18** 12:25:49.4±0.9, 32.75S×178.03W, mb4.3/7, mb1 4.5/8, mb1mx4.3/15, mbtmp4.3/8, MS3.6/4, Ms1 3.6/4, ms1mx3.3/28, Error ellipse: s-maj=24.4km s-min=23.5km az=35.0, Incorrectly calculated travel-time residual on T phase at H03N*

*NEIC **18** 12:25:51.1±6.7, 32.77S×178.01W, h11^{km}±41^{km}, mb4.8/5, Error ellipse: s-maj=13.8km s-min=12.8km az=57.0*

ISC 18 12:25:54.8±0.6, 33.31S±0.05×178.4W±0.1, h33^{km}, n54, σ1^{s}42/53, mb4.4/10, MS3.6/2, 4C-3D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.07**	**6**	Pn	**Pn**	**12 26 45.0**	**-11**
	76nm,0.3s,baz=69,slow=22,SNR=5.7						
RAO				Sn	**Sn**	**12 27 26.1**	**-17**
	258nm,0.3s,baz=272,slow=23,SNR=5.3						
RAO				LR	LR	12 27 59.7	
	comp=Z,482nm,21.9s,baz=9.8,slow=37						
PUZ	**Puketiti**	**5.46**	**209**	PN	**Pn**	**12 27 17.6**	**+1.5**
PUZ				SN	**Sn**	**12 28 26.6**	**+8.0**
MWZ	**Matawai**	**5.99**	**212**	PN	**Pn**	**12 27 24.9**	**+1.3**
MWZ				SN	**Sn**	**12 28 39.2**	**+7.4**
URZ	**Urewera**	**6.12**	**215**	Pn	**Pn**	**12 27 27.4**	**+1.9**
	5.6nm,0.3s,baz=182,slow=0.5,SNR=26						
URZ				Sn	**Sn**	**12 28 42.4**	**+7.3**
	31nm,0.3s,baz=151,slow=20,SNR=19						
URZ	**Urewera**	**6.12**	**215**	PN	**Pn**	**12 27 26.6**	**+1.2**
URZ				SN	**Sn**	**12 28 42.3**	**+7.2**
KNZ	**Kokohu**	**6.51**	**208**	PN	**Pn**	**12 27 30.8**	**-0.1**
OUZ	**Omahuta**	**6.86**	**252**	PN	**Pn**	**12 27 42.8**	**+7.0**
BKZ	**Black Stump Fm**	**7.14**	**214**	*e*PN	**Pn**	**12 27 39.1**	**-0.6**
BKZ				SN	**Sn**	**12 29 04.6**	**+4.2**
NGZ	**Ngauruhoe**	**7.58**	**218**	PN	**Pn**	**12 27 48.5**	**+2.7**
BFZ	**Birch Farm**	**8.50**	**208**	PN	**P**	**12 27 56.0**	**-2.4**
BFZ				SN	**Sn**	**12 29 35.1**	**+0.7**
MRZ	**Mangatainoka R**	**8.76**	**211**	PN	**P**	**12 27 59.9**	**-2.2**
MRZ				SN	**Sn**	**12 29 40.5**	**-0.3**
KIW	**Kapiti Island**	**9.22**	**213**	PN	**P**	**12 28 07.8**	**-0.6**
MRW	**Makara Radio**	**9.61**	**213**	*e*SN	**Sn**	**12 30 01.1**	**-0.7**
SNZO	**South Karori**	**9.67**	**212**	*e*PN	**P**	**12 28 11.3**	**-3.4**
SNZO				SN	**Sn**	**12 30 02.2**	**-1.1**
NNZ	**Nelson**	**10.23**	**217**	*e*PN	**P**	**12 28 26.3**	**+4.0**
THZ	**Tophouse**	**10.88**	**217**	*e*PN	**P**	**12 28 28.7**	**-2.5**
KHZ	**Kahutara**	**11.08**	**213**	PN	**P**	**12 28 34.0**	**0.0**
KHZ				*e*SN	**S**	**12 30 33.4**	**-4.3**
DSZ	**Denniston Nort**	**11.44**	**220**	PN	**P**	**12 28 39.4**	**+0.6**
LTZ	**Lake Taylor**	**11.95**	**215**	PN	**P**	**12 28 44.8**	**-0.9**
MQZ	**McQueen’s Vall**	**12.50**	**211**	*e*SN	**S**	**12 31 04.9**	**-7.2**
RPZ	**Rata Peaks**	**13.24**	**215**	Pn	**P**	**12 29 01.6**	**-1.3**
	3.7nm,0.3s,baz=52,slow=3.0,SNR=19						
RPZ				Sn	**S**	**12 31 24.4**	**-5.5**
	3.7nm,0.3s,baz=172,slow=24,SNR=18						
ODZ	**Otahua Downs**	**14.44**	**213**	PN	**P**	**12 29 17.1**	**-1.5**
DZM	**Mont Dzumac**	**17.42**	**306**	P	**P**	**12 29 59.4**	**+2.5**
	0.3nm,0.3s,baz=110,slow=16,SNR=7.4						
DZM				LR	LR	12 35 16.4	
	comp=Z,356nm,18.4s,baz=35,slow=33						
PPT	**Papeete**	**30.28**	**66**	LR	LR	12 41 53.0	
	comp=Z,127nm,19.4s,MS3.6,baz=249,slow=32						
STKA	**Stephens Creek**	**33.56**	**261**	P	**P**	**12 32 35.6**	**+1.9**
	1.1nm,0.5s,mb4.0,baz=68,slow=11,SNR=4.2						
CTA	**Charters Tower**	**34.01**	**284**	*e*P	**P**	**12 32 38.7**	**+1.0**
	4.5nm,0.5s,mb4.7						
CTA	**Charters Tower**	**34.01**	**284**	P	**P**	**12 32 36.9**	**-0.8**
	5.5nm,0.6s,mb4.7,baz=110,slow=10,SNR=13						
CTAO	**Charters Tower**	**34.01**	**284**	*e*P	**P**	**12 32 38.7**	**+1.0**
	5.0nm,0.6s,mb4.6						
WB2	**Warramunga Arr**	**43.90**	**275**	⇑*i*P	**P**	**12 34 00.0**	**-0.2**
WB2				*i*		12 34 03.4	
WRAB	**Tennant Creek**	**43.91**	**275**	*e*P	**P**	**12 33 59.6**	**-0.6**
	12nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	**43.91**	**275**	P	**P**	**12 34 00.2**	**-0.1**
	7.5nm,0.5s,mb4.6,baz=114,slow=7.8,SNR=124						
SBA	**Scott Base**	**45.12**	**184**	*e*P	**P**	**12 34 13.7**	**+4.5**
SBA				*e*		12 34 25.9	
VNDA	**Vanda**	**45.17**	**186**	P	**P**	**12 34 12.1**	**+2.4**
	0.8nm,0.7s,mb3.6,baz=53,slow=5.6,SNR=5.1						
VNDA				LR	LR	12 51 00.0	
	comp=Z,65nm,18.3s,MS3.6,baz=205,slow=33						
VNDA	**Vanda**	**45.17**	**186**	*e*P	**P**	**12 34 11.4**	**+1.8**
VNDA				LR	LR	12 51 00.0	
KAKA	**Kakadu**	**49.13**	**283**	*e*P	**P**	**12 34 40.0**	**-1.4**
	5.5nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**52.04**	**272**	P	**P**	**12 35 03.1**	**-0.4**
	4.1nm,0.8s,mb4.4,baz=160,slow=6.0,SNR=7.5						
CASY	**Casey**	**52.41**	**209**	*e*P	**P**	**12 35 06.8**	**+1.2**
QSPA	**South Pole Qui**	**56.81**	**180**	*e*P	sP	12 35 51.5	-0.2
MAW	**Mawson**	**69.47**	**201**	pP	pP	12 37 11.4	-0.1
	6.5nm,0.6s,baz=147,slow=7.7,SNR=8.9						
SNAA	**Sanae**	**75.27**	**179**	*e*P	**P**	**12 37 35.8**	**+0.4**
	16nm,1.3s,mb4.8						
SNAA				*e*		12 37 49.3	
VNA3	**Neumayer Olymp**	**75.44**	**176**	⇓*i*	**P**	**12 37 37.1**	**+0.7**
VNA3	**Neumayer Olymp**	**75.44**	**176**	⇑*i*	sP	12 37 52.5	+2.1
VNA2	**Neumayer--Watz**	**75.87**	**177**	⇓*i*	**P**	**12 37 40.1**	**+1.3**
VNA2	**Neumayer--Watz**	**75.87**	**177**	⇑*i*	sP	12 37 55.0	+2.2
VNA1	**Neumayer--Stat**	**76.10**	**177**	⇓*i*	**P**	**12 37 40.8**	**+0.6**
VNA1	**Neumayer--Stat**	**76.10**	**177**	⇑*i*	sP	12 37 56.6	+2.4
PLCA	**Paso Flores**	**80.81**	**133**	P	**P**	**12 38 05.5**	**-1.0**
	4.1nm,1.1s,mb4.3,baz=248,slow=11,SNR=3.2						
NVAR	**Mina Array Bea**	**90.62**	**43**	P	**P**	**12 38 51.5**	**-3.5**
	0.6nm,0.8s,mb4.0,baz=212,slow=6.0,SNR=4.5						

NVAR				sP	sP	12 39 06.2	-2.8
	1.2nm,0.8s,baz=207,slow=6.5,SNR=6.9						
ARCES	**ARCESS Array B**	141.33	347	PKP	PKPdf	12 45 21.1	-0.1
	1.7nm,0.9s,slow=3.6,SNR=3.5						
KAF	**Kangasniemi**	147.13	339	*e*pkp	PKPdf	12 45 35.4	+4.0
FINES	**FINESS Array B**	147.72	338	PKPbc	PKPdf	12 45 33.8	+1.5
	1.3nm,0.5s,baz=45,slow=2.7,SNR=11						
NB2	**NORSAR Subarra**	151.55	350	PKPabc	PKPdf	12 45 43.2	+4.9
	0.1nm,0.6s,baz=30,slow=2.7						
DBIC	**Dimbokro**	152.84	166	PKPbc	PKPdf	12 45 49.5	+7.9
	3.5nm,0.8s,baz=124,slow=10,SNR=5.4						
BRTR	**Keskin Array B**	153.52	293	PKPbc	PKPdf	12 45 49.5	+7.7
	0.5nm,0.7s,baz=72,slow=3.9,SNR=4.2						
BRTR				pPKPbc		12 45 58.5	
	2.1nm,0.5s,baz=136,slow=3.4,SNR=12						

IDC ***18*** *12:29:31.7±0.6, 1.25N×97.15E, mb4.3/14, mb1 4.4/15, mb1mx4.3/20, mbtmp4.3/15, ML4.5/1, MS4.0/10, Ms1 4.0/10, ms1mx3.8/26, Error ellipse: s-maj=24.7km s-min=15.1km az=59.0*

MOS ***18*** *12:29:35.2±1.2, 1.36N×97.27E, h33^{km}, mb4.8/15, Error ellipse: s-maj=18.4km s-min=7.7km az=101.0*

BJI ***18*** *12:29:37.3, 1.16N×97.25E, h63^{km}, mB5.0, mb4.8, Ms4.7, Msz4.6*

NEIC ***18*** *12:29:39.3±2.2, 1.32N×97.25E, h54^{km}±19^{km}, mb4.8/11, MS4.4/1, Error ellipse: s-maj=16.3km s-min=7.1km az=55.0*

ISC 18 12:29:33.7±0.4**, 1.24N**±0.05×**97.14E**±0.05**, h24**^{km}**,** **h24**^{km}±1.8^{km}**:pP-P, n102,** σ**1§15**/95**, mb4.5**/42**, MS4.3**/20**,** **2C-4D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	5.10	49	P	Pn	12 30 51.9	+1.2
KULM	**Kulim**	5.33	41	*e*P	Pn	12 30 54.1	+0.1
KGM	**Kluang**	6.22	83	P	Pn	12 31 08.5	+2.0
KSM	**Kuching**	13.17	89	P	P	12 32 45.2	+3.1
CM31	**Chiang Mai Arr**	17.20	6	*e*P	P	12 33 34.9	+0.6
	2.7nm,0.5s						
CMAR	**Chiang Mai Arr**	17.20	6	P	P	12 33 32.8	-1.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	17.20	6	P	P	12 33 32.8	-1.5
	comp=Z,0.6nm,0.3s,baz=198,slow=11,SNR=15						
KKM	**Kota Kinabalu**	19.62	75	*e*P	P	12 34 04.1	+0.5
KKM	**Kota Kinabalu**	19.62	75	P	P	12 34 04.5	+0.9
TSM	**Tawau**	20.93	81	P	P	12 34 16.8	-0.6
QIZ	**Qiongzhong**	21.62	34	P	P	12 34 24.9	+0.6
QIZ				S	S	12 38 23.6	+6.0
QIZ				XS		12 38 34.9	
QIZ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
QIZ				LR	LR		
	comp=N,590nm,16.7s,MS4.3						
QIZ				LR	LR		
	comp=E,650nm,14.6s,MS4.3						
QIZ				LR	LR		
	comp=Z,430nm,12.8s,MS4.0						
KMI	**Kunming**	24.35	12	P	P	12 34 52.8	+1.6
KMI				AP		12 35 03.0	
KMI				XS		12 39 28.9	
KMI				AMB	AMB		
	comp=Z,50nm,1.4s,mb4.8						
KMI				AMB	AMB		
	comp=Z,230nm,4.4s						
KMI				LR	LR		
	comp=N,2µm,14.8s,MS4.8						
KMI				LR	LR		
	comp=E,1µm,13.9s,MS4.8						
KMI				LR	LR		
	comp=Z,2µm,13.9s,MS4.7						
KMI	**Kunming**	24.35	12	P	P	12 34 52.7	+1.5
KMI				*SP		12 35 03.0	
KMI						12 35 33.8	
KMI				SS	SS	12 40 19.8	+19
KMI				pmax	pmax		
	comp=Z,50nm,1.4s,mb4.8						
KMI				MLR	MLR		
	comp=Z,2µm,13.9s,MS4.7						
KMI	**Kunming**	24.35	12	P	P	12 34 52.7	+1.5
	comp=Z,50nm,1.4s,mb4.8						
KMI				pP		12 34 59.6	
KMI				sP		12 35 03.0	
KMI				PP	PP	12 35 33.8	+7.2
KMI				S	S	12 39 15.9	+10
KMI				sS		12 39 28.9	
KMI				SS	SS	12 40 19.8	+19
KMI				LR	LR		
	comp=Z,2µm,13.9s,MS4.7						
GYA	**Guiyang**	26.69	19	⇓*i*P	P	12 35 13.3	+0.1
GYA				AP	pP	12 35 26.8	+6.6
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.5						
GYA				AMB	AMB		
	comp=Z,140nm,6.0s						
GYA				LR	LR		
	comp=N,1µm,14.0s,MS4.7						
GYA				LR	LR		
	comp=E,580nm,13.2s,MS4.7						
GYA				LR	LR		
	comp=Z,2µm,14.7s,MS4.7						
PKI	**Pulchoki**	28.49	338	*e*P	P	12 35 31.4	+1.9
	comp=Z,97nm,1.5s,mb5.2						
PKI	**Pulchoki**	28.49	338	*e*P	P	12 35 31.4	+1.9
PKI				pmax	pmax		
	comp=Z,48nm,1.5s,mb4.9						
GUN	**Gumba**	28.62	339	*e*P	P	12 35 31.7	+1.0
	comp=Z,38nm,0.6s,mb5.3						
KKN	**Kakani**	28.74	338	*e*P	P	12 35 32.5	+0.8
	comp=Z,53nm,1.1s,mb5.2						
KKN	**Kakani**	28.74	338	*e*P	P	12 35 32.5	+0.8
KKN				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.9						
LSA	**Lhasa**	28.87	349	*e*P	P	12 35 34.9	+2.0
GKN	**Gorkha**	29.18	337	*e*P	P	12 35 36.2	+0.5
KOLN	**Koldanda**	29.39	335	*e*P	P	12 35 38.4	+0.8
	comp=Z,13nm,0.6s,mb4.9						
ENH	**Enshi**	31.16	21	*e*P	P	12 35 51.8	-1.5
	comp=Z,32nm,1.0s,mb5.1						
MBWA	**Marble Bar**	31.37	136	P	P	12 35 56.7	+1.6
FITZ	**Fitzroy Crossi**	34.00	126	P	P	12 36 16.7	-1.4
	comp=Z,5.4nm,0.7s,mb4.6,baz=35,slow=3.8,SNR=3.1						
FITZ				LR	LR	12 49 11.3	
	comp=Z,267nm,21.4s,MS3.9,baz=287,slow=35						
XAN	**Xi'an**	34.44	17	P	P	12 36 20.1	-1.6
XAN				S	S	12 41 49.1	+1.6
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
XAN				LR	LR		
	comp=N,470nm,14.0s,MS4.4						
XAN				LR	LR		
	comp=E,360nm,16.4s,MS4.4						
XAN				LR	LR		
	comp=Z,820nm,14.8s,MS4.6						
LZH	**Lanzhou**	35.22	9	⇓P	P	12 36 27.5	-0.9
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
LZH				LR	LR		
	comp=N,430nm,14.6s						
LZH				LR	LR		
	comp=Z,590nm,18.0s,MS4.4						
LZH	**Lanzhou**	35.22	9	⇓P	P	12 36 27.5	-0.9
LZH				*SP	sP	12 36 38.2	-0.5
LZH						12 37 42.5	
LZH				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
LZH				MLR	MLR		
	comp=Z,590nm,18.0s,MS4.4						
LZH	**Lanzhou**	35.22	9	⇓P	P	12 36 27.5	-0.9
	comp=Z,29nm,1.3s,mb5.0						
LZH				pP	pP	12 36 35.0	-0.6
LZH				sP	sP	12 36 38.2	-0.5
LZH				PP	PP	12 37 42.5	-5.2
LZH				LR	LR		
	comp=Z,590nm,18.0s,MS4.4						
KAKA	**Kakadu**	37.67	113	*e*P	P	12 36 48.1	-1.2
	comp=Z,13nm,1.0s,mb4.6						
GTA	**Gaotai**	38.06	3	P	P	12 36 52.6	+0.3
GTA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
GTA				AMB	AMB		
	comp=Z,160nm,8.8s						
GTA				LR	LR		
	comp=N,460nm,14.5s,MS4.5						
GTA				LR	LR		
	comp=E,380nm,15.3s,MS4.5						
GTA				LR	LR		
	comp=Z,550nm,14.5s,MS4.5						
NWAO	**Narrogin (SRO)**	38.92	153	LR	LR	12 52 28.0	
	comp=Z,312nm,18.3s,MS4.2,baz=58,slow=35						
WRA	**Warramunga Arr**	42.11	122	P	P	12 37 25.9	-0.1
WRA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WRA	**Warramunga Arr**	42.11	122	P	P	12 37 25.9	-0.2
	comp=Z,5.2nm,0.7s,mb4.3,baz=300,slow=9.0,SNR=24						
WRAB	**Tennant Creek**	42.11	122	*e*P	P	12 37 25.5	-0.6
WB2	**Warramunga Arr**	42.12	122	*e*P	P	12 37 26.0	-0.1
WMQ	**Urumqi**	43.22	350	P	P	12 37 35.5	+0.7
WMQ				AP	pP	12 37 49.1	+7.0
WMQ				PP	PP	12 39 18.3	+0.9
WMQ				PCP	PcP	12 39 25.1	+0.6
WMQ				PPP	PPP	12 39 53.6	+0.8
WMQ				*e*S	S	12 43 59.6	-0.3
WMQ				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,200nm,4.0s						
WMQ				LR	LR		
	comp=N,310nm,24.0s,MS4.3						
WMQ				LR	LR		
	comp=E,390nm,24.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,320nm,24.0s,MS4.1						
JNU	**Nakatsue**	44.81	41	LR	LR	12 59 08.3	
	comp=Z,180nm,18.6s,MS4.0,baz=354,slow=40						
ULHL	**Ulahol**	44.93	338	P	P	12 37 47.3	-1.4
	SNR=5.4						
UCH	**Uchtor**	45.59	336	P	P	12 37 55.4	+1.5
	SNR=9.6						
TKM2	**Tokmak 2**	45.76	338	P	P	12 37 56.6	+1.4
	SNR=5.7						
KBK	**Karagaybulak**	45.78	337	P	P	12 37 57.2	+1.8
	SNR=5.3						
KS15	**Wonju Array Si**	45.81	35	*e*P	P	12 37 55.3	-0.4
AML	**Almayashu**	45.84	336	P	P	12 37 57.2	+1.3
	SNR=5.1						
AAK	**Ala-Archa**	45.94	337	P	P	12 37 55.6	-1.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5						
AAK	**Ala-Archa**	45.94	337	P	P	12 37 55.6	-1.0
	comp=Z,2.1nm,0.3s,mb4.5						
USP	**Ospenovka**	46.47	337	P	P	12 38 01.4	+0.6
	SNR=12						
SONM	**Songino Array**	47.10	9	P	P	12 38 06.1	+0.4
	comp=Z,4.8nm,0.7s,mb4.5,baz=190,slow=8.9,SNR=37						
SONM				PcP	PcP	12 39 37.5	-0.3
	comp=Z,0.8nm,0.5s,baz=189,slow=3.5,SNR=4.2						
MKAR	**Makanchi Array**	47.19	346	P	P	12 38 06.7	+0.3
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MKAR	**Makanchi Array**	47.19	346	P	P	12 38 06.7	+0.2
	comp=Z,2.7nm,0.4s,mb4.5,baz=161,slow=8.8,SNR=62						
KKAR	**Karatay Array**	47.99	334	P	P	12 38 13.1	+0.3
ZAK	**Zakamensk**	49.23	5	*e*P	P	12 38 21.5	-0.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
CN2	**Changchun**	49.29	27	*e*P	P	12 38 22.5	-0.3
CN2				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,14.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,14.0s,MS4.6						
CN2				LR	LR		
	comp=Z,200nm,15.0s,MS4.2						
MJAR	**Matsushiro Arr**	51.70	42	P	P	12 38 39.4	-1.9
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR				MLR	MLR		
	comp=Z,123nm,18.4s						
MJAR	**Matsushiro Arr**	51.70	42	P	P	12 38 39.4	-1.9
	comp=Z,1.6nm,0.8s,mb4.0,baz=225,slow=7.1,SNR=7.0						
MJAR				LR	LR	13 04 38.2	
	comp=Z,123nm,18.4s,MS4.0,baz=225,slow=41						
MJAR	**Matsushiro Arr**	51.70	42	P	P	12 38 39.4	-1.9
MJAR				LR	LR	13 04 38.2	
MDJ	**Mudanjiang**	51.86	29	P	P	12 38 42.8	+0.4
MDJ				PP	PP	12 40 39.3	-1.6
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,80nm,3.5s						
MDJ				LR	LR		
	comp=N,230nm,15.1s,MS4.4						
MDJ				LR	LR		
	comp=E,140nm,15.1s,MS4.4						
MDJ				LR	LR		
	comp=Z,370nm,13.3s,MS4.6						
MDJ	**Mudanjiang**	51.86	29	P	P	12 38 40.1	-2.3
CIT	**Chita**	52.44	13	*e*P	P	12 38 47.3	+0.6
STKA	**Stephens Creek**	53.43	132	P	P	12 38 54.0	-0.3
	comp=Z,9.4nm,1.0s,mb4.7,baz=290,slow=7.5,SNR=7.7						
STKA	**Stephens Creek**	53.43	132	*e*P	P	12 38 54.4	+0.2
ZAL	**Zalesovo**	53.50	351	P	P	12 38 54.8	+0.3
ZAL				pmax	pmax		
	comp=Z,7.0nm,0.4s						
ZAL	**Zalesovo**	53.50	351	P	P	12 38 54.8	+0.3
	comp=Z,6.5nm,0.4s,mb4.9,baz=306,slow=4.5,SNR=24						
NVS	**Novosibirsk**	54.62	350	⇑*i*P	P	12 39 00.6	-2.1
NVS				pmax	pmax		
	comp=N,8.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
NVS				pmax	pmax		
	comp=E,6.0nm,1.1s						
VOSK	**Vostochnaya**	55.74	341	P	P	12 39 09.7	-1.2
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
BVA0	**Borovoye Array**	56.19	341	P	P	12 39 12.3	-1.8
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
KLR	**Kul'dur**	56.24	27	*e*P	P	12 39 11.3	-3.2
KLR				MLR	MLR		
	comp=N,500nm,13.0s						
KLR				MLR	MLR		
	comp=Z,700nm,13.0s,MS4.9						
ZRNK	**Zerenda**	56.59	340	P	P	12 39 15.6	-1.4
ZRNK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
ZRNK	**Zerenda**	56.59	340	*e*P	P	12 39 15.5	-1.5
	comp=Z,5.2nm,0.9s,mb4.6						
AB31	**Akbulak array**	57.45	332	*i* P	P	12 39 21.4	-1.7
AB31				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
BOD	**Bodaibo**	57.98	11	*e*P	P	12 39 24.8	-1.9
BOD				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
YSS	**Yuzh-Sakhalins**	60.34	34	P	P	12 39 43.0	-0.2
SVE	**Sverdlovsk**	62.62	338	*e*P	P	12 39 57.4	-1.0
SVE				*e*	pP	12 40 05.0	-1.0
SVE				*e*		12 40 32.2	
KIV	**Kislovodsk**	64.24	319	*e*P	P	12 40 09.7	+0.4
KIV				*e*	pP	12 40 15.8	-1.0
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KIV				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
YAK	**Yakutsk**	65.39	16	*e*P	P	12 40 14.8	-1.6
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
BRTR	**Keskin Array B**	69.04	312	P	P	12 40 38.5	-1.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	69.04	312	P	P	12 40 38.5	-1.3
	comp=Z,0.6nm,0.7s,mb3.6,baz=117,slow=6.4,SNR=3.0						
MATP	**Matopo**	70.49	248	P	P	12 40 49.1	+0.2
	comp=Z,2.4nm,0.8s,mb4.2,baz=104,slow=3.5,SNR=6.3						
OBN	**Obninsk**	72.55	328	*e*P	P	12 41 07.1	+6.4
OBN				*e*		12 41 23.1	
OBN				pmax	pmax		
	comp=Z,16nm,1.6s,mb4.7						
TIXI	**Tiksi**	73.15	10	*e*P	P	12 40 59.0	-5.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
BOSA	**Boshof**	74.75	240	LR	LR	13 07 57.1	
	comp=Z,101nm,18.5s,MS4.2,baz=44,slow=31						
FINES	**FINESS Array B**	79.93	333	P	P	12 41 42.3	+0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	79.93	333	P	P	12 41 42.2	+0.1
	comp=Z,0.5nm,0.4s,mb3.8,baz=108,slow=6.0,SNR=5.6						
SYO	**Syowa Base**	80.03	198	⇑P	P	12 41 38.8	-3.7
ARCES	**ARCESS Array B**	82.47	340	P	P	12 41 55.9	+0.5
	comp=Z,0.8nm,0.4s,mb4.0,baz=94,slow=5.0,SNR=13						
ARCES				LR	LR	13 24 55.7	
	comp=Z,97nm,18.5s,MS4.2,baz=291,slow=40						
GERES	**GERESS Array B**	84.74	319	P	P	12 42 07.2	-0.1
	comp=Z,0.2nm,0.3s,mb3.7,baz=90,slow=4.9,SNR=7.8						
CLL	**Collm**	85.36	321	P	P	12 42 11.0	+0.7
VNDA	**Vanda**	85.88	169	P	P	12 42 13.1	+0.7
	comp=Z,0.8nm,1.0s,mb3.9,baz=321,slow=6.5,SNR=3.0						
VNDA				LR	LR	13 18 00.1	
	comp=Z,146nm,20.0s,MS4.4,baz=298,slow=34						
MOX	**Moxa**	86.20	320	*e*P	P	12 42 24.0	+10
GRA1	**Grafenberg Arr**	86.41	320	*e*P	P	12 42 16.3	+0.7
	comp=Z,6.0nm,1.2s,mb4.7						
GRA1				*e*pP	pP	12 42 24.2	+0.9
GRF	**Grafenberg Arr**	86.41	320	*e*P	P	12 42 16.3	+0.7
GRF				*e**PP	pP	12 42 24.2	+0.9
GRF				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.7						
NOA	**NORSAR Array B**	86.94	331	P	P	12 42 17.6	-0.2
	comp=Z,1.6nm,0.9s,mb4.2,baz=94,slow=4.9,SNR=3.7						
NOA				LR	LR	13 26 14.4	
	comp=Z,52nm,18.6s,MS4.0,baz=90,slow=39						
SBA	**Scott Base**	86.98	169	P	P	12 42 19.8	+2.0
JMIC	**Jan Mayen**	93.90	342	LR	LR	13 30 01.9	
	comp=Z,58nm,19.7s,MS4.0,baz=86,slow=39						
SNAA	**Sanae**	94.32	198	LR	LR	13 20 49.1	
	comp=Z,36nm,18.7s,MS3.9,baz=162,slow=33						
NVAR	**Mina Array Bea**	128.78	36	PKP	PKPdf	12 48 42.8	-1.7
	comp=Z,0.5nm,0.8s,baz=343,slow=0.9,SNR=4.2						
TXAR	**Lajitas Array**	143.66	32	PKIKP	PKPdf	12 49 06.9	-5.0
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	143.66	32	PKP	PKPdf	12 49 06.9	-5.0
	comp=Z,0.7nm,0.7s,baz=135,slow=3.5,SNR=5.2						
CPUP	**Villa Florida**	145.00	222	PKIKP	PKPdf	12 49 11.3	-3.1
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CPUP	**Villa Florida**	145.00	222	PKPbc	PKPbc	12 49 11.3	+1.2
	comp=Z,2.1nm,0.7s,baz=90,slow=2.5,SNR=4.5						
LRAL	**Lakeview Retre**	145.68	6	*e*P	PKPbc	12 49 11.1	-0.5

IDC ***18*** *12:35:60.0±0.6, 1.22N×97.09E, mb4.6/17, mb1 4.7/18, mb1mx4.6/22, mbtmp4.6/18, ML4.7/1, MS3.9/3, Ms1 3.9/3, ms1mx3.5/26, Error ellipse: s-maj=20.1km s-min=14.5km az=56.0*

MOS ***18*** *12:36:03.6±1.1, 1.38N×97.33E, h34^{km}, mb5.1/29, MS4.3/4, Error ellipse: s-maj=14.0km s-min=6.7km az=102.2*

BJI ***18*** *12:36:04.0, 1.11N×97.33E, h52^{km}, mB5.1, mb5.1, Ms4.8, Msz4.6*

HRVD ***18*** *12:36:06.2±2.6, 1.41N×97.44E, h36^{km}±3^{km}, MW4.7/24, Centroid moment Tensor Solution. LP body waves: s7,c11;Mantle waves: s24,c31; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.33±.23; $M_{\theta\theta}$-0.46±.13; $M_{\phi\phi}$0.13±.20; $M_{r\theta}$0.33±.17; $M_{\theta\phi}$1.25±.11; $M_{\phi r}$0.52±.26; Best double couple: $M_0$1.452×10^{16} NP1:ϕ_s87°, δ69°, λ19°. NP2:ϕ_s350°, δ72°, λ157°. Principal axes: T 1.451, Plg28°, Azm308°; N .001, Plg61°, Azm133°; P -1.452, Plg2°, Azm39°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***18*** *12:36:06.2±1.8, 1.26N×97.24E, h41^{km}±15^{km}, mb5.0/30 Error ellipse: s-maj=12.1km s-min=6.5km az=49.0*

ISC 18 12:36:02.3±0.3**, 1.23N**±0.05×**97.20E**±0.05**, h27**^{km}**,** **h27**^{km}±1.9^{km}**:pP-P, n150,** σ**1§17**/144**, mb4.8**/67**, MS4.4**/19**,** **14C-5D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	5.07	49	P	Pn	12 37 20.2	+1.6
KULM	**Kulim**	5.31	40	*e*P	Pn	12 37 22.5	+0.5
KGM	**Kluang**	6.17	83	P	Pn	12 37 36.5	+2.4
SNG	**Songkhla**	6.82	30	P	Pn	12 37 43.0	-0.3
	320nm,0.9s						
UBT	**Ubonrachathani**	15.93	29	P	P	12 39 50.7	+4.2
KKTK	**Khon Kaen**	16.00	20	P	P	12 39 50.5	+3.0
	432nm,0.8s						
CM31	**Chiang Mai Arr**	17.21	6	*e*P	P	12 40 01.2	-1.4
	18nm,0.8s						
CMAR	**Chiang Mai Arr**	17.21	6	P	P	12 40 01.4	-1.3
	1.1nm,0.3s,baz=194,slow=12,SNR=28						
CMAR				LR	LR	12 47 10.6	
	comp=Z,291nm,18.8s,baz=200,slow=39						
NANT	**Nan**	17.80	11	⇑P	P	12 40 11.5	+1.5
	288nm,0.4s						
KKM	**Kota Kinabalu**	19.57	75	*e*P	P	12 40 31.3	0.0
KKM	**Kota Kinabalu**	19.57	75	P	P	12 40 32.2	+0.9
TSM	**Tawau**	20.87	81	P	P	12 40 45.7	+0.6
QIZ	**Qiongzhong**	21.60	34	⇑P	P	12 40 53.0	+0.6
KMI	**Kunming**	24.35	12	P	P	12 41 21.3	+1.9
KMI				AMB	AMB		
	comp=Z,70nm,1.5s,mb4.9						
KMI				AMB	AMB		
	comp=Z,230nm,4.5s						
KMI				LR	LR		
	comp=N,1µm,12.8s,MS4.7						
KMI				LR	LR		
	comp=E,660nm,14.4s,MS4.7						
KMI				LR	LR		
	comp=Z,2µm,16.0s,MS4.6						
KMI	**Kunming**	24.35	12	P	P	12 41 21.3	+1.9
	comp=Z,76nm,1.5s,mb4.9						
KMI				pP		12 41 27.8	
KMI				sP		12 41 31.1	
KMI				LR	LR		
	comp=Z,2µm,16.0s,MS4.6						
HYB	**Hyderabad**	24.39	312	*e*P	P	12 41 22.0	+2.1
HYB				*e*		12 41 30.0	
HYB	**Hyderabad**	24.39	312	*i* P	P	12 41 22.0	+2.1
HYB				*e*pP		12 41 32.0	
SHL	**Shillong**	24.73	348	⇑*i*P	P	12 41 23.0	-0.1
SHL				*e*S	S	12 45 47.0	+6.4
GYA	**Guiyang**	26.69	19	⇓*i*P	P	12 41 41.6	+0.3
GYA				AP	pP	12 41 50.8	+1.5
GYA				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.5						
GYA				AMB	AMB		
	comp=Z,140nm,10.5s						
GYA				LR	LR		
	comp=N,1µm,14.1s,MS4.6						
GYA				LR	LR		
	comp=E,460nm,12.1s,MS4.6						
GYA				LR	LR		
	comp=Z,1µm,13.5s,MS4.6						
PKI	**Pulchoki**	28.53	338	*e*P	P	12 42 00.7	+2.7
	comp=Z,59nm,1.1s,mb5.2						
PKI	**Pulchoki**	28.53	338	*e*P	P	12 42 00.7	+2.7
PKI				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.9						
GUN	**Gumba**	28.66	339	*e*P	P	12 42 00.1	+0.9
	comp=Z,103nm,0.8s,mb5.6						
DMN	**Daman**	28.68	337	*e*P	P	12 42 01.0	+1.7
	comp=Z,41nm,0.8s,mb5.2						
KKN	**Kakani**	28.77	338	*e*P	P	12 42 00.8	+0.6
	comp=Z,67nm,0.8s,mb5.4						
KKN	**Kakani**	28.77	338	*e*P	P	12 42 00.8	+0.6
KKN				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.1						
LSA	**Lhasa**	28.89	349	*e*P	P	12 42 03.3	+2.0
LSA	**Lhasa**	28.89	349	*e*P	P	12 42 02.5	+1.2
LSA				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9						
LSA	**Lhasa**	28.89	349	*e*P	P	12 42 02.5	+1.3
	comp=Z,22nm,0.8s,mb4.9						
GKN	**Gorkha**	29.21	337	*e*P	P	12 42 04.4	+0.2
	comp=Z,64nm,0.9s,mb5.4						
KOLN	**Koldanda**	29.43	335	*e*P	P	12 42 06.9	+0.8
	comp=Z,49nm,0.7s,mb5.3						
CD2	**Chengdu**	30.17	11	*e*P	P	12 42 10.4	-2.3
CD2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
ENH	**Enshi**	31.16	21	*e*P	P	12 42 20.1	-1.3
	comp=Z,38nm,0.5s,mb5.5						

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MBWA  Marble Bar        31.32 137  eP     P       12 42 24.1 +1.3
            comp=Z,5.3nm,0.8s,mb4.4
LGTI  Lohaghat          32.38 332  eP     P       12 42 32.3 +0.2
WHN   Wuhan             33.39  28   P     P       12 42 40.8 -0.1
FITZ  Fitzroy Crossi    33.95 126   P     P       12 42 44.9 -0.9
            comp=Z,17nm,0.8s,mb5.0,baz=340,slow=6.3,SNR=15
XAN   Xi'an             34.44  17   P     P       12 42 48.4 -1.5
XAN                                 AMB   AMB
            comp=Z,40nm,0.9s,mb5.3
LZH   Lanzhou           35.23   9 ⇑P     P       12 42 56.8 +0.2
LZH                                 AMB   AMB
            comp=Z,30nm,1.5s,mb5.0
LZH                                 AMB   AMB
            comp=Z,70nm,6.3s
LZH                                 LR    LR
            comp=N,240nm,13.5s
LZH                                 LR    LR
            comp=Z,390nm,17.4s,MS4.2
LZH   Lanzhou           35.23   9 ⇑P     P       12 42 56.8 +0.2
            comp=Z,39nm,1.5s,mb5.1
LZH                                 pP    pP      12 43 04.1 -0.6
LZH                                 sP    sP      12 43 07.5 -0.7
LZH                                 LR    LR
            comp=Z,400nm,17.4s,MS4.2
NJ2   Nanjing           36.84  32  eP     P       12 43 08.1 -2.2
NJ2                                 AP    pP      12 43 21.8 +3.4
NJ2                                 PP    PP      12 44 38.5 +2.3
NJ2                                 S     S       12 48 48.0 -4.4
NJ2                                 AMB   AMB
            comp=Z,10.0nm,0.5s,mb4.9
NJ2                                 AMB   AMB
            comp=Z,1µm,5.3s
NJ2                                 LR    LR
            comp=N,900nm,10.8s,MS4.8
NJ2                                 LR    LR
            comp=E,550nm,15.0s,MS4.8
NJ2                                 LR    LR
            comp=Z,590nm,14.2s,MS4.5
SSE   Sheshan           37.39  35  eP     P       12 43 12.9 -2.0
SSE                                 S     S       12 48 59.1 -1.8
SSE                                 AMB   AMB
            comp=Z,20nm,0.6s,mb5.1
SSE                                 AMB   AMB
            comp=Z,50nm,4.3s
SSE                                 LR    LR
            comp=N,460nm,14.5s,MS4.4
SSE                                 LR    LR
            comp=E,180nm,14.4s,MS4.4
SSE                                 LR    LR
            comp=Z,480nm,16.0s,MS4.4
SSE   Sheshan           37.39  35  eP     P       12 43 12.9 -2.0
            comp=Z,28nm,0.6s,mb5.3
SSE                                 pP    pP      12 43 22.3 -0.8
SSE                                 S     S       12 48 59.1 -1.8
SSE                                 sS            12 49 15.1
SSE                                 SS    SS      12 51 43.1 +9.4
SSE                                 ScS   ScS     12 53 27.6 +2.9
SSE                                 LR    LR
            comp=Z,490nm,16.0s,MS4.4
KAKA  Kakadu            37.62 113  eP     P       12 43 15.1 -1.8
            comp=Z,11nm,0.6s,mb4.8
GTA   Gaotai            38.08   3   P     P       12 43 20.8 +0.2
GTA                                 AP    pP      12 43 31.8 +3.0
GTA                                 AMB   AMB
            comp=Z,30nm,0.8s,mb5.1
GTA                                 AMB   AMB
            comp=Z,120nm,9.9s
GTA                                 LR    LR
            comp=N,320nm,12.6s,MS4.5
GTA                                 LR    LR
            comp=E,290nm,13.4s,MS4.5
GTA                                 LR    LR
            comp=Z,470nm,14.1s,MS4.5
JOW   Kunigami          39.23  47   P     P       12 43 31.4 +1.1
            comp=Z,48nm,0.6s,mb5.4,baz=249,slow=9.0,SNR=17
HHC   Hu-ho-hao-te      41.53  16  eP     P       12 43 50.4 +1.2
HHC                                 AP    pP      12 44 01.0 +3.6
HHC                                 PP    PP      12 45 25.4 -2.9
HHC                                 AMB   AMB
            comp=Z,10.0nm,1.0s,mb4.4
HHC                                 LR    LR
            comp=N,590nm,15.3s,MS4.7
HHC                                 LR    LR
            comp=E,580nm,16.7s,MS4.7
HHC                                 LR    LR
            comp=Z,610nm,15.1s,MS4.6
WRA   Warramunga Arr    42.05 122   P     P       12 43 53.3 -0.5
            comp=Z,12nm,0.6s,mb4.7,baz=301,slow=8.9,SNR=15
WRAB  Tennant Creek     42.06 122d iP     P       12 43 54.3 +0.5
WRAB  Tennant Creek     42.06 122  eP     P       12 43 53.8  0.0
            comp=Z,19nm,0.6s,mb4.9
WB2   Warramunga Arr    42.06 122  eP     P       12 43 54.0 +0.2
WMQ   Urumqi            43.25 350   P     P       12 44 03.5 +0.3
WMQ                                 AP    pP      12 44 13.3 +1.9
WMQ                                 PP    PP      12 45 46.3 +0.5
WMQ                                 PCP   PcP     12 45 53.1 +0.5
WMQ                                 PPP   PPP     12 46 21.6 +0.2
WMQ                                eS     S       12 50 27.6 -0.5
WMQ                                 SCS   ScS     12 53 58.8 -0.3
WMQ                                 AMB   AMB
            comp=Z,20nm,1.2s,mb4.7
WMQ                                 AMB   AMB
            comp=Z,450nm,4.0s
WMQ                                 LR    LR
            comp=N,960nm,24.0s,MS4.8
WMQ                                 LR    LR
            comp=E,950nm,24.0s,MS4.8
WMQ                                 LR    LR
            comp=Z,920nm,24.0s,MS4.6
JNU   Nakatsue          44.79  41   P     P       12 44 16.1 +0.3
            comp=Z,21nm,0.9s,mb5.0,baz=194,slow=3.7,SNR=18
ULHL  Ulahol            44.97 338   P     P       12 44 18.0 +0.8
            SNR=11
UCH   Uchtor            45.62 336   P     P       12 44 23.7 +1.4
            SNR=20
TKM2  Tokmak 2          45.79 338   P     P       12 44 24.7 +1.1
            SNR=9.1
KS15  Wonju Array Si    45.80  35  eP     P       12 44 24.1 +0.3
KBK   Karagaybulak      45.81 337   P     P       12 44 25.9 +2.0
            SNR=6.9
AML   Almayashu         45.88 336   P     P       12 44 25.7 +1.4
            SNR=9.1
AAK   Ala-Archa         45.97 337  eP     P       12 44 25.5 +0.4
AAK                                 pmax  pmax
            comp=Z,23nm,1.4s,mb4.9
AAK   Ala-Archa         45.97 337  eP     P       12 44 25.5 +0.5
            comp=Z,23nm,1.4s,mb4.9
FRU   Bishkek           46.09 337  eP     P       12 44 35.0 +9.0
FRU                                e                  12 44 48.0
USP   Ospenovka         46.51 337   P     P       12 44 30.1 +0.8
            SNR=27
SNY   Shenyang          46.88  27 ⇓P     P       12 44 32.5 +0.2
SNY                                 LR    LR
            comp=N,280nm,17.4s,MS4.4
SNY                                 LR    LR
            comp=E,210nm,14.7s,MS4.4
SNY                                 LR    LR
            comp=Z,230nm,21.6s
SONM  Songino Array     47.10   8   P     P       12 44 34.5 +0.6
            comp=Z,15nm,0.7s,mb5.0,baz=189,slow=8.8,SNR=111
SONM                                PcP   PcP     12 46 06.0  0.0
            comp=Z,2.9nm,0.5s,baz=192,slow=3.9,SNR=7.6
MKAR  Makanchi Array    47.21 346   P     P       12 44 35.1 +0.2
            comp=Z,11nm,0.5s,mb5.0,baz=159,slow=8.2,SNR=140
ULN   Ulaanbaatar       47.23   9  eP     P       12 44 35.3 +0.3
ULN                                 pmax  pmax
            comp=Z,10.0nm,0.9s,mb4.8
ULN                                 MLR   MLR
            comp=Z,502nm,20.0s,MS4.5
ULN   Ulaanbaatar       47.23   9  eP     P       12 44 35.3 +0.3
            comp=Z,9.7nm,0.9s,mb4.7
ULN                                 LR    LR
            comp=Z,502nm,20.0s,MS4.5
KKAR  Karatay Array     48.03 334   P     P       12 44 40.6 -0.7
KKAR                                pmax  pmax
            comp=Z,1.0nm,0.5s,mb4.1
ZAK   Zakamensk         49.25   5⇑iP     P       12 44 50.8 +0.2
ZAK                                 pmax  pmax
            comp=Z,4.0nm,0.8s,mb4.5
CN2   Changchun         49.28  27  eP     P       12 44 50.6 -0.3
CN2                                eXP    sP      12 45 05.8 +3.3
CN2                                eS     S       12 51 54.4 +0.2
CN2                                 AMB   AMB
            comp=Z,30nm,0.9s,mb5.3
CN2                                 AMB   AMB
            comp=Z,200nm,4.0s
CN2                                 LR    LR
            comp=N,900nm,16.0s,MS5.0
CN2                                 LR    LR
            comp=E,700nm,16.0s,MS5.0
CN2                                 LR    LR
            comp=Z,800nm,15.0s,MS4.8
MOY   Mondy             50.36   3  eP     P       12 44 59.8 +0.7
TLY   Talaya            50.57   5  eP     P       12 45 01.3 +0.7
TLY                                 pmax  pmax
            comp=Z,9.0nm,0.7s,mb4.8
JHJ   Hachijo jima 2    51.00  47   LR    LR      13 05 55.8
            comp=Z,192nm,20.3s,MS4.1,baz=88,slow=35
IRK   Irkutsk           51.18   6  eP     P       12 45 04.2 -1.1
HIA   Hailar            51.62  19  eP     P       12 45 07.6 -1.0
HIA                                 pmax  pmax
            comp=Z,16nm,0.7s
HIA   Hailar            51.62  19  eP     P       12 45 07.6 -1.0
            comp=Z,16nm,0.7s,mb5.0
MAT   Matsushiro        51.67  42  eP     P       12 45 07.0 -2.2
MAT   Matsushiro        51.67  42   P     P       12 45 06.7 -2.5
MJAR  Matsushiro Arr    51.67  42   P     P       12 45 08.6 -0.6
            comp=Z,1.0nm,0.6s,mb3.9,baz=216,slow=7.8,SNR=5.4
MDJ   Mudanjiang        51.84  29   P     P       12 45 10.8 +0.4
MDJ                                 AP    pP      12 45 19.8 +1.0
MDJ                                 PP    PP      12 47 08.0 -1.0
MDJ                                 S     S       12 52 32.6 +3.0
MDJ                                 AMB   AMB
            comp=Z,10.0nm,0.7s,mb4.8
MDJ                                 AMB   AMB
            comp=Z,20nm,3.3s
MDJ                                 LR    LR
            comp=N,30nm,21.9s,MS4.0
MDJ                                 LR    LR
            comp=E,120nm,17.1s,MS4.0
MDJ                                 LR    LR
            comp=Z,160nm,19.5s,MS4.1
MDJ   Mudanjiang        51.84  29  eP     P       12 45 10.7 +0.2
            comp=Z,8.7nm,0.7s,mb4.8
MDJ                                 LR    LR
            comp=Z,217nm,19.0s,MS4.2
CIT   Chita             52.44  13  eP     P       12 45 15.6 +0.8
CIT                                 pmax  pmax
            comp=Z,157nm,1.3s,mb5.8
CTA   Charters Tower    52.52 117  eP     pP      12 45 24.4 +0.2
            comp=Z,7.3nm,0.9s
CTA   Charters Tower    52.52 117  eP     pP      12 45 24.4 +0.2
CTA                                 pmax  pmax
            comp=Z,7.0nm,0.9s
CTAO  Charters Tower    52.52 117  eP     P       12 45 16.0 +0.2
CTAO                               e*PP   pP      12 45 24.3 +0.1
CTAO                                pmax  pmax
            comp=Z,6.0nm,1.0s,mb4.5
CTAO                                MLR   MLR
            comp=Z,318nm,19.0s,MS4.4
CTAO  Charters Tower    52.52 117  eP     P       12 45 16.0 +0.2
            comp=Z,5.9nm,1.0s,mb4.5
CTAO                               epP    pP      12 45 24.3 +0.1
CTAO                                LR    LR
            comp=Z,318nm,19.0s,MS4.4
STKA  Stephens Creek    53.38 132   P     P       12 45 23.0 +1.0
            comp=Z,7.7nm,0.6s,mb4.8,baz=304,slow=7.4,SNR=20
STKA  Stephens Creek    53.38 132  eP     P       12 45 22.8 +0.8
ZAL   Zalesovo          53.52 351   P     P       12 45 23.1 +0.3
            comp=Z,16nm,0.5s,mb5.2,baz=311,slow=5.3,SNR=58
NVS   Novosibirsk       54.65 350⇑iP     P       12 45 29.2 -1.8
NVS                                eS     S       12 53 06.7 -0.8
NVS                                 pmax  pmax
            comp=Z,12nm,0.8s,mb5.0
NVS                                 pmax  pmax
            comp=N,7.0nm,0.7s
NVS                                 smax
            comp=E,10.0nm,1.8s
VOSK  Vostochnaya       55.77 341   P     P       12 45 38.0 -1.2
VOSK                                pmax  pmax
            comp=Z,7.0nm,0.6s,mb4.9
BVA0  Borovoye Array    56.22 341  i P    P       12 45 41.3 -1.2
BVA0                                pmax  pmax
            comp=Z,2.0nm,0.8s,mb4.2
KLR   Kul'dur           56.23  27  eP     P       12 45 39.7 -2.9
KLR                                 pmax  pmax
            comp=Z,20nm,0.9s,mb5.2
ZRNK  Zerenda           56.62 340   P     P       12 45 44.0 -1.4
ZRNK                                pmax  pmax
            comp=Z,7.0nm,0.9s,mb4.7
ZRNK  Zerenda           56.62 340  eP     P       12 45 44.0 -1.4
            comp=Z,67nm,0.6s,mb5.8
AB31  Akbulak array     57.49 332   P     P       12 45 50.2 -1.3
AB31                                pmax  pmax
            comp=Z,12nm,0.7s,mb5.0
BOD   Bodaibo           57.98  11  eP     P       12 45 51.4 -3.4
BOD                                 pmax  pmax
            comp=Z,17nm,1.0s,mb5.0
YSS   Yuzh-Sakhalins    60.33  34⇑eP     P       12 46 11.0 -0.2
YSS                                e                  12 58 25.0
YSS                                 pmax  pmax
            comp=Z,30nm,1.0s,mb5.3
YSS                                 MLR   MLR
            comp=Z,200nm,19.0s,MS4.3
YSS   Yuzh-Sakhalins    60.33  34  eP     P       12 46 11.3 +0.1
            comp=Z,21nm,0.9s,mb5.2
GNI   Garni             61.27 316  i P    P       12 46 22.3 +4.6
SVE   Sverdlovsk        62.66 338  eP     P       12 46 26.0 -0.8
SVE                                e                  12 46 38.0
SVE                                 pmax  pmax
            comp=Z,20nm,1.3s,mb5.1
ARU   Arti              63.16 337⇑iP     P       12 46 28.6 -1.5
ARU                                e                  12 48 46.3
ARU                                eS     S       12 54 59.1 +1.2
ARU                                 pmax  pmax
            comp=Z,10.0nm,0.9s,mb5.0
KIV   Kislovodsk        64.28 319   P     P       12 46 38.0 +0.3
KIV                                e                  12 46 44.0
KIV   Kislovodsk        64.28 319  eP     P       12 46 43.0 +5.3
            comp=Z,15nm,0.8s,mb5.1
YAK   Yakutsk           65.39  16c iP     P       12 46 43.6 -1.0
YAK                                 pmax  pmax
            comp=Z,30nm,1.0s,mb5.3
YAK                                 pmax  pmax
            comp=N,11nm,1.1s
YAK                                 pmax  pmax
            comp=E,8.0nm,1.2s
YAK   Yakutsk           65.39  16  eP     P       12 46 43.5 -1.0
            comp=E,21nm,0.6s,mb5.3
YAK                                 LR    LR
            comp=Z,314nm,20.0s,MS4.5
SOKR  Solikamsk         66.06 339⇓iP     P       12 46 46.9 -1.9
SOKR                                pmax  pmax
            comp=Z,10.0nm,0.9s,mb4.8
BRTR  Keskin Array B    69.09 312   P     P       12 47 07.2 -1.1
            comp=Z,1.3nm,0.7s,mb4.0,baz=132,slow=7.7,SNR=5.2
MATP  Matopo            70.53 248   P     P       12 47 17.3 -0.1
            comp=Z,3.7nm,0.8s,mb4.3,baz=56,slow=8.6,SNR=9.2
MATP  Matopo            70.53 248   P     P       12 47 17.3 -0.1
PET   Petropavlovsk     72.21  34  eP     P       12 47 26.8 -0.1
PET                                 pmax  pmax
            comp=Z,39nm,0.8s,mb5.4
PET                                 MLR   MLR
            comp=Z,100nm,17.0s,MS4.2
PET   Petropavlovsk     72.21  34  eP     P       12 47 26.6 -0.3
            comp=Z,14nm,0.6s,mb5.1
OBN   Obninsk           72.59 328⇓iP     P       12 47 28.3 -0.8
OBN                                e      pP      12 47 35.1 -2.6
OBN                                e                  12 47 49.2
OBN                                 pmax  pmax
            comp=Z,11nm,1.2s,mb4.7
TIXI  Tiksi             73.16  10⇑iP     P       12 47 30.1 -2.0
TIXI                               eS     S       12 56 54.4 -2.4
TIXI                                pmax  pmax
            comp=Z,10.0nm,0.8s,mb4.8
TIXI                                MLR   MLR
            comp=Z,328nm,18.0s,MS4.7
AKASG Malin Array Be    75.23 322   P     P       12 47 42.7 -1.8
            comp=Z,1.2nm,0.4s,mb4.2,baz=86,slow=4.8,SNR=5.6
AKASG Malin Array Be    75.23 322   P     P       12 47 42.7 -1.9
FINES FINESS Array B    79.97 333  i P    P       12 48 10.2 -0.3
FINES                               pmax  pmax
            comp=Z,2.0nm,0.6s
FINES FINESS Array B    79.97 333   P     P       12 48 09.2 -1.3
            comp=Z,2.0nm,0.6s,mb4.2,baz=90,slow=5.7,SNR=4.0
KAF   Kangasniemi       80.06 333  ep     P       12 48 09.7 -1.2
FX1   Attu Island--F    80.57  37  eP     P       12 48 14.5 +0.7
BILL  Bilibino          81.14  21   P     P       12 48 14.7 -1.8
ARCES ARCESS Array B    82.51 340   P     P       12 48 24.1 +0.5
            comp=Z,2.4nm,0.5s,mb4.5,baz=99,slow=4.6,SNR=18
PRU   Pruhonice         84.33 320  eP     pP      12 48 41.0 -1.1
PRU   Pruhonice         84.33 320  epP    pP      12 48 41.0 -1.1
BRG   Berggiesshubel    84.79 321⇑iP     P       12 48 36.0 +0.4
BRG                                e      pP      12 48 43.2 -1.1
BRG                                 pmax  pmax
            comp=Z,5.0nm,1.0s,mb4.6
BRG                                 pmax  pmax
            comp=Z,4.0nm,1.1s,mb4.5
BRG   Berggiesshubel    84.79 321⇑iP     P       12 48 36.0 +0.5
            comp=Z,5.2nm,1.0s,mb4.6
BRG                                e      pP      12 48 43.2 -1.1
GERES GERESS Array B    84.79 319   P     P       12 48 36.5 +0.8
            comp=Z,2.0nm,0.9s,mb4.2,baz=104,slow=5.5,SNR=9.5
KHC   Kasperske Hory    84.89 319⇑iP     P       12 48 36.1  0.0
KHC   Kasperske Hory    84.89 319  eP     P       12 48 34.5 -1.6
CLL   Collm             85.41 321  eP     P       12 48 31.0 -7.7
CLL                                e                  12 48 46.0
VNDA  Vanda             85.85 169   P     P       12 48 42.0 +1.7
            comp=Z,0.5nm,0.7s,mb3.9,baz=299,slow=6.5,SNR=3.8
MOX   Moxa              86.25 320  eP     P       12 48 50.0 +7.1
GRA1  Grafenberg Arr    86.46 320  eP     P       12 48 45.6 +1.7
            comp=Z,6.0nm,1.0s,mb4.8
GRA1                               epP    pP      12 48 52.3 -0.4
GRF   Grafenberg Arr    86.46 320  eP     P       12 48 45.6 +1.7
GRF                                e*PP   pP      12 48 52.3 -0.4
GRF                                 pmax  pmax
            comp=Z,6.0nm,1.0s,mb4.8
GRF                                 pmax  pmax
            comp=Z,6.0nm,1.0s,mb4.8
GRF   Grafenberg Arr    86.46 320  eP     P       12 48 45.6 +1.7
GRF                                e*PP   pP      12 48 52.3 -0.4
GRF                                 pmax  pmax
            comp=Z,6.0nm,1.0s,mb4.8
GRF   Grafenberg Arr    86.46 320  eP     P       12 48 45.6 +1.7
            comp=Z,6.0nm,1.0s,mb4.8
GRF                                epP    pP      12 48 52.3 -0.4
NB2   NORSAR Subarra    86.98 331   P     P       12 48 45.9 -0.3
            comp=Z,0.2nm,0.7s,mb3.5,baz=95,slow=5.6
NOA   NORSAR Array B    86.98 331   P     P       12 48 46.5 +0.3
            comp=Z,1.9nm,0.8s,mb4.4,baz=95,slow=4.9,SNR=7.1
DAVOX Davos             87.27 317   LR    LR      13 29 16.5
            comp=Z,37nm,18.9s,MS3.8,baz=74,slow=37
LPG   La Plagne         89.45 315  eP     P       12 49 05.6 +7.2
            comp=Z,5.9nm,0.8s,mb4.7
LPG   La Plagne         89.45 315  eP     P       12 49 05.6 +7.2
LPG                                 pmax  pmax
            comp=Z,3.0nm,0.8s,mb4.7
NVAR  Mina Array Bea   128.76  36   PKP   PKPdf   12 55 11.0 -1.8
            comp=Z,0.5nm,0.5s,baz=229,slow=0.3,SNR=6.7
NVAR  Mina Array Bea   128.76  36   PKP   PKPdf   12 55 11.0 -1.8
PDAR  Pinedale Array   130.02  26   PKP   PKPdf   12 55 12.4 -2.7
            comp=Z,0.6nm,0.5s,baz=135,slow=6.3,SNR=3.9
FVM   French Village   140.35   9   PKIKP PKPdf   12 55 30.5 -3.8
TXAR  Lajitas Array    143.65  32   PKP   PKPdf   12 55 35.4 -4.9
            comp=Z,0.8nm,0.6s,baz=230,slow=0.5,SNR=7.3
CPUP  Villa Florida    145.02 222   PKP   PKPdf   12 55 39.7 -3.2
            comp=Z,2.9nm,0.6s,baz=154,slow=4.8,SNR=10
CPUP  Villa Florida    145.02 222   PKP   PKPdf   12 55 39.7 -3.2
NATX  Nacogdoches      145.32  18   PKPdf PKPdf   12 55 40.1 -3.1
LRAL  Lakeview Retre   145.69   6  ePKPdf PKPdf   12 55 40.1 -3.7
LRAL                               epP                12 55 47.2
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*ATH **18** 12:42:55.4, 34.77N×26.13E, h13^{km}±1^{km}, MD3.6/5*

*NEIC **18** 12:42:55.4, 34.77N×26.13E, h13^{km}, MD3.6(ATH), After ATH.*

*CSEM **18** 12:42:56.6±0.3, 34.83N×26.10E, h2^{km}, MD3.6, Error ellipse: s-maj=8.5km s-min=3.3km az=167.0*

ISC 18 12:42:55.3±2.0**, 34.8N**±0.1×**26.04E**±0.09**, h2^{km}, n12, σ0^{s}81**/13**, Crete**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
XRY   Khrisi             0.31 294   ePB     Pb       12 43 02.9 -0.3
NPS   Neapolis           0.62 326   ePB     Pb       12 43 07.5 -1.0
NPS                                 eSB     Sb       12 43 16.6 -0.8
KARP  Karpathos          1.22  49   ePB     Pb       12 43 17.1 -1.6
VAM   Vamos              1.64 294   ePG     Pg       12 43 27.4 -0.7
SANT  Santorini          1.69 344   eP      Pn       12 43 26.9 +1.0
SANT  Santorini          1.69 344   eP      Pn       12 43 27.0 +1.0
THR1  Thera Island       1.69 344   eP      Pn       12 43 26.8 +0.8
THR3  Thira Island,      1.74 343   eP      Pn       12 43 26.9 +0.2
THR5  Thira Island,      1.76 342   eP      Pn       12 43 27.6 +0.6
THR4  Thira Island,      1.79 343   eP      Pn       12 43 27.9 +0.5
APE   Apeiranthos        2.35 350   ePN     Pn       12 43 36.0 +0.5
AGG   Agios Georgios     5.20 326   eP      Pn       12 44 16.8 +0.8
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*CSEM **18** 12:43:47.7±0.3, 33.51N×5.34W, h10^{km}, MD3.3, Error ellipse: s-maj=11.0km s-min=5.7km az=91.0*

*CNRM **18** 12:43:48.5, 33.56N×5.31W, h6^{km}, MD3.3*

MDD 18 12:43:47.6±0.8**, 33.56N×5.36W, mb3.9**/4**, Error ellipse: s-maj=18.7km s-min=4.9km az=72.0, PRXIMO, Morocco**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
CZD   Col de Zad         0.59 153    Pg     Pg       12 43 58.5 -0.9
CZD                                  Lg              12 44 07.0
CZD   Col de Zad         0.59 153   i P     Pg       12 43 58.5 -0.9
ZFT   Errachidia         1.74 150   i P     Pn       12 44 18.0 -1.4
ZFT                                 i S     Sn       12 44 41.0 -1.6
OUK   Oukaimeden         3.16 223   i P     Pn       12 44 39.0 -0.6
CIA   Chichaoua          3.49 236    Sn     Sn       12 45 23.0 -3.9
CIA   Chichaoua          3.49 236   i P     Pn       12 44 44.0 -0.3
CIA                                 i S     Sn       12 45 23.0 -3.9
EMIN  Mina Concepcio     4.33 346    Pn     Pn       12 44 53.3 -3.0
            0.6nm,0.1s,SNR=11
EMIN                                 Sn     Sn       12 45 39.8 -8.5
            0.5nm,0.1s,SNR=5.6
EMIN  Mina Concepcio     4.33 346    Pn     Pn       12 44 53.3 -3.0
            0.6nm,0.1s,SNR=11
EMIN                                 Sn     Sn       12 45 38.5  -10
            0.5nm,0.1s,SNR=5.6
ECAB  El Cabril          4.51 359    Pn     Pn       12 44 56.4 -2.4
            0.6nm,0.1s,SNR=6.8
ECAB                                 Sn     Sn       12 45 44.8 -7.9
            1.0nm,0.1s,SNR=6.9
ECAB  El Cabril          4.51 359    Pn     Pn       12 44 56.4 -2.4
            0.6nm,0.1s,SNR=6.8
ECAB                                 Sn     Sn       12 45 44.8 -7.9
            SNR=6.9
EQES  Quesada            4.63  23    Pn     Pn       12 44 59.5 -1.0
            0.3nm,0.1s,SNR=7.9
EQES                                 Sn     Sn       12 45 52.1 -3.6
            0.4nm,0.2s,SNR=7.9
EADA  Adamuz             4.64   8    Pn     Pn       12 44 58.4 -2.3
            0.2nm,0.1s,SNR=7.7
EADA                                 Sn     Sn       12 45 48.7 -7.4
            1.3nm,0.3s,SNR=5.0
EADA  Adamuz             4.64   8    Pn     Pn       12 44 58.4 -2.3
            0.2nm,0.1s,SNR=7.7
EADA                                 Sn     Sn       12 45 48.7 -7.4
            SNR=5.0
EBAD  Badajoz            5.36 346    Pn     Pn       12 45 07.1 -3.7
            1.6nm,0.1s,SNR=17
EBAD                                 Sn     Sn       12 46 04.2  -10
            1.3nm,0.1s
EBAD  Badajoz            5.36 346    Pn     Pn       12 45 07.1 -3.7
            1.6nm,0.1s,SNR=17
EBAD                                 Sn     Sn       12 46 02.1  -12
            1.3nm,0.1s
ESDC  Sonseca Array      6.21  10    Pn     Pn       12 45 19.7 -3.1
            0.5nm,0.1s,baz=203,slow=13,SNR=3.7
ESDC  Sonseca Array      6.21  10    Pn     Pn       12 45 19.7 -3.1
            0.5nm,0.1s,SNR=3.7
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NEIC 18 13:04:17.5, 40.65N×126.64W, h21^{km}, MD3.5(NCEDC)**, After NCEDC., Off coast of northern California**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
KHMM  Horse Mountain     2.22  83   eP      Pn       13 04 51.1 -2.8
WDC   Whiskeytown Da     3.12  90   eP      Pn       13 05 04.2 -2.5
YBH   Yreka Blue Hor     3.16  69    P      Pn       13 05 06.4 -0.8
LAMM  Antelope Mount     3.18  71    P      Pn       13 05 06.4 -1.1
HUMO  Hull Mountain      3.38  54    P      Pn       13 05 08.4 -2.0
LHEM  Herd Peak          3.48  72    P      Pn       13 05 11.3 -0.4
DBO   Dodson Butte       3.54  45    P      Pn       13 05 10.5 -2.1
BUOR  Burton Butte       3.68  62    P      Pn       13 05 14.5 -0.1
BBOR  Butler Butte       3.71  52    P      Pn       13 05 13.5 -1.5
LAB   Little Aspen B     3.80  63    P      Pn       13 05 15.8 -0.5
HSO   Harness Mounta     3.90  41    P      Pn       13 05 15.5 -2.3
VSP   Spence Mountai     3.91  63    P      Pn       13 05 17.1 -0.8
LBCM  Butte Creek Ri     4.02  86    P      Pn       13 05 18.2 -1.3
HOG   Hogback Mounta     4.04  65    P      Pn       13 05 18.6 -1.0
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HBO	Huckleberry Mo	4.52	44	P	Pn	13 05 25.2	-1.4
BEKR	Beckwourth	4.87	97	eP	Pn	13 05 29.9	-1.6
FRIS	Frissel Point	4.89	42	P	Pn	13 05 30.1	-1.7
MOD	Modoc	4.94	73	P	Pn	13 05 30.2	-2.3
BKCOR	Black Crater	5.16	43	P	Pn	13 05 33.8	-1.8
SAO	San Andreas Ge	5.62	132	eP	Pn	13 05 37.6	-4.5
BMO	Blue Mountains	8.05	55	eP	P	13 06 13.9	-2.3

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*NEIC **18** 13:09:33.5±0.7, 28.17S×70.60W, h81^{km}±5^{km}, Error ellipse: s-maj=19.5km s-min=8.3km az=96.0*

*GUC **18** 13:09:33.0±0.8, 28.19S×70.70W, h81^{km}±7^{km}, ML4.5*

*IDC **18** 13:09:33.8±0.9, 28.20S×70.50W, h80^{km}±5^{km}, mb3.9/4, mb1 3.7/6, mb1mx3.5/17, mbtmp4.0/6, MS2.8/1, Ms1 2.8/1, ms1mx2.7/19, Error ellipse: s-maj=32.7km s-min=12.8km az=71.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 18 13:09:32.4±0.8, **28.20S**±0.04×**70.6W**±0.2, **h90**^{km}±6^{km}, **n19**, σ**0^{s}67**/20, **mb4.0**/4, **1C-2D**, **Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VACH	Vallenar	0.40	198	⇓iP	P	13 09 46.4	-0.1
VACH				iS	S	13 09 56.0	-1.1
VACH				AMP		13 09 56.6	
	comp=E,65μm,0.1s						
CPCH	Copiapo	0.87	16	⇑iP	P	13 09 50.9	0.0
CPCH				iS	S	13 10 04.7	+0.1
CPCH				AMP		13 10 06.4	
	comp=E,87μm,0.1s						
TLL	Tololo Astrono	1.97	185	⇓iP	P	13 10 05.4	+0.7
TLL				iS	S	13 10 29.9	+1.4
TLL				AMP		13 10 32.2	
	comp=E,3μm,0.5s						
ZON	Zonda	3.74	154	eP	P	13 10 29.0	-0.2
CFAA	Coronel Fontan	3.98	149	P	P	13 10 33.2	+0.8
	comp=E,2.1nm,0.3s,baz=334,slow=13,SNR=63						
CFAA				S	S	13 11 17.5	-0.6
	comp=E,5.9nm,0.3s,baz=171,slow=17,SNR=18						
CFAA	Coronel Fontan	3.98	149	P	P	13 10 33.2	+0.8
CFAA				S	S	13 11 17.5	-0.6
MDZ	Mendoza	4.92	162	eP	P	13 10 46.0	+0.7
MDZ				i		13 11 22.1	
MDZ				S	S	13 11 45.7	+4.3
CLCH	Cerro Calan	5.18	179	eP	P	13 10 49.3	+0.3
CLCH				iS	S	13 11 47.1	-1.0
CPUP	Villa Florida	11.97	84	LR	LR	13 17 43.8	
	comp=E,43nm,18.5s,baz=206,slow=41						
SIV	San Ignacio	15.02	38	P	P	13 13 00.9	0.0
	comp=E,0.1nm,0.3s,baz=194,slow=17,SNR=2.8						
BDFB	Brasilia	24.36	64	P	P	13 14 43.8	+0.6
	comp=E,1.7nm,0.5s,mb3.7,baz=152,slow=1.0,SNR=3.7						
SNAA	Sanae	56.53	159	P	P	13 19 06.7	-0.6
	comp=E,1.0nm,0.5s,mb4.1,baz=286,slow=8.5,SNR=17						
SNAA				sP	sP	13 19 36.4	-3.5
	comp=E,1.1nm,0.9s,baz=286,slow=5.8,SNR=5.0						
DBIC	Dimbokro	72.20	72	P	P	13 20 49.5	-0.3
	comp=E,2.6nm,0.7s,mb4.2,baz=194,slow=15,SNR=3.7						
BOSA	Boshof	81.69	118	P	P	13 21 41.9	-0.6
	comp=E,1.9nm,0.7s,mb4.0,baz=246,slow=0.4,SNR=5.3						
WRA	Warramunga Arr	126.41	210	PKP	PKPdf	13 28 27.7	+2.3
	comp=E,0.5nm,0.5s,baz=155,slow=1.8,SNR=16						
WRA				pPKP		13 28 49.4	
	comp=E,0.4nm,0.5s,baz=161,slow=1.7,SNR=3.2						
ZAL	Zalesovo	148.61	28	PKPbc	PKPdf	13 29 12.1	+7.5
	comp=E,2.9nm,0.5s,baz=177,slow=0.7,SNR=11						
ZAL				pPKPbc		13 29 33.4	
	comp=E,1.6nm,0.7s,baz=192,slow=3.4,SNR=3.6						
ZAL	Zalesovo	148.61	28	PKPbc	PKPdf	13 29 12.1	+7.5
ZAL				pPKPbc		13 29 33.4	
MKAR	Makanchi Array	151.81	41	PKP	PKPdf	13 29 12.7	+3.0
	comp=E,0.2nm,0.5s,baz=90,slow=1.4,SNR=4.8						
MKAR				PKPbc	PKPdf	13 29 19.0	+9.3
	comp=E,2.5nm,0.6s,baz=321,slow=1.7,SNR=30						
MKAR				pPKPbc		13 29 40.9	
	comp=E,1.4nm,0.7s,baz=336,slow=1.9,SNR=6.1						
MKAR	Makanchi Array	151.81	41	PKP	PKPdf	13 29 12.7	+3.0
MKAR				PKPbc	PKPdf	13 29 19.0	+9.3
MKAR				pPKPbc		13 29 40.9	

WEL 18 13:24:48.8±0.4, **37.70S**×**176.65E**, **h190**^{km}±3^{km}, **ML3.9**/18, **6C, Error ellipse: s-maj=2.6km s-min=2.4km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARZ	Manawahe	0.29	176	PN	P	13 25 14.2	-0.3
LIRZ	Lichensteins R	0.37	214	PN	P	13 25 14.2	-0.6
TAZ	Tarawera	0.55	192	PN	P	13 25 15.5	+0.2
URZ	Urewera	0.67	147	⇑PN	P	13 25 15.2	-0.7
URZ				SN	S	13 25 35.3	-1.5
PATZ	Paeroa	0.75	204	PN	P	13 25 16.5	+0.2
MWZ	Matawai	0.94	133	⇑PN	P	13 25 16.9	-0.5
MWZ				SN	S	13 25 39.7	+0.2
MKAZ	Moumakai	1.31	296	PN	P	13 25 19.8	-0.6
PUZ	Puketiti	1.33	107	PN	P	13 25 20.0	-0.5
PUZ				SN	S	13 25 43.6	-1.4
RITZ	Rihia Road	1.42	206	PN	P	13 25 21.3	0.0
BKZ	Black Stump Fm	1.47	185	⇑PN	P	13 25 21.3	-0.5
BKZ				SN	S	13 25 45.9	-1.3
KNZ	Kokohu	1.55	149	⇑PN	P	13 25 22.5	0.0
KNZ				SN	S	13 25 47.8	-0.7
TWVZ	Taurewa	1.67	214	PN	P	13 25 23.4	-0.3
NGZ	Ngauruhoe	1.69	209	PN	P	13 25 23.9	0.0
CNZ	Chateau	1.73	210	PN	P	13 25 24.0	-0.3
WPVZ	Whakapapa	1.74	210	PN	P	13 25 24.0	-0.3
TUVZ	Tukino	1.75	206	PN	P	13 25 24.2	-0.2
FWVZ	Far West T-bar	1.78	209	PN	P	13 25 24.2	-0.5
TRVZ	Turoa	1.82	208	PN	P	13 25 24.9	-0.2
WNVZ	Wahianoa	1.83	206	⇑PN	P	13 25 24.8	-0.4
MOVZ	Moawhango	1.85	202	PN	P	13 25 24.5	-0.9
PKVZ	Pokaka	1.89	212	PN	P	13 25 25.5	-0.3
MTVZ	Mangateitei	1.92	208	PN	P	13 25 25.7	-0.5
PWZ	Pawanui	2.34	176	PN	P	13 25 29.7	-1.0
PWZ				SN	S	13 26 02.0	-1.1
TSZ	Takapari Road	2.42	193	PN	P	13 25 30.4	-1.3
TSZ				SN	S	13 26 02.6	-2.2
WAZ	Wanganui	2.43	212	⇑PN	P	13 25 30.8	-1.1
WAZ				eSN	S	13 26 03.4	-1.7

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*IDC **18** 14:00:54.9±7.2, 0.44N×124.31E, h222^{km}±76^{km}, mb3.8/9, mb1 4.0/10, mb1mx3.8/18, mbtmp4.4/10, Error ellipse: s-maj=37.7km s-min=15.8km az=79.0*

*NEIC **18** 14:00:56.0±5.5, 0.39N×124.21E, h236^{km}±58^{km}, mb4.4/4, Error ellipse: s-maj=30.4km s-min=14.7km az=77.0*

ISC 18 14:00:51.1±0.5, **0.47N**±0.10×**124.1E**±0.2, **h200**^{km}, **n16**, σ**0^{s}65**/16, **mb4.1**/12, **1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	18.51	176	⇓iP	P	14 04 54.0	-0.8
	20nm,0.6s						
FITZ	Fitzroy Crossi	18.51	176	P	P	14 04 54.1	-0.7
	2.4nm,0.3s,baz=5.2,slow=9.1,SNR=32						
MBWA	Marble Bar	21.92	191	eP	P	14 05 29.2	+0.3
	2.9nm,0.5s,mb4.1						
WRAB	Tennant Creek	22.61	154	eP	P	14 05 36.1	+0.4
	12nm,0.5s,mb4.7						
WRA	Warramunga Arr	22.61	154	P	P	14 05 36.0	+0.2
	10nm,0.6s,mb4.6,baz=333,slow=9.9,SNR=106						
WB2	Warramunga Arr	22.62	154	eP	P	14 05 36.2	+0.3
STKA	Stephens Creek	36.16	154	P	P	14 07 35.9	-0.3
	4.7nm,0.5s,mb4.3,baz=325,slow=6.9,SNR=6.3						
STKA	Stephens Creek	36.16	154	P	P	14 07 35.9	-0.3
MJAR	Matsushiro Arr	38.19	18	P	P	14 07 53.0	-0.1
	3.5nm,0.8s,mb3.9,baz=191,slow=9.0,SNR=15						
SONM	Songino Array	49.64	344	P	P	14 09 24.2	0.0
	1.6nm,0.5s,mb3.6,baz=160,slow=8.5,SNR=16						
MKAR	Makanchi Array	58.83	328	P	P	14 10 30.6	-0.2
	1.1nm,0.3s,mb4.0,baz=122,slow=8.1,SNR=22						
ZAL	Zalesovo	62.37	335	P	P	14 10 55.1	+0.5
	1.0nm,0.4s,mb3.8,baz=317,slow=11,SNR=3.2						
BVAR	Borovoye Array	68.68	328	P	P	14 11 36.5	+1.7
	0.9nm,0.4s,mb3.7,baz=135,slow=8.2,SNR=7.7						
ZRNK	Zerenda	69.37	328	eP	P	14 11 38.3	-0.7
	3.2nm,0.7s,mb4.1						
ARCES	ARCESS Array B	92.59	340	P	P	14 13 39.5	-1.1
	2.0nm,0.9s,mb4.1,baz=90,slow=7.3,SNR=5.2						
FINES	FINESS Array B	93.46	332	P	P	14 13 44.5	-0.2
	1.5nm,0.9s,mb4.0,baz=80,slow=12,SNR=3.3						

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*IDC **18** 14:22:37.6±1.3, 7.43N×93.78E, mb3.9/8, mb1 4.0/9, mb1mx3.9/19, mbtmp3.8/9, ML3.6/1, Error ellipse: s-maj=42.0km s-min=25.4km az=51.0*

*NEIC **18** 14:22:42.3±0.6, 7.47N×93.85E, h30^{km}, mb4.2/1, Error ellipse: s-maj=17.9km s-min=11.3km az=62.0*

ISC 18 14:22:40.6±0.9, **7.5N**±0.1×**93.9E**±0.2, **h30**^{km}, **n12**, σ**0^{s}76**/12, **mb3.8**/9, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.94	24	Pn	P	14 25 31.1	-0.8
	0.1nm,0.3s,baz=211,slow=14,SNR=4.4						
LSA	Lhasa	22.24	354	eP	P	14 27 38.3	+1.8
	7.5nm,0.7s,mb4.2						
MKAR	Makanchi Array	40.40	348	P	P	14 30 18.4	+0.7
	0.2nm,0.3s,mb3.3,baz=170,slow=8.8,SNR=2.9						
SONM	Songino Array	41.58	13	P	P	14 30 26.8	-0.5
	0.4nm,0.6s,mb3.3,baz=196,slow=9.0,SNR=4.4						
ZAL	Zalesovo	46.89	353	P	P	14 31 10.0	0.0
	1.6nm,0.3s,mb4.4,baz=332,slow=4.0,SNR=5.8						
WRA	Warramunga Arr	48.23	125	P	P	14 31 21.0	0.0
	0.8nm,0.6s,mb4.0,baz=307,slow=8.6,SNR=10						
WRAB	Tennant Creek	48.24	125	P	P	14 31 21.3	+0.3
BRTR	Keskin Array B	62.50	311	P	P	14 33 02.6	-1.2
	0.3nm,0.5s,mb3.6,baz=112,slow=7.8,SNR=2.3						
FINES	FINESS Array B	72.93	332	P	P	14 34 08.3	-0.5
	1.4nm,0.6s,mb4.1,baz=108,slow=6.0,SNR=8.2						
KAF	Kangasniemi	73.02	333	ep	P	14 34 08.7	-0.6
ARCES	ARCESS Array B	75.54	340	P	P	14 34 24.2	+0.5
	1.2nm,0.8s,mb3.9,baz=112,slow=6.5,SNR=3.6						
GERES	GERESS Array B	77.95	318	P	P	14 34 37.9	+0.4
	0.3nm,0.6s,mb3.4,baz=104,slow=5.5,SNR=4.9						

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*LDG **18** 14:31:05.9±0.3, 14.77S×166.85E, h10^{km}, Error ellipse: s-maj=55.4km s-min=5.9km az=87.0*

*IDC **18** 14:31:08.1±6.0, 14.94S×166.96E, h35^{km}±46^{km}, mb3.6/6, mb1 3.9/8, mb1mx3.8/18, mbtmp3.9/8, ML4.3/2, MS3.3/4, Ms1 3.2/4, ms1mx2.9/23, Error ellipse: s-maj=39.7km s-min=23.4km az=74.0*

ISC 18 14:31:06.0±4.3, **15.02S**±0.09×**166.9E**±0.2, **h32**^{km}±30^{km}, **n30**, σ**0^{s}69**/12, **mb3.7**/5, **MS3.2**/2, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.03	183	eP	Pn	14 32 49.9	+0.5
DZM				eS	Sn	14 34 04.5	-4.6
DZM	Mont Dzumac	7.03	183	Pn	Pn	14 32 49.8	+0.4
	1.8nm,0.3s,baz=16,slow=21,SNR=26						
DZM				Sn	Sn	14 34 07.7	-1.4
	1.2nm,0.3s,baz=136,slow=23,SNR=3.9						
DZM				LR	LR	14 34 54.6	
	comp=Z,122nm,19.2s,baz=165,slow=32						
NOUC	Port Laguerre	7.06	184	eP	Pn	14 32 50.2	+0.2
HNR	Honiara	8.75	309	Pn	P	14 33 12.8	-0.7
	8.3nm,0.3s,baz=162,slow=8.6,SNR=3.8						
HNR				LR	LR	14 36 19.4	
	comp=Z,182nm,20.9s,baz=228,slow=36						
CTA	Charters Tower	20.28	253	P	P	14 35 42.8	+0.8
	2.6nm,0.5s,baz=86,slow=11,SNR=3.6						
CTA				LR	LR	14 41 37.6	
	comp=Z,64nm,20.2s,MS3.0,baz=220,slow=31						
STKA	Stephens Creek	28.51	230	LR	LR	14 48 15.3	
	comp=Z,107nm,19.6s,MS3.5,baz=113,slow=36						
WRA	Warramunga Arr	31.38	256	P	P	14 37 25.8	-0.6
	0.2nm,0.5s,mb3.2,baz=83,slow=7.6,SNR=4.6						
VNDA	Vanda	62.56	181	P	P	14 41 29.1	+0.2
	0.8nm,0.6s,mb4.0,baz=354,slow=4.8,SNR=6.1						
SONM	Songino Array	82.50	324	P	P	14 43 27.8	+1.0
	0.3nm,0.6s,mb3.4,baz=108,slow=4.6,SNR=2.7						
ILAR	Eielson Array	86.92	18	P	P	14 43 47.8	-0.9
	0.6nm,0.5s,mb4.1,baz=248,slow=4.5,SNR=5.6						
MKAR	Makanchi Array	97.14	316	P	P	14 44 36.8	+0.3
	0.1nm,0.3s,mb3.7,baz=135,slow=4.1,SNR=2.9						
ARCES	ARCESS Array B	120.43	345	PKP	PKPdf	14 49 54.8	-4.4
	0.9nm,0.5s,baz=63,slow=2.7,SNR=8.2						
FLN	La Foliniere	144.78	345	ePKP1	PKPbc	14 50 42.3	+2.7
LDF	La Druitiere	144.85	345	ePKP1	PKPbc	14 50 42.6	+2.8
LPL	La Plagne	145.29	335	ePKP1	PKPbc	14 50 43.1	+2.0
LPG	La Plagne	145.30	335	ePKP1	PKPbc	14 50 43.5	+2.4
	14nm,0.9s						
SGMF	Saint Gilles	145.73	347	ePKP1	PKPbc	14 50 42.4	+0.3
ROSF	Rostrenen	145.80	348	ePKP1	PKPbc	14 50 42.3	0.0
MBDF	Montbardon	145.92	334	ePKP1	PKPbc	14 50 44.6	+1.9
	4.0nm,0.6s						
SBF	Sospel	146.32	333	ePKP1	PKPbc	14 50 45.4	+1.7
	16nm,0.7s						
PGF	Pioggiola	146.61	330	ePKP1	PKPbc	14 50 45.6	+1.2
VIVF	Saint-Julien-l	146.65	337	ePKP1	PKPbc	14 50 46.9	+2.5
MFF	Saint Martin d	146.69	344	ePKP1	PKPbc	14 50 46.7	+2.3
	13nm,0.7s						
FRF	La Foret Royal	146.91	333	ePKP1	PKPbc	14 50 48.0	+3.0
	14nm,1.0s						
SMRF	Simiane la Rot	147.03	335	ePKP1	PKPdf	14 50 48.1	-0.8
LMR	La Mourre	147.15	333	ePKP1	PKPdf	14 50 48.9	-0.3
RJF	Les Rejaudoux	147.37	341	ePKP1	PKPdf	14 50 48.2	-1.2
LASF	Ste Croix	147.62	337	ePKP1	PKPdf	14 50 49.8	-0.1
	3.8nm,0.7s						
MTLF	Montolieu	148.86	338	ePKP1	PKPdf	14 50 52.9	+1.0
	3.8nm,0.6s						
ETSF	Etsaut	150.19	341	ePKP1	PKPdf	14 50 56.6	+2.6
	4.9nm,0.6s						

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*IDC **18** 14:43:46.7±3.1, 0.97N×97.06E, mb3.8/4, mb1 4.0/5, mb1mx3.7/18, mbtmp3.8/5, ML3.9/1, Error ellipse: s-maj=112.8km s-min=25.1km az=59.0*

*NEIC **18** 14:43:51.9±1.0, 1.07N×97.20E, h30^{km}, mb4.1/2, Error ellipse: s-maj=24.1km s-min=11.8km az=68.0*

ISC 18 14:43:50.1±1.4, **1.1N**±0.1×**97.2E**±0.2, **h30**^{km}, **n9**, σ**0^{s}58**/9, **mb3.9**/6, **MS3.1**/1, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.43	39	eP	Pn	14 45 10.7	-0.5
CMAR	Chiang Mai Arr	17.36	6	P	P	14 47 52.2	+0.2
	0.1nm,0.3s,baz=202,slow=13,SNR=6.7						
KMI	Kunming	24.50	12	P	P	14 49 09.5	+1.2
	9.0nm,1.1s,mb4.2						
KMI				LR	LR		
	comp=Z,50nm,14.4s,MS3.1						
WRA	Warramunga Arr	41.98	122	P	P	14 51 40.2	-0.3
	comp=Z,0.4nm,0.4s,mb3.4,baz=302,slow=9.0,SNR=17						
WRAB	Tennant Creek	41.98	122	P	P	14 51 41.0	+0.4
	comp=Z,1.7nm,0.6s,mb3.9						
SONM	Songino Array	47.26	8	P	P	14 52 22.4	-0.2
	comp=Z,0.5nm,0.4s,mb3.8,baz=192,slow=10.0,SNR=6.5						
MKAR	Makanchi Array	47.36	346	P	P	14 52 23.3	-0.1
	comp=Z,1.1nm,0.6s,mb4.0,baz=158,slow=8.5,SNR=11						
MKAR	Makanchi Array	47.36	346	P	P	14 52 23.3	-0.1
ZAL	Zalesovo	53.67	351	P	P	14 53 10.4	-0.8
	comp=Z,1.1nm,0.4s,mb4.2,baz=277,slow=7.5,SNR=7.1						

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*NEIC **18** 14:51:34.2, 37.29S×177.19E, h184^{km}, MG3.8(WEL), After WEL.*

WEL 18 14:51:34.1±0.3, **37.28S**×**177.22E**, **h184**^{km}±2^{km}, **ML3.6**/12, **1C, Error ellipse: s-maj=3.1km s-min=3.0km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	0.99	185	P	P	14 52 02.0	-0.3
URZ	Urewera	0.99	185	⇑PN	P	14 52 02.0	-0.2
URZ				SN	S	14 52 23.4	-0.7
MWZ	Matawai	1.09	167	P	P	14 52 03.0	-0.1
MWZ				S	S	14 52 25.5	0.0
MWZ	Matawai	1.09	167	PN	P	14 52 03.0	-0.1
MWZ				SN	S	14 52 25.5	0.0
PUZ	Puketiti	1.15	134	eP	P	14 52 03.1	-0.5
PUZ				S	S	14 52 24.9	-1.5
PUZ	Puketiti	1.15	134	PN	P	14 52 03.1	-0.5
PUZ				SN	S	14 52 24.9	-1.5
KNZ	Kokohu	1.78	169	P	P	14 52 09.3	-0.2
KNZ	Kokohu	1.78	169	PN	P	14 52 09.3	-0.2
BKZ	Black Stump Fm	1.97	197	eP	P	14 52 11.1	-0.4
BKZ	Black Stump Fm	1.97	197	PN	P	14 52 11.1	-0.4
BKZ				SN	S	14 52 40.0	-0.4
FWVZ	Far West T-bar	2.37	213	eP	P	14 52 15.7	-0.3
FWVZ	Far West T-bar	2.37	213	PN	P	14 52 16.0	0.0
WNVZ	Wahianoa	2.42	211	P	P	14 52 16.2	-0.3
WNVZ	Wahianoa	2.42	211	PN	P	14 52 16.2	-0.4
PWZ	Pawanui	2.76	186	eP	P	14 52 19.6	-1.0
PWZ	Pawanui	2.76	186	PN	P	14 52 19.6	-1.0
PWZ				SN	S	14 52 55.2	-1.3
TSZ	Takapari Road	2.95	199	P	P	14 52 21.6	-1.3
TSZ	Takapari Road	2.95	199	PN	P	14 52 21.6	-1.3
TSZ				SN	S	14 52 58.7	-1.8
BFZ	Birch Farm	3.48	192	eP	P	14 52 27.8	-1.7
BFZ	Birch Farm	3.48	192	PN	P	14 52 27.7	-1.8
MRZ	Mangatainoka R	3.62	200	eP	P	14 52 29.0	-2.1
MRZ	Mangatainoka R	3.62	200	PN	P	14 52 29.0	-2.1
KIW	Kapiti Island	4.01	206	P	P	14 52 33.5	-2.6
CAW	Cannon Point	4.18	203	P	P	14 52 35.6	-2.7
THZ	Tophouse	5.59	215	eP	P	14 52 54.2	-2.3
KHZ	Kahutara	5.86	208	eP	P	14 52 57.0	-3.1

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*CSEM **18** 15:08:50.9±0.1, 36.12N×24.48E, h60^{km}, MD3.3, Error ellipse: s-maj=2.1km s-min=1.5km az=6.0*

*ATH **18** 15:08:51.1, 36.16N×24.49E, h43^{km}±2^{km}, MD3.3/9*

*NEIC **18** 15:08:51.1, 36.16N×24.49E, h43^{km}, MD3.3(ATH), After ATH.*

*THE **18** 15:08:52.6, 36.20N×24.40E, h20^{km}, ML2.9*

ISC 18 15:08:52.2±0.4, **36.16N**±0.04×**24.43E**±0.04, **h43**^{km}, **n17**, σ**0^{s}84**/26, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAM	Vamos	0.78	194	eP	P	15 09 07.1	+0.3
VAM				eS	S	15 09 19.0	+1.6
THR5	Thira Island,	0.79	71	ePg	P	15 09 07.4	+0.5
THR3	Thira Island,	0.82	72	ePg	P	15 09 07.9	+0.4
THR3				eSg	S	15 09 20.0	+1.3
THR4	Thira Island,	0.84	69	ePg	P	15 09 07.8	+0.1
THR4				eSg	S	15 09 19.9	+0.9
SANT	Santorini	0.86	76	ePg	P	15 09 08.1	+0.2
SANT				eSg	S	15 09 20.4	+0.9
SANT	Santorini	0.86	76	ePg	P	15 09 08.1	+0.2
SANT				eSg	S	15 09 20.4	+0.9
THR1	Thera Island	0.86	76	ePg	P	15 09 08.2	+0.2
KYTH	Kithira	1.13	276	eP	P	15 09 12.5	+0.7
APE	Apeiranthos	1.27	44	eP	P	15 09 13.2	-0.6
APE				eS	S	15 09 29.8	-0.1
NPS	Neapolis	1.32	133	eP	P	15 09 13.0	-1.5
NPS				eS	S	15 09 29.7	-1.4
VLI	Veliai	1.32	295	eP	P	15 09 14.8	+0.1
VLI				eS	S	15 09 32.1	+0.7
GVD	Gavdhos	1.35	192	eP	P	15 09 15.0	0.0
XRY	Khrisi	1.65	141	eP	P	15 09 18.5	-0.7
ITM	Ithomi	2.25	298	eP	P	15 09 28.0	+0.2
KARP	Karpathos	2.30	105	eP	P	15 09 27.0	-1.5
AGG	Agios Georgios	3.31	330	ePn	P	15 09 42.1	-0.7
AGG				eSn	S	15 10 20.3	-1.0
XOR	Xorichti	3.35	343	ePn	P	15 09 42.5	-0.8

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*NIED **18** 15:16:00, 33.30N×141.10E, h32^{km}, Mw3.8 Best double couple: M$_0$5.91×10^{14} NP1:ϕ_s47°, δ63°, λ140°. NP2:ϕ_s158°, δ55°, λ34°.*

*JMA **18** 15:16:05.9±0.1, 33.28N×141.14E, h54^{km}, M3.8*

*NEIC **18** 15:16:06.3±1.3, 33.29N×141.41E, h45^{km}, Error ellipse: s-maj=27.3km s-min=17.9km az=68.0*

*IDC **18** 15:16:08.0±2.4, 33.16N×141.05E, h52^{km}±25^{km}, mb3.5/4, mb1 3.9/6, mb1mx3.6/22, mbtmp3.9/6, ML4.0/1, MS2.5/1, Ms1 2.5/1, ms1mx2.3/22, Error ellipse: s-maj=23.9km s-min=13.8km az=87.0*

ISC 18 15:16:05.6±0.9, **33.23N**±0.05×**141.15E**±0.08, **h49**^{km}±10^{km}, **n28**, σ**0^{s}76**/36, **mb3.9**/5, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	1.12	264	P	P	15 16 25.8	+0.6
JHJ2				S	S	15 16 40.9	+1.1
JHJ	Hachijo jima 2	1.15	265	P	P	15 16 25.6	0.0
	543nm,0.3s,baz=1.6,slow=6.6,SNR=955						
JHJ				S	S	15 16 40.1	-0.3
	418nm,0.3s,baz=90,slow=23,SNR=21						
BSO1	Boso 1	1.43	354	P	P	15 16 29.4	-0.2
JMY	Miyakejima3	1.60	302	P	P	15 16 32.1	0.0
BSO3	Boso 3	1.66	341	P	P	15 16 32.7	-0.1
BSO4	Boso 4	1.88	339	P	P	15 16 36.4	+0.5
JKO	Kozu shima	1.93	300	P	P	15 16 36.9	+0.3
JKO				eS	S	15 16 59.4	-0.3
NJJJ	Nii jima 2	1.94	307	P	P	15 16 37.0	+0.2
JIM2	Oshima 3	2.06	317	P	P	15 16 38.1	-0.4
JIM2				eS	S	15 17 01.3	-1.7
JIZS	Izushimoda	2.40	309	P	P	15 16 43.5	+0.1
JIZS				eS	S	15 17 11.2	-0.5
JOD2	Odawara 2	2.65	320	P	P	15 16 46.4	-0.5
SHZ3	Shizuoka 3	3.05	308	P	P	15 16 53.7	+1.1
JYN	Shimob	3.12	317	P	P	15 16 54.3	+0.7
JRY	Ryogami san	3.34	327	P	P	15 16 56.7	0.0
JAG	Ashikaga	3.48	337	P	P	15 16 57.8	-0.8
MJAR	Matsushiro Arr	4.09	325	P	P	15 17 07.7	+0.4
	4.6nm,0.3s,baz=152,slow=12,SNR=79						
MJAR				S	S	15 17 54.1	-0.3
	2.6nm,0.3s,baz=148,slow=22,SNR=8.1						
MAJO	Matsushiro	4.09	325	ePn	P	15 17 07.9	+0.5
MAT	Matsushiro	4.09	325	eP	P	15 17 08.0	+0.7
MAT				eS	S	15 17 50.0	-4.5
MAT	Matsushiro	4.09	325	P	P	15 17 07.7	+0.4
MAT				S	S	15 17 49.6	-4.9
CBIJ	Chichi jima	6.18	171	P	P	15 17 35.2	-1.3
	9.3nm,0.3s,baz=291,slow=17,SNR=6.5						
CBIJ				S	S	15 18 40.4	-6.4
	4.8nm,0.3s,baz=277,slow=21,SNR=4.4						
JNU	Nakatsue	8.61	272	LR	LR	15 21 09.9	
	comp=Z,32nm,20.4s,baz=1.0,slow=35						
ASAJ	Asahikawa	10.93	6	P	P	15 18 37.7	-4.3
	2.3nm,0.3s,baz=269,slow=8.5,SNR=15						
YSS	Yuzh-Sakhalins	13.76	5	P	P	15 19 15.6	-4.1
SONM	Songino Array	29.89	310	P	P	15 22 10.6	0.0
	0.4nm,0.7s,mb3.3,baz=124,slow=10,SNR=2.8						
ILAR	Eielson Array	52.84	31	P	P	15 25 17.9	-0.1
	0.7nm,0.7s,mb3.7,baz=262,slow=5.8,SNR=6.9						
WRA	Warramunga Arr	53.27	188	P	P	15 25 20.5	-1.3
	0.7nm,0.3s,mb4.0,baz=2.6,slow=7.6,SNR=27						
NVAR	Mina Array Bea	77.46	52	P	P	15 27 60.0	+2.5
	1.0nm,0.8s,mb3.8,baz=288,slow=5.7,SNR=7.1						
CLL	Collm	84.28	330	P	P	15 28 33.5	+0.5
	logA/T=0.9,mb4.8						

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*THE **18** 15:16:09.0, 39.38N×20.70E, h10^{km}, ML3.3*

*NEIC **18** 15:16:08.9, 39.45N×20.65E, h20^{km}, MD3.3(ATH), After ATH.*

*CSEM **18** 15:16:09.1±0.1, 39.40N×20.69E, h5^{km}, MD3.3, Error ellipse: s-maj=3.2km s-min=3.0km az=96.0*

ATH 18 15:16:08.9, 39.45N×20.65E, h20^{km}±2^{km}, **MD3.3**/7, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	Janina	0.26	37	ePB	Pb	15 16 14.5	-0.4
JAN				eSB	Sb	15 16 19.5	+0.5
IGT	Igoumenitsa	0.26	289	ePg	Pb	15 16 14.8	-0.1
IGT				eSg	Sb	15 16 20.0	+1.0
MEV	Metsovon	0.56	53	ePg	Pb	15 16 19.4	-0.5
MEV				eSg	Sb	15 16 28.2	+0.9
KEK	Kerkira	0.71	292	ePN	Pn	15 16 22.6	-1.1
LKD	Levkas	0.74	180	ePg	Pb	15 16 21.9	-1.1
EVR	Evrytania	1.05	120	ePN	Pn	15 16 28.5	0.0
KZN	Kozani	1.22	45	ePN	Pn	15 16 31.8	+0.8
VLS	Valsamata	1.27	182	ePB	Pb	15 16 32.0	0.0
VLS				eSN	Sn	15 16 51.6	+3.2
AGG	Agios Georgios	1.37	108	ePg	Pn	15 16 33.2	0.0
AGG				eSg	Sb	15 16 52.8	+1.9
FNA	Florina	1.44	22	ePg	Pn	15 16 37.0	+2.8
FNA				eSg	Sn	15 16 57.7	+5.0
FNA	Florina	1.44	22	ePg	Pn	15 16 37.0	+2.8
FNA				eSg	Sn	15 16 57.7	+5.0
LIT	Litokhoron	1.56	65	ePg	Pn	15 16 37.5	+1.6
LIT				eSg	Sn	15 16 59.4	+3.7
GRG	Griva	2.02	41	ePn	Pn	15 16 44.5	+2.1
PLG	Polygyros	2.34	66	ePN	Pn	15 16 48.4	+1.3
ITM	Ithomi	2.48	156	ePB	Pb	15 16 51.0	-1.6
SKO	Skopje	2.59	13	ePn	Pn	15 16 53.0	+2.4

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*BGS **18** 15:16:30.7±1.5, 44.58N×27.38E, h140^{km}, mb4.7*

*CSEM **18** 15:16:40.9, 45.79N×26.91E, h135^{km}, mb5.0*

CRAAG **18** *15:16:40.9,45.79N×26.91E,Mb5.0*
PDG **18** *15:16:40.9±0.5,45.81N×26.79E,h42^{km}±11^{km}*
BJI **18** *15:16:41.4,45.70N×26.70E,h138^{km},mB5.0,mb5.2*
MOS **18** *15:16:41.5±1.0,45.72N×26.68E,h143^{km},mb4.9/37,Error ellipse: s-maj=3.0km s-min=2.7km az=121.8*
BUC **18** *15:16:41.5±0.6,45.72N×26.66E,h154^{km}±6^{km},MD5.5/7, Error ellipse: s-maj=4.5km s-min=3.4km az=107.0*
HRVD **18** *15:16:42.4±0.3,45.67N×26.50E,h138^{km}±2^{km},MW5.0/66, Centroid moment Tensor Solution. LP body waves: s33,c42;Mantle waves: s66,c114; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.26±.10; M$_{\theta\theta}$-2.83±.15; M$_{\phi\phi}$-0.43±.13; M$_{r\theta}$1.54±.11; M$_{\theta\phi}$1.21±.14; M$_{\phi r}$-0.63±.10; Best double couple: M$_0$3.693×10^{16} NP1: φ$_s$293°,δ32°,λ90°. NP2:φ$_s$112°,δ58°,λ90°. Principal axes: T 3.655, Plg77°, Azm22°; N .073, Plg0°, Azm113°; P -3.73, Plg13°, Azm203°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC **18** *15:16:42.4±0.1,45.71N×26.70E,mb4.8/179 Error ellipse: s-maj=2.0km s-min=1.6km az=24.0*
NEIC Felt [III] at Bucharest and [II] at Iasi. Felt at Cimpina, Galati, Miercurea-Ciuc, Pitesti and Ploiesti. Felt [II] at Chisinau, Moldova. Also felt at Ruse, Silistra and Svishtov, Bulgaria.
ZUR_RM **18** *15:16:42,45.71N×26.70E,h144^{km},Mw5.0/32,Moment Tensor Solution. s32 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.60; M$_{\theta\theta}$-2.60; M$_{\phi\phi}$-1.00; M$_{r\theta}$2.43; M$_{\theta\phi}$0.84; M$_{\phi r}$-1.14; Best double couple: M$_0$4.24×10^{16} NP1:φ$_s$114°,δ65°,λ91°. NP2:φ$_s$293°,δ25°,λ88°. Principal axes: T 4.565, Plg70°, Azm26°; N -.645, Plg1°, Azm294°; P -3.919, Plg20°, Azm204°;*
IDC **18** *15:16:42.4±0.3,45.78N×26.45E,h138^{km}±2^{km},mb4.5/24, mb1 4.6/30,mb1mx4.6/31,mbtmp4.9/30,MS3.5/5, Ms1 3.5/5,ms1mx3.1/33 Error ellipse: s-maj=9.7km s-min=8.1km az=138.0*
SOF **18** *15:16:44.0,45.59N×26.52E,h123^{km},MD4.2*
THE **18** *15:17:06.2,44.00N×25.76E,h20^{km},ML4.9*
UPP **18** *15:17:22.5,48.63N×25.36E,h32^{km}*
ISC 18 15:16:41.4±0.1**,45.735N**±0.010×**26.68E**±0.01**,h138**^{km}**,** **h138**^{km}±1.4^{km}**:pP-P,n978,**σ1§**18**/1040**,mb4.9**/133**,** **74C-34D,Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.12	350	⇑iP	P	15 17 02.0	+1.6
PLOR				iS	S	15 17 16.1	+1.3
VRI	Vrincioaia	0.14	15	⇑iP	P	15 17 02.2	+1.7
VRI				iS	S	15 17 17.5	+2.6
BRD	Bordesti	0.31	126	⇑P	P	15 17 03.7	+2.7
MLR	Muntele Rosu	0.57	245	P	P	15 17 03.9	+1.6
	baz=346,slow=12						
MLR				S	S	15 17 18.8	+0.5
	6µm,0.3s,baz=73,slow=19,SNR=16						
MLR	Muntele Rosu	0.57	245	⇑iP	P	15 17 03.8	+1.5
MLR				iS	S	15 17 20.2	+2.0
MLR	Muntele Rosu	0.57	245	⇑iP	P	15 17 03.8	+1.5
MLR				iS	S	15 17 20.2	+1.9
ISR	Istrita	0.62	189	⇑P	P	15 17 04.3	+1.7
ISR				iS	S	15 17 23.1	+4.3
ISR	Istrita	0.62	189	⇑P	P	15 17 04.3	+1.7
ISR				S	S	15 17 23.1	+4.3
PGOR	Pogoanele	0.85	165	⇑iP	P	15 17 06.0	+1.9
PGOR				eS	S	15 17 24.1	+2.6
FULR		0.86	191	⇑iP	P	15 17 06.0	+1.8
FULR				iS	S	15 17 24.1	+2.5
KGL	Cahul	1.08	80	iP	P	15 17 09.0	+3.0
KGL				iS	S	15 17 26.6	+1.7
SULR		1.10	196	⇑iP	P	15 17 07.8	+1.6
SULR				iS	S	15 17 26.9	+1.7
CFR	Carcaliu	1.17	118	⇑iP	P	15 17 07.9	+1.0
CFR				iS	S	15 17 27.3	+0.8
VOIR		1.18	256	⇑iP	P	15 17 08.0	+0.9
VOIR				iS	S	15 17 26.6	-0.1
AMRR		1.22	157	⇑iP	P	15 17 08.9	+1.5
AMRR				iS	S	15 17 28.4	+1.0
MTUR	Matau	1.25	246	⇑iP	P	15 17 09.3	+1.6
MTUR				iS	S	15 17 30.5	+2.6
STFR	Stefanesti	1.25	195	⇑iP	P	15 17 09.1	+1.3
STFR				iS	S	15 17 28.8	+0.9
MOGR	Mogosoaia	1.28	204	⇑iP	P	15 17 09.4	+1.3
MOGR				iS	S	15 17 29.5	+0.9
LEOM	Leovo	1.32	55	⇓iP	P	15 17 09.7	+1.2
LEOM				iS	S	15 17 29.7	+0.5
LEOM				pmax	pmax		
	comp=Z,35µm,0.8s						
LEOM				smax			
	comp=N,400µm,0.8s						
LEOM	Leovo	1.32	55	iP	P	15 17 09.7	+1.2
	comp=N,35µm,0.8s						
LEOM				iS	S	15 17 29.7	+0.5
	comp=N,400µm,0.8s						
CNCR	Cernica	1.32	193	⇑iP	P	15 17 09.7	+1.1
CNCR				iS	S	15 17 29.8	+0.4
BBIR	Bucharest-INCE	1.34	196	⇑iP	P	15 17 09.7	+0.9
BBIR				iS	S	15 17 29.9	+0.2
RBAR	Bucharest-INCE	1.34	196	⇑iP	P	15 17 09.9	+1.1
BGMR	Bucharest-Geol	1.35	198	⇑iP	P	15 17 09.9	+1.1
BGMR				iS	S	15 17 30.2	+0.4
BSTR	Bucharest-Scie	1.35	198	⇑iP	P	15 17 09.9	+1.0
BSTR				iS	S	15 17 30.2	+0.3
HARR	Harsova	1.37	139	⇑iP	P	15 17 10.3	+1.2
HARR				iS	S	15 17 30.0	-0.2
BAPR	Bucharest-Chil	1.39	197	⇑iP	P	15 17 10.2	+1.0
BAPR				eS	S	15 17 30.9	+0.4
CIOR	Ciorogarla	1.41	204	⇑iP	P	15 17 10.4	+1.0
CIOR				iS	S	15 17 31.3	+0.4
POPR	Popesti-Leorde	1.42	194	⇑iP	P	15 17 10.6	+1.0
POPR				iS	S	15 17 31.2	0.0
IAS	Iasi	1.58	22	⇓iP	P	15 17 12.8	+1.4
IAS				iS	S	15 17 34.2	-0.1
IAS	Iasi	1.58	22	⇑iP	P	15 17 12.8	+1.4
IAS				S	S	15 17 34.2	-0.1
KIS	Kishinev	1.95	49	iP	P	15 17 16.0	+0.4
KIS				iS	S	15 17 40.0	-1.7
KIS				pmax	pmax		
	comp=Z,16µm,1.0s						
KIS				pmax	pmax		
	comp=Z,31µm,1.2s						
KIS				smax			
	comp=N,170µm,1.2s						
KIS				smax			
	comp=E,167µm,1.2s						
KIS	Kishinev	1.95	49	⇓iP	P	15 17 16.0	+0.4
	comp=E,31µm,1.2s						
KIS				iS	S	15 17 40.0	-1.7
	comp=E,170µm,1.2s						
PSN	Preselentsi	2.32	152	iP	P	15 17 21.3	+1.1
CRAR	CRAIOVA	2.48	236	⇑iP	P	15 17 22.2	-0.2
CRAR				iS	S	15 17 51.6	-1.9
SZH	Strazhica	2.52	192	iP	P	15 17 23.0	+0.1
PRD	Provadia	2.59	168	iP	P	15 17 25.0	+1.3
PVL	Pavlikeni	2.70	201	iP	P	15 17 26.3	+1.2
JMB	Yambol	3.27	181	iP	P	15 17 32.7	+0.1
PGB	Panagyurishte	3.66	210	iP	P	15 17 38.5	+0.7
DIM	Dimitrovgrad	3.78	193	iP	P	15 17 38.5	-0.8
ZAPS	Zavoj/Pirot	3.79	231	⇓iPn	P	15 17 38.7	-0.9
ZAPS				Sn	S	15 18 18.2	-5.9
BOLS	Boljevac	3.86	242	⇓iPn	P	15 17 39.1	-1.4
BOLS				Sn	S	15 18 20.7	-5.1
EDRB	Edirne	3.89	179	P	Px	15 16 41.0	
EDRB	Edirne	3.89	179	P	P	15 17 40.9	+0.1
PLD	Plovdiv	3.90	202	iP	P	15 17 40.0	-1.0
VTS	Vitosha	4.01	220	iP	P	15 17 42.5	0.0
VTS	Vitosha	4.01	220	P	P	15 17 42.1	-0.4
SVIS	Svilajnac	4.13	252	⇓iPn	P	15 17 43.7	-0.3
SVIS				Sn	S	15 18 26.3	-5.8
KDZ	Kurdzhali	4.18	193	iP	P	15 17 44.5	-0.3
RZN	Rozhen	4.29	200	iP	P	15 17 46.0	-0.2
KOLS	Kolonicke sedl	4.38	318	iPN	P	15 17 48.2	+0.8
LVV	L'vov	4.46	337	iP	P	15 17 49.2	+0.8
LVV				eS	S	15 18 31.6	-8.3
BEO	Belgrade	4.49	260	⇑iPn	P	15 17 48.1	-0.7
BEO				Sn	S	15 18 30.8	-10
GRUS	Gruza	4.63	249	⇑iPn	P	15 17 49.7	-0.9
GRUS				Sn	S	15 18 33.2	-11
KKB	Krupnik	4.66	215	iP	P	15 17 51.5	+0.4
MMB	Musomiste	4.66	208	iP	P	15 17 51.0	-0.2
KWP	Kalwaria	4.73	327	ePn	P	15 17 53.1	+1.1
KWP				e		15 18 39.5	
KWP				eSn	S	15 18 49.8	+3.4
KWP				eSg	S	15 19 13.5	+27
KWP	Kalwaria	4.73	327	ePn	P	15 17 53.1	+1.0
KWP				e		15 18 39.5	
KWP				eSn	S	15 18 49.8	+3.4
KWP				eSg	S	15 19 13.5	+27
KWP	Kalwaria	4.73	327	ePn	P	15 17 53.1	+1.1
KWP				eS	S	15 18 49.8	+3.4
CTT	Catalca	4.76	164	P	Px	15 16 52.0	
CTT	Catalca	4.76	164	P	P	15 17 52.3	-0.1
ALN	Alexandroupoli	4.86	186	ePn	P	15 17 53.8	+0.1
MFT	Murefte	4.97	175	P	Px	15 16 54.2	
MFT	Murefte	4.97	175	P	P	15 17 54.4	-0.8
ISK	Istanbul-Kandi	4.98	159	eP	Px	15 16 54.2	
ISK	Istanbul-Kandi	4.98	159	P	P	15 17 55.0	-0.4
DIVS	Divcibare	5.02	253	⇑iPn	P	15 17 55.2	-0.7
DIVS				Sn	S	15 18 42.2	-11
KECS	Kecovo	5.04	305	iPN	P	15 17 56.4	+0.2
SEV	Sevastopol'	5.09	101	⇓iP	P	15 17 57.2	+0.4
SEV				iS	S	15 18 53.1	-1.9
SEV				pmax	pmax		
	comp=Z,200nm,0.5s						
SEV				smax			
	comp=N,2µm,0.9s						
SEV				smax			
	comp=E,520nm,0.9s						
SEV	Sevastopol'	5.09	101	iP	P	15 17 57.2	+0.4
	comp=E,200nm,0.5s						
SEV				iS	S	15 18 53.1	-1.9
SRS	Serrai	5.13	207	ePn	P	15 17 56.4	-1.0
SRS				eSn	S	15 18 33.8	-22
PSZ	Piszkesteto	5.14	298	eP	P	15 17 56.9	-0.6
PSZ				pmax	pmax		
	comp=Z,133nm,0.8s						
PSZ	Piszkesteto	5.14	298	ePn	P	15 17 56.9	-0.6
	comp=Z,133nm,0.8s						
PSZ	Piszkesteto	5.14	298	⇓iPn	P	15 17 57.3	-0.2
PSZ				e		15 29 30.7	
PSZ	Piszkesteto	5.14	298	ePn	P	15 17 56.9	-0.6
	comp=Z,133nm,0.8s						
MRMT	Marmara Adasi	5.17	172	eP	Px	15 16 55.9	
MRMT	Marmara Adasi	5.17	172	P	P	15 17 56.2	-1.7
BADT	Buyukada	5.20	159	eP	Px	15 16 58.0	
BADT	Buyukada	5.20	159	P	P	15 17 58.2	0.0
KIEV	Kiev	5.24	18	P	P	15 17 58.0	-0.8
AKASG	Malin Array Be	5.25	18	P	P	15 17 57.8	-1.2
	comp=Z,334nm,0.3s,baz=200,slow=11,SNR=437						
SIM	Simferopol'	5.30	96	⇓eP	P	15 17 59.7	+0.1
SIM				S	S	15 18 57.5	-2.7
SIM				pmax	pmax		
	comp=Z,590nm,0.4s						
SIM				MLR	MLR		
	comp=Z,240nm,8.3s						
SIM	Simferopol'	5.30	96	eP	P	15 17 59.7	+0.1
	comp=Z,590nm,0.4s						
SIM				S	S	15 18 57.5	-2.7
	comp=Z,240nm,8.3s						
VAY	Valandovo	5.33	216	⇓iPn	P	15 17 59.6	-0.4
VAY				iSn	S	15 19 01.0	+0.2
KNT	Kendrikon	5.33	212	ePn	P	15 18 00.2	+0.1
SKO	Skopje	5.34	227	⇓iP	P	15 18 00.3	+0.2
SKO				i		15 19 01.6	
SKO				pmax	pmax		
	comp=Z,490nm,0.8s						
SKO	Skopje	5.34	227	⇓iPn	P	15 18 00.3	+0.2
	comp=Z,490nm,0.8s						
SKO				i		15 18 08.3	
SKO				iSn	S	15 19 01.6	+0.6
SKO				Lg		15 19 20.0	
SKO	Skopje	5.34	227	⇓iPn	P	15 18 00.3	+0.2
SKO				i		15 18 08.3	
SKO				iSn	S	15 19 01.6	+0.6
SKO				Lg		15 19 20.0	
	comp=Z,0.5nm,0.8s						
GBZT	Gebze	5.34	157	P	P	15 18 00.0	-0.2
HRT	Hereke	5.37	155	eP	Px	15 17 00.5	
HRT	Hereke	5.37	155	P	P	15 18 00.3	-0.3
YAL	Yalta	5.44	101	⇑eP	P	15 18 01.6	+0.2
YAL				eS	S	15 19 00.7	-2.7
YAL				pmax	pmax		
	comp=Z,100nm,0.8s						
YAL				smax			
	comp=N,380nm,0.9s						
YAL				smax			
	comp=E,490nm,0.9s						
YAL	Yalta	5.44	101	eP	P	15 18 01.6	+0.2
	comp=E,100nm,0.8s						
YAL				eS	S	15 19 00.7	-2.7
BNT	Bandirma	5.45	170	eP	Px	15 17 01.2	
BNT	Bandirma	5.45	170	P	P	15 18 01.3	-0.4
NVSS	Nova Varos 2	5.46	248	⇑iPn	P	15 18 00.6	-1.1
NVSS				Sn	S	15 18 58.0	-5.9
SOH	Sokhos	5.48	207	ePn	P	15 18 01.5	-0.5
SOH				eSn	S	15 18 42.3	-22
BBLS	Bajina Basta -	5.50	253	⇑iPn	P	15 18 01.9	-0.3
BBLS				Sn	S	15 19 00.7	-4.2
YLV	Yalova	5.53	158	eP	Px	15 17 01.6	
YLV	Yalova	5.53	158	P	P	15 18 02.3	-0.4
BUD	Budapest	5.56	291	ePn	P	15 18 15.8	+13
BUD	Budapest	5.56	291	P	P	15 18 04.4	+1.4
ALU	Alushta	5.56	98	⇓iP	P	15 18 03.4	+0.3
ALU				iS	S	15 19 05.8	-0.6
ALU				pmax	pmax		
	comp=Z,130nm,0.6s						
ALU				smax			
	comp=N,710nm,0.7s						
ALU				smax			
	comp=E,310nm,0.5s						
ALU	Alushta	5.56	98	iP	P	15 18 03.4	+0.3
	comp=E,130nm,0.6s						
ALU				iS	S	15 19 05.8	-0.6
	comp=E,710nm,0.7s						
KCT	Karacabey	5.60	167	eP	Px	15 17 03.0	
KCT	Karacabey	5.60	167	P	P	15 18 03.5	-0.2
PKSM	Moragy	5.62	278	P	P	15 18 04.8	+0.9
IVA	Berane	5.64	242	⇑iPn	P	15 18 04.9	+0.7
IVA				eSn	S	15 19 07.2	-1.2
NIE	Niedzica	5.67	313	eP	P	15 18 05.6	+1.1
GRG	Griva	5.70	215	ePn	P	15 18 03.9	-1.1
CANB	Canakkale	5.72	177	eP	Px	15 17 03.7	
PLE	Pljevlja	5.74	248	⇑iPn	P	15 18 05.2	-0.2
PLE				eSn	S	15 19 08.7	-1.9
OUR	Ouranopolis	5.75	201	ePn	P	15 18 04.2	-1.3
OUR	Ouranopolis	5.75	201	ePn	P	15 18 04.2	-1.4
PVY	Plav	5.75	239	⇑iPn	P	15 18 06.1	+0.4
PVY				eSn	S	15 19 09.3	-1.7
EYL	Eskiyayla	5.76	153	eP	Px	15 17 05.7	
EYL	Eskiyayla	5.76	153	P	P	15 18 06.1	+0.4
THE	Thessaloniki	5.78	209	ePn	P	15 18 05.2	-0.8
THE				eSn	S	15 18 50.9	-21
HENT	Hendek	5.80	146	iP	P	15 18 06.7	+0.5
PLG	Polygyros	5.86	205	eP	P	15 18 06.0	-1.1
ULDT	Uludag	5.87	161	iP	P	15 18 07.2	-0.1
PKS9	Tamasi	5.90	281	eP	P	15 18 08.5	+0.9
ORLT	Orhaneli	5.92	163	eP	Px	15 17 07.6	
ORLT	Orhaneli	5.92	163	P	P	15 18 07.9	+0.1
LOS	Limnos	5.92	192	ePn	P	15 18 06.4	-1.5
SUDU	Sudak	5.93	95	⇓iP	P	15 18 08.5	+0.5
SUDU				iS	S	15 19 14.0	-1.3
SUDU				pmax	pmax		
	comp=Z,280nm,0.5s						
SUDU				smax			
	comp=N,690nm,0.7s						
SUDU				smax			
	comp=E,1µm,0.7s						
SUDU	Sudak	5.93	95	iP	P	15 18 08.5	+0.5
	comp=E,280nm,0.5s						
SUDU				iS	S	15 19 14.0	-1.3
VYHS	Vyhne	6.02	300	iPN	P	15 18 09.6	+0.3
BTOK	Tokmak	6.05	170	iP	P	15 18 08.8	-0.9
GPA	Golpazari	6.06	153	eP	Px	15 17 09.7	
GPA	Golpazari	6.06	153	P	P	15 18 10.3	+0.5
UPM	Unac-Piva	6.11	248	⇑iPn	P	15 18 11.3	+0.8
UPM				eSn	S	15 19 18.5	-1.1
SRO	Srobarova	6.11	293	ePN	P	15 18 12.0	+1.5
PUK	Puka	6.14	235	iPn	P	15 18 11.4	+0.6
PUK	Puka	6.14	235	ePn	P	15 18 11.4	+0.6
SRO1	Iza	6.15	292	ePN	P	15 18 10.2	-0.8
BALB	Balikesir	6.16	171	eP	Px	15 17 09.8	
BALB	Balikesir	6.16	171	P	P	15 18 10.3	-0.8
FEO	Feodosiya	6.18	94	⇓iP	P	15 18 10.8	-0.6
FEO				iS	S	15 19 17.3	-4.0
FEO				pmax	pmax		
	comp=Z,320nm,0.5s						
FEO				smax			
	comp=N,650nm,0.6s						
FEO				smax			
	comp=E,330nm,0.6s						
FEO	Feodosiya	6.18	94	iP	P	15 18 10.8	-0.6
	comp=E,320nm,0.5s						
PAIG	Paliouri	6.21	202	ePn	P	15 18 11.1	-0.7
MDU	Mudurnu	6.23	146	eP	Px	15 17 12.6	
MDU	Mudurnu	6.23	146	P	P	15 18 12.5	+0.4
NKY	Niksic	6.24	245	⇑iPn	P	15 18 12.4	+0.2
NKY				eSn	S	15 19 22.2	-0.5
SAFT	Safranbolu	6.27	134	eP	Px	15 17 11.8	
SAFT	Safranbolu	6.27	134	P	P	15 18 11.7	-0.9
TTG	Podgorica	6.28	241	⇑iPn	P	15 18 13.4	+0.6
TTG				eSn	S	15 19 22.3	-1.4
FNA	Florina	6.28	220	ePn	P	15 18 13.1	+0.3
FNA				eSn	S	15 19 06.6	-17
DST	Dursunbey	6.29	166	eP	Px	15 17 11.0	
DST	Dursunbey	6.29	166	P	P	15 18 11.0	-2.0
OHR	Ohrid	6.30	225	⇓iPn	P	15 18 12.2	-0.9
OHR				iSn	S	15 19 21.8	-2.4
KOLL	Kolacno	6.32	300	ePN	P	15 18 13.3	0.0
LIT	Litokhoron	6.42	210	ePn	P	15 18 13.3	-1.3
LIT				eSn	S	15 19 07.2	-20
OJC	Ojcow	6.44	317	ePn	P	15 18 14.0	-0.9
OJC				ePP	PP	15 18 22.8	-0.2
OJC				ePg	P	15 18 41.1	+26
OJC				eSn	S	15 19 27.7	+0.2
OJC	Ojcow	6.44	317	ePn	P	15 18 14.0	-0.9
OJC				eSn	S	15 19 27.7	+0.2
QSH	Qafa e Shtames	6.47	232	iPn	P	15 18 16.8	+1.4
QSH				iSn	S	15 19 27.6	-0.8
QSH	Qafa e Shtames	6.47	232	ePn	P	15 18 16.8	+1.4
QSH				iSn	S	15 19 27.6	-0.8
BRY	Bratogost	6.49	247	⇑iPn	P	15 18 16.4	+0.8
BRY				eSn	S	15 19 27.3	-1.5
SGKT	Sivrigoynuk	6.49	141	iP	P	15 18 15.9	+0.3
PRK	Paraskevi	6.49	183	eP	P	15 18 14.9	-0.8
BZK	Bozkurt	6.50	123	eP	Px	15 17 14.2	
BZK	Bozkurt	6.50	123	P	P	15 18 14.5	-1.3
KZN	Kozani	6.51	215	eP	P	15 18 16.0	+0.1
ULC	Ulcinj	6.56	238	⇑iPn	P	15 18 17.7	+1.1
ULC				eSn	S	15 19 29.8	-0.7
BUM	Brajici-Budva	6.58	241	⇑iPn	P	15 18 17.8	+1.0
BUM				eSn	S	15 19 29.9	-1.0
TIR	Tirane	6.61	231	iPn	P	15 18 18.5	+1.2
TIR				iSn	S	15 19 26.5	-5.3
TIR	Tirane	6.61	231	P	P	15 18 19.2	+1.9
HCY	Herceg Novi	6.74	244	⇑iPn	P	15 18 19.8	+0.7
HCY				eSn	S	15 19 33.8	-1.1
XOR	Xorichti	6.87	203	ePn	P	15 18 19.2	-1.5
JAVC	Velka Javorina	6.88	300	P	P	15 18 21.7	+0.8
AOS	Alonnisos	6.88	198	ePn	P	15 18 19.1	-1.9
KERU	Kerch	6.89	90	eP	P	15 18 24.7	+3.7
KERU				eS	S	15 19 33.7	-4.7
KERU				smax			
	comp=N,380nm,1.0s						
KERU				smax			
	comp=E,1µm,1.0s						
SMOL	Smolenice	6.89	297	ePN	P	15 18 21.6	+0.5
AKS	Akhisar	6.90	173	eP	Px	15 17 20.2	
AKS	Akhisar	6.90	173	P	P	15 18 20.6	-0.7
NEO	Neokhori	6.91	203	eP	P	15 18 20.0	-1.4
ESKT	Eskisehir	6.93	152	eP	Px	15 17 22.0	
ESKT	Eskisehir	6.93	152	iP	P	15 18 21.8	+0.2
ESKT	Eskisehir	6.93	152	P	P	15 18 21.9	+0.3
GDZ	Gediz	6.96	162	iP	P	15 18 22.0	0.0
ZST	Bratislava	7.00	294	ePN	P	15 18 22.4	-0.2
STON	Ston	7.05	249	⇓iP	P	15 18 23.4	+0.2
OKC	Ostrava-Krasne	7.06	309	ePN	P	15 18 21.8	-1.6
OKC				ex	x	15 18 40.2	
TOS	Tosya	7.12	129	eP	Px	15 17 23.4	
TOS	Tosya	7.12	129	P	P	15 18 23.3	-0.9
ALT	Altintas	7.14	158	eP	Px	15 17 24.5	
ALT	Altintas	7.14	158	P	P	15 18 24.6	+0.1
RAC	Raciborz	7.17	310	eP	P	15 18 24.0	-0.9
MEV	Metsovon	7.17	216	ePn	P	15 18 25.6	+0.8
ELDT	Eldivan	7.20	134	iP	P	15 18 25.0	-0.3
CANT	Cankiri	7.21	133	eP	Px	15 17 24.8	
CANT	Cankiri	7.21	133	P	P	15 18 24.9	-0.5
SOP	Sopron	7.22	289	P	P	15 18 26.3	+0.7
SOP	Sopron	7.22	289	⇑ePn	P	15 18 25.9	+0.3
SISC	Sisak	7.24	272	iP	P	15 18 26.6	+0.8
SISC	Sisak	7.24	272	iP	P	15 18 26.5	+0.8
BYBT	Boyabat	7.25	123	eP	Px	15 17 25.1	
BYBT	Boyabat	7.25	123	P	P	15 18 24.6	-1.4
KOGS	Kog	7.29	279	eP	P	15 18 27.1	+0.6
KDAG	Bornova	7.34	176	iP	P	15 18 26.1	-1.0
IZM	Izmir	7.34	176	eP	Px	15 17 26.0	
IZM	Izmir	7.34	176	P	P	15 18 26.1	-1.1
BLCB	Balcova	7.35	178	P	P	15 18 26.1	-1.2
MORC	Moravsky Berou	7.36	307	eP	P	15 18 26.1	-1.4
MORC				pmax	pmax		
	comp=Z,22nm,0.8s						
MORC	Moravsky Berou	7.36	307	ePn	P	15 18 26.1	-1.4
	comp=Z,22nm,0.8s						
MORC	Moravsky Berou	7.36	307	ePn	P	15 18 26.1	-1.4
	comp=Z,22nm,0.8s						
URLA	Izmir	7.37	181	iP	P	15 18 26.3	-1.3
MANT	Manisa	7.37	168	iP	P	15 18 26.6	-1.0
ANTO	Ankara	7.39	140	P	P	15 18 27.8	0.0
JAN	Janina	7.44	217	eP	P	15 18 29.0	+0.6
AGG	Agios Georgios	7.44	207	ePn	P	15 18 28.0	-0.4
WAR	Warsaw	7.50	332	ePn	P	15 18 30.1	+0.9
WAR				eSn	S	15 19 46.7	-6.4
WAR				eSg	S	15 20 32.0	+39
WAR	Warsaw	7.50	332	ePn	P	15 18 30.1	+0.9
WAR				eSn	S	15 19 46.7	-6.4
WAR				eSg	S	15 20 32.0	+39
VKA	Vienna	7.52	293	e(P)	P	15 18 30.0	+0.4
ANN	Anapa	7.65	93	eP	P	15 18 29.0	-2.3
ANN				eS	S	15 19 49.7	-7.1
ANN				pmax	pmax		
	comp=Z,104nm,1.2s						
ANN				smax			
	comp=N,287nm,1.5s						
ANN				smax			
	comp=E,308nm,1.5s						
ANN				smax			
	comp=Z,409nm,1.5s						
ANN	Anapa	7.65	93	eP	P	15 18 29.0	-2.3
	comp=Z,104nm,1.2s						
VRAC	Vranov	7.71	301	P	P	15 18 32.3	+0.2
	comp=Z,0.5nm,0.3s,baz=103,slow=14,SNR=32						
VRAC	Vranov	7.71	301	⇓iPn	P	15 18 31.8	-0.2
EVR	Evrytania	7.71	210	eP	P	15 18 32.0	-0.1
KRUC	Moravsky	7.73	299	P	P	15 18 32.5	+0.1
IGT	Igoumenitsa	7.76	219	ePn	P	15 18 33.5	+0.7
GROS	Grobnik	7.80	279	P	P	15 18 34.2	+0.8
ARSA	Arzberg	7.85	285	⇑iP	P	15 18 34.5	+0.6
	comp=Z,9.7nm,0.5s						
KIZT	Kizilcal	7.86	149	eP	Px	15 17 34.2	
KIZT	Kizilcal	7.86	149	P	P	15 18 34.4	+0.3
KEK	Kerkira	7.86	222	eP	P	15 18 34.0	-0.2
KEK	Kerkira	7.86	222	P	P	15 18 33.8	-0.4
MPAR	Parnis Oros	7.89	197	eP	P	15 18 33.5	-1.0
BR131	Keskin Array S	7.89	137	ePn	P	15 18 34.3	-0.3
	comp=Z,23nm,0.6s						
BR131	Keskin Array S	7.89	137	ePn	P	15 18 34.3	-0.2
	comp=Z,23nm,0.6s						
BRTR	Keskin Array B	7.89	137	P	P	15 18 34.1	-0.5
	comp=Z,1.1nm,0.3s,baz=323,slow=11,SNR=50						
BRTR				PcP	PcP	15 24 58.9	-1.2
	baz=273,slow=1.4,SNR=3.7						
LEGS	Legarje	7.94	276	P	P	15 18 36.5	+1.4
BOJS	Bojanci	8.02	272	iP	P	15 18 36.9	+0.7
BOJS				eS	S	15 20 08.4	+2.8
SMG	Samos	8.02	179	eP	P	15 18 35.5	-0.8
CORM	Corum	8.05	131	eP	Px	15 17 36.4	
PERS	Pernice	8.07	281	eP	P	15 18 38.5	+1.6
PERS	Pernice	8.07	281	eP	P	15 18 38.5	+1.5
MGER	Gerania Oros	8.15	199	eP	P	15 18 37.0	-1.0
TKTP	Tekketepe	8.15	159	iP	P	15 18 38.9	+0.9
PDKS	Podkum	8.16	276	P	P	15 18 39.6	+1.5
DENT	Denizli	8.17	167	P	P	15 18 38.0	-0.2
NSAL	Nisos Salamina	8.18	198	eP	P	15 18 37.0	-1.4
KAMT	Kaman	8.21	138	eP	Px	15 17 38.4	
KAMT	Kaman	8.21	138	P	P	15 18 38.7	-0.1

DNZL	Cakiroluk	8.23	167	iP	P	15 18 39.0	0.0
KDHN	Kadinhani	8.26	149	iP	P	15 18 40.7	+1.2
LCI	Lecce	8.27	232	P	P	15 18 38.8	-0.8
LCI				pmax	pmax		
	comp=Z,22nm,0.7s						
LCI	Lecce	8.27	232	P	P	15 18 38.8	-0.8
	comp=Z,22nm,0.7s						
VISS	Visnje	8.28	275	eP	P	15 18 40.6	+0.9
NAIG	Nisos Aigina	8.32	198	eP	P	15 18 39.0	-1.2
LKD	Levkas	8.32	215	ePn	P	15 18 40.3	0.0
CDAG	Cicekdag	8.33	134	iP	P	15 18 40.7	+0.3
DPC	Dobruska-Polom	8.33	307	P	P	15 18 40.3	-0.1
ISP	Isparta	8.39	159	eP	Px	15 17 40.8	
ISP	Isparta	8.39	159	diP	P	15 18 41.8	+0.6
ISP	Isparta	8.39	159	ePn	P	15 18 41.5	+0.4
	comp=Z,21nm,0.6s						
NVLJ	Novalja	8.43	266	iP	P	15 18 41.1	-0.6
BRT	Bari-Castellan	8.44	238	P	P	15 18 41.5	-0.4
OBKA	Obir	8.46	280	P	P	15 18 45.2	+3.0
MLSB	Milas	8.47	174	P	P	15 18 41.2	-1.1
LJU	Ljubljana	8.48	276	eP	P	15 18 43.1	+0.7
LJU				eS	S	15 20 20.0	+3.1
SUW	Suwalki	8.59	346	eP	P	15 18 41.5	-2.3
SUW				ePP	PP	15 18 53.8	+1.1
SUW				eSn	S	15 20 16.6	-2.7
SUW				eSg	S	15 21 22.5	+63
SUW	Suwalki	8.59	346	eP	P	15 18 41.5	-2.3
SUW				ePP	PP	15 18 53.8	+1.1
SUW				eSn	S	15 20 16.6	-2.7
SUW				eSg	S	15 21 22.5	+63
SUW	Suwalki	8.59	346	eP	P	15 18 41.5	-2.3
SUW				eSn	S	15 20 16.6	-2.7
KSP	Ksiaz	8.60	310	eP	P	15 18 42.5	-1.5
KSP				eS	S	15 20 23.6	+3.9
KSP	Ksiaz	8.60	310	eP	P	15 18 42.5	-1.5
KSP				ePP	PP	15 18 53.0	+0.1
KSP				eS	S	15 20 23.6	+3.9
KSP	Ksiaz	8.60	310	eP	P	15 18 42.6	-1.4
YER	Yerkesik	8.68	171	P	P	15 18 44.4	-0.6
BODT	Bodrum	8.68	177	P	P	15 18 44.0	-1.0
APE	Apeiranthos	8.70	186	diP	P	15 18 43.5	-1.8
APE	Apeiranthos	8.70	186	eP	P	15 18 43.0	-2.3
APE	Apeiranthos	8.70	186	iP	P	15 18 43.5	-1.8
MOA	Molln	8.78	288	⇑iP	P	15 18 47.5	+1.2
	comp=Z,4.1nm,0.8s						
MNK	Minsk	8.81	4	eP	P	15 18 42.0	-4.7
VLS	Valsamata	8.81	213	eP	P	15 18 45.5	-1.2
YOZ	Yozgat	8.81	131	eP	Px	15 17 46.9	
YOZ	Yozgat	8.81	131	P	P	15 18 45.7	-1.0
LTRZ	Laterza	8.84	238	P	P	15 18 45.8	-1.4
KONT	Konya--Tatoy	8.86	149	eP	Px	15 17 47.8	
KONT	Konya--Tatoy	8.86	149	P	P	15 18 48.5	+1.0
VOY	Vojsko	8.93	276	eP	P	15 18 49.7	+1.4
VOY				e		15 19 06.0	
VOY				e		15 19 34.8	
VOY				e		15 20 40.8	
RGNG	Rignano Grg	9.00	247	P	P	15 18 47.6	-1.7
TRI	Trieste	9.04	274	P	P	15 18 52.4	+2.6
ROBS	Robic	9.19	278	eP	P	15 18 52.7	+0.9
ROBS				eS	S	15 20 37.8	+4.2
PRU	Pruhonice	9.20	302	ePN	P	15 18 50.7	-1.2
PRU				ex	x	15 19 12.7	
FG2	Serracapriola	9.21	249	P	P	15 18 51.4	-0.7
	comp=Z,82nm,0.4s						
AVNT	Avonos	9.22	136	iP	P	15 18 53.1	+1.0
ITM	Ithomi	9.26	204	eP	P	15 18 53.0	+0.3
PTCC	Patocco-Chiusa	9.29	279	P	P	15 18 54.9	+1.8
ELL	Elmali	9.30	164	eP	Px	15 17 55.1	
ELL	Elmali	9.30	164	P	P	15 18 53.0	-0.3
KBA	Koelnbreinsper	9.31	283	⇑iP	P	15 18 55.4	+2.0
	comp=Z,5.9nm,0.7s						
KBA	Koelnbreinsper	9.31	283	⇑iP	P	15 18 55.4	+2.0
KBA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FG4	Candela	9.33	244	P	P	15 18 53.6	-0.1
FG4				pmax	pmax		
	comp=Z,533nm,2.4s						
FG4	Candela	9.33	244	P	P	15 18 53.6	-0.1
	comp=Z,533nm,2.4s						
GERES	GERESS Array B	9.35	294	P	P	15 18 55.0	+1.1
	comp=Z,0.2nm,0.3s,baz=108,slow=13,SNR=27						
GMNA	Gemona	9.37	278	P	P	15 18 57.8	+3.6
SANT	Santorini	9.40	186	ePn	P	15 18 52.0	-2.6
	comp=Z,32nm,0.9s						
ORI	Oriolo Calabro	9.40	237	P	P	15 18 53.6	-1.0
ORI				pmax	pmax		
	comp=Z,30nm,0.6s						
ORI	Oriolo Calabro	9.40	237	P	P	15 18 53.6	-1.0
	comp=Z,30nm,0.6s						
FG5	Orsara di Pugl	9.41	246	P	P	15 18 55.2	+0.5
VLI	Veliai	9.44	199	eP	P	15 18 54.0	-1.1
CIGN	Sant'Elia a Pi	9.45	249	P	P	15 18 55.3	0.0
	comp=Z,132nm,1.3s						
KHC	Kasperske Hory	9.51	296	ePn	P	15 18 56.5	+0.6
KHC				e		15 19 19.6	
KHC				e		15 21 02.0	
KHC	Kasperske Hory	9.51	296	ePN	P	15 18 56.5	+0.6
KHC				ex	x	15 19 19.6	
KHC				x	x	15 21 02.0	
SOC	Sochi	9.54	98	eP	P	15 19 03.3	+6.9
SOC				pmax	pmax		
	comp=N,5.0nm,0.7s						
SOC				pmax	pmax		
	comp=E,13nm,0.7s						
SOC				pmax	pmax		
	comp=Z,16nm,0.7s						
SOC				MLR	MLR		
	comp=Z,220nm,12.0s						
SOC				MLR	MLR		
	comp=N,99nm,11.0s						
SOC				MLR	MLR		
	comp=E,97nm,10.0s						
MRLC	Muro Lucano	9.56	243	P	P	15 18 54.9	-1.7
IDID	Didziasalis	9.59	0	eP	P	15 18 54.5	-2.5
IDID				AMb	AMB	15 18 56.0	
	comp=Z,44nm,0.9s						
IIGN	Ignalina	9.63	358	eP	P	15 18 55.3	-2.2
SLCN	Sala Consilina	9.69	240	P	P	15 18 57.0	-1.3
HDMB	Hadim	9.79	152	eP	Px	15 17 59.7	
HDMB	Hadim	9.79	152	P	P	15 18 59.7	0.0
CSSN	Cassano Irpino	9.79	244	P	P	15 18 57.9	-1.8
CII	Carovilli	9.81	250	P	P	15 18 58.7	-1.3
TIP	Timpagrande	9.83	232	P	P	15 18 59.3	-0.9
	comp=Z,25nm,1.1s						
KYTH	Kithira	9.84	197	eP	P	15 18 59.0	-1.3
ISAL	Salakas	9.86	358	iP	P	15 18 57.8	-2.7
ISAL				AMb	AMB	15 18 59.8	
	comp=Z,64nm,1.0s						
MGR	Morigerati	9.89	239	P	P	15 19 02.2	+1.2
	comp=Z,196nm,1.5s						
TERO	Teramo	9.89	256	P	P	15 19 00.3	-0.8
	comp=Z,70nm,0.7s						
CING	Cingoli	9.91	261	P	P	15 19 00.6	-0.7
	comp=Z,28nm,0.6s						
BRG	Berggiesshubel	9.92	306	eP	P	15 19 02.5	+1.2
BRG				pmax	pmax		
	comp=Z,10.0nm,1.6s						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,22nm,1.3s						
BRG	Berggiesshubel	9.92	306	eP	P	15 19 02.5	+1.2
	comp=Z,9.9nm,1.6s						
BRG				e		15 19 14.6	
BRG				e		15 19 43.3	
BRG				e		15 20 30.0	
BRG				e		15 22 23.7	
RNI2	Rionero Sannit	9.92	250	P	P	15 19 01.3	-0.1
	comp=Z,336nm,2.1s						
SGG	Gregorio Mates	9.93	248	P	P	15 19 01.2	-0.3
VRSR	Storozhevoye	9.95	52	⇓iP	P	15 19 01.3	-0.5
VRSR				eS	S	15 20 45.7	-6.0
VRSR				pmax	pmax		
	comp=Z,120nm,0.6s						
VRSR				pmax	pmax		
	comp=N,210nm,0.7s						
VRSR				pmax	pmax		
	comp=E,160nm,0.6s						
VRSR				smax			
	comp=N,940nm,0.7s						
VRSR				smax			
	comp=Z,580nm,1.0s						
VRSR				smax			
	comp=E,1µm,0.9s						
VRSR	Storozhevoye	9.95	52	iP	P	15 19 01.3	-0.5
	comp=E,940nm,0.7s						
ARV	Arcevia	10.05	262	P	P	15 19 02.3	-0.8
ARV				pmax	pmax		
	comp=Z,33nm,0.6s						
ARV	Arcevia	10.05	262	P	P	15 19 02.3	-0.8
	comp=Z,33nm,0.6s						
FSSB	Fossombrone	10.11	263	P	P	15 19 03.4	-0.4
AQU	L'Aquila	10.14	255	eP	P	15 19 02.8	-1.5
AQU				pmax	pmax		
	comp=Z,80nm,0.8s						
AQU	L'Aquila	10.14	255	ePn	P	15 19 02.8	-1.5
	comp=Z,80nm,0.8s						
AQU	L'Aquila	10.14	255	ePn	P	15 19 02.8	-1.5
	comp=Z,80nm,0.8s						
NRCA	Norcia	10.15	258	P	P	15 19 00.2	-4.2
VVLD	Villa Vallelon	10.20	252	P	P	15 19 05.4	+0.3
	comp=Z,68nm,1.1s						
RFI	Roccamonfina	10.23	249	P	P	15 19 06.8	+1.3
	comp=Z,24nm,1.2s						
GRI	Girifalco	10.27	231	P	P	15 19 05.1	-0.9
GRI				pmax	pmax		
	comp=Z,62nm,1.4s						
GRI	Girifalco	10.27	231	P	P	15 19 05.1	-0.9
	comp=Z,62nm,1.4s						
RSM	Repubblica di	10.27	265	P	P	15 19 06.2	+0.2
RSM				pmax	pmax		
	comp=Z,2.0nm,0.3s						
RSM	Repubblica di	10.27	265	P	P	15 19 06.2	+0.2
	comp=Z,1.9nm,0.3s						
PTQR	Pietraquaria	10.28	254	P	P	15 19 06.5	+0.4
MSC	Monte Massico	10.29	248	P	P	15 19 07.0	+0.7
FIAM	Fiamignano	10.37	255	P	P	15 19 07.6	+0.3
	comp=Z,21nm,0.8s						
ASS	Assisi	10.39	260	P	P	15 19 07.2	-0.4
ASS				pmax	pmax		
	comp=Z,31nm,0.6s						
ASS	Assisi	10.39	260	P	P	15 19 07.2	-0.4
	comp=Z,31nm,0.6s						
MURB	Monte Urbino	10.41	261	P	P	15 19 07.9	0.0
	comp=Z,64nm,1.1s						
CTI	Castel Tesino	10.48	277	P	P	15 19 10.3	+1.4
CTI				pmax	pmax		
	comp=Z,12nm,0.5s						
CTI	Castel Tesino	10.48	277	P	P	15 19 10.3	+1.4
	comp=Z,12nm,0.5s						
VAM	Vamos	10.49	191	eP	P	15 19 05.8	-3.1
IDI	Anoyia	10.52	188	P	P	15 19 08.3	-1.1
	comp=Z,0.8nm,0.3s,baz=7.8,slow=7.7,SNR=11						
NKC	Novy Kostel	10.54	300	ePn	P	15 19 11.9	+2.3
CERT	Cerreto	10.59	254	P	P	15 19 09.9	-0.4
	comp=Z,20nm,0.7s						
MNS	Montasola	10.62	257	P	P	15 19 09.7	-0.9
MNS				pmax	pmax		
	comp=Z,135nm,1.2s						
MNS	Montasola	10.62	257	P	P	15 19 09.7	-0.9
	comp=Z,135nm,1.2s						
CLL	Collm	10.64	307	eP	P	15 19 10.0	-0.9
CLL				PP	PP	15 19 21.8	+1.3
CLL				ipP		15 19 30.0	
CLL	Collm	10.64	307	P	P	15 19 10.0	-0.9
CLL				i		15 19 21.8	
CLL				i		15 19 30.0	
CLL				e*SP		15 19 46.0	
CLL				eS	S	15 21 13.0	+4.9
SFI	Santa Sofia	10.70	265	P	P	15 19 11.5	-0.2
SFI				pmax	pmax		
	comp=Z,68nm,1.4s						
SFI	Santa Sofia	10.70	265	P	P	15 19 11.5	-0.2
	comp=Z,68nm,1.4s						
MTCE	Montecelio	10.72	255	P	P	15 19 12.2	+0.2
	comp=Z,5.8nm,0.4s						
GUMT	Gumushane	10.74	115	P	P	15 19 10.0	-2.2
SQTA	Sankt Quirin	10.78	283	⇑iP	P	15 19 17.7	+5.0
	comp=Z,20nm,0.6s						
SQTA	Sankt Quirin	10.78	283	⇑iP	P	15 19 17.7	+5.0
SQTA				pmax	pmax		
	comp=Z,20nm,0.6s						
PGD	Poggio Sodo	10.79	265	P	P	15 19 13.2	+0.3
PGD				pmax	pmax		
	comp=Z,14nm,0.6s						
PGD	Poggio Sodo	10.79	265	P	P	15 19 13.2	+0.3
	comp=Z,14nm,0.6s						
XRY	Khrisi	10.87	184	eP	P	15 19 13.4	-0.6
VMG	Vicchio	10.89	266	P	P	15 19 14.3	0.0
SEI	Scarperia	11.00	267	P	P	15 19 20.1	+4.4
SOI	Samo	11.01	230	P	P	15 19 14.2	-1.5
SCLL	Scilla	11.06	231	P	P	15 19 14.7	-1.7
GVD	Gavdhos	11.06	191	eP	P	15 19 16.1	-0.4
	comp=Z,114nm,0.6s						
GVD	Gavdhos	11.06	191	eP	P	15 19 16.1	-0.4
	comp=Z,114nm,0.6s						
MOX	Moxa	11.19	301	eP	P	15 19 18.4	+0.3
MOX				pmax	pmax		
	comp=Z,24nm,1.5s						
MOX				MLR	MLR		
	comp=Z,200nm,16.0s						
MOX	Moxa	11.19	301	eP	P	15 19 18.4	+0.3
	comp=Z,24nm,1.5s						
MOX				ePP	PP	15 19 28.6	+0.5
MOX	Moxa	11.19	301	iP	P	15 19 18.4	+0.3
MOX				PP	PP	15 19 29.0	+0.9
MOX				L		15 24 12.0	
ZCCA	Zocca	11.20	269	P	P	15 19 21.4	+3.1
TOLF	Tolfa	11.21	256	P	P	15 19 13.5	-4.9
	comp=Z,92nm,1.2s						
MTTG	Motta San Giov	11.25	230	P	P	15 19 17.2	-1.8
MABI	Malga Bissina	11.27	277	P	P	15 19 30.0	+11
OBN	Obninsk	11.30	30	κiP	P	15 19 16.4	-3.1
OBN				iS	S	15 21 14.5	-9.1
OBN				pmax	pmax		
	comp=Z,76nm,0.4s						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s						
OBN	Obninsk	11.30	30	eP	P	15 19 16.1	-3.5
	comp=Z,274nm,0.4s						
OBN				eS	S	15 21 08.5	-15
BRMO	Bormio	11.35	280	P	P	15 19 29.8	+10
FUORN	Ofenpass	11.42	280	P	P	15 19 30.7	+10
MALT	Malatya	11.45	126	P	P	15 19 24.0	+2.4
MALT				pmax	pmax		
	comp=Z,23nm,1.0s						
MALT	Malatya	11.45	126	P	P	15 19 24.0	+2.4
	comp=Z,23nm,1.0s						
MALT				e		15 19 34.6	
KIV	Kislovodsk	11.51	93	ceP	P	15 19 22.8	+0.5
KIV				pmax	pmax		
	comp=Z,29nm,1.2s						
KIV				MLR	MLR		
	comp=Z,100nm,13.0s						
KIV	Kislovodsk	11.51	93	eP	P	15 19 22.1	-0.2
	comp=Z,62nm,0.6s						
KIV	Kislovodsk	11.51	93	eP	P	15 19 22.1	-0.2
	comp=Z,62nm,0.6s						
GRFL	Gerfalco	11.52	263	P	P	15 19 21.9	-0.6
	comp=Z,12nm,0.8s						
GOF	Gofitskoye	11.52	88	⇑iP	P	15 19 21.2	-1.3
GOF				iS	S	15 21 23.2	-5.8
GOF				pmax	pmax		
	comp=Z,510nm,1.7s						
GOF				smax			
	comp=E,510nm,1.7s						
GOF	Gofitskoye	11.52	88	iP	P	15 19 21.2	-1.3
	comp=E,510nm,1.7s						
BDI	Bagni Di Lucca	11.53	267	P	P	15 19 23.7	+1.1
BDI				pmax	pmax		
	comp=Z,30nm,1.0s						
BDI	Bagni Di Lucca	11.53	267	P	P	15 19 23.7	+1.1
	comp=Z,30nm,1.0s						
ERBM	Eremo	11.58	269	P	P	15 19 39.7	+16
VLC	Villacollemand	11.65	268	eP	P	15 19 24.9	+0.7
VLC	Villacollemand	11.65	268	eP	P	15 19 25.0	+0.7
PII	Pisa	11.67	266	P	P	15 19 26.8	+2.4
PII				pmax	pmax		
	comp=Z,34nm,0.7s						
PII	Pisa	11.67	266	P	P	15 19 26.8	+2.4
	comp=Z,34nm,0.7s						
DAVOX	Davos	11.68	281	P	P	15 19 33.8	+9.2
	comp=Z,5.9nm,0.3s,baz=90,slow=9.4,SNR=64						
DAVOX				LR	LR	15 23 53.3	
	comp=Z,64nm,18.9s,baz=77,slow=37						
DAVOX	Davos	11.68	281	P	P	15 19 33.4	+8.8
DAVA	Damuels	11.68	284	⇑iP	P	15 19 27.2	+2.6
	comp=Z,27nm,0.6s						
MNO	Monte Soro	11.85	233	P	P	15 19 26.8	0.0
MNO				pmax	pmax		
	comp=Z,131nm,0.4s						
MNO	Monte Soro	11.85	233	P	P	15 19 26.8	0.0
	comp=Z,131nm,0.4s						
CSS	Prodhromos	11.89	152	eP	P	15 19 27.4	0.0
	comp=Z,29nm,0.8s						
CSS	Prodhromos	11.89	152	eP	P	15 19 27.4	0.0
	comp=Z,29nm,0.8s						
BSD	Bornholm Skovb	12.00	326	eP	P	15 19 29.0	+0.3
BSD				pmax	pmax		
	comp=Z,250nm,0.5s						
BSD	Bornholm Skovb	12.00	326	iP	P	15 19 29.0	+0.3
	comp=Z,251nm,0.5s						
BSD	Bornholm Skovb	12.00	326	eP	P	15 19 29.0	+0.3
	comp=Z,251nm,0.5s						
TUE	Stuetta	12.06	280	P	P	15 19 38.2	+8.7
BUCH	Bad Urach	12.12	289	P	P	15 19 33.6	+3.3
MOS	Moscow	12.16	31	eP	P	15 19 27.8	-3.1
MOS				iS	S	15 21 35.1	-8.9
MOS				pmax	pmax		
	comp=Z,84nm,1.0s						
MOS				smax			
	comp=N,1µm,2.0s						
BOB	Bobbio (Coli)	12.19	272	P	P	15 19 37.4	+6.2
GIB	Gibilmanna	12.19	235	P	P	15 19 29.8	-1.5
EZM	Erzurum	12.25	113	P	P	15 19 29.5	-2.5
STU	Stuttgart	12.26	291	P	P	15 19 30.8	-1.4
MUGIO	Muggio	12.31	277	P	P	15 19 40.2	+7.4
VAE	Valguarnera	12.33	232	P	P	15 19 36.6	+3.5
	comp=N,2.0nm,0.3s,baz=330,slow=2.1,SNR=4.9						
CLZ	Clausthal	12.36	306	ePn	P	15 19 36.7	+3.3
VAI	Varese	12.50	277	P	P	15 19 41.9	+6.6
ZEI	Tsey	12.70	97	iP	P	15 19 38.5	+0.6
VSU	Vasula	12.75	0	diP	P	15 19 34.7	-3.8
NRDL	Niedersach Rie	12.77	308	ePn	P	15 19 42.2	+3.4
PCP	Pian Castagno	12.86	271	P	P	15 19 45.5	+5.5
FELD	Feldberg	12.97	286	eP	P	15 19 46.4	+5.0
ERC	Erice	13.00	239	P	P	15 19 45.6	+3.8
	comp=N,1µm,0.8s						
MCGN	Macugnaga	13.04	278	P	P	15 19 48.9	+6.7
MMK	Mattmark	13.04	278	P	P	15 19 47.8	+5.5
ORX	Oropa	13.08	276	P	P	15 19 47.4	+4.6
PGF	Pioggiola	13.09	262	eP	P	15 19 42.7	-0.3
	comp=N,97nm,0.9s						
PGF	Pioggiola	13.09	262	eP	P	15 19 42.7	-0.3
PGF				pmax	pmax		
	comp=Z,48nm,0.9s						
FIN	Finale Ligure	13.17	270	P	P	15 19 44.8	+0.8
LVI	Isola Levanzo	13.18	239	P	P	15 19 47.7	+3.5
LANF	Langenberg	13.20	291	eP	P	15 19 49.0	+4.7
LKBD	Leukerbad	13.25	280	⇓P	P	15 19 49.6	+4.6
TRAV		13.26	276	P	P	15 19 49.2	+4.1
BBS	Basel-Blauen	13.30	284	eP	P	15 19 49.9	+4.3
BSEG	Bad Segeberg	13.35	314	ePn	P	15 19 50.6	+4.4
ROB	Roburent	13.39	271	P	P	15 19 50.8	+4.1
COP	Copenhagen	13.41	323	eP	P	15 19 46.2	-0.8
COP				i		15 22 14.7	
COP				pmax	pmax		
	comp=Z,61nm,0.8s						
COP	Copenhagen	13.41	323	eP	P	15 19 46.2	-0.8
	comp=Z,61nm,0.8s						
COP				i		15 22 14.7	
COP	Copenhagen	13.41	323	iP	P	15 19 46.2	-0.8
	comp=Z,61nm,0.8s						
COP				i		15 22 14.7	
DIX	Grande Dixence	13.42	278	P	P	15 19 52.6	+5.4
IMI	Imperia	13.46	269	P	P	15 19 49.7	+2.0
CDF	Champ du Feu	13.49	288	eP	P	15 19 51.7	+3.6
	comp=Z,7.6nm,0.6s						
CDF	Champ du Feu	13.49	288	eP	P	15 19 51.7	+3.6
CDF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MONE	Monesi	13.52	270	P	P	15 19 52.4	+4.1
ECH	Echery	13.56	288	P	P	15 19 54.0	+5.2
MOF	Molkenrain	13.56	286	eP	P	15 19 52.9	+4.1
DGI	Dorgali Grotta	13.60	253	P	P	15 19 48.5	-1.0
NEGI	Negi	13.61	269	P	P	15 19 53.1	+3.6
RSP	Reno Superiore	13.65	275	P	P	15 19 53.0	+3.0
TI2	Plekhanov	13.66	101	eP	P	15 19 49.2	-1.0
LSD	Ceresole Reale	13.68	276	P	P	15 19 54.3	+3.9
SAOF	Saorge	13.68	269	eP	P	15 19 51.4	+1.0
BHB	Bricherasio	13.70	273	P	P	15 19 54.0	+3.3
ENR	Entracque	13.72	271	P	P	15 19 55.4	+4.5
HINF	Hinteralfeld	13.74	286	eP	P	15 19 54.8	+3.6
	comp=Z,9.7nm,0.6s						
HINF	Hinteralfeld	13.74	286	eP	P	15 19 54.8	+3.6
HINF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LOMF	Lomont	13.76	284	eP	P	15 19 54.7	+3.3
AUTN	L'Aution	13.77	270	eP	P	15 19 52.5	+1.0
DOI	San Damiano	13.78	272	P	P	15 19 56.2	+4.5
DOI				pmax	pmax		
	comp=Z,8.0nm,0.3s						
DOI	San Damiano	13.78	272	P	P	15 19 56.2	+4.5
	comp=Z,7.5nm,0.3s						
STV2	Anna di Valdie	13.78	271	P	P	15 19 55.0	+3.3
STV	Sta Anna Valdi	13.78	271	P	P	15 19 56.1	+4.4
EMV	Vieux Emosson	13.78	278	P	P	15 19 56.5	+4.8
SBF	Sospel	13.79	269	eP	P	15 19 51.9	0.0
	comp=Z,42nm,0.8s						
SBF	Sospel	13.79	269	eP	P	15 19 51.9	0.0
SBF				pmax	pmax		
	comp=Z,21nm,0.8s						
FENE	Fenestrelle	13.81	274	P	P	15 19 55.9	+3.9
PZZ	Prazzo	13.88	272	P	P	15 19 57.0	+4.0
TOUF	Mont Tournerai	13.89	270	eP	P	15 19 54.3	+1.2
LPG	La Plagne	13.95	276	eP	P	15 19 55.5	+1.6
	comp=Z,82nm,0.8s						
LPG	La Plagne	13.95	276	eP	P	15 19 55.5	+1.6
LPG				pmax	pmax		
	comp=Z,41nm,0.8s						
LPL	La Plagne	13.96	276	eP	P	15 19 54.9	+0.9
	comp=Z,60nm,0.8s						
LPL	La Plagne	13.96	276	eP	P	15 19 54.9	+0.9
LPL				pmax	pmax		
	comp=Z,30nm,0.8s						
MVIF	Mont Vial	13.98	269	eP	P	15 19 55.4	+1.1
RRL	Cesana Torines	14.02	274	P	P	15 19 58.0	+3.2
IBBN	Ibbenburen	14.03	305	ePn	P	15 19 59.1	+4.3
MBDF	Montbardon	14.07	273	eP	P	15 19 55.5	+0.2
	comp=Z,41nm,0.6s						
MBDF	Montbardon	14.07	273	eP	P	15 19 55.5	+0.2
MBDF				pmax	pmax		
	comp=Z,21nm,0.6s						
BNI	Bardonecchia	14.07	274	eP	P	15 19 56.5	+1.1
BNI				pmax	pmax		
	comp=Z,21nm,0.9s						
BNI	Bardonecchia	14.07	274	eP	P	15 19 56.5	+1.0
	comp=Z,21nm,0.9s						
BNI				eS	S	15 23 04.9	+36
BNI	Bardonecchia	14.07	274	eP	P	15 19 56.5	+1.1
	comp=Z,21nm,0.9s						
SURF	Saint Ours	14.09	272	eP	P	15 19 59.5	+3.9
HAU	Haudompre	14.09	287	eP	P	15 19 59.4	+3.8
	comp=Z,71nm,1.4s						
HAU				eR			
	comp=Z,203nm,18.5s						
VSL	Villasalto	14.17	250	P	P	15 19 59.5	+2.8
CALN	Calern	14.20	269	eP	P	15 19 57.9	+0.8
PUL	Pulkovo	14.22	8	iP	P	15 19 53.4	-3.8
PUL				pmax	pmax		
	comp=N,205nm,0.6s						
PUL				pmax	pmax		
	comp=Z,225nm,0.6s						
PUL				pmax	pmax		
	comp=E,98nm,0.7s						
CABF	La Chapelle	14.29	281	eP	P	15 20 01.5	+3.3
	comp=E,51nm,0.6s						
CABF	La Chapelle	14.29	281	eP	P	15 20 01.5	+3.3
CABF				pmax	pmax		
	comp=Z,26nm,0.6s						
CLDR	Caldiran	14.32	111	P	P	15 19 57.7	-0.9
GNI	Garni	14.35	106	diP	P	15 20 02.0	+3.0
GNI				pmax	pmax		
	comp=Z,81nm,1.3s						
GNI	Garni	14.35	106	P	P	15 20 02.5	+3.5
	comp=Z,1.3nm,0.3s,baz=190,slow=14,SNR=6.5						
GNI	Garni	14.35	106	P	P	15 19 57.2	-1.8
WLF	Walferdange	14.36	293	eP	P	15 19 57.8	-1.3
WLF				pmax	pmax		
	comp=Z,17nm,1.1s						
WLF	Walferdange	14.36	293	eP	P	15 19 57.8	-1.3
	comp=Z,17nm,1.1s						

WLF				e		15 20 02.9	
WLF	**Walferdange**	**14.36**	**293**	eP	**P**	**15 19 57.8**	**-1.3**
FRF	**La Foret Royal**	**14.42**	**268**	eP	**P**	**15 19 58.5**	**-1.4**
	comp=Z,54nm,0.7s						
FRF	**La Foret Royal**	**14.42**	**268**	eP	**P**	**15 19 58.5**	**-1.4**
FRF				pmax	pmax		
	comp=Z,27nm,0.7s						
WTSB	**Winterswijk**	**14.47**	**303**	eP	**P**	**15 20 04.1**	**+3.6**
	comp=Z,167nm,1.6s						
LMR	**La Mourre**	**14.58**	**268**	eP	**P**	**15 20 02.5**	**+0.6**
	comp=Z,43nm,0.9s						
LMR	**La Mourre**	**14.58**	**268**	eP	**P**	**15 20 02.5**	**+0.6**
LMR				pmax	pmax		
	comp=Z,21nm,0.9s						
OG25	**Le Caire**	**14.63**	**272**	eP	**P**	**15 20 03.6**	**+1.1**
HGN	**Heimansgroeve**	**14.69**	**298**	eP	**P**	**15 20 05.3**	**+2.0**
	comp=Z,73nm,1.4s						
HGN				eS	**S**	**15 22 55.7**	**+13**
TAVF	**Tavernes**	**14.82**	**269**	eP	**P**	**15 20 06.1**	**+1.1**
WIT	**Witteveen**	**14.83**	**306**	eP	**P**	**15 20 08.3**	**+3.3**
STOF	**St-Etienne Org**	**14.83**	**271**	eP	**P**	**15 20 09.6**	**+4.6**
MEZF	**Maizieres J'vi**	**14.97**	**288**	eP	**P**	**15 20 09.3**	**+2.5**
	comp=Z,23nm,0.7s						
SMRF	**Simiane la Rot**	**15.07**	**271**	eP	**P**	**15 20 08.0**	**-0.1**
	comp=Z,30nm,0.7s						
PUYF	**Puyloubier**	**15.09**	**269**	eP	**P**	**15 20 09.6**	**+1.2**
BERF	**Bertagne**	**15.16**	**268**	eP	**P**	**15 20 10.7**	**+1.5**
PECR	**Pechory**	**15.19**	**40**	i P	**P**	**15 20 06.4**	**-3.1**
PECR				e		15 22 46.5	
PECR				pmax	pmax		
	comp=Z,800nm,1.4s						
GIVF	**Givet**	**15.27**	**294**	eP	**P**	**15 20 13.4**	**+2.8**
	comp=Z,260nm,1.7s						
GIVF	**Givet**	**15.27**	**294**	eP	**P**	**15 20 13.4**	**+2.8**
GIVF				pmax	pmax		
	comp=Z,130nm,1.7s						
TREF	**Trevaresse**	**15.29**	**270**	eP	**P**	**15 20 18.0**	**+7.1**
MUD	**Monsted U'grnd**	**15.31**	**321**	⇑iP	**P**	**15 20 13.5**	**+2.5**
MUD				i S	**S**	**15 23 08.4**	**+12**
MUD				pmax	pmax		
	comp=Z,85nm,0.7s						
MUD	**Monsted U'grnd**	**15.31**	**321**	⇑iP	**P**	**15 20 13.5**	**+2.5**
	comp=Z,85nm,0.7s						
MUD				i		15 20 46.6	
MUD				i S	**S**	**15 23 08.4**	**+12**
GELF	**Grande-Etoile**	**15.33**	**269**	eP	**P**	**15 20 14.3**	**+3.0**
PRAF	**Pradon**	**15.39**	**270**	eP	**P**	**15 20 14.8**	**+2.6**
DOU	**Dourbes**	**15.42**	**294**	P	**P**	**15 20 15.2**	**+2.8**
VIVF	**Saint-Julien-l**	**15.51**	**275**	eP	**P**	**15 20 12.1**	**-1.5**
	comp=Z,30nm,0.7s						
VIVF	**Saint-Julien-l**	**15.51**	**275**	eP	**P**	**15 20 12.1**	**-1.5**
VIVF				pmax	pmax		
	comp=Z,15nm,0.7s						
BAIF	**Baives**	**15.66**	**294**	eP	**P**	**15 20 17.3**	**+1.9**
	comp=Z,67nm,1.3s						
BAIF	**Baives**	**15.66**	**294**	eP	**P**	**15 20 17.3**	**+1.9**
BAIF				pmax	pmax		
	comp=Z,33nm,1.3s						
UCC	**Uccle**	**15.68**	**297**	P	**P**	**15 20 15.9**	**+0.3**
ASF	**Jabal al Asfar**	**15.68**	**146**	P	**P**	**15 20 17.9**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=219,slow=6.7,SNR=5.6						
FINES	**FINESS Array B**	**15.74**	**359**	P	**P**	**15 20 11.6**	**-4.8**
	comp=Z,3.4nm,0.3s,baz=167,slow=13,SNR=63						
FINES	**FINESS Array B**	**15.74**	**359**	P	**P**	**15 20 11.6**	**-4.8**
LOR	**Lormes**	**15.78**	**284**	eP	**P**	**15 20 16.1**	**-0.8**
	comp=Z,56nm,1.0s						
LOR				eR			
	comp=Z,152nm,19.0s						
SMF	**Signal de Mont**	**15.84**	**282**	eP	**P**	**15 20 18.2**	**+0.6**
	comp=Z,52nm,1.0s						
SMF	**Signal de Mont**	**15.84**	**282**	eP	**P**	**15 20 18.2**	**+0.6**
SMF				pmax	pmax		
	comp=Z,26nm,1.0s						
PLDF	**La Plantade**	**16.06**	**279**	eP	**P**	**15 20 21.8**	**+1.4**
AVF	**Avril sur Loir**	**16.16**	**282**	eP	**P**	**15 20 21.8**	**+0.2**
	comp=Z,52nm,1.1s						
AVF	**Avril sur Loir**	**16.16**	**282**	eP	**P**	**15 20 21.8**	**+0.2**
AVF				pmax	pmax		
	comp=Z,26nm,1.1s						
LASF	**Ste Croix**	**16.25**	**272**	eP	**P**	**15 20 23.6**	**+0.8**
	comp=Z,36nm,0.8s						
HFS	**Hagfors**	**16.36**	**336**	P	**P**	**15 20 21.9**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=146,slow=11,SNR=52						
KAF	**Kangasniemi**	**16.41**	**359**	ep	**P**	**15 20 20.2**	**-4.5**
LBL	**Lubilhac**	**16.43**	**277**	eP	**P**	**15 20 27.6**	**+2.5**
PYM	**Petit Puy Mans**	**16.52**	**279**	eP	**P**	**15 20 26.9**	**+0.8**
BGF	**Bois d'Agland**	**16.53**	**281**	eP	**P**	**15 20 26.4**	**+0.2**
	comp=Z,25nm,0.6s						
BGF	**Bois d'Agland**	**16.53**	**281**	eP	**P**	**15 20 26.4**	**+0.2**
BGF				pmax	pmax		
	comp=Z,12nm,0.6s						
QURS	**Qurayyt al Mil**	**16.55**	**146**	P	**P**	**15 20 30.6**	**+4.0**
TCF	**Toulx Ste Croi**	**16.99**	**281**	eP	**P**	**15 20 32.2**	**+0.3**
	comp=Z,24nm,0.7s						
TCF	**Toulx Ste Croi**	**16.99**	**281**	eP	**P**	**15 20 32.2**	**+0.3**
TCF				pmax	pmax		
	comp=Z,12nm,0.7s						
CMAH	**Djebel Manchou**	**17.08**	**245**	P	**P**	**15 20 33.0**	**-0.1**
OSL	**Oslo**	**17.11**	**332**	eP	**P**	**15 20 32.6**	**-0.6**
	comp=Z,79nm,1.2s						
OSL	**Oslo**	**17.11**	**332**	eP	**P**	**15 20 32.6**	**-0.6**
OSL				AMb	AMB	15 20 48.9	
	comp=Z,79nm,1.2s						
OSL	**Oslo**	**17.11**	**332**	eP	**P**	**15 20 32.6**	**-0.6**
	comp=Z,79nm,1.2s,SNR=53						
KONO	**Kongsberg**	**17.28**	**330**	eP	**P**	**15 20 32.4**	**-2.9**
KONO				pmax	pmax		
	comp=Z,26nm,0.5s						
KONO	**Kongsberg**	**17.28**	**330**	eP	**P**	**15 20 32.4**	**-2.9**
	comp=Z,26nm,0.5s						
EIL	**Elat**	**17.30**	**155**	eP	**P**	**15 20 35.3**	**-0.6**
	comp=Z,52nm,1.4s						
EIL	**Elat**	**17.30**	**155**	eP	**P**	**15 20 35.3**	**-0.6**
	comp=Z,52nm,1.4s						
CAF	**Calviac**	**17.31**	**276**	eP	**P**	**15 20 36.7**	**+0.9**
	comp=Z,49nm,1.1s						
CAF	**Calviac**	**17.31**	**276**	eP	**P**	**15 20 36.7**	**+0.9**
CAF				pmax	pmax		
	comp=Z,24nm,1.1s						
CAEH	**'Ain El Ouahch**	**17.35**	**246**	P	**P**	**15 20 36.0**	**-0.4**
EJON	**La Jonquera**	**17.39**	**268**	P	**P**	**15 20 37.1**	**+0.3**
	comp=Z,4.3nm,0.4s						
EJON	**La Jonquera**	**17.39**	**268**	P	**P**	**15 20 37.1**	**+0.4**
	comp=Z,4.3nm,0.4s,SNR=6.6						
FILF	**Fillols**	**17.58**	**268**	eP	**P**	**15 20 39.8**	**+0.7**
MTLF	**Montolieu**	**17.59**	**271**	eP	**P**	**15 20 39.1**	**0.0**
	comp=Z,16nm,0.7s						
MTLF	**Montolieu**	**17.59**	**271**	eP	**P**	**15 20 39.1**	**0.0**
MTLF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RJF	**Les Rejaudoux**	**17.62**	**278**	eP	**P**	**15 20 39.9**	**+0.4**
	comp=Z,44nm,0.9s						
RJF				eR			
	comp=Z,118nm,22.5s						
CKFL	**Kef-Lekhel**	**17.66**	**245**	P	**P**	**15 20 33.5**	**-6.6**
ALWS	**Ilw as Safayha**	**17.68**	**155**	P	**P**	**15 20 41.8**	**+1.5**
NAO01	**NORSAR Array S**	**17.76**	**334**	eP	**P**	**15 20 38.4**	**-2.6**
	comp=Z,1.4nm,0.3s						
NB2	**NORSAR Subarra**	**17.81**	**335**	P	**P**	**15 20 38.4**	**-3.2**
	comp=Z,32nm,0.8s,baz=145,slow=11						
NB2	**NORSAR Subarra**	**17.81**	**335**	P	**P**	**15 20 38.4**	**-3.2**
	baz=145,slow=12						
NOA	**NORSAR Array B**	**17.81**	**335**	P	**P**	**15 20 38.5**	**-3.1**
	comp=Z,3.6nm,0.3s,baz=146,slow=12,SNR=41						
JMOS	**Jabal al Moall**	**17.82**	**155**	P	**P**	**15 20 43.2**	**+1.2**
HAQS	**Haql**	**17.88**	**156**	P	**P**	**15 20 44.0**	**+1.4**
CASM	**Ain Smara**	**17.90**	**245**	P	**P**	**15 20 41.0**	**-1.8**
LPEF	**Le Peyrat**	**17.92**	**270**	eP	**P**	**15 20 42.9**	**-0.1**
CTEI	**Djebel Teioual**	**18.07**	**245**	P	**P**	**15 20 44.0**	**-0.7**
DFRA	**Djebel Bou Aff**	**18.12**	**247**	P	**P**	**15 20 46.0**	**+0.8**
LFF	**La Frestale**	**18.23**	**277**	eP	**P**	**15 20 46.3**	**-0.1**
	comp=Z,131nm,0.8s						
LFF	**La Frestale**	**18.23**	**277**	eP	**P**	**15 20 46.3**	**-0.1**
LFF				pmax	pmax		
	comp=Z,65nm,0.8s						
BLS5	**Blasjo**	**18.30**	**326**	eP	**P**	**15 20 46.0**	**-1.0**
	comp=Z,33nm,1.0s						
BLS5	**Blasjo**	**18.30**	**326**	eP	**P**	**15 20 46.0**	**-1.0**
BLS5				AMb	AMB	15 21 12.7	
	comp=Z,33nm,1.0s						
BLS5	**Blasjo**	**18.30**	**326**	eP	**P**	**15 20 46.0**	**-1.0**
	comp=Z,33nm,1.0s,SNR=53						
JMQS	**Jabal Moqyreh**	**18.32**	**154**	P	**P**	**15 20 48.9**	**+1.5**
TAYS	**Tayyib Ism**	**18.34**	**157**	P	**P**	**15 20 48.3**	**+0.6**
LDF	**La Druitiere**	**18.41**	**289**	eP	**P**	**15 20 46.0**	**-2.3**
	comp=Z,110nm,0.8s						
LDF	**La Druitiere**	**18.41**	**289**	eP	**P**	**15 20 46.0**	**-2.3**
LDF				pmax	pmax		
	comp=Z,55nm,0.8s						
ETOS	**Mallorca**	**18.48**	**260**	P	**P**	**15 20 50.3**	**+1.2**
	comp=Z,25nm,0.9s,SNR=7.6						
MLS	**Moulis**	**18.48**	**271**	eP	**P**	**15 20 48.0**	**-1.1**
UMAU	**Umeaa**	**18.50**	**352**	P	**P**	**15 20 46.9**	**-2.2**
BDAS	**Al Bad'**	**18.51**	**156**	P	**P**	**15 20 50.7**	**+1.1**
EMIR	**Miracle**	**18.52**	**267**	P	**P**	**15 20 51.0**	**+1.5**
	comp=Z,9.0nm,0.7s						
EMIR	**Miracle**	**18.52**	**267**	P	**P**	**15 20 51.0**	**+1.5**
	comp=Z,9.0nm,0.7s,SNR=5.0						
MFF	**Saint Martin d**	**18.57**	**282**	eP	**P**	**15 20 47.9**	**-2.1**
	comp=Z,106nm,1.0s						
MFF	**Saint Martin d**	**18.57**	**282**	eP	**P**	**15 20 47.9**	**-2.1**
MFF				pmax	pmax		
	comp=Z,53nm,1.0s						
SET	**Setif**	**18.63**	**247**	P	**P**	**15 20 52.0**	**+1.2**
FLN	**La Foliniere**	**18.65**	**289**	eP	**P**	**15 20 48.5**	**-2.3**
	comp=Z,173nm,1.0s						
FLN				eR			
	comp=Z,130nm,17.8s						
CMER	**Merouana**	**18.67**	**245**	P	**P**	**15 20 51.0**	**-0.2**
LCHF	**La Chataignera**	**18.97**	**283**	eP	**P**	**15 20 52.1**	**-2.2**
EPF	**Esparros**	**18.99**	**271**	eP	**P**	**15 20 54.1**	**-0.4**
	comp=Z,13nm,0.5s						
EPF	**Esparros**	**18.99**	**271**	eP	**P**	**15 20 54.1**	**-0.4**
EPF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
EPOB	**Poblet**	**19.04**	**266**	P	**P**	**15 20 53.8**	**-1.2**
	comp=Z,18nm,0.7s						
EPOB	**Poblet**	**19.04**	**266**	P	**P**	**15 20 53.8**	**-1.2**
	comp=Z,18nm,0.7s,SNR=15						
RESF	**Ens**	**19.06**	**271**	eP	**P**	**15 20 55.6**	**+0.4**
TBKS	**Tabuk**	**19.15**	**153**	P	**P**	**15 20 57.6**	**+1.3**
EBIE	**Bielsa**	**19.23**	**270**	P	**P**	**15 20 56.3**	**-0.8**
	comp=Z,20nm,0.4s						
EBIE	**Bielsa**	**19.23**	**270**	P	**P**	**15 20 56.3**	**-0.8**
	comp=Z,20nm,0.4s,SNR=22						
DOMB	**Dombas**	**19.24**	**334**	eP	**P**	**15 20 55.3**	**-1.8**
	comp=Z,76nm,1.1s						
DOMB	**Dombas**	**19.24**	**334**	eP	**P**	**15 20 55.3**	**-1.8**
DOMB				AMb	AMB	15 20 59.8	
	comp=Z,57nm,1.3s						
DOMB	**Dombas**	**19.24**	**334**	eP	**P**	**15 20 55.3**	**-1.7**
	comp=Z,57nm,1.3s,SNR=52						
RUND	**Rundenannen**	**19.36**	**327**	eP	**P**	**15 20 57.4**	**-0.8**
RUND				AMb	AMB	15 20 59.1	
	comp=Z,424nm,1.0s						
RUND	**Rundenannen**	**19.36**	**327**	eP	**P**	**15 20 57.4**	**-0.8**
	comp=Z,424nm,1.0s,SNR=52						
ETSF	**Etsaut**	**19.66**	**271**	eP	**P**	**15 21 00.5**	**-1.0**
	comp=Z,45nm,0.6s						
FDAF	**Les Forges d'A**	**19.69**	**271**	eP	**P**	**15 21 02.9**	**+1.1**
ERTA	**Horta de San J**	**19.71**	**265**	P	**P**	**15 21 02.8**	**+0.8**
	comp=Z,16nm,0.9s						
ERTA	**Horta de San J**	**19.71**	**265**	P	**P**	**15 21 02.8**	**+0.8**
	comp=Z,16nm,0.9s,SNR=8.8						
ABA	**Alger-Bouzarea**	**19.83**	**252**	P	**P**	**15 21 03.1**	**-0.2**
EIBI	**Ibiza**	**19.83**	**259**	P	**P**	**15 21 03.7**	**+0.4**
	comp=Z,30nm,0.7s						
EIBI	**Ibiza**	**19.83**	**259**	P	**P**	**15 21 03.7**	**+0.4**
	comp=Z,30nm,0.7s,SNR=12						
DBAS	**Duba**	**19.92**	**155**	P	**P**	**15 21 05.3**	**+1.1**
LARF	**Larrau**	**19.92**	**272**	eP	**P**	**15 21 04.1**	**-0.1**
TRON	**Trondheim**	**19.98**	**338**	eP	**P**	**15 21 02.6**	**-2.1**
ESAC	**San Caprasio**	**19.98**	**268**	P	**P**	**15 21 06.9**	**+2.1**
	comp=Z,19nm,0.4s,SNR=12						
SGMF	**Saint Gilles**	**20.05**	**288**	eP	**P**	**15 21 03.4**	**-2.0**
	comp=Z,34nm,0.8s						
SGMF	**Saint Gilles**	**20.05**	**288**	eP	**P**	**15 21 03.4**	**-2.0**
SGMF				pmax	pmax		
	comp=Z,17nm,0.8s						
SJPF	**Ste Jean**	**20.06**	**273**	eP	**P**	**15 21 05.7**	**+0.1**
	comp=Z,36nm,0.5s						
SJPF	**Ste Jean**	**20.06**	**273**	eP	**P**	**15 21 05.7**	**+0.1**
SJPF				pmax	pmax		
	comp=Z,18nm,0.5s						
MOL	**Molde**	**20.11**	**334**	eP	**P**	**15 21 06.9**	**+0.9**
	comp=Z,139nm,1.4s						
MOL	**Molde**	**20.11**	**334**	eP	**P**	**15 21 06.9**	**+0.9**
MOL				AMb	AMB	15 21 09.2	
	comp=Z,139nm,1.4s						
MOL	**Molde**	**20.11**	**334**	eP	**P**	**15 21 06.9**	**+1.0**
	comp=Z,139nm,1.4s,SNR=51						
HAE	**Alders End**	**20.14**	**299**	eP	**P**	**15 21 04.1**	**-2.2**
HAE				AMb	AMB	15 21 06.5	
	comp=Z,163nm,1.1s						
EMHD	**Djebel Mahouad**	**20.23**	**250**	P	**P**	**15 21 07.5**	**+0.2**
EALK	**Alkurruntz**	**20.23**	**273**	P	**P**	**15 21 08.1**	**+0.8**
	comp=Z,11nm,0.5s						
EALK	**Alkurruntz**	**20.23**	**273**	P	**P**	**15 21 08.1**	**+0.8**
	comp=Z,11nm,0.5s,SNR=8.5						
FOO	**Floro**	**20.25**	**329**	eP	**P**	**15 21 09.7**	**+2.3**
	comp=Z,62nm,1.5s						
FOO	**Floro**	**20.25**	**329**	eP	**P**	**15 21 09.7**	**+2.3**
FOO				AMb	AMB	15 21 12.1	
	comp=Z,62nm,1.5s						
FOO	**Floro**	**20.25**	**329**	eP	**P**	**15 21 09.7**	**+2.3**
	comp=Z,62nm,1.5s,SNR=51						
HGH	**Gray Hill**	**20.25**	**298**	eP	**P**	**15 21 05.7**	**-1.8**
HGH				AMb	AMB	15 21 08.5	
	comp=Z,187nm,1.6s						
ELIZ	**Elizondo**	**20.26**	**273**	P	**P**	**15 21 09.6**	**+2.0**
ELIZ				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ELIZ	**Elizondo**	**20.26**	**273**	P	**P**	**15 21 09.6**	**+1.9**
	comp=Z,3.8nm,0.4s						
ELIZ	**Elizondo**	**20.26**	**273**	P	**P**	**15 21 09.6**	**+2.0**
	comp=Z,3.8nm,0.4s,SNR=7.6						
HLM1	**Long Mynd**	**20.40**	**300**	eP	**P**	**15 21 07.4**	**-1.6**
HLM1				AMb	AMB	15 21 10.9	
	comp=Z,91nm,1.2s						
MCH1	**Michaelchurch**	**20.41**	**299**	eP	**P**	**15 21 07.5**	**-1.6**
QUIF	**Quistinic**	**20.48**	**287**	eP	**P**	**15 21 07.2**	**-2.6**
	comp=Z,40nm,0.8s						
QUIF	**Quistinic**	**20.48**	**287**	eP	**P**	**15 21 07.2**	**-2.6**
QUIF				pmax	pmax		
	comp=Z,20nm,0.8s						
EMOS	**Mosqueruela**	**20.50**	**265**	P	**P**	**15 21 12.0**	**+1.9**
	comp=Z,24nm,0.6s,SNR=38						
ROSF	**Rostrenen**	**20.52**	**288**	eP	**P**	**15 21 07.6**	**-2.6**
	comp=Z,22nm,0.8s						
ROSF	**Rostrenen**	**20.52**	**288**	eP	**P**	**15 21 07.6**	**-2.6**
ROSF				pmax	pmax		
	comp=Z,11nm,0.8s						
NSS	**Namsos**	**20.53**	**342**	eP	**P**	**15 21 07.4**	**-2.7**
	comp=Z,179nm,1.2s						
NSS	**Namsos**	**20.53**	**342**	eP	**P**	**15 21 07.4**	**-2.7**
NSS				AMb	AMB	15 21 34.7	
	comp=Z,179nm,1.2s						
SSP1	**Stoney Pound**	**20.53**	**300**	⇑eP	**P**	**15 21 08.7**	**-1.6**
HTR	**Trewern Hill**	**20.59**	**299**	eP	**P**	**15 21 09.2**	**-1.7**
HTR				AMb	AMB	15 21 11.8	
	comp=Z,37nm,1.4s						
SBD1	**Bryn Du**	**20.68**	**301**	eP	**P**	**15 21 10.2**	**-1.7**
RORSS	**Ber_school_1**	**20.98**	**341**	eP	**P**	**15 21 13.4**	**-1.3**
RORSS				epP		15 21 39.3	
EBEN	**Beniarda**	**21.06**	**260**	P	**P**	**15 21 17.8**	**+2.1**
	comp=Z,25nm,0.6s,mb4.7,SNR=13						
EKA	**Eskdalemuir Ar**	**21.11**	**308**	P	**P**	**15 21 14.9**	**-1.1**
	comp=Z,15nm,0.6s,mb4.5,baz=99,slow=11,SNR=77						
ECRI	**Cripan**	**21.11**	**272**	P	**P**	**15 21 16.1**	**-0.1**
ECRI				pmax	pmax		
	comp=Z,39nm,0.7s,mb4.8						
ECRI	**Cripan**	**21.11**	**272**	P	**P**	**15 21 16.1**	**-0.1**
	comp=Z,39nm,0.7s,mb4.8						
ECRI	**Cripan**	**21.11**	**272**	P	**P**	**15 21 16.1**	**-0.1**
	comp=Z,39nm,0.7s,mb4.9,SNR=7.9						
WPM1	**Penmaenmawr**	**21.12**	**302**	eP	**P**	**15 21 15.2**	**-1.0**
WPM1				AMb	AMB	15 21 18.5	
	comp=Z,180nm,1.3s,mb5.2						
EBNR	**Beni Rached**	**21.12**	**252**	P	**P**	**15 21 18.0**	**+1.7**
ESK	**Eskdalemuir**	**21.13**	**308**	eP	**P**	**15 21 15.4**	**-0.8**
ESK				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.5						
ESK	**Eskdalemuir**	**21.13**	**308**	eP	**P**	**15 21 15.4**	**-0.8**
	comp=Z,18nm,0.8s,mb4.5						
ESK	**Eskdalemuir**	**21.13**	**308**	eP	**P**	**15 21 15.4**	**-0.8**
	comp=Z,18nm,0.8s,mb4.5						
YLL	**Llanberis**	**21.26**	**302**	eP	**P**	**15 21 16.4**	**-1.1**
ECHA	**Ech Chlef**	**21.31**	**252**	P	**P**	**15 21 19.0**	**+0.9**
ECHF	**Ech Chlef**	**21.32**	**252**	P	**P**	**15 21 19.0**	**+0.7**
WME	**Myndd Eilian**	**21.38**	**302**	eP	**P**	**15 21 17.6**	**-1.1**
YRE	**Yr Eifl**	**21.39**	**301**	eP	**P**	**15 21 17.7**	**-1.1**
YRE				AMb	AMB	15 21 20.6	
	comp=Z,69nm,1.3s,mb4.8						
WLF1	**Llynfaes**	**21.41**	**302**	eP	**P**	**15 21 18.1**	**-1.0**
WLF1				AMb	AMB	15 21 21.9	
	comp=Z,56nm,1.6s,mb4.7						
YRC	**Rhoscolyn**	**21.52**	**302**	eP	**P**	**15 21 18.9**	**-1.1**
WCB1	**Church Bay**	**21.52**	**302**	eP	**P**	**15 21 18.9**	**-1.1**
WCB1				AMb	AMB	15 21 23.0	
	comp=Z,76nm,1.8s,mb4.8						
MOR8	**Moi Rana**	**21.52**	**346**	eP	**P**	**15 21 20.5**	**+0.4**
	comp=Z,89nm,1.5s,mb5.0						
MOR8	**Moi Rana**	**21.52**	**346**	eP	**P**	**15 21 20.5**	**+0.4**
MOR8				AMb	AMB	15 21 23.4	
	comp=Z,64nm,0.8s,mb5.1						
MOR8	**Moi Rana**	**21.52**	**346**	eP	**P**	**15 21 20.5**	**+0.5**
	comp=Z,64nm,0.8s,mb5.1,SNR=50						
ELAN	**Lanestosa**	**21.57**	**274**	P	**P**	**15 21 21.1**	**+0.4**
	comp=Z,73nm,0.6s,mb5.3						
ELAN	**Lanestosa**	**21.57**	**274**	P	**P**	**15 21 21.0**	**+0.3**
	comp=Z,73nm,0.6s,mb5.3						
MME1	**Meikle Cairn**	**21.59**	**313**	eP	**P**	**15 21 20.1**	**-0.7**
EANR	**'Ain N'Sour**	**21.60**	**252**	P	**P**	**15 21 21.2**	**+0.2**
WIM	**Isle of Man**	**21.71**	**304**	eP	**P**	**15 21 21.3**	**-0.7**
WIM				AMb	AMB	15 21 24.8	
	comp=Z,123nm,2.0s,mb5.0						
ETRT	**Tiaret**	**21.79**	**251**	P	**P**	**15 21 23.0**	**+0.1**
MCD	**Coleburn Disti**	**21.83**	**314**	eP	**P**	**15 21 22.6**	**-0.5**
GAL1	**Galloway**	**21.87**	**306**	P	**P**	**15 21 22.7**	**-0.8**
GAL1	**Galloway**	**21.87**	**306**	eP	**P**	**15 21 22.4**	**-1.1**
GAL1				eP		15 21 22.7	
HILS	**Ha'il**	**21.91**	**142**	P	**P**	**15 21 25.8**	**+1.7**
STOK	**Stokkvaagen**	**21.91**	**345**	eP	**P**	**15 21 23.8**	**0.0**
	comp=Z,225nm,1.1s,mb5.5						
STOK	**Stokkvaagen**	**21.91**	**345**	eP	**P**	**15 21 23.8**	**0.0**
STOK				epP		15 21 49.1	
STOK				AMb	AMB	15 21 53.0	
	comp=Z,225nm,1.1s,mb5.5						
ETOB	**Tobarra**	**22.01**	**261**	P	**P**	**15 21 26.6**	**+1.6**
	comp=Z,9.5nm,0.7s,mb4.3						
ETOB	**Tobarra**	**22.01**	**261**	P	**P**	**15 21 26.6**	**+1.6**
	comp=Z,9.5nm,0.7s,mb4.3,SNR=8.1						
MLA1	**Latheron**	**22.14**	**315**	eP	**P**	**15 21 25.7**	**-0.4**
CART	**Cartagena**	**22.14**	**258**	eP	**P**	**15 21 26.2**	**-0.2**
	comp=Z,14nm,0.6s,mb4.6						
CART	**Cartagena**	**22.14**	**258**	eP	**P**	**15 21 26.2**	**-0.1**
	comp=Z,14nm,0.6s,mb4.6						
APA	**Apatity**	**22.17**	**7**	⇑iP	**P**	**15 21 27.2**	**+0.8**
APA				i S	**S**	**15 25 22.8**	**+6.2**
APA				pmax	pmax		
	comp=Z,200nm,1.2s,mb5.4						
APA	**Apatity**	**22.17**	**7**	i P	**P**	**15 21 27.2**	**+0.8**
	comp=Z,200nm,1.2s,mb5.4						
EMUR	**La Murta**	**22.18**	**259**	P	**P**	**15 21 27.2**	**+0.5**
	comp=Z,18nm,0.9s,mb4.5,SNR=9.8						
MELSS	**Ber_school_2**	**22.27**	**346**	eP	**P**	**15 21 28.0**	**+0.7**
MELSS				epP		15 21 53.5	
MDO	**Dochfour**	**22.35**	**313**	eP	**P**	**15 21 27.6**	**-0.5**
MVH1	**Achvaich**	**22.41**	**314**	eP	**P**	**15 21 28.2**	**-0.6**
GMK	**Mull of Kintyr**	**22.46**	**307**	eP	**P**	**15 21 28.9**	**-0.4**
ARU	**Arti**	**22.50**	**50**	⇑iP	**P**	**15 21 29.8**	**+0.2**
ARU				ePPP	PPP	15 22 01.0	-14
ARU				i S	**S**	**15 25 27.3**	**+5.1**
ARU				eSSS	SSS	15 26 18.4	-19
ARU				pmax	pmax		
	comp=Z,86nm,0.7s,mb5.3						
ARU	**Arti**	**22.50**	**50**	eP	**P**	**15 21 29.6**	**0.0**
	comp=Z,86nm,0.6s,mb5.4						
ARU	**Arti**	**22.50**	**50**	i P	**P**	**15 21 29.8**	**+0.2**
	comp=Z,86nm,0.7s,mb5.3						
AB31	**Akbulak array**	**22.64**	**69**	P	**P**	**15 21 32.0**	**+1.0**
AB31				i S	**S**	**15 25 30.1**	**+5.3**
AB31				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.7						
AB31				smax			
	comp=N,61nm,1.2s						
AB31	**Akbulak array**	**22.64**	**69**	P	**P**	**15 21 32.0**	**+1.0**
	comp=N,14nm,0.5s,mb4.7						
SOKR	**Solikamsk**	**22.66**	**42**	⇓iP	**P**	**15 21 31.2**	**+0.1**
SOKR				i S	**S**	**15 25 26.9**	**+1.9**
SOKR				pmax	pmax		
	comp=Z,50nm,1.2s,mb4.8						
SOKR				MLR	MLR		
	comp=Z,100nm,21.0s						
SOKR	**Solikamsk**	**22.66**	**42**	i P	**P**	**15 21 31.2**	**+0.1**
	comp=Z,50nm,1.2s,mb4.8						
EVIA	**Vianos**	**22.67**	**262**	P	**P**	**15 21 32.1**	**+0.7**
EVIA				pmax	pmax		
	comp=Z,27nm,0.6s,mb4.8						
EVIA	**Vianos**	**22.67**	**262**	P	**P**	**15 21 32.1**	**+0.7**
	comp=Z,27nm,0.6s,mb4.8						
EVIA	**Vianos**	**22.67**	**262**	P	**P**	**15 21 32.1**	**+0.7**
	comp=Z,27nm,0.6s,mb4.8,SNR=18						
DLF	**Lyons Farm**	**22.69**	**302**	eP	**P**	**15 21 31.1**	**-0.3**
GCL	**Cushendall**	**22.71**	**306**	eP	**P**	**15 21 31.4**	**-0.2**
EARI	**Arriondas**	**22.79**	**275**	P	**P**	**15 21 32.4**	**-0.1**
	comp=Z,37nm,0.6s,mb5.0						
EARI	**Arriondas**	**22.79**	**275**	P	**P**	**15 21 32.4**	**-0.1**
	comp=Z,37nm,0.6s,mb5.0,SNR=43						
KSB	**Sheil Bridge**	**22.83**	**312**	eP	**P**	**15 21 31.8**	**-0.9**
KAC	**Achnashellach**	**22.84**	**313**	eP	**P**	**15 21 32.4**	**-0.5**
KAR1	**Arisaig**	**22.96**	**311**	eP	**P**	**15 21 33.5**	**-0.5**
REB	**Eisghbrachaidh**	**23.03**	**314**	eP	**P**	**15 21 34.3**	**-0.4**
UMR	**Umm Al-Rimmam**	**23.10**	**127**	eP	**P**	**15 21 38.4**	**+2.8**
RRR	**Rubha Reidh**	**23.21**	**313**	eP	**P**	**15 21 35.8**	**-0.6**
ESDC	**Sonseca Array**	**23.23**	**266**	P	**P**	**15 21 35.2**	**-1.6**
	comp=Z,5.5nm,0.5s,mb4.2,baz=65,slow=9.4,SNR=46						
ESDC	**Sonseca Array**	**23.23**	**266**	P	**P**	**15 21 35.9**	**-0.9**
	comp=Z,3.7nm,0.3s,mb4.3						
ESDC	**Sonseca Array**	**23.23**	**266**	P	**P**	**15 21 35.9**	**-0.9**
	comp=Z,3.7nm,0.2s,mb4.4,SNR=7.9						
ESLA	**Sonseca Array**	**23.23**	**266**	eP	**P**	**15 21 35.6**	**-1.2**
	comp=Z,1.3nm,0.6s						
ESLA	**Sonseca Array**	**23.23**	**266**	eP	**P**	**15 21 35.6**	**-1.2**
	comp=Z,1.3nm,0.6s						
ENIJ	**Nijar**	**23.28**	**258**	P	**P**	**15 21 38.4**	**+1.1**
ENIJ				pmax	pmax		
	comp=Z,21nm,0.6s,mb4.7						
ENIJ	**Nijar**	**23.28**	**258**	P	**P**	**15 21 38.4**	**+1.0**
	comp=Z,21nm,0.6s,mb4.8						
ENIJ	**Nijar**	**23.28**	**258**	P	**P**	**15 21 38.3**	**+1.0**
	comp=Z,21nm,0.6s,mb4.8						
KBD	**Kabd**	**23.38**	**128**	eP	**P**	**15 21 41.2**	**+2.9**
EQES	**Quesada**	**23.46**	**261**	P	**P**	**15 21 40.5**	**+1.5**
	comp=Z,14nm,0.8s,mb4.5						
EQES	**Quesada**	**23.46**	**261**	P	**P**	**15 21 40.5**	**+1.5**
	comp=Z,14nm,0.8s,mb4.5,SNR=7.9						
LOF	**Lofoten**	**23.46**	**348**	eP	**P**	**15 21 40.0**	**+1.3**
	comp=Z,128nm,2.2s,mb5.0						
LOF	**Lofoten**	**23.46**	**348**	eP	**P**	**15 21 40.0**	**+1.3**
LOF				epP		15 22 04.6	
LOF				AMb	AMB	15 22 11.2	
	comp=Z,128nm,2.2s,mb5.0						
LOF	**Lofoten**	**23.46**	**348**	eP	**P**	**15 21 40.0**	**+1.2**
	SNR=42						
LOF				epP		15 22 04.6	
	SNR=129						
RDF	**Al-Radifah**	**23.49**	**128**	eP	**P**	**15 21 41.6**	**+2.2**
RRH	**Rhenigidale**	**23.68**	**313**	eP	**P**	**15 21 39.6**	**-1.3**
SVE	**Sverdlovsk**	**23.71**	**50**	⇑iP	**P**	**15 21 42.0**	**+0.8**
SVE				e		15 22 07.8	
SVE				e		15 22 22.0	
SVE				pmax	pmax		
	comp=Z,180nm,2.0s,mb5.2						
SVE				MLR	MLR		
	comp=N,100nm,12.0s						
SVE				MLR	MLR		
	comp=E,100nm,12.0s						
SVE				MLR	MLR		
	comp=Z,100nm,12.0s						
SVE	**Sverdlovsk**	**23.71**	**50**	i P	**P**	**15 21 42.0**	**+0.8**
	comp=Z,180nm,2.0s,mb5.2						
ARSS	**Ar Rass**	**23.84**	**141**	P	**P**	**15 21 45.5**	**+2.6**
ARCES	**ARCESS Array B**	**23.87**	**359**	P	**P**	**15 21 42.1**	**-0.5**
	comp=Z,37nm,0.6s,mb5.1,baz=176,slow=9.1,SNR=308						
ARCES				pP		15 22 08.4	
	comp=Z,37nm,0.7s,baz=180,slow=12,SNR=6.7						
ARE0	**ARCESS Array S**	**23.87**	**359**	eP	**P**	**15 21 42.1**	**-0.6**
ARE0				epP		15 22 08.3	
KEV	**Kevo**	**24.09**	**0**	ep	**P**	**15 21 44.2**	**-0.5**
EPON	**Pontenova**	**24.13**	**276**	P	**P**	**15 21 44.0**	**-1.4**
	comp=Z,36nm,0.6s,mb5.1						
EPON	**Pontenova**	**24.13**	**276**	P	**P**	**15 21 44.0**	**-1.4**
	comp=Z,36nm,0.6s,mb5.1,SNR=13						
TRO	**Tromso**	**24.28**	**353**	eP	**P**	**15 21 45.2**	**-1.4**
	comp=Z,197nm,1.5s,mb5.4						

TRO	Tromso	24.28	353	*e*P	P	15 21 45.2	-1.4
TRO				AMb	AMB	15 22 14.7	
	comp=Z,197nm,1.5s,mb5.4						
TRO				*e*S	S	15 25 57.2	+4.8
TRO	Tromso	24.28	353	*e*P	P	15 21 45.2	-1.3
	comp=Z,197nm,1.5s,mb5.4,SNR=41						
ECAL	Calabor	24.30	273	P	P	15 21 45.6	-1.4
	comp=Z,34nm,0.7s,mb5.0						
ECAL	Calabor	24.30	273	P	P	15 21 45.6	-1.4
	comp=Z,34nm,0.7s,mb5.0,SNR=12						
EADA	Adamuz	24.33	263	P	P	15 21 48.0	+0.6
	comp=Z,4.8nm,0.7s,mb4.1						
EADA	Adamuz	24.33	263	P	P	15 21 48.0	+0.6
	comp=Z,4.8nm,0.7s,mb4.2,SNR=6.1						
ERON	Agron	24.36	260	P	P	15 21 48.1	+0.5
	comp=Z,11nm,0.7s,mb4.5						
ERON	Agron	24.36	260	P	P	15 21 48.1	+0.5
	comp=Z,11nm,0.7s,mb4.5,SNR=6.8						
ELUQ	Luque	24.41	261	P	P	15 21 46.6	-1.5
ELUQ				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.4						
ELUQ	Luque	24.41	261	P	P	15 21 46.6	-1.5
	comp=Z,12nm,0.9s,mb4.4						
ELUQ	Luque	24.41	261	P	P	15 21 46.6	-1.5
	comp=Z,12nm,0.9s,mb4.4,SNR=7.9						
ERUA	La Rua	24.43	274	P	P	15 21 46.9	-1.3
ERUA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.5						
ERUA	La Rua	24.43	274	P	P	15 21 46.9	-1.3
	comp=Z,8.7nm,0.6s,mb4.5,SNR=7.0						
ELOJ	Sierra Loja	24.53	260	P	P	15 21 48.8	-0.5
ELOJ				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
ELOJ	Sierra Loja	24.53	260	P	P	15 21 48.8	-0.5
	comp=Z,2.4nm,0.4s,mb4.1						
ELOJ	Sierra Loja	24.53	260	P	P	15 21 48.8	-0.5
	comp=Z,2.4nm,0.4s,mb4.1,SNR=8.9						
ECAB	El Cabril	24.96	264	P	P	15 21 52.2	-1.2
	comp=Z,9.8nm,0.7s,mb4.5						
ECAB	El Cabril	24.96	264	P	P	15 21 52.2	-1.1
	comp=Z,9.8nm,0.7s,mb4.5,SNR=11						
PVRL	Vila Real	25.22	272	*e*P	P	15 21 53.9	-1.8
	comp=Z,25nm,0.8s,mb4.8						
STS	Santiago	25.25	276	P	P	15 21 56.1	+0.2
STS				pmax	pmax		
	comp=Z,23nm,0.7s,mb4.8						
STS	Santiago	25.25	276	P	P	15 21 56.1	+0.1
	comp=Z,22nm,0.7s,mb4.8						
STS	Santiago	25.25	276	P	P	15 21 56.1	+0.2
	comp=Z,22nm,0.7s,mb4.8,SNR=11						
ELOB	Lobios	25.25	274	P	P	15 21 54.3	-1.7
	comp=Z,9.9nm,0.6s,mb4.5						
EMIJ	Mijas	25.26	260	P	P	15 21 54.7	-1.5
	comp=Z,15nm,0.7s,mb4.6						
EMIJ	Mijas	25.26	260	P	P	15 21 54.7	-1.4
	comp=Z,15nm,0.7s,mb4.6,SNR=6.4						
MTE	Manteigas	25.44	270	*e*P	P	15 21 56.2	-1.6
	comp=Z,43nm,0.9s,mb5.0						
MTE	Manteigas	25.44	270	*e*P	P	15 21 55.9	-1.9
	comp=Z,32nm,0.9s,mb4.8						
MTE				*e*pP	pP	15 22 27.0	+0.7
EMAZ	Mazaricos	25.52	277	P	P	15 21 56.6	-1.9
	comp=Z,79nm,0.6s,mb5.5						
PVIS	Viseu	25.56	271	*e*P	P	15 21 57.2	-1.7
	comp=Z,33nm,1.2s,mb4.8						
ESPR	Espera	25.85	262	P	P	15 22 00.9	-0.8
	comp=Z,7.6nm,0.7s,mb4.4						
ESPR	Espera	25.85	262	P	P	15 22 00.9	-0.7
	comp=Z,7.6nm,0.7s,mb4.4,SNR=4.6						
MZLS	Mizel	26.34	139	P	P	15 22 08.5	+2.3
EVO	Evora	26.56	267	*e*P	P	15 22 05.8	-2.3
	comp=Z,8.6nm,0.6s,mb4.2						
PBEJ	Beja	26.69	266	*e*P	P	15 22 08.0	-1.3
ZRNK	Zerenda	28.16	60	*e*P	P	15 22 22.4	-0.1
ZRNK				*e**PP	pP	15 22 52.6	+1.0
BLJS	Baljurashi	28.57	150	P	P	15 22 27.8	+1.3
BVA0	Borovoye Array	29.00	59	P	P	15 22 30.1	+0.2
BVA0				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
BVAR	Borovoye Array	29.00	59	P	P	15 22 30.3	+0.4
	comp=Z,19nm,0.5s,mb5.0,baz=280,slow=8.3,SNR=120						
VOSK	Vostochnaya	29.38	60	P	P	15 22 33.0	-0.3
VOSK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
BANOM	Banah	30.84	120	⇓P	P	15 22 46.4	-0.2
	SNR=14						
KKAR	Karatay Array	31.13	79	*e*P	P	15 22 49.6	+0.7
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb4.8						
DJNS	Zahran al Janu	31.28	148	P	P	15 22 52.8	+2.4
ASHO	Ashiyiah	31.61	122	P	P	15 22 52.5	-0.8
	SNR=25						
ARQ	Araqi	32.91	123	⇓P	P	15 23 04.5	0.0
	SNR=8.2						
HOQ	Hoqain	33.19	121	⇑P	P	15 23 06.4	-0.6
	SNR=6.8						
EKS2	Erkin-Say	33.53	78	P	P	15 23 11.7	+2.1
	SNR=9.0						
AML	Almayashu	33.67	79	P	P	15 23 13.2	+2.4
	SNR=11						
BIDO	Bidbid	33.73	120	P	P	15 23 11.7	+0.2
	SNR=12						
BSY	Bisya	33.76	122	P	P	15 23 11.6	-0.2
	SNR=9.1						
KBS	Kingsbay	33.77	355	*e*P	P	15 23 11.0	-0.4
KBS				*e**PP	pP	15 23 40.6	-0.9
KBS				pmax	pmax		
	comp=Z,70nm,0.6s,mb5.6						
KBS	Kingsbay	33.77	355	*e*P	P	15 23 11.0	-0.4
	comp=Z,70nm,0.6s,mb5.6						
KBS				*e*pP	pP	15 23 40.6	-0.9
KBS	Kingsbay	33.77	355	*e*P	P	15 23 11.2	-0.2
USP	Ospenovka	33.80	77	P	P	15 23 13.5	+1.5
	SNR=7.3						
AAK	Ala-Archa	34.03	78	P	P	15 23 15.8	+1.9
	SNR=30						
AAK	Ala-Archa	34.03	78	*e*P	P	15 23 14.5	+0.6
AAK				*e**PP	pP	15 23 44.3	+0.2
AAK				pmax	pmax		
	comp=Z,55nm,0.7s,mb5.4						
AAK	Ala-Archa	34.03	78	*e*P	P	15 23 14.4	+0.5
	comp=Z,55nm,0.7s,mb5.4						
AAK				*e*pP	pP	15 23 44.3	+0.2
AAK	Ala-Archa	34.03	78	*e*P	P	15 23 14.5	+0.6
	comp=Z,55nm,0.7s,mb5.4						
FRU	Bishkek	34.04	77	⇓*i*P	P	15 23 16.0	+2.0
FRU				pmax	pmax		
	comp=Z,110nm,2.0s,mb5.2						
FRU	Bishkek	34.04	77	*i* P	P	15 23 16.0	+2.0
	comp=Z,110nm,2.0s,mb5.2						
SCO	Scoresbysund	34.12	333	*i* P	P	15 23 15.0	+0.6
SCO				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
SCO	Scoresbysund	34.12	333	*i* P	P	15 23 15.0	+0.6
	comp=Z,10nm,0.7s,mb4.7						
UCH	Uchtor	34.20	78	P	P	15 23 17.4	+2.0
	SNR=30						
KBK	Karagaybulak	34.33	77	P	P	15 23 18.7	+2.2
	SNR=16						
JMDO	Jabal Madar	34.58	122	P	P	15 23 19.1	+0.3
	SNR=11						
TKM2	Tokmak 2	34.67	77	P	P	15 23 21.0	+1.6
	SNR=27						
KZA	Kyzart	34.76	78	P	P	15 23 22.5	+2.4
	SNR=44						
ULHL	Ulahol	35.37	77	P	P	15 23 27.0	+1.7
	SNR=18						
WHFO	Wadi Hawf	35.72	132	⇓P	P	15 23 28.7	+0.2
	SNR=9.7						
ABTO	Aybut	35.94	133	P	P	15 23 31.0	+0.6
	SNR=9.3						
DAG	Danmarks Havn	36.10	344	⇑*i*P	P	15 23 31.2	+0.1
DAG				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.8						
DAG	Danmarks Havn	36.10	344	⇑*i*P	P	15 23 31.2	+0.1
	comp=Z,18nm,0.7s,mb4.8						
RBK	Rabkut	36.29	132	P	P	15 23 33.8	+0.5
	SNR=7.0						
KSH	Kashi	36.33	82	⇑*i*P	P	15 23 35.3	+2.0
KSH				AP	pP	15 24 04.0	+0.2
KSH				XP	sP	15 24 18.8	-1.2
KSH				PP	PP	15 25 01.3	+0.8
KSH				S	S	15 29 04.4	+1.0
KSH				SCS	ScS	15 33 36.5	+3.7
KSH				AMB	AMB		
	comp=Z,220nm,1.7s,mb5.5						
KSH				LR	LR		
	comp=N,510nm,4.9s						
KSH				LR	LR		
	comp=E,600nm,6.6s						
NVS	Novosibirsk	36.34	55	⇑*i*P	P	15 23 33.2	-0.1
NVS				*i* *PP	pP	15 24 03.6	-0.2
NVS				*e*		15 24 57.8	
NVS				*e*PPP	PPP	15 25 18.0	-4.2
NVS				*e*S	S	15 29 02.7	-0.8
NVS				*e*SSS	SSS	15 31 36.6	-35
NVS				pmax	pmax		
	comp=Z,88nm,0.9s,mb5.4						
NVS				pmax	pmax		
	comp=E,35nm,0.8s						
NVS				pmax	pmax		
	comp=E,16nm,1.5s						
NVS				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.6						
NVS				smax			
	comp=N,12nm,1.5s						
NVS	Novosibirsk	36.34	55	*i* P	P	15 23 33.2	-0.1
	comp=N,88nm,0.9s,mb5.4						
ZAL	Zalesovo	37.41	56	P	P	15 23 43.3	+1.0
	comp=N,54nm,0.5s,mb5.5,baz=182,slow=6.6,SNR=200						
ZAL				pP	pP	15 24 13.4	+0.6
	comp=N,10nm,0.8s,baz=193,slow=9.3,SNR=3.4						
MKAR	Makanchi Array	37.78	68	P	P	15 23 46.2	+0.7
	comp=N,36nm,0.4s,mb5.3,baz=272,slow=8.3,SNR=626						
MKAR				pP	pP	15 24 16.3	+0.2
	comp=N,7.9nm,0.7s,baz=280,slow=7.4,SNR=3.7						
SUMG	Summit	39.70	335	*e*P	P	15 24 01.6	+0.5
	comp=N,18nm,1.1s,mb4.6						
SUMG				*e*pP	pP	15 24 34.2	+2.3
SUMG				*e*PcP	PcP	15 26 04.8	-0.9
WMQ	Urumqi	42.43	70	P	P	15 24 26.4	+2.7
WMQ				AP	pP	15 24 54.9	+0.2
WMQ				XP	sP	15 25 09.5	-1.3
WMQ				PP	PP	15 26 09.5	+3.0
WMQ				PPP	PPP	15 26 46.3	+3.5
WMQ				*e*S	S	15 30 38.6	+4.2
WMQ				SCS	ScS	15 34 12.4	+4.1
WMQ				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,290nm,5.2s						
WMQ				LR	LR		
	comp=E,100nm,18.0s						
WMQ				LR	LR		
	comp=Z,140nm,22.4s						
NDI	New Delhi	42.95	95	*e*P	P	15 24 28.0	-0.2
LGTI	Lohaghat	44.61	92	*e*P	P	15 24 41.5	0.0
MBAR	Mbarara	46.28	174	*e*P	P	15 24 52.5	-2.4
MBAR				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
MBAR	Mbarara	46.28	174	*e*P	P	15 24 52.5	-2.4
	comp=Z,6.3nm,0.8s,mb4.3						
MBAR				*e*		15 25 16.9	
BHPL	Bhopal	46.55	101	*e*P	P	15 24 57.2	+0.3
BHPL				AMb	AMB	15 24 59.3	
	comp=Z,53nm,1.8s,mb4.9						
BHPL				*e*x	x	15 30 41.9	
MOY	Mondy	47.44	54	*e*P	P	15 25 05.1	+1.7
MOY				pmax	pmax		
	comp=Z,34nm,1.5s,mb4.8						
DBIC	Dimbokro	47.52	225	P	P	15 25 02.5	-2.0
	comp=Z,10nm,0.4s,mb4.8,baz=11,slow=9.0,SNR=43						
KOLN	Koldanda	47.97	92	*e*P	P	15 25 08.6	+0.7
	comp=Z,145nm,1.0s,mb5.6						
GKN	Gorkha	48.55	91	*e*P	P	15 25 12.8	+0.4
	comp=Z,229nm,0.7s,mb5.9						
TLY	Talaya	48.94	54	*e*P	P	15 25 16.3	+1.3
TLY				*e*	pP	15 25 48.6	+1.9
TLY				*e*		15 26 00.6	
TLY				*e*		15 27 11.4	
TLY				*e*S	S	15 32 03.1	-3.9
TLY				*e*		15 33 05.6	
TLY				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.2						
TLY				MLR	MLR		
	comp=Z,30nm,9.0s						
TLY	Talaya	48.94	54	*e*P	P	15 25 16.1	+1.0
	comp=Z,51nm,0.8s,mb5.2						
TLY				*e*pP	pP	15 25 47.6	+0.9
TLY				*e*sP	sP	15 25 59.8	-2.2
DMN	Daman	49.12	91	*e*P	P	15 25 17.4	+0.6
	comp=Z,91nm,0.6s,mb5.6						
KKN	Kakani	49.13	90	*e*P	P	15 25 17.1	+0.2
	comp=Z,127nm,0.6s,mb5.8						
KKN	Kakani	49.13	90	*e*P	P	15 25 17.1	+0.2
KKN				pmax	pmax		
	comp=Z,63nm,0.6s,mb5.4						
ZAK	Zakamensk	49.29	55	*e*P	P	15 25 19.0	+1.2
ZAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.6						
PKI	Pulchoki	49.36	90	*e*P	P	15 25 19.0	+0.4
	comp=Z,60nm,0.8s,mb5.3						
PKI	Pulchoki	49.36	90	*e*P	P	15 25 19.0	+0.4
PKI				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.0						
GUN	Gumba	49.48	90	*e*P	P	15 25 20.1	+0.6
	comp=Z,95nm,0.6s,mb5.6						
BLSP	Bilaspur	50.54	98	*e*P	P	15 25 26.7	-0.9
BLSP				AMb	AMB	15 25 28.4	
	comp=Z,43nm,1.5s,mb4.9						
TIXI	Tiksi	50.94	24*c*	*i*P	P	15 25 30.0	0.0
TIXI				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,200nm,15.0s						
BOD	Bodaibo	51.65	43	⇑*i*P	P	15 25 34.6	-1.0
BOD				pmax	pmax		
	comp=Z,30nm,1.3s,mb4.8						
LSA	Lhasa	52.09	84	P	P	15 25 40.5	+1.3
LSA	Lhasa	52.09	84	*e*P	P	15 25 40.4	+1.2
LSA				*e**PP	pP	15 26 11.8	+0.6
LSA				pmax	pmax		
	comp=Z,121nm,1.1s,mb5.4						
LSA	Lhasa	52.09	84	*e*P	P	15 25 40.4	+1.2
	comp=Z,122nm,1.1s,mb5.4						
LSA				*e*pP	pP	15 26 11.8	+0.6
SONM	Songino Array	52.29	57	P	P	15 25 41.0	+0.6
	comp=Z,34nm,0.6s,mb5.1,baz=296,slow=8.5,SNR=192						
SONM				pP	pP	15 26 11.7	-0.8
	comp=Z,7.5nm,0.9s,baz=293,slow=7.1,SNR=3.2						
SONM				sP	sP	15 26 26.9	-0.8
	comp=Z,12nm,0.9s,baz=293,slow=9.4,SNR=4.3						
SONM				PcP	PcP	15 26 49.4	-0.4
	comp=Z,3.8nm,0.5s,baz=266,slow=3.2,SNR=5.7						
GTA	Gaotai	52.50	69	⇓*i*P	P	15 25 43.3	+1.1
GTA				AP	pP	15 26 14.6	+0.4
GTA				XP	sP	15 26 29.9	+0.5
GTA				PCP	PcP	15 26 51.3	+0.5
GTA				SCP		15 30 36.0	
GTA				PCS		15 30 48.1	
GTA				S	S	15 33 01.4	+5.2
GTA				SCS	ScS	15 35 17.3	+2.8
GTA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,120nm,10.6s						
GTA				LR	LR		
	comp=N,110nm,14.5s						
GTA				LR	LR		
	comp=E,100nm,17.5s						
GTA				LR	LR		
	comp=Z,150nm,16.0s						
ULN	Ulaanbaatar	52.66	57	*e*P	P	15 25 43.4	+0.2
ULN				*e**PP	pP	15 26 13.0	-2.3
ULN				*e*		15 27 43.4	
ULN				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.9						
ULN	Ulaanbaatar	52.66	57	*e*P	P	15 25 43.4	+0.1
	comp=Z,24nm,1.0s,mb4.9						
ULN				*e*pP	pP	15 26 13.0	-2.3
ULN				*e*PP	PP	15 27 43.4	-1.4
SHL	Shillong	55.14	88	*e*P	P	15 26 01.0	-0.6
SCHQ	Schefferville	56.13	316	P	P	15 26 05.2	-3.1
	comp=Z,7.5nm,0.5s,mb4.8,baz=46,slow=6.9,SNR=27						
SCHQ				LR	LR	15 48 29.7	
	comp=Z,31nm,21.5s,baz=96,slow=34						
SCHQ	Schefferville	56.13	316	*e*P	P	15 26 05.1	-3.2
	comp=Z,11nm,0.6s,mb4.9						
YAK	Yakutsk	56.28	34	*e*P	P	15 26 07.7	-1.6
YAK				*e**PP	pP	15 26 38.3	-3.5
YAK				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.3						
YAK	Yakutsk	56.28	34	*e*P	P	15 26 07.7	-1.6
	comp=Z,38nm,0.7s,mb5.3						
YAK				*e*pP	pP	15 26 38.3	-3.4
LZH	Lanzhou	57.00	70	⇑P	P	15 26 15.3	+0.5
LZH				AP	pP	15 26 46.5	-0.8
LZH				XP	sP	15 27 01.3	-1.2
LZH				PP	PP	15 28 25.1	+0.7
LZH				*e*S	S	15 33 58.3	+2.0
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,150nm,7.1s						
LZH	Lanzhou	57.00	70	⇑P	P	15 26 15.2	+0.4
LZH				*PP	pP	15 26 46.5	-0.8
LZH				*SP	sP	15 27 01.2	-1.3
LZH						15 28 25.1	
LZH				*e*S	S	15 33 58.2	+1.9
LZH				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
LZH	Lanzhou	57.00	70	⇑P	P	15 26 15.2	+0.4
	comp=Z,29nm,1.3s,mb5.0						
LZH				pP	pP	15 26 46.5	-0.8
LZH				sP	sP	15 27 01.2	-1.3
LZH				PP	PP	15 28 25.1	+0.7
LZH				*e*S	S	15 33 58.2	+1.9
LZH				sS		15 34 51.4	
CLNS	Chul'man	57.23	40	*e*P	P	15 26 15.4	-0.6
CLNS				pmax	pmax		
	comp=Z,46nm,0.7s,mb5.4						
CLNS				pmax	pmax		
	comp=N,15nm,1.0s						
CLNS				pmax	pmax		
	comp=E,13nm,0.8s						
BTO	Baotou	58.36	63	*e*P	P	15 26 25.1	+0.9
HIA	Hailar	59.02	50	*e*P	P	15 26 28.9	+0.2
HIA				*e**PP	pP	15 27 01.0	-0.4
HIA				pmax	pmax		
	comp=Z,49nm,1.4s						
HIA	Hailar	59.02	50	*e*P	P	15 26 28.9	+0.3
	comp=Z,49nm,1.4s,mb5.1						
HIA				*e*pP	pP	15 27 01.0	-0.4
HHC	Hu-ho-hao-te	59.18	62	*e*P	P	15 26 30.1	+0.2
HHC				AP	pP	15 27 03.3	+0.6
HHC				PP	PP	15 28 45.6	+1.7
HHC				PCS		15 31 19.3	
HHC				SCS	ScS	15 36 02.3	0.0
HHC				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.9						
HHC				AMB	AMB		
	comp=Z,110nm,6.3s						
HHC				LR	LR		
	comp=N,410nm,13.2s						
HHC				LR	LR		
	comp=E,730nm,15.4s						
HHC				LR	LR		
	comp=Z,650nm,12.6s						
CD2	Chengdu	60.04	75	⇓*i*P	P	15 26 36.0	+0.1
CD2				AMB	AMB		
	comp=Z,100nm,0.7s,mb5.8						
PALK	Pallekele	60.14	112	*e*P	P	15 26 36.0	-0.8
LSZ	Lusaka	60.74	178	*e*P	P	15 26 40.4	-0.4
LSZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
LSZ	Lusaka	60.74	178	*e*P	P	15 26 40.4	-0.4
	comp=Z,1.7nm,0.6s,mb4.0						
BILL	Bilibino	62.56	16	*e*P	P	15 26 50.9	-1.5
BILL				*e**PP	pP	15 27 24.4	-1.1
BILL				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.9						
BILL	Bilibino	62.56	16	*e*P	P	15 26 50.9	-1.5
	comp=Z,17nm,0.9s,mb4.9						
BILL				*e*pP	pP	15 27 24.4	-1.1
KMI	Kunming	62.98	81	P	P	15 26 55.1	-0.6
KMI				AP	pP	15 27 28.8	-0.1
KMI				XP	sP	15 27 45.8	+1.9
KMI				S	S	15 35 10.4	-2.6
KMI				XS		15 36 12.6	
KMI				SSS	SSS	15 42 10.6	+0.1
KMI				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
KMI				AMB	AMB		
	comp=Z,100nm,4.1s						
KMI				LR	LR		
	comp=Z,40nm,28.5s						
KMI	Kunming	62.98	81	P	P	15 26 55.1	-0.6
KMI				*PP	pP	15 27 28.8	-0.1
KMI				*SP	sP	15 27 45.8	+1.9
KMI				S	S	15 35 10.4	-2.6
KMI				SS	SS	15 39 22.9	-0.1
KMI				SSS	SSS	15 42 10.6	+0.1
KMI				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.2						
KMI				MLR	MLR		
	comp=Z,40nm,28.5s						
KMI	Kunming	62.98	81	P	P	15 26 55.1	-0.6
	comp=Z,38nm,1.0s,mb5.2						
KMI				pP	pP	15 27 28.8	-0.1
KMI				sP	sP	15 27 45.8	+1.9
KMI				S	S	15 35 10.4	-2.6
KMI				sS		15 36 12.6	
KMI				SS	SS	15 39 22.9	-0.1
KMI				SSS	SSS	15 42 10.6	+0.1
KMI				LR	LR		
	comp=Z,40nm,28.5s						
ENH	Enshi	64.29	72	*e*P	P	15 27 03.5	-0.6
	comp=Z,55nm,0.8s,mb5.4						
CM31	Chiang Mai Arr	64.72	89	*e*P	P	15 27 06.3	-0.8
	comp=Z,80nm,1.0s,mb5.5						
CMAR	Chiang Mai Arr	64.72	89	P	P	15 27 06.3	-0.8
	comp=Z,19nm,0.6s,mb5.1,baz=303,slow=7.9,SNR=125						
CMAR				pP	pP	15 27 38.7	-1.6
	comp=Z,3.6nm,0.7s,baz=315,slow=7.7,SNR=2.5						
CMAR				sP	sP	15 27 55.0	-0.4
	comp=Z,5.1nm,0.8s,baz=306,slow=7.6,SNR=3.6						
GYA	Guiyang	64.82	77	⇑*i*P	P	15 27 07.6	0.0
GYA				AP	pP	15 27 38.4	-2.5
GYA				XP	sP	15 27 52.3	-3.7
GYA				PP	PP	15 29 34.8	+1.2
GYA				S	S	15 35 34.3	-1.4
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.2						
GYA				AMB	AMB		
	comp=Z,90nm,3.8s						
GYA				LR	LR		
	comp=N,510nm,18.4s						
GYA				LR	LR		
	comp=E,460nm,18.2s						
GYA				LR	LR		
	comp=Z,370nm,18.9s						
FCC	Fort Churchill	65.01	330	*e*P	P	15 27 06.1	-2.2
FCC				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.0						
FCC	Fort Churchill	65.01	330	*e*P	P	15 27 06.1	-2.2
	comp=Z,17nm,0.6s,mb5.1						
KLR	Kul'dur	65.19	44	*e*P	P	15 27 06.0	-3.6
KLR				*e*	pP	15 27 40.2	-2.8
KLR				pmax	pmax		
	comp=N,28nm,1.4s						
KLR				pmax	pmax		
	comp=E,30nm,1.4s						
KLR				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.1						
INK	Inuvik	65.32	352	*e*P	P	15 27 08.3	-1.8
INK				*e*	pP	15 27 40.7	-2.8
INK				pmax	pmax		
	comp=Z,42nm,1.5s						
INK	Inuvik	65.32	352	P	P	15 27 08.7	-1.5
	comp=Z,5.2nm,0.5s,mb4.6,baz=29,slow=8.7,SNR=18						
INK	Inuvik	65.32	352	*e*P	P	15 27 08.3	-1.8
	comp=Z,42nm,1.5s,mb5.0						
INK				*e*PcP	PcP	15 27 40.7	-0.3
CN2	Changchun	65.48	52	*e*P	P	15 27 11.8	+0.2
CN2				*e*S	S	15 35 43.8	+0.3
CN2				AMB	AMB		
	comp=Z,60nm,0.7s,mb5.5						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
MA2	Magadan	65.50	28	*e*P	P	15 27 11.2	-0.3
SNY	Shenyang	65.71	54	⇑P	P	15 27 12.8	-0.3
MATP	Matopo	65.86	178	P	P	15 27 13.4	-1.0
	comp=Z,1.2nm,0.4s,mb4.1,baz=14,slow=14,SNR=4.4						
OPO	Ambohidratompo	66.65	159	P	P	15 27 19.2	-0.3
	baz=320,slow=4.8						
MDJ	Mudanjiang	67.18	49	P	P	15 27 20.8	-1.5
MDJ				AP	pP	15 27 53.8	-2.0

MDJ				S	S	15 36 03.6	-0.4
MDJ				XS		15 37 01.8	
MDJ				SS	SS	15 40 29.3	+1.6
MDJ				AMB	AMB		
	comp=Z,90nm,4.4s						
MDJ				LR	LR		
	comp=N,10.0nm,17.8s						
MDJ				LR	LR		
	comp=E,40nm,17.8s						
MDJ				LR	LR		
	comp=Z,40nm,20.6s						
MDJ	Mudanjiang	67.18	49	eP	P	15 27 21.2	-1.1
	comp=Z,6.8nm,0.8s,mb4.5						
WHN	Wuhan	67.33	69	eP	P	15 27 23.0	-0.5
YKW3	Yellowknife Ar	67.71	342	eP	P	15 27 23.8	-1.5
YKW3				epP	pP	15 27 58.5	-0.4
YKA	Yellowknife Ar	67.76	342	P	P	15 27 24.2	-1.4
YKA				pmax	pmax		
	comp=Z,13nm,0.6s						
YKA	Yellowknife Ar	67.76	342	P	P	15 27 24.2	-1.4
	comp=Z,13nm,0.6s,mb4.8,baz=31,slow=5.9,SNR=29						
IMA	Indian Mountai	68.53	0	eP	P	15 27 30.9	+0.6
NJ2	Nanjing	69.25	65	eP	P	15 27 35.1	-0.2
NJ2				AP	pP	15 28 06.1	-2.8
NJ2				PP	PP	15 30 12.3	+0.5
NJ2				S	S	15 36 29.0	+0.3
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,1μm,5.3s						
NJ2				LR	LR		
	comp=N,330nm,21.2s						
NJ2				LR	LR		
	comp=E,300nm,16.6s						
NJ2				LR	LR		
	comp=Z,170nm,15.5s						
ILAR	Eielson Array	69.72	357	P	P	15 27 37.1	-0.5
	comp=Z,2.3nm,0.7s,mb4.0,baz=358,slow=5.1,SNR=27						
ILAR				PP	PP	15 30 08.9	-6.1
	comp=Z,0.7nm,0.9s,baz=1.5,slow=8.4,SNR=4.3						
LBTB	Lobatse	70.42	181	P	P	15 27 42.3	-0.1
	comp=Z,4.0nm,0.6s,mb4.3,baz=11,slow=5.0,SNR=8.4						
KS15	Wonju Array Si	71.11	56	eP	P	15 27 45.4	-1.0
SSE	Sheshan	71.36	64	eP	P	15 27 46.8	-1.2
SSE				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
SSE				AMB	AMB		
	comp=Z,80nm,3.5s						
SSE	Sheshan	71.36	64	eP	P	15 27 46.7	-1.3
	comp=Z,25nm,1.2s,mb4.8						
SSE				LR	LR		
	comp=Z,30nm,50.5s						
MENT	Mentasta	71.41	355	eP	P	15 27 47.8	+0.1
TTA	Tatalina	71.66	1	eP	P	15 27 46.3	-2.9
YSS	Yuzh-Sakhalins	72.00	40	eP	P	15 27 51.5	0.0
YSS				pmax	pmax		
	comp=Z,64nm,0.7s,mb5.5						
YSS	Yuzh-Sakhalins	72.00	40	eP	P	15 27 51.5	+0.1
	comp=Z,64nm,0.7s,mb5.5						
YSS				epP	pP	15 28 21.6	-3.9
EYMN	Ely	72.18	321	eP	P	15 27 50.8	-1.7
	comp=Z,18nm,0.9s,mb4.8						
EYMN				epP	pP	15 28 28.4	+1.8
ULM	Lac du Bonnet	72.22	325	P	P	15 27 51.1	-1.7
	comp=Z,11nm,0.7s,mb4.7,baz=32,slow=6.7,SNR=7.4						
ULM				LR	LR	16 00 11.8	
	comp=Z,43nm,18.3s,baz=232,slow=36						
PMR	Palmer	72.97	358	eP	P	15 27 56.6	-0.2
DIV	Divide	73.32	356	eP	P	15 27 58.8	0.0
	comp=Z,26nm,0.9s,mb5.0						
SPU	Mount Spurr	73.44	359	eP	P	15 27 58.6	-0.9
SPU				pP	pP	15 28 36.0	+2.4
SVW2	Sparrevohn	73.51	1	eP	P	15 28 00.5	+0.5
BOSA	Boshof	74.00	181	P	P	15 28 02.4	-1.1
	comp=Z,10nm,1.2s,mb4.4,baz=8.5,slow=8.5,SNR=6.0						
BOSA	Boshof	74.00	181	P	P	15 28 02.4	-1.1
ASAJ	Asahikawa	74.06	42	P	P	15 28 03.3	-0.2
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ASAJ	Asahikawa	74.06	42	P	P	15 28 03.2	-0.3
	comp=Z,10.0nm,0.5s,mb4.8,baz=288,slow=7.7,SNR=17						
DLBC	Dease Lake	74.41	348	P	P	15 28 06.9	+1.6
	comp=Z,10nm,0.7s,mb4.7,baz=23,slow=4.5,SNR=15						
DLBC	Dease Lake	74.41	348	eP	P	15 28 04.4	-0.9
FWV	Forest Hill	74.56	308	eP	P	15 28 04.0	-2.5
FWV				epP	pP	15 28 40.6	-0.1
EDM	Edmonton	75.67	337	eP	P	15 28 11.5	-0.9
KDAK	Kodiak Island	76.85	360	eP	P	15 28 19.1	+0.1
MAJO	Matsushiro	77.52	50	eP	P	15 28 22.1	-1.0
MAT	Matsushiro	77.52	50	eP	P	15 28 23.0	-0.1
MAT				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.7						
MAT	Matsushiro	77.52	50	eP	P	15 28 23.0	-0.1
	comp=Z,22nm,1.2s,mb4.7						
MAT	Matsushiro	77.52	50	P	P	15 28 22.9	-0.2
MJAR	Matsushiro Arr	77.52	50	P	P	15 28 22.9	-0.2
	comp=Z,8.6nm,0.7s,mb4.5,baz=331,slow=3.9,SNR=37						
FX1	Attu Island--F	77.65	20	eP	P	15 28 23.2	-0.3
JOW	Kunigami	78.78	63	P	P	15 28 29.9	-0.3
	comp=Z,26nm,0.4s,mb5.2,baz=216,slow=26,SNR=16						
LAO	LASA Array	79.08	329	eP	P	15 28 31.7	+0.3
	comp=Z,66nm,1.0s,mb5.2						
RSSD	Black Hills	80.44	326	eP	P	15 28 38.2	-0.6
RSSD				e*PP	pP	15 29 14.5	+1.1
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.3						
RSSD	Black Hills	80.44	326	eP	P	15 28 38.2	-0.6
	comp=Z,7.3nm,0.9s,mb4.3						
RSSD				epP	pP	15 29 14.5	+1.1
HRY	Holter Researc	80.97	333	eP	P	15 28 41.3	-0.2
HRY				epP	pP	15 29 16.4	+0.2
NEW	Newport	81.18	336	eP	P	15 28 42.6	0.0
NEW				pmax	pmax		
	comp=Z,14nm,1.1s						
NEW	Newport	81.18	336	eP	P	15 28 42.5	0.0
	comp=Z,14nm,1.1s,mb4.5						
CHMT	Chamberlain Mo	81.25	333	eP	P	15 28 42.1	-0.8
LRAL	Lakeview Retre	81.31	309	eP	P	15 28 41.7	-1.9
	comp=Z,19nm,1.0s,mb4.7						
LRAL				epP	pP	15 29 18.7	+0.4
BOZ	Bozeman (W)	81.85	332	eP	P	15 28 46.1	0.0
BOZ				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.5						
BOZ	Bozeman (W)	81.85	332	eP	P	15 28 46.1	0.0
	comp=Z,19nm,1.5s,mb4.5						
NLW	Nelson Butte	82.21	338	P	P	15 28 48.2	+0.3
OD2	Odessa Site #2	82.41	337	P	P	15 28 49.6	+0.6
WTV	Waterville	82.46	338	P	P	15 28 49.6	+0.3
YFT	Old Faithful	82.63	331	eP	P	15 28 49.6	-0.6
OBC	Olympics--Boni	83.17	341	P	P	15 28 54.4	+1.6
MOOW	Moose Ponds	83.22	330	eP	P	15 28 54.2	+1.1
	comp=Z,28nm,1.4s,mb4.8						
MOOW				epP	pP	15 29 29.2	+1.1
LOHW	Long Hollow	83.29	330	eP	P	15 28 53.3	-0.3
	comp=Z,25nm,1.4s,mb4.7						
EBG	Ellensburg	83.35	338	P	P	15 28 54.2	+0.4
PHWY	Pilot Hill	83.38	326	eP	P	15 28 54.1	+0.1
PHWY				epP	pP	15 29 26.0	-2.9
TPAW	Teton Pass	83.52	330	eP	P	15 28 55.6	+1.0
	comp=Z,21nm,1.0s,mb4.8						
REDW	Red Top Meadow	83.60	330	eP	P	15 28 55.4	+0.4
	comp=Z,14nm,1.3s,mb4.5						
PDAR	Pinedale Array	83.66	329	P	P	15 28 55.4	0.0
	comp=Z,7.1nm,0.9s,mb4.4,baz=45,slow=4.2,SNR=38						
RRI2	Red Ridge	83.77	331	eP	P	15 28 57.0	+1.1
	comp=Z,26nm,1.0s,mb4.9						
BMO	Blue Mountains	84.33	335	eP	P	15 28 57.7	-0.9
	comp=Z,45nm,0.8s,mb5.2						
BMO				epP	pP	15 29 32.6	-1.0
BMO				esP	sP	15 29 48.2	-0.5
ISCO	Idaho Springs	84.72	325	eP	P	15 29 01.1	+0.4
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
ISCO	Idaho Springs	84.72	325	eP	P	15 29 01.1	+0.4
	comp=Z,4.6nm,1.0s,mb4.2						
VFP	Flag Point	85.06	338	P	P	15 29 03.4	+1.1
HWUT	Hardware Ranch	85.39	330	eP	P	15 29 03.8	-0.2
	comp=Z,22nm,1.1s,mb4.8						
HWUT				epP	pP	15 29 39.6	+0.5
HVU	Hansel Valley	85.66	331	eP	P	15 29 05.3	0.0
HVU				e*PP	pP	15 29 41.3	+0.9
CTU	Camp Tracy	86.27	330	eP	P	15 29 08.4	+0.1
BGU	Big Grassy Mou	86.50	331	eP	P	15 29 09.7	+0.3
BGU				epP	pP	15 29 46.4	+1.8
MPU	Maple Canyon	86.82	329	P	P	15 29 09.7	-1.2
MOD	Modoc	87.91	336	eP	P	15 29 16.8	+0.7
	comp=Z,7.6nm,0.9s,mb4.5						
ANMO	Albuquerque	89.22	323c	iP	P	15 29 22.0	-0.5
ARUT	Antelope Range	89.44	329	eP	P	15 29 24.0	+0.5
NVAR	Mina Array Bea	90.50	333	P	P	15 29 28.4	0.0
	comp=Z,1.6nm,0.8s,mb4.0,baz=48,slow=4.3,SNR=11						
NVAR				LR	LR	16 11 21.6	
	comp=Z,90nm,21.4s,baz=65,slow=36						
BAO	Brasilia Array	90.73	248	P	P	15 29 31.0	+1.0
BDFB	Brasilia	90.75	248	P	P	15 29 29.4	-0.6
	comp=Z,7.0nm,0.7s,mb4.8,baz=52,slow=4.7,SNR=12						
MNTX	Cornudas Mount	91.53	321	eP	P	15 29 31.7	-1.7
	comp=Z,12nm,0.9s,mb4.9						
MNTX				epP	pP	15 30 10.3	+1.5
TXAR	Lajitas Array	92.75	318	P	P	15 29 38.4	-0.6
	comp=Z,3.8nm,0.9s,mb4.5,baz=56,slow=4.5,SNR=27						
TXAR				LR	LR	16 14 53.4	
	comp=Z,28nm,19.3s,baz=210,slow=38						
NWAO	Narrogin (SRO)	113.07	114	ePKIKP	PKPdf	15 34 59.8	-2.2
SYO	Syowa Base	114.82	175	⇑PKPdf	PKPdf	15 35 04.0	-0.6
WRA	Warramunga Arr	116.23	92	PKP	PKPdf	15 35 08.2	-0.3
	comp=Z,1.4nm,0.8s,baz=315,slow=2.0,SNR=8.1						
WRA				PKKPbc		15 45 39.2	
	comp=Z,0.2nm,0.4s,baz=132,slow=2.9,SNR=8.1						
WRAB	Tennant Creek	116.23	92	PKIKP	PKPdf	15 35 08.0	-0.4
MAW	Mawson	116.28	165	PKP	PKPdf	15 35 07.6	+0.2
	comp=Z,2.5nm,0.8s,baz=281,slow=5.9,SNR=4.4						
PMG	Port Moresby	117.80	74	PKIKP	PKPdf	15 35 08.9	-2.7
VNA2	Neumayer--Watz	118.90	192	⇑i		15 35 50.7	
SNAA	Sanae	118.96	190	ePKIKP	PKPdf	15 35 12.1	-0.5
VNA3	Neumayer Olymp	119.53	193	⇑i		15 35 52.3	
PLCA	Paso Flores	122.07	243	PKP	PKPdf	15 35 19.9	+0.6
	comp=Z,2.2nm,0.6s,baz=355,slow=3.2,SNR=5.6						
CTAO	Charters Tower	124.65	84	ePKIKP	PKPdf	15 35 25.2	+0.4
STKA	Stephens Creek	128.77	98	PKP	PKPdf	15 35 32.8	+0.4
	comp=Z,2.2nm,0.5s,baz=351,slow=5.9,SNR=10						
QSPA	South Pole Qui	135.58	180	eP	PKPdf	15 35 42.3	-1.6
TAU	Tasmania Unive	138.29	108	ePKIKP	PKPdf	15 35 52.6	+2.8
VNDA	Vanda	143.59	165	PKIKP	PKPdf	15 35 55.9	-2.2
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VNDA	Vanda	143.59	165	PKhKP		15 35 55.9	
	comp=Z,2.5nm,0.5s,baz=308,slow=4.9,SNR=20						
VNDA	Vanda	143.59	165	ePKPdf	PKPdf	15 35 55.3	-2.8
SBA	Scott Base	144.23	167	ePKIKP	PKPdf	15 35 59.0	-0.2
SBA				e		15 36 35.1	

IDC 18 15:32:09.6±3.2**, 20.14S**×**68.89W, h105**^{km}±60^{km}**, mb3.6**/2**, mb1 3.7**/4**, mb1mx3.4**/17**, mbtmp4.0**/4**, Error ellipse: s-maj=45.2km s-min=28.4km az=106.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.90	11	P	P	15 33 09.4	+0.7
	1.3nm,0.3s,baz=186,slow=8.4,SNR=76						
LPAZ				S	S	15 33 53.5	-0.3
	0.7nm,0.3s,baz=233,slow=15,SNR=2.3						
CPUP	Villa Florida	12.28	122	P	P	15 35 00.5	-1.5
	0.1nm,0.3s,baz=287,slow=11,SNR=4.5						
BDFB	Brasilia	20.36	81	P	P	15 36 38.4	-1.6
	4.9nm,0.6s,baz=263,slow=12,SNR=6.4						
PLCA	Paso Flores	20.57	184	P	P	15 36 39.9	-2.0
	2.9nm,0.6s,baz=5.5,slow=12,SNR=6.3						

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*BJI **18** 15:54:20.5, 20.10S×69.20W, h96^{km}, mB4.5*
*NEIC **18** 15:54:20.5±1.1, 20.06S×69.18W, h96^{km}±10^{km}, mb4.3/10, Error ellipse: s-maj=13.9km s-min=9.3km az=77.0*
*IDC **18** 15:54:20.1±3.1, 20.03S×69.06W, h89^{km}±28^{km}, mb3.9/8, mb1 4.0/10, mb1mx3.9/17, mbtmp4.2/10, Error ellipse: s-maj=24.8km s-min=19.2km az=122.0*
ISC 18 15:54:18.1±1.0**, 20.02S**±0.06×**69.10W**±0.07**, h87**^{km}±10^{km}**, n38,** σ**1**^{s}**05**/30**, mb4.2**/13**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.82	14	P	P	15 55 22.6	+6.6
	14nm,0.3s,baz=205,slow=6.8,SNR=287						
LPAZ	La Paz	3.82	14	ePn	P	15 55 22.4	+6.4
ANCH	Antofagasta	3.84	198	eP	P	15 55 16.4	+0.1
ARE	Arequipa	4.20	327	eP	P	15 55 22.0	+0.7
SIV	San Ignacio	8.62	64	P	P	15 56 23.5	+1.6
	2.8nm,0.3s,baz=262,slow=10.0,SNR=49						
SIV				S	S	15 57 57.2	-1.1
	baz=320,slow=24,SNR=3.3						
CFAA	Coronel Fontan	11.56	176	P	P	15 57 00.0	-1.6
	0.2nm,0.3s,baz=359,slow=13,SNR=8.6						
SAML	Samuel	12.40	28	eP	P	15 57 12.5	-0.3
	2.9nm,0.6s						
TRQA	Tornquist	19.01	163	eP	P	15 58 35.2	-0.3
	37nm,1.5s						
BDFB	Brasilia	20.53	81	P	P	15 58 52.2	+0.5
	6.5nm,0.6s,baz=275,slow=11,SNR=9.9						
BAO	Brasilia Array	20.56	81	P	P	15 58 53.0	+1.1
PLCA	Paso Flores	20.68	183	P	P	15 58 53.2	+0.2
	6.0nm,0.7s,baz=357,slow=14,SNR=10.0						
PLCA	Paso Flores	20.68	183	eP	P	15 58 52.9	-0.1
	8.6nm,0.9s						
OTAV	Otavalo	22.12	334	eP	P	15 59 15.0	+7.5
	7.1nm,0.9s,mb4.0						
SDV	Santo Domingo	28.76	357	P	P	16 00 08.0	-1.9
WVT	Waverly	58.59	342	eP	P	16 04 05.2	-3.1
	4.2nm,0.8s,mb4.5						
WVT				e	pP	16 04 32.1	+1.9
TXAR	Lajitas Array	59.32	325	P	P	16 04 12.7	-0.6
	0.3nm,0.5s,mb3.6,baz=145,slow=11,SNR=3.5						
SNAA	Sanae	63.73	161	eP	P	16 04 42.5	+0.1
	1.8nm,0.7s,mb4.0						
DBIC	Dimbokro	68.49	74	P	P	16 05 12.1	-1.4
	4.3nm,0.8s,mb4.3,baz=218,slow=2.8,SNR=6.2						
ULM	Lac du Bonnet	73.86	342	P	P	16 05 44.1	-0.9
	1.8nm,0.5s,mb4.1,baz=137,slow=5.8,SNR=4.2						
NVAR	Mina Array Bea	74.22	322	P	P	16 05 48.8	+1.4
	1.0nm,0.8s,mb3.6,baz=142,slow=7.3,SNR=6.1						
SCHQ	Schefferville	74.57	1	P	P	16 05 48.2	-0.9
	3.0nm,0.9s,mb4.0,baz=206,slow=6.5,SNR=5.1						
SCHQ	Schefferville	74.57	1	eP	P	16 05 48.5	-0.6
	6.9nm,1.0s,mb4.3						
HLID	Hailey	75.70	328	P	P	16 05 57.2	+1.5
	2.4nm,1.0s,mb3.9						
TSUM	Tsumeb	80.64	107	eP	P	16 06 24.1	+0.8
	2.3nm,0.8s,mb4.1						
FCC	Fort Churchill	81.16	347	eP	P	16 06 25.3	+0.1
	5.9nm,0.8s,mb4.5						
EDM	Edmonton	82.35	335	eP	P	16 06 31.2	-0.3
LBTB	Lobatse	85.80	115	eP	P	16 06 50.7	+1.3
	15nm,1.3s,mb4.8						
YKA	Yellowknife Ar	89.74	341	P	P	16 07 08.2	+0.9
	3.9nm,0.7s,mb4.7,baz=137,slow=4.7,SNR=9.3						
YKA	Yellowknife Ar	89.74	341	P	P	16 07 08.2	+0.9
WRA	Warramunga Arr	134.13	211	PKP	PKPdf	16 13 28.1	+1.7
	0.6nm,0.5s,baz=155,slow=1.6,SNR=10						
BVAR	Borovoye Array	134.67	33	PKP	PKPdf	16 13 28.7	+2.3
	0.4nm,0.6s,baz=243,slow=3.3,SNR=4.7						
ZAL	Zalesovo	140.69	24	PKP	PKPdf	16 13 39.3	+1.9
	0.9nm,0.5s,baz=170,slow=3.2,SNR=6.2						
MKAR	Makanchi Array	144.53	35	PKP	PKPdf	16 13 45.1	+0.9
	1.6nm,0.4s,baz=320,slow=2.8,SNR=30						
WMQ	Urumqi	149.36	34	ePKP	PKPdf	16 13 51.3	-1.1
MJAR	Matsushiro Arr	151.00	310	PKPbc	PKPdf	16 14 02.9	+7.8
	2.0nm,0.8s,baz=107,slow=1.4,SNR=9.1						
MAT	Matsushiro	151.00	310	eP	PKPdf	16 14 03.0	+7.9
MAT	Matsushiro	151.00	310	PKP	PKPdf	16 14 03.2	+8.1
SONM	Songino Array	152.01	6	PKP	PKPdf	16 13 58.2	+1.9
	0.6nm,0.7s,baz=315,slow=3.5,SNR=3.7						
SONM				PKPbc	PKPdf	16 14 05.4	+9.1
	3.0nm,0.6s,baz=321,slow=1.1,SNR=18						

IDC 18 15:56:42.5±17.0**, 23.61S**×**179.64W, h173**^{km}±161^{km}**, mb3.7**/6**, mb1 3.9**/6**, mb1mx3.6**/16**, mbtmp4.2**/6**, Error ellipse: s-maj=63.6km s-min=32.0km az=15.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	21.48	199	P	P	16 01 17.1	-0.9
	9.9nm,0.9s,baz=18,slow=4.3,SNR=7.8						
STKA	Stephens Creek	35.14	248	P	P	16 03 20.4	-1.0
	0.9nm,0.4s,baz=68,slow=11,SNR=4.4						
WB2	Warramunga Arr	42.75	266	eP	P	16 04 22.9	-1.6
WRA	Warramunga Arr	42.76	266	P	P	16 04 23.1	-1.5
	2.0nm,0.4s,baz=100,slow=8.2,SNR=53						
KAKA	Kakadu	46.61	275	eP	P	16 04 53.4	-1.9
	5.9nm,0.9s						
FITZ	Fitzroy Crossi	51.18	265	P	P	16 05 27.5	-2.7
	6.2nm,0.6s,baz=157,slow=9.0,SNR=8.4						
MJAR	Matsushiro Arr	71.84	325	P	P	16 07 46.8	-1.5
	0.4nm,0.4s,baz=157,slow=6.5,SNR=4.5						
TXAR	Lajitas Array	89.99	58	P	P	16 09 22.7	-1.1
	0.1nm,0.3s,baz=207,slow=5.6,SNR=3.5						
HFS	Hagfors	142.32	349	PKhKP		16 15 45.3	
	1.4nm,0.4s,baz=63,slow=3.3,SNR=14						
BRTR	Keskin Array B	147.66	308	PKPbc	PKPdf	16 16 06.0	+2.4
	0.6nm,0.6s,baz=98,slow=2.6,SNR=3.7						
BRTR	Keskin Array B	147.66	308	PKPbc	PKPdf	16 16 06.0	+2.4

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*IDC **18** 16:06:39.4±1.6, 30.91S×177.79W, mb4.4/3, mb1 4.5/5, mb1mx4.1/17, mbtmp4.4/5, ML3.3/2, Error ellipse: s-maj=46.2km s-min=21.4km az=118.0*
ISC 18 16:06:40.2±2.5**, 31.08S**±0.09×**177.5W**±0.4**, h33**^{km}**, n20,** σ**1**^{s}**23**/18**, mb4.4**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.86	348	Pn	Pn	16 07 10.5	+0.2
	120nm,0.3s,baz=252,slow=20,SNR=4.9						
RAO				Sn	Sn	16 07 27.2	-5.7
	409nm,0.3s,baz=91,slow=23,SNR=8.1						
MWZ	Matawai	8.32	208	ePN	P	16 08 41.6	+0.2
URZ	Urewera	8.44	210	Pn	P	16 08 43.3	+0.3
	0.2nm,0.3s,baz=226,slow=13,SNR=7.7						
URZ				Sn	Sn	16 10 19.6	+1.3
	3.6nm,0.3s,baz=262,slow=22,SNR=12						
URZ	Urewera	8.44	210	ePN	P	16 08 43.2	+0.2
BKZ	Black Stump Fm	9.46	210	PN	P	16 08 54.8	-2.3
BKZ				SN	Sn	16 10 40.9	-2.7
BKZ				eSN	Sn	16 10 42.8	-0.7
MRZ	Mangatainoka R	11.09	209	SN	S	16 11 16.2	-7.2
TCW	Tory Channel	12.10	211	eSN	S	16 11 39.4	-8.6
NNZ	Nelson	12.52	214	eSN	S	16 11 50.2	-7.9
MQZ	McQueen’s Vall	14.83	209	eSN	S	16 12 41.4	-12
RPZ	Rata Peaks	15.54	213	Pn	P	16 10 21.0	+2.6
	0.2nm,0.3s,baz=65,slow=19,SNR=2.3						
STKA	Stephens Creek	34.77	258	P	P	16 13 30.9	+1.3
	4.9nm,0.8s,mb4.5,baz=102,slow=12,SNR=7.8						
WB2	Warramunga Arr	44.56	273	eP	P	16 14 50.6	-0.4
WRA	Warramunga Arr	44.58	273	P	P	16 14 50.5	-0.5
	1.7nm,0.4s,mb4.2,baz=111,slow=8.1,SNR=34						
FITZ	Fitzroy Crossi	52.81	270	P	P	16 15 54.0	-0.7
	3.7nm,0.7s,mb4.4,baz=153,slow=16,SNR=4.0						
KAF	Kangasniemi	145.34	341	epkp	PKPdf	16 26 15.4	+1.6
FINES	FINESS Array B	145.94	340	PKPbc	PKPbc	16 26 18.6	+2.8
	3.1nm,0.5s,baz=64,slow=4.1,SNR=39						
NB2	NORSAR Subarra	149.49	352	PKPabc	PKPdf	16 26 29.1	+8.4
	0.5nm,0.5s,baz=9.0,slow=2.5						
NOA	NORSAR Array B	149.49	352	PKPbc	PKPdf	16 26 29.3	+8.6
	0.6nm,0.7s,baz=13,slow=4.0,SNR=3.3						
HFS	Hagfors	150.00	349	PKPbc	PKPdf	16 26 30.2	+8.7
	1.2nm,0.7s,baz=63,slow=9.7,SNR=4.5						
AKASG	Malin Array Be	152.11	322	PKPbc	PKPdf	16 26 34.5	+10
	0.7nm,0.4s,baz=46,slow=3.1,SNR=6.6						

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*LDG **18** 16:13:46.8±0.2, 39.02N×21.34E, h10^{km}, Mb4.3/16, Ms3.1/5, Error ellipse: s-maj=10.8km s-min=5.8km az=38.0*
*PRU **18** 16:13:46.3, 38.86N×21.25E, M3.9*
*BJI **18** 16:13:48.2, 38.80N×21.20E, h25^{km}, mB4.4, mb4.4, Ms4.2, Msz4.1*
*ATH **18** 16:13:50.2, 38.84N×21.24E, h26^{km}±1^{km}, MD4.1/22, ML4.1*
*THE **18** 16:13:50.0, 38.76N×21.27E, h5^{km}, ML4.3*
*NEIC **18** 16:13:50.2, 38.85N×21.24E, h25^{km}, mb3.9/22, ML4.4(PDG), ML4.1(ATH), ML4.1(THE), After ATH.*
*ZUR_RM **18** 16:13:50, 38.85N×21.24E, h39^{km}, Mw4.7/25, Moment Tensor Solution. s25 Moment tensor: Scale 10^{16}Nm; M_{rr}0.17; $M_{\theta\theta}$0.66; $M_{\phi\phi}$-0.83; $M_{r\theta}$0.12; $M_{\theta\phi}$0.74; $M_{\phi r}$0.12; Best double couple: $M_0$1.07×10^{16} NP1:ϕ_s22°, δ85°, λ170°. NP2:ϕ_s113°, δ80°, λ6°. Principal axes: T .992, Plg11°, Azm337°; N .1469, Plg79°, Azm173°; P -1.1389, Plg3°, Azm68°;*
*MOS **18** 16:13:51.4±1.0, 38.87N×21.13E, h49^{km}, mb4.6/4 Error ellipse: s-maj=3.7km s-min=2.5km az=103.0*
*CSEM **18** 16:13:51.0±0.0, 38.87N×21.14E, h40^{km}, mb4.0/9, Ms3.1, Error ellipse: s-maj=1.3km s-min=1.0km az=9.0*
*PDG **18** 16:13:52.8±0.2, 38.94N×20.48E, h11^{km}±1^{km}*
*IDC **18** 16:13:52.9±1.1, 38.86N×21.21E, h48^{km}±13^{km}, mb3.9/15, mb1 4.1/24, mb1mx4.0/34, mbtmp4.1/24, ML4.2/9, MS3.6/16, Ms1 3.6/16, ms1mx3.5/29, Error ellipse: s-maj=12.5km s-min=10.4km az=14.0*
*HLW **18** 16:13:53.5, 38.61N×21.57E, h33^{km}, Mb4.0*
*SOF **18** 16:13:57.7, 39.35N×21.88E, h2^{km}, MD3.8*
ISC 18 16:13:51.7±0.2**, 38.89N**±0.02×**21.17E**±0.02**, h52**^{km}±2^{km}**, n406,** σ**1**^{s}**24**/450**, mb4.1**/27**, MS3.6**/14**, 29C-17D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD	Levkas	0.45	246	ePg	P	16 13 59.5	-3.0
EVR	Evrytania	0.50	87	ePB	P	16 13 59.2	-3.9
EVR				eSB	S	16 14 07.3	-4.0
JAN	Janina	0.81	342	ePN	P	16 14 07.0	+0.1
VLS	Valsamata	0.84	213	ePB	P	16 14 06.0	-1.5
VLS				eSN	S	16 14 19.6	+0.3
RLS	Riolos of Patr	0.86	164	Pn	P	16 14 05.4	-2.3
AGG	Agios Georgios	0.91	81	ePg	P	16 14 06.7	-1.8
IGT	Igoumenitsa	0.91	315	ePg	P	16 14 09.4	+1.0
LSK	Leskovik	1.33	341	i Pn	P	16 14 16.0	+1.6
LSK				i Sn	S	16 14 38.7	+7.4
LSK	Leskovik	1.33	341	ePn	P	16 14 16.0	+1.6
SRN	Sarande	1.34	318	ePn	P	16 14 16.8	+2.2
KEK	Kerkira	1.34	308	Pn	P	16 14 16.6	+2.0
KEK				Sn	S	16 14 45.2	+14
KEK	Kerkira	1.34	308	ePN	P	16 14 16.5	+1.9
LKR	Lokris	1.45	99	Pn	P	16 14 16.1	+0.1
KZN	Kozani	1.49	18	ePN	P	16 14 18.0	+1.4
LIT	Litokhoron	1.58	40	ePb	P	16 14 18.6	+0.7
LIT				eSb	S	16 14 40.9	+3.6
LIT	Litokhoron	1.58	40	ePb	P	16 14 18.5	+0.6
LIT				S	S	16 14 40.9	+3.6
XOR	Xorichti	1.64	73	ePg	P	16 14 18.7	0.0
NEO	Neokhori	1.65	75	ePN	P	16 14 19.0	+0.2
TPE	Tepelena	1.67	328	ePn	P	16 14 21.5	+2.5
KBN	Korca	1.76	350	ePn	P	16 14 24.1	+3.8
KBN				i Sn	S	16 14 49.5	+8.0
ITM	Ithomi	1.81	161	ePN	P	16 14 21.5	+0.5
MGER	Gerania Oros	1.87	118	ePN	P	16 14 21.8	-0.1
FNA	Florina	1.90	5	ePn	P	16 14 24.8	+2.5
FNA				eSn	S	16 14 50.5	+5.5
VLO	Vlora	2.04	321	ePn	P	16 14 31.2	+6.9
NSAL	Nisos Salamina	2.05	118	ePN	P	16 14 24.5	+0.1
AOS	Alonnisos	2.13	82	ePn	P	16 14 24.7	-0.8
MPAR	Parnis Oros	2.14	109	ePN	P	16 14 25.5	-0.2
NAIG	Nisos Aigina	2.15	121	ePN	P	16 14 25.5	-0.3
ATH	Athens Observa	2.20	114	ePB	P	16 14 27.0	+0.4
PAIG	Paliouri	2.20	61	ePn	P	16 14 25.9	-0.7
THE	Thessaloniki	2.22	38	ePn	P	16 14 27.8	+0.9
OHR	Ohrid	2.24	353	i P	P	16 14 29.8	+2.7
OHR				i		16 15 03.5	
OHR	Ohrid	2.24	353	i Pn	P	16 14 29.8	+2.7
OHR				i Pg	P	16 14 33.7	+6.6
OHR				i Sg	S	16 15 03.5	+10
GRG	Griva	2.27	24	ePn	P	16 14 28.6	+1.1
GRG				eSn	S	16 14 59.4	+5.0
PTL	Penteli	2.27	111	ePB	P	16 14 28.0	+0.4
PLG	Polygyros	2.30	49	ePN	P	16 14 27.5	-0.5
SOH	Sokhos	2.56	40	ePn	P	16 14 32.7	+1.0
SOH				eSn	S	16 15 05.3	+3.6
VLI	Veliai	2.58	147	ePB	P	16 14 33.0	+1.0
OUR	Ouranopolis	2.61	56	ePn	P	16 14 32.6	+0.3
VAY	Valandovo	2.66	23	i Pn	P	16 14 34.7	+1.7
VAY				i Sn	S	16 15 07.0	+2.9
VAY				i Sg	S	16 15 17.0	+13
LCI	Lecce	2.77	302	Pn	P	16 14 35.4	+0.7
LCI				S	S	16 15 09.1	+2.1
QSH	Qafa e Shtames	2.80	340	ePn	P	16 14 36.8	+1.7
QSH				i Sn	S	16 15 08.8	+0.9
PHP	Peshkopia	2.85	349	ePn	P	16 14 37.9	+2.1
SRS	Serrai	2.90	39	ePn	P	16 14 36.7	+0.2
KYTH	Kithira	3.00	150	ePb	P	16 14 39.8	+1.9
SKO	Skopje	3.08	4	⇑iP	P	16 14 40.7	+1.6
SKO				i S	S	16 15 24.7	+10

SKO	**Skopje**	**3.08**	**4**	⇑*i*Pn	**P**	**16 14 40.7**	**+1.6**
SKO				*i* Pb	**P**	**16 14 45.7**	**+6.6**
SKO				*i* Pg	**P**	**16 14 51.0**	**+12**
SKO				*i* Sn	**S**	**16 15 16.2**	**+1.1**
SKO				*i* Sb	**S**	**16 15 24.7**	**+10**
SKO				Lg		16 15 27.0	
	comp=Z,0.4nm,0.8s						
SKO	**Skopje**	**3.08**	**4**	⇑*i*Pn	**P**	**16 14 40.7**	**+1.6**
SKO				*i* Sn	**S**	**16 15 16.2**	**+1.1**
LOS	**Limnos**	**3.20**	**70**	*e*Pn	**P**	**16 14 39.8**	**-1.0**
NVR	**Nevrokopi**	**3.21**	**39**	Pn	**P**	**16 14 43.0**	**+2.1**
LIA	**Limnos Island**	**3.27**	**71**	Pn	**P**	**16 14 41.6**	**-0.1**
PUK	**Puka**	**3.30**	**343**	*e*Pn	**P**	**16 14 43.8**	**+1.7**
KKB	**Krupnik**	**3.31**	**26**	*i* P	**P**	**16 14 43.0**	**+0.7**
KKB	**Krupnik**	**3.31**	**26**	P	**P**	**16 14 42.0**	**-0.3**
MMB	**Musomiste**	**3.33**	**35**	*i* P	**P**	**16 14 43.0**	**+0.4**
ULC	**Ulcinj**	**3.40**	**335**	⇑*i*Pn	**P**	**16 14 43.9**	**+0.3**
ULC				*e*Sn	**S**	**16 15 22.9**	**-0.1**
TIP	**Timpagrande**	**3.45**	**276**	Pn	**P**	**16 14 45.0**	**+0.7**
PE1	**Pezze di Greco**	**3.46**	**305**	*e*Pn	**P**	**16 14 44.4**	**0.0**
BCI	**Bajram Curri**	**3.57**	**347**	*e*Pn	**P**	**16 14 50.4**	**+4.4**
PVY	**Plav**	**3.81**	**347**	⇑*i*Pn	**P**	**16 14 51.2**	**+1.8**
PVY				*e*Sn	**S**	**16 15 35.2**	**+1.8**
BUM	**Brajici-Budva**	**3.82**	**334**	⇑*i*Pn	**P**	**16 14 49.5**	**0.0**
BUM				*e*Sn	**S**	**16 15 32.7**	**-1.0**
TTG	**Podgorica**	**3.82**	**338**	⇑*i*Pn	**P**	**16 14 50.6**	**+1.1**
TTG				*e*Sn	**S**	**16 15 33.4**	**-0.2**
RZN	**Rozhen**	**3.89**	**43**	*i* P	**P**	**16 14 50.7**	**+0.2**
RZN	**Rozhen**	**3.89**	**43**	P	**P**	**16 14 50.0**	**-0.5**
APE	**Apeiranthos**	**3.90**	**116**	P	Px	16 13 47.5	
APE	**Apeiranthos**	**3.90**	**116**	⇓*i*P	**P**	**16 14 50.2**	**-0.3**
APE	**Apeiranthos**	**3.90**	**116**	*e*PN	**P**	**16 14 50.3**	**-0.2**
PRK	**Paraskevi**	**3.99**	**83**	*e*PN	**P**	**16 14 51.0**	**-0.8**
VTS	**Vitosha**	**4.01**	**22**	*i* P	**P**	**16 14 53.5**	**+1.4**
VTS	**Vitosha**	**4.01**	**22**	P	**P**	**16 14 53.0**	**+0.9**
VTS				Pn	**P**	**16 14 54.0**	**+1.9**
VTS	**Vitosha**	**4.01**	**22**	Pn	**P**	**16 14 54.0**	**+1.9**
RDO	**Rodhopi**	**4.04**	**55**	*e*PN	**P**	**16 14 52.2**	**-0.4**
IVA	**Berane**	**4.09**	**347**	⇑*i*Pn	**P**	**16 14 54.8**	**+1.4**
IVA				*e*Sn	**S**	**16 15 41.9**	**+1.5**
HCY	**Herceg Novi**	**4.09**	**331**	⇑*i*Pn	**P**	**16 14 53.0**	**-0.3**
HCY				*e*Sn	**S**	**16 15 38.8**	**-1.7**
PLD	**Plovdiv**	**4.19**	**39**	*i* P	**P**	**16 14 55.7**	**+1.0**
PLD	**Plovdiv**	**4.19**	**39**	P	**P**	**16 14 55.0**	**+0.3**
SANT	**Santorini**	**4.23**	**125**	*e*Pn	**P**	**16 14 55.2**	**-0.1**
SANT	**Santorini**	**4.23**	**125**	*e*Pn	**P**	**16 14 55.2**	**-0.1**
VAM	**Vamos**	**4.24**	**144**	*e*PN	**P**	**16 14 55.0**	**-0.4**
ALN	**Alexandroupoli**	**4.25**	**60**	*e*Pn	**P**	**16 14 55.4**	**-0.2**
NKY	**Niksic**	**4.25**	**338**	⇑*i*Pn	**P**	**16 14 55.5**	**-0.1**
NKY				*e*Sn	**S**	**16 15 44.1**	**-0.4**
KDZ	**Kurdzhali**	**4.26**	**48**	*i* P	**P**	**16 14 54.3**	**-1.4**
KDZ	**Kurdzhali**	**4.26**	**48**	P	**P**	**16 14 54.0**	**-1.7**
PGB	**Panagyurishte**	**4.31**	**31**	*i* P	**P**	**16 14 57.5**	**+1.1**
CDT	**Castel del Mon**	**4.35**	**302**	*e*Pn	**P**	**16 14 56.9**	**-0.1**
BRY	**Bratogost**	**4.47**	**334**	⇑*i*Pn	**P**	**16 14 58.3**	**-0.4**
BRY				*e*Sn	**S**	**16 15 48.5**	**-1.6**
MGR	**Morigerati**	**4.52**	**288**	Pn	**P**	**16 15 00.1**	**+0.7**
SLCN	**Sala Consilina**	**4.53**	**291**	Pn	**P**	**16 15 01.4**	**+1.9**
ZAPS	**Zavoj/Pirot**	**4.54**	**13**	⇑*i*Pn	**P**	**16 14 59.9**	**+0.3**
ZAPS				Sn	**S**	**16 15 50.8**	**-0.8**
DIM	**Dimitrovgrad**	**4.59**	**45**	P	**P**	**16 15 00.5**	**+0.2**
SMG	**Samos**	**4.61**	**103**	*e*PN	**P**	**16 15 00.0**	**-0.6**
PLE	**Pljevlja**	**4.63**	**344**	⇑*i*Pn	**P**	**16 15 00.9**	**-0.1**
PLE				*e*Sn	**S**	**16 15 54.0**	**-0.1**
PLE	**Pljevlja**	**4.63**	**344**	*i* P	**P**	**16 15 00.9**	**-0.1**
PLE				*e*S	**S**	**16 15 54.0**	**-0.1**
UPM	**Unac-Piva**	**4.63**	**339**	⇑*i*Pn	**P**	**16 15 01.4**	**+0.5**
UPM				*e*Sn	**S**	**16 15 53.5**	**-0.6**
IDI	**Anoyia**	**4.67**	**139**	P	**P**	**16 14 59.3**	**-2.1**
	comp=Z,6.5nm,0.3s,baz=317,slow=16,SNR=38						
IDI				S	**S**	**16 15 52.9**	**-1.9**
	comp=Z,8.3nm,0.3s,baz=30,slow=7.5,SNR=4.9						
IDI	**Anoyia**	**4.67**	**139**	P	**P**	**16 14 59.2**	**-2.2**
IDI				S	**S**	**16 15 52.9**	**-2.0**
GVD	**Gavdhos**	**4.67**	**149**	*e*PN	**P**	**16 15 01.5**	**0.0**
CANB	**Canakkale**	**4.70**	**74**	*e*P	Px	16 13 59.5	
NVSS	**Nova Varos 2**	**4.75**	**347**	⇑*i*Pn	**P**	**16 15 01.8**	**-0.7**
NVSS				Sn	**S**	**16 15 54.7**	**-2.1**
MRLC	**Muro Lucano**	**4.75**	**295**	Pn	**P**	**16 15 03.3**	**+0.6**
STON	**Ston**	**4.77**	**328**	*i* Pn	**P**	**16 15 01.3**	**-1.5**
STON				*i* Sn	**S**	**16 15 52.9**	**-4.6**
IZM	**Izmir**	**4.79**	**94**	*e*P	Px	16 14 00.3	
SGO	**Sicignano**	**4.82**	**292**	Pn	**P**	**16 15 04.4**	**+0.8**
FG4	**Candela**	**4.88**	**299**	P	**P**	**16 15 05.2**	**+0.7**
MS1	**Monte Sant'Ang**	**4.89**	**307**	*e*Pn	**P**	**16 15 04.3**	**-0.2**
SLNA	**Salina**	**4.97**	**268**	Pn	**P**	**16 15 05.3**	**-0.3**
BOLS	**Boljevac**	**4.97**	**7**	⇓*i*Pn	**P**	**16 15 05.9**	**+0.2**
BOLS				Sn	**S**	**16 16 03.7**	**+1.2**
GRUS	**Gruza**	**5.01**	**356**	⇓*i*Pn	**P**	**16 15 05.1**	**-1.1**
GRUS				Sn	**S**	**16 16 00.1**	**-3.3**
MFT	**Murefte**	**5.07**	**66**	*e*P	Px	16 14 05.3	
NPS	**Neapolis**	**5.07**	**134**	*e*PN	**P**	**16 15 05.6**	**-1.5**
RGNG	**Rignano Grg**	**5.10**	**305**	Pn	**P**	**16 15 07.1**	**-0.3**
RGNG				Sn	**S**	**16 16 03.9**	**-1.8**
FG5	**Orsara di Pugl**	**5.12**	**300**	Pn	**P**	**16 15 08.5**	**+0.8**
CSSN	**Cassano Irpino**	**5.12**	**295**	Pn	**P**	**16 15 08.4**	**+0.6**
BBLS	**Bajina Basta -**	**5.15**	**346**	⇑*i*Pn	**P**	**16 15 06.9**	**-1.2**
BBLS				Sn	**S**	**16 16 05.1**	**-1.9**
MNO	**Monte Soro**	**5.18**	**261**	P	**P**	**16 15 08.5**	**0.0**
MNO				pmax	pmax		
	comp=Z,502nm,0.6s						
MNO	**Monte Soro**	**5.18**	**261**	Pn	**P**	**16 15 08.5**	**0.0**
	comp=Z,502nm,0.6s						
EDRB	**Edirne**	**5.18**	**53**	*e*P	Px	16 14 08.4	
BODT	**Bodrum**	**5.18**	**109**	*e*P	Px	16 14 07.0	
AKS	**Akhisar**	**5.18**	**88**	*e*P	Px	16 14 07.2	
MRMT	**Marmara Adasi**	**5.24**	**69**	*e*P	Px	16 14 08.9	
PZI	**Palazzolo**	**5.25**	**252**	P	**P**	**16 15 06.8**	**-2.7**
PZI						16 16 07.0	
PZI				pmax	pmax		
	comp=Z,257nm,0.2s						
PZI	**Palazzolo**	**5.25**	**252**	Pn	**P**	**16 15 06.8**	**-2.7**
	comp=Z,257nm,0.2s						
PZI				Sn	**S**	**16 16 07.0**	**-2.4**
MRB1	**Monte Rocchett**	**5.26**	**297**	Pn	**P**	**16 15 11.1**	**+1.5**
BALB	**Balikesir**	**5.26**	**80**	*e*P	Px	16 14 08.4	
DIVS	**Divcibare**	**5.28**	**351**	⇓*i*Pn	**P**	**16 15 09.1**	**-0.8**
DIVS				Sn	**S**	**16 16 09.5**	**-0.7**
PVL	**Pavlikeni**	**5.35**	**35**	*i* P	**P**	**16 15 09.5**	**-1.4**
SVIS	**Svilajnac**	**5.40**	**0**	⇑*i*Pn	**P**	**16 15 11.6**	**0.0**
SVIS				Sn	**S**	**16 16 13.8**	**+0.5**
XRY	**Khrisi**	**5.40**	**136**	*e*PN	**P**	**16 15 10.5**	**-1.2**
PSB1	**Pescosannita**	**5.41**	**298**	Pn	**P**	**16 15 12.5**	**+0.8**
BNT	**Bandirma**	**5.41**	**72**	*e*P	Px	16 14 10.4	
FG2	**Serracapriola**	**5.44**	**304**	Pn	**P**	**16 15 12.6**	**+0.5**
	comp=Z,297nm,0.3s						
JMB	**Yambol**	**5.45**	**47**	P	**P**	**16 15 10.0**	**-2.3**
JMB	**Yambol**	**5.45**	**47**	*i* P	**P**	**16 15 11.0**	**-1.3**
VAE	**Valguarnera**	**5.51**	**257**	P	**P**	**16 15 13.3**	**+0.2**
	comp=Z,4.9nm,0.3s,baz=323,slow=1.0,SNR=11						
VAE				S	**S**	**16 16 16.5**	**+0.5**
	comp=Z,9.8nm,0.3s,baz=324,slow=9.1,SNR=4.4						
VAE				LR	LR	16 17 44.7	
	comp=Z,289nm,20.6s,baz=223,slow=42						
VAE	**Valguarnera**	**5.51**	**257**	S	**S**	**16 16 16.5**	**+0.5**
GIB	**Gibilmanna**	**5.68**	**263**	P	**P**	**16 15 14.8**	**-0.7**
KARP	**Karpathos**	**5.83**	**123**	*e*PN	**P**	**16 15 17.4**	**-0.2**
DST	**Dursunbey**	**5.83**	**81**	*e*P	Px	16 14 16.3	
MIDA	**Miranda**	**5.96**	**300**	P	**P**	**16 15 20.4**	**+1.0**
CII	**Carovilli**	**5.96**	**301**	*e*Pn	**P**	**16 15 20.1**	**+0.7**
	comp=Z,141nm,0.7s						
RFI	**Roccamonfina**	**6.01**	**296**	P	**P**	**16 15 21.6**	**+1.5**
RNI2	**Rionero Sannit**	**6.06**	**300**	P	**P**	**16 15 22.6**	**+1.8**
ORLT	**Orhaneli**	**6.09**	**77**	*e*P	Px	16 14 20.0	
FAVR	**Favara**	**6.14**	**257**	P	**P**	**16 15 22.0**	**+0.1**
USI	**Ustica**	**6.25**	**271**	P	**P**	**16 15 22.6**	**-0.8**
VENT	**Ventotene**	**6.26**	**290**	P	**P**	**16 15 22.7**	**-0.9**
DENT	**Denizli**	**6.29**	**98**	*e*P	Px	16 14 22.3	
SDI	**San Donato**	**6.29**	**299**	P	**P**	**16 15 24.7**	**+0.6**
PRD	**Provadia**	**6.38**	**46**	*i* P	**P**	**16 15 25.0**	**-0.3**
VVLD	**Villa Vallelon**	**6.49**	**300**	P	**P**	**16 15 27.5**	**+0.7**
YLV	**Yalova**	**6.54**	**73**	*e*P	Px	16 14 26.2	
PTQR	**Pietraquaria**	**6.70**	**300**	P	**P**	**16 15 31.5**	**+1.7**
ERC	**Erice**	**6.79**	**265**	P	**P**	**16 15 34.1**	**+3.0**
AQU	**L'Aquila**	**6.85**	**303**	*e*P	**P**	**16 15 31.4**	**-0.5**
AQU				pmax	pmax		
	comp=Z,77nm,0.8s						
AQU	**L'Aquila**	**6.85**	**303**	*e*P	**P**	**16 15 31.4**	**-0.5**
	comp=Z,77nm,0.8s						
TERO	**Teramo**	**6.85**	**305**	P	**P**	**16 15 32.0**	**+0.1**
CERT	**Cerreto**	**6.96**	**299**	P	**P**	**16 15 35.0**	**+1.6**
FIAM	**Fiamignano**	**7.00**	**301**	P	**P**	**16 15 36.2**	**+2.2**
MTCE	**Montecelio**	**7.15**	**299**	P	**P**	**16 15 38.3**	**+2.2**
	comp=Z,54nm,0.8s						
NRCA	**Norcia**	**7.27**	**305**	P	**P**	**16 15 37.4**	**-0.3**
RHK3	**Tenkes**	**7.32**	**344**	⇓*e*P	**P**	**16 15 36.3**	**-2.1**
MNS	**Montasola**	**7.34**	**301**	P	**P**	**16 15 40.2**	**+1.5**
NVLJ	**Novalja**	**7.37**	**322**	*i* Pn	**P**	**16 15 37.4**	**-1.7**
NVLJ				*i* Sn	**S**	**16 16 56.9**	**-5.3**
NVLJ	**Novalja**	**7.37**	**322**	*i* Pn	**P**	**16 15 37.4**	**-1.7**
NVLJ				*i* Sn	**S**	**16 16 56.8**	**-5.4**
ISP	**Isparta**	**7.41**	**95**	*e*P	**P**	**16 15 40.6**	**+0.9**
MLR	**Muntele Rosu**	**7.49**	**27**	P	**P**	**16 15 41.3**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=256,slow=4.2,SNR=12						
CING	**Cingoli**	**7.50**	**309**	P	**P**	**16 15 39.6**	**-1.4**
PKSM	**Moragy**	**7.55**	**347**	⇑*i*P	**P**	**16 15 40.0**	**-1.7**
ASS	**Assisi**	**7.67**	**306**	P	**P**	**16 15 44.1**	**+0.7**
TOLF	**Tolfa**	**7.67**	**297**	P	**P**	**16 15 44.9**	**+1.5**
ARV	**Arcevia**	**7.72**	**309**	P	**P**	**16 15 42.4**	**-1.6**
MURB	**Monte Urbino**	**7.86**	**307**	P	**P**	**16 15 46.1**	**+0.2**
FSSB	**Fossombrone**	**7.93**	**310**	P	**P**	**16 15 45.2**	**-1.7**
BOJS	**Bojanci**	**7.93**	**328**	*i* Pn	**P**	**16 15 44.9**	**-2.0**
BOJS				*e*Sn	**S**	**16 17 12.1**	**-4.1**
PKS9	**Tamasi**	**7.98**	**345**	*e*P	**P**	**16 15 45.6**	**-2.0**
SLUM		**8.09**	**155**	⇑P	**P**	**16 15 44.8**	**-4.3**
VRI	**Vrincioaia**	**8.09**	**29**	P	**P**	**16 15 50.9**	**+1.8**
BADI	**Badiali**	**8.16**	**307**	P	**P**	**16 15 52.6**	**+2.6**
RSM	**Repubblica di**	**8.26**	**310**	P	**P**	**16 15 51.0**	**-0.5**
LEGS	**Legarje**	**8.27**	**330**	P	**P**	**16 15 49.3**	**-2.3**
KOGS	**Kog**	**8.38**	**336**	*e*Pn	**P**	**16 15 50.6**	**-2.4**
CEY	**Cerknica**	**8.47**	**326**	P	**P**	**16 15 52.4**	**-1.9**
PDKS	**Podkum**	**8.49**	**330**	P	**P**	**16 15 52.3**	**-2.3**
SFI	**Santa Sofia**	**8.61**	**309**	P	**P**	**16 15 57.0**	**+0.7**
GROS	**Grobnik**	**8.64**	**333**	P	**P**	**16 15 54.8**	**-1.9**
LJU	**Ljubljana**	**8.67**	**328**	*e*Pn	**P**	**16 15 55.0**	**-2.0**
LJU				*e*Sn	**S**	**16 17 31.1**	**-3.4**
PGD	**Poggio Sodo**	**8.67**	**308**	P	**P**	**16 15 57.1**	**0.0**
VMG	**Vicchio**	**8.83**	**308**	P	**P**	**16 16 00.7**	**+1.5**
PERS	**Pernice**	**8.93**	**332**	*e*Pn	**P**	**16 15 58.0**	**-2.6**
PERS	**Pernice**	**8.93**	**332**	*e*Pn	**P**	**16 15 58.0**	**-2.6**
VOY	**Vojsko**	**8.93**	**325**	⇓*e*Pn	**P**	**16 15 59.0**	**-1.7**
VOY				*e*Sn	**S**	**16 17 35.7**	**-5.3**
SEI	**Scarperia**	**8.99**	**308**	P	**P**	**16 16 02.9**	**+1.4**
OBKA	**Obir**	**9.04**	**330**	⇓*i*PN	**P**	**16 15 59.9**	**-2.2**
OBKA				*i* SN	**S**	**16 17 38.4**	**-5.1**
PSZ	**Piszkesteto**	**9.07**	**355**	*e*P	**P**	**16 16 01.5**	**-1.1**
PSZ				pmax	pmax		
	comp=Z,45nm,0.9s						
PSZ	**Piszkesteto**	**9.07**	**355**	*e*Pn	**P**	**16 16 01.5**	**-1.1**
	comp=Z,45nm,0.9s						
PSZ				P		16 16 06.6	
PSZ	**Piszkesteto**	**9.07**	**355**	*e*Pn	**P**	**16 16 01.5**	**-1.1**
	comp=Z,45nm,0.9s						
HMAT	**Matruh**	**9.17**	**146**	⇑P	**P**	**16 15 59.2**	**-4.7**
HMAT				S	**S**	**16 17 30.3**	**-16**
VSL	**Villasalto**	**9.18**	**277**	*e*Pn	**P**	**16 16 02.3**	**-1.7**
VSL	**Villasalto**	**9.18**	**277**	*e*Pn	**P**	**16 16 02.3**	**-1.8**
FNVD	**Fontana Vidola**	**9.19**	**308**	P	**P**	**16 16 05.8**	**+1.5**
ROBS	**Robic**	**9.27**	**325**	*e*Pn	**P**	**16 16 03.5**	**-1.8**
ARSA	**Arzberg**	**9.32**	**336**	⇑*i*PN	**P**	**16 16 03.0**	**-3.0**
ARSA				*i* SN	**S**	**16 17 46.1**	**-4.4**
PTCC	**Patocco-Chiusa**	**9.46**	**325**	P	**P**	**16 16 05.3**	**-2.6**
BDI	**Bagni Di Lucca**	**9.47**	**306**	P	**P**	**16 16 09.5**	**+1.5**
KECS	**Kecovo**	**9.60**	**357**	*e*PN	**P**	**16 16 10.2**	**+0.4**
GSCL	**Gusciola**	**9.62**	**308**	P	**P**	**16 16 11.5**	**+1.4**
BR131	**Keskin Array S**	**9.70**	**81**	*e*Pn	**P**	**16 16 10.9**	**-0.3**
	comp=Z,3.2nm,0.4s						
BRTR	**Keskin Array B**	**9.70**	**81**	P	**P**	**16 16 11.4**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRTR	**Keskin Array B**	**9.70**	**81**	P	**P**	**16 16 11.4**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=266,slow=12,SNR=22						
BRTR	**Keskin Array B**	**9.70**	**81**	P	**P**	**16 16 11.4**	**+0.2**
VYHS	**Vyhne**	**9.75**	**351**	*e*PN	**P**	**16 16 10.0**	**-1.8**
VYHS				*e*SN	**S**	**16 17 54.6**	**-6.3**
DABA	**Dabaa**	**9.79**	**141**	⇑P	**P**	**16 16 07.5**	**-4.9**
KIS	**Kishinev**	**9.85**	**32**	*e*P	**P**	**16 16 23.0**	**+10**
PGF	**Pioggiola**	**9.94**	**295**	*e*P	**P**	**16 16 14.9**	**+0.5**
	comp=Z,32nm,0.9s						
KBA	**Koelnbreinsper**	**9.99**	**328**	⇑*i*PN	**P**	**16 16 12.8**	**-2.3**
KBA				*i* SN	**S**	**16 18 00.8**	**-6.0**
CTI	**Castel Tesino**	**10.03**	**319**	P	**P**	**16 16 13.1**	**-2.5**
KOLS	**Kolonicke sedl**	**10.07**	**4**	*e*PN	**P**	**16 16 17.7**	**+1.4**
SWA2		**10.26**	**158**	⇓P	**P**	**16 16 13.5**	**-5.4**
MOA	**Molln**	**10.26**	**333**	⇑*i*PN	**P**	**16 16 17.3**	**-1.6**
MOA				*i* SN	**S**	**16 18 09.1**	**-4.4**
JAVC	**Velka Javorina**	**10.28**	**347**	P	**P**	**16 16 18.8**	**-0.3**
SWA1		**10.31**	**157**	P	**P**	**16 16 14.8**	**-4.8**
CSS	**Prodhromos**	**10.49**	**108**	*e*Pn	**P**	**16 16 20.6**	**-1.4**
CSS	**Prodhromos**	**10.49**	**108**	*e*Pn	**P**	**16 16 20.6**	**-1.4**
BOB	**Bobbio (Coli)**	**10.53**	**308**	P	**P**	**16 16 23.3**	**+0.8**
APPI	**Appiano**	**10.53**	**319**	P	**P**	**16 16 22.1**	**-0.4**
MABI	**Malga Bissina**	**10.63**	**316**	P	**P**	**16 16 22.7**	**-1.2**
VRAC	**Vranov**	**10.92**	**344**	P	**P**	**16 16 27.2**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=167,slow=14,SNR=2.9						
HBRG	**Burj al 'Arab**	**10.93**	**137**	⇓P	**P**	**16 16 22.4**	**-5.6**
WATA	**Walderalm**	**10.97**	**323**	⇓*i*PN	**P**	**16 16 26.6**	**-1.8**
WATA				*i* SN	**S**	**16 18 25.8**	**-4.7**
BRMO	**Bormio**	**10.98**	**317**	P	**P**	**16 16 28.0**	**-0.6**
SQTA	**Sankt Quirin**	**11.06**	**322**	*i* SN	**S**	**16 18 28.0**	**-4.7**
SQTA	**Sankt Quirin**	**11.06**	**322**	⇑*i*Pn	**P**	**16 16 27.5**	**-2.2**
SQTA				*i* Sn	**S**	**16 18 28.0**	**-4.7**
SQTA	**Sankt Quirin**	**11.06**	**322**	*i* P	**P**	**16 16 27.5**	**-2.2**
OKC	**Ostrava-Krasne**	**11.16**	**350**	*e*P	**P**	**16 16 30.0**	**-1.0**
OKC				AMS	AMS	16 22 20.0	
	comp=Z,300nm,17.3s						
MORC	**Moravsky Berou**	**11.19**	**348**	*e*P	**P**	**16 16 29.8**	**-1.6**
MORC				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MORC	**Moravsky Berou**	**11.19**	**348**	*e*P	**P**	**16 16 29.8**	**-1.6**
	comp=Z,7.6nm,1.4s						
MORC	**Moravsky Berou**	**11.19**	**348**	*e*P	**P**	**16 16 29.8**	**-1.6**
	comp=Z,7.6nm,1.4s						
GEC2	**GERESS Array S**	**11.31**	**334**	*e*Pn	**P**	**16 16 32.2**	**-0.9**
GEC2				*e*Sn	**S**	**16 18 33.2**	**-5.7**
GERES	**GERESS Array B**	**11.31**	**334**	P	**P**	**16 16 32.2**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=156,slow=14,SNR=26						
GERES				S	**S**	**16 18 34.2**	**-4.7**
	comp=Z,1.6nm,0.3s,baz=153,slow=23,SNR=10.0						
DAVOX	**Davos**	**11.43**	**317**	P	**P**	**16 16 34.8**	**+0.1**
	comp=Z,2.2nm,0.3s,baz=331,slow=22,SNR=12						
DAVOX				S	**S**	**16 18 31.1**	**-11**
	comp=Z,1.0nm,0.3s,baz=150,slow=18,SNR=3.3						
DAVOX				LR	LR	16 21 22.9	
	comp=Z,114nm,20.6s,baz=246,slow=39						
SBF	**Sospel**	**11.45**	**300**	*e*P	**P**	**16 16 33.6**	**-1.4**
VAI	**Varese**	**11.51**	**311**	P	**P**	**16 16 36.0**	**+0.2**
TUE	**Stuetta**	**11.53**	**315**	P	**P**	**16 16 36.2**	**+0.2**
KHC	**Kasperske Hory**	**11.60**	**334**	*e*P	**P**	**16 16 36.1**	**-0.8**
KHC	**Kasperske Hory**	**11.60**	**334**	*e*P	**P**	**16 16 36.3**	**-0.6**
KHC				*e*x	x	16 17 00.0	
KHC				*e*S	**S**	**16 18 41.5**	**-4.3**
KHC				*e*x	x	16 19 25.0	
KHC				AMS	AMS	16 21 40.0	
	comp=Z,800nm,16.3s						
WET	**Wettzell**	**11.85**	**333**	*e*Pn	**P**	**16 16 39.9**	**-0.5**
WET				*e*Sn	**S**	**16 18 45.6**	**-6.4**
FRF	**La Foret Royal**	**11.89**	**298**	*e*P	**P**	**16 16 41.0**	**+0.2**
DPC	**Dobruska-Polom**	**11.96**	**345**	*e*P	**P**	**16 16 40.9**	**-0.9**
DPC				AMS	AMS	16 22 00.0	
	comp=Z,400nm,14.7s						
PRU	**Pruhonice**	**12.06**	**339**	*e*P	**P**	**16 16 47.1**	**+4.0**
PRU				AMS	AMS	16 21 50.0	
	comp=Z,700nm,13.4s						
UPC	**Upice**	**12.18**	**344**	*e*P	**P**	**16 16 42.8**	**-1.9**
BNI	**Bardonecchia**	**12.41**	**304**	*e*P	**P**	**16 16 53.1**	**+5.2**
BNI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BNI	**Bardonecchia**	**12.41**	**304**	*e*P	**P**	**16 16 53.1**	**+5.2**
	comp=Z,2.8nm,0.7s						
DIX	**Grande Dixence**	**12.43**	**310**	⇓P	**P**	**16 16 50.1**	**+2.0**
LKBD	**Leukerbad**	**12.46**	**311**	⇑P	**P**	**16 16 47.7**	**-0.8**
LKBD				⇓P		16 16 51.2	
PVCC	**Panska Ves**	**12.54**	**340**	AMS	AMS	16 22 00.0	
	comp=Z,600nm,16.6s						
LPG	**La Plagne**	**12.56**	**306**	*e*P	**P**	**16 16 48.1**	**-1.7**
	comp=Z,21nm,0.8s						
LPG	**La Plagne**	**12.56**	**306**	*e*P	**P**	**16 16 48.1**	**-1.7**
LPG				pmax	pmax		
	comp=Z,11nm,0.8s						
LPL	**La Plagne**	**12.58**	**306**	*e*P	**P**	**16 16 48.1**	**-2.0**
	comp=Z,6.3nm,0.3s						
LPL	**La Plagne**	**12.58**	**306**	*e*P	**P**	**16 16 48.1**	**-2.0**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KIEV	**Kiev**	**13.10**	**23**	P	**P**	**16 16 59.0**	**+2.0**
AKASG	**Malin Array Be**	**13.11**	**23**	P	**P**	**16 16 58.2**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=204,slow=12,SNR=6.4						
AKASG	**Malin Array Be**	**13.11**	**23**	P	**P**	**16 16 58.2**	**+1.1**
STU	**Stuttgart**	**13.11**	**323**	*e*P	**P**	**16 16 55.8**	**-1.3**
STU				pmax	pmax		
	comp=Z,21nm,0.8s						
STU	**Stuttgart**	**13.11**	**323**	*e*P	**P**	**16 16 55.8**	**-1.4**
	comp=Z,21nm,0.8s						
STU	**Stuttgart**	**13.11**	**323**	*e*P	**P**	**16 16 55.8**	**-1.3**
	comp=Z,21nm,0.8s						
BFO	**Black Forest**	**13.23**	**320**	P	**P**	**16 16 59.2**	**+0.5**
CABF	**La Chapelle**	**13.49**	**310**	*e*P	**P**	**16 17 01.8**	**-0.3**
	comp=Z,26nm,0.9s						
CABF	**La Chapelle**	**13.49**	**310**	*e*P	**P**	**16 17 01.8**	**-0.3**
CABF				pmax	pmax		
	comp=Z,13nm,0.9s						
MALT	**Malatya**	**13.51**	**87**	*e*P	**P**	**16 17 03.9**	**+1.5**
MALT				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MALT	**Malatya**	**13.51**	**87**	*e*P	**P**	**16 17 03.9**	**+1.5**
	comp=Z,3.5nm,0.6s						
MOX	**Moxa**	**13.56**	**333**	*e*P	**P**	**16 17 03.0**	**+0.1**
MOX				pmax	pmax		
	comp=Z,13nm,0.9s						
MOX				MLR	MLR		
	comp=Z,500nm,17.0s						
MOX	**Moxa**	**13.56**	**333**	*i* P	**P**	**16 17 03.0**	**+0.1**
	comp=Z,logA/T=1.2						
MOX				L		16 23 12.0	
MOX	**Moxa**	**13.56**	**333**	*e*P	**P**	**16 17 03.0**	**+0.1**
	comp=Z,13nm,0.9s						
VIVF	**Saint-Julien-l**	**13.65**	**301**	*e*P	**P**	**16 17 03.5**	**-0.7**
CLL	**Collm**	**13.68**	**338**	⇓*i*P		16 17 13.3	
CLL	**Collm**	**13.68**	**338**	⇓*i**SP		16 17 13.3	
CLL				*e*SS	SS	16 19 55.0	+2.4
CLL				*e*		16 21 26.0	
HINF	**Hinteralfeld**	**13.70**	**315**	*e*P	**P**	**16 17 03.2**	**-1.5**
CDF	**Champ du Feu**	**13.83**	**318**	*e*P	**P**	**16 17 03.6**	**-2.8**
	comp=Z,2.8nm,0.3s						
CDF	**Champ du Feu**	**13.83**	**318**	*e*P	**P**	**16 17 03.6**	**-2.8**
CDF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
LASF	**Ste Croix**	**13.97**	**297**	*e*P	**P**	**16 17 12.6**	**+4.3**
HAU	**Haudompre**	**14.08**	**315**	*e*P	**P**	**16 17 08.7**	**-1.1**
HAU				*e*R			
	comp=Z,264nm,17.1s						
ETOS	**Mallorca**	**14.24**	**279**	P	**P**	**16 17 18.1**	**+6.2**
	comp=Z,0.4nm,0.4s						
EIL	**Elat**	**14.63**	**125**	*e*P	**P**	**16 17 09.2**	**-7.8**
	comp=Z,6.2nm,0.4s						
SOC	**Sochi**	**14.71**	**65**	*e*P	**P**	**16 17 18.0**	**-0.1**
SOC				*e*		16 20 10.4	
SOC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SOC				pmax	pmax		
	comp=N,2.0nm,0.3s						
SOC				pmax	pmax		
	comp=E,4.0nm,0.5s						
SOC	**Sochi**	**14.71**	**65**	*e*P	**P**	**16 17 18.0**	**-0.1**
	comp=E,2.0nm,0.3s						
SMF	**Signal de Mont**	**14.88**	**307**	*e*P	**P**	**16 17 19.3**	**-0.9**
	comp=E,7.9nm,0.5s						
SMF	**Signal de Mont**	**14.88**	**307**	*e*P	**P**	**16 17 19.3**	**-0.9**
SMF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MTLF	**Montolieu**	**14.96**	**293**	*e*P	**P**	**16 17 21.3**	**+0.1**
	comp=Z,7.9nm,0.9s						
MTLF	**Montolieu**	**14.96**	**293**	*e*P	**P**	**16 17 21.3**	**+0.1**
MTLF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SUW	**Suwalki**	**15.19**	**5**	*e*P	**P**	**16 17 23.9**	**-0.2**
SUW				pmax	pmax		
	comp=Z,76nm,1.1s						
SUW	**Suwalki**	**15.19**	**5**	*e*P	**P**	**16 17 23.9**	**-0.2**
	comp=Z,76nm,1.1s						
SUW	**Suwalki**	**15.19**	**5**	*e*P	**P**	**16 17 23.9**	**-0.2**
	comp=Z,76nm,1.1s						
WLF	**Walferdange**	**15.19**	**320**	*e*P	**P**	**16 17 25.8**	**+1.6**
WLF				pmax	pmax		
	comp=Z,21nm,1.1s						
WLF	**Walferdange**	**15.19**	**320**	*e*P	**P**	**16 17 25.8**	**+1.6**
	comp=Z,21nm,1.1s						
WLF	**Walferdange**	**15.19**	**320**	P	**P**	**16 17 26.2**	**+2.0**
AVF	**Avril sur Loir**	**15.25**	**307**	*e*P	**P**	**16 17 24.3**	**-0.6**
CAF	**Calviac**	**15.44**	**299**	*e*P	**P**	**16 17 32.3**	**+4.9**
TCF	**Toulx Ste Croi**	**15.78**	**304**	*e*P	**P**	**16 17 37.1**	**+5.4**
RJF	**Les Rejaudoux**	**15.92**	**300**	*e*P	**P**	**16 17 33.5**	**0.0**
RJF				*e*R			
	comp=Z,278nm,18.8s						
HGN	**Heimansgroeve**	**16.02**	**323**	*e*P	**P**	**16 17 39.8**	**+5.1**
	comp=Z,13nm,1.2s						
GIVF	**Givet**	**16.14**	**319**	*e*P	**P**	**16 17 36.6**	**+0.4**
DOU	**Dourbes**	**16.25**	**319**	P	**P**	**16 17 39.3**	**+1.7**
EBIE	**Bielsa**	**16.36**	**290**	P	**P**	**16 17 43.1**	**+4.0**
	comp=Z,1.5nm,1.0s						
BAIF	**Baives**	**16.43**	**318**	*e*P	**P**	**16 17 41.3**	**+1.4**
BAIF				pmax	pmax		
	comp=Z,12nm,0.8s						
BAIF	**Baives**	**16.43**	**318**	*e*P	**P**	**16 17 41.3**	**+1.4**
	comp=Z,12nm,0.8s						
BAIF				*e*P		16 17 45.0	
EMOS	**Mosqueruela**	**16.74**	**282**	P	**P**	**16 17 47.9**	**+4.1**
	comp=Z,0.8nm,0.5s						
KIV	**Kislovodsk**	**16.90**	**66**	*e*P	**P**	**16 17 46.5**	**+0.7**
KIV	**Kislovodsk**	**16.90**	**66**	*e*P	**P**	**16 17 46.5**	**+0.7**
KIV				*e*P		16 17 49.6	
ETSF	**Etsaut**	**16.90**	**291**	*e*P	**P**	**16 17 46.3**	**+0.4**
GOF	**Gofitskoye**	**17.36**	**62**	*e*P	**P**	**16 17 53.5**	**+1.8**
GOF				pmax	pmax		
	comp=Z,50nm,1.7s						
GOF	**Gofitskoye**	**17.36**	**62**	*e*P	**P**	**16 17 53.5**	**+1.8**
	comp=Z,50nm,1.7s						
SJPF	**Ste Jean**	**17.41**	**291**	*e*P	**P**	**16 17 55.2**	**+2.9**
MFF	**Saint Martin d**	**17.42**	**303**	*e*P	**P**	**16 17 52.3**	**0.0**
MFF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MFF	**Saint Martin d**	**17.42**	**303**	*e*P	**P**	**16 17 52.3**	**0.0**
	comp=Z,7.8nm,0.9s						
MFF				*e*P		16 17 55.6	
ZEI	**Tsey**	**17.62**	**70**	*e*P	**P**	**16 17 55.8**	**+0.9**
LDF	**La Druitiere**	**18.13**	**309**	*e*P	**P**	**16 18 00.8**	**-0.4**
	comp=Z,11nm,0.8s						
LDF	**La Druitiere**	**18.13**	**309**	*e*P	**P**	**16 18 00.8**	**-0.4**
LDF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GNI	**Garni**	**18.22**	**79**	LR	LR	16 26 28.7	
	comp=Z,100nm,20.1s,baz=273,slow=42						
GNI	**Garni**	**18.22**	**79**	*e*P	**P**	**16 18 04.1**	**+1.7**
FLN	**La Foliniere**	**18.42**	**309**	*e*P	**P**	**16 18 02.5**	**-2.2**
FLN				*e*R			
	comp=Z,113nm,17.2s						
FLN	**La Foliniere**	**18.42**	**309**	*e*P	**P**	**16 18 06.8**	**+2.1**
OBN	**Obninsk**	**19.26**	**28**	P	**P**	**16 18 15.0**	**+0.7**
OBN				MLR	MLR		
	comp=Z,100nm,15.0s						
OBN	**Obninsk**	**19.26**	**28**	⇓*i*P	**P**	**16 18 15.3**	**+1.0**
ESDC	**Sonseca Array**	**19.46**	**280**	P	**P**	**16 18 17.5**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=74,slow=11,SNR=16						
ESDC	**Sonseca Array**	**19.46**	**280**	P	**P**	**16 18 17.6**	**+1.0**
	comp=Z,0.2nm,0.2s,SNR=15						
ESLA	**Sonseca Array**	**19.46**	**280**	*e*P	**P**	**16 18 17.0**	**+0.4**
	comp=Z,1.4nm,0.7s						
SGMF	**Saint Gilles**	**19.51**	**306**	*e*P	**P**	**16 18 17.4**	**+0.3**
	comp=Z,33nm,1.1s						
SGMF	**Saint Gilles**	**19.51**	**306**	*e*P	**P**	**16 18 17.4**	**+0.3**
SGMF				pmax	pmax		
	comp=Z,16nm,1.1s						
QUIF	**Quistinic**	**19.78**	**305**	*e*P	**P**	**16 18 20.3**	**+0.2**
	comp=Z,8.0nm,0.5s						
QUIF	**Quistinic**	**19.78**	**305**	*e*P	**P**	**16 18 20.3**	**+0.2**
QUIF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
VSU	**Vasula**	**19.92**	**9**	⇓*i*P	**P**	**16 18 20.7**	**-0.7**
ROSF	**Rostrenen**	**19.99**	**306**	*e*P	**P**	**16 18 22.5**	**+0.2**
	comp=Z,14nm,0.7s						
ROSF	**Rostrenen**	**19.99**	**306**	*e*P	**P**	**16 18 22.5**	**+0.2**
ROSF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ELUQ	**Luque**	**20.02**	**274**	P	**P**	**16 18 22.8**	**+0.2**
	comp=Z,0.9nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**20.14**	**276**	P	**P**	**16 18 24.4**	**+0.5**
	comp=Z,1.4nm,0.5s						

EADA	**Adamuz**	20.14	276	P	P	16 18 24.4	+0.4
	comp=Z,1.4nm,0.5s,SNR=5.8						
EARI	**Arriondas**	20.33	291	P	P	16 18 27.2	+1.3
	comp=Z,2.4nm,0.4s,SNR=8.5						
ECAB	**El Cabril**	20.81	276	P	P	16 18 31.8	+1.0
	comp=Z,1.5nm,0.6s						
ECAB	**El Cabril**	20.81	276	P	P	16 18 31.8	+0.9
	comp=Z,1.5nm,0.6s,SNR=6.6						
EPON	**Pontenova**	21.75	291	P	P	16 18 43.3	+3.1
	comp=Z,2.6nm,0.6s,mb3.8						
HFS	**Hagfors**	21.78	350	P	P	16 18 39.7	-0.8
	comp=Z,9.8nm,0.4s,mb4.6,baz=172,slow=10,SNR=72						
HFS				LR	LR	16 27 41.5	
	comp=Z,140nm,18.7s,MS3.4,baz=359,slow=38						
HFA0	**Hagfors New Ar**	21.79	350	P	P	16 18 39.2	-1.4
EMIN	**Mina Concepcio**	21.84	276	P	P	16 18 41.7	+0.5
	comp=Z,1.0nm,0.5s,mb3.5						
EMIN	**Mina Concepcio**	21.84	276	P	P	16 18 41.7	+0.5
	comp=Z,1.0nm,0.5s,mb3.5,SNR=7.1						
EBAD	**Badajoz**	21.93	279	P	P	16 18 42.3	+0.2
	comp=Z,0.6nm,0.5s,mb3.3,SNR=7.9						
KONO	**Kongsberg**	22.04	344	*e*P	P	16 18 42.7	-0.3
FINES	**FINESS Array B**	22.78	6	P	P	16 18 49.6	-0.6
	comp=Z,2.7nm,0.4s,mb4.0,baz=172,slow=10,SNR=26						
FINES				LR	LR	16 28 53.8	
	comp=Z,171nm,18.4s,MS3.5,baz=190,slow=40						
NAO01	**NORSAR Array S**	22.90	347	*e*P	P	16 18 51.6	+0.2
	comp=Z,5.5nm,0.4s,mb4.3						
NAO01	**NORSAR Array S**	22.90	347	*e*P	P	16 18 51.6	+0.3
	comp=Z,5.5nm,0.4s,mb4.3						
NB2	**NORSAR Subarra**	23.03	348	P	P	16 18 52.9	+0.3
	comp=Z,4.2nm,0.6s,mb4.0,baz=160,slow=9.3						
NOA	**NORSAR Array B**	23.03	348	P	P	16 18 52.7	+0.1
	comp=Z,3.0nm,0.4s,mb4.1,baz=151,slow=10,SNR=22						
NOA				LR	LR	16 28 40.5	
	comp=Z,86nm,19.1s,MS3.2,baz=175,slow=38						
NOA	**NORSAR Array B**	23.03	348	P	P	16 18 52.7	+0.1
NOA				LR	LR	16 28 40.5	
EKA	**Eskdalemuir Ar**	23.15	323	P	P	16 18 54.9	+1.0
	comp=Z,5.7nm,0.6s,mb4.2,baz=119,slow=9.1,SNR=40						
EKA	**Eskdalemuir Ar**	23.15	323	P	P	16 18 54.8	+0.9
ESK	**Eskdalemuir**	23.16	323	*e*P	P	16 18 54.9	+0.9
ESK				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.5						
ESK	**Eskdalemuir**	23.16	323	*e*P	P	16 18 54.9	+0.9
	comp=Z,22nm,1.1s,mb4.5						
ESK	**Eskdalemuir**	23.16	323	*e*P	P	16 18 54.8	+0.8
	comp=Z,22nm,1.1s,mb4.5						
KAF	**Kangasniemi**	23.46	6	*e*p	P	16 18 56.6	-0.2
AB31	**Akbulak array**	29.42	57	P	P	16 19 51.6	-0.6
ARU	**Arti**	30.19	42⇑	*i*P	P	16 20 01.7	+2.8
ARU				*e*		16 21 02.2	
ARU				*i*		16 22 55.0	
ARU				*e*S	S	16 25 03.0	+10
ARU				*i*		16 30 34.5	
ARU				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
ARU	**Arti**	30.19	42	*e*P	P	16 20 01.7	+2.8
ARU	**Arti**	30.19	42	*i* ScS	ScS	16 30 34.5	+4.6
ARCES	**ARCESS Array B**	30.80	3	P	P	16 20 03.2	-0.9
	comp=Z,1.8nm,0.4s,mb4.3,baz=194,slow=10,SNR=52						
ARCES				LR	LR	16 33 43.9	
	comp=Z,144nm,18.7s,MS3.7,baz=143,slow=39						
KEV	**Kevo**	31.09	4	*e*p	P	16 20 05.8	-0.9
SVE	**Sverdlovsk**	31.40	42	*e*P	P	16 20 14.8	+5.2
ZRNK	**Zerenda**	35.43	51	*e*P	P	16 20 44.2	-0.2
	comp=Z,2.3nm,0.4s,mb4.5						
ZRNK	**Zerenda**	35.43	51	P	P	16 20 44.3	-0.2
JMIC	**Jan Mayen**	35.62	344	LR	LR	16 36 17.8	
	comp=Z,46nm,20.7s,MS3.2,baz=319,slow=38						
BVA0	**Borovoye Array**	36.27	51	P	P	16 20 51.6	0.0
BVAR	**Borovoye Array**	36.27	51	P	P	16 20 51.6	+0.1
	comp=Z,1.3nm,0.4s,mb4.2,baz=269,slow=8.0,SNR=13						
VOSK	**Vostochnaya**	36.62	51	*i* P	P	16 20 54.2	-0.3
KKAR	**Karatay Array**	37.05	67	*e*P	P	16 20 58.1	-0.1
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
KKAR	**Karatay Array**	37.05	67	*i* P	P	16 20 58.1	-0.1
DBIC	**Dimbokro**	39.76	223	P	P	16 21 21.1	0.0
	comp=Z,2.8nm,0.9s,mb4.0,baz=348,slow=16,SNR=2.6						
AAK	**Ala-Archa**	40.01	67	P	P	16 21 21.6	-1.2
NVS	**Novosibirsk**	43.82	48⇑	*i*P	P	16 21 53.0	-0.9
NVS				*i* S	S	16 28 21.6	+1.2
NVS				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.5						
NVS				pmax	pmax		
	comp=E,5.0nm,0.8s						
NVS				smax			
	comp=N,13nm,1.8s						
NVS				smax			
	comp=E,9.0nm,2.0s						
NVS	**Novosibirsk**	43.82	48	*i* P	P	16 21 53.0	-0.9
	comp=E,13nm,1.8s,mb4.4						
NVS				*i* S	S	16 28 21.6	+1.2
SUMG	**Summit**	44.35	338	*e*P	P	16 21 59.5	+1.7
	comp=E,1.2nm,0.5s,mb3.9						
SUMG	**Summit**	44.35	338	*e*P	P	16 21 59.5	+1.6
	comp=E,1.2nm,0.5s,mb3.9						
MKAR	**Makanchi Array**	44.50	59	P	P	16 21 58.9	-0.5
	comp=E,2.3nm,0.3s,mb4.3,baz=278,slow=7.5,SNR=102						
MKAR				LR	LR	16 43 49.6	
	comp=E,40nm,20.8s,MS3.3,baz=84,slow=40						
MKAR	**Makanchi Array**	44.50	59	P	P	16 21 58.9	-0.5
MKAR				LR	LR	16 43 49.6	
ZAL	**Zalesovo**	44.83	49	P	P	16 22 02.1	+0.2
	comp=E,11nm,0.4s,mb5.1,baz=196,slow=5.2,SNR=27						
ZAL				LR	LR	16 43 41.1	
	comp=E,90nm,18.6s,MS3.7,baz=186,slow=40						
WMQ	**Urumqi**	48.97	62	*e*P	P	16 22 36.3	+1.7
WMQ				LR	LR		
	comp=N,100nm,19.6s						
WMQ				LR	LR		
	comp=Z,110nm,19.0s,MS3.9						
TLY	**Talaya**	56.43	48⇓	*i*P	P	16 23 31.2	+1.2
ZAK	**Zakamensk**	56.71	49	*e*P	P	16 23 34.4	+2.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
ZAK	**Zakamensk**	56.71	49	*e*P	P	16 23 34.4	+2.4
	comp=Z,2.0nm,1.0s,mb4.1						
SCHQ	**Schefferville**	58.28	317	P	P	16 23 43.5	+0.5
	comp=Z,1.1nm,0.3s,mb4.3,baz=74,slow=6.6,SNR=14						
SCHQ	**Schefferville**	58.28	317	P	P	16 23 43.5	+0.5
TIXI	**Tiksi**	58.81	21⇑	*i*P	P	16 23 47.4	+1.0
BOD	**Bodaibo**	59.50	38	*e*P	P	16 23 49.4	-2.0
SONM	**Songino Array**	59.61	51	P	P	16 23 52.0	-0.4
	comp=Z,0.3nm,0.5s,mb3.6,baz=286,slow=6.2,SNR=3.1						
SONM				LR	LR	16 54 08.6	
	comp=Z,42nm,19.0s,MS3.6,baz=68,slow=40						
ULN	**Ulaanbaatar**	60.00	51	*e*P	P	16 23 56.8	+1.8
BOSA	**Boshof**	67.26	176	LR	LR	16 56 16.6	
	comp=Z,121nm,20.1s,MS4.1,baz=261,slow=38						
BILL	**Bilibino**	70.21	13	*e*P	P	16 25 00.5	+0.1
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
BILL	**Bilibino**	70.21	13	*e*P	P	16 25 00.5	+0.2
	comp=Z,5.3nm,1.2s,mb4.3						
BILL	**Bilibino**	70.21	13	*e*P	P	16 25 00.5	+0.1
	comp=Z,5.3nm,1.2s,mb4.3						
YKA	**Yellowknife Ar**	72.90	340	LR	LR	17 01 24.4	
	comp=Z,45nm,18.1s,MS3.8,baz=20,slow=39						
ULM	**Lac du Bonnet**	75.43	324	LR	LR	17 00 39.4	
	comp=Z,52nm,19.7s,MS3.8,baz=7.3,slow=37						
NJ2	**Nanjing**	76.02	60	*e*P	P	16 25 32.8	-2.2
ILAR	**Eielson Array**	76.25	355	P	P	16 25 36.5	+0.8
	comp=Z,0.3nm,0.4s,mb3.6,baz=350,slow=3.2,SNR=5.7						
SSE	**Sheshan**	78.18	60	*e*P	P	16 25 43.6	-3.5
SSE				AMB	AMB		
	comp=Z,10.0nm,3.5s						
SDV	**Santo Domingo**	85.89	278	P	P	16 26 27.3	-0.1
	comp=Z,1.8nm,0.5s,mb4.5,baz=45,slow=11,SNR=4.0						
YFT	**Old Faithful**	86.43	328	*e*P	P	16 26 24.4	-4.9
PDAR	**Pinedale Array**	87.25	326	P	P	16 26 33.8	+0.4
	comp=Z,0.2nm,0.3s,mb3.8,baz=22,slow=9.7,SNR=2.5						
PDAR				LR	LR	17 09 05.7	
	comp=Z,46nm,19.6s,MS3.9,baz=248,slow=38						
NVAR	**Mina Array Bea**	94.53	329	LR	LR	17 12 45.4	
	comp=Z,40nm,18.6s,MS3.9,baz=180,slow=37						
TXAR	**Lajitas Array**	94.85	314	P	P	16 27 11.6	+2.5
	comp=Z,0.2nm,0.4s,mb3.9,baz=90,slow=3.8,SNR=5.4						

MEX ***18*** *16:18:11.7±0.4, 14.27N×91.44W, h137^{km}±25^{km}, MD4.4*

NEIC ***18*** *16:18:11.3±1.1, 14.34N×91.19W, h78^{km}±12^{km}, mb3.8/4, MD4.4(MEX), Error ellipse: s-maj=34.9km s-min=10.2km az=222.0*

CASC ***18*** *16:18:11.2±1.6, 14.12N×91.50W, h48^{km}±41^{km}, MD4.2, ML4.3, mb3.8(NEIC)*

IDC ***18*** *16:18:12.2±1.0, 14.73N×90.71W, h72^{km}±8^{km}, mb3.6/3, mb1 3.7/5, mb1mx3.4/22, mbtmp3.7/5, MS3.1/3, Ms1 3.1/3, ms1mx2.6/26, Error ellipse: s-maj=65.2km s-min=16.4km az=46.0*

ISC 18 16:18:10.9±0.6**, 14.27N**±0.07×**91.43W**±0.05**, h90**^{km}±6^{km}**, n34,** σ1^{s}**26**/46**, mb3.7**/7**, 1C-6D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	0.59	73⇓	*i*P	P	16 18 25.2	-1.4
TP2	**Tecpan 2**	0.64	38⇓	*e*P	P	16 18 26.7	-0.4
TP2				*e*S	S	16 18 39.5	+0.5
TP2				AML	AML	16 18 42.6	
	comp=E,6µm,0.5s						
PCG	**Pacaya**	0.80	81	*e*P	P	16 18 28.0	-0.7
PCG				*e*S	S	16 18 40.3	-1.5
GCG	**Guatemala City**	0.92	70⇓	*e*P	P	16 18 30.3	+0.4
GCG				*e*S	S	16 18 44.7	+0.5
IXG	**Ixpaco**	0.95	96	*e*P	P	16 18 29.2	-1.0
IXG				*e*S	S	16 18 44.4	-0.3
IXG				AML	AML	16 18 47.4	
	comp=E,43µm,0.3s						
RBDL	**Robledal**	1.69	95⇑	*e*P	P	16 18 39.3	-0.3
RTR	**El Retiro**	1.77	102	*e*P	P	16 18 40.5	0.0
RTR				*e*S	S	16 19 03.4	+1.0
SBLS	**San Blas**	1.80	104	*e*P	P	16 18 40.8	-0.2
SBLS				*e*S	S	16 19 02.6	-0.6
SNJE	**San Jose**	1.81	103	*e*P	P	16 18 41.2	+0.1
SNJE				*e*S	S	16 19 04.7	+1.4
MRL	**Marmol**	1.86	65⇓	*e*P	P	16 18 42.5	+0.8
CCIG	**Comitan**	2.11	341⇓	*i*P	P	16 18 46.2	+1.0
CCIG				*i* S	S	16 19 13.3	+2.8
BOQS	**Boqueron**	2.15	104⇓	*e*P	P	16 18 46.0	+0.3
BOQS				*e*S	S	16 19 12.7	+1.3
LFU	**La Fuente**	2.30	103	*e*P	P	16 18 48.8	+1.0
LFRS	**El Faro**	2.38	105	*e*P	P	16 18 49.0	+0.1
LCBS	**La Ceiba**	2.45	104	*e*P	P	16 18 49.3	-0.6
CMIG	**Matias Romero**	4.35	311	*i* P	P	16 19 14.7	-1.4
CMIG				*i* S	S	16 20 03.6	-2.4
SCIG		4.68	3	*i* P	P	16 19 19.5	-1.0
SCIG				*i* S	S	16 20 12.1	-1.8
VHO	**Vista Hermosa**	5.82	299	*e*P	P	16 19 37.4	+1.2
VHO				*i* S	S	16 20 44.2	+2.0
VHO	**Vista Hermosa**	5.82	299	*e*P	P	16 19 37.4	+1.2
VHO				*i* S	S	16 20 39.6	-2.7
JTS	**JuntasAbangare**	7.46	121	P	P	16 19 56.0	-2.9
	comp=E,0.6nm,0.3s,baz=284,slow=19,SNR=1.6						
JTS				S	S	16 21 23.6	+1.1
	comp=E,0.6nm,0.3s,baz=287,slow=20,SNR=2.2						
PPM	**Popocatepetl**	8.39	306	*e*P	P	16 20 12.6	+1.2
PPM				*i* S	S	16 21 45.2	0.0
TXAR	**Lajitas Array**	18.79	325	P	P	16 22 27.4	+1.7
	comp=E,0.1nm,0.3s,baz=154,slow=11,SNR=7.2						
TXAR				LR	LR	16 31 09.2	
	comp=E,24nm,20.9s,slow=41						
WMOK	**Wichita Mounta**	21.43	343	*e*P	P	16 22 52.0	-1.1
	comp=E,1.1nm,0.6s,mb3.4						
MNTX	**Cornudas Mount**	21.55	326	*e*P	P	16 22 55.1	+0.8
	comp=E,2.9nm,0.7s,mb3.7						
PV01	**Paradox Valley**	28.21	331	*e*P	P	16 24 01.8	+4.5
SADO	**Sadowa**	32.14	17	LR	LR	16 37 00.2	
	comp=E,29nm,19.4s,baz=247,slow=36						
NVAR	**Mina Array Bea**	33.81	320	P	P	16 24 49.1	+2.7
	comp=E,1.9nm,0.8s,mb4.0,baz=125,slow=9.7,SNR=13						
NVAR				pP	pP	16 25 06.2	-1.3
	comp=E,0.9nm,0.7s,baz=128,slow=8.9,SNR=5.8						
NVAR				PcP	PcP	16 27 25.1	+1.4
	comp=E,0.5nm,0.6s,baz=146,slow=3.3,SNR=4.4						
HLID	**Hailey**	35.21	331	*e*P	P	16 24 59.8	+1.6
	comp=E,1.1nm,0.9s,mb3.7						
SAML	**Samuel**	36.29	128	*e*P	P	16 25 05.6	-2.1
	comp=E,1.5nm,0.9s,mb3.9						
SIV	**San Ignacio**	42.47	134	P	P	16 25 58.8	-0.2
	comp=E,0.8nm,0.6s,mb3.6,baz=310,slow=8.5,SNR=6.0						
SIV				pP	pP	16 26 16.7	-3.7
	comp=E,2.7nm,0.8s,baz=319,slow=10.0,SNR=12						
DLBC	**Dease Lake**	52.64	336	*e*P	P	16 27 16.1	-1.6
ILAR	**Eielson Array**	62.81	337	LR	LR	17 01 18.2	
	comp=E,40nm,19.2s,baz=180,slow=41						
EKA	**Eskdalemuir Ar**	77.42	36	P	P	16 29 55.1	-2.5
	comp=E,0.5nm,0.6s,mb3.4,baz=278,slow=5.9,SNR=4.9						
CMAR	**Chiang Mai Arr**	145.91	342	PKPbc	PKPbc	16 37 42.5	+1.4
	comp=E,3.3nm,0.7s,baz=337,slow=3.2,SNR=31						
CMAR				pPKPbc		16 38 02.4	
	comp=E,0.8nm,0.6s,baz=345,slow=3.7,SNR=4.1						

IDC ***18*** *16:26:47.1±1.4, 39.09N×21.46E, mb3.6/7, mb1 3.8/11, mb1mx3.7/27, mbtmp3.7/11, ML3.8/4, Error ellipse: s-maj=26.0km s-min=19.4km az=29.0*

ATH ***18*** *16:26:48.5, 38.78N×21.23E, h22^{km}±1^{km}, MD3.6/13, ML3.6*

THE ***18*** *16:26:48.8, 38.60N×21.24E, h20^{km}, ML3.7*

CSEM ***18*** *16:26:48.9±0.1, 38.80N×21.26E, h5^{km}, ML3.6, Error ellipse: s-maj=1.4km s-min=1.0km az=24.0*

NEIC ***18*** *16:26:51.8±0.3, 38.86N×21.25E, h54^{km}±6^{km}, MD3.5(ATH), Error ellipse: s-maj=6.4km s-min=3.3km az=208.0*

SOF ***18*** *16:27:02.1, 39.69N×22.21E, h2^{km}, MD3.2*

ISC 18 16:26:48.6±0.5**, 38.76N**±0.03×**21.22E**±0.03**, h23**^{km}±4^{km}**, n79,** σ1^{s}**26**/91**, mb3.8**/8**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD	**Levkas**	0.45	264	*e*Pg	Pb	16 26 58.2	+0.4
LKD	**Levkas**	0.45	264	*e*Pg	Pb	16 26 58.2	+0.4
EVR	**Evrytania**	0.49	70	*e*PB	Pb	16 26 57.5	-0.9
EVR				*e*SB	Sb	16 27 05.4	+0.3
RLS	**Riolos of Patr**	0.72	164	*e*PN	Pn	16 27 03.5	+0.1
VLS	**Valsamata**	0.76	221	*e*PN	Pn	16 27 04.0	+0.1
AGG	**Agios Georgios**	0.91	73	*e*Pg	Pb	16 27 05.0	-0.5
AGG				*e*Sg	Sb	16 27 17.9	+0.8
JAN	**Janina**	0.94	342	*e*PN	Pn	16 27 06.3	-0.2
IGT	**Igoumenitsa**	1.04	319	*e*Pg	Pb	16 27 08.4	+0.6
IGT				*e*Sg	Sb	16 27 24.0	+3.0
LKR	**Lokris**	1.40	94	*e*PB	Pb	16 27 13.6	-0.2
KEK	**Kerkira**	1.46	311	*e*PN	Pn	16 27 15.4	+1.5
KZN	**Kozani**	1.61	15	*e*PN	Pn	16 27 17.4	+1.4
XOR	**Xorichti**	1.65	68	*e*Pb	Pb	16 27 17.0	-1.1
NEO	**Neokhori**	1.65	70	*e*PB	Pb	16 27 17.4	-0.8
LIT	**Litokhoron**	1.67	36	*e*Pb	Pb	16 27 17.3	-1.1
LIT				*e*Sb	Sb	16 27 39.9	+0.8
ITM	**Ithomi**	1.67	160	*e*PN	Pn	16 27 19.4	+2.5
MGER	**Gerania Oros**	1.78	115	*e*PN	Pn	16 27 20.5	+2.1
NSAL	**Nisos Salamina**	1.96	115	*e*PN	Pn	16 27 23.0	+2.0
FNA	**Florina**	2.03	3	*e*Pn	Pn	16 27 23.5	+1.4
FNA				*e*Sn	Sn	16 27 49.5	+2.5
NAIG	**Nisos Aigina**	2.04	118	*e*PN	Pn	16 27 24.1	+1.8
MPAR	**Parnis Oros**	2.06	106	*e*PB	Pb	16 27 23.8	-1.4
ATH	**Athens Observa**	2.11	111	*e*PN	Pn	16 27 25.2	+2.0
PTL	**Penteli**	2.19	108	*e*PB	Pb	16 27 26.4	-1.0
PAIG	**Paliouri**	2.24	58	*e*Pn	Pn	16 27 24.6	-0.5
PAIG				*e*Sn	Sn	16 27 52.6	+0.4
THE	**Thessaloniki**	2.31	35	*e*Pn	Pn	16 27 26.8	+0.8
PLG	**Polygyros**	2.36	46	*e*Pn	Pn	16 27 26.4	-0.4
GRG	**Griva**	2.38	22	*e*Pn	Pn	16 27 27.3	+0.3
VLI	**Veliai**	2.45	146	*e*PB	Pb	16 27 30.5	-1.2
SOH	**Sokhos**	2.64	38	*e*Pn	Pn	16 27 30.9	+0.1
SOH				*e*Sn	Sn	16 28 03.3	+0.9
OUR	**Ouranopolis**	2.65	53	*e*Pn	Pn	16 27 30.9	-0.1
KNT	**Kendrikon**	2.73	28	*e*Pn	Pn	16 27 32.1	+0.1
SRS	**Serrai**	2.98	37	*e*Pn	Pn	16 27 35.4	-0.3
LOS	**Limnos**	3.22	67	*e*Pn	Pn	16 27 38.5	-0.4
SKO	**Skopje**	3.22	3	*e*Pn	Pn	16 27 39.0	0.0
SKO				*i*		16 27 44.6	
SKO				*i*		16 27 54.0	
KKB	**Krupnik**	3.42	24	*i* P	Pn	16 27 42.5	+0.7
MMB	**Musomiste**	3.42	33	*i* P	Pn	16 27 41.3	-0.6
TIP	**Timpagrande**	3.50	278	*e*Pn	Pn	16 27 43.4	+0.3
TIP	**Timpagrande**	3.50	278	*e*Pn	Pn	16 27 43.4	+0.3
LTRZ	**Laterza**	3.87	300	Pn	Pn	16 27 48.2	0.0
RZN	**Rozhen**	3.97	41	*i* P	Pn	16 27 50.0	+0.4
VTS	**Vitosha**	4.12	21	*i* P	Pn	16 27 52.3	+0.5
ALN	**Alexandroupoli**	4.29	59	*e*Pn	Pn	16 27 52.9	-1.3
KDZ	**Kurdzhali**	4.32	47	*i* P	Pn	16 27 53.0	-1.7
GVD	**Gavdhos**	4.53	149	Pn	Pn	16 27 58.9	+1.2
GVD	**Gavdhos**	4.53	149	Pn	Pn	16 27 58.9	+1.2
IDI	**Anoyia**	4.54	139	Pn	Pn	16 27 58.5	+0.7
	1.2nm,0.3s,baz=309,slow=13,SNR=10						
IDI				Sn	Sn	16 28 49.6	-0.8
	1.9nm,0.3s,baz=331,slow=13,SNR=2.8						
MGR	**Morigerati**	4.60	289	Pn	Pn	16 27 58.9	+0.3
SLCN	**Sala Consilina**	4.62	292	Pn	Pn	16 28 00.2	+1.3
MRLC	**Muro Lucano**	4.85	296	Pn	Pn	16 28 02.3	+0.1
STON	**Ston**	4.90	328	*i* Pn	Pn	16 28 00.6	-2.3
STON				*i* Sn	Sn	16 28 52.1	-7.6
STON	**Ston**	4.90	328	*i* Pn	Pn	16 28 00.5	-2.4
STON				*i* Sn	Sn	16 28 52.1	-7.6
SGO	**Sicignano**	4.91	293	Pn	Pn	16 28 03.6	+0.6
CSSN	**Cassano Irpino**	5.21	296	Pn	Pn	16 28 08.6	+1.3
PZI	**Palazzolo**	5.24	253	Pn	Pn	16 28 05.8	-1.9
PZI				Sn	Sn	16 29 05.0	-3.2
VAE	**Valguarnera**	5.52	259	Pn	Pn	16 28 16.5	+4.9
	1.3nm,0.3s,baz=98,slow=15,SNR=3.4						
VAE				Sn	Sn	16 29 17.4	+2.2
	1.9nm,0.3s,baz=105,slow=19,SNR=3.3						
SGG	**Gregorio Mates**	5.87	299	Pn	Pn	16 28 17.2	+0.7
CII	**Carovilli**	6.07	301	*e*Pn	Pn	16 28 19.2	-0.1
	18nm,0.7s						
CII	**Carovilli**	6.07	301	*e*Pn	Pn	16 28 19.2	-0.1
	18nm,0.7s						
ISP	**Isparta**	7.36	94	*e*Pn	Pn	16 28 38.9	+1.4
NRCA	**Norcia**	7.38	306	Pn	Pn	16 28 37.0	-0.7
MLR	**Muntele Rosu**	7.59	26	Pn	Pn	16 28 42.3	+1.6
	0.8nm,0.3s,baz=293,slow=7.7,SNR=4.4						
FSSB	**Fossombrone**	8.05	310	Pn	P	16 28 45.4	-1.7
PTCC	**Patocco-Chiusa**	9.59	325	Pn	P	16 29 06.0	-2.4
BR131	**Keskin Array S**	9.68	80	*e*Pn	P	16 29 09.7	0.0
	0.6nm,0.4s						
BRTR	**Keskin Array B**	9.68	80	Pn	P	16 29 09.8	0.0
	0.2nm,0.3s,baz=260,slow=12,SNR=6.1						
GERES	**GERESS Array B**	11.45	334	Pn	P	16 29 30.6	-3.2
	0.3nm,0.3s,baz=160,slow=14,SNR=7.6						
ESDC	**Sonseca Array**	19.52	281	P	P	16 31 16.4	-0.8
	0.2nm,0.3s,baz=69,slow=11,SNR=3.7						
ESLA	**Sonseca Array**	19.52	281	*e*P	P	16 31 09.9	-7.4
HFS	**Hagfors**	21.92	350	P	P	16 31 38.7	-3.2
	1.5nm,0.4s,mb3.7,baz=164,slow=11,SNR=13						
KONO	**Kongsberg**	22.18	344	*e*P	P	16 31 45.9	+1.3
	28nm,1.5s,mb4.5						
FINES	**FINESS Array B**	22.91	6	P	P	16 31 48.3	-3.3
	1.6nm,0.9s,mb3.4,baz=169,slow=9.7,SNR=5.1						
NB2	**NORSAR Subarra**	23.17	348	P	P	16 31 49.9	-4.2
	2.0nm,0.9s,mb3.5,baz=160,slow=9.3						
NOA	**NORSAR Array B**	23.17	348	P	P	16 31 52.0	-2.1
	1.1nm,0.7s,mb3.4,baz=154,slow=9.4,SNR=5.7						
NOA	**NORSAR Array B**	23.17	348	P	P	16 31 52.0	-2.1
EKA	**Eskdalemuir Ar**	23.29	323	P	P	16 31 53.8	-1.5
	0.9nm,0.5s,mb3.4,baz=121,slow=10,SNR=10						
ESK	**Eskdalemuir**	23.30	323	*e*P	P	16 31 54.0	-1.4
ARCES	**ARCESS Array B**	30.93	3	P	P	16 33 01.7	-3.8
	1.0nm,0.7s,mb3.7,baz=188,slow=10,SNR=6.3						
MKAR	**Makanchi Array**	44.53	59	P	P	16 34 57.5	-2.6
	0.5nm,0.5s,mb3.6,baz=281,slow=7.9,SNR=10						
MKAR	**Makanchi Array**	44.53	59	P	P	16 34 57.5	-2.6
ZAL	**Zalesovo**	44.89	49	P	P	16 35 00.9	-1.9
	1.3nm,0.4s,mb4.1,baz=204,slow=5.7,SNR=4.7						

NEIC 18 16:37:52.4, 63.61N×147.39W, h4^{km}**, ML3.7**(PMR)**, ML3.4**(AEIC)**, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RND	**Reindeer**	0.69	254	P	Pg	16 38 05.3	-0.8
RND				S	Sg	16 38 14.7	-0.6
MCK	**McKinley**	0.70	281	P	Pg	16 38 05.7	-0.7
DDM	**Donnelly Dome**	0.70	74	P	Pg	16 38 05.9	-0.6
DDM				S	Sg	16 38 15.2	-0.7
THY	**Trims Highway**	0.76	104	P	Pg	16 38 06.6	-1.0
THY				S	Sg	16 38 17.3	-0.4
HDA	**Harding Lake**	0.83	13	P	Pb	16 38 08.4	-0.5
WRH	**Wood River Hil**	0.92	341	P	Pb	16 38 10.0	-0.6
WRH				S	Sb	16 38 21.9	-1.0
CCB	**Clear Creek Bu**	1.06	350	P	Pb	16 38 12.4	-0.6
PAX	**Paxson**	1.08	125	P	Pb	16 38 11.6	-1.5
PAX				S	Sb	16 38 26.7	-0.7
IL1	**Eielson Array**	1.19	10	P	Pb	16 38 14.4	-0.7
IL1				S	Sb	16 38 30.7	-0.1
HUR	**Hurricane**	1.19	239	P	Pb	16 38 14.4	-0.8
NEA	**Nenana**	1.23	324	P	Pb	16 38 14.8	-1.0
NEA				S	Sb	16 38 31.4	-0.3
COLA	**College**	1.29	351	P	Pb	16 38 16.9	+0.1
TRF	**Thorofare Moun**	1.31	265	P	Pb	16 38 16.0	-1.2
MDM	**Murphy Dome**	1.41	345	P	Pn	16 38 17.7	-1.1
MDM				S	Sb	16 38 37.0	-0.1
DOT	**Dot Lake**	1.49	87	P	Pn	16 38 19.5	-0.4
DOT				S	Sb	16 38 39.9	+0.6
KTH	**Kantishna Hill**	1.58	270	P	Pn	16 38 21.1	-0.3
KTH				S	Sb	16 38 41.9	-0.1
SCM	**Sheep Creek Mo**	1.78	179	P	Pn	16 38 23.3	-0.8
SCM				S	Sn	16 38 47.0	-0.4
CUT	**Chulitna**	1.78	229	P	Pn	16 38 24.0	-0.2
MENT	**Mentasta**	1.79	110	P	Pn	16 38 24.5	+0.2
TZL	**Tazlina**	1.81	149	P	Pn	16 38 25.6	+1.0
SML	**Sawmill**	1.85	194	P	Pn	16 38 24.6	-0.6
SML				S	Sn	16 38 48.6	-0.8
GHO	**Glory Hole Cre**	1.97	202	P	Pn	16 38 27.1	+0.2
GHO				S	Sn	16 38 52.5	+0.1
MLY	**Manley**	2.04	316	P	Pn	16 38 26.4	-1.5
PMR	**Palmer**	2.17	203	P	Pn	16 38 30.1	+0.3
PMR				S	Sn	16 38 57.5	-0.1
WANC	**Wrangell North**	2.22	135	P	Pn	16 38 32.1	+1.7
WANC				S	Sn	16 39 02.0	+3.5
KNK	**Knik Glacier**	2.26	193	P	Pn	16 38 31.8	+0.8
PWA	**Palmer West**	2.27	211	P	Pn	16 38 30.6	-0.7
VLZ	**Valdez**	2.53	168	P	Pn	16 38 35.0	+0.1
VLZ				S	Sn	16 39 08.5	+1.9
BCA3	**Beaver Creek A**	2.58	100	P	Pn	16 38 34.6	-1.0
DIV	**Divide**	2.60	162	P	Pn	16 38 36.7	+0.8
DIV				S	Sn	16 39 10.9	+2.6
GLB	**Gilahina Butte**	2.73	141	P	Pn	16 38 39.1	+1.3
GLB				S	Sn	16 39 14.4	+2.7
RC01	**Rabbit Creek A**	2.75	204	P	Pn	16 38 38.9	+0.8
RC01				S	Sn	16 39 12.3	+0.2
VOGL	**Vogel Lake**	2.98	210	P	Pn	16 38 40.3	-1.0
EYAK	**Cordova Ski Ar**	3.16	165	P	Pn	16 38 44.4	+0.4
HIN	**Hinchinbrook I**	3.25	172	P	Pn	16 38 45.0	-0.1
SPU	**Mount Spurr**	3.26	224	*e*P	Pn	16 38 43.6	-1.7
MPA	**Moose Pass**	3.26	197	P	Pn	16 38 46.7	+1.4
SLKM	**Skilak Lake**	3.38	204	*e*P	Pn	16 38 47.1	+0.1
IM3	**Indian Mountai**	3.62	314	P	Pn	16 38 48.0	-2.4
SVW2	**Sparrevohn**	4.57	240	*e*P	Pn	16 39 03.0	-0.9
INK	**Inuvik**	7.36	44	*e*P	Pn	16 39 39.7	-3.6

NIED ***18*** *16:39:00, 37.90N×142.50E, h23^{km}, Mw3.8 Best double couple: M$_0$6.25×10^{14} NP1:φ$_s$25°, δ48°, λ75°. NP2:φ$_s$228°, δ44°, λ107°.*

IDC ***18*** *16:39:38.1±1.4, 37.88N×142.73E, mb3.8/8, mb1 3.9/11, mb1mx3.7/25, mbtmp3.8/11, ML3.5/3, MS2.8/2, Ms1 2.8/2, ms1mx2.2/30, Error ellipse: s-maj=40.2km s-min=20.1km az=90.0*

JMA ***18*** *16:39:41.2±0.2, 37.85N×142.47E, h35^{km}±2^{km}, M4.1*

ISC 18 16:39:41.3±0.7**, 37.82N**±0.04×**142.53E**±0.07**, h33**^{km}**, n23,** σ0^{s}**87**/28**, mb3.7**/8**, 7D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	**Ouri**	1.13	305	⇓P	P	16 40 00.3	-0.5
JIO				*e*S	S	16 40 13.6	-1.7
JMM	**Marumori**	1.38	272	⇓P	P	16 40 04.0	-0.4
JFK	**Kawauchi**	1.39	252	⇓P	P	16 40 04.3	-0.3
JFK				*e*S	S	16 40 20.4	-1.6
JMK	**Ichinoseki**	1.53	318	⇓P	P	16 40 06.3	-0.3
JOU	**Okura**	1.57	291	⇓P	P	16 40 07.3	+0.1
JFT	**Otama**	1.77	261	⇓P	P	16 40 10.6	+0.6
JFT				S	S	16 40 31.7	+0.2
JOM	**Ohasama**	1.91	330	⇓P	P	16 40 11.9	-0.2
JOM				*e*S	S	16 40 35.9	+0.6
JYS	**Shirataka**	1.99	282	P	P	16 40 13.3	+0.1
JYK	**Kaneyama**	2.03	303	P	P	16 40 13.6	-0.1
MJAR	**Matsushiro Arr**	3.68	251	Pn	Pn	16 40 38.6	+1.2
	2.4nm,0.3s,baz=81,slow=15,SNR=36						
MAT	**Matsushiro**	3.68	251	P	P	16 40 38.4	+1.1
MAT				S	S	16 41 22.2	+2.1
JHJ	**Hachijo jima 2**	5.20	206	Pn	Pn	16 40 58.4	-0.6
	16nm,0.3s,baz=57,slow=22,SNR=8.5						
JHJ				Sn	Sn	16 41 57.0	-1.5
	17nm,0.3s,baz=239,slow=22,SNR=6.8						
ASAJ	**Asahikawa**	6.29	0	Pn	Pn	16 41 12.4	-2.0

	0.8nm,0.3s,baz=249,slow=8.8,SNR=7.4						
ASAJ				LR	LR	16 44 05.3	
	comp=Z,70nm,20.9s,baz=174,slow=43						
JNU	Nakatsue	10.59	247	LR	LR	16 46 39.7	
	comp=Z,52nm,18.0s,baz=1.4,slow=39						
SONM	Songino Array	28.10	302	P	P	16 45 32.8	+0.9
	0.3nm,0.5s,mb3.2,baz=108,slow=7.8,SNR=4.1						
ZAL	Zalesovo	42.06	312	P	P	16 47 31.9	+0.6
	0.9nm,0.3s,mb3.8,baz=18,slow=8.4,SNR=3.1						
MKAR	Makanchi Array	44.46	302	P	P	16 47 51.3	+0.5
	0.5nm,0.7s,mb3.4,baz=85,slow=8.5,SNR=6.6						
WB2	Warramunga Arr	57.97	189	*e*P	P	16 49 32.9	-0.2
WRA	Warramunga Arr	57.97	189	P	P	16 49 33.1	0.0
	2.1nm,0.6s,mb4.4,baz=6.1,slow=7.1,SNR=25						
FINES	FINESS Array B	68.53	332	P	P	16 50 42.4	+0.3
	0.6nm,0.7s,mb3.7,baz=22,slow=10,SNR=3.5						
HFS	Hagfors	73.74	336	P	P	16 51 13.1	-0.1
	1.6nm,0.9s,mb3.9,slow=4.4,SNR=4.6						
NOA	NORSAR Array B	73.80	338	P	P	16 51 14.3	+0.7
	0.4nm,0.8s,mb3.4,baz=50,slow=13,SNR=2.5						
AKASG	Malin Array Be	74.22	323	P	P	16 51 16.6	+0.4
	0.4nm,0.3s,mb3.8,baz=46,slow=6.1,SNR=5.8						

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*ATH **18** 16:47:14.6,38.81N×21.26E,h27^{km}±4^{km},MD3.2/4*
*NEIC **18** 16:47:14.6,38.81N×21.26E,h27^{km},MD3.2(ATH),After ATH.*
*THE **18** 16:47:15.3,38.81N×21.28E,h10^{km},ML3.1*
*CSEM **18** 16:47:15.4±0.1,38.82N×21.24E,h2^{km},MD3.2,Error ellipse: s-maj=2.3km s-min=1.8km az=173.0*
ISC 18 16:47:13.6±0.8**,38.79N**±0.04×**21.27E**±0.04**,h2**^{km}±6^{km}**, n14,**σ**1^{s}02**/21**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.44	73	*e*PB	Pb	16 47 24.0	+0.3
EVR				*e*SB	Sb	16 47 31.4	+1.0
LKD	Levkas	0.49	260	*e*Pg	Pg	16 47 24.5	+1.0
LKD				*e*Sg	Sg	16 47 32.8	+2.7
RLS	Riolos of Patr	0.75	168	*e*PN	Pn	16 47 29.9	-1.0
VLS	Valsamata	0.81	221	*e*PB	Pb	16 47 30.2	0.0
VLS				*e*SN	Sn	16 47 43.5	-1.1
AGG	Agios Georgios	0.86	74	*e*Pg	Pg	16 47 31.4	+0.6
AGG				*e*Sg	Sg	16 47 43.5	+1.3
JAN	Janina	0.92	339	*e*PN	Pn	16 47 31.8	-1.6
IGT	Igoumenitsa	1.04	316	*e*Pg	Pg	16 47 34.1	-0.2
KEK	Kerkira	1.47	309	*e*PN	Pn	16 47 41.3	+0.1
XOR	Xorichti	1.60	68	*e*Pg	Pg	16 47 44.4	-1.2
LIT	Litokhoron	1.61	35	*e*Pg	Pg	16 47 44.0	-1.9
LIT				*e*Sg	Sg	16 48 06.0	-1.3
FNA	Florina	1.99	2	*e*Pb	Pb	16 47 49.7	-0.6
FNA				*e*Sb	Sb	16 48 16.4	+0.9
GRG	Griva	2.33	22	*e*Pn	Pn	16 47 53.8	+0.3
SOH	Sokhos	2.58	38	*e*Pn	Pn	16 47 57.6	+0.5
SOH				*e*Sn	Sn	16 48 30.0	+0.4
SRS	Serrai	2.93	37	*e*Pn	Pn	16 48 02.9	+0.8

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*BJI **18** 16:50:32.9,20.00S×69.00W,h106^{km},mB5.1*
*NEIC **18** 16:50:33.0±0.3,20.02S×68.95W,mb4.4/19,Error ellipse: s-maj=10.4km s-min=6.4km az=68.0*
*IDC **18** 16:50:33.2±0.6,20.19S×69.01W,h104^{km}±5^{km},mb4.0/12, mb1 4.2/15,mb1mx4.2/19,mbtmp4.4/15,MS3.8/2, Ms1 3.7/2,ms1mx3.0/23,Error ellipse: s-maj=17.5km s-min=10.4km az=86.0*
ISC 18 16:50:31.1±0.3**,20.07S**±0.04×**68.95W**±0.06**,h106**^{km}**, h106**^{km}±2.1^{km}**:pP-P,n74,**σ**1^{s}18**/62**,mb4.4**/26**,6C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.84	12	P	P	16 51 34.6	+5.2
	11nm,0.3s,baz=194,slow=7.9,SNR=184						
LPAZ				S	S	16 52 21.3	+7.5
	1.8nm,0.3s,baz=231,slow=11,SNR=4.3						
LPAZ	La Paz	3.84	12	*e*Pn	P	16 51 34.3	+4.9
ANCH	Antofagasta	3.84	200	*e*P	P	16 51 26.8	-2.7
ARE	Arequipa	4.32	326	*e*P	P	16 51 35.0	-1.0
ARE				*e*S	S	16 52 35.0	+9.4
CPN1	Cerro Paranal	4.73	196	*e*P	P	16 51 38.6	-3.0
SIV	San Ignacio	8.52	63	P	P	16 52 33.7	+0.6
	4.4nm,0.3s,baz=255,slow=11,SNR=254						
SIV				S	S	16 54 06.7	-1.5
	baz=89,slow=18,SNR=3.4						
TLL	Tololo Astrono	10.20	189	*e*P	P	16 52 45.4	-10
NNA	Nana	11.05	315	P	P	16 53 18.9	+12
CFAA	Coronel Fontan	11.51	177	P	P	16 53 11.8	-1.4
	0.1nm,0.3s,baz=348,slow=15,SNR=2.7						
CPUP	Villa Florida	12.37	122	P	P	16 53 24.9	+0.4
	1.0nm,0.3s,baz=326,slow=15,SNR=53						
SAML	Samuel	12.38	28	*e*P	P	16 53 24.4	-0.4
	3.9nm,0.7s						
TRQA	Tornquist	18.92	163	*e*P	P	16 54 44.8	-1.3
	8.4nm,0.8s						
BDFB	Brasilia	20.40	81	P	P	16 55 02.4	+0.7
	8.3nm,0.7s,baz=262,slow=12,SNR=14						
BDFB				LR	LR	17 04 26.2	
	comp=Z,157nm,19.2s,baz=106,slow=41						
BAO	Brasilia Array	20.43	81	P	P	16 55 02.5	+0.5
PLCA	Paso Flores	20.64	183	P	P	16 55 03.5	-0.5
	18nm,0.8s,baz=6.9,slow=13,SNR=18						
PLCA	Paso Flores	20.64	183	*e*P	P	16 55 03.2	-0.8
	21nm,0.9s						
OTAV	Otavalo	22.22	334	*e*P	P	16 55 18.7	-1.1
	11nm,1.0s,mb4.2						
PAYG	Puerto Ayora	28.41	310	*e*P	P	16 56 23.2	+5.2
	44nm,1.2s,mb4.9						
SDV	Santo Domingo	28.82	357	P	P	16 56 20.7	-0.9
	2.5nm,0.5s,mb4.1,baz=274,slow=9.1,SNR=4.8						
SDV	Santo Domingo	28.82	357	*e*P	P	16 56 18.7	-2.9
	3.6nm,0.8s,mb4.0						
SJG	San Juan	38.04	4	P	P	16 57 39.8	-1.1
	10nm,0.4s,mb5.0,baz=351,slow=10,SNR=5.6						
DWPF	Disney	49.39	345	*e*P	P	16 59 09.7	-2.4
	104nm,1.5s,mb5.5						
SWET	Sewanee	57.29	343	*e*P	P	17 00 08.4	-1.8
OXF	Oxford	57.66	340	*e*P	P	17 00 11.4	-1.3
	27nm,1.3s,mb5.1						
WVT	Waverly	58.68	342	*e*P	P	17 00 18.1	-1.7
	14nm,1.1s,mb4.9						
TXAR	Lajitas Array	59.44	325	P	P	17 00 24.9	-0.3
	0.5nm,0.5s,mb3.8,baz=146,slow=9.0,SNR=7.5						
FVM	French Village	61.17	341	*e*P	P	17 00 35.8	-1.1
	31nm,1.3s,mb5.2						
VNA3	Neumayer Olymp	61.44	162	⇑*i*	P	17 00 39.5	+1.3
VNA3	Neumayer Olymp	61.44	162	⇑*i*	pP	17 01 05.9	+1.3
VNA2	Neumayer--Watz	62.01	161	⇑*i*	P	17 00 43.2	+1.2
VNA2	Neumayer--Watz	62.01	161	⇑*i*	pP	17 01 09.6	+1.2
ALLY	Alegheny Colle	62.27	351	*e*P	P	17 00 43.9	-0.3
SNAA	Sanae	63.64	161	P	P	17 00 53.0	+0.3
	1.9nm,0.7s,mb4.0,baz=277,slow=6.3,SNR=18						
SNAA				pP	pP	17 01 19.3	+0.1
	0.8nm,0.7s,baz=278,slow=7.8,SNR=3.0						
SNAA	Sanae	63.64	161	*e*P	P	17 00 52.6	-0.1
SNAA				*e*pP	pP	17 01 18.5	-0.7
ANMO	Albuquerque	65.29	327	*e*P	P	17 01 04.3	+0.3
	1.8nm,0.9s,mb3.9						
DBIC	Dimbokro	68.37	74	P	P	17 01 23.9	+0.2
	2.4nm,0.5s,mb4.3,baz=253,slow=9.4,SNR=5.9						
DBIC				pP	pP	17 01 50.2	-0.3
	5.6nm,0.8s,baz=226,slow=3.5,SNR=3.2						
PV01	Paradox Valley	68.82	327	*e*P	P	17 01 27.4	+1.3
QSPA	South Pole Qui	70.12	180	⇓*i*P	P	17 01 34.6	+1.3
	9.6nm,1.0s,mb4.6						
SRU	San Rafael	70.56	327	P	P	17 01 35.6	-1.0
RSSD	Black Hills	71.50	334	*e*P	P	17 01 42.6	+0.5
	4.4nm,1.1s,mb4.2						
PDAR	Pinedale Array	72.86	330	P	P	17 01 50.8	+0.6
	0.7nm,0.8s,mb3.5,baz=143,slow=7.4,SNR=4.3						
HWUT	Hardware Ranch	72.95	328	*e*P	P	17 01 51.6	+0.8
	4.1nm,0.8s,mb4.3						
ULM	Lac du Bonnet	73.94	342	P	P	17 01 56.0	-0.4
	5.2nm,0.6s,mb4.4,baz=142,slow=4.2,SNR=5.3						
ELK	Elko	74.23	325	P	P	17 01 59.8	+1.6
	1.6nm,0.8s,mb3.8,baz=119,slow=4.1,SNR=6.7						
NVAR	Mina Array Bea	74.35	322	P	P	17 02 00.7	+1.7
	2.0nm,0.8s,mb3.9,baz=141,slow=7.9,SNR=13						
SCHQ	Schefferville	74.61	1	P	P	17 02 00.8	+0.7
	4.6nm,0.8s,mb4.2,baz=152,slow=5.0,SNR=8.1						
SCHQ	Schefferville	74.61	1	*e*P	P	17 01 57.6	-2.5
	7.2nm,0.8s,mb4.5						
HLID	Hailey	75.81	328	*e*P	P	17 02 09.2	+2.0
	6.3nm,1.0s,mb4.3						
HLID				*e*pP	pP	17 02 37.6	+2.9
MCMT	McKenzie Canyo	75.97	329	*e*P	P	17 02 09.1	+1.1
BOZ	Bozeman (W)	76.01	331	*e*P	P	17 02 09.2	+1.0
	18nm,2.0s,mb4.5						
SYO	Syowa Base	77.85	160	⇑P	P	17 02 17.8	-0.2
SYO	Syowa Base	77.85	160	⇑PcP	PcP	17 02 29.8	+1.9
BMO	Blue Mountains	78.19	327	*e*P	P	17 02 21.4	+1.0
	13nm,1.5s,mb4.5						
VNDA	Vanda	78.25	190	P	P	17 02 20.9	+0.8
	0.9nm,0.8s,mb3.6,baz=132,slow=5.0,SNR=5.7						
VNDA	Vanda	78.25	190	*e*P	P	17 02 21.3	+1.2
	4.6nm,1.4s,mb4.0						
FCC	Fort Churchill	81.23	347	*e*P	P	17 02 36.6	+0.2
	5.3nm,1.0s,mb4.3						
EDM	Edmonton	82.45	335	*e*P	P	17 02 42.6	-0.3
BOSA	Boshof	84.15	118	LR	LR	17 37 15.2	
	comp=Z,98nm,19.4s,baz=212,slow=33						
ESDC	Sonseca Array	84.84	45	pP	pP	17 03 24.7	+1.6
	1.3nm,0.8s,baz=225,slow=5.4,SNR=3.1						
YKA	Yellowknife Ar	89.83	341	P	P	17 03 19.8	+1.3
	5.4nm,0.6s,mb4.8,baz=131,slow=4.7,SNR=12						
YKA	Yellowknife Ar	89.83	341	P	P	17 03 19.8	+1.3
DLBC	Dease Lake	92.92	333	*e*P	P	17 03 34.1	+1.1
CASY	Casey	93.92	180	P	P	17 03 39.0	+1.6
RES	Resolute Bay	95.98	353	*e*P	P	17 03 46.9	+0.3
WRA	Warramunga Arr	134.16	211	PKP	PKPdf	17 09 39.2	+2.1
	0.8nm,0.5s,baz=158,slow=1.7,SNR=8.9						
ZAL	Zalesovo	140.68	24	PKP	PKPdf	17 09 50.4	+2.4
	1.4nm,0.6s,baz=211,slow=3.1,SNR=7.3						
ZAL				pPKP		17 10 17.5	
	1.0nm,0.9s,baz=172,slow=7.1,SNR=1.6						
ZAL	Zalesovo	140.68	24	PKP	PKPdf	17 09 50.4	+2.4
ZAL				pPKP		17 10 17.5	
MKAR	Makanchi Array	144.49	35	PKP	PKPdf	17 09 56.4	+1.6
	2.7nm,0.6s,baz=311,slow=3.0,SNR=41						
MKAR				pPKP		17 10 24.4	
	2.1nm,0.9s,baz=297,slow=2.7,SNR=4.9						
WMQ	Urumqi	149.32	34	*e*PKP	PKPdf	17 10 04.8	+1.9
WMQ				LR	LR		
	comp=N,100nm,23.6s						
WMQ				LR	LR		
	comp=E,90nm,22.0s						
WMQ				LR	LR		
	comp=Z,120nm,24.0s						
MJAR	Matsushiro Arr	151.14	310	PKPbc	PKPdf	17 10 14.3	+8.4
	comp=Z,3.2nm,0.8s,baz=89,slow=1.9,SNR=12						
MJAR				pPKPbc		17 10 41.9	
	comp=Z,1.5nm,0.8s,baz=76,slow=1.8,SNR=3.6						
MAT	Matsushiro	151.14	310	*e*P	PKPdf	17 10 14.0	+8.1
MAT	Matsushiro	151.14	310	PKP	PKPdf	17 10 14.2	+8.3
SONM	Songino Array	152.04	7	PKP	PKPdf	17 10 10.8	+3.9
	comp=Z,0.9nm,0.8s,baz=266,slow=0.3,SNR=7.3						
SONM				PKPbc	PKPdf	17 10 17.0	+10
	comp=Z,2.5nm,0.5s,baz=297,slow=1.4,SNR=27						
SONM				PKPab	PKPab	17 10 27.3	+1.4
	comp=Z,1.0nm,0.7s,baz=329,slow=3.9,SNR=4.9						
SONM				pPKPbc		17 10 45.2	
	comp=Z,2.5nm,0.9s,baz=333,slow=2.8,SNR=5.8						
ULN	Ulaanbaatar	152.08	6	*e*PKPdf	PKPdf	17 10 10.2	+3.2
ULN				*e*PKPbc	PKPdf	17 10 16.6	+10
ULN				*e*PKPab	PKPab	17 10 27.1	+1.2

NEIC 18 17:12:48.0,40.67N×126.82W,h5^{km}**,MD3.4**(NCEDC)**, 1C-1D,After NCEDC.,Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	2.35	84	*e*P	Pn	17 13 24.8	-3.1
KRMB	Red Mountain	2.36	68	*e*P	Pn	17 13 25.4	-2.5
KBO	Bosley Butte	2.49	51	P	Pn	17 13 27.7	-2.1
KSXB	Camp Six Broad	2.50	61	P	Pn	17 13 27.9	-2.2
WDC	Whiskeytown Da	3.25	90	*e*P	Pn	17 13 38.2	-2.5
WDC				*e*S	Sn	17 14 07.0	-13
YBH	Yreka Blue Hor	3.28	70	P	Pn	17 13 40.3	-0.8
LAMM	Antelope Mount	3.30	72	P	Pn	17 13 40.4	-1.0
HUMO	Hull Mountain	3.48	55	⇑P	Pn	17 13 42.2	-1.8
LHEM	Herd Peak	3.60	73	P	Pn	17 13 44.8	-0.9
DBO	Dodson Butte	3.62	46	P	Pn	17 13 44.2	-1.8
BUOR	Burton Butte	3.79	63	⇓P	Pn	17 13 48.4	0.0
BBOR	Butler Butte	3.81	53	P	Pn	17 13 47.4	-1.2
HSO	Harness Mounta	3.98	43	P	Pn	17 13 49.2	-1.8
VSP	Spence Mountai	4.02	64	P	Pn	17 13 50.8	-0.8
IRO	Indian Ridge	4.75	44	P	Pn	17 14 00.6	-1.4
FRIS	Frissel Point	4.97	43	P	Pn	17 14 03.8	-1.4
WIFE	Three Sisters-	5.02	46	P	Pn	17 14 04.7	-1.1
MOD	Modoc	5.06	74	P	Pn	17 14 04.2	-2.1
BKCOR	Black Crater	5.25	45	P	Pn	17 14 07.5	-1.4
CMB	Columbia Colle	5.63	116	*e*P	Pn	17 14 13.4	-1.1
SAO	San Andreas Ge	5.73	131	*e*P	Pn	17 14 12.0	-3.8
LRV	Little Rabbit	6.21	131	*e*P	Pn	17 14 19.7	-2.9
MTUM	Tungsten Hills	7.23	115	P	Pn	17 14 33.4	-3.5
BMO	Blue Mountains	8.15	56	*e*P	P	17 14 47.6	-2.2
HLID	Hailey	9.66	68	*e*P	P	17 15 09.1	-1.5
MCMT	McKenzie Canyo	11.08	63	*e*P	P	17 15 27.7	-2.5

IDC 18 17:21:42.4±2.5**,20.09S**×**68.89W,h123**^{km}±23^{km}**,mb3.6**/2**, mb1 3.6**/5**,mb1mx3.4**/18**,mbtmp4.0**/5**,Error ellipse: s-maj=34.3km s-min=19.8km az=97.0,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.85	11	P	P	17 22 40.7	-0.3
	2.5nm,0.3s,baz=201,slow=7.2,SNR=66						
SIV	San Ignacio	8.48	63	P	P	17 23 41.4	-2.1
	1.7nm,0.3s,baz=254,slow=11,SNR=59						
CFAA	Coronel Fontan	11.48	177	P	P	17 24 23.6	+0.2
	0.0nm,0.3s,baz=347,slow=15,SNR=3.6						
CPUP	Villa Florida	12.30	122	P	P	17 24 33.8	-0.6
	0.1nm,0.3s,baz=267,slow=18,SNR=2.7						
BDFB	Brasilia	20.35	81	P	P	17 26 09.7	-1.3
	5.0nm,0.6s,baz=261,slow=11,SNR=9.1						
PLCA	Paso Flores	20.62	184	P	P	17 26 11.5	-2.1
	3.4nm,0.7s,baz=357,slow=10,SNR=7.8						
MKAR	Makanchi Array	144.48	35	PKP	PKPdf	17 41 02.6	-1.3
	0.4nm,0.5s,baz=325,slow=2.8,SNR=7.6						
SONM	Songino Array	152.06	7	PKPbc	PKPdf	17 41 22.7	+6.6
	0.4nm,0.5s,baz=68,slow=1.9,SNR=3.8						
SONM				PKPab	PKPab	17 41 33.6	-1.6
	0.2nm,0.5s,baz=304,slow=2.5,SNR=2.8						

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*IDC **18** 17:23:47.5±2.2,29.33S×177.49W,h48^{km}±13^{km},mb3.7/2, mb1 4.1/4,mb1mx3.7/15,mbtmp4.2/4,ML3.6/2,MS3.8/2, Ms1 3.8/2,ms1mx3.1/26,Error ellipse: s-maj=35.3km s-min=23.5km az=96.0*
ISC 18 17:23:47.4±3.5**,29.43S**±0.10×**177.5W**±0.4**,h63**^{km}±11^{km}**, n12,**σ**1^{s}17**/8**,mb3.8**/2**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.38	299	P	P	17 23 58.2	-0.2
	2µm,0.3s,baz=94,slow=21,SNR=136						
RAO				S	S	17 24 06.9	+0.2
	10µm,0.3s,baz=81,slow=19,SNR=46						
URZ	Urewera	9.86	205	P	P	17 26 07.9	-0.8
	0.3nm,0.3s,baz=78,slow=14,SNR=4.0						
URZ				S	S	17 27 58.6	-0.3
	1.9nm,0.3s,baz=259,slow=22,SNR=12						
DZM	Mont Dzumac	16.18	293	LR	LR	17 32 23.9	
	comp=Z,110nm,21.4s,baz=182,slow=32						
RPZ	Rata Peaks	16.92	210	P	P	17 27 42.6	+1.4
	0.4nm,0.3s,slow=20,SNR=3.4						
RPZ				S	S	17 30 37.1	-8.9
	0.3nm,0.3s,baz=84,slow=9.2,SNR=2.8						
STKA	Stephens Creek	35.10	256	P	P	17 30 37.4	+0.8
	1.8nm,0.9s,mb4.0,baz=80,slow=11,SNR=4.3						
STKA				pP	pP	17 30 53.4	+1.1
	1.8nm,0.6s,baz=87,slow=12,SNR=5.9						
WRA	Warramunga Arr	44.47	271	P	P	17 31 53.2	-1.1
	1.0nm,0.7s,mb3.6,baz=109,slow=8.0,SNR=24						
WRA				pP	pP	17 32 09.8	-0.5
	2.3nm,0.7s,baz=109,slow=7.6,SNR=11						
WRA				PcP	PcP	17 33 38.1	+0.8
	0.8nm,0.9s,baz=102,slow=3.5,SNR=4.2						
RPN	Rapa Nui	59.31	106	LR	LR	17 52 57.9	
	comp=Z,305nm,18.3s,baz=319,slow=30						
FINES	FINESS Array B	144.37	341	PKhKP		17 43 13.2	
	0.8nm,0.6s,baz=45,slow=2.0,SNR=7.8						
FINES				PKP	PKPdf	17 43 17.1	+1.5
	0.8nm,0.6s,baz=63,slow=3.1,SNR=7.7						
NB2	NORSAR Subarra	147.86	352	PKPabc	PKPdf	17 43 24.8	+3.3
	0.8nm,0.7s,baz=13,slow=2.9						
NOA	NORSAR Array B	147.86	352	PKPbc	PKPdf	17 43 24.6	+3.1
	1.2nm,0.7s,baz=16,slow=4.7,SNR=5.5						
AKASG	Malin Array Be	150.77	324	PKPbc	PKPdf	17 43 34.0	+7.7
	2.4nm,0.5s,baz=43,slow=3.4,SNR=17						
BRTR	Keskin Array B	152.48	300	PKPbc	PKPdf	17 43 39.1	+10
	0.6nm,0.6s,baz=142,slow=3.9,SNR=4.1						

IDC 18 17:30:20.4±3.1**,2.28N**×**96.18E,mb3.8**/4**,mb1 3.9**/5**, mb1mx3.6**/17**,mbtmp3.8**/5**,ML4.3**/1**,Error ellipse: s-maj=109.9km s-min=26.8km az=59.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.30	9	Pn	P	17 34 13.0	+0.5
	0.4nm,0.3s,baz=198,slow=11,SNR=9.6						
WRA	Warramunga Arr	43.47	122	P	P	17 38 25.7	-1.7
	0.6nm,1.0s,baz=302,slow=9.1,SNR=3.9						
MKAR	Makanchi Array	45.96	347	P	P	17 38 45.0	-2.0
	1.3nm,0.7s,baz=161,slow=8.5,SNR=18						
SONM	Songino Array	46.23	10	P	P	17 38 46.7	-2.5
	0.8nm,0.7s,baz=194,slow=8.3,SNR=8.2						
ZAL	Zalesovo	52.34	352	P	P	17 39 34.2	-2.0
	1.0nm,0.5s,baz=309,slow=4.5,SNR=5.5						

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*ATH **18** 17:35:44.5,38.83N×21.24E,h17^{km}±4^{km},MD3.3/5*
*THE **18** 17:35:44.7,38.80N×21.26E,h10^{km},ML3.2*
*NEIC **18** 17:35:44.5,38.83N×21.24E,h17^{km},MD3.3(ATH),After ATH.*
*CSEM **18** 17:35:44.7±0.1,38.79N×21.25E,h2^{km},MD3.3,Error ellipse: s-maj=3.1km s-min=2.1km az=166.0*
ISC 18 17:35:44.9±0.5**,38.75N**±0.03×**21.24E**±0.05**,h17**^{km}**,n15,** σ**0^{s}78**/20**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD	Levkas	0.46	265	*e*Pg	Pb	17 35 53.9	-0.2
EVR	Evrytania	0.48	69	*e*PB	Pb	17 35 53.7	-0.7
RLS	Riolos of Patr	0.71	165	*e*PN	Pn	17 35 59.7	-0.3
VLS	Valsamata	0.76	222	*e*PB	Pb	17 35 59.8	+0.5
VLS				*e*SN	Sn	17 36 12.9	+1.1
AGG	Agios Georgios	0.90	72	*e*Pg	Pb	17 36 01.2	-0.4
AGG				*e*Sg	Sb	17 36 13.5	+0.4
JAN	Janina	0.96	342	*e*PN	Pn	17 36 01.6	-1.9
MEV	Metsovon	1.04	360	*e*Pg	Pb	17 36 02.7	-1.3
MEV				*e*Sg	Sb	17 36 17.7	+0.6
IGT	Igoumenitsa	1.05	318	*e*Pg	Pb	17 36 04.0	-0.2
LKR	Lokris	1.38	93	*e*PN	Pn	17 36 10.8	+1.2
KEK	Kerkira	1.48	311	*e*PN	Pn	17 36 11.1	+0.2
XOR	Xorichti	1.64	67	*e*Pg	Pn	17 36 13.3	0.0
LIT	Litokhoron	1.66	35	*e*Pg	Pn	17 36 13.3	-0.3
LIT				*e*Sg	Sn	17 36 35.7	+1.0
FNA	Florina	2.04	3	*e*Pn	Pn	17 36 19.0	0.0
FNA				*e*Sn	Sn	17 36 45.3	+1.1
GRG	Griva	2.38	22	*e*Pn	Pn	17 36 23.7	-0.2
VLI	Veliai	2.43	146	*e*PB	Pb	17 36 27.0	-0.8

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*BJI **18** 17:49:23.4,20.00S×68.90W,h101^{km},mB5.3*
*MOS **18** 17:49:23.4±1.6,19.99S×69.06W,h115^{km},mb5.0/12, Error ellipse: s-maj=17.1km s-min=7.8km az=112.5*
*NEIC **18** 17:49:23.4±0.2,19.96S×68.90W,mb4.8/32,Error ellipse: s-maj=7.6km s-min=4.4km az=60.0*
NEIC Felt [IV] at Iquique.
*IDC **18** 17:49:23.6±0.4,19.98S×68.98W,h102^{km}±3^{km},mb4.3/17, mb1 4.5/19,mb1mx4.5/20,mbtmp4.7/19,MS3.7/7, Ms1 3.7/7,ms1mx3.4/18,Error ellipse: s-maj=14.2km s-min=11.0km az=64.0*
ISC 18 17:49:21.7±0.2**,19.97S**±0.04×**68.95W**±0.05**,h102**^{km}**, h102**^{km}±1.0^{km}**:pP-P,n164,**σ**1^{s}07**/130**,mb4.8**/42**,5C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.74	12	P	P	17 50 24.2	+5.5
	29nm,0.3s,baz=187,slow=8.1,SNR=326						
LPAZ				S	S	17 51 02.6	+0.8
	4.9nm,0.3s,baz=175,slow=11,SNR=2.1						
LPAZ	La Paz	3.74	12	*e*Pn	P	17 50 23.9	+5.3
LPAZ				*e*Sn	S	17 51 01.2	-0.6
ANCH	Antofagasta	3.94	200	*e*P	P	17 50 17.0	-4.3
ARE	Arequipa	4.24	325	*e*P	P	17 50 25.0	-0.5
ARE				*e*S	S	17 51 14.0	-0.2
ARE	Arequipa	4.24	325	*e*P	P	17 50 25.0	-0.5
ARE				*e*		17 50 31.0	
ARE				*e*S	S	17 51 14.0	-0.2
CPN1	Cerro Paranal	4.83	196	*e*P	P	17 50 28.9	-4.6
CRCH	Chaqaral	6.53	193	*e*P	P	17 51 02.9	+6.0
SIV	San Ignacio	8.47	63	P	P	17 51 23.4	+0.3
	14nm,0.3s,baz=251,slow=12,SNR=522						
SIV				S	S	17 52 58.8	+1.0
	baz=333,slow=23,SNR=4.6						
TLL	Tololo Astrono	10.29	189	*e*P	P	17 51 39.5	-8.3
NNA	Nana	10.98	315	P	P	17 51 46.7	-10
CFAA	Coronel Fontan	11.61	177	P	P	17 52 01.1	-4.2
	0.1nm,0.3s,baz=14,slow=10,SNR=11						
SAML	Samuel	12.29	28	*e*P	P	17 52 13.5	-0.9
	12nm,0.6s						
SAML				*e*S	S	17 54 25.4	-4.2
CPUP	Villa Florida	12.42	123	P	P	17 52 15.5	-0.5
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CPUP	Villa Florida	12.42	123	P	P	17 52 15.4	-0.6
	comp=Z,1.1nm,0.3s,baz=321,slow=15,SNR=85						
TRQA	Tornquist	19.01	163	*e*P	P	17 53 35.0	-3.1
	comp=Z,25nm,1.1s						
BDFB	Brasilia	20.38	81	P	P	17 53 52.8	+0.2
BDFB				pmax	pmax		
	comp=Z,13nm,0.5s						
BDFB				MLR	MLR		
	comp=Z,387nm,19.0s						
BDFB	Brasilia	20.38	81	P	P	17 53 52.8	+0.3
	comp=Z,13nm,0.5s,baz=263,slow=10,SNR=22						
BDFB				LR	LR	18 03 07.0	
	comp=Z,387nm,19.0s,baz=207,slow=40						
BAO	Brasilia Array	20.41	81	P	P	17 53 53.5	+0.7
PLCA	Paso Flores	20.74	183	P	P	17 53 54.6	-1.5
PLCA				pmax	pmax		
	comp=Z,23nm,0.8s						
PLCA	Paso Flores	20.74	183	P	P	17 53 54.6	-1.4
	comp=Z,23nm,0.8s,baz=4.2,slow=12,SNR=28						
PLCA	Paso Flores	20.74	183	*e*P	P	17 53 54.4	-1.7
	comp=Z,22nm,0.8s						
OTAV	Otavalo	22.13	334	*e*P	P	17 54 13.1	+3.0
	comp=Z,30nm,1.0s,mb4.6						
ROSC	El Rosal	25.23	347	P	P	17 54 41.2	+1.2
	comp=Z,6.3nm,0.4s,mb4.4,baz=108,slow=20,SNR=6.3						
ROSC				LR	LR	18 05 18.0	
	comp=Z,116nm,20.2s,baz=299,slow=38						
SDV	Santo Domingo	28.72	357	P	P	17 55 10.7	-1.1
	comp=Z,8.4nm,0.7s,mb4.5,baz=202,slow=3.9,SNR=11						
SDV				pP	pP	17 55 34.6	+0.3
	comp=Z,11nm,0.7s,baz=99,slow=11,SNR=4.4						
SDV				LR	LR	18 08 09.1	
	comp=Z,171nm,18.2s,baz=210,slow=39						
SDV	Santo Domingo	28.72	357	*e*P	P	17 55 10.4	-1.4
	comp=Z,12nm,0.8s,mb4.6						
JTS	JuntasAbangare	33.95	331	*e*P	P	17 55 54.8	-2.7
USHA	Ushuaia	34.81	179	P	P	17 56 03.7	-0.7
	comp=Z,3.4nm,0.6s,mb4.4,baz=324,slow=6.3,SNR=3.3						
NHSC	New Hope	53.85	348	*e*P	P	17 58 35.1	-1.6
	comp=Z,261nm,1.3s						
COW	Cow Castle Cre	54.22	348	*e*P	P	17 58 38.9	-0.4
NATX	Nacogdoches	57.04	334	*e*P	P	17 58 58.5	-1.1
	comp=Z,67nm,1.2s,mb5.5						
CPCT	Cooper Cave	57.06	345	*e*P	P	17 58 58.1	-1.5
CPCT				*e*		17 59 16.5	
CPCT				*e*pP	pP	17 59 23.3	-1.4
CPCT				*e*sP	sP	17 59 34.3	-1.7
CPCT				*e*PcP	PcP	17 59 52.8	-0.4
SWET	Sewanee	57.20	343	*e*P	P	17 58 58.5	-2.1
SWET				*e*pP	pP	17 59 24.6	-1.0
SWET				*e*sP	sP	17 59 35.4	-1.6
OXF	Oxford	57.57	340	*e*P	P	17 59 01.1	-2.2
OXF				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.5						
OXF	Oxford	57.57	340	*e*P	P	17 59 01.1	-2.2
	comp=Z,51nm,1.1s,mb5.5						
ELN	Prospectdale	57.97	349	*e*P	P	17 59 05.6	-0.4
ELN				*e*pP	pP	17 59 31.4	+0.3
ELN				*e*sP	sP	17 59 41.8	-0.6
FWV	Forest Hill	58.32	349	*e*P	P	17 59 07.5	-0.9

WVT	**Waverly**	**58.58**	**342**	*e*P	**P**	**17 59 07.9**	**-2.4**
WVT				*e**PP	pP	17 59 32.7	-2.7
WVT				*e**SP	sP	17 59 43.9	-2.9
WVT				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.3						
WVT	**Waverly**	**58.58**	**342**	*e*P	**P**	**17 59 07.9**	**-2.4**
	comp=Z,34nm,1.0s,mb5.3						
WVT				*e*pP	pP	17 59 32.7	-2.7
WVT				*e*sP	sP	17 59 43.9	-2.9
UTMT	**University of**	**59.09**	**341**	*e*P	**P**	**17 59 11.5**	**-2.2**
	comp=Z,141nm,1.2s,mb5.9						
TXAR	**Lajitas Array**	**59.36**	**325**	P	**P**	**17 59 14.6**	**-1.1**
TXAR				*PP	pP	17 59 40.4	-0.5
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**59.36**	**325**	P	**P**	**17 59 14.6**	**-1.1**
	comp=Z,1.7nm,0.8s,mb4.2,baz=141,slow=8.0,SNR=20						
TXAR				pP	pP	17 59 40.4	-0.5
	comp=Z,1.1nm,0.9s,baz=141,slow=8.0,SNR=3.5						
TXAR	**Lajitas Array**	**59.36**	**325**	P	**P**	**17 59 14.6**	**-1.1**
TXAR				pP	pP	17 59 40.4	-0.5
WCI	**Wyandotte Cave**	**60.14**	**344**	*e*P	**P**	**17 59 19.0**	**-2.0**
WCI				*e**PP	pP	17 59 42.6	-3.6
WCI				*e**SP	sP	17 59 54.9	-2.7
WCI				pmax	pmax		
	comp=Z,52nm,1.4s,mb5.4						
WCI	**Wyandotte Cave**	**60.14**	**344**	*e*P	**P**	**17 59 19.0**	**-1.9**
	comp=Z,52nm,1.4s,mb5.4						
WCI				*e*pP	pP	17 59 42.6	-3.6
WCI				*e*sP	sP	17 59 54.9	-2.7
FVM	**French Village**	**61.08**	**341**	*e*P	**P**	**17 59 25.8**	**-1.6**
FVM				*e**PP	pP	17 59 50.0	-2.7
FVM				pmax	pmax		
	comp=Z,74nm,1.1s,mb5.6						
FVM	**French Village**	**61.08**	**341**	*e*P	**P**	**17 59 25.8**	**-1.6**
	comp=Z,74nm,1.1s,mb5.6						
FVM				*e*pP	pP	17 59 50.0	-2.7
FVM				*e*sP	sP	18 00 01.4	-2.7
CCM	**Cathedral Cave**	**61.40**	**340**	*e*P	**P**	**17 59 27.5**	**-2.0**
CCM				*e**PP	pP	17 59 52.3	-2.6
CCM				*e**SP	sP	18 00 04.5	-1.7
CCM				*e*		18 00 09.8	
CCM				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.3						
CCM	**Cathedral Cave**	**61.40**	**340**	*e*P	**P**	**17 59 27.5**	**-2.0**
	comp=Z,34nm,1.1s,mb5.3						
CCM				*e*pP	pP	17 59 52.3	-2.5
CCM				*e*sP	sP	18 00 04.5	-1.8
CCM				*e*PcP	PcP	18 00 09.8	-0.6
VNA3	**Neumayer Olymp**	**61.53**	**162**	⇑*i*P	**P**	**17 59 29.9**	**-0.1**
VNA1	**Neumayer--Stat**	**61.73**	**161**	⇑*i*P	**P**	**17 59 31.6**	**+0.3**
VNA2	**Neumayer--Watz**	**62.10**	**161**	⇑*i*P	**P**	**17 59 33.8**	**0.0**
ALLY	**Alegheny Colle**	**62.17**	**351**	*e*P	**P**	**17 59 33.7**	**-1.0**
ALLY				*e*pP	pP	17 59 59.3	-0.7
ALLY				*e*sP	sP	18 00 09.6	-1.8
BINY	**Binghamton**	**62.19**	**354**	*e*P	**P**	**17 59 34.4**	**-0.4**
	comp=Z,36nm,1.1s,mb5.3						
BINY				*e*pP	pP	18 00 00.2	+0.1
GENY	**Geneseo**	**62.95**	**353**	*e*P	**P**	**17 59 39.4**	**-0.5**
SNAA	**Sanae**	**63.73**	**161**	*e*P	**P**	**17 59 43.4**	**-1.1**
SNAA				*e**PP	pP	18 00 09.9	0.0
SNAA				*e**SP	sP	18 00 21.1	-0.1
SNAA				pmax	pmax		
	comp=Z,24nm,1.3s						
SNAA	**Sanae**	**63.73**	**161**	*e*P	**P**	**17 59 43.4**	**-1.1**
	comp=Z,24nm,1.3s,mb4.9						
SNAA				*e*pP	pP	18 00 09.8	-0.1
SNAA				*e*sP	sP	18 00 21.1	-0.1
NCB	**Newcomb**	**63.80**	**356**	*e*P	**P**	**17 59 44.9**	**-0.5**
	comp=Z,14nm,1.1s,mb4.7						
KSU1	**Kansas State U**	**64.21**	**336**	*e*P	**P**	**17 59 46.8**	**-1.4**
SADO	**Sadowa**	**65.09**	**352**	LR	LR	18 26 50.4	
	comp=Z,53nm,21.9s,baz=153,slow=34						
ANMO	**Albuquerque**	**65.21**	**327**	⇓*i*P	**P**	**17 59 54.0**	**-0.7**
TUC	**Tucson**	**65.61**	**322**	*e*P	**P**	**17 59 56.8**	**-0.5**
TUC				*e**PP	pP	18 00 22.2	-0.7
TUC				*e**SP	sP	18 00 33.4	-0.6
TUC				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.6						
TUC	**Tucson**	**65.61**	**322**	*e*P	**P**	**17 59 56.8**	**-0.5**
	comp=Z,13nm,1.4s,mb4.6						
TUC				*e*pP	pP	18 00 22.2	-0.6
TUC				*e*sP	sP	18 00 33.4	-0.6
WUAZ	**Wupatki**	**68.28**	**324**	*e*P	**P**	**18 00 14.5**	**+0.5**
	comp=Z,22nm,1.0s,mb4.9						
DBIC	**Dimbokro**	**68.34**	**74**	P	**P**	**18 00 14.3**	**-0.4**
DBIC				*PP	pP	18 00 41.6	+1.2
DBIC				pmax	pmax		
	comp=Z,20nm,0.7s						
DBIC				pmax	pmax		
	comp=Z,15nm,0.7s						
DBIC				MLR	MLR		
	comp=Z,57nm,19.2s						
DBIC	**Dimbokro**	**68.34**	**74**	P	**P**	**18 00 14.3**	**-0.4**
	comp=Z,20nm,0.7s,mb5.0,baz=229,slow=7.4,SNR=18						
DBIC				pP	pP	18 00 41.6	+1.1
	comp=Z,14nm,0.7s,baz=243,slow=6.2,SNR=4.4						
DBIC				LR	LR	18 28 58.9	
	comp=Z,57nm,19.2s,baz=146,slow=35						
DBIC	**Dimbokro**	**68.34**	**74**	P	**P**	**18 00 14.3**	**-0.4**
DBIC				pP	pP	18 00 41.6	+1.1
RW3	**Ridgway**	**68.39**	**328**	*e*P	**P**	**18 00 14.7**	**+0.2**
ISCO	**Idaho Springs**	**68.60**	**330**	*e*P	**P**	**18 00 15.5**	**-0.4**
ISCO				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.8						
ISCO	**Idaho Springs**	**68.60**	**330**	*e*P	**P**	**18 00 15.5**	**-0.4**
	comp=Z,25nm,1.5s,mb4.8						
PV01	**Paradox Valley**	**68.74**	**327**	*e*P	**P**	**18 00 17.1**	**+0.4**
QSPA	**South Pole Qui**	**70.22**	**180**	⇑*i*P	**P**	**18 00 25.5**	**+0.4**
	comp=Z,10.0nm,1.0s,mb4.6						
NEN	**Nelson**	**70.36**	**322**	*e*P	**P**	**18 00 27.3**	**+0.7**
NEN				*e*sP	sP	18 01 02.7	-0.7
MSU	**Marysvale**	**70.90**	**325**	*e*P	**P**	**18 00 30.1**	**+0.2**
MSU				*e*pP	pP	18 00 56.2	+0.4
MSU				*e*sP	sP	18 01 04.9	-1.7
ARUT	**Antelope Range**	**71.07**	**324**	*e*P	**P**	**18 00 32.4**	**+1.5**
ARUT				*e**PP	pP	18 00 58.2	+1.3
ARUT				*e**SP	sP	18 01 08.9	+1.2
MWC	**Mount Wilson**	**71.33**	**319**	*e*P	**P**	**18 00 33.0**	**+0.5**
RSSD	**Black Hills**	**71.41**	**334**	*e*P	**P**	**18 00 33.2**	**+0.4**
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
RSSD	**Black Hills**	**71.41**	**334**	*e*P	**P**	**18 00 33.2**	**+0.4**
	comp=Z,7.0nm,0.8s,mb4.5						
RSSD				*e*sP	sP	18 01 09.4	-0.2
DAU	**Daniels Canyon**	**71.83**	**327**	*e*P	**P**	**18 00 36.4**	**+1.1**
JLU	**Jordanelle**	**72.06**	**327**	*e*P	**P**	**18 00 37.7**	**+1.0**
TRCR	**Troy Canyon**	**72.66**	**323**	*e*P	**P**	**18 00 41.8**	**+1.5**
PDAR	**Pinedale Array**	**72.77**	**330**	P	**P**	**18 00 41.1**	**+0.3**
	comp=Z,1.3nm,0.8s,mb3.8,baz=153,slow=3.3,SNR=10.0						
HWUT	**Hardware Ranch**	**72.87**	**328**	*e*P	**P**	**18 00 41.1**	**-0.4**
	comp=Z,9.9nm,0.9s,mb4.6						
BGU	**Big Grassy Mou**	**73.11**	**327**	*e*P	**P**	**18 00 43.5**	**+0.6**
AHID	**Auburn Hatcher**	**73.51**	**329**	*e*P	**P**	**18 00 45.6**	**+0.5**
	comp=Z,7.9nm,1.2s,mb4.3						
MTUM	**Tungsten Hills**	**73.71**	**321**	*e*P	**P**	**18 00 47.6**	**+1.1**
MTUM				*e*pP	pP	18 01 13.1	+0.5
MTUM				*e*sP	sP	18 01 23.9	+0.4
ULM	**Lac du Bonnet**	**73.85**	**342**	P	**P**	**18 00 46.5**	**-0.5**
	comp=Z,8.4nm,0.6s,mb4.7,baz=160,slow=6.8,SNR=7.8						
ULM	**Lac du Bonnet**	**73.85**	**342**	*e*P	**P**	**18 00 46.2**	**-0.8**
	comp=Z,40nm,1.5s,mb4.9						
ULM				*e*sP	sP	18 01 22.6	-1.5
TBI	**Tubuai**	**73.97**	**251**	*e*S	S	18 09 53.2	-17
	comp=Z,134nm,26.2s						
TBI				*e*LR	LR	18 23 21.8	
	comp=Z,134nm,30.8s						
TPAW	**Teton Pass**	**73.98**	**330**	*e*P	**P**	**18 00 48.9**	**+0.9**
	comp=Z,15nm,1.3s,mb4.6						
RRI2	**Red Ridge**	**74.05**	**329**	*e*P	**P**	**18 00 49.1**	**+0.7**
	comp=Z,33nm,1.1s,mb5.0						
RRI2				*e*pP	pP	18 01 13.2	-1.4
RRI2				*e*sP	sP	18 01 25.9	+0.4
MOOW	**Moose Ponds**	**74.08**	**330**	*e*P	**P**	**18 00 49.1**	**+0.6**
OMM	**Old Mammoth Mi**	**74.14**	**321**	*e*P	**P**	**18 00 49.9**	**+0.9**
OMM				*e*pP	pP	18 01 15.7	+0.6
OMM				*e*sP	sP	18 01 25.9	-0.2
NVAR	**Mina Array Bea**	**74.27**	**322**	P	**P**	**18 00 50.8**	**+1.0**
	comp=Z,4.7nm,0.9s,mb4.2,baz=134,slow=7.1,SNR=32						
NVAR				pP	pP	18 01 16.1	+0.1
	comp=Z,2.5nm,0.9s,baz=133,slow=7.6,SNR=3.5						
NVAR				sP	sP	18 01 27.2	+0.4
	comp=Z,2.8nm,0.8s,baz=131,slow=6.9,SNR=4.6						
SCHQ	**Schefferville**	**74.52**	**1**	P	**P**	**18 00 50.6**	**-0.1**
	comp=Z,10nm,0.9s,mb4.6,baz=168,slow=5.1,SNR=15						
SCHQ				LR	LR	18 32 11.2	
	comp=Z,22nm,18.6s,baz=227,slow=34						
SCHQ	**Schefferville**	**74.52**	**1**	*e*P	**P**	**18 00 50.1**	**-0.6**
	comp=Z,8.0nm,0.8s,mb4.5						
DGMT	**Dagmar**	**75.06**	**337**	*e*P	**P**	**18 00 53.0**	**-1.0**
	comp=Z,22nm,0.9s,mb4.9						
DGMT				*e*sP	sP	18 01 31.1	-0.2
GCMT	**Greycliff**	**75.15**	**332**	*e*P	**P**	**18 00 55.3**	**+0.7**
PPT	**Papeete**	**75.65**	**256**	*e*LR	LR	18 24 08.6	
	comp=Z,116nm,28.0s						
HLID	**Hailey**	**75.73**	**328**	*e*P	**P**	**18 00 58.7**	**+0.8**
	comp=Z,19nm,1.1s,mb4.7						
HLID				*e*pP	pP	18 01 24.1	-0.2
HLID				*e*sP	sP	18 01 35.9	+0.6
MCMT	**McKenzie Canyo**	**75.89**	**329**	*e*P	**P**	**18 01 00.0**	**+1.2**
BOZ	**Bozeman (W)**	**75.93**	**331**	*e*P	**P**	**18 00 59.4**	**+0.4**
BOZ				pmax	pmax		
	comp=Z,27nm,1.6s,mb4.7						
BOZ	**Bozeman (W)**	**75.93**	**331**	*e*P	**P**	**18 00 59.4**	**+0.4**
	comp=Z,27nm,1.6s,mb4.7						
BOZ				*e*sP	sP	18 01 33.9	-2.5
HRY	**Holter Researc**	**76.82**	**331**	*e*P	**P**	**18 01 04.9**	**+0.9**
CHMT	**Chamberlain Mo**	**77.62**	**331**	*e*P	**P**	**18 01 09.3**	**+0.9**
MOD	**Modoc**	**77.72**	**323**	*e*P	**P**	**18 01 10.1**	**+1.1**
	comp=Z,25nm,1.6s,mb4.7						
SYO	**Syowa Base**	**77.94**	**160**	⇓P	**P**	**18 01 08.7**	**-1.0**
SYO	**Syowa Base**	**77.94**	**160**	⇑PcP	PcP	18 01 13.2	-6.3
BMO	**Blue Mountains**	**78.11**	**327**	*e*P	**P**	**18 01 11.7**	**+0.6**
	comp=Z,17nm,1.2s,mb4.6						
BMO				*e*pP	pP	18 01 37.3	-0.2
BMO				*e*sP	sP	18 01 48.3	-0.4
VNDA	**Vanda**	**78.35**	**190**	P	**P**	**18 01 12.7**	**+0.9**
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**78.35**	**190**	P	**P**	**18 01 12.7**	**+0.8**
	comp=Z,1.3nm,0.7s,mb3.8,baz=126,slow=4.5,SNR=7.7						
VIPM	**Ingram Point**	**79.62**	**325**	P	**P**	**18 01 20.9**	**+1.5**
CROR	**Criterion Ridg**	**80.13**	**325**	P	**P**	**18 01 23.8**	**+1.7**
TSUM	**Tsumeb**	**80.52**	**107**	*e*P	**P**	**18 01 25.2**	**+0.6**
	comp=Z,8.3nm,1.0s,mb4.5						
TSUM				*e*pP	pP	18 01 52.8	+1.6
OD2	**Odessa Site #2**	**80.58**	**328**	P	**P**	**18 01 25.4**	**+1.0**
FCC	**Fort Churchill**	**81.14**	**347**	*e*P	**P**	**18 01 27.2**	**+0.1**
FCC				*e**PP	pP	18 01 54.4	+0.7
FCC				pmax	pmax		
	comp=Z,59nm,1.5s,mb5.2						
FCC	**Fort Churchill**	**81.14**	**347**	*e*P	**P**	**18 01 27.2**	**0.0**
	comp=Z,59nm,1.5s,mb5.2						
FCC				*e*pP	pP	18 01 54.4	+0.7
FCC				*e*sP	sP	18 02 04.1	-0.8
TBM	**Table Mountain**	**81.37**	**327**	P	**P**	**18 01 30.1**	**+1.5**
ETW	**Entiat**	**81.53**	**328**	P	**P**	**18 01 30.6**	**+1.2**
EDM	**Edmonton**	**82.37**	**335**	*e*P	**P**	**18 01 32.5**	**-1.1**
EDM				*e**PP	pP	18 01 59.4	-0.8
BOSA	**Boshof**	**84.20**	**118**	P	**P**	**18 01 44.1**	**+0.7**
BOSA				*PP	pP	18 02 11.9	+1.8
BOSA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
BOSA				MLR	MLR		
	comp=Z,91nm,19.0s						
BOSA	**Boshof**	**84.20**	**118**	P	**P**	**18 01 44.1**	**+0.7**
	comp=Z,9.9nm,1.0s,mb4.6,baz=288,slow=4.6,SNR=7.8						
BOSA				pP	pP	18 02 11.9	+1.8
	comp=Z,4.2nm,0.9s,baz=235,slow=5.4,SNR=2.7						
BOSA				LR	LR	18 36 40.0	
	comp=Z,91nm,19.0s,baz=112,slow=34						
ESDC	**Sonseca Array**	**84.77**	**45**	P	**P**	**18 01 47.2**	**+1.2**
	comp=Z,4.3nm,1.0s,mb4.3,baz=240,slow=5.3,SNR=14						
ESDC				pP	pP	18 02 14.2	+1.4
	comp=Z,4.1nm,1.0s,baz=246,slow=5.2,SNR=5.4						
MAW	**Mawson**	**85.80**	**163**	P	**P**	**18 01 51.4**	**+1.0**
MAW				*PP	pP	18 02 18.5	+1.2
MAW				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MAW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAW	**Mawson**	**85.80**	**163**	P	**P**	**18 01 51.4**	**+1.0**
	comp=Z,3.9nm,0.6s,mb4.5,baz=243,slow=9.3,SNR=4.8						
MAW				pP	pP	18 02 18.5	+1.2
	comp=Z,3.3nm,0.7s,baz=270,slow=7.1,SNR=2.8						
YKA	**Yellowknife Ar**	**89.74**	**341**	P	**P**	**18 02 09.5**	**+0.2**
	comp=Z,16nm,0.8s,mb5.2,baz=135,slow=4.8,SNR=27						
YKA				pP	pP	18 02 36.5	+0.1
	comp=Z,4.8nm,0.9s,baz=136,slow=4.7,SNR=2.1						
YKA				sP	sP	18 02 46.8	-0.4
	comp=Z,6.1nm,0.8s,baz=132,slow=4.6,SNR=3.3						
YKA	**Yellowknife Ar**	**89.74**	**341**	P	**P**	**18 02 09.6**	**+0.2**
YKA				pP	pP	18 02 36.5	+0.1
YKA				sP	sP	18 02 46.9	-0.4
DLBC	**Dease Lake**	**92.83**	**333**	P	**P**	**18 02 25.3**	**+1.5**
	comp=Z,1.6nm,0.5s,mb4.6,baz=144,slow=5.1,SNR=5.2						
DLBC				pP	pP	18 02 51.5	+0.5
	comp=Z,2.7nm,1.0s,baz=112,slow=2.6,SNR=2.6						
DLBC	**Dease Lake**	**92.83**	**333**	P	**P**	**18 02 25.3**	**+1.5**
DLBC				pP	pP	18 02 51.5	+0.5
OBN	**Obninsk**	**114.98**	**38**	PKIKP	PKPdf	18 07 51.0	+0.4
OBN				*e*		18 24 38.6	
KIV	**Kislovodsk**	**119.03**	**50**	*e*PKIKP	PKPdf	18 08 01.7	+3.1
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARU	**Arti**	**126.90**	**33**	*i* PKIKP	PKPdf	18 08 12.8	-0.7
ARU				*e*		18 10 16.3	
ARU				*e*		18 15 04.4	
AB31	**Akbulak array**	**130.04**	**42**	*i* PKIKP	PKPdf	18 08 21.7	+2.0
AB31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ZRNK	**Zerenda**	**133.86**	**34**	*e*PKIKP	PKPdf	18 08 28.7	+1.9
ZRNK				*e*		18 08 56.8	
WRA	**Warramunga Arr**	**134.25**	**211**	PKHKP		18 08 17.5	
WRA						18 08 29.6	
WRA						18 08 57.0	
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**134.25**	**211**	PKhKP		18 08 17.5	
	comp=Z,0.2nm,0.5s,baz=167,slow=1.2,SNR=9.0						
WRA				PKP	PKPdf	18 08 29.6	+1.1
	comp=Z,1.6nm,0.7s,baz=151,slow=1.8,SNR=24						
WRA				pPKP		18 08 57.0	
	comp=Z,1.1nm,0.7s,baz=160,slow=1.8,SNR=4.2						
VOSK	**Vostochnaya**	**135.01**	**34**	PKIKP	PKPdf	18 08 31.0	+2.0
VOSK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZAL	**Zalesovo**	**140.58**	**24**	PKIKP	PKPdf	18 08 37.0	-2.1
ZAL						18 09 08.2	
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAL	**Zalesovo**	**140.58**	**24**	PKhKP		18 08 37.0	
	comp=Z,3.4nm,0.9s,baz=128,slow=0.5,SNR=6.5						
ZAL				pPKP		18 09 08.2	
	comp=Z,2.3nm,0.9s,baz=205,slow=2.5,SNR=3.5						
ASAJ	**Asahikawa**	**144.38**	**320**	PKIKP	PKPdf	18 08 46.9	+1.0
ASAJ				pmax	pmax		
	comp=Z,13nm,0.9s						
ASAJ	**Asahikawa**	**144.38**	**320**	PKP	PKPdf	18 08 46.9	+1.0
	comp=Z,13nm,0.9s,baz=299,slow=5.6,SNR=10						
MKAR	**Makanchi Array**	**144.41**	**35**	PKIKP	PKPdf	18 08 46.2	+0.3
MKAR						18 09 14.3	
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	**Makanchi Array**	**144.41**	**35**	PKP	PKPdf	18 08 46.2	+0.3
	comp=Z,3.7nm,0.5s,baz=309,slow=3.4,SNR=61						
MKAR				pPKP		18 09 14.3	
	comp=Z,5.1nm,0.9s,baz=270,slow=2.4,SNR=6.3						
MKAR	**Makanchi Array**	**144.41**	**35**	PKP	PKPdf	18 08 46.2	+0.3
MKAR				pPKP		18 09 14.3	
KLR	**Kul'dur**	**146.43**	**335**	*e*PKHKP		18 08 47.7	
IRK	**Irkutsk**	**147.35**	**8**	*e*PKP2	PKPab	18 08 55.3	-2.3
IRK				pmax	pmax		
	comp=Z,40nm,1.4s						
MOY	**Mondy**	**147.39**	**12**	*e*PKP2	PKPab	18 08 56.0	-1.7
MOY				pmax	pmax		
	comp=Z,34nm,1.9s						
TLY	**Talaya**	**147.82**	**9**	*e*PKIKP	PKPdf	18 08 53.4	+1.9
TLY				*e*		18 08 57.2	
ZAK	**Zakamensk**	**149.03**	**10**	*e*PKIKP	PKPdf	18 08 55.8	+2.3
ZAK				*i*		18 08 59.7	
ZAK				*e*		18 09 27.0	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WMQ	**Urumqi**	**149.23**	**34**	*e*PKP	PKPdf	18 08 57.0	+3.0
WMQ				LR	LR		
	comp=N,30nm,20.2s						
WMQ				LR	LR		
	comp=Z,20nm,22.6s						
HIA	**Hailar**	**149.95**	**349**	*e*PKP2	PKPab	18 09 01.5	-6.7
HIA				*e*		18 12 33.8	
HIA	**Hailar**	**149.95**	**349**	*e*PKPbc	PKPdf	18 09 01.5	+6.5
HIA				*e*PKPab	PKPab	18 09 08.5	+0.3
HIA				*e*SKP		18 12 33.8	
MDJ	**Mudanjiang**	**150.99**	**332**	PKP	PKPdf	18 08 57.5	+0.8
MDJ				PKP2	PKPab	18 09 12.3	-0.4
MDJ				APKP		18 09 30.5	
MDJ				PP	PP	18 12 41.3	-2.9
MDJ				PP	PP		
	comp=Z,70nm,4.3s						
MDJ				LR	LR		
	comp=N,20nm,21.3s						
MDJ				LR	LR		
	comp=Z,20nm,20.1s						
MJAR	**Matsushiro Arr**	**151.08**	**311**	PKIKP	PKPdf	18 09 00.6	+3.5
MJAR						18 09 32.1	
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MJAR	**Matsushiro Arr**	**151.08**	**311**	PKP	PKPdf	18 09 00.6	+3.5
	comp=Z,5.9nm,1.0s,baz=83,slow=1.6,SNR=4.9						
MJAR				PKPbc	PKPdf	18 09 04.6	+7.5
	comp=Z,5.4nm,0.8s,baz=82,slow=1.9,SNR=34						
MJAR				pPKPbc		18 09 32.1	
	comp=Z,2.8nm,0.8s,baz=102,slow=1.5,SNR=4.3						
MAJO	**Matsushiro**	**151.08**	**311**	*e*PKIKP	PKPdf	18 09 04.6	+7.5
MAT	**Matsushiro**	**151.08**	**311**	*e*PKIKP	PKPdf	18 09 04.0	+6.9
MAT	**Matsushiro**	**151.08**	**311**	PKP	PKPdf	18 09 04.4	+7.3
SONM	**Songino Array**	**151.94**	**7**	PKP	PKPdf	18 09 00.7	+2.7
	comp=Z,1.8nm,0.9s,baz=270,slow=1.0,SNR=14						
SONM				PKPbc	PKPdf	18 09 07.1	+9.1
	comp=Z,4.1nm,0.5s,baz=319,slow=1.3,SNR=37						
SONM				pPKPbc		18 09 34.6	
	comp=Z,6.6nm,0.9s,baz=333,slow=2.8,SNR=7.9						
ULN	**Ulaanbaatar**	**151.98**	**6**	*e*PKIKP	PKPdf	18 09 00.7	+2.6
ULN				*e*		18 09 17.4	
ULN	**Ulaanbaatar**	**151.98**	**6**	*e*PKPdf	PKPdf	18 09 00.7	+2.6
ULN				*e*PKPbc	PKPdf	18 09 07.1	+9.0
ULN				*e*PKPab	PKPab	18 09 17.4	+0.6
GTA	**Gaotai**	**158.34**	**24**	PKP	PKPdf	18 09 09.9	+3.1
GTA				APKP		18 09 37.3	
SSE	**Sheshan**	**165.64**	**323**	*e*P	PKPdf	18 09 09.3	-5.2
CMAR	**Chiang Mai Arr**	**168.46**	**95**	PKIKP	PKPdf	18 09 19.3	+2.5
CMAR						18 14 20.9	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**168.46**	**95**	PKP	PKPdf	18 09 19.3	+2.5
	comp=Z,0.9nm,0.9s,baz=278,slow=2.3,SNR=4.9						
CMAR				PP	PP	18 14 20.9	+2.6
	comp=Z,1.0nm,1.0s,baz=235,slow=4.2,SNR=4.4						

WEL 18 18:03:25.3±0.3, 35.24S×178.37E, h282^{km}±7^{km}, ML4.1/15, Error ellipse: s-maj=7.9km s-min=6.1km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**2.83**	**182**	PN	P	18 04 17.9	-0.6
PUZ				SN	S	18 04 59.2	-0.6
MWZ	**Matawai**	**3.17**	**192**	PN	P	18 04 22.0	+0.1
MWZ				SN	S	18 05 05.6	-0.4
URZ	**Urewera**	**3.18**	**198**	PN	P	18 04 21.9	-0.2
URZ				SN	S	18 05 05.7	-0.6
KNZ	**Kokohu**	**3.82**	**188**	PN	P	18 04 28.4	-0.6
KNZ				SN	S	18 05 17.6	-1.0
BKZ	**Black Stump Fm**	**4.20**	**200**	PN	P	18 04 32.8	-0.5
CNZ	**Chateau**	**4.55**	**209**	PN	P	18 04 37.9	+0.5
FWVZ	**Far West T-bar**	**4.60**	**208**	PN	P	18 04 38.2	+0.3
PWZ	**Pawanui**	**4.93**	**194**	PN	P	18 04 41.2	-0.5
PWZ				SN	S	18 05 40.2	-1.5
TSZ	**Takapari Road**	**5.18**	**201**	PN	P	18 04 43.4	-1.3
TSZ				SN	S	18 05 46.4	-0.6
WAZ	**Wanganui**	**5.25**	**210**	PN	P	18 04 45.6	0.0
BFZ	**Birch Farm**	**5.69**	**197**	*e*PN	P	18 04 49.7	-1.2
MRZ	**Mangatainoka R**	**5.85**	**201**	PN	P	18 04 51.0	-1.8
MRZ				SN	S	18 05 59.4	-2.0
KIW	**Kapiti Island**	**6.24**	**205**	PN	P	18 04 55.8	-1.8
KIW				SN	S	18 06 08.4	-1.7
MTW	**Mount Morrison**	**6.33**	**200**	*e*PN	P	18 04 56.6	-2.1
CAW	**Cannon Point**	**6.41**	**203**	*e*PN	P	18 04 57.5	-2.3
DUWZ	**D'Urville Isla**	**6.57**	**211**	PN	P	18 05 00.1	-1.6
MSWZ	**Moikau Station**	**6.64**	**201**	PN	P	18 05 00.5	-2.0
MRW	**Makara Radio**	**6.64**	**205**	PN	P	18 05 00.6	-2.0
WEL	**Wellington**	**6.67**	**204**	PN	P	18 05 00.9	-2.0
SNZO	**South Karori**	**6.71**	**204**	PN	P	18 05 00.8	-2.6
SNZO				SN	S	18 06 18.8	-1.7
BHW	**Baring Head**	**6.75**	**203**	PN	P	18 05 01.5	-2.4
TCW	**Tory Channel**	**6.78**	**207**	PN	P	18 05 01.9	-2.4
TCW				SN	S	18 06 20.2	-1.8
TUWZ	**Tuamarina**	**7.09**	**208**	PN	P	18 05 05.7	-2.4
NNZ	**Nelson**	**7.15**	**212**	*e*PN	P	18 05 04.9	-3.9
QRZ	**Quartz Range**	**7.24**	**218**	PN	P	18 05 07.5	-2.4
BSWZ	**Blackbirch Sta**	**7.37**	**207**	PN	P	18 05 09.2	-2.3
THZ	**Tophouse**	**7.80**	**212**	PN	P	18 05 14.4	-2.5
THZ				SN	S	18 06 42.9	-1.6
KHZ	**Kahutara**	**8.10**	**206**	PN	P	18 05 18.5	-2.2
ODZ	**Otahua Downs**	**11.44**	**209**	*e*PN	P	18 06 00.8	-1.4

ATH ***18*** *18:08:42.3, 38.85N×21.21E, h9^{km}±6^{km}, MD3.3/4*

THE ***18*** *18:08:42.1, 38.82N×21.25E, h10^{km}, ML3.4*

NEIC ***18*** *18:08:42.3, 38.85N×21.21E, h9^{km}, MD3.3(ATH), After ATH.*

CSEM ***18*** *18:08:42.3±0.1, 38.86N×21.24E, h2^{km}, MD3.3, Error ellipse: s-maj=3.2km s-min=2.6km az=154.0*

ISC 18 18:08:41.3±0.4, 38.86N±0.03×21.26E±0.03, h2^{km}, n15, $\sigma 0^{s}98$/25, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.43**	**82**	*e*PB	**Pb**	**18 08 51.0**	**-0.3**
EVR				*e*SB	**Sb**	**18 08 58.5**	**+0.5**
LKD	**Levkas**	**0.50**	**252**	*e*Pg	**Pg**	**18 08 51.3**	**+0.1**
LKD				*e*Sg	**Sg**	**18 08 58.4**	**+0.5**
RLS	**Riolos of Patr**	**0.82**	**168**	*e*PG	**Pg**	**18 08 57.3**	**-0.3**
RLS				*e*SB	**Sb**	**18 09 09.3**	**+0.2**
AGG	**Agios Georgios**	**0.85**	**79**	*e*Pg	**Pg**	**18 08 58.5**	**+0.2**
AGG				*e*Sg	**Sg**	**18 09 11.1**	**+1.4**
JAN	**Janina**	**0.86**	**339**	*e*PB	**Pb**	**18 08 58.8**	**+0.2**
VLS	**Valsamata**	**0.86**	**218**	*e*PG	**Pg**	**18 08 57.5**	**-1.0**
VLS				*e*SB	**Sb**	**18 09 10.7**	**+0.3**
MEV	**Metsovon**	**0.93**	**359**	*e*Pg	**Pg**	**18 08 59.8**	**+0.1**
MEV				*e*Sg	**Sg**	**18 09 14.6**	**+2.5**
IGT	**Igoumenitsa**	**0.98**	**313**	*e*Pg	**Pg**	**18 09 01.1**	**+0.1**
KEK	**Kerkira**	**1.42**	**307**	*e*PG	**Pg**	**18 09 08.2**	**-1.4**
LIT	**Litokhoron**	**1.56**	**37**	*e*Pg	**Pg**	**18 09 10.8**	**-1.7**
LIT				*e*Sg	**Sg**	**18 09 33.4**	**0.0**
XOR	**Xorichti**	**1.59**	**71**	*e*Pg	**Pg**	**18 09 11.4**	**-1.6**
XOR				*e*Sg	**Sg**	**18 09 33.5**	**-0.7**
ITM	**Ithomi**	**1.76**	**162**	*e*PN	**Pn**	**18 09 15.3**	**+2.3**
FNA	**Florina**	**1.92**	**3**	*e*Pb	**Pb**	**18 09 15.6**	**-1.2**
FNA				*e*Sb	**Sb**	**18 09 42.0**	**+0.8**
FNA	**Florina**	**1.92**	**3**	*e*Pb	**Pb**	**18 09 15.6**	**-1.2**
FNA				*e*Sb	**Sb**	**18 09 42.0**	**+0.7**
AOS	**Alonnisos**	**2.07**	**81**	*e*Pn	**Pn**	**18 09 17.6**	**+0.2**

NIED ***18*** *18:10:00, 40.20N×142.30E, h47^{km}, Mw3.9 Best double couple: $M_0$7.01×10^{14} NP1:ϕ_s194°, δ55°, λ63°. NP2:ϕ_s56°, δ43°, λ123°.*

JMA ***18*** *18:10:47.8±0.1, 40.21N×142.33E, h38^{km}±1^{km}, M4.2*

JMA Felt I J1.

MOS ***18*** *18:10:47.8±1.9,40.20N×142.52E,h56^{km},mb4.4/4,Error ellipse: s-maj=17.0km s-min=8.8km az=78.7*

IDC ***18*** *18:10:47.5±2.5,40.08N×142.21E,h43^{km}±25^{km},mb3.5/11, mb1 3.6/12,mb1mx3.5/25,mbtmp3.7/12,ML3.6/2,MS3.1/2, Ms1 3.1/2,ms1mx2.7/18,Error ellipse: s-maj=25.1km s-min=16.4km az=102.0*

NEIC ***18*** *18:10:51.5±0.9,40.17N×142.31E,h78^{km}±9^{km},mb4.2/5, Error ellipse: s-maj=13.2km s-min=8.4km az=108.0*

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

BJI ***18*** *18:10:53.9,40.47N×142.27E,h62^{km},mB4.4,mb4.5, Ms3.5,Msz3.4*

ISC 18 18:10:47.3±0.6,**40.22N**±0.03×**142.33E**±0.07,**h51**^{km}±5^{km},**n49**,σ**0**^{s}**95**/63,**mb3.8**/16,**MS3.5**/2,**4C-4D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**0.46**	**232**	⇑P	**P**	**18 10 57.8**	**-0.4**
JTH				S	**S**	**18 11 04.7**	**-1.3**
JANG	**Nango**	**0.64**	**284**	⇓P	**P**	**18 11 00.3**	**0.0**
JANG				S	**S**	**18 11 09.0**	**-1.0**
MIYJ	**Miyakonagasawa**	**0.76**	**211**	P	**P**	**18 11 01.7**	**-0.2**
MIYJ				S	**S**	**18 11 11.6**	**-1.0**
JKZ	**Kuzumaki**	**0.80**	**253**	⇑P	**P**	**18 11 02.9**	**+0.4**
JKZ				S	**S**	**18 11 13.6**	**-0.1**
JOM	**Ohasama**	**1.09**	**227**	⇑P	**P**	**18 11 07.1**	**+0.5**
JOM				S	**S**	**18 11 20.7**	**-0.2**
JTM	**Tenmabayashi**	**1.11**	**301**	⇓P	**P**	**18 11 07.2**	**+0.4**
JTM				S	**S**	**18 11 21.5**	**+0.2**
JAH	**Hinai**	**1.30**	**269**	⇓P	**P**	**18 11 10.0**	**+0.5**
JAH				*e*S	**S**	**18 11 26.4**	**+0.4**
JOT	**Ohata**	**1.51**	**320**	P	**P**	**18 11 12.7**	**+0.2**
JOT				S	**S**	**18 11 31.6**	**+0.4**
JMK	**Ichinoseki**	**1.53**	**214**	⇑P	**P**	**18 11 13.1**	**+0.3**
JMK				*e*S	**S**	**18 11 33.3**	**+1.6**
ASAJ	**Asahikawa**	**3.90**	**3**	P	**P**	**18 11 46.3**	**+0.1**
ASAJ				S	**S**	**18 12 30.2**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,107nm,20.0s						
ASAJ	**Asahikawa**	**3.90**	**3**	P	**P**	**18 11 46.3**	**+0.1**
	comp=Z,2.5nm,0.3s,baz=262,slow=9.6,SNR=17						
ASAJ				S	**S**	**18 12 30.1**	**-1.0**
	baz=17,slow=19,SNR=3.6						
ASAJ				LR	LR	18 13 39.9	
	comp=Z,107nm,20.0s,baz=195,slow=43						
YUK	**Yuzh-Kuril'sk**	**4.63**	**33**	⇓*i*P	**P**	**18 11 55.9**	**-0.6**
YUK				*e*S	**S**	**18 12 42.9**	**-6.6**
YUK				pmax	pmax		
	comp=Z,190nm,0.3s						
YUK				smax			
	comp=N,230nm,0.5s						
YUK				smax			
	comp=E,230nm,0.5s						
MJAR	**Matsushiro Arr**	**4.90**	**223**	P	**P**	**18 12 02.0**	**+1.7**
	comp=E,1.4nm,0.3s,baz=32,slow=13,SNR=38						
MAJO	**Matsushiro**	**4.90**	**223**	*e*Pn	**P**	**18 12 01.9**	**+1.6**
MAJO				*e*		18 12 11.3	
MAT	**Matsushiro**	**4.90**	**223**	*e*P	**P**	**18 12 02.0**	**+1.7**
MAT				*e*S	S	18 13 25.0	+29
MAT	**Matsushiro**	**4.90**	**223**	P	**P**	**18 12 01.5**	**+1.2**
MAT				*e*S	**S**	**18 12 54.3**	**-2.0**
YSS	**Yuzh-Sakhalins**	**6.74**	**2**	P	**P**	**18 12 26.8**	**+0.8**
YSS				pmax	pmax		
	comp=Z,11nm,0.9s						
YSS	**Yuzh-Sakhalins**	**6.74**	**2**	P	**P**	**18 12 26.8**	**+0.9**
	comp=Z,11nm,0.9s						
JHJ	**Hachijo jima 2**	**7.38**	**197**	P	**P**	**18 12 31.6**	**-3.4**
	comp=Z,5.2nm,0.3s,baz=111,slow=7.3,SNR=5.3						
JHJ				S	**S**	**18 13 50.0**	**-8.1**
	comp=Z,5.8nm,0.3s,baz=240,slow=20,SNR=3.5						
MDJ	**Mudanjiang**	**10.39**	**299**	P	**P**	**18 13 19.3**	**+3.1**
MDJ				S	**S**	**18 15 20.9**	**+8.7**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.7s						
MDJ				AMB	AMB		
	comp=Z,40nm,5.6s						
MDJ				LR	LR		
	comp=E,70nm,7.1s						
MDJ				LR	LR		
	comp=Z,100nm,7.1s						
MDJ	**Mudanjiang**	**10.39**	**299**	*e*P	**P**	**18 13 19.6**	**+3.4**
	comp=Z,11nm,0.9s						
KS15	**Wonju Array Si**	**11.60**	**261**	P	**P**	**18 13 38.6**	**+5.9**
HIA	**Hailar**	**18.36**	**307**	P	**P**	**18 15 04.1**	**+4.5**
SONM	**Songino Array**	**26.75**	**299**	P	**P**	**18 16 23.4**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.0,baz=90,slow=7.9,SNR=3.9						
WMQ	**Urumqi**	**40.13**	**294**	*e*P	**P**	**18 18 26.3**	**+6.8**
WMQ				LR	LR		
	comp=N,80nm,19.8s						
WMQ				LR	LR		
	comp=Z,80nm,19.2s,MS3.6						
MKAR	**Makanchi Array**	**43.11**	**299**	P	**P**	**18 18 43.5**	**-0.4**
	comp=Z,0.6nm,0.6s,mb3.5,baz=80,slow=9.4,SNR=8.3						
ILAR	**Eielson Array**	**46.44**	**34**	P	**P**	**18 19 10.8**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.8,baz=272,slow=6.0,SNR=6.5						
BVAR	**Borovoye Array**	**49.01**	**310**	P	**P**	**18 19 30.1**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.8,baz=72,slow=8.4,SNR=5.5						
BRVK	**Borovoye**	**49.06**	**311**	P	**P**	**18 19 35.0**	**+4.1**
	comp=Z,0.2nm,0.4s,mb3.5						
BRVK				*e*PcP	PcP	18 20 49.1	-5.2
ZRNK	**Zerenda**	**49.83**	**311**	*e*P	**P**	**18 19 41.4**	**+4.6**
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
ZRNK	**Zerenda**	**49.83**	**311**	*e*P	**P**	**18 19 41.4**	**+4.6**
	comp=Z,1.2nm,0.7s,mb4.0						
INK	**Inuvik**	**51.23**	**28**	P	**P**	**18 19 47.8**	**+0.5**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**51.23**	**28**	P	**P**	**18 19 47.8**	**+0.5**
	comp=Z,1.7nm,0.5s,mb4.3,baz=311,slow=4.4,SNR=6.3						
INK	**Inuvik**	**51.23**	**28**	*e*P	**P**	**18 19 47.5**	**+0.2**
ARU	**Arti**	**54.48**	**317**	*e*P	**P**	**18 20 10.3**	**-1.2**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
ARU	**Arti**	**54.48**	**317**	*e*P	**P**	**18 20 10.3**	**-1.2**
	comp=Z,2.1nm,0.8s,mb4.1						
DLBC	**Dease Lake**	**55.69**	**40**	P	**P**	**18 20 27.5**	**+7.2**
WRA	**Warramunga Arr**	**60.31**	**189**	P	**P**	**18 20 51.0**	**-2.2**
	comp=Z,0.4nm,0.5s,mb3.7,baz=5.7,slow=6.8,SNR=4.7						
ARCES	**ARCESS Array B**	**61.27**	**339**	LR	LR	18 51 53.9	
	comp=Z,27nm,19.4s,MS3.4,baz=34,slow=40						
FINES	**FINESS Array B**	**66.34**	**332**	P	**P**	**18 21 31.2**	**-0.9**
	comp=Z,1.4nm,0.9s,mb4.0,baz=112,slow=10,SNR=5.0						
NEW	**Newport**	**67.36**	**45**	P	**P**	**18 21 39.3**	**+0.5**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NEW	**Newport**	**67.36**	**45**	P	**P**	**18 21 39.3**	**+0.5**
	comp=Z,2.9nm,0.9s,mb4.3						
SUMG	**Summit**	**67.50**	**0**	*e*P	**P**	**18 21 40.0**	**+0.7**
	comp=Z,2.2nm,0.6s,mb4.4						
HFS	**Hagfors**	**71.48**	**336**	P	**P**	**18 22 03.7**	**-0.1**
	comp=Z,0.5nm,0.4s,mb3.8,baz=90,slow=7.4,SNR=4.7						
NOA	**NORSAR Array B**	**71.53**	**337**	P	**P**	**18 22 03.2**	**-0.8**
	comp=Z,0.6nm,0.7s,mb3.6,baz=40,slow=5.8,SNR=3.5						
AKASG	**Malin Array Be**	**72.22**	**322**	P	**P**	**18 22 07.9**	**-0.5**
	comp=Z,0.2nm,0.3s,mb3.6,baz=43,slow=6.5,SNR=4.1						
PV01	**Paradox Valley**	**78.58**	**49**	P	**P**	**18 22 50.5**	**+5.6**
TXAR	**Lajitas Array**	**87.62**	**53**	P	**P**	**18 23 32.2**	**+1.0**
	comp=Z,0.1nm,0.6s,mb3.2,baz=305,slow=3.1,SNR=4.1						
TXAR	**Lajitas Array**	**87.62**	**53**	P	**P**	**18 23 32.2**	**+0.9**

LDG ***18*** *18:11:37.7±0.3,41.88N×8.53W,h2^{km},Md3.6/1,Ml2.9/3, Error ellipse: s-maj=6.7km s-min=2.8km az=104.0*

INMG ***18*** *18:11:41.6±0.9,41.79N×8.64W,h16^{km}±2^{km},ML2.7,Error ellipse: s-maj=2.4km s-min=1.2km az=97.0*

NEIC ***18*** *18:11:41.4,41.77N×8.65W,h11^{km},MN2.6(MDD),After MDD.*

CSEM ***18*** *18:11:41.7±0.1,41.78N×8.62W,h15^{km},ML3.2/13,Error ellipse: s-maj=2.0km s-min=1.1km az=82.0*

MDD 18 18:11:41.4±0.3,**41.77N**×**8.65W,h11**^{km},**mbLg2.6**/31,**3C-1D,Error ellipse: s-maj=3.4km s-min=2.1km az=65.0, PRXIMO,Portugal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZAM	**Zamans**	**0.38**	**355**	⇑Pg	Pg	18 11 48.6	-0.6
EZAM				Lg		18 11 53.8	
EZAM	**Zamans**	**0.38**	**355**	⇓Pg	Pg	18 11 48.5	-0.7
	13nm,0.1s,SNR=18						
EZAM				Lg		18 11 53.8	
	70nm,0.2s						
EZAM	**Zamans**	**0.38**	**355**	Pg	Pg	18 11 48.6	-0.6
	13nm,0.1s,SNR=18						
ELOB	**Lobios**	**0.45**	**77**	⇑Pg	Pg	18 11 49.9	-0.7
ELOB				Lg		18 11 55.9	
ELOB	**Lobios**	**0.45**	**77**	⇑Pg	Pg	18 11 49.8	-0.7
	22nm,0.1s,SNR=18						
ELOB				Lg		18 11 55.9	
	281nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**0.45**	**77**	Pg	Pg	18 11 49.8	-0.8
	22nm,0.1s,SNR=18						
PVRL	**Vila Real**	**0.86**	**125**	*e*Pg	Pg	18 11 57.4	-1.2
PVRL				*e*Sg	Sg	18 12 08.9	-1.2
	351nm,0.1s						
PVRL	**Vila Real**	**0.86**	**125**	*e*Pg	Pg	18 11 57.4	-1.2
PVRL				*e*Sg	Sg	18 12 08.9	-1.2
	351nm,0.1s						
STS	**Santiago**	**1.12**	**4**	Pg	Pg	18 12 01.8	-2.0
	7.7nm,0.2s,SNR=9.5						
STS				Lg		18 12 16.6	
	27nm,0.2s,SNR=19						
PVIS	**Viseu**	**1.20**	**151**	*e*P	Pb	18 12 02.9	-0.7
PVIS				*e*S	Sb	18 12 18.7	-0.2
	175nm,0.1s						
PVIS	**Viseu**	**1.20**	**151**	*e*P	Pb	18 12 02.9	-0.7
PVIS				*e*S	Sb	18 12 18.7	-0.2
	175nm,0.1s						
EMAZ	**Mazaricos**	**1.20**	**349**	Pg	Pg	18 12 03.2	-2.3
	2.5nm,0.1s,SNR=11						
EMAZ				Lg		18 12 19.3	
	22nm,0.2s,SNR=6.4						
EMAZ	**Mazaricos**	**1.20**	**349**	Pg	Pg	18 12 03.2	-2.3
	2.5nm,0.1s,SNR=11						
ERUA	**La Rua**	**1.28**	**60**	Pn	Pn	18 12 03.3	-2.0
	0.2nm,0.1s,SNR=117						
ERUA				Pg	Pg	18 12 05.2	-1.9
	45nm,0.3s,SNR=7.9						
ERUA				Lg		18 12 22.1	
	53nm,0.3s,SNR=25						
ECAL	**Calabor**	**1.44**	**82**	Pn	Pn	18 12 05.8	-1.7
	5.5nm,0.2s,SNR=7.9						
ECAL				Pg	Pg	18 12 07.7	-2.4
	11nm,0.2s,SNR=42						
ECAL				Sn	Sn	18 12 23.7	-2.8
	15nm,0.2s,SNR=7.9						
ECAL				Lg		18 12 26.7	
	145nm,0.2s,SNR=31						
ECAL	**Calabor**	**1.44**	**82**	Pn	Pn	18 12 05.8	-1.7
	5.5nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**1.44**	**82**	Pg	Pg	18 12 07.7	-2.5
	11nm,0.2s,SNR=42						
ECAL				Sn	Sn	18 12 23.7	-2.8
	15nm,0.2s,SNR=7.9						
MTE	**Manteigas**	**1.60**	**148**	*e*Pn	Pn	18 12 08.3	-1.5
MTE				*e*Sn	Sn	18 12 28.1	-2.5
MTE				*e*Sg	Sg	18 12 31.3	-3.5
	119nm,0.4s						
MTE	**Manteigas**	**1.60**	**148**	*e*Pn	Pn	18 12 07.9	-2.0
MTE				*e*Sn	Sn	18 12 30.8	+0.2
MTE	**Manteigas**	**1.60**	**148**	Pn	Pn	18 12 08.3	-1.5
MTE				Sn	Sn	18 12 28.1	-2.5
MTE				Lg		18 12 31.3	
	59nm,0.4s						
MTE	**Manteigas**	**1.60**	**148**	*e*Pn	Pn	18 12 07.9	-1.9
MTE				*e*Sn	Sn	18 12 28.1	-2.5
MTE				*e*Sg	Sg	18 12 31.3	-3.5
	119nm,0.4s						
EPON	**Pontenova**	**1.91**	**35**	Pn	Pn	18 12 12.2	-2.1
	3.1nm,0.4s,SNR=6.0						
EPON				Pg	Pg	18 12 16.8	-2.7
	1.5nm,0.1s,SNR=7.9						
EPON				Sn	Sn	18 12 34.8	-3.7
	3.8nm,0.2s,SNR=7.9						
EPON				Lg		18 12 41.2	
	31nm,0.3s,SNR=12						
EPON	**Pontenova**	**1.91**	**35**	Pn	Pn	18 12 12.2	-2.0
	3.1nm,0.4s,SNR=6.0						
EPON	**Pontenova**	**1.91**	**35**	Pg	Pg	18 12 16.8	-2.8
	1.5nm,0.1s,SNR=7.9						
EPON				Sn	Sn	18 12 34.8	-3.7
	3.8nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**2.12**	**155**	*e*Pn	Pn	18 12 15.5	-1.8
PCBR				*e*Sn	Sn	18 12 41.6	-2.2
PCBR				*e*Sg	Sg	18 12 47.6	-4.5
	37nm,0.3s						
PCBR	**Castelo Branco**	**2.12**	**155**	*e*Pn	Pn	18 12 15.5	-1.8
PCBR				*e*Sn	Sn	18 12 41.6	-2.2
PCBR				*e*Sg	Sg	18 12 47.6	-4.5
	37nm,0.3s						
PTOM	**Tomar**	**2.16**	**175**	*e*Pg	Pg	18 12 19.7	-4.7
PTOM				*e*Sn	Sn	18 12 42.7	-2.0
PTOM				*e*Sg	Sg	18 12 48.4	-4.8
	64nm,0.3s						
PTOM	**Tomar**	**2.16**	**175**	*e*Pg	Pg	18 12 19.7	-4.7
PTOM				*e*Sn	Sn	18 12 42.7	-2.0
PTOM				*e*Sg	Sg	18 12 48.4	-4.8
	64nm,0.3s						
PLOU	**Loures**	**2.91**	**188**	*e*Sn	Sn	18 13 00.1	-3.6
PLOU				*e*Sg	Sg	18 13 11.6	-6.6
	28nm,0.6s						
PLOU	**Loures**	**2.91**	**188**	*e*Sn	Sn	18 13 00.1	-3.6
PLOU				*e*Sg	Sg	18 13 11.6	-6.6
	28nm,0.6s						
EARI	**Arriondas**	**2.97**	**58**	Pn	Pn	18 12 28.8	-0.5
	2.0nm,0.1s,SNR=30						
EARI				Sn	Sn	18 13 01.2	-4.1
	1.4nm,0.5s,SNR=7.9						
EARI				Lg		18 13 15.4	
	5.3nm,0.3s,SNR=5.0						
EARI	**Arriondas**	**2.97**	**58**	Pn	Pn	18 12 28.8	-0.6
	2.0nm,0.1s,SNR=30						
EARI				Sn	Sn	18 13 01.2	-4.1
	1.4nm,0.5s,SNR=7.9						
MOE	**Montemor**	**3.25**	**176**	*e*Pn	Pn	18 12 31.7	-1.7
MOE				*e*Sn	Sn	18 13 08.0	-4.4
MOE				*e*Sg	Sg	18 13 20.9	-8.7
EBAD	**Badajoz**	**3.26**	**157**	Pn	Pn	18 12 31.3	-2.2
	2.5nm,0.1s,SNR=14						
EBAD				Sn	Sn	18 13 07.6	-5.1
	5.3nm,0.2s,SNR=7.9						
EBAD				Lg		18 13 23.7	
	22nm,0.2s,SNR=8.3						
EBAD	**Badajoz**	**3.26**	**157**	Pn	Pn	18 12 31.3	-2.2
	2.5nm,0.1s,SNR=14						
EBAD				Sn	Sn	18 13 07.6	-5.1
	5.3nm,0.2s,SNR=7.9						
EVO	**Evora**	**3.27**	**171**	*e*Pn	Pn	18 12 31.5	-2.1
EVO				*e*Sn	Sn	18 13 08.1	-4.8
EVO				*e*Sg	Sg	18 13 22.3	-8.0
	24nm,0.4s						
PBEJ	**Beja**	**3.79**	**171**	*e*Pn	Pn	18 12 38.5	-2.5
PBEJ				*e*Sn	Sn	18 13 21.1	-4.9
PBEJ				*e*Sg	Sg	18 13 38.1	-9.3
	6.2nm,0.3s						
PBEJ	**Beja**	**3.79**	**171**	Pn	Pn	18 12 38.5	-2.5
PBEJ				Sn	Sn	18 13 21.1	-4.9
PBEJ				Lg		18 13 38.1	
	3.1nm,0.3s						
ELAN	**Lanestosa**	**4.12**	**68**	Pn	Pn	18 12 42.7	-3.1
ELAN				Lg		18 13 49.5	
ELAN	**Lanestosa**	**4.12**	**68**	Pn	Pn	18 12 42.7	-3.1
	1.1nm,0.3s,SNR=7.9						
ELAN				Lg		18 13 49.5	
	7.8nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**4.12**	**68**	Pn	Pn	18 12 42.7	-3.1
	1.1nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**4.13**	**119**	Pn	Pn	18 12 43.3	-2.6
ESDC				Sn	Sn	18 13 29.7	-5.1
ESDC				Lg		18 13 49.4	
ESDC	**Sonseca Array**	**4.13**	**119**	Pn	Pn	18 12 43.3	-2.6
	2.1nm,0.1s,baz=305,slow=13,SNR=12						
ESDC				Sn	Sn	18 13 29.7	-5.1
	3.3nm,0.2s,baz=301,slow=23,SNR=13						
ESDC				Lg		18 13 49.4	
	5.0nm,0.5s,baz=302,slow=26,SNR=9.1						
ESDC	**Sonseca Array**	**4.13**	**119**	Pn	Pn	18 12 43.3	-2.6
	2.1nm,0.1s,SNR=12						
ESDC				Sn	Sn	18 13 29.7	-5.0
	3.3nm,0.2s,SNR=13						
PTEO	**Sao Teotonio**	**4.22**	**181**	*e*Sn	Sn	18 13 32.5	-4.5
PTEO				*e*Sg	Sg	18 13 53.8	-8.0
	9.2nm,0.6s						
PTEO	**Sao Teotonio**	**4.22**	**181**	Sn	Sn	18 13 32.5	-4.5
PTEO				Lg		18 13 53.8	
	4.6nm,0.6s						
EMIN	**Mina Concepcio**	**4.28**	**158**	Pn	Pn	18 12 45.8	-2.1
	0.1nm,0.1s,SNR=15						
EMIN				Sn	Sn	18 13 31.8	-6.7
	1.1nm,0.2s,SNR=7.9						
EMIN				Lg		18 13 54.1	
	4.6nm,0.4s,SNR=6.9						
EMIN	**Mina Concepcio**	**4.28**	**158**	Pn	Pn	18 12 45.8	-2.1
	0.1nm,0.1s,SNR=15						
EMIN				Sn	Sn	18 13 31.8	-6.6
	1.1nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**4.45**	**145**	Pn	Pn	18 12 47.6	-2.7
	0.6nm,0.3s,SNR=7.9						
ECAB				Sn	Sn	18 13 36.7	-6.1
	5.6nm,0.2s,SNR=7.9						
ECAB				Lg		18 14 00.6	
	5.6nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**4.45**	**145**	Pn	Pn	18 12 47.6	-2.8
	0.6nm,0.3s,SNR=7.9						
ECAB				Sn	Sn	18 13 36.7	-6.1
	5.6nm,0.2s,SNR=7.9						
ECRI	**Cripan**	**4.64**	**78**	Lg		18 14 06.7	
	3.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**4.77**	**138**	Pn	Pn	18 12 51.8	-3.1
	0.7nm,0.2s,SNR=7.9						
EADA				Sn	Sn	18 13 44.2	-6.6
	1.8nm,0.4s,SNR=5.0						
EADA				Lg		18 14 10.2	
	2.5nm,0.2s,SNR=7.4						
EADA	**Adamuz**	**4.77**	**138**	Pn	Pn	18 12 51.8	-3.1
	0.7nm,0.2s,SNR=7.9						
EADA				Sn	Sn	18 13 44.2	-6.6
	1.8nm,0.4s,SNR=5.0						
EBAN	**Banos Encina**	**5.19**	**132**	Lg		18 14 23.8	
	1.4nm,0.2s,SNR=7.9						
ESPR	**Espera**	**5.35**	**155**	Lg		18 14 30.8	
	2.3nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**5.48**	**72**	Lg		18 14 34.3	
	2.4nm,0.4s,SNR=7.9						
EVIA	**Vianos**	**5.65**	**122**	Sn	Sn	18 14 06.6	-6.4
	0.8nm,0.4s,SNR=7.9						
EVIA				Lg		18 14 39.2	
	0.1nm,0.1s,SNR=7.9						
SJPF	**Ste Jean**	**5.66**	**74**	*e*Pn	Pn	18 12 59.4	-8.0
SJPF				*e*Pg	Pg	18 13 19.9	-14
SJPF				*e*Sg	Sg	18 14 30.8	-19
	2.2nm,0.4s						
EQES	**Quesada**	**5.84**	**131**	Lg		18 14 44.2	
	0.7nm,0.2s,SNR=7.9						
ETSF	**Etsaut**	**6.10**	**77**	*e*Sg	Sg	18 14 45.1	-19
	1.4nm,0.4s						
ESAC	**San Caprasio**	**6.12**	**88**	Lg		18 14 54.1	
	7.3nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**6.27**	**118**	Pn	Pn	18 13 11.6	-4.5
	SNR=7.9						
ETOB				Sn	Sn	18 14 18.8	-10
	0.2nm,0.6s,SNR=7.9						
ETOB				Lg		18 14 59.2	
	2.2nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**6.34**	**100**	Pn	Pn	18 13 14.7	-2.4
EMOS				Sn	Sn	18 14 23.2	-7.0
EMOS				Lg		18 15 03.2	
EMOS	**Mosqueruela**	**6.34**	**100**	Pn	Pn	18 13 14.7	-2.4
	0.2nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	18 14 23.2	-7.0
	0.0nm,0.5s,SNR=7.9						
EMOS	**Mosqueruela**	**6.34**	**100**	Pn	Pn	18 13 14.7	-2.4
	0.2nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	18 14 23.2	-7.0
	SNR=7.9						
EBIE	**Bielsa**	**6.59**	**79**	Sn	Sn	18 14 29.3	-7.2
	0.2nm,0.2s,SNR=7.9						
EBIE				Lg		18 15 06.4	
	0.8nm,0.4s,SNR=7.9						
EBIE	**Bielsa**	**6.59**	**79**	Sn	Sn	18 14 29.3	-7.3
	0.2nm,0.2s,SNR=7.9						
QUIF	**Quistinic**	**7.28**	**31**	*e*P	Pn	18 13 25.2	-5.1
SGMF	**Saint Gilles**	**7.79**	**32**	*e*Pn	Pn	18 13 28.1	-9.3
MFF	**Saint Martin d**	**7.79**	**49**	*e*P	Pn	18 13 33.4	-4.0

IDC ***18*** *18:13:19.0±4.9,5.80S×154.47E,h135^{km}±44^{km},mb3.5/3, mb1 3.8/5,mb1mx3.5/16,mbtmp4.2/5,MS3.2/2,Ms1 3.2/2, ms1mx2.8/16,Error ellipse: s-maj=35.0km s-min=24.7km az=39.0*

ISC 18 18:13:16.7±4.2,**5.8S**±0.2×**154.6E**±0.2,**h133**^{km}±38^{km},**n7**,σ**0**^{s}**81**/7,**mb3.7**/3,**Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.17**	**243**	P	**P**	**18 15 13.0**	**-0.6**
	5.3nm,0.3s,baz=43,slow=11,SNR=30						
PMG				S	**S**	**18 16 45.2**	**+0.6**
	1.0nm,0.3s,baz=162,slow=20,SNR=3.1						
PMG				LR	LR	18 18 13.1	
	comp=Z,75nm,18.1s,baz=9.8,slow=36						
DZM	**Mont Dzumac**	**19.88**	**146**	P	**P**	**18 17 40.4**	**+0.6**
	1.6nm,0.3s,baz=318,slow=14,SNR=23						
WB2	**Warramunga Arr**	**24.17**	**232**	*e*P	**P**	**18 18 21.9**	**-0.1**
WRA	**Warramunga Arr**	**24.18**	**233**	P	**P**	**18 18 22.4**	**+0.3**
	1.8nm,0.7s,mb3.7,baz=58,slow=9.6,SNR=11						
STKA	**Stephens Creek**	**28.67**	**203**	P	**P**	**18 19 02.2**	**-1.1**
	2.6nm,0.8s,mb4.0,baz=51,slow=13,SNR=3.6						
FITZ	**Fitzroy Crossi**	**30.77**	**244**	LR	LR	18 32 04.1	
	comp=Z,83nm,20.3s,baz=264,slow=37						
SONM	**Songino Array**	**68.06**	**327**	P	**P**	**18 24 04.2**	**+0.2**
	0.5nm,0.8s,mb3.3,baz=130,slow=5.1,SNR=4.2						

TAP ***18*** *18:32:52.7,24.34N×121.73E,h24^{km},ML2.0*

JMA 18 18:32:06.3±0.3,**25.16N**×**123.26E,h161**^{km}±4^{km},**M2.7, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.73**	**198**	*e*S	S	18 32 48.9	-0.2
IRIF	**Iriomote-Funau**	**0.93**	**152**	P	P	18 32 31.6	-0.1
IRIF				*e*S	S	18 32 50.9	-0.4
JIJ	**Ishigaki jima**	**1.13**	**134**	P	P	18 32 33.3	-0.1
JIJ				S	S	18 32 53.4	-0.9
JKRS	**Kuro-shima**	**1.14**	**143**	P	P	18 32 33.8	+0.3
JKRS				S	S	18 32 54.4	-0.2
HATJ	**Hateruma jima**	**1.21**	**156**	P	P	18 32 34.0	-0.1
HATJ				*e*S	S	18 32 55.7	+0.1
JTJ	**Tarama**	**1.41**	**111**	P	P	18 32 36.4	+0.3
JTJ				*e*S	S	18 32 58.9	-0.2
JMJ	**Miyako jima 2**	**1.88**	**100**	*e*S	S	18 33 07.5	-0.3
JOGS	**Gusukube**	**1.99**	**101**	P	P	18 32 41.5	-0.8
JOGS				*e*S	S	18 33 09.3	-0.7
JKE	**Kume jima 2**	**3.38**	**69**	*e*S	S	18 33 40.6	-0.1

CSEM ***18*** *18:40:44.6±0.2,39.96N×29.63W,h5^{km},ML2.9,Error ellipse: s-maj=4.7km s-min=3.0km az=66.0,After PDA*

PDA ***18*** *18:40:44.6±0.9,39.96N×29.63W,h5^{km},MD3.1,ML2.9, Error ellipse: s-maj=10.2km s-min=5.3km az=71.0*

SVSA 18 18:40:44.6±0.9,**39.96N**×**29.63W,h5**^{km},**MD3.1,ML2.9, Error ellipse: s-maj=10.2km s-min=5.3km az=71.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STGR	**Santa Cruz**	**1.54**	**124**	*e*P	Pn	18 41 07.8	-5.0
STGR				*e*S	Sb	18 41 24.9	-8.0
	30nm,0.2s						
CALA	**Caldeira**	**1.56**	**152**	*e*S	Sb	18 41 26.3	-7.2
PGRA	**Graciosa**	**1.58**	**126**	*e*P	Pn	18 41 08.1	-5.4
PGRA				*e*S	Sb	18 41 26.3	-7.9
	41nm,0.4s						
PICO	**Pico**	**1.74**	**147**	*e*S	Sn	18 41 30.2	-8.2
PMAN	**Manadas**	**1.79**	**137**	*e*P	Pn	18 41 11.0	-5.4
PMAN				*e*S	Sn	18 41 31.1	-8.7
	20nm,0.4s						
PSBA	**Serra de Santa**	**2.15**	**123**	*i* P	Pn	18 41 16.5	-5.1
ASBA	**Santa Barbara**	**2.18**	**124**	*e*P	Pn	18 41 16.9	-5.1
PBIS	**Biscoitos**	**2.20**	**122**	*e*P	Pn	18 41 17.2	-5.1
PBIS				*e*S	Sn	18 41 42.0	-8.3
	10nm,0.2s						
PVNV	**Vila Nova**	**2.27**	**121**	*e*P	Pn	18 41 18.2	-5.0
ADH	**Angra Heroismo**	**2.27**	**124**	*e*P	Pn	18 41 18.1	-5.3
RIB2	**Ribeirinha**	**2.30**	**123**	*e*P	Pn	18 41 18.4	-5.4
PFAV	**Pico das Favas**	**2.34**	**122**	*e*P	Pn	18 41 19.3	-5.0
PFAV				*e*S	Sn	18 41 44.9	-8.9
	9.7nm,0.1s						

NEIC ***18*** *19:00:56.2,16.67N×99.91W,h8^{km},MD3.8(MEX),After*

MEX.

MEX 18 19:00:56.0±1.2**, 16.66N×99.91W, h8^{km}**±8^{km}**, MD3.8, 1C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.20	358	iP	Pg	19 00 59.0	-1.3
ACX				iS	Sg	19 01 04.0	+0.8
CAIG	El Cayaco	0.52	318	iP	Pg	19 01 06.3	0.0
CAIG				iS	Sg	19 01 11.9	-1.5
PLIG	Platanillo	1.76	13	⇑iP	Pn	19 01 23.3	-3.8
PLIG				iS	Sn	19 01 44.9	-5.0
PLIG	Platanillo	1.76	13	iP	Pn	19 01 23.2	-3.9
PLIG				iS	Sn	19 01 44.9	-5.0
PPM	Popocatepetl	2.69	27	eP	Pn	19 01 37.9	-2.4
PPM				iS	Sn	19 02 08.2	-5.1
PPM	Popocatepetl	2.69	27	eP	Pn	19 01 37.9	-2.4
PPM				eP		19 01 38.0	
PPM				iS	Sn	19 02 08.2	-5.1
PPM				iS	Sn	19 02 13.0	-0.3
VHO	Vista Hermosa	3.07	82	eP	Pn	19 01 44.6	-1.1
VHO				iS	Sn	19 02 19.0	-4.0
OXX	Oaxaca	3.08	82	eP	Pn	19 01 51.0	+5.1
OXX				iS	Sn	19 02 20.0	-3.3

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*CSEM **18** 19:14:59.6±0.7, 40.02N×35.90E, h0^{km}±4^{km}, MD3.5, Error ellipse: s-maj=2.1km s-min=1.5km az=23.0*

ISK 18 19:14:59.7, 40.05N×35.91E, h5^{km}, MD3.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOKT	Tokat	0.56	61	PG	Pg	19 15 11.3	+0.4
YOZ	Yozgat	0.61	228	iPG	Pg	19 15 12.4	+0.5
SVST	Sivas	0.85	109	iP	Pb	19 16 17.6	+61
SVST				iS	Sg	19 16 30.6	+63
CORM	Corum	0.99	278	PG	Pg	19 15 18.8	-0.7
CORM				SG	Sg	19 15 34.4	+1.7
BNN	Bunyan	1.20	182	PN	Pn	19 15 24.0	+1.0
CDAG	Cicekdag	1.26	251	iP	Pb	19 16 23.4	+60
CDAG				iS	Sb	19 16 41.3	+61
AVNT	Avonos	1.51	213	iP	Pn	19 16 28.2	+61
AVNT				iS	Sb	19 16 50.4	+63
BOYT	Boyabat	1.57	331	iP	Pn	19 16 29.2	+61
BOYT				iS	Sb	19 16 53.1	+64
BYBT	Boyabat	1.66	329	ePN	Pn	19 15 30.4	+0.7
TOS	Tosya	1.74	305	PN	Pn	19 15 32.7	+1.8
KAMT	Kaman	1.82	249	PN	Pn	19 15 33.2	+1.2
CANT	Cankiri	1.84	288	ePN	Pn	19 15 33.5	+1.3
ELDT	Eldivan	1.95	284	iP	Pn	19 16 35.6	+62
ELDT				iS	Sn	19 17 02.6	+64
BZK	Bozkurt	2.39	324	ePN	Pn	19 15 41.6	+1.4
ANTO	Ankara	2.40	267	ePN	Pn	19 15 41.3	+1.0
LOD	Lodumlu	2.42	267	ePN	Pn	19 15 41.9	+1.3
BALT	Daday	2.42	309	iP	Pn	19 16 42.5	+62
BALT				iS	Sn	19 17 15.4	+64
KAHT	Ahir Dag	2.53	162	iP	Pn	19 16 48.5	+66
KAHT				iS	Sb	19 17 24.4	+68
KELT	Kelkit	2.57	87	iP	Pn	19 16 45.8	+63
KELT				iS	Sn	19 17 19.4	+65
MYA	Malataya	2.60	131	ePN	Pn	19 15 43.8	+0.6
MALT	Malatya	2.61	131	ePN	Pn	19 15 44.5	+1.2
SAFT	Safranbolu	2.73	297	ePN	Pn	19 15 46.3	+1.4
GUMT	Gumushane	2.76	80	ePN	Pn	19 15 46.8	+1.3
ELZG	Elazig	2.84	122	iP	Pn	19 16 48.0	+61
ELZG				iS	Sn	19 17 29.2	+67
SGKT	Sivrigoynuk	2.99	281	iP	Pn	19 16 50.4	+62
SGKT				iS	Sn	19 17 22.6	+57
CEYT	Ceyhan	3.04	182	ePN	Pn	19 15 50.5	+1.1
KDHN	Kadinhani	3.31	244	iP	Pn	19 16 54.4	+61
KDHN				iS	Sb	19 17 43.8	+64
KIZT	Kizilcal	3.33	251	ePN	Pn	19 15 54.6	+1.1
MDU	Mudurnu	3.62	278	ePN	Pn	19 15 59.0	+1.4
EZM	Erzurum	4.19	90	ePN	Pn	19 16 07.1	+1.3

IDC 18 19:15:00.4±2.7**, 19.69S×68.75W, h126^{km}**±23^{km}**, mb3.6**/3**, mb1 3.6**/6**, mb1mx3.4**/19**, mbtmp4.0**/6**, Error ellipse: s-maj=33.5km s-min=25.5km az=89.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.44	10	P	P	19 15 53.5	-0.1
	1.6nm,0.3s,baz=191,slow=9.0,SNR=67						
SIV	San Ignacio	8.19	65	P	P	19 16 55.7	-2.0
	1.7nm,0.3s,baz=262,slow=10,SNR=52						
CPUP	Villa Florida	12.42	124	P	P	19 17 53.4	-0.4
	0.2nm,0.3s,baz=323,slow=14,SNR=4.5						
BDFB	Brasilia	20.16	82	P	P	19 19 25.6	-1.4
	1.4nm,0.4s,baz=290,slow=12,SNR=2.7						
PLCA	Paso Flores	21.03	184	P	P	19 19 34.1	-1.5
	0.8nm,0.5s,baz=348,slow=12,SNR=3.1						
DBIC	Dimbokro	68.09	74	P	P	19 25 47.1	-2.1
	10nm,1.2s,baz=229,slow=9.3,SNR=4.2						
SONM	Songino Array	151.65	7	PKPbc	PKPdf	19 34 39.9	+6.7
	0.5nm,0.4s,baz=296,slow=1.6,SNR=8.9						

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*IDC **18** 19:28:42.9±1.9, 36.06N×141.66E, mb3.4/2, mb1 3.6/6, mb1mx3.4/25, mbtmp3.7/6, ML3.3/4, MS2.7/1, Ms1 2.7/1, ms1mx2.2/22, Error ellipse: s-maj=36.2km s-min=22.4km az=74.0*

*JMA **18** 19:28:47.8±0.2, 36.04N×141.38E, h43^{km}±3^{km}, M3.3*

ISC 18 19:28:43.7±1.5**, 36.02N**±0.05×**141.71E**±0.08**, h24^{km}**±11^{km}**, n14, σ1§02**/17**, mb3.3**/2**, 4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.76	246	⇓P	Pb	19 28 59.0	+0.9
CHOJ				S	Sb	19 29 07.4	-0.6
JHO	Hitachi	1.09	303	⇓P	Pn	19 29 03.7	0.0
JYT	Yasato	1.24	280	⇓P	Pn	19 29 05.1	-0.7
JFK	Kawauchi	1.50	334	P	Pn	19 29 11.0	+1.5
BSO3	Boso 3	1.56	219	P	Pn	19 29 12.4	+2.0
JAG	Ashikaga	1.87	283	⇓P	Pn	19 29 14.1	-0.7
MJAR	Matsushiro Arr	2.88	281	Pn	Pn	19 29 29.0	-0.1
	2.6nm,0.3s,baz=114,slow=7.1,SNR=40						
MJAR				Sn	Sn	19 30 03.5	+0.1
	3.4nm,0.3s,baz=99,slow=25,SNR=6.5						
MAT	Matsushiro	2.88	281	P	Pn	19 29 29.0	-0.2
MAT				S	Sn	19 30 03.2	-0.2
JHJ	Hachijo jima 2	3.30	209	Pn	Pn	19 29 36.5	+1.2
	4.9nm,0.3s,baz=44,slow=16,SNR=13						
JHJ				Sn	Sn	19 30 13.2	-1.0
	20nm,0.3s,baz=79,slow=22,SNR=7.4						
ASAJ	Asahikawa	8.11	5	Pn	P	19 30 41.1	-1.9
	0.4nm,0.3s,baz=229,slow=9.3,SNR=3.0						
CBIJ	Chichi jima	8.91	177	Pn	P	19 30 52.2	-1.8
	2.6nm,0.3s,baz=292,slow=19,SNR=5.4						
JNU	Nakatsue	9.39	255	LR	LR	19 34 47.4	
	comp=Z,42nm,18.3s,baz=359,slow=39						
MKAR	Makanchi Array	44.86	303	P	P	19 36 58.5	+0.8
	0.2nm,0.7s,mb3.0,baz=94,slow=7.6,SNR=4.1						
WRA	Warramunga Arr	56.09	188	P	P	19 38 24.2	+0.6
	0.2nm,0.4s,mb3.5,baz=4.8,slow=7.3,SNR=4.6						

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*NEIC **18** 19:38:33.3±1.4, 17.60S×178.98W, h475^{km}±17^{km}, mb4.4/11, Error ellipse: s-maj=25.4km s-min=12.0km az=149.0*

*IDC **18** 19:38:34.6±1.9, 17.63S×178.79W, h505^{km}±22^{km}, mb3.4/10, mb1 3.7/12, mb1mx3.5/20, mbtmp4.3/12, Error ellipse: s-maj=25.9km s-min=12.9km az=149.0*

ISC 18 19:38:33.8±1.3**, 17.6S**±0.1×**178.8W**±0.1**, h509^{km}**±18^{km}**, n45, σ1§26**/27**, mb4.1**/17**, 4D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.73	63	P	P	19 40 28.4	-0.3
	9.3nm,0.3s,baz=223,slow=21,SNR=11						
AFI	Afiamalu	7.73	63	eP	P	19 40 28.1	-0.6
	75nm,0.7s						
DZM	Mont Dzumac	14.54	250	P	P	19 41 41.4	+2.1
	0.3nm,0.3s,baz=70,slow=15,SNR=9.9						
URZ	Urewera	20.88	189	P	P	19 42 39.1	-1.6
	5.1nm,0.5s,baz=22,slow=19,SNR=6.1						
CTA	Charters Tower	33.09	260	P	P	19 44 29.0	+0.7
	7.5nm,0.6s,mb4.4,baz=85,slow=6.7,SNR=6.9						
CTA	Charters Tower	33.09	260	P	P	19 44 29.0	+0.7
CTAO	Charters Tower	33.09	260	eP	P	19 44 28.4	+0.1
	15nm,0.8s,mb4.6						
CNB	Canberra Magne	33.28	232	⇓iP	P	19 44 31.3	+1.5
	14nm,0.6s,mb4.7						
TOO	Toolangi	37.04	230	eP	P	19 45 02.6	+1.6
	10nm,0.9s,mb4.4						
STKA	Stephens Creek	38.41	241	P	P	19 45 13.7	+1.5
	10nm,0.4s,mb4.7,baz=85,slow=9.1,SNR=88						
WB2	Warramunga Arr	44.27	259	⇓iP	P	19 45 58.3	-0.9
WRAB	Tennant Creek	44.27	259	eP	P	19 45 57.8	-1.4
	7.8nm,0.8s,mb4.3						
WRA	Warramunga Arr	44.28	259	P	P	19 45 58.4	-0.9
	2.0nm,0.3s,mb4.1,baz=94,slow=7.8,SNR=132						
WRA				PcP	PcP	19 47 32.4	-0.8
	1.0nm,0.6s,baz=92,slow=3.4,SNR=6.4						
KAKA	Kakadu	47.18	269	⇓iP	P	19 46 21.4	-0.3
	28nm,0.4s,mb5.1						
FORT	Forrest	49.76	244	eP	P	19 46 40.3	-0.7
	19nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	52.67	260	⇓iP	P	19 47 02.0	-0.3
	4.0nm,0.3s,mb4.2						
FITZ	Fitzroy Crossi	52.67	260	P	P	19 47 02.1	-0.2
	6.2nm,0.3s,mb4.4,baz=108,slow=3.2,SNR=49						
MBWA	Marble Bar	57.75	256	eP	P	19 47 36.6	-1.1
	22nm,1.3s,mb4.2						
KLBR	Kellerberrin	58.59	243	eP	P	19 47 42.2	-1.0
	12nm,0.7s,mb4.2						
CASY	Casey	66.23	205	eP	P	19 48 31.6	-0.4
	8.8nm,1.2s,mb4.2						
MJAR	Matsushiro Arr	67.42	324	P	P	19 48 38.7	-1.2
	0.8nm,0.5s,mb3.5,baz=159,slow=7.3,SNR=6.0						
KS15	Wonju Array Si	74.22	318	eP	P	19 49 23.2	+3.5
NVAR	Mina Array Bea	79.50	44	P	P	19 49 49.2	+0.9
	1.0nm,0.7s,mb3.2,baz=218,slow=7.3,SNR=7.6						
NVAR	Mina Array Bea	79.50	44	P	P	19 49 49.2	+0.9
ILAR	Eielson Array	85.69	13	P	P	19 50 17.3	-1.4
	0.6nm,0.4s,mb3.6,baz=224,slow=5.2,SNR=7.1						
TXAR	Lajitas Array	86.18	58	P	P	19 50 23.9	+1.9
	0.4nm,0.7s,mb3.1,baz=212,slow=7.8,SNR=5.4						
CMAR	Chiang Mai Arr	88.40	290	P	P	19 50 34.2	+1.7
	1.1nm,0.8s,mb3.6,baz=105,slow=3.5,SNR=6.2						
BR131	Keskin Array S	144.28	315	ePKPdf	PKPdf	19 57 12.0	+0.7
BRTR	Keskin Array B	144.28	315	PKP	PKPdf	19 57 12.4	+1.2
	1.2nm,0.5s,baz=96,slow=2.0,SNR=11						
CLL	Collm	145.09	347	i PKIKP	PKPdf	19 57 13.4	+1.1
	logA/T=0.9						
KHC	Kasperske Hory	146.99	345	ePKPDF	PKPdf	19 57 19.0	+3.5
GERES	GERESS Array B	147.22	345	PKPbc	PKPdf	19 57 20.4	+4.5
	1.1nm,0.5s,baz=30,slow=3.5,SNR=19						
GIVF	Givet	147.46	356	ePKP1	PKPdf	19 57 20.7	+4.5
BAIF	Baives	147.54	356	ePKP1	PKPdf	19 57 21.0	+4.6
CDF	Champ du Feu	148.88	352	ePKP1	PKPdf	19 57 24.4	+5.8
	3.0nm,0.5s						
FLN	La Foliniere	148.90	2	ePKP1	PKPdf	19 57 24.0	+5.4
LDF	La Druitiere	149.08	2	ePKP1	PKPdf	19 57 24.4	+5.5
HAU	Haudompre	149.39	353	ePKP1	PKPdf	19 57 25.6	+6.2
	2.3nm,0.4s						
DAVOX	Davos	150.03	348	PKPbc	PKPdf	19 57 28.0	+7.5
	baz=326,slow=7.3						
LOR	Lormes	150.34	356	ePKP1	PKPdf	19 57 28.0	+7.1
	4.9nm,0.5s						
SSF	Saint Saulge	150.57	357	ePKP1	PKPdf	19 57 28.5	+7.2
	5.3nm,0.6s						
CABF	La Chapelle	150.80	353	ePKP1	PKPdf	19 57 29.4	+7.8
	2.6nm,0.5s						
MFF	Saint Martin d	151.07	2	ePKP1	PKPdf	19 57 29.4	+7.4
	2.5nm,0.5s						
LPL	La Plagne	151.79	352	ePKP1	PKPdf	19 57 31.5	+8.4
MBDF	Montbardon	152.56	351	ePKP1	PKPdf	19 57 33.7	+10

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*BJI **18** 19:55:41.0, 82.50N×5.80W, h10^{km}, mB5.0, mb4.7, Ms4.8, Msz4.6*

*MOS **18** 19:55:41.0±0.9, 82.44N×5.86W, h10^{km}, mb4.9/48, Error ellipse: s-maj=59.4km s-min=4.4km az=92.7*

*IDC **18** 19:55:41.5±0.5, 82.49N×5.69W, mb4.0/26, mb1 4.3/27, mb1mx4.2/32, mbtmp4.1/27, ML4.3/2, MS4.0/19, Ms1 4.0/19, ms1mx3.9/29, Error ellipse: s-maj=15.7km s-min=9.6km az=46.0*

*NEIC **18** 19:55:43.0±0.2, 82.46N×5.76W, h10^{km}, mb4.7/53, Error ellipse: s-maj=6.3km s-min=3.7km az=49.0*

*ZUR_RM **18** 19:55:43, 82.46N×5.76W, h12^{km}, Mw5.0/6, Moment Tensor Solution. s6 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.42; $M_{\theta\theta}$0.26; $M_{\phi\phi}$3.16; $M_{r\theta}$0.41; $M_{\theta\phi}$0.41; $M_{\phi r}$-1.82; Best double couple: $M_0$3.8×10^{16} NP1:ϕ_s359°, δ60°, λ-99°. NP2:ϕ_s196°, δ32°, λ-75°. Principal axes: T 3.653, Plg14°, Azm95°; N .296, Plg8°, Azm3°; P -3.949, Plg74°, Azm245°;*

ISC 18 19:55:41.3±0.2**, 82.45N**±0.03×**5.7W**±0.3**, h10^{km}, (h28^{km}**±1.2^{km}**:pP-P), n212, σ1§12**/217**, mb4.5**/86**, MS4.0**/30**, 3C-7D, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	4.53	132	eP	Pn	19 56 48.8	-2.8
KBS				e		19 57 41.6	
KBS	Kingsbay	4.53	132	ePn	Pn	19 56 48.8	-2.8
KBS				e		19 56 55.8	
KBS				eSn	Sn	19 57 41.6	-3.3
KBS	Kingsbay	4.53	132	⇑iP	Pn	19 56 49.0	-2.6
KBS				eS	Sn	19 57 37.5	-7.4
DAG	Danmarks Havn	6.14	209	eP	Pn	19 57 04.0	-10
DAG				i		20 10 02.0	
DAG	Danmarks Havn	6.14	209	iP	Pn	19 57 04.0	-10
DAG				i		20 10 02.0	
HSP	Hornsund	6.59	134	eP	Pn	19 57 17.7	-2.9
HOPEN	Hopen	8.03	121	eP	P	19 57 36.8	-4.0
HOPEN				eS	Sn	19 59 00.5	-12
HOPEN				AML	AML	19 59 08.0	
	comp=Z,27nm,0.6s						
JNW	Jan Mayen West	11.50	184	eP	P	19 58 26.0	-2.4
	comp=Z,73nm,0.4s						
JNW	Jan Mayen West	11.50	184	eP	P	19 58 25.8	-2.6
JMIC	Jan Mayen	11.54	185	Pn	P	19 58 26.2	-2.7
	comp=Z,17nm,0.3s,baz=62,slow=3.1,SNR=14						
JMIC				LR	LR	20 01 54.3	
	comp=Z,307nm,21.5s,baz=197,slow=32						
JMIC	Jan Mayen	11.54	185	eP	P	19 58 26.1	-2.8
JMIC				e		20 00 38.3	
JMI	Jan Mayen	11.61	185	eP	P	19 58 22.5	-7.3
SUMG	Summit	11.85	232	eP	P	19 58 24.2	-8.9
	comp=Z,28nm,0.6s						
SCO	Scoresbysund	12.51	206	eP	P	19 58 38.4	-3.6
SCO	Scoresbysund	12.51	206	iP	P	19 58 38.4	-3.6
TRO	Tromso	13.93	143	ePn	P	19 59 01.1	+0.5
TRO				e		20 01 52.7	
KEV	Kevo	14.54	131	eP	P	19 59 04.1	-4.5
KEV				pmax	pmax		
	comp=Z,22nm,0.8s						
KEV	Kevo	14.54	131	eP	P	19 59 04.1	-4.5
	comp=Z,22nm,0.8s						
ARCES	ARCESS Array B	14.61	134	Pn	P	19 59 07.0	-2.4
	comp=Z,0.8nm,0.3s,baz=344,slow=11,SNR=29						
ARCES				LR	LR	20 04 48.9	
	comp=Z,452nm,18.2s,baz=345,slow=37						
ARE0	ARCESS Array S	14.61	134	eP	P	19 59 07.1	-2.3
RES	Resolute Bay	17.05	295	eP	P	19 59 33.7	-7.1
RES				pmax	pmax		
	comp=Z,66nm,1.3s						
RES	Resolute Bay	17.05	295	eP	P	19 59 33.7	-7.1
	comp=Z,66nm,1.3s						
LVZ	Lovozero	17.13	124	eP	P	19 59 40.0	-1.9
LVZ				MLR	MLR		
	comp=Z,590nm,20.0s						
LVZ				MLR	MLR		
	comp=N,860nm,17.0s						
LVZ				MLR	MLR		
	comp=E,890nm,15.0s						
APA	Apatity	17.31	126	⇓iP	P	19 59 40.8	-3.3
APA				pmax	pmax		
	comp=Z,21nm,1.0s						
APA				MLR	MLR		
	comp=Z,800nm,11.0s						
SFJD	Kangerlussuaq	18.51	241	eP	P	19 59 49.1	-10
NB2	NORSAR Subarra	21.95	158	P	P	20 00 35.3	-1.1
	comp=Z,43nm,1.7s,mb4.6,baz=354,slow=10						
NOA	NORSAR Array B	21.95	158	P	P	20 00 36.3	-0.1
	comp=Z,4.9nm,0.9s,mb3.9,baz=351,slow=9.1,SNR=8.8						
NOA				LR	LR	20 08 06.3	
	comp=Z,86nm,18.0s,MS3.2,baz=350,slow=34						
NAO01	NORSAR Array S	22.13	158	eP	P	20 00 35.9	-2.3
	comp=Z,6.6nm,0.8s,mb4.1						
BER	Bergen	22.36	165	eSn	S	20 04 48.6	+7.3
FINES	FINESS Array B	22.59	139	iP	P	20 00 42.5	0.0
FINES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FINES	FINESS Array B	22.59	139	P	P	20 00 42.0	-0.5
	comp=Z,5.9nm,1.0s,mb4.0,slow=9.5,SNR=13						
FINES				LR	LR	20 08 54.0	
	comp=Z,322nm,21.5s,MS3.7,baz=63,slow=35						
HFS	Hagfors	22.99	155	P	P	20 00 47.2	+0.7
	comp=Z,11nm,1.0s,mb4.3,baz=14,slow=6.1,SNR=13						
TIXI	Tiksi	24.39	33	eP	P	20 01 03.9	+3.9
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb3.8						
INK	Inuvik	27.12	320	eP	P	20 01 28.1	+2.5
INK				pmax	pmax		
	comp=Z,24nm,1.3s						
INK	Inuvik	27.12	320	P	P	20 01 24.0	-1.6
	comp=Z,1.8nm,0.7s,mb3.7,baz=16,slow=7.4,SNR=2.4						
INK				LR	LR	20 13 36.3	
	comp=Z,192nm,20.4s,MS3.6,baz=25,slow=40						
INK	Inuvik	27.12	320	eP	P	20 01 28.1	+2.5
	comp=Z,24nm,1.3s,mb4.6						
INK				LR	LR	20 13 36.3	
EKA	Eskdalemuir Ar	27.25	177	P	P	20 01 27.7	+0.8
	comp=Z,1.5nm,0.9s,mb3.5,baz=13,slow=9.5,SNR=3.6						
SOKR	Solikamsk	27.84	105	eP	P	20 01 39.1	+6.9
SOKR				iS	S	20 06 05.2	-8.4
SOKR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.4						
SOKR				MLR	MLR		
	comp=Z,300nm,17.0s,MS3.9						
BILL	Bilibino	29.64	6	⇓iP	P	20 01 47.1	-1.2
BILL				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
BILL				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.1						
BILL	Bilibino	29.64	6	eP	P	20 01 46.8	-1.6
	comp=Z,7.7nm,0.9s,mb4.4						
OBN	Obninsk	29.83	129	eP	P	20 01 48.8	-1.3
OBN				e		20 01 56.9	
OBN				eS	S	20 06 53.5	+8.0
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
OBN				MLR	MLR		
	comp=Z,200nm,13.0s,MS3.9						
YKA	Yellowknife Ar	30.91	301	P	P	20 01 58.2	-1.3
	comp=Z,2.3nm,0.8s,mb4.1,baz=8.1,slow=9.4,SNR=3.6						
YKA				LR	LR	20 14 33.3	
	comp=Z,619nm,20.2s,MS4.3,baz=30,slow=37						
YKA	Yellowknife Ar	30.91	301	P	P	20 01 58.2	-1.3
YKA				LR	LR	20 14 33.3	
SVE	Sverdlovsk	31.00	102	eP	P	20 01 57.6	-2.9
ARU	Arti	31.12	104	⇑iP	P	20 02 01.5	0.0
ARU				e		20 03 05.4	
ARU				ePPP	PPP	20 03 15.8	-3.2
ARU				eS	S	20 07 07.2	+1.3
ARU				eSS	SS	20 08 54.3	+3.5
ARU				eSSS	SSS	20 09 11.1	-1.8
ARU				e		20 12 41.0	
ARU				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.3						
ARU				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.3						
ARU				MLR	MLR		
	comp=N,400nm,16.5s,MS4.2						
ARU				MLR	MLR		
	comp=E,100nm,13.0s,MS4.2						
ARU	Arti	31.12	104	eP	P	20 02 01.2	-0.4
	comp=E,1.4nm,0.8s,mb3.8						
ARU				e		20 02 10.9	
ILAR	Eielson Array	31.64	329	P	P	20 02 06.0	0.0
	comp=E,3.4nm,0.9s,mb4.2,baz=6.6,slow=8.1,SNR=20						
ILAR				PcP	PcP	20 04 55.4	-2.8
	comp=E,0.9nm,0.8s,baz=333,slow=3.3,SNR=6.0						
ILAR				LR	LR	20 15 03.6	
	comp=E,110nm,19.0s,MS3.5,baz=144,slow=37						
CLL	Collm	31.76	157	⇓iP	P	20 02 05.6	-1.6
CLL				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.5						
CLL	Collm	31.76	157	⇓iP	P	20 02 05.6	-1.6
	comp=Z,9.0nm,1.1s,mb4.5						
CLL				i		20 02 15.5	
CLL	Collm	31.76	157	⇓P	P	20 02 05.6	-1.6
	comp=Z,logA/T=0.9,mb4.5						
CLL				i *SP	sP	20 02 15.5	+4.1
CLL				e		20 02 36.0	
FCC	Fort Churchill	32.01	281	eP	P	20 02 07.1	-2.2
FCC				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.6						
FCC	Fort Churchill	32.01	281	eP	P	20 02 07.1	-2.3
	comp=Z,12nm,1.3s,mb4.6						
BRG	Berggiesshubel	32.24	156	⇓iP	P	20 02 11.1	-0.3
BRG				i		20 02 19.7	
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
BRG				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.8						
BRG	Berggiesshubel	32.24	156	⇓iP	P	20 02 11.1	-0.3
	comp=Z,6.8nm,1.0s,mb4.4						
BRG				i		20 02 19.8	
SCHQ	Schefferville	32.28	252	LR	LR	20 15 40.9	
	comp=Z,384nm,18.0s,MS4.1,baz=136,slow=37						
MOX	Moxa	32.35	159	eP	P	20 02 12.3	-0.1
MOX				epP	pP	20 02 21.2	+5.9
MOX				LR	LR		
	comp=Z,100nm,18.0s,MS3.5						
MOX	Moxa	32.35	159	iP	P	20 02 12.3	-0.1
MOX				pP	pP	20 02 21.0	+5.7
MOX				L		20 15 45.0	
PVCC	Panska Ves	32.62	156	eP	P	20 02 14.5	-0.2
PVCC				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.6						
PVCC	Panska Ves	32.62	156	eP	P	20 02 14.5	-0.2
PVCC				epP	pP	20 02 23.9	+6.3
PVCC				AMS	AMS	20 15 40.0	
	comp=Z,100nm,18.0s						
GIVF	Givet	32.64	167	eP	P	20 02 14.6	-0.3
BAIF	Baives	32.66	168	eP	P	20 02 14.9	-0.2
	comp=Z,15nm,1.1s,mb4.5						
BAIF	Baives	32.66	168	eP	P	20 02 14.9	-0.2
BAIF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
UPC	Upice	32.72	154	eP	P	20 02 15.5	-0.1
UPC				epP	pP	20 02 23.8	+5.3
NKC	Novy Kostel	32.80	158	eP	P	20 02 16.2	-0.1
NKC				epP	pP	20 02 25.3	+6.0
DPC	Dobruska-Polom	32.90	154	eP	P	20 02 16.5	-0.6
DPC				epP	pP	20 02 24.8	+4.7
PRU	Pruhonice	33.16	156	eP	P	20 02 19.6	+0.2
PRU				epP	pP	20 02 27.7	+5.4
PRU				AMS	AMS	20 15 50.0	
	comp=Z,200nm,19.5s						
OJC	Ojcow	33.24	150	eP	P	20 02 19.2	-0.9
OJC				i		20 02 28.4	
OJC	Ojcow	33.24	150	eP	P	20 02 19.2	-0.9
OJC				e		20 02 28.4	
GRA1	Grafenberg Arr	33.29	160	eP	P	20 02 21.0	+0.5
	comp=Z,8.0nm,1.1s,mb4.6						
GRA1				epP	pP	20 02 29.9	+6.4
GRF	Grafenberg Arr	33.29	160	eP	P	20 02 21.0	+0.5
GRF				e*PP	pP	20 02 29.9	+6.4
GRF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
GRF	Grafenberg Arr	33.29	160	eP	P	20 02 21.0	+0.5
GRF				e*PP	pP	20 02 29.9	+6.4
GRF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
GRF	Grafenberg Arr	33.29	160	eP	P	20 02 21.0	+0.5
	comp=Z,8.0nm,1.1s,mb4.6						
GRF				epP	pP	20 02 29.9	+6.4
AKASG	Malin Array Be	33.49	139	P	P	20 02 21.0	-1.3
	comp=Z,2.2nm,0.7s,mb4.2,baz=348,slow=8.7,SNR=9.4						
OKC	Ostrava-Krasne	33.52	152	eP	P	20 02 22.1	-0.4
OKC				epP	pP	20 02 30.4	+4.9
OKC				AMS	AMS	20 16 00.0	
	comp=Z,200nm,20.2s						
MORC	Moravsky Berou	33.54	152	eP	P	20 02 21.9	-0.8
MORC				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
MORC	Moravsky Berou	33.54	152	eP	P	20 02 21.9	-0.8
	comp=Z,8.7nm,1.0s,mb4.6						
VRAC	Vranov	33.95	154	P	P	20 02 26.4	+0.1
	comp=Z,8.1nm,0.9s,mb4.7,baz=6.4,slow=11,SNR=8.3						
KHC	Kasperske Hory	33.96	157	eP	P	20 02 27.3	+0.9
KHC				epP	pP	20 02 35.2	+5.9
STU	Stuttgart	34.12	162	eP	P	20 02 28.6	+0.9
STU				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
STU	Stuttgart	34.12	162	eP	P	20 02 28.6	+0.8

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             comp=Z,11nm,0.8s,mb4.8
MEZF   Maizieres J'vi     34.24 167  eP     P       20 02 29.2 +0.4
GERES  GERESS Array B     34.25 157   P     P       20 02 29.4 +0.5
             comp=Z,4.7nm,0.8s,mb4.5,baz=9.5,slow=8.1,SNR=45
GERES                                 LR    LR      20 16 27.9
             comp=Z,86nm,18.6s,MS3.5,baz=354,slow=36
CDF    Champ du Feu       34.41 165  eP     P       20 02 30.4 +0.2
             comp=Z,58nm,1.4s,mb5.0
CDF    Champ du Feu       34.41 165  eP     P       20 02 30.4 +0.2
CDF                                   pmax  pmax
             comp=Z,29nm,1.4s,mb5.0
ECH    Echery             34.60 165  eP     P       20 02 31.7  -0.2
KOLS   Kolonicke sedl     34.70 147  eP     P       20 02 32.9 +0.2
HAU    Haudompre          34.78 166  eP     P       20 02 33.6 +0.2
             comp=Z,34nm,1.1s,mb4.9
HAU                                  eR
             comp=Z,155nm,17.6s
HAU    Haudompre          34.78 166  eP     P       20 02 33.6 +0.2
HAU                                   pmax  pmax
             comp=Z,17nm,1.1s,mb4.9
HAU                                   MLR   MLR
             comp=Z,160nm,17.5s,MS3.8
KOLL   Kolacno            34.79 152  eP     P       20 02 33.7 +0.2
SMOL   Smolenice          34.79 153  eP     P       20 02 35.6 +2.1
SMOL                                 e              20 02 42.3
VYHS   Vyhne              34.90 151  eP     P       20 02 34.0  -0.5
VYHS                                 e              20 02 42.7
FELD   Feldberg           34.97 164  eP     P       20 02 34.1  -1.0
HINF   Hinteralfeld       34.99 165  eP     P       20 02 35.3 +0.1
             comp=Z,35nm,1.4s,mb4.8
HINF   Hinteralfeld       34.99 165  eP     P       20 02 35.3 +0.1
HINF                                  pmax  pmax
             comp=Z,18nm,1.4s,mb4.8
KECS   Kecovo             35.02 149  e      P       20 02 41.8 +6.3
ZST    Bratislava         35.09 153  eP     P       20 02 35.5  -0.6
ZST                                  e              20 02 44.6
LOR    Lormes             35.45 169  eP     P       20 02 38.8  -0.3
             comp=Z,29nm,1.2s,mb4.8
LOR                                  eR
             comp=Z,135nm,22.0s
LOR    Lormes             35.45 169  eP     P       20 02 38.8  -0.3
LOR                                   pmax  pmax
             comp=Z,15nm,1.2s,mb4.8
LOR                                   MLR   MLR
             comp=Z,140nm,22.0s,MS3.7
PSZ    Piszkesteto        35.54 150  eP     P       20 02 39.5  -0.4
PSZ                                   pmax  pmax
             comp=Z,13nm,1.4s,mb4.7
PSZ    Piszkesteto        35.54 150  eP     P       20 02 39.5  -0.5
             comp=Z,13nm,1.4s,mb4.7
PSZ                                  e              20 02 48.9
PSZ    Piszkesteto        35.54 150  eP     P       20 02 40.4 +0.5
SSF    Saint Saulge       35.64 169  eP     P       20 02 40.5  -0.3
SSF                                   pmax  pmax
             comp=Z,18nm,1.3s,mb4.8
SSF    Saint Saulge       35.64 169  eP     P       20 02 40.5  -0.3
             comp=Z,18nm,1.3s,mb4.8
ZRNK   Zerenda            35.88  95  eP     P       20 02 42.7  -0.1
ZRNK                                  pmax  pmax
             comp=Z,86nm,0.8s
ZRNK   Zerenda            35.88  95  eP     P       20 02 42.7  -0.1
             comp=Z,86nm,0.8s
ZRNK                                 e              20 02 52.2
AVF    Avril sur Loir     35.91 169  eP     P       20 02 42.8  -0.3
             comp=Z,42nm,1.3s,mb4.9
AVF    Avril sur Loir     35.91 169  eP     P       20 02 42.8  -0.3
AVF                                   pmax  pmax
             comp=Z,21nm,1.3s,mb4.9
NVS    Novosibirsk        35.91  80  eP     P       20 02 42.3  -0.7
NVS                                   pmax  pmax
             comp=Z,12nm,1.6s,mb4.6
NVS                                   pmax  pmax
             comp=N,13nm,2.2s
BVAR   Borovoye Array     35.99  94   P     P       20 02 44.7 +1.0
             comp=N,1.3nm,0.8s,mb3.9,baz=338,slow=8.0,SNR=12
MFF    Saint Martin d     36.03 173  eP     P       20 02 43.7  -0.4
SMF    Signal de Mont     36.07 169  eP     P       20 02 44.2  -0.2
             comp=N,11nm,1.0s,mb4.5
SMF    Signal de Mont     36.07 169  eP     P       20 02 44.2  -0.2
SMF                                   pmax  pmax
             comp=Z,6.0nm,1.0s,mb4.5
BGF    Bois d'Agland      36.13 170  eP     P       20 02 44.9   0.0
             comp=Z,46nm,1.1s,mb5.0
BGF    Bois d'Agland      36.13 170  eP     P       20 02 44.9   0.0
BGF                                   pmax  pmax
             comp=Z,23nm,1.1s,mb5.0
DAVOX  Davos              36.14 162   P     P       20 02 46.0 +1.1
             comp=Z,0.8nm,0.4s,mb4.0,baz=328,slow=19,SNR=2.5
DAVOX                                 LR    LR      20 16 18.9
             comp=Z,147nm,20.9s,MS3.7,baz=268,slow=34
CABF   La Chapelle        36.17 166  eP     P       20 02 45.4 +0.2
             comp=Z,73nm,1.5s,mb5.1
CABF   La Chapelle        36.17 166  eP     P       20 02 45.4 +0.2
CABF                                  pmax  pmax
             comp=Z,37nm,1.5s,mb5.1
TCF    Toulx Ste Croi     36.39 171  eP     P       20 02 46.8  -0.3
             comp=Z,38nm,1.4s,mb4.8
TCF    Toulx Ste Croi     36.39 171  eP     P       20 02 46.8  -0.3
TCF                                   pmax  pmax
             comp=Z,19nm,1.4s,mb4.8
ZAL    Zalesovo           37.00  79   P     P       20 02 51.6  -0.6
             comp=Z,3.8nm,1.2s,mb4.1,baz=145,slow=16
ZAL                                   LR    LR      20 22 25.1
             comp=Z,387nm,18.3s,MS4.2,baz=123,slow=43
LPL    La Plagne          37.28 165  eP     P       20 02 55.8 +1.2
             comp=Z,35nm,1.1s,mb4.8
LPL    La Plagne          37.28 165  eP     P       20 02 55.8 +1.2
LPL                                   pmax  pmax
             comp=Z,17nm,1.1s,mb4.8
LPG    La Plagne          37.30 165  eP     P       20 02 56.2 +1.4
             comp=Z,69nm,1.3s,mb5.0
LPG    La Plagne          37.30 165  eP     P       20 02 56.2 +1.4
LPG                                   pmax  pmax
             comp=Z,35nm,1.3s,mb5.0
RJF    Les Rejaudoux      37.36 172  eP     P       20 02 55.2   0.0
             comp=Z,29nm,1.0s,mb4.8
RJF                                  eR
             comp=Z,136nm,17.0s
RJF    Les Rejaudoux      37.36 172  eP     P       20 02 55.2   0.0
RJF                                   pmax  pmax
             comp=Z,15nm,1.0s,mb4.8
RJF                                   MLR   MLR
             comp=Z,140nm,17.0s,MS3.8
LFF    La Frestale        37.71 172  eP     P       20 02 58.1  -0.1
BNI    Bardonecchia       37.74 166  eP     P       20 02 59.0 +0.5
BNI                                   pmax  pmax
             comp=Z,38nm,1.6s,mb4.9
BNI    Bardonecchia       37.74 166  eP     P       20 02 59.0 +0.5
             comp=Z,38nm,1.6s,mb4.9
CAF    Calviac            37.75 171  eP     P       20 02 58.6 +0.1
             comp=Z,12nm,1.1s,mb4.2
CAF    Calviac            37.75 171  eP     P       20 02 58.6 +0.1
CAF                                   pmax  pmax
             comp=Z,6.0nm,1.1s,mb4.2
VIVF   Saint-Julien-l     37.88 168  eP     P       20 03 00.1 +0.5
             comp=Z,54nm,1.4s,mb4.8
VIVF   Saint-Julien-l     37.88 168  eP     P       20 03 00.1 +0.5
VIVF                                  pmax  pmax
             comp=Z,27nm,1.4s,mb4.8
MBDF   Montbardon         38.07 166  eP     P       20 03 02.6 +1.3
             comp=Z,38nm,1.3s,mb4.7
MBDF   Montbardon         38.07 166  eP     P       20 03 02.6 +1.3
MBDF                                  pmax  pmax
             comp=Z,19nm,1.3s,mb4.7
MLR    Muntele Rosu       38.40 144   P     P       20 03 05.0 +1.0
             comp=Z,3.5nm,0.8s,mb4.1,baz=90,slow=18,SNR=2.7
MLR    Muntele Rosu       38.40 144   P     P       20 03 05.0 +1.0
LASF   Ste Croix          38.64 169  eP     P       20 03 07.1 +1.1
             comp=Z,84nm,1.7s,mb4.9
VLC    Villacollemand     38.77 161  eP     P       20 03 14.4 +7.2
             comp=Z,14nm,0.9s,mb4.7
SMRF   Simiane la Rot     38.78 167  eP     P       20 03 07.9 +0.7
             comp=Z,26nm,1.1s,mb4.6
TOUF   Mont Tournerai     38.80 165  eP     P       20 03 10.7 +3.3
AUTN   L'Aution           38.82 165  eP     P       20 03 10.0 +2.4
SBF    Sospel             38.96 165  eP     P       20 03 09.5 +0.8
             comp=Z,138nm,1.3s,mb5.2
SBF    Sospel             38.96 165  eP     P       20 03 09.5 +0.8
SBF                                   pmax  pmax
             comp=Z,69nm,1.3s,mb5.2
CALN   Calern             39.05 165  eP     P       20 03 12.3 +2.8
FRF    La Foret Royal     39.23 166  eP     P       20 03 11.4 +0.4
             comp=Z,71nm,1.3s,mb4.9
FRF    La Foret Royal     39.23 166  eP     P       20 03 11.4 +0.4
FRF                                   pmax  pmax
             comp=Z,36nm,1.3s,mb4.9
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MTLF   Montolieu          39.33 171  eP     P       20 03 12.4 +0.6
             comp=Z,11nm,1.1s,mb4.2
MTLF   Montolieu          39.33 171  eP     P       20 03 12.4 +0.6
MTLF                                  pmax  pmax
             comp=Z,5.0nm,1.1s,mb4.2
LMR    La Mourre          39.45 166  eP     P       20 03 13.3 +0.5
             comp=Z,28nm,1.2s,mb4.6
LMR    La Mourre          39.45 166  eP     P       20 03 13.3 +0.5
LMR                                   pmax  pmax
             comp=Z,14nm,1.2s,mb4.6
SJPF   Ste Jean           39.50 175  eP     P       20 03 13.9 +0.6
EPF    Esparros           39.61 173  eP     P       20 03 14.3 +0.2
             comp=Z,19nm,1.1s,mb4.4
EPF    Esparros           39.61 173  eP     P       20 03 14.3 +0.2
EPF                                   pmax  pmax
             comp=Z,10.0nm,1.1s,mb4.5
ETSF   Etsaut             39.73 174  eP     P       20 03 14.2  -0.9
             comp=Z,7.4nm,0.8s,mb4.2
ETSF   Etsaut             39.73 174  eP     P       20 03 14.2  -0.9
ETSF                                  pmax  pmax
             comp=Z,4.0nm,0.8s,mb4.2
EDM    Edmonton           39.83 297  eP     P       20 03 16.4 +0.5
PGF    Pioggiola          40.33 163  eP     P       20 03 20.4 +0.4
             comp=Z,33nm,1.1s,mb4.7
PGF    Pioggiola          40.33 163  eP     P       20 03 20.4 +0.4
PGF                                   pmax  pmax
             comp=Z,17nm,1.1s,mb4.7
AQU    L'Aquila           40.71 158   P     P       20 03 24.7 +1.5
AQU                                   pmax  pmax
             comp=Z,20nm,1.0s,mb4.7
AQU    L'Aquila           40.71 158   P     P       20 03 24.7 +1.5
             comp=Z,20nm,1.0s,mb4.7
IRK    Irkutsk            41.08  62  eP     P       20 03 25.0  -1.1
IRK                                  e              20 05 09.0
IRK                                   pmax  pmax
             comp=Z,38nm,2.3s,mb4.6
MOY    Mondy              41.26  65  eP     P       20 03 29.3 +1.8
MOY                                   pmax  pmax
             comp=Z,30nm,2.8s,mb4.4
CII    Carovilli          41.39 157  eP     P       20 03 31.0 +2.2
             comp=Z,19nm,1.1s,mb4.6
KIV    Kislovodsk         41.49 125   P     P       20 03 30.0 +0.4
KIV                                  eS     S       20 09 46.8 +2.0
KIV                                  eSS    SS      20 12 52.5 +8.3
KIV                                   MLR   MLR
             comp=Z,200nm,15.0s,MS4.1
SOC    Sochi              41.55 129  eP     P       20 03 35.3 +5.4
SOC                                  e              20 05 06.5
SOC                                  eS     S       20 09 50.2 +4.7
SOC                                  eSS    SS      20 12 45.2 +0.1
SOC                                   pmax  pmax
             comp=Z,6.0nm,0.8s,mb4.3
SOC                                   pmax  pmax
             comp=N,7.0nm,0.6s
SOC                                   pmax  pmax
             comp=E,5.0nm,0.6s
SOC                                   MLR   MLR
             comp=N,208nm,12.0s,MS4.3
SOC                                   MLR   MLR
             comp=E,114nm,12.0s,MS4.3
SOC                                   MLR   MLR
             comp=Z,163nm,12.0s,MS4.1
TLY    Talaya             41.55  62  eP     P       20 03 30.3 +0.5
TLY                                  e              20 05 07.5
TLY                                  eS     S       20 09 36.6  -8.8
TLY                                  eSSS   SS      20 12 48.4 +3.4
TLY                                   pmax  pmax
             comp=Z,8.0nm,1.1s,mb4.3
TLY                                   MLR   MLR
             comp=Z,425nm,21.0s,MS4.3
EYMN   Ely                42.24 274  eP     P       20 03 34.2  -1.3
             comp=Z,10nm,1.1s,mb4.4
ZAK    Zakamensk          42.79  63  eP     P       20 03 30.3   -10
ZAK                                  e              20 05 26.6
ZAK                                   pmax  pmax
             comp=Z,1.0nm,1.2s
ZAK                                   pmax  pmax
             comp=Z,1.0nm,1.2s
ZAK                                   pmax  pmax
             comp=Z,2.0nm,1.5s
ESDC   Sonseca Array      42.92 178   P     P       20 03 41.9 +0.7
             comp=Z,1.1nm,0.8s,mb3.7,baz=18,slow=8.1,SNR=5.6
MKAR   Makanchi Array     43.67  84   P     P       20 03 47.8 +0.6
             comp=Z,2.7nm,0.8s,mb4.0,baz=352,slow=7.6,SNR=30
MKAR                                  LR    LR      20 25 56.4
             comp=Z,328nm,18.0s,MS4.3,baz=359,slow=42
TIP    Timpagrande        44.05 155  eP     P       20 03 50.9 +0.5
BR131  Keskin Array S     44.78 136  eP     P       20 03 57.2 +0.9
             comp=Z,3.7nm,0.8s,mb4.3
BR131                                e              20 04 05.0
BRTR   Keskin Array B     44.78 136   P     P       20 03 57.1 +0.9
             comp=Z,4.3nm,0.9s,mb4.3,baz=349,slow=6.3,SNR=26
NEW    Newport            45.16 299   P     P       20 03 60.0 +0.8
             comp=Z,2.4nm,0.3s,mb4.5,baz=39,slow=6.5,SNR=6.8
GNI    Garni              45.48 124 i P     P       20 04 03.0 +1.2
SONM   Songino Array      45.66  61   P     P       20 04 03.8 +0.7
             comp=Z,4.4nm,1.1s,mb4.3,baz=338,slow=6.7,SNR=19
SONM                                  LR    LR      20 23 54.7
             comp=Z,318nm,20.6s,MS4.2,baz=348,slow=37
ULN    Ulaanbaatar        45.71  60c iP     P       20 04 04.5 +1.0
BINY   Binghamton         45.85 257  eP     P       20 04 05.0 +0.3
             comp=Z,12nm,0.9s,mb4.8
CHMT   Chamberlain Mo     46.03 295  eP     P       20 04 05.9  -0.2
HRY    Holter Researc     46.05 293  eP     P       20 04 06.1  -0.1
MSO    Missoula           46.19 295  eP     P       20 04 07.6 +0.3
             comp=Z,12nm,1.4s,mb4.6
FRU    Bishkek            46.55  93  eP     P       20 04 12.0 +1.8
FRU                                  e              20 04 20.0
MALT   Malatya            46.64 131  eP     P       20 04 10.8  -0.2
MALT                                  pmax  pmax
             comp=Z,4.0nm,0.9s,mb4.3
MALT   Malatya            46.64 131  eP     P       20 04 10.8  -0.2
             comp=Z,4.3nm,0.9s,mb4.4
MALT                                 e              20 04 21.1
AAK    Ala-Archa          46.73  93  eP     P       20 04 12.5 +0.9
AAK                                  e              20 04 21.7
AAK                                   pmax  pmax
             comp=Z,19nm,1.3s,mb4.9
AAK    Ala-Archa          46.73  93  eP     P       20 04 12.5 +0.9
             comp=Z,18nm,1.3s,mb4.8
AAK                                  e              20 04 21.7
ALLY   Alegheny Colle     46.93 261  eP     P       20 04 13.2   0.0
ALLY                                 e              20 04 22.4
WMQ    Urumqi             47.30  79  eP     P       20 04 17.0 +0.9
WMQ                                   AP    pP      20 04 21.0 +1.8
WMQ                                   XP    sP      20 04 23.0 +2.6
WMQ                                   AMB   AMB
             comp=Z,10.0nm,1.0s,mb4.7
WMQ                                   AMB   AMB
             comp=Z,170nm,5.8s
WMQ                                   LR    LR
             comp=N,760nm,18.5s,MS4.8
WMQ                                   LR    LR
             comp=E,720nm,21.0s,MS4.8
WMQ                                   LR    LR
             comp=Z,730nm,20.2s,MS4.6
RSSD   Black Hills        47.63 285  eP     P       20 04 17.4  -1.4
RSSD                                 e              20 04 26.1
RSSD                                  pmax  pmax
             comp=Z,17nm,1.6s,mb4.8
RSSD   Black Hills        47.63 285  eP     P       20 04 17.4  -1.4
             comp=Z,17nm,1.6s,mb4.8
RSSD                                 e              20 04 26.1
BMO    Blue Mountains     48.54 298  eP     P       20 04 25.1  -0.7
             comp=Z,6.8nm,0.8s,mb4.7
HLID   Hailey             49.47 295   P     P       20 04 34.7 +1.7
             comp=Z,1.3nm,0.8s,mb4.0
PDAR   Pinedale Array     49.66 290   P     P       20 04 36.4 +1.9
             comp=Z,0.4nm,0.7s,mb3.6,baz=72,slow=9.4,SNR=3.7
PDAR                                  LR    LR      20 25 47.0
             comp=Z,569nm,18.2s,MS4.6,baz=14,slow=36
MDJ    Mudanjiang         51.20  40   P     P       20 04 43.8  -2.4
MDJ                                   AP    pP      20 04 49.9 +0.7
MDJ                                   AMB   AMB
             comp=Z,10.0nm,3.8s
MDJ                                   LR    LR
             comp=E,130nm,28.4s
MDJ                                   LR    LR
             comp=Z,80nm,22.1s
ASF    Jabal al Asfar     52.57 134   P     P       20 04 55.8  -0.9
             comp=Z,2.7nm,0.8s,mb4.3,baz=330,slow=14,SNR=3.0
GTA    Gaotai             53.18  69   P     P       20 05 01.4 +0.3
GTA                                   AP    pP      20 05 09.6 +5.4
GTA                                   XP    sP      20 05 13.9 +8.5
PV01   Paradox Valley     54.10 288  eP     P       20 05 07.0  -0.9
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PV01                                 e              20 05 15.6
NVAR   Mina Array Bea     54.99 298   P     P       20 05 14.3  -0.2
             comp=Z,0.7nm,0.9s,mb3.7,baz=17,slow=5.5,SNR=4.3
NVAR                                  LR    LR      20 28 32.8
             comp=Z,303nm,21.0s,MS4.3,baz=50,slow=36
NVAR   Mina Array Bea     54.99 298   P     P       20 05 14.3  -0.2
NVAR                                  LR    LR      20 28 32.8
ANMO   Albuquerque        56.97 286 i P     P       20 05 29.7 +0.9
ANMO   Albuquerque        56.97 286   P     P       20 05 29.4 +0.6
             comp=Z,0.6nm,0.5s,mb3.9,baz=53,slow=8.6,SNR=3.3
MJAR   Matsushiro Arr     59.90  33   P     P       20 05 47.5  -1.7
             comp=Z,1.6nm,1.0s,mb4.0,baz=350,slow=7.6,SNR=4.2
TXAR   Lajitas Array      62.15 282   P     P       20 06 02.5  -2.1
             comp=Z,0.4nm,0.6s,mb3.8,baz=21,slow=7.7,SNR=3.4
TXAR                                  LR    LR      20 33 52.4
             comp=Z,196nm,19.0s,MS4.3,baz=35,slow=37
NJ2    Nanjing            62.63  52  eP     P       20 06 10.1 +2.4
NJ2                                   AMB   AMB
             comp=Z,10.0nm,0.5s,mb5.2
NJ2                                   LR    LR
             comp=N,1µm,19.3s
NJ2                                   LR    LR
             comp=E,620nm,12.5s
NJ2                                   LR    LR
             comp=Z,520nm,14.1s
SSE    Sheshan            63.82  50  eP     P       20 06 12.1  -3.3
             comp=Z,33nm,0.7s,mb5.5
CMAR   Chiang Mai Arr     73.73  73   P     P       20 07 15.9  -0.9
             comp=Z,1.9nm,0.9s,mb4.0,baz=352,slow=7.4,SNR=5.9
DBIC   Dimbokro           75.77 179   LR    LR      20 40 26.5
             comp=Z,87nm,19.3s,MS4.1,baz=48,slow=35
ROSC   El Rosal           82.45 249   LR    LR      20 47 02.4
             comp=Z,131nm,19.0s,MS4.3,baz=19,slow=37
MBAR   Mbarara            84.49 143   P     P       20 08 19.5 +4.4
MBAR                                  pmax  pmax
             comp=Z,4.0nm,1.1s,mb4.5
MBAR   Mbarara            84.49 143   P     P       20 08 19.5 +4.4
             comp=Z,4.1nm,1.1s,mb4.5
BDFB   Brasilia           99.86 221   LR    LR      20 47 28.9
             comp=Z,87nm,19.2s,MS4.3,baz=211,slow=31
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BJI ***18*** *19:56:17.1, 11.27S×69.38E, h26^{km}, mB5.0, mb4.8, Ms5.2, Msz4.8*

MOS ***18*** *19:56:17.8±1.0, 11.05S×69.83E, h10^{km}, mb4.9/77, Error ellipse: s-maj=10.9km s-min=5.6km az=114.8*

IDC ***18*** *19:56:17.7±0.4, 11.11S×69.78E, mb4.6/29, mb1 4.7/29, mb1mx4.6/31, mbtmp4.6/29, MS3.8/1, Ms1 3.7/1, ms1mx3.1/29, Error ellipse: s-maj=15.4km s-min=13.2km az=24.0*

NEIC ***18*** *19:56:19.3±0.2, 11.14S×69.81E, h10^{km}, mb4.7/82, Error ellipse: s-maj=5.6km s-min=5.2km az=195.0*

ISC 18 19:56:17.8±0.3**, 11.07S**±0.06×**69.87E**±0.05**, h10^{km}, n280, σ0^{s}97**/247**, mb4.6**/110**, MS4.3**/2**, 36C-6D, Mid-Indian Ridge**

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Code   Station Name        Δ°   AZ°   Phase ID           Time     Res
                                     Op     ISC       h  m  s    ISC
DGAR   Diego Garcia        4.44  35  ePn    Pn      19 57 24.4  -2.5
DGAR                                 eSn    Sn      19 58 12.8  -6.4
PALK   Pallekele          21.17  31   P     P       20 00 58.4  -7.4
             28nm,1.2s,mb4.5
KULM   Kulim              34.68  64  eP     P       20 03 12.1 +2.1
LSZ    Lusaka             40.76 259  eP     P       20 04 00.4  -0.5
             15nm,1.0s,mb4.6
MATP   Matopo             40.79 252   P     P       20 04 00.8  -0.3
             6.4nm,0.9s,mb4.2,baz=88,slow=11,SNR=9.7
KOLN   Koldanda           40.84  19  eP     P       20 04 03.3 +1.8
             38nm,0.8s,mb5.1
CMAR   Chiang Mai Arr     41.03  45   P     P       20 04 04.4 +1.3
CMAR                                                20 06 01.7
CMAR                                  pmax  pmax
             comp=Z,4.0nm,1.0s
CMAR                                  pmax  pmax
             comp=Z,1.0nm,0.7s
CMAR   Chiang Mai Arr     41.03  45   P     P       20 04 04.3 +1.2
             comp=Z,4.2nm,1.0s,mb4.0,baz=238,slow=9.1,SNR=15
CMAR                                  PcP   PcP     20 06 01.7  -2.0
             comp=Z,1.2nm,0.7s,baz=243,slow=4.0,SNR=2.5
DMN    Daman              41.19  21  eP     P       20 04 06.1 +1.7
             comp=Z,34nm,1.0s,mb4.9
PKI    Pulchoki           41.26  21  eP     P       20 04 06.6 +1.7
             comp=Z,28nm,1.1s,mb4.8
PKI    Pulchoki           41.26  21  eP     P       20 04 06.6 +1.7
PKI                                   pmax  pmax
             comp=Z,14nm,1.1s,mb4.5
GKN    Gorkha             41.39  20  eP     P       20 04 07.5 +1.5
             comp=Z,31nm,0.7s,mb5.0
KKN    Kakani             41.42  21  eP     P       20 04 07.5 +1.3
             comp=Z,40nm,1.0s,mb5.0
KKN    Kakani             41.42  21  eP     P       20 04 07.5 +1.3
KKN                                   pmax  pmax
             comp=Z,20nm,1.0s,mb4.7
GUN    Gumba              41.74  22  eP     P       20 04 11.0 +2.1
             comp=Z,35nm,1.0s,mb5.0
KSM    Kuching            42.10  75  eP     P       20 04 11.7  -0.4
LBTB   Lobatse            44.12 245  eP     P       20 04 25.9  -2.5
LBTB                                  pmax  pmax
             comp=Z,21nm,1.4s,mb4.7
LBTB   Lobatse            44.12 245   P     P       20 04 27.2  -1.2
             comp=Z,9.9nm,1.1s,mb4.5,baz=104,slow=7.5,SNR=6.2
LBTB   Lobatse            44.12 245  eP     P       20 04 25.9  -2.5
             comp=Z,21nm,1.4s,mb4.7
BOSA   Boshof             45.15 241  eP     P       20 04 35.4  -1.2
BOSA                                  pmax  pmax
             comp=Z,8.0nm,0.8s,mb4.6
BOSA   Boshof             45.15 241   P     P       20 04 35.5  -1.1
             comp=Z,7.2nm,0.9s,mb4.5,baz=90,slow=5.9,SNR=7.2
BOSA                                  LR    LR      20 19 13.1
             comp=Z,126nm,21.1s,MS3.8,baz=271,slow=30
BOSA   Boshof             45.15 241  eP     P       20 04 35.4  -1.2
             comp=Z,8.1nm,0.8s,mb4.6
LSA    Lhasa              45.43  26  eP     P       20 04 39.9 +1.1
LSA                                   pmax  pmax
             comp=Z,6.0nm,0.7s,mb4.5
LSA    Lhasa              45.43  26  eP     P       20 04 39.9 +1.0
             comp=Z,5.6nm,0.7s,mb4.5
TSUM   Tsumeb             50.96 254   P     P       20 05 19.3  -2.7
             comp=Z,5.8nm,1.2s,mb4.4
ASF    Jabal al Asfar     53.33 325   P     P       20 05 37.0  -2.6
             comp=Z,1.9nm,0.5s,mb4.3,baz=108,slow=6.4,SNR=2.4
AAK    Ala-Archa          53.61   4  eP     P       20 05 40.5  -1.0
AAK                                   pmax  pmax
             comp=Z,6.0nm,1.3s,mb4.4
AAK    Ala-Archa          53.61   4   P     P       20 05 40.8  -0.7
             comp=Z,8.3nm,1.4s,mb4.5
KKAR   Karatay Array      53.91   1 i P     P       20 05 43.4  -0.3
BEST   Besiri             55.59 333 i P     P       20 05 55.5  -0.6
GNI    Garni              56.04 337c iP     P       20 05 58.4  -0.8
GNI                                   pmax  pmax
             comp=Z,19nm,1.3s
GNI    Garni              56.04 337   P     P       20 05 60.0 +0.7
             comp=Z,6.8nm,0.7s,mb4.8,baz=216,slow=8.7,SNR=4.2
GNI    Garni              56.04 337  eP     P       20 05 59.2   0.0
             comp=Z,23nm,1.4s,mb5.0
ENH    Enshi              56.05  42  eP     P       20 05 58.2  -1.3
             comp=Z,16nm,1.0s,mb5.0
WMQ    Urumqi             56.99  15   P     P       20 06 06.5 +0.4
WMQ                                   AP    pP      20 06 10.5 +1.4
WMQ                                   PCP   PcP     20 07 01.4 +0.3
WMQ                                   AMB   AMB
             comp=Z,10.0nm,0.8s,mb4.9
WMQ                                   AMB   AMB
             comp=Z,180nm,6.0s
WMQ                                   LR    LR
             comp=N,750nm,18.5s,MS4.9
WMQ                                   LR    LR
             comp=E,710nm,21.0s,MS4.9
WMQ                                   LR    LR
             comp=Z,740nm,20.2s,MS4.8
KAHT   Ahir Dag           57.48 329 i P     P       20 06 09.9 +0.4
MKAR   Makanchi Array     58.67  10 i P     P       20 06 16.1  -1.6
MKAR                                  pmax  pmax
             comp=Z,3.0nm,0.6s
MKAR   Makanchi Array     58.67  10   P     P       20 06 16.4  -1.3
             comp=Z,4.0nm,0.6s,mb4.6,baz=197,slow=7.9,SNR=44
AVNT   Avonos             59.38 329 i P     P       20 06 22.1  -0.8
KIV    Kislovodsk         60.09 338 i P     P       20 06 26.1  -1.5
KIV                                   pmax  pmax
             comp=Z,12nm,1.2s,mb4.8
KIV    Kislovodsk         60.09 338  eP     P       20 06 26.6  -1.0
             comp=Z,12nm,1.1s,mb4.8
AB31   Akbulak array      60.70 353   P     P       20 06 30.3  -1.4
AB31                                  pmax  pmax
             comp=Z,12nm,0.9s,mb5.0
BR131  Keskin Array S     60.71 328  eP     P       20 06 30.9  -1.0
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      comp=Z,9.7nm,1.1s,mb4.8
BRTR  Keskin Array B   60.71 328  P       P       20 06 31.5 -0.4
BRTR                              pmax    pmax
      comp=Z,4.0nm,0.9s
BRTR  Keskin Array B   60.71 328  P       P       20 06 31.5 -0.4
      comp=Z,3.6nm,0.9s,mb4.5,baz=124,slow=7.5,SNR=17
GOF   Gofitskoye       60.91 339⇓iP       P       20 06 29.4 -3.8
GOF                               pmax    pmax
      comp=Z,20nm,1.3s,mb5.1
SYO   Syowa Base       61.09 192 ⇑pP      pP      20 06 37.0 -0.2
SGKT  Sivrigoynuk      62.16 328  iP      P       20 06 41.0 -0.7
BALT  Daday            62.19 330  iP      P       20 06 40.8 -1.1
WRA   Warramunga Arr   62.44 107  P       P       20 06 44.0 +0.2
WRA                               pmax    pmax
      comp=Z,5.0nm,0.8s
WRA   Warramunga Arr   62.44 107  P       P       20 06 44.0 +0.2
      comp=Z,5.4nm,0.8s,mb4.7,baz=279,slow=6.1,SNR=8.3
WRAB  Tennant Creek    62.45 107  eP      P       20 06 43.1 -0.8
WRAB                              pmax    pmax
      comp=Z,12nm,0.9s,mb5.0
WRAB  Tennant Creek    62.45 107  eP      P       20 06 43.1 -0.8
      comp=Z,12nm,0.9s,mb5.0
IDI   Anoyia           62.72 319  P       P       20 06 45.4 -0.2
      comp=Z,3.8nm,0.8s,mb4.5,baz=134,slow=4.9,SNR=3.3
SANT  Santorini        63.05 321  P       P       20 06 40.1 -7.5
ULDT  Uludag           63.41 326  iP      P       20 06 49.8 -0.1
NJ2   Nanjing          63.49  46  eP      P       20 06 49.3 -1.3
NJ2                               AP      pP      20 06 59.5 +5.8
NJ2                               XP      sP      20 07 03.3 +8.4
NJ2                               PP      PP      20 09 10.3 -1.7
NJ2                               S       S       20 15 19.0 -3.2
NJ2                               AMB     AMB
      comp=Z,10.0nm,0.8s,mb5.0
NJ2                               LR      LR
      comp=N,1µm,19.3s
NJ2                               LR      LR
      comp=E,620nm,12.5s
NJ2                               LR      LR
      comp=Z,520nm,14.1s
VOSK  Vostochnaya      63.54   1  P       P       20 06 48.7 -2.0
VOSK                              pmax    pmax
      comp=Z,6.0nm,1.4s,mb4.4
ZRNK  Zerenda          63.77 359  eP      P       20 06 50.3 -1.8
ZRNK                              pmax    pmax
      comp=Z,154nm,1.2s
ZRNK  Zerenda          63.77 359  eP      P       20 06 50.3 -1.8
      comp=Z,154nm,1.2s
BVA0  Borovoye Array   63.84   0  iP      P       20 06 50.8 -1.8
BVA0                              pmax    pmax
      comp=Z,1.0nm,0.9s,mb3.9
BVAR  Borovoye Array   63.84   0  P       P       20 06 51.5 -1.1
      comp=Z,4.1nm,0.7s,mb4.6,baz=162,slow=8.6,SNR=25
ZAL   Zalesovo         65.99  10  P       P       20 07 06.0 -0.5
ZAL                               pmax    pmax
      comp=Z,3.0nm,0.6s
ZAL   Zalesovo         65.99  10  P       P       20 07 06.0 -0.5
      comp=Z,3.0nm,0.6s,mb4.5,baz=281,slow=5.1,SNR=13
NVS   Novosibirsk      66.62   8  eP      P       20 07 03.4 -7.1
NVS                               pmax    pmax
      comp=Z,6.0nm,1.2s,mb4.5
NVS                               pmax    pmax
      comp=N,6.0nm,1.4s
NVS                               pmax    pmax
      comp=E,4.0nm,1.1s
ULN   Ulaanbaatar      67.32  26  iP      P       20 07 12.2 -2.9
ARU   Arti             67.91 353⇑iP       P       20 07 17.1 -1.5
ARU                               e               20 07 42.4
ARU                               e               20 09 44.7
ARU                               ePPP    PPP     20 11 22.9 -4.5
ARU                               eS      S       20 16 13.8 -1.9
ARU                               eSS     SS      20 20 37.2 -1.7
ARU                               pmax    pmax
      comp=Z,8.0nm,1.8s,mb4.5
ARU   Arti             67.91 353  eP      P       20 07 16.9 -1.7
      comp=Z,2.7nm,0.8s,mb4.3
VRI   Vrincioaia       68.66 329 ⇑P       P       20 07 23.3 -0.2
STKA  Stephens Creek   68.77 120  P       P       20 07 24.1 -0.3
      comp=Z,3.7nm,0.7s,mb4.4,baz=266,slow=13,SNR=2.4
MLR   Muntele Rosu     68.80 328  P       P       20 07 24.8 +0.5
MLR                               pmax    pmax
      comp=Z,5.0nm,0.6s
MLR   Muntele Rosu     68.80 328  P       P       20 07 24.8 +0.5
      comp=Z,5.1nm,0.6s,mb4.6,baz=133,slow=5.5,SNR=4.4
MLR   Muntele Rosu     68.80 328 ⇓P       P       20 07 25.1 +0.8
TLY   Talaya           68.98  22⇑iP       P       20 07 21.0 -4.3
BURAR Bucovina Array   70.61 330 ⇓P       P       20 07 35.2 -0.2
AKASG Malin Array Be   70.95 334  P       P       20 07 36.1 -1.3
AKASG                             pmax    pmax
      comp=Z,6.0nm,0.6s
AKASG Malin Array Be   70.95 334  P       P       20 07 36.1 -1.3
      comp=Z,6.3nm,0.6s,mb4.7,baz=132,slow=5.4,SNR=32
BZS   Buzias           71.17 326 ⇑P       P       20 07 38.2 -0.6
OBN   Obninsk          71.63 341αiP       P       20 07 40.6 -0.8
OBN                                               20 08 00.0
OBN                               pmax    pmax
      comp=Z,15nm,0.6s,mb5.1
OBN   Obninsk          71.63 341  eP      P       20 07 40.4 -1.0
      comp=Z,18nm,0.6s,mb5.2
KS15  Wonju Array Si   72.64  45  eP      P       20 07 45.8 -2.0
JNU   Nakatsue         72.81  50  P       P       20 07 49.8 +0.9
      comp=Z,8.8nm,0.8s,mb4.8,baz=270,slow=14,SNR=6.8
KOLS  Kolonicke sedl   72.96 329  eP      P       20 07 49.6 +0.2
KOLS                              e               20 08 02.2
CTA   Charters Tower   73.60 108  P       P       20 07 53.9 +0.2
CTA                               pmax    pmax
      comp=Z,11nm,0.9s
CTA   Charters Tower   73.60 108  P       P       20 07 53.9 +0.2
      comp=Z,11nm,0.9s,mb4.8,baz=276,slow=6.4,SNR=6.5
CTA   Charters Tower   73.60 108  P       P       20 07 53.9 +0.2
CTAO  Charters Tower   73.60 108  eP      P       20 07 53.7  0.0
CTAO                              pmax    pmax
      comp=Z,26nm,1.4s,mb5.0
CTAO  Charters Tower   73.60 108  eP      P       20 07 53.7  0.0
      comp=Z,26nm,1.4s,mb5.0
SNAA  Sanae            74.14 198  eP      P       20 07 54.6 -1.2
SNAA                              pmax    pmax
      comp=Z,5.0nm,0.9s
SNAA  Sanae            74.14 198  eP      P       20 07 54.6 -1.2
      comp=Z,4.8nm,0.9s,mb4.4
HIA   Hailar           74.32  31  eP      P       20 07 57.7 +0.4
CN2   Changchun        74.32  38  eP      P       20 07 57.3 -0.1
CN2                               AMB     AMB
      comp=Z,10.0nm,0.9s,mb4.8
VYHS  Vyhne            74.45 328  eP      P       20 07 57.6 -0.4
VNA2  Neumayer--Watz   75.44 199⇑iP       P       20 08 03.7 +0.4
VNA2  Neumayer--Watz   75.44 199⇑i        P       20 08 11.1 +7.8
VNA2  Neumayer--Watz   75.44 199⇑i        P       20 08 14.2 +11
ARSA  Arzberg          75.52 325⇑iP       P       20 08 04.2  0.0
      comp=Z,6.8nm,0.8s,mb4.6
VNA1  Neumayer--Stat   75.69 200⇑iP       P       20 08 08.8 +4.1
VNA1  Neumayer--Stat   75.69 200⇑i        P       20 08 15.6 +11
PMG   Port Moresby     75.87  97  P       P       20 08 06.7 -0.2
PMG                               pmax    pmax
      comp=Z,11nm,0.7s
PMG   Port Moresby     75.87  97  P       P       20 08 06.7 -0.2
      comp=Z,11nm,0.7s,mb4.9,baz=243,slow=7.8,SNR=4.8
PMG   Port Moresby     75.87  97  eP      P       20 08 07.3 +0.5
      comp=Z,16nm,0.8s,mb5.0
MORC  Moravsky Berou   75.90 328  eP      P       20 08 05.3 -1.0
MORC                              pmax    pmax
      comp=Z,2.0nm,0.8s,mb4.1
MORC  Moravsky Berou   75.90 328  eP      P       20 08 05.3 -1.0
      comp=Z,2.4nm,0.8s,mb4.2
VNA3  Neumayer Olymp   76.22 199⇑iP       P       20 08 08.7 +1.0
VNA3  Neumayer Olymp   76.22 199⇓i        P       20 08 15.0 +7.3
VNA3  Neumayer Olymp   76.22 199⇑i        P       20 08 18.5 +11
DBIC  Dimbokro         76.42 280  eP      P       20 08 08.9 -1.1
DBIC                              pmax    pmax
      comp=Z,11nm,1.0s
DBIC  Dimbokro         76.42 280  P       P       20 08 09.6 -0.4
      comp=Z,8.3nm,0.9s,mb4.7,baz=94,slow=9.2,SNR=7.4
DBIC  Dimbokro         76.42 280  eP      P       20 08 08.9 -1.1
      comp=Z,11nm,1.0s,mb4.8
MOA   Molln            76.56 325⇑iP       P       20 08 10.1  0.0
      comp=Z,15nm,0.8s,mb5.0
DPC   Dobruska-Polom   76.87 328  eP      P       20 08 11.6 -0.2
PGF   Pioggiola        77.03 319⇑iP       P       20 08 12.1 -0.7
      comp=Z,17nm,1.2s,mb4.5
PGF   Pioggiola        77.03 319⇑iP       P       20 08 12.1 -0.7
PGF                               pmax    pmax
      comp=Z,8.0nm,1.2s,mb4.5
UPC   Upice            77.13 328  eP      P       20 08 13.1 -0.1
MDJ   Mudanjiang       77.30  39  P       P       20 08 14.6 +0.4
MDJ                               PP      PP      20 11 08.8 -1.3
MDJ                               S       S       20 18 01.3 -1.5
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MDJ                               AMB     AMB
      comp=Z,30nm,4.1s
MDJ   Mudanjiang       77.30  39  eP      P       20 08 13.4 -0.8
      comp=Z,9.3nm,1.1s,mb4.6
GEC2  GERESS Array S   77.42 326  eP      P       20 08 14.2 -0.7
GEC2                              pmax    pmax
      comp=Z,5.0nm,1.1s,mb4.4
GEC2  GERESS Array S   77.42 326  eP      P       20 08 14.2 -0.7
      comp=Z,5.0nm,1.1s,mb4.4
GERES GERESS Array B   77.42 326  P       P       20 08 14.5 -0.3
GERES                             pmax    pmax
      comp=Z,2.0nm,0.8s
GERES GERESS Array B   77.42 326  P       P       20 08 14.5 -0.4
      comp=Z,1.9nm,0.8s,mb4.1,baz=135,slow=5.7,SNR=19
PRU   Pruhonice        77.60 327  eP      P       20 08 15.9 +0.1
KHC   Kasperske Hory   77.65 326⇑iP       P       20 08 14.7 -1.4
KHC   Kasperske Hory   77.65 326  eP      P       20 08 15.4 -0.7
WATA  Walderalm        77.82 324⇓iP       P       20 08 16.8 -0.3
      comp=Z,11nm,0.8s,mb4.8
WATA  Walderalm        77.82 324⇓iP       P       20 08 16.8 -0.3
WATA                              pmax    pmax
      comp=Z,11nm,0.8s,mb4.8
PVCC  Panska Ves       77.89 328  eP      P       20 08 17.7 +0.3
SQTA  Sankt Quirin     77.97 323⇑iP       P       20 08 17.9  0.0
      comp=Z,8.1nm,0.6s,mb4.8
SQTA  Sankt Quirin     77.97 323⇑iP       P       20 08 17.9  0.0
SQTA                              pmax    pmax
      comp=Z,8.0nm,0.6s,mb4.8
WET   Wettzell         78.04 326  eP      P       20 08 17.4 -0.8
WET                               pmax    pmax
      comp=Z,6.0nm,1.1s,mb4.4
WET   Wettzell         78.04 326  eP      P       20 08 17.4 -0.8
      comp=Z,6.0nm,1.1s,mb4.4
BRG   Berggiesshubel   78.42 328  iP      P       20 08 20.7 +0.4
BRG                               pmax    pmax
      comp=Z,8.0nm,1.1s,mb4.6
BRG   Berggiesshubel   78.42 328  iP      P       20 08 20.7 +0.4
      comp=Z,8.3nm,1.1s,mb4.6
FUR   Furstenfeldbru   78.42 324  eP      P       20 08 20.9 +0.5
FUR                               pmax    pmax
      comp=Z,22nm,0.9s,mb5.1
FUR   Furstenfeldbru   78.42 324  eP      P       20 08 20.9 +0.5
      comp=Z,22nm,0.9s,mb5.1
DAVOX Davos            78.53 323  P       P       20 08 21.0  0.0
      comp=Z,8.9nm,0.7s,mb4.8,baz=129,slow=7.2,SNR=14
SBF   Sospel           78.65 319  eP      P       20 08 21.9 +0.2
      comp=Z,16nm,0.8s,mb4.7
SBF   Sospel           78.65 319  eP      P       20 08 21.9 +0.2
SBF                               pmax    pmax
      comp=Z,8.0nm,0.8s,mb4.7
DAVA  Damuels          78.79 323⇑iP       P       20 08 22.5 +0.1
      comp=Z,18nm,0.8s,mb5.0
NKC   Novy Kostel      78.86 327  eP      P       20 08 23.5 +0.8
LMR   La Mourre        79.01 318  eP      P       20 08 23.9 +0.2
      comp=Z,7.4nm,0.9s,mb4.3
LMR   La Mourre        79.01 318  eP      P       20 08 23.9 +0.2
LMR                               pmax    pmax
      comp=Z,4.0nm,0.9s,mb4.3
FRF   La Foret Royal   79.02 319  eP      P       20 08 23.9 +0.1
      comp=Z,7.2nm,0.9s,mb4.3
FRF   La Foret Royal   79.02 319  eP      P       20 08 23.9 +0.1
FRF                               pmax    pmax
      comp=Z,4.0nm,0.9s,mb4.3
CLL   Collm            79.15 328⇑iP       P       20 08 24.9 +0.6
CLL                               pmax    pmax
      comp=Z,18nm,1.0s,mb5.0
CLL   Collm            79.15 328⇑iP       P       20 08 24.9 +0.6
      comp=Z,18nm,1.0s,mb5.0
CLL   Collm            79.15 328 ⇑P       P       20 08 24.9 +0.6
      comp=Z,logA/T=1.3,mb5.0
GRA1  Grafenberg Arr   79.25 326  eP      P       20 08 25.0 +0.2
      comp=Z,16nm,0.9s,mb5.0
GRF   Grafenberg Arr   79.25 326  eP      P       20 08 25.0 +0.2
GRF                               pmax    pmax
      comp=Z,16nm,0.9s,mb5.0
GRF   Grafenberg Arr   79.25 326  eP      P       20 08 25.0 +0.2
GRF                               pmax    pmax
      comp=Z,16nm,0.9s,mb5.0
GRF   Grafenberg Arr   79.25 326  eP      P       20 08 25.0 +0.2
      comp=Z,16nm,0.9s,mb5.0
MBDF  Montbardon       79.47 320  eP      P       20 08 26.1 -0.1
      comp=Z,8.8nm,0.7s,mb4.5
MBDF  Montbardon       79.47 320  eP      P       20 08 26.1 -0.1
MBDF                              pmax    pmax
      comp=Z,4.0nm,0.7s,mb4.5
MOX   Moxa             79.53 327  eP      P       20 08 26.8 +0.4
MOX                               pmax    pmax
      comp=Z,20nm,1.6s,mb4.8
MOX   Moxa             79.53 327  eP      P       20 08 26.8 +0.4
      comp=Z,20nm,1.6s,mb4.8
MOX   Moxa             79.53 327  iP      P       20 08 26.8 +0.4
      comp=Z,logA/T=1.1,mb4.8
VNDA  Vanda            79.70 167  eP      P       20 08 26.4 -0.4
VNDA                              pmax    pmax
      comp=Z,4.0nm,1.4s
VNDA  Vanda            79.70 167  P       P       20 08 26.8  0.0
      comp=Z,1.5nm,1.0s,mb3.9,baz=211,slow=2.1,SNR=5.1
VNDA  Vanda            79.70 167  eP      P       20 08 26.4 -0.4
      comp=Z,4.3nm,1.4s,mb4.2
MAJO  Matsushiro       79.70  50  eP      P       20 08 28.1 +0.5
MAJO                              pmax    pmax
      comp=Z,8.0nm,1.3s,mb4.5
MAJO  Matsushiro       79.70  50  eP      P       20 08 28.1 +0.5
      comp=Z,8.5nm,1.3s,mb4.5
MJAR  Matsushiro Arr   79.70  50  P       P       20 08 28.4 +0.8
MJAR                              pmax    pmax
      comp=Z,9.0nm,1.2s
MJAR  Matsushiro Arr   79.70  50  P       P       20 08 28.4 +0.8
      comp=Z,9.3nm,1.2s,mb4.6,baz=244,slow=6.3,SNR=11
LPG   La Plagne        79.83 320  eP      P       20 08 27.8 -0.3
LPL   La Plagne        79.85 320⇑iP       P       20 08 27.8 -0.4
      comp=Z,5.7nm,0.7s,mb4.3
LPL   La Plagne        79.85 320⇑iP       P       20 08 27.8 -0.4
LPL                               pmax    pmax
      comp=Z,3.0nm,0.7s,mb4.3
SMRF  Simiane la Rot   79.90 319  eP      P       20 08 28.7 +0.2
      comp=Z,7.7nm,0.9s,mb4.3
ETOS  Mallorca         80.02 314  P       P       20 08 29.8 +0.6
      comp=Z,0.2nm,0.2s,mb3.7
FINES FINESS Array B   80.03 340  P       P       20 08 28.6 -0.2
FINES                             pmax    pmax
      comp=Z,5.0nm,0.8s
FINES FINESS Array B   80.03 340  P       P       20 08 28.6 -0.2
      comp=Z,4.8nm,0.8s,mb4.5,baz=117,slow=8.5,SNR=11
BFO   Black Forest     80.21 323  eP      P       20 08 30.1 +0.1
BFO                               pmax    pmax
      comp=Z,6.0nm,1.0s,mb4.5
BFO   Black Forest     80.21 323  eP      P       20 08 30.1 +0.1
      comp=Z,6.0nm,1.0s,mb4.5
KAF   Kangasniemi      80.44 341  ep      P       20 08 30.0 -1.0
      comp=Z,6.8nm,0.7s,mb4.7,baz=136,slow=5.1
KAF   Kangasniemi      80.44 341  eP      P       20 08 30.0 -1.0
KAF                               pmax    pmax
      comp=Z,7.0nm,0.7s,mb4.7
SBA   Scott Base       80.70 168  eP      P       20 08 33.0 +0.9
SBA                               pmax    pmax
      comp=Z,8.0nm,1.4s,mb4.5
SBA   Scott Base       80.70 168  eP      P       20 08 33.0 +0.8
      comp=Z,8.0nm,1.4s,mb4.5
CABF  La Chapelle      80.75 321  eP      P       20 08 33.3 +0.3
      comp=Z,9.4nm,0.9s,mb4.4
CABF  La Chapelle      80.75 321  eP      P       20 08 33.3 +0.3
CABF                              pmax    pmax
      comp=Z,5.0nm,0.9s,mb4.4
CLZ   Clausthal        80.83 327  eP      P       20 08 34.2 +1.0
CLZ                               pmax    pmax
      comp=Z,18nm,1.2s,mb4.9
CLZ   Clausthal        80.83 327  eP      P       20 08 34.2 +1.0
      comp=Z,18nm,1.2s,mb4.9
HINF  Hinteralfeld     80.84 323  eP      P       20 08 32.9 -0.5
      comp=Z,4.2nm,0.6s,mb4.2
HINF  Hinteralfeld     80.84 323  eP      P       20 08 32.9 -0.5
HINF                              pmax    pmax
      comp=Z,2.0nm,0.6s,mb4.2
CDF   Champ du Feu     80.87 323  eP      P       20 08 33.5  0.0
      comp=Z,8.9nm,1.0s,mb4.4
CDF   Champ du Feu     80.87 323  eP      P       20 08 33.5  0.0
CDF                               pmax    pmax
      comp=Z,4.0nm,1.0s,mb4.3
VIVF  Saint-Julien-l   80.87 319⇑iP       P       20 08 34.1 +0.5
      comp=Z,10.0nm,1.0s,mb4.4
VIVF  Saint-Julien-l   80.87 319⇑iP       P       20 08 34.1 +0.5
VIVF                              pmax    pmax
      comp=Z,5.0nm,1.0s,mb4.4
EJON  La Jonquera      81.04 316  P       P       20 08 36.8 +2.3
      comp=Z,0.5nm,0.2s,mb4.1
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TNS   Taunus Mts       81.06 325  eP      P       20 08 34.9 +0.4
TNS                               pmax    pmax
      comp=Z,10.0nm,1.1s,mb4.7
TNS   Taunus Mts       81.06 325  eP      P       20 08 34.9 +0.4
      comp=Z,10.0nm,1.1s,mb4.7
LASF  Ste Croix        81.06 318⇑iP       P       20 08 35.4 +0.7
      comp=Z,8.1nm,0.9s,mb4.4
HAU   Haudompre        81.23 323  eP      P       20 08 35.2 -0.2
      comp=Z,6.2nm,0.7s,mb4.3
HAU   Haudompre        81.23 323  eP      P       20 08 35.2 -0.2
HAU                               pmax    pmax
      comp=Z,3.0nm,0.7s,mb4.3
MTLF  Montolieu        81.85 317⇑iP       P       20 08 39.5 +0.7
      comp=Z,22nm,1.1s,mb4.7
MTLF  Montolieu        81.85 317⇑iP       P       20 08 39.5 +0.7
MTLF                              pmax    pmax
      comp=Z,11nm,1.1s,mb4.7
BSEG  Bad Segeberg     81.94 329  eP      P       20 08 40.3 +1.3
EBR   Ebro Roquetas    82.06 314  eP      P       20 08 41.0 +1.1
SMF   Signal de Mont   82.16 321  eP      P       20 08 40.3  0.0
ERTA  Horta de San J   82.22 314  P       P       20 08 41.5 +0.8
      comp=Z,0.2nm,0.2s,mb3.7
MEZF  Maizieres J'vi   82.22 323⇑iP       P       20 08 41.1 +0.5
      comp=Z,11nm,0.8s,mb4.5
LOR   Lormes           82.41 321  eP      P       20 08 41.8 +0.2
      comp=Z,9.3nm,0.9s,mb4.4
LOR   Lormes           82.41 321  eP      P       20 08 41.8 +0.2
LOR                               pmax    pmax
      comp=Z,5.0nm,0.9s,mb4.4
AVF   Avril sur Loir   82.52 321  eP      P       20 08 42.1 -0.1
      comp=Z,8.2nm,1.1s,mb4.4
AVF   Avril sur Loir   82.52 321  eP      P       20 08 42.1 -0.1
AVF                               pmax    pmax
      comp=Z,4.0nm,1.1s,mb4.4
SSF   Saint Saulge     82.54 321⇑iP       P       20 08 42.7 +0.4
SSF                               pmax    pmax
      comp=Z,9.0nm,0.9s,mb4.8
SSF   Saint Saulge     82.54 321⇑iP       P       20 08 42.7 +0.4
      comp=Z,9.1nm,0.9s,mb4.8
EMOS  Mosqueruela      82.58 313  P       P       20 08 44.3 +1.7
      comp=Z,0.7nm,0.4s,mb4.0
CAF   Calviac          82.58 318  eP      P       20 08 43.3 +0.8
ECHE  Chera            82.66 313  P       P       20 08 44.9 +1.9
ECHE                              pmax    pmax
      comp=Z,1.0nm,0.4s,mb4.2
ECHE  Chera            82.66 313  P       P       20 08 44.9 +1.9
      comp=Z,0.9nm,0.4s,mb4.2
BGF   Bois d'Agland    82.75 320  eP      P       20 08 44.2 +0.9
      comp=Z,35nm,1.0s,mb5.1
BGF   Bois d'Agland    82.75 320  eP      P       20 08 44.2 +0.9
BGF                               pmax    pmax
      comp=Z,18nm,1.0s,mb5.1
EBIE  Bielsa           83.00 316  P       P       20 08 46.4 +1.7
      comp=Z,0.8nm,0.4s,mb4.1
TCF   Toulx Ste Croi   83.04 320  eP      P       20 08 45.5 +0.6
      comp=Z,9.8nm,1.0s,mb4.5
TCF   Toulx Ste Croi   83.04 320  eP      P       20 08 45.5 +0.6
TCF                               pmax    pmax
      comp=Z,5.0nm,1.0s,mb4.5
ESAC  San Caprasio     83.07 315  P       P       20 08 46.0 +0.8
      comp=Z,1.1nm,0.2s,mb4.5
GIVF  Givet            83.07 324  eP      P       20 08 45.5 +0.6
RJF   Les Rejaudoux    83.09 319  eP      P       20 08 46.0 +0.9
      comp=Z,20nm,1.0s,mb4.8
RJF   Les Rejaudoux    83.09 319  eP      P       20 08 46.0 +0.9
RJF                               pmax    pmax
      comp=Z,10.0nm,1.0s,mb4.8
BAIF  Baives           83.41 324  eP      P       20 08 47.4 +0.7
      comp=Z,21nm,1.1s,mb4.8
BAIF  Baives           83.41 324  eP      P       20 08 47.4 +0.7
BAIF                              pmax    pmax
      comp=Z,11nm,1.1s,mb4.8
LFF   La Frestale      83.45 318  eP      P       20 08 48.0 +1.0
      comp=Z,16nm,0.7s,mb4.9
LFF   La Frestale      83.45 318  eP      P       20 08 48.0 +1.0
LFF                               pmax    pmax
      comp=Z,8.0nm,0.7s,mb4.9
ETSF  Etsaut           83.56 316  eP      P       20 08 48.7 +1.1
      comp=Z,21nm,0.9s,mb5.0
ETSF  Etsaut           83.56 316  eP      P       20 08 48.7 +1.1
ETSF                              pmax    pmax
      comp=Z,11nm,0.9s,mb5.0
EQES  Quesada          83.59 310  P       P       20 08 47.7 -0.2
      comp=Z,0.7nm,0.3s,mb4.3
HFS   Hagfors          83.78 335  P       P       20 08 48.8 +0.5
HFS                               pmax    pmax
      comp=Z,8.0nm,0.7s
HFS   Hagfors          83.78 335  P       P       20 08 48.8 +0.5
      comp=Z,7.9nm,0.7s,mb5.0,baz=146,slow=5.3,SNR=17
SJPF  Ste Jean         84.09 316  eP      P       20 08 51.5 +1.2
      comp=Z,15nm,0.7s,mb4.9
SJPF  Ste Jean         84.09 316  eP      P       20 08 51.5 +1.2
SJPF                              pmax    pmax
      comp=Z,7.0nm,0.7s,mb4.9
MFF   Saint Martin d   84.66 319  eP      P       20 08 53.7 +0.6
      comp=Z,19nm,1.0s,mb4.9
MFF   Saint Martin d   84.66 319  eP      P       20 08 53.7 +0.6
MFF                               pmax    pmax
      comp=Z,9.0nm,1.0s,mb4.8
ESDC  Sonseca Array    84.86 312  P       P       20 08 54.9 +0.6
      comp=Z,3.7nm,0.8s,mb4.6,baz=103,slow=4.4,SNR=13
ESDC  Sonseca Array    84.86 312  P       P       20 08 54.9 +0.6
      comp=Z,0.6nm,0.4s,mb4.1
ESLA  Sonseca Array    84.86 312  eP      P       20 08 54.0 -0.3
      comp=Z,1.6nm,1.0s,mb4.1
NB2   NORSAR Subarra   85.31 335  P       P       20 08 55.9 -0.1
      comp=Z,4.4nm,0.8s,mb4.6,baz=114,slow=4.8
NOA   NORSAR Array B   85.31 335  P       P       20 08 56.0  0.0
NOA                               pmax    pmax
      comp=Z,4.0nm,0.8s
NOA   NORSAR Array B   85.31 335  P       P       20 08 56.0 +0.1
      comp=Z,3.7nm,0.8s,mb4.6,baz=115,slow=4.9,SNR=11
LDF   La Druitiere     85.40 321  eP      P       20 08 57.1 +0.4
      comp=Z,23nm,1.0s,mb4.9
LDF   La Druitiere     85.40 321  eP      P       20 08 57.1 +0.4
LDF                               pmax    pmax
      comp=Z,11nm,1.0s,mb4.9
FLN   La Foliniere     85.68 321  eP      P       20 08 58.7 +0.6
KEV   Kevo             85.90 346  ep      P       20 08 57.2 -1.5
      comp=Z,3.3nm,0.9s,mb4.6
KEV   Kevo             85.90 346  eP      P       20 08 57.2 -1.5
KEV                               pmax    pmax
      comp=Z,3.0nm,0.9s,mb4.5
ARCES ARCESS Array B   86.09 346  P       P       20 09 00.4 +0.7
ARCES                             pmax    pmax
      comp=Z,2.0nm,0.5s
ARCES ARCESS Array B   86.09 346  P       P       20 09 00.4 +0.7
      comp=Z,2.1nm,0.5s,mb4.2,baz=133,slow=5.0,SNR=21
EKA   Eskdalemuir Ar   89.59 327  P       P       20 09 16.2 -0.6
EKA                               pmax    pmax
      comp=Z,1.0nm,0.9s
EKA   Eskdalemuir Ar   89.59 327  P       P       20 09 16.2 -0.6
      comp=Z,0.9nm,0.9s,mb4.1,baz=117,slow=5.6,SNR=4.2
ILAR  Eielson Array   120.63  17  PKIKP   PKPdf   20 15 09.6 -3.2
ILAR                              pmax    pmax
      comp=Z,1.0nm,1.0s
ILAR  Eielson Array   120.63  17  PKP     PKPdf   20 15 09.6 -3.2
      comp=Z,1.0nm,1.0s,baz=270,slow=2.7,SNR=4.1
SIV   San Ignacio     124.50 242  PKP     PKPdf   20 15 18.7 -2.8
      comp=Z,0.5nm,0.7s,baz=133,slow=3.2,SNR=4.1
SCHQ  Schefferville   124.68 331  PKP     PKPdf   20 15 19.1 -1.7
      comp=Z,1.7nm,0.7s,baz=30,slow=2.8,SNR=4.2
LPAZ  La Paz          130.35 237  PKIKP   PKPdf   20 15 31.9 -0.8
LPAZ                              pmax    pmax
      comp=Z,2.0nm,0.8s
LPAZ  La Paz          130.35 237  PKP     PKPdf   20 15 31.9 -0.8
      comp=Z,2.2nm,0.8s,baz=70,slow=4.7,SNR=14
CHMT  Chamberlain Mo  144.18   4  ePKPdf  PKPdf   20 15 53.1 -3.9
HRY   Holter Researc  144.45   2  eP      PKPbc   20 15 54.0 -0.2
GCMT  Greycliff       145.40 359  ePKPdf  PKPdf   20 15 58.0 -1.1
BOZ   Bozeman (W)     145.52   2  ePKIKP  PKPdf   20 15 58.4 -1.0
QLMT  Earthquake Lak  146.34   2  ePKPdf  PKPdf   20 16 00.2 -0.6
CPCT  Cooper Cave     146.40 320  ePKPdf  PKPdf   20 15 59.9 -1.4
HUMO  Hull Mountain   146.65  17  ePKPbc  PKPdf   20 16 00.1 +0.3
RSSD  Black Hills     146.66 352  ePKP2   PKPab   20 16 01.8 -1.4
OTAV  Otavalo         146.74 253  ePKPdf  PKPdf   20 16 01.7 -0.7
HLID  Hailey          147.42   6  ePKPdf  PKPdf   20 16 02.0 -0.7
SWET  Sewanee         147.43 321  ePKPbc  PKPdf   20 16 01.6 -1.3
LOHW  Long Hollow     147.58   1  ePKPdf  PKPdf   20 16 05.3 +2.4
TPAW  Teton Pass      147.69   1  ePKPdf  PKPdf   20 16 02.7 -0.4
WVT   Waverly         147.92 325  ePKP2   PKPab   20 16 04.0 -4.4
MOD   Modoc           148.02  14  ePKPbc  PKPdf   20 16 02.2 -1.4
PDAR  Pinedale Array  148.42 359  PKP     PKPdf   20 16 03.4 -0.9
      comp=Z,5.4nm,1.0s,slow=4.4,SNR=16
PDAR                              PKPbc   PKPdf   20 16 07.0 +2.7
      comp=Z,5.2nm,1.0s,baz=63,slow=2.0,SNR=17
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HVU	Hansel Valley	149.32	4	ePKIKP	PKPdf	20 16 03.2	-2.6
LRAL	Lakeview Retre	149.52	319	eP	PKPdf	20 16 05.3	-1.1
HWUT	Hardware Ranch	149.56	2	ePKPbc	PKPdf	20 16 09.5	+3.4
BEKR	Beckwourth	149.92	16	ePKPdf	PKPdf	20 16 05.9	-0.9
BEKR				ePKPbc	PKPdf	20 16 10.7	+3.9
ELK	Elko	150.10	8	ePKIKP	PKPdf	20 16 06.9	-0.1
UALR	University of	151.38	328	ePKPdf	PKPdf	20 16 13.9	+4.7
NVAR	Mina Array Bea	151.79	14	PKP	PKPdf	20 16 09.4	-0.3
	comp=Z,5.8nm,0.7s,baz=12,slow=0.6,SNR=6.2						
NVAR				PKPbc	PKPdf	20 16 16.1	+6.4
	comp=Z,5.4nm,0.7s,baz=315,slow=2.6,SNR=32						
ANMO	Albuquerque	156.00	353	PKIKP	PKPdf	20 16 15.0	-0.5
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ANMO	Albuquerque	156.00	353	PKP	PKPdf	20 16 15.0	-0.4
	comp=Z,0.9nm,0.6s,baz=90,slow=2.0,SNR=2.2						
ANMO				PKPab	PKPab	20 16 43.0	+0.8
	comp=Z,0.8nm,0.5s,baz=1.1,slow=5.2,SNR=2.8						
ANMO	Albuquerque	156.00	353	PKP	PKPdf	20 16 15.0	-0.5
ANMO				PKPab	PKPab	20 16 43.0	+0.8
TXAR	Lajitas Array	160.86	343	PKIKP	PKPdf	20 16 21.1	-0.4
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TXAR	Lajitas Array	160.86	343	PKP	PKPdf	20 16 21.1	-0.4
	comp=Z,0.7nm,0.7s,baz=122,slow=1.9,SNR=9.4						
TXAR				PKPab	PKPab	20 17 03.4	+0.1
	comp=Z,3.2nm,1.0s,baz=56,slow=4.1,SNR=13						

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*BJI **18** 19:58:04.6, 3.36N×128.39E, h51^{km}, mB5.0, mb5.0, Ms4.2, Msz4.1*

*IDC **18** 19:58:10.9±3.9, 4.04N×127.99E, h41^{km}±35^{km}, mb4.5/27, mb1 4.5/27, mb1mx4.5/29, mbtmp4.7/27, MS3.7/11, Ms1 3.7/11, ms1mx3.6/25, Error ellipse: s-maj=19.3km s-min=9.8km az=82.0*

*MOS **18** 19:58:11.6±1.0, 4.07N×128.17E, h68^{km}, mb5.0/30, Error ellipse: s-maj=15.5km s-min=7.0km az=108.2*

*HRVD **18** 19:58:11.6±0.7, 4.02N×128.03E, h44^{km}±2^{km}, MW4.8/28, Centroid moment Tensor Solution. LP body waves: s14,c15;Mantle waves: s28,c37; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.05±.24; M$_{\theta\theta}$0.11±.14; M$_{\phi\phi}$-2.16±.16; M$_{r\theta}$0.36±.11; M$_{\theta\phi}$-0.81±.15; M$_{\phi r}$-0.08±.16; Best double couple: M$_0$2.274×10^{16} NP1:ϕ_s186°,δ46°,λ73°. NP2:ϕ_s29°,δ47°,λ106°. Principal axes: T 2.127, Plg78°, Azm16°; N .294, Plg12°, Azm198°; P -2.422, Plg0°, Azm108°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **18** 19:58:11.6±0.2, 4.02N×128.12E, mb4.9/29 Error ellipse: s-maj=7.8km s-min=4.7km az=79.0*

ISC 18 19:58:09.9±0.2, **3.99N**±0.03×**128.12E**±0.04, **h48**^{km}, **h48**^{km}±2.0^{km}**:pP-P, n178,** σ1^{s}**11**/173, **mb4.9**/69, **MS3.9**/18, **7C-11D, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	3.48	328	eP	P	19 59 05.0	+2.2
KCP	Kidapawan	4.26	315	⇓eP	P	19 59 15.0	+1.1
KCP				i S	S	20 00 09.8	+7.0
BUKP	Musuan	4.92	322	eP	P	19 59 25.1	+1.8
CGP	Cagayan de Oro	5.59	323	⇓eP	P	19 59 36.5	+3.9
PAGZ	Pagadian	6.08	309	eP	P	19 59 39.0	-0.4
SCPH	Surigao	6.32	336	eP	P	19 59 47.9	+5.1
DCPH	Dipolog City	6.58	314	eP	P	19 59 48.9	+2.4
IPIL	Ipil	6.69	305	eP	P	19 59 46.8	-1.2
MSLP	Maasin	6.91	332	eP	P	19 59 54.5	+3.4
BESP	Borongan	8.02	341	eP	P	20 00 09.4	+3.1
GUIM	Jordan	8.58	321	eP	P	20 00 16.2	+2.1
RCP	Roxas	9.22	325	⇓eP	P	20 00 25.7	+2.8
CUYO	Cuyo Island	9.80	314	eP	P	20 00 29.9	-1.2
TSM	Tawau	10.23	272	P	P	20 00 36.4	-0.6
PVCP	Virac	10.32	338	eP	P	20 00 36.3	-1.9
SJMP	San Jose	10.90	321	eP	P	20 00 45.3	-0.8
ENPP	El Nido	11.21	310	eP	P	20 00 50.0	-0.3
BATP	Bataraza	11.31	295	eP	P	20 00 55.4	+3.7
KKM	Kota Kinabalu	12.04	280	eP	P	20 01 01.9	+0.5
KKM				epP		20 01 15.7	
KAKA	Kakadu	17.14	166	eP	P	20 02 08.4	+0.8
	24nm,0.6s						
KSM	Kuching	17.97	262	eP	P	20 02 17.2	-0.8
NACB	Ninganchiao	21.03	343	eP	P	20 02 54.7	+2.8
YHNB	Yeheng	21.56	343	eP	P	20 02 59.6	+2.3
FITZ	Fitzroy Crossi	22.09	186	eP	P	20 03 01.6	-0.9
	9.9nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	22.09	186	P	P	20 03 01.6	-0.9
	15nm,0.6s,mb4.6,baz=15,slow=6.9,SNR=18						
JOW	Kunigami	22.71	0	P	P	20 03 10.2	+1.5
	25nm,0.6s,mb4.8,baz=155,slow=28,SNR=3.9						
PMG	Port Moresby	23.17	125	LR	LR	20 12 38.7	
	comp=Z,192nm,21.6s,MS3.5,baz=340,slow=37						
QIZ	Qiongzhong	23.29	311	eP	P	20 03 14.4	+0.1
QIZ				S	S	20 07 17.1	-2.4
QIZ				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.5						
QIZ				LR	LR		
	comp=N,220nm,21.5s						
QIZ	Qiongzhong	23.29	311	eP	P	20 03 14.2	-0.1
	comp=N,42nm,1.1s,mb4.8						
GZH	Guangzhou	23.76	324	P	P	20 03 22.1	+3.2
WRAB	Tennant Creek	24.55	166	eP	P	20 03 26.6	0.0
WRAB				pmax	pmax		
	comp=Z,73nm,0.6s,mb5.4						
WRAB	Tennant Creek	24.55	166	eP	P	20 03 26.6	0.0
	comp=Z,73nm,0.6s,mb5.4						
WRA	Warramunga Arr	24.55	166	P	P	20 03 27.1	+0.4
WRA				pmax	pmax		
	comp=Z,48nm,0.6s						
WRA	Warramunga Arr	24.55	166	P	P	20 03 27.1	+0.4
	comp=Z,48nm,0.6s,mb5.2,baz=344,slow=10,SNR=157						
WB2	Warramunga Arr	24.56	166	⇓iP	P	20 03 27.0	+0.3
WB2				i S	S	20 07 41.0	-0.4
KGM	Kluang	24.85	266	P	P	20 03 29.4	-0.1
MBWA	Marble Bar	26.31	198	eP	P	20 03 43.4	+0.2
	comp=Z,38nm,1.2s,mb4.8						
CBIJ	Chichi jima	26.62	29	P	P	20 03 45.8	-0.2
	comp=Z,54nm,0.4s,mb5.4,baz=277,slow=8.8,SNR=11						
CBIJ				LR	LR	20 11 49.3	
	comp=Z,191nm,21.8s,MS3.6,baz=356,slow=31						
IPM	Ipoh	27.03	272	P	P	20 03 48.4	-1.5
JNU	Nakatsue	29.10	5	P	P	20 04 06.8	-1.4
	comp=Z,10nm,0.8s,mb4.6,baz=114,slow=14,SNR=6.7						
JNU				LR	LR	20 13 49.5	
	comp=Z,98nm,19.0s,MS3.4,baz=359,slow=32						
WHN	Wuhan	29.44	335	⇓P	P	20 04 12.5	+1.1
CTA	Charters Tower	29.83	144	LR	LR	20 14 43.8	
	comp=Z,106nm,20.5s,MS3.5,baz=139,slow=33						
GYA	Guiyang	30.35	320	⇑iP	P	20 04 21.4	+1.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
ENH	Enshi	31.52	328	eP	P	20 04 29.8	0.0
	comp=Z,18nm,0.8s,mb4.9						
CM31	Chiang Mai Arr	31.95	299	eP	P	20 04 33.4	-0.2
	comp=Z,30nm,0.7s,mb5.2						
CMAR	Chiang Mai Arr	31.95	299	P	P	20 04 33.1	-0.6
CMAR				pmax	pmax		
	comp=Z,29nm,0.7s						
CMAR				MLR	MLR		
	comp=Z,82nm,19.0s						
CMAR	Chiang Mai Arr	31.95	299	P	P	20 04 33.0	-0.6
	comp=Z,29nm,0.7s,mb5.2,baz=110,slow=7.0,SNR=148						
CMAR				LR	LR	20 18 55.4	
	comp=Z,82nm,19.0s,MS3.4,baz=120,slow=39						
KMI	Kunming	32.20	313	P	P	20 04 36.3	+0.5
KMI				AP	pP	20 04 49.5	+1.0
KMI				PP	PP	20 05 43.3	-0.5
KMI				S	S	20 09 42.4	-1.8
KMI				SCS	ScS	20 15 00.6	+1.1
KMI				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
KMI				AMB	AMB		
	comp=Z,80nm,5.0s						
KMI				LR	LR		
	comp=N,110nm,7.1s						
KMI				LR	LR		
	comp=E,90nm,8.9s						
KMI				LR	LR		
	comp=Z,110nm,9.4s						
KMI	Kunming	32.20	313	P	P	20 04 36.2	+0.4
KMI				*SP	sP	20 04 55.1	+0.5
KMI						20 05 43.2	
KMI				PPP	PPP	20 05 59.2	0.0
KMI						20 07 25.7	
KMI				S	S	20 09 42.4	-1.8
KMI				SS	SS	20 11 36.2	-4.1
KMI				SSS	SSS	20 12 00.0	-4.4
KMI						20 15 00.6	
KMI				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.1						
KMI	Kunming	32.20	313	P	P	20 04 36.2	+0.4
	comp=Z,26nm,0.9s,mb5.1						
KMI				pP	pP	20 04 49.5	+1.0
KMI				sP	sP	20 04 55.1	+0.5
KMI				PP	PP	20 05 43.2	-0.6
KMI				PPP	PPP	20 05 59.2	0.0
KMI				PcP	PcP	20 07 25.7	+2.0
KMI				S	S	20 09 42.4	-1.8
KMI				sS		20 10 05.2	
KMI				ScP		20 11 03.7	
KMI				PcS		20 11 09.3	
KMI				SS	SS	20 11 36.2	-4.1
KMI				SSS	SSS	20 12 00.0	-4.4
KMI				ScS	ScS	20 15 00.6	+1.1
KS15	Wonju Array Si	33.29	360	eP	P	20 04 44.5	-0.6
MAJO	Matsushiro	33.70	15	eP	P	20 04 46.3	-2.4
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
MAJO	Matsushiro	33.70	15	eP	P	20 04 46.3	-2.4
	comp=Z,10.0nm,0.6s,mb4.9						
MAT	Matsushiro	33.70	15	eP	P	20 04 47.0	-1.7
MAT				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
MAT	Matsushiro	33.70	15	eP	P	20 04 47.0	-1.7
	comp=Z,6.2nm,0.7s,mb4.7						
MAT	Matsushiro	33.70	15	P	P	20 04 47.1	-1.6
MJAR	Matsushiro Arr	33.70	15	P	P	20 04 47.1	-1.5
MJAR						20 07 27.6	
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR				MLR	MLR		
	comp=Z,183nm,20.9s						
MJAR	Matsushiro Arr	33.70	15	P	P	20 04 47.0	-1.6
	comp=Z,5.9nm,0.6s,mb4.7,baz=181,slow=10.0,SNR=36						
MJAR				PcP	PcP	20 07 27.6	-0.1
	comp=Z,2.0nm,0.7s,baz=190,slow=3.1,SNR=6.9						
MJAR				LR	LR	20 16 25.0	
	comp=Z,183nm,20.9s,MS3.8,baz=185,slow=32						
XAN	Xi’an	34.83	331	P	P	20 04 57.4	-1.0
XAN				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.3						
XAN				LR	LR		
	comp=N,170nm,15.9s,MS4.1						
XAN				LR	LR		
	comp=E,200nm,17.5s,MS4.1						
XAN				LR	LR		
	comp=Z,220nm,20.7s,MS3.9						
CD2	Chengdu	35.27	322	eP	P	20 05 02.9	+0.7
CD2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
KLBR	Kellerberrin	36.73	195	eP	P	20 05 14.1	-0.4
	comp=Z,97nm,1.8s,mb5.3						
KLBR				i PCP	PcP	20 07 36.4	-0.2
MUN	Mundaring	37.52	197	⇓iP	P	20 05 21.2	+0.1
	comp=Z,7.5nm,0.5s,mb4.7						
MUN	Mundaring	37.52	197	⇓iP	P	20 05 21.2	+0.1
MUN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.7						
SNY	Shenyang	37.89	354	⇓P	P	20 05 25.0	+0.9
SNY				LR	LR		
	comp=N,180nm,16.5s						
SNY				LR	LR		
	comp=Z,160nm,15.9s,MS3.9						
STKA	Stephens Creek	37.90	161	P	P	20 05 24.9	+0.6
	comp=Z,11nm,0.4s,mb4.9,baz=334,slow=8.4,SNR=51						
STKA				LR	LR	20 20 56.9	
	comp=Z,157nm,21.4s,MS3.8,baz=120,slow=36						
NWAO	Narrogin (SRO)	38.14	195	P	P	20 05 26.5	+0.2
NWAO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NWAO	Narrogin (SRO)	38.14	195	P	P	20 05 26.5	+0.2
	comp=Z,9.2nm,0.6s,mb4.7,baz=332,slow=3.1,SNR=9.4						
NWAO	Narrogin (SRO)	38.14	195	eP	P	20 05 26.1	-0.1
	comp=Z,26nm,1.1s,mb4.9						
LZH	Lanzhou	39.00	328	⇑P	P	20 05 34.8	+1.4
LZH				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,140nm,5.8s						
LZH				LR	LR		
	comp=N,700nm,15.0s						
LZH				LR	LR		
	comp=Z,980nm,17.5s,MS4.7						
LZH	Lanzhou	39.00	328	⇑P	P	20 05 34.8	+1.4
	comp=Z,35nm,1.4s,mb4.9						
LZH				pP	pP	20 05 45.1	-1.2
LZH				sP	sP	20 05 49.3	-3.0
LZH				PP	PP	20 07 31.5	+24
LZH				eS	S	20 12 03.0	+34
LZH				sS		20 12 29.7	
LZH				LR	LR		
	comp=Z,990nm,17.5s,MS4.7						
HHC	Hu-ho-hao-te	39.61	340	eP	P	20 05 39.5	+1.1
HHC				PP	PP	20 07 19.3	+5.7
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,110nm,6.1s						
HHC				LR	LR		
	comp=N,760nm,17.8s,MS4.7						
HHC				LR	LR		
	comp=E,390nm,15.9s,MS4.7						
HHC				LR	LR		
	comp=Z,850nm,18.2s,MS4.6						
MDJ	Mudanjiang	40.48	2	P	P	20 05 46.6	+1.0
MDJ				PP	PP	20 07 22.3	-0.3
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,80nm,4.2s						
MDJ				LR	LR		
	comp=E,130nm,23.2s						
MDJ				LR	LR		
	comp=Z,80nm,21.1s,MS3.5						
MDJ	Mudanjiang	40.48	2	eP	P	20 05 46.1	+0.5
	comp=Z,12nm,0.8s,mb4.7						
SHL	Shillong	40.85	305	⇑iP	P	20 05 49.0	+0.2
ASAJ	Asahikawa	41.95	16	P	P	20 05 58.5	+0.8
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ASAJ	Asahikawa	41.95	16	P	P	20 05 58.5	+0.8
	comp=Z,8.0nm,0.6s,mb4.5,baz=208,slow=10,SNR=18						
LSA	Lhasa	43.32	310	eP	P	20 06 10.2	+1.1
LSA				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.8						
LSA	Lhasa	43.32	310	eP	P	20 06 10.2	+1.1
	comp=Z,13nm,0.7s,mb4.8						
GTA	Gaotai	43.60	328	P	P	20 06 09.4	-1.9
GTA				AMB	AMB		
	comp=Z,130nm,6.1s						
GTA				LR	LR		
	comp=N,170nm,15.3s,MS4.4						
GTA				LR	LR		
	comp=E,300nm,14.9s,MS4.4						
GTA				LR	LR		
	comp=Z,370nm,22.5s						
KLR	Kul’dur	45.18	3	eP	P	20 06 21.2	-2.6
DZM	Mont Dzumac	45.56	126	P	P	20 06 28.1	+0.9
	comp=Z,3.5nm,0.8s,mb4.3,baz=275,slow=18,SNR=2.6						
GUN	Gumba	46.70	305	eP	P	20 06 37.5	+1.4
	comp=Z,93nm,0.7s,mb5.8						
PKI	Pulchoki	46.96	305	eP	P	20 06 37.9	-0.3
	comp=Z,30nm,0.9s,mb5.2						
PKI	Pulchoki	46.96	305	eP	P	20 06 37.9	-0.3
PKI				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
KKN	Kakani	47.15	305	eP	P	20 06 40.1	+0.5
	comp=Z,31nm,0.7s,mb5.3						
KKN	Kakani	47.15	305	eP	P	20 06 40.1	+0.5
KKN				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
DMN	Daman	47.22	304	eP	P	20 06 40.1	-0.1
	comp=Z,28nm,0.8s,mb5.2						
ULN	Ulaanbaatar	47.32	341	eP	P	20 06 40.6	-0.1
ULN				e*PP	pP	20 06 54.0	+0.2
ULN				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
ULN	Ulaanbaatar	47.32	341	eP	P	20 06 40.6	-0.1
	comp=Z,25nm,0.9s,mb5.1						
ULN				epP	pP	20 06 54.0	+0.2
SONM	Songino Array	47.51	340	P	P	20 06 42.4	+0.2
	comp=Z,6.4nm,0.7s,mb4.8,baz=153,slow=9.4,SNR=50						
SONM				PcP	PcP	20 08 11.8	-0.3
	comp=Z,2.1nm,0.8s,baz=171,slow=3.4,SNR=2.9						
GKN	Gorkha	47.76	305	eP	P	20 06 45.4	+1.0
	comp=Z,15nm,0.4s,mb5.4						
KOLN	Koldanda	48.52	304	eP	P	20 06 49.0	-1.4
	comp=Z,85nm,0.7s,mb5.9						
CIT	Chita	49.38	348	eP	P	20 06 57.2	+0.5
CIT				e	pP	20 07 09.9	+0.1
CIT				e		20 07 21.7	
CIT				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.3						
ZAK	Zakamensk	50.75	340	⇑iP	P	20 07 06.6	-0.5
ZAK				e		20 08 23.5	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
TLY	Talaya	51.73	341	eP	P	20 07 13.5	-1.0
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
TLY	Talaya	51.73	341	eP	P	20 07 13.5	-0.9
	comp=Z,8.1nm,0.9s,mb4.7						
MOY	Mondy	52.62	339	eP	P	20 07 21.7	+0.5
WMQ	Urumqi	53.32	324	P	P	20 07 26.8	+0.3
WMQ				PCP	PcP	20 08 33.8	+0.3
WMQ				PP	PP	20 09 29.3	+0.8
WMQ				PPP	PPP	20 10 37.0	+0.8
WMQ				eS	S	20 14 49.3	-3.6
WMQ				SCS	ScS	20 17 03.3	-4.9
WMQ				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,230nm,6.0s						
WMQ				LR	LR		
	comp=N,760nm,18.5s,MS4.9						
WMQ				LR	LR		
	comp=E,720nm,21.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,730nm,20.2s,MS4.7						
YAK	Yakutsk	57.92	1	⇑iP	P	20 07 58.6	-0.7
YAK				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.5						
YAK				pmax	pmax		
	comp=N,20nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK	Yakutsk	57.92	1	eP	P	20 07 58.3	-1.1
	comp=E,112nm,0.8s						
MKAR	Makanchi Array	58.14	325	eP	P	20 08 00.6	-0.5
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MKAR	Makanchi Array	58.14	325	P	P	20 08 00.4	-0.7
	comp=Z,22nm,0.5s,mb5.4,baz=117,slow=8.1,SNR=195						
KZA	Kyzart	60.37	317	P	P	20 08 17.4	+0.8
	SNR=13						
TKM2	Tokmak 2	60.48	318	P	P	20 08 17.1	-0.2
	SNR=16						
UCH	Uchtor	60.93	317	P	P	20 08 21.1	+0.7
	SNR=17						
ZAL	Zalesovo	61.00	332	P	P	20 08 19.9	-0.8
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZAL	Zalesovo	61.00	332	P	P	20 08 19.9	-0.8
	comp=Z,3.8nm,0.6s,mb4.7,baz=343,slow=7.6,SNR=8.4						
CHMS	Chumysh	61.08	318	P	P	20 08 20.4	-1.0
	SNR=5.8						
AAK	Ala-Archa	61.10	317	P	P	20 08 20.8	-0.7
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
AAK	Ala-Archa	61.10	317	eP	P	20 08 19.6	-2.0
	comp=Z,3.8nm,0.6s,mb4.7						
FX1	Attu Island--F	61.17	29	eP	P	20 08 23.6	+1.8
USP	Ospenovka	61.35	318	P	P	20 08 22.7	-0.5
	SNR=21						
AML	Almayashu	61.45	316	P	P	20 08 24.4	+0.4
	SNR=12						
EKS2	Erkin-Say	61.60	317	P	P	20 08 25.2	+0.3
	SNR=16						
KKAR	Karatay Array	64.00	317	i P	P	20 08 39.8	-1.0
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
VOSK	Vostochnaya	67.41	326	P	P	20 09 01.0	-1.4
VOSK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
TIXI	Tiksi	67.57	0	⇓iP	P	20 08 59.9	-3.2
TIXI				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.3						
BVA0	Borovoye Array	67.87	327	i P	P	20 09 04.4	-0.8
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
BVAR	Borovoye Array	67.87	327	P	P	20 09 04.2	-1.0
	comp=Z,8.7nm,0.6s,mb5.0,baz=127,slow=8.7,SNR=37						
ZRNK	Zerenda	68.60	326	P	P	20 09 08.8	-1.0
ZRNK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
BILL	Bilibino	68.95	14	eP	P	20 09 11.1	-0.6
BILL				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
BILL	Bilibino	68.95	14	eP	P	20 09 10.4	-1.3
	comp=Z,5.4nm,0.8s,mb4.5						
CASY	Casey	71.25	187	eP	P	20 09 26.1	+0.4
	comp=Z,51nm,1.5s,mb5.2						
UNV	Unalaska Valle	72.42	34	eP	P	20 09 33.6	+0.7
	comp=Z,14μm,1.2s						
SVE	Sverdlovsk	74.47	328	eP	P	20 09 44.0	-0.8
SVE				e		20 10 12.0	
ARU	Arti	75.46	327	eP	P	20 09 49.3	-1.2
ARU	Arti	75.46	327	eP	P	20 09 49.0	-1.6
	comp=Z,14nm,0.6s,mb5.1						
RSO	Redoubt South	81.18	30	eP	P	20 10 22.0	+0.2
MZLS	Mizel	81.92	294	P	P	20 10 26.8	+0.3
OPO	Ambohidratompo	82.69	251	P	P	20 10 30.7	+0.3
	comp=Z,2.1nm,0.7s,mb4.3,baz=85,slow=8.3,SNR=4.2						
ZEI	Tsey	83.07	312	eP	P	20 10 31.5	-0.4
ZEI				i *PP	pP	20 10 58.4	+12
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
SML	Sawmill	83.45	28	eP	P	20 10 34.3	+0.9
SML				e*PP	pP	20 10 49.1	+1.5
VNDA	Vanda	83.51	173	P	P	20 10 34.4	+1.0
VNDA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
VNDA	Vanda	83.51	173	P	P	20 10 34.4	+0.9
	comp=Z,4.0nm,0.7s,mb4.7,baz=318,slow=5.5,SNR=23						
VNDA	Vanda	83.51	173	eP	P	20 10 33.9	+0.5
	comp=Z,7.9nm,1.0s,mb4.8						
TATS	Tathlith	83.64	289	P	P	20 10 36.1	+0.7
DJNS	Zahran al Janu	83.64	287	P	P	20 10 36.7	+1.3
ARSS	Ar Rass	83.68	295	P	P	20 10 35.3	-0.1
ILAR	Eielson Array	84.27	25	P	P	20 10 37.8	+0.3
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ILAR				MLR	MLR		
	comp=Z,48nm,20.0s						
ILAR	Eielson Array	84.27	25	P	P	20 10 37.8	+0.3
	comp=Z,2.5nm,0.5s,mb4.6,baz=252,slow=5.4,SNR=22						
ILAR				LR	LR	20 46 42.9	
	comp=Z,48nm,20.0s,MS3.9,baz=358,slow=34						
MAW	Mawson	84.48	200	P	P	20 10 38.8	+0.3
MAW				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MAW	Mawson	84.48	200	P	P	20 10 38.8	+0.3
	comp=Z,6.5nm,0.7s,mb4.9,baz=85,slow=6.4,SNR=5.7						
DIV	Divide	84.65	29	eP	P	20 10 41.0	+1.5
	comp=Z,192nm,1.1s,mb6.1						
DIV				epP	pP	20 10 55.9	+2.3
HILS	Ha’il	84.93	297	P	P	20 10 42.6	+0.9
BLJS	Baljurashi	85.39	290	P	P	20 10 45.3	+1.2
OBN	Obninsk	87.65	325	eP	P	20 11 02.7	+8.4
OBN				e	pP	20 11 17.4	+8.8
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
ASF	Jabal al Asfar	88.94	302	P	P	20 11 00.4	-0.6
	comp=Z,1.5nm,0.5s,mb4.6,baz=129,slow=6.5,SNR=2.8						
INK	Inuvik	89.41	22	P	P	20 11 02.2	-0.2
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
INK	Inuvik	89.41	22	P	P	20 11 02.2	-0.2
	comp=Z,3.2nm,0.8s,mb4.7,baz=267,slow=2.0,SNR=3.8						

INK	**Inuvik**	**89.41**	**22**	P	**P**	**20 11 02.2**	**-0.2**
JMQS	**Jabal Moqyreh**	**90.06**	**299**	P	**P**	**20 11 06.7**	**+0.3**
AYUS	**‘Aynunah**	**90.65**	**298**	P	**P**	**20 11 09.1**	**0.0**
ARCES	**ARCESS Array B**	**90.69**	**340**	P	**P**	**20 11 07.4**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ARCES	**ARCESS Array B**	**90.69**	**340**	P	**P**	**20 11 07.3**	**-1.0**
	comp=Z,3.8nm,0.7s,mb4.8,baz=89,slow=6.0,SNR=20						
JMOS	**Jabal al Moall**	**90.71**	**299**	P	**P**	**20 11 09.5**	**+0.1**
BRTR	**Keskin Array B**	**90.93**	**310**	P	**P**	**20 11 08.8**	**-1.4**
	comp=Z,0.4nm,0.6s,mb4.0,baz=68,slow=7.8,SNR=4.1						
KAF	**Kangasniemi**	**92.01**	**333**	*e*p	**P**	**20 11 12.9**	**-1.7**
FINES	**FINESS Array B**	**92.26**	**332**	P	**P**	**20 11 14.4**	**-1.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**92.26**	**332**	P	**P**	**20 11 14.4**	**-1.3**
	comp=Z,0.5nm,0.4s,mb4.2,baz=56,slow=6.9,SNR=3.4						
AKASG	**Malin Array Be**	**92.57**	**321**	P	**P**	**20 11 15.7**	**-1.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**92.57**	**321**	P	**P**	**20 11 15.7**	**-1.8**
	comp=Z,1.0nm,0.6s,mb4.4,baz=62,slow=5.4,SNR=4.4						
DLBC	**Dease Lake**	**92.81**	**31**	LR	LR	20 51 40.0	
	comp=Z,39nm,18.7s,MS3.9,baz=79,slow=35						
SYO	**Syowa Base**	**93.17**	**201**	⇓P	**P**	**20 11 19.5**	**-0.3**
SYO	**Syowa Base**	**93.17**	**201**	⇓sP	sP	20 11 41.0	+1.9
QSPA	**South Pole Qui**	**93.89**	**180**	⇑*i*P	**P**	**20 11 24.4**	**+1.6**
	comp=Z,11nm,0.9s,mb5.3						
HFS	**Hagfors**	**98.43**	**333**	P	**P**	**20 11 42.4**	**-1.5**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	**Hagfors**	**98.43**	**333**	P	**P**	**20 11 42.4**	**-1.5**
	comp=Z,0.8nm,0.5s,mb4.5,baz=72,slow=4.6,SNR=5.7						
YKA	**Yellowknife Ar**	**98.69**	**25**	LR	LR	20 51 57.6	
	comp=Z,44nm,20.9s,MS3.9,baz=210,slow=33						
NB2	**NORSAR Subarra**	**99.17**	**334**	P	**P**	**20 11 46.7**	**-0.5**
	comp=Z,0.9nm,0.8s,mb4.3,baz=68,slow=4.5						
NB2	**NORSAR Subarra**	**99.17**	**334**	P	**P**	**20 11 46.7**	**-0.5**
	baz=68,slow=4.4						
NOA	**NORSAR Array B**	**99.17**	**334**	P	**P**	**20 11 47.4**	**+0.2**
	comp=Z,0.3nm,0.6s,mb4.0,baz=45,slow=3.9,SNR=2.7						
NOA				LR	LR	20 59 52.9	
	comp=Z,26nm,19.1s,MS3.8,baz=40,slow=37						
MATP	**Matopo**	**100.39**	**250**	P	P	20 11 53.6	-0.1
	comp=Z,2.0nm,0.9s,baz=82,slow=7.1,SNR=3.4						
PDAR	**Pinedale Array**	**110.24**	**42**	PKKPab		20 27 50.1	
	comp=Z,1.0nm,0.7s,baz=90,slow=4.5,SNR=7.2						
TXAR	**Lajitas Array**	**120.34**	**53**	PKKPbc		20 27 05.6	
	comp=Z,0.4nm,0.7s,baz=149,slow=5.3,SNR=4.6						
CFAA	**Coronel Fontan**	**148.52**	**153**	PKPbc	PKPdf	20 17 55.6	+7.3
	comp=Z,0.6nm,0.5s,baz=221,slow=4.0,SNR=13						
CPUP	**Villa Florida**	**157.18**	**167**	PKPab	PKPab	20 18 34.7	+0.5
	comp=Z,2.9nm,0.9s,baz=218,slow=3.5,SNR=4.9						
SIV	**San Ignacio**	**165.03**	**143**	PKP	PKPdf	20 18 12.0	+2.6
	comp=Z,1.0nm,0.7s,baz=209,slow=4.5,SNR=6.0						
SIV				PKPab	PKPab	20 19 09.6	+1.1
	comp=Z,0.5nm,0.6s,baz=222,slow=12,SNR=4.0						
BDFB	**Brasilia**	**167.81**	**198**	PKPab	PKPab	20 19 20.7	+0.2
	comp=Z,1.0nm,0.4s,baz=117,slow=4.6,SNR=3.2						

*NEIC **18** 20:24:50.7,31.83S×72.10W,h26^{km},ML3.0(GUC),After GUC.*

GUC 18 20:24:50.7±0.4**,31.83S×72.10W,h26**^{km}±2^{km}**,MD3.5, ML3.0,2C,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCH	**El Roble**	**1.47**	**141**	*e*P	Pn	20 25 16.3	+0.4
ROCH				*i* S	Sn	20 25 35.9	+1.5
JACH	**Jahuel**	**1.53**	**124**	⇑*i*P	Pn	20 25 16.9	+0.1
JACH				*i* S	Sn	20 25 37.3	+1.1
LCCH	**Las Cruces**	**1.70**	**165**	*e*P	Pn	20 25 19.4	+0.2
CLCH	**Cerro Calan**	**2.04**	**140**	⇑*i*P	Pn	20 25 25.0	+0.8
CLCH				*i* S	Sn	20 25 50.9	+1.8
CLCH				AMP		20 26 01.7	
	comp=N,160nm,0.5s						
TACH	**Talagante**	**2.07**	**152**	*i* P	Pn	20 25 25.3	+0.8
TACH				*i* S	Sn	20 25 50.9	+1.2
SFDO	**San Fernando**	**2.92**	**162**	*e*P	Pn	20 25 36.9	+0.2

*IDC **18** 20:26:09.9±0.8,1.03N×97.22E,mb4.3/15,mb1 4.4/16, mb1mx4.3/22,mbtmp4.3/16,ML4.8/1,MS4.1/13,Ms1 4.1/13, ms1mx3.9/27,Error ellipse: s-maj=35.1km s-min=15.9km az=50.0*

*BJI **18** 20:26:12.3,0.95N×97.51E,h31^{km},mB5.0,mb4.8,Ms4.6, Msz4.5*

*MOS **18** 20:26:13.1±1.0,1.07N×97.34E,h33^{km},mb4.7/21, MS4.1/9,Error ellipse: s-maj=19.5km s-min=8.2km az=103.5*

*NEIC **18** 20:26:14.5±0.5,1.04N×97.28E,h30^{km},mb4.6/19,Error ellipse: s-maj=11.0km s-min=8.3km az=217.0*

ISC 18 20:26:13.1±0.5**,1.09N**±0.06×**97.34E**±0.05**,h32**^{km}**, h32**^{km}±3.1^{km}**:pP-P,n103,**σ**1^{s}05**/98**,mb4.5**/44**,MS4.3**/23**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**5.06**	**47**	P	**Pn**	**20 27 30.5**	**+1.6**
KULM	**Kulim**	**5.33**	**38**	*e*Pn	**Pn**	**20 27 33.1**	**+0.5**
KULM				*e*		20 27 42.0	
KGM	**Kluang**	**6.05**	**81**	P	**Pn**	**20 27 44.6**	**+1.8**
CM31	**Chiang Mai Arr**	**17.33**	**5**	*e*P	**P**	**20 30 13.5**	**-1.0**
	4.9nm,0.5s						
CM31				*e*pP		20 30 22.1	
CMAR	**Chiang Mai Arr**	**17.33**	**5**	P	**P**	**20 30 13.9**	**-0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,371nm,20.9s						
CMAR	**Chiang Mai Arr**	**17.33**	**5**	P	**P**	**20 30 13.8**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=194,slow=11,SNR=56						
CMAR				PcP	PcP	20 34 58.0	+1.4
	baz=219,slow=2.9,SNR=4.2						
CMAR				LR	LR	20 36 53.3	
	comp=Z,370nm,20.9s,baz=195,slow=37						
PALK	**Pallekele**	**17.68**	**291**	P	**P**	**20 30 15.6**	**-3.3**
	comp=Z,84nm,1.7s						
KKM	**Kota Kinabalu**	**19.47**	**75**	*e*P	**P**	**20 30 40.0**	**-0.5**
TSM	**Tawau**	**20.76**	**81**	P	**P**	**20 30 54.1**	**0.0**
QIZ	**Qiongzhong**	**21.64**	**34**	P	**P**	**20 31 01.3**	**-1.7**
QIZ				XP		20 31 16.3	
QIZ				S	**S**	**20 34 55.8**	**+0.1**
QIZ				XS		20 35 13.4	
QIZ				LR	LR		
	comp=N,540nm,15.7s,MS4.1						
QIZ				LR	LR		
	comp=E,390nm,16.8s,MS4.1						
QIZ				LR	LR		
	comp=Z,540nm,14.6s,MS4.1						
QIZ	**Qiongzhong**	**21.64**	**34**	*e*P	**P**	**20 31 02.6**	**-0.4**
	comp=Z,25nm,1.2s,mb4.5						
KMI	**Kunming**	**24.46**	**12**	P	**P**	**20 31 32.3**	**+1.6**
KMI				AP		20 31 38.1	
KMI				XP		20 31 40.3	
KMI				AMB	AMB		
	comp=Z,30nm,1.5s,mb4.5						
KMI				AMB	AMB		
	comp=Z,260nm,3.1s						
KMI				LR	LR		
	comp=N,1µm,16.0s,MS4.5						
KMI				LR	LR		
	comp=E,540nm,14.5s,MS4.5						
KMI				LR	LR		
	comp=Z,1µm,14.5s,MS4.6						
KMI	**Kunming**	**24.46**	**12**	P	**P**	**20 31 32.3**	**+1.6**
KMI				*SP		20 31 40.3	
KMI						20 32 18.1	
KMI				pmax	pmax		
	comp=Z,38nm,1.5s,mb4.6						
KMI				MLR	MLR		
	comp=Z,1µm,14.5s,MS4.6						
SHL	**Shillong**	**24.90**	**348**	*e*P	**P**	**20 31 36.0**	**+1.1**
GYA	**Guiyang**	**26.77**	**19**	P	**P**	**20 31 52.4**	**+0.1**
GYA				AP	pP	20 32 01.4	-0.2
GYA				XP	sP	20 32 05.9	+0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
GYA				AMB	AMB		
	comp=Z,140nm,5.7s						
GYA				LR	LR		
	comp=N,400nm,19.2s,MS4.3						
GYA				LR	LR		
	comp=E,740nm,16.2s,MS4.3						
GYA				LR	LR		
	comp=Z,490nm,18.6s,MS4.1						
PKI	**Pulchoki**	**28.71**	**338**	*e*P	**P**	**20 32 12.0**	**+2.2**
	comp=Z,17nm,0.7s,mb4.9						
PKI	**Pulchoki**	**28.71**	**338**	*e*P	**P**	**20 32 12.0**	**+2.2**
PKI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
GUN	**Gumba**	**28.84**	**339**	*e*P	**P**	**20 32 12.2**	**+1.2**
	comp=Z,155nm,1.4s,mb5.5						
DMN	**Daman**	**28.86**	**337**	*e*P	**P**	**20 32 13.6**	**+2.4**
	comp=Z,22nm,1.0s,mb4.9						
KKN	**Kakani**	**28.95**	**338**	*e*P	**P**	**20 32 13.0**	**+1.0**
	comp=Z,27nm,0.9s,mb5.0						
KKN	**Kakani**	**28.95**	**338**	*e*P	**P**	**20 32 13.0**	**+1.0**
KKN				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
LSA	**Lhasa**	**29.06**	**349**	*e*P	**P**	**20 32 14.0**	**+1.1**
LSA	**Lhasa**	**29.06**	**349**	*e*P	**P**	**20 32 13.7**	**+0.8**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.6						
LSA	**Lhasa**	**29.06**	**349**	*e*P	**P**	**20 32 13.7**	**+0.8**
	comp=Z,5.2nm,0.4s,mb4.6						
GKN	**Gorkha**	**29.39**	**337**	*e*P	**P**	**20 32 16.2**	**+0.2**
	comp=Z,44nm,1.1s,mb5.1						
KOLN	**Koldanda**	**29.61**	**335**	*e*P	**P**	**20 32 18.6**	**+0.6**
	comp=Z,22nm,0.8s,mb5.0						
ENH	**Enshi**	**31.23**	**21**	*e*P	**P**	**20 32 30.9**	**-1.4**
	comp=Z,7.5nm,0.5s,mb4.8						
LGTI	**Lohaghat**	**32.57**	**332**	*e*P	**P**	**20 32 44.7**	**+0.8**
FITZ	**Fitzroy Crossi**	**33.75**	**126**	P	**P**	**20 32 53.7**	**-0.6**
	comp=Z,4.5nm,0.7s,mb4.5,baz=148,slow=1.6,SNR=7.0						
XAN	**Xi’an**	**34.53**	**17**	P	**P**	**20 32 59.6**	**-1.3**
XAN				AP	pP	20 33 05.4	-4.9
XAN				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
XAN				LR	LR		
	comp=N,250nm,13.4s,MS4.4						
XAN				LR	LR		
	comp=E,340nm,12.7s,MS4.4						
XAN				LR	LR		
	comp=Z,570nm,12.7s,MS4.5						
GTA	**Gaotai**	**38.21**	**3**	P	**P**	**20 33 32.0**	**+0.1**
GTA				AP	pP	20 33 44.3	+2.9
GTA				XP	sP	20 33 48.6	+3.2
GTA				PP	PP	20 35 03.0	+0.2
GTA				PPP	PPP	20 35 23.9	-1.2
GTA				PCP	PcP	20 35 47.4	+1.0
GTA				S	**S**	**20 39 20.0**	**-2.9**
GTA				SCP		20 39 26.8	
GTA				XS		20 39 41.8	
GTA				SS	SS	20 41 59.3	-2.8
GTA				SCS	ScS	20 43 38.1	-0.6
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,100nm,10.3s						
GTA				LR	LR		
	comp=N,320nm,18.3s,MS4.3						
GTA				LR	LR		
	comp=E,240nm,15.7s,MS4.3						
GTA				LR	LR		
	comp=Z,450nm,17.2s,MS4.3						
NWAO	**Narrogin (SRO)**	**38.70**	**153**	LR	LR	20 49 01.1	
	comp=Z,375nm,18.8s,MS4.2,baz=261,slow=35						
WRA	**Warramunga Arr**	**41.86**	**122**	P	**P**	**20 34 02.1**	**-0.2**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**41.86**	**122**	P	**P**	**20 34 02.1**	**-0.3**
	comp=Z,1.8nm,0.7s,mb3.8,baz=300,slow=9.1,SNR=24						
WRAB	**Tennant Creek**	**41.87**	**122**	*e*P	**P**	**20 34 02.6**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
WRAB	**Tennant Creek**	**41.87**	**122**	*e*P	**P**	**20 34 02.6**	**+0.2**
	comp=Z,9.9nm,0.9s,mb4.4						
WMQ	**Urumqi**	**43.41**	**350**	*e*P	**P**	**20 34 15.0**	**+0.4**
WMQ				AP	pP	20 34 24.8	+0.6
WMQ				XP	sP	20 34 28.3	+0.1
WMQ				PP	PP	20 35 58.3	+0.8
WMQ				PCP	PcP	20 36 03.6	+0.4
WMQ				PPP	PPP	20 36 34.1	+0.4
WMQ				*e*S	**S**	**20 40 40.4**	**+0.2**
WMQ				SCS	ScS	20 44 09.8	+0.2
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,250nm,6.0s						
WMQ				LR	LR		
	comp=N,710nm,22.0s,MS4.7						
WMQ				LR	LR		
	comp=E,750nm,22.6s,MS4.7						
WMQ				LR	LR		
	comp=Z,720nm,24.0s,MS4.5						
JNU	**Nakatsue**	**44.80**	**41**	LR	LR	20 55 27.7	
	comp=Z,203nm,18.0s,MS4.1,baz=180,slow=39						
KS15	**Wonju Array Si**	**45.83**	**34**	*e*P	**P**	**20 34 34.9**	**+0.7**
SONM	**Songino Array**	**47.22**	**8**	P	**P**	**20 34 45.4**	**+0.4**
	comp=Z,8.5nm,0.5s,mb4.9,baz=191,slow=9.4,SNR=38						
SONM				PcP	PcP	20 36 16.6	+0.2
	comp=Z,2.7nm,0.7s,baz=190,slow=3.6,SNR=6.9						
SONM				LR	LR	20 57 21.5	
	comp=Z,599nm,18.1s,MS4.6,baz=194,slow=40						
ULN	**Ulaanbaatar**	**47.35**	**9**	*e*P	**P**	**20 34 46.1**	**0.0**
ULN				*e*		20 36 15.6	
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
ULN	**Ulaanbaatar**	**47.35**	**9**	*e*P	**P**	**20 34 46.1**	**+0.1**
	comp=Z,5.1nm,0.6s,mb4.6						
ULN				*e*PcP	PcP	20 36 15.6	-1.3
MKAR	**Makanchi Array**	**47.38**	**346**	P	**P**	**20 34 46.7**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,110nm,19.3s						
MKAR	**Makanchi Array**	**47.38**	**346**	P	**P**	**20 34 46.7**	**+0.4**
	comp=Z,6.3nm,0.7s,mb4.7,baz=160,slow=8.6,SNR=78						
MKAR				LR	LR	20 58 28.0	
	comp=Z,110nm,19.3s,MS3.8,baz=170,slow=41						
MKAR	**Makanchi Array**	**47.38**	**346**	P	**P**	**20 34 46.7**	**+0.4**
MKAR				LR	LR	20 58 28.0	
KKAR	**Karatay Array**	**48.22**	**334**	P	**P**	**20 34 52.4**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
CN2	**Changchun**	**49.34**	**27**	*e*P	**P**	**20 35 01.4**	**-0.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
ZAK	**Zakamensk**	**49.37**	**5**	*e*P	**P**	**20 35 01.5**	**-0.2**
ZAK				*e*		20 36 23.4	
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
TLY	**Talaya**	**50.69**	**5**	*e*P	**P**	**20 35 12.3**	**+0.6**
TLY				*e*		20 42 39.5	
TLY				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
TLY				MLR	MLR		
	comp=Z,339nm,18.0s,MS4.4						
MJAR	**Matsushiro Arr**	**51.68**	**42**	P	**P**	**20 35 19.1**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MJAR				MLR	MLR		
	comp=Z,90nm,18.9s						
MJAR	**Matsushiro Arr**	**51.68**	**42**	P	**P**	**20 35 19.1**	**-0.4**
	comp=Z,0.8nm,0.5s,mb3.9,baz=219,slow=7.6,SNR=6.4						
MJAR				LR	LR	20 57 25.8	
	comp=Z,90nm,18.9s,MS3.8,baz=245,slow=36						
HIA	**Hailar**	**51.70**	**19**	*e*P	**P**	**20 35 19.1**	**-0.3**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HIA	**Hailar**	**51.70**	**19**	*e*P	**P**	**20 35 19.1**	**-0.3**
	comp=Z,8.3nm,0.6s,mb4.8						
MDJ	**Mudanjiang**	**51.90**	**29**	P	**P**	**20 35 19.8**	**-1.2**
MDJ				AP	pP	20 35 29.8	-1.0
MDJ				XP	sP	20 35 35.3	+0.8
MDJ				PP	PP	20 37 20.1	+0.6
MDJ				S	**S**	**20 42 48.8**	**+8.7**
MDJ				AMB	AMB		
	comp=Z,50nm,3.9s						
MDJ				LR	LR		
	comp=N,130nm,17.4s,MS4.1						
MDJ				LR	LR		
	comp=E,70nm,17.4s,MS4.1						
MDJ				LR	LR		
	comp=Z,210nm,15.6s,MS4.3						
CTA	**Charters Tower**	**52.33**	**116**	LR	LR	20 59 28.5	
	comp=Z,250nm,22.0s,MS4.2,baz=283,slow=38						
CIT	**Chita**	**52.55**	**13**	*e*P	**P**	**20 35 25.4**	**-0.4**
STKA	**Stephens Creek**	**53.18**	**132**	P	**P**	**20 35 31.2**	**+0.5**
	comp=Z,4.0nm,0.8s,mb4.4,baz=279,slow=9.3,SNR=6.6						
ZAL	**Zalesovo**	**53.68**	**351**	P	**P**	**20 35 34.5**	**+0.4**
ZAL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZAL	**Zalesovo**	**53.68**	**351**	P	**P**	**20 35 34.5**	**+0.4**
	comp=Z,6.0nm,0.5s,mb4.8,baz=302,slow=5.5,SNR=29						
NVS	**Novosibirsk**	**54.81**	**350**	*e*P	**P**	**20 35 37.5**	**-4.9**
VOSK	**Vostochnaya**	**55.95**	**341**	P	**P**	**20 35 49.1**	**-1.5**
VOSK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
KLR	**Kul’dur**	**56.29**	**26**	*e*P	**P**	**20 35 50.0**	**-3.2**
KLR				MLR	MLR		
	comp=N,500nm,14.0s						
KLR				MLR	MLR		
	comp=Z,700nm,14.0s,MS4.9						
BVA0	**Borovoye Array**	**56.40**	**341**	*i* P	**P**	**20 35 52.5**	**-1.4**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.8						
ZRNK	**Zerenda**	**56.80**	**340**	P	**P**	**20 35 55.1**	**-1.7**
ZRNK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
ZRNK	**Zerenda**	**56.80**	**340**	*e*P	**P**	**20 35 54.4**	**-2.4**
	comp=Z,3.1nm,0.9s,mb4.3						
AB31	**Akbulak array**	**57.67**	**332**	*i* P	**P**	**20 36 01.6**	**-1.4**
ARU	**Arti**	**63.34**	**337**	*e*P	**P**	**20 36 38.3**	**-3.1**
KIV	**Kislovodsk**	**64.48**	**319**	P	**P**	**20 36 49.0**	**-0.1**
YAK	**Yakutsk**	**65.49**	**16**	*e*P	**P**	**20 36 54.6**	**-0.7**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.3s,mb5.3						
YAK	**Yakutsk**	**65.49**	**16**	*e*P	**P**	**20 36 54.6**	**-0.7**
	comp=Z,8.9nm,0.3s,mb5.3						
BRTR	**Keskin Array B**	**69.29**	**312**	P	**P**	**20 37 18.5**	**-1.1**
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRTR	**Keskin Array B**	**69.29**	**312**	P	**P**	**20 37 18.4**	**-1.1**
	comp=Z,2.1nm,1.1s,mb4.0,baz=135,slow=5.2,SNR=6.2						
MATP	**Matopo**	**70.61**	**248**	LR	LR	21 03 26.6	
	comp=Z,140nm,19.2s,MS4.2,baz=94,slow=32						
OBN	**Obninsk**	**72.78**	**328**	*e*P	**P**	**20 37 47.0**	**+6.6**
OBN				*e*		20 37 53.7	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
OBN				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.1						
TIXI	**Tiksi**	**73.27**	**10**	*e*P	**P**	**20 37 40.6**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,287nm,17.0s,MS4.6						
LBTB	**Lobatse**	**73.96**	**244**	*e*P	**P**	**20 37 51.8**	**+4.0**
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
LBTB	**Lobatse**	**73.96**	**244**	*e*P	**P**	**20 37 51.8**	**+4.0**
	comp=Z,3.3nm,0.9s,mb4.3						
BOSA	**Boshof**	**74.84**	**240**	LR	LR	21 06 05.7	
	comp=Z,118nm,19.3s,MS4.2,baz=42,slow=32						
FINES	**FINESS Array B**	**80.16**	**332**	P	**P**	**20 38 21.2**	**-0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES				MLR	MLR		
	comp=Z,66nm,18.5s						
FINES	**FINESS Array B**	**80.16**	**332**	P	**P**	**20 38 21.1**	**-0.4**
	comp=Z,0.9nm,0.5s,mb3.9,baz=101,slow=5.0,SNR=15						
FINES				LR	LR	21 16 54.6	
	comp=Z,66nm,18.5s,MS4.0,baz=70,slow=38						
FINES	**FINESS Array B**	**80.16**	**332**	P	**P**	**20 38 21.1**	**-0.4**
FINES				LR	LR	21 16 54.6	
KAF	**Kangasniemi**	**80.24**	**333**	*e*p	**P**	**20 38 21.9**	**-0.1**
ARCES	**ARCESS Array B**	**82.69**	**340**	P	**P**	**20 38 34.7**	**0.0**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,118nm,20.7s						
ARCES	**ARCESS Array B**	**82.69**	**340**	P	**P**	**20 38 34.7**	**0.0**
	comp=Z,3.1nm,0.9s,mb4.3,baz=104,slow=5.0,SNR=12						
ARCES				LR	LR	21 19 35.3	
	comp=Z,118nm,20.7s,MS4.2,baz=107,slow=39						
ARCES	**ARCESS Array B**	**82.69**	**340**	P	**P**	**20 38 34.7**	**0.0**
ARCES				LR	LR	21 19 35.3	
GERES	**GERESS Array B**	**84.99**	**319**	P	**P**	**20 38 46.4**	**-0.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**84.99**	**319**	P	**P**	**20 38 46.4**	**-0.3**
	comp=Z,1.0nm,0.8s,mb4.0,baz=90,slow=4.0,SNR=12						
KHC	**Kasperske Hory**	**85.09**	**319**	*e*P	**P**	**20 38 47.5**	**+0.3**
HFS	**Hagfors**	**85.89**	**330**	P	**P**	**20 38 51.7**	**+0.8**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HFS	**Hagfors**	**85.89**	**330**	P	**P**	**20 38 51.7**	**+0.7**
	comp=Z,1.6nm,0.7s,mb4.4,baz=153,slow=6.6,SNR=6.7						
NB2	**NORSAR Subarra**	**87.17**	**331**	P	**P**	**20 38 57.5**	**+0.3**
	comp=Z,1.4nm,0.7s,mb4.3,baz=96,slow=4.8						
NOA	**NORSAR Array B**	**87.17**	**331**	P	**P**	**20 38 57.6**	**+0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,65nm,18.2s						
NOA	**NORSAR Array B**	**87.17**	**331**	P	**P**	**20 38 57.6**	**+0.4**
	comp=Z,1.4nm,0.7s,mb4.3,baz=95,slow=4.9,SNR=7.6						
NOA				LR	LR	21 23 49.9	
	comp=Z,64nm,18.2s,MS4.1,baz=75,slow=40						
DAVOX	**Davos**	**87.47**	**317**	P	**P**	**20 39 00.5**	**+1.5**
	comp=Z,1.2nm,0.4s,mb4.5,baz=169,slow=23,SNR=3.4						
DAVOX	**Davos**	**87.47**	**317**	P	**P**	**20 39 00.5**	**+1.5**
LPG	**La Plagne**	**89.64**	**315**	*e*P	**P**	**20 39 10.1**	**+0.7**
	comp=Z,5.1nm,0.9s,mb4.6						
LPG	**La Plagne**	**89.64**	**315**	*e*P	**P**	**20 39 10.1**	**+0.7**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
EKA	**Eskdalemuir Ar**	**95.08**	**326**	P	**P**	**20 39 35.4**	**+1.2**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**95.08**	**326**	P	**P**	**20 39 35.4**	**+1.2**
	comp=Z,0.7nm,0.6s,mb4.3,baz=102,slow=4.7,SNR=4.7						
ILAR	**Eielson Array**	**99.75**	**23**	LR	LR	21 34 19.8	
	comp=Z,70nm,18.6s,MS4.2,baz=181,slow=41						
RWWY	**Rawlins**	**131.97**	**25**	*e*PKPdf	PKPdf	20 45 22.3	-7.0
PV01	**Paradox Valley**	**134.24**	**29**	*e*P	PKPdf	20 45 20.0	-14
TXAR	**Lajitas Array**	**143.69**	**32**	PKP	PKPdf	20 45 45.7	-5.2
	comp=Z,0.4nm,0.5s,baz=45,slow=1.2,SNR=7.8						

WEL 18 20:26:37.0±0.3**,38.59S×175.77E,h158**^{km}±2^{km}**,ML3.7**/17**, 10C-1D,Error ellipse: s-maj=1.9km s-min=1.6km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PATZ	**Paeroa**	**0.44**	**62**	⇑PN	P	20 26 59.4	0.0
KRVZ	**Karewarewa**	**0.52**	**191**	PN	P	20 26 59.5	-0.2
WTVZ	**West Tongariro**	**0.55**	**195**	⇑PN	P	20 26 59.6	-0.2
WTVZ				*e*SN	S	20 27 16.9	-0.5
TWVZ	**Taurewa**	**0.55**	**208**	⇑PN	P	20 26 59.4	-0.4
OTVZ	**Oturere**	**0.58**	**188**	PN	P	20 26 59.9	-0.2
NGZ	**Ngauruhoe**	**0.60**	**192**	PN	P	20 26 59.8	-0.3
CNZ	**Chateau**	**0.64**	**195**	⇓PN	P	20 27 00.1	-0.2
WPVZ	**Whakapapa**	**0.64**	**196**	⇑PN	P	20 27 00.2	-0.2
TAZ	**Tarawera**	**0.68**	**59**	PN	P	20 27 00.6	+0.1
TUVZ	**Tukino**	**0.69**	**187**	⇑PN	P	20 27 00.5	0.0
TUVZ				SN	S	20 27 18.3	-0.4
FWVZ	**Far West T-bar**	**0.69**	**194**	PN	P	20 27 00.2	-0.4
HIZ	**Hauiti**	**0.72**	**275**	⇑PN	P	20 27 00.1	-0.6
WNVZ	**Wahianoa**	**0.75**	**190**	⇑PN	P	20 27 00.9	-0.1
WNVZ				SN	S	20 27 19.2	-0.2
BKZ	**Black Stump Fm**	**0.81**	**136**	⇑PN	P	20 27 01.3	0.0
BKZ				SN	S	20 27 19.4	-0.6
MOVZ	**Moawhango**	**0.82**	**181**	⇑PN	P	20 27 01.0	-0.4
MOVZ				SN	S	20 27 18.8	-1.3
VRZ	**Vera Road**	**0.95**	**235**	PN	P	20 27 01.8	-0.4
URZ	**Urewera**	**1.10**	**73**	⇑PN	P	20 27 03.1	-0.4
URZ				SN	S	20 27 22.7	-1.4
WAZ	**Wanganui**	**1.32**	**207**	PN	P	20 27 05.0	-0.6
WAZ				SN	S	20 27 26.7	-1.0
MWZ	**Matawai**	**1.41**	**80**	PN	P	20 27 06.4	-0.1
MWZ				SN	S	20 27 27.7	-1.5
TSZ	**Takapari Road**	**1.48**	**174**	PN	P	20 27 06.7	-0.5
TSZ				SN	S	20 27 29.8	-0.8
PWZ	**Pawanui**	**1.67**	**150**	PN	P	20 27 09.0	-0.2
PWZ				*e*SN	S	20 27 33.3	-0.9
PUZ	**Puketiti**	**2.02**	**76**	PN	P	20 27 12.8	-0.3
PUZ				SN	S	20 27 38.9	-2.1
MRZ	**Mangatainoka R**	**2.08**	**184**	*e*SN	S	20 27 38.0	-4.2

BFZ	Birch Farm	2.12	170	PN	P	20 27 13.2	-1.2
KIW	Kapiti Island	2.37	196	PN	P	20 27 15.0	-2.4
CAW	Cannon Point	2.58	192	PN	P	20 27 17.5	-2.5

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*LDG **18** 20:31:19.3±0.3, 41.89N×8.54W, h2^{km}, Md3.4/1, Ml3.0/2, Error ellipse: s-maj=10.0km s-min=3.1km az=97.0*

*INMG **18** 20:31:23.7±1.0, 41.79N×8.62W, h16^{km}±2^{km}, ML2.5, Error ellipse: s-maj=2.8km s-min=1.3km az=81.0*

*NEIC **18** 20:31:23.6, 41.79N×8.62W, h10^{km}, MN2.6(MDD), After MDD.*

*CSEM **18** 20:31:23.3±0.1, 41.79N×8.63W, h10^{km}, ML3.2/7, Error ellipse: s-maj=2.9km s-min=1.3km az=75.0*

MDD 18 20:31:23.2±0.4**, 41.77N×8.64W, h10^{km}, mbLg2.6**/21**, 2D, Error ellipse: s-maj=3.7km s-min=2.1km az=59.0, PRXIMO, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZAM	Zamans	0.38	354	Pg	Pg	20 31 30.5	-0.6
EZAM				Lg		20 31 35.6	
EZAM	Zamans	0.38	354	⇓Pg	Pg	20 31 30.5	-0.6
	17nm,0.1s,SNR=18						
EZAM				Lg		20 31 35.6	
	99nm,0.2s						
ELOB	Lobios	0.45	77	Pg	Pg	20 31 31.7	-0.6
ELOB				Lg		20 31 37.4	
ELOB	Lobios	0.45	77	⇓Pg	Pg	20 31 31.7	-0.6
	32nm,0.1s,SNR=18						
ELOB				Lg		20 31 37.4	
	250nm,0.1s						
ELOB	Lobios	0.45	77	Pg	Pg	20 31 31.7	-0.7
	32nm,0.1s,SNR=252						
PVRL	Vila Real	0.85	125	*e*Pg	Pg	20 31 39.4	-1.0
PVRL				*e*Sg	Sg	20 31 50.7	-1.1
	176nm,0.1s						
PVRL	Vila Real	0.85	125	*e*Pg	Pg	20 31 39.4	-1.0
PVRL				*e*Sg	Sg	20 31 50.7	-1.1
	176nm,0.1s						
STS	Santiago	1.12	3	Pg	Pg	20 31 43.5	-2.2
	14nm,0.1s,SNR=16						
STS				Lg		20 31 58.0	
	57nm,0.2s,SNR=20						
PVIS	Viseu	1.19	152	*e*P	Pb	20 31 44.6	-0.9
PVIS				*e*S	Sb	20 32 00.5	-0.3
	78nm,0.1s						
PVIS	Viseu	1.19	152	*e*P	Pb	20 31 44.6	-0.9
PVIS				*e*S	Sb	20 32 00.5	-0.3
	78nm,0.1s						
EMAZ	Mazaricos	1.21	348	Pg	Pg	20 31 44.8	-2.6
	4.6nm,0.1s,SNR=19						
EMAZ				Sn	Sn	20 32 00.0	-2.5
	11nm,0.1s,SNR=7.9						
EMAZ				Lg		20 32 01.9	
	59nm,0.2s						
EMAZ	Mazaricos	1.21	348	Pg	Pg	20 31 44.8	-2.6
	4.6nm,0.1s,SNR=19						
EMAZ				Sn	Sn	20 32 00.0	-2.5
	11nm,0.1s,SNR=7.9						
ERUA	La Rua	1.28	60	Pn	Pn	20 31 45.7	-1.5
	1.5nm,0.2s,SNR=7.9						
ERUA				Pg	Pg	20 31 47.0	-1.9
	43nm,0.2s,SNR=146						
ERUA				Lg		20 32 03.8	
	55nm,0.4s,SNR=25						
ERUA	La Rua	1.28	60	Pg	Pg	20 31 47.0	-1.9
	43nm,0.2s,SNR=146						
ECAL	Calabor	1.44	82	Pn	Pn	20 31 47.7	-1.7
	4.4nm,0.1s,SNR=7.9						
ECAL				Pg	Pg	20 31 49.7	-2.2
	10nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	20 32 05.4	-3.0
	11nm,0.2s,SNR=7.9						
ECAL				Lg		20 32 08.5	
	106nm,0.2s,SNR=7.9						
ECAL	Calabor	1.44	82	Pn	Pn	20 31 47.7	-1.7
	4.4nm,0.1s,SNR=7.9						
ECAL	Calabor	1.44	82	Pg	Pg	20 31 49.7	-2.3
	10nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	20 32 05.4	-3.0
	11nm,0.2s,SNR=7.9						
MTE	Manteigas	1.60	148	*e*Pn	Pn	20 31 50.1	-1.6
MTE	Manteigas	1.60	148	*e*Pg	Pg	20 31 52.1	-3.1
MTE				*e*Sn	Sn	20 32 10.4	-2.2
MTE				*e*Sg	Sg	20 32 13.1	-3.5
	72nm,0.5s						
MTE	Manteigas	1.60	148	Pn	Pn	20 31 50.1	-1.6
MTE				Pg	Pg	20 31 52.1	-3.1
MTE				Sn	Sn	20 32 10.4	-2.2
MTE				Lg		20 32 13.1	
	36nm,0.5s						
MTE	Manteigas	1.60	148	*e*Pg	Pg	20 31 52.1	-3.1
MTE				*e*Sn	Sn	20 32 10.4	-2.2
MTE				*e*Sg	Sg	20 32 13.1	-3.5
	72nm,0.5s						
EPON	Pontenova	1.91	35	Pn	Pn	20 31 53.9	-2.2
	0.5nm,0.1s,SNR=7.9						
EPON				Pg	Pg	20 31 59.3	-2.1
	4.5nm,0.1s,SNR=7.9						
EPON				Sn	Sn	20 32 16.4	-4.0
	SNR=7.9						
EPON				Lg		20 32 23.2	
	33nm,0.2s,SNR=7.9						
EPON	Pontenova	1.91	35	Pn	Pn	20 31 53.9	-2.3
	0.5nm,0.1s,SNR=7.9						
EPON	Pontenova	1.91	35	Pg	Pg	20 31 59.3	-2.1
	4.5nm,0.1s,SNR=7.9						
EPON				Sn	Sn	20 32 16.4	-4.0
	SNR=7.9						
PCBR	Castelo Branco	2.12	155	*e*Pn	Pn	20 31 57.5	-1.7
PCBR	Castelo Branco	2.12	155	*e*Pg	Pg	20 32 02.0	-3.6
PCBR				*e*Sn	Sn	20 32 22.5	-3.3
PCBR				*e*Sg	Sg	20 32 29.5	-4.4
	20nm,0.3s						
PCBR	Castelo Branco	2.12	155	Pn	Pn	20 31 57.5	-1.7
PCBR				Pg	Pg	20 32 02.0	-3.6
PCBR				Sn	Sn	20 32 22.5	-3.3
PCBR				Lg		20 32 29.5	
	9.9nm,0.3s						
PCBR	Castelo Branco	2.12	155	*e*Pg	Pg	20 32 02.0	-3.6
PCBR				*e*Sn	Sn	20 32 22.5	-3.3
PCBR				*e*Sg	Sg	20 32 29.5	-4.4
	20nm,0.3s						
PTOM	Tomar	2.15	175	*e*Pg	Pg	20 32 01.6	-4.7
PTOM				*e*Sg	Sg	20 32 29.4	-5.7
	40nm,0.3s						
PTOM	Tomar	2.15	175	Pg	Pg	20 32 01.6	-4.7
PTOM				Lg		20 32 29.4	
	20nm,0.3s						
EARI	Arriondas	2.96	58	Pn	Pn	20 32 10.6	-0.6
	2.7nm,0.1s,SNR=45						
EARI				Sn	Sn	20 32 45.0	-2.2
	0.6nm,0.2s,SNR=7.9						
EARI				Lg		20 32 57.1	
	4.7nm,0.3s						
EARI	Arriondas	2.96	58	Pn	Pn	20 32 10.6	-0.6
	2.7nm,0.1s,SNR=45						
EARI				Sn	Sn	20 32 45.0	-2.2
	0.6nm,0.2s,SNR=7.9						
EBAD	Badajoz	3.26	157	Pn	Pn	20 32 13.8	-1.7
	1.6nm,0.2s,SNR=14						
EBAD				Pg	Pg	20 32 23.9	-4.4
	1.7nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	20 32 49.2	-5.4
	SNR=7.9						
EBAD				Lg		20 33 05.0	
	8.9nm,0.2s						
EBAD	Badajoz	3.26	157	Pn	Pn	20 32 13.8	-1.6
	1.6nm,0.2s,SNR=14						
EBAD	Badajoz	3.26	157	Pg	Pg	20 32 23.9	-4.4
	1.7nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	20 32 49.2	-5.4
	SNR=7.9						
EVO	Evora	3.27	171	*e*Pn	Pn	20 32 13.0	-2.6
EVO				*e*Sn	Sn	20 32 49.5	-5.4
EVO				*e*Sg	Sg	20 33 03.6	-8.5
	18nm,0.4s						
PBEJ	Beja	3.79	171	*e*Sn	Sn	20 33 03.1	-4.9
PBEJ				*e*Sg	Sg	20 33 22.0	-7.3
	3.1nm,0.3s						
PBEJ	Beja	3.79	171	Sn	Sn	20 33 03.1	-4.9
PBEJ				Lg		20 33 22.0	
	1.6nm,0.3s						
ELAN	Lanestosa	4.12	67	Pn	Pn	20 32 26.0	-1.7
	0.5nm,0.2s,SNR=7.9						
ELAN				Lg		20 33 35.2	
	2.0nm,0.3s,SNR=7.9						
ELAN	Lanestosa	4.12	67	Pn	Pn	20 32 26.0	-1.7
	0.5nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	4.13	119	Pn	Pn	20 32 25.4	-2.4
	0.6nm,0.3s,baz=304,slow=13,SNR=12						
ESDC	Sonseca Array	4.13	119	Pn	Pn	20 32 25.4	-2.4
	0.6nm,0.3s,SNR=12						
EMIN	Mina Concepcio	4.28	159	Pn	Pn	20 32 27.7	-2.2
	0.9nm,0.2s,SNR=12						
EMIN				Sn	Sn	20 33 13.6	-6.8
	SNR=7.9						
EMIN				Lg		20 33 38.7	
	3.3nm,0.4s,SNR=5.7						
EMIN	Mina Concepcio	4.28	159	Pn	Pn	20 32 27.7	-2.2
	0.9nm,0.2s,SNR=12						
EMIN				Sn	Sn	20 33 13.6	-6.8
	SNR=7.9						
EADA	Adamuz	4.76	138	Pn	Pn	20 32 34.6	-2.2
	0.1nm,0.1s,SNR=6.0						
EADA				Sn	Sn	20 33 26.0	-6.7
	4.3nm,0.5s,SNR=5.0						
EADA				Lg		20 33 55.5	
	1.0nm,0.2s,SNR=5.8						
EADA	Adamuz	4.76	138	Pn	Pn	20 32 34.6	-2.2
	0.1nm,0.1s,SNR=6.0						
EADA				Sn	Sn	20 33 26.0	-6.7
	4.3nm,0.5s,SNR=5.0						
EBAN	Banos Encina	5.18	132	Lg		20 34 02.9	
	0.7nm,0.3s,SNR=7.9						
ESPR	Espera	5.35	155	Pn	Pn	20 32 42.3	-2.7
	0.5nm,0.2s,SNR=7.9						
ESPR				Sn	Sn	20 33 41.6	-5.8
	SNR=7.9						
ESPR				Lg		20 34 16.7	
	2.5nm,0.3s,SNR=7.9						
ESPR	Espera	5.35	155	Pn	Pn	20 32 42.3	-2.8
	0.5nm,0.2s,SNR=7.9						
ESPR				Sn	Sn	20 33 41.6	-5.8
	SNR=7.9						
SJPF	Ste Jean	5.65	74	*e*Pn	Pn	20 32 40.8	-8.5
SJPF				*e*Sg	Sg	20 34 13.4	-18
	3.1nm,0.5s						
EQES	Quesada	5.84	131	Lg		20 34 30.4	
	1.4nm,0.4s,SNR=7.9						
ETOB	Tobarra	6.26	118	Pn	Pn	20 32 57.4	-0.6
	0.3nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	20 34 01.9	-8.4
	SNR=7.9						
ETOB				Lg		20 34 42.1	
	1.4nm,0.4s,SNR=7.9						
ETOB	Tobarra	6.26	118	Pn	Pn	20 32 57.4	-0.6
	0.3nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	20 34 01.9	-8.5
	SNR=7.9						
EMOS	Mosqueruela	6.33	100	Pn	Pn	20 32 58.4	-0.6
	0.2nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	20 34 05.0	-7.1
	SNR=7.9						
EMOS				Lg		20 34 48.0	
	0.5nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	6.33	100	Pn	Pn	20 32 58.4	-0.6
EMOS				Sn	Sn	20 34 05.0	-7.1
EBIE	Bielsa	6.59	79	Pn	Pn	20 32 57.7	-4.8
	0.1nm,0.1s,SNR=7.9						
EBIE				Lg		20 34 50.7	
	0.6nm,0.4s,SNR=7.9						
QUIF	Quistinic	7.28	30	*e*P	Pn	20 33 06.8	-5.4
ROSF	Rostrenen	7.59	28	*e*P	Pn	20 33 11.1	-5.5
MFF	Saint Martin d	7.79	49	*e*P	Pn	20 33 14.5	-4.8
SGMF	Saint Gilles	7.79	32	*e*Pn	Pn	20 33 09.5	-10
SGMF				*e*P		20 33 14.4	

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*NEIC **18** 20:35:53.9±0.5, 43.77N×105.21W, ML3.2, Error ellipse: s-maj=7.2km s-min=5.4km az=135.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

*IDC **18** 20:35:55.9±1.5, 44.51N×106.22W, mb4.1/1, mb1 4.0/4, mb1mx3.5/23, mbtmp3.9/4, ML3.5/3, Error ellipse: s-maj=89.0km s-min=9.0km az=142.0*

ISC 18 20:35:52.5±0.6**, 43.80N**±0.05×**105.23W**±0.07**, n27, σ1^{s}32**/27**, mb4.1**/1**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.92	69	*e*P	Pg	20 36 11.9	+1.1
PHWY	Pilot Hill	2.50	184	*e*P	Pn	20 36 35.5	+0.4
RWWY	Rawlins	2.57	215	*e*P	Pn	20 36 37.2	+1.2
LAO	LASA Array	2.97	347	*e*P	Pn	20 36 42.6	+0.9
PDAR	Pinedale Array	3.33	253	Pn	Pn	20 36 47.6	+0.8
	3.3nm,0.3s,baz=65,slow=15,SNR=32						
PDAR				Lg		20 37 28.9	
	3.2nm,0.3s,baz=66,slow=34,SNR=4.0						
GCMT	Greycliff	3.73	304	*e*P	Pn	20 36 53.4	+0.8
LOHW	Long Hollow	3.90	269	*e*P	Pn	20 37 01.0	+6.0
ISCO	Idaho Springs	4.01	184	*e*P	Pn	20 36 56.6	+0.1
YNR	Norris Junctio	4.02	285	P	Pn	20 37 00.8	+4.2
SNOW	Snow King Moun	4.03	267	*e*P	Pn	20 36 59.6	+2.8
REDW	Red Top Meadow	4.11	266	*e*P	Pn	20 36 59.4	+1.5
IMW	Indian Meadow	4.13	273	*e*P	Pn	20 37 00.7	+2.4
TPAW	Teton Pass	4.17	268	*e*P	Pn	20 37 00.3	+1.6
AHID	Auburn Hatcher	4.41	258	*e*P	Pn	20 37 01.9	-0.3
RRI2	Red Ridge	4.45	266	*e*P	Pn	20 37 01.5	-1.2
DGMT	Dagmar	4.73	8	*e*P	Pn	20 37 07.9	+1.2
BOZ	Bozeman (W)	4.92	294	*e*P	Pn	20 37 08.4	-1.0
HWUT	Hardware Ranch	5.16	247	*e*P	Pn	20 37 12.0	-0.8
	6.4nm,0.3s						
HRY	Holter Researc	5.49	304	*e*P	Pn	20 37 17.4	-0.2
SRU	San Rafael	6.14	222	*e*P	Pn	20 37 24.8	-1.9
TMUT	Trail Mountain	6.35	227	*e*P	Pn	20 37 29.3	-0.3
CHMT	Chamberlain Mo	6.45	302	*e*P	Pn	20 37 29.9	-1.1
MSO	Missoula	6.85	299	*e*P	Pn	20 37 35.1	-1.5
	1.4nm,0.4s						
ELK	Elko	8.03	251	Pn	P	20 37 51.3	-1.9
	0.5nm,0.3s,baz=50,slow=7.9,SNR=6.8						
ULM	Lac du Bonnet	9.07	41	Pn	P	20 38 06.2	-1.5
	2.0nm,0.3s,baz=242,slow=13,SNR=8.0						
ARCES	ARCESS Array B	61.35	18	P	P	20 46 09.1	-2.7
	1.3nm,0.9s,mb4.1,baz=323,slow=6.1,SNR=3.7						
ARCES	ARCESS Array B	61.35	18	P	P	20 46 09.1	-2.7

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*ATH **18** 20:44:59.5, 34.76N×26.15E, h5^{km}, MD3.6/4*

*NEIC **18** 20:44:59.5, 34.76N×26.15E, h5^{km}, MD3.6(ATH), After ATH.*

*CSEM **18** 20:45:03.1±0.2, 35.06N×26.14E, h2^{km}, MD3.6, Error ellipse: s-maj=9.0km s-min=3.9km az=169.0*

ISC 18 20:45:01.6±1.5**, 34.93N**±0.10×**26.1E**±0.1**, h5^{km}, n8, σ1^{s}23**/10**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.35	261	*e*PG	Pg	20 45 07.0	-1.7
NPS	Neapolis	0.53	309	*e*PG	Pg	20 45 12.0	-0.2
KARP	Karpathos	1.05	54	*e*PB	Pb	20 45 21.3	-0.6
SANT	Santorini	1.54	340	*e*Pn	Pn	20 45 31.7	+1.9
SANT				*e*Sn	Sn	20 45 49.1	-1.1
SANT	Santorini	1.54	340	*e*Pn	Pn	20 45 31.7	+2.0
SANT				*e*Sn	Sn	20 45 49.2	-1.1
VAM	Vamos	1.64	287	*e*PN	Pn	20 45 33.0	+1.7
GVD	Gavdhos	1.67	267	*e*Pn	Pn	20 45 31.8	+0.1
GVD	Gavdhos	1.67	267	*e*Pn	Pn	20 45 31.8	+0.1

IDC 18 20:45:05.4±7.5**, 15.17N×145.26E, h524^{km}**±88^{km}**, mb3.1**/6**, mb1 3.4**/6**, mb1mx3.0**/19**, mbtmp4.0**/6**, Error ellipse: s-maj=39.5km s-min=22.8km az=84.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WB2	Warramunga Arr	36.51	197	*e*P	P	20 51 24.7	-2.8
WRA	Warramunga Arr	36.51	197	P	P	20 51 25.6	-2.0
	2.0nm,0.5s,baz=19,slow=8.7,SNR=49						
FITZ	Fitzroy Crossi	38.30	211	*e*P	P	20 51 41.8	-0.4
	9.3nm,1.2s						
FITZ	Fitzroy Crossi	38.30	211	P	P	20 51 41.9	-0.2
	3.0nm,0.3s,baz=21,slow=9.7,SNR=25						
CMAR	Chiang Mai Arr	44.36	281	P	P	20 52 28.9	-1.7
	0.6nm,0.9s,baz=79,slow=5.5,SNR=4.6						
ILAR	Eielson Array	66.98	26	P	P	20 55 06.2	-1.0
	0.7nm,0.8s,baz=260,slow=4.8,SNR=4.7						
NVAR	Mina Array Bea	85.65	52	P	P	20 56 49.0	-0.6
	0.4nm,0.6s,baz=278,slow=6.4,SNR=2.9						
ARCES	ARCESS Array B	85.70	342	P	P	20 56 48.1	-0.9
	0.9nm,0.6s,baz=59,slow=5.3,SNR=3.8						
AKASG	Malin Array Be	93.94	325	P	P	20 57 30.7	+2.9
	0.2nm,0.3s,baz=55,slow=3.4,SNR=4.0						
CFAA	Coronel Fontan	145.36	124	PKPbc	PKPbc	21 03 45.7	+1.0
	0.2nm,0.5s,baz=166,slow=1.7,SNR=3.8						
LPAZ	La Paz	147.86	97	PKPbc	PKPdf	21 03 51.8	+3.7
	0.5nm,0.3s,baz=296,slow=5.6,SNR=3.2						

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*IDC **18** 20:47:31.8±2.3, 11.27S×71.49W, h182^{km}±23^{km}, mb3.6/7, mb1 3.8/9, mb1mx3.6/21, mbtmp4.2/9, Error ellipse: s-maj=24.7km s-min=15.3km az=64.0*

*NEIC **18** 20:47:32.2±0.9, 11.20S×71.44W, h189^{km}±12^{km}, mb4.3/8, Error ellipse: s-maj=14.4km s-min=9.9km az=49.0*

ISC 18 20:47:31.7±0.8**, 11.23S**±0.08×**71.46W**±0.08**, h202^{km}**±10^{km}**, n25, σ1^{s}29**/23**, mb3.9**/9**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	5.20	180	*e*P	P	20 48 50.0	+0.6
NNA	Nana	5.33	261	*e*Pn	P	20 48 50.2	-0.8
	81nm,0.6s						
NNA				*e*		20 48 54.9	
LPAZ	La Paz	5.97	148	P	P	20 48 59.4	0.0
	2.8nm,0.3s,baz=321,slow=10,SNR=110						
LPAZ				S	S	20 50 06.7	-0.9
	1.8nm,0.3s,baz=322,slow=18,SNR=4.1						
LPAZ	La Paz	5.97	148	*e*Pn	P	20 48 59.1	-0.2
	15nm,0.6s						
SAML	Samuel	8.46	75	*e*Pn	P	20 49 30.0	-1.7
	12nm,0.7s						
SIV	San Ignacio	11.15	116	P	P	20 50 07.3	+0.7
	3.1nm,0.3s,baz=294,slow=12,SNR=98						
OTAV	Otavalo	13.35	328	P	P	20 50 36.3	+1.9
SDV	Santo Domingo	20.00	2	P	P	20 51 51.9	+1.4
	3.8nm,0.4s,baz=145,slow=2.4,SNR=6.3						
SDV	Santo Domingo	20.00	2	*e*P	P	20 51 51.0	+0.4
	9.5nm,0.9s						
CPUP	Villa Florida	20.08	140	P	P	20 51 49.8	-1.5
	2.7nm,0.7s,baz=328,slow=9.7,SNR=5.9						
CFAA	Coronel Fontan	20.49	172	P	P	20 51 57.7	+2.4
	0.6nm,0.7s,baz=1.2,slow=12,SNR=4.4						
BDFB	Brasilia	23.21	103	P	P	20 52 24.5	+2.5
	18nm,0.8s,mb4.6,baz=272,slow=11,SNR=24						
BAO	Brasilia Array	23.23	103	P	P	20 52 24.8	+2.6
PLCA	Paso Flores	29.39	179	P	P	20 53 18.5	+0.2
	1.7nm,0.9s,mb3.7,baz=341,slow=17,SNR=2.4						
TXAR	Lajitas Array	50.91	323	P	P	20 56 14.2	-0.2
	0.2nm,0.5s,mb2.8,baz=146,slow=8.5,SNR=3.2						
WMOK	Wichita Mounta	52.55	332	P	P	20 56 26.3	-0.2
	1.4nm,0.6s,mb3.6						
PDAR	Pinedale Array	64.05	330	P	P	20 57 46.2	+0.2
	0.6nm,0.5s,mb3.5,baz=121,slow=8.6,SNR=4.2						
MCMT	McKenzie Canyo	67.18	329	*e*P	P	20 58 03.0	-3.0
DBIC	Dimbokro	68.61	78	P	P	20 58 14.8	-0.5
	1.9nm,0.5s,mb4.0,baz=277,slow=4.3,SNR=5.7						
FCC	Fort Churchill	72.14	348	*e*P	P	20 58 34.4	-1.4
	3.1nm,0.6s,mb4.1						
TSUM	Tsumeb	85.48	109	P	P	20 59 47.5	-1.1
	14nm,1.6s,mb4.5						
SUMG	Summit	86.37	9	P	P	20 59 51.7	0.0
	3.2nm,0.9s,mb4.0						
WRA	Warramunga Arr	139.94	220	PKP	PKPdf	21 06 39.0	+2.3
	0.4nm,0.6s,baz=136,slow=1.8,SNR=5.9						
SONM	Songino Array	143.47	2	PKP	PKPdf	21 06 44.6	+2.6
	0.1nm,0.3s,baz=324,slow=2.7,SNR=4.3						
FITZ	Fitzroy Crossi	146.32	210	PKPbc	PKPbc	21 06 51.3	+2.0
	5.6nm,0.7s,baz=348,slow=1.6,SNR=5.5						

IDC 18 20:53:21.2±12.0**, 5.66N×94.74E, h137^{km}**±107^{km}**, mb3.3**/5**, mb1 3.5**/6**, mb1mx3.3**/19**, mbtmp3.7**/6**, ML4.2**/1**, Error ellipse: s-maj=92.0km s-min=20.2km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.36	18	P	P	20 56 25.8	-0.6
	0.4nm,0.3s,baz=209,slow=15,SNR=13						
MKAR	Makanchi Array	42.36	347	P	P	21 01 01.2	-2.1
	1.0nm,0.5s,baz=167,slow=6.7,SNR=22						
SONM	Songino Array	43.19	11	P	P	21 01 08.2	-1.8
	0.3nm,0.5s,baz=185,slow=11,SNR=4.6						
WRA	Warramunga Arr	46.52	124	P	P	21 01 35.1	-1.8
	0.5nm,0.5s,baz=300,slow=10,SNR=16						
ZAL	Zalesovo	48.80	352	P	P	21 01 53.0	-1.2
	1.1nm,0.3s,baz=266,slow=6.3,SNR=4.4						
GERES	GERESS Array B	79.86	318	P	P	21 05 14.8	-1.2
	0.2nm,0.4s,baz=108,slow=4.2,SNR=3.5						

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*IDC **18** 20:55:58.3±5.5, 13.66N×95.04E, h323^{km}±46^{km}, mb3.2/5, mb1 3.5/5, mb1mx3.1/19, mbtmp4.0/5, Error ellipse: s-maj=77.1km s-min=14.2km az=63.0*

ISC 18 20:55:20.9±1.5**, 12.1N**±0.1×**92.5E**±0.2**, h33^{km}, n6, σ0^{s}34**/6**, mb3.9**/5**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.85	44	P	P	20 57 29.5	0.0
	0.1nm,0.3s,baz=232,slow=15,SNR=2.9						
MKAR	Makanchi Array	35.61	348	P	P	21 02 17.8	+0.4
	0.4nm,0.8s,mb3.4,baz=149,slow=8.4,SNR=3.1						
SONM	Songino Array	37.45	15	P	P	21 02 22.8	-10
	0.8nm,0.5s,mb3.8,baz=188,slow=9.9,SNR=10						
ZAL	Zalesovo	42.15	353	P	P	21 03 11.4	-0.4
	4.1nm,0.5s,mb4.4,baz=311,slow=4.2,SNR=15						
FITZ	Fitzroy Crossi	44.41	132	P	P	21 03 30.6	0.0
	2.0nm,0.6s,mb4.0,baz=342,slow=3.2,SNR=4.1						
WRA	Warramunga Arr	52.08	127	P	P	21 04 30.2	0.0
	1.2nm,0.8s,mb3.9,baz=304,slow=8.6,SNR=8.4						

IDC 18 21:37:42.2±4.1**, 3.04N×96.77E, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/17**, mbtmp3.5**/3**, Error ellipse: s-maj=158.5km s-min=28.6km az=58.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.38	123	P	P	21 45 46.7	-1.8
	0.4nm,0.3s,baz=302,slow=9.2,SNR=9.0						
MKAR	Makanchi Array	45.37	346	P	P	21 46 02.1	-2.0
	0.4nm,0.4s,baz=156,slow=9.3,SNR=12						
SONM	Songino Array	45.39	9	P	P	21 46 02.7	-1.6
	0.3nm,0.4s,baz=197,slow=9.7,SNR=5.2						

IDC 18 22:03:12.9±2.8**, 6.68N×94.08E, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.3**/19**, mbtmp3.4**/3**, ML3.9**/1**, Error ellipse: s-maj=92.9km s-min=29.9km az=63.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.63	22	Pn	P	22 06 14.2	-2.6
	0.2nm,0.3s,baz=214,slow=14,SNR=6.5						
MKAR	Makanchi Array	41.23	348	P	P	22 10 59.6	-1.6
	0.7nm,0.8s,baz=161,slow=7.8,SNR=5.7						
WRA	Warramunga Arr	47.63	125	P	P	22 11 51.0	-2.1
	0.6nm,0.6s,baz=306,slow=8.4,SNR=12						

MAN 18 22:15:07.5, 12.90N×120.99E, h20^{km}, mb3.5, ML2.2, MS1.7, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJMP	San Jose	0.46	163	*e*P	Pb	22 15 17.2	+0.4
SJMP				*e*S	Sb	22 15 25.8	+2.8
BOAC	Boac	1.00	56	*e*P	Pb	22 15 25.6	-0.5
LUBP	Lubang	1.10	319	*e*P	Pb	22 15 27.1	-0.5
LUBP				*e*S	Sb	22 15 42.3	+0.7
OTRP	Odiongan	1.14	118	*e*P	Pb	22 15 28.9	+0.5
BUSP	Coron	1.18	221	*e*P	Pb	22 15 28.4	-0.5
BUSP				*e*S	Sb	22 15 45.0	+1.2
ENPP	El Nido	2.27	222	*e*P	Pn	22 15 44.2	-0.5
GUIM	Jordan	2.75	145	*e*P	Pn	22 15 50.8	-0.7

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*NEIC **18** 22:27:38.1, 15.85N×97.34W, h27^{km}, MD3.7(MEX), After MEX.*

MEX 18 22:27:38.1±0.8**, 15.85N×97.34W, h27^{km}**±22^{km}**, MD3.7, 1C, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.94	306	⇑*i*P	Pb	22 27 53.1	-2.5
PNIG				*i* S	Sb	22 28 04.1	-3.6
HUIG	**Huatulco**	1.18	94	*i* P	Pn	22 27 56.6	-2.5
HUIG				*i* S	Sn	22 28 10.4	-4.1
VHO	**Vista Hermosa**	1.35	25	*e*P	Pn	22 28 00.9	-0.6
VHO				*e*S	Sn	22 28 15.3	-3.4
OXX	**Oaxaca**	1.36	25	*e*P	Pn	22 28 01.0	-0.7
OXX				*e*S	Sn	22 28 18.0	-1.0
CMIG	**Matias Romero**	2.66	62	*e*P	Pn	22 28 17.8	-2.4
CMIG				*e*S	Sn	22 28 47.3	-4.6
ACX	**Acapulco**	2.68	293	*e*P	Pn	22 28 18.0	-2.5
ACX				*i* S	Sn	22 28 47.5	-4.9
PPM	**Popocatepetl**	3.43	339	*e*P	Pn	22 28 30.0	-1.2
PPM				*i* S	Sn	22 29 20.0	+8.5

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*HLW **18** 22:55:13.0, 39.16N×21.51E, h33^{km}, Mb3.7*

*IDC **18** 22:55:14.3±1.0, 38.97N×21.30E, mb4.1/11, mb1 4.2/15, mb1mx4.1/27, mbtmp4.1/15, ML4.2/4, MS3.0/3, Ms1 3.0/3, ms1mx2.6/34, Error ellipse: s-maj=20.2km s-min=14.2km az=35.0*

*ATH **18** 22:55:17.3, 38.81N×21.26E, h25^{km}±1^{km}, MD3.9/19, ML3.9*

*THE **18** 22:55:17.1, 38.79N×21.31E, h1^{km}, ML4.1*

*MOS **18** 22:55:18.7±1.0, 38.85N×21.17E, h54^{km}, mb4.4/8, Error ellipse: s-maj=5.1km s-min=3.1km az=121.4*

*CSEM **18** 22:55:18.7±0.0, 38.77N×21.31E, h20^{km}, Ms2.7, Error ellipse: s-maj=1.5km s-min=0.9km az=21.0*

*PDG **18** 22:55:19.9±0.1, 38.83N×20.40E, h19^{km}±28^{km}*

*NEIC **18** 22:55:20.2±0.2, 38.86N×21.24E, h53^{km}±5^{km}, mb4.1/21, MD3.9(ATH), MD3.8(PDG), Error ellipse: s-maj=4.4km s-min=2.5km az=208.0*

*SOF **18** 22:55:26.4, 39.44N×21.99E, h2^{km}, MD3.3*

ISC 18 22:55:17.1±0.2, **38.84N**±0.02×**21.18E**±0.02, **h25**^{km}, **n318**, σ**1^{s}42**/358, **mb4.1**/19, **MS2.9**/1, **27C-6D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD	**Levkas**	0.43	253	*e*Pg	Pb	22 55 26.9	+0.7
EVR	**Evrytania**	0.50	81	*e*PB	Pb	22 55 26.3	-0.9
EVR				*e*SB	Sb	22 55 34.0	-0.1
VLS	**Valsamata**	0.81	215	*e*PB	Pb	22 55 32.6	+0.3
VLS				*e*SN	Sn	22 55 45.9	+1.8
RLS	**Riolos of Patr**	0.81	164	*e*PN	Pn	22 55 32.1	-0.8
JAN	**Janina**	0.86	343	*e*PN	Pn	22 55 34.9	+1.3
IGT	**Igoumenitsa**	0.96	317	*e*Pg	Pb	22 55 36.9	+2.0
KEK	**Kerkira**	1.39	310	*e*PN	Pn	22 55 44.0	+2.9
LSK	**Leskovik**	1.39	341	*i* Pn	Pn	22 55 44.0	+2.8
LSK				*i* Sn	Sn	22 56 08.2	+9.4
LSK	**Leskovik**	1.39	341	*e*Pn	Pn	22 55 44.0	+2.8
LKR	**Lokris**	1.43	97	*e*PN	Pn	22 55 42.4	+0.6
KZN	**Kozani**	1.54	17	*e*PN	Pn	22 55 45.8	+2.5
LIT	**Litokhoron**	1.62	38	*e*Pg	Pn	22 55 45.9	+1.4
LIT				*e*Sg	Sn	22 56 07.9	+3.2
XOR	**Xorichti**	1.65	71	*e*Pg	Pn	22 55 45.7	+0.7
XOR				*e*Sg	Sn	22 56 07.5	+2.0
NEO	**Neokhori**	1.66	73	*e*PN	Pn	22 55 45.8	+0.8
TPE	**Tepelena**	1.71	329	*e*Pn	Pn	22 55 49.1	+3.2
TPE				*i* Sn	Sn	22 56 10.9	+3.7
ITM	**Ithomi**	1.76	160	*e*PN	Pn	22 55 48.8	+2.4
KBN	**Korca**	1.81	350	*i* Pn	Pn	22 55 51.6	+4.4
KBN				*i* Sn	Sn	22 56 22.1	+13
KBN	**Korca**	1.81	350	*e*Pn	Pn	22 55 51.6	+4.4
MGER	**Gerania Oros**	1.84	117	*e*PN	Pn	22 55 49.0	+1.3
FNA	**Florina**	1.95	4	*e*Pn	Pn	22 55 51.3	+2.1
FNA				*e*Sn	Sn	22 56 17.6	+4.5
FNA	**Florina**	1.95	4	*e*Pn	Pn	22 55 51.3	+2.1
FNA				*e*Sn	Sn	22 56 17.6	+4.5
NSAL	**Nisos Salamina**	2.02	117	*e*PN	Pn	22 55 51.5	+1.3
NAIG	**Nisos Aigina**	2.11	120	*e*PB	Pb	22 55 52.5	-2.0
MPAR	**Parnis Oros**	2.12	108	*e*PB	Pb	22 55 52.7	-1.9
AOS	**Alonnisos**	2.13	80	*e*Pn	Pn	22 55 51.8	0.0
ATH	**Athens Observa**	2.17	113	*e*PB	Pb	22 55 53.7	-1.8
PTL	**Penteli**	2.25	110	*e*PB	Pb	22 55 55.3	-1.6
THE	**Thessaloniki**	2.26	37	*e*Pn	Pn	22 55 54.1	+0.4
OHR	**Ohrid**	2.29	353	⇑*i*Pn	Pn	22 55 57.2	+3.1
OHR				*i*		22 56 02.5	
OHR				*i* Sn	Sn	22 56 25.0	+3.2
OHR				*i*		22 56 33.4	
OHR	**Ohrid**	2.29	353	⇑*i*Pn	Pn	22 55 57.2	+3.1
OHR				*i* S	Sn	22 56 25.0	+3.2
GRG	**Griva**	2.32	24	*e*Pn	Pn	22 55 55.9	+1.4
GRG				*e*Sn	Sn	22 56 25.7	+3.2
PLG	**Polygyros**	2.33	48	*e*PN	Pn	22 55 54.8	+0.2
VLI	**Veliai**	2.53	146	*e*PB	Pb	22 55 59.5	-2.2
OUR	**Ouranopolis**	2.63	54	*e*Pn	Pn	22 55 59.6	+0.6
TIR	**Tirane**	2.70	338	Pn	Pn	22 56 02.4	+2.4
LCI	**Lecce**	2.80	303	Pn	Pn	22 56 02.9	+1.5
QSH	**Qafa e Shtames**	2.85	340	*e*Pn	Pn	22 56 03.4	+1.2
QSH				*i* Sn	Sn	22 56 37.4	+1.3
SRS	**Serrai**	2.94	38	*e*Pn	Pn	22 56 03.9	+0.6
SKO	**Skopje**	3.14	4	*i* Pn	Pn	22 56 08.1	+1.9
SKO				*i* Pb	Pb	22 56 13.1	+1.1
SKO				*i* Sn	Sn	22 56 45.1	+1.8
SKO				*i* Sb	Sb	22 56 54.9	+4.7
SKO				Lg		22 57 03.0	
	comp=Z,0.1nm,0.8s						
SKO	**Skopje**	3.14	4	*i* Pn	Pn	22 56 08.1	+1.9
SKO				*i* S	Sn	22 56 45.1	+1.8
LOS	**Limnos**	3.21	69	*e*Pn	Pn	22 56 07.0	-0.2
LOS				*e*Sn	Sn	22 56 45.8	+0.6
NVR	**Nevrokopi**	3.25	38	*e*PN	Pn	22 56 08.3	+0.6
PUK	**Puka**	3.35	343	*i* Pn	Pn	22 56 10.9	+1.7
PUK	**Puka**	3.35	343	*e*Pn	Pn	22 56 10.9	+1.7
KKB	**Krupnik**	3.36	25	*i* P	Pn	22 56 10.3	+1.0
MMB	**Musomiste**	3.37	35	*i* P	Pn	22 56 10.0	+0.5
ULC	**Ulcinj**	3.45	335	⇑*i*Pn	Pn	22 56 11.3	+0.7
ULC				*e*Sn	Sn	22 56 50.3	-0.9
TIP	**Timpagrande**	3.46	277	Pn	Pn	22 56 13.2	+2.4
PE1	**Pezze di Greco**	3.50	305	*e*Pn	Pn	22 56 11.9	+0.6
BCI	**Bajram Curri**	3.63	347	*e*Pn	Pn	22 56 15.4	+2.3
BRT	**Bari-Castellan**	3.68	305	Pn	Pn	22 56 15.7	+1.9
GRI	**Girifalco**	3.72	271	Pn	Pn	22 56 16.3	+1.9
LTRZ	**Laterza**	3.80	299	Pn	Pn	22 56 16.8	+1.2
ORI	**Oriolo Calabro**	3.86	290	Pn	Pn	22 56 18.5	+2.0
APE	**Apeiranthos**	3.86	116	P	Px	22 55 16.9	
APE	**Apeiranthos**	3.86	116	*e*PN	Pn	22 56 16.9	+0.4
PVY	**Plav**	3.87	347	⇑*i*Pn	Pn	22 56 18.5	+2.0
PVY				*e*Sn	Sn	22 57 03.3	+1.6
BUM	**Brajici-Budva**	3.87	334	⇑*i*Pn	Pn	22 56 16.9	+0.3
BUM				*e*Sn	Sn	22 56 59.9	-1.9
TTG	**Podgorica**	3.88	338	⇑*i*Pn	Pn	22 56 17.0	+0.4
TTG				*e*Sn	Sn	22 57 01.1	-0.8
RZN	**Rozhen**	3.93	42	*i* P	Pn	22 56 18.3	+0.9
PRK	**Paraskevi**	3.98	83	*e*PN	Pn	22 56 18.1	-0.1
SG1	**Sgolgore (BA)**	4.00	301	*e*Pn	Pn	22 56 19.4	+0.9
BAI	**Bari**	4.01	306	*e*Pn	Pn	22 56 19.2	+0.7
VTS	**Vitosha**	4.05	22	*i* P	Pn	22 56 21.0	+1.8
RDO	**Rodhopi**	4.06	54	*e*PN	Pn	22 56 19.0	-0.3
SOI	**Samo**	4.10	261	Pn	Pn	22 56 20.5	+0.7
HCY	**Herceg Novi**	4.14	331	⇑*i*Pn	Pn	22 56 20.1	-0.4
HCY				*e*Sn	Sn	22 57 05.8	-3.0
IVA	**Berane**	4.15	347	⇑*i*Pn	Pn	22 56 22.1	+1.6
IVA				*e*Sn	Sn	22 57 09.7	+0.9
VAM	**Vamos**	4.19	144	*e*PN	Pn	22 56 21.5	+0.4
SANT	**Santorini**	4.19	125	*e*Pn	Pn	22 56 20.4	-0.8
SANT	**Santorini**	4.19	125	*e*Pn	Pn	22 56 20.4	-0.8
THR1	**Thera Island**	4.20	125	*e*Pn	Pn	22 56 20.6	-0.6
PLD	**Plovdiv**	4.23	38	*i* P	Pn	22 56 23.0	+1.3
URLA	**Izmir**	4.27	95	*i* P	Pn	22 56 23.4	+1.2
KDZ	**Kurdzhali**	4.29	48	*i* P	Pn	22 56 21.5	-1.0
NKY	**Niksic**	4.30	338	⇑*i*Pn	Pn	22 56 23.4	+0.6
NKY				*e*Sn	Sn	22 57 11.4	-1.4
AYVA	**Ayvalik**	4.31	82	*i* P	Pn	22 56 22.0	-0.9
SCLL	**Scilla**	4.33	264	Pn	Pn	22 56 23.9	+0.9
SCLL				Sn	Sn	22 57 05.9	-7.4
PGB	**Panagyurishte**	4.35	31	*i* P	Pn	22 56 24.0	+0.6
CDT	**Castel del Mon**	4.39	302	*e*Pn	Pn	22 56 24.5	+0.6
MTTG	**Motta San Giov**	4.39	261	Pn	Pn	22 56 24.4	+0.4
MTTG				Sn	Sn	22 57 10.9	-4.1
BRY	**Bratogost**	4.53	335	⇑*i*Pn	Pn	22 56 25.7	-0.1
BRY				*e*Sn	Sn	22 57 15.7	-2.7
MGR	**Morigerati**	4.54	288	Pn	Pn	22 56 27.7	+1.6
SLCN	**Sala Consilina**	4.56	292	Pn	Pn	22 56 28.9	+2.6
ZAPS	**Zavoj/Pirot**	4.59	13	⇑*i*Pn	Pn	22 56 27.5	+0.8
ZAPS				Sn	Sn	22 57 18.3	-1.6
SMG	**Samos**	4.59	102	*e*PN	Pn	22 56 27.0	+0.2
IDI	**Anoyia**	4.62	139	Pn	Pn	22 56 26.5	-0.7
	comp=Z,3.0nm,0.3s,baz=316,slow=14,SNR=21						
IDI				Sn	Sn	22 57 20.5	-0.3
	comp=Z,5.7nm,0.3s,baz=63,slow=21,SNR=4.4						
IDI				LR	LR	22 58 43.9	
	comp=Z,106nm,19.4s,baz=324,slow=45						
GVD	**Gavdhos**	4.62	149	*e*Pn	Pn	22 56 27.4	+0.2
PLE	**Pljevlja**	4.69	344	*e*Pn	Pn	22 56 29.3	+1.1
PLE				*e*Sn	Sn	22 57 22.0	-0.5
UPM	**Unac-Piva**	4.69	339	⇑*i*Pn	Pn	22 56 28.8	+0.6
UPM				*e*Sn	Sn	22 57 20.9	-1.6
IZM	**Izmir**	4.78	93	P	Px	22 55 29.8	
MRLC	**Muro Lucano**	4.79	295	Pn	Pn	22 56 30.8	+1.2
KDAG	**Bornova**	4.79	93	*i* P	Pn	22 56 30.1	+0.5
NVSS	**Nova Varos 2**	4.80	347	⇑*i*Pn	Pn	22 56 29.3	-0.4
STON	**Ston**	4.82	328	*i* Pn	Pn	22 56 29.0	-1.0
STON				*i* Sn	Sn	22 57 21.6	-4.2
STON	**Ston**	4.82	328	*i* Pn	Pn	22 56 28.9	-1.1
STON				*i* Sn	Sn	22 57 21.5	-4.3
SGO	**Sicignano**	4.85	293	Pn	Pn	22 56 31.9	+1.5
FG4	**Candela**	4.92	300	Pn	Pn	22 56 32.5	+1.1
MS1	**Monte Sant'Ang**	4.93	307	*e*Pn	Pn	22 56 31.6	0.0
SLNA	**Salina**	4.97	269	Pn	Pn	22 56 32.7	+0.5
NPS	**Neapolis**	5.03	134	*e*PN	Pn	22 56 32.7	-0.3
SSY	**Sortino**	5.11	253	Pn	Pn	22 56 32.8	-1.3
	comp=Z,210nm,0.6s						
SSY				Sn	Sn	22 57 30.4	-2.7
RGNG	**Rignano Grg**	5.13	305	Pn	Pn	22 56 34.6	+0.1
RGNG				Sn	Sn	22 57 32.1	-1.6
CSSN	**Cassano Irpino**	5.15	295	Pn	Pn	22 56 35.7	+1.0
FG5	**Orsara di Pugl**	5.15	300	Pn	Pn	22 56 36.0	+1.3
BODT	**Bodrum**	5.16	108	*e*P	Px	22 55 33.5	
BBLS	**Bajina Basta -**	5.20	346	⇓*i*Pn	Pn	22 56 34.7	-0.8
BBLS				Sn	Sn	22 57 32.3	-3.1
EDRB	**Edirne**	5.21	53	*e*P	Px	22 55 33.6	
PZI	**Palazzolo**	5.24	252	P	Pn	22 56 34.5	-1.4
BALB	**Balikesir**	5.26	79	*e*P	Px	22 55 36.6	
MRB1	**Monte Rocchett**	5.29	298	Pn	Pn	22 56 38.1	+1.4
DIVS	**Divcibare**	5.33	351	⇓*i*Pn	Pn	22 56 36.6	-0.7
DIVS				Sn	Sn	22 57 36.4	-2.3
XRY	**Khrisi**	5.36	136	*e*PN	Pn	22 56 37.0	-0.6
BTOK	**Tokmak**	5.39	78	*i* P	Pn	22 56 39.1	+1.0
BTOK	**Tokmak**	5.39	78	*i* P	Pn	22 56 40.0	+1.9
MLSB	**Milas**	5.43	104	*e*P	Px	22 55 39.8	
PSB1	**Pescosannita**	5.44	298	Pn	Pn	22 56 40.4	+1.6
FG2	**Serracapriola**	5.47	305	Pn	Pn	22 56 39.6	+0.3
	comp=Z,117nm,0.3s						
JMB	**Yambol**	5.48	47	*i* P	Pn	22 56 38.0	-1.3
VAE	**Valguarnera**	5.50	258	Pn	Pn	22 56 39.4	-0.3
	comp=Z,2.1nm,0.3s,baz=116,slow=1.9,SNR=7.2						
VAE				Sn	Sn	22 57 45.1	+2.1
	comp=Z,9.0nm,0.3s,baz=112,slow=16,SNR=7.8						
CIGN	**Sant'Elia a Pi**	5.57	302	Pn	Pn	22 56 41.3	+0.7
	comp=Z,63nm,0.6s						
OVO	**Vesuviano**	5.59	293	Pn	Pn	22 56 42.2	+1.3
GIB	**Gibilmanna**	5.68	264	Pn	Pn	22 56 43.0	+0.8
MANT	**Manisa**	5.78	91	*i* P	Pn	22 56 45.7	+2.1
KARP	**Karpathos**	5.79	123	*e*PN	Pn	22 56 44.0	+0.2
SGG	**Gregorio Mates**	5.80	298	Pn	Pn	22 56 45.6	+1.7
YER	**Yerkesik**	5.86	105	*e*P	Px	22 55 45.5	
MIDA	**Miranda**	6.00	300	Pn	Pn	22 56 48.1	+1.5
	comp=Z,125nm,0.6s						
CII	**Carovilli**	6.00	301	Pn	Pn	22 56 48.1	+1.5
MSC	**Monte Massico**	6.01	295	Pn	Pn	22 56 47.9	+1.0
RFI	**Roccamonfina**	6.04	296	Pn	Pn	22 56 48.6	+1.3
	comp=Z,11nm,1.0s						
RNI2	**Rionero Sannit**	6.09	300	Pn	Pn	22 56 49.5	+1.5
ORLT	**Orhaneli**	6.09	76	*e*P	Px	22 55 48.5	
USI	**Ustica**	6.25	271	Pn	Pn	22 56 50.0	-0.3
	comp=Z,20nm,0.4s						
DENT	**Denizli**	6.27	97	*e*P	Px	22 55 50.2	
ULDT	**Uludag**	6.29	76	*i* P	Pn	22 56 50.3	-0.5
DNZL	**Cakiroluk**	6.29	98	*i* P	Pn	22 56 51.9	+1.1
SDI	**San Donato**	6.33	299	P	Pn	22 56 52.9	+1.6
SDI				pmax	pmax		
	comp=Z,24nm,0.3s						
SDI	**San Donato**	6.33	299	Pn	Pn	22 56 52.9	+1.6
	comp=Z,24nm,0.3s						
VVLD	**Villa Vallelon**	6.52	300	Pn	Pn	22 56 55.7	+1.7
	comp=Z,114nm,0.6s						
FETY	**Fethiye**	6.64	107	*e*P	Px	22 55 57.2	
PTQR	**Pietraquaria**	6.74	301	Pn	Pn	22 56 58.6	+1.6
AQU	**L'Aquila**	6.88	303	P	Pn	22 57 00.5	+1.4
AQU				pmax	pmax		
	comp=Z,36nm,0.8s						
AQU	**L'Aquila**	6.88	303	Pn	Pn	22 57 00.5	+1.4
	comp=Z,36nm,0.8s						
TERO	**Teramo**	6.89	306	Pn	Pn	22 56 59.5	+0.3
	comp=Z,49nm,0.6s						
ALT	**Altintas**	6.96	85	*e*P	Px	22 56 00.1	
CERT	**Cerreto**	6.99	299	Pn	Pn	22 57 02.1	+1.5
	comp=Z,19nm,0.5s						
FIAM	**Fiamignano**	7.03	302	Pn	Pn	22 57 03.1	+1.9
	comp=Z,30nm,0.7s						
VOIR		7.19	22	⇑P	Pn	22 57 04.1	+0.6
TKTP	**Tekketepe**	7.22	93	*i* P	Pn	22 57 04.5	+0.7
ELL	**Elmali**	7.22	104	*e*P	Px	22 56 05.1	
NRCA	**Norcia**	7.30	306	Pn	Pn	22 57 04.2	-0.8
MNS	**Montasola**	7.37	301	P	Pn	22 57 07.5	+1.5
MNS				pmax	pmax		
	comp=Z,12nm,0.5s						
MNS	**Montasola**	7.37	301	Pn	Pn	22 57 07.5	+1.5
	comp=Z,12nm,0.5s						
ISP	**Isparta**	7.40	95	*e*P	Pn	22 57 07.5	+1.2
NVLJ	**Novalja**	7.42	323	*i* Pn	Pn	22 57 05.1	-1.5
NVLJ				*i* Sn	Sn	22 58 24.6	-6.2
MLR	**Muntele Rosu**	7.53	26	Pn	Pn	22 57 10.8	+2.6
	comp=Z,1.7nm,0.3s,baz=219,slow=5.1,SNR=6.4						
MLR	**Muntele Rosu**	7.53	26	⇑P	Pn	22 57 10.2	+2.0
ESKT	**Eskisehir**	7.54	82	*e*P	Px	22 56 07.8	
ESKT	**Eskisehir**	7.54	82	*i* P	Pn	22 57 08.6	+0.3
CING	**Cingoli**	7.54	309	Pn	Pn	22 57 07.1	-1.3
	comp=Z,57nm,0.9s						
TOLF	**Tolfa**	7.71	298	Pn	Pn	22 57 12.8	+2.1
	comp=Z,5.0nm,0.7s						
ASS	**Assisi**	7.71	306	P	Pn	22 57 11.5	+0.8
ASS				pmax	pmax		
	comp=Z,21nm,0.8s						
ASS	**Assisi**	7.71	306	Pn	Pn	22 57 11.5	+0.8
	comp=Z,21nm,0.8s						
ARV	**Arcevia**	7.76	309	Pn	Pn	22 57 09.9	-1.6
	comp=Z,13nm,0.6s						
MURB	**Monte Urbino**	7.89	307	Pn	Pn	22 57 14.3	+1.0
	comp=Z,74nm,0.3s						
FSSB	**Fossombrone**	7.97	310	Pn	Pn	22 57 12.8	-1.6
BOJS	**Bojanci**	7.98	328	*i* Pn	Pn	22 57 12.3	-2.2
BOJS				*e*Sn	Sn	22 58 38.5	-6.4
SLUM		8.04	155	⇑P	P	22 57 10.8	-4.4
VRI	**Vrincioaia**	8.13	29	⇑P	P	22 57 17.8	+1.2
GCIS	**Gornji Cirnik**	8.14	331	*e*Pn	P	22 57 13.8	-2.9
RSM	**Repubblica di**	8.30	311	P	P	22 57 19.2	+0.2
RSM				pmax	pmax		
	comp=Z,7.0nm,0.3s						
RSM	**Repubblica di**	8.30	311	Pn	P	22 57 19.2	+0.2
	comp=Z,7.4nm,0.3s						
KOGS	**Kog**	8.43	336	*e*Pn	P	22 57 17.2	-3.5
PDKS	**Podkum**	8.54	330	*e*Pn	P	22 57 19.7	-2.6
SGKT	**Sivrigoynuk**	8.56	75	*i* P	P	22 57 22.2	-0.4
SFI	**Santa Sofia**	8.65	309	P	P	22 57 24.2	+0.4
SFI				pmax	pmax		
	comp=Z,6.0nm,0.3s						
SFI	**Santa Sofia**	8.65	309	Pn	P	22 57 24.2	+0.4
	comp=Z,5.7nm,0.3s						
PGD	**Poggio Sodo**	8.71	308	P	P	22 57 26.0	+1.4
PGD				pmax	pmax		
	comp=Z,12nm,0.7s						
PGD	**Poggio Sodo**	8.71	308	Pn	P	22 57 26.0	+1.4
	comp=Z,12nm,0.7s						
LJU	**Ljubljana**	8.72	328	*e*Pn	P	22 57 22.0	-2.7
LJU				*e*Sn	Sn	22 58 57.0	-6.2
VMG	**Vicchio**	8.87	308	Pn	P	22 57 28.4	+1.6
PERS	**Pernice**	8.98	332	*e*Pn	P	22 57 25.2	-3.1
VOY	**Vojsko**	8.98	326	*e*Pn	P	22 57 25.8	-2.6
VOY				*e*Sn	Sn	22 59 02.5	-7.3
SEI	**Scarperia**	9.03	308	Pn	P	22 57 30.5	+1.5
OBKA	**Obir**	9.09	330	⇑*i*PN	P	22 57 27.1	-2.7
OBKA				*i* SN	Sn	22 59 03.7	-8.7
HMAT	**Matruh**	9.12	146	⇑P	P	22 57 25.5	-4.8
PSZ	**Piszkesteto**	9.13	355	*e*P	P	22 57 28.1	-2.3
PSZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PSZ	**Piszkesteto**	9.13	355	*e*Pn	P	22 57 28.1	-2.3
	comp=Z,7.5nm,0.6s						
PSZ	**Piszkesteto**	9.13	355	*e*Pn	P	22 57 28.1	-2.3
	comp=Z,7.5nm,0.6s						
VSL	**Villasalto**	9.19	278	*e*Pn	P	22 57 30.2	-1.1
VSL	**Villasalto**	9.19	278	*e*Pn	P	22 57 30.2	-1.1
BURAR	**Bucovina Array**	9.25	17	⇑P	P	22 57 32.7	+0.6
ROBS	**Robic**	9.32	325	*e*Pn	P	22 57 30.7	-2.3
ARSA	**Arzberg**	9.37	336	⇓*i*PN	P	22 57 30.7	-3.0
ARSA				*i* SN	Sn	22 59 12.1	-7.3
GMNA	**Gemona**	9.46	324	Pn	P	22 57 34.1	-0.9
PTCC	**Patocco-Chiusa**	9.51	325	Pn	P	22 57 32.6	-3.0
ELDT	**Eldivan**	9.59	76	*i* P	P	22 57 36.5	-0.2
BR131	**Keskin Array S**	9.70	81	*e*Pn	P	22 57 37.4	-0.9
	comp=Z,3.9nm,0.8s						
BRTR	**Keskin Array B**	9.70	81	Pn	P	22 57 38.6	+0.4
	comp=Z,0.5nm,0.3s,baz=264,slow=12,SNR=17						
FVI	**Forni Avoltri**	9.91	324	P	P	22 57 41.8	+0.7
FVI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
FVI	**Forni Avoltri**	9.91	324	Pn	P	22 57 41.8	+0.7
	comp=Z,8.5nm,0.5s						
PGF	**Pioggiola**	9.97	296	*e*P	P	22 57 42.6	+0.7
	comp=Z,19nm,1.1s						
CTI	**Castel Tesino**	10.07	319	Pn	P	22 57 40.9	-2.4
KOLS	**Kolonicke sedl**	10.12	4	*e*	P	22 57 56.2	+12
SWA2		10.20	158	⇑P	P	22 57 41.0	-4.1
SWA1		10.26	157	⇑P	P	22 57 41.8	-4.1
SWA1				S	S	22 59 30.7	-10
MOA	**Molln**	10.32	333	⇓*i*PN	P	22 57 43.9	-2.8
MOA				*i* SN	S	22 59 34.2	-8.3
CSS	**Prodhromos**	10.47	108	P	P	22 57 48.3	-0.5
CSS	**Prodhromos**	10.47	108	P	P	22 57 48.3	-0.5
APPI	**Appiano**	10.58	319	Pn	P	22 57 48.4	-1.9
MABI	**Malga Bissina**	10.68	316	Pn	P	22 57 50.3	-1.3
WATA	**Walderalm**	11.01	324	⇓*i*PN	P	22 57 53.7	-2.5
WATA				*i* SN	S	22 59 51.9	-7.7
SQTA	**Sankt Quirin**	11.10	322	⇑*i*PN	P	22 57 55.5	-1.9
SQTA				*i* SN	S	22 59 53.3	-8.5
GERES	**GERESS Array B**	11.36	334	Pn	P	22 57 58.3	-2.6
	comp=Z,0.9nm,0.3s,baz=159,slow=14,SNR=40						
GERES				Sn	S	23 00 01.6	-6.5
	comp=Z,0.4nm,0.3s,baz=153,slow=23,SNR=5.1						
DAVOX	**Davos**	11.48	317	Pn	P	22 58 02.0	-0.5
	comp=Z,0.8nm,0.3s,baz=114,slow=18,SNR=8.4						
DAVOX				Sn	S	23 00 07.1	-3.8
	comp=Z,0.7nm,0.3s,baz=8.1,slow=21,SNR=5.1						
SBF	**Sospel**	11.48	300	*e*P	P	22 58 01.3	-1.3
	comp=Z,13nm,0.9s						
SBF	**Sospel**	11.48	300	*e*P	P	22 58 01.3	-1.3
SBF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KHC	**Kasperske Hory**	11.65	335	*e*P	P	22 58 01.7	-3.1
KHC				*e*S	S	23 00 08.6	-6.5
KHC	**Kasperske Hory**	11.65	335	*e*P	P	22 58 01.7	-3.1
KHC				*e*x	x	22 58 17.5	
KHC				*e*S	S	23 00 08.6	-6.5
DAVA	**Damuels**	11.81	319	⇑*i*Pn	P	22 58 06.2	-0.8
DAVA				*i* Sn	S	23 00 11.3	-7.6
FRF	**La Foret Royal**	11.92	298	*e*P	P	22 58 08.6	+0.1
	comp=Z,6.7nm,0.9s						
FRF	**La Foret Royal**	11.92	298	*e*P	P	22 58 08.6	+0.1
FRF				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MBDF	**Montbardon**	12.26	303	*e*P	P	22 58 12.2	-0.8
	comp=Z,5.6nm,0.7s						
MBDF	**Montbardon**	12.26	303	*e*P	P	22 58 12.2	-0.8
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LPG	**La Plagne**	12.60	307	*e*P	P	22 58 15.8	-1.8
	comp=Z,13nm,0.8s						
LPG	**La Plagne**	12.60	307	*e*P	P	22 58 15.8	-1.8
LPG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LPL	**La Plagne**	12.62	307	*e*P	P	22 58 15.9	-1.9
	comp=Z,8.1nm,0.8s						
LPL	**La Plagne**	12.62	307	*e*P	P	22 58 15.9	-1.9
LPL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GLL	**Jalalah**	12.69	134	⇓P	P	22 58 12.8	-6.0
AMAG	**Maghara**	12.82	126	⇑P	P	22 58 14.8	-5.8
HFRF	**Wahat Farafira**	13.09	151	⇑P	P	22 58 20.4	-3.8
SUZ		13.15	130	⇑P	P	22 58 19.5	-5.4
STU	**Stuttgart**	13.16	323	*e*P	P	22 58 21.6	-3.4
STU				pmax	pmax		
	comp=Z,17nm,0.6s						
STU	**Stuttgart**	13.16	323	*e*P	P	22 58 21.6	-3.4
	comp=Z,17nm,0.6s						
MALT	**Malatya**	13.51	87	*e*P	P	22 58 34.6	+5.0
MALT				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MALT	**Malatya**	13.51	87	*e*P	P	22 58 34.6	+5.0
	comp=Z,3.3nm,0.7s						
CABF	**La Chapelle**	13.53	310	*e*P	P	22 58 29.3	-0.6
MOX	**Moxa**	13.61	333	*e*P	P	22 58 30.1	-0.7
MOX				MLR	MLR		
	comp=Z,200nm,20.0s						
MOX	**Moxa**	13.61	333	*i* P	P	22 58 30.1	-0.7
MOX				PP	PP	22 58 38.0	-3.4
MOX				L		23 04 39.0	
VIVF	**Saint-Julien-l**	13.69	301	*e*P	P	22 58 31.2	-0.8
CLL	**Collm**	13.73	338	P	P	22 58 30.0	-2.5
CLL				*i* *PP		22 58 40.8	
HINF	**Hinteralfeld**	13.74	315	*e*P	P	22 58 30.7	-1.9
	comp=Z,6.7nm,0.4s						
HINF	**Hinteralfeld**	13.74	315	*e*P	P	22 58 30.7	-1.9
HINF				pmax	pmax		
	comp=Z,3.0nm,0.4s						
CDF	**Champ du Feu**	13.87	318	*e*P	P	22 58 31.3	-3.1
HAU	**Haudompre**	14.13	315	*e*P	P	22 58 35.7	-2.0
	comp=Z,10nm,0.6s						
HAU				*e*R			
	comp=Z,65nm,20.1s						
EIL	**Elat**	14.59	125	*e*P	P	22 58 37.3	-6.6
ALWS	**Ilw as Safayha**	14.90	125	P	P	22 58 43.3	-4.7
SMF	**Signal de Mont**	14.92	307	*e*P	P	22 58 47.0	-1.1
	comp=Z,6.6nm,0.6s						
SMF	**Signal de Mont**	14.92	307	*e*P	P	22 58 47.0	-1.1
SMF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MTLF	**Montolieu**	14.99	294	*e*P	P	22 58 49.0	+0.1
	comp=Z,18nm,1.3s						
MTLF	**Montolieu**	14.99	294	*e*P	P	22 58 49.0	+0.1
MTLF				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HAQS	**Haql**	15.00	126	P	P	22 58 44.0	-5.2
JMOS	**Jabal al Moall**	15.03	126	P	P	22 58 44.6	-5.1
JMOS				S	S	23 01 29.2	-6.8
MEZF	**Maizieres J'vi**	15.12	315	*e*P	P	22 58 49.1	-1.6
	comp=Z,26nm,0.9s						
LOR	**Lormes**	15.19	309	*e*P	P	22 58 49.4	-2.2
LOR				*e*R			
	comp=Z,54nm,20.0s						
AVF	**Avril sur Loir**	15.29	307	*e*P	P	22 58 52.3	-0.6
	comp=Z,32nm,1.3s						
AVF	**Avril sur Loir**	15.29	307	*e*P	P	22 58 52.3	-0.6
AVF				pmax	pmax		
	comp=Z,16nm,1.3s						
SSF	**Saint Saulge**	15.31	308	*e*P	P	22 58 51.8	-1.3
SSF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SSF	**Saint Saulge**	15.31	308	*e*P	P	22 58 51.8	-1.3
	comp=Z,7.9nm,0.9s						
BGF	**Bois d'Agland**	15.51	306	*e*P	P	22 58 55.2	-0.6
	comp=Z,9.4nm,0.8s						
BGF	**Bois d'Agland**	15.51	306	*e*P	P	22 58 55.2	-0.6
BGF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AYUS	**'Aynunah**	15.82	128	P	P	22 58 54.6	-5.2
RJF	**Les Rejaudoux**	15.95	300	*e*P	P	22 59 01.2	-0.2
	comp=Z,17nm,1.2s						
RJF				*e*R			
	comp=Z,91nm,20.5s						
BAIF	**Baives**	16.47	318	*e*P	P	22 59 06.1	-1.9
	comp=Z,16nm,0.7s						
BAIF	**Baives**	16.47	318	*e*P	P	22 59 06.1	-1.9
BAIF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ETSF	**Etsaut**	16.93	291	*e*P	P	22 59 13.5	-0.3
MFF	**Saint Martin d**	17.45	303	*e*P	P	22 59 19.9	-0.5
	comp=Z,6.1nm,0.6s						
MFF	**Saint Martin d**	17.45	303	*e*P	P	22 59 19.9	-0.5
MFF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZEI	**Tsey**	17.63	70	*e*P	P	22 59 21.8	-0.8

LDF	La Druitiere	18.17	309	*e*P	P	22 59 28.3	-1.1
	comp=Z,6.6nm,0.5s						
LDF	La Druitiere	18.17	309	*e*P	P	22 59 28.3	-1.1
LDF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GNI	Garni	18.23	78	*e*P	P	22 59 38.5	+8.4
GNI	Garni	18.23	78	LR	LR	23 07 16.7	
	comp=Z,54nm,19.3s,baz=78,slow=40						
FLN	La Foliniere	18.46	310	*e*P	P	22 59 32.2	-0.7
	comp=Z,37nm,1.2s						
FLN				*e*R			
	comp=Z,48nm,18.0s						
ESDC	Sonseca Array	19.48	280	P	P	22 59 44.6	-0.4
	comp=Z,0.4nm,0.3s,baz=74,slow=11,SNR=17						
ESLA	Sonseca Array	19.48	280	*e*P	P	22 59 44.3	-0.6
	comp=Z,1.2nm,0.9s						
ESLA	Sonseca Array	19.48	280	*e*P	P	22 59 44.3	-0.7
	comp=Z,1.2nm,0.9s						
SGMF	Saint Gilles	19.55	306	*e*P	P	22 59 45.2	-0.5
	comp=Z,9.8nm,0.8s						
SGMF	Saint Gilles	19.55	306	*e*P	P	22 59 45.2	-0.5
SGMF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
QUIF	Quistinic	19.82	305	*e*P	P	22 59 47.9	-0.8
	comp=Z,18nm,0.6s						
QUIF	Quistinic	19.82	305	*e*P	P	22 59 47.9	-0.8
QUIF				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ROSF	Rostrenen	20.02	306	*e*P	P	22 59 50.2	-0.7
	comp=Z,27nm,0.8s						
ROSF	Rostrenen	20.02	306	*e*P	P	22 59 50.2	-0.7
ROSF				pmax	pmax		
	comp=Z,13nm,0.8s						
HFS	Hagfors	21.84	350	P	P	23 00 06.8	-2.5
	comp=Z,4.9nm,0.4s,mb4.3,baz=164,slow=11,SNR=45						
FINES	FINESS Array B	22.84	6	P	P	23 00 17.0	-2.1
	comp=Z,2.1nm,0.7s,mb3.7,baz=176,slow=9.5,SNR=16						
NAO01	NORSAR Array S	22.95	347	*e*P	P	23 00 18.8	-1.5
	comp=Z,7.7nm,0.7s,mb4.2						
NAO01	NORSAR Array S	22.95	347	*e*P	P	23 00 18.8	-1.4
	comp=Z,7.7nm,0.7s,mb4.2						
NB2	NORSAR Subarra	23.08	348	P	P	23 00 20.2	-1.3
	comp=Z,3.0nm,0.6s,mb3.9,baz=161,slow=10						
NOA	NORSAR Array B	23.08	348	P	P	23 00 20.4	-1.0
	comp=Z,1.9nm,0.5s,mb3.8,baz=157,slow=8.8,SNR=20						
NOA	NORSAR Array B	23.08	348	P	P	23 00 20.4	-1.0
EKA	Eskdalemuir Ar	23.20	323	P	P	23 00 22.5	-0.2
	comp=Z,3.9nm,0.7s,mb4.0,baz=120,slow=9.9,SNR=31						
ESK	Eskdalemuir	23.21	323	*e*P	P	23 00 21.9	-0.9
ESK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
ESK	Eskdalemuir	23.21	323	*e*P	P	23 00 21.9	-0.9
	comp=Z,8.9nm,0.8s,mb4.2						
ESK	Eskdalemuir	23.21	323	*e*P	P	23 00 21.9	-0.9
	comp=Z,8.9nm,0.8s,mb4.2						
KAF	Kangasniemi	23.52	6	*e*p	P	23 00 23.3	-2.4
ARCES	ARCESS Array B	30.85	3	P	P	23 01 30.2	-2.9
	comp=Z,0.7nm,0.3s,mb3.9,baz=187,slow=11,SNR=26						
ARCES	ARCESS Array B	30.85	3	P	P	23 01 30.2	-2.9
KEV	Kevo	31.14	4	*e*p	P	23 01 33.3	-2.3
ZRNK	Zerenda	35.46	51	*e*P	P	23 02 11.5	-1.7
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
ZRNK	Zerenda	35.46	51	*e*P	P	23 02 11.5	-1.7
	comp=Z,1.0nm,0.4s,mb4.1						
JMIC	Jan Mayen	35.67	344	LR	LR	23 16 37.8	
	comp=Z,21nm,18.6s,MS2.9,baz=253,slow=36						
AAK	Ala-Archa	40.02	67	*e*P	P	23 02 54.5	+2.9
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
AAK	Ala-Archa	40.02	67	*e*P	P	23 02 54.5	+2.9
	comp=Z,4.8nm,0.9s,mb4.2						
NVS	Novosibirsk	43.85	48	*e*P	P	23 03 20.8	-1.8
SUMG	Summit	44.40	338	*e*P	P	23 03 30.3	+3.4
	comp=Z,2.9nm,0.8s,mb4.1						
MKAR	Makanchi Array	44.52	59	P	P	23 03 26.1	-2.1
	comp=Z,1.5nm,0.5s,mb4.1,baz=274,slow=7.7,SNR=16						
ZAL	Zalesovo	44.86	49	P	P	23 03 29.1	-1.7
	comp=Z,3.9nm,0.5s,mb4.5,baz=195,slow=6.2,SNR=16						
TLY	Talaya	56.46	48	P	P	23 05 04.2	+5.3
TLY				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
TLY	Talaya	56.46	48	P	P	23 05 04.2	+5.2
	comp=Z,4.4nm,1.1s,mb4.4						
ZAK	Zakamensk	56.74	49	*e*P	P	23 05 05.6	+4.7
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.8						
SCHQ	Schefferville	58.33	317	P	P	23 05 10.6	-1.4
	comp=Z,1.6nm,0.5s,mb4.3,baz=238,slow=16,SNR=3.8						
SONM	Songino Array	59.64	51	P	P	23 05 18.9	-2.4
	comp=Z,0.1nm,0.3s,mb3.3,baz=276,slow=11,SNR=2.6						
ULN	Ulaanbaatar	60.03	51	*e*P	P	23 05 28.0	+4.1
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ULN	Ulaanbaatar	60.03	51	*e*P	P	23 05 28.0	+4.1
	comp=Z,2.0nm,0.8s,mb4.2						
ULM	Lac du Bonnet	75.48	324	P	P	23 06 59.5	-1.0
	comp=Z,2.8nm,0.4s,mb4.5,baz=35,slow=5.2,SNR=3.1						
TXAR	Lajitas Array	94.89	314	P	P	23 08 38.2	-0.2
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	94.89	314	P	P	23 08 38.2	-0.2
	comp=Z,0.7nm,0.8s,mb4.2,baz=69,slow=4.0,SNR=8.2						

NIED **18** 22:58:00,36.20N×139.70E,h89^{km},Mw3.5 Best double couple: M$_0$2.29×10^{14} NP1:φ$_s$75°,δ66°,λ-121°. NP2: φ$_s$311°,δ39°,λ-41°.

JMA **18** 22:58:32.5±0.1,36.14N×139.72E,h90^{km}±1^{km},M3.3 Broadband fault plane solution: P waves. NP1:φ$_s$319°, δ53°,λ-40°. NP2:φ$_s$76°,δ59°,λ-135°. Principal axes: T Plg4°, Azm196°; N Plg38°, Azm103°; P Plg52°, Azm291°;

JMA Felt I J1.

NEIC **18** 22:58:34.4±1.4,35.40N×137.87E,h70^{km}±12^{km},mb4.4/1 Error ellipse: s-maj=21.3km s-min=14.9km az=163.0

IDC **18** 22:58:36.3±1.1,35.46N×137.93E,h89^{km}±13^{km},mb3.3/5, mb1 3.6/6,mb1mx3.3/22,mbtmp3.7/6,Error ellipse: s-maj=31.2km s-min=7.8km az=71.0

ISC 18 22:58:31.9±0.5**,36.12N**±0.03×**139.72E**±0.06**,h90**^{km}**,n24, σ0^{s}81**/35**,mb3.6**/6**,7C-1D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	Ashikaga	0.37	325	P	P	22 58 46.2	+0.4
JAG				S	S	22 58 56.6	+0.3
JYT	Yasato	0.40	74	P	P	22 58 46.5	+0.6
JYT				S	S	22 58 57.2	+0.6
JRY	Ryogami san	0.67	261	⇑P	P	22 58 49.0	+0.7
JRY				S	S	22 59 01.6	+1.1
JKT	Katashina	0.75	330	⇑P	P	22 58 49.4	+0.3
JKT				S	S	22 59 02.6	+0.8
JOD2	Odawara 2	1.00	211	⇑P	P	22 58 51.9	+0.2
JOD2				S	S	22 59 07.0	+0.3
JYN	Shimob	1.14	237	⇑P	P	22 58 54.1	+0.6
JYN				S	S	22 59 09.4	-0.3
JHK	Hiroka	1.26	334	⇑P	P	22 58 55.3	+0.2
JFY	Yanaizu	1.29	360	⇑P	P	22 58 55.6	+0.2
MJAR	Matsushiro Arr	1.29	290	P	P	22 58 55.0	-0.5
	16nm,0.3s,baz=107,slow=9.4,SNR=195						
MJAR				S	S	22 59 13.2	+0.2
	17nm,0.3s,baz=223,slow=14,SNR=20						
MAJO	Matsushiro	1.29	290	*e*Pn	P	22 58 54.9	-0.6
MAT	Matsushiro	1.29	290	*e*P	P	22 58 56.0	+0.5
MAT				*e*S	S	22 59 13.0	-0.1
MAT	Matsushiro	1.29	290	P	P	22 58 55.5	0.0
MAT				S	S	22 59 12.9	-0.2
MAT	Matsushiro	1.29	290	P	P	22 58 55.7	+0.2
MAT				S	S	22 59 13.2	+0.1
JIM2	Oshima 3	1.42	190	P	P	22 58 56.9	-0.1
JIM2				S	S	22 59 15.5	-0.2
BSO3	Boso 3	1.47	154	⇓P	P	22 58 57.8	+0.2
JNS	Sasagawa	1.73	349	⇑P	P	22 59 01.2	+0.2
JHJ	Hachijo jima 2	2.99	179	P	P	22 59 18.1	-0.3
	58nm,0.3s,baz=75,slow=8.5,SNR=39						
JHJ				S	S	22 59 53.4	+0.1
	54nm,0.3s,baz=79,slow=22,SNR=8.5						
SONM	Songino Array	27.19	306	P	P	23 04 04.4	-4.4
	0.1nm,0.3s,mb2.8,baz=116,slow=14,SNR=3.2						
ZAL	Zalesovo	41.55	313	P	P	23 06 10.0	-1.6
	1.1nm,0.4s,mb3.9,baz=49,slow=4.8,SNR=3.2						
MKAR	Makanchi Array	43.45	303	P	P	23 06 24.6	-2.8
	0.7nm,0.7s,mb3.5,baz=82,slow=10,SNR=4.4						
ILAR	Eielson Array	50.99	32	P	pP	23 07 38.2	-10
	0.2nm,0.5s,baz=256,slow=7.4,SNR=2.9						
WRA	Warramunga Arr	55.99	186	P	P	23 07 59.9	-3.6
	0.4nm,0.4s,mb3.8,baz=1.2,slow=7.6,SNR=17						
ARU	Arti	56.14	319	*e*P	P	23 07 59.4	-4.6
	2.4nm,0.5s,mb4.5						
NB2	NORSAR Subarra	74.49	337	P	P	23 09 58.9	-2.8
	0.3nm,0.5s,mb3.3,baz=42,slow=5.8						

IDC **18** 23:10:07.2±3.8,17.61S×178.73W,h582^{km}±46^{km},mb3.7/9, mb1 4.0/10,mb1mx3.8/17,mbtmp4.6/10,Error ellipse: s-maj=28.2km s-min=19.8km az=162.0

NEIC **18** 23:10:08.2±0.3,17.63S×178.78W,h600^{km},mb4.5/14, Error ellipse: s-maj=15.8km s-min=6.1km az=146.0

ISC 18 23:10:09.8±2.9**,17.8S**±0.2×**178.9W**±0.1**,h640**^{km}±41^{km}**, n32,σ0^{s}67**/27**,mb4.2**/20**,1C-5D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.48	250	P	P	23 13 12.8	+0.3
	1.1nm,0.3s,baz=84,slow=16,SNR=15						
URZ	Urewera	20.74	189	P	P	23 14 10.2	+0.1
	21nm,1.1s,baz=56,slow=7.0,SNR=3.1						
ARMA	Armidale	29.66	239	⇓*i*P	P	23 15 28.4	+0.2
CTA	Charters Tower	33.06	260	*e*P	P	23 15 57.0	+0.2
	9.9nm,0.8s,mb4.4						
CTAO	Charters Tower	33.06	260	*e*P	P	23 15 56.7	-0.1
	16nm,0.8s,mb4.6						
CNB	Canberra Magne	33.19	232	⇓*i*P	P	23 15 57.9	+0.1
	23nm,0.5s,mb5.0						
TOO	Toolangi	36.94	230	⇑*i*P	P	23 16 29.0	+0.3
	13nm,0.7s,mb4.6						
STKA	Stephens Creek	38.34	241	⇓*i*P	P	23 16 40.7	+0.6
	16nm,0.5s,mb4.7						
STKA	Stephens Creek	38.34	241	P	P	23 16 40.8	+0.7
	21nm,0.5s,mb4.8,baz=93,slow=9.6,SNR=65						
WB2	Warramunga Arr	44.23	259	⇓*i*P	P	23 17 26.2	-0.6
WRAB	Tennant Creek	44.24	259	*e*P	P	23 17 26.4	-0.4
	15nm,0.5s,mb4.6						
WRA	Warramunga Arr	44.25	259	P	P	23 17 26.3	-0.6
	15nm,0.7s,mb4.4,baz=96,slow=7.0,SNR=344						
WRA				PcP	PcP	23 18 57.7	+0.7
	1.3nm,0.5s,baz=97,slow=3.1,SNR=4.7						
KAKA	Kakadu	47.16	269	⇓*i*P	P	23 17 49.0	0.0
	26nm,0.5s,mb4.8						
FORT	Forrest	49.69	244	*e*P	P	23 18 06.7	-0.9
	16nm,0.6s,mb4.5						
KLBR	Kellerberrin	58.52	243	*e*P	P	23 19 08.4	-0.7
	8.8nm,0.5s,mb4.2						
MJAR	Matsushiro Arr	67.53	324	P	P	23 20 06.5	+0.4
	3.2nm,0.8s,mb3.7,baz=157,slow=6.2,SNR=13						
CMB	Columbia Colle	78.01	43	*e*P	P	23 21 04.9	-0.7
	5.9nm,1.0s,mb4.1						
NVAR	Mina Array Bea	79.60	44	P	P	23 21 14.2	+0.4
	4.3nm,0.8s,mb3.9,baz=216,slow=7.7,SNR=9.0						
TPH	Tonopah	80.14	45	P	P	23 21 16.4	-0.2
	13nm,1.2s,mb4.2						
NEW	Newport	85.63	36	*e*P	P	23 21 42.0	-1.6
	2.3nm,0.8s,mb3.9						
ILAR	Eielson Array	85.83	13	P	P	23 21 43.7	-0.4
	1.0nm,0.5s,mb3.7,baz=237,slow=5.1,SNR=8.1						
TXAR	Lajitas Array	86.27	58	P	P	23 21 47.8	+0.7
	3.7nm,0.7s,mb4.1,baz=217,slow=6.3,SNR=25						
ANMO	Albuquerque	86.33	52	*e*P	P	23 21 47.3	+0.1
	2.8nm,1.1s,mb3.8						
MCMT	McKenzie Canyo	86.39	41	*e*P	P	23 21 47.9	+0.6
PDAR	Pinedale Array	87.53	44	P	P	23 21 52.8	+0.1
	2.2nm,0.6s,mb4.0,baz=270,slow=3.0,SNR=8.9						
BOZ	Bozeman (W)	87.54	40	*e*P	P	23 21 52.9	+0.2
	5.9nm,1.4s,mb4.0						
CMAR	Chiang Mai Arr	88.44	290	P	P	23 21 59.8	+2.3
	1.2nm,0.5s,mb3.8,baz=120,slow=2.4,SNR=9.5						
BVAR	Borovoye Array	116.46	321	PKP	PKPdf	23 27 44.1	+1.9
	0.4nm,0.3s,baz=119,slow=3.3,SNR=4.1						
BR131	Keskin Array S	144.37	315	*e*PKPdf	PKPdf	23 28 37.7	+3.0
BRTR	Keskin Array B	144.37	315	PKP	PKPdf	23 28 38.0	+3.3
	1.3nm,0.6s,baz=135,slow=1.7,SNR=9.7						
ASF	Jabal al Asfar	144.74	301	PKP	PKPdf	23 28 39.2	+3.6
	2.7nm,0.9s,baz=89,slow=3.8,SNR=3.3						
GERES	GERESS Array B	147.35	345	PKPbc	PKPdf	23 28 45.6	+6.2
	0.3nm,0.5s,baz=27,slow=3.0,SNR=5.8						

IDC **18** 23:20:10.0±0.9,24.30S×111.98W,mb4.1/6,mb1 4.4/7, mb1mx4.2/16,mbtmp4.2/7,ML4.6/1,MS4.5/4,Ms1 4.4/4, ms1mx3.9/34,Error ellipse: s-maj=30.1km s-min=22.8km az=35.0

HRVD **18** 23:20:12.3±0.4,24.07S×111.65W,h12^{km},MW5.1/31, Centroid moment Tensor Solution. LP body waves: s28,c45;Mantle waves: s31,c51; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.39±.20; M$_{\theta\theta}$2.81±.20; M$_{\phi\phi}$-1.42±.21; M$_{r\theta}$-1.63±.49; M$_{\theta\phi}$-4.34±.17; M$_{\phi r}$0.67±.56; Best double couple: M$_0$5.052×10^{16} NP1:φ$_s$348°,δ76°,λ5°. NP2:φ$_s$257°,δ85°,λ166°. Principal axes: T 5.936, Plg13°, Azm212°; N -1.768, Plg75°, Azm59°; P -4.168, Plg7°, Azm303°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

NEIC **18** 23:20:12.3±0.5,24.08S×111.76W,h10^{km},mb4.9/13 Error ellipse: s-maj=16.6km s-min=11.3km az=77.0

BJI **18** 23:20:13.2,24.10S×111.80W,h10^{km},mB4.6,Ms5.2, Msz4.8

ISC 18 23:20:10.4±0.5**,24.00S**±0.06×**111.91W**±0.10**,h10**^{km}**,n57, σ1^{s}16**/33**,mb4.6**/18**,MS4.6**/4**,6C-1D,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.88	144	Pn	Pn	23 21 06.3	-5.2
	49nm,0.3s,baz=322,slow=15,SNR=28						
RPN				Sn	Sn	23 21 56.8	-0.8
	4.1nm,0.3s,baz=156,slow=17,SNR=3.6						
RPN				LR	LR	23 22 21.9	
	comp=Z,6µm,18.4s,baz=5.1,slow=36						
RPN	Rapa Nui	3.88	144	*e*Pn	Pn	23 21 06.1	-5.3
TAOE	Nuku Hiva Isla	30.90	294	*e*P	P	23 26 29.9	+0.3
	16µm,34.3s						
TAOE				*e*LQ		23 32 47.4	
	5µm,40.6s						
TAOE				*e*LR	LR	23 34 28.9	
	3µm,24.8s,baz=120						
TBI	Tubuai	34.33	263	*e*LQ		23 34 33.2	
	1µm,28.2s						
TBI				*e*LR	LR	23 36 03.3	
	360nm,26.2s,baz=99						
NNA	Nana	35.32	76	*e*P	P	23 27 08.4	+0.4
	21nm,1.2s,mb4.9						
PPT	Papeete	35.72	273	*e*S	S	23 32 42.1	-5.2
	88nm,27.0s						
PPT				*e*LQ		23 35 09.2	
	1µm,25.8s						
PPT				*e*LR	LR	23 36 31.3	
	730nm,30.8s,baz=105						
PLCA	Paso Flores	38.32	126	*e*P	P	23 27 35.4	+2.5
LPAZ	La Paz	41.68	88	P	P	23 28 02.1	+1.1
	4.7nm,1.1s,mb4.0,baz=254,slow=8.1,SNR=12						
LPAZ	La Paz	41.68	88	*e*P	P	23 28 02.0	+1.0
	18nm,1.4s,mb4.5						
JTS	JuntasAbangare	43.08	41	LR	LR	23 41 19.9	
	comp=Z,942nm,21.1s,MS4.7,baz=216,slow=29						
JTS	JuntasAbangare	43.08	41	*e*P	P	23 28 13.4	+0.8
	37nm,1.3s,mb5.0						
USHA	Ushuaia	44.45	145	LR	LR	23 43 24.3	
	comp=Z,564nm,20.3s,MS4.5,baz=88,slow=32						
ROSC	El Rosal	46.51	57	P	P	23 28 41.9	+1.8
	3.4nm,0.4s,mb4.6,baz=260,slow=8.5,SNR=4.8						
SAML	Samuel	48.81	81	*e*P	P	23 28 55.6	-2.4
	14nm,1.2s,mb4.9						
SDV	Santo Domingo	51.89	56	*e*P	P	23 29 20.7	-0.9
	9.2nm,1.0s,mb4.7						
TXAR	Lajitas Array	53.62	9	P	P	23 29 35.4	+1.1
	0.4nm,0.8s,mb3.4,baz=180,slow=7.2,SNR=3.0						
BDFB	Brasilia	60.26	95	P	P	23 30 21.1	-0.5
	4.2nm,0.9s,mb4.5,baz=260,slow=7.5,SNR=4.4						
TPH	Tonopah	61.95	355	*e*P	P	23 30 32.3	-0.5
	7.7nm,0.9s,mb4.8						
CMB	Columbia Colle	62.22	352	P	P	23 30 32.4	-2.2
	2.9nm,0.9s,mb4.4						
NVAR	Mina Array Bea	62.39	354	P	P	23 30 36.9	+1.1
	6.7nm,1.0s,mb4.7,baz=172,slow=9.5,SNR=20						
SWET	Sewanee	63.83	24	*e*P	P	23 30 42.4	-2.9
SBA	Scott Base	64.88	193	*e*P	P	23 30 51.9	+0.4
	18nm,1.6s,mb4.9						
VNDA	Vanda	65.93	194	P	P	23 31 00.8	+2.6
	0.6nm,0.6s,mb3.8,baz=102,slow=9.3,SNR=3.4						
VNDA	Vanda	65.93	194	*e*P	P	23 30 59.5	+1.3
	4.8nm,1.3s,mb4.4						
MOD	Modoc	66.03	353	*e*P	P	23 30 60.0	+0.5
	9.8nm,1.0s,mb4.8						
PDAR	Pinedale Array	66.47	2	P	P	23 31 01.8	-0.5
	0.5nm,0.5s,mb3.8,baz=180,slow=8.1,SNR=4.6						
HLID	Hailey	67.27	358	*e*P	P	23 31 07.6	+0.3
	8.6nm,1.3s,mb4.6						
CHMT	Chamberlain Mo	70.59	359	*e*P	P	23 31 28.1	+0.3
VNA3	Neumayer Olymp	71.33	161	⇑*i*	P	23 31 31.9	0.0
VNA3	Neumayer Olymp	71.33	161	⇑*i*	Px	23 31 38.1	
VNA3	Neumayer Olymp	71.33	161	⇑*i*	Px	23 31 43.8	
NEW	Newport	72.08	356	*e*P	P	23 31 36.6	-0.1
	26nm,1.8s,mb4.8						
VNA2	Neumayer--Watz	72.14	160	⇑*i*	P	23 31 36.9	+0.2
VNA2	Neumayer--Watz	72.14	160	⇑*i*	Px	23 31 42.4	
VNA2	Neumayer--Watz	72.14	160		Px	23 31 54.4	
SNAA	Sanae	73.19	162	*e*P	P	23 31 41.9	-0.9
	29nm,1.5s,mb5.0						
RCBR	Riachuelo	74.88	90	P	P	23 31 54.3	+0.6
DLBC	Dease Lake	83.50	351	*e*P	P	23 32 37.2	-2.2
SYO	Syowa Base	84.97	170	⇓P	P	23 32 45.5	-1.0
SYO	Syowa Base	84.97	170	⇑PcP	PcP	23 32 47.5	-2.9
SCHQ	Schefferville	87.49	24	LR	LR	00 09 03.2	
	comp=Z,129nm,20.5s,MS4.3,baz=99,slow=33						
AKASG	Malin Array Be	139.91	38	PKP	PKPdf	23 39 39.6	-2.2
	0.4nm,0.4s,baz=283,slow=3.4,SNR=5.9						
SONM	Songino Array	141.49	318	PKP	PKPdf	23 39 44.0	-0.7
	1.1nm,1.0s,slow=1.2,SNR=5.2						
GYA	Guiyang	145.11	282	PKP	PKPdf	23 39 50.6	-1.1
ARU	Arti	146.87	10	*e*PKPdf	PKPdf	23 39 52.4	-1.3
LZH	Lanzhou	146.97	300	*e*P	PKPbc	23 39 56.1	+3.0
LZH				pP		23 40 04.5	
LZH				sP		23 40 07.8	
BR131	Keskin Array S	147.04	53	*e*PKPbc	PKPdf	23 39 56.1	+1.5
BRTR	Keskin Array B	147.04	53	PKPbc	PKPdf	23 39 55.8	+1.2
	2.7nm,0.9s,baz=276,slow=1.2,SNR=15						
ZAL	Zalesovo	147.58	342	PKPbc	PKPdf	23 39 56.2	+1.2
	2.2nm,0.7s,baz=66,slow=4.9,SNR=17						
ZAL	Zalesovo	147.58	342	PKPbc	PKPdf	23 39 56.2	+1.2
GTA	Gaotai	149.14	307	PKP	PKPdf	23 40 03.0	+5.1
GTA				XPKP		23 40 06.9	
CMAR	Chiang Mai Arr	150.76	265	PKPbc	PKPdf	23 40 04.8	+3.8
	2.1nm,0.7s,baz=227,slow=0.2,SNR=11						
CMAR				PKPab	PKPab	23 40 11.7	-1.2
	4.0nm,0.9s,baz=349,slow=0.7,SNR=12						
MALT	Malatya	151.03	53	*e*PKPbc	PKPdf	23 40 06.4	+5.5
MALT				*e*PKPab	PKPab	23 40 12.2	-1.3
ZRNK	Zerenda	151.09	359	*e*PKPdf	PKPdf	23 39 59.6	-0.8
ZRNK				*e*PKPbc	PKPdf	23 40 05.3	+4.8
ZRNK				*e*PKPab	PKPab	23 40 11.7	-1.6
WMQ	Urumqi	154.52	326	*e*PKP	PKPdf	23 40 04.4	-1.2
WMQ				PP	PP	23 44 06.8	+2.3
WMQ				PPP	PPP	23 47 39.6	+2.5
WMQ				PP	PP		
	comp=Z,20nm,6.2s						
WMQ				LR	LR		
	comp=N,140nm,20.8s,MS5.0						
WMQ				LR	LR		
	comp=E,210nm,22.1s,MS5.0						
WMQ				LR	LR		
	comp=Z,180nm,24.0s,MS4.8						
MKAR	Makanchi Array	154.56	337	PKP	PKPdf	23 40 04.7	-0.9
	comp=Z,0.6nm,0.9s,baz=270,slow=2.9,SNR=2.8						
MKAR				PKPbc	PKPdf	23 40 11.3	+5.7
	comp=Z,1.4nm,0.8s,baz=45,slow=3.4,SNR=8.1						
MKAR	Makanchi Array	154.56	337	PKP	PKPdf	23 40 04.7	-0.9
MKAR				PKPbc	PKPdf	23 40 11.3	+5.7

IDC **18** 23:30:33.3±0.6,24.07S×111.93W,mb4.6/14,mb1 4.8/14, mb1mx4.7/18,mbtmp4.6/14,MS4.9/30,Ms1 4.8/30, ms1mx4.8/35,Error ellipse: s-maj=20.5km s-min=16.6km az=52.0

BJI **18** 23:30:34.5,24.10S×111.80W,h10^{km},mB5.5,Ms5.2, Msz5.1

HRVD **18** 23:30:34.5±0.3,24.07S×111.68W,h12^{km},MW5.4/26, Centroid moment Tensor Solution. LP body waves: s24,c37;Mantle waves: s26,c44; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.23±.06; M$_{\theta\theta}$-1.35±.05; M$_{\phi\phi}$1.58±.05; M$_{r\theta}$0.62±.15; M$_{\theta\phi}$-0.16±.05; M$_{\phi r}$0.23±.14; Best double couple: M$_0$1.627×10^{17} NP1: φ$_s$314°,δ68°,λ-167°. NP2:φ$_s$219°,δ78°,λ-22°. Principal axes: T 1.612, Plg7°, Azm268°; N .032, Plg65°, Azm13°; P -1.641, Plg24°, Azm175°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

NEIC **18** 23:30:34.5±0.3,24.08S×111.76W,h10^{km},mb5.3/42, MS4.9/40 Error ellipse: s-maj=12.6km s-min=6.6km az=72.0

MOS **18** 23:30:36.0±1.2,23.51S×111.28W,h10^{km},mb5.3/18, MS4.8/9,Error ellipse: s-maj=20.2km s-min=10.7km az=93.1

ISC 18 23:30:32.9±0.4**,24.01S**±0.06×**111.86W**±0.10**,h10**^{km}**, n223,σ0^{s}96**/111**,mb5.0**/53**,MS4.9**/75**,8C-6D,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.85	144	Pn	Pn	23 31 28.4	-5.2
	31nm,0.3s,baz=316,slow=14,SNR=15						
RPN				Sn	Sn	23 32 13.6	-5.8
	4.5nm,0.3s,baz=320,slow=18,SNR=2.1						
RPN				LR	LR	23 32 47.3	
	comp=Z,10µm,18.6s,baz=314,slow=35						
RPN	Rapa Nui	3.85	144	*e*Pn	Pn	23 31 27.3	-6.3
PAYG	Puerto Ayora	31.23	45	PFAKE		23 37 10.0	+15
PAYG				LR	LR		
	comp=Z,3µm,22.0s,MS4.9						
NNA	Nana	35.28	76	PFAKE		23 37 40.0	+10
NNA				LR	LR		
	comp=Z,1µm,22.0s,MS4.6						
PPT	Papeete	35.76	273	*e*S	S	23 42 53.8	-17
	comp=Z,675nm,26.0s						
PPT				*e*LR	LR	23 46 04.5	
	comp=Z,5µm,34.2s,baz=104						
PPT	Papeete	35.76	273	LR	LR	23 48 18.4	
	comp=Z,939nm,18.7s,MS4.6,baz=123,slow=30						
PLCA	Paso Flores	38.28	126	P	P	23 37 56.4	+1.2
	comp=Z,6.0nm,1.1s,mb4.2,baz=283,slow=10,SNR=5.0						
PLCA				LR	LR	23 49 16.3	
	comp=Z,2µm,21.6s,MS4.8,baz=280,slow=29						
CFAA	Coronel Fontan	39.12	111	P	P	23 38 03.5	+1.2
	comp=Z,1.3nm,1.0s,baz=276,slow=4.3,SNR=11						
CFAA				LR	LR	23 50 06.1	
	comp=Z,463nm,19.7s,MS4.3,baz=269,slow=30						
OTAV	Otavalo	40.38	58	*e*P	P	23 38 15.1	+2.2
	comp=Z,17nm,1.3s,mb4.6						
OTAV				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
LPAZ	La Paz	41.63	88	*e*P	P	23 38 24.4	+1.2
LPAZ				pmax	pmax		
	comp=Z,81nm,1.4s						
LPAZ				MLR	MLR		
	comp=Z,1µm,20.0s						
LPAZ	La Paz	41.63	88	P	P	23 38 24.2	+1.0
	comp=Z,24nm,1.1s,mb4.7,baz=265,slow=6.8,SNR=67						
LPAZ				LR	LR	23 51 31.3	
	comp=Z,1µm,19.4s,MS4.8,baz=257,slow=30						
LPAZ	La Paz	41.63	88	*e*P	P	23 38 24.4	+1.2
	comp=Z,81nm,1.4s,mb5.2						
LPAZ				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
JTS	JuntasAbangare	43.05	41	P	P	23 38 36.3	+1.4
	comp=Z,9.9nm,1.0s,mb4.5,baz=302,slow=13,SNR=3.2						
JTS	JuntasAbangare	43.05	41	P	P	23 38 36.3	+1.4
JTS				LR	LR		
	comp=Z,252nm,19.0s,MS4.1						
TRQA	Tornquist	44.48	121	PFAKE		23 39 00.0	+14
TRQA				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
ROSC	El Rosal	46.48	57	P	P	23 39 05.2	+2.9
	comp=Z,9.4nm,1.0s,mb4.7,baz=81,slow=24,SNR=10						
ROSC				LR	LR	23 55 08.2	
	comp=Z,2µm,19.2s,MS5.0,baz=7.0,slow=32						
SAML	Samuel	48.77	81	*e*P	P	23 39 19.1	-1.1
	comp=Z,70nm,1.3s,mb5.5						
SAML				LR	LR		
	comp=Z,1µm,21.0s,MS4.8						
CPUP	Villa Florida	49.10	105	P	P	23 39 21.9	-0.8
	comp=Z,11nm,1.1s,mb4.8,baz=279,slow=6.9,SNR=9.7						
CPUP				LR	LR	23 56 05.4	
	comp=Z,888nm,21.1s,MS4.7,baz=282,slow=31						
CPUP	Villa Florida	49.10	105	P	P	23 39 21.9	-0.8
CPUP				LR	LR	23 56 05.4	

PMSA	Palmer Station	51.05	156	PFAKE		23 39 50.0	+13
PMSA				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
SDV	Santo Domingo	51.86	56	*e*P	P	23 39 43.0	-0.8
	comp=Z,19nm,1.2s,mb4.9						
SDV				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
TXAR	Lajitas Array	53.61	9	P	P	23 39 57.5	+0.8
	comp=Z,3.0nm,1.0s,mb4.2,baz=186,slow=11,SNR=13						
TXAR				LR	LR	23 58 49.0	
	comp=Z,663nm,18.0s,MS4.7,baz=150,slow=32						
LTX	Lajitas	53.61	9	PFAKE		23 40 10.0	+13
LTX				LR	LR		
	comp=Z,854nm,19.0s,MS4.8						
MNTX	Cornudas Mount	55.73	7	*e*P	P	23 40 12.2	0.0
	comp=Z,39nm,1.5s,mb5.2						
JATB	Jatai	56.35	96	⇓*i*P	P	23 40 17.2	+0.4
JATB				*i*	pP	23 40 21.4	+1.6
JATB				*i*		23 41 11.0	
JATB				*i*		23 41 15.8	
JATB				*i*		23 41 21.9	
AFI	Afiamalu	57.20	269	LR	LR	23 58 32.3	
	comp=Z,2µm,18.7s,MS5.2,baz=93,slow=29						
RAO	Raoul Island	58.60	249	LR	LR	23 59 16.1	
	comp=Z,973nm,21.0s,MS4.9,baz=67,slow=29						
ANMO	Albuquerque	58.85	5	LR	LR	00 01 21.2	
	comp=Z,1µm,19.3s,MS5.0,baz=93,slow=31						
ANMO	Albuquerque	58.85	5	PFAKE		23 40 50.0	+16
ANMO				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
NEN	Nelson	59.40	357	*e*P	P	23 40 39.0	+1.0
DWPF	Disney	59.54	31	PFAKE		23 40 50.0	+11
DWPF				LR	LR		
	comp=Z,240nm,20.0s,MS4.3						
BDFB	Brasilia	60.21	95	P	P	23 40 42.7	-1.1
	comp=Z,33nm,1.1s,mb5.3,baz=260,slow=7.0,SNR=9.8						
BDFB				LR	LR	00 04 29.8	
	comp=Z,1µm,18.2s,MS5.0,baz=258,slow=34						
URZ	Urewera	61.09	238	LR	LR	00 01 48.8	
	comp=Z,1µm,19.7s,MS5.1,baz=360,slow=31						
LRAL	Lakeview Retre	61.48	24	*e*P	P	23 40 51.5	-0.7
	comp=Z,24nm,1.3s,mb5.2						
OMM	Old Mammoth Mi	61.66	354	*e*P	P	23 40 54.5	+1.1
TPH	Tonopah	61.95	355	*e*P	P	23 40 56.5	+1.1
TPH				pmax	pmax		
	comp=Z,78nm,1.5s,mb5.6						
TPH				MLR	MLR		
	comp=Z,448nm,19.0s,MS4.7						
TPH	Tonopah	61.95	355	*e*P	P	23 40 56.5	+1.1
	comp=Z,78nm,1.5s,mb5.6						
TPH				LR	LR		
	comp=Z,448nm,19.0s,MS4.7						
OXF	Oxford	61.98	21	PFAKE		23 41 10.0	+14
OXF				LR	LR		
	comp=Z,223nm,21.0s,MS4.3						
RW3	Ridgway	62.05	4	*e*P	P	23 40 56.4	+0.4
MVU	Marysvale	62.18	360	*e*P	P	23 40 55.7	-1.2
	comp=Z,25nm,1.3s,mb5.2						
MSU	Marysvale	62.19	360	*e*P	P	23 40 58.2	+1.3
CMB	Columbia Colle	62.23	352	*e*P	P	23 40 57.7	+0.5
CMB				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.2						
CMB				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.0						
CMB	Columbia Colle	62.23	352	*e*P	P	23 40 57.7	+0.5
	comp=Z,28nm,1.4s,mb5.2						
CMB				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
NVAR	Mina Array Bea	62.40	354	P	P	23 40 58.9	+0.6
	comp=Z,23nm,0.8s,mb5.3,baz=169,slow=6.7,SNR=94						
NVAR				LR	LR	00 02 18.5	
	comp=Z,1µm,19.5s,MS5.1,baz=90,slow=30						
NVAR	Mina Array Bea	62.40	354	P	P	23 40 58.9	+0.6
NVAR				LR	LR	00 02 18.5	
SRU	San Rafael	62.80	1	*e*P	P	23 41 01.1	+0.2
TMUT	Trail Mountain	62.97	1	*e*P	P	23 40 58.1	-4.0
CAM4	Nova Friburgo	63.11	104	⇓*i*P	P	23 41 03.7	+0.5
CAM4				*i*	pP	23 41 08.6	+2.3
WCN	Washoe City	63.41	353	*e*P	P	23 41 05.2	+0.3
WCN				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.1						
WCN	Washoe City	63.41	353	*e*P	P	23 41 05.2	+0.3
	comp=Z,16nm,1.1s,mb5.0						
CBKS	Cedar Bluff	63.51	11	PFAKE		23 41 20.0	+14
CBKS				LR	LR		
	comp=Z,611nm,19.0s,MS4.8						
SWET	Sewanee	63.82	24	*e*P	P	23 41 05.7	-2.1
WVT	Waverly	63.98	22	PFAKE		23 41 20.0	+11
WVT				LR	LR		
	comp=Z,296nm,20.0s,MS4.5						
BEKR	Beckwourth	64.03	353	*e*P	P	23 41 09.9	+0.8
	comp=Z,44nm,1.7s,mb5.2						
JLU	Jordanelle	64.27	0	*e*P	P	23 41 11.5	+0.9
BMN	Battle Mountai	64.30	355	*e*P	P	23 41 11.7	+0.9
BMN				pmax	pmax		
	comp=Z,46nm,1.4s,mb5.3						
BMN	Battle Mountai	64.30	355	*e*P	P	23 41 11.7	+0.8
	comp=Z,46nm,1.4s,mb5.3						
NOQ	North Oquirrh	64.32	360	P	P	23 41 10.3	-0.7
CTU	Camp Tracy	64.36	0	*e*P	P	23 41 11.6	+0.4
ELK	Elko	64.49	357	*e*P	P	23 41 12.1	0.0
ELK				pmax	pmax		
	comp=Z,17nm,1.3s						
ELK	Elko	64.49	357	*e*P	P	23 41 12.1	0.0
	comp=Z,17nm,1.3s,mb4.9						
CPCT	Cooper Cave	64.55	25	*e*P	P	23 41 10.9	-1.6
CPCT				*e*		23 41 26.5	
CCM	Cathedral Cave	64.70	18	*e*P	P	23 41 11.6	-1.9
CCM				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.0						
CCM	Cathedral Cave	64.70	18	*e*P	P	23 41 11.6	-1.9
	comp=Z,22nm,1.3s,mb5.0						
RPZ	Rata Peaks	64.74	231	LR	LR	00 05 18.9	
	comp=Z,1µm,18.4s,MS5.1,baz=187,slow=32						
TCUT	Toone Canyon	64.79	0	*e*P	P	23 41 13.4	-0.6
SBA	Scott Base	64.89	193	PFAKE		23 41 30.0	+16
SBA				LR	LR		
	comp=Z,874nm,19.0s,MS5.0						
SPUT	South Promonto	64.98	360	P	P	23 41 14.7	-0.5
WDC	Whiskeytown Da	65.02	351	*e*P	P	23 41 15.0	-0.5
WDC				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.2						
WDC	Whiskeytown Da	65.02	351	*e*P	P	23 41 15.0	-0.5
	comp=Z,30nm,1.2s,mb5.2						
HWUT	Hardware Ranch	65.28	0	*e*P	P	23 41 17.7	+0.6
	comp=Z,20nm,1.2s,mb5.0						
HWUT				LR	LR		
	comp=Z,755nm,22.0s,MS4.8						
TZTN	Tazewell	65.89	25	*e*P	P	23 41 19.4	-1.7
VNDA	Vanda	65.94	194	*e*P	P	23 41 20.5	-0.3
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VNDA				MLR	MLR		
	comp=Z,798nm,21.0s						
VNDA	Vanda	65.94	194	P	P	23 41 20.4	-0.3
	comp=Z,1.8nm,0.9s,mb4.1,baz=91,slow=4.6,SNR=10.0						
VNDA				LR	LR	00 05 15.7	
	comp=Z,537nm,18.5s,MS4.8,baz=90,slow=32						
VNDA	Vanda	65.94	194	*e*P	P	23 41 20.5	-0.3
	comp=Z,4.8nm,1.1s,mb4.4						
VNDA				LR	LR		
	comp=Z,798nm,21.0s,MS4.9						
MOD	Modoc	66.04	353	*e*P	P	23 41 22.2	+0.2
	comp=Z,39nm,1.1s,mb5.3						
QSPA	South Pole Qui	66.15	180	*e*P	P	23 41 22.7	+0.6
	comp=Z,21nm,0.9s,mb5.2						
QSPA				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
YBH	Yreka Blue Hor	66.17	351	LR	LR	00 03 28.0	
	comp=Z,2µm,21.6s,MS5.2,baz=251,slow=30						
AHID	Auburn Hatcher	66.44	1	*e*P	P	23 41 23.8	-0.7
	comp=Z,13nm,1.0s,mb4.9						
PDAR	Pinedale Array	66.47	2	P	P	23 41 24.5	-0.2
	comp=Z,2.1nm,0.3s,mb4.6,baz=180,slow=4.4,SNR=16						
PDAR				LR	LR	00 05 20.6	
	comp=Z,557nm,21.0s,MS4.8,baz=173,slow=31						
RRI2	Red Ridge	67.02	0	*e*P	P	23 41 28.4	+0.2
	comp=Z,99nm,1.7s,mb5.6						
REDW	Red Top Meadow	67.04	1	*e*P	P	23 41 27.9	-0.5
	comp=Z,44nm,1.5s,mb5.3						
SNOW	Snow King Moun	67.14	1	*e*P	P	23 41 28.8	-0.1
	comp=Z,12nm,0.8s,mb5.0						
TPAW	Teton Pass	67.17	1	*e*P	P	23 41 28.3	-0.8
	comp=Z,24nm,1.1s,mb5.1						
HLID	Hailey	67.27	358	*e*P	P	23 41 29.1	-0.7
	comp=Z,23nm,1.0s,mb5.2						
HLID				LR	LR		
	comp=Z,854nm,22.0s,MS4.9						
LOHW	Long Hollow	67.29	1	*e*P	P	23 41 29.6	-0.4
	comp=Z,39nm,1.5s,mb5.2						
MOOW	Moose Ponds	67.43	1	*e*P	P	23 41 30.6	-0.1
	comp=Z,27nm,1.4s,mb5.1						
IMW	Indian Meadow	67.57	1	*e*P	P	23 41 32.5	+0.8
	comp=Z,54nm,1.5s,mb5.4						
QLMT	Earthquake Lak	68.50	0	*e*P	P	23 41 37.1	-0.3
MCMT	McKenzie Canyo	68.50	359	*e*P	P	23 41 37.2	-0.3
BMO	Blue Mountains	68.70	356	*e*P	P	23 41 38.9	+0.2
	comp=Z,37nm,1.5s,mb5.1						
BOZ	Bozeman (W)	69.32	0	*e*P	P	23 41 42.0	-0.5
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
BOZ	Bozeman (W)	69.32	0	*e*P	P	23 41 42.0	-0.5
	comp=Z,4.9nm,0.7s,mb4.5						
VFP	Flag Point	69.54	353	P	P	23 41 45.6	+1.7
HRY	Holter Researc	70.38	0	*e*P	P	23 41 48.5	-0.5
MSO	Missoula	70.52	358	*e*P	P	23 41 49.2	-0.7
	comp=Z,14nm,1.3s,mb4.7						
LAO	LASA Array	70.54	4	P	P	23 41 49.6	-0.4
	comp=Z,20nm,1.0s,mb5.0						
CHMT	Chamberlain Mo	70.59	359	*e*P	P	23 41 50.3	+0.1
CHMT				*e*		23 42 03.9	
BMW	Boistfort Moun	70.90	352	P	P	23 41 54.0	+1.9
EBG	Ellensburg	71.02	354	P	P	23 41 55.0	+2.2
FMW	Mount Fremont	71.16	353	P	P	23 41 55.3	+1.6
VNA3	Neumayer Olymp	71.32	160	⇑*i*	P	23 41 54.4	+0.1
VNA3	Neumayer Olymp	71.32	160	⇑*i*	P	23 42 00.4	+6.1
ALLY	Alegheny Colle	71.63	25	*e*P	P	23 41 57.6	+1.0
BBSR	BB Station	71.90	41	PFAKE		23 42 10.0	+12
BBSR				LR	LR		
	comp=Z,496nm,20.0s,MS4.8						
NEW	Newport	72.09	356	*e*P	P	23 41 58.2	-1.0
NEW				pmax	pmax		
	comp=Z,29nm,1.2s						
NEW				MLR	MLR		
	comp=Z,798nm,22.0s						
NEW	Newport	72.09	356	LR	LR	00 08 04.0	
	comp=Z,630nm,21.3s,MS4.9,baz=233,slow=31						
NEW	Newport	72.09	356	*e*P	P	23 41 58.2	-1.1
	comp=Z,29nm,1.2s,mb5.1						
NEW				LR	LR		
	comp=Z,798nm,22.0s,MS4.9						
VNA2	Neumayer--Watz	72.12	160	⇑*i*	P	23 41 59.3	+0.2
VNA2	Neumayer--Watz	72.12	160	⇑*i*	P	23 42 06.6	+7.5
DGMT	Dagmar	72.47	5	*e*P	P	23 42 00.5	-1.0
	comp=Z,53nm,1.3s,mb5.3						
PGC	Sidney	73.06	352	*e*P	P	23 42 04.7	-0.2
	comp=Z,71nm,1.2s,mb5.5						
SNAA	Sanae	73.17	162	*e*P	P	23 42 03.7	-1.5
SNAA				pmax	pmax		
	comp=Z,35nm,1.4s						
SNAA	Sanae	73.17	162	*e*P	P	23 42 03.7	-1.4
	comp=Z,35nm,1.4s,mb5.1						
BINY	Binghamton	73.75	27	*e*P	P	23 42 08.6	-0.4
	comp=Z,35nm,1.2s,mb5.2						
EYMN	Ely	73.92	14	*e*P	P	23 42 08.9	-1.0
	comp=Z,22nm,1.2s,mb5.0						
DZM	Mont Dzumac	74.12	253	LR	LR	00 06 53.1	
	comp=Z,1µm,21.7s,MS5.1,baz=191,slow=29						
RCBR	Riachuelo	74.84	90	PFAKE		23 42 30.0	+14
RCBR				LR	LR		
	comp=Z,929nm,19.0s,MS5.1						
ULM	Lac du Bonnet	75.27	11	P	P	23 42 17.9	+0.3
	comp=Z,6.5nm,0.8s,mb4.6,baz=182,slow=7.5,SNR=5.0						
ULM				LR	LR	00 12 02.2	
	comp=Z,265nm,19.1s,MS4.6,baz=213,slow=33						
NCB	Newcomb	75.94	27	*e*P	P	23 42 20.6	-1.1
	comp=Z,34nm,1.3s,mb5.1						
MIV	Mineville/With	76.31	27	*e*P	P	23 42 23.0	-0.7
EDM	Edmonton	76.91	359	*e*P	P	23 42 26.1	-0.8
DLBC	Dease Lake	83.51	350	LR	LR	00 13 39.2	
	comp=Z,364nm,21.6s,MS4.7,baz=199,slow=31						
DLBC	Dease Lake	83.51	350	*e*P	P	23 43 02.5	+0.6
FCC	Fort Churchill	83.77	9	*e*P	P	23 43 01.9	-1.3
FCC				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.9						
FCC	Fort Churchill	83.77	9	*e*P	P	23 43 01.9	-1.3
	comp=Z,12nm,1.2s,mb4.9						
CASY	Casey	84.45	196	*e*P	P	23 43 07.6	+1.1
	comp=Z,13nm,1.0s,mb5.0						
HNR	Honiara	84.59	262	LR	LR	00 12 48.0	
	comp=Z,849nm,21.3s,MS5.1,baz=133,slow=30						
SYO	Syowa Base	84.96	170	⇓P	P	23 43 07.4	-1.6
YKA	Yellowknife Ar	86.22	359	P	P	23 43 14.9	-0.5
	comp=Z,6.1nm,0.9s,mb4.8,baz=173,slow=4.8,SNR=9.7						
YKA				LR	LR	00 17 48.7	
	comp=Z,666nm,18.1s,MS5.1,baz=225,slow=33						
SCHQ	Schefferville	87.48	24	P	P	23 43 22.8	+1.1
	comp=Z,3.3nm,0.8s,mb4.6,baz=248,slow=4.8,SNR=5.6						
SCHQ	Schefferville	87.48	24	P	P	23 43 22.8	+1.1
SCHQ				LR	LR		
	comp=Z,294nm,22.0s,MS4.7						
MAW	Mawson	88.58	178	LR	LR	00 18 34.4	
	comp=Z,685nm,19.9s,MS5.1,baz=329,slow=32						
STKA	Stephens Creek	90.51	235	LR	LR	00 20 39.3	
	comp=Z,414nm,18.0s,MS4.9,baz=51,slow=33						
CTA	Charters Tower	92.23	247	LR	LR	00 17 25.9	
	comp=Z,647nm,21.1s,MS5.0,baz=306,slow=30						
ILAR	Eielson Array	92.55	346	LR	LR	00 17 20.4	
	comp=Z,267nm,18.4s,MS4.7,baz=317,slow=30						
COLA	College	92.86	345	PFAKE		23 44 00.0	+13
COLA				LR	LR		
	comp=Z,1.0nm,21.0s						
INK	Inuvik	93.41	352	*e*P	P	23 43 48.8	-0.3
INK				pmax	pmax		
	comp=Z,15nm,1.4s						
INK	Inuvik	93.41	352	LR	LR	00 19 07.7	
	comp=Z,667nm,20.6s,MS5.1,baz=178,slow=31						
INK	Inuvik	93.41	352	*e*P	P	23 43 48.8	-0.3
	comp=Z,15nm,1.4s,mb5.2						
PMG	Port Moresby	96.10	257	LR	LR	00 21 21.7	
	comp=Z,731nm,18.1s,MS5.2,baz=102,slow=32						
DBIC	Dimbokro	108.20	91	PFAKE		23 49 20.0	
DBIC				LR	LR		
	comp=Z,562nm,21.0s,MS5.1						
TSUM	Tsumeb	114.63	127	PFAKE		23 49 30.0	+13
TSUM				LR	LR		
	comp=Z,403nm,20.0s,MS5.0						
LBTB	Lobatse	116.18	137	PFAKE		23 49 30.0	+10
LBTB				LR	LR		
	comp=Z,279nm,20.0s,MS4.9						
JMIC	Jan Mayen	116.83	21	AMS	AMS	00 36 42.3	
	comp=Z,214nm,20.7s,MS4.8						
ESLA	Sonseca Array	118.30	57	PFAKE		23 49 30.0	+6.2
ESLA				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
KBS	Kingsbay	119.69	11	*e*SS	SS	00 07 13.7	+3.0
KBS				AMS	AMS	00 38 32.3	
	comp=Z,266nm,18.7s,MS4.9						
ESK	Eskdalemuir	119.94	39	PFAKE		23 49 40.0	+14
ESK				LR	LR		
	comp=Z,47nm,22.0s,MS4.1						
SJPF	Ste Jean	120.76	53	*e*PKIKP	PKPdf	23 49 25.8	-2.7
	comp=Z,38nm,1.4s						
EPF	Esparros	121.90	53	*e*PKIKP	PKPdf	23 49 28.4	-2.3
	comp=Z,13nm,1.2s						
BER	Bergen	123.97	32	*e*SS	SS	00 08 07.1	+1.4
BER				AMS	AMS	00 42 44.9	
	comp=Z,129nm,19.2s,MS4.6						
LSZ	Lusaka	124.80	131	PFAKE		23 49 50.0	+13
LSZ				LR	LR		
	comp=Z,365nm,19.0s,MS5.1						
SMRF	Simiane la Rot	125.74	52	*e*PKIKP	PKPdf	23 49 35.3	-2.8
	comp=Z,23nm,1.4s						
TRO	Tromso	126.02	19	*e*SS	SS	00 08 33.0	+1.9
TRO				AMS	AMS	00 41 19.7	
	comp=Z,166nm,21.2s,MS4.7						
FRF	La Foret Royal	126.52	53	*e*PKIKP	PKPdf	23 49 37.3	-2.2
	comp=Z,18nm,1.3s						
MDJ	Mudanjiang	126.53	309	PKP	PKPdf	23 49 37.4	-2.1
MDJ				PP	PP	23 51 34.3	-2.3
MDJ				SKS	SKS	23 56 47.8	+2.4
MDJ				PP	PP		
	comp=Z,100nm,5.5s						
MDJ				LR	LR		
	comp=N,50nm,20.1s,MS4.7						
MDJ				LR	LR		
	comp=E,170nm,23.2s,MS4.7						
MDJ				LR	LR		
	comp=Z,200nm,20.9s,MS4.8						
LPL	La Plagne	126.54	50	*e*PKIKP	PKPdf	23 49 37.4	-2.0
	comp=Z,19nm,1.5s						
LPG	La Plagne	126.55	50	*e*PKIKP	PKPdf	23 49 37.1	-2.4
	comp=Z,25nm,1.4s						
GRA1	Grafenberg Arr	129.18	45	*e*PKP	PKPdf	23 49 43.8	-0.7
GRF	Grafenberg Arr	129.18	45	*e*PKIKP	PKPdf	23 49 43.8	-0.7
MOX	Moxa	129.28	43	*e*PKIKP	PKPdf	23 49 41.9	-2.8
MOX				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.8						
MOX	Moxa	129.28	43	*i* P	PKPdf	23 49 41.9	-2.8
MOX				L		00 47 01.0	
CLL	Collm	130.02	42	⇓*i*PKIKP	PKPdf	23 49 46.3	+0.2
CLL				*i*		23 49 50.6	
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL	Collm	130.02	42	⇓*i*PKP1	PKPdf	23 49 46.3	+0.2
CLL				*i* *PPKP		23 49 50.6	
CLL				*i*		23 49 55.8	
BRG	Berggiesshubel	130.69	43	*i* PKIKP	PKPdf	23 49 47.3	0.0
BRG				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BRG	Berggiesshubel	130.69	43	*e*P	PKPdf	23 49 44.3	-3.0
KHC	Kasperske Hory	130.79	45	*e*P	PKPdf	23 49 47.5	-0.1
GERES	GERESS Array B	130.92	45	PKP	PKPdf	23 49 47.1	-0.8
	comp=Z,1.4nm,1.0s,SNR=8.1						
FINES	FINESS Array B	132.92	26	PKP	PKPdf	23 49 49.3	-2.0
	comp=Z,2.0nm,0.9s,baz=146,slow=6.9,SNR=5.2						
MBAR	Mbarara	136.24	119	PFAKE		23 50 10.0	+11
MBAR				LR	LR		
	comp=Z,96nm,21.0s,MS4.5						
AKASG	Malin Array Be	139.88	38	PKP	PKPdf	23 50 01.9	-2.5
	comp=Z,2.1nm,0.6s,baz=284,slow=2.8,SNR=9.4						
ULN	Ulaanbaatar	141.10	318	*e*PKHKP		23 50 02.6	
ULN				MLR	MLR		
	comp=Z,337nm,21.0s,MS5.1						
OBN	Obninsk	141.15	29	α*e*PKIKP	PKPdf	23 50 05.2	-1.2
OBN				*i*		23 50 10.1	
OBN						23 53 12.0	
OBN				*e*		00 16 48.7	
OBN				pmax	pmax		
	comp=Z,12nm,1.6s						
OBN				pmax	pmax		
	comp=Z,31nm,1.2s						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.9						
OBN	Obninsk	141.15	29	*e*PKPdf	PKPdf	23 50 04.2	-2.2
SONM	Songino Array	141.52	318	PKhKP		23 50 01.2	
	comp=Z,0.6nm,0.7s,baz=357,slow=1.9,SNR=5.5						
SONM				PKP	PKPdf	23 50 06.4	-0.8
	comp=Z,1.9nm,1.0s,baz=90,slow=1.2,SNR=9.2						
ZAK	Zakamensk	142.14	323	*e*PKHKP		23 50 03.5	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s						
ENH	Enshi	142.83	289	PFAKE		23 50 20.0	+10
ENH				LR	LR		
	comp=Z,294nm,20.0s,MS5.0						
ULDT	Uludag	143.57	54	*i* P	PKPbc	23 50 06.6	0.0
HENT	Hendek	144.68	53	*i* P	PKPbc	23 50 10.9	+1.1
TKTP	Tekketepe	144.95	57	*i* P	PKPbc	23 50 11.9	+1.2
ESKT	Eskisehir	145.00	55	*i* P	PKPbc	23 50 11.3	+0.5
GYA	Guiyang	145.15	282	⇑*i*PKP	PKPdf	23 50 12.8	-1.4
SIM	Simferopol’	145.39	44	⇑*e*PKIKP	PKPdf	23 50 14.2	+0.1
SIM				pmax	pmax		
	comp=Z,52nm,1.2s						
SGKT	Sivrigoynuk	145.60	53	*i* P	PKPbc	23 50 14.2	+2.0
BALT	Daday	146.24	50	*i* P	PKPbc	23 50 15.2	+1.5
ELDT	Eldivan	146.61	52	*i* P	PKPbc	23 50 15.8	+1.2
SVE	Sverdlovsk	146.76	8	*e*PKP2	PKPab	23 50 16.0	-2.1
SVE				pmax	pmax		
	comp=Z,50nm,2.5s						
ARU	Arti	146.86	10	*e*PKIKP	PKPdf	23 50 15.0	-1.2
ARU	Arti	146.86	10	*e*PKPdf	PKPdf	23 50 15.0	-1.2
BR131	Keskin Array S	147.01	53	*e*PKPdf	PKPdf	23 50 15.5	-1.5
BRTR	Keskin Array B	147.01	53	PKPbc	PKPdf	23 50 17.4	+0.4
	comp=Z,7.1nm,1.0s,baz=180,slow=1.2,SNR=28						
LZH	Lanzhou	147.01	300	*e*PKP	PKPdf	23 50 17.0	-0.1
LZH				APKP		23 50 24.3	
LZH				LR	LR		
	comp=N,530nm,15.2s						
LZH				LR	LR		
	comp=Z,930nm,17.5s,MS5.6						
LZH	Lanzhou	147.01	300	*e*PKIKP	PKPdf	23 50 17.0	-0.1
LZH				*PP		23 50 24.2	
LZH				MLR	MLR		
	comp=Z,940nm,17.5s,MS5.6						
NVS	Novosibirsk	147.22	344	*e*PKHKP		23 50 11.8	
NVS				pmax	pmax		
	comp=Z,40nm,2.0s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.6s						
BOYT	Boyabat	147.34	50	*i* P	PKPdf	23 50 16.9	-0.5
CDAG	Cicekdag	147.58	53	*i* P	PKPdf	23 50 19.3	+1.4
ZAL	Zalesovo	147.60	342	PKPbc	PKPdf	23 50 17.9	+0.5
	comp=E,2.7nm,0.6s,baz=96,slow=2.8,SNR=17						
ZAL	Zalesovo	147.60	342	PKPbc	PKPdf	23 50 17.9	+0.5
CSS	Prodhromos	147.94	62	*e*PKPdf	PKPdf	23 50 18.3	-0.3
AVNT	Avonos	148.20	54	*i* P	PKPdf	23 50 21.5	+2.6
KMI	Kunming	148.56	279	PKP	PKPdf	23 50 21.6	+1.7
KMI				LR	LR		
	comp=Z,70nm,30.6s,MS4.3						
KMI	Kunming	148.56	279	P	PKPdf	23 50 21.6	+1.7
KMI				sP		23 50 33.7	
KMI				LR	LR		
	comp=Z,80nm,30.6s,MS4.3						
GTA	Gaotai	149.18	307	PKP	PKPdf	23 50 23.8	+3.3
GTA				SKS	SKS	23 57 29.4	+1.5
GTA				PP	PP		
	comp=Z,130nm,12.6s						
GTA				LR	LR		
	comp=N,110nm,21.8s,MS4.9						
GTA				LR	LR		
	comp=E,220nm,26.0s,MS4.9						
GTA				LR	LR		
	comp=Z,300nm,23.3s,MS5.0						
COBT	Iskenderun	149.91	58	*i* P	PKPdf	23 50 25.3	+3.6
EIL	Elat	149.92	72	*e*PKPbc	PKPdf	23 50 25.1	+3.1
GZT	Gaziantep	150.67	56	*i* P	PKPdf	23 50 28.1	+5.2
GOF	Gofitskoye	150.73	38	⇓*i*PKIKP	PKPdf	23 50 26.5	+3.8
GOF				pmax	pmax		
	comp=Z,40nm,1.7s						
CMAR	Chiang Mai Arr	150.80	265	PKPbc	PKPdf	23 50 28.0	+4.4
	comp=Z,3.9nm,0.8s,baz=151,slow=0.5,SNR=12						
CMAR				PKPab	PKPab	23 50 34.5	-1.2
	comp=Z,10nm,1.0s,baz=104,slow=0.6,SNR=22						
BVA0	Borovoye Array	150.97	357	PKIKP	PKPdf	23 50 22.4	-0.4
BVA0				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BVAR	Borovoye Array	150.97	357	PKPbc	PKPdf	23 50 28.0	+5.2
	comp=Z,8.4nm,0.9s,baz=315,slow=2.1,SNR=9.2						
MALT	Malatya	151.00	54	*e*PKIKP	PKPdf	23 50 24.9	+1.6
ZRNK	Zerenda	151.09	359	*e*PKIKP	PKPdf	23 50 21.9	-1.1
KIV	Kislovodsk	151.18	40	*e*PKIKP	PKPdf	23 50 24.7	+1.3
KIV				MLR	MLR		
	comp=Z,46nm,22.0s,MS4.2						
KIV	Kislovodsk	151.18	40	*e*PKPdf	PKPdf	23 50 24.7	+1.3
KIV				LR	LR		
	comp=Z,46nm,22.0s,MS4.2						
VOSK	Vostochnaya	151.24	356	PKIKP	PKPdf	23 50 24.0	+0.8
VOSK				pmax	pmax		
	comp=Z,66nm,1.5s						
TI2	Plekhanov	153.70	42	*e*PKIKP	PKPdf	23 50 23.0	-4.1
AB31	Akbulak array	153.99	12	*i* PKIKP	PKPdf	23 50 28.1	+0.9
AB31				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WMQ	Urumqi	154.54	326	*e*PKP	PKPdf	23 50 28.0	-0.1
WMQ				PP	PP	23 54 30.4	+3.3
WMQ				PPP	PPP	23 58 03.3	+3.5
WMQ				PP	PP		
	comp=Z,220nm,6.2s						
WMQ				LR	LR		
	comp=N,140nm,20.8s,MS5.0						
WMQ				LR	LR		
	comp=E,210nm,22.1s,MS5.0						
WMQ				LR	LR		
	comp=Z,180nm,24.0s,MS4.8						
GNI	Garni	154.58	45	PFAKE		23 50 40.0	+12
GNI				LR	LR		
	comp=Z,250nm,20.0s,MS5.0						
MKAR	Makanchi Array	154.58	337	PKP	PKPdf	23 50 28.4	+0.3
	comp=Z,0.6nm,0.8s,slow=2.9,SNR=3.1						
MKAR				PKPbc	PKPdf	23 50 37.6	+9.5
	comp=Z,2.3nm,0.9s,baz=34,slow=4.4,SNR=6.2						
LSA	Lhasa	158.72	290	PFAKE		23 50 40.0	+6.0
LSA				LR	LR		
	comp=Z,276nm,21.0s,MS5.1						
PALK	Pallekele	159.46	218	PFAKE		23 50 50.0	+15

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK				LR	LR		
	comp=Z,140nm,19.0s,MS4.8						
KKAR	**Karatay Array**	**160.85**	**355**	*i* PKP2	PKPab	23 51 17.7	0.0
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

MAN 18 23:40:53.2,13.22N×124.41E,h26^{km},mb4.2,ML3.0, MS2.8,1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.45**	**326**	*e*P	Pb	23 41 03.3	+0.6
PVCP				*e*S	Sb	23 41 08.0	-1.0
CNP	**Catarman**	**0.75**	**161**	*e*P	Pb	23 41 08.0	+0.5
CNP				*e*S	Sb	23 41 18.9	+1.6
MMPH	**Masbate**	**1.15**	**222**	*e*P	Pn	23 41 13.0	-0.9
MMPH				*i* S	Sn	23 41 25.3	-3.7
PLP	**Palo**	**2.12**	**165**	*e*P	Pn	23 41 28.7	+1.0
PLP				*e*S	Sn	23 41 52.9	-0.5
RCP	**Roxas**	**2.32**	**225**	⇑*e*P	Pn	23 41 30.7	0.0
BOAC	**Boac**	**2.51**	**276**	*e*P	Pn	23 41 33.2	-0.1

*IDC **18** 23:42:47.2±0.7,24.05S×111.79W,mb4.2/9,mb1 4.5/9, mb1mx4.3/19,mbtmp4.2/9,MS4.2/8,Ms1 4.2/8, ms1mx4.0/29,Error ellipse: s-maj=28.4km s-min=21.7km az=85.0*

*NEIC **18** 23:42:48.6±0.4,24.13S×111.73W,h10^{km},mb4.7/14, Error ellipse: s-maj=16.1km s-min=8.5km az=80.0*

ISC 18 23:42:46.7±0.4**,24.12S**±0.06×**111.8W**±0.1**,h10^{km},n56, σ1^{s}00**/38**,mb4.5**/22**,MS4.2**/7**,4C-1D,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**3.72**	**144**	Pn	**Pn**	**23 43 42.5**	**-3.0**
	31nm,0.3s,baz=320,slow=16,SNR=13						
RPN				Sn	**Sn**	**23 44 28.9**	**-1.0**
	baz=340,slow=23,SNR=2.6						
RPN				LR	LR	23 44 38.0	
	comp=Z,1μm,19.4s,baz=220,slow=29						
RPN	**Rapa Nui**	**3.72**	**144**	*e*Pn	**Pn**	**23 43 42.3**	**-3.1**
TAOE	**Nuku Hiva Isla**	**31.06**	**294**	*e*PP	PP	23 50 10.9	+1.4
	7μm,28.8s						
TAOE				*e*LR	LR	23 56 56.1	
	4μm,31.8s,baz=138						
TBI	**Tubuai**	**34.44**	**263**	*e*LQ		23 57 12.1	
	771nm,28.0s						
PPT	**Papeete**	**35.84**	**273**	*e*LQ		23 57 45.5	
	879nm,26.2s						
PPT				*e*LR	LR	23 59 02.6	
	471nm,30.2s,baz=118						
PLCA	**Paso Flores**	**38.15**	**126**	LR	LR	00 01 42.4	
	comp=Z,378nm,18.4s,MS4.2,baz=91,slow=30						
CFAA	**Coronel Fontan**	**39.01**	**111**	LR	LR	00 02 09.5	
	comp=Z,103nm,18.5s,MS3.7,baz=266,slow=30						
OTAV	**Otavalo**	**40.38**	**58**	*e*P	**P**	**23 50 28.4**	**+1.7**
	6.9nm,1.1s,mb4.3						
LPAZ	**La Paz**	**41.56**	**88**	P	**P**	**23 50 38.5**	**+2.1**
	2.3nm,1.0s,mb3.7,baz=268,slow=8.9,SNR=5.0						
LPAZ	**La Paz**	**41.56**	**88**	*e*P	**P**	**23 50 38.2**	**+1.8**
	6.5nm,1.2s,mb4.1						
JTS	**JuntasAbangare**	**43.08**	**41**	LR	LR	00 03 56.4	
	comp=Z,605nm,21.6s,MS4.5,baz=148,slow=30						
ROSC	**El Rosal**	**46.47**	**57**	LR	LR	00 05 52.3	
	comp=Z,404nm,20.6s,MS4.4,baz=0.1,slow=30						
SAML	**Samuel**	**48.71**	**80**	*e*P	**P**	**23 51 34.5**	**+1.0**
	4.7nm,0.9s,mb4.5						
LTX	**Lajitas**	**53.71**	**9**	*e*P	**P**	**23 52 11.7**	**+0.5**
	5.7nm,0.9s,mb4.5						
TXAR	**Lajitas Array**	**53.71**	**9**	P	**P**	**23 52 10.8**	**-0.4**
	1.1nm,0.9s,mb3.8,baz=180,slow=8.1,SNR=4.7						
TXAR				LR	LR	00 10 26.0	
	comp=Z,138nm,20.7s,MS4.0,baz=90,slow=31						
ANMO	**Albuquerque**	**58.96**	**5**	P	**P**	**23 52 48.4**	**-0.4**
	1.6nm,0.9s,mb4.0						
BDFB	**Brasilia**	**60.13**	**95**	P	**P**	**23 52 56.1**	**-1.0**
	4.4nm,1.0s,mb4.5,baz=226,slow=5.3,SNR=4.5						
TPH	**Tonopah**	**62.07**	**355**	*e*P	**P**	**23 53 10.4**	**+0.4**
	18nm,1.1s,mb5.1						
CMB	**Columbia Colle**	**62.35**	**352**	P	**P**	**23 53 10.5**	**-1.2**
	6.4nm,1.2s,mb4.6						
NVAR	**Mina Array Bea**	**62.52**	**354**	P	**P**	**23 53 13.4**	**+0.5**
	6.2nm,0.8s,mb4.8,baz=172,slow=10.0,SNR=21						
SRU	**San Rafael**	**62.91**	**1**	*e*P	**P**	**23 53 15.3**	**-0.2**
SWET	**Sewanee**	**63.89**	**23**	*e*P	**P**	**23 53 20.3**	**-1.7**
ELK	**Elko**	**64.61**	**357**	P	**P**	**23 53 26.7**	**+0.1**
	0.9nm,0.6s,mb4.0,baz=169,slow=8.7,SNR=4.3						
ELK	**Elko**	**64.61**	**357**	P	**P**	**23 53 26.7**	**+0.1**
SBA	**Scott Base**	**64.80**	**193**	*e*P	**P**	**23 53 27.3**	**0.0**
	10nm,1.4s,mb4.7						
WDC	**Whiskeytown Da**	**65.14**	**351**	*e*P	**P**	**23 53 30.1**	**+0.1**
	10nm,1.0s,mb4.8						
VNDA	**Vanda**	**65.85**	**194**	P	**P**	**23 53 34.6**	**+0.6**
	1.0nm,1.1s,mb3.8,baz=87,slow=2.4,SNR=3.0						
VNDA				LR	LR	00 15 00.2	
	comp=Z,341nm,20.0s,MS4.5,baz=113,slow=29						
QSPA	**South Pole Qui**	**66.04**	**180**	*e*P	**P**	**23 53 37.1**	**+1.9**
	5.6nm,1.0s,mb4.5						
MOD	**Modoc**	**66.16**	**353**	*e*P	**P**	**23 53 36.5**	**0.0**
	28nm,1.2s,mb5.2						
PDAR	**Pinedale Array**	**66.58**	**2**	P	**P**	**23 53 37.6**	**-1.6**
	0.9nm,0.7s,mb3.9,baz=180,slow=4.4,SNR=6.3						
PDAR				LR	LR	00 18 05.1	
	comp=Z,150nm,18.9s,MS4.2,baz=351,slow=32						
PDAR	**Pinedale Array**	**66.58**	**2**	P	**P**	**23 53 37.6**	**-1.6**
PDAR				LR	LR	00 18 05.1	
HLID	**Hailey**	**67.39**	**358**	*e*P	**P**	**23 53 44.1**	**-0.3**
	15nm,1.2s,mb4.9						
VNA3	**Neumayer Olymp**	**71.19**	**160**	⇑*i*	**P**	**23 54 08.5**	**+1.2**
VNA3	**Neumayer Olymp**	**71.19**	**160**		**P**	**23 54 15.9**	**+8.6**
VNA2	**Neumayer--Watz**	**72.00**	**160**	⇑*i*	**P**	**23 54 13.6**	**+1.5**
VNA2	**Neumayer--Watz**	**72.00**	**160**	⇑*i*	**P**	**23 54 22.9**	**+11**
NEW	**Newport**	**72.20**	**356**	P	**P**	**23 54 12.9**	**-0.8**
	3.5nm,1.0s,mb4.2,baz=144,slow=5.9,SNR=3.2						
NEW	**Newport**	**72.20**	**356**	*e*P	**P**	**23 54 12.9**	**-0.7**
SNAA	**Sanae**	**73.05**	**162**	*e*P	**P**	**23 54 18.4**	**+0.2**
	13nm,1.4s,mb4.7						
DLBC	**Dease Lake**	**83.63**	**350**	P	**P**	**23 55 17.4**	**+1.1**
	5.3nm,1.0s,mb4.6,baz=169,slow=5.2,SNR=5.8						
DLBC	**Dease Lake**	**83.63**	**350**	*e*P	**P**	**23 55 16.9**	**+0.6**
CASY	**Casey**	**84.36**	**196**	P	**P**	**23 55 18.8**	**-1.0**
SYO	**Syowa Base**	**84.83**	**170**	⇓P	**P**	**23 55 22.0**	**-0.1**
SYO	**Syowa Base**	**84.83**	**170**	⇑X		23 55 29.0	
SCHQ	**Schefferville**	**87.55**	**24**	*e*P	**P**	**23 55 35.8**	**0.0**
	3.2nm,0.9s,mb4.5						
GERES	**GERESS Array B**	**130.95**	**45**	PKP	PKPdf	00 02 01.5	-0.2
	0.2nm,0.5s,baz=180,slow=1.0,SNR=4.5						
FINES	**FINESS Array B**	**132.99**	**26**	PKP	PKPdf	00 02 03.4	-1.8
	1.1nm,0.8s,baz=243,slow=4.3,SNR=3.9						
AKASG	**Malin Array Be**	**139.92**	**38**	PKhKP		00 02 11.4	
	0.2nm,0.3s,baz=286,slow=2.8,SNR=4.3						
AKASG				PKP	PKPdf	00 02 16.6	-1.6
	1.1nm,0.6s,baz=285,slow=2.9,SNR=6.9						
SONM	**Songino Array**	**141.65**	**318**	PKhKP		00 02 15.0	
	0.6nm,0.9s,baz=29,slow=1.3,SNR=3.4						
SONM				PKP	PKPdf	00 02 20.7	-0.6
	0.6nm,0.7s,baz=90,slow=1.2,SNR=4.8						
BR131	**Keskin Array S**	**147.01**	**54**	*e*PKPbc	PKPdf	00 02 31.8	+1.0
BRTR	**Keskin Array B**	**147.01**	**54**	PKPbc	PKPdf	00 02 31.9	+1.1
	2.9nm,0.9s,baz=225,slow=3.5,SNR=14						
ZAL	**Zalesovo**	**147.72**	**342**	PKPbc	PKPdf	00 02 33.3	+1.9
	2.5nm,0.7s,baz=89,slow=2.8,SNR=17						
CMAR	**Chiang Mai Arr**	**150.86**	**265**	PKPbc	PKPdf	00 02 42.6	+5.2
	2.7nm,0.7s,baz=90,slow=0.9,SNR=15						
CMAR				PKPab	PKPab	00 02 48.8	-0.9
	3.1nm,1.0s,baz=117,slow=0.8,SNR=8.0						
BVAR	**Borovoye Array**	**151.09**	**357**	PKPbc	PKPdf	00 02 41.5	+4.7
	4.6nm,0.9s,SNR=18						
BVAR				PKPab	PKPab	00 02 47.9	-1.7
	3.1nm,0.6s,baz=27,slow=3.3,SNR=12						
MKAR	**Makanchi Array**	**154.72**	**337**	PKP	PKPdf	00 02 39.7	-2.3
	0.6nm,0.9s,baz=304,slow=5.2,SNR=2.5						
MKAR				PKPbc	PKPdf	00 02 49.6	+7.5
	1.2nm,0.8s,baz=25,slow=1.7,SNR=6.0						
MKAR				PKPab	PKPab	00 03 04.8	-0.2
	1.5nm,1.0s,baz=18,slow=3.8,SNR=3.5						
MKAR	**Makanchi Array**	**154.72**	**337**	PKP	PKPdf	00 02 39.7	-2.3
MKAR				PKPbc	PKPdf	00 02 49.6	+7.5
MKAR				PKPab	PKPab	00 03 04.8	-0.2

MAN 18 23:47:28.9,11.31N×125.65E,h6^{km},mb4.0,ML2.7,MS2.4, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	**Palo**	**0.68**	**257**	*e*P	Pg	23 47 42.2	-0.3
PLP				*e*S	Sg	23 47 51.2	-0.4
MSLP	**Maasin**	**1.41**	**214**	*e*P	Pn	23 47 55.8	+0.5
SCPH	**Surigao**	**1.53**	**186**	*i* P	Pn	23 47 56.1	-0.8
SCPH				*e*S	Sb	23 48 17.0	+0.1
CNP	**Catarman**	**1.53**	**321**	*e*P	Pn	23 47 55.1	-1.9
CNP				*e*S	Sb	23 48 17.5	+0.5
PVCP	**Virac**	**2.70**	**327**	*e*P	Pn	23 48 14.7	+1.1

*CSEM **18** 23:57:05.2±0.3,34.66N×51.68E,h18^{km},ML4.6/3,Error ellipse: s-maj=2.4km s-min=1.8km az=165.0,After THR*

THR 18 23:57:05.2±0.4**,34.66N×51.68E,h18^{km},ML3.1, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAMV	**Damavand**	**0.99**	**14**	*e*PG	Pb	23 57 24.2	+0.7
DAMV				*e*SG	Sb	23 57 37.8	+1.6
DAMV				AML	AML	23 57 38.2	
	comp=N,1μm,0.1s						
ASAO	**Ashtian**	**1.37**	**266**	*e*PG	Pn	23 57 30.5	+0.9
ASAO				*e*SG	Sb	23 57 49.3	+2.3
ASAO				AML	AML	23 57 50.0	
	comp=E,298nm,0.2s						
ASAO	**Ashtian**	**1.37**	**266**	*e*Pg	Pn	23 57 30.5	+0.9
	SNR=92						
ASAO				*e*Sg	Sb	23 57 49.3	+2.3
	comp=E,298nm,0.2s,SNR=92						
THKV	**Tehran--Karaj**	**1.41**	**333**	*e*PG	Pn	23 57 31.3	+1.1
NASN	**Na'in**	**2.08**	**153**	*e*PG	Pn	23 57 43.2	+3.3
NASN				*e*SG	Sn	23 58 11.3	+5.7
NASN				AML	AML	23 58 17.4	
	comp=E,57nm,0.1s						

*IDC **18** 23:59:11.8±5.0,24.82S×179.86E,h534^{km}±60^{km},mb3.6/6, mb1 3.8/7,mb1mx3.4/16,mbtmp4.4/7,Error ellipse: s-maj=34.0km s-min=26.4km az=8.0*

ISC 18 23:59:13.7±3.2**,24.9S**±0.2×**179.7E**±0.2**,h571**^{km}±41^{km}**, n12,σ0^{s}43**/12**,mb4.1**/7**,2D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.52**	**280**	P	**P**	**00 01 57.7**	**0.0**
	0.3nm,0.3s,baz=73,slow=15,SNR=6.9						
RPZ	**Rata Peaks**	**20.03**	**199**	P	**P**	**00 03 09.7**	**-0.2**
	5.0nm,0.5s,baz=65,slow=8.7,SNR=5.8						
CTA	**Charters Tower**	**31.25**	**272**	*e*P	**P**	**00 04 49.4**	**+0.4**
	10nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**34.12**	**249**	*e*P	**P**	**00 05 13.5**	**+0.6**
	2.5nm,0.4s,mb4.1						
STKA	**Stephens Creek**	**34.12**	**249**	P	**P**	**00 05 13.7**	**+0.8**
	3.0nm,0.4s,mb4.2,baz=95,slow=11,SNR=16						
WB2	**Warramunga Arr**	**42.09**	**267**	⇓*i*P	**P**	**00 06 17.6**	**-0.3**
WRA	**Warramunga Arr**	**42.10**	**267**	P	**P**	**00 06 17.7**	**-0.3**
	7.0nm,0.4s,mb4.6,baz=100,slow=7.5,SNR=205						
KAKA	**Kakadu**	**46.16**	**276**	⇓*i*P	**P**	**00 06 48.7**	**-0.8**
	5.0nm,0.7s,mb4.2						
FITZ	**Fitzroy Crossi**	**50.51**	**267**	*e*P	**P**	**00 07 22.2**	**+0.2**
	13nm,0.7s,mb4.4						
FITZ	**Fitzroy Crossi**	**50.51**	**267**	P	**P**	**00 07 22.3**	**+0.3**
	15nm,0.7s,mb4.5,baz=120,slow=4.9,SNR=16						
NVAR	**Mina Array Bea**	**85.67**	**44**	P	**P**	**00 10 53.9**	**+0.4**
	0.7nm,0.8s,mb3.4,baz=229,slow=9.6,SNR=3.6						
TXAR	**Lajitas Array**	**91.19**	**58**	P	**P**	**00 11 19.3**	**-0.2**
	0.4nm,0.4s,mb3.7,baz=211,slow=7.3,SNR=4.2						

*IDC **19** 00:05:11.8±1.2,4.30N×93.01E,h21^{km}±4^{km},mb3.7/8, mb1 3.9/9,mb1mx3.7/21,mbtmp3.8/9,ML4.0/1,MS4.3/1, Ms1 4.3/1,ms1mx3.4/32,Error ellipse: s-maj=39.8km s-min=18.2km az=52.0*

*NEIC **19** 00:05:12.7±1.0,4.50N×93.33E,mb4.2/4,Error ellipse: s-maj=22.0km s-min=14.0km az=52.0*

ISC 19 00:05:10.6±0.8**,4.5N**±0.1×**93.2E**±0.2**,h22^{km}, h22**^{km}±.9^{km}**:pP-P,n15,σ1^{s}20**/15**,mb3.9**/12**,MS4.3**/1**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**7.51**	**83**	*e*P	**Pn**	**00 06 56.5**	**-5.2**
CM31	**Chiang Mai Arr**	**15.02**	**22**	P	**P**	**00 08 41.0**	**-2.5**
CM31				*e*pP		00 08 51.9	
CMAR	**Chiang Mai Arr**	**15.02**	**22**	Pn	**P**	**00 08 44.0**	**+0.4**
	0.2nm,0.3s,baz=217,slow=14,SNR=6.2						
KMI	**Kunming**	**22.52**	**23**	P	**P**	**00 10 06.0**	**-4.4**
	5.0nm,0.9s,mb3.9						
LSA	**Lhasa**	**25.18**	**356**	P	**P**	**00 10 38.3**	**+2.1**
	6.7nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**39.10**	**126**	P	**P**	**00 12 36.5**	**-1.9**
	2.3nm,0.7s,mb4.0,baz=175,slow=12,SNR=5.1						
FITZ				LR	LR	00 30 55.7	
	comp=Z,409nm,18.2s,MS4.3,baz=106,slow=40						
MKAR	**Makanchi Array**	**43.21**	**349**	P	**P**	**00 13 12.0**	**+0.2**
	0.9nm,0.4s,mb3.9,baz=170,slow=8.7,SNR=15						
MKAR				pP	pP	00 13 19.3	+0.9
	1.3nm,0.4s,baz=170,slow=8.2,SNR=8.8						
SONM	**Songino Array**	**44.69**	**13**	P	**P**	**00 13 25.1**	**+1.3**
	0.2nm,0.4s,mb3.3,baz=200,slow=6.9,SNR=3.5						
WRA	**Warramunga Arr**	**47.18**	**122**	P	**P**	**00 13 44.7**	**+0.8**
	2.4nm,0.7s,mb4.2,baz=299,slow=9.1,SNR=15						
WRAB	**Tennant Creek**	**47.19**	**122**	*e*P	**P**	**00 13 44.9**	**+1.0**
	2.5nm,0.6s,mb4.3						
ZAL	**Zalesovo**	**49.79**	**354**	P	**P**	**00 14 04.3**	**+0.7**
	1.4nm,0.4s,mb4.3,baz=247,slow=1.7,SNR=6.9						
ZAL				pP	pP	00 14 10.6	+0.2
	1.9nm,0.5s,baz=279,slow=5.2,SNR=5.4						
BVAR	**Borovoye Array**	**51.91**	**343**	P	**P**	**00 14 19.1**	**-0.7**
	0.7nm,0.6s,mb3.8,baz=141,slow=9.5,SNR=7.5						
BVAR				pP	pP	00 14 25.5	-1.1
	2.1nm,0.8s,baz=143,slow=7.4,SNR=9.4						
ZRNK	**Zerenda**	**52.27**	**342**	*e*P	**P**	**00 14 21.6**	**-0.8**
	1.3nm,0.7s,mb4.0						
BRTR	**Keskin Array B**	**63.94**	**312**	P	**P**	**00 15 43.8**	**-0.8**
	0.3nm,0.5s,mb3.6,baz=149,slow=8.4,SNR=2.6						
BRTR				pP	pP	00 15 50.9	-0.6
	0.8nm,0.8s,baz=127,slow=6.2,SNR=3.4						
GERES	**GERESS Array B**	**79.71**	**319**	P	**P**	**00 17 18.4**	**0.0**
	0.5nm,0.9s,mb3.5,baz=80,slow=6.0,SNR=4.6						

*LDG **19** 00:28:00.4±0.3,20.59S×170.23E,h10^{km},Mb4.3/2,Error ellipse: s-maj=40.3km s-min=22.5km az=36.0*

*BJI **19** 00:28:07.8,21.40S×170.00E,h73^{km},mB5.2,mb4.6, Ms4.9,Msz4.8*

*NEIC **19** 00:28:07.9±1.8,21.42S×170.05E,h73^{km}±14^{km},mb4.7/10, Error ellipse: s-maj=14.9km s-min=8.9km az=74.0*

*IDC **19** 00:28:07.1±4.4,21.46S×169.95E,h62^{km}±35^{km},mb4.2/10, mb1 4.3/12,mb1mx4.2/18,mbtmp4.5/12,ML4.9/2,MS3.7/10, Ms1 3.8/10,ms1mx3.6/27,Error ellipse: s-maj=28.7km s-min=18.9km az=69.0*

ISC 19 00:28:06.8±2.0**,21.45S**±0.09×**170.0E**±0.1**,h74**^{km}±15^{km}**, n87,σ1^{s}25**/42**,mb4.4**/16**,3C-4D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.31**	**259**	*e*P	**P**	**00 28 57.2**	**-0.4**
DZM				*e*S	**S**	**00 29 33.8**	**-2.2**
DZM	**Mont Dzumac**	**3.31**	**259**	P	**P**	**00 28 57.3**	**-0.3**
	139nm,0.3s,baz=86,slow=16,SNR=3125						
DZM				LR	LR	00 29 32.8	
	comp=Z,173nm,18.6s,baz=181,slow=26						
DZM				S	**S**	**00 29 34.6**	**-1.4**
	1μm,0.3s,baz=164,slow=18,SNR=34						
DZM	**Mont Dzumac**	**3.31**	**259**	*e*P	**P**	**00 28 57.2**	**-0.4**
DZM				*e*S	**S**	**00 29 33.8**	**-2.2**
NOUC	**Port Laguerre**	**3.45**	**258**	*e*P	**P**	**00 28 59.2**	**-0.3**
HNR	**Honiara**	**15.34**	**320**	P	**P**	**00 31 41.6**	**+1.2**
	4.9nm,0.3s,baz=161,slow=5.5,SNR=4.9						
HNR				LR	LR	00 36 02.0	
	comp=Z,260nm,20.6s,baz=126,slow=31						
HNR	**Honiara**	**15.34**	**320**	*e*P	**P**	**00 31 42.8**	**+2.4**
	265nm,1.1s						
URZ	**Urewera**	**17.86**	**161**	P	**P**	**00 32 12.5**	**+0.8**
	0.1nm,0.3s,baz=54,slow=11,SNR=3.2						
ARMA	**Armidale**	**18.72**	**238**	*e*P	**P**	**00 32 24.0**	**+2.0**
AFI	**Afiamalu**	**18.95**	**70**	LR	LR	00 38 13.2	
	comp=Z,209nm,21.1s,baz=257,slow=32						
RIV	**Riverview**	**20.68**	**229**	*e*P	**P**	**00 32 44.9**	**+2.1**
CTA	**Charters Tower**	**22.19**	**269**	P	**P**	**00 33 00.0**	**+2.0**
	7.9nm,1.0s,mb4.0,baz=96,slow=16,SNR=4.1						
CTA				LR	LR	00 40 44.4	
	comp=Z,176nm,21.6s,baz=76,slow=34						
RPZ	**Rata Peaks**	**22.22**	**178**	LR	LR	00 39 53.5	
	comp=Z,361nm,21.8s,baz=190,slow=32						
CNB	**Canberra Magne**	**22.72**	**228**	*e*P	**P**	**00 33 04.8**	**+1.7**
	88nm,1.2s,mb5.0						
PMG	**Port Moresby**	**24.98**	**295**	P	**P**	**00 33 26.0**	**+0.8**
	12nm,0.8s,mb4.4,baz=76,slow=4.7,SNR=4.0						
PMG	**Port Moresby**	**24.98**	**295**	*e*P	**P**	**00 33 25.8**	**+0.6**
	15nm,0.9s,mb4.4						
TOO	**Toolangi**	**26.55**	**227**	*e*P	**P**	**00 33 40.2**	**+0.6**
	5.4nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**27.31**	**242**	⇑*i*P	**P**	**00 33 47.1**	**+0.5**
	9.2nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**27.31**	**242**	P	**P**	**00 33 46.1**	**-0.4**
	10nm,0.8s,mb4.4,baz=72,slow=9.0,SNR=12						
WB2	**Warramunga Arr**	**33.29**	**266**	*e*P	**P**	**00 34 38.4**	**-1.1**
WRAB	**Tennant Creek**	**33.29**	**266**	*e*P	**P**	**00 34 38.3**	**-1.2**
WRA	**Warramunga Arr**	**33.30**	**266**	P	**P**	**00 34 38.6**	**-1.0**
	8.1nm,1.0s,mb4.5,baz=100,slow=8.5,SNR=23						
KAKA	**Kakadu**	**36.81**	**277**	*e*P	**P**	**00 35 09.1**	**-0.4**
	11nm,1.3s,mb4.6						
TBI	**Tubuai**	**37.49**	**101**	*e*LQ		00 43 32.3	
	285nm,36.0s						
TBI				*e*LR	LR	00 44 38.1	
	100nm,28.0s,baz=282						
PPT	**Papeete**	**38.27**	**91**	LR	LR	00 46 12.4	
	comp=Z,112nm,19.8s,baz=269,slow=28						
FITZ	**Fitzroy Crossi**	**41.73**	**267**	*e*P	**P**	**00 35 51.0**	**+0.7**
	34nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	**41.73**	**267**	P	**P**	**00 35 50.9**	**+0.6**
	41nm,0.8s,mb5.2,baz=138,slow=5.5,SNR=23						
TAOE	**Nuku Hiva Isla**	**49.57**	**83**	*e*LQ		00 47 48.0	
	861nm,34.3s						
TAOE				*e*LR	LR	00 48 48.3	
	1μm,38.4s						
VNDA	**Vanda**	**56.26**	**182**	P	**P**	**00 37 40.1**	**-1.4**
	1.6nm,0.7s,mb4.1,baz=355,slow=7.5,SNR=12						
VNDA				LR	LR	00 58 25.1	
	comp=Z,110nm,18.6s,baz=18,slow=32						
VNDA	**Vanda**	**56.26**	**182**	*e*P	**P**	**00 37 39.7**	**-1.7**
	2.6nm,0.9s,mb4.3						
SBA	**Scott Base**	**56.47**	**181**	*e*P	**P**	**00 37 42.6**	**-0.4**
	15nm,0.9s,mb5.0						
MJAR	**Matsushiro Arr**	**65.01**	**332**	P	**P**	**00 38 40.1**	**-1.2**
	2.6nm,0.9s,mb4.1,baz=164,slow=5.0,SNR=10						
QSPA	**South Pole Qui**	**68.62**	**180**	*e*P	**P**	**00 39 02.4**	**-1.0**
	10.0nm,1.0s,mb4.6						
MAW	**Mawson**	**76.65**	**202**	P	**P**	**00 39 51.1**	**+0.4**
	3.2nm,0.8s,mb4.1,baz=117,slow=6.8,SNR=4.4						
MAW				LR	LR	01 11 05.5	
	comp=Z,107nm,19.0s,baz=124,slow=34						
CN2	**Changchun**	**76.68**	**329**	*e*P	**P**	**00 39 50.1**	**-1.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
CMAR	**Chiang Mai Arr**	**80.01**	**294**	P	**P**	**00 40 11.6**	**+1.4**
	comp=Z,1.0nm,0.7s,mb3.8,baz=128,slow=3.3,SNR=6.3						
SYO	**Syowa Base**	**83.01**	**196**	⇓P	**P**	**00 40 22.6**	**-2.2**
SYO	**Syowa Base**	**83.01**	**196**	⇓PcP	PcP	00 40 27.5	-2.2
SYO	**Syowa Base**	**83.01**	**196**	⇓pP	pP	00 40 49.4	+4.3
SNAA	**Sanae**	**86.99**	**182**	LR	LR	01 14 35.4	
	comp=Z,50nm,20.1s,baz=197,slow=32						
SNAA	**Sanae**	**86.99**	**182**	⇑*i*P	**P**	**00 40 43.7**	**-0.7**
SNAA				*e*	pP	00 41 04.1	-0.8
SNAA				*e*		00 41 09.3	
VNA3	**Neumayer Olymp**	**87.56**	**180**	*e*	**P**	**00 40 52.3**	**+5.2**
VNA3	**Neumayer Olymp**	**87.56**	**180**	*e*P	**P**	**00 40 47.6**	**+0.5**
VNA3				*e*		00 40 52.3	
VNA2	**Neumayer--Watz**	**87.86**	**181**	*e*	**P**	**00 40 54.3**	**+5.7**
VNA2	**Neumayer--Watz**	**87.86**	**181**	*e*P	**P**	**00 40 49.7**	**+1.1**
VNA2				*e*		00 40 54.3	
VNA1	**Neumayer--Stat**	**88.14**	**181**	*e*	**P**	**00 40 52.9**	**+3.0**
VNA1	**Neumayer--Stat**	**88.14**	**181**	*e*P	**P**	**00 40 47.8**	**-2.1**
VNA1				*e*		00 40 52.9	
SONM	**Songino Array**	**89.38**	**323**	P	**P**	**00 40 56.6**	**+0.4**
	comp=Z,1.3nm,0.8s,mb4.0,baz=130,slow=4.3,SNR=9.4						
TXAR	**Lajitas Array**	**97.23**	**61**	LR	LR	01 15 47.8	
	comp=Z,109nm,21.8s,baz=315,slow=29						
ARCES	**ARCESS Array B**	**127.36**	**345**	PKP	PKPdf	00 47 02.8	+0.3
	comp=Z,1.5nm,0.8s,baz=45,slow=1.7,SNR=10						
FINES	**FINESS Array B**	**132.87**	**337**	PKP	PKPdf	00 47 15.4	+2.1
	comp=Z,0.5nm,0.6s,baz=63,slow=4.3,SNR=6.1						
DPC	**Dobruska-Polom**	**144.47**	**331**	*e*PKP	PKPdf	00 47 34.4	+0.1
UPC	**Upice**	**144.50**	**331**	*e*PKP	PKPdf	00 47 36.4	+2.0
PVCC	**Panska Ves**	**145.12**	**332**	*e*PKP	PKPdf	00 47 36.9	+1.5
CLL	**Collm**	**145.19**	**334**	⇓*i*PKP1	PKPbc	00 47 36.4	+0.4
CLL				*e*		00 48 04.0	
PRU	**Pruhonice**	**145.53**	**332**	*e*PKP	PKPdf	00 47 37.8	+1.6
CLZ	**Clausthal**	**145.77**	**337**	*e*PKPbc	PKPbc	00 47 38.6	+1.2
EKA	**Eskdalemuir Ar**	**145.77**	**353**	PKPbc	PKPbc	00 47 37.8	+0.5
	comp=Z,4.0nm,0.7s,baz=356,slow=3.0,SNR=13						
NKC	**Novy Kostel**	**146.24**	**334**	*e*PKP	PKPdf	00 47 40.3	+2.9
MOX	**Moxa**	**146.26**	**335**	*e*P	PKPdf	00 47 40.0	+2.6
IDI	**Anoyia**	**146.49**	**302**	PKPbc	PKPbc	00 47 41.2	+1.6
	comp=Z,2.5nm,0.5s,baz=62,slow=14,SNR=4.5						
KHC	**Kasperske Hory**	**146.59**	**331**	*e*PKP	PKPdf	00 47 41.3	+3.3
KHC				*e*pPKP		00 48 02.0	
GEC2	**GERESS Array S**	**146.74**	**331**	*e*PKPbc	PKPbc	00 47 41.4	+1.6
GERES	**GERESS Array B**	**146.74**	**331**	PKPbc	PKPbc	00 47 41.6	+1.9
	comp=Z,5.3nm,0.7s,baz=31,slow=2.5,SNR=62						
WET	**Wettzell**	**146.89**	**332**	*e*PKPbc	PKPbc	00 47 42.1	+2.0
GRA1	**Grafenberg Arr**	**147.16**	**334**	*e*PKPbc	PKPdf	00 47 42.1	+3.2
GRA1				*e*PKPab	PKPab	00 47 44.9	-0.3
TNS	**Taunus Mts**	**147.79**	**338**	*e*PKPbc	PKPdf	00 47 44.1	+4.2
LJU	**Ljubljana**	**148.31**	**327**	*e*PKPbc	PKPdf	00 47 45.6	+4.7
FUR	**Furstenfeldbru**	**148.32**	**332**	*e*PKPab	PKPab	00 47 49.7	-0.1
CEY	**Cerknica**	**148.57**	**326**	*e*PKPbc	PKPdf	00 47 46.1	+4.8
SQTA	**Sankt Quirin**	**149.07**	**331**	⇑*i*P	PKPdf	00 47 47.5	+5.4
GIVF	**Givet**	**149.09**	**341**	*e*PKP1	PKPdf	00 47 46.6	+4.6
BFO	**Black Forest**	**149.40**	**336**	*e*PKPbc	PKPdf	00 47 48.2	+5.6
CDF	**Champ du Feu**	**149.72**	**337**	*e*PKP1	PKPdf	00 47 48.6	+5.5
	comp=Z,11nm,0.9s						
DAVOX	**Davos**	**149.99**	**332**	PKPbc	PKPdf	00 47 49.8	+6.3
	comp=Z,7.7nm,0.7s,baz=132,slow=1.9,SNR=13						
HINF	**Hinteralfeld**	**150.38**	**337**	*e*PKP1	PKPdf	00 47 50.3	+6.2
	comp=Z,4.5nm,0.6s						
HAU	**Haudompre**	**150.40**	**337**	*e*PKP1	PKPdf	00 47 50.4	+6.2
	comp=Z,13nm,0.8s						
MEZF	**Maizieres J'vi**	**150.42**	**339**	*e*PKP1	PKPdf	00 47 50.8	+6.6
	comp=Z,14nm,0.7s						
CABF	**La Chapelle**	**151.67**	**336**	*e*PKP1	PKPdf	00 47 52.9	+6.8
	comp=Z,16nm,0.9s						
FLN	**La Foliniere**	**151.69**	**347**	*e*PKP1	PKPdf	00 47 53.0	+7.0
	comp=Z,10.0nm,0.7s						
LDF	**La Druitiere**	**151.77**	**346**	*e*PKP1	PKPdf	00 47 53.1	+6.9
LOR	**Lormes**	**151.89**	**340**	*e*PKP1	PKPdf	00 47 53.8	+7.4
	comp=Z,4.9nm,0.7s						
SSF	**Saint Saulge**	**152.19**	**340**	*e*PKP1	PKPdf	00 47 54.5	+7.7
	comp=Z,7.9nm,1.1s						
LPL	**La Plagne**	**152.33**	**334**	*e*PKP1	PKPdf	00 47 55.4	+8.3
	comp=Z,4.7nm,0.7s						
LPG	**La Plagne**	**152.33**	**334**	*e*PKP1	PKPdf	00 47 55.5	+8.4
	comp=Z,8.8nm,0.8s						
SMF	**Signal de Mont**	**152.44**	**339**	*e*PKP1	PKPdf	00 47 54.7	+7.5
AVF	**Avril sur Loir**	**152.47**	**340**	*e*PKP1	PKPdf	00 47 54.7	+7.5
TCF	**Toulx Ste Croi**	**153.28**	**341**	*e*PKP1	PKPdf	00 47 56.6	+8.2

IDC 19 00:51:25.9±3.9**,2.33N×97.22E,mb3.8**/4**,mb1 4.0**/4**, mb1mx3.6**/17**,mbtmp3.8**/4**,1C,Error ellipse: s-maj=151.7km s-min=28.2km az=57.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.62**	**123**	P	P	00 59 24.2	-1.8
	0.3nm,0.6s,baz=302,slow=9.1,SNR=5.8						
WB2	**Warramunga Arr**	**42.63**	**123**	⇑*i*P	P	00 59 32.8	+6.7
SONM	**Songino Array**	**46.02**	**9**	P	P	00 59 51.5	-1.4
	0.7nm,0.6s,baz=194,slow=9.1,SNR=7.5						
MKAR	**Makanchi Array**	**46.15**	**346**	P	P	00 59 52.1	-1.9
	2.0nm,0.8s,baz=166,slow=8.0,SNR=14						
ZAL	**Zalesovo**	**52.44**	**351**	P	P	01 00 39.8	-2.6
	0.9nm,0.3s,baz=289,slow=8.2,SNR=6.4						

*SOF **19** 00:56:01.6,45.76N×26.65E,h75^{km},MD2.8*

*BUC **19** 00:56:01.3±1.1,45.75N×26.83E,h121^{km}±9^{km},MD3.8/6, Error ellipse: s-maj=7.2km s-min=6.1km az=46.0*

*CSEM **19** 00:56:01.3±0.3,45.68N×26.73E,h113^{km}±2^{km},MD3.8/6, Error ellipse: s-maj=4.2km s-min=3.7km az=12.0*

ISC 19 00:55:59.9±1.0**,45.81N**±0.05×**26.82E**±0.07**,h127**^{km}±6^{km}**,**

n19,σ1^{s}01/31,11C-2D,Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRI	Vrincioaia	0.09	313	⇑iP	P	00 56 18.0	+0.7
VRI				i S	S	00 56 30.1	-0.3
VRI	Vrincioaia	0.09	313	⇑iP	P	00 56 18.1	+0.8
VRI				S	S	00 56 30.1	-0.3
VRI	Vrincioaia	0.09	313	⇑iP	P	00 56 18.1	+0.8
VRI				i S	S	00 56 31.3	+0.9
PLOR	Plostina	0.13	291	⇑iP	P	00 56 17.9	+0.6
PLOR				i S	S	00 56 30.6	+0.1
BRD	Bordesti	0.29	150	⇑iP	P	00 56 19.5	+1.8
BRD				S	S	00 56 34.4	+3.1
MLR	Muntele Rosu	0.69	243	⇑iP	P	00 56 20.7	+0.7
MLR				i S	S	00 56 34.8	-0.6
ISR	Istrita	0.71	196	⇑iP	P	00 56 21.0	+0.8
PGOR	Pogoanele	0.91	173	⇑iP	P	00 56 22.6	+0.8
PGOR				i S	S	00 56 39.0	+0.5
CFR	Carcaliu	1.12	124	⇑iP	P	00 56 24.5	+0.5
CFR				i S	S	00 56 41.5	-0.6
SULR		1.20	200	⇑iP	P	00 56 25.1	+0.3
SULR				i S	S	00 56 43.1	-0.5
AMRR		1.25	163	⇑iP	P	00 56 25.7	+0.3
AMRR				i S	S	00 56 43.9	-0.7
VOIR		1.30	254	S	S	00 56 43.3	-2.3
HARR	Harsova	1.36	145	⇓iP	P	00 56 27.0	+0.3
HARR				i S	S	00 56 45.3	-1.8
KIS	Kishinev	1.82	48	⇓iP	P	00 56 31.5	-0.5
	360nm,0.4s						
KIS				i S	S	00 56 54.5	-1.9
	500nm,0.5s						
PSN	Preselentsi	2.33	155	i P	P	00 56 38.3	-0.2
SZH	Strazhica	2.62	194	i P	P	00 56 41.3	-0.9
PRD	Provadia	2.64	171	i P	P	00 56 43.5	+1.0
PVL	Pavlikeni	2.80	203	i P	P	00 56 45.3	+0.7
VTS	Vitosha	4.13	220	P	P	00 57 01.0	-1.4

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*TEH **19** 01:00:20.2,37.39N×57.26E,h10^{km},Mn3.4*
*CSEM **19** 01:00:20.2,37.39N×57.26E,h10^{km},ML3.4,After TEH*
*IDC **19** 01:00:23.6±8.1,37.87N×57.00E,mb3.5/3,mb1 3.7/4, mb1mx3.4/20,mbtmp3.6/4,ML3.6/1,Error ellipse: s-maj=153.0km s-min=37.3km az=180.0*
*NNC **19** 01:00:27.1±17.0,38.72N×54.21E,Error ellipse: s-maj=1086.7km s-min=165.1km az=109.0*
ISC 19 01:00:18.9±0.5,**37.37N**±0.07×**57.16E**±0.05,**h10^{km},n25, σ1^{s}36**/26,**mb3.7**/2,**2D,Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISFR	Esferayen	0.74	115	Pg	Pg	01 00 29.0	-4.8
IQHU	Quchan	1.15	105	Pg	Pg	01 00 39.5	-2.3
IEMG	Emamqoli	1.19	87	Pg	Pg	01 00 40.7	-2.0
MHI	Mashhad	2.13	119	Pn	Pn	01 00 56.7	+1.6
IMOG	Moghan	2.15	125	Pn	Pn	01 00 56.6	+1.2
IMYA	Miamay	2.57	113	Pn	Pn	01 01 02.2	+0.9
IKIA	Kiasar	3.02	249	Pn	Pn	01 01 09.8	+2.1
IGLO	Galoogah	3.12	251	Pn	Pn	01 01 06.5	-2.7
IANJ	Anjiloo	3.23	235	Pn	Pn	01 01 11.2	+0.5
ISHM	Shahmirzad	3.48	245	Pn	Pn	01 01 19.5	+5.3
ILAS	Lasjerd	3.92	241	Pn	Pn	01 01 19.9	-0.6
IFIR	Firoozkooh	3.94	245	Pn	Pn	01 01 21.6	+0.8
IPRN	Paran-Amol	4.10	256	Pn	Pn	01 01 22.7	-0.4
IDMV	Damavand	4.50	248	Pn	Pn	01 01 29.2	+0.5
IVRN	Varamin	4.99	243	Pn	Pn	01 01 34.7	-0.9
IQOM	Qom	5.53	245	Pn	Pn	01 01 34.6	-8.7
IBAF	Bafgh	5.91	193	Pn	Pn	01 01 47.7	-0.9
IRAZ	Razeghan	6.15	254	Pn	Pn	01 01 59.0	+7.0
IPIR	Pirpir	6.94	230	Pn	Pn	01 01 58.1	-5.1
AB31	Akbulak array	12.06	9	⇓P	P	01 03 09.9	-3.8
	0.4nm,0.4s,baz=199,slow=15,SNR=7.1						
AB31				⇓S	S	01 05 18.3	-11
	0.4nm,0.3s,baz=205,slow=25,SNR=4.3						
BVAR	Borovoye Array	18.18	26	P	P	01 04 34.0	+1.2
	0.2nm,0.3s,baz=216,slow=13,SNR=6.7						
MKAR	Makanchi Array	20.82	55	P	P	01 05 04.5	+1.6
	0.6nm,0.7s,baz=242,slow=11,SNR=5.5						
FINES	FINESS Array B	30.92	331	P	P	01 06 37.6	0.0
	1.3nm,0.9s,mb3.8,baz=141,slow=8.9,SNR=2.3						
NB2	NORSAR Subarra	37.10	325	P	P	01 07 30.1	-0.8
	0.5nm,0.5s,mb3.6,baz=114,slow=7.9						
NOA	NORSAR Array B	37.10	325	P	P	01 07 30.7	-0.2
	0.5nm,0.6s,mb3.6,baz=101,slow=9.5,SNR=3.7						

JMA 19 01:13:00.3±0.5,**45.18N×150.16E,h116^{km},M3.7,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	3.66	242	P	P	01 13 55.8	-0.4
NEM2				eS	S	01 14 38.8	0.0
JRA	Rausu	3.81	253	P	P	01 13 58.3	0.0
JNK	Nakash	4.21	250	P	P	01 14 03.9	+0.1
JAK	Akkeshi	4.50	243	P	P	01 14 06.8	-0.8
JAK				eS	S	01 14 59.1	-0.2
JTKR	Abashiri--Toko	4.63	257	P	P	01 14 09.1	-0.3
JAR	Ashorobuto	4.96	250	P	P	01 14 14.1	+0.2
JMP	Maruseppu	5.00	259	P	P	01 14 14.3	-0.1
JOB	Onbets	5.10	246	P	P	01 14 15.4	-0.3
JOB				eS	S	01 15 14.3	+0.5
JCH	Churui	5.54	245	P	P	01 14 20.9	-0.8
JCH				eS	S	01 15 23.2	-1.5
JEM	Erimo	5.99	241	P	P	01 14 28.1	+0.4
JEM				eS	S	01 15 36.3	+0.8
JNBK	Urakawa-nobuka	6.10	244	P	P	01 14 27.4	-1.9
JNBK				eS	S	01 15 35.6	-2.7
JBT2	Biratori 2	6.12	250	eS	S	01 15 38.9	+0.2
JNB	Noboribetsu	7.13	251	P	P	01 14 42.7	-0.7
JNB				eS	S	01 16 02.0	-1.4
JKB	Kayabe	7.40	247	P	P	01 14 44.5	-2.6
JKB				eS	S	01 16 04.8	-5.2
JANG	Nango	7.97	236	P	P	01 14 51.9	-2.8
JANG				eS	S	01 16 18.5	-5.2
JTM	Tenmabayashi	7.98	240	P	P	01 14 52.9	-2.0
JTM				eS	S	01 16 17.2	-6.8
JTH	Tanohata	8.05	232	P	P	01 14 53.5	-2.4
OFUJ	Ofunato	8.77	229	P	P	01 15 04.1	-1.4
JRG	Rokugo	9.12	234	P	P	01 15 08.8	-1.4
JRG				eS	S	01 16 49.6	-2.0
JIO	Ouri	9.40	227	eS	S	01 16 54.7	-3.6

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*IDC **19** 01:14:26.3±0.7,23.98S×111.96W,mb3.9/8,mb1 4.1/8, mb1mx4.0/18,mbtmp3.9/8,MS3.6/5,Ms1 3.6/5, ms1mx3.3/32,Error ellipse: s-maj=27.2km s-min=21.2km az=71.0*
*NEIC **19** 01:14:27.8±0.4,23.97S×111.93W,h10^{km},mb4.3/1,Error ellipse: s-maj=17.1km s-min=13.1km az=77.0*
ISC 19 01:14:26.9±0.8,**23.9S**±0.1×**111.8W**±0.2,**h10^{km}, (h15^{km}**±.6^{km}**:pP-P),n31,σ1^{s}39**/20,**mb4.0**/9,**MS3.6**/4,**4C, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	3.93	145	LR	LR	01 16 44.0	
	comp=Z,1µm,18.1s,baz=6.7,slow=35						
PLCA	Paso Flores	38.33	126	LR	LR	01 32 49.6	
	comp=Z,133nm,22.0s,MS3.7,baz=356,slow=29						
LPAZ	La Paz	41.61	88	P	P	01 22 19.3	+2.3
	1.9nm,1.0s,mb3.7,baz=261,slow=6.7,SNR=7.2						
LPAZ				LR	LR	01 35 29.9	
	comp=Z,59nm,18.6s,MS3.5,baz=121,slow=30						
SIV	San Ignacio	48.16	90	P	P	01 23 09.1	-0.4
	1.7nm,0.8s,mb4.1,baz=250,slow=6.5,SNR=12						
SAML	Samuel	48.73	81	eP	P	01 23 13.2	-0.7
	3.4nm,1.1s,mb4.3						
CPUP	Villa Florida	49.11	105	LR	LR	01 39 00.3	
	comp=Z,61nm,21.8s,MS3.6,baz=148,slow=30						
TXAR	Lajitas Array	53.51	9	P	P	01 23 50.5	+0.5
	0.4nm,0.8s,mb3.4,baz=198,slow=12,SNR=4.0						
BDFB	Brasilia	60.20	95	P	P	01 24 36.2	-1.5
	1.7nm,0.8s,mb4.1,baz=285,slow=4.8,SNR=3.0						
BDFB				LR	LR	01 48 38.2	
	comp=Z,53nm,18.6s,MS3.7,baz=334,slow=34						
NVAR	Mina Array Bea	62.29	354	P	P	01 24 51.6	0.0
	4.2nm,1.1s,mb4.5,baz=170,slow=9.0,SNR=13						
VNDA	Vanda	66.05	194	P	P	01 25 15.4	-0.1
	0.9nm,0.9s,mb3.8,baz=88,slow=3.8,SNR=4.5						
PDAR	Pinedale Array	66.36	2	P	P	01 25 17.6	-0.4
	0.3nm,0.3s,mb3.8,baz=172,slow=10,SNR=4.1						
VNA3	Neumayer Olymp	71.41	161	e	P	01 25 52.8	+4.0
VNA3	Neumayer Olymp	71.41	161	e	P	01 26 04.4	+16
VNA3	Neumayer Olymp	71.41	161	⇑iP	P	01 25 47.8	-1.0
VNA3				e	pP	01 25 52.8	+0.9
VNA3				e		01 26 04.4	
VNA1	Neumayer--Stat	72.05	160	e	P	01 25 55.3	+2.7
VNA1	Neumayer--Stat	72.05	160	⇑iP	P	01 25 51.1	-1.5
VNA1				e	pP	01 25 55.3	-0.5
VNA2	Neumayer--Watz	72.22	160	e	P	01 25 57.6	+4.0
VNA2	Neumayer--Watz	72.22	160	e	P	01 26 09.6	+16
VNA2	Neumayer--Watz	72.22	160	⇑iP	P	01 25 52.7	-0.9
VNA2				e	pP	01 25 57.6	+0.8
VNA2				e		01 26 09.6	
SNAA	Sanae	73.27	162	e	P	01 26 03.6	+3.9
SNAA	Sanae	73.27	162	e	P	01 26 15.5	+16
SNAA	Sanae	73.27	162	P	P	01 25 58.3	-1.4
	2.1nm,1.1s,mb4.0,baz=251,slow=4.1,SNR=9.3						
SNAA	Sanae	73.27	162	⇑iP	P	01 25 58.6	-1.1
SNAA				e	pP	01 26 03.6	+0.8
SNAA				e		01 26 15.5	
SONM	Songino Array	141.45	318	PKP	PKPdf	01 33 58.6	-2.5
	0.5nm,1.0s,baz=34,slow=5.2,SNR=2.8						
BRTR	Keskin Array B	146.93	53	PKPbc	PKPbc	01 34 10.9	+1.5
	2.5nm,1.1s,baz=270,slow=1.2,SNR=8.1						
ZAL	Zalesovo	147.50	342	PKPbc	PKPdf	01 34 11.5	+0.2
	1.1nm,0.7s,baz=65,slow=3.2,SNR=6.9						
CMAR	Chiang Mai Arr	150.83	265	PKPbc	PKPdf	01 34 21.1	+3.5
	2.3nm,0.5s,baz=28,slow=0.3,SNR=16						
BVAR	Borovoye Array	150.87	357	PKPbc	PKPdf	01 34 20.0	+3.4
	1.2nm,0.7s,baz=135,slow=2.1,SNR=10.0						
BVAR				PKPab	PKPab	01 34 25.8	-3.0
	1.2nm,0.8s,baz=117,slow=6.6,SNR=4.4						
ZRNK	Zerenda	150.98	359	ePKPdf	PKPdf	01 34 15.6	-1.2
ZRNK				ePKPbc	PKPdf	01 34 20.6	+3.8
MKAR	Makanchi Array	154.49	337	PKPbc	PKPdf	01 34 26.7	+4.7
	0.7nm,0.7s,baz=90,slow=1.2,SNR=4.5						
MKAR	Makanchi Array	154.49	337	PKPbc	PKPdf	01 34 26.7	+4.7

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*ATH **19** 01:29:11.4,35.56N×27.25E,h24^{km},MD3.4/7*
*NEIC **19** 01:29:11.4,35.56N×27.25E,h24^{km},MD3.4(ATH),After ATH.*
*ISK **19** 01:29:12.4,35.50N×27.20E,h48^{km},MD3.6*
*CSEM **19** 01:29:12.3±0.1,35.61N×27.30E,h15^{km},MD3.4,Error ellipse: s-maj=4.4km s-min=1.8km az=146.0*
ISC 19 01:29:12.7±0.6,**35.57N**±0.06×**27.26E**±0.04,**h19^{km}**±5^{km}**, n31,σ0^{s}72**/38,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.08	251	ePB	Pb	01 29 15.7	-0.7
KARP				eSB	Sb	01 29 19.1	+0.2
ARG	Arkhangelos	0.95	48	ePN	Pn	01 29 30.1	-1.0
NISR	Nisiros	1.04	354	ePN	Pn	01 29 31.5	-0.8
NPS	Neapolis	1.38	257	ePN	Pn	01 29 37.6	+0.5
XRY	Khrisi	1.46	242	ePN	Pn	01 29 38.0	-0.3
BODT	Bodrum	1.49	2	PN	Pn	01 29 38.9	+0.2
BDRM	Kayabasi	1.50	6	i P	Pn	01 29 39.6	+0.8
DALT	Dalyan (Mudla)	1.63	43	PN	Pn	01 29 41.4	+0.6
SANT	Santorini	1.66	299	eP	Pn	01 29 41.9	+0.7
SANT				eS	Sn	01 30 02.1	0.0
SANT	Santorini	1.66	299	eP	Pn	01 29 41.9	+0.7
SANT				eS	Sn	01 30 02.1	0.0
YER	Yerkesik	1.76	28	PN	Pn	01 29 43.1	+0.4
MLSB	Milas	1.77	14	PN	Pn	01 29 42.9	+0.2
FETY	Fethiye	1.82	54	ePN	Pn	01 29 43.4	0.0
FETY				eSN	Sn	01 30 06.1	0.0
APE	Apeiranthos	2.04	317	PN	Pn	01 29 46.2	-0.4
APE				SN	Sn	01 30 09.7	-2.1
APE	Apeiranthos	2.04	317	ePN	Pn	01 29 46.8	+0.2
AYDN	Tasoluk	2.14	13	i P	Pn	01 29 49.9	+1.8
ELL	Elmali	2.44	61	ePN	Pn	01 29 51.6	-0.8
GOLH	Golhisar	2.49	48	i P	Pn	01 29 54.7	+1.6
GOLH				i S	Sn	01 30 31.5	+8.2
VAM	Vamos	2.50	267	ePN	Pn	01 29 53.0	-0.2
DENT	Denizli	2.60	33	ePN	Pn	01 29 54.6	-0.1
GVD	Gavdhos	2.70	255	ePn	Pn	01 29 56.8	+0.8
GVD	Gavdhos	2.70	255	ePn	Pn	01 29 56.8	+0.8
IZM	Izmir	2.82	0	ePN	Pn	01 29 57.8	+0.1
BCK	Bucak	3.28	54	ePN	Pn	01 30 03.6	-0.7
AKS	Akhisar	3.33	8	PN	Pn	01 30 05.1	+0.1
TKTP	Tekketepe	3.48	44	i P	Pn	01 30 15.4	+8.3
TKTP				i S	Sn	01 30 55.6	+7.4
VLI	Veliai	3.68	289	ePN	Pn	01 30 10.0	+0.1
BALB	Balikesir	4.09	7	ePN	Pn	01 30 15.5	-0.3
ALT	Altintas	4.15	32	ePN	Pn	01 30 16.8	+0.1
HDMB	Hadim	4.45	70	ePN	Pn	01 30 20.4	-0.5
LEF	Lefka	4.63	94	ePN	Pn	01 30 22.7	-0.7

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*IDC **19** 01:36:29.0±1.1,24.17S×111.98W,mb3.9/2,mb1 4.3/2, mb1mx3.7/16,mbtmp3.9/2,MS3.5/1,Ms1 3.5/1, ms1mx3.0/28,Error ellipse: s-maj=50.2km s-min=38.1km az=4.0*
NEIC 19 01:36:30.5±1.1,**24.19S×111.96W,h10^{km},Error ellipse: s-maj=56.2km s-min=32.0km az=195.0,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	41.73	88	P	P	01 44 21.1	-0.5
	1.2nm,1.0s,baz=270,slow=6.4,SNR=3.7						
JTS	JuntasAbangare	43.24	41	LR	LR	01 58 14.1	
	comp=Z,59nm,20.0s,baz=67,slow=30						
NVAR	Mina Array Bea	62.57	354	P	P	01 46 55.9	-1.2
	1.3nm,0.6s,baz=173,slow=9.1,SNR=11						
BRTR	Keskin Array B	147.19	54	PKPbc	PKPdf	01 56 14.2	-0.7
	1.6nm,1.1s,baz=207,slow=2.8,SNR=5.3						
ZAL	Zalesovo	147.74	341	PKPbc	PKPdf	01 56 14.0	-1.3
	0.7nm,0.3s,baz=162,slow=18,SNR=3.8						
ZAL	Zalesovo	147.74	341	PKPbc	PKPdf	01 56 14.0	-1.3
CMAR	Chiang Mai Arr	150.69	265	PKPbc	PKPdf	01 56 25.3	+4.3
	0.3nm,0.3s,baz=201,slow=28,SNR=3.4						
CMAR				PKPab	PKPab	01 56 29.8	-3.0
	1.0nm,0.7s,baz=93,slow=1.6,SNR=5.4						
BVAR	Borovoye Array	151.15	357	PKPbc	PKPdf	01 56 23.8	+3.1
	2.0nm,1.0s,SNR=8.1						
BVAR				PKPab	PKPab	01 56 29.4	-4.3
	0.7nm,0.5s,baz=313,slow=1.9,SNR=5.0						
ZRNK	Zerenda	151.27	359	ePKPbc	PKPdf	01 56 23.9	+3.0
MKAR	Makanchi Array	154.71	337	PKPbc	PKPdf	01 56 30.2	+4.3
	0.3nm,0.6s,baz=90,slow=4.9,SNR=2.7						
MKAR	Makanchi Array	154.71	337	PKPbc	PKPdf	01 56 30.2	+4.3

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*BJI **19** 01:45:42.0,39.10S×174.90E,h210^{km},mB4.8,mb4.7*
*WEL **19** 01:45:42.3±0.2,39.17S×174.92E,h207^{km}±1^{km},ML5.0/22, Error ellipse: s-maj=2.4km s-min=1.7km az=90.0,Very clear, unusual phases 4-6 secs. after P on many stations.*
*NEIC **19** 01:45:42.0,39.14S×174.88E,h210^{km},MG5.1(WEL), After WEL.*
ISC 19 01:45:40.5±0.3,**39.25S**±0.03×**174.83E**±0.05,**h211^{km}**±2^{km}**, n151,σ0^{s}99**/189,**6C-6D,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	Vera Road	0.14	336	P	P	01 46 08.7	+0.4
VRZ				S	S	01 46 29.1	-0.6
VRZ	Vera Road	0.14	336	PN	P	01 46 08.6	+0.3
VRZ				SN	S	01 46 29.1	-0.5
RAEZ	Rainy Point	0.34	264	P	P	01 46 09.8	+1.1
RAEZ	Rainy Point	0.34	264	PN	P	01 46 09.7	+1.1
PKVZ	Pokaka	0.40	96	PN	P	01 46 09.7	+0.8
PKVZ				SN	S	01 46 30.4	-0.4
TWVZ	Taurewa	0.51	70	P	P	01 46 09.8	+0.6
TWVZ				S	S	01 46 30.7	-0.7
TWVZ	Taurewa	0.51	70	PN	P	01 46 09.8	+0.6
TWVZ				SN	S	01 46 30.7	-0.6
MTVZ	Mangateitei	0.52	105	PN	P	01 46 10.2	+1.0
MTVZ				SN	S	01 46 31.2	-0.2
WAZ	Wanganui	0.52	167	P	P	01 46 10.9	+1.7
WAZ	Wanganui	0.52	167	PN	P	01 46 10.8	+1.6
WAZ				SN	S	01 46 32.2	+0.8
WPVZ	Whakapapa	0.56	86	P	P	01 46 10.3	+0.9
WPVZ	Whakapapa	0.56	86	PN	P	01 46 10.3	+0.9
TRVZ	Turoa	0.56	95	PN	P	01 46 10.5	+1.2
TRVZ				SN	S	01 46 31.3	-0.4
CNZ	Chateau	0.56	85	PN	P	01 46 10.3	+0.9
FWVZ	Far West T-bar	0.56	91	P	P	01 46 10.4	+1.0
FWVZ	Far West T-bar	0.56	91	PN	P	01 46 10.4	+1.0
FWVZ				SN	S	01 46 31.3	-0.4
DFE	Dawson Falls	0.57	262	PN	P	01 46 10.6	+1.2
NEZ	North Egmont	0.57	268	P	P	01 46 10.8	+1.4
NEZ	North Egmont	0.57	268	PN	P	01 46 10.8	+1.4
DRZ	Dome Shelter	0.57	93	P	P	01 46 10.8	+1.4
DRZ	Dome Shelter	0.57	93	PN	P	01 46 10.7	+1.3
WNVZ	Wahianoa	0.60	98	P	P	01 46 10.6	+1.1
WNVZ	Wahianoa	0.60	98	PN	P	01 46 10.5	+1.0
WNVZ				SN	S	01 46 31.7	-0.4
NGZ	Ngauruhoe	0.60	83	P	P	01 46 10.4	+0.9
NGZ				S	S	01 46 31.8	-0.2
NGZ	Ngauruhoe	0.60	83	⇓PN	P	01 46 10.5	+1.0
NGZ				SN	S	01 46 31.7	-0.4
WTVZ	West Tongariro	0.61	77	P	P	01 46 10.3	+0.8
WTVZ				S	S	01 46 31.5	-0.6
WTVZ	West Tongariro	0.61	77	PN	P	01 46 10.3	+0.7
WTVZ				SN	S	01 46 31.9	-0.1
TUVZ	Tukino	0.64	92	P	P	01 46 10.8	+1.1
TUVZ	Tukino	0.64	92	PN	P	01 46 10.9	+1.2
TUVZ				SN	S	01 46 32.5	+0.2
KRVZ	Karewarewa	0.65	76	PN	P	01 46 10.4	+0.7
KRVZ				SN	S	01 46 31.8	-0.6
OTVZ	Oturere	0.66	83	PN	P	01 46 10.5	+0.8
PKE	Pukeiti	0.66	275	P	P	01 46 10.8	+1.0
PKE	Pukeiti	0.66	275	PN	P	01 46 10.8	+1.0
NRZ	Ngariki Road	0.70	263	P	P	01 46 11.1	+1.2
KATZ	Kakaramea	0.73	68	P	P	01 46 10.7	+0.6
KATZ	Kakaramea	0.73	68	PN	P	01 46 10.7	+0.6
KATZ				SN	S	01 46 32.3	-0.7
MOVZ	Moawhango	0.73	103	P	P	01 46 10.8	+0.7
MOVZ	Moawhango	0.73	103	PN	P	01 46 10.8	+0.7
MOVZ				SN	S	01 46 31.6	-1.5
HIZ	Hauiti	0.74	2	P	P	01 46 10.1	0.0
HIZ				S	S	01 46 31.9	-1.2
HIZ	Hauiti	0.74	2	PN	P	01 46 10.1	0.0
HIZ				SN	S	01 46 31.9	-1.2
RATZ	Rangitukua	0.83	63	P	P	01 46 11.0	+0.5
RATZ	Rangitukua	0.83	63	⇓PN	P	01 46 11.0	+0.4
RITZ	Rihia Road	0.84	72	P	P	01 46 11.4	+0.8
RITZ	Rihia Road	0.84	72	PN	P	01 46 11.3	+0.7
WATZ	Wairara	0.89	53	P	P	01 46 11.5	+0.6
WATZ	Wairara	0.89	53	PN	P	01 46 11.5	+0.6
WATZ				SN	S	01 46 33.4	-1.1
HATZ	Hinemaiaia	1.05	70	P	P	01 46 12.0	+0.1
HATZ	Hinemaiaia	1.05	70	PN	P	01 46 12.0	+0.2
HATZ				SN	S	01 46 34.1	-2.1
WHTZ	Whakaora	1.05	57	P	P	01 46 12.5	+0.6
WHTZ	Whakaora	1.05	57	PN	P	01 46 12.5	+0.6
TSZ	Takapari Road	1.19	133	P	P	01 46 14.5	+1.5
TSZ	Takapari Road	1.19	133	PN	P	01 46 14.4	+1.5
TSZ				SN	S	01 46 38.0	-0.1
BKZ	Black Stump Fm	1.29	87	PN	P	01 46 14.2	+0.4
BKZ				SN	S	01 46 37.7	-1.8
PATZ	Paeroa	1.41	53	P	P	01 46 14.8	0.0
PATZ	Paeroa	1.41	53	PN	P	01 46 14.8	0.0
MRZ	Mangatainoka R	1.52	158	eP	P	01 46 16.8	+1.1
MRZ	Mangatainoka R	1.52	158	PN	P	01 46 16.7	+1.0
MRZ				SN	S	01 46 42.4	-0.5
TOZ	Tahuroa Road	1.61	19	P	P	01 46 16.2	-0.3
TOZ	Tahuroa Road	1.61	19	PN	P	01 46 15.8	-0.6
KIW	Kapiti Island	1.61	178	P	P	01 46 17.6	+1.1
KIW	Kapiti Island	1.61	178	PN	P	01 46 17.5	+1.0
KIW				SN	S	01 46 43.8	-0.5
TAZ	Tarawera	1.66	53	P	P	01 46 16.8	-0.2
TAZ	Tarawera	1.66	53	PN	P	01 46 16.7	-0.2
DUWZ	D’Urville Isla	1.70	204	PN	P	01 46 18.3	+1.0
DUWZ				SN	S	01 46 45.5	-0.2
LIRZ	Lichensteins R	1.74	45	P	P	01 46 17.2	-0.5
LIRZ	Lichensteins R	1.74	45	PN	P	01 46 17.2	-0.5
PWZ	Pawanui	1.75	117	P	P	01 46 18.9	+1.1
PWZ	Pawanui	1.75	117	⇓PN	P	01 46 18.9	+1.1
BFZ	Birch Farm	1.80	143	P	P	01 46 19.1	+0.9
BFZ	Birch Farm	1.80	143	PN	P	01 46 19.1	+0.9
CAW	Cannon Point	1.86	174	P	P	01 46 19.9	+1.1
CAW	Cannon Point	1.86	174	⇑PN	P	01 46 19.8	+1.0
EDRZ	Edgecumbe	1.88	53	P	P	01 46 18.3	-0.7
EDRZ	Edgecumbe	1.88	53	PN	P	01 46 18.2	-0.8
MARZ	Manawahe	1.92	49	PN	P	01 46 18.6	-0.7
MTW	Mount Morrison	1.97	165	P	P	01 46 20.6	+0.7
MTW	Mount Morrison	1.97	165	PN	P	01 46 20.6	+0.7
MRW	Makara Radio	1.98	183	⇑PN	P	01 46 20.9	+0.9
MRW				SN	S	01 46 50.1	-0.2
TCW	Tory Channel	2.00	192	P	P	01 46 21.4	+1.2
TCW	Tory Channel	2.00	192	PN	P	01 46 21.4	+1.2
TCW				SN	S	01 46 50.5	-0.3
WEL	Wellington	2.03	181	P	P	01 46 21.3	+0.8
WEL	Wellington	2.03	181	PN	P	01 46 21.3	+0.8
URZ	Urewera	2.04	62	P	P	01 46 19.4	-1.2
URZ	Urewera	2.04	62	⇓PN	P	01 46 19.4	-1.1
URZ				SN	S	01 46 47.4	-4.0
SNZO	South Karori	2.06	183	P	P	01 46 21.5	+0.7
SNZO				eS	S	01 46 46.0	-5.8
SNZO	South Karori	2.06	183	PN	P	01 46 21.5	+0.7
MKAZ	Moumakai	2.15	7	P	P	01 46 21.2	-0.6
MKAZ	Moumakai	2.15	7	PN	P	01 46 21.2	-0.6
BHW	Baring Head	2.16	179	P	P	01 46 22.4	+0.6
BHW	Baring Head	2.16	179	PN	P	01 46 22.4	+0.6
BHW				SN	S	01 46 52.8	-0.8
PAWZ	Paruwai Farm	2.18	168	PN	P	01 46 22.7	+0.7
PAWZ				SN	S	01 46 53.6	-0.4
MSWZ	Moikau Station	2.19	172	P	P	01 46 22.8	+0.7
MSWZ	Moikau Station	2.19	172	PN	P	01 46 22.8	+0.7
KNZ	Kokohu	2.22	85	P	P	01 46 22.7	+0.2
KNZ	Kokohu	2.22	85	⇓PN	P	01 46 22.7	+0.1
KNZ				SN	S	01 46 52.6	-2.4
NNZ	Nelson	2.26	209	P	P	01 46 23.1	+0.2
NNZ	Nelson	2.26	209	PN	P	01 46 23.4	+0.6
NNZ				SN	S	01 46 55.2	-0.4
MYRZ	Mayor Island	2.26	30	PN	P	01 46 22.3	-0.6
TUWZ	Tuamarina	2.28	197	PN	P	01 46 23.8	+0.7
TUWZ				SN	S	01 46 55.1	-1.0
MWZ	Matawai	2.30	67	P	P	01 46 22.5	-0.8
MWZ	Matawai	2.30	67	⇓PN	P	01 46 22.5	-0.8
OTAZ	Otara	2.30	2	PN	P	01 46 22.9	-0.4
WTAZ	Waiatarua	2.32	355	P	P	01 46 23.3	-0.3
WTAZ	Waiatarua	2.32	355	PN	P	01 46 23.3	-0.2
QRZ	Quartz Range	2.37	228	P	P	01 46 23.8	-0.2
QRZ	Quartz Range	2.37	228	PN	P	01 46 23.7	-0.3
QRZ				SN	S	01 46 55.3	-2.4
MTAZ	Motutapu	2.46	2	P	P	01 46 24.4	-0.7
MTAZ	Motutapu	2.46	2	PN	P	01 46 24.4	-0.6
CMWZ	Cape Campbell	2.54	190	P	P	01 46 27.1	+1.2
CMWZ	Cape Campbell	2.54	190	PN	P	01 46 27.1	+1.2
CMWZ				SN	S	01 47 02.1	+1.0
BSWZ	Blackbirch Sta	2.57	196	P	P	01 46 27.0	+0.8
BSWZ	Blackbirch Sta	2.57	196	PN	P	01 46 27.0	+0.7
THZ	Tophouse	2.91	210	P	P	01 46 30.3	+0.2
THZ	Tophouse	2.91	210	PN	P	01 46 30.3	+0.2
PUZ	Puketiti	2.93	67	P	P	01 46 29.1	-1.2
PUZ	Puketiti	2.93	67	PN	P	01 46 29.1	-1.3
MXZ	Matakaoa Point	3.21	59	P	P	01 46 32.3	-1.3
MXZ	Matakaoa Point	3.21	59	PN	P	01 46 32.3	-1.4
KHZ	Kahutara	3.31	197	P	P	01 46 35.1	+0.2
KHZ	Kahutara	3.31	197	PN	P	01 46 35.1	+0.2
DSZ	Denniston Nort	3.40	222	P	P	01 46 35.3	-0.6
DSZ	Denniston Nort	3.40	222	PN	P	01 46 35.3	-0.6
LTZ	Lake Taylor	4.03	208	PN	P	01 46 43.2	-0.4
CRLZ	Canterbury Las	4.63	200	P	P	01 46 50.1	-1.0
CRLZ	Canterbury Las	4.63	200	PN	P	01 46 50.1	-1.1
MQZ	McQueen’s Vall	4.74	199	P	P	01 46 51.1	-1.5
MQZ	McQueen’s Vall	4.74	199	PN	P	01 46 51.1	-1.4
RPZ	Rata Peaks	5.29	211	eP	P	01 46 57.2	-2.3
RPZ	Rata Peaks	5.29	211	PN	P	01 46 57.2	-2.3
FOZ	Fox Glacier	5.79	220	eP	P	01 47 02.2	-3.7
FOZ	Fox Glacier	5.79	220	PN	P	01 47 02.2	-3.7
LBZ	Lake Benmore	6.19	213	eP	P	01 47 09.1	-2.0
LBZ	Lake Benmore	6.19	213	PN	P	01 47 09.1	-2.0
ODZ	Otahua Downs	6.57	207	eP	P	01 47 14.7	-1.3
ODZ	Otahua Downs	6.57	207	PN	P	01 47 14.7	-1.2
JCZ	Jackson Bay	6.62	221	P	P	01 47 14.1	-2.6
JCZ	Jackson Bay	6.62	221	PN	P	01 47 14.1	-2.5
WKZ	Wanaka	7.05	216	P	P	01 47 18.8	-3.4
WKZ	Wanaka	7.05	216	PN	P	01 47 18.8	-3.4
EAZ	Earnscleugh	7.24	213	eP	P	01 47 22.5	-2.2
EAZ	Earnscleugh	7.24	213	PN	P	01 47 22.5	-2.2
TUZ	Tuapeka	7.72	208	eP	P	01 47 29.7	-1.1
TUZ	Tuapeka	7.72	208	PN	P	01 47 29.7	-1.1
MLZ	Mavora Lakes	7.84	217	eP	P	01 47 29.9	-2.5
MLZ	Mavora Lakes	7.84	217	PN	P	01 47 29.9	-2.5
STKA	Stephens Creek	27.91	275	eP	P	01 51 09.2	-3.8
SNAA	Sanae	69.37	181	⇑i	P	01 56 26.0	-0.4

VNA3	**Neumayer Olymp**	**69.77**	**178**	⇑*i*	**P**	**01 56 29.0**	**+0.2**
VNA2	**Neumayer--Watz**	**70.12**	**179**	⇑*i*	**P**	**01 56 31.3**	**+0.3**
VNA1	**Neumayer--Stat**	**70.39**	**179**	⇑*i*	**P**	**01 56 27.8**	**-4.8**
MDJ	**Mudanjiang**	**92.90**	**329**	P	**P**	**01 58 32.0**	**+1.8**
MDJ				AMB	AMB		
	comp=Z,30nm,4.5s						

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*BJI **19** 01:55:41.7, 40.55N×77.45E, h14^{km}, ML3.2*
*NNC **19** 01:56:15.6±14.0, 41.23N×75.99E, mpv2.8, Error ellipse: s-maj=138.9km s-min=77.0km az=116.0*
ISC 19 01:55:38.1±4.4**, 40.2N**±0.2×**77.9E**±0.3**, h10**^{km}**, n12, σ1^{s}58**/13**, 2C-1D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.59**	**247**	⇑PG	**Pg**	**01 56 09.3**	**-0.7**
KSH				SG	**Sg**	**01 56 31.8**	**+0.5**
KSH				Smax			
	comp=N,250nm,0.4s						
KSH				Smax			
	comp=E,300nm,0.4s						
ULHL	**Ulahol**	**2.41**	**330**	P	**Pn**	**01 56 14.6**	**-3.6**
	SNR=11						
KZA	**Kyzart**	**2.75**	**315**	P	**Pn**	**01 56 20.6**	**-2.5**
	SNR=80						
TKM2	**Tokmak 2**	**3.23**	**329**	P	**Pn**	**01 56 29.8**	**-0.3**
	SNR=32						
UCH	**Uchtor**	**3.26**	**310**	P	**Pn**	**01 56 27.0**	**-3.4**
	SNR=14						
KBK	**Karagaybulak**	**3.32**	**320**	P	**Pn**	**01 56 31.1**	**-0.1**
	SNR=24						
AAK	**Ala-Archa**	**3.54**	**315**	P	**Pn**	**01 56 34.8**	**+0.5**
	SNR=8.3						
CHMS	**Chumysh**	**3.67**	**321**	P	**Pn**	**01 56 37.1**	**+0.9**
	SNR=12						
AML	**Almayashu**	**3.71**	**303**	P	**Pn**	**01 56 39.4**	**+2.6**
	SNR=12						
EKS2	**Erkin-Say**	**3.96**	**310**	P	**Pn**	**01 56 43.6**	**+3.3**
	SNR=8.3						
USP	**Ospenovka**	**3.99**	**322**	P	**Pn**	**01 56 42.7**	**+1.9**
	SNR=41						
KK31	**Karatay Array**	**6.24**	**300**	⇑Pn	**Pb**	**01 57 24.8**	**-2.0**
	comp=E,0.6nm,0.3s,baz=114,slow=15,SNR=13						
KK31				⇓Lg		01 58 38.0	
	comp=E,4.8nm,0.7s,baz=113,slow=29,SNR=6.6						

IDC 19 01:57:00.6±1.2**, 1.06N**×**120.47E, mb3.9**/4**, mb1 4.2**/5**, mb1mx3.8**/18**, mbtmp4.0**/5**, ML4.3**/1**, Error ellipse: s-maj=122.5km s-min=19.8km az=66.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.71**	**165**	P	P	02 01 32.7	-1.9
	0.6nm,0.3s,baz=348,slow=8.1,SNR=6.1						
WRA	**Warramunga Arr**	**24.91**	**148**	P	P	02 02 25.6	-1.3
	1.9nm,0.6s,baz=324,slow=11,SNR=21						
WB2	**Warramunga Arr**	**24.92**	**148**	*e*P	P	02 02 25.1	-1.9
STKA	**Stephens Creek**	**38.39**	**150**	P	P	02 04 23.0	-2.5
	4.0nm,0.9s,baz=350,slow=7.5,SNR=4.3						
SONM	**Songino Array**	**48.16**	**347**	P	P	02 05 43.2	-1.3
	0.8nm,0.7s,baz=170,slow=8.6,SNR=7.3						
MKAR	**Makanchi Array**	**56.40**	**329**	P	P	02 06 43.3	-2.8
	1.3nm,1.1s,baz=117,slow=8.1,SNR=6.8						

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*LDG **19** 01:57:50.5±0.6, 15.85S×166.70E, h10^{km}, Mb4.6/2, Error ellipse: s-maj=88.2km s-min=46.9km az=41.0*
*IDC **19** 01:58:02.8±4.0, 15.39S×167.54E, h104^{km}±35^{km}, mb4.1/11, mb1 4.3/12, mb1mx4.2/18, mbtmp4.4/12, Error ellipse: s-maj=25.6km s-min=20.4km az=68.0*
*NEIC **19** 01:58:05.0±1.9, 15.45S×167.51E, h124^{km}±16^{km}, mb4.6/6, Error ellipse: s-maj=15.9km s-min=12.8km az=214.0*
ISC 19 01:58:04.8±2.4**, 15.5S**±0.1×**167.4E**±0.1**, h136**^{km}±20^{km}**, n69, σ1^{s}02**/32**, mb4.2**/15**, 4C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.60**	**188**	*e*P	**P**	**01 59 40.0**	**-0.5**
DZM				*e*S	**S**	**02 00 55.7**	**+0.9**
DZM	**Mont Dzumac**	**6.60**	**188**	P	**P**	**01 59 40.5**	**0.0**
	18nm,0.3s,baz=38,slow=16,SNR=189						
DZM				S	**S**	**02 00 53.0**	**-1.8**
	4.4nm,0.3s,baz=327,slow=23,SNR=2.0						
DZM	**Mont Dzumac**	**6.60**	**188**	*e*P	**P**	**01 59 40.0**	**-0.5**
DZM				*e*S	**S**	**02 00 55.7**	**+0.9**
NOUC	**Port Laguerre**	**6.65**	**189**	*e*P	**P**	**01 59 41.6**	**+0.4**
CTA	**Charters Tower**	**20.66**	**254**	P	**P**	**02 02 37.9**	**+2.3**
	2.6nm,0.6s,baz=70,slow=14,SNR=6.1						
CTAO	**Charters Tower**	**20.66**	**254**	*e*P	**P**	**02 02 37.8**	**+2.2**
STKA	**Stephens Creek**	**28.62**	**231**	*e*P	**P**	**02 03 51.4**	**+0.8**
	2.4nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**28.62**	**231**	P	**P**	**02 03 51.2**	**+0.6**
	2.2nm,0.4s,mb4.2,baz=87,slow=8.9,SNR=9.3						
STKA				PcP	PcP	02 06 57.6	-0.7
	1.8nm,0.5s,baz=95,slow=1.2,SNR=3.0						
WB2	**Warramunga Arr**	**31.78**	**257**	*e*P	**P**	**02 04 17.3**	**-1.4**
WRAB	**Tennant Creek**	**31.78**	**257**	*e*P	**P**	**02 04 17.3**	**-1.3**
	1.9nm,0.3s,mb4.3						
WRA	**Warramunga Arr**	**31.79**	**257**	P	**P**	**02 04 17.4**	**-1.4**
	0.9nm,0.3s,mb4.0,baz=80,slow=6.0,SNR=32						
FITZ	**Fitzroy Crossi**	**40.03**	**260**	*e*P	**P**	**02 05 28.6**	**+0.4**
	18nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**40.03**	**260**	P	**P**	**02 05 28.7**	**+0.5**
	20nm,0.5s,mb5.0,baz=105,slow=4.2,SNR=51						
MBWA	**Marble Bar**	**45.49**	**255**	*e*P	**P**	**02 06 12.7**	**+0.2**
	7.9nm,0.6s,mb4.5						
MJAR	**Matsushiro Arr**	**58.66**	**333**	P	**P**	**02 07 47.5**	**-2.8**
	1.8nm,0.6s,mb4.1,baz=166,slow=8.4,SNR=9.1						
VNDA	**Vanda**	**62.09**	**181**	P	**P**	**02 08 12.9**	**-0.3**
	1.9nm,0.5s,mb4.2,baz=3.4,slow=5.8,SNR=22						
SBA	**Scott Base**	**62.37**	**180**	*e*P	**P**	**02 08 15.5**	**+0.6**
	3.4nm,0.8s,mb4.2						
QSPA	**South Pole Qui**	**74.53**	**180**	*e*P	**P**	**02 09 30.2**	**+0.5**
	13nm,0.9s,mb4.5						
CMAR	**Chiang Mai Arr**	**75.40**	**294**	P	**P**	**02 09 37.0**	**+1.2**
	1.1nm,0.4s,mb3.8,baz=135,slow=4.0,SNR=9.5						
ULN	**Ulaanbaatar**	**82.85**	**324**	*e*P	**P**	**02 10 15.8**	**+0.5**
	8.5nm,1.0s,mb4.4						
SONM	**Songino Array**	**83.20**	**324**	P	**P**	**02 10 17.8**	**+0.6**
	2.1nm,0.5s,mb4.1,baz=153,slow=9.0,SNR=25						
ILAR	**Eielson Array**	**87.21**	**18**	P	**P**	**02 10 36.6**	**+0.1**
	0.7nm,0.5s,mb3.8,baz=247,slow=5.7,SNR=6.5						
SNAA	**Sanae**	**92.79**	**183**	⇑*i*P	**P**	**02 11 02.3**	**-0.2**
VNA3	**Neumayer Olymp**	**93.45**	**181**	⇑*i*P	**P**	**02 11 05.3**	**-0.2**
VNA2	**Neumayer--Watz**	**93.72**	**182**	⇑*i*P	**P**	**02 11 07.0**	**+0.3**
VNA1	**Neumayer--Stat**	**94.01**	**181**	⇑*i*P	**P**	**02 11 05.4**	**-2.6**
MKAR	**Makanchi Array**	**97.86**	**316**	P	**P**	**02 11 26.5**	**+0.4**
	0.5nm,0.5s,mb4.2,baz=89,slow=7.2,SNR=5.0						
ZAL	**Zalesovo**	**98.11**	**324**	P	**P**	**02 11 27.4**	**+0.4**
	0.9nm,0.5s,mb4.4,baz=308,slow=23,SNR=3.0						
ZAL	**Zalesovo**	**98.11**	**324**	P	**P**	**02 11 27.4**	**+0.4**
KEV	**Kevo**	**120.51**	**345**	*e*pkp	PKPdf	02 16 35.6	-4.3
ARCES	**ARCESS Array B**	**121.03**	**345**	PKP	PKPdf	02 16 41.5	+0.6
	1.8nm,0.6s,baz=78,slow=2.0,SNR=22						
KAF	**Kangasniemi**	**125.97**	**339**	*e*pkp	PKPdf	02 16 50.8	+0.3
FINES	**FINESS Array B**	**126.49**	**338**	PKP	PKPdf	02 16 53.6	+2.1
	0.4nm,0.3s,baz=126,slow=3.4,SNR=8.7						
GERES	**GERESS Array B**	**140.40**	**333**	PKP	PKPdf	02 17 19.7	+1.8
	0.1nm,0.4s,SNR=4.4						
IDI	**Anoyia**	**141.15**	**308**	PKP	PKPdf	02 17 22.5	+2.9
	1.9nm,0.6s,baz=144,slow=4.3,SNR=8.0						
CDF	**Champ du Feu**	**143.35**	**338**	*e*PKP1	PKPbc	02 17 21.5	+0.1
	5.3nm,0.7s						
HINF	**Hinteralfeld**	**144.00**	**338**	*e*PKP1	PKPbc	02 17 23.5	+0.1
	4.6nm,0.6s						
HAU	**Haudompre**	**144.02**	**338**	*e*PKP1	PKPbc	02 17 23.9	+0.5
	8.2nm,0.8s						
MEZF	**Maizieres J'vi**	**144.04**	**340**	*e*PKP1	PKPbc	02 17 24.4	+0.9
	4.7nm,0.5s						
CABF	**La Chapelle**	**145.30**	**337**	*e*PKP1	PKPbc	02 17 28.8	+1.8
	16nm,0.7s						
FLN	**La Foliniere**	**145.38**	**346**	*e*PKP1	PKPbc	02 17 28.2	+1.1
	27nm,0.7s						
LDF	**La Druitiere**	**145.45**	**345**	*e*PKP1	PKPbc	02 17 28.3	+1.0
	17nm,0.7s						
LOR	**Lormes**	**145.51**	**340**	*e*PKP1	PKPbc	02 17 29.0	+1.5
	20nm,0.9s						
SSF	**Saint Saulge**	**145.81**	**340**	*e*PKP1	PKPbc	02 17 30.0	+1.8
	11nm,0.7s						
HYF	**Humbligny**	**145.90**	**341**	*e*PKP1	PKPbc	02 17 30.1	+1.7
LPL	**La Plagne**	**145.96**	**335**	*e*PKP1	PKPbc	02 17 30.9	+2.3
	9.2nm,0.7s						
LPG	**La Plagne**	**145.96**	**335**	*e*PKP1	PKPbc	02 17 31.0	+2.3
	13nm,0.7s						
SMF	**Signal de Mont**	**146.06**	**340**	*e*PKP1	PKPbc	02 17 30.5	+1.6
	19nm,0.9s						
AVF	**Avril sur Loir**	**146.10**	**340**	*e*PKP1	PKPbc	02 17 30.5	+1.6
	10nm,0.7s						
SGMF	**Saint Gilles**	**146.31**	**348**	*e*PKP1	PKPbc	02 17 31.0	+1.6
	22nm,0.6s						
BNI	**Bardonecchia**	**146.36**	**335**	*e*PKPdf	PKPdf	02 17 30.2	+2.0
ROSF	**Rostrenen**	**146.38**	**349**	*e*PKP1	PKPbc	02 17 31.1	+1.6
BGF	**Bois d'Agland**	**146.47**	**341**	*e*PKP1	PKPbc	02 17 31.8	+2.0
	17nm,0.7s						
MBDF	**Montbardon**	**146.59**	**335**	*e*PKP1	PKPbc	02 17 32.7	+2.6
	7.6nm,0.7s						
QUIF	**Quistinic**	**146.76**	**348**	*e*PKP1	PKPbc	02 17 32.0	+1.6
ORIF	**Oris-en-Rattie**	**146.79**	**336**	*e*PKP1	PKPbc	02 17 33.0	+2.4
TCF	**Toulx Ste Croi**	**146.91**	**341**	*e*PKP1	PKPbc	02 17 33.0	+2.2
	6.8nm,0.7s						
SBF	**Sospel**	**147.00**	**333**	*e*PKP1	PKPbc	02 17 34.4	+3.3
PGF	**Pioggiola**	**147.30**	**330**	*e*PKP1	PKPdf	02 17 34.1	+4.2
	10nm,0.7s						
MFF	**Saint Martin d**	**147.30**	**344**	*e*PKP1	PKPdf	02 17 34.1	+4.4
	26nm,0.8s						
FRF	**La Foret Royal**	**147.58**	**333**	*e*PKP1	PKPdf	02 17 34.6	+4.3
	4.9nm,0.6s						
SMRF	**Simiane la Rot**	**147.69**	**335**	*e*PKP1	PKPdf	02 17 35.4	+4.9
	12nm,1.1s						
LMR	**La Mourre**	**147.83**	**333**	*e*PKP1	PKPdf	02 17 35.3	+4.6
	6.2nm,0.8s						
RJF	**Les Rejaudoux**	**148.01**	**341**	*e*PKP1	PKPdf	02 17 36.0	+5.0
	11nm,0.9s						
LASF	**Ste Croix**	**148.28**	**337**	*e*PKP1	PKPdf	02 17 36.9	+5.5
	5.2nm,0.8s						
LFF	**La Frestale**	**148.57**	**342**	*e*PKP1	PKPdf	02 17 36.8	+4.9
	6.8nm,0.6s						
MTLF	**Montolieu**	**149.51**	**338**	*e*PKP1	PKPdf	02 17 40.0	+6.6
	8.1nm,0.9s						
ETSF	**Etsaut**	**150.82**	**342**	*e*PKP1	PKPdf	02 17 43.6	+8.2
EVO	**Evora**	**156.71**	**351**	*e*PKP2	PKPab	02 18 15.7	-0.5
	7.8nm,0.9s						

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*IDC **19** 02:01:04.7±0.4, 23.95S×112.06W, mb4.8/26, mb1 4.9/27, mb1mx4.9/28, mbtmp4.8/27, ML4.5/1, MS5.2/22, Ms1 5.2/22, ms1mx5.1/23, Error ellipse: s-maj=14.1km s-min=12.9km az=91.0*
*BJI **19** 02:01:06.5, 23.90S×112.00W, h10^{km}, mB5.7, Ms5.9, Msz5.6*
*MOS **19** 02:01:06.7±1.1, 23.59S×111.86W, h10^{km}, mb5.7/32, MS5.2/24, Error ellipse: s-maj=15.6km s-min=7.4km az=85.0*
*HRVD **19** 02:01:06.5±0.1, 23.99S×111.93W, h12^{km}, MW5.7/77, Centroid moment Tensor Solution. LP body waves: s70,c156;Mantle waves: s77,c261; Half duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M_{rr}1.72±.04; $M_{\theta\theta}$1.44±.05; $M_{\phi\phi}$-3.16±.04; $M_{r\theta}$0.12±.13; $M_{\theta\phi}$-3.59±.04; $M_{\phi r}$0.94±.13; Best double couple: $M_0$4.355×10^{17} NP1:ϕ_s254°, δ77°, λ177°. NP2:ϕ_s344°, δ87°, λ13°. Principal axes: T 3.475, Plg12°, Azm210°; N 1.76, Plg76°, Azm357°; P -5.234, Plg7°, Azm118°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **19** 02:01:06.5±0.2, 23.95S×111.98W, h10^{km}, mb5.6/64, MS5.3/56, MW5.7 Error ellipse: s-maj=7.2km s-min=4.6km az=87.0, Moment Tensor Solution. s5 Moment tensor: Scale 10^{17}Nm; M_{rr}0.35; $M_{\theta\theta}$2.88; $M_{\phi\phi}$-3.23; $M_{r\theta}$0.30; $M_{\theta\phi}$-2.00; $M_{\phi r}$0.96; Best double couple: $M_0$3.8×10^{17} NP1: ϕ_s151°, δ81°, λ-9°. NP2:ϕ_s242°, δ81°, λ-171°. Principal axes: T 3.47, Plg0°, Azm17°; N .58, Plg77°, Azm285°; P -4.05, Plg13°, Azm107°;*
*CSEM **19** 02:01:08.2, 23.97S×112.06W, h33^{km}, mb5.6*
ISC 19 02:01:04.5±0.2**, 23.95S**±0.04×**111.95W**±0.06**, h10**^{km}**, (h6**^{km}±.8^{km}**:pP-P), n403, σ0^{s}98**/211**, mb5.3**/82**, MS5.3**/89**, 13C-10D, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**3.95**	**144**	Pn	**Pn**	**02 02 06.0**	**-0.6**
	30nm,0.3s,baz=330,slow=15,SNR=18						
RPN				Sn	**Sn**	**02 02 52.1**	**-1.3**
	14nm,0.3s,baz=350,slow=10,SNR=3.7						
RPN				LR	LR	02 03 25.2	
	comp=Z,78µm,18.4s,baz=342,slow=35						
RPN	**Rapa Nui**	**3.95**	**144**	*e*P	**Pn**	**02 02 03.6**	**-2.9**
TAOE	**Nuku Hiva Isla**	**30.84**	**294**	*e*S	**S**	**02 12 13.3**	**-12**
	15µm,40.1s						
TAOE				*e*LR	LR	02 15 12.9	
	74µm,26.0s,baz=131						
TBI	**Tubuai**	**34.30**	**263**	*e*P	**P**	**02 07 36.0**	**-17**
	200nm,29.0s						
TBI				*e*S	**S**	**02 13 03.9**	**-16**
	808nm,29.8s						
TBI				*e*LQ		02 15 26.1	
	11µm,28.8s						
TBI				*e*LR	LR	02 16 35.0	
	14µm,28.0s,baz=94						
PPT	**Papeete**	**35.68**	**273**	*e*P	**P**	**02 07 46.4**	**-19**
	292nm,25.5s						
PPT				*e*PP	PP	02 09 08.3	-17
	287nm,23.2s						
PPT				*e*S	**S**	**02 13 22.5**	**-18**
	2µm,26.5s						
PPT				*e*LQ		02 16 00.1	
	9µm,25.2s						
PPT				*e*LR	LR	02 17 18.5	
	22µm,37.2s,baz=102						
PPT	**Papeete**	**35.68**	**273**	P	**P**	**02 08 02.9**	**-2.2**
	5.7nm,0.3s,mb5.0,baz=358,slow=23,SNR=2.0						
PPT				LR	LR	02 18 50.2	
	comp=Z,3µm,19.7s,MS5.1,baz=109,slow=30						
SCR	**San Cristobal**	**36.95**	**114**	*e*P	**P**	**02 08 19.9**	**+4.2**
PLCA	**Paso Flores**	**38.38**	**126**	*e*P	**P**	**02 08 28.7**	**+1.1**
PLCA				pmax	pmax		
	comp=Z,51nm,1.6s						
PLCA				MLR	MLR		
	comp=Z,8µm,19.0s						
PLCA	**Paso Flores**	**38.38**	**126**	P	**P**	**02 08 29.1**	**+1.5**
	comp=Z,9.8nm,1.1s,mb4.5,baz=291,slow=11,SNR=6.5						
PLCA				LR	LR	02 20 07.6	
	comp=Z,10µm,21.5s,MS5.6,baz=273,slow=30						
PLCA	**Paso Flores**	**38.38**	**126**	*e*P	**P**	**02 08 28.7**	**+1.1**
	comp=Z,51nm,1.6s,mb5.0						
PLCA				LR	LR		
	comp=Z,8µm,19.0s,MS5.6						
ARE	**Arequipa**	**38.59**	**87**	*e*P	**P**	**02 08 31.0**	**+1.4**
OTAV	**Otavalo**	**40.42**	**58**	*e*P	**P**	**02 08 47.0**	**+2.2**
	comp=Z,36nm,1.3s,mb4.9						
OTAV				LR	LR		
	comp=Z,4µm,22.0s,MS5.2						
LPAZ	**La Paz**	**41.71**	**88**	*e*P	**P**	**02 08 57.1**	**+1.6**
LPAZ				pmax	pmax		
	comp=Z,124nm,1.5s						
LPAZ	**La Paz**	**41.71**	**88**	P	**P**	**02 08 57.6**	**+2.2**
	comp=Z,36nm,1.1s,mb4.9,baz=260,slow=7.0,SNR=62						
LPAZ				LR	LR	02 22 07.8	
	comp=Z,4µm,19.9s,MS5.2,baz=249,slow=30						
LPAZ	**La Paz**	**41.71**	**88**	*e*P	**P**	**02 08 57.1**	**+1.6**
	comp=Z,124nm,1.5s,mb5.3						
JTS	**JuntasAbangare**	**43.06**	**41**	P	**P**	**02 09 06.8**	**+0.2**
JTS				pmax	pmax		
	comp=Z,244nm,1.9s						
JTS				MLR	MLR		
	comp=Z,2µm,22.0s						
JTS	**JuntasAbangare**	**43.06**	**41**	P	**P**	**02 09 06.8**	**+0.2**
	comp=Z,244nm,1.9s,mb5.6						
JTS				LR	LR		
	comp=Z,2µm,22.0s,MS4.9						
OXX	**Oaxaca**	**43.41**	**21**	*i* P	**P**	**02 09 13.0**	**+3.7**
CMIG	**Matias Romero**	**44.06**	**24**	⇑*e*P	**P**	**02 09 15.4**	**+0.8**
CCIG	**Comitan**	**44.42**	**28**	*i* P	**P**	**02 09 19.6**	**+2.0**
USHA	**Ushuaia**	**44.51**	**145**	P	**P**	**02 09 16.5**	**-1.3**
	comp=Z,5.3nm,0.8s,mb4.4,baz=302,slow=2.6,SNR=3.5						
TRQA	**Tornquist**	**44.58**	**121**	*e*P	**P**	**02 09 19.7**	**+1.2**
	comp=Z,43nm,1.1s,mb5.2						
MOIG	**Morelia**	**44.61**	**15**	⇓*i*P	**P**	**02 09 21.2**	**+2.1**
PPM	**Popocatepetl**	**44.69**	**18**	*e*P	**P**	**02 09 22.0**	**+2.3**
ROSC	**El Rosal**	**46.51**	**57**	P	**P**	**02 09 37.0**	**+2.8**
	comp=Z,5.6nm,0.3s,mb4.9,baz=95,slow=9.1,SNR=15						
ROSC				LR	LR	02 25 43.0	
	comp=Z,1µm,18.8s,MS4.9,baz=212,slow=32						
LPA	**La Plata**	**47.80**	**116**	*de*P	**P**	**02 09 44.0**	**-0.1**
LPA				*e*pS		02 16 46.0	
LPA				*e*sS		02 16 47.0	
	comp=Z,7µm,21.0s						
SAML	**Samuel**	**48.84**	**81**	*e*P	**P**	**02 09 51.4**	**-1.1**
	comp=Z,79nm,1.3s,mb5.6						
SAML				LR	LR		
	comp=Z,3µm,20.0s,MS5.3						
CPUP	**Villa Florida**	**49.20**	**105**	P	**P**	**02 09 54.0**	**-1.0**
	comp=Z,8.2nm,0.9s,mb4.8,baz=270,slow=7.4,SNR=14						
CPUP				LR	LR	02 28 14.4	
	comp=Z,3µm,19.7s,MS5.3,baz=277,slow=33						
SDV	**Santo Domingo**	**51.90**	**56**	*e*P	**P**	**02 10 16.0**	**+0.2**
	comp=Z,75nm,1.4s,mb5.4						
SDV				LR	LR		
	comp=Z,1µm,22.0s,MS4.9						
LTX	**Lajitas**	**53.57**	**9**	*e*P	**P**	**02 10 28.4**	**+0.3**
LTX				pmax	pmax		
	comp=Z,143nm,2.1s,mb5.5						
LTX				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.1						
LTX	**Lajitas**	**53.57**	**9**	*e*P	**P**	**02 10 28.4**	**+0.3**
	comp=Z,143nm,2.1s,mb5.5						
LTX				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
TXAR	**Lajitas Array**	**53.57**	**9**	P	**P**	**02 10 28.2**	**+0.1**
	comp=Z,4.3nm,1.0s,mb4.3,baz=194,slow=8.3,SNR=26						
TXAR				LR	LR	02 29 09.0	
	comp=Z,2µm,18.1s,MS5.2,baz=90,slow=31						
TXAR	**Lajitas Array**	**53.57**	**9**	P	**P**	**02 10 28.2**	**+0.1**
TXAR				LR	LR	02 29 09.0	
MNTX	**Cornudas Mount**	**55.69**	**7**	*e*P	**P**	**02 10 42.6**	**-0.9**
	comp=Z,302nm,2.3s,mb5.9						
MNTX				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
TUC	**Tucson**	**55.95**	**1**	*e*P	**P**	**02 10 45.4**	**0.0**
TUC				pmax	pmax		
	comp=Z,79nm,1.8s,mb5.4						
TUC	**Tucson**	**55.95**	**1**	*e*P	**P**	**02 10 45.4**	**0.0**
	comp=Z,79nm,1.8s,mb5.4						
GDL2	**Guadalupe Moun**	**56.30**	**8**	*e*P	**P**	**02 10 47.0**	**-0.9**
CLNB	**Carlsbad**	**56.43**	**8**	*e*P	**P**	**02 10 48.7**	**-0.1**
JATB	**Jatai**	**56.44**	**96**	⇓*i*P	**P**	**02 10 49.1**	**+0.1**
JATB				*i*		02 11 09.7	
BAR	**Barrett**	**56.49**	**355**	*e*P	**P**	**02 10 49.2**	**-0.1**
CPRX	**Cap Rock**	**57.18**	**8**	*e*P	**P**	**02 10 53.9**	**-0.3**
PFO	**Pinyon Flat Ob**	**57.40**	**356**	*e*P	**P**	**02 10 55.5**	**-0.2**
PFO				pmax	pmax		
	comp=Z,133nm,2.0s,mb5.6						
PFO				MLR	MLR		
	comp=Z,209nm,22.0s,MS4.2						
PFO	**Pinyon Flat Ob**	**57.40**	**356**	*e*P	**P**	**02 10 55.5**	**-0.2**
	comp=Z,133nm,2.0s,mb5.6						
PFO				LR	LR		
	comp=Z,209nm,22.0s,MS4.2						
NATX	**Nacogdoches**	**57.81**	**17**	*e*P	**P**	**02 10 58.1**	**-0.5**
	comp=Z,71nm,1.1s,mb5.6						
NATX				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
LENM	**Lemitar**	**57.99**	**5**	*e*P	**P**	**02 11 00.6**	**+0.8**
BNM	**Barren Site**	**58.00**	**5**	*e*P	**P**	**02 11 00.2**	**+0.4**
MWC	**Mount Wilson**	**58.14**	**354**	*e*P	**P**	**02 11 01.5**	**+0.6**
ANMO	**Albuquerque**	**58.81**	**5**	*d i*P	**P**	**02 11 05.9**	**+0.4**
ANMO	**Albuquerque**	**58.81**	**5**	P	**P**	**02 11 04.5**	**-1.0**
	comp=Z,3.2nm,1.0s,mb4.3,baz=180,slow=11,SNR=11						
ANMO				LR	LR	02 29 51.6	
	comp=Z,392nm,19.6s,MS4.5,baz=42,slow=29						
ANMO	**Albuquerque**	**58.81**	**5**	*e*P	**P**	**02 11 05.3**	**-0.2**
	comp=Z,222nm,2.7s,mb5.7						
NEN	**Nelson**	**59.34**	**357**	*e*P	**P**	**02 11 10.0**	**+0.8**
DWPF	**Disney**	**59.53**	**31**	PFAKE		02 11 20.0	+9.4
DWPF				LR	LR		
	comp=Z,854nm,19.0s,MS4.9						
BDFB	**Brasilia**	**60.30**	**95**	P	**P**	**02 11 15.8**	**-0.2**
	comp=Z,15nm,0.8s,mb5.0,baz=264,slow=8.1,SNR=17						
BDFB				LR	LR	02 34 39.4	
	comp=Z,2µm,19.4s,MS5.4,baz=110,slow=33						
URZ	**Urewera**	**61.05**	**238**	P	**P**	**02 11 19.7**	**-1.1**
	comp=Z,15nm,1.1s,mb5.0,baz=151,slow=14,SNR=2.5						
MTUM	**Tungsten Hills**	**61.29**	**354**	*e*P	**P**	**02 11 23.7**	**+1.2**
UALR	**University of**	**61.30**	**18**	*e*P	**P**	**02 11 22.1**	**-0.4**
	comp=Z,357nm,2.3s,mb6.1						
ARUT	**Antelope Range**	**61.42**	**359**	*e*P	**P**	**02 11 21.9**	**-1.5**
LRAL	**Lakeview Retre**	**61.46**	**24**	*e*P	**P**	**02 11 23.7**	**0.0**
	comp=Z,93nm,1.6s,mb5.7						
PV01	**Paradox Valley**	**61.84**	**3**	*e*P	**P**	**02 11 26.1**	**-0.1**
TPH	**Tonopah**	**61.89**	**355**	*e*P	**P**	**02 11 27.0**	**+0.4**
TPH				pmax	pmax		
	comp=Z,71nm,1.4s,mb5.6						
TPH	**Tonopah**	**61.89**	**355**	*e*P	**P**	**02 11 27.0**	**+0.4**
	comp=Z,71nm,1.4s,mb5.6						
OXF	**Oxford**	**61.96**	**21**	*e*P	**P**	**02 11 26.2**	**-0.9**
OXF				pmax	pmax		
	comp=Z,48nm,1.2s,mb5.5						
OXF	**Oxford**	**61.96**	**21**	*e*P	**P**	**02 11 26.2**	**-0.9**
	comp=Z,48nm,1.2s,mb5.5						
TRCR	**Troy Canyon**	**62.06**	**357**	*e*P	**P**	**02 11 28.4**	**+0.7**
MVU	**Marysvale**	**62.12**	**360**	P	**P**	**02 11 25.2**	**-2.9**
	comp=Z,8.5nm,1.1s,mb4.8						
MVU				LR	LR		
	comp=Z,626nm,19.0s,MS4.8						
MSU	**Marysvale**	**62.13**	**360**	P	**P**	**02 11 28.4**	**+0.2**
CMB	**Columbia Colle**	**62.16**	**352**	*e*P	**P**	**02 11 28.9**	**+0.5**
CMB				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.4						
CMB				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.0						
CMB	**Columbia Colle**	**62.16**	**352**	*e*P	**P**	**02 11 28.9**	**+0.5**
	comp=Z,40nm,1.4s,mb5.3						
CMB				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
NVAR	**Mina Array Bea**	**62.34**	**354**	P	**P**	**02 11 30.0**	**+0.4**
	comp=Z,28nm,0.7s,mb5.5,baz=184,slow=6.5,SNR=98						
NVAR				LR	LR	02 33 01.1	
	comp=Z,768nm,20.9s,MS4.8,baz=205,slow=31						
SRU	**San Rafael**	**62.74**	**1**	*e*P	**P**	**02 11 32.0**	**-0.2**
TMUT	**Trail Mountain**	**62.92**	**1**	*e*P	**P**	**02 11 33.4**	**0.0**
CAM4	**Nova Friburgo**	**63.20**	**104**	*e*P	**P**	**02 11 35.3**	**-0.1**
CAM4				*i*	pP	02 11 36.9	-1.6
CAM4				*i*		02 11 45.3	
CAM4				*i*		02 11 49.9	
CAM4				*i*		02 11 56.0	
CAM4				*i*		02 12 03.5	
WCN	**Washoe City**	**63.34**	**353**	*e*P	**P**	**02 11 36.8**	**+0.6**
WCN				pmax	pmax		
	comp=Z,182nm,2.2s,mb5.8						
WCN	**Washoe City**	**63.34**	**353**	*e*P	**P**	**02 11 36.8**	**+0.6**
	comp=Z,182nm,2.2s,mb5.8						
NLU	**North Lily Min**	**63.57**	**360**	*e*P	**P**	**02 11 38.8**	**+1.1**
MPU	**Maple Canyon**	**63.63**	**0**	*e*P	**P**	**02 11 38.4**	**+0.3**
SWET	**Sewanee**	**63.80**	**24**	*e*P	**P**	**02 11 38.1**	**-1.2**
UTMT	**University of**	**63.81**	**21**	*e*P	**P**	**02 11 39.7**	**+0.4**
	comp=Z,75nm,0.9s,mb5.7						
PARMO	**Parma**	**63.82**	**20**	P	**P**	**02 11 38.6**	**-0.8**
WVT	**Waverly**	**63.96**	**22**	*e*P	**P**	**02 11 38.9**	**-1.4**
WVT				pmax	pmax		
	comp=Z,117nm,0.9s,mb5.9						
WVT				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
WVT	**Waverly**	**63.96**	**22**	*e*P	**P**	**02 11 38.9**	**-1.4**
	comp=Z,117nm,0.9s,mb5.9						
WVT				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
BEKR	**Beckwourth**	**63.97**	**353**	*e*P	**P**	**02 11 40.2**	**-0.1**
	comp=Z,56nm,1.6s,mb5.3						
DAU	**Daniels Canyon**	**64.03**	**1**	*e*P	**P**	**02 11 40.8**	**+0.1**
JLU	**Jordanelle**	**64.22**	**0**	*e*P	**P**	**02 11 41.6**	**-0.3**
BMN	**Battle Mountai**	**64.24**	**356**	*e*P	**P**	**02 11 42.3**	**+0.3**
BMN				pmax	pmax		
	comp=Z,196nm,1.9s,mb5.8						
BMN	**Battle Mountai**	**64.24**	**356**	*e*P	**P**	**02 11 42.3**	**+0.3**
	comp=Z,196nm,1.9s,mb5.8						
NOQ	**North Oquirrh**	**64.27**	**360**	*e*P	**P**	**02 11 42.8**	**+0.5**
CTU	**Camp Tracy**	**64.31**	**0**	*e*P	**P**	**02 11 43.0**	**+0.5**
MYNC	**Murphy**	**64.36**	**25**	PFAKE		02 11 50.0	+7.1
MYNC				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
ELK	**Elko**	**64.43**	**357**	*e*P	**P**	**02 11 43.6**	**+0.3**
ELK				pmax	pmax		
	comp=Z,114nm,1.9s						
ELK				MLR	MLR		
	comp=Z,1µm,20.0s						
ELK	**Elko**	**64.43**	**357**	*e*P	**P**	**02 11 43.6**	**+0.3**
	comp=Z,114nm,1.9s,mb5.6						
ELK				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
CPCT	**Cooper Cave**	**64.53**	**25**	*e*P	**P**	**02 11 41.3**	**-2.8**
CCM	**Cathedral Cave**	**64.67**	**18**	PFAKE		02 12 00.0	+15
CCM				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						

RPZ	**Rata Peaks**	64.71	231	P	P	02 11 44.8	-0.2
	comp=Z,19nm,0.9s,mb5.1,baz=142,slow=5.7,SNR=6.0						
TCUT	**Toone Canyon**	64.73	0	*e*P	P	02 11 45.3	0.0
FVM	**French Village**	64.84	19	*e*P	P	02 11 44.6	-1.4
FVM				pmax	pmax		
	comp=Z,45nm,1.4s,mb5.3						
FVM	**French Village**	64.84	19	*e*P	P	02 11 44.6	-1.4
	comp=Z,45nm,1.4s,mb5.3						
JSC	**Jenkinsville**	64.84	28	*e*P	P	02 11 43.3	-2.8
SBA	**Scott Base**	64.92	193	*e*P	P	02 11 45.7	-0.2
SBA				pmax	pmax		
	comp=Z,69nm,1.5s,mb5.5						
SBA	**Scott Base**	64.92	193	*e*P	P	02 11 45.7	-0.2
	comp=Z,69nm,1.5s,mb5.5						
SPUT	**South Promonto**	64.93	360	*e*P	P	02 11 44.2	-2.3
WDC	**Whiskeytown Da**	64.95	351	*e*P	P	02 11 45.7	-1.0
WDC				pmax	pmax		
	comp=Z,55nm,1.4s,mb5.4						
WDC				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.1						
WDC	**Whiskeytown Da**	64.95	351	*e*P	P	02 11 45.7	-0.9
	comp=Z,55nm,1.4s,mb5.4						
WDC				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
PHWY	**Pilot Hill**	65.20	5	*e*P	P	02 11 47.0	-1.2
HWUT	**Hardware Ranch**	65.22	0	*e*P	P	02 11 47.6	-0.8
	comp=Z,51nm,1.7s,mb5.3						
HVU	**Hansel Valley**	65.40	359	*e*P	P	02 11 48.3	-1.2
KHMM	**Horse Mountain**	65.42	350	*e*P	P	02 11 49.1	-0.6
TZTN	**Tazewell**	65.87	25	*e*P	P	02 11 52.0	-0.7
VNDA	**Vanda**	65.97	194	*e*P	P	02 11 51.7	-0.9
VNDA				pmax	pmax		
	comp=Z,21nm,1.4s						
VNDA				MLR	MLR		
	comp=Z,2µm,22.0s						
VNDA	**Vanda**	65.97	194	P	P	02 11 52.1	-0.5
	comp=Z,4.6nm,0.9s,mb4.5,baz=97,slow=7.0,SNR=15						
VNDA				LR	LR	02 33 52.9	
	comp=Z,2µm,20.9s,MS5.3,baz=98,slow=30						
VNDA	**Vanda**	65.97	194	*e*P	P	02 11 51.7	-1.0
	comp=Z,21nm,1.4s,mb5.0						
VNDA				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
MOD	**Modoc**	65.97	353	*e*P	P	02 11 53.5	+0.3
	comp=Z,32nm,0.8s,mb5.4						
YBH	**Yreka Blue Hor**	66.10	351	*e*P	P	02 11 53.8	-0.2
YBH				pmax	pmax		
	comp=Z,23nm,1.4s						
YBH	**Yreka Blue Hor**	66.10	351	P	P	02 11 53.3	-0.7
	comp=Z,5.5nm,0.8s,mb4.6,baz=99,slow=4.9,SNR=8.9						
YBH	**Yreka Blue Hor**	66.10	351	*e*P	P	02 11 53.8	-0.2
	comp=Z,23nm,1.4s,mb5.0						
QSPA	**South Pole Qui**	66.21	180	*e*P	P	02 11 55.0	+0.9
	comp=Z,106nm,1.5s,mb5.7						
WCI	**Wyandotte Cave**	66.37	22	PFAKE		02 12 10.0	+14
WCI				LR	LR		
	comp=Z,732nm,20.0s,MS4.9						
AHID	**Auburn Hatcher**	66.38	1	*e*P	P	02 11 55.2	-0.6
	comp=Z,30nm,1.2s,mb5.2						
PDAR	**Pinedale Array**	66.42	2	P	P	02 11 55.5	-0.6
	comp=Z,4.9nm,0.7s,mb4.7,baz=172,slow=6.6,SNR=36						
PDAR				LR	LR	02 36 21.6	
	comp=Z,1µm,19.1s,MS5.1,baz=289,slow=32						
BUOR	**Burton Butte**	66.58	352	P	P	02 11 59.1	+2.1
RRI2	**Red Ridge**	66.96	0	*e*P	P	02 11 59.4	-0.1
	comp=Z,121nm,1.6s,mb5.7						
REDW	**Red Top Meadow**	66.98	1	*e*P	P	02 11 57.5	-2.1
	comp=Z,207nm,2.2s,mb5.8						
HUMO	**Hull Mountain**	67.00	351	*e*P	P	02 12 00.5	+0.7
	comp=Z,43nm,1.3s,mb5.3						
SNOW	**Snow King Moun**	67.09	1	*e*P	P	02 12 00.2	-0.1
	comp=Z,233nm,2.1s,mb5.8						
TPAW	**Teton Pass**	67.11	1	*e*P	P	02 12 00.1	-0.3
	comp=Z,37nm,1.1s,mb5.3						
BLO	**Bloomington**	67.15	21	*e*P	P	02 11 59.8	-0.9
BLO				pmax	pmax		
	comp=Z,131nm,1.8s,mb5.7						
BLO	**Bloomington**	67.15	21	*e*P	P	02 11 59.8	-1.0
	comp=Z,131nm,1.8s,mb5.7						
HLID	**Hailey**	67.22	358	*e*P	P	02 12 01.1	0.0
	comp=Z,35nm,0.9s,mb5.4						
HLID				LR	LR		
	comp=Z,522nm,20.0s,MS4.8						
LOHW	**Long Hollow**	67.24	1	*e*P	P	02 12 00.5	-0.8
	comp=Z,43nm,1.4s,mb5.3						
MOOW	**Moose Ponds**	67.37	1	*e*P	P	02 12 00.6	-1.4
	comp=Z,41nm,1.4s,mb5.3						
IMW	**Indian Meadow**	67.52	1	*e*P	P	02 12 01.9	-1.1
	comp=Z,81nm,1.5s,mb5.5						
ELN	**Prospectdale**	67.57	27	*e*P	P	02 12 03.3	-0.2
FWV	**Forest Hill**	67.85	26	*e*P	P	02 12 04.8	-0.4
YFT	**Old Faithful**	68.07	1	*e*P	P	02 12 08.3	+1.9
MCMT	**McKenzie Canyo**	68.45	359	*e*P	P	02 12 09.2	+0.4
QLMT	**Earthquake Lak**	68.45	0	*e*P	P	02 12 09.1	+0.3
BMO	**Blue Mountains**	68.64	356	*e*P	P	02 12 09.9	-0.1
	comp=Z,93nm,1.7s,mb5.4						
BMO				LR	LR		
	comp=Z,912nm,19.0s,MS5.0						
COR	**Corvallis**	68.99	351	PFAKE		02 12 20.0	+7.9
COR				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
CROR	**Criterion Ridg**	69.09	353	P	P	02 12 13.6	+0.9
BOZ	**Bozeman (W)**	69.26	0	*e*P	P	02 12 13.2	-0.6
BOZ				pmax	pmax		
	comp=Z,55nm,1.8s,mb5.2						
BOZ	**Bozeman (W)**	69.26	0	*e*P	P	02 12 13.2	-0.5
	comp=Z,54nm,1.8s,mb5.2						
JFWS	**Jewell Farm**	69.47	17	*e*P	P	02 12 12.7	-2.4
JFWS				pmax	pmax		
	comp=Z,107nm,1.8s,mb5.5						
JFWS	**Jewell Farm**	69.47	17	*e*P	P	02 12 12.7	-2.4
	comp=Z,107nm,1.8s,mb5.5						
MCWV	**Mont Chateau**	70.02	26	*e*P	P	02 12 18.0	-0.6
	comp=Z,140nm,1.7s,mb5.6						
HRY	**Holter Researc**	70.33	0	*e*P	P	02 12 20.6	+0.3
FL2	**Flat Top 2**	70.45	352	P	P	02 12 22.0	+1.0
MSO	**Missoula**	70.47	359	*e*P	P	02 12 20.3	-0.8
	comp=Z,12nm,1.0s,mb4.8						
CHMT	**Chamberlain Mo**	70.54	359	*e*P	P	02 12 22.0	+0.4
LON	**Longmire**	70.93	353	P	P	02 12 25.5	+1.6
EBG	**Ellensburg**	70.95	354	P	P	02 12 25.4	+1.3
SDMD	**Soldier's Deli**	71.06	28	*e*P	P	02 12 24.9	0.0
EPH	**Ephrata**	71.30	355	P	P	02 12 27.3	+1.1
VNA3	**Neumayer Olymp**	71.40	161	*e*	P	02 12 27.8	+1.4
VNA3	**Neumayer Olymp**	71.40	161	*e*	P	02 12 31.4	+5.0
VNA3	**Neumayer Olymp**	71.40	161	*e*	P	02 12 42.1	+16
VNA3	**Neumayer Olymp**	71.40	161	⇑*i*P	P	02 12 26.2	-0.2
VNA3				*e*	pP	02 12 27.8	-1.7
VNA3				*e*		02 12 31.4	
VNA3				*e*		02 12 42.1	
ALLY	**Alegheny Colle**	71.61	25	*e*P	P	02 12 28.9	+0.7
NEW	**Newport**	72.03	356	*e*P	P	02 12 30.0	-0.5
NEW				pmax	pmax		
	comp=Z,97nm,1.5s						
NEW	**Newport**	72.03	356	P	P	02 12 30.1	-0.4
	comp=Z,18nm,1.0s,mb5.0,baz=157,slow=6.3,SNR=36						
NEW				LR	LR	02 37 53.1	
	comp=Z,484nm,21.1s,MS4.7,baz=204,slow=31						
NEW	**Newport**	72.03	356	*e*P	P	02 12 29.9	-0.6
	comp=Z,97nm,1.5s,mb5.5						
VNA1	**Neumayer--Stat**	72.04	160	*e*	P	02 12 32.0	+1.8
VNA1	**Neumayer--Stat**	72.04	160	*e*	P	02 12 36.2	+6.0
VNA1	**Neumayer--Stat**	72.04	160	*e*	P	02 12 46.3	+16
VNA1	**Neumayer--Stat**	72.04	160	⇑*i*P	P	02 12 30.3	+0.1
VNA1				*e*	pP	02 12 32.0	-1.3
VNA1				*e*		02 12 36.2	
VNA1				*e*		02 12 46.3	
VNA2	**Neumayer--Watz**	72.20	160	*e*	P	02 12 34.1	+2.9
VNA2	**Neumayer--Watz**	72.20	160	*e*	P	02 12 37.0	+5.8
VNA2	**Neumayer--Watz**	72.20	160	*e*	P	02 12 45.3	+14
VNA2	**Neumayer--Watz**	72.20	160	⇑*i*P	P	02 12 31.3	+0.1
VNA2				*e*	pP	02 12 34.1	-0.2
VNA2				*e*		02 12 37.0	
VNA2				*e*		02 12 45.3	
OCWA	**Octopus Mounta**	72.21	351	PFAKE		02 12 40.0	+8.4
OCWA				LR	LR		
	comp=Z,2µm,21.0s,MS5.2						
DGMT	**Dagmar**	72.42	5	*e*P	P	02 12 33.2	+0.4
	comp=Z,84nm,1.1s,mb5.6						
RPW	**Rockport**	72.57	353	P	P	02 12 34.8	+1.1
PGC	**Sidney**	73.00	352	*e*P	P	02 12 36.3	+0.1
	comp=Z,76nm,1.0s,mb5.6						
SNAA	**Sanae**	73.25	162	*e*	P	02 12 42.8	+5.6
SNAA	**Sanae**	73.25	162	*e*	P	02 12 53.4	+16
SNAA	**Sanae**	73.25	162	⇑*i*P	P	02 12 37.1	-0.1
SNAA				*e*		02 12 42.8	
SNAA				*e*		02 12 53.4	
CPNY	**Central Park**	73.45	29	*e*P	P	02 12 39.3	+0.2
BINY	**Binghamton**	73.73	27	*e*P	P	02 12 41.2	+0.6
	comp=Z,56nm,1.1s,mb5.4						
BINY				LR	LR		
	comp=Z,2µm,21.0s,MS5.3						
EYMN	**Ely**	73.89	14	*e*P	P	02 12 40.3	-1.1
	comp=Z,38nm,1.1s,mb5.2						
DZM	**Mont Dzumac**	74.06	253	P	P	02 12 43.2	+0.3
	comp=Z,8.1nm,1.0s,mb4.6,baz=94,slow=12,SNR=4.5						
DRV	**Dumont d'Urvil**	75.09	203	P	P	02 12 54.0	+6.1
DRV				S	S	02 22 32.0	+7.2
ULM	**Lac du Bonnet**	75.23	11	P	P	02 12 48.6	-0.5
	comp=Z,9.9nm,0.8s,mb4.8,baz=213,slow=6.6,SNR=11						
ULM				LR	LR	02 42 30.2	
	comp=Z,891nm,19.0s,MS5.1,baz=215,slow=33						
ULM	**Lac du Bonnet**	75.23	11	P	P	02 12 47.2	-1.9
	comp=Z,32nm,1.2s,mb5.1						
ULM				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
ACCN	**Adirondack Com**	75.68	28	*e*P	P	02 12 52.1	+0.3
NCB	**Newcomb**	75.92	27	*e*P	P	02 12 53.0	-0.2
	comp=Z,171nm,1.8s,mb5.7						
EDM	**Edmonton**	76.85	359	*e*P	P	02 12 57.5	-0.7
BBB	**Bella Bella**	77.12	350	P	P	02 12 58.2	-1.4
	comp=Z,8.3nm,0.8s,mb4.7,baz=276,slow=5.7,SNR=3.5						
BBB	**Bella Bella**	77.12	350	P	P	02 12 58.2	-1.4
MAIT	**Maitri**	77.71	164	*e*P	P	02 13 03.2	+0.6
NVL	**N'lazarevskaya**	77.75	164	⇑*i*P	P	02 13 04.2	+1.4
NVL				*i*		02 13 16.2	
NVL				*e*		02 23 39.4	
NVL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
WVL	**Waterville**	78.38	29	PFAKE		02 13 20.0	+13
WVL				LR	LR		
	comp=Z,4µm,19.0s,MS5.7						
FFC	**Flin Flon**	78.82	6	*e*P	P	02 13 08.4	-0.6
FFC				pmax	pmax		
	comp=Z,57nm,1.6s,mb5.2						
FFC	**Flin Flon**	78.82	6	*e*P	P	02 13 08.4	-0.6
	comp=Z,57nm,1.6s,mb5.2						
EMMW	**East Machias**	79.49	31	*e*P	P	02 13 13.1	+0.3
	comp=Z,388nm,1.8s,mb6.0						
EMMW				LR	LR		
	comp=Z,4µm,22.0s,MS5.8						
MIDW	**Midway**	81.61	306	PFAKE		02 13 40.0	+16
MIDW				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
DLBC	**Dease Lake**	83.44	351	P	P	02 13 33.9	+0.6
	comp=Z,14nm,0.9s,mb5.0,baz=182,slow=4.9,SNR=16						
DLBC	**Dease Lake**	83.44	351	*e*P	P	02 13 33.9	+0.6
FCC	**Fort Churchill**	83.72	9	*e*P	P	02 13 33.8	-0.8
FCC				pmax	pmax		
	comp=Z,166nm,2.0s,mb5.8						
FCC	**Fort Churchill**	83.72	9	*e*P	P	02 13 33.8	-0.9
	comp=Z,166nm,2.0s,mb5.8						
CASY	**Casey**	84.48	196	P	P	02 13 39.0	+0.7
	comp=Z,8.7nm,0.6s,mb5.1						
HNR	**Honiara**	84.52	262	LR	LR	02 43 58.2	
	comp=Z,1µm,21.3s,MS5.3,baz=119,slow=30						
HNR	**Honiara**	84.52	262	PFAKE		02 13 50.0	+10
HNR				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
TOO	**Toolangi**	85.01	231	*e*P	P	02 13 43.1	+1.5
	comp=Z,15nm,1.4s,mb4.9						
TOO	**Toolangi**	85.01	231	*e*P	P	02 13 43.1	+1.5
TOO				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.9						
SYO	**Syowa Base**	85.03	170	⇓P	P	02 13 40.0	-0.9
SYO	**Syowa Base**	85.03	170	⇑PcP	PcP	02 13 43.0	-1.8
YKA	**Yellowknife Ar**	86.17	359	P	P	02 13 46.6	-0.2
	comp=Z,11nm,0.9s,mb5.1,baz=170,slow=4.5,SNR=29						
YKA				LR	LR	02 48 11.3	
	comp=Z,623nm,20.2s,MS5.0,baz=135,slow=33						
YKW3	**Yellowknife Ar**	86.24	359	*e*P	P	02 13 46.5	-0.6
SCHQ	**Schefferville**	87.46	24	P	P	02 13 54.2	+1.0
	comp=Z,4.3nm,0.8s,mb4.7,baz=209,slow=3.9,SNR=6.9						
SCHQ				LR	LR	02 50 08.9	
	comp=Z,842nm,21.0s,MS5.1,baz=225,slow=34						
SCHQ	**Schefferville**	87.46	24	*e*P	P	02 13 53.0	-0.3
	comp=Z,7.0nm,0.9s,mb4.9						
MAW	**Mawson**	88.64	178	LR	LR	02 50 57.3	
	comp=Z,3µm,18.4s,MS5.8,baz=180,slow=34						
DIV	**Divide**	89.09	344	*e*P	P	02 14 01.5	+0.6
	comp=Z,39nm,1.0s,mb5.7						
DIV				LR	LR		
	comp=Z,10µm,19.0s,MS6.2						
WAKE	**Wake Island**	90.19	291	PFAKE		02 14 20.0	+13
WAKE				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
FIB	**Fire Island**	90.27	343	PFAKE		02 14 20.0	+14
FIB				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
PMR	**Palmer**	90.34	343	*e*P	P	02 14 07.7	+1.0
STKA	**Stephens Creek**	90.48	235	P	P	02 14 08.2	+0.1
	comp=Z,8.0nm,1.2s,mb4.9,baz=126,slow=13,SNR=3.9						
STKA				LR	LR	02 49 00.9	
	comp=Z,927nm,20.3s,MS5.2,baz=5.8,slow=32						
STKA	**Stephens Creek**	90.48	235	P	P	02 14 07.1	-1.0
SPU	**Mount Spurr**	90.81	342	*e*P	P	02 14 10.4	+1.5
CTA	**Charters Tower**	92.18	247	P	P	02 14 17.9	+1.8
	comp=Z,4.3nm,0.9s,mb4.8,baz=15,slow=3.7,SNR=3.6						
CTA				LR	LR	02 48 17.1	
	comp=Z,1µm,21.9s,MS5.3,baz=318,slow=31						
ILAR	**Eielson Array**	92.48	346	P	P	02 14 16.6	+0.1
	comp=Z,0.7nm,0.8s,mb4.0,baz=173,slow=4.7,SNR=6.5						
ILAR				LR	LR	02 48 04.8	
	comp=Z,2µm,18.7s,MS5.5,baz=164,slow=30						
INK	**Inuvik**	93.35	352	*e*P	P	02 14 18.8	-1.6
INK				pmax	pmax		
	comp=Z,43nm,1.6s						
INK	**Inuvik**	93.35	352	P	P	02 14 20.6	+0.2
	comp=Z,7.3nm,1.1s,mb5.0,baz=161,slow=3.7,SNR=11						
INK	**Inuvik**	93.35	352	*e*P	P	02 14 18.8	-1.6
	comp=Z,43nm,1.6s,mb5.6						
PMG	**Port Moresby**	96.03	257	LR	LR	02 52 00.0	
	comp=Z,2µm,18.6s,MS5.6,baz=92,slow=32						
PMG	**Port Moresby**	96.03	257	PFAKE		02 14 50.0	+16
PMG				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
TNA	**Tin City**	98.86	340	PFAKE		02 15 00.0	+14
TNA				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
WRAB	**Tennant Creek**	102.08	242	PFAKE		02 15 10.0	+8.8
WRAB				LR	LR		
	comp=Z,618nm,19.0s,MS5.2						
GUMO	**Guam**	107.28	277	PFAKE		02 19 50.0	
GUMO				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
DBIC	**Dimbokro**	108.28	91	PFAKE		02 19 50.0	
DBIC				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
JMIC	**Jan Mayen**	116.81	21	*e*PP	PP	02 20 58.8	-3.3
JMIC				AMS	AMS	03 07 41.5	
	comp=Z,512nm,19.2s,MS5.2						
YSS	**Yuzh-Sakhalins**	117.35	312	*i* PKIKP	PKPdf	02 19 51.2	-2.1
YSS	**Yuzh-Sakhalins**	117.35	312	PFAKE		02 20 00.0	+6.7
YSS				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
KBS	**Kingsbay**	119.65	11	PFAKE		02 20 10.0	+13
KBS				LR	LR		
	comp=Z,966nm,21.0s,MS5.4						
KBS	**Kingsbay**	119.65	11	*e*PP	PP	02 21 19.4	-1.8
KBS				*e*		02 37 49.1	
KBS				AMS	AMS	03 08 55.5	
	comp=Z,491nm,19.8s,MS5.1						
TIXI	**Tiksi**	121.61	341	*i* PKIKP	PKPdf	02 19 54.5	-6.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BER	**Bergen**	123.96	32	*e*PP	PP	02 21 50.4	-1.0
BER				*e*SS	SS	02 38 35.0	-2.2
BER				AMS	AMS	03 13 55.9	
	comp=Z,386nm,17.7s,MS5.1						
YAK	**Yakutsk**	124.12	330	*i* PKIKP	PKPdf	02 20 05.2	-0.9
YAK				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.6						
KLR	**Kul'dur**	124.79	314	*e*PKIKP	PKPdf	02 20 02.2	-5.5
LSZ	**Lusaka**	124.89	131	PFAKE		02 20 20.0	+11
LSZ				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
TRO	**Tromso**	126.00	19	*e*PP	PP	02 21 58.8	-5.6
TRO				AMS	AMS	03 10 56.3	
	comp=Z,492nm,21.4s,MS5.2						
MDJ	**Mudanjiang**	126.44	309	PKP	PKPdf	02 20 09.1	-1.8
MDJ				XPKP		02 20 13.8	
MDJ				PP	PP	02 22 05.3	-2.3
MDJ				PS	PS	02 32 08.8	+1.9
MDJ				SS	SS	02 39 11.9	+3.1
MDJ				PP	PP		
	comp=Z,60nm,4.9s						
MDJ				LR	LR		
	comp=N,1µm,21.4s,MS5.7						
MDJ				LR	LR		
	comp=E,1µm,21.4s,MS5.7						
MDJ				LR	LR		
	comp=Z,2µm,20.7s,MS5.8						
MDJ	**Mudanjiang**	126.44	309	PFAKE		02 20 20.0	+9.1
MDJ				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
BNI	**Bardonecchia**	126.54	51	*e*PKIKP	PKPdf	02 20 10.8	-0.3
NB2	**NORSAR Subarra**	126.60	30	PKPdf	PKPdf	02 20 08.6	-2.1
	comp=Z,20nm,2.0s,baz=289,slow=1.9						
NB2	**NORSAR Subarra**	126.60	30	PKPd		02 20 08.6	
	baz=289,slow=1.9						
NOA	**NORSAR Array B**	126.60	30	PKP	PKPdf	02 20 08.2	-2.5
	comp=Z,0.4nm,0.8s,baz=135,slow=24,SNR=2.6						
TNS	**Taunus Mts**	127.35	44	*e*PKIKP	PKPdf	02 20 11.9	-0.7
BFO	**Black Forest**	127.48	47	*e*PKIKP	PKPdf	02 20 11.4	-1.5
FIN	**Finale Ligure**	127.66	52	PKIKP	PKPdf	02 20 12.9	-0.5
BSEG	**Bad Segeberg**	127.90	39	*e*PKIKP	PKPdf	02 20 12.5	-1.1
ARCES	**ARCESS Array B**	127.95	18	PKP	PKPdf	02 20 11.0	-2.3
	comp=Z,2.0nm,0.9s,baz=315,slow=6.9,SNR=3.7						
CLZ	**Clausthal**	128.32	42	*e*PKIKP	PKPdf	02 20 13.4	-1.0
GRA1	**Grafenberg Arr**	129.20	45	*e*PKPdf	PKPdf	02 20 14.8	-1.4
GRF	**Grafenberg Arr**	129.20	45	*e*PKIKP	PKPdf	02 20 14.8	-1.4
MOX	**Moxa**	129.30	43	*e*PKIKP	PKPdf	02 20 16.0	-0.3
MOX				*e*		02 22 23.0	
MOX				pmax	pmax		
	comp=Z,27nm,2.0s						
MOX				MLR	MLR		
	comp=Z,400nm,20.0s,MS5.1						
MOX	**Moxa**	129.30	43	*e*PKP	PKPdf	02 20 16.0	-0.3
MOX				*e*PP	PP	02 22 23.0	-3.6
MOX				*e*SS	SS	02 39 46.0	+1.5
MOX				LR	LR		
	comp=Z,400nm,20.0s,MS5.1						
MOX	**Moxa**	129.30	43	*i* P	PKPdf	02 20 16.0	-0.3
	comp=Z,logA/T=1.1						
MOX				PP	PP	02 22 23.0	-3.6
MOX				SS	SS	02 39 46.0	+1.5
MOX				L		03 09 10.0	
CN2	**Changchun**	129.45	308	*e*PKP	PKPdf	02 20 17.9	+1.1
CN2				PP	PP	02 22 31.4	+3.7
CN2				SS	SS	02 39 50.8	+4.3
CN2				LR	LR		
	comp=N,200nm,18.0s,MS5.4						
CN2				LR	LR		
	comp=E,700nm,18.0s,MS5.4						
CN2				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
FUR	**Furstenfeldbru**	129.45	46	*e*PKIKP	PKPdf	02 20 15.4	-1.3
NKC	**Novy Kostel**	129.89	44	*e*PKIKP	PKPdf	02 20 17.9	+0.4
NKC				MLR	MLR		
	comp=Z,700nm,22.0s,MS5.3						
NKC	**Novy Kostel**	129.89	44	*e*PKPDF	PKPdf	02 20 17.9	+0.4
NKC				*e*PKS	PKS	02 23 42.3	-7.4
NKC				*e*SKKS		02 29 31.0	
NKC				*e*SS	SS	02 39 58.2	+6.6
NKC				AMS	AMS	03 07 30.0	
	comp=Z,700nm,22.0s						
CLL	**Collm**	130.03	42	⇑*i*PKIKP	PKPdf	02 20 16.2	-1.5
CLL				pmax	pmax		
	comp=Z,14nm,1.3s						
CLL				MLR	MLR		
	comp=Z,600nm,22.3s,MS5.2						
CLL				MLR	MLR		
	comp=Z,500nm,16.0s						
CLL	**Collm**	130.03	42	⇑*i*PKP	PKPdf	02 20 16.2	-1.5
CLL				*i*		02 23 16.1	
CLL				*e*PKS	PKS	02 23 43.0	-6.9
CLL				LR	LR		
	comp=Z,600nm,22.3s,MS5.2						
CLL	**Collm**	130.03	42	*e*	PKPdf	02 20 12.0	-5.7
CLL				*i* PKIKP	PKPdf	02 20 16.2	-1.5
CLL				*e*PP	PP	02 22 28.0	-3.0
CLL				*i*		02 23 16.1	
CLL				*e*PKS	PKS	02 23 43.0	-6.9
CLL				*e*SS	SS	02 39 54.0	+0.7
CLL				*e*SSS	SSS	02 44 54.0	+11
SFI	**Santa Sofia**	130.30	52	PKIKP	PKPdf	02 20 17.7	-0.7
WET	**Wettzell**	130.36	45	*e*PKIKP	PKPdf	02 20 16.8	-1.6
BRG	**Berggiesshubel**	130.70	43	*e*PKIKP	PKPdf	02 20 19.0	0.0
BRG				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BRG				MLR	MLR		
	comp=N,354nm,25.1s,MS5.1						
BRG				MLR	MLR		
	comp=E,358nm,25.1s,MS5.1						
BRG				MLR	MLR		
	comp=Z,579nm,21.6s,MS5.2						
BRG	**Berggiesshubel**	130.70	43	*e*P	PKPdf	02 20 19.0	0.0
BRG				LR	LR		
	comp=Z,580nm,21.6s,MS5.2						
KHC	**Kasperske Hory**	130.81	45	*e*PKIKP	PKPdf	02 20 18.6	-0.7
KHC				*e*SS	SS	02 40 06.0	+3.3
KHC				MLR	MLR		
	comp=Z,700nm,24.9s,MS5.3						
KHC	**Kasperske Hory**	130.81	45	*e*PKPDF	PKPdf	02 20 18.6	-0.7
KHC				*e*PKS	PKS	02 23 47.6	-3.8
KHC				*e*SKKS		02 29 31.2	
KHC				*e*SS	SS	02 40 06.0	+3.3
KHC				AMS	AMS	03 05 50.0	
	comp=Z,700nm,24.9s						
GEC2	**GERESS Array S**	130.94	45	*e*PKIKP	PKPdf	02 20 18.0	-1.5
GERES	**GERESS Array B**	130.94	45	PKP	PKPdf	02 20 18.7	-0.8
	comp=Z,0.3nm,0.4s,baz=270,slow=1.3,SNR=12						
MNS	**Montasola**	131.02	54	PKIKP	PKPdf	02 20 13.8	-6.0
ARV	**Arcevia**	131.12	52	PKIKP	PKPdf	02 20 19.2	-0.8
PVCC	**Panska Ves**	131.16	43	*e*PKIKP	PKPdf	02 20 19.1	-0.8
PVCC				*e*SS	SS	02 40 10.1	+3.1
PVCC				MLR	MLR		
	comp=Z,500nm,21.3s,MS5.2						
PVCC	**Panska Ves**	131.16	43	*e*PKPDF	PKPdf	02 20 19.1	-0.8
PVCC				*e*PKS	PKS	02 23 50.4	-1.6
PVCC				*e*SKKS		02 29 39.5	
PVCC				*e*SS	SS	02 40 10.1	+3.1
PVCC				AMS	AMS	03 09 00.0	
	comp=Z,500nm,21.3s						
PRU	**Pruhonice**	131.26	44	*e*PKIKP	PKPdf	02 20 19.6	-0.5
PRU				*e*SS	SS	02 40 12.2	+3.9
PRU				MLR	MLR		
	comp=Z,700nm,22.5s,MS5.3						
PRU	**Pruhonice**	131.26	44	*e*PKPDF	PKPdf	02 20 19.6	-0.5
PRU				*e*PKS	PKS	02 23 48.6	-3.6
PRU				*e*SKKS		02 29 33.8	
PRU				*e*SS	SS	02 40 12.2	+3.9
PRU				AMS	AMS	03 07 40.0	
	comp=Z,700nm,22.5s						
PTQR	**Pietraquaria**	131.58	54	PKP	PKPdf	02 20 20.3	-0.6
UPC	**Upice**	132.07	43	*e*PKPDF	PKPdf	02 20 21.0	-0.6
KSP	**Ksiaz**	132.16	42	*e*PKIKP	PKPdf	02 20 20.8	-1.0
KSP				*e*SS	SS	02 40 21.0	+1.2
KSP	**Ksiaz**	132.16	42	*e*PKP	PKPdf	02 20 20.8	-1.0
KSP				*e*PKS	PKS	02 23 49.0	-4.8
KSP				*e*SS	SS	02 40 21.0	+1.2
KSP	**Ksiaz**	132.16	42	*e*PKP	PKPdf	02 20 21.7	-0.1
PDKS	**Podkum**	132.27	49	*e*PKPdf	PKPdf	02 20 20.7	-1.4
PDKS				*e*		02 20 38.8	
PDKS				*e*		02 22 52.3	
PDKS				*e*		02 23 48.4	
DPC	**Dobruska-Polom**	132.30	43	*e*PKIKP	PKPdf	02 20 21.9	-0.2
DPC				*e*SS	SS	02 40 21.9	+0.5
DPC				MLR	MLR		
	comp=Z,600nm,20.5s,MS5.3						
DPC	**Dobruska-Polom**	132.30	43	*e*PKPDF	PKPdf	02 20 21.9	-0.2
DPC				*e*PKS	PKS	02 23 53.2	-0.9
DPC				*e*SKKS		02 29 46.2	
DPC				*e*SS	SS	02 40 21.9	+0.5
DPC				AMS	AMS	03 10 30.0	
	comp=Z,600nm,20.5s						
GROS	**Grobnik**	132.55	48	*e*PKPdf	PKPdf	02 20 22.1	-0.6
DL2	**Dalian**	132.56	302	*e*PKP	PKPdf	02 20 18.8	-4.1
DL2				PP	PP		
	comp=Z,160nm,7.0s						
DL2				LR	LR		
	comp=N,340nm,21.0s,MS5.5						
DL2				LR	LR		
	comp=E,960nm,20.6s,MS5.5						

DL2				LR	LR		
	comp=Z,1µm,21.2s,MS5.6						
HIA	**Hailar**	**132.57**	**316**	PFAKE		02 20 30.0	+7.4
HIA				LR	LR		
	comp=Z,3µm,19.0s,MS6.1						
SSE	**Sheshan**	**132.71**	**291**	*e*PKP	PKPdf	02 20 24.0	+0.6
SSE				PP	PP	02 22 46.8	-1.9
SSE				PP	PP		
	comp=Z,90nm,7.3s						
SSE				LR	LR		
	comp=N,210nm,19.9s,MS5.5						
SSE				LR	LR		
	comp=E,980nm,19.9s,MS5.5						
SSE				LR	LR		
	comp=Z,1µm,20.5s,MS5.6						
SSE	**Sheshan**	**132.71**	**291**	*e*PKP	PKPdf	02 20 24.5	+1.1
SSE				PP	PP	02 22 46.7	-2.0
SSE				SS	SS	02 40 33.2	+6.3
SSE				LR	LR		
	comp=Z,1µm,20.5s,MS5.6						
FINES	**FINESS Array B**	**132.91**	**26**	PKP	PKPdf	02 20 22.1	-0.8
	comp=Z,6.1nm,1.2s,baz=236,slow=6.9,SNR=6.2						
MORC	**Moravsky Berou**	**133.20**	**43**	*e*PKIKP	PKPdf	02 20 22.9	-0.8
ZST	**Bratislava**	**133.29**	**46**	*e*PKP	PKPdf	02 20 22.9	-1.0
ZST				*e*		02 21 14.2	
ZST				*e*PP	PP	02 23 05.0	+13
OKC	**Ostrava-Krasne**	**133.56**	**43**	*e*PKIKP	PKPdf	02 20 24.1	-0.2
OKC				*e*SS	SS	02 40 42.4	+5.8
OKC				MLR	MLR		
	comp=Z,600nm,20.5s,MS5.3						
OKC	**Ostrava-Krasne**	**133.56**	**43**	*e*PKPDF	PKPdf	02 20 24.1	-0.2
OKC				*e*PKS	PKS	02 23 55.4	-1.1
OKC				*e*SKKS		02 29 54.4	
OKC				*e*SS	SS	02 40 42.4	+5.8
OKC				AMS	AMS	03 11 30.0	
	comp=Z,600nm,20.5s						
VYHS	**Vyhne**	**134.34**	**45**	*e*PKP	PKPdf	02 20 25.2	-0.6
OJC	**Ojcow**	**134.48**	**42**	*e*PKP	PKPdf	02 20 24.9	-1.2
NJ2	**Nanjing**	**134.76**	**292**	*e*PKP	PKPdf	02 20 22.6	-4.6
NJ2				PP	PP	02 23 01.0	-1.0
NJ2				PKS	PKS	02 23 56.0	-3.2
NJ2				SKKS		02 29 49.0	
NJ2				PP	PP		
	comp=Z,240nm,6.4s						
NJ2				LR	LR		
	comp=N,3µm,31.8s						
NJ2				LR	LR		
	comp=E,2µm,25.4s						
NJ2				LR	LR		
	comp=Z,290nm,27.4s,MS4.9						
VSU	**Vasula**	**134.80**	**29**	*i* PKIKP	PKPdf	02 20 23.3	-3.2
NIE	**Niedzica**	**135.03**	**43**	*e*PKP	PKPdf	02 20 26.6	-0.6
PSZ	**Piszkesteto**	**135.17**	**45**	*e*P	PKPdf	02 20 26.1	-1.4
CIT	**Chita**	**135.53**	**321**	*e*PKIKP	PKPdf	02 20 28.2	+0.2
KOLS	**Kolonicke sedl**	**136.41**	**43**	*e*PKP	PKPdf	02 20 30.9	+1.3
KWP	**Kalwaria**	**136.45**	**42**	*e*PKP	PKPdf	02 20 29.8	+0.1
LVV	**L'vov**	**137.20**	**41**	*i* PKIKP	PKPdf	02 20 30.3	-0.7
LVV				*e*		02 23 19.1	
LVV				*e*PPP	PPP	02 26 17.7	+0.5
LVV				*e*		02 27 31.3	
LVV				*e*		02 33 29.3	
LVV				MLR	MLR		
	comp=Z,390nm,22.0s,MS5.1						
LVV				MLR	MLR		
	comp=N,180nm,23.0s,MS5.0						
LVV				MLR	MLR		
	comp=E,240nm,23.0s,MS5.0						
SKO	**Skopje**	**137.53**	**53**	*e*PKP	PKPdf	02 20 30.5	-1.4
AKASG	**Malin Array Be**	**139.89**	**38**	PKP	PKPdf	02 20 34.5	-1.5
	comp=E,3.7nm,0.8s,baz=289,slow=2.4,SNR=18						
AKASG				PP	PP	02 23 34.3	+1.1
	comp=E,0.3nm,0.5s,baz=307,slow=4.6,SNR=5.0						
IRK	**Irkutsk**	**140.55**	**325**	*e*PKIKP	PKPdf	02 20 35.1	-2.0
IRK				pmax	pmax		
	comp=Z,62nm,2.9s						
QIZ	**Qiongzhong**	**140.91**	**271**	PFAKE		02 20 50.0	+11
QIZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
ULN	**Ulaanbaatar**	**141.00**	**318**	*i* PKIKP	PKPdf	02 20 36.9	-1.1
ULN	**Ulaanbaatar**	**141.00**	**318**	*e*PKPpre		02 20 32.8	
ULN				*i* PKPr		02 20 36.9	
ULN				LR	LR		
	comp=Z,3µm,22.0s,MS6.0						
IDI	**Anoyia**	**141.09**	**63**	PKP	PKPdf	02 20 34.7	-3.9
	comp=Z,4.7nm,1.1s,baz=307,slow=6.6,SNR=3.3						
OBN	**Obninsk**	**141.14**	**29**	*i* PKIKP	PKPdf	02 20 37.3	-0.7
OBN				*e*SS	SS	02 42 02.4	-3.7
OBN				pmax	pmax		
	comp=Z,39nm,1.4s						
OBN				MLR	MLR		
	comp=Z,500nm,18.0s,MS5.3						
OBN	**Obninsk**	**141.14**	**29**	*e*PKPdf	PKPdf	02 20 36.9	-1.2
OBN				LR	LR		
	comp=Z,183nm,21.0s,MS4.8						
MOS	**Moscow**	**141.18**	**27**	*e*PKIKP	PKPdf	02 20 38.6	+0.5
MOS				*e*		02 23 37.2	
MOS				pmax	pmax		
	comp=Z,50nm,1.5s						
TLY	**Talaya**	**141.18**	**325**	*e*PKIKP	PKPdf	02 20 38.3	+0.1
TLY				*e*SS	SS	02 42 05.7	-1.0
TLY				pmax	pmax		
	comp=Z,16nm,1.1s						
TLY	**Talaya**	**141.18**	**325**	*i* PKPr		02 20 38.1	
TLY				LR	LR		
	comp=Z,359nm,20.0s,MS5.1						
KIS	**Kishinev**	**141.20**	**44**	*e*PKIKP	PKPdf	02 20 34.0	-4.4
KIS				*e*		02 27 40.0	
BTO	**Baotou**	**141.22**	**306**	*e*PKP	PKPdf	02 20 37.8	-0.9
SONM	**Songino Array**	**141.42**	**318**	PKhKP		02 20 30.9	
	comp=Z,1.7nm,0.8s,baz=89,slow=2.2,SNR=12						
SONM				PKP	PKPdf	02 20 37.1	-1.7
	comp=Z,6.8nm,1.2s,baz=78,slow=2.0,SNR=15						
ZAK	**Zakamensk**	**142.05**	**323**	*e*PKHKP		02 20 33.4	
ZAK				*e*		02 23 41.1	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.8s						
ENH	**Enshi**	**142.74**	**289**	PFAKE		02 20 50.0	+8.4
ENH				LR	LR		
	comp=Z,754nm,22.0s,MS5.4						
XAN	**Xi'an**	**143.07**	**295**	PKP	PKPdf	02 20 38.0	-4.0
PECR	**Pechory**	**143.23**	**22**	*e*PKIKP	PKPdf	02 20 38.0	-3.5
PECR				pmax	pmax		
	comp=Z,800nm,1.7s						
KULM	**Kulim**	**143.56**	**245**	*e*PKPpre		02 20 38.8	
ULDT	**Uludag**	**143.60**	**54**	*i* P	PKPbc	02 20 37.5	-0.8
GDZ	**Gediz**	**144.11**	**56**	*i* P	PKPbc	02 20 40.7	+0.7
GDZ	**Gediz**	**144.11**	**56**	*i* P	PKPbc	02 20 40.7	+0.7
VOR	**Voronezh**	**144.53**	**31**	*e*PKIKP	PKPdf	02 20 42.0	-2.0
VOR				pmax	pmax		
	comp=Z,140nm,2.0s						
VOR				pmax	pmax		
	comp=E,50nm,1.8s						
GOLH	**Golhisar**	**144.56**	**59**	*i* P	PKPbc	02 20 43.0	+1.7
GOLH	**Golhisar**	**144.56**	**59**	*i* P	PKPbc	02 20 43.0	+1.7
HENT	**Hendek**	**144.71**	**53**	*i* P	PKPbc	02 20 43.2	+1.6
HENT	**Hendek**	**144.71**	**53**	*i* P	PKPbc	02 20 43.2	+1.6
AKAS	**Kas**	**144.77**	**61**	*i* P	PKPbc	02 20 42.6	+0.8
TKTP	**Tekketepe**	**144.99**	**57**	*i* P	PKPbc	02 20 44.4	+2.0
ESKT	**Eskisehir**	**145.04**	**55**	*i* P	PKPbc	02 20 43.3	+0.8
GYA	**Guiyang**	**145.06**	**282**	⇑*i*PKP	PKPdf	02 20 44.4	-1.3
GYA				SKKS		02 30 50.8	
GYA				PP	PP		
	comp=Z,300nm,6.9s						
GYA				LR	LR		
	comp=N,690nm,22.2s,MS5.7						
GYA				LR	LR		
	comp=E,1µm,21.9s,MS5.7						
GYA				LR	LR		
	comp=Z,1µm,25.5s,MS5.5						
ISP	**Isparta**	**145.18**	**58**	*e*PKIKP	PKPdf	02 20 45.3	-0.3
SIM	**Simferopol'**	**145.41**	**44***c*	*i*PKIKP	PKPdf	02 20 45.0	-0.7
SIM				*e*		02 20 51.0	
SIM				pmax	pmax		
	comp=Z,55nm,1.0s						
SGKT	**Sivrigoynuk**	**145.63**	**52**	*i* P	PKPbc	02 20 42.7	-1.2
KDHN	**Kadinhani**	**146.25**	**56**	*i* P	PKPbc	02 20 47.6	+2.1
KDHN	**Kadinhani**	**146.25**	**56**	*i* P	PKPbc	02 20 47.6	+2.1
BALT	**Daday**	**146.26**	**50**	*i* P	PKPbc	02 20 46.9	+1.5
KKTK	**Khon Kaen**	**146.56**	**263**	P	PKPbc	02 20 49.0	+2.2
ELDT	**Eldivan**	**146.65**	**52**	*i* P	PKPbc	02 20 48.8	+2.4
SVE	**Sverdlovsk**	**146.72**	**7**	*e*PKP2	PKPab	02 20 47.0	-2.5
SVE				pmax	pmax		
	comp=Z,180nm,2.3s						
ARU	**Arti**	**146.82**	**10**	*i* PKP2	PKPab	02 20 48.5	-1.4
ARU				*e*		02 24 13.3	
ARU				*e*SS	SS	02 43 07.5	-3.8
ARU				MLR	MLR		
	comp=N,800nm,20.0s,MS5.5						
ARU				MLR	MLR		
	comp=Z,800nm,20.0s,MS5.5						
ARU				MLR	MLR		
	comp=E,300nm,22.0s,MS5.5						
ARU	**Arti**	**146.82**	**10**	*e*PKPdf	PKPdf	02 20 46.0	-1.8
ARU				LR	LR		
	comp=Z,231nm,21.0s,MS4.9						
LZH	**Lanzhou**	**146.91**	**300**	⇓PKP	PKPdf	02 20 48.5	-0.1
LZH				APKP		02 20 51.8	
LZH				XPKP		02 20 53.1	
LZH				*e*PP	PP	02 24 20.5	+4.7
LZH				SKKS		02 31 04.5	
LZH				SS	SS	02 43 14.6	+1.6
LZH				PP	PP		
	comp=Z,310nm,8.5s						
LZH				LR	LR		
	comp=N,460nm,18.0s						
LZH				LR	LR		
	comp=Z,750nm,20.0s,MS5.5						
LZH	**Lanzhou**	**146.91**	**300**	⇓PKIKP	PKPdf	02 20 48.5	-0.1
LZH						02 20 51.7	
LZH						02 20 53.1	
LZH				*e*		02 24 20.5	
LZH				SS	SS	02 43 14.6	+1.6
LZH				MLR	MLR		
	comp=Z,760nm,20.0s,MS5.5						
LZH	**Lanzhou**	**146.91**	**300**	⇓PKP	PKPdf	02 20 48.5	-0.1
LZH				pPKP		02 20 51.7	
LZH				sPKP		02 20 53.1	
LZH				*e*PP	PP	02 24 20.5	+4.7
LZH				SKKS		02 31 04.5	
LZH				SS	SS	02 43 14.6	+1.6
LZH				LR	LR		
	comp=Z,760nm,20.0s,MS5.5						
BR131	**Keskin Array S**	**147.04**	**53**	*e*PKPbc	PKPdf	02 20 49.3	+0.6
BRTR	**Keskin Array B**	**147.04**	**53**	PKPbc	PKPdf	02 20 49.4	+0.7
	comp=Z,18nm,1.1s,baz=255,slow=1.2,SNR=34						
NVS	**Novosibirsk**	**147.14**	**344**	⇑*i*PKHKP		02 20 45.0	
NVS				pmax	pmax		
	comp=Z,80nm,1.7s						
NVS				pmax	pmax		
	comp=N,43nm,2.0s						
NVS				pmax	pmax		
	comp=E,27nm,1.6s						
ERMK	**Ermenek**	**147.31**	**59**	*i* P	PKPdf	02 20 50.3	+1.1
BOYT	**Boyabat**	**147.37**	**50**	*i* P	PKPdf	02 20 50.5	+1.4
ZAL	**Zalesovo**	**147.52**	**342**	PKPbc	PKPdf	02 20 48.6	-0.4
	comp=E,7.4nm,0.7s,baz=74,slow=4.4,SNR=33						
ANN	**Anapa**	**147.57**	**43**	*i* PKP2	PKPab	02 20 50.8	-2.4
ANN				*e*		02 27 54.9	
ANN				pmax	pmax		
	comp=Z,557nm,7.0s						
ANN				MLR	MLR		
	comp=N,717nm,19.0s,MS5.6						
ANN				MLR	MLR		
	comp=E,520nm,19.0s,MS5.6						
ANN				MLR	MLR		
	comp=Z,467nm,19.0s,MS5.3						
CDAG	**Cicekdag**	**147.61**	**53**	*i* P	PKPdf	02 20 51.0	+1.4
CD2	**Chengdu**	**147.66**	**290**	*e*PKP	PKPdf	02 20 52.8	+2.9
CSS	**Prodhromos**	**147.99**	**62**	*e*PKPbc	PKPdf	02 20 52.7	+2.4
AVNT	**Avonos**	**148.23**	**54**	*i* P	PKPdf	02 20 52.2	+1.6
MEST	**Erdemli**	**148.29**	**59**	*i* P	PKPdf	02 20 54.1	+3.3
KMI	**Kunming**	**148.47**	**279**	PKHKP		02 20 50.2	
KMI						02 24 29.0	
KMI				PPP	PPP	02 27 46.6	+0.7
KMI				SS	SS	02 43 32.4	+1.8
KMI				SSS	SSS	02 49 06.6	-0.7
KMI				MLR	MLR		
	comp=Z,1µm,19.9s,MS5.7						
KMI	**Kunming**	**148.47**	**279**	PKP	PKPdf	02 20 50.2	-1.2
KMI				sPKP		02 21 05.8	
KMI				PP	PP	02 24 29.0	+4.0
KMI				PPP	PPP	02 27 46.6	+0.7
KMI				SKKS		02 31 18.8	
KMI				SS	SS	02 43 32.4	+1.8
KMI				SSS	SSS	02 49 06.6	-0.7
KMI				LR	LR		
	comp=Z,1µm,19.9s,MS5.7						
GTA	**Gaotai**	**149.08**	**307**	PKP	PKPdf	02 20 55.3	+3.3
GTA				PKP2	PKPab	02 21 04.5	+5.0
GTA				PKS	PKS	02 24 28.8	+6.2
GTA				PP	PP	02 24 33.0	+5.3
GTA				PPP	PPP	02 27 54.5	+4.7
GTA				SKS	SKS	02 27 57.6	-1.8
GTA				SKKS		02 31 19.1	
GTA				PP	PP		
	comp=Z,210nm,14.4s						
GTA				LR	LR		
	comp=N,660nm,24.7s,MS5.7						
GTA				LR	LR		
	comp=E,1µm,23.6s,MS5.7						
GTA				LR	LR		
	comp=Z,2µm,25.9s,MS5.8						
NANT	**Nan**	**149.21**	**267**	⇓P	PKPdf	02 20 54.0	+1.3
	comp=Z,188nm,1.0s						
SVST	**Sivas**	**149.43**	**52**	*i* P	PKPdf	02 20 56.7	+4.2
SOC	**Sochi**	**149.60**	**43***c*	*i*PKP2	PKPab	02 20 55.9	-5.6
SOC				*e*		02 24 28.1	
SOC				pmax	pmax		
	comp=Z,27nm,1.1s						
SOC				pmax	pmax		
	comp=N,16nm,0.9s						
SOC				pmax	pmax		
	comp=E,8.0nm,0.7s						
EIL	**Elat**	**149.98**	**72**	*e*PKPbc	PKPdf	02 20 57.8	+4.1
HAQS	**Haql**	**149.99**	**73**	P	PKPdf	02 20 58.7	+5.0
ALWS	**Ilw as Safayha**	**150.09**	**73**	P	PKPdf	02 20 58.7	+4.8
JMOS	**Jabal al Moall**	**150.14**	**73**	P	PKPdf	02 20 58.5	+4.5
BDAS	**Al Bad'**	**150.15**	**74**	P	PKPdf	02 20 59.5	+5.5
AYUS	**'Aynunah**	**150.30**	**75**	P	PKPdf	02 20 59.3	+5.1
GZT	**Gaziantep**	**150.71**	**56**	*i* P	PKPdf	02 20 58.8	+4.2
CMAR	**Chiang Mai Arr**	**150.72**	**265**	PKPbc	PKPdf	02 21 00.0	+4.9
	comp=E,21nm,1.0s,baz=94,slow=0.4,SNR=33						
GOF	**Gofitskoye**	**150.74**	**38**	⇓*i*PKIKP	PKPdf	02 20 51.0	-3.3
GOF				pmax	pmax		
	comp=Z,33nm,1.3s						
BVA0	**Borovoye Array**	**150.91**	**357**	*i* PKIKP	PKPdf	02 20 53.5	-0.8
BVA0				pmax	pmax		
	comp=Z,16nm,1.5s						
BVAR	**Borovoye Array**	**150.91**	**357**	PKP	PKPdf	02 20 54.0	-0.3
	comp=Z,3.0nm,0.8s,baz=180,slow=1.5,SNR=12						
BVAR				PKPbc	PKPdf	02 20 59.4	+5.1
	comp=Z,16nm,0.9s,slow=1.4,SNR=35						
MALT	**Malatya**	**151.03**	**53**	*e*PKIKP	PKPdf	02 20 54.2	-0.8
MALT				*e*		02 21 00.2	
ZRNK	**Zerenda**	**151.03**	**359**	PKIKP	PKPdf	02 20 51.8	-2.7
ZRNK				pmax	pmax		
	comp=Z,90nm,1.3s						
VOSK	**Vostochnaya**	**151.18**	**356**	PKIKP	PKPdf	02 20 53.5	-1.3
VOSK				pmax	pmax		
	comp=Z,138nm,1.8s						
KIV	**Kislovodsk**	**151.19**	**40**	*e*PKIKP	PKPdf	02 20 54.1	-1.0
KIV				*i*		02 21 00.2	
KIV				*e*		02 24 38.0	
KIV				*e*SS	SS	02 43 59.7	-0.3
KIV				pmax	pmax		
	comp=Z,23nm,1.2s						
KIV				pmax	pmax		
	comp=E,6.0nm,0.8s						
KIV	**Kislovodsk**	**151.19**	**40**	*e*PKPbc	PKPdf	02 21 00.2	+5.2
ASF	**Jabal al Asfar**	**151.39**	**66**	PKP	PKPdf	02 20 56.0	+0.2
	comp=E,1.1nm,0.4s,baz=49,slow=1.8,SNR=8.6						
ASF				PKPbc	PKPdf	02 21 01.8	+6.1
	comp=E,9.8nm,0.8s,baz=297,slow=4.5,SNR=10.0						
QURS	**Qurayyt al Mil**	**151.86**	**68**	P	PKPdf	02 20 57.7	+1.2
ONI	**Oni**	**152.44**	**42**	P	PKPdf	02 20 57.0	+0.1
TI2	**Plekhanov**	**153.72**	**42**	*e*PKIKP	PKPdf	02 20 52.0	-6.7
AB31	**Akbulak array**	**153.95**	**12**	*i* PKIKP	PKPdf	02 20 58.2	-0.6
AB31				pmax	pmax		
	comp=Z,24nm,1.0s						
WMQ	**Urumqi**	**154.45**	**326**	PKP	PKPdf	02 20 59.1	-0.6
WMQ				SS	SS	02 44 39.3	+3.5
WMQ				PP	PP		
	comp=Z,350nm,6.0s						
WMQ				LR	LR		
	comp=N,990nm,19.2s,MS5.8						
WMQ				LR	LR		
	comp=E,910nm,22.0s,MS5.8						
WMQ				LR	LR		
	comp=Z,1µm,23.2s,MS5.7						
MKAR	**Makanchi Array**	**154.50**	**337**	PKP	PKPdf	02 20 58.5	-1.1
	comp=Z,1.0nm,0.9s,baz=90,slow=2.4,SNR=6.2						
MKAR				PKPbc	PKPdf	02 21 06.6	+7.0
	comp=Z,3.7nm,0.8s,baz=10,slow=1.6,SNR=17						
MKAR	**Makanchi Array**	**154.50**	**337**	PKP	PKPdf	02 20 58.5	-1.2
MKAR				PKPbc	PKPdf	02 21 06.6	+6.9
MAK	**Makhachkala**	**154.56**	**37**	*e*PKIKP	PKPdf	02 21 02.0	+2.2
GNI	**Garni**	**154.59**	**45**	PKP	PKPdf	02 21 01.1	+1.1
	comp=Z,2.4nm,0.4s,baz=178,slow=17,SNR=5.1						
GNI				PKPbc	PKPdf	02 21 07.8	+7.8
	comp=Z,2.4nm,0.3s,baz=216,slow=10,SNR=4.1						
GNI				PKPab	PKPab	02 21 22.7	+0.1
	comp=Z,1.8nm,0.3s,baz=356,slow=18,SNR=4.8						
GNI	**Garni**	**154.59**	**45**	PKP	PKPdf	02 21 01.1	+1.1
GNI				PKPbc	PKPdf	02 21 07.8	+7.8
GNI				PKPab	PKPab	02 21 22.7	+0.1
HILS	**Ha'il**	**156.10**	**76**	P	PKPdf	02 21 03.2	+0.8
DJNS	**Zahran al Janu**	**156.28**	**101**	P	PKPdf	02 21 04.9	+2.1
AFFS	**'Afif**	**157.11**	**85**	P	PKPdf	02 21 04.2	+0.4
LSA	**Lhasa**	**158.62**	**291**	PFAKE		02 21 20.0	+14
LSA				LR	LR		
	comp=Z,233nm,20.0s,MS5.0						
FRU	**Bishkek**	**160.40**	**345**	*e*PKIKP	PKPdf	02 21 07.5	+0.4
FRU				*e*		02 25 33.5	
FRU				pmax	pmax		
	comp=Z,120nm,2.5s						
AAK	**Ala-Archa**	**160.62**	**346**	PKIKP	PKPdf	02 21 06.4	-0.9
AAK				pmax	pmax		
	comp=Z,21nm,1.6s						
AAK	**Ala-Archa**	**160.62**	**346**	PFAKE		02 21 20.0	+13
AAK				LR	LR		
	comp=Z,480nm,20.0s						

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*IDC **19** 02:09:27.8±1.3, 7.58N×93.24E, mb4.0/9, mb1 4.2/9, mb1mx4.0/19, mbtmp4.0/9, MS2.8/1, Ms1 3.0/1, ms1mx2.7/30, Error ellipse: s-maj=50.0km s-min=18.9km az=54.0*

*NEIC **19** 02:09:32.5±1.7, 7.43N×93.08E, h36^{km}±16^{km}, mb4.5/6, Error ellipse: s-maj=11.0km s-min=8.9km az=185.0*

ISC 19 02:09:29.4±7.2**, 7.4N**±0.1×**93.03E**±0.08**, h29^{km}**±51^{km}**, n23, $\sigma 0^{s}93$**/22**, mb4.2**/15**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**12.23**	**270**	*e*Sn	**S**	**02 14 40.1**	**-1.0**
CMAR	**Chiang Mai Arr**	**12.42**	**27**	Pn	**P**	**02 12 26.2**	**-1.1**
	0.6nm,0.3s,baz=211,slow=15,SNR=18						
CMAR				LR	LR	02 17 25.3	
	comp=Z,44nm,19.1s,baz=140,slow=39						
PKI	**Pulchoki**	**21.34**	**341**	*e*P	**P**	**02 14 17.5**	**+1.0**
	20nm,0.6s,mb4.6						
GUN	**Gumba**	**21.51**	**343**	*e*P	**P**	**02 14 19.8**	**+1.5**
	36nm,0.6s,mb5.0						
KKN	**Kakani**	**21.58**	**341**	*e*P	**P**	**02 14 19.3**	**+0.3**
GKN	**Gorkha**	**21.99**	**340**	*e*P	**P**	**02 14 24.3**	**+1.2**
	71nm,1.2s,mb5.0						
KOLN	**Koldanda**	**22.15**	**337**	*e*P	**P**	**02 14 25.6**	**+0.9**
	16nm,0.8s,mb4.5						
LSA	**Lhasa**	**22.27**	**356**	*e*P	**P**	**02 14 25.1**	**-0.7**
MKAR	**Makanchi Array**	**40.33**	**349**	P	**P**	**02 17 05.5**	**-0.7**
	1.6nm,0.5s,mb4.0,baz=168,slow=8.1,SNR=17						
FITZ	**Fitzroy Crossi**	**40.96**	**129**	P	**P**	**02 17 11.1**	**-0.4**
	1.2nm,0.3s,mb4.0,baz=177,slow=13,SNR=5.6						
SONM	**Songino Array**	**41.88**	**13**	P	**P**	**02 17 16.8**	**-2.0**
	1.3nm,1.0s,mb3.5,baz=188,slow=8.7,SNR=8.1						
SONM				PcP	PcP	02 19 15.7	+0.8
	0.5nm,0.5s,baz=206,slow=4.1,SNR=4.8						
ZAL	**Zalesovo**	**46.89**	**353**	P	**P**	**02 17 58.9**	**-0.2**
	2.5nm,0.5s,mb4.4,baz=288,slow=5.6,SNR=7.2						
WRA	**Warramunga Arr**	**48.88**	**124**	P	**P**	**02 18 15.7**	**+0.7**
	1.7nm,0.5s,mb4.3,baz=304,slow=8.9,SNR=23						
WRAB	**Tennant Creek**	**48.89**	**124**	*e*P	**P**	**02 18 15.6**	**+0.5**
	2.9nm,0.4s,mb4.7						
ZRNK	**Zerenda**	**49.47**	**341**	*e*P	**P**	**02 18 18.6**	**-0.5**
	1.0nm,0.7s,mb4.0						
MJAR	**Matsushiro Arr**	**50.30**	**48**	P	**P**	**02 18 25.0**	**-0.8**
	0.9nm,0.5s,mb4.0,baz=233,slow=6.8,SNR=6.7						
MJAR				PcP	PcP	02 19 44.6	+0.1
	1.2nm,0.7s,baz=236,slow=5.1,SNR=6.1						
FINES	**FINESS Array B**	**72.63**	**332**	P	**P**	**02 20 56.7**	**+0.6**
	2.2nm,0.9s,mb4.1,baz=90,slow=5.7,SNR=5.2						
FINES	**FINESS Array B**	**72.63**	**332**	P	**P**	**02 20 56.7**	**+0.6**
ARCES	**ARCESS Array B**	**75.35**	**340**	P	**P**	**02 21 12.5**	**+0.8**
	0.6nm,0.4s,mb3.9,baz=103,slow=6.9,SNR=9.1						
ARCES	**ARCESS Array B**	**75.35**	**340**	P	**P**	**02 21 12.5**	**+0.8**
NB2	**NORSAR Subarra**	**79.61**	**331**	P	**P**	**02 21 34.0**	**-1.4**
	0.6nm,0.6s,mb3.7,baz=91,slow=5.0						
NOA	**NORSAR Array B**	**79.61**	**331**	P	**P**	**02 21 36.0**	**+0.6**
	0.5nm,0.6s,mb3.6,baz=95,slow=4.9,SNR=3.5						

IDC 19 02:27:35.6±2.2**, 7.50N**×**93.80E, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/18**, mbtmp3.7**/4**, Error ellipse: s-maj=84.7km s-min=28.4km az=58.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**41.60**	**13**	P	P	02 35 25.2	-1.7
	0.2nm,0.4s,baz=202,slow=7.8,SNR=2.2						
ZAL	**Zalesovo**	**46.87**	**353**	P	P	02 36 07.8	-1.5
	1.7nm,0.3s,baz=54,slow=1.8,SNR=4.5						
WRA	**Warramunga Arr**	**48.33**	**125**	P	P	02 36 19.2	-2.0
	0.4nm,0.5s,baz=305,slow=8.5,SNR=10.0						
FINES	**FINESS Array B**	**72.88**	**332**	P	P	02 39 06.1	-2.0
	0.8nm,0.8s,baz=90,slow=5.6,SNR=5.6						

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*NAO **19** 02:38:56.1±1.2, 67.70N×33.64E, ML2.5*

*CSEM **19** 02:38:57.5±0.5, 67.74N×32.85E, h2^{km}, ML2.5, Error ellipse: s-maj=12.3km s-min=7.4km az=75.0, Suspected Mining explosion.*

*UPP **19** 02:38:58.8, 67.64N×32.93E, ML2.2, Suspected Mining explosion.*

HEL 19 02:38:54.8±0.4**, 67.70N**×**33.80E, ML2.5, ML2.2**(UPP)**, ML2.6**(BER)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.32**	**253**	*i* P	Pg	02 39 00.5	-0.7
APA0				*i* S	Sg	02 39 04.6	-0.9
APA0				*e*RG		02 39 06.8	
APA0	**Apatity Array**	**0.32**	**253**	P	Pg	02 39 00.5	-0.7
	baz=86,slow=18						
APA0				S	Sg	02 39 04.6	-0.9
	baz=86,slow=56						
APA0				Rg		02 39 06.8	
KU4	**Liikasenvaara**	**2.13**	**233**	*e*P	Pn	02 39 32.0	-0.1
KU4				*e*S	Sn	02 39 58.0	-1.5
MSF	**Maaselka**	**2.60**	**229**	*e*P	Pn	02 39 38.7	-0.1
MSF				*e*S	Sn	02 40 10.3	-1.2
MSF				MSG		02 40 17.9	
	comp=Z,27nm,0.2s						
MSF	**Maaselka**	**2.60**	**229**	P	Pn	02 39 38.7	-0.1
MSF				S	Sn	02 40 10.3	-1.3
	comp=Z,27nm,0.2s						
SGF	**Sodankyl**	**2.80**	**268**	*e*P	Pn	02 39 40.4	-1.3
SGF				*e*S	Sn	02 40 14.4	-2.2
SGF				MSG		02 40 20.0	
	comp=Z,14nm,0.2s						
SGF	**Sodankyl**	**2.80**	**268**	P	Pn	02 39 40.3	-1.3
SGF				S	Sn	02 40 14.4	-2.2
	comp=Z,14nm,0.2s						
KEV	**Kevo**	**3.22**	**313**	*e*P	Pn	02 39 47.4	-0.2
KEV				*e*S	Sn	02 40 25.5	-1.9
KEV	**Kevo**	**3.22**	**313**	P	Pn	02 39 47.4	-0.3
KEV				S	Sn	02 40 25.4	-1.9
ARA0	**ARCESS Array S**	**3.55**	**305**	*e*P	Pn	02 39 51.3	-1.0
ARA0				*e*PG	Pg	02 39 59.8	-5.9
ARA0				*e*S	Sn	02 40 32.6	-3.1
ARA0				*e*SG		02 40 44.5	
ARA0	**ARCESS Array S**	**3.55**	**305**	Pn	Pn	02 39 51.3	-1.0
	baz=123,slow=14						
ARA0				Pg	Pg	02 39 59.8	-5.9
	baz=117,slow=16						
ARA0				Sn	Sn	02 40 32.6	-3.1
	baz=128,slow=28						
ARA0				Lg		02 40 44.5	
	baz=122,slow=28						
ARA0	**ARCESS Array S**	**3.55**	**305**	P	Pn	02 39 51.3	-1.0

ARA0				S	Sn	02 40 32.5	-3.2
OUL	**Oulu**	**4.12**	**234**	*e*P	Pn	02 39 59.1	-1.3
OUL				*e*SG	Sg	02 41 02.2	-10
OUL				MSG		02 41 05.6	
	comp=Z,13nm,0.2s						
OUL	**Oulu**	**4.12**	**234**	P	Pn	02 39 59.1	-1.3
OUL				Sg	Sg	02 41 02.2	-10
	comp=Z,13nm,0.2s						
PAJU	**Pajala**	**4.18**	**266**	*e*P	Pn	02 39 58.8	-2.6
KJN	**Kajaani**	**4.40**	**217**	*e*P	Pn	02 40 03.0	-1.5
KJN				*e*S	Sn	02 40 52.9	-4.3
KJN				*e*SG	Sg	02 41 09.8	-12
KJN				MSG		02 41 14.4	
	comp=Z,9.6nm,0.3s						
KJN	**Kajaani**	**4.40**	**217**	P	Pn	02 40 02.9	-1.5
KJN				S	Sn	02 40 52.9	-4.3
KJN				Sg	Sg	02 41 09.8	-12
	comp=Z,9.6nm,0.3s						
MASU	**Masugnsbyn**	**4.53**	**272**	*e*P	Pn	02 40 03.4	-2.8
ERTU	**Ertsjaerv**	**4.67**	**261**	*e*P	Pn	02 40 05.5	-2.8
KUA	**Kurravaara**	**5.11**	**279**	*e*P	Pn	02 40 11.3	-3.0
DUNU	**Dundret**	**5.13**	**270**	*e*P	Pn	02 40 11.6	-3.1
DUNU				*e*S	Sn	02 41 06.9	-8.7
TRO	**Tromso**	**5.76**	**296**	*e*P	Pn	02 40 20.3	-3.3
TRO				*e*S	Sn	02 41 23.7	-7.7
TRO				AML	AML	02 41 54.6	
	comp=Z,8.3nm,0.4s						
TRO	**Tromso**	**5.76**	**296**	P	Pn	02 40 20.3	-3.3
TRO				*e*S	Sn	02 41 23.7	-7.7
	comp=Z,8.3nm,0.4s,SNR=49						
FIA0	**FINESS Array S**	**7.10**	**211**	*e*P	Pn	02 40 38.8	-3.7
FIA0				*e*S	Sn	02 41 57.5	-7.4
FIA0				*e*SG		02 42 29.7	
FIA0	**FINESS Array S**	**7.10**	**211**	Pn	Pn	02 40 38.8	-3.7
FIA0				Sn	Sn	02 41 57.5	-7.4
	baz=41,slow=22						
FIA0				Lg		02 42 29.7	
	baz=37,slow=28						
LOF	**Lofoten**	**7.64**	**283**	*e*	Sn	02 42 03.6	-15
LOF	**Lofoten**	**7.64**	**283**	*e*	Sn	02 42 03.6	-15
MOR8	**Moi Rana**	**7.75**	**268**	*e*SG	Sg	02 42 47.1	-26
MOR8				AML	AML	02 42 55.8	
	comp=Z,7.9nm,0.4s						
MELSS	**Ber_school_2**	**7.81**	**273**	*e*Sg	Sg	02 42 57.1	-18
STOK	**Stokkvaagen**	**8.23**	**270**	*e*SG	Sg	02 43 08.9	-20
STOK				AML	AML	02 43 21.1	
	comp=Z,9.7nm,0.6s						
HFS	**Hagfors**	**11.60**	**239**	Pn	P	02 41 39.2	-5.2
	baz=35,slow=16						
HFS				Sn	S	02 43 45.6	-10
	baz=46,slow=28						
HFS				Lg		02 44 53.3	
	baz=26,slow=28						
HFS	**Hagfors**	**11.60**	**239**	*e*P	P	02 41 39.2	-5.2
HFS				*e*S	S	02 43 45.6	-10
HFS				*e*SG		02 44 53.3	
SPA0	**Spitsbergen Ar**	**11.61**	**342**	Pn	P	02 41 38.6	-6.0
	baz=140,slow=14						
SPA0	**Spitsbergen Ar**	**11.61**	**342**	*e*P	P	02 41 38.6	-6.0
NB2	**NORSAR Subarra**	**11.78**	**246**	Pn	P	02 41 43.9	-3.0
NB2				Sn	S	02 43 57.2	-3.0
NB2				Lg		02 45 05.8	
NB2	**NORSAR Subarra**	**11.78**	**246**	*e*P	P	02 41 43.9	-3.0
NB2				*e*		02 43 57.2	
NB2				*e*		02 45 05.8	
NB2	**NORSAR Subarra**	**11.78**	**246**	Pn	P	02 41 43.8	-3.1

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*NEIC **19** 02:39:58.9,36.68N×11.25W,h32^{km},MG3.5(MDD),After MDD.*

MDD 19 02:39:59.1±4.3**,36.81N×11.00W,mb2.6**/4**,Error ellipse: s-maj=36.8km s-min=31.6km az=66.0,PRXIMO, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMIN	**Mina Concepcio**	**3.58**	**73**	Pn	Pn	02 40 55.4	-1.6
	0.0nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	02 41 35.5	-5.1
	0.3nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.58**	**73**	Pn	Pn	02 40 55.4	-1.6
	SNR=7.9						
EMIN				Sn	Sn	02 41 35.5	-5.1
	0.3nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**3.70**	**57**	Pn	Pn	02 40 56.7	-2.1
	0.6nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	02 41 37.8	-6.0
	1.1nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.70**	**57**	Pn	Pn	02 40 56.7	-2.1
	0.1nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	02 41 37.8	-6.0
	1.1nm,0.2s,SNR=7.9						
ESPR	**Espera**	**4.12**	**88**	Pn	Pn	02 41 00.4	-4.4
	0.1nm,0.1s,SNR=4.0						
ESPR				Sn	Sn	02 41 49.2	-5.3
	1.0nm,0.2s,SNR=4.0						
ESPR	**Espera**	**4.12**	**88**	Pn	Pn	02 41 00.4	-4.4
	0.3nm,0.1s,SNR=4.0						
ESPR				Sn	Sn	02 41 49.2	-5.3
	1.0nm,0.2s,SNR=4.0						
EADA	**Adamuz**	**5.28**	**73**	Pn	Pn	02 41 18.6	-2.6
	0.2nm,0.5s,SNR=7.9						
EADA				Sn	Sn	02 42 16.5	-7.2
	0.4nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.28**	**73**	Pn	Pn	02 41 18.6	-2.6
	0.1nm,0.1s,SNR=7.9						
EADA				Sn	Sn	02 42 16.5	-7.2
	0.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.54**	**23**	Sn	Sn	02 42 21.8	-8.3
	0.2nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.54**	**23**	Sn	Sn	02 42 21.8	-8.3
	0.2nm,0.1s,SNR=7.9						

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*NEIC **19** 02:44:57.5±0.6,13.46N×92.72E,mb4.6/1,Error ellipse: s-maj=17.3km s-min=10.4km az=59.0*

*IDC **19** 02:44:57.4±1.1,13.48N×92.73E,h25^{km}±5^{km},mb3.7/7, mb1 3.9/8,mb1mx3.7/18,mbtmp3.8/8,MS3.1/1,Ms1 3.3/1, ms1mx3.2/23,Error ellipse: s-maj=29.7km s-min=18.5km az=54.0*

ISC 19 02:44:55.3±6.8**,13.47N**±0.09×**92.7E**±0.1**,h25**^{km}±48^{km}**, h26**^{km}±1.6^{km}**:pP-P,n12,**σ**0$\overset{s}{.}$38**/11**,mb4.0**/8**,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.76**	**49**	Pn	**Pn**	**02 46 49.7**	**+0.2**
	baz=243,slow=16,SNR=3.9						
CMAR				Sn	**Sn**	**02 48 17.6**	**+0.2**
	0.3nm,0.3s,baz=140,slow=19,SNR=3.1						
CMAR				LR	LR	02 50 37.1	
	comp=Z,131nm,19.1s,baz=225,slow=44						
MKAR	**Makanchi Array**	**34.37**	**347**	P	**P**	**02 51 42.2**	**-0.2**
	0.6nm,0.7s,mb3.6,baz=203,slow=11,SNR=3.0						
MKAR				pP	pP	02 51 49.4	-0.5
	2.0nm,0.8s,baz=162,slow=8.2,SNR=8.9						
SONM	**Songino Array**	**36.11**	**16**	P	**P**	**02 51 56.3**	**-0.8**
	0.2nm,0.4s,mb3.4,baz=196,slow=9.0,SNR=4.0						
SONM				pP	pP	02 52 05.2	+0.5
	1.5nm,1.1s,baz=203,slow=9.4,SNR=4.8						
ZAL	**Zalesovo**	**40.86**	**353**	pP	pP	02 52 44.0	-0.3
	1.3nm,0.8s,baz=272,slow=8.6,SNR=3.3						
FITZ	**Fitzroy Crossi**	**45.13**	**133**	P	**P**	**02 53 12.1**	**+0.2**
	4.1nm,0.6s,mb4.4,baz=346,slow=12,SNR=4.0						
WRA	**Warramunga Arr**	**52.70**	**128**	P	**P**	**02 54 10.3**	**-0.1**
	2.6nm,0.6s,mb4.3,baz=306,slow=8.1,SNR=25						
WRAB	**Tennant Creek**	**52.70**	**128**	*e*P	**P**	**02 54 10.2**	**-0.2**
	5.7nm,0.7s,mb4.6						
WB2	**Warramunga Arr**	**52.71**	**128**	*e*P	**P**	**02 54 10.5**	**+0.1**
BRTR	**Keskin Array B**	**57.82**	**309**	pP	pP	02 54 55.1	+0.1
	0.6nm,0.7s,baz=130,slow=7.1,SNR=3.3						
FINES	**FINESS Array B**	**67.17**	**331**	P	**P**	**02 55 48.8**	**-0.3**
	1.3nm,0.9s,mb4.0,baz=108,slow=8.8,SNR=5.2						
ARCES	**ARCESS Array B**	**69.58**	**340**	P	**P**	**02 56 04.1**	**+0.2**
	1.7nm,0.8s,mb4.0,baz=82,slow=6.4,SNR=3.1						
GERES	**GERESS Array B**	**72.79**	**317**	P	**P**	**02 56 24.4**	**+0.8**
	0.5nm,0.7s,mb3.5,baz=90,slow=5.3,SNR=7.0						
GERES				pP	pP	02 56 31.9	+0.4
	1.1nm,0.8s,baz=79,slow=6.8,SNR=7.3						

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*NNC **19** 02:49:01.1±5.4,37.90N×72.07E,h206^{km}±109^{km},mpv3.9, Error ellipse: s-maj=72.2km s-min=31.8km az=15.0*

ISC 19 02:48:54.8±1.3**,37.48N**±0.08×**72.0E**±0.2**,h184**^{km}±24^{km}**, n14,**σ**0$\overset{s}{.}$95**/18**,mb3.5**/1**,3C-1D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.81**	**15**	P	**P**	**02 50 08.0**	**+0.8**
	SNR=63						
UCH	**Uchtor**	**5.11**	**21**	P	**P**	**02 50 11.6**	**+0.7**
	SNR=65						
KZA	**Kyzart**	**5.21**	**27**	P	**P**	**02 50 12.2**	**-0.1**
	SNR=13						
EKS2	**Erkin-Say**	**5.34**	**14**	P	**P**	**02 50 14.7**	**+0.7**
	SNR=12						
AAK	**Ala-Archa**	**5.48**	**19**	P	**P**	**02 50 16.7**	**+0.9**
	SNR=20						
AAK	**Ala-Archa**	**5.48**	**19**	⇓P	**P**	**02 50 16.6**	**+0.8**
	18nm,0.5s						
AAK				⇑S	**S**	**02 51 17.3**	**-1.4**
	28nm,0.6s						
KBK	**Karagaybulak**	**5.63**	**22**	P	**P**	**02 50 18.9**	**+1.2**
	SNR=8.9						
KK31	**Karatay Array**	**5.74**	**349**	P	**P**	**02 50 19.9**	**+0.8**
	1.7nm,0.3s,baz=159,slow=11,SNR=26						
KK31				S	**S**	**02 51 22.4**	**-2.2**
	38nm,0.5s,baz=155,slow=18,SNR=26						
ULHL	**Ulahol**	**5.75**	**33**	P	**P**	**02 50 18.9**	**-0.4**
	SNR=7.5						
THN	**Thein Dam**	**5.87**	**148**	*e*P	**P**	**02 50 19.6**	**-1.3**
THN				*e*S	**S**	**02 51 22.7**	**-5.2**
CHMS	**Chumysh**	**5.89**	**20**	P	**P**	**02 50 21.0**	**-0.1**
	SNR=12						
TKM2	**Tokmak 2**	**6.08**	**25**	P	**P**	**02 50 23.6**	**0.0**
	SNR=15						
AB31	**Akbulak array**	**14.67**	**327**	⇑P	**P**	**02 52 14.9**	**+0.5**
	4.1nm,0.6s						
AB31				⇑S	**S**	**02 54 48.4**	**-4.0**
	2.6nm,0.5s						
NB2	**NORSAR Subarra**	**44.11**	**322**	P	**P**	**02 56 45.5**	**-0.4**
	0.6nm,0.5s,mb3.5,baz=94,slow=7.9						

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*ISK **19** 02:57:04.7,37.05N×28.21E,h12^{km},MD3.3*

*CSEM **19** 02:57:04.6±0.1,37.08N×28.23E,h10^{km},MD3.3,Error ellipse: s-maj=1.9km s-min=1.4km az=42.0*

*ATH **19** 02:57:06.5,36.94N×27.99E,h10^{km},MD3.0/3*

ISC 19 02:57:04.9±0.5**,37.03N**±0.03×**28.19E**±0.03**,h6**^{km}±5^{km}**, n22,**σ**0$\overset{s}{.}$83**/30**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**34**	*i* PG	**Pg**	**02 57 07.6**	**-0.2**
MLSB	**Milas**	**0.43**	**309**	PG	**Pg**	**02 57 13.5**	**0.0**
DALT	**Dalyan (Mudla)**	**0.44**	**125**	PG	**Pg**	**02 57 14.1**	**+0.3**
DALT				SG	**Sg**	**02 57 20.8**	**+1.1**
BDRM	**Kayabasi**	**0.60**	**274**	*i* P	**Pg**	**02 57 16.9**	**0.0**
BDRM				*i* S	**Sg**	**02 57 26.2**	**+1.3**
AYDN	**Tasoluk**	**0.68**	**339**	*i* P	**Pg**	**02 57 18.4**	**-0.2**
AYDN				*i* S	**Sg**	**02 57 27.2**	**-0.5**
BODT	**Bodrum**	**0.70**	**273**	PG	**Pg**	**02 57 19.1**	**0.0**
ARG	**Arkhangelos**	**0.81**	**184**	*e*PB	**Pb**	**02 57 20.5**	**-0.5**
FETY	**Fethiye**	**0.81**	**118**	PG	**Pg**	**02 57 20.6**	**-0.6**
DNZL	**Cakiroluk**	**0.95**	**46**	*i* P	**Pb**	**02 57 23.1**	**-0.2**
DNZL				*i* S	**Sb**	**02 57 35.8**	**-0.1**
DENT	**Denizli**	**0.99**	**42**	PG	**Pg**	**02 57 23.8**	**-0.9**
GOLH	**Golhisar**	**1.11**	**79**	*i* P	**Pb**	**02 57 27.3**	**+1.1**
GOLH				*i* S	**Sb**	**02 57 47.0**	**+6.2**
SMG	**Samos**	**1.28**	**303**	*e*PB	**Pb**	**02 57 29.1**	**+0.2**
AKAS	**Kas**	**1.39**	**124**	*i* P	**Pb**	**02 57 32.2**	**+1.4**
AKAS				*i* S	**Sb**	**02 57 56.6**	**+8.0**
ELL	**Elmali**	**1.41**	**101**	*e*PN	**Pn**	**02 57 30.4**	**-0.7**
MANT	**Manisa**	**1.49**	**11**	*i* P	**Pn**	**02 57 32.6**	**+0.3**
MANT				*i* S	**Sb**	**02 57 53.5**	**+1.8**
IZM	**Izmir**	**1.56**	**332**	PN	**Pn**	**02 57 32.7**	**-0.5**
KDAG	**Bornova**	**1.56**	**332**	*i* P	**Pn**	**02 57 33.5**	**+0.2**
KDAG				*i* S	**Sb**	**02 57 56.6**	**+3.0**
KARP	**Karpathos**	**1.69**	**210**	*e*PB	**Pb**	**02 57 35.4**	**-0.7**
AKS	**Akhisar**	**1.87**	**351**	*e*PN	**Pn**	**02 57 37.3**	**-0.5**
APE	**Apeiranthos**	**2.13**	**272**	*e*PN	**Pn**	**02 57 40.6**	**-0.8**
ALT	**Altintas**	**2.53**	**36**	*e*PN	**Pn**	**02 57 46.0**	**-1.2**
DST	**Dursunbey**	**2.60**	**7**	*e*PN	**Pn**	**02 57 47.2**	**-1.0**

CASC 19 03:01:14.4±2.7**,15.08N×89.58W,h1**^{km}±6^{km}**,MD3.9, 3C-6D,Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.10**	**262**	⇑*e*P	Pg	03 01 15.4	-1.1
MRL				*e*S	Sg	03 01 18.9	+1.0
MTO2	**Montecristo 2**	**0.71**	**162**	⇓*e*P	Pg	03 01 28.0	-0.6
RBDL	**Robledal**	**0.97**	**186**	⇑*e*P	Pb	03 01 33.7	+0.1
RBDL				*e*S	Sg	03 01 48.8	+2.2
RTR	**El Retiro**	**1.18**	**183**	⇓*e*P	Pb	03 01 37.6	+0.4
SNJE	**San Jose**	**1.21**	**181**	⇓*e*P	Pb	03 01 38.0	+0.3
IXG	**Ixpaco**	**1.23**	**223**	⇑*e*P	Pb	03 01 35.6	-2.5
IXG				*e*S	Sb	03 01 55.8	+1.4
SBLS	**San Blas**	**1.23**	**182**	⇓*e*P	Pb	03 01 38.5	+0.3
SBLS				*e*S	Sb	03 01 56.8	+2.3
BOQS	**Boqueron**	**1.37**	**168**	⇓*e*P	Pb	03 01 40.3	-0.2
BOQS				*e*S	Sb	03 01 58.9	+0.5
LFU	**La Fuente**	**1.40**	**161**	*e*P	Pb	03 01 40.8	-0.2
LFU				*e*S	Sb	03 01 59.6	+0.3
TP2	**Tecpan 2**	**1.42**	**258**	⇓*e*P	Pb	03 01 40.2	-1.2
TP2				*e*S	Sb	03 02 02.0	+2.2
LBRS	**Las Brisas**	**1.43**	**158**	*e*P	Pn	03 01 41.3	-0.2
LBRS				*e*S	Sb	03 02 00.9	+0.6
LCBS	**La Ceiba**	**1.53**	**157**	*e*P	Pn	03 01 42.5	-0.5
LCBS				*e*S	Sb	03 02 03.0	-0.1
LFRS	**El Faro**	**1.53**	**161**	*e*P	Pn	03 01 42.8	-0.2
LFRS				*e*S	Sb	03 02 02.8	-0.4
BLLM	**Bellamira**	**2.09**	**141**	*e*P	Pn	03 01 51.6	+0.7
BLLM				*e*S	Sn	03 02 16.8	-1.1

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*IDC **19** 03:04:23.1±1.6,35.32N×64.39E,mb3.7/3,mb1 3.9/5, mb1mx3.6/21,mbtmp3.7/5,ML3.8/2,Error ellipse: s-maj=38.0km s-min=30.9km az=167.0*

*NEIC **19** 03:04:25.3±1.3,35.67N×64.38E,h10^{km},mb3.7/2,Error ellipse: s-maj=23.0km s-min=13.6km az=161.0*

*CSEM **19** 03:04:25.3±1.4,35.67N×64.38E,h10^{km},mb3.7/2,Error ellipse: s-maj=38.1km s-min=23.0km az=172.0,After NEIC*

*NNC **19** 03:04:33.5±7.7,36.24N×64.53E,mpv3.8,Error ellipse: s-maj=71.3km s-min=50.9km az=16.0*

ISC 19 03:04:26.5±1.3**,36.0N**±0.1×**64.32E**±0.08**,h10**^{km}**,n23,** σ**0$\overset{s}{.}$96**/27**,mb3.7**/3**,2C-1D,Turkmenistan-Afghanistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**8.53**	**32**	P	**P**	**03 06 34.0**	**+1.0**
	2.9nm,0.6s,baz=219,slow=15,SNR=16						
KK31				S	**Sn**	**03 08 09.8**	**-0.5**
	2.3nm,0.5s,baz=213,slow=26,SNR=4.6						
KK31	**Karatay Array**	**8.53**	**32**	P	**P**	**03 06 34.0**	**+1.0**
KK31				S	**Sn**	**03 08 09.8**	**-0.5**
AML	**Almayashu**	**9.50**	**47**	P	**P**	**03 06 46.0**	**-0.4**
	SNR=5.6						
EKS2	**Erkin-Say**	**9.87**	**45**	P	**P**	**03 06 52.2**	**+0.7**
	SNR=8.7						
AAK	**Ala-Archa**	**10.27**	**47**	P	**P**	**03 06 57.9**	**+0.8**
	SNR=5.6						
AAK	**Ala-Archa**	**10.27**	**47**	⇓P	**P**	**03 06 57.3**	**+0.2**
	5.2nm,0.6s						
AAK	**Ala-Archa**	**10.27**	**47**	*e*P	**P**	**03 06 55.6**	**-1.4**
	7.0nm,0.6s						
KBK	**Karagaybulak**	**10.56**	**48**	P	**P**	**03 07 01.6**	**+0.7**
	SNR=7.2						
USP	**Ospenovka**	**10.66**	**44**	P	**P**	**03 07 01.1**	**-1.3**
	SNR=5.9						
TKM2	**Tokmak 2**	**11.10**	**48**	P	**P**	**03 07 07.3**	**-1.0**
	SNR=7.6						
AB31	**Akbulak array**	**13.60**	**348**	P	**P**	**03 07 41.0**	**-0.8**
	0.6nm,0.4s,baz=309,slow=81,SNR=21						
AB31				S	**S**	**03 10 14.3**	**+0.3**
	1.6nm,0.6s,baz=162,slow=24,SNR=4.8						
MKAR	**Makanchi Array**	**17.20**	**46**	P	**P**	**03 08 28.7**	**+0.2**
	0.1nm,0.3s,baz=239,slow=14,SNR=3.8						
ZRNK	**Zerenda**	**17.24**	**10**	⇑P	**P**	**03 08 35.4**	**+6.6**
	0.9nm,0.7s						
ZRNK	**Zerenda**	**17.24**	**10**	*e*P	**P**	**03 08 30.9**	**+2.1**
ZRNK				*e*S	**S**	**03 11 33.4**	**-5.8**
VOSK	**Vostochnaya**	**17.34**	**14**	⇑P	**P**	**03 08 36.3**	**+6.2**
	2.0nm,0.8s						
VOSK	**Vostochnaya**	**17.34**	**14**	P	**P**	**03 08 36.3**	**+6.2**
BVA0	**Borovoye Array**	**17.52**	**12**	P	**P**	**03 08 38.1**	**+5.8**
	0.6nm,0.7s,baz=186,slow=14,SNR=16						
BVAR	**Borovoye Array**	**17.52**	**12**	P	**P**	**03 08 37.9**	**+5.5**
	0.9nm,0.3s,baz=182,slow=13,SNR=21						
KIV	**Kislovodsk**	**18.33**	**302**	*e*P	**P**	**03 08 41.7**	**-0.8**
	3.7nm,0.5s						
ZAL	**Zalesovo**	**22.89**	**32**	P	**P**	**03 09 34.5**	**+3.4**
	0.7nm,0.4s,mb3.4,baz=230,slow=9.1,SNR=3.3						
BR131	**Keskin Array S**	**24.43**	**288**	*e*P	**P**	**03 09 47.6**	**+1.2**
	1.1nm,0.7s,mb3.4						
BRTR	**Keskin Array B**	**24.43**	**288**	P	**P**	**03 09 45.9**	**-0.4**
	1.5nm,0.8s,mb3.5,baz=105,slow=9.4,SNR=9.5						
WRA	**Warramunga Arr**	**86.45**	**118**	P	**P**	**03 17 06.1**	**-4.8**
	0.9nm,0.6s,mb4.2,baz=321,slow=4.7,SNR=4.4						

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*LDG **19** 03:12:11.6±0.2,41.87N×8.47W,h2^{km},Md3.3/1,Ml2.8/4, Error ellipse: s-maj=7.7km s-min=2.8km az=101.0*

*INMG **19** 03:12:13.3±1.0,41.79N×8.61W,h15^{km}±3^{km},ML2.6,Error ellipse: s-maj=2.5km s-min=1.4km az=91.0*

*NEIC **19** 03:12:13.3,41.79N×8.62W,h10^{km},MN2.7(MDD),After MDD.*

*CSEM **19** 03:12:13.5±0.1,41.80N×8.59W,h15^{km},ML2.9/13,Error ellipse: s-maj=2.8km s-min=1.2km az=76.0*

MDD 19 03:12:13.1±0.3**,41.78N×8.63W,h11**^{km}**,mbLg2.5**/21**, 2C-1D,Error ellipse: s-maj=3.8km s-min=2.1km az=61.0, PRXIMO,Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZAM	**Zamans**	**0.38**	**353**	⇓Pg	Pg	03 12 20.1	-0.7
	21nm,0.3s,SNR=18						
EZAM				Lg		03 12 25.3	
	83nm,0.1s,SNR=7.5						
ELOB	**Lobios**	**0.44**	**78**	⇑Pg	Pg	03 12 21.3	-0.7
	34nm,0.3s,SNR=18						
ELOB				Lg		03 12 27.2	
	232nm,0.1s,SNR=5.6						
ELOB	**Lobios**	**0.44**	**78**	Pg	Pg	03 12 21.3	-0.7
	34nm,0.3s,SNR=18						
PVRL	**Vila Real**	**0.85**	**126**	*e*Pg	Pg	03 12 28.8	-1.3
PVRL				*e*Sg	Sg	03 12 39.7	-1.8
	164nm,0.1s						
PVRL	**Vila Real**	**0.85**	**126**	*e*Pg	Pg	03 12 28.8	-1.3
PVRL				*e*Sg	Sg	03 12 39.7	-1.8
	164nm,0.1s						
STS	**Santiago**	**1.11**	**3**	Pg	Pg	03 12 33.1	-2.2
	8.9nm,0.3s,SNR=21						
STS				Lg		03 12 48.0	
	32nm,0.1s,SNR=6.3						
PVIS	**Viseu**	**1.20**	**152**	*e*P	Pb	03 12 34.1	-1.1
PVIS				*e*S	Sb	03 12 50.1	-0.4
	83nm,0.1s						
PVIS	**Viseu**	**1.20**	**152**	*e*P	Pb	03 12 34.1	-1.1
PVIS				*e*S	Sb	03 12 50.1	-0.4
	83nm,0.1s						
EMAZ	**Mazaricos**	**1.20**	**348**	Pg	Pg	03 12 35.0	-2.1
	12nm,0.3s,SNR=41						
EMAZ				Lg		03 12 51.3	
	42nm,0.1s,SNR=18						
EMAZ	**Mazaricos**	**1.20**	**348**	Pg	Pg	03 12 35.0	-2.1
	12nm,0.3s,SNR=41						
ERUA	**La Rua**	**1.27**	**60**	Pg	Pg	03 12 36.5	-2.0
	47nm,0.2s,SNR=158						
ERUA				Lg		03 12 53.0	
	36nm,0.2s,SNR=5.6						
ECAL	**Calabor**	**1.43**	**83**	⇑Pg	Pg	03 12 37.2	-4.4
	30nm,0.3s,SNR=18						
ECAL				Lg		03 12 57.8	
	106nm,0.3s,SNR=16						
ECAL	**Calabor**	**1.43**	**83**	Pg	Pg	03 12 37.2	-4.4
	30nm,0.3s,SNR=18						
MTE	**Manteigas**	**1.60**	**149**	*e*Pn	Pn	03 12 39.7	-1.8
MTE				*e*Sn	Sn	03 12 59.9	-2.3
MTE				*e*Sg	Sg	03 13 02.7	-3.8
	92nm,0.7s						
MTE	**Manteigas**	**1.60**	**149**	*e*Pn	Pn	03 12 39.7	-1.8
MTE				*e*Sn	Sn	03 12 59.9	-2.3
MTE				*e*Sg	Sg	03 13 02.7	-3.8
	92nm,0.7s						
EPON	**Pontenova**	**1.90**	**35**	Pn	Pn	03 12 43.6	-2.2
	4.2nm,0.3s,SNR=12						
EPON				Pg	Pg	03 12 48.0	-3.0
	7.7nm,0.2s,SNR=21						
EPON				Sn	Sn	03 13 07.0	-2.8
	5.1nm,0.1s,SNR=6.3						
EPON				Lg		03 13 13.2	
	26nm,0.3s,SNR=14						
EPON	**Pontenova**	**1.90**	**35**	Pn	Pn	03 12 43.6	-2.1
	4.2nm,0.3s,SNR=12						
EPON	**Pontenova**	**1.90**	**35**	Pg	Pg	03 12 48.0	-3.0
	7.7nm,0.2s,SNR=21						
EPON				Sn	Sn	03 13 07.0	-2.8
	5.1nm,0.1s,SNR=6.3						
PCBR	**Castelo Branco**	**2.12**	**155**	*e*Pn	Pn	03 12 47.1	-1.8
PCBR	**Castelo Branco**	**2.12**	**155**	*e*Pg	Pg	03 12 51.0	-4.5
PCBR				*e*Sn	Sn	03 13 13.1	-2.4
PCBR				*e*Sg	Sg	03 13 18.7	-5.1
	28nm,0.2s						
PCBR	**Castelo Branco**	**2.12**	**155**	Pn	Pn	03 12 47.1	-1.8
PCBR				Pg	Pg	03 12 51.0	-4.5
PCBR				Sn	Sn	03 13 13.1	-2.4
PCBR				Lg		03 13 18.7	
	14nm,0.2s						
PCBR	**Castelo Branco**	**2.12**	**155**	*e*Pg	Pg	03 12 51.0	-4.5
PCBR				*e*Sn	Sn	03 13 13.1	-2.4
PCBR				*e*Sg	Sg	03 13 18.7	-5.1
	28nm,0.2s						
PTOM	**Tomar**	**2.16**	**175**	*e*Pn	Pn	03 12 48.3	-1.2
PTOM				*e*Sn	Sn	03 13 13.6	-2.9
PTOM				*e*Sg	Sg	03 13 18.9	-6.2
	44nm,0.5s						
PTOM	**Tomar**	**2.16**	**175**	*e*Pn	Pn	03 12 48.3	-1.2
PTOM				*e*Sn	Sn	03 13 13.6	-2.9
PTOM				*e*Sg	Sg	03 13 18.9	-6.2
	44nm,0.5s						
PLOU	**Loures**	**2.91**	**188**	*e*Sg	Sg	03 13 44.2	-5.9
	23nm,0.4s						
PLOU	**Loures**	**2.91**	**188**	*e*Sg	Sg	03 13 44.2	-5.9
	23nm,0.4s						
EARI	**Arriondas**	**2.95**	**58**	Pn	Pn	03 13 00.2	-0.6
	4.3nm,0.4s,SNR=34						
EARI				Pg	Pg	03 13 08.2	-3.9
	3.0nm,0.3s,SNR=11						
EARI				Sn	Sn	03 13 34.7	-1.9
	0.2nm,0.1s,SNR=7.9						
EARI				Lg		03 13 46.5	
	0.7nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**2.95**	**58**	Pn	Pn	03 13 00.2	-0.6
	4.3nm,0.4s,SNR=34						
MOE	**Montemor**	**3.25**	**176**	*e*Sn	Sn	03 13 41.9	-2.3
MOE				*e*Sg	Sg	03 13 53.4	-8.1
EBAD	**Badajoz**	**3.26**	**157**	Pn	Pn	03 13 03.5	-1.7
	1.8nm,0.4s,SNR=13						
EBAD				Sn	Sn	03 13 39.9	-4.4
	1.2nm,0.1s,SNR=7.9						
EBAD				Lg		03 13 54.1	
	8.9nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.26**	**157**	Pn	Pn	03 13 03.5	-1.7
	1.8nm,0.4s,SNR=13						
EBAD				Sn	Sn	03 13 39.9	-4.4
	1.2nm,0.1s,SNR=7.9						
EVO	**Evora**	**3.27**	**171**	*e*Pn	Pn	03 13 02.6	-2.7
EVO				*e*Sn	Sn	03 13 39.9	-4.8
EVO				*e*Sg	Sg	03 13 54.7	-7.4
	26nm,0.5s						
PBEJ	**Beja**	**3.79**	**171**	*e*Pn	Pn	03 13 10.4	-2.3
PBEJ				*e*Sn	Sn	03 13 52.1	-5.6
PBEJ				*e*Sg	Sg	03 14 12.1	-7.2
	5.1nm,0.5s						
PBEJ	**Beja**	**3.79**	**171**	Pn	Pn	03 13 10.4	-2.3
PBEJ				Sn	Sn	03 13 52.1	-5.6
PBEJ				Lg		03 14 12.1	
	2.5nm,0.5s						
ELAN	**Lanestosa**	**4.11**	**68**	Pn	Pn	03 13 15.5	-1.7
	8.3nm,0.9s,SNR=5.9						
ELAN				Sn	Sn	03 14 00.5	-5.4
	0.3nm,0.2s,SNR=7.9						
ELAN				Lg		03 14 22.6	
	3.7nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**4.11**	**68**	Pn	Pn	03 13 15.5	-1.7
	8.3nm,0.9s,SNR=5.9						
ELAN				Sn	Sn	03 14 00.5	-5.3
	0.3nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**4.12**	**119**	Pn	Pn	03 13 16.2	-1.2
	0.8nm,0.2s,baz=304,slow=14,SNR=21						

ESDC				Sn	Sn	03 14 00.8	-5.4
	SNR=7.9						
ESDC	**Sonseca Array**	**4.12**	**119**	Pn	Pn	03 13 16.2	-1.2
	0.8nm,0.2s,SNR=21						
ESDC				Sn	Sn	03 14 00.8	-5.3
	SNR=7.9						
PTEO	**Sao Teotonio**	**4.22**	**181**	*e*Pn	Pn	03 13 16.7	-2.2
PTEO				*e*Sg	Sg	03 14 21.7	-12
	9.5nm,1.0s						
PTEO	**Sao Teotonio**	**4.22**	**181**	Pn	Pn	03 13 16.7	-2.2
PTEO				Lg		03 14 21.7	
	4.8nm,1.0s						
EMIN	**Mina Concepcio**	**4.28**	**159**	Pn	Pn	03 13 17.2	-2.4
EMIN				Sn	Sn	03 14 04.1	-6.0
EMIN				Lg		03 14 29.6	
EMIN	**Mina Concepcio**	**4.28**	**159**	Pn	Pn	03 13 17.2	-2.4
	1.0nm,0.3s,SNR=16						
EMIN				Sn	Sn	03 14 04.1	-6.0
	0.8nm,0.2s,SNR=7.9						
EMIN				Lg		03 14 26.9	
	15nm,1.0s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.28**	**159**	Pn	Pn	03 13 17.2	-2.4
	1.0nm,0.3s,SNR=16						
EMIN				Sn	Sn	03 14 04.1	-6.0
	0.8nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**4.76**	**138**	Pn	Pn	03 13 23.5	-3.0
EADA				Sn	Sn	03 14 17.0	-5.4
EADA				Lg		03 14 44.6	
EADA	**Adamuz**	**4.76**	**138**	Pn	Pn	03 13 23.5	-3.0
	0.2nm,0.1s,SNR=7.9						
EADA				Sn	Sn	03 14 15.4	-6.9
	0.7nm,0.2s,SNR=7.9						
EADA				Lg		03 14 41.8	
	2.6nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**4.76**	**138**	Pn	Pn	03 13 23.5	-3.0
	0.2nm,0.1s,SNR=7.9						
EADA				Sn	Sn	03 14 17.0	-5.4
	0.7nm,0.2s,SNR=7.9						
ESPR	**Espera**	**5.35**	**155**	Pn	Pn	03 13 31.6	-3.2
	0.7nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	03 14 30.6	-6.5
	0.5nm,0.2s,SNR=7.9						
ESPR	**Espera**	**5.35**	**155**	Pn	Pn	03 13 31.6	-3.2
	0.7nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	03 14 30.6	-6.5
	0.5nm,0.2s,SNR=7.9						
SJPF	**Ste Jean**	**5.64**	**74**	*e*Pn	Pn	03 13 32.1	-6.8
SJPF				*e*Sg	Sg	03 15 03.7	-17
	2.0nm,0.4s						
ETOB	**Tobarra**	**6.26**	**118**	Pn	Pn	03 13 44.9	-2.7
	0.3nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	03 14 51.3	-8.6
	0.2nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**6.26**	**118**	Pn	Pn	03 13 44.9	-2.7
	0.3nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	03 14 51.3	-8.6
	0.2nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**6.33**	**100**	Pn	Pn	03 13 46.3	-2.3
	0.0nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	03 14 53.9	-7.6
	0.1nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**6.33**	**100**	Pn	Pn	03 13 46.3	-2.3
	SNR=7.9						
EMOS				Sn	Sn	03 14 53.9	-7.7
QUIF	**Quistinic**	**7.26**	**30**	*e*Pn	Pn	03 13 54.2	-7.6
QUIF				*e*Sn	Sn	03 15 11.1	-14
	1.0nm,0.3s						
ROSF	**Rostrenen**	**7.58**	**28**	*e*Pn	Pn	03 13 59.3	-6.8
ROSF				*e*Sn	Sn	03 15 18.7	-14
	0.4nm,0.3s						
MFF	**Saint Martin d**	**7.78**	**49**	*e*P	Pn	03 14 04.2	-4.7
SGMF	**Saint Gilles**	**7.78**	**32**	*e*Pn	Pn	03 14 00.6	-8.3

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*IDC **19** 03:48:28.0±0.7,24.79S×112.38W,mb4.2/10,mb1 4.5/11, mb1mx4.3/19,mbtmp4.2/11,ML4.0/1,MS4.4/14,Ms1 4.3/14, ms1mx4.2/23,Error ellipse: s-maj=26.5km s-min=17.7km az=64.0*

*BJI **19** 03:48:32.1,24.20S×111.80W,h10^{km},mB4.8,Ms4.8, Msz4.4*

*NEIC **19** 03:48:32.2±0.5,24.25S×111.82W,h10^{km},mb4.8/10, Error ellipse: s-maj=21.6km s-min=9.5km az=67.0*

ISC 19 03:48:31.4±0.6,**24.10S**±0.08×**111.5W**±0.2,**h10**^{km},**(h7**^{km}±.3^{km}**:pP-P),n61,**σ**0**^{s}**92**/35,**mb4.5**/17,**MS4.4**/15,**4C-2D,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**3.57**	**148**	Pn	**Pn**	**03 49 26.1**	**-1.9**
	13nm,0.3s,baz=324,slow=17,SNR=11						
RPN				Sn	**Sn**	**03 50 10.1**	**-0.6**
	1.7nm,0.3s,baz=289,slow=9.6,SNR=2.1						
RPN	**Rapa Nui**	**3.57**	**148**	*e*P	**Pn**	**03 49 26.6**	**-1.5**
PPT	**Papeete**	**36.14**	**273**	*e*LR	LR	04 04 39.0	
	1µm,33.5s,baz=108						
PPT	**Papeete**	**36.14**	**273**	LR	LR	04 04 34.8	
	comp=Z,232nm,18.7s,MS4.0,baz=121,slow=27						
PLCA	**Paso Flores**	**37.92**	**126**	LR	LR	04 07 24.3	
	comp=Z,535nm,21.3s,MS4.3,baz=279,slow=30						
LPAZ	**La Paz**	**41.26**	**87**	P	**P**	**03 56 22.5**	**+3.9**
	7.0nm,1.2s,mb4.2,baz=245,slow=7.8,SNR=16						
LPAZ				LR	LR	04 09 45.7	
	comp=Z,345nm,18.6s,MS4.2,baz=52,slow=30						
LPAZ	**La Paz**	**41.26**	**87**	*e*P	**P**	**03 56 22.5**	**+3.9**
	17nm,1.4s,mb4.5						
ROSC	**El Rosal**	**46.21**	**56**	LR	LR	04 12 56.1	
	comp=Z,533nm,19.1s,MS4.5,baz=243,slow=31						
SAML	**Samuel**	**48.41**	**80**	*e*P	**P**	**03 57 16.5**	**+0.5**
	22nm,1.5s,mb5.0						
SDV	**Santo Domingo**	**51.60**	**56**	LR	LR	04 16 57.2	
	comp=Z,548nm,18.3s,MS4.6,baz=209,slow=32						
TXAR	**Lajitas Array**	**53.65**	**8**	P	**P**	**03 57 57.0**	**+1.5**
	1.2nm,1.1s,mb3.7,baz=169,slow=6.4,SNR=4.9						
TXAR				LR	LR	04 16 29.5	
	comp=Z,190nm,18.5s,MS4.2,baz=210,slow=31						
NEN	**Nelson**	**59.51**	**357**	*e*P	**P**	**03 58 37.3**	**0.0**
BDFB	**Brasilia**	**59.83**	**95**	P	**P**	**03 58 40.8**	**+1.1**
	1.2nm,0.6s,mb4.1,baz=290,slow=5.7,SNR=5.2						
BDFB				LR	LR	04 22 26.8	
	comp=Z,263nm,19.0s,MS4.4,baz=73,slow=34						
NVAR	**Mina Array Bea**	**62.53**	**354**	P	**P**	**03 58 57.9**	**+0.2**
	5.2nm,0.7s,mb4.8,baz=194,slow=11,SNR=29						
DAU	**Daniels Canyon**	**64.18**	**0**	*e*P	**P**	**03 59 08.3**	**-0.2**
JLU	**Jordanelle**	**64.37**	**360**	P	**P**	**03 59 09.8**	**0.0**
ELK	**Elko**	**64.61**	**357**	P	**P**	**03 59 11.4**	**+0.1**
	1.0nm,0.7s,mb3.9,baz=202,slow=8.1,SNR=7.9						
ELK	**Elko**	**64.61**	**357**	*e*P	**P**	**03 59 11.0**	**-0.3**
	8.9nm,1.5s,mb4.6						
VNDA	**Vanda**	**65.94**	**194**	P	**P**	**03 59 08.9**	**-10**
	0.6nm,0.4s,mb3.9,baz=48,slow=5.5,SNR=13						
VNDA				LR	LR	04 20 44.2	
	comp=Z,239nm,21.9s,MS4.4,baz=192,slow=30						
QSPA	**South Pole Qui**	**66.06**	**180**	*e*P	**P**	**03 59 20.8**	**+0.8**
	15nm,1.3s,mb4.9						
MOD	**Modoc**	**66.18**	**353**	*e*P	**P**	**03 59 21.4**	**+0.1**
	5.1nm,0.8s,mb4.6						
BW06	**Boulder Array**	**66.55**	**2**	*e*P	**P**	**03 59 21.9**	**-1.9**
	2.5nm,0.8s,mb4.3						
PDAR	**Pinedale Array**	**66.55**	**2**	P	**P**	**03 59 23.0**	**-0.8**
	1.4nm,0.7s,mb4.1,baz=180,slow=5.9,SNR=9.7						
TPAW	**Teton Pass**	**67.25**	**0**	*e*P	**P**	**03 59 27.5**	**-0.8**
	14nm,1.4s,mb4.8						
HLID	**Hailey**	**67.38**	**358**	*e*P	**P**	**03 59 28.2**	**-0.8**
	7.1nm,1.0s,mb4.7						
MCMT	**McKenzie Canyo**	**68.60**	**359**	*e*P	**P**	**03 59 36.1**	**-0.5**
CHMT	**Chamberlain Mo**	**70.70**	**359**	*e*P	**P**	**03 59 48.7**	**-0.6**
VNA3	**Neumayer Olymp**	**71.10**	**160**	*e*	**P**	**03 59 54.1**	**+2.6**
VNA3	**Neumayer Olymp**	**71.10**	**160**	⇑*i*P	**P**	**03 59 52.1**	**+0.6**
VNA3				*e*	pP	03 59 54.1	-0.5
VNA1	**Neumayer--Stat**	**71.74**	**160**	*e*	**P**	**03 59 56.9**	**+1.6**
VNA1	**Neumayer--Stat**	**71.74**	**160**	⇑*i*P	**P**	**03 59 54.9**	**-0.4**
VNA1				*e*	pP	03 59 56.9	-1.5
VNA2	**Neumayer--Watz**	**71.91**	**160**	*e*	**P**	**03 59 59.5**	**+3.2**
VNA2	**Neumayer--Watz**	**71.91**	**160**	⇑*i*P	**P**	**03 59 57.2**	**+0.9**
VNA2				*e*	pP	03 59 59.5	+0.1
NEW	**Newport**	**72.21**	**356**	P	**P**	**03 59 58.6**	**+0.2**
	4.3nm,0.9s,mb4.4,baz=154,slow=4.1,SNR=7.2						
NEW	**Newport**	**72.21**	**356**	*e*P	**P**	**03 59 58.5**	**0.0**
	19nm,1.5s,mb4.8						
EYMN	**Ely**	**73.92**	**14**	*e*P	**P**	**04 00 08.7**	**+0.2**
	11nm,1.4s,mb4.6						
DZM	**Mont Dzumac**	**74.45**	**253**	LR	LR	04 24 55.2	
	comp=Z,341nm,21.8s,MS4.6,baz=204,slow=30						
DLBC	**Dease Lake**	**83.67**	**350**	P	**P**	**04 01 02.2**	**+1.0**
	4.1nm,0.8s,mb4.6,baz=158,slow=7.1,SNR=4.5						
SYO	**Syowa Base**	**84.80**	**170**	⇓P	**P**	**04 01 06.0**	**-0.7**
SYO	**Syowa Base**	**84.80**	**170**	⇓sP	sP	04 01 12.0	+1.1
HNR	**Honiara**	**84.95**	**262**	LR	LR	04 30 14.1	
	comp=Z,372nm,21.7s,MS4.7,baz=321,slow=30						
YKA	**Yellowknife Ar**	**86.33**	**359**	P	**P**	**04 01 14.1**	**-0.3**
	2.9nm,0.9s,mb4.5,baz=165,slow=4.7,SNR=3.9						
SCHQ	**Schefferville**	**87.41**	**24**	LR	LR	04 35 14.7	
	comp=Z,136nm,21.3s,MS4.3,baz=62,slow=32						
STKA	**Stephens Creek**	**90.77**	**234**	LR	LR	04 35 18.7	
	comp=Z,196nm,20.6s,MS4.5,baz=206,slow=31						
CTA	**Charters Tower**	**92.54**	**247**	LR	LR	04 31 16.9	
	comp=Z,79nm,21.4s,MS4.1,baz=47,slow=28						
PMG	**Port Moresby**	**96.44**	**257**	LR	LR	04 39 33.0	
	comp=Z,228nm,18.3s,MS4.7,baz=100,slow=32						
BRG	**Berggiesshubel**	**130.50**	**43**	P	PKPdf	04 07 45.1	-0.4
AKASG	**Malin Array Be**	**139.72**	**39**	PKP	PKPdf	04 08 00.4	-2.1
	1.3nm,0.7s,baz=289,slow=1.8,SNR=6.3						
SONM	**Songino Array**	**141.84**	**318**	PKP	PKPdf	04 08 02.5	-3.8
	0.6nm,0.6s,baz=135,slow=1.7,SNR=5.6						
GYA	**Guiyang**	**145.54**	**282**	⇑*i*PKP	PKPdf	04 08 12.3	-1.1
BR131	**Keskin Array S**	**146.76**	**54**	*e*PKPbc	PKPbc	04 08 16.0	+2.5
BRTR	**Keskin Array B**	**146.76**	**54**	PKPbc	PKPbc	04 08 16.2	+2.7
	4.5nm,1.0s,baz=207,slow=2.8,SNR=16						
ARU	**Arti**	**146.89**	**10**	*e*PKPbc	PKPbc	04 08 14.7	+1.4
LZH	**Lanzhou**	**147.38**	**300**	*e*P	PKPdf	04 08 14.5	-1.7
LZH				pP		04 08 22.6	
LZH				sP		04 08 26.5	
ZAL	**Zalesovo**	**147.80**	**342**	PKPbc	PKPdf	04 08 16.1	-0.2
	2.3nm,0.8s,baz=72,slow=1.7,SNR=13						
KMI	**Kunming**	**148.95**	**279**	PKP	PKPdf	04 08 14.0	-5.0
KMI				LR	LR		
	comp=Z,70nm,31.7s,MS4.2						
KMI	**Kunming**	**148.95**	**279**	PKP	PKPdf	04 08 14.4	-4.6
KMI				LR	LR		
	comp=Z,70nm,31.7s,MS4.2						
MALT	**Malatya**	**150.75**	**54**	*e*PKPbc	PKPdf	04 08 26.1	+4.7
CMAR	**Chiang Mai Arr**	**151.16**	**265**	PKPab	PKPab	04 08 27.4	-8.2
	comp=Z,1.6nm,0.6s,baz=24,slow=0.5,SNR=9.5						
ZRNK	**Zerenda**	**151.19**	**359**	*e*PKPdf	PKPdf	04 08 19.0	-2.6
ZRNK				*e*PKPbc	PKPdf	04 08 25.7	+4.1
MKAR	**Makanchi Array**	**154.82**	**337**	PKPbc	PKPdf	04 08 33.0	+6.1
	comp=Z,0.6nm,0.5s,baz=34,slow=4.4,SNR=6.5						

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*IDC **19** 03:56:29.9±1.0,27.96N×139.69E,h447^{km}±24^{km},mb3.0/4, mb1 3.1/6,mb1mx2.9/22,mbtmp3.9/6,Error ellipse: s-maj=60.6km s-min=20.5km az=77.0*

*JMA **19** 03:56:30.9±0.2,28.19N×140.04E,h459^{km},M3.4*

ISC 19 03:56:29.1±0.9,**28.00N**±0.08×**139.4E**±0.4,**h439**^{km}±21^{km},**n11,**σ**0**^{s}**95**/15,**mb3.2**/4,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.66**	**109**	P	**P**	**03 57 33.6**	**+0.3**
	26nm,0.3s,baz=266,slow=14,SNR=46						
CBIJ				S	**S**	**03 58 23.0**	**-1.0**
	57nm,0.3s,baz=310,slow=23,SNR=17						
CBIJ	**Chichi jima**	**2.66**	**109**	P	**P**	**03 57 33.6**	**+0.3**
CBIJ				S	**S**	**03 58 23.2**	**-0.8**
JHHJ	**Haha-jima-NKT**	**2.85**	**118**	P	**P**	**03 57 35.6**	**+0.9**
JHHJ				S	**S**	**03 58 26.8**	**+0.3**
BSO3	**Boso 3**	**6.85**	**8**	*e*S	**S**	**03 59 35.9**	**+0.8**
JHU	**Hanno**	**7.83**	**360**	*e*S	**S**	**03 59 53.9**	**-0.5**
JAG	**Ashikaga**	**8.40**	**1**	P	**P**	**03 58 30.0**	**-0.1**
JAG				S	**S**	**04 00 04.1**	**-1.7**
ASAJ	**Asahikawa**	**16.29**	**8**	P	**P**	**03 59 56.5**	**+1.6**
	0.5nm,0.3s,baz=225,slow=20,SNR=4.5						
SONM	**Songino Array**	**32.34**	**317**	P	**P**	**04 02 22.7**	**+1.2**
	0.4nm,0.5s,mb3.0,baz=125,slow=8.8,SNR=5.4						
WRA	**Warramunga Arr**	**47.90**	**186**	P	**P**	**04 04 26.3**	**-1.4**
	0.5nm,0.4s,mb3.2,baz=3.0,slow=7.7,SNR=5.9						
MKAR	**Makanchi Array**	**47.97**	**309**	P	**P**	**04 04 28.1**	**+0.2**
	0.3nm,0.4s,mb3.0,baz=106,slow=8.8,SNR=3.7						
FINES	**FINESS Array B**	**76.02**	**333**	P	**P**	**04 07 30.0**	**-0.8**
	2.3nm,1.0s,mb3.8,baz=68,slow=5.7,SNR=9.7						

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*WAR **19** 04:12:08.9,51.51N×16.08E,h1^{km},ML2.6,Mining Induced*

*CSEM **19** 04:12:09.6±0.3,51.47N×16.12E,h2^{km},ML2.8/7,Error ellipse: s-maj=4.7km s-min=2.4km az=13.0*

*IPEC **19** 04:12:09.5±0.3,51.48N×16.37E,ML1.8/3,Error ellipse: s-maj=3.5km s-min=1.9km az=90.0*

*PRU **19** 04:12:10.4,51.42N×16.11E*

*NEIC **19** 04:12:13.6±1.1,51.22N×15.81E,h5^{km},ML2.7(VIE),Error ellipse: s-maj=13.7km s-min=5.9km az=18.0*

ISC 19 04:12:07.8±0.8,**51.44N**±0.04×**16.07E**±0.04,**n24,**σ**1**^{s}**28**/49,**1C,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.61**	**167**	*e*Pg	**Pg**	**04 12 21.4**	**+1.4**
KSP				*i*		04 12 22.0	
KSP				*e*Sg	**Sg**	**04 12 30.7**	**+2.6**
KSP	**Ksiaz**	**0.61**	**167**	*e*PG	**Pg**	**04 12 21.0**	**+1.0**
KSP				*e*SG	**Sg**	**04 12 31.0**	**+2.9**
KSP	**Ksiaz**	**0.61**	**167**	*e*Pg	**Pg**	**04 12 21.4**	**+1.4**
KSP				*e*		04 12 22.0	
KSP				*e*Sg	**Sg**	**04 12 30.7**	**+2.6**
KSP	**Ksiaz**	**0.61**	**167**	*e*Pg	**Pg**	**04 12 21.5**	**+1.5**
KSP				*e*Sg	**Sg**	**04 12 29.8**	**+1.7**
UPC	**Upice**	**0.93**	**182**	*e*PG	**Pg**	**04 12 27.9**	**+1.5**
DPC	**Dobruska-Polom**	**1.10**	**172**	*e*PG	**Pg**	**04 12 30.8**	**+1.0**
DPC				*e*SG	**Sg**	**04 12 46.0**	**+1.6**
	15nm,0.3s						
DPC	**Dobruska-Polom**	**1.10**	**172**	*e*Pg	**Pg**	**04 12 30.8**	**+1.0**
DPC				*e*Sg	**Sg**	**04 12 45.1**	**+0.7**
PVCC	**Panska Ves**	**1.31**	**227**	*e*PG	**Pg**	**04 12 35.0**	**+0.9**
BRG	**Berggiesshubel**	**1.46**	**248**	Pn	**Pn**	**04 12 36.9**	**+1.4**
BRG				Pg	**Pg**	**04 12 37.4**	**+0.5**
BRG				Sg	**Sg**	**04 12 57.2**	**+0.9**
BRG	**Berggiesshubel**	**1.46**	**248**	Pn	**Pn**	**04 12 36.9**	**+1.5**
BRG	**Berggiesshubel**	**1.46**	**248**	Pg	**Pg**	**04 12 37.4**	**+0.5**
PRU	**Pruhonice**	**1.75**	**214**	*e*PN	**Pn**	**04 12 40.7**	**+1.1**
PRU				*e*PG	**Pg**	**04 12 42.3**	**-0.4**
PRU				*e*x	x	04 12 45.9	
PRU				*e*x	x	04 12 59.1	
PRU				*e*SG	**Sg**	**04 13 06.4**	**+0.4**
	6.9nm,0.2s						
MORC	**Moravsky Berou**	**1.91**	**150**	*e*Pn	**Pn**	**04 12 42.6**	**+0.7**
MORC				*e*Sg	**Sg**	**04 13 07.9**	**-3.4**
	6.0nm,0.2s						
CLL	**Collm**	**1.93**	**267**	*i* PG	**Pg**	**04 12 45.0**	**-1.3**
CLL				*e*		04 12 49.0	
CLL				*i* SG	**Sg**	**04 13 11.1**	**-0.9**
CLL	**Collm**	**1.93**	**267**	*i* Pg	**Pg**	**04 12 45.0**	**-1.3**
CLL				*i* Sg	**Sg**	**04 13 11.1**	**-0.9**
OKC	**Ostrava-Krasne**	**2.08**	**140**	*e*PG	**Pg**	**04 12 48.5**	**-0.7**
OKC				*e*SG	**Sg**	**04 13 16.0**	**-0.9**
	12nm,0.6s						
VRAC	**Vranov**	**2.16**	**171**	*e*Pn	**Pn**	**04 12 46.7**	**+1.2**
VRAC				*e*Sg	**Sg**	**04 13 17.2**	**-2.4**
	3.8nm,0.2s						
KRUC	**Moravsky**	**2.39**	**175**	*e*Pn	**Pn**	**04 12 51.0**	**+2.2**
KRUC				*e*Sg	**Sg**	**04 13 25.3**	**-2.0**
	6.1nm,0.3s						
NKC	**Novy Kostel**	**2.59**	**244**	*e*PN	**Pn**	**04 12 52.6**	**+0.9**
NKC				*e*PG	**Pg**	**04 12 59.2**	**-0.4**
NKC				*e*SG	**Sg**	**04 13 33.5**	**-0.7**
NKC	**Novy Kostel**	**2.59**	**244**	Pg	**Pg**	**04 12 59.2**	**-0.4**
NKC				Sg	**Sg**	**04 13 33.5**	**-0.7**
OJC	**Ojcow**	**2.66**	**116**	*e*PG	**Pg**	**04 12 59.0**	**-1.9**
OJC				*e*SG	**Sg**	**04 13 35.0**	**-1.3**
KHC	**Kasperske Hory**	**2.81**	**216**	*e*PN	**Pn**	**04 12 55.4**	**+0.6**
KHC				*e*PG	**Pg**	**04 13 01.9**	**-2.0**
KHC				*e*SN	**Sn**	**04 13 30.8**	**+0.9**
KHC				*e*SG	**Sg**	**04 13 40.5**	**-0.8**
	2.9nm,0.3s						
MOX	**Moxa**	**2.92**	**256**	*e*Pg	**Pg**	**04 13 04.5**	**-1.7**
MOX				*e*Sg	**Sg**	**04 13 43.6**	**-1.5**
MOA	**Molln**	**3.78**	**199**	⇑*i*PN	**Pn**	**04 13 09.4**	**+0.8**
MOA				*i* SG	**Sg**	**04 14 12.9**	**-0.7**
	1.9nm,0.3s						

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*IDC **19** 04:13:31.2±0.8,19.81S×68.92W,h107^{km}±6^{km},mb4.0/9, mb1 4.3/10,mb1mx4.0/19,mbtmp4.5/10,Error ellipse: s-maj=20.4km s-min=17.9km az=82.0*

*NEIC **19** 04:13:33.2±1.3,19.89S×68.76W,h129^{km}±12^{km},mb4.4/6, Error ellipse: s-maj=15.1km s-min=10.6km az=65.0*

ISC 19 04:13:31.8±1.0,**19.96S**±0.06×**68.8W**±0.1,**h134**^{km}±10^{km},**n32,**σ**1**^{s}**40**/26,**mb4.0**/10,**1C-1D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	**2.98**	**170**	*e*P	**P**	**04 14 18.6**	**-0.5**
LPAZ	**La Paz**	**3.70**	**9**	P	**P**	**04 14 30.2**	**+1.5**
	12nm,0.3s,baz=190,slow=8.2,SNR=447						
LPAZ	**La Paz**	**3.70**	**9**	⇑*i*Pn	**P**	**04 14 30.0**	**+1.3**
ANCH	**Antofagasta**	**4.01**	**202**	*e*P	**P**	**04 14 26.5**	**-6.2**
SIV	**San Ignacio**	**8.31**	**63**	P	**P**	**04 15 30.4**	**-0.1**
	25nm,0.3s,baz=256,slow=12,SNR=994						
NNA	**Nana**	**11.11**	**314**	P	**P**	**04 16 09.0**	**+1.3**
	12nm,0.6s						
CFAA	**Coronel Fontan**	**11.60**	**178**	P	**P**	**04 16 10.2**	**-3.9**
	baz=353,slow=14						
SAML	**Samuel**	**12.20**	**27**	*e*P	**P**	**04 16 20.3**	**-1.8**
	6.8nm,0.7s						
TRQA	**Tornquist**	**18.96**	**163**	*e*P	**P**	**04 17 44.2**	**-0.8**
BDFB	**Brasilia**	**20.20**	**81**	P	**P**	**04 17 59.5**	**+1.4**
	16nm,0.6s,baz=269,slow=11,SNR=41						
PLCA	**Paso Flores**	**20.76**	**184**	P	**P**	**04 18 03.2**	**-0.3**
	20nm,0.7s,baz=358,slow=11,SNR=27						
PLCA	**Paso Flores**	**20.76**	**184**	*e*P	**P**	**04 18 02.9**	**-0.6**
	21nm,0.8s						
OTAV	**Otavalo**	**22.21**	**334**	*e*P	**P**	**04 18 20.0**	**+2.0**
	4.3nm,0.8s,mb3.9						
SDV	**Santo Domingo**	**28.73**	**356**	P	**P**	**04 19 16.8**	**-2.1**
	3.4nm,0.9s,mb4.1,baz=207,slow=2.3,SNR=3.7						
SJG	**San Juan**	**37.92**	**4**	P	**P**	**04 20 35.6**	**-2.3**
	12nm,0.7s,mb4.7,baz=79,slow=2.4,SNR=5.2						
TXAR	**Lajitas Array**	**59.46**	**325**	P	**P**	**04 23 21.5**	**-1.6**
	0.3nm,0.6s,mb3.3,baz=148,slow=8.5,SNR=3.0						
MNTX	**Cornudas Mount**	**62.23**	**325**	*e*P	**P**	**04 23 39.7**	**-2.0**
	1.4nm,0.9s,mb3.8						
SNAA	**Sanae**	**63.68**	**161**	*e*P	**P**	**04 23 51.8**	**+1.1**
	17nm,1.5s,mb4.7						
DBIC	**Dimbokro**	**68.16**	**74**	P	**P**	**04 24 21.1**	**+1.0**
	11nm,0.7s,mb4.7,baz=221,slow=7.1,SNR=14						
DBIC	**Dimbokro**	**68.16**	**74**	*e*P	**P**	**04 24 21.0**	**+0.9**
MSU	**Marysvale**	**71.00**	**325**	*e*P	**P**	**04 24 37.8**	**+0.9**
NVAR	**Mina Array Bea**	**74.38**	**322**	P	**P**	**04 24 56.2**	**-0.5**
	1.7nm,0.9s,mb3.8,baz=126,slow=5.8,SNR=8.9						
SYO	**Syowa Base**	**77.88**	**160**	⇓P	**P**	**04 25 15.8**	**+0.1**
VNDA	**Vanda**	**78.38**	**190**	P	**P**	**04 25 20.8**	**+2.5**
	0.5nm,0.8s,mb3.2,baz=117,slow=4.5,SNR=5.3						
YKA	**Yellowknife Ar**	**89.79**	**341**	P	**P**	**04 26 16.7**	**+0.9**
	3.7nm,0.7s,mb4.4,baz=134,slow=4.6,SNR=24						
YKA				pP	pP	04 26 44.5	-6.0
	1.6nm,0.7s,baz=133,slow=4.5,SNR=3.6						
YKA	**Yellowknife Ar**	**89.79**	**341**	P	**P**	**04 26 16.8**	**+0.9**
YKA				pP	pP	04 26 44.5	-6.0
WRA	**Warramunga Arr**	**134.34**	**211**	PKP	PKPdf	04 32 36.9	+2.3
	0.9nm,0.7s,baz=154,slow=1.8,SNR=9.6						
MKAR	**Makanchi Array**	**144.30**	**35**	PKP	PKPdf	04 32 53.9	+2.2
	0.4nm,0.5s,baz=326,slow=4.4,SNR=4.4						
MKAR				pPKP		04 33 21.4	
	0.6nm,0.6s,baz=270,slow=2.4,SNR=3.4						
MJAR	**Matsushiro Arr**	**151.21**	**311**	PKPbc	PKPdf	04 33 12.0	+8.8
	2.0nm,0.8s,baz=83,slow=2.4,SNR=6.2						
MAT	**Matsushiro**	**151.21**	**311**	*e*P	PKPdf	04 33 12.0	+8.8
MAT	**Matsushiro**	**151.21**	**311**	PKP	PKPdf	04 33 11.2	+8.0
SONM	**Songino Array**	**151.92**	**7**	PKP	PKPdf	04 33 08.3	+4.3
	0.4nm,0.9s,baz=270,slow=2.5,SNR=4.3						
SONM				PKPbc	PKPdf	04 33 14.0	+10
	0.7nm,0.4s,baz=326,slow=1.6,SNR=9.9						
SONM				pPKPbc		04 33 43.3	
	1.2nm,0.7s,baz=337,slow=2.0,SNR=5.0						

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*IDC **19** 04:34:15.4±1.0,2.34N×97.18E,mb3.9/9,mb1 4.1/10, mb1mx3.9/19,mbtmp3.9/10,ML4.4/1,MS3.2/1,Ms1 3.4/1, ms1mx2.8/28,Error ellipse: s-maj=49.3km s-min=19.6km az=61.0*

*NEIC **19** 04:34:19.5±0.5,2.23N×97.07E,h30^{km},mb4.3/2,Error ellipse: s-maj=14.6km s-min=8.8km az=61.0*

ISC 19 04:34:17.8±0.8,**2.2N**±0.1×**97.0E**±0.1,**h33**^{km}**,n19,**σ**0**^{s}**65**/16,**mb4.0**/11,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**4.73**	**49**	*e*P	**P**	**04 35 29.2**	**+0.5**
CMAR	**Chiang Mai Arr**	**16.27**	**6**	Pn	**P**	**04 38 05.5**	**0.0**
	0.5nm,0.3s,baz=214,slow=12,SNR=4.1						
CMAR				LR	LR	04 44 35.3	
	comp=Z,85nm,21.7s,baz=190,slow=38						
WRA	**Warramunga Arr**	**42.70**	**123**	P	**P**	**04 42 13.8**	**+0.1**
	2.0nm,0.7s,mb4.0,baz=302,slow=9.1,SNR=7.9						
WRA	**Warramunga Arr**	**42.70**	**123**	P	**P**	**04 42 13.8**	**+0.1**
WRAB	**Tennant Creek**	**42.71**	**123**	*e*P	**P**	**04 42 13.9**	**+0.2**
	5.1nm,0.5s,mb4.5						
SONM	**Songino Array**	**46.17**	**9**	P	**P**	**04 42 40.7**	**-0.5**
	0.7nm,0.6s,mb3.8,baz=185,slow=10.0,SNR=5.4						
MKAR	**Makanchi Array**	**46.24**	**346**	P	**P**	**04 42 41.5**	**-0.3**
	1.0nm,0.5s,mb4.0,baz=146,slow=8.7,SNR=7.8						
ZAL	**Zalesovo**	**52.54**	**351**	P	**P**	**04 43 30.1**	**+0.1**
	1.5nm,0.7s,mb4.1,baz=290,slow=2.8,SNR=4.6						
CTAO	**Charters Tower**	**53.09**	**117**	P	**P**	**04 43 33.7**	**-0.9**
STKA	**Stephens Creek**	**54.14**	**133**	P	**P**	**04 43 42.4**	**+0.1**
	1.3nm,0.6s,mb4.1,baz=302,slow=12,SNR=3.3						
BVAR	**Borovoye Array**	**55.26**	**341**	P	**P**	**04 43 49.4**	**-0.7**
	1.6nm,0.8s,mb4.1,baz=120,slow=12,SNR=9.2						
ZRNK	**Zerenda**	**55.66**	**340**	*e*P	**P**	**04 43 52.1**	**-0.9**
	0.6nm,0.3s,mb4.1						
FINES	**FINESS Array B**	**79.04**	**332**	P	**P**	**04 46 19.9**	**-0.2**
	1.0nm,0.8s,mb3.8,baz=115,slow=6.8,SNR=5.2						
ARCES	**ARCESS Array B**	**81.55**	**340**	P	**P**	**04 46 34.4**	**+1.2**
	0.5nm,0.4s,mb3.8,baz=96,slow=4.8,SNR=14						
ARCES	**ARCESS Array B**	**81.55**	**340**	P	**P**	**04 46 34.4**	**+1.2**
GERES	**GERESS Array B**	**83.96**	**319**	P	**P**	**04 46 47.4**	**+1.4**
	0.3nm,0.7s,mb3.6,baz=146,slow=7.1,SNR=4.7						
TXAR	**Lajitas Array**	**142.90**	**31**	PKP	PKPdf	04 53 51.1	+2.4
	0.1nm,0.3s,baz=188,slow=3.8,SNR=5.0						
CFAA	**Coronel Fontan**	**147.62**	**204**	PKPbc	PKPdf	04 54 03.4	+6.7
	0.4nm,0.7s,baz=160,slow=2.7,SNR=12						
CFAA	**Coronel Fontan**	**147.62**	**204**	PKPbc	PKPdf	04 54 03.4	+6.7

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*IDC **19** 04:46:04.5±0.5,33.09N×58.11E,mb4.6/30,mb1 4.7/32, mb1mx4.7/33,mbtmp4.6/32,MS4.1/20,Ms1 4.1/20, ms1mx4.0/29,Error ellipse: s-maj=14.0km s-min=11.4km az=17.0*

*THR **19** 04:46:04.5±0.7,33.13N×58.21E,h15^{km},ML5.2*

*MOS **19** 04:46:07.9±0.9,33.12N×58.02E,h33^{km},mb5.1/101, MS4.0/34,Error ellipse: s-maj=6.7km s-min=3.1km az=132.8*

*CSEM **19** 04:46:07.6±0.1,33.07N×58.19E,h45^{km},mb4.8/72,Ms3.9, Error ellipse: s-maj=3.3km s-min=2.1km az=68.0*

*BJI **19** 04:46:08.8,33.26N×58.18E,h30^{km},mB5.0,mb5.0,Ms5.0, Msz4.6*

*TEH **19** 04:46:09.8,33.21N×58.01E,h10^{km},Mn5.4*

*BGS **19** 04:46:10.4±2.5,33.14N×58.09E,h42^{km},mb4.7*

*CRAAG **19** 04:46:10.4,33.10N×58.00E,Mb4.8*

*HRVD **19** 04:46:10.5±0.4,33.06N×58.03E,h13^{km}±1^{km},MW4.9/52, Centroid moment Tensor Solution. LP body waves: s17,c23;Mantle waves: s52,c81; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.54±.20; $M_{\theta\theta}$-0.14±.14; $M_{\phi\phi}$-1.40±.14; $M_{r\theta}$1.61±.42; $M_{\theta\phi}$1.83±.09; $M_{\phi r}$1.65±.40; Best double couple: $M_0$3.202×10^{16} NP1:ϕ_s112°,δ52°,λ33°. NP2:ϕ_s1°,δ65°,λ137°. Principal axes: T 3.645, Plg47°, Azm320°; N -.881, Plg42°, Azm156°; P -2.76, Plg8°, Azm59°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **19** 04:46:10.5±0.5,33.14N×58.09E,h42^{km}±4^{km},mb4.9/125 Error ellipse: s-maj=5.3km s-min=3.4km az=178.0*

*OMAN **19** 04:47:04.5,29.11N×57.26E,h117^{km},Error ellipse: s-maj=6046.0km s-min=273.1km az=3.0*

ISC 19 04:46:06.4±0.8,**33.12N**±0.02×**58.12E**±0.02,**h24**^{km}±6^{km},**n569,**σ**1**^{s}**07**/571,**mb4.8**/174,**MS4.2**/37,**29C-13D,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBAF	**Bafgh**	**2.64**	**235**	Pn	**Pn**	**04 46 49.7**	**+1.1**
IMOG	**Moghan**	**3.14**	**18**	Pn	**Pn**	**04 46 58.1**	**+2.4**
ICHK	**Chekchek**	**3.25**	**255**	Pn	**Pn**	**04 46 57.8**	**+0.6**
KRBR	**Kerman**	**3.34**	**201**	*e*PN	**Pn**	**04 46 59.5**	**+1.0**
KRBR				AML	AML	04 48 05.3	
	comp=N,8µm,0.6s						
MHI	**Mashhad**	**3.37**	**19**	Pn	**Pn**	**04 47 02.0**	**+3.1**
IMEH	**Mehriz**	**3.43**	**241**	Pn	**Pn**	**04 47 02.5**	**+2.6**
IMYA	**Miamay**	**3.60**	**26**	Pn	**Pn**	**04 47 04.6**	**+2.4**

ZHSF	Zahedan	4.18	146	ePN	Pn	04 47 09.3	-1.1
IANJ	Anjiloo	4.19	305	Pn	Pn	04 47 11.6	+1.0
NASN	Na’in	4.47	267	ePN	Pn	04 47 14.6	0.0
NASN				AML	AML	04 48 36.2	
	comp=E,2μm,0.5s						
ISHM	Shahmirzad	4.80	305	Pn	Pn	04 47 20.5	+1.3
VAN	Vannovskaya	4.81	360	P	Pn	04 47 19.6	+0.2
ILAS	Lasjerd	4.83	299	Pn	Pn	04 47 20.5	+0.9
IZEF	Zefreh	4.87	269	Pn	Pn	04 47 18.8	-1.4
IGAR	Garneh	5.07	262	Pn	Pn	04 47 22.7	-0.3
IFIR	Firoozkooh	5.09	301	Pn	Pn	04 47 23.7	+0.3
IFIR				Lg		04 48 44.6	
QAM	Qamsar	5.33	280	Pn	Pn	04 47 31.0	+4.3
IPAR	Pars	5.42	234	Pn	Pn	04 47 31.6	+3.5
IKLH	Kalahroud	5.48	274	Pn	Pn	04 47 27.7	-1.2
IDMV	Damavand	5.59	298	Pn	Pn	04 47 31.0	+0.5
IVRN	Varamin	5.62	291	Pn	Pn	04 47 30.9	+0.1
IVRN				Sn	Sn	04 48 31.4	-4.0
DAMV	Damavand	5.66	298	ePN	Pn	04 47 31.6	+0.2
DAMV				AML	AML	04 49 24.8	
	comp=E,874nm,0.8s						
BNDS	Bandar-Abbas	5.95	197	ePN	Pn	04 47 34.8	-0.7
BNDS				AML	AML	04 49 46.4	
	comp=N,460nm,1.0s						
IQOM	Qom	6.10	288	Sn	Sn	04 48 42.4	-5.0
IMOK	Mook	6.16	230	Pn	Pn	04 47 38.0	-0.5
GHIR	Ghir-Karzin	6.54	224	ePN	Pn	04 47 43.0	-0.8
THKV	Tehran--Karaj	6.59	297	ePN	Pn	04 47 44.8	+0.3
ASAO	Ashtian	6.88	284	ePN	Pn	04 47 48.3	-0.3
IRAZ	Razeghan	7.15	291	Pn	Pn	04 48 05.8	+13
BANOM	Banah	7.35	193	⇓P	Pn	04 47 54.6	-0.6
	SNR=13						
SHGO	Shushtar	7.92	265	ePN	Pn	04 48 02.6	-0.6
SHGR	Shooshtar-Gavs	7.92	265	ePN	Pn	04 48 02.6	-0.6
ASHO	Ashiyiah	8.60	193	⇓P	P	04 48 11.3	-1.3
	SNR=11						
IKOM	Komasi	8.90	280	Pn	P	04 48 17.0	+0.3
ILIN	Laeen	9.43	284	Pn	P	04 48 31.0	+7.0
IVIS	Veys	9.47	282	Pn	P	04 48 26.2	+1.6
HOQ	Hoqain	9.53	184	⇑P	P	04 48 24.3	-1.2
ARQ	Araqi	9.85	189	⇓P	P	04 48 28.7	-1.2
IDHR	Dehrash	9.87	282	Pn	P	04 48 31.3	+1.1
SMDO	Samad	10.03	180	⇑P	P	04 48 32.1	-0.2
	SNR=6.5						
GRMI	Germi	10.04	307	ePN	P	04 48 31.1	-1.3
HASS	Wahat al Ahsa’	10.80	225	P	P	04 48 38.0	-4.8
JASL	Jaisalmer	12.68	116	eP	P	04 49 07.5	-0.8
GNI	Garni	12.82	307	c iP	P	04 49 11.0	+1.0
GNI				pmax	pmax		
	comp=Z,111nm,2.5s						
GNI				MLR	MLR		
	comp=Z,600nm,14.0s						
GNI	Garni	12.82	307	Pn	P	04 49 10.9	+0.9
	comp=Z,0.7nm,0.3s,baz=30,slow=3.4,SNR=14						
GNI	Garni	12.82	307	P	P	04 49 09.4	-0.7
	comp=Z,64nm,1.1s						
MAK	Makhachkala	12.89	323	eP	P	04 49 09.0	-1.9
MAK				MLR	MLR		
	comp=Z,1μm,8.0s						
TI2	Plekhanov	13.65	313	eP	P	04 49 16.6	-4.4
TI2				MLR	MLR		
	comp=E,2μm,10.0s						
TI2				MLR	MLR		
	comp=Z,1μm,10.0s						
KKAR	Karatay Array	13.93	41	P	P	04 49 21.5	-3.2
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MZLS	Mizel	14.51	235	P	P	04 49 29.4	-3.0
ZEI	Tsey	14.76	315	eP	P	04 49 34.4	-1.2
ERZM	Erzurum	15.06	301	iP	P	04 49 42.0	+2.4
HILS	Ha’il	15.22	252	P	P	04 49 39.0	-2.7
AML	Almayashu	15.25	49	P	P	04 49 40.2	-1.7
	SNR=16						
BHK	Bhakra	15.58	91	eP	P	04 49 48.5	+2.2
EKS2	Erkin-Say	15.58	48	P	P	04 49 45.3	-1.0
	SNR=14						
KSH	Kashi	15.73	61	P	P	04 49 46.0	-2.2
KSH				eAP		04 49 51.3	
KSH				PP	PP	04 50 00.0	-0.8
KSH				AMB	AMB		
	comp=Z,280nm,3.6s						
KSH				LR	LR		
	comp=N,7μm,11.2s						
KSH				LR	LR		
	comp=E,6μm,5.2s						
UCH	Uchtor	15.83	50	P	P	04 49 47.9	-1.5
	SNR=6.1						
AAK	Ala-Archa	16.02	49	iP	P	04 49 50.0	-1.9
AAK				pmax	pmax		
	comp=Z,69nm,1.1s						
AAK				MLR	MLR		
	comp=Z,2μm,13.0s						
AAK	Ala-Archa	16.02	49	eP	P	04 49 49.5	-2.3
	comp=Z,100nm,1.3s						
KHET	Khetri	16.04	104	eP	P	04 49 55.4	+3.2
KHET				AMb	AMB	04 50 00.1	
	comp=Z,48nm,2.0s						
AFFS	‘Afif	16.12	239	P	P	04 49 50.3	-3.0
AB31	Akbulak array	16.18	4	iP	P	04 49 50.4	-3.4
AB31				pmax	pmax		
	comp=Z,81nm,1.0s						
KIV	Kislovodsk	16.18	316	d iP	P	04 49 54.4	+0.5
KIV				pmax	pmax		
	comp=Z,46nm,0.9s						
KIV				MLR	MLR		
	comp=Z,300nm,18.0s						
KIV	Kislovodsk	16.18	316	eP	P	04 49 52.9	-1.0
	comp=Z,53nm,0.9s						
FRU	Bishkek	16.20	49	⇑iP	P	04 49 53.0	-1.2
FRU				pmax	pmax		
	comp=Z,150nm,1.5s						
KZA	Kyzart	16.23	52	P	P	04 49 51.8	-2.9
	SNR=15						
KBK	Karagaybulak	16.32	49	P	P	04 49 55.2	-0.5
	SNR=8.4						
USP	Ospenovka	16.36	47	P	P	04 49 54.2	-2.0
	SNR=6.5						
CHMS	Chumysh	16.37	48	P	P	04 49 55.8	-0.5
	SNR=15						
KELT	Kelkit	16.67	300	iP	P	04 50 03.2	+3.1
GOF	Gofitskoye	16.67	320	⇑iP	P	04 49 57.0	-3.1
GOF				pmax	pmax		
	comp=Z,43nm,1.3s						
MALT	Malatya	16.80	294	eP	P	04 50 03.2	+1.4
MALT				pmax	pmax		
	comp=Z,24nm,1.0s						
MALT	Malatya	16.80	294	eP	P	04 50 03.2	+1.5
	comp=Z,24nm,1.0s						
TKM2	Tokmak 2	16.86	50	P	P	04 50 02.2	-0.3
	SNR=14						
AYAN	Aya Nagar	16.97	101	ex	x	04 50 09.0	
AYAN				AMb	AMB	04 50 10.6	
	comp=Z,10nm,0.6s						
NDI	New Delhi	16.98	100	eP	P	04 50 07.5	+3.4
NDI				eP		04 50 07.7	
NDI				AMb	AMB	04 50 11.6	
	comp=Z,127nm,1.1s						
SONA	Sohna	17.02	102	eP	P	04 50 03.7	-0.9
SONA				AMb	AMB	04 50 10.2	
	comp=Z,28nm,0.9s						
GZT	Gaziantep	17.31	290	iP	P	04 50 08.3	+0.2
QURS	Qurayyt al Mil	17.67	270	P	P	04 50 14.5	+1.7
SOC	Sochi	17.77	311	c iP	P	04 50 13.5	-0.4
SOC				e		04 53 27.6	
SOC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SOC				pmax	pmax		
	comp=N,5.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,7.0nm,0.6s						
SOC				MLR	MLR		
	comp=N,443nm,12.0s						
SOC				MLR	MLR		
	comp=Z,378nm,12.0s						
SOC				MLR	MLR		
	comp=E,216nm,11.0s						
KAHT	Ahir Dag	17.89	291	iP	P	04 50 16.4	+1.0
ASF	Jabal al Asfar	17.90	273	Pn	P	04 50 16.1	+0.6
	comp=E,0.6nm,0.3s,baz=307,slow=3.3,SNR=11						
ASF				LR	LR	04 58 24.8	
	comp=E,543nm,18.9s,baz=129,slow=41						
AGRA	Agra	18.11	104	eP	P	04 50 19.2	+0.9
AGRA				AMb	AMB	04 50 20.1	
	comp=Z,49nm,0.4s						
COBT	Iskenderun	18.26	287	iP	P	04 50 23.0	+2.9
BHL	Bhannes	18.75	279	eP	P	04 50 28.5	+2.5
TATS	Tathlith	18.81	228	P	P	04 50 24.8	-2.1
TBKS	Tabuk	19.17	261	P	P	04 50 33.2	+2.1
JMQS	Jabal Moqyreh	19.52	263	P	P	04 50 37.4	+2.4
BHPL	Bhopal	19.64	115	eP	P	04 50 37.4	+1.0
BHPL				iP		04 50 38.3	
BHPL				AMb	AMB	04 50 39.6	
	comp=Z,43nm,1.0s						
BLJS	Baljurashi	19.77	232	P	P	04 50 38.6	+0.6
ANN	Anapa	19.80	312	eP	P	04 50 37.6	-0.5
ANN				eS	S	04 54 19.4	+5.1
ANN				pmax	pmax		
	comp=Z,385nm,9.6s						
ANN				MLR	MLR		
	comp=N,755nm,20.0s						
ANN				MLR	MLR		
	comp=E,623nm,20.0s						
ANN				MLR	MLR		
	comp=Z,467nm,20.0s						
EIL	Elat	20.06	266	eP	P	04 50 40.1	-0.9
	comp=Z,56nm,1.1s						
ALWS	Ilw as Safayha	20.07	265	P	P	04 50 43.5	+2.4
JMOS	Jabal al Moall	20.07	265	P	P	04 50 43.1	+2.0
DJNS	Zahran al Janu	20.18	224	P	P	04 50 42.7	+0.4
BOYT	Boyabat	20.20	301	iP	P	04 50 43.0	+0.7
HAQS	Haql	20.26	265	P	P	04 50 45.7	+2.7
BDAS	Al Bad‘	20.31	263	P	P	04 50 45.2	+1.7
CSS	Prodhromos	20.61	282	eP	P	04 50 47.2	+0.6
	comp=Z,75nm,1.4s						
BR131	Keskin Array S	20.73	296	eP	P	04 50 47.7	-0.2
	comp=Z,15nm,0.8s						
BRTR	Keskin Array B	20.73	296	P	P	04 50 47.7	-0.2
BRTR				pmax	pmax		
	comp=Z,15nm,0.8s						
BRTR	Keskin Array B	20.73	296	P	P	04 50 47.6	-0.2
	comp=Z,15nm,0.8s,baz=117,slow=11,SNR=36						
ERMK	Ermenek	20.95	287	iP	P	04 50 51.0	+0.9
ZRNK	Zerenda	21.31	18	⇑iP	P	04 50 52.5	-1.1
ZRNK				pmax	pmax		
	comp=Z,43nm,1.0s,mb4.7						
ZRNK	Zerenda	21.31	18	⇑iP	P	04 50 52.5	-1.1
	comp=Z,43nm,1.0s,mb4.7						
BALT	Daday	21.33	300	iP	P	04 50 54.2	+0.3
BVA0	Borovoye Array	21.76	20	iP	P	04 50 57.7	-0.5
BVA0				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.4						
BVAR	Borovoye Array	21.76	20	P	P	04 50 57.7	-0.5
	comp=Z,38nm,0.7s,mb4.9,baz=203,slow=12,SNR=74						
SIM	Simferopol’	21.98	309	d iP	P	04 51 01.0	+0.6
SIM				eS	S	04 55 05.0	+8.3
SIM				pmax	pmax		
	comp=Z,49nm,1.0s,mb4.9						
SGKT	Sivrigoynuk	22.09	297	iP	P	04 51 02.2	+0.7
KOLN	Koldanda	22.58	97	eP	P	04 51 06.5	-0.1
	comp=Z,69nm,1.0s,mb5.0						
ESKT	Eskisehir	22.83	294	iP	P	04 51 10.4	+1.6
MKAR	Makanchi Array	22.90	46	iP	P	04 51 10.8	+1.3
MKAR				pmax	pmax		
	comp=Z,100nm,1.2s						
MKAR	Makanchi Array	22.90	46	P	P	04 51 10.1	+0.6
	comp=Z,24nm,1.0s,mb4.6,baz=225,slow=8.6,SNR=32						
MKAR				LR	LR	05 00 45.2	
	comp=Z,426nm,19.5s,MS3.9,baz=236,slow=38						
ISP	Isparta	22.93	290	d iP	P	04 51 12.2	+2.4
ISP	Isparta	22.93	290	eP	P	04 51 11.8	+2.0
	comp=Z,32nm,0.8s,mb4.8						
HENT	Hendek	23.00	297	iP	P	04 51 07.2	-3.3
TKTP	Tekketepe	23.09	290	iP	P	04 51 13.2	+1.8
VOR	Voronezh	23.13	329	P	P	04 51 12.0	+0.4
VOR				e		04 51 26.0	
VOR				pmax	pmax		
	comp=Z,100nm,1.4s,mb5.0						
ARU	Arti	23.31	1	⇑iP	P	04 51 13.3	0.0
ARU				ePPP	PPP	04 51 48.4	-6.3
ARU				eS	S	04 55 21.6	+1.2
ARU				eSSS	SSS	04 56 02.3	-21
ARU				pmax	pmax		
	comp=Z,50nm,1.7s,mb4.7						
ARU	Arti	23.31	1	eP	P	04 51 12.9	-0.4
	comp=Z,36nm,1.0s,mb4.8						
GKN	Gorkha	23.37	96	eP	P	04 51 14.5	+0.3
	comp=Z,130nm,0.9s,mb5.3						
GOLH	Golhisar	23.66	288	iP	P	04 51 13.4	-3.5
SVE	Sverdlovsk	23.77	3	⇓eP	P	04 51 19.0	+1.2
SVE				e		04 51 48.2	
SVE				eSS	SS	04 56 36.0	+18
SVE				pmax	pmax		
	comp=Z,96nm,1.6s,mb5.0						
SVE				MLR	MLR		
	comp=N,400nm,13.0s,MS4.1						
SVE				MLR	MLR		
	comp=E,200nm,13.0s,MS4.1						
SVE				MLR	MLR		
	comp=Z,700nm,13.0s,MS4.3						
GDZ	Gediz	23.83	293	iP	P	04 51 19.4	+0.8
DMN	Daman	23.89	96	eP	P	04 51 20.7	+1.4
	comp=Z,82nm,0.9s,mb5.2						
KKN	Kakani	23.98	96	eP	P	04 51 21.5	+1.4
	comp=Z,111nm,0.8s,mb5.4						
KKN	Kakani	23.98	96	eP	P	04 51 21.5	+1.4
KKN				pmax	pmax		
	comp=Z,56nm,0.8s,mb5.0						
PKI	Pulchoki	24.16	96	eP	P	04 51 22.9	+1.0
	comp=Z,132nm,0.8s,mb5.4						
PKI	Pulchoki	24.16	96	eP	P	04 51 22.9	+1.0
PKI				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.1						
ULDT	Uludag	24.22	295	iP	P	04 51 21.7	-0.6
GUN	Gumba	24.44	95	eP	P	04 51 25.2	+0.6
	comp=Z,206nm,0.9s,mb5.6						
MANT	Manisa	24.50	291	iP	P	04 51 25.2	+0.1
AYDN	Tasoluk	25.00	289	iP	P	04 51 31.3	+1.3
BTOK	Tokmak	25.02	294	iP	P	04 51 30.8	+0.7
KDAG	Bornova	25.51	291	iP	P	04 51 33.8	-1.0
URLA	Izmir	26.04	291	iP	P	04 51 31.8	-7.8
SOKR	Solikamsk	26.47	358	⇓iP	P	04 51 43.2	-0.1
SOKR				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.7						
SOKR				MLR	MLR		
	comp=Z,330nm,21.0s,MS3.9						
OBN	Obninsk	26.67	332	d iP	P	04 51 45.6	+0.3
OBN				e		04 52 27.1	
OBN				pmax	pmax		
	comp=Z,58nm,1.2s,mb5.0						
MOS	Moscow	26.73	334	eP	P	04 51 46.0	+0.2
MOS				e		04 52 26.8	
MOS				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.0						
SANT	Santorini	26.96	286	eP	P	04 51 47.3	-0.8
	comp=Z,27nm,0.9s,mb4.8						
IDI	Anoyia	27.49	284	P	P	04 51 53.1	+0.1
	comp=Z,6.8nm,0.5s,mb4.5,baz=64,slow=5.2,SNR=16						
AKASG	Malin Array Be	27.51	318	P	P	04 51 52.9	0.0
AKASG				pmax	pmax		
	comp=Z,37nm,0.8s						
AKASG	Malin Array Be	27.51	318	P	P	04 51 52.9	-0.1
	comp=Z,37nm,0.8s,mb5.1,baz=123,slow=9.1,SNR=19						
MLR	Muntele Rosu	27.60	306	P	P	04 51 54.2	+0.4
MLR				pmax	pmax		
	comp=Z,12nm,0.8s						
MLR	Muntele Rosu	27.60	306	P	P	04 51 54.2	+0.4
	comp=Z,12nm,0.8s,mb4.6,baz=101,slow=3.9,SNR=12						
MLR	Muntele Rosu	27.60	306	P	P	04 51 54.2	+0.4
MLR	Muntele Rosu	27.60	306	⇓P	P	04 51 56.1	+2.3
NVS	Novosibirsk	27.98	32	eP	P	04 51 55.8	-1.3
NVS				eS	S	04 56 40.2	+2.0
NVS				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.5						
NVS				pmax	pmax		
	comp=N,23nm,1.6s						
NVS				smax			
	comp=N,17nm,1.6s						
NVS				smax			
	comp=E,12nm,1.6s						
GVD	Gavdhos	28.19	283	eP	P	04 51 58.8	-0.5
	comp=E,26nm,0.9s,mb4.9						
BURAR	Bucovina Array	28.69	310	⇓P	P	04 52 03.3	-0.4
BOLS	Boljevac	30.04	301	⇑iP	P	04 52 15.9	+0.1
LVV	L’vov	30.17	314	eP	P	04 52 17.9	+1.0
LVV				e		04 53 29.5	
LVV				MLR	MLR		
	comp=Z,170nm,15.0s,MS3.8						
LVV				MLR	MLR		
	comp=N,170nm,17.0s,MS4.1						
LVV				MLR	MLR		
	comp=E,310nm,17.0s,MS4.1						
SHL	Shillong	30.29	95	eP	P	04 52 18.0	-0.2
BZS	Buzias	30.59	305	⇓P	P	04 52 19.8	-0.8
KWP	Kalwaria	30.91	313	eP	P	04 52 23.4	0.0
KWP				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.1						
KWP	Kalwaria	30.91	313	eP	P	04 52 23.4	0.0
	comp=Z,26nm,0.8s,mb5.1						
KOLS	Kolonicke sedl	30.97	311	eP	P	04 52 24.5	+0.6
KECS	Kecovo	31.98	310	eP	P	04 52 32.7	-0.1
PSZ	Piszkesteto	32.23	309	eP	P	04 52 33.8	-1.2
PSZ				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
PSZ	Piszkesteto	32.23	309	eP	P	04 52 33.8	-1.2
	comp=Z,8.8nm,0.8s,mb4.6						
NIE	Niedzica	32.34	312	eP	P	04 52 36.6	+0.7
OJC	Ojcow	32.88	313	eP	P	04 52 40.5	-0.2
VYHS	Vyhne	33.05	309	eP	P	04 52 41.9	-0.2
OKC	Ostrava-Krasne	33.81	312	eP	P	04 52 48.8	+0.1
OKC				AMS	AMS	05 10 10.0	
	comp=Z,200nm,17.8s						
GTA	Gaotai	33.97	67	P	P	04 52 51.6	+1.4
GTA				PP	PP	04 54 05.8	+1.6
GTA				PCP	PcP	04 55 30.0	+1.7
GTA				S	S	04 58 10.5	-2.3
GTA				SCP		04 59 07.3	
GTA				SS	SS	05 00 19.4	-1.1
GTA				SCS	ScS	05 03 07.1	-3.8
GTA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
GTA				AMB	AMB		
	comp=Z,110nm,11.8s						
GTA				LR	LR		
	comp=N,400nm,13.7s,MS4.5						
GTA				LR	LR		
	comp=E,620nm,17.5s,MS4.5						
GTA				LR	LR		
	comp=Z,600nm,17.9s,MS4.4						
ZST	Bratislava	34.12	308	eP	P	04 52 50.9	-0.5
MORC	Moravsky Berou	34.17	311	eP	P	04 52 51.2	-0.7
MORC				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
MORC	Moravsky Berou	34.17	311	eP	P	04 52 51.2	-0.7
	comp=Z,5.4nm,0.8s,mb4.5						
MORC	Moravsky Berou	34.17	311	eP	P	04 52 51.4	-0.5
KOGS	Kog	34.41	305	iP	P	04 52 53.7	-0.3
VRAC	Vranov	34.67	310	P	P	04 52 56.6	+0.4
VRAC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VRAC	Vranov	34.67	310	P	P	04 52 56.6	+0.5
	comp=Z,3.1nm,0.7s,mb4.3,baz=86,slow=10,SNR=5.7						
VRAC	Vranov	34.67	310	eP	P	04 52 56.0	-0.2
SGO	Sicignano	34.78	295	P	P	04 52 57.8	+0.6
SGO				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
SGO	Sicignano	34.78	295	P	P	04 52 57.8	+0.6
	comp=Z,16nm,1.3s,mb4.8						
CSSN	Cassano Irpino	34.99	295	P	P	04 52 56.8	-2.2
ARSA	Arzberg	35.01	307	⇑iP	P	04 52 59.0	-0.1
	comp=Z,16nm,0.9s,mb5.0						
FINES	FINESS Array B	35.04	334	P	P	04 52 59.8	+0.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,129nm,19.4s						
FINES	FINESS Array B	35.04	334	P	P	04 52 59.8	+0.7
	comp=Z,2.3nm,0.7s,mb4.2,baz=130,slow=7.7,SNR=12						
FINES				LR	LR	05 09 02.4	
	comp=Z,129nm,19.4s,MS3.7,baz=166,slow=39						
DPC	Dobruska-Polom	35.07	312	eP	P	04 53 00.2	+0.6
DPC				AMS	AMS	05 11 20.0	
	comp=Z,300nm,10.9s						
KSP	Ksiaz	35.21	313	⇑eP	P	04 53 01.0	+0.3
PERS	Pernice	35.21	305	eP	P	04 53 00.1	-0.6
UPC	Upice	35.30	312	eP	P	04 53 02.3	+0.8
KAF	Kangasniemi	35.38	335	ep	P	04 53 00.9	-1.2
CII	Carovilli	35.52	297	P	P	04 53 04.8	+1.3
MIDA	Miranda	35.56	297	P	P	04 53 04.1	+0.3
	comp=Z,31nm,0.9s,mb5.2						
VAE	Valguarnera	35.69	290	P	P	04 53 05.9	+0.9
	comp=Z,4.1nm,0.4s,mb4.7,baz=55,slow=16,SNR=3.3						
VAE				LR	LR	05 08 13.8	
	comp=Z,187nm,19.0s,MS3.9,baz=310,slow=37						
VVLD	Villa Vallelon	36.03	297	P	P	04 53 08.1	+0.3
	comp=Z,24nm,1.2s,mb5.0						
MOY	Mondy	36.05	46	eP	P	04 53 09.6	+1.8
MOY				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.3						
PRU	Pruhonice	36.12	311	eP	P	04 53 08.3	-0.1
PRU				AMS	AMS	05 10 20.0	
	comp=Z,200nm,20.8s						
AQU	L’Aquila	36.19	298	P	P	04 53 10.1	+1.0
AQU				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
AQU	L’Aquila	36.19	298	P	P	04 53 10.1	+1.0
	comp=Z,19nm,0.8s,mb5.1						
PTQR	Pietraquaria	36.19	297	P	P	04 53 09.7	+0.6
PVCC	Panska Ves	36.21	312	eP	P	04 53 09.9	+0.7
PVCC				AMS	AMS	05 15 10.0	
	comp=Z,200nm,17.8s						
ROBS	Robic	36.27	305	eP	P	04 53 09.4	-0.4
PTCC	Patocco-Chiusa	36.40	305	P	P	04 53 10.6	-0.2
FIAM	Fiamignano	36.40	298	P	P	04 53 11.7	+0.8
	comp=Z,24nm,0.8s,mb5.2						
NRCA	Norcia	36.40	299	P	P	04 53 11.2	+0.3
GEC2	GERESS Array S	36.46	309	eP	P	04 53 10.9	-0.4
GEC2				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
GEC2	GERESS Array S	36.46	309	eP	P	04 53 10.9	-0.4
	comp=Z,30nm,1.3s,mb5.1						
GERES	GERESS Array B	36.46	309	P	P	04 53 11.1	-0.2
GERES				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GERES				MLR	MLR		
	comp=Z,241nm,19.7s						
GERES	GERESS Array B	36.46	309	P	P	04 53 11.1	-0.2
	comp=Z,10nm,0.8s,mb4.8,baz=112,slow=7.2,SNR=53						
GERES				LR	LR	05 09 45.3	
	comp=Z,241nm,19.7s,MS4.0,baz=124,slow=39						
ARV	Arcevia	36.53	300	P	P	04 53 12.5	+0.5
ARV				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
ARV	Arcevia	36.53	300	P	P	04 53 12.5	+0.5
	comp=Z,18nm,0.8s,mb5.0						
KHC	Kasperske Hory	36.58	309	eP	P	04 53 12.3	-0.1
KHC				AMS	AMS	05 09 10.0	
	comp=Z,200nm,17.8s						
FSSB	Fossombrone	36.65	300	P	P	04 53 13.7	+0.7
BRG	Berggiesshubel	36.67	312	iP	P	04 53 13.9	+0.9
BRG				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.8						
BRG	Berggiesshubel	36.67	312	iP	P	04 53 13.9	+0.9
	comp=Z,22nm,1.4s,mb4.8						
BRG	Berggiesshubel	36.67	312	eP	P	04 53 13.3	+0.3
	comp=Z,22nm,1.4s,mb4.8						
MNS	Montasola	36.72	298	P	P	04 53 13.4	-0.2
MNS				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9						
MNS	Montasola	36.72	298	P	P	04 53 13.4	-0.2
	comp=Z,16nm,0.8s,mb4.9						
ASS	Assisi	36.74	299	P	P	04 53 14.8	+1.1
ASS				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
ASS	Assisi	36.74	299	P	P	04 53 14.8	+1.1
	comp=Z,4.6nm,0.6s,mb4.5						
MURB	Monte Urbino	36.83	299	P	P	04 53 15.7	+1.2
	comp=Z,33nm,1.0s,mb5.1						
ZAK	Zakamensk	37.19	49	⇑iP	P	04 53 18.7	+1.2
ZAK				e		04 54 48.7	
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.7						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.9						
SEST	Monte Rota	37.21	305	P	P	04 53 17.6	0.0
	comp=Z,30nm,1.1s,mb5.0						
SFI	Santa Sofia	37.33	301	P	P	04 53 20.1	+1.4
SFI				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
SFI	Santa Sofia	37.33	301	P	P	04 53 20.1	+1.4
	comp=Z,20nm,0.8s,mb5.0						
CLL	Collm	37.33	313	⇑iP	P	04 53 18.9	+0.3
CLL				e		04 54 46.0	
CLL				pmax	pmax		
	comp=Z,52nm,1.4s,mb5.2						
CLL				MLR	MLR		

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      comp=Z,300nm,17.3s,MS4.2
CLL   Collm            37.33 313⇑iP   P      04 53 18.9 +0.3
      comp=Z,52nm,1.4s,mb5.2
CLL                              e           04 54 46.0
CLL                               LR  LR
      comp=Z,300nm,17.3s,MS4.2
CLL   Collm            37.33 313 ⇑P   P      04 53 18.9 +0.3
      comp=Z,logA/T=1.6,mb5.2
CLL                              ePP  PP     04 54 46.0 -0.4
CLL   Collm            37.33 313 eP   P      04 53 18.9 +0.3
      comp=Z,52nm,1.4s,mb5.2
APA   Apatity          37.37 345⇑iP   P      04 53 19.0 +0.3
APA                               pmax pmax
      comp=Z,43µm,1.2s
APA                               MLR MLR
      comp=Z,900nm,14.0s
PGD   Poggio Sodo      37.42 300  P   P      04 53 21.3 +1.9
PGD                               pmax pmax
      comp=Z,42nm,1.1s,mb5.2
PGD   Poggio Sodo      37.42 300  P   P      04 53 21.3 +1.9
      comp=Z,42nm,1.1s,mb5.2
NKC   Novy Kostel      37.49 311 eP   P      04 53 20.4 +0.5
NKC                               AMS AMS    05 10 10.0
      comp=Z,200nm,19.0s
LZH   Lanzhou          37.49  72 ⇑P   P      04 53 23.9 +3.8
LZH                               AMB AMB
      comp=Z,20nm,1.3s,mb4.8
LZH                               LR  LR
      comp=N,430nm,14.7s
LZH                               LR  LR
      comp=Z,540nm,17.9s,MS4.4
LZH   Lanzhou          37.49  72 ⇑P   P      04 53 23.9 +3.8
LZH                               *PP pP     04 53 37.5  +10
LZH                                          04 55 08.2
LZH                               pmax pmax
      comp=Z,29nm,1.3s,mb5.0
LZH                               MLR MLR
      comp=Z,540nm,17.9s,MS4.4
LZH   Lanzhou          37.49  72 ⇑P   P      04 53 23.9 +3.8
      comp=Z,29nm,1.3s,mb5.0
LZH                               pP  pP     04 53 37.5  +10
LZH                               sP  sP     04 53 45.0  +15
LZH                               PP  PP     04 55 08.2  +20
LZH                               LR  LR
      comp=Z,540nm,17.9s,MS4.4
CTI   Castel Tesino    37.55 304  P   P      04 53 20.6 +0.1
CTI                               pmax pmax
      comp=Z,24nm,1.2s,mb4.8
CTI   Castel Tesino    37.55 304  P   P      04 53 20.6 +0.1
      comp=Z,24nm,1.2s,mb4.8
VMG   Vicchio          37.55 301  P   P      04 53 22.3 +1.8
NOTT  Nottersdorf      37.63 310 eP   P      04 53 21.0 -0.1
TLY   Talaya           37.66  47 eP   P      04 53 22.8 +1.4
TLY                              e           04 54 54.8
TLY                              eS   S      04 59 19.2  +10
TLY                               pmax pmax
      comp=Z,29nm,1.4s,mb4.8
TLY                               MLR MLR
      comp=Z,1µm,15.0s,MS4.8
TLY   Talaya           37.66  47 eP   P      04 53 23.2 +1.8
      comp=Z,25nm,1.3s,mb4.8
SEI   Scarperia        37.69 301  P   P      04 53 23.2 +1.5
WATA  Walderalm        37.69 306⇑iP   P      04 53 20.7 -1.0
      comp=Z,11nm,0.8s,mb4.7
WATA  Walderalm        37.69 306⇑iP   P      04 53 20.7 -1.0
WATA                              pmax pmax
      comp=Z,11nm,0.8s,mb4.6
FNVD  Fontana Vidola   37.86 301  P   P      04 53 24.3 +1.2
      comp=Z,30nm,0.8s,mb5.1
APPI  Appiano          37.87 305  P   P      04 53 22.5 -0.7
      comp=Z,16nm,0.9s,mb4.8
SQTA  Sankt Quirin     37.93 306⇑iP   P      04 53 22.9 -0.8
      comp=Z,8.4nm,0.6s,mb4.7
SQTA  Sankt Quirin     37.93 306⇑iP   P      04 53 22.9 -0.8
SQTA                              pmax pmax
      comp=Z,8.0nm,0.6s,mb4.6
ZCCA  Zocca            37.96 301  P   P      04 53 26.3 +2.3
GRFL  Gerfalco         37.97 299  P   P      04 53 24.2 +0.2
      comp=Z,11nm,1.0s,mb4.5
MOX   Moxa             38.08 312 eP   P      04 53 25.0 +0.1
MOX                               pmax pmax
      comp=Z,20nm,1.5s,mb4.6
MOX                               MLR MLR
      comp=Z,200nm,19.0s,MS4.0
MOX   Moxa             38.08 312 eP   P      04 53 25.0 +0.1
      comp=Z,20nm,1.5s,mb4.6
MOX                               LR  LR
      comp=Z,200nm,19.0s,MS4.0
MOX   Moxa             38.08 312 i P  P      04 53 25.0 +0.1
      comp=Z,logA/T=1.1,mb4.6
MOX                               L          05 11 42.0
MOX   Moxa             38.08 312 eP   P      04 53 25.1 +0.2
      comp=Z,20nm,1.4s,mb4.7
IRK   Irkutsk          38.16  46 eP   P      04 53 28.8 +3.3
IRK                               pmax pmax
      comp=Z,39nm,1.8s,mb4.8
GRA1  Grafenberg Arr   38.19 310 eP   P      04 53 25.8  0.0
      comp=Z,18nm,1.3s,mb4.6
GRF   Grafenberg Arr   38.19 310 eP   P      04 53 25.8  0.0
GRF                               pmax pmax
      comp=Z,18nm,1.3s,mb4.6
GRF   Grafenberg Arr   38.19 310 eP   P      04 53 25.8  0.0
GRF                               pmax pmax
      comp=Z,18nm,1.3s,mb4.6
GRF   Grafenberg Arr   38.19 310 eP   P      04 53 25.8  0.0
      comp=Z,18nm,1.3s,mb4.6
BDI   Bagni Di Lucca   38.23 301  P   P      04 53 26.3  0.0
BDI                               pmax pmax
      comp=Z,12nm,0.6s,mb4.8
BDI   Bagni Di Lucca   38.23 301  P   P      04 53 26.3  0.0
      comp=Z,12nm,0.6s,mb4.8
GSCL  Gusciola         38.24 301  P   P      04 53 27.5 +1.1
PII   Pisa             38.29 300  P   P      04 53 25.3 -1.4
MAIM                   38.31 301  P   P      04 53 27.1 +0.1
MAIM                   38.31 301  P   P      04 53 27.1 +0.2
MABI  Malga Bissina    38.34 304  P   P      04 53 27.7 +0.6
      comp=Z,14nm,0.9s,mb4.7
SARO  Sassorosso       38.38 301  P   P      04 53 27.8 +0.3
VLC   Villacollemand   38.39 301  P   P      04 53 28.6 +1.0
      comp=Z,47nm,1.6s,mb5.0
BRMO  Bormio           38.46 305  P   P      04 53 28.4 +0.3
VALM                   38.49 301  P   P      04 53 28.6 +0.2
VALM                   38.49 301  P   P      04 53 28.6 +0.2
CD2   Chengdu          38.53  81 eP   P      04 53 29.0 +0.1
FUORN Ofenpass         38.54 305  P   P      04 53 29.5 +0.7
VINC  Vinca            38.55 301  P   P      04 53 28.1 -0.8
VINC  Vinca            38.55 301  P   P      04 53 28.1 -0.9
BACM                   38.61 301  P   P      04 53 29.6 +0.2
BACM                   38.61 301  P   P      04 53 29.6 +0.1
GRAM                   38.62 301  P   P      04 53 29.4  0.0
GRAM                   38.62 301  P   P      04 53 29.5  0.0
CODM                   38.77 301  P   P      04 53 30.8 +0.1
CODM                   38.77 301  P   P      04 53 30.8  0.0
DAVOX Davos            38.81 305  P   P      04 53 30.9 -0.2
      comp=Z,11nm,0.7s,mb4.7,baz=105,slow=5.2,SNR=16
DAVOX                             LR  LR     05 12 07.6
      comp=Z,182nm,19.1s,MS3.9,baz=200,slow=40
DAVOX Davos            38.81 305  P   P      04 53 30.5 -0.6
DAVA  Damuels          38.84 306⇑iP   P      04 53 30.5 -0.8
      comp=Z,36nm,0.7s,mb5.2
SONM  Songino Array    38.91  53  P   P      04 53 33.1 +1.2
      comp=Z,5.2nm,0.8s,mb4.3,baz=267,slow=7.8,SNR=26
SONM                              LR  LR     05 11 58.9
      comp=Z,1µm,18.4s,MS4.7,baz=185,slow=40
CLZ   Clausthal        39.05 313 eP   P      04 53 33.6 +0.6
CLZ                               pmax pmax
      comp=Z,22nm,1.1s,mb4.8
CLZ   Clausthal        39.05 313 eP   P      04 53 33.6 +0.6
      comp=Z,22nm,1.1s,mb4.8
BOB   Bobbio (Coli)    39.06 302  P   P      04 53 33.7 +0.5
BOB                               pmax pmax
      comp=Z,36nm,0.9s,mb5.1
BOB   Bobbio (Coli)    39.06 302  P   P      04 53 33.7 +0.5
      comp=Z,36nm,0.9s,mb5.1
TUE   Stuetta          39.16 305  P   P      04 53 34.6 +0.6
CMAR  Chiang Mai Arr   39.30 102  P   P      04 53 35.1 -0.3
CMAR                              pmax pmax
      comp=Z,13nm,0.9s
CMAR                              MLR MLR
      comp=Z,203nm,19.5s
CMAR  Chiang Mai Arr   39.30 102  P   P      04 53 35.1 -0.3
      comp=Z,13nm,0.9s,mb4.7,baz=295,slow=7.9,SNR=37
CMAR                              LR  LR     05 10 37.4
      comp=Z,203nm,19.4s,MS4.0,baz=300,slow=38
ULN   Ulaanbaatar      39.35  53 eP   P      04 53 36.2 +0.6
ULN                               pmax pmax
      comp=Z,26nm,1.3s,mb4.8
ULN   Ulaanbaatar      39.35  53 eP   P      04 53 36.2 +0.7
      comp=Z,26nm,1.3s,mb4.8
MUGIO Muggio           39.36 304  P   P      04 53 34.7 -1.0
VSL   Villasalto       39.40 294 eP   P      04 53 36.1 +0.1
      comp=Z,18nm,0.8s,mb4.8
PGF   Pioggiola        39.44 298 eP   P      04 53 35.1 -1.3
      comp=Z,38nm,1.3s,mb4.7
PGF   Pioggiola        39.44 298 eP   P      04 53 35.1 -1.3
PGF                               pmax pmax
      comp=Z,19nm,1.3s,mb4.7
BSEG  Bad Segeberg     39.47 316 eP   P      04 53 36.8 +0.3
BSEG                              pmax pmax
      comp=Z,13nm,1.0s,mb4.6
BSEG  Bad Segeberg     39.47 316 eP   P      04 53 36.8 +0.3
      comp=Z,13nm,1.0s,mb4.6
VAI   Varese           39.55 304  P   P      04 53 36.5 -0.7
VAI                               pmax pmax
      comp=Z,26nm,1.0s,mb4.9
VAI   Varese           39.55 304  P   P      04 53 36.5 -0.7
      comp=Z,26nm,1.0s,mb4.9
KMI   Kunming          39.55  90  P   P      04 53 37.8 +0.3
KMI                               PP  PP     04 55 13.1 +0.9
KMI                               PPP PPP    04 55 38.4 +1.5
KMI                               PCP PcP    04 55 44.6 -0.6
KMI                               SCP        04 59 31.3
KMI                               PCS        04 59 33.4
KMI                               S   S      04 59 40.5 +2.1
KMI                               SS  SS     05 02 29.5 +3.1
KMI                               SSS SSS    05 03 05.0 +3.5
KMI                               SCS ScS    05 03 42.4 +0.3
KMI                               AMB AMB
      comp=Z,30nm,0.8s,mb5.1
KMI                               AMB AMB
      comp=Z,160nm,4.3s
KMI                               LR  LR
      comp=N,170nm,12.7s,MS4.3
KMI                               LR  LR
      comp=E,280nm,15.9s,MS4.3
KMI                               LR  LR
      comp=Z,390nm,18.0s,MS4.3
KMI   Kunming          39.55  90  P   P      04 53 37.7 +0.2
KMI                               *SP sP     04 53 45.5 -2.0
KMI                                          04 55 13.1
KMI                               PPP PPP    04 55 38.4 +1.5
KMI                                          04 55 44.6
KMI                               S   S      04 59 40.5 +2.1
KMI                               SS  SS     05 02 29.5 +3.1
KMI                               SSS SSS    05 03 05.0 +3.5
KMI                                          05 03 42.4
KMI                               pmax pmax
      comp=Z,31nm,0.8s,mb5.1
KMI                               MLR MLR
      comp=Z,390nm,18.0s,MS4.3
KMI   Kunming          39.55  90  P   P      04 53 37.7 +0.2
      comp=Z,31nm,0.8s,mb5.1
KMI                               pP  pP     04 53 43.3 -1.3
KMI                               sP  sP     04 53 45.5 -2.0
KMI                               PP  PP     04 55 13.1 +0.9
KMI                               PPP PPP    04 55 38.4 +1.5
KMI                               PcP PcP    04 55 44.6 -0.6
KMI                               ScP        04 59 31.2
KMI                               PcS        04 59 33.4
KMI                               S   S      04 59 40.5 +2.1
KMI                               sS         04 59 50.0
KMI                               SS  SS     05 02 29.5 +3.1
KMI                               SSS SSS    05 03 05.0 +3.5
KMI                               ScS ScS    05 03 42.4 +0.3
KMI                               LR  LR
      comp=Z,390nm,18.0s,MS4.3
HFS   Hagfors          39.57 327  P   P      04 53 36.9 -0.4
HFS                               pmax pmax
      comp=Z,8.0nm,0.7s
HFS                               MLR MLR
      comp=Z,126nm,19.9s
HFS   Hagfors          39.57 327  P   P      04 53 36.9 -0.4
      comp=Z,7.8nm,0.7s,mb4.6,baz=121,slow=8.6,SNR=16
HFS                               LR  LR     05 12 28.4
      comp=Z,126nm,19.9s,MS3.8,baz=343,slow=40
PCP   Pian Castagno    39.70 302  P   P      04 53 37.8 -0.7
TOD   Tromm            39.74 309 eP   P      04 53 39.3 +0.5
FIN   Finale Ligure    39.95 301  P   P      04 53 39.0 -1.6
TNS   Taunus Mts       40.03 310 eP   P      04 53 41.7 +0.5
TNS                               pmax pmax
      comp=Z,28nm,1.6s,mb4.7
TNS   Taunus Mts       40.03 310 eP   P      04 53 41.7 +0.5
      comp=Z,28nm,1.6s,mb4.7
ORX   Oropa            40.10 303  P   P      04 53 40.2 -1.6
IMI   Imperia          40.19 301  P   P      04 53 42.6  0.0
IMI   Imperia          40.19 301  P   P      04 53 41.7 -0.9
ROB   Roburent         40.19 301  P   P      04 53 41.9 -0.7
TRAV                   40.26 303  P   P      04 53 40.9 -2.2
TRAV                   40.26 303  P   P      04 53 40.9 -2.2
MONE  Monesi           40.28 301  P   P      04 53 42.4 -0.9
MONE  Monesi           40.28 301  P   P      04 53 42.4 -0.9
NEGI  Negi             40.33 301  P   P      04 53 42.7 -1.0
NEGI  Negi             40.33 301  P   P      04 53 42.7 -1.0
SAOF  Saorge           40.43 301 eP   P      04 53 44.2 -0.3
ENR   Entracque        40.52 301  P   P      04 53 44.4 -0.8
SBF   Sospel           40.52 301 eP   P      04 53 44.5 -0.8
      comp=Z,80nm,0.8s,mb5.1
SBF   Sospel           40.52 301 eP   P      04 53 44.5 -0.8
SBF                               pmax pmax
      comp=Z,40nm,0.8s,mb5.1
AUTN  L'Aution         40.52 301 eP   P      04 53 45.4 +0.1
KEV   Kevo             40.54 344 ep   P      04 53 44.8 -0.4
REVF  Revere           40.58 300 eP   P      04 53 45.2 -0.5
ABH   Alteburg         40.58 310 eP   P      04 53 46.7 +1.1
STV2  Anna di Valdie   40.59 301  P   P      04 53 44.5 -1.3
STV2  Anna di Valdie   40.59 301  P   P      04 53 44.5 -1.3
STV   Sta Anna Valdi   40.59 301  P   P      04 53 44.6 -1.2
RSP   Reno Superiore   40.61 303  P   P      04 53 43.6 -2.4
BHB   Bricherasio      40.61 302  P   P      04 53 43.6 -2.4
TOUF  Mont Tournerai   40.65 301 eP   P      04 53 46.2 -0.1
CDF   Champ du Feu     40.66 308 eP   P      04 53 44.8 -1.5
      comp=Z,17nm,0.8s,mb4.4
CDF   Champ du Feu     40.66 308 eP   P      04 53 44.8 -1.5
CDF                               pmax pmax
      comp=Z,8.0nm,0.8s,mb4.4
LSD   Ceresole Reale   40.68 303  P   P      04 53 45.2 -1.3
IBBN  Ibbenburen       40.71 314 eP   P      04 53 46.9 +0.2
ECH   Echery           40.72 307 eP   P      04 53 46.2 -0.7
MVIF  Mont Vial        40.72 301 eP   P      04 53 46.8 -0.1
ARCES ARCESS Array B   40.73 343  P   P      04 53 47.2 +0.4
ARCES                             pmax pmax
      comp=Z,6.0nm,0.9s
ARCES                             MLR MLR
      comp=Z,175nm,18.6s
ARCES ARCESS Array B   40.73 343  P   P      04 53 47.2 +0.4
      comp=Z,6.1nm,0.9s,mb4.2,baz=135,slow=5.1,SNR=10
ARCES                             LR  LR     05 14 02.4
      comp=Z,175nm,18.6s,MS4.0,baz=133,slow=41
ARCES ARCESS Array B   40.73 343  P   P      04 53 47.2 +0.4
ARCES                             LR  LR     05 14 02.4
PZZ   Prazzo           40.74 302  P   P      04 53 45.2 -1.8
FENE  Fenestrelle      40.75 302  P   P      04 53 44.9 -2.2
BUG   Bochum--Univer   40.91 312 eP   P      04 53 48.9 +0.6
HINF  Hinteralfeld     40.91 307 eP   P      04 53 47.7 -0.7
CALN  Calern           40.92 300 eP   P      04 53 48.0 -0.5
RRL   Cesana Torines   40.95 302  P   P      04 53 47.3 -1.5
LPG   La Plagne        40.96 303 eP   P      04 53 48.4 -0.5
      comp=Z,41nm,0.9s,mb4.8
LPG   La Plagne        40.96 303 eP   P      04 53 48.4 -0.5
LPG                               pmax pmax
      comp=Z,20nm,0.9s,mb4.8
MBDF  Montbardon       40.97 302 eP   P      04 53 48.2 -0.7
      comp=Z,32nm,0.7s,mb4.7
MBDF  Montbardon       40.97 302 eP   P      04 53 48.2 -0.7
MBDF                              pmax pmax
      comp=Z,16nm,0.7s,mb4.8
LPL   La Plagne        40.98 303 eP   P      04 53 48.1 -0.9
      comp=Z,29nm,0.8s,mb4.7
LPL   La Plagne        40.98 303 eP   P      04 53 48.1 -0.9
LPL                               pmax pmax
      comp=Z,14nm,0.8s,mb4.6
BNI   Bardonecchia     41.02 302 eP   P      04 53 48.3 -1.1
BNI                               pmax pmax
      comp=Z,22nm,1.0s,mb4.7
BNI   Bardonecchia     41.02 302 eP   P      04 53 48.3 -1.0
      comp=Z,22nm,1.0s,mb4.8
NB2   NORSAR Subarra   41.05 327  P   P      04 53 48.3 -1.1
      comp=Z,6.0nm,0.8s,mb4.3,baz=114,slow=7.9
NB2   NORSAR Subarra   41.05 327  P   P      04 53 48.3 -1.1
      baz=114,slow=8.6
NOA   NORSAR Array B   41.05 327  P   P      04 53 48.7 -0.7
NOA                               pmax pmax
      comp=Z,4.0nm,0.7s
NOA                               MLR MLR
      comp=Z,199nm,18.8s
NOA   NORSAR Array B   41.05 327  P   P      04 53 48.7 -0.7
      comp=Z,3.6nm,0.7s,mb4.1,baz=114,slow=8.1,SNR=19
NOA                               LR  LR     05 13 11.8
      comp=Z,199nm,18.8s,MS4.0,baz=95,slow=40
FRF   La Foret Royal   41.11 300 eP   P      04 53 48.8 -1.3
      comp=Z,9.8nm,0.8s,mb4.2
FRF   La Foret Royal   41.11 300 eP   P      04 53 48.8 -1.3
FRF                               pmax pmax
      comp=Z,5.0nm,0.8s,mb4.2
LMR   La Mourre        41.22 300 eP   P      04 53 49.5 -1.5
WTSB  Winterswijk      41.26 313 eP   P      04 53 50.8 -0.4
      comp=Z,28nm,1.5s,mb4.7
HAU   Haudompre        41.26 307 eP   P      04 53 50.1 -1.2
      comp=Z,18nm,0.8s,mb4.5
HAU                              eR
      comp=Z,142nm,17.6s
HAU   Haudompre        41.26 307 eP   P      04 53 50.1 -1.2
HAU                               pmax pmax
      comp=Z,9.0nm,0.8s,mb4.5
HAU                               MLR MLR
      comp=Z,140nm,17.6s,MS3.9
CMAH  Djebel Manchou   41.35 290  P   P      04 53 54.5 +2.4
CABF  La Chapelle      41.42 305 eP   P      04 53 51.7 -0.9
      comp=Z,61nm,0.9s,mb5.0
CABF  La Chapelle      41.42 305 eP   P      04 53 51.7 -0.9
CABF                              pmax pmax
      comp=Z,31nm,0.9s,mb4.9
WLF   Walferdange      41.46 309  P   P      04 53 53.7 +0.8
THEF  They Montfort    41.51 307 eP   P      04 53 52.9 -0.4
ORIF  Oris-en-Rattie   41.59 302 eP   P      04 53 53.7 -0.3
ORIF                             eR
      comp=Z,254nm,21.2s
HGN   Heimansgroeve    41.68 311 eP   P      04 53 55.1 +0.5
      comp=Z,18nm,1.5s,mb4.5
CAEH  'Ain El Ouahch   41.77 290  P   P      04 53 57.5 +1.9
SMRF  Simiane la Rot   41.86 301 eP   P      04 53 54.8 -1.4
CKFL  Kef-Lekhel       41.95 289  P   P      04 53 58.5 +1.5
XAN   Xi'an            41.98  74  P   P      04 53 57.8 +0.5
XAN                               AP  pP     04 54 12.6 +8.2
NSS   Namsos           42.12 332 eP   P      04 53 57.6 -0.5
MEZF  Maizieres J'vi   42.14 308 eP   P      04 53 57.9 -0.5
      comp=Z,28nm,1.0s,mb4.5
CASM  Ain Smara        42.16 289  P   P      04 54 00.0 +1.2
GIVF  Givet            42.34 310 eP   P      04 54 00.8 +0.7
      comp=Z,99nm,1.4s,mb5.0
GIVF  Givet            42.34 310 eP   P      04 54 00.8 +0.7
GIVF                              pmax pmax
      comp=Z,49nm,1.4s,mb4.9
GYA   Guiyang          42.35  86 ⇓P   P      04 54 00.0 -0.5
GYA                               AMB AMB
      comp=Z,10.0nm,0.7s,mb4.5
VIVF  Saint-Julien-l   42.45 302 eP   P      04 53 59.9 -1.2
      comp=Z,30nm,0.9s,mb4.6
VIVF  Saint-Julien-l   42.45 302 eP   P      04 53 59.9 -1.2
VIVF                              pmax pmax
      comp=Z,15nm,0.9s,mb4.6
DOU   Dourbes          42.49 310  P   P      04 54 01.8 +0.5
TRO   Tromso           42.51 341 eP   P      04 54 00.4 -0.8
TRO                               AMb AMB    04 54 04.3
      comp=Z,72nm,2.1s,mb5.0
TRO                              eSS  SS     05 03 21.1 -4.6
TRO                               AMS AMS    05 14 42.6
      comp=Z,95nm,17.6s,MS3.7
TRO   Tromso           42.51 341 eP   P      04 54 00.4 -0.8
      comp=Z,72nm,2.1s,mb5.0,SNR=36
TRO                              eSS  SS     05 03 21.1 -4.6
      SNR=53
DFRA  Djebel Bou Aff   42.59 290  P   P      04 54 04.0 +1.7
BAIF  Baives           42.74 310 eP   P      04 54 04.0 +0.7
      comp=Z,38nm,1.0s,mb4.8
BAIF  Baives           42.74 310 eP   P      04 54 04.0 +0.7
BAIF                              pmax pmax
      comp=Z,19nm,1.0s,mb4.8
LOR   Lormes           42.94 306 eP   P      04 54 03.9 -1.1
      comp=Z,33nm,1.1s,mb4.7
LOR                              eR
      comp=Z,234nm,19.2s
LOR   Lormes           42.94 306 eP   P      04 54 03.9 -1.1
LOR                               pmax pmax
      comp=Z,17nm,1.1s,mb4.7
LOR                               MLR MLR
      comp=Z,230nm,19.3s,MS4.1
SMF   Signal de Mont   42.96 305 eP   P      04 54 04.4 -0.8
      comp=Z,71nm,0.9s,mb5.1
SMF   Signal de Mont   42.96 305 eP   P      04 54 04.4 -0.8
SMF                               pmax pmax
      comp=Z,35nm,0.9s,mb5.1
CKHR  Kef el Ahmar     42.98 289  P   P      04 54 07.0 +1.5
SET   Setif            43.03 289  P   P      04 54 08.0 +2.1
LASF  Ste Croix        43.09 301 eP   P      04 54 05.1 -1.2
      comp=Z,30nm,1.1s,mb4.6
PLDF  La Plantade      43.14 304 eP   P      04 54 07.2 +0.5
SSF   Saint Saulge     43.18 305 eP   P      04 54 06.3 -0.7
SSF                               pmax pmax
      comp=Z,18nm,0.9s,mb4.8
SSF   Saint Saulge     43.18 305 eP   P      04 54 06.3 -0.7
      comp=Z,18nm,0.9s,mb4.8
AVF   Avril sur Loir   43.30 305 eP   P      04 54 07.0 -0.9
      comp=Z,46nm,0.9s,mb4.9
AVF   Avril sur Loir   43.30 305 eP   P      04 54 07.0 -0.9
AVF                               pmax pmax
      comp=Z,23nm,0.9s,mb4.9
LBL   Lubilhac         43.44 303 eP   P      04 54 09.6 +0.5
AGO   Saint Agoulin    43.48 304 eP   P      04 54 10.2 +0.8
PYM   Petit Puy Mans   43.58 304 eP   P      04 54 10.9 +0.7
BER   Bergen           43.60 325  AMS AMS    05 15 38.9
      comp=Z,98nm,18.2s,MS3.8
BGF   Bois d'Agland    43.65 305 eP   P      04 54 09.8 -1.0
      comp=Z,17nm,0.8s,mb4.5
BGF   Bois d'Agland    43.65 305 eP   P      04 54 09.8 -1.0
BGF                               pmax pmax
      comp=Z,8.0nm,0.8s,mb4.5
HYF   Humbligny        43.77 306 eP   P      04 54 11.6 -0.1
CIT   Chita            43.80  47 eP   P      04 54 12.2 +0.3
CIT                              e           04 56 01.7
CIT                               pmax pmax
      comp=Z,71nm,1.4s,mb5.2
TCF   Toulx Ste Croi   44.10 304 eP   P      04 54 13.9 -0.6
      comp=Z,23nm,0.9s,mb4.6
TCF   Toulx Ste Croi   44.10 304 eP   P      04 54 13.9 -0.6
TCF                               pmax pmax
      comp=Z,12nm,0.9s,mb4.6
CAF   Calviac          44.30 302 eP   P      04 54 15.2 -0.9
      comp=Z,23nm,0.9s,mb4.6
CAF   Calviac          44.30 302 eP   P      04 54 15.2 -0.9
CAF                               pmax pmax
      comp=Z,12nm,0.9s,mb4.6
MTLF  Montolieu        44.34 300 eP   P      04 54 15.5 -0.9
      comp=Z,14nm,0.8s,mb4.5
MTLF  Montolieu        44.34 300 eP   P      04 54 15.5 -0.9
MTLF                              pmax pmax
      comp=Z,7.0nm,0.8s,mb4.4
ETOS  Mallorca         44.38 295  P   P      04 54 16.4 -0.4
      comp=Z,20nm,1.1s,mb4.8
ETOS  Mallorca         44.38 295  P   P      04 54 16.4 -0.4
      comp=Z,20nm,1.1s,mb4.8,SNR=14
LPEF  Le Peyrat        44.61 300 eP   P      04 54 18.1 -0.5
RJF   Les Rejaudoux    44.66 303 eP   P      04 54 18.2 -0.8
      comp=Z,38nm,0.9s,mb5.0
RJF                              eR
      comp=Z,224nm,19.0s
RJF   Les Rejaudoux    44.66 303 eP   P      04 54 18.2 -0.8
RJF                               pmax pmax
      comp=Z,19nm,0.9s,mb4.9
RJF                               MLR MLR
      comp=Z,220nm,19.0s,MS4.1
ABA   Alger-Bouzarea   44.77 291  P   P      04 54 12.5 -7.5
EMHD  Djebel Mahouad   44.96 290  P   P      04 54 23.0 +1.4
EMIR  Miracle          45.02 298  P   P      04 54 21.8 -0.1
      comp=Z,36nm,1.0s,mb5.2
EMIR  Miracle          45.02 298  P   P      04 54 21.8 -0.1
      comp=Z,36nm,1.0s,mb5.2,SNR=25
MLS   Moulis           45.20 300 eP   P      04 54 22.0 -1.3
LFF   La Frestale      45.24 303 eP   P      04 54 22.6 -1.0
      comp=Z,29nm,0.7s,mb4.9
LFF   La Frestale      45.24 303 eP   P      04 54 22.6 -1.0
LFF                               pmax pmax
      comp=Z,14nm,0.7s,mb4.9
EPOB  Poblet           45.44 298  P   P      04 54 24.6 -0.6
      comp=Z,66nm,1.5s,mb5.2
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EPOB	Poblet	45.44	298	P	P	04 54 24.6	-0.6
	comp=Z,66nm,1.5s,mb5.2,SNR=29						
LDF	La Druitiere	45.57	308	*e*P	P	04 54 25.0	-1.2
MFF	Saint Martin d	45.71	305	*e*P	P	04 54 25.9	-1.4
	comp=Z,37nm,1.4s,mb4.8						
MFF	Saint Martin d	45.71	305	*e*P	P	04 54 25.9	-1.4
MFF				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
EPF	Esparros	45.74	300	*e*P	P	04 54 26.6	-1.0
FLN	La Foliniere	45.80	308	*e*P	P	04 54 26.8	-1.2
FLN				*e*R			
	comp=Z,200nm,22.2s						
EBIE	Bielsa	45.93	300	P	P	04 54 31.1	+2.0
	comp=Z,6.7nm,0.9s,mb4.6						
EBIE	Bielsa	45.93	300	P	P	04 54 31.1	+2.0
	comp=Z,6.7nm,0.9s,mb4.6,SNR=4.6						
EBR	Ebro Roquetas	45.96	297	*e*P	P	04 54 29.8	+0.5
ERTA	Horta de San J	46.05	297	P	P	04 54 32.1	+2.0
	comp=Z,7.9nm,0.7s,mb4.8						
ERTA	Horta de San J	46.05	297	P	P	04 54 32.1	+2.0
	comp=Z,7.9nm,0.7s,mb4.7,SNR=8.6						
EBNR	Beni Rached	46.06	291	P	P	04 54 31.0	+0.8
ECHA	Ech Chlef	46.23	290	P	P	04 54 33.0	+1.5
ECHF	Ech Chlef	46.24	290	P	P	04 54 33.0	+1.3
ETSF	Etsaut	46.41	300	*e*P	P	04 54 32.0	-0.9
	comp=Z,30nm,0.9s,mb5.0						
ETSF	Etsaut	46.41	300	*e*P	P	04 54 32.0	-0.9
ETSF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
ETRT	Tiaret	46.46	289	P	P	04 54 34.0	+0.6
EANR	’Ain N’Sour	46.48	290	P	P	04 54 35.0	+1.4
ESAC	San Caprasio	46.52	298	P	P	04 54 34.2	+0.4
	comp=Z,28nm,1.3s,mb5.0						
ESAC	San Caprasio	46.52	298	P	P	04 54 34.2	+0.4
	comp=Z,28nm,1.3s,mb5.0,SNR=7.3						
EMOS	Mosqueruela	46.76	296	P	P	04 54 36.8	+1.1
	comp=Z,16nm,1.3s,mb4.8						
EMOS	Mosqueruela	46.76	296	P	P	04 54 36.8	+1.1
	comp=Z,16nm,1.3s,mb4.8,SNR=7.8						
SJPF	Ste Jean	46.86	300	*e*P	P	04 54 35.3	-1.2
	comp=Z,21nm,1.0s,mb4.7						
SJPF	Ste Jean	46.86	300	*e*P	P	04 54 35.3	-1.2
SJPF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
BTA	Talkin	47.12	317	*e*P	P	04 54 37.7	-0.7
BTA				AMb	AMB	04 54 40.4	
	comp=Z,21nm,0.6s,mb5.2						
SGMF	Saint Gilles	47.21	307	*e*P	P	04 54 38.3	-0.9
BDL	Dobcross Hall	47.27	316	*e*P	P	04 54 38.8	-0.7
BDL				AMb	AMB	04 54 42.4	
	comp=Z,31nm,0.9s,mb5.2						
BBH	Bruntsheil	47.27	317	*e*P	P	04 54 39.0	-0.5
BBH				AMb	AMB	04 54 40.4	
	comp=Z,26nm,1.2s,mb5.0						
ECHE	Chera	47.28	296	P	P	04 54 39.2	-0.7
ECHE				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
ECHE	Chera	47.28	296	P	P	04 54 39.2	-0.7
	comp=Z,6.1nm,0.7s,mb4.6						
ECHE	Chera	47.28	296	P	P	04 54 39.2	-0.7
	comp=Z,6.1nm,0.7s,mb4.6,SNR=4.0						
EKA	Eskdalemuir Ar	47.41	317	P	P	04 54 40.0	-0.6
EKA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
EKA	Eskdalemuir Ar	47.41	317	P	P	04 54 40.0	-0.6
	comp=Z,8.3nm,0.8s,mb4.7,baz=105,slow=8.1,SNR=18						
BHH	Howats Hill	47.43	317	*e*P	P	04 54 40.5	-0.3
BHH				AMb	AMB	04 54 41.7	
	comp=Z,18nm,1.2s,mb4.8						
BBO1	Bothel	47.44	316	*e*P	P	04 54 40.4	-0.6
BBO1				AMb	AMB	04 54 41.8	
	comp=Z,28nm,1.4s,mb5.0						
QUIF	Quistinic	47.65	307	*e*P	P	04 54 41.5	-1.1
	comp=Z,72nm,1.2s,mb5.3						
QUIF	Quistinic	47.65	307	*e*P	P	04 54 41.5	-1.1
QUIF				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.3						
ROSF	Rostrenen	47.68	308	*e*P	P	04 54 41.8	-1.1
	comp=Z,45nm,0.9s,mb5.2						
ROSF	Rostrenen	47.68	308	*e*P	P	04 54 41.8	-1.1
ROSF				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
BWH	Wardlaw	47.69	317	*e*P	P	04 54 42.4	-0.4
BWH				AMb	AMB	04 54 45.9	
	comp=Z,20nm,2.2s,mb4.8						
HIA	Hailar	47.77	51	*e*P	P	04 54 45.9	+2.4
HIA				pmax	pmax		
	comp=Z,13nm,0.7s						
HIA	Hailar	47.77	51	*e*P	P	04 54 45.9	+2.4
	comp=Z,13nm,0.7s,mb5.1						
EMUR	La Murta	47.87	293	P	P	04 54 43.9	-0.6
	comp=Z,8.1nm,1.1s,mb4.7						
EMUR	La Murta	47.87	293	P	P	04 54 43.9	-0.6
	comp=Z,8.1nm,1.1s,mb4.7,SNR=7.9						
ECRI	Cripan	47.88	300	P	P	04 54 46.5	+2.0
ECRI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
ECRI	Cripan	47.88	300	P	P	04 54 46.5	+2.0
	comp=Z,6.0nm,0.7s,mb4.7						
ECRI	Cripan	47.88	300	P	P	04 54 46.5	+2.0
	comp=Z,6.0nm,0.7s,mb4.7,SNR=7.9						
ETOB	Tobarra	47.92	294	P	P	04 54 45.5	+0.6
	comp=Z,7.1nm,0.9s,mb4.7						
ETOB	Tobarra	47.92	294	P	P	04 54 45.5	+0.6
	comp=Z,7.1nm,0.9s,mb4.7,SNR=7.6						
ELAN	Lanestosa	48.44	301	P	P	04 54 49.6	+0.8
	comp=Z,15nm,0.8s,mb5.1						
ELAN	Lanestosa	48.44	301	P	P	04 54 49.6	+0.8
	comp=Z,15nm,0.8s,mb5.1,SNR=7.9						
EVIA	Vianos	48.65	295	P	P	04 54 50.0	-0.5
EVIA				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
EVIA	Vianos	48.65	295	P	P	04 54 50.0	-0.5
	comp=Z,6.2nm,1.2s,mb4.5						
EVIA	Vianos	48.65	295	P	P	04 54 50.0	-0.5
	comp=Z,6.2nm,1.2s,mb4.5,SNR=8.1						
ENIJ	Nijar	48.82	292	P	P	04 54 51.3	-0.5
ENIJ				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
ENIJ	Nijar	48.82	292	P	P	04 54 51.3	-0.5
	comp=Z,4.9nm,0.7s,mb4.7						
ENIJ	Nijar	48.82	292	P	P	04 54 51.3	-0.5
	comp=Z,4.9nm,0.7s,mb4.6,SNR=7.9						
EQES	Quesada	49.28	294	P	P	04 54 55.6	+0.2
	comp=Z,16nm,1.2s,mb4.9						
EQES	Quesada	49.28	294	P	P	04 54 55.6	+0.2
	comp=Z,16nm,1.2s,mb4.9,SNR=13						
EBER	Berja	49.37	292	P	P	04 54 55.8	-0.3
EBER	Berja	49.37	292	P	P	04 54 55.8	-0.3
	comp=Z,28nm,1.0s,mb5.3,SNR=6.4						
ESDC	Sonseca Array	49.53	296	P	P	04 54 56.7	-0.5
	comp=Z,6.2nm,0.7s,mb4.8,baz=69,slow=7.4,SNR=28						
ESDC	Sonseca Array	49.53	296	P	P	04 54 56.3	-1.0
	comp=Z,2.8nm,0.4s,mb4.7						
ESDC	Sonseca Array	49.53	296	P	P	04 54 56.3	-0.9
	comp=Z,2.8nm,0.4s,mb4.7,SNR=27						
ESLA	Sonseca Array	49.53	296	*e*P	P	04 54 56.0	-1.2
	comp=Z,1.6nm,0.8s,mb4.1						
EARI	Arriondas	49.71	301	P	P	04 54 58.9	+0.3
	comp=Z,17nm,0.8s,mb5.1						
EARI	Arriondas	49.71	301	P	P	04 54 58.8	+0.2
	comp=Z,17nm,0.8s,mb5.1,SNR=7.0						
EBAN	Banos Encina	49.74	294	P	P	04 54 58.4	-0.5
EBAN				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
EBAN	Banos Encina	49.74	294	P	P	04 54 58.4	-0.5
	comp=Z,12nm,0.9s,mb4.9						
EBAN	Banos Encina	49.74	294	P	P	04 54 58.4	-0.5
	comp=Z,12nm,0.9s,mb4.9,SNR=5.6						
KBS	Kingsbay	49.76	349	*e*P	P	04 54 58.3	-0.3
KBS				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
KBS	Kingsbay	49.76	349	*e*P	P	04 54 58.3	-0.3
	comp=Z,17nm,1.0s,mb5.0						
KBS	Kingsbay	49.76	349	*e*P	P	04 54 58.9	+0.3
KBS				AMb	AMB	04 55 01.2	
	comp=Z,20nm,1.0s,mb5.1						
KBS				AMS	AMS	05 19 54.2	
	comp=Z,96nm,15.0s,MS3.9						
KBS	Kingsbay	49.76	349	*e*P	P	04 54 58.9	+0.3
	comp=Z,20nm,1.0s,mb5.1,SNR=34						
ELOJ	Sierra Loja	50.28	293	P	P	04 55 02.0	-1.0
ELOJ				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
ELOJ	Sierra Loja	50.28	293	P	P	04 55 02.0	-1.1
	comp=Z,6.7nm,1.1s,mb4.6						
ELOJ	Sierra Loja	50.28	293	P	P	04 55 02.0	-1.0
	comp=Z,6.7nm,1.1s,mb4.6,SNR=5.6						
EADA	Adamuz	50.35	295	P	P	04 55 03.4	-0.2
	comp=Z,6.1nm,0.9s,mb4.6						
EADA	Adamuz	50.35	295	P	P	04 55 03.3	-0.2
	comp=Z,6.1nm,0.9s,mb4.7,SNR=5.8						
EMIJ	Mijas	50.91	293	P	P	04 55 07.4	-0.5
	comp=Z,15nm,0.8s,mb5.0						
EMIJ	Mijas	50.91	293	P	P	04 55 07.4	-0.5
	comp=Z,15nm,0.8s,mb5.0,SNR=8.7						
ECAB	El Cabril	51.01	295	P	P	04 55 06.9	-1.7
	comp=Z,22nm,1.4s,mb4.9						
ECAB	El Cabril	51.01	295	P	P	04 55 06.9	-1.7
	comp=Z,22nm,1.4s,mb4.9,SNR=11						
EPON	Pontenova	51.09	302	P	P	04 55 05.4	-3.7
	comp=Z,14nm,0.9s,mb4.9						
ERUA	La Rua	51.28	300	P	P	04 55 09.7	-0.8
ERUA				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
ERUA	La Rua	51.28	300	P	P	04 55 09.7	-0.8
	comp=Z,12nm,1.1s,mb4.7						
ERUA	La Rua	51.28	300	P	P	04 55 09.7	-0.8
	comp=Z,12nm,1.1s,mb4.7,SNR=7.9						
JMIC	Jan Mayen	51.47	337	LR	LR	05 20 02.3	
	comp=Z,117nm,18.4s,MS4.0,baz=84,slow=40						
JMIC	Jan Mayen	51.47	337	AMS	AMS	05 19 30.1	
	comp=Z,176nm,16.7s,MS4.2						
ESPR	Espera	51.67	293	P	P	04 55 12.2	-1.3
	comp=Z,14nm,1.1s,mb4.8						
ESPR	Espera	51.67	293	P	P	04 55 12.2	-1.4
	comp=Z,14nm,1.1s,mb4.8,SNR=5.2						
MTE	Manteigas	52.03	298	*e*P	P	04 55 15.7	-0.6
	comp=Z,26nm,0.8s,mb5.2						
EBAD	Badajoz	52.05	296	P	P	04 55 15.6	-0.8
	comp=Z,6.8nm,1.0s,mb4.5						
EBAD	Badajoz	52.05	296	P	P	04 55 15.6	-0.8
	comp=Z,6.8nm,1.0s,mb4.5,SNR=7.9						
EMIN	Mina Concepcio	52.05	295	P	P	04 55 15.6	-0.9
	comp=Z,8.6nm,1.3s,mb4.5						
EMIN	Mina Concepcio	52.05	295	P	P	04 55 15.6	-0.9
	comp=Z,8.6nm,1.3s,mb4.5,SNR=7.9						
ELOB	Lobios	52.06	300	P	P	04 55 15.9	-0.5
	comp=Z,21nm,1.3s,mb4.9						
ELOB	Lobios	52.06	300	P	P	04 55 16.0	-0.5
	comp=Z,21nm,1.3s,mb4.9,SNR=4.5						
STS	Santiago	52.19	301	P	P	04 55 17.5	+0.1
STS				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
STS	Santiago	52.19	301	P	P	04 55 17.4	0.0
	comp=Z,6.0nm,0.7s,mb4.6						
OPO	Ambohidratompo	52.45	193	LR	LR	05 14 23.4	
	comp=Z,269nm,21.9s,MS4.2,baz=344,slow=32						
YAK	Yakutsk	52.79	34	*e*P	P	04 55 22.9	+1.2
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
YAK				MLR	MLR		
	comp=Z,530nm,18.0s,MS4.6						
YAK				MLR	MLR		
	comp=N,108nm,10.0s						
YAK				MLR	MLR		
	comp=E,386nm,15.0s						
EVO	Evora	52.86	296	*e*P	P	04 55 22.1	-0.4
	comp=E,6.9nm,0.6s,mb4.5						
EVO				*e*R			
	comp=E,108nm,19.5s						
TIXI	Tiksi	52.88	22	*e*P	P	04 55 17.5	-4.7
TIXI				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,191nm,12.0s,MS4.4						
DAG	Danmarks Havn	55.01	344⇑	*e*P	P	04 55 37.3	-0.5
DAG				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
DAG	Danmarks Havn	55.01	344⇑	*e*P	P	04 55 37.3	-0.5
	comp=Z,11nm,1.1s,mb4.8						
DAG	Danmarks Havn	55.01	344⇑	*i*P	P	04 55 37.3	-0.5
	comp=Z,11nm,1.1s,mb4.8						
KLR	Kul’dur	55.55	50	*e*P	P	04 55 37.4	-4.7
MATP	Matopo	60.30	212	P	P	04 56 14.4	-1.3
	comp=Z,4.1nm,0.8s,mb4.5,baz=25,slow=8.4,SNR=10						
SUMG	Summit	60.68	340	*e*P	P	04 56 17.7	0.0
	comp=Z,11nm,0.8s,mb5.0						
YSS	Yuzh-Sakhalins	63.26	50⇑	*i*P	P	04 56 35.7	+0.4
YSS				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.4						
YSS	Yuzh-Sakhalins	63.26	50	*e*P	P	04 56 35.5	+0.2
	comp=Z,21nm,0.8s,mb5.3						
DBIC	Dimbokro	63.80	260	P	P	04 56 38.1	-1.2
DBIC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DBIC				MLR	MLR		
	comp=Z,497nm,18.2s						
DBIC	Dimbokro	63.80	260	P	P	04 56 38.1	-1.3
	comp=Z,8.1nm,1.0s,mb4.7,baz=61,slow=3.8,SNR=6.3						
DBIC				LR	LR	05 26 52.6	
	comp=Z,497nm,18.2s,MS4.7,baz=38,slow=38						
MJAR	Matsushiro Arr	63.98	62	P	P	04 56 39.8	-0.4
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MJAR				MLR	MLR		
	comp=Z,230nm,18.6s						
MJAR	Matsushiro Arr	63.98	62	P	P	04 56 39.8	-0.4
	comp=Z,1.4nm,0.7s,mb4.1,baz=298,slow=8.2,SNR=8.0						
MJAR				LR	LR	05 27 10.2	
	comp=Z,230nm,18.6s,MS4.4,baz=335,slow=38						
LBTB	Lobatse	65.59	212	P	P	04 56 50.4	-0.4
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
LBTB	Lobatse	65.59	212	P	P	04 56 50.4	-0.4
	comp=Z,3.3nm,0.9s,mb4.3,baz=62,slow=7.7,SNR=3.1						
BILL	Bilibino	66.07	23	*e*P	P	04 56 55.3	+2.2
BILL				pmax	pmax		
	comp=Z,21nm,1.6s,mb4.9						
BILL				MLR	MLR		
	comp=Z,300nm,15.0s,MS4.6						
BILL	Bilibino	66.07	23	*e*P	P	04 56 53.9	+0.8
	comp=Z,16nm,1.2s,mb4.9						
BOSA	Boshof	68.86	211	P	P	04 57 11.4	0.0
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BOSA				MLR	MLR		
	comp=Z,235nm,19.9s,MS4.4						
BOSA	Boshof	68.86	211	P	P	04 57 11.4	0.0
	comp=Z,4.1nm,0.8s,mb4.4,baz=27,slow=9.7,SNR=5.2						
BOSA				LR	LR	05 29 29.2	
	comp=Z,235nm,19.9s,MS4.4,baz=34,slow=38						
INK	Inuvik	78.50	4	P	P	04 58 06.6	-0.1
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	Inuvik	78.50	4	P	P	04 58 06.6	-0.1
	comp=Z,3.0nm,0.9s,mb4.2,baz=19,slow=6.7,SNR=5.6						
SCHQ	Schefferville	80.48	331	P	P	04 58 19.1	+1.5
	comp=Z,1.7nm,0.7s,mb4.1,baz=28,slow=5.7,SNR=3.8						
ILAR	Eielson Array	80.48	11	P	P	04 58 18.7	+1.3
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ILAR				MLR	MLR		
	comp=Z,122nm,20.1s						
ILAR	Eielson Array	80.48	11	P	P	04 58 18.7	+1.3
	comp=Z,1.6nm,1.0s,mb3.9,baz=332,slow=4.3,SNR=8.8						
ILAR				LR	LR	05 37 31.2	
	comp=Z,122nm,20.1s,MS4.2,baz=155,slow=38						
FITZ	Fitzroy Crossi	82.11	117	P	P	04 58 26.8	-0.1
	comp=Z,18nm,0.9s,mb5.0,baz=223,slow=2.8,SNR=8.4						
YKA	Yellowknife Ar	84.54	357	P	P	04 58 38.8	+0.5
YKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA				MLR	MLR		
	comp=Z,86nm,18.6s						
YKA	Yellowknife Ar	84.54	357	P	P	04 58 38.8	+0.5
	comp=Z,4.2nm,0.9s,mb4.6,baz=359,slow=5.0,SNR=14						
YKA				LR	LR	05 40 05.2	
	comp=Z,86nm,18.6s,MS4.2,baz=345,slow=38						
YKA	Yellowknife Ar	84.54	357	P	P	04 58 38.8	+0.5
YKA				LR	LR	05 40 05.2	
FCC	Fort Churchill	85.57	346	*e*P	P	04 58 43.6	+0.1
FCC				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
FCC	Fort Churchill	85.57	346	*e*P	P	04 58 43.6	+0.1
	comp=Z,7.4nm,0.8s,mb5.0						
WRA	Warramunga Arr	89.79	114	P	P	04 59 06.4	+1.6
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	89.79	114	P	P	04 59 06.4	+1.6
	comp=Z,1.8nm,0.7s,mb4.5,baz=316,slow=4.2,SNR=16						
ULM	Lac du Bonnet	93.85	344	P	P	04 59 23.0	+0.3
	comp=Z,5.4nm,0.8s,mb5.0,baz=4.8,slow=3.9,SNR=4.9						
ULM				LR	LR	05 48 42.7	
	comp=Z,89nm,19.9s,MS4.2,baz=26,slow=40						
ULM	Lac du Bonnet	93.85	344	P	P	04 59 23.0	+0.3
ULM				LR	LR	05 48 42.7	
NEW	Newport	98.87	357	LR	LR	05 44 40.2	
	comp=Z,100nm,21.9s,MS4.3,baz=170,slow=36						
TXAR	Lajitas Array	115.53	342	PKP	PKPdf	05 04 48.4	-2.8
	comp=Z,0.3nm,0.6s,baz=135,slow=1.8,SNR=4.9						
SIV	San Ignacio	122.85	272	PKP	PKPdf	05 05 02.7	-3.0
	comp=Z,0.9nm,0.7s,baz=66,slow=3.0,SNR=7.6						

WEL 19 05:20:04.8±0.5**, 38.14S×176.16E, h176**^{km}±4^{km}**, ML3.6**/12**, Error ellipse: s-maj=4.9km s-min=4.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.76	99	PN	P	05 20 30.2	-0.5
URZ				SN	S	05 20 50.3	-0.4
BKZ	Black Stump Fm	1.06	166	PN	P	05 20 32.7	0.0
BKZ				SN	S	05 20 54.1	-0.1
HIZ	Hauiti	1.09	249	PN	P	05 20 31.7	-1.2
MWZ	Matawai	1.10	101	PN	P	05 20 33.2	+0.2
MWZ				SN	S	05 20 54.6	-0.2
NGZ	Ngauruhoe	1.12	203	PN	P	05 20 33.4	+0.2
CNZ	Chateau	1.16	204	PN	P	05 20 33.6	0.0
WPVZ	Whakapapa	1.17	204	PN	P	05 20 33.6	0.0
TUVZ	Tukino	1.20	199	PN	P	05 20 33.9	0.0
TUVZ				SN	S	05 20 56.9	+0.5
FWVZ	Far West T-bar	1.21	203	PN	P	05 20 34.3	+0.2
WNVZ	Wahianoa	1.27	200	PN	P	05 20 34.4	-0.2
MOVZ	Moawhango	1.31	194	PN	P	05 20 34.2	-0.7
MOVZ				SN	S	05 20 56.9	-1.3
KNZ	Kokohu	1.48	127	PN	P	05 20 36.6	0.0
KNZ				SN	S	05 20 57.1	-4.0
PUZ	Puketiti	1.66	88	PN	P	05 20 37.8	-0.5
PUZ				SN	S	05 21 01.2	-3.0
TSZ	Takapari Road	1.92	184	PN	P	05 20 40.0	-1.1
TSZ				SN	S	05 21 06.9	-2.1
BFZ	Birch Farm	2.54	178	PN	P	05 20 46.1	-2.2
MRZ	Mangatainoka R	2.56	190	PN	P	05 20 46.1	-2.4
MRZ				SN	S	05 21 18.5	-3.6
KIW	Kapiti Island	2.89	199	PN	P	05 20 49.3	-3.1
CAW	Cannon Point	3.08	195	PN	P	05 20 51.6	-3.2
MSWZ	Moikau Station	3.35	192	PN	P	05 20 54.5	-3.7
TCW	Tory Channel	3.40	205	PN	P	05 20 55.2	-3.6
BHW	Baring Head	3.41	196	PN	P	05 20 55.0	-4.0
TUWZ	Tuamarina	3.70	207	PN	P	05 20 58.8	-3.9
NNZ	Nelson	3.75	214	PN	P	05 20 59.0	-4.3
QRZ	Quartz Range	3.88	225	PN	P	05 21 00.6	-4.4
THZ	Tophouse	4.40	214	PN	P	05 21 07.8	-3.8
KHZ	Kahutara	4.72	204	PN	P	05 21 11.4	-4.3
LTZ	Lake Taylor	5.50	211	PN	P	05 21 20.8	-5.2
MQZ	McQueen’s Vall	6.16	204	SN	S	05 22 34.4	-10

WEL 19 05:24:19.1±0.2**, 39.30S×175.14E, h143**^{km}±1^{km}**, ML3.7**/19**, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKVZ	Pokaka	0.16	88	PN	P	05 24 38.2	-0.5
PKVZ				SN	S	05 24 52.7	-1.1
MTVZ	Mangateitei	0.27	110	PN	P	05 24 38.7	-0.5
MTVZ				SN	S	05 24 53.3	-1.1
TRVZ	Turoa	0.32	91	PN	P	05 24 39.0	-0.3
TRVZ				SN	S	05 24 53.5	-1.3
TWVZ	Taurewa	0.32	46	PN	P	05 24 38.6	-0.7
TWVZ				SN	S	05 24 53.1	-1.7
FWVZ	Far West T-bar	0.32	83	PN	P	05 24 38.9	-0.4
FWVZ				SN	S	05 24 53.5	-1.3
WPVZ	Whakapapa	0.33	74	PN	P	05 24 38.8	-0.5
WPVZ				SN	S	05 24 53.6	-1.2
CNZ	Chateau	0.33	73	PN	P	05 24 38.8	-0.6
VRZ	Vera Road	0.34	300	PN	P	05 24 38.4	-1.0
VRZ				SN	S	05 24 53.5	-1.4
VRZ				SN	S	05 24 53.6	-1.4
WNVZ	Wahianoa	0.36	95	PN	P	05 24 39.1	-0.3
WNVZ				SN	S	05 24 53.9	-1.2
NGZ	Ngauruhoe	0.38	72	PN	P	05 24 39.0	-0.5
NGZ				SN	S	05 24 54.0	-1.2
WTVZ	West Tongariro	0.39	63	PN	P	05 24 39.0	-0.6
WTVZ				SN	S	05 24 53.8	-1.5
TUVZ	Tukino	0.40	86	PN	P	05 24 39.3	-0.4
TUVZ				SN	S	05 24 54.1	-1.2
OTVZ	Oturere	0.43	72	PN	P	05 24 39.5	-0.2
OTVZ				SN	S	05 24 54.9	-0.7
KRVZ	Karewarewa	0.44	63	PN	P	05 24 39.2	-0.6
KRVZ				SN	S	05 24 54.3	-1.4
WAZ	Wanganui	0.47	195	PN	P	05 24 39.9	-0.1
WAZ				SN	S	05 24 55.5	-0.5
MOVZ	Moawhango	0.49	103	PN	P	05 24 39.3	-0.8
MOVZ				SN	S	05 24 53.5	-2.6
KATZ	Kakaramea	0.54	54	PN	P	05 24 39.6	-0.7
KATZ				SN	S	05 24 55.3	-1.2
RAEZ	Rainy Point	0.58	271	PN	P	05 24 40.0	-0.5
WATZ	Wairara	0.75	38	PN	P	05 24 40.9	-0.6
HIZ	Hauiti	0.81	344	PN	P	05 24 40.7	-1.2
NEZ	North Egmont	0.81	271	PN	P	05 24 41.7	-0.2
PKE	Pukeiti	0.90	276	PN	P	05 24 41.9	-0.6
PKE				SN	S	05 24 58.6	-2.0
NRZ	Ngariki Road	0.94	267	PN	P	05 24 42.3	-0.5
TSZ	Takapari Road	0.99	141	PN	P	05 24 43.4	+0.1
TSZ				SN	S	05 25 00.5	-1.3
BKZ	Black Stump Fm	1.06	83	PN	P	05 24 43.3	-0.6
BKZ				SN	S	05 25 00.4	-2.5
MRZ	Mangatainoka R	1.41	166	PN	P	05 24 46.9	-0.5
MRZ				SN	S	05 25 06.6	-2.7
PWZ	Pawanui	1.52	119	PN	P	05 24 48.3	-0.3
PWZ				SN	S	05 25 09.4	-2.0
KIW	Kapiti Island	1.57	186	PN	P	05 24 48.5	-0.8
KIW				SN	S	05 25 09.6	-2.9
BFZ	Birch Farm	1.62	149	PN	P	05 24 49.2	-0.6
DUWZ	D’Urville Isla	1.77	211	PN	P	05 24 50.5	-0.9
DUWZ				SN	S	05 25 15.1	-1.2
CAW	Cannon Point	1.81	182	PN	P	05 24 51.1	-0.8
CAW				SN	S	05 25 14.4	-2.7
URZ	Urewera	1.85	57	PN	P	05 24 50.6	-1.8
URZ				SN	S	05 25 15.1	-2.9
MTW	Mount Morrison	1.88	172	PN	P	05 24 51.7	-1.0
MRW	Makara Radio	1.96	190	PN	P	05 24 52.7	-0.9
KNZ	Kokohu	1.99	83	PN	P	05 24 52.9	-1.0
WEL	Wellington	2.01	188	PN	P	05 24 53.1	-1.1
TCW	Tory Channel	2.03	199	PN	P	05 24 53.4	-1.0
TCW				SN	S	05 25 18.4	-3.1
SNZO	South Karori	2.04	189	PN	P	05 24 53.4	-1.2
SNZO				SN	S	05 25 18.2	-3.6
PAWZ	Paruwai Farm	2.10	174	PN	P	05 24 54.1	-1.2
PAWZ				SN	S	05 25 19.3	-3.7
MWZ	Matawai	2.10	64	PN	P	05 24 53.8	-1.5
MSWZ	Moikau Station	2.12	178	PN	P	05 24 54.4	-1.2
BHW	Baring Head	2.12	185	PN	P	05 24 54.3	-1.3
TUWZ	Tuamarina	2.32	203	PN	P	05 24 56.5	-1.7
NNZ	Nelson	2.35	214	PN	P	05 24 56.8	-1.7
QRZ	Quartz Range	2.52	232	PN	P	05 24 58.3	-2.4
BSWZ	Blackbirch Sta	2.60	201	PN	P	05 25 00.2	-1.5

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*BJI **19** 05:35:47.0, 40.60N×126.50W, h10^{km}, mb4.5, Ms4.8, Msz4.4*

*NEIC **19** 05:35:49.0±1.4, 40.61N×126.53W, h10^{km}, mb4.0/4, Error ellipse: s-maj=17.9km s-min=6.1km az=79.0*

*IDC **19** 05:35:52.6±1.6, 40.60N×126.08W, mb3.6/4, mb1 3.8/9, mb1mx3.6/28, mbtmp3.5/9, ML3.3/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/33, Error ellipse: s-maj=22.6km s-min=15.5km az=26.0*

ISC 19 05:35:47.8±0.7**, 40.60N**±0.04×**126.49W**±0.07**, h10**^{km}**, n60, **σ1§**19**/60**, mb3.8**/7**, MS4.8**/1**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	2.12	82	*e*Pn	Pn	05 36 23.8	0.0
KBO	Bosley Butte	2.34	46	*e*Pn	Pn	05 36 25.7	-1.4
KEBM	Edson Butte	2.79	35	*e*Pn	Pn	05 36 31.3	-2.1

WDC	Whiskeytown Da	3.01	89	*e*Pn	Pn	05 36 36.9	+0.4
WDC				*e*S	Sn	05 37 09.7	-3.3
YBH	Yreka Blue Hor	3.07	67	Pn	Pn	05 36 38.9	+1.5
	20nm,0.3s,baz=269,slow=8.8,SNR=417						
YBH				Sn	Sn	05 37 14.8	+0.2
	14nm,0.3s,baz=42,slow=20,SNR=11						
YBH	Yreka Blue Hor	3.07	67	*e*Pn	Pn	05 36 38.1	+0.7
HOPS	Hopland	3.09	120	*e*Pn	Pn	05 36 37.6	0.0
LAMM	Antelope Mount	3.09	70	P	Pn	05 36 39.0	+1.3
HUMO	Hull Mountain	3.32	52	*e*Pn	Pn	05 36 40.4	-0.6
LHEM	Herd Peak	3.39	71	P	Pn	05 36 43.6	+1.7
DBO	Dodson Butte	3.50	43	P	Pn	05 36 42.5	-0.9
BUOR	Burton Butte	3.61	61	P	Pn	05 36 46.7	+1.7
BBOR	Butler Butte	3.65	50	P	Pn	05 36 45.5	-0.1
LAB	Little Aspen B	3.72	62	P	Pn	05 36 48.2	+1.6
VSP	Spence Mountai	3.83	62	P	Pn	05 36 49.3	+1.1
HOG	Hogback Mounta	3.96	64	P	Pn	05 36 50.9	+0.9
SAC	San Andreas	4.38	132	*e*Pn	Pn	05 36 55.0	-1.0
HBO	Huckleberry Mo	4.48	42	P	Pn	05 36 57.2	-0.2
BROR	Big Rock Looko	4.73	38	P	Pn	05 37 00.7	-0.3
BEKR	Beckwourth	4.75	97	*e*Pn	Pn	05 37 01.4	+0.2
MOD	Modoc	4.84	72	*e*Pn	Pn	05 37 02.3	-0.3
FRIS	Frissel Point	4.86	41	P	Pn	05 37 02.4	-0.4
SSOR	Sweet Springs	5.19	34	P	Pn	05 37 07.0	-0.4
CMB	Columbia Colle	5.38	116	*e*Pn	Pn	05 37 10.6	+0.4
SAO	San Andreas Ge	5.50	133	*e*Pn	Pn	05 37 10.2	-1.6
VIPM	Ingram Point	5.83	46	P	Pn	05 37 16.0	-0.5
LRV	Little Rabbit	5.98	132	*e*Pn	Pn	05 37 17.3	-1.4
OMM	Old Mammoth Mi	6.55	115	Pn	Pn	05 37 26.3	-0.3
NVAR	Mina Array Bea	6.69	106	Pn	Pn	05 37 29.1	+0.4
	0.2nm,0.3s,baz=277,slow=14,SNR=7.3						
MTUM	Tungsten Hills	6.98	115	P	Pn	05 37 31.5	-1.1
OCWA	Octopus Mounta	7.34	12	*e*P	Pn	05 37 36.5	-1.2
BMO	Blue Mountains	7.99	55	*e*P	Pn	05 37 45.5	-1.2
ELK	Elko	8.55	85	Pn	P	05 37 55.2	+0.6
	0.1nm,0.3s,baz=236,slow=11,SNR=1.9						
HLID	Hailey	9.46	68	*e*P	P	05 38 06.3	-0.8
NEW	Newport	10.17	38	Pn	P	05 38 19.8	+2.8
	0.1nm,0.3s,baz=238,slow=13,SNR=3.6						
ARUT	Antelope Range	10.51	101	Pn	P	05 38 21.9	+0.3
MCMT	McKenzie Canyo	10.89	63	*e*P	P	05 38 26.1	-0.7
CHMT	Chamberlain Mo	11.46	52	*e*P	P	05 38 31.7	-2.8
BOZ	Bozeman (W)	11.97	60	*e*P	P	05 38 40.3	-1.1
HRY	Holter Researc	12.24	55	*e*P	P	05 38 42.2	-2.9
PDAR	Pinedale Array	12.85	75	Pn	P	05 38 55.0	+1.9
	0.1nm,0.3s,baz=279,slow=12,SNR=2.4						
PV01	Paradox Valley	14.09	94	P	P	05 39 10.8	+1.3
ANMO	Albuquerque	16.80	103	Pn	P	05 39 48.3	+3.6
	baz=304,slow=12,SNR=9.7						
ANMO				LR	LR	05 45 40.8	
	comp=Z,56nm,21.3s,baz=129,slow=36						
ANMO	Albuquerque	16.80	103	P	P	05 39 44.3	-0.4
	3.0nm,1.0s						
GDL2	Guadalupe Moun	19.65	108	P	P	05 40 18.8	-0.8
FFC	Flin Flon	21.58	41	*e*P	P	05 40 39.6	+0.2
	6.2nm,0.8s,mb4.1						
TXAR	Lajitas Array	21.76	114	P	P	05 40 43.4	+1.9
	2.3nm,0.9s,mb3.6,baz=297,slow=8.4,SNR=18						
YKA	Yellowknife Ar	23.06	14	P	P	05 40 58.4	+4.5
	1.3nm,0.8s,mb3.4,baz=200,slow=11,SNR=4.6						
ULM	Lac du Bonnet	23.41	55	P	P	05 41 00.2	+2.7
	4.0nm,0.7s,mb4.0						
ILAR	Eielson Array	26.93	341	P	P	05 41 36.2	+5.5
	0.6nm,0.9s,mb3.1,baz=155,slow=6.4,SNR=6.3						
ILAR	Eielson Array	26.93	341	P	P	05 41 36.2	+5.5
TAOE	Nuku Hiva Isla	50.80	198	*e*PP	PP	05 46 07.9	-40
	323nm,29.1s						
TAOE				*e*LR	LR	06 00 12.7	
	1µm,39.2s,baz=42						
SUMG	Summit	51.24	23	P	P	05 44 54.9	+1.8
	1.6nm,0.7s,mb4.1						
PPT	Papeete	61.72	205	*e*P	P	05 46 19.7	+11
	25nm,21.5s						
PPT				*e*LR	LR	06 02 34.6	
	164nm,23.2s,baz=49						
TBI	Tubuai	67.12	203	*e*LR	LR	06 05 23.2	
	145nm,33.5s						
CN2	Changchun	73.97	314	*e*P	P	05 47 24.1	-0.8
CN2				*e*S	S	05 56 53.1	-2.6
BVAR	Borovoye Array	85.61	350	P	P	05 48 33.6	+6.5
	0.7nm,0.7s,mb4.0,baz=63,slow=3.3,SNR=4.4						
NJ2	Nanjing	85.83	309	*e*P	P	05 48 30.0	+1.2
WMQ	Urumqi	90.49	336	*e*P	P	05 48 51.6	+0.8
WMQ				AP	pP	05 48 55.6	+1.6
WMQ				XP	sP	05 48 57.6	+2.6
LZH	Lanzhou	90.77	321	*e*P	P	05 48 51.5	-0.8
LZH				LR	LR		
	comp=N,140nm,15.0s						
LZH				LR	LR		
	comp=Z,320nm,17.8s,MS4.8						

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*CSEM **19** 05:47:00.4±0.6, 38.67N×28.57W, h1^{km}±6^{km}, ML1.3, Error ellipse: s-maj=6.4km s-min=2.1km az=134.0, After PDA*

*PDA **19** 05:47:00.4±0.6, 38.67N×28.57W, h1^{km}±6^{km}, MD2.9, ML1.3, Error ellipse: s-maj=6.4km s-min=2.1km az=134.0*

SVSA 19 05:47:00.4±0.6**, 38.67N×28.57W, h1**^{km}±6^{km}**, MD2.9, ML1.3, Error ellipse: s-maj=6.4km s-min=2.1km az=134.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	Caldeira	0.13	231	*e*P	Pg	05 47 03.0	-0.1
CALA				*e*S	Sg	05 47 05.4	+0.6
HOR	Horta	0.15	198	*e*S	Sg	05 47 05.4	+0.1
PICO	Pico	0.20	145	*e*P	Pg	05 47 04.2	-0.2
PICO				*e*S	Sg	05 47 07.3	+0.2
PMAN	Manadas	0.38	95	*e*P	Pg	05 47 07.5	-0.5
PMAN				*e*S	Sg	05 47 12.7	-0.3
	12nm,0.1s						
PMAN	Manadas	0.38	95	*e*P	Pg	05 47 07.5	-0.5
PMAN				*e*S	Sg	05 47 12.7	-0.3
	12nm,0.1s						

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*LDG **19** 05:58:09.1±0.1, 41.87N×8.43W, h2^{km}, Md3.3/1, Ml2.9/4, Error ellipse: s-maj=4.7km s-min=1.7km az=102.0*

*INMG **19** 05:58:10.6±1.1, 41.79N×8.62W, h17^{km}±3^{km}, ML2.5, Error ellipse: s-maj=3.2km s-min=1.5km az=84.0*

*NEIC **19** 05:58:10.3, 41.77N×8.63W, h11^{km}, MN2.8(MDD), After MDD.*

NEIC Felt [II] at Rosal, Spain.

*CSEM **19** 05:58:11.3±0.1, 41.83N×8.50W, h18^{km}±1^{km}, ML3.1/13, Error ellipse: s-maj=4.0km s-min=2.1km az=81.0*

MDD 19 05:58:10.3±0.3**, 41.77N×8.64W, h11**^{km}**, mbLg2.7**/20**, 2D, Error ellipse: s-maj=3.5km s-min=2.1km az=62.0, PRXIMO, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZAM	Zamans	0.38	353	⇓Pg	Pg	05 58 17.5	-0.6
EZAM				Lg		05 58 22.6	
EZAM	Zamans	0.38	353	⇓Pg	Pg	05 58 17.4	-0.7
	20nm,0.1s,SNR=18						
EZAM				Lg		05 58 22.6	
	84nm,0.1s						
EZAM	Zamans	0.38	353	Pg	Pg	05 58 17.5	-0.6
	20nm,0.1s,SNR=18						
EZAM				Lg		05 58 22.6	
	84nm,0.1s						
ELOB	Lobios	0.44	77	Pg	Pg	05 58 18.7	-0.6
ELOB				Lg		05 58 24.6	
ELOB	Lobios	0.44	77	Pg	Pg	05 58 18.5	-0.7
	12nm,0.0s,SNR=152						
ELOB				Lg		05 58 24.6	
	273nm,0.2s						
ELOB	Lobios	0.44	77	Pg	Pg	05 58 18.7	-0.6
	12nm,0.0s,SNR=152						
ELOB				Lg		05 58 24.6	
	273nm,0.2s						
PVRL	Vila Real	0.85	125	*e*Pg	Pg	05 58 26.2	-1.1
PVRL				*e*Sg	Sg	05 58 37.1	-1.6
	112nm,0.1s						
PVRL	Vila Real	0.85	125	P	Pb	05 58 26.1	-0.4
PVRL				S	Sb	05 58 37.0	-0.7
PVRL	Vila Real	0.85	125	*e*Pg	Pg	05 58 26.2	-1.1
PVRL				*e*Sg	Sg	05 58 37.1	-1.6
	112nm,0.1s						
STS	Santiago	1.12	3	Pg	Pg	05 58 30.5	-2.2
	19nm,0.1s,SNR=26						
STS				Lg		05 58 45.5	
	86nm,0.2s,SNR=25						
PVIS	Viseu	1.19	152	*e*P	Pb	05 58 31.6	-0.8
PVIS				*e*S	Sb	05 58 47.2	-0.5
	49nm,0.1s						
PVIS	Viseu	1.19	152	Pg	Pg	05 58 31.6	-2.6
PVIS				Lg		05 58 47.4	
PVIS	Viseu	1.19	152	P	Pb	05 58 31.8	-0.6
PVIS				S	Sb	05 58 47.4	-0.3
EMAZ	Mazaricos	1.20	348	Pg	Pg	05 58 32.5	-1.9
EMAZ				Lg		05 58 46.9	
EMAZ	Mazaricos	1.20	348	Pg	Pg	05 58 32.1	-2.3
	6.8nm,0.1s,SNR=21						
EMAZ				Lg		05 58 46.9	
	142nm,0.2s						
EMAZ	Mazaricos	1.20	348	Pg	Pg	05 58 32.5	-1.9
	6.8nm,0.1s,SNR=21						
EMAZ				Lg		05 58 46.9	
	142nm,0.2s						
ERUA	La Rua	1.27	60	Pg	Pg	05 58 33.9	-1.8
	56nm,0.2s,SNR=123						
ERUA				Lg		05 58 50.7	
	92nm,0.4s,SNR=28						
ECAL	Calabor	1.43	83	Pg	Pg	05 58 34.6	-4.2
	9.7nm,0.3s,SNR=59						
ECAL				Lg		05 58 55.3	
	135nm,0.2s,SNR=10						
ECAL	Calabor	1.43	83	Pg	Pg	05 58 34.6	-4.2
	9.7nm,0.3s,SNR=59						
ECAL				Lg		05 58 55.3	
	135nm,0.2s,SNR=10						
MTE	Manteigas	1.60	149	*e*Pn	Pn	05 58 37.2	-1.5
MTE	Manteigas	1.60	149	*e*Pg	Pg	05 58 39.2	-3.0
MTE				*e*Sn	Sn	05 58 56.6	-2.8
MTE				*e*Sg	Sg	05 59 00.7	-2.9
	109nm,0.6s						
MTE	Manteigas	1.60	149	P	Pn	05 58 33.5	-5.2
MTE				S	Sn	05 58 56.4	-3.0
MTE	Manteigas	1.60	149	Pn	Pn	05 58 37.2	-1.5
MTE				Pg	Pg	05 58 39.2	-3.0
MTE				Sn	Sn	05 58 56.6	-2.8
MTE				Lg		05 59 00.7	
	54nm,0.6s						
MTE	Manteigas	1.60	149	*e*Pg	Pg	05 58 39.2	-3.0
MTE				*e*Sn	Sn	05 58 56.6	-2.8
MTE				*e*Sg	Sg	05 59 00.7	-2.9
	109nm,0.6s						
EPON	Pontenova	1.90	35	Pn	Pn	05 58 40.9	-2.2
	5.1nm,0.3s,SNR=14						
EPON				Pg	Pg	05 58 46.0	-2.3
	7.7nm,0.2s,SNR=26						
EPON				Sn	Sn	05 59 03.3	-3.8
	6.4nm,0.1s,SNR=7.0						
EPON				Lg		05 59 10.0	
	68nm,0.3s,SNR=15						
EPON	Pontenova	1.90	35	Pn	Pn	05 58 40.9	-2.1
	5.1nm,0.3s,SNR=14						
EPON				Sn	Sn	05 59 03.3	-3.9
	6.4nm,0.1s,SNR=7.0						
PCBR	Castelo Branco	2.12	155	*e*Pn	Pn	05 58 44.5	-1.6
PCBR	Castelo Branco	2.12	155	*e*Pg	Pg	05 58 49.0	-3.6
PCBR				*e*Sn	Sn	05 59 10.3	-2.4
PCBR				*e*Sg	Sg	05 59 16.3	-4.6
	22nm,0.5s						
PCBR	Castelo Branco	2.12	155	Pn	Pn	05 58 44.4	-1.7
PCBR				Sn	Sn	05 59 09.5	-3.2
PCBR	Castelo Branco	2.12	155	Pn	Pn	05 58 44.5	-1.6
PCBR				Pg	Pg	05 58 49.0	-3.6
PCBR				Sn	Sn	05 59 10.3	-2.4
PCBR				Lg		05 59 16.3	
	11nm,0.5s						
PCBR	Castelo Branco	2.12	155	*e*Pg	Pg	05 58 49.0	-3.6
PCBR				Sn	Sn	05 59 09.5	-3.2
PCBR				*e*Sg	Sg	05 59 16.3	-4.6
	22nm,0.5s						
PTOM	Tomar	2.16	175	*e*Pn	Pn	05 58 45.3	-1.4
PTOM	Tomar	2.16	175	*e*Pg	Pg	05 58 48.5	-4.9
PTOM				*e*Sn	Sn	05 59 12.3	-1.3
PTOM				*e*Sg	Sg	05 59 17.6	-4.6
	49nm,0.3s						
PTOM	Tomar	2.16	175	Pn	Pn	05 58 45.3	-1.4
PTOM				Pg	Pg	05 58 48.5	-4.9
PTOM				Sn	Sn	05 59 12.3	-1.3
PTOM				Lg		05 59 17.6	
	24nm,0.3s						
PTOM	Tomar	2.16	175	*e*Pg	Pg	05 58 48.5	-4.9
PTOM				*e*Sn	Sn	05 59 12.3	-1.3
PTOM				*e*Sg	Sg	05 59 17.6	-4.6
	49nm,0.3s						
EARI	Arriondas	2.96	58	Pn	Pn	05 58 56.6	-1.5
	3.3nm,0.2s,SNR=39						
EARI				Sn	Sn	05 59 31.8	-2.1
	0.3nm,0.1s,SNR=4.0						
EARI				Lg		05 59 44.0	
	11nm,0.4s						
EARI	Arriondas	2.96	58	Pn	Pn	05 58 56.6	-1.5
	3.3nm,0.2s,SNR=39						
EARI				Sn	Sn	05 59 31.8	-2.1
	0.3nm,0.1s,SNR=4.0						
EARI				Lg		05 59 44.0	
	11nm,0.4s						
MOE	Montemor	3.25	176	*e*Sg	Sg	05 59 51.2	-7.4
EBAD	Badajoz	3.26	157	Pn	Pn	05 59 00.2	-2.1
	1.5nm,0.1s,SNR=10						
EBAD				Pg	Pg	05 59 09.4	-5.9
	0.8nm,0.1s,SNR=4.6						
EBAD				Sn	Sn	05 59 36.9	-4.6
	2.2nm,0.3s,SNR=4.7						
EBAD				Lg		05 59 52.3	
	5.7nm,0.2s,SNR=8.3						
EBAD	Badajoz	3.26	157	Pn	Pn	05 59 00.2	-2.2
	1.5nm,0.1s,SNR=10						
EBAD	Badajoz	3.26	157	Pg	Pg	05 59 09.4	-5.9
	0.8nm,0.1s,SNR=4.6						
EBAD				Sn	Sn	05 59 36.9	-4.6
	2.2nm,0.3s,SNR=4.7						
EBAD				Lg		05 59 52.3	
	5.7nm,0.2s,SNR=8.3						
EVO	Evora	3.27	171	*e*Pn	Pn	05 59 00.2	-2.3
EVO				*e*Sn	Sn	05 59 37.1	-4.7
EVO				*e*Sg	Sg	05 59 52.4	-6.8
	20nm,0.4s						
PBEJ	Beja	3.79	171	*e*Pn	Pn	05 59 07.9	-2.0
PBEJ				*e*Sn	Sn	05 59 49.9	-5.0
PBEJ				*e*Sg	Sg	06 00 07.6	-8.8
	4.9nm,0.4s						
PBEJ	Beja	3.79	171	Pn	Pn	05 59 07.8	-2.1
PBEJ				Sn	Sn	05 59 49.9	-5.0
PBEJ				Lg		06 00 07.6	
	2.5nm,0.4s						
PBEJ	Beja	3.79	171	Pn	Pn	05 59 07.8	-2.1
PBEJ				Sn	Sn	05 59 50.7	-4.2
ELAN	Lanestosa	4.11	67	Pn	Pn	05 59 12.4	-2.1
	1.2nm,0.2s,SNR=7.9						
ELAN				Lg		06 00 20.3	
	11nm,0.4s,SNR=7.9						
ELAN	Lanestosa	4.11	67	Pn	Pn	05 59 12.4	-2.1
	1.2nm,0.2s,SNR=7.9						
ELAN				Lg		06 00 20.3	
	11nm,0.4s,SNR=7.9						
ESDC	Sonseca Array	4.12	119	Pn	Pn	05 59 12.3	-2.4
	2.2nm,0.2s,baz=305,slow=13,SNR=9.1						
ESDC				Sn	Sn	05 59 57.6	-5.8
	2.3nm,0.2s,baz=301,slow=23,SNR=9.1						
ESDC				Lg		06 00 17.8	
	3.2nm,0.6s,baz=306,slow=29,SNR=11						
ESDC	Sonseca Array	4.12	119	Pn	Pn	05 59 12.3	-2.3
	2.2nm,0.2s,SNR=9.1						
ESDC				Sn	Sn	05 59 57.6	-5.8
	2.3nm,0.2s,SNR=9.1						
ESDC				Lg		06 00 17.8	
	3.2nm,0.6s,SNR=11						
PTEO	Sao Teotonio	4.22	181	*e*Pn	Pn	05 59 13.6	-2.5
PTEO	Sao Teotonio	4.22	181	Pn	Pn	05 59 14.0	-2.0
EMIN	Mina Concepcio	4.27	159	Pn	Pn	05 59 14.6	-2.2
	0.7nm,0.1s,SNR=13						
EMIN				Sn	Sn	06 00 00.0	-7.3
	2.4nm,0.3s,SNR=7.9						
EMIN				Lg		06 00 24.6	
	4.9nm,0.4s,SNR=6.6						
EMIN	Mina Concepcio	4.27	159	Pn	Pn	05 59 14.6	-2.2
	0.7nm,0.1s,SNR=13						
EMIN				Sn	Sn	06 00 00.0	-7.3
	2.4nm,0.3s,SNR=7.9						
ECAB	El Cabril	4.44	145	Pn	Pn	05 59 16.4	-2.8
	0.2nm,0.2s,SNR=8.4						
ECAB				Sn	Sn	06 00 04.7	-6.8
	1.8nm,0.2s,SNR=23						
ECAB				Lg		06 00 29.2	
	24nm,0.7s,SNR=6.4						
ECAB	El Cabril	4.44	145	Pn	Pn	05 59 16.4	-2.8
	0.2nm,0.2s,SNR=8.4						
ECAB				Sn	Sn	06 00 04.7	-6.8
	1.8nm,0.2s,SNR=23						
ECRI	Cripan	4.63	78	Lg		06 00 34.5	
	SNR=7.9						
EADA	Adamuz	4.76	138	Pn	Pn	05 59 19.9	-3.8
	0.4nm,0.2s,SNR=4.0						
EADA				Sn	Sn	06 00 12.5	-7.0
	0.3nm,0.3s,SNR=4.0						
EADA				Lg		06 00 39.3	
	4.8nm,0.5s,SNR=6.1						
EADA	Adamuz	4.76	138	Pn	Pn	05 59 19.9	-3.8
	0.4nm,0.2s,SNR=4.0						
EADA				Sn	Sn	06 00 12.5	-7.1
	0.3nm,0.3s,SNR=4.0						
SJPF	Ste Jean	5.64	74	*e*Pn	Pn	05 59 29.3	-6.9
SJPF				*e*Sg	Sg	06 01 01.4	-17
	6.2nm,0.6s						
ESAC	San Caprasio	6.11	88	Pn	Pn	05 59 39.7	-3.1
	6.7nm,1.5s,SNR=7.9						
ETOB	Tobarra	6.26	118	Lg		06 01 25.7	
	4.1nm,0.5s,SNR=4.0						
EMOS	Mosqueruela	6.33	100	Sn	Sn	06 00 51.4	-7.4
	SNR=7.9						
QUIF	Quistinic	7.27	30	*e*Pn	Pn	05 59 51.7	-7.4
QUIF				*e*Sn	Sn	06 01 08.0	-14
	1.3nm,0.4s						
ROSF	Rostrenen	7.58	28	*e*Pn	Pn	05 59 56.1	-7.3
ROSF				*e*Sn	Sn	06 01 15.2	-15
	0.7nm,0.3s						
MFF	Saint Martin d	7.78	49	*e*Pn	Pn	05 59 58.1	-8.1
SGMF	Saint Gilles	7.78	32	*e*Pn	Pn	05 59 58.0	-8.2

IDC 19 06:00:52.2±1.4**, 2.16N×126.92E, mb3.9**/4**, mb1 4.2**/4**, mb1mx3.9**/16**, mbtmp4.0**/4**, Error ellipse: s-maj=78.8km s-min=21.3km az=86.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	20.17	184	*e*P	P	06 05 29.1	-2.1
FITZ	Fitzroy Crossi	20.17	184	P	P	06 05 29.2	-2.1
	4.4nm,0.5s,baz=15,slow=7.8,SNR=11						
WRA	Warramunga Arr	23.14	162	P	P	06 05 59.7	-1.6
	2.5nm,0.5s,baz=340,slow=11,SNR=39						
WB2	Warramunga Arr	23.14	162	*e*P	P	06 06 00.2	-1.1
MJAR	Matsushiro Arr	35.77	16	P	P	06 07 53.1	-1.9
	2.5nm,0.7s,baz=185,slow=9.5,SNR=11						
SONM	Songino Array	48.84	342	P	P	06 09 39.3	-2.0
	0.5nm,0.6s,baz=160,slow=8.4,SNR=3.9						

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*IDC **19** 06:02:29.7±1.5, 3.21N×93.76E, h28^{km}±5^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.7/20, mbtmp3.9/7, ML4.2/1, Error ellipse: s-maj=46.4km s-min=26.8km az=57.0*

*NEIC **19** 06:02:30.3±1.4, 3.32N×94.16E, mb4.1/1, Error ellipse: s-maj=26.3km s-min=20.2km az=219.0*

ISC 19 06:02:28.4±1.2**, 3.3N**±0.1×**93.9E**±0.2**, h28**^{km}**, h28**^{km}±.6^{km}**:pP-P, n10, σ0^{s}51**/10**, mb4.0**/6**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	7.03	74	*e*P	Pn	06 04 05.7	-6.5
KULM				*e*		06 04 13.5	
CM31	Chiang Mai Arr	15.84	18	*e*P	P	06 06 10.9	-0.4
	5.5nm,0.4s						
CMAR	Chiang Mai Arr	15.84	18	Pn	P	06 06 11.5	+0.2
	0.3nm,0.3s,baz=215,slow=11,SNR=16						
MKAR	Makanchi Array	44.45	349	P	P	06 10 39.7	+0.9
	1.7nm,0.6s,mb3.9,baz=163,slow=8.5,SNR=22						
MKAR				pP	pP	06 10 48.1	+0.8
	1.8nm,0.7s,baz=164,slow=8.8,SNR=12						
MKAR	Makanchi Array	44.45	349	P	P	06 10 39.7	+0.9
MKAR				pP	pP	06 10 48.1	+0.8
SONM	Songino Array	45.64	12	P	P	06 10 47.8	-0.4
	1.4nm,0.8s,mb4.0,baz=192,slow=8.2,SNR=10						
SONM				pP	pP	06 10 56.9	+0.2
	1.2nm,0.8s,baz=195,slow=8.4,SNR=6.1						
WRA	Warramunga Arr	45.97	122	P	P	06 10 51.3	+0.1
	2.0nm,0.9s,mb4.0,baz=300,slow=9.1,SNR=5.3						
ZAL	Zalesovo	51.00	353	P	P	06 11 30.4	+0.6
	1.3nm,0.3s,mb4.3,baz=233,slow=3.1,SNR=6.1						
ZAL				pP	pP	06 11 38.8	+0.4
	1.2nm,0.6s,baz=316,slow=7.2,SNR=2.8						
BVAR	Borovoye Array	53.20	343	P	P	06 11 45.7	-0.7
	1.3nm,0.9s,mb3.9,baz=135,slow=6.3,SNR=5.7						
BVAR				pP	pP	06 11 54.6	-0.4
	0.9nm,0.8s,baz=135,slow=10,SNR=4.6						
GERES	GERESS Array B	81.04	319	P	P	06 14 42.0	-0.3
	0.6nm,0.8s,mb3.6,baz=106,slow=9.7,SNR=5.7						
GERES				pP	pP	06 14 50.4	-0.9
	1.1nm,1.1s,baz=90,slow=2.7,SNR=3.5						

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*IDC **19** 06:14:10.6±2.2, 24.26S×111.80W, mb4.1/5, mb1 4.4/6, mb1mx4.1/16, mbtmp4.2/6, ML3.8/1, MS3.8/12, Ms1 3.8/12, ms1mx3.6/22, Error ellipse: s-maj=76.3km s-min=17.7km az=54.0*

*NEIC **19** 06:14:12.3±0.9, 24.25S×111.67W, h10^{km}, mb4.5/2, Error ellipse: s-maj=40.1km s-min=14.0km az=66.0*

ISC 19 06:14:10.6±1.1**, 24.2S**±0.2×**111.8W**±0.3**, h10**^{km}**, n28, σ0^{s}78**/17**, mb4.2**/6**, MS3.7**/12**, 2C, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	3.69	143	Pn	Pn	06 15 07.0	-2.0
	8.6nm,0.3s,baz=329,slow=19,SNR=5.4						
RPN				LR	LR	06 15 49.9	
	comp=Z,905nm,19.4s,baz=0.8,slow=27						
RPN				Lg		06 16 05.9	
	2.4nm,0.3s,baz=300,slow=18,SNR=3.9						
RPN	Rapa Nui	3.69	143	*e*P	Pn	06 15 04.9	-4.0
RPN				LR	LR	06 15 49.9	
RPN				Lg		06 16 05.9	
RPN				*e*S	Sn	06 16 06.0	+13
PPT	Papeete	35.82	273	LR	LR	06 30 29.5	
	comp=Z,10nm,19.3s,MS2.6,baz=25,slow=27						
PLCA	Paso Flores	38.14	126	LR	LR	06 33 04.0	
	comp=Z,170nm,21.7s,MS3.8,baz=281,slow=30						
CFAA	Coronel Fontan	39.01	111	LR	LR	06 33 42.2	
	comp=Z,47nm,20.6s,MS3.3,baz=91,slow=30						
LPAZ	La Paz	41.59	88	P	P	06 22 01.2	+0.6
	5.8nm,1.2s,mb4.1,baz=244,slow=7.9,SNR=13						
LPAZ				LR	LR	06 35 26.4	
	comp=Z,99nm,21.6s,MS3.6,baz=140,slow=31						
LPAZ	La Paz	41.59	88	*e*P	P	06 22 01.9	+1.3
	9.3nm,1.3s,mb4.2						
LPAZ				LR	LR	06 35 26.4	
USHA	Ushuaia	44.25	145	LR	LR	06 36 00.6	
	comp=Z,203nm,21.2s,MS4.0,baz=19,slow=30						
CPUP	Villa Florida	49.01	105	LR	LR	06 39 29.9	
	comp=Z,85nm,21.5s,MS3.7,baz=226,slow=31						
SDV	Santo Domingo	51.91	56	LR	LR	06 42 36.6	
	comp=Z,116nm,18.4s,MS4.0,baz=213,slow=33						
TXAR	Lajitas Array	53.77	9	LR	LR	06 40 46.4	
	comp=Z,48nm,21.0s,MS3.5,baz=180,slow=30						
BDFB	Brasilia	60.15	95	P	P	06 24 20.6	-0.5
	3.2nm,0.8s,mb4.4,baz=270,slow=5.1,SNR=4.5						
BDFB				LR	LR	06 47 28.5	
	comp=Z,102nm,18.7s,MS4.0,baz=270,slow=33						
URZ	Urewera	61.04	238	LR	LR	06 43 04.5	
	comp=Z,61nm,22.0s,MS3.7,baz=202,slow=28						
NVAR	Mina Array Bea	62.57	354	P	P	06 24 38.1	+0.9
	2.7nm,0.9s,mb4.4,baz=169,slow=8.4,SNR=17						
PDAR	Pinedale Array	66.64	2	P	P	06 25 02.4	-1.1
	0.7nm,0.6s,mb3.9,baz=194,slow=7.4,SNR=5.8						
HLID	Hailey	67.44	358	*e*P	P	06 25 08.7	0.0
	4.5nm,1.2s,mb4.4						
MCMT	McKenzie Canyo	68.67	359	*e*P	P	06 25 16.1	-0.2
CHMT	Chamberlain Mo	70.77	359	*e*P	P	06 25 28.8	-0.3
VNA3	Neumayer Olymp	71.14	160	*e*	P	06 25 37.3	+6.4
VNA3	Neumayer Olymp	71.14	160	⇑*i*P	P	06 25 31.5	+0.6
VNA3				*e*		06 25 37.3	
VNA2	Neumayer--Watz	71.95	160	*e*	P	06 25 42.3	+6.5
VNA2	Neumayer--Watz	71.95	160	⇑*i*P	P	06 25 36.5	+0.7
VNA2				*e*		06 25 42.3	
YKA	Yellowknife Ar	86.39	359	P	P	06 26 54.2	+0.2
	0.6nm,0.5s,mb4.1,baz=166,slow=4.4,SNR=8.5						
YKA	Yellowknife Ar	86.39	359	P	P	06 26 54.2	+0.2
SCHQ	Schefferville	87.61	24	LR	LR	07 04 01.7	
	comp=Z,30nm,21.3s,MS3.7,baz=79,slow=34						
PMG	Port Moresby	96.11	257	LR	LR	07 03 33.3	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,189nm,18.7s,MS4.6,baz=41,slow=31						
BRTR	**Keskin Array B**	**147.07**	**54**	PKPbc	PKPdf	06 33 56.0	+1.2
	3.5nm,1.0s,baz=315,slow=1.7,SNR=8.3						
MALT	**Malatya**	**151.06**	**54**	*e*PKPbc	PKPdf	06 34 05.6	+4.4
MALT				*e*PKPab	PKPab	06 34 12.5	-1.4

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*NIED **19** 06:16:00,40.30N×142.90E,h41^{km},Mw3.7 Best double couple: M$_0$3.66×10^{14} NP1:φ$_s$66°,δ78°,λ-152°. NP2: φ$_s$330°,δ62°,λ-14°.*

*JMA **19** 06:16:23.6±0.1,40.30N×142.85E,h32^{km}±2^{km},M3.7*

*MOS **19** 06:16:23.6±1.9,40.46N×142.71E,h33^{km},mb4.2/2,Error ellipse: s-maj=35.2km s-min=14.0km az=66.1*

*IDC **19** 06:16:28.1±3.2,40.51N×142.40E,h42^{km}±31^{km},mb3.4/4,mb1 3.6/6,mb1mx3.3/24,mbtmp3.7/6,ML3.8/2,Error ellipse: s-maj=46.8km s-min=25.9km az=137.0*

*NEIC **19** 06:16:31.3±1.1,40.06N×142.49E,h100^{km},mb4.0/1,Error ellipse: s-maj=24.8km s-min=9.6km az=116.0*

ISC 19 06:16:23.7±0.8, **40.30N**±0.04×**142.87E**±0.08, **h47**^{km}±8^{km}, **n25**, σ**0^{s}61**/39, **mb3.8**/5, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.85**	**245**	P	**P**	**06 16 39.2**	**-0.3**
JTH				S	**S**	**06 16 50.2**	**-0.9**
JANG	**Nango**	**1.03**	**274**	P	**P**	**06 16 42.0**	**-0.1**
JANG				S	**S**	**06 16 55.2**	**-0.5**
MIYJ	**Miyakonagasawa**	**1.08**	**228**	P	**P**	**06 16 42.5**	**-0.2**
MIYJ				S	**S**	**06 16 56.1**	**-0.7**
JTM	**Tenmabayashi**	**1.45**	**290**	P	**P**	**06 16 48.3**	**+0.2**
JTM				S	**S**	**06 17 06.3**	**+0.2**
JOM	**Ohasama**	**1.47**	**236**	P	**P**	**06 16 48.8**	**+0.6**
JOM				*e*S	**S**	**06 17 06.9**	**+0.4**
JAH	**Hinai**	**1.71**	**267**	P	**P**	**06 16 52.5**	**+0.8**
JAH				*e*S	**S**	**06 17 13.5**	**+1.1**
JEM	**Erimo**	**1.73**	**7**	P	**P**	**06 16 51.5**	**-0.4**
JEM				*e*S	**S**	**06 17 12.5**	**-0.3**
JOT	**Ohata**	**1.75**	**309**	P	**P**	**06 16 52.0**	**-0.2**
JOT				*e*S	**S**	**06 17 13.4**	**0.0**
JMK	**Ichinoseki**	**1.85**	**224**	P	**P**	**06 16 54.2**	**+0.6**
JMK				*e*S	**S**	**06 17 16.1**	**+0.2**
JNBK	**Urakawa-nobuka**	**1.98**	**358**	P	**P**	**06 16 55.2**	**-0.2**
JNBK				*e*S	**S**	**06 17 19.5**	**+0.4**
ASAJ	**Asahikawa**	**3.82**	**357**	P	**P**	**06 17 21.3**	**-0.2**
ASAJ				S	**S**	**06 18 06.1**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ	**Asahikawa**	**3.82**	**357**	P	**P**	**06 17 21.2**	**-0.3**
	comp=Z,7.4nm,0.3s,baz=226,slow=8.1,SNR=38						
ASAJ				S	**S**	**06 18 06.1**	**+0.4**
	comp=Z,2.4nm,0.3s,baz=118,slow=32,SNR=5.4						
YUK	**Yuzh-Kuril'sk**	**4.34**	**30**	*e*P	**P**	**06 17 25.0**	**-4.0**
YUK				*e*S	**S**	**06 18 09.9**	**-9.1**
YUK				pmax	pmax		
	comp=E,190nm,0.3s						
YUK				pmax	pmax		
	comp=Z,420nm,0.3s						
YUK				pmax	pmax		
	comp=N,170nm,0.4s						
YUK				smax			
	comp=N,2μm,0.7s						
YUK				smax			
	comp=E,2μm,0.7s						
YUK				smax			
	comp=N,600nm,0.4s						
YUK				smax			
	comp=E,240nm,0.4s						
MAJO	**Matsushiro**	**5.24**	**226**	*e*P	**P**	**06 17 42.0**	**+0.5**
MAT	**Matsushiro**	**5.24**	**226**	*e*P	**P**	**06 17 42.0**	**+0.5**
MAT	**Matsushiro**	**5.24**	**226**	P	**P**	**06 17 41.5**	**0.0**
MAT				*e*S	**S**	**06 18 40.3**	**-1.1**
MJAR	**Matsushiro Arr**	**5.24**	**226**	P	**P**	**06 17 42.4**	**+0.9**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	**Matsushiro Arr**	**5.24**	**226**	P	**P**	**06 17 42.4**	**+0.9**
	comp=Z,1.9nm,0.3s,baz=38,slow=12,SNR=49						
SONM	**Songino Array**	**27.07**	**298**	P	**P**	**06 22 03.4**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.5,baz=85,slow=9.2,SNR=10						
MKAR	**Makanchi Array**	**43.43**	**299**	P	**P**	**06 24 23.1**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**43.43**	**299**	P	**P**	**06 24 23.1**	**-0.3**
	comp=Z,1.1nm,0.5s,mb3.8,baz=89,slow=9.3,SNR=10						
ILAR	**Eielson Array**	**46.14**	**34**	P	**P**	**06 24 48.1**	**+3.4**
	comp=Z,0.4nm,0.8s,mb3.4,baz=266,slow=6.6,SNR=5.1						
BVAR	**Borovoye Array**	**49.27**	**311**	P	**P**	**06 25 08.8**	**-0.6**
	comp=Z,0.8nm,0.4s,mb4.1,baz=62,slow=8.1,SNR=7.4						
ZRNK	**Zerenda**	**50.09**	**311**	*e*P	**P**	**06 25 15.1**	**-0.6**
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
ZRNK	**Zerenda**	**50.09**	**311**	*e*P	**P**	**06 25 15.1**	**-0.6**
	comp=Z,0.9nm,0.5s,mb4.1						

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*IDC **19** 06:16:34.6±3.2,16.13S×174.19W,h91^{km}±22^{km},mb3.6/6,mb1 3.9/7,mb1mx3.7/16,mbtmp3.9/7,Error ellipse: s-maj=92.5km s-min=17.4km az=147.0*

*NEIC **19** 06:16:35.1±1.9,16.17S×174.22W,h96^{km}±13^{km},mb3.6/1,Error ellipse: s-maj=69.8km s-min=13.7km az=147.0*

ISC 19 06:16:33.5±2.6, **16.0S**±0.6×**174.3W**±0.4, **h90**^{km}±19^{km}, **n11**, σ**0^{s}67**/11, **mb3.7**/7, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.23**	**50**	P	**P**	**06 17 24.1**	**+0.9**
	8.6nm,0.3s,baz=107,slow=1.4,SNR=18						
AFI				S	**S**	**06 18 00.6**	**0.0**
	36nm,0.3s,baz=51,slow=23,SNR=20						
AFI	**Afiamalu**	**3.23**	**50**	*e*P	**P**	**06 17 24.2**	**+1.0**
AFI				*e*S	**S**	**06 17 58.2**	**-2.5**
STKA	**Stephens Creek**	**42.97**	**240**	P	**P**	**06 24 24.8**	**-0.6**
	7.0nm,1.1s,mb4.3,baz=276,slow=16,SNR=3.4						
WRA	**Warramunga Arr**	**48.85**	**257**	P	**P**	**06 25 12.0**	**0.0**
	0.5nm,0.6s,mb3.6,baz=90,slow=7.0,SNR=15						
NVAR	**Mina Array Bea**	**75.38**	**42**	P	**P**	**06 28 08.7**	**-0.4**
	0.9nm,0.7s,mb3.6,baz=233,slow=9.5,SNR=6.7						
HLID	**Hailey**	**80.66**	**40**	*e*P	**P**	**06 28 38.7**	**+0.7**
	0.8nm,0.8s,mb3.6						
TXAR	**Lajitas Array**	**81.68**	**56**	P	**P**	**06 28 43.5**	**-0.1**
	0.7nm,1.0s,mb3.5,baz=233,slow=6.3,SNR=5.2						
ILAR	**Eielson Array**	**83.22**	**11**	P	**P**	**06 28 51.0**	**+0.1**
	0.8nm,0.9s,mb3.5,baz=207,slow=5.4,SNR=5.8						
PDAR	**Pinedale Array**	**83.31**	**42**	P	**P**	**06 28 51.9**	**+0.2**
	1.1nm,0.7s,mb3.8,baz=243,slow=3.3,SNR=9.1						
ARCES	**ARCESS Array B**	**125.10**	**352**	PKP	PKPdf	06 35 22.8	-0.2
	2.2nm,0.8s,baz=315,slow=1.7,SNR=7.3						
GERES	**GERESS Array B**	**146.62**	**350**	PKPbc	PKPbc	06 36 06.3	+2.0
	0.2nm,0.4s,baz=135,slow=3.8,SNR=4.1						

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*IDC **19** 06:24:14.5±1.3,1.26N×97.34E,mb4.2/9,mb1 4.4/10,mb1mx4.2/18,mbtmp4.2/10,ML4.6/1,MS3.9/5,Ms1 4.0/5,ms1mx3.6/25,Error ellipse: s-maj=40.8km s-min=23.5km az=48.0*

*BJI **19** 06:24:15.7,0.94N×97.38E,h39^{km},mB5.0,mb4.9,Ms4.4,Msz4.3*

*MOS **19** 06:24:17.4±1.2,1.19N×97.29E,h33^{km},mb4.6/18,MS4.4/4,Error ellipse: s-maj=22.3km s-min=9.3km az=98.1*

*NEIC **19** 06:24:18.2±0.7,1.20N×97.32E,mb4.8/12,Error ellipse: s-maj=17.1km s-min=12.2km az=52.0*

ISC 19 06:24:16.8±0.7, **1.24N**±0.09×**97.23E**±0.07, **h28**^{km}, **h28**^{km}±1.8^{km}**:pP-P**, **n75**, σ**1^{s}11**/72, **mb4.6**/35, **MS4.2**/15, **7C**, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.04**	**49**	P	**Pn**	**06 25 33.9**	**+1.3**
KULM	**Kulim**	**5.28**	**40**	⇑*i*P	**Pn**	**06 25 36.5**	**+0.5**
KGM	**Kluang**	**6.14**	**83**	P	**Pn**	**06 25 50.4**	**+2.3**
CMAR	**Chiang Mai Arr**	**17.20**	**6**	*i* P	**P**	**06 28 19.2**	**+2.3**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**17.20**	**6**	P	**P**	**06 28 15.5**	**-1.4**
	comp=Z,0.8nm,0.3s,baz=199,slow=11,SNR=17						
CMAR				LR	LR	06 35 03.4	
	comp=Z,257nm,19.7s,baz=190,slow=38						
KKM	**Kota Kinabalu**	**19.54**	**75**	P	**P**	**06 28 44.8**	**-0.6**
TSM	**Tawau**	**20.84**	**81**	P	**P**	**06 28 59.8**	**+0.7**
KMI	**Kunming**	**24.34**	**12**	P	**P**	**06 29 35.3**	**+1.6**
KMI				AP		06 29 41.9	
KMI				XP		06 29 45.3	
KMI				PP	PP	06 30 15.5	+6.4
KMI				PPP	PPP	06 30 30.3	+11
KMI				AMB	AMB		
	comp=Z,40nm,1.7s,mb4.6						
KMI				AMB	AMB		
	comp=Z,230nm,4.7s						
KMI				LR	LR		
	comp=N,840nm,16.5s,MS4.4						
KMI				LR	LR		
	comp=E,510nm,13.0s,MS4.4						
KMI				LR	LR		
	comp=Z,920nm,16.0s,MS4.4						
KMI	**Kunming**	**24.34**	**12**	P	**P**	**06 29 35.3**	**+1.6**
KMI				*SP		06 29 45.3	
KMI						06 30 15.5	
KMI				pmax	pmax		
	comp=Z,43nm,1.7s,mb4.6						
KMI				MLR	MLR		
	comp=Z,920nm,16.0s,MS4.4						
KMI	**Kunming**	**24.34**	**12**	P	**P**	**06 29 35.3**	**+1.6**
	comp=Z,43nm,1.7s,mb4.6						
KMI				pP		06 29 41.9	
KMI				sP		06 29 45.3	
KMI				PP	PP	06 30 15.5	+6.4
KMI				PPP	PPP	06 30 30.3	+11
KMI				S	**S**	**06 34 03.0**	**+15**
KMI				sS		06 34 14.0	
KMI				SS	SS	06 35 09.5	+27
KMI				LR	LR		
	comp=Z,920nm,16.0s,MS4.4						
SHL	**Shillong**	**24.73**	**348**	⇑*i*P	**P**	**06 29 36.5**	**-1.0**
GYA	**Guiyang**	**26.67**	**19**	P	**P**	**06 29 55.0**	**-0.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.2						
GYA				LR	LR		
	comp=N,680nm,12.9s,MS4.4						
GYA				LR	LR		
	comp=E,330nm,13.2s,MS4.4						
GYA				LR	LR		
	comp=Z,890nm,14.1s,MS4.5						
PKI	**Pulchoki**	**28.53**	**338**	*e*P	**P**	**06 30 13.9**	**+1.5**
	comp=Z,43nm,1.1s,mb5.1						
PKI	**Pulchoki**	**28.53**	**338**	*e*P	**P**	**06 30 13.9**	**+1.5**
PKI				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.8						
GUN	**Gumba**	**28.66**	**339**	*e*P	**P**	**06 30 13.7**	**+0.1**
	comp=Z,40nm,0.7s,mb5.2						
DMN	**Daman**	**28.68**	**337**	*e*P	**P**	**06 30 16.5**	**+2.8**
	comp=Z,35nm,1.0s,mb5.1						
KKN	**Kakani**	**28.77**	**338**	*e*P	**P**	**06 30 14.4**	**-0.2**
	comp=Z,50nm,1.1s,mb5.2						
KKN	**Kakani**	**28.77**	**338**	*e*P	**P**	**06 30 14.4**	**-0.2**
KKN				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.9						
LSA	**Lhasa**	**28.89**	**349**	*e*P	**P**	**06 30 16.7**	**+1.1**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**28.89**	**349**	*e*P	**P**	**06 30 16.7**	**+1.1**
	comp=Z,8.3nm,0.8s,mb4.5						
GKN	**Gorkha**	**29.22**	**337**	*e*P	**P**	**06 30 18.5**	**-0.1**
	comp=Z,49nm,1.1s,mb5.2						
KOLN	**Koldanda**	**29.43**	**335**	*e*P	**P**	**06 30 20.9**	**+0.3**
	comp=Z,27nm,0.7s,mb5.1						
ENH	**Enshi**	**31.14**	**21**	*e*P	**P**	**06 30 34.3**	**-1.3**
	comp=Z,24nm,0.8s,mb5.1						
ENH				*e*pP	pP	06 30 40.9	-2.9
WHN	**Wuhan**	**33.37**	**28**	P	**P**	**06 30 56.4**	**+1.3**
WHN				LR	LR		
	comp=Z,1μm,21.1s,MS4.5						
XAN	**Xi'an**	**34.42**	**17**	P	**P**	**06 31 02.6**	**-1.5**
XAN				AP	pP	06 31 10.0	-2.4
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
XAN				LR	LR		
	comp=N,260nm,14.4s,MS4.2						
XAN				LR	LR		
	comp=E,290nm,16.6s,MS4.2						
XAN				LR	LR		
	comp=Z,450nm,14.8s,MS4.3						
LZH	**Lanzhou**	**35.21**	**9**	⇑P	**P**	**06 31 10.0**	**-0.9**
LZH				AP	pP	06 31 17.5	-1.7
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.0						
LZH	**Lanzhou**	**35.21**	**9**	⇑P	**P**	**06 31 10.0**	**-0.9**
LZH				*SP	sP	06 31 20.6	-2.2
LZH				pmax	pmax		
	comp=Z,32nm,1.5s,mb5.0						
LZH	**Lanzhou**	**35.21**	**9**	⇑P	**P**	**06 31 10.0**	**-0.9**
	comp=Z,32nm,1.5s,mb5.0						
LZH				pP	pP	06 31 17.5	-1.7
LZH				sP	sP	06 31 20.6	-2.2
NJ2	**Nanjing**	**36.82**	**31**	*e*P	**P**	**06 31 19.8**	**-4.7**
NJ2				AP	pP	06 31 29.5	-3.3
NJ2				PP	PP	06 32 45.3	-5.0
NJ2				S	**S**	**06 37 01.0**	**-5.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,170nm,6.0s						
NJ2				LR	LR		
	comp=N,660nm,18.2s,MS4.5						
NJ2				LR	LR		
	comp=E,290nm,17.3s,MS4.5						
NJ2				LR	LR		
	comp=Z,370nm,16.9s,MS4.2						
SSE	**Sheshan**	**37.37**	**35**	*e*P	**P**	**06 31 23.4**	**-5.7**
SSE				S	**S**	**06 37 08.8**	**-6.0**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,70nm,3.5s						
SSE				LR	LR		
	comp=N,240nm,16.6s,MS4.1						
SSE				LR	LR		
	comp=E,100nm,16.6s,MS4.1						
SSE				LR	LR		
	comp=Z,300nm,14.0s,MS4.2						
SSE	**Sheshan**	**37.37**	**35**	*e*P	**P**	**06 31 23.4**	**-5.7**
	comp=Z,37nm,0.7s,mb5.3						
SSE				pP	pP	06 31 33.2	-4.2
SSE				sP	sP	06 31 36.6	-4.3
SSE				PP	PP	06 32 48.0	-9.1
SSE				S	**S**	**06 37 08.8**	**-6.0**
SSE				sS		06 37 24.3	
SSE				SS	SS	06 40 05.0	+18
SSE				LR	LR		
	comp=Z,300nm,14.0s,MS4.2						
GTA	**Gaotai**	**38.07**	**3**	P	**P**	**06 31 34.8**	**-0.1**
GTA				AP	pP	06 31 43.6	+0.4
GTA				XP	sP	06 31 46.0	-0.7
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,120nm,7.2s						
GTA				LR	LR		
	comp=N,270nm,16.4s,MS4.3						
GTA				LR	LR		
	comp=E,230nm,15.2s,MS4.3						
GTA				LR	LR		
	comp=Z,280nm,15.6s,MS4.2						
WRA	**Warramunga Arr**	**42.03**	**122**	P	**P**	**06 32 07.7**	**-0.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**42.03**	**122**	P	**P**	**06 32 07.7**	**-0.3**
	comp=Z,1.0nm,0.5s,mb3.7,baz=302,slow=9.1,SNR=21						
WRAB	**Tennant Creek**	**42.04**	**122**	*e*P	**P**	**06 32 07.8**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
WRAB	**Tennant Creek**	**42.04**	**122**	*e*P	**P**	**06 32 07.8**	**-0.2**
	comp=Z,2.3nm,0.6s,mb4.0						
AAK	**Ala-Archa**	**45.98**	**337**	⇑*e*P	**P**	**06 32 43.8**	**+4.3**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
AAK				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.7						
SONM	**Songino Array**	**47.09**	**8**	P	**P**	**06 32 48.5**	**+0.3**
	comp=Z,6.5nm,0.8s,mb4.6,baz=188,slow=8.4,SNR=55						
MKAR	**Makanchi Array**	**47.21**	**346**	P	**P**	**06 32 49.0**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR	**Makanchi Array**	**47.21**	**346**	P	**P**	**06 32 49.0**	**-0.2**
	comp=Z,4.7nm,0.7s,mb4.5,baz=158,slow=7.8,SNR=47						
MKAR	**Makanchi Array**	**47.21**	**346**	P	**P**	**06 32 49.0**	**-0.2**
ULN	**Ulaanbaatar**	**47.22**	**9**	*e*P	**P**	**06 32 48.1**	**-1.1**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ULN	**Ulaanbaatar**	**47.22**	**9**	*e*P	**P**	**06 32 48.1**	**-1.1**
	comp=Z,4.2nm,0.8s,mb4.4						
ZAK	**Zakamensk**	**49.23**	**5**	⇑*i*P	**P**	**06 33 04.5**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
CN2	**Changchun**	**49.26**	**27**	*e*P	**P**	**06 33 04.8**	**-0.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
TLY	**Talaya**	**50.55**	**5**	*e*P	**P**	**06 33 15.1**	**+0.2**
TLY				*e*		06 35 10.7	
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TLY				MLR	MLR		
	comp=Z,194nm,19.0s,MS4.1						
MJAR	**Matsushiro Arr**	**51.65**	**42**	P	**P**	**06 33 22.3**	**-1.1**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJAR	**Matsushiro Arr**	**51.65**	**42**	P	**P**	**06 33 22.3**	**-1.1**
	comp=Z,0.8nm,0.6s,mb3.8,baz=218,slow=6.6,SNR=5.7						
CIT	**Chita**	**52.43**	**13**	*e*P	**P**	**06 33 24.5**	**-4.6**
CIT				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
ZAL	**Zalesovo**	**53.52**	**351**	P	**P**	**06 33 36.9**	**-0.2**
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZAL	**Zalesovo**	**53.52**	**351**	P	**P**	**06 33 36.9**	**-0.2**
	comp=Z,4.9nm,0.8s,mb4.5,baz=289,slow=6.5,SNR=32						
ZAL	**Zalesovo**	**53.52**	**351**	P	**P**	**06 33 36.9**	**-0.2**
NVS	**Novosibirsk**	**54.64**	**350**	*i* P	**P**	**06 33 43.0**	**-2.4**
KLR	**Kul'dur**	**56.21**	**27**	*e*P	**P**	**06 33 52.8**	**-4.0**
KLR				MLR	MLR		
	comp=Z,500nm,13.0s,MS4.8						
SVE	**Sverdlovsk**	**62.66**	**338**	*e*P	**P**	**06 34 40.2**	**-1.0**
SVE				*e*		06 34 55.2	
KIV	**Kislovodsk**	**64.30**	**319**	*e*P	**P**	**06 34 57.5**	**+5.3**
KIV				pmax	pmax		
	comp=N,11nm,1.1s						
KIV				pmax	pmax		
	comp=E,6.0nm,1.1s						
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
YAK	**Yakutsk**	**65.38**	**16**	*i* P	**P**	**06 34 57.8**	**-1.0**
YAK				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.3						
YAK				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.3						
BRTR	**Keskin Array B**	**69.11**	**312**	P	**P**	**06 35 25.3**	**+2.6**
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRTR	**Keskin Array B**	**69.11**	**312**	P	**P**	**06 35 25.2**	**+2.5**
	comp=Z,2.0nm,1.0s,mb4.0,baz=135,slow=5.2,SNR=4.7						
MATP	**Matopo**	**70.56**	**248**	LR	LR	07 02 12.3	
	comp=Z,89nm,20.5s,MS4.0,baz=2.3,slow=32						
OBN	**Obninsk**	**72.60**	**328**	*e*P	**P**	**06 35 44.8**	**+1.3**
OBN				*e*		06 36 05.3	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
TIXI	**Tiksi**	**73.14**	**10**	*i* P	**P**	**06 35 44.8**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
LBTB	**Lobatse**	**73.93**	**244**	LR	LR	07 01 27.8	
	comp=Z,96nm,21.8s,MS4.0,baz=352,slow=30						
ARCES	**ARCESS Array B**	**82.51**	**340**	P	**P**	**06 36 37.9**	**-0.1**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	**ARCESS Array B**	**82.51**	**340**	P	**P**	**06 36 37.9**	**-0.1**
	comp=Z,2.8nm,0.9s,mb4.3,baz=117,slow=4.0,SNR=4.4						
GERES	**GERESS Array B**	**84.80**	**319**	P	**P**	**06 36 50.3**	**+0.2**
GERES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GERES	**GERESS Array B**	**84.80**	**319**	P	**P**	**06 36 50.3**	**+0.3**
	comp=Z,1.6nm,1.0s,mb4.1,baz=108,slow=4.2,SNR=7.7						
VNDA	**Vanda**	**85.86**	**169**	LR	LR	07 10 06.5	
	comp=Z,86nm,20.9s,MS4.1,baz=94,slow=32						
NB2	**NORSAR Subarra**	**86.99**	**331**	P	**P**	**06 37 00.5**	**-0.1**
	comp=Z,3.7nm,1.2s,mb4.5,baz=91,slow=5.3						
NOA	**NORSAR Array B**	**86.99**	**331**	P	**P**	**06 37 00.8**	**+0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	**NORSAR Array B**	**86.99**	**331**	P	**P**	**06 37 00.8**	**+0.2**
	comp=Z,1.1nm,0.9s,mb4.1,baz=90,slow=5.8,SNR=3.5						
ILAR	**Eielson Array**	**99.65**	**23**	LR	LR	07 30 08.0	
	comp=Z,55nm,19.1s,MS4.1,baz=180,slow=40						
TXAR	**Lajitas Array**	**143.62**	**32**	PKIKP	PKPdf	06 43 49.8	-4.9
TXAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TXAR	**Lajitas Array**	**143.62**	**32**	PKP	PKPdf	06 43 49.8	-4.9
	comp=Z,0.8nm,1.0s,baz=180,slow=1.3,SNR=5.4						
LRAL	**Lakeview Retre**	**145.68**	**6**	*e*PKP	PKPdf	06 43 54.1	-4.1

IDC 19 06:28:01.0±3.3, **4.09N**×**93.92E**, **mb3.6**/2, **mb1 4.0**/3, **mb1mx3.5**/19, **mbtmp3.7**/3, **ML4.4**/1, **MS3.9**/2, **Ms1 3.9**/2, **ms1mx3.4**/23, **Error ellipse: s-maj=117.5km s-min=32.5km az=60.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.11**	**19**	Pn	P	06 31 36.7	-1.0
	0.6nm,0.3s,baz=208,slow=12,SNR=4.6						
MKAR	**Makanchi Array**	**43.72**	**348**	P	P	06 36 07.8	-1.9
	0.4nm,0.4s,baz=160,slow=8.1,SNR=8.3						
MKAR				LR	LR	06 54 09.4	
	comp=Z,48nm,21.6s,baz=354,slow=36						
SONM	**Songino Array**	**44.89**	**12**	LR	LR	06 55 21.4	
	comp=Z,446nm,18.2s,baz=195,slow=36						
WRA	**Warramunga Arr**	**46.34**	**123**	P	P	06 36 29.1	-1.8
	0.9nm,0.9s,baz=302,slow=9.1,SNR=4.8						

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*IDC **19** 06:39:24.0±1.3,12.95N×92.02E,h41^{km}±8^{km},mb3.6/8,mb1 3.7/8,mb1mx3.6/18,mbtmp3.8/8,Error ellipse: s-maj=43.3km s-min=19.5km az=57.0*

ISC 19 06:39:22.1±1.1, **13.0N**±0.2×**92.1E**±0.2, **h42**^{km}, **h42**^{km}±.5^{km}**:pP-P**, **n10**, σ**1^{s}00**/11, **mb3.8**/8, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIS	**Vishakhapatnam**	**9.71**	**300**	*i* P	**P**	**06 41 44.6**	**+2.4**
VIS				*i* S	**S**	**06 43 18.6**	**-12**
MKAR	**Makanchi Array**	**34.73**	**348**	P	**P**	**06 46 09.9**	**-0.3**
	1.6nm,0.9s,mb4.0,baz=173,slow=9.8,SNR=12						
MKAR				pP	pP	06 46 21.6	-0.2
	1.2nm,0.8s,baz=166,slow=10.0,SNR=8.1						
SONM	**Songino Array**	**36.76**	**16**	P	**P**	**06 46 27.2**	**-0.1**
	0.6nm,0.7s,mb3.6,baz=217,slow=6.2,SNR=6.0						
SONM				pP	pP	06 46 39.1	+0.1
	0.3nm,0.5s,baz=214,slow=4.5,SNR=2.3						
ZAL	**Zalesovo**	**41.29**	**353**	P	**P**	**06 47 05.3**	**+0.4**
	0.8nm,0.3s,mb3.9,baz=298,slow=7.7,SNR=4.4						
ZAL				pP	pP	06 47 16.8	+0.1
	0.8nm,0.3s,baz=316,slow=4.0,SNR=1.7						
WRA	**Warramunga Arr**	**52.87**	**128**	P	**P**	**06 48 36.5**	**+0.2**
	0.4nm,0.6s,mb3.5,baz=307,slow=8.2,SNR=7.2						
WRA				pP	pP	06 48 48.4	+0.1
	0.3nm,0.5s,baz=305,slow=8.2,SNR=2.5						
BRTR	**Keskin Array B**	**57.66**	**309**	P	**P**	**06 49 08.3**	**-2.4**
	0.6nm,0.5s,mb3.9,baz=127,slow=6.2,SNR=3.6						
FINES	**FINESS Array B**	**67.31**	**332**	P	**P**	**06 50 15.0**	**+0.5**
	1.2nm,0.8s,mb4.0,baz=243,slow=8.5,SNR=3.7						
GERES	**GERESS Array B**	**72.75**	**317**	P	**P**	**06 50 48.5**	**+0.7**
	0.3nm,0.3s,mb3.6,baz=79,slow=6.8,SNR=6.5						
NB2	**NORSAR Subarra**	**74.35**	**330**	P	**P**	**06 50 56.7**	**-0.2**
	0.5nm,0.7s,mb3.5,baz=88,slow=5.8						
NOA	**NORSAR Array B**	**74.35**	**330**	P	**P**	**06 50 57.1**	**+0.2**
	0.6nm,0.7s,mb3.7,baz=91,slow=6.0,SNR=4.0						

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*BJI **19** 07:16:12.8,20.92S×178.64W,h586^{km},mB4.8,mb4.5*

*NEIC **19** 07:16:13.8±0.1,20.80S×178.81W,mb4.7/33,Error ellipse: s-maj=7.3km s-min=4.7km az=147.0*

*IDC **19** 07:16:14.8±0.7,20.81S×178.83W,h586^{km}±8^{km},mb4.1/18,mb1 4.3/19,mb1mx4.2/20,mbtmp5.0/19,Error ellipse: s-maj=12.6km s-min=8.7km az=152.0*

ISC 19 07:16:09.5±0.8, **20.89S**±0.05×**178.78W**±0.06, **h537**^{km}±10^{km}, **h573**^{km}±10.2^{km}**:pP-P**, **n235**, σ**0^{s}93**/117, **mb4.6**/44, **14C-20D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	9.63	45	P	P	07 18 24.7	+0.2
	16nm,0.3s,baz=30,slow=6.5,SNR=26						
AFI				S	S	07 20 11.6	-0.5
	12nm,0.3s,baz=46,slow=22,SNR=8.2						
AFI	Afiamalu	9.63	45	*e*P	P	07 18 23.9	-0.6
	243nm,0.9s						
DZM	Mont Dzumac	13.81	262	*e*P	P	07 19 10.7	+3.6
DZM	Mont Dzumac	13.81	262	P	P	07 19 11.3	+4.2
	5.9nm,0.3s,baz=83,slow=22,SNR=37						
DZM	Mont Dzumac	13.81	262	*e*P	P	07 19 10.7	+3.6
NOUC	Port Laguerre	13.94	262	*e*P	P	07 19 12.6	+4.3
NOUC	Port Laguerre	13.94	262	*e*P	P	07 19 12.6	+4.3
MTAZ	Motutapu	16.77	198	PN	P	07 19 41.0	+4.8
KAAZ	Kauri Point	16.86	198	PN	P	07 19 42.2	+5.1
OTAZ	Otara	16.92	198	PN	P	07 19 42.3	+4.7
MKAZ	Moumakai	17.00	197	PN	P	07 19 42.6	+4.2
WTAZ	Waiatarua	17.00	198	PN	P	07 19 42.9	+4.5
PUZ	Puketiti	17.32	188	PN	P	07 19 42.9	+1.5
URZ	Urewera	17.67	191	P	P	07 19 44.6	-0.4
	14nm,0.3s,baz=284,slow=2.9,SNR=66						
URZ				S	S	07 22 34.0	-4.7
	3.4nm,0.3s,baz=94,slow=20,SNR=12						
URZ	Urewera	17.67	191	PN	P	07 19 44.2	-0.7
RAR	Rarotonga	17.75	94	*e*P	P	07 19 45.2	-0.6
BKZ	Black Stump Fm	18.66	192	PN	P	07 19 53.3	-1.1
NGZ	Ngauruhoe	18.86	194	PN	P	07 19 57.3	+1.1
CNZ	Chateau	18.89	194	PN	P	07 19 57.0	+0.5
TUVZ	Tukino	18.93	193	PN	P	07 19 57.0	0.0
FWVZ	Far West T-bar	18.94	194	PN	P	07 19 58.1	+1.0
TSZ	Takapari Road	19.63	192	PN	P	07 20 03.8	+0.2
MRZ	Mangatainoka R	20.29	192	PN	P	07 20 08.3	-1.4
KIW	Kapiti Island	20.62	194	PN	P	07 20 12.5	-0.2
CAW	Cannon Point	20.82	193	PN	P	07 20 14.2	-0.4
SNZO	South Karori	21.09	194	PN	P	07 20 16.8	-0.3
TCW	Tory Channel	21.10	195	PN	P	07 20 17.1	0.0
QRZ	Quartz Range	21.21	198	PN	P	07 20 19.2	+1.0
NNZ	Nelson	21.33	196	PN	P	07 20 18.8	-0.5
TUWZ	Tuamarina	21.39	195	PN	P	07 20 18.8	-1.0
THZ	Tophouse	21.97	197	PN	P	07 20 24.6	-0.5
DSZ	Denniston Nort	22.27	199	PN	P	07 20 28.1	+0.3
KHZ	Kahutara	22.42	195	PN	P	07 20 28.3	-0.8
LTZ	Lake Taylor	23.09	197	PN	P	07 20 33.9	-1.3
RPZ	Rata Peaks	24.29	198	P	P	07 20 46.1	+0.1
	9.5nm,0.3s,mb4.9,baz=4.7,slow=4.3,SNR=32						
FOZ	Fox Glacier	24.57	200	PN	P	07 20 47.0	-1.6
LBZ	Lake Benmore	25.16	199	PN	P	07 20 52.1	-1.7
PPT	Papeete	27.75	88	P	P	07 21 16.9	+0.1
	58nm,0.8s,mb5.2,baz=151,slow=1.0,SNR=7.8						
ARMA	Armidale	28.24	244	⇓*i*P	P	07 21 23.0	+2.0
CNB	Canberra Magne	31.40	236	⇓*i*P	P	07 21 49.9	+1.9
	52nm,0.9s,mb5.1						
CTA	Charters Tower	32.73	265	P	P	07 22 00.8	+1.6
	78nm,0.3s,mb5.7,baz=91,slow=11,SNR=405						
CTAO	Charters Tower	32.73	265	*e*P	P	07 22 00.6	+1.3
	83nm,0.4s,mb5.6						
PMG	Port Moresby	34.72	284	P	P	07 22 17.3	+1.2
	105nm,0.9s,mb5.4,baz=78,slow=6.2,SNR=30						
PMG	Port Moresby	34.72	284	*e*P	P	07 22 17.1	+1.1
	106nm,0.9s,mb5.4						
TOO	Toolangi	35.08	234	*e*P	P	07 22 20.1	+1.3
	33nm,1.0s,mb4.8						
STKA	Stephens Creek	36.96	244	⇓*i*P	P	07 22 36.0	+1.6
	28nm,0.4s,mb5.2						
STKA	Stephens Creek	36.96	244	P	P	07 22 36.0	+1.7
	28nm,0.4s,mb5.2,baz=95,slow=10.0,SNR=176						
WB2	Warramunga Arr	43.81	263	⇓*i*P	P	07 23 29.4	0.0
WB2				*e*S	S	07 29 15.4	-6.3
WRAB	Tennant Creek	43.82	263	⇓*e*P	P	07 23 29.2	-0.3
	117nm,0.9s,mb5.4						
WRA	Warramunga Arr	43.83	263	P	P	07 23 29.5	-0.1
	28nm,0.3s,mb5.2,baz=96,slow=7.5,SNR=884						
WRA				PcP	PcP	07 25 03.6	-1.0
	2.0nm,0.4s,baz=95,slow=3.7,SNR=5.7						
WRA				S	S	07 29 18.2	-3.7
	4.0nm,1.1s,baz=98,slow=14,SNR=6.2						
KAKA	Kakadu	47.25	272	⇓*i*P	P	07 23 55.7	-0.3
	33nm,0.3s,mb5.3						
KAKA				*e*S	S	07 30 07.1	-2.6
FORT	Forrest	48.47	247	*e*P	P	07 24 03.9	-1.1
	30nm,0.8s,mb4.9						
FITZ	Fitzroy Crossi	52.25	263	⇓*i*P	P	07 24 32.8	-0.1
	47nm,1.3s,mb4.7						
MBWA	Marble Bar	57.06	258	*e*P	P	07 25 05.0	-1.4
	71nm,0.8s,mb5.0						
KLBR	Kellerberrin	57.23	245	⇓*i*P	P	07 25 06.8	-0.8
	79nm,0.9s,mb4.9						
SBA	Scott Base	57.44	184	*e*P	P	07 25 10.1	+1.8
	18nm,1.0s,mb4.3						
VNDA	Vanda	57.46	185	P	P	07 25 09.7	+1.1
	2.5nm,0.4s,mb3.8,baz=0.6,slow=6.8,SNR=35						
VNDA	Vanda	57.46	185	*e*P	P	07 25 09.4	+0.8
	3.0nm,0.7s,mb3.6						
NWAO	Narrogin (SRO)	57.54	244	P	P	07 25 09.5	-0.1
	26nm,0.9s,mb4.4,baz=90,slow=7.6,SNR=8.7						
NWAO	Narrogin (SRO)	57.54	244	*e*P	P	07 25 09.3	-0.4
	45nm,1.1s,mb4.6						
MUN	Mundaring	58.50	245	*e*P	P	07 25 16.1	0.0
	28nm,0.9s,mb4.5						
CASY	Casey	63.30	205	⇓*i*P	P	07 25 46.9	-0.1
KKM	Kota Kinabalu	69.15	285	*e*P	P	07 26 23.7	-0.3
QSPA	South Pole Qui	69.18	180	⇓*i*P	P	07 26 24.1	+1.0
	21nm,0.8s,mb4.7						
MJAR	Matsushiro Arr	70.09	324	P	P	07 26 28.1	-1.2
	8.4nm,0.8s,mb4.3,baz=164,slow=6.2,SNR=31						
MAJO	Matsushiro	70.09	324	*e*P	P	07 26 28.3	-0.9
	19nm,1.2s,mb4.5						
MAT	Matsushiro	70.09	324	*e*P	P	07 26 27.0	-2.2
	12nm,1.0s,mb4.4						
MAT	Matsushiro	70.09	324	P	P	07 26 27.1	-2.1
KSM	Kuching	72.75	278	*e*P	P	07 26 45.1	0.0
MDJ	Mudanjiang	80.42	325	P	P	07 27 26.4	+0.3
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,70nm,6.4s						
MDJ	Mudanjiang	80.42	325	*e*P	P	07 27 26.8	+0.6
	comp=Z,10nm,0.9s,mb4.2						
MAW	Mawson	80.95	200	*e*P	P	07 27 28.7	+0.3
	comp=Z,2.7nm,0.3s,mb4.2						
MAW	Mawson	80.95	200	P	P	07 27 29.0	+0.6
	comp=Z,3.0nm,0.3s,mb4.2,baz=115,slow=6.0,SNR=13						
YBH	Yreka Blue Hor	81.05	39	P	P	07 27 30.1	+0.7
	comp=Z,9.7nm,0.8s,mb4.3,baz=101,slow=1.6,SNR=25						
YBH	Yreka Blue Hor	81.05	39	*e*P	P	07 27 30.5	+1.0
	comp=Z,22nm,1.4s,mb4.4						
HUMO	Hull Mountain	81.45	38	*e*P	P	07 27 32.4	+0.9
	comp=Z,12nm,1.1s,mb4.3						
NVAR	Mina Array Bea	81.81	44	P	P	07 27 34.0	+0.6
	comp=Z,4.7nm,0.8s,mb4.0,baz=214,slow=6.5,SNR=29						
NVAR				pP	pP	07 29 37.6	+7.4
	comp=Z,2.2nm,1.0s,baz=218,slow=7.6,SNR=4.2						
NVAR	Mina Array Bea	81.81	44	P	P	07 27 34.0	+0.6
NVAR				pP	pP	07 29 37.6	+7.4
CN2	Changchun	82.16	323	*e*P	P	07 27 36.8	+1.8
MOD	Modoc	82.58	40	*e*P	P	07 27 37.3	+0.1
	comp=Z,15nm,1.1s,mb4.4						
KULM	Kulim	83.10	278	P	P	07 27 39.8	-0.6
ENH	Enshi	85.66	305	*e*P	P	07 27 52.4	-0.2
	comp=Z,38nm,1.1s,mb4.9						
DIV	Divide	85.95	15	*e*P	P	07 27 52.5	-0.7
	comp=Z,38nm,0.9s,mb5.0						
BMO	Blue Mountains	86.07	39	*e*P	P	07 27 54.2	0.0
	comp=Z,3.1nm,0.7s,mb4.0						
SYO	Syowa Base	86.19	193	⇑P	P	07 27 52.2	-2.0
SYO	Syowa Base	86.19	193	⇑PcP	PcP	07 27 54.9	-1.4
HLID	Hailey	87.10	41	*e*P	P	07 27 59.0	-0.1
	comp=Z,6.6nm,1.0s,mb4.2						
SRU	San Rafael	87.32	46	*e*P	P	07 27 59.9	-0.3
SNAA	Sanae	87.64	179	*e*P	P	07 28 00.4	-0.6
	comp=Z,4.3nm,0.9s,mb4.2						
VNA3	Neumayer Olymp	87.80	176	*e*	P	07 28 06.5	+4.8
VNA3	Neumayer Olymp	87.80	176	*e*	PcP	07 28 17.4	+14
VNA3	Neumayer Olymp	87.80	176	⇓*i*Pdif	P	07 28 01.4	-0.3
VNA3				*e*		07 28 06.5	
VNA3				*e*		07 28 17.4	
VNA3				*e*		07 29 17.3	
TXAR	Lajitas Array	87.88	58	P	P	07 28 04.2	+1.2
	comp=Z,2.4nm,0.8s,mb4.0,baz=221,slow=5.8,SNR=27						
TXAR				pP	pP	07 30 10.1	+8.4
	comp=Z,3.1nm,1.1s,baz=217,slow=6.3,SNR=11						
TXAR				PKKPbc		07 45 46.6	
	comp=Z,0.4nm,0.5s,baz=126,slow=2.6,SNR=7.5						
TXAR	Lajitas Array	87.88	58	P	P	07 28 04.2	+1.2
TXAR				pP	pP	07 30 10.1	+8.4
TXAR				PKKPbc		07 45 46.6	
PV10	Paradox Valley	87.97	48	*e*P	P	07 28 03.4	0.0
VNA2	Neumayer--Watz	88.23	177	*e*	P	07 28 09.2	+5.4
VNA2	Neumayer--Watz	88.23	177	*e*	PcP	07 28 20.2	+15
VNA2	Neumayer--Watz	88.23	177	⇓*i*Pdif	P	07 28 03.9	+0.1
VNA2				*e*		07 28 09.2	
VNA2				*e*		07 28 20.2	
VNA2				*e*		07 29 19.9	
VNA1	Neumayer--Stat	88.47	177	⇓*i*Pdif	P	07 28 04.9	0.0
VNA1				*e*		07 28 20.3	
VNA1				*e*		07 29 23.6	
GDL2	Guadalupe Moun	88.57	55	*e*P	P	07 28 06.8	+0.5
MCMT	McKenzie Canyo	88.72	41	*e*P	P	07 28 07.4	+0.7
ILAR	Eielson Array	88.86	13	P	P	07 28 05.3	-1.5
	comp=Z,5.9nm,0.8s,mb4.5,baz=228,slow=5.5,SNR=44						
ILAR				pP	pP	07 30 13.8	+8.2
	comp=Z,3.2nm,1.1s,baz=225,slow=5.9,SNR=9.4						
KMI	Kunming	88.88	297	P	P	07 28 07.3	-0.6
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
KMI	Kunming	88.88	297	P	P	07 28 07.3	-0.6
	comp=Z,17nm,1.0s,mb4.8						
SNOW	Snow King Moun	89.32	42	*e*P	P	07 28 09.4	-0.1
	comp=Z,11nm,1.0s,mb4.7						
IMW	Indian Meadow	89.42	42	*e*P	P	07 28 10.7	+0.7
	comp=Z,12nm,1.1s,mb4.6						
LOHW	Long Hollow	89.49	42	*e*P	P	07 28 10.6	+0.3
	comp=Z,3.0nm,0.6s,mb4.3						
PLCA	Paso Flores	89.53	134	P	P	07 28 11.1	+0.6
	comp=Z,1.7nm,0.8s,mb3.9,baz=300,slow=11,SNR=2.7						
CMAR	Chiang Mai Arr	89.56	290	P	P	07 28 11.7	+0.6
	comp=Z,11nm,0.9s,mb4.7,baz=122,slow=3.1,SNR=12						
CHMT	Chamberlain Mo	89.57	39	*e*P	P	07 28 10.4	-0.1
PDAR	Pinedale Array	89.75	44	P	P	07 28 11.6	+0.2
	comp=Z,4.1nm,0.7s,mb4.4,baz=270,slow=3.0,SNR=27						
LZH	Lanzhou	92.43	308	⇓P	P	07 28 24.9	+0.9
LZH				AP	pP	07 30 26.9	+3.4
LZH				PP	PP	07 32 18.0	+2.0
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,70nm,7.6s						
LZH	Lanzhou	92.43	308	⇓P	P	07 28 24.9	+0.9
	comp=Z,25nm,1.5s,mb5.0						
LZH				pP	pP	07 30 26.9	+3.4
LZH				sP	sP	07 31 21.2	+4.9
LZH				PP	PP	07 32 18.0	+2.0
YKA	Yellowknife Ar	97.17	25	P	P	07 28 44.0	-0.9
	comp=Z,0.6nm,0.7s,mb4.0,baz=241,slow=4.5,SNR=6.5						
YKA	Yellowknife Ar	97.17	25	P	P	07 28 44.0	-0.9
ZAL	Zalesovo	110.35	321	PKiKP		07 33 39.5	
	comp=Z,1.5nm,0.6s,baz=319,slow=3.8,SNR=7.6						
ZAL	Zalesovo	110.35	321	PKPdf	PKPdf	07 33 39.5	-0.4
MKAR	Makanchi Array	110.93	313	PKiKP		07 33 40.5	
	comp=Z,1.2nm,0.3s,baz=167,slow=0.6,SNR=44						
SCHQ	Schefferville	119.43	38	PKP	PKPdf	07 33 56.4	-1.1
	comp=Z,2.1nm,0.9s,baz=118,slow=2.6,SNR=3.6						
SUMG	Summit	123.70	13	*e*PKPdf	PKPdf	07 34 03.5	-1.8
ARU	Arti	125.10	325	*e*PKPdf	PKPdf	07 34 07.4	-0.9
BOSA	Boshof	125.59	206	PKP	PKPdf	07 34 10.3	+0.1
	comp=Z,1.7nm,0.4s,baz=281,slow=4.4,SNR=4.6						
BOSA	Boshof	125.59	206	PKP	PKPdf	07 34 10.3	+0.1
KEV	Kevo	128.71	349	*e*pkp	PKPdf	07 34 14.0	-1.1
ARCES	ARCESS Array B	129.17	349	PKP	PKPdf	07 34 14.4	-1.5
	comp=Z,3.9nm,0.6s,baz=75,slow=1.5,SNR=21						
KAF	Kangasniemi	135.32	344	*e*pkp	PKPdf	07 34 26.7	-0.9
LSZ	Lusaka	135.36	219	*e*PKPdf	PKPdf	07 34 31.1	+2.3
FINES	FINESS Array B	135.94	343	PKhKP		07 34 19.9	
	comp=Z,0.5nm,0.3s,baz=9.2,slow=4.1,SNR=8.1						
FINES				PKP	PKPdf	07 34 29.7	+1.0
	comp=Z,2.5nm,0.6s,baz=111,slow=3.7,SNR=11						
FINES				SKP		07 37 08.6	
	comp=Z,4.3nm,0.8s,baz=63,slow=4.3,SNR=12						
TSUM	Tsumeb	137.05	203	PKPdf	PKPdf	07 34 34.6	+2.7
NB2	NORSAR Subarra	139.28	353	PKPdf	PKPdf	07 34 36.8	+2.0
	comp=Z,1.6nm,0.7s,baz=14,slow=1.8						
NOA	NORSAR Array B	139.28	353	PKhKP		07 34 26.2	
	comp=Z,2.3nm,0.8s,baz=16,slow=4.6,SNR=10						
NOA				PKP	PKPdf	07 34 37.0	+2.2
	comp=Z,1.9nm,0.8s,baz=14,slow=4.1,SNR=7.1						
HFS	Hagfors	139.80	350	SKP		07 37 19.0	
	comp=Z,1.0nm,0.8s,baz=45,slow=6.3,SNR=3.7						
NAMS	An Nimas	141.53	275	P	PKPdf	07 34 37.9	-2.1
BLJS	Baljurashi	142.21	276	P	PKPdf	07 34 40.2	-0.9
HILS	Ha’il	142.54	288	P	PKPdf	07 34 40.5	-0.9
SUW	Suwalki	142.94	339	*e*PKP	PKPdf	07 34 39.4	-1.9
SUW	Suwalki	142.94	339	*e*PKP	PKPdf	07 34 39.4	-1.9
AKASG	Malin Array Be	142.99	330	PKP	PKPdf	07 34 38.1	-3.4
	comp=Z,13nm,0.4s,baz=43,slow=4.6,SNR=103						
AKASG	Malin Array Be	142.99	330	PKP	PKPdf	07 34 38.1	-3.4
MALT	Malatya	143.58	307	*e*PKPdf	PKPdf	07 34 42.6	-0.3
MUD	Monsted U’grnd	144.00	352	⇓*i*P	PKPbc	07 34 42.7	-0.1
	comp=Z,44nm,1.0s						
MBAR	Mbarara	144.09	237	*e*PKP	PKPdf	07 34 44.9	+0.4
COP	Copenhagen	144.25	349	*e*P	PKPdf	07 34 43.7	+0.2
COP	Copenhagen	144.25	349	*i* P	PKPdf	07 34 43.7	+0.2
	comp=Z,30nm,1.0s						
BSD	Bornholm Skovb	144.30	347	*i* P	PKPdf	07 34 43.4	-0.2
BSD	Bornholm Skovb	144.30	347	*i*	PKPdf	07 34 43.4	-0.2
BSEG	Bad Segeberg	146.29	350	*e*PKPbc	PKPbc	07 34 49.7	+0.8
BSEG				*e*pPKPbc		07 37 03.7	
BR131	Keskin Array S	146.55	311	*e*PKPdf	PKPdf	07 34 49.1	+1.1
BR131				*e*PKPbc	PKPbc	07 34 50.9	+0.9
BRTR	Keskin Array B	146.55	311	PKP	PKPdf	07 34 47.7	-0.3
	comp=Z,8.6nm,0.7s,baz=134,slow=4.3,SNR=33						
BRTR				PKPbc	PKPbc	07 34 50.6	+0.7
	comp=Z,8.6nm,0.7s,baz=132,slow=4.5,SNR=33						
KWP	Kalwaria	146.62	334	*e*PKP	PKPdf	07 34 51.1	+3.4
KWP	Kalwaria	146.62	334	*e*PKP	PKPdf	07 34 51.1	+3.3
DCN	Croghan	146.95	9	⇓*i*P	PKPdf	07 34 51.3	+3.2
BURAR	Bucovina Array	147.03	330	⇑P	PKPdf	07 34 52.5	+4.0
DLF	Lyons Farm	147.11	9	⇓*i*P	PKPdf	07 34 51.6	+3.2
TBKS	Tabuk	147.13	290	P	PKPdf	07 34 53.7	+4.5
CFR	Carcaliu	147.17	324	⇑*i*P	PKPdf	07 34 52.7	+3.9
CFR	Carcaliu	147.17	324	⇑*i*P	PKPdf	07 34 52.7	+3.9
KOLS	Kolonicke sedl	147.35	334	*i* PKP	PKPdf	07 34 53.4	+4.5
KOLS				*e*		07 35 01.6	
TIRR	Tirgusor	147.46	323	⇑P	PKPdf	07 34 53.4	+4.1
VRI	Vrincioaia	147.49	326	⇑*i*P	PKPdf	07 34 53.4	+4.1
VRI	Vrincioaia	147.49	326	⇑*i*P	PKPdf	07 34 53.4	+4.1
HARR	Harsova	147.59	323	⇑*i*P	PKPdf	07 34 54.0	+4.5
JMQS	Jabal Moqyreh	147.66	291	P	PKPdf	07 34 55.0	+4.9
NIE	Niedzica	147.73	336	*e*PKP	PKPdf	07 34 54.1	+4.6
KSP	Ksiaz	147.84	342	*e*PKP	PKPdf	07 34 54.4	+4.7
KSP				*e*		07 34 58.9	
KSP				*e*pPKP		07 37 11.0	
KSP	Ksiaz	147.84	342	*e*PKP	PKPdf	07 34 54.7	+5.0
OKC	Ostrava-Krasne	148.14	339	*e*PKPbc	PKPdf	07 34 55.4	+5.2
OKC				*e*PKPab	PKPab	07 35 00.6	-0.9
MLR	Muntele Rosu	148.15	326	⇑*i*P	PKPdf	07 34 55.0	+4.6
MLR	Muntele Rosu	148.15	326	⇑*i*P	PKPdf	07 34 55.0	+4.7
UPC	Upice	148.22	342	*e*PKPbc	PKPdf	07 34 55.3	+5.0
UPC				*e*PKPab	PKPab	07 35 00.9	-0.9
CLL	Collm	148.27	346	*e*PKP	PKPdf	07 34 51.0	+0.7
CLL				⇓*i*PKP	PKPdf	07 34 55.1	+4.8
CLL				⇑*i*PKP	PKPdf	07 35 00.1	+10
CLL				*e*pPKP		07 37 12.0	
CLL	Collm	148.27	346	*e*PKIKP	PKPdf	07 34 51.0	+0.7
	comp=Z,logA/T=0.7						
CLL				*i* PKP1	PKPdf	07 34 55.1	+4.8
CLL				*e*		07 34 59.0	
CLL				*i* PKP2	PKPab	07 35 00.1	-1.9
CLL				*e**PPKP		07 37 12.0	
DPC	Dobruska-Polom	148.27	341	*e*PKPbc	PKPdf	07 34 55.6	+5.2
DPC				*e*PKPab	PKPab	07 35 01.3	-0.7
CLZ	Clausthal	148.29	349	*e*PKPbc	PKPdf	07 34 55.0	+4.7
JMOS	Jabal al Moall	148.29	292	P	PKPdf	07 34 56.4	+5.3
ALWS	Ilw as Safayha	148.31	292	P	PKPdf	07 34 56.5	+5.4
EIL	Elat	148.36	293	*e*PKPdf	PKPdf	07 34 51.6	+0.4
EIL				*e*PKPbc	PKPdf	07 34 56.2	+5.0
EIL				*e*PKPab	PKPab	07 35 02.1	-0.9
BDAS	Al Bad‘	148.38	291	P	PKPdf	07 34 56.6	+5.4
MORC	Moravsky Berou	148.39	340	*e*PKPbc	PKPdf	07 34 55.5	+5.0
KECS	Kecovo	148.42	335	*e*PKP	PKPdf	07 34 56.1	+5.4
KECS				*e*		07 34 59.8	
HAQS	Haql	148.46	292	P	PKPdf	07 34 56.7	+5.4
CSS	Prodhromos	148.51	303	*e*PKPbc	PKPdf	07 34 56.0	+4.7
TAYS	Tayyib Ism	148.57	291	P	PKPdf	07 34 56.8	+5.3
PVCC	Panska Ves	148.60	344	*e*PKPbc	PKPdf	07 34 56.4	+5.5
PVCC				*e*PKPab	PKPab	07 35 02.3	-1.1
VOIR		148.65	327	⇑P	PKPdf	07 34 56.5	+5.4
WTSB	Winterswijk	148.68	353	*e*PKP	PKPdf	07 34 55.8	+4.8
	comp=Z,52nm,1.0s						
VYHS	Vyhne	149.04	337	*i* PKP	PKPdf	07 34 57.1	+5.4
VYHS				*e*		07 35 04.3	
VYHS				*e*		07 37 14.3	
PRU	Pruhonice	149.10	343	*e*PKPbc	PKPdf	07 34 57.3	+5.6
PRU				*e*PKPab	PKPab	07 35 04.1	-1.3
PSZ	Piszkesteto	149.11	335	*e*PKPbc	PKPdf	07 34 57.1	+5.3
KOLL	Kolacno	149.12	338	*i* PKP	PKPdf	07 34 57.8	+6.0
KOLL				*e*		07 35 04.5	
MOX	Moxa	149.19	347	*e*PKPdf	PKPdf	07 34 51.8	0.0
MOX	Moxa	149.19	347	*i* P	PKPdf	07 34 51.8	0.0
MOX				PP2		07 34 57.0	
MOX				PKP2	PKPab	07 35 04.0	-1.8
NKC	Novy Kostel	149.40	346	*e*PKPbc	PKPdf	07 34 58.1	+5.9
NKC				*e*PKPab	PKPab	07 35 05.3	-1.4
SMOL	Smolenice	149.52	339	*e*PKP	PKPdf	07 34 59.0	+6.6
SMOL				*e*		07 35 06.5	
ISP	Isparta	149.56	310	*e*PKPbc	PKPdf	07 34 57.5	+4.6
SRO1	Iza	149.87	337	*e*PKP	PKPdf	07 34 59.4	+6.4
ZST	Bratislava	149.91	339	*e*PKP	PKPdf	07 35 00.0	+7.0
HGN	Heimansgroeve	149.96	354	*e*PKP	PKPdf	07 34 58.9	+5.8
	comp=Z,18nm,1.0s						
HGN				*e*x	x	07 35 06.8	
KHC	Kasperske Hory	150.14	344	*e*PKPbc	PKPdf	07 34 59.9	+6.5
KHC				*e*PKPab	PKPab	07 35 09.1	-0.6
TNS	Taunus Mts	150.18	351	*e*PKPbc	PKPdf	07 34 59.5	+6.1
GRA1	Grafenberg Arr	150.18	347	*e*PKPbc	PKPdf	07 34 59.5	+6.1
GRA1				*e*PKPab	PKPab	07 35 08.2	-1.7
BZS	Buzias	150.19	331	⇑P	PKPdf	07 34 59.5	+5.9
WET	Wettzell	150.31	344	*e*PKPbc	PKPdf	07 35 00.0	+6.4
GEC2	GERESS Array S	150.37	343	*e*PKPbc	PKPdf	07 34 59.9	+6.2
GERES	GERESS Array B	150.37	343	PKP	PKPdf	07 34 54.9	+1.2
	comp=Z,0.6nm,0.6s,SNR=7.7						
GERES				PKPbc	PKPdf	07 35 00.2	+6.4
	comp=Z,7.8nm,0.8s,baz=45,slow=1.9,SNR=59						
GIVF	Givet	150.71	355	*e*PKP1	PKPdf	07 35 00.8	+6.6
	comp=Z,51nm,0.9s						
BAIF	Baives	150.80	356	*e*PKP1	PKPdf	07 35 01.1	+6.8
	comp=Z,52nm,1.1s						
WLF	Walferdange	151.02	353	*e*PKPbc	PKPdf	07 35 01.9	+7.2
ZAPS	Zavoj/Pirot	151.39	326	⇓*i*P	PKPdf	07 35 02.6	+7.2
STU	Stuttgart	151.46	349	*e*PKPbc	PKPdf	07 35 02.6	+7.3
FUR	Furstenfeldbru	151.61	346	*e*PKPbc	PKPdf	07 35 02.6	+7.0
FUR				*e*PKPab	PKPab	07 35 14.5	-1.4
PERS	Pernice	151.93	339	*i* PKPbc	PKPdf	07 35 03.1	+7.0
BFO	Black Forest	152.03	350	*e*PKPbc	PKPdf	07 35 03.7	+7.6
CDF	Champ du Feu	152.11	351	*e*PKP1	PKPdf	07 35 03.8	+7.6
	comp=Z,22nm,0.9s						
FLN	La Foliniere	152.16	2	*e*PKP1	PKPdf	07 35 03.6	+7.3
MEZF	Maizieres J’vi	152.28	355	*e*PKP1	PKPdf	07 35 04.5	+8.0
	comp=Z,36nm,1.0s						
LDF	La Druitiere	152.34	2	*e*PKP1	PKPdf	07 35 03.8	+7.2
ROSF	Rostrenen	152.38	6	*e*PKP1	PKPdf	07 35 03.8	+7.2
GRR	Gorron	152.51	3	*e*PKP1	PKPdf	07 35 04.4	+7.6
SGMF	Saint Gilles	152.53	5	*e*PKP1	PKPdf	07 35 04.2	+7.4
	comp=Z,16nm,0.8s						
HAU	Haudompre	152.63	352	*e*PKP1	PKPdf	07 35 04.8	+7.8
LJU	Ljubljana	152.64	340	*i* PKPbc	PKPdf	07 35 05.1	+8.0
LJU				*e*		07 35 36.2	
HINF	Hinteralfeld	152.75	352	*e*PKP1	PKPdf	07 35 04.9	+7.7
	comp=Z,9.5nm,0.8s						
BOJS	Bojanci	152.87	338	*e*PKPbc	PKPdf	07 35 05.8	+8.4
LOR	Lormes	153.60	356	*e*PKP1	PKPdf	07 35 07.0	+8.7
	comp=Z,9.0nm,0.8s						
SSF	Saint Saulge	153.83	356	*e*PKP1	PKPdf	07 35 07.6	+9.0
CABF	La Chapelle	154.04	352	*e*PKP1	PKPdf	07 35 08.5	+10
	comp=Z,12nm,0.9s						
AVF	Avril sur Loir	154.10	357	*e*PKP1	PKPdf	07 35 08.8	+10
MFF	Saint Martin d	154.33	2	*e*PKP1	PKPdf	07 35 08.4	+9.1
TCF	Toulx Ste Croi	154.65	358	*e*PKP1	PKPdf	07 35 09.1	+9.3
LPL	La Plagne	155.02	351	*e*PKP1	PKPdf	07 35 10.8	+10
	comp=Z,20nm,1.3s						
BNI	Bardonecchia	155.48	351	*e*PKPab	PKPab	07 35 31.4	-1.0
EVO	Evora	160.70	22	*e*PKIKP	PKPdf	07 35 14.6	+7.2
ESDC	Sonseca Array	160.76	12	PKPab	PKPab	07 35 54.5	-0.7
	comp=Z,3.9nm,1.0s,baz=337,slow=3.5,SNR=12						
DBIC	Dimbokro	164.69	157	PKP	PKPdf	07 35 12.7	+0.7
	comp=Z,8.7nm,1.1s,baz=124,slow=8.2,SNR=3.2						
DBIC				PKPab	PKPab	07 36 13.8	+0.7
	comp=Z,6.0nm,1.0s,baz=134,slow=5.9,SNR=3.9						

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*NEIC **19** 07:22:40.8, 37.63N×15.23E, h30^{km}, ML2.5(ROM), After ROM.*

*CSEM **19** 07:22:40.8±0.1, 37.63N×15.23E, h30^{km}, ML3.5/2, Error ellipse: s-maj=2.7km s-min=1.9km az=96.0, After ROM*

ROM 19 07:22:40.8±0.1**, 37.63N×15.23E, h30^{km}**±3^{km}**, Md2.6**/9**, Ml2.5**/7**, 1C, Error ellipse: s-maj=1.9km s-min=1.7km az=96.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGST	Augusta-Monte	0.37	180	Pg	Pb	07 22 49.9	+0.6
AGST				Sg	Sb	07 22 56.8	+1.8
	266nm,0.3s						
SSY	Sortino	0.49	195	⇑*e*Pg	Pb	07 22 51.7	+0.6
SSY				Sg	Sb	07 23 00.5	+2.4
	409nm,0.3s						
MNO	Monte Soro	0.52	306	Pg	Pb	07 22 52.2	+0.7
	166nm,0.4s						
MTTG	Motta San Giov	0.52	45	Pg	Pb	07 22 52.9	+1.4
	37nm,0.5s						
PZI	Palazzolo	0.61	201	Pg	Pb	07 22 54.0	+1.0
	142nm,0.1s						
MSRU	Castanea	0.67	19	Pg	Pb	07 22 54.3	+0.4
MSRU				Sg	Sb	07 23 05.9	+3.0
	157nm,0.3s						
HMDC	Modica	0.76	208	Pg	Pb	07 22 56.5	+1.1
HMDC				Sg	Sb	07 23 08.1	+2.6
	210nm,0.3s						
VPL	Vulcano Piano	0.77	346	Pg	Pb	07 22 56.5	+0.9
VPL				Sg	Sb	07 23 08.6	+2.8
	367nm,0.7s						
SOI	Samo	0.79	56	Pg	Pb	07 22 57.5	+1.6
	27nm,0.5s						
PLLN	Pollina	0.93	293	Pg	Pn	07 23 00.1	+2.1
GIB	Gibilmanna	1.02	291	Pg	Pn	07 23 01.0	+1.8
	568nm,2.1s						

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*CSEM **19** 07:32:28.0±0.2, 35.18N×3.99W, h5^{km}, MD2.7, Error ellipse: s-maj=5.8km s-min=4.0km az=65.0*

*NEIC **19** 07:32:29.3, 35.12N×4.02W, MG2.9(MDD), After MDD.*

*CNRM **19** 07:32:29.1, 35.23N×3.73W, h7^{km}, MD2.7*

*MDD **19** 07:32:29.6±0.6, 35.11N×4.02W, mbLg2.1/2, Error ellipse: s-maj=5.0km s-min=3.0km az=68.0, PRXIMO*

ISC 19 07:32:29.5±0.5**, 35.19N**±0.03×**4.01W**±0.04**, h10^{km}, n23,** σ**0^{s}98**/36**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAL	Palemas	0.07	57	Pg	Pg	07 32 32.0	+0.3
MPAL				Lg		07 32 35.0	
MPAL	Palemas	0.07	57	*i* P	Pg	07 32 32.0	+0.3
TOU	Touzarine	0.31	137	Pg	Pg	07 32 34.0	-1.9
TOU				Lg		07 32 38.0	
TOU	Touzarine	0.31	137	*i* P	Pg	07 32 34.0	-1.9
EMEL	Melilla	0.87	82	Pg	Pg	07 32 45.7	-1.2
	15nm,0.1s,SNR=7.9						
EMEL				Lg		07 32 57.8	
	25nm,0.1s,SNR=7.9						
EMLI	Melilla	0.88	82	P	Pb	07 32 45.7	-0.6
	15nm,0.1s,SNR=7.9						
EMLI				S	Sb	07 32 57.8	0.0
	25nm,0.1s,SNR=7.9						
EALB	Alboran	1.09	46	P	Pb	07 32 50.3	+0.2
EALB				S	Sb	07 33 05.4	+1.2
EALB	Alboran	1.09	46	Pg	Pg	07 32 50.3	-1.1
	0.8nm,0.0s,SNR=7.9						
EALB				Lg		07 33 05.4	
	2.9nm,0.1s,SNR=7.9						
EALB	Alboran	1.09	46	P	Pb	07 32 50.3	+0.3
	0.8nm,0.0s,SNR=7.9						
EALB				S	Sb	07 33 05.4	+1.2
	2.9nm,0.1s,SNR=7.9						
TZK	Tazeka	1.11	187	*i* P	Pb	07 32 51.0	+0.7
TZK				*i* S	Sb	07 33 06.0	+1.5
EMIJ	Mijas	1.51	336	Pn	Pn	07 32 55.6	-1.1
	0.3nm,0.2s,SNR=7.9						
EMIJ				Sn	Sn	07 33 17.5	+1.0
	1.0nm,0.2s,SNR=7.9						
EJIF	Jimena Fronter	1.73	317	P	Pn	07 32 60.0	+0.1
EJIF				S	Sn	07 33 22.7	+0.5

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EJIF   Jimena Fronter     1.73 317   Pn      Pn       07 32 60.0 +0.1
       0.7nm,0.3s,SNR=4.0
EJIF                                 Sn      Sn       07 33 22.7 +0.5
       0.5nm,0.3s,SNR=7.9
EBER   Berja              1.93  28   Pn      Pn       07 33 03.5 +0.7
       0.8nm,0.1s,SNR=7.9
EBER                                 Sn      Sn       07 33 28.9 +1.6
       4.1nm,0.4s,SNR=7.9
EBER   Berja              1.93  28   P       Pn       07 33 03.5 +0.7
       0.8nm,0.1s,SNR=7.9
EBER                                 S       Sn       07 33 28.9 +1.6
       4.1nm,0.4s,SNR=7.9
EQES   Quesada            2.72  16   Sn      Sn       07 33 47.3 +0.1
       2.4nm,0.3s,SNR=4.0
EQES   Quesada            2.72  16   S       Sn       07 33 47.3  0.0
       2.4nm,0.3s,SNR=4.0
EADA   Adamuz             3.01 351   Pn      Pn       07 33 19.5 +1.4
       0.1nm,0.1s,SNR=4.0
EADA   Adamuz             3.01 351   P       Pn       07 33 19.5 +1.3
       0.1nm,0.1s,SNR=4.0
ECAB   El Cabril          3.10 339   Pn      Pn       07 33 19.2 -0.2
       0.2nm,0.1s,SNR=4.0
ECAB                                 Sn      Sn       07 33 55.8 -1.1
       0.9nm,0.3s,SNR=4.0
ECAB   El Cabril          3.10 339   P       Pn       07 33 19.2 -0.2
       0.2nm,0.1s,SNR=4.0
ECAB                                 S       Sn       07 33 55.8 -1.1
       0.9nm,0.3s,SNR=4.0
EMIN   Mina Concepcio     3.35 321   Pn      Pn       07 33 22.1 -0.9
       0.2nm,0.1s,SNR=7.9
EMIN                                 Sn      Sn       07 34 02.1 -1.2
       SNR=7.9
EMIN   Mina Concepcio     3.35 321   P       Pn       07 33 22.1 -0.9
       0.2nm,0.1s,SNR=7.9
EMIN                                 S       Sn       07 34 02.1 -1.2
       SNR=7.9
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*NEIC **19** 07:49:09.3±0.7, 15.58S×71.42W, h136km±8km, mb4.2/3, Error ellipse: s-maj=12.3km s-min=9.4km az=48.0*

*IDC **19** 07:49:12.2±3.8, 15.61S×71.26W, h162km±31km, mb3.7/2, mb1 3.4/6, mb1mx3.2/23, mbtmp3.9/6, Error ellipse: s-maj=41.3km s-min=28.4km az=75.0*

ISC 19 07:49:08.4±0.7, 15.59S±0.08×71.49W±0.07, h143km±8km, n13, σ1s07/16, mb4.0/2, 1C-2D, Southern Peru

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Code   Station Name         Δ°   AZ°   Phase ID           Time       Res
                                       Op      ISC        h  m  s    ISC
ARE    Arequipa            0.87 180⇓iP     P         07 49 31.7 +0.1
ARE                                  i S    S         07 49 49.0 -0.5
LPAZ   La Paz              3.31 103  P      P         07 50 02.3 +2.1
       14nm,0.3s,baz=287,slow=8.4,SNR=587
LPAZ                                 S      S         07 50 40.5 +0.7
       baz=38,slow=19,SNR=1.6
LPAZ   La Paz              3.31 103⇑iP     P         07 50 02.1 +1.9
LPAZ                                 eS     S         07 50 41.0 +1.1
NNA    Nana                6.31 304⇓eP     P         07 50 40.5 +0.3
       28nm,0.4s
NNA                                  eS     S         07 51 47.6 -3.8
SIV    San Ignacio        10.04  94  P      P         07 51 28.4 -1.6
       1.3nm,0.3s,baz=272,slow=13,SNR=33
SAML   Samuel             10.46  52  eP     P         07 51 34.3 -1.2
       3.4nm,0.7s
CFAA   Coronel Fontan     16.22 170  P      P         07 52 49.8 +0.4
       0.0nm,0.3s,baz=353,slow=13,SNR=9.2
CPUP   Villa Florida      16.99 131  P      P         07 52 56.9 -2.0
       0.2nm,0.3s,baz=347,slow=13,SNR=4.5
OTAV   Otavalo            17.16 336  P      P         07 53 01.5 +0.5
       0.8nm,0.4s
BDFB   Brasilia           22.61  93  P      P         07 53 57.9 +0.1
       2.3nm,0.4s,mb3.9,baz=270,slow=9.3,SNR=13
TRQA   Tornquist          23.90 161  eP     P         07 54 10.7 +0.7
SDV    Santo Domingo      24.33   2  P      P         07 54 15.1 +0.7
       2.6nm,0.4s,mb4.1,baz=268,slow=3.5,SNR=3.2
WRA    Warramunga Arr    136.51 217  PKP    PKPdf     08 08 16.8 +2.6
       0.7nm,1.0s,baz=166,slow=1.5,SNR=4.8
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*NIED **19** 07:59:00, 34.30N×142.00E, h5km, Mw4.2 Best double couple: M0 2.08×10^15 NP1:φs59°, δ86°, λ97°. NP2:φs182°, δ8°, λ34°.*

*JMA **19** 07:59:35.7±0.6, 34.26N×142.01E, h8km±3km, M3.7*

*NEIC **19** 07:59:42.7±9.6, 34.29N×141.51E, h16km±58km, mb4.1/1, Error ellipse: s-maj=24.8km s-min=15.4km az=132.0*

*IDC **19** 07:59:46.2±3.2, 34.26N×141.52E, h42km±30km, mb3.5/8, mb1 3.8/9, mb1mx3.6/22, mbtmp3.7/9, ML3.8/1, Error ellipse: s-maj=24.1km s-min=16.2km az=86.0*

ISC 19 07:59:38.3±1.4, 34.36N±0.04×141.77E±0.06, h0km±8km, n30, σ1s28/39, mb3.8/9, Off east coast of Honshu

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Code   Station Name         Δ°   AZ°   Phase ID           Time       Res
                                       Op      ISC        h  m  s    ISC
BSO1   Boso 1              0.72 295  P      Pg        07 59 53.6 +1.0
BSO2   Boso 2              0.92 296  S      Sg        08 00 13.2 +4.1
BSO3   Boso 3              1.13 294  P      Pb        08 00 01.6 +1.2
BSO4   Boso 4              1.34 299  P      Pb        08 00 05.0 +1.1
CHOJ   Chosi               1.54 331  P      Pn        08 00 06.7 -0.4
CHOJ                                 S      Sb        08 00 27.4 +0.1
JIM2   Oshima 3            1.96 281  S      Sn        08 00 42.2 +3.4
JHJ2   Mitsune             2.04 233  P      Pn        08 00 15.0 +0.7
JHJ2                                 S      Sn        08 00 40.4 -0.5
JHJ    Hachijo jima 2      2.06 234  P      Pn        08 00 14.8 +0.2
       34nm,0.3s,baz=244,slow=3.0,SNR=11
JOD2   Odawara 2           2.38 293  P      Pn        08 00 18.0 -1.2
JOD2                                 S      Sn        08 00 51.3 +1.8
JAG    Ashikaga            2.80 318  P      Pn        08 00 24.7 -0.4
JAG                                  S      Sn        08 01 02.1 +2.1
JRY    Ryogami san         2.87 306  P      Pn        08 00 25.3 -0.9
JYN    Shimob              2.88 294  P      Pn        08 00 25.7 -0.6
JYN                                  S      Sn        08 01 05.7 +3.5
JFK    Kawauchi            3.09 347  P      Pn        08 00 27.6 -1.7
JFK                                  S      Sn        08 01 03.0 -4.4
MJAR   Matsushiro Arr      3.63 308  P      Pn        08 00 36.7 -0.2
       8.0nm,0.3s,baz=161,slow=13,SNR=72
MJAR                                 S      Sn        08 01 19.4 -1.8
       2.5nm,0.3s,baz=354,slow=10,SNR=6.5
MAJO   Matsushiro          3.63 308  eP     Pn        08 00 36.1 -0.9
MAT    Matsushiro          3.63 308  eP     Pn        08 00 37.0  0.0
MAT                                  eS     Sn        08 01 19.0 -2.2
MAT    Matsushiro          3.63 308  P      Pn        08 00 36.2 -0.8
MAT                                  S      Sn        08 01 19.2 -2.0
ASAJ   Asahikawa           9.77   4  P      P         08 01 58.3 -4.8
       1.4nm,0.3s,baz=121,slow=27,SNR=7.7
SONM   Songino Array      29.59 308  P      P         08 05 46.1 -0.9
       0.7nm,0.6s,mb3.7,baz=99,slow=8.7,SNR=6.4
CMAR   Chiang Mai Arr     41.17 259  P      P         08 07 24.3 -1.8
       0.8nm,0.4s,mb3.8,baz=51,slow=7.7,SNR=4.6
MKAR   Makanchi Array     45.83 304  P      P         08 08 02.8 -0.8
       1.1nm,0.7s,mb4.0,baz=87,slow=9.7,SNR=9.6
ILAR   Eielson Array      51.62  31  P      P         08 08 48.1  0.0
       1.0nm,0.7s,mb3.9,baz=270,slow=6.1,SNR=12
WRA    Warramunga Arr     54.46 189  P      P         08 09 08.9 -0.9
       0.8nm,0.5s,mb4.0,baz=4.8,slow=7.6,SNR=17
INK    Inuvik             56.65  26  eP     P         08 09 25.1  0.0
       1.2nm,0.6s,mb4.1
YKA    Yellowknife Ar     65.98  30  P      P         08 10 30.1 +2.0
       0.2nm,0.3s,mb3.9,baz=63,slow=28,SNR=4.3
YKA    Yellowknife Ar     65.98  30  P      P         08 10 30.1 +2.0
NVAR   Mina Array Bea     76.37  53  P      P         08 11 34.1 +3.1
       0.4nm,0.7s,mb3.7,baz=289,slow=8.1,SNR=5.3
PV10   Paradox Valley     82.33  49  eP     P         08 12 05.4 +2.3
TXAR   Lajitas Array      91.52  53  P      P         08 12 48.9 +0.8
       0.2nm,0.7s,mb3.5,baz=307,slow=4.5,SNR=3.4
TXAR   Lajitas Array      91.52  53  P      P         08 12 48.9 +0.8
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*NIED **19** 08:06:00, 45.20N×143.60E, h300km, Mw4.0 Best double couple: M0 1.24×10^15 NP1:φs195°, δ61°, λ77°. NP2:φs41°, δ32°, λ112°.*

*BJI **19** 08:06:05.5, 45.42N×143.74E, h313km, mB4.2, mb4.4*

*SKHL **19** 08:06:05.0±0.5, 45.31N×143.67E, h320km±29km, mb4.6/6, Ms3.2/1, msh5.0/4*

*MOS **19** 08:06:06.6±1.0, 45.34N×143.45E, h294km, mb3.9/12, Error ellipse: s-maj=15.6km s-min=8.9km az=79.9*

*JMA **19** 08:06:07.1±0.3, 45.18N×143.63E, h296km±3km, M4.3*

*NEIC **19** 08:06:07.8±0.6, 45.31N×143.55E, h290km±6km, mb4.1/10, Error ellipse: s-maj=9.9km s-min=7.0km az=126.0*

*IDC **19** 08:06:07.8±0.5, 45.28N×143.56E, h288km±6km, mb3.6/14, mb1 3.8/15, mb1mx3.6/25, mbtmp4.2/15, Error ellipse: s-maj=15.6km s-min=11.3km az=154.0*

ISC 19 08:06:06.5±0.2, 45.30N±0.03×143.62E±0.05, h290km±2km, n102, σ1s16/119, mb3.9/21, 25C-2D, Hokkaido region

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Code   Station Name         Δ°   AZ°   Phase ID           Time       Res
                                       Op      ISC        h  m  s    ISC
JSE    Soyaes              0.81 245 ⇑P      P         08 06 46.0 +0.8
JWK2   Keihoku             1.22 271 ⇑P      P         08 06 48.6 +1.4
JWK2                                 eS     S         08 07 20.0 +0.9
JMP    Maruseppu           1.31 188 ⇑P      P         08 06 48.3 +0.5
JMP                                  eS     S         08 07 20.2 +0.2
JTKR   Abashiri--Toko      1.35 171 ⇑P      P         08 06 48.7 +0.7
JTKR                                 eS     S         08 07 20.1 -0.3
ASAJ   Asahikawa           1.39 212  PN     P         08 06 49.3 +1.0
ASAJ                                 S      S         08 07 21.5 +0.6
ASAJ                                 pmax   pmax
       comp=Z,187nm,0.3s
ASAJ   Asahikawa           1.39 212  P      P         08 06 49.3 +1.0
       comp=Z,187nm,0.3s,baz=45,slow=2.1,SNR=1053
ASAJ                                 S      S         08 07 21.4 +0.5
       baz=317,slow=27,SNR=3.5
ASAJ   Asahikawa           1.39 212 ⇑P      P         08 06 49.3 +1.0
JSS    Shosan              1.55 235 ⇑P      P         08 06 50.4 +1.1
JKK2   Kamakawa 2          1.56 204 ⇑P      P         08 06 50.0 +0.6
JRA    Rausu               1.73 141  P      P         08 06 51.2 +0.6
JRA                                  eS     S         08 07 26.0 +1.0
YSS    Yuzh-Sakhalins      1.76 340⇑ePN    P         08 06 51.8 +1.0
YSS                                  i S    S         08 07 25.0 -0.4
YSS                                  pmax   pmax
       comp=N,50nm,0.6s
YSS                                  pmax   pmax
       comp=Z,90nm,0.6s
YSS                                  pmax   pmax
       comp=E,50nm,0.5s
YSS                                  smax
       comp=N,740nm,1.0s
YSS                                  smax
       comp=E,560nm,1.0s
YSS    Yuzh-Sakhalins      1.76 340⇑iPn    P         08 06 51.9 +1.1
YSS                                  eS     S         08 07 22.2 -3.1
YSS    Yuzh-Sakhalins      1.76 340⇑iP     P         08 06 51.8 +1.0
YSS                                  AMB    AMB       08 06 52.0
       comp=E,50nm,0.5s
YSS                                  AMB    AMB       08 06 52.0
       comp=E,90nm,0.5s
YSS                                  i S    S         08 07 25.4  0.0
YSS                                  A                08 07 26.5
       comp=E,740nm,1.0s
YSS                                  A                08 07 26.5
       comp=E,560nm,1.0s
JYG    Yagishiri           1.79 242 ⇑P      P         08 06 51.5 +0.5
JYG                                  eS     S         08 07 26.8 +1.0
JAR    Ashorobuto          2.01 177 ⇑P      P         08 06 53.1 +0.4
JAR                                  S      S         08 07 28.3 -0.4
YUK    Yuzh-Kuril'sk       2.04 128  ePN    P         08 06 51.8 -1.2
YUK                                  eS     S         08 07 30.0 +0.8
YUK                                  pmax   pmax
       comp=Z,210nm,0.3s
YUK                                  pmax   pmax
       comp=N,180nm,0.5s
YUK                                  pmax   pmax
       comp=E,160nm,0.5s
YUK                                  smax
       comp=E,3μm,0.7s
YUK                                  smax
       comp=N,2μm,0.6s
YUK                                  smax
       comp=N,420nm,0.5s
YUK                                  smax
       comp=E,940nm,0.6s
YUK    Yuzh-Kuril'sk       2.04 128  eP     P         08 06 52.2 -0.8
YUK                                  AMB    AMB       08 06 54.9
       comp=E,210nm,0.3s
YUK                                  AMB    AMB       08 06 54.9
       comp=E,180nm,0.5s
YUK                                  AMB    AMB       08 06 54.9
       comp=E,160nm,0.5s
YUK                                  i S    S         08 07 30.4 +1.2
YUK                                  A                08 07 31.3
       comp=E,3μm,0.7s
YUK                                  A                08 07 31.3
       comp=E,2μm,0.6s
YUK                                  A                08 07 31.6
       comp=E,420nm,0.5s
YUK                                  A                08 07 31.6
       comp=E,940nm,0.6s
JHR    Hokuryu             2.07 222  P      P         08 06 54.0 +0.8
JFR    Furan               2.26 199  P      P         08 06 55.3 +0.3
JFR                                  eS     S         08 07 32.1 -0.6
JAK    Akkeshi             2.43 161  P      P         08 06 55.3 -1.2
JAK                                  eS     S         08 07 31.9 -3.6
NEM2   Nemuro 2            2.46 141 ⇓P      P         08 06 54.8 -2.0
NEM2                                 eS     S         08 07 31.2 -4.8
JCH    Churui              2.69 184 ⇑P      P         08 06 57.7 -1.3
JCH                                  S      S         08 07 35.6 -4.2
JEW    Eniwo               2.92 213 ⇑P      P         08 07 01.7 +0.5
JEW                                  S      S         08 07 42.9 -0.8
JSK    Shakotan            2.98 230 ⇑P      P         08 07 02.4 +0.6
JSK                                  eS     S         08 07 44.8 -0.1
KUR    Kuril'sk            3.00  90  eP     P         08 06 59.8 -2.1
KUR                                  eS     S         08 07 43.0 -2.1
KUR                                  A                08 07 44.0
       comp=E,38nm,0.6s
JNBK   Urakawa-nobuka      3.09 192 ⇑P      P         08 07 01.7 -1.2
JKB    Kayabe              3.90 210 ⇑P      P         08 07 10.4 -1.2
JKB                                  eS     S         08 07 57.6 -4.7
UGL    Uglegorsk           3.92 345  ePN    P         08 07 13.0 +1.1
UGL                                  e                08 08 02.0
UGL                                  pmax   pmax
       comp=Z,73nm,0.5s
UGL                                  MLR    MLR
       comp=N,300nm,15.0s
UGL                                  MLR    MLR
       comp=E,200nm,15.0s
UGL                                  MLR    MLR
       comp=Z,350nm,15.0s
UGL                                  pmax   pmax
       comp=Z,140nm,0.9s
UGL                                  smax
       comp=N,500nm,10.0s
UGL                                  smax
       comp=E,900nm,10.0s
UGL    Uglegorsk           3.92 345  eP     P         08 07 13.0 +1.1
UGL                                  AMB    AMB       08 07 16.0
       comp=E,73nm,0.5s
UGL                                  eS     S         08 08 04.0 +1.1
UGL                                  AMS    AMS       08 11 16.0
       comp=E,300nm,15.0s
UGL                                  AMS    AMS       08 11 16.0
       comp=E,200nm,15.0s
UGL                                  AMS    AMS       08 11 16.0
       comp=E,350nm,15.0s
JOT    Ohata               4.34 207 ⇑P      P         08 07 15.1 -1.5
JOT                                  eS     S         08 08 05.9 -5.5
JOSM   Okushiri--Mats      4.41 225 ⇑P      P         08 07 16.7 -0.6
TYV    Tymovskoe           5.60 354⇓iP     P         08 07 28.8 -2.5
TYV                                  AMB    AMB       08 07 30.2
       comp=E,45nm,0.6s
TYV                                  eS     S         08 08 35.0 -2.8
TYV                                  A                08 08 38.5
       comp=E,31nm,0.9s
GRNR   Gornyy              7.29 321  eP     P         08 07 48.0 -4.0
GRNR                                 AMB    AMB       08 07 48.2
       comp=E,13nm,0.6s
NKL    Nikolayevsk         8.09 347  eP     P         08 08 05.5 +3.7
KLR    Kul'dur             8.98 300  eP     P         08 08 10.2 -2.6
MAJO   Matsushiro          9.66 207  ePN    P         08 08 20.6 -0.7
MAJO                                 pmax   pmax
       comp=Z,4.0nm,0.5s
MAJO   Matsushiro          9.66 207  eP     P         08 08 20.6 -0.6
       comp=Z,4.1nm,0.5s
MAT    Matsushiro          9.66 207  P      P         08 08 20.6 -0.7
MAT                                  eS     S         08 10 09.6 +2.1
MAT    Matsushiro          9.66 207  eP     P         08 08 22.0 +0.7
MJAR   Matsushiro Arr      9.66 207  PN     P         08 08 22.1 +0.8
MJAR                                 pmax   pmax
       comp=Z,1.0nm,0.3s
MJAR   Matsushiro Arr      9.66 207  P      P         08 08 22.1 +0.8
       comp=Z,0.7nm,0.3s,baz=15,slow=13,SNR=14
MDJ    Mudanjiang          9.97 271  P      P         08 08 25.0 -0.1
MDJ                                  AMB    AMB
       comp=Z,10.0nm,1.1s
MDJ                                  AMB    AMB
       comp=Z,60nm,7.3s
EKMR   Ekimchan           10.44 322  eP     P         08 08 27.6 -3.3
EKMR                                 AMB    AMB       08 08 29.7
       comp=Z,18nm,0.7s
YASR   Yasnyy             12.95 314  eP     P         08 08 58.5 -3.2
BMKR   Bomnak             13.35 320  eP     P         08 09 03.0 -3.6
BMKR                                 AMB    AMB       08 09 05.0
       comp=Z,16nm,0.8s
ZEA    Zeya               13.55 314  eP     P         08 09 05.4 -3.6
ZEA                                  AMB    AMB       08 09 07.0
       comp=Z,30nm,0.8s
ZEA                                  AMB    AMB       08 09 07.0
       comp=Z,38nm,0.8s
MA2    Magadan            14.93  14  eP     P         08 09 24.6 -0.8
MA2                                  pmax   pmax
       comp=Z,9.0nm,0.7s
MA2    Magadan            14.93  14  eP     P         08 09 24.6 -0.8
       comp=Z,9.0nm,0.7s
HIA    Hailar             16.66 292  eP     P         08 09 42.0 -2.5
HIA                                  pmax   pmax
       comp=Z,24nm,0.5s
HIA    Hailar             16.66 292  eP     P         08 09 42.0 -2.4
       comp=Z,24nm,0.5s
FX1    Attu Island--F     20.67  58  P      P         08 10 27.8 +3.0
FX1                                  pmax   pmax
       comp=Z,15nm,0.5s
FX1    Attu Island--F     20.67  58  P      P         08 10 27.8 +3.0
       comp=Z,15nm,0.5s,baz=80,slow=20,SNR=7.6
ULN    Ulaanbaatar        25.12 289  eP     P         08 11 06.8 +0.1
ULN                                  pmax   pmax
       comp=Z,3.0nm,0.6s,mb3.9
ULN    Ulaanbaatar        25.12 289  eP     P         08 11 06.8 +0.1
       comp=Z,3.1nm,0.6s,mb3.9
SONM   Songino Array      25.56 289  P      P         08 11 11.4 +0.7
       comp=Z,3.6nm,0.4s,mb4.2,baz=87,slow=8.8,SNR=35
ZAK    Zakamensk          27.30 295  eP     P         08 11 25.2 -1.3
ZAK                                  pmax   pmax
       comp=Z,1.0nm,1.1s,mb3.2
IMA    Indian Mountai     38.84  35  eP     P         08 13 04.1 -0.9
IMA                                  pmax   pmax
       comp=Z,19nm,0.6s,mb4.7
IMA    Indian Mountai     38.84  35  eP     P         08 13 04.1 -0.9
       comp=Z,19nm,0.6s,mb4.7
MKAR   Makanchi Array     41.64 295  P      P         08 13 28.2 +0.2
MKAR                                 pmax   pmax
       comp=Z,3.0nm,0.6s
MKAR   Makanchi Array     41.64 295  P      P         08 13 28.2 +0.3
       comp=Z,3.2nm,0.6s,mb3.7,baz=80,slow=8.9,SNR=37
ILAR   Eielson Array      41.75  37  P      P         08 13 27.9 -0.7
ILAR                                 pmax   pmax
       comp=Z,3.0nm,0.8s
ILAR   Eielson Array      41.75  37  P      P         08 13 27.9 -0.7
       comp=Z,2.7nm,0.8s,mb3.5,baz=286,slow=10,SNR=20
INK    Inuvik             46.35  31⇑iP     P         08 14 03.7 -1.3
INK                                  pmax   pmax
       comp=Z,3.0nm,0.3s
INK    Inuvik             46.35  31⇑iP     P         08 14 03.7 -1.3
       comp=Z,2.6nm,0.3s,mb4.0
DLBC   Dease Lake         51.23  42  eP     P         08 14 43.6 +1.5
YKA    Yellowknife Ar     55.90  33  P      P         08 15 15.2 -0.7
YKA                                                   08 16 10.7
YKA                                  pmax   pmax
       comp=Z,3.0nm,0.5s
YKA    Yellowknife Ar     55.90  33  P      P         08 15 15.2 -0.6
       comp=Z,3.0nm,0.5s,mb3.9,baz=306,slow=7.2,SNR=27
YKA                                  PcP    PcP       08 16 10.7 -0.3
       comp=Z,0.2nm,0.3s,baz=303,slow=4.1,SNR=4.0
YKA    Yellowknife Ar     55.90  33  P      P         08 15 15.2 -0.6
YKA                                  PcP    PcP       08 16 10.7 -0.3
FINES  FINESS Array B     62.32 331  P      P         08 15 58.7 -1.0
FINES                                pmax   pmax
       comp=Z,1.0nm,0.5s
FINES  FINESS Array B     62.32 331  P      P         08 15 58.7 -1.0
       comp=Z,0.9nm,0.5s,mb3.7,baz=44,slow=7.0,SNR=12
NEW    Newport            63.18  48  P      P         08 16 04.9 -0.5
NEW                                  pmax   pmax
       comp=Z,1.0nm,0.5s
NEW    Newport            63.18  48  P      P         08 16 04.9 -0.5
       comp=Z,1.2nm,0.5s,mb3.8,baz=317,slow=5.7,SNR=4.3
YBH    Yreka Blue Hor     64.15  56  P      P         08 16 13.3 +1.6
YBH                                  pmax   pmax
       comp=Z,1.0nm,0.5s
YBH    Yreka Blue Hor     64.15  56  P      P         08 16 13.3 +1.5
       comp=Z,0.6nm,0.5s,mb3.5,baz=300,slow=2.4,SNR=5.1
WRA    Warramunga Arr     65.48 190  P      P         08 16 19.4 -1.1
WRA                                                   08 16 49.4
WRA                                  pmax   pmax
       comp=Z,1.0nm,0.5s
WRA    Warramunga Arr     65.48 190  P      P         08 16 19.4 -1.1
       comp=Z,0.6nm,0.5s,mb3.5,baz=7.4,slow=6.7,SNR=17
WRA                                  PcP    PcP       08 16 49.4 -0.8
       comp=Z,0.1nm,0.4s,baz=1.7,slow=4.7,SNR=5.1
FCC    Fort Churchill     65.91  29⇑eP     P         08 16 21.9 -0.7
FCC                                  pmax   pmax
       comp=Z,4.0nm,0.4s,mb4.5
FCC    Fort Churchill     65.91  29⇑eP     P         08 16 21.9 -0.7
       comp=Z,3.6nm,0.4s,mb4.5
HRY    Holter Researc     66.92  46  eP     P         08 16 29.8 +0.6
NB2    NORSAR Subarra     67.22 337  P      P         08 16 30.2 -0.6
       comp=Z,0.6nm,0.6s,mb3.5,baz=34,slow=6.2
NOA    NORSAR Array B     67.22 337  P      P         08 16 30.5 -0.3
NOA                                  pmax   pmax
       comp=Z,1.0nm,0.7s
NOA    NORSAR Array B     67.22 337  P      P         08 16 30.5 -0.3
       comp=Z,0.9nm,0.7s,mb3.6,baz=36,slow=6.2,SNR=5.7
BOZ    Bozeman (W)        67.74  47  eP     P         08 16 35.1 +0.8
BOZ                                  pmax   pmax
       comp=Z,6.0nm,1.2s,mb4.2
BOZ    Bozeman (W)        67.74  47  eP     P         08 16 35.1 +0.9
       comp=Z,5.9nm,1.2s,mb4.2
NVAR   Mina Array Bea     68.86  56  P      P         08 16 42.3 +1.0
       comp=Z,2.1nm,0.7s,mb4.0,baz=307,slow=4.4,SNR=19
ELK    Elko               69.08  53  P      P         08 16 44.0 +1.4
ELK                                  pmax   pmax
       comp=Z,1.0nm,0.4s
ELK    Elko               69.08  53  P      P         08 16 44.0 +1.5
       comp=Z,0.6nm,0.4s,mb3.6,baz=36,slow=1.5,SNR=4.2
RRI2   Red Ridge          69.46  49  eP     P         08 16 46.3 +1.5
       comp=Z,2.5nm,0.6s,mb4.1
BW06   Boulder Array      70.80  48  eP     P         08 16 52.8 -0.2
       comp=Z,1.3nm,0.6s,mb3.7
PDAR   Pinedale Array     70.80  48  P      P         08 16 53.5 +0.6
       comp=Z,1.6nm,0.5s,mb3.9,baz=315,slow=4.2,SNR=10
PV10   Paradox Valley     74.17  51  eP     P         08 17 13.8 +1.0
PV01   Paradox Valley     74.61  51  eP     P         08 17 15.8 +0.5
TXAR   Lajitas Array      83.84  54  P      P         08 18 05.9 +1.3
TXAR                                 pmax   pmax
       comp=Z,3.0nm,0.6s
TXAR   Lajitas Array      83.84  54  P      P         08 18 05.9 +1.3
       comp=Z,3.0nm,0.6s,mb4.3,baz=290,slow=3.3,SNR=60
BDFB   Brasilia          148.85  22  PKP2   PKPdf     08 25 21.7 +6.2
BDFB                                 pmax   pmax
       comp=Z,2.0nm,0.6s
BDFB   Brasilia          148.85  22  PKPbc  PKPdf     08 25 21.7 +6.2
       comp=Z,2.3nm,0.6s,baz=140,slow=3.7,SNR=5.0
VNA2   Neumayer--Watz    150.70 199  e      PKPdf     08 25 30.1  +13
VNA2   Neumayer--Watz    150.70 199  e      PKPdf     08 25 33.1  +16
VNA2   Neumayer--Watz    150.70 199⇑iP     PKPdf     08 25 24.3 +7.5
VNA2                                 e                08 25 30.1
VNA2                                 e                08 25 33.1
VNA3   Neumayer Olymp    150.96 197  e      PKPdf     08 25 29.9  +13
VNA3   Neumayer Olymp    150.96 197  e      PKPdf     08 25 33.6  +16
VNA3   Neumayer Olymp    150.96 197⇑iP     PKPdf     08 25 24.6 +7.5
VNA3                                 e                08 25 29.9
VNA3                                 e                08 25 33.6
```

MAN 19 08:06:13.5, 11.36N×125.68E, h9km, mb4.2, ML3.1, MS2.8, 1D, Samar

```
Code   Station Name         Δ°   AZ°   Phase ID           Time       Res
                                       Op      ISC        h  m  s    ISC
BESP   Borongan            0.34 315  eP     Pg        08 06 21.2 +0.8
BESP                                 eS     Sg        08 06 27.5 +2.5
PLP    Palo                0.72 254  i P    Pb        08 06 27.2 -0.5
PLP                                  i S    Sb        08 06 35.5 -1.9
MSLP   Maasin              1.47 214  eP     Pn        08 06 40.6 +0.4
CNP    Catarman            1.51 319  eP     Pn        08 06 39.4 -1.6
CNP                                  eS     Sb        08 07 01.6 +1.0
SCPH   Surigao             1.58 187⇓eP     Pn        08 06 41.0 -1.0
SCPH                                 eS     Sb        08 07 02.8 +0.2
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*IDC **19** 08:27:59.0±0.9, 53.77N×164.76W, mb3.9/12, mb1 4.1/15, mb1mx4.0/27, mbtmp3.9/15, ML3.5/3, MS3.3/7, Ms1 3.3/7, ms1mx3.0/36, Error ellipse: s-maj=23.9km s-min=15.1km az=0.0*

*NEIC **19** 08:28:05.7±0.6, 53.76N×164.78W, h48km±5km, mb4.2/2,* *ML4.0(PMR),ML3.9(AEIC),Error ellipse: s-maj=10.7km s-min=3.8km az=158.0*

ISC 19 08:28:04.3±0.7,53.71N±0.07×164.69W±0.06,h55^{km}±6^{km}, n58,σ0^{s}83/61,mb3.9/12,MS3.3/6,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKA	**Akutan**	**0.77**	**304**	P	**P**	**08 28 18.9**	**-0.3**
AKA				S	**S**	**08 28 30.8**	**+0.5**
AKUT	**Akutan**	**0.77**	**304**	P	**P**	**08 28 18.9**	**-0.3**
AKUT				S	**S**	**08 28 30.4**	**+0.1**
WESS	**West Dahl Sout**	**0.77**	**359**	P	**P**	**08 28 19.0**	**-0.4**
WESS				S	**S**	**08 28 30.6**	**+0.2**
WFAR	**Faris Peak**	**0.83**	**357**	P	**P**	**08 28 20.0**	**-0.1**
WESN	**West Dahl Nort**	**0.86**	**4**	P	**P**	**08 28 20.6**	**0.0**
AKLV	**Akutan Long Va**	**0.88**	**302**	P	**P**	**08 28 20.3**	**-0.4**
AKLV				S	**S**	**08 28 33.1**	**+0.3**
AKGG	**Akutan Green G**	**0.91**	**303**	P	**P**	**08 28 21.1**	**-0.1**
AKGG				S	**S**	**08 28 34.4**	**+0.6**
UNV	**Unalaska Valle**	**1.08**	**278**	P	**P**	**08 28 22.5**	**-1.1**
SSLS	**Shishaldin Sou**	**1.09**	**22**	P	**P**	**08 28 23.0**	**-0.6**
SSLN	**Shishaldin Nor**	**1.18**	**20**	P	**P**	**08 28 24.8**	**0.0**
MNAT	**Makushin Natee**	**1.19**	**279**	P	**P**	**08 28 24.4**	**-0.6**
MTBL	**Makushin Table**	**1.21**	**283**	P	**P**	**08 28 24.9**	**-0.3**
MSW	**Makushin Switc**	**1.26**	**280**	P	**P**	**08 28 25.4**	**-0.6**
FALS	**False Pass**	**1.38**	**33**	P	**P**	**08 28 26.8**	**-1.0**
FALS				S	**S**	**08 28 44.9**	**-0.2**
BALA	**Baldy Mountain**	**1.86**	**36**	P	**P**	**08 28 35.9**	**+1.5**
OKFG	**Magazine Ridge**	**1.94**	**262**	P	**P**	**08 28 35.5**	**-0.1**
DT1	**Dutton Round H**	**1.99**	**44**	P	**P**	**08 28 36.0**	**-0.3**
DTNA	**Dutton South F**	**2.03**	**44**	P	**P**	**08 28 36.7**	**-0.1**
DOL	**Dolgoi Island**	**2.19**	**48**	P	**P**	**08 28 39.0**	**-0.2**
HAG	**Hague Volcano**	**2.29**	**44**	P	**P**	**08 28 41.5**	**+0.9**
PVV	**Pavlof Volcano**	**2.38**	**44**	P	**P**	**08 28 43.0**	**+1.2**
BLHA	**Black Hill**	**2.51**	**36**	P	**P**	**08 28 45.7**	**+1.9**
NIKO	**Nikolski**	**2.60**	**255**	P	**P**	**08 28 45.3**	**+0.3**
SDPT	**Sand Point**	**2.96**	**55**	P	**P**	**08 28 48.9**	**-1.1**
SDPT				*e*P		08 28 52.1	
GSTR	**Great Sitkin T**	**7.06**	**261**	P	**P**	**08 29 48.0**	**+0.4**
KIWB	**Kanaga Island**	**7.78**	**261**	*e*P	**P**	**08 29 57.7**	**+0.3**
SVW2	**Sparrevohn**	**8.88**	**30**	*e*P	**P**	**08 30 14.5**	**+1.9**
TTA	**Tatalina**	**10.30**	**23**	*e*P	**P**	**08 30 32.8**	**+0.9**
SLKM	**Skilak Lake**	**10.39**	**43**	P	**P**	**08 30 32.0**	**-1.1**
PWA	**Palmer West**	**11.21**	**39**	*e*P	**P**	**08 30 44.2**	**0.0**
DIV	**Divide**	**12.58**	**46**	*e*P	**P**	**08 31 02.1**	**-0.5**
FX1	**Attu Island--F**	**13.26**	**275**	Pn	**P**	**08 31 12.9**	**+1.4**
	0.4nm,0.3s,baz=264,slow=15,SNR=4.7						
IMA	**Indian Mountai**	**13.54**	**19**	P	**P**	**08 31 15.1**	**+0.1**
ILAR	**Eielson Array**	**14.28**	**32**	Pn	**P**	**08 31 20.9**	**-3.8**
	0.1nm,0.3s,baz=229,slow=12,SNR=4.3						
ILAR				LR	LR	08 37 25.3	
	comp=Z,123nm,18.3s,baz=174,slow=40						
MENT	**Mentasta**	**14.31**	**41**	*e*P	**P**	**08 31 22.0**	**-3.1**
DLBC	**Dease Lake**	**19.77**	**62**	P	**P**	**08 32 29.4**	**-2.8**
	0.2nm,0.3s,baz=274,slow=15,SNR=10						
DLBC	**Dease Lake**	**19.77**	**62**	*e*P	**P**	**08 32 32.3**	**+0.1**
INK	**Inuvik**	**20.68**	**33**	P	**P**	**08 32 39.2**	**-2.4**
	1.9nm,0.3s,baz=211,slow=9.2,SNR=14						
INK				LR	LR	08 41 21.5	
	comp=Z,65nm,19.8s,MS3.0,baz=188,slow=39						
INK	**Inuvik**	**20.68**	**33**	*e*P	**P**	**08 32 42.0**	**+0.3**
	3.9nm,0.6s						
YKA	**Yellowknife Ar**	**27.22**	**51**	P	**P**	**08 33 44.4**	**-0.1**
	1.4nm,0.7s,mb3.6,baz=275,slow=10.0,SNR=12						
YKA	**Yellowknife Ar**	**27.22**	**51**	P	**P**	**08 33 44.4**	**-0.1**
YBH	**Yreka Blue Hor**	**30.23**	**96**	P	**P**	**08 34 11.7**	**0.0**
	0.9nm,0.7s,mb3.6,baz=184,slow=7.9,SNR=3.7						
YBH				LR	LR	08 43 10.4	
	comp=Z,62nm,20.9s,MS3.2,baz=287,slow=30						
NVAR	**Mina Array Bea**	**34.94**	**97**	P	**P**	**08 34 53.9**	**+1.3**
	1.8nm,0.8s,mb4.0,baz=305,slow=6.8,SNR=14						
FCC	**Fort Churchill**	**37.90**	**53**	*e*P	**P**	**08 35 17.1**	**-0.2**
	3.9nm,0.7s,mb4.2						
PV01	**Paradox Valley**	**40.91**	**89**	*e*P	**P**	**08 35 42.8**	**+0.3**
TXAR	**Lajitas Array**	**49.96**	**94**	P	**P**	**08 36 54.8**	**+0.2**
	4.6nm,0.6s,mb4.7,baz=300,slow=5.4,SNR=90						
TXAR				LR	LR	08 56 07.9	
	comp=Z,35nm,21.8s,MS3.3,baz=195,slow=34						
SCHQ	**Schefferville**	**52.50**	**46**	LR	LR	08 58 24.6	
	comp=Z,34nm,21.1s,MS3.4,baz=48,slow=35						
ARCES	**ARCESS Array B**	**56.84**	**356**	P	**P**	**08 37 43.5**	**-1.4**
	1.7nm,0.9s,mb4.1,baz=19,slow=8.1,SNR=6.5						
BVAR	**Borovoye Array**	**64.20**	**327**	P	**P**	**08 38 34.8**	**-0.2**
	0.6nm,0.6s,mb3.8,baz=31,slow=8.6,SNR=5.4						
FINES	**FINESS Array B**	**64.88**	**354**	P	**P**	**08 38 39.2**	**0.0**
	1.3nm,0.8s,mb4.0,baz=176,slow=29,SNR=6.0						
FINES				LR	LR	09 06 57.2	
	comp=Z,24nm,20.0s,MS3.4,baz=151,slow=36						
FINES	**FINESS Array B**	**64.88**	**354**	P	**P**	**08 38 39.2**	**0.0**
FINES				LR	LR	09 06 57.2	
MKAR	**Makanchi Array**	**64.88**	**316**	LR	LR	09 08 00.4	
	comp=Z,32nm,18.9s,MS3.5,baz=270,slow=37						
NB2	**NORSAR Subarra**	**65.56**	**2**	P	**P**	**08 38 43.0**	**-0.6**
	0.3nm,0.6s,mb3.5,baz=358,slow=6.2						
NOA	**NORSAR Array B**	**65.56**	**2**	P	**P**	**08 38 43.0**	**-0.6**
	0.6nm,0.7s,mb3.7,baz=359,slow=6.4,SNR=3.5						
AKASG	**Malin Array Be**	**75.31**	**351**	P	**P**	**08 39 42.0**	**-0.7**
	0.9nm,0.6s,mb3.9,baz=12,slow=5.8,SNR=4.0						
BRTR	**Keskin Array B**	**85.61**	**346**	P	**P**	**08 40 39.1**	**+1.7**
	0.4nm,0.4s,mb4.0,baz=315,slow=2.0,SNR=2.1						
WRA	**Warramunga Arr**	**90.07**	**235**	P	**P**	**08 40 59.3**	**0.0**
	0.3nm,0.7s,mb3.8,baz=31,slow=5.9,SNR=4.8						
MATP	**Matopo**	**145.27**	**338**	PKPbc	PKPbc	08 47 38.0	+2.0
	5.3nm,0.7s,baz=30,slow=2.0,SNR=15						

NEIC 19 08:38:14.8±1.0,1.08N×97.17E,h30^{km},mb4.2/1,Error ellipse: s-maj=24.5km s-min=12.8km az=67.0

IDC 19 08:38:21.9±14.0,1.30N×97.47E,h87^{km}±121^{km},mb3.5/4, mb1 3.6/5,mb1mx3.4/18,mbtmp3.8/5,ML4.2/1,MS3.2/2, Ms1 3.3/2,ms1mx2.9/20,Error ellipse: s-maj=112.3km s-min=22.7km az=56.0

ISC 19 08:38:12.9±1.3,1.1N±0.1×97.1E±0.2,h30^{km},n9,σ0^{s}81/8, mb3.8/5,MS3.4/2,1C,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.46**	**40**	⇑*e*P	**Pn**	**08 39 33.5**	**-0.9**
CMAR	**Chiang Mai Arr**	**17.36**	**6**	P	**P**	**08 42 15.4**	**+0.6**
	0.3nm,0.3s,baz=187,slow=12,SNR=5.3						
CMAR				LR	LR	08 49 53.1	
	comp=Z,38nm,19.1s,baz=90,slow=40						
KMI	**Kunming**	**24.51**	**12**	P	**P**	**08 43 32.7**	**+1.6**
	9.0nm,1.2s,mb4.2						
KMI				LR	LR		
	comp=Z,60nm,15.7s,MS3.2						
WRA	**Warramunga Arr**	**42.02**	**122**	P	**P**	**08 46 03.6**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.5,baz=301,slow=9.1,SNR=10						
WRAB	**Tennant Creek**	**42.02**	**122**	*e*P	**P**	**08 46 04.1**	**+0.4**
SONM	**Songino Array**	**47.26**	**8**	P	**P**	**08 46 45.0**	**-0.4**
	comp=Z,0.5nm,0.4s,mb3.8,baz=193,slow=10,SNR=7.7						
MKAR	**Makanchi Array**	**47.34**	**346**	P	**P**	**08 46 46.2**	**+0.2**
	comp=Z,0.8nm,0.6s,mb3.9,baz=164,slow=8.8,SNR=7.0						
CTA	**Charters Tower**	**52.50**	**116**	LR	LR	09 12 25.8	
	comp=Z,57nm,20.2s,MS3.6,baz=230,slow=39						
BVAR	**Borovoye Array**	**56.34**	**341**	P	**P**	**08 47 52.2**	**-1.3**
	comp=Z,0.9nm,0.8s,mb3.9,baz=135,slow=8.4,SNR=6.8						

NEIC 19 08:57:36.0±1.4,51.62N×16.19E,h1^{km}±6^{km},ML3.1(VIE), ML3.0(SZGRF),ML2.8(CLL),Error ellipse: s-maj=12.2km s-min=4.6km az=189.0

BGR 19 08:57:36.6±0.7,51.54N×16.22E,h1^{km},ML3.0/4,Error ellipse: s-maj=10.0km s-min=6.7km az=172.0

IPEC 19 08:57:37.6±0.3,51.52N×16.25E,ML2.3/4,Error ellipse: s-maj=4.0km s-min=1.9km az=85.0

PRU 19 08:57:38.8,51.47N×16.11E,Felt In Harrachov

CSEM 19 08:57:38.9±0.1,51.48N×16.15E,h2^{km},ML3.3/8,Error ellipse: s-maj=2.7km s-min=1.4km az=11.0

WAR 19 08:57:38.2,51.54N×16.13E,h1^{km},ML3.0,2C-1D,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.71**	**172**	*i* PG	Pg	08 57 51.1	-1.2
KSP				*e*SG	Sg	08 58 00.1	-1.6
KSP	**Ksiaz**	**0.71**	**172**	*e*Pg	Pg	08 57 51.2	-1.1
KSP				*e*Sg	Sg	08 58 00.4	-1.3
KSP	**Ksiaz**	**0.71**	**172**	⇓*i*Pg	Pg	08 57 51.1	-1.2
KSP				*e*Sg	Sg	08 58 00.2	-1.5
UPC	**Upice**	**1.04**	**184**	*e*PG	Pg	08 57 57.2	-1.7
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*PG	Pg	08 58 00.0	-2.1
DPC				*e*SG	Sg	08 58 15.4	-2.7
	23nm,0.3s						
PVCC	**Panska Ves**	**1.41**	**225**	*e*PG	Pg	08 58 04.6	-1.8
BRG	**Berggiesshubel**	**1.53**	**245**	*e*Pg	Pg	08 58 06.1	-2.7
BRG				*e*Sg	Sg	08 58 27.1	-2.0
BRG	**Berggiesshubel**	**1.53**	**245**	Pn	Pn	08 58 04.7	-2.1
BRG				Pg	Pg	08 58 06.3	-2.4
BRG				Sg	Sg	08 58 27.3	-1.9
BRG	**Berggiesshubel**	**1.53**	**245**	Pn	Pn	08 58 04.7	-2.1
BRG	**Berggiesshubel**	**1.53**	**245**	Pg	Pg	08 58 06.3	-2.4
BRG				Sg	Sg	08 58 27.1	-2.0
FBE	**Freiberg**	**1.85**	**252**	Sg	Sg	08 58 36.8	-3.1
PRU	**Pruhonice**	**1.85**	**214**	*e*PN	Pn	08 58 09.6	-1.8
PRU				*e*PG	Pg	08 58 11.6	-3.6
PRU				*e*x	x	08 58 15.9	
PRU				*e*x	x	08 58 28.4	
PRU				*e*SG	Sg	08 58 35.9	-4.0
	34nm,0.4s						
RAC	**Raciborz**	**1.96**	**137**	*e*Pg	Pg	08 58 14.6	-2.7
RAC				*e*Sg	Sg	08 58 40.2	-3.3
CLL	**Collm**	**1.97**	**264**	*e*Pn	Pn	08 58 10.6	-2.5
CLL				*e*Sg	Sg	08 58 40.7	-3.1
CLL	**Collm**	**1.97**	**264**	*i* Pn	Pn	08 58 10.6	-2.5
CLL				*i* Pg	Pg	08 58 14.1	-3.5
CLL				*i* Sg	Sg	08 58 40.3	-3.5
CLL	**Collm**	**1.97**	**264**	*i* PN	Pn	08 58 10.6	-2.5
	logA/T=1.3						
CLL				*i* PG	Pg	08 58 14.1	-3.5
CLL				*i*		08 58 17.8	
CLL				*i* SG	Sg	08 58 40.3	-3.5
CLL	**Collm**	**1.97**	**264**	*i* Pg	Pg	08 58 14.1	-3.5
CLL				Sg	Sg	08 58 40.7	-3.1
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	Pn	08 58 10.8	-2.4
MORC				*e*Sg	Sg	08 58 39.5	-4.7
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	Pn	08 58 10.8	-2.4
MORC				*e*Sg	Sg	08 58 39.5	-4.7
OKC	**Ostrava-Krasne**	**2.13**	**142**	*e*PG	Pg	08 58 17.2	-3.6
OKC				*e*SG	Sg	08 58 44.1	-5.2
	27nm,0.5s						
VRAC	**Vranov**	**2.25**	**172**	*e*Pn	Pn	08 58 16.2	-0.9
VRAC				*e*Sg	Sg	08 58 47.0	-6.3
	26nm,0.4s						
KRUC	**Moravsky**	**2.49**	**176**	*e*Pn	Pn	08 58 19.2	-1.3
KRUC				*e*Sg	Sg	08 58 54.5	-6.5
	8.5nm,0.2s						
WERD	**Werda**	**2.65**	**247**	*e*Pn	Pn	08 58 20.8	-2.0
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN	Pn	08 58 21.3	-1.8
NKC				*e*PG	Pg	08 58 27.3	-4.3
NKC				*e*SG	Sg	08 59 04.2	-3.0
	66nm,0.4s						
OJC	**Ojcow**	**2.67**	**118**	*e*PN	Pn	08 58 20.0	-3.1
OJC				*e*PG	Pg	08 58 29.0	-2.6
OJC				*e*SG	Sg	08 59 04.0	-3.2
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	Pg	08 58 28.9	-2.7
OJC				*e*Sg	Sg	08 59 04.1	-3.1
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	Pn	08 58 24.2	-2.4
KHC				*e*PG	Pg	08 58 31.0	-5.4
KHC				*e*SN	Sn	08 58 59.0	-3.7
KHC				*e*SG	Sg	08 59 09.8	-5.4
	19nm,0.4s						
MOX	**Moxa**	**2.98**	**254**	*e*Pn	Pn	08 58 25.1	-2.5
MOX				*e*Sg	Sg	08 59 13.9	-3.7
MOX	**Moxa**	**2.98**	**254**	*e*Pn	Pn	08 58 25.2	-2.4
MOX				*e*Pg	Pg	08 58 33.7	-4.1
MOX				*e*Sg	Sg	08 59 14.0	-3.6
MOX	**Moxa**	**2.98**	**254**	*i* P	Pn	08 58 25.2	-2.4
MOX				Pg	Pg	08 58 34.0	-3.8
MOX				Sg	Sg	08 59 14.0	-3.6
MOX	**Moxa**	**2.98**	**254**	*e*Pg	Pg	08 58 33.7	-4.1
MOX				Sg	Sg	08 59 13.9	-3.7
NOTT	**Nottersdorf**	**3.08**	**237**	*e*Pn	Pn	08 58 27.4	-1.6
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn	Pn	08 58 28.2	-1.3
GEC2				*e*Sg	Sg	08 59 15.6	-6.4
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn	Pn	08 58 28.2	-1.3
GEC2				*e*Sg	Sg	08 59 15.6	-6.4
SMOL	**Smolenice**	**3.14**	**164**	*e*SG	Sg	08 59 21.6	-1.3
WET	**Wettzell**	**3.18**	**222**	*e*Pn	Pn	08 58 28.3	-2.0
WET	**Wettzell**	**3.18**	**222**	*e*Pn	Pn	08 58 28.3	-2.0
ZST	**Bratislava**	**3.41**	**169**	*e*SG	Sg	08 59 26.4	-5.2
VYHS	**Vyhne**	**3.51**	**149**	*e*PG	Pg	08 58 44.3	-4.1
GRA1	**Grafenberg Arr**	**3.63**	**241**	*e*Pn	Pn	08 58 34.6	-2.2
GRA1				*e*Sg	Sg	08 59 34.0	-5.1
GRA1	**Grafenberg Arr**	**3.63**	**241**	Pn	Pn	08 58 34.6	-2.2
GRA1				Sg	Sg	08 59 34.0	-5.1
GRF	**Grafenberg Arr**	**3.63**	**241**	*e*Pn	Pn	08 58 34.6	-2.1
GRF				*e*Sg	Sg	08 59 34.0	-5.1
MOA	**Molln**	**3.89**	**199**	⇑*i*PN	Pn	08 58 38.2	-2.2
MOA				*i* SG	Sg	08 59 41.4	-6.3
	10nm,0.5s						
ARSA	**Arzberg**	**4.31**	**186**	⇑*i*PN	Pn	08 58 43.6	-2.8
ARSA				*i* SG	Sg	08 59 52.4	-9.4
	9.4nm,0.5s						

IDC 19 08:57:51.3±4.1,1.39N×97.79E,mb3.7/4,mb1 3.8/4, mb1mx3.6/17,mbtmp3.7/4,Error ellipse: s-maj=158.9km s-min=28.2km az=57.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.64**	**123**	P	P	09 05 41.6	-1.8
	0.4nm,0.7s,baz=302,slow=9.1,SNR=6.4						
SONM	**Songino Array**	**46.86**	**8**	P	P	09 06 23.7	-1.3
	0.6nm,0.6s,baz=180,slow=11,SNR=6.5						
MKAR	**Makanchi Array**	**47.21**	**346**	P	P	09 06 25.6	-2.2
	0.5nm,0.6s,baz=143,slow=8.2,SNR=3.4						
ZAL	**Zalesovo**	**53.46**	**350**	P	P	09 07 12.9	-2.6
	0.9nm,0.3s,baz=238,slow=13,SNR=4.4						

MAN 19 09:04:36.5,9.11N×126.81E,h1^{km},mb4.8,ML3.7,MS3.7

NEIC 19 09:04:39.8±0.6,9.02N×126.65E,mb4.4/5,Error ellipse: s-maj=34.6km s-min=9.7km az=69.0

IDC 19 09:04:40.0±0.7,8.97N×126.54E,h34^{km}±5^{km},mb3.9/13, mb1 4.0/13,mb1mx3.9/21,mbtmp4.1/13,MS3.2/2, Ms1 3.2/2,ms1mx2.8/24,Error ellipse: s-maj=33.8km s-min=14.9km az=68.0

ISC 19 09:04:37.4±0.5,9.18N±0.05×126.98E±0.05,h36^{km}, h36^{km}±.6^{km}:pP-P,n35,σ1^{s}15/39,mb4.1/16,MS3.2/2,4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.35**	**261**	*e*P	**P**	**09 04 58.8**	**-1.5**
SCPH	**Surigao**	**1.59**	**292**	⇑*e*P	**P**	**09 05 03.8**	**+0.3**
SCPH				*e*S	**S**	**09 05 20.3**	**-2.7**
BUKP	**Musuan**	**2.29**	**236**	*e*P	**P**	**09 05 14.4**	**+0.8**
MATI	**Mati**	**2.33**	**198**	*e*P	**P**	**09 05 14.5**	**+0.4**
CGP	**Cagayan de Oro**	**2.37**	**253**	⇓*i*P	**P**	**09 05 14.2**	**-0.5**
CGP				*e*S	**S**	**09 05 42.4**	**-0.4**
PLP	**Palo**	**2.79**	**315**	*e*P	**P**	**09 05 22.0**	**+1.3**
KCP	**Kidapawan**	**2.85**	**221**	⇓*e*P	**P**	**09 05 21.6**	**0.0**
KCP				*i* S	**S**	**09 05 56.8**	**+1.7**
TBP	**Tagbilaran**	**3.12**	**280**	*e*P	**P**	**09 05 25.7**	**+0.3**
TBP				*e*S	**S**	**09 06 00.8**	**-1.0**
LLP	**Lapu-Lapu**	**3.18**	**291**	*e*P	**P**	**09 05 27.6**	**+1.3**
LLP				*e*S	**S**	**09 06 07.6**	**+4.2**
DCPH	**Dipolog City**	**3.63**	**261**	⇑*e*P	**P**	**09 05 32.1**	**-0.6**
SNPH	**Sibulan**	**3.70**	**273**	⇑*e*P	**P**	**09 05 33.5**	**0.0**
PAGZ	**Pagadian**	**3.79**	**250**	*e*P	**P**	**09 05 35.6**	**+0.7**
RCP	**Roxas**	**4.79**	**300**	⇑*e*P	**P**	**09 05 50.8**	**+1.7**
OTRP	**Odiongan**	**5.81**	**303**	*e*P	**P**	**09 06 07.7**	**+4.4**
KAKA	**Kakadu**	**22.41**	**166**	*e*P	**P**	**09 09 37.0**	**+2.6**
	6.2nm,0.6s,mb4.2						
JHJ	**Hachijo jima 2**	**26.60**	**25**	LR	LR	09 18 56.1	
	comp=Z,53nm,22.0s,MS3.0,baz=311,slow=32						
FITZ	**Fitzroy Crossi**	**27.14**	**183**	*e*P	**P**	**09 10 19.5**	**-0.1**
	9.5nm,0.8s,mb4.4						
FITZ	**Fitzroy Crossi**	**27.14**	**183**	P	**P**	**09 10 19.7**	**+0.1**
	4.1nm,0.6s,mb4.1,baz=3.9,slow=6.5,SNR=5.0						
CMAR	**Chiang Mai Arr**	**28.70**	**292**	P	**P**	**09 10 32.2**	**-1.5**
	1.6nm,0.9s,mb3.7,baz=105,slow=6.3,SNR=5.2						
WRAB	**Tennant Creek**	**29.82**	**166**	*e*P	**P**	**09 10 42.6**	**-1.1**
	8.1nm,1.1s,mb4.4						
WRA	**Warramunga Arr**	**29.83**	**166**	P	**P**	**09 10 41.9**	**-1.8**
	0.8nm,0.6s,mb3.6,baz=348,slow=9.3,SNR=12						
WB2	**Warramunga Arr**	**29.83**	**166**	*e*P	**P**	**09 10 42.7**	**-1.0**
SONM	**Songino Array**	**42.28**	**339**	P	**P**	**09 12 30.4**	**+1.1**
	0.3nm,0.5s,mb3.2,baz=154,slow=9.2,SNR=4.1						
SONM				LR	LR	09 31 28.3	
	comp=Z,36nm,18.9s,MS3.3,baz=83,slow=38						
STKA	**Stephens Creek**	**43.15**	**162**	P	**P**	**09 12 35.1**	**-1.4**
	1.6nm,0.5s,mb4.0,baz=125,slow=24,SNR=3.1						
MKAR	**Makanchi Array**	**53.31**	**323**	P	**P**	**09 13 54.7**	**-0.6**
	3.7nm,0.7s,mb4.4,baz=122,slow=8.2,SNR=30						
MKAR				pP	pP	09 14 05.4	-0.5
	3.0nm,0.7s,baz=128,slow=7.9,SNR=11						
ZAL	**Zalesovo**	**55.92**	**331**	P	**P**	**09 14 13.4**	**-0.8**
	1.2nm,0.4s,mb4.3,baz=268,slow=6.7,SNR=3.7						
ZAL				pP	pP	09 14 24.1	-0.7
	1.2nm,0.4s,baz=306,slow=5.4,SNR=1.5						
BVAR	**Borovoye Array**	**62.96**	**326**	P	**P**	**09 15 02.0**	**-0.8**
	2.4nm,0.8s,mb4.4,baz=121,slow=8.6,SNR=20						
BVAR				pP	pP	09 15 12.8	-0.8
	2.5nm,0.9s,baz=108,slow=9.4,SNR=8.7						
ZRNK	**Zerenda**	**63.71**	**325**	*e*P	**P**	**09 15 06.4**	**-1.2**
	4.6nm,0.8s,mb4.6						
ZRNK				*e*pP	pP	09 15 16.9	-1.6
ILAR	**Eielson Array**	**80.12**	**26**	P	**P**	**09 16 49.4**	**+4.3**
	0.6nm,0.7s,mb3.6,baz=235,slow=6.1,SNR=7.2						
ILAR				pP	pP	09 16 60.0	+3.8
	0.9nm,0.7s,baz=225,slow=4.0,SNR=7.5						
ASF	**Jabal al Asfar**	**85.25**	**302**	P	**P**	**09 17 13.7**	**+1.5**
	2.8nm,0.3s,mb4.8,baz=231,slow=23,SNR=8.8						
ARCES	**ARCESS Array B**	**85.46**	**340**	P	**P**	**09 17 13.4**	**+1.1**
	2.4nm,0.9s,mb4.3,baz=101,slow=4.6,SNR=4.5						
ARCES				pP	pP	09 17 25.1	+1.7
	2.6nm,0.7s,baz=34,slow=4.4,SNR=4.0						
FINES	**FINESS Array B**	**87.18**	**332**	P	**P**	**09 17 21.5**	**+0.6**
	0.4nm,0.6s,mb3.8,baz=322,slow=31,SNR=3.6						
FINES	**FINESS Array B**	**87.18**	**332**	P	**P**	**09 17 21.5**	**+0.6**
VNDA	**Vanda**	**88.76**	**173**	P	**P**	**09 17 30.1**	**+1.9**
	0.5nm,0.5s,mb4.1,baz=316,slow=6.7,SNR=4.9						
VNDA	**Vanda**	**88.76**	**173**	*e*P	**P**	**09 17 28.1**	**-0.2**
	0.7nm,0.7s,mb4.1						

CASC 19 09:06:48.7±1.8,14.21N×92.37W,h36^{km}±999^{km},MD4.3, 1C,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RBDL	**Robledal**	**2.60**	**92**	⇑*e*P	P	09 07 28.9	-0.4
RBDL				*e*S	S	09 08 00.7	+0.8
RTR	**El Retiro**	**2.66**	**96**	*e*P	P	09 07 29.8	-0.3
SBLS	**San Blas**	**2.69**	**97**	*e*P	P	09 07 31.4	+0.9
SNJE	**San Jose**	**2.70**	**97**	*e*P	P	09 07 30.1	-0.6
MRL	**Marmol**	**2.73**	**71**	*e*P	P	09 07 31.0	0.0
MRL				*e*S	S	09 08 03.5	+0.3
BOQS	**Boqueron**	**3.03**	**98**	*e*P	P	09 07 34.4	-1.0
LFRS	**El Faro**	**3.26**	**100**	*e*P	P	09 07 37.3	-1.4
LFRS				*e*S	S	09 08 14.7	-2.1

NEIC 19 09:09:06.3±0.8,5.35N×94.43E,h30^{km},mb4.1/2,Error ellipse: s-maj=24.4km s-min=10.4km az=222.0

IDC 19 09:09:19.1±11.0,5.54N×94.77E,h142^{km}±102^{km},mb3.5/7, mb1 3.7/8,mb1mx3.4/20,mbtmp3.9/8,ML3.7/1,MS3.4/1, Ms1 3.4/1,ms1mx2.8/16,Error ellipse: s-maj=83.7km s-min=19.8km az=56.0

ISC 19 09:09:05.0±1.0,5.4N±0.2×94.58E±0.09,h30^{km},n11, σ0^{s}56/12,mb4.0/9,MS3.5/1,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.05**	**91**	*e*P	**Pn**	**09 10 36.5**	**+1.7**
KULM				*e*S	**Sn**	**09 11 43.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**13.62**	**18**	P	**P**	**09 12 25.1**	**+6.3**
	0.1nm,0.3s,baz=215,slow=12,SNR=8.4						
MKAR	**Makanchi Array**	**42.54**	**348**	P	**P**	**09 16 59.9**	**+0.2**
	1.5nm,0.6s,mb3.9,baz=171,slow=8.4,SNR=8.4						
SONM	**Songino Array**	**43.43**	**12**	P	**P**	**09 17 06.9**	**0.0**
	0.6nm,0.6s,mb3.5,baz=188,slow=7.8,SNR=6.6						
ULN	**Ulaanbaatar**	**43.60**	**12**	*e*P	**P**	**09 17 08.3**	**0.0**
	1.0nm,0.6s,mb3.7						
WRA	**Warramunga Arr**	**46.53**	**124**	P	**P**	**09 17 31.8**	**-0.3**
	1.2nm,0.6s,mb4.0,baz=302,slow=9.5,SNR=13						
WRAB	**Tennant Creek**	**46.53**	**124**	*e*P	**P**	**09 17 31.8**	**-0.3**
	2.3nm,0.6s,mb4.3						
ZAL	**Zalesovo**	**49.00**	**352**	P	**P**	**09 17 50.6**	**-0.3**
	1.7nm,0.2s,mb4.7,baz=208,slow=3.7,SNR=4.8						
ZAL				LR	LR	09 40 47.3	
	comp=Z,43nm,19.1s,MS3.5,baz=290,slow=39						
BVAR	**Borovoye Array**	**51.41**	**342**	P	**P**	**09 18 09.1**	**-0.3**
	0.3nm,0.3s,mb3.8,baz=129,slow=9.5,SNR=4.3						
ARCES	**ARCESS Array B**	**77.68**	**340**	P	**P**	**09 21 00.0**	**-0.1**
	2.8nm,1.0s,mb4.1,baz=72,slow=7.7,SNR=3.7						
GERES	**GERESS Array B**	**79.92**	**319**	P	**P**	**09 21 13.0**	**+0.2**
	0.5nm,0.7s,mb3.5,baz=90,slow=1.3,SNR=4.7						

CASC 19 09:13:00.6±3.0,14.82N×91.30W,h191^{km}±13^{km},MD4.2, ML3.8

MEX 19 09:13:05.2±0.5,14.40N×91.64W,h155^{km}±51^{km},MD4.2

NEIC 19 09:13:05.2,14.40N×91.64W,h155^{km},MD4.2(MEX),After MEX.

ISC 19 09:13:02.6±0.5,14.36N±0.07×91.68W±0.06,h155^{km},n21, σ0^{s}97/32,1C-7D,Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**1.20**	**98**	⇓*e*P	**P**	**09 13 30.8**	**+0.9**
IXG				*e*S	**S**	**09 13 52.1**	**+1.2**
IXG				AML	AML	09 13 57.0	
	comp=E,5µm,0.4s						
CCIG	**Comitan**	**1.96**	**347**	⇓*i*P	**P**	**09 13 38.7**	**+0.8**
CCIG				⇓*i*S	**S**	**09 14 05.1**	**0.0**
RTR	**El Retiro**	**2.03**	**103**	*e*P	**P**	**09 13 45.5**	**+6.9**
RTR				*e*S	**S**	**09 14 15.9**	**+10**
MRL	**Marmol**	**2.05**	**70**	⇓*e*P	**P**	**09 13 36.6**	**-2.4**
MRL				*e*S	**S**	**09 14 00.4**	**-6.5**
MRL				AML	AML	09 14 03.1	
	comp=E,130nm,0.7s						
SBLS	**San Blas**	**2.06**	**104**	*e*P	**P**	**09 13 45.7**	**+6.6**
SBLS				*e*S	**S**	**09 14 15.9**	**+8.7**
BOQS	**Boqueron**	**2.41**	**105**	⇓*e*P	**P**	**09 13 49.2**	**+5.8**
BOQS				*e*S	**S**	**09 14 23.1**	**+8.4**
SCX	**San Cristobal**	**2.54**	**339**	*e*P	**P**	**09 13 45.5**	**+0.5**
SCX				*e*S	**S**	**09 14 17.0**	**-0.5**
LFRS	**El Faro**	**2.65**	**106**	*e*P	**P**	**09 13 52.0**	**+5.7**
LFRS				*e*S	**S**	**09 14 26.4**	**+6.5**
LCBS	**La Ceiba**	**2.71**	**105**	⇓*e*P	**P**	**09 13 52.9**	**+5.7**
CMIG	**Matias Romero**	**4.11**	**312**	*e*P	**P**	**09 14 06.8**	**+1.6**
CMIG				*i* S	**S**	**09 14 53.2**	**-0.3**
HUIG	**Huatulco**	**4.50**	**289**	*e*P	**P**	**09 14 11.1**	**+0.7**
HUIG				*e*S	**S**	**09 15 02.8**	**+0.2**
OXX	**Oaxaca**	**5.56**	**300**	*e*P	**P**	**09 14 29.0**	**+4.6**
OXX				*i* S	**S**	**09 15 25.0**	**-2.8**
VHO	**Vista Hermosa**	**5.56**	**300**	*e*S	**S**	**09 15 28.0**	**+0.1**
VCR	**Vista de Mar**	**7.25**	**125**	*e*P	**P**	**09 14 47.1**	**+0.1**
JTS	**JuntasAbangare**	**7.72**	**121**	*e*P	**P**	**09 14 52.0**	**-1.2**
	comp=E,18nm,0.3s						
JCR	**Jicaral**	**7.83**	**124**	*e*P	**P**	**09 14 54.6**	**-0.1**
CGA2	**Cerro Gallo 2**	**8.27**	**121**	*e*P	**P**	**09 15 00.3**	**-0.2**
PRS1	**Puriscal**	**8.41**	**120**	⇑*e*P	**P**	**09 15 02.8**	**+0.4**
LAJ	**Bijagual**	**8.63**	**120**	⇓*e*P	**P**	**09 15 01.9**	**-3.5**
URSC	**Urasca**	**8.94**	**119**	*e*P	**P**	**09 15 09.0**	**-0.4**
BUS	**Buena Vista**	**9.10**	**121**	*e*P	**P**	**09 15 11.5**	**0.0**

CSEM 19 09:17:18.5±0.7,38.60N×28.78W,h1^{km}±2^{km},ML1.4,Error ellipse: s-maj=6.8km s-min=5.7km az=45.0,After PDA

PDA 19 09:17:18.5±0.7,38.60N×28.78W,h1^{km}±2^{km},MD2.9, ML1.4,Error ellipse: s-maj=6.8km s-min=5.7km az=45.0

SVSA 19 09:17:18.5±0.7,38.60N×28.78W,h1^{km}±2^{km},MD2.9, ML1.4,Error ellipse: s-maj=6.8km s-min=5.7km az=45.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**0.06**	**108**	*i* P	Pg	09 17 19.8	0.0
CALA				*e*S	Sg	09 17 20.7	+0.1
CALA	**Caldeira**	**0.06**	**108**	*e*S	Sg	09 17 20.7	+0.1
HOR	**Horta**	**0.14**	**123**	*i* P	Pg	09 17 21.1	-0.2
HOR				*e*S	Sg	09 17 23.1	0.0
HOR	**Horta**	**0.14**	**123**	*e*S	Sg	09 17 23.1	0.0
PICO	**Pico**	**0.29**	**110**	*e*P	Pg	09 17 24.1	-0.3
PICO				*e*S	Sg	09 17 28.5	+0.2
PMAN	**Manadas**	**0.54**	**86**	*e*S	Sg	09 17 35.2	-1.3
	8.9nm,0.1s						
PMAN	**Manadas**	**0.54**	**86**	*e*S	Sg	09 17 35.2	-1.3
	8.9nm,0.1s						

ISK 19 09:24:00.6,38.03N×27.42E,h25^{km},MD3.3

CSEM ***19*** *09:24:00.4±0.1, 38.01N×27.46E, h20^{km}, MD3.3, Error ellipse: s-maj=2.9km s-min=1.9km az=87.0*

ATH ***19*** *09:24:02.4, 37.98N×27.33E, h12^{km}, MD3.2/3*

ISC 19 09:24:00.4±0.5**, 37.99N**±0.02×**27.50E**±0.03**, h5**^{km}±5^{km}**, n24,** σ1^{s}.**11**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYDN	Tasoluk	0.44	137	*i* P	Pg	09 24 09.3	0.0
AYDN				*i* S	Sg	09 24 14.9	-0.3
IZM	Izmir	0.45	336	*i* PG	Pg	09 24 09.5	+0.1
IZM				*i* SG	Sg	09 24 16.0	+0.5
KDAG	Bornova	0.45	337	*i* P	Pg	09 24 09.5	0.0
KDAG				*i* S	Sg	09 24 15.9	+0.3
SMG	Samos	0.59	242	*e*PB	Pb	09 24 11.7	-1.1
MLSB	Milas	0.72	162	*i* PG	Pg	09 24 15.9	+1.0
URLA	Izmir	0.80	298	*i* P	Pg	09 24 16.0	-0.4
URLA				*i* S	Sg	09 24 26.4	-0.7
BDRM	Kayabasi	0.92	183	*i* P	Pb	09 24 17.0	-1.5
BDRM				*i* S	Sb	09 24 29.7	-1.1
AKS	Akhisar	0.93	16	*i* PG	Pg	09 24 18.4	-0.5
AKS				*i* SG	Sg	09 24 30.5	-0.8
BODT	Bodrum	0.93	189	*i* PG	Pg	09 24 18.8	-0.2
BODT				*i* SG	Sg	09 24 32.8	+1.3
MANT	Manisa	0.98	59	*i* P	Pb	09 24 19.9	+0.5
MANT				*i* S	Sb	09 24 30.8	-1.6
YER	Yerkesik	1.05	143	*i* PN	Pn	09 24 21.2	-0.5
DENT	Denizli	1.24	100	*i* PN	Pn	09 24 23.8	-0.6
DNZL	Cakiroluk	1.26	103	*i* P	Pb	09 24 24.5	+0.2
DNZL				*i* S	Sb	09 24 43.4	+2.6
AYVA	Ayvalik	1.46	335	*i* P	Pn	09 24 29.0	+1.4
AYVA				*i* S	Sb	09 24 47.6	+1.1
DALT	Dalyan (Mudla)	1.52	143	PN	Pn	09 24 28.5	+0.2
PRK	Paraskevi	1.58	323	*e*PB	Pb	09 24 30.8	+1.0
PRK				*e*SB	Sb	09 24 51.5	+1.5
BALB	Balikesir	1.68	10	PN	Pn	09 24 29.1	-1.6
GOLH	Golhisar	1.80	114	*i* P	Pn	09 24 34.8	+2.3
GOLH				*i* S	Sn	09 25 03.4	+7.4
APE	Apeiranthos	1.81	240	*e*PN	Pn	09 24 30.3	-2.2
APE	Apeiranthos	1.81	240	*e*PN	Pn	09 24 34.0	+1.5
BTOK	Tokmak	1.82	13	*i* P	Pn	09 24 31.9	-0.8
BTOK				*i* S	Sn	09 24 55.4	-1.1
TKTP	Tekketepe	2.23	88	*i* P	Pn	09 24 38.6	0.0
TKTP				*i* S	Sn	09 25 16.7	+10
ULDT	Uludag	2.50	30	*i* P	Pn	09 24 46.6	+4.2
ULDT				*i* S	Sn	09 25 19.7	+5.9
ESKT	Eskisehir	3.04	59	*i* P	Pg	09 24 58.2	-2.9
ESKT				*i* S	Sg	09 25 42.5	+1.0

MOS ***19*** *09:27:17.6±1.3, 40.31N×126.49W, h10^{km}, mb4.9/38, MS4.2/16, Error ellipse: s-maj=6.3km s-min=6.1km az=10.8*

HRVD ***19*** *09:27:18.8±0.3, 40.45N×126.71W, h16^{km}±1^{km}, MW4.9/61, Centroid moment Tensor Solution. LP body waves: s24,c32;Mantle waves: s61,c110; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.01±.09; M$_{\theta\theta}$-0.12±.09; M$_{\phi\phi}$0.11±.08; M$_{r\theta}$-0.29±.18; M$_{\theta\phi}$-2.64±.09; M$_{\phi r}$0.48±.21; Best double couple: M$_0$2.7×10^{16} NP1:ϕ_s271°, δ80°, λ174°. NP2:ϕ_s2°, δ84°, λ10°. Principal axes: T 2.746, Plg11°, Azm227°; N -.093, Plg78°, Azm33°; P -2.654, Plg3°, Azm136°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***19*** *09:27:18.8±0.3, 40.32N×126.58W, h10^{km}, mb4.9/53, MS4.3/46 Error ellipse: s-maj=5.6km s-min=3.6km az=214.0*

IDC ***19*** *09:27:18.7±0.7, 40.48N×126.51W, mb4.2/14, mb1 4.3/21, mb1mx4.2/30, mbtmp4.1/21, ML3.8/5, MS4.0/23, Ms1 4.0/23, ms1mx3.9/34, Error ellipse: s-maj=13.3km s-min=9.1km az=27.0*

BJI ***19*** *09:27:19.5, 41.15N×126.80W, h10^{km}, mB5.2, mb4.8, Ms5.0, Msz4.8*

ISC 19 09:27:17.4±1.6**, 40.32N**±0.03×**126.52W**±0.05**, h9**^{km}±9^{km}**, h13**^{km}±1.4^{km}**:pP-P, n284,** σ1^{s}.**14**/237**, mb4.7**/66**, MS4.2**/65**, 2C-4D, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	2.19	74	⇓*i*Pn	Pn	09 27 54.6	0.0
KBO	Bosley Butte	2.56	42	*e*Pn	Pn	09 27 58.8	-1.1
HOPS	Hopland	2.97	115	*e*Pn	Pn	09 28 04.9	-0.8
KEBM	Edson Butte	3.03	32	*e*Pn	Pn	09 28 05.0	-1.5
WDC	Whiskeytown Da	3.04	84	⇓*e*P	Pn	09 28 06.8	0.0
YBH	Yreka Blue Hor	3.21	63	P	Pn	09 28 09.4	+0.3
YBH						09 28 47.1	
YBH				pmax	pmax		
	comp=Z,17nm,0.3s						
YBH				smax			
	comp=E,30nm,0.3s						
YBH				MLR	MLR		
	comp=Z,4µm,20.9s						
YBH	Yreka Blue Hor	3.21	63	Pn	Pn	09 28 09.4	+0.4
	comp=Z,17nm,0.3s,baz=268,slow=9.5,SNR=301						
YBH				Sn	Sn	09 28 47.1	-0.7
	comp=Z,30nm,0.3s,baz=100,slow=21,SNR=3.7						
YBH				LR	LR	09 29 35.6	
	comp=Z,4µm,20.9s,baz=126,slow=44						
YBH	Yreka Blue Hor	3.21	63	*e*Pn	Pn	09 28 09.4	+0.3
LAMM	Antelope Mount	3.22	65	P	Pn	09 28 09.6	+0.4
LHEM	Herd Peak	3.51	67	P	Pn	09 28 14.2	+0.9
HUMO	Hull Mountain	3.52	48	⇑*i*Pn	Pn	09 28 13.3	-0.2
NSHM	Saint Helena R	3.52	119	*e*Pn	Pn	09 28 14.3	+0.8
BUOR	Burton Butte	3.77	57	P	Pn	09 28 19.0	+2.0
BBOR	Butler Butte	3.85	47	P	Pn	09 28 18.6	+0.3
LBCM	Butte Creek Ri	3.97	81	P	Pn	09 28 21.2	+1.3
SAC	San Andreas	4.21	129	*e*P	Pn	09 28 22.8	-0.5
HBO	Huckleberry Mo	4.71	40	P	Pn	09 28 30.5	+0.2
BEKR	Beckwourth	4.75	94	*e*Pn	Pn	09 28 31.5	+0.6
IRO	Indian Ridge	4.86	39	P	Pn	09 28 32.4	-0.1
MOD	Modoc	4.95	69	*e*Pn	Pn	09 28 33.3	-0.6
	comp=Z,60nm,0.7s						
FRIS	Frissel Point	5.08	39	P	Pn	09 28 35.6	-0.1
CMB	Columbia Colle	5.28	114	*e*P	Pn	09 28 38.7	+0.2
WCN	Washoe City	5.30	99	*e*P	Pn	09 28 39.7	+0.9
SAO	San Andreas Ge	5.33	130	⇓*e*P	Pn	09 28 37.8	-1.4
SAO				pmax	pmax		
	comp=Z,309nm,1.2s						
SAO	San Andreas Ge	5.33	130	⇓*e*Pn	Pn	09 28 37.8	-1.4
	comp=Z,309nm,1.2s						
PAHR	Pah Rah Range	5.51	94	*e*Pn	Pn	09 28 40.9	-0.9
LRV	Little Rabbit	5.81	130	*e*Pn	Pn	09 28 44.8	-1.2
NVAR	Mina Array Bea	6.64	104	Pn	Pn	09 28 58.4	+0.8
	comp=Z,5.9nm,0.3s,baz=285,slow=15,SNR=111						
NVAR				LR	LR	09 31 37.9	
	comp=Z,3µm,20.4s,baz=290,slow=39						
MTUM	Tungsten Hills	6.88	113	*e*Pn	Pn	09 29 02.2	+1.2
BMN	Battle Mountai	7.10	86	P	Pn	09 29 04.1	0.0
TPH	Tonopah	7.56	104	P	Pn	09 29 09.1	-1.4
OCWA	Octopus Mounta	7.61	12	*e*Pn	Pn	09 29 10.3	-1.0
BMO	Blue Mountains	8.16	53	*e*Pn	P	09 29 18.8	-0.2
ELK	Elko	8.60	84	Pn	P	09 29 26.8	+1.7
	comp=Z,0.2nm,0.3s,baz=271,slow=12,SNR=19						
ELK				LR	LR	09 32 52.4	
	comp=Z,667nm,18.2s,baz=262,slow=39						
ELK	Elko	8.60	84	*e*Pn	P	09 29 25.6	+0.5
PGC	Sidney	8.61	14	*e*Pn	P	09 29 24.3	-0.9
TRCR	Troy Canyon	8.70	100	*e*Pn	P	09 29 26.2	-0.2
MWC	Mount Wilson	9.08	129	*e*P	P	09 29 30.9	-0.8
HLID	Hailey	9.58	66	*e*Pn	P	09 29 39.1	+0.6
NEN	Nelson	10.32	113	Pn	P	09 29 47.3	-1.5
NEW	Newport	10.40	37	Pn	P	09 29 50.9	+1.0
	comp=Z,0.2nm,0.3s,baz=214,slow=15,SNR=4.3						
NEW				LR	LR	09 33 46.3	
	comp=Z,2µm,19.9s,baz=222,slow=38						
NEW	Newport	10.40	37	*e*Pn	P	09 29 48.6	-1.2
LDFC	Landfair	10.44	116	*e*Pn	P	09 29 50.1	-0.3
ARUT	Antelope Range	10.48	100	*e*P	P	09 29 51.0	0.0
HVU	Hansel Valley	10.48	78	*e*P	P	09 29 50.8	-0.2
NOQ	North Oquirrh	10.97	84	Pn	P	09 29 56.5	-1.2
MCMT	McKenzie Canyo	11.04	61	*e*Pn	P	09 29 58.7	+0.2
NLU	North Lily Min	11.07	87	*e*Pn	P	09 29 57.2	-1.8
MSO	Missoula	11.20	50	*e*Pn	P	09 29 59.9	-0.8
MVU	Marysvale	11.22	95	*e*Pn	P	09 29 59.7	-1.3
MSU	Marysvale	11.24	95	*e*P	P	09 30 01.3	-0.1
HWUT	Hardware Ranch	11.38	79	*e*Pn	P	09 30 03.7	+0.4
JLU	Jordanelle	11.49	84	*e*Pn	P	09 30 05.0	+0.3
TCUT	Toone Canyon	11.50	81	*e*Pn	P	09 30 03.8	-1.0
DAU	Daniels Canyon	11.65	85	*e*P	P	09 30 05.2	-1.7
CHMT	Chamberlain Mo	11.65	51	*e*Pn	P	09 30 06.7	-0.2
RRI2	Red Ridge	11.73	70	*e*Pn	P	09 30 08.4	+0.4
AHID	Auburn Hatcher	11.81	73	Pn	P	09 30 08.5	-0.6
TMUT	Trail Mountain	11.82	90	*e*Pn	P	09 30 09.2	0.0
QLMT	Earthquake Lak	12.00	63	Pn	P	09 30 12.0	+0.4
TPAW	Teton Pass	12.02	70	Pn	P	09 30 13.0	+1.1
REDW	Red Top Meadow	12.07	70	*e*Pn	P	09 30 10.8	-1.8
IMW	Indian Meadow	12.11	68	*e*Pn	P	09 30 13.9	+0.8
BOZ	Bozeman (W)	12.13	59	*e*P	P	09 30 12.5	-0.8
SNOW	Snow King Moun	12.16	70	*e*Pn	P	09 30 10.4	-3.4
MOOW	Moose Ponds	12.22	69	*e*Pn	P	09 30 15.3	+0.7
YMR	Madison River	12.27	64	*e*Pn	P	09 30 14.7	-0.5
LOHW	Long Hollow	12.29	69	*e*Pn	P	09 30 14.9	-0.7
YFT	Old Faithful	12.31	65	Pn	P	09 30 14.4	-1.3
SRU	San Rafael	12.38	90	P	P	09 30 14.6	-2.1
HRY	Holter Researc	12.42	54	*e*Pn	P	09 30 17.0	-0.2
YNR	Norris Junctio	12.48	64	*e*Pn	P	09 30 20.4	+2.4
PDAR	Pinedale Array	12.94	74	Pn	P	09 30 26.9	+2.7
	comp=Z,0.1nm,0.3s,baz=292,slow=8.0,SNR=9.3						
PDAR				LR	LR	09 35 35.9	
	comp=Z,783nm,20.2s,baz=266,slow=39						
GCMT	Greycliff	13.47	61	Pn	P	09 30 30.8	-0.5
PV10	Paradox Valley	13.67	93	*e*Pn	P	09 30 36.7	+2.8
PV01	Paradox Valley	14.09	93	*e*Pn	P	09 30 40.0	+0.7
RWWY	Rawlins	14.65	78	*e*Pn	P	09 30 47.1	+0.5
TUC	Tucson	14.98	117	*e*P	P	09 30 51.4	+0.4
TUC				pmax	pmax		
	comp=Z,39nm,1.4s						
TUC	Tucson	14.98	117	*e*P	P	09 30 51.4	+0.4
	comp=Z,39nm,1.4s						
EDM	Edmonton	15.71	30	*e*P	P	09 30 59.1	-1.3
PHWY	Pilot Hill	15.98	80	*e*P	P	09 31 04.2	+0.3
LAO	LASA Array	16.02	60	*e*P	P	09 31 05.5	+1.1
	comp=Z,177nm,1.5s						
LENM	Lemitar	16.72	105	P	P	09 31 14.1	+0.7
ANMO	Albuquerque	16.76	102	Pn	P	09 31 15.8	+1.9
	baz=299,slow=11,SNR=23						
ANMO				LR	LR	09 38 07.7	
	comp=Z,905nm,19.2s,baz=129,slow=39						
ANMO	Albuquerque	16.76	102	*e*P	P	09 31 13.7	-0.3
	comp=Z,100nm,2.0s						
LPM	Los Pinos Moun	16.91	104	P	P	09 31 17.2	+1.5
BNM	Barren Site	16.98	105	P	P	09 31 19.5	+2.8
DGMT	Dagmar	17.87	55	*e*P	P	09 31 27.2	-0.5
	comp=Z,165nm,1.5s						
DLBC	Dease Lake	18.27	354	P	P	09 31 33.0	+0.3
	comp=Z,0.1nm,0.3s,baz=190,slow=12,SNR=7.5						
DLBC				S	S	09 34 53.8	0.0
	comp=Z,0.3nm,0.3s,baz=332,slow=16,SNR=5.8						
DLBC	Dease Lake	18.27	354	P	P	09 31 32.8	+0.1
MNTX	Cornudas Mount	19.11	110	*e*P	P	09 31 44.6	+1.6
	comp=Z,38nm,1.4s						
CPRX	Cap Rock	19.54	105	*e*P	P	09 31 46.7	-1.4
GDL2	Guadalupe Moun	19.58	107	*e*P	P	09 31 48.3	-0.2
CLNB	Carlsbad	19.91	107	P	P	09 31 52.1	0.0
CBKS	Cedar Bluff	20.68	85	*e*P	P	09 31 59.7	-0.5
CBKS				pmax	pmax		
	comp=Z,145nm,1.3s						
CBKS				MLR	MLR		
	comp=Z,332nm,21.0s,MS3.7						
CBKS	Cedar Bluff	20.68	85	*e*P	P	09 31 59.7	-0.5
	comp=Z,145nm,1.3s						
CBKS				LR	LR		
	comp=Z,332nm,21.0s,MS3.7						
LTX	Lajitas	21.66	113	*e*P	P	09 32 12.5	+2.2
LTX				pmax	pmax		
	comp=Z,111nm,1.4s,mb5.1						
LTX	Lajitas	21.66	113	*e*P	P	09 32 12.5	+2.2
	comp=Z,111nm,1.4s,mb5.1						
TXAR	Lajitas Array	21.66	113	P	P	09 32 12.5	+2.2
TXAR						09 36 13.3	
TXAR				pmax	pmax		
	comp=Z,29nm,1.2s						
TXAR				MLR	MLR		
	comp=Z,190nm,21.9s						
TXAR	Lajitas Array	21.66	113	P	P	09 32 12.4	+2.2
	comp=Z,29nm,1.1s,mb4.6,baz=292,slow=6.7,SNR=136						
TXAR				PcP	PcP	09 36 13.3	+1.2
	comp=Z,0.3nm,0.9s,baz=324,slow=39,SNR=2.6						
TXAR				LR	LR	09 41 13.1	
	comp=Z,190nm,21.9s,MS3.5,baz=335,slow=38						
TXAR	Lajitas Array	21.66	113	P	P	09 32 12.4	+2.2
TXAR				PcP	PcP	09 36 13.3	+1.2
TXAR				LR	LR	09 41 13.1	
FFC	Flin Flon	21.80	40	*e*P	P	09 32 11.4	-0.1
FFC				pmax	pmax		
	comp=Z,86nm,1.4s,mb5.0						
FFC				MLR	MLR		
	comp=Z,131nm,19.0s,MS3.4						
FFC	Flin Flon	21.80	40	*e*P	P	09 32 11.4	-0.1
	comp=Z,86nm,1.4s,mb5.0						
FFC				LR	LR		
	comp=Z,131nm,19.0s,MS3.4						
KSU1	Kansas State U	22.99	83	P	P	09 32 24.3	+0.9
YKA	Yellowknife Ar	23.34	14	P	P	09 32 27.6	+1.2
YKA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YKA				MLR	MLR		
	comp=Z,97nm,21.4s						
YKA	Yellowknife Ar	23.34	14	P	P	09 32 27.6	+1.2
	comp=Z,6.9nm,0.9s,mb4.1,baz=200,slow=11,SNR=11						
YKA				LR	LR	09 42 37.1	
	comp=Z,97nm,21.4s,MS3.2,baz=210,slow=40						
YKA	Yellowknife Ar	23.34	14	P	P	09 32 27.6	+1.1
YKA				LR	LR	09 42 37.0	
YKW3	Yellowknife Ar	23.40	14	*e*P	P	09 32 27.6	+0.5
ULM	Lac du Bonnet	23.58	55	P	P	09 32 31.1	+2.2
	comp=Z,24nm,1.0s,mb4.6,baz=262,slow=9.9,SNR=14						
ULM				LR	LR	09 42 00.2	
	comp=Z,985nm,19.1s,MS4.3,baz=11,slow=38						
ULM	Lac du Bonnet	23.58	55	*e*P	P	09 32 30.3	+1.3
	comp=Z,56nm,1.2s,mb4.9						
ULM				LR	LR		
	comp=Z,1µm,21.0s,MS4.4						
DIV	Divide	23.96	337	*e*P	P	09 32 34.5	+2.0
	comp=Z,138nm,1.5s,mb5.2						
DIV				LR	LR		
	comp=Z,2µm,20.0s,MS4.5						
KDAK	Kodiak Island	24.19	325	PFAKE		09 32 50.0	+15
KDAK				LR	LR		
	comp=Z,182nm,20.0s,MS3.6						
SML	Sawmill	25.27	336	*e*P	P	09 32 46.5	+1.4
PMR	Palmer	25.37	335	*e*P	P	09 32 48.1	+2.0
THY	Trims Highway	25.79	340	*e*P	P	09 32 51.3	+1.3
SPU	Mount Spurr	26.09	332	P	P	09 32 51.8	-1.0
EYMN	Ely	26.09	61	*e*P	P	09 32 53.4	+0.4
	comp=Z,56nm,1.6s,mb4.8						
EYMN				LR	LR		
	comp=Z,1µm,21.0s,MS4.4						
NATX	Nacogdoches	27.03	98	*e*P	P	09 33 02.1	+0.4
	comp=Z,45nm,1.4s,mb4.8						
NATX				LR	LR		
	comp=Z,1µm,19.0s,MS4.4						
JFWS	Jewell Farm	27.11	73	*e*P	P	09 33 02.9	+0.5
JFWS				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.7						
JFWS				MLR	MLR		
	comp=Z,890nm,19.0s,MS4.3						
JFWS	Jewell Farm	27.11	73	*e*P	P	09 33 02.9	+0.5
	comp=Z,25nm,1.0s,mb4.7						
JFWS				LR	LR		
	comp=Z,890nm,19.0s,MS4.3						
ILAR	Eielson Array	27.19	341	P	P	09 33 03.2	+0.4
ILAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ILAR				MLR	MLR		
	comp=Z,174nm,20.0s						
ILAR	Eielson Array	27.19	341	P	P	09 33 03.1	+0.3
	comp=Z,6.8nm,1.1s,mb4.1,baz=157,slow=7.8,SNR=37						
ILAR				LR	LR	09 42 09.8	
	comp=Z,174nm,20.0s,MS3.6,baz=167,slow=33						
FCC	Fort Churchill	27.57	37	*e*P	P	09 33 05.6	-0.8
FCC				pmax	pmax		
	comp=Z,28nm,1.3s,mb4.7						
FCC	Fort Churchill	27.57	37	*e*P	P	09 33 05.6	-0.8
	comp=Z,28nm,1.3s,mb4.7						
INK	Inuvik	28.30	355	P	P	09 33 12.7	-0.2
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	Inuvik	28.30	355	P	P	09 33 12.7	-0.2
	comp=Z,4.0nm,0.9s,mb4.0						
TTA	Tatalina	28.65	332	*e*P	P	09 33 18.4	+2.3
OXF	Oxford	29.89	89	*e*P	P	09 33 26.9	-0.6
OXF				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.9						
OXF				MLR	MLR		
	comp=Z,376nm,21.0s,MS4.0						
OXF	Oxford	29.89	89	*e*P	P	09 33 26.9	-0.6
	comp=Z,29nm,1.1s,mb4.9						
OXF				LR	LR		
	comp=Z,376nm,21.0s,MS4.0						
UNV	Unalaska Valle	29.96	310	PFAKE		09 33 40.0	+12
UNV				LR	LR		
	comp=Z,2µm,20.0s,MS4.7						
IMA	Indian Mountai	30.01	338	*e*P	P	09 33 27.9	-0.4
IMA				pmax	pmax		
	comp=Z,77nm,1.4s,mb5.2						
IMA	Indian Mountai	30.01	338	*e*P	P	09 33 27.9	-0.3
	comp=Z,77nm,1.4s,mb5.2						
SWET	Sewanee	32.28	86	*e*P	P	09 33 48.6	+0.1
LRAL	Lakeview Retre	32.31	90	*e*P	P	09 33 49.4	+0.5
	comp=Z,23nm,1.1s,mb4.9						
LRAL				LR	LR		
	comp=Z,303nm,19.0s,MS4.0						
CPCT	Cooper Cave	33.27	85	*e*P	P	09 33 56.6	-0.6
MYNC	Murphy	33.71	85	*e*P	P	09 34 01.2	+0.2
MYNC				pmax	pmax		
	comp=Z,58nm,1.6s,mb5.3						
MYNC				MLR	MLR		
	comp=Z,455nm,21.0s,MS4.2						
MYNC	Murphy	33.71	85	*e*P	P	09 34 01.2	+0.2
	comp=Z,58nm,1.6s,mb5.3						
MYNC				LR	LR		
	comp=Z,455nm,21.0s,MS4.2						
TNA	Tin City	34.44	331	PFAKE		09 34 20.0	+13
TNA				LR	LR		
	comp=Z,198nm,19.0s,MS3.9						
MCWV	Mont Chateau	35.44	76	PFAKE		09 34 30.0	+14
MCWV				LR	LR		
	comp=Z,849nm,22.0s,MS4.5						
ELN	Prospectdale	35.51	80	*e*P	P	09 34 17.0	+0.5
BINY	Binghamton	37.58	70	P	P	09 34 34.5	+0.7
	comp=Z,125nm,1.7s,mb5.4						
CBN	Corbin	37.72	77	PFAKE		09 34 50.0	+15
CBN				LR	LR		
	comp=Z,566nm,20.0s,MS4.4						
NCB	Newcomb	38.41	67	PFAKE		09 34 50.0	+9.2
NCB				LR	LR		
	comp=Z,471nm,21.0s,MS4.3						
HRV	Harvard--Oak R	40.67	68	PFAKE		09 35 10.0	+10
HRV				LR	LR		
	comp=Z,331nm,20.0s,MS4.2						
WVL	Waterville	41.45	65	PFAKE		09 35 20.0	+14
WVL				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
SCHQ	Schefferville	41.50	49	P	P	09 35 07.0	+0.8
	comp=Z,6.0nm,0.9s,mb4.2,baz=279,slow=8.5,SNR=4.7						
SCHQ				LR	LR	09 52 04.0	
	comp=Z,218nm,20.1s,MS4.0,baz=114,slow=36						
SCHQ	Schefferville	41.50	49	*e*P	P	09 35 05.0	-1.2
	comp=Z,16nm,1.2s,mb4.5						
SCHQ				LR	LR		
	comp=Z,137nm,19.0s,MS3.8						
PQI	Presque Isle	42.06	61	PFAKE		09 35 20.0	+9.2
PQI				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
FX1	Attu Island--F	42.09	308	LR	LR	09 48 10.4	
	comp=Z,7.6nm,19.7s,baz=278,slow=30						
EMMW	East Machias	42.93	64	PFAKE		09 35 30.0	+12
EMMW				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
BILL	Bilibino	44.88	331	*e*P	P	09 35 35.2	+1.7
BILL				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.7						
BILL	Bilibino	44.88	331	PFAKE		09 35 40.0	+6.5
BILL				LR	LR		
	comp=Z,392nm,20.0s,MS4.3						
BBSR	BB Station	49.54	79	PFAKE		09 36 20.0	+10
BBSR				LR	LR		
	comp=Z,223nm,19.0s,MS4.2						
TAOE	Nuku Hiva Isla	50.52	198	*e*S	S	09 43 20.5	-11
	comp=Z,2µm,31.5s						
TAOE				*e*LR	LR	09 49 44.0	
	comp=Z,751nm,27.3s,baz=23						
SUMG	Summit	51.51	23	*e*P	P	09 36 25.0	0.0
	comp=Z,16nm,1.1s,mb4.9						
MA2	Magadan	52.83	321	PFAKE		09 36 50.0	+15
MA2				LR	LR		
	comp=Z,135nm,20.0s,MS4.0						
SDV	Santo Domingo	58.49	106	PFAKE		09 37 30.0	+14
SDV				LR	LR		
	comp=Z,136nm,20.0s,MS4.1						
KBS	Kingsbay	58.55	9	PFAKE		09 37 30.0	+14
KBS				LR	LR		
	comp=Z,85nm,19.0s,MS3.9						
OTAV	Otavalo	59.10	120	*e*P	P	09 37 21.4	+0.7
	comp=Z,21nm,1.2s,mb5.0						
OTAV				LR	LR		
	comp=Z,82nm,19.0s,MS3.9						
YAK	Yakutsk	61.16	328	*i* P	P	09 37 35.0	+0.9
YAK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
YAK	Yakutsk	61.16	328	PFAKE		09 37 50.0	+16
YAK				LR	LR		
	comp=Z,246nm,21.0s,MS4.3						
PPT	Papeete	61.46	205	LR	LR	09 57 35.1	
	comp=Z,254nm,20.3s,MS4.4,baz=113,slow=30						
YSS	Yuzh-Sakhalins	62.43	309	PFAKE		09 37 50.0	+7.1
YSS				LR	LR		
	comp=Z,124nm,19.0s,MS4.1						
ASAJ	Asahikawa	63.99	307	P	P	09 37 52.2	-0.9
	comp=Z,7.6nm,0.9s,mb4.7,baz=282,slow=3.1,SNR=8.7						
ASAJ				LR	LR	10 01 21.7	
	comp=Z,67nm,18.4s,MS3.9,baz=157,slow=32						
TBI	Tubuai	66.85	203	*e*S	S	09 47 24.9	+22
	comp=Z,569nm,38.5s						
TBI				*e*LQ		09 54 01.2	
	comp=Z,234nm,37.0s						
TBI				*e*LR	LR	09 57 22.1	
	comp=Z,331nm,31.2s,baz=14						
ARCES	ARCESS Array B	68.54	10	LR	LR	10 11 04.7	
	comp=Z,64nm,18.4s,MS3.9,baz=348,slow=38						
MAJO	Matsushiro	71.00	302	*e*P	P	09 38 36.1	-1.3
MAJO				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
MAJO				MLR	MLR		
	comp=Z,140nm,20.0s,MS4.2						
MAJO	Matsushiro	71.00	302	*e*P	P	09 38 36.1	-1.4
	comp=Z,12nm,0.9s,mb4.8						
MAJO				LR	LR		
	comp=Z,140nm,20.0s,MS4.2						
MAT	Matsushiro	71.00	302	*e*P	P	09 38 36.0	-1.4
MAT				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
MAT	Matsushiro	71.00	302	*e*P	P	09 38 36.0	-1.4
	comp=Z,11nm,1.0s,mb4.7						
MAT	Matsushiro	71.00	302	P	P	09 38 35.9	-1.5
MJAR	Matsushiro Arr	71.00	302	P	P	09 38 36.6	-0.8
	comp=Z,4.1nm,1.1s,mb4.3,baz=38,slow=4.5,SNR=8.5						
MJAR				LR	LR	10 03 46.3	
	comp=Z,78nm,20.5s,MS4.0,baz=165,slow=31						
MDJ	Mudanjiang	71.33	313	P	P	09 38 37.3	-2.0
MDJ				AP	pP	09 38 40.1	-1.9
MDJ				XP	sP	09 38 41.8	-1.2
MDJ				PCP	PcP	09 38 57.0	-2.2
MDJ				PP	PP	09 41 14.9	-4.6
MDJ				S	S	09 47 54.3	-1.6
MDJ				AMB	AMB		
	comp=Z,40nm,4.9s						
MDJ				LR	LR		
	comp=N,50nm,10.1s						
MDJ				LR	LR		
	comp=E,80nm,17.6s						
MDJ				LR	LR		
	comp=Z,150nm,9.2s						
NB2	NORSAR Subarra	73.28	20	P	P	09 38 50.8	+0.4
	comp=Z,6.7nm,1.0s,mb4.5,baz=330,slow=6.2						
NOA	NORSAR Array B	73.28	20	P	P	09 38 50.9	+0.5
	comp=Z,2.2nm,0.9s,mb4.1,baz=330,slow=5.4,SNR=4.5						
NOA				LR	LR	10 09 49.6	
	comp=Z,92nm,21.7s,MS4.0,baz=320,slow=35						
NAO01	NORSAR Array S	73.36	20	*e*P	P	09 38 50.1	-0.7
	comp=Z,11nm,0.9s,mb4.8						
KONO	Kongsberg	74.02	21	PFAKE		09 39 10.0	+15
KONO				LR	LR		
	comp=Z,173nm,19.0s,MS4.4						
CN2	Changchun	74.15	314	*e*P	P	09 38 55.3	-0.5
CN2				*e*S	S	09 48 25.4	-2.3
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
SAML	Samuel	76.15	115	*e*P	P	09 39 06.4	-1.4
	comp=Z,3.9nm,0.9s,mb4.3						

SAML				LR	LR		
	comp=Z,141nm,19.0s,MS4.3						
FINES	**FINESS Array B**	**76.17**	**13**	P	**P**	**09 39 07.3**	**+0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES				MLR	MLR		
	comp=Z,63nm,20.1s						
FINES	**FINESS Array B**	**76.17**	**13**	P	**P**	**09 39 07.3**	**+0.3**
	comp=Z,1.1nm,0.8s,mb3.8,baz=258,slow=27,SNR=3.3						
FINES				LR	LR	10 13 47.3	
	comp=Z,63nm,20.1s,MS3.9,baz=174,slow=37						
INCN	**Inchon**	**77.63**	**309**	PFAKE		09 39 30.0	+14
INCN				LR	LR		
	comp=Z,124nm,19.0s,MS4.2						
LPAZ	**La Paz**	**78.16**	**123**	P	**P**	**09 39 20.2**	**+1.4**
	comp=Z,1.5nm,0.8s,mb4.0,baz=348,slow=10,SNR=11						
LPAZ				LR	LR	10 11 27.4	
	comp=Z,48nm,21.6s,MS3.8,baz=330,slow=34						
LPAZ	**La Paz**	**78.16**	**123**	eP	**P**	**09 39 19.6**	**+0.8**
	comp=Z,3.5nm,0.8s,mb4.3						
ROSF	**Rostrenen**	**78.44**	**35**	eP	**P**	**09 39 19.1**	**-0.7**
	comp=Z,117nm,1.6s,mb5.2						
ROSF	**Rostrenen**	**78.44**	**35**	eP	**P**	**09 39 19.1**	**-0.7**
ROSF				pmax	pmax		
	comp=Z,59nm,1.6s,mb5.3						
TLY	**Talaya**	**78.50**	**331**	eP	**P**	**09 39 21.1**	**+1.0**
TLY				e		09 49 21.6	
TLY				e		09 54 24.3	
TLY				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
TLY				MLR	MLR		
	comp=Z,172nm,20.0s,MS4.4						
TLY	**Talaya**	**78.50**	**331**	eP	**P**	**09 39 20.6**	**+0.6**
	comp=Z,3.2nm,1.0s,mb4.2						
TLY				LR	LR		
	comp=Z,51nm,21.0s,MS3.8						
QUIF	**Quistinic**	**78.81**	**35**	eP	**P**	**09 39 21.3**	**-0.5**
SGMF	**Saint Gilles**	**78.81**	**34**	eP	**P**	**09 39 20.9**	**-1.0**
BAIF	**Baives**	**80.14**	**30**	eP	**P**	**09 39 27.4**	**-1.6**
	comp=Z,12nm,1.0s,mb4.5						
BAIF	**Baives**	**80.14**	**30**	eP	**P**	**09 39 27.4**	**-1.6**
BAIF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
ULN	**Ulaanbaatar**	**80.17**	**327**	PFAKE		09 39 40.0	+11
ULN				LR	LR		
	comp=Z,107nm,20.0s,MS4.2						
GUMO	**Guam**	**80.30**	**280**	PFAKE		09 39 40.0	+9.5
GUMO				LR	LR		
	comp=Z,294nm,19.0s,MS4.7						
SONM	**Songino Array**	**80.47**	**327**	P	**P**	**09 39 31.5**	**+0.7**
	comp=Z,3.2nm,1.1s,mb4.2,baz=34,slow=4.5,SNR=16						
SONM				PP	PP	09 42 30.1	-5.8
	comp=Z,0.3nm,0.8s,baz=287,slow=17,SNR=3.2						
SONM				LR	LR	10 14 48.4	
	comp=Z,160nm,20.1s,MS4.4,baz=60,slow=36						
NVS	**Novosibirsk**	**81.85**	**343**	eP	**P**	**09 39 37.6**	**-0.3**
CLL	**Collm**	**82.14**	**24**	eP	**P**	**09 39 41.0**	**+1.5**
CLL				i *PP	pP	09 39 44.1	+1.8
CLL				i		09 39 47.8	
CLL				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
CLL	**Collm**	**82.14**	**24**	eP	**P**	**09 39 41.0**	**+1.5**
	comp=Z,6.0nm,1.3s,mb4.4						
CLL				i pP	pP	09 39 44.1	+1.8
CLL				i		09 39 47.8	
CLL	**Collm**	**82.14**	**24**	P	**P**	**09 39 41.0**	**+1.5**
	comp=Z,logA/T=0.7,mb4.4						
CLL				i *PP	pP	09 39 44.1	+1.8
CLL				i		09 39 47.8	
LOR	**Lormes**	**82.26**	**32**	eP	**P**	**09 39 38.8**	**-1.4**
	comp=Z,16nm,1.0s,mb4.6						
LOR				eR			
	comp=Z,255nm,21.2s						
LOR	**Lormes**	**82.26**	**32**	eP	**P**	**09 39 38.8**	**-1.4**
LOR				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
LOR				MLR	MLR		
	comp=Z,250nm,21.3s,MS4.5						
MOX	**Moxa**	**82.27**	**25**	eP	**P**	**09 39 44.6**	**+4.5**
MOX				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
MOX				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.5						
MOX	**Moxa**	**82.27**	**25**	eP	**P**	**09 39 44.6**	**+4.5**
	comp=Z,6.0nm,1.1s,mb4.4						
MOX				LR	LR		
	comp=Z,200nm,18.0s,MS4.5						
MOX	**Moxa**	**82.27**	**25**	i P	**P**	**09 39 44.6**	**+4.5**
	comp=Z,logA/T=0.7,mb4.4						
MOX				L		10 17 41.0	
ZAL	**Zalesovo**	**82.32**	**342**	LR	LR	10 18 42.8	
	comp=Z,120nm,19.7s,MS4.3,baz=92,slow=38						
TCF	**Toulx Ste Croi**	**82.38**	**33**	eP	**P**	**09 39 40.2**	**-0.6**
AVF	**Avril sur Loir**	**82.44**	**32**	eP	**P**	**09 39 40.3**	**-0.8**
	comp=Z,8.2nm,1.0s,mb4.3						
AVF	**Avril sur Loir**	**82.44**	**32**	eP	**P**	**09 39 40.3**	**-0.8**
AVF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
CDF	**Champ du Feu**	**82.64**	**29**	eP	**P**	**09 39 40.5**	**-1.6**
	comp=Z,16nm,1.2s,mb4.6						
CDF	**Champ du Feu**	**82.64**	**29**	eP	**P**	**09 39 40.5**	**-1.6**
CDF				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
BRG	**Berggiesshubel**	**82.82**	**24**	eP	**P**	**09 39 44.4**	**+1.4**
BRG				e		09 39 49.7	
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
BRG	**Berggiesshubel**	**82.82**	**24**	eP	**P**	**09 39 44.4**	**+1.5**
	comp=Z,3.7nm,1.1s,mb4.3						
BRG				e		09 39 49.6	
NKC	**Novy Kostel**	**82.90**	**25**	eP	PcP	09 39 52.4	+3.7
NKC				AMS	AMS	10 17 10.0	
	comp=Z,300nm,21.6s						
GRA1	**Grafenberg Arr**	**82.96**	**26**	eP	**P**	**09 39 45.2**	**+1.5**
	comp=Z,24nm,1.8s,mb4.9						
GRF	**Grafenberg Arr**	**82.96**	**26**	eP	**P**	**09 39 45.2**	**+1.5**
GRF				pmax	pmax		
	comp=Z,24nm,1.8s,mb4.9						
GRF	**Grafenberg Arr**	**82.96**	**26**	eP	**P**	**09 39 45.2**	**+1.5**
GRF				pmax	pmax		
	comp=Z,24nm,1.8s,mb4.9						
GRF	**Grafenberg Arr**	**82.96**	**26**	eP	**P**	**09 39 45.2**	**+1.5**
	comp=Z,24nm,1.8s,mb4.9						
PVCC	**Panska Ves**	**83.31**	**24**	eP	**P**	**09 39 53.1**	**+7.6**
PVCC				AMS	AMS	10 14 00.0	
	comp=Z,200nm,22.7s						
SJPF	**Ste Jean**	**83.37**	**37**	eP	**P**	**09 39 45.7**	**-0.3**
EVO	**Evora**	**83.47**	**44**	eP	**P**	**09 39 47.3**	**+0.7**
	comp=Z,24nm,1.2s,mb4.8						
EVO				eR			
	comp=Z,119nm,21.6s						
HHC	**Hu-ho-hao-te**	**83.50**	**320**	eP	**P**	**09 39 45.3**	**-1.4**
HHC				AP	pP	09 39 49.8	+0.3
HHC				XP	sP	09 39 52.8	+2.4
HHC				PP	PP	09 43 01.0	+0.2
HHC				SKS	SKS	09 50 01.1	-8.9
HHC				S	S	09 50 07.3	+0.2
HHC				XS		09 50 16.8	
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
HHC				AMB	AMB		
	comp=Z,140nm,6.2s						
HHC				LR	LR		
	comp=Z,130nm,17.8s,MS4.3						
ARU	**Arti**	**83.52**	**357**	i P	**P**	**09 39 50.7**	**+4.3**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.6						
KSP	**Ksiaz**	**83.55**	**23**	eP	**P**	**09 39 48.5**	**+1.8**
CABF	**La Chapelle**	**83.68**	**31**	eP	**P**	**09 39 45.9**	**-1.5**
	comp=Z,17nm,1.1s,mb4.8						
CABF	**La Chapelle**	**83.68**	**31**	eP	**P**	**09 39 45.9**	**-1.5**
CABF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.8						
UPC	**Upice**	**83.77**	**23**	eP	pP	09 39 55.2	+4.6
PRU	**Pruhonice**	**83.78**	**24**	eP	pP	09 39 54.6	+3.9
PRU				AMS	AMS	10 16 30.0	
	comp=Z,200nm,22.9s						
OBN	**Obninsk**	**83.84**	**10**	eP	**P**	**09 39 50.4**	**+2.4**
OBN				e		09 39 56.6	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.3						
OBN	**Obninsk**	**83.84**	**10**	PFAKE		09 40 00.0	+12
OBN				LR	LR		
	comp=Z,25nm,19.0s,MS3.6						
ETSF	**Etsaut**	**83.84**	**37**	eP	**P**	**09 39 48.0**	**-0.4**
	comp=Z,9.1nm,1.0s,mb4.5						
ETSF	**Etsaut**	**83.84**	**37**	eP	**P**	**09 39 48.0**	**-0.4**
ETSF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.6						
DPC	**Dobruska-Polom**	**84.00**	**23**	eP	**P**	**09 39 51.0**	**+2.0**
DPC				AMS	AMS	10 15 40.0	
	comp=Z,200nm,21.0s						
KHC	**Kasperske Hory**	**84.22**	**25**	eP	**P**	**09 39 52.8**	**+2.7**
KHC				AMS	AMS	10 17 30.0	
	comp=Z,200nm,18.9s						
GERES	**GERESS Array B**	**84.51**	**25**	P	**P**	**09 39 53.4**	**+1.8**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES				MLR	MLR		
	comp=Z,207nm,19.1s						
GERES	**GERESS Array B**	**84.51**	**25**	P	**P**	**09 39 53.4**	**+1.9**
	comp=Z,0.9nm,0.7s,mb4.0,baz=333,slow=3.0,SNR=10.0						
GERES				LR	LR	10 18 14.8	
	comp=Z,207nm,19.1s,MS4.5,baz=338,slow=36						
VIVF	**Saint-Julien-l**	**84.55**	**33**	eP	**P**	**09 39 50.9**	**-1.0**
	comp=Z,21nm,1.3s,mb4.8						
VIVF	**Saint-Julien-l**	**84.55**	**33**	eP	**P**	**09 39 50.9**	**-1.0**
VIVF				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.8						
ESDC	**Sonseca Array**	**84.70**	**41**	P	**P**	**09 39 54.7**	**+2.0**
	comp=Z,2.0nm,0.9s,mb4.2,baz=321,slow=5.7,SNR=7.6						
ESLA	**Sonseca Array**	**84.70**	**41**	PFAKE		09 40 00.0	+7.2
ESLA				LR	LR		
	comp=Z,552nm,19.0s,MS5.0						
LPL	**La Plagne**	**84.84**	**31**	eP	**P**	**09 39 51.7**	**-1.6**
	comp=Z,17nm,1.2s,mb4.8						
LPL	**La Plagne**	**84.84**	**31**	eP	**P**	**09 39 51.7**	**-1.6**
LPL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.8						
LPG	**La Plagne**	**84.86**	**31**	eP	**P**	**09 39 52.0**	**-1.4**
	comp=Z,36nm,1.3s,mb5.0						
LPG	**La Plagne**	**84.86**	**31**	eP	**P**	**09 39 52.0**	**-1.4**
LPG				pmax	pmax		
	comp=Z,18nm,1.3s,mb5.0						
MORC	**Moravsky Berou**	**84.87**	**22**	eP	**P**	**09 39 53.8**	**+0.5**
MORC				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.6						
MORC	**Moravsky Berou**	**84.87**	**22**	eP	**P**	**09 39 53.8**	**+0.5**
	comp=Z,5.7nm,1.2s,mb4.6						
OKC	**Ostrava-Krasne**	**84.99**	**22**	eP	pP	09 40 00.7	+3.9
OKC				AMS	AMS	10 18 10.0	
	comp=Z,200nm,19.8s						
ORIF	**Oris-en-Rattie**	**84.99**	**32**	eP	**P**	**09 39 52.5**	**-1.6**
	comp=Z,12nm,0.9s,mb4.7						
ORIF				eR			
	comp=Z,187nm,20.8s						
BNI	**Bardonecchia**	**85.20**	**31**	eP	**P**	**09 39 57.7**	**+2.6**
BNI				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.0						
BNI	**Bardonecchia**	**85.20**	**31**	eP	**P**	**09 39 57.7**	**+2.6**
	comp=Z,20nm,1.4s,mb5.0						
SSE	**Sheshan**	**85.27**	**307**	eP	**P**	**09 39 54.8**	**-1.0**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,130nm,3.7s						
SSE	**Sheshan**	**85.27**	**307**	eP	**P**	**09 39 54.7**	**-1.1**
	comp=Z,20nm,0.7s,mb5.4						
MBDF	**Montbardon**	**85.51**	**31**	eP	**P**	**09 39 55.1**	**-1.5**
	comp=Z,12nm,1.0s,mb4.8						
MBDF	**Montbardon**	**85.51**	**31**	eP	**P**	**09 39 55.1**	**-1.5**
MBDF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.8						
SMRF	**Simiane la Rot**	**85.64**	**32**	eP	**P**	**09 39 55.9**	**-1.4**
	comp=Z,32nm,1.5s,mb5.0						
NJ2	**Nanjing**	**86.00**	**309**	eP	**P**	**09 40 00.1**	**+0.7**
NJ2				AP	pP	09 40 04.8	+2.6
NJ2				XP	sP	09 40 07.0	+3.9
NJ2				PP	PP	09 43 21.6	+0.6
NJ2				SKS	SKS	09 50 20.0	-7.0
NJ2				S	S	09 50 32.0	+0.2
NJ2				XS		09 50 42.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,150nm,5.2s						
NJ2				LR	LR		
	comp=N,460nm,30.3s,MS4.8						
NJ2				LR	LR		
	comp=E,270nm,27.4s,MS4.8						
NJ2				LR	LR		
	comp=Z,80nm,28.7s,MS4.0						
VYHS	**Vyhne**	**86.40**	**22**	e	pP	09 40 08.3	+4.5
FRF	**La Foret Royal**	**86.42**	**32**	eP	**P**	**09 39 59.5**	**-1.7**
LMR	**La Mourre**	**86.56**	**32**	eP	**P**	**09 39 59.7**	**-2.2**
	comp=Z,19nm,1.0s,mb5.0						
LMR	**La Mourre**	**86.56**	**32**	eP	**P**	**09 39 59.7**	**-2.2**
LMR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
AKASG	**Malin Array Be**	**86.90**	**15**	P	**P**	**09 40 05.8**	**+2.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**86.90**	**15**	P	**P**	**09 40 05.8**	**+2.5**
	comp=Z,1.2nm,0.7s,mb4.3,baz=341,slow=4.5,SNR=5.8						
PGF	**Pioggiola**	**88.22**	**31**	eP	**P**	**09 40 07.6**	**-2.3**
MKAR	**Makanchi Array**	**89.54**	**341**	LR	LR	10 22 47.7	
	comp=Z,73nm,19.0s,MS4.1,baz=11,slow=37						
GTA	**Gaotai**	**90.08**	**326**	P	**P**	**09 40 20.1**	**+1.3**
GTA				AP	pP	09 40 26.8	+5.1
GTA				XP	sP	09 40 29.8	+7.2
GTA				SKS	SKS	09 50 49.4	-3.3
GTA				S	S	09 51 14.5	+4.6
GTA				XS		09 51 21.4	
GTA				AMB	AMB		
	comp=Z,180nm,6.8s						
GTA				LR	LR		
	comp=N,100nm,24.7s,MS4.4						
GTA				LR	LR		
	comp=E,160nm,22.8s,MS4.4						
GTA				LR	LR		
	comp=Z,270nm,22.4s,MS4.6						
WMQ	**Urumqi**	**90.74**	**336**	eP	**P**	**09 40 22.5**	**+0.8**
WMQ				AP	pP	09 40 26.5	+1.9
WMQ				XP	sP	09 40 28.5	+3.0
WMQ				PP	PP	09 44 00.3	+0.6
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,230nm,4.8s						
WMQ				LR	LR		
	comp=N,600nm,22.0s						
WMQ				LR	LR		
	comp=Z,600nm,20.4s,MS5.0						
LZH	**Lanzhou**	**90.98**	**321**	eP	**P**	**09 40 21.5**	**-1.5**
LZH				AP	pP	09 40 24.8	-1.1
LZH				XP	sP	09 40 26.3	-0.5
LZH				PP	PP	09 43 58.5	-3.3
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,70nm,6.2s						
LZH				LR	LR		
	comp=Z,670nm,18.4s,MS5.1						
LZH	**Lanzhou**	**90.98**	**321**	eP	**P**	**09 40 21.5**	**-1.5**
	comp=Z,26nm,1.5s,mb5.3						
LZH				pP	pP	09 40 24.8	-1.1
LZH				sP	sP	09 40 26.3	-0.5
LZH				PP	PP	09 43 58.5	-3.3
LZH				LR	LR		
	comp=Z,680nm,18.4s,MS5.1						
BDFB	**Brasilia**	**91.48**	**109**	LR	LR	10 23 21.2	
	comp=Z,159nm,21.1s,MS4.4,baz=18,slow=37						
PMG	**Port Moresby**	**93.23**	**260**	PFAKE		09 40 40.0	+6.2
PMG				LR	LR		
	comp=Z,162nm,19.0s,MS4.5						
AAK	**Ala-Archa**	**95.27**	**345**	PFAKE		09 40 50.0	+7.4
AAK				LR	LR		
	comp=Z,42nm,21.0s,MS3.9						
KIV	**Kislovodsk**	**95.54**	**8**	PFAKE		09 41 00.0	+16
KIV				LR	LR		
	comp=Z,17nm,19.0s,MS3.5						
GYA	**Guiyang**	**97.19**	**314**⇑	iP	**P**	**09 40 52.1**	**+0.4**
GYA				AP	pP	09 40 56.8	+2.3
GYA				XP	sP	09 40 59.8	+4.4
GYA				S	S	09 52 11.6	-0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.3						
GYA				AMB	AMB		
	comp=Z,90nm,3.7s						
GYA				LR	LR		
	comp=N,340nm,18.4s,MS5.0						
GYA				LR	LR		
	comp=E,370nm,18.6s,MS5.0						
GYA				LR	LR		
	comp=Z,290nm,18.7s,MS4.8						
KSH	**Kashi**	**97.93**	**343**	eP	**P**	**09 40 53.1**	**-1.6**
KSH				eAP	pP	09 40 57.6	0.0
KSH				eXP	sP	09 41 00.0	+1.5
KSH				ePP	PP	09 44 50.4	-5.9
KSH				ePPP	PPP	09 46 55.6	-7.6
KSH				eSKS	SKS	09 51 28.6	-7.4
KSH				eS	S	09 52 12.3	-5.4
KSH				eSS	SS	09 58 50.1	-13
KSH				AMB	AMB		
	comp=Z,220nm,4.8s						
KMI	**Kunming**	**100.38**	**316**	P	P	09 41 05.1	-1.1
KMI				AP		09 41 08.6	
KMI				XP		09 41 11.4	
KMI				PP	PP	09 45 09.3	-6.0
KMI				SKS	SKS	09 51 45.8	-2.8
KMI				S	S	09 52 37.8	-0.8
KMI				SS	SS	09 59 25.3	-12
KMI				SSS	SSS	10 03 28.5	0.0
KMI				LR	LR		
	comp=Z,120nm,14.2s,MS4.5						
KMI	**Kunming**	**100.38**	**316**	P	P	09 41 05.1	-1.1
	comp=Z,6.0nm,0.7s						
KMI				pP		09 41 08.6	
KMI				sP		09 41 11.4	
KMI				PP	PP	09 45 09.2	-6.1
KMI				SKS	SKS	09 51 45.8	-2.8
KMI				S	S	09 52 37.7	-0.9
KMI				sS		09 52 56.8	
KMI				PS	PS	09 54 02.7	-11
KMI				SS	SS	09 59 25.2	-13
KMI				SSS	SSS	10 03 28.5	0.0
KMI				LR	LR		
	comp=Z,120nm,14.2s,MS4.5						
VNA3	**Neumayer Olymp**	**136.19**	**155**	e	PKPdf	09 46 42.2	+1.0
VNA3	**Neumayer Olymp**	**136.19**	**155**	e	PKPdf	09 46 46.2	+5.0
VNA3	**Neumayer Olymp**	**136.19**	**155**	e	PKPdf	09 46 48.9	+7.7
VNA3	**Neumayer Olymp**	**136.19**	**155**	ePKPdf	PKPdf	09 46 39.9	-1.3
VNA3				e		09 46 42.2	
VNA3				e		09 46 46.2	
VNA3				e		09 46 48.9	
VNA2	**Neumayer--Watz**	**136.97**	**155**	e	PKPdf	09 46 45.0	+2.4
VNA2	**Neumayer--Watz**	**136.97**	**155**	e	PKPdf	09 46 47.8	+5.2
VNA2	**Neumayer--Watz**	**136.97**	**155**	e	PKPdf	09 46 50.2	+7.6
VNA2	**Neumayer--Watz**	**136.97**	**155**	ePKPdf	PKPdf	09 46 42.6	0.0
VNA2				e		09 46 45.0	
VNA2				e		09 46 47.8	
VNA2				e		09 46 50.2	
LSZ	**Lusaka**	**146.71**	**49**	ePKP	PKPdf	09 46 59.9	-1.4

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*ISK **19** 09:28:21.6, 37.98N×27.51E, h18^{km}, MD3.3*
*CSEM **19** 09:28:21.5±0.1, 37.98N×27.57E, h15^{km}±1^{km}, MD3.3, Error ellipse: s-maj=2.6km s-min=1.5km az=90.0*
*ATH **19** 09:28:22.5, 37.95N×27.48E, h6^{km}, MD3.3/3*
*NEIC **19** 09:28:22.3, 37.96N×27.50E, h4^{km}, MD3.4(ISK), MD3.3(ATH), After ATH.*
ISC 19 09:28:21.5±0.4, **37.99N**±0.02×**27.53E**±0.03, **h4**^{km}±5^{km}, **n31**, σ**0**^{s}**94**/45, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	**0.43**	**140**	i P	**Pg**	**09 28 30.7**	**+0.6**
AYDN				i S	**Sg**	**09 28 36.6**	**+0.7**
IZM	**Izmir**	**0.46**	**333**	i PG	**Pg**	**09 28 31.1**	**+0.4**
KDAG	**Bornova**	**0.46**	**333**	i P	**Pg**	**09 28 31.0**	**+0.3**
KDAG				i S	**Sg**	**09 28 37.4**	**+0.5**
SMG	**Samos**	**0.62**	**243**	ePg	**Pg**	**09 28 33.3**	**-0.6**
SMG				eSg	**Sg**	**09 28 41.8**	**-0.3**
MLSB	**Milas**	**0.72**	**164**	i PG	**Pg**	**09 28 35.7**	**-0.2**
URLA	**Izmir**	**0.82**	**297**	i P	**Pg**	**09 28 37.5**	**-0.5**
URLA				i S	**Sg**	**09 28 48.7**	**-0.3**
AKS	**Akhisar**	**0.91**	**14**	i PG	**Pg**	**09 28 39.9**	**+0.1**
BDRM	**Kayabasi**	**0.93**	**184**	i P	**Pb**	**09 28 39.1**	**-0.7**
BDRM				i S	**Sb**	**09 28 51.4**	**-0.9**
BODT	**Bodrum**	**0.94**	**191**	PG	**Pg**	**09 28 40.3**	**-0.1**
BODT				SG	**Sg**	**09 28 53.8**	**+0.8**
MANT	**Manisa**	**0.95**	**58**	i P	**Pb**	**09 28 41.7**	**+1.5**
MANT				i S	**Sb**	**09 28 52.6**	**-0.4**
YER	**Yerkesik**	**1.04**	**145**	PG	**Pg**	**09 28 42.4**	**0.0**
YER				SG	**Sg**	**09 28 55.9**	**-0.4**
DENT	**Denizli**	**1.21**	**101**	PN	**Pn**	**09 28 45.4**	**+0.2**
DNZL	**Cakiroluk**	**1.24**	**104**	i P	**Pb**	**09 28 45.8**	**+0.7**
DNZL				i S	**Sb**	**09 29 04.6**	**+3.3**
AYVA	**Ayvalik**	**1.47**	**334**	i P	**Pn**	**09 28 50.7**	**+1.8**
AYVA				i S	**Sb**	**09 29 08.5**	**+0.5**
DALT	**Dalyan (Mudla)**	**1.50**	**144**	PN	**Pn**	**09 28 48.4**	**-1.0**
PRK	**Paraskevi**	**1.59**	**322**	ePB	**Pb**	**09 28 52.5**	**+1.3**
BALB	**Balikesir**	**1.67**	**9**	ePN	**Pn**	**09 28 51.5**	**-0.2**
GOLH	**Golhisar**	**1.78**	**114**	i P	**Pn**	**09 28 56.4**	**+3.1**
GOLH				i S	**Sn**	**09 29 22.1**	**+5.4**
BTOK	**Tokmak**	**1.81**	**12**	i P	**Pn**	**09 28 53.5**	**-0.2**
BTOK				i S	**Sn**	**09 29 17.5**	**0.0**
DST	**Dursunbey**	**1.83**	**28**	ePN	**Pn**	**09 28 53.3**	**-0.7**
FETY	**Fethiye**	**1.83**	**137**	ePN	**Pn**	**09 28 52.8**	**-1.3**
ARG	**Arkhangelos**	**1.83**	**165**	ePN	**Pn**	**09 28 56.3**	**+2.2**
APE	**Apeiranthos**	**1.84**	**241**	ePN	**Pn**	**09 28 53.0**	**-1.1**
APE	**Apeiranthos**	**1.84**	**241**	ePb	**Pb**	**09 28 56.2**	**+0.8**
TKTP	**Tekketepe**	**2.20**	**88**	i P	**Pg**	**09 29 04.8**	**-0.7**
TKTP				i S	**Sg**	**09 29 40.7**	**+5.8**
ORLT	**Orhaneli**	**2.31**	**27**	ePN	**Pn**	**09 29 00.4**	**-0.5**
BNT	**Bandirma**	**2.38**	**7**	ePN	**Pn**	**09 29 00.8**	**-1.1**
ULDT	**Uludag**	**2.48**	**30**	i P	**Pn**	**09 29 07.6**	**+4.2**
ULDT				i S	**Sn**	**09 29 41.4**	**+6.8**
YLV	**Yalova**	**2.94**	**28**	ePN	**Pn**	**09 29 09.3**	**-0.7**
ESKT	**Eskisehir**	**3.01**	**59**	i P	**Pg**	**09 29 20.0**	**-1.6**
HRT	**Hereke**	**3.28**	**30**	ePN	**Pn**	**09 29 13.7**	**-1.0**

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*NEIC **19** 10:10:15.9±0.7, 24.12S×111.71W, h10^{km}, mb4.2/2, Error ellipse: s-maj=30.5km s-min=12.7km az=63.0*
*IDC **19** 10:10:15.5±1.2, 24.01S×112.52W, mb3.9/4, mb1 4.3/4, mb1mx3.9/16, mbtmp3.9/4, MS3.8/4, Ms1 3.8/4, ms1mx3.2/29, Error ellipse: s-maj=60.4km s-min=31.6km az=66.0, Incorrectly calculated travel-time residual on T phase at H03N*
ISC 19 10:10:15.3±1.4, **24.0S**±0.2×**111.4W**±0.4, **h10**^{km}, **n19**, σ**0**^{s}**59**/9, **mb3.9**/6, **MS3.8**/4, **Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**3.68**	**149**	P	**Pn**	**10 11 13.7**	**+0.2**
PLCA	**Paso Flores**	**38.00**	**126**	P	**P**	**10 17 43.0**	**+7.8**
	0.4nm,0.5s,mb3.4,baz=145,slow=5.7,SNR=2.8						
LPAZ	**La Paz**	**41.25**	**88**	LR	LR	10 31 57.0	
	comp=Z,37nm,21.4s,MS3.2,baz=283,slow=31						
JTS	**JuntasAbangare**	**42.77**	**40**	LR	LR	10 31 13.0	
	comp=Z,196nm,21.6s,MS4.0,baz=149,slow=29						
SAML	**Samuel**	**48.39**	**80**	eP	**P**	**10 18 59.3**	**-0.4**
	5.2nm,1.4s,mb4.4						
TXAR	**Lajitas Array**	**53.52**	**8**	P	**P**	**10 19 39.7**	**+1.3**
	0.3nm,0.9s,mb3.2,baz=202,slow=9.7,SNR=3.5						
AFI	**Afiamalu**	**57.58**	**268**	LR	LR	10 37 18.3	
	comp=Z,76nm,22.0s,MS3.8,baz=56,slow=29						
RAO	**Raoul Island**	**58.97**	**249**	LR	LR	10 40 24.7	
	comp=Z,198nm,20.5s,MS4.2,baz=356,slow=31						
NVAR	**Mina Array Bea**	**62.40**	**354**	P	**P**	**10 20 41.2**	**+0.5**
	2.4nm,0.8s,mb4.4,baz=171,slow=9.3,SNR=17						
HLID	**Hailey**	**67.25**	**358**	eP	**P**	**10 21 11.9**	**-0.1**
	1.0nm,0.8s,mb3.9						
HLID				e		10 21 19.5	
MCMT	**McKenzie Canyo**	**68.47**	**359**	eP	**P**	**10 21 19.2**	**-0.5**
EDM	**Edmonton**	**76.88**	**359**	P	**P**	**10 22 08.4**	**-0.7**
YKA	**Yellowknife Ar**	**86.19**	**359**	P	**P**	**10 22 57.3**	**-0.3**
	1.3nm,0.8s,mb4.2,baz=174,slow=4.3,SNR=11						
BRTR	**Keskin Array B**	**146.68**	**53**	PKPbc	PKPbc	10 29 59.3	+2.1
	1.5nm,0.8s,baz=207,slow=2.8,SNR=6.6						
ZAL	**Zalesovo**	**147.68**	**342**	PKPbc	PKPdf	10 30 00.6	+0.6
	1.2nm,0.6s,baz=199,slow=1.9,SNR=7.3						
MALT	**Malatya**	**150.67**	**54**	ePKPbc	PKPdf	10 30 09.5	+4.3
ZRNK	**Zerenda**	**151.05**	**359**	ePKPbc	PKPdf	10 30 08.8	+3.5
ZRNK				ePKPab	PKPab	10 30 15.8	-2.2
CMAR	**Chiang Mai Arr**	**151.18**	**265**	PKPbc	PKPdf	10 30 09.9	+3.3
	0.7nm,0.4s,SNR=4.8						
MKAR	**Makanchi Array**	**154.69**	**338**	PKPbc	PKPdf	10 30 15.8	+5.2
	0.8nm,0.9s,baz=243,slow=2.7,SNR=4.1						

*IDC **19** 10:29:12.4±0.7, 24.21S×111.85W, mb4.2/9, mb1 4.5/9, mb1mx4.3/18, mbtmp4.2/9, MS3.8/10, Ms1 3.8/10, ms1mx3.5/29, Error ellipse: s-maj=26.3km s-min=19.7km az=70.0, Incorrectly calculated travel-time residual on T phase at H03N*

*BJI **19** 10:29:13.7, 24.20S×111.80W, h9^{km}, mB5.0, Ms5.0, Msz4.9*

*NEIC **19** 10:29:13.8±4.8, 24.16S×111.84W, h10^{km}±29^{km}, mb4.8/16, Error ellipse: s-maj=13.8km s-min=5.8km az=83.0*

ISC 19 10:29:11.8±0.4**, 24.15S**±0.06×**111.9W**±0.1**, h10^{km}, n75, σ0^{s}76**/43**, mb4.5**/24**, MS4.2**/14**, 3C-2D, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.75	143	ePn	Pn	10 30 11.1	+0.1
RPN				eS	Sn	10 31 04.5	+8.8
TBI	Tubuai	34.34	264	eLR	LR	10 44 49.5	
	369nm,27.0s,baz=97						
PPT	Papeete	35.75	273	LR	LR	10 46 27.6	
	comp=Z,190nm,19.9s,MS3.9,baz=347,slow=29						
PLCA	Paso Flores	38.21	126	LR	LR	10 47 52.3	
	comp=Z,191nm,21.9s,MS3.9,baz=93,slow=29						
LPAZ	La Paz	41.66	88	P	P	10 37 04.2	+1.9
	3.1nm,1.1s,mb3.9,baz=295,slow=7.3,SNR=8.9						
LPAZ				LR	LR	10 50 38.3	
	comp=Z,89nm,21.4s,MS3.6,baz=275,slow=31						
LPAZ	La Paz	41.66	88	P	P	10 37 04.2	+1.9
LPAZ				LR	LR	10 50 38.3	
USHA	Ushuaia	44.31	145	LR	LR	10 51 00.7	
	comp=Z,182nm,20.7s,MS4.0,baz=190,slow=30						
SIV	San Ignacio	48.20	90	P	P	10 37 54.4	-0.4
	2.0nm,0.9s,mb4.2,baz=262,slow=14,SNR=11						
CPUP	Villa Florida	49.08	105	LR	LR	10 54 19.1	
	comp=Z,92nm,20.0s,MS3.8,baz=86,slow=31						
TXAR	Lajitas Array	53.76	9	P	P	10 38 37.8	+1.0
	1.3nm,1.0s,mb3.8,baz=186,slow=11,SNR=9.1						
TXAR				PcP	PcP	10 39 43.4	+0.6
	1.2nm,1.1s,baz=172,slow=8.8,SNR=4.5						
CPRX	Cap Rock	57.38	8	eP	P	10 39 02.3	-0.6
LDFC	Landfair	58.99	357	eP	P	10 39 15.6	+1.5
ANMO	Albuquerque	59.00	5	LR	LR	11 00 06.8	
	comp=Z,47nm,21.3s,MS3.6,baz=348,slow=31						
BDFB	Brasilia	60.22	95	P	P	10 39 22.6	-0.3
	5.3nm,0.9s,mb4.5,baz=244,slow=4.4,SNR=5.9						
BDFB				LR	LR	11 01 50.9	
	comp=Z,91nm,18.1s,MS4.0,baz=208,slow=32						
URZ	Urewera	60.99	238	LR	LR	11 00 19.6	
	comp=Z,138nm,19.6s,MS4.1,baz=232,slow=31						
SAO	San Andreas Ge	61.26	351	P	P	10 39 28.7	-0.9
	7.2nm,1.1s,mb4.7						
NVAR	Mina Array Bea	62.54	354	P	P	10 39 39.7	+1.4
	10nm,0.9s,mb5.0,baz=171,slow=9.1,SNR=52						
SRU	San Rafael	62.94	1	eP	P	10 39 40.9	0.0
SWET	Sewanee	63.96	24	eP	P	10 39 46.6	-1.1
MYNC	Murphy	64.51	25	eP	P	10 39 50.6	-0.7
	18nm,1.0s,mb5.0						
SBA	Scott Base	64.74	193	eP	P	10 39 52.4	+0.4
	6.7nm,1.3s,mb4.5						
HWUT	Hardware Ranch	65.43	0	eP	P	10 39 55.6	-1.4
	8.7nm,1.4s,mb4.6						
VNDA	Vanda	65.79	194	P	P	10 39 59.3	+0.5
	1.6nm,1.0s,mb4.0,baz=79,slow=3.9,SNR=5.1						
VNDA				LR	LR	11 03 12.9	
	comp=Z,70nm,19.3s,MS3.9,baz=316,slow=31						
VNDA	Vanda	65.79	194	eP	P	10 39 59.6	+0.7
	0.9nm,0.4s,mb4.2						
VNDA				e		10 40 05.6	
QSPA	South Pole Qui	66.01	180	eP	P	10 40 00.2	+0.1
	7.2nm,1.0s,mb4.7						
MOD	Modoc	66.18	353	eP	P	10 40 00.4	-1.5
	12nm,1.0s,mb4.9						
YBH	Yreka Blue Hor	66.31	351	LR	LR	11 01 16.7	
	comp=Z,43nm,20.9s,MS3.6,baz=267,slow=29						
BW06	Boulder Array	66.62	2	eP	P	10 40 03.7	-0.9
	3.2nm,1.0s,mb4.3						
PDAR	Pinedale Array	66.62	2	P	P	10 40 04.0	-0.6
	2.6nm,1.0s,mb4.2,baz=166,slow=6.1,SNR=13						
SNOW	Snow King Moun	67.29	1	eP	P	10 40 08.4	-0.5
	4.7nm,0.9s,mb4.5						
TPAW	Teton Pass	67.31	1	eP	P	10 40 08.8	-0.2
	9.2nm,1.1s,mb4.7						
HLID	Hailey	67.42	358	eP	P	10 40 10.4	+0.6
	9.0nm,0.9s,mb4.8						
MCMT	McKenzie Canyo	68.65	359	eP	P	10 40 17.5	+0.1
BMO	Blue Mountains	68.85	356	eP	P	10 40 18.7	+0.1
	6.3nm,1.2s,mb4.4						
MCWV	Mont Chateau	70.17	26	eP	P	10 40 27.1	+0.3
	5.1nm,0.5s,mb4.7						
HRY	Holter Researc	70.53	0	eP	P	10 40 29.2	+0.4
CHMT	Chamberlain Mo	70.74	359	eP	P	10 40 30.5	+0.4
VNA3	Neumayer Olymp	71.19	160	e	pP	10 40 38.0	+2.6
VNA3	Neumayer Olymp	71.19	160	e	sP	10 40 42.5	+6.0
VNA3	Neumayer Olymp	71.19	160	⇑iP	P	10 40 32.0	-0.4
VNA3				e		10 40 38.0	
VNA3				e		10 40 42.5	
VNA1	Neumayer--Stat	71.82	160	e	pP	10 40 42.3	+3.1
VNA1	Neumayer--Stat	71.82	160	e	sP	10 40 46.7	+6.4
VNA1	Neumayer--Stat	71.82	160	⇑iP	P	10 40 36.2	-0.1
VNA1				e		10 40 42.3	
VNA1				e		10 40 46.7	
VNA2	Neumayer--Watz	71.99	160	e	pP	10 40 42.9	+2.7
VNA2	Neumayer--Watz	71.99	160	e	sP	10 40 47.5	+6.2
VNA2	Neumayer--Watz	71.99	160	⇑iP	P	10 40 37.1	-0.2
VNA2				e		10 40 42.9	
VNA2				e		10 40 47.5	
NEW	Newport	72.24	356	eP	P	10 40 39.4	+0.3
	10nm,1.1s,mb4.7						
SNAA	Sanae	73.04	162	P	P	10 40 42.9	-0.5
	1.3nm,0.9s,mb3.9,baz=233,slow=6.9,SNR=7.4						
EYMN	Ely	74.07	14	eP	P	10 40 49.6	-0.1
	10nm,1.1s,mb4.7						
NCB	Newcomb	76.08	27	eP	P	10 41 01.3	-0.1
	16nm,1.2s,mb4.8						
EDM	Edmonton	77.06	359	eP	P	10 41 06.5	-0.2
DLBC	Dease Lake	83.65	351	eP	P	10 41 43.1	+1.5
SYO	Syowa Base	84.81	170	⇓P	P	10 41 46.4	-0.8
SYO	Syowa Base	84.81	170	⇓pP	pP	10 41 49.2	-1.1
YKA	Yellowknife Ar	86.37	359	P	P	10 41 55.7	+0.6
	4.1nm,0.9s,mb4.6,baz=172,slow=4.4,SNR=29						
YKA	Yellowknife Ar	86.37	359	P	P	10 41 55.7	+0.6
YKW3	Yellowknife Ar	86.44	359	eP	P	10 41 55.7	+0.3
MDJ	Mudanjiang	126.61	309	PKP	PKPdf	10 48 13.8	-4.7
CN2	Changchun	129.62	308	ePKP	PKPdf	10 48 25.6	+1.2
CLL	Collm	130.14	42	ePKIKP	PKPdf	10 48 24.0	-1.2
NJ2	Nanjing	134.90	292	ePKP	PKPdf	10 48 30.5	-4.2
NJ2				PP	PP	10 51 10.0	-0.1
NJ2				PKS	PKS	10 52 06.0	-0.8
NJ2				SKS	SKS	10 55 37.0	-7.9
NJ2				PP	PP		
	comp=Z,480nm,10.2s						
NJ2				LR	LR		
	comp=N,1μm,24.2s,MS5.6						
NJ2				LR	LR		
	comp=E,840nm,21.8s,MS5.6						
NJ2				LR	LR		
	comp=Z,2μm,26.4s,MS5.7						
AKASG	Malin Array Be	140.01	38	PKP	PKPdf	10 48 42.4	-1.1
	comp=Z,0.2nm,0.3s,baz=287,slow=2.2,SNR=4.8						
ARU	Arti	147.01	10	ePKP	PKPdf	10 48 55.3	-0.1
LZH	Lanzhou	147.07	300	ePKP	PKPdf	10 48 55.0	-1.1
LZH				APKP		10 48 58.3	
LZH				XPKP		10 48 59.8	
LZH				ePP	PP	10 52 26.5	+2.5
LZH				PP	PP		
	comp=Z,70nm,7.8s						
LZH				LR	LR		
	comp=N,210nm,18.0s						
LZH				LR	LR		
	comp=Z,340nm,20.0s,MS5.1						
LZH	Lanzhou	147.07	300	ePKP	PKPdf	10 48 55.0	-1.1
LZH				pPKP		10 48 58.2	
LZH				sPKP		10 48 59.7	
LZH				ePP	PP	10 52 26.5	+2.5
LZH				LR	LR		
	comp=Z,350nm,20.0s,MS5.1						
BR131	Keskin Array S	147.11	54	ePKP	PKPdf	10 48 56.3	+0.2
BRTR	Keskin Array B	147.11	54	PKPbc	PKPdf	10 48 57.3	+1.2
	comp=Z,5.7nm,1.0s,baz=225,slow=1.7,SNR=21						
ZAL	Zalesovo	147.73	341	PKPbc	PKPdf	10 48 58.0	+1.4
	comp=Z,1.7nm,0.8s,baz=235,slow=3.9,SNR=12						
GTA	Gaotai	149.25	307	PKP	PKPdf	10 49 03.3	+3.8
GTA				PKP2	PKPab	10 49 14.8	+7.2
GTA				PKS	PKS	10 52 36.3	+6.1
GTA				PP	PP	10 52 41.6	+5.6
GTA				SKS	SKS	10 56 05.8	-1.1
GTA				SKKS		10 59 25.8	
GTA				SS	SS	11 11 48.0	+1.9
GTA				LR	LR		
	comp=N,70nm,24.3s,MS4.6						
GTA				LR	LR		
	comp=E,80nm,22.4s,MS4.6						
GTA				LR	LR		
	comp=Z,170nm,21.7s,MS4.8						
CMAR	Chiang Mai Arr	150.77	265	PKPbc	PKPdf	10 49 07.9	+5.4
	comp=Z,3.5nm,0.9s,baz=53,slow=0.4,SNR=17						
MALT	Malatya	151.10	54	ePKPbc	PKPdf	10 49 07.7	+5.3
BVAR	Borovoye Array	151.12	357	PKPbc	PKPdf	10 49 07.0	+5.1
	comp=Z,5.8nm,0.9s,slow=1.5,SNR=22						
ZRNK	Zerenda	151.24	359	ePKP	PKPdf	10 49 01.0	-1.1
ZRNK				e		10 49 06.7	
WMQ	Urumqi	154.65	325	ePKP	PKPdf	10 49 06.3	-0.9
WMQ				LR	LR		
	comp=Z,80nm,22.0s,MS4.5						
MKAR	Makanchi Array	154.71	337	PKPbc	PKPdf	10 49 14.4	+7.2
	comp=Z,1.5nm,0.9s,baz=27,slow=2.7,SNR=8.6						

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*GUC **19** 10:35:17.3±0.7, 38.85S×74.55W, h10^{km}, MD4.1, ML4.2*

*IDC **19** 10:35:17.2±1.0, 38.86S×74.96W, mb3.8/6, mb1 4.0/7, mb1mx3.9/15, mbtmp3.8/7, ML4.2/1, MS3.8/2, Ms1 3.8/2, ms1mx3.1/20, Error ellipse: s-maj=32.6km s-min=20.2km az=62.0*

*NEIC **19** 10:35:18.6±0.7, 38.92S×74.50W, h10^{km}, mb4.4/2, ML4.2(GUC), Error ellipse: s-maj=17.1km s-min=8.9km az=95.0*

ISC 19 10:35:17.3±1.7**, 38.83S**±0.04×**74.57W**±0.09**, h11^{km}**±11^{km}**, n31, σ1^{s}40**/37**, mb3.9**/8**, MS4.1**/1**, 3C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLCH	Valdivia	1.42	134	⇓iP	Pn	10 35 40.6	-2.5
VLCH				i S	Sb	10 35 58.7	-2.4
VLCH				AMP		10 36 01.5	
	comp=E,10μm,0.1s						
PMCH	Puerto Montt	2.95	155	i P	Pn	10 36 05.0	0.0
PMCH				i S	Sn	10 36 40.8	0.0
PMCH				AMP		10 36 48.1	
	comp=N,1μm,0.5s						
CCHI	Chillan	2.97	42	i P	Pn	10 36 05.5	+0.2
CCHI				i S	Sn	10 36 41.6	+0.3
CCHI				AMP		10 36 55.3	
	comp=N,321nm,0.5s						
PLCA	Paso Flores	3.63	123	Pn	Pn	10 36 20.2	+5.5
	comp=N,4.0nm,0.3s,baz=308,slow=11,SNR=26						
PLCA				Sn	Sn	10 37 06.5	+8.6
	comp=N,9.4nm,0.3s,baz=210,slow=5.6,SNR=9.6						
PLCA				LR	LR	10 37 54.0	
	comp=N,727nm,18.9s,baz=293,slow=40						
PLCA	Paso Flores	3.63	123	Pn	Pn	10 36 20.2	+5.5
PLCA				Sn	Sn	10 37 06.5	+8.6
PLCA				LR	LR	10 37 54.0	
LNCH	Linares	3.80	39	i P	Pn	10 36 19.5	+2.5
LNCH				i S	Sn	10 37 05.0	+2.9
LNCH				AMP		10 37 09.6	
	comp=N,207nm,0.4s						
TALC	Talca	4.15	35	⇑iP	Pn	10 36 23.8	+1.8
TALC				i S	Sn	10 37 13.1	+2.1
SFDO	San Fernando	5.08	35	i P	Pn	10 36 34.5	-0.8
SFDO				i S	Sn	10 37 33.7	-0.8
CACH	El Canelo	5.68	35	i S	Sn	10 37 48.8	-0.9
TACH	Talagante	5.94	31	i P	Pn	10 36 46.3	-1.0
PCH	Pirque	6.14	33	⇑iP	Pn	10 36 49.2	-0.9
CLCH	Cerro Calan	6.32	32	⇑iP	Pn	10 36 51.9	-0.8
CLCH				i S	Sn	10 38 03.5	-2.3
JACH	Jahuel	6.93	29	i P	Pn	10 37 00.1	-1.2
CFAA	Coronel Fontan	8.87	38	Pn	P	10 37 27.6	-0.8
	comp=N,0.0nm,0.3s,baz=166,slow=2.5,SNR=18						
CFAA				Sn	Sn	10 39 08.2	-1.1
	comp=N,0.2nm,0.3s,baz=354,slow=9.9,SNR=6.2						
TRQA	Tornquist	9.91	89	P	P	10 37 44.5	+1.9
ARE	Arequipa	22.44	8	eP	P	10 40 21.0	+3.4
LPAZ	La Paz	23.15	16	P	P	10 40 27.8	+3.2
	comp=N,1.6nm,0.8s,mb3.5,baz=170,slow=7.5,SNR=8.9						
SIV	San Ignacio	25.65	31	P	P	10 40 50.7	+2.1
	comp=N,0.4nm,0.7s,mb3.1,baz=224,slow=9.8,SNR=2.7						
SAML	Samuel	31.46	22	P	P	10 41 40.6	-0.4
	comp=N,1.6nm,1.1s,mb3.8						
SNAA	Sanae	47.95	156	P	P	10 43 57.3	+0.2
	comp=N,1.1nm,0.9s,mb3.9,baz=265,slow=6.2,SNR=6.7						
PPT	Papeete	67.66	265	LR	LR	11 06 04.7	
	comp=N,112nm,20.6s,MS4.1,baz=136,slow=27						
TXAR	Lajitas Array	73.04	334	P	P	10 46 48.5	-0.6
	comp=N,1.1nm,0.7s,mb3.9,baz=157,slow=8.8,SNR=21						
SWET	Sewanee	74.42	350	eP	P	10 46 55.9	-1.1
SWET				e		10 47 04.2	
CPCT	Cooper Cave	74.48	352	eP	P	10 46 55.9	-1.4
CPCT				e		10 47 03.8	
DBIC	Dimbokro	78.64	72	P	P	10 47 22.6	+1.5
	comp=N,9.9nm,1.1s,mb4.7,baz=199,slow=9.6,SNR=4.8						
DBIC	Dimbokro	78.64	72	eP	P	10 47 20.8	-0.3
	comp=N,21nm,1.3s,mb4.9						
BOSA	Boshof	79.61	118	P	P	10 47 27.8	+1.7
	comp=N,1.7nm,0.8s,mb4.0,baz=180,slow=11,SNR=2.6						
NVAR	Mina Array Bea	86.75	327	P	P	10 48 03.1	+0.7
	comp=N,0.4nm,0.7s,mb3.8,baz=151,slow=6.5,SNR=3.9						
GERES	GERESS Array B	116.95	48	PKP	PKPdf	10 54 02.7	-2.2
	comp=N,0.3nm,0.5s,baz=270,slow=2.7,SNR=4.4						
ZRNK	Zerenda	151.33	48	ePKPbc	PKPdf	10 55 11.8	+4.6
ZRNK				e		10 55 19.8	
BVAR	Borovoye Array	152.12	48	PKPbc	PKPdf	10 55 14.3	+5.9
	comp=N,2.0nm,0.7s,baz=297,slow=3.3,SNR=12						

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*CSEM **19** 10:47:20.7±1.1, 38.63N×28.57W, ML2.0, Error ellipse: s-maj=4.9km s-min=3.6km az=26.0, After PDA*

*PDA **19** 10:47:20.7±1.1, 38.63N×28.57W, MD3.1, ML2.0, Error ellipse: s-maj=4.9km s-min=3.6km az=26.0*

SVSA 19 10:47:20.7±1.1**, 38.63N×28.57W, MD3.1, ML2.0, Error ellipse: s-maj=4.9km s-min=3.6km az=26.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	Caldeira	0.12	243	i P	Pg	10 47 23.1	+0.1
CALA				eS	Sg	10 47 25.1	+0.5
CALA	Caldeira	0.12	243	eS	Sg	10 47 25.1	+0.5
HOR	Horta	0.12	204	i P	Pg	10 47 22.6	-0.4
HOR				eS	Sg	10 47 24.8	+0.2
HOR	Horta	0.12	204	eS	Sg	10 47 24.8	+0.2
PICO	Pico	0.17	140	i P	Pg	10 47 24.1	-0.1
PICO				eS	Sg	10 47 26.9	+0.4
PICO	Pico	0.17	140	eS	Sg	10 47 26.9	+0.4
PMAN	Manadas	0.38	90	eP	Pg	10 47 27.5	-0.7
PMAN				eS	Sg	10 47 33.4	+0.2
	73nm,0.1s						
PMAN	Manadas	0.38	90	eP	Pg	10 47 27.5	-0.7
PMAN				eS	Sg	10 47 33.4	+0.2
	73nm,0.1s						
PGRA	Graciosa	0.61	49	eP	Pg	10 47 31.3	-1.5

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*NEIC **19** 11:37:31.1, 18.89N×65.07W, h45^{km}, MD3.5(RSPR), After RSPR.*

RSPR 19 11:37:31.1, 18.89N×65.07W, h45^{km}±8^{km}**, MD3.5**/10**, MD3.5**/10**, 3C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTP	Monte Pirata	0.92	210	⇓eP	P	11 37 46.6	-1.2
MTP				eS	S	11 37 58.9	-1.2
CBYP	Canovanas	0.97	230	⇓eP	P	11 37 46.8	-1.6
CBYP				eS	S	11 38 00.3	-1.0
CPD	Cerro la Pandu	1.17	223	⇓eP	P	11 37 50.0	-1.2
CPD				eS	S	11 38 04.4	-1.9
SJG	San Juan	1.29	233	⇑eP	P	11 37 51.3	-1.7
SJG				eS	S	11 38 07.5	-1.9
CELP	Cerrillos	1.65	241	⇑eP	P	11 37 56.9	-1.3
ICM	Isla Caja Muer	1.70	234	⇑eP	P	11 37 57.9	-0.9
ICM				eS	S	11 38 18.0	-1.5
PORP	Portuguez	1.71	241	⇑iP	P	11 37 57.4	-1.5
PORP				eS	S	11 38 17.1	-2.6
LRS	Lares	1.79	251	⇓iP	P	11 37 58.5	-1.5
MGP	Maguayo	2.11	246	⇑iP	P	11 38 03.1	-1.5
MGP				eS	S	11 38 27.1	-2.7
CRPR	Cabo Rojo, PR	2.13	246	⇓eP	P	11 38 03.3	-1.6
CRPR				eS	S	11 38 28.4	-1.8

IDC 19 11:46:14.0±5.9**, 64.43S×175.92E, mb3.8**/1**, mb1 4.0**/2**, mb1mx3.8**/10**, mbtmp3.7**/2**, ML3.0**/1**, MS3.5**/6**, Ms1 3.5**/6**, ms1mx3.4**/17**, Error ellipse: s-maj=206.3km s-min=45.1km az=76.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	13.85	193	Pn	P	11 49 30.6	-2.9
	0.1nm,0.3s,baz=31,slow=11,SNR=6.2						
VNDA				LR	LR	11 54 00.8	
	comp=Z,119nm,20.1s,baz=340,slow=34						
URZ	Urewera	26.22	2	LR	LR	11 59 54.0	
	comp=Z,86nm,20.3s,baz=223,slow=31						
DZM	Mont Dzumac	42.81	347	LR	LR	12 07 11.4	
	comp=Z,71nm,18.6s,baz=234,slow=29						
SNAA	Sanae	44.16	181	LR	LR	12 12 35.4	
	comp=Z,25nm,18.6s,baz=290,slow=36						
NWAO	Narrogin (SRO)	47.38	282	LR	LR	12 08 23.0	
	comp=Z,74nm,19.7s,baz=256,slow=28						
WRA	Warramunga Arr	52.35	308	P	P	11 55 27.2	-2.4
	2.0nm,1.1s,baz=158,slow=6.5,SNR=6.7						
PMG	Port Moresby	58.56	326	LR	LR	12 18 36.5	
	comp=Z,104nm,19.5s,baz=250,slow=33						
TAOE	Nuku Hiva Isla	63.47	50	eP	P	11 56 54.2	+6.3
	175nm,30.7s						
TAOE				ePP	PP	11 59 36.2	+27
	1μm,34.6s						
TAOE				eS	S	12 05 08.3	-12
	1μm,33.0s						
TAOE				eLR	LR	12 16 06.2	
	895nm,26.6s,baz=11						
BRTR	Keskin Array B	146.96	240	PKPbc	PKPbc	12 05 57.2	+0.3
	1.0nm,0.8s,baz=136,slow=4.5,SNR=5.0						

MAN 19 11:46:17.8, 18.03N×120.42E, h10^{km}, mb4.6, ML3.5, MS3.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	Dolores	0.47	143	eP	Pg	11 46 28.0	+0.7
ABRA				eS	Sg	11 46 39.0	+5.3
APYP	Conner	0.80	102	eP	Pb	11 46 32.6	-0.7
APYP				eS	Sb	11 46 46.9	+2.9
CVP	Callao Caves	1.38	103	⇑iP	Pn	11 46 42.0	-1.2
CVP				i S	Sb	11 47 04.5	+3.8
BOLP	Bolinao	1.71	196	eP	Pn	11 46 44.3	-3.5
CAUP	Cauayan	1.72	129	eP	Pn	11 46 49.4	+1.3
CAUP				eS	Sn	11 47 11.3	+1.1
SCZP	Santa Cruz	2.29	192	eP	Pn	11 46 55.7	-0.5
SCZP				eS	Sn	11 47 24.6	-0.1
BALP	Baler	2.53	154	eP	Pn	11 46 59.5	-0.2

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*IDC **19** 12:01:51.4±0.7, 24.27S×111.71W, mb3.9/8, mb1 4.2/9, mb1mx4.1/19, mbtmp3.9/9, ML3.7/1, MS3.8/8, Ms1 3.8/8, ms1mx3.5/21, Error ellipse: s-maj=33.5km s-min=18.4km az=80.0*

*NEIC **19** 12:01:52.7±0.4, 24.25S×111.65W, h10^{km}, mb4.5/4, Error ellipse: s-maj=21.9km s-min=10.5km az=73.0*

ISC 19 12:01:51.1±0.6**, 24.23S**±0.09×**111.4W**±0.2**, h10^{km}, n34, σ1^{s}05**/22**, mb4.1**/11**, MS3.8**/7**, 1C, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.42	148	Pn	Pn	12 02 46.1	+0.4
	6.6nm,0.3s,baz=321,slow=15,SNR=5.3						
RPN				LR	LR	12 03 28.6	
	comp=Z,1μm,19.9s,baz=50,slow=27						
RPN				Sn	Sg	12 03 44.0	-1.1
	2.2nm,0.3s,baz=233,slow=20,SNR=3.4						
RPN	Rapa Nui	3.42	148	P	Pn	12 02 46.5	+0.8
RPN				LR	LR	12 03 28.6	
RPN				Sn	Sg	12 03 44.0	-1.1
PLCA	Paso Flores	37.79	126	LR	LR	12 20 43.6	
	comp=Z,156nm,20.7s,MS3.8,baz=280,slow=30						
LPAZ	La Paz	41.20	87	P	P	12 09 41.5	+3.7
	2.6nm,1.0s,mb3.8,baz=177,slow=25,SNR=8.6						
LPAZ				LR	LR	12 23 05.0	
	comp=Z,90nm,19.7s,MS3.6,baz=84,slow=31						
LPAZ	La Paz	41.20	87	eP	P	12 09 41.8	+4.1
	5.4nm,1.2s,mb4.0						
LPAZ				LR	LR	12 23 05.0	
ROSC	El Rosal	46.22	56	LR	LR	12 26 14.5	
	comp=Z,155nm,19.3s,MS4.0,baz=327,slow=32						
SAML	Samuel	48.36	80	eP	P	12 10 36.4	+1.0
	7.1nm,1.4s,mb4.5						
CPUP	Villa Florida	48.62	104	LR	LR	12 26 58.8	
	comp=Z,68nm,20.7s,MS3.6,baz=10,slow=31						
TXAR	Lajitas Array	53.76	8	P	P	12 11 17.5	+1.5
	0.5nm,1.0s,mb3.4,baz=190,slow=5.5,SNR=3.5						
TXAR				LR	LR	12 30 31.7	
	comp=Z,34nm,20.5s,MS3.4,baz=95,slow=32						
MNTX	Cornudas Mount	55.90	6	eP	P	12 11 30.2	-1.4
	12nm,1.8s,mb4.6						
MNTX				e		12 11 36.3	
LDFC	Landfair	59.08	356	eP	P	12 11 54.5	+0.4
BDFB	Brasilia	59.75	95	LR	LR	12 35 26.1	
	comp=Z,84nm,18.8s,MS3.9,baz=343,slow=34						
NVAR	Mina Array Bea	62.66	354	P	P	12 12 17.2	-1.1
	3.5nm,1.1s,mb4.4,baz=170,slow=8.0,SNR=13						
VNDA	Vanda	65.83	194	P	P	12 12 38.4	0.0
	0.6nm,1.0s,mb3.6,baz=35,slow=3.7,SNR=3.4						
PDAR	Pinedale Array	66.68	1	P	P	12 12 44.9	+0.6
	1.0nm,0.8s,mb3.9,baz=164,slow=11,SNR=4.2						
HLID	Hailey	67.51	358	eP	P	12 12 48.1	-1.5
	3.7nm,1.0s,mb4.4						
CHMT	Chamberlain Mo	70.82	359	eP	P	12 13 09.2	-0.7
CHMT				e		12 13 15.1	
VNA3	Neumayer Olymp	70.96	160		pP	12 13 17.7	+4.2
VNA3	Neumayer Olymp	70.96	160	P	P	12 13 11.4	+1.1
VNA3				P		12 13 17.7	
VNA2	Neumayer--Watz	71.77	160		pP	12 13 22.2	+3.9
VNA2	Neumayer--Watz	71.77	160	P	P	12 13 14.9	-0.3
VNA2				P		12 13 22.2	
SNAA	Sanae	72.83	162	P	P	12 13 22.2	+0.8
	0.4nm,0.6s,mb3.5,baz=228,slow=8.0,SNR=8.7						
EDM	Edmonton	77.14	359	eP	P	12 13 45.0	-1.4
DLBC	Dease Lake	83.80	350	P	P	12 14 23.1	+1.5
	2.4nm,0.8s,mb4.4,baz=169,slow=16,SNR=2.5						
SYO	Syowa Base	84.66	170	⇑P	P	12 14 31.8	+6.1
HNR	Honiara	85.00	262	LR	LR	12 43 09.6	
	comp=Z,146nm,21.4s,MS4.3,baz=312,slow=29						
YKA	Yellowknife Ar	86.45	358	P	P	12 14 34.3	-0.4
	1.1nm,1.0s,mb4.1,baz=171,slow=4.0,SNR=6.1						
SONM	Songino Array	141.98	318	PKP	PKPdf	12 21 23.1	-3.3
	0.4nm,0.8s,baz=90,slow=2.9,SNR=3.9						
BRTR	Keskin Array B	146.78	54	PKPbc	PKPbc	12 21 35.3	+2.0
	1.4nm,0.9s,baz=297,slow=3.2,SNR=6.3						
ARU	Arti	147.00	10	P	PKPdf	12 21 34.2	-0.4
ZAL	Zalesovo	147.94	342	PKPbc	PKPdf	12 21 38.0	+1.8
	1.2nm,0.5s,baz=83,slow=3.0,SNR=6.9						
CMAR	Chiang Mai Arr	151.22	264	PKPbc	PKPdf	12 21 44.8	+2.3
	1.7nm,0.9s,baz=82,slow=0.7,SNR=7.5						
ZRNK	Zerenda	151.31	360	eP	PKPdf	12 21 40.9	-0.7
MKAR	Makanchi Array	154.96	337	PKP	PKPdf	12 21 46.6	-0.3
	0.3nm,0.5s,slow=4.3,SNR=3.0						
MKAR				PKPbc	PKPdf	12 21 54.9	+8.1
	1.1nm,0.8s,baz=63,slow=3.2,SNR=3.5						

ISC 19 12:12:31.5±0.8**, 39.68N**±0.05×**29.48E**±0.06**, h10^{km}, n7, σ0^{s}74**/11**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULDT	Uludag	0.53	330	i P	Pg	12 12 41.5	-0.7
ULDT				i S	Sg	12 12 49.8	+0.3
ORLT	Orhaneli	0.58	309	PG	Pg	12 12 41.6	-1.6
ORLT				SG	Sg	12 12 51.1	+0.1
GDZ	Gediz	0.59	180	i P	Pg	12 12 42.9	-0.5
YLV	Yalova	0.89	355	PG	Pg	12 12 49.7	+0.4
ESKT	Eskisehir	1.07	98	PN	Pn	12 12 52.5	+0.1
ESKT	Eskisehir	1.07	98	i P	Pb	12 12 52.4	+0.8
ESKT				i S	Sb	12 13 11.5	+6.0
BTOK	Tokmak	1.12	275	i P	Pb	12 12 52.3	-0.2
BTOK				i S	Sb	12 13 08.2	+1.3

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*BJI **19** 12:21:42.8, 41.26N×76.76E, h15^{km}, ML3.6*

KNET ***19*** *12:21:43.2±1.2, 41.34N×76.53E, ml3.3, Error ellipse: s-maj=9.5km s-min=6.2km az=84.0*

NNC ***19*** *12:21:43.6±2.7, 41.21N×76.52E, mpv3.8, Error ellipse: s-maj=31.5km s-min=14.8km az=19.0*

ISC 19 12:21:41.6±1.0**, 41.13N**±0.04×**76.8E**±0.1**, h10^{km}, n13, σ1^{s}18**/22**, 14C-9D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	Ulahol	1.19	339	⇓P	Pb	12 22 00.6	-3.3
	40nm,0.2s,SNR=181						
ULHL				⇓S	Sb	12 22 15.1	-4.2
	570nm,0.2s						
KZA	Kyzart	1.51	309	⇑P	Pn	12 22 05.9	-3.0
	160nm,0.2s,SNR=259						
KZA				⇓S	Sb	12 22 24.0	-4.4
	335nm,0.3s						
KSH	Kashi	1.74	202	⇑PG	Pg	12 22 15.3	-1.1
KSH				SG	Sg	12 22 40.4	+0.8
KSH				Smax			
	comp=N,270nm,0.6s						
KSH				Smax			
	comp=E,360nm,0.6s						
TKM2	Tokmak 2	2.01	333	⇓P	Pn	12 22 15.3	-0.7
	comp=E,36nm,0.2s,SNR=29						
TKM2				⇑S	Sn	12 22 40.7	-0.7
	comp=E,88nm,0.2s						
UCH	Uchtor	2.04	303	⇑P	Pn	12 22 15.5	-1.1
	comp=E,53nm,0.2s,SNR=156						
KBK	Karagaybulak	2.07	318	⇑P	Pn	12 22 17.0	+0.1
	comp=E,70nm,0.1s,SNR=32						
KBK				⇑S	Sn	12 22 42.4	-0.5
	comp=E,265nm,0.2s						
AAK	Ala-Archa	2.29	312	⇑P	Pn	12 22 20.4	+0.2
	comp=E,194nm,0.3s,SNR=45						
AAK				⇑S	Sn	12 22 48.4	-0.2
	comp=E,190nm,0.3s						
AAK	Ala-Archa	2.29	312	⇑P	Pn	12 22 20.4	+0.3
	comp=E,103nm,0.4s						
AAK				⇑S	Sn	12 22 47.5	-1.2
	comp=E,92nm,0.3s						
CHMS	Chumysh	2.42	321	⇓P	Pn	12 22 23.0	+1.1
	comp=E,65nm,0.3s,SNR=40						
CHMS				⇓S	Sn	12 22 53.1	+1.3
	comp=E,170nm,0.4s						
AML	Almayashu	2.55	294	⇓P	Pn	12 22 24.0	+0.2
	comp=E,65nm,0.2s,SNR=154						
USP	Ospenovka	2.74	322	⇓P	Pn	12 22 28.1	+1.6
	comp=E,53nm,0.3s,SNR=65						
USP				⇑S	Sn	12 23 02.2	+2.2
	comp=E,172nm,0.4s						
KK31	Karatay Array	5.09	295	⇑Pg	Pb	12 23 10.4	-0.1
	comp=E,5.6nm,0.5s,baz=118,slow=15,SNR=53						
KK31				⇑Lg		12 24 17.4	
	comp=E,5.5nm,0.4s,baz=119,slow=29,SNR=7.2						
MK31	Makanchi Array	6.90	33	⇓Pn	Pn	12 23 25.9	+0.6
	comp=E,1.2nm,0.5s,baz=212,slow=15,SNR=8.6						
MK31				⇑Lg		12 25 23.8	
	comp=E,5.7nm,0.8s,baz=194,slow=25,SNR=4.4						

IDC ***19*** *12:44:51.9±0.5, 1.16N×97.20E, mb4.5/17, mb1 4.6/18, mb1mx4.6/20, mbtmp4.5/18, ML4.8/1, MS4.6/10, Ms1 4.6/10, ms1mx4.4/19, Error ellipse: s-maj=23.0km s-min=13.2km az=63.0*

BJI ***19*** *12:44:54.1, 1.15N×97.30E, h26^{km}, mB5.3, mb5.1, Ms5.2, Msz5.1*

MOS ***19*** *12:44:55.5±0.9, 1.24N×97.30E, h33^{km}, mb5.0/42, MS4.7/14, Error ellipse: s-maj=13.1km s-min=6.5km az=101.0*

HRVD ***19*** *12:44:55.6±0.6, 1.09N×97.09E, h21^{km}, MW5.0/43, Centroid moment Tensor Solution. LP body waves: s29,c52;Mantle waves: s43,c67; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.46±.14; $M_{\theta\theta}$-0.97±.08; $M_{\phi\phi}$-1.49±.12; $M_{r\theta}$1.56±.19; $M_{\theta\phi}$1.51±.09; $M_{\phi r}$-1.71±.22; Best double couple: $M_0$3.49×10^{16} NP1:ϕ_s322°,δ24°,λ93°. NP2:ϕ_s138°,δ66°,λ89°. Principal axes: T 3.339, Plg69°, Azm45°; N .298, Plg1°, Azm139°; P -3.641, Plg21°, Azm229°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***19*** *12:44:55.6±0.2, 1.17N×97.25E, mb4.9/31 Error ellipse: s-maj=6.8km s-min=5.2km az=57.0*

ISC 19 12:44:53.9±0.3**, 1.11N**±0.04×**97.27E**±0.04**, h24^{km}, h24^{km}**±1.6^{km}**:pP-P, n183, σ1^{s}12**/191**, mb4.8**/75**, MS4.9**/36**, 14C-6D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	Ipoh	5.09	47	P	Pn	12 46 12.4	+1.6
KULM	Kulim	5.35	39	⇑iP	Pn	12 46 14.8	+0.4
KULM				eS	Sn	12 47 30.5	+14
KGM	Kluang	6.11	81	P	Pn	12 46 27.0	+1.8
SNG	Songkhla	6.89	29	P	Pn	12 46 28.0	-8.1
	182nm,0.8s						
PBA	Port Blair	11.40	337	ex	x	12 48 02.3	
PBA				ex	x	12 51 13.0	
KSM	Kuching	13.04	88	eP	P	12 47 59.5	-1.0
NST	Nakhon Sawan	14.74	11	P	P	12 48 24.1	+1.1
UBT	Ubonrachathani	15.99	28	P	P	12 48 43.0	+3.8
KKTK	Khon Kaen	16.09	20	⇓P	P	12 48 43.7	+3.3
	37nm,0.9s						
CM31	Chiang Mai Arr	17.32	5	eP	P	12 48 53.6	-2.4
	14nm,0.6s						
CMAR	Chiang Mai Arr	17.32	5	P	P	12 48 54.5	-1.4
	1.3nm,0.3s,baz=200,slow=9.9,SNR=30						
CMAR				PcP	PcP	12 53 39.1	+0.5
	0.1nm,0.3s,baz=205,slow=4.3,SNR=4.4						
CMAR				LR	LR	12 56 24.9	
	comp=Z,1µm,19.0s,baz=190,slow=40						
NANT	Nan	17.90	11	⇓P	P	12 49 02.0	-1.2
	431nm,0.8s						
KKM	Kota Kinabalu	19.53	75	eP	P	12 49 22.8	0.0
KKM	Kota Kinabalu	19.53	75	P	P	12 49 23.0	+0.2
MDRS	Chennai	20.63	306	ex	x	12 55 01.0	
TSM	Tawau	20.82	81	P	P	12 49 36.7	+0.3
VIS	Vishakhapatnam	21.45	321	eP	P	12 49 44.7	+1.8
VIS				AMb	AMB	12 49 57.0	
	comp=Z,61nm,1.4s,mb4.7						
QIZ	Qiongzhong	21.66	34	⇑P	P	12 49 45.1	+0.2
QIZ				S	S	12 53 42.1	+3.7
QIZ				XS		12 53 53.4	
QIZ				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.5						
QIZ				LR	LR		
	comp=N,2µm,13.7s,MS4.8						
QIZ				LR	LR		
	comp=E,2µm,14.7s,MS4.8						
QIZ				LR	LR		
	comp=Z,2µm,12.8s,MS4.8						
QIZ	Qiongzhong	21.66	34	eP	P	12 49 43.7	-1.2
	comp=Z,13nm,0.6s,mb4.5						
KMI	Kunming	24.45	12	P	P	12 50 14.1	+1.8
KMI				AP		12 50 20.0	
KMI				S	S	12 54 35.4	+7.4
KMI				XS		12 54 46.0	
KMI				AMB	AMB		
	comp=Z,120nm,1.7s,mb5.0						
KMI				AMB	AMB		
	comp=Z,830nm,3.9s						
KMI				LR	LR		
	comp=N,5µm,15.8s,MS5.2						
KMI				LR	LR		
	comp=E,2µm,14.6s,MS5.2						
KMI				LR	LR		
	comp=Z,5µm,15.3s,MS5.1						
KMI	Kunming	24.45	12	P	P	12 50 14.1	+1.8
KMI				*PP		12 50 20.0	
KMI						12 50 53.2	
KMI				S	S	12 54 35.4	+7.4
KMI				*SS		12 54 46.0	
KMI				SS	SS	12 55 32.7	+10
KMI				pmax	pmax		
	comp=Z,129nm,1.7s,mb5.1						
KMI				MLR	MLR		
	comp=Z,5µm,15.3s,MS5.1						
KMI	Kunming	24.45	12	P	P	12 50 14.1	+1.8
	comp=Z,129nm,1.7s,mb5.1						
KMI				pP		12 50 20.0	
KMI				PP	PP	12 50 53.2	+5.1
KMI				PPP	PPP	12 51 07.3	+8.7
KMI				S	S	12 54 35.4	+7.4
KMI				sS		12 54 46.0	
KMI				SS	SS	12 55 32.7	+10
KMI				SSS	SSS	12 55 52.1	+13
KMI				LR	LR		
	comp=Z,5µm,15.3s,MS5.1						
SHL	Shillong	24.86	348	⇑iP	P	12 50 16.1	-0.2
SHL				ex	x	12 54 43.5	
BOK	Bokaro	25.10	335	eP	P	12 50 20.6	+2.0
BOK				AMb	AMB	12 50 23.9	
	comp=Z,95nm,1.3s,mb5.2						
BOK				eS	S	12 54 41.5	+2.4
BLSP	Bilaspur	25.57	326	eP	P	12 50 24.0	+1.0
BLSP				AMb	AMB	12 50 35.9	
	comp=Z,50nm,1.6s,mb4.8						
GYA	Guiyang	26.77	19	⇑iP	P	12 50 33.5	-0.6
GYA				AP	pP	12 50 42.8	+1.8
GYA				XP	sP	12 50 44.3	+0.2
GYA				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.5						
GYA				AMB	AMB		
	comp=Z,340nm,6.0s						
GYA				LR	LR		
	comp=N,3µm,14.1s,MS5.0						
GYA				LR	LR		
	comp=E,2µm,13.8s,MS5.0						
GYA				LR	LR		
	comp=Z,3µm,13.5s,MS5.1						
KAD	Karad	27.83	307	ex	x	12 51 29.1	
POO	Poona	28.77	308	ex	x	12 50 44.5	
GUN	Gumba	28.79	339	eP	P	12 50 52.8	+0.4
	comp=Z,87nm,0.6s,mb5.6						
KKN	Kakani	28.91	338	eP	P	12 50 53.7	+0.3
	comp=Z,62nm,0.9s,mb5.3						
KKN	Kakani	28.91	338	eP	P	12 50 53.7	+0.3
KKN				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.0						
LSA	Lhasa	29.02	349	eP	P	12 50 55.0	+0.6
LSA	Lhasa	29.02	349	eP	P	12 50 53.9	-0.5
LSA				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
LSA	Lhasa	29.02	349	eP	P	12 50 53.9	-0.5
	comp=Z,15nm,0.8s,mb4.8						
GKN	Gorkha	29.35	337	eP	P	12 50 57.3	-0.1
	comp=Z,154nm,1.3s,mb5.6						
KOLN	Koldanda	29.57	335	eP	P	12 50 59.4	0.0
	comp=Z,50nm,0.6s,mb5.4						
CD2	Chengdu	30.27	11	P	P	12 51 04.4	-1.1
CD2				S	S	12 55 54.1	-8.6
CD2				AMB	AMB		
	comp=Z,40nm,0.4s,mb5.5						
CD2				LR	LR		
	comp=N,4µm,13.2s						
CD2				LR	LR		
	comp=Z,4µm,14.4s,MS5.2						
MBWA	Marble Bar	31.18	136	eP	P	12 51 14.7	+1.0
ENH	Enshi	31.24	21	eP	P	12 51 12.5	-1.6
	comp=Z,42nm,0.6s,mb5.4						
QZH	Quanzhou	31.39	39	P	P	12 51 15.6	+0.1
QZH				S	S	12 56 24.0	+3.6
QZH				LR	LR		
	comp=N,4µm,15.9s,MS5.3						
QZH				LR	LR		
	comp=E,4µm,17.9s,MS5.3						
QZH				LR	LR		
	comp=Z,5µm,14.4s,MS5.3						
SONA	Sohna	33.18	326	eP	P	12 51 29.9	-1.2
WHN	Wuhan	33.46	27	eP	P	12 51 31.5	-2.0
WHN				S	S	12 56 58.3	+5.8
WHN				LR	LR		
	comp=Z,4µm,13.8s,MS5.3						
KHET	Khetri	33.77	324	eP	P	12 51 37.0	+0.8
FITZ	Fitzroy Crossi	33.82	126	P	P	12 51 35.3	-1.4
	comp=Z,10.0nm,0.8s,mb4.8,baz=292,slow=3.9,SNR=9.0						
XAN	Xi'an	34.52	17	P	P	12 51 40.9	-1.8
XAN				AP	pP	12 51 47.3	-2.4
XAN				S	S	12 57 02.8	-6.2
XAN				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.4						
XAN				LR	LR		
	comp=N,1µm,12.4s,MS5.1						
XAN				LR	LR		
	comp=E,2µm,15.2s,MS5.1						
XAN				LR	LR		
	comp=Z,2µm,17.3s,MS5.0						
LZH	Lanzhou	35.33	9	⇑P	P	12 51 48.5	-1.0
LZH				AP	pP	12 51 56.0	-0.5
LZH				XP	sP	12 51 59.1	-0.4
LZH				PP	PP	12 53 12.3	+3.1
LZH				eS	S	12 57 23.3	+1.8
LZH				XS		12 57 35.6	
LZH				AMB	AMB		
	comp=Z,60nm,1.5s,mb5.3						
LZH				AMB	AMB		
	comp=Z,150nm,5.5s						
LZH				LR	LR		
	comp=N,2µm,16.2s						
LZH				LR	LR		
	comp=Z,3µm,17.9s,MS5.1						
LZH	Lanzhou	35.33	9	⇑P	P	12 51 48.5	-1.0
LZH				*SP	sP	12 51 59.1	-0.4
LZH						12 53 12.2	
LZH				eS	S	12 57 23.2	+1.7
LZH				*SS		12 57 35.6	
LZH				pmax	pmax		
	comp=Z,66nm,1.5s,mb5.3						
LZH				MLR	MLR		
	comp=Z,3µm,17.9s,MS5.1						
LZH	Lanzhou	35.33	9	⇑P	P	12 51 48.5	-1.0
	comp=Z,66nm,1.5s,mb5.3						
LZH				pP	pP	12 51 56.0	-0.5
LZH				sP	sP	12 51 59.1	-0.4
LZH				PP	PP	12 53 12.2	+3.0
LZH				eS	S	12 57 23.2	+1.7
LZH				sS		12 57 35.6	
LZH				SS	SS	12 59 45.5	+6.2
LZH				LR	LR		
	comp=Z,3µm,17.9s,MS5.1						
NJ2	Nanjing	36.90	31	eP	P	12 52 02.8	0.0
NJ2				AP	pP	12 52 15.0	+5.2
NJ2				PP	PP	12 53 30.0	+1.0
NJ2				S	S	12 57 45.0	-0.7
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,260nm,5.6s						
NJ2				LR	LR		
	comp=N,940nm,31.4s,MS4.5						
NJ2				LR	LR		
	comp=E,710nm,29.5s,MS4.5						
SSE	Sheshan	37.44	35	eP	P	12 52 07.3	-0.1
SSE				AP	pP	12 52 16.9	+2.5
SSE				XP	sP	12 52 19.8	+2.4
SSE				S	S	12 57 55.3	+1.3
SSE				XS		12 58 12.4	
SSE				SCS	ScS	13 02 19.3	+1.8
SSE				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,70nm,4.0s						
SSE				LR	LR		
	comp=N,1µm,14.6s,MS5.0						
SSE				LR	LR		
	comp=E,1µm,14.6s,MS5.0						
SSE				LR	LR		
	comp=Z,2µm,15.1s,MS5.0						
SSE	Sheshan	37.44	35	eP	P	12 52 07.3	-0.1
	comp=Z,41nm,0.8s,mb5.3						
SSE				pP	pP	12 52 16.9	+2.5
SSE				sP	sP	12 52 19.8	+2.4
SSE				S	S	12 57 55.3	+1.3
SSE				sS		12 58 12.4	
SSE				ScS	ScS	13 02 19.2	+1.7
SSE				LR	LR		
	comp=Z,2µm,15.1s,MS5.0						
KAKA	Kakadu	37.50	113	eP	P	12 52 06.6	-1.4
	comp=Z,6.6nm,0.5s,mb4.6						
GTA	Gaotai	38.19	3	⇑iP	P	12 52 13.4	-0.1
GTA				AP	pP	12 52 20.3	-0.3
GTA				XP	sP	12 52 24.0	+0.5
GTA				PP	PP	12 53 44.3	0.0
GTA				PPP	PPP	12 54 06.4	-0.2
GTA				PCP	PcP	12 54 29.1	+0.7
GTA				S	S	12 58 03.6	-1.6
GTA				SCP		12 58 14.8	
GTA				SS	SS	13 00 41.1	-2.8
GTA				SCS	ScS	13 02 21.8	+0.2
GTA				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.0						
GTA				AMB	AMB		
	comp=Z,370nm,8.0s						
GTA				LR	LR		
	comp=N,1µm,19.8s						
GTA				LR	LR		
	comp=E,780nm,14.4s						
GTA				LR	LR		
	comp=Z,1µm,20.5s,MS4.7						
BTO	Baotou	40.98	15	eP	P	12 52 38.1	+1.4
BTO				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
HHC	Hu-ho-hao-te	41.62	16	eP	P	12 52 42.8	+0.8
HHC				AP	pP	12 52 52.8	+3.8
HHC				XP	sP	12 52 56.0	+4.0
HHC				PP	PP	12 54 20.8	-0.5
HHC				PCP	PcP	12 54 39.0	-0.4
HHC				SCP		12 58 25.8	
HHC				PCS		12 58 32.9	
HHC				S	S	12 58 57.6	+0.9
HHC				XS		12 59 13.3	
HHC				SS	SS	13 01 59.1	+2.0
HHC				SCS	ScS	13 02 40.3	-1.5
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
HHC				AMB	AMB		
	comp=Z,300nm,5.6s						
HHC				LR	LR		
	comp=N,2µm,16.7s,MS5.2						
HHC				LR	LR		
	comp=E,2µm,17.1s,MS5.2						
HHC				LR	LR		
	comp=Z,2µm,17.1s,MS5.0						
WRA	Warramunga Arr	41.93	122	P	P	12 52 44.3	-0.5
WRA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WRA	Warramunga Arr	41.93	122	P	P	12 52 44.3	-0.4
	comp=Z,7.5nm,0.7s,mb4.4,baz=300,slow=9.1,SNR=85						
WRAB	Tennant Creek	41.93	122	eP	P	12 52 44.7	-0.1
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
WRAB	Tennant Creek	41.93	122	eP	P	12 52 44.7	-0.1
	comp=Z,10nm,0.7s,mb4.6						
WB2	Warramunga Arr	41.94	122	⇓iP	P	12 52 45.0	+0.2
DL2	Dalian	43.72	28	P	P	12 52 59.8	+0.7
DL2				AP	pP	12 53 05.9	-0.3
DL2				S	S	12 59 29.1	+1.7
DL2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.3						
DL2				LR	LR		
	comp=N,220nm,14.1s,MS4.5						
DL2				LR	LR		
	comp=E,350nm,15.5s,MS4.5						
DL2				LR	LR		
	comp=Z,650nm,14.7s,MS4.7						
JNU	Nakatsue	44.82	41	LR	LR	13 14 19.8	
	comp=Z,694nm,18.3s,MS4.6,baz=208,slow=39						
KZA	Kyzart	45.34	337	P	P	12 53 13.6	+1.5
	SNR=5.1						
UCH	Uchtor	45.76	336	P	P	12 53 17.0	+1.6
	SNR=14						
KS15	Wonju Array Si	45.85	34	eP	P	12 53 16.0	-0.2
KS15				e	pP	12 53 22.6	-0.7
TKM2	Tokmak 2	45.92	338	P	P	12 53 17.2	+0.5
	SNR=8.1						
KBK	Karagaybulak	45.95	337	P	P	12 53 18.7	+1.8
	SNR=6.2						
AML	Almayashu	46.01	336	P	P	12 53 18.7	+1.3
	SNR=11						
AAK	Ala-Archa	46.11	337	P	P	12 53 19.1	+0.9
AAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
FRU	Bishkek	46.23	337	eP	P	12 53 20.0	+0.9
EKS2	Erkin-Say	46.42	336	P	P	12 53 21.8	+1.2
	SNR=9.1						
USP	Ospenovka	46.64	337	P	P	12 53 23.3	+0.9
	SNR=9.7						
SNY	Shenyang	46.95	27	⇓P	P	12 53 24.9	+0.1
SNY				LR	LR		
	comp=N,1µm,16.5s,MS5.0						
SNY				LR	LR		
	comp=E,780nm,15.5s,MS5.0						
SNY				LR	LR		
	comp=Z,2µm,14.9s,MS5.1						
SONM	Songino Array	47.21	8	P	P	12 53 27.1	+0.3
	comp=Z,13nm,0.8s,mb4.9,baz=192,slow=9.1,SNR=58						
SONM				PcP	PcP	12 54 58.3	-0.1
	comp=Z,4.6nm,0.8s,baz=181,slow=4.3,SNR=4.8						
SONM				LR	LR	13 16 02.4	
	comp=Z,2µm,18.5s,MS5.2,baz=189,slow=40						
ULN	Ulaanbaatar	47.34	9	eP	P	12 53 27.9	+0.1
ULN				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0						
ULN	Ulaanbaatar	47.34	9	eP	P	12 53 27.9	0.0
	comp=Z,22nm,1.1s,mb5.0						
MKAR	Makanchi Array	47.34	346	P	P	12 53 28.0	+0.1
MKAR				pmax	pmax		
	comp=Z,11nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,376nm,21.0s						
MKAR	Makanchi Array	47.34	346	P	P	12 53 27.9	+0.1
	comp=Z,10nm,0.6s,mb4.9,baz=160,slow=7.5,SNR=37						
MKAR				LR	LR	13 17 29.7	
	comp=Z,376nm,21.0s,MS4.3,baz=170,slow=41						
KKAR	Karatay Array	48.16	334	i P	P	12 53 33.5	-0.9
KKAR				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.0						
CN2	Changchun	49.35	27	⇑P	P	12 53 43.3	-0.2
CN2				eS	S	13 00 48.1	+0.6
CN2				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.6						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,1µm,12.0s,MS5.2						
CN2				LR	LR		
	comp=E,900nm,12.0s,MS5.2						
CN2				LR	LR		
	comp=Z,2µm,13.0s,MS5.2						
ZAK	Zakamensk	49.35	5	⇑iP	P	12 53 43.4	0.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.3						
MOY	Mondy	50.47	3	eP	P	12 53 51.8	-0.2
MOY				pmax	pmax		
	comp=Z,27nm,2.4s,mb4.8						
TLY	Talaya	50.67	5	eP	P	12 53 53.1	-0.4
TLY				e		12 55 52.2	
TLY				eS	S	13 01 09.6	+3.9
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
TLY				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.9						
TLY	Talaya	50.67	5	eP	P	12 53 53.4	0.0
	comp=Z,4.3nm,0.6s,mb4.6						
IRK	Irkutsk	51.29	6	eP	P	12 53 58.4	+0.3
IRK				e		12 55 53.8	
IRK				pmax	pmax		
	comp=Z,44nm,1.9s,mb5.1						
HIA	Hailar	51.70	19	eP	P	12 54 01.0	-0.3
HIA				e	pP	12 54 07.4	-1.1
HIA				pmax	pmax		
	comp=Z,15nm,0.7s						
HIA	Hailar	51.70	19	eP	P	12 54 01.0	-0.3
	comp=Z,15nm,0.7s,mb5.0						
HIA				e	pP	12 54 07.4	-1.1
MAT	Matsushiro	51.71	42	eP	P	12 54 00.0	-1.6
MAT				eS	S	13 01 33.0	+13
MAT	Matsushiro	51.71	42	P	P	12 54 00.1	-1.4
MAT				S	S	13 01 23.0	+2.8
MJAR	Matsushiro Arr	51.71	42	P	P	12 54 00.6	-1.0
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MJAR	Matsushiro Arr	51.71	42	P	P	12 54 00.6	-1.0
	comp=Z,2.2nm,0.5s,mb4.4,baz=211,slow=7.9,SNR=16						
MDJ	Mudanjiang	51.91	29	P	P	12 54 03.3	+0.3
MDJ				AP	pP	12 54 09.6	-0.6
MDJ				XP	sP	12 54 12.3	-0.7
MDJ				PCP	PcP	12 55 12.3	-3.3
MDJ				PP	PP	12 56 00.5	-1.1
MDJ				S	S	13 01 26.5	+3.6
MDJ				XS		13 01 41.8	
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,130nm,4.9s						

MDJ				LR	LR		
	comp=N,870nm,15.8s,MS5.0						
MDJ				LR	LR		
	comp=E,600nm,17.8s,MS5.0						
MDJ				LR	LR		
	comp=Z,1µm,16.8s,MS5.1						
MDJ	Mudanjiang	51.91	29	eP	P	12 54 03.0	0.0
	comp=Z,9.6nm,0.6s,mb4.9						
CIT	Chita	52.54	13	eP	P	12 54 07.8	+0.2
CIT				pmax	pmax		
	comp=Z,89nm,2.0s,mb5.3						
STKA	Stephens Creek	53.24	132	eP	P	12 54 13.8	+0.7
	comp=Z,7.9nm,1.1s,mb4.6						
STKA	Stephens Creek	53.24	132	P	P	12 54 13.8	+0.7
	comp=Z,8.4nm,0.8s,mb4.7,baz=305,slow=8.3,SNR=14						
ZAL	Zalesovo	53.65	351	i P	P	12 54 16.0	+0.3
ZAL				pmax	pmax		
	comp=Z,12nm,0.8s						
ZAL	Zalesovo	53.65	351	P	P	12 54 15.8	+0.1
	comp=Z,12nm,0.8s,mb4.9,baz=301,slow=6.3,SNR=62						
ZAL	Zalesovo	53.65	351	P	P	12 54 15.8	0.0
NVS	Novosibirsk	54.77	350	eP	P	12 54 21.3	-2.7
NVS				e		12 56 33.1	
NVS				eS	S	13 02 03.6	+2.1
NVS				pmax	pmax		
	comp=N,13nm,1.1s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
NVS				smax			
	comp=N,20nm,1.9s						
NVS				smax			
	comp=E,9.0nm,1.6s						
VOSK	Vostochnaya	55.91	341	P	P	12 54 30.4	-1.8
VOSK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
KLR	Kul'dur	56.30	26	eP	P	12 54 31.5	-3.6
KLR				eS	S	13 02 14.0	-8.0
KLR				e		13 06 07.0	
KLR				pmax	pmax		
	comp=E,45nm,2.0s						
KLR				pmax	pmax		
	comp=Z,63nm,2.0s,mb5.3						
KLR				MLR	MLR		
	comp=N,1µm,12.5s,MS5.3						
KLR				MLR	MLR		
	comp=E,900nm,12.5s,MS5.3						
KLR				MLR	MLR		
	comp=Z,2µm,12.5s,MS5.4						
BVA0	Borovoye Array	56.35	341	i P	P	12 54 33.2	-2.3
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
ZRNK	Zerenda	56.76	340	eP	P	12 54 36.7	-1.6
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
ZRNK	Zerenda	56.76	340	eP	P	12 54 36.7	-1.7
	comp=Z,3.0nm,0.5s,mb4.6						
AB31	Akbulak array	57.62	332	i P	P	12 54 43.0	-1.5
AB31				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
BOD	Bodaibo	58.08	10	eP	P	12 54 46.8	-0.8
BOD				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.0						
CLNS	Chul'man	59.80	17	eP	P	12 54 56.8	-2.8
CLNS				pmax	pmax		
	comp=N,6.0nm,0.6s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.6s						
CLNS				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.1						
CLNS				MLR	MLR		
	comp=Z,1µm,13.0s,MS5.2						
CLNS				MLR	MLR		
	comp=N,1µm,14.0s,MS5.2						
CLNS				MLR	MLR		
	comp=E,100nm,13.0s,MS5.2						
YSS	Yuzh-Sakhalins	60.38	34	eP	P	12 55 02.8	-0.9
YSS				S	S	13 03 36.0	+21
YSS				MLR	MLR		
	comp=N,500nm,16.0s,MS4.9						
YSS				MLR	MLR		
	comp=E,500nm,16.0s,MS4.9						
YSS				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.8						
GNI	Garni	61.40	316	i P	P	12 55 11.8	+1.1
SVE	Sverdlovsk	62.79	338	eP	P	12 55 18.8	-0.9
SVE				e		12 56 04.8	
SVE				eS	S	13 03 52.0	+6.3
SVE				pmax	pmax		
	comp=Z,44nm,2.0s,mb5.2						
SVE				MLR	MLR		
	comp=N,500nm,17.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,100nm,17.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.7						
ZEI	Tsey	63.11	319	eP	P	12 55 15.8	-6.2
ZEI				i *PP	pP	12 55 21.7	-7.7
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
ARU	Arti	63.29	337	⇑iP	P	12 55 21.2	-1.8
ARU				e		12 55 54.5	
ARU				e		12 57 36.4	
ARU				eS	S	13 03 52.7	+0.7
ARU				e		13 05 15.3	
ARU				eSS	SS	13 08 04.4	+3.9
ARU				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.7						
ARU				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.6						
ARU				MLR	MLR		
	comp=N,200nm,20.0s,MS4.5						
ARU				MLR	MLR		
	comp=E,200nm,19.0s,MS4.5						
ARU	Arti	63.29	337	eP	P	12 55 20.3	-2.7
	comp=E,11nm,1.2s,mb4.9						
KIV	Kislovodsk	64.42	319	eP	P	12 55 29.5	-1.1
KIV				e		12 57 51.2	
KIV				eS	S	13 04 04.8	-1.4
KIV				eSS	SS	13 08 18.1	+0.1
KIV				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
KIV				pmax	pmax		
	comp=N,12nm,1.3s						
KIV	Kislovodsk	64.42	319	P	P	12 55 29.9	-0.8
	comp=N,19nm,0.9s,mb5.1						
MALT	Malatya	65.24	312	eP	P	12 55 35.8	-0.2
MALT				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
MALT	Malatya	65.24	312	eP	P	12 55 35.8	-0.2
	comp=Z,9.8nm,1.2s,mb4.7						
YAK	Yakutsk	65.48	16	⇑iP	P	12 55 36.0	-1.2
YAK				e*PP	pP	12 55 41.7	-2.8
YAK				e		12 58 02.1	
YAK				ePPP	PPP	12 59 38.9	+0.9
YAK				e*SS		13 04 45.7	
YAK				e		13 05 24.6	
YAK				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
YAK				MLR	MLR		
	comp=Z,672nm,13.0s,MS5.0						
YAK				MLR	MLR		
	comp=N,504nm,14.0s,MS5.0						
YAK				MLR	MLR		
	comp=E,458nm,15.0s,MS5.0						
YAK	Yakutsk	65.48	16	eP	P	12 55 35.8	-1.4
	comp=E,60nm,1.0s,mb5.6						
MBAR	Mbarara	66.55	269	eP	P	12 55 44.6	-0.2
MBAR				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
MBAR	Mbarara	66.55	269	eP	P	12 55 44.6	-0.3
	comp=Z,9.0nm,1.3s,mb4.6						
BR131	Keskin Array S	69.22	312	eP	P	12 55 59.5	-1.6
	comp=Z,1.1nm,0.6s,mb4.0						
BRTR	Keskin Array B	69.22	312	P	P	12 55 59.6	-1.5
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	Keskin Array B	69.22	312	P	P	12 55 59.6	-1.5
	comp=Z,1.7nm,0.7s,mb4.1,baz=134,slow=7.2,SNR=8.9						
MA2	Magadan	71.38	26	eP	P	12 56 13.9	0.0
MA2				eS	S	13 05 29.9	+0.7
MA2				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.8						
PET	Petropavlovsk	72.26	34	eP	P	12 56 19.6	+0.3
PET				eS	S	13 05 41.2	+1.8
PET				ePS	PS	13 06 09.8	-3.7
PET				ePPS	PPS	13 06 28.7	+2.0
PET				pmax	pmax		
	comp=Z,100nm,14.0s						
PET				smax			
	comp=E,100nm,22.7s						
PET				smax			
	comp=N,100nm,18.6s						
PET				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.4						
MAW	Mawson	72.64	193	P	P	12 56 22.3	+1.1
	comp=Z,4.9nm,0.5s,mb4.7,baz=99,slow=12,SNR=13						
MAW				LR	LR	13 24 43.1	
	comp=Z,377nm,19.6s,MS4.7,baz=188,slow=33						
OBN	Obninsk	72.73	328	i P	P	12 56 20.9	-1.1
OBN				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.4						
SEY	Seymchan	73.81	23	eP	P	12 56 28.4	+0.3
SEY						12 56 44.7	
SEY				e		12 59 19.6	
SEY				e		13 00 56.7	
SEY				eS	S	13 06 01.9	+5.2
SEY				e		13 06 35.0	
SEY				pmax	pmax		
	comp=E,8.0nm,1.2s						
SEY				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
SEY				pmax	pmax		
	comp=N,8.0nm,0.9s						
SEY				smax			
	comp=N,240nm,19.1s						
SEY				smax			
	comp=E,90nm,19.1s						
SEY				MLR	MLR		
	comp=Z,590nm,22.0s,MS4.8						
SEY				MLR	MLR		
	comp=N,390nm,16.0s						
SEY				MLR	MLR		
	comp=E,450nm,24.0s						
TIRR	Tirgusor	74.23	316	⇓P	P	12 56 29.6	-1.3
BOSA	Boshof	74.80	240	P	P	12 56 34.5	-0.1
	comp=E,2.5nm,0.8s,mb4.2,baz=199,slow=20,SNR=3.9						
BOSA				LR	LR	13 27 53.0	
	comp=E,334nm,18.1s,MS4.7,baz=68,slow=34						
AKASG	Malin Array Be	75.37	322	P	P	12 56 36.0	-1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	75.37	322	P	P	12 56 36.0	-1.4
	comp=Z,1.4nm,0.5s,mb4.2,baz=88,slow=5.6,SNR=7.5						
AKASG	Malin Array Be	75.37	322	P	P	12 56 36.0	-1.4
MLR	Muntele Rosu	76.18	317	⇓P	P	12 56 41.6	-0.5
BURAR	Bucovina Array	77.14	319	⇑P	P	12 56 48.2	+0.8
RPZ	Rata Peaks	79.09	135	P	P	12 56 59.3	+1.1
	comp=Z,4.2nm,0.6s,mb4.5,baz=228,slow=8.0,SNR=6.3						
RPZ	Rata Peaks	79.09	135	P	P	12 56 59.3	+1.1
KOLS	Kolonicke sedl	79.33	320	i P	P	12 57 00.4	+1.1
KOLS				epP	pP	12 57 07.4	+0.6
SYO	Syowa Base	79.94	198	⇑PcP	PcP	12 57 10.5	+0.3
FINES	FINESS Array B	80.11	333	i P	P	12 57 03.0	-0.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	80.11	333	P	P	12 57 02.8	-0.5
	comp=Z,2.0nm,0.6s,mb4.2,baz=117,slow=4.3,SNR=7.4						
KAF	Kangasniemi	80.19	333	ep	P	12 56 59.1	-4.6
	comp=Z,2.3nm,0.6s,mb4.3,baz=102,slow=5.0						
KAF	Kangasniemi	80.19	333	eP	P	12 56 59.1	-4.6
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
FX1	Attu Island--F	80.62	37	LR	LR	13 36 13.3	
	comp=Z,6.2nm,19.4s,baz=91,slow=38						
BILL	Bilibino	81.22	21	eP	P	12 57 09.2	+0.2
BILL				e	pP	12 57 14.9	-1.6
BILL				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.5						
BILL				MLR	MLR		
	comp=Z,700nm,17.0s,MS5.1						
LIKS	Likavka	81.41	319	eP	P	12 57 13.3	+2.9
KEV	Kevo	82.21	341	ep	P	12 57 08.0	-6.1
	comp=Z,8.6nm,1.0s,mb4.6						
KEV	Kevo	82.21	341	eP	P	12 57 08.0	-6.1
KEV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
MORC	Moravsky Berou	82.52	320	eP	P	12 57 16.3	+0.2
MORC				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
MORC	Moravsky Berou	82.52	320	eP	P	12 57 16.3	+0.2
	comp=Z,7.2nm,1.1s,mb4.6						
ARCES	ARCESS Array B	82.64	340	P	P	12 57 16.7	+0.3
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES				MLR	MLR		
	comp=Z,370nm,19.3s						
ARCES	ARCESS Array B	82.64	340	P	P	12 57 16.7	+0.3
	comp=Z,2.3nm,0.6s,mb4.4,baz=99,slow=4.9,SNR=22						
ARCES				LR	LR	13 38 25.0	
	comp=Z,370nm,19.3s,MS4.8,baz=72,slow=39						
PRU	Pruhonice	84.47	320	eP	P	12 57 26.0	-0.1
BRG	Berggiesshubel	84.92	321	eP	P	12 57 29.1	+0.8
BRG				e		12 57 34.6	
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
BRG	Berggiesshubel	84.92	321	eP	P	12 57 29.1	+0.8
	comp=Z,4.4nm,0.9s,mb4.6						
BRG				e		12 57 34.6	
GERES	GERESS Array B	84.92	319	P	P	12 57 27.2	-1.2
GERES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	GERESS Array B	84.92	319	P	P	12 57 27.2	-1.1
	comp=Z,2.3nm,0.8s,mb4.3,baz=90,slow=5.3,SNR=19						
KHC	Kasperske Hory	85.03	319	eP	P	12 57 29.5	+0.6
CLL	Collm	85.54	321	eP	P	12 57 31.0	-0.4
CLL				e	pP	12 57 39.0	0.0
CLL	Collm	85.54	321	P	P	12 57 31.0	-0.4
CLL				e*PP	pP	12 57 39.0	0.0
VNDA	Vanda	85.73	169	P	P	12 57 33.0	+1.2
	comp=Z,0.4nm,0.8s,baz=307,slow=5.1,SNR=2.1						
VNDA				LR	LR	13 33 26.8	
	comp=Z,293nm,18.5s,MS4.7,baz=307,slow=34						
SBA	Scott Base	86.83	169	eP	P	12 57 39.6	+2.4
SBA				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.8						
SBA	Scott Base	86.83	169	eP	P	12 57 39.6	+2.4
	comp=Z,9.7nm,1.4s,mb4.8						
NB2	NORSAR Subarra	87.12	331	P	P	12 57 38.5	-0.4
	comp=Z,3.2nm,0.8s,mb4.6,baz=94,slow=4.6						
NOA	NORSAR Array B	87.12	331	P	P	12 57 38.8	-0.1
	comp=Z,2.1nm,0.8s,mb4.4,baz=94,slow=4.9,SNR=8.6						
NOA				LR	LR	13 42 30.6	
	comp=Z,196nm,20.6s,MS4.5,baz=90,slow=40						
LPG	La Plagne	89.58	315	eP	P	12 57 51.4	+0.3
	comp=Z,9.9nm,0.8s,mb4.9						
LPG	La Plagne	89.58	315	eP	P	12 57 51.4	+0.3
LPG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.9						
ILAR	Eielson Array	99.75	23	LR	LR	13 53 00.5	
	comp=Z,206nm,19.6s,MS4.6,baz=179,slow=41						
YKA	Yellowknife Ar	112.16	15	PP	PP	13 04 10.7	-5.6
	comp=Z,0.7nm,0.8s,baz=330,slow=7.5,SNR=4.9						
CHMT	Chamberlain Mo	125.20	25	ePKPdf	PKPdf	13 03 54.5	-3.0
MCMT	McKenzie Canyo	127.00	27	ePKPdf	PKPdf	13 03 59.0	-1.9
HLID	Hailey	127.25	29	ePKPdf	PKPdf	13 03 59.4	-2.0
NVAR	Mina Array Bea	128.81	36	PKP	PKPdf	13 04 02.3	-2.4
	comp=Z,0.9nm,0.8s,baz=244,slow=0.8,SNR=7.1						
PDAR	Pinedale Array	130.09	26	PKP	PKPdf	13 04 04.1	-2.9
	comp=Z,0.6nm,0.7s,baz=315,slow=4.2,SNR=4.3						
TXAR	Lajitas Array	143.71	32	PKIKP	PKPdf	13 04 27.5	-4.7
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	143.71	32	PKP	PKPdf	13 04 27.5	-4.7
	comp=Z,1.0nm,0.6s,baz=204,slow=1.1,SNR=17						
CPUP	Villa Florida	144.99	222	PKIKP	PKPdf	13 04 31.2	-3.3
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CPUP	Villa Florida	144.99	222	PKP	PKPdf	13 04 31.2	-3.3
	comp=Z,2.3nm,0.6s,baz=129,slow=4.5,SNR=6.7						
CPUP	Villa Florida	144.99	222	PKP	PKPdf	13 04 31.2	-3.4
NATX	Nacogdoches	145.41	18	ePKP	PKPdf	13 04 32.5	-2.5
LRAL	Lakeview Retre	145.80	6	ePKP	PKPdf	13 04 32.6	-3.1

CSEM ***19*** *13:59:44.2, 63.41S×61.56W, h8^{km}, mb5.5*

MOS ***19*** *13:59:45.7±0.9, 63.47S×61.83W, h10^{km}, mb5.5/16, MS5.0/29, Error ellipse: s-maj=33.6km s-min=9.9km az=92.6*

BJI ***19*** *13:59:46.2, 63.50S×61.90W, h10^{km}, mB5.7, Ms5.6, Msz5.3*

HRVD ***19*** *13:59:46.3±0.2, 63.57S×61.33W, h12^{km}, MW5.4/69, Centroid moment Tensor Solution. LP body waves: s63,c123;Mantle waves: s69,c135; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.93±.02; $M_{\theta\theta}$0.76±.02; $M_{\phi\phi}$0.16±.02; $M_{r\theta}$0.79±.05; $M_{\theta\phi}$0.41±.02; $M_{\phi r}$0.86±.06; Best double couple: $M_0$1.503×10^{17} NP1: ϕ_s77°,δ22°,λ-62°. NP2:ϕ_s228°,δ71°,λ-101°. Principal axes: T 1.488, Plg25°, Azm326°; N .03, Plg10°, Azm231°; P -1.519, Plg63°, Azm121°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***19*** *13:59:46.3±0.1, 63.48S×61.95W, h10^{km}, mb5.4/25, MS5.1/104 Error ellipse: s-maj=8.9km s-min=5.2km az=83.0*

IDC ***19*** *13:59:52.6±2.5, 63.47S×61.81W, h57^{km}±21^{km}, mb4.6/18, mb1 4.7/19, mb1mx4.7/20, mbtmp4.8/19, ML3.8/1, MS5.0/17, Ms1 5.0/17, ms1mx5.0/19, Error ellipse: s-maj=19.7km s-min=9.7km az=72.0*

ISC 19 13:59:45.1±0.3**, 63.49S**±0.04×**61.8W**±0.1**, h10^{km}, n313, σ0^{s}91**/77**, mb5.1**/34**, MS5.1**/118**, 18C-9D, South Shetland Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	Palmer Station	1.62	216	⇓ePn	Pn	14 00 14.3	+0.3
PMSA				eSn	Sn	14 00 34.6	-0.5
USHA	Ushuaia	9.32	336	P	P	14 02 04.2	+1.7
	1.0nm,0.3s,baz=120,slow=14,SNR=9.7						
USHA				LR	LR	14 05 11.4	
	comp=Z,41µm,18.1s,baz=123,slow=34						
USHA	Ushuaia	9.32	336	P	P	14 02 04.2	+1.7
USHA				LR	LR	14 05 11.4	
VNA3	Neumayer Olymp	20.82	134	⇓i	P	14 04 28.6	-0.1
VNA3	Neumayer Olymp	20.82	134	⇑i		14 04 34.3	
VNA3	Neumayer Olymp	20.82	134	⇑i		14 04 38.4	
VNA3	Neumayer Olymp	20.82	134	⇑i	Px	14 04 48.5	
VNA2	Neumayer--Watz	21.59	133	⇓i	P	14 04 37.3	+0.7
VNA2	Neumayer--Watz	21.59	133	⇑i		14 04 41.8	
VNA2	Neumayer--Watz	21.59	133			14 04 45.7	
VNA2	Neumayer--Watz	21.59	133		Px	14 04 50.4	
VNA2	Neumayer--Watz	21.59	133		Px	14 04 55.8	
SNAA	Sanae	22.94	136	d iP	P	14 04 50.7	+1.0
SNAA	Sanae	22.94	136	P	P	14 04 50.7	+1.0
	52nm,1.1s,mb4.9,baz=264,slow=9.3,SNR=94						
SNAA				S	S	14 09 05.0	+10
	4.4nm,0.8s,baz=288,slow=16,SNR=6.2						
SNAA				LR	LR	14 13 10.7	
	comp=Z,2µm,19.9s,MS4.6,baz=228,slow=35						
SNAA	Sanae	22.94	136	⇓eP	P	14 04 50.6	+0.9
	157nm,1.0s,mb5.4						
PLCA	Paso Flores	23.37	343	eP	P	14 04 55.2	+1.0
PLCA				pmax	pmax		
	comp=Z,86nm,1.2s						
PLCA				MLR	MLR		
	comp=Z,8µm,19.0s						
PLCA	Paso Flores	23.37	343	P	P	14 04 55.0	+0.8
	comp=Z,33nm,1.0s,mb4.7,baz=165,slow=10,SNR=30						
PLCA				S	S	14 09 05.5	+2.3
	comp=Z,2.4nm,0.9s,baz=276,slow=12,SNR=1.8						
PLCA				LR	LR	14 14 13.7	
	comp=Z,8µm,18.6s,MS5.2,baz=168,slow=37						
PLCA	Paso Flores	23.37	343	eP	P	14 04 55.2	+0.9
	comp=Z,86nm,1.2s,mb5.1						
PLCA				LR	LR		
	comp=Z,8µm,19.0s,MS5.2						
TRQA	Tornquist	25.46	360	eP	P	14 05 14.3	-0.1
	comp=Z,260nm,1.1s,mb5.7						
TRQA				LR	LR		
	comp=Z,5µm,19.0s,MS5.0						
QSPA	South Pole Qui	26.73	180	eP	P	14 05 27.1	+1.3
	comp=Z,317nm,1.1s,mb5.8						
MAIT	Maitri	27.71	137	eP	P	14 05 28.9	-5.9
MAIT				eS	S	14 10 27.2	+12
NVL	N'lazarevskaya	27.74	137	⇑iP	P	14 05 36.3	+1.2
NVL				i *PP	pP	14 05 41.3	+3.3
NVL				i PPP	PPP	14 06 32.5	-3.3
NVL				i S	S	14 10 21.3	+5.5
NVL				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.3						
NVL				MLR	MLR		
	comp=Z,290nm,17.2s						
CFAA	Coronel Fontan	32.16	350	P	P	14 06 14.9	+0.2
	comp=Z,1.1nm,0.4s,mb4.0,baz=164,slow=8.3,SNR=15						
CFAA				LR	LR	14 20 49.1	
	comp=Z,706nm,18.4s,MS4.4,baz=196,slow=39						
CMCH	Combarbala	32.86	345	eP	P	14 06 20.5	-0.4
TLL	Tololo Astrono	33.83	346	eP	P	14 06 29.5	+0.1
SBA	Scott Base	35.86	196	eP	P	14 06 47.7	+1.4
SBA				e		14 06 54.0	
SBA				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.5						
SBA				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.0						
SBA	Scott Base	35.86	196	eP	P	14 06 47.7	+1.5
	comp=Z,58nm,1.0s,mb5.5						
SBA				e		14 06 54.0	
SBA				LR	LR		
	comp=Z,2µm,21.0s,MS5.0						
SYO	Syowa Base	36.71	144	⇑pP	pP	14 06 52.6	-3.8
SYO	Syowa Base	36.71	144	⇑sP	sP	14 06 55.5	-2.2
VNDA	Vanda	36.72	195	eP	P	14 06 55.5	+2.0
VNDA				pmax	pmax		
	comp=Z,14nm,1.0s						
VNDA				MLR	MLR		
	comp=Z,4µm,19.0s						
VNDA	Vanda	36.72	195	P	P	14 06 55.2	+1.8
	comp=Z,5.3nm,1.1s,mb4.3,baz=152,slow=8.6,SNR=9.9						
VNDA				LR	LR	14 22 15.8	
	comp=Z,4µm,18.0s,MS5.2,baz=144,slow=37						
VNDA	Vanda	36.72	195	eP	P	14 06 55.5	+2.0
	comp=Z,14nm,1.0s,mb4.7						
VNDA				LR	LR		
	comp=Z,4µm,19.0s,MS5.2						
CPUP	Villa Florida	37.27	7	P	P	14 06 58.2	-0.4
	comp=Z,39nm,1.1s,mb5.1,baz=201,slow=11,SNR=17						
CPUP				LR	LR	14 23 12.4	
	comp=Z,2µm,18.0s,MS5.0,baz=200,slow=38						
TRIS	Tristan da Cun	39.69	72	P	P	14 07 17.9	-0.8
	comp=Z,102nm,0.5s,mb5.8						
MAW	Mawson	43.31	153	eP	P	14 07 48.7	+0.8
	comp=Z,26nm,0.9s,mb5.0						
MAW	Mawson	43.31	153	eP	P	14 07 48.7	+0.8
MAW				pmax	pmax		
	comp=Z,26nm,0.9s						
MAW	Mawson	43.31	153	P	P	14 07 48.5	+0.6
	comp=Z,48nm,1.2s,mb5.1,baz=199,slow=8.8,SNR=21						
MAW				PcP	PcP	14 09 35.4	-2.0
	comp=Z,10nm,0.8s,baz=217,slow=7.8,SNR=4.0						
MAW				LR	LR	14 26 28.6	
	comp=Z,5µm,20.3s,MS5.5,baz=213,slow=37						
JATB	Jatai	46.10	14	⇓iP	P	14 08 10.8	-0.1
JATB				i		14 08 16.2	
JATB				e		14 08 25.8	
JATB				e		14 08 34.0	
LPAZ	La Paz	47.35	352	eP	P	14 08 21.7	+0.8
LPAZ				pmax	pmax		
	comp=Z,20nm,0.9s						
LPAZ				MLR	MLR		
	comp=Z,3µm,19.0s						
LPAZ	La Paz	47.35	352	P	P	14 08 21.6	+0.7
	comp=Z,4.0nm,0.7s,mb4.5,baz=150,slow=7.6,SNR=17						
LPAZ				LR	LR	14 29 39.4	
	comp=Z,2µm,19.0s,MS5.2,baz=159,slow=38						
LPAZ	La Paz	47.35	352	eP	P	14 08 21.7	+0.8
	comp=Z,20nm,0.9s,mb5.0						
LPAZ				LR	LR		
	comp=Z,3µm,19.0s,MS5.2						
SIV	San Ignacio	47.45	1	P	P	14 08 21.0	-0.6
	comp=Z,22nm,0.9s,mb5.1,baz=191,slow=7.8,SNR=69						
ARE	Arequipa	47.46	347	eP	P	14 08 22.0	+0.3
RPN	Rapa Nui	47.52	297	PFAKE		14 08 30.0	+8.0
RPN				LR	LR		
	comp=Z,791nm,20.0s,MS4.7						
BDFB	Brasilia	48.75	18	P	P	14 08 30.7	-1.0
	comp=Z,15nm,0.7s,mb5.1,baz=203,slow=4.8,SNR=19						
BDFB				LR	LR	14 28 15.4	

	comp=Z,1µm,21.2s,MS4.8,baz=182,slow=35						
DRV	Dumont d'Urvil	49.18	191	P	P	14 08 33.0	-1.4
CASY	Casey	50.41	176	⇑*i*P	P	14 08 44.4	+0.6
NNA	Nana	52.52	341	PFAKE		14 09 10.0	+10
NNA				LR	LR		
	comp=Z,454nm,21.0s,MS4.5						
SAML	Samuel	54.45	358	*e*P	P	14 09 13.5	-1.2
	comp=Z,36nm,1.2s,mb5.2						
SAML				LR	LR		
	comp=Z,3µm,19.0s,MS5.4						
RCBR	Riachuelo	60.54	30	PFAKE		14 10 10.0	+12
RCBR				LR	LR		
	comp=Z,676nm,19.0s,MS4.8						
BOSA	Boshof	63.51	101	*e*P	P	14 10 16.8	-0.6
BOSA				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.5						
BOSA				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.1						
BOSA	Boshof	63.51	101	P	P	14 10 17.2	-0.2
	comp=Z,7.8nm,0.6s,mb4.9,baz=201,slow=7.3,SNR=14						
BOSA				LR	LR	14 33 57.1	
	comp=Z,1µm,18.4s,MS5.1,baz=218,slow=32						
BOSA	Boshof	63.51	101	*e*P	P	14 10 16.8	-0.6
	comp=Z,28nm,0.6s,mb5.5						
BOSA				LR	LR		
	comp=Z,1µm,21.0s,MS5.1						
OTAV	Otavalo	64.77	342	*e*P	P	14 10 26.6	+0.8
	comp=Z,63nm,1.3s,mb5.5						
OTAV				LR	LR		
	comp=Z,652nm,21.0s,MS4.8						
RPZ	Rata Peaks	65.23	220	LR	LR	14 37 05.9	
	comp=Z,494nm,18.2s,MS4.8,baz=70,slow=34						
PAYG	Puerto Ayora	66.12	329	PFAKE		14 10 50.0	+16
PAYG				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
SNZO	South Karori	66.35	223	PFAKE		14 10 50.0	+14
SNZO				LR	LR		
	comp=Z,678nm,20.0s,MS4.8						
LBTB	Lobatse	66.78	100	*e*P	P	14 10 37.8	-0.7
LBTB				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.5						
LBTB				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.5						
LBTB	Lobatse	66.78	100	P	P	14 10 38.4	-0.1
	comp=Z,32nm,1.0s,mb5.3,baz=201,slow=6.8,SNR=18						
LBTB	Lobatse	66.78	100	*e*P	P	14 10 37.8	-0.7
	comp=Z,47nm,0.9s,mb5.5						
LBTB				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
TSUM	Tsumeb	68.27	89	P	P	14 10 47.9	0.0
	comp=Z,5.9nm,0.6s,mb4.8,baz=237,slow=5.4,SNR=17						
TSUM	Tsumeb	68.27	89	*e*P	P	14 10 48.0	0.0
	comp=Z,28nm,1.1s,mb5.2						
TSUM				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
TBI	Tubuai	68.35	261	*e*S	S	14 19 31.1	-17
	comp=Z,443nm,24.8s						
TBI				*e*LQ		14 27 27.9	
	comp=Z,593nm,28.2s						
TBI				*e*LR	LR	14 30 58.7	
	comp=Z,1µm,29.0s,baz=158						
URZ	Urewera	68.37	226	LR	LR	14 36 10.3	
	comp=Z,594nm,19.0s,MS4.8,baz=139,slow=32						
ROSC	El Rosal	68.81	347	P	P	14 10 51.6	+0.1
	comp=Z,4.5nm,0.4s,mb4.7,baz=94,slow=21,SNR=4.8						
ROSC				LR	LR	14 38 08.4	
	comp=Z,1µm,20.9s,MS5.2,baz=198,slow=33						
TAU	Tasmania Unive	71.45	202	PFAKE		14 11 20.0	+13
TAU				LR	LR		
	comp=Z,342nm,20.0s,MS4.6						
SDV	Santo Domingo	72.48	351	*e*P	P	14 11 12.4	-1.2
	comp=Z,16nm,0.8s,mb5.0						
SDV				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
PPT	Papeete	73.46	264	*e*S	S	14 20 32.5	-15
	comp=Z,691nm,23.8s						
PPT				*e*SS	SS	14 25 12.4	-20
	comp=Z,370nm,27.8s						
PPT				*e*LR	LR	14 33 27.0	
	comp=Z,3µm,24.5s,baz=152						
PPT	Papeete	73.46	264	LR	LR	14 35 21.6	
	comp=Z,2µm,21.2s,MS5.3,baz=154,slow=29						
JTS	JuntasAbangare	75.67	336	PFAKE		14 11 40.0	+7.9
JTS				LR	LR		
	comp=Z,174nm,20.0s,MS4.4						
LSZ	Lusaka	76.46	97	*e*P	P	14 11 37.1	+0.6
LSZ				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.4						
LSZ				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.4						
LSZ	Lusaka	76.46	97	*e*P	P	14 11 37.1	+0.7
	comp=Z,43nm,0.9s,mb5.4						
LSZ				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
TAOE	Nuku Hiva Isla	76.92	276	*e*PP	PP	14 14 12.7	-21
	comp=Z,2µm,34.1s						
TAOE				*e*S	S	14 21 07.3	-18
	comp=Z,804nm,40.4s						
TAOE				*e*LQ		14 32 05.3	
	comp=Z,1µm,26.5s						
TAOE				*e*LR	LR	14 35 03.6	
	comp=Z,5µm,26.0s,baz=171						
TOO	Toolangi	76.96	202	*e*P	P	14 11 39.1	+0.3
	comp=Z,16nm,0.8s,mb5.0						
TOO	Toolangi	76.96	202	*e*P	P	14 11 39.1	+0.3
TOO				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
CNB	Canberra Magne	78.45	206	*e*P	P	14 11 47.1	0.0
	comp=Z,19nm,0.8s,mb5.1						
DBIC	Dimbokro	81.95	57	*e*P	P	14 12 05.1	-1.1
DBIC				*e*		14 12 12.2	
DBIC				pmax	pmax		
	comp=Z,33nm,1.1s						
DBIC				MLR	MLR		
	comp=Z,449nm,22.0s						
DBIC	Dimbokro	81.95	57	P	P	14 12 05.5	-0.6
	comp=Z,5.8nm,1.0s,mb4.5,baz=311,slow=10,SNR=3.8						
DBIC				LR	LR	14 40 48.1	
	comp=Z,374nm,20.5s,MS4.7,baz=186,slow=30						
DBIC	Dimbokro	81.95	57	*e*P	P	14 12 05.1	-1.1
	comp=Z,33nm,1.1s,mb5.2						
DBIC				*e*		14 12 12.2	
DBIC				LR	LR		
	comp=Z,449nm,22.0s,MS4.8						
STKA	Stephens Creek	83.15	200	*e*P	P	14 12 11.4	-0.7
	comp=Z,11nm,0.8s,mb4.9						
STKA				*i*		14 12 20.6	
STKA	Stephens Creek	83.15	200	P	P	14 12 11.6	-0.5
	comp=Z,12nm,0.8s,mb5.0,baz=153,slow=5.5,SNR=14						
STKA				LR	LR	14 45 50.9	
	comp=Z,588nm,18.0s,MS5.0,baz=198,slow=33						
NWAO	Narrogin (SRO)	83.91	179	*e*P	P	14 12 14.8	-1.0
NWAO				pmax	pmax		
	comp=Z,25nm,0.8s						
NWAO				MLR	MLR		
	comp=Z,2µm,19.0s						
NWAO	Narrogin (SRO)	83.91	179	*e*P	P	14 12 14.8	-1.0
	comp=Z,25nm,0.8s,mb5.4						
NWAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
MUN	Mundaring	84.85	178	*e*P	P	14 12 20.4	-0.1
	comp=Z,30nm,0.8s,mb5.5						
MUN	Mundaring	84.85	178	*e*P	P	14 12 20.4	-0.1
MUN				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.5						
MBAR	Mbarara	90.61	93	*e*P	P	14 12 50.2	+1.5
MBAR				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.4						
MBAR				MLR	MLR		
	comp=Z,329nm,20.0s,MS4.8						
MBAR	Mbarara	90.61	93	*e*P	P	14 12 50.2	+1.5
	comp=Z,19nm,1.0s,mb5.4						
MBAR				LR	LR		
	comp=Z,329nm,20.0s,MS4.8						
CTAO	Charters Tower	93.85	206	PFAKE		14 13 10.0	+6.6
CTAO				LR	LR		
	comp=Z,478nm,20.0s,MS5.0						
BBSR	BB Station	95.56	358	PFAKE		14 13 20.0	+9.0
BBSR				LR	LR		
	comp=Z,768nm,22.0s,MS5.1						
MBWA	Marble Bar	95.63	181	P	P	14 13 10.2	-1.4
	comp=Z,9.3nm,1.0s,mb5.2						
MBWA				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
WB2	Warramunga Arr	95.89	195	*e*P	P	14 13 12.7	-0.1
WRA	Warramunga Arr	95.89	195	P	P	14 13 11.6	-1.2
	comp=Z,3.4nm,0.7s,mb4.9,baz=177,slow=4.0,SNR=27						
WRAB	Tennant Creek	95.89	195	*e*P	P	14 13 11.5	-1.4
WRAB				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.4						
WRAB				MLR	MLR		
	comp=Z,308nm,19.0s,MS4.8						
WRAB	Tennant Creek	95.89	195	*e*P	P	14 13 11.5	-1.4
	comp=Z,13nm,0.9s,mb5.4						
WRAB				LR	LR		
	comp=Z,308nm,19.0s,MS4.8						
NHSC	New Hope	97.37	345	PFAKE		14 13 30.0	+11
NHSC				LR	LR		
	comp=Z,577nm,21.0s,MS5.0						
LTX	Lajitas	98.26	324	PFAKE		14 13 30.0	+6.7
LTX				LR	LR		
	comp=Z,633nm,20.0s,MS5.1						
TXAR	Lajitas Array	98.26	324	P	P	14 13 22.9	-0.4
	comp=Z,1.0nm,1.1s,mb4.3,baz=166,slow=5.2,SNR=5.9						
TXAR				LR	LR	14 50 32.0	
	comp=Z,458nm,18.7s,MS5.0,baz=160,slow=31						
LRAL	Lakeview Retre	98.27	339	PFAKE		14 13 30.0	+6.8
LRAL				LR	LR		
	comp=Z,519nm,20.0s,MS5.0						
NATX	Nacogdoches	98.45	332	PFAKE		14 13 30.0	+5.9
NATX				LR	LR		
	comp=Z,717nm,22.0s,MS5.1						
FITZ	Fitzroy Crossi	98.47	187	P	P	14 13 22.9	-1.5
	comp=Z,6.3nm,1.1s,mb5.1,baz=120,slow=8.1,SNR=2.1						
OXF	Oxford	100.11	337	PFAKE		14 13 40.0	+8.4
OXF				LR	LR		
	comp=Z,358nm,20.0s,MS4.9						
HNR	Honiara	100.65	222	PFAKE		14 13 50.0	+15
HNR				LR	LR		
	comp=Z,355nm,21.0s,MS4.8						
MNTX	Cornudas Mount	100.96	323	PFAKE		14 13 50.0	+14
MNTX				LR	LR		
	comp=Z,929nm,19.0s,MS5.3						
CBN	Corbin	102.11	348	PFAKE		14 13 50.0	+9.4
CBN				LR	LR		
	comp=Z,755nm,22.0s,MS5.2						
TUC	Tucson	103.06	319	PFAKE		14 14 00.0	+15
TUC				LR	LR		
	comp=Z,334nm,19.0s,MS4.9						
MCWV	Mont Chateau	103.81	346	PFAKE		14 14 00.0	+12
MCWV				LR	LR		
	comp=Z,671nm,20.0s,MS5.2						
PMG	Port Moresby	104.03	210	PFAKE		14 14 00.0	+10
PMG				LR	LR		
	comp=Z,463nm,19.0s,MS5.0						
ANMO	Albuquerque	104.32	323	PFAKE		14 14 00.0	+10
ANMO				LR	LR		
	comp=Z,487nm,19.0s,MS5.1						
WES	Weston	105.80	353	PFAKE		14 18 20.0	
WES				LR	LR		
	comp=Z,663nm,20.0s,MS5.2						
HRV	Harvard--Oak R	105.93	353	PFAKE		14 18 20.0	
HRV				LR	LR		
	comp=Z,456nm,21.0s,MS5.0						
BINY	Binghamton	105.95	349	PFAKE		14 18 20.0	
BINY				LR	LR		
	comp=Z,707nm,22.0s,MS5.2						
CBKS	Cedar Bluff	106.34	330	PFAKE		14 18 20.0	
CBKS				LR	LR		
	comp=Z,499nm,19.0s,MS5.1						
NCB	Newcomb	107.57	351	PFAKE		14 18 20.0	
NCB				LR	LR		
	comp=Z,471nm,21.0s,MS5.0						
PV01	Paradox Valley	107.89	323	*e*PKiKP		14 18 13.9	
WVL	Waterville	107.89	354	PFAKE		14 18 20.0	
WVL				LR	LR		
	comp=Z,3µm,21.0s,MS5.9						
EMMW	East Machias	107.94	356	PFAKE		14 18 20.0	
EMMW				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
JFWS	Jewell Farm	108.44	338	PFAKE		14 18 30.0	
JFWS				LR	LR		
	comp=Z,526nm,21.0s,MS5.1						
MVU	Marysvale	109.25	320	PFAKE		14 18 30.0	
MVU				LR	LR		
	comp=Z,603nm,20.0s,MS5.2						
PQI	Presque Isle	109.92	355	PFAKE		14 18 30.0	
PQI				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
TPH	Tonopah	110.35	316	PFAKE		14 18 30.0	+10
TPH				LR	LR		
	comp=Z,359nm,20.0s,MS5.0						
SAO	San Andreas Ge	110.51	312	PFAKE		14 18 30.0	+10
SAO				LR	LR		
	comp=Z,914nm,19.0s,MS5.4						
NVAR	Mina Array Bea	111.02	315	PKiKP		14 18 19.4	
	comp=Z,0.7nm,0.9s,baz=162,slow=2.9,SNR=3.5						
NVAR				PKKPab		14 29 22.8	
	comp=Z,0.4nm,0.7s,baz=319,slow=1.1,SNR=3.2						
CMB	Columbia Colle	111.32	314	PFAKE		14 18 30.0	+8.6
CMB				LR	LR		
	comp=Z,632nm,21.0s,MS5.2						
HWUT	Hardware Ranch	111.95	322	PFAKE		14 18 30.0	+7.6
HWUT				LR	LR		
	comp=Z,635nm,21.0s,MS5.2						
ELK	Elko	112.20	319	PKiKP		14 18 21.2	
	comp=Z,0.3nm,0.3s,baz=187,slow=8.1,SNR=2.2						
ELK	Elko	112.20	319	PKPdf	PKPdf	14 18 21.2	-1.8
ELK				LR	LR		
	comp=Z,606nm,21.0s,MS5.2						
BW06	Boulder Array	112.48	324	PFAKE		14 18 30.0	+6.5
BW06				LR	LR		
	comp=Z,617nm,21.0s,MS5.2						
PDAR	Pinedale Array	112.48	324	PKiKP		14 18 21.0	
	comp=Z,0.8nm,0.7s,baz=135,slow=2.1,SNR=3.9						
PDAR				PKKPab		14 29 17.5	
	comp=Z,1.2nm,1.1s,slow=4.4,SNR=4.6						
PDAR	Pinedale Array	112.48	324	PKPdf	PKPdf	14 18 21.0	-2.5
PDAR				PKKPab		14 29 17.5	
BMN	Battle Mountai	112.51	317	PFAKE		14 18 30.0	+6.4
BMN				LR	LR		
	comp=Z,214nm,20.0s,MS4.7						
ESLA	Sonseca Array	112.57	45	PFAKE		14 18 30.0	+6.2
ESLA				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
AHID	Auburn Hatcher	112.90	323	PFAKE		14 18 30.0	+5.6
AHID				LR	LR		
	comp=Z,517nm,21.0s,MS5.1						
HOPS	Hopland	113.07	312	PFAKE		14 18 30.0	+5.2
HOPS				LR	LR		
	comp=Z,736nm,21.0s,MS5.2						
EYMN	Ely	113.54	339	PFAKE		14 18 40.0	+14
EYMN				LR	LR		
	comp=Z,416nm,21.0s,MS5.0						
MOOW	Moose Ponds	113.71	323	*e*PKiKP		14 18 22.6	
WDC	Whiskeytown Da	114.33	313	PFAKE		14 18 40.0	+13
WDC				LR	LR		
	comp=Z,490nm,21.0s,MS5.1						
HLID	Hailey	114.56	321	PFAKE		14 18 40.0	+12
HLID				LR	LR		
	comp=Z,439nm,20.0s,MS5.1						
MOD	Modoc	114.81	315	PFAKE		14 18 40.0	+12
MOD				LR	LR		
	comp=Z,321nm,20.0s,MS4.9						
LAO	LASA Array	115.31	328	PFAKE		14 18 40.0	+11
LAO				LR	LR		
	comp=Z,769nm,19.0s,MS5.3						
YBH	Yreka Blue Hor	115.42	314	PFAKE		14 18 40.0	+11
YBH				LR	LR		
	comp=Z,463nm,20.0s,MS5.1						
BOZ	Bozeman (W)	115.71	323	*e*PKIKP	PKPdf	14 18 27.7	-2.1
BOZ				MLR	MLR		
	comp=Z,439nm,20.0s,MS5.1						
HUMO	Hull Mountain	116.29	314	PFAKE		14 18 40.0	+9.0
HUMO				LR	LR		
	comp=Z,647nm,20.0s,MS5.2						
ULM	Lac du Bonnet	116.52	336	PKP	PKPdf	14 18 26.7	-4.6
	comp=Z,1.6nm,0.5s,baz=146,slow=7.3,SNR=2.0						
ULM	Lac du Bonnet	116.52	336	PKP	PKPdf	14 18 26.7	-4.6
ULM				LR	LR		
	comp=Z,543nm,19.0s,MS5.2						
BMO	Blue Mountains	116.57	319	PFAKE		14 18 40.0	+8.5
BMO				LR	LR		
	comp=Z,378nm,20.0s,MS5.0						
CHMT	Chamberlain Mo	117.31	323	*e*PKPdf	PKPdf	14 18 30.8	-2.0
MSO	Missoula	117.42	322	*e*PKPdf	PKPdf	14 18 30.1	-2.9
MSO				LR	LR		
	comp=Z,244nm,20.0s,MS4.8						
PALK	Pallekele	117.75	137	PFAKE		14 18 40.0	+5.5
PALK				LR	LR		
	comp=Z,193nm,19.0s,MS4.7						
SCHQ	Schefferville	118.05	357	PFAKE		14 18 40.0	+5.9
SCHQ				LR	LR		
	comp=Z,613nm,21.0s,MS5.2						
LASF	Ste Croix	119.09	49	*e*PKIKP	PKPdf	14 18 36.8	+0.4
	comp=Z,16nm,1.2s						
NEW	Newport	119.62	321	PKP	PKPdf	14 18 34.5	-2.8
	comp=Z,4.5nm,0.8s,baz=182,slow=1.9,SNR=10						
NEW	Newport	119.62	321	*e*PKPdf	PKPdf	14 18 34.2	-3.0
NEW				LR	LR		
	comp=Z,487nm,21.0s,MS5.1						
VIVF	Saint-Julien-l	120.05	49	*e*PKIKP	PKPdf	14 18 39.9	+1.7
TCF	Toulx Ste Croi	120.50	46	*e*PKIKP	PKPdf	14 18 38.1	-1.0
OCWA	Octopus Mounta	121.27	316	PFAKE		14 18 50.0	+9.4
OCWA				LR	LR		
	comp=Z,573nm,19.0s,MS5.2						
APE	Apeiranthos	121.31	69	*i* PKIKP	PKPdf	14 18 45.2	+4.3
AVF	Avril sur Loir	121.31	47	*e*PKIKP	PKPdf	14 18 38.3	-2.4
LPG	La Plagne	121.32	50	*e*PKIKP	PKPdf	14 18 39.8	-0.9
LPL	La Plagne	121.33	50	*e*PKIKP	PKPdf	14 18 39.6	-1.2
SMF	Signal de Mont	121.34	47	*e*PKIKP	PKPdf	14 18 38.7	-2.1
PGC	Sidney	121.84	317	*e*PKPdf	PKPdf	14 18 39.7	-2.0
PGC				*e*		14 18 44.4	
LOR	Lormes	121.90	47	*e*PKIKP	PKPdf	14 18 39.8	-2.0
	comp=Z,17nm,1.1s						
FFC	Flin Flon	121.94	334	*e*PKIKP	PKPdf	14 18 38.6	-3.1
FFC				MLR	MLR		
	comp=Z,106nm,21.0s,MS4.5						
EDM	Edmonton	123.11	326	*e*PKIKP	PKPdf	14 18 40.1	-3.8
EDM				*e*		14 18 45.4	
HAU	Haudompre	123.37	48	*e*PKIKP	PKPdf	14 18 42.7	-1.9
MEZF	Maizieres J'vi	123.37	47	*e*PKIKP	PKPdf	14 18 43.0	-1.5
	comp=Z,40nm,1.2s						
HINF	Hinteralfeld	123.37	49	*e*PKIKP	PKPdf	14 18 42.8	-1.8
	comp=Z,20nm,1.2s						
SKO	Skopje	123.78	63	*e*PKP	PKPdf	14 18 45.0	-0.6
CDF	Champ du Feu	124.03	49	*e*PKIKP	PKPdf	14 18 43.9	-2.0
	comp=Z,44nm,1.5s						
ISP	Isparta	124.07	73	*i* PKIKP	PKPdf	14 18 51.4	+5.1
ROBS	Robic	124.36	54	*e*PKP	PKPdf	14 18 49.8	+3.2
SQTA	Sankt Quirin	124.37	52	⇑*i*P	PKPdf	14 18 44.6	-2.0
BAIF	Baives	124.45	46	*e*PKIKP	PKPdf	14 18 44.9	-1.8
	comp=Z,30nm,1.3s						
BBLS	Bajina Basta -	124.58	60	⇓*i*P	PKPdf	14 18 44.8	-2.1
GIVF	Givet	124.68	46	*e*PKIKP	PKPdf	14 18 45.4	-1.5
PDKS	Podkum	124.75	56	*e*PKP	PKPdf	14 18 49.9	+2.7
HGN	Heimansgroeve	125.61	46	*e*x	PKPdf	14 18 54.6	+5.9
	comp=Z,10nm,1.1s						
MOA	Molln	126.00	54	⇑*i*P	PKPdf	14 18 46.6	-2.9
GRA1	Grafenberg Arr	126.47	51	*e*PKP	PKPdf	14 18 48.1	-2.2
GRF	Grafenberg Arr	126.47	51	*e*PKIKP	PKPdf	14 18 48.1	-2.2
GERES	GERESS Array B	126.63	53	PKP	PKPdf	14 18 48.2	-2.4
	comp=Z,3.6nm,0.7s,baz=225,slow=1.9,SNR=32						
KHC	Kasperske Hory	126.83	53	*i* PKIKP	PKPdf	14 18 48.1	-2.9
KHC	Kasperske Hory	126.83	53	*e*PKPDF	PKPdf	14 18 56.3	+5.3
KHC				AMS	AMS	15 10 00.0	
	comp=Z,300nm,19.1s						
ESK	Eskdalemuir	126.84	38	PFAKE		14 19 00.0	+9.2
ESK				LR	LR		
	comp=Z,123nm,19.0s,MS4.6						
BZS	Buzias	126.90	61	⇑P	PKPdf	14 18 49.0	-2.2
WTSB	Winterswijk	126.92	46	*e*x	PKPdf	14 18 57.9	+6.8
	comp=Z,10nm,0.9s						
BRTR	Keskin Array B	126.99	74	PKP	PKPdf	14 18 48.8	-2.7
	comp=Z,2.3nm,0.9s,baz=180,slow=3.7,SNR=6.0						
NKC	Novy Kostel	127.36	51	*e*PKPDF	PKPdf	14 18 55.1	+3.1
NKC				AMS	AMS	15 12 00.0	
	comp=Z,200nm,19.5s						
MOX	Moxa	127.41	50	*e*PKIKP	PKPdf	14 18 49.8	-2.3
MOX				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.8						
MOX	Moxa	127.41	50	*i* P	PKPdf	14 18 49.8	-2.3
MOX				L		15 12 05.0	
PRU	Pruhonice	127.89	53	*e*PKPDF	PKPdf	14 18 57.1	+4.0
PRU				AMS	AMS	15 11 00.0	
	comp=Z,300nm,19.9s						
MALT	Malatya	127.91	79	*e*PKIKP	PKPdf	14 18 50.0	-3.5
VYHS	Vyhne	128.22	57	*e*PKP	PKPdf	14 18 52.9	-0.9
VYHS				*e*		14 18 59.5	
PVCC	Panska Ves	128.35	52	*e*PKPDF	PKPdf	14 18 59.2	+5.2
PVCC				AMS	AMS	15 13 30.0	
	comp=Z,300nm,17.0s						
BRG	Berggiesshubel	128.41	52	*i* PKIKP	PKPdf	14 18 59.2	+5.1
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CLL	Collm	128.45	51	*i* PKIKP	PKPdf	14 18 51.9	-2.3
CLL				*i*		14 18 56.7	
CLL				*i*		14 18 59.4	
CLL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CLL				MLR	MLR		
	comp=Z,400nm,20.3s,MS5.1						
CLL	Collm	128.45	51	*i* PKIKP	PKPdf	14 18 51.9	-2.3
	comp=Z,logA/T=0.4						
CLL				*i*		14 18 56.7	
CLL				*i*		14 18 59.4	
CLL				*i*		14 19 09.6	
MLR	Muntele Rosu	128.52	64	⇑*i*P	PKPdf	14 18 52.3	-2.2
TIRR	Tirgusor	128.68	67	⇑P	PKPdf	14 18 57.1	+2.3
MORC	Moravsky Berou	128.80	55	PKIKP	PKPdf	14 18 52.2	-2.7
DPC	Dobruska-Polom	128.83	54	*e*PKPDF	PKPdf	14 18 58.4	+3.5
DPC				AMS	AMS	15 13 20.0	
	comp=Z,200nm,23.6s						
KECS	Kecovo	128.83	58	*e*PKP	PKPdf	14 18 56.6	+1.6
UPC	Upice	128.85	53	*e*PKPDF	PKPdf	14 18 57.3	+2.4
OKC	Ostrava-Krasne	129.07	55	*e*PKPDF	PKPdf	14 19 01.3	+5.9
OKC				AMS	AMS	15 13 50.0	
	comp=Z,200nm,23.0s						
VRI	Vrincioaia	129.14	64	⇑*i*P	PKPdf	14 18 57.9	+2.3
CFR	Carcaliu	129.15	66	⇑*i*P	PKPdf	14 18 58.3	+2.6
KOLS	Kolonicke sedl	129.88	59	*e*PKP	PKPdf	14 18 54.4	-2.6
KOLS				*e*		14 19 02.6	
BURAR	Bucovina Array	129.96	62	⇑P	PKPdf	14 18 55.1	-2.0
LVV	L'vov	131.28	59	*e*PKIKP	PKPdf	14 19 01.9	+2.3
YKA	Yellowknife Ar	131.72	330	PKP	PKPdf	14 18 56.8	-3.3
	comp=Z,2.2nm,0.5s,baz=142,slow=2.5,SNR=6.1						
YKA	Yellowknife Ar	131.72	330	PKP	PKPdf	14 18 56.8	-3.3
YKW3	Yellowknife Ar	131.78	330	*e*PKPdf	PKPdf	14 18 57.2	-2.9
GNI	Garni	132.21	83	PKP	PKPdf	14 19 00.5	-1.2
	comp=Z,3.0nm,0.3s,baz=145,slow=16,SNR=2.1						
GNI	Garni	132.21	83	PKP	PKPdf	14 19 00.5	-1.2
GNI				LR	LR		
	comp=Z,585nm,21.0s,MS5.3						
DLBC	Dease Lake	132.26	319	PKP	PKPdf	14 18 58.6	-2.6
	comp=Z,10nm,1.2s,baz=181,slow=7.1,SNR=4.7						
DLBC	Dease Lake	132.26	319	*e*PKPdf	PKPdf	14 18 58.5	-2.7
SIT	Sitka	132.76	314	PFAKE		14 19 10.0	+7.8
SIT				LR	LR		
	comp=Z,663nm,20.0s,MS5.3						
CM31	Chiang Mai Arr	133.11	155	PFAKE		14 19 10.0	+6.1
CM31				LR	LR		
	comp=Z,741nm,20.0s,MS5.4						
CMAR	Chiang Mai Arr	133.11	155	PKP	PKPdf	14 19 01.8	-2.1
	comp=Z,0.9nm,0.7s,baz=222,slow=3.1,SNR=5.4						
AKASG	Malin Array Be	134.01	62	PKP	PKPdf	14 19 01.2	-3.3
	comp=Z,5.3nm,0.7s,baz=246,slow=1.1,SNR=14						
AKASG				PP	PP	14 21 37.8	+1.4
	comp=Z,1.9nm,0.8s,baz=219,slow=6.3,SNR=6.1						
KONO	Kongsberg	134.20	42	PFAKE		14 19 10.0	+5.3
KONO				LR	LR		
	comp=Z,405nm,21.0s,MS5.1						
KIV	Kislovodsk	134.36	78	*i* PKIKP	PKPdf	14 19 07.8	+2.3
KIV				pmax	pmax		
	comp=Z,20nm,1.2s						
KIV				pmax	pmax		
	comp=E,4.0nm,0.8s						
KIV	Kislovodsk	134.36	78	PFAKE		14 19 20.0	+15
KIV				LR	LR		
	comp=Z,78nm,20.0s,MS4.4						
QIZ	Qiongzhong	135.21	169	PFAKE		14 19 20.0	+12
QIZ				LR	LR		
	comp=Z,543nm,21.0s,MS5.2						
NAO01	NORSAR Array S	135.54	42	PFAKE		14 19 20.0	+13
NAO01				LR	LR		
	comp=Z,409nm,21.0s,MS5.1						
NB2	NORSAR Subarra	135.79	42	PKPdf	PKPdf	14 19 05.4	-2.3
	comp=Z,5.3nm,0.8s,baz=221,slow=1.8						
NB2	NORSAR Subarra	135.79	42	PKPd		14 19 05.4	
	baz=221,slow=1.8						
NOA	NORSAR Array B	135.79	42	PKP	PKPdf	14 19 05.1	-2.6
	comp=Z,1.1nm,0.8s,baz=208,slow=1.8,SNR=4.3						
NOA	NORSAR Array B	135.79	42	PKP	PKPdf	14 19 05.1	-2.6
HFS	Hagfors	135.84	44	PKP	PKPdf	14 19 04.2	-3.6
	comp=Z,2.4nm,0.7s,baz=198,slow=4.6,SNR=3.7						
SUMG	Summit	136.72	10	*e*PKPdf	PKPdf	14 19 07.4	-1.6
KDAK	Kodiak Island	139.28	305	PFAKE		14 19 20.0	+5.9

KDAK				LR	LR		
	comp=Z,86nm,19.0s,MS4.5						
DIV	**Divide**	**139.33**	**312**	PFAKE		14 19 20.0	+5.9
DIV				LR	LR		
	comp=Z,1μm,19.0s,MS5.7						
OBN	**Obninsk**	**140.26**	**63**	*e*PKIKP	PKPdf	14 19 12.8	-3.2
OBN				pmax	pmax		
	comp=Z,14nm,1.0s						
OBN				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.9						
OBN	**Obninsk**	**140.26**	**63**	PFAKE		14 19 30.0	+14
OBN				LR	LR		
	comp=Z,105nm,19.0s,MS4.6						
KMI	**Kunming**	**140.30**	**158**	PKP	PKPdf	14 19 15.0	-1.9
KMI				PP	PP	14 22 18.5	+2.7
KMI				SKKS		14 29 08.8	
KMI				SS	SS	14 40 41.8	+5.4
KMI				PP	PP		
	comp=Z,170nm,7.5s						
KMI				LR	LR		
	comp=N,440nm,18.8s,MS5.3						
KMI				LR	LR		
	comp=E,230nm,17.4s,MS5.3						
KMI				LR	LR		
	comp=Z,700nm,25.7s						
KMI	**Kunming**	**140.30**	**158**	PKIKP	PKPdf	14 19 15.2	-1.7
KMI						14 22 18.5	
KMI				SS	SS	14 40 41.8	+5.4
KMI				MLR	MLR		
	comp=Z,700nm,25.7s,MS5.3						
KMI	**Kunming**	**140.30**	**158**	PKP	PKPdf	14 19 15.2	-1.7
KMI				PP	PP	14 22 18.5	+2.7
KMI				SKKS		14 29 08.8	
KMI				SS	SS	14 40 41.8	+5.4
KMI				LR	LR		
	comp=Z,700nm,25.7s,MS5.3						
FINES	**FINESS Array B**	**140.87**	**50**	PKhKP		14 19 07.4	
	comp=Z,2.6nm,0.7s,baz=192,slow=2.9,SNR=8.8						
FINES				PKP	PKPdf	14 19 13.4	-3.3
	comp=Z,3.2nm,0.6s,baz=228,slow=2.1,SNR=8.0						
INK	**Inuvik**	**141.01**	**326**	PKhKP		14 19 07.5	
	comp=Z,4.7nm,0.9s,baz=129,slow=5.6,SNR=4.3						
INK				PKP	PKPdf	14 19 13.0	-3.7
	comp=Z,11nm,1.0s,baz=103,slow=4.6,SNR=9.4						
INK	**Inuvik**	**141.01**	**326**	*e*PKPpre		14 19 07.5	
INK				PKP	PKPdf	14 19 13.0	-3.8
RSO	**Redoubt South**	**141.25**	**308**	*e*PKPdf	PKPdf	14 19 15.3	-2.1
KAF	**Kangasniemi**	**141.42**	**49**	*e*p	PKPdf	14 19 10.2	-7.4
UNV	**Unalaska Valle**	**141.94**	**292**	PFAKE		14 19 30.0	+11
UNV				LR	LR		
	comp=Z,3μm,22.0s,MS5.9						
LSA	**Lhasa**	**142.02**	**140**	PKIKP	PKPdf	14 19 18.4	-1.3
LSA				MLR	MLR		
	comp=Z,699nm,21.0s,MS5.4						
GYA	**Guiyang**	**142.20**	**163**⇑	*i*PKP	PKPdf	14 19 20.1	0.0
GYA				PP	PP	14 22 29.8	+2.7
GYA				SKKS		14 29 18.4	
GYA				PP	PP		
	comp=Z,670nm,7.2s						
GYA				LR	LR		
	comp=N,990nm,21.4s,MS5.7						
GYA				LR	LR		
	comp=E,840nm,20.8s,MS5.7						
GYA				LR	LR		
	comp=Z,120nm,21.6s,MS4.6						
ILAR	**Eielson Array**	**142.27**	**316**	PKhKP		14 19 12.4	
	comp=Z,3.6nm,0.5s,baz=172,slow=2.1,SNR=40						
SVW2	**Sparrevohn**	**142.70**	**307**	*e*P	PKPdf	14 19 12.8	-7.0
TTA	**Tatalina**	**144.07**	**309**	*e*PKIKP	PKPdf	14 19 18.7	-3.4
IMA	**Indian Mountai**	**145.28**	**314**	*e*PKIKP	PKPdf	14 19 22.3	-1.9
KSH	**Kashi**	**145.43**	**114**	*i* PKP	PKPdf	14 19 24.0	-1.3
ARCES	**ARCESS Array B**	**146.01**	**39**	PKPbc	PKPbc	14 19 23.0	-0.3
	comp=Z,12nm,0.6s,baz=248,slow=2.0,SNR=58						
ARE0	**ARCESS Array S**	**146.01**	**39**	*e*PKPdf	PKPdf	14 19 22.7	-2.7
KKAR	**Karatay Array**	**146.07**	**104**	PKP2	PKPab	14 19 24.8	-2.0
KKAR				pmax	pmax		
	comp=Z,53nm,0.7s						
AB31	**Akbulak array**	**146.08**	**87**	*i* PKIKP	PKPdf	14 19 23.3	-2.8
AB31				pmax	pmax		
	comp=Z,61nm,0.8s						
CD2	**Chengdu**	**146.13**	**157**	PKP	PKPdf	14 19 26.0	-0.7
ENH	**Enshi**	**146.30**	**166**	*e*PKPdf	PKPdf	14 19 26.1	-0.9
ENH				LR	LR		
	comp=Z,740nm,19.0s,MS5.5						
KEV	**Kevo**	**146.56**	**39**	*e*p	PKPbc	14 19 25.7	+1.1
AML	**Almayashu**	**146.65**	**108**	P	PKPbc	14 19 27.6	+2.0
	SNR=20						
UCH	**Uchtor**	**147.08**	**109**	P	PKPdf	14 19 28.8	+0.8
	SNR=23						
EKS2	**Erkin-Say**	**147.12**	**108**	P	PKPdf	14 19 28.9	+0.9
	SNR=24						
APA	**Apatity**	**147.23**	**45**⇓	*i*PKP2	PKPab	14 19 28.0	-2.5
APA				pmax	pmax		
	comp=Z,14nm,0.6s						
APA				MLR	MLR		
	comp=Z,500nm,20.0s,MS5.3						
KZA	**Kyzart**	**147.27**	**110**	P	PKPdf	14 19 29.6	+1.3
	SNR=15						
AAK	**Ala-Archa**	**147.40**	**109**	P	PKPdf	14 19 29.5	+1.0
	SNR=12						
AAK	**Ala-Archa**	**147.40**	**109**	PKP2	PKPab	14 19 29.1	-2.9
AAK				pmax	pmax		
	comp=Z,32nm,0.8s						
AAK	**Ala-Archa**	**147.40**	**109**	*e*PKPdf	PKPdf	14 19 27.9	-0.6
AAK				LR	LR		
	comp=Z,88nm,22.0s,MS4.5						
SSE	**Sheshan**	**147.53**	**185**	PKP	PKPdf	14 19 33.0	+3.9
SSE				PP	PP	14 23 00.1	+1.1
SSE				SS	SS	14 41 59.3	-0.2
SSE				LR	LR		
	comp=N,370nm,18.6s,MS5.3						
SSE				LR	LR		
	comp=E,370nm,18.5s,MS5.3						
SSE				LR	LR		
	comp=Z,450nm,20.1s,MS5.2						
SSE	**Sheshan**	**147.53**	**185**	PKP	PKPdf	14 19 33.1	+4.0
SSE				PP	PP	14 23 00.1	+1.1
SSE				SS	SS	14 41 59.2	-0.3
SSE				LR	LR		
	comp=Z,450nm,20.1s,MS5.2						
KBK	**Karagaybulak**	**147.61**	**109**	P	PKPdf	14 19 30.1	+1.3
	SNR=6.9						
CHMS	**Chumysh**	**147.81**	**109**	P	PKPdf	14 19 38.8	+10
	SNR=6.4						
USP	**Ospenovka**	**147.92**	**108**	P	PKPdf	14 19 30.2	+0.9
	SNR=9.4						
HSP	**Hornsund**	**148.02**	**25**⇓	*e*P	PKPdf	14 19 29.1	+0.6
TKM2	**Tokmak 2**	**148.10**	**110**	P	PKPdf	14 19 31.1	+1.5
	SNR=9.5						
KBS	**Kingsbay**	**148.48**	**21**	*e*PKIKP	PKPdf	14 19 26.7	-2.5
KBS				MLR	MLR		
	comp=Z,266nm,21.0s,MS5.0						
NJ2	**Nanjing**	**148.54**	**181**	*e*PKP	PKPdf	14 19 25.8	-4.9
NJ2				APKP		14 19 36.4	
NJ2				PKS	PKS	14 23 01.0	-0.4
NJ2				PP	PP	14 23 02.0	-2.5
NJ2				PP	PP		
	comp=Z,1μm,8.2s						
NJ2				LR	LR		
	comp=N,5μm,27.0s,MS6.2						
NJ2				LR	LR		
	comp=E,2μm,24.2s,MS6.2						
SMY	**Shemya**	**149.59**	**276**	PFAKE		14 19 40.0	+8.3
SMY				LR	LR		
	comp=Z,742nm,19.0s,MS5.5						
TNA	**Tin City**	**149.82**	**307**	*e*PKPbc	PKPdf	14 19 35.3	+3.7
TNA				*e*PKPab	PKPab	14 19 40.3	-0.8
TNA				LR	LR		
	comp=Z,265nm,20.0s,MS5.0						
XAN	**Xi'an**	**149.96**	**164**	PKP	PKPdf	14 19 34.3	+1.4
ARU	**Arti**	**150.35**	**76**	*e*PKIKP	PKPdf	14 19 30.9	-1.8
ARU				*e*		14 19 35.4	
ARU				MLR	MLR		
	comp=Z,96nm,20.0s,MS4.6						
ARU	**Arti**	**150.35**	**76**	*e*PKPdf	PKPdf	14 19 30.9	-1.9
ARU				*e*PKPbc	PKPdf	14 19 35.4	+2.6
ARU				*e*PKPab	PKPab	14 19 44.0	+0.5
ARU				LR	LR		
	comp=Z,96nm,20.0s,MS4.6						
MAJO	**Matsushiro**	**150.39**	**214**	*e*PKIKP	PKPdf	14 19 36.5	+3.1
MAJO				MLR	MLR		
	comp=Z,307nm,21.0s,MS5.1						
MAT	**Matsushiro**	**150.39**	**214**	*e*P	PKPdf	14 19 36.0	+2.6
MAT	**Matsushiro**	**150.39**	**214**	PKP	PKPdf	14 19 34.1	+0.7
LZH	**Lanzhou**	**151.19**	**155**	*e*PKP	PKPdf	14 19 33.5	-1.1
LZH				APKP		14 19 36.8	
LZH				XPKP		14 19 38.3	
LZH				*e*PP	PP	14 23 22.5	+2.9
LZH				SKKS		14 30 05.4	
LZH				SS	SS	14 42 39.5	0.0
LZH				PP	PP		
	comp=Z,230nm,8.2s						
LZH				LR	LR		
	comp=N,430nm,18.0s						
LZH				LR	LR		
	comp=Z,590nm,20.0s,MS5.4						
LZH	**Lanzhou**	**151.19**	**155**	*e*PKIKP	PKPdf	14 19 33.5	-1.1
LZH						14 19 36.8	
LZH						14 19 38.2	
LZH				*e*		14 23 22.5	
LZH				SS	SS	14 42 39.5	0.0
LZH				MLR	MLR		
	comp=Z,600nm,20.0s,MS5.4						
LZH	**Lanzhou**	**151.19**	**155**	*e*PKP	PKPdf	14 19 33.5	-1.1
LZH				pPKP		14 19 36.8	
LZH				sPKP		14 19 38.2	
LZH				PKP	PKPdf	14 19 50.3	+16
LZH				*e*PP	PP	14 23 22.5	+2.9
LZH				SKKS		14 30 05.4	
LZH				SS	SS	14 42 39.5	0.0
LZH				LR	LR		
	comp=Z,600nm,20.0s,MS5.4						
SOKR	**Solikamsk**	**151.47**	**69**⇑	*i*PKIKP	PKPdf	14 19 38.1	+3.8
SOKR				pmax	pmax		
	comp=Z,50nm,1.0s						
SVE	**Sverdlovsk**	**151.50**	**77**	*e*PKIKP	PKPdf	14 19 36.2	+1.8
SVE				*e*		14 23 26.0	
TIA	**Tai'an**	**152.69**	**178**	PKP	PKPdf	14 19 41.8	+5.0
ZRNK	**Zerenda**	**152.74**	**90**	PKIKP	PKPdf	14 19 40.7	+4.4
ZRNK				pmax	pmax		
	comp=Z,18nm,0.9s						
ZRNK	**Zerenda**	**152.74**	**90**	*e*PKPbc	PKPdf	14 19 41.4	+5.0
BVA0	**Borovoye Array**	**153.41**	**91**	PKIKP	PKPdf	14 19 42.4	+5.1
BVA0				pmax	pmax		
	comp=Z,11nm,1.1s						
BVAR	**Borovoye Array**	**153.41**	**91**	PKP	PKPdf	14 19 36.2	-1.1
	comp=Z,0.6nm,0.5s,baz=217,slow=39,SNR=3.2						
BVAR				PKPbc	PKPdf	14 19 41.2	+3.9
	comp=Z,9.8nm,0.6s,baz=220,slow=1.8,SNR=32						
INCN	**Inchon**	**153.46**	**195**	PFAKE		14 19 50.0	+12
INCN				LR	LR		
	comp=Z,247nm,20.0s,MS5.0						
VOSK	**Vostochnaya**	**153.47**	**92**	PKIKP	PKPdf	14 19 42.2	+4.8
VOSK				pmax	pmax		
	comp=Z,21nm,1.1s						
GTA	**Gaotai**	**153.51**	**147**	PKP	PKPdf	14 19 37.4	-0.5
GTA				APKP		14 19 43.8	
GTA				PKP2	PKPab	14 19 57.9	+0.5
GTA				PKS	PKS	14 23 10.5	+2.5
GTA				PP	PP	14 23 34.1	+1.5
GTA				SKS	SKS	14 26 38.5	-5.7
GTA				PPP	PPP	14 27 02.4	-0.7
GTA				SKKS		14 30 18.3	
GTA				SS	SS	14 43 01.8	-3.1
GTA				PP	PP		
	comp=Z,210nm,12.8s						
GTA				LR	LR		
	comp=N,310nm,25.8s,MS5.2						
GTA				LR	LR		
	comp=E,300nm,23.2s,MS5.2						
GTA				LR	LR		
	comp=Z,360nm,21.3s,MS5.2						
WMQ	**Urumqi**	**153.70**	**124**	*e*PKP	PKPdf	14 19 37.1	-0.9
WMQ				PP	PP	14 23 35.9	+2.3
WMQ				PPP	PPP	14 27 06.6	+2.3
WMQ				SKKS		14 30 19.1	
WMQ				SS	SS	14 43 06.5	-0.3
WMQ				PP	PP		
	comp=Z,220nm,4.4s						
WMQ				LR	LR		
	comp=N,210nm,22.8s,MS5.0						
WMQ				LR	LR		
	comp=E,190nm,23.8s,MS5.0						
WMQ				LR	LR		
	comp=Z,290nm,22.8s,MS5.0						
MKAR	**Makanchi Array**	**154.03**	**113**	PKP	PKPdf	14 19 36.6	-1.7
	comp=Z,0.6nm,0.8s,baz=270,slow=2.9,SNR=4.2						
MKAR				PKPbc	PKPdf	14 19 45.4	+7.1
	comp=Z,3.8nm,0.7s,baz=270,slow=1.2,SNR=18						
PET	**Petropavlovsk**	**156.70**	**262**	PFAKE		14 19 50.0	+8.3
PET				LR	LR		
	comp=Z,317nm,20.0s,MS5.1						
YSS	**Yuzh-Sakhalins**	**158.54**	**231**	PFAKE		14 19 50.0	+5.8
YSS				LR	LR		
	comp=Z,400nm,19.0s,MS5.3						
CN2	**Changchun**	**159.84**	**195**	*e*PKP	PKPdf	14 19 46.8	+1.0
MDJ	**Mudanjiang**	**160.00**	**204**	PKP	PKPdf	14 19 44.8	-1.2
MDJ				APKP		14 19 50.0	
MDJ				XPKP		14 19 51.5	
MDJ				PP	PP	14 24 07.1	-0.3
MDJ				SS	SS	14 44 17.9	+3.7
MDJ				LR	LR		
	comp=N,190nm,26.2s						
MDJ				LR	LR		
	comp=E,170nm,22.6s						
MDJ				LR	LR		
	comp=Z,430nm,24.1s						
MDJ	**Mudanjiang**	**160.00**	**204**	PFAKE		14 20 00.0	+14
MDJ				LR	LR		
	comp=Z,387nm,22.0s						
BILL	**Bilibino**	**160.19**	**304**	*i* PKP2	PKPab	14 20 25.0	-0.1
BILL	**Bilibino**	**160.19**	**304**	PFAKE		14 19 50.0	+4.6
BILL				LR	LR		
	comp=Z,644nm,20.0s						
NVS	**Novosibirsk**	**160.34**	**100**	*e*PKIKP	PKPdf	14 19 51.3	+5.3
ZAL	**Zalesovo**	**160.43**	**104**	PKP	PKPdf	14 19 43.8	-2.3
	comp=Z,1.0nm,0.3s,baz=226,slow=5.7,SNR=2.2						
ZAL				PKPab	PKPab	14 20 25.5	-1.0
	comp=Z,3.1nm,0.8s,baz=264,slow=3.9,SNR=4.2						
SONM	**Songino Array**	**163.01**	**152**	PKPab	PKPab	14 20 36.4	-1.5
	comp=Z,4.0nm,0.9s,baz=192,slow=4.6,SNR=7.4						
ULN	**Ulaanbaatar**	**163.17**	**153**	PFAKE		14 20 00.0	+11
ULN				LR	LR		
	comp=Z,469nm,19.0s						
MA2	**Magadan**	**164.10**	**271**	PFAKE		14 20 00.0	+10
MA2				LR	LR		
	comp=Z,462nm,22.0s						
HIA	**Hailar**	**165.72**	**184**	PFAKE		14 20 00.0	+8.6
HIA				LR	LR		
	comp=Z,522nm,21.0s						
TLY	**Talaya**	**165.87**	**140**	PFAKE		14 20 00.0	+8.5
TLY				LR	LR		
	comp=Z,142nm,21.0s						
YAK	**Yakutsk**	**174.53**	**260**	PFAKE		14 20 10.0	+14
YAK				LR	LR		
	comp=Z,424nm,20.0s						

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*MAN **19** 14:11:08.9, 5.63N×126.45E, h1^{km}, mb4.8, ML3.7, MS3.7*
*BJI **19** 14:11:21.1, 5.95N×126.03E, h200^{km}, mB4.7, mb4.4*
*NEIC **19** 14:11:22.5±2.1, 6.16N×126.11E, h185^{km}±21^{km}, mb4.6/10, Error ellipse: s-maj=16.3km s-min=6.1km az=74.0*
*IDC **19** 14:11:23.3±9.8, 6.24N×126.32E, h196^{km}±97^{km}, mb3.9/10, mb1 4.0/10, mb1mx3.8/20, mbtmp4.4/10, Error ellipse: s-maj=41.7km s-min=15.9km az=70.0*
ISC 19 14:11:18.0±0.5**, 6.18N**±0.05×**126.21E**±0.08**, h157**^{km}±4^{km}**, n42,** σ**0^{s}96**/46**, mb4.4**/20**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.76**	**4**	*e*P	**P**	**14 11 41.4**	**-0.5**
MATI				*e*S	**S**	**14 12 00.2**	**-0.1**
KCP	**Kidapawan**	**1.38**	**307**⇑	*e*P	**P**	**14 11 46.8**	**-0.4**
KCP				*i* S	**S**	**14 12 06.9**	**-2.8**
BUKP	**Musuan**	**2.04**	**326**	*e*P	**P**	**14 11 53.9**	**-0.3**
BUKP				*e*S	**S**	**14 12 21.9**	**-0.3**
BUTP	**Butuan**	**2.83**	**348**	*e*P	**P**	**14 12 04.8**	**+0.7**
BUTP				*e*S	**S**	**14 12 46.2**	**+6.7**
PAGZ	**Pagadian**	**3.26**	**301**	*e*P	**P**	**14 12 09.0**	**-0.6**
SCPH	**Surigao**	**3.65**	**349**⇓	*e*P	**P**	**14 12 16.0**	**+1.3**
IPIL	**Ipil**	**3.95**	**294**	*e*P	**P**	**14 12 20.7**	**+2.1**
MSLP	**Maasin**	**4.15**	**341**	*e*P	**P**	**14 12 21.4**	**+0.2**
SNPH	**Sibulan**	**4.31**	**317**⇑	*e*P	**P**	**14 12 22.6**	**-0.6**
SNPH				*e*S	**S**	**14 13 26.4**	**+13**
BESP	**Borongan**	**5.44**	**352**	*e*P	**P**	**14 12 41.0**	**+2.9**
GUIM	**Jordan**	**5.69**	**321**	*e*P	**P**	**14 12 40.7**	**-0.7**
KKM	**Kota Kinabalu**	**9.94**	**270**	P	**P**	**14 13 38.6**	**+0.7**
KSM	**Kuching**	**16.53**	**254**	*e*P	**P**	**14 15 03.2**	**+0.8**
KAKA	**Kakadu**	**19.76**	**162**	*e*P	**P**	**14 15 38.3**	**+0.3**
	14nm,0.6s						
QIZ	**Qiongzhong**	**20.42**	**310**	*e*P	**P**	**14 15 46.3**	**+1.7**
FITZ	**Fitzroy Crossi**	**24.13**	**181**	P	**P**	**14 16 21.5**	**+0.6**
	25nm,0.6s,mb4.9,baz=2.2,slow=11,SNR=30						
WRAB	**Tennant Creek**	**27.16**	**163**	*e*P	**P**	**14 16 48.3**	**-0.5**
WRA	**Warramunga Arr**	**27.16**	**163**	P	**P**	**14 16 48.2**	**-0.7**
	0.8nm,0.5s,mb3.6,baz=343,slow=11,SNR=27						
WB2	**Warramunga Arr**	**27.17**	**163**	*e*P	**P**	**14 16 45.1**	**-3.9**
MBWA	**Marble Bar**	**27.90**	**193**	*e*P	**P**	**14 16 54.6**	**-1.1**
	8.9nm,0.5s,mb4.8						
CMAR	**Chiang Mai Arr**	**29.24**	**297**	ScP		14 23 39.9	
	1.6nm,0.9s,baz=82,slow=2.3,SNR=5.1						
KMI	**Kunming**	**29.32**	**313**	P	**P**	**14 17 08.0**	**-0.3**
	5.0nm,1.2s,mb4.1						
KS15	**Wonju Array Si**	**31.15**	**3**	*e*P	**P**	**14 17 24.6**	**+0.3**
FORT	**Forrest**	**36.79**	**177**	*e*P	**P**	**14 18 13.0**	**+0.6**
	26nm,0.6s,mb5.0						
MDJ	**Mudanjiang**	**38.40**	**4**	*e*P	**P**	**14 18 27.4**	**+1.7**
	20nm,0.9s,mb4.8						
KLBR	**Kellerberrin**	**38.42**	**192**	*e*P	**P**	**14 18 26.0**	**0.0**
	10nm,0.4s,mb4.8						
MUN	**Mundaring**	**39.12**	**194**	*e*P	**P**	**14 18 31.8**	**-0.1**
	13nm,0.4s,mb4.9						
NWAO	**Narrogin (SRO)**	**39.81**	**192**	P	**P**	**14 18 38.2**	**+0.7**
	9.4nm,0.3s,mb4.8,baz=36,slow=7.2,SNR=23						
NWAO	**Narrogin (SRO)**	**39.81**	**192**	P	**P**	**14 18 38.2**	**+0.7**
STKA	**Stephens Creek**	**40.59**	**160**	*e*P	**P**	**14 18 44.9**	**+1.0**
	6.4nm,1.0s,mb4.2						
STKA	**Stephens Creek**	**40.59**	**160**	P	**P**	**14 18 44.9**	**+1.0**
	2.2nm,0.5s,mb4.0,baz=337,slow=7.9,SNR=8.0						
GTA	**Gaotai**	**40.75**	**328**	P	**P**	**14 18 45.9**	**+0.8**
ULN	**Ulaanbaatar**	**44.64**	**342**	*e*P	**P**	**14 19 16.6**	**+0.1**
	2.2nm,0.8s,mb3.8						
SONM	**Songino Array**	**44.83**	**341**	P	**P**	**14 19 17.7**	**-0.3**
	0.7nm,0.4s,mb3.6,baz=151,slow=8.9,SNR=11						
MKAR	**Makanchi Array**	**55.26**	**325**	P	**P**	**14 20 36.5**	**-0.7**
	6.7nm,1.0s,mb4.3,baz=117,slow=7.0,SNR=3.7						
YAK	**Yakutsk**	**55.79**	**2**	*e*P	**P**	**14 20 41.0**	**+0.1**
	20nm,0.8s,mb5.0						
BVAR	**Borovoye Array**	**65.00**	**327**	P	**P**	**14 21 42.3**	**-1.1**
	2.3nm,0.6s,mb4.2,baz=135,slow=7.6,SNR=4.8						
ZRNK	**Zerenda**	**65.73**	**326**	*e*P	**P**	**14 21 45.9**	**-2.2**
	5.2nm,0.5s,mb4.6						
ILAR	**Eielson Array**	**83.13**	**26**	P	**P**	**14 23 26.3**	**-1.0**
	1.6nm,0.8s,mb3.8,baz=229,slow=4.1,SNR=8.7						
ARCES	**ARCESS Array B**	**87.98**	**340**	P	**P**	**14 23 50.5**	**-0.5**
	2.5nm,0.6s,mb4.2,baz=86,slow=5.5,SNR=6.9						
FINES	**FINESS Array B**	**89.44**	**332**	P	**P**	**14 23 57.3**	**-0.7**
	0.9nm,0.6s,mb3.9,baz=101,slow=9.7,SNR=4.6						
NB2	**NORSAR Subarra**	**96.38**	**334**	P	**P**	**14 24 29.0**	**-0.8**
	0.5nm,0.6s,mb4.0,baz=66,slow=4.6						

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*NEIC **19** 14:12:11.8±2.0, 40.93N×126.29W, h10^{km}, mb3.9/2, Error ellipse: s-maj=24.8km s-min=10.5km az=65.0*
*IDC **19** 14:12:11.8±2.7, 40.98N×126.24W, mb3.2/3, mb1 3.5/6, mb1mx3.4/25, mbtmp3.2/6, ML4.0/2, Error ellipse: s-maj=29.2km s-min=25.7km az=69.0*
ISC 19 14:12:10.4±1.4**, 40.95N**±0.08×**126.3W**±0.1**, h10**^{km}**, n31,** σ**1^{s}24**/32**, mb3.5**/5**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHMM	**Horse Mountain**	**1.97**	**91**	*e*Pn	**Pn**	**14 12 43.1**	**-1.1**
KBO	**Bosley Butte**	**2.02**	**51**	*e*Pn	**Pn**	**14 12 43.8**	**-1.1**
KEBM	**Edson Butte**	**2.43**	**37**	*e*Pn	**Pn**	**14 12 49.4**	**-1.4**
YBH	**Yreka Blue Hor**	**2.83**	**73**	Pn	**Pn**	**14 12 57.4**	**+0.8**
	4.0nm,0.3s,baz=274,slow=9.2,SNR=53						
YBH				Sn	**Sn**	**14 13 31.1**	**-0.1**
	3.8nm,0.3s,baz=185,slow=20,SNR=5.4						
YBH	**Yreka Blue Hor**	**2.83**	**73**	*e*Pn	**Pn**	**14 12 56.8**	**+0.3**
LAMM	**Antelope Mount**	**2.87**	**76**	P	**Pn**	**14 12 58.4**	**+1.4**
WDC	**Whiskeytown Da**	**2.90**	**96**	*e*Pn	**Pn**	**14 12 56.9**	**-0.6**
HUMO	**Hull Mountain**	**3.02**	**56**	*e*Pn	**Pn**	**14 12 58.4**	**-0.8**
LHEM	**Herd Peak**	**3.17**	**76**	P	**Pn**	**14 13 02.4**	**+1.0**
BUOR	**Burton Butte**	**3.33**	**65**	P	**Pn**	**14 13 05.2**	**+1.5**
BBOR	**Butler Butte**	**3.34**	**53**	P	**Pn**	**14 13 04.3**	**+0.5**
LASM	**Arnica Sink**	**3.64**	**78**	P	**Pn**	**14 13 08.8**	**+0.8**
MOD	**Modoc**	**4.63**	**76**	*e*Pn	**Pn**	**14 13 21.2**	**-0.9**
BEKR	**Beckwourth**	**4.68**	**101**	*e*Pn	**Pn**	**14 13 23.0**	**+0.1**
CMB	**Columbia Colle**	**5.44**	**120**	*e*Pn	**Pn**	**14 13 32.1**	**-1.5**
NVAR	**Mina Array Bea**	**6.68**	**110**	Pn	**Pn**	**14 13 52.0**	**+1.0**
	0.1nm,0.3s,baz=288,slow=14,SNR=3.8						
OCWA	**Octopus Mounta**	**6.97**	**12**	*e*P	**Pn**	**14 13 53.9**	**-1.3**
BMO	**Blue Mountains**	**7.68**	**57**	*e*Pn	**Pn**	**14 14 03.4**	**-1.8**
HLID	**Hailey**	**9.21**	**70**	*e*Pn	**P**	**14 14 25.9**	**-0.5**
MCMT	**McKenzie Canyo**	**10.62**	**64**	*e*P	**P**	**14 14 44.9**	**-0.8**
CHMT	**Chamberlain Mo**	**11.15**	**53**	*e*P	**P**	**14 14 51.7**	**-1.2**
PDAR	**Pinedale Array**	**12.64**	**76**	Pn	**P**	**14 15 17.8**	**+4.8**
	0.1nm,0.3s,baz=285,slow=14,SNR=2.8						
PV01	**Paradox Valley**	**13.99**	**96**	P	**P**	**14 15 33.7**	**+2.8**
EDM	**Edmonton**	**15.09**	**31**	P	**P**	**14 15 47.9**	**+2.6**
LAO	**LASA Array**	**15.59**	**62**	P	**P**	**14 15 54.9**	**+3.2**
FFC	**Flin Flon**	**21.23**	**41**	*e*P	**P**	**14 16 59.1**	**+0.5**
	4.2nm,1.0s,mb3.7						
TXAR	**Lajitas Array**	**21.79**	**115**	P	**P**	**14 17 03.0**	**-1.4**
	0.6nm,1.0s,mb3.0,baz=302,slow=8.5,SNR=3.1						
YKA	**Yellowknife Ar**	**22.69**	**14**	P	**P**	**14 17 13.7**	**+0.8**
	0.8nm,0.8s,mb3.2,baz=203,slow=10,SNR=4.0						
YKA	**Yellowknife Ar**	**22.69**	**14**	P	**P**	**14 17 13.7**	**+0.7**
ULM	**Lac du Bonnet**	**23.11**	**56**	P	**P**	**14 17 19.0**	**+1.8**
	0.9nm,0.3s,mb3.7,baz=228,slow=14,SNR=2.1						
SUMG	**Summit**	**50.87**	**23**	*e*P	**P**	**14 21 19.5**	**+6.6**
	2.1nm,0.8s,mb4.1						

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*NIED **19** 14:15:00, 42.70N×145.50E, h29^{km}, Mw3.6 Best double couple: M$_0$2.82×10^{14} NP1:ϕ_s15°, δ70°, λ58°. NP2:ϕ_s256°, δ37°, λ145°.*
*IDC **19** 14:15:48.9±2.2, 42.71N×145.96E, mb3.9/7, mb1 3.8/9, mb1mx3.6/25, mbtmp3.8/9, ML3.5/2, Error ellipse: s-maj=42.6km s-min=28.7km az=136.0*
*MOS **19** 14:15:51.6±1.0, 42.49N×145.77E, h42^{km}, mb4.2/6, Error ellipse: s-maj=22.4km s-min=13.4km az=95.8*
*NEIC **19** 14:15:54.7±2.4, 42.37N×145.88E, h55^{km}, Error ellipse: s-maj=57.6km s-min=13.6km az=115.0*
*JMA **19** 14:15:55.6±0.1, 42.72N×145.49E, h43^{km}±2^{km}, M3.5*
ISC 19 14:15:51.6±1.4**, 42.56N**±0.06×**145.9E**±0.1**, h37**^{km}±9^{km}**, n30,** σ**1^{s}06**/36**, mb3.9**/8**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.81**	**354**	P	**P**	**14 16 08.5**	**+1.9**
NEM2				*e*S	**S**	**14 16 17.8**	**+0.2**
JAK	**Akkeshi**	**0.96**	**298**	P	**P**	**14 16 08.5**	**-0.2**
JAK				*e*S	**S**	**14 16 16.9**	**-4.5**
JNK	**Nakash**	**1.32**	**321**	P	**P**	**14 16 13.6**	**-0.4**
YUK	**Yuzh-Kuril'sk**	**1.48**	**0**	*e*PN	**P**	**14 16 16.9**	**+0.7**
YUK				*i* S	**S**	**14 16 33.0**	**-1.5**
YUK				pmax	pmax		
	comp=Z,2μm,0.5s						
YUK				pmax	pmax		
	comp=N,180nm,0.3s						
YUK				pmax	pmax		
	comp=E,160nm,0.3s						
YUK				pmax	pmax		
	comp=Z,390nm,0.3s						
YUK				smax			
	comp=N,2μm,0.6s						
YUK				smax			
	comp=E,2μm,1.0s						
YUK				smax			
	comp=N,2μm,0.5s						
YUK				smax			
	comp=E,1μm,0.5s						
JRA	**Rausu**	**1.48**	**339**	P	**P**	**14 16 17.0**	**+0.8**
JRA				*e*S	**S**	**14 16 32.8**	**-1.8**
JOB	**Onbets**	**1.53**	**284**	P	**P**	**14 16 16.8**	**-0.1**
JAR	**Ashorobuto**	**1.70**	**296**	P	**P**	**14 16 18.7**	**-0.7**
JCH	**Churui**	**1.84**	**273**	P	**P**	**14 16 22.3**	**+0.9**
JTKR	**Abashiri--Toko**	**2.01**	**315**	P	**P**	**14 16 23.7**	**0.0**
ASAJ	**Asahikawa**	**2.84**	**304**	PN	**P**	**14 16 36.3**	**+0.6**
ASAJ						14 17 10.7	
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ	**Asahikawa**	**2.84**	**304**	Pn	**P**	**14 16 36.3**	**+0.6**
	comp=Z,5.3nm,0.3s,baz=148,slow=12,SNR=35						
ASAJ				Sn	**S**	**14 17 10.7**	**+1.6**
	comp=Z,7.4nm,0.3s,baz=23,slow=27,SNR=11						
MJAR	**Matsushiro Arr**	**8.42**	**227**	Pn	**P**	**14 17 53.5**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=30,slow=12,SNR=7.0						
MJAR				Sn	**S**	**14 19 35.7**	**+6.7**

	comp=Z,0.4nm,0.3s,baz=247,slow=22,SNR=8.7						
MAJO	Matsushiro	8.42	227	*e*PN	P	14 17 51.4	-2.7
JNU	Nakatsue	15.11	236	Pn	P	14 19 31.9	+7.9
	comp=Z,0.3nm,0.3s,baz=121,slow=20,SNR=3.2						
YAK	Yakutsk	21.75	339	*e*P	P	14 20 40.3	-1.1
YAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.3						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
CIT	Chita	23.70	305	*e*P	P	14 20 59.4	-1.1
CIT				pmax	pmax		
	comp=Z,34nm,3.3s						
SONM	Songino Array	28.08	295	P	P	14 21 42.2	+0.5
	comp=Z,1.8nm,0.7s,mb3.8,baz=82,slow=8.0,SNR=4.5						
MKAR	Makanchi Array	44.31	298	P	P	14 23 59.8	+0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	44.31	298	P	P	14 23 59.8	+0.4
	comp=Z,0.6nm,0.5s,mb3.6,baz=88,slow=9.3,SNR=2.7						
BVAR	Borovoye Array	49.53	310	P	P	14 24 40.4	0.0
	comp=Z,0.7nm,0.5s,mb3.9,baz=78,slow=8.8,SNR=5.3						
ARCES	ARCESS Array B	60.03	339	P	P	14 25 54.7	-1.8
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	60.03	339	P	P	14 25 54.7	-1.8
	comp=Z,0.5nm,0.5s,mb3.9,baz=36,slow=7.8,SNR=4.5						
ARCES	ARCESS Array B	60.03	339	P	P	14 25 54.7	-1.8
FINES	FINESS Array B	65.50	333	P	P	14 26 33.4	+0.7
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	65.50	333	P	P	14 26 33.4	+0.6
	comp=Z,0.7nm,0.6s,mb3.9,baz=45,slow=8.1,SNR=3.8						
FINES	FINESS Array B	65.50	333	P	P	14 26 33.4	+0.6
NOA	NORSAR Array B	70.37	338	P	P	14 27 04.2	+1.1
	comp=Z,0.4nm,0.5s,mb3.6,baz=48,slow=5.2,SNR=2.9						
NOA	NORSAR Array B	70.37	338	P	P	14 27 04.2	+1.1
HFS	Hagfors	70.42	337	P	P	14 27 04.5	+1.2
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HFS	Hagfors	70.42	337	P	P	14 27 04.5	+1.1
	comp=Z,1.1nm,0.4s,mb4.1,baz=51,slow=9.5,SNR=12						

IDC 19 14:29:09.8±3.2**, 2.00N×96.06E, mb3.6**/4**, mb1 3.7**/5**, mb1mx3.6**/17**, mbtmp3.5**/5**, ML3.5**/1**, Error ellipse: s-maj=114.3km s-min=27.4km az=60.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.60	10	Pn	P	14 33 04.3	-1.4
	0.1nm,0.3s,baz=198,slow=8.6,SNR=4.2						
WRA	Warramunga Arr	43.42	122	P	P	14 37 14.8	-1.6
	0.3nm,0.8s,baz=296,slow=9.4,SNR=3.7						
MKAR	Makanchi Array	46.20	347	P	P	14 37 36.9	-1.4
	0.7nm,0.5s,baz=162,slow=7.7,SNR=7.0						
SONM	Songino Array	46.52	10	P	P	14 37 38.5	-2.3
	0.3nm,0.3s,baz=193,slow=9.3,SNR=4.9						
ZAL	Zalesovo	52.59	352	P	P	14 38 24.8	-2.7
	1.0nm,0.3s,baz=327,slow=8.1,SNR=3.2						

IDC ***19*** *15:04:09.8±1.0, 4.97S×148.23E, h540^{km}±11^{km}, mb3.6/12, mb1 3.9/14, mb1mx3.8/17, mbtmp4.6/14, Error ellipse: s-maj=14.9km s-min=10.0km az=94.0*

BJI ***19*** *15:04:10.5, 5.07S×148.27E, h566^{km}, mB4.2, mb4.3*

NEIC ***19*** *15:04:10.3±0.8, 4.94S×148.22E, h546^{km}±9^{km}, mb4.4/18, Error ellipse: s-maj=10.0km s-min=7.5km az=75.0*

ISC 19 15:04:09.5±0.8**, 4.98S**±0.06×**148.23E**±0.09**, h551**^{km}±10^{km}**, n45, σ0^{s}79**/47**, mb4.2**/24**, 3C-6D, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.53	193	P	P	15 05 36.3	+0.2
	29nm,0.3s,baz=30,slow=5.6,SNR=206						
PMG				S	S	15 06 44.5	-0.4
	5.3nm,0.3s,baz=123,slow=21,SNR=17						
PMG	Port Moresby	4.53	193	⇑*i*P	P	15 05 36.3	+0.1
PMG				*e*S	S	15 06 43.7	-1.1
CTA	Charters Tower	15.14	187	⇓*i*P	P	15 07 21.8	+1.7
	35nm,0.8s						
CTA	Charters Tower	15.14	187	P	P	15 07 21.9	+1.8
	3.3nm,0.3s,baz=5.8,slow=11,SNR=48						
CTAO	Charters Tower	15.14	187	⇓*i*P	P	15 07 21.8	+1.6
	47nm,0.8s						
KAKA	Kakadu	17.38	243	*e*P	P	15 07 42.5	+0.6
	14nm,0.5s						
WRAB	Tennant Creek	20.09	221	⇓*e*P	P	15 08 07.9	+0.5
	77nm,0.5s						
WB2	Warramunga Arr	20.09	221	⇓*i*P	P	15 08 08.1	+0.6
WB2				*e*S	S	15 11 18.5	-0.2
WRA	Warramunga Arr	20.10	221	P	P	15 08 07.9	+0.3
	41nm,0.4s,baz=45,slow=9.5,SNR=748						
WRA				S	S	15 11 19.0	+0.2
	5.2nm,0.8s,baz=49,slow=15,SNR=14						
WRA				PcP	PcP	15 11 57.9	-0.3
	2.2nm,0.5s,baz=39,slow=2.0,SNR=7.2						
WRA				ScP		15 14 44.2	
	2.8nm,0.8s,baz=44,slow=2.6,SNR=13						
DZM	Mont Dzumac	24.49	136	P	P	15 08 46.8	-0.7
	5.5nm,0.6s,mb4.4,baz=327,slow=23,SNR=14						
FITZ	Fitzroy Crossi	25.64	238	P	P	15 08 56.7	-1.0
	4.9nm,0.4s,mb4.5,baz=54,slow=5.1,SNR=18						
STKA	Stephens Creek	27.47	192	⇓*i*P	P	15 09 12.4	-1.2
	2.8nm,0.3s,mb4.4						
STKA	Stephens Creek	27.47	192	P	P	15 09 12.4	-1.2
	3.8nm,0.4s,mb4.4,baz=356,slow=8.1,SNR=25						
CNB	Canberra Magne	30.21	178	⇓*i*P	P	15 09 37.7	+0.6
	12nm,0.9s,mb4.4						
FORT	Forrest	31.92	214	*e*P	P	15 09 51.5	-0.2
	11nm,0.6s,mb4.6						
MBWA	Marble Bar	31.98	237	*e*P	P	15 09 51.8	-0.5
TOO	Toolangi	32.54	184	*e*P	P	15 09 57.6	+0.8
	5.5nm,0.6s,mb4.3						
MJAR	Matsushiro Arr	42.35	348	P	P	15 11 15.9	-1.2
	1.7nm,0.8s,mb3.6,baz=166,slow=7.4,SNR=7.0						
MJAR				PcP	PcP	15 12 57.1	-1.0
	1.8nm,0.8s,baz=160,slow=3.7,SNR=5.5						
NJ2	Nanjing	46.23	325	*e*P	P	15 11 47.4	+0.2
CN2	Changchun	52.72	339	*e*P	P	15 12 37.4	+2.3
CMAR	Chiang Mai Arr	53.86	297	P	P	15 12 43.7	+0.2
	1.4nm,0.5s,mb3.5,baz=114,slow=4.4,SNR=12						
LZH	Lanzhou	58.25	318	⇑P	P	15 13 14.0	+0.5
LZH				AP	pP	15 15 02.5	+0.4
LZH				PP	PP	15 15 34.1	+3.2
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.2						
LZH	Lanzhou	58.25	318	⇑P	P	15 13 14.0	+0.5
	comp=Z,21nm,1.3s,mb4.2						
LZH				pP	pP	15 15 02.5	+0.4
LZH				PP	PP	15 15 34.1	+3.2
LZH				sP	sP	15 15 49.7	-10
GTA	Gaotai	62.75	319	P	P	15 13 43.8	+0.8
ULN	Ulaanbaatar	63.81	330	*e*P	P	15 13 49.8	+0.1
	comp=Z,3.5nm,0.8s,mb3.8						
SONM	Songino Array	64.12	330	P	P	15 13 51.5	-0.1
	comp=Z,2.4nm,0.5s,mb3.9,baz=148,slow=4.9,SNR=28						
LSA	Lhasa	64.62	306	*e*P	P	15 13 55.9	+0.9
	comp=Z,2.6nm,0.6s,mb3.8						
GUN	Gumba	68.34	302	*e*P	P	15 14 17.8	-0.2
	comp=Z,24nm,0.7s,mb4.8						
PKI	Pulchoki	68.63	302	*e*P	P	15 14 18.7	-1.1
KKN	Kakani	68.81	302	*e*P	P	15 14 20.3	-0.5
	comp=Z,23nm,1.0s,mb4.7						
DMN	Daman	68.90	302	*e*P	P	15 14 20.9	-0.5
	comp=Z,12nm,0.5s,mb4.7						
GKN	Gorkha	69.42	302	*e*P	P	15 14 24.3	-0.1
	comp=Z,13nm,0.6s,mb4.6						
KOLN	Koldanda	70.22	302	*e*P	P	15 14 28.8	-0.4
	comp=Z,19nm,0.9s,mb4.6						
VNDA	Vanda	72.86	177	P	P	15 14 44.3	+0.7
	comp=Z,2.0nm,0.7s,mb3.7,baz=324,slow=6.5,SNR=23						
VNDA	Vanda	72.86	177	*e*P	P	15 14 44.2	+0.6
	comp=Z,1.8nm,0.6s,mb3.7						
SBA	Scott Base	73.48	176	P	P	15 14 45.8	-1.3
MKAR	Makanchi Array	77.50	320	P	P	15 15 09.8	+0.1
	comp=Z,1.5nm,0.4s,mb3.7,baz=98,slow=8.0,SNR=12						
ZAL	Zalesovo	78.81	327	P	P	15 15 16.5	-0.1
	comp=Z,3.4nm,0.6s,mb3.8,baz=350,slow=6.1,SNR=14						
IMA	Indian Mountai	82.17	20	*e*P	P	15 15 34.5	+0.9
	comp=Z,19nm,1.4s,mb4.3						
SML	Sawmill	82.20	25	*e*P	P	15 15 34.0	+0.2
ILAR	Eielson Array	84.07	23	P	P	15 15 41.8	-1.3
	comp=Z,7.0nm,0.7s,mb4.3,baz=250,slow=5.0,SNR=58						
ZRNK	Zerenda	87.47	323	*e*P	P	15 15 58.4	-1.2
	comp=Z,1.5nm,0.5s,mb3.9						
NVAR	Mina Array Bea	95.78	52	P	P	15 16 38.8	+0.6
	comp=Z,0.4nm,0.5s,mb3.9,baz=278,slow=4.4,SNR=5.9						
GERES	GERESS Array B	121.75	326	PKP	PKPdf	15 22 02.1	+1.0
	comp=Z,0.8nm,0.7s,SNR=7.0						
SAML	Samuel	145.77	114	*e*P	PKPdf	15 22 49.6	+3.2

NEIC ***19*** *15:19:42.9, 19.02N×64.81W, h58^{km}, MD3.6(RSPR), After RSPR.*

RSPR 19 15:19:42.9, 19.02N×64.81W, h58^{km}±16^{km}**, MD3.6**/9**, MD3.6**/9**, 4C-5D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTP	Monte Pirata	1.16	218	⇓*e*P	P	15 20 01.8	-1.6
MTP				*e*S	S	15 20 17.6	-0.8
CBYP	Canovanas	1.24	234	⇓*e*P	P	15 20 02.7	-1.8
CBYP				*e*S	S	15 20 19.7	-0.8
CPD	Cerro la Pandu	1.43	227	⇑*e*P	P	15 20 06.0	-1.3
CPD				*e*S	S	15 20 23.8	-1.3
SJG	San Juan	1.56	235	⇑*e*P	P	15 20 07.1	-1.9
SJG				*e*S	S	15 20 26.5	-1.7
PORP	Portuguez	1.98	241	⇓*e*P	P	15 20 13.5	-1.3
PORP				*e*S	S	15 20 36.8	-1.6
LRS	Lares	2.06	250	⇑*e*P	P	15 20 14.1	-1.8
LSP	Las Mesas	2.32	249	⇓*e*P	P	15 20 18.8	-0.8
MGP	Maguayo	2.39	246	⇓*i*P	P	15 20 19.2	-1.3
MGP				*e*S	S	15 20 46.7	-1.9
CRPR	Cabo Rojo, PR	2.41	246	⇑*e*P	P	15 20 19.4	-1.4
CRPR				*e*S	S	15 20 47.9	-1.2

NIED ***19*** *16:15:00, 35.70N×140.70E, h53^{km}, Mw5.7 Best double couple: M$_0$3.81×10^{17} NP1:ϕ_s16°,δ72°,λ93°. NP2:ϕ_s188°, δ18°,λ82°.*

BJI ***19*** *16:15:12.5, 35.69N×140.61E, h55^{km}, mB5.6, mb5.5, Ms5.3, Msz5.2*

JMA ***19*** *16:15:14.2±0.2, 35.73N×140.69E, h51^{km}±2^{km}, M5.6 Broadband fault plane solution: P waves. NP1:ϕ_s209°, δ12°,λ111°. NP2:ϕ_s7°,δ79°,λ86°. Principal axes: T Plg56°, Azm272°; N Plg4°, Azm8°; P Plg34°, Azm101°;*

JMA Felt IV J1.

BGS ***19*** *16:15:15.7, 35.79N×140.82E, h48^{km}, mb5.5*

MOS ***19*** *16:15:15.8±0.8, 35.77N×140.46E, h58^{km}, mb5.6/132, MS5.3/61, Error ellipse: s-maj=7.5km s-min=3.7km az=116.1*

HRVD ***19*** *16:15:15.2±0.1, 35.63N×140.86E, h48^{km}, MW5.7/78, Centroid moment Tensor Solution. LP body waves: s69,c164;Mantle waves: s78,c184; Half duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.05±.06; M$_{\theta\theta}$0.21±.04; M$_{\phi\phi}$-3.26±.04; M$_{r\theta}$0.76±.04; M$_{\theta\phi}$-1.08±.04; M$_{\phi r}$2.17±.04; Best double couple: M$_0$4.03×10^{17} NP1:ϕ_s193°,δ28°,λ86°. NP2:ϕ_s18°,δ62°,λ92°. Principal axes: T 3.773, Plg73°, Azm293°; N .511, Plg2°, Azm197°; P -4.287, Plg17°, Azm106°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***19*** *16:15:15.2±0.1, 35.61N×140.48E, mb5.4/183, MS5.1/28, MW5.7, MW5.7(NIED) Error ellipse: s-maj=3.1km s-min=2.3km az=168.0, Moment Tensor Solution. s23 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.73; M$_{\theta\theta}$-0.45; M$_{\phi\phi}$-2.27; M$_{r\theta}$1.12; M$_{\theta\phi}$-1.55; M$_{\phi r}$2.32; Best double couple: M$_0$3.9×10^{17} NP1:ϕ_s213°,δ25°,λ96°. NP2:ϕ_s27°, δ66°,λ87°. Principal axes: T 3.7, Plg69°, Azm292°; N .43, Plg2°, Azm28°; P -4.13, Plg21°, Azm119°;*

NEIC Felt [IV] at Yokohama and [III] at Iwaki, Tokyo and Yokosuka. Felt in much of east-central Honshu. Recorded [4 JMA] in Chiba and Ibaraki; [3 JMA] in Kanagawa, Saitama, Tochigi and Tokyo; [2 JMA] in Fukushima, Gumma, Miyagi, Nagano, Shizuoka and Yamanashi Prefectures. Also recorded [1 JMA] on Hachijo-jima, Kozu-jima, Mikura-jima, Miyake-jima, Nii-jima and O-shima.

IDC ***19*** *16:15:15.9±1.5, 35.64N×140.54E, h55^{km}±14^{km}, mb4.9/24, mb1 5.0/28, mb1mx5.0/29, mbtmp5.1/28, MS5.0/25, Ms1 5.0/25, ms1mx5.0/26 Error ellipse: s-maj=12.5km s-min=9.7km az=83.0*

ISC 19 16:15:14.0±0.1**, 35.64N**±0.02×**140.55E**±0.02**, h48**^{km}**, h48**^{km}±.7^{km}**:pP-P, n866, σ1^{s}04**/864**, mb5.4**/241**, MS5.2**/88**, 89C-58D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.26	76	⇑P	P	16 15 22.0	-0.6
JCN	Nagara	0.36	232	⇓P	P	16 15 26.3	+2.7
JCN				*e*S	S	16 15 35.3	+4.9
TOK	Tokyo	0.65	274	⇓P	P	16 15 29.9	+2.9
JYT	Yasato	0.65	334	P	P	16 15 27.2	+0.1
JYT				*e*S	S	16 15 36.3	-0.4
BSO4	Boso 4	0.67	195	⇓P	P	16 15 29.4	+2.1
BSO3	Boso 3	0.84	182	P	P	16 15 31.1	+1.5
BSO2	Boso 2	0.90	169	P	P	16 15 32.6	+2.1
JHO	Hitachi	0.97	1	⇓P	P	16 15 31.0	-0.4
BSO1	Boso 1	1.04	160	⇓P	P	16 15 33.1	+0.6
JAG	Ashikaga	1.18	312	⇓P	P	16 15 34.9	+0.5
JOD2	Odawara 2	1.25	253	⇓P	P	16 15 37.5	+2.0
JOD2				*e*S	S	16 15 57.0	+5.6
JIM2	Oshima 3	1.30	225	⇓P	P	16 15 37.1	+0.9
JIM2				*e*S	S	16 15 54.5	+1.8
ONAJ	Iwakimizuishiy	1.47	8	⇓P	P	16 15 38.0	-0.7
JKT	Katashina	1.54	317	⇓P	P	16 15 40.4	+0.8
NJJJ	Nii jima 2	1.61	220	P	P	16 15 41.6	+1.0
JYN	Shimob	1.64	266	⇓P	P	16 15 43.1	+2.1
JIZS	Izushimoda	1.65	237	⇓P	P	16 15 42.7	+1.6
JFK	Kawauchi	1.74	9	⇓P	P	16 15 41.4	-1.0
JGK	Kuni	1.80	301	P	P	16 15 44.6	+1.4
JKO	Kozu shima	1.86	219	P	P	16 15 45.1	+1.1
JFT	Otama	1.88	355	S	S	16 16 10.0	+3.0
JFY	Yanaizu	1.89	339	⇓P	P	16 15 44.9	+0.4
JNT	Takato	1.98	278	⇓P	P	16 15 48.5	+2.8
SHZ3	Shizuoka 3	2.00	254	⇓P	P	16 15 48.6	+2.6
JHK	Hiroka	2.02	323	⇓P	P	16 15 47.7	+1.3
MJAR	Matsushiro Arr	2.10	296	P	P	16 15 48.7	+1.2
	392nm,0.3s,baz=98,slow=14,SNR=1211						
MJAR				LR	LR	16 16 49.9	
	comp=Z,80µm,19.4s,baz=110,slow=46						
MAJO	Matsushiro	2.10	296	*e*P	P	16 15 49.2	+1.7
MAT	Matsushiro	2.10	296	*e*P	P	16 15 50.0	+2.5
MAT				*e*S	S	16 16 19.0	+6.6
MAT	Matsushiro	2.10	296	P	P	16 15 48.2	+0.7
MAT				*e*S	S	16 16 14.9	+2.5
JNG	Nsakai	2.13	292	⇓P	P	16 15 50.1	+2.2
JSG	Sagara	2.16	244	P	P	16 15 51.6	+3.2
JNY	Yasuok	2.21	263	⇓P	P	16 15 52.0	+2.9
JMM	Marumori	2.23	5	⇓P	P	16 15 48.9	-0.4
JNS	Sasagawa	2.39	336	⇓P	P	16 15 52.4	+0.8
JIZZ	Izumozaki	2.40	322	⇓P	P	16 15 53.9	+2.1
JJN	Nakama	2.42	308	⇓P	P	16 15 54.0	+2.0
HMMJ	Hamamatsu 2	2.44	252	P	P	16 15 54.5	+2.1
TK04	Tokai 4	2.53	241	P	P	16 15 56.4	+2.8
JHJ	Hachijo jima 2	2.59	194	P	P	16 15 54.3	-0.2
	521nm,0.3s,baz=59,slow=2.1,SNR=132						
JHJ				S	S	16 16 26.2	+1.2
	3µm,0.3s,baz=230,slow=21,SNR=11						
JHJ				LR	LR	16 17 08.7	
	comp=Z,26µm,19.6s,baz=46,slow=44						
JGF	Kuroka	2.60	270	⇓P	P	16 15 57.6	+3.0
JYS	Shirataka	2.60	352	⇑P	P	16 15 55.5	+0.8
JGN	Niukaw	2.69	283	⇓P	P	16 15 58.7	+2.8
JAO	Obara	2.71	263	⇓P	P	16 15 58.7	+2.5
JTT	Ttatey	2.78	291	P	P	16 16 00.7	+3.6
JIO	Ouri	2.88	13	⇓P	P	16 15 57.1	-1.5
JAA	Atsumi	2.97	251	P	P	16 16 02.5	+2.7
JAW	Awa shima	3.00	340	P	P	16 16 00.6	+0.3
JYA	Atsumi	3.02	347	⇓P	P	16 16 01.6	+1.0
JGM	Miyama	3.12	272	⇓P	P	16 16 06.3	+4.3
JSZ	Suzu	3.14	306	⇓P	P	16 16 03.2	+1.0
JIE	Ise	3.39	250	P	P	16 16 08.5	+2.7
JKG	Kaga	3.48	282	P	P	16 16 10.4	+3.3
TSUJ	Tsu 2	3.51	256	P	P	16 16 10.5	+3.0
OFUJ	Ofunato	3.55	14	⇓P	P	16 16 06.0	-2.0
JRG	Rokugo	3.75	1	⇑P	P	16 16 10.9	0.0
JKN2	Miekihoku	3.78	250	P	P	16 16 14.4	+3.1
MIYJ	Miyakonagasawa	4.06	14	S	S	16 16 58.2	-3.8
JANG	Nango	4.79	9	P	P	16 16 23.2	-2.3
JKD	Kudamatsu	7.31	260	P	P	16 17 04.0	+3.3
JNU	Nakatsue	8.38	255	P	P	16 17 16.6	+1.0
	5.2nm,0.3s,baz=66,slow=15,SNR=29						
ASAJ	Asahikawa	8.61	10	P	P	16 17 13.4	-5.3
	14nm,0.3s,baz=222,slow=12,SNR=71						
ASAJ				S	S	16 18 43.6	-12
	6.9nm,0.3s,baz=244,slow=26,SNR=2.0						
CBIJ	Chichi jima	8.63	170	P	P	16 17 14.3	-4.7
	162nm,0.3s,baz=335,slow=6.7,SNR=61						
CBIJ				S	S	16 18 43.3	-13
	164nm,0.3s,baz=282,slow=23,SNR=5.3						
JTSR	Tashiro 2	9.20	244	P	P	16 17 29.8	+2.9
YUK	Yuzh-Kuril'sk	9.32	24	*e*P	P	16 17 21.0	-7.6
YUK				pmax	pmax		
	comp=Z,770nm,0.5s						
YUK				pmax	pmax		
	comp=N,810nm,0.7s						
YUK				pmax	pmax		
	comp=E,180nm,0.5s						
YUK				pmax	pmax		
	comp=Z,2µm,1.2s						
YUK				pmax	pmax		
	comp=E,2µm,0.8s						
KS15	Wonju Array Si	10.35	284	P	P	16 17 41.6	-1.0
KUR	Kuril'sk	11.08	28	*e*P	P	16 17 45.0	-7.5
KUR				pmax	pmax		
	comp=N,100nm,0.7s						
KUR				pmax	pmax		
	comp=E,90nm,0.7s						
KUR				pmax	pmax		
	comp=Z,140nm,0.7s						
KUR				MLR	MLR		
	comp=N,4µm,14.0s						
KUR				MLR	MLR		
	comp=E,7µm,14.0s						
KUR				MLR	MLR		
	comp=Z,3µm,14.0s						
INCN	Inchon	11.34	283	*e*P	P	16 17 58.0	+1.9
	comp=Z,55nm,0.8s						
YSS	Yuzh-Sakhalins	11.42	8	*e*P	P	16 17 51.9	-5.3
YSS				pmax	pmax		
	comp=Z,140nm,0.9s						
YSS				pmax	pmax		
	comp=N,140µm,0.9s						
YSS				pmax	pmax		
	comp=E,60µm,0.9s						
YSS				MLR	MLR		
	comp=Z,6µm,16.0s						
YSS				MLR	MLR		
	comp=N,3µm,15.0s						
YSS				MLR	MLR		
	comp=E,7µm,13.0s						
YSS	Yuzh-Sakhalins	11.42	8	*e*P	P	16 17 51.7	-5.4
	comp=E,126nm,0.8s						
MDJ	Mudanjiang	12.27	320	P	P	16 18 06.3	-2.2
MDJ				AP		16 18 11.8	
MDJ				S	S	16 20 22.6	-2.0
MDJ				PCP	PcP	16 23 47.3	-0.8
MDJ				SCS	ScS	16 30 50.4	-0.1
MDJ				AMB	AMB		
	comp=Z,70nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,3µm,8.4s						
MDJ				LR	LR		
	comp=N,8µm,22.5s						
MDJ				LR	LR		
	comp=E,6µm,16.4s						
MDJ				LR	LR		
	comp=Z,12µm,23.0s						
MDJ	Mudanjiang	12.27	320	⇑*e*P	P	16 18 08.0	-0.5
	comp=Z,121nm,0.9s						
JOW	Kunigami	13.68	233	P	P	16 18 25.9	-1.3
	comp=Z,1.1nm,0.3s,baz=18,slow=9.6,SNR=2.5						
JOW				LR	LR	16 23 32.1	
	comp=Z,9µm,21.7s,baz=233,slow=36						
CN2	Changchun	14.18	310	*e*P	P	16 18 33.8	+0.1
CN2				*e*AP		16 18 42.3	
CN2				*e*XP		16 18 49.0	
CN2				*e*S	S	16 21 09.6	-0.7
CN2				AMB	AMB		
	comp=Z,20nm,1.3s						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,6µm,14.0s						
CN2				LR	LR		
	comp=E,8µm,14.0s						
CN2				LR	LR		
	comp=Z,7µm,21.0s						
SNY	Shenyang	14.61	300	⇑P	P	16 18 39.9	+0.6
SNY				PP	PP	16 18 45.4	-5.6
SNY				AMB	AMB		
	comp=Z,60nm,1.0s						
SNY				AMB	AMB		
	comp=Z,1µm,9.3s						
SNY				LR	LR		
	comp=E,7µm,20.2s						
SNY				LR	LR		
	comp=Z,10µm,26.9s						
KLR	Kul'dur	15.04	337	*e*P	P	16 18 38.0	-6.8
KLR				MLR	MLR		
	comp=E,4µm,17.5s						
KLR				MLR	MLR		
	comp=Z,5µm,17.5s						
DL2	Dalian	15.41	288	⇑*i*P	P	16 18 51.8	+2.1
DL2				XP		16 19 08.3	
DL2				AMB	AMB		
	comp=Z,110nm,0.7s						
DL2				AMB	AMB		
	comp=Z,1µm,5.4s						
DL2				LR	LR		
	comp=N,2µm,21.2s						
DL2				LR	LR		
	comp=E,6µm,21.6s						
DL2				LR	LR		
	comp=Z,8µm,21.8s						
SSE	Sheshan	16.79	260	*e*P	P	16 19 05.4	-1.8
SSE				AP		16 19 17.8	
SSE				XP		16 19 25.5	
SSE				S	S	16 22 10.0	-1.2
SSE				AMB	AMB		
	comp=Z,40nm,0.7s						
SSE				AMB	AMB		
	comp=Z,710nm,5.0s						
SSE				LR	LR		
	comp=N,2µm,16.2s						
SSE				LR	LR		
	comp=E,8µm,16.3s						
SSE				LR	LR		
	comp=Z,9µm,18.6s						
SSE	Sheshan	16.79	260	*e*P	P	16 19 05.4	-1.8
	comp=Z,41nm,0.7s						
SSE				pP		16 19 17.7	
SSE				sP		16 19 25.5	
SSE				S	S	16 22 10.0	-1.2
SSE				sS		16 22 39.2	
NJ2	Nanjing	18.37	265	*e*P	P	16 19 26.0	-0.9
NJ2				AP		16 19 35.5	
NJ2				XP		16 19 41.8	
NJ2				S	S	16 22 45.0	-1.8
NJ2				AMB	AMB		
	comp=Z,40nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,2µm,7.6s						
NJ2				LR	LR		
	comp=N,12µm,20.7s						
NJ2				LR	LR		
	comp=E,21µm,20.8s						
NJ2				LR	LR		
	comp=Z,10µm,21.9s						
SKR	Severo-Kuril's	18.78	32	*e*P	P	16 19 25.9	-5.8
SKR				*e*S	S	16 22 55.0	-0.9
SKR				pmax	pmax		
	comp=N,180nm,1.0s						
SKR				pmax	pmax		
	comp=E,180nm,1.0s						
SKR				pmax	pmax		
	comp=Z,220nm,1.0s						
SKR				pmax	pmax		
	comp=N,2µm,4.0s						
SKR				pmax	pmax		
	comp=E,2µm,4.0s						
SKR				pmax	pmax		
	comp=Z,2µm,4.0s						
SKR				smax			
	comp=N,2µm,12.0s						
SKR				smax			
	comp=E,5µm,12.0s						
SKR				MLR	MLR		

	comp=N,6μm,20.0s						
SKR				MLR	MLR		
	comp=Z,6μm,20.0s						
TIA	**Tai'an**	**18.98**	**279**	P	**P**	**16 19 30.1**	**-4.0**
TIA				AMB	AMB		
	comp=Z,370nm,1.4s						
TIA				LR	LR		
	comp=N,4μm,13.0s						
TIA				LR	LR		
	comp=E,2μm,11.0s						
YHNB	**Yeheng**	**19.82**	**242**	*e*P	**P**	**16 19 40.2**	**-3.3**
NACB	**Ninganchiao**	**19.98**	**240**	*e*P	**P**	**16 19 40.7**	**-4.4**
HIA	**Hailar**	**20.43**	**318**	*e*P	**P**	**16 19 45.4**	**-4.2**
HIA				pmax	pmax		
	comp=Z,43nm,0.8s						
HIA				MLR	MLR		
	comp=Z,8μm,21.0s						
HIA	**Hailar**	**20.43**	**318**	*e*P	**P**	**16 19 45.4**	**-4.3**
	comp=Z,43nm,0.8s						
HIA				LR	LR		
	comp=Z,8μm,21.0s,MS5.0						
PET	**Petropavlovsk**	**21.57**	**31**	*e*P	**P**	**16 20 04.1**	**+3.0**
PET				*i* S	**S**	**16 23 54.5**	**+2.3**
PET				pmax	pmax		
	comp=Z,185nm,1.3s,mb5.3						
PET				pmax	pmax		
	comp=N,142nm,1.2s						
PET				pmax	pmax		
	comp=Z,300nm,10.5s						
PET				pmax	pmax		
	comp=Z,700nm,6.0s						
PET				pmax	pmax		
	comp=Z,800nm,7.5s						
PET				smax			
	comp=E,3μm,12.7s						
PET				smax			
	comp=E,4μm,16.3s						
PET				smax			
	comp=N,4μm,11.1s						
PET				MLR	MLR		
	comp=Z,3μm,19.0s,MS4.7						
PET				MLR	MLR		
	comp=Z,4μm,20.0s						
PET	**Petropavlovsk**	**21.57**	**31**	*e*P	**P**	**16 20 01.0**	**-0.1**
	comp=Z,192nm,1.1s,mb5.4						
QZH	**Quanzhou**	**21.71**	**247**	⇑*i*P	**P**	**16 20 00.4**	**-2.3**
QZH				S	**S**	**16 23 53.0**	**-2.0**
QZH				AMB	AMB		
	comp=Z,240nm,0.9s,mb5.6						
QZH				LR	LR		
	comp=N,5μm,11.2s						
QZH				LR	LR		
	comp=E,13μm,19.0s						
QZH				LR	LR		
	comp=Z,15μm,19.6s						
BBP	**Basco**	**22.27**	**232**	*e*P	**P**	**16 20 08.0**	**-0.3**
GUMO	**Guam**	**22.30**	**169**	*e*P	**P**	**16 20 09.0**	**+0.4**
GUMO				pmax	pmax		
	comp=Z,481nm,1.1s,mb5.8						
GUMO	**Guam**	**22.30**	**169**	*e*P	**P**	**16 20 09.0**	**+0.4**
	comp=Z,481nm,1.1s,mb5.8						
WHN	**Wuhan**	**22.50**	**264**	P	**P**	**16 20 09.5**	**-1.1**
WHN				S	**S**	**16 24 12.0**	**+2.5**
WHN				AMB	AMB		
	comp=Z,2μm,7.4s						
WHN				LR	LR		
	comp=Z,17μm,18.0s,MS5.5						
HHC	**Hu-ho-hao-te**	**23.30**	**292**	*e*P	**P**	**16 20 14.8**	**-3.4**
HHC				AP		16 20 27.0	
HHC				XP		16 20 32.6	
HHC				PP	PP	16 20 49.3	-1.1
HHC				S	**S**	**16 24 28.0**	**+4.6**
HHC				XS		16 24 43.5	
HHC				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.0						
HHC				LR	LR		
	comp=N,4μm,19.1s						
HHC				LR	LR		
	comp=E,3μm,26.5s						
HHC				LR	LR		
	comp=Z,4μm,32.1s						
CLNS	**Chul'man**	**23.70**	**338**	*e*P	**P**	**16 20 19.8**	**-2.1**
CLNS				*e*		16 20 42.6	
CLNS				*e*PPP	PPP	16 20 48.4	-18
CLNS				*e*S	**S**	**16 24 21.7**	**-8.5**
CLNS				pmax	pmax		
	comp=Z,146nm,1.5s,mb5.2						
CLNS				pmax	pmax		
	comp=N,126nm,1.4s						
CLNS				pmax	pmax		
	comp=E,48nm,1.4s						
CLNS				pmax	pmax		
	comp=Z,73nm,0.9s,mb5.1						
CLNS				pmax	pmax		
	comp=N,68nm,0.7s						
CLNS				pmax	pmax		
	comp=E,58nm,0.8s						
CLNS				smax			
	comp=N,2μm,10.3s						
CLNS				smax			
	comp=Z,1μm,13.0s						
CLNS				smax			
	comp=E,269nm,10.8s						
CLNS				MLR	MLR		
	comp=Z,6μm,20.0s,MS5.1						
CLNS				MLR	MLR		
	comp=N,3μm,16.0s,MS4.9						
CLNS				MLR	MLR		
	comp=E,400nm,13.0s,MS4.9						
CVP	**Callao Caves**	**24.40**	**228**	*e*P	**P**	**16 20 27.0**	**-2.2**
BTO	**Baotou**	**24.45**	**291**	*e*P	**P**	**16 20 28.8**	**-0.7**
BTO				LR	LR		
	comp=N,3μm,9.8s						
BTO				LR	LR		
	comp=E,3μm,19.1s						
APYP	**Conner**	**24.63**	**229**	*e*P	**P**	**16 20 28.4**	**-3.0**
APYP				*e*S		16 20 58.1	
MA2	**Magadan**	**24.86**	**12**	*e*P	**P**	**16 20 33.3**	**+0.1**
MA2				*e*		16 20 44.7	
MA2				*e*		16 21 06.2	
MA2				*i* S	**S**	**16 24 50.8**	**+0.7**
MA2				*e*SS	SS	16 25 16.7	-34
MA2				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.2						
MA2				pmax	pmax		
	comp=E,30nm,1.2s						
MA2				pmax	pmax		
	comp=N,40nm,0.9s						
MA2				MLR	MLR		
	comp=Z,5μm,19.5s,MS5.0						
MA2	**Magadan**	**24.86**	**12**	*e*P	**P**	**16 20 32.5**	**-0.7**
	comp=Z,112nm,0.8s,mb5.5						
ABRA	**Dolores**	**25.12**	**230**	*e*P	**P**	**16 20 33.9**	**-2.2**
ABRA				*e*S	sP	16 21 05.9	+12
CIT	**Chita**	**25.23**	**319**	*e*P	**P**	**16 20 34.7**	**-2.1**
CIT				*e*		16 31 30.7	
CIT				pmax	pmax		
	comp=Z,25nm,1.4s,mb4.5						
XAN	**Xi'an**	**25.95**	**276**	P	**P**	**16 20 42.0**	**-1.7**
XAN				AP	pP	16 20 56.5	+0.5
XAN				S	**S**	**16 25 02.0**	**-6.5**
XAN				AMB	AMB		
	comp=Z,140nm,0.8s,mb5.5						
XAN				LR	LR		
	comp=N,3μm,20.2s,MS5.0						
XAN				LR	LR		
	comp=E,4μm,22.7s,MS5.0						
XAN				LR	LR		
	comp=Z,8μm,21.3s,MS5.2						
BALP	**Baler**	**26.08**	**225**	*e*P	**P**	**16 20 42.3**	**-2.8**
PVCP	**Virac**	**26.45**	**218**	*e*P	**P**	**16 20 45.3**	**-3.2**
ENH	**Enshi**	**26.54**	**267**	*e*P	**P**	**16 20 47.3**	**-2.0**
	comp=Z,432nm,0.6s,mb6.2						
POLP	**Polilio Island**	**26.69**	**223**	*e*P	**P**	**16 20 50.3**	**-0.4**
YAK	**Yakutsk**	**27.29**	**349***c*	*i*P	**P**	**16 20 53.8**	**-1.9**
YAK				*e**PP	pP	16 21 03.3	-4.7
YAK				*e*PPP	PPP	16 21 43.8	-12
YAK				*e*		16 24 13.3	
YAK				*e*S	**S**	**16 25 26.1**	**-3.8**
YAK				*i*		16 31 37.1	
YAK				pmax	pmax		
	comp=Z,75nm,1.0s,mb5.2						
YAK				pmax	pmax		
	comp=N,75nm,1.1s						
YAK				pmax	pmax		
	comp=E,20nm,1.2s						
YAK				pmax	pmax		
	comp=Z,49nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,38nm,1.0s						
YAK				pmax	pmax		
	comp=E,31nm,1.2s						
YAK				smax			
	comp=N,12nm,1.1s						
YAK				smax			
	comp=E,8.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,3μm,21.0s,MS4.8						
YAK				MLR	MLR		
	comp=N,2μm,18.0s,MS4.9						
YAK				MLR	MLR		
	comp=E,2μm,20.0s,MS4.9						
YAK	**Yakutsk**	**27.29**	**349**	*e*P	**P**	**16 20 53.5**	**-2.2**
	comp=E,176nm,0.8s,mb5.6						
YAK				LR	LR		
	comp=Z,5μm,21.0s,MS5.0						
ULN	**Ulaanbaatar**	**27.59**	**307**	*e*P	**P**	**16 20 56.2**	**-2.4**
ULN				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.2						
ULN				MLR	MLR		
	comp=Z,5μm,22.0s,MS5.1						
ULN	**Ulaanbaatar**	**27.59**	**307**	*e*P	**P**	**16 20 56.2**	**-2.5**
	comp=Z,58nm,1.0s,mb5.2						
ULN				LR	LR		
	comp=Z,5μm,22.0s,MS5.1						
SONM	**Songino Array**	**28.02**	**306**	P	**P**	**16 21 01.1**	**-1.4**
	comp=Z,35nm,0.7s,mb5.1,baz=107,slow=9.4,SNR=63						
SONM				ScP		16 27 51.7	
	comp=Z,2.5nm,1.0s,baz=180,slow=2.5,SNR=5.5						
SONM				LR	LR	16 32 31.0	
	comp=Z,6μm,19.1s,MS5.2,baz=105,slow=37						
SEY	**Seymchan**	**28.29**	**11**	*i* P	**P**	**16 21 04.3**	**-0.5**
SEY				*e*		16 22 01.7	
SEY				*e*		16 24 24.3	
SEY				*e*S	**S**	**16 25 46.5**	**+0.4**
SEY				SS	SS	16 27 05.7	-6.6
SEY				*e*SSS	SSS	16 27 29.6	-2.1
SEY				pmax	pmax		
	comp=E,20nm,0.9s						
SEY				pmax	pmax		
	comp=Z,90nm,0.9s,mb5.4						
SEY				pmax	pmax		
	comp=N,30nm,0.8s						
SEY				smax			
	comp=N,1μm,8.1s						
SEY				smax			
	comp=E,280nm,4.8s						
SEY				MLR	MLR		
	comp=N,5μm,19.0s,MS5.4						
SEY				MLR	MLR		
	comp=Z,13μm,19.0s,MS5.5						
SEY				MLR	MLR		
	comp=E,7μm,16.0s,MS5.4						
BOD	**Bodaibo**	**28.36**	**330**	*e*P	**P**	**16 21 04.0**	**-1.4**
BOD				pmax	pmax		
	comp=Z,78nm,0.9s,mb5.3						
FX1	**Attu Island--F**	**28.69**	**43**	P	**P**	**16 21 07.8**	**-0.6**
FX1				pmax	pmax		
	comp=Z,17nm,0.6s						
FX1				MLR	MLR		
	comp=Z,63nm,20.9s						
FX1	**Attu Island--F**	**28.69**	**43**	P	**P**	**16 21 07.8**	**-0.6**
	comp=Z,17nm,0.6s,mb5.0,baz=36,slow=16,SNR=5.3						
FX1				LR	LR	16 30 48.2	
	comp=Z,63nm,20.9s,baz=260,slow=32						
LZH	**Lanzhou**	**29.64**	**282**	⇑P	**P**	**16 21 15.1**	**-2.0**
LZH				AP	pP	16 21 28.0	-1.6
LZH				XP	sP	16 21 32.9	-2.6
LZH				PP	PP	16 22 12.5	-2.1
LZH				S	**S**	**16 26 05.3**	**-2.6**
LZH				XS		16 26 26.1	
LZH				SS	SS	16 27 39.8	-4.4
LZH				AMB	AMB		
	comp=Z,200nm,1.5s,mb5.6						
LZH				AMB	AMB		
	comp=Z,490nm,5.2s						
LZH				LR	LR		
	comp=N,5μm,13.2s						
LZH				LR	LR		
	comp=Z,7μm,16.9s,MS5.4						
LZH	**Lanzhou**	**29.64**	**282**	⇑P	**P**	**16 21 15.1**	**-2.0**
LZH				*PP	pP	16 21 28.0	-1.6
LZH				*SP	sP	16 21 32.9	-2.6
LZH						16 22 12.5	
LZH				S	**S**	**16 26 05.2**	**-2.7**
LZH				*SS		16 26 26.1	
LZH				SS	SS	16 27 39.8	-4.4
LZH				pmax	pmax		
	comp=Z,208nm,1.5s,mb5.6						
LZH				MLR	MLR		
	comp=Z,7μm,16.9s,MS5.4						
LZH	**Lanzhou**	**29.64**	**282**	⇑P	**P**	**16 21 15.1**	**-2.0**
	comp=Z,208nm,1.5s,mb5.6						
LZH				pP	pP	16 21 28.0	-1.6
LZH				sP	sP	16 21 32.9	-2.6
LZH				PP	PP	16 22 12.5	-2.1
LZH				S	**S**	**16 26 05.2**	**-2.7**
LZH				sS		16 26 26.1	
LZH				SS	SS	16 27 39.8	-4.4
LZH				LR	LR		
	comp=Z,7μm,16.9s,MS5.4						
GYA	**Guiyang**	**30.32**	**262**	⇑*i*P	**P**	**16 21 21.1**	**-2.1**
GYA				AP	pP	16 21 33.6	-2.1
GYA				XP	sP	16 21 40.3	-1.4
GYA				AMB	AMB		
	comp=Z,70nm,0.8s,mb5.4						
GYA				AMB	AMB		
	comp=Z,520nm,6.3s						
GYA				LR	LR		
	comp=N,2μm,15.2s,MS5.2						
GYA				LR	LR		
	comp=E,3μm,14.9s,MS5.2						
GYA				LR	LR		
	comp=Z,4μm,15.5s,MS5.2						
IRK	**Irkutsk**	**30.54**	**314**	*e*P	**P**	**16 21 23.7**	**-1.2**
IRK				pmax	pmax		
	comp=Z,67nm,2.6s,mb5.0						
ZAK	**Zakamensk**	**30.61**	**310**	*e*P	**P**	**16 21 23.7**	**-1.8**
ZAK				*e*		16 28 01.5	
ZAK				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.9						
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.9s						
TLY	**Talaya**	**30.74**	**313***c*	*i*P	**P**	**16 21 25.1**	**-1.6**
TLY				*e*		16 22 21.9	
TLY				*e*		16 24 17.2	
TLY				*e*S	**S**	**16 26 21.6**	**-3.4**
TLY				*e*SS	SS	16 28 11.4	+1.7
TLY				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.1						
TLY				MLR	MLR		
	comp=Z,4μm,16.0s,MS5.1						
TLY	**Talaya**	**30.74**	**313**	*e*P	**P**	**16 21 24.1**	**-2.5**
	comp=Z,20nm,0.8s,mb5.0						
TLY				LR	LR		
	comp=Z,967nm,21.0s,MS4.4						
CD2	**Chengdu**	**31.00**	**272**	P	**P**	**16 21 27.0**	**-2.2**
CD2				AP	pP	16 21 42.4	+0.6
CD2				PPP	PPP	16 22 34.4	-13
CD2				S	**S**	**16 26 27.9**	**-1.4**
CD2				XS		16 26 50.5	
CD2				SS	SS	16 28 16.3	+0.5
CD2				AMB	AMB		
	comp=Z,160nm,0.7s,mb6.0						
CD2				LR	LR		
	comp=N,10μm,16.2s						
CD2				LR	LR		
	comp=Z,13μm,20.4s,MS5.6						
QIZ	**Qiongzhong**	**31.73**	**247**	*e*P	**P**	**16 21 33.4**	**-2.3**
QIZ				S	**S**	**16 26 40.4**	**-0.5**
QIZ				XS		16 27 06.9	
QIZ				AMB	AMB		
	comp=Z,320nm,7.6s						
QIZ				LR	LR		
	comp=N,3μm,23.0s,MS5.0						
QIZ				LR	LR		
	comp=E,2μm,20.0s,MS5.0						
QIZ				LR	LR		
	comp=Z,4μm,22.2s,MS5.1						
MOY	**Mondy**	**32.33**	**312**	*e*P	**P**	**16 21 39.8**	**-0.8**
MOY				pmax	pmax		
	comp=Z,39nm,1.6s,mb5.0						
GTA	**Gaotai**	**32.33**	**289**	P	**P**	**16 21 39.0**	**-1.8**
GTA				AP	pP	16 21 51.5	-1.9
GTA				XP	sP	16 21 56.5	-3.0
GTA				PP	PP	16 22 50.6	+1.2
GTA				PPP	PPP	16 23 04.3	-0.6
GTA				PCP	PcP	16 24 28.8	+0.9
GTA				S	**S**	**16 26 49.0**	**-1.1**
GTA				XS		16 27 09.3	
GTA				SCP		16 28 06.8	
GTA				PCS		16 28 12.5	
GTA				SS	SS	16 28 46.1	-1.1
GTA				SCS	ScS	16 32 04.3	+0.3
GTA				AMB	AMB		
	comp=Z,80nm,0.7s,mb5.7						
GTA				AMB	AMB		
	comp=Z,570nm,11.8s						
GTA				LR	LR		
	comp=N,2μm,21.3s,MS5.1						
GTA				LR	LR		
	comp=E,3μm,22.4s,MS5.1						
GTA				LR	LR		
	comp=Z,5μm,26.2s,MS5.1						
KMI	**Kunming**	**34.08**	**263**	P	**P**	**16 21 54.3**	**-1.7**
KMI				AP	pP	16 22 04.4	-4.3
KMI				PP	PP	16 23 10.6	-0.6
KMI				PCP	PcP	16 24 33.5	+0.6
KMI				S	**S**	**16 27 14.1**	**-3.2**
KMI				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.5						
KMI				AMB	AMB		
	comp=Z,340nm,5.8s						
KMI				LR	LR		
	comp=N,3μm,18.0s						
KMI				LR	LR		
	comp=E,3μm,12.4s						
KMI				LR	LR		
	comp=Z,4μm,26.3s						
KMI	**Kunming**	**34.08**	**263**	P	**P**	**16 21 54.3**	**-1.7**
KMI				*SP	sP	16 22 08.6	-6.2
KMI						16 23 10.6	
KMI						16 24 33.5	
KMI				S	**S**	**16 27 14.1**	**-3.2**
KMI				pmax	pmax		
	comp=Z,79nm,1.1s,mb5.6						
KMI				MLR	MLR		
	comp=Z,4μm,26.3s,MS5.1						
KMI	**Kunming**	**34.08**	**263**	P	**P**	**16 21 54.3**	**-1.7**
	comp=Z,79nm,1.1s,mb5.6						
KMI				pP	pP	16 22 04.4	-4.3
KMI				sP	sP	16 22 08.6	-6.2
KMI				PP	PP	16 23 10.6	-0.6
KMI				PPP	PPP	16 23 20.7	-8.6
KMI				PcP	PcP	16 24 33.5	+0.6
KMI				S	**S**	**16 27 14.1**	**-3.2**
KMI				sS		16 27 32.1	
KMI				SS	SS	16 29 18.2	-9.3
KMI				SSS	SSS	16 29 43.7	-11
KMI				LR	LR		
	comp=Z,4μm,26.3s,MS5.1						
BILL	**Bilibino**	**35.56**	**16***c*	*i*P	**P**	**16 22 06.9**	**-1.3**
BILL				*e*S	**S**	**16 27 30.3**	**-9.5**
BILL				pmax	pmax		
	comp=Z,26nm,0.6s,mb5.3						
BILL				MLR	MLR		
	comp=Z,2μm,18.0s,MS5.0						
BILL	**Bilibino**	**35.56**	**16**	*e*P	**P**	**16 22 06.8**	**-1.4**
	comp=Z,39nm,1.0s,mb5.3						
BILL				LR	LR		
	comp=Z,3μm,21.0s,MS5.0						
KKM	**Kota Kinabalu**	**36.99**	**223**	*e*P	**P**	**16 22 18.7**	**-2.1**
KKM	**Kota Kinabalu**	**36.99**	**223**	P	**P**	**16 22 20.2**	**-0.5**
TSM	**Tawau**	**37.57**	**219**	P	**P**	**16 22 23.4**	**-2.2**
KKTK	**Khon Kaen**	**38.67**	**250**	P	**P**	**16 22 34.0**	**-0.8**
	comp=Z,494nm,0.9s,mb6.2						
NANT	**Nan**	**38.90**	**255**	⇓P	**P**	**16 22 34.0**	**-2.7**
	comp=Z,840nm,1.0s,mb6.4						
NIKO	**Nikolski**	**39.22**	**48**	*e*P	**P**	**16 22 37.4**	**-1.6**
CM31	**Chiang Mai Arr**	**40.48**	**256**	*e*P	**P**	**16 22 49.0**	**-0.7**
	comp=Z,21nm,0.6s,mb5.0						
CMAR	**Chiang Mai Arr**	**40.48**	**256**	P	**P**	**16 22 49.4**	**-0.4**
CMAR						16 24 51.5	
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CMAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CMAR				MLR	MLR		
	comp=Z,3μm,18.7s						
CMAR	**Chiang Mai Arr**	**40.48**	**256**	P	**P**	**16 22 49.4**	**-0.4**
	comp=Z,6.1nm,0.5s,mb4.6,baz=49,slow=7.9,SNR=39						
CMAR				PcP	PcP	16 24 51.5	-1.0
	comp=Z,5.8nm,1.0s,baz=33,slow=2.9,SNR=4.4						
CMAR				pPcP		16 25 10.1	
	comp=Z,7.5nm,0.9s,baz=19,slow=1.8,SNR=5.1						
CMAR				LR	LR	16 41 08.5	
	comp=Z,3μm,18.7s,MS5.2,baz=60,slow=38						
WMQ	**Urumqi**	**40.86**	**298**	⇑P	**P**	**16 22 53.0**	**+0.3**
WMQ				AP	pP	16 23 05.1	-0.5
WMQ				XP	sP	16 23 10.5	-0.9
WMQ				S	**S**	**16 29 00.5**	**+0.1**
WMQ				SS	SS	16 31 58.0	-0.5
WMQ				SCS	ScS	16 32 52.0	+0.8
WMQ				AMB	AMB		
	comp=Z,120nm,1.0s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,2μm,4.8s						
WMQ				LR	LR		
	comp=N,2μm,20.4s,MS5.2						
WMQ				LR	LR		
	comp=E,3μm,24.0s,MS5.2						
WMQ				LR	LR		
	comp=Z,4μm,22.8s,MS5.2						
NST	**Nakhon Sawan**	**41.14**	**252**	P	**P**	**16 22 55.2**	**0.0**
LSA	**Lhasa**	**41.66**	**276**	P	**P**	**16 23 00.8**	**+1.4**
LSA				AP	pP	16 23 16.4	+4.1
LSA				XS		16 29 38.8	
LSA				AMB	AMB		
	comp=Z,130nm,0.7s,mb5.7						
LSA				AMB	AMB		
	comp=Z,760nm,7.0s						
LSA				LR	LR		
	comp=N,880nm,20.0s,MS5.2						
LSA				LR	LR		
	comp=E,3μm,24.0s,MS5.2						
LSA				LR	LR		
	comp=Z,4μm,24.0s,MS5.2						
LSA	**Lhasa**	**41.66**	**276**	*e*P	**P**	**16 23 00.9**	**+1.5**
LSA				pmax	pmax		
	comp=Z,99nm,0.7s,mb5.5						
LSA				MLR	MLR		
	comp=Z,4μm,20.0s,MS5.2						
LSA	**Lhasa**	**41.66**	**276**	*e*P	**P**	**16 23 00.9**	**+1.5**
	comp=Z,99nm,0.7s,mb5.5						
LSA				LR	LR		
	comp=Z,4μm,20.0s,MS5.2						
ZAL	**Zalesovo**	**42.36**	**314**	P	**P**	**16 23 04.9**	**0.0**
ZAL				pmax	pmax		
	comp=Z,37nm,0.8s						
ZAL				MLR	MLR		
	comp=Z,2μm,21.7s						
ZAL	**Zalesovo**	**42.36**	**314**	P	**P**	**16 23 04.9**	**0.0**
	comp=Z,36nm,0.8s,mb5.1,baz=20,slow=8.2,SNR=214						
ZAL				LR	LR	16 41 27.2	
	comp=Z,2μm,21.7s,MS4.9,baz=20,slow=37						
SHL	**Shillong**	**42.70**	**270**	*e*x	x	16 23 26.8	
SHL				*e*x	x	16 29 24.3	
NVS	**Novosibirsk**	**43.31**	**315**	⇓*i*P	**P**	**16 23 11.1**	**-1.5**
NVS				*e*		16 24 54.2	
NVS				*e*S	**S**	**16 29 32.9**	**-3.3**
NVS				*e*SS	SS	16 33 06.7	+23
NVS				pmax	pmax		
	comp=N,25nm,1.0s						
NVS				pmax	pmax		
	comp=E,94nm,1.0s						
NVS				pmax	pmax		
	comp=Z,97nm,1.0s,mb5.5						
NVS				smax			
	comp=N,34nm,2.0s						
NVS				smax			
	comp=E,40nm,2.0s						
KSM	**Kuching**	**44.09**	**226**	*e*P	**P**	**16 23 17.8**	**-1.7**
MKAR	**Makanchi Array**	**44.28**	**303**	P	**P**	**16 23 20.4**	**-0.1**

MKAR				pmax	pmax		
	comp=Z,61nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,4µm,19.1s						
MKAR	**Makanchi Array**	**44.28**	**303**	P	**P**	**16 23 20.4**	**-0.2**
	comp=Z,61nm,0.7s,mb5.5,baz=89,slow=9.8,SNR=326						
MKAR				LR	LR	16 42 25.7	
	comp=Z,4µm,19.1s,MS5.4,baz=175,slow=37						
GUN	**Gumba**	**46.61**	**277**	*e*P	**P**	**16 23 39.4**	**+0.1**
	comp=Z,244nm,0.7s,mb6.2						
TTA	**Tatalina**	**46.96**	**34**	*e*P	**P**	**16 23 41.6**	**0.0**
SVW2	**Sparrevohn**	**47.05**	**37**	*e*P	**P**	**16 23 43.1**	**+0.8**
PKI	**Pulchoki**	**47.13**	**276**	*e*P	**P**	**16 23 42.9**	**-0.5**
	comp=Z,99nm,0.7s,mb5.9						
PKI	**Pulchoki**	**47.13**	**276**	*e*P	**P**	**16 23 42.9**	**-0.5**
PKI				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.5						
KKN	**Kakani**	**47.14**	**277**	*e*P	**P**	**16 23 43.1**	**-0.4**
	comp=Z,130nm,0.6s,mb6.1						
KKN	**Kakani**	**47.14**	**277**	*e*P	**P**	**16 23 43.1**	**-0.4**
KKN				pmax	pmax		
	comp=Z,65nm,0.6s,mb5.7						
DMN	**Daman**	**47.36**	**277**	*e*P	**P**	**16 23 44.8**	**-0.4**
	comp=Z,89nm,0.7s,mb5.8						
KULM	**Kulim**	**47.52**	**240**	*e*P	**P**	**16 23 45.0**	**-1.6**
GKN	**Gorkha**	**47.58**	**277**	*e*P	**P**	**16 23 46.5**	**-0.4**
	comp=Z,259nm,0.6s,mb6.4						
IPM	**Ipoh**	**47.75**	**239**	P	**P**	**16 23 47.5**	**-0.9**
KGM	**Kluang**	**48.05**	**234**	P	**P**	**16 23 50.1**	**-0.7**
IMA	**Indian Mountai**	**48.24**	**30**	P	**P**	**16 23 52.1**	**+0.6**
IMA				pmax	pmax		
	comp=Z,77nm,1.0s,mb5.7						
IMA	**Indian Mountai**	**48.24**	**30**	*e*P	**P**	**16 23 51.6**	**+0.1**
HNR	**Honiara**	**48.42**	**154**	LR	LR	16 42 08.8	
	comp=Z,1µm,21.3s,MS4.9,baz=324,slow=33						
RSO	**Redoubt South**	**48.43**	**37**	*e*P	**P**	**16 23 53.0**	**0.0**
KOLN	**Koldanda**	**48.51**	**277**	*e*P	**P**	**16 23 53.7**	**-0.4**
	comp=Z,228nm,0.8s,mb6.3						
KDAK	**Kodiak Island**	**48.60**	**41**	*e*P	**P**	**16 23 53.2**	**-1.2**
AAA	**Alma-Ata**	**48.65**	**299**	*e*P	**P**	**16 23 55.0**	**0.0**
AAA				*e*S	**S**	**16 31 05.0**	**+13**
AAA				pmax	pmax		
	comp=Z,1µm,6.0s						
AAA				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.4						
KAKA	**Kakadu**	**48.70**	**191**	⇑*i*P	**P**	**16 23 54.1**	**-1.6**
	comp=Z,116nm,0.9s,mb5.9						
SPU	**Mount Spurr**	**48.77**	**36**	*e*P	**P**	**16 23 55.6**	**0.0**
ULHL	**Ulahol**	**49.40**	**298**	P	**P**	**16 24 02.9**	**+2.1**
	SNR=6.8						
TKM2	**Tokmak 2**	**49.69**	**299**	P	**P**	**16 24 03.6**	**+0.6**
	SNR=143						
KZA	**Kyzart**	**50.16**	**298**	P	**P**	**16 24 07.9**	**+1.3**
	SNR=44						
PMR	**Palmer**	**50.16**	**36**	*e*P	**P**	**16 24 05.5**	**-0.9**
KBK	**Karagaybulak**	**50.22**	**299**	P	**P**	**16 24 07.4**	**+0.3**
	SNR=86						
CHMS	**Chumysh**	**50.27**	**300**	P	**P**	**16 24 07.2**	**-0.2**
	SNR=40						
KSH	**Kashi**	**50.35**	**295**	⇑*i*P	**P**	**16 24 09.0**	**+0.9**
KSH				AP	pP	16 24 21.6	+0.4
KSH				XP	sP	16 24 26.8	-0.1
KSH				PP	PP	16 26 06.3	+1.6
KSH				PPP	PPP	16 27 00.4	-2.1
KSH				S	**S**	**16 31 16.3**	**+0.1**
KSH				XS		16 31 36.5	
KSH				SCS	ScS	16 33 52.8	+1.1
KSH				SS	SS	16 34 43.6	-3.7
KSH				AMB	AMB		
	comp=Z,1µm,5.7s						
KSH				LR	LR		
	comp=N,3µm,15.0s,MS5.6						
KSH				LR	LR		
	comp=E,5µm,17.8s,MS5.6						
USP	**Ospenovka**	**50.38**	**300**	P	**P**	**16 24 08.0**	**-0.3**
	SNR=11						
FRU	**Bishkek**	**50.41**	**299**	*i* P	**P**	**16 24 08.5**	**0.0**
FRU				*e*		16 31 24.0	
FRU				pmax	pmax		
	comp=Z,140nm,2.0s,mb5.7						
FRU				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.5						
PTH	**Pithoragarh**	**50.51**	**281**	*e*P	**P**	**16 24 08.8**	**-0.7**
SML	**Sawmill**	**50.53**	**36**	P	**P**	**16 24 08.9**	**-0.3**
SML	**Sawmill**	**50.53**	**36**	*e*P	**P**	**16 24 08.2**	**-1.0**
AAK	**Ala-Archa**	**50.55**	**299**	P	**P**	**16 24 09.5**	**-0.1**
	SNR=18						
AAK	**Ala-Archa**	**50.55**	**299**	P	**P**	**16 24 09.4**	**-0.2**
AAK				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.2						
AAK	**Ala-Archa**	**50.55**	**299**	*e*P	**P**	**16 24 08.2**	**-1.4**
	comp=Z,37nm,0.7s,mb5.4						
AAK				LR	LR		
	comp=Z,1µm,21.0s,MS4.9						
UCH	**Uchtor**	**50.64**	**299**	P	**P**	**16 24 11.0**	**+0.7**
	SNR=27						
VOSK	**Vostochnaya**	**50.70**	**313**	P	**P**	**16 24 09.4**	**-1.2**
VOSK				pmax	pmax		
	comp=Z,76nm,0.8s,mb5.7						
VOSK	**Vostochnaya**	**50.70**	**313**	*i* P	**P**	**16 24 09.5**	**-1.1**
BVA0	**Borovoye Array**	**51.00**	**313**	P	**P**	**16 24 11.9**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,47nm,1.5s,mb5.2						
ILAR	**Eielson Array**	**51.04**	**32**	P	**P**	**16 24 11.9**	**-1.1**
ILAR				pmax	pmax		
	comp=Z,37nm,0.8s						
ILAR				MLR	MLR		
	comp=Z,698nm,20.1s						
ILAR	**Eielson Array**	**51.04**	**32**	P	**P**	**16 24 11.9**	**-1.1**
	comp=Z,37nm,0.8s,mb5.3,baz=271,slow=6.1,SNR=222						
ILAR				LR	LR	16 45 34.8	
	comp=Z,698nm,20.1s,MS4.7,baz=281,slow=36						
EKS2	**Erkin-Say**	**51.05**	**299**	P	**P**	**16 24 13.3**	**-0.1**
	SNR=34						
AML	**Almayashu**	**51.26**	**299**	P	**P**	**16 24 15.8**	**+0.8**
	SNR=139						
THY	**Trims Highway**	**51.62**	**33**	*e*P	**P**	**16 24 16.7**	**-0.7**
DIV	**Divide**	**51.81**	**36**	*e*P	**P**	**16 24 18.4**	**-0.4**
	comp=Z,155nm,1.0s,mb5.9						
ZRNK	**Zerenda**	**51.84**	**313**	P	**P**	**16 24 18.5**	**-0.7**
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZRNK	**Zerenda**	**51.84**	**313**	*e*P	**P**	**16 24 18.2**	**-1.0**
EYAK	**Cordova Ski Ar**	**51.88**	**37**	*e*P	**P**	**16 24 18.7**	**-0.7**
SMLA	**Simla**	**52.31**	**284**	*i* P	**P**	**16 24 19.6**	**-3.5**
SMLA				*i* S	**S**	**16 31 42.8**	**-0.6**
SDNR	**Sundarnagar**	**52.32**	**285**	*e*P	**P**	**16 24 22.2**	**-0.9**
MENT	**Mentasta**	**52.58**	**34**	*e*P	**P**	**16 24 24.9**	**+0.3**
BHK	**Bhakra**	**52.79**	**285**	*e*x	x	16 24 32.2	
THN	**Thein Dam**	**52.95**	**286**	*e*P	**P**	**16 24 26.0**	**-1.8**
KKAR	**Karatay Array**	**53.23**	**301**	P	**P**	**16 24 28.8**	**-0.9**
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
NDI	**New Delhi**	**53.26**	**282**	*e*P	**P**	**16 24 28.0**	**-2.2**
NDI				*e*x	x	16 32 04.5	
VIS	**Vishakhapatnam**	**53.43**	**266**	*i* P	**P**	**16 24 29.6**	**-2.0**
FITZ	**Fitzroy Crossi**	**55.28**	**197**	⇑*i*P	**P**	**16 24 44.0**	**-1.1**
	comp=Z,85nm,0.6s,mb6.0						
FITZ				*e*S	**S**	**16 32 21.7**	**-1.9**
WRAB	**Tennant Creek**	**55.58**	**187**	*e*P	**P**	**16 24 44.9**	**-2.3**
WRAB				pmax	pmax		
	comp=Z,420nm,1.4s,mb6.3						
WRAB				MLR	MLR		
	comp=Z,422nm,20.0s,MS4.5						
WRAB	**Tennant Creek**	**55.58**	**187**	*e*P	**P**	**16 24 44.9**	**-2.3**
	comp=Z,420nm,1.4s,mb6.3						
WRAB				LR	LR		
	comp=Z,422nm,20.0s,MS4.5						
WB2	**Warramunga Arr**	**55.59**	**187**	⇑*i*P	**P**	**16 24 45.1**	**-2.1**
WB2				*e*S	**S**	**16 32 26.8**	**-0.9**
WRA	**Warramunga Arr**	**55.59**	**187**	P	**P**	**16 24 45.2**	**-2.1**
WRA				pmax	pmax		
	comp=Z,28nm,0.4s						
WRA	**Warramunga Arr**	**55.59**	**187**	P	**P**	**16 24 45.2**	**-2.1**
	comp=Z,28nm,0.4s,mb5.7,baz=1.7,slow=7.6,SNR=117						
CTA	**Charters Tower**	**55.69**	**174**	*e*P	**P**	**16 24 46.3**	**-1.6**
	comp=Z,5.8nm,0.5s,mb4.9						
CTA				*e*S	**S**	**16 32 28.1**	**-0.8**
CTA	**Charters Tower**	**55.69**	**174**	*e*P	**P**	**16 24 46.3**	**-1.6**
CTA				*e*S	**S**	**16 32 28.1**	**-0.8**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CTAO	**Charters Tower**	**55.69**	**174**	*e*P	**P**	**16 24 46.3**	**-1.6**
CTAO				pmax	pmax		
	comp=Z,49nm,1.4s,mb5.3						
CTAO				MLR	MLR		
	comp=Z,858nm,22.0s,MS4.8						
CTAO	**Charters Tower**	**55.69**	**174**	*e*P	**P**	**16 24 46.3**	**-1.6**
	comp=Z,50nm,1.4s,mb5.3						
CTAO				LR	LR		
	comp=Z,858nm,22.0s,MS4.8						
SVE	**Sverdlovsk**	**55.74**	**319**	⇑*i*P	**P**	**16 24 47.2**	**-0.6**
SVE				*e*	pP	16 25 00.0	-1.2
SVE				*e*S	**S**	**16 32 30.0**	**+0.9**
SVE				*e*PS	PS	16 32 47.0	-0.7
SVE				*e*		16 34 24.0	
SVE				pmax	pmax		
	comp=Z,244nm,2.0s,mb5.9						
SVE				MLR	MLR		
	comp=N,1µm,16.0s,MS5.4						
SVE				MLR	MLR		
	comp=E,2µm,16.0s,MS5.4						
SVE				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.6						
INK	**Inuvik**	**55.94**	**27**	P	**P**	**16 24 48.5**	**-0.6**
INK				pmax	pmax		
	comp=Z,23nm,0.9s						
INK	**Inuvik**	**55.94**	**27**	LR	LR	16 53 01.8	
	comp=Z,601nm,18.5s,MS4.7,baz=277,slow=40						
INK	**Inuvik**	**55.94**	**27**	*e*P	**P**	**16 24 47.9**	**-1.2**
	comp=Z,23nm,0.9s,mb5.2						
AJM	**Ajmer**	**56.27**	**280**	*i* x	**P**	**16 24 56.0**	**+3.9**
ARU	**Arti**	**56.95**	**319**	⇑*i*P	**P**	**16 24 55.2**	**-1.3**
ARU				*i*		16 25 49.2	
ARU				*i* PPP	PPP	16 28 20.5	-4.2
ARU				*i* S	**S**	**16 32 48.7**	**+3.5**
ARU				*i*		16 34 37.4	
ARU				pmax	pmax		
	comp=Z,163nm,0.8s,mb6.1						
ARU				MLR	MLR		
	comp=N,900nm,17.0s,MS5.3						
ARU				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.4						
ARU				MLR	MLR		
	comp=E,2µm,16.0s,MS5.3						
ARU	**Arti**	**56.95**	**319**	*e*P	**P**	**16 24 55.0**	**-1.5**
	comp=E,183nm,0.8s,mb6.2						
ARU				LR	LR		
	comp=Z,634nm,19.0s,MS4.7						
SOKR	**Solikamsk**	**57.02**	**323**	*c* *i*P	**P**	**16 24 54.5**	**-2.4**
SOKR				*e*	pP	16 25 08.9	-1.5
SOKR				*i* SSS	SSS	16 38 53.9	+2.5
SOKR				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.6						
SOKR				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.5						
AB31	**Akbulak array**	**58.31**	**311**	P	**P**	**16 25 04.9**	**-1.2**
AB31				pmax	pmax		
	comp=Z,15nm,0.5s,mb5.3						
MDRS	**Chennai**	**58.43**	**263**	*e*x	**P**	**16 25 08.0**	**+0.6**
MDRS				*e*x	x	16 33 26.0	
LATR	**Latur**	**58.58**	**271**	*e*P	**P**	**16 25 06.6**	**-1.8**
MBWA	**Marble Bar**	**59.84**	**203**	*e*P	**P**	**16 25 14.6**	**-2.5**
	comp=Z,42nm,0.6s,mb5.6						
DLBC	**Dease Lake**	**60.15**	**37**	*e*P	**P**	**16 25 19.0**	**+0.2**
POO	**Poona**	**60.73**	**273**	⇑*i*P	**P**	**16 25 22.0**	**-1.2**
KAD	**Karad**	**61.09**	**271**	*e*P	**P**	**16 25 24.0**	**-1.7**
KBS	**Kingsbay**	**61.91**	**350**	P	**P**	**16 25 30.3**	**-0.1**
KBS				pmax	pmax		
	comp=Z,74nm,1.0s,mb5.8						
KBS	**Kingsbay**	**61.91**	**350**	*e*P	**P**	**16 25 28.7**	**-1.7**
	comp=Z,101nm,1.0s,mb5.9						
KBS				LR	LR		
	comp=Z,345µm,17.5s						
KBS	**Kingsbay**	**61.91**	**350**	*e*P	**P**	**16 25 28.7**	**-1.7**
KBS				AMb	AMB	16 25 31.5	
	comp=Z,101nm,1.0s,mb5.9						
KBS				*e*S	**S**	**16 33 50.2**	**+1.2**
KBS				AMS	AMS	16 56 03.4	
	comp=Z,345nm,17.5s,MS4.6						
NOUC	**Port Laguerre**	**62.40**	**153**	*e*P	**P**	**16 25 33.4**	**-1.0**
NOUC	**Port Laguerre**	**62.40**	**153**	*e*P	**P**	**16 25 33.4**	**-1.0**
DZM	**Mont Dzumac**	**62.42**	**153**	*e*P	**P**	**16 25 33.5**	**-1.0**
DZM	**Mont Dzumac**	**62.42**	**153**	*e*P	**P**	**16 25 33.5**	**-1.0**
HSP	**Hornsund**	**62.66**	**348**	⇓*e*P	**P**	**16 25 34.5**	**-0.9**
LVZ	**Lovozero**	**63.09**	**336**	*e*P	**P**	**16 25 33.8**	**-4.6**
LVZ				*e*S	**S**	**16 33 58.5**	**-5.5**
LVZ				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
LVZ				pmax	pmax		
	comp=N,7.0nm,1.4s						
LVZ				pmax	pmax		
	comp=E,10.0nm,1.1s						
LVZ				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.5						
LVZ				MLR	MLR		
	comp=N,570nm,19.0s,MS5.3						
LVZ				MLR	MLR		
	comp=E,2µm,19.0s,MS5.3						
APA	**Apatity**	**63.67**	**336**	⇓*i*P	**P**	**16 25 40.6**	**-1.5**
APA				*i*	pP	16 25 54.0	-1.7
APA				*i* S	**S**	**16 34 13.0**	**+1.9**
APA				*i* PS	PS	16 34 33.0	-3.9
APA				*i*		16 35 30.0	
APA				*e*SS	SS	16 38 14.0	-6.9
APA				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.6						
APA				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.5						
RES	**Resolute Bay**	**64.12**	**14**	P	**P**	**16 25 43.5**	**-1.4**
RES				pmax	pmax		
	comp=Z,52nm,1.0s,mb5.5						
RES	**Resolute Bay**	**64.12**	**14**	*e*P	**P**	**16 25 43.3**	**-1.6**
	comp=Z,52nm,1.0s,mb5.5						
PECR	**Pechory**	**64.50**	**322**	*e*P	**P**	**16 25 47.0**	**-0.6**
PECR				pmax	pmax		
	comp=Z,330nm,2.0s,mb6.0						
KEV	**Kevo**	**64.50**	**339**	*e*p	**P**	**16 25 45.7**	**-1.7**
	comp=Z,38nm,0.8s,mb5.5						
KEV	**Kevo**	**64.50**	**339**	P	**P**	**16 25 46.8**	**-0.6**
KEV				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.5						
ARCES	**ARCESS Array B**	**65.05**	**339**	P	**P**	**16 25 50.1**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,35nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,3µm,20.4s						
ARCES	**ARCESS Array B**	**65.05**	**339**	P	**P**	**16 25 50.0**	**-1.0**
	comp=Z,34nm,0.8s,mb5.5,baz=59,slow=7.1,SNR=78						
ARCES				LR	LR	16 57 26.2	
	comp=Z,3µm,20.4s,MS5.4,baz=56,slow=39						
ARE0	**ARCESS Array S**	**65.05**	**339**	*e*P	**P**	**16 25 50.6**	**-0.5**
YKW3	**Yellowknife Ar**	**65.32**	**30**	*e*P	**P**	**16 25 51.3**	**-1.5**
YKA	**Yellowknife Ar**	**65.36**	**30**	P	**P**	**16 25 51.9**	**-1.2**
YKA				pmax	pmax		
	comp=Z,11nm,0.9s						
YKA				MLR	MLR		
	comp=Z,453nm,21.0s						
YKA	**Yellowknife Ar**	**65.36**	**30**	P	**P**	**16 25 51.9**	**-1.2**
	comp=Z,11nm,0.9s,mb4.9,baz=298,slow=6.5,SNR=39						
YKA				LR	LR	16 53 32.9	
	comp=Z,453nm,21.0s,MS4.7,baz=295,slow=35						
YKA	**Yellowknife Ar**	**65.36**	**30**	P	**P**	**16 25 51.9**	**-1.2**
YKA				LR	LR	16 53 32.9	
AFI	**Afiamalu**	**66.79**	**129**	LR	LR	16 50 31.0	
	comp=Z,1µm,19.9s,MS5.1,baz=313,slow=32						
TRO	**Tromso**	**66.81**	**341**	*e*P	**P**	**16 26 00.0**	**-2.2**
TRO				pmax	pmax		
	comp=Z,56nm,1.3s,mb5.4						
TRO				MLR	MLR		
	comp=Z,1567µm,18.0s						
TRO	**Tromso**	**66.81**	**341**	*e*P	**P**	**16 26 00.0**	**-2.1**
TRO				AMb	AMB	16 26 17.0	
	comp=Z,56nm,1.3s,mb5.4						
TRO				*e*S	S	16 34 51.0	+1.6
TRO				*e*SS	SS	16 39 08.9	-0.8
TRO				AMS	AMS	17 01 12.8	
	comp=Z,2µm,18.0s,MS5.3						
DAG	**Danmarks Havn**	**67.10**	**355**	⇓*e*P	**P**	**16 26 03.5**	**-0.4**
DAG				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
DAG	**Danmarks Havn**	**67.10**	**355**	⇓*e*P	**P**	**16 26 03.5**	**-0.4**
	comp=Z,23nm,1.1s,mb5.1						
DAG	**Danmarks Havn**	**67.10**	**355**	⇓*i*P	**P**	**16 26 03.5**	**-0.4**
	comp=Z,23nm,1.1s,mb5.1						
FORT	**Forrest**	**67.10**	**192**	*e*P	**P**	**16 26 03.8**	**-0.9**
	comp=Z,111nm,0.6s,mb6.1						
STKA	**Stephens Creek**	**67.17**	**179**	⇑*i*P	**P**	**16 26 03.7**	**-1.4**
	comp=Z,7.9nm,0.5s,mb5.0						
STKA	**Stephens Creek**	**67.17**	**179**	P	**P**	**16 26 03.6**	**-1.5**
	comp=Z,11nm,0.6s,mb5.0,baz=13,slow=7.3,SNR=28						
STKA				LR	LR	16 55 55.8	
	comp=Z,904nm,21.1s,MS5.0,baz=9.9,slow=36						
PGC	**Sidney**	**67.81**	**45**	*e*P	**P**	**16 26 07.9**	**-0.9**
	comp=Z,23nm,0.8s,mb5.3						
OOW	**Octopus West**	**67.82**	**47**	P	**P**	**16 26 09.8**	**+1.0**
OCWA	**Octopus Mounta**	**67.82**	**47**	*e*P	**P**	**16 26 09.7**	**+0.8**
	comp=Z,52nm,1.4s,mb5.4						
MOS	**Moscow**	**67.95**	**324**	α *i*P	**P**	**16 26 09.3**	**-0.3**
MOS				*e*	pP	16 26 21.9	-1.4
MOS				*e*		16 26 35.6	
MOS				*e*		16 28 37.5	
MOS				*e*PPP	PPP	16 30 14.4	-4.5
MOS				*e*S	S	16 35 03.6	+0.2
MOS				pmax	pmax		
	comp=Z,400nm,2.0s,mb6.1						
MOS				pmax	pmax		
	comp=Z,169nm,1.7s,mb5.8						
MOS				smax			
	comp=N,1µm,5.0s						
MOS				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.6						
MOS	**Moscow**	**67.95**	**324**	⇑*i*P	**P**	**16 26 09.4**	**-0.2**
OSR	**Olympics--Salm**	**68.06**	**47**	P	**P**	**16 26 11.3**	**+0.9**
MAK	**Makhachkala**	**68.77**	**308**	*e*P	**P**	**16 26 11.0**	**-3.9**
MAK				*i*		16 26 36.2	
MAK				*e*PPP	PPP	16 30 22.0	-5.2
MAK				S	S	16 35 14.0	+0.6
MAK				*i* PS	PS	16 35 40.0	-5.3
MAK				*i*		16 36 05.0	
MAK				pmax	pmax		
	comp=Z,1µm,6.0s						
MAK				MLR	MLR		
	comp=N,2µm,14.0s						
MAK				MLR	MLR		
	comp=E,25µm,14.0s						
MAK				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.6						
OBN	**Obninsk**	**68.79**	**323**	*c* *i*P	**P**	**16 26 13.8**	**-1.0**
OBN				*e*		16 26 39.8	
OBN				*e*		16 28 52.2	
OBN				*e*S	S	16 35 16.4	+2.9
OBN				*e*SS	SS	16 39 44.5	+3.7
OBN				pmax	pmax		
	comp=Z,54nm,0.7s,mb5.6						
OBN				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.6						
OBN	**Obninsk**	**68.79**	**323**	*e*P	**P**	**16 26 12.5**	**-2.3**
	comp=Z,37nm,0.8s,mb5.4						
PUL	**Pulkovo**	**69.04**	**329**	*i* P	**P**	**16 26 16.7**	**+0.5**
KAF	**Kangasniemi**	**69.22**	**333**	*e*p	**P**	**16 26 16.2**	**-1.1**
	comp=Z,26nm,0.6s,mb5.3,baz=50,slow=5.9						
KAF	**Kangasniemi**	**69.22**	**333**	*e*P	**P**	**16 26 16.2**	**-1.1**
KAF				pmax	pmax		
	comp=Z,26nm,0.6s,mb5.3						
VOR	**Voronezh**	**69.23**	**319**	*e*P	**P**	**16 26 16.5**	**-1.1**
VOR				*e*	pP	16 26 29.5	-1.8
VOR				pmax	pmax		
	comp=Z,100nm,1.7s,mb5.5						
LOF	**Lofoten**	**69.26**	**341**	*e*P	**P**	**16 26 14.4**	**-3.1**
	comp=Z,48nm,1.5s,mb5.2						
LOF	**Lofoten**	**69.26**	**341**	*e*P	**P**	**16 26 14.4**	**-3.1**
LOF				AMb	AMB	16 26 24.7	
	comp=Z,48nm,1.5s,mb5.2						
TDL	**Tradedollar La**	**69.67**	**47**	P	**P**	**16 26 21.0**	**+0.6**
FINES	**FINESS Array B**	**69.72**	**332**	P	**P**	**16 26 19.3**	**-1.1**
FINES				pmax	pmax		
	comp=Z,27nm,0.7s						
FINES				MLR	MLR		
	comp=Z,1µm,18.3s						
FINES	**FINESS Array B**	**69.72**	**332**	P	**P**	**16 26 19.3**	**-1.1**
	comp=Z,27nm,0.7s,mb5.3,baz=46,slow=5.8,SNR=94						
FINES				LR	LR	16 59 06.6	
	comp=Z,1µm,18.3s,MS5.2,baz=176,slow=38						
MELSS	**Ber_school_2**	**70.13**	**340**	*e*P	**P**	**16 26 22.1**	**-0.6**
KLBR	**Kellerberrin**	**70.22**	**201**	*e*P	**P**	**16 26 22.3**	**-1.6**
	comp=Z,54nm,1.1s,mb5.4						
EBG	**Ellensburg**	**70.36**	**46**	P	**P**	**16 26 25.0**	**+0.5**
MOR8	**Moi Rana**	**70.42**	**340**	*e*P	**P**	**16 26 22.3**	**-2.2**
	comp=Z,115nm,1.1s,mb5.7						
MOR8	**Moi Rana**	**70.42**	**340**	*e*P	**P**	**16 26 22.3**	**-2.2**
MOR8				AMb	AMB	16 26 24.3	
	comp=Z,115nm,1.1s,mb5.7						
MOR8				*e*pP	pP	16 26 36.5	-1.9
MOR8				*e*sP	sP	16 26 42.4	-1.2
GOF	**Gofitskoye**	**70.51**	**312**	⇑*i*P	**P**	**16 26 23.5**	**-1.9**
GOF				pmax	pmax		
	comp=Z,60nm,0.7s,mb5.6						
WBK	**Wadi Bani Khal**	**70.61**	**284**	⇑P	**P**	**16 26 27.4**	**+0.9**
EPH	**Ephrata**	**70.70**	**45**	P	**P**	**16 26 26.2**	**-0.3**
BIDO	**Bidbid**	**70.81**	**286**	⇓P	**P**	**16 26 28.4**	**+0.8**
	SNR=18						
EDM	**Edmonton**	**70.87**	**38**	P	**P**	**16 26 27.2**	**-0.3**
EDM	**Edmonton**	**70.87**	**38**	*e*P	**P**	**16 26 26.7**	**-0.8**
DGRG	**David-gareji**	**70.89**	**308**	P	**P**	**16 26 27.6**	**-0.2**
HBO	**Huckleberry Mo**	**70.90**	**49**	P	**P**	**16 26 28.3**	**+0.5**
BANOM	**Banah**	**70.99**	**289**	⇑P	**P**	**16 26 29.0**	**+0.3**
	SNR=11						
DUS	**Dusheti**	**71.00**	**308**	P	**P**	**16 26 28.0**	**-0.5**
MUN	**Mundaring**	**71.04**	**202**	*e*P	**P**	**16 26 27.9**	**-1.0**
	comp=Z,6.5nm,0.6s,mb4.7						
MUN	**Mundaring**	**71.04**	**202**	*e*P	**P**	**16 26 27.9**	**-1.0**
MUN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
SMDO	**Samad**	**71.11**	**285**	⇓P	**P**	**16 26 30.8**	**+1.4**
	SNR=9.8						
HUMO	**Hull Mountain**	**71.14**	**51**	*e*P	**P**	**16 26 28.6**	**-0.7**
	comp=Z,7.1nm,1.0s,mb4.5						
MTA	**Mtatsminda**	**71.14**	**308**	P	**P**	**16 26 30.7**	**+1.4**
TI2	**Plekhanov**	**71.15**	**308**	*i* P	**P**	**16 26 28.4**	**-1.0**
TI2				*e*S	S	16 35 48.6	+7.4
ZEI	**Tsey**	**71.16**	**309**	*e*P	**P**	**16 26 27.3**	**-2.1**
ZEI				*i*		16 29 04.0	
ZEI				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
TBLG	**Delisi**	**71.16**	**308**	P	**P**	**16 26 30.1**	**+0.6**
GBL	**Gable Mountain**	**71.17**	**46**	P	**P**	**16 26 29.5**	**+0.1**
OD2	**Odessa Site #2**	**71.19**	**45**	P	**P**	**16 26 29.2**	**-0.3**
KIV	**Kislovodsk**	**71.29**	**311**	*c* *i*P	**P**	**16 26 30.1**	**-0.1**
KIV				*e*		16 26 50.4	
KIV				*e*		16 29 09.5	
KIV				*e*PPP	PPP	16 30 52.7	+0.6
KIV				*e*S	S	16 35 44.4	+1.6
KIV				*e*SS	SS	16 40 21.2	+1.6
KIV				pmax	pmax		
	comp=E,55nm,1.2s						
KIV				pmax	pmax		
	comp=Z,142nm,1.2s,mb5.8						
KIV				MLR	MLR		
	comp=N,652nm,16.0s,MS5.2						
KIV				MLR	MLR		
	comp=E,742nm,16.0s,MS5.2						
KIV				MLR	MLR		
	comp=Z,1µm,16.0s,MS5.2						
KIV	**Kislovodsk**	**71.29**	**311**	*e*P	**P**	**16 26 29.9**	**-0.3**
	comp=Z,104nm,0.8s,mb5.8						
VSU	**Vasula**	**71.30**	**329**	⇑*i*P	**P**	**16 26 29.1**	**-0.9**
JMIC	**Jan Mayen**	**71.39**	**350**	LR	LR	17 00 09.0	
	comp=Z,167nm,18.3s,MS4.3,baz=196,slow=38						
JMIC	**Jan Mayen**	**71.39**	**350**	*e*P	**P**	**16 26 31.6**	**+1.2**
JMIC				*e*S	S	16 35 48.4	+4.9
JMIC				AMS	AMS	17 03 57.7	
	comp=Z,344nm,18.2s,MS4.7						
HOQ	**Hoqain**	**71.41**	**286**	⇑P	**P**	**16 26 31.8**	**+0.6**
	SNR=11						
JMDO	**Jabal Madar**	**71.42**	**285**	⇑P	**P**	**16 26 32.0**	**+0.7**
	SNR=14						
ONI	**Oni**	**71.54**	**309**	P	**P**	**16 26 31.7**	**0.0**
VIPM	**Ingram Point**	**71.59**	**48**	P	**P**	**16 26 32.4**	**+0.4**
NEW	**Newport**	**71.62**	**43**	P	**P**	**16 26 31.8**	**-0.2**
NEW				pmax	pmax		
	comp=Z,16nm,1.0s						
NEW	**Newport**	**71.62**	**43**	P	**P**	**16 26 31.4**	**-0.7**
	comp=Z,13nm,0.8s,mb4.9,baz=314,slow=4.3,SNR=16						
NEW	**Newport**	**71.62**	**43**	*e*P	**P**	**16 26 31.5**	**-0.5**
	comp=Z,16nm,0.9s,mb5.0						
NEW				LR	LR		
	comp=Z,481nm,20.0s,MS4.8						
NWAO	**Narrogin (SRO)**	**71.62**	**201**	P	**P**	**16 26 31.6**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,38nm,0.9s						
NWAO	**Narrogin (SRO)**	**71.62**	**201**	*e*P	**P**	**16 26 31.1**	**-1.2**
	comp=Z,38nm,0.9s,mb5.3						
YBH	**Yreka Blue Hor**	**71.75**	**52**	P	**P**	**16 26 33.9**	**+0.9**
YBH				pmax	pmax		

	comp=Z,11nm,1.0s						
YBH	Yreka Blue Hor	71.75	52	P	P	16 26 33.1	+0.2
	comp=Z,9.3nm,0.9s,mb4.7,baz=298,slow=2.7,SNR=24						
YBH	Yreka Blue Hor	71.75	52	eP	P	16 26 33.5	+0.5
	comp=Z,11nm,1.0s,mb4.7						
ASHO	Ashiyiah	71.82	288	P	P	16 26 33.4	-0.2
	SNR=12						
BSY	Bisya	71.94	285	⇑P	P	16 26 35.2	+0.8
	SNR=18						
GNI	Garni	71.98	307	P	P	16 26 35.6	+1.3
GNI				pmax	pmax		
	comp=Z,63nm,0.9s						
GNI	Garni	71.98	307	eP	P	16 26 35.5	+1.1
	comp=Z,63nm,0.9s,mb5.5						
SUMG	Summit	72.07	360	eP	P	16 26 34.8	+0.4
	comp=Z,107nm,1.4s,mb5.6						
LHEM	Herd Peak	72.12	51	P	P	16 26 35.9	+0.7
ARQ	Araqi	72.16	286	⇑P	P	16 26 36.6	+0.9
	SNR=7.4						
NSS	Namsos	72.34	339	eP	P	16 26 33.1	-2.9
	comp=Z,55nm,1.2s,mb5.4						
NSS	Namsos	72.34	339	eP	P	16 26 33.1	-2.9
NSS				AMb	AMB	16 26 35.8	
	comp=Z,55nm,1.2s,mb5.4						
NSS				AMS	AMS	17 01 43.0	
	comp=Z,2μm,19.0s,MS5.4						
WDC	Whiskeytown Da	72.47	52	P	P	16 26 37.7	+0.5
WDC				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
WDC	Whiskeytown Da	72.47	52	eP	P	16 26 37.0	-0.3
	comp=Z,12nm,0.9s,mb4.8						
LASM	Arnica Sink	72.54	51	P	P	16 26 38.4	+0.8
LTIM	Timbered Crate	72.83	51	P	P	16 26 40.0	+0.7
TOO	Toolangi	72.99	176	eP	P	16 26 41.2	+0.9
	comp=Z,15nm,1.1s,mb4.8						
TOO	Toolangi	72.99	176	eP	P	16 26 41.2	+0.9
TOO				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
MOD	Modoc	73.18	50	eP	P	16 26 41.4	0.0
	comp=Z,8.8nm,0.8s,mb4.7						
MNK	Minsk	73.28	326	⇓eP	P	16 26 41.0	-0.7
SOC	Sochi	73.31	312	c iP	P	16 26 41.4	-0.7
SOC				e	pP	16 26 54.6	-1.3
SOC				i S	S	16 36 05.0	-0.8
SOC				e		16 36 52.9	
SOC				eSS	SS	16 40 50.4	-0.4
SOC				pmax	pmax		
	comp=Z,57nm,1.0s,mb5.5						
SOC				pmax	pmax		
	comp=N,15nm,0.5s						
SOC				pmax	pmax		
	comp=E,13nm,0.8s						
SOC				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.3						
SOC				MLR	MLR		
	comp=N,2μm,20.0s,MS5.4						
SOC				MLR	MLR		
	comp=E,1μm,20.0s,MS5.4						
BMO	Blue Mountains	73.39	47	eP	P	16 26 41.5	-1.0
	comp=E,11nm,0.9s,mb4.8						
TVAN	Van	73.72	306	i P	P	16 26 42.6	-2.0
ANN	Anapa	73.99	314	eP	P	16 26 43.4	-2.7
ANN				e*PP	pP	16 27 00.7	+0.8
ANN				e		16 29 30.9	
ANN				eS	S	16 36 13.6	+0.2
ANN				pmax	pmax		
	comp=Z,298nm,5.8s						
ANN				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.2						
ANN				MLR	MLR		
	comp=E,654nm,19.0s						
MSO	Missoula	74.20	43	eP	P	16 26 47.0	-0.3
	comp=E,11nm,1.0s,mb4.7						
BEKR	Beckwourth	74.26	52	eP	P	16 26 47.7	0.0
	comp=E,21nm,0.8s,mb5.1						
ERZM	Erzurum	74.30	308	i P	P	16 26 46.4	-1.5
CHMT	Chamberlain Mo	74.54	43	eP	P	16 26 48.9	-0.3
WCN	Washoe City	74.96	52	P	P	16 26 52.6	+0.8
WCN				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.0						
WCN	Washoe City	74.96	52	eP	P	16 26 52.2	+0.5
	comp=Z,26nm,1.3s,mb5.0						
AKASG	Malin Array Be	74.97	322	P	P	16 26 50.7	-0.9
AKASG				pmax	pmax		
	comp=Z,33nm,0.6s						
AKASG	Malin Array Be	74.97	322	P	P	16 26 50.7	-0.8
	comp=Z,33nm,0.6s,mb5.5,baz=47,slow=6.2,SNR=141						
AKASG	Malin Array Be	74.97	322	P	P	16 26 50.7	-0.8
DOMB	Dombas	75.09	339	eP	P	16 26 51.6	-0.4
	comp=Z,72nm,1.4s,mb5.4						
DOMB	Dombas	75.09	339	eP	P	16 26 51.6	-0.4
DOMB				AMb	AMB	16 26 53.4	
	comp=Z,72nm,1.4s,mb5.4						
DOMB				epP	pP	16 27 06.3	+0.4
NB2	NORSAR Subarra	75.20	337	P	P	16 26 52.2	-0.5
	comp=Z,37nm,0.6s,mb5.5,baz=41,slow=5.6						
NB2	NORSAR Subarra	75.20	337	P	P	16 26 52.2	-0.5
	baz=41,slow=5.9						
NOA	NORSAR Array B	75.20	337	P	P	16 26 52.2	-0.5
NOA				pmax	pmax		
	comp=Z,48nm,0.9s						
NOA				MLR	MLR		
	comp=Z,2μm,19.3s						
NOA	NORSAR Array B	75.20	337	P	P	16 26 52.2	-0.5
	comp=Z,48nm,0.8s,mb5.5,baz=39,slow=5.7,SNR=137						
NOA				LR	LR	17 02 47.6	
	comp=Z,2μm,19.3s,MS5.4,baz=30,slow=38						
NOA	NORSAR Array B	75.20	337	P	P	16 26 52.2	-0.5
NOA				LR	LR	17 02 47.6	
CMB	Columbia Colle	75.25	54	P	P	16 26 53.7	+0.2
CMB				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
CMB	Columbia Colle	75.25	54	eP	P	16 26 53.3	-0.1
	comp=Z,12nm,0.6s,mb5.0						
CMB				LR	LR		
	comp=Z,1μm,22.0s,MS5.1						
FFC	Flin Flon	75.25	32	P	P	16 26 52.9	-0.2
FFC				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.2						
FFC	Flin Flon	75.25	32	eP	P	16 26 52.8	-0.4
	comp=Z,27nm,0.8s,mb5.2						
HRY	Holter Researc	75.45	43	eP	P	16 26 54.7	+0.3
NAO01	NORSAR Array S	75.45	337	eP	P	16 26 53.2	-0.9
	comp=Z,28nm,0.8s,mb5.2						
FCC	Fort Churchill	75.56	26	P	P	16 26 54.3	-0.5
FCC				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.3						
FCC	Fort Churchill	75.56	26	eP	P	16 26 53.7	-1.1
	comp=Z,42nm,1.0s,mb5.3						
SUW	Suwalki	75.68	327	eP	P	16 26 54.8	-0.8
SUW				e	pP	16 27 08.1	-1.4
SUW				eS	S	16 36 35.8	+3.8
SUW				pmax	pmax		
	comp=Z,400nm,2.6s,mb5.9						
SUW				MLR	MLR		
	comp=Z,2μm,19.8s,MS5.3						
SUW	Suwalki	75.68	327	eP	P	16 26 54.8	-0.8
	comp=Z,400nm,2.6s,mb5.9						
SUW				ePcP	PcP	16 27 08.1	-0.5
SUW				eS	S	16 36 35.8	+3.8
SUW				MLR	MLR	17 02 45.0	
	comp=Z,2μm,19.8s,MS5.3						
SIM	Simferopol’	75.83	315	c iP	P	16 26 57.0	+0.4
SIM				e	pP	16 27 10.0	-0.5
SIM				eS	S	16 36 38.0	+4.2
SIM				pmax	pmax		
	comp=Z,65nm,0.8s,mb5.6						
SIM				MLR	MLR		
	comp=Z,1μm,18.0s,MS5.3						
SIM	Simferopol’	75.83	315	⇑iP	P	16 26 56.1	-0.5
HLID	Hailey	75.83	46	eP	P	16 26 56.9	+0.2
	comp=Z,12nm,1.1s,mb4.7						
HLID				LR	LR		
	comp=Z,531nm,22.0s,MS4.8						
BHD	Baghdad	75.91	301	eP	P	16 26 55.0	-2.3
BMN	Battle Mountai	75.93	50	P	P	16 26 58.4	+1.1
BMN				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
BMN	Battle Mountai	75.93	50	eP	P	16 26 58.3	+1.0
	comp=Z,13nm,0.8s,mb4.9						
MCMT	McKenzie Canyo	76.00	45	eP	P	16 26 57.4	-0.2
BOZ	Bozeman (W)	76.20	43	P	P	16 26 59.2	+0.5
BOZ				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
BOZ	Bozeman (W)	76.20	43	eP	P	16 26 59.0	+0.3
	comp=Z,26nm,0.9s,mb5.2						
NVAR	Mina Array Bea	76.39	52	P	P	16 27 00.6	+0.6
	comp=Z,10nm,0.6s,mb4.9,baz=293,slow=4.9,SNR=88						
NVAR				LR	LR	16 57 04.9	
	comp=Z,361nm,20.0s,MS4.7,baz=285,slow=33						
OMM	Old Mammoth Mi	76.40	53	eP	P	16 27 00.7	+0.7
HASS	Wahat al Ahsa’	76.44	291	P	P	16 27 00.6	+0.2
ELZG	Elazig	76.62	308	i P	P	16 26 59.8	-1.4
KONO	Kongsberg	76.78	337	P	P	16 27 01.4	-0.3
KONO				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
KONO	Kongsberg	76.78	337	eP	P	16 27 01.3	-0.4
	comp=Z,14nm,0.8s,mb4.9						
QLMT	Earthquake Lak	76.80	44	eP	P	16 27 02.0	-0.1
MTUM	Tungsten Hills	76.83	53	eP	P	16 27 02.5	+0.1
ELK	Elko	76.98	49	P	P	16 27 04.1	+0.9
ELK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ELK	Elko	76.98	49	eP	P	16 27 03.8	+0.5
	comp=Z,9.3nm,0.7s,mb4.8						
MALT	Malatya	77.08	308	P	P	16 27 04.9	+1.1
MALT				pmax	pmax		
	comp=Z,48nm,1.2s,mb5.3						
MALT	Malatya	77.08	308	eP	P	16 27 04.7	+0.8
	comp=Z,48nm,1.2s,mb5.3						
RBK	Rabkut	77.12	282	⇑P	P	16 27 03.8	-0.6
	SNR=6.6						
YMR	Madison River	77.17	44	eP	P	16 27 05.2	+1.0
GCMT	Greycliff	77.20	42	eP	P	16 27 05.2	+0.8
WHFO	Wadi Hawf	77.23	283	⇑P	P	16 27 04.2	-0.8
	SNR=14						
TPH	Tonopah	77.29	52	P	P	16 27 05.8	+0.8
TPH				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
TPH	Tonopah	77.29	52	eP	P	16 27 05.6	+0.6
	comp=Z,27nm,1.1s,mb5.1						
YNR	Norris Junctio	77.30	44	eP	P	16 27 07.0	+2.1
SFJD	Kangerlussuaq	77.33	4	⇑iP	P	16 27 04.7	+0.1
SFJD				i	pP	16 27 18.2	-0.3
SFJD				i S	S	16 36 47.8	-1.9
SFJD				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.2						
SFJD				MLR	MLR		
	comp=Z,590nm,21.0s,MS4.9						
SFJD	Kangerlussuaq	77.33	4	⇑iP	P	16 27 04.7	+0.1
	comp=Z,27nm,0.9s,mb5.2						
SFJD				i	pP	16 27 18.2	-0.3
SFJD				i S	S	16 36 47.8	-1.9
	comp=Z,590nm,21.0s						
YFT	Old Faithful	77.37	44	eP	P	16 27 07.3	+2.0
BOYT	Boyabat	77.46	312	i P	P	16 27 04.6	-1.3
KIS	Kishinev	77.50	319	eP	P	16 27 04.0	-2.0
KIS				e	pP	16 27 18.0	-1.9
KIS				e		16 30 00.0	
KIS				eS	S	16 36 50.0	-1.9
KIS				ePS	PS	16 37 12.0	-26
KIS				MLR	MLR		
	comp=Z,4μm,16.0s,MS5.8						
KIS				MLR	MLR		
	comp=N,2μm,15.0s,MS5.7						
KIS				MLR	MLR		
	comp=E,2μm,15.0s,MS5.7						
KIS				MLR	MLR		
	comp=Z,4μm,16.0s						
BER	Bergen	77.51	339	eS	S	16 36 53.4	+1.7
BER				eSS	SS	16 41 52.9	-1.4
BER				AMS	AMS	17 04 40.0	
	comp=Z,2μm,18.9s,MS5.5						
IMW	Indian Meadow	77.65	45	eP	P	16 27 08.3	+1.4
	comp=Z,29nm,1.0s,mb5.2						
RRI2	Red Ridge	77.77	45	eP	P	16 27 08.8	+1.2
	comp=Z,24nm,1.1s,mb5.0						
WAR	Warsaw	77.84	327	eP	P	16 27 08.6	+0.8
WAR				epP	pP	16 27 22.9	+1.3
WAR				eS	S	16 36 54.7	-0.8
WAR				MLR	MLR	17 02 14.1	
	comp=Z,2μm,24.7s,MS5.2						
HVU	Hansel Valley	77.86	47	P	P	16 27 09.1	+1.0
HVU	Hansel Valley	77.86	47	eP	P	16 27 08.7	+0.6
TPAW	Teton Pass	77.89	45	eP	P	16 27 09.3	+1.1
	comp=Z,16nm,0.9s,mb5.0						
ABTO	Aybut	77.92	283	⇑P	P	16 27 08.4	-0.4
	SNR=6.5						
LOHW	Long Hollow	78.02	45	eP	P	16 27 09.3	+0.5
	comp=Z,8.9nm,0.9s,mb4.7						
SNOW	Snow King Moun	78.02	45	eP	P	16 27 10.2	+1.3
	comp=Z,17nm,0.9s,mb5.0						
REDW	Red Top Meadow	78.03	45	eP	P	16 27 09.8	+0.9
	comp=Z,20nm,1.1s,mb5.0						
LVV	L’vov	78.09	324	eP	P	16 27 09.1	0.0
LVV				e	pP	16 27 20.3	-2.8
LVV				eS	S	16 36 58.3	+0.1
LVV				i		16 37 17.7	
LVV				ePS	PS	16 37 51.7	+5.7
LVV				MLR	MLR		
	comp=Z,2μm,18.0s,MS5.4						
LVV				MLR	MLR		
	comp=N,980nm,19.0s,MS5.3						
LVV				MLR	MLR		
	comp=E,810nm,17.0s,MS5.3						
TRCR	Troy Canyon	78.17	51	eP	P	16 27 10.7	+0.8
AHID	Auburn Hatcher	78.25	46	eP	P	16 27 10.5	+0.3
	comp=E,11nm,0.9s,mb4.8						
BALT	Daday	78.30	313	i P	P	16 27 07.5	-3.0
BSD	Bornholm Skovb	78.34	332	⇓iP	P	16 27 10.5	+0.1
BSD				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.6						
BSD	Bornholm Skovb	78.34	332	⇓iP	P	16 27 10.5	+0.1
	comp=Z,59nm,0.8s,mb5.6						
DGMT	Dagmar	78.36	38	eP	P	16 27 10.6	-0.1
	comp=Z,31nm,1.0s,mb5.2						
LAO	LASA Array	78.49	40	eP	P	16 27 11.8	+0.5
	comp=Z,25nm,0.8s,mb5.2						
HWUT	Hardware Ranch	78.69	47	eP	P	16 27 13.0	+0.4
	comp=Z,24nm,1.0s,mb5.1						
COP	Copenhagen	78.85	333	⇑iP	P	16 27 13.0	-0.2
COP				i	pP	16 27 27.0	-0.1
COP				i S	S	16 37 05.5	-0.7
COP				MLR	MLR		
	comp=Z,730nm,19.0s,MS5.0						
COP	Copenhagen	78.85	333	⇑iP	P	16 27 13.0	-0.2
COP				i	pP	16 27 27.0	-0.1
COP				i		16 30 02.5	
COP				i S	S	16 37 05.5	-0.7
	comp=Z,720nm,19.0s						
KWP	Kalwaria	78.85	324	eP	P	16 27 13.6	+0.3
KWP				e*PP	pP	16 27 27.1	-0.2
KWP				eS	S	16 37 07.5	+1.2
KWP				pmax	pmax		
	comp=Z,600nm,2.8s,mb6.0						
KWP				MLR	MLR		
	comp=Z,2μm,16.6s,MS5.6						
KWP	Kalwaria	78.85	324	eP	P	16 27 13.6	+0.3
	comp=Z,600nm,2.8s,mb6.0						
KWP				epP	pP	16 27 27.1	-0.2
KWP				eS	S	16 37 07.5	+1.2
KWP				MLR	MLR	17 05 15.3	
	comp=Z,2μm,16.6s,MS5.6						
CDAG	Cicekdag	78.86	311	i P	P	16 27 08.4	-5.2
ELDT	Eldivan	78.91	312	i P	P	16 27 12.3	-1.6
NOQ	North Oquirrh	78.94	48	eP	P	16 27 14.9	+0.9
BURAR	Bucovina Array	78.97	321	⇑P	P	16 27 14.0	0.0
CFR	Carcaliu	79.02	318	⇓iP	P	16 27 14.7	+0.3
AVNT	Avonos	79.07	310	i P	P	16 27 11.3	-3.5
TCUT	Toone Canyon	79.08	47	eP	P	16 27 15.6	+0.8
CTU	Camp Tracy	79.14	48	eP	P	16 27 15.7	+0.6
BW06	Boulder Array	79.14	45	eP	P	16 27 15.0	-0.1
	comp=Z,9.9nm,0.6s,mb4.9						
BW06				LR	LR		
	comp=Z,649nm,21.0s,MS4.9						
PDAR	Pinedale Array	79.14	45	P	P	16 27 15.3	+0.3
	comp=Z,9.5nm,0.6s,mb4.9,baz=301,slow=2.7,SNR=51						
PDAR				LR	LR	16 57 06.0	
	comp=Z,442nm,21.3s,MS4.8,baz=316,slow=32						
BRTR	Keskin Array B	79.25	311	P	P	16 27 16.4	+0.7
BRTR				pmax	pmax		
	comp=Z,16nm,0.7s						
BRTR	Keskin Array B	79.25	311	P	P	16 27 16.4	+0.6
	comp=Z,16nm,0.7s,mb5.0,baz=110,slow=4.0,SNR=66						
RYDS	Riyadh	79.30	292	P	P	16 27 14.3	-2.0
TIRR	Tirgusor	79.33	318	⇑P	P	16 27 16.9	+0.8
VRI	Vrincioaia	79.33	319	⇓iP	P	16 27 16.9	+0.9
JLU	Jordanelle	79.37	47	eP	P	16 27 16.5	+0.1
RGN	Rugen	79.38	332	eP	P	16 27 15.8	-0.3
NLU	North Lily Min	79.39	48	eP	P	16 27 16.9	+0.4
MUD	Monsted U’grnd	79.42	335	⇑iP	P	16 27 16.1	-0.2
MUD				i		16 30 13.9	
MUD				eS	S	16 37 14.9	+2.7
MUD				i		16 42 26.4	
MUD				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
MUD				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.4						
MUD	Monsted U’grnd	79.42	335	⇑iP	P	16 27 16.1	-0.2
	comp=Z,30nm,0.9s,mb5.2						
MUD				i		16 30 13.9	
MUD				eS	S	16 37 14.9	+2.7
MUD				i		16 42 26.4	
	comp=Z,2μm,20.0s						
KOLS	Kolonicke sedl	79.54	324	eP	P	16 27 17.3	+0.2
KOLS				esP	sP	16 27 36.9	+0.5
DAU	Daniels Canyon	79.61	48	eP	P	16 27 18.7	+1.1
MPU	Maple Canyon	79.62	48	eP	P	16 27 18.2	+0.4
SGKT	Sivrigoynuk	79.69	313	i P	P	16 27 09.4	-8.7
OJC	Ojcow	79.80	326	⇑iP	P	16 27 18.5	0.0
OJC				ePP	PP	16 30 19.1	-2.4
OJC				eS	S	16 37 15.5	-0.8
OJC				MLR	MLR	17 05 16.0	
	comp=Z,2μm,19.5s,MS5.4						
ARUT	Antelope Range	79.86	51	eP	P	16 27 19.7	+0.6
MLR	Muntele Rosu	79.99	320	⇓iP	P	16 27 20.3	+0.7
NIE	Niedzica	80.13	325	eP	P	16 27 21.4	+1.2
MVU	Marysvale	80.20	50	eP	P	16 27 22.1	+1.3
	comp=Z,11nm,0.9s,mb4.8						
MSU	Marysvale	80.21	49	P	P	16 27 21.5	+0.6
MSU	Marysvale	80.21	49	eP	P	16 27 21.3	+0.4
NEN	Nelson	80.25	53	eP	P	16 27 21.4	+0.2
TMUT	Trail Mountain	80.33	48	eP	P	16 27 22.5	+1.0
PFO	Pinyon Flat Ob	80.40	56	P	P	16 27 22.1	+0.1
PFO				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
PFO	Pinyon Flat Ob	80.40	56	eP	P	16 27 21.9	-0.1
	comp=Z,14nm,0.8s,mb5.0						
MZLS	Mizel	80.47	293	P	P	16 27 22.9	+0.4
VOIR		80.50	320	⇑P	P	16 27 23.4	+1.1
RAC	Raciborz	80.63	327	eP	P	16 27 23.3	+0.4
RAC				eS	S	16 37 33.0	+8.1
RAC				MLR	MLR	17 06 59.0	
	comp=Z,3μm,16.8s,MS5.7						
KECS	Kecovo	80.70	324	eP	P	16 27 24.1	+0.8
BAR	Barrett	80.81	56	eP	P	16 27 24.1	-0.1
OKC	Ostrava-Krasne	80.83	326	eP	P	16 27 24.7	+0.8
OKC				e*PP	pP	16 27 38.5	+0.6
OKC				eS	S	16 37 24.2	-2.8
OKC				MLR	MLR		
	comp=Z,2μm,15.8s,MS5.6						
OKC	Ostrava-Krasne	80.83	326	eP	P	16 27 24.7	+0.8
OKC				epP	pP	16 27 38.5	+0.6
OKC				ex	x	16 30 38.6	
OKC				eS	S	16 37 24.2	-2.8
OKC				AMS	AMS	17 07 00.0	
	comp=Z,2μm,15.8s						
MEST	Erdemli	80.84	309	i P	P	16 27 21.9	-2.5
SRU	San Rafael	80.86	48	P	P	16 27 24.9	+0.6
SRU	San Rafael	80.86	48	eP	P	16 27 24.8	+0.5
KSP	Ksiaz	80.91	328	⇑eP	P	16 27 24.5	+0.1
KSP				e*PP	pP	16 27 38.1	-0.3
KSP				e		16 30 25.5	
KSP				eS	S	16 37 26.0	-1.9
KSP				eSS	SS	16 42 41.0	-4.6
KSP				MLR	MLR		
	comp=Z,4μm,20.3s,MS5.7						
KSP	Ksiaz	80.91	328	⇑eP	P	16 27 24.5	+0.1
KSP				epP	pP	16 27 38.1	-0.3
KSP				ePP	PP	16 30 25.5	-5.8
KSP				eS	S	16 37 26.0	-1.9
KSP				eScS	ScS	16 37 47.5	+3.0
KSP				eSS	SS	16 42 41.0	-4.6
KSP				LR	LR		
	comp=Z,4μm,20.3s,MS5.7						
KSP	Ksiaz	80.91	328	eP	P	16 27 24.7	+0.3
	comp=Z,600nm,3.6s						
KSP				ePcP	PcP	16 27 30.1	-1.0
KSP				epP	pP	16 27 38.4	0.0
KSP				eS	S	16 37 28.5	+0.7
KSP				eSKS	SKS	16 37 37.0	+2.9
KSP				MLR	MLR	17 06 12.2	
	comp=Z,3μm,20.4s,MS5.7						
KDHN	Kadinhani	80.92	311	i P	P	16 27 17.1	-7.6
BSEG	Bad Segeberg	80.98	333	eP	P	16 27 24.3	-0.4
BSEG				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4						
ULM	Lac du Bonnet	81.05	33	P	P	16 27 23.7	-1.4
	comp=Z,12nm,0.9s,mb4.9,baz=305,slow=6.3,SNR=12						
ULM				LR	LR	17 01 09.9	
	comp=Z,444nm,21.7s,MS4.8,baz=165,slow=34						
ULM	Lac du Bonnet	81.05	33	eP	P	16 27 23.9	-1.2
	comp=Z,10nm,0.7s,mb4.9						
HILS	Ha’il	81.08	297	P	P	16 27 26.0	+0.3
MORC	Moravsky Berou	81.14	327	P	P	16 27 25.8	+0.2
MORC				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
MORC	Moravsky Berou	81.14	327	eP	P	16 27 25.5	-0.1
	comp=Z,32nm,1.1s,mb5.2						
RWWY	Rawlins	81.17	45	eP	P	16 27 26.2	+0.3
	comp=Z,18nm,0.8s,mb5.1						
DPC	Dobruska-Polom	81.26	328	eP	P	16 27 26.6	+0.4
DPC				epP	pP	16 27 41.2	+1.0
DPC				ePP	PP	16 30 30.2	-3.9
DPC				eS	S	16 37 32.4	+0.9
DPC				AMS	AMS	17 07 20.0	
	comp=Z,2μm,18.8s						
UPC	Upice	81.28	328	eP	P	16 27 27.2	+0.9
UPC				epP	pP	16 27 41.0	+0.7
UPC				ePP	PP	16 30 31.6	-2.7
PSZ	Piszkesteto	81.38	324	P	P	16 27 27.3	+0.4
PSZ				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.3						
PSZ	Piszkesteto	81.38	324	eP	P	16 27 27.1	+0.2
	comp=Z,43nm,1.1s,mb5.3						
PSZ	Piszkesteto	81.38	324	⇓eP	P	16 27 27.9	+1.0
SZH	Strazhica	81.47	318	eP	P	16 27 28.0	+0.6
VYHS	Vyhne	81.47	325	eP	P	16 27 27.5	+0.2
VYHS				e	pP	16 27 41.9	+0.5
VYHS				eS	S	16 37 34.0	+0.3
VYHS	Vyhne	81.47	325	eP	P	16 27 27.5	+0.2
VYHS				epP	pP	16 27 41.9	+0.5
VYHS				ePP	PP	16 30 16.7	-19
VYHS				eS	S	16 37 34.0	+0.3
ERMK	Ermenek	81.59	309	i P	P	16 27 23.8	-4.5
ULDT	Uludag	81.69	314	i P	P	16 27 25.7	-3.0
PVCC	Panska Ves	81.89	329	eP	P	16 27 30.7	+1.3
PVCC				epP	pP	16 27 44.3	+0.8
PVCC				ePP	PP	16 30 36.8	-2.3
PVCC				AMS	AMS	17 06 30.0	
	comp=Z,2μm,18.5s						
BRG	Berggiesshubel	81.89	329	i P	P	16 27 29.4	-0.1
BRG				i	pP	16 27 44.0	+0.5
BRG				i		16 30 37.7	
BRG				S	S	16 37 41.0	+3.1
BRG				SS	SS	16 42 56.0	-4.2
BRG				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.1						
BRG				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.2						
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
BRG				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
BRG				MLR	MLR		
	comp=E,537nm,15.4s,MS5.6						
BRG				MLR	MLR		
	comp=Z,2μm,14.8s,MS5.5						
BRG				MLR	MLR		
	comp=N,2μm,15.4s,MS5.6						
BRG	Berggiesshubel	81.89	329	i P	P	16 27 29.4	0.0
	comp=N,29nm,1.1s,mb5.1						
BRG				i	pP	16 27 44.0	+0.5
BRG				PP	PP	16 30 30.6	-8.5
BRG				i		16 30 37.7	
BRG				S	S	16 37 41.0	+3.1
BRG				SS	SS	16 42 56.0	-4.2
BRG				LR	LR		
	comp=Z,2μm,14.8s,MS5.5						
CLL	Collm	81.95	330	⇓iP	P	16 27 30.3	+0.5
CLL				i *PP	pP	16 27 44.0	+0.2
CLL				eS	S	16 37 37.0	-1.5
CLL				pmax	pmax		
	comp=Z,61nm,0.9s,mb5.5						

CLL				MLR	MLR		
	comp=Z,2µm,18.2s,MS5.5						
CLL	**Collm**	**81.95**	**330**	⇓*i*P	**P**	**16 27 30.3**	**+0.5**
	comp=Z,61nm,0.9s,mb5.5						
CLL				*i* pP	pP	16 27 44.0	+0.2
CLL				*e*S	S	16 37 37.0	-1.5
CLL				LR	LR		
	comp=Z,2µm,18.2s,MS5.5						
CLL	**Collm**	**81.95**	**330**	⇓P	**P**	**16 27 30.3**	**+0.5**
	comp=Z,logA/T=1.8,mb5.5						
CLL				*i* *PP	pP	16 27 44.0	+0.2
CLL				*e**SP	sP	16 27 50.0	+0.9
CLL				*e*		16 28 06.0	
CLL				*i* PP	PP	16 30 37.7	-1.9
CLL				*e**SPP		16 30 55.0	
CLL				*e*PPP	PPP	16 32 24.0	-7.8
CLL				*e*S	S	16 37 37.0	-1.5
CLL				*e*SCS	ScS	16 37 53.0	0.0
CLL				*e*SS	SS	16 42 56.0	-5.1
SMOL	**Smolenice**	**82.11**	**326**	*e*P	**P**	**16 27 31.4**	**+0.8**
SMOL				*e*pP	pP	16 27 45.2	+0.5
BZS	**Buzias**	**82.15**	**322**	⇑P	**P**	**16 27 30.8**	**-0.1**
MVH1	**Achvaich**	**82.20**	**342**	*e*P	**P**	**16 27 30.3**	**-0.6**
PV10	**Paradox Valley**	**82.22**	**48**	*e*P	**P**	**16 27 32.8**	**+1.4**
MCD	**Coleburn Disti**	**82.26**	**341**	*e*P	**P**	**16 27 31.4**	**+0.2**
PRU	**Pruhonice**	**82.30**	**328**	*e*P	**P**	**16 27 32.7**	**+1.1**
PRU				*e*pP	pP	16 27 46.4	+0.8
PRU				*e*PP	PP	16 30 39.3	-3.2
PRU				*e*S	S	16 37 43.2	+1.1
PRU				AMS	AMS	17 08 40.0	
	comp=Z,2µm,14.0s						
TKTP	**Tekketepe**	**82.32**	**312**	*i* P	**P**	**16 27 23.8**	**-8.2**
ISP	**Isparta**	**82.33**	**311**	P	**P**	**16 27 32.6**	**+0.6**
ISP				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
ISP	**Isparta**	**82.33**	**311**	*e*P	**P**	**16 27 31.1**	**-0.9**
	comp=Z,15nm,0.8s,mb5.0						
CSS	**Prodhromos**	**82.36**	**308**	*e*P	**P**	**16 27 32.4**	**+0.1**
	comp=Z,31nm,0.7s,mb5.3						
PHWY	**Pilot Hill**	**82.42**	**44**	P	**P**	**16 27 31.0**	**-1.4**
ZST	**Bratislava**	**82.49**	**326**	*e*P	**P**	**16 27 33.9**	**+1.3**
ZST				*e*pP	pP	16 27 47.7	+1.1
ZST				*e*PP	PP	16 30 38.6	-5.4
ZST				*e*S	S	16 37 46.1	+2.1
CLZ	**Clausthal**	**82.59**	**331**	*e*P	**P**	**16 27 33.2**	**+0.2**
CLZ				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
CLZ	**Clausthal**	**82.59**	**331**	*e*P	**P**	**16 27 33.2**	**+0.2**
	comp=Z,50nm,1.0s,mb5.5						
PV01	**Paradox Valley**	**82.66**	**48**	*e*P	**P**	**16 27 33.9**	**+0.2**
MDO	**Dochfour**	**82.67**	**342**	*e*P	**P**	**16 27 33.1**	**-0.2**
KDZ	**Kurdzhali**	**82.83**	**317**	*e*P	**P**	**16 27 36.0**	**+1.5**
PGB	**Panagyurishte**	**82.91**	**318**	*e*P	**P**	**16 27 36.0**	**+1.1**
NKC	**Novy Kostel**	**83.00**	**329**	*e*P	**P**	**16 27 36.0**	**+0.9**
NKC				*e**PP	pP	16 27 49.8	+0.6
NKC				*e*		16 30 46.2	
NKC				MLR	MLR		
	comp=Z,2µm,16.5s,MS5.6						
NKC	**Novy Kostel**	**83.00**	**329**	*e*P	**P**	**16 27 36.0**	**+0.9**
NKC				*e*pP	pP	16 27 49.8	+0.6
NKC				*e*PP	PP	16 30 46.2	-1.8
NKC				*e*x	x	16 38 01.4	
NKC				AMS	AMS	17 08 10.0	
	comp=Z,2µm,16.5s						
MOX	**Moxa**	**83.03**	**330**	*e*P	**P**	**16 27 35.9**	**+0.6**
MOX				pmax	pmax		
	comp=Z,133nm,2.0s,mb5.6						
MOX				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
MOX	**Moxa**	**83.03**	**330**	*e*P	**P**	**16 27 35.9**	**+0.6**
	comp=Z,133nm,2.0s,mb5.6						
MOX				*e*S	S	16 37 50.0	+0.6
MOX				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
MOX	**Moxa**	**83.03**	**330**	*i* P	**P**	**16 27 35.9**	**+0.6**
	comp=Z,logA/T=1.8,mb5.6						
MOX				S	S	16 37 50.0	+0.6
MOX				L		17 07 45.0	
KAMS	**Al Khamasin**	**83.07**	**290**	P	**P**	**16 27 36.1**	**0.0**
SOP	**Sopron**	**83.11**	**326**	⇑*i*P	**P**	**16 27 36.2**	**+0.4**
RW3	**Ridgway**	**83.12**	**47**	P	**P**	**16 27 37.8**	**+1.8**
RW3	**Ridgway**	**83.12**	**47**	*e*P	**P**	**16 27 37.3**	**+1.3**
RZN	**Rozhen**	**83.19**	**317**	P	**P**	**16 27 37.0**	**+0.7**
WIT	**Witteveen**	**83.21**	**334**	*e*P	**P**	**16 27 36.7**	**+0.6**
WIT				*e*pP	pP	16 27 51.4	+1.2
BOLS	**Boljevac**	**83.21**	**320**	⇑*i*P	**P**	**16 27 33.5**	**-2.8**
ZAPS	**Zavoj/Pirot**	**83.23**	**319**	⇑*i*P	**P**	**16 27 36.8**	**+0.4**
GOLH	**Golhisar**	**83.30**	**311**	*i* P	**P**	**16 27 37.2**	**+0.2**
KHC	**Kasperske Hory**	**83.36**	**328**	*e*P	**P**	**16 27 37.3**	**+0.3**
KHC				*e*	pP	16 27 51.8	+0.7
KHC				*e*		16 30 43.6	
KHC				*e*S	S	16 38 00.0	+7.2
KHC				MLR	MLR		
	comp=Z,2µm,16.7s,MS5.5						
KHC	**Kasperske Hory**	**83.36**	**328**	*e*P	**P**	**16 27 37.3**	**+0.3**
KHC				*e*		16 27 45.0	
KHC				*e*	pP	16 27 51.8	+0.7
KHC				*e*PP	PP	16 30 43.6	-7.3
KHC				*e*S	S	16 38 00.0	+7.2
KHC				LR	LR		
	comp=Z,2µm,16.7s,MS5.5						
KHC	**Kasperske Hory**	**83.36**	**328**	*e*P	**P**	**16 27 37.3**	**+0.3**
KHC				x	x	16 27 45.0	
KHC				x	x	16 27 51.8	
KHC				*e*PP	PP	16 30 43.6	-7.3
KHC				*e*S	S	16 38 00.0	+7.2
KHC				AMS	AMS	17 08 40.0	
	comp=Z,2µm,16.7s						
VTS	**Vitosha**	**83.40**	**319**	P	**P**	**16 27 38.0**	**+0.6**
GEC2	**GERESS Array S**	**83.52**	**328**	*e*P	**P**	**16 27 37.5**	**-0.3**
GEC2				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.2						
GEC2	**GERESS Array S**	**83.52**	**328**	*e*P	**P**	**16 27 37.5**	**-0.3**
	comp=Z,25nm,1.3s,mb5.2						
GERES	**GERESS Array B**	**83.52**	**328**	P	**P**	**16 27 37.4**	**-0.4**
GERES						16 30 49.8	
GERES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GERES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES				MLR	MLR		
	comp=Z,2µm,18.5s						
GERES	**GERESS Array B**	**83.52**	**328**	P	**P**	**16 27 37.4**	**-0.4**
	comp=Z,8.8nm,0.8s,mb4.9,baz=45,slow=3.8,SNR=62						
GERES				PP	PP	16 30 49.8	-2.4
	comp=Z,2.7nm,0.9s,baz=51,slow=8.5,SNR=4.1						
GERES				PKKPbc		16 45 55.3	
	comp=Z,0.2nm,0.3s,baz=180,slow=1.3,SNR=3.9						
GERES				LR	LR	17 08 58.9	
	comp=Z,2µm,18.5s,MS5.5,baz=36,slow=39						
WET	**Wettzell**	**83.65**	**328**	*e*P	**P**	**16 27 38.6**	**+0.2**
WET				*e**PP	pP	16 27 52.8	+0.3
WET				pmax	pmax		
	comp=Z,34nm,1.4s,mb5.3						
WET	**Wettzell**	**83.65**	**328**	*e*P	**P**	**16 27 38.6**	**+0.2**
	comp=Z,34nm,1.4s,mb5.3						
WET				*e*pP	pP	16 27 52.8	+0.3
RPZ	**Rata Peaks**	**83.72**	**158**	LR	LR	16 58 53.6	
	comp=Z,507nm,22.0s,MS4.8,baz=341,slow=31						
MMB	**Musomiste**	**83.81**	**318**	P	**P**	**16 27 40.0**	**+0.6**
GRUS	**Gruza**	**83.81**	**321**	⇓*i*P	**P**	**16 27 39.2**	**-0.2**
WTSB	**Winterswijk**	**83.84**	**333**	*e*P	**P**	**16 27 38.2**	**-1.1**
	comp=Z,30nm,0.8s,mb5.4						
WTSB				*e*pP	pP	16 27 53.0	-0.4
ARSA	**Arzberg**	**83.91**	**326**	⇑*i*P	**P**	**16 27 39.5**	**-0.2**
	comp=Z,450nm,4.0s						
AKAS	**Kas**	**83.92**	**311**	*i* P	**P**	**16 27 38.1**	**-1.9**
KDAG	**Bornova**	**83.92**	**313**	*i* P	**P**	**16 27 37.2**	**-2.9**
GRA1	**Grafenberg Arr**	**83.92**	**330**	*e*P	**P**	**16 27 39.9**	**+0.1**
	comp=Z,93nm,1.0s,mb5.9						
GRA1				*e*pP	pP	16 27 54.1	+0.2
GRA1				*e*S	S	16 38 04.6	+6.3
GRA1				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
GRF	**Grafenberg Arr**	**83.92**	**330**	*e*P	**P**	**16 27 39.9**	**+0.1**
GRF				*e**PP	pP	16 27 54.1	+0.2
GRF				*e*S	S	16 38 04.6	+6.3
GRF				pmax	pmax		
	comp=Z,93nm,1.0s,mb5.9						
GRF				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.4						
GRF	**Grafenberg Arr**	**83.92**	**330**	*e*P	**P**	**16 27 39.9**	**+0.1**
GRF				*e**PP	pP	16 27 54.1	+0.2
GRF				*e*S	S	16 38 04.6	+6.3
GRF				pmax	pmax		
	comp=Z,93nm,1.0s,mb5.9						
GRF				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.4						
GRF	**Grafenberg Arr**	**83.92**	**330**	*e*P	**P**	**16 27 39.9**	**+0.1**
	comp=Z,93nm,1.0s,mb5.9						
GRF				*e*pP	pP	16 27 54.1	+0.2
GRF				*e*S	S	16 38 04.6	+6.3
GRF				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
GRFO	**Grafenberg**	**83.92**	**330**	P	**P**	**16 27 40.3**	**+0.5**
GRFO				pP	pP	16 27 54.3	+0.4
GRFO				SKSac		16 38 00.2	
GRFO				sSKSac		16 38 26.5	
KKB	**Krupnik**	**83.97**	**318**	P	**P**	**16 27 31.0**	**-9.2**
MOA	**Molln**	**84.03**	**327**	⇑*i*P	**P**	**16 27 40.4**	**+0.1**
	comp=Z,407nm,4.2s						
DIVS	**Divcibare**	**84.04**	**321**	⇓*i*P	**P**	**16 27 40.4**	**-0.1**
ESK	**Eskdalemuir**	**84.23**	**340**	*e*P	**P**	**16 27 41.8**	**+0.6**
ESK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
ESK	**Eskdalemuir**	**84.23**	**340**	*e*P	**P**	**16 27 41.8**	**+0.6**
	comp=Z,9.4nm,0.8s,mb5.0						
TBKS	**Tabuk**	**84.32**	**301**	P	**P**	**16 27 42.9**	**+0.7**
URLA	**Izmir**	**84.34**	**314**	*i* P	**P**	**16 27 37.2**	**-5.0**
TATS	**Tathlith**	**84.36**	**290**	P	**P**	**16 27 43.4**	**+0.7**
JMQS	**Jabal Moqyreh**	**84.38**	**302**	P	**P**	**16 27 43.1**	**+0.5**
BBLS	**Bajina Basta -**	**84.49**	**322**	⇓*i*P	**P**	**16 27 43.2**	**+0.4**
EIL	**Elat**	**84.55**	**303**	*e*P	**P**	**16 27 43.6**	**+0.2**
	comp=Z,68nm,1.0s,mb5.7						
PERS	**Pernice**	**84.55**	**326**	*e*P	**P**	**16 27 43.0**	**0.0**
PERS				*e*	pP	16 27 57.6	+0.5
PERS				*e*PP	PP	16 31 01.0	+0.6
TNS	**Taunus Mts**	**84.62**	**331**	*e*P	**P**	**16 27 43.5**	**+0.3**
TNS				*e**PP	pP	16 27 57.8	+0.4
TNS				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.3						
TNS	**Taunus Mts**	**84.62**	**331**	*e*P	**P**	**16 27 43.5**	**+0.3**
	comp=Z,31nm,1.3s,mb5.3						
TNS				*e*pP	pP	16 27 57.8	+0.4
VAY	**Valandovo**	**84.62**	**318**	⇑*i*P	**P**	**16 27 43.7**	**+0.2**
PPT	**Papeete**	**84.64**	**116**	*e*SS	SS	16 43 47.3	+6.1
	comp=Z,371nm,29.2s						
PPT				*e*LR	LR	16 53 34.1	
	comp=Z,5µm,29.8s,baz=313						
PPT	**Papeete**	**84.64**	**116**	LR	LR	16 58 39.5	
	comp=Z,1µm,20.4s,MS5.3,baz=271,slow=31						
EYMN	**Ely**	**84.69**	**32**	*e*P	**P**	**16 27 43.5**	**-0.2**
	comp=Z,16nm,0.9s,mb5.1						
ALWS	**Ilw as Safayha**	**84.69**	**302**	P	**P**	**16 27 44.7**	**+0.5**
JMOS	**Jabal al Moall**	**84.74**	**302**	P	**P**	**16 27 45.2**	**+0.8**
SKO	**Skopje**	**84.78**	**319**	⇑*i*P	**P**	**16 27 45.2**	**+0.9**
SKO				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.6						
SKO	**Skopje**	**84.78**	**319**	⇑*i*P	**P**	**16 27 45.2**	**+0.9**
	comp=Z,0.1nm,0.9s,mb3.0						
GMK	**Mull of Kintyr**	**84.85**	**341**	*e*P	**P**	**16 27 44.4**	**+0.1**
SIND	**Sindeldorf**	**84.85**	**330**	*e*P	**P**	**16 27 44.2**	**-0.2**
OBKA	**Obir**	**84.90**	**326**	⇑*i*P	**P**	**16 27 44.5**	**-0.3**
	comp=Z,426nm,3.9s						
HAQS	**Haql**	**84.94**	**302**	P	**P**	**16 27 46.0**	**+0.6**
TUC	**Tucson**	**84.96**	**54**	P	**P**	**16 27 46.1**	**+0.7**
TUC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
TUC	**Tucson**	**84.96**	**54**	*e*P	**P**	**16 27 46.0**	**+0.5**
	comp=Z,10nm,1.0s,mb4.9						
TOD	**Tromm**	**84.97**	**331**	*e*P	**P**	**16 27 45.2**	**+0.2**
TOD	**Tromm**	**84.97**	**331**	⇑*e*P	**P**	**16 27 45.1**	**+0.1**
KBA	**Koelnbreinsper**	**85.02**	**327**	⇑*i*P	**P**	**16 27 45.3**	**0.0**
	comp=Z,298nm,3.6s						
KBA	**Koelnbreinsper**	**85.02**	**327**	⇑*i*P	**P**	**16 27 45.3**	**0.0**
KBA				pmax	pmax		
	comp=Z,298nm,3.6s						
GAL1	**Galloway**	**85.04**	**341**	*e*P	**P**	**16 27 46.0**	**+0.7**
FUR	**Furstenfeldbru**	**85.08**	**329**	*e*P	**P**	**16 27 46.2**	**+0.6**
FUR				pmax	pmax		
	comp=Z,64nm,0.8s,mb5.8						
FUR	**Furstenfeldbru**	**85.08**	**329**	*e*P	**P**	**16 27 46.2**	**+0.6**
	comp=Z,64nm,0.8s,mb5.8						
SWS	**Schriesheim**	**85.11**	**331**	*e*P	**P**	**16 27 46.5**	**+0.8**
HGN	**Heimansgroeve**	**85.14**	**333**	⇑*e*P	**P**	**16 27 45.5**	**-0.3**
	comp=Z,45nm,1.2s,mb5.5						
HGN				*e*pP	pP	16 27 59.5	-0.4
HGN				*e*PP	PP	16 31 06.4	+1.4
HGN				*e*S	S	16 38 07.3	-3.0
HGN				*e*SS	tx	16 45 04.9	
BDAS	**Al Bad‘**	**85.20**	**302**	P	**P**	**16 27 47.8**	**+1.1**
HDH	**Heidenheim**	**85.20**	**329**	*e*P	**P**	**16 27 46.4**	**+0.2**
GCL	**Cushendall**	**85.23**	**342**	*e*P	**P**	**16 27 46.8**	**+0.7**
ABH	**Alteburg**	**85.24**	**332**	*e*P	**P**	**16 27 46.5**	**+0.2**
ABH	**Alteburg**	**85.24**	**332**	⇑*e*P	**P**	**16 27 46.3**	**0.0**
LJU	**Ljubljana**	**85.26**	**326**	*e*P	**P**	**16 27 46.2**	**-0.4**
LJU				*e*pP	pP	16 28 00.5	-0.2
LJU				*e*PP	PP	16 31 06.5	+0.3
LJU				*e*		16 31 22.8	
TAYS	**Tayyib Ism**	**85.29**	**302**	P	**P**	**16 27 48.1**	**+1.0**
DJNS	**Zahran al Janu**	**85.37**	**288**	P	**P**	**16 27 49.2**	**+1.5**
LHO	**Holmfirth**	**85.39**	**339**	*e*P	**P**	**16 27 47.3**	**+0.3**
STU	**Stuttgart**	**85.47**	**330**	P	**P**	**16 27 48.7**	**+1.2**
STU				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.7						
STU	**Stuttgart**	**85.47**	**330**	*e*P	**P**	**16 27 47.9**	**+0.4**
	comp=Z,67nm,0.9s,mb5.8						
KTD	**Kalmit**	**85.48**	**331**	*e*P	**P**	**16 27 48.0**	**+0.5**
PTCC	**Patocco-Chiusa**	**85.53**	**326**	P	**P**	**16 27 47.3**	**-0.5**
KBI1	**Birley Grange**	**85.55**	**338**	*e*P	**P**	**16 27 48.5**	**+0.8**
VOY	**Vojsko**	**85.56**	**326**	*e*P	**P**	**16 27 47.8**	**-0.2**
RUP	**Ruppelstein**	**85.57**	**332**	*e*P	**P**	**16 27 48.4**	**+0.4**
RUP	**Ruppelstein**	**85.57**	**332**	*e*P	**P**	**16 27 48.1**	**+0.1**
UMJS	**Umm Lajj**	**85.58**	**298**	P	**P**	**16 27 49.7**	**+1.0**
BLJS	**Baljurashi**	**85.59**	**291**	P	**P**	**16 27 50.0**	**+1.3**
WATA	**Walderalm**	**85.60**	**328**	⇓*i*P	**P**	**16 27 48.5**	**+0.3**
	comp=Z,14nm,1.3s,mb5.0						
WATA	**Walderalm**	**85.60**	**328**	⇓*i*P	**P**	**16 27 48.5**	**+0.3**
WATA				pmax	pmax		
	comp=Z,15nm,1.3s,mb5.1						
BUCH	**Bad Urach**	**85.66**	**330**	*e*P	**P**	**16 27 48.7**	**+0.3**
LBG	**Lerchenberg**	**85.72**	**330**	*e*P	**P**	**16 27 49.4**	**+0.7**
OHR	**Ohrid**	**85.72**	**319**	⇑*i*P	**P**	**16 27 49.0**	**+0.1**
SEST	**Monte Rota**	**85.77**	**327**	P	**P**	**16 27 51.6**	**+2.6**
SQTA	**Sankt Quirin**	**85.84**	**328**	⇑*i*P	**P**	**16 27 49.4**	**0.0**
	comp=Z,75nm,2.2s,mb5.5						
SQTA	**Sankt Quirin**	**85.84**	**328**	⇑*i*P	**P**	**16 27 49.4**	**0.0**
SQTA				pmax	pmax		
	comp=Z,75nm,2.2s,mb5.5						
KWE	**Weaver Farm**	**85.85**	**338**	*e*P	**P**	**16 27 49.3**	**+0.1**
LANF	**Langenberg**	**85.86**	**331**	*e*P	**P**	**16 27 49.9**	**+0.5**
GMM	**Mts of Mourne**	**85.93**	**341**	*e*P	**P**	**16 27 49.6**	**0.0**
WLF	**Walferdange**	**85.95**	**332**	P	**P**	**16 27 50.7**	**+0.9**
WLF				pmax	pmax		
	comp=Z,160nm,1.6s,mb6.0						
WLF	**Walferdange**	**85.95**	**332**	*e*P	**P**	**16 27 49.9**	**+0.1**
	comp=Z,101nm,1.7s,mb5.8						
UBR	**Uberruh**	**85.95**	**329**	*e*P	**P**	**16 27 50.0**	**+0.1**
ANMO	**Albuquerque**	**86.02**	**49**	P	**P**	**16 27 51.9**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,16nm,1.0s						
ANMO	**Albuquerque**	**86.02**	**49**	*e*P	**P**	**16 27 51.8**	**+1.3**
	comp=Z,16nm,1.1s,mb5.2						
GUT	**Gutenstein**	**86.06**	**330**	⇑*e*P	**P**	**16 27 50.0**	**-0.4**
GIVF	**Givet**	**86.09**	**333**	*e*P	**P**	**16 27 50.3**	**-0.2**
	comp=Z,42nm,1.0s,mb5.3						
GIVF	**Givet**	**86.09**	**333**	*e*P	**P**	**16 27 50.3**	**-0.2**
GIVF				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.3						
SPAK	**Spaichingen**	**86.17**	**330**	*e*P	**P**	**16 27 51.2**	**+0.3**
BFO	**Black Forest**	**86.17**	**330**	*e*P	**P**	**16 27 51.0**	**+0.1**
BFO				*e**PP	pP	16 28 05.5	+0.4
BFO				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.8						
BFO	**Black Forest**	**86.17**	**330**	*e*P	**P**	**16 27 51.0**	**+0.1**
	comp=Z,53nm,0.9s,mb5.8						
BFO				*e*pP	pP	16 28 05.5	+0.4
BAIF	**Baives**	**86.35**	**334**	*e*P	**P**	**16 27 51.6**	**-0.2**
	comp=Z,36nm,1.0s,mb5.2						
BAIF	**Baives**	**86.35**	**334**	*e*P	**P**	**16 27 51.6**	**-0.2**
BAIF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.3						
DAVA	**Damuels**	**86.36**	**329**	⇑*i*P	**P**	**16 27 51.7**	**-0.2**
	comp=Z,81nm,1.5s,mb5.7						
SBD1	**Bryn Du**	**86.37**	**339**	*e*P	**P**	**16 27 52.3**	**+0.5**
SBD1				AMb	AMB	16 27 54.1	
	comp=Z,86nm,1.0s,mb6.0						
BNM	**Barren Site**	**86.44**	**50**	*e*P	**P**	**16 27 53.8**	**+1.2**
WLS	**Welschbruch**	**86.50**	**331**	*e*P	**P**	**16 27 52.5**	**0.0**
TAOE	**Nuku Hiva Isla**	**86.52**	**103**	*e*SS	SS	16 43 59.6	-9.3
	comp=Z,797nm,29.9s						
TAOE				*e*LR	LR	16 54 27.3	
	comp=Z,9µm,25.0s,baz=313						
CDF	**Champ du Feu**	**86.53**	**331**	*e*P	**P**	**16 27 52.7**	**0.0**
	comp=Z,85nm,0.9s,mb5.7						
CDF	**Champ du Feu**	**86.53**	**331**	*e*P	**P**	**16 27 52.7**	**0.0**
CDF				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.7						
CTI	**Castel Tesino**	**86.56**	**327**	P	**P**	**16 27 52.9**	**0.0**
CTI				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.4						
CTI	**Castel Tesino**	**86.56**	**327**	P	**P**	**16 27 52.9**	**0.0**
	comp=Z,29nm,1.2s,mb5.4						
LIBD	**Limburg**	**86.61**	**331**	*e*P	**P**	**16 27 53.6**	**+0.5**
LIBD	**Limburg**	**86.61**	**331**	*e*P	**P**	**16 27 53.9**	**+0.8**
KIZ	**Kirchzarten**	**86.64**	**330**	*e*P	**P**	**16 27 53.5**	**+0.3**
MENF	**Mencas**	**86.66**	**335**	*e*P	**P**	**16 27 53.4**	**+0.1**
FELD	**Feldberg**	**86.67**	**330**	*e*P	**P**	**16 27 53.2**	**-0.2**
FELD	**Feldberg**	**86.67**	**330**	*e*P	**P**	**16 27 53.0**	**-0.4**
FUORN	**Ofenpass**	**86.72**	**328**	P	**P**	**16 27 54.5**	**+0.8**
ECH	**Echery**	**86.73**	**331**	*e*P	**P**	**16 27 53.8**	**+0.1**
DAVOX	**Davos**	**86.76**	**329**	P	**P**	**16 27 54.2**	**+0.4**
BRMO	**Bormio**	**86.78**	**328**	P	**P**	**16 27 54.5**	**+0.5**
SCHQ	**Schefferville**	**86.86**	**15**	P	**P**	**16 27 54.7**	**+0.5**
	comp=Z,22nm,0.9s,mb5.4,baz=339,slow=4.5,SNR=27						
SCHQ				LR	LR	17 06 53.6	
	comp=Z,598nm,21.1s,MS5.0,baz=77,slow=36						
SCHQ	**Schefferville**	**86.86**	**15**	*e*P	**P**	**16 27 54.5**	**+0.3**
	comp=Z,28nm,0.9s,mb5.5						
HAE	**Alders End**	**86.91**	**338**	*e*P	**P**	**16 27 54.8**	**+0.3**
HAE				AMb	AMB	16 27 56.5	
	comp=Z,83nm,1.1s,mb5.9						
DLF	**Lyons Farm**	**86.93**	**341**	*e*P	**P**	**16 27 54.0**	**-0.5**
DSB	**Dublin**	**86.94**	**341**	*e*P	**P**	**16 27 53.9**	**-0.6**
	comp=Z,43nm,1.3s,mb5.5						
MOF	**Molkenrain**	**87.04**	**331**	*e*P	**P**	**16 27 55.3**	**+0.1**
DCN	**Croghan**	**87.08**	**341**	*e*P	**P**	**16 27 55.0**	**-0.3**
MCH1	**Michaelchurch**	**87.08**	**338**	*e*P	**P**	**16 27 55.4**	**+0.1**
MCH1				AMb	AMB	16 27 57.3	
	comp=Z,71nm,0.8s,mb6.0						
HTR	**Trewern Hill**	**87.09**	**339**	*e*P	**P**	**16 27 55.7**	**+0.3**
HTR				AMb	AMB	16 27 57.4	
	comp=Z,68nm,1.6s,mb5.6						
HINF	**Hinteralfeld**	**87.17**	**331**	*e*P	**P**	**16 27 55.4**	**-0.5**
	comp=Z,22nm,0.9s,mb5.1						
HINF	**Hinteralfeld**	**87.17**	**331**	*e*P	**P**	**16 27 55.4**	**-0.5**
HINF				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.1						
THEF	**They Montfort**	**87.18**	**332**	*e*P	**P**	**16 27 56.2**	**+0.3**
BBS	**Basel-Blauen**	**87.20**	**330**	*e*P	**P**	**16 27 55.5**	**-0.5**
BBS	**Basel-Blauen**	**87.20**	**330**	*e*P	**P**	**16 27 55.4**	**-0.6**
HAU	**Haudompre**	**87.22**	**331**	*e*P	**P**	**16 27 55.6**	**-0.5**
	comp=Z,31nm,0.8s,mb5.3						
HAU				*e*R			
	comp=Z,1µm,22.0s						
HAU	**Haudompre**	**87.22**	**331**	*e*P	**P**	**16 27 55.6**	**-0.5**
HAU				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.3						
HAU				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.3						
TUE	**Stuetta**	**87.22**	**329**	P	**P**	**16 27 56.6**	**+0.5**
MEZF	**Maizieres J’vi**	**87.32**	**332**	*e*P	**P**	**16 27 56.7**	**+0.2**
	comp=Z,76nm,1.1s,mb5.5						
HGH	**Gray Hill**	**87.34**	**338**	*e*P	**P**	**16 27 56.8**	**+0.2**
HGH				AMb	AMB	16 27 58.3	
	comp=Z,72nm,1.0s,mb5.9						
LOMF	**Lomont**	**87.56**	**331**	*e*P	**P**	**16 27 57.5**	**-0.2**
MUGIO	**Muggio**	**87.79**	**328**	P	**P**	**16 27 58.1**	**-0.8**
FSSB	**Fossombrone**	**87.86**	**325**	P	**P**	**16 27 59.5**	**+0.3**
CING	**Cingoli**	**87.90**	**325**	P	**P**	**16 27 59.5**	**0.0**
	comp=Z,54nm,1.9s,mb5.5						
ARV	**Arcevia**	**87.93**	**325**	P	**P**	**16 27 59.7**	**+0.1**
	comp=Z,44nm,1.2s,mb5.6						
VAI	**Varese**	**87.95**	**329**	P	**P**	**16 27 58.9**	**-0.7**
VAI				pmax	pmax		
	comp=Z,19nm,0.5s,mb5.6						
VAI	**Varese**	**87.95**	**329**	P	**P**	**16 27 58.9**	**-0.7**
	comp=Z,19nm,0.5s,mb5.6						
RGNG	**Rignano Grg**	**88.02**	**322**	P	**P**	**16 28 00.3**	**+0.2**
SFI	**Santa Sofia**	**88.12**	**326**	P	**P**	**16 28 01.5**	**+1.0**
SFI				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.6						
SFI	**Santa Sofia**	**88.12**	**326**	P	**P**	**16 28 01.5**	**+1.0**
	comp=Z,41nm,1.0s,mb5.6						
HEX	**Exmoor**	**88.14**	**338**	*e*P	**P**	**16 28 00.6**	**+0.2**
ZCCA	**Zocca**	**88.18**	**326**	P	**P**	**16 28 03.0**	**+2.3**
LTRZ	**Laterza**	**88.18**	**321**	P	**P**	**16 28 01.0**	**+0.1**
PGD	**Poggio Sodo**	**88.20**	**326**	P	**P**	**16 28 02.0**	**+1.1**
PGD				pmax	pmax		
	comp=Z,259nm,1.6s,mb6.2						
PGD	**Poggio Sodo**	**88.20**	**326**	P	**P**	**16 28 02.0**	**+1.1**
	comp=Z,258nm,1.6s,mb6.2						
MCGN	**Macugnaga**	**88.21**	**329**	P	**P**	**16 28 01.7**	**+0.8**
VMG	**Vicchio**	**88.22**	**326**	P	**P**	**16 28 02.2**	**+1.2**
SEI	**Scarperia**	**88.23**	**326**	P	**P**	**16 28 02.4**	**+1.4**
FNVD	**Fontana Vidola**	**88.25**	**326**	P	**P**	**16 28 02.3**	**+1.2**
	comp=Z,464nm,3.3s						
TERO	**Teramo**	**88.28**	**324**	P	**P**	**16 28 01.6**	**+0.3**
	comp=Z,103nm,2.1s,mb5.7						
MURB	**Monte Urbino**	**88.30**	**325**	P	**P**	**16 28 02.3**	**+0.9**
	comp=Z,48nm,0.9s,mb5.7						
GSCL	**Gusciola**	**88.35**	**327**	P	**P**	**16 28 03.2**	**+1.6**
NRCA	**Norcia**	**88.35**	**324**	P	**P**	**16 28 02.2**	**+0.6**
ASS	**Assisi**	**88.40**	**325**	P	**P**	**16 28 02.0**	**+0.2**
ASS				pmax	pmax		
	comp=Z,55nm,1.3s,mb5.6						
ASS	**Assisi**	**88.40**	**325**	P	**P**	**16 28 02.0**	**+0.2**
	comp=Z,55nm,1.3s,mb5.6						
TBI	**Tubuai**	**88.42**	**120**	*e*S	S	16 38 29.1	-13
	comp=Z,321nm,30.5s						
TBI				*e*SS	SS	16 44 01.0	-35
	comp=Z,295nm,31.2s						
TBI				*e*LQ		16 51 41.9	
	comp=Z,519nm,29.2s						
TBI				*e*LR	LR	16 55 27.1	
	comp=Z,3µm,26.2s,baz=309						
FG4	**Candela**	**88.46**	**322**	P	**P**	**16 28 03.2**	**+1.0**
FG4				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.5						
FG4	**Candela**	**88.46**	**322**	P	**P**	**16 28 03.2**	**+1.0**
	comp=Z,22nm,0.7s,mb5.5						
CABF	**La Chapelle**	**88.46**	**331**	*e*P	**P**	**16 28 01.8**	**-0.2**
	comp=Z,30nm,1.1s,mb5.1						
CABF	**La Chapelle**	**88.46**	**331**	*e*P	**P**	**16 28 01.8**	**-0.2**
CABF				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.1						
FG5	**Orsara di Pugl**	**88.47**	**322**	P	**P**	**16 28 03.3**	**+1.1**
BOB	**Bobbio (Coli)**	**88.53**	**328**	P	**P**	**16 28 02.8**	**+0.4**
BDI	**Bagni Di Lucca**	**88.57**	**326**	P	**P**	**16 28 02.6**	**0.0**
BDI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb5.2						
BDI	**Bagni Di Lucca**	**88.57**	**326**	P	**P**	**16 28 02.6**	**0.0**
	comp=Z,6.2nm,0.5s,mb5.2						
AQU	**L’Aquila**	**88.58**	**324**	P	**P**	**16 28 03.5**	**+0.8**
AQU				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.7						
AQU	**L’Aquila**	**88.58**	**324**	P	**P**	**16 28 03.3**	**+0.6**
	comp=Z,169nm,2.2s,mb6.0						
CII	**Carovilli**	**88.62**	**323**	P	**P**	**16 28 03.8**	**+0.9**
MIDA	**Miranda**	**88.70**	**323**	P	**P**	**16 28 03.8**	**+0.5**
	comp=Z,37nm,0.5s,mb6.0						
RNI2	**Rionero Sannit**	**88.71**	**323**	P	**P**	**16 28 04.2**	**+0.8**
	comp=Z,307nm,2.3s,mb6.2						
FIAM	**Fiamignano**	**88.78**	**324**	P	**P**	**16 28 03.9**	**+0.2**
	comp=Z,56nm,1.5s,mb5.7						
LOR	**Lormes**	**88.79**	**332**	*e*P	**P**	**16 28 03.3**	**-0.3**
	comp=Z,59nm,1.2s,mb5.5						
LOR				*e*R			
	comp=Z,952nm,20.8s						
LOR	**Lormes**	**88.79**	**332**	*e*P	**P**	**16 28 03.3**	**-0.3**
LOR				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.5						
LOR				MLR	MLR		
	comp=Z,950nm,20.8s,MS5.2						
KSU1	**Kansas State U**	**88.82**	**41**	*e*P	**P**	**16 28 03.8**	**-0.1**
PTQR	**Pietraquaria**	**88.83**	**324**	P	**P**	**16 28 04.7**	**+0.8**
SGG	**Gregorio Mates**	**88.83**	**323**	P	**P**	**16 28 04.6**	**+0.6**
VVLD	**Villa Vallelon**	**88.84**	**323**	P	**P**	**16 28 04.5**	**+0.5**
	comp=Z,53nm,1.2s,mb5.8						
MNTX	**Cornudas Mount**	**88.84**	**51**	*e*P	**P**	**16 28 04.4**	**+0.2**
	comp=Z,4.9nm,1.1s,mb4.8						
CPRX	**Cap Rock**	**88.90**	**49**	*e*P	**P**	**16 28 04.7**	**+0.2**

MNS	Montasola	88.90	324	P	P	16 28 03.6	-0.7
MNS				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.4						
MNS	Montasola	88.90	324	P	P	16 28 03.6	-0.7
	comp=Z,12nm,0.6s,mb5.4						
SGO	Sicignano	88.99	322	P	P	16 28 05.2	+0.5
SGO				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.2						
SGO	Sicignano	88.99	322	P	P	16 28 05.2	+0.5
	comp=Z,14nm,1.0s,mb5.2						
LPL	La Plagne	89.08	330	*e*P	P	16 28 05.2	+0.2
	comp=Z,19nm,0.8s,mb5.2						
LPL	La Plagne	89.08	330	*e*P	P	16 28 05.2	+0.2
LPL				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
FLN	La Foliniere	89.09	335	*e*P	P	16 28 04.6	-0.4
FLN				*e*R			
	comp=Z,2µm,20.0s						
CERT	Cerreto	89.09	324	P	P	16 28 04.8	-0.4
	comp=Z,18nm,1.0s,mb5.4						
LPG	La Plagne	89.09	329	*e*P	P	16 28 05.3	+0.2
LDF	La Druitiere	89.11	335	*e*P	P	16 28 04.7	-0.4
GDL2	Guadalupe Moun	89.15	50	*e*P	P	16 28 06.2	+0.6
HYF	Humbligny	89.25	333	*e*P	P	16 28 06.3	+0.5
TIP	Timpagrande	89.26	320	*e*P	P	16 28 06.2	+0.1
SMF	Signal de Mont	89.31	332	*e*P	P	16 28 05.9	-0.2
AVF	Avril sur Loir	89.38	332	*e*P	P	16 28 06.2	-0.2
	comp=Z,43nm,0.8s,mb5.5						
AVF	Avril sur Loir	89.38	332	*e*P	P	16 28 06.2	-0.2
AVF				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.5						
CLNB	Carlsbad	89.41	50	*e*P	P	16 28 07.0	+0.1
BNI	Bardonecchia	89.48	329	P	P	16 28 07.4	+0.5
BNI				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.4						
BNI	Bardonecchia	89.48	329	*e*P	P	16 28 06.8	-0.2
	comp=Z,30nm,1.5s,mb5.4						
GRR	Gorron	89.54	335	*e*P	P	16 28 07.0	-0.1
	comp=Z,76nm,1.2s,mb5.6						
GRR	Gorron	89.54	335	*e*P	P	16 28 07.0	-0.1
GRR				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.6						
MBDF	Montbardon	89.71	329	*e*P	P	16 28 07.9	-0.1
BGF	Bois d'Agland	89.77	332	*e*P	P	16 28 08.2	0.0
	comp=Z,27nm,1.0s,mb5.2						
BGF	Bois d'Agland	89.77	332	*e*P	P	16 28 08.2	0.0
BGF				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.2						
ORIF	Oris-en-Rattie	89.92	330	*e*P	P	16 28 08.7	-0.3
	comp=Z,19nm,0.9s,mb5.1						
ORIF				*e*R			
	comp=Z,2µm,20.8s						
PLDF	La Plantade	89.96	332	*e*P	P	16 28 09.7	+0.6
SAOF	Saorge	89.97	328	*e*P	P	16 28 08.4	-0.8
AUTN	L'Aution	90.02	328	*e*P	P	16 28 08.9	-0.6
AGO	Saint Agoulin	90.08	332	*e*P	P	16 28 10.1	+0.4
TOUF	Mont Tournerai	90.08	328	*e*P	P	16 28 09.6	-0.2
SBF	Sospel	90.12	328	*e*P	P	16 28 09.8	-0.2
	comp=Z,60nm,0.9s,mb5.6						
SBF	Sospel	90.12	328	*e*P	P	16 28 09.8	-0.2
SBF				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.6						
MVIF	Mont Vial	90.22	328	*e*P	P	16 28 09.7	-0.7
SGMF	Saint Gilles	90.22	336	*e*P	P	16 28 10.3	0.0
	comp=Z,51nm,1.0s,mb5.5						
SGMF	Saint Gilles	90.22	336	*e*P	P	16 28 10.3	0.0
SGMF				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.5						
TCF	Toulx Ste Croi	90.23	333	*e*P	P	16 28 10.5	+0.1
	comp=Z,29nm,1.0s,mb5.2						
TCF	Toulx Ste Croi	90.23	333	*e*P	P	16 28 10.5	+0.1
TCF				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.3						
PYM	Petit Puy Mans	90.38	332	*e*P	P	16 28 11.3	+0.2
ROSF	Rostrenen	90.38	337	*e*P	P	16 28 11.1	0.0
	comp=Z,64nm,1.0s,mb5.6						
ROSF	Rostrenen	90.38	337	*e*P	P	16 28 11.1	0.0
ROSF				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.6						
CALN	Calern	90.44	328	*e*P	P	16 28 11.3	-0.2
SOI	Samo	90.45	319	P	P	16 28 09.8	-1.9
VIVF	Saint-Julien-l	90.47	330	*e*P	P	16 28 11.4	-0.1
	comp=Z,33nm,0.9s,mb5.4						
VIVF	Saint-Julien-l	90.47	330	*e*P	P	16 28 11.4	-0.1
VIVF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.3						
PGF	Pioggiola	90.48	326	*e*P	P	16 28 11.1	-0.6
	comp=Z,38nm,1.1s,mb5.3						
PGF	Pioggiola	90.48	326	*e*P	P	16 28 11.1	-0.6
PGF				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.3						
FRF	La Foret Royal	90.70	328	*e*P	P	16 28 11.9	-0.8
	comp=Z,54nm,1.0s,mb5.5						
FRF	La Foret Royal	90.70	328	*e*P	P	16 28 11.9	-0.8
FRF				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.5						
QUIF	Quistinic	90.71	337	*e*P	P	16 28 12.4	-0.2
	comp=Z,59nm,1.1s,mb5.5						
QUIF	Quistinic	90.71	337	*e*P	P	16 28 12.4	-0.2
QUIF				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.5						
LBL	Lubilhac	90.72	331	*e*P	P	16 28 13.0	+0.3
SMRF	Simiane la Rot	90.82	329	*e*P	P	16 28 13.0	-0.2
MFF	Saint Martin d	90.83	334	*e*P	P	16 28 13.3	+0.1
	comp=Z,92nm,1.1s,mb5.7						
MFF	Saint Martin d	90.83	334	*e*P	P	16 28 13.3	+0.1
MFF				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.7						
VILF	Villemus	90.86	329	*e*P	P	16 28 14.1	+0.7
TAVF	Tavernes	90.91	329	*e*P	P	16 28 14.1	+0.4
LMR	La Mourre	90.94	328	*e*P	P	16 28 13.2	-0.6
	comp=Z,87nm,1.0s,mb5.7						
LMR	La Mourre	90.94	328	*e*P	P	16 28 13.2	-0.6
LMR				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.7						
PRAF	Pradon	91.13	329	*e*P	P	16 28 15.2	+0.5
PUYF	Puyloubier	91.13	329	*e*P	P	16 28 14.6	-0.1
TREF	Trevaresse	91.18	329	*e*P	P	16 28 15.0	+0.1
BERF	Bertagne	91.31	329	*e*P	P	16 28 16.1	+0.6
RJF	Les Rejaudoux	91.32	332	*e*P	P	16 28 15.7	+0.2
	comp=Z,70nm,1.0s,mb5.7						
RJF				*e*R			
	comp=Z,1µm,18.8s						
RJF	Les Rejaudoux	91.32	332	*e*P	P	16 28 15.7	+0.2
RJF				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.6						
RJF				MLR	MLR		
	comp=Z,1µm,18.8s,MS5.3						
GELF	Grande-Etoile	91.36	329	*e*P	P	16 28 16.1	+0.3
CAF	Calviac	91.43	332	*e*P	P	16 28 16.6	+0.5
	comp=Z,69nm,1.1s,mb5.6						
CAF	Calviac	91.43	332	*e*P	P	16 28 16.6	+0.5
CAF				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.6						
LASF	Ste Croix	91.44	330	*e*P	P	16 28 16.1	0.0
	comp=Z,68nm,1.1s,mb5.6						
LTX	Lajitas	91.53	52	P	P	16 28 17.9	+1.0
LTX				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.1						
LTX	Lajitas	91.53	52	*e*P	P	16 28 17.5	+0.7
	comp=Z,11nm,1.0s,mb5.1						
TXAR	Lajitas Array	91.53	52	P	P	16 28 17.1	+0.2
TXAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TXAR				MLR	MLR		
	comp=Z,560nm,20.0s						
TXAR	Lajitas Array	91.53	52	P	P	16 28 17.1	+0.2
	comp=Z,6.3nm,0.7s,mb5.0,baz=297,slow=3.0,SNR=62						
TXAR				LR	LR	17 08 22.2	
	comp=Z,560nm,20.0s,MS5.0,baz=70,slow=35						
LFF	La Frestale	91.92	333	*e*P	P	16 28 18.6	+0.3
	comp=Z,110nm,1.0s,mb5.8						
LFF	La Frestale	91.92	333	*e*P	P	16 28 18.6	+0.3
LFF				pmax	pmax		
	comp=Z,55nm,1.0s,mb5.8						
SADO	Sadowa	92.25	27	P	P	16 28 19.6	-0.3
	comp=Z,10.0nm,1.1s,mb5.0,baz=341,slow=5.7,SNR=5.3						
MTLF	Montolieu	92.71	331	*e*P	P	16 28 22.1	+0.1
	comp=Z,58nm,1.1s,mb5.6						
MTLF	Montolieu	92.71	331	*e*P	P	16 28 22.1	+0.1
MTLF				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.6						
LRDF	Laroque-de-Fa	92.92	331	*e*P	P	16 28 23.2	+0.3
SJAF	Saint Jean de	93.16	330	*e*P	P	16 28 24.2	+0.2
EJON	La Jonquera	93.18	330	P	P	16 28 23.7	-0.5
	comp=Z,46nm,1.5s,mb5.7						
MLS	Moulis	93.47	331	*e*P	P	16 28 25.6	+0.2
VALF	Valcebollere	93.58	331	*e*P	P	16 28 26.3	+0.4
EPF	Esparros	93.70	332	*e*P	P	16 28 26.1	-0.4
	comp=Z,29nm,1.2s,mb5.3						
EPF	Esparros	93.70	332	*e*P	P	16 28 26.1	-0.4
EPF				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.3						
RESF	Ens	93.89	332	*e*P	P	16 28 28.4	+1.1
EBIE	Bielsa	94.07	332	P	P	16 28 29.4	+1.2
	comp=Z,38nm,1.4s,mb5.6						
ETSF	Etsaut	94.15	332	*e*P	P	16 28 29.0	+0.5
	comp=Z,21nm,0.9s,mb5.3						
ETSF	Etsaut	94.15	332	*e*P	P	16 28 29.0	+0.5
ETSF				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.3						
EMIR	Miracle	94.18	331	P	P	16 28 29.2	+0.5
	comp=Z,87nm,2.3s,mb5.8						
SJPF	Ste Jean	94.22	333	*e*P	P	16 28 28.7	-0.1
EALK	Alkurruntz	94.23	333	P	P	16 28 29.4	+0.5
	comp=Z,22nm,1.5s,mb5.4						
ELIZ	Elizondo	94.29	333	P	P	16 28 29.9	+0.8
ELIZ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.1						
ELIZ	Elizondo	94.29	333	P	P	16 28 29.9	+0.8
	comp=Z,6.4nm,0.8s,mb5.1						
EPOB	Poblet	94.84	331	P	P	16 28 31.5	-0.2
	comp=Z,36nm,1.2s,mb5.7						
ELAN	Lanestosa	94.91	334	P	P	16 28 31.9	-0.1
	comp=Z,20nm,1.1s,mb5.5						
ESAC	San Caprasio	95.13	332	P	P	16 28 33.7	+0.6
	comp=Z,239nm,2.4s,mb6.2						
ETOS	Mallorca	95.45	329	P	P	16 28 34.7	+0.1
	comp=Z,54nm,1.8s,mb5.7						
EARI	Arriondas	95.46	336	P	P	16 28 33.8	-0.7
	comp=Z,73nm,1.7s,mb5.8						
ERTA	Horta de San J	95.47	331	P	P	16 28 34.8	+0.2
	comp=Z,38nm,1.6s,mb5.6						
EPON	Pontenova	96.07	337	P	P	16 28 37.5	+0.2
	comp=Z,43nm,1.6s,mb5.6						
EMOS	Mosqueruela	96.29	331	P	P	16 28 39.1	+0.8
	comp=Z,56nm,2.4s,mb5.6						
STS	Santiago	96.91	338	P	P	16 28 38.5	-2.6
TZTN	Tazewell	97.31	34	*e*P	P	16 28 43.0	-0.1
ESDC	Sonseca Array	98.22	333	P	P	16 28 46.3	-0.8
	comp=Z,1.9nm,0.9s,mb4.6,baz=14,slow=5.2,SNR=6.6						
ESDC	Sonseca Array	98.22	333	P	P	16 28 47.6	+0.5
	comp=Z,1.9nm,0.9s,mb4.6						
DRV	Dumont d'Urvil	101.98	180	Pdif	P	16 29 01.0	-2.4
VNDA	Vanda	113.65	175	*e*PKiKP		16 33 47.0	
VNDA				*e*		16 33 57.1	
MAW	Mawson	117.98	205	PKIKP	PKPdf	16 33 55.8	+1.1
MAW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAW	Mawson	117.98	205	PKP	PKPdf	16 33 55.8	+1.1
	comp=Z,2.7nm,0.7s,baz=357,slow=2.0,SNR=5.4						
QSPA	South Pole Qui	125.39	180	⇓*i*P	PKPdf	16 34 09.8	+1.1
BOSA	Boshof	125.62	258	PKIKP	PKPdf	16 34 11.2	+0.7
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOSA	Boshof	125.62	258	PKP	PKPdf	16 34 11.2	+0.7
	comp=Z,4.0nm,0.8s,baz=134,slow=0.3,SNR=9.4						
SYO	Syowa Base	126.65	206	⇑PKPdf	PKPdf	16 34 11.8	+0.4
SYO	Syowa Base	126.65	206	⇓pPKPdf		16 34 27.0	
DBIC	Dimbokro	126.81	315	PKIKP	PKPdf	16 34 13.6	+0.5
DBIC						16 36 08.8	
DBIC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DBIC	Dimbokro	126.81	315	PKP	PKPdf	16 34 13.6	+0.5
	comp=Z,7.1nm,0.9s,baz=34,slow=3.7,SNR=6.0						
DBIC				PP	PP	16 36 08.8	-6.0
	comp=Z,5.9nm,0.8s,baz=360,slow=5.8,SNR=3.6						
SDV	Santo Domingo	126.84	40	*e*PKPdf	PKPdf	16 34 14.4	+1.2
SNAA	Sanae	139.22	197	*e*PKHKP		16 34 25.0	
VNA2	Neumayer--Watz	140.79	196	⇑*i*	PKPdf	16 34 39.6	+2.0
VNA2	Neumayer--Watz	140.79	196	⇑*i*	PKPdf	16 34 49.9	+12
VNA2	Neumayer--Watz	140.79	196	⇑*i*PKPdf	PKPdf	16 34 32.9	-4.7
VNA2				⇑*i*P		16 34 39.6	
VNA2				⇑*i*P		16 34 49.9	
VNA3	Neumayer Olymp	141.04	195	⇑*i*	PKPdf	16 34 37.1	-0.9
VNA3	Neumayer Olymp	141.04	195	⇑*i*	PKPdf	16 34 41.9	+3.9
VNA3	Neumayer Olymp	141.04	195		PKPdf	16 35 01.3	+23
VNA3	Neumayer Olymp	141.04	195	PKPdf	PKPdf	16 34 33.4	-4.6
VNA3				⇑*i*P		16 34 37.1	
VNA3				⇑*i*P		16 34 41.9	
VNA3				P		16 35 01.3	
VNA1	Neumayer--Stat	141.19	196	⇑*i*	PKPdf	16 34 36.6	-1.7
VNA1	Neumayer--Stat	141.19	196	⇑	PKPdf	16 34 40.1	+1.8
VNA1	Neumayer--Stat	141.19	196	⇑	PKPdf	16 34 50.3	+12
VNA1	Neumayer--Stat	141.19	196	⇓*i*PKPdf	PKPdf	16 34 34.1	-4.2
VNA1				⇑*i*P		16 34 36.6	
VNA1				⇑*i*P		16 34 40.1	
VNA1				⇑*i*P		16 34 50.3	
ARE	Arequipa	145.68	65	*e*PKP2	PKPab	16 34 50.0	-0.4
SAML	Samuel	145.72	45	*e*PKPdf	PKPdf	16 34 48.8	+1.0
LPAZ	La Paz	147.99	60	PKIKP	PKPdf	16 34 54.4	+3.0
LPAZ				pmax	pmax		
	comp=Z,19nm,0.7s						
LPAZ	La Paz	147.99	60	PKPbc	PKPdf	16 34 54.4	+3.0
	comp=Z,19nm,0.7s,baz=357,slow=5.3,SNR=76						
LPAZ	La Paz	147.99	60	*e*PKPbc	PKPdf	16 34 56.8	+5.4
LVC	Limon Verde	151.30	71	PKPbc	PKPdf	16 35 04.5	+8.0
	comp=Z,15nm,0.7s,baz=295,slow=3.0,SNR=25						
LVC	Limon Verde	151.30	71	*e*PKPbc	PKPdf	16 35 04.8	+8.4
SIV	San Ignacio	152.51	50	PKP	PKPdf	16 35 00.1	+1.7
	comp=Z,3.5nm,0.8s,baz=76,slow=1.0,SNR=23						
SIV				PKPbc	PKPdf	16 35 06.8	+8.5
	comp=Z,14nm,0.5s,baz=289,slow=3.2,SNR=84						
PLCA	Paso Flores	155.11	111	PKIKP	PKPdf	16 35 11.6	+10
PLCA						16 35 26.8	
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PLCA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PLCA	Paso Flores	155.11	111	PKPbc	PKPdf	16 35 11.6	+10
	comp=Z,1.7nm,0.5s,baz=241,slow=12,SNR=3.6						
PLCA				PKPab	PKPab	16 35 26.8	-1.6
	comp=Z,5.0nm,1.0s,baz=292,slow=3.7,SNR=3.3						
CFAA	Coronel Fontan	155.73	89	PKP	PKPdf	16 35 04.4	+2.1
	comp=Z,0.2nm,0.9s,baz=81,slow=3.3,SNR=3.8						
CFAA				PKPbc	PKPdf	16 35 14.4	+12
	comp=Z,0.3nm,0.6s,baz=309,slow=4.1,SNR=5.0						
CFAA				PKPab	PKPab	16 35 32.0	+0.6
	comp=Z,1.0nm,0.5s,baz=258,slow=4.2,SNR=9.6						
BDFB	Brasilia	158.66	23	PKP2	PKPab	16 35 42.8	-1.6
BDFB				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BDFB	Brasilia	158.66	23	PKPab	PKPab	16 35 42.8	-1.6
	comp=Z,8.1nm,0.7s,baz=334,slow=3.1,SNR=9.1						
CPUP	Villa Florida	162.10	64	PKP2	PKPab	16 35 57.9	-1.1
CPUP				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CPUP	Villa Florida	162.10	64	PKPab	PKPab	16 35 57.9	-1.2
	comp=Z,3.1nm,0.9s,baz=348,slow=4.1,SNR=3.6						

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*MOS **19** 16:24:41.0±1.1, 35.71N×140.82E, h53^{km}, mb4.2/11, Error ellipse: s-maj=15.0km s-min=10.0km az=121.5*

*JMA **19** 16:24:42.2±0.1, 35.72N×140.72E, h52^{km}±1^{km}, M4.2*

JMA Felt II J1.

*NEIC **19** 16:24:42.7±0.4, 35.66N×140.70E, mb4.7/6, Error ellipse: s-maj=8.8km s-min=7.9km az=150.0*

NEIC Recorded [2 JMA] in Chiba and [1 JMA] in Ibaraki Prefectures.

*IDC **19** 16:24:42.5±1.7, 35.62N×140.64E, h45^{km}±15^{km}, mb3.6/15, mb1 3.8/20, mb1mx3.7/28, mbtmp3.9/20, ML3.9/5, Error ellipse: s-maj=18.6km s-min=12.1km az=50.0*

ISC 19 16:24:42.1±0.5**, 35.70N**±0.03×**140.68E**±0.05**, h57**^{km}±3^{km}**, n66, σ0^{s}96**/78**, mb4.1**/22**, 3C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.14	88	⇑P	P	16 24 50.2	-0.7
JCN	Nagara	0.48	235	⇓P	P	16 24 54.4	+0.7
KTR	Katsuura	0.63	209	P	P	16 24 55.6	+0.3
KTR				S	S	16 25 06.0	+0.9
JYT	Yasato	0.66	323	⇓P	P	16 24 55.6	-0.1
JYT				S	S	16 25 04.8	-1.1
BSO3	Boso 3	0.91	189	P	P	16 24 59.3	+0.4
BSO1	Boso 1	1.07	167	P	P	16 25 01.1	-0.1
BSO1				S	S	16 25 15.9	+0.5
JAG	Ashikaga	1.23	306	P	P	16 25 03.5	+0.1
JOD2	Odawara 2	1.37	252	⇓P	P	16 25 05.8	+0.3
JOD2				S	S	16 25 23.1	+0.2
JIM2	Oshima 3	1.42	227	⇑P	P	16 25 05.5	-0.6
JIM2				S	S	16 25 22.6	-1.3
JRY	Ryogami san	1.48	283	P	P	16 25 07.8	+0.8
JKT	Katashina	1.57	313	P	P	16 25 09.0	+0.7
JFK	Kawauchi	1.67	5	P	P	16 25 09.9	+0.3
MJAR	Matsushiro Arr	2.17	294	P	P	16 25 17.0	+0.4
MJAR				S	S	16 25 41.5	-0.8
MJAR				pmax	pmax		
	comp=Z,29nm,0.3s						
MJAR	Matsushiro Arr	2.17	294	P	P	16 25 17.0	+0.3
	comp=Z,29nm,0.3s,baz=100,slow=6.5,SNR=100						
MJAR				S	S	16 25 41.5	-0.8
	comp=Z,16nm,0.3s,baz=117,slow=24,SNR=8.4						
MAJO	Matsushiro	2.17	294	*e*P	P	16 25 18.2	+1.5
MAT	Matsushiro	2.17	294	*e*P	P	16 25 18.0	+1.3
MAT				*e*S	S	16 25 53.0	+11
MAT	Matsushiro	2.17	294	P	P	16 25 17.7	+1.0
MAT				*e*S	S	16 25 44.3	+1.9
JHJ	Hachijo jima 2	2.68	196	P	P	16 25 21.9	-1.9
	comp=Z,66nm,0.3s,baz=257,slow=16,SNR=20						
JHJ				S	S	16 25 56.7	+1.5
	comp=Z,132nm,0.3s,baz=223,slow=24,SNR=7.6						
JNU	Nakatsue	8.50	255	P	P	16 26 43.0	-2.1
	comp=Z,0.2nm,0.3s,baz=114,slow=18,SNR=2.0						
ASAJ	Asahikawa	8.54	9	P	P	16 26 43.0	-2.5
ASAJ				S	S	16 28 13.6	-7.7
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	Asahikawa	8.54	9	P	P	16 26 43.0	-2.5
	comp=Z,2.3nm,0.3s,baz=274,slow=5.4,SNR=12						
ASAJ				S	S	16 28 13.6	-7.7
	comp=Z,0.4nm,0.3s,baz=124,slow=15,SNR=2.0						
CBIJ	Chichi jima	8.67	171	P	P	16 26 42.6	-4.7
	comp=Z,17nm,0.3s,baz=273,slow=23,SNR=7.8						
CBIJ				S	S	16 28 11.3	-13
	comp=Z,5.6nm,0.3s,baz=194,slow=23,SNR=2.4						
YSS	Yuzh-Sakhalins	11.35	7	P	P	16 27 20.7	-3.2
ENH	Enshi	26.66	267	*e*P	P	16 30 15.9	-1.5
	comp=Z,16nm,0.7s,mb4.7						
SONM	Songino Array	28.07	306	P	P	16 30 29.5	-0.6
	comp=Z,0.8nm,0.7s,mb3.5,baz=110,slow=9.4,SNR=4.2						
CMAR	Chiang Mai Arr	40.60	256	P	P	16 32 16.9	-0.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	Chiang Mai Arr	40.60	256	P	P	16 32 16.9	-1.0
	comp=Z,0.5nm,0.7s,mb3.2,baz=47,slow=7.4,SNR=4.3						
ZAL	Zalesovo	42.40	313	P	P	16 32 33.1	+0.8
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAL	Zalesovo	42.40	313	P	P	16 32 33.0	+0.8
	comp=Z,1.3nm,0.7s,mb3.6,baz=9.7,slow=8.1,SNR=5.1						
MKAR	Makanchi Array	44.34	303	P	P	16 32 48.6	+0.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	44.34	303	P	P	16 32 48.5	+0.4
	comp=Z,1.5nm,0.6s,mb3.9,baz=86,slow=9.1,SNR=17						
GUN	Gumba	46.71	277	*e*P	P	16 33 08.4	+1.2
	comp=Z,6.9nm,0.4s,mb4.9						
PKI	Pulchoki	47.23	276	*e*P	P	16 33 10.9	-0.4
	comp=Z,92nm,2.0s,mb5.3						
PKI	Pulchoki	47.23	276	*e*P	P	16 33 10.9	-0.4
PKI				pmax	pmax		
	comp=Z,46nm,2.0s,mb5.1						
KKN	Kakani	47.24	277	*e*P	P	16 33 12.0	+0.6
GKN	Gorkha	47.68	277	*e*P	P	16 33 15.0	+0.2
	comp=Z,12nm,0.5s,mb5.2						
KOLN	Koldanda	48.61	277	*e*P	P	16 33 20.8	-1.2
	comp=Z,19nm,1.2s,mb5.0						
ILAR	Eielson Array	50.94	32	P	P	16 33 40.1	+0.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	50.94	32	P	P	16 33 40.0	+0.7
	comp=Z,0.7nm,0.8s,mb3.6,baz=260,slow=6.2,SNR=7.7						
BVAR	Borovoye Array	51.04	313	P	P	16 33 40.5	+0.2
	comp=Z,1.1nm,0.6s,mb4.0,baz=70,slow=7.5,SNR=5.5						
BVAR	Borovoye Array	51.04	313	P	P	16 33 40.5	+0.2
ZRNK	Zerenda	51.88	313	*e*P	P	16 33 46.6	+0.1
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ZRNK	Zerenda	51.88	313	*e*P	P	16 33 46.6	+0.1
	comp=Z,4.5nm,0.9s,mb4.4						
WRAB	Tennant Creek	55.65	187	*e*P	P	16 34 13.8	-1.0
WRA	Warramunga Arr	55.66	187	P	P	16 34 13.6	-1.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	55.66	187	P	P	16 34 13.6	-1.2
	comp=Z,0.8nm,0.4s,mb4.1,slow=6.7,SNR=10						
ARU	Arti	56.97	319	*e*P	P	16 34 23.4	-0.3
ARU				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
ARU	Arti	56.97	319	*e*P	P	16 34 23.4	-0.3
	comp=Z,3.5nm,0.4s,mb4.7						
MBWA	Marble Bar	59.93	203	*e*P	P	16 34 43.9	-0.9
ARCES	ARCESS Array B	65.04	339	P	P	16 35 17.6	-0.4
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	65.04	339	P	P	16 35 17.6	-0.4
	comp=Z,2.1nm,0.8s,mb4.2,baz=45,slow=8.9,SNR=3.5						
FINES	FINESS Array B	69.72	332	P	P	16 35 47.7	+0.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	69.72	332	P	P	16 35 47.7	+0.3
	comp=Z,0.5nm,0.4s,mb3.8,baz=51,slow=8.9,SNR=5.7						
AKASG	Malin Array Be	74.99	322	P	P	16 36 18.6	-0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	74.99	322	P	P	16 36 18.6	-0.1
	comp=Z,1.0nm,0.6s,mb3.9,baz=47,slow=6.3,SNR=4.9						
HFS	Hagfors	75.06	336	P	P	16 36 19.4	+0.5
HFS				*PP	pP	16 36 33.6	-1.3
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	Hagfors	75.06	336	P	P	16 36 19.4	+0.5
	comp=Z,0.6nm,0.4s,mb3.8,baz=72,slow=4.7,SNR=6.2						
HFS				pP	pP	16 36 33.6	-1.3
	comp=Z,0.9nm,0.5s,baz=90,slow=3.0,SNR=2.3						
NB2	NORSAR Subarra	75.19	337	P	P	16 36 19.9	+0.3
	comp=Z,0.8nm,0.5s,mb3.9,baz=41,slow=5.8						
NOA	NORSAR Array B	75.19	337	P	P	16 36 19.5	-0.1
NOA				*PP	pP	16 36 33.1	-2.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	75.19	337	P	P	16 36 19.5	-0.1
	comp=Z,0.8nm,0.6s,mb3.9,baz=39,slow=5.8,SNR=5.0						
NOA				pP	pP	16 36 33.0	-2.6
	comp=Z,0.9nm,0.7s,baz=40,slow=5.8,SNR=3.6						
NVAR	Mina Array Bea	76.26	53	P	P	16 36 27.6	+1.4
	comp=Z,0.4nm,0.7s,mb3.5,baz=291,slow=7.7,SNR=2.4						
BRTR	Keskin Array B	79.29	311	P	P	16 36 43.2	+0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	79.29	311	P	P	16 36 43.1	+0.2
	comp=Z,1.1nm,0.8s,mb3.8,baz=34,slow=5.2,SNR=4.2						
CLL	Collm	81.96	330	P	P	16 36 58.0	+1.2
TXAR	Lajitas Array	91.41	52	P	P	16 37 44.6	+1.3
	comp=Z,0.1nm,0.5s,mb3.5,baz=297,slow=4.0,SNR=2.3						
SJG	San Juan	120.75	30	⇑*e*PKIKP	PKPdf	16 43 33.7	+5.5

MEX 19 16:37:21.5±0.4**, 16.81N×95.77W, h93**^{km}±9^{km}**, MD3.7, 1C-1D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.89	72	⇓*i*P	P	16 37 39.0	-1.4
CMIG				*i* S	S	16 37 52.5	-2.0
OXX	Oaxaca	0.95	286	*i* P	P	16 37 40.0	-1.1
OXX				*i* S	S	16 37 54.0	-1.7
VHO	Vista Hermosa	0.96	286	⇑*i*P	P	16 37 39.6	-1.5
VHO				*i* S	S	16 37 54.2	-1.6
SCIG		4.86	63	*e*P	P	16 38 36.0	+2.3
SCIG				*i* S	S	16 39 26.3	-2.9

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*NDI **19** 17:33:25.5±2.7, 34.64N×74.34E, h15^{km}, ML3.3*

*NNC **19** 17:33:40.1±77.0, 35.44N×75.55E, mpv3.7, Error ellipse: s-maj=800.7km s-min=703.7km az=64.0*

*IDC **19** 17:34:10.0±24.0, 36.45N×74.33E, h233^{km}±163^{km}, mb2.9/2, mb1 3.0/5, mb1mx2.8/21, mbtmp3.5/5, Error ellipse: s-maj=212.3km s-min=36.7km az=16.0*

ISC 19 17:33:29.3±0.7**, 34.62N**±0.06×**75.3E**±0.1**, h10**^{km}**, n17, σ0^{s}88**/20**, mb3.2**/2**, 1C-1D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.20	171	*e*P	Pn	17 34 06.2	-0.3
THN				*e*S	Sn	17 34 34.9	+0.9
SDNR	Sundarnagar	3.40	156	*e*P	Pn	17 34 24.0	+0.4
SDNR				*e*x	x	17 35 15.0	
SMLA	Simla	3.81	155	*i* P	Pn	17 34 27.6	-1.8
SMLA				*i* x	x	17 35 23.8	
KLP	Kalpa	3.93	141	*e*P	Pn	17 34 34.7	+3.5
KLP				*e*S	Sn	17 35 23.0	+5.1
KLP				AML	AML	17 35 46.6	
	comp=E,149nm,0.7s						
KLP				AML	AML	17 35 46.9	
	comp=N,150nm,0.7s						
KHET	Khetri	6.53	176	*e*S	Sn	17 36 13.4	-10
KHET				AML	AML	17 36 53.6	
	comp=N,10nm,0.2s						
KHET				AML	AML	17 36 53.7	
	comp=E,14nm,0.6s						
KK31	Karatay Array	9.27	338	⇓P	P	17 35 45.7	-0.3
	comp=E,1.1nm,0.3s,baz=146,slow=11,SNR=39						
KK31				⇑S	Sn	17 37 24.6	-6.8
	comp=E,0.8nm,0.3s,baz=152,slow=24,SNR=6.8						
KOLN	Koldanda	9.83	132	*e*P	P	17 35 53.6	-0.3
	comp=E,5.0nm,0.2s						
GKN	Gorkha	10.33	127	*e*P	P	17 36 01.2	+0.4
	comp=E,18nm,0.3s						
KKN	Kakani	10.90	126	*e*P	P	17 36 08.5	0.0
	comp=E,4.1nm,0.2s						
DMN	Daman	10.91	127	*e*P	P	17 36 07.6	-1.0
	comp=E,10nm,0.3s						
PKI	Pulchoki	11.13	126	*e*P	P	17 36 11.7	0.0
	comp=E,6.6nm,0.2s						
GUN	Gumba	11.23	124	*e*P	P	17 36 13.4	+0.4
	comp=E,20nm,0.2s						
MKAR	Makanchi Array	13.26	21	P	P	17 36 52.7	+13
	comp=E,0.1nm,0.3s,baz=208,slow=11,SNR=5.9						
BVAR	Borovoye Array	18.74	351	P	P	17 37 50.9	+0.7
	comp=E,0.2nm,0.3s,baz=162,slow=11,SNR=6.0						
ZAL	Zalesovo	20.44	16	P	P	17 38 13.2	+3.8
	comp=E,0.5nm,0.3s,baz=282,slow=3.8,SNR=4.3						
SONM	Songino Array	26.64	51	P	P	17 39 23.2	+13
	comp=E,0.1nm,0.4s,mb2.7,baz=270,slow=7.2,SNR=3.3						
ARCES	ARCESS Array B	44.23	337	P	P	17 41 39.6	-0.4
	comp=E,0.5nm,0.4s,mb3.6,baz=110,slow=8.3,SNR=13						

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*IDC **19** 17:39:03.0±1.4, 3.00N×96.13E, mb3.8/6, mb1 4.0/7, mb1mx3.8/18, mbtmp3.8/7, ML3.4/1, Error ellipse: s-maj=56.1km s-min=25.0km az=53.0*

*NEIC **19** 17:39:07.7±0.7, 3.02N×96.12E, h30^{km}, mb4.2/1, Error ellipse: s-maj=15.7km s-min=10.9km az=225.0*

ISC 19 17:39:06.0±1.0**, 3.0N**±0.1×**96.1E**±0.1**, h30**^{km}**, n11, σ0^{s}49**/10**, mb3.8**/7**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.03	63	*e*P	Pn	17 40 21.8	+0.3
CMAR	Chiang Mai Arr	15.57	10	Pn	P	17 42 45.3	0.0
	0.1nm,0.3s,baz=200,slow=12,SNR=2.9						
WRA	Warramunga Arr	43.92	123	P	P	17 47 11.6	-0.6
	1.3nm,0.5s,mb3.9,baz=300,slow=9.2,SNR=12						
WRAB	Tennant Creek	43.92	123	*e*P	P	17 47 12.4	+0.2
	1.9nm,0.4s,mb4.2						
MKAR	Makanchi Array	45.22	347	P	P	17 47 22.0	-0.3
	1.1nm,0.4s,mb4.0,baz=157,slow=8.8,SNR=36						
SONM	Songino Array	45.50	10	P	P	17 47 24.1	-0.4
	0.5nm,0.4s,mb3.7,baz=190,slow=9.0,SNR=11						
BVAR	Borovoye Array	54.18	341	P	P	17 48 30.1	-0.7
	baz=137,slow=9.9						
AKASG	Malin Array Be	73.16	322	P	P	17 50 35.7	-0.1
	0.1nm,0.3s,mb3.2,baz=87,slow=5.9,SNR=4.8						
ARCES	ARCESS Array B	80.46	340	P	P	17 51 17.1	+0.9
	1.3nm,0.8s,mb3.9,baz=100,slow=7.4,SNR=5.5						
GERES	GERESS Array B	82.74	319	P	P	17 51 29.1	+0.6
	0.8nm,1.1s,mb3.7,baz=90,slow=4.0,SNR=4.5						
TXAR	Lajitas Array	142.64	29	PKhKP		17 58 33.6	
	0.3nm,0.8s,slow=4.5,SNR=3.7						

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*IDC **19** 17:52:42.1±1.7, 2.54S×140.26E, mb4.1/4, mb1 4.4/5, mb1mx4.1/12, mbtmp4.1/5, ML4.0/1, Error ellipse: s-maj=53.7km s-min=26.4km az=104.0*

*NEIC **19** 17:52:43.9±1.1, 2.44S×140.09E, h10^{km}, mb4.0/2, Error ellipse: s-maj=37.0km s-min=12.8km az=100.0*

ISC 19 17:52:46.5±3.7**, 2.53S**±0.09×**140.0E**±0.3**, h35**^{km}±34^{km}**, n15, σ1^{s}16**/15**, mb3.7**/5**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	12.57	216	*e*P	P	17 55 43.4	-2.4
	21nm,0.4s						
WRAB	Tennant Creek	18.15	197	*e*P	P	17 56 59.3	+1.6
	11nm,0.8s						
WB2	Warramunga Arr	18.16	197	*e*P	P	17 56 59.6	+1.7
WRA	Warramunga Arr	18.16	197	P	P	17 56 56.1	-1.8
	0.5nm,0.3s,baz=18,slow=12,SNR=43						
WRA				S	S	18 00 15.8	-0.4
	0.1nm,0.3s,baz=15,slow=22,SNR=3.8						
WRA	Warramunga Arr	18.16	197	P	P	17 56 56.1	-1.8
WRA				S	S	18 00 15.8	-0.4
FITZ	Fitzroy Crossi	20.91	221	P	P	17 57 29.2	+0.7
	2.7nm,0.4s,baz=29,slow=11,SNR=8.0						
MBWA	Marble Bar	27.05	225	*e*P	P	17 58 28.0	+0.1
CMAR	Chiang Mai Arr	45.45	299	P	P	18 01 04.0	-0.4
	0.7nm,0.8s,mb3.6,baz=125,slow=7.3,SNR=5.2						
SONM	Songino Array	58.10	334	P	P	18 02 40.1	+1.2
	0.2nm,0.6s,mb3.4,baz=153,slow=6.6,SNR=2.5						
SONM	Songino Array	58.10	334	P	P	18 02 40.1	+1.2
MKAR	Makanchi Array	70.42	322	P	P	18 03 59.1	-0.1
	1.5nm,0.6s,mb4.1,baz=112,slow=7.9,SNR=17						
ZRNK	Zerenda	80.66	325	*e*P	P	18 04 57.5	+0.1
	0.7nm,0.4s,mb3.9						
ILAR	Eielson Array	85.15	24	P	P	18 05 18.9	-1.2
	0.2nm,0.7s,mb3.4,baz=258,slow=4.6,SNR=4.8						
DBIC	Dimbokro	144.71	278	PKPbc	PKPbc	18 12 21.5	+0.8
	1.9nm,0.5s,baz=85,slow=3.8,SNR=7.0						
DBIC	Dimbokro	144.71	278	PKPbc	PKPbc	18 12 21.5	+0.8
DBIC				*e*PKP	PKPdf	18 12 21.5	+0.7

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*ISK **19** 18:36:25.4, 36.89N×27.49E, h16^{km}, MD3.5*

*ATH **19** 18:36:26.0, 36.90N×27.46E, h30^{km}±6^{km}, MD3.2/4*

*NEIC **19** 18:36:26.0, 36.90N×27.46E, h30^{km}, MD3.2(ATH), After ATH.*

*CSEM **19** 18:36:26.0±0.1, 36.94N×27.52E, h18^{km}±1^{km}, MD3.5, Error ellipse: s-maj=2.5km s-min=2.4km az=130.0*

ISC 19 18:36:25.3±0.7**, 36.87N**±0.03×**27.49E**±0.05**, h7**^{km}±5^{km}**, n23, σ0^{s}90**/32**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.20	349	*i* P	Pg	18 36 30.1	+0.5
BDRM				*i* S	Sg	18 36 32.6	+0.2
BODT	Bodrum	0.24	324	*i* PG	Pg	18 36 31.1	+0.7
NISR	Nisiros	0.39	229	*e*PB	Pb	18 36 35.0	+0.9
MLSB	Milas	0.49	28	PG	Pg	18 36 35.2	+0.1
MLSB				SG	Sg	18 36 41.9	+0.2
YER	Yerkesik	0.69	67	PG	Pg	18 36 39.0	-0.1
ARG	Arkhangelos	0.82	142	*e*PB	Pb	18 36 42.4	+0.8
ARG				*e*SN	Sn	18 36 56.1	+0.5
AYDN	Tasoluk	0.85	21	*i* P	Pb	18 36 41.4	-0.7
AYDN				*i* S	Sb	18 36 52.8	-0.7
DALT	Dalyan (Mudla)	0.92	96	PG	Pg	18 36 43.4	-0.4
SMG	Samos	0.99	328	*e*PN	Pn	18 36 44.5	-1.0
FETY	Fethiye	1.30	100	*e*PN	Pn	18 36 49.9	0.0
KARP	Karpathos	1.34	192	*e*PN	Pn	18 36 50.9	+0.4
DNZL	Cakiroluk	1.49	56	*i* P	Pn	18 36 52.9	+0.2
DNZL				*i* S	Sb	18 37 13.1	+1.2
DENT	Denizli	1.52	54	*e*PN	Pn	18 36 52.9	-0.1
IZM	Izmir	1.54	353	*e*PN	Pn	18 36 52.4	-1.0
KDAG	Bornova	1.55	353	*i* P	Pn	18 36 52.0	-1.5
KDAG				*i* S	Sb	18 37 15.5	+1.8
BLCB	Balcova	1.56	347	*e*PN	Pn	18 36 53.0	-0.7
APE	Apeiranthos	1.58	278	PN	Pn	18 36 53.0	-1.0
URLA	Izmir	1.65	335	*i* P	Pn	18 36 57.4	+2.4
URLA				*i* S	Sn	18 37 21.2	+4.5
MANT	Manisa	1.83	27	*i* P	Pn	18 36 56.4	-1.1
MANT				*i* S	Sn	18 37 22.2	+1.0
ELL	Elmali	1.94	93	*e*PN	Pn	18 36 58.7	-0.4
AKS	Akhisar	2.03	7	*e*PN	Pn	18 37 00.0	-0.4
TKTP	Tekketepe	2.54	62	*i* P	Pg	18 37 12.4	-3.6
TKTP				*i* S	Sg	18 37 54.2	+4.3
BCK	Bucak	2.54	76	*e*PN	Pn	18 37 07.1	-0.7

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*IDC **19** 18:59:54.4±1.3, 0.99N×97.06E, mb4.2/8, mb1 4.3/9, mb1mx4.0/19, mbtmp4.2/9, ML4.1/1, MS3.6/3, Ms1 3.6/3, ms1mx3.3/14, Error ellipse: s-maj=59.8km s-min=19.3km az=59.0*

*BJI **19** 18:59:57.8, 0.84N×97.38E, h51^{km}, mB5.1, mb4.7, Ms4.1, Msz3.9*

*NEIC **19** 19:00:00.3±2.8, 1.10N×97.23E, h38^{km}±22^{km}, mb4.6/6, Error ellipse: s-maj=24.1km s-min=8.8km az=57.0*

ISC 19 18:59:57.9±0.8**, 1.10N**±0.08×**97.16E**±0.09**, h33**^{km}**, n34, σ0^{s}90**/32**, mb4.4**/15**, MS3.8**/3**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	5.18	48	P	P	19 01 15.2	0.0
KULM	Kulim	5.43	40	⇑*i*P	P	19 01 18.2	-0.5
KGM	Kluang	6.23	81	P	P	19 01 30.4	+0.6
CM31	Chiang Mai Arr	17.34	6	*e*P	P	19 03 59.5	+0.3
	6.3nm,0.8s						
CMAR	Chiang Mai Arr	17.34	6	P	P	19 03 58.1	-1.0
	0.2nm,0.3s,baz=193,slow=12,SNR=16						
CMAR				LR	LR	19 11 19.1	
	comp=Z,79nm,18.6s,baz=190,slow=39						
KKM	Kota Kinabalu	19.64	75	*e*P	P	19 04 25.6	-1.2
KKM	Kota Kinabalu	19.64	75	P	P	19 04 26.9	+0.1
TSM	Tawau	20.93	81	P	P	19 04 43.1	+2.7
KMI	Kunming	24.49	12	P	P	19 05 17.1	+1.6
KMI				AP		19 05 23.8	
KMI				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
KMI				AMB	AMB		
	comp=Z,170nm,4.3s						
KMI				LR	LR		
	comp=N,320nm,16.2s,MS4.0						
KMI				LR	LR		
	comp=E,140nm,14.9s,MS4.0						
KMI				LR	LR		
	comp=Z,290nm,14.9s,MS3.9						
KMI	Kunming	24.49	12	P	P	19 05 17.1	+1.6
	comp=Z,28nm,0.9s,mb4.7						
KMI				pP		19 05 23.8	
KMI				sP		19 05 25.9	
KMI				PP	PP	19 06 02.3	+11
KMI				S	S	19 09 48.8	+18
KMI				sS		19 10 01.2	
KMI				SS	SS	19 11 03.3	+37
KMI				LR	LR		
	comp=Z,300nm,14.9s,MS3.9						
LSA	Lhasa	29.01	349	*e*P	P	19 05 58.8	+1.7
LSA	Lhasa	29.01	349	*e*P	P	19 05 58.5	+1.4
	comp=Z,5.3nm,0.9s,mb4.3						
ENH	Enshi	31.29	21	*e*P	P	19 06 15.4	-2.0
	comp=Z,12nm,0.6s,mb4.9						
XAN	Xi’an	34.57	17	P	P	19 06 44.4	-1.4
GTA	Gaotai	38.21	3	P	P	19 07 17.0	+0.6
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
WRA	Warramunga Arr	42.02	122	P	P	19 07 47.4	-0.8
	comp=Z,1.7nm,0.7s,mb3.8,baz=300,slow=9.1,SNR=18						
WRAB	Tennant Creek	42.02	122	*e*P	P	19 07 48.0	-0.2
WB2	Warramunga Arr	42.03	122	*e*P	P	19 07 48.3	0.0
KS15	Wonju Array Si	45.93	34	*e*P	P	19 08 19.7	+0.1
SONM	Songino Array	47.24	8	P	P	19 08 30.3	+0.6
	comp=Z,3.8nm,0.6s,mb4.5,baz=190,slow=9.2,SNR=25						
SONM				PcP	PcP	19 10 00.9	-0.1
	comp=Z,1.3nm,0.7s,baz=187,slow=4.7,SNR=5.4						
SONM				LR	LR	19 30 47.2	
	comp=Z,80nm,19.3s,MS3.7,baz=216,slow=39						
MKAR	Makanchi Array	47.33	346	P	P	19 08 31.0	+0.6
	comp=Z,3.1nm,0.7s,mb4.4,baz=162,slow=9.2,SNR=22						
MKAR	Makanchi Array	47.33	346	P	P	19 08 31.0	+0.6
ULN	Ulaanbaatar	47.37	9	*e*P	P	19 08 31.2	+0.4
	comp=Z,3.3nm,0.7s,mb4.4						
CN2	Changchun	49.41	27	*e*P	P	19 08 46.1	-0.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
STKA	Stephens Creek	53.32	132	P	P	19 09 16.6	+0.2
	comp=Z,1.5nm,0.5s,mb4.2,baz=91,slow=4.2,SNR=3.3						
ZAL	Zalesovo	53.64	351	P	P	19 09 18.8	+0.4
	comp=Z,2.7nm,0.8s,mb4.3,baz=291,slow=6.7,SNR=21						
ZAL	Zalesovo	53.64	351	P	P	19 09 18.8	+0.4
BVAR	Borovoye Array	56.33	341	P	P	19 09 37.2	-0.7
	comp=Z,1.6nm,0.8s,mb4.1,baz=149,slow=8.6,SNR=15						
YAK	Yakutsk	65.53	16	*e*P	P	19 10 39.3	-0.8
	comp=Z,10nm,0.9s,mb4.9						
FINES	FINESS Array B	80.07	333	P	P	19 12 05.4	-0.4
	comp=Z,1.4nm,1.1s,mb3.8,SNR=3.4						
ARCES	ARCESS Array B	82.62	340	P	P	19 12 19.1	+0.2
	comp=Z,2.2nm,0.9s,mb4.2,baz=108,slow=3.8,SNR=6.8						
ARCES				LR	LR	19 53 37.3	
	comp=Z,44nm,18.4s,MS3.9,baz=193,slow=39						
TXAR	Lajitas Array	143.78	32	PKP	PKPdf	19 19 30.3	-0.1
	comp=Z,0.2nm,0.5s,baz=177,slow=1.1,SNR=3.8						
CPUP	Villa Florida	144.90	222	PKP	PKPdf	19 19 33.9	+1.4
	comp=Z,0.9nm,0.6s,baz=146,slow=4.4,SNR=2.3						
LRAL	Lakeview Retre	145.83	6	*e*PKPdf	PKPdf	19 19 35.5	+1.6

KRSC 19 19:02:28.4±0.7**, 53.61N×160.71E, h40**^{km}±9^{km}**, ML4.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.66	219	*i* P	P	19 02 40.9	-0.4
SPN				*i* S	S	19 02 49.8	-0.8
KII	Karymskiy	0.86	300	*i* P	P	19 02 43.9	-0.2
KII				*i* S	S	19 02 55.5	-0.2
NLC	Nalytchevo	0.93	242	*i* P	P	19 02 44.8	-0.3
NLC				*i* S	S	19 02 56.8	-0.6
MKZ	Mys Kozlova	1.12	32	*i* P	P	19 02 46.3	-1.5
MKZ				*i* S	S	19 03 00.8	-1.5
SDLR	Sedlovina	1.14	254	*i* P	P	19 02 48.3	+0.2
SDLR				*i* S	S	19 03 02.9	+0.1
UGLR	Uglovaya	1.20	251	*i* P	P	19 02 49.2	+0.3
UGLR				*i* S	S	19 03 04.7	+0.4
AVH	Avacha	1.23	254	*i* P	P	19 02 49.7	+0.3
AVH				*i* S	S	19 03 05.2	+0.1
KOK	Koryaka	1.28	256	*i* P	P	19 02 50.3	+0.2
KOK				*i* S	S	19 03 06.2	-0.2
PET	Petropavlovsk	1.37	245	*i* P	P	19 02 51.4	0.0
PET				*i* S	S	19 03 07.6	-1.0
GNL	Ganaly	1.65	274	*i* P	P	19 02 55.8	+0.4
GNL				*e*S	S	19 03 15.8	+0.2
TUMR	Tumrok	1.71	349	*i* P	P	19 02 56.3	0.0
TUMR				*i* S	S	19 03 16.3	-0.8
RUS	Russkaya	1.77	229	*e*P	P	19 02 56.6	-0.6
RUS				*e*S	S	19 03 17.4	-1.3
GRL	Gorelyy	1.91	237	*e*P	P	19 02 59.3	+0.2
GRL				*e*S	S	19 03 21.7	-0.4
KMNR	Kamenistaya	2.17	353	*e*P	P	19 03 03.1	+0.3
KMNR				*e*S	S	19 03 28.1	-0.5
APC	Apacha	2.24	254	*e*P	P	19 03 04.7	+0.9
APC				*e*S	S	19 03 30.8	+0.3
APC				Smax			
	60nm,0.9s						
KPT	Kopyto	2.38	353	*e*P	P	19 03 06.2	+0.4
KPT				*e*S	S	19 03 33.6	-0.4
ZLN	Zelenaya	2.41	1	*e*P	P	19 03 07.0	+0.7
ZLN				*e*S	S	19 03 35.3	+0.4
LGNR	Loginova	2.48	360	*e*P	P	19 03 08.9	+1.7
LGNR				*e*S	S	19 03 38.1	+1.6
KOZ	Kozyrevsk	2.50	349	*e*P	P	19 03 07.2	-0.4
KOZ				*e*S	S	19 03 35.2	-1.9
CIRR	Tsirk	2.51	0	*e*P	P	19 03 09.8	+2.1
CIRR				*e*S	S	19 03 40.0	+2.7
ESO	Esso	2.60	334	*i* P	P	19 03 08.6	-0.3
ESO				*e*S	S	19 03 37.7	-1.8
ESO				Smax			
	60nm,0.8s						
KRSR	Krestovskiy	2.61	358	*e*P	P	19 03 09.5	+0.3
KRSR				*e*S	S	19 03 38.7	-1.3
KLY	Klyuchi	2.71	359	*e*P	P	19 03 10.3	-0.2
KLY				*e*S	S	19 03 40.5	-1.9
SRDR	Sredinnyy	2.77	348	*e*P	P	19 03 11.4	0.0
SRDR				*e*S	S	19 03 42.5	-1.5
KBTR	Krutoberegovo	2.87	24	*e*P	P	19 03 12.1	-0.8
KBTR				*e*S	S	19 03 45.5	-1.1
PAU	Pauzhetka	3.21	230	*e*P	P	19 03 18.9	+1.3
PAU				*e*S	S	19 03 54.8	-0.2
BKI	Bering	3.46	60	*e*P	P	19 03 18.9	-2.4
BKI				*e*S	S	19 03 55.5	-6.1
BKI				Smax			
	60nm,0.3s						

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*NEIC **19** 19:08:28.8±2.1, 16.10N×97.22W, h10^{km}, MD3.8(MEX), Error ellipse: s-maj=24.0km s-min=12.2km az=51.0*

MEX 19 19:08:21.1±0.8**, 17.18N×94.99W, h128**^{km}±8^{km}**, MD3.7, 1D, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.13	133	⇓*i*P	P	19 08 37.5	-1.2
CMIG				*i* S	S	19 08 49.5	-2.5
OXX	Oaxaca	1.66	267	*i* P	P	19 08 50.0	-1.4
OXX				*i* S	S	19 09 12.0	-2.4
VHO	Vista Hermosa	1.67	266	*i* P	P	19 08 49.4	-2.0
VHO				*i* S	S	19 09 12.4	-2.2
HUIG	Huatulco	1.77	218	*i* P	P	19 08 50.2	-2.4
HUIG				*i* S	S	19 09 15.1	-1.5
CCIG	Comitan	2.87	108	*i* P	P	19 09 05.6	-1.2
CCIG				*i* S	S	19 09 37.4	-4.1
PPM	Popocatepetl	3.94	299	*i* P	P	19 09 20.3	-0.7
PPM				*i* S	S	19 10 05.4	-1.5

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*NEIC **19** 20:19:38.6, 15.74N×96.46W, h12^{km}, MD4.0(MEX), After MEX.*

MEX 19 20:19:38.6±1.0**, 15.74N×96.46W, h12**^{km}±17^{km}**, MD4.0, 1D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.34	86	*i* P	Pg	20 19 45.4	-0.4
HUIG				*i* S	Sg	20 19 50.4	-0.2
VHO	Vista Hermosa	1.35	349	⇓*i*P	Pn	20 19 59.9	-3.4
VHO				*i* S	Sb	20 20 15.7	-4.6
OXX	Oaxaca	1.35	349	*i* P	Pn	20 20 00.0	-3.4
OXX				*i* S	Sb	20 20 16.5	-4.0
CMIG	Matias Romero	2.02	48	*i* P	Pn	20 20 07.9	-5.0
CMIG				*i* S	Sn	20 20 34.5	-3.9
PPM	Popocatepetl	3.90	328	*e*P	Pn	20 20 37.1	-2.6
PPM				*i* S	Sn	20 21 20.8	-5.0

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*NEIC **19** 20:27:23.6, 35.84N×9.88W, MG3.5(MDD), After MDD.*

*CSEM **19** 20:27:24.7±0.7, 35.83N×9.77W, h2^{km}, ML2.4/3, Error ellipse: s-maj=15.0km s-min=10.7km az=102.0*

MDD 19 20:27:24.4±3.3**, 35.84N×9.82W, mb2.7**/4**, Error ellipse: s-maj=28.9km s-min=25.6km az=55.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	Sao Teotonio	1.92	27	*e*Pn	Pn	20 27 57.3	-1.3
PTEO				*e*Sn	Sn	20 28 20.9	-2.9
EMIN	Mina Concepcio	3.17	52	Pn	Pn	20 28 14.1	-2.4
	0.1nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	20 28 50.5	-5.1
	0.6nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	3.17	52	Pn	Pn	20 28 14.1	-2.4
	0.3nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	20 28 50.5	-5.2
	0.6nm,0.1s,SNR=7.9						
ESPR	Espera	3.36	71	Pn	Pn	20 28 16.9	-2.2
	0.1nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	20 28 56.2	-4.2
	1.4nm,0.2s,SNR=7.9						
ESPR	Espera	3.36	71	Pn	Pn	20 28 16.9	-2.2
	3.6nm,0.2s,SNR=7.9						
ESPR				Sn	Sn	20 28 56.2	-4.1
	1.4nm,0.2s,SNR=7.9						
EBAD	Badajoz	3.67	37	Pn	Pn	20 28 20.6	-3.0
	0.2nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	20 29 03.8	-4.4
	0.1nm,0.1s,SNR=7.9						
EBAD	Badajoz	3.67	37	Pn	Pn	20 28 20.6	-3.0
	0.1nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	20 29 03.8	-4.4
	0.1nm,0.1s,SNR=7.9						
EADA	Adamuz	4.79	59	Pn	Pn	20 28 36.4	-3.2
	0.0nm,0.0s,SNR=7.9						
EADA				Sn	Sn	20 29 30.3	-6.3
	0.6nm,0.2s,SNR=7.9						
EADA	Adamuz	4.79	59	Pn	Pn	20 28 36.4	-3.2
	0.2nm,0.1s,SNR=7.9						
EADA				Sn	Sn	20 29 30.4	-6.3

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*IDC **19** 20:49:09.2±0.9, 23.73S×111.93W, mb3.8/5, mb1 4.2/5, mb1mx3.9/16, mbtmp3.8/5, MS3.5/5, Ms1 3.5/5, ms1mx3.2/15, Error ellipse: s-maj=37.7km s-min=29.4km az=94.0*

*NEIC **19** 20:49:11.1±0.5, 23.56S×111.93W, h10^{km}, mb4.3/3, Error ellipse: s-maj=23.6km s-min=16.6km az=81.0*

ISC 19 20:49:09.6±0.8**, 23.6S**±0.1×**111.9W**±0.2**, h10**^{km}**, n24, σ1^{s}05**/12**, mb3.9**/7**, MS3.5**/5**, 2D, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	Papeete	35.69	272	LR	LR	21 06 23.6	
	comp=Z,131nm,21.5s,MS3.7,baz=284,slow=29						
PLCA	Paso Flores	38.58	126	LR	LR	21 08 02.0	
	comp=Z,62nm,21.9s,MS3.4,baz=213,slow=29						
LPAZ	La Paz	41.67	88	P	P	20 57 00.5	+0.3
	1.3nm,1.0s,mb3.5,baz=297,slow=6.8,SNR=7.0						
LPAZ				LR	LR	21 10 12.3	
	comp=Z,70nm,21.3s,MS3.5,baz=81,slow=30						
LPAZ	La Paz	41.67	88	*e*P	P	20 57 00.6	+0.4
	8.4nm,1.5s,mb4.2						
LPAZ				LR	LR	21 10 12.3	
SAML	Samuel	48.75	81	*e*P	P	20 57 55.5	-1.3
	4.7nm,1.2s,mb4.4						
CPUP	Villa Florida	49.27	105	LR	LR	21 14 28.3	
	comp=Z,46nm,21.8s,MS3.4,baz=234,slow=31						
TXAR	Lajitas Array	53.19	9	P	P	20 58 30.7	+0.3
	0.9nm,1.2s,mb3.6,baz=190,slow=7.6,SNR=3.9						
TXAR	Lajitas Array	53.19	9	P	P	20 58 30.7	+0.3
BDFB	Brasilia	60.30	95	LR	LR	21 22 43.6	
	comp=Z,38nm,19.4s,MS3.5,baz=119,slow=33						
NVAR	Mina Array Bea	61.96	354	P	P	20 59 33.1	+1.0
	0.4nm,0.3s,mb4.0,baz=174,slow=8.2,SNR=6.5						
VNDA	Vanda	66.35	194	P	P	20 59 58.5	-1.6
	0.5nm,0.8s,mb3.6,baz=138,slow=3.8,SNR=3.7						
VNDA	Vanda	66.35	194	P	P	20 59 58.5	-1.6
HLID	Hailey	66.84	358	*e*P	P	21 00 03.4	-0.4
	1.7nm,1.0s,mb4.0						
VNA3	Neumayer Olymp	71.75	161		sP	21 00 40.6	+2.8
VNA3	Neumayer Olymp	71.75	161	⇓*i*P	P	21 00 33.9	+0.4
VNA3				P		21 00 40.6	
VNA2	Neumayer--Watz	72.55	161		sP	21 00 46.4	+3.9
VNA2	Neumayer--Watz	72.55	161	⇓*i*P	P	21 00 40.4	+2.2
VNA2				P		21 00 46.4	
YKA	Yellowknife Ar	85.79	359	P	P	21 01 49.3	-0.6
	0.4nm,0.4s,mb4.0,baz=178,slow=4.6,SNR=5.1						
SONM	Songino Array	141.16	318	PKP	PKPdf	21 08 41.2	-2.1
	0.3nm,0.8s,baz=90,slow=2.5,SNR=4.2						
BRTR	Keskin Array B	146.79	53	PKPbc	PKPbc	21 08 53.8	+2.0
	2.5nm,0.9s,baz=243,slow=2.8,SNR=9.8						
ZAL	Zalesovo	147.17	342	PKPbc	PKPdf	21 08 53.6	+0.1
	0.6nm,0.4s,baz=174,slow=6.5,SNR=4.2						
ZRNK	Zerenda	150.65	359	*e*PKPdf	PKPdf	21 08 57.5	-1.6
ZRNK				*e*PKPbc	PKPdf	21 09 03.1	+4.1
ZRNK				*e*PKPab	PKPab	21 09 09.3	-1.4
CMAR	Chiang Mai Arr	150.78	266	PKPbc	PKPdf	21 09 04.3	+4.0
	1.7nm,0.9s,baz=95,slow=1.1,SNR=9.4						
MKAR	Makanchi Array	154.16	337	PKPbc	PKPdf	21 09 10.1	+5.9
	0.6nm,0.8s,baz=304,slow=5.2,SNR=4.2						

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*ATH **19** 21:00:05.8, 36.92N×27.72E, h27^{km}±1^{km}, MD3.6/7*

*ISK **19** 21:00:05.6, 36.89N×27.69E, h12^{km}, MD3.6*

*NEIC **19** 21:00:05.8, 36.92N×27.72E, h27^{km}, MD3.6(ATH), After ATH.*

*CSEM **19** 21:00:05.7±0.2, 36.90N×27.70E, h11^{km}±1^{km}, MD3.6, Error ellipse: s-maj=2.5km s-min=2.2km az=4.0*

*HLW **19** 21:00:10.5, 36.70N×27.66E, h20^{km}, Mb3.3*

ISC 19 21:00:05.1±0.6**, 36.83N**±0.02×**27.67E**±0.04**, h10**^{km}±4^{km}**,**

n44, σ0^{s}97/53, 1C-2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.29**	**322**	*i* P	**Pg**	**21 00 11.6**	**+0.4**
BDRM				*i* S	**Sg**	**21 00 15.7**	**+0.4**
BODT	**Bodrum**	**0.36**	**309**	*i* PG	**Pg**	**21 00 13.3**	**+0.6**
MLSB	**Milas**	**0.47**	**11**	*i* PG	**Pg**	**21 00 14.0**	**-0.7**
MLSB				*i* SG	**Sg**	**21 00 20.8**	**-0.3**
NISR	**Nisiros**	**0.49**	**243**	*e*PN	**Pn**	**21 00 17.5**	**-0.2**
YER	**Yerkesik**	**0.58**	**58**	*i* PG	**Pg**	**21 00 16.5**	**-0.3**
ARG	**Arkhangelos**	**0.72**	**149**	*e*PN	**Pn**	**21 00 21.2**	**+0.2**
DALT	**Dalyan (Mudla)**	**0.78**	**94**	PG	**Pg**	**21 00 20.9**	**+0.1**
AYDN	**Tasoluk**	**0.84**	**12**	*i* P	**Pb**	**21 00 20.6**	**-0.8**
AYDN				*i* S	**Sb**	**21 00 30.5**	**-1.9**
SMG	**Samos**	**1.10**	**323**	*e*PN	**Pn**	**21 00 26.0**	**-0.4**
FETY	**Fethiye**	**1.16**	**99**	PN	**Pn**	**21 00 27.4**	**+0.1**
KARP	**Karpathos**	**1.35**	**198**	*e*PN	**Pn**	**21 00 31.9**	**+1.9**
DNZL	**Cakiroluk**	**1.39**	**52**	*i* P	**Pn**	**21 00 31.2**	**+0.5**
DNZL				*i* S	**Sb**	**21 00 48.0**	**-0.5**
DENT	**Denizli**	**1.43**	**49**	PN	**Pn**	**21 00 32.1**	**+1.0**
GOLH	**Golhisar**	**1.57**	**75**	*i* P	**Pn**	**21 00 37.4**	**+4.2**
GOLH				*i* S	**Sb**	**21 00 57.0**	**+3.4**
IZM	**Izmir**	**1.59**	**349**	PN	**Pn**	**21 00 33.1**	**-0.5**
KDAG	**Bornova**	**1.60**	**349**	*i* P	**Pn**	**21 00 33.0**	**-0.6**
KDAG				*i* S	**Sb**	**21 00 53.2**	**-1.2**
BLCB	**Balcova**	**1.63**	**342**	PN	**Pn**	**21 00 33.6**	**-0.4**
AKAS	**Kas**	**1.67**	**110**	*i* P	**Pn**	**21 00 38.7**	**+4.1**
AKAS				*i* S	**Sn**	**21 01 03.9**	**+7.6**
APE	**Apeiranthos**	**1.73**	**278**	PN	**Pn**	**21 00 36.4**	**+0.9**
APE	**Apeiranthos**	**1.73**	**278**	*e*PN	**Pn**	**21 00 36.5**	**+1.0**
URLA	**Izmir**	**1.75**	**331**	*i* P	**Pn**	**21 00 38.5**	**+2.8**
URLA				*i* S	**Sn**	**21 01 00.5**	**+2.3**
ELL	**Elmali**	**1.80**	**92**	*e*PN	**Pn**	**21 00 37.6**	**+1.1**
SANT	**Santorini**	**1.83**	**256**	P	**Pn**	**21 00 37.0**	**0.0**
SANT	**Santorini**	**1.83**	**256**	P	**Pn**	**21 00 37.0**	**0.0**
AKS	**Akhisar**	**2.04**	**3**	*e*PN	**Pn**	**21 00 39.7**	**-0.3**
BCK	**Bucak**	**2.42**	**74**	*e*PN	**Pn**	**21 00 45.7**	**+0.4**
ISP	**Isparta**	**2.48**	**65**	*e*PN	**Pn**	**21 00 46.9**	**+0.7**
ISP	**Isparta**	**2.48**	**65**	*e*P	**Pn**	**21 00 44.1**	**-2.2**
ISP	**Isparta**	**2.48**	**65**	*e*P	**Pn**	**21 00 44.1**	**-2.1**
ISP	**Isparta**	**2.48**	**65**	*e*Pn	**Pn**	**21 00 46.9**	**+0.7**
XRY	**Khrisi**	**2.53**	**220**	*e*PB	**Pb**	**21 00 50.0**	**-0.2**
PRK	**Paraskevi**	**2.65**	**336**	*e*PN	**Pn**	**21 00 48.4**	**-0.2**
BALB	**Balikesir**	**2.81**	**3**	*e*PN	**Pn**	**21 00 51.5**	**+0.6**
DST	**Dursunbey**	**2.87**	**15**	*e*PN	**Pn**	**21 00 50.8**	**-1.0**
CANB	**Canakkale**	**3.21**	**352**	*e*PN	**Pn**	**21 00 57.2**	**+0.5**
BNT	**Bandirma**	**3.52**	**3**	*e*PN	**Pn**	**21 01 01.5**	**+0.4**
ESKT	**Eskisehir**	**3.67**	**42**	*e*PN	**Pn**	**21 01 04.0**	**+0.8**
HDMB	**Hadim**	**3.87**	**87**	*e*PN	**Pn**	**21 01 06.8**	**+0.9**
YLV	**Yalova**	**3.96**	**19**	*e*PN	**Pn**	**21 01 07.1**	**-0.2**
DABA	**Dabaa**	**5.83**	**175**	⇑P	**Pn**	**21 01 33.6**	**-0.2**
HBRG	**Burj al ‘Arab**	**6.50**	**163**	P	**Pn**	**21 01 42.7**	**-0.5**
SWA1		**7.73**	**193**	P	**Pn**	**21 01 59.0**	**-1.4**
SWA1				S	**Sn**	**21 03 19.6**	**-9.2**
SWA2		**7.79**	**194**	⇓P	**Pn**	**21 02 00.1**	**-1.2**
HFRF	**Wahat Farafira**	**9.67**	**177**	⇓P	**P**	**21 02 25.3**	**-2.1**

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*NEIC **19** 21:31:50.0±0.8, 44.01N×82.59E, h10^{km}, Error ellipse: s-maj=14.1km s-min=9.9km az=170.0*

*IDC **19** 21:31:49.2±1.2, 44.13N×82.83E, mb3.5/5, mb1 3.7/9, mb1mx3.6/23, mbtmp3.6/9, ML3.4/4, Error ellipse: s-maj=26.0km s-min=12.4km az=76.0*

*BJI **19** 21:31:52.1, 44.11N×82.54E, h12^{km}, ML3.8*

*NNC **19** 21:32:02.2±2.7, 44.70N×81.88E, h21^{km}±12^{km}, mpv3.2, Error ellipse: s-maj=25.4km s-min=15.2km az=134.0*

ISC 19 21:31:49.6±0.8**, 44.23N**±0.08×**82.43E**±0.08**, h10**^{km}**, n21, σ1^{s}12**/30**, mb3.5**/5**, 8C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**2.57**	**358**	Pn	**Pn**	**21 32 36.2**	**+4.3**
	1.1nm,0.3s,baz=204,slow=17,SNR=758						
MK31				⇑Pg	**Pg**	**21 32 40.6**	**-0.2**
	9.9nm,0.3s,baz=21,slow=46,SNR=6.2						
MK31				⇓Lg		21 33 10.8	
	21nm,0.2s,baz=174,slow=29,SNR=9.9						
MKAR	**Makanchi Array**	**2.57**	**358**	Pn	**Pn**	**21 32 36.3**	**+4.4**
	2.6nm,0.3s,baz=175,slow=16,SNR=77						
MKAR				Pg	**Pg**	**21 32 40.6**	**-0.2**
	16nm,0.3s,baz=174,slow=17,SNR=118						
MKAR				Sn	**Sn**	**21 33 09.0**	**+5.5**
	22nm,0.3s,baz=185,slow=27,SNR=18						
MKAR				Lg		21 33 15.0	
	49nm,0.3s,baz=164,slow=32,SNR=13						
MKAR	**Makanchi Array**	**2.57**	**358**	Pn	**Pn**	**21 32 36.3**	**+4.4**
MKAR				Pg	**Pg**	**21 32 40.6**	**-0.2**
MKAR				Sn	**Sn**	**21 33 09.0**	**+5.5**
MKAR				Lg		21 33 15.0	
WMQ	**Urumqi**	**3.82**	**94**	P	**Pn**	**21 32 53.3**	**+3.6**
WMQ				S	**Sn**	**21 33 36.5**	**+1.3**
WMQ				SG	**Sg**	**21 33 45.8**	**-11**
WMQ				Smax			
	comp=N,50nm,0.5s						
WMQ				Smax			
	comp=E,60nm,0.7s						
AAK	**Ala-Archa**	**6.00**	**257**	⇓Pg	**Pg**	**21 33 48.7**	**-0.6**
	comp=E,4.5nm,0.5s						
AAK				⇑Lg		21 34 57.3	
	comp=E,15nm,0.6s						
AAK	**Ala-Archa**	**6.00**	**257**	*e*Pg	**Pg**	**21 33 45.5**	**-3.8**
	comp=E,8.6nm,0.8s						
KK31	**Karatay Array**	**8.71**	**267**	⇑Lg		21 36 25.0	
	comp=E,4.1nm,0.6s,baz=69,slow=28,SNR=5.4						
ZAL	**Zalesovo**	**9.84**	**8**	Pn	**P**	**21 34 13.4**	**-0.7**
	comp=E,1.0nm,0.3s,baz=290,slow=11,SNR=7.0						
ZAL				Lg		21 37 04.1	
	comp=E,0.3nm,0.3s,baz=216,slow=10,SNR=2.8						
ZAL	**Zalesovo**	**9.84**	**8**	Pn	**P**	**21 34 13.4**	**-0.7**
ZAL				Lg		21 37 04.1	
VOSK	**Vostochnaya**	**11.39**	**322**	⇑Pn	**P**	**21 34 35.0**	**-0.3**
	comp=E,1.3nm,0.9s						
VOSK				⇓Sn	**S**	**21 36 38.2**	**-5.4**
	comp=E,1.5nm,0.7s						
VOSK				⇑Lg		21 37 44.0	
	comp=E,4.2nm,0.7s						
BVAR	**Borovoye Array**	**11.86**	**322**	Pn	**P**	**21 34 41.9**	**+0.3**
	comp=E,0.2nm,0.3s,baz=132,slow=13,SNR=3.7						
BVAR				Lg		21 38 15.1	
	comp=E,0.5nm,0.3s,baz=119,slow=33,SNR=4.2						
ZRNK	**Zerenda**	**12.44**	**319**	⇑Pn	**P**	**21 34 49.1**	**-0.4**
	comp=E,1.1nm,0.9s						
ZRNK				⇑Sn	**S**	**21 37 01.2**	**-7.9**
	comp=E,5.1nm,1.9s						
ZRNK				⇑Lg		21 38 17.3	
	comp=E,5.0nm,1.4s						
ZRNK	**Zerenda**	**12.44**	**319**	Pn	**P**	**21 34 49.9**	**+0.4**
ZRNK				*e*Sn	**S**	**21 37 03.5**	**-5.6**
SONM	**Songino Array**	**17.01**	**69**	Pn	**P**	**21 35 46.6**	**-2.3**
	comp=E,0.2nm,0.3s,baz=233,slow=7.2,SNR=2.3						
KAF	**Kangasniemi**	**36.69**	**319**	*e*p	**P**	**21 38 58.4**	**+0.4**
FINES	**FINESS Array B**	**36.77**	**318**	P	**P**	**21 39 00.2**	**+1.4**
	comp=E,0.3nm,0.5s,mb3.4,baz=96,slow=9.5,SNR=6.0						
FINES	**FINESS Array B**	**36.77**	**318**	P	**P**	**21 39 00.2**	**+1.4**
ARCES	**ARCESS Array B**	**37.94**	**331**	P	**P**	**21 39 09.7**	**+1.3**
	comp=E,1.2nm,0.9s,mb3.6,baz=74,slow=8.8,SNR=4.4						
NOA	**NORSAR Array B**	**43.95**	**318**	P	**P**	**21 39 58.9**	**+0.9**
	comp=E,0.7nm,0.6s,mb3.6,baz=80,slow=7.9,SNR=3.4						
ILAR	**Eielson Array**	**64.71**	**21**	P	**P**	**21 42 28.1**	**-1.2**
	comp=E,0.5nm,0.8s,mb3.6,baz=315,slow=4.8,SNR=4.9						
WRA	**Warramunga Arr**	**79.54**	**131**	P	**P**	**21 43 57.0**	**-1.2**
	comp=E,0.1nm,0.4s,mb3.1,baz=332,slow=4.2,SNR=5.4						

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*NIED **19** 21:40:00, 38.80N×141.50E, h65^{km}, Mw3.5 Best double couple: $M_0 2.21\times10^{14}$ NP1:ϕ_s207°, δ70°, λ48°. NP2:ϕ_s96°, δ46°, λ152°.*

*JMA **19** 21:40:28.9, 38.81N×141.54E, h70^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1:ϕ_s111°, δ49°, λ153°. NP2:ϕ_s219°, δ70°, λ45°. Principal axes: T Plg45°, Azm84°; N Plg42°, Azm238°; P Plg13°, Azm340°;*

JMA Felt II J1.

*IDC **19** 21:40:31.9±2.6, 38.74N×141.49E, h103^{km}±25^{km}, mb3.2/3, mb1 3.3/5, mb1mx3.1/23, mbtmp3.5/5 Error ellipse: s-maj=36.5km s-min=20.5km az=111.0*

ISC 19 21:40:27.7±0.8**, 38.79N**±0.05×**141.62E**±0.10**, h75**^{km}±5^{km}**, n13, σ0^{s}71**/21**, mb3.6**/3**, 5C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.29**	**7**	⇑P	**P**	**21 40 40.0**	**+0.5**
OFUJ				S	**S**	**21 40 48.1**	**-0.1**
JMK	**Ichinoseki**	**0.35**	**297**	⇑P	**P**	**21 40 39.9**	**0.0**
JMK				S	**S**	**21 40 47.8**	**-1.1**
JIO	**Ouri**	**0.40**	**213**	⇑P	**P**	**21 40 40.7**	**+0.5**
JIO				S	**S**	**21 40 49.1**	**-0.4**
JOM	**Ohasama**	**0.73**	**340**	⇓P	**P**	**21 40 43.8**	**+0.3**
JOM				S	**S**	**21 40 54.8**	**-0.4**
JOU	**Okura**	**0.86**	**241**	⇑P	**P**	**21 40 45.4**	**+0.4**
JOU				S	**S**	**21 40 58.0**	**+0.1**
JYK	**Kaneyama**	**0.99**	**278**	⇑P	**P**	**21 40 46.8**	**+0.2**
JYK				S	**S**	**21 41 00.8**	**0.0**
JMM	**Marumori**	**1.13**	**216**	P	**P**	**21 40 48.5**	**+0.2**
JMM				S	**S**	**21 41 03.1**	**-0.7**
MAT	**Matsushiro**	**3.52**	**231**	P	**P**	**21 41 21.7**	**+0.4**
MAT				*e*S	**S**	**21 42 01.9**	**0.0**
MJAR	**Matsushiro Arr**	**3.52**	**231**	P	**P**	**21 41 22.8**	**+1.5**
	2.1nm,0.3s,baz=41,slow=11,SNR=31						
ASAJ	**Asahikawa**	**5.37**	**8**	P	**P**	**21 41 50.6**	**+3.6**
	1.2nm,0.3s,baz=300,slow=20,SNR=2.8						
MKAR	**Makanchi Array**	**43.35**	**301**	P	**P**	**21 48 23.1**	**-0.6**
	1.0nm,0.6s,mb3.7,baz=87,slow=11,SNR=8.2						
ILAR	**Eielson Array**	**47.93**	**33**	P	**P**	**21 49 00.1**	**+0.1**
	0.4nm,0.6s,mb3.4,baz=280,slow=5.5,SNR=5.1						
WRA	**Warramunga Arr**	**58.82**	**188**	P	**P**	**21 50 19.0**	**-1.7**
	0.6nm,1.1s,mb3.5,baz=6.1,slow=6.4,SNR=6.9						

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*IDC **19** 22:25:55.2±6.6, 19.99S×69.37W, h63^{km}±55^{km}, mb3.8/2, mb1 4.3/4, mb1mx3.7/17, mbtmp4.4/4, ML4.3/1, MS3.2/1, Ms1 3.1/1, ms1mx2.6/15, Error ellipse: s-maj=75.8km s-min=25.3km az=123.0*

*NEIC **19** 22:25:59.2±1.0, 20.20S×69.11W, h97^{km}±11^{km}, mb3.8/1, Error ellipse: s-maj=14.5km s-min=10.8km az=89.0*

ISC 19 22:25:58.7±1.1**, 20.26S**±0.07×**69.1W**±0.1**, h106**^{km}±18^{km}**, n18, σ1^{s}25**/17**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.05**	**13**	P	**P**	**22 27 00.3**	**+0.4**
	6.2nm,0.3s,baz=203,slow=7.0,SNR=116						
LPAZ				S	**S**	**22 27 48.0**	**+1.4**
	4.2nm,0.3s,baz=236,slow=16,SNR=4.0						
LPAZ	**La Paz**	**4.05**	**13**	*e*P	**P**	**22 26 59.7**	**-0.2**
LPAZ				S	**S**	**22 27 48.0**	**+1.4**
ARE	**Arequipa**	**4.40**	**329**	*e*P	**P**	**22 27 04.0**	**-0.7**
SIV	**San Ignacio**	**8.73**	**62**	P	**P**	**22 28 00.8**	**-2.7**
	7.1nm,0.3s,baz=255,slow=12,SNR=278						
CFAA	**Coronel Fontan**	**11.33**	**176**	P	**P**	**22 28 36.7**	**-1.7**
	0.1nm,0.3s,baz=352,slow=15,SNR=7.0						
CFAA	**Coronel Fontan**	**11.33**	**176**	P	**P**	**22 28 36.7**	**-1.7**
CPUP	**Villa Florida**	**12.39**	**121**	P	**P**	**22 28 54.4**	**+2.0**
	0.4nm,0.3s,baz=329,slow=15,SNR=23						
SAML	**Samuel**	**12.61**	**28**	*e*P	**P**	**22 28 48.8**	**-6.6**
TRQA	**Tornquist**	**18.78**	**162**	*e*P	**P**	**22 30 12.8**	**+0.7**
	3.1nm,0.5s						
PLCA	**Paso Flores**	**20.45**	**183**	P	**P**	**22 30 31.1**	**+1.5**
	6.2nm,0.8s,baz=359,slow=11,SNR=11						
PLCA	**Paso Flores**	**20.45**	**183**	*e*P	**P**	**22 30 30.7**	**+1.1**
BDFB	**Brasilia**	**20.57**	**81**	P	**P**	**22 30 30.9**	**-0.1**
	5.0nm,0.5s,baz=254,slow=12,SNR=12						
BDFB				LR	LR	22 39 38.7	
	comp=Z,59nm,19.0s,baz=222,slow=40						
BAO	**Brasilia Array**	**20.60**	**81**	P	**P**	**22 30 30.0**	**-1.2**
RCBR	**Riachuelo**	**35.28**	**71**	*e*P	**P**	**22 32 45.9**	**+0.6**
DBIC	**Dimbokro**	**68.56**	**74**	*e*P	**P**	**22 36 51.8**	**-0.6**
WRA	**Warramunga Arr**	**133.93**	**211**	PKP	PKPdf	22 45 05.6	+1.4
	0.6nm,0.7s,baz=166,slow=1.6,SNR=8.3						
MKAR	**Makanchi Array**	**144.73**	**35**	PKP	PKPdf	22 45 23.6	+0.9
	0.4nm,0.6s,baz=243,slow=2.7,SNR=3.7						
SONM	**Songino Array**	**152.25**	**7**	PKPbc	PKPdf	22 45 43.5	+8.7
	0.5nm,0.4s,baz=345,slow=2.1,SNR=5.2						

MAN 19 22:38:40.8, 13.49N×120.68E, h17^{km}, mb3.6, ML2.3, MS1.8, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.48**	**301**	*e*P	Pb	22 38 51.3	+0.9
LUBP				*e*S	Sb	22 39 02.0	+5.0
TGY	**Tagaytay City**	**0.66**	**23**	⇑*e*P	Pb	22 38 53.4	-0.1
TGY				*e*S	Sb	22 39 06.0	+3.9
SJMP	**San Jose**	**1.11**	**157**	*e*P	Pb	22 39 01.7	+0.7
SJMP				*e*S	Sb	22 39 20.2	+5.2
BOAC	**Boac**	**1.14**	**91**	*e*P	Pb	22 39 00.7	-0.9
BUSP	**Coron**	**1.54**	**198**	*e*P	Pn	22 39 05.7	-2.1
BUSP				*e*S	Sn	22 39 27.5	0.0
OTRP	**Odiongan**	**1.72**	**130**	*e*P	Pn	22 39 09.6	-0.8
OTRP				*e*S	Sn	22 39 32.7	+0.7

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*CSEM **19** 22:54:27.7±0.8, 38.68N×29.23W, ML1.8, Error ellipse: s-maj=15.1km s-min=6.7km az=64.0, After PDA*

*PDA **19** 22:54:27.7±0.8, 38.68N×29.23W, MD3.2, ML1.8, Error ellipse: s-maj=15.1km s-min=6.7km az=64.0*

SVSA 19 22:54:27.7±0.8**, 38.68N×29.23W, MD3.2, ML1.8, Error ellipse: s-maj=15.1km s-min=6.7km az=64.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.42**	**103**	*e*P	Pg	22 54 35.3	-0.8
CALA				*e*S	Sg	22 54 41.4	-0.3
HOR	**Horta**	**0.49**	**107**	*e*P	Pg	22 54 36.6	-0.9
HOR				*e*S	Sg	22 54 43.1	-0.9
PICO	**Pico**	**0.65**	**105**	*e*P	Pg	22 54 39.5	-1.2
PICO				*e*S	Sg	22 54 48.1	-1.3
PMAN	**Manadas**	**0.89**	**92**	*e*S	Sg	22 54 53.8	-3.6
	26nm,0.3s						
PMAN	**Manadas**	**0.89**	**92**	*e*S	Sg	22 54 53.8	-3.6
	26nm,0.3s						
PGRA	**Graciosa**	**1.03**	**70**	*e*S	Sb	22 54 57.0	-5.1
	8.4nm,0.2s						

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*IDC **19** 22:56:04.8±2.8, 2.38N×96.65E, mb3.8/5, mb1 3.9/5, mb1mx3.7/17, mbtmp3.8/5, Error ellipse: s-maj=114.7km s-min=27.1km az=56.0*

*NEIC **19** 22:56:09.3±2.0, 2.38N×96.67E, h30^{km}, mb4.0/1, Error ellipse: s-maj=83.3km s-min=19.7km az=56.0*

ISC 19 22:56:07.7±2.6**, 2.4N**±0.4×**96.7E**±0.6**, h30**^{km}**, n6, σ0^{s}16**/5**, mb3.8**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.11**	**123**	P	**P**	**23 04 07.4**	**0.0**
	0.3nm,0.5s,mb3.3,baz=302,slow=9.0,SNR=8.1						
WRAB	**Tennant Creek**	**43.12**	**123**	*e*P	pP	23 04 15.6	-0.8
	1.5nm,0.5s						
MKAR	**Makanchi Array**	**45.94**	**346**	P	**P**	**23 04 29.8**	**0.0**
	1.1nm,0.6s,mb4.0,baz=164,slow=8.6,SNR=11						
SONM	**Songino Array**	**46.01**	**9**	P	**P**	**23 04 30.4**	**+0.1**
	0.4nm,0.4s,mb3.7,baz=189,slow=10,SNR=5.3						
ZAL	**Zalesovo**	**52.27**	**351**	P	**P**	**23 05 18.3**	**-0.2**
	1.2nm,0.4s,mb4.2,baz=292,slow=5.4,SNR=5.6						
ARCES	**ARCESS Array B**	**81.22**	**340**	P	**P**	**23 08 22.0**	**+0.1**
	1.2nm,1.0s,mb3.8,baz=72,slow=3.8,SNR=4.6						

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*ATH **19** 23:05:01.8, 35.85N×25.27E, h28^{km}±2^{km}, MD3.9/8*

*NEIC **19** 23:05:01.8, 35.85N×25.27E, h28^{km}, MD3.5(ATH), After ATH.*

*HLW **19** 23:05:01.4, 36.04N×25.16E, h33^{km}, Mb3.0*

*CSEM **19** 23:05:01.7±0.1, 35.77N×25.25E, h10^{km}, MD3.5, Error ellipse: s-maj=2.6km s-min=1.6km az=97.0*

*THE **19** 23:05:02.6, 35.82N×25.44E, h3^{km}*

ISC 19 23:05:01.3±0.9**, 35.78N**±0.03×**25.32E**±0.06**, h11**^{km}±8^{km}**, n26, σ0^{s}71**/35**, 3C, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.57**	**156**	*e*Pn	**Pn**	**23 05 14.3**	**-0.7**
NPS				*e*Sn	**Sn**	**23 05 24.2**	**-0.2**
SANT	**Santorini**	**0.60**	**10**	*e*Pb	**Pb**	**23 05 12.8**	**-0.5**
SANT				*e*Pn	**Pn**	**23 05 13.8**	**-1.7**
SANT				*e*S	**Sg**	**23 05 22.2**	**+0.7**
SANT	**Santorini**	**0.60**	**10**	*e*Pb	**Pb**	**23 05 12.8**	**-0.5**
SANT	**Santorini**	**0.60**	**10**	*e*Pn	**Pn**	**23 05 13.8**	**-1.6**
THR1	**Thera Island**	**0.60**	**11**	*e*Pg	**Pg**	**23 05 13.4**	**0.0**
THR1				*e*Sg	**Sg**	**23 05 21.8**	**+0.3**
THR1	**Thera Island**	**0.60**	**11**	*e*Pg	**Pg**	**23 05 13.4**	**0.0**
THR1				*e*Sg	**Sg**	**23 05 21.8**	**+0.3**
THR3	**Thira Island,**	**0.63**	**6**	*e*Pg	**Pg**	**23 05 13.8**	**-0.2**
THR5	**Thira Island,**	**0.63**	**2**	*e*Pg	**Pg**	**23 05 14.5**	**+0.3**
THR4	**Thira Island,**	**0.68**	**5**	*e*Pg	**Pg**	**23 05 14.7**	**-0.3**
XRY	**Khrisi**	**0.95**	**161**	*e*PN	**Pn**	**23 05 21.9**	**+1.3**
XRY				*e*SN	**Sn**	**23 05 36.0**	**+1.8**
VAM	**Vamos**	**0.99**	**248**	*e*PN	**Pn**	**23 05 21.2**	**+0.1**
VAM				*e*SN	**Sn**	**23 05 34.4**	**-0.6**
APE	**Apeiranthos**	**1.29**	**7**	*e*PN	**Pn**	**23 05 25.0**	**-0.4**
KARP	**Karpathos**	**1.51**	**98**	*e*PB	**Pb**	**23 05 29.1**	**+0.1**
KYTH	**Kithira**	**1.92**	**286**	*e*PN	**Pn**	**23 05 35.0**	**+0.7**
VLI	**Veliai**	**2.14**	**297**	*e*PN	**Pn**	**23 05 36.8**	**-0.8**
SMG	**Samos**	**2.27**	**32**	*e*PN	**Pn**	**23 05 39.5**	**+0.1**
XOR	**Xorichti**	**3.96**	**335**	*e*Pn	**Pn**	**23 06 03.4**	**0.0**
AGG	**Agios Georgios**	**4.02**	**324**	*e*Pn	**Pn**	**23 06 05.0**	**+0.8**
AGG				*e*Sn	**Sn**	**23 06 52.7**	**+0.9**
SLUM		**4.28**	**181**	⇑P	**Pn**	**23 06 08.1**	**+0.1**
HMAT	**Matruh**	**4.91**	**162**	P	**Pn**	**23 06 17.6**	**+0.7**
DABA	**Dabaa**	**5.36**	**152**	P	**Pn**	**23 06 23.4**	**+0.1**
SWA1		**6.51**	**177**	⇑P	**Pn**	**23 06 39.1**	**-0.4**
SWA1				S	**Sn**	**23 07 50.3**	**-4.2**
SWA2		**6.52**	**179**	⇑P	**Pn**	**23 06 39.1**	**-0.6**
GLL	**Jalalah**	**8.20**	**137**	P	**P**	**23 07 03.2**	**+0.1**
AMAG	**Maghara**	**8.36**	**126**	P	**P**	**23 07 04.3**	**-1.1**
HFRF	**Wahat Farafira**	**8.98**	**163**	P	**P**	**23 07 13.4**	**-0.5**

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*NEIC **19** 23:50:48.4±1.7, 20.09S×68.76W, h106^{km}±19^{km}, mb3.6/2, Error ellipse: s-maj=23.3km s-min=16.5km az=94.0*

*IDC **19** 23:50:48.1±3.3, 20.16S×68.76W, h91^{km}±54^{km}, mb3.4/2, mb1 3.5/5, mb1mx3.3/18, mbtmp3.7/5, ML3.9/1, Error ellipse: s-maj=44.0km s-min=33.1km az=117.0*

ISC 19 23:50:44.5±1.7**, 19.9S**±0.1×**69.0W**±0.1**, h100**^{km}±25^{km}**, n10, σ0^{s}98**/11**, mb3.8**/1**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.72**	**13**	P	**P**	**23 51 46.7**	**+5.7**
	1.0nm,0.3s,baz=185,slow=8.5,SNR=28						
LPAZ	**La Paz**	**3.72**	**13**	*e*P	**P**	**23 51 46.3**	**+5.3**
ARE	**Arequipa**	**4.19**	**325**	P	**P**	**23 51 49.0**	**+1.5**
ARE				*e*S	**S**	**23 52 34.0**	**-1.7**
SIV	**San Ignacio**	**8.49**	**64**	P	**P**	**23 52 46.4**	**+0.1**
	0.6nm,0.3s,baz=252,slow=13,SNR=20						
CPUP	**Villa Florida**	**12.47**	**123**	P	**P**	**23 53 38.7**	**-0.9**
	0.2nm,0.3s,baz=323,slow=15,SNR=3.8						
CPUP	**Villa Florida**	**12.47**	**123**	P	**P**	**23 53 38.7**	**-0.9**
BDFB	**Brasilia**	**20.42**	**81**	P	**P**	**23 55 16.5**	**+0.7**
	3.8nm,0.6s,baz=262,slow=9.2,SNR=7.5						
PLCA	**Paso Flores**	**20.77**	**183**	P	**P**	**23 55 19.4**	**+0.1**
	1.8nm,0.8s,slow=12,SNR=4.0						
PLCA	**Paso Flores**	**20.77**	**183**	*e*P	**P**	**23 55 19.4**	**+0.2**
	1.3nm,0.6s						
DBIC	**Dimbokro**	**68.37**	**74**	P	**P**	**00 01 37.3**	**-0.5**
	0.7nm,0.5s,mb3.8						

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*CSEM **19** 23:59:33.8±0.2, 35.09N×22.71E, h10^{km}, ML3.1, Error ellipse: s-maj=9.7km s-min=3.0km az=90.0*

*HLW **19** 23:59:36.8, 35.33N×23.08E, h33^{km}, Mb3.1*

*ATH **19** 23:59:44.0, 35.92N×23.65E, h20^{km}, MD3.3/4*

ISC 19 23:59:33.1±2.3**, 35.12N**±0.08×**22.6E**±0.3**, h10**^{km}**, n6, σ0^{s}76**/7**, 3C, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.21**	**16**	*e*PB	**Pb**	**23 59 55.6**	**0.0**
VAM	**Vamos**	**1.31**	**77**	*e*PN	**Pn**	**23 59 57.6**	**+0.1**
SLUM		**4.21**	**148**	⇑P	**Pn**	**00 00 40.0**	**+1.2**
SWA2		**6.32**	**157**	⇑P	**Pn**	**00 01 08.7**	**0.0**
SWA1		**6.39**	**155**	⇑P	**Pn**	**00 01 09.8**	**+0.2**
SWA1				S	**Sn**	**00 02 17.9**	**-5.5**
HFRF	**Wahat Farafira**	**9.31**	**147**	P	**P**	**00 01 49.0**	**-1.4**

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*JMA **20** 00:10:24.6±0.4, 23.99N×121.58E, h91^{km}, M2.7*

*TAP **20** 00:10:24.2, 23.94N×121.61E, h5^{km}, ML3.7*

TAP Felt III J at Hualien, II J at Shilin.

ISC 20 00:10:23.8±0.3**, 23.91N**±0.02×**121.69E**±0.02**, h5**^{km}**, n49, σ1^{s}04**/78**, 11C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.10**	**310**	⇑*i*P	**Pg**	**00 10 25.7**	**-0.3**
ESF	**Shoufeng Towns**	**0.17**	**256**	*i* P	**Pg**	**00 10 27.1**	**-0.3**
ESF				S	**Sg**	**00 10 29.4**	**-0.4**
TWD	**Chiawan**	**0.19**	**333**	⇑*i*P	**Pg**	**00 10 27.5**	**-0.1**
TWD				S	**Sg**	**00 10 30.1**	**-0.2**
TEGC	**Jichi Village**	**0.24**	**214**	*e*P	**Pg**	**00 10 29.7**	**+0.9**
TEGC				S	**Sg**	**00 10 35.1**	**+3.0**
ESL	**Shilin**	**0.26**	**247**	⇑*i*P	**Pg**	**00 10 28.5**	**-0.5**
ESL				S	**Sg**	**00 10 31.5**	**-1.0**
WHF	**Hehuan Shan**	**0.45**	**301**	⇑*i*P	**Pg**	**00 10 32.0**	**-0.9**
WHF				S	**Sg**	**00 10 37.6**	**-1.3**
ENA	**Nanau**	**0.52**	**5**	⇑*i*P	**Pg**	**00 10 34.1**	**-0.1**
EHY	**Hungye**	**0.53**	**220**	⇑P	**Pg**	**00 10 34.0**	**-0.4**
EHY				S	**Sg**	**00 10 40.6**	**-0.8**
TWT	**Tachien**	**0.58**	**306**	P	**Pg**	**00 10 34.9**	**-0.5**
TWT				S	**Sg**	**00 10 42.6**	**-0.5**
NNS	**Nan Shan**	**0.60**	**331**	⇑*i*P	**Pg**	**00 10 35.3**	**-0.6**
TWF1	**Yuli**	**0.66**	**213**	*e*P	**Pg**	**00 10 36.5**	**-0.6**
TWC	**Suao**	**0.71**	**12**	*e*P	**Pg**	**00 10 38.0**	**0.0**
TWC				S	**Sg**	**00 10 50.8**	**+3.3**
SMLT	**Sun Moon Lake**	**0.72**	**268**	⇑*i*P	**Pg**	**00 10 37.7**	**-0.6**
SMLT				S	**Sg**	**00 10 47.8**	**-0.2**
ENTT	**Nioudou**	**0.73**	**351**	⇑*i*P	**Pg**	**00 10 38.2**	**-0.3**
ENTT				S	**Sg**	**00 10 49.8**	**+1.5**
TYC	**Yuchr**	**0.76**	**270**	⇑*i*P	**Pg**	**00 10 38.1**	**-1.0**
TYC				S	**Sg**	**00 10 47.6**	**-1.7**
TWE	**Neicheng**	**0.81**	**358**	*e*P	**Pb**	**00 10 39.5**	**-0.4**
TWE				S	**Sg**	**00 10 50.6**	**0.0**
NSK	**Sanguang**	**0.82**	**338**	P	**Pb**	**00 10 39.8**	**-0.4**
NSK				S	**Sg**	**00 10 48.7**	**-2.4**
CHKT	**Chengkung**	**0.86**	**200**	*e*P	**Pb**	**00 10 41.5**	**+0.6**
ALS	**Alishan**	**0.91**	**244**	P	**Pb**	**00 10 41.3**	**-0.3**
ALS				S	**Sb**	**00 10 53.4**	**-0.3**
WNT	**Mingjian**	**0.92**	**268**	*e*P	**Pb**	**00 10 42.4**	**+0.5**
WNT				S	**Sb**	**00 10 54.9**	**+0.7**
TWQ1	**Liyutan**	**0.94**	**298**	*e*P	**Pb**	**00 10 42.3**	**0.0**
TWQ1				S	**Sb**	**00 10 55.9**	**+1.0**
ELDTW	**Lidau**	**0.95**	**221**	*e*P	**Pb**	**00 10 41.3**	**-1.1**
NSTT	**Nanjuang**	**0.95**	**319**	*e*P	**Pb**	**00 10 41.9**	**-0.6**
NSTT				S	**Sb**	**00 10 53.7**	**-1.4**
TCU	**Taichung**	**0.96**	**284**	*e*P	**Pb**	**00 10 42.2**	**-0.3**
TCU				S	**Sb**	**00 10 57.6**	**+2.3**
CHN5	**Tsauling**	**0.98**	**252**	⇑*i*P	**Pb**	**00 10 43.1**	**+0.2**
CHN5				S	**Sb**	**00 10 57.8**	**+1.8**
TWA	**Mucha**	**1.07**	**355**	*e*P	**Pb**	**00 10 44.3**	**-0.1**
TWB1	**Santiao Chiao**	**1.12**	**14**	*e*P	**Pb**	**00 10 45.7**	**+0.3**
TWB1				S	**Sb**	**00 11 02.6**	**+2.5**
TAP1	**Taipei**	**1.13**	**352**	*e*P	**Pb**	**00 10 45.1**	**-0.4**
NCU	**National Centr**	**1.15**	**337**	*e*P	**Pb**	**00 10 47.2**	**+1.4**
CHN4	**Tsaushan**	**1.15**	**241**	⇓*i*P	**Pb**	**00 10 46.2**	**+0.4**
CHN4				S	**Sb**	**00 11 02.0**	**+1.1**
NWF	**Wu-fen Shan**	**1.16**	**4**	*e*P	**Pb**	**00 10 46.4**	**+0.5**
WTP	**Ta-pu**	**1.19**	**236**	⇓P	**Pb**	**00 10 46.6**	**+0.1**
WTP				S	**Sb**	**00 11 04.5**	**+2.5**
TWS1	**Kuangyinshan**	**1.21**	**348**	*e*P	**Pb**	**00 10 48.0**	**+1.2**
TWS1				S	**Sb**	**00 11 05.0**	**+2.4**
TWG	**Pinlang**	**1.23**	**208**	*e*P	**Pb**	**00 10 46.3**	**-0.8**
CHY	**Chiayi**	**1.23**	**251**	*e*P	**Pb**	**00 10 47.3**	**+0.1**
CHN1	**Nanshi**	**1.29**	**236**	*e*P	**Pb**	**00 10 48.1**	**-0.1**
CHN1				S	**Sb**	**00 11 07.0**	**+2.0**
SGST	**Jiashian**	**1.31**	**231**	*e*P	**Pb**	**00 10 49.2**	**+0.7**
SGST				S	**Sb**	**00 11 08.8**	**+3.2**
YOJ	**Yonaguni jima**	**1.32**	**65**	P	**Pb**	**00 10 49.3**	**+0.5**
YOJ				*e*S	**Sb**	**00 11 08.1**	**+2.1**
ECL	**Taimali**	**1.47**	**207**	*e*P	**Pn**	**00 10 49.8**	**-1.4**
TWM1	**Shoushan**	**1.59**	**227**	*e*P	**Pn**	**00 10 53.3**	**+0.5**
EAST	**Anshuo**	**1.71**	**207**	*e*P	**Pn**	**00 10 55.8**	**+1.3**
SCZT	**Fangliau**	**1.82**	**213**	*e*P	**Pn**	**00 10 55.4**	**-0.7**
IRIF	**Iriomote-Funau**	**1.91**	**77**	P	**Pn**	**00 10 57.3**	**-0.1**
IRIF				S	**Sn**	**00 11 22.2**	**+0.1**
HATJ	**Hateruma jima**	**1.94**	**85**	*e*S	**Sn**	**00 11 22.2**	**-0.6**
WDGT	**Dungji**	**1.97**	**251**	*e*P	**Pn**	**00 10 57.0**	**-1.3**
PNG	**Penghu**	**1.99**	**260**	*e*P	**Pn**	**00 10 57.7**	**-0.8**
JKRS	**Kuro-shima**	**2.14**	**81**	P	**Pn**	**00 11 00.9**	**+0.2**
JKRS				*e*S	**Sn**	**00 11 28.3**	**+0.3**
JIJ	**Ishigaki jima**	**2.29**	**78**	P	**Pn**	**00 11 01.8**	**-1.0**
JIJ				S	**Sn**	**00 11 29.8**	**-1.8**

JTJ	Tarama	2.84	75	eS	Sn	00 11 44.5	-1.3

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*LDG **20** 00:25:51.5±0.8, 14.06S×170.34E, h10^{km}, Error ellipse: s-maj=135.9km s-min=7.7km az=107.0*

*IDC **20** 00:26:09.6±5.8, 14.18S×167.30E, h143^{km}±55^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.8/15, mbtmp4.2/7, MS2.7/2, Ms1 2.7/2, ms1mx2.6/22, Error ellipse: s-maj=45.4km s-min=27.7km az=155.0*

*NEIC **20** 00:26:14.1±2.0, 14.43S×167.12E, h182^{km}±18^{km}, mb4.3/6, Error ellipse: s-maj=19.8km s-min=10.9km az=179.0*

ISC 20 00:26:12.8±2.6, **14.4S**±0.1×**167.1E**±0.1, **h181**^{km}±26^{km}, **n69**, σ**1^{s}03**/24, **mb4.0**/10, **1C-2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.66	184	eP	P	00 28 02.1	-0.4
DZM				eS	S	00 29 25.9	-2.1
DZM	Mont Dzumac	7.66	184	P	P	00 28 02.1	-0.3
	7.9nm,0.3s,baz=39,slow=17,SNR=77						
DZM				S	S	00 29 30.2	+2.2
	baz=73,slow=19,SNR=3.1						
DZM				LR	LR	00 30 15.1	
	comp=Z,46nm,19.0s,baz=354,slow=31						
DZM	Mont Dzumac	7.66	184	eP	P	00 28 02.1	-0.4
DZM				eS	S	00 29 25.9	-2.1
NOUC	Port Laguerre	7.70	185	eP	P	00 28 02.7	-0.3
NOUC	Port Laguerre	7.70	185	eS	S	00 29 29.9	+0.9
NOUC	Port Laguerre	7.70	185	eP	P	00 28 02.6	-0.3
NOUC				eS	S	00 29 29.9	+0.9
HNR	Honiara	8.53	305	LR	LR	00 30 54.6	
	comp=Z,50nm,18.4s,baz=129,slow=33						
PMG	Port Moresby	20.09	282	P	P	00 30 33.5	-0.6
	4.8nm,0.6s						
AFI	Afiamalu	20.53	91	eP	P	00 30 39.7	+1.2
	42nm,1.1s						
STKA	Stephens Creek	29.06	229	P	P	00 31 59.5	+1.2
	2.7nm,0.4s,mb4.3,baz=46,slow=10.0,SNR=14						
STKA	Stephens Creek	29.06	229	eP	P	00 31 59.4	+1.0
WB2	Warramunga Arr	31.70	255	⇓iP	P	00 32 21.2	-0.5
WRAB	Tennant Creek	31.70	255	eP	P	00 32 21.0	-0.7
	1.6nm,0.4s,mb4.1						
WRA	Warramunga Arr	31.71	255	P	P	00 32 21.4	-0.4
	1.5nm,0.6s,mb3.9,baz=86,slow=9.2,SNR=19						
KAKA	Kakadu	33.68	269	⇑iP	P	00 32 39.4	+0.7
	28nm,1.7s,mb4.7						
FITZ	Fitzroy Crossi	39.88	259	⇓iP	P	00 33 31.5	+0.9
	9.8nm,0.7s,mb4.5						
CMAR	Chiang Mai Arr	74.63	294	P	P	00 37 35.6	+1.2
	1.2nm,0.7s,mb3.6,baz=136,slow=5.4,SNR=4.9						
QSPA	South Pole Qui	75.63	180	P	P	00 37 37.4	-1.5
	1.7nm,0.8s,mb3.7						
SONM	Songino Array	82.11	324	P	P	00 38 14.3	0.0
	0.2nm,0.4s,mb3.1,baz=140,slow=6.9,SNR=4.5						
ILAR	Eielson Array	86.27	18	P	P	00 38 32.8	-2.0
	1.6nm,0.7s,mb3.9,baz=238,slow=5.5,SNR=20						
MKAR	Makanchi Array	96.82	316	P	P	00 39 24.9	+0.8
	1.0nm,0.7s,mb4.2,baz=101,slow=6.2,SNR=9.9						
KEV	Kevo	119.35	345	ep	PKPdf	00 44 39.6	-0.5
ARCES	ARCESS Array B	119.88	345	PKP	PKPdf	00 44 41.7	+0.7
	1.8nm,0.3s,baz=81,slow=2.1,SNR=60						
ARCES	ARCESS Array B	119.88	345	PKP	PKPdf	00 44 41.7	+0.7
KAF	Kangasniemi	124.81	339	ep	PKPdf	00 44 49.5	-1.3
FINES	FINESS Array B	125.34	338	PKP	PKPdf	00 44 52.5	+0.8
	0.8nm,0.5s,baz=52,slow=2.6,SNR=14						
NOA	NORSAR Array B	130.25	345	PKP	PKPdf	00 45 02.2	+1.0
	0.2nm,0.5s,baz=68,slow=4.2,SNR=2.9						
GERES	GERESS Array B	139.26	333	PKP	PKPdf	00 45 20.8	+2.5
	0.5nm,0.5s,baz=90,slow=1.3,SNR=6.5						
CABF	La Chapelle	144.14	337	ePKP1	PKPbc	00 45 27.6	+1.3
	5.7nm,0.7s						
FLN	La Foliniere	144.22	346	ePKP1	PKPbc	00 45 26.5	0.0
LDF	La Druitiere	144.30	345	ePKP1	PKPbc	00 45 27.7	+1.0
	9.7nm,0.8s						
LOR	Lormes	144.36	340	ePKP1	PKPbc	00 45 27.8	+0.9
	4.1nm,0.6s						
SSF	Saint Saulge	144.65	340	ePKP1	PKPbc	00 45 28.9	+1.2
	32nm,0.8s						
GRR	Gorron	144.66	346	ePKP1	PKPbc	00 45 28.4	+0.7
	22nm,0.7s						
HYF	Humbligny	144.74	342	ePKP1	PKPbc	00 45 29.5	+1.5
LPL	La Plagne	144.81	336	ePKP1	PKPbc	00 45 30.0	+1.8
	12nm,0.6s						
LPG	La Plagne	144.82	336	ePKP1	PKPbc	00 45 30.0	+1.8
	15nm,0.6s						
SMF	Signal de Mont	144.91	340	ePKP1	PKPbc	00 45 29.5	+1.0
	32nm,1.1s						
AVF	Avril sur Loir	144.94	340	ePKP1	PKPbc	00 45 29.5	+0.9
	13nm,0.8s						
SGMF	Saint Gilles	145.16	348	ePKP1	PKPbc	00 45 29.9	+0.8
	26nm,0.7s						
BNI	Bardonecchia	145.21	335	eP	PKPdf	00 45 30.7	+1.9
ROSF	Rostrenen	145.23	349	ePKP1	PKPbc	00 45 30.2	+1.0
	35nm,1.1s						
BGF	Bois d'Agland	145.31	341	ePKP1	PKPbc	00 45 30.9	+1.4
	16nm,0.7s						
MBDF	Montbardon	145.44	335	ePKP1	PKPbc	00 45 31.3	+1.4
QUIF	Quistinic	145.61	348	ePKP1	PKPbc	00 45 31.5	+1.3
ORIF	Oris-en-Rattie	145.64	336	ePKP1	PKPbc	00 45 32.2	+1.8
	22nm,0.6s						
TCF	Toulx Ste Croi	145.75	341	ePKP1	PKPbc	00 45 32.1	+1.5
	6.1nm,0.7s						
SBF	Sospel	145.86	333	ePKP1	PKPbc	00 45 32.4	+1.4
	48nm,0.9s						
MFF	Saint Martin d	146.15	344	ePKP1	PKPbc	00 45 33.1	+1.5
	20nm,0.8s						
VIVF	Saint-Julien-l	146.16	337	ePKP1	PKPbc	00 45 33.2	+1.6
PGF	Pioggiola	146.17	330	ePKP1	PKPbc	00 45 33.3	+1.6
	43nm,1.1s						
FRF	La Foret Royal	146.44	334	ePKP1	PKPbc	00 45 34.1	+1.8
	17nm,0.7s						
SMRF	Simiane la Rot	146.54	335	ePKP1	PKPbc	00 45 35.0	+2.4
	12nm,0.8s						
LMR	La Mourre	146.68	334	ePKP1	PKPbc	00 45 34.9	+2.0
	9.9nm,0.6s						
RJF	Les Rejaudoux	146.85	341	ePKP1	PKPbc	00 45 35.3	+2.1
	10nm,0.7s						
CAF	Calviac	147.01	340	ePKP1	PKPdf	00 45 36.1	+4.4
LASF	Ste Croix	147.13	337	ePKP1	PKPdf	00 45 35.9	+4.0
	9.4nm,0.8s						
LFF	La Frestale	147.42	342	ePKP1	PKPdf	00 45 36.8	+4.4
	15nm,0.7s						
MTLF	Montolieu	148.36	339	ePKP1	PKPdf	00 45 39.7	+5.7
	33nm,1.1s						
EPF	Esparros	149.26	341	ePKP1	PKPdf	00 45 42.1	+6.6
	5.7nm,0.7s						
SJPF	Ste Jean	149.66	343	ePKP1	PKPdf	00 45 43.0	+6.9
	12nm,1.0s						
ETSF	Etsaut	149.66	342	ePKP1	PKPdf	00 45 43.3	+7.2
	11nm,0.6s						
ELAN	Lanestosa	150.13	346	PKP	PKPdf	00 45 44.3	+7.5
EPOB	Poblet	150.51	338	PKP	PKPdf	00 45 44.7	+7.2
ESAC	San Caprasio	150.70	341	PKP	PKPdf	00 45 45.7	+8.0
EPON	Pontenova	150.74	351	PKP	PKPdf	00 45 41.7	+4.0
ERTA	Horta de San J	151.12	339	PKP	PKPdf	00 45 46.3	+8.0
ETOS	Mallorca	151.19	334	PKP	PKPdf	00 45 46.6	+8.1
EMOS	Mosqueruela	151.92	339	PKP	PKPdf	00 45 48.5	+8.9

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*IDC **20** 00:48:53.4±1.3, 1.16N×96.99E, mb4.2/8, mb1 4.2/9, mb1mx4.0/18, mbtmp4.1/9, ML4.1/1, Error ellipse: s-maj=58.8km s-min=19.8km az=57.0*

*BJI **20** 00:48:58.4, 1.20N×97.20E, h30^{km}, mB5.2, mb4.7, Ms4.1, Msz4.0*

*NEIC **20** 00:48:58.4±0.7, 1.20N×97.18E, h30^{km}, mb4.4/8, Error ellipse: s-maj=18.0km s-min=10.2km az=51.0*

ISC 20 00:48:57.2±0.7, **1.20N**±0.09×**97.2E**±0.1, **h33**^{km}, **n30**, σ**1^{s}07**/29, **mb4.3**/17, **MS4.0**/1, **2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.34	40	ePn	Pn	00 50 16.6	-0.3
CMAR	Chiang Mai Arr	17.24	6	P	P	00 52 54.9	-2.2
	0.2nm,0.3s,baz=200,slow=12,SNR=6.5						
KKM	Kota Kinabalu	19.60	75	ePn	P	00 53 27.0	+1.4
KMI	Kunming	24.39	12	P	P	00 54 16.1	+2.3
KMI				AP		00 54 28.8	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
KMI				LR	LR		
	comp=N,270nm,16.4s,MS4.0						
KMI				LR	LR		
	comp=E,220nm,12.0s,MS4.0						
KMI				LR	LR		
	comp=Z,310nm,13.7s,MS4.0						
KMI	Kunming	24.39	12	P	P	00 54 16.1	+2.3
	comp=Z,16nm,1.2s,mb4.3						
KMI				pP		00 54 28.8	
KMI				sP		00 54 34.5	
KMI				S	S	00 58 41.5	+13
KMI				sS		00 59 01.9	
KMI				LR	LR		
	comp=Z,310nm,13.7s,MS4.0						
PKI	Pulchoki	28.55	338	eP	P	00 54 53.6	+1.4
GUN	Gumba	28.68	339	eP	P	00 54 53.5	+0.1
	comp=Z,20nm,0.7s,mb5.0						
DMN	Daman	28.70	337	eP	P	00 54 55.5	+1.9
KKN	Kakani	28.79	338	eP	P	00 54 55.1	+0.7
LSA	Lhasa	28.92	349	eP	P	00 54 56.6	+1.1
	comp=Z,4.6nm,0.7s,mb4.3						
GKN	Gorkha	29.23	337	eP	P	00 54 58.6	+0.3
	comp=Z,5.0nm,0.3s,mb4.7						
KOLN	Koldanda	29.45	335	eP	P	00 55 00.4	+0.1
	comp=Z,14nm,0.9s,mb4.7						
ENH	Enshi	31.19	21	eP	P	00 55 12.6	-3.1
	comp=Z,7.8nm,0.6s,mb4.7						
GTA	Gaotai	38.11	3	⇓P	P	00 56 15.0	+0.1
GTA				AP	pP	00 56 22.5	-2.1
GTA				XP	sP	00 56 26.3	-2.6
WRA	Warramunga Arr	42.05	122	P	P	00 56 47.8	0.0
	comp=Z,1.9nm,0.6s,mb3.9,baz=301,slow=9.1,SNR=24						
WRA				pP	pP	00 56 54.9	-2.7
	comp=Z,1.3nm,0.6s,baz=302,slow=9.0,SNR=6.1						
WRAB	Tennant Creek	42.06	122	eP	P	00 56 47.3	-0.6
	comp=Z,3.4nm,0.5s,mb4.2						
WB2	Warramunga Arr	42.06	122	⇓iP	P	00 56 47.8	-0.1
SONM	Songino Array	47.14	8	P	P	00 57 28.1	-0.1
	comp=Z,2.7nm,0.7s,mb4.3,baz=189,slow=8.5,SNR=25						
SONM				PcP	PcP	00 58 59.5	-0.5
	comp=Z,0.7nm,0.5s,baz=200,slow=3.7,SNR=5.4						
SONM				pPcP		00 59 06.9	
	comp=Z,0.5nm,0.5s,baz=186,slow=4.5,SNR=4.5						
MKAR	Makanchi Array	47.24	346	P	P	00 57 28.3	-0.7
	comp=Z,2.8nm,0.5s,mb4.4,baz=161,slow=9.0,SNR=44						
ULN	Ulaanbaatar	47.27	9	eP	P	00 57 28.5	-0.7
	comp=Z,1.2nm,0.6s,mb4.0						
STKA	Stephens Creek	53.37	132	P	P	00 58 16.4	+0.4
	comp=Z,3.6nm,0.9s,mb4.3,baz=324,slow=8.7,SNR=4.4						
STKA	Stephens Creek	53.37	132	eP	P	00 58 16.2	+0.2
ZAL	Zalesovo	53.55	351	P	P	00 58 16.4	-0.5
	comp=Z,4.4nm,0.4s,mb4.8,baz=325,slow=3.9,SNR=16						
ZRNK	Zerenda	56.65	340	eP	P	00 58 37.2	-2.2
	comp=Z,2.4nm,0.8s,mb4.3						
FINES	FINESS Array B	79.99	333	P	P	01 01 03.7	-0.8
	comp=Z,0.9nm,0.6s,mb3.9,baz=166,slow=5.7,SNR=5.0						
FINES	FINESS Array B	79.99	333	P	P	01 01 03.7	-0.9
ARCES	ARCESS Array B	82.53	340	P	P	01 01 17.3	-0.4
	comp=Z,0.4nm,0.5s,mb3.7,baz=88,slow=4.8,SNR=10						
GERES	GERESS Array B	84.80	319	P	P	01 01 29.5	-0.2
	comp=Z,0.1nm,0.4s,mb3.3,baz=104,slow=5.5,SNR=4.6						
TXAR	Lajitas Array	143.69	32	PKP	PKPdf	01 08 28.9	-0.6
	comp=Z,0.1nm,0.5s,baz=315,slow=1.3,SNR=2.3						
LRAL	Lakeview Retre	145.73	6	ePKP	PKPdf	01 08 33.9	+1.0

NNC 20 01:08:31.8±2.6, **37.39N**×**71.52E, h146**^{km}±41^{km}**, mpv3.6, 4C-2D, Error ellipse: s-maj=35.8km s-min=21.2km az=50.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.71	23	⇓P	P	01 09 54.2	-1.3
	3.9nm,0.5s						
AAK				⇑S	S	01 11 01.1	+0.7
	4.0nm,0.8s						
KK31	Karatay Array	5.76	353	⇓P	P	01 09 55.3	-0.8
	1.3nm,0.2s,baz=174,slow=13						
KK31				⇑S	S	01 11 00.9	-0.7
	0.9nm,0.3s,baz=173,slow=21,SNR=6.7						
AB31	Akbulak array	14.53	328	⇑P	P	01 11 50.4	-0.8
	0.2nm,0.3s,baz=148,slow=12,SNR=13						
AB31				⇑S	S	01 14 28.8	+0.1
	0.8nm,0.7s						

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*IDC **20** 01:12:33.8±1.6, 60.17N×25.30E, mb1 2.7/3, mb1mx2.7/20, mbtmp2.7/3, ML2.4/3, Error ellipse: s-maj=16.9km s-min=6.7km az=147.0*

*HEL **20** 01:12:34.0±0.2, 60.12N×25.23E, ML1.8, ML2.0(UPP), Explosion*

ISC 20 01:12:32.1±0.7, **60.09N**±0.05×**25.29E**±0.08, **n27**, σ**0^{s}97**/36, **Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVF	Pernaja	0.54	32	eP	Pg	01 12 43.2	+0.2
PVF				eS	Sg	01 12 50.0	-0.1
VJF	Virojoki	1.22	67	eP	Pb	01 12 55.9	+0.2
VJF				eS	Sb	01 13 10.3	-1.5
FIA0	FINESS Array S	1.42	16	eP	Pb	01 12 58.7	-0.4
FIA0				eS	Sb	01 13 16.1	-1.5
FINES	FINESS Array B	1.42	16	Pg	Pg	01 12 58.7	-1.7
	3.1nm,0.3s,baz=194,slow=17,SNR=164						
FINES				Pn	Pn	01 13 00.8	+1.7
	3.1nm,0.3s,baz=195,slow=13,SNR=164						
FINES				Lg		01 13 15.8	
	1.0nm,0.3s,baz=194,slow=29,SNR=9.9						
FINES				Sn	Sn	01 13 20.5	+1.8
	5.4nm,0.3s,baz=197,slow=23,SNR=18						
FINES				Rg		01 13 22.9	
	7.1nm,0.3s,baz=197,slow=24,SNR=25						
KAF	Kangasniemi	2.09	13	eP	Pn	01 13 10.2	+1.3
KAF				eS	Sn	01 13 36.3	+0.4
KAF				MSG		01 13 39.2	
	comp=Z,4.5nm,0.1s						
KEF	Keuruu	2.10	355	eP	Pn	01 13 10.6	+1.7
KEF				eS	Sn	01 13 36.5	+0.4
KEF				MSG		01 13 40.1	
	comp=Z,6.7nm,0.1s						
AAL	Aland	2.65	274	eP	Pn	01 13 17.5	+0.7
SUF	Sumiainen	2.68	9	MSG		01 13 54.6	
	comp=Z,3.0nm,0.1s						
GRAU	Graesoe	3.38	277	eP	Pn	01 13 27.0	-0.1
NRTU	Norrtaelje	3.38	266	eP	Pn	01 13 27.8	+0.6
NRTU				eS	Sn	01 14 08.4	-0.2
FLYU	Flymyra	3.71	274	eP	Pn	01 13 32.1	+0.3
NYNU	Nynaeshamn	3.86	257	eP	Pn	01 13 34.8	+0.8
IGGU	Iggoen	4.02	285	eP	Pn	01 13 35.7	-0.6
OSTU	Oestervaala	4.08	276	eP	Pn	01 13 36.8	-0.3
BACU	Backbrunna	4.12	270	eP	Pn	01 13 37.5	-0.1
ARNU	Arnoeviken	4.19	296	eP	Pn	01 13 38.5	-0.1
GOTU	Gotland	4.24	238	eP	Pn	01 13 40.2	+0.9
UMAU	Umeaa	4.39	332	eP	Pn	01 13 41.5	0.0
ESKU	Eskilstuna	4.59	263	eP	Pn	01 13 44.7	+0.3
VIKU	Vikbolandet	4.68	254	eP	Pn	01 13 46.3	+0.6
HASU	Hassela	4.69	300	eP	Pn	01 13 45.4	-0.4
FALU	Falun	4.72	279	eP	Pn	01 13 45.5	-0.7
ROTU	Roteberg	4.84	290	eP	Pn	01 13 46.5	-1.4
BURU	Burvik	4.87	340	eP	Pn	01 13 48.2	-0.1
HFS	Hagfors	5.80	276	Pn	Pn	01 13 59.4	-2.0
	comp=Z,0.0nm,0.3s,baz=85,slow=16,SNR=5.3						
HFS				Sn	Sn	01 15 03.8	-5.9
	comp=Z,0.1nm,0.3s,baz=81,slow=27,SNR=7.1						
HFS				Lg		01 15 34.4	
	comp=Z,0.1nm,0.3s,baz=85,slow=35,SNR=3.6						
NOA	NORSAR Array B	7.00	284	Pn	Pn	01 14 15.1	-3.3
	comp=Z,0.1nm,0.3s,baz=70,slow=21,SNR=2.5						
NOA				Sn	Sn	01 15 31.3	-8.5
	comp=Z,0.1nm,0.3s,baz=81,slow=18,SNR=2.5						
ARCES	ARCESS Array B	9.49	0	Pn	P	01 14 48.4	-4.6
	comp=Z,0.1nm,0.3s,baz=181,slow=13,SNR=11						

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*NEIC **20** 01:46:21.1±1.3, 12.55N×142.52E, h168^{km}±16^{km}, mb4.2/2, Error ellipse: s-maj=23.3km s-min=9.2km az=91.0*

*IDC **20** 01:46:22.2±10.0, 12.52N×142.53E, h178^{km}±95^{km}, mb3.6/9, mb1 3.7/9, mb1mx3.6/23, mbtmp4.1/9, Error ellipse: s-maj=42.9km s-min=18.1km az=84.0*

ISC 20 01:46:19.6±1.7, **12.52N**±0.09×**142.6E**±0.2, **h170**^{km}±21^{km}, **n16**, σ**0^{s}52**/17, **mb3.9**/10, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.50	64	Pn	P	01 47 03.3	+1.1
GUMO				eSn	S	01 47 34.2	-0.8
JNU	Nakatsue	23.12	334	P	P	01 51 11.4	-0.1
	4.5nm,0.8s,mb3.9,baz=157,slow=7.7,SNR=4.3						
WRAB	Tennant Creek	33.24	194	eP	P	01 52 42.7	-0.1
	3.8nm,0.6s,mb4.3						
WB2	Warramunga Arr	33.25	194	eP	P	01 52 43.2	+0.4
WRA	Warramunga Arr	33.25	194	P	P	01 52 42.9	0.0
	1.9nm,0.6s,mb4.0,baz=12,slow=9.4,SNR=36						
FITZ	Fitzroy Crossi	34.70	209	eP	P	01 52 54.8	-0.4
	8.1nm,1.6s,mb4.1						
FITZ	Fitzroy Crossi	34.70	209	P	P	01 52 54.6	-0.6
	3.5nm,0.6s,mb4.2,baz=17,slow=12,SNR=6.4						
ENH	Enshi	35.31	305	eP	P	01 52 59.9	-0.3
SONM	Songino Array	46.34	327	P	P	01 54 30.7	+0.5
	0.6nm,0.5s,mb3.5,baz=139,slow=6.2,SNR=6.7						
MKAR	Makanchi Array	60.71	317	P	P	01 56 15.2	0.0
	0.7nm,0.5s,mb3.8,baz=93,slow=8.6,SNR=12						
MKAR	Makanchi Array	60.71	317	P	P	01 56 15.2	0.0
BVAR	Borovoye Array	69.37	322	P	P	01 57 10.7	0.0
	2.6nm,0.5s,mb4.2,baz=96,slow=7.5,SNR=10						
ZRNK	Zerenda	70.20	322	eP	P	01 57 15.6	-0.1
ILAR	Eielson Array	70.50	25	P	P	01 57 17.6	+0.3
	0.2nm,0.5s,mb3.1,baz=247,slow=5.9,SNR=5.7						
ARCES	ARCESS Array B	87.40	342	P	P	01 58 48.8	+0.7
	1.6nm,0.9s,mb3.9,baz=63,slow=5.4,SNR=3.8						
FINES	FINESS Array B	91.17	335	P	P	01 59 05.0	-1.0
	0.8nm,0.7s,mb3.9,baz=72,slow=6.0,SNR=6.4						

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*NEIC **20** 01:52:32.6±0.4, 10.18S×116.66E, mb4.7/6, Error ellipse: s-maj=17.2km s-min=7.9km az=51.0*

*IDC **20** 01:52:32.5±0.8, 10.20S×116.71E, h44^{km}±5^{km}, mb4.2/11, mb1 4.2/13, mb1mx4.1/19, mbtmp4.3/13, ML3.9/2, MS3.4/1, Ms1 3.4/1, ms1mx3.0/22, Error ellipse: s-maj=27.5km s-min=16.9km az=69.0*

ISC 20 01:52:30.3±0.4, **10.14S**±0.10×**116.83E**±0.10, **h45**^{km}, **h45**^{km}±1.2^{km}**:pP-P, n30**, σ**1^{s}10**/31, **mb4.6**/19, **South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBWA	Marble Bar	11.30	166	eP	P	01 55 03.8	-8.3
	14nm,0.4s						
FITZ	Fitzroy Crossi	11.64	134	P	P	01 55 14.9	-1.7
	1.2nm,0.3s,baz=326,slow=7.1,SNR=16						
FITZ				S	S	01 57 18.1	-8.0
	2.8nm,0.3s,baz=174,slow=13,SNR=7.8						
FITZ				LR	LR	02 00 01.5	
	comp=Z,163nm,18.4s,baz=292,slow=38						
KKM	Kota Kinabalu	16.09	358	eP	P	01 56 21.4	+6.3
WRA	Warramunga Arr	19.50	122	P	P	01 56 58.3	+1.8
	0.2nm,0.3s,baz=295,slow=12,SNR=14						
WRA				S	S	02 00 26.8	-1.9
	0.1nm,0.3s,baz=298,slow=21,SNR=4.8						
WRAB	Tennant Creek	19.50	122	eP	P	01 56 59.0	+2.4
KULM	Kulim	22.25	313	P	P	01 57 23.6	-1.2
NWAO	Narrogin (SRO)	22.68	179	P	P	01 57 28.8	-0.3
	12nm,0.8s,mb4.4,baz=356,slow=7.4,SNR=3.6						
NWAO	Narrogin (SRO)	22.68	179	eP	P	01 57 29.4	+0.4
CTA	Charters Tower	30.03	113	pP	pP	01 58 52.7	+3.3
	2.4nm,0.6s,baz=270,slow=7.1,SNR=2.7						
CMAR	Chiang Mai Arr	33.45	328	P	P	01 59 07.5	0.0
	2.5nm,0.9s,mb4.2,baz=156,slow=7.6,SNR=9.5						
CMAR				pP	pP	01 59 20.8	+1.2
	0.9nm,0.4s,baz=157,slow=7.8,SNR=2.6						
ENH	Enshi	40.80	350	eP	P	02 00 10.4	+1.3
	4.5nm,0.5s,mb4.3						
GUN	Gumba	48.26	322	eP	P	02 01 08.6	-0.5
	9.8nm,0.4s,mb5.2						
PKI	Pulchoki	48.29	322	eP	P	02 01 08.4	-0.9
DMN	Daman	48.51	321	eP	P	02 01 10.3	-0.7
	16nm,0.7s,mb5.2						
KKN	Kakani	48.53	322	eP	P	02 01 10.3	-0.9
	11nm,0.7s,mb5.0						
GKN	Gorkha	49.08	321	eP	P	02 01 14.3	-1.1
	11nm,0.4s,mb5.2						
KOLN	Koldanda	49.56	320	eP	P	02 01 17.9	-1.2
	13nm,0.7s,mb5.1						
MJAR	Matsushiro Arr	50.60	22	P	P	02 01 27.7	+0.7
	2.4nm,0.6s,mb4.3,baz=197,slow=8.2,SNR=6.3						
SONM	Songino Array	58.46	352	P	P	02 02 23.6	-0.4
	1.4nm,0.5s,mb4.2,baz=169,slow=8.1,SNR=16						
SONM				pP	pP	02 02 37.2	+0.4
	0.5nm,0.5s,baz=168,slow=7.3,SNR=5.0						
SONM				PcP	PcP	02 03 15.5	+1.4
	1.3nm,0.8s,baz=180,slow=3.8,SNR=5.1						
MKAR	Makanchi Array	64.52	334	P	P	02 03 04.6	-0.3
	2.0nm,0.5s,mb4.4,baz=154,slow=6.9,SNR=32						
MKAR				pP	pP	02 03 17.3	-0.5
	1.4nm,0.4s,baz=156,slow=6.6,SNR=7.5						
MKAR	Makanchi Array	64.52	334	P	P	02 03 04.6	-0.3
MKAR				pP	pP	02 03 17.3	-0.5
OPO	Ambohidratompo	67.65	254	P	P	02 03 25.2	0.0
	4.0nm,0.9s,mb4.4,baz=63,slow=4.9,SNR=3.2						
ZAL	Zalesovo	69.36	340	P	P	02 03 35.3	0.0
	2.8nm,0.5s,mb4.5,baz=345,slow=6.9,SNR=13						
ZAL				pP	pP	02 03 47.6	-0.7
	1.5nm,0.5s,baz=252,slow=3.6,SNR=3.4						
BVAR	Borovoye Array	74.31	333	P	P	02 04 05.0	+0.3
	3.8nm,0.7s,mb4.4,baz=127,slow=7.4,SNR=17						
BVAR				pP	pP	02 04 18.1	+0.2
	1.4nm,0.5s,baz=162,slow=9.4,SNR=3.7						
ZRNK	Zerenda	74.89	332	eP	P	02 04 08.3	+0.2
	3.7nm,0.5s,mb4.6						
ZRNK				epP	pP	02 04 21.0	-0.1
BOSA	Boshof	86.59	242	P	P	02 05 11.6	+1.0
	3.5nm,1.1s,mb4.5,baz=130,slow=7.9,SNR=4.3						
BOSA	Boshof	86.59	242	eP	P	02 05 11.6	+1.0
MALT	Malatya	87.27	310	eP	P	02 05 16.1	+2.4
	3.8nm,0.8s,mb4.7						
BRTR	Keskin Array B	91.22	310	P	P	02 05 33.2	+0.9
	2.2nm,0.9s,mb4.5,baz=134,slow=6.6,SNR=11						
BRTR				pP	pP	02 05 46.2	+0.4
	0.4nm,0.7s,baz=135,slow=3.5,SNR=3.6						
FINES	FINESS Array B	99.19	331	P	P	02 06 09.1	+1.0
	1.1nm,1.0s,mb4.3,baz=72,slow=6.0,SNR=3.6						

IDC 20 02:11:25.0±6.8, **12.94N**×**92.97E, mb3.8**/4, **mb1 3.9**/5, **mb1mx3.5**/20, **mbtmp3.8**/5, **ML3.6**/1, **Error ellipse: s-maj=165.1km s-min=49.0km az=162.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.95	46	Pn	Pn	02 13 22.4	-2.3
	0.2nm,0.3s,baz=236,slow=14,SNR=5.4						
FINES	FINESS Array B	67.73	331	P	P	02 22 24.0	-2.3
	0.5nm,0.6s,baz=117,slow=9.3,SNR=3.8						
ARCES	ARCESS Array B	70.14	340	P	P	02 22 38.7	-2.3
	1.4nm,0.9s,baz=90,slow=7.3,SNR=4.5						
GERES	GERESS Array B	73.32	317	P	P	02 22 59.5	-0.9
	0.3nm,0.6s,baz=104,slow=5.5,SNR=3.7						
HFS	Hagfors	73.53	329	P	P	02 22 59.5	-1.9
	1.0nm,0.8s,baz=104,slow=5.9,SNR=4.1						

IDC 20 02:17:33.8±13.0, **17.77S**×**178.91W, h657**^{km}±183^{km}**, mb3.0**/3, **mb1 3.3**/4, **mb1mx2.9**/16, **mbtmp4.1**/4, **Error ellipse: s-maj=121.0km s-min=60.8km az=167.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.42	250	P	P	02 20 34.7	-1.0
	0.4nm,0.3s,baz=80,slow=19,SNR=6.4						
STKA	Stephens Creek	38.28	241	P	P	02 24 01.8	-0.9
	3.1nm,0.5s,baz=94,slow=12,SNR=8.4						
WB2	Warramunga Arr	44.18	259	eP	P	02 24 47.1	-2.3
WRA	Warramunga Arr	44.19	259	P	P	02 24 47.4	-2.1
	1.2nm,0.5s,baz=100,slow=7.6,SNR=23						
TXAR	Lajitas Array	86.33	58	P	P	02 29 08.8	-1.1
	0.5nm,0.7s,baz=209,slow=6.4,SNR=7.8						

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*BGS **20** 02:32:56.4±1.4, 35.88N×71.41E, h240^{km}, mb5.2*

*MOS **20** 02:32:57.9±0.9, 36.36N×71.04E, h226^{km}, mb5.1/101, MS4.6/5, Error ellipse: s-maj=5.5km s-min=2.6km az=133.2*

*BJI **20** 02:32:58.4, 36.56N×71.04E, h227^{km}, mB4.9, mb5.3*

*NEIC **20** 02:32:60.0±0.1, 36.35N×71.08E, mb5.2/181, Error ellipse: s-maj=3.9km s-min=2.1km az=196.0*

NEIC Felt at Charikar and Kabul. Felt in the Chitral-Peshawar area, Pakistan.

*HRVD **20** 02:33:00.0±0.3, 36.39N×71.12E, h244^{km}±1^{km}, MW5.3/58, Centroid moment Tensor Solution. LP body waves: s48,c80;Mantle waves: s58,c114; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}1.24±.03;*

$M_{\theta\theta}$-0.78±.03; $M_{\phi\phi}$-0.45±.03; $M_{r\theta}$-0.38±.03; $M_{\theta\phi}$0.20±.03; $M_{\phi r}$0.08±.03; Best double couple: $M_0$1.125×10^{17} NP1: ϕ_s118°,δ35°,λ95°. NP2:ϕ_s292°,δ55°,λ87°. Principal axes: T 1.31, Plg80°, Azm188°; N -.365, Plg3°, Azm294°; P -.941, Plg10°, Azm24°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*IDC **20** 02:33:00.0±0.3,36.36N×71.10E,h235^{km}±2^{km},mb5.0/27, mb1 5.2/30,mb1mx5.2/30,mbtmp5.6/30 Error ellipse: s-maj=8.8km s-min=6.4km az=27.0*

*CRAAG **20** 02:33:02.7,36.37N×70.95E,Mb5.3*

*NNC **20** 02:33:03.8±1.9,36.79N×70.96E,h231^{km}±13^{km},mpv6.0, Error ellipse: s-maj=19.4km s-min=16.4km az=6.0*

ISC 20 02:32:58.6±0.1**,36.38N**±0.01×**71.07E**±0.01**,h235**^{km}**,** **h235**^{km}±.5^{km}**:pP-P,n1000,**σ**0**^{s}**94**/1057**,mb5.1**/244**,** **342C-33D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.64**	**165**	⇓P	**P**	**02 33 46.9**	**+0.2**
CEP				S	**S**	**02 34 15.0**	**-9.0**
CHCP	**Chirah Chowk**	**3.26**	**146**	⇓P	**P**	**02 33 54.3**	**+0.7**
SRNI	**Srinagar**	**3.84**	**125**	*e*x	x	02 35 11.0	
SRNI				*e*x	x	02 35 45.0	
SBDP	**Sheikh Budin**	**4.08**	**183**	⇑P	**P**	**02 34 03.1**	**-0.1**
SARP	**Sargodha**	**4.64**	**163**	P	**P**	**02 34 09.4**	**-0.7**
DRP	**Derazinda**	**4.68**	**189**	⇓P	**P**	**02 34 10.3**	**-0.3**
KSH	**Kashi**	**4.98**	**50**	*i* PR	**P**	**02 34 14.5**	**+0.2**
KSH				S	**S**	**02 35 11.0**	**-2.2**
TAS	**Tashkent**	**5.13**	**345**	⇑*e*PN	**P**	**02 34 13.0**	**-3.1**
THN	**Thein Dam**	**5.50**	**134**	*e*P	**P**	**02 34 20.0**	**-0.8**
THN				*e*S	**S**	**02 35 22.8**	**-2.0**
PONG	**Pong**	**5.99**	**136**	*e*P	**P**	**02 34 26.0**	**-0.9**
PONG				*e*S	**S**	**02 35 31.0**	**-4.8**
AML	**Almayashu**	**6.09**	**19**	P	**P**	**02 34 27.9**	**-0.3**
	SNR=4844						
UCH	**Uchtor**	**6.42**	**23**	P	**P**	**02 34 32.3**	**-0.1**
	SNR=2077						
KZA	**Kyzart**	**6.55**	**28**	P	**P**	**02 34 32.1**	**-1.9**
	SNR=578						
EKS2	**Erkin-Say**	**6.61**	**18**	P	**P**	**02 34 34.5**	**-0.4**
	SNR=1318						
BHK	**Bhakra**	**6.65**	**137**	*e*P	**P**	**02 34 36.0**	**+0.7**
BHK				*e*x	x	02 35 29.8	
KK31	**Karatay Array**	**6.73**	**356**	⇓P	**P**	**02 34 35.8**	**-0.6**
	525nm,0.5s,baz=176,slow=12,SNR=9610						
KK31				⇓S	**S**	**02 35 47.8**	**-4.9**
	4µm,0.7s,baz=176,slow=15,SNR=21						
KKAR	**Karatay Array**	**6.73**	**356**	*e*PN	**P**	**02 34 35.7**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,139nm,0.3s						
AAK	**Ala-Archa**	**6.78**	**22**	P	**P**	**02 34 37.0**	**-0.1**
	SNR=217						
AAK	**Ala-Archa**	**6.78**	**22**	⇓P	**P**	**02 34 37.0**	**0.0**
	comp=Z,827nm,0.5s						
AAK				⇑S	**S**	**02 35 52.6**	**-1.3**
	comp=Z,5µm,1.7s						
AAK	**Ala-Archa**	**6.78**	**22**	PN	**P**	**02 34 36.9**	**-0.1**
AAK				pmax	pmax		
	comp=Z,372nm,0.5s						
AAK	**Ala-Archa**	**6.78**	**22**	⇓*i*Pn	**P**	**02 34 35.9**	**-1.1**
	comp=Z,1µm,0.4s						
SDNR	**Sundarnagar**	**6.91**	**133**	*e*P	**P**	**02 34 36.4**	**-2.2**
SDNR				*e*S	**S**	**02 35 50.0**	**-6.8**
KBK	**Karagaybulak**	**6.95**	**24**	P	**P**	**02 34 39.2**	**+0.1**
	SNR=260						
FRU	**Bishkek**	**7.00**	**22**	⇑*i*PN	**P**	**02 34 40.0**	**+0.2**
FRU				pmax	pmax		
	comp=Z,6µm,2.0s						
CHMS	**Chumysh**	**7.19**	**22**	P	**P**	**02 34 41.3**	**-1.0**
	SNR=864						
SMLA	**Simla**	**7.29**	**134**	*i* x	**P**	**02 34 40.5**	**-3.0**
SMLA				*i* S	**S**	**02 36 00.0**	**-5.6**
USP	**Ospenovka**	**7.37**	**20**	P	**P**	**02 34 43.1**	**-1.4**
	SNR=234						
TKM2	**Tokmak 2**	**7.41**	**27**	P	**P**	**02 34 44.7**	**-0.3**
	SNR=376						
KLP	**Kalpa**	**7.67**	**127**	*e*x	**P**	**02 34 44.5**	**-4.0**
KLP				AMb	AMB	02 34 52.4	
	comp=Z,553nm,1.0s						
KLP				*e*x	x	02 35 55.4	
KKR	**Kurukshetra**	**8.01**	**141**	*e*P	**P**	**02 34 52.4**	**-0.3**
KKR				AMb	AMB	02 34 53.6	
	comp=Z,1µm,1.4s						
AAA	**Alma-Ata**	**8.23**	**31***c*	*i*PN	**P**	**02 34 55.0**	**-0.6**
AAA				pmax	pmax		
	comp=Z,8µm,2.0s						
AAA				MLR	MLR		
	comp=Z,5µm,4.0s						
AAA	**Alma-Ata**	**8.23**	**31**	*e*P	**P**	**02 34 55.1**	**-0.5**
DDI	**Dehra Dun**	**8.40**	**134**	*e*P	**P**	**02 34 59.0**	**+1.2**
DDI				*e*x	x	02 36 15.0	
JOSI	**Joshimath**	**9.16**	**127**	*e*x	x	02 35 57.6	
KHET	**Khetri**	**9.20**	**153**	*e*x	**P**	**02 34 59.7**	**-8.3**
KHET				AMb	AMB	02 35 08.4	
	comp=Z,302nm,1.6s						
KHET				*e*x	x	02 35 58.0	
KHET				*e*S	**S**	**02 36 43.6**	**-5.7**
NDI	**New Delhi**	**9.26**	**144**	*e*P	**P**	**02 35 08.0**	**-0.7**
NDI				*e*S	**S**	**02 36 46.0**	**-4.7**
AYAN	**Aya Nagar**	**9.39**	**145**	*i* P	**P**	**02 35 09.4**	**-1.0**
AYAN				AMb	AMB	02 35 10.2	
	comp=Z,148nm,0.7s						
AYAN				*e*x	x	02 36 16.6	
JASL	**Jaisalmer**	**9.43**	**181**	*e*P	**P**	**02 35 09.9**	**-1.0**
JASL				AMb	AMB	02 35 23.4	
	comp=Z,2µm,1.2s						
JASL				*e*x	x	02 36 33.6	
SONA	**Sohna**	**9.57**	**146**	*e*x	**P**	**02 35 09.1**	**-3.5**
SONA				AMb	AMB	02 35 13.4	
	comp=Z,1µm,0.7s						
SONA				*e*x	x	02 36 03.4	
SONA				*e*x	x	02 36 31.0	
PTH	**Pithoragarh**	**10.26**	**129**	*e*x	**P**	**02 35 19.0**	**-2.5**
PTH				*e*S	**S**	**02 37 09.0**	**-4.7**
AJM	**Ajmer**	**10.33**	**162**	*i* x	**P**	**02 35 20.0**	**-2.4**
VAN	**Vannovskaya**	**10.47**	**282**	⇓*i*P	**P**	**02 35 22.7**	**-1.4**
AGRA	**Agra**	**10.83**	**145**	*e*x	**P**	**02 35 26.2**	**-2.5**
AGRA				AMb	AMB	02 35 29.0	
	comp=Z,661nm,1.2s						
AGRA				*e*x	x	02 36 59.6	
MK31	**Makanchi Array**	**13.35**	**35**	P	**P**	**02 35 58.9**	**-1.3**
	comp=Z,141nm,0.5s,baz=210,slow=11,SNR=2595						
MK31				⇑S	**S**	**02 38 31.1**	**+7.3**
	comp=Z,190nm,1.2s,baz=184,slow=40,SNR=3.8						
MKAR	**Makanchi Array**	**13.35**	**35**	P	**P**	**02 35 58.8**	**-1.4**
MKAR				S	**S**	**02 38 30.9**	**+7.1**
MKAR				pmax	pmax		
	comp=Z,21nm,0.3s						
MKAR	**Makanchi Array**	**13.35**	**35**	P	**P**	**02 35 58.8**	**-1.5**
	comp=Z,21nm,0.3s,baz=215,slow=14,SNR=463						
MKAR				S	**S**	**02 38 30.9**	**+7.1**
	baz=209,slow=26,SNR=2.5						
KOLN	**Koldanda**	**13.65**	**125**	*e*P	**P**	**02 36 03.0**	**-0.9**
	comp=Z,163nm,0.3s						
KOLN				*e*S	**S**	**02 38 30.1**	**-0.3**
GKN	**Gorkha**	**14.19**	**122**	*e*P	**P**	**02 36 09.5**	**-1.1**
	comp=Z,506nm,0.4s						
GKN				*e*S	**S**	**02 38 41.7**	**-0.9**
BHPL	**Bhopal**	**14.20**	**155**	*e*P	**P**	**02 36 10.6**	**-0.2**
BHPL				AMb	AMB	02 36 11.6	
	comp=Z,324nm,1.3s						
BHPL				*e*x	x	02 38 36.1	
WMQ	**Urumqi**	**14.72**	**55**	⇓*i*P	**P**	**02 36 16.5**	**-0.6**
WMQ				XP		02 37 16.5	
WMQ				S	**S**	**02 38 53.3**	**-0.9**
WMQ				PCP	PcP	02 41 13.5	+0.8
WMQ				AMB	AMB		
	comp=Z,300nm,1.2s						
WMQ				AMB	AMB		
	comp=Z,2µm,3.6s						
WMQ				LR	LR		
	comp=N,410nm,18.0s						
WMQ				LR	LR		
	comp=E,440nm,20.0s						
WMQ				LR	LR		
	comp=Z,330nm,16.0s						
DMN	**Daman**	**14.76**	**122**	*e*P	**P**	**02 36 17.3**	**-0.4**
	comp=Z,732nm,0.9s						
DMN				*e*S	**S**	**02 38 55.8**	**+0.5**
KKN	**Kakani**	**14.77**	**121**	*e*P	**P**	**02 36 16.9**	**-0.8**
	comp=Z,534nm,0.6s						
KKN				*e*S	**S**	**02 38 54.9**	**-0.5**
KKN	**Kakani**	**14.77**	**121**	*e*P	**P**	**02 36 16.9**	**-0.8**
KKN				*e*S	**S**	**02 38 54.9**	**-0.5**
KKN				pmax	pmax		
	comp=Z,267nm,0.6s						
PKI	**Pulchoki**	**14.99**	**122**	*e*P	**P**	**02 36 19.7**	**-0.8**
	comp=Z,851nm,0.7s						
PKI				*e*S	**S**	**02 39 00.8**	**+0.4**
PKI	**Pulchoki**	**14.99**	**122**	*e*P	**P**	**02 36 19.7**	**-0.8**
PKI				*e*S	**S**	**02 39 00.8**	**+0.4**
PKI				pmax	pmax		
	comp=Z,425nm,0.7s						
GUN	**Gumba**	**15.11**	**120**	*e*P	**P**	**02 36 21.0**	**-0.9**
	comp=Z,805nm,0.8s						
GUN				*e*S	**S**	**02 39 03.0**	**0.0**
AB31	**Akbulak array**	**15.22**	**331**	⇓P	**P**	**02 36 21.7**	**-1.4**
	comp=Z,31nm,0.3s						
AB31				⇑S	**S**	**02 39 08.0**	**+2.6**
	comp=Z,188nm,0.7s						
AB31	**Akbulak array**	**15.22**	**331**	P	**P**	**02 36 21.6**	**-1.5**
AB31				S	**S**	**02 39 09.6**	**+4.2**
AB31				pmax	pmax		
	comp=Z,26nm,0.3s						
AB31				smax			
	comp=N,183nm,0.7s						
VOSK	**Vostochnaya**	**16.34**	**360**	⇓P	**P**	**02 36 35.3**	**-1.0**
	comp=N,384nm,0.8s						
VOSK				⇑S	**S**	**02 39 29.8**	**-0.2**
	comp=N,183nm,1.1s						
VOSK	**Vostochnaya**	**16.34**	**360**	P	**P**	**02 36 34.9**	**-1.4**
VOSK				S	**S**	**02 39 29.7**	**-0.3**
VOSK				pmax	pmax		
	comp=Z,327nm,0.9s						
VOSK				smax			
	comp=N,193nm,1.1s						
VOSK	**Vostochnaya**	**16.34**	**360**	*i* P	**P**	**02 36 34.0**	**-2.3**
BANOM	**Banah**	**16.37**	**235**	⇓P	**P**	**02 36 36.7**	**-0.1**
	SNR=68						
ZRNK	**Zerenda**	**16.63**	**356**	⇓P	**P**	**02 36 38.9**	**-0.7**
	comp=N,220nm,0.8s						
ZRNK				⇓S	**S**	**02 39 36.5**	**+0.4**
	comp=N,254nm,1.2s						
ZRNK	**Zerenda**	**16.63**	**356**	P	**P**	**02 36 39.0**	**-0.6**
ZRNK				S	**S**	**02 39 36.5**	**+0.3**
ZRNK				pmax	pmax		
	comp=Z,165nm,0.8s						
ZRNK				smax			
	comp=N,317nm,1.3s						
ZRNK	**Zerenda**	**16.63**	**356**	⇓*e*P	**P**	**02 36 38.9**	**-0.7**
BVA0	**Borovoye Array**	**16.65**	**359**	⇓P	**P**	**02 36 39.1**	**-0.7**
	comp=N,33nm,0.6s,baz=348,slow=42,SNR=2.7						
BVA0				⇑S	**S**	**02 39 36.9**	**+0.4**
	comp=N,46nm,1.2s						
BVA0	**Borovoye Array**	**16.65**	**359**	P	**P**	**02 36 39.0**	**-0.8**
BVA0				S	**S**	**02 39 36.9**	**+0.4**
BVA0				pmax	pmax		
	comp=Z,14nm,0.4s						
BVA0				smax			
	comp=N,55nm,1.2s						
BVAR	**Borovoye Array**	**16.65**	**359**	P	**P**	**02 36 39.1**	**-0.7**
	comp=N,83nm,0.3s,baz=172,slow=10,SNR=357						
BVAR				S	**S**	**02 39 38.1**	**+1.6**
	baz=185,slow=17,SNR=1.9						
BVAR				PKiKP		02 49 06.0	
	comp=N,0.1nm,0.3s,baz=180,slow=1.4,SNR=3.8						
NGP	**Nagpur**	**16.70**	**153**	*e*P	**P**	**02 36 40.6**	**+0.1**
NGP				*e*S	**S**	**02 39 42.9**	**+5.2**
BIDO	**Bidbid**	**17.01**	**225**	⇑P	**P**	**02 36 44.8**	**+0.8**
	SNR=26						
BLSP	**Bilaspur**	**17.15**	**143**	*e*P	**P**	**02 36 46.5**	**+1.1**
BLSP				AMb	AMB	02 36 49.0	
	comp=Z,134nm,1.0s						
BLSP				*e*S	**S**	**02 39 53.7**	**+6.7**
WBK	**Wadi Bani Khal**	**17.28**	**221**	⇓P	**P**	**02 36 48.1**	**+1.2**
	SNR=31						
ASHO	**Ashiyiah**	**17.39**	**232**	⇑P	**P**	**02 36 48.1**	**+0.2**
	SNR=48						
SMDO	**Samad**	**17.42**	**224**	⇑P	**P**	**02 36 49.4**	**+1.2**
	SNR=29						
HOQ	**Hoqain**	**17.43**	**227**	⇑P	**P**	**02 36 48.7**	**+0.3**
	SNR=12						
BOK	**Bokaro**	**17.91**	**130**	*i* P	**P**	**02 36 52.5**	**-0.9**
BOK				*i* S	**S**	**02 40 06.4**	**+4.3**
JMDO	**Jabal Madar**	**17.93**	**222**	⇑P	**P**	**02 36 55.6**	**+1.9**
	SNR=53						
POO	**Poona**	**17.95**	**171**	⇑*i*P	**P**	**02 36 54.0**	**+0.2**
POO				*i* x	x	02 40 55.0	
ARQ	**Araqi**	**18.09**	**228**	⇓P	**P**	**02 36 56.6**	**+1.4**
	SNR=30						
LSA	**Lhasa**	**18.09**	**106**	P	**P**	**02 36 57.3**	**+2.1**
LSA				S	**S**	**02 40 01.8**	**-3.8**
LSA				XS		02 40 13.5	
LSA				AMB	AMB		
	comp=Z,130nm,1.0s						
LSA				AMB	AMB		
	comp=Z,150nm,5.0s						
LSA				LR	LR		
	comp=N,190nm,5.0s						
LSA				LR	LR		
	comp=E,140nm,5.0s						
LSA				LR	LR		
	comp=Z,200nm,4.0s						
LSA	**Lhasa**	**18.09**	**106**	⇑*e*P	**P**	**02 36 56.9**	**+1.7**
LSA				pmax	pmax		
	comp=Z,248nm,1.1s						
LSA	**Lhasa**	**18.09**	**106**	⇑*e*P	**P**	**02 36 56.9**	**+1.7**
	comp=Z,248nm,1.1s						
BSY	**Bisya**	**18.14**	**225**	⇓P	**P**	**02 36 57.9**	**+2.1**
	SNR=50						
LATR	**Latur**	**18.54**	**163**	*e*P	**P**	**02 37 00.0**	**+0.1**
KAD	**Karad**	**19.20**	**171**	*e*P	**P**	**02 37 07.6**	**+1.0**
KAD				*i* x	x	02 41 27.2	
ZAL	**Zalesovo**	**19.98**	**24**	P	**P**	**02 37 14.5**	**+0.2**
ZAL				S	**S**	**02 40 43.2**	**+2.3**
ZAL				pmax	pmax		
	comp=Z,49nm,0.3s						
ZAL	**Zalesovo**	**19.98**	**24**	P	**P**	**02 37 14.5**	**+0.2**
	comp=Z,49nm,0.3s,baz=253,slow=6.7,SNR=198						
ZAL				S	**S**	**02 40 43.2**	**+2.3**
	baz=170,slow=23,SNR=6.1						
ZAL	**Zalesovo**	**19.98**	**24**	P	**P**	**02 37 14.5**	**+0.2**
ZAL				S	**S**	**02 40 43.2**	**+2.3**
HYB	**Hyderabad**	**20.02**	**159**	⇑*e*P	**P**	**02 37 16.0**	**+1.2**
HYB				pmax	pmax		
	comp=Z,480nm,1.0s						
HYB	**Hyderabad**	**20.02**	**159**	⇑*e*P	**P**	**02 37 16.0**	**+1.2**
	comp=Z,480nm,1.0s						
HYB				*e*S	**S**	**02 40 54.0**	**+12**
HYB	**Hyderabad**	**20.02**	**159**	⇑*i*P	**P**	**02 37 16.0**	**+1.2**
	comp=Z,480nm,1.0s						
HYB				*e*S	**S**	**02 40 42.0**	**+0.3**
NVS	**Novosibirsk**	**20.27**	**21**	*e*P	**P**	**02 37 15.9**	**-1.2**
NVS				*e*		02 38 23.3	
NVS				*e*S	**S**	**02 40 48.7**	**+2.6**
NVS				pmax	pmax		
	comp=N,92nm,1.0s						
NVS				pmax	pmax		
	comp=E,63nm,1.0s						
NVS				pmax	pmax		
	comp=Z,105nm,1.0s						
NVS				smax			
	comp=N,787nm,1.1s						
NVS				smax			
	comp=E,1µm,1.3s						
BWNR	**Bhubaneshwar**	**20.57**	**137**	*e*x	x	02 37 46.0	
DGRG	**David-gareji**	**20.60**	**292**	P	**P**	**02 37 21.8**	**+1.4**
DGRG				S		02 38 32.5	
SHL	**Shillong**	**20.80**	**115**	*e*P	**P**	**02 37 23.0**	**+0.4**
SHL				*e*S	**S**	**02 41 01.0**	**+5.2**
GNI	**Garni**	**20.99**	**288**	⇑*e*P	**P**	**02 37 27.5**	**+3.2**
GNI				pmax	pmax		
	comp=Z,515nm,1.1s						
GNI	**Garni**	**20.99**	**288**	P	**P**	**02 37 27.8**	**+3.5**
	comp=Z,337nm,1.1s,baz=49,slow=1.9,SNR=77						
GNI	**Garni**	**20.99**	**288**	⇑*e*P	**P**	**02 37 27.5**	**+3.2**
	comp=Z,515nm,1.1s						
MTA	**Mtatsminda**	**21.05**	**293**	P	**P**	**02 37 37.0**	**+12**
TI2	**Plekhanov**	**21.09**	**293**	⇑*i*P	**P**	**02 37 24.6**	**-0.7**
TI2				*e*S		02 38 30.6	
TI2				pmax	pmax		
	comp=Z,60nm,0.6s,mb5.3						
TBLG	**Delisi**	**21.10**	**293**	P	**P**	**02 37 26.4**	**+1.1**
DUS	**Dusheti**	**21.16**	**294**	P	**P**	**02 37 28.6**	**+2.6**
AGT	**Agartala**	**21.39**	**120**	*i* P	**P**	**02 37 29.0**	**+0.7**
AGT				*i* x	x	02 38 35.0	
VIS	**Vishakhapatnam**	**21.52**	**147**	*i* P	**P**	**02 37 29.3**	**-0.3**
VIS				*i* S	**S**	**02 41 15.2**	**+6.8**
SVE	**Sverdlovsk**	**21.63**	**344**	⇑*i*P	**P**	**02 37 32.0**	**+1.6**
SVE				*e*		02 38 41.0	
SVE				*e*S	**S**	**02 41 27.2**	**+17**
SVE				pmax	pmax		
	comp=Z,320nm,1.5s,mb5.6						
SVE				MLR	MLR		
	comp=N,1µm,10.0s						
SVE				MLR	MLR		
	comp=E,1µm,10.0s						
SVE				MLR	MLR		
	comp=Z,2µm,10.0s						
ARU	**Arti**	**21.77**	**341**	⇑*i*P	**P**	**02 37 33.6**	**+1.9**
ARU				*i* S	**S**	**02 41 21.4**	**+8.9**
ARU				pmax	pmax		
	comp=Z,272nm,0.8s,mb5.8						
ARU	**Arti**	**21.77**	**341**	*e*P	**P**	**02 37 32.6**	**+0.9**
	comp=Z,230nm,0.7s,mb5.8						
ZEI	**Tsey**	**21.84**	**295**	*i* P	**P**	**02 37 32.5**	**-0.1**
TVAN	**Van**	**22.04**	**284**	*i* P	**P**	**02 37 35.3**	**+0.7**
ONI	**Oni**	**22.15**	**295**	P	**P**	**02 37 38.4**	**+2.9**
IMP	**Imphal**	**22.77**	**114**	*e*x	**P**	**02 37 45.0**	**+3.3**
SHAO	**Shalim**	**22.82**	**221**	⇓P	**P**	**02 37 44.8**	**+2.6**
	SNR=8.2						
GTA	**Gaotai**	**22.84**	**74**	⇑*i*P	**P**	**02 37 45.3**	**+3.0**
GTA				PCP	PcP	02 41 25.9	-1.0
GTA				S	**S**	**02 41 38.4**	**+7.5**
GTA				SS	SS	02 42 52.0	+10
GTA				SCP		02 44 42.0	
GTA				PCS		02 45 04.4	
GTA				SCS	ScS	02 48 23.9	-1.5
GTA				AMB	AMB		
	comp=Z,260nm,0.7s,mb5.9						
GTA				AMB	AMB		
	comp=Z,240nm,7.3s						
GTA				LR	LR		
	comp=N,500nm,14.4s						
GTA				LR	LR		
	comp=E,460nm,11.8s						
GTA				LR	LR		
	comp=Z,440nm,15.3s						
GOF	**Gofitskoye**	**22.86**	**301**	⇑*i*P	**P**	**02 37 41.7**	**-0.7**
GOF				*i*		02 38 25.2	
GOF				*i*		02 38 49.2	
GOF				pmax	pmax		
	comp=Z,550nm,1.3s,mb5.9						
KIV	**Kislovodsk**	**22.90**	**298***c*	*i*P	**P**	**02 37 43.9**	**+1.2**
KIV				*e*S	**S**	**02 41 33.5**	**+1.7**
KIV				pmax	pmax		
	comp=Z,118nm,1.1s,mb5.3						
KIV				pmax	pmax		
	comp=N,58nm,0.9s						
KIV				MLR	MLR		
	comp=Z,311nm,17.0s						
KIV				MLR	MLR		
	comp=N,153nm,19.0s						
KIV				MLR	MLR		
	comp=E,292nm,19.0s						
KIV	**Kislovodsk**	**22.90**	**298**	⇑*i*P	**P**	**02 37 43.8**	**+1.0**
	comp=E,114nm,0.6s,mb5.6						
ERZM	**Erzurum**	**23.58**	**288**	*i* P	**P**	**02 37 49.6**	**+0.5**
BEST	**Besiri**	**23.77**	**283**	*i* P	**P**	**02 37 52.5**	**+1.5**
WHFO	**Wadi Hawf**	**23.91**	**224**	⇓P	**P**	**02 37 53.4**	**+0.9**
	SNR=43						
RBK	**Rabkut**	**24.01**	**223**	⇓P	**P**	**02 37 54.4**	**+1.0**
	SNR=33						
RYDS	**Riyadh**	**24.27**	**247**	P	**P**	**02 37 53.6**	**-2.2**
ABTO	**Aybut**	**24.63**	**224**	⇑P	**P**	**02 38 00.3**	**+1.1**
	SNR=50						
SOC	**Sochi**	**24.98**	**296***c*	*i*P	**P**	**02 38 02.5**	**+0.3**
SOC				*e**PP		02 38 50.0	
SOC				*e*S	**S**	**02 42 05.6**	**-0.8**
SOC				pmax	pmax		
	comp=Z,85nm,1.3s,mb5.2						
SOC				pmax	pmax		
	comp=N,46nm,1.2s						
SOC				pmax	pmax		
	comp=E,44nm,1.3s						
SOC				MLR	MLR		
	comp=E,290nm,20.0s						
SOC				MLR	MLR		
	comp=Z,311nm,20.0s						
SOKR	**Solikamsk**	**24.99**	**343***c*	*i*P	**P**	**02 38 04.0**	**+1.9**
SOKR				MLR	MLR		
	comp=Z,520nm,20.0s						
MZLS	**Mizel**	**25.43**	**248**	P	**P**	**02 38 07.1**	**+0.6**
ELZG	**Elazig**	**25.50**	**284**	*i* P	**P**	**02 38 05.9**	**-1.1**
ARSS	**Ar Rass**	**25.94**	**254**	P	**P**	**02 38 11.2**	**0.0**
MALT	**Malatya**	**25.95**	**284**	⇑*e*P	**P**	**02 38 12.8**	**+1.6**
MALT				pmax	pmax		
	comp=Z,93nm,0.9s,mb5.4						
MALT	**Malatya**	**25.95**	**284**	⇑*e*P	**P**	**02 38 12.8**	**+1.6**
	comp=Z,93nm,0.9s,mb5.4						
MOY	**Mondy**	**26.15**	**45**	*e*P	**P**	**02 38 14.4**	**+1.6**
MOY				pmax	pmax		
	comp=Z,21nm,2.0s,mb4.4						
HILS	**Ha’il**	**26.35**	**258**	P	**P**	**02 38 15.3**	**+0.4**
LZH	**Lanzhou**	**26.37**	**81**	⇑P	**P**	**02 38 16.5**	**+1.5**
LZH				AP	pP	02 39 02.8	+2.1
LZH				PP	PP	02 39 10.5	+2.6
LZH				XP	sP	02 39 31.0	+2.4
LZH				S	**S**	**02 42 29.5**	**+0.5**
LZH				XS		02 43 51.4	
LZH				AMB	AMB		
	comp=Z,80nm,1.4s,mb5.2						
LZH				AMB	AMB		
	comp=Z,350nm,5.2s						
LZH	**Lanzhou**	**26.37**	**81**	⇑P	**P**	**02 38 16.5**	**+1.5**
LZH				*PP	pP	02 39 02.8	+2.1
LZH				*SP	sP	02 39 31.0	+2.4
LZH				S	**S**	**02 42 29.5**	**+0.5**
LZH				*SS		02 43 51.4	
LZH				pmax	pmax		
	comp=Z,81nm,1.4s,mb5.2						
LZH	**Lanzhou**	**26.37**	**81**	⇑P	**P**	**02 38 16.5**	**+1.5**
	comp=Z,81nm,1.4s,mb5.2						
LZH				pP	pP	02 39 02.8	+2.1
LZH				PP	PP	02 39 10.5	+2.6
LZH				sP	sP	02 39 31.0	+2.4
LZH				S	**S**	**02 42 29.5**	**+0.5**
LZH				sS		02 43 51.4	
ANN	**Anapa**	**26.74**	**299**	*e*P	**P**	**02 38 17.7**	**-0.6**
ANN				*e**PP	pP	02 39 04.2	0.0
ANN				*e*S	**S**	**02 42 39.6**	**+4.6**
ANN				pmax	pmax		
	comp=Z,142nm,1.0s,mb5.5						
PECR	**Pechory**	**26.99**	**326**	*i* P	**P**	**02 38 20.6**	**+0.2**
PECR				*i*	pP	02 39 06.0	-0.4
PECR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ZAK	**Zakamensk**	**27.02**	**49**	⇓*i*P	**P**	**02 38 21.5**	**+0.7**
ZAK				*e*	pP	02 39 09.6	+2.8
ZAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
ZAK				pmax	pmax		
	comp=Z,53nm,1.4s,mb5.0						
VRSR	**Storozhevoye**	**27.11**	**313**	*e*P	**P**	**02 38 20.4**	**-1.2**
VRSR				*e*	pP	02 39 08.5	+0.9
VRSR				pmax	pmax		
	comp=Z,50nm,2.2s,mb4.8						
VRSR				pmax	pmax		
	comp=N,3.0nm,1.1s						
VRSR				pmax	pmax		
	comp=E,30nm,1.3s						
AFFS	**‘Afif**	**27.16**	**251**	P	**P**	**02 38 22.4**	**+0.1**
VOR	**Voronezh**	**27.29**	**314**	*e*P	**P**	**02 38 23.0**	**-0.2**
VOR				*e*	pP	02 39 10.0	+0.7
VOR				pmax	pmax		
	comp=N,110nm,1.3s						
VOR				pmax	pmax		
	comp=E,250nm,1.3s						
VOR				pmax	pmax		
	comp=Z,250nm,1.3s,mb5.7						
CD2	**Chengdu**	**27.67**	**92**	P	**P**	**02 38 28.1**	**+1.3**
CD2				S	**S**	**02 42 54.5**	**+4.5**
CD2				SS	SS	02 44 36.6	+2.9
CD2				AMB	AMB		
	comp=Z,140nm,1.0s,mb5.5						
TLY	**Talaya**	**27.68**	**46**	*e*P	**P**	**02 38 28.4**	**+1.7**
TLY				*e*	pP	02 39 14.2	+1.2
TLY				*e*S	**S**	**02 42 43.7**	**-6.2**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
COBT	**Iskenderun**	**27.92**	**281**	*i* P	**P**	**02 38 27.0**	**-2.0**
KAMS	**Al Khamasin**	**28.16**	**243**	P	**P**	**02 38 30.5**	**-0.8**

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SONM  Songino Array     28.36  55    P      P      02 38 33.8 +1.0
      comp=Z,43nm,0.7s,mb5.2,baz=261,slow=9.3,SNR=393
SONM                                 PcP    PcP    02 41 38.4 -0.9
      comp=Z,21nm,1.0s,baz=262,slow=4.4,SNR=3.6
SONM                                 P3KPbc        03 10 46.4
      comp=Z,2.9nm,0.9s,baz=82,slow=3.7,SNR=20
SONM                                 P3KP          03 11 47.1
      comp=Z,0.7nm,0.8s,baz=90,slow=3.7,SNR=4.3
SONM  Songino Array     28.36  55    P      P      02 38 33.8 +1.0
SONM                                 PcP    PcP    02 41 38.4 -0.9
SONM                                e              03 10 46.4
QURS  Qurayyt al Mil    28.37 270    P      P      02 38 33.9 +0.9
ASF   Jabal al Asfar    28.46 272    P      P      02 38 34.8 +0.9
      comp=Z,13nm,0.8s,mb4.6,baz=347,slow=1.7,SNR=12
CTKT  Corum             28.58 290   i P     P      02 38 32.8 -2.0
AVNT  Avonos            28.69 286   i P     P      02 38 35.7 -0.2
ULN   Ulaanbaatar       28.80  55   i P     P      02 38 37.3 +0.6
ULN   Ulaanbaatar       28.80  55   i Pr    P      02 38 37.3 +0.6
SIM   Simferopol'       29.11 299c eP       P      02 38 39.0 -0.4
SIM                                eS       S      02 43 14.0 +1.4
SIM                                  pmax   pmax
      comp=Z,33nm,1.5s,mb4.7
SIM                                  MLR    MLR
      comp=Z,200nm,18.0s
KMI   Kunming           29.31 104    P      P      02 38 41.8 +0.3
KMI                                  AP     pP     02 39 30.3 +1.9
KMI                                  PP     PP     02 39 52.9 +6.3
KMI                                  XP     sP     02 39 58.1 +2.3
KMI                                  PCP    PcP    02 41 43.9 +2.0
KMI                                  S      S      02 43 15.8 -0.3
KMI                                  XS            02 44 40.9
KMI                                  SCP           02 45 02.9
KMI                                  SS     SS     02 45 10.3 -0.2
KMI                                  PCS           02 45 25.6
KMI                                  SCS    ScS    02 48 55.6 +2.4
KMI                                  AMB    AMB
      comp=Z,20nm,0.8s,mb4.8
KMI                                  AMB    AMB
      comp=Z,240nm,3.1s
KMI                                  LR     LR
      comp=N,230nm,16.7s
KMI                                  LR     LR
      comp=E,180nm,11.9s
KMI                                  LR     LR
      comp=Z,170nm,18.2s
KMI   Kunming           29.31 104    P      P      02 38 41.8 +0.3
KMI                                  *PP    pP     02 39 30.3 +1.9
KMI                                                02 39 52.9
KMI                                                02 41 43.9
KMI                                  S      S      02 43 15.8 -0.3
KMI                                  *SS           02 44 40.9
KMI                                                02 48 55.6
KMI                                  pmax   pmax
      comp=Z,23nm,0.8s,mb4.9
KMI                                  MLR    MLR
      comp=Z,170nm,18.2s
KMI   Kunming           29.31 104    P      P      02 38 41.8 +0.3
      comp=Z,23nm,0.8s,mb4.9
KMI                                  pP     pP     02 39 30.3 +1.9
KMI                                  PP     PP     02 39 52.9 +6.3
KMI                                  sP     sP     02 39 58.1 +2.3
KMI                                  PcP    PcP    02 41 43.9 +2.0
KMI                                  S      S      02 43 15.8 -0.3
KMI                                  sS            02 44 40.9
KMI                                  ScP           02 45 02.9
KMI                                  SS     SS     02 45 10.2 -0.3
KMI                                  PcS           02 45 25.6
KMI                                  ScS    ScS    02 48 55.6 +2.4
KMI                                  LR     LR
      comp=Z,170nm,18.2s
TATS  Tathlith          29.44 243    P      P      02 38 42.6 -0.1
BRTR  Keskin Array B    29.53 288    P      P      02 38 43.7 +0.5
BRTR                                 *PP    pP     02 39 31.0 +0.8
BRTR                                               02 41 41.2
BRTR                                 pmax   pmax
      comp=Z,63nm,0.7s
BRTR                                 pmax   pmax
      comp=Z,19nm,0.7s
BRTR                                 pmax   pmax
      comp=Z,16nm,0.8s
BRTR  Keskin Array B    29.53 288    P      P      02 38 43.7 +0.5
      comp=Z,63nm,0.7s,mb5.3,baz=100,slow=8.6,SNR=284
BRTR                                 pP     pP     02 39 31.0 +0.8
      comp=Z,19nm,0.7s,baz=101,slow=8.5,SNR=4.0
BRTR                                 PcP    PcP    02 41 41.1 -1.1
      comp=Z,16nm,0.8s,baz=138,slow=2.5,SNR=8.8
MMLI  Mount Malkishu    29.57 273    P      P      02 38 44.6 +0.9
MEST  Erdemli           29.58 282   i P     P      02 38 42.4 -1.3
HNTI  Hanita            29.58 274    P      P      02 38 44.9 +1.1
BALT  Daday             29.59 292   i P     P      02 38 43.3 -0.5
ELDT  Eldivan           29.62 290   i P     P      02 38 42.4 -1.7
MOS   Moscow            29.79 321α iP       P      02 38 45.9 +0.5
MOS                                e*PP     pP     02 39 32.1 -0.3
MOS                                e               02 41 45.4
MOS                                eS       S      02 43 23.7 +0.5
MOS                                e*SS            02 44 45.1
MOS                                  pmax   pmax
      comp=Z,500nm,1.3s,mb6.0
MOS                                  pmax   pmax
      comp=Z,408nm,1.2s,mb5.9
SLTI  Sal'it            29.94 273    P      P      02 38 47.9 +1.0
OBN   Obninsk           30.07 319c iP       P      02 38 47.7 -0.1
OBN                                e*PP     pP     02 39 34.9  0.0
OBN                                i               02 40 00.9
OBN                                i S      S      02 43 25.8 -1.8
OBN                                  pmax   pmax
      comp=Z,184nm,0.6s,mb5.9
OBN                                  MLR    MLR
      comp=Z,100nm,14.0s
OBN   Obninsk           30.07 319⇑ iP       P      02 38 47.6 -0.2
      comp=Z,244nm,0.6s,mb6.0
TBKS  Tabuk             30.17 264    P      P      02 38 50.5 +1.5
PALK  Pallekele         30.28 161  eP       P      02 38 50.5 +0.5
      comp=Z,119nm,0.9s,mb5.5
CMAR  Chiang Mai Arr    30.35 119    P      P      02 38 50.8 +0.2
CMAR                                 *PP    pP     02 39 37.5 -0.3
CMAR                                 *SP    sP     02 40 04.5 -0.7
CMAR                                               02 41 43.5
CMAR                                 pmax   pmax
      comp=Z,55nm,0.9s
CMAR                                 pmax   pmax
      comp=Z,19nm,0.8s
CMAR                                 pmax   pmax
      comp=Z,85nm,1.2s
CMAR                                 pmax   pmax
      comp=Z,29nm,1.1s
CMAR                                 pmax   pmax
      comp=Z,1.0nm,0.4s
CMAR  Chiang Mai Arr    30.35 119    P      P      02 38 50.8 +0.2
      comp=Z,55nm,0.9s,mb5.2,baz=299,slow=8.1,SNR=142
CMAR                                 pP     pP     02 39 37.5 -0.3
      comp=Z,19nm,0.8s,baz=304,slow=7.6,SNR=1.9
CMAR                                 sP     sP     02 40 04.5 -0.7
      comp=Z,85nm,1.2s,baz=298,slow=9.8,SNR=3.6
CMAR                                 PcP    PcP    02 41 43.5 -1.1
      comp=Z,29nm,1.1s,baz=308,slow=8.0,SNR=4.4
CMAR                                 P3KPbc        03 10 39.0
      comp=Z,1.2nm,0.3s,baz=174,slow=2.0,SNR=6.0
CMAR  Chiang Mai Arr    30.35 119    P      P      02 38 50.8 +0.2
CMAR                                 pP     pP     02 39 37.5 -0.3
CMAR                                 sP     sP     02 40 04.5 -0.7
CMAR                                 PcP    PcP    02 41 43.5 -1.1
CMAR                               e               03 10 39.0
ZFRI  Zfri              30.38 269    P      P      02 38 51.7 +0.9
JMQS  Jabal Moqyreh     30.44 266    P      P      02 38 51.9 +0.5
ERMK  Ermenek           30.54 282   i P     P      02 38 47.2 -5.0
CSS   Prodhromos        30.57 279  eP       P      02 38 51.8 -0.6
      comp=Z,28nm,0.9s,mb4.9
CSS                                ePcP     PcP    02 41 44.2 -0.8
BLJS  Baljurashi        30.59 245    P      P      02 38 53.6 +0.9
PRNI  Paran             30.59 269    P      P      02 38 53.5 +0.8
BTO   Baotou            30.60  70  eP       P      02 38 53.8 +1.2
BTO                                  AMB    AMB
      comp=Z,80nm,0.6s,mb5.5
DJNS  Zahran al Janu    30.61 240    P      P      02 38 53.7 +0.8
SGKT  Sivrigoynuk       30.66 290   i P     P      02 38 52.0 -1.2
KDHN  Kadinhani         30.85 286   i P     P      02 38 52.0 -2.8
MBH   Mount Berech      30.87 268    P      P      02 38 55.9 +0.8
XAN   Xi'an             30.89  83    P      P      02 38 55.5 +0.4
XAN                                  PP     PP     02 40 05.1 -1.4
XAN                                  S      S      02 43 37.5 -3.2
XAN                                  AMB    AMB
      comp=Z,110nm,0.8s,mb5.5
XAN                                  LR     LR
      comp=N,120nm,9.1s
XAN                                  LR     LR
      comp=E,200nm,11.6s
XAN                                  LR     LR
      comp=Z,250nm,12.0s
EIL   Elat              30.89 268    P      P      02 38 55.7 +0.5
KZIT  Kziot             30.89 271    P      P      02 38 56.0 +0.8
UMJS  Umm Lajj          30.91 258    P      P      02 38 57.1 +1.7
ALWS  Ilw as Safayha    30.93 267    P      P      02 38 56.3 +0.7
JMOS  Jabal al Moall    30.95 267    P      P      02 38 56.3 +0.5
HAQS  Haql              31.14 267    P      P      02 38 58.0 +0.6
AYUS  'Aynunah          31.21 265    P      P      02 38 58.7 +0.6
BDAS  Al Bad'           31.25 266    P      P      02 38 58.9 +0.5
NANT  Nan               31.38 116 ⇑P        P      02 38 57.0 -2.6
      comp=Z,561nm,0.8s,mb6.2
TAYS  Tayyib Ism        31.39 266    P      P      02 39 00.1 +0.5
HENT  Hendek            31.51 291   i P     P      02 38 57.7 -2.8
ESKT  Eskisehir         31.69 288   i P     P      02 39 01.5 -0.6
HHC   Hu-ho-hao-te      31.75  69  eP       P      02 39 03.8 +1.2
HHC                                  AP     pP     02 39 48.8 -1.4
HHC                                  XP     sP     02 40 13.6 -3.8
HHC                                  PP     PP     02 40 17.9 +0.7
HHC                                  S      S      02 43 54.8 +0.8
HHC                                  XS            02 45 14.5
HHC                                  PCS           02 45 35.9
HHC                                  SS     SS     02 46 04.5 -0.9
HHC                                  SCS    ScS    02 49 07.8 +2.8
HHC                                  AMB    AMB
      comp=Z,50nm,0.7s,mb5.2
HHC                                  AMB    AMB
      comp=Z,110nm,4.6s
GYA   Guiyang           31.79  98⇑ iP       P      02 39 03.3 +0.2
GYA                                  PCP    PcP    02 41 44.6 -3.8
GYA                                  S      S      02 43 56.9 +2.1
GYA                                  AMB    AMB
      comp=Z,90nm,1.1s,mb5.2
GYA                                  AMB    AMB
      comp=Z,100nm,4.5s
GYA                                  LR     LR
      comp=N,670nm,16.4s
GYA                                  LR     LR
      comp=E,410nm,16.9s
GYA                                  LR     LR
      comp=Z,570nm,17.0s
ISP   Isparta           32.21 285  eP       P      02 39 06.5 -0.1
ISP                                e               02 41 47.6
ISP                                  pmax   pmax
      comp=Z,32nm,0.9s,mb4.8
ISP   Isparta           32.21 285  eP       P      02 39 06.5 -0.1
      comp=Z,32nm,0.9s,mb4.8
ISP                                ePcP     PcP    02 41 47.6 -1.8
TKTP  Tekketepe         32.32 285   i P     P      02 39 05.4 -2.2
ENH   Enshi             32.52  90  eP       P      02 39 10.1 +0.8
      comp=Z,148nm,1.0s,mb5.5
ULDT  Uludag            32.92 290   i P     P      02 39 11.1 -1.6
KIS   Kishinev          32.93 302α iP       P      02 39 11.0 -1.7
KIS                                e        pP     02 39 56.0 -4.5
KIS                                e               02 40 26.0
KIS                                e               02 44 04.0
KIS                                  pmax   pmax
      comp=Z,400nm,1.0s,mb5.9
KIS                                  pmax   pmax
      comp=Z,400nm,1.0s,mb5.9
GOLH  Golhisar          33.06 284   i P     P      02 39 11.1 -2.8
NST   Nakhon Sawan      33.06 121 ⇓P        P      02 39 15.8 +1.7
AKASG Malin Array Be    33.07 309    P      P      02 39 13.3 -0.5
AKASG                                *PP    pP     02 40 00.2 -1.5
AKASG                                *SP    sP     02 40 27.3 -1.6
AKASG                                              02 41 49.7
AKASG                                pmax   pmax
      comp=Z,92nm,0.7s
AKASG                                pmax   pmax
      comp=Z,14nm,0.5s
AKASG                                pmax   pmax
      comp=Z,31nm,0.8s
AKASG                                pmax   pmax
      comp=Z,29nm,0.7s
AKASG Malin Array Be    33.07 309    P      P      02 39 13.2 -0.6
      comp=Z,92nm,0.7s,mb5.4,baz=79,slow=8.0,SNR=296
AKASG                                pP     pP     02 40 00.2 -1.5
      comp=Z,14nm,0.5s,baz=85,slow=7.9,SNR=3.1
AKASG                                sP     sP     02 40 27.3 -1.6
      comp=Z,31nm,0.8s,baz=89,slow=8.9,SNR=3.9
AKASG                                PcP    PcP    02 41 49.7 -1.9
      comp=Z,29nm,0.7s,baz=82,slow=3.5,SNR=7.6
AKASG Malin Array Be    33.07 309    P      P      02 39 13.2 -0.6
AKASG                                pP     pP     02 40 00.2 -1.5
AKASG                                sP     sP     02 40 27.3 -1.6
AKASG                                PcP    PcP    02 41 49.7 -1.9
PSN   Preselentsi       33.34 296  eP       P      02 39 17.0 +0.8
DNZL  Cakiroluk         33.37 285   i P     P      02 39 13.0 -3.5
MANT  Manisa            33.61 287   i P     P      02 39 16.9 -1.7
CIT   Chita             33.69  49  eP       P      02 39 19.2 +0.1
CIT                                  pmax   pmax
      comp=Z,83nm,1.2s,mb5.1
PRD   Provadia          33.94 295  eP       P      02 39 22.0 +0.7
BRD   Bordesti          34.13 299 ⇑P        P      02 39 17.2 -5.7
VRI   Vrincioaia        34.34 300 ⇑P        P      02 39 25.8 +1.1
ARG   Arkhangelos       34.40 283    P      P      02 39 25.6 +0.3
ARG   Arkhangelos       34.40 283  eP       P      02 39 25.5 +0.2
KKTK  Khon Kaen         34.52 117 ⇑P        P      02 39 27.0 +0.5
      comp=Z,2µm,0.4s
JMB   Yambol            34.59 294  eP       P      02 39 28.0 +1.1
JMB   Yambol            34.59 294    P      P      02 39 28.6 +1.7
KDAG  Bornova           34.62 287   i P     P      02 39 24.5 -2.6
MNK   Minsk             34.66 315⇑ eP       P      02 39 26.0 -1.3
MLR   Muntele Rosu      34.89 299 ⇓P        P      02 39 31.3 +1.9
NNT   Nongplab          34.99 125    P      P      02 39 32.7 +2.2
PUL   Pulkovo           35.05 325⇓ eP       P      02 39 31.4 +0.9
URLA  Izmir             35.15 287   i P     P      02 39 25.5 -6.1
ALN   Alexandroupoli    35.16 291  eP       P      02 39 32.5 +0.8
KARP  Karpathos         35.32 282  eP       P      02 39 33.0 -0.1
BURAR Bucovina Array    35.40 303 ⇑P        P      02 39 34.3 +0.7
BURAR Bucovina Array    35.40 303 ⇑P        P      02 39 34.3 +0.7
BOD   Bodaibo           35.41  39  eP       P      02 39 30.7 -2.8
BOD                                e        pP     02 40 21.9 -0.1
BOD                                e               02 41 56.3
BOD                                  pmax   pmax
      comp=Z,24nm,1.0s,mb4.7
BOD                                  pmax   pmax
      comp=Z,52nm,1.3s,mb4.9
BOD                                  pmax   pmax
      comp=Z,45nm,1.3s,mb4.8
BOD                                  pmax   pmax
      comp=Z,49nm,1.1s,mb5.0
BOD                                  pmax   pmax
      comp=Z,36nm,0.8s,mb5.0
IDID  Didziasalis       35.46 316⇑ iP       P      02 39 34.5 +0.5
IDID                                 AMb    AMB    02 39 36.2
      comp=Z,62nm,1.2s,mb5.0
IDID                               epP      pP     02 40 21.9 -0.6
IDID                               esP      sP     02 40 48.6 -1.0
RDO   Rodhopi           35.51 292    P      P      02 39 35.4 +0.8
RDO   Rodhopi           35.51 292  eP       P      02 39 35.5 +0.9
VOIR                    35.52 299 ⇓P        P      02 39 35.4 +0.7
KDZ   Kurdzhali         35.54 293  eP       P      02 39 36.0 +1.2
IIGN  Ignalina          35.76 316  eP       P      02 39 37.2 +0.7
ISAL  Salakas           35.86 317⇑ iP       P      02 39 38.0 +0.6
ISAL                                 AMb    AMB    02 39 39.8
      comp=Z,56nm,1.2s,mb5.0
ISAL                               epP      pP     02 40 24.9 -1.0
ISAL                               esP      sP     02 40 52.3 -0.8
RZN   Rozhen            36.06 293    P      P      02 39 40.0 +0.8
APE   Apeiranthos       36.24 285⇑ iP       P      02 39 41.1 +0.3
APE   Apeiranthos       36.24 285  eP       P      02 39 41.0 +0.2
LVV   L'vov             36.28 307⇑ iP       P      02 39 41.3 +0.3
LVV                                ePPP     PP     02 41 15.5 +5.8
LVV                                  MLR    MLR
      comp=E,100nm,16.0s
LVV                                  MLR    MLR
      comp=N,30nm,14.0s
LVV                                  MLR    MLR
      comp=Z,100nm,16.0s
VSU   Vasula            36.31 322   i P     P      02 39 41.2  0.0
WHN   Wuhan             36.34  86 ⇑P        P      02 39 42.5 +0.8
PGB   Panagyurishte     36.36 294  eP       P      02 39 43.0 +1.2
SANT  Santorini         36.46 284  eP       P      02 39 42.0 -0.7
      comp=Z,269nm,1.5s,mb5.5
THR1  Thera Island      36.46 284  eP       P      02 39 42.4 -0.2
THR3  Thira Island,     36.50 284  eP       P      02 39 43.1 +0.2
NPS   Neapolis          36.62 282  eP       P      02 39 43.5 -0.5
XRY   Khrisi            36.66 281  eP       P      02 39 43.5 -0.8
OUR   Ouranopolis       36.80 291  eP       P      02 39 46.4 +0.9
MMB   Musomiste         36.80 293    P      P      02 39 46.0 +0.5
TIA   Tai'an            36.84  76  eP       P      02 39 46.8 +0.9
TIA                                  AMB    AMB
      comp=Z,100nm,1.0s,mb5.3
SRS   Serrai            36.97 292  eP       P      02 39 47.5 +0.6
VTS   Vitosha           37.06 295    P      P      02 39 48.0 +0.4
VTS   Vitosha           37.06 295    P      P      02 39 48.9 +1.3
PAIG  Paliouri          37.10 290  eP       P      02 39 48.7 +0.7
KWP   Kalwaria          37.13 306⇑ eP       P      02 39 49.1 +1.0
KWP                                e*PP     pP     02 40 38.5 +1.6
KWP                                e               02 42 03.0
KWP                                eS       S      02 45 18.4 +1.9
KWP                                  pmax   pmax
      comp=Z,300nm,1.1s,mb5.7
KWP   Kalwaria          37.13 306⇑ eP       P      02 39 49.1 +1.0
      comp=Z,300nm,1.1s,mb5.7
KWP                                epP      pP     02 40 38.5 +1.6
KWP                                ePcP     PcP    02 42 03.0 -0.5
KWP                                eS       S      02 45 18.4 +1.9
SOH   Sokhos            37.19 292  eP       P      02 39 49.3 +0.5
PLG   Polygyros         37.20 291  eP       P      02 39 49.5 +0.7
SUW   Suwalki           37.24 314⇑ eP       P      02 39 49.0  0.0
SUW                                e*PP     pP     02 40 36.6 -1.2
SUW                                e               02 41 19.5
SUW                                eS       S      02 45 18.6 +0.5
SUW                                eSS      SS     02 48 13.2 +7.6
SUW                                  pmax   pmax
      comp=Z,300nm,1.1s,mb5.7
SUW   Suwalki           37.24 314⇑ eP       P      02 39 49.0  0.0
      comp=Z,300nm,1.1s,mb5.7
SUW                                epP      pP     02 40 36.6 -1.2
SUW                                ePP      PP     02 41 19.5 -1.1
SUW                                eS       S      02 45 18.6 +0.4
SUW                                eSS      SS     02 48 13.2 +7.6
KKB   Krupnik           37.24 294    P      P      02 39 49.0 -0.1
HIA   Hailar            37.31  54  eP       P      02 39 50.9 +1.2
HIA                                e               02 42 03.9
HIA                                  pmax   pmax
      comp=Z,21nm,0.7s
HIA   Hailar            37.31  54  eP       P      02 39 50.9 +1.2
      comp=Z,21nm,0.7s,mb4.8
HIA                                ePcP     PcP    02 42 03.9 -0.2
KOLS  Kolonicke sedl    37.39 305   i P     P      02 39 50.8 +0.5
KOLS                               epP      pP     02 40 39.7 +0.6
KOLS                               ePP      PP     02 41 22.4 +0.1
KOLS                               ePCP     PcP    02 42 04.5 +0.2
THE   Thessaloniki      37.52 292  eP       P      02 39 51.2 -0.2
XOR   Xorichti          37.57 289  eP       P      02 39 50.7 -1.2
LVZ   Lovozero          37.59 338  eP       P      02 39 52.1 +0.3
LVZ                                eS       S      02 45 23.8 +0.5
LVZ                                  pmax   pmax
      comp=Z,190nm,0.8s,mb5.7
LVZ                                  pmax   pmax
      comp=N,30nm,0.5s
LVZ                                  pmax   pmax
      comp=E,50nm,1.0s
LVZ                                  pmax   pmax
      comp=N,50nm,0.8s
LVZ                                  pmax   pmax
      comp=Z,210nm,0.8s,mb5.7
LVZ                                  pmax   pmax
      comp=E,100nm,1.3s
LVZ                                  smax
      comp=Z,290nm,2.9s
LVZ                                  smax
      comp=N,100nm,1.6s
LVZ                                  smax
      comp=E,200nm,1.8s
LVZ                                  MLR    MLR
      comp=Z,870nm,14.0s
LVZ                                  MLR    MLR
      comp=N,350nm,12.0s
LVZ                                  MLR    MLR
      comp=E,460nm,15.0s
FINES FINESS Array B    37.62 326    P      P      02 39 52.4 +0.4
FINES                                *PP    pP     02 40 40.2 -0.7
FINES                                *SP    sP     02 41 06.8 -1.3
FINES                                              02 42 04.2
FINES                                S      S      02 45 23.9 +0.2
FINES                                pmax   pmax
      comp=Z,89nm,0.6s
FINES                                pmax   pmax
      comp=Z,25nm,0.7s
FINES                                pmax   pmax
      comp=Z,31nm,0.7s
FINES                                pmax   pmax
      comp=Z,22nm,0.8s
FINES FINESS Array B    37.62 326    P      P      02 39 52.4 +0.4
      comp=Z,89nm,0.6s,mb5.5,baz=109,slow=9.6,SNR=598
FINES                                pP     pP     02 40 40.2 -0.7
      comp=Z,25nm,0.7s,baz=108,slow=12,SNR=3.9
FINES                                sP     sP     02 41 06.8 -1.3
      comp=Z,31nm,0.7s,baz=112,slow=10,SNR=3.5
FINES                                PcP    PcP    02 42 04.2 -0.7
      comp=Z,22nm,0.8s,baz=90,slow=8.3,SNR=3.3
FINES                                S      S      02 45 23.9 +0.3
      comp=Z,5.7nm,0.7s,baz=96,slow=14,SNR=3.4
FINES FINESS Array B    37.62 326    P      P      02 39 52.4 +0.4
FINES                                pP     pP     02 40 40.2 -0.7
FINES                                sP     sP     02 41 06.8 -1.3
FINES                                PcP    PcP    02 42 04.2 -0.7
FINES                                S      S      02 45 23.9 +0.3
VAM   Vamos             37.70 283  eP       P      02 39 53.0  0.0
KAF   Kangasniemi       37.76 327  ep       P      02 39 51.9 -1.3
      comp=Z,76nm,0.8s,mb5.3,baz=111,slow=8.4
KAF   Kangasniemi       37.76 327  eP       P      02 39 51.9 -1.3
KAF                                  pmax   pmax
      comp=Z,77nm,0.8s,mb5.3
BOLS  Boljevac          37.83 297⇑ iP       P      02 39 54.2 +0.2
GRG   Griva             37.89 292  eP       P      02 39 55.1 +0.6
BZS   Buzias            37.92 300 ⇑P        P      02 39 55.7 +1.0
LIT   Litokhoron        37.97 291  eP       P      02 39 55.1 -0.1
QIZ   Qiongzhong        38.13 106 ⇓P        P      02 39 59.0 +2.3
AGG   Agios Georgios    38.29 289  eP       P      02 39 58.1 +0.2
SVIS  Svilajnac         38.31 298⇑ iP       P      02 39 59.0 +1.1
WAR   Warsaw            38.34 311⇑ eP       P      02 39 59.0 +0.9
WAR                                e*PP     pP     02 40 47.8 +0.7
WAR                                e               02 42 06.9
WAR                                eS       S      02 45 34.2 -0.4
WAR                                  pmax   pmax
      comp=Z,600nm,1.2s,mb6.0
WAR   Warsaw            38.34 311⇑ eP       P      02 39 59.0 +0.9
      comp=Z,0.6nm,1.2s
WAR                                epP      pP     02 40 47.8 +0.7
WAR                                ePcP     PcP    02 42 06.9 -0.4
WAR                                eS       S      02 45 34.2 -0.4
WAR   Warsaw            38.34 311⇑ eP       P      02 39 59.0 +0.9
      comp=Z,600nm,1.2s,mb6.0
WAR                                epP      pP     02 40 47.8 +0.6
WAR                                ePcP     PcP    02 42 06.9 -0.4
WAR                                eS       S      02 45 34.2 -0.5
VLI   Veliai            38.34 285  eP       P      02 39 56.5 -1.8
SKO   Skopje            38.44 294⇑ iP       P      02 39 59.6 +0.5
SKO                                i        pP     02 40 50.0 +1.9
KECS  Kecovo            38.58 304   i P     P      02 40 00.6 +0.5
KECS                               ePP      PP     02 41 36.0 +0.7
FNA   Florina           38.68 292  eP       P      02 40 01.1  0.0
NIE   Niedzica          38.68 306⇑ iP       P      02 40 02.1 +1.1
NIE                                e        pP     02 40 50.7 +0.6
NIE                                e               02 42 08.3
EVR   Evrytania         38.71 289  eP       P      02 40 01.0 -0.4
GZH   Guangzhou         38.73  98    P      P      02 40 01.8 +0.2
MEV   Metsovon          38.98 291  eP       P      02 40 03.9 +0.4
PSZ   Piszkesteto       38.99 304  eP       P      02 40 04.4 +0.9
PSZ                                e*PP     pP     02 40 52.0 -0.7
PSZ                                e               02 42 08.2
PSZ                                  pmax   pmax
      comp=Z,27nm,0.8s,mb4.8
PSZ   Piszkesteto       38.99 304  eP       P      02 40 04.4 +0.8
      comp=Z,27nm,0.8s,mb4.8
PSZ                                epP      pP     02 40 52.0 -0.6
PSZ                                ePcP     PcP    02 42 08.2 -1.1
ITM   Ithomi            39.02 286    P      P      02 40 03.0 -0.9
OJC   Ojcow             39.02 307⇑ iP       P      02 40 04.2 +0.4
OJC                                ePP      PP     02 41 19.9  -20
OJC                                eS       S      02 45 35.7 -9.2
DIVS  Divcibare         39.21 298⇓ iP       P      02 40 05.7 +0.2
JAN   Janina            39.29 290  eP       P      02 40 06.5 +0.4
NJ2   Nanjing           39.43  82 ⇑P        P      02 40 08.8 +1.4
NJ2                                  AP     pP     02 40 55.3 -1.3
NJ2                                  XP     sP     02 41 20.5 -3.3
NJ2                                  PP     PP     02 41 47.6 +2.8
NJ2                                  S      S      02 45 55.0 +3.8
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NJ2				XS		02 47 17.0	
NJ2				AMB	AMB		
	comp=Z,90nm,0.9s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,600nm,4.2s						
NJ2				LR	LR		
	comp=N,590nm,15.4s						
NJ2				LR	LR		
	comp=E,550nm,14.1s						
NJ2				LR	LR		
	comp=Z,20nm,18.2s						
BUD	**Budapest**	**39.60**	**303**	eP	**P**	**02 40 09.8**	**+1.3**
LKD	**Levkas**	**39.64**	**289**	eP	**P**	**02 40 08.4**	**-0.6**
SNG	**Songkhla**	**39.65**	**130**	P	**P**	**02 40 09.5**	**+0.2**
	comp=Z,236nm,0.9s,mb5.6						
VYHS	**Vyhne**	**39.67**	**305**	i P	**P**	**02 40 10.2**	**+1.0**
VYHS				e	pP	02 40 59.2	+0.8
VYHS				e		02 42 10.8	
VYHS	**Vyhne**	**39.67**	**305**	i P	**P**	**02 40 10.2**	**+1.0**
VYHS				e		02 40 28.0	
VYHS				epP	pP	02 40 59.2	+0.8
VYHS				ePP	PP	02 41 40.3	-6.8
VYHS				ePCP	PcP	02 42 10.8	-0.7
DL2	**Dalian**	**39.70**	**71**	P	**P**	**02 40 11.0**	**+1.5**
DL2				AP	pP	02 40 59.4	+0.7
DL2				S	**S**	**02 45 56.5**	**+1.4**
DL2				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.8						
IGT	**Igoumenitsa**	**39.70**	**290**	eP	**P**	**02 40 08.9**	**-0.6**
KOLL	**Kolacno**	**39.96**	**305**	i P	**P**	**02 40 12.2**	**+0.7**
SRO2	**Moca**	**40.01**	**303**	eP	**P**	**02 40 13.4**	**+1.5**
RAC	**Raciborz**	**40.05**	**307**	eP	**P**	**02 40 13.3**	**+1.0**
SRO	**Srobarova**	**40.06**	**304**	eP	**P**	**02 40 13.9**	**+1.6**
SRO				e	pP	02 41 03.3	+1.7
SRO				ePCP	PcP	02 42 12.0	-0.8
OKC	**Ostrava-Krasne**	**40.09**	**307**	⇑iP	**P**	**02 40 13.2**	**+0.7**
OKC				ex	x	02 41 15.1	
SRO1	**Iza**	**40.11**	**303**	eP	**P**	**02 40 14.0**	**+1.2**
SRO1				epP	pP	02 41 02.4	+0.3
SRO1				ePCP	PcP	02 42 12.4	-0.6
JAVC	**Velka Javorina**	**40.43**	**305**	P	**P**	**02 40 17.2**	**+1.8**
MORC	**Moravsky Berou**	**40.48**	**307**	eP	**P**	**02 40 16.3**	**+0.5**
MORC				e*PP	pP	02 41 05.3	+0.1
MORC				pmax	pmax		
	comp=Z,65nm,0.8s,mb5.1						
MORC	**Moravsky Berou**	**40.48**	**307**	eP	**P**	**02 40 16.3**	**+0.5**
	comp=Z,65nm,0.8s,mb5.1						
MORC				epP	pP	02 41 05.3	+0.1
SNY	**Shenyang**	**40.58**	**66**	⇓P	**P**	**02 40 16.5**	**-0.2**
SNY				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
SNY				AMB	AMB		
	comp=Z,50nm,6.5s						
SNY				LR	LR		
	comp=E,160nm,4.1s						
SNY				LR	LR		
	comp=Z,130nm,5.7s						
SMOL	**Smolenice**	**40.61**	**305**	i P	**P**	**02 40 17.6**	**+0.8**
SMOL				epP	pP	02 41 06.0	-0.2
SMOL				ePCP	PcP	02 42 12.2	-2.3
ZST	**Bratislava**	**40.84**	**304**	eP	**P**	**02 40 19.2**	**+0.4**
ZST				epP	pP	02 41 09.0	+0.8
ZST				ePP	PP	02 42 01.5	+2.7
ZST				ePCP	PcP	02 42 15.0	-0.3
KEV	**Kevo**	**40.94**	**338**	ep	**P**	**02 40 19.4**	**+0.1**
	comp=Z,164nm,0.9s,mb5.5						
KEV	**Kevo**	**40.94**	**338**	eP	**P**	**02 40 19.4**	**+0.1**
KEV				pmax	pmax		
	comp=Z,164nm,0.9s,mb5.5						
CLNS	**Chul'man**	**40.96**	**43**	eP	**P**	**02 40 19.5**	**-0.1**
CLNS				ePPP	PPP	02 42 15.2	-22
CLNS				eSS	SS	02 49 23.5	+3.8
CLNS				pmax	pmax		
	comp=Z,39nm,0.8s,mb4.9						
CLNS				pmax	pmax		
	comp=N,11nm,0.9s						
CLNS				pmax	pmax		
	comp=E,22nm,0.9s						
CLNS				pmax	pmax		
	comp=N,14nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.6						
CLNS				pmax	pmax		
	comp=E,31nm,0.9s						
CLNS				MLR	MLR		
	comp=Z,330nm,13.0s						
CLNS				MLR	MLR		
	comp=N,100nm,10.0s						
CLNS				MLR	MLR		
	comp=E,100nm,12.0s						
CLNS	**Chul'man**	**40.96**	**43**	eP	**P**	**02 40 18.5**	**-1.1**
VRAC	**Vranov**	**41.12**	**306**	P	**P**	**02 40 22.3**	**+1.3**
KULM	**Kulim**	**41.15**	**132**	eP	**P**	**02 40 22.0**	**+0.4**
SOP	**Sopron**	**41.25**	**303**	P	**P**	**02 40 22.8**	**+0.8**
SOP	**Sopron**	**41.25**	**303**	⇑iP	**P**	**02 40 22.7**	**+0.7**
DPC	**Dobruska-Polom**	**41.25**	**307**	⇑iP	**P**	**02 40 22.9**	**+0.8**
DPC				e*PP	pP	02 41 12.8	+1.2
DPC				e		02 42 10.6	
DPC				e		02 46 20.6	
DPC	**Dobruska-Polom**	**41.25**	**307**	⇑iP	**P**	**02 40 22.9**	**+0.8**
DPC				epP	pP	02 41 12.8	+1.2
DPC				ePP	PP	02 42 10.6	+7.6
DPC				ePP	tx	02 43 06.9	
DPC				ex	x	02 46 20.6	
KSP	**Ksiaz**	**41.26**	**308**	⇑eP	**P**	**02 40 22.5**	**+0.4**
KSP				e*PP	pP	02 41 11.0	-0.6
KSP				e*SP	sP	02 41 38.5	-0.3
KSP				e		02 42 03.6	
KSP				e		02 42 15.6	
KSP				eS	**S**	**02 46 15.7**	**-2.2**
KSP				e*SS		02 47 36.5	
KSP				eSS	SS	02 49 33.0	+7.8
KSP	**Ksiaz**	**41.26**	**308**	⇑eP	**P**	**02 40 22.7**	**+0.6**
	comp=E,200nm,1.9s,mb5.2						
KSP				epP	pP	02 41 12.3	+0.7
KSP				ePP	PP	02 42 03.8	+0.8
KSP				ePcP	PcP	02 42 16.6	0.0
KSP				eS	**S**	**02 46 22.9**	**+5.0**
KRUC	**Moravsky**	**41.26**	**306**	P	**P**	**02 40 23.0**	**+0.9**
ARCES	**ARCESS Array B**	**41.28**	**338**	P	**P**	**02 40 22.8**	**+0.7**
ARCES				*PP	pP	02 41 11.6	0.0
ARCES				pmax	pmax		
	comp=Z,220nm,0.7s						
ARCES				pmax	pmax		
	comp=Z,62nm,1.0s						
ARCES	**ARCESS Array B**	**41.28**	**338**	P	**P**	**02 40 22.8**	**+0.7**
	comp=Z,220nm,0.7s,mb5.7,baz=113,slow=8.3,SNR=1517						
ARCES				pP	pP	02 41 11.6	0.0
	comp=Z,62nm,1.0s,baz=108,slow=7.7,SNR=3.9						
ARE0	**ARCESS Array S**	**41.28**	**338**	eP	**P**	**02 40 22.9**	**+0.8**
ARE0				epP	pP	02 41 11.2	-0.4
ARE0				esP	sP	02 41 37.2	-1.6
ARE0				ePcP	PcP	02 42 16.0	-0.6
UPC	**Upice**	**41.45**	**308**	⇑iP	**P**	**02 40 24.3**	**+0.7**
UPC				epP	pP	02 41 13.5	+0.3
UPC				ePP	PP	02 42 15.7	+11
SISC	**Sisak**	**41.61**	**300**	i P	**P**	**02 40 24.7**	**-0.2**
CN2	**Changchun**	**41.61**	**62**	eP	**P**	**02 40 25.6**	**+0.6**
CN2				eAP	pP	02 41 13.6	-1.0
CN2				eXP	sP	02 41 38.1	-3.6
CN2				PCP	PcP	02 42 17.4	-0.5
CN2				eS	**S**	**02 46 22.5**	**-0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
SSE	**Sheshan**	**41.63**	**82**	P	**P**	**02 40 24.8**	**-0.6**
SSE				AP	pP	02 41 14.6	-0.3
SSE				XP	sP	02 41 42.3	+0.2
SSE				S	**S**	**02 46 22.6**	**-1.0**
SSE				XS		02 47 51.5	
SSE				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.0						
SSE				AMB	AMB		
	comp=Z,180nm,4.4s						
SSE				LR	LR		
	comp=N,100nm,25.2s						
SSE				LR	LR		
	comp=E,130nm,25.3s						
SSE				LR	LR		
	comp=Z,110nm,19.4s						
SSE	**Sheshan**	**41.63**	**82**	P	**P**	**02 40 24.7**	**-0.7**
	comp=Z,82nm,1.2s,mb5.0						
SSE				pP	pP	02 41 14.6	-0.3
SSE				sP	sP	02 41 42.2	+0.1
SSE				S	**S**	**02 46 22.6**	**-1.0**
SSE				sS		02 47 51.5	
SSE				LR	LR		
	comp=Z,110nm,19.4s						
IPM	**Ipoh**	**41.94**	**132**	P	**P**	**02 40 29.1**	**+1.0**
ARSA	**Arzberg**	**41.99**	**303**	⇑iP	**P**	**02 40 28.4**	**+0.4**
	comp=Z,63nm,1.5s,mb4.8						
QZH	**Quanzhou**	**42.06**	**92**	P	**P**	**02 40 29.0**	**+0.1**
QZH				AMB	AMB		
	comp=Z,80nm,1.0s,mb5.1						
BSD	**Bornholm Skovb**	**42.14**	**315**	⇑iP	**P**	**02 40 28.3**	**-0.8**
BSD				i	pP	02 41 17.9	-0.8
BSD				pmax	pmax		
	comp=Z,170nm,0.9s,mb5.5						
BSD	**Bornholm Skovb**	**42.14**	**315**	⇑iP	**P**	**02 40 28.3**	**-0.8**
	comp=Z,168nm,0.9s,mb5.5						
BSD				i	pP	02 41 17.9	-0.8
PERS	**Pernice**	**42.33**	**302**	eP	**P**	**02 40 31.4**	**+0.6**
PVCC	**Panska Ves**	**42.36**	**308**	⇑iP	**P**	**02 40 31.8**	**+0.8**
PVCC				epP	pP	02 41 20.2	-0.5
PVCC				ex	x	02 43 24.2	
BOJS	**Bojanci**	**42.38**	**300**	i P	**P**	**02 40 31.8**	**+0.6**
BOJS				epP	pP	02 41 22.2	+1.3
BOJS				e		02 41 32.0	
BOJS				ePP	PP	02 42 20.0	+5.1
BOJS				e		02 48 23.0	
BOJS				e		02 57 37.8	
PRU	**Pruhonice**	**42.41**	**307**	⇑iP	**P**	**02 40 32.2**	**+0.8**
PRU				epP	pP	02 41 20.4	-0.7
PRU				ePP	PP	02 42 19.0	+3.9
PRU				ex	x	02 43 24.7	
TIP	**Timpagrande**	**42.48**	**291**	P	**P**	**02 40 32.0**	**-0.1**
ORI	**Oriolo Calabro**	**42.51**	**292**	P	**P**	**02 40 33.1**	**+0.8**
OBKA	**Obir**	**42.73**	**302**	⇑iP	**P**	**02 40 34.9**	**+0.9**
	comp=Z,166nm,1.9s,mb5.1						
BRG	**Berggiesshubel**	**42.74**	**308**	⇑iP	**P**	**02 40 35.0**	**+0.9**
BRG				i *PP	pP	02 41 24.4	+0.6
BRG				i *SP	sP	02 41 51.3	+0.4
BRG				i		02 42 21.0	
BRG				S	**S**	**02 46 35.0**	**-4.5**
BRG				SS	SS	02 50 04.0	+12
BRG				pmax	pmax		
	comp=Z,113nm,0.9s,mb5.3						
BRG				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.0						
BRG				pmax	pmax		
	comp=N,35nm,1.1s						
BRG				pmax	pmax		
	comp=Z,66nm,1.2s,mb4.9						
BRG	**Berggiesshubel**	**42.74**	**308**	⇑iP	**P**	**02 40 35.0**	**+1.0**
	comp=Z,113nm,0.9s,mb5.3						
BRG				i pP	pP	02 41 24.4	+0.6
BRG				i sP	sP	02 41 51.3	+0.4
BRG				i PcP	PcP	02 42 21.0	-0.5
BRG				PPP	PPP	02 43 25.0	+25
BRG				S	**S**	**02 46 35.0**	**-4.5**
BRG				sS		02 48 04.0	
BRG				SS	SS	02 50 04.0	+12
MOA	**Molln**	**42.77**	**304**	⇑iP	**P**	**02 40 34.7**	**+0.4**
	comp=Z,104nm,1.1s,mb5.2						
RGNG	**Rignano Grg**	**42.80**	**295**	P	**P**	**02 40 34.8**	**+0.1**
LJU	**Ljubljana**	**42.81**	**301**	eP	**P**	**02 40 35.0**	**+0.3**
LJU				epP	pP	02 41 25.3	+0.8
LJU				e		02 41 50.1	
LJU				ePP	PP	02 42 21.0	+2.0
GRI	**Girifalco**	**42.83**	**290**	P	**P**	**02 40 35.0**	**+0.1**
FG4	**Candela**	**42.97**	**294**	P	**P**	**02 40 36.5**	**+0.5**
FG4				pmax	pmax		
	comp=Z,46nm,1.0s,mb4.9						
FG4	**Candela**	**42.97**	**294**	P	**P**	**02 40 36.5**	**+0.5**
	comp=Z,46nm,1.0s,mb4.9						
RGN	**Rugen**	**43.04**	**314**	⇑iP	**P**	**02 40 37.2**	**+0.8**
	comp=Z,308nm,0.9s,mb5.7						
RGN				epP	pP	02 41 26.6	+0.3
RGN				e		02 41 53.4	
SLCN	**Sala Consilina**	**43.04**	**293**	P	**P**	**02 40 37.4**	**+0.8**
GEC2	**GERESS Array S**	**43.05**	**305**	eP	**P**	**02 40 37.1**	**+0.6**
GEC2				e*PP	pP	02 41 27.4	+1.1
GEC2				e*SP	sP	02 41 54.7	+1.3
GEC2				e		02 42 21.9	
GEC2				pmax	pmax		
	comp=Z,37nm,1.3s,mb4.7						
GEC2	**GERESS Array S**	**43.05**	**305**	eP	**P**	**02 40 37.1**	**+0.6**
	comp=Z,37nm,1.3s,mb4.7						
GEC2				epP	pP	02 41 27.4	+1.1
GEC2				esP	sP	02 41 54.7	+1.3
GEC2				ePcP	PcP	02 42 21.9	-0.7
GERES	**GERESS Array B**	**43.05**	**305**	P	**P**	**02 40 36.8**	**+0.3**
GERES				*PP	pP	02 41 26.8	+0.5
GERES				*SP	sP	02 41 53.7	+0.3
GERES						02 42 21.5	
GERES				pmax	pmax		
	comp=Z,12nm,0.8s						
GERES				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GERES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GERES				pmax	pmax		
	comp=Z,29nm,0.9s						
GERES	**GERESS Array B**	**43.05**	**305**	P	**P**	**02 40 36.8**	**+0.3**
	comp=Z,12nm,0.8s,mb4.4,baz=90,slow=6.7,SNR=131						
GERES				pP	pP	02 41 26.8	+0.4
	comp=Z,8.0nm,0.7s,baz=90,slow=8.0,SNR=5.8						
GERES				sP	sP	02 41 53.7	+0.3
	comp=Z,2.4nm,0.6s,baz=82,slow=9.4,SNR=1.5						
GERES				PcP	PcP	02 42 21.5	-1.0
	comp=Z,29nm,0.9s,baz=90,slow=4.0,SNR=15						
MRLC	**Muro Lucano**	**43.07**	**293**	P	**P**	**02 40 37.3**	**+0.5**
KHC	**Kasperske Hory**	**43.10**	**306**	⇑iP	**P**	**02 40 37.4**	**+0.4**
KHC				e*PP	pP	02 41 26.1	-0.7
KHC				e		02 42 21.5	
KHC	**Kasperske Hory**	**43.10**	**306**	⇑iP	**P**	**02 40 37.4**	**+0.4**
KHC				e		02 40 43.5	
KHC				epP	pP	02 41 26.1	-0.7
KHC				e		02 42 21.5	
KHC				e		02 43 35.9	
KHC	**Kasperske Hory**	**43.10**	**306**	⇑iP	**P**	**02 40 37.4**	**+0.4**
KHC				x	x	02 40 43.5	
KHC				epP	pP	02 41 26.1	-0.7
KHC				PP	PP	02 42 21.5	-0.3
KHC				ex	x	02 43 35.9	
FG5	**Orsara di Pugl**	**43.12**	**294**	P	**P**	**02 40 38.4**	**+1.2**
MGR	**Morigerati**	**43.16**	**293**	P	**P**	**02 40 37.7**	**+0.1**
HFS	**Hagfors**	**43.20**	**322**	P	**P**	**02 40 37.6**	**0.0**
HFS				*PP	pP	02 41 27.4	0.0
HFS				*SP	sP	02 41 52.8	-1.7
HFS				pmax	pmax		
	comp=Z,204nm,0.6s						
HFS				pmax	pmax		
	comp=Z,126nm,0.7s						
HFS				pmax	pmax		
	comp=Z,69nm,0.8s						
HFS	**Hagfors**	**43.20**	**322**	P	**P**	**02 40 37.6**	**+0.1**
	comp=Z,204nm,0.6s,mb5.7,baz=98,slow=10,SNR=583						
HFS				pP	pP	02 41 27.4	0.0
	comp=Z,126nm,0.7s,baz=90,slow=10,SNR=7.7						
HFS				sP	sP	02 41 52.8	-1.7
	comp=Z,69nm,0.8s,baz=90,slow=10,SNR=3.1						
HFA0	**Hagfors New Ar**	**43.20**	**322**	P	**P**	**02 40 36.7**	**-0.9**
SGO	**Sicignano**	**43.25**	**293**	P	**P**	**02 40 39.0**	**+0.7**
SGO				pmax	pmax		
	comp=Z,68nm,1.1s,mb5.0						
SGO	**Sicignano**	**43.25**	**293**	P	**P**	**02 40 39.0**	**+0.7**
	comp=Z,68nm,1.1s,mb5.0						
VOY	**Vojsko**	**43.25**	**301**	eP	**P**	**02 40 38.0**	**-0.2**
VOY				e		02 40 47.0	
VOY				epP	pP	02 41 28.2	+0.2
VOY				e		02 41 54.3	
VOY				ePP	PP	02 42 22.3	-1.0
SOI	**Samo**	**43.30**	**289**	P	**P**	**02 40 38.7**	**0.0**
CLL	**Collm**	**43.31**	**309**	P	**P**	**02 40 38.8**	**+0.2**
CLL	**Collm**	**43.31**	**309**	⇑P	**P**	**02 40 39.0**	**+0.4**
	comp=Z,logA/T=1.9,mb5.1						
CLL				i *PP	pP	02 41 28.3	-0.2
CLL				e*SP	sP	02 41 50.0	-5.5
CLL				ePCP	PcP	02 42 22.0	-1.5
CLL				e*PPP		02 43 00.0	
CLL				e		02 43 20.0	
CLL				e*SPP		02 43 34.0	
CLL				e		02 43 56.0	
CLL				eS	**S**	**02 46 48.0**	**+0.3**
CLL				e*SS		02 48 15.0	
CLL				eSS	SS	02 50 08.0	+6.1
CLL				e		02 50 23.0	
MRB1	**Monte Rocchett**	**43.37**	**294**	P	**P**	**02 40 40.1**	**+0.9**
CSSN	**Cassano Irpino**	**43.39**	**294**	P	**P**	**02 40 41.5**	**+2.1**
TRO	**Tromso**	**43.40**	**336**	⇑iP	**P**	**02 40 38.2**	**-0.9**
TRO				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.1						
TRO				MLR	MLR		
	comp=Z,244µm,18.8s						
TRO	**Tromso**	**43.40**	**336**	⇑iP	**P**	**02 40 38.2**	**-0.9**
	comp=Z,72nm,1.0s,mb5.1						
TRO				LR	LR		
	comp=Z,244µm,18.8s						
TRO	**Tromso**	**43.40**	**336**	⇑iP	**P**	**02 40 38.5**	**-0.6**
TRO				AMb	AMB	02 40 47.2	
	comp=Z,72nm,1.0s,mb5.1						
TRO				eS	**S**	**02 46 48.9**	**+0.1**
TRO				eSS	SS	02 50 07.6	+4.4
TRO				AMS	AMS	03 00 20.7	
	comp=Z,244nm,18.8s						
PSB1	**Pescosannita**	**43.47**	**294**	P	**P**	**02 40 40.8**	**+0.8**
KBA	**Koelnbreinsper**	**43.48**	**303**	⇑iP	**P**	**02 40 40.6**	**+0.6**
	comp=Z,142nm,2.9s,mb4.9						
KBA	**Koelnbreinsper**	**43.48**	**303**	⇑iP	**P**	**02 40 40.6**	**+0.6**
KBA				pmax	pmax		
	comp=Z,142nm,2.9s,mb4.9						
ROBS	**Robic**	**43.48**	**302**	eP	**P**	**02 40 40.2**	**+0.1**
SCLL	**Scilla**	**43.51**	**290**	P	**P**	**02 40 41.1**	**+0.7**
WET	**Wettzell**	**43.56**	**306**	eP	**P**	**02 40 40.8**	**+0.2**
WET				e*PP	pP	02 41 31.4	+0.9
WET				e		02 42 24.1	
WET				pmax	pmax		
	comp=Z,34nm,1.5s,mb4.5						
WET	**Wettzell**	**43.56**	**306**	eP	**P**	**02 40 40.8**	**+0.2**
	comp=Z,34nm,1.5s,mb4.5						
WET				epP	pP	02 41 31.4	+0.9
WET				ePcP	PcP	02 42 24.1	-0.2
COP	**Copenhagen**	**43.57**	**315**	⇑iP	**P**	**02 40 41.4**	**+0.8**
COP				i	pP	02 41 31.0	+0.5
COP				e		02 41 55.4	
COP				i S	**S**	**02 46 55.2**	**+3.9**
COP				i		02 50 17.5	
COP				pmax	pmax		
	comp=Z,170nm,1.0s,mb5.3						
COP	**Copenhagen**	**43.57**	**315**	⇑iP	**P**	**02 40 41.4**	**+0.8**
	comp=Z,168nm,1.0s,mb5.3						
COP				i	pP	02 41 31.0	+0.5
COP				e		02 41 55.4	
COP				i S	**S**	**02 46 55.2**	**+3.9**
COP				i		02 48 11.9	
COP				i		02 50 17.5	
PTCC	**Patocco-Chiusa**	**43.57**	**302**	P	**P**	**02 40 40.9**	**+0.2**
MTTG	**Motta San Giov**	**43.59**	**289**	P	**P**	**02 40 41.3**	**+0.3**
GMNA	**Gemona**	**43.67**	**302**	P	**P**	**02 40 41.9**	**+0.4**
CII	**Carovilli**	**43.73**	**295**	P	**P**	**02 40 44.6**	**+2.5**
NKC	**Novy Kostel**	**43.74**	**308**	⇑iP	**P**	**02 40 42.6**	**+0.6**
SGG	**Gregorio Mates**	**43.75**	**295**	P	**P**	**02 40 42.1**	**-0.1**
MIDA	**Miranda**	**43.78**	**295**	P	**P**	**02 40 42.8**	**+0.3**
	comp=Z,47nm,1.1s,mb4.7						
RNI2	**Rionero Sannit**	**43.84**	**295**	P	**P**	**02 40 43.6**	**+0.6**
FVI	**Forni Avoltri**	**43.93**	**302**	P	**P**	**02 40 43.6**	**0.0**
MOR8	**Moi Rana**	**43.95**	**331**	⇑iP	**P**	**02 40 43.1**	**-0.4**
	comp=Z,384nm,0.7s,mb5.8						
MOR8	**Moi Rana**	**43.95**	**331**	⇑iP	**P**	**02 40 43.1**	**-0.4**
MOR8				AMb	AMB	02 40 44.0	
	comp=Z,384nm,0.7s,mb5.8						
YAK	**Yakutsk**	**44.03**	**35c**	iP	**P**	**02 40 44.1**	**-0.1**
YAK				e	pP	02 41 35.1	+0.9
YAK				i		02 42 23.0	
YAK				i S	**S**	**02 46 56.4**	**-1.4**
YAK				i *SS		02 47 04.6	
YAK				pmax	pmax		
	comp=N,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,68nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=E,13nm,1.0s						
YAK				pmax	pmax		
	comp=Z,36nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,27nm,1.3s						
YAK				smax			
	comp=N,25nm,1.1s						
YAK				smax			
	comp=Z,10.0nm,0.9s						
YAK				smax			
	comp=E,35nm,1.1s						
YAK	**Yakutsk**	**44.03**	**35**	⇑iP	**P**	**02 40 44.1**	**-0.1**
	comp=E,139nm,0.7s,mb5.4						
YAK				epP	pP	02 41 34.2	0.0
MSC	**Monte Massico**	**44.09**	**294**	P	**P**	**02 40 44.8**	**-0.2**
SLNA	**Salina**	**44.09**	**291**	P	**P**	**02 40 45.1**	**+0.1**
CING	**Cingoli**	**44.19**	**298**	P	**P**	**02 40 46.2**	**+0.5**
VVLD	**Villa Vallelon**	**44.20**	**295**	P	**P**	**02 40 45.9**	**+0.1**
MOX	**Moxa**	**44.23**	**308**	eP	**P**	**02 40 46.5**	**+0.5**
MOX				e	pP	02 41 36.4	+0.4
MOX				e		02 42 25.8	
MOX				pmax	pmax		
	comp=Z,121nm,1.3s,mb5.1						
MOX	**Moxa**	**44.23**	**308**	eP	**P**	**02 40 46.5**	**+0.5**
	comp=Z,121nm,1.3s,mb5.1						
MOX				ePP	pP	02 41 36.4	+0.4
MOX				ePcP	PcP	02 42 25.8	-0.8
MOX				eS	**S**	**02 47 01.0**	**+0.1**
MOX	**Moxa**	**44.23**	**308**	i P	**P**	**02 40 46.5**	**+0.5**
	comp=Z,logA/T=2.0,mb5.1						
MOX				PP	pP	02 41 36.0	0.0
MOX				PcP	PcP	02 42 26.0	-0.6
MOX				S	**S**	**02 47 01.0**	**+0.1**
AQU	**L'Aquila**	**44.25**	**296**	P	**P**	**02 40 46.5**	**+0.3**
SEST	**Monte Rota**	**44.29**	**303**	P	**P**	**02 40 45.9**	**-0.6**
SSY	**Sortino**	**44.30**	**288**	P	**P**	**02 40 46.5**	**-0.2**
PTQR	**Pietraquaria**	**44.32**	**296**	P	**P**	**02 40 47.4**	**+0.6**
ARV	**Arcevia**	**44.35**	**298**	P	**P**	**02 40 47.6**	**+0.6**
NRCA	**Norcia**	**44.36**	**297**	P	**P**	**02 40 47.5**	**+0.4**
MELSS	**Ber_school_2**	**44.40**	**332**	⇑iP	**P**	**02 40 47.2**	**+0.2**
MDJ	**Mudanjiang**	**44.41**	**60**	P	**P**	**02 40 46.9**	**-0.6**
MDJ				AP	pP	02 41 34.9	-2.6
MDJ				XP	sP	02 42 01.9	-2.6
MDJ				PCP	PcP	02 42 26.5	-0.8
MDJ				PP	PP	02 42 34.3	-0.4
MDJ				SCP		02 45 55.8	
MDJ				PCS		02 46 20.5	
MDJ				S	**S**	**02 47 03.4**	**-0.1**
MDJ				XS		02 48 30.5	
MDJ				AMB	AMB		
	comp=Z,80nm,6.2s						
MDJ				LR	LR		
	comp=N,270nm,13.7s						
MDJ				LR	LR		
	comp=E,190nm,12.8s						
MDJ				LR	LR		
	comp=Z,390nm,14.7s						
FSSB	**Fossombrone**	**44.43**	**298**	P	**P**	**02 40 48.0**	**+0.4**
YHNB	**Yeheng**	**44.43**	**91**	eP	**P**	**02 40 49.5**	**+1.6**
NB2	**NORSAR Subarra**	**44.51**	**323**	P	**P**	**02 40 47.9**	**-0.1**
	comp=Z,217nm,0.8s,mb5.5,baz=95,slow=7.4						
NB2	**NORSAR Subarra**	**44.51**	**323**	P	**P**	**02 40 47.8**	**-0.2**
NB2	**NORSAR Subarra**	**44.51**	**323**	P	**P**	**02 40 47.9**	**-0.1**
	baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.51**	**323**	P	**P**	**02 40 47.6**	**-0.4**
NOA				*PP	pP	02 41 37.8	-0.3
NOA				*SP	sP	02 42 03.6	-1.5
NOA				S	**S**	**02 47 04.7**	**0.0**
NOA				pmax	pmax		
	comp=Z,178nm,0.8s						
NOA				pmax	pmax		
	comp=Z,65nm,0.7s						
NOA				pmax	pmax		
	comp=Z,33nm,0.7s						
NOA				smax			
	comp=N,2.0nm,0.9s						
NOA	**NORSAR Array B**	**44.51**	**323**	P	**P**	**02 40 47.6**	**-0.4**
	comp=N,178nm,0.8s,mb5.5,baz=97,slow=7.7,SNR=631						
NOA				pP	pP	02 41 37.8	-0.3
	comp=N,65nm,0.7s,baz=97,slow=8.1,SNR=7.4						
NOA				sP	sP	02 42 03.5	-1.5
	comp=N,33nm,0.7s,baz=97,slow=8.1,SNR=2.9						
NOA				S	**S**	**02 47 04.7**	**-0.1**
	comp=N,2.0nm,0.8s,baz=347,slow=15,SNR=3.4						
STOK	**Stokkvaagen**	**44.55**	**331**	⇑iP	**P**	**02 40 48.3**	**+0.1**

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      comp=N,111nm,1.9s,mb4.9
STOK  Stokkvaagen    44.55 331⇑iP      P      02 40 48.3 +0.1
STOK                            AMb    AMB    02 40 49.5
      comp=Z,111nm,1.9s,mb4.9
GRA1  Grafenberg Arr 44.58 307 eP      P      02 40 50.0 +1.3
      comp=Z,248nm,1.6s,mb5.3
GRA1                           epP     pP     02 41 40.1 +1.3
GRA1                           esP     sP     02 42 07.9 +2.1
GRA1                           ePcP    PcP    02 42 28.2 +0.4
GRF   Grafenberg Arr 44.58 307 eP      P      02 40 50.0 +1.3
GRF                            e*PP    pP     02 41 40.1 +1.3
GRF                            e*SP    sP     02 42 07.9 +2.1
GRF                            e              02 42 28.2
GRF                             pmax   pmax
      comp=Z,248nm,1.6s,mb5.3
GRF   Grafenberg Arr 44.58 307 eP      P      02 40 50.0 +1.3
GRF                            e*PP    pP     02 41 40.1 +1.3
GRF                            e*SP    sP     02 42 07.9 +2.1
GRF                            e              02 42 28.2
GRF                             pmax   pmax
      comp=Z,248nm,1.6s,mb5.3
GRF   Grafenberg Arr 44.58 307 eP      P      02 40 50.0 +1.3
      comp=Z,248nm,1.6s,mb5.3
GRF                            epP     pP     02 41 40.1 +1.3
GRF                            esP     sP     02 42 07.9 +2.1
GRF                            ePcP    PcP    02 42 28.2 +0.4
NSS   Namsos         44.63 328 eP      P      02 40 47.3 -1.6
      comp=Z,72nm,1.2s,mb4.9
NSS   Namsos         44.63 328 eP      P      02 40 47.3 -1.6
NSS                             AMb    AMB    02 40 48.9
      comp=Z,72nm,1.2s,mb4.9
NSS                            epP     pP     02 41 39.1 +0.1
WATA  Walderalm      44.64 303⇑iP      P      02 40 48.6 -0.6
      comp=Z,30nm,1.0s,mb4.6
WATA  Walderalm      44.64 303⇑iP      P      02 40 48.6 -0.6
WATA                            pmax   pmax
      comp=Z,30nm,1.0s,mb4.6
ASS   Assisi         44.64 297  P      P      02 40 50.7 +1.4
CERT  Cerreto        44.64 296  P      P      02 40 49.1 -0.2
NAO01 NORSAR Array S 44.65 323 eP      P      02 40 48.4 -0.7
      comp=Z,130nm,0.9s,mb5.3
NAO01                          epP     pP     02 41 38.9 -0.3
NAO01                          ePP     PP     02 42 38.6 +1.7
OSL   Oslo           44.66 322 eP      P      02 40 49.1 -0.2
      comp=Z,154nm,0.9s,mb5.3
OSL   Oslo           44.66 322 eP      P      02 40 49.1 -0.2
OSL                             AMb    AMB    02 40 50.2
      comp=Z,154nm,0.9s,mb5.3
OSL                            epP     pP     02 41 39.8 +0.5
MURB  Monte Urbino   44.69 298  P      P      02 40 51.0 +1.3
VAE   Valguarnera    44.71 289  P      P      02 40 51.1 +1.1
      comp=Z,32nm,0.9s,mb4.6,baz=73,slow=3.1,SNR=18
FUR   Furstenfeldbru 44.73 305 eP      P      02 40 50.5 +0.6
FUR                            e*PP    pP     02 41 40.6 +0.6
FUR                            e*SP    sP     02 42 08.0 +1.0
FUR                            e              02 42 27.4
FUR                             pmax   pmax
      comp=Z,172nm,1.4s,mb5.2
FUR   Furstenfeldbru 44.73 305 eP      P      02 40 50.5 +0.6
      comp=Z,172nm,1.4s,mb5.2
FUR                            epP     pP     02 41 40.6 +0.6
FUR                            esP     sP     02 42 08.0 +1.0
FUR                            ePcP    PcP    02 42 27.4 -1.0
MNS   Montasola      44.77 296  P      P      02 40 50.2 -0.1
CTI   Castel Tesino  44.79 302  P      P      02 40 50.5 +0.1
MTCE  Montecelio     44.80 296  P      P      02 40 50.2 -0.4
BSEG  Bad Segeberg   44.82 313 eP      P      02 40 51.1 +0.6
BSEG                           e*PP    pP     02 41 41.9 +1.2
BSEG                           e*SP    sP     02 42 07.2 -0.4
BSEG                           e              02 42 28.5
BSEG                            pmax   pmax
      comp=Z,142nm,0.9s,mb5.3
KS15  Wonju Array Si 44.84  71 eP      P      02 40 51.5 +0.6
CSLB  Castelbuono    44.85 290  P      P      02 40 50.0 -1.0
GIB   Gibilmanna     44.86 290  P      P      02 40 50.3 -0.8
SQTA  Sankt Quirin   44.91 303⇑iP      P      02 40 50.9 -0.4
      comp=Z,40nm,1.1s,mb4.7
SQTA  Sankt Quirin   44.91 303⇑iP      P      02 40 50.9 -0.4
SQTA                            pmax   pmax
      comp=Z,40nm,1.1s,mb4.7
CLZ   Clausthal      44.91 310 eP      P      02 40 51.8 +0.5
CLZ                            e*PP    pP     02 41 42.2 +0.7
CLZ                            e              02 42 28.3
CLZ                             pmax   pmax
      comp=Z,182nm,1.4s,mb5.2
CLZ   Clausthal      44.91 310 eP      P      02 40 51.8 +0.5
      comp=Z,182nm,1.4s,mb5.2
CLZ                            epP     pP     02 41 42.2 +0.7
CLZ                            ePcP    PcP    02 42 28.3 -0.6
MA9   Marino         44.92 296  P      P      02 40 51.5  0.0
APPI  Appiano        45.01 302  P      P      02 40 51.1 -1.1
SFI   Santa Sofia    45.05 299  P      P      02 40 53.6 +1.1
PGD   Poggio Sodo    45.14 299  P      P      02 40 54.7 +1.5
KLR   Kul’dur        45.17  54 eP      P      02 40 50.3 -3.1
KLR                            e       PcP    02 42 25.7 -4.2
KLR                            e       PP     02 42 45.0 +2.9
KLR                            eS      SS     02 50 42.5 +7.1
KONO  Kongsberg      45.22 321c iP     P      02 40 53.0 -0.6
VMG   Vicchio        45.25 299  P      P      02 40 55.6 +1.5
USI   Ustica         45.30 291  P      P      02 40 54.1 -0.5
KGM   Kluang         45.35 131  P      P      02 40 56.6 +1.3
SEI   Scarperia      45.36 299  P      P      02 40 56.5 +1.5
HDH   Heidenheim     45.38 305  P      P      02 40 56.2 +1.2
HDH   Heidenheim     45.38 305 eP      P      02 40 55.3 +0.3
MUD   Monsted U’grnd 45.40 317⇑iP      P      02 40 55.5 +0.4
MUD                            i S     S      02 47 21.4 +4.0
MUD                             pmax   pmax
      comp=Z,120nm,1.0s,mb5.2
MUD   Monsted U’grnd 45.40 317⇑iP      P      02 40 55.5 +0.4
      comp=Z,115nm,1.0s,mb5.2
MUD                            i              02 43 52.5
MUD                            i S     S      02 47 21.4 +4.0
MUD                            i              02 48 35.8
FNVD  Fontana Vidola 45.50 299  P      P      02 40 57.3 +1.2
MABI  Malga Bissina  45.57 302  P      P      02 40 56.3 -0.3
ZCCA  Zocca          45.57 299  P      P      02 40 58.4 +1.8
UBR   Uberruh        45.57 304  P      P      02 40 56.6  0.0
UBR   Uberruh        45.57 304⇑eP      P      02 40 56.5 -0.1
BRMO  Bormio         45.59 302  P      P      02 40 56.2 -0.6
DOMB  Dombas         45.62 324⇑iP      P      02 40 56.7 -0.1
      comp=Z,145nm,1.2s,mb5.2
DOMB  Dombas         45.62 324⇑iP      P      02 40 56.7 -0.1
DOMB                            AMb    AMB    02 40 58.3
      comp=Z,145nm,1.2s,mb5.2
DOMB                           epP     pP     02 41 47.5 +0.4
FUORN Ofenpass       45.64 303⇑iP      P      02 40 57.1 -0.1
SAL   Salo           45.64 301  P      P      02 40 57.8 +0.6
SIND  Sindeldorf     45.66 307  P      P      02 40 58.1 +0.8
SIND  Sindeldorf     45.66 307⇑eP      P      02 40 57.8 +0.5
DAVA  Damuels        45.79 304⇑iP      P      02 40 58.1 -0.2
      comp=Z,149nm,1.0s,mb5.3
GRFL  Gerfalco       45.82 298  P      P      02 40 58.1 -0.5
BERNI Berninapass    45.84 302⇑iP      P      02 40 58.6 -0.1
GSCL  Gusciola       45.84 300  P      P      02 40 59.9 +1.1
DAVOX Davos          45.88 303  P      P      02 40 58.7 -0.3
      comp=Z,44nm,0.8s,mb4.9,baz=100,slow=6.4,SNR=80
DAVOX                           pP     pP     02 41 49.2 -0.1
      comp=Z,41nm,0.7s,baz=101,slow=5.9,SNR=6.4
DAVOX                           PcP    PcP    02 42 31.4 -1.0
      comp=Z,69nm,0.8s,baz=114,slow=6.4,SNR=8.1
DAVOX Davos          45.88 303⇑iP      P      02 40 58.7 -0.3
BDI   Bagni Di Lucca 45.90 299  P      P      02 40 59.0 -0.2
ERBM  Eremo          45.95 300  P      P      02 41 01.3 +1.7
BUCH  Bad Urach      45.96 305  P      P      02 41 00.2 +0.6
BUCH  Bad Urach      45.96 305⇑eP      P      02 41 00.0 +0.4
MAIM                 46.00 299  P      P      02 40 59.3 -0.7
SARO  Sassorosso     46.01 299  P      P      02 41 01.0 +1.0
STU   Stuttgart      46.01 306 eP      P      02 40 59.2 -0.8
STU                            e*PP    pP     02 41 51.2 +0.7
STU                             pmax   pmax
      comp=Z,55nm,0.8s,mb4.9
STU   Stuttgart      46.01 306 eP      P      02 40 59.2 -0.8
      comp=Z,55nm,0.8s,mb4.9
STU                            epP     pP     02 41 51.2 +0.7
PII   Pisa           46.02 299  P      P      02 40 59.4 -0.7
VLC   Villacollemand 46.02 299 eP      P      02 40 59.9 -0.3
      comp=Z,53nm,0.9s,mb4.9
VLC                            epP     pP     02 41 51.2 +0.6
LIENZ Alp Oberkamor  46.05 304⇑iP      P      02 41 00.2 -0.1
VALM                 46.08 300  P      P      02 41 01.3 +0.7
TOD   Tromm          46.15 307⇑eP      P      02 41 01.2 +0.1
TOD   Tromm          46.15 307⇑eP      P      02 41 01.5 +0.4
PLONS Plons          46.16 303⇑iP      P      02 41 00.8 -0.4
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GUT   Gutenstein     46.17 305  P      P      02 41 01.6 +0.3
GUT   Gutenstein     46.17 305⇑eP      P      02 41 01.1 -0.2
GRAM                 46.18 300  P      P      02 41 01.8 +0.4
VDL   Val di Lei     46.20 303 ⇑P      P      02 41 01.5  0.0
BACM                 46.22 300  P      P      02 41 01.8 +0.1
SWS   Schriesheim    46.23 307  P      P      02 41 02.5 +0.8
SWS   Schriesheim    46.23 307⇑eP      P      02 41 02.2 +0.5
LBG   Lerchenberg    46.29 306  P      P      02 41 02.7 +0.5
LBG   Lerchenberg    46.29 306⇑eP      P      02 41 02.5 +0.3
TUE   Stuetta        46.29 303  P      P      02 41 01.8 -0.4
TNS   Taunus Mts     46.30 308 eP      P      02 41 02.6 +0.4
TNS                            e*PP    pP     02 41 53.2 +0.5
TNS                            e              02 42 33.0
TNS                             pmax   pmax
      comp=Z,47nm,1.0s,mb4.8
TNS   Taunus Mts     46.30 308 eP      P      02 41 02.6 +0.4
      comp=Z,47nm,1.0s,mb4.8
TNS                            epP     pP     02 41 53.2 +0.5
TNS                            ePcP    PcP    02 42 33.0 -0.8
SISB  Singen-Sch Ber 46.34 304  P      P      02 41 02.5  0.0
WEIN  Weingarten     46.35 304⇑iP      P      02 41 02.1 -0.5
CODM                 46.35 300  P      P      02 41 03.1 +0.4
MOL   Molde          46.37 325 eP      P      02 41 05.5 +2.9
      comp=Z,112nm,1.7s,mb4.9
MOL   Molde          46.37 325 eP      P      02 41 05.5 +2.9
MOL                             AMb    AMB    02 41 07.6
      comp=Z,112nm,1.7s,mb4.9
SPAK  Spaichingen    46.39 305⇑eP      P      02 41 03.1 +0.2
SPAK  Spaichingen    46.39 305⇑eP      P      02 41 03.0 +0.1
STEIN Stein am Rhein 46.40 304⇑iP      P      02 41 02.7 -0.3
WILA  Wila           46.42 304⇑iP      P      02 41 02.7 -0.5
LLS   Linth-Limmern  46.45 303 ⇑P      P      02 41 02.3 -1.1
LLS   Linth-Limmern  46.45 303⇑iP      P      02 41 03.0 -0.4
BOB   Bobbio (Coli)  46.55 300  P      P      02 41 05.3 +1.0
MUGIO Muggio         46.60 302⇑iP      P      02 41 03.5 -1.1
SLE   Schleitheim    46.64 305 ⇑P      P      02 41 04.6 -0.3
SLE   Schleitheim    46.64 305⇑iP      P      02 41 04.4 -0.5
ZUR   Zurich         46.65 304 ⇑P      P      02 41 04.4 -0.5
ZUR   Zurich         46.65 304⇑iP      P      02 41 04.3 -0.6
BFO   Black Forest   46.65 305 eP      P      02 41 04.7 -0.3
BFO                            e*PP    pP     02 41 55.8 +0.2
BFO                            e*SP    sP     02 42 22.9 +0.6
BFO                            e              02 42 33.7
BFO                             pmax   pmax
      comp=Z,26nm,1.0s,mb4.5
BFO   Black Forest   46.65 305 eP      P      02 41 04.7 -0.3
      comp=Z,26nm,1.0s,mb4.5
BFO                            epP     pP     02 41 55.8 +0.2
BFO                            esP     sP     02 42 22.9 +0.6
BFO                            ePcP    PcP    02 42 33.7 -1.4
KTD   Kalmit         46.66 307⇑eP      P      02 41 05.5 +0.5
KTD   Kalmit         46.66 307 eP      P      02 41 05.5 +0.5
MUO   Muotathal      46.68 303 ⇑P      P      02 41 05.0 -0.2
MUO   Muotathal      46.68 303⇑iP      P      02 41 05.1 -0.1
FUSIO Fusio          46.76 303⇑iP      P      02 41 05.2 -0.6
BLS5  Blasjo         46.81 321⇑iP      P      02 41 07.5 +1.4
      comp=Z,113nm,1.0s,mb5.2
BLS5  Blasjo         46.81 321⇑iP      P      02 41 07.5 +1.4
BLS5                            AMb    AMB    02 41 08.9
      comp=Z,113nm,1.0s,mb5.2
BLS5                           epP     pP     02 41 57.0 +0.4
BNALP Bannalp        46.84 303⇑iP      P      02 41 06.2 -0.3
LANF  Langenberg     46.89 306⇑eP      P      02 41 07.4 +0.6
ABH   Alteburg       46.92 308⇑eP      P      02 41 07.2 +0.2
ABH   Alteburg       46.92 308⇑eP      P      02 41 07.6 +0.6
SULZ  Sulz-Cheisache 46.93 304⇑iP      P      02 41 06.5 -0.6
FELD  Feldberg       46.94 305⇑eP      P      02 41 07.0 -0.2
GENL  Genova Univers 46.97 300  P      P      02 41 05.9 -1.6
KIZ   Kirchzarten    46.98 305  P      P      02 41 07.5 -0.1
KIZ   Kirchzarten    46.98 305⇑eP      P      02 41 07.1 -0.5
HASLI Hasliberg      47.05 303⇑iP      P      02 41 07.6 -0.5
WTSB  Winterswijk    47.10 310⇑iP      P      02 41 08.6 +0.2
WTSB                           epP     pP     02 41 58.8 -0.3
WTSB                           esP     sP     02 42 26.6 +0.8
WTSB                           ePP     PP     02 43 06.1 +5.2
LIBD  Limburg        47.16 305 eP      P      02 41 09.7 +0.8
LIBD  Limburg        47.16 305 eP      P      02 41 09.0 +0.1
STAV  Stavanger      47.21 320 eP      P      02 41 09.0 -0.1
      comp=Z,120nm,1.0s,mb5.2
STAV  Stavanger      47.21 320 eP      P      02 41 09.0 -0.1
STAV                            AMb    AMB    02 41 10.7
      comp=Z,120nm,1.0s,mb5.2
PCP   Pian Castagno  47.23 300  P      P      02 41 08.2 -1.3
BALST Balsthal       47.24 304⇑iP      P      02 41 08.9 -0.7
RUP   Ruppelstein    47.26 307⇑eP      P      02 41 10.0 +0.4
RUP   Ruppelstein    47.26 307⇑eP      P      02 41 10.2 +0.6
HSP   Hornsund       47.27 345 eP      P      02 41 10.9 +1.5
WLS   Welschbruch    47.28 306⇑eP      P      02 41 09.4 -0.4
MMK   Mattmark       47.31 302 ⇑P      P      02 41 09.4 -0.7
MCGN  Macugnaga      47.32 302  P      P      02 41 09.3 -0.9
CDF   Champ du Feu   47.33 306⇑iP      P      02 41 09.8 -0.4
      comp=Z,48nm,0.8s,mb4.6
CDF                            epP     pP     02 42 01.4 +0.4
CDF   Champ du Feu   47.33 306⇑iP      P      02 41 09.8 -0.4
CDF                            e*PP    pP     02 42 01.4 +0.4
CDF                             pmax   pmax
      comp=Z,24nm,0.8s,mb4.6
BBS   Basel-Blauen   47.34 304⇑eP      P      02 41 09.6 -0.8
BER   Bergen         47.37 322 eS      S      02 47 45.4 +0.2
BER                            eSS     SS     02 51 19.6 +7.4
BER                             AMS    AMS    03 05 31.1
      comp=Z,672nm,18.6s
PGF   Pioggiola      47.38 297⇑iP      P      02 41 10.1 -0.6
      comp=Z,110nm,1.0s,mb4.9
PGF                            epP     pP     02 42 01.2 -0.3
PGF   Pioggiola      47.38 297⇑iP      P      02 41 10.1 -0.6
PGF                            e*PP    pP     02 42 01.2 -0.3
PGF                             pmax   pmax
      comp=Z,55nm,1.0s,mb4.8
ORX   Oropa          47.39 302  P      P      02 41 08.5 -2.2
ORO   Oropa          47.39 302  P      P      02 41 09.0 -1.7
WIMIS Wimmis         47.42 303⇑iP      P      02 41 10.5 -0.5
ECH   Echery         47.44 305⇑eP      P      02 41 12.6 +1.5
LKBD  Leukerbad      47.48 303 ⇑P      P      02 41 11.1 -0.3
LKBD  Leukerbad      47.48 303⇑iP      P      02 41 11.0 -0.4
DGI   Dorgali Grotta 47.52 294  P      P      02 41 11.0 -0.8
MOF   Molkenrain     47.52 305⇑eP      P      02 41 11.5 -0.3
FIN   Finale Ligure  47.54 300  P      P      02 41 10.1 -1.9
BOURR Bourrignon     47.54 304⇑iP      P      02 41 11.4 -0.5
TRAV                 47.57 302  P      P      02 41 09.8 -2.4
DIX   Grande Dixence 47.68 302⇑iP      P      02 41 13.1 +0.1
SENIN Lac Senin      47.70 303⇑iP      P      02 41 13.0 -0.2
HINF  Hinteralfeld   47.72 305⇑iP      P      02 41 12.7 -0.5
      comp=Z,96nm,0.8s,mb4.9
HINF  Hinteralfeld   47.72 305⇑iP      P      02 41 12.7 -0.5
HINF                            pmax   pmax
      comp=Z,48nm,0.8s,mb4.9
ROB   Roburent       47.76 300  P      P      02 41 12.2 -1.4
HGN   Heimansgroeve  47.81 309⇑iP      P      02 41 13.9  0.0
      comp=Z,29nm,0.9s,mb4.6
HGN                            ex      x      02 42 31.6
HGN                            eS      S      02 47 58.3 +6.8
LOMF  Lomont         47.82 304⇑eP      P      02 41 13.5 -0.6
IMI   Imperia        47.84 300  P      P      02 41 13.5 -0.7
WLF   Walferdange    47.84 307 eP      P      02 41 14.8 +0.6
WLF                            e*PP    pP     02 42 06.0 +0.9
WLF                             pmax   pmax
      comp=Z,93nm,0.8s,mb5.2
WLF   Walferdange    47.84 307 eP      P      02 41 14.8 +0.6
      comp=Z,93nm,0.8s,mb5.2
WLF                            epP     pP     02 42 06.0 +0.9
TORNY Torny          47.85 303⇑iP      P      02 41 14.0 -0.3
GRYON Gryon          47.85 303⇑iP      P      02 41 14.0 -0.3
MONE  Monesi         47.89 300  P      P      02 41 14.2 -0.5
VSL   Villasalto     47.92 293 eP      P      02 41 13.9 -1.0
      comp=Z,158nm,1.8s,mb5.0
VSL                            ePcP    PcP    02 42 38.3 -1.5
AIGLE Aigle          47.94 303⇑iP      P      02 41 14.7 -0.3
SALAN Lac Salanfe    47.97 303⇑iP      P      02 41 15.1 -0.1
NEGI  Negi           47.98 299  P      P      02 41 14.9 -0.4
RSP   Reno Superiore 47.99 301  P      P      02 41 12.8 -2.6
LSD   Ceresole Reale 47.99 302  P      P      02 41 14.3 -1.1
HAU   Haudompre      48.01 305⇑iP      P      02 41 15.0 -0.5
      comp=Z,72nm,0.7s,mb4.8
HAU   Haudompre      48.01 305⇑iP      P      02 41 15.0 -0.5
HAU                             pmax   pmax
      comp=Z,36nm,0.7s,mb4.8
EMV   Vieux Emosson  48.04 303⇑iP      P      02 41 15.8 +0.1
SAOF  Saorge         48.05 300⇑eP      P      02 41 16.0 +0.1
BHB   Bricherasio    48.06 301  P      P      02 41 13.6 -2.3
ENR   Entracque      48.09 300  P      P      02 41 14.8 -1.4
AUTN  L’Aution       48.14 300⇑eP      P      02 41 17.1 +0.5
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BRANT Les Verrieres  48.14 304⇑iP      P      02 41 16.4 -0.1
DOI   San Damiano    48.15 300  P      P      02 41 14.9 -1.7
STV2  Anna di Valdie 48.15 300  P      P      02 41 15.1 -1.5
FENE  Fenestrelle    48.15 301  P      P      02 41 14.7 -1.9
STV   Sta Anna Valdi 48.15 300  P      P      02 41 14.6 -2.1
SBF   Sospel         48.17 300⇑iP      P      02 41 16.8  0.0
      comp=Z,247nm,1.0s,mb5.2
SBF   Sospel         48.17 300⇑iP      P      02 41 16.8  0.0
SBF                             pmax   pmax
      comp=Z,124nm,1.0s,mb5.2
THEF  They Montfort  48.21 306⇑eP      P      02 41 16.9 -0.1
REVF  Revere         48.24 299⇑eP      P      02 41 17.2 -0.2
LPG   La Plagne      48.26 302⇑iP      P      02 41 17.7 +0.2
      comp=Z,149nm,0.8s,mb5.0
LPG   La Plagne      48.26 302⇑iP      P      02 41 17.7 +0.2
LPG                             pmax   pmax
      comp=Z,74nm,0.8s,mb5.1
TOUF  Mont Tournerai 48.26 300⇑eP      P      02 41 18.0 +0.5
LPL   La Plagne      48.27 302⇑iP      P      02 41 17.8 +0.3
      comp=Z,155nm,0.9s,mb5.0
LPL                            epP     pP     02 42 09.0 +0.5
LPL   La Plagne      48.27 302⇑iP      P      02 41 17.8 +0.3
LPL                            e*PP    pP     02 42 09.0 +0.5
LPL                             pmax   pmax
      comp=Z,78nm,0.9s,mb5.0
MVIF  Mont Vial      48.36 300⇑eP      P      02 41 18.3 +0.1
GIMEL Gimel          48.37 303⇑iP      P      02 41 18.4 +0.2
RRL   Cesana Torines 48.37 301  P      P      02 41 17.6 -0.7
BNI   Bardonecchia   48.41 301 eP      P      02 41 18.3 -0.3
BNI                            e*PP    pP     02 42 09.8 +0.2
BNI                             pmax   pmax
      comp=Z,47nm,0.8s,mb4.9
BNI   Bardonecchia   48.41 301 eP      P      02 41 18.3 -0.3
      comp=Z,48nm,0.8s,mb4.9
BNI                            epP     pP     02 42 09.8 +0.2
MBDF  Montbardon     48.42 301⇑iP      P      02 41 18.4 -0.3
      comp=Z,99nm,0.8s,mb4.9
MBDF  Montbardon     48.42 301⇑iP      P      02 41 18.4 -0.3
MBDF                            pmax   pmax
      comp=Z,49nm,0.8s,mb4.9
SURF  Saint Ours     48.45 301⇑eP      P      02 41 19.3 +0.4
CABF  La Chapelle    48.47 303⇑iP      P      02 41 19.0  0.0
      comp=Z,202nm,1.1s,mb5.0
CABF  La Chapelle    48.47 303⇑iP      P      02 41 19.0  0.0
CABF                            pmax   pmax
      comp=Z,101nm,1.1s,mb5.1
CALN  Calern         48.58 300⇑eP      P      02 41 19.9  0.0
GIVF  Givet          48.62 308⇑iP      P      02 41 20.3 +0.2
KBS   Kingsbay       48.74 347⇑iP      P      02 41 21.5 +0.8
KBS                             pmax   pmax
      comp=Z,170nm,1.4s,mb5.2
KBS                             MLR    MLR
      comp=Z,155µm,17.2s
KBS   Kingsbay       48.74 347⇑iP      P      02 41 21.5 +0.8
      comp=Z,170nm,1.4s,mb5.2
KBS                             LR     LR
      comp=Z,155µm,17.2s
KBS   Kingsbay       48.74 347⇑iP      P      02 41 21.5 +0.8
KBS                             AMb    AMB    02 41 22.9
      comp=Z,170nm,1.4s,mb5.2
KBS                            epP     pP     02 42 11.8  0.0
KBS                            eS      S      02 48 04.9 +0.8
KBS                            eSS     SS     02 51 39.1 +4.2
KBS                             AMS    AMS    02 53 46.6
      comp=Z,155nm,17.2s
GDM   Grand’Maison   48.76 302⇑eP      P      02 41 21.1 -0.2
MEZF  Maizieres J’vi 48.77 306⇑iP      P      02 41 21.3  0.0
FRF   La Foret Royal 48.80 299⇑iP      P      02 41 21.1 -0.4
      comp=Z,101nm,1.0s,mb4.8
FRF   La Foret Royal 48.80 299⇑iP      P      02 41 21.1 -0.4
FRF                             pmax   pmax
      comp=Z,51nm,1.0s,mb4.8
LMR   La Mourre      48.95 299⇑iP      P      02 41 22.1 -0.6
      comp=Z,43nm,1.0s,mb4.4
LMR   La Mourre      48.95 299⇑iP      P      02 41 22.1 -0.6
LMR                             pmax   pmax
      comp=Z,22nm,1.0s,mb4.4
ORIF  Oris-en-Rattie 48.99 301⇑iP      P      02 41 22.2 -0.8
      comp=Z,36nm,0.8s,mb4.4
ORIF  Oris-en-Rattie 48.99 301⇑iP      P      02 41 22.2 -0.8
ORIF                            pmax   pmax
      comp=Z,18nm,0.8s,mb4.5
GRN   Grenoble       49.01 302⇑eP      P      02 41 23.1 -0.1
BAIF  Baives         49.01 308⇑iP      P      02 41 23.5 +0.4
      comp=Z,276nm,1.2s,mb5.2
BAIF                           epP     pP     02 42 15.0 +0.7
BAIF  Baives         49.01 308⇑iP      P      02 41 23.5 +0.4
BAIF                           e*PP    pP     02 42 15.0 +0.7
BAIF                            pmax   pmax
      comp=Z,138nm,1.2s,mb5.2
TAVF  Tavernes       49.19 300⇑eP      P      02 41 24.5 -0.1
STOF  St-Etienne Org 49.20 300⇑eP      P      02 41 25.4 +0.8
VILF  Villemus       49.37 300⇑eP      P      02 41 25.8 -0.1
SMRF  Simiane la Rot 49.44 300⇑iP      P      02 41 26.2 -0.2
      comp=Z,65nm,1.1s,mb4.6
PUYF  Puyloubier     49.47 300⇑eP      P      02 41 26.7  0.0
BERF  Bertagne       49.53 299⇑eP      P      02 41 27.1  0.0
TREF  Trevaresse     49.66 300⇑eP      P      02 41 28.4 +0.2
GELF  Grande-Etoile  49.70 299⇑eP      P      02 41 28.4  0.0
PRAF  Pradon         49.77 300⇑eP      P      02 41 29.1 +0.2
LOR   Lormes         49.81 305⇑iP      P      02 41 28.3 -0.9
      comp=Z,73nm,1.2s,mb4.6
LOR                            epP     pP     02 42 19.9 -0.7
LOR   Lormes         49.81 305⇑iP      P      02 41 28.3 -0.9
LOR                            e*PP    pP     02 42 19.9 -0.7
LOR                             pmax   pmax
      comp=Z,36nm,1.2s,mb4.6
VIVF  Saint-Julien-l 49.84 301⇑iP      P      02 41 29.3 -0.2
      comp=Z,78nm,0.8s,mb4.8
VIVF                           epP     pP     02 42 21.0 +0.2
VIVF  Saint-Julien-l 49.84 301⇑iP      P      02 41 29.3 -0.2
VIVF                           e*PP    pP     02 42 21.0 +0.2
VIVF                            pmax   pmax
      comp=Z,39nm,0.8s,mb4.8
SMF   Signal de Mont 49.97 304⇑iP      P      02 41 30.1 -0.3
      comp=Z,183nm,0.8s,mb5.2
SMF   Signal de Mont 49.97 304⇑iP      P      02 41 30.1 -0.3
SMF                             pmax   pmax
      comp=Z,92nm,0.8s,mb5.2
SSF   Saint Saulge   50.09 305⇑iP      P      02 41 30.4 -0.9
SSF                             pmax   pmax
      comp=Z,56nm,1.2s,mb4.8
SSF   Saint Saulge   50.09 305⇑iP      P      02 41 30.4 -0.9
      comp=Z,56nm,1.2s,mb4.8
MENF  Mencas         50.21 309⇑eP      P      02 41 32.0 -0.2
KSM   Kuching        50.21 125 eP      P      02 41 32.9 +0.2
AVF   Avril sur Loir 50.26 304⇑iP      P      02 41 32.2 -0.4
      comp=Z,169nm,0.8s,mb5.1
AVF   Avril sur Loir 50.26 304⇑iP      P      02 41 32.2 -0.4
AVF                             pmax   pmax
      comp=Z,84nm,0.8s,mb5.1
PLDF  La Plantade    50.28 303⇑eP      P      02 41 33.6 +0.9
CMAH  Djebel Manchou 50.29 290  P      P      02 41 33.5 +0.5
CGMA  Guelma         50.36 290  P      P      02 41 33.0 -0.5
ABSA  Djebel Ababsia 50.37 290  P      P      02 41 34.0 +0.5
AGO   Saint Agoulin  50.59 303⇑eP      P      02 41 36.0 +0.9
LASF  Ste Croix      50.61 301⇑iP      P      02 41 35.3 +0.1
      comp=Z,199nm,1.0s,mb5.2
HYF   Humbligny      50.62 305⇑iP      P      02 41 35.0 -0.3
BGF   Bois d’Agland  50.66 304⇑iP      P      02 41 34.8 -0.7
      comp=Z,55nm,0.8s,mb4.8
BGF   Bois d’Agland  50.66 304⇑iP      P      02 41 34.8 -0.7
BGF                             pmax   pmax
      comp=Z,27nm,0.8s,mb4.7
CAEH  ’Ain El Ouahch 50.67 291  P      P      02 41 35.0 -0.8
LBL   Lubilhac       50.72 302⇑eP      P      02 41 37.1 +1.0
PYM   Petit Puy Mans 50.75 303⇑eP      P      02 41 37.3 +1.0
CKFL  Kef-Lekhel     50.90 290  P      P      02 41 37.0 -0.5
KKM   Kota Kinabalu  51.11 115 eP      P      02 41 40.5 +1.2
KKM                            epP     pP     02 42 31.4 +0.5
KKM   Kota Kinabalu  51.11 115  P      P      02 41 40.6 +1.3
CASM  Ain Smara      51.12 290  P      P      02 41 39.0 -0.1
TCF   Toulx Ste Croi 51.15 304⇑iP      P      02 41 38.9 -0.3
      comp=Z,160nm,0.9s,mb5.1
TCF                            epP     pP     02 42 31.0 +0.1
TCF   Toulx Ste Croi 51.15 304⇑iP      P      02 41 38.9 -0.3
TCF                            e*PP    pP     02 42 31.0 +0.1
TCF                             pmax   pmax
      comp=Z,80nm,0.9s,mb5.2
CTEI  Djebel Teioual 51.25 290  P      P      02 41 40.0 -0.1
DFRA  Djebel Bou Aff 51.48 291  P      P      02 41 42.0 +0.2
CAF   Calviac        51.61 302⇑iP      P      02 41 42.8 +0.1
      comp=Z,90nm,0.8s,mb4.9
CAF                            epP     pP     02 42 34.5 +0.1
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CAF	**Calviac**	51.61	302	⇑iP	P	**02 41 42.8**	**+0.1**
CAF				e*PP	pP	02 42 34.5	+0.1
CAF				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.0						
SJAF	**Saint Jean de**	51.74	299	⇑eP	P	**02 41 43.0**	**-0.7**
EJON	**La Jonquera**	51.75	299	P	P	**02 41 43.0**	**-0.7**
	comp=Z,69nm,1.6s,mb4.8						
SKP1	**Kophill**	51.79	311	⇑eP	P	**02 41 43.3**	**-0.6**
CMER	**Merouana**	51.80	290	P	P	**02 41 46.0**	**+1.8**
LRDF	**Laroque-de-Fa**	51.85	300	⇑eP	P	**02 41 44.4**	**-0.1**
RJF	**Les Rejaudoux**	51.88	303	⇑iP	P	**02 41 44.8**	**+0.2**
	comp=Z,112nm,1.0s,mb4.9						
RJF	**Les Rejaudoux**	51.88	303	⇑iP	P	**02 41 44.8**	**+0.2**
RJF				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.0						
CKHR	**Kef el Ahmar**	51.95	290	P	P	**02 41 45.0**	**-0.3**
MTLF	**Montolieu**	51.96	300	⇑iP	P	**02 41 45.1**	**-0.1**
	comp=Z,61nm,0.8s,mb4.8						
MTLF	**Montolieu**	51.96	300	⇑iP	P	**02 41 45.1**	**-0.1**
MTLF				pmax	pmax		
	comp=Z,30nm,0.8s,mb4.8						
SET	**Setif**	51.97	291	P	P	**02 41 47.0**	**+1.6**
LDF	**La Druitiere**	52.10	307	⇑iP	P	**02 41 45.6**	**-0.6**
	comp=Z,43nm,0.6s,mb4.8						
LDF	**La Druitiere**	52.10	307	⇑iP	P	**02 41 45.6**	**-0.6**
LDF				pmax	pmax		
	comp=Z,22nm,0.6s,mb4.8						
FLN	**La Foliniere**	52.29	307	⇑iP	P	**02 41 46.9**	**-0.7**
	comp=Z,100nm,0.7s,mb5.0						
FLN	**La Foliniere**	52.29	307	⇑iP	P	**02 41 46.9**	**-0.7**
FLN				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.0						
LPEF	**Le Peyrat**	52.29	300	⇑eP	P	**02 41 47.7**	**0.0**
SIW	**Isle of Wight**	52.38	310	⇑iP	P	**02 41 47.8**	**-0.4**
VALF	**Valcebollere**	52.38	299	⇑eP	P	**02 41 48.2**	**-0.2**
ESK	**Eskdalemuir**	52.44	316	eP	P	**02 41 47.8**	**-0.9**
ESK				e*PP	pP	02 42 39.7	-0.9
ESK				pmax	pmax		
	comp=Z,104nm,1.1s,mb5.2						
ESK	**Eskdalemuir**	52.44	316	eP	P	**02 41 47.8**	**-0.9**
	comp=Z,104nm,1.1s,mb5.2						
ESK				epP	pP	02 42 39.7	-0.9
SWN1	**Swindon**	52.44	311	⇑eP	P	**02 41 48.2**	**-0.5**
MBAR	**Mbarara**	52.48	235	eP	P	**02 41 49.1**	**-0.4**
MBAR				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.1						
MBAR	**Mbarara**	52.48	235	eP	P	**02 41 49.1**	**-0.4**
	comp=Z,70nm,0.8s,mb5.2						
LFF	**La Frestale**	52.51	303	⇑iP	P	**02 41 49.3**	**0.0**
	comp=Z,109nm,0.8s,mb5.0						
LFF	**La Frestale**	52.51	303	⇑iP	P	**02 41 49.3**	**0.0**
LFF				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.0						
GRR	**Gorron**	52.62	307	⇑iP	P	**02 41 49.3**	**-0.8**
	comp=Z,96nm,0.8s,mb5.0						
GRR	**Gorron**	52.62	307	⇑iP	P	**02 41 49.3**	**-0.8**
GRR				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.0						
MFF	**Saint Martin d**	52.64	305	⇑iP	P	**02 41 49.4**	**-0.8**
	comp=Z,93nm,1.0s,mb4.9						
MFF				epP	pP	02 42 41.4	-0.8
MFF	**Saint Martin d**	52.64	305	⇑iP	P	**02 41 49.4**	**-0.8**
MFF				e*PP	pP	02 42 41.4	-0.8
MFF				pmax	pmax		
	comp=Z,46nm,1.0s,mb4.9						
ETOS	**Mallorca**	52.65	296	P	P	**02 41 49.3**	**-1.1**
	comp=Z,34nm,1.1s,mb4.7						
JMIC	**Jan Mayen**	52.72	336	eP	P	**02 41 45.1**	**-5.4**
JMIC				AMS	AMS	03 09 22.6	
	comp=Z,149nm,17.3s						
HAE	**Alders End**	52.77	312	⇑iP	P	**02 41 50.5**	**-0.7**
HAE				AMb	AMB	02 41 51.8	
	comp=Z,312nm,1.5s,mb5.5						
SWK	**Warminster**	52.80	311	⇑eP	P	**02 41 50.9**	**-0.5**
YSS	**Yuzh-Sakhalins**	52.85	55	⇓iP	P	**02 41 52.0**	**+0.3**
YSS				e	pP	02 42 45.0	+1.3
YSS				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.0						
YSS	**Yuzh-Sakhalins**	52.85	55	eP	P	**02 41 51.8**	**+0.1**
	comp=Z,47nm,0.8s,mb5.0						
SALF	**Salau**	52.85	300	⇑eP	P	**02 41 50.6**	**-1.2**
MLS	**Moulis**	52.86	300	⇑eP	P	**02 41 51.3**	**-0.6**
HLM1	**Long Mynd**	52.86	313	⇑eP	P	**02 41 50.8**	**-1.0**
HLM1				AMb	AMB	02 41 52.6	
	comp=Z,100nm,1.2s,mb5.1						
EMIR	**Miracle**	52.88	299	P	P	**02 41 50.9**	**-1.1**
	comp=Z,169nm,1.9s,mb5.2						
ATAF	**Djebel Tarf**	52.93	291	P	P	**02 41 51.8**	**-0.7**
MAJO	**Matsushiro**	52.94	68	eP	P	**02 41 51.8**	**-0.8**
MAJO				e*PP	pP	02 42 44.7	+0.1
MAJO				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.6						
MAJO	**Matsushiro**	52.94	68	eP	P	**02 41 51.8**	**-0.8**
	comp=Z,20nm,0.8s,mb4.6						
MAJO				epP	pP	02 42 44.7	+0.1
MAT	**Matsushiro**	52.94	68	eP	P	**02 41 52.0**	**-0.6**
MAT				eS	S	**02 48 57.0**	**-5.1**
MAT				pmax	pmax		
	comp=Z,26nm,0.9s,mb4.7						
MAT	**Matsushiro**	52.94	68	eP	P	**02 41 52.0**	**-0.6**
	comp=Z,26nm,0.9s,mb4.7						
MAT				eS	S	**02 48 57.0**	**-5.1**
MAT	**Matsushiro**	52.94	68	P	P	**02 41 51.8**	**-0.8**
MAT				S	S	**02 48 59.0**	**-3.1**
MJAR	**Matsushiro Arr**	52.94	68	P	P	**02 41 52.0**	**-0.6**
MJAR				*PP	pP	02 42 44.6	0.0
MJAR				pmax	pmax		
	comp=Z,36nm,1.1s						
MJAR				pmax	pmax		
	comp=Z,18nm,1.0s						
MJAR	**Matsushiro Arr**	52.94	68	P	P	**02 41 52.0**	**-0.6**
	comp=Z,36nm,1.1s,mb4.7,baz=286,slow=9.4,SNR=44						
MJAR				pP	pP	02 42 44.5	-0.1
	comp=Z,18nm,1.0s,baz=285,slow=9.3,SNR=5.1						
GCD	**Castle Douglas**	52.95	316	⇑eP	P	**02 41 51.8**	**-0.6**
SBD1	**Bryn Du**	52.99	313	⇑eP	P	**02 41 52.0**	**-0.7**
REB	**Eisghbrachaidh**	53.02	320	⇑eP	P	**02 41 52.4**	**-0.5**
SSP1	**Stoney Pound**	53.02	312	⇑iP	P	**02 41 52.5**	**-0.5**
HGH	**Gray Hill**	53.02	311	⇑eP	P	**02 41 52.0**	**-1.0**
HGH				AMb	AMB	02 41 54.2	
	comp=Z,224nm,1.1s,mb5.5						
MCH1	**Michaelchurch**	53.05	312	⇑iP	P	**02 41 52.5**	**-0.7**
AKET	**Djebel Ketaf**	53.16	291	P	P	**02 41 54.6**	**+0.4**
HTR	**Trewern Hill**	53.20	312	⇑iP	P	**02 41 53.5**	**-0.7**
HTR				AMb	AMB	02 41 54.8	
	comp=Z,264nm,1.4s,mb5.5						
WPM1	**Penmaenmawr**	53.29	314	⇑eP	P	**02 41 54.4**	**-0.5**
WPM1				AMb	AMB	02 41 55.7	
	comp=Z,181nm,1.5s,mb5.3						
RRR	**Rubha Reidh**	53.34	320	P	P	**02 41 54.6**	**-0.6**
RRR	**Rubha Reidh**	53.34	320	⇑eP	P	**02 41 54.6**	**-0.6**
RRR				⇑eP		02 41 54.6	
EPF	**Esparros**	53.36	300	⇑iP	P	**02 41 54.3**	**-1.3**
	comp=Z,38nm,0.7s,mb4.6						
EPF	**Esparros**	53.36	300	⇑iP	P	**02 41 54.3**	**-1.3**
EPF				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.6						
EPOB	**Poblet**	53.38	298	P	P	**02 41 54.3**	**-1.4**
	comp=Z,58nm,1.1s,mb4.9						
GAL1	**Galloway**	53.38	316	⇑eP	P	**02 41 55.0**	**-0.6**
RESF	**Ens**	53.43	300	⇑eP	P	**02 41 56.0**	**-0.1**
ADJB	**Djebel Djouab**	53.46	291	P	P	**02 41 55.8**	**-0.6**
YLL	**Llanberis**	53.47	314	⇑eP	P	**02 41 55.5**	**-0.7**
TSM	**Tawau**	53.50	115	P	P	**02 41 57.2**	**+0.2**
ABA	**Alger-Bouzarea**	53.52	292	P	P	**02 41 54.9**	**-2.0**
WIM	**Isle of Man**	53.53	315	⇑iP	P	**02 41 56.4**	**-0.2**
WIM				AMb	AMB	02 41 58.4	
	comp=Z,207nm,1.3s,mb5.5						
WLF1	**Llynfaes**	53.57	314	⇑iP	P	**02 41 56.4**	**-0.6**
WLF1				AMb	AMB	02 41 57.7	
	comp=Z,59nm,1.4s,mb4.9						
EBIE	**Bielsa**	53.61	300	P	P	**02 41 56.0**	**-1.4**
	comp=Z,42nm,1.1s,mb4.9						
VIEF	**Viey**	53.63	300	⇑eP	P	**02 41 57.4**	**-0.1**
WCB1	**Church Bay**	53.64	314	⇑iP	P	**02 41 56.8**	**-0.7**
WCB1				AMb	AMB	02 41 57.7	
	comp=Z,62nm,1.2s,mb5.0						
YRE	**Yr Eifl**	53.66	313	⇑iP	P	**02 41 57.0**	**-0.6**
YRE				AMb	AMB	02 41 57.9	
	comp=Z,72nm,0.8s,mb5.2						
YRC	**Rhoscolyn**	53.68	314	⇑eP	P	**02 41 57.3**	**-0.5**
YRC				AMb	AMB	02 41 58.2	
	comp=Z,104nm,0.8s,mb5.4						
SGMF	**Saint Gilles**	53.75	307	⇑iP	P	**02 41 57.8**	**-0.5**
	comp=Z,118nm,0.9s,mb5.1						
SGMF	**Saint Gilles**	53.75	307	⇑iP	P	**02 41 57.8**	**-0.5**
SGMF				pmax	pmax		
	comp=Z,59nm,0.9s,mb5.1						
GMK	**Mull of Kintyr**	53.77	316	⇑eP	P	**02 41 57.7**	**-0.6**
RRH	**Rhenigidale**	53.79	320	⇑eP	P	**02 41 57.9**	**-0.6**
EMHD	**Djebel Mahouad**	53.81	292	P	P	**02 41 58.0**	**-0.9**
REYF	**Montagne du Re**	53.86	301	⇑eP	P	**02 41 58.2**	**-1.0**
EBR	**Ebro Roquetas**	53.97	298	eP	P	**02 42 00.0**	**0.0**
EIBI	**Ibiza**	53.98	295	P	P	**02 41 59.2**	**-0.8**
	comp=Z,103nm,1.2s,mb5.2						
ETSF	**Etsaut**	54.03	300	⇑iP	P	**02 42 00.5**	**+0.1**
	comp=Z,110nm,0.7s,mb5.2						
ETSF	**Etsaut**	54.03	300	⇑iP	P	**02 42 00.5**	**+0.1**
ETSF				pmax	pmax		
	comp=Z,55nm,0.7s,mb5.2						
ERTA	**Horta de San J**	54.04	298	P	P	**02 41 58.6**	**-1.9**
	comp=Z,126nm,1.4s,mb5.2						
FDAF	**Les Forges d'A**	54.06	300	⇑eP	P	**02 42 00.7**	**+0.1**
GCL	**Cushendall**	54.13	316	⇑eP	P	**02 42 00.1**	**-0.9**
ROSF	**Rostrenen**	54.19	308	⇑iP	P	**02 42 00.8**	**-0.7**
	comp=Z,110nm,0.8s,mb5.1						
ROSF	**Rostrenen**	54.19	308	⇑iP	P	**02 42 00.8**	**-0.7**
ROSF				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.1						
GMM	**Mts of Mourne**	54.23	315	⇑eP	P	**02 42 01.0**	**-0.7**
QUIF	**Quistinic**	54.24	307	⇑iP	P	**02 42 01.0**	**-0.9**
	comp=Z,98nm,1.0s,mb5.0						
QUIF				epP	pP	02 42 53.3	-0.8
QUIF	**Quistinic**	54.24	307	⇑iP	P	**02 42 01.0**	**-0.9**
QUIF				e*PP	pP	02 42 53.3	-0.8
QUIF				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.0						
LARF	**Larrau**	54.28	301	⇑eP	P	**02 42 02.1**	**-0.1**
ESAC	**San Caprasio**	54.35	299	P	P	**02 42 01.4**	**-1.3**
	comp=Z,116nm,0.9s,mb5.4						
SJPF	**Ste Jean**	54.42	301	⇑iP	P	**02 42 02.6**	**-0.6**
	comp=Z,31nm,0.8s,mb4.6						
SJPF	**Ste Jean**	54.42	301	⇑iP	P	**02 42 02.6**	**-0.6**
SJPF				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.6						
MA2	**Magadan**	54.42	38c	iP	P	**02 42 03.1**	**+0.1**
MA2				i S	S	**02 49 22.7**	**+1.2**
MA2				ePS		02 49 36.9	
MA2				eSS	SS	02 53 11.8	+4.1
MA2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
MA2	**Magadan**	54.42	38	⇑iP	P	**02 42 02.8**	**-0.2**
	comp=Z,22nm,0.8s,mb4.7						
MA2				epP	pP	02 42 58.0	+2.6
EALK	**Alkurruntz**	54.58	301	P	P	**02 42 03.1**	**-1.3**
	comp=Z,51nm,1.2s,mb4.9						
ELIZ	**Elizondo**	54.61	301	P	P	**02 42 03.6**	**-1.0**
ELIZ				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5						
ELIZ	**Elizondo**	54.61	301	P	P	**02 42 03.6**	**-1.0**
	comp=Z,13nm,0.9s,mb4.5						
DSB	**Dublin**	54.73	314	eP	P	**02 42 04.6**	**-0.7**
	comp=Z,78nm,1.6s,mb5.0						
DSB				epP	pP	02 42 56.8	-0.9
DLF	**Lyons Farm**	54.81	314	eP	P	**02 42 04.1**	**-1.8**
EMOS	**Mosqueruela**	54.82	298	P	P	**02 42 05.0**	**-1.2**
	comp=Z,82nm,1.2s,mb5.1						
EBNR	**Beni Rached**	54.84	292	P	P	**02 42 07.0**	**+0.6**
DAG	**Danmarks Havn**	54.86	344	⇓iP	P	**02 42 06.2**	**+0.2**
DAG				pmax	pmax		
	comp=Z,180nm,0.9s,mb5.6						
DAG				MLR	MLR		
	comp=Z,1µm,17.0s						
DAG	**Danmarks Havn**	54.86	344	⇓iP	P	**02 42 06.2**	**+0.2**
	comp=Z,176nm,0.9s,mb5.6						
	comp=Z,1µm,17.0s						
ECHA	**Ech Chlef**	55.02	292	P	P	**02 42 08.0**	**+0.4**
ECHF	**Ech Chlef**	55.03	292	P	P	**02 42 08.0**	**+0.3**
DCN	**Croghan**	55.23	314	eP	P	**02 42 07.5**	**-1.4**
EBEN	**Beniarda**	55.23	296	P	P	**02 42 08.2**	**-1.0**
	comp=Z,73nm,1.2s,mb5.1						
EANR	**'Ain N'Sour**	55.29	292	P	P	**02 42 09.5**	**-0.1**
ETRT	**Tiaret**	55.36	291	P	P	**02 42 10.0**	**-0.1**
ECHE	**Chera**	55.45	297	P	P	**02 42 10.9**	**+0.2**
ECHE				pmax	pmax		
	comp=Z,26nm,0.9s,mb4.8						
ECHE	**Chera**	55.45	297	P	P	**02 42 10.9**	**+0.3**
	comp=Z,26nm,0.9s,mb4.8						
ECRI	**Cripan**	55.48	301	P	P	**02 42 10.7**	**-0.1**
ECRI				pmax	pmax		
	comp=Z,35nm,0.8s,mb4.9						
ECRI	**Cripan**	55.48	301	P	P	**02 42 10.7**	**-0.2**
	comp=Z,34nm,0.8s,mb4.9						
ELAN	**Lanestosa**	55.90	302	P	P	**02 42 13.8**	**-0.1**
	comp=Z,88nm,1.7s,mb5.0						
CART	**Cartagena**	56.22	295	⇑iP	P	**02 42 15.1**	**-1.0**
	comp=Z,103nm,0.9s,mb5.4						
EMUR	**La Murta**	56.30	295	P	P	**02 42 15.3**	**-1.4**
	comp=Z,98nm,1.4s,mb5.2						
EVIA	**Vianos**	56.91	296	P	P	**02 42 20.7**	**-0.3**
EVIA				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.0						
EVIA	**Vianos**	56.91	296	P	P	**02 42 20.7**	**-0.4**
	comp=Z,38nm,1.0s,mb5.0						
EARI	**Arriondas**	57.09	302	P	P	**02 42 21.1**	**-1.2**
	comp=Z,51nm,1.1s,mb5.1						
SCO	**Scoresbysund**	57.19	336	i P	P	**02 42 23.6**	**+1.0**
SCO				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.8						
SCO	**Scoresbysund**	57.19	336	i P	P	**02 42 23.6**	**+1.0**
	comp=Z,19nm,0.8s,mb4.8						
EHUE	**Huescar**	57.30	295	P	P	**02 42 22.1**	**-1.6**
	comp=Z,0.2nm,0.4s						
ENIJ	**Nijar**	57.34	294	P	P	**02 42 23.1**	**-1.0**
ENIJ				pmax	pmax		
	comp=Z,113nm,0.9s,mb5.5						
ENIJ	**Nijar**	57.34	294	P	P	**02 42 23.1**	**-1.0**
	comp=Z,113nm,0.9s,mb5.5						
ESDC	**Sonseca Array**	57.57	298	P	P	**02 42 24.6**	**-1.0**
	comp=Z,24nm,0.8s,mb4.9,baz=56,slow=7.8,SNR=82						
ESDC				PcP	PcP	02 43 14.3	-2.0
	comp=Z,8.2nm,0.8s,baz=60,slow=5.8,SNR=6.4						
ESDC	**Sonseca Array**	57.57	298	P	P	**02 42 24.7**	**-1.0**
	comp=Z,1.4nm,1.5s						
ESLA	**Sonseca Array**	57.57	298	⇑iP	P	**02 42 24.6**	**-1.0**
	comp=Z,19nm,1.2s,mb4.6						
EQES	**Quesada**	57.65	296	P	P	**02 42 24.2**	**-2.0**
	comp=Z,91nm,0.9s,mb5.4						
EBAN	**Banos Encina**	58.02	296	P	P	**02 42 27.9**	**-1.0**
EBAN				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.1						
EBAN	**Banos Encina**	58.02	296	P	P	**02 42 27.9**	**-0.9**
	comp=Z,39nm,0.8s,mb5.1						
ECOG	**Cogollos-Vega**	58.22	295	P	P	**02 42 29.0**	**-1.2**
ECOG				pmax	pmax		
	comp=Z,1.0nm,0.2s,mb4.1						
ECOG	**Cogollos-Vega**	58.22	295	P	P	**02 42 29.0**	**-1.2**
	comp=Z,0.9nm,0.2s						
EALB	**Alboran**	58.37	294	P	P	**02 42 28.4**	**-2.9**
	comp=Z,61nm,1.0s,mb5.2						
ERON	**Agron**	58.50	295	P	P	**02 42 30.9**	**-1.3**
	comp=Z,20nm,0.7s,mb4.9						
EADA	**Adamuz**	58.60	297	P	P	**02 42 31.3**	**-1.5**
	comp=Z,53nm,0.9s,mb5.2						
ECAL	**Calabor**	58.64	301	P	P	**02 42 32.3**	**-0.8**
	comp=Z,86nm,1.2s,mb5.2						
BILL	**Bilibino**	58.69	26c	iP	P	**02 42 33.5**	**+0.5**
BILL				pmax	pmax		
	comp=Z,43nm,0.8s,mb5.1						
BILL				MLR	MLR		
	comp=Z,300nm,16.0s						
BILL	**Bilibino**	58.69	26	eP	P	**02 42 33.5**	**+0.5**
	comp=Z,82nm,1.1s,mb5.3						
BILL				epP	pP	02 43 26.3	+0.1
ELOJ	**Sierra Loja**	58.70	295	P	P	**02 42 31.1**	**-2.4**
ELOJ				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.5						
ELOJ	**Sierra Loja**	58.70	295	P	P	**02 42 31.1**	**-2.4**
	comp=Z,16nm,1.3s,mb4.5						
ERUA	**La Rua**	58.75	302	P	P	**02 42 33.2**	**-0.6**
ERUA				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.9						
ERUA	**La Rua**	58.75	302	P	P	**02 42 33.2**	**-0.6**
	comp=Z,27nm,0.8s,mb4.9						
EMIJ	**Mijas**	59.39	295	P	P	**02 42 35.6**	**-2.6**
	comp=Z,21nm,0.8s,mb4.8						
STS	**Santiago**	59.52	303	P	P	**02 42 37.8**	**-1.2**
STS				pmax	pmax		
	comp=Z,159nm,1.8s,mb5.3						
STS	**Santiago**	59.52	303	P	P	**02 42 37.8**	**-1.2**
	comp=Z,159nm,1.8s,mb5.3						
PVRL	**Vila Real**	59.58	301	eP	P	**02 42 38.6**	**-0.9**
	comp=Z,63nm,1.5s,mb5.0						
ELOB	**Lobios**	59.58	302	P	P	**02 42 37.5**	**-2.0**
	comp=Z,90nm,1.2s,mb5.3						
EMAZ	**Mazaricos**	59.78	303	P	P	**02 42 39.7**	**-1.1**
	comp=Z,30nm,0.7s,mb5.0						
MTE	**Manteigas**	59.81	300	i P	P	**02 42 41.2**	**+0.1**
	comp=Z,119nm,1.5s,mb5.3						
MTE				epP	pP	02 43 34.3	-0.2
MTE				eS	S	**02 50 35.6**	**+3.4**
MTE	**Manteigas**	59.81	300	eP	P	**02 42 40.7**	**-0.4**
	comp=Z,93nm,1.1s,mb5.3						
MTE				epP	pP	02 43 34.2	-0.3
PVIS	**Viseu**	59.93	300	i P	P	**02 42 41.8**	**0.0**
	comp=Z,108nm,1.3s,mb5.3						
PVIS				epP	pP	02 43 34.8	-0.5
PCBR	**Castelo Branco**	59.99	299	eP	P	**02 42 41.9**	**-0.4**
	comp=Z,41nm,1.5s,mb4.8						
ESPR	**Espera**	60.06	296	P	P	**02 42 39.9**	**-2.9**
	comp=Z,52nm,0.9s,mb5.2						
EBAD	**Badajoz**	60.10	298	P	P	**02 42 41.3**	**-1.8**
	comp=Z,150nm,1.0s,mb5.6						
EMIN	**Mina Concepcio**	60.27	297	P	P	**02 42 42.6**	**-1.6**
	comp=Z,61nm,1.1s,mb5.1						
PET	**Petropavlovsk**	60.58	44	eP	P	**02 42 42.4**	**-3.7**
PET				e*PP	pP	02 43 35.5	-4.2
PET				eS	S	**02 50 39.9**	**-1.9**
PET				MLR	MLR		
	comp=Z,800nm,16.0s						
PET	**Petropavlovsk**	60.58	44	⇑eP	P	**02 42 44.0**	**-2.1**
PTOM	**Tomar**	60.74	299	i P	P	**02 42 47.0**	**-0.3**
	comp=Z,135nm,1.2s,mb5.5						
PTOM				epP	pP	02 43 40.4	-0.5
EVO	**Evora**	60.91	298	⇑iP	P	**02 42 48.5**	**0.0**
	comp=Z,147nm,1.2s,mb5.2						
EVO				epP	pP	02 43 41.6	-0.5
PBEJ	**Beja**	61.02	298	eP	P	**02 42 48.9**	**-0.3**
	comp=Z,78nm,1.7s,mb5.1						
PBEJ	**Beja**	61.02	298	ePcP	PcP	02 43 29.6	-0.4
SUMG	**Summit**	61.20	341	eP	P	**02 42 51.0**	**+1.1**
	comp=Z,158nm,0.8s,mb5.7						
SUMG				epP	pP	02 43 43.6	0.0
PLOU	**Loures**	61.57	299	eP	P	**02 42 52.8**	**-0.1**
PTEO	**Sao Teotonio**	61.84	297	eP	P	**02 42 54.4**	**-0.3**
SFJD	**Kangerlussuaq**	67.89	339	⇑iP	P	**02 43 32.8**	**-0.1**
SFJD				i	pP	02 44 27.6	-0.2
SFJD				i S	S	02 52 15.8	+4.7
SFJD				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.1						
SFJD	**Kangerlussuaq**	67.89	339	⇑iP	P	**02 43 32.8**	**-0.1**
	comp=Z,55nm,1.1s,mb5.1						
SFJD				i	pP	02 44 27.6	-0.2
SFJD				i S	S	02 52 15.8	+4.7
RES	**Resolute Bay**	68.82	356	eP	P	**02 43 38.9**	**+0.3**
RES				e*PP	pP	02 44 32.9	-0.7
RES				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
RES	**Resolute Bay**	68.82	356	eP	P	**02 43 38.9**	**+0.3**
	comp=Z,9.2nm,0.8s,mb4.5						
RES				epP	pP	02 44 32.9	-0.7
IMA	**Indian Mountai**	72.22	18	eP	P	**02 43 59.2**	**+0.1**
MBWA	**Marble Bar**	73.40	133	eP	P	**02 44 06.2**	**-0.7**
	comp=Z,143nm,1.4s,mb5.4						
MBWA				epP	pP	02 45 03.0	+0.6
INK	**Inuvik**	74.02	9	P	P	**02 44 10.2**	**+0.7**
INK				*PP	pP	02 45 04.9	-0.1
INK				S	S	02 53 22.4	+1.4
INK				pmax	pmax		
	comp=Z,130nm,1.0s						
INK				pmax	pmax		
	comp=Z,83nm,0.9s						
INK				smax			
	comp=N,1.0nm,0.7s						
INK	**Inuvik**	74.02	9	P	P	**02 44 10.2**	**+0.8**
	comp=N,130nm,1.0s,mb5.5,baz=354,slow=7.0,SNR=190						
INK				pP	pP	02 45 04.9	-0.2
	comp=N,82nm,0.9s,baz=356,slow=7.2,SNR=7.8						
INK				S	S	02 53 22.4	+1.4
	comp=N,1.1nm,0.7s,baz=175,slow=30,SNR=5.3						
INK	**Inuvik**	74.02	9	eP	P	**02 44 10.1**	**+0.6**
	comp=N,132nm,0.9s,mb5.6						
INK				epP	pP	02 45 04.4	-0.7
TTA	**Tatalina**	74.11	20	eP	P	**02 44 11.0**	**+0.9**
LBTB	**Lobatse**	74.63	222	⇑iP	P	**02 44 14.4**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,300nm,1.0s,mb5.9						
LBTB	**Lobatse**	74.63	222	⇑iP	P	**02 44 14.3**	**+0.5**
	comp=Z,300nm,1.0s,mb5.9						
DBIC	**Dimbokro**	74.75	267	P	P	**02 44 13.5**	**-1.3**
DBIC				*PP	pP	02 45 08.8	-1.6
DBIC				pmax	pmax		
	comp=Z,35nm,0.7s						
DBIC				pmax	pmax		
	comp=Z,15nm,0.8s						
DBIC	**Dimbokro**	74.75	267	P	P	**02 44 13.4**	**-1.3**
	comp=Z,35nm,0.7s,mb5.1,baz=32,slow=6.7,SNR=61						
DBIC				pP	pP	02 45 08.8	-1.7
	comp=Z,14nm,0.8s,baz=5.9,slow=9.7,SNR=3.1						
FITZ	**Fitzroy Crossi**	74.77	127	⇑iP	P	**02 44 14.4**	**-0.4**
	comp=Z,128nm,0.9s,mb5.5						
FITZ				i pP	pP	02 45 09.5	-0.9
FITZ	**Fitzroy Crossi**	74.77	127	P	P	**02 44 14.5**	**-0.3**
	comp=Z,170nm,0.9s,mb5.7,baz=342,slow=4.5,SNR=69						
FITZ				pP	pP	02 45 09.8	-0.7
	comp=Z,90nm,1.0s,baz=343,slow=3.5,SNR=4.8						
ILAR	**Eielson Array**	74.88	16	P	P	**02 44 14.1**	**-0.4**
ILAR				*PP	pP	02 45 09.3	-0.8
ILAR				pmax	pmax		
	comp=Z,26nm,0.9s						
ILAR				pmax	pmax		
	comp=Z,14nm,1.0s						
ILAR	**Eielson Array**	74.88	16	P	P	**02 44 14.1**	**-0.4**
	comp=Z,26nm,0.9s,mb4.9,baz=321,slow=5.4,SNR=180						
ILAR				pP	pP	02 45 09.2	-0.9
	comp=Z,14nm,1.0s,baz=323,slow=7.1,SNR=4.6						
TSUM	**Tsumeb**	74.89	232	eP	P	**02 44 15.6**	**+0.2**
	comp=Z,124nm,0.8s,mb5.6						
KAKA	**Kakadu**	75.63	118	⇑iP	P	**02 44 18.8**	**-0.8**
	comp=Z,89nm,0.8s,mb5.5						
KAKA				epP	pP	02 45 14.5	-0.9
SVW2	**Sparrevohn**	75.70	21	eP	P	**02 44 19.8**	**+0.7**
THY	**Trims Highway**	76.31	16	eP	P	**02 44 22.5**	**0.0**
SPU	**Mount Spurr**	76.63	20	eP	P	**02 44 23.8**	**-0.5**
PWA	**Palmer West**	76.82	19	eP	P	**02 44 25.4**	**+0.1**
RSO	**Redoubt South**	77.03	21	eP	P	**02 44 27.5**	**+1.0**
PMR	**Palmer**	77.06	18	eP	P	**02 44 26.8**	**+0.2**
SML	**Sawmill**	77.08	18	eP	P	**02 44 26.9**	**+0.2**
MENT	**Mentasta**	77.17	16	eP	P	**02 44 28.9**	**+1.7**
BOSA	**Boshof**	77.69	220	P	P	**02 44 31.1**	**+0.3**
BOSA				*PP	pP	02 45 27.2	+0.3
BOSA				*SP	sP	02 45 51.9	+0.5
BOSA				pmax	pmax		
	comp=Z,142nm,0.9s,mb5.6						
BOSA				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.2						
BOSA				pmax	pmax		
	comp=Z,22nm,0.7s,mb4.9						
BOSA	**Boshof**	77.69	220	P	P	**02 44 31.1**	**+0.2**
	comp=Z,142nm,0.9s,mb5.6,baz=30,slow=4.6,SNR=163						
BOSA				pP	pP	02 45 27.2	+0.3
	comp=Z,67nm,1.0s,baz=51,slow=6.8,SNR=6.5						
BOSA				sP	sP	02 45 51.9	+0.4
	comp=Z,22nm,0.7s,baz=44,slow=8.9,SNR=2.5						
BOSA	**Boshof**	77.69	220	⇑iP	P	**02 44 30.9**	**0.0**
	comp=Z,168nm,0.9s,mb5.7						
BOSA				epP	pP	02 45 27.5	+0.6
SLKM	**Skilak Lake**	77.69	20	eP	P	**02 44 29.9**	**-0.2**
DIV	**Divide**	78.29	17	⇑iP	P	**02 44 34.1**	**+0.7**
	comp=Z,105nm,0.7s,mb5.6						
EYAK	**Cordova Ski Ar**	78.81	18	⇑iP	P	**02 44 37.3**	**+1.1**
EYAK				epP	pP	02 45 35.8	+3.3
KDAK	**Kodiak Island**	79.29	22	eP	P	**02 44 39.2**	**+0.4**
MUN	**Mundaring**	80.06	142	eP	P	**02 44 42.5**	**-0.9**
	comp=Z,25nm,0.9s,mb4.8						
MUN	**Mundaring**	80.06	142	eP	P	**02 44 42.5**	**-0.9**
MUN				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.8						
KLBR	**Kellerberrin**	80.53	141	⇑iP	P	**02 44 44.5**	**-1.4**
	comp=Z,55nm,0.9s,mb5.2						
KLBR				epP	pP	02 45 43.3	+0.9
YKW3	**Yellowknife Ar**	81.30	3	eP	P	**02 44 49.8**	**+0.5**
YKW3				epP	pP	02 45 46.1	+0.2
NWAO	**Narrogin (SRO)**	81.34	142	eP	P	**02 44 49.1**	**-1.0**
NWAO				pmax	pmax		

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      comp=Z,38nm,1.1s
NWAO  Narrogin (SRO)    81.34 142 eP       P        02 44 49.1 -1.0
      comp=Z,38nm,1.1s,mb4.9
YKA   Yellowknife Ar    81.36   3 P        P        02 44 50.5 +0.9
YKA                               *PP      pP       02 45 46.3  0.0
YKA                               pmax     pmax
      comp=Z,74nm,0.7s
YKA                               pmax     pmax
      comp=Z,58nm,1.0s
YKA                               pmax     pmax
      comp=Z,3.0nm,0.7s
YKA   Yellowknife Ar    81.36   3 P        P        02 44 50.5 +0.9
      comp=Z,74nm,0.7s,mb5.5,baz=348,slow=5.3,SNR=134
YKA                               pP       pP       02 45 46.3  0.0
      comp=Z,58nm,1.0s,baz=348,slow=5.3,SNR=9.2
YKA                               PKKPbc            03 03 20.3
      comp=Z,3.3nm,0.7s,baz=169,slow=2.5,SNR=7.2
YKA   Yellowknife Ar    81.36   3 P        P        02 44 50.5 +0.9
YKA                               pP       pP       02 45 46.3  0.0
YKA                               PKKPbc            03 03 20.3
WRA   Warramunga Arr    81.88 122 P        P        02 44 52.5 -0.6
WRA                               *PP      pP       02 45 49.3 -0.5
WRA                               pmax     pmax
      comp=Z,134nm,0.8s
WRA                               pmax     pmax
      comp=Z,17nm,0.8s
WRA                               pmax     pmax
      comp=Z,7.0nm,0.7s
WRA                               pmax     pmax
      comp=Z,2.0nm,0.9s
WRA   Warramunga Arr    81.88 122 P        P        02 44 52.5 -0.6
      comp=Z,134nm,0.8s,mb5.6,baz=325,slow=5.0,SNR=1160
WRA                               pP       pP       02 45 49.3 -0.5
      comp=Z,17nm,0.8s,baz=321,slow=4.9,SNR=2.8
WRA                               PKKPbc            03 03 22.3
      comp=Z,7.0nm,0.7s,baz=136,slow=2.1,SNR=42
WRA                               PKPPKP            03 11 26.0
      comp=Z,2.4nm,0.9s,baz=138,slow=1.9,SNR=9.7
WRAB  Tennant Creek     81.88 122⇑iP       P        02 44 52.5 -0.6
WRAB                              e*PP     pP       02 45 49.2 -0.6
WRAB                              pmax     pmax
      comp=Z,271nm,0.9s,mb5.9
WRAB  Tennant Creek     81.88 122⇑iP       P        02 44 52.5 -0.6
      comp=Z,271nm,0.9s,mb5.9
WRAB                              epP      pP       02 45 49.2 -0.6
WB2   Warramunga Arr    81.89 122⇑iP       P        02 44 52.4 -0.7
SCHQ  Schefferville     82.23 337 P        P        02 44 54.8 +0.5
      comp=Z,21nm,0.9s,mb4.8,baz=34,slow=5.7,SNR=26
SCHQ                              pP       pP       02 45 51.5 +0.5
      comp=Z,13nm,0.8s,baz=60,slow=4.5,SNR=5.0
SCHQ  Schefferville     82.23 337 eP       P        02 44 54.5 +0.3
      comp=Z,137nm,1.6s,mb5.3
SCHQ                              epP      pP       02 45 51.9 +0.9
DLBC  Dease Lake        83.90  11 eP       P        02 45 04.0 +1.4
DLBC                              epP      pP       02 46 01.0 +1.6
FCC   Fort Churchill    84.41 352 eP       P        02 45 06.0 +0.9
FCC                               e*PP     pP       02 46 02.3 +0.3
FCC                               pmax     pmax
      comp=Z,97nm,1.1s,mb5.5
FCC   Fort Churchill    84.41 352 eP       P        02 45 06.0 +0.9
      comp=Z,97nm,1.1s,mb5.4
FCC                               epP      pP       02 46 02.3 +0.3
PMG   Port Moresby      84.51 106 P        P        02 45 06.5 -0.2
PMG                               *PP      pP       02 46 04.2 +0.6
PMG                               pmax     pmax
      comp=Z,58nm,1.0s
PMG                               pmax     pmax
      comp=Z,24nm,0.8s
PMG   Port Moresby      84.51 106 P        P        02 45 06.5 -0.1
      comp=Z,58nm,1.0s,mb5.3,baz=341,slow=5.0,SNR=26
PMG                               pP       pP       02 46 04.2 +0.6
      comp=Z,24nm,0.8s,baz=265,slow=4.8,SNR=4.1
PMG   Port Moresby      84.51 106 eP       P        02 45 06.0 -0.7
      comp=Z,74nm,1.1s,mb5.3
PMG                               epP      pP       02 46 04.4 +0.8
FORT  Forrest           85.54 134⇑iP       P        02 45 11.2 -0.2
      comp=Z,145nm,0.7s,mb5.8
FFC   Flin Flon         89.06 356 eP       P        02 45 28.6 +1.1
FFC                               e*PP     pP       02 46 25.3 +0.3
FFC                               pmax     pmax
      comp=Z,84nm,0.9s,mb5.6
FFC   Flin Flon         89.06 356 eP       P        02 45 28.6 +1.0
      comp=Z,84nm,0.9s,mb5.6
FFC                               epP      pP       02 46 25.3 +0.3
CTA   Charters Tower    90.44 115⇑iP       P        02 45 34.2 -0.6
      comp=Z,64nm,0.8s,mb5.5
CTA                               epP      pP       02 46 33.5 +1.1
CTA   Charters Tower    90.44 115⇑iP       P        02 45 34.2 -0.6
CTA                               e*PP     pP       02 46 33.5 +1.1
CTA                               pmax     pmax
      comp=Z,64nm,0.8s
CTAO  Charters Tower    90.44 115 eP       P        02 45 34.3 -0.5
CTAO                              e*PP     pP       02 46 33.3 +0.9
CTAO                              pmax     pmax
      comp=Z,91nm,0.8s,mb5.7
CTAO  Charters Tower    90.44 115 eP       P        02 45 34.3 -0.5
      comp=Z,91nm,0.8s,mb5.7
CTAO                              epP      pP       02 46 33.3 +1.0
EDM   Edmonton          90.69   3 eP       P        02 45 36.4 +1.3
EDM                               e*PP     pP       02 46 33.4 +0.7
ULM   Lac du Bonnet     92.98 352 P        P        02 45 46.0 +0.1
      comp=Z,29nm,0.9s,mb5.3,baz=1.6,slow=4.4,SNR=23
ULM                               pP       pP       02 46 43.8 +0.3
      comp=Z,9.1nm,0.8s,baz=7.1,slow=6.0,SNR=3.4
ULM                               PP       PP       02 49 31.2 -2.6
      comp=Z,1.9nm,0.4s,baz=20,slow=4.6,SNR=2.9
ULM   Lac du Bonnet     92.98 352 eP       P        02 45 45.9 +0.1
      comp=Z,56nm,1.1s,mb5.5
ULM                               epP      pP       02 46 44.0 +0.5
PNT   Penticton         94.15   7 P        P        02 45 52.3 +1.1
PGC   Sidney            94.36  10 eP       P        02 45 53.3 +1.2
      comp=Z,69nm,1.5s,mb5.5
EYMN  Ely               94.62 348 eP       P        02 45 53.7 +0.4
      comp=Z,55nm,1.0s,mb5.6
EYMN                              epP      pP       02 46 51.5 +0.5
STKA  Stephens Creek    94.67 126 eP       P        02 45 52.9 -1.1
      comp=Z,7.5nm,0.7s,mb4.9
STKA  Stephens Creek    94.67 126 P        P        02 45 53.0 -0.9
      comp=Z,8.8nm,0.6s,mb5.1,baz=325,slow=5.5,SNR=17
CMW   Cultus Mountai    94.76   9 P        P        02 45 55.2 +1.3
RPW   Rockport          94.81   8 P        P        02 45 54.9 +0.7
JCW   Jim Creek         95.01   9 P        P        02 45 56.2 +1.1
NEW   Newport           95.42   5 P        P        02 45 58.2 +1.2
NEW                               *PP      pP       02 46 55.6 +1.0
NEW                                                 02 49 52.0
NEW                               pmax     pmax
      comp=Z,9.0nm,0.7s
NEW                               pmax     pmax
      comp=Z,11nm,0.8s
NEW                               pmax     pmax
      comp=Z,4.0nm,0.9s
NEW   Newport           95.42   5 P        P        02 45 58.2 +1.2
      comp=Z,8.8nm,0.7s,mb5.0,baz=323,slow=4.6,SNR=17
NEW                               pP       pP       02 46 55.6 +1.0
      comp=Z,11nm,0.8s,baz=349,slow=4.4,SNR=6.8
NEW                               PP       PP       02 49 52.0 -0.4
      comp=Z,4.2nm,0.9s,baz=339,slow=6.9,SNR=3.3
NEW   Newport           95.42   5 eP       P        02 45 57.9 +1.0
      comp=Z,22nm,1.2s,mb5.2
NEW                               epP      pP       02 46 55.2 +0.6
DGMT  Dagmar            95.42 357⇑eP       P        02 45 58.4 +1.4
      comp=Z,86nm,1.4s,mb5.7
RMW   Rattlesnake Mo    95.74   9 P        P        02 46 00.1 +1.6
BSMT  Bassoo Peak       95.98   4 P        P        02 46 01.3 +1.8
RVC   Mount Rainier-    96.23   9 P        P        02 46 02.3 +1.6
CHMT  Chamberlain Mo    96.99   3 eP       P        02 46 04.8 +0.6
CHMT                              epP      pP       02 47 02.7 +0.9
LVP   Lakeview Peak     97.03   9 P        P        02 46 06.2 +1.8
MSO   Missoula          97.05   3 eP       P        02 46 04.8 +0.3
      comp=Z,16nm,1.6s,mb5.0
HRY   Holter Researc    97.25   2 eP       P        02 46 06.3 +1.0
HRY                               epP      pP       02 47 04.4 +1.4
LAO   LASA Array        97.27 358 eP       P        02 46 07.2 +1.7
      comp=Z,30nm,0.8s,mb5.6
LCCM  Lewis and Clar    98.12   2 P        P        02 46 10.5 +1.2
BOZ   Bozeman (W)       98.31   2 eP       P        02 46 11.1 +0.9
BOZ                               e*PP     pP       02 47 09.6 +1.7
BOZ                               pmax     pmax
      comp=Z,16nm,1.4s,mb5.2
BOZ   Bozeman (W)       98.31   2 eP       P        02 46 11.1 +0.9
      comp=Z,16nm,1.4s,mb5.2
BOZ                               epP      pP       02 47 09.6 +1.7
MCMT  McKenzie Canyo    99.09   3 ePdif    P        02 46 14.8 +1.0
PDAR  Pinedale Array   101.23   0 P        P        02 46 24.1 +0.7
      comp=Z,1.5nm,0.7s,slow=4.4,SNR=10
PDAR                              PKKPbc            03 02 30.9
      comp=Z,0.5nm,0.7s,baz=180,slow=0.9,SNR=3.7
YBH   Yreka Blue Hor   101.25  10 P        P        02 46 25.0 +1.4
YBH                               pmax     pmax
      comp=Z,2.0nm,1.0s
YBH   Yreka Blue Hor   101.25  10 P        P        02 46 25.0 +1.4
      comp=Z,2.0nm,1.0s,baz=333,slow=2.5
HVU   Hansel Valley    102.14   3 eP       Pdif     02 46 28.9 +1.4
HWUT  Hardware Ranch   102.35   2 ePdif    Pdif     02 46 30.0 +1.6
      comp=Z,5.0nm,0.6s
ELK   Elko             103.03   5 P        Pdif     02 46 33.3 +1.8
ELK                               pmax     pmax
      comp=Z,2.0nm,0.7s
ELK   Elko             103.03   5 Pdiff    Pdif     02 46 33.3 +1.8
      comp=Z,1.5nm,0.7s,baz=292,slow=8.4,SNR=9.9
DAU   Daniels Canyon   103.55   2 eP       Pdif     02 46 36.1 +2.3
NVAR  Mina Array Bea   105.06   8 Pdiff    Pdif     02 46 42.1 +1.7
      comp=Z,0.7nm,0.5s,baz=16,slow=4.1,SNR=5.9
NVAR                              PKiKP             02 50 55.1
      comp=Z,1.8nm,0.7s,baz=27,slow=2.4,SNR=8.1
NVAR                              PKKPbc            03 02 21.5
      comp=Z,1.9nm,0.7s,baz=169,slow=5.0,SNR=8.5
PV01  Paradox Valley   105.86 360 ePdif    Pdif     02 46 46.1 +2.1
MNTX  Cornudas Mount   112.20 357 ePKiKP            02 51 07.6
TXAR  Lajitas Array    114.45 355 P        Pdif     02 47 26.0 +4.0
TXAR                                                02 51 11.7
TXAR                                                03 01 50.9
TXAR                              pmax     pmax
      comp=Z,1.0nm,0.8s
TXAR                              pmax     pmax
      comp=Z,2.0nm,0.8s
TXAR  Lajitas Array    114.45 355 Pdiff    Pdif     02 47 25.9 +4.0
      comp=Z,0.4nm,0.8s,baz=12,slow=4.4,SNR=4.9
TXAR                              PKP      PKPdf    02 51 11.7 +1.2
      comp=Z,1.1nm,0.8s,baz=82,slow=2.3,SNR=8.9
TXAR                              PKKPbc            03 01 50.9
      comp=Z,2.1nm,0.8s,baz=183,slow=6.6,SNR=9.9
SNAA  Sanae            119.30 200 ePKIKP   PKPdf    02 51 19.0 +0.1
SNAA                              e                 02 52 17.9
SNAA                              e                 02 52 43.8
VNA2  Neumayer--Watz   120.31 202 ePKPdf   PKPdf    02 51 21.7 +0.9
VNA2                              e                 02 52 23.4
VNA2                              e                 02 52 50.7
VNA2                              e                 02 53 08.8
VNA1  Neumayer--Stat   120.46 202 ePKPdf   PKPdf    02 51 22.0 +0.8
VNA1                              e                 02 52 23.8
VNA1                              e                 02 52 51.1
VNA1                              e                 02 53 08.6
VNA3  Neumayer Olymp   121.12 202 ePKPdf   PKPdf    02 51 22.6 +0.2
VNA3                              e                 02 52 24.5
VNA3                              e                 02 52 50.6
VNA3                              e                 02 53 08.8
SDV   Santo Domingo    122.36 314 ePKPdf   PKPdf    02 51 26.6 +0.5
BDFB  Brasilia         122.42 274 PKIKP    PKPdf    02 51 26.6 +0.5
BDFB                              pmax     pmax
      comp=Z,5.0nm,0.6s
BDFB                              pmax     pmax
      comp=Z,8.0nm,1.0s
BDFB  Brasilia         122.42 274 PKP      PKPdf    02 51 26.6 +0.5
      comp=Z,5.1nm,0.6s,baz=29,slow=1.8,SNR=12
BDFB                              PKKPbc            03 01 22.4
      comp=Z,8.1nm,0.9s,baz=220,slow=4.1,SNR=11
VNDA  Vanda            125.36 165 PKIKP    PKPdf    02 51 30.5 +0.1
VNDA                                                02 53 23.9
VNDA                              pmax     pmax
      comp=Z,7.0nm,0.8s
VNDA                              pmax     pmax
      comp=Z,3.0nm,1.1s
VNDA  Vanda            125.36 165 PKP      PKPdf    02 51 30.5 +0.1
      comp=Z,7.1nm,0.8s,baz=288,slow=4.6,SNR=18
VNDA                              PP       PP       02 53 23.9 -3.9
      comp=Z,3.2nm,1.1s,baz=294,slow=11,SNR=3.3
VNDA  Vanda            125.36 165 ePKPdf   PKPdf    02 51 30.2 -0.2
QSPA  South Pole Qui   126.17 180 eP       PKPdf    02 51 32.3 +0.5
SBA   Scott Base       126.45 165 ePKIKP   PKPdf    02 51 33.8 +1.4
ROSC  El Rosal         127.75 314 PKP      PKPdf    02 51 38.3 +1.6
      comp=Z,67nm,0.7s,baz=120,slow=3.1,SNR=6.8
SAML  Samuel           130.37 292 ePKPdf   PKPdf    02 51 42.5 +0.9
SIV   San Ignacio      133.04 283 SKPbc             02 54 51.7
      comp=Z,1.8nm,0.8s,baz=27,slow=4.5,SNR=3.0
OTAV  Otavalo          133.87 315 ePKPdf   PKPdf    02 51 50.7 +2.5
CPUP  Villa Florida    135.27 268 PKIKP    PKPdf    02 51 50.9 +0.5
CPUP                              pmax     pmax
      comp=Z,38nm,0.7s
CPUP                              pmax     pmax
      comp=N,5.0nm,1.0s
CPUP  Villa Florida    135.27 268 PKP      PKPdf    02 51 50.9 +0.5
      comp=N,38nm,0.7s,baz=94,slow=2.9,SNR=76
CPUP                              SKPbc             02 54 59.0
      comp=N,5.4nm,1.0s,baz=345,slow=2.9,SNR=3.2
CPUP  Villa Florida    135.27 268 PKP      PKPdf    02 51 50.9 +0.5
CPUP                              SKPbc             02 54 59.0
LPAZ  La Paz           138.71 288 PKIKP    PKPdf    02 51 58.5 +1.6
LPAZ                              pmax     pmax
      comp=Z,10.0nm,0.8s
LPAZ  La Paz           138.71 288 PKP      PKPdf    02 51 58.5 +1.6
      comp=Z,10nm,0.8s,baz=43,slow=3.3,SNR=29
LPAZ  La Paz           138.71 288 ePKPdf   PKPdf    02 51 58.6 +1.6
ARE   Arequipa         141.37 291 ePKHKP            02 51 58.0
NNA   Nana             142.27 302 ePKPpre           02 52 00.3
TRQA  Tornquist        142.88 253 ePKPpre           02 52 01.3
TRQA                              ePKPdf   PKPdf    02 52 05.9 +2.2
CFAA  Coronel Fontan   146.11 266 PKPbc    PKPbc    02 52 12.9 +2.1
      comp=Z,12nm,0.8s,baz=55,slow=3.8,SNR=125
CFAA                              pPKPbc            02 53 12.0
      comp=Z,1.8nm,0.7s,baz=88,slow=2.5,SNR=2.3
MDZ   Mendoza          147.00 264 ePKIKP   PKPdf    02 52 13.0 +2.0
PLCA  Paso Flores      149.84 250 P        PKPdf    02 52 17.1 +1.9
PLCA                              P                 02 52 22.2
PLCA                              P                 02 52 34.0
PLCA  Paso Flores      149.84 250 PKHKP             02 52 17.3
PLCA                              pmax     pmax
      comp=Z,24nm,1.1s
PLCA                              pmax     pmax
      comp=Z,134nm,0.9s
PLCA  Paso Flores      149.84 250 PKP      PKPdf    02 52 17.3 +2.1
      comp=Z,24nm,1.1s,baz=148,slow=1.6,SNR=19
PLCA                              PKPbc    PKPdf    02 52 22.1 +6.9
      comp=Z,134nm,0.9s,baz=108,slow=2.3,SNR=114
PLCA  Paso Flores      149.84 250 ePKPdf   PKPdf    02 52 16.9 +1.7
PLCA                              ePKPbc   PKPdf    02 52 22.2 +7.0
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*NEIC **20** 02:40:28.3,35.55N×9.48W,h6^{km},MG3.5(MDD),After MDD.*

*CSEM **20** 02:40:29.7±0.2,35.57N×9.28W,h2^{km},ML3.0/10,Error ellipse: s-maj=4.8km s-min=3.0km az=31.0*

*MDD **20** 02:40:31.2±3.5,35.84N×9.17W,mb3.4/4,Error ellipse: s-maj=33.6km s-min=21.7km az=41.0,PRXIMO*

INMG 20 02:40:29.3±0.8**,35.53N**×**9.51W,h10**^{km}**,ML1.9,Error ellipse: s-maj=4.9km s-min=3.0km az=56.0,West of Gibraltar**

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Code  Station Name       Δ°   AZ° Phase ID          Time       Res
                                  Op       ISC      h  m  s    ISC
PTEO  Sao Teotonio       2.11  17 ePn      Pn       02 41 02.7 -2.5
PTEO                              eSn      Sn       02 41 27.8 -4.0
      3.3nm,0.1s
PTEO  Sao Teotonio       2.11  17 ePn      Pn       02 41 02.7 -2.5
PTEO                              eSn      Sn       02 41 27.8 -4.0
      3.3nm,0.1s
PBEJ  Beja               2.82  27 ePn      Pn       02 41 12.3 -3.1
PBEJ                              eSn      Sn       02 41 44.5 -5.3
      2.0nm,0.1s
PBEJ  Beja               2.82  27 ePn      Pn       02 41 12.3 -3.1
PBEJ                              eSn      Sn       02 41 44.5 -5.3
      2.0nm,0.1s
MOE   Montemor           3.13  17 ePn      Pn       02 41 17.0 -2.7
MOE                               eSn      Sn       02 41 52.1 -5.5
EMIN  Mina Concepcio     3.20  45 Pn       Pn       02 41 17.5 -3.2
      1.6nm,0.1s,SNR=22
EMIN                              Sn       Sn       02 41 52.9 -6.4
      1.6nm,0.1s,SNR=8.7
EMIN  Mina Concepcio     3.20  45 Pn       Pn       02 41 17.5 -3.1
      1.6nm,0.1s,SNR=22
EMIN                              Sn       Sn       02 41 52.9 -6.3
      1.6nm,0.1s,SNR=8.7
ESPR  Espera             3.25  65 Pn       Pn       02 41 18.1 -3.3
      0.4nm,0.1s,SNR=4.8
ESPR                              Sn       Sn       02 41 55.1 -5.4
      14nm,0.3s,SNR=7.9
ESPR  Espera             3.25  65 Pn       Pn       02 41 18.1 -3.2
      0.4nm,0.1s,SNR=4.8
ESPR                              Sn       Sn       02 41 55.1 -5.4
      14nm,0.3s,SNR=7.9
EBAD  Badajoz            3.79  31 Pn       Pn       02 41 25.4 -3.7
      1.6nm,0.1s,SNR=31
EBAD                              Sn       Sn       02 42 08.5 -5.8
      1.5nm,0.1s,SNR=7.9
EBAD  Badajoz            3.79  31 Pn       Pn       02 41 25.4 -3.7
      1.6nm,0.1s,SNR=31
EBAD                              Sn       Sn       02 42 08.5 -5.8
      1.5nm,0.1s,SNR=7.9
EMIJ  Mijas              3.98  74 Pn       Pn       02 41 27.9 -3.8
      0.4nm,0.4s,SNR=7.9
EMIJ                              Sn       Sn       02 42 12.3 -6.6
      0.7nm,0.2s,SNR=7.9
PTOM  Tomar              4.18  12 ePn      Pn       02 41 31.1 -3.5
PTOM                              eSn      Sn       02 42 16.9 -7.2
      2.3nm,0.1s
PTOM  Tomar              4.18  12 Pn       Pn       02 41 31.1 -3.5
PTOM                              Sn       Sn       02 42 16.9 -7.2
      1.1nm,0.1s
PCBR  Castelo Branco     4.60  20 ePn      Pn       02 41 36.7 -3.9
PCBR                              eSn      Sn       02 42 27.3 -7.4
EADA  Adamuz             4.75  55 Pn       Pn       02 41 38.8 -4.0
      0.2nm,0.1s,SNR=7.9
EADA                              Sn       Sn       02 42 30.9 -7.7
      1.8nm,0.1s,SNR=7.9
EADA  Adamuz             4.75  55 Pn       Pn       02 41 38.8 -4.0
      0.2nm,0.1s,SNR=7.9
EADA                              Sn       Sn       02 42 30.9 -7.7
      1.8nm,0.1s,SNR=7.9
ECOG  Cogollos-Vega      5.10  68 Sn       Sn       02 42 39.5 -7.9
      2.2nm,0.3s,SNR=7.9
MTE   Manteigas          5.11  17 ePn      Pn       02 41 43.6 -4.2
MTE                               eSn      Sn       02 42 39.6 -8.0
EBAN  Banos Encina       5.29  58 Sn       Sn       02 42 43.3 -8.9
      0.8nm,0.1s,SNR=7.9
PVIS  Viseu              5.34  13 eSn      Sn       02 42 45.3 -8.0
PVIS  Viseu              5.34  13 Sn       Sn       02 42 45.3 -8.0
PVRL  Vila Real          5.91  13 ePn      Pn       02 41 54.8 -4.3
PVRL                              eSn      Sn       02 42 58.5 -9.2
ESDC  Sonseca Array      6.04  45 Pn       Pn       02 41 56.8 -4.2
      1.1nm,0.1s,baz=235,slow=13,SNR=7.9
ESDC  Sonseca Array      6.04  45 Pn       Pn       02 41 56.8 -4.2
      1.1nm,0.1s,SNR=7.9
ELOB  Lobios             6.43  10 Pn       Pn       02 42 02.3 -4.2
      0.3nm,0.0s,SNR=7.9
ELOB                              Sn       Sn       02 43 10.0  -11
      0.4nm,0.1s,SNR=7.9
ELOB  Lobios             6.43  10 Pn       Pn       02 42 02.3 -4.2
      0.3nm,0.0s,SNR=7.9
ELOB                              Sn       Sn       02 43 10.0  -11
      0.4nm,0.1s,SNR=7.9
ECAL  Calabor            6.76  18 Pn       Pn       02 42 06.6 -4.5
      0.3nm,0.1s,SNR=7.9
ECAL  Calabor            6.76  18 Pn       Pn       02 42 06.6 -4.5
      0.3nm,0.1s,SNR=7.9
ETOB  Tobarra            7.08  62 P        Pn       02 42 15.1 -0.6
      55nm,0.9s
ETOB  Tobarra            7.08  62 Sn       Sn       02 43 26.4  -11
      0.3nm,0.2s,SNR=7.9
ETOB  Tobarra            7.08  62 Sn       Sn       02 43 26.4  -11
      0.3nm,0.2s,SNR=7.9
ERUA  La Rua             7.10  14 Sn       Sn       02 43 26.7  -11
      18nm,0.8s,SNR=7.9
EPON  Pontenova          8.00  12 P        P        02 42 30.9 +2.4
      48nm,0.8s
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*IDC **20** 02:44:52.0±0.4,26.62S×176.17W,mb4.9/20,mb1 5.1/22, mb1mx5.0/23,mbtmp4.9/22,MS5.3/20,Ms1 5.3/20, ms1mx5.3/24,Error ellipse: s-maj=18.4km s-min=13.0km az=141.0*

*BJI **20** 02:44:53.6,26.35S×175.88W,h13^{km},mB5.9,mb5.2, Ms5.7,Msz5.4*

*MOS **20** 02:44:54.0±1.5,26.60S×176.26W,h10^{km},mb5.6/30, MS5.5/45,Error ellipse: s-maj=11.6km s-min=8.3km az=68.2*

*HRVD **20** 02:44:54.2±0.1,26.70S×175.64W,h12^{km},MW5.8/75, Centroid moment Tensor Solution. LP body waves: s70,c158;Mantle waves: s75,c254; Half duration: $1^{s}9$ Moment tensor: Scale 10^{17}Nm; M_{rr}3.69±.04; $M_{\theta\theta}$0.27±.04; $M_{\phi\phi}$-3.96±.04; $M_{r\theta}$0.85±.11; $M_{\theta\phi}$-0.34±.03; $M_{\phi r}$4.60±.11; Best double couple: $M_0$6.052×10^{17} NP1:ϕ_s179°,δ20°,λ81°. NP2:ϕ_s9°,δ70°,λ93°. Principal axes: T 5.916, Plg64°, Azm285°; N .274, Plg3°, Azm188°; P -6.188, Plg25°, Azm97°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **20** 02:44:54.2±0.1,26.72S×176.17W,h10^{km},mb5.5/59, MS5.6/131,MW5.6 Error ellipse: s-maj=8.1km s-min=4.8km az=141.0,Moment Tensor Solution. s8 Moment tensor: Scale 10^{17}Nm; M_{rr}2.41; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$-1.89; $M_{r\theta}$1.00; $M_{\theta\phi}$-0.96; $M_{\phi r}$1.29; Best double couple: $M_0$2.9×10^{17} NP1:ϕ_s202°,δ28°,λ80°. NP2:ϕ_s33°, δ62°,λ95°. Principal axes: T 2.92, Plg72°, Azm316°; N -.05, Plg5°, Azm211°; P -2.87, Plg17°, Azm119°;*

*BGS **20** 02:44:59.1±2.3,26.72S×176.17W,h10^{km}*

ISC 20 02:44:53.1±0.2**,26.74S**±0.05×**176.21W**±0.05**,h12**^{km}**, h12**^{km}±2.2^{km}**:pP-P,n469,**σ**0^{s}96**/221**,mb5.4**/77**,MS5.5**/155**, 17C-9D,South of Fiji Islands**

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Code  Station Name       Δ°   AZ° Phase ID          Time       Res
                                  Op       ISC      h  m  s    ISC
RAO   Raoul Island       2.92 211 Pn       Pn       02 45 40.3  0.0
      516nm,0.3s,baz=85,slow=7.6,SNR=18
RAO                               Sn       Sn       02 46 18.3 +2.7
      721nm,0.3s,baz=83,slow=22,SNR=4.1
RAO                               LR       LR       02 46 34.4
      comp=Z,34μm,18.8s,baz=109,slow=34
RAO   Raoul Island       2.92 211 ePn      Pn       02 45 41.1 +0.8
RAO                               eSn      Sn       02 46 15.8 +0.2
URZ   Urewera           12.79 204 Pn       P        02 47 49.7 -7.8
      1.6nm,0.3s,baz=78,slow=4.4,SNR=8.0
URZ                               Sn       S        02 50 10.2  -11
      4.1nm,0.3s,baz=191,slow=19,SNR=7.0
AFI   Afiamalu          13.43  19 eP       P        02 47 57.7 -8.4
AFI                               pmax     pmax
      comp=Z,260nm,0.9s
AFI   Afiamalu          13.43  19 Pn       P        02 47 57.6 -8.5
      comp=Z,15nm,0.3s,baz=83,slow=2.5,SNR=13
AFI                               Sn       S        02 50 15.9  -20
      comp=Z,4.7nm,0.3s,baz=217,slow=20,SNR=3.5
AFI                               LR       LR       02 51 40.9
      comp=Z,8μm,18.2s,baz=59,slow=31
AFI   Afiamalu          13.43  19 eP       P        02 47 57.7 -8.4
      comp=Z,260nm,0.9s
AFI                               eS       S        02 50 18.0  -18
RAR   Rarotonga         16.00  73 eP       P        02 48 28.3  -11
DZM   Mont Dzumac       16.46 283 eP       P        02 48 50.0 +4.4
DZM   Mont Dzumac       16.46 283 Pn       P        02 48 51.1 +5.4
      comp=Z,0.4nm,0.3s,baz=99,slow=12,SNR=23
DZM                               LR       LR       02 52 49.3
      comp=Z,9μm,18.0s,baz=88,slow=29
NOUC  Port Laguerre     16.58 282 eP       P        02 48 52.7 +5.6
RPZ   Rata Peaks        19.83 208 P        P        02 49 23.9 -2.7
      comp=Z,1.2nm,0.3s,baz=7.8,slow=4.0,SNR=3.9
RPZ                               LR       LR       02 56 58.5
      comp=Z,12μm,19.7s,baz=23,slow=36
TBI   Tubuai            24.45  88 eP       Px       02 49 47.3
      comp=Z,2μm,29.2s
TBI                               eLQ               02 54 15.3
      comp=Z,9μm,27.0s
TBI                               eLR      LR       02 55 26.9
      comp=Z,25μm,29.0s,baz=255
PPT   Papeete           26.26  75 eP       Px       02 50 01.8
      comp=Z,694nm,22.5s
PPT                               eLQ               02 54 43.1
      comp=Z,16μm,23.8s
PPT                               eLR      LR       02 56 10.3
      comp=Z,30μm,27.8s,baz=241
PPT   Papeete           26.26  75 LR       LR       02 59 32.4
      comp=Z,9μm,19.1s,MS5.3,baz=250,slow=34
HNR   Honiara           28.37 303 LR       LR       03 00 20.2
      comp=Z,3μm,19.5s,MS4.8,baz=145,slow=33
HNR   Honiara           28.37 303 PFAKE             02 51 00.0  +11
HNR                               LR       LR
      comp=Z,6μm,22.0s,MS5.1
TAU   Tasmania Unive    33.70 232 eP       P        02 51 35.7 -0.5
TAU                               pmax     pmax
      comp=Z,63nm,1.0s,mb5.5
TAU                               MLR      MLR
      comp=Z,1μm,19.0s,MS4.7
TAU   Tasmania Unive    33.70 232 eP       P        02 51 35.7 -0.5
      comp=Z,63nm,1.0s,mb5.5
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TAU				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
TOO	**Toolangi**	**33.96**	**242**	*e*P	**P**	**02 51 39.6**	**+1.1**
	comp=Z,15nm,0.8s,mb5.0						
TOO	**Toolangi**	**33.96**	**242**	*e*P	**P**	**02 51 39.6**	**+1.1**
TOO				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
CTA	**Charters Tower**	**34.98**	**273**	*e*P	**P**	**02 51 48.2**	**+0.7**
	comp=Z,36nm,1.1s,mb5.2						
CTA	**Charters Tower**	**34.98**	**273**	*e*P	**P**	**02 51 48.2**	**+0.7**
CTA				pmax	pmax		
	comp=Z,36nm,1.1s						
CTA	**Charters Tower**	**34.98**	**273**	P	**P**	**02 51 47.2**	**-0.2**
	comp=Z,8.9nm,0.4s,mb5.1,baz=99,slow=11,SNR=27						
CTA				LR	LR	03 04 12.0	
	comp=Z,8µm,18.8s,MS5.5,baz=106,slow=33						
CTAO	**Charters Tower**	**34.98**	**273**	*e*P	**P**	**02 51 47.6**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,163nm,1.5s,mb5.7						
CTAO				MLR	MLR		
	comp=Z,8µm,19.0s,MS5.5						
CTAO	**Charters Tower**	**34.98**	**273**	*e*P	**P**	**02 51 47.6**	**+0.2**
	comp=Z,163nm,1.5s,mb5.7						
CTAO				LR	LR		
	comp=Z,8µm,19.0s,MS5.5						
STKA	**Stephens Creek**	**36.98**	**252**	*e*P	**P**	**02 52 05.7**	**+1.5**
	comp=Z,14nm,1.2s,mb4.7						
STKA	**Stephens Creek**	**36.98**	**252**	P	**P**	**02 52 04.0**	**-0.2**
	comp=Z,4.7nm,0.7s,mb4.5,baz=346,slow=9.0,SNR=7.3						
STKA				LR	LR	03 04 53.4	
	comp=Z,7µm,20.9s,MS5.4,baz=91,slow=32						
TAOE	**Nuku Hiva Isla**	**38.48**	**69**	*e*LQ		03 00 33.6	
	comp=Z,26µm,34.0s						
TAOE				*e*LR	LR	03 01 49.5	
	comp=Z,27µm,27.5s,baz=249						
KWAJ	**Kwajalein Atol**	**38.66**	**334**	PFAKE		02 52 30.0	+11
KWAJ				LR	LR		
	comp=Z,903nm,22.0s,MS4.5						
PMG	**Port Moresby**	**38.66**	**290**	*e*P	**P**	**02 52 18.1**	**-0.5**
PMG				pmax	pmax		
	comp=Z,43nm,1.0s						
PMG				MLR	MLR		
	comp=Z,6µm,20.0s						
PMG	**Port Moresby**	**38.66**	**290**	P	**P**	**02 52 18.0**	**-0.5**
	comp=Z,12nm,0.8s,mb4.7,baz=78,slow=1.5,SNR=4.9						
PMG	**Port Moresby**	**38.66**	**290**	*e*P	**P**	**02 52 18.1**	**-0.4**
	comp=Z,43nm,1.0s,mb5.1						
PMG				LR	LR		
	comp=Z,6µm,20.0s,MS5.4						
PTCN	**Pitcairn Islan**	**41.34**	**98**	PFAKE		02 52 50.0	+9.4
PTCN				LR	LR		
	comp=Z,9µm,19.0s,MS5.7						
WB2	**Warramunga Arr**	**45.67**	**268**	*e*P	**P**	**02 53 13.7**	**-2.0**
WB2				*e*S	**S**	**02 59 57.4**	**-0.2**
WRAB	**Tennant Creek**	**45.67**	**268**	P	**P**	**02 53 13.9**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,69nm,0.9s,mb5.6						
WRAB	**Tennant Creek**	**45.67**	**268**	*e*P	**P**	**02 53 13.6**	**-2.2**
	comp=Z,68nm,0.8s,mb5.6						
WRAB				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
WRA	**Warramunga Arr**	**45.68**	**268**	P	**P**	**02 53 14.7**	**-1.1**
	comp=Z,9.9nm,0.4s,mb5.1,baz=105,slow=5.9,SNR=79						
WRA				S	**S**	**02 59 57.5**	**-0.3**
	comp=Z,3.3nm,1.0s,baz=103,slow=15,SNR=4.5						
DRV	**Dumont d'Urvil**	**48.11**	**202**	P	**P**	**02 53 41.0**	**+6.6**
DRV				S	**S**	**03 00 41.0**	**+9.3**
FORT	**Forrest**	**48.60**	**251**	*e*P	**P**	**02 53 36.7**	**-2.0**
	comp=Z,30nm,0.6s,mb5.5						
WAKE	**Wake Island**	**48.68**	**338**	PFAKE		02 53 50.0	+11
WAKE				LR	LR		
	comp=Z,4µm,19.0s,MS5.4						
POHA	**Pohakuloa**	**50.39**	**26**	PFAKE		02 54 00.0	+7.5
POHA				LR	LR		
	comp=Z,24µm,19.0s,MS6.2						
SBA	**Scott Base**	**51.79**	**185**	*e*P	**P**	**02 54 02.4**	**0.0**
SBA				pmax	pmax		
	comp=Z,193nm,1.5s,mb5.8						
SBA				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.3						
SBA	**Scott Base**	**51.79**	**185**	*e*P	**P**	**02 54 02.4**	**0.0**
	comp=Z,193nm,1.5s,mb5.8						
SBA				LR	LR		
	comp=Z,3µm,21.0s,MS5.3						
VNDA	**Vanda**	**51.88**	**186**	P	**P**	**02 54 04.5**	**+1.3**
	comp=Z,8.9nm,0.9s,mb4.7,baz=356,slow=7.4,SNR=8.7						
VNDA				LR	LR	03 12 21.5	
	comp=Z,3µm,20.0s,MS5.3,baz=21,slow=32						
VNDA	**Vanda**	**51.88**	**186**	*e*P	**P**	**02 54 04.5**	**+1.3**
VNDA				LR	LR		
	comp=Z,3µm,20.0s,MS5.3						
FITZ	**Fitzroy Crossi**	**54.05**	**266**	*e*P	**P**	**02 54 18.4**	**-1.5**
	comp=Z,33nm,0.8s,mb5.3						
FITZ	**Fitzroy Crossi**	**54.05**	**266**	P	**P**	**02 54 18.4**	**-1.5**
	comp=Z,45nm,0.8s,mb5.4,baz=158,slow=6.6,SNR=19						
MIDW	**Midway**	**54.65**	**359**	PFAKE		02 54 40.0	+16
MIDW				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
GUMO	**Guam**	**55.11**	**312**	PFAKE		02 54 40.0	+12
GUMO				LR	LR		
	comp=Z,2µm,21.0s,MS5.2						
KLBR	**Kellerberrin**	**57.09**	**248**	*e*P	**P**	**02 54 41.0**	**-0.8**
	comp=Z,50nm,1.3s,mb5.4						
NWAO	**Narrogin (SRO)**	**57.22**	**247**	PFAKE		02 54 50.0	+7.3
NWAO				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
MBWA	**Marble Bar**	**58.28**	**261**	PFAKE		02 55 00.0	+10
MBWA				LR	LR		
	comp=Z,7µm,19.0s,MS5.8						
RPN	**Rapa Nui**	**58.94**	**107**	PFAKE		02 55 10.0	+15
RPN				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
CASY	**Casey**	**59.10**	**207**	*e*P	**P**	**02 54 54.7**	**-0.7**
	comp=Z,106nm,0.9s,mb5.9						
CASY				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
QSPA	**South Pole Qui**	**63.36**	**180**	*e*P	**P**	**02 55 23.1**	**-0.9**
	comp=Z,42nm,0.8s,mb5.6						
MIR	**Mirnyy**	**66.09**	**206***d*	*i*P	**P**	**02 55 46.0**	**+4.2**
MIR				pmax	pmax		
	comp=Z,163nm,1.4s,mb5.9						
MIR				MLR	MLR		
	comp=N,2µm,16.0s,MS5.5						
MIR				MLR	MLR		
	comp=E,2µm,16.0s,MS5.5						
MIR				MLR	MLR		
	comp=Z,5µm,16.0s,MS5.8						
JHJ	**Hachijo jima 2**	**72.76**	**322**	LR	LR	03 26 02.9	
	comp=Z,836nm,18.8s,MS5.0,baz=123,slow=34						
PMSA	**Palmer Station**	**74.94**	**156**	PFAKE		02 56 50.0	+15
PMSA				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
KSM	**Kuching**	**75.95**	**279**	*e*P	**P**	**02 56 41.0**	**-1.2**
MJAR	**Matsushiro Arr**	**76.19**	**324**	P	**P**	**02 56 42.1**	**-1.0**
	comp=Z,7.1nm,0.8s,mb4.7,baz=161,slow=6.2,SNR=12						
MJAR				LR	LR	03 26 43.4	
	comp=Z,2µm,20.8s,MS5.3,baz=125,slow=33						
MAJO	**Matsushiro**	**76.19**	**324**	*e*P	**P**	**02 56 42.5**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,335nm,2.0s,mb5.9						
MAJO				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.4						
MAJO	**Matsushiro**	**76.19**	**324**	*e*P	**P**	**02 56 42.5**	**-0.5**
	comp=Z,335nm,2.0s,mb5.9						
MAJO				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
MAT	**Matsushiro**	**76.19**	**324**	*e*P	**P**	**02 56 42.0**	**-1.1**
MAT				*e*S	S	03 06 29.0	+3.5
MAT				pmax	pmax		
	comp=Z,81nm,1.5s,mb5.4						
MAT				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.4						
MAT	**Matsushiro**	**76.19**	**324**	*e*P	**P**	**02 56 42.0**	**-1.1**
	comp=Z,81nm,1.5s,mb5.4						
MAT				*e*S	S	03 06 29.0	+3.5
MAT				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
MAT	**Matsushiro**	**76.19**	**324**	P	**P**	**02 56 42.3**	**-0.8**
MAT				S	S	03 06 29.0	+3.5
MAW	**Mawson**	**76.27**	**200**	*e*P	**P**	**02 56 43.6**	**+0.7**
	comp=Z,22nm,1.0s,mb5.0						
MAW				*e*S	S	03 06 32.7	+6.9
MAW	**Mawson**	**76.27**	**200**	*e*P	**P**	**02 56 43.6**	**+0.7**
MAW				*e*S	S	03 06 32.7	+6.9
MAW				pmax	pmax		
	comp=Z,22nm,1.0s						
MAW	**Mawson**	**76.27**	**200**	P	**P**	**02 56 43.2**	**+0.3**
	comp=Z,22nm,0.8s,mb5.1,baz=130,slow=6.9,SNR=20						
MAW				LR	LR	03 30 49.1	
	comp=Z,5µm,18.1s,MS5.9,baz=115,slow=36						
JNU	**Nakatsue**	**77.92**	**317**	LR	LR	03 27 18.7	
	comp=Z,653nm,20.2s,MS5.0,baz=143,slow=33						
NACB	**Ninganchiao**	**78.53**	**304**	*e*P	**P**	**02 56 56.3**	**0.0**
YUK	**Yuzh-Kuril'sk**	**78.53**	**333**	*e*P	**P**	**02 56 55.5**	**-0.4**
YUK				*e*		02 57 02.5	
YUK				S	S	03 07 00.5	+10
YUK				*e*PS	PS	03 07 41.0	+6.4
YUK				*e*SS	SS	03 11 58.0	+0.8
YUK				pmax	pmax		
	comp=Z,1µm,5.0s						
YUK				smax			
	comp=N,4µm,12.0s						
YUK				smax			
	comp=E,3µm,13.0s						
TATO	**Taipei**	**79.08**	**305**	*e*P	**P**	**02 56 59.3**	**0.0**
	comp=E,255nm,1.4s,mb6.0						
TATO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
SMY	**Shemya**	**79.58**	**354**	PFAKE		02 57 10.0	+8.6
SMY				LR	LR		
	comp=Z,5µm,20.0s,MS5.9						
FX1	**Attu Island--F**	**79.82**	**353**	LR	LR	03 27 21.1	
	comp=Z,52nm,18.3s,baz=196,slow=32						
UNV	**Unalaska Valle**	**80.69**	**6**	PFAKE		02 57 20.0	+13
UNV				LR	LR		
	comp=Z,4µm,19.0s,MS5.7						
SKR	**Severo-Kuril's**	**80.88**	**343**	*e*P	**P**	**02 57 12.0**	**+3.7**
SKR				*e*PPP	PPP	03 02 06.3	+0.3
SKR				*e*S	S	03 07 21.0	+5.8
SKR				pmax	pmax		
	comp=Z,2600µm,1.0s						
SKR				smax			
	comp=N,5µm,12.0s						
SKR				smax			
	comp=E,5µm,10.0s						
SKR				MLR	MLR		
	comp=N,3µm,18.0s,MS5.8						
SKR				MLR	MLR		
	comp=E,2µm,18.0s,MS5.8						
SKR				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.7						
SYO	**Syowa Base**	**81.02**	**192**	⇓P	**P**	**02 57 06.7**	**-2.0**
SYO	**Syowa Base**	**81.02**	**192**	⇑pP	pP	02 57 10.4	-2.2
QZH	**Quanzhou**	**81.20**	**304**	⇑*i*P	**P**	**02 57 11.0**	**+0.4**
QZH				S	S	03 07 24.0	+4.9
QZH				AMB	AMB		
	comp=Z,170nm,1.4s,mb5.8						
QZH				AMB	AMB		
	comp=Z,990nm,3.2s						
QZH				LR	LR		
	comp=Z,4µm,40.0s,MS5.5						
SAO	**San Andreas Ge**	**81.51**	**42**	P	**P**	**02 57 07.8**	**-4.2**
SAO				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1						
SAO	**San Andreas Ge**	**81.51**	**42**	P	**P**	**02 57 12.4**	**+0.4**
	comp=Z,27nm,1.1s,mb5.1						
SAO				LR	LR		
	comp=Z,5µm,19.0s,MS5.9						
SNAA	**Sanae**	**81.75**	**178**	*e*	**P**	**02 57 15.0**	**+2.5**
SNAA	**Sanae**	**81.75**	**178**	*e*	**P**	**02 57 15.7**	**+3.2**
SNAA	**Sanae**	**81.75**	**178**	*e*	**P**	**02 57 17.2**	**+4.7**
SNAA	**Sanae**	**81.75**	**178**	*e*	**P**	**02 57 25.8**	**+13**
SNAA	**Sanae**	**81.75**	**178**	LR	LR	03 27 44.7	
	comp=Z,477nm,21.4s,MS4.8,baz=203,slow=31						
SNAA	**Sanae**	**81.75**	**178**	⇑*i*P	**P**	**02 57 12.1**	**-0.4**
SNAA				*e*	pP	02 57 15.0	-1.4
SNAA				*e*	pP	02 57 15.7	-0.7
SNAA				*e*	pP	02 57 17.2	+0.8
SNAA				*e*		02 57 25.8	
SNAA				*e*		03 01 37.0	
SNAA				*e*		03 02 35.0	
VNA3	**Neumayer Olymp**	**81.83**	**176**	*e*	**P**	**02 57 15.2**	**+2.3**
VNA3	**Neumayer Olymp**	**81.83**	**176**	*e*	**P**	**02 57 17.4**	**+4.5**
VNA3	**Neumayer Olymp**	**81.83**	**176**	*e*	**P**	**02 57 25.3**	**+12**
VNA3	**Neumayer Olymp**	**81.83**	**176**	P	**P**	**02 57 12.5**	**-0.4**
VNA3				*e*	pP	02 57 15.2	-1.6
VNA3				*e*	pP	02 57 17.4	+0.6
VNA3				*e*		02 57 25.3	
VNA3				*e*		03 01 28.6	
VNA3				*e*		03 02 31.6	
HOPS	**Hopland**	**82.09**	**39**	PFAKE		02 57 30.0	+15
HOPS				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
YSS	**Yuzh-Sakhalins**	**82.18**	**333***j*	*e*P	**P**	**02 57 16.0**	**+0.8**
YSS				*e*		02 57 23.2	
YSS						03 00 26.0	
YSS				*e*S	S	03 07 37.0	+8.4
YSS				*e*PPS	PPS	03 08 38.0	-3.1
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
YSS				smax			
	comp=N,3µm,13.0s						
YSS				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.4						
YSS				MLR	MLR		
	comp=N,1µm,18.0s						
YSS	**Yuzh-Sakhalins**	**82.18**	**333**	*e*P	**P**	**02 57 16.4**	**+1.2**
	comp=N,99nm,1.1s,mb5.7						
YSS				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
VNA2	**Neumayer--Watz**	**82.29**	**176**	*e*	**P**	**02 57 18.2**	**+2.9**
VNA2	**Neumayer--Watz**	**82.29**	**176**	*e*	**P**	**02 57 20.3**	**+5.0**
VNA2	**Neumayer--Watz**	**82.29**	**176**	*e*	**P**	**02 57 27.6**	**+12**
VNA2	**Neumayer--Watz**	**82.29**	**176**	⇑*i*P	**P**	**02 57 15.4**	**+0.1**
VNA2				*e*	pP	02 57 18.2	-0.9
VNA2				*e*	pP	02 57 20.3	+1.2
VNA2				*e*		02 57 27.6	
VNA2				*e*		03 01 31.2	
VNA2				*e*		03 02 34.8	
PET	**Petropavlovsk**	**82.39**	**345***c*	*i*P	**P**	**02 57 15.6**	**-0.6**
PET				*e*		03 00 33.0	
PET				*i* S	S	03 07 34.5	+3.8
PET				*e*PS	PS	03 08 27.8	+5.2
PET				*e*SS	SS	03 12 58.1	+3.2
PET				pmax	pmax		
	comp=Z,700nm,11.5s						
PET				pmax	pmax		
	comp=Z,700nm,7.4s						
PET				pmax	pmax		
	comp=Z,200nm,15.6s						
PET				smax			
	comp=E,2µm,14.6s						
PET				smax			
	comp=N,2µm,14.8s						
PET	**Petropavlovsk**	**82.39**	**345**	*e*P	**P**	**02 57 16.6**	**+0.4**
PET				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
VNA1	**Neumayer--Stat**	**82.50**	**176**	*e*	**P**	**02 57 19.4**	**+3.0**
VNA1	**Neumayer--Stat**	**82.50**	**176**	*e*	**P**	**02 57 21.7**	**+5.3**
VNA1	**Neumayer--Stat**	**82.50**	**176**	*e*	**P**	**02 57 28.8**	**+12**
VNA1	**Neumayer--Stat**	**82.50**	**176**	P	**P**	**02 57 16.5**	**+0.1**
VNA1				*e*	pP	02 57 19.4	-0.9
VNA1				*e*	pP	02 57 21.7	+1.4
VNA1				*e*		02 57 28.8	
VNA1				*e*		03 01 21.8	
VNA1				*e*		03 02 34.4	
PFO	**Pinyon Flat Ob**	**82.57**	**47**	PFAKE		02 57 30.0	+12
PFO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
NVL	**N'lazarevskaya**	**82.60**	**183**	⇓*i*P	**P**	**02 57 19.8**	**+2.9**
NVL				*i*	pP	02 57 23.4	+2.6
NVL				*i* *PP	pP	02 57 27.1	+6.3
NVL				*i*		03 00 24.5	
NVL				*i* S	S	03 07 27.0	-5.5
NVL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
NVL				MLR	MLR		
	comp=Z,510nm,16.6s,MS5.0						
SSE	**Sheshan**	**82.93**	**310**	P	**P**	**02 57 20.3**	**+0.8**
SSE				XP	sP	02 57 24.8	+0.2
SSE				PP	PP	03 00 28.3	-3.7
SSE				S	S	03 07 39.8	+3.1
SSE				XS		03 07 45.3	
SSE				SS	SS	03 13 04.3	+0.8
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,520nm,11.3s						
SSE				LR	LR		
	comp=N,640nm,22.0s,MS5.1						
SSE				LR	LR		
	comp=E,740nm,22.2s,MS5.1						
SSE				LR	LR		
	comp=Z,1µm,23.0s,MS5.3						
SSE	**Sheshan**	**82.93**	**310**	P	**P**	**02 57 20.2**	**+0.7**
	comp=Z,27nm,0.7s,mb5.4						
SSE				sP	sP	02 57 24.8	+0.2
SSE				PP	PP	03 00 28.3	-3.7
SSE				S	S	03 07 39.8	+3.1
SSE				sS		03 07 45.3	
SSE				SS	SS	03 13 04.2	+0.7
SSE				LR	LR		
	comp=Z,1µm,23.0s,MS5.3						
CMB	**Columbia Colle**	**82.99**	**41**	*e*P	**P**	**02 57 19.4**	**-0.2**
CMB				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.3						
CMB				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.9						
CMB	**Columbia Colle**	**82.99**	**41**	*e*P	**P**	**02 57 19.4**	**-0.2**
	comp=Z,41nm,1.4s,mb5.3						
CMB				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
KHMM	**Horse Mountain**	**83.04**	**37**	*e*P	**P**	**02 57 17.9**	**-1.9**
INCN	**Inchon**	**83.42**	**318**	PFAKE		02 57 30.0	+8.2
INCN				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
WDC	**Whiskeytown Da**	**83.48**	**38**	*e*P	**P**	**02 57 22.1**	**0.0**
WDC				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.3						
WDC				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.3						
WDC	**Whiskeytown Da**	**83.48**	**38**	*e*P	**P**	**02 57 22.1**	**0.0**
	comp=Z,35nm,1.1s,mb5.3						
WDC				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
OMM	**Old Mammoth Mi**	**83.55**	**42**	*e*P	**P**	**02 57 22.6**	**+0.1**
MTUM	**Tungsten Hills**	**83.63**	**43**	*e*P	**P**	**02 57 23.6**	**+0.7**
PLCA	**Paso Flores**	**83.83**	**133**	P	**P**	**02 57 23.2**	**-0.7**
	comp=Z,5.0nm,0.8s,mb4.7,baz=233,slow=5.1,SNR=6.1						
PLCA				LR	LR	03 29 40.6	
	comp=Z,2µm,18.0s,MS5.5,baz=245,slow=32						
PLCA	**Paso Flores**	**83.83**	**133**	*e*P	**P**	**02 57 23.6**	**-0.3**
PLCA				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
YBH	**Yreka Blue Hor**	**84.18**	**37**	*e*P	**P**	**02 57 25.2**	**-0.4**
YBH				pmax	pmax		
	comp=Z,24nm,1.1s						
YBH				MLR	MLR		
	comp=Z,1µm,19.0s						
YBH	**Yreka Blue Hor**	**84.18**	**37**	P	**P**	**02 57 25.0**	**-0.6**
	comp=Z,17nm,0.9s,mb5.2,baz=186,slow=3.5,SNR=31						
YBH	**Yreka Blue Hor**	**84.18**	**37**	*e*P	**P**	**02 57 25.2**	**-0.4**
	comp=Z,24nm,1.1s,mb5.2						
YBH				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
WCN	**Washoe City**	**84.20**	**41**	*e*P	**P**	**02 57 25.0**	**-0.7**
WCN				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.3						
WCN	**Washoe City**	**84.20**	**41**	*e*P	**P**	**02 57 25.0**	**-0.8**
	comp=Z,24nm,1.0s,mb5.3						
BEKR	**Beckwourth**	**84.23**	**40**	*e*P	**P**	**02 57 25.8**	**-0.1**
	comp=Z,98nm,1.8s,mb5.6						
LTIM	**Timbered Crate**	**84.47**	**38**	P	**P**	**02 57 27.8**	**+0.7**
NVAR	**Mina Array Bea**	**84.48**	**42**	P	**P**	**02 57 26.6**	**-0.6**
	comp=Z,13nm,0.9s,mb5.0,baz=210,slow=6.9,SNR=28						
NVAR				LR	LR	03 31 21.6	
	comp=Z,6µm,18.1s,MS6.0,baz=245,slow=33						
HUMO	**Hull Mountain**	**84.66**	**36**	*e*P	**P**	**02 57 27.7**	**-0.2**
	comp=Z,87nm,1.6s,mb5.6						
HUMO				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
NEN	**Nelson**	**84.88**	**46**	*e*P	**P**	**02 57 29.3**	**+0.1**
QIZ	**Qiongzhong**	**84.90**	**294**	P	**P**	**02 57 29.8**	**+0.1**
QIZ				S	S	03 07 53.4	-3.1
QIZ				LR	LR		
	comp=N,640nm,17.1s						
QIZ	**Qiongzhong**	**84.90**	**294**	PFAKE		02 57 40.0	+10
QIZ				LR	LR		
	comp=Z,674nm,19.0s,MS5.0						
TPH	**Tonopah**	**84.91**	**43**	*e*P	**P**	**02 57 29.7**	**+0.4**
TPH				pmax	pmax		
	comp=Z,66nm,1.4s,mb5.6						
TPH				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.7						
TPH	**Tonopah**	**84.91**	**43**	*e*P	**P**	**02 57 29.6**	**+0.3**
	comp=Z,66nm,1.4s,mb5.6						
TPH				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
SFJM	**Santa Fe**	**85.01**	**64**	*i* P	**P**	**02 57 30.0**	**-0.2**
NJ2	**Nanjing**	**85.10**	**309**	*e*P	**P**	**02 57 30.8**	**+0.4**
NJ2				AP	pP	02 57 41.6	+7.3
NJ2				XP	sP	02 57 45.8	+10
NJ2				PP	PP	03 00 49.8	+0.4
NJ2				S	S	03 07 57.0	-1.3
NJ2				XS		03 08 14.0	
NJ2				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,840nm,8.4s						
NJ2				LR	LR		
	comp=N,5µm,18.4s,MS6.3						
NJ2				LR	LR		
	comp=E,10µm,16.4s,MS6.3						
NJ2				LR	LR		
	comp=Z,9µm,20.4s,MS6.2						
TUC	**Tucson**	**85.59**	**51**	*e*P	**P**	**02 57 32.7**	**-0.2**
TUC				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.4						
TUC				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.6						
TUC	**Tucson**	**85.59**	**51**	*e*P	**P**	**02 57 32.7**	**-0.2**
	comp=Z,27nm,1.1s,mb5.4						
TUC				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
MOD	**Modoc**	**85.62**	**38**	*e*P	**P**	**02 57 32.7**	**-0.1**
	comp=Z,29nm,1.1s,mb5.4						
MOD				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
COR	**Corvallis**	**85.86**	**35**	PFAKE		02 57 40.0	+6.1
COR				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
IRO	**Indian Ridge**	**86.00**	**36**	P	**P**	**02 57 35.1**	**+0.5**
PAYG	**Puerto Ayora**	**86.06**	**89**	PFAKE		02 57 50.0	+14
PAYG				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
KULM	**Kulim**	**86.25**	**278**	P	**P**	**02 57 36.1**	**-0.5**
BMN	**Battle Mountai**	**86.41**	**41**	*e*P	**P**	**02 57 35.7**	**-1.1**
BMN				pmax	pmax		
	comp=Z,49nm,1.4s,mb5.5						
BMN				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.7						
BMN	**Battle Mountai**	**86.41**	**41**	*e*P	**P**	**02 57 35.7**	**-1.1**
	comp=Z,49nm,1.4s,mb5.5						
BMN				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
KDAK	**Kodiak Island**	**86.50**	**12**	PFAKE		02 57 50.0	+13
KDAK				LR	LR		
	comp=Z,438nm,20.0s,MS4.9						
MDJ	**Mudanjiang**	**86.54**	**325**	P	**P**	**02 57 38.1**	**+0.8**
MDJ				AP	pP	02 57 41.1	0.0
MDJ				PP	PP	03 01 00.0	-1.1
MDJ				S	S	03 08 15.8	+4.0
MDJ				XS		03 08 21.6	
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,580nm,10.3s						
MDJ				LR	LR		
	comp=N,1µm,18.8s,MS5.4						
MDJ				LR	LR		
	comp=E,840nm,18.8s,MS5.4						
MDJ				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
MDJ	**Mudanjiang**	**86.54**	**325**	*e*P	**P**	**02 57 37.2**	**-0.1**
	comp=Z,31nm,1.0s,mb5.5						
MDJ				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
ARUT	**Antelope Range**	**87.07**	**45**	P	**P**	**02 57 39.6**	**-0.4**
DL2	**Dalian**	**87.37**	**316**	P	**P**	**02 57 42.3**	**+0.9**
DL2				S	S	03 08 19.1	-0.7
DL2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.3						
DL2				AMB	AMB		
	comp=Z,340nm,7.3s						
DL2				LR	LR		
	comp=N,390nm,15.5s,MS5.0						
DL2				LR	LR		

	comp=E,200nm,13.9s,MS5.0						
DL2				LR	LR		
	comp=Z,550nm,21.8s						
WHN	**Wuhan**	**87.44**	**306**	*e*P	**P**	**02 57 43.5**	**+1.5**
OCWA	**Octopus Mounta**	**87.65**	**32**	*e*P	**P**	**02 57 43.5**	**+1.0**
	comp=Z,144nm,1.5s,mb6.0						
OCWA				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
ELK	**Elko**	**87.78**	**42**	*e*P	**P**	**02 57 43.5**	**+0.1**
ELK				pmax	pmax		
	comp=Z,18nm,1.3s						
ELK				MLR	MLR		
	comp=Z,5µm,19.0s						
ELK	**Elko**	**87.78**	**42**	P	**P**	**02 57 43.5**	**+0.2**
	comp=Z,3.9nm,0.9s,mb4.6,baz=201,slow=3.1,SNR=14						
ELK	**Elko**	**87.78**	**42**	*e*P	**P**	**02 57 43.5**	**+0.1**
	comp=Z,18nm,1.3s,mb5.1						
ELK				LR	LR		
	comp=Z,5µm,19.0s,MS6.0						
SNY	**Shenyang**	**88.01**	**320**	⇑P	**P**	**02 57 44.4**	**0.0**
SNY				SKS	SKS	03 08 09.1	-6.6
SNY				S	S	03 08 20.1	-5.7
SNY				AMB	AMB		
	comp=Z,10.0nm,2.5s,mb4.6						
SNY				AMB	AMB		
	comp=Z,610nm,9.4s						
SNY				LR	LR		
	comp=N,950nm,16.6s						
SNY				LR	LR		
	comp=Z,1µm,17.6s,MS5.4						
CN2	**Changchun**	**88.21**	**322**	*e*P	**P**	**02 57 46.4**	**+1.1**
CN2				*e*XP	sP	02 57 53.8	+3.3
CN2				PP	PP	03 01 12.3	-2.7
CN2				*e*S	S	03 08 36.4	+8.8
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.9						
CN2				AMB	AMB		
	comp=Z,800nm,6.0s						
CN2				LR	LR		
	comp=N,900nm,19.0s,MS5.4						
CN2				LR	LR		
	comp=E,900nm,19.0s,MS5.4						
CN2				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
MVU	**Marysvale**	**88.28**	**45**	*e*P	**P**	**02 57 46.5**	**+0.7**
	comp=Z,34nm,1.6s,mb5.3						
MVU				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
MSU	**Marysvale**	**88.30**	**45**	*e*P	**P**	**02 57 46.8**	**+0.9**
RMW	**Rattlesnake Mo**	**88.60**	**34**	P	**P**	**02 57 47.9**	**+0.8**
PGC	**Sidney**	**88.63**	**32**	*e*P	**P**	**02 57 47.5**	**+0.2**
	comp=Z,80nm,1.0s,mb6.0						
TIA	**Tai'an**	**88.67**	**312**	*e*P	**P**	**02 57 47.8**	**+0.1**
KLR	**Kul'dur**	**88.70**	**329**	*e*P	**P**	**02 57 44.4**	**-3.1**
EBG	**Ellensburg**	**88.84**	**34**	P	**P**	**02 57 48.9**	**+0.6**
TBM	**Table Mountain**	**89.00**	**34**	P	**P**	**02 57 49.8**	**+0.7**
MNTX	**Cornudas Mount**	**89.07**	**54**	*e*P	**P**	**02 57 49.0**	**-0.7**
	comp=Z,72nm,1.8s,mb5.7						
MNTX				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
LTX	**Lajitas**	**89.08**	**56**	*e*P	**P**	**02 57 49.9**	**0.0**
LTX				pmax	pmax		
	comp=Z,117nm,1.8s,mb5.9						
LTX				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.6						
LTX	**Lajitas**	**89.08**	**56**	*e*P	**P**	**02 57 49.9**	**0.0**
	comp=Z,116nm,1.8s,mb5.9						
LTX				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
TXAR	**Lajitas Array**	**89.08**	**56**	P	**P**	**02 57 49.4**	**-0.5**
	comp=Z,11nm,1.0s,mb5.2,baz=214,slow=6.8,SNR=35						
TXAR				LR	LR	03 33 38.4	
	comp=Z,2µm,18.2s,MS5.6,baz=185,slow=33						
SVW2	**Sparrevohn**	**89.12**	**10**	*e*P	**P**	**02 57 48.3**	**-0.9**
BMO	**Blue Mountains**	**89.20**	**38**	*e*P	**P**	**02 57 49.4**	**-0.7**
	comp=Z,41nm,1.6s,mb5.5						
BMO				LR	LR		
	comp=Z,960nm,20.0s,MS5.2						
LENM	**Lemitar**	**89.28**	**51**	*e*P	**P**	**02 57 51.3**	**+0.6**
TMUT	**Trail Mountain**	**89.38**	**45**	*e*P	**P**	**02 57 51.2**	**+0.2**
KKTK	**Khon Kaen**	**89.44**	**289**	P	**P**	**02 57 53.5**	**+1.7**
	comp=Z,556nm,0.8s						
MBW	**Mount Baker**	**89.46**	**32**	P	**P**	**02 57 52.0**	**+0.8**
SLKM	**Skilak Lake**	**89.49**	**13**	*e*P	**P**	**02 57 50.5**	**-0.5**
BNM	**Barren Site**	**89.51**	**51**	*e*P	**P**	**02 57 52.0**	**+0.2**
WTV	**Waterville**	**89.68**	**34**	P	**P**	**02 57 52.6**	**+0.4**
SRU	**San Rafael**	**89.70**	**45**	*e*P	**P**	**02 57 52.2**	**-0.3**
SPU	**Mount Spurr**	**89.78**	**11**	*e*P	**P**	**02 57 51.4**	**-1.0**
SPUT	**South Promonto**	**89.80**	**43**	*e*P	**P**	**02 57 54.6**	**+1.7**
CTU	**Camp Tracy**	**89.86**	**43**	P	**P**	**02 57 52.9**	**-0.3**
HVU	**Hansel Valley**	**89.88**	**42**	*e*P	**P**	**02 57 53.1**	**-0.2**
JLU	**Jordanelle**	**89.99**	**44**	*e*P	**P**	**02 57 55.2**	**+1.4**
DAU	**Daniels Canyon**	**90.00**	**44**	*e*P	**P**	**02 57 54.3**	**+0.4**
HLID	**Hailey**	**90.01**	**40**	*e*P	**P**	**02 57 53.9**	**0.0**
	comp=Z,12nm,1.2s,mb5.1						
HLID				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
ANMO	**Albuquerque**	**90.06**	**50**	*e*P	**P**	**02 57 54.3**	**0.0**
ANMO				pmax	pmax		
	comp=Z,21nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,3µm,19.0s						
ANMO	**Albuquerque**	**90.06**	**50**	P	**P**	**02 57 53.5**	**-0.9**
	comp=Z,8.5nm,0.9s,mb5.0,baz=211,slow=6.0,SNR=19						
ANMO	**Albuquerque**	**90.06**	**50**	*e*P	**P**	**02 57 54.3**	**0.0**
	comp=Z,21nm,1.3s,mb5.3						
ANMO				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
GDL2	**Guadalupe Moun**	**90.07**	**54**	*e*P	**P**	**02 57 54.4**	**0.0**
OD2	**Odessa Site #2**	**90.11**	**35**	P	**P**	**02 57 54.7**	**+0.5**
FIB	**Fire Island**	**90.11**	**12**	PFAKE		02 58 10.0	+16
FIB				LR	LR		
	comp=Z,924nm,19.0s,MS5.2						
CFAA	**Coronel Fontan**	**90.12**	**126**	P	**P**	**02 57 54.0**	**-0.7**
	comp=Z,0.8nm,1.0s,baz=36,slow=1.3,SNR=3.1						
MA2	**Magadan**	**90.21**	**344**	PFAKE		02 58 10.0	+16
MA2				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
PV10	**Paradox Valley**	**90.23**	**46**	*e*P	**P**	**02 57 54.5**	**-0.5**
SIT	**Sitka**	**90.31**	**21**	PFAKE		02 58 10.0	+15
SIT				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
TCUT	**Toone Canyon**	**90.32**	**43**	*e*P	**P**	**02 57 55.8**	**+0.4**
NNT	**Nongplab**	**90.37**	**284**	P	**P**	**02 58 02.0**	**+5.8**
PV01	**Paradox Valley**	**90.40**	**47**	*e*P	**P**	**02 57 55.6**	**-0.2**
HWUT	**Hardware Ranch**	**90.51**	**43**	*e*P	**P**	**02 57 55.4**	**-0.8**
	comp=Z,53nm,1.8s,mb5.6						
HWUT				LR	LR		
	comp=Z,5µm,19.0s,MS6.0						
PMR	**Palmer**	**90.70**	**13**	*e*P	**P**	**02 57 58.8**	**+2.2**
TTA	**Tatalina**	**90.80**	**9**	*e*P	**P**	**02 57 57.7**	**+0.7**
CPRX	**Cap Rock**	**90.86**	**53**	P	**P**	**02 57 55.6**	**-2.5**
TRQA	**Tornquist**	**90.86**	**134**	PFAKE		02 58 10.0	+12
TRQA				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
ENH	**Enshi**	**90.87**	**304**	*e*P	**P**	**02 57 59.0**	**+0.8**
	comp=Z,285nm,1.4s,mb6.4						
ENH				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
DIV	**Divide**	**90.98**	**14**	*e*P	**P**	**02 57 58.4**	**+0.5**
	comp=Z,141nm,1.2s,mb6.2						
DIV				LR	LR		
	comp=Z,6µm,19.0s,MS6.0						
GYA	**Guiyang**	**91.13**	**299**	⇑*i*P	**P**	**02 58 00.6**	**+1.2**
GYA				SKS	SKS	03 08 26.3	-8.6
GYA				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.8						
GYA				AMB	AMB		
	comp=Z,410nm,7.8s						
GYA				LR	LR		
	comp=N,810nm,16.8s,MS5.4						
GYA				LR	LR		
	comp=E,820nm,18.6s,MS5.4						
GYA				LR	LR		
	comp=Z,990nm,19.2s,MS5.3						
NST	**Nakhon Sawan**	**91.43**	**287**	P	**P**	**02 58 02.5**	**+1.5**
AHID	**Auburn Hatcher**	**91.47**	**42**	*e*P	**P**	**02 58 00.0**	**-0.6**
	comp=Z,48nm,1.4s,mb5.6						
AHID				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
NEW	**Newport**	**91.49**	**35**	P	**P**	**02 57 59.8**	**-0.8**
NEW				pmax	pmax		
	comp=Z,13nm,1.1s						
NEW				MLR	MLR		
	comp=Z,3µm,19.0s						
NEW	**Newport**	**91.49**	**35**	P	**P**	**02 57 58.4**	**-2.2**
	comp=Z,8.8nm,1.0s,mb5.0,baz=230,slow=2.7,SNR=9.6						
NEW	**Newport**	**91.49**	**35**	P	**P**	**02 57 59.8**	**-0.8**
	comp=Z,13nm,1.1s,mb5.2						
NEW				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
MCMT	**McKenzie Canyo**	**91.67**	**40**	*e*P	**P**	**02 58 01.8**	**+0.3**
RRI2	**Red Ridge**	**91.68**	**41**	*e*P	**P**	**02 58 01.7**	**+0.1**
	comp=Z,57nm,1.4s,mb5.7						
REDW	**Red Top Meadow**	**91.97**	**42**	*e*P	**P**	**02 58 03.1**	**+0.3**
	comp=Z,64nm,1.5s,mb5.7						
TPAW	**Teton Pass**	**91.98**	**41**	*e*P	**P**	**02 58 01.3**	**-1.6**
	comp=Z,47nm,1.4s,mb5.6						
SNOW	**Snow King Moun**	**92.08**	**42**	*e*P	**P**	**02 58 03.5**	**+0.1**
	comp=Z,56nm,1.4s,mb5.7						
TNA	**Tin City**	**92.22**	**3**	PFAKE		02 58 10.0	+6.5
TNA				LR	LR		
	comp=Z,923nm,19.0s,MS5.2						
IMW	**Indian Meadow**	**92.22**	**41**	*e*P	**P**	**02 58 04.4**	**+0.4**
	comp=Z,48nm,1.4s,mb5.6						
MOOW	**Moose Ponds**	**92.25**	**41**	*e*P	**P**	**02 58 03.8**	**-0.4**
	comp=Z,37nm,1.6s,mb5.5						
LOHW	**Long Hollow**	**92.26**	**41**	*e*P	**P**	**02 58 04.2**	**0.0**
	comp=Z,35nm,1.4s,mb5.5						
MSO	**Missoula**	**92.27**	**37**	*e*P	**P**	**02 58 03.5**	**-0.7**
	comp=Z,15nm,1.4s,mb5.1						
MSO				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
NANT	**Nan**	**92.37**	**290**	⇓P	**P**	**02 58 02.0**	**-3.3**
	comp=Z,215nm,0.1s						
BW06	**Boulder Array**	**92.40**	**43**	PFAKE		02 58 20.0	+15
BW06				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
PDAR	**Pinedale Array**	**92.40**	**43**	P	**P**	**02 58 03.7**	**-1.2**
	comp=Z,6.4nm,1.0s,mb4.9,baz=225,slow=4.2,SNR=17						
PDAR				PP	PP	03 01 42.5	-6.0
	comp=Z,0.6nm,0.9s,baz=255,slow=10,SNR=3.5						
PDAR				LR	LR	03 36 20.4	
	comp=Z,3µm,18.0s,MS5.7,baz=241,slow=34						
QLMT	**Earthquake Lak**	**92.48**	**40**	*e*P	**P**	**02 58 05.9**	**+0.7**
YFT	**Old Faithful**	**92.61**	**41**	*e*P	**P**	**02 58 07.7**	**+1.9**
CHMT	**Chamberlain Mo**	**92.70**	**38**	*e*P	**P**	**02 58 04.0**	**-2.2**
BOZ	**Bozeman (W)**	**92.85**	**39**	*e*P	**P**	**02 58 05.8**	**-1.1**
BOZ				pmax	pmax		
	comp=Z,47nm,1.4s,mb5.7						
BOZ				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.8						
BOZ	**Bozeman (W)**	**92.85**	**39**	*e*P	**P**	**02 58 05.8**	**-1.1**
	comp=Z,48nm,1.4s,mb5.7						
BOZ				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
NNA	**Nana**	**92.87**	**105**	PFAKE		02 58 20.0	+12
NNA				LR	LR		
	comp=Z,317nm,20.0s,MS4.8						
LKWY	**Lake**	**92.93**	**41**	PFAKE		02 58 20.0	+13
LKWY				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
MENT	**Mentasta**	**93.04**	**14**	*e*P	**P**	**02 58 08.0**	**+0.7**
DLBC	**Dease Lake**	**93.15**	**22**	P	**P**	**02 58 07.2**	**-0.8**
	comp=Z,3.8nm,0.8s,mb4.9,baz=215,slow=3.1,SNR=6.2						
DLBC	**Dease Lake**	**93.15**	**22**	*e*P	**P**	**02 58 07.9**	**0.0**
XAN	**Xi'an**	**93.18**	**307**	P	**P**	**02 58 09.6**	**+0.9**
RWWY	**Rawlins**	**93.24**	**44**	*e*P	**P**	**02 58 08.8**	**0.0**
	comp=Z,43nm,1.5s,mb5.7						
HRY	**Holter Researc**	**93.36**	**38**	*e*P	**P**	**02 58 09.3**	**+0.1**
KMI	**Kunming**	**93.60**	**296**	⇑P	**P**	**02 58 12.9**	**+2.1**
KMI				XP	sP	02 58 18.8	+2.8
KMI				SKS	SKS	03 08 42.3	-6.6
KMI				S	S	03 09 19.3	+3.0
KMI				PS	PS	03 10 37.1	+0.4
KMI				SS	SS	03 15 38.9	+0.8
KMI				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb5.0						
KMI				AMB	AMB		
	comp=Z,310nm,6.2s						
KMI				LR	LR		
	comp=N,640nm,20.9s,MS5.2						
KMI				LR	LR		
	comp=E,660nm,22.1s,MS5.2						
KMI				LR	LR		
	comp=Z,930nm,25.5s,MS5.1						
KMI	**Kunming**	**93.60**	**296**	⇑P	**P**	**02 58 12.9**	**+2.1**
KMI				*SP	sP	02 58 18.7	+2.7
KMI						03 08 42.3	
KMI				S	S	03 09 19.3	+3.0
KMI				PS	PS	03 10 37.1	+0.4
KMI				SS	SS	03 15 38.9	+0.8
KMI				pmax	pmax		
	comp=Z,16nm,1.6s,mb5.2						
KMI				MLR	MLR		
	comp=Z,940nm,25.5s,MS5.1						
KMI	**Kunming**	**93.60**	**296**	⇑P	**P**	**02 58 12.9**	**+2.1**
	comp=Z,16nm,1.6s,mb5.2						
KMI				sP	sP	02 58 18.7	+2.7
KMI				SKS	SKS	03 08 42.3	-6.6
KMI				S	S	03 09 19.3	+3.0
KMI				PS	PS	03 10 37.1	+0.4
KMI				SS	SS	03 15 38.9	+0.8
KMI				LR	LR		
	comp=Z,940nm,25.5s,MS5.1						
CM31	**Chiang Mai Arr**	**93.70**	**289**	P	**P**	**02 58 13.6**	**+2.2**
	comp=Z,33nm,1.0s,mb5.7						
CM31				LR	LR		
	comp=Z,730nm,20.0s,MS5.1						
CMAR	**Chiang Mai Arr**	**93.70**	**289**	P	**P**	**02 58 11.9**	**+0.5**
	comp=Z,5.9nm,1.0s,mb5.0,baz=142,slow=3.6,SNR=14						
ILAR	**Eielson Array**	**94.03**	**12**	P	**P**	**02 58 10.3**	**-1.5**
	comp=Z,2.4nm,0.7s,mb4.7,baz=220,slow=5.7,SNR=22						
ILAR				LR	LR	03 41 09.8	
	comp=Z,1µm,18.2s,MS5.5,baz=18,slow=36						
IMA	**Indian Mountai**	**94.11**	**9**	*e*P	**P**	**02 58 12.7**	**+0.5**
HIA	**Hailar**	**94.69**	**324**	PFAKE		02 58 30.0	+15
HIA				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
BILL	**Bilibino**	**95.39**	**353**	⇓*e*P	**P**	**02 58 18.3**	**+0.3**
BILL				*e*		03 02 18.4	
BILL				*e*SS	SS	03 15 55.1	-6.9
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.1						
BILL				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.7						
BILL	**Bilibino**	**95.39**	**353**	*e*P	**P**	**02 58 18.1**	**+0.1**
	comp=Z,13nm,1.1s,mb5.3						
BILL				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
CD2	**Chengdu**	**95.49**	**302**	P	**P**	**02 58 19.0**	**-0.4**
CD2				PP	PP	03 02 08.3	-4.2
CD2				SKS	SKS	03 08 57.5	-1.6
CD2				S	S	03 09 30.5	-1.8
CD2				XS		03 09 40.8	
CD2				SS	SS	03 16 07.8	+3.4
CD2				AMB	AMB		
	comp=Z,570nm,12.0s						
CD2				LR	LR		
	comp=N,930nm,14.4s						
CD2				LR	LR		
	comp=Z,1µm,21.6s						
JTS	**JuntasAbangare**	**95.67**	**81**	PFAKE		02 58 30.0	+9.4
JTS				LR	LR		
	comp=Z,776nm,19.0s,MS5.2						
EDM	**Edmonton**	**96.45**	**33**	*e*P	**P**	**02 58 23.0**	**-0.2**
RSSD	**Black Hills**	**96.51**	**44**	PFAKE		02 58 40.0	+16
RSSD				LR	LR		
	comp=Z,9µm,19.0s,MS6.2						
LAO	**LASA Array**	**96.54**	**41**	*e*P	**P**	**02 58 24.3**	**+0.5**
	comp=Z,14nm,0.9s,mb5.4						
LAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
CBKS	**Cedar Bluff**	**96.66**	**50**	PFAKE		02 58 40.0	+15
CBKS				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
NATX	**Nacogdoches**	**97.04**	**58**	PFAKE		02 58 40.0	+14
NATX				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
OTAV	**Otavalo**	**97.04**	**93**	PFAKE		02 58 40.0	+13
OTAV				LR	LR		
	comp=Z,882nm,19.0s,MS5.3						
LZH	**Lanzhou**	**97.81**	**306**	*e*P	**P**	**02 58 41.0**	**+11**
LZH				pP	pP	02 58 44.3	+11
LZH				sP	sP	02 58 45.6	+11
LZH				PP	PP	03 02 42.8	+12
LZH				SKS	SKS	03 09 17.0	+5.7
LZH				*e*S	S	03 10 04.2	+12
LZH				sS		03 10 11.2	
LZH				PS	PS	03 11 32.0	+10
LZH				SS	SS	03 16 48.9	+12
LZH				LR	LR		
	comp=Z,2µm,18.1s,MS5.6						
LPAZ	**La Paz**	**98.15**	**113**	P	**P**	**02 58 32.0**	**+0.3**
	comp=Z,1.4nm,0.9s,mb4.5,baz=350,slow=3.7,SNR=4.2						
LPAZ				LR	LR	03 37 45.9	
	comp=Z,858nm,18.5s,MS5.3,baz=147,slow=32						
LPAZ	**La Paz**	**98.15**	**113**	P	**P**	**02 58 32.0**	**+0.3**
LPAZ				LR	LR	03 37 45.9	
YAK	**Yakutsk**	**98.48**	**337**	*e*P	**P**	**02 58 31.6**	**-0.5**
YAK				MLR	MLR		
	comp=Z,960nm,19.0s,MS5.3						
DGMT	**Dagmar**	**98.64**	**40**	PFAKE		02 58 40.0	+6.8
DGMT				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
ULN	**Ulaanbaatar**	**101.11**	**318**	*e*P	P	02 58 44.0	-0.4
ULN				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
OXF	**Oxford**	**102.19**	**58**	PFAKE		02 59 00.0	+10
OXF				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
CCM	**Cathedral Cave**	**102.29**	**54**	PFAKE		02 59 00.0	+10
CCM				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
FFC	**Flin Flon**	**102.92**	**35**	PFAKE		02 59 00.0	+7.6
FFC				LR	LR		
	comp=Z,329nm,19.0s,MS4.9						
LRAL	**Lakeview Retre**	**103.45**	**60**	PFAKE		02 59 10.0	+15
LRAL				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
WVT	**Waverly**	**104.02**	**57**	PFAKE		02 59 10.0	+12
WVT				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
ULM	**Lac du Bonnet**	**104.29**	**41**	PFAKE		02 59 10.0	+12
ULM				LR	LR		
	comp=Z,5µm,19.0s,MS6.0						
TLY	**Talaya**	**104.77**	**321**	*e*P	Pdif	02 58 59.5	-1.1
TLY				*e*		03 09 41.5	
TLY				*e*S	PS	03 12 41.1	+7.3
TLY				*e*SS	SS	03 18 26.0	+13
TLY				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.6						
TLY	**Talaya**	**104.77**	**321**	PFAKE		02 59 10.0	+9.4
TLY				LR	LR		
	comp=Z,360nm,20.0s,MS4.9						
LSA	**Lhasa**	**104.86**	**296**	PFAKE		02 59 10.0	+8.5
LSA				LR	LR		
	comp=Z,727nm,19.0s,MS5.2						
PALK	**Pallekele**	**104.90**	**271**	PFAKE		02 59 10.0	+8.0
PALK				LR	LR		
	comp=Z,390nm,20.0s,MS4.9						
JFWS	**Jewell Farm**	**104.92**	**49**	PFAKE		02 59 10.0	+8.6
JFWS				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
DGAR	**Diego Garcia**	**105.39**	**253**	PFAKE		03 03 30.0	
DGAR				LR	LR		
	comp=Z,530nm,20.0s,MS5.1						
WCI	**Wyandotte Cave**	**105.95**	**55**	PFAKE		03 03 30.0	
WCI				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
DWPF	**Disney**	**106.00**	**66**	PFAKE		03 03 30.0	
DWPF				LR	LR		
	comp=Z,891nm,19.0s,MS5.3						
SAML	**Samuel**	**106.05**	**109**	PFAKE		03 03 30.0	
SAML				LR	LR		
	comp=Z,3µm,21.0s,MS5.7						
SDV	**Santo Domingo**	**107.82**	**89**	PFAKE		03 03 30.0	
SDV				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
NHSC	**New Hope**	**108.80**	**62**	PFAKE		03 03 40.0	
NHSC				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
BLA	**Blacksburg**	**109.97**	**58**	PFAKE		03 03 40.0	
BLA				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
MCWV	**Mont Chateau**	**111.17**	**55**	PFAKE		03 03 40.0	+10
MCWV				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
WMQ	**Urumqi**	**112.18**	**309**	PDIF	Pdif	02 59 34.8	+1.4
WMQ				PP	PP	03 04 19.3	+1.6
WMQ				PPP	PPP	03 06 41.5	+1.6
WMQ				SKS	SKS	03 10 37.3	+21
WMQ				SS	SS	03 19 52.5	-0.2
WMQ				PP	PP		
	comp=Z,170nm,11.0s						
WMQ				LR	LR		
	comp=N,2µm,22.0s,MS5.8						
WMQ				LR	LR		
	comp=E,2µm,24.0s,MS5.8						
WMQ				LR	LR		
	comp=Z,2µm,24.0s,MS5.6						
CBN	**Corbin**	**112.58**	**57**	PFAKE		03 03 40.0	+7.3
CBN				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
BINY	**Binghamton**	**114.68**	**54**	PFAKE		03 03 50.0	+13
BINY				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
ZAL	**Zalesovo**	**116.33**	**319**	PKP	PKPdf	03 03 36.0	-3.6
	comp=Z,1.5nm,0.3s,baz=193,slow=6.0,SNR=6.6						
NCB	**Newcomb**	**116.34**	**52**	PFAKE		03 03 50.0	+10
NCB				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
MKAR	**Makanchi Array**	**116.59**	**311**	PKP	PKPdf	03 03 36.6	-3.8
	comp=Z,4.6nm,0.9s,baz=59,slow=2.1,SNR=20						
NVS	**Novosibirsk**	**117.37**	**320**	*e*PKIKP	PKPdf	03 03 37.6	-4.0
NVS				pmax	pmax		
	comp=Z,13nm,1.0s						
NVS				pmax	pmax		
	comp=E,1µm,1.3s						
HRV	**Harvard--Oak R**	**117.94**	**54**	PFAKE		03 03 50.0	+6.9
HRV				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
WES	**Weston**	**118.09**	**54**	PFAKE		03 03 50.0	+6.6
WES				LR	LR		
	comp=Z,6µm,22.0s,MS6.2						
WVL	**Waterville**	**119.68**	**52**	PFAKE		03 04 00.0	+14
WVL				LR	LR		
	comp=Z,14µm,19.0s,MS6.6						
KSH	**Kashi**	**119.69**	**302**	*e*PKP	PKPdf	03 03 44.5	-2.0
KSH				*e*PP	PP	03 05 08.5	-2.0
KSH				*e*PKS	PKS	03 07 20.3	+1.4
KSH				*e*PPP	PPP	03 07 39.0	-3.9
KSH				SKS	SKS	03 10 51.1	+7.0
KSH				PP	PP		
	comp=Z,570nm,6.4s						
KSH				LR	LR		
	comp=N,2µm,19.3s						
KSH				LR	LR		
	comp=E,750nm,12.9s						
BBSR	**BB Station**	**121.07**	**67**	PFAKE		03 04 00.0	+11
BBSR				LR	LR		
	comp=Z,892nm,19.0s,MS5.4						
PQI	**Presque Isle**	**121.12**	**50**	PFAKE		03 04 00.0	+11
PQI				LR	LR		
	comp=Z,8µm,20.0s,MS6.4						
BOSA	**Boshof**	**121.23**	**202**	PKP	PKPdf	03 03 49.5	-0.4
	comp=Z,9.9nm,1.0s,baz=103,slow=3.4,SNR=8.2						
BOSA	**Boshof**	**121.23**	**202**	PKP	PKPdf	03 03 49.5	-0.4
BOSA				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
EMMW	**East Machias**	**121.25**	**52**	PFAKE		03 04 00.0	+11
EMMW				LR	LR		
	comp=Z,9µm,19.0s,MS6.4						
AAK	**Ala-Archa**	**121.34**	**305**	PFAKE		03 04 00.0	+10
AAK				LR	LR		
	comp=Z,279nm,21.0s,MS4.9						
SCHQ	**Schefferville**	**122.46**	**40**	PFAKE		03 04 00.0	+8.5
SCHQ				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
LBTB	**Lobatse**	**124.41**	**204**	PFAKE		03 04 10.0	+14
LBTB				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
BVAR	**Borovoye Array**	**124.83**	**318**	PKP	PKPdf	03 03 52.4	-3.8
	comp=Z,9.6nm,0.9s,baz=90,slow=1.5,SNR=20						
ZRNK	**Zerenda**	**125.67**	**317**	*e*PKIKP	PKPdf	03 03 53.8	-3.9
KBS	**Kingsbay**	**127.61**	**358**	*e*PKIKP	PKPdf	03 03 57.5	-3.4
KBS				MLR	MLR		
	comp=Z,583nm,19.0s,MS5.3						
DAG	**Danmarks Havn**	**128.75**	**6**	⇑*e*PKIKP	PKPdf	03 04 02.1	-1.0
DAG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
DAG	**Danmarks Havn**	**128.75**	**6**	⇑*i*P	PKPdf	03 04 02.1	-1.0
	comp=Z,2.0nm,1.0s						
SUMG	**Summit**	**128.77**	**15**	PKPdf	PKPdf	03 04 01.7	-1.6

RCBR	**Riachuelo**	**129.76**	**124**	PFAKE		03 04 20.0	+13
RCBR				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
SVE	**Sverdlovsk**	**129.99**	**323**	*e*PKIKP	PKPdf	03 04 07.3	+1.4
SVE				*e*		03 06 12.8	
ARU	**Arti**	**131.20**	**323**	*i* PKIKP	PKPdf	03 04 04.4	-3.8
ARU				*e*SS	SS	03 23 51.2	-4.2
ARU	**Arti**	**131.20**	**323**	*e*PKPdf	PKPdf	03 04 06.1	-2.1
ARU				LR	LR		
	comp=Z,233nm,21.0s,MS4.9						
SOKR	**Solikamsk**	**131.24**	**327**	*i* PKIKP	PKPdf	03 04 15.4	+7.2
SOKR				*i* PPP	PPP	03 09 20.0	+3.3
SOKR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LSZ	**Lusaka**	**131.97**	**212**	PFAKE		03 04 20.0	+9.2
LSZ				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
TSUM	**Tsumeb**	**132.41**	**198**	PFAKE		03 04 20.0	+8.4
TSUM				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
ARCES	**ARCESS Array B**	**135.33**	**349**	PKP	PKPdf	03 04 12.1	-3.6
	comp=Z,8.3nm,0.9s,baz=3.4,slow=1.5,SNR=16						
ARE0	**ARCESS Array S**	**135.33**	**349**	*e*PKPdf	PKPdf	03 04 13.1	-2.5
APA	**Apatity**	**135.37**	**344**	⇑*i*PKIKP	PKPdf	03 04 12.6	-3.2
APA				*e*PS	PS	03 17 10.0	-0.6
APA				*i* SS	SS	03 24 50.0	+4.2
APA				pmax	pmax		
	comp=Z,65nm,1.7s						
APA				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.6						
MOS	**Moscow**	**142.11**	**329**	*e*PKIKP	PKPdf	03 04 30.9	+2.8
MOS				*e*		03 07 29.5	
MOS				*e*SS	SS	03 26 05.1	-0.5
FINES	**FINESS Array B**	**142.19**	**343**	PKhKP		03 04 20.6	
	comp=Z,1.3nm,0.4s,baz=47,slow=2.7,SNR=15						
DJNS	**Zahran al Janu**	**142.24**	**265**	P	PKPdf	03 04 28.4	-1.1
MBAR	**Mbarara**	**142.41**	**228**	PFAKE		03 04 40.0	+10
MBAR				LR	LR		
	comp=Z,461nm,20.0s,MS5.2						
TATS	**Tathlith**	**142.92**	**267**	P	PKPdf	03 04 26.8	-3.8
OBN	**Obninsk**	**142.97**	**329**	*d i*PKIKP	PKPdf	03 04 27.7	-1.9
OBN				*e*		03 07 39.4	
OBN				*e*		03 11 34.7	
OBN				*e*PS	PS	03 19 59.7	0.0
OBN				pmax	pmax		
	comp=Z,51nm,1.7s						
OBN				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.6						
OBN	**Obninsk**	**142.97**	**329**	⇑*i*PKP	PKPdf	03 04 27.7	-1.9
OBN				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
TI2	**Plekhanov**	**143.34**	**305**	*e*PKHKP		03 04 20.6	
VOR	**Voronezh**	**143.49**	**323**	PKIKP	PKPdf	03 04 28.0	-2.6
VOR				pmax	pmax		
	comp=Z,70nm,1.8s						
GNI	**Garni**	**143.62**	**302**	*e*PKIKP	PKPdf	03 04 31.3	+0.1
GNI				MLR	MLR		
	comp=Z,602nm,20.0s						
GOF	**Gofitskoye**	**143.76**	**311**	*e*PKIKP	PKPdf	03 04 29.8	-1.5
GOF				pmax	pmax		
	comp=Z,20nm,1.2s						
ONI	**Oni**	**144.11**	**306**	P	PKPbc	03 04 28.8	+0.7
KIV	**Kislovodsk**	**144.31**	**309**	*i* PKIKP	PKPdf	03 04 28.3	-4.0
KIV				*e*		03 07 43.4	
KIV				*e*SS	SS	03 26 24.3	-6.9
KIV				*e*SSS	SSS	03 31 50.3	-6.2
KIV				pmax	pmax		
	comp=Z,18nm,1.2s						
KIV				pmax	pmax		
	comp=N,9.0nm,0.7s						
KIV				pmax	pmax		
	comp=E,7.0nm,0.7s						
KIV	**Kislovodsk**	**144.31**	**309**	*e*PKP	PKPdf	03 04 28.3	-4.0
KIV				LR	LR		
	comp=Z,205nm,19.0s,MS4.9						
BHD	**Baghdad**	**144.42**	**290**	*i* PKP	PKPdf	03 04 28.0	-4.8
AFFS	**‘Afif**	**144.54**	**274**	P	PKPbc	03 04 31.3	+1.5
BLJS	**Baljurashi**	**144.71**	**267**	P	PKPbc	03 04 32.5	+2.1
ARSS	**Ar Rass**	**144.72**	**278**	P	PKPbc	03 04 31.3	+1.1
TVAN	**Van**	**144.88**	**300**	*i* P	PKPbc	03 04 28.4	-1.9
NB2	**NORSAR Subarra**	**145.34**	**354**	PKPabc	PKPdf	03 04 30.5	-3.1
	comp=Z,22nm,0.8s,baz=11,slow=3.5						
NOA	**NORSAR Array B**	**145.34**	**354**	PKPbc	PKPbc	03 04 29.8	-1.0
	comp=Z,20nm,0.8s,baz=9.4,slow=2.4,SNR=66						
NOA	**NORSAR Array B**	**145.34**	**354**	PKPbc	PKPbc	03 04 29.8	-1.0
MSL	**Mosul**	**145.37**	**296**	*e*PKP	PKPdf	03 04 34.5	+0.1
MSL				*e*		03 10 24.0	
NAO01	**NORSAR Array S**	**145.56**	**354**	*e*PKPdf	PKPdf	03 04 31.8	-2.1
NAO01				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
ERZM	**Erzurum**	**146.22**	**302**	*i* P	PKPbc	03 04 35.1	+1.5
SOC	**Sochi**	**146.48**	**309**	*e*PKHKP		03 04 27.9	
SOC				*e*		03 07 55.5	
SOC				*e*SS	SS	03 26 50.8	-4.7
BEST	**Besiri**	**146.63**	**299**	*i* P	PKPbc	03 04 34.1	-0.5
KONO	**Kongsberg**	**146.86**	**355**	*e*PKIKP	PKPdf	03 04 34.6	-1.6
KONO				MLR	MLR		
	comp=Z,649nm,21.0s,MS5.4						
IDID	**Didziasalis**	**146.92**	**336**	*e*P	PKPbc	03 04 36.3	+1.6
IDID				AMb	AMB	03 04 50.5	
	comp=Z,29nm,1.1s						
ISAL	**Salakas**	**146.94**	**337**	*e*P	PKPbc	03 04 36.6	+1.8
ISAL				AMb	AMB	03 04 51.4	
	comp=Z,39nm,1.1s						
ANN	**Anapa**	**147.60**	**313**	*i* PKP2	PKPab	03 04 46.5	+4.9
ANN				pmax	pmax		
	comp=Z,75nm,0.7s						
ELZG	**Elazig**	**148.30**	**301**	*i* P	PKPdf	03 04 38.9	-0.3
KAC	**Achnashellach**	**148.59**	**9**	*e*P	PKPdf	03 04 41.1	+2.1
MALT	**Malatya**	**148.77**	**300**	*e*PKP2	PKPdf	03 04 41.4	+1.5
MCD	**Coleburn Disti**	**148.78**	**7**	*e*P	PKPdf	03 04 41.0	+1.7
MCD				AMb	AMB	03 04 44.5	
	comp=Z,58nm,1.4s						
MDO	**Dochfour**	**148.78**	**9**	*e*P	PKPdf	03 04 41.5	+2.2
MDO				AMb	AMB	03 04 48.8	
	comp=Z,67nm,1.5s						
KSB	**Sheil Bridge**	**148.85**	**10**	*e*P	PKPdf	03 04 43.0	+3.6
KAR1	**Arisaig**	**149.07**	**10**	*e*P	PKPdf	03 04 42.4	+2.6
AKASG	**Malin Array Be**	**149.20**	**328**	PKPbc	PKPdf	03 04 40.9	+0.7
	comp=Z,7.9nm,0.6s,baz=43,slow=3.3,SNR=37						
SUW	**Suwalki**	**149.22**	**337**	*e*PKP	PKPdf	03 04 41.8	+1.6
SIM	**Simferopol’**	**149.68**	**315**	*i* PKHKP	PKPdf	03 04 43.0	+1.8
MUD	**Monsted U’grnd**	**150.06**	**354**	*i* PKP2	PKPdf	03 04 45.2	+3.8
MUD				pmax	pmax		
	comp=Z,48nm,1.0s						
MUD				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.7						
MUD	**Monsted U’grnd**	**150.06**	**354**	*i* P	PKPdf	03 04 45.2	+3.8
	comp=Z,48nm,1.0s						
	comp=Z,1µm,18.0s						
COP	**Copenhagen**	**150.41**	**350**	*i* PKIKP	PKPdf	03 04 45.1	+3.1
COP				pmax	pmax		
	comp=Z,26nm,0.9s						
COP				MLR	MLR		
	comp=Z,920nm,18.0s,MS5.6						
COP	**Copenhagen**	**150.41**	**350**	*i* P	PKPdf	03 04 45.1	+3.1
	comp=Z,26nm,0.9s						
COP				*i*		03 04 58.2	
COP				*e*		03 05 28.9	
	comp=Z,920nm,18.0s						
BSD	**Bornholm Skovb**	**150.51**	**347**	*i* PKIKP	PKPdf	03 04 45.6	+3.5
BSD				pmax	pmax		
	comp=Z,40nm,0.9s						
BSD	**Bornholm Skovb**	**150.51**	**347**	*i* P	PKPdf	03 04 45.6	+3.5
	comp=Z,40nm,0.9s						
BSD				*i*		03 04 58.4	
BOYT	**Boyabat**	**150.55**	**308**	*i* P	PKPdf	03 04 36.0	-6.6
COBT	**Iskenderun**	**150.80**	**298**	*i* P	PKPdf	03 04 42.8	-0.4
CTKT	**Corum**	**150.89**	**306**	*i* P	PKPdf	03 04 46.6	+3.4
ESK	**Eskdalemuir**	**151.00**	**8**	PFAKE		03 04 50.0	+7.2
ESK				LR	LR		
	comp=Z,360nm,19.0s,MS5.2						
BWH	**Wardlaw**	**151.08**	**9**	*e*P	PKPdf	03 04 45.8	+2.8
BHH	**Howats Hill**	**151.22**	**8**	*e*P	PKPdf	03 04 46.1	+2.9
RGN	**Rugen**	**151.35**	**348**	PKPbc	PKPdf	03 04 48.4	+5.0
AVNT	**Avonos**	**151.39**	**303**	*i* P	PKPdf	03 04 44.7	+0.7
BTA	**Talkin**	**151.47**	**8**	*e*P	PKPdf	03 04 46.2	+2.7
CDAG	**Cicekdag**	**151.51**	**305**	*i* P	PKPdf	03 04 45.6	+1.5
BDL	**Dobcross Hall**	**151.53**	**8**	*e*P	PKPdf	03 04 46.6	+2.9
BBO1	**Bothel**	**151.56**	**9**	*e*P	PKPdf	03 04 46.5	+2.8
BALT	**Daday**	**151.57**	**309**	*i* P	PKPdf	03 04 44.7	+0.5
KIS	**Kishinev**	**151.75**	**322**	*e*PKIKP	PKPdf	03 04 44.0	-0.2
KIS				*e*		03 11 50.0	
LCP	**Cassop**	**151.77**	**6**	*e*P	PKPdf	03 04 47.8	+3.8
ELDT	**Eldivan**	**151.91**	**307**	*i* P	PKPdf	03 04 38.0	-6.8
BRTR	**Keskin Array B**	**152.01**	**305**	PKP	PKPdf	03 04 42.0	-2.9
	comp=Z,6.4nm,1.1s,baz=135,slow=1.7,SNR=10.0						
BRTR				PKPbc	PKPdf	03 04 48.7	+3.8
	comp=Z,9.9nm,1.1s,baz=135,slow=2.0,SNR=15						
DCN	**Croghan**	**152.18**	**14**	*e*P	PKPdf	03 04 46.7	+2.0
LVV	**L’vov**	**152.18**	**331**	*e*PKIKP	PKPdf	03 04 49.5	+4.7
BDAS	**Al Bad‘**	**152.23**	**281**	P	PKPdf	03 04 50.6	+5.0
ALWS	**Ilw as Safayha**	**152.31**	**283**	P	PKPdf	03 04 51.1	+5.5
DLF	**Lyons Farm**	**152.38**	**13**	*e*P	PKPdf	03 04 46.7	+1.7
BSEG	**Bad Segeberg**	**152.41**	**352**	*e*PKPdf	PKPdf	03 04 48.9	+3.9
BSEG				*e*SS	SS	03 28 09.6	+8.6
HAQS	**Haql**	**152.42**	**282**	P	PKPdf	03 04 51.4	+5.6
EIL	**Elat**	**152.42**	**283**	*e*PKPbc	PKPdf	03 04 51.8	+6.0
TAYS	**Tayyib Ism**	**152.44**	**281**	P	PKPdf	03 04 51.7	+5.9
MEST	**Erdemli**	**152.46**	**298**	*i* P	PKPdf	03 04 44.7	-1.0
HPK	**Haverah Park**	**152.52**	**7**	*e*P	PKPdf	03 04 48.8	+3.7
KWP	**Kalwaria**	**152.88**	**332**	*e*PKP	PKPdf	03 04 51.6	+5.8
LHO	**Holmfirth**	**152.90**	**7**	*e*P	PKPdf	03 04 49.2	+3.6
CMLA	**Cha da Macela**	**152.99**	**59**	PFAKE		03 05 00.0	+14
CMLA				LR	LR		
	comp=Z,390nm,19.0s,MS5.2						
KBI1	**Birley Grange**	**153.22**	**7**	*e*P	PKPdf	03 04 49.1	+3.0
KBI1				AMb	AMB	03 05 06.3	
	comp=Z,51nm,1.4s						
BURAR	**Bucovina Array**	**153.22**	**327**	⇑P	PKPdf	03 04 53.7	+7.4
ERMK	**Ermenek**	**153.41**	**299**	*i* P	PKPdf	03 04 50.4	+3.5
KWE	**Weaver Farm**	**153.42**	**8**	*e*P	PKPdf	03 04 48.9	+2.5
KWE				AMb	AMB	03 05 07.0	
	comp=Z,84nm,1.5s						
KDHN	**Kadinhani**	**153.51**	**303**	*i* P	PKPdf	03 04 45.6	-1.4
OJC	**Ojcow**	**153.53**	**337**	*e*PKP	PKPdf	03 04 51.2	+4.6
VRI	**Vrincioaia**	**153.59**	**322**	⇑P	PKPdf	03 04 55.1	+8.2
KOLS	**Kolonicke sedl**	**153.60**	**332**	*e*PKP	PKPdf	03 04 47.0	+0.2
NIE	**Niedzica**	**154.00**	**335**	*e*PKP	PKPdf	03 04 45.9	-1.4
KSP	**Ksiaz**	**154.11**	**342**	*e*PKIKP	PKPdf	03 04 45.8	-1.6
KSP				*e*SS	SS	03 28 24.0	+4.2
KSP	**Ksiaz**	**154.11**	**342**	*e*PKP	PKPdf	03 04 45.8	-1.6
KSP				*e*		03 04 57.9	
KSP				*e*PP	PP	03 08 34.0	-11
KSP				*e*SKSP		03 19 04.0	
KSP				*e*SS	SS	03 28 24.0	+4.2
KSP				LR	LR		
	comp=Z,2µm,25.2s,MS5.9						
ESKT	**Eskisehir**	**154.11**	**306**	*i* P	PKPdf	03 04 38.9	-8.9
MLR	**Muntele Rosu**	**154.25**	**322**	⇓P	PKPdf	03 04 57.8	+10
OKC	**Ostrava-Krasne**	**154.42**	**338**	*e*PKPDF	PKPdf	03 04 48.9	+1.0
OKC				*e*PKPAB	PKPab	03 05 06.5	-3.2
OKC				AMS	AMS	04 21 10.0	
	comp=Z,1µm,18.1s						
CLZ	**Clausthal**	**154.44**	**351**	*e*PKPdf	PKPdf	03 04 48.5	+0.7
CLZ				*e*SS	SS	03 28 35.0	+12
CLL	**Collm**	**154.49**	**347**	*i* PKIKP	PKPdf	03 04 48.5	+0.6
CLL				*i*		03 04 54.7	
CLL				*i*		03 05 07.7	
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL				pmax	pmax		
	comp=Z,31nm,1.2s						
CLL				MLR	MLR		
	comp=Z,1µm,17.2s,MS5.8						
CLL	**Collm**	**154.49**	**347**	*i* PKP	PKPdf	03 04 48.5	+0.6
CLL				*i* PKP	PKPdf	03 04 54.7	+6.8
CLL				*i* pPKP		03 04 58.6	
CLL				*i* PKP	PKPab	03 05 07.7	-2.3
CLL				LR	LR		
	comp=Z,1µm,17.2s,MS5.8						
CLL	**Collm**	**154.49**	**347**	*i* PKIKP	PKPdf	03 04 48.5	+0.6
	comp=Z,logA/T=0.8						
CLL				*i* PKP1	PKPdf	03 04 54.7	+6.8
CLL				*i* *PPKP		03 04 58.6	
CLL				*i* PKP2	PKPab	03 05 07.7	-2.3
CLL				*i* *PPKP2		03 05 11.6	
CLL				*e*		03 05 21.0	
CLL				*e*PP	PP	03 08 38.0	-8.5
CLL				*e*		03 09 02.0	
CLL				*e*		03 19 15.0	
CLL				*e*SS	SS	03 28 23.0	-0.9
UPC	**Upice**	**154.49**	**342**	*e*PKPDF	PKPdf	03 04 46.1	-1.8
DPC	**Dobruska-Polom**	**154.54**	**341**	*e*PKPDF	PKPdf	03 04 46.4	-1.6
DPC				*e*PKPAB	PKPab	03 05 06.4	-3.8
DPC				*e*x	x	03 28 26.6	
DPC				AMS	AMS	04 21 40.0	
	comp=Z,900nm,18.9s						
BRG	**Berggiesshubel**	**154.69**	**345**	*e*PKIKP	PKPdf	03 04 48.7	+0.5
BRG				*i*		03 05 08.2	
BRG				SS	SS	03 28 27.0	+0.9
BRG				pmax	pmax		
	comp=Z,13nm,1.5s						
BRG				pmax	pmax		
	comp=Z,26nm,1.1s						
BRG				pmax	pmax		
	comp=Z,47nm,1.4s						
BRG	**Berggiesshubel**	**154.69**	**345**	*e*PKP	PKPdf	03 04 48.7	+0.5
BRG				*e*		03 04 57.7	
BRG				*i*		03 05 08.2	
BRG				*e*		03 09 07.0	
BRG				SS	SS	03 28 27.0	+0.9
VOIR		**154.77**	**323**	⇓P	PKPdf	03 05 00.7	+12
PVCC	**Panska Ves**	**154.85**	**344**	*e*PKPDF	PKPdf	03 04 49.2	+0.8
PVCC				*e*PKPAB	PKPab	03 05 07.7	-3.8
PVCC				*e*x	x	03 28 29.2	
PVCC				AMS	AMS	04 20 00.0	
	comp=Z,2µm,19.0s						
ULDT	**Uludag**	**155.08**	**309**	*i* P	PKPdf	03 04 44.7	-4.4
VYHS	**Vyhne**	**155.32**	**336**	*e*PKP	PKPdf	03 04 47.4	-1.7
VYHS				*e*		03 05 09.1	
PRU	**Pruhonice**	**155.36**	**343**	*e*PKPDF	PKPdf	03 04 54.4	+5.3
PRU				*e*PKPAB	PKPab	03 05 08.3	-5.4
PRU				*e*SS	SS	03 28 36.1	+2.6
PRU				AMS	AMS	04 20 30.0	
	comp=Z,2µm,19.0s						
MOX	**Moxa**	**155.39**	**348**	*e*PKIKP	PKPdf	03 04 47.0	-2.1
MOX				pmax	pmax		
	comp=Z,40nm,1.9s						
MOX				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.8						
MOX	**Moxa**	**155.39**	**348**	*e*PKP	PKPdf	03 04 47.0	-2.1
MOX				*e*PKPab	PKPab	03 05 13.0	-0.8
MOX				*e*SS	SS	03 28 39.0	+5.1
MOX				LR	LR		
	comp=Z,1µm,20.0s,MS5.8						
NKC	**Novy Kostel**	**155.62**	**346**	*e*PKIKP	PKPdf	03 04 49.1	-0.3
NKC				*e*		03 28 37.3	
NKC				MLR	MLR		
	comp=Z,2µm,17.6s,MS5.9						
NKC	**Novy Kostel**	**155.62**	**346**	*e*PKPDF	PKPdf	03 04 49.1	-0.3
NKC				*e*PKPAB	PKPab	03 05 00.2	-15
NKC				*e*x	x	03 28 37.3	
NKC				AMS	AMS	04 26 40.0	
	comp=Z,2µm,17.6s						
GOLH	**Golhisar**	**155.83**	**302**	*i* P	PKPdf	03 04 45.6	-4.5
ZST	**Bratislava**	**156.19**	**338**	*e*PKP	PKPdf	03 04 49.7	-0.5
ZST				*e*		03 05 18.2	
GRA1	**Grafenberg Arr**	**156.38**	**348**	*e*PKPdf	PKPdf	03 04 49.0	-1.4
GRA1				*e*PP	PP	03 09 00.4	+3.4
GRA1				*e*SS	SS	03 28 52.9	+8.5
GRA1				LR	LR		
	comp=Z,2µm,19.2s,MS5.9						
GRF	**Grafenberg Arr**	**156.38**	**348**	*e*PKIKP	PKPdf	03 04 49.0	-1.4
GRF				*e*		03 09 00.4	
GRF				MLR	MLR		
	comp=Z,2µm,19.2s,MS5.9						
GRF	**Grafenberg Arr**	**156.38**	**348**	*e*PKP	PKPdf	03 04 49.0	-1.4
GRF				*e*PP	PP	03 09 00.4	+3.4
GRF				*e*SS	SS	03 28 52.9	+8.5
GRF				LR	LR		
	comp=Z,2µm,19.2s,MS5.9						
BZS	**Buzias**	**156.39**	**328**	⇑P	PKPdf	03 04 51.6	+1.0
KHC	**Kasperske Hory**	**156.39**	**344**	*e*PKIKP	PKPdf	03 04 47.7	-2.8
KHC				*e*		03 28 46.3	
KHC				MLR	MLR		
	comp=Z,2µm,18.1s,MS6.0						
KHC	**Kasperske Hory**	**156.39**	**344**	*e*PKP	PKPdf	03 04 47.7	-2.8
KHC				*e*		03 05 21.5	
KHC				*e*		03 05 37.0	
KHC				*e*		03 28 46.3	
KHC				LR	LR		
	comp=Z,2µm,18.1s,MS6.0						
KHC	**Kasperske Hory**	**156.39**	**344**	*e*PKPDF	PKPdf	03 04 47.7	-2.8
KHC				*e*PKPAB	PKPab	03 05 21.5	+3.3
KHC				x	x	03 05 37.0	
KHC				*e*SS	SS	03 28 46.3	+1.7
KHC				AMS	AMS	04 21 30.0	
	comp=Z,2µm,18.1s						
WET	**Wettzell**	**156.55**	**345**	*e*PKPdf	PKPdf	03 04 48.8	-1.9
WET				*e*PP	PP	03 09 04.4	+6.6
WET				*e*SS	SS	03 28 55.7	+10
GEC2	**GERESS Array S**	**156.62**	**343**	*e*PKPdf	PKPdf	03 04 48.9	-1.9
GEC2				*e*PP	PP	03 09 04.3	+6.1
GEC2				*e*SS	SS	03 28 55.3	+8.4
GERES	**GERESS Array B**	**156.62**	**343**	PKP	PKPdf	03 04 48.0	-2.8
	comp=Z,1.9nm,1.1s,baz=90,slow=1.3,SNR=6.9						
GERES				PKPab	PKPab	03 05 17.3	-1.9
	comp=Z,3.7nm,1.0s,baz=45,slow=1.9,SNR=7.2						
GIVF	**Givet**	**156.66**	**358**	*e*PKIKP	PKPdf	03 04 50.2	-0.6
BAIF	**Baives**	**156.72**	**359**	*e*PKIKP	PKPdf	03 04 50.2	-0.7
	comp=Z,17nm,1.2s						
CDF	**Champ du Feu**	**158.19**	**354**	*e*PKIKP	PKPdf	03 04 51.7	-1.2
HAU	**Haudompre**	**158.68**	**355**	*e*PKIKP	PKPdf	03 04 52.5	-1.0
HAU				*e*R			
	comp=Z,2µm,17.4s						
HINF	**Hinteralfeld**	**158.82**	**354**	*e*PKIKP	PKPdf	03 04 52.6	-1.1
LJU	**Ljubljana**	**158.92**	**339**	*e*PKPdf	PKPdf	03 04 51.5	-2.3
SKO	**Skopje**	**159.01**	**321**	*e*PKP	PKPdf	03 05 01.0	+6.9
SKO				*i*		03 05 31.0	
SKO				*i*		03 05 41.0	
ROBS	**Robic**	**159.06**	**341**	*e*PKPdf	PKPdf	03 04 53.8	-0.2
LOR	**Lormes**	**159.51**	**360**	*e*PKIKP	PKPdf	03 04 53.7	-0.8
	comp=Z,50nm,1.4s						
LOR				*e*R			
	comp=Z,2µm,18.5s						
SSF	**Saint Saulge**	**159.72**	**1**	*e*PKIKP	PKPdf	03 04 54.0	-0.7
	comp=Z,38nm,1.4s						
MFF	**Saint Martin d**	**159.93**	**8**	*e*PKIKP	PKPdf	03 04 54.1	-0.8
	comp=Z,49nm,1.3s						
AVF	**Avril sur Loir**	**159.99**	**1**	*e*PKIKP	PKPdf	03 04 54.0	-1.0
	comp=Z,22nm,1.3s						
CABF	**La Chapelle**	**160.08**	**355**	*e*PKIKP	PKPdf	03 04 53.6	-1.5
	comp=Z,42nm,1.3s						
SMF	**Signal de Mont**	**160.13**	**360**	*e*PKIKP	PKPdf	03 04 54.2	-0.9
BGF	**Bois d’Agland**	**160.21**	**2**	*e*PKIKP	PKPdf	03 04 54.6	-0.6
TCF	**Toulx Ste Croi**	**160.45**	**3**	*e*PKIKP	PKPdf	03 04 54.6	-0.9
LPL	**La Plagne**	**161.12**	**354**	*e*PKIKP	PKPdf	03 04 56.0	-0.2
LPG	**La Plagne**	**161.13**	**354**	*e*PKIKP	PKPdf	03 04 56.3	+0.1
	comp=Z,66nm,1.9s						
RJF	**Les Rejaudoux**	**161.39**	**5**	*e*PKIKP	PKPdf	03 04 55.8	-0.6
	comp=Z,64nm,1.5s						
RJF				*e*R			
	comp=Z,2µm,18.5s						
ORIF	**Oris-en-Rattie**	**161.78**	**355**	*e*PKIKP	PKPdf	03 04 56.5	-0.4
ORIF				*e*R			
	comp=Z,2µm,21.0s						
CAF	**Calviac**	**161.80**	**4**	*e*PKIKP	PKPdf	03 04 55.4	-1.5
MBDF	**Montbardon**	**161.89**	**353**	*e*PKIKP	PKPdf	03 04 56.7	-0.3
VIVF	**Saint-Julien-l**	**161.91**	**358**	*e*PKIKP	PKPdf	03 04 56.7	-0.3
SBF	**Sospel**	**162.66**	**351**	*e*PKIKP	PKPdf	03 04 56.7	-1.1
	comp=Z,24nm,1.0s						
LASF	**Ste Croix**	**162.70**	**360**	*e*PKIKP	PKPdf	03 04 57.7	-0.1
	comp=Z,56nm,1.6s						
SMRF	**Simiane la Rot**	**162.74**	**356**	*e*PKIKP	PKPdf	03 04 57.7	-0.1
	comp=Z,86nm,1.8s						
FRF	**La Foret Royal**	**163.06**	**353**	*e*PKIKP	PKPdf	03 04 57.2	-1.0
	comp=Z,79nm,1.7s						
LMR	**La Mourre**	**163.30**	**353**	*e*PKIKP	PKPdf	03 04 57.5	-0.9
	comp=Z,30nm,1.2s						
MTLF	**Montolieu**	**163.39**	**4**	*e*PKIKP	PKPdf	03 04 58.0	-0.5
	comp=Z,27nm,1.4s						
EPF	**Esparros**	**163.51**	**9**	*e*PKIKP	PKPdf	03 04 58.2	-0.4
PGF	**Pioggiola**	**163.66**	**346**	*e*PKIKP	PKPdf	03 04 57.7	-1.1
EVO	**Evora**	**164.62**	**37**	*e*PKIKP	PKPdf	03 04 58.6	-1.3
	comp=Z,99nm,1.7s						
EVO				*e*R			
	comp=Z,2µm,21.2s						
ESDC	**Sonseca Array**	**165.57**	**25**	PKP	PKPdf	03 04 59.0	-1.8
	comp=Z,0.8nm,0.7s,baz=350,slow=3.0,SNR=9.0						
ESDC				PKPab	PKPab	03 05 57.2	-1.0
	comp=Z,4.8nm,0.9s,baz=319,slow=3.7,SNR=9.2						
ESLA	**Sonseca Array**	**165.57**	**25**	PFAKE		03 05 10.0	+9.2
ESLA				LR	LR		
	comp=Z,9µm,19.0s						

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*NEIC **20** 02:53:06.0, 37.04S×177.01E, h258km, MG4.5(WEL), After WEL.*

WEL 20 02:53:06.4±0.4**, 37.05S×176.93E, h252km**±3km**, ML4.5**/19**, 4C-2D, Error ellipse: s-maj=3.2km s-min=3.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYRZ	**Mayor Island**	**0.60**	**246**	PN	P	02 53 40.2	0.0
KUZ	**Kuaotunu**	**1.01**	**287**	⇓*e*P	P	02 53 41.5	-0.5
KUZ				S	S	02 54 10.1	+0.4
KUZ	**Kuaotunu**	**1.01**	**287**	⇓PN	P	02 53 41.5	-0.5
KUZ				SN	S	02 54 09.1	-0.6
LIRZ	**Lichensteins R**	**1.05**	**204**	P	P	02 53 42.4	+0.2
LIRZ	**Lichensteins R**	**1.05**	**204**	PN	P	02 53 42.4	+0.2
MXZ	**Matakaoa Point**	**1.22**	**116**	*e*P	P	02 53 43.0	-0.3
MXZ				S	S	02 54 11.0	-1.0
MXZ	**Matakaoa Point**	**1.22**	**116**	⇑PN	P	02 53 43.0	-0.3
MXZ				SN	S	02 54 11.0	-1.0
URZ	**Urewera**	**1.22**	**173**	*e*P	P	02 53 42.6	-0.7
URZ	**Urewera**	**1.22**	**173**	PN	P	02 53 42.6	-0.7
URZ				SN	S	02 54 11.3	-0.8
TAZ	**Tarawera**	**1.23**	**196**	P	P	02 53 43.7	+0.3
TAZ	**Tarawera**	**1.23**	**196**	PN	P	02 53 43.7	+0.3
MWZ	**Matawai**	**1.37**	**160**	*e*P	P	02 53 44.1	-0.3
MWZ	**Matawai**	**1.37**	**160**	PN	P	02 53 44.1	-0.3
PATZ	**Paeroa**	**1.44**	**202**	P	P	02 53 45.0	+0.2
PATZ	**Paeroa**	**1.44**	**202**	PN	P	02 53 45.0	+0.2
PUZ	**Puketiti**	**1.47**	**135**	P	P	02 53 45.1	0.0
PUZ				S	S	02 54 14.0	-1.1
PUZ	**Puketiti**	**1.47**	**135**	PN	P	02 53 45.2	+0.1
PUZ				SN	S	02 54 14.5	-0.6
WATZ	**Wairara**	**1.91**	**209**	*e*P	P	02 53 48.4	-0.2
WATZ	**Wairara**	**1.91**	**209**	PN	P	02 53 48.4	-0.2
HATZ	**Hinemaiaia**	**1.96**	**199**	PN	P	02 53 48.7	-0.3
RATZ	**Rangitukua**	**2.04**	**206**	P	P	02 53 49.5	-0.2
RATZ	**Rangitukua**	**2.04**	**206**	PN	P	02 53 49.5	-0.2
KNZ	**Kokohu**	**2.06**	**164**	⇑P	P	02 53 49.7	-0.2
KNZ				S	S	02 54 23.1	-0.6
KNZ	**Kokohu**	**2.06**	**164**	⇑PN	P	02 53 49.7	-0.2
KNZ				SN	S	02 54 23.1	-0.6
RITZ	**Rihia Road**	**2.11**	**203**	P	P	02 53 50.5	+0.1
RITZ	**Rihia Road**	**2.11**	**203**	PN	P	02 53 50.5	+0.1
BKZ	**Black Stump Fm**	**2.15**	**189**	P	P	02 53 49.7	-1.1
BKZ				S	S	02 54 23.7	-1.5
BKZ	**Black Stump Fm**	**2.15**	**189**	PN	P	02 53 49.7	-1.1
BKZ				SN	S	02 54 23.7	-1.5
KATZ	**Kakaramea**	**2.16**	**206**	P	P	02 53 50.6	-0.3
KATZ	**Kakaramea**	**2.16**	**206**	PN	P	02 53 50.6	-0.3
HIZ	**Hauiti**	**2.20**	**228**	*e*P	P	02 53 51.4	+0.1
HIZ	**Hauiti**	**2.20**	**228**	PN	P	02 53 51.4	+0.1
KRVZ	**Karewarewa**	**2.29**	**206**	PN	P	02 53 51.9	-0.2
WTVZ	**West Tongariro**	**2.32**	**207**	P	P	02 53 52.1	-0.4
WTVZ	**West Tongariro**	**2.32**	**207**	PN	P	02 53 52.1	-0.4
OTVZ	**Oturere**	**2.34**	**205**	PN	P	02 53 52.3	-0.4
OTVZ				SN	S	02 54 28.5	-0.1
TWVZ	**Taurewa**	**2.34**	**210**	P	P	02 53 52.2	-0.5
TWVZ	**Taurewa**	**2.34**	**210**	PN	P	02 53 52.2	-0.4
NGZ	**Ngauruhoe**	**2.37**	**206**	P	P	02 53 52.5	-0.5
NGZ	**Ngauruhoe**	**2.37**	**206**	PN	P	02 53 52.5	-0.4
CNZ	**Chateau**	**2.41**	**206**	P	P	02 53 52.7	-0.7
CNZ	**Chateau**	**2.41**	**206**	PN	P	02 53 52.7	-0.6
WPVZ	**Whakapapa**	**2.42**	**206**	*e*P	P	02 53 52.8	-0.6
WPVZ	**Whakapapa**	**2.42**	**206**	PN	P	02 53 52.8	-0.7
TUVZ	**Tukino**	**2.44**	**204**	P	P	02 53 53.0	-0.6
TUVZ	**Tukino**	**2.44**	**204**	PN	P	02 53 53.0	-0.6
FWVZ	**Far West T-bar**	**2.46**	**206**	P	P	02 53 53.3	-0.5
FWVZ	**Far West T-bar**	**2.46**	**206**	PN	P	02 53 53.3	-0.6
DRZ	**Dome Shelter**	**2.47**	**205**	P	P	02 53 54.1	+0.1
DRZ	**Dome Shelter**	**2.47**	**205**	PN	P	02 53 54.1	+0.1
WNVZ	**Wahianoa**	**2.51**	**204**	P	P	02 53 53.5	-0.8
WNVZ	**Wahianoa**	**2.51**	**204**	PN	P	02 53 53.5	-0.8
MOVZ	**Moawhango**	**2.54**	**201**	PN	P	02 53 53.3	-1.3
MOVZ				SN	S	02 54 30.9	-1.1
PKVZ	**Pokaka**	**2.57**	**209**	PN	P	02 53 54.0	-0.9
MTVZ	**Mangateitei**	**2.60**	**206**	PN	P	02 53 54.6	-0.8
MTVZ				SN	S	02 54 33.4	+0.1
VRZ	**Vera Road**	**2.69**	**219**	P	P	02 53 55.9	-0.3
VRZ	**Vera Road**	**2.69**	**219**	PN	P	02 53 55.9	-0.3
PWZ	**Pawanui**	**2.98**	**181**	P	P	02 53 57.8	-1.5
PWZ				S	S	02 54 38.7	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PWZ	Pawanui	2.98	181	PN	P	02 53 57.8	-1.4
PWZ				SN	S	02 54 38.7	-1.6
TSZ	Takapari Road	3.10	194	P	P	02 53 58.8	-1.8
WAZ	Wanganui	3.11	209	P	P	02 53 59.4	-1.3
NEZ	North Egmont	3.15	224	P	P	02 54 01.5	+0.4
PKE	Pukeiti	3.16	226	P	P	02 54 01.4	+0.2
BFZ	Birch Farm	3.67	188	P	P	02 54 04.6	-2.4
MRZ	Mangatainoka R	3.76	196	⇑P	P	02 54 05.3	-2.8
MRZ				S	S	02 54 52.9	-3.1
KIW	Kapiti Island	4.12	202	P	P	02 54 09.1	-3.2
MTW	Mount Morrison	4.26	195	*e*P	P	02 54 10.3	-3.6
CAW	Cannon Point	4.31	199	*e*P	P	02 54 11.0	-3.5
MRW	Makara Radio	4.52	202	P	P	02 54 13.8	-3.3
MSWZ	Moikau Station	4.55	196	P	P	02 54 13.7	-3.7
SNZO	South Karori	4.60	201	P	P	02 54 14.5	-3.4
BHW	Baring Head	4.64	199	P	P	02 54 15.2	-3.3
TCW	Tory Channel	4.64	206	P	P	02 54 15.0	-3.5
NNZ	Nelson	5.00	212	P	P	02 54 18.8	-4.0
QRZ	Quartz Range	5.10	221	*e*P	P	02 54 19.5	-4.6
BSWZ	Blackbirch Sta	5.23	206	P	P	02 54 22.2	-3.4
THZ	Tophouse	5.65	212	P	P	02 54 26.3	-4.5
KHZ	Kahutara	5.97	205	P	P	02 54 31.3	-3.5
KHZ				S	S	02 55 38.0	-5.9
DSZ	Denniston Nort	6.15	219	P	P	02 54 31.7	-5.3
MQZ	McQueen's Vall	7.41	205	*e*P	P	02 54 47.8	-5.2
RPZ	Rata Peaks	8.03	212	*e*P	P	02 54 55.7	-5.1
FOZ	Fox Glacier	8.54	218	*e*P	P	02 55 00.1	-7.2
ODZ	Otahua Downs	9.29	209	*e*P	P	02 55 12.4	-4.4

CSEM ***20*** *03:41:00.3±0.1, 36.97N×31.49E, h120^{km}±1^{km}, Mw3.2, Error ellipse: s-maj=2.3km s-min=1.7km az=36.0*

IDC ***20*** *03:41:01.7±1.5, 36.83N×31.46E, h127^{km}±25^{km}, mb3.2/2, mb1 3.2/5, mb1mx3.0/20, mbtmp3.6/5, Error ellipse: s-maj=19.7km s-min=18.2km az=5.0*

ISK ***20*** *03:41:02.5, 36.94N×31.53E, h119^{km}, MD3.5*

NEIC ***20*** *03:41:02.2±0.5, 36.92N×31.48E, h125^{km}±9^{km}, MD3.5(ISK), Error ellipse: s-maj=11.1km s-min=7.0km az=76.0*

HLW ***20*** *03:41:05.3, 36.81N×31.24E, h33^{km}, Mb3.8*

NIC ***20*** *03:41:05.2±0.4, 37.00N×31.96E, h55^{km}, ML3.4, MW3.2*

ISC 20 03:41:01.5±0.4**, 36.90N**±0.03×**31.53E**±0.03**, h131**^{km}±5^{km}**, n44, σ0^{s}95**/60**, mb3.5**/2**, 4C, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HDMB	Hadim	0.77	85	*i* PG	P	03 41 23.6	+0.9
HDMB				*i* SG	S	03 41 37.1	-1.7
BCK	Bucak	0.94	307	*i* PG	P	03 41 23.9	-0.2
ERMK	Ermenek	1.14	102	*i* P	P	03 41 27.3	+1.1
ERMK				*i* S	S	03 41 44.4	-0.5
KONT	Konya--Tatoy	1.24	32	PN	P	03 41 27.6	+0.4
ISP	Isparta	1.25	320	*i* PN	P	03 41 26.9	-0.4
ISP	Isparta	1.25	320	*e*Pn	P	03 41 26.8	-0.5
ISP				*e*Sn	S	03 41 39.0	-7.8
ELL	Elmali	1.31	264	PN	P	03 41 28.8	+0.8
TKTP	Tekketepe	1.49	320	*i* P	P	03 41 29.9	-0.1
TKTP				*i* S	S	03 41 50.8	-1.0
GOLH	Golhisar	1.61	283	*i* P	P	03 41 32.9	+1.6
GOLH				*i* S	S	03 41 54.5	+0.5
AKAS	Kas	1.68	247	*i* P	P	03 41 32.5	+0.4
AKAS				*i* S	S	03 41 55.5	-0.1
KDHN	Kadinhani	1.69	16	*i* P	P	03 41 31.8	-0.5
KDHN				*i* S	S	03 41 53.2	-2.5
IKL	Isikli	1.86	110	PN	P	03 41 35.5	+1.3
ALFC	Alevga	1.94	153	P	P	03 41 35.2	0.0
	16nm,0.2s						
ALFC				S	S	03 41 59.4	-1.5
AKMC	Akamas	1.98	160	P	P	03 41 36.5	+0.9
FETY	Fethiye	1.98	263	PN	P	03 41 36.5	+0.8
FETY				SN	S	03 42 01.3	-0.4
KIZT	Kizilcal	2.00	8	PN	P	03 41 35.9	0.0
LEF	Lefka	2.09	148	PN	P	03 41 37.9	+0.8
PPCY	Paphos	2.11	161	P	P	03 41 39.5	+2.1
MEST	Erdemli	2.13	98	*i* P	P	03 41 39.2	+1.6
MEST				*i* S	S	03 42 05.6	+0.6
DNZL	Cakiroluk	2.13	293	*i* P	P	03 41 38.6	+1.0
DNZL				*i* S	S	03 42 05.2	+0.2
DENT	Denizli	2.16	294	PN	P	03 41 38.7	+0.6
MAMC	Mammari	2.20	141	P	P	03 41 38.7	+0.2
DALT	Dalyan (Mudla)	2.32	268	PN	P	03 41 40.4	+0.3
CSS	Prodhromos	2.42	142	P	P	03 41 41.0	-0.4
	2.8nm,0.2s						
CSS				S	S	03 42 09.2	-2.6
YER	Yerkesik	2.61	276	PN	P	03 41 44.6	+0.8
ESKT	Eskisehir	2.67	349	PN	P	03 41 44.7	0.0
KAMT	Kaman	3.01	34	PN	P	03 41 49.0	-0.2
BR131	Keskin Array S	3.28	30	*e*Pn	P	03 41 52.4	-0.3
BR131	Keskin Array S	3.28	30	*e*Pn	P	03 41 52.3	-0.4
BRTR	Keskin Array B	3.28	30	P	P	03 41 52.6	0.0
	2.5nm,0.3s,baz=213,slow=15,SNR=101						
BODT	Bodrum	3.38	274	*e*PN	P	03 41 54.5	+0.5
CEYT	Ceyhan	3.38	87	*e*PN	P	03 41 53.7	-0.4
HTY	Hatay	3.79	100	*e*PN	P	03 41 59.8	+0.2
IDI	Anoyia	5.61	255	P	P	03 42 22.8	-1.0
	3.4nm,0.3s,baz=80,slow=15,SNR=27						
IDI				S	S	03 43 24.6	-3.0
	1.0nm,0.3s,baz=294,slow=20,SNR=3.4						
DABA	Dabaa	6.46	206	⇑P	P	03 42 34.8	-0.6
HBRG	Burj al 'Arab	6.46	193	P	P	03 42 34.5	-0.8
KOT	Kottamia	6.96	178	⇑P	P	03 42 42.8	+0.7
HNKL	Nakhl	7.24	163	⇑P	P	03 42 47.0	+1.0
HNKL				S	S	03 44 03.1	-4.1
EIL	Elat	7.75	157	P	P	03 42 53.0	+0.1
	0.9nm,0.3s,baz=148,slow=10,SNR=7.9						
EIL				S	S	03 44 15.9	-3.7
	1.7nm,0.3s,baz=6.6,slow=28,SNR=6.3						
SWA1		9.04	214	P	P	03 43 09.1	-0.9
SWA1				S	S	03 44 40.9	-9.5
SWA2		9.17	215	⇑P	P	03 43 10.7	-1.1
HFRF	Wahat Farafira	10.09	197	P	P	03 43 23.7	-0.3
FINES	FINESS Array B	24.81	354	P	P	03 46 11.9	-0.5
	0.7nm,0.5s,mb3.4,baz=164,slow=10,SNR=8.8						
ARCES	ARCESS Array B	32.86	356	P	P	03 47 23.8	-0.7
	1.1nm,1.0s,mb3.5,baz=180,slow=7.3,SNR=6.8						

GUC 20 04:01:28.8±0.6**, 32.10S×71.74W, h24**^{km}±6^{km}**, MD3.8, ML2.4, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PACH	Papudo	0.50	150	*e*P	Pb	04 01 38.9	-0.1
PACH				*i* S	Sb	04 01 46.6	+0.7
ILCH	Illapel	0.67	46	*i* P	Pb	04 01 41.7	-0.1
ILCH				*i* S	Sb	04 01 51.3	+0.7
ILCH				AMP		04 01 55.1	
	comp=N,257nm,0.6s						
ROCH	El Roble	1.06	145	*e*P	Pn	04 01 47.9	-0.5
ROCH				*i* S	Sb	04 02 02.3	+0.4
CMCH	Combarbala	1.12	34	*e*P	Pn	04 01 48.5	-0.6
CMCH				*i* S	Sb	04 02 03.6	+0.1
CMCH				AMP		04 02 09.4	
	comp=E,286nm,0.8s						
JACH	Jahuel	1.13	121	*i* P	Pn	04 01 49.1	-0.2
JACH				*i* S	Sb	04 02 04.2	+0.4
CLCH	Cerro Calan	1.64	142	*e*P	Pn	04 01 56.6	0.0
CLCH				AMP		04 02 31.5	
	comp=E,71nm,0.5s						
TACH	Talagante	1.69	157	*e*P	Pn	04 01 57.8	+0.6
CHCH	Chadas Angostu	2.04	154	*e*P	Pn	04 02 03.1	+0.7

NIED ***20*** *04:03:00, 37.20N×138.60E, h5^{km}, Mw4.9 Best double couple: M$_0$2.16×10^{16} NP1:φ$_s$23°, δ66°, λ83°. NP2:φ$_s$220°, δ25°, λ105°.*

IDC ***20*** *04:03:11.0±0.4, 37.30N×138.45E, mb4.7/19, mb1 4.9/20, mb1mx4.8/22, mbtmp4.7/20, ML4.6/1, MS4.3/9, Ms1 4.3/9, ms1mx4.0/34, Error ellipse: s-maj=16.1km s-min=7.7km az=98.0*

MOS ***20*** *04:03:11.7±0.8, 37.31N×138.39E, h12^{km}, mb5.4/86, MS4.2/11, Error ellipse: s-maj=8.0km s-min=4.0km az=105.1*

JMA ***20*** *04:03:13.1±0.1, 37.23N×138.59E, h15^{km}±2^{km}, M5.0 Broadband fault plane solution: P waves. NP1:φ$_s$240°, δ41°, λ114°. NP2:φ$_s$29°, δ53°, λ70°. Principal axes: T Plg73°, Azm243°; N Plg16°, Azm41°; P Plg6°, Azm133°;*

HRVD ***20*** *04:03:13.4±0.5, 37.26N×138.62E, h17^{km}±1^{km}, MW4.9/51, Centroid moment Tensor Solution. LP body waves: s14,c19;Mantle waves: s51,c86; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.96±.37; M$_{\theta\theta}$-0.77±.21; M$_{\phi\phi}$-2.20±.21; M$_{r\theta}$0.48±.70; M$_{\theta\phi}$-1.29±.12; M$_{\phi r}$0.77±.50; Best double couple: M$_0$3.095×10^{16} NP1:φ$_s$210°, δ36°, λ89°. NP2:φ$_s$31°, δ54°, λ90°. Principal axes: T 3.096, Plg81°, Azm303°; N -.008, Plg0°, Azm211°; P -3.095, Plg9°, Azm121°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***20*** *04:03:13.4±0.7, 37.21N×138.42E, h16^{km}±4^{km}, mb5.2/106, MW4.8(NIED) Error ellipse: s-maj=3.9km s-min=2.8km az=167.0*

NEIC One person injured in Kashiwazaki. Felt strongly in Niigata Prefecture. Recorded [4 JMA] in Niigata; [2 JMA] in Fukushima, Gumma, Nagano and Yamagata; [1 JMA] in Ishikawa, Miyagi, Saitama and Toyama Prefectures. Recorded [3 JMA] on Sado-shima.

BJI ***20*** *04:03:13.4, 37.20N×138.40E, h15^{km}, mB5.2, mb4.6, Ms4.8, Msz4.5*

CSEM ***20*** *04:03:18.3, 38.36N×139.19E, h33^{km}, mb5.5*

ISC 20 04:03:13.0±0.3**, 37.26N**±0.02×**138.52E**±0.02**, h21**^{km}±2^{km}**, h22**^{km}±2.1^{km}**:pP-P, n468, σ0^{s}90**/480**, mb5.0**/142**, MS4.5**/25**, 121C-27D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIZZ	Izumozaki	0.31	30	⇓P	Pb	04 03 20.1	+0.2
JIZZ				S	Sb	04 03 26.0	+1.4
JJN	Nakama	0.33	241	⇑P	Pb	04 03 20.6	+0.5
JJN				S	Sb	04 03 26.6	+1.6
JHK	Hiroka	0.40	92	⇓P	Pb	04 03 19.9	-1.4
JHK				S	Sb	04 03 25.0	-2.0
JGK	Kuni	0.71	172	⇓P	Pb	04 03 26.0	-0.5
MAJO	Matsushiro	0.76	199	⇑*e*P	Pb	04 03 26.9	-0.5
MAT	Matsushiro	0.76	199	*e*P	Pb	04 03 27.0	-0.4
MAT				*e*S	Sb	04 03 37.0	-0.3
MAT	Matsushiro	0.76	199	P	Pb	04 03 26.6	-0.8
MAT				S	Sb	04 03 37.3	0.0
MAT	Matsushiro	0.76	199	P	Pb	04 03 26.7	-0.7
MJAR	Matsushiro Arr	0.76	199	Pg	Pb	04 03 27.0	-0.5
	362nm,0.3s,baz=16,slow=16,SNR=1414						
MJAR				Lg		04 03 37.4	
	1μm,0.3s,baz=214,slow=42,SNR=39						
JKT	Katashina	0.77	130	⇓P	Pb	04 03 26.1	-1.4
JSD	Sado	0.80	345	⇓P	Pb	04 03 28.3	+0.2
JSD				S	Sb	04 03 39.8	+1.4
JNS	Sasagawa	0.84	49	⇑P	Pb	04 03 28.2	-0.6
JNS				S	Sb	04 03 39.5	-0.2
JNG	Nsakai	0.92	202	⇑P	Pb	04 03 29.7	-0.4
JSZ	Suzu	0.94	282	⇓P	Pb	04 03 31.1	+0.7
JFY	Yanaizu	0.96	81	S	Sb	04 03 42.2	-0.8
JAG	Ashikaga	1.12	138	⇓P	Pb	04 03 32.7	-0.9
JTT	Ttatey	1.16	236	⇑P	Pb	04 03 35.0	+0.9
JSB	Shiboa	1.16	104	⇓P	Pn	04 03 33.7	-0.5
JRY	Ryogami san	1.28	166	⇓P	Pn	04 03 35.3	-0.6
JHG	Hegura jima	1.40	295	⇓P	Pn	04 03 37.9	+0.3
JGN	Niukaw	1.42	223	⇑P	Pn	04 03 39.2	+1.3
JNT	Takato	1.42	193	⇑P	Pn	04 03 38.3	+0.4
JJH	Hakui	1.43	257	⇑P	Pn	04 03 38.3	+0.3
JFT	Otama	1.47	79	P	Pn	04 03 38.5	-0.1
JYS	Shirataka	1.56	52	⇑P	Pn	04 03 40.1	+0.3
JHO	Hitachi	1.77	111	⇓P	Pn	04 03 42.5	-0.4
ONAJ	Iwakimizuishiy	1.83	94	⇓P	Pn	04 03 43.7	0.0
JFK	Kawauchi	1.88	86	⇓P	Pn	04 03 44.5	0.0
JGF	Kuroka	1.91	210	⇑P	Pn	04 03 46.0	+1.2
JNY	Yasuok	1.97	196	⇑P	Pn	04 03 47.0	+1.2
JOU	Okura	2.02	56	⇑P	Pn	04 03 46.8	+0.2
JOD2	Odawara 2	2.05	167	P	Pn	04 03 48.6	+1.7
JGM	Miyama	2.13	223	⇑P	Pn	04 03 49.3	+1.2
JYK	Kaneyama	2.20	41	⇑P	Pn	04 03 49.4	+0.3
JAO	Obara	2.24	207	⇑P	Pn	04 03 50.7	+1.1
HMMJ	Hamamatsu 2	2.49	195	P	Pn	04 03 54.3	+1.1
JAA	Atsumi	2.85	203	P	Pn	04 04 00.1	+1.7
OFUJ	Ofunato	3.08	53	P	Pn	04 04 01.8	+0.3
JKY	Yasaka	3.20	240	P	Pn	04 04 04.2	+0.9
JWT	Wachi	3.20	233	⇑P	Pn	04 04 05.1	+1.8
JAH	Hinai	3.36	29	⇑P	Pn	04 04 06.0	+0.4
JKZ	Kuzumaki	3.50	38	P	Pn	04 04 08.2	+0.7
JKN2	Miekihoku	3.53	212	P	Pn	04 04 08.4	+0.4
JHJ	Hachijo jima 2	4.26	166	Pn	Pn	04 04 19.4	+0.9
	100nm,0.3s,baz=314,slow=8.1,SNR=13						
JNU	Nakatsue	7.50	239	Pn	Pn	04 05 05.0	+1.0
	2.4nm,0.3s,baz=63,slow=17,SNR=19						
JNU				LR	LR	04 08 10.4	
	comp=Z,1μm,19.9s,baz=48,slow=40						
ASAJ	Asahikawa	7.51	23	P	Pn	04 05 05.0	+0.8
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,784nm,19.2s						
ASAJ	Asahikawa	7.51	23	Pn	Pn	04 05 05.0	+0.8
	comp=Z,4.6nm,0.3s,baz=235,slow=11,SNR=24						
ASAJ				LR	LR	04 08 12.5	
	comp=Z,784nm,19.2s,baz=44,slow=40						
KS15	Wonju Array Si	8.47	274	*e*P	P	04 05 17.7	+0.2
YUK	Yuzh-Kuril'sk	8.77	37	*e*P	P	04 05 18.0	-3.7
YUK				*e*S	Sn	04 06 56.0	-4.9
YUK				pmax	pmax		
	comp=Z,2μm,1.0s						
YUK				pmax	pmax		
	comp=Z,250nm,0.6s						
YUK				pmax	pmax		
	comp=N,130nm,0.3s						
YUK				pmax	pmax		
	comp=E,210nm,0.6s						
YUK				smax			
	comp=N,2μm,2.0s						
YUK				smax			
	comp=E,3μm,2.0s						
YUK				smax			
	comp=N,170nm,0.5s						
YUK				smax			
	comp=E,110nm,0.5s						
MDJ	Mudanjiang	9.97	320	P	P	04 05 41.5	+3.2
MDJ				AP		04 05 47.3	
MDJ				XP		04 05 50.8	
MDJ				S	Sn	04 07 32.0	+1.4
MDJ				AMB	AMB		
	comp=Z,30nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,390nm,5.8s						
MDJ				LR	LR		
	comp=N,2μm,16.0s						
MDJ				LR	LR		
	comp=E,2μm,14.2s						
MDJ				LR	LR		
	comp=Z,2μm,16.7s						
MDJ	Mudanjiang	9.97	320	P	P	04 05 39.7	+1.4
	comp=Z,36nm,1.0s						
YSS	Yuzh-Sakhalins	10.18	17α	*i*P	P	04 05 41.0	-0.1
YSS				S	S	04 07 34.0	-1.7
YSS				pmax	pmax		
	comp=N,120nm,1.0s						
YSS				pmax	pmax		
	comp=Z,120nm,1.0s						
YSS				MLR	MLR		
	comp=Z,3μm,14.0s						
YSS				MLR	MLR		
	comp=E,3μm,13.0s						
YSS	Yuzh-Sakhalins	10.18	17	⇑*e*P	P	04 05 40.9	-0.2
	comp=E,134nm,1.0s						
CN2	Changchun	11.89	307	*e*P	P	04 06 05.8	+1.4
CN2				*e*XP		04 06 15.6	
CN2				*e*S	S	04 08 19.3	+1.9
CN2				AMB	AMB		
	comp=Z,20nm,0.7s						
CN2				AMB	AMB		
	comp=Z,700nm,6.0s						
CN2				LR	LR		
	comp=N,2μm,16.0s						
CN2				LR	LR		
	comp=E,2μm,16.0s						
CN2				LR	LR		
	comp=Z,2μm,17.0s						
KLR	Kul'dur	12.93	340	*e*P	P	04 06 18.2	-0.1
KLR				*e*		04 08 50.5	
KLR				pmax	pmax		
	comp=N,900nm,5.5s						
KLR				pmax	pmax		
	comp=Z,1μm,5.5s						
SSE	Sheshan	15.60	252	P	P	04 06 51.0	-2.4
SSE				XP		04 07 00.8	
SSE				AMB	AMB		
	comp=Z,20nm,0.7s						
SSE				AMB	AMB		
	comp=Z,190nm,4.9s						
SSE				LR	LR		
	comp=N,790nm,19.4s						
SSE				LR	LR		
	comp=E,660nm,19.4s						
SSE				LR	LR		
	comp=Z,680nm,14.7s						
SSE	Sheshan	15.60	252	P	P	04 06 51.0	-2.4
	comp=Z,20nm,0.7s						
SSE				sP		04 07 00.8	
SSE				S	S	04 09 40.8	-5.1
NJ2	Nanjing	16.99	258	*e*P	P	04 07 10.3	-0.7
NJ2				AP		04 07 18.0	
NJ2				XP		04 07 22.4	
NJ2				PP	PP	04 07 25.6	+0.3
NJ2				PPP	PPP	04 07 32.6	-0.7
NJ2				S	S	04 10 18.0	0.0
NJ2				XS		04 10 31.0	
NJ2				AMB	AMB		
	comp=Z,40nm,1.5s						
NJ2				AMB	AMB		
	comp=Z,330nm,4.0s						
NJ2				LR	LR		
	comp=N,2μm,12.8s						
NJ2				LR	LR		
	comp=E,2μm,12.0s						
NJ2				LR	LR		
	comp=Z,2μm,13.6s						
HIA	Hailar	18.13	317	*e*P	P	04 07 25.3	+0.1
HIA				pmax	pmax		
	comp=Z,104nm,0.2s						
HIA	Hailar	18.13	317	*e*P	P	04 07 25.3	+0.1
	comp=Z,104nm,0.2s						
QZH	Quanzhou	20.97	240	*e*P	P	04 07 58.4	+1.1
QZH				S	S	04 11 53.0	+7.9
QZH				LR	LR		
	comp=N,3μm,16.9s,MS4.7						
QZH				LR	LR		
	comp=E,690nm,14.2s,MS4.7						
QZH				LR	LR		
	comp=Z,1μm,11.4s,MS4.5						
PET	Petropavlovsk	21.10	35	*e*P	P	04 07 58.0	-0.4
PET				*e*S	S	04 11 48.5	+1.2
PET				MLR	MLR		
	comp=Z,700nm,15.8s,MS4.1						
WHN	Wuhan	21.12	259	*e*P	P	04 07 58.5	-0.2
HHC	Hu-ho-hao-te	21.20	288	*e*P	P	04 07 56.9	-2.6
HHC				AP		04 08 03.9	
HHC				XP		04 08 07.0	
HHC				PP	PP	04 08 22.3	-0.7
HHC				PCP	PcP	04 12 02.3	-2.5
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
HHC				LR	LR		
	comp=N,1μm,12.2s,MS4.7						
HHC				LR	LR		
	comp=E,1μm,11.2s,MS4.7						
HHC				LR	LR		
	comp=Z,1μm,12.5s,MS4.5						
CLNS	Chul'man	21.59	339	*e*P	P	04 08 01.8	-1.5
CLNS				*e**PP		04 08 08.8	
CLNS				*e*PPP	PPP	04 08 23.2	-14
CLNS				*e*S	S	04 11 54.6	-1.9
CLNS				*e*SS	SS	04 12 33.2	+0.4
CLNS				pmax	pmax		
	comp=Z,35nm,0.8s,mb4.8						
CLNS				pmax	pmax		
	comp=N,29nm,1.1s						
CLNS				pmax	pmax		
	comp=E,21nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.7						
CLNS				pmax	pmax		
	comp=N,35nm,1.3s						
CLNS				pmax	pmax		
	comp=E,18nm,0.8s						
CLNS				smax			
	comp=N,7.0nm,0.8s						
CLNS				smax			
	comp=Z,3.0nm,0.6s						
CLNS				smax			
	comp=E,5.0nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,600nm,15.0s,MS4.1						
CLNS				MLR	MLR		
	comp=N,700nm,13.0s,MS4.3						
CLNS				MLR	MLR		
	comp=E,200nm,12.0s,MS4.3						
BTO	Baotou	22.38	287	*e*P	P	04 08 10.8	-0.4
BTO				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb4.6						
BTO				LR	LR		
	comp=N,1μm,11.8s,MS4.7						
BTO				LR	LR		
	comp=E,1μm,11.4s,MS4.7						
CIT	Chita	22.93	318	*e*P	P	04 08 14.9	-1.7
CIT				pmax	pmax		
	comp=Z,62nm,1.4s,mb4.8						
MA2	Magadan	23.68	16*c*	*e*P	P	04 08 23.2	-0.6
MA2				pmax	pmax		
	comp=Z,40nm,1.3s,mb4.7						
MA2	Magadan	23.68	16	*e*P	P	04 08 22.7	-1.1
	comp=Z,47nm,1.0s,mb4.9						
XAN	Xi'an	24.22	271	P	P	04 08 28.8	-0.5
XAN				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.3						
ENH	Enshi	25.06	262	*e*P	P	04 08 35.7	-1.6
	comp=Z,102nm,1.0s,mb5.3						
ENH				LR	LR		
	comp=Z,602nm,21.0s,MS4.1						
ULN	Ulaanbaatar	25.32	305	*e*P	P	04 08 38.7	-0.9
ULN				*e*		04 12 12.1	
ULN				pmax	pmax		
	comp=Z,35nm,1.0s,mb4.8						
ULN	Ulaanbaatar	25.32	305	*e*P	P	04 08 38.7	-0.9
	comp=Z,35nm,1.0s,mb4.8						
ULN				*e*PcP	PcP	04 12 12.1	-1.1
YAK	Yakutsk	25.40	350*c*	*i*P	P	04 08 38.8	-1.4
YAK				*e*		04 09 12.4	
YAK				*i* S	S	04 13 10.0	+7.0
YAK				*e*SS	SS	04 14 24.1	+19
YAK				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.6						
YAK				pmax	pmax		
	comp=N,11nm,1.6s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.5						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
YAK				smax			
	comp=N,2.0nm,0.9s						
YAK				smax			
	comp=E,5.0nm,1.3s						
YAK				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.0						
YAK				MLR	MLR		
	comp=N,200nm,15.0s,MS3.9						
YAK				MLR	MLR		
	comp=E,100nm,12.0s,MS3.9						
YAK	Yakutsk	25.40	350	*e*P	P	04 08 38.7	-1.5
	comp=E,45nm,0.8s,mb5.0						
YAK				LR	LR		
	comp=Z,616nm,19.0s,MS4.1						
SONM	Songino Array	25.74	304	P	P	04 08 43.0	-0.6
	comp=Z,14nm,0.9s,mb4.5,baz=106,slow=9.0,SNR=99						
SONM				PcP	PcP	04 12 13.1	-1.0
	comp=Z,1.1nm,0.6s,baz=109,slow=2.9,SNR=5.2						
SONM				LR	LR	04 19 00.3	
	comp=Z,1μm,19.1s,MS4.4,baz=74,slow=37						
BOD	Bodaibo	26.13	330	*e*P	P	04 08 37.5	-10
LZH	Lanzhou	27.75	278	⇓P	P	04 08 59.8	-2.3
LZH				AP	pP	04 09 07.3	-1.0
LZH				XP	sP	04 09 11.3	+0.2
LZH				PP	PP	04 09 48.0	-3.1
LZH				*e*S	S	04 13 37.9	-3.9
LZH				AMB	AMB		
	comp=Z,60nm,1.5s,mb5.0						
LZH				AMB	AMB		

	comp=Z,230nm,5.2s						
LZH				LR	LR		
	comp=N,1µm,12.0s						
LZH				LR	LR		
	comp=Z,2µm,15.3s,MS4.8						
LZH	**Lanzhou**	**27.75**	**278**	⇓P	**P**	**04 08 59.7**	**-2.4**
LZH				*PP	pP	04 09 07.2	-1.1
LZH						04 09 48.0	
LZH				*e*S	**S**	**04 13 37.9**	**-3.9**
LZH				SS	SS	04 14 57.5	-4.6
LZH				pmax	pmax		
	comp=Z,61nm,1.5s,mb5.0						
LZH				MLR	MLR		
	comp=Z,2µm,15.3s,MS4.8						
LZH	**Lanzhou**	**27.75**	**278**	⇓P	**P**	**04 08 59.7**	**-2.4**
	comp=Z,61nm,1.5s,mb5.0						
LZH				pP	pP	04 09 07.2	-1.1
LZH				sP	sP	04 09 11.2	+0.1
LZH				PP	PP	04 09 48.0	-3.1
LZH				*e*S	**S**	**04 13 37.9**	**-3.9**
LZH				sS		04 13 50.2	
LZH				SS	SS	04 14 57.5	-4.6
LZH				LR	LR		
	comp=Z,2µm,15.3s,MS4.8						
ZAK	**Zakamensk**	**28.32**	**309**	*e*P	**P**	**04 09 05.5**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.8						
TLY	**Talaya**	**28.44**	**312**	*e*P	**P**	**04 09 07.0**	**-1.2**
TLY				*e*		04 12 27.8	
TLY				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
TLY				MLR	MLR		
	comp=Z,671nm,16.0s,MS4.3						
GYA	**Guiyang**	**29.00**	**257**	⇑*i*P	**P**	**04 09 11.4**	**-2.1**
GYA				AP	pP	04 09 18.3	-1.4
GYA				XP	sP	04 09 21.6	-0.8
GYA				PP	PP	04 10 03.8	-3.6
GYA				S	**S**	**04 13 56.9**	**-5.1**
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,180nm,5.1s						
GYA				LR	LR		
	comp=N,690nm,11.7s,MS4.6						
GYA				LR	LR		
	comp=E,570nm,12.6s,MS4.6						
GYA				LR	LR		
	comp=Z,510nm,12.6s,MS4.3						
KMI	**Kunming**	**32.72**	**259**	P	**P**	**04 09 45.3**	**-1.1**
KMI				AP	pP	04 09 51.3	-1.3
KMI				XP	sP	04 09 54.8	-0.6
KMI				S	**S**	**04 15 01.3**	**+0.7**
KMI				AMB	AMB		
	comp=Z,20nm,1.7s,mb4.8						
KMI				AMB	AMB		
	comp=Z,190nm,4.9s						
KMI				LR	LR		
	comp=N,730nm,15.3s,MS4.6						
KMI				LR	LR		
	comp=E,690nm,16.0s,MS4.6						
KMI				LR	LR		
	comp=Z,510nm,20.0s,MS4.2						
KMI	**Kunming**	**32.72**	**259**	P	**P**	**04 09 45.2**	**-1.2**
KMI				*PP	pP	04 09 51.2	-1.4
KMI				S	**S**	**04 15 01.3**	**+0.7**
KMI				pmax	pmax		
	comp=Z,21nm,1.7s,mb4.8						
KMI				MLR	MLR		
	comp=Z,510nm,20.0s,MS4.2						
KMI	**Kunming**	**32.72**	**259**	P	**P**	**04 09 45.2**	**-1.2**
	comp=Z,21nm,1.7s,mb4.8						
KMI				pP	pP	04 09 51.2	-1.4
KMI				sP	sP	04 09 54.7	-0.7
KMI				S	**S**	**04 15 01.3**	**+0.7**
KMI				LR	LR		
	comp=Z,510nm,20.0s,MS4.2						
BILL	**Bilibino**	**34.49**	**18**	*d i*P	**P**	**04 10 00.4**	**-0.9**
BILL				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
BILL				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.1						
BILL	**Bilibino**	**34.49**	**18**	*e*P	**P**	**04 09 59.6**	**-1.7**
	comp=Z,12nm,1.0s,mb4.8						
WMQ	**Urumqi**	**38.67**	**296**	*e*P	**P**	**04 10 36.8**	**0.0**
WMQ				AP	pP	04 10 44.3	+1.2
WMQ				XP	sP	04 10 47.6	+1.9
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,540nm,5.2s						
WMQ				LR	LR		
	comp=N,2µm,18.6s,MS5.3						
WMQ				LR	LR		
	comp=E,3µm,20.2s,MS5.3						
WMQ				LR	LR		
	comp=Z,2µm,18.6s,MS5.0						
CMAR	**Chiang Mai Arr**	**39.34**	**253**	P	**P**	**04 10 41.8**	**-0.8**
CMAR						04 12 51.2	
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,359nm,18.2s						
CMAR	**Chiang Mai Arr**	**39.34**	**253**	P	**P**	**04 10 41.8**	**-0.8**
	comp=Z,1.7nm,0.6s,mb3.9,baz=47,slow=8.4,SNR=5.8						
CMAR				PcP	PcP	04 12 51.2	-0.3
	comp=Z,0.8nm,0.3s,baz=333,slow=3.2,SNR=4.8						
CMAR				LR	LR	04 28 05.1	
	comp=Z,359nm,18.2s,MS4.2,baz=75,slow=38						
LSA	**Lhasa**	**39.88**	**273**	*e*P	**P**	**04 10 47.8**	**+0.7**
ZAL	**Zalesovo**	**40.06**	**312**	P	**P**	**04 10 47.1**	**-1.1**
ZAL						04 12 52.8	
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZAL	**Zalesovo**	**40.06**	**312**	P	**P**	**04 10 47.1**	**-1.2**
	comp=Z,1.7nm,0.3s,mb4.2,baz=18,slow=8.8,SNR=7.4						
ZAL				PcP	PcP	04 12 52.8	-0.7
	comp=Z,4.4nm,0.6s,baz=329,slow=2.7,SNR=9.4						
NVS	**Novosibirsk**	**41.01**	**314**	*e*P	**P**	**04 10 53.1**	**-2.9**
SHL	**Shillong**	**41.10**	**267**	*i* P	**P**	**04 10 55.5**	**-1.6**
MKAR	**Makanchi Array**	**42.03**	**301**	*i* P	**P**	**04 11 03.4**	**-1.0**
MKAR				pmax	pmax		
	comp=Z,3µm,0.9s						
MKAR	**Makanchi Array**	**42.03**	**301**	P	**P**	**04 11 02.8**	**-1.6**
	comp=Z,3.4nm,0.9s,mb4.0,baz=87,slow=9.4,SNR=22						
MKAR				PcP	PcP	04 12 58.8	-1.1
	comp=Z,4.1nm,0.8s,baz=76,slow=5.0,SNR=9.6						
MKAR				ScP		04 16 48.7	
	comp=Z,0.8nm,0.8s,baz=90,slow=6.1,SNR=4.7						
MKAR				LR	LR	04 29 04.2	
	comp=Z,813nm,18.6s,MS4.6,baz=3.1,slow=37						
MKAR	**Makanchi Array**	**42.03**	**301**	P	**P**	**04 11 02.8**	**-1.6**
MKAR				PcP	PcP	04 12 58.8	-1.1
MKAR				ScP		04 16 48.7	
MKAR				LR	LR	04 29 04.2	
GUN	**Gumba**	**44.83**	**274**	*e*P	**P**	**04 11 27.3**	**-0.2**
	comp=Z,57nm,1.1s,mb5.3						
PKI	**Pulchoki**	**45.35**	**274**	*e*P	**P**	**04 11 30.7**	**-0.9**
	comp=Z,21nm,1.0s,mb4.9						
PKI	**Pulchoki**	**45.35**	**274**	*e*P	**P**	**04 11 30.7**	**-0.9**
PKI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
KKN	**Kakani**	**45.36**	**274**	*e*P	**P**	**04 11 31.3**	**-0.4**
	comp=Z,42nm,1.0s,mb5.2						
KKN	**Kakani**	**45.36**	**274**	*e*P	**P**	**04 11 31.3**	**-0.4**
KKN				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.9						
DMN	**Daman**	**45.58**	**274**	*e*P	**P**	**04 11 32.9**	**-0.5**
GKN	**Gorkha**	**45.78**	**275**	*e*P	**P**	**04 11 34.3**	**-0.7**
	comp=Z,48nm,0.9s,mb5.4						
TTA	**Tatalina**	**46.56**	**35**	*e*P	**P**	**04 11 40.5**	**-0.1**
KOLN	**Koldanda**	**46.71**	**275**	*e*P	**P**	**04 11 41.8**	**-0.5**
	comp=Z,58nm,1.4s,mb5.3						
SVW2	**Sparrevohn**	**46.75**	**38**	*e*P	**P**	**04 11 43.3**	**+1.2**
PMG	**Port Moresby**	**47.12**	**168**	LR	LR	04 28 40.1	
	comp=Z,226nm,18.1s,MS4.2,baz=354,slow=32						
IMA	**Indian Mountai**	**47.67**	**31**	*e*P	**P**	**04 11 50.3**	**+0.9**
RSO	**Redoubt South**	**48.16**	**38**	*e*P	**P**	**04 11 53.3**	**+0.1**
KSH	**Kashi**	**48.19**	**293**	*e*P	**P**	**04 11 53.6**	**-0.2**
KSH				*e*AP	pP	04 12 00.3	+0.1
KSH				*e*XP	sP	04 12 04.0	+1.2
KSH				*e*PCP	PcP	04 13 19.5	-1.8
KSH				PP	PP	04 13 44.8	-0.9
KSH				*e*PPP	PPP	04 14 34.0	-2.9
KSH				*e*SCP		04 17 11.6	
KSH				*e*PCS		04 17 14.9	
KSH				*e*S	**S**	**04 18 48.8**	**-2.0**
KSH				*e*XS		04 19 00.8	
KSH				*e*SCS	ScS	04 21 40.6	-2.3
KSH				LR	LR		
	comp=N,1µm,12.4s,MS5.2						
KSH				LR	LR		
	comp=E,1µm,10.8s,MS5.2						
AAK	**Ala-Archa**	**48.34**	**297**	*i* P	**P**	**04 11 53.6**	**-1.3**
VOSK	**Vostochnaya**	**48.40**	**311**	P	**P**	**04 11 53.6**	**-1.6**
VOSK				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.0						
SPU	**Mount Spurr**	**48.45**	**37**	*e*P	**P**	**04 11 55.9**	**+0.4**
BVA0	**Borovoye Array**	**48.70**	**312**	*i* P	**P**	**04 11 56.1**	**-1.4**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
ZRNK	**Zerenda**	**49.54**	**312**	P	**P**	**04 12 02.9**	**-1.1**
ZRNK				pmax	pmax		
	comp=Z,48nm,1.6s,mb5.3						
ZRNK	**Zerenda**	**49.54**	**312**	*e*P	**P**	**04 12 01.9**	**-2.0**
	comp=Z,9.3nm,0.7s,mb4.9						
PMR	**Palmer**	**49.82**	**37**	*e*P	**P**	**04 12 05.4**	**-0.6**
KAKA	**Kakadu**	**50.03**	**188**	*e*P	**P**	**04 12 06.4**	**-1.9**
	comp=Z,222nm,3.1s						
SML	**Sawmill**	**50.18**	**36**	*e*P	**P**	**04 12 08.3**	**-0.5**
ILAR	**Eielson Array**	**50.54**	**32**	P	**P**	**04 12 10.3**	**-1.2**
ILAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ILAR	**Eielson Array**	**50.54**	**32**	P	**P**	**04 12 10.3**	**-1.2**
	comp=Z,7.0nm,0.9s,mb4.6,baz=272,slow=5.8,SNR=48						
HNR	**Honiara**	**50.61**	**152**	LR	LR	04 30 28.3	
	comp=Z,314nm,20.6s,MS4.3,baz=323,slow=32						
KKAR	**Karatay Array**	**51.00**	**299**	*i* P	**P**	**04 12 14.2**	**-1.1**
KKAR				pmax	pmax		
	comp=Z,48nm,1.4s,mb5.2						
DIV	**Divide**	**51.49**	**37**	*e*P	**P**	**04 12 17.5**	**-1.2**
	comp=Z,74nm,1.0s,mb5.6						
MENT	**Mentasta**	**52.16**	**34**	*e*P	**P**	**04 12 23.8**	**0.0**
SVE	**Sverdlovsk**	**53.44**	**318**	⇑*i*P	**P**	**04 12 32.0**	**-1.4**
SVE				pmax	pmax		
	comp=Z,120nm,2.0s,mb5.5						
ARU	**Arti**	**54.65**	**318**	⇑*i*P	**P**	**04 12 41.2**	**-1.0**
ARU				*e*		04 13 41.9	
ARU				*e*		04 14 42.2	
ARU				*e*S	**S**	**04 20 20.0**	**+0.8**
ARU				*e*		04 22 24.4	
ARU				pmax	pmax		
	comp=Z,52nm,1.2s,mb5.4						
ARU	**Arti**	**54.65**	**318**	*e*P	**P**	**04 12 41.0**	**-1.2**
	comp=Z,77nm,1.4s,mb5.5						
SOKR	**Solikamsk**	**54.73**	**322**	⇓*i*P	**P**	**04 12 39.8**	**-3.0**
SOKR				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,540nm,18.0s,MS4.7						
INK	**Inuvik**	**55.23**	**27**	*e*P	**P**	**04 12 45.9**	**-0.5**
INK				pmax	pmax		
	comp=Z,37nm,1.1s						
INK	**Inuvik**	**55.23**	**27**	*e*P	**P**	**04 12 45.9**	**-0.5**
	comp=Z,36nm,1.1s,mb5.3						
AB31	**Akbulak array**	**56.01**	**309**	*i* P	**P**	**04 12 50.7**	**-1.5**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
FITZ	**Fitzroy Crossi**	**56.39**	**195**	*e*P	**P**	**04 12 53.3**	**-2.0**
	comp=Z,9.0nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**57.02**	**185**	*c i*P	**P**	**04 12 57.4**	**-2.5**
WRAB	**Tennant Creek**	**57.02**	**185**	*e*P	**P**	**04 12 57.1**	**-2.8**
	comp=Z,48nm,1.2s,mb5.4						
WB2	**Warramunga Arr**	**57.03**	**185**	⇑*i*P	**P**	**04 12 57.5**	**-2.5**
WRA	**Warramunga Arr**	**57.03**	**185**	P	**P**	**04 12 57.4**	**-2.6**
WRA						04 13 53.5	
WRA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WRA	**Warramunga Arr**	**57.03**	**185**	P	**P**	**04 12 57.4**	**-2.5**
	comp=Z,9.3nm,0.5s,mb5.0,baz=0.3,slow=7.5,SNR=291						
WRA				PcP	PcP	04 13 53.5	-1.2
	comp=Z,2.5nm,0.5s,baz=358,slow=4.5,SNR=6.0						
CTA	**Charters Tower**	**57.51**	**171**	LR	LR	04 34 22.4	
	comp=Z,265nm,19.8s,MS4.3,baz=49,slow=32						
DLBC	**Dease Lake**	**59.86**	**37**	*e*P	**P**	**04 13 19.6**	**+0.5**
KBS	**Kingsbay**	**60.03**	**350**	*e*P	**P**	**04 13 19.3**	**-0.8**
KBS				pmax	pmax		
	comp=Z,46nm,1.3s,mb5.3						
KBS	**Kingsbay**	**60.03**	**350**	*e*P	**P**	**04 13 19.3**	**-0.8**
	comp=Z,46nm,1.3s,mb5.3						
HSP	**Hornsund**	**60.72**	**347**	*e*P	**P**	**04 13 24.3**	**-0.5**
APA	**Apatity**	**61.52**	**335**	⇑*e*P	**P**	**04 13 28.5**	**-1.8**
APA				*i*		04 13 38.0	
APA				pmax	pmax		
	comp=Z,65nm,1.4s,mb5.6						
APA				MLR	MLR		
	comp=Z,900nm,18.0s,MS5.0						
KEV	**Kevo**	**62.40**	**339**	*e*p	**P**	**04 13 34.3**	**-1.9**
	comp=Z,13nm,0.8s,mb5.1						
KEV	**Kevo**	**62.40**	**339**	*e*P	**P**	**04 13 34.3**	**-1.9**
KEV				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.1						
RES	**Resolute Bay**	**62.95**	**14**	*e*P	**P**	**04 13 38.1**	**-1.6**
RES				pmax	pmax		
	comp=Z,45nm,1.4s,mb5.4						
RES	**Resolute Bay**	**62.95**	**14**	*e*P	**P**	**04 13 38.1**	**-1.7**
	comp=Z,45nm,1.4s,mb5.4						
ARCES	**ARCESS Array B**	**62.96**	**339**	P	**P**	**04 13 38.8**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,15nm,0.8s						
ARCES	**ARCESS Array B**	**62.96**	**339**	P	**P**	**04 13 38.8**	**-1.1**
	comp=Z,15nm,0.8s,mb5.2,baz=56,slow=8.7,SNR=34						
YKA	**Yellowknife Ar**	**64.76**	**29**	*i* P	**P**	**04 13 51.0**	**-0.6**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	**Yellowknife Ar**	**64.76**	**29**	P	**P**	**04 13 50.4**	**-1.2**
	comp=Z,2.4nm,0.8s,mb4.3,baz=292,slow=6.4,SNR=6.2						
YKA	**Yellowknife Ar**	**64.76**	**29**	P	**P**	**04 13 50.4**	**-1.2**
DAG	**Danmarks Havn**	**65.33**	**354**	⇓*e*P	**P**	**04 13 54.1**	**-1.1**
DAG				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
DAG	**Danmarks Havn**	**65.33**	**354**	⇓*e*P	**P**	**04 13 54.1**	**-1.1**
	comp=Z,9.7nm,0.8s,mb4.9						
DAG	**Danmarks Havn**	**65.33**	**354**	⇓*i*P	**P**	**04 13 54.1**	**-1.1**
	comp=Z,9.7nm,0.8s,mb4.9						
MOS	**Moscow**	**65.67**	**322**	*e*P	**P**	**04 13 56.7**	**-0.9**
MOS				*e*		04 14 27.6	
MOS				*e*		04 16 23.0	
MOS				*e*S	S	04 22 40.5	-0.2
MOS				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.6						
OBN	**Obninsk**	**66.51**	**322**	*ce*P	**P**	**04 14 02.1**	**-0.9**
OBN				*e*S	S	04 22 44.3	-6.7
OBN				pmax	pmax		
	comp=Z,59nm,1.3s,mb5.5						
OBN				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.8						
OBN	**Obninsk**	**66.51**	**322**	⇑*i*P	**P**	**04 14 02.1**	**-0.9**
OBN				LR	LR		
	comp=Z,600nm,18.0s,MS4.8						
VOR	**Voronezh**	**66.94**	**318**	*e*P	**P**	**04 14 04.5**	**-1.3**
VOR				pmax	pmax		
	comp=Z,70nm,1.7s,mb5.4						
KAF	**Kangasniemi**	**67.03**	**332**	*e*p	**P**	**04 14 04.1**	**-2.1**
	comp=Z,16nm,0.5s,mb5.3,baz=51,slow=6.0						
KAF	**Kangasniemi**	**67.03**	**332**	*e*P	**P**	**04 14 04.1**	**-2.1**
KAF				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.3						
FINES	**FINESS Array B**	**67.52**	**331**	P	**P**	**04 14 08.3**	**-1.0**
FINES						04 14 35.1	
FINES				pmax	pmax		
	comp=Z,16nm,0.6s						
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	**FINESS Array B**	**67.52**	**331**	P	**P**	**04 14 08.3**	**-1.0**
	comp=Z,16nm,0.6s,mb5.2,baz=57,slow=6.1,SNR=97						
FINES				PcP	PcP	04 14 35.1	-1.4
	comp=Z,3.2nm,0.6s,baz=53,slow=5.0,SNR=4.7						
FINES	**FINESS Array B**	**67.52**	**331**	P	**P**	**04 14 08.3**	**-1.0**
FINES				PcP	PcP	04 14 35.1	-1.4
PGC	**Sidney**	**67.83**	**45**	*e*P	**P**	**04 14 11.3**	**-0.2**
	comp=Z,20nm,0.9s,mb5.1						
GOF	**Gofitskoye**	**68.21**	**311**	⇑*i*P	**P**	**04 14 11.6**	**-2.3**
GOF				pmax	pmax		
	comp=Z,90nm,1.7s,mb5.5						
ARMA	**Armidale**	**68.44**	**168**	*e*P	**P**	**04 14 15.0**	**-0.6**
STKA	**Stephens Creek**	**68.84**	**177**	*e*P	**P**	**04 14 16.4**	**-1.6**
	comp=Z,3.0nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**68.84**	**177**	P	**P**	**04 14 16.3**	**-1.7**
	comp=Z,2.6nm,0.5s,mb4.4,baz=351,slow=7.6,SNR=11						
ZEI	**Tsey**	**68.86**	**308**	*e*P	**P**	**04 14 15.3**	**-2.7**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5						
KIV	**Kislovodsk**	**69.00**	**310**	*e*P	**P**	**04 14 18.5**	**-0.3**
KIV				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
KIV	**Kislovodsk**	**69.00**	**310**	*e*P	**P**	**04 14 18.5**	**-0.3**
	comp=Z,27nm,1.0s,mb5.1						
RPW	**Rockport**	**69.03**	**45**	P	**P**	**04 14 18.8**	**-0.1**
VSU	**Vasula**	**69.07**	**328**	*c i*P	**P**	**04 14 17.9**	**-1.1**
VSU	**Vasula**	**69.07**	**328**	⇑*i*P	**P**	**04 14 17.0**	**-2.0**
PNT	**Penticton**	**69.60**	**43**	P	**P**	**04 14 22.1**	**-0.3**
GNI	**Garni**	**69.70**	**305**	P	**P**	**04 14 21.2**	**-1.9**
GNI				pmax	pmax		
	comp=Z,60nm,1.4s						
GNI	**Garni**	**69.70**	**305**	P	**P**	**04 14 21.2**	**-2.0**
	comp=Z,60nm,1.4s,mb5.3						
NLW	**Nelson Butte**	**69.89**	**44**	P	**P**	**04 14 24.6**	**+0.4**
NSS	**Namsos**	**70.23**	**338**	*e*P	**P**	**04 14 23.1**	**-2.9**
NSS	**Namsos**	**70.23**	**338**	*e*	**P**	**04 14 23.1**	**-2.9**
EBG	**Ellensburg**	**70.41**	**46**	P	**P**	**04 14 28.0**	**+0.6**
SUMG	**Summit**	**70.44**	**359**	*e*P	**P**	**04 14 27.4**	**+0.3**
	comp=Z,48nm,0.9s,mb5.4						
EDM	**Edmonton**	**70.58**	**37**	*e*P	**P**	**04 14 26.3**	**-2.0**
VFP	**Flag Point**	**70.77**	**47**	P	**P**	**04 14 30.3**	**+0.7**
MNK	**Minsk**	**71.02**	**325**	*e*P	**P**	**04 14 31.0**	**+0.1**
OD2	**Odessa Site #2**	**71.19**	**44**	P	**P**	**04 14 32.0**	**0.0**
NEW	**Newport**	**71.56**	**43**	*e*P	**P**	**04 14 33.9**	**-0.4**
NEW				pmax	pmax		
	comp=Z,21nm,1.2s						
NEW	**Newport**	**71.56**	**43**	*e*P	**P**	**04 14 33.9**	**-0.4**
	comp=Z,22nm,1.2s,mb5.0						
SCO	**Scoresbysund**	**71.63**	**353**	*i* P	**P**	**04 14 34.6**	**+0.2**
YBH	**Yreka Blue Hor**	**72.02**	**51**	*e*P	**P**	**04 14 37.8**	**+0.7**
YBH				pmax	pmax		
	comp=Z,13nm,1.2s						
YBH	**Yreka Blue Hor**	**72.02**	**51**	*e*P	**P**	**04 14 37.8**	**+0.7**
	comp=Z,13nm,1.2s,mb4.7						
AKASG	**Malin Array Be**	**72.68**	**321**	P	**P**	**04 14 39.7**	**-1.1**
AKASG	**Malin Array Be**	**72.68**	**321**	P	**P**	**04 14 39.6**	**-1.2**
	comp=Z,12nm,0.6s,mb5.0,baz=46,slow=6.7,SNR=62						
LASM	**Arnica Sink**	**72.79**	**51**	P	**P**	**04 14 42.7**	**+1.0**
NB2	**NORSAR Subarra**	**73.06**	**336**	P	**P**	**04 14 42.1**	**-0.7**
	comp=Z,21nm,0.7s,mb5.2,baz=41,slow=5.8						
NB2	**NORSAR Subarra**	**73.06**	**336**	P	**P**	**04 14 42.1**	**-0.7**
	baz=41,slow=6.2						
NOA	**NORSAR Array B**	**73.06**	**336**	P	**P**	**04 14 42.4**	**-0.4**
NOA				pmax	pmax		
	comp=Z,17nm,0.7s						
NOA				MLR	MLR		
	comp=Z,190nm,18.7s						
NOA	**NORSAR Array B**	**73.06**	**336**	P	**P**	**04 14 42.4**	**-0.5**
	comp=Z,17nm,0.7s,mb5.1,baz=40,slow=5.9,SNR=85						
NOA				LR	LR	04 48 27.6	
	comp=Z,190nm,18.7s,MS4.4,baz=35,slow=37						
BSMT	**Bassoo Peak**	**73.07**	**42**	P	**P**	**04 14 43.8**	**+0.7**
NAO01	**NORSAR Array S**	**73.31**	**336**	*e*P	**P**	**04 14 43.3**	**-1.0**
	comp=Z,9.2nm,0.8s,mb4.8						
MOD	**Modoc**	**73.40**	**50**	*e*P	**P**	**04 14 45.7**	**+0.5**
	comp=Z,14nm,1.3s,mb4.7						
SUW	**Suwalki**	**73.43**	**326**	*e*P	**P**	**04 14 44.4**	**-0.7**
BMO	**Blue Mountains**	**73.45**	**46**	*e*P	**P**	**04 14 45.8**	**+0.4**
	comp=Z,15nm,1.1s,mb4.8						
SIM	**Simferopol’**	**73.53**	**314**	*e*P	**P**	**04 14 45.5**	**-0.4**
SIM				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
SIM				MLR	MLR		
	comp=Z,800nm,17.0s,MS5.1						
MSO	**Missoula**	**74.14**	**43**	*e*P	**P**	**04 14 49.3**	**-0.1**
	comp=Z,15nm,1.1s,mb4.8						
CHMT	**Chamberlain Mo**	**74.47**	**43**	*e*P	**P**	**04 14 51.1**	**-0.2**
BEKR	**Beckwourth**	**74.55**	**52**	*e*P	**P**	**04 14 52.2**	**+0.3**
	comp=Z,12nm,1.1s,mb4.7						
KONO	**Kongsberg**	**74.64**	**336**	*i* P	**P**	**04 14 50.0**	**-2.0**
FFC	**Flin Flon**	**74.74**	**32**	*e*P	**P**	**04 14 52.2**	**-0.5**
FFC				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0						
FFC	**Flin Flon**	**74.74**	**32**	*e*P	**P**	**04 14 52.2**	**-0.5**
	comp=Z,23nm,1.3s,mb5.0						
MALT	**Malatya**	**74.80**	**307**	*e*P	**P**	**04 14 54.1**	**+0.7**
MALT				pmax	pmax		
	comp=Z,35nm,1.6s,mb5.0						
MALT	**Malatya**	**74.80**	**307**	*e*P	**P**	**04 14 54.1**	**+0.7**
	comp=Z,35nm,1.6s,mb5.0						
FCC	**Fort Churchill**	**74.81**	**25**	*e*P	**P**	**04 14 52.4**	**-0.6**
FCC				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.2						
FCC	**Fort Churchill**	**74.81**	**25**	*e*P	**P**	**04 14 52.4**	**-0.7**
	comp=Z,39nm,1.3s,mb5.2						
KIS	**Kishinev**	**75.20**	**318**	*e*P	**P**	**04 14 54.0**	**-1.5**
HRY	**Holter Researc**	**75.36**	**42**	*e*P	**P**	**04 14 57.0**	**+0.6**
CMB	**Columbia Colle**	**75.60**	**53**	*e*P	**P**	**04 14 58.1**	**+0.1**
CMB				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
CMB	**Columbia Colle**	**75.60**	**53**	*e*P	**P**	**04 14 58.1**	**+0.1**
	comp=Z,16nm,1.2s,mb4.8						
LVV	**L’vov**	**75.81**	**323**	⇑*i*P	**P**	**04 14 58.9**	**0.0**
LCCM	**Lewis and Clar**	**75.88**	**43**	P	**P**	**04 14 60.0**	**+0.6**
HLID	**Hailey**	**75.89**	**46**	*e*P	**P**	**04 15 00.0**	**+0.5**
	comp=Z,11nm,1.2s,mb4.7						
MCMT	**McKenzie Canyo**	**75.98**	**44**	*e*P	**P**	**04 15 00.2**	**+0.2**
BSD	**Bornholm Skovb**	**76.13**	**330**	⇓*i*P	**P**	**04 15 00.3**	**-0.3**
BSD				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.3						
BSD	**Bornholm Skovb**	**76.13**	**330**	⇓*i*P	**P**	**04 15 00.3**	**-0.3**
	comp=Z,35nm,0.8s,mb5.3						
BOZ	**Bozeman (W)**	**76.14**	**43**	*e*P	**P**	**04 15 01.1**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
BOZ	**Bozeman (W)**	**76.14**	**43**	*e*P	**P**	**04 15 01.1**	**+0.3**
	comp=Z,33nm,1.2s,mb5.1						
BMN	**Battle Mountai**	**76.15**	**50**	*e*P	**P**	**04 15 01.9**	**+0.9**
BMN				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
BMN	**Battle Mountai**	**76.15**	**50**	*e*P	**P**	**04 15 01.9**	**+0.9**
	comp=Z,20nm,1.4s,mb4.8						
KWP	**Kalwaria**	**76.58**	**323**	*e*P	**P**	**04 15 04.0**	**+0.8**
COP	**Copenhagen**	**76.66**	**332**	*i* P	**P**	**04 15 03.7**	**+0.1**
COP				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.2						
COP	**Copenhagen**	**76.66**	**332**	*i* P	**P**	**04 15 03.7**	**+0.1**
	comp=Z,27nm,0.9s,mb5.2						
BURAR	**Bucovina Array**	**76.68**	**320**	⇑P	**P**	**04 15 04.1**	**+0.3**
BURAR	**Bucovina Array**	**76.68**	**320**	⇑P	**P**	**04 15 04.1**	**+0.2**
NVAR	**Mina Array Bea**	**76.68**	**52**	P	**P**	**04 15 05.0**	**+0.9**
	comp=Z,9.2nm,1.0s,mb4.7,baz=309,slow=4.1,SNR=35						
QLMT	**Earthquake Lak**	**76.77**	**43**	*e*P	**P**	**04 15 05.7**	**+1.3**
BRTR	**Keskin Array B**	**76.95**	**310**	P	**P**	**04 15 05.7**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRTR	**Keskin Array B**	**76.95**	**310**	P	**P**	**04 15 05.7**	**+0.1**
	comp=Z,5.0nm,0.6s,mb4.6,baz=104,slow=5.1,SNR=25						
VRI	**Vrincioaia**	**77.04**	**318**	⇑P	**P**	**04 15 06.4**	**+0.5**
YMR	**Madison River**	**77.12**	**43**	*e*P	**P**	**04 15 07.5**	**+1.2**
MUD	**Monsted U’grnd**	**77.25**	**334**	*i* P	**P**	**04 15 07.0**	**+0.1**
MUD				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
MUD	**Monsted U’grnd**	**77.25**	**334**	*i* P	**P**	**04 15 07.0**	**+0.1**
	comp=Z,24nm,1.2s,mb5.0						
KOLS	**Kolonicke sedl**	**77.26**	**323**	*e*P	**P**	**04 15 06.4**	**-0.6**
KOLS				*e*		04 15 16.8	
OJC	**Ojcow**	**77.54**	**325**	*e*P	**P**	**04 15 08.8**	**+0.2**
TPH	**Tonopah**	**77.58**	**52**	*e*P	**P**	**04 15 10.1**	**+1.1**
TPH				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
TPH	**Tonopah**	**77.58**	**52**	*e*P	**P**	**04 15 10.1**	**+1.1**
	comp=Z,6.4nm,0.8s,mb4.6						
IMW	**Indian Meadow**	**77.63**	**44**	*e*P	**P**	**04 15 10.7**	**+1.5**
	comp=Z,29nm,1.3s,mb5.0						
MLR	**Muntele Rosu**	**77.70**	**318**	⇓P	**P**	**04 15 10.1**	**+0.6**
RRI2	**Red Ridge**	**77.78**	**44**	*e*P	**P**	**04 15 11.2**	**+1.2**
	comp=Z,13nm,0.9s,mb4.8						
NIE	**Niedzica**	**77.86**	**324**	⇑*i*P	**P**	**04 15 11.0**	**+0.7**
TPAW	**Teton Pass**	**77.89**	**44**	*e*P	**P**	**04 15 12.2**	**+1.5**
	comp=Z,29nm,1.3s,mb5.0						
SNOW	**Snow King Moun**	**78.02**	**44**	*e*P	**P**	**04 15 12.8**	**+1.5**
	comp=Z,13nm,1.1s,mb4.8						
VOIR		**78.20**	**319**	⇑P	**P**	**04 15 13.4**	**+1.1**
LAO	**LASA Array**	**78.29**	**39**	*e*P	**P**	**04 15 13.2**	**+0.5**
	comp=Z,32nm,1.1s,mb5.2						

MZLS	Mizel	78.35	291	P	P	04 15 14.0	+0.5
TRCR	Troy Canyon	78.42	51	eP	P	04 15 14.5	+0.8
KECS	Kecovo	78.43	323	eP	P	04 15 13.6	+0.1
OKC	Ostrava-Krasne	78.56	325	⇑iP	P	04 15 14.2	0.0
KSP	Ksiaz	78.67	327	⇑eP	P	04 15 15.3	+0.6
KSP	Ksiaz	78.67	327	eP	P	04 15 15.3	+0.6
ARSS	Ar Rass	78.72	294	P	P	04 15 15.3	-0.2
HWUT	Hardware Ranch	78.75	46	eP	P	04 15 16.3	+0.9
	comp=Z,31nm,1.4s,mb5.0						
BSEG	Bad Segeberg	78.79	332	eP	P	04 15 15.4	+0.1
BSEG				pmax	pmax		
	comp=Z,53nm,1.4s,mb5.3						
MORC	Moravsky Berou	78.88	325	eP	P	04 15 15.6	-0.3
MORC				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.1						
MORC	Moravsky Berou	78.88	325	eP	P	04 15 15.6	-0.4
	comp=Z,28nm,1.1s,mb5.1						
HILS	Ha'il	78.89	296	P	P	04 15 16.9	+0.4
DPC	Dobruska-Polom	79.01	326	⇑iP	P	04 15 17.3	+0.7
UPC	Upice	79.03	327	⇑iP	P	04 15 17.2	+0.4
PSZ	Piszkesteto	79.11	323	eP	P	04 15 17.7	+0.5
PSZ				pmax	pmax		
	comp=Z,80nm,1.4s,mb5.5						
PSZ	Piszkesteto	79.11	323	eP	P	04 15 17.7	+0.5
	comp=Z,80nm,1.4s,mb5.5						
PSZ	Piszkesteto	79.11	323	⇑iP	P	04 15 17.9	+0.7
PDAR	Pinedale Array	79.13	44	P	P	04 15 17.9	+0.4
	comp=Z,6.2nm,1.0s,mb4.5,baz=315,slow=4.2,SNR=33						
TCUT	Toone Canyon	79.16	46	eP	P	04 15 17.9	+0.3
VYHS	Vyhne	79.20	324	i P	P	04 15 18.3	+0.6
JLU	Jordanelle	79.47	47	eP	P	04 15 20.9	+1.6
PVCC	Panska Ves	79.64	327	⇑iP	P	04 15 20.7	+0.6
BRG	Berggiesshubel	79.66	328	i P	P	04 15 20.4	+0.3
BRG				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
BRG	Berggiesshubel	79.66	328	i P	P	04 15 20.4	+0.3
	comp=Z,18nm,1.0s,mb5.0						
DAU	Daniels Canyon	79.70	47	eP	P	04 15 21.8	+1.2
CLL	Collm	79.72	329	⇑iP	P	04 15 20.4	-0.1
CLL				pmax	pmax		
	comp=Z,79nm,1.7s,mb5.4						
CLL	Collm	79.72	329	⇑iP	P	04 15 20.4	-0.1
	comp=Z,79nm,1.7s,mb5.4						
CLL	Collm	79.72	329	⇑P	P	04 15 20.4	-0.1
	comp=Z,logA/T=1.7,mb5.4						
MPU	Maple Canyon	79.74	47	eP	P	04 15 21.8	+1.0
SMOL	Smolenice	79.84	325	eP	P	04 15 22.9	+1.7
BZS	Buzias	79.86	321	⇑P	P	04 15 21.4	+0.1
SRO	Srobarova	79.93	324	eP	P	04 15 22.9	+1.2
AFFS	‘Afif	80.04	292	P	P	04 15 22.9	+0.2
PRU	Pruhonice	80.06	327	⇑iP	P	04 15 22.7	+0.4
ARUT	Antelope Range	80.09	50	P	P	04 15 23.2	+0.5
ZST	Bratislava	80.22	325	eP	P	04 15 24.0	+0.8
CLZ	Clausthal	80.38	330	eP	P	04 15 24.3	+0.3
CLZ				pmax	pmax		
	comp=Z,55nm,1.3s,mb5.3						
CLZ	Clausthal	80.38	330	eP	P	04 15 24.3	+0.3
	comp=Z,55nm,1.3s,mb5.3						
MSU	Marysvale	80.39	49	eP	P	04 15 25.4	+1.1
ULM	Lac du Bonnet	80.56	32	P	P	04 15 24.8	-0.1
	comp=Z,13nm,0.9s,mb4.8,baz=321,slow=5.3,SNR=12						
ULM	Lac du Bonnet	80.56	32	eP	P	04 15 24.4	-0.5
	comp=Z,62nm,1.5s,mb5.3						
NEN	Nelson	80.58	52	eP	P	04 15 25.8	+0.5
NKC	Novy Kostel	80.77	328	⇑iP	P	04 15 26.4	+0.4
MOX	Moxa	80.80	329	eP	P	04 15 26.7	+0.5
MOX				pmax	pmax		
	comp=Z,39nm,1.5s,mb5.1						
MOX	Moxa	80.80	329	eP	P	04 15 26.7	+0.5
	comp=Z,39nm,1.5s,mb5.1						
MOX	Moxa	80.80	329	i P	P	04 15 26.7	+0.5
	comp=Z,logA/T=1.4,mb5.1						
RZN	Rozhen	80.89	316	i P	P	04 15 27.0	+0.1
ZAPS	Zavoj/Pirot	80.94	318	⇑iP	P	04 15 27.5	+0.4
SRU	San Rafael	80.98	47	eP	P	04 15 27.3	-0.1
KAMS	Al Khamasin	80.99	289	P	P	04 15 27.8	0.0
VTS	Vitosha	81.10	317	eP	P	04 15 28.5	+0.5
KHC	Kasperske Hory	81.11	327	⇑iP	P	04 15 28.4	+0.5
KHC				e	pP	04 15 33.5	-1.1
KHC	Kasperske Hory	81.11	327	⇑iP	P	04 15 28.4	+0.5
KHC				pP	pP	04 15 33.5	-1.1
RWWY	Rawlins	81.15	44	eP	P	04 15 28.9	+0.6
	comp=Z,32nm,1.3s,mb5.1						
GEC2	GERESS Array S	81.28	327	eP	P	04 15 28.9	+0.2
GEC2				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
GEC2	GERESS Array S	81.28	327	eP	P	04 15 28.9	+0.2
	comp=Z,16nm,1.2s,mb4.8						
GERES	GERESS Array B	81.28	327	P	P	04 15 28.7	0.0
GERES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GERES	GERESS Array B	81.28	327	P	P	04 15 28.7	0.0
	comp=Z,5.1nm,0.8s,mb4.5,baz=45,slow=3.8,SNR=42						
WET	Wettzell	81.41	327	eP	P	04 15 30.0	+0.6
WET				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.0						
WET	Wettzell	81.41	327	eP	P	04 15 30.0	+0.6
	comp=Z,31nm,1.4s,mb5.0						
MMB	Musomiste	81.50	316	i P	P	04 15 30.0	-0.1
ARSA	Arzberg	81.64	325	⇑iP	P	04 15 31.4	+0.7
	comp=Z,24nm,1.7s,mb4.8						
KKB	Krupnik	81.67	317	eP	P	04 15 31.0	+0.1
GRA1	Grafenberg Arr	81.69	329	eP	P	04 15 31.6	+0.7
	comp=Z,119nm,1.4s,mb5.6						
GRF	Grafenberg Arr	81.69	329	eP	P	04 15 31.6	+0.7
GRF				pmax	pmax		
	comp=Z,119nm,1.4s,mb5.6						
GRF	Grafenberg Arr	81.69	329	eP	P	04 15 31.6	+0.7
GRF				pmax	pmax		
	comp=Z,119nm,1.4s,mb5.6						
GRF	Grafenberg Arr	81.69	329	eP	P	04 15 31.6	+0.7
	comp=Z,119nm,1.4s,mb5.6						
DIVS	Divcibare	81.75	320	⇓iP	P	04 15 31.2	-0.1
MOA	Molln	81.77	326	⇑iP	P	04 15 32.0	+0.7
	comp=Z,22nm,1.6s,mb4.8						
KOGS	Kog	81.89	324	eP	P	04 15 31.6	-0.4
ESK	Eskdalemuir	82.15	339	eP	P	04 15 33.2	+0.1
ESK				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
ESK	Eskdalemuir	82.15	339	eP	P	04 15 33.2	+0.1
	comp=Z,19nm,1.2s,mb4.9						
JMQS	Jabal Moqyreh	82.15	300	P	P	04 15 34.2	+0.5
BBLS	Bajina Basta -	82.20	320	⇑iP	P	04 15 33.7	0.0
TATS	Tathlith	82.28	289	P	P	04 15 35.3	+0.7
PERS	Pernice	82.28	325	i P	P	04 15 34.5	+0.5
EIL	Elat	82.30	301	eP	P	04 15 34.5	+0.1
	comp=Z,23nm,1.3s,mb5.0						
PV10	Paradox Valley	82.34	47	eP	P	04 15 35.6	+1.1
TNS	Taunus Mts	82.41	330	eP	P	04 15 34.7	+0.1
TNS				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.0						
TNS	Taunus Mts	82.41	330	eP	P	04 15 34.7	+0.1
	comp=Z,28nm,1.3s,mb5.0						
ALWS	Ilw as Safayha	82.44	301	P	P	04 15 35.7	+0.5
SKO	Skopje	82.48	318	eP	P	04 15 35.5	+0.4
JMOS	Jabal al Moall	82.50	301	P	P	04 15 36.3	+0.8
SIND	Sindeldorf	82.62	329	⇑eP	P	04 15 35.9	+0.2
HAQS	Haql	82.69	301	P	P	04 15 37.1	+0.6
TOD	Tromm	82.75	330	⇑eP	P	04 15 36.6	+0.2
KBA	Koelnbreinsper	82.76	326	⇓iP	P	04 15 37.2	+0.7
	comp=Z,38nm,1.4s,mb5.2						
KBA	Koelnbreinsper	82.76	326	⇓iP	P	04 15 37.2	+0.7
KBA				pmax	pmax		
	comp=Z,38nm,1.4s,mb5.2						
PV01	Paradox Valley	82.77	47	eP	P	04 15 37.8	+1.0
FUR	Furstenfeldbru	82.84	328	eP	P	04 15 37.4	+0.5
FUR				pmax	pmax		
	comp=Z,52nm,1.0s,mb5.5						
FUR	Furstenfeldbru	82.84	328	eP	P	04 15 37.4	+0.5
	comp=Z,52nm,1.0s,mb5.5						
SWS	Schriesheim	82.89	330	eP	P	04 15 37.3	+0.2
BDAS	Al Bad‘	82.96	300	P	P	04 15 38.5	+0.6
HDH	Heidenheim	82.97	328	eP	P	04 15 37.5	-0.1
LJU	Ljubljana	83.00	324	eP	P	04 15 37.7	0.0
AYUS	‘Aynunah	83.00	300	P	P	04 15 38.8	+0.7
ABH	Alteburg	83.03	331	⇑eP	P	04 15 38.0	+0.2
TAYS	Tayyib Ism	83.05	301	P	P	04 15 39.2	+0.8
BOJS	Bojanci	83.06	324	eP	P	04 15 38.2	+0.1
STU	Stuttgart	83.25	329	eP	P	04 15 39.6	+0.6
STU				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.3						
STU	Stuttgart	83.25	329	eP	P	04 15 39.6	+0.7
	comp=Z,23nm,0.8s,mb5.3						
DJNS	Zahran al Janu	83.32	287	P	P	04 15 41.2	+1.3
RUP	Ruppelstein	83.36	331	⇑eP	P	04 15 39.7	+0.2
BUCH	Bad Urach	83.43	329	⇑eP	P	04 15 40.4	+0.5
BLJS	Baljurashi	83.49	290	P	P	04 15 42.0	+1.2
LBG	Lerchenberg	83.49	329	⇑eP	P	04 15 40.6	+0.4
SQTA	Sankt Quirin	83.60	327	⇑iP	P	04 15 41.2	+0.5
	comp=Z,39nm,1.6s,mb5.3						
SQTA	Sankt Quirin	83.60	327	⇑iP	P	04 15 41.2	+0.5
SQTA				pmax	pmax		
	comp=Z,39nm,1.6s,mb5.3						
UBR	Uberruh	83.72	328	eP	P	04 15 41.5	+0.2
WLF	Walferdange	83.75	331	eP	P	04 15 41.9	+0.5
WLF				pmax	pmax		
	comp=Z,48nm,1.4s,mb5.4						
WLF	Walferdange	83.75	331	eP	P	04 15 41.9	+0.4
	comp=Z,48nm,1.4s,mb5.4						
GUT	Gutenstein	83.83	329	⇑eP	P	04 15 42.1	+0.2
GIVF	Givet	83.90	332	eP	P	04 15 42.1	-0.1
SPAK	Spaichingen	83.94	329	eP	P	04 15 42.5	+0.1
BFO	Black Forest	83.95	329	eP	P	04 15 42.6	+0.1
BFO				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.6						
BFO	Black Forest	83.95	329	eP	P	04 15 42.6	+0.1
	comp=Z,76nm,1.4s,mb5.6						
DAVA	Damuels	84.12	328	⇑iP	P	04 15 43.9	+0.5
	comp=Z,43nm,1.1s,mb5.5						
BAIF	Baives	84.16	332	eP	P	04 15 43.2	-0.3
EYMN	Ely	84.17	31	eP	P	04 15 43.6	0.0
	comp=Z,46nm,1.3s,mb5.5						
CDF	Champ du Feu	84.31	330	⇑iP	P	04 15 44.6	+0.3
	comp=Z,140nm,1.3s,mb5.6						
CDF	Champ du Feu	84.31	330	⇑iP	P	04 15 44.6	+0.3
CDF				pmax	pmax		
	comp=Z,70nm,1.3s,mb5.6						
LIBD	Limburg	84.39	329	eP	P	04 15 45.1	+0.4
KIZ	Kirchzarten	84.41	329	eP	P	04 15 44.8	0.0
FELD	Feldberg	84.44	329	eP	P	04 15 45.0	0.0
DLF	Lyons Farm	84.86	340	⇑iP	P	04 15 47.1	+0.2
HINF	Hinteralfeld	84.96	330	⇑iP	P	04 15 47.3	-0.2
	comp=Z,22nm,0.9s,mb5.0						
HINF	Hinteralfeld	84.96	330	⇑iP	P	04 15 47.3	-0.2
HINF				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0						
BBS	Basel-Blauen	84.97	329	eP	P	04 15 47.7	+0.1
HAU	Haudompre	85.01	330	⇑iP	P	04 15 47.4	-0.4
	comp=Z,39nm,1.0s,mb5.2						
HAU	Haudompre	85.01	330	⇑iP	P	04 15 47.4	-0.4
HAU				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.2						
DCN	Croghan	85.02	340	eP	P	04 15 48.1	+0.4
MEZF	Maizieres J'vi	85.11	331	eP	P	04 15 48.5	+0.2
SCHQ	Schefferville	85.72	14	P	P	04 15 51.6	+0.4
	comp=Z,3.9nm,0.7s,mb4.7,baz=342,slow=5.8,SNR=7.8						
ANMO	Albuquerque	86.18	48	c iP	P	04 15 55.4	+1.4
CABF	La Chapelle	86.24	329	⇑iP	P	04 15 53.7	-0.3
	comp=Z,34nm,1.4s,mb5.1						
CABF	La Chapelle	86.24	329	⇑iP	P	04 15 53.7	-0.3
CABF				pmax	pmax		
	comp=Z,17nm,1.4s,mb5.1						
LOR	Lormes	86.59	331	⇑iP	P	04 15 55.4	-0.2
	comp=Z,97nm,1.3s,mb5.6						
LOR	Lormes	86.59	331	⇑iP	P	04 15 55.4	-0.2
LOR				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.6						
BNM	Barren Site	86.63	49	eP	P	04 15 57.2	+1.0
LPL	La Plagne	86.85	328	⇑iP	P	04 15 57.1	+0.1
	comp=Z,16nm,1.0s,mb4.9						
LPL	La Plagne	86.85	328	⇑iP	P	04 15 57.1	+0.1
LPL				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9						
LPG	La Plagne	86.86	328	⇑iP	P	04 15 57.3	+0.3
	comp=Z,11nm,0.8s,mb4.8						
LPG	La Plagne	86.86	328	⇑iP	P	04 15 57.3	+0.3
LPG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9						
SSF	Saint Saulge	86.89	331	⇑iP	P	04 15 57.0	-0.1
SSF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.3						
SSF	Saint Saulge	86.89	331	⇑iP	P	04 15 57.0	-0.1
	comp=Z,20nm,1.1s,mb5.3						
FLN	La Foliniere	86.93	334	⇑iP	P	04 15 57.0	-0.3
	comp=Z,17nm,0.8s,mb5.0						
FLN	La Foliniere	86.93	334	⇑iP	P	04 15 57.0	-0.3
FLN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.0						
HYF	Humbligny	87.05	332	eP	P	04 15 58.3	+0.4
SMF	Signal de Mont	87.11	331	⇑iP	P	04 15 58.0	-0.2
AVF	Avril sur Loir	87.18	331	⇑iP	P	04 15 58.3	-0.2
	comp=Z,42nm,0.9s,mb5.3						
AVF	Avril sur Loir	87.18	331	⇑iP	P	04 15 58.3	-0.2
AVF				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.4						
GRR	Gorron	87.38	334	⇑iP	P	04 15 59.4	-0.1
	comp=Z,88nm,1.2s,mb5.6						
GRR	Gorron	87.38	334	⇑iP	P	04 15 59.4	-0.1
GRR				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.6						
MBDF	Montbardon	87.47	328	eP	P	04 16 00.0	0.0
BGF	Bois d'Agland	87.56	331	⇑iP	P	04 16 00.3	-0.1
ORIF	Oris-en-Rattie	87.69	328	eP	P	04 16 01.3	+0.3
PLDF	La Plantade	87.75	330	eP	P	04 16 02.6	+1.3
AGO	Saint Agoulin	87.87	331	eP	P	04 16 03.3	+1.4
SBF	Sospel	87.88	327	⇑iP	P	04 16 01.1	-0.9
	comp=Z,18nm,0.8s,mb5.0						
SBF	Sospel	87.88	327	⇑iP	P	04 16 01.1	-0.9
SBF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
TCF	Toulx Ste Croi	88.03	331	eP	P	04 16 02.9	+0.3
	comp=Z,44nm,1.4s,mb5.2						
TCF	Toulx Ste Croi	88.03	331	eP	P	04 16 02.9	+0.3
TCF				pmax	pmax		
	comp=Z,22nm,1.4s,mb5.2						
SGMF	Saint Gilles	88.07	335	⇑iP	P	04 16 03.0	+0.2
	comp=Z,80nm,1.2s,mb5.5						
SGMF	Saint Gilles	88.07	335	⇑iP	P	04 16 03.0	+0.2
SGMF				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.5						
PYM	Petit Puy Mans	88.17	331	eP	P	04 16 04.5	+1.2
PGF	Pioggiola	88.22	325	⇑iP	P	04 16 03.0	-0.6
	comp=Z,24nm,1.1s,mb5.0						
PGF	Pioggiola	88.22	325	⇑iP	P	04 16 03.0	-0.6
PGF				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.0						
ROSF	Rostrenen	88.24	336	⇑iP	P	04 16 03.9	+0.3
	comp=Z,56nm,1.1s,mb5.4						
ROSF	Rostrenen	88.24	336	⇑iP	P	04 16 03.9	+0.3
ROSF				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.4						
VIVF	Saint-Julien-l	88.24	329	⇑iP	P	04 16 03.4	-0.3
	comp=Z,18nm,1.0s,mb4.9						
VIVF	Saint-Julien-l	88.24	329	⇑iP	P	04 16 03.4	-0.3
VIVF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
FRF	La Foret Royal	88.46	327	eP	P	04 16 04.3	-0.5
	comp=Z,32nm,1.3s,mb5.1						
FRF	La Foret Royal	88.46	327	eP	P	04 16 04.3	-0.5
FRF				pmax	pmax		
	comp=Z,16nm,1.3s,mb5.1						
QUIF	Quistinic	88.57	335	⇑iP	P	04 16 04.8	-0.4
	comp=Z,70nm,1.3s,mb5.5						
QUIF	Quistinic	88.57	335	⇑iP	P	04 16 04.8	-0.4
QUIF				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.5						
SMRF	Simiane la Rot	88.58	328	eP	P	04 16 05.4	+0.1
	comp=Z,42nm,1.4s,mb5.3						
KSU1	Kansas State U	88.64	40	eP	P	04 16 05.7	-0.1
MFF	Saint Martin d	88.65	333	⇑iP	P	04 16 05.7	+0.1
	comp=Z,108nm,1.5s,mb5.7						
MFF	Saint Martin d	88.65	333	⇑iP	P	04 16 05.7	+0.1
MFF				pmax	pmax		
	comp=Z,54nm,1.5s,mb5.7						
LMR	La Mourre	88.70	327	⇑iP	P	04 16 05.3	-0.6
	comp=Z,33nm,1.2s,mb5.2						
LMR	La Mourre	88.70	327	⇑iP	P	04 16 05.3	-0.6
LMR				pmax	pmax		
	comp=Z,16nm,1.2s,mb5.2						
RJF	Les Rejaudoux	89.12	331	⇑iP	P	04 16 08.0	+0.1
	comp=Z,40nm,1.3s,mb5.3						
RJF	Les Rejaudoux	89.12	331	⇑iP	P	04 16 08.0	+0.1
RJF				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.3						
LASF	Ste Croix	89.21	329	⇑iP	P	04 16 08.4	0.0
CAF	Calviac	89.23	331	⇑iP	P	04 16 08.6	+0.2
	comp=Z,28nm,1.3s,mb5.1						
CAF	Calviac	89.23	331	⇑iP	P	04 16 08.6	+0.2
CAF				pmax	pmax		
	comp=Z,14nm,1.3s,mb5.1						
GDL2	Guadalupe Moun	89.35	49	eP	P	04 16 09.9	+0.7
LFF	La Frestale	89.72	331	⇑iP	P	04 16 11.0	+0.3
	comp=Z,38nm,1.1s,mb5.3						
LFF	La Frestale	89.72	331	⇑iP	P	04 16 11.0	+0.3
LFF				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.3						
MTLF	Montolieu	90.49	330	⇑iP	P	04 16 14.6	+0.3
	comp=Z,36nm,1.2s,mb5.3						
MTLF	Montolieu	90.49	330	⇑iP	P	04 16 14.6	+0.3
MTLF				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.3						
MLS	Moulis	91.26	330	eP	P	04 16 18.1	+0.3
VALF	Valcebollere	91.35	329	eP	P	04 16 18.8	+0.5
EPF	Esparros	91.49	331	⇑iP	P	04 16 18.6	-0.3
RESF	Ens	91.68	331	eP	P	04 16 21.0	+1.2
TXAR	Lajitas Array	91.79	51	P	P	04 16 21.2	+0.6
TXAR						04 33 40.1	
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TXAR	Lajitas Array	91.79	51	P	P	04 16 21.2	+0.6
	comp=Z,1.5nm,0.7s,mb4.4,baz=294,slow=3.0,SNR=22						
TXAR				PKKPbc		04 33 40.1	
	comp=Z,0.2nm,0.5s,baz=168,slow=6.3,SNR=5.2						
ETSF	Etsaut	91.95	331	⇑iP	P	04 16 21.7	+0.7
	comp=Z,16nm,1.0s,mb5.0						
ETSF	Etsaut	91.95	331	⇑iP	P	04 16 21.7	+0.7
ETSF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.0						
BOSA	Boshof	124.35	258	PKIKP	PKPdf	04 22 11.3	-3.7
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BOSA	Boshof	124.35	258	PKP	PKPdf	04 22 11.3	-3.7
	comp=Z,1.6nm,0.9s,baz=173,slow=11,SNR=3.3						
DBIC	Dimbokro	124.50	314	PKIKP	PKPdf	04 22 11.6	-4.1
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DBIC	Dimbokro	124.50	314	PKP	PKPdf	04 22 11.6	-4.1
	comp=Z,4.1nm,0.6s,baz=283,slow=3.3,SNR=6.3						
DBIC	Dimbokro	124.50	314	PKP	PKPdf	04 22 11.6	-4.1
SDV	Santo Domingo	126.58	37	eP	PKPdf	04 22 16.3	-3.3
SAML	Samuel	145.64	40	eP	PKPbc	04 22 51.3	+0.3
LPAZ	La Paz	148.52	56	ePKIKP	PKPdf	04 22 57.5	-1.7
LPAZ				e		04 23 00.8	
LPAZ	La Paz	148.52	56	PKPbc	PKPdf	04 23 00.7	+1.5
	comp=Z,9.7nm,1.1s,baz=354,slow=6.3,SNR=17						
BDFB	Brasilia	157.70	17	PKP2	PKPab	04 23 42.4	-0.5
BDFB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BDFB	Brasilia	157.70	17	PKPab	PKPab	04 23 42.4	-0.4
	comp=Z,5.2nm,1.0s,baz=40,slow=3.6,SNR=5.4						

JMA 20 04:14:55.6±0.1, 37.24N×138.59E, h15km±2km, M2.0, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHK	Hiroka	0.34	88	P	Pb	04 15 02.6	-0.2
JJN	Nakama	0.37	248	P	Pb	04 15 03.2	-0.1
JJN				S	Sb	04 15 09.2	+0.7
JKT	Katashina	0.71	132	P	Pb	04 15 09.2	+0.1
MAT	Matsushiro	0.76	204	P	Pb	04 15 09.7	-0.3
MAT				S	Sb	04 15 19.8	-0.1
MAT	Matsushiro	0.76	204	P	Pb	04 15 09.8	-0.2
MAT				S	Sb	04 15 19.7	-0.2
JNS	Sasagawa	0.82	45	P	Pb	04 15 11.1	+0.1
JSD	Sado	0.84	342	P	Pb	04 15 11.1	-0.2
JSD				S	Sb	04 15 22.6	+0.5
JFY	Yanaizu	0.90	79	P	Pb	04 15 12.7	+0.2
JFY				S	Sb	04 15 24.8	+0.8

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*NIED **20** 04:15:00, 37.20N×138.60E, $h5^{km}$, Mw4.2 Best double couple: $M_0 1.92\times10^{15}$ NP1:ϕ_s15°, δ62°, λ74°. NP2:ϕ_s228°, δ32°, λ118°.*

*IDC **20** 04:15:29.0±0.6, 37.28N×138.50E, mb4.0/14, mb1 4.2/14, mb1mx4.2/21, mbtmp4.0/14, MS3.6/1, Ms1 3.6/1, ms1mx2.9/30, Error ellipse: s-maj=22.2km s-min=8.3km az=100.0*

*BJI **20** 04:15:29.2, 37.30N×138.60E, $h10^{km}$, mB5.1, mb4.5, Ms4.4, Msz4.2*

*NEIC **20** 04:15:30.3±1.7, 37.25N×138.55E, $h10^{km}\pm11^{km}$, mb4.4/5, Error ellipse: s-maj=12.4km s-min=12.2km az=54.0*

NEIC Recorded [2 JMA] in Niigata and [1 JMA] in Nagano Prefectures.

*JMA **20** 04:15:31.0±0.1, 37.22N×138.59E, $h13^{km}\pm2^{km}$, M4.4*

JMA Felt IV J1.

ISC 20 04:15:30.6±0.3, 37.21N±0.03×138.59E±0.03, h27km±3km, n46, σ0s.92/53, mb4.0/20, MS4.3/1, 3C-3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIZZ	Izumozaki	0.33	17	P	Pb	04 15 38.1	-0.1
JIZZ				eS	Sb	04 15 44.0	+0.6
JHK	Hiroka	0.34	84	⇓P	Pb	04 15 37.6	-0.8
JHK				eS	Sb	04 15 42.9	-0.8
JJN	Nakama	0.36	252	⇑P	Pb	04 15 38.3	-0.3
JJN				S	Sb	04 15 44.6	+0.6
JGK	Kuni	0.65	176	P	Pb	04 15 43.6	+0.3
JKT	Katashina	0.69	130	⇓P	Pb	04 15 43.8	-0.2
MAJO	Matsushiro	0.73	205	⇑iP	Pb	04 15 44.7	-0.1
MAT	Matsushiro	0.73	205	eP	Pb	04 15 45.0	+0.3
MAT				eS	Sb	04 15 55.0	+0.6
MAT	Matsushiro	0.73	205	P	Pb	04 15 44.4	-0.3
MAT				S	Sb	04 15 54.9	+0.5
MAT	Matsushiro	0.73	205	P	Pb	04 15 44.6	-0.1
MAT				S	Sb	04 15 55.0	+0.6
MJAR	Matsushiro Arr	0.73	205	Pg	Pb	04 15 44.9	+0.1
	75nm,0.3s,baz=18,slow=17,SNR=137						
MJAR				Lg		04 15 55.2	
	288nm,0.3s,baz=183,slow=27,SNR=47						
JNS	Sasagawa	0.84	44	⇑P	Pb	04 15 46.1	-0.3
JNS				S	Sb	04 15 57.7	+0.4
JSD	Sado	0.86	343	P	Pb	04 15 46.3	-0.6
JSD				S	Sb	04 15 57.8	-0.2
JFY	Yanaizu	0.91	77	⇓P	Pb	04 15 47.6	-0.1
JFY				S	Sb	04 16 00.1	+0.6
JSZ	Suzu	1.00	284	P	Pn	04 15 48.5	-0.6
JSZ				eS	Sb	04 16 03.0	+0.9
JNU	Nakatsue	7.52	239	Pn	Pn	04 17 22.9	+1.5
	0.4nm,0.3s,baz=205,slow=4.7,SNR=7.4						
KS15	Wonju Array Si	8.53	275	eP	P	04 17 35.0	-0.5
CBIJ	Chichi jima	10.54	162	LR	LR	04 21 33.4	
	comp=Z,318nm,19.3s,baz=100,slow=34						
ENH	Enshi	25.11	263	eP	P	04 20 54.5	-0.2
	15nm,0.9s,mb4.5						
ULN	Ulaanbaatar	25.39	305	eP	P	04 20 55.3	-1.9
	2.4nm,0.9s,mb3.7						
SONM	Songino Array	25.82	304	P	P	04 21 01.3	+0.1
	2.3nm,1.1s,mb3.6,baz=98,slow=8.7,SNR=11						
WMQ	Urumqi	38.74	296	eP	P	04 22 51.3	-3.0
WMQ				AP	pP	04 22 57.3	-4.9
WMQ				LR	LR		
	comp=N,510nm,21.0s						
WMQ				LR	LR		
	comp=Z,510nm,22.0s,MS4.3						
ZAL	Zalesovo	40.14	312	PcP	PcP	04 25 10.6	+0.1
	comp=Z,1.1nm,0.3s,baz=144,slow=6.7,SNR=5.0						
MKAR	Makanchi Array	42.11	302	P	P	04 23 21.4	-0.5
	comp=Z,0.7nm,0.8s,mb3.3,baz=97,slow=9.8,SNR=5.5						
MKAR	Makanchi Array	42.11	302	P	P	04 23 21.4	-0.5
ZRNK	Zerenda	49.61	312	eP	P	04 24 20.6	-0.8
	comp=Z,1.7nm,0.8s,mb4.1						
ILAR	Eielson Array	50.55	32	P	P	04 24 28.9	+0.5
	comp=Z,0.9nm,1.0s,mb3.7,baz=280,slow=8.0,SNR=6.0						
INK	Inuvik	55.25	27	P	P	04 25 04.0	+0.6
	comp=Z,1.9nm,0.8s,mb4.2,baz=326,slow=4.7,SNR=3.9						
INK	Inuvik	55.25	27	eP	P	04 25 01.4	-2.0
WRAB	Tennant Creek	56.98	185	eP	P	04 25 15.2	-1.2
	comp=Z,20nm,1.2s,mb5.0						
WB2	Warramunga Arr	56.99	185	eP	P	04 25 15.4	-1.1
WRA	Warramunga Arr	56.99	185	P	P	04 25 15.3	-1.1
	comp=Z,5.2nm,1.0s,mb4.5,baz=360,slow=7.3,SNR=35						
WRA				PcP	PcP	04 26 11.1	-0.1
	comp=Z,0.7nm,0.7s,baz=351,slow=4.2,SNR=4.1						
KEV	Kevo	62.46	339	ep	P	04 25 53.0	-0.4
	comp=Z,210nm,3.3s						
ARCES	ARCESS Array B	63.02	339	P	P	04 25 57.0	-0.1
	comp=Z,1.8nm,0.8s,mb4.2,baz=30,slow=9.8,SNR=4.8						
KAF	Kangasniemi	67.10	332	ep	P	04 26 22.5	-0.9
	comp=Z,1.9nm,0.5s,mb4.4,baz=51,slow=6.0						

FINES	FINESS Array B	67.59	331	P	P	04 26 26.2	-0.3
	comp=Z,2.9nm,0.8s,mb4.4,baz=56,slow=6.9,SNR=10						
AKASG	Malin Array Be	72.76	321	P	P	04 26 57.9	-0.2
	comp=Z,0.4nm,0.3s,mb3.8,baz=48,slow=6.7,SNR=8.9						
NB2	NORSAR Subarra	73.13	336	P	P	04 27 00.2	+0.1
	comp=Z,1.1nm,0.7s,mb3.9,baz=43,slow=5.8						
NOA	NORSAR Array B	73.13	336	P	P	04 27 00.3	+0.2
	comp=Z,1.8nm,0.8s,mb4.1,baz=41,slow=6.0,SNR=7.7						
NVAR	Mina Array Bea	76.67	52	P	P	04 27 23.1	+2.2
	comp=Z,1.3nm,0.9s,mb3.9,baz=278,slow=7.1,SNR=5.4						
BRTR	Keskin Array B	77.03	310	P	P	04 27 24.1	+1.4
	comp=Z,1.3nm,0.8s,mb3.9,baz=122,slow=12,SNR=4.7						
PDAR	Pinedale Array	79.13	44	P	P	04 27 35.0	+0.7
	comp=Z,0.7nm,0.8s,mb3.6,baz=304,slow=5.3,SNR=4.2						
CLL	Collm	79.80	329	P	P	04 27 38.4	+0.7
	comp=Z,logA/T=0.7,mb4.4						
GERES	GERESS Array B	81.35	327	P	P	04 27 47.2	+1.3
	comp=Z,0.6nm,0.6s,mb3.7,SNR=6.5						
PV10	Paradox Valley	82.33	47	*e*P	P	04 27 53.8	+2.6
TXAR	Lajitas Array	91.78	51	P	P	04 28 39.1	+1.8
	comp=Z,0.5nm,0.9s,mb3.9,baz=243,slow=2.8,SNR=5.3						
SAML	Samuel	145.65	40	*e*PKPdf	PKPdf	04 35 09.6	-2.3

*IDC **20** 04:33:59.5±2.1, 0.33N×99.35E, mb3.8/6, mb1 4.0/6, mb1mx3.8/17, mbtmp3.8/6, Error ellipse: s-maj=108.0km s-min=23.8km az=56.0*

*NEIC **20** 04:34:01.9±1.1, 0.17S×98.66E, h30^{km}, mb3.8/1, Error ellipse: s-maj=32.1km s-min=14.8km az=62.0*

ISC 20 04:34:00.0±1.2**, 0.1S**±0.1×**98.6E**±0.2**, h30^{km}, n10, σ0^{s}91**/9**, mb3.8**/7**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim	5.75	20	*e*P	Pn	04 35 26.2	+0.6
WRA	Warramunga Arr	40.12	122	P	P	04 41 34.4	-0.7
	0.5nm,0.6s,mb3.4,baz=306,slow=9.2,SNR=8.2						
WRA				PcP	PcP	04 43 40.2	+0.4
	0.2nm,0.4s,baz=318,slow=2.5,SNR=7.5						
WRAB	Tennant Creek	40.13	122	*e*P	P	04 41 35.8	+0.6
	0.8nm,0.4s,mb3.8						
SONM	Songino Array	48.25	7	P	P	04 42 39.0	-1.2
	0.3nm,0.6s,mb3.5,baz=180,slow=7.2,SNR=2.8						
MKAR	Makanchi Array	48.88	345	P	P	04 42 45.0	-0.1
	0.3nm,0.4s,mb3.7,baz=161,slow=8.3,SNR=7.7						
ZAL	Zalesovo	55.09	350	P	P	04 43 31.2	-0.5
	3.1nm,0.6s,mb4.5,baz=286,slow=4.1,SNR=5.3						
ZAL	Zalesovo	55.09	350	P	P	04 43 31.2	-0.5
BVAR	Borovoye Array	57.97	340	P	P	04 43 51.7	-0.5
	0.5nm,0.4s,mb3.9,baz=138,slow=12,SNR=4.7						
ARCES	ARCESS Array B	84.26	340	P	P	04 46 31.9	+2.0
	0.4nm,0.3s,mb4.0,baz=105,slow=4.9,SNR=6.1						
TXAR	Lajitas Array	144.00	34	PKhKP		04 53 32.8	
	0.1nm,0.5s,baz=11,slow=0.9,SNR=5.2						

*MOS **20** 04:34:30.5±1.5, 23.68S×111.86W, h10^{km}, mb5.1/8, MS4.7/5, Error ellipse: s-maj=20.7km s-min=12.3km az=90.3*

*IDC **20** 04:34:30.2±0.7, 23.61S×111.94W, mb4.3/11, mb1 4.5/11, mb1mx4.4/16, mbtmp4.3/11, MS4.7/19, Ms1 4.7/19, ms1mx4.5/27, Error ellipse: s-maj=24.4km s-min=17.3km az=55.0, Incorrectly calculated travel-time residual on T phase at H03N*

*BJI **20** 04:34:31.5, 23.80S×112.00W, h10^{km}, mB5.5, Ms5.0, Msz5.2*

*HRVD **20** 04:34:31.5±0.2, 23.86S×111.81W, h12^{km}, MW5.2/72, Centroid moment Tensor Solution. LP body waves: s50,c84;Mantle waves: s72,c142; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.79±.01; M$_{\theta\theta}$0.17±.01; M$_{\phi\phi}$0.61±.01; M$_{r\theta}$-0.07±.04; M$_{\theta\phi}$-0.26±.01; M$_{\phi r}$-0.03±.04; Best double couple: M$_0$.767×10^{17} NP1: φ$_s$340°, δ45°, λ-82°. NP2:φ$_s$150°, δ45°, λ-98°. Principal axes: T .738, Plg0°, Azm245°; N .058, Plg5°, Azm155°; P -.797, Plg85°, Azm335°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **20** 04:34:31.5±0.3, 23.78S×111.98W, h10^{km}, mb5.2/22, MS4.7/6 Error ellipse: s-maj=12.0km s-min=6.1km az=72.0*

ISC 20 04:34:29.3±0.4**, 23.79S**±0.06×**112.1W**±0.1**, h9^{km}, h9^{km}**±.4^{km}**:pP-P, n132, σ1^{s}00**/73**, mb4.8**/31**, MS4.8**/26**, 2C-8D, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	4.15	144	Pn	Pn	04 35 31.8	-2.5
	10nm,0.3s,baz=334,slow=15,SNR=8.3						
RPN				LR	LR	04 36 53.0	
	comp=Z,3µm,19.8s,baz=155,slow=34						
RPN	Rapa Nui	4.15	144	*e*Pn	Pn	04 35 31.5	-2.8
TBI	Tubuai	34.20	263	*e*PP	tx	04 42 00.3	
	115nm,25.5s						
TBI				*e*S	tx	04 46 20.1	
	399nm,27.0s						
TBI				*e*LQ		04 48 56.7	
	983nm,25.5s						
TBI				*e*LR	LR	04 50 12.3	
	3µm,29.8s,baz=92						
PPT	Papeete	35.55	273	*e*P	Px	04 40 57.3	
	123nm,23.8s						
PPT				*e*PP	PP	04 42 38.9	-10
	419nm,33.0s						
PPT				*e*S	S	04 46 54.7	-9.1
	478nm,23.8s						
PPT				*e*LR	LR	04 50 45.8	
	2µm,33.2s,baz=114						
PLCA	Paso Flores	38.57	126	P	P	04 41 54.6	+0.5
PLCA				pmax	pmax		
	comp=Z,12nm,1.3s						
PLCA				MLR	MLR		
	comp=Z,958nm,22.0s						
PLCA	Paso Flores	38.57	126	P	P	04 41 54.4	+0.3
	comp=Z,4.8nm,1.1s,mb4.1,baz=262,slow=14,SNR=3.8						
PLCA				LR	LR	04 53 33.7	
	comp=Z,723nm,22.0s,MS4.5,baz=278,slow=30						
PLCA	Paso Flores	38.57	126	P	P	04 41 54.6	+0.5
	comp=Z,12nm,1.3s,mb4.5						
PLCA				LR	LR		
	comp=Z,958nm,22.0s,MS4.6						
CFAA	Coronel Fontan	39.39	111	P	P	04 42 02.4	+1.4
	comp=Z,0.4nm,0.8s,baz=272,slow=6.4,SNR=9.0						
OTAV	Otavalo	40.44	59	*e*P	P	04 42 11.3	+1.4
	comp=Z,22nm,1.6s,mb4.7						
OTAV				LR	LR		
	comp=Z,1µm,21.0s,MS4.8						
LPAZ	La Paz	41.83	88	*e*P	P	04 42 22.5	+1.2
LPAZ				pmax	pmax		
	comp=Z,44nm,1.6s						
LPAZ				MLR	MLR		
	comp=Z,821nm,19.0s						
LPAZ	La Paz	41.83	88	P	P	04 42 21.7	+0.4
	comp=Z,4.6nm,1.0s,mb4.1,baz=254,slow=5.6,SNR=17						
LPAZ				LR	LR	04 55 32.8	
	comp=Z,848nm,19.9s,MS4.6,baz=244,slow=30						
LPAZ	La Paz	41.83	88	*e*P	P	04 42 22.5	+1.2
	comp=Z,44nm,1.6s,mb4.8						
LPAZ				LR	LR		
	comp=Z,821nm,19.0s,MS4.6						
JTS	JuntasAbangare	43.02	41	P	P	04 42 30.7	-0.4
	comp=Z,3.2nm,0.5s,mb4.3,baz=11,slow=17,SNR=5.5						
JTS				LR	LR	04 55 36.5	
	comp=Z,2µm,20.6s,MS4.9,baz=228,slow=30						
TRQA	Tornquist	44.76	121	*e*P	P	04 42 45.8	+0.8
ROSC	El Rosal	46.53	57	P	P	04 43 01.8	+2.6
	comp=Z,1.6nm,0.4s,mb4.3,baz=102,slow=22,SNR=5.5						
ROSC				LR	LR	04 59 04.0	
	comp=Z,1µm,18.8s,MS4.9,baz=241,slow=32						
SAML	Samuel	48.93	81	*e*P	P	04 43 16.2	-1.8
	comp=Z,38nm,1.5s,mb5.2						
CPUP	Villa Florida	49.35	105	P	P	04 43 20.1	-1.1
	comp=Z,4.3nm,1.0s,mb4.4,baz=290,slow=8.0,SNR=3.9						
CPUP				LR	LR	05 00 08.2	
	comp=Z,309nm,18.4s,MS4.3,baz=292,slow=31						
TXAR	Lajitas Array	53.43	9	P	P	04 43 49.8	-2.1
	comp=Z,2.0nm,1.1s,mb4.0,baz=189,slow=7.2,SNR=14						
TXAR				LR	LR	05 02 36.9	
	comp=Z,322nm,18.7s,MS4.4,baz=80,slow=32						
GDL2	Guadalupe Moun	56.16	8	*e*P	P	04 44 10.7	-1.0
AFI	Afiamalu	57.00	268	LR	LR	05 01 32.6	
	comp=Z,1000nm,21.3s,MS4.9,baz=97,slow=28						
LENM	Lemitar	57.84	5	*e*P	P	04 44 24.3	+0.7
BNM	Barren Site	57.85	5	*e*P	P	04 44 23.9	+0.2
RAO	Raoul Island	58.49	249	LR	LR	05 02 38.5	
	comp=Z,975nm,20.4s,MS4.9,baz=122,slow=29						
LDFC	Landfair	58.61	357	*e*P	P	04 44 30.3	+1.3
ANMO	Albuquerque	58.66	5	*e*P	P	04 44 29.0	-0.3
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.5s						
ANMO				MLR	MLR		
	comp=Z,475nm,21.0s						
ANMO	Albuquerque	58.66	5	*e*P	P	04 44 29.0	-0.3
	comp=Z,7.9nm,1.5s,mb4.5						
ANMO				LR	LR		
	comp=Z,475nm,21.0s,MS4.6						
NEN	Nelson	59.17	357	*e*P	P	04 44 31.0	-1.9
BDFB	Brasilia	60.43	95	P	P	04 44 40.5	-1.3
	comp=Z,4.3nm,0.8s,mb4.5,baz=239,slow=6.2,SNR=7.9						
BDFB				LR	LR	05 07 13.5	
	comp=Z,567nm,19.5s,MS4.7,baz=314,slow=33						
URZ	Urewera	61.03	238	LR	LR	05 06 07.8	
	comp=Z,1µm,18.1s,MS5.1,baz=155,slow=31						
ARUT	Antelope Range	61.26	359	*e*P	P	04 44 48.2	+1.0
PV01	Paradox Valley	61.68	3	*e*P	P	04 44 50.0	0.0
MSU	Marysvale	61.97	360	*e*P	P	04 44 52.5	+0.5
NVAR	Mina Array Bea	62.16	354	P	P	04 44 52.9	-0.4
	comp=Z,3.6nm,0.8s,mb4.5,baz=169,slow=9.3,SNR=22						
NVAR				LR	LR	05 05 12.0	
	comp=Z,318nm,21.8s,MS4.4,baz=265,slow=30						
SRU	San Rafael	62.58	1	*e*P	P	04 44 55.8	-0.2
JLU	Jordanelle	64.06	1	*e*P	P	04 45 05.4	-0.3
BMN	Battle Mountai	64.06	356	*e*P	P	04 45 06.0	+0.2
BMN				pmax	pmax		
	comp=Z,68nm,1.8s,mb5.4						
BMN	Battle Mountai	64.06	356	*e*P	P	04 45 06.0	+0.2
	comp=Z,68nm,1.8s,mb5.4						
CTU	Camp Tracy	64.15	0	*e*P	P	04 45 06.8	+0.5
ELK	Elko	64.27	357	*e*P	P	04 45 07.6	+0.5
ELK				pmax	pmax		
	comp=Z,70nm,2.2s						
ELK	Elko	64.27	357	*e*P	P	04 45 07.6	+0.5
	comp=Z,70nm,2.2s,mb5.3						
TCUT	Toone Canyon	64.57	1	*e*P	P	04 45 09.9	+0.8
RPZ	Rata Peaks	64.72	231	LR	LR	05 07 26.8	
	comp=Z,886nm,18.1s,MS5.0,baz=55,slow=30						
WDC	Whiskeytown Da	64.77	351	P	P	04 45 10.1	-0.3
WDC				pmax	pmax		
	comp=Z,24nm,1.5s,mb5.0						
WDC	Whiskeytown Da	64.77	351	P	P	04 45 10.1	-0.2
	comp=Z,24nm,1.5s,mb5.0						
SBA	Scott Base	65.05	193	*e*P	P	04 45 10.9	-0.7
SBA				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.9						
SBA	Scott Base	65.05	193	*e*P	P	04 45 10.9	-0.7
	comp=Z,18nm,1.4s,mb4.9						
KHMM	Horse Mountain	65.23	350	*e*P	P	04 45 14.8	+1.4
MOD	Modoc	65.80	353	*e*P	P	04 45 17.2	+0.3
	comp=Z,20nm,1.3s,mb5.0						
VNDA	Vanda	66.10	194	*e*P	P	04 45 19.4	+1.1
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
VNDA				MLR	MLR		
	comp=Z,638nm,21.0s						
VNDA	Vanda	66.10	194	P	P	04 45 19.6	+1.3
	comp=Z,3.2nm,1.1s,mb4.3,baz=86,slow=6.4,SNR=6.0						
VNDA	Vanda	66.10	194	*e*P	P	04 45 19.4	+1.1
	comp=Z,8.8nm,1.4s,mb4.6						
VNDA				LR	LR		
	comp=Z,638nm,21.0s,MS4.8						
PDAR	Pinedale Array	66.26	2	P	P	04 45 18.5	-1.4
	comp=Z,2.0nm,1.0s,mb4.1,baz=180,slow=7.4,SNR=11						
QSPA	South Pole Qui	66.37	180	*e*P	P	04 45 21.0	+1.0
	comp=Z,201nm,2.2s,mb5.8						
RRI2	Red Ridge	66.80	1	*e*P	P	04 45 23.2	-0.1
	comp=Z,56nm,1.7s,mb5.3						
TPAW	Teton Pass	66.95	1	*e*P	P	04 45 22.8	-1.5
	comp=Z,20nm,1.4s,mb5.0						
LOHW	Long Hollow	67.08	1	*e*P	P	04 45 23.9	-1.1
	comp=Z,15nm,1.4s,mb4.8						
IMW	Indian Meadow	67.36	1	*e*P	P	04 45 26.8	0.0
	comp=Z,39nm,1.6s,mb5.2						
MCMT	McKenzie Canyo	68.28	359	*e*P	P	04 45 32.5	-0.1
QLMT	Earthquake Lak	68.28	0	*e*P	P	04 45 34.1	+1.5
BMO	Blue Mountains	68.47	356	*e*P	P	04 45 33.8	-0.1
	comp=Z,29nm,1.7s,mb5.0						
HRY	Holter Researc	70.16	0	*e*P	P	04 45 43.4	-0.7
CHMT	Chamberlain Mo	70.37	359	*e*P	P	04 45 45.8	+0.4
VNA3	Neumayer Olymp	71.59	161	*e*	pP	04 45 55.6	+0.3
VNA3	Neumayer Olymp	71.59	161	*e*	sP	04 45 57.9	+1.5
VNA3	Neumayer Olymp	71.59	161	*e*	PcP	04 46 11.1	-0.8
VNA3	Neumayer Olymp	71.59	161	⇓*i*P	P	04 45 52.4	0.0
VNA3				*e*	pP	04 45 55.6	+0.3
VNA3				*e*		04 45 57.9	
VNA3				*e*		04 46 11.1	
VNA3				*e*		04 51 57.9	
VNA1	Neumayer--Stat	72.23	160	*e*	pP	04 45 59.5	+0.4
VNA1	Neumayer--Stat	72.23	160	*e*	sP	04 46 03.2	+3.0
VNA1	Neumayer--Stat	72.23	160	*e*	PcP	04 46 14.3	-0.3
VNA1	Neumayer--Stat	72.23	160	⇓*i*P	P	04 45 56.8	+0.6
VNA1				*e*	pP	04 45 59.5	+0.4
VNA1				*e*		04 46 03.2	
VNA1				*e*		04 46 14.3	
DGMT	Dagmar	72.27	6	*e*P	P	04 45 56.4	-0.4
	comp=Z,19nm,1.1s,mb5.0						
VNA2	Neumayer--Watz	72.40	161	*e*	pP	04 46 00.5	+0.4
VNA2	Neumayer--Watz	72.40	161	*e*	sP	04 46 02.9	+1.7
VNA2	Neumayer--Watz	72.40	161	*e*	PcP	04 46 14.8	-0.5
VNA2	Neumayer--Watz	72.40	161	⇓*i*P	P	04 45 57.6	+0.4
VNA2				*e*	pP	04 46 00.5	+0.4
VNA2				*e*		04 46 02.9	
VNA2				*e*		04 46 14.8	
VNA2				*e*		04 52 01.0	
SNAA	Sanae	73.44	162	*e*P	P	04 46 03.3	+0.1
SNAA				pmax	pmax		
	comp=Z,191nm,2.2s						
SNAA	Sanae	73.44	162	*e*P	P	04 46 03.2	0.0
	comp=Z,191nm,2.2s,mb5.6						
BINY	Binghamton	73.64	27	*e*P	P	04 46 04.1	-0.9
	comp=Z,139nm,2.0s,mb5.5						
DZM	Mont Dzumac	73.99	253	LR	LR	05 10 28.5	
	comp=Z,800nm,20.2s,MS5.0,baz=293,slow=29						
ULM	Lac du Bonnet	75.09	11	P	P	04 46 12.8	-0.4
	comp=Z,2.9nm,0.9s,mb4.2,baz=216,slow=6.7,SNR=4.4						
ULM	Lac du Bonnet	75.09	11	P	P	04 46 12.8	-0.4
EDM	Edmonton	76.69	359	*e*P	P	04 46 21.9	-0.2
EMMW	East Machias	79.41	31	*e*P	P	04 46 39.4	+2.1
	comp=Z,20nm,1.0s,mb5.0						
DLBC	Dease Lake	83.26	351	*e*P	P	04 46 58.3	+1.1
FCC	Fort Churchill	83.58	9	*e*P	P	04 46 58.3	-0.5
FCC				pmax	pmax		
	comp=Z,84nm,2.0s,mb5.5						
FCC	Fort Churchill	83.58	9	*e*P	P	04 46 58.3	-0.5
	comp=Z,84nm,2.0s,mb5.5						
HNR	Honiara	84.42	262	LR	LR	05 16 45.3	
	comp=Z,441nm,21.4s,MS4.8,baz=132,slow=30						
SYO	Syowa Base	85.21	170	⇓P	P	04 47 05.0	-1.7
SYO	Syowa Base	85.21	170	⇑PcP	PcP	04 47 08.0	-2.4
YKA	Yellowknife Ar	86.00	359	P	P	04 47 10.6	-0.2
	comp=Z,4.1nm,1.0s,mb4.6,baz=174,slow=4.2,SNR=6.5						
SCHQ	Schefferville	87.36	24	LR	LR	05 23 17.2	
	comp=Z,291nm,18.4s,MS4.7,baz=211,slow=34						
STKA	Stephens Creek	90.47	235	LR	LR	05 19 42.1	
	comp=Z,358nm,19.2s,MS4.8,baz=294,slow=30						
CTA	Charters Tower	92.13	247	LR	LR	05 21 14.3	
	comp=Z,450nm,19.9s,MS4.9,baz=48,slow=30						
PMG	Port Moresby	95.95	257	LR	LR	05 23 17.8	
	comp=Z,433nm,18.3s,MS5.0,baz=313,slow=30						
MDJ	Mudanjiang	126.24	309	PKP	PKPdf	04 53 34.3	-1.1
CN2	Changchun	129.25	308	*e*PKP	PKPdf	04 53 41.9	+0.6
MOX	Moxa	129.26	43	*e*P	PKPdf	04 53 40.0	-1.1
GERES	GERESS Array B	130.91	45	PKP	PKPdf	04 53 42.8	-1.5
	comp=Z,0.2nm,0.3s,baz=135,slow=1.9,SNR=4.4						
SSE	Sheshan	132.54	291	PKP	PKPdf	04 53 48.0	+0.1
SSE	Sheshan	132.54	291	PKP	PKPdf	04 53 48.1	+0.2
NJ2	Nanjing	134.59	292	*e*PKP	PKPdf	04 53 46.6	-5.0
NJ2				PP	PP	04 56 25.0	-0.8
NJ2				PKS	PKS	04 57 22.0	-1.8
NJ2				SKKS		05 03 22.0	
NJ2				PP	PP		
	comp=Z,400nm,6.2s						
NJ2				LR	LR		
	comp=Z,740nm,22.4s,MS5.3						
AKASG	Malin Array Be	139.83	38	PKhKP		04 53 51.3	
	comp=Z,0.2nm,0.3s,baz=224,slow=36,SNR=4.6						
AKASG				PKP	PKPdf	04 53 58.9	-1.7
	comp=Z,0.3nm,0.3s,baz=294,slow=2.6,SNR=4.9						
AKASG	Malin Array Be	139.83	38	PKP		04 53 51.3	
AKASG				PKP	PKPdf	04 53 58.9	-1.7
SONM	Songino Array	141.22	318	PKhKP		04 53 53.0	
	comp=Z,0.1nm,0.3s,baz=53,slow=26,SNR=2.1						
SONM				PKP	PKPdf	04 54 01.5	-1.7
	comp=Z,1.3nm,1.1s,baz=90,slow=1.2,SNR=5.1						
ZAK	Zakamensk	141.85	323	*e*PKHKP		04 53 58.0	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s						
GOLH	Golhisar	144.58	59	*i* P		04 54 00.6	
GYA	Guiyang	144.91	283	⇓*i*PKP	PKPdf	04 54 09.3	-1.0
GYA				PP	PP		
	comp=Z,240nm,6.8s						
GYA				LR	LR		
	comp=N,490nm,20.4s,MS5.4						
GYA				LR	LR		
	comp=E,460nm,21.2s,MS5.4						
GYA				LR	LR		
	comp=Z,640nm,20.8s,MS5.4						
TKTP	Tekketepe	145.00	57	*i* P	PKPbc	04 54 04.4	-2.9
ESKT	Eskisehir	145.04	54	*i* P	PKPbc	04 54 02.5	-4.9
ISP	Isparta	145.19	57	*e*PKIKP	PKPdf	04 54 09.6	-0.8
SGKT	Sivrigoynuk	145.62	52	*i* P	PKPbc	04 54 06.3	-2.5
SVE	Sverdlovsk	146.57	7	⇑*i*PKP2	PKPab	04 54 12.8	-1.0
SVE				pmax	pmax		
	comp=Z,200nm,2.5s						
ELDT	Eldivan	146.64	52	*i* P	PKPbc	04 54 13.0	+1.8
ARU	Arti	146.68	9	*e*PKP2	PKPab	04 54 11.5	-2.8
ARU	Arti	146.68	9	*e*PKPdf	PKPdf	04 54 11.5	-0.8
LZH	Lanzhou	146.73	300	⇓PKP	PKPdf	04 54 14.5	+1.4
LZH				APKP		04 54 17.8	
LZH				XPKP		04 54 19.0	
LZH				SKKS		05 04 32.8	
LZH				PP	PP		
	comp=Z,110nm,7.5s						
LZH				LR	LR		
	comp=N,140nm,18.0s						
LZH				LR	LR		
	comp=Z,240nm,20.0s,MS5.0						
LZH	Lanzhou	146.73	300	⇓PKP2	PKPab	04 54 14.5	-0.6
LZH				SS	SS	05 16 41.5	+5.8
LZH				MLR	MLR		
	comp=Z,250nm,20.0s,MS5.0						
LZH	Lanzhou	146.73	300	⇓PKP	PKPdf	04 54 14.5	+1.4
LZH				pPKP		04 54 17.8	
LZH				sPKP		04 54 19.0	
LZH				*e*PP	PP	04 57 55.0	+15
LZH				SKKS		05 04 32.8	
LZH				SS	SS	05 16 41.5	+5.8
LZH				LR	LR		
	comp=Z,250nm,20.0s,MS5.0						
NVS	Novosibirsk	146.95	344	*e*PKIKP	PKPdf	04 54 10.4	-2.4
NVS				pmax	pmax		
	comp=Z,47nm,2.2s						
NVS				pmax	pmax		
	comp=N,16nm,1.8s						
NVS				pmax	pmax		
	comp=E,15nm,1.6s						
BRTR	Keskin Array B	147.04	53	PKPbc	PKPdf	04 54 14.4	+1.0
	comp=E,18nm,1.2s,baz=180,slow=1.2,SNR=15						
CDAG	Cicekdag	147.61	53	*i* P	PKPdf	04 54 07.3	-7.1
AVNT	Avonos	148.24	54	*i* P	PKPdf	04 54 13.0	-2.4
KMI	Kunming	148.32	280	PKIKP	PKPdf	04 54 14.4	-1.6
KMI						04 54 19.4	
KMI						04 57 49.6	
KMI	Kunming	148.32	280	PKP	PKPdf	04 54 14.4	-1.6
KMI				pPKP		04 54 19.4	
KMI				PKPab	PKPab	04 54 23.7	+2.0
KMI				PP	PP	04 57 49.6	+0.5
GTA	Gaotai	148.88	308	PKP	PKPdf	04 54 18.1	+1.7
GTA				APKP		04 54 22.3	
GTA				PKP2	PKPab	04 54 27.8	+4.2
GTA				PKS	PKS	04 57 51.1	+3.9
GTA				PP	PP	04 57 55.3	+3.8
GTA				PPP	PPP	05 01 16.4	+3.2
GTA				SKS	SKS	05 01 21.8	-2.1
GTA				SKKS		05 04 39.5	
GTA				PP	PP		
	comp=Z,130nm,16.3s						
GTA				LR	LR		
	comp=N,110nm,22.4s,MS4.8						
GTA				LR	LR		
	comp=E,150nm,26.2s,MS4.8						
GTA				LR	LR		
	comp=Z,170nm,25.5s,MS4.7						
EIL	Elat	150.04	72	*e*PKPbc	PKPdf	04 54 22.8	+4.2
CMAR	Chiang Mai Arr	150.62	266	PKP	PKPdf	04 54 20.2	+0.5
	comp=Z,1.0nm,0.4s,baz=162,slow=12,SNR=3.1						
CMAR				PKPbc	PKPdf	04 54 25.3	+5.6
	comp=Z,13nm,1.1s,baz=141,slow=0.4,SNR=16						
BVAR	Borovoye Array	150.75	357	PKP	PKPdf	04 54 18.7	-0.2
	comp=Z,1.9nm,0.7s,baz=56,slow=5.3,SNR=4.4						
BVAR				PKPbc	PKPdf	04 54 23.6	+4.7
	comp=Z,4.7nm,0.9s,baz=27,slow=3.3,SNR=17						
BVAR				PKPab	PKPab	04 54 30.2	-0.6
	comp=Z,6.8nm,1.0s,slow=1.5,SNR=10						
MALT	Malatya	151.03	53	*e*PKIKP	PKPdf	04 54 25.3	+5.5
WMQ	Urumqi	154.25	326	*e*PKP	PKPdf	04 54 23.0	-1.2
WMQ				LR	LR		
	comp=N,110nm,21.2s						
WMQ				LR	LR		
	comp=Z,120nm,21.2s,MS4.7						
MKAR	Makanchi Array	154.30	337	PKP	PKPdf	04 54 23.4	-0.7
	comp=Z,0.3nm,0.5s,slow=1.4,SNR=1.8						
MKAR				PKPbc	PKPdf	04 54 30.9	+6.8
	comp=Z,1.3nm,0.6s,baz=18,slow=3.8,SNR=6.1						
MKAR	Makanchi Array	154.30	337	PKP	PKPdf	04 54 23.4	-0.7
MKAR				PKPbc	PKPdf	04 54 30.9	+6.8

*IDC **20** 04:39:38.9±0.7, 26.53S×176.42W, mb4.3/7, mb1 4.6/8, mb1mx4.5/13, mbtmp4.3/8, MS4.0/5, Ms1 4.0/5, ms1mx3.7/31, Error ellipse: s-maj=27.1km s-min=17.9km az=144.0*

*BJI **20** 04:39:46.7, 26.90S×176.10W, h60^{km}, mB5.0, mb4.9, Ms4.7, Msz4.5*

*NEIC **20** 04:39:46.8±2.6, 26.87S×176.08W, h60^{km}±23^{km}, mb4.8/6, Error ellipse: s-maj=20.3km s-min=17.4km az=197.0*

ISC 20 04:39:38.6±3.3**, 26.63S**±0.08×**176.3W**±0.1**, h7^{km}**±20^{km}**, n41, σ1^{s}03**/33**, mb4.5**/14**, MS4.1**/2**, 1C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.00	209	Pn	Pn	04 40 27.8	+0.3
	297nm,0.3s,baz=272,slow=22,SNR=11						
RAO				LR	LR	04 40 56.0	
	comp=Z,1µm,21.1s,baz=73,slow=26						
RAO				Sn	Sn	04 41 05.3	+1.1
	664nm,0.3s,baz=39,slow=22,SNR=7.5						
RAO	Raoul Island	3.00	209	*e*P	Pn	04 40 27.8	+0.3
RAO				*e*S	Sn	04 41 04.8	+0.6
URZ	Urewera	12.88	204	Pn	P	04 42 38.2	-6.7
	1.0nm,0.3s,baz=164,slow=2.3,SNR=7.1						
URZ				Sn	S	04 44 53.3	-16
	4.0nm,0.3s,baz=62,slow=23,SNR=13						
AFI	Afiamalu	13.33	19	Pn	P	04 42 44.4	-6.4
	8.8nm,0.3s,baz=290,slow=19,SNR=9.5						
AFI				Sn	S	04 45 00.8	-20
	2.5nm,0.3s,baz=20,slow=18,SNR=2.8						
AFI	Afiamalu	13.33	19	*e*P	P	04 42 42.6	-8.3
AFI				S	S	04 44 55.5	-25
DZM	Mont Dzumac	16.40	282	Pn	P	04 43 38.5	+7.5
	0.5nm,0.3s,baz=115,slow=14,SNR=7.5						
DZM				LR	LR	04 48 09.0	
	comp=Z,518nm,18.2s,baz=82,slow=31						
NOUC	Port Laguerre	16.52	282	*e*P	P	04 43 39.8	+7.4
NOUC	Port Laguerre	16.52	282	*e*P	P	04 43 39.8	+7.4
RPZ	Rata Peaks	19.92	208	LR	LR	04 51 06.6	
	comp=Z,565nm,18.0s,baz=194,slow=34						
CTA	Charters Tower	34.94	273	*e*P	P	04 46 33.9	+0.6
	6.1nm,1.2s,mb4.4						
CTA	Charters Tower	34.94	273	LR	LR	04 57 32.6	
	comp=Z,279nm,18.0s,MS4.0,baz=226,slow=31						
CTAO	Charters Tower	34.94	273	*e*P	P	04 46 33.3	0.0
	17nm,1.3s,mb4.8						
STKA	Stephens Creek	36.98	252	LR	LR	04 58 45.4	
	comp=Z,349nm,21.3s,MS4.1,baz=156,slow=31						
TAOE	Nuku Hiva Isla	38.48	69	*e*LQ		04 46 12.0	
	9µm,32.5s						
TAOE				*e*LR	LR	04 48 37.1	
	6µm,26.1s,baz=136						
WB2	Warramunga Arr	45.63	268	*e*P	P	04 48 00.4	-1.3
WRAB	Tennant Creek	45.64	268	*e*P	P	04 48 00.8	-1.0
	10.0nm,0.7s,mb4.8						
WRA	Warramunga Arr	45.64	268	P	P	04 48 00.7	-1.1
	6.7nm,0.6s,mb4.7,baz=107,slow=7.5,SNR=39						

WRA				S	S	04 54 43.3	-0.9
	1.1nm,1.0s,baz=110,slow=14,SNR=4.1						
VNDA	Vanda	51.99	186	P	P	04 48 50.1	-0.1
	1.1nm,0.3s,mb4.3,baz=333,slow=5.5,SNR=6.2						
FITZ	Fitzroy Crossi	54.02	266	*e*P	P	04 49 07.5	+1.5
	8.1nm,0.8s,mb4.7						
CASY	Casey	59.19	207	*e*P	P	04 49 41.0	-1.2
	25nm,0.7s,mb5.3						
CASY				*e*		04 49 51.5	
QSPA	South Pole Qui	63.47	180	⇑*i*P	P	04 50 09.9	-1.2
	11nm,1.0s,mb4.9						
MJAR	Matsushiro Arr	76.07	324	P	P	04 51 27.0	-1.7
	1.3nm,0.3s,mb4.3,baz=166,slow=6.4,SNR=4.4						
YBH	Yreka Blue Hor	84.12	37	*e*P	P	04 52 12.0	+0.4
	14nm,1.6s,mb4.8						
NVAR	Mina Array Bea	84.42	42	P	P	04 52 13.4	+0.2
	1.4nm,0.8s,mb4.2,baz=208,slow=6.8,SNR=11						
QIZ	Qiongzhong	84.81	294	*e*P	P	04 52 17.1	+1.5
MDJ	Mudanjiang	86.42	325	P	P	04 52 24.3	+1.3
MDJ				AMB	AMB		
	comp=Z,70nm,8.4s						
MSU	Marysvale	88.25	45	*e*P	P	04 52 32.6	+0.6
TXAR	Lajitas Array	89.05	56	P	P	04 52 35.8	-0.2
	comp=Z,0.9nm,0.8s,mb4.1,baz=214,slow=7.1,SNR=13						
PDAR	Pinedale Array	92.34	43	P	P	04 52 50.8	-0.2
	comp=Z,0.7nm,0.9s,mb4.0,baz=219,slow=5.8,SNR=3.5						
CHMT	Chamberlain Mo	92.63	38	*e*P	P	04 52 51.6	-0.6
CMAR	Chiang Mai Arr	93.63	289	P	P	04 52 59.9	+2.4
	comp=Z,0.9nm,0.3s,mb4.6,baz=157,slow=4.8,SNR=4.9						
ILAR	Eielson Array	93.92	12	P	P	04 52 58.0	+0.3
	comp=Z,0.6nm,0.7s,mb4.1,baz=222,slow=5.6,SNR=4.4						
MKAR	Makanchi Array	116.49	311	PKP	PKPdf	04 58 23.4	-2.5
	comp=Z,0.7nm,0.6s,baz=220,slow=1.5,SNR=6.9						
BVAR	Borovoye Array	124.72	318	PKP	PKPdf	04 58 40.1	-1.5
	comp=Z,1.2nm,0.7s,baz=90,slow=1.5,SNR=5.9						
ARCES	ARCESS Array B	135.21	349	PKP	PKPdf	04 58 58.8	-2.3
	comp=Z,1.5nm,0.6s,baz=27,slow=2.7,SNR=11						
FINES	FINESS Array B	142.07	343	PKhKP		04 59 06.0	
	comp=Z,0.7nm,0.4s,baz=52,slow=5.1,SNR=10						
NB2	NORSAR Subarra	145.22	354	PKPabc	PKPbc	04 59 17.6	+0.8
	comp=Z,11nm,0.9s,baz=7.0,slow=3.8						
NOA	NORSAR Array B	145.22	354	PKPbc	PKPbc	04 59 17.6	+0.8
	comp=Z,3.9nm,0.8s,baz=7.9,slow=2.5,SNR=14						
NAO01	NORSAR Array S	145.45	354	*e*P	PKPbc	04 59 18.5	+1.1
AKASG	Malin Array Be	149.08	328	PKPbc	PKPdf	04 59 28.0	+2.2
	comp=Z,3.0nm,0.6s,baz=42,slow=4.2,SNR=11						
BRTR	Keskin Array B	151.91	305	PKPbc	PKPdf	04 59 36.0	+5.5
	comp=Z,1.0nm,0.7s,baz=107,slow=2.4,SNR=4.9						

*IDC **20** 04:40:20.4±3.9, 8.17S×117.53E, mb3.7/3, mb1 3.9/3, mb1mx3.8/16, mbtmp3.7/3, Error ellipse: s-maj=206.3km s-min=31.2km az=51.0*

ISC 20 04:40:18.7±1.1, **9.1S**±0.2×**116.6E**±0.2, **h33**^{km}, **n6**, σ**1^{s}76**/6, **mb3.8**/2, **1C-1D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	15.96	105	*e*P	P	04 44 01.4	-1.2
	5.1nm,0.3s						
WRA	Warramunga Arr	20.27	124	P	P	04 44 55.3	+1.0
	2.6nm,0.5s,baz=300,slow=12,SNR=36						
WB2	Warramunga Arr	20.28	124	⇓*i*P	P	04 44 55.1	+0.8
SONM	Songino Array	57.37	352	P	P	04 50 05.0	-1.2
	0.5nm,0.4s,mb3.9,baz=179,slow=8.1,SNR=5.0						
MKAR	Makanchi Array	63.46	334	P	P	04 50 49.8	+2.1
	0.4nm,0.6s,mb3.7,baz=150,slow=7.0,SNR=5.5						
SYO	Syowa Base	76.94	201	⇑P	P	04 52 08.2	-1.1

*IDC **20** 04:55:13.0±1.3, 36.83S×177.37E, h204^{km}±9^{km}, mb4.3/8, mb1 4.3/8, mb1mx4.1/16, mbtmp4.8/8, Error ellipse: s-maj=27.1km s-min=15.2km az=45.0*

*BJI **20** 04:55:14.5, 37.00S×177.00E, h211^{km}, mB4.8, mb4.8*

*NEIC **20** 04:55:15.5, 36.99S×177.04E, h211^{km}, mb4.6/8, After WEL.*

NEIC Felt from Bay of Plenty to Wellington.

*WEL **20** 04:55:16.2±0.3, 36.98S×177.05E, h203^{km}±3^{km}, ML5.6/22, Error ellipse: s-maj=2.4km s-min=2.0km az=0.0*

WEL Felt from Bay of Plenty to Wellington, maximum reported intensity MM 4.

ISC 20 04:55:14.6±0.4, **37.12S**±0.04×**177.03E**±0.06, **h221**^{km}±2^{km}, **n151**, σ**1^{s}15**/164, **mb4.5**/14, **42C-11D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	White Island	0.43	163	PN	P	04 55 43.5	-0.7
MYRZ	Mayor Island	0.65	255	⇓PN	P	04 55 44.6	-0.3
TGRZ	Tauranga	0.86	225	P	P	04 55 46.1	+0.2
TGRZ				S	S	04 56 10.5	+0.3
TGRZ	Tauranga	0.86	225	PN	P	04 55 45.9	0.0
TGRZ				SN	S	04 56 10.2	0.0
MARZ	Manawahe	0.91	198	P	P	04 55 46.8	+0.7
MARZ	Manawahe	0.91	198	PN	P	04 55 46.8	+0.6
EDRZ	Edgecumbe	1.01	193	P	P	04 55 47.5	+0.8
EDRZ	Edgecumbe	1.01	193	PN	P	04 55 47.5	+0.8
LIRZ	Lichensteins R	1.02	210	P	P	04 55 47.8	+1.0
LIRZ	Lichensteins R	1.02	210	PN	P	04 55 47.8	+1.0
MXZ	Matakaoa Point	1.11	114	P	P	04 55 47.6	+0.2
MXZ	Matakaoa Point	1.11	114	⇑PN	P	04 55 47.6	+0.1
MXZ				SN	S	04 56 11.9	-1.0
KUZ	Kuaotunu	1.11	289	P	P	04 55 46.5	-1.0
KUZ				S	S	04 56 10.6	-2.4
KUZ	Kuaotunu	1.11	289	⇓PN	P	04 55 46.6	-0.9
KUZ				SN	S	04 56 10.5	-2.4
MKRZ	Makatiti	1.11	203	P	P	04 55 48.9	+1.4
MKRZ	Makatiti	1.11	203	PN	P	04 55 48.9	+1.4
URZ	Urewera	1.14	177	P	P	04 55 47.8	+0.1
	642nm,0.3s,baz=294,slow=2.7,SNR=4218						
URZ				S	S	04 56 12.7	-0.6
	639nm,0.3s,baz=180,slow=20,SNR=19						
URZ	Urewera	1.14	177	P	P	04 55 47.9	+0.2
URZ	Urewera	1.14	177	⇑PN	P	04 55 47.9	+0.3
URZ				SN	S	04 56 12.1	-1.2
TAZ	Tarawera	1.19	200	P	P	04 55 49.1	+1.1
TAZ	Tarawera	1.19	200	PN	P	04 55 49.1	+1.1
MWZ	Matawai	1.28	162	P	P	04 55 49.1	+0.4
MWZ				S	S	04 56 14.8	-0.3
MWZ	Matawai	1.28	162	⇑PN	P	04 55 49.1	+0.4
MWZ				SN	S	04 56 14.4	-0.8
TOZ	Tahuroa Road	1.36	243	P	P	04 55 49.7	+0.3
TOZ	Tahuroa Road	1.36	243	⇑PN	P	04 55 49.7	+0.4
TOZ				SN	S	04 56 16.1	-0.2
PUZ	Puketiti	1.36	135	P	P	04 55 50.1	+0.7
PUZ	Puketiti	1.36	135	⇑PN	P	04 55 50.1	+0.7
PUZ				SN	S	04 56 15.1	-1.2
PATZ	Paeroa	1.40	206	⇑PN	P	04 55 50.7	+1.0
OTAZ	Otara	1.69	275	⇓PN	P	04 55 52.2	0.0
MTAZ	Motutapu	1.73	280	P	P	04 55 52.3	-0.2
MTAZ	Motutapu	1.73	280	⇓PN	P	04 55 52.3	-0.2
WHTZ	Whakaora	1.76	208	P	P	04 55 54.1	+1.3
WHTZ	Whakaora	1.76	208	PN	P	04 55 54.1	+1.3
KAAZ	Kauri Point	1.89	278	P	P	04 55 53.8	-0.1
KAAZ	Kauri Point	1.89	278	⇓PN	P	04 55 53.8	-0.1
WATZ	Wairara	1.89	212	P	P	04 55 55.2	+1.2
WATZ				S	S	04 56 27.5	+3.2
WATZ	Wairara	1.89	212	⇑PN	P	04 55 55.2	+1.2
HATZ	Hinemaiaia	1.92	202	P	P	04 55 54.8	+0.6
HATZ	Hinemaiaia	1.92	202	⇑PN	P	04 55 54.8	+0.6
HATZ				SN	S	04 56 23.6	-1.2
KNZ	Kokohu	1.97	165	P	P	04 55 55.5	+0.8
KNZ				S	S	04 56 25.4	-0.2
KNZ	Kokohu	1.97	165	⇑PN	P	04 55 55.4	+0.8
KNZ				SN	S	04 56 25.4	-0.2
WTAZ	Waiatarua	1.97	275	P	P	04 55 54.6	-0.1
WTAZ	Waiatarua	1.97	275	⇓PN	P	04 55 54.6	-0.1
RATZ	Rangitukua	2.01	209	P	P	04 55 55.8	+0.7
RATZ	Rangitukua	2.01	209	PN	P	04 55 55.8	+0.7
RITZ	Rihia Road	2.07	206	⇑P	P	04 55 56.7	+1.0
RITZ	Rihia Road	2.07	206	⇑PN	P	04 55 56.7	+1.0
BKZ	Black Stump Fm	2.09	192	PN	P	04 55 56.1	+0.2
BKZ				SN	S	04 56 26.3	-1.4
KATZ	Kakaramea	2.13	209	⇑P	P	04 55 57.2	+0.8
KATZ	Kakaramea	2.13	209	⇑PN	P	04 55 57.2	+0.8
HIZ	Hauiti	2.21	230	⇑P	P	04 55 58.3	+1.1
HIZ	Hauiti	2.21	230	⇓PN	P	04 55 58.3	+1.1
KRVZ	Karewarewa	2.26	209	⇑PN	P	04 55 58.3	+0.7
WTVZ	West Tongariro	2.29	209	⇑P	P	04 55 58.7	+0.7
WTVZ	West Tongariro	2.29	209	⇑PN	P	04 55 58.7	+0.6
OTVZ	Oturere	2.31	207	⇑PN	P	04 55 59.0	+0.8
OTVZ				SN	S	04 56 32.9	+1.0
TWVZ	Taurewa	2.32	212	⇑P	P	04 55 59.0	+0.7
TWVZ				S	S	04 56 32.7	+0.6
TWVZ	Taurewa	2.32	212	⇑PN	P	04 55 59.0	+0.7
TWVZ				SN	S	04 56 33.0	+0.9
NGZ	Ngauruhoe	2.34	208	⇑P	P	04 55 59.1	+0.6
NGZ	Ngauruhoe	2.34	208	⇑PN	P	04 55 59.1	+0.6
CNZ	Chateau	2.38	209	PN	P	04 55 59.5	+0.5
WPVZ	Whakapapa	2.39	209	P	P	04 55 59.3	+0.3
WPVZ	Whakapapa	2.39	209	PN	P	04 55 59.3	+0.3
TUVZ	Tukino	2.40	206	⇑P	P	04 55 59.9	+0.7
TUVZ	Tukino	2.40	206	⇑PN	P	04 55 59.9	+0.7
FWVZ	Far West T-bar	2.43	208	P	P	04 55 59.9	+0.4
FWVZ	Far West T-bar	2.43	208	PN	P	04 55 59.9	+0.5
FWVZ				SN	S	04 56 34.4	+0.2
DRZ	Dome Shelter	2.44	208	P	P	04 56 00.7	+1.1
DRZ	Dome Shelter	2.44	208	PN	P	04 56 00.6	+1.0
WCZ	Waipu Caves	2.46	298	⇓PN	P	04 55 58.7	-1.1
TRVZ	Turoa	2.47	208	PN	P	04 56 00.4	+0.5
WNVZ	Wahianoa	2.48	207	⇑P	P	04 56 00.6	+0.6
WNVZ	Wahianoa	2.48	207	⇑PN	P	04 56 00.6	+0.6
WNVZ				SN	S	04 56 35.3	+0.2
MOVZ	Moawhango	2.50	203	⇑P	P	04 56 00.2	0.0
MOVZ	Moawhango	2.50	203	⇑PN	P	04 56 00.2	0.0
MOVZ				SN	S	04 56 33.3	-2.2
PKVZ	Pokaka	2.54	211	⇑PN	P	04 56 01.3	+0.6
MTVZ	Mangateitei	2.58	208	⇑PN	P	04 56 01.5	+0.5
MTVZ				SN	S	04 56 37.3	+0.3
VRZ	Vera Road	2.69	221	⇑P	P	04 56 03.6	+1.3
VRZ				S	S	04 56 40.5	+1.3
VRZ	Vera Road	2.69	221	⇑PN	P	04 56 03.6	+1.4
VRZ				SN	S	04 56 40.5	+1.3
PWZ	Pawanui	2.91	183	P	P	04 56 04.6	-0.1
PWZ	Pawanui	2.91	183	PN	P	04 56 04.6	-0.1
RAEZ	Rainy Point	3.00	223	P	P	04 56 07.5	+1.8
RAEZ	Rainy Point	3.00	223	PN	P	04 56 07.5	+1.8
TSZ	Takapari Road	3.05	196	⇑P	P	04 56 06.0	-0.4
TSZ	Takapari Road	3.05	196	⇑PN	P	04 56 06.0	-0.4
WAZ	Wanganui	3.08	211	⇑P	P	04 56 06.9	+0.2
NEZ	North Egmont	3.15	226	P	P	04 56 09.6	+2.0
PKE	Pukeiti	3.17	228	P	P	04 56 09.4	+1.7
NRZ	Ngariki Road	3.29	227	P	P	04 56 10.8	+1.6
OUZ	Omahuta	3.36	303	⇑*e*P	P	04 56 08.8	-1.2
BFZ	Birch Farm	3.61	190	⇓P	P	04 56 11.9	-1.1
MRZ	Mangatainoka R	3.71	197	⇑P	P	04 56 12.9	-1.3
KIW	Kapiti Island	4.09	203	P	P	04 56 17.0	-1.7
MTW	Mount Morrison	4.21	196	P	P	04 56 18.2	-2.0
CAW	Cannon Point	4.27	200	P	P	04 56 19.0	-2.0
MRW	Makara Radio	4.49	203	P	P	04 56 21.7	-2.0
MSWZ	Moikau Station	4.51	197	P	P	04 56 21.7	-2.3
WEL	Wellington	4.52	202	P	P	04 56 22.0	-2.1
SNZO	South Karori	4.56	203	P	P	04 56 22.3	-2.3
BHW	Baring Head	4.60	201	P	P	04 56 22.8	-2.3
TCW	Tory Channel	4.61	207	P	P	04 56 23.3	-2.0
NNZ	Nelson	4.98	214	P	P	04 56 27.3	-2.6
QRZ	Quartz Range	5.10	222	*e*P	P	04 56 28.6	-2.8
KHZ	Kahutara	5.94	206	P	P	04 56 39.5	-2.5
MQZ	McQueen's Vall	7.38	206	P	P	04 56 56.7	-3.8
RPZ	Rata Peaks	8.01	213	P	P	04 57 05.6	-3.1
	4.9nm,0.3s,baz=1.2,slow=18,SNR=50						
RPZ				S	S	04 58 31.5	-6.5
	36nm,0.3s,baz=205,slow=21,SNR=23						
LBZ	Lake Benmore	8.92	213	*e*P	P	04 57 17.4	-3.1
DZM	Mont Dzumac	17.57	326	P	P	04 59 06.2	-0.7
	0.7nm,0.3s,baz=122,slow=16,SNR=11						
STKA	Stephens Creek	29.55	270	P	P	05 01 01.1	+0.4
	8.5nm,1.0s,mb4.3,baz=87,slow=12,SNR=4.0						
CTA	Charters Tower	31.72	294	⇑*i*P	P	05 01 19.9	+0.2
	6.7nm,0.7s,mb4.3						
CTA	Charters Tower	31.72	294	P	P	05 01 19.9	+0.2
	6.7nm,0.5s,mb4.4,baz=114,slow=9.0,SNR=10						
TBI	Tubuai	31.86	74	*e*LQ		05 08 23.4	
	248nm,40.5s						
PPT	Papeete	35.23	66	*e*P	Px	05 01 25.7	
	56nm,24.5s						
PPT				*e*PP	PP	05 02 45.1	-31
	61nm,23.2s						
PPT				*e*LR	LR	05 11 27.6	
	107nm,20.0s,baz=267						
PMG	Port Moresby	38.60	308	P	P	05 02 18.4	+0.5
	9.7nm,0.6s,mb4.5,baz=121,slow=4.5,SNR=6.4						
FORT	Forrest	40.75	264	*e*P	P	05 02 35.8	+0.3
	41nm,0.5s,mb5.1						
WB2	Warramunga Arr	40.84	283	⇑*i*P	P	05 02 35.9	-0.4
WRAB	Tennant Creek	40.84	283	*e*P	P	05 02 35.8	-0.6
	8.4nm,0.4s,mb4.5						
WRA	Warramunga Arr	40.85	283	P	P	05 02 35.9	-0.4
	7.0nm,0.5s,mb4.3,baz=121,slow=7.9,SNR=188						
VNDA	Vanda	41.03	185	P	P	05 02 39.8	+2.4
	2.8nm,0.7s,mb3.8,baz=2.8,slow=7.9,SNR=13						
KAKA	Kakadu	46.62	290	*e*P	P	05 03 21.2	-1.3
	6.0nm,0.4s,mb4.3						
NWAO	Narrogin (SRO)	48.45	256	P	P	05 03 36.0	-0.4
	13nm,1.0s,mb4.2,baz=126,slow=8.4,SNR=6.8						
KLBR	Kellerberrin	48.57	258	⇓*i*P	P	05 03 36.9	-0.4
	11nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	48.70	278	*e*P	P	05 03 38.0	-0.5
	18nm,0.6s,mb4.6						
FITZ	Fitzroy Crossi	48.70	278	P	P	05 03 38.2	-0.3
	28nm,0.7s,mb4.7,baz=155,slow=5.7,SNR=25						
MUN	Mundaring	49.62	257	*e*P	P	05 03 44.8	-0.5
	9.8nm,0.5s,mb4.4						
QSPA	South Pole Qui	53.01	180	⇓*i*P	P	05 04 13.3	+3.4
	33nm,0.5s,mb5.0						
VNA3	Neumayer Olymp	71.83	178	*e*	P	05 06 16.5	+2.2
VNA3	Neumayer Olymp	71.83	178	*e*	P	05 06 24.7	+10
VNA3	Neumayer Olymp	71.83	178	⇑*i*P	P	05 06 15.5	+1.2
VNA3				*e*		05 06 16.5	
VNA3				*e*		05 06 24.7	
VNA2	Neumayer--Watz	72.21	178	*e*	P	05 06 19.5	+2.9
VNA2	Neumayer--Watz	72.21	178	*e*	P	05 06 26.3	+10
VNA2	Neumayer--Watz	72.21	178	*e*	P	05 06 33.2	+17
VNA2	Neumayer--Watz	72.21	178	⇑*i*P	P	05 06 18.1	+1.5
VNA2				*e*		05 06 19.5	
VNA2				*e*		05 06 26.3	
VNA2				*e*		05 06 33.2	
VNA1	Neumayer--Stat	72.47	178	*e*	P	05 06 20.8	+2.7
VNA1	Neumayer--Stat	72.47	178	*e*	P	05 06 28.7	+11
VNA1	Neumayer--Stat	72.47	178	*e*	P	05 06 35.3	+17
VNA1	Neumayer--Stat	72.47	178	⇑*i*P	P	05 06 19.9	+1.8
VNA1				*e*		05 06 20.8	
VNA1				*e*		05 06 28.7	
VNA1				*e*		05 06 35.3	
KSM	Kuching	72.52	286	*e*P	P	05 06 18.9	-0.5
CMAR	Chiang Mai Arr	91.86	292	P	P	05 07 60.0	+1.0
	4.1nm,0.6s,mb4.6,baz=142,slow=3.3,SNR=12						
MDJ	Mudanjiang	91.97	328	P	P	05 07 59.6	+0.7
MDJ				AMB	AMB		
	comp=Z,90nm,7.4s						
MKAR	Makanchi Array	118.81	309	PKP	PKPdf	05 13 35.0	-1.2
	comp=Z,0.4nm,0.4s,baz=101,slow=1.5,SNR=4.8						
KEV	Kevo	143.54	343	*e*pkp	PKPdf	05 14 18.1	-3.4
ARCES	ARCESS Array B	144.06	343	PKP	PKPdf	05 14 21.2	-1.2
	comp=Z,8.9nm,0.7s,baz=50,slow=3.7,SNR=44						
KAF	Kangasniemi	149.11	333	*e*pkp	PKPdf	05 14 34.3	+3.3
FINES	FINESS Array B	149.63	333	PKPbc	PKPdf	05 14 36.7	+4.9
	comp=Z,3.7nm,0.6s,baz=29,slow=4.3,SNR=23						
FINES				PKPab	PKPab	05 14 42.6	-2.3
	comp=Z,0.6nm,0.3s,baz=61,slow=4.3,SNR=3.5						
FINES	FINESS Array B	149.63	333	PKPbc	PKPdf	05 14 36.7	+4.9
FINES				PKPab	PKPab	05 14 42.6	-2.3
DBIC	Dimbokro	149.64	176	PKPbc	PKPdf	05 14 39.0	+5.6
	comp=Z,1.7nm,0.4s,baz=154,slow=5.1,SNR=10						
DBIC				PKPab	PKPab	05 14 45.3	-1.1
	comp=Z,3.2nm,0.6s,baz=140,slow=9.9,SNR=4.5						
BRTR	Keskin Array B	151.32	287	PKPbc	PKPdf	05 14 41.7	+6.6
	comp=Z,1.4nm,0.4s,baz=149,slow=4.1,SNR=8.9						
BRTR				PKPab	PKPab	05 14 50.9	-1.8
	comp=Z,1.5nm,0.8s,baz=139,slow=5.0,SNR=5.1						
AKASG	Malin Array Be	153.37	311	PKPbc	PKPdf	05 14 45.4	+7.7
	comp=Z,0.8nm,0.4s,baz=69,slow=3.5,SNR=4.1						
AKASG				PKPab	PKPab	05 14 59.1	-1.8
	comp=Z,2.0nm,0.6s,baz=59,slow=5.1,SNR=4.3						
NB2	NORSAR Subarra	154.43	344	PKPabc	PKPdf	05 14 48.0	+9.3
	comp=Z,1.1nm,0.8s,baz=17,slow=2.6						
NOA	NORSAR Array B	154.43	344	PKPbc	PKPdf	05 14 47.3	+8.6
	comp=Z,1.1nm,0.8s,baz=33,slow=2.1,SNR=5.1						

*NIED **20** 05:04:00, 35.80N×136.90E, h29^{km}, Mw4.5 Best double couple: M$_0$5.87×10^{15} NP1:ϕ_s144°, δ82°, λ-19°. NP2: ϕ_s236°, δ71°, λ-172°.*

*IDC **20** 05:04:27.5±1.2, 35.77N×136.81E, mb3.6/5, mb1 3.9/7, mb1mx3.7/23, mbtmp3.7/7, ML3.7/1, MS3.7/3, Ms1 3.8/3, ms1mx3.3/30, Error ellipse: s-maj=31.2km s-min=12.5km az=157.0*

*JMA **20** 05:04:28.0, 35.76N×136.86E, h9^{km}±1^{km}, M4.6 Broadband fault plane solution: P waves. NP1:ϕ_s148°, δ78°, λ5°. NP2:ϕ_s57°, δ85°, λ168°. Principal axes: T Plg12°, Azm12°; N Plg77°, Azm215°; P Plg5°, Azm103°;*

JMA Felt III J1.

*NEIC **20** 05:04:28.8±1.7, 35.80N×136.88E, h9^{km}±10^{km}, mb4.0/2 Error ellipse: s-maj=21.0km s-min=7.4km az=165.0*

NEIC Felt at Izumi, Ogaki and Ueno. Recorded [3 JMA] in Gifu and Fukui; [2 JMA] in Nara, Osaka and Shiga; [1 JMA] in Hyogo, Kyoto, Mie, Okayama and Wakayama Prefectures.

ISC 20 05:04:27.7±0.6, **35.78N**±0.05×**136.82E**±0.04, **h9**^{km}±4^{km}, **n23**, σ**0^{s}91**/26, **mb3.6**/6, **MS4.0**/2, **3C-1D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGM	Miyama	0.12	225	⇑P	Pg	05 04 31.0	+0.4
JGM				*e*S	Sg	05 04 32.8	+0.4
JGN	Niukaw	0.60	42	⇑P	Pg	05 04 39.4	-0.4
JGN				S	Sg	05 04 47.2	-0.6
JKG	Kaga	0.63	322	⇓P	Pb	05 04 41.0	+0.5
JKG				*e*S	Sb	05 04 49.9	+0.7
JTT	Ttatey	0.92	27	⇑P	Pb	05 04 45.8	+0.4
MAJO	Matsushiro	1.36	55	*e*P	Pb	05 04 53.4	+0.5
MAJO				*e*S	Sb	05 05 10.7	+0.5
MAT	Matsushiro	1.36	55	*e*P	Pb	05 04 53.0	+0.1
MAT				*e*S	Sb	05 05 12.0	+1.8
MAT	Matsushiro	1.36	55	P	Pb	05 04 53.1	+0.2
MAT				S	Sb	05 05 11.6	+1.4
MJAR	Matsushiro Arr	1.36	56	Pg	Pg	05 04 53.9	-1.0
	111nm,0.3s,baz=237,slow=16,SNR=525						
MJAR				Lg		05 05 12.7	
	96nm,0.3s,baz=160,slow=17,SNR=24						
MJAR	Matsushiro Arr	1.36	56	Pg	Pg	05 04 53.9	-1.0
MJAR				Lg		05 05 12.7	
JHJ	Hachijo jima 2	3.61	136	Pn	Pn	05 05 25.8	+0.7
	18nm,0.3s,baz=306,slow=13,SNR=3.3						
JNU	Nakatsue	5.58	243	Pn	Pn	05 05 53.2	+0.3
	baz=49,slow=5.2						
JNU				Lg		05 07 23.1	
	6.1nm,0.3s,baz=329,slow=34,SNR=12						
KS15	Wonju Array Si	7.37	286	*e*P	Pn	05 06 15.8	-2.4
ASAJ	Asahikawa	9.43	26	LR	LR	05 10 31.4	
	comp=Z,119nm,21.8s,baz=24,slow=38						
HIA	Hailar	18.38	322	*e*P	P	05 08 44.5	+0.1
	6.8nm,0.6s						
ULN	Ulaanbaatar	25.09	308	*e*P	P	05 09 54.9	+1.0
	3.1nm,1.0s,mb3.8						
SONM	Songino Array	25.50	308	P	P	05 09 59.0	+1.1
	2.9nm,0.9s,mb3.8,baz=113,slow=9.4,SNR=14						
ZAL	Zalesovo	40.07	314	LR	LR	05 29 24.0	
	comp=Z,137nm,18.4s,MS3.8,baz=176,slow=37						
MKAR	Makanchi Array	41.66	303	P	P	05 12 16.7	-1.1
	0.3nm,0.4s,mb3.2,baz=100,slow=7.0,SNR=3.5						
RSO	Redoubt South	50.16	37	*e*P	P	05 13 23.8	-1.4
ILAR	Eielson Array	52.52	32	P	P	05 13 41.3	-1.7
	0.9nm,0.8s,mb3.7,baz=281,slow=6.9,SNR=12						
ARCES	ARCESS Array B	63.84	339	LR	LR	05 46 10.8	
	comp=Z,189nm,20.1s,MS4.3,baz=268,slow=39						
NVAR	Mina Array Bea	78.68	51	P	P	05 16 31.6	-0.1
	0.2nm,0.6s,mb3.2,baz=293,slow=12,SNR=2.2						
TXAR	Lajitas Array	93.79	50	P	P	05 17 46.2	-0.3
	0.2nm,0.7s,mb3.7,baz=270,slow=2.7,SNR=2.9						

*BJI **20** 05:08:57.4, 7.90S×117.42E, h613^{km}, mB4.7, mb4.6*

*MOS **20** 05:09:04.5±1.1, 7.01S×117.17E, h617^{km}, mb4.5/28, Error ellipse: s-maj=16.4km s-min=8.2km az=113.3*

*IDC **20** 05:09:04.9±1.4, 7.06S×117.14E, h605^{km}±16^{km}, mb3.9/22, mb1 4.0/23, mb1mx4.0/25, mbtmp4.9/23, Error ellipse: s-maj=13.9km s-min=7.6km az=70.0*

*NEIC **20** 05:09:05.3±0.1, 7.09S×117.15E, mb4.7/30, Error ellipse: s-maj=7.4km s-min=4.0km az=64.0*

ISC 20 05:09:05.4±0.6, **7.10S**±0.04×**117.24E**±0.06, **h635**^{km}±9^{km}, **h615**^{km}±2.4^{km}**:pP-P, n192**, σ**0^{s}91**/154, **mb4.4**/58, **11C-6D, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSM	Kuching	10.97	321	*e*P	P	05 11 33.6	-0.5
TSM	Tawau	11.33	3	P	P	05 11 38.3	+0.7
KKM	Kota Kinabalu	13.09	355	*e*P	P	05 11 54.3	-0.4
KKM	Kota Kinabalu	13.09	355	P	P	05 11 54.8	+0.1
FITZ	Fitzroy Crossi	13.66	144	⇑*i*P	P	05 11 59.9	-0.3
	100nm,0.6s						
FITZ				*e*S	S	05 14 22.7	+2.3
FITZ	Fitzroy Crossi	13.66	144	P	P	05 11 59.9	-0.3
	20nm,0.3s,baz=347,slow=6.2,SNR=134						
FITZ				S	S	05 14 23.6	+3.2
	1.0nm,0.3s,baz=70,slow=5.0,SNR=6.1						
MBWA	Marble Bar	14.19	170	*e*P	P	05 12 04.6	-0.6
	104nm,1.0s						
BATP	Bataraza	15.80	2	*e*P	P	05 12 22.0	+1.3
KAKA	Kakadu	15.97	112	⇑*i*P	P	05 12 22.1	-0.2
	90nm,0.5s						
PAGZ	Pagadian	16.06	23	*e*P	P	05 12 24.3	+1.2
KGM	Kluang	16.59	303	P	P	05 12 29.8	+1.8
BUKP	Musuan	16.80	28	*e*P	P	05 12 30.6	+0.7
TBP	Tagbilaran	17.93	22	*e*P	P	05 12 40.3	-0.1
GUIM	Jordan	18.39	17	*e*P	P	05 12 45.2	+0.5
RCP	Roxas	19.33	16	⇓*e*P	P	05 12 44.9	-8.3
KULM	Kulim	20.63	306	*e*P	P	05 13 02.4	-2.7
WRA	Warramunga Arr	20.93	129	P	P	05 13 07.4	-0.4
WRA				S	S	05 16 20.7	-1.3
WRA						05 16 47.4	
WRA				pmax	pmax		
	comp=Z,22nm,0.6s						
WRA				smax			
	comp=E,11nm,0.8s						
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRA	Warramunga Arr	20.93	129	P	P	05 13 07.4	-0.4
	comp=Z,22nm,0.6s,baz=311,slow=9.7,SNR=206						
WRA				S	S	05 16 20.7	-1.3
	comp=Z,11nm,0.8s,baz=306,slow=17,SNR=11						
WRA				PcP	PcP	05 16 47.4	-0.2
	comp=Z,4.4nm,0.6s,baz=331,slow=1.6,SNR=5.9						
WRA				PKiKP		05 24 33.3	
	comp=Z,0.4nm,0.4s,baz=303,slow=1.2,SNR=10						
WRAB	Tennant Creek	20.93	129	*e*P	P	05 13 07.8	0.0
WRAB				*e*S	S	05 16 20.4	-1.7
WRAB				pmax	pmax		
	comp=Z,29nm,0.6s						
WRAB	Tennant Creek	20.93	129	*e*P	P	05 13 07.8	0.0
	comp=Z,29nm,0.6s						
WRAB				*e*		05 13 15.6	
WRAB				*e*S	S	05 16 20.4	-1.6
WB2	Warramunga Arr	20.94	129	⇑*i*P	P	05 13 07.3	-0.5
WB2				*e*S	S	05 16 21.0	-1.2
KLBR	Kellerberrin	24.37	179	*e*P	P	05 13 37.2	-1.2
	comp=Z,82nm,1.8s,mb4.9						
NWAO	Narrogin (SRO)	25.70	180	P	P	05 13 48.8	-1.2
NWAO						05 16 57.6	
NWAO				pmax	pmax		
	comp=Z,32nm,0.8s						
NWAO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NWAO	Narrogin (SRO)	25.70	180	P	P	05 13 48.8	-1.2
	comp=Z,32nm,0.8s,mb4.9,baz=353,slow=9.3,SNR=17						
NWAO				PcP	PcP	05 16 57.6	-0.2
	comp=Z,6.6nm,0.6s,baz=46,slow=2.8,SNR=5.0						
NWAO	Narrogin (SRO)	25.70	180	*e*P	P	05 13 49.4	-0.6
PMG	Port Moresby	29.69	97	P	P	05 14 25.1	+0.7
PMG				pmax	pmax		
	comp=Z,17nm,0.8s						
PMG	Port Moresby	29.69	97	P	P	05 14 25.1	+0.7
	comp=Z,17nm,0.8s,mb4.6,baz=278,slow=7.6,SNR=7.7						
PMG	Port Moresby	29.69	97	*e*P	P	05 14 24.6	+0.2
	comp=Z,18nm,0.9s,mb4.6						
CTA	Charters Tower	30.94	118	PcP	PcP	05 17 11.9	+0.7
	comp=Z,11nm,0.6s,baz=291,slow=3.8,SNR=9.7						
CMAR	Chiang Mai Arr	31.16	325	P	P	05 14 36.9	+0.1
CMAR						05 17 13.0	
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR	Chiang Mai Arr	31.16	325	P	P	05 14 36.9	+0.1
	comp=Z,4.1nm,0.6s,mb4.1,baz=148,slow=7.8,SNR=12						
CMAR				PcP	PcP	05 17 12.9	+1.2
	comp=Z,5.3nm,0.7s,baz=169,slow=3.2,SNR=12						

STKA	Stephens Creek	33.52	141	eP	P	05 14 57.0	+0.6
	comp=Z,9.4nm,0.5s,mb4.6						
STKA				e		05 15 04.3	
STKA				e		05 17 18.2	
STKA				eS	S	05 19 36.9	-0.4
STKA	Stephens Creek	33.52	141	P	P	05 14 57.3	+0.9
	comp=Z,12nm,0.5s,mb4.7,baz=317,slow=8.5,SNR=40						
STKA				PcP	PcP	05 17 18.2	-0.1
	comp=Z,7.0nm,0.5s,baz=329,slow=3.0,SNR=8.8						
STKA				S	S	05 19 36.2	-1.1
	comp=Z,14nm,1.1s,baz=121,slow=17,SNR=5.0						
GYA	Guiyang	34.90	343	⇑iP	P	05 15 08.0	+0.1
GYA				AP		05 16 48.3	
GYA				XP	sP	05 17 56.8	-5.7
GYA				S	S	05 19 58.9	+0.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
KMI	Kunming	35.00	337	P	P	05 15 11.1	+2.4
KMI				S	S	05 20 02.4	+2.8
KMI				AMB	AMB		
	comp=Z,110nm,7.0s						
KMI	Kunming	35.00	337	P	P	05 15 11.1	+2.4
	comp=Z,6.0nm,0.8s,mb4.2						
KMI				pP		05 16 54.6	
KMI				S	S	05 20 02.4	+2.8
ENH	Enshi	37.89	349	eP	P	05 15 31.8	-0.5
	comp=Z,22nm,1.1s,mb4.5						
SSE	Sheshan	38.16	5	P	P	05 15 35.4	+0.9
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.7						
SSE				AMB	AMB		
	comp=Z,70nm,3.4s						
SSE	Sheshan	38.16	5	P	P	05 15 35.4	+0.9
	comp=Z,21nm,0.7s,mb4.7						
NJ2	Nanjing	38.96	2	eP	P	05 15 41.3	+0.4
NJ2				AP		05 17 23.6	
NJ2				PP	PP	05 17 28.4	+1.9
NJ2				XP	sP	05 18 31.3	-5.7
NJ2				S	S	05 21 00.0	+2.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
NJ2				AMB	AMB		
	comp=Z,300nm,5.2s						
CD2	Chengdu	39.94	342	P	P	05 15 48.0	-0.8
XAN	Xi’an	41.66	350	P	P	05 16 00.6	-1.9
XAN				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
LSA	Lhasa	44.36	327	eP	P	05 16 24.2	+0.7
LSA				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.3						
LSA	Lhasa	44.36	327	eP	P	05 16 24.1	+0.6
	comp=Z,13nm,0.8s,mb4.3						
LZH	Lanzhou	44.76	345	⇑P	P	05 16 27.0	+0.5
LZH				AP	pP	05 18 14.6	-2.1
LZH				PP	PP	05 18 24.0	+2.6
LZH				XP	sP	05 19 20.3	-5.5
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.2						
LZH	Lanzhou	44.76	345	⇑P	P	05 16 27.0	+0.5
	comp=Z,27nm,1.4s,mb4.4						
LZH				pP	pP	05 18 14.6	-2.1
LZH				PP	PP	05 18 24.0	+2.6
LZH				sP	sP	05 19 20.3	-5.5
GUN	Gumba	46.15	320	eP	P	05 16 36.6	-0.6
	comp=Z,84nm,0.7s,mb5.2						
PKI	Pulchoki	46.21	320	eP	P	05 16 36.7	-1.0
	comp=Z,30nm,0.6s,mb4.8						
PKI	Pulchoki	46.21	320	eP	P	05 16 36.7	-1.0
PKI				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.5						
DMN	Daman	46.44	319	eP	P	05 16 38.6	-0.8
	comp=Z,74nm,1.0s,mb5.0						
KKN	Kakani	46.45	320	eP	P	05 16 38.5	-1.0
	comp=Z,33nm,0.8s,mb4.7						
KKN	Kakani	46.45	320	eP	P	05 16 38.5	-1.0
KKN				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.4						
GKN	Gorkha	47.01	319	eP	P	05 16 42.6	-1.1
	comp=Z,48nm,0.8s,mb4.9						
KOLN	Koldanda	47.53	318	eP	P	05 16 46.5	-1.0
	comp=Z,48nm,0.8s,mb4.9						
MJAR	Matsushiro Arr	47.66	23	P	P	05 16 47.6	-0.8
MJAR						05 18 05.5	
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	Matsushiro Arr	47.66	23	P	P	05 16 47.6	-0.8
	comp=Z,1.0nm,0.3s,mb3.6,baz=195,slow=8.8,SNR=4.3						
MJAR				PcP	PcP	05 18 05.5	+0.4
	comp=Z,3.1nm,0.7s,baz=208,slow=6.0,SNR=5.7						
GTA	Gaotai	49.01	342	P	P	05 16 58.8	+0.4
GTA				PCP	PcP	05 18 11.3	+1.2
GTA				AP	pP	05 18 50.3	-1.4
GTA				PP	PP	05 19 02.8	+2.9
GTA				XP	sP	05 19 51.5	-8.6
GTA				SCP		05 21 08.6	
GTA				S	S	05 23 17.8	-0.1
GTA				SCS	ScS	05 25 43.8	+3.1
GTA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.5						
GTA				AMB	AMB		
	comp=Z,210nm,12.2s						
DZM	Mont Dzumac	49.66	113	P	P	05 17 04.0	+0.7
	comp=Z,6.1nm,0.7s,mb4.0,baz=270,slow=11,SNR=8.9						
CN2	Changchun	51.20	8	eP	P	05 17 16.3	+2.0
MDJ	Mudanjiang	52.66	11	P	P	05 17 24.0	-0.6
MDJ				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,180nm,12.8s						
MDJ	Mudanjiang	52.66	11	eP	P	05 17 23.9	-0.7
	comp=Z,30nm,0.8s,mb4.6						
ULN	Ulaanbaatar	55.46	352	eP	P	05 17 43.6	-0.5
ULN				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.3						
ULN	Ulaanbaatar	55.46	352	eP	P	05 17 43.6	-0.5
	comp=Z,15nm,0.8s,mb4.3						
SONM	Songino Array	55.53	351	P	P	05 17 44.2	-0.3
	comp=Z,27nm,0.8s,mb4.4,baz=169,slow=8.3,SNR=112						
SONM				PcP	PcP	05 18 34.3	-0.3
	comp=Z,5.6nm,0.8s,baz=164,slow=4.9,SNR=6.0						
SONM				ScP		05 21 36.0	
	comp=Z,1.0nm,0.7s,baz=165,slow=5.1,SNR=5.0						
ASAJ	Asahikawa	55.89	22	P	P	05 17 46.6	-0.4
ASAJ				pmax	pmax		
	comp=Z,11nm,0.6s						
ASAJ	Asahikawa	55.89	22	P	P	05 17 46.5	-0.5
	comp=Z,11nm,0.6s,mb4.2,baz=225,slow=10,SNR=8.9						
WMQ	Urumqi	57.30	335	P	P	05 17 56.8	+0.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.1						
ZAK	Zakamensk	58.51	350	iP	P	05 18 04.0	-0.7
ZAK				e		05 18 46.4	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.5						
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.5						
CIT	Chita	58.97	357	eP	P	05 18 07.3	-0.4
CASY	Casey	59.27	183	eP	P	05 18 08.7	-0.8
RPZ	Rata Peaks	59.37	137	P	P	05 18 10.9	+0.4
	comp=Z,41nm,0.7s,mb4.7,baz=252,slow=2.8,SNR=11						
TLY	Talaya	59.70	350	eP	P	05 18 11.9	-0.6
TLY				e		05 18 47.9	
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb3.9						
MKAR	Makanchi Array	61.98	334	P	P	05 18 27.1	-0.3
MKAR						05 19 00.3	
MKAR				*PP	pP	05 20 26.8	-3.6
MKAR				pmax	pmax		
	comp=Z,26nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	61.98	334	P	P	05 18 27.1	-0.3
	comp=Z,26nm,0.5s,mb4.7,baz=151,slow=6.9,SNR=208						
MKAR				PcP	PcP	05 19 00.3	-0.3
	comp=Z,6.3nm,0.7s,baz=138,slow=6.0,SNR=7.2						
MKAR				pP	pP	05 20 26.8	-3.6
	comp=Z,3.0nm,0.8s,baz=141,slow=7.8,SNR=5.9						
MKAR				PKP2bc		05 47 34.0	
	comp=Z,0.8nm,0.8s,slow=3.6,SNR=6.5						
MKAR	Makanchi Array	61.98	334	P	P	05 18 27.1	-0.3
MKAR				PcP	PcP	05 19 00.3	-0.3
MKAR				pP	pP	05 20 26.8	-3.6
MKAR				⇑e		05 47 34.0	
KZA	Kyzart	62.15	326	P	P	05 18 29.2	+0.6
	SNR=25						
TKM2	Tokmak 2	62.52	327	P	P	05 18 30.7	-0.2
	SNR=16						
UCH	Uchtor	62.66	325	P	P	05 18 32.2	+0.4
	SNR=14						
KBK	Karagaybulak	62.70	326	P	P	05 18 31.7	-0.4
	SNR=8.1						
AAK	Ala-Archa	62.94	326	P	P	05 18 33.8	+0.2
	SNR=8.2						
AAK	Ala-Archa	62.94	326	P	P	05 18 33.5	-0.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb3.8						
AAK	Ala-Archa	62.94	326	eP	P	05 18 32.6	-1.0
	comp=Z,22nm,1.0s,mb4.3						
AML	Almayashu	63.06	325	P	P	05 18 34.7	+0.3
	SNR=35						
USP	Ospenovka	63.35	326	P	P	05 18 35.2	-1.0
	SNR=19						
EKS2	Erkin-Say	63.36	325	P	P	05 18 36.4	+0.2
	SNR=16						
KKAR	Karatay Array	65.50	324	iP	P	05 18 48.5	-1.2
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.3						
ZAL	Zalesovo	66.66	340	P	P	05 18 55.9	-0.7
ZAL				pmax	pmax		
	comp=Z,17nm,0.6s						
ZAL	Zalesovo	66.66	340	P	P	05 18 55.9	-0.7
	comp=Z,17nm,0.6s,mb4.6,baz=338,slow=4.9,SNR=34						
NVS	Novosibirsk	67.93	340	eP	P	05 18 59.8	-4.4
NVS				eS	S	05 27 07.2	-7.5
NVS				pmax	pmax		
	comp=N,11nm,1.3s						
NVS				pmax	pmax		
	comp=E,11nm,1.3s						
NVS				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.3						
NVS				smax			
	comp=N,12nm,1.6s						
NVS				smax			
	comp=E,16nm,1.6s						
OPO	Ambohidratompo	68.90	253	P	P	05 19 10.8	+0.2
	comp=E,3.9nm,0.8s,mb3.8,baz=28,slow=7.0,SNR=3.6						
YAK	Yakutsk	69.59	6	eP	P	05 19 13.5	-0.5
YAK				pmax	pmax		
	comp=Z,34nm,0.8s,mb4.8						
YAK	Yakutsk	69.59	6	eP	P	05 19 13.5	-0.5
	comp=Z,34nm,0.8s,mb4.8						
MAW	Mawson	70.43	199	P	P	05 19 18.9	+0.1
MAW				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MAW	Mawson	70.43	199	P	P	05 19 18.9	0.0
	comp=Z,5.6nm,0.7s,mb4.1,baz=47,slow=7.9,SNR=9.5						
VOSK	Vostochnaya	71.34	332	P	P	05 19 23.5	-0.8
VOSK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.2						
MA2	Magadan	71.61	17	iP	P	05 19 26.7	+0.9
MA2	Magadan	71.61	17	eP	P	05 19 26.3	+0.6
	comp=Z,5.2nm,0.6s,mb4.1						
BVA0	Borovoye Array	71.81	332	iP	P	05 19 26.6	-0.4
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
BVAR	Borovoye Array	71.81	332	P	P	05 19 26.7	-0.3
	comp=Z,9.6nm,0.8s,mb4.3,baz=143,slow=7.4,SNR=62						
ZRNK	Zerenda	72.41	332	⇓iP	P	05 19 30.0	-0.4
ZRNK				pmax	pmax		
	comp=Z,27nm,0.6s,mb4.8						
ZRNK	Zerenda	72.41	332	⇓iP	P	05 19 30.0	-0.5
	comp=Z,27nm,0.6s,mb4.8						
VNDA	Vanda	74.13	171	P	P	05 19 40.6	+0.9
VNDA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VNDA	Vanda	74.13	171	P	P	05 19 40.5	+0.8
	comp=Z,7.7nm,0.5s,mb4.5,baz=316,slow=6.4,SNR=38						
VNDA	Vanda	74.13	171	eP	P	05 19 40.5	+0.8
	comp=Z,7.8nm,0.6s,mb4.4						
AB31	Akbulak array	75.02	325	iP	P	05 19 44.8	-0.3
AB31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.2						
SBA	Scott Base	75.14	170	eP	P	05 19 47.1	+1.8
SBA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
SBA	Scott Base	75.14	170	eP	P	05 19 47.1	+1.8
	comp=Z,5.8nm,0.9s,mb4.1						
KAMS	Al Khamasin	76.40	293	P	P	05 19 52.7	-0.6
MZLS	Mizel	76.69	297	P	P	05 19 55.2	+0.4
DJNS	Zahran al Janu	76.80	290	P	P	05 19 56.7	+1.3
TATS	Tathlith	77.24	292	P	P	05 19 58.6	+0.9
AFFS	‘Afif	78.63	296	P	P	05 20 05.9	+0.8
ARSS	Ar Rass	78.87	298	P	P	05 20 06.9	+0.6
SYO	Syowa Base	78.99	201	⇓P	P	05 20 05.4	-0.7
SYO	Syowa Base	78.99	201	⇓PcP	PcP	05 20 12.0	-0.5
BLJS	Baljurashi	79.04	292	P	P	05 20 09.1	+1.8
ARU	Arti	79.37	331	iP	P	05 20 07.5	-0.7
ARU	Arti	79.37	331	eP	P	05 20 07.2	-1.0
	comp=Z,7.2nm,0.8s,mb4.2						
HILS	Ha’il	80.47	299	P	P	05 20 16.1	+1.5
GNI	Garni	81.38	312	iP	P	05 20 20.6	+1.7
QSPA	South Pole Qui	82.89	180	eP	P	05 20 26.5	+0.8
	comp=Z,10nm,0.6s,mb4.5						
GOF	Gofitskoye	83.98	317	⇑iP	P	05 20 31.3	-0.6
GOF				pmax	pmax		
	comp=Z,40nm,1.3s,mb4.8						
MBAR	Mbarara	86.46	270	eP	P	05 20 44.1	-0.3
MBAR				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.4						
MBAR	Mbarara	86.46	270	eP	P	05 20 44.1	-0.3
	comp=Z,12nm,1.3s,mb4.4						
LSZ	Lusaka	87.25	255	eP	P	05 20 48.4	+0.3
LSZ				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.5						
LSZ	Lusaka	87.25	255	eP	P	05 20 48.4	+0.4
	comp=Z,17nm,1.3s,mb4.5						
BOSA	Boshof	88.38	242	P	P	05 20 53.5	+0.4
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
BOSA	Boshof	88.38	242	P	P	05 20 53.5	+0.3
	comp=Z,3.9nm,0.7s,mb4.2,baz=101,slow=6.0,SNR=9.1						
BRTR	Keskin Array B	89.59	310	P	P	05 20 58.2	-0.2
BRTR				*PP	pP	05 23 11.0	-3.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	Keskin Array B	89.59	310	P	P	05 20 58.2	-0.2
	comp=Z,3.2nm,0.8s,mb4.2,baz=123,slow=5.2,SNR=14						
BRTR				pP	pP	05 23 10.9	-3.3
	comp=Z,1.5nm,0.8s,baz=90,slow=3.7,SNR=4.8						
OBN	Obninsk	90.46	325	ceP	P	05 21 02.0	0.0
OBN				e		05 24 44.4	
OBN				eS	S	05 31 01.7	-1.0
OBN				eSSS	SSS	05 41 13.5	+0.4
OBN				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.5						
SNAA	Sanae	92.35	196	P	P	05 21 11.4	+1.1
SNAA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SNAA	Sanae	92.35	196	P	P	05 21 11.4	+1.1
	comp=Z,1.6nm,0.5s,mb4.2,baz=171,slow=5.6,SNR=8.8						
VNA2	Neumayer--Watz	93.99	196	⇑iP	P	05 21 19.2	+1.4
VNA3	Neumayer Olymp	94.40	195	⇑iP	P	05 21 20.8	+1.1
KAF	Kangasniemi	96.66	332	ep	P	05 21 28.3	-1.7
FINES	FINESS Array B	96.74	331	P	P	05 21 30.0	-0.4
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FINES	FINESS Array B	96.74	331	P	P	05 21 29.9	-0.5
	comp=Z,4.4nm,0.7s,mb4.8,baz=90,slow=6.9,SNR=16						
ARCES	ARCESS Array B	97.21	339	P	P	05 21 31.7	-0.7
	comp=Z,1.8nm,0.6s,mb4.5,baz=88,slow=7.1,SNR=15						
ARCES				PKiKP		05 26 04.7	
	comp=Z,0.4nm,0.5s,baz=90,slow=1.2,SNR=3.7						
ARCES	ARCESS Array B	97.21	339	P	P	05 21 31.7	-0.7
ILAR	Eielson Array	98.88	26	P	P	05 21 38.9	-1.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	98.88	26	P	P	05 21 38.9	-1.1
	comp=Z,0.5nm,0.6s,mb3.9,baz=250,slow=4.5,SNR=12						
ILAR				PKKPbc		05 38 04.4	
	comp=Z,0.7nm,0.7s,baz=105,slow=2.1,SNR=7.9						
GERES	GERESS Array B	104.22	319	PKiKP		05 26 16.9	
	comp=Z,0.2nm,0.2s,baz=90,slow=2.7,SNR=3.7						
YKA	Yellowknife Ar	113.16	23	iPKIKP	PKPdf	05 26 33.7	+1.9
YKA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
YKA	Yellowknife Ar	113.16	23	PKiKP		05 26 33.7	
	comp=Z,3.0nm,0.4s,baz=304,slow=1.8,SNR=17						
YKA	Yellowknife Ar	113.16	23	PKPdf	PKPdf	05 26 33.7	+1.9
USHA	Ushuaia	118.12	176	PKP	PKPdf	05 26 43.7	+2.1
	comp=Z,8.0nm,0.9s,baz=162,slow=3.2,SNR=2.7						
NVAR	Mina Array Bea	121.13	49	PKP	PKPdf	05 26 51.1	+3.3
	comp=Z,3.3nm,0.7s,baz=256,slow=1.5,SNR=31						
NVAR				PKKPbc		05 36 56.8	
	comp=Z,0.7nm,0.7s,baz=117,slow=5.6,SNR=6.7						
CHMT	Chamberlain Mo	121.48	38	ePKPdf	PKPdf	05 26 50.4	+2.1
DBIC	Dimbokro	122.55	273	PKIKP	PKPdf	05 26 52.8	+1.6
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
DBIC	Dimbokro	122.55	273	PKP	PKPdf	05 26 52.8	+1.6
	comp=Z,5.5nm,0.5s,baz=118,slow=3.3,SNR=13						
MCMT	McKenzie Canyo	122.64	40	ePKPdf	PKPdf	05 26 53.5	+2.8
TPAW	Teton Pass	124.45	41	ePKPdf	PKPdf	05 26 57.0	+2.9
REDW	Red Top Meadow	124.57	41	ePKPdf	PKPdf	05 26 57.7	+3.3
NEN	Nelson	124.60	51	ePKPdf	PKPdf	05 26 57.8	+3.2
LOHW	Long Hollow	124.62	41	ePKPdf	PKPdf	05 26 57.5	+3.0
PDAR	Pinedale Array	125.68	41	PKP	PKPdf	05 26 59.0	+2.5
	comp=Z,1.2nm,0.4s,baz=9.1,slow=1.4,SNR=12						
PDAR				PKKPbc		05 36 36.4	
	comp=Z,0.7nm,0.5s,baz=108,slow=4.7,SNR=5.1						
SRU	San Rafael	126.59	46	ePKIKP	PKPdf	05 27 01.3	+2.9
PV10	Paradox Valley	127.95	46	ePKPdf	PKPdf	05 27 04.3	+3.2
PV01	Paradox Valley	128.39	46	ePKPdf	PKPdf	05 27 04.8	+2.9
ULM	Lac du Bonnet	128.88	27	PKP	PKPdf	05 27 04.6	+2.1
	comp=Z,1.9nm,0.4s,baz=88,slow=1.7,SNR=3.0						
PLCA	Paso Flores	131.87	172	PKIKP	PKPdf	05 27 11.8	+3.4
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PLCA	Paso Flores	131.87	172	PKP	PKPdf	05 27 11.8	+3.4
	comp=Z,1.9nm,0.7s,baz=73,slow=2.8,SNR=4.2						
SCHQ	Schefferville	132.29	3	PKP	PKPdf	05 27 11.7	+2.9
	comp=Z,4.3nm,0.5s,baz=349,slow=1.1,SNR=9.7						
TXAR	Lajitas Array	135.62	55	PKHKP		05 27 05.4	
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	135.62	55	PKhKP		05 27 05.4	
	comp=Z,0.9nm,0.6s,baz=237,slow=4.7,SNR=13						
SADO	Sadowa	139.85	18	PKhKP		05 27 19.2	
	comp=Z,2.7nm,0.5s,baz=302,slow=6.2,SNR=6.2						
CFAA	Coronel Fontan	141.16	173	PKhKP		05 27 24.1	
	comp=Z,0.5nm,0.4s,baz=185,slow=4.8,SNR=13						
CFAA				PKP	PKPdf	05 27 29.2	+3.6
	comp=Z,1.0nm,0.6s,baz=213,slow=2.7,SNR=15						
BLO	Bloomington	141.56	30	ePKHKP		05 27 23.9	
HNH	Hanover	142.59	11	ePKPdf	PKPdf	05 27 29.2	+1.5
ACCN	Adirondack Com	142.61	13	ePKPpre		05 27 27.3	
FFD	Franklin Falls	142.94	11	ePKPpre		05 27 24.7	
BINY	Binghamton	143.13	16	ePKPdf	PKPdf	05 27 29.4	+0.8
HRV	Harvard--Oak R	143.89	11	ePKIKP	PKPdf	05 27 32.1	+2.1
WES	Weston	144.05	11	ePKIKP	PKPdf	05 27 32.1	+1.8
MCWV	Mont Chateau	144.13	23	ePKP	PKPdf	05 27 32.9	+2.4
CAM4	Nova Friburgo	144.67	214	⇓iP	PKPdf	05 27 35.6	+3.7
CAM4				i		05 27 36.7	
CAM4				i		05 27 38.2	
CAM4				i		05 27 44.1	
CAM4				i		05 27 51.7	
CAM4				i		05 28 17.7	
PAL	Palisades	144.80	15	ePKIKP	PKPdf	05 27 34.8	+3.2
SWET	Sewanee	144.84	34	ePKP	PKPdf	05 27 34.1	+2.3
TZTN	Tazewell	145.08	30	ePKPdf	PKPdf	05 27 34.8	+2.6
CPCT	Cooper Cave	145.43	32	ePKPbc	PKPbc	05 27 36.1	+2.0
FWV	Forest Hill	145.50	26	ePKPbc	PKPbc	05 27 36.4	+2.2
ELN	Prospectdale	145.83	26	ePKPbc	PKPbc	05 27 37.2	+2.2
CPUP	Villa Florida	146.36	189	PKP2	PKPab	05 27 39.5	-3.4
CPUP				pmax	pmax		
	comp=Z,17nm,0.6s						
CPUP	Villa Florida	146.36	189	PKPbc	PKPbc	05 27 39.5	+2.9
	comp=Z,17nm,0.6s,baz=173,slow=4.2,SNR=48						
BAO	Brasilia Array	153.09	213	P	PKPdf	05 27 47.0	+1.9
BDFB	Brasilia	153.10	213	PKIKP	PKPdf	05 27 48.0	+2.9
BDFB						05 28 11.2	
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BDFB				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BDFB				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BDFB	Brasilia	153.10	213	PKP	PKPdf	05 27 48.0	+2.9
	comp=Z,1.6nm,0.6s,baz=119,slow=1.0,SNR=5.2						
BDFB				PKPbc	PKPdf	05 27 55.4	+10
	comp=Z,4.3nm,0.5s,baz=132,slow=2.0,SNR=10						
BDFB				PKPab	PKPab	05 28 11.2	+0.4
	comp=Z,7.7nm,0.6s,baz=124,slow=1.9,SNR=9.7						
LPAZ	La Paz	156.16	167	PKIKP	PKPdf	05 27 53.3	+4.1
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LPAZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LPAZ	La Paz	156.16	167	PKP	PKPdf	05 27 53.3	+4.1
	comp=Z,1.8nm,0.9s,baz=253,slow=3.8,SNR=6.8						
LPAZ				PKPab	PKPab	05 28 25.2	+1.4
	comp=Z,6.5nm,0.8s,baz=181,slow=4.5,SNR=17						
LPAZ	La Paz	156.16	167	ePKPdf	PKPdf	05 27 53.2	+4.1
SIV	San Ignacio	157.00	184	PKP	PKPdf	05 27 53.3	+3.0
	comp=Z,2.3nm,0.8s,baz=210,slow=1.6,SNR=14						
SIV				PKPab	PKPab	05 28 27.6	+0.3
	comp=Z,3.5nm,0.5s,baz=174,slow=5.1,SNR=15						

MAN 20 05:21:49.5, 13.56N×119.89E, h33km, mb4.2, ML3.0, MS2.7, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.15	62	eP	P	05 22 08.9	-0.4
TGY				eS	S	05 22 24.1	0.0
BUSP	Coron	1.57	169	eP	S	05 22 35.7	+1.0
SJMP	San Jose	1.62	132	eP	P	05 22 16.1	+0.1
BOAC	Boac	1.90	93	eP	P	05 22 20.8	+0.8
SCZP	Santa Cruz	2.21	0	eP	P	05 22 25.1	+0.7
PCPH	Palayan	2.31	30	⇑eP	P	05 22 23.8	-2.1
PCPH				eS	S	05 22 53.2	-0.3
ENPP	El Nido	2.38	191	eP	P	05 22 27.0	+0.1
ENPP				eS	S	05 22 55.4	+0.1
OTRP	Odiongan	2.39	120	eP	P	05 22 31.8	+4.8
BALP	Baler	2.71	37	eP	P	05 22 31.6	-0.1
BOLP	Bolinao	2.81	0	eP	P	05 22 32.5	-0.5
CUYO	Cuyo Island	2.91	158	eP	P	05 22 34.0	-0.4

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*NEIC **20** 05:30:49.1, 33.06S×70.34W, h100km, MD3.6(GUC), After GUC.*

GUC 20 05:30:49.1±0.8, 33.06S×70.34W, h100km±3km, MD3.6, ML3.0, 2C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLCH	Cerro Calan	0.38	206	⇓iP	P	05 31 04.7	+0.5
CLCH				iS	S	05 31 16.1	+0.5
CLCH				AMP		05 31 16.7	
	comp=N,927nm,0.4s						
DSCH	Colegio Aleman	0.39	210	eP	P	05 31 04.6	+0.3
DSCH				iS	S	05 31 16.1	+0.3
DSCH				AMP		05 31 16.9	
	comp=N,741nm,0.4s						
JACH	Jahuel	0.43	330	eP	P	05 31 04.9	+0.3
JACH				iS	S	05 31 17.1	+0.9
FSR	Penalolen	0.45	201	⇓iP	P	05 31 05.2	+0.5
FSR				iS	S	05 31 17.1	+0.8
FSR				AMP		05 31 17.7	
	comp=N,866nm,0.2s						
STL	Santa Lucia	0.46	214	eP	P	05 31 04.3	-0.5
STL				iS	S	05 31 16.3	-0.2
STL				AMP		05 31 16.8	
	comp=N,278nm,0.4s						
ROCH	El Roble	0.57	278	⇓iP	P	05 31 06.3	+0.7
ROCH				iS	S	05 31 19.1	+1.1
PCH	Pirque	0.58	195	⇑iP	P	05 31 06.2	+0.5
PCH				iS	S	05 31 18.6	+0.5
SJCH	San Jose de Ma	0.58	181	eP	P	05 31 05.6	-0.1
SJCH				iS	S	05 31 18.3	+0.2
SJCH				AMP		05 31 19.3	
	comp=N,296nm,0.2s						
TACH	Talagante	0.78	220	eP	P	05 31 07.5	0.0
TACH				iS	S	05 31 21.7	+0.6
LMEL	Las Melosas	0.80	172	eP	P	05 31 08.0	+0.3
LMEL				iS	S	05 31 23.1	+1.7
LMEL				AMP		05 31 26.5	

	comp=N,481nm,0.2s						
CHCH	Chadas Angostu	0.91	197	eP	P	05 31 08.7	-0.1
PACH	Papudo	1.06	299	eP	P	05 31 10.4	-0.1
PACH				i S	S	05 31 26.7	+0.2
CACH	El Canelo	1.08	192	eP	P	05 31 11.5	+0.8
CACH				i S	S	05 31 28.0	+1.1
LCCH	Las Cruces	1.11	248	eP	P	05 31 12.0	+0.8
CICH	Cipreses	1.26	183	eP	P	05 31 13.0	0.0
ILCH	Illapel	1.58	333	eP	P	05 31 17.1	+0.3
ILCH				i S	S	05 31 37.8	+0.4
ILCH				AMP		05 31 39.9	
	comp=N,379nm,0.1s						
SFDO	San Fernando	1.65	200	eP	P	05 31 17.6	-0.1
CMCH	Combarbala	1.96	343	⇑iP	P	05 31 21.6	-0.1
CMCH				i S	S	05 31 46.3	+0.5
CMCH				AMP		05 31 50.4	
	comp=E,469nm,0.6s						

CASC 20 05:39:49.7±2.6**, 13.77N×91.11W, h20**^{km}±15^{km}**, MD3.9, ML3.8, 2C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.75	58	⇓eP	Pb	05 40 02.7	-1.3
IXG				eS	Sb	05 40 14.6	+0.7
IXG				AML	AML	05 40 17.9	
	comp=E,3μm,0.5s						
RBDL	Robledal	1.42	76	eP	Pn	05 40 27.8	+13
RBDL				eS	Sn	05 40 46.1	+13
RTR	El Retiro	1.43	85	eP	Pn	05 40 27.5	+13
RTR				eS	Sn	05 40 47.4	+14
SBLS	San Blas	1.45	87	eP	Pn	05 40 27.5	+12
SBLS				eS	Sn	05 40 46.2	+13
SNJE	San Jose	1.47	86	eP	Pn	05 40 27.8	+12
SNJE				eS	Sn	05 40 45.8	+12
BOQS	Boqueron	1.78	91	⇓eP	Pn	05 40 32.3	+12
BOQS				eS	Sn	05 40 55.1	+13
MRL	Marmol	1.89	47	eP	Pn	05 40 21.6	+0.3
MRL				eS	Sn	05 40 47.5	+2.7
LFU	La Fuente	1.94	90	eP	Pn	05 40 34.7	+13
LFRS	El Faro	2.00	94	⇑eP	Pn	05 40 35.4	+12
LFRS				eS	Sn	05 40 59.8	+12
LCBS	La Ceiba	2.08	93	⇑eP	Pn	05 40 36.3	+12
LCBS				eS	Sn	05 41 01.8	+12

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*JMA **20** 05:40:35.3±0.4, 23.62N×121.97E, h66^{km}, M3.1*

TAP 20 05:40:35.2, 23.65N×121.86E, h29^{km}**, ML3.7, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	1.33	52	P	Pn	05 40 57.4	-0.6
YOJ				S	Sn	05 41 13.4	-1.4
HATJ	Hateruma jima	1.83	77	P	Pn	05 41 03.6	-1.6
HATJ				S	Sn	05 41 24.3	-3.2
IRIF	Iriomote-Funau	1.84	68	P	Pn	05 41 04.2	-1.2
IRIF				S	Sn	05 41 26.8	-1.1
JKRS	Kuro-shima	2.05	73	P	Pn	05 41 07.2	-1.2
JKRS				S	Sn	05 41 31.7	-1.6
JIJ	Ishigaki jima	2.21	71	P	Pn	05 41 08.7	-1.9
JIJ				S	Sn	05 41 33.6	-3.6
JTJ	Tarama	2.78	69	P	Pn	05 41 16.8	-2.0
JTJ				S	Sn	05 41 48.1	-3.6

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*IDC **20** 06:11:47.6±1.0, 5.35N×94.41E, mb4.1/8, mb1 4.3/8, mb1mx4.1/18, mbtmp4.1/8, Error ellipse: s-maj=45.1km s-min=23.3km az=60.0*

*NEIC **20** 06:11:51.8±0.8, 5.19N×94.29E, h30^{km}, mb4.2/2, Error ellipse: s-maj=20.3km s-min=13.4km az=46.0*

ISC 20 06:11:49.7±0.9**, 5.2N**±0.1×**94.3E**±0.1**, h30**^{km}**, n15,** σ**0^{s}89**/13**, mb4.1**/10**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	6.31	89	eP	Pn	06 13 23.0	-0.3
CMAR	Chiang Mai Arr	13.93	19	Pn	P	06 15 10.1	+2.5
	0.7nm,0.3s,baz=211,slow=14,SNR=3.9						
MKAR	Makanchi Array	42.71	348	P	P	06 19 46.0	+0.2
	4.6nm,0.6s,mb4.4,baz=168,slow=8.1,SNR=59						
SONM	Songino Array	43.72	12	P	P	06 19 53.1	-0.9
	1.8nm,0.6s,mb4.0,baz=188,slow=8.3,SNR=18						
SONM				PcP	PcP	06 21 40.6	-0.5
	0.4nm,0.4s,baz=198,slow=2.9,SNR=4.5						
ULN	Ulaanbaatar	43.88	12	eP	P	06 19 53.9	-1.4
	1.7nm,0.6s,mb4.0						
WRA	Warramunga Arr	46.61	124	P	P	06 20 17.8	+0.4
	2.8nm,0.6s,mb4.4,baz=304,slow=9.1,SNR=10						
WRAB	Tennant Creek	46.62	124	eP	P	06 20 17.6	+0.1
ZAL	Zalesovo	49.20	353	P	P	06 20 37.3	+0.1
	3.4nm,0.2s,mb4.9,baz=290,slow=6.1,SNR=10						
ZRNK	Zerenda	51.94	341	eP	P	06 20 57.6	-0.4
	2.9nm,0.6s,mb4.4						
AKASG	Malin Array Be	70.35	322	P	P	06 23 02.3	-0.4
	0.3nm,0.3s,mb3.6,baz=84,slow=5.9,SNR=5.0						
FINES	FINESS Array B	75.14	333	P	P	06 23 30.1	-0.6
	0.6nm,0.5s,mb3.8,baz=90,slow=4.2,SNR=5.8						
ARCES	ARCESS Array B	77.82	340	P	P	06 23 45.8	+0.1
	0.6nm,0.5s,mb3.8,baz=95,slow=4.9,SNR=14						
GERES	GERESS Array B	79.92	319	P	P	06 23 59.0	+1.5
	0.7nm,0.5s,mb3.8,baz=101,slow=6.8,SNR=8.5						
TXAR	Lajitas Array	141.56	26	PKhKP		06 31 14.8	
	0.2nm,0.6s,baz=27,slow=2.8,SNR=3.5						
TXAR				PKiKP		06 31 23.7	
	0.3nm,0.5s,baz=344,slow=0.5,SNR=9.2						
CFAA	Coronel Fontan	149.06	210	PKPbc	PKPdf	06 31 39.2	+2.6
	0.1nm,0.4s,baz=150,slow=3.9,SNR=6.8						

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*NEIC **20** 06:12:20.3±2.4, 8.90S×125.12E, h174^{km}±26^{km}, mb4.1/4, Error ellipse: s-maj=26.0km s-min=20.6km az=72.0*

*IDC **20** 06:12:21.4±4.4, 8.96S×125.08E, h188^{km}±44^{km}, mb3.7/2, mb1 3.8/4, mb1mx3.4/14, mbtmp4.1/4, Error ellipse: s-maj=74.3km s-min=26.2km az=65.0*

ISC 20 06:12:15.3±2.1**, 8.62S**±0.10×**125.0E**±0.1**, h134**^{km}±23^{km}**, n10,** σ**1^{s}05**/15**, mb3.7**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	8.34	120	eP	P	06 14 14.1	-0.4
	8.6nm,0.4s						
KAKA				eS	S	06 15 48.9	+1.5
FITZ	Fitzroy Crossi	9.44	176	eP	P	06 14 28.8	-0.3
	2.1nm,0.3s						
FITZ				eS	S	06 16 16.0	+2.3
FITZ	Fitzroy Crossi	9.44	176	P	P	06 14 28.9	-0.2
	1.1nm,0.3s,baz=2.1,slow=12,SNR=14						
FITZ				S	S	06 16 14.5	+0.8
	1.5nm,0.3s,baz=154,slow=6.8,SNR=3.8						
WRAB	Tennant Creek	14.42	142	eP	P	06 15 33.4	-0.9
	8.7nm,0.9s						
WRA	Warramunga Arr	14.42	142	P	P	06 15 33.8	-0.4
	0.5nm,0.3s,baz=317,slow=13,SNR=34						
WRA				S	S	06 18 11.7	+0.9
	0.4nm,0.3s,baz=311,slow=25,SNR=6.4						
WB2	Warramunga Arr	14.42	142	eP	P	06 15 33.5	-0.8
WB2				eS	S	06 18 09.6	-1.4
MKAR	Makanchi Array	67.00	330	P	P	06 22 56.0	+0.1
	1.3nm,0.5s,mb4.0,baz=137,slow=8.0,SNR=12						
MKAR	Makanchi Array	67.00	330	P	P	06 22 56.0	+0.1
VNDA	Vanda	71.48	172	P	P	06 23 18.9	-3.8
	0.5nm,0.3s,mb3.8,baz=324,slow=4.7,SNR=4.6						
ZRNK	Zerenda	77.54	329	eP	P	06 23 58.8	+1.1
	0.5nm,0.5s,mb3.4						

NEIC 20 06:30:03.8, 50.89N×177.22W, h8^{km}**, ML3.1**(AEIC)**, After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	0.87	359	P	Pb	06 30 19.7	-1.0
KIWB	Kanaga Island	0.96	2	P	Pb	06 30 21.1	-1.1
KIWB				S	Sb	06 30 35.0	+0.1
KIKV	Kanaga Island	0.99	2	P	Pb	06 30 21.6	-1.1
ADAG	Mount Adagdak	1.16	19	P	Pb	06 30 23.9	-1.6
GSTD	Great Sitkin T	1.34	29	P	Pb	06 30 26.9	-1.9
GSTD				S	Sb	06 30 44.3	-1.6
GSIG	Igitkin Island	1.36	36	P	Pb	06 30 26.7	-2.4
GSIG				S	Sb	06 30 44.4	-2.1
GSTR	Great Sitkin T	1.40	31	P	Pn	06 30 28.0	-1.7
ATKA	Atka Island	2.30	54	P	Pn	06 30 39.8	-2.7
IMA	Indian Mountai	19.37	29	eP	P	06 34 28.3	-3.8

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*NEIC **20** 06:32:09.8, 32.85S×68.31W, h10^{km}, mb4.4/5, MD4.5(SJA), ML4.5(GUC), After SJA.*

NEIC Felt [III] at San Martin.

*GUC **20** 06:32:12.2±0.7, 32.83S×68.22W, h17^{km}±5^{km}, MD4.4, ML4.5*

*IDC **20** 06:32:16.1±1.2, 32.81S×68.15W, h48^{km}±11^{km}, mb4.0/9, mb1 4.2/13, mb1mx4.0/20, mbtmp4.2/13, ML3.9/3, MS3.5/3, Ms1 3.5/3, ms1mx3.2/20, Error ellipse: s-maj=22.6km s-min=9.9km az=85.0*

ISC 20 06:32:09.6±0.3**, 32.84S**±0.03×**68.06W**±0.03**, h10**^{km}**, n61,** σ**0^{s}98**/71**, mb4.2**/11**, MS3.4**/2**, 3C-5D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDZ	Mendoza	0.66	266	⇑iP	Pb	06 32 19.2	-3.6
MDZ				i		06 32 20.9	
MDZ				i		06 32 22.8	
MDZ				i S	Sb	06 32 26.3	-5.5
MDZ				i S	Sb	06 32 26.8	-5.0
CFAA	Coronel Fontan	1.24	353	P	Pb	06 32 34.5	+1.7
	29nm,0.3s,baz=177,slow=16,SNR=3024						
CFAA				S	Sb	06 32 52.1	+3.5
	59nm,0.3s,baz=227,slow=5.2,SNR=35						
ZON	Zonda	1.39	338	eP	Pn	06 32 35.0	-0.2
ZON				eS	Sb	06 32 53.0	0.0
LMEL	Las Melosas	2.05	240	⇓iP	Pn	06 32 44.8	+0.2
LMEL				i S	Sn	06 33 10.2	-0.4
LMEL				AMP		06 33 13.5	
	comp=N,4μm,0.2s						
SJCH	San Jose de Ma	2.08	247	⇑iP	Pn	06 32 45.2	+0.2
SJCH				i S	Sn	06 33 10.4	-0.8
JACH	Jahuel	2.14	274	⇓iP	Pn	06 32 46.0	+0.1
JACH				i S	Sn	06 33 12.0	-0.7
CLCH	Cerro Calan	2.15	254	⇓iP	Pn	06 32 46.4	+0.4
CLCH				i S	Sn	06 33 12.1	-0.8
CLCH				AMP		06 33 14.1	
	comp=E,5μm,0.6s						
FSR	Penalolen	2.16	252	⇓iP	Pn	06 32 46.7	+0.5
FSR				i S	Sn	06 33 12.8	-0.5
FSR				AMP		06 33 14.7	
	comp=E,4μm,0.4s						
DSCH	Colegio Aleman	2.17	255	⇑iP	Pn	06 32 46.9	+0.5
DSCH				i S	Sn	06 33 13.1	-0.6
DSCH				AMP		06 33 15.5	
	comp=E,10μm,0.6s						
PCH	Pirque	2.20	249	eP	Pn	06 32 47.4	+0.7
PCH				i S	Sn	06 33 13.5	-0.7
SAN	Santiago	2.26	254	eP	Pn	06 32 48.1	+0.4
SAN				i S	Sn	06 33 15.5	-0.4
ANTU	Antumapu	2.27	251	eP	Pn	06 32 48.5	+0.6
ANTU				i S	Sn	06 33 15.4	-0.7
ANTU				AMP		06 33 21.0	
	comp=E,4μm,0.3s						
PUEX	Pudahuel	2.34	254	eP	Pn	06 32 50.0	+1.3
CHCH	Chadas Angostu	2.42	243	eP	Pn	06 32 51.2	+1.2
CICH	Cipreses	2.46	233	eP	Pn	06 32 51.4	+0.9
CACH	El Canelo	2.47	238	eP	Pn	06 32 52.5	+1.9
TACH	Talagante	2.54	251	eP	Pn	06 32 52.9	+1.2
PACH	Papudo	2.86	275	eP	Pn	06 32 56.0	-0.2
ILCH	Illapel	2.89	294	eP	Pn	06 32 57.0	+0.4
ILCH				i S	Sn	06 33 34.5	+2.6
CMCH	Combarbala	3.00	303	eP	Pn	06 32 58.2	0.0
LNV	Longovilo	3.01	247	eP	Pn	06 32 58.3	0.0
IHA	Instituto Hidr	3.02	266	eP	Pn	06 32 58.3	0.0
SFDO	San Fernando	3.03	233	eP	Pn	06 32 59.1	+0.6
TLL	Tololo Astrono	3.55	318	eP	Pn	06 33 11.7	+5.7
TLL				i S	Sn	06 33 56.6	+8.2
VACH	Vallenar	4.84	331	eP	Pn	06 33 24.0	-0.3
TRQA	Tornquist	7.19	138	eP	Pn	06 33 57.5	+0.1
TRQA				S	Sn	06 35 15.8	-4.1
PLCA	Paso Flores	8.12	194	P	P	06 34 10.1	-0.4
	comp=E,0.2nm,0.3s,baz=17,slow=14,SNR=2.0						
PLCA				S	Sn	06 35 42.9	-0.5
	comp=E,0.9nm,0.3s,baz=41,slow=11,SNR=3.6						
PLCA	Paso Flores	8.12	194	P	P	06 34 07.9	-2.6
PLCA				e		06 34 46.6	
CPUP	Villa Florida	11.37	58	P	P	06 34 55.0	-0.2
	comp=E,0.3nm,0.3s,baz=248,slow=13,SNR=6.9						
LPAZ	La Paz	16.48	360	P	P	06 36 02.8	+0.2
	comp=E,0.6nm,0.3s,baz=182,slow=9.6,SNR=35						
LPAZ				LR	LR	06 43 06.1	
	comp=E,95nm,18.1s,baz=118,slow=40						
LPAZ	La Paz	16.48	360	eP	P	06 36 03.3	+0.7
	comp=E,16nm,0.9s						
ARE	Arequipa	16.60	348	eP	P	06 36 04.0	-0.1
SIV	San Ignacio	17.93	22	P	P	06 36 21.1	+0.3
	comp=E,0.6nm,0.3s,baz=211,slow=12,SNR=34						
USHA	Ushuaia	21.98	181	P	P	06 37 07.9	+2.5
	comp=E,4.9nm,0.8s,mb4.0,baz=330,slow=8.1,SNR=2.9						
USHA				LR	LR	06 46 22.1	
	comp=E,177nm,18.2s,MS3.5,baz=43,slow=38						
SAML	Samuel	24.20	12	eP	P	06 37 27.4	-0.1
	comp=E,10nm,0.9s,mb4.3						
BDFB	Brasilia	24.97	51	P	P	06 37 34.9	0.0
	comp=E,2.4nm,0.5s,mb4.0,baz=219,slow=5.5,SNR=9.5						
BDFB				LR	LR	06 46 57.7	
	comp=E,75nm,18.5s,MS3.2,baz=62,slow=35						
BAO	Brasilia Array	24.99	52	P	P	06 37 35.0	0.0
SDV	Santo Domingo	41.57	356	eP	P	06 39 57.2	-2.1
SNAA	Sanae	51.42	158	P	P	06 41 16.3	0.0
	comp=E,3.2nm,1.0s,mb4.2,baz=275,slow=6.2,SNR=13						
SNAA	Sanae	51.42	158	eP	P	06 41 16.0	-0.4
	comp=E,17nm,1.3s,mb4.8						
SYO	Syowa Base	65.70	158	⇓sP	sP	06 42 59.0	-1.2
TXAR	Lajitas Array	70.45	327	P	P	06 43 24.9	-1.4
	comp=E,0.8nm,0.7s,mb3.8,baz=147,slow=7.9,SNR=15						
MAW	Mawson	73.31	162	P	P	06 43 44.5	+1.9
	comp=E,3.8nm,0.6s,mb4.5,baz=230,slow=9.3,SNR=5.4						
CPRX	Cap Rock	73.70	329	eP	P	06 43 43.8	-1.7
ANMO	Albuquerque	76.46	328	P	P	06 44 00.7	-0.6
	comp=E,1.4nm,0.6s,mb4.1,baz=153,slow=8.4,SNR=7.2						
ANMO	Albuquerque	76.46	328	eP	P	06 44 00.7	-0.7
	comp=E,2.3nm,0.9s,mb4.1						
BOSA	Boshof	77.63	116	P	P	06 44 08.6	+0.6
	comp=E,4.6nm,0.8s,mb4.5,baz=225,slow=6.9,SNR=8.8						
PV10	Paradox Valley	80.45	328	eP	P	06 44 21.5	-1.5
NEN	Nelson	81.00	323	eP	P	06 44 25.2	-0.9
SRU	San Rafael	81.72	328	eP	P	06 44 29.0	-0.6
MSU	Marysvale	81.98	327	eP	P	06 44 29.5	-1.5
PDAR	Pinedale Array	84.31	331	P	P	06 44 41.6	-1.3
	comp=E,0.8nm,0.6s,mb4.1,baz=135,slow=6.3,SNR=5.8						
NVAR	Mina Array Bea	84.91	323	P	P	06 44 45.8	-0.2
	comp=E,2.1nm,0.8s,mb4.3,baz=146,slow=5.8,SNR=15						
MOOW	Moose Ponds	85.61	330	eP	P	06 44 52.8	+3.4
	comp=E,1.6nm,0.5s,mb4.5						
MCMT	McKenzie Canyo	87.37	330	eP	P	06 44 57.8	-0.2
ARCES	ARCESS Array B	121.58	24	PKP	PKPdf	06 51 03.0	-3.0
	comp=E,1.6nm,0.9s,baz=243,slow=2.7,SNR=3.6						
WRA	Warramunga Arr	123.31	205	PKP	PKPdf	06 51 06.6	-3.8
	comp=E,0.2nm,0.5s,baz=160,slow=1.6,SNR=9.6						
BVAR	Borovoye Array	144.16	43	PKP	PKPdf	06 51 44.8	-3.4
	comp=E,0.4nm,0.5s,baz=204,slow=36,SNR=3.1						
ZAL	Zalesovo	151.43	34	PKPbc	PKPdf	06 52 04.7	+4.7
	comp=E,6.4nm,0.5s,baz=147,slow=2.6,SNR=16						
MKAR	Makanchi Array	153.49	50	PKPbc	PKPdf	06 52 08.9	+5.8
	comp=E,1.0nm,0.8s,baz=315,slow=1.7,SNR=7.4						
MKAR				PKPab	PKPab	06 52 21.1	-1.4
	comp=E,0.4nm,0.7s,baz=270,slow=6.1,SNR=2.9						
SONM	Songino Array	164.45	14	PKPab	PKPab	06 53 09.5	-0.2
	comp=E,0.5nm,1.1s,baz=315,slow=1.7,SNR=3.5						

IGQ 20 06:45:01.7, 2.04N×80.03W, h16^{km}±4^{km}**, mb4.1, Error ellipse: s-maj=30.4km s-min=5.1km az=147.8, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOR1	San Jorge 1	2.46	146	P	Pn	06 45 45.0	+3.1
JOR1				S	Sn	06 46 15.3	+3.4
YANA	Yana	2.59	146	P	Pn	06 45 46.1	+2.2
YANA				S	Sn	06 46 15.0	-0.3
PINO	Pino	2.61	147	P	Pn	06 45 46.8	+2.7
GGP	Refugio Guagua	2.63	147	P	Pn	06 45 46.5	+2.2
JUA2	San Juan 2	2.65	148	P	Pn	06 45 47.0	+2.3
JUA2				S	Sn	06 46 18.9	+2.0
VC1	Cotopaxi 1	3.12	149	P	Pn	06 45 54.0	+2.6
TAMB	Tambo	3.18	149	P	Pn	06 45 54.9	+2.6

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*ATH **20** 06:49:49.8, 38.71N×20.51E, h25^{km}±3^{km}, MD3.5/5*

*THE **20** 06:49:49.3, 38.65N×20.49E, h10^{km}, ML3.2*

*NEIC **20** 06:49:49.8, 38.71N×20.51E, h25^{km}, MD3.5(ATH), After ATH.*

*CSEM **20** 06:49:50.4±0.2, 38.71N×20.55E, h2^{km}, ML3.2, Error ellipse: s-maj=4.1km s-min=2.1km az=81.0*

ISC 20 06:49:49.2±0.7**, 38.67N**±0.03×**20.50E**±0.07**, h10**^{km}**, n19,** σ**1^{s}06**/26**, 1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKD	Levkas	0.13	73	ePg	Pg	06 49 51.9	-0.4
VLS	Valsamata	0.50	171	⇓iPN	Pn	06 50 00.5	-1.4
VLS				eSN	Sn	06 50 09.8	-0.8
IGT	Igoumenitsa	0.87	352	ePg	Pg	06 50 05.7	-1.0
RLS	Riolos of Patr	0.98	128	ePB	Pb	06 50 07.8	0.0
RLS				eSN	Sn	06 50 23.3	+0.5
JAN	Janina	1.02	16	ePB	Pb	06 50 07.8	-0.7
JAN				eSN	Sn	06 50 22.9	-1.0
EVR	Evrytania	1.06	76	ePN	Pn	06 50 09.8	-0.1
KEK	Kerkira	1.17	333	ePN	Pn	06 50 11.9	+0.3
AGG	Agios Georgios	1.48	76	ePg	Pg	06 50 15.9	-2.8
AGG				eSg	Sg	06 50 36.9	-1.5
ITM	Ithomi	1.87	142	ePN	Pn	06 50 23.3	+1.7
ITM				eSN	Sn	06 50 47.1	+1.7
LKR	Lokris	1.96	90	ePB	Pb	06 50 23.4	-1.2
LIT	Litokhoron	2.11	47	ePn	Pn	06 50 25.6	+0.6
LIT				eSn	Sn	06 50 53.5	+2.1
XOR	Xorichti	2.21	71	ePn	Pn	06 50 26.6	+0.1
FNA	Florina	2.22	18	ePn	Pn	06 50 26.9	+0.4
FNA				eSn	Sn	06 50 56.1	+1.8
AOS	Alonnisos	2.69	78	ePn	Pn	06 50 33.3	0.0
GRG	Griva	2.72	32	ePn	Pn	06 50 34.1	+0.4
PAIG	Paliouri	2.77	62	ePn	Pn	06 50 34.9	+0.4
PAIG	Paliouri	2.77	62	ePn	Pn	06 50 34.8	+0.3
SRS	Serrai	3.41	43	ePn	Pn	06 50 43.9	+0.2
SRS	Serrai	3.41	43	ePn	Pn	06 50 43.8	+0.2

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*NIED **20** 07:00:00, 26.10N×128.60E, h11^{km}, Mw4.5 Best double couple: $M_0$6.88×10^{15} NP1:ϕ_s44°, δ60°, λ90°. NP2:ϕ_s223°, δ30°, λ89°.*

*BJI **20** 07:00:21.0, 26.11N×129.13E, h31^{km}, mB4.5, mb4.6, Ms4.4, Msz4.2*

*JMA **20** 07:00:25.4±0.2, 26.06N×128.65E, h43^{km}, M4.5*

*IDC **20** 07:00:26.7±6.2, 26.16N×128.56E, h26^{km}±41^{km}, mb4.0/13, mb1 4.2/14, mb1mx4.1/21, mbtmp4.2/14, ML3.8/1, MS3.6/1, Ms1 3.6/1, ms1mx3.0/29, Error ellipse: s-maj=26.2km s-min=15.8km az=79.0*

*HRVD **20** 07:00:27.5±1.2, 25.81N×128.69E, h32^{km}±1^{km}, MW4.8/26, Centroid moment Tensor Solution. LP body waves: s11,c14;Mantle waves: s26,c33; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.81±.27; $M_{\theta\theta}$-1.30±.16; $M_{\phi\phi}$-0.50±.18; $M_{r\theta}$0.48±.17; $M_{\theta\phi}$-0.36±.07; $M_{\phi r}$0.09±.16; Best double couple: $M_0$1.694×10^{16} NP1:ϕ_s247°, δ37°, λ86°. NP2:ϕ_s72°, δ53°, λ93°. Principal axes: T 1.882, Plg82°, Azm355°; N -.371, Plg2°, Azm250°; P -1.507, Plg8°, Azm160°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **20** 07:00:27.6±0.5, 26.14N×128.51E, mb4.9/16, MW4.5(NIED) Error ellipse: s-maj=9.7km s-min=7.2km az=130.0*

ISC 20 07:00:26.3±0.4**, 26.08N**±0.04×**128.59E**±0.04**, h43**^{km}**, n56,** σ**1^{s}01**/66**, mb4.6**/29**, MS4.1**/4**, 2D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT2	Tamagusuku 2	0.76	274	P	P	07 00 40.6	-0.1
JJT2				eS	S	07 00 51.8	+0.6
JOW	Kunigami	0.80	339	Pn	P	07 00 41.0	-0.3
	1μm,0.3s,baz=153,slow=16,SNR=427						
JOW				Sn	S	07 00 51.5	-0.7
	2μm,0.3s,baz=99,slow=23,SNR=26						
JOW				LR	LR	07 00 56.5	
	comp=Z,4μm,19.6s,baz=117,slow=42						
JOW	Kunigami	0.80	339	P	P	07 00 40.9	-0.3
JOW				eS	S	07 00 51.6	-0.6
NAH1	Naha	0.82	279	P	P	07 00 41.2	-0.3
NAH1				eS	S	07 00 53.4	+0.7
JIH	Iheya	1.10	330	P	P	07 00 45.7	+0.2
JIH				eS	S	07 00 59.3	-0.5
JAGN	Aguni-jima	1.31	293	P	P	07 00 48.6	0.0
JKE	Kume jima 2	1.64	279	P	P	07 00 52.5	-0.7
JTK	Tokunoshima	1.73	11	P	P	07 00 54.3	-0.2
JMZ	Minamidaito 2	2.38	96	P	P	07 01 01.9	-1.9
JMZ				S	S	07 01 28.5	-3.4
JZK	Kikaishima	2.54	29	P	P	07 01 06.2	+0.1
JZK				eS	S	07 01 36.1	+0.1
JOGS	Gusukube	3.17	246	eS	S	07 01 49.8	-2.1
JTJ	Tarama	3.80	249	P	P	07 01 21.8	-2.1
JTJ				eS	S	07 02 03.9	-4.0
JNN	Nakanoshima	3.91	17	P	P	07 01 24.2	-1.3
JIJ	Ishigaki jima	4.38	248	P	P	07 01 31.0	-1.1
YHNB	Yeheng	6.68	259	eP	P	07 02 02.3	-2.0
JNU	Nakatsue	7.29	15	Pn	P	07 02 12.1	-0.8
	1.5nm,0.3s,baz=6.8,slow=16,SNR=4.8						
JNU				LR	LR	07 05 26.0	
	comp=Z,433nm,19.0s,baz=8.6,slow=41						
XAN	Xi’an	18.76	300	P	P	07 04 44.0	-0.3
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s						
HHC	Hu-ho-hao-te	20.41	320	eP	P	07 05 02.1	-0.1
HHC				AP		07 05 11.1	
HHC				XP		07 05 17.3	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s						
HHC				AMB	AMB		
	comp=Z,110nm,4.6s						
HHC				LR	LR		
	comp=N,640nm,12.2s,MS4.2						
HHC				LR	LR		
	comp=E,410nm,14.5s,MS4.2						
HHC				LR	LR		
	comp=Z,750nm,11.8s,MS4.3						
KMI	Kunming	23.32	273	P	P	07 05 32.5	+1.0
KMI				S	S	07 09 45.3	+8.0
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
KMI				AMB	AMB		
	comp=Z,40nm,3.5s						
KMI				LR	LR		
	comp=N,400nm,17.1s						
KMI				LR	LR		
	comp=E,350nm,9.1s						
KMI				LR	LR		
	comp=Z,340nm,10.5s						
KMI	Kunming	23.32	273	P	P	07 05 32.5	+1.0
	comp=Z,17nm,1.2s,mb4.3						
KMI				pP		07 05 41.0	
KMI				sP		07 05 44.7	
KMI				S	S	07 09 45.3	+8.0
KMI				sS		07 09 59.6	
KMI				SS	SS	07 10 35.9	+10
KMI				LR	LR		
	comp=Z,350nm,10.5s,MS4.1						
LZH	Lanzhou	23.37	301	⇓P	P	07 05 32.3	+0.5
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.6						
LZH				AMB	AMB		
	comp=Z,90nm,5.7s						
LZH				LR	LR		
	comp=N,170nm,13.6s						
LZH				LR	LR		
	comp=Z,290nm,17.4s,MS3.8						
LZH	Lanzhou	23.37	301	⇓P	P	07 05 32.3	+0.5
	comp=Z,35nm,1.3s,mb4.6						
LZH				pP		07 05 41.5	
LZH				sP		07 05 45.8	
LZH				LR	LR		
	comp=Z,290nm,17.4s,MS3.8						
YSS	Yuzh-Sakhalins	23.67	25	eP	P	07 05 37.6	+3.0
	comp=Z,23nm,0.4s,mb5.0						
GTA	Gaotai	27.48	306	P	P	07 06 09.8	-0.8
GTA				AP	pP	07 06 20.9	-1.1
GTA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.8						
GTA				AMB	AMB		
	comp=Z,70nm,9.6s						
GTA				LR	LR		
	comp=N,330nm,13.0s,MS4.2						
GTA				LR	LR		
	comp=E,360nm,15.7s,MS4.2						
GTA				LR	LR		

	comp=Z,470nm,13.8s,MS4.2						
ULN	**Ulaanbaatar**	**27.55**	**328**	P	**P**	**07 06 09.9**	**-1.3**
	comp=Z,24nm,1.4s,mb4.6						
SONM	**Songino Array**	**27.85**	**327**	P	**P**	**07 06 12.6**	**-1.3**
	comp=Z,7.4nm,0.9s,mb4.3,baz=142,slow=10,SNR=35						
CMAR	**Chiang Mai Arr**	**28.42**	**261**	P	**P**	**07 06 19.9**	**+0.6**
	comp=Z,3.3nm,1.0s,mb3.9,baz=52,slow=7.8,SNR=8.2						
GUN	**Gumba**	**37.96**	**283**	*e*P	**P**	**07 07 43.0**	**+1.3**
	comp=Z,27nm,0.8s,mb5.0						
PKI	**Pulchoki**	**38.42**	**282**	*e*P	**P**	**07 07 46.2**	**+0.7**
	comp=Z,51nm,0.9s,mb5.2						
KKN	**Kakani**	**38.51**	**283**	*e*P	**P**	**07 07 46.6**	**+0.4**
	comp=Z,53nm,0.9s,mb5.3						
DMN	**Daman**	**38.68**	**282**	*e*P	**P**	**07 07 48.6**	**+0.9**
	comp=Z,65nm,1.1s,mb5.3						
GKN	**Gorkha**	**39.04**	**283**	*e*P	**P**	**07 07 51.6**	**+0.9**
	comp=Z,45nm,0.8s,mb5.3						
KOLN	**Koldanda**	**39.98**	**283**	*e*P	**P**	**07 07 59.3**	**+0.8**
	comp=Z,56nm,0.9s,mb5.3						
MKAR	**Makanchi Array**	**41.88**	**312**	P	**P**	**07 08 13.9**	**0.0**
	comp=Z,2.2nm,0.6s,mb4.0,baz=99,slow=11,SNR=32						
MKAR				PcP	PcP	07 10 10.0	+0.3
	comp=Z,0.9nm,0.8s,baz=104,slow=5.0,SNR=3.6						
ZAL	**Zalesovo**	**42.57**	**323**	P	**P**	**07 08 19.1**	**-0.4**
	comp=Z,1.0nm,0.4s,mb3.9,baz=344,slow=6.4,SNR=3.8						
WRAB	**Tennant Creek**	**46.08**	**172**	*e*P	**P**	**07 08 48.7**	**+0.5**
	comp=Z,9.6nm,0.6s,mb4.9						
WRA	**Warramunga Arr**	**46.09**	**172**	P	**P**	**07 08 48.7**	**+0.5**
	comp=Z,2.6nm,0.5s,mb4.4,baz=353,slow=8.3,SNR=46						
IMA	**Indian Mountai**	**61.50**	**27**	*e*P	**P**	**07 10 47.6**	**+6.9**
	comp=Z,13nm,0.9s,mb5.0						
ILAR	**Eielson Array**	**64.41**	**28**	P	**P**	**07 10 59.5**	**-0.4**
	comp=Z,0.6nm,0.7s,mb3.7,baz=269,slow=7.3,SNR=6.4						
INK	**Inuvik**	**68.90**	**23**	P	**P**	**07 11 29.2**	**+0.9**
	comp=Z,1.3nm,0.6s,mb4.0,baz=294,slow=3.5,SNR=3.2						
INK	**Inuvik**	**68.90**	**23**	P	**P**	**07 11 29.2**	**+0.9**
KEV	**Kevo**	**69.69**	**339**	*e*p	**P**	**07 11 32.2**	**-0.9**
ARCES	**ARCESS Array B**	**70.26**	**339**	P	**P**	**07 11 37.0**	**+0.4**
	comp=Z,2.8nm,1.0s,mb4.2,baz=63,slow=11,SNR=4.8						
ARCES	**ARCESS Array B**	**70.26**	**339**	P	**P**	**07 11 37.0**	**+0.4**
KAF	**Kangasniemi**	**72.79**	**331**	*e*p	**P**	**07 11 51.0**	**-0.7**
FINES	**FINESS Array B**	**73.15**	**331**	P	**P**	**07 11 54.0**	**+0.1**
	comp=Z,1.7nm,0.6s,mb4.1,baz=72,slow=6.0,SNR=11						
MALT	**Malatya**	**74.46**	**305**	*e*P	**P**	**07 12 04.1**	**+2.2**
	comp=Z,6.6nm,1.0s,mb4.5						
AKASG	**Malin Array Be**	**75.86**	**320**	P	**P**	**07 12 10.2**	**+0.5**
	comp=Z,3.5nm,0.6s,mb4.5,baz=55,slow=7.2,SNR=14						
BRTR	**Keskin Array B**	**77.38**	**308**	P	**P**	**07 12 19.8**	**+1.3**
	comp=Z,3.9nm,0.9s,mb4.3,baz=117,slow=5.5,SNR=11						
NB2	**NORSAR Subarra**	**79.59**	**334**	P	**P**	**07 12 30.5**	**+0.3**
	comp=Z,2.2nm,0.6s,mb4.3,baz=53,slow=5.3						
NOA	**NORSAR Array B**	**79.59**	**334**	P	**P**	**07 12 30.9**	**+0.7**
	comp=Z,2.2nm,0.7s,mb4.2,baz=52,slow=5.4,SNR=10						
SUMG	**Summit**	**81.20**	**356**	*e*P	**P**	**07 12 44.4**	**+5.9**
	comp=Z,18nm,0.9s,mb5.0						
SUMG				*e*		07 12 52.5	
CLL	**Collm**	**84.46**	**325**	P	**P**	**07 12 57.0**	**+1.5**
GERES	**GERESS Array B**	**85.51**	**323**	P	**P**	**07 13 02.5**	**+1.7**
	comp=Z,0.8nm,0.7s,mb4.1,baz=45,slow=3.8,SNR=5.8						
GRA1	**Grafenberg Arr**	**86.33**	**325**	*e*P	**P**	**07 13 10.9**	**+6.1**
	comp=Z,5.0nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**86.33**	**325**	*e*P	**P**	**07 13 10.9**	**+6.1**
	comp=Z,5.0nm,1.0s,mb4.7						

*IDC **20** 07:10:13.0±11.0,17.89N×100.58W,mb3.6/2,mb1 4.0/4, mb1mx3.6/21,mbtmp3.6/4,ML3.3/1,Error ellipse: s-maj=206.5km s-min=105.6km az=112.0*
*MEX **20** 07:10:23.8±0.9,18.19N×100.89W,h62^{km}±15^{km},MD4.1*
*NEIC **20** 07:10:23.8,18.19N×100.89W,h62^{km},MD4.1(MEX),After MEX.*
ISC 20 07:10:21.9±0.5,**18.19N**±0.03×**100.86W**±0.03,**h60**^{km}±9^{km}, **n26**,σ**1^{s}00**/45,**mb3.4**/2,**4C,Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.81**	**225**	⇑*i*P	**P**	**07 10 37.8**	**+0.1**
ZIIG				*i* S	**S**	**07 10 49.7**	**+0.3**
CAIG	**El Cayaco**	**1.27**	**153**	⇑*i*P	**P**	**07 10 44.5**	**+0.6**
CAIG				*i* S	**S**	**07 10 59.3**	**-0.9**
PLIG	**Platanillo**	**1.31**	**81**	⇑*i*P	**P**	**07 10 45.5**	**+0.9**
PLIG				*i* S	**S**	**07 11 01.8**	**+0.4**
MOIG	**Morelia**	**1.52**	**348**	⇑*i*P	**P**	**07 10 46.6**	**-0.8**
MOIG				*i* S	**S**	**07 11 06.1**	**-0.1**
ACX	**Acapulco**	**1.59**	**145**	*i* P	**P**	**07 10 48.5**	**+0.1**
ACX				*i* S	**S**	**07 11 05.1**	**-3.0**
SZVM	**Salazar**	**1.80**	**51**	*i* P	**P**	**07 10 51.4**	**+0.1**
IIZ	**Mezontepec**	**1.83**	**57**	*i* P	**P**	**07 10 52.6**	**+0.9**
IIZ				*i* S	**S**	**07 11 18.2**	**+4.5**
YAIG	**Yautepec**	**1.83**	**68**	*i* P	**P**	**07 10 52.6**	**+0.8**
YAIG				*i* S	**S**	**07 11 14.0**	**+0.2**
UNM	**Universidad Na**	**1.96**	**54**	*i* P	**P**	**07 10 54.5**	**+1.0**
UNM				*i* S	**S**	**07 11 15.3**	**-1.6**
PTVM	**Pico Tres Padr**	**2.17**	**50**	*i* P	**P**	**07 10 56.2**	**-0.2**
PTVM				*i* S	**S**	**07 11 21.8**	**-0.3**
IIC	**Rita Coyotepec**	**2.19**	**44**	*i* P	**P**	**07 10 55.9**	**-0.8**
IIC				*i* S	**S**	**07 11 23.8**	**+1.3**
PPM	**Popocatepetl**	**2.29**	**67**	*i* P	**P**	**07 10 59.6**	**+1.4**
PPM				*i* S	**S**	**07 11 26.6**	**+1.3**
PPM				*i* S	**S**	**07 11 31.0**	**+5.6**
PPM	**Popocatepetl**	**2.29**	**67**	*i* P	**P**	**07 10 58.8**	**+0.5**
PPM				*e*P		07 10 59.5	
PPM				*i* P		07 10 59.6	
PPM				*i* S	**S**	**07 11 26.6**	**+1.3**
PPM				*i* S	**S**	**07 11 31.0**	**+5.6**
IIO	**Organos**	**2.46**	**55**	*i* P	**P**	**07 11 00.6**	**0.0**
IIO				*i* S	**S**	**07 11 28.5**	**-1.0**
SFJM	**Santa Fe**	**3.08**	**318**	*i* P	**P**	**07 11 07.4**	**-1.9**
IISM	**Ciudad Serdan**	**3.40**	**76**	*i* P	**P**	**07 11 14.3**	**+0.4**
IISM				*i* S	**S**	**07 11 50.2**	**-3.1**
VHO	**Vista Hermosa**	**4.09**	**105**	*i* P	**P**	**07 11 25.5**	**+2.0**
VHO				*i* S	**S**	**07 12 09.1**	**-1.5**
OXX	**Oaxaca**	**4.10**	**105**	*i* P	**P**	**07 11 24.2**	**+0.5**
OXX				*i* S	**S**	**07 12 11.5**	**+0.7**
CMIG	**Matias Romero**	**5.80**	**100**	*i* P	**P**	**07 11 48.5**	**+1.1**
CMIG				*i* S	**S**	**07 12 51.3**	**-2.1**
TXAR	**Lajitas Array**	**11.39**	**348**	Pn	**P**	**07 13 03.4**	**-0.8**
	0.0nm,0.3s,baz=163,slow=13,SNR=8.5						
TXAR	**Lajitas Array**	**11.39**	**348**	Pn	**P**	**07 13 03.4**	**-0.8**
GDL2	**Guadalupe Moun**	**14.31**	**348**	P	**P**	**07 13 42.8**	**-0.1**
ANMO	**Albuquerque**	**17.42**	**344**	P	**P**	**07 14 22.8**	**+0.4**
	baz=169,slow=14,SNR=5.8						
ANMO	**Albuquerque**	**17.42**	**344**	*e*P	**P**	**07 14 22.3**	**-0.2**
	2.4nm,1.0s						
NVAR	**Mina Array Bea**	**25.26**	**327**	P	**P**	**07 15 44.5**	**+0.4**
	1.4nm,0.6s,mb3.6,baz=141,slow=10,SNR=11						
PDAR	**Pinedale Array**	**25.59**	**345**	P	**P**	**07 15 47.5**	**+0.4**
	0.5nm,0.6s,mb3.2,baz=140,slow=12,SNR=4.0						

*NIED **20** 07:16:00,26.00N×128.70E,h26^{km},Mw5.2 Best double couple: M$_0$6.87×10^{16} NP1:φ$_s$35°,δ79°,λ67°. NP2:φ$_s$281°, δ26°,λ153°.*
*IDC **20** 07:16:12.0±0.5,26.12N×128.49E,mb4.6/25,mb1 4.7/27, mb1mx4.7/30,mbtmp4.6/27,ML4.3/2,MS4.5/13,Ms1 4.5/13, ms1mx4.3/28,Error ellipse: s-maj=17.1km s-min=11.0km az=74.0*
*MOS **20** 07:16:12.5±1.1,26.11N×128.45E,h10^{km},mb5.5/62, MS5.3/25,Error ellipse: s-maj=7.8km s-min=4.8km az=112.9*
*JMA **20** 07:16:14.1±0.1,26.04N×128.65E,h51^{km}±4^{km},M5.4*
*BJI **20** 07:16:14.6,26.13N×128.63E,h37^{km},mB5.1,mb5.0, Ms5.4,Msz5.2*
*HRVD **20** 07:16:16.8±0.2,25.99N×128.63E,h15^{km},MW5.3/67, Centroid moment Tensor Solution. LP body waves: s53,c91;Mantle waves: s67,c132; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.43±.01; M$_{\theta\theta}$-0.23±.01; M$_{\phi\phi}$-0.19±.01; M$_{r\theta}$0.63±.05; M$_{\theta\phi}$-0.28±.01; M$_{\phi r}$0.72±.05; Best double couple: M$_0$1.058×10^{17} NP1: φ$_s$234°,δ13°,λ102°. NP2:φ$_s$42°,δ77°,λ87°. Principal axes: T 1.028, Plg58°, Azm308°; N .06, Plg3°, Azm42°; P -1.088, Plg32°, Azm134°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **20** 07:16:16.8±0.2,26.08N×128.45E,mb5.4/74,MS4.8/13, MW5.2(NIED) Error ellipse: s-maj=4.5km s-min=4.0km az=140.0*
NEIC Felt on Okinawa-jima.
*CSEM **20** 07:16:20.6,26.98N×128.44E,h33^{km},mb5.5*
ISC 20 07:16:15.3±0.2,**26.12N**±0.02×**128.47E**±0.02,**h29**^{km}, **h29**^{km}±.7^{km}**:pP-P,n390,**σ**1^{s}20**/418,**mb5.2**/116,**MS5.0**/56, **50C-17D,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.65**	**272**	P	**Pb**	**07 16 29.7**	**+1.6**
JJT2				*e*S	**Sb**	**07 16 40.8**	**+4.0**
NAH1	**Naha**	**0.71**	**277**	P	**Pb**	**07 16 30.3**	**+1.3**
NAH1				*e*S	**Sb**	**07 16 42.5**	**+4.0**
JOW	**Kunigami**	**0.73**	**346**	Pn	**Pn**	**07 16 30.0**	**+0.3**
	2µm,0.3s,baz=145,slow=17,SNR=1273						
JOW	**Kunigami**	**0.73**	**346**	P	**Pb**	**07 16 30.1**	**+0.6**
JIH	**Iheya**	**1.02**	**334**	P	**Pn**	**07 16 34.7**	**+0.9**
JIH				*e*S	**Sn**	**07 16 49.2**	**+2.0**
JAGN	**Aguni-jima**	**1.20**	**293**	P	**Pn**	**07 16 37.5**	**+1.1**
JKE	**Kume jima 2**	**1.53**	**278**	P	**Pn**	**07 16 41.6**	**+0.5**
JTK	**Tokunoshima**	**1.71**	**14**	P	**Pn**	**07 16 43.3**	**-0.5**
JTK				*e*S	**Sn**	**07 17 03.7**	**-1.2**
JMZ	**Minamidaito 2**	**2.49**	**96**	P	**Pn**	**07 16 50.9**	**-4.0**
JMZ				*e*S	**Sn**	**07 17 17.3**	**-7.4**
JAM	**Amami Oshima**	**2.50**	**24**	P	**Pn**	**07 16 53.4**	**-1.6**
JAM				*e*S	**Sn**	**07 17 22.3**	**-2.5**
JZK	**Kikaishima**	**2.56**	**31**	P	**Pn**	**07 16 54.2**	**-1.7**
JZK				*e*S	**Sn**	**07 17 25.2**	**-1.3**
JOGS	**Gusukube**	**3.08**	**245**	P	**Pn**	**07 17 03.6**	**+0.3**
JOGS				*e*S	**Sn**	**07 17 39.7**	**+0.1**
JMJ	**Miyako jima 2**	**3.15**	**246**	P	**Pn**	**07 17 04.3**	**0.0**
JMJ				*e*S	**Sn**	**07 17 40.0**	**-1.4**
JTJ	**Tarama**	**3.71**	**247**	P	**Pn**	**07 17 10.8**	**-1.4**
JTJ				*e*S	**Sn**	**07 17 53.5**	**-2.1**
JNN	**Nakanoshima**	**3.91**	**18**	P	**Pn**	**07 17 13.3**	**-1.8**
JIJ	**Ishigaki jima**	**4.29**	**247**	P	**Pn**	**07 17 18.6**	**-1.9**
JKC	**Kuchinoerabu**	**4.59**	**19**	P	**Pn**	**07 17 22.7**	**-2.0**
IRIF	**Iriomote-Funau**	**4.65**	**249**	P	**Pn**	**07 17 24.5**	**-1.0**
JTN	**Tanegashima 3**	**5.03**	**25**	P	**Pn**	**07 17 29.1**	**-1.8**
JTN				*e*S	**Sn**	**07 18 24.1**	**-4.7**
YOJ	**Yonaguni jima**	**5.21**	**253**	P	**Pn**	**07 17 31.0**	**-2.4**
TATO	**Taipei**	**6.41**	**261**	P	**Pn**	**07 17 49.3**	**-1.1**
	506nm,1.3s						
NACB	**Ninganchiao**	**6.53**	**254**	*e*P	**Pn**	**07 17 48.4**	**-3.6**
YHNB	**Yeheng**	**6.58**	**259**	*e*P	**Pn**	**07 17 51.0**	**-1.7**
JNU	**Nakatsue**	**7.29**	**16**	Pn	**Pn**	**07 18 01.3**	**-1.4**
	8.9nm,0.3s,baz=269,slow=0.5,SNR=37						
JNU				Sn	**Sn**	**07 19 23.1**	**-2.1**
	3.7nm,0.3s,baz=300,slow=28,SNR=3.5						
SSE	**Sheshan**	**8.10**	**309**	P	**P**	**07 18 12.3**	**-1.7**
SSE				S	**Sn**	**07 19 44.1**	**-1.4**
SSE				AMB	AMB		
	comp=Z,50nm,1.1s						
SSE				AMB	AMB		
	comp=Z,570nm,9.7s						
SSE				LR	LR		
	comp=N,11µm,11.8s						
SSE				LR	LR		
	comp=E,13µm,11.8s						
SSE				LR	LR		
	comp=Z,22µm,12.3s						
SSE	**Sheshan**	**8.10**	**309**	P	**P**	**07 18 12.3**	**-1.7**
	comp=Z,52nm,1.1s						
SSE				sP		07 18 21.5	
SSE				S	**Sn**	**07 19 44.1**	**-1.4**
QZH	**Quanzhou**	**9.00**	**265**	P	**P**	**07 18 24.6**	**-1.9**
QZH				S	**Sn**	**07 20 09.0**	**+1.1**
QZH				LR	LR		
	comp=N,9µm,13.4s						
QZH				LR	LR		
	comp=E,11µm,10.7s						
QZH				LR	LR		
	comp=Z,14µm,11.3s						
NJ2	**Nanjing**	**10.28**	**307**	*e*P	**P**	**07 18 43.9**	**-0.2**
NJ2				AP		07 18 50.4	
NJ2				PP	PP	07 18 51.5	-0.3
NJ2				XP		07 18 55.9	
NJ2				PPP	PPP	07 18 59.4	+0.3
NJ2				S	**S**	**07 20 39.1**	**-0.3**
NJ2				XS		07 20 53.3	
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,440nm,5.0s						
NJ2				LR	LR		
	comp=N,25µm,12.8s						
NJ2				LR	LR		
	comp=E,30µm,16.0s						
NJ2				LR	LR		
	comp=Z,55µm,11.7s						
CVP	**Callao Caves**	**10.40**	**218**	*e*P	**P**	**07 18 42.0**	**-3.8**
KS15	**Wonju Array Si**	**11.30**	**358**	*e*P	**P**	**07 18 56.7**	**-1.4**
INCN	**Inchon**	**11.44**	**353**	P	**P**	**07 18 59.6**	**-0.3**
CBIJ	**Chichi jima**	**12.31**	**82**	LR	LR	07 23 07.1	
	comp=Z,929nm,20.4s,baz=156,slow=34						
WHN	**Wuhan**	**13.20**	**293**	*e*P	**P**	**07 19 22.5**	**-0.9**
WHN				LR	LR		
	comp=N,11µm,15.0s						
WHN				LR	LR		
	comp=E,21µm,12.1s						
WHN				LR	LR		
	comp=Z,24µm,12.8s						
MAJO	**Matsushiro**	**13.30**	**36**	P	**P**	**07 19 26.1**	**+1.3**
MAJO				pmax	pmax		
	comp=Z,58nm,1.4s						
MAJO	**Matsushiro**	**13.30**	**36**	P	**P**	**07 19 26.1**	**+1.3**
	comp=Z,58nm,1.4s						
MAT	**Matsushiro**	**13.30**	**36**	*e*P	**P**	**07 19 24.0**	**-0.8**
MAT				*e*S	**S**	**07 22 00.0**	**+7.3**
MAT	**Matsushiro**	**13.30**	**36**	P	**P**	**07 19 20.5**	**-4.3**
MAT				S	**S**	**07 21 53.0**	**+0.3**
MJAR	**Matsushiro Arr**	**13.30**	**36**	Pn	**P**	**07 19 23.1**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=227,slow=46,SNR=3.6						
TIA	**Tai'an**	**13.97**	**319**	*e*P	**P**	**07 19 33.4**	**-0.3**
TIA				LR	LR		
	comp=N,7µm,11.0s						
TIA				LR	LR		
	comp=E,7µm,12.0s						
DL2	**Dalian**	**13.99**	**337**	P	**P**	**07 19 35.9**	**+2.0**
DL2				S	**S**	**07 22 11.0**	**+1.9**
DL2				AMB	AMB		
	comp=Z,100nm,1.1s						
DL2				AMB	AMB		
	comp=Z,270nm,5.2s						
DL2				LR	LR		
	comp=N,4µm,13.1s						
DL2				LR	LR		
	comp=Z,4µm,12.9s						
SNY	**Shenyang**	**16.18**	**347**	⇑P	**P**	**07 20 01.3**	**-1.0**
SNY				S	**S**	**07 22 58.1**	**-2.4**
SNY				XS		07 23 10.4	
SNY				AMB	AMB		
	comp=Z,40nm,2.1s						
SNY				LR	LR		
	comp=N,6µm,14.7s						
SNY				LR	LR		
	comp=Z,7µm,12.2s						
ENH	**Enshi**	**17.24**	**288**	*e*P	**P**	**07 20 16.7**	**+1.0**
	comp=Z,220nm,1.6s						
CN2	**Changchun**	**17.81**	**353**	*e*P	**P**	**07 20 22.3**	**-0.5**
CN2				*e*S	**S**	**07 23 39.8**	**+2.0**
CN2				AMB	AMB		
	comp=Z,30nm,1.3s						
CN2				AMB	AMB		
	comp=Z,500nm,7.0s						
CN2				LR	LR		
	comp=N,10µm,12.0s						
CN2				LR	LR		
	comp=E,5µm,12.0s						
CN2				LR	LR		
	comp=Z,11µm,12.0s						
MDJ	**Mudanjiang**	**18.48**	**3**	P	**P**	**07 20 29.8**	**-1.3**
MDJ				AP		07 20 35.5	
MDJ				XP		07 20 38.3	
MDJ				S	**S**	**07 23 55.6**	**+2.7**
MDJ				XS		07 24 09.8	
MDJ				SCP		07 28 33.8	
MDJ				PCS		07 28 36.5	
MDJ				AMB	AMB		
	comp=Z,320nm,9.8s						
MDJ				LR	LR		
	comp=N,2µm,14.2s						
MDJ				LR	LR		
	comp=E,2µm,13.7s						
MDJ				LR	LR		
	comp=Z,3µm,13.7s						
MDJ	**Mudanjiang**	**18.48**	**3**	*e*P	**P**	**07 20 30.2**	**-0.9**
QIZ	**Qiongzhong**	**18.58**	**251**	⇑P	**P**	**07 20 34.4**	**+1.9**
QIZ				XP		07 20 45.3	
QIZ				S	**S**	**07 24 05.1**	**+10**
QIZ				AMB	AMB		
	comp=Z,70nm,1.5s						
QIZ				AMB	AMB		
	comp=Z,780nm,8.4s						
QIZ				LR	LR		
	comp=N,6µm,19.9s						
QIZ				LR	LR		
	comp=E,2µm,20.9s						
QIZ				LR	LR		
	comp=Z,4µm,19.9s						
QIZ	**Qiongzhong**	**18.58**	**251**	*e*P	**P**	**07 20 33.2**	**+0.7**
	comp=Z,156nm,1.4s						
XAN	**Xi'an**	**18.65**	**300**	P	**P**	**07 20 32.6**	**-0.6**
XAN				AP		07 20 41.4	
XAN				S	**S**	**07 24 06.4**	**+10**
XAN				AMB	AMB		
	comp=Z,60nm,1.1s						
XAN				LR	LR		
	comp=N,6µm,12.8s						
XAN				LR	LR		
	comp=E,5µm,13.2s						
XAN				LR	LR		
	comp=Z,7µm,14.1s						
GYA	**Guiyang**	**19.56**	**276**	⇓*i*P	**P**	**07 20 44.6**	**+0.8**
GYA				AP		07 20 51.8	
GYA				PP	PP	07 21 05.4	+3.7
GYA				S	**S**	**07 24 25.6**	**+8.4**
GYA				AMB	AMB		
	comp=Z,30nm,1.1s						
GYA				AMB	AMB		
	comp=Z,710nm,8.4s						
GYA				LR	LR		
	comp=N,5µm,11.6s						
GYA				LR	LR		
	comp=E,3µm,14.9s						
GYA				LR	LR		
	comp=Z,4µm,12.3s						
HHC	**Hu-ho-hao-te**	**20.31**	**321**	*e*P	**P**	**07 20 50.4**	**-1.4**
HHC				AP		07 20 57.5	
HHC				AMB	AMB		
	comp=Z,50nm,1.7s						
HHC				AMB	AMB		
	comp=Z,920nm,9.4s						
HHC				LR	LR		
	comp=N,9µm,11.6s,MS5.4						
HHC				LR	LR		
	comp=E,6µm,12.7s,MS5.4						
HHC				LR	LR		
	comp=Z,10µm,12.0s,MS5.4						
BTO	**Baotou**	**21.06**	**318**	*e*P	**P**	**07 20 57.5**	**-2.0**
BTO				AMB	AMB		
	comp=Z,40nm,1.5s,mb4.5						
BTO				LR	LR		
	comp=N,9µm,12.0s,MS5.4						
BTO				LR	LR		
	comp=E,4µm,14.5s,MS5.4						
ASAJ	**Asahikawa**	**21.30**	**29**	P	**P**	**07 20 58.4**	**-3.4**
	comp=E,1.7nm,0.3s,baz=206,slow=19,SNR=5.2						
ASAJ				LR	LR	07 29 30.7	
	comp=E,2µm,21.0s,baz=344,slow=38						
CD2	**Chengdu**	**22.22**	**288**	P	**P**	**07 21 09.8**	**-1.3**
CD2				PP	PP	07 21 37.6	-0.4
CD2				PPP	PPP	07 21 45.8	-2.2
CD2				S	**S**	**07 25 13.6**	**+4.5**
CD2				AMB	AMB		
	comp=Z,90nm,1.2s,mb5.1						
CD2				LR	LR		
	comp=N,13µm,13.8s						
CD2				LR	LR		
	comp=Z,12µm,12.6s,MS5.5						
YUK	**Yuzh-Kuril'sk**	**22.77**	**34**	*e*P	**P**	**07 21 16.0**	**-0.5**
YUK				*e*		07 21 50.0	
YUK				*e*		07 25 03.0	
YUK				*i* S	**S**	**07 25 27.0**	**+8.1**
YUK				pmax	pmax		
	comp=Z,2µm,7.0s						
YUK				smax			
	comp=E,3.0nm,15.0s						
YUK				smax			
	comp=N,3µm,15.0s						
YUK				MLR	MLR		
	comp=Z,2µm,15.0s,MS4.6						
YUK				MLR	MLR		
	comp=N,2µm,18.0s						
KMI	**Kunming**	**23.21**	**273**	P	**P**	**07 21 22.3**	**+1.3**
KMI				AP		07 21 30.5	
KMI				XP		07 21 34.3	
KMI				PP	PP	07 21 53.1	+1.1
KMI				S	**S**	**07 25 27.3**	**+0.3**
KMI				XS		07 25 40.3	
KMI				SS	SS	07 26 13.4	0.0
KMI				SSS	SSS	07 26 29.4	+0.2
KMI				AMB	AMB		
	comp=Z,90nm,1.7s,mb4.9						
KMI				AMB	AMB		
	comp=Z,670nm,4.4s						
KMI				LR	LR		
	comp=N,5µm,17.1s						
KMI				LR	LR		
	comp=E,5µm,11.2s						
KMI				LR	LR		
	comp=Z,4µm,11.2s						
KMI	**Kunming**	**23.21**	**273**	P	**P**	**07 21 22.2**	**+1.2**
KMI				*PP		07 21 30.5	
KMI						07 21 53.1	
KMI				S	**S**	**07 25 27.3**	**+0.3**
KMI				SS	SS	07 26 13.4	0.0
KMI				SSS	SSS	07 26 29.4	+0.2
KMI				pmax	pmax		
	comp=Z,90nm,1.7s,mb4.9						
KMI				MLR	MLR		
	comp=Z,4µm,11.2s,MS5.2						
KMI	**Kunming**	**23.21**	**273**	P	**P**	**07 21 22.2**	**+1.2**
	comp=Z,90nm,1.7s,mb4.9						
KMI				pP		07 21 30.5	
KMI				sP		07 21 34.3	
KMI				PP	PP	07 21 53.1	+1.1
KMI				S	**S**	**07 25 27.3**	**+0.3**
KMI				sS		07 25 40.3	
KMI				SS	SS	07 26 13.4	0.0
KMI				SSS	SSS	07 26 29.4	+0.2
KMI				LR	LR		
	comp=Z,4µm,11.2s,MS5.2						
LZH	**Lanzhou**	**23.26**	**301**	⇑P	**P**	**07 21 21.0**	**-0.3**
LZH				AP		07 21 28.5	
LZH				XP		07 21 32.0	
LZH				PP	PP	07 21 52.1	-0.4
LZH				*e*S	**S**	**07 25 27.3**	**-0.3**
LZH				SS	SS	07 26 13.3	-1.0
LZH				AMB	AMB		
	comp=Z,100nm,1.3s,mb5.1						
LZH				AMB	AMB		
	comp=Z,320nm,4.6s						
LZH				LR	LR		
	comp=N,3µm,11.0s						
LZH				LR	LR		
	comp=Z,4µm,13.3s,MS5.0						
LZH	**Lanzhou**	**23.26**	**301**	⇑P	**P**	**07 21 21.0**	**-0.3**
LZH				*PP		07 21 28.5	
LZH						07 21 52.1	
LZH				*e*S	**S**	**07 25 27.3**	**-0.3**
LZH				SS	SS	07 26 13.2	-1.1
LZH				pmax	pmax		
	comp=Z,106nm,1.3s,mb5.1						
LZH				MLR	MLR		
	comp=Z,4µm,13.3s,MS5.0						
LZH	**Lanzhou**	**23.26**	**301**	⇑P	**P**	**07 21 21.0**	**-0.3**
	comp=Z,106nm,1.3s,mb5.1						
LZH				pP		07 21 28.5	
LZH				sP		07 21 32.0	
LZH				PP	PP	07 21 52.1	-0.4
LZH				*e*S	**S**	**07 25 27.3**	**-0.3**
LZH				sS		07 25 39.5	
LZH				SS	SS	07 26 13.2	-1.1
LZH				LR	LR		
	comp=Z,4µm,13.3s,MS5.0						
YSS	**Yuzh-Sakhalins**	**23.68**	**25**	α*e*P	**P**	**07 21 26.0**	**+0.7**
YSS				*e*		07 21 31.0	
YSS				*e*S	**S**	**07 25 39.0**	**+4.1**
YSS				*e*		07 25 48.0	
YSS				*e*		07 26 23.0	
YSS				pmax	pmax		
	comp=Z,450nm,1.3s,mb5.7						
YSS				MLR	MLR		

	comp=N,1µm,19.0s						
YSS				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.5						
YSS	**Yuzh-Sakhalins**	**23.68**	**25**	*e*P	**P**	**07 21 25.6**	**+0.3**
	comp=Z,514nm,1.4s,mb5.8						
YSS				LR	LR		
	comp=Z,2µm,21.0s,MS4.5						
KKTK	**Khon Kaen**	**25.77**	**253**	P	**P**	**07 21 47.0**	**+1.4**
NANT	**Nan**	**26.64**	**260**	⇓P	**P**	**07 21 52.0**	**-1.6**
	comp=Z,228nm,1.0s,mb5.7						
GTA	**Gaotai**	**27.37**	**306**	⇑*i*P	**P**	**07 21 58.5**	**-1.6**
GTA				AP	pP	07 22 07.1	-1.4
GTA				XP	sP	07 22 10.9	-1.4
GTA				PP	PP	07 22 45.9	-1.8
GTA				PPP	PPP	07 22 58.8	-0.9
GTA				PCP	PcP	07 25 19.3	+0.2
GTA				S	**S**	**07 26 35.5**	**-1.0**
GTA				SS	SS	07 27 53.8	-0.3
GTA				SCP		07 28 55.4	
GTA				PCS		07 28 59.6	
GTA				SCS	ScS	07 32 44.6	-1.7
GTA				AMB	AMB		
	comp=Z,120nm,1.2s,mb5.3						
GTA				AMB	AMB		
	comp=Z,440nm,12.6s						
GTA				LR	LR		
	comp=N,4µm,12.6s,MS5.3						
GTA				LR	LR		
	comp=E,4µm,15.7s,MS5.3						
GTA				LR	LR		
	comp=Z,6µm,14.1s,MS5.3						
ULN	**Ulaanbaatar**	**27.47**	**328**	*e*P	**P**	**07 21 58.4**	**-2.5**
ULN				*e*		07 22 02.9	
ULN				pmax	pmax		
	comp=Z,133nm,1.4s,mb5.3						
ULN				MLR	MLR		
	comp=Z,2µm,19.0s,MS4.6						
ULN	**Ulaanbaatar**	**27.47**	**328**	*e*P	**P**	**07 21 58.4**	**-2.5**
	comp=Z,133nm,1.4s,mb5.3						
ULN				*e*		07 22 02.9	
ULN				*e*		07 22 10.5	
ULN				LR	LR		
	comp=Z,2µm,19.0s,MS4.6						
SONM	**Songino Array**	**27.76**	**327**	P	**P**	**07 22 01.5**	**-2.1**
	comp=Z,37nm,1.1s,mb4.9,baz=143,slow=6.2,SNR=40						
SONM				ScP		07 28 58.7	
	comp=Z,1.3nm,1.1s,baz=135,slow=5.2,SNR=3.7						
SONM				LR	LR	07 34 22.7	
	comp=Z,2µm,19.3s,MS4.7,baz=139,slow=39						
SONM	**Songino Array**	**27.76**	**327**	P	**P**	**07 22 01.5**	**-2.1**
SONM				ScP		07 28 58.7	
SONM				LR	LR	07 34 22.7	
CIT	**Chita**	**28.23**	**340**	*e*P	**P**	**07 22 04.3**	**-3.4**
CIT				pmax	pmax		
	comp=Z,48nm,1.8s,mb4.8						
CMAR	**Chiang Mai Arr**	**28.32**	**260**	*i* P	**P**	**07 22 09.5**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,14nm,1.0s						
CMAR	**Chiang Mai Arr**	**28.32**	**260**	P	**P**	**07 22 08.7**	**-0.2**
	comp=Z,14nm,1.0s,mb4.6,baz=59,slow=7.0,SNR=27						
CMAR				LR	LR	07 35 16.2	
	comp=Z,1µm,18.1s,MS4.6,baz=75,slow=40						
KSM	**Kuching**	**30.10**	**218**	*e*P	**P**	**07 22 25.1**	**+0.2**
ZAK	**Zakamensk**	**31.00**	**328**	*e*P	**P**	**07 22 28.9**	**-3.5**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
TLY	**Talaya**	**31.72**	**330**	*c i*P	**P**	**07 22 36.3**	**-2.4**
TLY				pmax	pmax		
	comp=Z,24µm,1.7s						
TLY				MLR	MLR		
	comp=Z,3µm,14.0s,MS5.1						
TLY	**Talaya**	**31.72**	**330**	*e*P	**P**	**07 22 36.1**	**-2.7**
	comp=Z,25nm,1.5s,mb4.8						
TLY				LR	LR		
	comp=Z,409nm,19.0s,MS4.1						
IRK	**Irkutsk**	**31.84**	**331**	*e*P	**P**	**07 22 35.8**	**-4.0**
IRK				pmax	pmax		
	comp=Z,50nm,1.6s,mb5.1						
SHL	**Shillong**	**32.87**	**277**	⇑*i*P	**P**	**07 22 48.0**	**-1.0**
SHL				*i* S	**S**	**07 28 03.5**	**-0.1**
MOY	**Mondy**	**32.93**	**328**	*e*P	**P**	**07 22 47.1**	**-2.2**
MOY				pmax	pmax		
	comp=Z,34nm,2.2s,mb4.9						
LSA	**Lhasa**	**33.08**	**285**	P	**P**	**07 22 51.3**	**+0.4**
LSA				AP	pP	07 23 03.4	+4.0
LSA				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.5						
LSA				AMB	AMB		
	comp=Z,20nm,4.0s						
LSA				LR	LR		
	comp=N,1µm,14.0s,MS5.3						
LSA				LR	LR		
	comp=E,4µm,13.0s,MS5.3						
LSA				LR	LR		
	comp=Z,6µm,13.0s,MS5.5						
LSA	**Lhasa**	**33.08**	**285**	*e*P	**P**	**07 22 50.5**	**-0.4**
LSA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
LSA	**Lhasa**	**33.08**	**285**	*e*P	**P**	**07 22 50.5**	**-0.4**
	comp=Z,20nm,1.0s,mb5.0						
KULM	**Kulim**	**33.71**	**237**	*e*P	**P**	**07 22 56.5**	**0.0**
PET	**Petropavlovsk**	**35.08**	**32**	*i* P	**P**	**07 23 07.9**	**+0.1**
PET				pmax	pmax		
	comp=Z,86µm,1.3s						
PET				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.4						
PET	**Petropavlovsk**	**35.08**	**32**	*i* P	**P**	**07 23 07.0**	**-0.8**
YAK	**Yakutsk**	**35.91**	**1**	*d i*P	**P**	**07 23 14.1**	**-0.7**
YAK				*e*		07 24 37.3	
YAK				*e*S	**S**	**07 28 53.2**	**+2.8**
YAK				*e*SSS	SSS	07 31 38.9	-1.9
YAK				*e*		07 33 35.9	
YAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
YAK				smax			
	comp=N,100nm,19.6s						
YAK				smax			
	comp=Z,100nm,16.6s						
YAK				smax			
	comp=E,100nm,14.9s						
YAK				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.3						
YAK				MLR	MLR		
	comp=N,500nm,18.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,500nm,17.0s,MS4.5						
YAK	**Yakutsk**	**35.91**	**1**	*e*P	**P**	**07 23 14.4**	**-0.4**
	comp=E,43nm,0.9s,mb5.4						
YAK				LR	LR		
	comp=Z,929nm,20.0s,MS4.5						
MA2	**Magadan**	**36.85**	**19**	*de*P	**P**	**07 23 22.3**	**-0.4**
MA2				*e**PP	pP	07 23 31.3	0.0
MA2				*i* S	**S**	**07 29 02.3**	**-2.4**
MA2				*e*		07 33 29.9	
MA2				MLR	MLR		
	comp=Z,500nm,21.0s,MS4.3						
MA2	**Magadan**	**36.85**	**19**	*e*P	**P**	**07 23 22.3**	**-0.4**
MA2				pP	pP	07 23 30.6	-0.7
WMQ	**Urumqi**	**37.35**	**309**	⇑*i*P	**P**	**07 23 25.6**	**-1.5**
WMQ				AP	pP	07 23 33.1	-2.6
WMQ				XP	sP	07 23 36.6	-2.7
WMQ				PP	PP	07 24 53.1	-2.0
WMQ				PPP	PPP	07 25 13.8	-2.0
WMQ				PCP	PcP	07 25 45.6	-0.7
WMQ				S	**S**	**07 29 11.3**	**-1.4**
WMQ				SS	SS	07 31 42.6	-2.6
WMQ				SCS	ScS	07 33 35.6	-1.2
WMQ				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,190nm,3.6s						
WMQ				LR	LR		
	comp=N,950nm,15.2s,MS5.0						
WMQ				LR	LR		
	comp=E,2µm,16.6s,MS5.0						
WMQ				LR	LR		
	comp=Z,2µm,16.0s,MS4.9						
GUN	**Gumba**	**37.85**	**283**	*e*P	**P**	**07 23 31.5**	**0.0**
	comp=Z,306nm,1.1s,mb6.0						
PKI	**Pulchoki**	**38.31**	**282**	*e*P	**P**	**07 23 35.1**	**-0.2**
	comp=Z,372nm,1.2s,mb6.0						
PKI	**Pulchoki**	**38.31**	**282**	*e*P	**P**	**07 23 35.1**	**-0.2**
PKI				pmax	pmax		
	comp=Z,186nm,1.2s,mb5.7						
KKN	**Kakani**	**38.39**	**282**	*e*P	**P**	**07 23 35.9**	**-0.1**
	comp=Z,267nm,1.0s,mb5.9						
KKN	**Kakani**	**38.39**	**282**	*e*P	**P**	**07 23 35.9**	**-0.1**
KKN				pmax	pmax		
	comp=Z,133nm,1.0s,mb5.6						
DMN	**Daman**	**38.57**	**282**	*e*P	**P**	**07 23 37.3**	**-0.2**
	comp=Z,429nm,1.3s,mb6.0						
KAKA	**Kakadu**	**38.79**	**174**	*e*P	**P**	**07 23 36.5**	**-2.9**
	comp=Z,25nm,1.0s,mb4.9						
GKN	**Gorkha**	**38.93**	**283**	*e*P	**P**	**07 23 40.2**	**-0.3**
	comp=Z,500nm,1.3s,mb6.1						
PMG	**Port Moresby**	**39.71**	**150**	*e*P	**P**	**07 23 45.3**	**-1.8**
PMG				pmax	pmax		
	comp=Z,20nm,0.9s						
PMG				MLR	MLR		
	comp=Z,811nm,20.0s						
PMG	**Port Moresby**	**39.71**	**150**	P	**P**	**07 23 45.5**	**-1.6**
	comp=Z,7.5nm,0.5s,mb4.6,baz=238,slow=1.1,SNR=5.8						
PMG	**Port Moresby**	**39.71**	**150**	*e*P	**P**	**07 23 45.3**	**-1.8**
	comp=Z,20nm,0.9s,mb4.8						
PMG				LR	LR		
	comp=Z,811nm,20.0s,MS4.6						
KOLN	**Koldanda**	**39.87**	**283**	*e*P	**P**	**07 23 48.1**	**-0.2**
	comp=Z,337nm,1.0s,mb6.0						
SEY	**Seymchan**	**40.06**	**17**	*e*P	**P**	**07 23 50.2**	**+0.7**
SEY						07 25 26.1	
SEY				*e*PPP	PPP	07 25 48.9	-2.6
SEY				*e*S	**S**	**07 29 49.9**	**-3.5**
SEY				*e*SSS	SSS	07 33 28.9	+7.5
SEY				*e*		07 33 48.7	
SEY				pmax	pmax		
	comp=Z,50nm,1.5s,mb5.0						
SEY				smax			
	comp=N,1µm,12.6s						
SEY				smax			
	comp=E,800nm,13.2s						
MKAR	**Makanchi Array**	**41.77**	**312**	*i* P	**P**	**07 24 02.4**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,122nm,1.4s						
MKAR	**Makanchi Array**	**41.77**	**312**	P	**P**	**07 24 02.4**	**-1.3**
	comp=Z,7.3nm,0.6s,mb4.5,baz=97,slow=9.9,SNR=83						
MKAR				PcP	PcP	07 26 00.1	-0.2
	comp=Z,3.1nm,0.8s,baz=90,slow=2.1,SNR=3.9						
MKAR				LR	LR	07 41 56.3	
	comp=Z,350nm,19.6s,MS4.2,baz=272,slow=37						
MKAR	**Makanchi Array**	**41.77**	**312**	P	**P**	**07 24 02.4**	**-1.3**
MKAR				PcP	PcP	07 26 00.1	-0.2
MKAR				LR	LR	07 41 56.3	
ZAL	**Zalesovo**	**42.47**	**323**	*i* P	**P**	**07 24 09.0**	**-0.4**
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZAL	**Zalesovo**	**42.47**	**323**	P	**P**	**07 24 08.2**	**-1.1**
	comp=Z,2.5nm,0.5s,mb4.1,baz=8.7,slow=8.7,SNR=15						
ZAL				LR	LR	07 43 36.1	
	comp=Z,1µm,18.8s,MS4.8,baz=348,slow=39						
LGTI	**Lohaghat**	**42.56**	**286**	*e*P	**P**	**07 24 10.8**	**+0.4**
FX1	**Attu Island--F**	**42.64**	**39**	*e*P	**P**	**07 24 12.4**	**+1.7**
JOSI	**Joshimath**	**43.02**	**288**	*e*x	x	07 23 50.9	
NVS	**Novosibirsk**	**43.67**	**323**	*e*P	**P**	**07 24 14.8**	**-4.2**
NVS				*e*		07 25 59.1	
NVS				*e*S	**S**	**07 30 43.7**	**-2.8**
NVS				pmax	pmax		
	comp=N,37nm,2.3s						
NVS				pmax	pmax		
	comp=E,65nm,2.3s						
NVS				pmax	pmax		
	comp=Z,88nm,2.3s,mb5.1						
NVS				smax			
	comp=N,16nm,2.0s						
NVS				smax			
	comp=E,33nm,2.2s						
FITZ	**Fitzroy Crossi**	**44.04**	**184**	⇓*i*P	**P**	**07 24 21.2**	**-1.4**
	comp=E,53nm,0.9s,mb5.3						
FITZ	**Fitzroy Crossi**	**44.04**	**184**	P	**P**	**07 24 21.4**	**-1.2**
	comp=E,27nm,1.1s,mb4.9,baz=5.5,slow=9.8,SNR=11						
FITZ				LR	LR	07 41 44.1	
	comp=E,218nm,20.8s,MS4.0,baz=289,slow=35						
SMLA	**Simla**	**44.99**	**289**	*i* P	**P**	**07 24 27.2**	**-2.9**
SMLA				*i* x	x	07 26 37.0	
NDI	**New Delhi**	**45.30**	**285**	*e*x	**P**	**07 24 29.0**	**-3.5**
NDI				*e*S	**S**	**07 31 10.0**	**-0.4**
NDI				AMb	AMB	07 44 59.3	
	comp=Z,35nm,1.2s,mb5.1						
ULHL	**Ulahol**	**45.40**	**304**	P	**P**	**07 24 34.7**	**+1.5**
	SNR=13						
AYAN	**Aya Nagar**	**45.41**	**285**	*e*P	**P**	**07 24 31.5**	**-1.9**
KSH	**Kashi**	**45.50**	**301**	P	**P**	**07 24 35.3**	**+1.3**
KSH				AP	pP	07 24 42.1	-0.6
KSH				XP	sP	07 24 46.3	+0.1
KSH				PCP	PcP	07 26 14.4	+1.4
KSH				PP	PP	07 26 23.0	+1.9
KSH				SCP		07 30 04.8	
KSH				*e*PCS		07 30 07.1	
KSH				*e*S	**S**	**07 31 14.5**	**+1.2**
KSH				*e*SCS	ScS	07 34 26.8	+1.0
KSH				*e*SS	SS	07 34 28.5	0.0
KSH				LR	LR		
	comp=N,6µm,14.0s,MS5.8						
KSH				LR	LR		
	comp=E,4µm,12.5s,MS5.8						
TKM2	**Tokmak 2**	**45.92**	**305**	P	**P**	**07 24 38.0**	**+0.7**
	SNR=28						
KUDL	**Kundal**	**46.02**	**285**	*e*P	**P**	**07 24 37.6**	**-0.7**
KUDL				AMb	AMB	07 24 48.1	
	comp=Z,41nm,1.0s,mb5.3						
THN	**Thein Dam**	**46.07**	**291**	*e*P	**P**	**07 24 36.8**	**-1.8**
	comp=Z,12nm,0.4s,mb5.2						
KZA	**Kyzart**	**46.13**	**304**	P	**P**	**07 24 40.5**	**+1.6**
	SNR=19						
WRAB	**Tennant Creek**	**46.13**	**172**	*e*P	**P**	**07 24 37.7**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.6						
WRAB				MLR	MLR		
	comp=Z,210nm,20.0s,MS4.1						
WRAB	**Tennant Creek**	**46.13**	**172**	*e*P	**P**	**07 24 37.7**	**-1.5**
	comp=Z,66nm,0.8s,mb5.6						
WRAB				LR	LR		
	comp=Z,210nm,20.0s,MS4.1						
WRA	**Warramunga Arr**	**46.14**	**172**	P	**P**	**07 24 37.8**	**-1.5**
	comp=Z,14nm,0.7s,mb5.0,baz=354,slow=8.2,SNR=105						
WB2	**Warramunga Arr**	**46.14**	**172**	*e*P	**P**	**07 24 37.7**	**-1.6**
WB2				*e*S	**S**	**07 31 20.6**	**-2.0**
CHMS	**Chumysh**	**46.54**	**305**	P	**P**	**07 24 42.4**	**+0.2**
	SNR=12						
KHET	**Khetri**	**46.62**	**285**	*e*P	**P**	**07 24 42.9**	**-0.2**
KHET				AMb	AMB	07 24 54.1	
	comp=Z,30nm,1.1s,mb5.1						
FRU	**Bishkek**	**46.63**	**305**	*e*P	**P**	**07 24 43.0**	**+0.1**
FRU				*e*	pP	07 24 51.0	-0.6
FRU				pmax	pmax		
	comp=Z,80nm,1.8s,mb5.3						
FRU				MLR	MLR		
	comp=Z,4µm,14.0s,MS5.5						
UCH	**Uchtor**	**46.68**	**304**	P	**P**	**07 24 44.1**	**+0.8**
	SNR=40						
AAK	**Ala-Archa**	**46.71**	**305**	*e*P	**P**	**07 24 42.9**	**-0.6**
AAK				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
AAK	**Ala-Archa**	**46.71**	**305**	*e*P	**P**	**07 24 42.9**	**-0.6**
	comp=Z,17nm,1.2s,mb4.8						
USP	**Ospenovka**	**46.74**	**306**	P	**P**	**07 24 43.9**	**+0.2**
	SNR=15						
HYB	**Hyderabad**	**46.93**	**270**	*e*P	**P**	**07 24 43.5**	**-2.0**
HYB	**Hyderabad**	**46.93**	**270**	*i* P	**P**	**07 24 46.5**	**+1.0**
EKS2	**Erkin-Say**	**47.24**	**305**	P	**P**	**07 24 48.3**	**+0.5**
	SNR=5.4						
AML	**Almayashu**	**47.29**	**304**	P	**P**	**07 24 49.4**	**+1.3**
	SNR=12						
BILL	**Bilibino**	**47.71**	**18**	*d i*P	**P**	**07 24 50.6**	**-0.5**
BILL				*e*		07 26 25.8	
BILL				*e*S	**S**	**07 31 54.6**	**+10**
BILL				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.3						
BILL				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.9						
BILL	**Bilibino**	**47.71**	**18**	*e*P	**P**	**07 24 50.7**	**-0.4**
	comp=Z,35nm,1.1s,mb5.3						
CTA	**Charters Tower**	**49.07**	**158**	⇑*i*P	**P**	**07 25 01.6**	**-0.6**
	comp=Z,22nm,0.8s,mb5.2						
CTA	**Charters Tower**	**49.07**	**158**	⇑*i*P	**P**	**07 25 01.6**	**-0.6**
CTA				pmax	pmax		
	comp=Z,22nm,0.8s						
CTAO	**Charters Tower**	**49.07**	**158**	*e*P	**P**	**07 25 01.4**	**-0.8**
CTAO				*e**PP	pP	07 25 09.5	-1.5
CTAO				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.4						
CTAO	**Charters Tower**	**49.07**	**158**	*e*P	**P**	**07 25 01.4**	**-0.8**
	comp=Z,38nm,0.9s,mb5.4						
CTAO				*e*pP	pP	07 25 09.5	-1.5
VOSK	**Vostochnaya**	**50.10**	**318**	P	**P**	**07 25 08.1**	**-1.6**
VOSK				pmax	pmax		
	comp=Z,63nm,1.7s,mb5.4						
VOSK	**Vostochnaya**	**50.10**	**318**	*i* P	**P**	**07 25 08.1**	**-1.6**
BVA0	**Borovoye Array**	**50.50**	**318**	*i* P	**P**	**07 25 11.5**	**-1.2**
BVA0				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.8						
BVAR	**Borovoye Array**	**50.50**	**318**	P	**P**	**07 25 11.8**	**-0.9**
	comp=Z,9.2nm,0.7s,mb4.8,baz=90,slow=7.4,SNR=76						
BRVK	**Borovoye**	**50.57**	**318**	P	**P**	**07 25 11.6**	**-1.7**
	comp=Z,0.2nm,0.5s						
ZRNK	**Zerenda**	**51.32**	**318**	*i* P	**P**	**07 25 17.3**	**-1.6**
SVE	**Sverdlovsk**	**56.48**	**322**	⇑*i*P	**P**	**07 25 55.8**	**-1.1**
SVE				*e*	pP	07 26 05.0	-0.7
SVE				*e*		07 26 57.0	
SVE				*e*S	**S**	**07 33 55.0**	**+11**
SVE				*e*		07 35 48.0	
SVE				pmax	pmax		
	comp=Z,140nm,1.9s,mb5.7						
SVE				MLR	MLR		
	comp=N,600nm,13.0s,MS5.7						
SVE				MLR	MLR		
	comp=E,4µm,13.0s,MS5.7						
SVE				MLR	MLR		
	comp=Z,6µm,13.0s,MS5.8						
FORT	**Forrest**	**56.58**	**180**	*e*P	**P**	**07 25 54.1**	**-3.8**
	comp=Z,53nm,0.8s,mb5.6						
AB31	**Akbulak array**	**56.88**	**313**	*i* P	**P**	**07 25 58.5**	**-1.4**
AB31				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
ARU	**Arti**	**57.61**	**322**	⇑*i*P	**P**	**07 26 03.2**	**-1.7**
ARU				*e*		07 26 54.8	
ARU				*e*		07 28 10.6	
ARU				*e*S	**S**	**07 34 01.0**	**+1.7**
ARU				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.2						
ARU				MLR	MLR		
	comp=N,1µm,17.0s,MS5.3						
ARU				MLR	MLR		
	comp=E,2µm,17.0s,MS5.3						
ARU				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.4						
ARU	**Arti**	**57.61**	**322**	*e*P	**P**	**07 26 03.4**	**-1.5**
	comp=Z,55nm,1.4s,mb5.4						
ARU				*e*pP	pP	07 26 12.2	-1.7
SOKR	**Solikamsk**	**58.62**	**326**	⇑*i*P	**P**	**07 26 10.0**	**-1.9**
SOKR				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
SOKR				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.2						
STKA	**Stephens Creek**	**59.01**	**167**	*e*P	**P**	**07 26 13.2**	**-1.8**
	comp=Z,2.7nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**59.01**	**167**	P	**P**	**07 26 13.1**	**-1.9**
	comp=Z,5.5nm,0.8s,mb4.6,baz=332,slow=8.5,SNR=5.0						
STKA				LR	LR	07 50 48.5	
	comp=Z,237nm,20.4s,MS4.3,baz=114,slow=35						
NWAO	**Narrogin (SRO)**	**59.68**	**191**	LR	LR	07 50 43.9	
	comp=Z,201nm,20.1s,MS4.2,baz=1.3,slow=35						
DZM	**Mont Dzumac**	**60.41**	**139**	P	**P**	**07 26 23.9**	**-0.8**
	comp=Z,13nm,1.1s,mb4.9,baz=33,slow=12,SNR=6.4						
SVW2	**Sparrevohn**	**60.74**	**33**	*e*P	**P**	**07 26 27.4**	**+0.9**
IMA	**Indian Mountai**	**61.51**	**27**	*e*P	**P**	**07 26 32.0**	**+0.4**
RSO	**Redoubt South**	**62.16**	**33**	*e*P	**P**	**07 26 36.6**	**+0.6**
RSO				*e*pP	pP	07 26 44.6	-0.5
PWA	**Palmer West**	**63.45**	**32**	*e*P	**P**	**07 26 43.2**	**-1.3**
ILAR	**Eielson Array**	**64.43**	**28**	P	**P**	**07 26 49.4**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=253,slow=4.9,SNR=16						
ILAR				LR	LR	07 57 52.4	
	comp=Z,272nm,18.5s,MS4.5,baz=304,slow=39						
ILAR	**Eielson Array**	**64.43**	**28**	P	**P**	**07 26 49.4**	**-1.5**
ILAR				LR	LR	07 57 52.4	
TOO	**Toolangi**	**65.34**	**165**	*e*P	**P**	**07 26 57.2**	**0.0**
	comp=Z,21nm,1.1s,mb5.1						
TOO	**Toolangi**	**65.34**	**165**	*e*P	**P**	**07 26 57.2**	**0.0**
TOO				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
DIV	**Divide**	**65.47**	**32**	*e*P	**P**	**07 26 57.0**	**-0.7**
	comp=Z,152nm,1.4s,mb5.8						
MENT	**Mentasta**	**66.11**	**30**	*e*P	**P**	**07 27 01.8**	**+0.2**
LVZ	**Lovozero**	**67.50**	**336**	*e*P	**P**	**07 27 05.5**	**-5.0**
LVZ				*e*S	S	07 36 03.7	+0.3
LVZ				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.9						
LVZ				pmax	pmax		
	comp=N,4.0nm,1.0s						
LVZ				pmax	pmax		
	comp=E,5.0nm,1.9s						
APA	**Apatity**	**68.05**	**336**	⇓*i*P	**P**	**07 27 13.0**	**-0.9**
APA				*i*	pP	07 27 21.8	-1.1
APA				*i*		07 27 35.2	
APA				*e*S	S	07 36 12.0	+2.1
APA				*e*		07 36 53.0	
APA				pmax	pmax		
	comp=Z,65nm,1.3s,mb5.5						
INK	**Inuvik**	**68.91**	**23**	*e*P	**P**	**07 27 19.2**	**0.0**
INK				pmax	pmax		
	comp=Z,33nm,1.4s						
INK	**Inuvik**	**68.91**	**23**	P	**P**	**07 27 18.8**	**-0.4**
	comp=Z,2.7nm,0.6s,mb4.3,baz=306,slow=9.3,SNR=8.0						
INK	**Inuvik**	**68.91**	**23**	*e*P	**P**	**07 27 19.2**	**0.0**
	comp=Z,33nm,1.4s,mb5.1						
GOF	**Gofitskoye**	**68.93**	**311**	⇑*i*P	**P**	**07 27 18.7**	**-1.0**
GOF				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
ZEI	**Tsey**	**68.97**	**308**	*e*P	**P**	**07 27 19.2**	**-0.8**
ZEI				*i* *PP	pP	07 27 38.0	+9.0
ZEI				*i*		07 29 58.7	
ZEI				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
GNI	**Garni**	**69.12**	**305**	*i* P	**P**	**07 27 20.3**	**-0.7**
MOS	**Moscow**	**69.29**	**323**	*e*P	**P**	**07 27 21.9**	**+0.1**
MOS				*e*		07 27 27.3	
MOS				*e*		07 27 44.7	
MOS				*e*		07 29 52.1	
MOS				*e*PPP	PPP	07 31 31.9	-3.8
MOS				*e*S	S	07 36 27.9	+3.0
MOS				*e*		07 37 20.5	
MOS				pmax	pmax		
	comp=Z,43nm,0.6s,mb5.6						
MOS				MLR	MLR		
	comp=Z,3µm,14.1s,MS5.7						
KBS	**Kingsbay**	**69.39**	**349**	*e*P	**P**	**07 27 21.0**	**-1.1**
KBS				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
KBS	**Kingsbay**	**69.39**	**349**	*e*P	**P**	**07 27 21.0**	**-1.0**
	comp=Z,18nm,1.3s,mb4.8						
KBS	**Kingsbay**	**69.39**	**349**	*e*P	**P**	**07 27 21.5**	**-0.6**
KBS				*e*S	S	07 36 27.4	+1.6
KBS				AMS	AMS	08 01 45.4	
	comp=Z,280nm,14.8s,MS4.6						
KIV	**Kislovodsk**	**69.48**	**310**	*c i*P	**P**	**07 27 23.2**	**+0.1**
KIV				*e*		07 29 52.6	
KIV				*e*PPP	PPP	07 31 37.5	-0.2
KIV				*e*S	S	07 36 27.5	+0.3
KIV				pmax	pmax		
	comp=N,33nm,1.1s						
KIV				pmax	pmax		
	comp=E,24nm,1.1s						
KIV				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.4						
KIV				MLR	MLR		
	comp=Z,723nm,20.0s,MS4.9						
KIV				MLR	MLR		
	comp=N,213nm,15.0s,MS4.8						
KIV				MLR	MLR		
	comp=E,347nm,17.0s,MS4.8						
KIV	**Kislovodsk**	**69.48**	**310**	*e*P	**P**	**07 27 23.1**	**0.0**
	comp=E,126nm,1.4s,mb5.7						
KIV				LR	LR		
	comp=Z,199nm,20.0s,MS4.4						
KEV	**Kevo**	**69.62**	**339**	*e*p	**P**	**07 27 22.3**	**-1.2**
	comp=Z,21nm,1.0s,mb5.0						
KEV	**Kevo**	**69.62**	**339**	*e*P	**P**	**07 27 22.3**	**-1.2**
KEV				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
OBN	**Obninsk**	**70.05**	**322**	*c i*P	**P**	**07 27 25.1**	**-1.3**
OBN				*e**PP	pP	07 27 43.4	+8.0

OBN				*e*S	S	07 36 37.5	+3.7
OBN				*e*SS	SS	07 41 08.6	+3.7
OBN				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
OBN				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.4						
OBN	**Obninsk**	**70.05**	**322**	⇑*i*P	**P**	**07 27 25.1**	**-1.3**
OBN				LR	LR		
	comp=Z,2µm,15.0s,MS5.4						
ARCES	**ARCESS Array B**	**70.19**	**339**	P	**P**	**07 27 26.7**	**-0.3**
	comp=Z,10nm,0.9s,mb4.7,baz=63,slow=5.4,SNR=21						
ARE0	**ARCESS Array S**	**70.19**	**339**	*e*P	**P**	**07 27 25.8**	**-1.2**
ARE0				*e*pP	pP	07 27 34.8	-1.2
BHD	**Baghdad**	**71.54**	**299**	*e*P	**P**	**07 27 32.0**	**-3.8**
MSL	**Mosul**	**71.55**	**302**	*e*P	**P**	**07 27 37.0**	**+1.2**
SOC	**Sochi**	**71.64**	**310***c*	*i*P	**P**	**07 27 36.3**	**+0.1**
SOC				*e*		07 30 10.0	
SOC				*e*S	S	07 36 58.2	+5.7
TRO	**Tromso**	**72.25**	**340**	*e*P	**P**	**07 27 41.1**	**+1.7**
TRO				AMS	AMS	08 06 26.9	
	comp=Z,1µm,16.7s,MS5.2						
KAF	**Kangasniemi**	**72.70**	**331**	*e*p	**P**	**07 27 41.0**	**-1.1**
	comp=Z,19nm,1.1s,mb4.9,baz=66,slow=5.6						
KAF	**Kangasniemi**	**72.70**	**331**	*e*P	**P**	**07 27 41.0**	**-1.1**
KAF				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
ANN	**Anapa**	**72.79**	**312**	*e*P	**P**	**07 27 39.6**	**-3.4**
ANN				*e*S	S	07 37 06.3	+0.8
ANN				pmax	pmax		
	comp=Z,109nm,1.6s,mb5.5						
FINES	**FINESS Array B**	**73.07**	**331**	P	**P**	**07 27 43.6**	**-0.7**
	comp=Z,8.1nm,0.8s,mb4.7,baz=72,slow=6.0,SNR=28						
VSU	**Vasula**	**73.96**	**328**	⇑*i*P	**P**	**07 27 49.3**	**-0.2**
MALT	**Malatya**	**74.35**	**305**	*e*P	**P**	**07 27 53.9**	**+1.7**
MALT				pmax	pmax		
	comp=Z,100nm,1.5s,mb5.5						
MALT	**Malatya**	**74.35**	**305**	*e*P	**P**	**07 27 53.9**	**+1.7**
	comp=Z,100nm,1.5s,mb5.5						
SIM	**Simferopol’**	**74.94**	**313***c*	*e*P	**P**	**07 27 55.3**	**-0.2**
SIM				*e*S	S	07 37 37.0	+7.3
SIM				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.2						
MNK	**Minsk**	**75.00**	**324**	*e*P	**P**	**07 27 56.0**	**+0.4**
GZT	**Gaziantep**	**75.33**	**305**	*i* P	**P**	**07 27 59.1**	**+1.2**
DAG	**Danmarks Havn**	**75.39**	**353**	⇓*e*P	**P**	**07 27 56.3**	**-1.2**
DAG				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
DAG	**Danmarks Havn**	**75.39**	**353**	⇓*e*P	**P**	**07 27 56.3**	**-1.2**
	comp=Z,10.0nm,1.0s,mb4.7						
DAG	**Danmarks Havn**	**75.39**	**353**	⇓*i*P	**P**	**07 27 56.3**	**-1.2**
	comp=Z,10.0nm,1.0s,mb4.7						
RES	**Resolute Bay**	**75.62**	**11**	*e*P	**P**	**07 27 59.1**	**+0.3**
RES				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.3						
RES	**Resolute Bay**	**75.62**	**11**	*e*P	**P**	**07 27 59.1**	**+0.3**
	comp=Z,37nm,1.0s,mb5.3						
BOYT	**Boyabat**	**75.73**	**309**	*i* P	**P**	**07 28 00.9**	**+0.8**
KAHT	**Ahir Dag**	**75.74**	**305**	*i* P	**P**	**07 28 02.2**	**+2.0**
AKASG	**Malin Array Be**	**75.76**	**320**	P	**P**	**07 27 58.7**	**-1.3**
	comp=Z,11nm,0.6s,mb5.0,baz=54,slow=6.5,SNR=59						
CTKT	**Corum**	**76.11**	**309**	*i* P	**P**	**07 28 03.5**	**+1.3**
COBT	**Iskenderun**	**76.62**	**304**	*i* P	**P**	**07 28 06.3**	**+1.2**
NSS	**Namsos**	**77.22**	**337**	*e*	**P**	**07 28 06.6**	**-1.3**
NSS				AMS	AMS	08 08 06.9	
	comp=Z,807nm,18.3s,MS5.1						
BRTR	**Keskin Array B**	**77.27**	**308**	P	**P**	**07 28 09.2**	**+0.4**
	comp=Z,21nm,0.9s,mb5.1,baz=108,slow=3.9,SNR=66						
KIS	**Kishinev**	**77.53**	**316**	*e*P	**P**	**07 28 08.0**	**-2.0**
KIS				*e*		07 28 20.0	
KIS				MLR	MLR		
	comp=N,1µm,16.0s,MS5.6						
KIS				MLR	MLR		
	comp=E,2µm,14.0s,MS5.6						
SUW	**Suwalki**	**77.67**	**324**	*e*P	**P**	**07 28 10.6**	**0.0**
SUW				*e*	pP	07 28 19.5	-0.2
SUW				*e*S	S	07 37 56.9	-2.3
SUW				*e*		07 38 18.8	
SUW				MLR	MLR		
	comp=Z,2µm,18.4s,MS5.4						
SUW	**Suwalki**	**77.67**	**324**	*e*P	**P**	**07 28 10.6**	**0.0**
SUW				*e*PcP	PcP	07 28 19.5	-1.6
SUW				*e*S	S	07 37 57.0	-2.3
SUW				*e*SKS	SKS	07 38 18.8	-6.4
SUW				MLR	MLR	08 05 41.7	
	comp=Z,2µm,18.4s,MS5.4						
ANTO	**Ankara**	**77.81**	**308**	⇓P	**P**	**07 28 12.7**	**+1.0**
ANTO	**Ankara**	**77.81**	**308**	P	**P**	**07 28 12.7**	**+1.0**
SGKT	**Sivrigoynuk**	**78.05**	**309**	*i* P	**P**	**07 28 14.0**	**+1.1**
YKW3	**Yellowknife Ar**	**78.49**	**25**	*e*P	**P**	**07 28 14.5**	**-0.4**
YKA	**Yellowknife Ar**	**78.54**	**25**	*i* P	**P**	**07 28 15.9**	**+0.7**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**78.54**	**25**	P	**P**	**07 28 15.3**	**+0.1**
	comp=Z,2.5nm,0.8s,mb4.2,baz=298,slow=5.1,SNR=9.4						
JMIC	**Jan Mayen**	**78.57**	**347**	*e*P	**P**	**07 28 16.6**	**+1.4**
JMIC				AMS	AMS	08 06 18.6	
	comp=Z,242nm,16.9s,MS4.6						
KDHN	**Kadinhani**	**78.84**	**307**	*i* P	**P**	**07 28 17.7**	**+0.3**
HFS	**Hagfors**	**79.02**	**332**	P	**P**	**07 28 17.2**	**-0.7**
	comp=Z,3.1nm,0.4s,mb4.6,baz=63,slow=6.6,SNR=15						
LVV	**L’vov**	**79.14**	**320**	⇑*i*P	**P**	**07 28 18.9**	**+0.1**
VRI	**Vrincioaia**	**79.32**	**316**	⇓P	**P**	**07 28 20.8**	**+1.0**
ESKT	**Eskisehir**	**79.32**	**309**	*i* P	**P**	**07 28 20.1**	**+0.2**
CSS	**Prodhromos**	**79.42**	**304**	*e*P	**P**	**07 28 20.4**	**-0.2**
	comp=Z,76nm,1.3s,mb5.5						
CSS				*e*pP	pP	07 28 29.7	0.0
BURAR	**Bucovina Array**	**79.46**	**318**	⇑P	**P**	**07 28 21.0**	**+0.5**
BURAR	**Bucovina Array**	**79.46**	**318**	⇑P	**P**	**07 28 21.0**	**+0.5**
NB2	**NORSAR Subarra**	**79.51**	**334**	P	**P**	**07 28 19.6**	**-0.9**
	comp=Z,25nm,1.0s,mb5.1,baz=52,slow=5.0						
NB2	**NORSAR Subarra**	**79.51**	**334**	P	**P**	**07 28 19.6**	**-0.9**
	baz=52,slow=5.3						
NOA	**NORSAR Array B**	**79.51**	**334**	P	**P**	**07 28 19.8**	**-0.7**
	comp=Z,9.7nm,0.8s,mb4.8,baz=51,slow=5.5,SNR=28						
MLR	**Muntele Rosu**	**79.98**	**316**	P	**P**	**07 28 23.9**	**+0.6**
	comp=Z,16nm,0.9s,mb5.0,baz=9.8,slow=2.3,SNR=17						
MLR				LR	LR	08 07 27.6	
	comp=Z,885nm,20.9s,MS5.1,baz=44,slow=38						
MLR	**Muntele Rosu**	**79.98**	**316**	⇑P	**P**	**07 28 24.3**	**+1.0**
MLR	**Muntele Rosu**	**79.98**	**316**	⇑P	**P**	**07 28 24.3**	**+0.9**
KWP	**Kalwaria**	**79.99**	**321**	*e*P	**P**	**07 28 24.1**	**+0.8**
KWP				*e*PcP	PcP	07 28 32.7	+1.6
KWP				*e*S	S	07 38 23.3	-0.6
KWP				*e*SKS	SKS	07 38 38.6	-3.3
KWP				MLR	MLR	08 06 23.8	
	comp=Z,1µm,18.5s,MS5.3						
ULDT	**Uludag**	**80.25**	**310**	*i* P	**P**	**07 28 25.3**	**+0.4**
ISP	**Isparta**	**80.28**	**307**	*i* P	**P**	**07 28 24.5**	**-0.6**
TKTP	**Tekketepe**	**80.33**	**308**	*i* P	**P**	**07 28 25.6**	**+0.2**
EIL	**Elat**	**80.35**	**298**	*e*P	**P**	**07 28 26.7**	**+1.0**
	comp=Z,106nm,1.8s,mb5.5						
VOIR		**80.56**	**316**	⇓P	**P**	**07 28 27.4**	**+0.9**
VOIR		**80.56**	**316**	⇑P	**P**	**07 28 26.7**	**+0.2**
VOIR		**80.56**	**316**	⇑P	**P**	**07 28 26.7**	**+0.2**
KOLS	**Kolonicke sedl**	**80.58**	**320**	*e*P	**P**	**07 28 26.4**	**-0.1**
KOLS				*e*sP	sP	07 28 39.4	+0.7
KONO	**Kongsberg**	**80.98**	**333**	*i* P	**P**	**07 28 27.5**	**-0.9**
SUMG	**Summit**	**81.16**	**356**	*e*P	**P**	**07 28 30.1**	**+1.0**
	comp=Z,77nm,1.0s,mb5.6						
BTOK	**Tokmak**	**81.18**	**310**	*i* P	**P**	**07 28 30.7**	**+0.8**
BSD	**Bornholm Skovb**	**81.26**	**328**	⇓*i*P	**P**	**07 28 30.6**	**+0.7**
BSD				*i*		07 28 37.2	
BSD				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
BSD	**Bornholm Skovb**	**81.26**	**328**	⇓*i*P	**P**	**07 28 30.6**	**+0.7**
	comp=Z,18nm,1.0s,mb5.0						
BSD				*i*		07 28 37.2	
OJC	**Ojcow**	**81.34**	**322**	⇑*i*P	**P**	**07 28 31.1**	**+0.7**
OJC				*e*S	S	07 38 40.8	+2.9
OJC				MLR	MLR	08 08 05.3	
	comp=Z,800nm,20.3s,MS5.1						
DNZL	**Cakiroluk**	**81.39**	**308**	*i* P	**P**	**07 28 30.6**	**-0.3**
NIE	**Niedzica**	**81.45**	**321**	*e*P	**P**	**07 28 32.5**	**+1.4**
KECS	**Kecovo**	**81.83**	**320**	*e*P	**P**	**07 28 33.4**	**+0.4**
COP	**Copenhagen**	**82.11**	**329**	*i* P	**P**	**07 28 27.4**	**-6.9**
COP				MLR	MLR		
	comp=Z,760nm,16.0s,MS5.2						
COP	**Copenhagen**	**82.11**	**329**	*i* P	**P**	**07 28 27.4**	**-6.9**
COP				*e*S	S	07 38 35.4	-10
COP				*i*		07 48 54.8	
COP				LR	LR		
	comp=Z,770nm,16.0s,MS5.2						
COP	**Copenhagen**	**82.11**	**329**	*e*S	S	07 38 35.4	-10
COP				*i*		07 48 54.8	
	comp=Z,760nm,16.0s						
BER	**Bergen**	**82.19**	**335**	*e*P	**P**	**07 28 35.1**	**+0.5**
BER				AMS	AMS	08 10 21.3	
	comp=Z,2µm,16.2s,MS5.5						
KDAG	**Bornova**	**82.32**	**309**	*i* P	**P**	**07 28 36.0**	**+0.2**
RGN	**Rugen**	**82.34**	**328**	*e*P	**P**	**07 28 37.1**	**+1.6**
	comp=Z,68nm,1.3s,mb5.4						
OKC	**Ostrava-Krasne**	**82.45**	**322**	*e*P	**P**	**07 28 36.9**	**+0.7**
OKC				MLR	MLR		
	comp=Z,2µm,15.6s,MS5.5						
OKC	**Ostrava-Krasne**	**82.45**	**322**	*e*P	**P**	**07 28 36.9**	**+0.7**
OKC				*e*pP	pP	07 28 46.3	+0.9
OKC				AMS	AMS	08 07 50.0	
	comp=Z,2µm,15.6s						
PSZ	**Piszkesteto**	**82.45**	**320**	*e*P	**P**	**07 28 36.6**	**+0.3**
PSZ				pmax	pmax		
	comp=Z,51nm,1.4s,mb5.3						
PSZ	**Piszkesteto**	**82.45**	**320**	*e*P	**P**	**07 28 36.6**	**+0.3**
	comp=Z,51nm,1.4s,mb5.3						
RZN	**Rozhen**	**82.53**	**313**	*e*P	**P**	**07 28 37.0**	**+0.2**
VYHS	**Vyhne**	**82.77**	**321**	*i* P	**P**	**07 28 39.0**	**+1.1**
VYHS				*e*S	S	07 38 53.1	+0.6
VYHS	**Vyhne**	**82.77**	**321**	*i* P	**P**	**07 28 39.0**	**+1.1**
VYHS				*e*	pP	07 28 49.4	+2.3
VYHS				*e*S	S	07 38 53.1	+0.6
MORC	**Moravsky Berou**	**82.81**	**322**	⇑P	**P**	**07 28 39.5**	**+1.4**
MORC	**Moravsky Berou**	**82.81**	**322**	*e*P	**P**	**07 28 37.9**	**-0.1**
	comp=Z,14nm,1.1s,mb4.9						
URLA	**Izmir**	**82.81**	**309**	*i* P	**P**	**07 28 35.5**	**-2.8**
KSP	**Ksiaz**	**82.91**	**324**	*e*P	**P**	**07 28 39.9**	**+1.3**
KSP				*e*		07 39 02.0	
KSP				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.8						
KSP	**Ksiaz**	**82.91**	**324**	*e*P	**P**	**07 28 39.9**	**+1.3**
KSP				*e*SKS	SKS	07 39 02.0	-0.3
KSP				LR	LR		
	comp=Z,3µm,18.0s,MS5.8						
KSP	**Ksiaz**	**82.91**	**324**	*e*P	**P**	**07 28 40.1**	**+1.5**
KSP				*e*PcP	PcP	07 28 47.5	+3.7
KSP				*e*S	S	07 38 51.1	-2.9
KSP				*e*sS		07 39 10.3	
KSP				MLR	MLR	08 08 45.8	
	comp=Z,3µm,18.0s,MS5.7						
VTS	**Vitosha**	**83.08**	**314**	⇑P	**P**	**07 28 41.5**	**+1.9**
VTS	**Vitosha**	**83.08**	**314**	*e*P	**P**	**07 28 40.0**	**+0.4**
VTS	**Vitosha**	**83.08**	**314**	P	**P**	**07 28 41.5**	**+1.9**
MUD	**Monsted U’grnd**	**83.11**	**331**	⇑*i*P	**P**	**07 28 39.8**	**+0.3**
MUD				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
MUD				MLR	MLR		
	comp=Z,2µm,16.0s,MS5.5						
MUD	**Monsted U’grnd**	**83.11**	**331**	⇑*i*P	**P**	**07 28 39.8**	**+0.3**
	comp=Z,30nm,1.0s,mb5.3						
MUD				*i*	pP	07 28 49.5	+0.8
MUD				*i*		07 39 14.3	
	comp=Z,2µm,16.0s						
ZAPS	**Zavoj/Pirot**	**83.12**	**315**	⇑*i*P	**P**	**07 28 40.4**	**+0.6**
DPC	**Dobruska-Polom**	**83.16**	**323**	*e*P	**P**	**07 28 40.8**	**+0.9**
DPC				AMS	AMS	08 10 00.0	
	comp=Z,2µm,12.7s						
UPC	**Upice**	**83.24**	**324**	*e*P	**P**	**07 28 41.2**	**+0.9**
BOLS	**Boljevac**	**83.27**	**316**	⇑*i*P	**P**	**07 28 35.4**	**-5.2**
KKB	**Krupnik**	**83.52**	**314**	*e*P	**P**	**07 28 42.0**	**+0.1**
VRAC	**Vranov**	**83.58**	**322**	⇑P	**P**	**07 28 43.4**	**+1.4**
VRAC	**Vranov**	**83.58**	**322**	P	**P**	**07 28 42.9**	**+0.9**
	comp=Z,9.4nm,1.0s,mb4.9,baz=51,slow=7.5,SNR=18						
VRAC	**Vranov**	**83.58**	**322**	P	**P**	**07 28 43.4**	**+1.4**
ZST	**Bratislava**	**83.90**	**321**	*i* P	**P**	**07 28 44.8**	**+1.1**
ZST				*e*S	S	07 39 14.6	+11
PVCC	**Panska Ves**	**84.00**	**324**	*e*P	**P**	**07 28 45.1**	**+1.0**
PVCC				MLR	MLR		
	comp=Z,2µm,13.9s,MS5.6						
PVCC	**Panska Ves**	**84.00**	**324**	*e*P	**P**	**07 28 45.1**	**+1.0**
PVCC				*e*pP	pP	07 28 54.4	+1.1
PVCC				AMS	AMS	08 11 30.0	
	comp=Z,2µm,13.9s						
PKSM	**Moragy**	**84.07**	**319**	⇓P	**P**	**07 28 45.5**	**+0.9**
PKSM	**Moragy**	**84.07**	**319**	P	**P**	**07 28 45.5**	**+0.9**
BSEG	**Bad Segeberg**	**84.13**	**328**	*e*P	**P**	**07 28 45.7**	**+1.0**
BSEG				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.5						
BRG	**Berggiesshubel**	**84.13**	**325**	*i* P	**P**	**07 28 45.5**	**+0.7**
BRG				S	S	07 39 08.0	+1.9
BRG				pmax	pmax		
	comp=Z,96nm,2.0s,mb5.6						
BRG				pmax	pmax		
	comp=Z,39nm,1.5s,mb5.3						
BRG				MLR	MLR		
	comp=N,955nm,15.2s,MS5.5						
BRG				MLR	MLR		
	comp=E,968nm,15.2s,MS5.5						
BRG				MLR	MLR		
	comp=Z,2µm,14.7s,MS5.6						
BRG	**Berggiesshubel**	**84.13**	**325**	*i* P	**P**	**07 28 45.5**	**+0.7**
	comp=Z,96nm,2.0s,mb5.6						
BRG				*i*	pP	07 28 55.9	+1.9
BRG				S	S	07 39 08.0	+1.9
BRG				SP	SP	07 40 18.0	+18
BRG				SS	SS	07 44 49.0	+11
BRG				LR	LR		
	comp=Z,2µm,14.7s,MS5.6						
PRU	**Pruhonice**	**84.32**	**324**	*e*P	**P**	**07 28 46.5**	**+0.8**
PRU				MLR	MLR		
	comp=Z,2µm,13.1s,MS5.7						
PRU	**Pruhonice**	**84.32**	**324**	*e*P	**P**	**07 28 46.5**	**+0.8**
PRU				*e*pP	pP	07 28 56.2	+1.2
PRU				AMS	AMS	08 10 30.0	
	comp=Z,2µm,13.1s						
DIVS	**Divcibare**	**84.36**	**317**	*e*P	**P**	**07 28 46.3**	**+0.2**
CLL	**Collm**	**84.37**	**325**	⇑*i*P	**P**	**07 28 46.5**	**+0.6**
CLL				*i* *PP	pP	07 28 54.6	-0.6
CLL				*e*S	S	07 39 09.0	+0.5
CLL				pmax	pmax		
	comp=Z,143nm,2.2s,mb5.7						
CLL	**Collm**	**84.37**	**325**	⇑*i*P	**P**	**07 28 46.5**	**+0.6**
	comp=Z,143nm,2.2s,mb5.7						
CLL				*i* pP	pP	07 28 54.6	-0.6
CLL				*e*S	S	07 39 09.0	+0.5
CLL	**Collm**	**84.37**	**325**	⇑P	**P**	**07 28 46.5**	**+0.6**
	comp=Z,logA/T=1.8,mb5.7						
CLL				*i* *PP	pP	07 28 54.6	-0.6
CLL				*i* *SP	sP	07 28 58.8	+0.6
CLL				*e*		07 29 06.0	
CLL				*e*PP	PP	07 32 01.0	-1.7
CLL				*e*S	S	07 39 09.0	+0.5
CLL				*e*PS	PS	07 40 06.0	-1.0
CLL				*e*SS	SS	07 44 54.0	+12
SKO	**Skopje**	**84.53**	**314**	⇑*i*P	**P**	**07 28 48.1**	**+1.1**
	comp=Z,50nm,0.9s,mb5.6						
SKO				*i*	pP	07 28 58.3	+2.1
SKO	**Skopje**	**84.53**	**314**	⇑*i*P	**P**	**07 28 48.1**	**+1.1**
SKO				*i*	pP	07 28 58.3	+2.1
	comp=Z,0.1nm,0.9s						
SANT	**Santorini**	**84.54**	**308**	*e*P	**P**	**07 28 46.6**	**-0.6**
	comp=Z,43nm,1.3s,mb5.4						
EDM	**Edmonton**	**84.58**	**32**	*e*P	**P**	**07 28 47.5**	**+0.6**
BBLS	**Bajina Basta -**	**84.84**	**317**	*i* (P)	pP	07 28 58.1	+0.4
NKC	**Novy Kostel**	**85.28**	**325**	*e*P	**P**	**07 28 51.2**	**+0.7**
NKC				*e*pP	pP	07 29 00.2	+0.4
NKC				AMS	AMS	08 10 20.0	
	comp=Z,2µm,16.3s						
ARSA	**Arzberg**	**85.31**	**321**	⇑*i*P	**P**	**07 28 52.3**	**+1.5**
	comp=Z,16nm,1.3s,mb5.0						
KHC	**Kasperske Hory**	**85.32**	**323**	*e*P	**P**	**07 28 51.5**	**+0.7**
KHC				*e*pP	pP	07 29 00.4	+0.4
KHC				AMS	AMS	08 11 10.0	
	comp=Z,2µm,12.7s						
CLZ	**Clausthal**	**85.37**	**327**	*e*P	**P**	**07 28 52.5**	**+1.6**
CLZ				*e*S	S	07 39 20.0	+1.7
CLZ				pmax	pmax		
	comp=Z,38nm,1.3s,mb5.4						
CLZ	**Clausthal**	**85.37**	**327**	*e*P	**P**	**07 28 52.5**	**+1.6**
	comp=Z,38nm,1.3s,mb5.4						
CLZ				*e*S	S	07 39 20.0	+1.7
GEC2	**GERESS Array S**	**85.42**	**323**	*e*P	**P**	**07 28 52.0**	**+0.7**
GEC2				pmax	pmax		
	comp=Z,47nm,1.9s,mb5.3						
GEC2	**GERESS Array S**	**85.42**	**323**	*e*P	**P**	**07 28 52.0**	**+0.7**
	comp=Z,47nm,1.9s,mb5.3						
GERES	**GERESS Array B**	**85.42**	**323**	P	**P**	**07 28 52.5**	**+1.3**
	comp=Z,3.3nm,0.8s,mb4.5,baz=56,slow=4.8,SNR=19						
MOX	**Moxa**	**85.47**	**325**	*e*P	**P**	**07 28 53.0**	**+1.6**
MOX				pmax	pmax		
	comp=Z,74nm,2.0s,mb5.5						
MOX				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.4						
MOX	**Moxa**	**85.47**	**325**	*e*P	**P**	**07 28 53.0**	**+1.6**
	comp=Z,74nm,2.0s,mb5.5						
MOX				*e*S	S	07 39 33.0	+14
MOX				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
MOX	**Moxa**	**85.47**	**325**	*i* P	**P**	**07 28 53.0**	**+1.6**
	comp=Z,logA/T=1.6,mb5.5						
MOX				S	S	07 39 33.0	+14
MOX				L		08 11 01.0	
NEW	**Newport**	**85.55**	**38**	*e*P	**P**	**07 28 52.9**	**+1.0**
NEW				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NEW	**Newport**	**85.55**	**38**	*e*P	**P**	**07 28 52.9**	**+1.0**
	comp=Z,7.7nm,1.1s,mb4.8						
MOA	**Molln**	**85.68**	**322**	⇓*i*P	**P**	**07 28 53.3**	**+0.7**
	comp=Z,22nm,1.1s,mb5.3						
WET	**Wettzell**	**85.69**	**324**	*e*P	**P**	**07 28 54.4**	**+1.8**
WET				*e*S	S	07 39 23.4	+1.9
WET				pmax	pmax		
	comp=Z,66nm,2.2s,mb5.5						
WET	**Wettzell**	**85.69**	**324**	*e*P	**P**	**07 28 54.4**	**+1.8**
	comp=Z,66nm,2.2s,mb5.5						
WET				*e*S	S	07 39 23.4	+1.9
YBH	**Yreka Blue Hor**	**85.80**	**45**	*e*P	**P**	**07 28 54.0**	**+0.7**
YBH				pmax	pmax		
	comp=Z,15nm,1.4s						
YBH	**Yreka Blue Hor**	**85.80**	**45**	*e*P	**P**	**07 28 54.0**	**+0.6**
	comp=Z,15nm,1.4s,mb5.0						
PERS	**Pernice**	**85.89**	**321**	*e*P	**P**	**07 28 54.0**	**+0.4**
PERS				*e*	pP	07 29 04.4	+1.5
GRA1	**Grafenberg Arr**	**86.24**	**325**	*e*P	**P**	**07 28 57.3**	**+2.0**
	comp=Z,92nm,1.5s,mb5.8						
GRA1				LR	LR		
	comp=Z,1µm,19.4s,MS5.4						
GRF	**Grafenberg Arr**	**86.24**	**325**	*e*P	**P**	**07 28 57.3**	**+2.0**
GRF				pmax	pmax		
	comp=Z,92nm,1.5s,mb5.8						
GRF				MLR	MLR		
	comp=Z,1µm,19.4s,MS5.4						
GRF	**Grafenberg Arr**	**86.24**	**325**	*e*P	**P**	**07 28 57.3**	**+2.0**
GRF				pmax	pmax		
	comp=Z,92nm,1.5s,mb5.8						
GRF				MLR	MLR		
	comp=Z,1µm,19.4s,MS5.4						
GRF	**Grafenberg Arr**	**86.24**	**325**	*e*P	**P**	**07 28 57.3**	**+2.0**
	comp=Z,92nm,1.5s,mb5.8						
GRF				LR	LR		
	comp=Z,1µm,19.4s,MS5.4						
BOJS	**Bojanci**	**86.45**	**320**	*e*P	**P**	**07 28 57.2**	**+0.8**
BOJS				*e*		07 29 09.2	
LJU	**Ljubljana**	**86.56**	**320**	*e*P	**P**	**07 28 57.4**	**+0.5**
KBA	**Koelnbreinsper**	**86.64**	**322**	⇑*i*P	**P**	**07 28 59.1**	**+1.8**
	comp=Z,27nm,1.6s,mb5.2						
KBA	**Koelnbreinsper**	**86.64**	**322**	⇑*i*P	**P**	**07 28 59.1**	**+1.8**
KBA				pmax	pmax		
	comp=Z,27nm,1.6s,mb5.2						
CEY	**Cerknica**	**86.79**	**320**	*e*P	**P**	**07 28 58.5**	**+0.4**
VOY	**Vojsko**	**86.93**	**321**	*e*P	**P**	**07 28 58.8**	**0.0**
VOY				*e*	pP	07 29 06.9	-1.1
VOY				*e*		07 29 22.3	
FUR	**Furstenfeldbru**	**87.12**	**323**	*e*P	**P**	**07 29 01.7**	**+2.0**
SFJD	**Kangerlussuaq**	**87.17**	**360**	*e*P	**P**	**07 29 04.3**	**+4.8**
SFJD				*i* S	S	07 39 29.8	-5.5
SFJD				*i*		07 45 18.6	
SFJD				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.3						
SFJD				MLR	MLR		
	comp=Z,390nm,18.0s,MS4.9						
SFJD	**Kangerlussuaq**	**87.17**	**360**	*e*P	**P**	**07 29 04.3**	**+4.8**
	comp=Z,18nm,1.0s,mb5.3						
SFJD				*i* S	S	07 39 29.8	-5.5
SFJD				*i*		07 39 50.3	
SFJD				*i*		07 45 18.6	
SFJD				LR	LR		
	comp=Z,390nm,18.0s,MS4.9						
SFJD	**Kangerlussuaq**	**87.17**	**360**	*i* P	**P**	**07 29 04.3**	**+4.8**
	comp=Z,18nm,1.0s,mb5.3						
SFJD	**Kangerlussuaq**	**87.17**	**360**	*i* S	S	07 39 29.8	-5.5
SFJD				*i*		07 39 50.3	
SFJD				*i*		07 45 18.6	
	comp=Z,380nm,18.0s						
MOD	**Modoc**	**87.23**	**44**	*e*P	**P**	**07 29 00.8**	**+0.5**
	comp=Z,20nm,1.2s,mb5.2						
MOD				*e*pP	pP	07 29 09.8	+0.2
TNS	**Taunus Mts**	**87.33**	**326**	*e*P	**P**	**07 29 02.7**	**+2.1**
BEKR	**Beckwourth**	**88.30**	**46**	*e*P	**P**	**07 29 06.3**	**+0.8**
	comp=Z,11nm,1.3s,mb4.9						
FCC	**Fort Churchill**	**88.36**	**21**	*e*P	**P**	**07 29 04.8**	**-0.5**
FCC				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.3						
FCC	**Fort Churchill**	**88.36**	**21**	*e*P	**P**	**07 29 04.8**	**-0.5**
	comp=Z,22nm,1.2s,mb5.3						
DAVA	**Damuels**	**88.41**	**323**	⇑*i*P	**P**	**07 29 07.1**	**+1.3**
	comp=Z,17nm,1.1s,mb5.2						
BFO	**Black Forest**	**88.58**	**325**	*e*P	**P**	**07 29 08.3**	**+1.7**
BFO				pmax	pmax		
	comp=Z,30nm,1.6s,mb5.4						
BFO	**Black Forest**	**88.58**	**325**	*e*P	**P**	**07 29 08.3**	**+1.7**
	comp=Z,30nm,1.6s,mb5.4						
FFC	**Flin Flon**	**88.59**	**27**	*e*P	**P**	**07 29 07.4**	**+0.9**
FFC				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.4						
FFC	**Flin Flon**	**88.59**	**27**	*e*P	**P**	**07 29 07.4**	**+0.9**
	comp=Z,22nm,1.1s,mb5.4						
FUORN	**Ofenpass**	**88.61**	**323**	P	**P**	**07 29 08.1**	**+1.3**
WCN	**Washoe City**	**89.00**	**46**	*e*P	**P**	**07 29 10.0**	**+1.1**
WCN				pmax	pmax		
	comp=Z,33nm,1.8s,mb5.4						
WCN	**Washoe City**	**89.00**	**46**	*e*P	**P**	**07 29 10.0**	**+1.1**
	comp=Z,33nm,1.8s,mb5.4						
CMB	**Columbia Colle**	**89.28**	**47**	*e*P	**P**	**07 29 11.1**	**+0.9**
CMB				pmax	pmax		
	comp=Z,11nm,1.3s,mb5.0						
CMB	**Columbia Colle**	**89.28**	**47**	*e*P	**P**	**07 29 11.1**	**+0.8**
	comp=Z,11nm,1.3s,mb5.0						
MURB	**Monte Urbino**	**89.33**	**319**	P	**P**	**07 29 11.8**	**+1.4**
	comp=Z,126nm,1.8s,mb6.0						
AQU	**L’Aquila**	**89.34**	**318**	*e*P	**P**	**07 29 11.8**	**+1.4**
AQU				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.7						
AQU	**L’Aquila**	**89.34**	**318**	*e*P	**P**	**07 29 11.8**	**+1.4**
	comp=Z,50nm,1.3s,mb5.7						
PGD	**Poggio Sodo**	**89.44**	**320**	P	**P**	**07 29 13.3**	**+2.5**
PGD				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.7						
PGD	**Poggio Sodo**	**89.44**	**320**	P	**P**	**07 29 13.3**	**+2.5**
	comp=Z,41nm,1.0s,mb5.7						
VMG	**Vicchio**	**89.49**	**320**	P	**P**	**07 29 13.8**	**+2.7**
HLID	**Hailey**	**89.84**	**40**	*e*P	**P**	**07 29 14.0**	**+1.3**
	comp=Z,4.9nm,1.1s,mb4.8						
SOI	**Samo**	**90.10**	**313**	P	**P**	**07 29 15.1**	**+1.0**
BOZ	**Bozeman (W)**	**90.13**	**37**	*e*P	**P**	**07 29 14.9**	**+0.9**
NVAR	**Mina Array Bea**	**90.43**	**46**	P	**P**	**07 29 16.3**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=312,slow=4.0,SNR=4.4						
NVAR				LR	LR	08 05 11.0	
	comp=Z,81nm,21.4s,MS4.1,baz=270,slow=32						
PPT	**Papeete**	**90.65**	**109**	LR	LR	08 05 54.4	
	comp=Z,389nm,18.9s,MS4.9,baz=303,slow=33						
ELK	**Elko**	**91.03**	**43**	P	**P**	**07 29 20.2**	**+1.9**
	comp=Z,0.9nm,0.7s,mb4.2,baz=12,slow=8.0,SNR=3.6						
TPH	**Tonopah**	**91.33**	**46**	*e*P	**P**	**07 29 20.0**	**+0.3**
TPH				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.1						
TPH	**Tonopah**	**91.33**	**46**	*e*P	**P**	**07 29 20.0**	**+0.3**
	comp=Z,10.0nm,1.1s,mb5.1						
HVU	**Hansel Valley**	**91.88**	**41**	P	**P**	**07 29 23.9**	**+1.7**
HWUT	**Hardware Ranch**	**92.70**	**41**	*e*P	**P**	**07 29 26.9**	**+1.0**
	comp=Z,17nm,1.4s,mb5.3						
PDAR	**Pinedale Array**	**93.11**	**39**	P	**P**	**07 29 26.8**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=321,slow=9.5,SNR=4.5						
MSU	**Marysvale**	**94.26**	**43**	*e*P	**P**	**07 29 34.0**	**+0.8**
NEN	**Nelson**	**94.29**	**47**	*e*P	**P**	**07 29 34.9**	**+1.5**
PV10	**Paradox Valley**	**96.25**	**42**	*e*P	**P**	**07 29 43.6**	**+1.2**
VNA2	**Neumayer--Watz**	**128.73**	**197**	*e*	PKPdf	07 35 29.4	+5.0
VNA2	**Neumayer--Watz**	**128.73**	**197**	*e*	PKPdf	07 35 33.2	+8.8
VNA2	**Neumayer--Watz**	**128.73**	**197**	⇑*i*PKPdf	PKPdf	07 35 21.4	-3.0
VNA2				*e*		07 35 29.4	
VNA2				*e*		07 35 33.2	
VNA3	**Neumayer Olymp**	**129.12**	**196**	*e*	PKPdf	07 35 33.8	+8.6
VNA3	**Neumayer Olymp**	**129.12**	**196**	*e*	PKPdf	07 35 37.2	+12
VNA3	**Neumayer Olymp**	**129.12**	**196**	⇑*i*PKPdf	PKPdf	07 35 26.1	+0.9
VNA3				*e*		07 35 33.8	
VNA3				*e*		07 35 37.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VNA1	**Neumayer--Stat**	**129.12**	**197**	*e*	PKPdf	07 35 34.4	+9.2
VNA1	**Neumayer--Stat**	**129.12**	**197**	*e*	PKPdf	07 35 38.6	+13
VNA1	**Neumayer--Stat**	**129.12**	**197**	⇑*i*PKPdf	PKPdf	07 35 28.3	+3.1
VNA1				*e*		07 35 34.4	
VNA1				*e*		07 35 38.6	
SDV	**Santo Domingo**	**140.56**	**31**	PKP	PKPdf	07 35 44.1	-3.9
	comp=Z,5.3nm,0.9s,baz=316,slow=2.2,SNR=4.8						
SDV	**Santo Domingo**	**140.56**	**31**	PKPdf	PKPdf	07 35 43.9	-4.1
LPAZ	**La Paz**	**161.71**	**61**	*e*PKIKP	PKPdf	07 36 17.6	-1.2

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*IDC **20** 07:18:45.9±1.0, 26.33N×129.16E, mb4.1/10, mb1 4.2/11, mb1mx4.1/22, mbtmp4.1/11, ML3.3/1, MS4.9/2, Ms1 4.9/2, ms1mx4.0/27, Error ellipse: s-maj=30.9km s-min=22.8km az=55.0*

*NEIC **20** 07:18:47.4±0.6, 26.29N×129.14E, h10^{km}, mb4.4/1, Error ellipse: s-maj=19.3km s-min=12.0km az=72.0*

*JMA **20** 07:18:49.4±0.1, 26.03N×128.68E, h42^{km}, M3.8*

ISC 20 07:18:49.0±1.0**, 26.04N**±0.05×**128.69E**±0.05**, h28**^{km}±7^{km}**, n29, σ0^{s}69**/34**, mb4.0**/12**, MS5.0**/2**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.85**	**277**	P	**Pb**	**07 19 05.1**	**0.0**
JJT2				*e*S	**Sb**	**07 19 16.3**	**+0.2**
JOW	**Kunigami**	**0.87**	**335**	Pn	**Pn**	**07 19 05.7**	**+0.2**
	740nm,0.3s,baz=146,slow=18,SNR=6.9						
JOW				Sn	**Sn**	**07 19 16.6**	**-0.6**
	940nm,0.3s,baz=105,slow=24,SNR=7.0						
JOW	**Kunigami**	**0.87**	**335**	P	**Pb**	**07 19 05.5**	**0.0**
JOW				*e*S	**Sb**	**07 19 16.8**	**+0.1**
NAH1	**Naha**	**0.91**	**280**	P	**Pn**	**07 19 05.9**	**-0.1**
NAH1				*e*S	**Sb**	**07 19 18.1**	**+0.2**
JIH	**Iheya**	**1.18**	**327**	P	**Pn**	**07 19 10.2**	**+0.3**
JAGN	**Aguni-jima**	**1.41**	**293**	P	**Pn**	**07 19 13.3**	**+0.2**
JKE	**Kume jima 2**	**1.73**	**280**	P	**Pn**	**07 19 17.1**	**-0.7**
JTK	**Tokunoshima**	**1.75**	**8**	P	**Pn**	**07 19 18.7**	**+0.6**
JMZ	**Minamidaito 2**	**2.29**	**95**	P	**Pn**	**07 19 25.9**	**+0.1**
JMZ				*e*S	**Sn**	**07 19 52.5**	**-0.9**
JAM	**Amami Oshima**	**2.50**	**19**	P	**Pn**	**07 19 28.7**	**-0.1**
JTJ	**Tarama**	**3.87**	**250**	P	**Pn**	**07 19 46.1**	**-2.1**
JTJ				*e*S	**Sn**	**07 20 28.4**	**-4.8**
JNN	**Nakanoshima**	**3.93**	**15**	P	**Pn**	**07 19 49.5**	**+0.4**
JNN				*e*S	**Sn**	**07 20 34.2**	**-0.6**
JNU	**Nakatsue**	**7.31**	**15**	Pn	**Pn**	**07 20 29.6**	**-7.2**
	0.6nm,0.3s,baz=94,slow=44,SNR=5.4						
ULN	**Ulaanbaatar**	**27.64**	**328**	P	**P**	**07 24 35.3**	**-0.9**
	5.6nm,0.7s,mb4.3						
SONM	**Songino Array**	**27.93**	**327**	P	**P**	**07 24 40.4**	**+1.5**
	1.5nm,0.5s,mb3.9,baz=142,slow=11,SNR=6.6						
MKAR	**Makanchi Array**	**41.97**	**312**	P	**P**	**07 26 38.6**	**-0.5**
	1.5nm,0.6s,mb3.8,baz=91,slow=9.8,SNR=4.6						
WRAB	**Tennant Creek**	**46.03**	**173**	*e*P	**P**	**07 27 12.7**	**+0.4**
WRA	**Warramunga Arr**	**46.04**	**173**	P	**P**	**07 27 13.0**	**+0.7**
	1.7nm,0.5s,mb4.2,baz=354,slow=8.5,SNR=6.7						
CTA	**Charters Tower**	**48.92**	**158**	LR	LR	07 46 31.9	
	comp=Z,411nm,20.5s,MS4.4,baz=150,slow=34						
BVAR	**Borovoye Array**	**50.69**	**318**	P	**P**	**07 27 47.1**	**-0.8**
	0.8nm,0.4s,mb4.0,baz=86,slow=7.5,SNR=3.8						
ILAR	**Eielson Array**	**64.41**	**28**	P	**P**	**07 29 19.4**	**-5.1**
	0.9nm,1.0s,mb3.8,baz=288,slow=8.6,SNR=4.0						
FINES	**FINESS Array B**	**73.23**	**331**	P	**P**	**07 30 18.6**	**-0.4**
	0.6nm,0.5s,mb3.8,baz=72,slow=6.0,SNR=4.0						
AKASG	**Malin Array Be**	**75.94**	**320**	P	**P**	**07 30 34.5**	**-0.3**
	1.2nm,0.4s,mb4.1,baz=64,slow=6.4,SNR=4.5						
BRTR	**Keskin Array B**	**77.47**	**308**	P	**P**	**07 30 44.3**	**+0.7**
	2.0nm,0.9s,mb4.0,baz=79,slow=7.3,SNR=3.7						
HFS	**Hagfors**	**79.18**	**332**	P	**P**	**07 30 52.8**	**+0.3**
	1.0nm,0.5s,mb4.0,baz=79,slow=7.3,SNR=3.3						
NOA	**NORSAR Array B**	**79.66**	**334**	P	**P**	**07 30 55.7**	**+0.5**
	0.6nm,0.8s,mb3.6,baz=61,slow=4.9,SNR=3.7						
MLR	**Muntele Rosu**	**80.17**	**316**	P	**P**	**07 30 59.7**	**+1.6**
	2.2nm,0.6s,mb4.3,baz=96,slow=9.2,SNR=3.2						
MLR	**Muntele Rosu**	**80.17**	**316**	P	**P**	**07 30 59.7**	**+1.5**
DAVOX	**Davos**	**88.90**	**323**	LR	LR	08 12 32.5	
	comp=Z,2µm,19.1s,MS5.5,baz=79,slow=36						

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*IDC **20** 07:20:33.8±1.8, 26.14N×128.72E, mb4.0/7, mb1 4.1/7, mb1mx3.9/19, mbtmp4.0/7, MS4.4/3, Ms1 4.4/3, ms1mx3.9/31, Error ellipse: s-maj=118.6km s-min=17.9km az=67.0*

*NEIC **20** 07:20:35.3±1.4, 26.09N×128.73E, h10^{km}, mb4.2/1, Error ellipse: s-maj=86.8km s-min=14.6km az=68.0*

*JMA **20** 07:20:36.7±0.2, 26.04N×128.69E, h44^{km}, M3.6*

ISC 20 07:20:36.2±1.1**, 26.04N**±0.04×**128.70E**±0.05**, h28**^{km}±8^{km}**, n23, σ0^{s}62**/26**, mb3.9**/8**, MS4.5**/3**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.86**	**277**	P	**Pb**	**07 20 52.5**	**0.0**
JJT2				*e*S	**Sb**	**07 21 03.8**	**0.0**
JOW	**Kunigami**	**0.88**	**334**	Pn	**Pn**	**07 20 52.7**	**-0.1**
	288nm,0.3s,baz=162,slow=18,SNR=7.4						
JOW				Sn	**Sn**	**07 21 04.3**	**-0.3**
	759nm,0.3s,baz=94,slow=26,SNR=9.2						
JOW	**Kunigami**	**0.88**	**334**	P	**Pn**	**07 20 52.7**	**-0.1**
JOW				*e*S	**Sb**	**07 21 04.3**	**+0.1**
NAH1	**Naha**	**0.93**	**281**	*e*S	**Sb**	**07 21 05.3**	**-0.2**
JIH	**Iheya**	**1.19**	**327**	P	**Pn**	**07 20 57.6**	**+0.4**
JAGN	**Aguni-jima**	**1.42**	**293**	P	**Pn**	**07 21 00.6**	**+0.1**
JKE	**Kume jima 2**	**1.75**	**280**	P	**Pn**	**07 21 04.3**	**-0.8**
JTK	**Tokunoshima**	**1.76**	**7**	P	**Pn**	**07 21 05.3**	**0.0**
JTK				*e*S	**Sn**	**07 21 26.2**	**-0.7**
JMZ	**Minamidaito 2**	**2.28**	**95**	P	**Pn**	**07 21 13.1**	**+0.4**
JMZ				*e*S	**Sn**	**07 21 39.1**	**-1.0**
JAM	**Amami Oshima**	**2.50**	**19**	P	**Pn**	**07 21 16.0**	**+0.1**
JAM				*e*S	**Sn**	**07 21 44.7**	**-1.1**
JZK	**Kikaishima**	**2.54**	**26**	*e*S	**Sn**	**07 21 48.3**	**+1.6**
JNN	**Nakanoshima**	**3.93**	**15**	P	**Pn**	**07 21 36.8**	**+0.6**
ULN	**Ulaanbaatar**	**27.65**	**328**	P	**P**	**07 26 24.4**	**+1.0**
	4.4nm,0.9s,mb4.1						
SONM	**Songino Array**	**27.95**	**327**	P	**P**	**07 26 26.2**	**+0.1**
	1.6nm,0.6s,mb3.8,baz=139,slow=10,SNR=3.7						
MKAR	**Makanchi Array**	**41.98**	**312**	P	**P**	**07 28 25.8**	**-0.6**
	1.0nm,0.6s,mb3.6,baz=98,slow=10.0,SNR=5.1						
WRA	**Warramunga Arr**	**46.03**	**173**	P	**P**	**07 28 59.7**	**+0.4**
	0.8nm,0.5s,mb3.9,baz=353,slow=8.5,SNR=3.4						
FINES	**FINESS Array B**	**73.24**	**331**	P	**P**	**07 32 05.7**	**-0.5**
	0.7nm,0.6s,mb3.8,baz=101,slow=7.1,SNR=3.9						
AKASG	**Malin Array Be**	**75.95**	**320**	P	**P**	**07 32 21.5**	**-0.6**
	1.1nm,0.5s,mb4.0,baz=54,slow=7.1,SNR=5.4						
BRTR	**Keskin Array B**	**77.49**	**308**	P	**P**	**07 32 31.8**	**+1.0**
	2.0nm,0.9s,mb4.0,baz=86,slow=5.4,SNR=4.1						
NOA	**NORSAR Array B**	**79.67**	**334**	P	**P**	**07 32 42.7**	**+0.4**
	0.9nm,0.7s,mb3.8,baz=52,slow=5.5,SNR=3.2						
EIL	**Elat**	**80.58**	**298**	LR	LR	08 11 19.6	
	comp=Z,286nm,19.3s,MS4.6,baz=300,slow=38						
IDI	**Anoyia**	**85.68**	**307**	LR	LR	08 14 20.0	
	comp=Z,198nm,21.1s,MS4.5,baz=268,slow=38						
PDAR	**Pinedale Array**	**93.05**	**39**	LR	LR	08 17 54.6	
	comp=Z,158nm,19.7s,MS4.5,baz=344,slow=37						

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*IDC **20** 07:38:30.2±0.6, 2.33N×96.39E, mb4.7/20, mb1 4.8/21, mb1mx4.7/25, mbtmp4.7/21, ML4.7/1, MS4.2/7, Ms1 4.2/7, ms1mx3.8/31, Error ellipse: s-maj=21.1km s-min=12.5km az=46.0*

*BJI **20** 07:38:32.7, 2.16N×96.47E, h37^{km}, mB5.3, mb5.2, Ms4.8, Msz4.5*

*MOS **20** 07:38:33.3±1.0, 2.27N×96.35E, h34^{km}, mb5.2/29, Error ellipse: s-maj=13.3km s-min=6.7km az=106.0*

*HRVD **20** 07:38:34.8±1.5, 2.02N×95.94E, h36^{km}±2^{km}, MW4.8/25, Centroid moment Tensor Solution. LP body waves: s13,c17;Mantle waves: s25,c32; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.50±.22; $M_{\theta\theta}$-1.09±.19; $M_{\phi\phi}$-0.41±.30; $M_{r\theta}$0.62±.11; $M_{\theta\phi}$0.59±.11; $M_{\phi r}$-0.91±.17; Best double couple: $M_0$1.83×10^{16} NP1:ϕ_s288°, δ29°, λ67°. NP2:ϕ_s134°, δ64°, λ102°. Principal axes: T 1.912, Plg69°, Azm69°; N -.169, Plg11°, Azm309°; P -1.748, Plg18°, Azm215°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **20** 07:38:34.8±0.2, 2.30N×96.35E, h30^{km}, mb5.0/25 Error ellipse: s-maj=6.8km s-min=4.3km az=221.0*

ISC 20 07:38:33.2±0.3**, 2.29N**±0.05×**96.37E**±0.04**, h32**^{km}**, h32**^{km}±2.8^{km}**:pP-P, n143, σ1^{s}04**/147**, mb4.9**/64**, MS4.4**/16**, 13C-5D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.17**	**64**	P	**Pn**	**07 39 51.5**	**+1.0**
KULM	**Kulim**	**5.21**	**55**	⇑*i*P	**Pn**	**07 39 51.7**	**+0.7**
SNG	**Songkhla**	**6.44**	**41**	P	**Pn**	**07 40 08.0**	**-0.4**
	570nm,1.0s						
KGM	**Kluang**	**6.95**	**92**	P	**Pn**	**07 40 17.0**	**+1.5**
KSM	**Kuching**	**13.95**	**93**	*e*P	**P**	**07 41 52.3**	**+1.1**
KSM				*e*		07 41 59.1	
KKTK	**Khon Kaen**	**15.34**	**24**	P	**P**	**07 42 14.0**	**+4.7**
	1µm,0.5s						
CMAR	**Chiang Mai Arr**	**16.27**	**9**	Pn	**P**	**07 42 20.0**	**-1.2**
	1.0nm,0.3s,baz=192,slow=12,SNR=79						
CMAR				LR	LR	07 49 22.5	
	comp=Z,1µm,19.3s,baz=195,slow=40						
NANT	**Nan**	**16.95**	**14**	⇓P	**P**	**07 42 29.0**	**-0.8**
	190nm,1.0s						
VIS	**Vishakhapatnam**	**19.98**	**321**	*e*P	**P**	**07 43 07.6**	**+1.5**
KKM	**Kota Kinabalu**	**20.14**	**79**	*e*P	**P**	**07 43 07.8**	**+0.2**
KKM	**Kota Kinabalu**	**20.14**	**79**	P	**P**	**07 43 09.0**	**+1.3**
QIZ	**Qiongzhong**	**21.23**	**37**	*e*P	**P**	**07 43 17.0**	**-1.9**
QIZ				*e*S	**S**	**07 47 13.8**	**+5.6**
QIZ				LR	LR		
	comp=N,910nm,13.8s,MS4.7						
QIZ				LR	LR		
	comp=E,2µm,13.5s,MS4.7						
QIZ				LR	LR		
	comp=Z,3µm,12.9s,MS4.8						
TSM	**Tawau**	**21.56**	**84**	P	**P**	**07 43 23.8**	**+1.6**
HYB	**Hyderabad**	**23.07**	**312**	*i* P	**P**	**07 43 38.5**	**+1.2**
HYB				*e*sP		07 43 49.0	
KMI	**Kunming**	**23.52**	**15**	P	**P**	**07 43 43.8**	**+2.2**
KMI				AP		07 43 56.9	
KMI				PP	PP	07 44 18.1	+4.2
KMI				PCP	PcP	07 47 28.0	-0.2
KMI				S	**S**	**07 47 52.1**	**+2.4**
KMI				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.9						
KMI				LR	LR		
	comp=N,520nm,13.6s,MS4.3						
KMI				LR	LR		
	comp=E,460nm,12.5s,MS4.3						
KMI				LR	LR		
	comp=Z,880nm,14.2s,MS4.4						
KMI	**Kunming**	**23.52**	**15**	P	**P**	**07 43 43.7**	**+2.1**
KMI				*PP		07 43 56.9	
KMI						07 44 18.1	
KMI				PPP	PPP	07 44 29.0	+5.1
KMI						07 47 28.0	
KMI				S	**S**	**07 47 51.0**	**+1.3**
KMI				SS	SS	07 48 44.6	+6.4
KMI				SSS	SSS	07 49 01.0	+6.7
KMI				pmax	pmax		
	comp=Z,40nm,0.8s,mb4.9						
KMI				MLR	MLR		
	comp=Z,890nm,14.2s,MS4.4						
KMI	**Kunming**	**23.52**	**15**	P	**P**	**07 43 43.7**	**+2.1**
	comp=Z,40nm,0.8s,mb4.9						
KMI				pP		07 43 56.9	
KMI				sP		07 44 03.6	
KMI				PP	PP	07 44 18.1	+4.2
KMI				PPP	PPP	07 44 29.0	+5.1
KMI				PcP	PcP	07 47 28.0	-0.2
KMI				S	**S**	**07 47 51.0**	**+1.3**
KMI				sS		07 48 14.9	
KMI				SS	SS	07 48 44.6	+6.4
KMI				SSS	SSS	07 49 01.0	+6.7
KMI				LR	LR		
	comp=Z,890nm,14.2s,MS4.4						
SHL	**Shillong**	**23.55**	**350**	*e*P	**P**	**07 43 40.0**	**-1.8**
SHL				*e*S	**S**	**07 47 52.0**	**+1.9**
PKI	**Pulchoki**	**27.24**	**338**	*e*P	**P**	**07 44 16.8**	**+0.2**
	comp=Z,37nm,0.8s,mb4.9						
PKI	**Pulchoki**	**27.24**	**338**	*e*P	**P**	**07 44 16.8**	**+0.2**
PKI				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.7						
GUN	**Gumba**	**27.39**	**339**	*e*P	**P**	**07 44 18.5**	**+0.6**
	comp=Z,95nm,0.8s,mb5.4						
DMN	**Daman**	**27.39**	**338**	*e*P	**P**	**07 44 18.9**	**+0.9**
KKN	**Kakani**	**27.49**	**338**	*e*P	**P**	**07 44 19.3**	**+0.4**
	comp=Z,54nm,0.8s,mb5.1						
KKN	**Kakani**	**27.49**	**338**	*e*P	**P**	**07 44 19.3**	**+0.4**
KKN				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.8						
LSA	**Lhasa**	**27.71**	**350**	*e*P	**P**	**07 44 21.3**	**+0.5**
LSA				pmax	pmax		
	comp=Z,88nm,1.1s,mb5.3						
LSA	**Lhasa**	**27.71**	**350**	*e*P	**P**	**07 44 21.3**	**+0.4**
	comp=Z,88nm,1.1s,mb5.3						
GKN	**Gorkha**	**27.92**	**337**	*e*P	**P**	**07 44 23.0**	**+0.2**
	comp=Z,48nm,0.7s,mb5.3						
KOLN	**Koldanda**	**28.13**	**335**	*e*P	**P**	**07 44 25.2**	**+0.6**
	comp=Z,44nm,0.8s,mb5.2						
CD2	**Chengdu**	**29.32**	**13**	P	**P**	**07 44 33.8**	**-1.5**
CD2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
ENH	**Enshi**	**30.49**	**23**	*e*P	**P**	**07 44 44.5**	**-1.2**
	comp=Z,24nm,0.8s,mb5.0						
LGTI	**Lohaghat**	**31.06**	**332**	*e*P	**P**	**07 44 51.0**	**+0.2**
MBWA	**Marble Bar**	**32.65**	**137**	*e*P	**P**	**07 45 05.5**	**+0.8**
XAN	**Xi'an**	**33.70**	**19**	P	**P**	**07 45 12.0**	**-1.7**
XAN				AP	pP	07 45 18.8	-4.4
XAN				AMB	AMB		
	comp=Z,90nm,0.9s,mb5.7						
LZH	**Lanzhou**	**34.34**	**11**	⇑P	**P**	**07 45 13.6**	**-5.6**
LZH				*PP	pP	07 45 30.2	+1.5
LZH				pmax	pmax		
	comp=Z,42nm,1.5s,mb5.2						
LZH				MLR	MLR		
	comp=Z,380nm,17.4s,MS4.2						
LZH	**Lanzhou**	**34.34**	**11**	⇑P	**P**	**07 45 13.6**	**-5.6**
	comp=Z,42nm,1.5s,mb5.2						
LZH				pP	pP	07 45 30.2	+1.5
LZH				sP	sP	07 45 37.5	+4.7
LZH				LR	LR		
	comp=Z,380nm,17.4s,MS4.2						
FITZ	**Fitzroy Crossi**	**35.23**	**126**	*e*P	**P**	**07 45 26.3**	**-0.7**
	comp=Z,18nm,0.9s,mb5.0						
FITZ	**Fitzroy Crossi**	**35.23**	**126**	P	**P**	**07 45 26.3**	**-0.7**
	comp=Z,20nm,0.8s,mb5.1,baz=262,slow=2.0,SNR=14						
NJ2	**Nanjing**	**36.40**	**33**	*e*P	**P**	**07 45 36.3**	**-0.5**
NJ2				AP	pP	07 45 45.9	-0.4
NJ2				XP	sP	07 45 49.9	-0.4
NJ2				PP	PP	07 47 02.3	+1.6
NJ2				S	**S**	**07 51 16.0**	**+0.6**
NJ2				XS		07 51 32.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,200nm,4.0s						
NJ2				LR	LR		
	comp=N,5µm,14.7s,MS5.6						
NJ2				LR	LR		
	comp=E,6µm,15.0s,MS5.6						
SSE	**Sheshan**	**37.02**	**37**	P	**P**	**07 45 41.5**	**-0.5**
SSE				XP	sP	07 45 54.0	-1.6
SSE				PP	PP	07 47 06.9	-2.0
SSE				S	**S**	**07 51 28.1**	**+3.1**
SSE				XS		07 51 42.5	
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,100nm,4.0s						
SSE				LR	LR		
	comp=N,130nm,15.7s,MS4.0						
SSE				LR	LR		
	comp=E,180nm,15.7s,MS4.0						
SSE				LR	LR		
	comp=Z,270nm,14.1s,MS4.2						
SSE	**Sheshan**	**37.02**	**37**	P	**P**	**07 45 41.5**	**-0.5**
	comp=Z,27nm,0.8s,mb5.1						
SSE				sP	sP	07 45 54.0	-1.6
SSE				PP	PP	07 47 06.9	-2.0
SSE				S	**S**	**07 51 28.1**	**+3.1**
SSE				sS		07 51 42.5	
SSE				LR	LR		
	comp=Z,280nm,14.1s,MS4.2						
GTA	**Gaotai**	**37.09**	**4**	P	**P**	**07 45 42.3**	**-0.2**
GTA				AP	pP	07 45 49.6	-2.4
GTA				XP	sP	07 45 52.8	-3.2
GTA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.2						
KAKA	**Kakadu**	**38.79**	**113**	⇑*i*P	**P**	**07 45 55.8**	**-1.2**
	comp=Z,21nm,0.9s,mb4.9						
HHC	**Hu-ho-hao-te**	**40.77**	**18**	*e*P	**P**	**07 46 14.5**	**+1.4**
HHC				AP	pP	07 46 27.9	+5.2
HHC				XP	sP	07 46 32.4	+5.7
HHC				PP	PP	07 47 51.3	+1.1
HHC				PCP	PcP	07 48 14.8	+0.2
HHC				S	**S**	**07 52 20.3**	**-1.2**
HHC				XS		07 52 40.0	
HHC				SCS	ScS	07 56 11.4	-2.3
HHC				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.1						
HHC				AMB	AMB		
	comp=Z,430nm,10.2s						
HHC				LR	LR		
	comp=N,580nm,13.7s,MS4.6						
HHC				LR	LR		
	comp=E,400nm,16.7s,MS4.6						
HHC				LR	LR		
	comp=Z,550nm,14.9s,MS4.5						
WMQ	**Urumqi**	**42.07**	**351**	P	**P**	**07 46 24.0**	**+0.2**
WMQ				AP	pP	07 46 34.0	+0.6
WMQ				XP	sP	07 46 38.0	+0.6
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
WMQ				LR	LR		
	comp=N,330nm,22.4s						
WMQ				LR	LR		
	comp=Z,280nm,22.0s,MS4.1						
WRA	**Warramunga Arr**	**43.31**	**122**	P	**P**	**07 46 34.0**	**-0.2**
	comp=Z,7.4nm,0.9s,mb4.4,baz=302,slow=9.1,SNR=36						
WRAB	**Tennant Creek**	**43.31**	**122**	*e*P	**P**	**07 46 34.0**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.9						
WRAB	**Tennant Creek**	**43.31**	**122**	*e*P	**P**	**07 46 34.0**	**-0.2**
	comp=Z,25nm,0.9s,mb4.9						
WB2	**Warramunga Arr**	**43.32**	**122**	*e*P	**P**	**07 46 33.8**	**-0.5**
ULHL	**Ulahol**	**43.69**	**338**	P	**P**	**07 46 35.6**	**-1.4**
	SNR=12						
KZA	**Kyzart**	**43.92**	**337**	P	**P**	**07 46 40.4**	**+1.6**
	SNR=7.9						
UCH	**Uchtor**	**44.33**	**337**	P	**P**	**07 46 43.5**	**+1.3**
	SNR=23						
TKM2	**Tokmak 2**	**44.51**	**338**	P	**P**	**07 46 44.6**	**+1.0**
	SNR=9.9						
KBK	**Karagaybulak**	**44.53**	**337**	P	**P**	**07 46 45.8**	**+2.0**
	SNR=5.8						
JNU	**Nakatsue**	**44.56**	**43**	P	**P**	**07 46 42.9**	**-1.3**
	comp=Z,8.6nm,0.9s,mb4.6,baz=210,slow=6.4,SNR=4.4						
AML	**Almayashu**	**44.58**	**336**	P	**P**	**07 46 45.6**	**+1.3**
	SNR=15						
AAK	**Ala-Archa**	**44.68**	**337**	*i* P	**P**	**07 46 45.2**	**+0.1**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
AAK	**Ala-Archa**	**44.68**	**337**	*e*P	**P**	**07 46 44.8**	**-0.3**
	comp=Z,9.3nm,0.9s,mb4.6						
EKS2	**Erkin-Say**	**44.99**	**336**	P	**P**	**07 46 48.8**	**+1.2**
	SNR=10						
USP	**Ospenovka**	**45.22**	**337**	P	**P**	**07 46 50.0**	**+0.7**
	SNR=29						
MKAR	**Makanchi Array**	**46.00**	**347**	P	**P**	**07 46 55.4**	**-0.1**
	comp=Z,45nm,0.8s,mb5.4,baz=160,slow=7.7,SNR=310						
MKAR				LR	LR	08 08 37.4	
	comp=Z,191nm,18.3s,MS4.1,baz=172,slow=39						
SONM	**Songino Array**	**46.19**	**9**	P	**P**	**07 46 57.2**	**+0.3**
	comp=Z,19nm,0.7s,mb5.2,baz=189,slow=9.1,SNR=111						
SONM				PcP	PcP	07 48 33.4	+0.6
	comp=Z,4.9nm,0.7s,baz=187,slow=3.9,SNR=7.1						
SONM				ScP		07 52 25.8	
	comp=Z,1.4nm,1.2s,baz=225,slow=5.2,SNR=4.6						
ULN	**Ulaanbaatar**	**46.33**	**10**	*e*P	**P**	**07 46 57.9**	**-0.1**
ZAK	**Zakamensk**	**48.28**	**6**	⇑*i*P	**P**	**07 47 13.3**	**0.0**
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
CN2	**Changchun**	**48.73**	**28**	*e*P	**P**	**07 47 15.9**	**-0.9**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
MOY	**Mondy**	**49.36**	**4**	*e*P	**P**	**07 47 22.9**	**+1.3**
MOY				pmax	pmax		
	comp=Z,21nm,2.4s,mb4.7						
TLY	**Talaya**	**49.60**	**6**	*e*P	**P**	**07 47 23.7**	**+0.2**
TLY				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
TLY	**Talaya**	**49.60**	**6**	*e*P	**P**	**07 47 23.5**	**+0.1**
	comp=Z,14nm,0.8s,mb5.0						
HIA	**Hailar**	**50.89**	**20**	*e*P	**P**	**07 47 33.0**	**-0.3**
HIA				pmax	pmax		
	comp=Z,31nm,1.1s						
HIA	**Hailar**	**50.89**	**20**	*e*P	**P**	**07 47 33.0**	**-0.3**
	comp=Z,31nm,1.1s,mb5.1						
MDJ	**Mudanjiang**	**51.34**	**30**	P	**P**	**07 47 36.8**	**0.0**
MDJ				AP	pP	07 47 48.4	+1.8
MDJ				XP	sP	07 47 52.3	+2.0
MDJ				PCP	PcP	07 48 50.8	-0.6
MDJ				PP	PP	07 49 34.1	-0.4
MDJ				SCP		07 52 43.9	
MDJ				PCS		07 52 48.8	
MDJ				S	**S**	**07 54 54.4**	**+2.0**
MDJ				XS		07 55 13.8	
MDJ				AMB	AMB		
	comp=Z,70nm,7.2s						
MDJ				LR	LR		
	comp=N,300nm,16.1s,MS4.6						
MDJ				LR	LR		
	comp=E,420nm,16.7s,MS4.6						
MDJ				LR	LR		
	comp=Z,410nm,12.1s,MS4.7						
MJAR	**Matsushiro Arr**	**51.46**	**43**	P	**P**	**07 47 37.3**	**-0.6**
	comp=Z,4.0nm,0.9s,mb4.3,baz=211,slow=6.7,SNR=8.1						
MJAR				LR	LR	08 11 01.7	
	comp=Z,184nm,18.1s,MS4.2,baz=280,slow=38						
CIT	**Chita**	**51.61**	**13**	*e*P	**P**	**07 47 39.0**	**+0.3**
CIT				pmax	pmax		
	comp=Z,48nm,1.7s,mb5.2						
PMG	**Port Moresby**	**51.91**	**104**	*e*P	**P**	**07 47 41.1**	**-0.4**
PMG				pmax	pmax		
	comp=Z,25nm,0.8s						
PMG	**Port Moresby**	**51.91**	**104**	P	**P**	**07 47 40.7**	**-0.8**
	comp=Z,25nm,0.8s,mb5.2,baz=309,slow=3.8,SNR=15						
PMG	**Port Moresby**	**51.91**	**104**	*e*P	**P**	**07 47 41.1**	**-0.4**
	comp=Z,25nm,0.8s,mb5.2						
ZAL	**Zalesovo**	**52.36**	**351**	P	**P**	**07 47 44.5**	**+0.2**
	comp=Z,22nm,0.7s,mb5.2,baz=309,slow=6.2,SNR=92						
OPO	**Ambohidratompo**	**52.63**	**245**	P	**P**	**07 47 47.0**	**+0.2**
	comp=Z,1.2nm,0.6s,mb4.0,baz=41,slow=9.5,SNR=3.7						
NVS	**Novosibirsk**	**53.48**	**351**	*e*P	**P**	**07 47 49.8**	**-2.8**
NVS				*e*		07 49 06.2	
NVS				pmax	pmax		
	comp=N,19nm,0.8s						
NVS				pmax	pmax		
	comp=E,11nm,0.8s						
NVS				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
CTA	**Charters Tower**	**53.73**	**117**	*e*P	**P**	**07 47 54.9**	**0.0**
	comp=Z,10nm,1.0s,mb4.7						
CTA	**Charters Tower**	**53.73**	**117**	*e*P	**P**	**07 47 54.9**	**0.0**
CTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CTA	**Charters Tower**	**53.73**	**117**	P	**P**	**07 47 54.7**	**-0.2**
	comp=Z,16nm,1.0s,mb4.9,baz=287,slow=7.0,SNR=8.7						
CTA				LR	LR	08 15 08.5	
	comp=Z,214nm,18.5s,MS4.2,baz=237,slow=41						
CTAO	**Charters Tower**	**53.73**	**117**	*e*P	**P**	**07 47 54.2**	**-0.7**
VOSK	**Vostochnaya**	**54.52**	**341**	*i* P	**P**	**07 47 59.3**	**-1.0**
STKA	**Stephens Creek**	**54.69**	**132**	*e*P	**P**	**07 48 02.4**	**+0.5**
	comp=Z,6.2nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**54.69**	**132**	P	**P**	**07 48 02.0**	**+0.1**
	comp=Z,7.6nm,0.8s,mb4.8,baz=310,slow=9.3,SNR=12						
BVA0	**Borovoye Array**	**54.96**	**341**	*i* P	**P**	**07 48 02.6**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BVAR	**Borovoye Array**	**54.96**	**341**	P	**P**	**07 48 02.4**	**-1.1**
	comp=Z,17nm,0.7s,mb5.2,baz=143,slow=8.6,SNR=100						
ZRNK	**Zerenda**	**55.36**	**340**	P	**P**	**07 48 05.4**	**-1.0**
ZRNK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
ZRNK	**Zerenda**	**55.36**	**340**	*i* P	**P**	**07 48 05.4**	**-1.0**
AB31	**Akbulak array**	**56.17**	**332**	P	**P**	**07 48 11.4**	**-0.9**
AB31				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
BOD	**Bodaibo**	**57.11**	**11**	*e*P	**P**	**07 48 18.4**	**-0.5**
BOD				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
ASAJ	**Asahikawa**	**58.31**	**38**	LR	LR	08 15 18.6	
	comp=Z,145nm,18.3s,MS4.1,baz=189,slow=38						
YSS	**Yuzh-Sakhalins**	**59.93**	**35**	*e*P	**P**	**07 48 39.0**	**+0.3**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
YSS	**Yuzh-Sakhalins**	**59.93**	**35**	*i* P	**P**	**07 48 39.0**	**+0.3**
GNI	**Garni**	**59.94**	**316**	*i* P	**P**	**07 48 37.5**	**-1.4**

SVE	**Sverdlovsk**	**61.38**	**339**	⇑*e*P	**P**	**07 48 47.3**	**-1.1**
SVE				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.2						
ZEI	**Tsey**	**61.64**	**318**	*e*P	**P**	**07 48 48.1**	**-2.3**
ZEI				*i* *PP	pP	07 48 57.5	-2.9
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
ARU	**Arti**	**61.87**	**337**	⇑*i*P	**P**	**07 48 50.1**	**-1.6**
ARU				*e*		07 49 26.3	
ARU				*e*S	**S**	**07 57 14.6**	**+3.2**
ARU				*e*SS	SS	08 01 15.0	-0.3
ARU				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.1						
ARU	**Arti**	**61.87**	**337**	*e*P	**P**	**07 48 50.0**	**-1.8**
	comp=Z,13nm,0.9s,mb5.1						
KIV	**Kislovodsk**	**62.95**	**319**	*e*P	**P**	**07 48 58.3**	**-0.8**
KIV				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.0						
KIV	**Kislovodsk**	**62.95**	**319**	*e*P	**P**	**07 48 58.3**	**-0.7**
	comp=Z,8.3nm,0.6s,mb5.0						
ASF	**Jabal al Asfar**	**63.17**	**305**	LR	LR	08 14 04.1	
	comp=Z,147nm,20.8s,MS4.1,baz=191,slow=34						
YAK	**Yakutsk**	**64.62**	**17**	*e*P	**P**	**07 49 08.6**	**-1.1**
YAK				pmax	pmax		
	comp=Z,88nm,0.8s,mb5.8						
YAK	**Yakutsk**	**64.62**	**17**	*e*P	**P**	**07 49 08.6**	**-1.2**
	comp=Z,88nm,0.8s,mb5.8						
SOKR	**Solikamsk**	**64.78**	**339**	⇓*i*P	**P**	**07 49 07.0**	**-3.8**
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
BRTR	**Keskin Array B**	**67.77**	**312**	P	**P**	**07 49 28.8**	**-1.5**
	comp=Z,1.3nm,0.7s,mb4.1,baz=135,slow=7.0,SNR=6.2						
OBN	**Obninsk**	**71.27**	**328**	*ce*P	**P**	**07 49 50.5**	**-0.9**
OBN				*e*		07 52 26.7	
OBN				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.2						
OBN	**Obninsk**	**71.27**	**328**	*i* P	**P**	**07 49 50.6**	**-0.8**
AKASG	**Malin Array Be**	**73.90**	**322**	P	**P**	**07 50 05.7**	**-1.3**
	comp=Z,1.6nm,0.4s,mb4.3,baz=89,slow=5.3,SNR=12						
VRI	**Vrincioaia**	**74.26**	**317**	⇑P	**P**	**07 50 09.1**	**-0.1**
BOSA	**Boshof**	**74.61**	**240**	P	**P**	**07 50 13.1**	**+1.6**
	comp=Z,2.2nm,0.9s,mb4.1,baz=39,slow=16,SNR=3.3						
BOSA				LR	LR	08 16 46.7	
	comp=Z,218nm,20.4s,MS4.4,baz=56,slow=31						
MLR	**Muntele Rosu**	**74.72**	**317**	P	**P**	**07 50 12.4**	**+0.6**
	comp=Z,3.5nm,0.9s,mb4.3,baz=173,slow=6.4,SNR=4.7						
MLR	**Muntele Rosu**	**74.72**	**317**	⇓P	**P**	**07 50 12.2**	**+0.4**
MLR	**Muntele Rosu**	**74.72**	**317**	⇓P	**P**	**07 50 12.2**	**+0.4**
BURAR	**Bucovina Array**	**75.67**	**319**	⇑P	**P**	**07 50 18.4**	**+1.2**
BURAR	**Bucovina Array**	**75.67**	**319**	⇑P	**P**	**07 50 18.4**	**+1.2**
APA	**Apatity**	**77.83**	**340**	⇑*i*P	**P**	**07 50 29.1**	**+0.3**
APA				*i*		07 50 34.7	
APA				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
FINES	**FINESS Array B**	**78.66**	**333**	P	**P**	**07 50 33.7**	**+0.2**
	comp=Z,10nm,0.8s,mb4.8,baz=104,slow=7.9,SNR=23						
FINES	**FINESS Array B**	**78.66**	**333**	P	**P**	**07 50 33.7**	**+0.2**
KAF	**Kangasniemi**	**78.75**	**333**	*e*p	**P**	**07 50 33.7**	**-0.3**
	comp=Z,12nm,0.8s,mb4.9,baz=103,slow=5.1						
KAF	**Kangasniemi**	**78.75**	**333**	*e*P	**P**	**07 50 33.7**	**-0.3**
KAF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
BILL	**Bilibino**	**80.45**	**21**	⇑*e*P	**P**	**07 50 41.0**	**-2.1**
BILL				*e*		07 53 43.1	
BILL				*e*S	S	08 00 37.9	-7.8
BILL				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.4						
BILL				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.9						
SYO	**Syowa Base**	**80.78**	**198**	⇓sP	sP	07 51 03.8	+5.5
KEV	**Kevo**	**80.81**	**341**	*e*p	**P**	**07 50 44.9**	**0.0**
	comp=Z,12nm,0.8s,mb4.9						
KEV	**Kevo**	**80.81**	**341**	*e*P	**P**	**07 50 44.9**	**0.0**
KEV				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
ARCES	**ARCESS Array B**	**81.24**	**340**	P	**P**	**07 50 48.0**	**+0.8**
	comp=Z,5.8nm,0.6s,mb4.7,baz=98,slow=5.1,SNR=53						
ARE0	**ARCESS Array S**	**81.24**	**340**	*e*P	**P**	**07 50 47.5**	**+0.3**
GERES	**GERESS Array B**	**83.46**	**319**	P	**P**	**07 51 00.3**	**+1.2**
	comp=Z,2.7nm,0.8s,mb4.3,baz=104,slow=5.5,SNR=22						
CLL	**Collm**	**84.07**	**321**	P	**P**	**07 51 03.0**	**+0.9**
MOX	**Moxa**	**84.91**	**320**	*e*P	**P**	**07 51 06.0**	**-0.3**
MOX				*e*	sP	07 51 26.0	+6.1
MOX	**Moxa**	**84.91**	**320**	*e*P	**P**	**07 51 06.0**	**-0.3**
MOX				pP	sP	07 51 26.0	+6.1
GRA1	**Grafenberg Arr**	**85.12**	**319**	*e*P	**P**	**07 51 08.4**	**+1.0**
	comp=Z,5.0nm,0.9s,mb4.6						
GRF	**Grafenberg Arr**	**85.12**	**319**	*e*P	**P**	**07 51 08.4**	**+1.0**
GRF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
GRF	**Grafenberg Arr**	**85.12**	**319**	*e*P	**P**	**07 51 08.4**	**+1.0**
GRF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
GRF	**Grafenberg Arr**	**85.12**	**319**	*e*P	**P**	**07 51 08.4**	**+1.0**
	comp=Z,5.0nm,0.9s,mb4.6						
NB2	**NORSAR Subarra**	**85.66**	**331**	P	**P**	**07 51 10.0**	**+0.2**
	comp=Z,5.5nm,0.9s,mb4.8,baz=92,slow=5.3						
NOA	**NORSAR Array B**	**85.66**	**331**	P	**P**	**07 51 09.7**	**-0.1**
	comp=Z,3.2nm,0.9s,mb4.5,baz=94,slow=5.0,SNR=7.5						
IMA	**Indian Mountai**	**95.91**	**23**	*e*P	**P**	**07 51 58.8**	**+1.0**
IMA				pmax	pmax		
	comp=Z,39nm,1.4s,mb5.6						
IMA	**Indian Mountai**	**95.91**	**23**	*e*P	**P**	**07 51 58.8**	**+1.0**
	comp=Z,39nm,1.4s,mb5.6						
NVAR	**Mina Array Bea**	**128.38**	**35**	PKP	PKPdf	07 57 39.2	-3.4
	comp=Z,0.7nm,0.9s,baz=221,slow=1.4,SNR=5.4						
NVAR	**Mina Array Bea**	**128.38**	**35**	PKP	PKPdf	07 57 39.2	-3.4
PDAR	**Pinedale Array**	**129.42**	**25**	PKP	PKPdf	07 57 41.5	-3.0
	comp=Z,0.4nm,0.4s,baz=270,slow=4.4,SNR=4.5						
TXAR	**Lajitas Array**	**143.17**	**30**	PKhKP		07 58 03.6	
	comp=Z,1.0nm,0.8s,baz=276,slow=1.5,SNR=12						

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*LDG **20** 07:49:59.1±0.0, 43.08N×0.15E, h12^{km}, Md3.1/2, Ml3.2/19, Error ellipse: s-maj=0.9km s-min=0.7km az=177.0*

*NEIC **20** 07:49:59.1, 43.08N×0.15E, h12^{km}, ML3.2(LDG), ML2.6(STR), After LDG.*

*STR **20** 07:49:59.4±0.1, 43.05N×0.16E, h5^{km}±1^{km}, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **20** 07:49:59.2±0.0, 43.10N×0.15E, h10^{km}, ML3.2/18, Error ellipse: s-maj=0.9km s-min=0.8km az=143.0*

MDD 20 07:49:58.6±0.3**, 43.10N×0.15E, h12**^{km}±3^{km}**, mbLg2.4**/31**, 1D, Error ellipse: s-maj=3.5km s-min=2.1km az=3.0, PRXIMO, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LABF	**Labassere**	**0.08**	**231**	Pg	Pg	07 50 01.9	+0.8
LABF				Lg		07 50 04.0	
EPF	**Esparros**	**0.15**	**115**	*e*Pg	Pg	07 50 02.9	+0.6
EPF				*e*Sg	Sg	07 50 05.2	+0.5
	644nm,0.2s						
VIEF	**Viey**	**0.23**	**204**	Pg	Pg	07 50 03.7	0.0
VIEF				Sg	Sg	07 50 06.1	-1.0
VIEF	**Viey**	**0.23**	**204**	Pg	Pg	07 50 03.8	+0.1
VIEF				Lg		07 50 07.1	
RESF	**Ens**	**0.32**	**155**	Pg	Pg	07 50 05.4	+0.1
RESF				Sg	Sg	07 50 09.9	+0.2
RESF	**Ens**	**0.32**	**155**	Pg	Pg	07 50 05.3	0.0
RESF				Lg		07 50 09.9	
REYF	**Montagne du Re**	**0.40**	**267**	Pg	Pg	07 50 07.0	+0.1
REYF				Sg	Sg	07 50 12.9	+0.5
REYF	**Montagne du Re**	**0.40**	**267**	Pg	Pg	07 50 06.8	-0.1
REYF				Lg		07 50 12.6	
EBIE	**Bielsa**	**0.41**	**181**	⇓Pg	Pg	07 50 06.7	-0.3
	30nm,0.1s,SNR=18						
EBIE				Lg		07 50 12.1	
	120nm,0.1s,SNR=5.0						
EBIE	**Bielsa**	**0.41**	**181**	Pg	Pg	07 50 06.7	-0.3
	30nm,0.1s,SNR=18						
EBIE				Lg		07 50 12.1	
	120nm,0.1s,SNR=5.0						
MELF	**Melles**	**0.50**	**116**	Pg	Pg	07 50 08.0	-0.7
MELF				Sg	Sg	07 50 14.6	-0.9
MELF	**Melles**	**0.50**	**116**	Pg	Pg	07 50 08.0	-0.7
MELF				Lg		07 50 14.5	
ETSF	**Etsaut**	**0.56**	**250**	*e*Pg	Pg	07 50 09.7	-0.3
ETSF				*e*Sg	Sg	07 50 17.0	-0.5
	151nm,0.2s						
FDAF	**Les Forges d'A**	**0.60**	**243**	Pg	Pg	07 50 10.3	-0.4
FDAF				Sg	Sg	07 50 18.1	-0.7
FDAF	**Les Forges d'A**	**0.60**	**243**	Pg	Pg	07 50 10.3	-0.4
FDAF				Lg		07 50 18.3	
ATE	**Arette**	**0.63**	**269**	Pg	Pg	07 50 11.3	0.0
ATE				Lg		07 50 20.2	
MLS	**Moulis**	**0.70**	**101**	Pg	Pg	07 50 12.7	-0.1
MLS				Sg	Sg	07 50 22.6	+0.3
MLS	**Moulis**	**0.70**	**101**	Pg	Pg	07 50 11.9	-0.9
MLS				Lg		07 50 21.8	
ORDF	**Ordiarp**	**0.81**	**279**	Pg	Pg	07 50 14.8	0.0
ORDF				Sg	Sg	07 50 25.9	+0.2
ORDF	**Ordiarp**	**0.81**	**279**	Pg	Pg	07 50 14.8	0.0
ORDF				Lg		07 50 25.0	
SALF	**Salau**	**0.83**	**113**	Pg	Pg	07 50 14.6	-0.7
SALF	**Salau**	**0.83**	**113**	Pg	Pg	07 50 13.5	-1.8
SALF				Lg		07 50 24.0	
LARF	**Larrau**	**0.84**	**266**	Pg	Pg	07 50 16.0	+0.5
LARF				Sg	Sg	07 50 27.8	+1.1
LARF	**Larrau**	**0.84**	**266**	Pg	Pg	07 50 15.1	-0.3
LARF				Lg		07 50 26.9	
SJPF	**Ste Jean**	**1.01**	**271**	*e*Pn	Pn	07 50 17.5	-1.1
SJPF				*e*Pg	Pg	07 50 18.2	-0.7
SJPF				*e*Sg	Sg	07 50 30.8	-1.6
	11nm,0.2s						
CSOR	**Sort**	**1.02**	**135**	Pg	Pg	07 50 18.2	-0.9
CSOR				Lg		07 50 31.8	
	6.3nm,0.1s						
GRBF	**Gourbit**	**1.05**	**104**	Pg	Pg	07 50 18.1	-1.5
OSSF	**Osses**	**1.05**	**279**	Pg	Pg	07 50 19.3	-0.3
OSSF	**Osses**	**1.05**	**279**	Pg	Pg	07 50 18.8	-0.8
OSSF				Lg		07 50 32.2	
CORG	**Organya**	**1.22**	**135**	Pg	Pg	07 50 22.2	-0.8
EALK	**Alkurruntz**	**1.22**	**276**	Pg	Pg	07 50 21.7	-1.4
EALK				Lg		07 50 38.8	
EALK	**Alkurruntz**	**1.22**	**276**	Pg	Pg	07 50 21.7	-1.4
	0.1nm,0.1s,SNR=8.4						
EALK				Lg		07 50 38.8	
	4.1nm,0.1s,SNR=6.2						
ELIZ	**Elizondo**	**1.23**	**274**	Pg	Pg	07 50 21.5	-1.9
	2.4nm,0.2s,SNR=7.9						
ELIZ				Lg		07 50 39.8	
	6.1nm,0.2s,SNR=4.0						
CAVN	**Les Avellanes**	**1.29**	**160**	Pg	Pg	07 50 23.1	-1.3
CAVN				Lg		07 50 40.2	
	19nm,0.1s						
LPEF	**Le Peyrat**	**1.29**	**96**	Pg	Pg	07 50 23.8	-0.7
LPEF				Sg	Sg	07 50 41.6	-0.2
LPEF	**Le Peyrat**	**1.29**	**96**	Pg	Pg	07 50 23.8	-0.8
LPEF				Lg		07 50 41.0	
ESAC	**San Caprasio**	**1.45**	**199**	Pg	Pg	07 50 26.6	-1.0
ESAC				Lg		07 50 45.2	
ESAC	**San Caprasio**	**1.45**	**199**	Pg	Pg	07 50 25.5	-2.0
	103nm,0.2s,SNR=53						
ESAC				Lg		07 50 45.2	
	96nm,0.3s,SNR=5.8						
ESAC	**San Caprasio**	**1.45**	**199**	Pg	Pg	07 50 26.6	-1.0
	103nm,0.2s,SNR=53						
CLLI	**Llivia**	**1.48**	**114**	Pg	Pg	07 50 26.8	-1.3
CLLI				Lg		07 50 46.3	
	2.7nm,0.1s						
CARF	**Carcanieres**	**1.48**	**104**	Pg	Pg	07 50 27.6	-0.7
CARF				Sg	Sg	07 50 47.4	-0.7
CARF	**Carcanieres**	**1.48**	**104**	Pg	Pg	07 50 27.1	-1.2
CARF				Lg		07 50 46.4	
MTLF	**Montolieu**	**1.53**	**80**	*e*Pn	Pn	07 50 24.9	-1.1
MTLF				*e*Pg	Pg	07 50 28.0	-1.2
MTLF				*e*Sn	Sn	07 50 43.5	-2.4
	90nm,0.2s						
MTLF				*e*Sg	Sg	07 50 47.3	-2.3
	102nm,0.2s						
MTLF	**Montolieu**	**1.53**	**80**	Pn	Pn	07 50 24.9	-1.1
MTLF				Pg	Pg	07 50 28.0	-1.2
MTLF				Lg		07 50 47.3	
	51nm,0.2s						
VALF	**Valcebollere**	**1.54**	**116**	Pg	Pg	07 50 28.0	-1.4
VALF				Lg		07 50 49.3	
EMIR	**Miracle**	**1.56**	**139**	Pg	Pg	07 50 28.4	-1.4
	3.5nm,0.1s,SNR=12						
EMIR				Lg		07 50 49.2	
	7.7nm,0.1s,SNR=8.2						
EMIR	**Miracle**	**1.56**	**139**	Pg	Pg	07 50 28.4	-1.3
	3.5nm,0.1s,SNR=12						
CBRU	**Bruguera**	**1.70**	**118**	Pg	Pg	07 50 30.5	-2.1
LRDF	**Laroque-de-Fa**	**1.76**	**94**	Pg	Pg	07 50 32.2	-1.5
LRDF	**Laroque-de-Fa**	**1.76**	**94**	Pg	Pg	07 50 32.3	-1.4
LRDF				Lg		07 50 54.3	
EPOB	**Poblet**	**1.87**	**158**	Pn	Pn	07 50 31.1	+0.2
	1.7nm,0.2s,SNR=7.9						
EPOB				Pg	Pg	07 50 33.2	-2.8
	4.5nm,0.2s,SNR=27						
EPOB				Lg		07 50 57.0	
	13nm,0.2s,SNR=11						
EPOB	**Poblet**	**1.87**	**158**	Pn	Pn	07 50 31.1	+0.2
	1.7nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**1.87**	**158**	Pg	Pg	07 50 33.2	-2.8
	4.5nm,0.2s,SNR=27						
LFF	**La Frestale**	**1.89**	**13**	*e*Pn	Pn	07 50 30.1	-1.1
LFF				*e*Pg	Pg	07 50 35.2	-1.2
LFF				*e*Sg	Sg	07 50 59.0	-2.7
	63nm,0.2s						
ECRI	**Cripan**	**2.02**	**257**	Lg		07 51 02.8	
	5.2nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**2.12**	**107**	Pg	Pg	07 50 39.1	-1.8
EJON				Lg		07 51 07.8	
EJON	**La Jonquera**	**2.12**	**107**	Pg	Pg	07 50 38.8	-2.1
	0.9nm,0.1s,SNR=7.9						
EJON				Lg		07 51 07.8	
	1.6nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**2.12**	**107**	Pg	Pg	07 50 39.1	-1.8
	0.9nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**2.14**	**176**	Pg	Pg	07 50 38.6	-2.8
ERTA				Lg		07 51 06.0	
ERTA	**Horta de San J**	**2.14**	**176**	Pg	Pg	07 50 38.2	-3.2
	2.3nm,0.1s,SNR=8.7						
ERTA				Lg		07 51 06.0	
	8.4nm,0.1s,SNR=6.2						
ERTA	**Horta de San J**	**2.14**	**176**	Pg	Pg	07 50 38.6	-2.8
	2.3nm,0.1s,SNR=8.7						
CFON	**Fontmartina**	**2.15**	**127**	Pn	Pn	07 50 36.3	+1.4
CFON				Lg		07 51 06.8	
	15nm,0.2s						
EBR	**Ebro Roquetas**	**2.29**	**174**	*e*Rs		07 50 48.0	
CAF	**Calviac**	**2.29**	**36**	*e*Pn	Pn	07 50 35.0	-1.9
CAF				*e*Pg	Pg	07 50 41.7	-2.7
CAF				*e*Sn	Sn	07 51 01.8	-3.5
CAF				*e*Sg	Sg	07 51 11.8	-3.2
	27nm,0.2s						
RJF	**Les Rejaudoux**	**2.42**	**23**	*e*Pn	Pn	07 50 36.4	-2.3
RJF				*e*Pg	Pg	07 50 44.1	-2.8
RJF				*e*Sg	Sg	07 51 15.6	-3.5
	48nm,0.3s						
EMOS	**Mosqueruela**	**2.77**	**190**	Pg	Pg	07 50 51.9	-2.0
EMOS				Sn	Sn	07 51 16.1	-1.4
EMOS				Lg		07 51 27.4	
EMOS	**Mosqueruela**	**2.77**	**190**	Pn	Pn	07 50 42.1	-1.6
	0.3nm,0.4s,SNR=7.9						
EMOS				Pg	Pg	07 50 50.1	-3.8
	6.5nm,0.3s,SNR=4.0						
EMOS				Sn	Sn	07 51 16.1	-1.4
	0.7nm,0.1s,SNR=7.9						
EMOS				Lg		07 51 27.4	
	2.7nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.77**	**190**	Pg	Pg	07 50 51.9	-2.0
	6.5nm,0.3s,SNR=4.0						
EMOS				Sn	Sn	07 51 16.1	-1.3
	0.7nm,0.1s,SNR=7.9						
LASF	**Ste Croix**	**2.86**	**69**	*e*Pn	Pn	07 50 41.9	-3.2
LASF				*e*Pg	Pg	07 50 52.7	-3.1
LASF				*e*Sg	Sg	07 51 28.0	-6.0
	17nm,0.2s						
MFF	**Saint Martin d**	**3.51**	**357**	*e*Pn	Pn	07 50 52.5	-1.8
MFF				*e*Pg	Pg	07 51 04.7	-4.1
MFF				*e*Sg	Sg	07 51 49.6	-6.0
	12nm,0.2s						
TCF	**Toulx Ste Croi**	**3.51**	**24**	*e*Pn	Pn	07 50 50.9	-3.4
TCF				*e*Pg	Pg	07 51 04.4	-4.4
TCF				*e*Sn	Sn	07 51 30.7	-5.5
TCF				*e*Sg	Sg	07 51 49.0	-6.6
	10nm,0.2s						
VIVF	**Saint-Julien-l**	**3.71**	**60**	*e*Pn	Pn	07 50 54.3	-2.7
VIVF				*e*Pg	Pg	07 51 08.0	-4.6
VIVF				*e*Sg	Sg	07 51 55.6	-6.5
	6.3nm,0.2s						
BGF	**Bois d'Agland**	**3.96**	**28**	*e*Pn	Pn	07 50 57.4	-3.2
BGF				*e*Pg	Pg	07 51 12.5	-5.1
BGF				*e*Sg	Sg	07 52 03.2	-7.2
	54nm,0.4s						
SMRF	**Simiane la Rot**	**4.04**	**76**	*e*Pn	Pn	07 50 59.1	-2.7
SMRF				*e*Pg	Pg	07 51 14.5	-4.8
SMRF				*e*Sg	Sg	07 52 05.5	-7.6
	6.7nm,0.4s						
AVF	**Avril sur Loir**	**4.34**	**30**	*e*Pn	Pn	07 51 02.7	-3.3
AVF				*e*Sn	Sn	07 51 50.4	-6.7
AVF				*e*Sg	Sg	07 52 15.1	-7.9
	9.6nm,0.4s						
SMF	**Signal de Mont**	**4.41**	**35**	*e*Pn	Pn	07 51 03.9	-3.2
SMF				*e*Sg	Sg	07 52 17.9	-7.6
	6.4nm,0.3s						
SSF	**Saint Saulge**	**4.62**	**30**	*e*Pn	Pn	07 51 06.6	-3.4
SSF				*e*Sn	Sn	07 51 57.4	-6.9
SSF				*e*Sg	Sg	07 52 23.9	-8.6
	3.5nm,0.4s						
LMR	**La Mourre**	**4.65**	**85**	*e*Sg	Sg	07 52 24.5	-9.0
	4.7nm,0.4s						
LOR	**Lormes**	**4.93**	**31**	*e*Pn	Pn	07 51 11.2	-3.2
LOR				*e*Sg	Sg	07 52 33.5	-9.2
	7.3nm,0.3s						
LPL	**La Plagne**	**5.30**	**61**	*e*Pn	Pn	07 51 16.1	-3.6
GRR	**Gorron**	**5.34**	**353**	*e*Pn	Pn	07 51 15.5	-4.7
GRR				*e*Sn	Sn	07 52 14.8	-7.6
GRR				*e*Sg	Sg	07 52 46.9	-10
	3.1nm,0.2s						
QUIF	**Quistinic**	**5.36**	**335**	*e*Pn	Pn	07 51 17.0	-3.4
QUIF				*e*Sn	Sn	07 52 15.2	-7.6
FLN	**La Foliniere**	**5.69**	**356**	*e*Pn	Pn	07 51 21.4	-3.7
FLN				*e*Sn	Sn	07 52 22.9	-8.2
ROSF	**Rostrenen**	**5.76**	**337**	*e*Pn	Pn	07 51 22.0	-4.2

IDC 20 07:55:23.5±3.9**, 5.39S×101.71E, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.8**/16**, mbtmp3.9**/4**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx2.9**/28**, Error ellipse: s-maj=157.3km s-min=28.7km az=52.0, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.87**	**117**	P	P	08 02 16.7	-2.1
	0.8nm,0.6s,baz=289,slow=12,SNR=6.6						
JOW	**Kunigami**	**41.08**	**37**	LR	LR	08 16 53.8	
	comp=Z,294nm,21.9s,baz=201,slow=31						
SONM	**Songino Array**	**53.15**	**4**	P	P	08 04 43.5	-2.0
	0.8nm,0.6s,baz=189,slow=8.4,SNR=5.1						
MKAR	**Makanchi Array**	**54.73**	**344**	P	P	08 04 54.4	-2.6
	0.7nm,0.5s,baz=143,slow=8.5,SNR=8.7						
ZAL	**Zalesovo**	**60.79**	**349**	P	P	08 05 37.0	-2.6
	1.3nm,0.3s,baz=67,slow=15,SNR=3.6						
TXAR	**Lajitas Array**	**146.20**	**42**	PKPbc	PKPbc	08 15 06.2	-0.3
	0.2nm,0.7s,baz=225,slow=1.8,SNR=3.6						

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*CSEM **20** 08:30:42.6, 30.29N×59.68E, h14^{km}, ML3.5, After THR*

THR 20 08:30:42.6±0.4**, 30.29N×59.68E, h14**^{km}±4^{km}**, ML3.5, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZHSF	**Zahedan**	**1.17**	**125**	*e*PG	Pg	08 31 04.3	-1.7
KRBR	**Kerman**	**2.55**	**264**	*e*PN	Pn	08 31 25.8	+1.5
KRBR				*e*SG	Sg	08 32 02.6	-5.0
KRBR				AML	AML	08 32 03.7	
	comp=E,333nm,0.3s						
KRBR	**Kerman**	**2.55**	**264**	*e*Pn	Pn	08 31 25.8	+1.5
	SNR=52						
KRBR				*e*Sg	Sg	08 32 02.6	-5.0
	comp=E,333nm,0.3s,SNR=90						
BNDS	**Bandar-Abbas**	**4.22**	**228**	*e*PN	Pn	08 31 48.8	+0.8
BNDS				AML	AML	08 32 59.4	
	comp=N,35nm,0.7s						

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*NEIC **20** 08:48:53.9, 36.68S×176.88E, h351^{km}, MG4.3(WEL), After WEL.*

WEL 20 08:48:53.6±0.3**, 36.65S×176.88E, h351**^{km}±3^{km}**, ML4.2**/20**, 10C, Error ellipse: s-maj=5.6km s-min=5.3km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.46**	**129**	P	P	08 49 41.8	-0.2
MXZ				S	S	08 50 19.3	-0.6
MXZ	**Matakaoa Point**	**1.46**	**129**	PN	P	08 49 41.8	-0.2
MXZ				SN	S	08 50 19.3	-0.6
URZ	**Urewera**	**1.61**	**174**	⇑PN	P	08 49 42.3	-0.6
URZ				SN	S	08 50 20.4	-1.0
MWZ	**Matawai**	**1.76**	**163**	P	P	08 49 43.6	-0.2
MWZ				S	S	08 50 22.6	-0.4
MWZ	**Matawai**	**1.76**	**163**	PN	P	08 49 43.6	-0.2
MWZ				SN	S	08 50 22.6	-0.4
PUZ	**Puketiti**	**1.79**	**143**	⇑*e*P	P	08 49 43.9	-0.1
PUZ				S	S	08 50 22.7	-0.7
PUZ	**Puketiti**	**1.79**	**143**	⇑PN	P	08 49 43.9	-0.1
PUZ				SN	S	08 50 22.7	-0.7
RATZ	**Rangitukua**	**2.38**	**201**	⇑P	P	08 49 48.4	+0.1
RATZ	**Rangitukua**	**2.38**	**201**	⇑PN	P	08 49 48.4	+0.1
KNZ	**Kokohu**	**2.45**	**165**	PN	P	08 49 48.6	-0.2
RITZ	**Rihia Road**	**2.46**	**199**	PN	P	08 49 49.2	+0.3
KATZ	**Kakaramea**	**2.50**	**202**	P	P	08 49 49.9	+0.7
KATZ	**Kakaramea**	**2.50**	**202**	PN	P	08 49 49.9	+0.6
BKZ	**Black Stump Fm**	**2.53**	**187**	P	P	08 49 48.8	-0.6
BKZ				S	S	08 50 32.9	-0.3
BKZ	**Black Stump Fm**	**2.53**	**187**	PN	P	08 49 48.8	-0.7
BKZ				SN	S	08 50 32.9	-0.3
WTVZ	**West Tongariro**	**2.66**	**202**	P	P	08 49 50.5	-0.1
WTVZ	**West Tongariro**	**2.66**	**202**	PN	P	08 49 50.5	-0.1
OTVZ	**Oturere**	**2.69**	**201**	PN	P	08 49 50.7	-0.1
NGZ	**Ngauruhoe**	**2.72**	**202**	P	P	08 49 50.7	-0.3
NGZ	**Ngauruhoe**	**2.72**	**202**	PN	P	08 49 50.9	-0.1
CNZ	**Chateau**	**2.75**	**202**	P	P	08 49 51.1	-0.2
CNZ	**Chateau**	**2.75**	**202**	PN	P	08 49 51.1	-0.2
WPVZ	**Whakapapa**	**2.76**	**202**	⇑PN	P	08 49 51.4	0.0
TUVZ	**Tukino**	**2.79**	**200**	P	P	08 49 51.4	-0.2
TUVZ	**Tukino**	**2.79**	**200**	⇑PN	P	08 49 51.6	0.0
FWVZ	**Far West T-bar**	**2.80**	**202**	P	P	08 49 51.5	-0.2
FWVZ	**Far West T-bar**	**2.80**	**202**	PN	P	08 49 51.5	-0.2
WNVZ	**Wahianoa**	**2.86**	**200**	P	P	08 49 51.9	-0.3
WNVZ	**Wahianoa**	**2.86**	**200**	PN	P	08 49 51.9	-0.3
MOVZ	**Moawhango**	**2.89**	**198**	P	P	08 49 51.8	-0.7
MOVZ	**Moawhango**	**2.89**	**198**	PN	P	08 49 51.8	-0.7
PKVZ	**Pokaka**	**2.90**	**204**	PN	P	08 49 52.3	-0.2
MTVZ	**Mangateitei**	**2.95**	**202**	PN	P	08 49 52.7	-0.2
VRZ	**Vera Road**	**2.99**	**214**	P	P	08 49 53.8	+0.5
VRZ	**Vera Road**	**2.99**	**214**	PN	P	08 49 53.8	+0.5
PWZ	**Pawanui**	**3.37**	**180**	P	P	08 49 56.3	-0.6
PWZ	**Pawanui**	**3.37**	**180**	PN	P	08 49 56.3	-0.6
PWZ				SN	S	08 50 47.6	+1.0
WAZ	**Wanganui**	**3.44**	**205**	*e*P	P	08 49 57.0	-0.6
WAZ	**Wanganui**	**3.44**	**205**	PN	P	08 49 57.0	-0.6
TSZ	**Takapari Road**	**3.48**	**192**	P	P	08 49 56.8	-1.2
TSZ	**Takapari Road**	**3.48**	**192**	⇑PN	P	08 49 56.8	-1.1
BFZ	**Birch Farm**	**4.05**	**187**	PN	P	08 50 02.7	-1.0
MRZ	**Mangatainoka R**	**4.13**	**194**	⇑P	P	08 50 02.8	-1.7
MRZ	**Mangatainoka R**	**4.13**	**194**	⇑PN	P	08 50 02.8	-1.7
KIW	**Kapiti Island**	**4.48**	**200**	P	P	08 50 06.2	-2.0
KIW	**Kapiti Island**	**4.48**	**200**	PN	P	08 50 06.2	-1.9
MTW	**Mount Morrison**	**4.63**	**193**	P	P	08 50 07.7	-2.1
MTW	**Mount Morrison**	**4.63**	**193**	PN	P	08 50 07.7	-2.0
CAW	**Cannon Point**	**4.67**	**197**	P	P	08 50 08.2	-2.0
CAW	**Cannon Point**	**4.67**	**197**	PN	P	08 50 08.2	-2.0
DUWZ	**D'Urville Isla**	**4.75**	**208**	PN	P	08 50 08.8	-2.2
PAWZ	**Paruwai Farm**	**4.86**	**193**	PN	P	08 50 10.5	-1.8
MRW	**Makara Radio**	**4.88**	**200**	P	P	08 50 10.3	-2.2
MRW	**Makara Radio**	**4.88**	**200**	PN	P	08 50 10.3	-2.1
WEL	**Wellington**	**4.91**	**199**	*e*P	P	08 50 10.9	-1.9
WEL	**Wellington**	**4.91**	**199**	PN	P	08 50 10.9	-2.0
MSWZ	**Moikau Station**	**4.92**	**194**	P	P	08 50 10.7	-2.3
MSWZ	**Moikau Station**	**4.92**	**194**	PN	P	08 50 10.7	-2.3
SNZO	**South Karori**	**4.95**	**199**	P	P	08 50 11.2	-2.1
SNZO	**South Karori**	**4.95**	**199**	PN	P	08 50 11.2	-2.1
TCW	**Tory Channel**	**4.99**	**203**	P	P	08 50 11.6	-2.1
TCW	**Tory Channel**	**4.99**	**203**	PN	P	08 50 11.6	-2.1
BHW	**Baring Head**	**5.00**	**198**	P	P	08 50 11.7	-2.1
BHW	**Baring Head**	**5.00**	**198**	PN	P	08 50 11.7	-2.2
TUWZ	**Tuamarina**	**5.29**	**205**	PN	P	08 50 14.6	-2.4
NNZ	**Nelson**	**5.31**	**210**	P	P	08 50 14.4	-2.9
NNZ	**Nelson**	**5.31**	**210**	PN	P	08 50 14.4	-2.9
QRZ	**Quartz Range**	**5.38**	**218**	*e*P	P	08 50 14.9	-3.2
QRZ	**Quartz Range**	**5.38**	**218**	PN	P	08 50 14.9	-3.2
BSWZ	**Blackbirch Sta**	**5.57**	**204**	P	P	08 50 18.3	-1.9

THZ	**Tophouse**	**5.96**	**210**	*e*P	P	08 50 21.5	-3.2
KHZ	**Kahutara**	**6.31**	**203**	*e*P	P	08 50 25.9	-2.8
LTZ	**Lake Taylor**	**7.08**	**209**	*e*P	P	08 50 34.7	-3.0
MQZ	**McQueen's Vall**	**7.75**	**203**	*e*P	P	08 50 42.3	-3.4

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*IDC **20** 09:03:32.7±1.1, 41.56N×106.61E, mb3.7/4, mb1 3.8/7, mb1mx3.7/21, mbtmp3.7/7, ML3.3/3, Error ellipse: s-maj=33.5km s-min=18.4km az=69.0*

*BJI **20** 09:03:33.7, 41.42N×106.21E, h15^{km}, ML3.9, Ms3.5, Msz3.2*

*NEIC **20** 09:03:33.6±0.8, 41.45N×106.46E, h10^{km}, Error ellipse: s-maj=19.1km s-min=9.8km az=97.0*

ISC 20 09:03:30.9±0.5, 41.42N±0.04×106.51E±0.05, h10^{km}, n13, σ1^{s}.37/28, mb3.8/4, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTO	**Baotou**	**2.78**	**106**	P	**Pn**	**09 04 21.3**	**+4.9**
BTO				PG	**Pg**	**09 04 31.1**	**+4.6**
BTO				S	**Sn**	**09 04 55.8**	**+5.5**
BTO				SG	**Sg**	**09 05 03.9**	**+0.4**
BTO				Smax			
	comp=N,530nm,0.5s						
BTO				Smax			
	comp=E,360nm,0.4s						
HHC	**Hu-ho-hao-te**	**3.86**	**97**	*e*P	**Pn**	**09 04 35.6**	**+3.9**
HHC				PG	**Pg**	**09 04 45.3**	**-2.7**
HHC				S	**Sn**	**09 05 24.4**	**+6.7**
HHC				SG	**Sg**	**09 05 36.3**	**-3.2**
HHC				Smax			
	comp=N,990nm,0.6s						
HHC				Smax			
	comp=E,900nm,0.5s						
GTA	**Gaotai**	**5.49**	**251**	P	**Pn**	**09 04 54.4**	**-0.3**
GTA				PG	**Pg**	**09 05 11.3**	**-9.2**
GTA				S	**Sn**	**09 06 00.3**	**+1.6**
GTA				SG	**Sg**	**09 06 26.4**	**-7.2**
GTA				Smax			
	comp=N,100nm,0.9s						
GTA				Smax			
	comp=E,80nm,1.0s						
GTA				LR	LR		
	comp=N,350nm,8.8s						
GTA				LR	LR		
	comp=E,220nm,6.1s						
GTA				LR	LR		
	comp=Z,140nm,5.7s						
LZH	**Lanzhou**	**5.71**	**202**	Pg	**Pg**	**09 05 22.5**	**-2.5**
	comp=Z,151nm,1.2s						
LZH				Sn	**Sn**	**09 06 03.5**	**-0.9**
LZH				Sg	**Sg**	**09 06 34.0**	**-7.2**
SONM	**Songino Array**	**6.42**	**359**	Pn	**Pn**	**09 05 07.2**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=185,slow=13,SNR=19						
SONM				Pg	**Pg**	**09 05 27.6**	**-11**
	comp=Z,1.7nm,0.3s,baz=182,slow=18,SNR=9.3						
SONM				Lg		09 06 48.0	
	comp=Z,10nm,0.3s,baz=190,slow=29,SNR=15						
ULN	**Ulaanbaatar**	**6.46**	**3**	*e*Pn	**Pn**	**09 05 07.3**	**-1.2**
	comp=Z,8.0nm,0.5s						
ULN				*e*Sg	**Sg**	**09 06 49.0**	**-17**
XAN	**Xi'an**	**7.61**	**165**	P	**Pn**	**09 05 26.3**	**+1.7**
XAN				S	**Sn**	**09 06 51.8**	**0.0**
XAN				SG	**Sg**	**09 07 28.9**	**-15**
XAN				Smax			
	comp=N,30nm,1.0s						
XAN				Smax			
	comp=E,20nm,0.8s						
MKAR	**Makanchi Array**	**18.17**	**295**	P	**P**	**09 07 44.6**	**-0.3**
	comp=E,0.1nm,0.3s,baz=97,slow=12,SNR=4.3						
ZAL	**Zalesovo**	**19.15**	**318**	P	**P**	**09 07 55.8**	**-0.9**
	comp=E,0.2nm,0.3s,baz=14,slow=19,SNR=3.2						
BVAR	**Borovoye Array**	**26.85**	**308**	P	**P**	**09 09 15.5**	**+2.3**
	comp=E,1.3nm,0.5s,mb3.8,baz=112,slow=8.0,SNR=6.7						
NOA	**NORSAR Array B**	**57.19**	**325**	P	**P**	**09 13 21.2**	**+1.2**
	comp=E,0.5nm,0.4s,mb3.9,baz=60,slow=6.7,SNR=3.5						
ILAR	**Eielson Array**	**59.78**	**28**	P	**P**	**09 13 38.5**	**+0.5**
	comp=E,0.3nm,0.6s,mb3.5,baz=304,slow=7.0,SNR=5.2						
WRA	**Warramunga Arr**	**66.28**	**151**	P	**P**	**09 14 22.7**	**+1.1**
	comp=E,0.4nm,0.3s,mb3.9,baz=342,slow=7.0,SNR=20						

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*ISK **20** 09:16:21.5, 38.39N×30.81E, h18^{km}, MD3.5*

*CSEM **20** 09:16:21.5, 38.39N×30.81E, h18^{km}, MD3.5, After ISK*

ISC 20 09:16:21.4±0.5, 38.47N±0.02×30.81E±0.03, h7^{km}±5^{km}, n25, σ1^{s}.12/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKTP	**Tekketepe**	**0.57**	**222**	*i* P	**Pg**	**09 16 33.0**	**0.0**
TKTP				*i* S	**Sg**	**09 16 42.6**	**+1.9**
ISP	**Isparta**	**0.66**	**201**	*i* PG	**Pg**	**09 16 34.1**	**-0.7**
KIZT	**Kizilcal**	**0.94**	**63**	*i* PG	**Pg**	**09 16 40.7**	**+0.5**
BCK	**Bucak**	**1.02**	**190**	*i* PG	**Pg**	**09 16 39.8**	**-2.0**
KHL	**Karahalli**	**1.02**	**262**	*i* PG	**Pg**	**09 16 41.2**	**-0.7**
KHL				*i* SG	**Sg**	**09 16 55.7**	**+0.2**
KDHN	**Kadinhani**	**1.03**	**86**	*i* P	**Pb**	**09 16 42.2**	**+1.0**
KDHN				*i* S	**Sb**	**09 16 56.2**	**+1.6**
ESKT	**Eskisehir**	**1.05**	**2**	*i* P	**Pb**	**09 16 41.2**	**-0.4**
ESKT				*i* S	**Sb**	**09 16 55.4**	**-0.1**
ESKT	**Eskisehir**	**1.05**	**2**	*i* Pn	**Pn**	**09 16 42.1**	**-0.4**
GDZ	**Gediz**	**1.21**	**301**	*i* P	**Pb**	**09 16 43.9**	**-0.4**
GDZ				*i* S	**Sb**	**09 16 60.0**	**0.0**
KONT	**Konya--Tatoy**	**1.33**	**113**	PN	**Pn**	**09 16 45.8**	**-0.7**
KONT				SN	**Sn**	**09 17 02.8**	**-1.7**
DENT	**Denizli**	**1.57**	**244**	*e*PN	**Pn**	**09 16 48.8**	**-1.1**
GOLH	**Golhisar**	**1.57**	**219**	*i* P	**Pn**	**09 16 52.1**	**+2.1**
GOLH				*i* S	**Sg**	**09 17 14.4**	**+0.5**
ELL	**Elmali**	**1.86**	**203**	*e*PN	**Pn**	**09 16 51.8**	**-2.2**
GPA	**Golpazari**	**1.86**	**348**	PN	**Pn**	**09 16 55.2**	**+1.1**
HDMB	**Hadim**	**2.00**	**138**	*e*PN	**Pn**	**09 16 55.0**	**-1.1**
MDU	**Mudurnu**	**2.02**	**9**	*e*PN	**Pn**	**09 16 57.5**	**+1.1**
DST	**Dursunbey**	**2.04**	**305**	*e*PN	**Pn**	**09 16 56.7**	**0.0**
ANTO	**Ankara**	**2.08**	**47**	*e*PN	**Pn**	**09 16 57.1**	**-0.2**
ULDT	**Uludag**	**2.12**	**323**	*i* P	**Pn**	**09 16 58.2**	**+0.5**
ULDT				*i* S	**Sn**	**09 17 24.6**	**-0.1**
ORLT	**Orhaneli**	**2.17**	**317**	*e*PN	**Pn**	**09 16 58.4**	**-0.1**
SGKT	**Sivrigoynuk**	**2.32**	**24**	*i* P	**Pn**	**09 17 03.6**	**+3.0**
SGKT				*i* S	**Sg**	**09 17 36.9**	**-1.7**
HENT	**Hendek**	**2.36**	**2**	*i* P	**Pn**	**09 17 01.7**	**+0.5**
HENT				*i* S	**Sg**	**09 17 40.5**	**+0.6**
AKS	**Akhisar**	**2.38**	**281**	*e*PN	**Pn**	**09 17 00.5**	**-1.0**
ERMK	**Ermenek**	**2.47**	**137**	*i* P	**Pn**	**09 17 08.4**	**+5.5**
ERMK				*i* S	**Sg**	**09 17 45.0**	**+1.3**
ELDT	**Eldivan**	**2.86**	**44**	*i* P	**Pn**	**09 17 09.6**	**+1.2**
ELDT				*i* S	**Sg**	**09 17 54.1**	**-2.7**

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*IDC **20** 09:24:49.3±2.2, 0.76N×97.37E, mb4.1/5, mb1 4.2/6, mb1mx3.9/17, mbtmp4.0/6, ML4.1/1, MS3.2/1, Ms1 3.4/1, ms1mx3.0/21, Error ellipse: s-maj=88.7km s-min=24.6km az=58.0*

*NEIC **20** 09:24:54.0±0.9, 0.82N×97.44E, h30^{km}, mb4.0/1, Error ellipse: s-maj=23.9km s-min=13.1km az=69.0*

ISC 20 09:24:52.5±1.2, 0.9N±0.1×97.5E±0.2, h30^{km}, n10, σ0^{s}.39/8, mb4.0/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.43**	**36**	*e*P	**Pn**	**09 26 13.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**17.54**	**5**	P	**P**	**09 28 55.8**	**-0.9**
	0.2nm,0.3s,baz=192,slow=11,SNR=7.8						
CMAR				LR	LR	09 36 38.0	
	comp=Z,86nm,20.4s,baz=200,slow=40						
WRA	**Warramunga Arr**	**41.64**	**122**	P	**P**	**09 32 39.9**	**-0.2**
	1.2nm,0.6s,mb3.7,baz=302,slow=9.0,SNR=15						
WRAB	**Tennant Creek**	**41.65**	**122**	*e*P	**P**	**09 32 40.1**	**0.0**
	2.4nm,0.7s,mb3.9						
SONM	**Songino Array**	**47.42**	**8**	P	**P**	**09 33 26.7**	**+0.5**
	1.0nm,0.5s,mb4.0,baz=186,slow=10.0,SNR=10.0						
MKAR	**Makanchi Array**	**47.62**	**346**	P	**P**	**09 33 28.0**	**+0.1**
	3.9nm,0.7s,mb4.5,baz=160,slow=7.9,SNR=22						
ZAL	**Zalesovo**	**53.92**	**351**	P	**P**	**09 34 15.4**	**0.0**
	2.7nm,0.7s,mb4.3,baz=313,slow=0.8,SNR=9.6						
ARCES	**ARCESS Array B**	**82.93**	**340**	P	**P**	**09 37 15.8**	**+0.2**
	0.7nm,0.6s,mb3.9,baz=90,slow=4.9,SNR=5.2						
TXAR	**Lajitas Array**	**143.81**	**32**	PKP	PKPdf	09 44 26.3	-4.3
	0.2nm,0.8s,slow=1.3,SNR=3.6						
TXAR	**Lajitas Array**	**143.81**	**32**	PKP	PKPdf	09 44 26.3	-4.3

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*LDG **20** 09:25:51.4±0.1, 43.05N×0.11W, h6^{km}, Md2.9/2, Ml3.1/13, Error ellipse: s-maj=1.2km s-min=0.9km az=163.0*

*NEIC **20** 09:25:51.4, 43.05N×0.11W, h6^{km}, ML3.1(LDG), ML2.5(STR), MN2.4(MDD), After LDG.*

*STR **20** 09:25:51.9±0.2, 43.00N×0.14W, h5^{km}±1^{km}, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **20** 09:25:51.3±0.0, 43.07N×0.12W, h2^{km}, ML3.0/14, Error ellipse: s-maj=0.9km s-min=0.8km az=160.0*

MDD 20 09:25:50.9±0.3, 43.07N×0.12W, h9^{km}±4^{km}, mbLg2.4/25, 1C-1D, Error ellipse: s-maj=3.9km s-min=2.0km az=11.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
REYF	**Montagne du Re**	**0.20**	**270**	Pg	Pg	09 25 55.6	+0.4
REYF				Sg	Sg	09 25 58.5	+0.4
REYF	**Montagne du Re**	**0.20**	**270**	Pg	Pg	09 25 55.5	+0.3
REYF				Lg		09 25 58.9	
VIEF	**Viey**	**0.21**	**151**	Pg	Pg	09 25 55.5	+0.1
VIEF				Sg	Sg	09 25 57.9	-0.5
VIEF	**Viey**	**0.21**	**151**	Pg	Pg	09 25 55.6	+0.2
VIEF				Lg		09 25 58.4	
EPF	**Esparros**	**0.34**	**96**	*e*Pg	Pg	09 25 58.0	+0.2
EPF				*e*Sg	Sg	09 26 02.4	0.0
	193nm,0.2s						
ETSF	**Etsaut**	**0.37**	**242**	*e*Pg	Pg	09 25 58.2	-0.2
ETSF				*e*Sg	Sg	09 26 03.1	-0.3
	208nm,0.3s						
FDAF	**Les Forges d'A**	**0.41**	**233**	Pg	Pg	09 25 59.1	-0.2
FDAF				Sg	Sg	09 26 04.7	-0.3
FDAF	**Les Forges d'A**	**0.41**	**233**	Pg	Pg	09 25 59.1	-0.3
FDAF				Lg		09 26 04.7	
RESF	**Ens**	**0.42**	**128**	Pg	Pg	09 25 59.4	-0.1
RESF				Sg	Sg	09 26 05.3	+0.1
RESF	**Ens**	**0.42**	**128**	Pg	Pg	09 25 59.4	-0.1
RESF				Lg		09 26 05.2	
EBIE	**Bielsa**	**0.43**	**154**	⇑Pg	Pg	09 25 59.3	-0.3
	13nm,0.0s,SNR=18						
EBIE				Lg		09 26 04.8	
	155nm,0.1s,SNR=4.0						
EBIE	**Bielsa**	**0.43**	**154**	Pg	Pg	09 25 59.3	-0.3
	13nm,0.0s,SNR=18						
EBIE				Lg		09 26 04.8	
	155nm,0.1s,SNR=4.0						
ATE	**Arette**	**0.43**	**272**	Pg	Pg	09 25 59.4	-0.2
ATE				Lg		09 26 05.8	
ORDF	**Ordiarp**	**0.62**	**284**	Pg	Pg	09 26 03.9	+0.6
ORDF				Sg	Sg	09 26 12.6	+1.0
ORDF	**Ordiarp**	**0.62**	**284**	Pg	Pg	09 26 03.3	0.0
ORDF				Lg		09 26 12.1	
LARF	**Larrau**	**0.64**	**267**	Pg	Pg	09 26 03.3	-0.5
LARF				Sg	Sg	09 26 13.0	+0.6
LARF	**Larrau**	**0.64**	**267**	Pg	Pg	09 26 03.4	-0.4
LARF				Lg		09 26 12.6	
MELF	**Melles**	**0.67**	**107**	Pg	Pg	09 26 03.8	-0.6
MELF				Sg	Sg	09 26 13.5	+0.1
MELF	**Melles**	**0.67**	**107**	Pg	Pg	09 26 03.7	-0.7
MELF				Lg		09 26 13.7	
SJPF	**Ste Jean**	**0.81**	**273**	*e*Pg	Pg	09 26 06.2	-1.0
SJPF				*e*Pn	Pn	09 26 07.8	-0.6
SJPF				*e*Sg	Sg	09 26 17.7	-0.4
	22nm,0.2s						
OSSF	**Osses**	**0.86**	**283**	Pg	Pg	09 26 07.0	-1.1
OSSF				Lg		09 26 18.9	
MLS	**Moulis**	**0.90**	**97**	Pg	Pg	09 26 10.4	+1.6
MLS				Sg	Sg	09 26 21.4	+0.6
MLS	**Moulis**	**0.90**	**97**	Pg	Pg	09 26 08.2	-0.6
MLS				Lg		09 26 20.1	
SALF	**Salau**	**1.01**	**107**	Pg	Pg	09 26 10.4	-0.7
SALF				Sg	Sg	09 26 24.3	-0.2
SALF	**Salau**	**1.01**	**107**	Pg	Pg	09 26 10.0	-1.1
SALF				Lg		09 26 23.6	
EALK	**Alkurruntz**	**1.03**	**279**	Pg	Pg	09 26 09.9	-1.6
	1.0nm,0.1s,SNR=12						
EALK				Lg		09 26 24.7	
	15nm,0.1s,SNR=14						
ELIZ	**Elizondo**	**1.04**	**276**	Pg	Pg	09 26 11.1	-0.6
	2.2nm,0.2s,SNR=7.6						
ELIZ				Lg		09 26 26.7	
	9.4nm,0.1s,SNR=11						
PAND	**Andorre**	**1.34**	**114**	Lg		09 26 34.0	
ESAC	**San Caprasio**	**1.37**	**191**	⇓Pg	Pg	09 26 17.4	-0.9
	76nm,0.2s,SNR=18						
ESAC				Lg		09 26 35.6	
	103nm,0.2s,SNR=12						
ESAC	**San Caprasio**	**1.37**	**191**	Pg	Pg	09 26 17.4	-0.9
	76nm,0.2s,SNR=18						
CARF	**Carcanieres**	**1.67**	**101**	Pn	Pn	09 26 23.5	+2.9
CARF				Sg	Sg	09 26 45.8	-0.8
CARF	**Carcanieres**	**1.67**	**101**	Pg	Pg	09 26 23.8	-0.5
CARF				Lg		09 26 44.9	
EMIR	**Miracle**	**1.68**	**133**	Pg	Pg	09 26 22.5	-1.9
	5.6nm,0.1s,SNR=11						
EMIR				Lg		09 26 45.2	
	30nm,0.2s,SNR=14						
VALF	**Valcebollere**	**1.71**	**112**	Pn	Pn	09 26 24.9	+3.8
VALF				Sg	Sg	09 26 49.1	+1.3
VALF	**Valcebollere**	**1.71**	**112**	Pg	Pg	09 26 24.9	-0.1
VALF				Lg		09 26 46.5	
MTLF	**Montolieu**	**1.73**	**80**	*e*Pn	Pn	09 26 20.1	-1.3
MTLF				*e*Pg	Pg	09 26 23.5	-1.9
MTLF				*e*Sn	Sn	09 26 41.4	-2.4
MTLF				*e*Sg	Sg	09 26 45.8	-2.7
	14nm,0.2s						
ECRI	**Cripan**	**1.82**	**256**	Pg	Pg	09 26 25.3	-2.0
	2.3nm,0.2s,SNR=5.0						
ECRI				Lg		09 26 49.2	
	9.2nm,0.2s,SNR=5.3						
EPOB	**Poblet**	**1.93**	**152**	Pg	Pg	09 26 26.8	-2.7
	1.9nm,0.1s,SNR=13						
EPOB				Lg		09 26 51.6	
	6.5nm,0.1s,SNR=18						
LRDF	**Laroque-de-Fa**	**1.95**	**93**	Lg		09 26 53.0	
LFF	**La Frestale**	**1.97**	**18**	*e*Pn	Pn	09 26 23.6	-1.3
LFF				*e*Pg	Pg	09 26 28.8	-1.4
LFF				*e*Sn	Sn	09 26 47.2	-2.7
LFF				*e*Sg	Sg	09 26 53.4	-3.1
	53nm,0.3s						
ERTA	**Horta de San J**	**2.14**	**171**	Pg	Pg	09 26 31.3	-2.3
	1.7nm,0.1s,SNR=7.2						
ERTA				Lg		09 26 58.7	
	7.6nm,0.1s,SNR=12						
ERTA	**Horta de San J**	**2.14**	**171**	Pg	Pg	09 26 31.3	-2.3
	1.7nm,0.1s,SNR=7.2						
SJAF	**Saint Jean de**	**2.28**	**104**	Lg		09 27 04.0	
EBR	**Ebro Roquetas**	**2.29**	**168**	*e*Rs		09 27 05.0	
EBR				*e*S*S*		09 27 09.0	
EJON	**La Jonquera**	**2.30**	**105**	Pg	Pg	09 26 35.4	-1.4
	0.9nm,0.2s,SNR=12						
EJON				Lg		09 27 05.1	
	8.6nm,0.2s,SNR=5.0						
EJON	**La Jonquera**	**2.30**	**105**	Pg	Pg	09 26 35.4	-1.4
	0.9nm,0.2s,SNR=12						
CAF	**Calviac**	**2.43**	**40**	*e*Pn	Pn	09 26 28.9	-2.6
CAF				*e*Pg	Pg	09 26 37.2	-2.3
CAF				*e*Sn	Sn	09 26 58.3	-3.4
CAF				*e*Sg	Sg	09 27 07.7	-4.2
	19nm,0.2s						
ELAN	**Lanestosa**	**2.43**	**275**	Lg		09 27 09.3	
	2.6nm,0.2s,SNR=5.5						
RJF	**Les Rejaudoux**	**2.52**	**27**	*e*Pn	Pn	09 26 31.2	-1.6
RJF				*e*Pg	Pg	09 26 38.5	-2.8
RJF				*e*Sn	Sn	09 27 00.5	-3.5
RJF				*e*Sg	Sg	09 27 11.1	-3.9
	16nm,0.2s						
EMOS	**Mosqueruela**	**2.72**	**186**	Pn	Pn	09 26 36.3	+0.8
	0.6nm,0.3s,SNR=6.9						
EMOS				Sn	Sn	09 27 08.0	-0.9
	0.8nm,0.1s,SNR=7.9						
EMOS				Lg		09 27 15.6	
	2.2nm,0.2s,SNR=5.0						
EMOS	**Mosqueruela**	**2.72**	**186**	Pn	Pn	09 26 36.3	+0.7
	0.6nm,0.3s,SNR=6.9						
EMOS				Sn	Sn	09 27 08.0	-0.9
	0.8nm,0.1s,SNR=7.9						
LASF	**Ste Croix**	**3.06**	**69**	*e*Pn	Pn	09 26 38.8	-1.6
LASF				*e*Sg	Sg	09 27 28.0	-4.7
	6.9nm,0.4s						
MFF	**Saint Martin d**	**3.53**	**360**	*e*Pn	Pn	09 26 44.9	-2.3
MFF				*e*Pg	Pg	09 26 56.9	-4.5
MFF				*e*Sn	Sn	09 27 24.5	-5.1
MFF				*e*Sg	Sg	09 27 41.9	-6.6
	6.4nm,0.2s						
TCF	**Toulx Ste Croi**	**3.62**	**26**	*e*Pn	Pn	09 26 46.2	-2.2
TCF				*e*Pg	Pg	09 26 58.6	-4.6
TCF				*e*Sn	Sn	09 27 26.7	-5.1
TCF				*e*Sg	Sg	09 27 45.0	-6.5
	6.4nm,0.2s						
VIVF	**Saint-Julien-l**	**3.89**	**61**	*e*Pn	Pn	09 26 49.8	-2.5
VIVF				*e*Sg	Sg	09 27 53.6	-6.9
	4.1nm,0.4s						
BGF	**Bois d'Agland**	**4.08**	**30**	*e*Pn	Pn	09 26 53.0	-1.9
BGF				*e*Pg	Pg	09 27 06.8	-5.5
BGF				*e*Sg	Sg	09 27 59.4	-7.2
	27nm,0.3s						
BGF	**Bois d'Agland**	**4.08**	**30**	*e*Pn	Pn	09 26 53.0	-1.9
BGF				*e*Sg	Sg	09 27 59.4	-7.2
	13nm,0.3s						
AVF	**Avril sur Loir**	**4.46**	**32**	*e*Pn	Pn	09 26 58.6	-1.8
AVF				*e*Sg	Sg	09 28 11.7	-7.8
	7.4nm,0.4s						
SMF	**Signal de Mont**	**4.55**	**37**	*e*Sg	Sg	09 28 13.8	-8.6
	7.3nm,0.4s						
LOR	**Lormes**	**5.05**	**32**	*e*Pn	Pn	09 27 05.7	-3.0
	baz=212						
LOR				*e*Sn	Sn	09 28 01.3	-6.7
	2.6nm,0.2s						
QUIF	**Quistinic**	**5.30**	**337**	*e*Pn	Pn	09 27 09.3	-2.9
GRR	**Gorron**	**5.34**	**355**	*e*Pn	Pn	09 27 09.9	-3.0
FLN	**La Foliniere**	**5.70**	**358**	*e*Pn	Pn	09 27 14.1	-3.8
	baz=168						
ROSF	**Rostrenen**	**5.71**	**338**	*e*Pn	Pn	09 27 15.0	-3.0

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*THE **20** 09:31:44.0, 38.69N×20.49E, h1^{km}, ML2.9*

*ATH **20** 09:31:44.1, 38.70N×20.67E, h30^{km}±11^{km}, MD3.2/4*

*NEIC **20** 09:31:44.1, 38.70N×20.67E, h30^{km}, MD3.2(ATH), After ATH.*

*CSEM **20** 09:31:44.6±0.1, 38.73N×20.54E, ML2.9, Error ellipse: s-maj=3.9km s-min=1.9km az=75.0*

ISC 20 09:31:42.1±1.2, 38.62N±0.04×20.52E±0.07, h2^{km}±7^{km}, n9, σ0^{s}.94/15, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD	**Levkas**	**0.13**	**50**	*e*Pg	**Pg**	**09 31 46.4**	**+1.6**
VLS	**Valsamata**	**0.45**	**173**	*e*PN	**Pn**	**09 31 55.0**	**0.0**
VLS				*e*SN	**Sn**	**09 32 04.3**	**+0.6**
IGT	**Igoumenitsa**	**0.92**	**351**	*e*Pg	**Pg**	**09 32 00.0**	**-0.5**
EVR	**Evrytania**	**1.05**	**73**	*e*PN	**Pn**	**09 32 02.2**	**-1.5**
EVR				*e*SN	**Sn**	**09 32 15.4**	**-3.6**
JAN	**Janina**	**1.06**	**14**	*e*PN	**Pn**	**09 32 02.4**	**-1.5**
KEK	**Kerkira**	**1.23**	**333**	*e*PN	**Pn**	**09 32 06.4**	**+0.2**
KEK				*e*SN	**Sn**	**09 32 24.1**	**+0.6**
AGG	**Agios Georgios**	**1.47**	**74**	*e*Pg	**Pg**	**09 32 10.3**	**-1.2**
AGG				*e*Sg	**Sg**	**09 32 31.7**	**+0.7**
LIT	**Litokhoron**	**2.12**	**45**	*e*Pn	**Pn**	**09 32 19.7**	**+0.7**
LIT				*e*Sn	**Sn**	**09 32 47.1**	**+0.8**
FNA	**Florina**	**2.26**	**17**	*e*Pn	**Pn**	**09 32 21.1**	**+0.2**
FNA				*e*Sn	**Sn**	**09 32 49.5**	**-0.2**

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*NEIC **20** 09:37:48.8±0.9, 21.07S×68.80W, h93^{km}±10^{km}, mb3.8/2, Error ellipse: s-maj=15.5km s-min=8.5km az=87.0*

*IDC **20** 09:37:49.6±2.3, 21.07S×68.75W, h101^{km}±23^{km}, mb3.5/3, mb1 3.6/7, mb1mx3.5/18, mbtmp3.8/7, Error ellipse: s-maj=32.0km s-min=20.1km az=92.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 20 09:37:47.5±1.3, 21.09S±0.07×68.8W±0.1, h100^{km}±15^{km}, n14, σ0^{s}.97/13, mb3.6/4, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.81**	**7**	P	**P**	**09 39 01.6**	**+2.6**
	3.4nm,0.3s,baz=206,slow=8.7,SNR=57						
LPAZ	**La Paz**	**4.81**	**7**	*e*P	**P**	**09 39 00.9**	**+1.9**
ARE	**Arequipa**	**5.26**	**330**	*e*P	**P**	**09 39 04.0**	**-1.2**
SIV	**San Ignacio**	**8.90**	**57**	P	**P**	**09 39 53.8**	**-0.9**
	0.4nm,0.3s,baz=238,slow=10,SNR=6.4						
CFAA	**Coronel Fontan**	**10.49**	**177**	P	**P**	**09 40 15.7**	**-0.5**
	0.2nm,0.3s,baz=349,slow=13,SNR=14						
SAML	**Samuel**	**13.22**	**25**	*e*P	**P**	**09 40 53.0**	**+0.6**
TRQA	**Tornquist**	**17.91**	**162**	*e*P	**P**	**09 41 51.8**	**+0.3**
PLCA	**Paso Flores**	**19.64**	**184**	P	**P**	**09 42 11.7**	**+1.0**
	0.4nm,0.3s,baz=1.6,slow=12,SNR=6.6						
PLCA	**Paso Flores**	**19.64**	**184**	*e*P	**P**	**09 42 11.3**	**+0.7**
	6.4nm,1.0s						
TXAR	**Lajitas Array**	**60.36**	**325**	P	**P**	**09 47 47.3**	**-1.2**
	0.2nm,0.6s,mb3.4,baz=154,slow=9.7,SNR=4.8						
DBIC	**Dimbokro**	**68.50**	**74**	P	**P**	**09 48 40.9**	**-0.8**
	3.2nm,0.8s,mb4.2,baz=235,slow=7.8,SNR=3.8						
NVAR	**Mina Array Bea**	**75.24**	**322**	P	**P**	**09 49 21.6**	**+0.4**
	0.3nm,0.6s,mb3.2,baz=172,slow=8.9,SNR=4.7						
HLID	**Hailey**	**76.75**	**328**	*e*P	**P**	**09 49 30.4**	**+0.8**
	0.9nm,0.7s,mb3.6						
MKAR	**Makanchi Array**	**145.23**	**36**	PKPbc	PKPbc	09 57 15.4	+1.6
	1.0nm,0.4s,baz=315,slow=1.7,SNR=8.4						

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*NIED **20** 10:03:00, 26.00N×128.60E, h20^{km}, Mw4.4 Best double couple: M$_0$4.98×10^{15} NP1:ϕ_s45°, δ81°, λ91°. NP2:ϕ_s220°, δ9°, λ86°.*

*BJI **20** 10:03:19.4, 26.06N×128.79E, h29^{km}, mB4.3, mb4.5, Ms4.4, Msz4.2*

*IDC **20** 10:03:19.1±0.9, 26.12N×128.51E, mb4.1/11, mb1 4.3/12, mb1mx4.2/20, mbtmp4.1/12, ML3.8/1, MS3.5/3, Ms1 3.6/3, ms1mx3.1/27, Error ellipse: s-maj=28.1km s-min=15.7km az=81.0*

*JMA **20** 10:03:21.6±0.2, 26.05N×128.65E, h46^{km}, M4.2*

*NEIC **20** 10:03:23.7±0.4, 26.11N×128.50E, mb4.6/11, MW4.4(NIED), Error ellipse: s-maj=9.2km s-min=7.1km az=134.0*

ISC 20 10:03:21.4±1.1, 26.05N±0.04×128.61E±0.04, h29^{km}±8^{km}, n49, σ1^{s}.08/61, mb4.4/24, MS3.8/6, 2D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.78**	**277**	P	**Pn**	**10 03 37.0**	**+0.5**
JJT2				*e*S	**Sb**	**10 03 48.0**	**+1.3**
JOW	**Kunigami**	**0.83**	**339**	Pn	**Pn**	**10 03 37.1**	**-0.1**
	776nm,0.3s,baz=148,slow=15,SNR=1449						
JOW				Sn	**Sn**	**10 03 48.2**	**-0.4**
	2µm,0.3s,baz=114,slow=19,SNR=31						
JOW	**Kunigami**	**0.83**	**339**	P	**Pn**	**10 03 37.4**	**+0.2**
JOW				S	**Sn**	**10 03 48.8**	**+0.2**
NAH1	**Naha**	**0.84**	**281**	P	**Pn**	**10 03 37.5**	**+0.1**
NAH1				*e*S	**Sn**	**10 03 49.5**	**+0.7**
JIH	**Iheya**	**1.14**	**330**	P	**Pn**	**10 03 42.2**	**+0.6**
JIH				*e*S	**Sn**	**10 03 55.1**	**-1.2**
JAGN	**Aguni-jima**	**1.34**	**294**	P	**Pn**	**10 03 45.1**	**+0.6**
JKE	**Kume jima 2**	**1.66**	**280**	P	**Pn**	**10 03 48.9**	**-0.2**
JKE				*e*S	**Sn**	**10 04 09.3**	**-0.3**
JTK	**Tokunoshima**	**1.75**	**10**	P	**Pn**	**10 03 50.6**	**+0.2**
JTK				*e*S	**Sn**	**10 04 10.8**	**-1.1**
JMZ	**Minamidaito 2**	**2.36**	**95**	P	**Pn**	**10 03 57.9**	**-1.2**
JMZ				S	**Sn**	**10 04 23.8**	**-3.6**
JAM	**Amami Oshima**	**2.51**	**20**	P	**Pn**	**10 04 00.7**	**-0.5**
JAM				*e*S	**Sn**	**10 04 30.2**	**-1.0**
JZK	**Kikaishima**	**2.56**	**28**	P	**Pn**	**10 04 03.5**	**+1.6**
JZK				*e*S	**Sn**	**10 04 33.9**	**+1.5**
JTJ	**Tarama**	**3.81**	**249**	P	**Pn**	**10 04 17.9**	**-1.7**
JTJ				*e*S	**Sn**	**10 05 00.1**	**-3.8**
JNN	**Nakanoshima**	**3.94**	**16**	P	**Pn**	**10 04 21.4**	**-0.1**
JNN				S	**Sn**	**10 05 03.2**	**-4.1**
JIJ	**Ishigaki jima**	**4.38**	**248**	P	**Pn**	**10 04 25.5**	**-2.3**
YHNB	**Yeheng**	**6.69**	**260**	*e*Pn	**Pn**	**10 04 58.3**	**-2.1**
JNU	**Nakatsue**	**7.32**	**15**	Pn	**Pn**	**10 05 08.4**	**-0.8**
	1.4nm,0.3s,baz=216,slow=14,SNR=15						
HHC	**Hu-ho-hao-te**	**20.44**	**320**	*e*P	**P**	**10 07 56.0**	**-3.2**
HHC				AMB	AMB		
	comp=Z,110nm,7.3s						
HHC				LR	LR		
	comp=N,580nm,11.6s,MS4.3						
HHC				LR	LR		
	comp=E,450nm,12.7s,MS4.3						
HHC				LR	LR		
	comp=Z,640nm,11.8s,MS4.2						
KMI	**Kunming**	**23.34**	**273**	P	**P**	**10 08 29.4**	**+1.1**
KMI				AP		10 08 36.9	
KMI				XP		10 08 40.3	
KMI				PP	PP	10 09 03.1	+3.2
KMI				S	**S**	**10 12 40.8**	**+5.5**
KMI				XS		10 12 54.3	
KMI				AMB	AMB		
	comp=Z,50nm,3.6s						

KMI				LR	LR		
	comp=N,380nm,19.1s						
KMI				LR	LR		
	comp=E,280nm,10.6s						
KMI				LR	LR		
	comp=Z,370nm,11.8s						
KMI	Kunming	23.34	273	P	P	10 08 29.4	+1.1
	comp=Z,8.0nm,1.2s,mb4.0						
KMI				pP		10 08 36.9	
KMI				sP		10 08 40.3	
KMI				PP	PP	10 09 03.1	+3.2
KMI				S	S	10 12 40.7	+5.4
KMI				sS		10 12 54.3	
KMI				SS	SS	10 13 31.9	+9.4
KMI				LR	LR		
	comp=Z,380nm,11.8s,MS4.1						
LZH	Lanzhou	23.40	301	⇓P	P	10 08 28.5	-0.2
LZH				AP		10 08 37.5	
LZH				XP		10 08 41.6	
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.4						
LZH	Lanzhou	23.40	301	⇓P	P	10 08 28.5	-0.2
	comp=Z,25nm,1.3s,mb4.5						
LZH				pP		10 08 37.5	
LZH				sP		10 08 41.6	
YSS	Yuzh-Sakhalins	23.69	25	*e*P	P	10 08 33.5	+2.1
	comp=Z,39nm,1.0s,mb4.8						
GTA	Gaotai	27.51	306	P	P	10 09 06.0	-1.4
GTA				AP	pP	10 09 14.3	-1.7
GTA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.9						
GTA				AMB	AMB		
	comp=Z,60nm,11.0s						
GTA				LR	LR		
	comp=N,290nm,13.7s,MS4.2						
GTA				LR	LR		
	comp=E,280nm,13.7s,MS4.2						
GTA				LR	LR		
	comp=Z,410nm,14.4s,MS4.1						
ULN	Ulaanbaatar	27.59	328	*e*P	P	10 09 08.9	+0.9
	comp=Z,17nm,1.4s,mb4.5						
SONM	Songino Array	27.89	327	P	P	10 09 08.8	-1.9
	comp=Z,4.0nm,0.7s,mb4.2,baz=139,slow=10,SNR=24						
CMAR	Chiang Mai Arr	28.43	261	P	P	10 09 15.8	-0.2
	comp=Z,1.1nm,0.5s,mb3.7,baz=52,slow=6.9,SNR=4.5						
CMAR				LR	LR	10 21 32.8	
	comp=Z,131nm,18.2s,MS3.6,baz=60,slow=39						
GUN	Gumba	37.99	283	*e*P	P	10 10 39.5	+0.9
	comp=Z,25nm,0.8s,mb5.0						
PKI	Pulchoki	38.45	282	*e*P	P	10 10 42.8	+0.3
KKN	Kakani	38.53	283	*e*P	P	10 10 43.6	+0.4
	comp=Z,20nm,0.5s,mb5.1						
DMN	Daman	38.71	282	*e*P	P	10 10 45.7	+1.0
GKN	Gorkha	39.06	283	*e*P	P	10 10 47.4	-0.3
	comp=Z,19nm,0.4s,mb5.1						
PMG	Port Moresby	39.59	150	LR	LR	10 25 40.4	
	comp=Z,72nm,19.7s,MS3.5,baz=178,slow=34						
KOLN	Koldanda	40.01	283	*e*P	P	10 10 55.8	+0.3
	comp=Z,18nm,0.8s,mb4.9						
MKAR	Makanchi Array	41.91	312	P	P	10 11 10.3	-0.5
	comp=Z,1.4nm,0.5s,mb3.8,baz=98,slow=10.0,SNR=4.9						
ZAL	Zalesovo	42.60	323	LR	LR	10 30 14.0	
	comp=Z,49nm,21.9s,MS3.4,baz=180,slow=38						
WRAB	Tennant Creek	46.05	172	*e*P	P	10 11 44.9	+0.3
	comp=Z,6.8nm,0.8s,mb4.6						
WRA	Warramunga Arr	46.06	173	P	P	10 11 44.7	+0.1
	comp=Z,1.8nm,0.6s,mb4.2,baz=353,slow=8.5,SNR=34						
BVAR	Borovoye Array	50.63	318	P	P	10 12 19.2	-0.6
	comp=Z,2.0nm,0.6s,mb4.3,baz=80,slow=9.0,SNR=9.5						
ZRNK	Zerenda	51.45	318	*e*P	P	10 12 25.3	-0.7
	comp=Z,3.8nm,0.6s,mb4.5						
ZRNK				*e*pP	pP	10 12 33.9	-1.1
ILAR	Eielson Array	64.43	28	P	P	10 13 56.7	-0.2
	comp=Z,0.5nm,0.6s,mb3.7,baz=268,slow=6.5,SNR=7.9						
FINES	FINESS Array B	73.19	331	P	P	10 14 51.0	0.0
	comp=Z,1.5nm,0.6s,mb4.1,baz=72,slow=6.0,SNR=7.8						
AKASG	Malin Array Be	75.89	320	P	P	10 15 06.4	-0.4
	comp=Z,2.8nm,0.5s,mb4.5,baz=58,slow=6.9,SNR=4.3						
YKA	Yellowknife Ar	78.54	25	P	P	10 15 22.1	+0.8
	comp=Z,0.5nm,0.6s,mb3.6,baz=304,slow=5.8,SNR=4.1						
YKA	Yellowknife Ar	78.54	25	P	P	10 15 22.1	+0.8
NB2	NORSAR Subarra	79.62	334	P	P	10 15 27.2	0.0
	comp=Z,1.4nm,0.6s,mb4.1,baz=49,slow=5.6						
NOA	NORSAR Array B	79.62	334	P	P	10 15 27.1	0.0
	comp=Z,1.8nm,0.7s,mb4.1,baz=52,slow=5.5,SNR=6.7						
CLL	Collm	84.49	325	P	P	10 15 54.2	+1.6
	comp=Z,logA/T=0.9,mb4.8						
CLL				*i* *SP	sP	10 16 06.6	+1.5
NEW	Newport	85.53	38	*e*P	P	10 16 00.0	+2.2
	comp=Z,1.3nm,0.7s,mb4.3						
GERES	GERESS Array B	85.55	323	P	P	10 15 59.7	+1.7
	comp=Z,0.6nm,0.5s,mb4.1,baz=63,slow=3.0,SNR=5.1						

*NEIC **20** 10:04:49.1, 16.21N×99.52W, h14^{km}, MD4.1(MEX), After MEX.*

MEX 20 10:04:49.1±1.1**, 16.21N×99.52W, h14**^{km}±18^{km}**, MD4.1, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	Acapulco	0.76	330	*i* P	Pb	10 05 01.0	-2.6
ACX				*i* S	Sb	10 05 11.0	-2.6
CAIG	El Cayaco	1.11	319	*i* P	Pb	10 05 07.6	-1.9
CAIG				*i* S	Sb	10 05 19.0	-4.5
PNIG	Pinotepa	1.35	82	*i* P	Pn	10 05 09.9	-3.6
PNIG				*i* S	Sb	10 05 25.9	-4.6
PLIG	Platanillo	2.17	0	*i* P	Pn	10 05 22.7	-2.8
PLIG				*i* S	Sn	10 05 47.1	-5.2
ZIIG	Zihuatanejo	2.33	307	*e*P	Pn	10 05 24.1	-3.5
ZIIG				*i* S	Sn	10 05 51.4	-4.8
YAIG	Yautepec	2.68	9	*i* P	Pn	10 05 29.7	-2.9
YAIG				*i* S	Sn	10 06 00.9	-4.1
VHO	Vista Hermosa	2.80	72	*e*P	Pn	10 05 30.4	-4.0
VHO				*i* S	Sn	10 06 02.0	-6.2
PPM	Popocatepetl	2.97	16	*e*P	Pn	10 05 33.8	-2.9
PPM				*i* S	Sn	10 06 08.7	-3.7
PPM	Popocatepetl	2.97	16	*e*P	Pn	10 05 33.8	-2.9
PPM				*e*P		10 05 36.0	
PPM				*i* S	Sn	10 06 08.7	-3.7
PPM				*i* S	Sn	10 06 10.4	-2.0
PPM				*e*S	Sn	10 06 12.0	-0.5
IIZ	Mezontepec	2.98	5	*i* S	Sn	10 06 10.0	-2.7
SZVM	Salazar	3.10	2	*e*S	Sn	10 06 12.4	-3.5
UNM	Universidad Na	3.12	6	*e*P	Pn	10 05 36.1	-2.9
UNM				*i* S	Sn	10 06 14.7	-1.7
HUIG	Huatulco	3.31	97	*e*P	Pn	10 05 42.8	+1.3
HUIG				*e*S	Sn	10 06 20.4	-0.5
PTVM	Pico Tres Padr	3.39	6	*e*S	Sn	10 06 20.6	-2.5
IISM	Ciudad Serdan	3.44	36	*e*P	Pn	10 05 45.0	+1.6
IISM				*i* S	Sn	10 06 27.0	+2.7
IIO	Organos	3.45	13	*i* S	Sn	10 06 19.0	-5.7
IIC	Rita Coyotepec	3.55	4	*i* S	Sn	10 06 23.8	-3.4
MOIG	Morelia	3.80	335	*e*P	Pn	10 05 50.6	+2.0
MOIG				*i* S	Sn	10 06 30.8	-2.8

*NIED **20** 10:04:00, 26.00N×128.70E, h35^{km}, Mw4.4 Best double couple: $M_0$4.06×10^{15} NP1:ϕ_s30°, δ65°, λ91°. NP2:ϕ_s208°, δ25°, λ89°.*

*JMA **20** 10:04:52.4±0.2, 26.03N×128.68E, h40^{km}, M3.9*

*BJI **20** 10:04:52.5, 26.37N×128.87E, h35^{km}, mB4.6, mb4.7, Ms4.4, Msz4.3*

*IDC **20** 10:04:54.2±6.3, 26.19N×128.75E, h30^{km}±45^{km}, mb4.0/6, mb1 4.1/6, mb1mx3.8/19, mbtmp4.2/6, MS3.7/1, Ms1 3.7/1, ms1mx2.9/26, Error ellipse: s-maj=56.9km s-min=19.0km az=66.0*

*NEIC **20** 10:04:55.4±0.7, 26.08N×128.49E, h35^{km}, mb4.3/3, Error ellipse: s-maj=27.2km s-min=11.1km az=75.0*

ISC 20 10:04:52.8±0.7**, 26.04N**±0.05×**128.67E**±0.04**, h36**^{km}±7^{km}**, n24, σ0^{s}92**/31**, mb4.1**/10**, MS4.1**/3**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT2	Tamagusuku 2	0.83	277	P	P	10 05 08.1	0.0
JJT2				*e*S	S	10 05 19.7	+0.4
JOW	Kunigami	0.86	336	Pn	P	10 05 08.6	0.0
	564nm,0.3s,baz=146,slow=16,SNR=6.6						
JOW				Sn	S	10 05 19.4	-0.8
	1µm,0.3s,baz=323,slow=29,SNR=10						
JOW	Kunigami	0.86	336	P	P	10 05 08.5	0.0
JOW				*e*S	S	10 05 19.7	-0.4
NAH1	Naha	0.90	281	P	P	10 05 08.9	-0.1
JIH	Iheya	1.17	328	P	P	10 05 13.2	+0.3
JIH				*e*S	S	10 05 28.5	+0.5
JAGN	Aguni-jima	1.39	293	P	P	10 05 16.3	+0.2
JKE	Kume jima 2	1.72	280	P	P	10 05 20.0	-0.7
JTK	Tokunoshima	1.76	8	P	P	10 05 21.9	+0.6
JMZ	Minamidaito 2	2.31	95	P	P	10 05 28.9	-0.3
JMZ				*e*S	S	10 05 54.6	-2.1
JAM	Amami Oshima	2.50	19	P	P	10 05 31.9	-0.1
JAM				*e*S	S	10 06 01.0	-0.7
JZK	Kikaishima	2.55	27	P	P	10 05 33.9	+1.3
JZK				*e*S	S	10 06 03.6	+0.9
HHC	Hu-ho-hao-te	20.48	320	*e*P	P	10 09 28.8	-1.4
HHC				S	S	10 13 10.0	-2.5
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s						
HHC				AMB	AMB		
	comp=Z,100nm,5.6s						
HHC				LR	LR		
	comp=N,580nm,11.6s,MS4.3						
HHC				LR	LR		
	comp=E,450nm,12.8s,MS4.3						
HHC				LR	LR		
	comp=Z,640nm,11.6s,MS4.2						
YSS	Yuzh-Sakhalins	23.68	25	*e*P	P	10 10 04.6	+2.8
	comp=Z,8.8nm,0.6s,mb4.4						
GTA	Gaotai	27.56	306	P	P	10 10 36.8	-1.7
GTA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
GTA				AMB	AMB		
	comp=Z,100nm,8.4s						
GTA				LR	LR		
	comp=N,260nm,13.3s,MS4.1						
GTA				LR	LR		
	comp=E,240nm,12.2s,MS4.1						
GTA				LR	LR		
	comp=Z,300nm,11.8s,MS4.1						
ULN	Ulaanbaatar	27.63	328	*e*P	P	10 10 39.9	+0.9
	comp=Z,2.7nm,0.6s,mb4.0						
SONM	Songino Array	27.93	327	P	P	10 10 41.0	-0.7
	comp=Z,2.6nm,0.7s,mb4.0,baz=142,slow=10,SNR=7.0						
MKAR	Makanchi Array	41.95	312	P	P	10 12 41.5	-0.2
	comp=Z,1.3nm,0.5s,mb3.8,baz=99,slow=10.0,SNR=4.3						
WRAB	Tennant Creek	46.03	173	*e*P	P	10 13 16.0	+1.0
	comp=Z,2.5nm,0.6s,mb4.3						
WRA	Warramunga Arr	46.04	173	P	P	10 13 16.1	+1.0
	comp=Z,1.8nm,0.6s,mb4.2,baz=354,slow=8.4,SNR=8.1						
BVAR	Borovoye Array	50.68	318	P	P	10 13 50.9	+0.3
	comp=Z,1.4nm,0.6s,mb4.1,baz=83,slow=8.9,SNR=3.9						
AKASG	Malin Array Be	75.93	320	P	P	10 16 37.5	+0.1
	comp=Z,2.3nm,0.6s,mb4.3,baz=56,slow=6.5,SNR=5.1						
URZ	Urewera	78.43	143	LR	LR	10 47 44.8	
	comp=Z,44nm,18.6s,MS3.8,baz=80,slow=33						
NB2	NORSAR Subarra	79.66	334	P	P	10 16 57.8	-0.1
	comp=Z,0.2nm,0.6s,mb3.2,baz=59,slow=5.8						
NOA	NORSAR Array B	79.66	334	P	P	10 16 58.5	+0.6
	comp=Z,1.3nm,0.6s,mb4.0,baz=52,slow=5.4,SNR=4.4						

*NEIC **20** 10:20:54.0, 34.12S×70.05W, h4^{km}, ML3.2(GUC), After GUC.*

GUC 20 10:20:54.0±0.6**, 34.12S×70.05W, h4**^{km}±1^{km}**, MD4.1, ML3.2, 7C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMEL	Las Melosas	0.30	335	⇑*i*P	Pg	10 21 00.6	+0.6
LMEL				*i* S	Sg	10 21 05.4	+1.5
LMEL				AMP		10 21 06.6	
	comp=N,7µm,0.2s						
CICH	Cipreses	0.37	236	⇑*i*P	Pg	10 21 01.7	+0.3
CICH				*i* S	Sg	10 21 07.1	+0.8
CACH	El Canelo	0.46	270	⇓*i*P	Pg	10 21 03.4	+0.3
CACH				*i* S	Sg	10 21 10.3	+1.1
CHCH	Chadas Angostu	0.53	290	⇑*i*P	Pg	10 21 05.1	+0.4
CHCH				*i* S	Sg	10 21 13.3	+1.6
SJCH	San Jose de Ma	0.54	332	⇑*i*P	Pg	10 21 04.7	0.0
SJCH				*i* S	Sg	10 21 13.1	+1.2
SJCH				AMP		10 21 13.4	
	comp=E,2µm,0.3s						
PCH	Pirque	0.63	322	⇓*i*P	Pg	10 21 06.7	+0.2
PCH				*i* S	Sg	10 21 16.6	+1.7
ANTU	Antumapu	0.73	318	⇓*i*P	Pg	10 21 08.6	+0.1
ANTU				*i* S	Sg	10 21 19.6	+1.3
ANTU				AMP		10 21 19.8	
	comp=N,1µm,0.2s						
CLCH	Cerro Calan	0.82	331	⇑*i*P	Pg	10 21 10.3	-0.2
CLCH				*i* S	Sg	10 21 22.7	+1.2
CLCH				AMP		10 21 24.8	
	comp=E,3µm,0.6s						
DSCH	Colegio Aleman	0.83	329	*e*P	Pb	10 21 10.6	-0.1
DSCH				*i* S	Sg	10 21 22.9	+1.1
DSCH				AMP		10 21 23.8	
	comp=E,2µm,0.3s						
TACH	Talagante	0.87	302	⇓*i*P	Pb	10 21 11.0	-0.2
TACH				*i* S	Sg	10 21 23.5	+0.6
PUEX	Pudahuel	0.89	319	⇑*i*P	Pb	10 21 07.5	-4.2
PUEX				*i* S	Sb	10 21 24.4	+0.7
PUEX				AMP		10 21 28.4	
	comp=N,2µm,0.5s						
SFDO	San Fernando	0.94	238	⇑*i*P	Pb	10 21 11.9	-0.5
LNV	Longovilo	1.14	278	*e*P	Pb	10 21 15.3	-0.6
LNV				*i* S	Sb	10 21 31.2	+0.4
LCCH	Las Cruces	1.42	296	*e*P	Pn	10 21 20.2	-0.3
LCCH				*i* S	Sb	10 21 39.8	+0.9
JACH	Jahuel	1.50	342	*e*P	Pn	10 21 21.2	-0.5
MDZ	Mendoza	1.59	40	*e*P	Pn	10 21 23.1	+0.1
MDZ				S	Sb	10 21 48.9	+5.0
TALC	Talca	1.82	225	*e*P	Pn	10 21 27.0	+0.6
PACH	Papudo	1.96	323	*e*P	Pn	10 21 29.4	+1.1
CMCH	Combarbala	3.04	344	*e*P	Pn	10 21 46.8	+3.0

NIED 20 10:41:00, 25.70N×142.70E, h14^{km}**, Mw3.7 Best double couple:** $M_0$4.32×10^{14} **NP1:**ϕ_s300°**,** δ71°**,** λ111°. **NP2:** ϕ_s70°**,** δ28°**,** λ43°.**, Volcano Islands region**

*ATH **20** 10:43:00.4, 36.39N×27.19E, h18^{km}±1^{km}, MD3.3/7*

*NEIC **20** 10:43:00.4, 36.39N×27.19E, h18^{km}, MD3.3(ATH), After ATH.*

*CSEM **20** 10:43:00.4±0.1, 36.39N×27.31E, h15^{km}, MD3.1, Error ellipse: s-maj=1.8km s-min=1.5km az=117.0*

*ISK **20** 10:43:01.0, 36.40N×27.20E, h29^{km}, MD3.1*

ISC 20 10:42:59.7±0.5**, 36.34N**±0.03×**27.25E**±0.03**, h10**^{km}**, n20, σ1^{s}16**/32**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NISR	Nisiros	0.29	341	*e*PB	Pg	10 43 05.5	-0.3
NISR				*e*SB	Sg	10 43 10.0	+0.2
ARG	Arkhangelos	0.72	99	*e*PN	Pn	10 43 15.3	-0.4
ARG				*e*SN	Sn	10 43 26.9	+0.2
BODT	Bodrum	0.73	4	PG	Pg	10 43 14.6	+0.3
BODT				SG	Sg	10 43 23.9	-0.2
BDRM	Kayabasi	0.74	12	*i* P	Pb	10 43 15.4	+1.2
BDRM				*i* S	Sb	10 43 24.6	+0.4
KARP	Karpathos	0.79	185	*e*PN	Pn	10 43 16.6	-0.1
KARP				*e*SN	Sn	10 43 28.5	0.0
MLSB	Milas	1.05	24	PG	Pg	10 43 18.7	-2.0
MLSB				SG	Sg	10 43 33.7	-1.0
YER	Yerkesik	1.15	46	PN	Pn	10 43 21.8	0.0
DALT	Dalyan (Mudla)	1.20	68	PN	Pn	10 43 22.5	0.0
SMG	Samos	1.41	347	*e*PN	Pn	10 43 25.1	-0.4
AYDN	Tasoluk	1.42	21	*i* P	Pn	10 43 28.0	+2.4
AYDN				*i* S	Sg	10 43 47.6	+0.7
SANT	Santorini	1.45	272	*e*Pn	Pn	10 43 23.4	-2.6
SANT				*e*Pg	Pg	10 43 27.1	-1.5
SANT				*e*Sg	Sg	10 43 46.8	-1.1
SANT	Santorini	1.45	272	*e*Pn	Pn	10 43 23.4	-2.6
SANT	Santorini	1.45	272	*e*Pg	Pg	10 43 27.1	-1.5
FETY	Fethiye	1.51	78	*e*PN	Pn	10 43 26.6	-0.4
APE	Apeiranthos	1.56	298	*e*PN	Pn	10 43 27.1	-0.6
APE	Apeiranthos	1.56	298	*e*PN	Pn	10 43 28.1	+0.4
APE				*e*SN	Sn	10 43 49.7	+1.6
NPS	Neapolis	1.71	232	*e*PN	Pn	10 43 31.0	+1.2
XRY	Khrisi	1.93	221	*e*PN	Pn	10 43 35.0	+2.0
DNZL	Cakiroluk	1.97	46	*i* P	Pn	10 43 37.8	+4.2
DNZL				*i* S	Sg	10 44 08.8	+3.3
GOLH	Golhisar	2.06	63	*i* P	Pn	10 43 38.8	+3.9
GOLH				*i* S	Sg	10 44 06.6	-1.8

*IDC **20** 11:00:38.2±0.7, 21.28N×120.26E, mb4.0/13, mb1 4.2/13, mb1mx4.1/18, mbtmp4.0/13, MS3.3/5, Ms1 3.3/5, ms1mx3.1/26, Error ellipse: s-maj=33.0km s-min=17.1km az=65.0*

*NEIC **20** 11:00:41.1±3.4, 21.24N×120.25E, h18^{km}±21^{km}, mb4.3/6, Error ellipse: s-maj=8.8km s-min=8.1km az=92.0*

*TAP **20** 11:00:41.6, 21.41N×120.05E, h58^{km}±2^{km}, ML4.4*

*MAN **20** 11:00:42.7, 21.03N×120.32E, h5^{km}, mb4.4, ML3.3, MS3.1*

*BJI **20** 11:00:43.5, 21.72N×120.01E, h17^{km}, mB4.5, mb4.3, ML3.8, Ms3.8, Msz3.9*

*JMA **20** 11:00:46.4±0.5, 21.26N×120.74E, h166^{km}, M3.4*

ISC 20 11:00:42.6±0.7**, 21.29N**±0.03×**120.31E**±0.05**, h42**^{km}±8^{km}**, n51, σ1^{s}14**/51**, mb4.0**/18**, MS3.5**/7**, 3C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBP	Basco	1.76	118	*e*P	P	11 01 11.9	+0.8
BBP				*e*S	S	11 01 34.6	+2.1
NACB	Ninganchiao	3.10	22	*e*Pn	P	11 01 30.3	0.0
YHNB	Yeheng	3.50	16	*e*Pn	P	11 01 35.6	-0.4
APYP	Conner	3.52	165	*e*P	P	11 01 34.8	-1.4
APYP				*e*S	S	11 02 15.6	-1.5
ABRA	Dolores	3.64	174	*e*P	P	11 01 29.1	-8.8
CVP	Callao Caves	3.84	158	*e*P	P	11 01 40.0	-0.7
QZH	Quanzhou	3.97	337	*e*P	P	11 01 37.1	-5.4
QZH				S	S	11 02 19.4	-9.0
YOJ	Yonaguni jima	4.02	38	P	P	11 01 45.3	+2.0
YOJ				*e*S	S	11 02 30.6	+0.9
HATJ	Hateruma jima	4.24	49	*e*S	S	11 02 34.1	-1.2
IRIF	Iriomote-Funau	4.37	45	P	P	11 01 49.8	+1.5
IRIF				*e*S	S	11 02 38.5	-0.1
JKRS	Kuro-shima	4.50	49	P	P	11 01 50.6	+0.5
JKRS				*e*S	S	11 02 39.8	-2.0
CAUP	Cauayan	4.55	161	*e*P	P	11 01 52.6	+1.8
JIJ	Ishigaki jima	4.67	48	P	P	11 01 52.9	+0.4
JIJ				*e*S	S	11 02 44.1	-2.1
JTJ	Tarama	5.24	50	P	P	11 02 00.1	-0.4
JTJ				*e*S	S	11 02 59.5	-1.0
BALP	Baler	5.65	168	*e*P	P	11 02 06.6	+0.5
QIZ	Qiongzhong	10.09	259	P	P	11 03 08.9	+1.0
QIZ				*e*S	S	11 05 09.4	+8.5
QIZ				LR	LR		
	comp=N,320nm,11.5s						
QIZ				LR	LR		
	comp=E,340nm,12.3s						
QIZ				LR	LR		
	comp=Z,450nm,11.8s						
JNU	Nakatsue	15.06	36	LR	LR	11 10 19.8	
	comp=Z,109nm,21.8s,baz=198,slow=38						
KMI	Kunming	16.60	287	P	P	11 04 32.5	-1.3
	comp=Z,5.0nm,0.5s						
CMAR	Chiang Mai Arr	20.29	266	P	P	11 05 16.1	-1.5
	comp=Z,1.9nm,0.8s,baz=68,slow=8.8,SNR=5.4						
CMAR				LR	LR	11 13 28.8	
	comp=Z,118nm,19.0s,MS3.3,baz=85,slow=38						
HHC	Hu-ho-hao-te	20.87	341	*e*P	P	11 05 27.0	+3.7
HHC				AP		11 05 32.1	
HHC				PCP	PcP	11 09 32.5	+1.8
HHC				PCS		11 13 11.6	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s						
HHC				AMB	AMB		
	comp=Z,110nm,5.1s						
HHC				LR	LR		
	comp=N,180nm,11.8s,MS3.8						
HHC				LR	LR		
	comp=E,170nm,13.2s,MS3.8						
HHC				LR	LR		
	comp=Z,170nm,13.1s,MS3.6						
JHJ	Hachijo jima 2	20.91	52	LR	LR	11 11 53.7	
	comp=Z,48nm,20.8s,MS2.9,baz=117,slow=32						
MDJ	Mudanjiang	24.50	16	P	P	11 06 00.4	+1.3
MDJ				AP		11 06 03.4	
MDJ				S	S	11 10 22.8	+9.0
MDJ				XS		11 10 27.9	
MDJ				SCP		11 13 16.4	
MDJ				PCS		11 13 17.8	
MDJ				AMB	AMB		
	comp=Z,40nm,4.9s						
MDJ				LR	LR		
	comp=N,60nm,27.6s						
MDJ				LR	LR		
	comp=E,90nm,20.9s						
MDJ				LR	LR		
	comp=Z,120nm,16.7s						
GTA	Gaotai	25.18	320	P	P	11 06 05.5	-0.2
GTA				AP	pP	11 06 10.8	-5.9
GTA				XP	sP	11 06 14.3	-7.5
GTA				PP	PP	11 06 38.5	-6.1
GTA				PPP	PPP	11 06 49.9	-6.0
GTA				SCP		11 13 22.8	
GTA				SCS	ScS	11 17 11.5	+10
GTA				AMB	AMB		
	comp=Z,90nm,9.9s						
GTA				LR	LR		
	comp=N,130nm,14.8s,MS3.7						
GTA				LR	LR		
	comp=E,110nm,14.1s,MS3.7						
GTA				LR	LR		
	comp=Z,170nm,12.9s,MS3.8						
LSA	Lhasa	27.57	294	P	P	11 06 28.3	+0.5
	comp=Z,3.5nm,0.4s,mb4.3						
SONM	Songino Array	28.76	340	P	P	11 06 37.1	-1.2
	comp=Z,0.4nm,0.4s,mb3.5,baz=149,slow=8.4,SNR=3.4						
ASAJ	Asahikawa	29.32	34	LR	LR	11 18 20.2	
	comp=Z,46nm,19.8s,MS3.1,baz=324,slow=36						
WMQ	Urumqi	35.15	317	*e*P	P	11 07 35.6	+1.3
WMQ				AP	pP	11 07 40.0	-5.9
WMQ				XP	sP	11 07 42.6	-8.6
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
WMQ				LR	LR		
	comp=N,610nm,22.0s						
WMQ				LR	LR		
	comp=Z,620nm,23.0s,MS4.3						
MKAR	Makanchi Array	39.91	319	P	P	11 08 13.6	-0.5
	comp=Z,0.7nm,0.6s,mb3.5,baz=104,slow=10.0,SNR=5.0						
ZAL	Zalesovo	42.27	329	P	P	11 08 34.2	+0.7
	comp=Z,0.7nm,0.3s,mb3.8,baz=74,slow=10,SNR=3.2						
WRAB	Tennant Creek	43.21	161	*e*P	P	11 08 40.6	-0.9
	comp=Z,2.3nm,0.4s,mb4.3						
WRA	Warramunga Arr	43.21	161	P	P	11 08 40.8	-0.8
	comp=Z,1.2nm,0.4s,mb4.0,baz=342,slow=9.1,SNR=28						
WRA				PcP	PcP	11 10 30.5	-0.4
	comp=Z,1.0nm,0.6s,baz=344,slow=3.4,SNR=6.2						
BVAR	Borovoye Array	49.43	323	P	P	11 09 28.6	-1.7
	comp=Z,0.9nm,0.7s,mb3.9,baz=90,slow=12,SNR=3.5						
BVAR				PcP	PcP	11 10 51.8	-0.5
	comp=Z,1.1nm,0.7s,baz=104,slow=5.9,SNR=4.8						
HNR	Honiara	49.47	124	LR	LR	11 28 34.6	
	comp=Z,46nm,18.8s,MS3.5,baz=339,slow=34						
ZRNK	Zerenda	50.20	322	*e*P	P	11 09 35.2	-0.9
	comp=Z,1.2nm,0.8s,mb4.0						
STKA	Stephens Creek	56.66	158	P	P	11 10 23.6	-0.6
	comp=Z,1.1nm,0.3s,mb4.3,baz=333,slow=12,SNR=4.5						
IMA	Indian Mountai	69.14	26	*e*P	P	11 11 47.2	+1.0
	comp=Z,12nm,0.8s,mb4.9						
ARCES	ARCESS Array B	71.92	338	P	P	11 12 03.3	+0.4
	comp=Z,1.8nm,0.7s,mb4.1,baz=82,slow=8.6,SNR=7.8						
ILAR	Eielson Array	72.14	27	P	P	11 12 04.5	+0.2
	comp=Z,1.3nm,0.8s,mb3.9,baz=285,slow=6.3,SNR=15						
FINES	FINESS Array B	73.53	330	P	P	11 12 12.7	+0.2
	comp=Z,0.6nm,0.6s,mb3.7,baz=108,slow=6.0,SNR=4.0						
INK	Inuvik	76.20	22	*e*P	P	11 12 28.2	+0.5
	comp=Z,3.5nm,0.9s,mb4.3						
NB2	NORSAR Subarra	80.40	332	P	P	11 12 50.0	-0.9
	comp=Z,0.7nm,0.6s,mb3.8,baz=61,slow=5.3						
NOA	NORSAR Array B	80.40	332	P	P	11 12 50.7	-0.2
	comp=Z,0.9nm,0.6s,mb3.9,baz=62,slow=5.5,SNR=3.8						
GERES	GERESS Array B	84.56	321	P	P	11 13 13.7	+1.2
	comp=Z,0.7nm,0.5s,mb4.1,baz=90,slow=5.3,SNR=5.6						
YKA	Yellowknife Ar	85.94	22	P	P	11 13 21.7	+2.7
	comp=Z,0.4nm,0.6s,mb3.8,baz=324,slow=4.9,SNR=3.5						
YKA	Yellowknife Ar	85.94	22	P	P	11 13 21.7	+2.7
VNA2	Neumayer--Watz	121.90	198	*e*	PKPdf	11 19 34.5	+2.6
VNA2	Neumayer--Watz	121.90	198	⇑*i*P	PKPdf	11 19 33.4	+1.5
VNA2				*e*		11 19 34.5	
VNA1	Neumayer--Stat	122.29	198	*e*	PKPdf	11 19 35.2	+2.6
VNA1	Neumayer--Stat	122.29	198	⇑*i*P	PKPdf	11 19 34.2	+1.6
VNA1				*e*		11 19 35.2	
VNA3	Neumayer Olymp	122.37	197	*e*	PKPdf	11 19 34.7	+1.9
VNA3	Neumayer Olymp	122.37	197	⇑*i*P	PKPdf	11 19 34.0	+1.2
VNA3				*e*		11 19 34.7	

NIED ***20*** *11:19:00,26.10N×128.60E,h20^{km},Mw4.4 Best double couple: $M_0$4.87×10^{15} NP1:ϕ_s33°,δ59°,λ94°. NP2:ϕ_s205°,δ32°,λ84°.*

BJI ***20*** *11:19:45.2,26.19N×129.06E,h34^{km},mB4.5,mb4.5,Ms4.3,Msz4.2*

JMA ***20*** *11:19:48.1±0.3,26.06N×128.63E,h41^{km},M3.6*

IDC ***20*** *11:19:49.9±5.1,26.16N×128.57E,h30^{km}±36^{km},mb3.8/10,mb1 3.9/11,mb1mx3.8/20,mbtmp3.9/11,ML3.7/1,MS3.6/9,Ms1 3.6/9,ms1mx3.4/27,Error ellipse: s-maj=28.9km s-min=17.5km az=77.0*

NEIC ***20*** *11:19:50.5±0.5,26.12N×128.50E,mb4.7/11,MW4.4(NIED),Error ellipse: s-maj=10.8km s-min=8.2km az=122.0*

ISC 20 11:19:47.3±0.9**,26.04N**±0.04×**128.63E**±0.04**,h30**^{km}±6^{km}**,n50,**σ0^s**89**/56**,mb4.3**/24**,MS3.8**/9**,2D,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**0.80**	**277**	P	**Pn**	**11 20 03.1**	**+0.5**
JJT2				S	**Sb**	**11 20 14.5**	**+1.4**
JOW	**Kunigami**	**0.85**	**338**	Pn	**Pn**	**11 20 03.5**	**+0.2**
	429nm,0.3s,baz=149,slow=16,SNR=652						
JOW				Sn	**Sn**	**11 20 13.9**	**-0.9**
	700nm,0.3s,baz=106,slow=20,SNR=34						
JOW	**Kunigami**	**0.85**	**338**	P	**Pn**	**11 20 03.5**	**+0.2**
JOW				*e*S	**Sb**	**11 20 14.0**	**-0.5**
NAH1	**Naha**	**0.86**	**281**	P	**Pn**	**11 20 03.7**	**+0.2**
NAH1				*e*S	**Sb**	**11 20 14.3**	**-0.5**
JIH	**Iheya**	**1.15**	**329**	P	**Pn**	**11 20 08.5**	**+0.8**
JIH				*e*S	**Sn**	**11 20 22.8**	**+0.2**
JAGN	**Aguni-jima**	**1.36**	**294**	P	**Pn**	**11 20 11.2**	**+0.6**
JKE	**Kume jima 2**	**1.68**	**280**	P	**Pn**	**11 20 15.0**	**-0.2**
JKE				*e*S	**Sn**	**11 20 35.7**	**-0.2**
JTK	**Tokunoshima**	**1.76**	**9**	P	**Pn**	**11 20 16.8**	**+0.4**
JTK				*e*S	**Sn**	**11 20 37.8**	**-0.2**
JMZ	**Minamidaito 2**	**2.34**	**95**	P	**Pn**	**11 20 24.5**	**-0.2**
JMZ				S	**Sn**	**11 20 51.0**	**-1.8**
JAM	**Amami Oshima**	**2.52**	**20**	P	**Pn**	**11 20 27.1**	**-0.1**
JZK	**Kikaishima**	**2.56**	**28**	P	**Pn**	**11 20 29.0**	**+1.2**
JTJ	**Tarama**	**3.82**	**249**	P	**Pn**	**11 20 44.7**	**-1.0**
JTJ				*e*S	**Sn**	**11 21 26.0**	**-4.1**
JIJ	**Ishigaki jima**	**4.39**	**249**	P	**Pn**	**11 20 52.2**	**-1.7**
YHNB	**Yeheng**	**6.70**	**260**	*e*Pn	**Pn**	**11 21 25.4**	**-1.0**
JNU	**Nakatsue**	**7.32**	**15**	Pn	**Pn**	**11 21 34.9**	**-0.3**
	1.2nm,0.3s,baz=329,slow=8.3,SNR=7.7						
JNU				LR	LR	11 24 49.5	
	comp=Z,328nm,19.1s,baz=2.8,slow=42						
JHJ	**Hachijo jima 2**	**11.99**	**51**	LR	LR	11 26 10.4	
	comp=Z,166nm,21.3s,baz=125,slow=32						
MJAR	**Matsushiro Arr**	**13.28**	**36**	LR	LR	11 27 25.3	
	comp=Z,106nm,19.3s,baz=220,slow=34						
XAN	**Xi'an**	**18.81**	**300**	P	**P**	**11 24 05.4**	**-1.6**
XAN				AP		11 24 14.3	
KMI	**Kunming**	**23.36**	**273**	P	**P**	**11 24 54.5**	**+0.2**
KMI				AP		11 25 03.3	
KMI				XP		11 25 06.4	
KMI				PP	PP	11 25 30.6	+4.6
KMI				S	**S**	**11 29 10.3**	**+8.9**
KMI				XS		11 29 25.1	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.0						
KMI				AMB	AMB		
	comp=Z,110nm,4.0s						
KMI				LR	LR		
	comp=N,360nm,17.1s						
KMI				LR	LR		
	comp=E,310nm,11.7s						
KMI				LR	LR		
	comp=Z,250nm,13.7s,MS3.8						
KMI	**Kunming**	**23.36**	**273**	P	**P**	**11 24 54.5**	**+0.2**
	comp=Z,11nm,1.5s,mb4.1						
KMI				pP		11 25 03.3	
KMI				sP		11 25 06.4	
KMI				PP	PP	11 25 30.6	+4.6
KMI				S	**S**	**11 29 10.3**	**+8.9**
KMI				sS		11 29 25.1	
KMI				SS	SS	11 30 05.2	+16
KMI				LR	LR		
	comp=Z,250nm,13.7s,MS3.8						
LZH	**Lanzhou**	**23.42**	**301**	⇓P	**P**	**11 24 54.5**	**-0.3**
LZH				AP		11 25 04.5	
LZH				XP		11 25 09.1	
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.4						
LZH	**Lanzhou**	**23.42**	**301**	⇓P	**P**	**11 24 54.5**	**-0.3**
	comp=Z,26nm,1.3s,mb4.5						
LZH				pP		11 25 04.5	
LZH				sP		11 25 09.1	
YSS	**Yuzh-Sakhalins**	**23.69**	**25**	*e*P	**P**	**11 24 60.0**	**+2.7**
	comp=Z,32nm,1.1s,mb4.7						
GTA	**Gaotai**	**27.53**	**306**	P	**P**	**11 25 32.0**	**-1.4**
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
GTA				AMB	AMB		
	comp=Z,90nm,10.7s						
GTA				LR	LR		
	comp=N,210nm,13.3s,MS4.0						
GTA				LR	LR		
	comp=E,270nm,17.1s,MS4.0						
GTA				LR	LR		
	comp=Z,440nm,14.8s,MS4.2						
ULN	**Ulaanbaatar**	**27.61**	**328**	*e*P	**P**	**11 25 35.2**	**+1.1**
	comp=Z,5.7nm,1.1s,mb4.1						
SONM	**Songino Array**	**27.91**	**327**	P	**P**	**11 25 35.4**	**-1.3**
	comp=Z,3.1nm,1.0s,mb3.9,baz=140,slow=9.6,SNR=15						
CMAR	**Chiang Mai Arr**	**28.45**	**261**	P	**P**	**11 25 43.2**	**+1.4**
	comp=Z,0.9nm,0.4s,mb3.8,baz=68,slow=7.1,SNR=6.7						
CMAR				LR	LR	11 39 28.7	
	comp=Z,131nm,18.1s,MS3.6,baz=50,slow=42						
SHL	**Shillong**	**33.02**	**277**	*e*x	x	11 26 21.0	
WMQ	**Urumqi**	**37.51**	**309**	*e*P	**P**	**11 27 00.1**	**-0.2**
WMQ				AP	pP	11 27 09.8	+0.6
WMQ				XP	sP	11 27 13.9	+1.0
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
WMQ				LR	LR		
	comp=N,70nm,16.0s,MS3.8						
WMQ				LR	LR		
	comp=E,100nm,15.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,100nm,15.0s,MS3.7						
GUN	**Gumba**	**38.01**	**283**	*e*P	**P**	**11 27 05.6**	**+0.9**
	comp=Z,20nm,0.8s,mb4.9						
PKI	**Pulchoki**	**38.46**	**282**	*e*P	**P**	**11 27 09.0**	**+0.5**
	comp=Z,16nm,0.6s,mb4.9						
KKN	**Kakani**	**38.55**	**283**	*e*P	**P**	**11 27 09.3**	**+0.1**
	comp=Z,45nm,1.1s,mb5.1						
DMN	**Daman**	**38.73**	**282**	*e*P	**P**	**11 27 11.6**	**+0.9**
	comp=Z,11nm,0.2s,mb5.2						
GKN	**Gorkha**	**39.08**	**283**	*e*P	**P**	**11 27 13.3**	**-0.4**
	comp=Z,49nm,1.1s,mb5.2						
KOLN	**Koldanda**	**40.02**	**283**	*e*P	**P**	**11 27 21.7**	**+0.2**
	comp=Z,44nm,0.9s,mb5.2						
MKAR	**Makanchi Array**	**41.93**	**312**	P	**P**	**11 27 36.7**	**-0.1**
	comp=Z,1.0nm,0.7s,mb3.5,baz=113,slow=9.2,SNR=4.7						
MKAR				LR	LR	11 46 08.7	
	comp=Z,30nm,18.6s,MS3.2,baz=178,slow=38						
MKAR	**Makanchi Array**	**41.93**	**312**	P	**P**	**11 27 36.7**	**-0.1**
MKAR				LR	LR	11 46 08.7	
ZAL	**Zalesovo**	**42.62**	**323**	P	**P**	**11 27 41.4**	**-1.1**
	comp=Z,1.2nm,0.3s,mb4.0,baz=121,slow=11,SNR=3.1						
ZAL				LR	LR	11 46 29.9	
	comp=Z,67nm,19.7s,MS3.5,baz=91,slow=38						
WRAB	**Tennant Creek**	**46.03**	**173**	*e*P	**P**	**11 28 11.2**	**+0.8**
	comp=Z,5.6nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**46.04**	**173**	P	**P**	**11 28 11.1**	**+0.7**
	comp=Z,1.1nm,0.4s,mb4.1,baz=346,slow=7.9,SNR=24						
BVAR	**Borovoye Array**	**50.65**	**318**	P	**P**	**11 28 45.8**	**+0.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=79,slow=7.6,SNR=10						
ZRNK	**Zerenda**	**51.47**	**318**	*e*P	**P**	**11 28 51.3**	**-0.7**
	comp=Z,7.4nm,1.1s,mb4.5						
ZRNK				*e*	pP	11 28 59.9	-1.2
ILAR	**Eielson Array**	**64.43**	**28**	P	**P**	**11 30 23.1**	**+0.3**
	comp=Z,0.3nm,0.8s,mb3.4,baz=239,slow=5.3,SNR=3.7						
ILAR				LR	LR	12 04 11.0	
	comp=Z,34nm,18.4s,MS3.6,baz=188,slow=41						
FINES	**FINESS Array B**	**73.20**	**331**	P	**P**	**11 31 16.9**	**-0.1**
	comp=Z,1.3nm,0.8s,mb3.9,baz=45,slow=7.9,SNR=3.5						
AKASG	**Malin Array Be**	**75.91**	**320**	P	**P**	**11 31 31.7**	**-1.1**
	comp=Z,0.2nm,0.3s,mb3.6,baz=54,slow=6.7,SNR=4.9						
AKASG	**Malin Array Be**	**75.91**	**320**	P	**P**	**11 31 31.7**	**-1.1**
NOA	**NORSAR Array B**	**79.64**	**334**	P	**P**	**11 31 53.8**	**+0.7**
	comp=Z,0.2nm,0.3s,mb3.5,baz=68,slow=7.3,SNR=2.6						
CLL	**Collm**	**84.51**	**325**	P	**P**	**11 32 20.0**	**+1.5**
GERES	**GERESS Array B**	**85.57**	**323**	LR	LR	12 13 49.2	
	comp=Z,113nm,18.0s,MS4.3,baz=263,slow=38						
PPT	**Papeete**	**90.49**	**109**	LR	LR	12 06 24.0	
	comp=Z,82nm,19.3s,MS4.2,baz=233,slow=31						

JMA 20 11:30:34.3±0.3**,31.43N**×**141.06E,M3.8,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.98**	**328**	P	Pn	11 31 09.6	+0.2
JHJ2				S	Sn	11 31 35.2	-0.1
BSO3	**Boso 3**	**3.39**	**352**	P	Pn	11 31 30.3	+0.7
BSO3				S	Sn	11 32 11.2	0.0
JOD2	**Odawara 2**	**4.16**	**337**	P	Pn	11 31 41.4	+0.9
JYN	**Shimob**	**4.57**	**333**	P	Pn	11 31 48.3	+2.0
JRY	**Ryogami san**	**4.92**	**339**	P	Pn	11 31 52.4	+1.2
JAG	**Ashikaga**	**5.16**	**345**	P	Pn	11 31 54.3	-0.3
JAG				S	Sn	11 32 54.8	-1.0
JMK	**Ichinoseki**	**7.51**	**1**	P	Pn	11 32 25.8	-1.9
JMK				S	Sn	11 33 48.0	-6.6

NEIC ***20*** *11:40:05.6,37.34S×179.94E,h33^{km},ML4.0(WEL),After WEL.*

WEL 20 11:40:05.5±0.4**,37.35S**×**179.95E,h33**^{km}**,ML3.8**/10**,1C,Error ellipse: s-maj=3.6km s-min=3.5km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.32**	**260**	P	P	11 40 27.0	-0.8
MXZ				S	S	11 40 43.3	-1.2
MXZ	**Matakaoa Point**	**1.32**	**260**	PN	Pn	11 40 27.0	-1.0
MXZ				SN	Sn	11 40 43.3	-1.3
PUZ	**Puketiti**	**1.52**	**241**	P	P	11 40 29.8	-0.9
PUZ				S	S	11 40 48.3	-1.2
PUZ	**Puketiti**	**1.52**	**241**	⇑PN	Pn	11 40 29.8	-1.0
PUZ				SN	Sn	11 40 48.3	-1.3
MWZ	**Matawai**	**2.15**	**242**	P	P	11 40 38.2	-1.5
MWZ				S	S	11 41 03.2	-2.3
MWZ	**Matawai**	**2.15**	**242**	PN	Pn	11 40 38.2	-1.7
MWZ				SN	Sn	11 41 03.2	-2.5
URZ	**Urewera**	**2.42**	**247**	P	P	11 40 42.7	-0.9
URZ	**Urewera**	**2.42**	**247**	PN	Pn	11 40 42.7	-1.1
KNZ	**Kokohu**	**2.45**	**226**	*e*P	P	11 40 41.7	-2.2
KNZ	**Kokohu**	**2.45**	**226**	PN	Pn	11 40 41.7	-2.4
KNZ				SN	Sn	11 41 10.1	-3.1
BKZ	**Black Stump Fm**	**3.27**	**235**	P	P	11 40 53.4	-2.2
BKZ				S	S	11 41 30.0	-3.9
BKZ	**Black Stump Fm**	**3.27**	**235**	PN	Pn	11 40 53.4	-2.3
BKZ				SN	Sn	11 41 30.5	-3.5
KUZ	**Kuaotunu**	**3.44**	**279**	*e*P	P	11 40 56.4	-1.6
KUZ	**Kuaotunu**	**3.44**	**279**	PN	Pn	11 40 56.8	-1.3
FWVZ	**Far West T-bar**	**3.95**	**240**	PN	Pn	11 41 04.1	-1.2
TSZ	**Takapari Road**	**4.13**	**228**	*e*P	P	11 41 03.3	-4.5
TSZ	**Takapari Road**	**4.13**	**228**	PN	Pn	11 41 03.3	-4.7
BFZ	**Birch Farm**	**4.40**	**220**	*e*P	P	11 41 06.2	-5.5
BFZ	**Birch Farm**	**4.40**	**220**	PN	Pn	11 41 06.2	-5.7
MRZ	**Mangatainoka R**	**4.75**	**224**	P	P	11 41 11.4	-5.2
MRZ				S	S	11 42 02.6	-8.6
MRZ	**Mangatainoka R**	**4.75**	**224**	PN	Pn	11 41 11.4	-5.3
MRZ				SN	Sn	11 42 02.6	-8.7

IDC ***20*** *11:48:39.0±0.8,2.96S×141.64E,mb4.2/8,mb1 4.5/10,mb1mx4.4/15,mbtmp4.3/10,ML4.1/2,MS3.7/6,Ms1 3.8/6,ms1mx3.3/26,Error ellipse: s-maj=26.9km s-min=21.1km az=79.0*

BJI ***20*** *11:48:46.8,2.77S×141.35E,h45^{km},mB4.7,mb4.6,Ms4.1,Msz4.0*

NEIC ***20*** *11:48:48.0±2.0,3.05S×141.51E,h66^{km}±19^{km},mb4.8/9,Error ellipse: s-maj=12.1km s-min=11.9km az=53.0*

ISC 20 11:48:44.7±2.8**,3.1S**±0.1×**141.4E**±0.1**,h46**^{km}±27^{km}**,n35,**σ0^s**88**/29**,mb4.5**/15**,MS3.8**/5**,1C,New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.55**	**138**	*e*Pn	**P**	**11 50 49.5**	**+0.8**
	16nm,1.0s						
KAKA	**Kakadu**	**13.03**	**222**	*e*P	**P**	**11 51 47.9**	**-1.8**
	18nm,0.6s						
CTA	**Charters Tower**	**17.60**	**165**	LR	LR	11 58 49.9	
	comp=Z,119nm,21.6s,baz=235,slow=35						
WRAB	**Tennant Creek**	**18.12**	**202**	*e*P	**P**	**11 52 55.9**	**+1.0**
	24nm,1.0s						
WB2	**Warramunga Arr**	**18.13**	**202**	*e*P	**P**	**11 52 55.0**	**0.0**
WRA	**Warramunga Arr**	**18.13**	**202**	P	**P**	**11 52 54.6**	**-0.4**
	0.4nm,0.3s,baz=22,slow=12,SNR=42						
HNR	**Honiara**	**19.53**	**110**	P	**P**	**11 53 06.2**	**-5.2**
	2.0nm,0.3s,baz=308,slow=6.5,SNR=3.1						
HNR	**Honiara**	**19.53**	**110**	*e*P	**P**	**11 53 07.0**	**-4.4**
	103nm,1.1s						
FITZ	**Fitzroy Crossi**	**21.47**	**225**	P	**P**	**11 53 30.9**	**-0.5**
	10nm,0.8s,mb4.2,baz=49,slow=6.6,SNR=9.9						
FITZ				LR	LR	12 02 14.3	
	comp=Z,205nm,18.3s,MS3.6,baz=62,slow=38						
STKA	**Stephens Creek**	**28.68**	**180**	LR	LR	12 06 59.3	
	comp=Z,162nm,19.3s,MS3.6,baz=293,slow=38						
CMAR	**Chiang Mai Arr**	**46.90**	**299**	P	**P**	**11 57 13.0**	**+0.1**
	1.2nm,0.8s,mb3.9,baz=124,slow=6.4,SNR=5.7						
MDJ	**Mudanjiang**	**48.61**	**349**	P	**P**	**11 57 27.0**	**+1.1**
MDJ				AMB	AMB		
	comp=Z,40nm,5.0s						
CD2	**Chengdu**	**49.23**	**316**	P	**P**	**11 57 31.0**	**+0.1**
GTA	**Gaotai**	**56.93**	**322**	P	**P**	**11 58 27.8**	**-0.1**
ULN	**Ulaanbaatar**	**58.91**	**334**	*e*P	**P**	**11 58 40.5**	**-1.0**
	comp=Z,1.7nm,0.6s,mb4.2						
SONM	**Songino Array**	**59.18**	**333**	P	**P**	**11 58 43.0**	**-0.5**
	comp=Z,0.5nm,0.7s,mb3.6,baz=135,slow=3.5,SNR=3.5						
GUN	**Gumba**	**61.55**	**304**	*e*P	**P**	**11 59 00.6**	**+0.7**
PKI	**Pulchoki**	**61.83**	**303**	*e*P	**P**	**11 59 02.0**	**+0.3**
KKN	**Kakani**	**62.01**	**304**	*e*P	**P**	**11 59 03.1**	**+0.1**
	comp=Z,22nm,0.8s,mb5.3						
DMN	**Daman**	**62.09**	**303**	*e*P	**P**	**11 59 04.2**	**+0.7**
	comp=Z,18nm,0.8s,mb5.2						
GKN	**Gorkha**	**62.62**	**304**	*e*P	**P**	**11 59 07.0**	**0.0**
	comp=Z,26nm,0.8s,mb5.4						
KOLN	**Koldanda**	**63.41**	**303**	*e*P	**P**	**11 59 12.4**	**+0.1**
	comp=Z,19nm,0.9s,mb5.2						
WMQ	**Urumqi**	**66.93**	**321**	*e*P	**P**	**11 59 36.4**	**+1.7**
MKAR	**Makanchi Array**	**71.68**	**322**	P	**P**	**12 00 03.9**	**+0.1**
	comp=Z,4.9nm,0.8s,mb4.5,baz=117,slow=8.1,SNR=27						
ZAL	**Zalesovo**	**73.57**	**329**	P	**P**	**12 00 14.5**	**-0.3**
	comp=Z,1.9nm,0.4s,mb4.4,baz=75,slow=3.2,SNR=7.9						
VNDA	**Vanda**	**75.22**	**175**	P	**P**	**12 00 23.8**	**-0.1**
	comp=Z,0.5nm,0.7s,mb3.5,baz=311,slow=7.5,SNR=6.0						
VNDA				LR	LR	12 31 18.6	
	comp=Z,77nm,20.3s,MS4.0,baz=337,slow=34						
ZRNK	**Zerenda**	**81.89**	**324**	*e*P	**P**	**12 01 00.8**	**0.0**
	comp=Z,2.1nm,0.7s,mb4.2						
ILAR	**Eielson Array**	**85.06**	**24**	P	**P**	**12 01 13.9**	**-2.6**
	comp=Z,4.5nm,0.8s,mb4.6,baz=262,slow=4.7,SNR=18						
ILAR				LR	LR	12 38 15.4	
	comp=Z,34nm,18.2s,MS3.8,baz=358,slow=35						
QSPA	**South Pole Qui**	**86.90**	**180**	⇑*i*P	**P**	**12 01 26.4**	**+1.1**
	comp=Z,8.1nm,0.9s,mb5.0						
YBH	**Yreka Blue Hor**	**96.45**	**49**	LR	LR	12 37 47.2	
	comp=Z,63nm,19.8s,MS4.1,baz=279,slow=31						
YKA	**Yellowknife Ar**	**99.17**	**27**	P	**P**	**12 02 20.8**	**-1.4**
	comp=Z,0.4nm,0.8s,mb4.0,baz=270,slow=5.6,SNR=5.1						
YKA	**Yellowknife Ar**	**99.17**	**27**	P	**P**	**12 02 20.8**	**-1.4**
LPAZ	**La Paz**	**145.10**	**124**	PKP	PKPdf	12 08 20.2	+2.1
	comp=Z,4.2nm,0.7s,baz=274,slow=3.1,SNR=24						
DBIC	**Dimbokro**	**146.15**	**277**	PKPbc	PKPbc	12 08 23.0	+1.8
	comp=Z,9.9nm,0.8s,baz=60,slow=6.1,SNR=7.6						
DBIC	**Dimbokro**	**146.15**	**277**	PKPbc	PKPbc	12 08 23.0	+1.8

NEIC ***20*** *12:11:16.1±4.6,30.99S×177.50W,h10^{km}±29^{km},Error ellipse: s-maj=38.2km s-min=10.6km az=99.0*

IDC ***20*** *12:11:16.4±1.5,30.91S×177.85W,mb4.2/3,mb1 4.3/4,mb1mx4.0/15,mbtmp4.1/4,ML3.4/1,MS3.7/2,Ms1 3.7/2,ms1mx2.9/28,Error ellipse: s-maj=46.4km s-min=24.4km az=125.0*

ISC 20 12:11:15.4±2.8**,31.07S**±0.08×**178.0W**±0.3**,h0**^{km}±20^{km}**,n21,**σ0^s**73**/24**,mb4.1**/3**,MS4.2**/1**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.81**	**1**	Pn	**Pn**	**12 11 46.9**	**-1.1**
	108nm,0.3s,baz=121,slow=23,SNR=9.8						
RAO				Sn	**Sn**	**12 12 04.4**	**-7.5**
	644nm,0.3s,baz=226,slow=23,SNR=15						
MXZ	**Matakaoa Point**	**7.18**	**204**	*e*P	**Pn**	**12 13 04.5**	**+0.4**
MXZ	**Matakaoa Point**	**7.18**	**204**	PN	**Pn**	**12 13 04.5**	**+0.3**
PUZ	**Puketiti**	**7.65**	**203**	*e*P	**Pn**	**12 13 11.0**	**+0.2**
PUZ				S	**Sn**	**12 14 38.6**	**-0.6**
PUZ	**Puketiti**	**7.65**	**203**	PN	**Pn**	**12 13 11.0**	**+0.2**
PUZ				SN	**Sn**	**12 14 38.6**	**-0.6**
MWZ	**Matawai**	**8.15**	**206**	*e*P	**P**	**12 13 17.8**	**+0.1**
MWZ	**Matawai**	**8.15**	**206**	PN	**P**	**12 13 17.8**	**+0.1**
MWZ				SN	**Sn**	**12 14 51.6**	**0.0**
URZ	**Urewera**	**8.24**	**208**	Pn	**P**	**12 13 18.6**	**-0.5**
	0.5nm,0.3s,baz=12,slow=18,SNR=12						
URZ				Sn	**Sn**	**12 14 53.7**	**-0.3**
	2.4nm,0.3s,baz=177,slow=23,SNR=15						
URZ	**Urewera**	**8.24**	**208**	*e*P	**P**	**12 13 18.7**	**-0.3**
URZ	**Urewera**	**8.24**	**208**	PN	**P**	**12 13 18.7**	**-0.3**
URZ				SN	**Sn**	**12 14 53.6**	**-0.4**
WTVZ	**West Tongariro**	**9.61**	**212**	*e*P	**P**	**12 13 29.2**	**-8.8**
TSZ	**Takapari Road**	**10.25**	**207**	SN	**S**	**12 15 31.9**	**-12**
MRZ	**Mangatainoka R**	**10.91**	**207**	PN	**P**	**12 13 51.1**	**-4.7**
MRZ				SN	**S**	**12 15 53.6**	**-6.2**
DZM	**Mont Dzumac**	**16.57**	**299**	LR	LR	12 20 00.8	
	comp=Z,87nm,21.2s,baz=24,slow=32						
STKA	**Stephens Creek**	**34.37**	**258**	P	**P**	**12 18 07.9**	**+1.9**
	3.7nm,0.8s,mb4.4,baz=98,slow=14,SNR=5.3						
PMG	**Port Moresby**	**38.93**	**296**	LR	LR	12 29 53.0	
	comp=Z,360nm,20.8s,MS4.2,baz=39,slow=29						
WRA	**Warramunga Arr**	**44.16**	**273**	P	**P**	**12 19 27.3**	**-0.4**
	1.8nm,0.3s,mb4.3,baz=111,slow=8.1,SNR=135						
NVAR	**Mina Array Bea**	**88.70**	**43**	P	**P**	**12 24 12.5**	**+0.6**
	0.2nm,0.6s,mb3.5,baz=206,slow=7.3,SNR=4.2						
NVAR	**Mina Array Bea**	**88.70**	**43**	P	**P**	**12 24 12.5**	**+0.6**
FINES	**FINESS Array B**	**145.78**	**340**	PKPbc	PKPbc	12 30 54.4	-1.5
	1.6nm,0.5s,baz=63,slow=4.9,SNR=14						
AKASG	**Malin Array Be**	**151.85**	**322**	PKPbc	PKPdf	12 31 11.7	+4.7
	0.3nm,0.3s,baz=61,slow=2.1,SNR=6.8						

IDC ***20*** *12:21:41.5±1.9,37.01N×88.97W,mb3.3/4,mb1 3.9/8,mb1mx3.7/26,mbtmp3.6/8,ML4.3/3,MS3.1/1,Ms1 3.1/1,ms1mx2.4/18,Error ellipse: s-maj=33.9km s-min=11.7km az=146.0*

NEIC 20 12:21:42.0,36.92N×**89.00W,h21**^{km}**,mb3.7**/1**,MW3.6**(SLM)**,After CERI.,New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UTMT	**University of**	**0.59**	**169**	*e*P	Pb	12 21 53.4	-0.1
PARMO	**Parma**	**0.66**	**247**	*e*P	Pb	12 21 54.9	+0.2
GLAT	**Glass**	**0.69**	**200**	*e*P	Pb	12 21 55.5	+0.3
PVMO	**Portageville**	**0.76**	**228**	*e*P	Pb	12 21 55.6	-0.7
HALT	**Halls**	**1.04**	**195**	*e*P	Pb	12 22 01.8	+0.6
GNAR	**Gosnell**	**1.26**	**221**	*e*P	Pn	12 22 06.0	+1.4
GNAR				*e*S	Sb	12 22 22.4	+1.7
FVM	**French Village**	**1.55**	**314**	*e*P	Pn	12 22 09.8	+1.0
FVM				*e*S	Sn	12 22 28.9	+0.4
HBAR	**Harrisburg**	**1.91**	**225**	P	Pn	12 22 14.6	+0.6
MET	**Memphis--Engin**	**1.95**	**203**	*e*Pn	Pn	12 22 13.7	-0.7
SLM	**Saint Louis**	**1.97**	**331**	*e*Pn	Pn	12 22 16.2	+1.4
OXF	**Oxford**	**2.43**	**188**	*e*Pn	Pn	12 22 21.3	0.0
BLO	**Bloomington**	**2.98**	**40**	*e*Pn	Pn	12 22 29.2	0.0
SWET	**Sewanee**	**3.01**	**123**	*e*Pn	Pn	12 22 30.9	+1.3
UALR	**University of**	**3.46**	**233**	*e*Pn	Pn	12 22 36.1	+0.2
CPCT	**Cooper Cave**	**3.91**	**111**	*e*Pn	Pn	12 22 43.2	+0.9
LRAL	**Lakeview Retre**	**4.21**	**156**	*e*Pn	Pn	12 22 45.3	-1.4
TZTN	**Tazewell**	**4.39**	**93**	*e*Pn	Pn	12 22 48.7	-0.5
JFWS	**Jewell Farm**	**6.06**	**351**	*e*Pn	Pn	12 23 11.6	-1.2
KSU1	**Kansas State U**	**6.39**	**292**	*e*Pn	Pn	12 23 15.9	-1.6
JSC	**Jenkinsville**	**6.83**	**110**	*e*Pn	Pn	12 23 22.0	-1.7
BLA	**Blacksburg**	**6.87**	**85**	Pn	Pn	12 23 23.3	-0.8
ALLY	**Alegheny Colle**	**8.33**	**53**	*e*Pn	P	12 23 41.2	-3.4
CBKS	**Cedar Bluff**	**8.70**	**286**	*e*Pn	P	12 23 47.3	-2.4
SADO	**Sadowa**	**10.82**	**41**	Pn	P	12 24 14.6	-4.2
	0.9nm,0.3s,baz=243,slow=15,SNR=2.8						
SADO				Sn	S	12 26 10.4	-10
	2.0nm,0.3s,baz=264,slow=10,SNR=3.0						
SADO				Lg		12 27 13.6	
	2.4nm,0.3s,baz=152,slow=22,SNR=25						
CPRX	**Cap Rock**	**12.79**	**257**	*e*Pn	P	12 24 41.4	-4.2
GDL2	**Guadalupe Moun**	**13.51**	**254**	*e*Pn	P	12 24 51.0	-4.0
ULM	**Lac du Bonnet**	**14.22**	**342**	Pn	P	12 24 58.9	-5.2
	0.7nm,0.3s,baz=156,slow=16,SNR=3.1						
ULM				Lg		12 28 59.5	
	0.2nm,0.3s,baz=80,slow=20,SNR=4.1						
ULM	**Lac du Bonnet**	**14.22**	**342**	Pn	P	12 24 58.9	-5.2
ULM				Lg		12 28 59.5	
ANMO	**Albuquerque**	**14.29**	**267**	Pn	P	12 25 09.7	+4.5
	baz=58,slow=9.5,SNR=2.5						
ANMO				Lg		12 29 12.6	
	baz=358,slow=16,SNR=5.5						
TXAR	**Lajitas Array**	**14.42**	**243**	Pn	P	12 25 04.2	-2.8
	0.3nm,0.3s,baz=52,slow=15,SNR=7.0						
TXAR				Lg		12 29 14.9	
	0.2nm,0.3s,baz=52,slow=20,SNR=3.0						
MNTX	**Cornudas Mount**	**14.50**	**254**	*e*P	P	12 25 04.2	-3.8
PV10	**Paradox Valley**	**15.94**	**281**	Pn	P	12 25 25.3	-1.4
PDAR	**Pinedale Array**	**16.82**	**297**	Pn	P	12 25 36.8	-1.0
	0.2nm,0.3s,baz=117,slow=14,SNR=6.0						
PDAR				Lg		12 30 25.3	
	0.2nm,0.3s,baz=96,slow=28,SNR=3.9						
SRU	**San Rafael**	**17.10**	**284**	*e*Pn	P	12 25 41.3	0.0
LOHW	**Long Hollow**	**17.77**	**299**	Pn	P	12 25 50.6	+0.9
ELK	**Elko**	**20.77**	**289**	P	P	12 26 24.8	+0.8
	0.5nm,0.5s,baz=135,slow=7.1,SNR=2.7						
FCC	**Fort Churchill**	**22.11**	**353**	*e*P	P	12 26 37.0	-0.5
	2.2nm,0.7s						
NVAR	**Mina Array Bea**	**23.20**	**283**	P	P	12 26 50.5	+2.1
	0.3nm,0.5s,baz=97,slow=7.3,SNR=3.5						
NVAR	**Mina Array Bea**	**23.20**	**283**	P	P	12 26 50.5	+2.1
NEW	**Newport**	**23.47**	**308**	LR	LR	12 37 12.0	
	comp=Z,42nm,19.7s,baz=309,slow=40						
YKA	**Yellowknife Ar**	**30.08**	**336**	P	P	12 27 50.4	-1.4
	0.3nm,0.7s,baz=126,slow=8.0,SNR=3.8						
YKA	**Yellowknife Ar**	**30.08**	**336**	P	P	12 27 50.4	-1.4
ILAR	**Eielson Array**	**43.70**	**328**	P	P	12 29 48.1	+1.4
	0.9nm,0.8s,baz=102,slow=6.7,SNR=13						

MAN 20 12:31:21.8,19.27N×**121.27E,h10**^{km}**,mb4.4,ML3.2,MS3.0,1C,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	**Mt. Cagua**	**1.26**	**144**	*e*P	Pb	12 31 45.0	-0.1
BBP	**Basco**	**1.34**	**29**	*e*P	Pb	12 31 46.4	-0.1
BBP				*e*S	Sb	12 32 04.2	+0.7
APYP	**Conner**	**1.40**	**181**	*e*P	Pn	12 31 45.5	-1.9
APYP				*e*S	Sb	12 32 07.8	+2.5
CVP	**Callao Caves**	**1.64**	**161**	⇑*e*P	Pn	12 31 50.0	-0.9
CVP				*i* S	Sn	12 32 13.0	+0.7
ABRA	**Dolores**	**1.70**	**198**	*e*P	Pn	12 31 50.9	-0.8
CAUP	**Cauayan**	**2.37**	**167**	*e*P	Pn	12 32 02.8	+1.5
BALP	**Baler**	**3.52**	**175**	*e*P	Pn	12 32 17.2	-0.5

NIED ***20*** *12:38:00,35.80N×136.90E,h32^{km},Mw3.9 Best double couple: $M_0$7.13×10^{14} NP1:ϕ_s140°,δ87°,λ-18°. NP2:ϕ_s231°,δ72°,λ-177°.*

NEIC ***20*** *12:38:15.1±1.1,34.61N×137.27E,h10^{km},Error ellipse: s-maj=20.9km s-min=14.3km az=125.0*

JMA ***20*** *12:38:24.8,35.76N×136.86E,h9^{km}±1^{km},M4.3 Broadband fault plane solution: P waves. NP1:ϕ_s49°,δ79°,λ171°. NP2:ϕ_s141°,δ82°,λ11°. Principal axes: T Plg14°, Azm5°; N Plg76°, Azm177°; P Plg2°, Azm275°;*

JMA Felt II J1.

ISC 20 12:38:24.2±1.1**,35.71N**±0.08×**136.81E**±0.06**,h17**^{km}±7^{km}**,n8,**σ0^s**81**/14**,3C,Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGM	**Miyama**	**0.08**	**261**	P	**Pb**	**12 38 27.8**	**+0.1**
JGM				S	**Sb**	**12 38 29.7**	**-0.3**
JGN	**Niukaw**	**0.65**	**38**	⇑P	**Pb**	**12 38 36.1**	**-0.7**
JGN				*e*S	**Sb**	**12 38 43.9**	**-1.4**
JKG	**Kaga**	**0.69**	**325**	⇑P	**Pb**	**12 38 37.8**	**+0.5**
JKG				*e*S	**Sb**	**12 38 46.9**	**+0.6**
JTT	**Ttatey**	**0.98**	**25**	⇑P	**Pb**	**12 38 42.6**	**+0.2**
MAJO	**Matsushiro**	**1.40**	**53**	*e*Pn	**Pn**	**12 38 50.1**	**+0.9**
MAJO				*e*Sn	**Sn**	**12 39 06.3**	**-1.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAT	Matsushiro	1.40	53	eP	Pn	12 38 50.0	+0.9
MAT				eS	Sb	12 39 08.0	+1.1
MAT	Matsushiro	1.40	53	P	Pn	12 38 50.1	+1.0
MAT				S	Sb	12 39 08.1	+1.2
KS15	Wonju Array Si	7.39	286	ePn	Pn	12 40 13.0	-1.0

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*IDC **20** 12:42:07.1±1.7, 3.89S×101.30E, mb4.1/9, mb1 4.3/9, mb1mx4.1/17, mbtmp4.2/9, MS3.2/1, Ms1 3.4/1, ms1mx2.9/18, Error ellipse: s-maj=66.8km s-min=16.6km az=56.0*

*NEIC **20** 12:42:11.3±1.1, 3.93S×101.29E, h30^{km}, mb4.1/3, Error ellipse: s-maj=40.6km s-min=9.5km az=56.0*

ISC 20 12:42:08.8±1.4, **4.0S**±0.2×**101.2E**±0.3, **h30^{km}, n13, σ0^{s}80**/12, **mb4.1**/12, **MS3.0**/1, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	22.39	354	P	P	12 47 07.8	+1.5
	1.9nm,0.7s,mb3.6,baz=183,slow=7.9,SNR=9.8						
CMAR				LR	LR	12 56 46.0	
	comp=Z,62nm,20.2s,MS3.0,baz=16,slow=39						
FITZ	Fitzroy Crossi	27.74	122	P	P	12 47 57.0	-0.1
	7.7nm,0.8s,mb4.4,baz=179,slow=5.7,SNR=5.9						
WRA	Warramunga Arr	35.99	119	P	P	12 49 09.1	-0.2
	2.2nm,0.8s,mb4.2,baz=300,slow=9.1,SNR=15						
WRAB	Tennant Creek	35.99	119	eP	P	12 49 08.9	-0.4
	4.7nm,0.6s,mb4.6						
STKA	Stephens Creek	46.96	131	P	P	12 50 40.4	+1.3
	4.9nm,1.1s,mb4.4,baz=300,slow=14,SNR=3.0						
SONM	Songino Array	51.78	4	P	P	12 51 16.9	+0.9
	1.9nm,0.9s,mb4.0,baz=188,slow=8.7,SNR=9.9						
ULN	Ulaanbaatar	51.87	5	P	P	12 51 17.0	+0.4
	0.7nm,0.5s,mb3.9						
MJAR	Matsushiro Arr	53.07	37	P	P	12 51 24.4	-1.4
	0.5nm,0.5s,mb3.7,baz=219,slow=8.0,SNR=6.1						
MKAR	Makanchi Array	53.23	344	P	P	12 51 26.5	-0.3
	1.9nm,0.7s,mb4.1,baz=149,slow=7.6,SNR=12						
ZAL	Zalesovo	59.31	349	P	P	12 52 10.1	-0.1
	1.4nm,0.3s,mb4.5,baz=231,slow=6.5						
BVAR	Borovoye Array	62.43	340	P	P	12 52 30.8	-0.6
	1.0nm,0.4s,mb4.3,baz=141,slow=9.5,SNR=11						
ZRNK	Zerenda	62.86	339	eP	P	12 52 33.4	-0.8
	1.0nm,0.8s,mb4.0						
TXAR	Lajitas Array	145.47	40	PKPbc	PKPbc	13 01 48.1	+2.9
	2.4nm,0.6s,baz=296,slow=1.2,SNR=25						

GUC 20 13:28:37.0±0.9, **19.88S**×**69.21W, h101^{km}**±6^{km}, **ML4.1, Northern Chile**

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*JMA **20** 13:30:13.7±0.4, 23.84N×122.05E, h61^{km}*

TAP 20 13:30:13.3, 23.83N×121.96E, h27^{km}, ML2.9, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.15	57	P	Pn	13 30 33.0	-0.8
YOJ				eS	Sn	13 30 47.1	-1.7
IRIF	Iriomote-Funau	1.69	72	P	Pn	13 30 40.6	-1.1
IRIF				eS	Sn	13 31 00.4	-2.2
HATJ	Hateruma jima	1.70	82	P	Pn	13 30 40.3	-1.5
JKRS	Kuro-shima	1.92	77	P	Pn	13 30 43.9	-0.9
JKRS				eS	Sn	13 31 06.7	-1.6
JIJ	Ishigaki jima	2.06	75	P	Pn	13 30 45.1	-1.9
JIJ				eS	Sn	13 31 08.5	-3.6

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*IDC **20** 13:51:55.6±1.5, 26.65S×176.35W, mb4.1/5, mb1 4.4/6, mb1mx4.2/15, mbtmp4.2/6, MS3.9/7, Ms1 3.9/7, ms1mx3.5/28, Error ellipse: s-maj=45.1km s-min=24.9km az=129.0*

*NEIC **20** 13:52:01.3±3.1, 26.75S×176.36W, h41^{km}±25^{km}, mb4.5/4, Error ellipse: s-maj=25.7km s-min=17.2km az=219.0*

ISC 20 13:51:59.8±3.6, **26.7S**±0.1×**176.5W**±0.2, **h37^{km}**±30^{km}, **n26, σ0^{s}91**/16, **mb4.3**/8, **MS3.9**/5, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.90	206	Pn	P	13 52 44.0	-0.7
	137nm,0.3s,baz=273,slow=23,SNR=8.3						
RAO				Sn	S	13 53 19.7	+1.0
	292nm,0.3s,baz=92,slow=22,SNR=8.0						
URZ	Urewera	12.79	204	Sn	S	13 57 10.2	-14
	1.5nm,0.3s,baz=139,slow=17,SNR=10						
URZ				LR	LR	13 59 38.8	
	comp=Z,342nm,18.4s,baz=225,slow=36						
DZM	Mont Dzumac	16.24	283	LR	LR	14 00 53.3	
	comp=Z,395nm,18.5s,baz=203,slow=33						
TBI	Tubuai	24.66	88	eLR	LR	14 02 38.3	
	260nm,30.2s,baz=221						
PPT	Papeete	26.44	76	eLR	LR	14 03 38.6	
	362nm,27.2s,baz=219						
PPT	Papeete	26.44	76	LR	LR	14 04 22.9	
	comp=Z,176nm,19.7s,MS3.6,baz=145,slow=28						
HNR	Honiara	28.14	303	LR	LR	14 07 41.8	
	comp=Z,163nm,18.6s,MS3.6,baz=144,slow=34						
CTA	Charters Tower	34.77	273	P	P	13 58 50.0	+1.1
	2.3nm,0.5s,mb4.3,baz=125,slow=7.3,SNR=9.0						
CTAO	Charters Tower	34.77	273	P	P	13 58 49.2	+0.3
	2.0nm,0.5s,mb4.3						
STKA	Stephens Creek	36.80	252	LR	LR	14 13 33.8	
	comp=Z,288nm,18.2s,MS4.1,baz=21,slow=35						
WRAB	Tennant Creek	45.46	268	eP	P	14 00 16.8	-0.7
	4.2nm,0.5s,mb4.5						
WRA	Warramunga Arr	45.47	268	P	P	14 00 16.4	-1.1
	1.8nm,0.4s,mb4.2,baz=106,slow=8.6,SNR=51						
MJAR	Matsushiro Arr	75.98	324	P	P	14 03 44.5	-0.4
	1.0nm,0.4s,mb4.1,baz=159,slow=7.4,SNR=5.1						
SNAA	Sanae	81.85	178	eP	P	14 04 15.0	-1.2
	3.9nm,1.0s,mb4.3						
VNA3	Neumayer Olymp	81.94	176		P	14 04 15.7	-0.9
VNA3	Neumayer Olymp	81.94	176		P	14 04 21.1	+4.5
VNA2	Neumayer--Watz	82.39	176		P	14 04 19.0	+0.1
VNA2	Neumayer--Watz	82.39	176		P	14 04 22.7	+3.8
NVAR	Mina Array Bea	84.56	42	P	P	14 04 31.6	+1.1
	0.3nm,0.6s,mb3.6,baz=236,slow=9.8,SNR=3.7						
ENH	Enshi	90.64	304	P	P	14 05 00.2	+0.2
	14nm,1.1s,mb5.2						
PDAR	Pinedale Array	92.47	43	LR	LR	14 37 18.8	
	comp=Z,53nm,19.9s,MS4.0,baz=73,slow=30						
CMAR	Chiang Mai Arr	93.47	289	P	P	14 05 14.7	+1.3
	1.5nm,0.9s,mb4.4,baz=137,slow=3.3,SNR=5.3						
JTS	JuntasAbangare	95.86	81	LR	LR	14 39 35.4	
	comp=Z,66nm,21.6s,MS4.1,baz=47,slow=30						
NB2	NORSAR Subarra	145.22	353	PKPabc	PKPdf	14 11 33.9	+1.0
	1.2nm,0.8s,baz=12,slow=3.8						
NOA	NORSAR Array B	145.22	353	PKPbc	PKPbc	14 11 33.0	-0.3
	2.1nm,0.9s,baz=14,slow=2.4,SNR=4.5						
AKASG	Malin Array Be	149.00	328	PKPbc	PKPdf	14 11 43.5	+4.0
	0.2nm,0.3s,baz=40,slow=2.9,SNR=4.5						

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*IDC **20** 14:22:21.4±1.4, 26.07N×128.43E, mb3.9/4, mb1 4.0/5, mb1mx3.8/19, mbtmp3.9/5, ML3.4/1, Error ellipse: s-maj=67.1km s-min=16.6km az=82.0*

*JMA **20** 14:22:23.2±0.2, 26.04N×128.73E, h43^{km}, M3.4*

*NEIC **20** 14:22:26.3±0.9, 26.09N×128.55E, h35^{km}, mb4.2/3, Error ellipse: s-maj=23.9km s-min=14.9km az=89.0*

ISC 20 14:22:23.3±1.4, **26.07N**±0.05×**128.74E**±0.04, **h30^{km}**±10^{km}, **n21, σ0^{s}73**/27, **mb3.9**/7, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	Kunigami	0.87	332	Pn	Pn	14 22 39.5	0.0
	230nm,0.3s,baz=142,slow=18,SNR=206						
JOW				Sn	Sn	14 22 51.0	-0.3
	308nm,0.3s,baz=135,slow=18,SNR=22						
JOW	Kunigami	0.87	332	P	Pn	14 22 39.5	-0.1
JOW				eS	Sb	14 22 51.2	+0.2
JJT2	Tamagusuku 2	0.89	275	P	Pn	14 22 39.6	-0.3
JJT2				eS	Sn	14 22 52.0	+0.2
NAH1	Naha	0.95	279	P	Pn	14 22 40.2	-0.5
JIH	Iheya	1.19	325	P	Pn	14 22 44.4	+0.3
JIH				eS	Sn	14 22 59.6	+0.3
JAGN	Aguni-jima	1.44	292	P	Pn	14 22 47.8	+0.1
JTK	Tokunoshima	1.72	6	P	Pn	14 22 52.3	+0.5
JKE	Kume jima 2	1.77	279	P	Pn	14 22 51.6	-0.9
JMZ	Minamidaito 2	2.25	96	P	Pn	14 22 59.7	+0.4
JMZ				S	Sn	14 23 25.5	-0.8
JAM	Amami Oshima	2.46	18	P	Pn	14 23 02.4	+0.1
JAM				eS	Sn	14 23 29.9	-1.8
JTJ	Tarama	3.92	250	P	Pn	14 23 22.4	-0.6
JNU	Nakatsue	7.28	14	Pn	Pn	14 24 10.6	+0.2
	0.6nm,0.3s,baz=173,slow=8.2,SNR=4.5						
YSS	Yuzh-Sakhalins	23.63	24	eP	P	14 27 34.8	+2.2
	14nm,1.0s,mb4.3						
ULN	Ulaanbaatar	27.64	328	eP	P	14 28 11.0	+0.8
	2.5nm,0.7s,mb4.0						
SONM	Songino Array	27.94	327	P	P	14 28 13.8	+0.8
	1.6nm,0.7s,mb3.8,baz=137,slow=9.9,SNR=11						
WRA	Warramunga Arr	46.05	173	P	P	14 30 46.9	+0.5
	0.4nm,0.4s,mb3.7,baz=350,slow=8.3,SNR=12						
AAK	Ala-Archa	46.94	305	eP	P	14 30 52.0	-1.1
	1.5nm,0.4s,mb4.3						
AKASG	Malin Array Be	75.95	320	P	P	14 34 09.1	+0.1
	0.3nm,0.4s,mb3.6,baz=58,slow=6.0,SNR=4.4						
NB2	NORSAR Subarra	79.66	334	P	P	14 34 29.6	+0.4
	0.5nm,0.7s,mb3.5,baz=51,slow=5.3						
NOA	NORSAR Array B	79.66	334	P	P	14 34 28.9	-0.2
	0.8nm,0.8s,mb3.7,baz=52,slow=5.1,SNR=3.3						
NOA	NORSAR Array B	79.66	334	P	P	14 34 28.9	-0.2

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*MOS **20** 14:24:58.5±1.3, 42.80N×74.05E, h10^{km}, mb3.6/1, Error ellipse: s-maj=22.5km s-min=16.5km az=99.7*

*NNC **20** 14:24:59.6±1.1, 42.80N×74.31E, h16^{km}±18^{km}, mpv4.0, Error ellipse: s-maj=27.2km s-min=14.3km az=11.0*

*NEIC **20** 14:25:00.1±2.2, 42.79N×74.22E, h10^{km}, Error ellipse: s-maj=42.4km s-min=10.9km az=55.0*

*KNET **20** 14:25:01.0±0.3, 42.75N×74.39E, h23^{km}±3^{km}, ml3.9, Error ellipse: s-maj=1.7km s-min=1.4km az=150.0*

*IDC **20** 14:25:01.7±2.6, 42.97N×74.30E, mb2.8/1, mb1 3.7/4, mb1mx3.5/22, mbtmp3.6/4, ML3.8/3, Error ellipse: s-maj=25.2km s-min=15.4km az=22.0*

*BJI **20** 14:25:06.3, 43.09N×74.79E, h10^{km}, ML4.0, Ms3.7*

ISC 20 14:25:00.8±0.4, **42.83N**±0.03×**74.29E**±0.04, **h28^{km}**±4^{km}, **n26, σ1^{s}28**/47, **mb2.9**/1, **21C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	0.25	143	⇑P	Pb	14 25 06.4	-1.0
	1μm,0.2s,SNR=380						
AAK				⇑S	Sb	14 25 09.8	-2.1
	16μm,0.3s						
AAK	Ala-Archa	0.25	143	⇓P	Pb	14 25 06.5	-0.9
	674nm,0.4s						
AAK				⇑S	Sb	14 25 09.9	-2.0
	7μm,0.3s						
AAK	Ala-Archa	0.25	143	ePg	Pb	14 25 05.3	-2.1
AAK				eSg	Sb	14 25 08.7	-3.2
CHMS	Chumysh	0.38	64	P	Pb	14 25 09.4	+0.2
	827nm,0.2s,SNR=456						
CHMS				⇑S	Sb	14 25 15.0	+0.1
	14μm,0.3s						
EKS2	Erkin-Say	0.42	246	P	Pb	14 25 11.0	+1.2
	1μm,0.1s,SNR=1578						
EKS2				⇑S	Sb	14 25 17.8	+1.8
	3μm,0.3s						
USP	Ospenovka	0.46	19	⇑P	Pb	14 25 11.8	+1.3
	1μm,0.2s,SNR=2993						
USP				⇑S	Sb	14 25 19.2	+2.0
	4μm,0.2s						
KBK	Karagaybulak	0.51	110	⇓P	Pb	14 25 10.8	-0.6
	3μm,0.1s,SNR=5915						
KBK				⇑S	Sb	14 25 17.7	-0.9
	8μm,0.3s						
UCH	Uchtor	0.63	165	⇑P	Pb	14 25 12.5	-0.6
	2μm,0.2s,SNR=5176						
UCH				⇓S	Sb	14 25 20.5	-1.2
	5μm,0.3s						
AML	Almayashu	0.83	213	P	Pb	14 25 17.2	+0.6
	661nm,0.2s,SNR=1793						
AML				⇓S	Sb	14 25 28.1	+0.7
	3μm,0.3s						
TKM2	Tokmak 2	0.96	84	P	Pn	14 25 18.6	0.0
	1μm,0.2s,SNR=2040						
TKM2				⇓S	Sb	14 25 31.2	0.0
	4μm,0.2s						
KZA	Kyzart	1.03	137	⇑P	Pn	14 25 19.9	+0.3
	444nm,0.2s,SNR=1034						
KZA				⇑S	Sb	14 25 32.5	-0.7
	4μm,0.2s						
ULHL	Ulahol	1.56	112	P	Pn	14 25 28.7	+1.7
	376nm,0.2s,SNR=1447						
ULHL				⇓S	Sn	14 25 48.4	+1.9
	592nm,0.2s						
AAA	Alma-Ata	1.99	76	ePN	Pn	14 25 36.0	+2.7
AAA				eS	Sn	14 26 02.0	+4.4
KSH	Kashi	3.55	159	eP	Pn	14 26 03.9	+8.5
KSH				eS	Sn	14 26 44.8	+7.9
KSH				Smax			
	comp=N,160nm,0.6s						
KSH				Smax			
	comp=E,310nm,1.0s						
MK31	Makanchi Array	6.93	52	⇑Pn	Pn	14 26 44.3	+1.1
	comp=E,3.3nm,0.4s,baz=233,slow=14						
MK31				⇑Sn	Sn	14 28 01.6	-0.3
	comp=E,5.9nm,0.4s,baz=233,slow=24,SNR=7.7						
MK31				⇓Lg		14 28 37.5	
	comp=E,30nm,0.7s,baz=238,slow=26,SNR=5.0						
MKAR	Makanchi Array	6.93	52	Pn	Pn	14 26 44.5	+1.2
	comp=E,2.9nm,0.3s,baz=235,slow=15,SNR=130						
MKAR				Sn	Sn	14 28 01.0	-0.9
	comp=E,2.9nm,0.3s,baz=233,slow=26,SNR=9.1						
MKAR				Lg		14 28 37.3	
	comp=E,6.2nm,0.3s,baz=244,slow=28,SNR=8.3						
VOSK	Vostochnaya	10.14	348	⇑Pn	P	14 27 26.5	-1.2
	comp=E,1.7nm,0.5s						
VOSK				⇑Lg		14 30 20.8	
	comp=E,37nm,1.1s						
VOSK	Vostochnaya	10.14	348	P	P	14 27 26.9	-0.8
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVA0	Borovoye Array	10.53	347	⇑Pn	P	14 27 31.2	-1.8
	comp=Z,0.4nm,0.8s,baz=153,slow=14,SNR=19						
BVA0				⇑Lg		14 30 31.6	
	comp=Z,5.7nm,1.3s,baz=157,slow=24,SNR=4.8						
BVAR	Borovoye Array	10.53	347	Pn	P	14 27 30.7	-2.3
	comp=Z,0.6nm,0.3s,baz=160,slow=12,SNR=14						
BVAR				Sn	S	14 29 25.3	-5.6
	comp=Z,0.9nm,0.3s,baz=175,slow=17,SNR=4.8						
BVAR				Lg		14 30 30.6	
	comp=Z,2.5nm,0.3s,baz=147,slow=30,SNR=6.6						
ZRNK	Zerenda	10.72	343	⇑Pn	P	14 27 34.1	-1.6
	comp=Z,1.4nm,0.5s						
ZRNK				⇓Sn	S	14 29 31.8	-4.0
	comp=Z,5.2nm,0.5s						
ZRNK				⇑Lg		14 30 41.8	
	comp=Z,26nm,1.1s						
ZRNK	Zerenda	10.72	343	ePn	P	14 27 34.5	-1.1
ZRNK				eSn	S	14 29 31.7	-4.1
AB31	Akbulak array	11.85	308	⇑Pn	P	14 27 49.9	-1.0
	comp=Z,4.0nm,0.6s,baz=114,slow=13						
AB31				⇑Sn	S	14 29 56.9	-6.4
	comp=Z,7.9nm,0.9s,baz=113,slow=23,SNR=6.1						
AB31	Akbulak array	11.85	308	P	P	14 27 49.8	-1.2
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAL	Zalesovo	13.10	28	Pn	P	14 28 07.0	-0.6
	comp=Z,1.0nm,0.3s,baz=260,slow=11,SNR=7.0						
ZAL				Sn	S	14 30 27.1	-6.4
	comp=Z,0.6nm,0.3s,baz=107,slow=21,SNR=6.6						
ZAL				Lg		14 31 55.1	
	comp=Z,0.7nm,0.3s,baz=336,slow=24,SNR=3.2						
SONM	Songino Array	23.01	66	P	P	14 30 07.4	+3.2
	comp=Z,0.2nm,0.5s,mb2.9,baz=257,slow=12,SNR=2.4						

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*NEIC **20** 14:41:09.1±0.8, 21.28S×68.62W, h107^{km}±9^{km}, mb3.8/4, Error ellipse: s-maj=11.6km s-min=8.0km az=86.0*

*IDC **20** 14:41:09.3±2.3, 21.29S×68.58W, h109^{km}±20^{km}, mb3.8/5, mb1 3.9/9, mb1mx3.7/19, mbtmp4.1/9, Error ellipse: s-maj=26.1km s-min=16.8km az=91.0*

ISC 20 14:41:08.3±1.1, **21.30S**±0.07×**68.6W**±0.1, **h118^{km}**±13^{km}, **n20, σ0^{s}90**/17, **mb3.9**/5, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	5.01	5	P	P	14 42 23.9	+1.4
	1.5nm,0.3s,baz=183,slow=4.5,SNR=23						
ARE	Arequipa	5.53	330	eP	P	14 42 29.0	-0.5
SIV	San Ignacio	8.89	55	P	P	14 43 12.6	-2.5
	14nm,0.3s,baz=252,slow=12,SNR=207						
CFAA	Coronel Fontan	10.27	178	P	P	14 43 32.2	-1.4
	0.0nm,0.3s,baz=340,slow=15,SNR=5.1						
CFAA	Coronel Fontan	10.27	178	P	P	14 43 32.2	-1.4
CPUP	Villa Florida	11.48	118	P	P	14 43 51.1	+1.4
	0.2nm,0.3s,baz=318,slow=14,SNR=3.9						
SAML	Samuel	13.35	24	eP	P	14 44 14.4	+0.2
	1.5nm,0.7s						
TRQA	Tornquist	17.66	162	eP	P	14 45 09.0	+0.8
	4.5nm,0.9s						
PLCA	Paso Flores	19.44	184	P	P	14 45 28.6	+0.8
	0.2nm,0.3s,baz=359,slow=13,SNR=8.0						
PLCA	Paso Flores	19.44	184	eP	P	14 45 28.2	+0.3
	5.4nm,0.9s						
BDFB	Brasilia	20.33	77	P	P	14 45 37.0	-0.2
	11nm,0.4s,baz=254,slow=9.9,SNR=23						
BAO	Brasilia Array	20.36	77	P	P	14 45 37.5	+0.1
RCBR	Riachuelo	35.22	69	eP	P	14 47 53.5	+0.2
	3.8nm,0.6s,mb4.4						
SNAA	Sanae	62.38	161	P	P	14 51 19.8	-0.6
	0.5nm,0.6s,mb3.8,baz=287,slow=7.5,SNR=15						
DBIC	Dimbokro	68.42	73	P	P	14 51 59.3	-0.6
	4.3nm,0.8s,mb4.3,baz=300,slow=13,SNR=4.2						
NVAR	Mina Array Bea	75.50	322	P	P	14 52 41.6	+0.2
	0.2nm,0.4s,mb3.2,baz=182,slow=6.9,SNR=4.2						
YKA	Yellowknife Ar	91.09	340	P	P	14 54 00.5	+0.2
	0.3nm,0.4s,mb3.8,baz=127,slow=4.5,SNR=4.9						
WRA	Warramunga Arr	133.26	210	PKP	PKPdf	15 00 13.4	+2.3
	0.5nm,0.6s,baz=162,slow=1.8,SNR=11						
MKAR	Makanchi Array	145.32	36	PKPbc	PKPbc	15 00 34.4	+1.9
	1.6nm,0.7s,baz=331,slow=3.7,SNR=13						
MKAR	Makanchi Array	145.32	36	PKPbc	PKPbc	15 00 34.4	+1.9

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*NEIC **20** 14:44:45.1±0.7, 2.43N×95.98E, mb4.4/8, Error ellipse: s-maj=16.2km s-min=9.0km az=224.0*

*IDC **20** 14:44:45.6±2.3, 2.55N×96.11E, h24^{km}±6^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.7/18, mbtmp3.9/6, ML3.4/1, MS3.3/2, Ms1 3.4/2, ms1mx3.0/27, Error ellipse: s-maj=76.5km s-min=28.3km az=56.0*

ISC 20 14:44:43.2±1.0, **2.4N**±0.1×**96.0E**±0.1, **h25^{km}, h25^{km}**±.5^{km}**:pP-P, n16, σ0^{s}66**/15, **mb4.3**/13, **MS3.4**/1, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.45	58	ePn	Pn	14 46 05.0	-0.1
CMAR	Chiang Mai Arr	16.19	10	Pn	P	14 48 31.8	+0.9
	0.1nm,0.3s,baz=195,slow=11,SNR=9.9						
CMAR				LR	LR	14 55 36.7	
	comp=Z,92nm,18.8s,baz=193,slow=41						
PKI	Pulchoki	26.97	339	eP	P	14 50 25.5	+0.5
	9.1nm,0.6s,mb4.5						
GUN	Gumba	27.11	340	eP	P	14 50 27.0	+0.6
	22nm,0.9s,mb4.7						
KKN	Kakani	27.21	339	eP	P	14 50 27.7	+0.4
	17nm,0.9s,mb4.6						
GKN	Gorkha	27.64	338	eP	P	14 50 31.8	+0.6
	20nm,0.9s,mb4.8						
KOLN	Koldanda	27.84	336	eP	P	14 50 33.5	+0.5
	21nm,1.2s,mb4.7						
WRA	Warramunga Arr	43.72	122	P	P	14 52 49.0	+0.5
	0.7nm,0.8s,mb3.4,baz=300,slow=9.3,SNR=3.5						
WRAB	Tennant Creek	43.72	122	P	P	14 52 48.7	+0.2
	3.2nm,0.9s,mb4.0						
MKAR	Makanchi Array	45.77	347	P	P	14 53 04.6	+0.1
	1.7nm,0.6s,mb4.2,baz=158,slow=8.2,SNR=20						
MKAR				pP	pP	14 53 11.9	-0.1
	4.9nm,0.9s,baz=159,slow=9.0,SNR=14						
SONM	Songino Array	46.11	10	P	P	14 53 06.7	-0.6
	1.6nm,0.7s,mb4.1,baz=187,slow=8.8,SNR=8.3						
SONM				pP	pP	14 53 13.9	-0.8
	0.7nm,0.4s,baz=196,slow=9.0,SNR=4.0						
TLY	Talaya	49.50	6	P	P	14 53 32.5	-1.2
	3.5nm,0.6s,mb4.6						
ZAL	Zalesovo	52.16	352	P	P	14 53 53.3	-0.5
	1.6nm,0.4s,mb4.3,baz=320,slow=7.5,SNR=7.1						
BVAR	Borovoye Array	54.70	341	P	P	14 54 11.8	-0.8
	0.8nm,0.6s,mb3.9,baz=149,slow=8.6,SNR=7.3						
BVAR				pP	pP	14 54 19.7	-0.5
	0.5nm,0.6s,baz=135,slow=8.4,SNR=3.6						
ZRNK	Zerenda	55.09	340	eP	P	14 54 14.3	-1.2
	0.9nm,0.7s,mb3.9						
IDI	Anoyia	73.19	306	LR	LR	15 28 15.1	
	comp=Z,20nm,19.0s,MS3.4,baz=78,slow=36						

GUC 20 14:46:22.3±0.3, **19.74S**×**69.23W, h105^{km}**±2^{km}, **ML3.7, Northern Chile**

GUC 20 15:02:49.5±0.4, **19.94S**×**69.25W, h103^{km}**±3^{km}, **ML3.5, Northern Chile**

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*IDC **20** 15:26:15.8±1.7, 21.14S×178.66W, h522^{km}±19^{km}, mb3.7/11, mb1 3.9/14, mb1mx3.8/19, mbtmp4.6/14, Error ellipse: s-maj=16.7km s-min=11.7km az=148.0*

*BJI **20** 15:26:16.1, 21.10S×178.70W, h528^{km}, mB4.6, mb4.3*

*NEIC **20** 15:26:16.2±0.9, 21.15S×178.68W, h528^{km}±10^{km}, mb4.5/16, Error ellipse: s-maj=13.4km s-min=7.6km az=149.0*

ISC 20 15:26:12.7±1.1, **21.09S**±0.09×**178.75W**±0.08, **h489^{km}**±13^{km}, **n104, σ0^{s}75**/42, **mb4.2**/24, **10C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	9.76	44	P	P	15 28 29.9	+1.1
	15nm,0.3s,baz=80,slow=2.8,SNR=19						
AFI				S	S	15 30 15.7	-1.3
	3.5nm,0.3s,baz=49,slow=19,SNR=6.4						
AFI	Afiamalu	9.76	44	eP	P	15 28 29.7	+1.0
	63nm,0.6s						
DZM	Mont Dzumac	13.81	263	P	P	15 29 15.3	+3.9
	1.3nm,0.3s,baz=78,slow=20,SNR=19						
URZ	Urewera	17.48	191	P	P	15 29 48.3	+0.1
	6.3nm,0.3s,baz=0.5,slow=5.1,SNR=34						
URZ				S	S	15 32 36.7	-5.5
	0.3nm,0.3s,baz=38,slow=19,SNR=4.8						
RPZ	Rata Peaks	24.11	198	P	P	15 30 49.4	-0.6
	9.5nm,0.4s,mb4.6,baz=307,slow=5.3,SNR=7.7						
CTA	Charters Tower	32.74	265	⇓iP	P	15 32 06.8	+1.3
	20nm,0.4s,mb4.9						
CTAO	Charters Tower	32.74	265	eP	P	15 32 06.7	+1.2
	22nm,0.5s,mb4.8						
PMG	Port Moresby	34.80	284	P	P	15 32 24.1	+1.3
	30nm,0.7s,mb4.8,baz=108,slow=4.9,SNR=27						
PMG	Port Moresby	34.80	284	eP	P	15 32 23.8	+1.0
	37nm,0.9s,mb4.8						
STKA	Stephens Creek	36.90	245	eP	P	15 32 41.4	+1.3
	8.7nm,2.0s,mb3.8						
STKA	Stephens Creek	36.90	245	P	P	15 32 40.8	+0.6
	4.7nm,0.9s,mb3.9,baz=81,slow=16,SNR=8.0						
WB2	Warramunga Arr	43.82	263	⇓iP	P	15 33 35.5	-0.5
WB2				eS	S	15 39 22.2	-8.8
WRAB	Tennant Creek	43.82	263	eP	P	15 33 35.5	-0.5
	14nm,0.2s,mb5.0						
WRA	Warramunga Arr	43.83	263	P	P	15 33 35.6	-0.5
	4.7nm,0.3s,mb4.5,baz=96,slow=7.5,SNR=230						
WRA				S	S	15 39 30.4	-0.7
	1.4nm,0.9s,baz=99,slow=15,SNR=5.6						
KAKA	Kakadu	47.29	272	⇓iP	P	15 34 02.3	-0.6
	15nm,0.4s,mb4.8						
FORT	Forrest	48.42	247	eP	P	15 34 10.5	-0.7
	16nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	52.26	263	eP	P	15 34 38.9	-0.9
	4.2nm,0.4s,mb4.1						
VNDA	Vanda	57.26	185	P	P	15 35 13.8	-0.3
	0.9nm,0.5s,mb3.4,baz=7.2,slow=6.7,SNR=5.8						
VNDA	Vanda	57.26	185	eP	P	15 35 13.9	-0.2
	1.2nm,0.6s,mb3.4						
MUN	Mundaring	58.44	245	eP	P	15 35 22.3	-0.4
	12nm,1.3s,mb4.0						
MJAR	Matsushiro Arr	70.27	324	P	P	15 36 36.9	-0.6
	4.1nm,0.7s,mb4.1,baz=162,slow=6.2,SNR=6.6						
FX1	Attu Island--F	74.00	355	eP	P	15 36 57.8	-0.9
MDJ	Mudanjiang	80.60	325	P	P	15 37 35.3	+0.8
MDJ				AMB	AMB		
	comp=Z,40nm,5.9s						
NVAR	Mina Array Bea	81.93	44	P	P	15 37 41.6	+0.1
	comp=Z,1.7nm,0.6s,mb3.8,baz=228,slow=8.8,SNR=13						
CN2	Changchun	82.34	323	eP	P	15 37 43.8	+0.4
ARUT	Antelope Range	84.79	46	P	P	15 37 57.2	+1.5
ELK	Elko	85.19	43	eP	P	15 37 57.7	+0.1
	comp=Z,0.5nm,0.5s,mb3.4						
ENH	Enshi	85.79	305	eP	P	15 38 00.4	-0.3
	comp=Z,11nm,0.9s,mb4.5						
HLID	Hailey	87.23	41	eP	P	15 38 07.6	+0.3

	comp=Z,2.4nm,0.9s,mb3.9						
MNTX	**Cornudas Mount**	**87.66**	**55**	*e*P	**P**	**15 38 09.6**	**0.0**
	comp=Z,1.8nm,1.0s,mb3.8						
TXAR	**Lajitas Array**	**87.96**	**58**	P	**P**	**15 38 11.6**	**+0.5**
	comp=Z,0.6nm,0.5s,mb3.5,baz=214,slow=4.5,SNR=8.4						
KMI	**Kunming**	**89.00**	**297**	P	**P**	**15 38 16.5**	**+0.5**
KMI				AP	pP	15 40 09.9	+3.9
KMI				PPP	PPP	15 43 59.8	+1.3
KMI	**Kunming**	**89.00**	**297**	P	**P**	**15 38 16.5**	**+0.5**
	comp=Z,7.0nm,0.8s,mb4.5						
KMI				pP	pP	15 40 09.9	+3.9
KMI				PPP	PPP	15 43 59.7	+1.2
RRI2	**Red Ridge**	**89.04**	**42**	*e*P	**P**	**15 38 15.9**	**+0.2**
	comp=Z,3.4nm,0.7s,mb4.3						
ILAR	**Eielson Array**	**89.04**	**13**	P	**P**	**15 38 13.8**	**-1.5**
	comp=Z,2.4nm,0.5s,mb4.3,baz=226,slow=5.6,SNR=25						
CMAR	**Chiang Mai Arr**	**89.65**	**290**	P	**P**	**15 38 19.8**	**+0.6**
	comp=Z,3.5nm,0.9s,mb4.2,baz=124,slow=2.8,SNR=14						
BW06	**Boulder Array**	**89.87**	**44**	*e*P	**P**	**15 38 19.6**	**0.0**
	comp=Z,1.6nm,0.6s,mb4.0						
PDAR	**Pinedale Array**	**89.87**	**44**	P	**P**	**15 38 19.6**	**0.0**
	comp=Z,1.6nm,0.6s,mb4.0,baz=239,slow=3.7,SNR=6.4						
MKAR	**Makanchi Array**	**111.09**	**313**	PKiKP		15 43 48.4	
	comp=Z,0.7nm,0.4s,baz=124,slow=0.8,SNR=19						
ZRNK	**Zerenda**	**119.92**	**320**	*e*PKPdf	PKPdf	15 44 05.2	-1.4
ARU	**Arti**	**125.29**	**325**	*e*PKPdf	PKPdf	15 44 16.0	-0.8
KEV	**Kevo**	**128.91**	**349**	*e*p	PKPdf	15 44 16.2	-7.3
	comp=Z,0.6nm,0.3s						
ARCES	**ARCESS Array B**	**129.37**	**349**	PKP	PKPdf	15 44 23.0	-1.4
	comp=Z,4.0nm,0.6s,baz=30,slow=1.1,SNR=36						
KAF	**Kangasniemi**	**135.52**	**343**	*e*p	PKPdf	15 44 33.1	-2.9
	comp=Z,3.3nm,0.5s,baz=67,slow=5.7						
FINES	**FINESS Array B**	**136.14**	**343**	PKhKP		15 44 27.8	
	comp=Z,0.6nm,0.5s,baz=45,slow=2.7,SNR=6.2						
FINES				PKP	PKPdf	15 44 36.3	-0.8
	comp=Z,1.5nm,0.5s,baz=73,slow=2.9,SNR=10						
NB2	**NORSAR Subarra**	**139.48**	**353**	PKPabc	PKPdf	15 44 34.6	-8.6
	comp=Z,0.9nm,0.6s,baz=14,slow=3.0						
NOA	**NORSAR Array B**	**139.48**	**353**	PKhKP		15 44 32.7	
	comp=Z,1.2nm,0.7s,baz=15,slow=4.6,SNR=6.2						
NOA				PKP	PKPdf	15 44 44.5	+1.3
	comp=Z,1.3nm,0.6s,baz=14,slow=4.0,SNR=5.3						
NOA	**NORSAR Array B**	**139.48**	**353**	PKP		15 44 32.7	
NOA				PKP	PKPdf	15 44 44.5	+1.3
AKASG	**Malin Array Be**	**143.18**	**330**	PKhKP		15 44 47.0	
	comp=Z,11nm,0.4s,baz=43,slow=4.3,SNR=7.1						
MBAR	**Mbarara**	**144.01**	**237**	*e*PKPdf	PKPdf	15 44 51.8	-0.7
MUD	**Monsted U'grnd**	**144.20**	**352**	*e*P	PKPbc	15 44 51.0	-0.4
MUD	**Monsted U'grnd**	**144.20**	**352**	*i* P	PKPbc	15 44 51.0	-0.4
	comp=Z,13nm,0.7s						
BSD	**Bornholm Skovb**	**144.50**	**346**	*i* P	PKPdf	15 44 51.7	-0.3
BSEG	**Bad Segeberg**	**146.49**	**350**	*e*PKPbc	PKPbc	15 44 58.2	+0.9
BURAR	**Bucovina Array**	**147.22**	**329**	⇑P	PKPdf	15 45 00.8	+4.0
KOLS	**Kolonicke sedl**	**147.54**	**334**	*i* PKP	PKPdf	15 45 01.7	+4.4
VRI	**Vrincioaia**	**147.67**	**326**	⇑P	PKPdf	15 45 01.0	+3.4
KSP	**Ksiaz**	**148.04**	**342**	*e*PKP	PKPdf	15 45 02.4	+4.4
MLR	**Muntele Rosu**	**148.33**	**326**	PKPbc	PKPdf	15 45 01.4	+2.8
	comp=Z,6.4nm,0.5s,baz=355,slow=5.7,SNR=14						
MLR	**Muntele Rosu**	**148.33**	**326**	⇓P	PKPdf	15 45 02.6	+4.0
MLR	**Muntele Rosu**	**148.33**	**326**	⇓P	PKPdf	15 45 02.6	+3.9
UPC	**Upice**	**148.42**	**342**	*e*P	PKPdf	15 45 03.6	+5.0
UPC	**Upice**	**148.42**	**342**	⇑*e*PKPB		15 45 03.6	
EIL	**Elat**	**148.47**	**293**	PKPbc	PKPdf	15 45 03.5	+4.2
	comp=Z,3.5nm,0.5s,baz=282,slow=9.7,SNR=7.0						
DPC	**Dobruska-Polom**	**148.47**	**341**	*e*P	PKPdf	15 45 03.7	+5.0
DPC				*e*		15 45 09.7	
DPC	**Dobruska-Polom**	**148.47**	**341**	⇑*e*PKPB		15 45 03.7	
DPC				*e*PKPAB	PKPab	15 45 09.7	-0.8
CLL	**Collm**	**148.47**	**346**	⇓*i*PKP	PKPdf	15 45 03.2	+4.5
CLL				⇓*i*PKP	PKPdf	15 45 08.6	+10
CLL	**Collm**	**148.47**	**346**	⇓*i*PKP1	PKPdf	15 45 03.2	+4.5
CLL				*i* PKP2	PKPab	15 45 08.6	-1.9
CLZ	**Clausthal**	**148.50**	**349**	*e*PKPbc	PKPdf	15 45 03.6	+4.9
MORC	**Moravsky Berou**	**148.59**	**340**	*e*PKPbc	PKPdf	15 45 03.2	+4.3
KECS	**Kecovo**	**148.62**	**335**	*e*PKP	PKPdf	15 45 03.7	+4.7
PVCC	**Panska Ves**	**148.80**	**344**	*e*P	PKPdf	15 45 04.3	+5.0
PVCC	**Panska Ves**	**148.80**	**344**	⇑*e*PKPB		15 45 04.3	
VOIR		**148.83**	**327**	⇓P	PKPdf	15 45 04.8	+5.3
VYHS	**Vyhne**	**149.24**	**337**	*e*PKP	PKPdf	15 45 05.3	+5.3
PRU	**Pruhonice**	**149.30**	**343**	*e*P	PKPdf	15 45 05.6	+5.5
PRU				*e*		15 45 12.4	
PRU	**Pruhonice**	**149.30**	**343**	⇑*e*PKPB		15 45 05.6	
PRU				*e*PKPAB	PKPab	15 45 12.4	-1.6
VRAC	**Vranov**	**149.31**	**340**	PKPbc	PKPdf	15 45 05.3	+5.2
	comp=Z,2.6nm,0.6s,baz=88,slow=9.4,SNR=3.8						
MOX	**Moxa**	**149.40**	**347**	*e*PKP	PKPdf	15 45 05.4	+5.2
NKC	**Novy Kostel**	**149.60**	**346**	*e*P	PKPdf	15 45 06.3	+5.7
NKC				*e*		15 45 13.7	
NKC	**Novy Kostel**	**149.60**	**346**	⇑*e*PKPB		15 45 06.3	
NKC				*e*PKPAB	PKPab	15 45 13.7	-1.5
KHC	**Kasperske Hory**	**150.34**	**344**	*e*P	PKPdf	15 45 07.9	+6.2
KHC				*e*		15 45 17.3	
KHC	**Kasperske Hory**	**150.34**	**344**	⇑*e*PKPB		15 45 07.9	
KHC				*e*PKPAB	PKPab	15 45 17.3	-1.0
TNS	**Taunus Mts**	**150.38**	**351**	*e*PKPbc	PKPdf	15 45 07.9	+6.1
GRA1	**Grafenberg Arr**	**150.38**	**347**	*e*PKPbc	PKPdf	15 45 08.0	+6.2
WET	**Wettzell**	**150.51**	**344**	*e*PKPbc	PKPdf	15 45 08.2	+6.2
GEC2	**GERESS Array S**	**150.57**	**343**	*e*PKPbc	PKPdf	15 45 08.4	+6.3
GERES	**GERESS Array B**	**150.57**	**343**	PKP	PKPdf	15 45 01.9	-0.2
	comp=Z,0.3nm,0.4s,baz=180,slow=1.3,SNR=4.8						
GERES				PKPbc	PKPdf	15 45 08.3	+6.2
	comp=Z,5.2nm,0.7s,baz=45,slow=1.9,SNR=38						
GIVF	**Givet**	**150.91**	**355**	*e*PKIKP	PKPdf	15 45 09.0	+6.4
	comp=Z,27nm,0.7s						
BAIF	**Baives**	**151.00**	**356**	*e*PKIKP	PKPdf	15 45 09.2	+6.5
	comp=Z,8.8nm,0.5s						
WLF	**Walferdange**	**151.22**	**353**	*e*PKPbc	PKPdf	15 45 08.9	+5.8
MOA	**Molln**	**151.31**	**342**	⇑*i*P	PKPdf	15 45 09.7	+6.5
BFO	**Black Forest**	**152.24**	**350**	*e*PKPbc	PKPdf	15 45 12.0	+7.5
KBA	**Koelnbreinsper**	**152.28**	**342**	⇑*i*P	PKPdf	15 45 12.1	+7.5
CDF	**Champ du Feu**	**152.32**	**351**	*e*PKIKP	PKPdf	15 45 12.1	+7.5
	comp=Z,11nm,0.7s						
FLN	**La Foliniere**	**152.36**	**2**	*e*PKIKP	PKPdf	15 45 11.8	+7.2
	comp=Z,7.9nm,0.5s						
LDF	**La Druitiere**	**152.54**	**2**	*e*PKIKP	PKPdf	15 45 12.1	+7.2
	comp=Z,4.1nm,0.4s						
ROSF	**Rostrenen**	**152.58**	**7**	*e*PKIKP	PKPdf	15 45 11.9	+6.9
GRR	**Gorron**	**152.71**	**3**	*e*PKIKP	PKPdf	15 45 12.7	+7.6
	comp=Z,8.9nm,0.6s						
SGMF	**Saint Gilles**	**152.73**	**6**	*e*PKIKP	PKPdf	15 45 12.5	+7.3
HAU	**Haudompre**	**152.84**	**352**	*e*PKIKP	PKPdf	15 45 13.0	+7.7
HINF	**Hinteralfeld**	**152.96**	**352**	*e*PKIKP	PKPdf	15 45 13.1	+7.6
QUIF	**Quistinic**	**153.00**	**7**	*e*PKIKP	PKPdf	15 45 12.9	+7.3
DAVOX	**Davos**	**153.43**	**347**	PKPbc	PKPdf	15 45 14.6	+8.4
	comp=Z,5.7nm,0.5s,baz=197,slow=6.6,SNR=6.2						

GUC 20 15:40:36.9±0.5, 20.11S×69.19W, h101^{km}±3^{km}, ML3.7, Northern Chile

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IDC 20 15:53:13.1±4.8, 0.77N×96.94E, mb3.4/3, mb1 3.5/3, mb1mx3.4/15, mbtmp3.4/3, Error ellipse: s-maj=174.0km s-min=31.4km az=58.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.03**	**121**	P	P	16 01 06.6	-1.8
	0.4nm,0.8s,baz=301,slow=9.1,SNR=5.1						
MKAR	**Makanchi Array**	**47.59**	**346**	P	P	16 01 50.3	-2.4
	0.3nm,0.5s,baz=159,slow=8.0,SNR=5.2						
SONM	**Songino Array**	**47.59**	**9**	P	P	16 01 51.1	-1.5
	0.6nm,0.9s,baz=180,slow=8.6,SNR=3.0						

IDC 20 15:58:59.9±4.5, 1.62N×96.93E, mb3.6/3, mb1 3.7/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=168.1km s-min=30.6km az=58.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.48**	**122**	P	P	16 06 57.1	-1.7
	0.4nm,0.9s,baz=300,slow=9.0,SNR=5.2						
SONM	**Songino Array**	**46.76**	**9**	P	P	16 07 31.1	-1.7
	0.7nm,0.7s,baz=192,slow=7.8,SNR=7.0						
MKAR	**Makanchi Array**	**46.78**	**346**	P	P	16 07 31.0	-1.9
	0.9nm,0.6s,baz=160,slow=7.2,SNR=9.8						

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*ROM **20** 16:06:41.6±0.2, 40.80N×15.89E, h13^{km}±5^{km}, Md3.1/12, Ml2.7/5, Error ellipse: s-maj=2.5km s-min=1.8km az=156.0*

*NEIC **20** 16:06:41.6, 40.80N×15.89E, h13^{km}, ML2.7(ROM), After ROM.*

*CSEM **20** 16:06:41.7±0.1, 40.81N×15.87E, h12^{km}, ML3.5/5, Error ellipse: s-maj=1.7km s-min=1.3km az=14.0*

ISC 20 16:06:41.8±0.3, 40.81N±0.02×15.89E±0.02, h13^{km}, n23, σ0^{s}89/35, 3C, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRLC	**Muro Lucano**	**0.31**	**260**	⇑*i*Pg	**Pg**	**16 06 48.6**	**+0.1**
MRLC				Sg	**Sg**	**16 06 54.6**	**+1.7**
CDT	**Castel del Mon**	**0.40**	**47**	*e*Sg	**Sg**	**16 06 56.2**	**+0.7**
FG4	**Candela**	**0.43**	**318**	Pg	**Pg**	**16 06 50.2**	**-0.5**
FG4				Sg	**Sg**	**16 06 57.1**	**+0.5**
	133nm,0.3s						
SGO	**Sicignano**	**0.51**	**241**	⇑*e*Pg	**Pg**	**16 06 51.7**	**-0.6**
SGO				Sg	**Sg**	**16 06 59.7**	**+0.4**
SNAL	**S. Angelo Dei**	**0.53**	**282**	⇑*e*Pg	**Pg**	**16 06 52.1**	**-0.6**
SNAL				Sg	**Sg**	**16 07 00.7**	**+0.8**
	751nm,0.7s						
SG1	**Sgolgore (BA)**	**0.60**	**87**	*e*Pg	**Pg**	**16 06 53.8**	**-0.2**
SG1				*e*Sg	**Sg**	**16 07 02.9**	**+0.8**
CSSN	**Cassano Irpino**	**0.66**	**274**	Pg	**Pg**	**16 06 54.0**	**-1.2**
	85nm,0.3s						
FG5	**Orsara di Pugl**	**0.67**	**315**	Pg	**Pg**	**16 06 56.6**	**+1.3**
	183nm,0.2s						
MGR	**Morigerati**	**0.72**	**201**	Pg	**Pg**	**16 06 55.4**	**-1.1**
MGR				Sg	**Sg**	**16 07 06.8**	**+0.6**
	295nm,0.3s						
LTRZ	**Laterza**	**0.74**	**106**	Pg	**Pg**	**16 06 56.3**	**-0.4**
LTRZ				Sg	**Sg**	**16 07 07.7**	**+1.1**
	206nm,0.5s						
BAI	**Bari**	**0.80**	**68**	*e*Sg	**Sg**	**16 07 10.0**	**+1.1**
ORI	**Oriolo Calabro**	**0.86**	**150**	Pg	**Pg**	**16 06 59.2**	**0.0**
	81nm,0.3s						
RGNG	**Rignano Grg**	**0.89**	**345**	Pg	**Pg**	**16 06 59.2**	**-0.6**
RGNG				Sg	**Sg**	**16 07 12.5**	**+0.8**
MS1	**Monte Sant'Ang**	**0.89**	**2**	*e*Pg	**Pg**	**16 06 58.6**	**-1.2**
MS1				*e*Sg	**Sg**	**16 07 10.7**	**-1.1**
IPES	**Pescosannita**	**0.90**	**298**	Pg	**Pg**	**16 07 01.2**	**+1.2**
BRT	**Bari-Castellan**	**1.00**	**86**	Pg	**Pg**	**16 07 01.4**	**-0.5**
BRT				Sg	**Sg**	**16 07 14.7**	**-0.6**
	5.0nm,0.2s						
SACR	**S. Croce Del S**	**1.07**	**303**	Pg	**Pg**	**16 07 03.3**	**0.0**
SACR				Sg	**Sg**	**16 07 19.7**	**+2.0**
	120nm,0.7s						
FG2	**Serracapriola**	**1.13**	**331**	Pg	**Pg**	**16 07 03.1**	**-1.5**
FG2				Sg	**Sg**	**16 07 19.9**	**+0.1**
	390nm,0.3s						
PE1	**Pezze di Greco**	**1.16**	**90**	*e*Sg	**Sg**	**16 07 21.0**	**+0.3**
ISOR	**Termini**	**1.21**	**259**	Pg	**Pg**	**16 07 04.7**	**-1.3**
BSSO	**Busso**	**1.22**	**307**	Pg	**Pg**	**16 07 05.7**	**-0.7**
	119nm,0.7s						
SGG	**Gregorio Mates**	**1.28**	**297**	Pg	**Pg**	**16 07 07.3**	**-0.2**
MIDA	**Miranda**	**1.49**	**304**	Pg	**Pg**	**16 07 10.5**	**-1.1**
	92nm,0.7s						

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*IDC **20** 16:53:15.2±1.4, 36.57N×27.33E, mb3.5/5, mb1 3.7/6, mb1mx3.5/21, mbtmp3.5/6, ML3.1/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/33, Error ellipse: s-maj=45.2km s-min=20.5km az=155.0*

*ATH **20** 16:53:16.6, 36.74N×27.38E, h25^{km}±1^{km}, MD3.8/9*

*ISK **20** 16:53:16.5, 36.73N×27.41E, h7^{km}, MD3.5*

*CSEM **20** 16:53:16.6±0.1, 36.63N×27.45E, h20^{km}, MD3.5, Error ellipse: s-maj=1.8km s-min=1.7km az=53.0*

*NEIC **20** 16:53:16.6, 36.74N×27.38E, h25^{km}, MD3.8(ATH), After ATH.*

*HLW **20** 16:53:20.4, 36.62N×27.66E, h33^{km}, Mb3.7*

ISC 20 16:53:15.5±0.2, 36.67N±0.02×27.41E±0.02, h10^{km}, n78, σ1^{s}29/97, mb3.6/6, MS3.3/2, 10C-2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NISR	**Nisiros**	**0.24**	**257**	*e*PB	**Pb**	**16 53 22.5**	**+1.1**
BDRM	**Kayabasi**	**0.40**	**3**	*i* P	**Pg**	**16 53 23.5**	**-0.3**
BDRM				*i* S	**Sg**	**16 53 28.7**	**-0.5**
BODT	**Bodrum**	**0.41**	**348**	*i* PG	**Pg**	**16 53 23.9**	**+0.1**
BODT				*i* SG	**Sg**	**16 53 29.3**	**0.0**
MLSB	**Milas**	**0.69**	**25**	PG	**Pg**	**16 53 28.8**	**-0.7**
MLSB				SG	**Sg**	**16 53 37.6**	**-1.2**
ARG	**Arkhangelos**	**0.73**	**128**	*e*PB	**Pb**	**16 53 31.5**	**+1.6**
ARG				*e*SN	**Sn**	**16 53 44.1**	**+1.3**
YER	**Yerkesik**	**0.84**	**56**	PG	**Pg**	**16 53 32.4**	**0.0**
DALT	**Dalyan (Mudla)**	**0.99**	**84**	PG	**Pg**	**16 53 35.7**	**+0.3**
AYDN	**Tasoluk**	**1.06**	**20**	*i* P	**Pb**	**16 53 35.5**	**-0.1**
AYDN				*i* S	**Sb**	**16 53 48.2**	**-1.1**
KARP	**Karpathos**	**1.14**	**190**	*e*PN	**Pn**	**16 53 39.2**	**+1.8**
KARP				*e*SN	**Sn**	**16 53 56.0**	**+2.9**
SMG	**Samos**	**1.14**	**336**	*e*PN	**Pn**	**16 53 37.2**	**-0.3**
SMG				*e*SN	**Sn**	**16 53 52.3**	**-0.9**
FETY	**Fethiye**	**1.34**	**91**	PN	**Pn**	**16 53 42.5**	**+2.1**
APE	**Apeiranthos**	**1.56**	**285**	PN	**Pn**	**16 53 44.6**	**+1.0**
APE	**Apeiranthos**	**1.56**	**285**	*e*PN	**Pn**	**16 53 44.4**	**+0.8**
APE				*e*SN	**Sn**	**16 54 04.1**	**+0.1**
SANT	**Santorini**	**1.60**	**260**	*e*Pn	**Pn**	**16 53 44.1**	**0.0**
SANT				*e*Sn	**Sn**	**16 54 02.2**	**-2.8**
SANT	**Santorini**	**1.60**	**260**	*e*Pn	**Pn**	**16 53 44.1**	**0.0**
DNZL	**Cakiroluk**	**1.66**	**51**	*i* P	**Pn**	**16 53 46.3**	**+1.4**
DNZL				*i* S	**Sn**	**16 54 10.9**	**+4.5**
DENT	**Denizli**	**1.69**	**49**	PN	**Pn**	**16 53 46.9**	**+1.5**
IZM	**Izmir**	**1.73**	**356**	*e*PN	**Pn**	**16 53 46.9**	**+0.9**
KDAG	**Bornova**	**1.74**	**356**	*i* P	**Pn**	**16 53 44.4**	**-1.7**
KDAG				*i* S	**Sn**	**16 54 12.4**	**+3.9**
BLCB	**Balcova**	**1.74**	**350**	PN	**Pn**	**16 53 46.9**	**+0.8**
GOLH	**Golhisar**	**1.81**	**71**	*i* P	**Pn**	**16 53 50.6**	**+3.5**
GOLH				*i* S	**Sn**	**16 54 15.5**	**+5.2**
URLA	**Izmir**	**1.81**	**339**	*i* P	**Pn**	**16 53 48.3**	**+1.2**
URLA				*i* S	**Sn**	**16 54 12.5**	**+2.1**
AKAS	**Kas**	**1.82**	**103**	*i* P	**Pn**	**16 53 50.4**	**+3.1**
AKAS				*i* S	**Sn**	**16 54 17.8**	**+7.3**
ELL	**Elmali**	**2.01**	**87**	*e*PN	**Pn**	**16 53 52.4**	**+2.5**
NPS	**Neapolis**	**2.02**	**227**	*e*PB	**Pb**	**16 53 52.0**	**0.0**
NPS				*e*SN	**Sn**	**16 54 16.8**	**+1.1**
AKS	**Akhisar**	**2.23**	**8**	*e*PN	**Pn**	**16 53 54.3**	**+1.1**
XRY	**Khrisi**	**2.27**	**219**	*e*PB	**Pb**	**16 53 56.0**	**-0.2**
BCK	**Bucak**	**2.66**	**72**	*e*PN	**Pn**	**16 54 01.1**	**+1.8**
TKTP	**Tekketepe**	**2.69**	**58**	*i* P	**Pn**	**16 54 00.7**	**+0.9**
TKTP				*i* S	**Sg**	**16 54 44.7**	**-0.5**
PRK	**Paraskevi**	**2.73**	**341**	*e*PN	**Pn**	**16 53 59.9**	**-0.4**
PRK				*e*SN	**Sn**	**16 54 31.7**	**-2.0**
ISP	**Isparta**	**2.73**	**64**	*e*PN	**Pn**	**16 54 02.4**	**+2.1**
BALB	**Balikesir**	**2.99**	**7**	*e*PN	**Pn**	**16 54 05.5**	**+1.5**
DST	**Dursunbey**	**3.09**	**18**	*e*PN	**Pn**	**16 54 06.1**	**+0.8**
CANB	**Canakkale**	**3.36**	**355**	*e*PN	**Pn**	**16 54 09.2**	**0.0**
VLI	**Veliai**	**3.60**	**272**	*e*PN	**Pn**	**16 54 13.7**	**+1.1**
LIA	**Limnos Island**	**3.67**	**332**	*e*PN	**Pn**	**16 54 13.7**	**0.0**
ULDT	**Uludag**	**3.73**	**21**	*i* P	**Pg**	**16 54 24.8**	**-5.2**
ULDT				*i* S	**Sg**	**16 55 17.3**	**-2.3**
ESKT	**Eskisehir**	**3.93**	**43**	*i* P	**Pg**	**16 54 31.1**	**-3.0**
ESKT				*i* S	**Sg**	**16 55 25.2**	**-1.3**
HDMB	**Hadim**	**4.08**	**84**	*e*PN	**Pn**	**16 54 20.4**	**+0.9**
KIZT	**Kizilcal**	**4.17**	**57**	*e*PN	**Pn**	**16 54 21.7**	**+0.9**
ALN	**Alexandroupoli**	**4.36**	**346**	*e*P	**Pn**	**16 54 22.6**	**-0.8**
AGG	**Agios Georgios**	**4.66**	**302**	*e*P	**Pn**	**16 54 27.5**	**-0.2**
RDO	**Rodhopi**	**4.71**	**342**	*e*PN	**Pn**	**16 54 27.5**	**-0.9**
IKL	**Isikli**	**5.07**	**93**	*e*PN	**Pn**	**16 54 35.2**	**+1.7**
SLUM		**5.47**	**200**	⇑P	**Pn**	**16 54 40.2**	**+1.0**
SLUM				S	**Sn**	**16 55 38.8**	**-4.2**
HMAT	**Matruh**	**5.56**	**183**	⇑P	**Pn**	**16 54 41.4**	**+0.9**
DABA	**Dabaa**	**5.69**	**172**	P	**Pn**	**16 54 42.2**	**+0.1**
BRTR	**Keskin Array B**	**5.78**	**56**	Pn	**Pn**	**16 54 44.1**	**+0.7**
	0.5nm,0.3s,baz=240,slow=16,SNR=16						
HBRG	**Burj al 'Arab**	**6.40**	**161**	⇑P	**Pn**	**16 54 52.1**	**-0.2**
SWA1		**7.52**	**191**	⇑P	**Pn**	**16 55 08.2**	**+0.2**
SWA1				S	**Sn**	**16 56 27.2**	**-6.9**
SWA2		**7.58**	**193**	⇑P	**Pn**	**16 55 08.5**	**-0.4**
KOT	**Kottamia**	**7.67**	**150**	P	**Pn**	**16 55 09.1**	**-0.9**
AMAG	**Maghara**	**7.71**	**140**	⇑P	**Pn**	**16 55 08.7**	**-1.9**
HRSH	**Kfar Ka'horesh**	**7.74**	**136**	P	**Pn**	**16 55 09.1**	**-2.0**
RSH		**7.74**	**136**	P	**Pn**	**16 55 09.1**	**-2.0**
GLL	**Jalalah**	**7.93**	**152**	⇑P	**Pn**	**16 55 11.9**	**-1.8**
SUZ		**8.18**	**145**	P	**P**	**16 55 15.8**	**-1.3**
HNKL	**Nakhl**	**8.68**	**139**	⇑P	**P**	**16 55 22.4**	**-1.7**
TIP	**Timpagrande**	**8.79**	**290**	*e*Pn	**P**	**16 55 25.3**	**-0.3**
MLR	**Muntele Rosu**	**8.89**	**353**	LR	LR	16 59 26.1	
	comp=Z,126nm,18.8s,baz=132,slow=41						
EIL	**Elat**	**9.41**	**136**	*e*Pn	**P**	**16 55 31.6**	**-2.6**
	4.9nm,0.5s						
EIL	**Elat**	**9.41**	**136**	*e*Pn	**P**	**16 55 31.6**	**-2.6**
	4.9nm,0.5s						
HBST	**Basata**	**9.64**	**138**	⇑P	**P**	**16 55 35.3**	**-2.1**
HKAT	**Jabal Katrina**	**9.83**	**144**	⇓P	**P**	**16 55 38.2**	**-1.9**
HDHB	**Dhahab**	**9.97**	**141**	P	**P**	**16 55 39.9**	**-2.2**
HHRG	**Al Ghardaqah**	**10.77**	**149**	⇑P	**P**	**16 55 51.1**	**-1.8**
HSFG		**11.49**	**149**	⇓P	**P**	**16 56 01.5**	**-1.3**
ESDC	**Sonseca Array**	**24.79**	**287**	P	**P**	**16 58 38.1**	**-0.6**
	0.2nm,0.3s,mb3.1,baz=84,slow=9.4,SNR=4.5						
NB2	**NORSAR Subarra**	**26.47**	**342**	P	**P**	**16 58 56.5**	**+2.2**
	0.6nm,0.6s,mb3.3,baz=151,slow=9.3						
NOA	**NORSAR Array B**	**26.47**	**342**	P	**P**	**16 58 54.7**	**+0.4**
	0.5nm,0.6s,mb3.2,baz=144,slow=8.8,SNR=3.9						
NOA				LR	LR	17 10 57.6	
	comp=Z,28nm,20.9s,MS2.8,baz=160,slow=40						
NOA	**NORSAR Array B**	**26.47**	**342**	P	**P**	**16 58 54.7**	**+0.4**
NOA				LR	LR	17 10 57.6	
BVAR	**Borovoye Array**	**33.98**	**47**	P	**P**	**17 00 02.3**	**+1.1**
	0.2nm,0.4s,mb3.4,baz=254,slow=10,SNR=2.3						
MKAR	**Makanchi Array**	**41.42**	**58**	P	**P**	**17 01 03.5**	**-0.1**
	1.0nm,0.5s,mb3.7,baz=277,slow=7.3,SNR=13						
DBIC	**Dimbokro**	**41.93**	**233**	P	**P**	**17 01 07.1**	**-1.1**
	3.7nm,0.7s,mb4.1,baz=14,slow=13,SNR=4.9						
DBIC	**Dimbokro**	**41.93**	**233**	P	**P**	**17 01 07.1**	**-1.1**
ZAL	**Zalesovo**	**42.63**	**47**	P	**P**	**17 01 13.8**	**+0.4**
	0.7nm,0.4s,mb3.8,baz=191,slow=13,SNR=3.8						
ZAL	**Zalesovo**	**42.63**	**47**	P	**P**	**17 01 13.8**	**+0.4**
MJAR	**Matsushiro Arr**	**82.96**	**49**	LR	LR	17 46 04.7	
	comp=Z,37nm,18.6s,MS3.8,baz=110,slow=38						

GUC 20 17:01:23.8±0.5, 20.17S×69.22W, h100^{km}±3^{km}, ML3.5, Northern Chile

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NNC 20 17:18:39.6±4.1, 36.78N×70.05E, h92^{km}±72^{km}, mpv3.6, 2C-3D, Error ellipse: s-maj=47.4km s-min=34.2km az=66.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.33**	**3**	⇑P	P	17 20 10.2	-1.8
	1.5nm,0.3s,baz=190,slow=14,SNR=48						
KK31				⇓S	S	17 21 24.5	+1.1
	4.3nm,0.6s,baz=181,slow=26,SNR=3.9						
AAK	**Ala-Archa**	**6.78**	**29**	⇓S	S	17 21 31.0	-3.4
	13nm,0.6s						
AB31	**Akbulak array**	**14.47**	**333**	⇓P	P	17 21 60.0	-1.0
	1.0nm,0.3s,baz=156,slow=12,SNR=39						
AB31				⇑S	S	17 24 38.7	-0.8
	0.8nm,0.5s,baz=162,slow=22,SNR=6.2						

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*IDC **20** 17:22:04.3±0.9, 14.65N×92.65W, h62^{km}±7^{km}, mb3.8/10, mb1 4.0/11, mb1mx3.8/24, mbtmp4.1/11, MS3.5/4, Ms1 3.5/4, ms1mx2.9/25, Error ellipse: s-maj=41.9km s-min=14.4km az=54.0*

*CASC **20** 17:22:05.3±2.0, 14.47N×92.70W, h18^{km}±131^{km}, MD4.6, ML4.6, mb4.1(NEIC)*

*MEX **20** 17:22:06.1±0.6, 14.65N×92.95W, h96^{km}±15^{km}, MD4.5*

*NEIC **20** 17:22:06.1, 14.65N×92.95W, h96^{km}, mb4.1/17, MD4.5(MEX), After MEX.*

ISC 20 17:22:03.0±0.5, 14.51N±0.05×92.90W±0.03, h64^{km}±5^{km}, n64, σ1^{s}07/75, mb4.2/22, 5C-1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TP2	**Tecpan 2**	**1.84**	**81**	⇑*e*P	**P**	**17 22 33.9**	**+1.0**
TP2				*e*S	**S**	**17 22 56.6**	**+1.6**
TP2				AML	AML	17 23 01.7	
	comp=E,5μm,0.7s						
CCIG	**Comitan**	**1.91**	**23**	*i* P	**P**	**17 22 35.0**	**+1.1**
CCIG				*i* S	**S**	**17 22 57.2**	**+0.4**
SCX	**San Cristobal**	**2.23**	**7**	*i* P	**P**	**17 22 39.0**	**+0.6**
SCX				*i* S	**S**	**17 23 05.0**	**+0.3**
IXG	**Ixpaco**	**2.39**	**98**	⇑*e*P	**P**	**17 22 41.2**	**+0.5**
IXG				*e*S	**S**	**17 23 08.2**	**-0.7**
IXG				AML	AML	17 23 17.1	
	comp=E,31μm,0.4s						
RBDL	**Robledal**	**3.14**	**97**	*e*P	**P**	**17 22 51.3**	**0.0**
MRL	**Marmol**	**3.15**	**79**	⇑*e*P	**P**	**17 22 51.8**	**+0.3**
CMIG	**Matias Romero**	**3.20**	**324**	⇑*i*P	**P**	**17 22 51.5**	**-0.5**
CMIG				*i* S	**S**	**17 23 26.3**	**-2.9**
RTR	**El Retiro**	**3.21**	**101**	*e*P	**P**	**17 22 52.3**	**0.0**
SBLS	**San Blas**	**3.25**	**101**	*e*P	**P**	**17 22 52.8**	**+0.1**
SBLS				*e*S	**S**	**17 23 30.9**	**+0.5**
SNJE	**San Jose**	**3.26**	**101**	*e*P	**P**	**17 22 52.9**	**-0.1**
BOQS	**Boqueron**	**3.60**	**102**	*e*P	**P**	**17 22 58.6**	**+1.0**
BOQS				*e*S	**S**	**17 23 40.1**	**+1.0**
SNET	**Serv Nac Est T**	**3.65**	**102**	*e*S	**S**	**17 23 39.4**	**-1.2**
SNET				*i*		17 23 56.4	
	comp=Z,1μm,0.7s						
LFU	**La Fuente**	**3.75**	**101**	*e*P	**P**	**17 23 02.1**	**+2.3**
TUIG	**Tuzandepetl**	**3.80**	**338**	*e*P	**P**	**17 23 00.0**	**-0.4**
TUIG				*i* S	**S**	**17 23 40.9**	**-3.3**
LBRS	**Las Brisas**	**3.82**	**101**	*e*P	**P**	**17 22 59.7**	**-1.0**
LFRS	**El Faro**	**3.83**	**103**	*e*P	**P**	**17 23 00.8**	**-0.1**
LFRS				*e*S	**S**	**17 23 43.1**	**-1.9**
LCBS	**La Ceiba**	**3.90**	**102**	⇓*e*P	**P**	**17 23 01.7**	**-0.1**
OXX	**Oaxaca**	**4.48**	**305**	*e*P	**P**	**17 23 10.0**	**0.0**
OXX				*i* S	**S**	**17 23 59.0**	**-2.4**
VHO	**Vista Hermosa**	**4.48**	**305**	*e*P	**P**	**17 23 10.1**	**0.0**
VHO				*i* S	**S**	**17 23 59.4**	**-2.0**
BLLM	**Bellamira**	**4.65**	**103**	*e*S	**S**	**17 24 05.1**	**-0.5**
SCIG		**4.73**	**20**	*i* P	**P**	**17 23 12.1**	**-1.4**
SCIG				*i* S	**S**	**17 24 04.4**	**-3.1**
CNCH	**Conchagua**	**5.07**	**103**	⇑*e*P	**P**	**17 23 17.9**	**-0.4**
IISM	**Ciudad Serdan**	**6.18**	**317**	*e*P	**P**	**17 23 34.0**	**+0.4**
PPM	**Popocatepetl**	**7.11**	**310**	*e*P	**P**	**17 23 48.0**	**+1.3**
PPM				*i* S	**S**	**17 25 06.9**	**+0.1**
PPM	**Popocatepetl**	**7.11**	**310**	*e*P	**P**	**17 23 48.0**	**+1.3**
PPM				*e*P		17 23 48.9	
PPM				*i* S	**S**	**17 25 06.9**	**+0.1**
ACX	**Acapulco**	**7.15**	**290**	*e*P	**P**	**17 23 47.0**	**-0.2**
JTS	**JuntasAbangare**	**8.82**	**117**	P	**P**	**17 24 11.4**	**+1.3**
	comp=Z,2.4nm,0.3s,baz=307,slow=21,SNR=8.6						
JTS				S	**S**	**17 25 48.0**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=275,slow=21,SNR=1.5						
JTS	**JuntasAbangare**	**8.82**	**117**	*e*Pn	**P**	**17 24 10.1**	**0.0**
JTS				S	**S**	**17 25 48.0**	**-1.0**
LTX	**Lajitas**	**17.80**	**328**	*e*P	**P**	**17 26 08.8**	**+1.0**
	comp=Z,1.9nm,0.5s						
TXAR	**Lajitas Array**	**17.80**	**328**	P	**P**	**17 26 09.4**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=149,slow=12,SNR=16						
LRAL	**Lakeview Retre**	**19.21**	**15**	P	**P**	**17 26 22.4**	**-2.0**
	comp=Z,6.1nm,0.5s						
GDL2	**Guadalupe Moun**	**20.49**	**331**	*e*P	**P**	**17 26 39.5**	**+1.5**
MNTX	**Cornudas Mount**	**20.57**	**328**	*e*P	**P**	**17 26 39.0**	**+0.2**
	comp=Z,2.8nm,0.9s						
WMOK	**Wichita Mounta**	**20.83**	**346**	*e*P	**P**	**17 26 40.2**	**-1.3**
	comp=Z,1.5nm,0.5s						
CPRX	**Cap Rock**	**20.96**	**333**	*e*P	**P**	**17 26 42.3**	**-0.5**
SDV	**Santo Domingo**	**22.50**	**102**	P	**P**	**17 26 58.1**	**-0.2**
	comp=Z,4.1nm,0.5s,mb4.1,baz=326,slow=8.0,SNR=6.7						
SDV	**Santo Domingo**	**22.50**	**102**	*e*P	**P**	**17 26 57.9**	**-0.4**
	comp=Z,4.7nm,0.6s,mb4.1						
ANMO	**Albuquerque**	**23.74**	**331**	P	**P**	**17 27 11.9**	**+1.8**
	comp=Z,1.3nm,0.5s,mb3.6,baz=127,slow=17,SNR=3.0						
TUC	**Tucson**	**24.09**	**320**	*e*P	**P**	**17 27 14.3**	**+0.8**
	comp=Z,1.1nm,0.5s,mb3.5						
HWUT	**Hardware Ranch**	**31.48**	**333**	*e*P	**P**	**17 28 21.5**	**+0.7**
	comp=Z,1.6nm,0.7s,mb4.0						
PDAR	**Pinedale Array**	**31.60**	**336**	P	**P**	**17 28 21.8**	**0.0**
	comp=Z,0.7nm,0.9s,mb3.5,baz=141,slow=12,SNR=3.9						
ELK	**Elko**	**32.59**	**328**	*e*P	**P**	**17 28 31.3**	**+0.8**
	comp=Z,1.6nm,0.8s,mb4.0						
SNOW	**Snow King Moun**	**32.66**	**336**	*e*P	**P**	**17 28 31.5**	**+0.5**
	comp=Z,11nm,0.5s,mb5.0						
LOHW	**Long Hollow**	**32.73**	**336**	*e*P	**P**	**17 28 32.5**	**+0.8**
	comp=Z,9.2nm,1.1s,mb4.6						
TPAW	**Teton Pass**	**32.76**	**335**	*e*P	**P**	**17 28 33.0**	**+1.0**
	comp=Z,8.9nm,1.2s,mb4.6						
RRI2	**Red Ridge**	**32.79**	**335**	*e*P	**P**	**17 28 33.7**	**+1.5**
	comp=Z,3.3nm,0.5s,mb4.5						
MOOW	**Moose Ponds**	**32.90**	**336**	*e*P	**P**	**17 28 34.0**	**+0.9**
	comp=Z,2.4nm,0.9s,mb4.1						
HLID	**Hailey**	**34.31**	**332**	*e*P	**P**	**17 28 46.4**	**+1.1**
	comp=Z,3.1nm,0.9s,mb4.2						
MCMT	**McKenzie Canyo**	**34.64**	**335**	*e*P	**P**	**17 28 49.8**	**+1.8**
SAML	**Samuel**	**37.58**	**127**	*e*P	**P**	**17 29 13.2**	**0.0**
	comp=Z,1.4nm,0.6s,mb3.9						
SIV	**San Ignacio**	**43.67**	**133**	P	**P**	**17 30 02.6**	**-0.9**
	comp=Z,1.5nm,0.6s,mb3.9,baz=314,slow=8.7,SNR=7.6						
SIV				pP	pP	17 30 18.8	-1.0
	comp=Z,2.6nm,0.7s,baz=313,slow=9.1,SNR=7.7						

SCHQ	**Schefferville**	45.06	21	LR	LR	17 49 14.7	
	comp=Z,77nm,21.0s,baz=106,slow=36						
YKA	**Yellowknife Ar**	50.34	347	P	P	17 30 53.9	-1.2
	comp=Z,1.3nm,0.5s,mb4.2,baz=153,slow=7.5,SNR=6.1						
PLCA	**Paso Flores**	58.74	160	P	P	17 31 55.8	-0.8
	comp=Z,1.6nm,0.5s,mb4.3,baz=308,slow=12,SNR=4.1						
INK	**Inuvik**	59.71	344	LR	LR	18 01 30.5	
	comp=Z,44nm,20.9s,baz=114,slow=40						
INK	**Inuvik**	59.71	344	eP	P	17 32 02.1	-0.8
	comp=Z,2.2nm,0.6s,mb4.4						
ILAR	**Eielson Array**	62.03	337	P	P	17 32 17.8	-0.9
	comp=Z,1.6nm,0.7s,mb4.3,baz=142,slow=4.1,SNR=13						
ILAR				pP	pP	17 32 33.9	-2.0
	comp=Z,1.2nm,0.8s,baz=128,slow=5.6,SNR=7.5						
BILL	**Bilibino**	80.66	338	eP	P	17 34 10.4	+0.3
	comp=Z,2.3nm,0.4s,mb4.5						
NOA	**NORSAR Array B**	84.12	28	LR	LR	18 09 32.9	
	comp=Z,20nm,19.0s,baz=200,slow=34						
HFS	**Hagfors**	85.58	29	P	P	17 34 34.1	-1.1
	comp=Z,1.5nm,0.8s,mb4.3,baz=264,slow=13,SNR=3.0						
ARCES	**ARCESS Array B**	85.93	18	P	P	17 34 35.6	-1.1
	comp=Z,0.6nm,0.6s,mb4.0,baz=297,slow=5.4,SNR=4.7						
FINES	**FINESS Array B**	90.41	25	P	P	17 34 56.5	-1.7
	comp=Z,1.2nm,1.0s,mb4.2,slow=2.8,SNR=4.2						
FINES				LR	LR	18 13 32.5	
	comp=Z,20nm,21.2s,baz=260,slow=34						
WRA	**Warramunga Arr**	134.67	256	PKP	PKPdf	17 41 16.3	+1.1
	comp=Z,0.7nm,0.6s,baz=83,slow=2.1,SNR=10						
WRA				pPKP		17 41 35.5	
	comp=Z,0.5nm,0.8s,baz=78,slow=2.1,SNR=3.0						
CMAR	**Chiang Mai Arr**	145.22	340	PKPbc	PKPbc	17 41 35.2	+0.7
	comp=Z,2.8nm,0.8s,baz=335,slow=2.9,SNR=11						
CMAR				pPKP		17 41 52.3	
	comp=Z,1.3nm,0.8s,baz=339,slow=2.8,SNR=3.0						

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*IDC **20** 17:31:34.9±1.3, 20.19N×121.63E, mb3.6/5, mb1 3.9/6, mb1mx3.6/19, mbtmp3.8/6, ML4.1/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/22, Error ellipse: s-maj=34.8km s-min=23.8km az=67.0*

*NEIC **20** 17:31:41.1±2.1, 20.20N×121.67E, h50^{km}±23^{km}, Error ellipse: s-maj=21.7km s-min=16.9km az=52.0*

*MAN **20** 17:31:43.2, 20.29N×121.65E, h19^{km}, mb4.6, ML3.5, MS3.4*

ISC 20 17:31:42.1±0.6**, 20.43N**±0.05×**121.7E**±0.1**, h70**^{km}±11^{km}**, n17,** σ**0**^{s}**99**/20**, mb3.5**/5**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	**Basco**	0.21	86	eP	P	17 31 51.2	-1.5
SGCP	**Mt. Cagua**	2.19	172	eP	P	17 32 17.8	+0.8
APYP	**Conner**	2.59	190	eP	P	17 32 22.5	-0.3
APYP				eS	S	17 32 52.4	-0.7
CVP	**Callao Caves**	2.71	178	eP	P	17 32 25.0	+0.6
CVP				i S	S	17 32 57.0	+0.9
ABRA	**Dolores**	2.93	200	eP	P	17 32 27.2	-0.3
ABRA				eS	S	17 33 00.9	-0.7
CAUP	**Cauayan**	3.46	179	eP	P	17 32 36.6	+1.6
YHNB	**Yeheng**	4.24	356	ePn	P	17 32 46.8	+1.1
BOLP	**Bolinao**	4.38	204	eP	P	17 32 47.6	-0.1
BALP	**Baler**	4.66	182	eP	P	17 32 52.0	+0.3
SCZP	**Santa Cruz**	4.94	201	eP	P	17 32 55.9	+0.4
JOW	**Kunigami**	8.75	42	Pn	P	17 33 47.5	-0.5
	4.2nm,0.3s,baz=196,slow=16,SNR=6.9						
CMAR	**Chiang Mai Arr**	21.58	269	P	P	17 36 25.6	-2.1
	1.2nm,0.9s,mb3.2,baz=85,slow=7.9,SNR=2.9						
SONM	**Songino Array**	30.03	339	P	P	17 37 46.3	-0.2
	0.3nm,0.4s,mb3.3,baz=152,slow=9.2,SNR=4.8						
SONM				LR	LR	17 51 20.4	
	comp=Z,28nm,18.4s,baz=78,slow=39						
MKAR	**Makanchi Array**	41.44	319	P	P	17 39 24.5	+1.2
	0.6nm,0.4s,mb3.7,baz=109,slow=9.5,SNR=6.0						
WRA	**Warramunga Arr**	41.97	162	P	P	17 39 26.2	-1.9
	1.2nm,0.8s,mb3.7,baz=344,slow=9.2,SNR=10						
ZAL	**Zalesovo**	43.70	329	P	P	17 39 42.5	+0.8
	0.6nm,0.4s,mb3.7,baz=171,slow=13,SNR=3.2						
ZAL	**Zalesovo**	43.70	329	P	P	17 39 42.5	+0.8

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*LDG **20** 17:35:38.5±0.1, 44.62N×7.23E, h2^{km}, Md2.1/1, Ml2.0/6, Error ellipse: s-maj=1.8km s-min=0.8km az=69.0*

*NEIC **20** 17:35:38.3, 44.61N×7.20E, h13^{km}, ML2.6(GEN), ML2.0(LDG), ML1.8(STR), After GEN.*

*STR **20** 17:35:38.6±0.2, 44.61N×7.20E, h5^{km}±1^{km}, Ml1.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **20** 17:35:38.3±0.1, 44.61N×7.20E, h13^{km}, ML2.6, Error ellipse: s-maj=2.1km s-min=1.4km az=71.0, After NEIC*

ISC 20 17:35:37.6±0.3**, 44.61N**±0.01×**7.19E**±0.03**, h13**^{km}**, n44,** σ**0**^{s}**53**/78**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHB	**Bricherasio**	0.24	12	P	Pg	17 35 43.3	+0.3
BHB				S	Sg	17 35 46.8	+0.2
BHB	**Bricherasio**	0.24	12	P	Pg	17 35 43.3	+0.3
BHB				S	Sg	17 35 46.8	+0.3
OG22	**Abries**	0.28	321	Pg	Pg	17 35 44.4	+0.7
OG22				Sg	Sg	17 35 48.4	+0.7
SURF	**Saint Ours**	0.30	245	Pg	Pg	17 35 45.0	+1.0
SURF				Sg	Sg	17 35 49.0	+0.7
MBDF	**Montbardon**	0.32	292	ePg	Pg	17 35 45.4	+0.9
MBDF				eSg	Sg	17 35 49.8	+0.7
	10.0nm,0.2s						
STV2	**Anna di Valdie**	0.37	165	P	Pg	17 35 45.8	+0.4
STV2				S	Sg	17 35 50.6	0.0
STV2	**Anna di Valdie**	0.37	165	P	Pg	17 35 45.8	+0.4
STV2				S	Sg	17 35 50.7	+0.1
STV	**Sta Anna Valdi**	0.37	165	P	Pg	17 35 45.7	+0.3
STV				S	Sg	17 35 50.6	0.0
STV	**Sta Anna Valdi**	0.37	165	P	Pg	17 35 45.7	+0.3
STV				S	Sg	17 35 50.7	+0.1
ENR	**Entracque**	0.41	157	P	Pg	17 35 46.3	+0.2
ENR				S	Sg	17 35 51.6	-0.3
ENR	**Entracque**	0.41	157	P	Pg	17 35 46.3	+0.1
ENR				S	Sg	17 35 51.6	-0.3
RRL	**Cesana Torines**	0.43	317	P	Pg	17 35 46.9	+0.4
RRL				S	Sg	17 35 52.5	+0.2
RRL	**Cesana Torines**	0.43	317	P	Pg	17 35 46.9	+0.4
RRL				S	Sg	17 35 52.5	+0.1
FENE	**Fenestrelle**	0.43	348	P	Pg	17 35 46.9	+0.3
FENE				S	Sg	17 35 52.5	-0.1
FENE	**Fenestrelle**	0.43	348	P	Pg	17 35 46.9	+0.3
FENE				S	Sg	17 35 52.5	-0.1
RSP	**Reno Superiore**	0.55	5	P	Pb	17 35 48.7	+0.1
RSP				S	Sb	17 35 55.7	-0.4
RSP	**Reno Superiore**	0.55	5	P	Pb	17 35 48.7	+0.1
RSP				S	Sb	17 35 55.7	-0.3
ROB	**Roburent**	0.58	122	P	Pb	17 35 49.3	+0.2
ROB				S	Sb	17 35 56.8	-0.1
ROB	**Roburent**	0.58	122	P	Pb	17 35 49.3	+0.2
ROB				S	Sb	17 35 56.8	-0.1
TOUF	**Mont Tournerai**	0.59	176	Pg	Pg	17 35 50.1	+0.4
AUTN	**L’Aution**	0.63	164	Pg	Pg	17 35 51.1	+0.6
AUTN				Sg	Sg	17 35 59.3	+0.3
MONE	**Monesi**	0.66	142	P	Pb	17 35 50.6	+0.1
MONE				S	Sb	17 35 59.1	-0.3
MONE	**Monesi**	0.66	142	P	Pb	17 35 50.7	+0.2
MONE				S	Sb	17 35 59.1	-0.3
SAOF	**Saorge**	0.67	157	Pg	Pg	17 35 51.0	-0.2
SAOF				Sg	Sg	17 36 00.7	+0.4
MVIF	**Mont Vial**	0.71	182	Pg	Pg	17 35 51.6	-0.4
MVIF				Sg	Sg	17 36 02.2	+0.6
SBF	**Sospel**	0.76	167	ePg	Pg	17 35 52.7	-0.3
SBF				eSg	Sg	17 36 03.3	0.0
	3.9nm,0.2s						
FIN	**Finale Ligure**	0.83	118	P	Pb	17 35 53.6	+0.2
FIN				S	Sb	17 36 03.7	-0.5
FIN	**Finale Ligure**	0.83	118	P	Pb	17 35 53.6	+0.2
FIN				S	Sb	17 36 03.7	-0.5
NEGI	**Negi**	0.84	154	P	Pb	17 35 53.8	+0.2
NEGI				S	Sb	17 36 04.2	-0.4
NEGI	**Negi**	0.84	154	P	Pb	17 35 53.8	+0.2
NEGI				S	Sb	17 36 04.2	-0.4
LSD	**Ceresole Reale**	0.85	358	P	Pb	17 35 54.1	+0.3
LSD	**Ceresole Reale**	0.85	358	P	Pb	17 35 54.1	+0.3
IMI	**Imperia**	0.86	144	P	Pb	17 35 53.9	+0.1
IMI	**Imperia**	0.86	144	P	Pb	17 35 53.9	0.0
LPG	**La Plagne**	0.94	341	ePg	Pg	17 35 56.5	-0.1
LPG				eSg	Sg	17 36 08.8	-0.5
	3.4nm,0.2s						
LPL	**La Plagne**	0.97	340	ePg	Pg	17 35 56.7	-0.4
LPL				eSg	Sg	17 36 09.0	-1.0
	4.2nm,0.3s						
ORIF	**Oris-en-Rattie**	0.98	289	ePg	Pg	17 35 57.3	-0.1
ORIF				eSg	Sg	17 36 08.9	-1.8
	2.7nm,0.3s						
TRAV		0.99	23	P	Pb	17 35 55.9	-0.2
TRAV		0.99	23	P	Pb	17 35 55.9	-0.2
FRF	**La Foret Royal**	1.12	201	ePg	Pg	17 36 00.1	+0.1
FRF				eSg	Sg	17 36 14.2	-0.8
	3.6nm,0.2s						
ORX	**Oropa**	1.17	28	P	Pb	17 35 58.4	-0.8
ORX	**Oropa**	1.17	28	P	Pb	17 35 58.4	-0.8
SMRF	**Simiane la Rot**	1.32	242	eSg	Sg	17 36 21.2	-0.6
	2.8nm,0.3s						
LMR	**La Mourre**	1.36	201	ePg	Pg	17 36 04.4	-0.5
LMR				eSg	Sg	17 36 21.9	-1.3
	5.5nm,0.4s						

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*GUC **20** 17:36:49.8±0.5, 19.25S×69.23W, h126^{km}±4^{km}, ML4.6*

*NEIC **20** 17:36:50.5±1.9, 19.25S×68.84W, h126^{km}±18^{km}, Error ellipse: s-maj=24.9km s-min=15.3km az=77.0*

*IDC **20** 17:36:50.4±2.7, 19.30S×68.91W, h123^{km}±25^{km}, mb3.7/3, mb1 3.8/6, mb1mx3.6/19, mbtmp4.1/6, Error ellipse: s-maj=34.7km s-min=23.1km az=84.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 20 17:36:47.2±1.4**, 19.2S**±0.1×**68.98W**±0.10**, h106**^{km}±19^{km}**, n10,** σ**0**^{s}**55**/10**, mb3.9**/2**, 2C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	3.01	16	P	P	17 37 39.3	+5.1
	7.7nm,0.3s,baz=209,slow=6.9,SNR=132						
LPAZ	**La Paz**	3.01	16	⇑iPn	P	17 37 39.4	+5.2
ARE	**Arequipa**	3.63	318	⇑iP	P	17 37 43.8	+1.2
ARE				eS	S	17 38 24.0	-0.8
SIV	**San Ignacio**	8.19	68	P	P	17 38 44.3	-0.4
	3.3nm,0.3s,baz=265,slow=10,SNR=71						
SAML	**Samuel**	11.64	30	Pn	P	17 39 31.1	+0.1
CPUP	**Villa Florida**	12.87	126	P	P	17 39 47.0	-0.2
	0.3nm,0.3s,baz=278,slow=17,SNR=3.8						
BDFB	**Brasilia**	20.31	83	P	P	17 41 17.3	+0.5
	5.1nm,0.6s,baz=255,slow=8.3,SNR=6.3						
PLCA	**Paso Flores**	21.50	183	P	P	17 41 28.6	-0.1
	3.4nm,0.9s,mb3.7,baz=7.2,slow=15,SNR=6.2						
YKA	**Yellowknife Ar**	89.01	341	P	P	17 49 30.6	-0.2
	1.3nm,0.6s,mb4.1,baz=129,slow=4.4,SNR=5.1						
SONM	**Songino Array**	151.19	6	PKPbc	PKPdf	17 56 29.6	+7.8
	0.7nm,0.5s,baz=313,slow=1.5,SNR=9.7						

MAN 20 17:49:27.3, 10.18N×121.94E, h1^{km}**, mb4.6, ML3.4, MS3.3, 2C, Panay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	**Jordan**	0.78	55	eP	Pg	17 49 42.8	-0.2
CUYO	**Cuyo Island**	1.12	307	eP	Pb	17 49 50.0	+0.7
CUYO				eS	Sb	17 50 06.8	+2.6
SNPH	**Sibulan**	1.53	123	eP	Pn	17 49 55.5	-0.3
SNPH				i S	Sb	17 50 18.5	+2.6
KALP	**Kalibo**	1.54	15	eP	Pn	17 49 46.0	-10
RCP	**Roxas**	1.59	30	⇑eP	Pn	17 49 57.5	+0.7
DCPH	**Dipolog City**	2.11	138	⇑eP	Pn	17 50 02.8	-1.5
SJMP	**San Jose**	2.41	341	eP	Pn	17 50 08.1	-0.4
IPIL	**Ipil**	2.45	165	eP	Pn	17 50 08.4	-0.7
BUSP	**Coron**	2.49	317	eP	Pn	17 50 09.4	-0.3
ENPP	**El Nido**	2.67	293	eP	Pn	17 50 12.2	0.0
PAGZ	**Pagadian**	2.72	148	eP	Pn	17 50 13.3	+0.4
MSLP	**Maasin**	2.88	91	eP	Pn	17 50 15.8	+0.6
CNP	**Catarman**	3.54	49	eP	Pn	17 50 24.3	-0.3
BUKP	**Musuan**	3.84	126	eP	Pn	17 50 29.8	+0.9
LUBP	**Lubang**	3.90	335	eP	Pn	17 50 29.5	-0.2

GUC 20 17:50:06.4±0.6**, 19.69S×69.25W, h107**^{km}±4^{km}**, ML4.1, Northern Chile**

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*IGQ **20** 17:58:13.7, 1.57S×77.77W, h213^{km}±3^{km}, mb4.1, Error ellipse: s-maj=3.6km s-min=1.8km az=45.9*

*NEIC **20** 17:58:17.0±0.8, 1.53S×77.58W, h190^{km}±8^{km}, mb3.9/12, MD4.1(IGQ), Error ellipse: s-maj=14.4km s-min=6.5km az=64.0*

*IDC **20** 17:58:20.6±2.8, 1.43S×77.38W, h226^{km}±29^{km}, mb3.5/8, mb1 3.7/12, mb1mx3.6/25, mbtmp4.1/12, Error ellipse: s-maj=36.3km s-min=10.6km az=64.0*

ISC 20 17:58:16.0±0.4**, 1.57S**±0.05×**77.73W**±0.07**, h194**^{km}±3^{km}**, n66,** σ**0**^{s}**77**/60**, mb3.6**/17**, 6C-19D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULBA	**Ulba**	0.68	280	⇓P	P	17 58 43.7	+0.1
ULBA				S	S	17 59 04.7	-0.2
RUN5	**Runtun**	0.71	283	⇓P	P	17 58 43.8	+0.1
ARRY	**Arrayan**	0.72	275	⇓P	P	17 58 43.7	0.0
JUIV	**Juive**	0.74	281	P	P	17 58 43.5	-0.3
JUIV				S	S	17 59 04.7	-0.6
CUSU	**Cusua**	0.76	280	⇑P	P	17 58 44.3	+0.4
PISA	**Pisayambo**	0.83	308	⇓P	P	17 58 44.9	+0.6
IGUA	**Igualata**	0.91	275	⇓P	P	17 58 45.4	+0.6
TAMB	**Tambo**	1.08	324	⇓P	P	17 58 46.4	+0.5
VC1	**Cotopaxi 1**	1.14	324	⇓P	P	17 58 47.0	+0.5
CAMI	**Rancho Maria**	1.18	319	⇓P	P	17 58 47.6	+0.9
NAS1	**Nasa**	1.19	321	⇓P	P	17 58 47.7	+0.8
ECOPE	**Copete-Rev Vol**	1.46	4	⇓P	P	17 58 48.9	-0.3
LAV3	**Lava3-Reventad**	1.47	4	P	P	17 58 48.6	-0.7
CHAR	**Charly**	1.48	2	⇑P	P	17 58 49.3	-0.1
CONE	**Cono NE Rev Vo**	1.49	4	⇑P	P	17 58 49.3	-0.3
ELAGU	**Cayambe Volc**	1.56	351	⇑P	P	17 58 50.5	+0.4
CAYR	**Refugio Cayamb**	1.60	350	⇓P	P	17 58 51.1	+0.6
JUA2	**San Juan 2**	1.60	327	⇓P	P	17 58 50.6	+0.1
GGP	**Refugio Guagua**	1.63	328	⇓P	P	17 58 51.1	+0.3
TERV	**Terraza Guagua**	1.64	328	⇓P	P	17 58 51.1	+0.2
CAYA	**Cayambe**	1.65	351	⇓P	P	17 58 51.7	+0.7
PINO	**Pino**	1.65	328	⇑P	P	17 58 51.1	+0.1
YANA	**Yana**	1.67	330	⇓P	P	17 58 51.3	+0.1
JOR1	**San Jorge 1**	1.80	330	⇓P	P	17 58 50.6	-1.9
OTAV	**Otavalo**	1.93	338	ePn	P	17 58 53.0	-0.7
COTA	**Cotacachi**	1.99	342	⇓P	P	17 58 54.8	+0.5
ECEN	**Cerro Negro**	2.39	354	P	P	17 58 59.2	+0.4
JAMA	**Jama**	2.79	298	⇓P	P	17 59 02.0	-1.4
HOJA	**Cerro de Hojas**	2.86	280	⇑P	P	17 59 02.1	-2.0
HOJA				S	S	17 59 34.1	-7.3
LORE	**San Lorenzo**	3.06	339	P	P	17 59 05.2	-1.4
ROSC	**El Rosal**	7.23	28	P	P	18 00 01.3	+1.3
	1.1nm,0.3s,baz=104,slow=19,SNR=2.9						
NNA	**Nana**	10.39	175	ePn	P	18 00 41.8	+0.6
SDV	**Santo Domingo**	12.57	34	P	P	18 01 07.8	-1.4
	1.7nm,0.3s,baz=246,slow=10.0,SNR=10						
SDV	**Santo Domingo**	12.57	34	ePn	P	18 01 07.7	-1.4
JTS	**JuntasAbangare**	13.80	329	P	P	18 01 27.7	+2.9
	0.5nm,0.3s,baz=128,slow=19,SNR=2.6						
SAML	**Samuel**	16.23	117	eP	P	18 01 51.8	-3.1
	7.5nm,0.6s						
LPAZ	**La Paz**	17.42	148	P	P	18 02 08.4	-0.1
	0.9nm,0.3s,baz=341,slow=12,SNR=12						
LPAZ	**La Paz**	17.42	148	eP	P	18 02 08.1	-0.4
	3.1nm,0.6s						
SIV	**San Ignacio**	21.79	132	P	P	18 02 52.8	-0.3
	2.9nm,0.7s,mb3.9,baz=299,slow=8.5,SNR=16						
CFAA	**Coronel Fontan**	31.19	164	P	P	18 04 19.9	+0.7
	0.1nm,0.4s,mb2.8,baz=315,slow=16,SNR=5.7						
TXAR	**Lajitas Array**	39.49	323	P	P	18 05 30.1	+0.7
	0.5nm,0.4s,mb3.4,baz=141,slow=8.0,SNR=6.3						
PLCA	**Paso Flores**	39.52	171	P	P	18 05 30.1	+0.6
	1.1nm,0.4s,mb3.6,baz=357,slow=12,SNR=4.0						
WMOK	**Wichita Mounta**	41.16	333	eP	P	18 05 42.5	-0.4
	1.3nm,0.4s,mb3.7						
ANMO	**Albuquerque**	45.21	326	P	P	18 06 16.4	+0.9
	5.5nm,0.5s,mb4.1,baz=134,slow=7.8,SNR=14						
ANMO	**Albuquerque**	45.21	326	eP	P	18 06 16.5	+0.9
	8.2nm,0.9s,mb4.1						
TUC	**Tucson**	45.97	320	eP	P	18 06 22.5	+0.9
	1.3nm,0.6s,mb3.4						
PDAR	**Pinedale Array**	52.62	331	P	P	18 07 11.5	-0.6
	0.5nm,0.6s,mb3.1,baz=146,slow=5.3,SNR=3.8						
HWUT	**Hardware Ranch**	52.79	328	eP	P	18 07 12.9	-0.4
	1.5nm,0.6s,mb3.6						
RRI2	**Red Ridge**	53.92	330	eP	P	18 07 21.5	-0.1
	3.0nm,0.6s,mb4.0						
ELK	**Elko**	54.21	325	eP	P	18 07 23.8	0.0
	1.8nm,0.9s,mb3.6						
NVAR	**Mina Array Bea**	54.58	321	P	P	18 07 26.7	+0.3
	0.6nm,0.4s,mb3.4,baz=151,slow=8.2,SNR=6.3						
BMN	**Battle Mountai**	55.16	324	eP	P	18 07 30.3	-0.3
	2.1nm,0.5s,mb3.9						
HLID	**Hailey**	55.66	328	eP	P	18 07 33.9	-0.2
	1.4nm,0.7s,mb3.6						
INK	**Inuvik**	79.42	342	P	P	18 10 01.7	+0.1
	2.2nm,0.5s,mb4.0,baz=102,slow=5.5,SNR=5.2						
INK	**Inuvik**	79.42	342	eP	P	18 10 01.2	-0.4
	6.2nm,0.9s,mb4.2						
ILAR	**Eielson Array**	82.65	336	P	P	18 10 18.2	-0.4
	1.8nm,0.7s,mb3.9,baz=126,slow=3.9,SNR=15						
SNAA	**Sanae**	83.79	162	eP	P	18 10 23.9	-0.3
	1.2nm,0.7s,mb3.7						
ZAL	**Zalesovo**	125.86	13	PKP	PKPdf	18 16 55.4	+0.6
	0.8nm,0.3s,baz=218,slow=5.1,SNR=5.0						
WB2	**Warramunga Arr**	141.96	234	eP		18 17 22.1	
WRA	**Warramunga Arr**	141.97	234	PKhKP		18 17 21.6	
	0.6nm,0.4s,baz=112,slow=2.8,SNR=21						
KAKA	**Kakadu**	146.86	244	eP	PKPdf	18 17 37.4	+3.3
	6.6nm,0.6s						
GKN	**Gorkha**	148.77	31	eP	PKPdf	18 17 42.5	+5.6
	14nm,0.9s						
KKN	**Kakani**	149.27	30	eP	PKPdf	18 17 43.6	+5.9
	7.2nm,0.3s						
DMN	**Daman**	149.33	31	eP	PKPdf	18 17 43.8	+6.0
	10nm,0.4s						
GUN	**Gumba**	149.47	29	eP	PKPdf	18 17 44.5	+6.5
PKI	**Pulchoki**	149.52	30	eP	PKPdf	18 17 43.7	+5.6

GUC 20 17:58:40.6±0.6**, 20.92S×68.98W, h106**^{km}±5^{km}**, ML3.6, Chile-Bolivia border region**

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*IDC **20** 18:22:05.3±1.9, 22.14N×93.66E, mb3.8/5, mb1 4.0/5, mb1mx3.6/18, mbtmp3.8/5, Error ellipse: s-maj=94.0km s-min=16.1km az=49.0*

*NEIC **20** 18:22:16.8±0.9, 22.55N×94.54E, h89^{km}±11^{km}, mb4.4/2, Error ellipse: s-maj=27.4km s-min=8.6km az=224.0*

ISC 20 18:22:16.2±1.7**, 22.5N**±0.2×**94.5E**±0.2**, h102**^{km}±16^{km}**, n17,** σ**0**^{s}**77**/19**, mb3.9**/7**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	**Shillong**	3.85	322	ePN	P	18 23 15.0	+0.4
SHL				eSN	S	18 23 53.0	-6.1
CMAR	**Chiang Mai Arr**	5.81	134	Pn	P	18 23 39.7	-1.6
	baz=305,slow=14,SNR=2.7						
CMAR				Pg	P	18 23 58.2	+17
	0.2nm,0.3s,baz=310,slow=15,SNR=4.2						
CMAR				Lg		18 25 19.7	
	0.2nm,0.3s,baz=318,slow=31,SNR=3.7						
LSA	**Lhasa**	7.74	338	ePn	P	18 24 07.5	-0.3
GUN	**Gumba**	9.46	306	eP	P	18 24 32.3	+1.3
	8.1nm,0.2s						
KKN	**Kakani**	9.86	304	eP	P	18 24 36.6	+0.3
	4.4nm,0.2s						
DMN	**Daman**	9.90	303	eP	P	18 24 37.7	+0.7
	3.6nm,0.3s						
GKN	**Gorkha**	10.46	303	eP	P	18 24 43.5	-0.9
	15nm,0.4s						
KOLN	**Koldanda**	11.16	300	eP	P	18 24 52.5	-1.4
	5.3nm,0.3s						
MKAR	**Makanchi Array**	26.14	341	P	P	18 27 43.0	+0.6
	1.2nm,0.4s,mb3.7,baz=150,slow=10,SNR=19						
MKAR	**Makanchi Array**	26.14	341	P	P	18 27 43.0	+0.6
ZAL	**Zalesovo**	32.20	349	P	P	18 28 36.3	-0.2
	1.2nm,0.3s,mb4.0,baz=290,slow=7.5,SNR=3.8						
ZRNK	**Zerenda**	36.07	334	eP	P	18 29 09.7	+0.2
	1.8nm,0.5s,mb4.3						
ARU	**Arti**	42.89	331	eP	P	18 30 06.0	+0.1
	2.7nm,0.4s,mb4.3						
WRA	**Warramunga Arr**	57.40	134	P	P	18 31 57.5	+0.9
	0.5nm,1.1s,mb3.5,baz=321,slow=7.6,SNR=2.5						
FINES	**FINESS Array B**	60.16	329	P	P	18 32 14.3	-0.8
	1.0nm,0.7s,mb4.0,baz=104,slow=7.9,SNR=5.2						
FINES	**FINESS Array B**	60.16	329	P	P	18 32 14.3	-0.8
ARCES	**ARCESS Array B**	61.75	338	P	P	18 32 25.4	-0.5
	0.3nm,0.4s,mb3.7,baz=99,slow=6.6,SNR=9.5						

WEL 20 18:32:46.7±0.1**, 44.14S×168.72E, h5**^{km}**, ML3.6**/5**, 1C-1D, Error ellipse: s-maj=1.9km s-min=0.8km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCZ	**Jackson Bay**	0.07	20	⇑PG	Pg	18 32 48.6	+0.2
JCZ				SG	Sg	18 32 49.7	+0.2
JCZ				SG	Sg	18 32 49.8	+0.2
WKZ	**Wanaka**	0.72	163	P*	Pb	18 33 00.7	-0.6
WKZ				S*	Sb	18 33 10.1	-1.1
FOZ	**Fox Glacier**	0.91	51	P*	Pb	18 33 05.0	+0.4
FOZ				S*	Sb	18 33 18.3	+1.6
LBZ	**Lake Benmore**	1.08	104	⇓P*	Pb	18 33 07.5	0.0
LBZ				S*	Sb	18 33 21.4	-0.2
EAZ	**Earnscleugh**	1.17	159	P*	Pb	18 33 08.8	-0.2
EAZ				S*	Sb	18 33 24.2	0.0
MLZ	**Mavora Lakes**	1.27	198	P*	Pb	18 33 10.5	-0.2
MLZ				S*	Sb	18 33 29.8	+2.7
WHZ	**Wether Hill Ro**	1.84	197	PN	Pn	18 33 19.1	-0.1
TUZ	**Tuapeka**	1.92	161	PN	Pn	18 33 19.9	-0.6
TUZ				SN	Sn	18 33 46.3	+1.0
THZ	**Tophouse**	3.88	54	PN	Pn	18 33 46.1	-2.3

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*MOS **20** 18:48:37.5±1.0, 50.86N×157.49E, h60^{km}, mb4.1/2, Error ellipse: s-maj=35.0km s-min=9.8km az=65.0*

*IDC **20** 18:48:39.9±3.4, 51.25N×157.20E, h66^{km}±37^{km}, mb3.6/3, mb1 4.1/6, mb1mx3.5/23, mbtmp4.1/6, ML4.2/2, MS3.0/1, Ms1 3.1/1, ms1mx2.2/40, Error ellipse: s-maj=102.2km s-min=21.2km az=148.0*

*KRSC **20** 18:48:39.0±0.9, 50.84N×157.52E, h40^{km}±12^{km}, ML4.9*

*NEIC **20** 18:48:40.7±1.5, 51.00N×157.45E, h75^{km}±15^{km}, Error ellipse: s-maj=30.6km s-min=14.4km az=144.0*

ISC 20 18:48:38.8±0.6**, 50.88N**±0.05×**157.53E**±0.09**, h71**^{km}±8^{km}**, n48,** σ**1**^{s}**18**/87**, mb3.8**/3**, 1C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	0.74	323	i P	P	18 48 54.5	+0.1
PAU				eS	S	18 49 05.2	-0.7
PAU				Smax			
	6µm,0.5s						
SKR	**Severo-Kuril’s**	0.92	258	⇑iPN	P	18 48 54.0	-2.6
SKR				i S	S	18 49 05.4	-4.3
SKR				pmax	pmax		
	comp=Z,310nm,0.4s						
SKR				pmax	pmax		
	comp=E,160µm,0.4s						
SKR				pmax	pmax		
	comp=N,240µm,0.2s						
SKR				smax			
	comp=N,8µm,1.0s						
SKR				smax			
	comp=E,10µm,2.0s						
SKR				smax			
	comp=N,5µm,0.4s						
SKR				smax			
	comp=E,12µm,0.2s						
SKR	**Severo-Kuril’s**	0.92	258	i P	P	18 48 54.0	-2.6
SKR				i S	S	18 49 05.4	-4.3
ALID	**Alaid**	1.25	270	i P	P	18 49 01.2	+0.2
ALID				i S	S	18 49 16.5	-0.9
MIPR	**Malaya Ipel’ka**	1.48	341	i P	P	18 49 04.3	+0.3
MIPR				i S	S	18 49 22.3	-0.3
RUS	**Russkaya**	1.67	21	P	P	18 49 06.0	-0.6
RUS				S	S	18 49 25.6	-1.5
RUS	**Russkaya**	1.67	21	i P	P	18 49 06.0	-0.6
RUS				i S	S	18 49 26.1	-1.0
GRL	**Gorelyy**	1.71	11	i P	P	18 49 07.7	+0.6
GRL				i S	S	18 49 28.0	+0.1
APC	**Apacha**	2.06	354	i P	P	18 49 12.4	+0.5
APC				eS	S	18 49 36.5	+0.1
APC				Smax			
	comp=E,380nm,0.9s						
PET	**Petropavlovsk**	2.25	18	P	P	18 49 14.9	+0.2
PET				S	S	18 49 41.0	-0.3
PET	**Petropavlovsk**	2.25	18	⇓iPN	P	18 49 14.8	+0.1
PET				i S	S	18 49 41.6	+0.3
PET				pmax	pmax		

	comp=Z,180nm,0.6s						
PET				smax			
	comp=N,1μm,0.5s						
PET				smax			
	comp=N,1μm,0.5s						
PET				smax			
	comp=E,1μm,0.5s						
PET				MLR	MLR		
	comp=Z,600nm,1.0s						
PET	**Petropavlovsk**	**2.25**	**18**	⇓*i*Pn	**P**	**18 49 14.7**	**0.0**
PET				*e*Sn	**S**	**18 49 41.0**	**-0.3**
PET	**Petropavlovsk**	**2.25**	**18**	*i* P	**P**	**18 49 14.7**	**0.0**
PET				*i* S	**S**	**18 49 41.0**	**-0.3**
UGLR	**Uglovaya**	**2.46**	**18**	*e*P	**P**	**18 49 18.4**	**+0.7**
UGLR				*e*S	**S**	**18 49 46.7**	**+0.1**
AVH	**Avacha**	**2.50**	**17**	*i* P	**P**	**18 49 19.2**	**+1.0**
AVH				*e*S	**S**	**18 49 48.1**	**+0.6**
KOK	**Koryaka**	**2.51**	**15**	*i* P	**P**	**18 49 19.6**	**+1.3**
KOK				*e*S	**S**	**18 49 48.9**	**+1.2**
SDLR	**Sedlovina**	**2.54**	**19**	*i* P	**P**	**18 49 18.9**	**+0.1**
SDLR				*e*S	**S**	**18 49 48.9**	**+0.4**
NLC	**Nalytchevo**	**2.55**	**25**	P	**P**	**18 49 17.6**	**-1.3**
NLC				S	**S**	**18 49 45.5**	**-3.3**
NLC	**Nalytchevo**	**2.55**	**25**	*i* P	**P**	**18 49 17.5**	**-1.4**
NLC				*i* S	**S**	**18 49 46.1**	**-2.7**
SPN	**Mys Shipunski**	**2.70**	**34**	P	**P**	**18 49 20.9**	**-0.1**
SPN				S	**S**	**18 49 51.5**	**-1.1**
SPN	**Mys Shipunski**	**2.70**	**34**	*i* P	**P**	**18 49 20.8**	**-0.2**
SPN				*i* S	**S**	**18 49 51.9**	**-0.7**
GNL	**Ganaly**	**2.83**	**5**	*i* P	**P**	**18 49 23.6**	**+0.8**
GNL				*i* S	**S**	**18 49 56.7**	**+0.9**
MKZ	**Mys Kozlova**	**4.48**	**33**	P	**P**	**18 49 44.7**	**-1.1**
MKZ				S	**S**	**18 50 32.2**	**-4.9**
MKZ	**Mys Kozlova**	**4.48**	**33**	*e*P	**P**	**18 49 45.3**	**-0.5**
MKZ				*e*S	**S**	**18 50 34.5**	**-2.6**
TUMR	**Tumrok**	**4.68**	**19**	*i* P	**P**	**18 49 50.7**	**+2.0**
TUMR				*e*S	**S**	**18 50 42.3**	**+0.1**
ESO	**Esso**	**5.10**	**7**	*e*P	**P**	**18 49 55.5**	**+1.1**
ESO				*e*S	**S**	**18 50 51.1**	**-1.5**
ESO				Smax			
	comp=Z,30nm,1.4s						
KMNR	**Kamenistaya**	**5.14**	**17**	*e*P	**P**	**18 49 57.8**	**+2.8**
KMNR				*e*S	**S**	**18 50 54.5**	**+0.8**
KPT	**Kopyto**	**5.34**	**16**	*e*P	**P**	**18 49 58.6**	**+0.9**
KPT				*e*S	**S**	**18 50 56.4**	**-2.2**
KOZ	**Kozyrevsk**	**5.37**	**14**	*e*P	**P**	**18 49 59.6**	**+1.5**
KOZ				*e*S	**S**	**18 50 57.7**	**-1.6**
ZLN	**Zelenaya**	**5.50**	**20**	*e*P	**P**	**18 50 01.6**	**+1.6**
ZLN				*e*S	**S**	**18 51 02.2**	**-0.4**
LGNR	**Loginova**	**5.54**	**19**	*e*P	**P**	**18 50 03.5**	**+3.0**
LGNR				*e*S	**S**	**18 51 03.8**	**+0.2**
CIRR	**Tsirk**	**5.58**	**19**	*e*P	**P**	**18 50 03.1**	**+2.0**
CIRR				*e*S	**S**	**18 51 04.1**	**-0.5**
SRDR	**Sredinnyy**	**5.60**	**13**	*i* P	**P**	**18 50 03.6**	**+2.3**
SRDR				*e*S	**S**	**18 51 04.4**	**-0.6**
KRSR	**Krestovskiy**	**5.64**	**18**	*e*P	**P**	**18 50 03.0**	**+1.1**
KRSR				*e*S	**S**	**18 51 03.0**	**-3.1**
KBTR	**Krutoberegovo**	**6.20**	**29**	P	**P**	**18 50 08.8**	**-0.8**
KBTR				S	**S**	**18 51 14.6**	**-5.2**
KBTR	**Krutoberegovo**	**6.20**	**29**	*e*P	**P**	**18 50 09.6**	**0.0**
KBTR				*e*S	**S**	**18 51 16.2**	**-3.6**
BKI	**Bering**	**6.68**	**46**	*e*P	**P**	**18 50 13.8**	**-2.6**
BKI				*e*S	**S**	**18 51 22.8**	**-8.9**
BKI				Smax			
	comp=Z,80nm,0.3s						
FX1	**Attu Island--F**	**9.88**	**72**	P	**P**	**18 50 59.9**	**-0.1**
	comp=Z,4.3nm,0.3s,baz=140,slow=21,SNR=39						
FX1				S	**S**	**18 52 42.1**	**-8.0**
	comp=Z,6.2nm,0.3s,baz=143,slow=23,SNR=5.6						
FX1	**Attu Island--F**	**9.88**	**72**	*e*Pn	**P**	**18 50 59.7**	**-0.4**
FX1				*e*Sn	**S**	**18 52 42.8**	**-7.4**
ASAJ	**Asahikawa**	**12.14**	**242**	PN	**P**	**18 51 30.6**	**0.0**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ	**Asahikawa**	**12.14**	**242**	P	**P**	**18 51 30.6**	**-0.1**
	comp=Z,2.9nm,0.3s,baz=82,slow=11,SNR=21						
MJAR	**Matsushiro Arr**	**19.93**	**231**	P	**P**	**18 53 06.6**	**-0.6**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**19.93**	**231**	P	**P**	**18 53 06.6**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=20,slow=9.0,SNR=11						
ILAR	**Eielson Array**	**31.51**	**43**	P	**P**	**18 54 54.0**	**-1.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR				MLR	MLR		
	comp=Z,26nm,18.6s						
ILAR	**Eielson Array**	**31.51**	**43**	P	**P**	**18 54 54.0**	**-1.8**
	comp=Z,0.8nm,0.8s,mb3.5,baz=262,slow=9.6,SNR=7.6						
ILAR				LR	LR	19 09 39.7	
	comp=Z,26nm,18.6s,baz=181,slow=40						
PDAR	**Pinedale Array**	**60.01**	**58**	P	**P**	**18 58 39.4**	**-0.7**
	comp=Z,0.6nm,0.5s,mb3.9,baz=333,slow=3.3,SNR=3.8						
TXAR	**Lajitas Array**	**72.99**	**64**	P	**P**	**19 00 03.0**	**+0.6**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	**Lajitas Array**	**72.99**	**64**	P	**P**	**19 00 03.0**	**+0.6**
	comp=Z,0.8nm,0.4s,mb3.9,baz=315,slow=5.3,SNR=7.1						

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*BJI **20** 18:50:38.4, 4.62N×94.75E, h52^{km}, mB5.0, mb5.1, Ms4.5, Msz4.3*

*MOS **20** 18:50:39.2±0.8, 5.07N×94.88E, h36^{km}, mb5.1/75, Error ellipse: s-maj=10.2km s-min=4.7km az=121.0*

*HRVD **20** 18:50:39.9±1.0, 4.75N×94.53E, h51^{km}±2^{km}, MW4.7/33, Centroid moment Tensor Solution. LP body waves: s18,c27;Mantle waves: s33,c45; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.23±.16; $M_{\theta\theta}$-0.80±.10; $M_{\phi\phi}$-0.42±.17; $M_{r\theta}$0.56±.06; $M_{\theta\phi}$0.97±.10; $M_{\phi r}$-0.34±.07; Best double couple: $M_0$1.56×10^{16} NP1:ϕ_s316°,δ33°,λ99°. NP2:ϕ_s125°,δ58°,λ84°. Principal axes: T 1.38, Plg77°, Azm17°; N .362, Plg5°, Azm128°; P -1.741, Plg12°, Azm219°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **20** 18:50:39.9±0.2, 4.95N×94.75E, h30^{km}, mb5.0/93 Error ellipse: s-maj=4.9km s-min=3.6km az=200.0*

*IDC **20** 18:50:40.8±0.6, 4.96N×94.77E, h37^{km}±3^{km}, mb4.7/22, mb1 4.8/22, mb1mx4.7/25, mbtmp4.9/22, MS3.8/16, Ms1 3.8/16, ms1mx3.7/32, Error ellipse: s-maj=14.9km s-min=12.2km az=57.0*

ISC 20 18:50:39.1±0.2**, 4.91N**±0.04×**94.79E**±0.03**, h36**^{km}**,** **h36**^{km}±1.7^{km}**:pP-P, n316,** σ0^{s}**90**/322**, mb5.0**/140**, MS4.1**/33**,** **67C-1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.85**	**86**	*e*Pn	**P**	**18 52 07.3**	**+1.7**
KULM				*e*Sn	**S**	**18 53 13.2**	**+0.7**
SNG	**Songkhla**	**6.22**	**69**	P	**P**	**18 52 13.0**	**+2.2**
	500nm,0.8s						
NNT	**Nongplab**	**9.06**	**32**	P	**P**	**18 52 54.0**	**+3.6**
NST	**Nakhon Sawan**	**11.91**	**26**	P	**P**	**18 53 33.0**	**+3.5**
KKTK	**Khon Kaen**	**13.82**	**34**	P	**P**	**18 54 03.5**	**+8.6**
	556nm,0.7s						
CM31	**Chiang Mai Arr**	**14.06**	**16**	*e*Pn	**P**	**18 53 57.1**	**-1.0**
	64nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.06**	**16**	Pn	**P**	**18 54 00.5**	**+2.5**
	2.3nm,0.3s,baz=212,slow=11,SNR=74						
CMAR				LR	LR	18 59 12.7	
	comp=Z,334nm,21.9s,baz=200,slow=36						
KSM	**Kuching**	**15.87**	**102**	*e*Pn	**P**	**18 54 23.7**	**+2.1**
VIS	**Vishakhapatnam**	**16.96**	**320**	*e*P	**P**	**18 54 37.0**	**+1.7**
VIS				AMb	AMB	18 54 49.7	
	comp=Z,34nm,0.4s						
VIS				*e*x	x	18 57 26.1	
HYB	**Hyderabad**	**20.17**	**309**	*e*P	**P**	**18 55 13.0**	**-0.4**
HYB	**Hyderabad**	**20.17**	**309**	*i* P	**P**	**18 55 13.0**	**-0.4**
QIZ	**Qiongzhong**	**20.31**	**45**	P	**P**	**18 55 15.8**	**+1.0**
QIZ				PP	PP	18 55 32.8	-2.8
QIZ				S	**S**	**18 58 55.8**	**+0.2**
QIZ				AMB	AMB		
	comp=Z,10.0nm,0.8s						
QIZ				AMB	AMB		
	comp=Z,80nm,3.8s						
QIZ				LR	LR		
	comp=E,370nm,21.0s						
QIZ				LR	LR		
	comp=Z,450nm,20.1s,MS3.8						
QIZ	**Qiongzhong**	**20.31**	**45**	*e*P	**P**	**18 55 15.6**	**+0.8**
	comp=Z,15nm,0.8s						
SHL	**Shillong**	**20.72**	**353**	*e*P	**P**	**18 55 15.0**	**-4.0**
SHL				*e*x	x	18 58 55.0	
BLSP	**Bilaspur**	**21.05**	**326**	*e*P	**P**	**18 55 23.1**	**+0.7**
BLSP				AMb	AMB	18 55 24.3	
	comp=Z,61nm,0.8s,mb5.0						
KKM	**Kota Kinabalu**	**21.36**	**86**	P	**P**	**18 55 26.2**	**+0.6**
KKM				*e*pP		18 55 31.0	
KMI	**Kunming**	**21.50**	**20**	P	**P**	**18 55 28.3**	**+1.4**
KMI				AP		18 55 37.6	
KMI				XP		18 55 41.3	
KMI				PP	PP	18 55 54.0	+2.4
KMI				S	**S**	**18 59 20.8**	**+2.7**
KMI				SS	SS	18 59 56.6	+2.1
KMI				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.4						
KMI				AMB	AMB		
	comp=Z,90nm,3.5s						
KMI				LR	LR		
	comp=N,300nm,16.4s,MS4.0						
KMI				LR	LR		
	comp=E,380nm,15.6s,MS4.0						
KMI				LR	LR		
	comp=Z,420nm,22.6s						
KMI	**Kunming**	**21.50**	**20**	P	**P**	**18 55 28.3**	**+1.4**
KMI				*SP		18 55 41.2	
KMI						18 55 54.0	
KMI				S	**S**	**18 59 20.7**	**+2.6**
KMI				*SS		18 59 35.2	
KMI				SS	SS	18 59 56.6	+2.1
KMI				pmax	pmax		
	comp=Z,26nm,1.1s,mb4.5						
KMI				MLR	MLR		
	comp=Z,420nm,22.6s,MS3.8						
KMI	**Kunming**	**21.50**	**20**	P	**P**	**18 55 28.3**	**+1.4**
	comp=Z,26nm,1.1s,mb4.5						
KMI				pP		18 55 37.6	
KMI				sP		18 55 41.2	
KMI				PP	PP	18 55 54.0	+2.4
KMI				S	**S**	**18 59 20.7**	**+2.6**
KMI				sS		18 59 35.2	
KMI				SS	SS	18 59 56.6	+2.1
KMI				LR	LR		
	comp=Z,420nm,22.6s,MS3.8						
NGP	**Nagpur**	**22.22**	**318**	*e*P	**P**	**18 55 35.8**	**+1.7**
NGP				AMb	AMB	18 55 38.4	
	comp=Z,29nm,0.8s,mb4.7						
KAD	**Karad**	**23.64**	**303**	*e*P	**P**	**18 55 46.3**	**-1.8**
KAD				AMb	AMB	18 55 49.0	
	comp=Z,90nm,2.2s,mb4.8						
PKI	**Pulchoki**	**24.24**	**339**	*e*P	**P**	**18 55 53.2**	**-0.7**
	comp=Z,57nm,0.5s,mb5.3						
PKI	**Pulchoki**	**24.24**	**339**	*e*P	**P**	**18 55 53.2**	**-0.7**
PKI				pmax	pmax		
	comp=Z,28nm,0.5s,mb5.0						
GYA	**Guiyang**	**24.25**	**27**	⇑*i*P	**P**	**18 55 54.8**	**+0.8**
GYA				AP		18 56 07.0	
GYA				XP		18 56 12.3	
GYA				PP	PP	18 56 30.4	+1.0
GYA				S	**S**	**19 00 08.1**	**+0.8**
GYA				AMB	AMB		
	comp=Z,160nm,0.7s,mb5.6						
GYA				AMB	AMB		
	comp=Z,290nm,3.0s						
GYA				LR	LR		
	comp=N,450nm,15.6s,MS4.2						
GYA				LR	LR		
	comp=E,440nm,15.6s,MS4.2						
GYA				LR	LR		
	comp=Z,800nm,16.8s,MS4.3						
DMN	**Daman**	**24.38**	**339**	*e*P	**P**	**18 55 54.7**	**-0.6**
	comp=Z,75nm,0.7s,mb5.2						
GUN	**Gumba**	**24.39**	**341**	*e*P	**P**	**18 55 54.5**	**-0.8**
KKN	**Kakani**	**24.48**	**339**	*e*P	**P**	**18 55 55.5**	**-0.8**
	comp=Z,108nm,0.9s,mb5.3						
KKN	**Kakani**	**24.48**	**339**	*e*P	**P**	**18 55 55.5**	**-0.8**
KKN				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.0						
LSA	**Lhasa**	**24.89**	**352**	P	**P**	**18 56 01.8**	**+1.6**
LSA	**Lhasa**	**24.89**	**352**	*e*P	**P**	**18 56 00.4**	**+0.2**
LSA				pmax	pmax		
	comp=Z,53nm,0.5s,mb5.3						
LSA	**Lhasa**	**24.89**	**352**	*e*P	**P**	**18 56 00.4**	**+0.2**
	comp=Z,53nm,0.5s,mb5.3						
GKN	**Gorkha**	**24.91**	**338**	*e*P	**P**	**18 56 00.2**	**-0.2**
	comp=Z,92nm,0.5s,mb5.6						
KOLN	**Koldanda**	**25.10**	**336**	*e*P	**P**	**18 56 02.8**	**+0.6**
	comp=Z,204nm,0.7s,mb5.8						
CD2	**Chengdu**	**27.20**	**17**	⇑*i*P	**P**	**18 56 20.8**	**-0.9**
CD2				AMB	AMB		
	comp=Z,50nm,0.5s,mb5.3						
CD2				LR	LR		
	comp=N,510nm,11.4s						
CD2				LR	LR		
	comp=Z,270nm,4.1s						
LGTI	**Lohaghat**	**28.01**	**332**	*e*P	**P**	**18 56 30.5**	**+1.5**
ENH	**Enshi**	**28.78**	**27**	*e*P	**P**	**18 56 34.5**	**-1.4**
	comp=Z,41nm,0.6s,mb5.3						
SMLA	**Simla**	**30.89**	**330**	*i* x	x	18 56 49.6	
XAN	**Xi’an**	**31.82**	**23**	P	**P**	**18 57 01.5**	**-1.3**
XAN				AP	pP	18 57 12.0	-1.1
XAN				S	**S**	**19 02 09.8**	**+0.4**
XAN				AMB	AMB		
	comp=Z,90nm,0.8s,mb5.7						
XAN				LR	LR		
	comp=N,190nm,16.3s,MS4.1						
XAN				LR	LR		
	comp=E,240nm,16.0s,MS4.1						
XAN				LR	LR		
	comp=Z,520nm,16.7s,MS4.3						
LZH	**Lanzhou**	**32.12**	**14**	⇑P	**P**	**18 57 04.0**	**-1.4**
LZH				PP	PP	18 58 11.5	-1.2
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=N,590nm,12.7s						
LZH				LR	LR		
	comp=Z,1μm,17.2s,MS4.6						
LZH	**Lanzhou**	**32.12**	**14**	⇑P	**P**	**18 57 04.0**	**-1.4**
LZH				*PP	pP	18 57 13.2	-2.6
LZH				*SP	sP	18 57 17.2	-3.3
LZH						18 58 11.5	
LZH				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.0						
LZH				MLR	MLR		
	comp=Z,1μm,17.2s,MS4.6						
LZH	**Lanzhou**	**32.12**	**14**	⇑P	**P**	**18 57 04.0**	**-1.4**
	comp=Z,35nm,1.3s,mb5.0						
LZH				pP	pP	18 57 13.2	-2.6
LZH				sP	sP	18 57 17.2	-3.3
LZH				PP	PP	18 58 11.5	-1.2
LZH				LR	LR		
	comp=Z,1μm,17.2s,MS4.6						
THN	**Thein Dam**	**32.67**	**329**	*e*P	**P**	**18 57 10.1**	**-0.1**
	comp=Z,14nm,0.5s,mb5.2						
GTA	**Gaotai**	**34.64**	**7**	⇑*i*P	**P**	**18 57 26.3**	**-0.8**
GTA				AP	pP	18 57 38.4	+0.9
GTA				XP	sP	18 57 43.9	+1.7
GTA				PP	PP	18 58 45.0	+0.6
GTA				PPP	PPP	18 59 02.9	+0.5
GTA				PCP	PcP	19 00 01.9	+0.8
GTA				S	**S**	**19 02 53.3**	**0.0**
GTA				XS		19 03 13.8	
GTA				SCP		19 03 42.3	
GTA				SS	SS	19 05 09.0	+2.4
GTA				SCS	ScS	19 07 42.3	-1.6
GTA				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.5						
GTA				AMB	AMB		
	comp=Z,100nm,11.4s						
GTA				LR	LR		
	comp=N,100nm,20.9s,MS3.7						
GTA				LR	LR		
	comp=E,100nm,22.4s,MS3.7						
GTA				LR	LR		
	comp=Z,150nm,24.0s,MS3.6						
NJ2	**Nanjing**	**35.17**	**37**	*e*P	**P**	**18 57 31.9**	**+0.2**
NJ2				AP	pP	18 57 41.6	-0.5
NJ2				XP	sP	18 57 45.8	-1.0
NJ2				PP	PP	18 58 51.1	0.0
NJ2				S	**S**	**19 03 02.0**	**+0.5**
NJ2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,440nm,4.4s						
NJ2				LR	LR		
	comp=Z,2μm,14.4s,MS5.0						
SSE	**Sheshan**	**35.97**	**40**	P	**P**	**18 57 37.4**	**-1.1**
SSE				S	**S**	**19 03 14.5**	**+0.6**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,50nm,3.1s						
SSE				LR	LR		
	comp=N,50nm,21.4s,MS3.5						
SSE				LR	LR		
	comp=E,80nm,21.4s,MS3.5						
SSE				LR	LR		
	comp=Z,110nm,21.4s,MS3.6						
SSE	**Sheshan**	**35.97**	**40**	P	**P**	**18 57 37.4**	**-1.1**
	comp=Z,29nm,0.7s,mb5.3						
SSE				sP	sP	18 57 50.0	-3.7
SSE				S	**S**	**19 03 14.5**	**+0.6**
SSE				sS		19 03 29.7	
SSE				LR	LR		
	comp=Z,110nm,21.4s,MS3.6						
TIA	**Tai’an**	**37.31**	**30**	*e*P	**P**	**18 57 50.0**	**+0.3**
TIA				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.4						
FITZ	**Fitzroy Crossi**	**38.07**	**128**	*e*P	**P**	**18 57 55.2**	**-1.1**
	comp=Z,15nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**38.07**	**128**	P	**P**	**18 57 55.0**	**-1.2**
	comp=Z,19nm,0.6s,mb5.0,baz=322,slow=3.6,SNR=28						
FITZ				PcP	PcP	19 00 11.5	0.0
	comp=Z,8.6nm,0.6s,baz=13,slow=3.2,SNR=6.6						
FITZ				LR	LR	19 13 58.5	
	comp=Z,166nm,18.1s,MS3.9,baz=292,slow=37						
HHC	**Hu-ho-hao-te**	**38.82**	**20**	*e*P	**P**	**18 58 02.9**	**+0.6**
HHC				AP	pP	18 58 12.3	-0.5
HHC				PP	PP	18 59 35.3	-0.1
HHC				PCP	PcP	19 00 16.5	+2.9
HHC				S	**S**	**19 03 52.5**	**-4.8**
HHC				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,110nm,5.3s						
HHC				LR	LR		
	comp=N,330nm,14.2s,MS4.5						
HHC				LR	LR		
	comp=E,330nm,12.7s,MS4.5						
HHC				LR	LR		
	comp=Z,340nm,22.1s						
WMQ	**Urumqi**	**39.25**	**352**	P	**P**	**18 58 06.5**	**+0.7**
WMQ				AP	pP	18 58 15.6	-0.7
WMQ				XP	sP	18 58 19.8	-1.1
WMQ				PP	PP	18 59 40.3	+0.3
WMQ				PPP	PPP	19 00 03.6	-0.6
WMQ				PCP	PcP	19 00 16.0	+1.0
WMQ				*e*S	**S**	**19 04 03.1**	**-0.6**
WMQ				SS	SS	19 06 48.4	-1.9
WMQ				SCS	ScS	19 08 10.5	+0.9
WMQ				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,140nm,5.8s						
WMQ				LR	LR		
	comp=N,1μm,22.0s,MS4.8						
WMQ				LR	LR		
	comp=E,1μm,24.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,1μm,24.0s,MS4.6						
ULHL	**Ulahol**	**40.67**	**339**	P	**P**	**18 58 18.6**	**+0.9**
	SNR=27						
KZA	**Kyzart**	**40.90**	**338**	P	**P**	**18 58 20.8**	**+1.3**
	SNR=16						
UCH	**Uchtor**	**41.31**	**337**	P	**P**	**18 58 24.2**	**+1.3**
	SNR=38						
KAKA	**Kakadu**	**41.31**	**115**	*e*P	**P**	**18 58 22.5**	**-0.7**
	comp=Z,6.4nm,0.5s,mb4.5						
TKM2	**Tokmak 2**	**41.50**	**339**	P	**P**	**18 58 25.4**	**+1.0**
	SNR=14						
KBK	**Karagaybulak**	**41.51**	**338**	P	**P**	**18 58 26.1**	**+1.6**
	SNR=44						
AML	**Almayashu**	**41.55**	**336**	P	**P**	**18 58 25.9**	**+1.0**
	SNR=91						
AAK	**Ala-Archa**	**41.66**	**337**	P	**P**	**18 58 28.1**	**+2.2**
	SNR=8.5						
AAK	**Ala-Archa**	**41.66**	**337**	P	**P**	**18 58 26.8**	**+1.0**
AAK				pmax	pmax		
	comp=Z,28nm,0.9s,mb4.9						
AAK	**Ala-Archa**	**41.66**	**337**	*e*P	**P**	**18 58 26.2**	**+0.4**
	comp=Z,46nm,1.1s,mb5.0						
DL2	**Dalian**	**41.68**	**32**	P	**P**	**18 58 26.9**	**+0.9**
DL2				AP	pP	18 58 39.0	+2.4
DL2				*e*S	**S**	**19 04 44.4**	**+4.3**
DL2				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.9						
DL2				LR	LR		
	comp=N,120nm,19.6s,MS3.9						
DL2				LR	LR		
	comp=E,90nm,17.8s,MS3.9						
DL2				LR	LR		
	comp=Z,160nm,17.3s,MS4.0						
CHMS	**Chumysh**	**41.88**	**338**	P	**P**	**18 58 28.2**	**+0.6**
	SNR=8.0						
EKS2	**Erkin-Say**	**41.96**	**337**	P	**P**	**18 58 29.6**	**+1.3**
	SNR=30						
USP	**Ospenovka**	**42.20**	**338**	P	**P**	**18 58 30.9**	**+0.6**
	SNR=49						
MKAR	**Makanchi Array**	**43.10**	**347**	P	**P**	**18 58 37.5**	**0.0**
	comp=Z,35nm,0.7s,mb5.2,baz=166,slow=8.2,SNR=283						
MKAR				pP	pP	18 58 49.0	+0.9
	comp=Z,14nm,0.8s,baz=170,slow=7.4,SNR=5.0						
MKAR				LR	LR	19 17 56.5	
	comp=Z,74nm,20.8s,MS3.6,baz=168,slow=38						
MKAR	**Makanchi Array**	**43.10**	**347**	P	**P**	**18 58 37.5**	**0.0**
MKAR				pP	pP	18 58 49.0	+0.9
MKAR				LR	LR	19 17 56.5	
KKAR	**Karatay Array**	**43.68**	**334**	*e*P	**P**	**18 58 42.1**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
JNU	**Nakatsue**	**43.79**	**46**	P	**P**	**18 58 43.1**	**-0.2**
	comp=Z,19nm,0.8s,mb4.9,baz=160,slow=8.9,SNR=14						
SONM	**Songino Array**	**43.91**	**11**	P	**P**	**18 58 43.5**	**-0.6**
	comp=Z,16nm,0.7s,mb4.8,baz=190,slow=8.6,SNR=162						
SONM				pP	pP	18 58 54.7	0.0
	comp=Z,10nm,0.8s,baz=195,slow=7.7,SNR=12						
SONM				sP	sP	18 58 59.7	+0.5
	comp=Z,9.0nm,0.7s,baz=194,slow=9.1,SNR=7.3						
SONM				PcP	PcP	19 00 29.4	-0.8
	comp=Z,9.5nm,0.7s,baz=192,slow=3.9,SNR=21						
SONM				pPcP		19 00 44.3	
	comp=Z,3.7nm,0.7s,baz=198,slow=3.9,SNR=4.6						
SONM				LR	LR	19 19 25.6	
	comp=Z,120nm,18.5s,MS3.8,baz=214,slow=39						
ULN	**Ulaanbaatar**	**44.07**	**12**	*e*P	**P**	**18 58 44.4**	**-1.0**
ULN				*e*		19 00 30.3	
ULN				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
ULN	**Ulaanbaatar**	**44.07**	**12**	*e*P	**P**	**18 58 44.4**	**-1.0**
	comp=Z,10nm,0.6s,mb4.7						
ULN				*e*PcP	PcP	19 00 30.3	-0.5
KS15	**Wonju Array Si**	**44.28**	**38**	*e*P	**P**	**18 58 46.3**	**-0.9**
SNY	**Shenyang**	**44.84**	**31**	⇑P	**P**	**18 58 51.4**	**-0.2**
SNY				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.2						
SNY				AMB	AMB		
	comp=Z,110nm,5.5s						
SNY				LR	LR		
	comp=N,270nm,18.9s						
SNY				LR	LR		
	comp=Z,270nm,17.4s,MS4.2						
ZAK	**Zakamensk**	**45.87**	**8**	*e*P	**P**	**18 58 58.9**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**46.06**	**124**	P	**P**	**18 59 01.6**	**-0.1**
	comp=Z,36nm,0.6s,mb5.5,baz=302,slow=9.2,SNR=325						
WRAB	**Tennant Creek**	**46.07**	**124**	*c i*P	**P**	**18 59 01.9**	**+0.2**
WRAB	**Tennant Creek**	**46.07**	**124**	*e*P	**P**	**18 59 01.6**	**-0.1**
	comp=Z,66nm,0.7s,mb5.7						
WB2	**Warramunga Arr**	**46.07**	**124**	⇑*i*P	**P**	**18 59 01.7**	**0.0**
MOY	**Mondy**	**46.88**	**5**	*e*P	**P**	**18 59 07.4**	**-0.3**
TLY	**Talaya**	**47.19**	**8**	⇑*i*P	**P**	**18 59 09.7**	**-0.4**
TLY				*e*		19 01 06.6	
TLY				*e*S	**S**	**19 05 55.5**	**-3.9**
TLY				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
TLY				MLR	MLR		
	comp=Z,124nm,18.0s,MS3.9						
TLY	**Talaya**	**47.19**	**8**	*e*P	**P**	**18 59 09.7**	**-0.4**
	comp=Z,12nm,0.7s,mb4.9						
TLY				*e*PcP	PcP	19 00 41.2	-0.4

HIA	**Hailar**	**49.00**	**21**	*e*P	**P**	**18 59 23.6**	**-0.6**
HIA				pmax	pmax		
	comp=Z,11nm,0.5s						
HIA	**Hailar**	**49.00**	**21**	*e*P	**P**	**18 59 23.6**	**-0.7**
	comp=Z,11nm,0.5s,mb5.2						
ZAL	**Zalesovo**	**49.55**	**352**	P	**P**	**18 59 28.4**	**+0.1**
	comp=Z,25nm,0.5s,mb5.5,baz=301,slow=5.5,SNR=144						
ZAL				LR	LR	19 25 04.6	
	comp=Z,52nm,19.8s,MS3.5,baz=296,slow=42						
MDJ	**Mudanjiang**	**49.92**	**32**	P	**P**	**18 59 30.4**	**-1.0**
MDJ				AP	pP	18 59 43.3	+1.3
MDJ				PCP	PcP	19 00 49.8	-1.7
MDJ				PP	PP	19 01 25.4	-1.7
MDJ				SCP		19 04 43.3	
MDJ				PCS		19 04 46.9	
MDJ				S	**S**	**19 06 40.0**	**+2.2**
MDJ				SCS	ScS	19 09 19.3	+2.7
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
MDJ				LR	LR		
	comp=N,110nm,23.6s,MS4.0						
MDJ				LR	LR		
	comp=E,130nm,20.8s,MS4.0						
MDJ				LR	LR		
	comp=Z,190nm,21.9s,MS4.1						
MDJ	**Mudanjiang**	**49.92**	**32**	*e*P	**P**	**18 59 31.7**	**+0.3**
	comp=Z,9.9nm,0.9s,mb4.8						
NVS	**Novosibirsk**	**50.65**	**351**	*i* P	**P**	**18 59 34.7**	**-2.0**
NVS				*i*		19 01 39.5	
NVS				*i* S	**S**	**19 06 39.9**	**-7.8**
NVS				pmax	pmax		
	comp=Z,11nm,0.4s,mb5.1						
NVS				pmax	pmax		
	comp=N,10.0nm,0.4s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.6s						
NVS				smax			
	comp=N,7.0nm,1.5s						
NVS				smax			
	comp=E,3.0nm,1.2s						
MAT	**Matsushiro**	**50.71**	**46**	*e*P	**P**	**18 59 37.0**	**-0.5**
MAT	**Matsushiro**	**50.71**	**46**	P	**P**	**18 59 37.2**	**-0.3**
MJAR	**Matsushiro Arr**	**50.71**	**46**	P	**P**	**18 59 37.0**	**-0.5**
	comp=E,4.4nm,0.6s,mb4.6,baz=248,slow=6.5,SNR=16						
MJAR				PcP	PcP	19 00 53.8	-0.7
	comp=E,2.8nm,0.7s,baz=241,slow=3.6,SNR=5.3						
MJAR				pPcP		19 01 07.9	
	comp=E,2.9nm,0.9s,baz=245,slow=4.5,SNR=4.7						
MJAR				LR	LR	19 22 27.5	
	comp=E,141nm,20.8s,MS4.0,baz=225,slow=38						
MJAR	**Matsushiro Arr**	**50.71**	**46**	P	**P**	**18 59 37.0**	**-0.5**
MJAR				PcP	PcP	19 00 53.8	-0.7
MJAR				pPcP		19 01 07.9	
MJAR				LR	LR	19 22 27.5	
VOSK	**Vostochnaya**	**51.54**	**342**	P	**P**	**18 59 42.6**	**-0.9**
VOSK				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.2						
BVA0	**Borovoye Array**	**51.98**	**342**	*i* P	**P**	**18 59 45.6**	**-1.2**
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
BVAR	**Borovoye Array**	**51.98**	**342**	P	**P**	**18 59 45.7**	**-1.1**
	comp=Z,16nm,0.7s,mb5.0,baz=141,slow=8.6,SNR=124						
ZRNK	**Zerenda**	**52.37**	**341**	P	**P**	**18 59 48.8**	**-0.9**
ZRNK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
AB31	**Akbulak array**	**53.12**	**332**	*e*P	**P**	**18 59 54.9**	**-0.5**
AB31				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
PMG	**Port Moresby**	**54.10**	**105**	*e*P	**P**	**19 00 01.8**	**-1.3**
PMG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PMG	**Port Moresby**	**54.10**	**105**	*e*P	**P**	**19 00 01.8**	**-1.3**
	comp=Z,9.0nm,0.6s,mb4.9						
KLR	**Kul’dur**	**54.12**	**29**	*e*P	**P**	**19 00 00.0**	**-2.7**
CTA	**Charters Tower**	**56.34**	**118**	LR	LR	19 26 31.7	
	comp=Z,149nm,18.6s,MS4.1,baz=288,slow=38						
GNI	**Garni**	**56.97**	**316**	*e*P	**P**	**19 00 22.4**	**-1.1**
GNI				pmax	pmax		
	comp=Z,15nm,0.8s						
GNI	**Garni**	**56.97**	**316**	P	**P**	**19 00 22.3**	**-1.1**
	comp=Z,4.5nm,0.5s,mb4.8,baz=148,slow=10,SNR=4.6						
GNI	**Garni**	**56.97**	**316**	*e*P	**P**	**19 00 22.4**	**-1.1**
	comp=Z,15nm,0.8s,mb5.1						
ASAJ	**Asahikawa**	**57.25**	**39**	P	**P**	**19 00 24.7**	**-0.7**
	comp=Z,4.8nm,0.3s,mb5.0,baz=254,slow=10,SNR=15						
ASAJ				LR	LR	19 24 23.1	
	comp=Z,98nm,21.5s,MS3.9,baz=212,slow=35						
STKA	**Stephens Creek**	**57.62**	**133**	P	**P**	**19 00 27.1**	**-1.1**
	comp=Z,5.5nm,0.7s,mb4.7,baz=291,slow=9.1,SNR=8.9						
SVE	**Sverdlovsk**	**58.37**	**339**	*e*P	**P**	**19 00 32.5**	**-0.6**
SVE				*e*		19 00 47.0	
SVE				*e*		19 01 18.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
YSS	**Yuzh-Sakhalins**	**58.74**	**37**	*e*P	**P**	**19 00 34.2**	**-1.6**
YSS				*e*	pP	19 00 46.5	-0.2
YSS				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.3						
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
YSS	**Yuzh-Sakhalins**	**58.74**	**37**	*e*P	**P**	**19 00 34.7**	**-1.1**
	comp=Z,23nm,0.9s,mb5.2						
ARU	**Arti**	**58.85**	**337⇑**	*i*P	**P**	**19 00 34.8**	**-1.6**
ARU				*e*		19 01 21.8	
ARU				*e*		19 02 51.4	
ARU				*e*S	**S**	**19 08 39.1**	**+1.4**
ARU				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.2						
ARU	**Arti**	**58.85**	**337**	*e*P	**P**	**19 00 34.6**	**-1.8**
	comp=Z,30nm,1.1s,mb5.2						
TBKS	**Tabuk**	**59.81**	**300**	P	**P**	**19 00 44.6**	**+1.1**
KIV	**Kislovodsk**	**59.94**	**319**	*i* P	**P**	**19 00 43.1**	**-1.0**
KIV				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
JMQS	**Jabal Moqyreh**	**60.52**	**300**	P	**P**	**19 00 48.7**	**+0.4**
MALT	**Malatya**	**60.87**	**311**	*e*P	**P**	**19 00 49.9**	**-0.7**
MALT				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
MALT	**Malatya**	**60.87**	**311**	*e*P	**P**	**19 00 49.9**	**-0.7**
	comp=Z,3.1nm,0.7s,mb4.5						
ALWS	**Ilw as Safayha**	**61.30**	**301**	P	**P**	**19 00 53.8**	**+0.2**
EIL	**Elat**	**61.47**	**301**	*e*P	**P**	**19 00 54.6**	**-0.1**
	comp=Z,5.1nm,0.7s,mb4.8						
EIL				*e*	pP	19 01 03.8	-1.9
SOKR	**Solikamsk**	**61.77**	**339⇑**	*i*P	**P**	**19 00 54.2**	**-2.1**
SOKR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
YAK	**Yakutsk**	**62.59**	**18***c*	*i*P	**P**	**19 00 59.8**	**-2.0**
YAK				pmax	pmax		
	comp=Z,19nm,0.5s,mb5.5						
YAK	**Yakutsk**	**62.59**	**18**	*e*P	**P**	**19 00 59.3**	**-2.4**
	comp=Z,27nm,0.6s,mb5.5						
ANN	**Anapa**	**63.74**	**318**	*e*P	**P**	**19 01 01.9**	**-7.7**
ANN				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.6						
BRTR	**Keskin Array B**	**64.85**	**312**	P	**P**	**19 01 15.5**	**-1.4**
	comp=Z,10nm,0.6s,mb5.0,baz=133,slow=7.4,SNR=52						
HNR	**Honiara**	**66.48**	**102**	P	**P**	**19 01 27.4**	**-0.3**
HNR				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.6						
HNR	**Honiara**	**66.48**	**102**	P	**P**	**19 01 27.4**	**-0.3**
	comp=Z,57nm,0.9s,mb5.6						
MOS	**Moscow**	**67.93**	**329**	*e*P	**P**	**19 01 32.4**	**-3.7**
MOS				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.5						
OBN	**Obninsk**	**68.21**	**328***c*	*i*P	**P**	**19 01 36.7**	**-1.2**
OBN				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.2						
OBN	**Obninsk**	**68.21**	**328**	*e*P	**P**	**19 01 36.1**	**-1.8**
	comp=Z,8.7nm,0.6s,mb5.0						
LSZ	**Lusaka**	**68.92**	**252**	*e*P	**P**	**19 01 42.3**	**-0.6**
LSZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
LSZ	**Lusaka**	**68.92**	**252**	*e*P	**P**	**19 01 42.3**	**-0.7**
	comp=Z,1.8nm,0.7s,mb4.1						
MA2	**Magadan**	**69.09**	**27**	*e*P	**P**	**19 01 42.2**	**-1.1**
MA2				S	S	19 10 43.9	-0.7
MA2				*e*		19 11 25.9	
MA2				*e*SSS	SSS	19 18 05.7	-9.3
MA2				pmax	pmax		
	comp=Z,30nm,1.7s,mb5.0						
MA2				MLR	MLR		
	comp=Z,200nm,22.4s,MS4.3						
MA2	**Magadan**	**69.09**	**27**	*e*P	**P**	**19 01 42.3**	**-0.9**
	comp=Z,17nm,0.7s,mb5.1						
MATP	**Matopo**	**69.74**	**246**	LR	LR	19 28 16.3	
	comp=Z,200nm,18.9s,MS4.4,baz=70,slow=32						
KIS	**Kishinev**	**70.14**	**318**	*e*P	**P**	**19 01 48.0**	**-1.9**
PET	**Petropavlovsk**	**70.56**	**35**	*e*P	**P**	**19 01 51.1**	**-1.2**
PET				*e*		19 11 20.6	
PET				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.3						
PET				MLR	MLR		
	comp=Z,60nm,18.0s,MS3.9						
AKASG	**Malin Array Be**	**70.86**	**322**	P	**P**	**19 01 52.0**	**-2.2**
	comp=Z,11nm,0.6s,mb5.0,baz=83,slow=5.0,SNR=60						
MLR	**Muntele Rosu**	**71.73**	**316**	P	**P**	**19 01 59.3**	**-0.2**
	comp=Z,20nm,0.9s,mb5.0,baz=91,slow=5.0,SNR=27						
LBTB	**Lobatse**	**73.42**	**242**	*e*P	**P**	**19 02 10.2**	**+0.3**
LBTB				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LBTB	**Lobatse**	**73.42**	**242**	*e*P	**P**	**19 02 10.2**	**+0.2**
	comp=Z,3.9nm,0.7s,mb4.5						
BOSA	**Boshof**	**74.58**	**239**	*e*P	**P**	**19 02 17.1**	**+0.5**
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BOSA	**Boshof**	**74.58**	**239**	P	**P**	**19 02 17.3**	**+0.7**
	comp=Z,2.3nm,0.6s,mb4.3,baz=83,slow=9.2,SNR=6.6						
BOSA				sP	sP	19 02 33.0	+1.2
	comp=Z,10nm,1.0s,baz=78,slow=5.8,SNR=7.2						
BOSA				LR	LR	19 30 25.4	
	comp=Z,106nm,18.4s,MS4.2,baz=286,slow=32						
BOSA	**Boshof**	**74.58**	**239**	*e*P	**P**	**19 02 17.1**	**+0.5**
	comp=Z,4.8nm,0.9s,mb4.4						
KWP	**Kalwaria**	**74.69**	**320**	*e*P	**P**	**19 02 16.8**	**0.0**
APA	**Apatity**	**74.83**	**340⇑**	*i*P	**P**	**19 02 16.0**	**-1.2**
APA				*i*	pP	19 02 25.0	-3.4
APA				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
KOLS	**Kolonicke sedl**	**74.85**	**319**	*e*P	**P**	**19 02 18.2**	**+0.5**
KOLS				*e*	pP	19 02 29.4	+0.6
KOLS				*e*		19 03 54.7	
DZM	**Mont Dzumac**	**74.99**	**114**	LR	LR	19 36 13.0	
	comp=Z,76nm,18.3s,MS4.0,baz=194,slow=36						
SUW	**Suwalki**	**75.27**	**325**	*e*P	**P**	**19 02 19.4**	**-0.7**
FINES	**FINESS Array B**	**75.61**	**332**	P	**P**	**19 02 20.7**	**-1.2**
	comp=Z,5.6nm,0.6s,mb4.7,baz=100,slow=5.8,SNR=39						
FINES				sP	sP	19 02 36.3	-0.8
	comp=Z,4.5nm,0.5s,baz=97,slow=5.3,SNR=6.8						
FINES				LR	LR	19 40 02.7	
	comp=Z,37nm,18.1s,MS3.7,baz=257,slow=39						
KAF	**Kangasniemi**	**75.70**	**333**	*e*p	**P**	**19 02 20.8**	**-1.5**
	comp=Z,6.2nm,0.6s,mb4.7,baz=104,slow=5.2						
KAF	**Kangasniemi**	**75.70**	**333**	*e*P	**P**	**19 02 20.8**	**-1.5**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
MAW	**Mawson**	**75.79**	**192**	LR	LR	19 26 21.6	
	comp=Z,87nm,20.8s,MS4.0,baz=240,slow=28						
KECS	**Kecovo**	**75.94**	**319**	*e*P	**P**	**19 02 23.7**	**-0.3**
NIE	**Niedzica**	**76.19**	**320**	*e*P	**P**	**19 02 26.0**	**+0.6**
PSZ	**Piszkesteto**	**76.25**	**318**	*e*P	**P**	**19 02 24.5**	**-1.3**
PSZ				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
PSZ	**Piszkesteto**	**76.25**	**318**	*e*P	**P**	**19 02 24.5**	**-1.3**
	comp=Z,8.8nm,0.8s,mb4.7						
PSZ	**Piszkesteto**	**76.25**	**318⇑**	*i*P	**P**	**19 02 25.7**	**-0.1**
OJC	**Ojcow**	**76.64**	**320**	*e*P	**P**	**19 02 28.1**	**+0.2**
VYHS	**Vyhne**	**77.03**	**319**	*e*P	**P**	**19 02 30.0**	**-0.2**
VYHS				*e*		19 02 48.2	
TIP	**Timpagrande**	**77.63**	**309**	*e*P	**P**	**19 02 32.8**	**-0.9**
OKC	**Ostrava-Krasne**	**77.65**	**320**	*e*P	**P**	**19 02 33.9**	**+0.3**
KEV	**Kevo**	**77.82**	**341**	*e*p	**P**	**19 02 32.7**	**-1.4**
	comp=Z,9.2nm,0.7s,mb4.8						
KEV	**Kevo**	**77.82**	**341**	*e*P	**P**	**19 02 32.7**	**-1.4**
KEV				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
MORC	**Moravsky Berou**	**78.03**	**320**	*e*P	**P**	**19 02 35.3**	**-0.3**
MORC				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
MORC	**Moravsky Berou**	**78.03**	**320**	*e*P	**P**	**19 02 35.3**	**-0.3**
	comp=Z,5.9nm,0.5s,mb4.8						
ZST	**Bratislava**	**78.14**	**318**	*e*P	**P**	**19 02 36.8**	**+0.5**
ZST				*e*		19 02 53.2	
ARCES	**ARCESS Array B**	**78.25**	**340**	P	**P**	**19 02 36.2**	**-0.2**
	comp=Z,6.5nm,0.5s,mb4.8,baz=101,slow=5.3,SNR=60						
ARCES				pP	pP	19 02 47.4	-0.2
	comp=Z,4.8nm,0.5s,baz=79,slow=6.2,SNR=5.9						
ARCES				LR	LR	19 40 19.1	
	comp=Z,48nm,21.7s,MS3.8,baz=281,slow=38						
ARCES	**ARCESS Array B**	**78.25**	**340**	P	**P**	**19 02 36.2**	**-0.2**
ARCES				pP	pP	19 02 47.4	-0.2
ARCES				LR	LR	19 40 19.1	
ARE0	**ARCESS Array S**	**78.25**	**340**	*e*P	**P**	**19 02 34.9**	**-1.6**
KOGS	**Kog**	**78.56**	**316**	*e*P	**P**	**19 02 38.7**	**+0.1**
BILL	**Bilibino**	**78.59**	**21⇓**	*i*P	**P**	**19 02 37.9**	**-0.5**
BILL				*e*S	S	19 12 39.5	+8.4
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
BILL				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.7						
DPC	**Dobruska-Polom**	**78.87**	**320**	*e*P	**P**	**19 02 40.9**	**+0.6**
DPC				*e*x	x	19 02 55.1	
KSP	**Ksiaz**	**78.94**	**321**	*e*P	**P**	**19 02 41.0**	**+0.4**
KSP	**Ksiaz**	**78.94**	**321**	*e*P	**P**	**19 02 41.3**	**+0.6**
UPC	**Upice**	**79.08**	**320**	*e*P	**P**	**19 02 42.1**	**+0.7**
FX1	**Attu Island--F**	**79.09**	**37**	P	**P**	**19 02 41.2**	**-0.1**
	comp=Z,39nm,0.5s,mb5.6,baz=31,slow=5.9,SNR=33						
FX1				LR	LR	19 40 30.8	
	comp=Z,3.0nm,20.4s,baz=118,slow=38						
FX1	**Attu Island--F**	**79.09**	**37**	*e*P	**P**	**19 02 41.2**	**-0.2**
ARSA	**Arzberg**	**79.12**	**317⇑**	*i*P	**P**	**19 02 42.1**	**+0.4**
	comp=Z,26nm,1.4s,mb5.0						
BOJS	**Bojanci**	**79.18**	**315**	*i* P	**P**	**19 02 42.0**	**-0.1**
SUR	**Sutherland**	**79.20**	**236**	*e*P	**P**	**19 02 42.2**	**-0.2**
	comp=Z,89nm,1.8s,mb5.4						
PERS	**Pernice**	**79.35**	**316**	*e*P	**P**	**19 02 43.2**	**+0.2**
PRU	**Pruhonice**	**79.98**	**320**	*e*P	**P**	**19 02 46.7**	**+0.4**
PVCC	**Panska Ves**	**80.00**	**320**	*e*P	**P**	**19 02 47.0**	**+0.6**
MOA	**Molln**	**80.01**	**318⇑**	*i*P	**P**	**19 02 46.3**	**-0.2**
	comp=Z,27nm,2.1s,mb4.8						
BSD	**Bornholm Skovb**	**80.19**	**325**	*i* P	**P**	**19 02 46.6**	**-0.7**
BSD				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.5						
BSD	**Bornholm Skovb**	**80.19**	**325**	*i* P	**P**	**19 02 46.6**	**-0.7**
	comp=Z,40nm,0.6s,mb5.5						
AQU	**L’Aquila**	**80.34**	**312**	*e*P	**P**	**19 02 48.2**	**-0.2**
AQU				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
AQU	**L’Aquila**	**80.34**	**312**	*e*P	**P**	**19 02 48.2**	**-0.2**
	comp=Z,12nm,0.6s,mb5.0						
BRG	**Berggiesshubel**	**80.43**	**321**	*i* P	**P**	**19 02 49.0**	**+0.4**
BRG				*e*		19 03 03.9	
BRG				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
BRG				MLR	MLR		
	comp=N,284nm,13.4s,MS4.9						
BRG				MLR	MLR		
	comp=Z,550nm,13.2s,MS5.1						
BRG				MLR	MLR		
	comp=E,283nm,13.4s,MS4.9						
BRG	**Berggiesshubel**	**80.43**	**321**	*i* P	**P**	**19 02 49.0**	**+0.4**
	comp=E,12nm,0.7s,mb4.9						
BRG				*e*		19 03 03.9	
BRG				LR	LR		
	comp=Z,550nm,13.1s,MS5.1						
ROBS	**Robic**	**80.44**	**316**	*e*P	**P**	**19 02 48.4**	**-0.4**
GEC2	**GERESS Array S**	**80.45**	**319**	*e*P	**P**	**19 02 49.3**	**+0.5**
GEC2				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
GEC2	**GERESS Array S**	**80.45**	**319**	*e*P	**P**	**19 02 49.3**	**+0.5**
	comp=Z,26nm,0.8s,mb5.2						
GERES	**GERESS Array B**	**80.45**	**319**	P	**P**	**19 02 48.9**	**+0.1**
	comp=Z,18nm,0.8s,mb5.0,baz=90,slow=5.3,SNR=123						
KHC	**Kasperske Hory**	**80.55**	**319**	*e*P	**P**	**19 02 49.3**	**0.0**
KHC				*e*x	x	19 03 04.0	
PTCC	**Patocco-Chiusa**	**80.55**	**316**	P	**P**	**19 02 49.3**	**-0.1**
KBA	**Koelnbreinsper**	**80.59**	**317⇑**	*i*P	**P**	**19 02 49.3**	**-0.3**
	comp=Z,61nm,3.3s						
KBA	**Koelnbreinsper**	**80.59**	**317⇑**	*i*P	**P**	**19 02 49.3**	**-0.3**
KBA				pmax	pmax		
	comp=Z,61nm,3.3s						
FVI	**Forni Avoltri**	**80.96**	**316**	P	**P**	**19 02 52.1**	**+0.6**
FVI				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
FVI	**Forni Avoltri**	**80.96**	**316**	P	**P**	**19 02 52.1**	**+0.6**
	comp=Z,15nm,1.0s,mb4.9						
WET	**Wettzell**	**81.01**	**319**	*e*P	**P**	**19 02 52.1**	**+0.4**
WET				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
WET	**Wettzell**	**81.01**	**319**	*e*P	**P**	**19 02 52.1**	**+0.4**
	comp=Z,10.0nm,0.9s,mb4.8						
CLL	**Collm**	**81.05**	**321**	*i* P	**P**	**19 02 51.8**	**-0.1**
CLL				*e**SP	sP	19 03 06.0	-1.1
CLL				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
CLL	**Collm**	**81.05**	**321**	*i* P	**P**	**19 02 51.8**	**-0.1**
	comp=Z,10.0nm,1.1s,mb4.7						
CLL				*e*sP	sP	19 03 06.0	-1.1
CLL	**Collm**	**81.05**	**321**	P	**P**	**19 02 51.8**	**-0.1**
	comp=Z,logA/T=1.0,mb4.7						
CLL				*e**SP	sP	19 03 06.0	-1.1
NKC	**Novy Kostel**	**81.34**	**320**	*e*P	**P**	**19 02 54.2**	**+0.7**
SFI	**Santa Sofia**	**81.53**	**314**	P	**P**	**19 02 55.8**	**+1.2**
SFI				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.3						
SFI	**Santa Sofia**	**81.53**	**314**	P	**P**	**19 02 55.8**	**+1.2**
	comp=Z,24nm,0.6s,mb5.3						
PGD	**Poggio Sodo**	**81.62**	**313**	P	**P**	**19 02 56.7**	**+1.7**
PGD				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
PGD	**Poggio Sodo**	**81.62**	**313**	P	**P**	**19 02 56.7**	**+1.7**
	comp=Z,21nm,0.8s,mb5.1						
COP	**Copenhagen**	**81.65**	**325**	*i* P	**P**	**19 02 46.0**	**-8.9**
	comp=Z,11nm,0.7s,mb4.9						
COP	**Copenhagen**	**81.65**	**325**	*e*P	**P**	**19 02 46.0**	**-8.9**
	comp=Z,11nm,0.7s,mb4.9						
CTI	**Castel Tesino**	**81.72**	**316**	P	**P**	**19 02 56.1**	**+0.6**
CTI				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CTI	**Castel Tesino**	**81.72**	**316**	P	**P**	**19 02 56.1**	**+0.6**
	comp=Z,9.5nm,0.6s,mb4.9						
WATA	**Walderalm**	**81.81**	**317⇑**	*i*P	**P**	**19 02 55.3**	**-0.6**
	comp=Z,13nm,1.2s,mb4.7						
WATA	**Walderalm**	**81.81**	**317⇑**	*i*P	**P**	**19 02 55.3**	**-0.6**
WATA				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
MOX	**Moxa**	**81.89**	**320**	*e*P	**P**	**19 02 56.4**	**+0.1**
MOX				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
MOX	**Moxa**	**81.89**	**320**	*e*P	**P**	**19 02 56.4**	**+0.1**
	comp=Z,13nm,0.9s,mb4.9						
MOX	**Moxa**	**81.89**	**320**	*i* P	**P**	**19 02 56.4**	**+0.1**
	comp=Z,logA/T=1.2,mb4.9						
SQTA	**Sankt Quirin**	**82.05**	**317⇑**	*i*P	**P**	**19 02 57.0**	**-0.2**
	comp=Z,5.6nm,0.8s,mb4.5						
SQTA	**Sankt Quirin**	**82.05**	**317⇑**	*i*P	**P**	**19 02 57.0**	**-0.2**
SQTA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
GRA1	**Grafenberg Arr**	**82.11**	**319**	*e*P	**P**	**19 02 58.2**	**+0.7**
	comp=Z,15nm,0.9s,mb4.9						
GRF	**Grafenberg Arr**	**82.11**	**319**	*e*P	**P**	**19 02 58.2**	**+0.7**
GRF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
GRF	**Grafenberg Arr**	**82.11**	**319**	*e*P	**P**	**19 02 58.2**	**+0.7**
GRF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
GRF	**Grafenberg Arr**	**82.11**	**319**	*e*P	**P**	**19 02 58.2**	**+0.7**
	comp=Z,15nm,0.9s,mb4.9						
MABI	**Malga Bissina**	**82.51**	**316**	P	**P**	**19 03 00.4**	**+0.8**
	comp=Z,7.3nm,1.0s,mb4.7						
NB2	**NORSAR Subarra**	**82.61**	**331**	P	**P**	**19 02 59.0**	**-0.8**
	comp=Z,4.7nm,0.8s,mb4.6,baz=93,slow=5.0						
NOA	**NORSAR Array B**	**82.61**	**331**	P	**P**	**19 02 58.9**	**-0.9**
	comp=Z,4.5nm,0.8s,mb4.5,baz=94,slow=5.4,SNR=17						
NOA				LR	LR	19 43 01.5	
	comp=Z,25nm,20.9s,MS3.6,baz=175,slow=38						
BRMO	**Bormio**	**82.61**	**316**	P	**P**	**19 03 00.8**	**+0.7**
CLZ	**Clausthal**	**82.71**	**322**	*e*P	**P**	**19 03 00.8**	**+0.3**
CLZ				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
CLZ	**Clausthal**	**82.71**	**322**	*e*P	**P**	**19 03 00.8**	**+0.3**
	comp=Z,14nm,0.8s,mb5.0						
NAO01	**NORSAR Array S**	**82.76**	**331**	*e*P	**P**	**19 03 00.0**	**-0.5**
	comp=Z,4.3nm,0.7s,mb4.6						
BSEG	**Bad Segeberg**	**82.80**	**324**	*e*P	**P**	**19 03 01.3**	**+0.4**
BSEG				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
DAVOX	**Davos**	**82.96**	**316**	P	**P**	**19 03 02.7**	**+0.9**
DAVA	**Damuels**	**82.96**	**317⇑**	*i*P	**P**	**19 03 02.1**	**+0.3**
	comp=Z,27nm,1.4s,mb5.1						
VSL	**Villasalto**	**83.36**	**309**	*e*P	**P**	**19 03 03.9**	**-0.1**
	comp=Z,9.8nm,1.0s,mb4.8						
VSL				*e*		19 03 20.1	
PGF	**Pioggiola**	**83.60**	**312**	*e*P	**P**	**19 03 05.4**	**+0.1**
	comp=Z,8.2nm,0.7s,mb4.7						
PGF	**Pioggiola**	**83.60**	**312**	*e*P	**P**	**19 03 05.4**	**+0.1**
PGF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
KBS	**Kingsbay**	**83.83**	**349**	*e*P	**P**	**19 03 04.3**	**-1.4**
KBS				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
KBS	**Kingsbay**	**83.83**	**349**	*e*P	**P**	**19 03 04.3**	**-1.3**
	comp=Z,3.7nm,0.6s,mb4.7						
TNS	**Taunus Mts**	**83.91**	**320**	*e*P	**P**	**19 03 07.1**	**+0.5**
TNS				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
TNS	**Taunus Mts**	**83.91**	**320**	*e*P	**P**	**19 03 07.1**	**+0.5**
	comp=Z,10.0nm,0.9s,mb5.0						
BFO	**Black Forest**	**84.00**	**318**	*e*P	**P**	**19 03 07.0**	**-0.1**
BFO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
BFO	**Black Forest**	**84.00**	**318**	*e*P	**P**	**19 03 07.0**	**-0.1**
	comp=Z,8.0nm,0.8s,mb4.9						
CDF	**Champ du Feu**	**84.70**	**318⇑**	*i*P	**P**	**19 03 10.5**	**-0.2**
	comp=Z,5.9nm,0.6s,mb4.6						
CDF	**Champ du Feu**	**84.70**	**318⇑**	*i*P	**P**	**19 03 10.5**	**-0.2**
CDF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
SBF	**Sospel**	**84.72**	**313⇑**	*i*P	**P**	**19 03 11.0**	**+0.2**
	comp=Z,34nm,0.7s,mb5.3						
SBF	**Sospel**	**84.72**	**313⇑**	*i*P	**P**	**19 03 11.0**	**+0.2**
SBF				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.3						
HINF	**Hinteralfeld**	**85.00**	**317**	*e*P	**P**	**19 03 11.9**	**-0.3**
LPG	**La Plagne**	**85.15**	**315⇑**	*i*P	**P**	**19 03 13.5**	**+0.6**
	comp=Z,16nm,0.7s,mb5.0						
LPG	**La Plagne**	**85.15**	**315⇑**	*i*P	**P**	**19 03 13.5**	**+0.6**
LPG				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0						
LPL	**La Plagne**	**85.16**	**315⇑**	*i*P	**P**	**19 03 13.5**	**+0.5**
	comp=Z,22nm,0.8s,mb5.0						
LPL	**La Plagne**	**85.16**	**315⇑**	*i*P	**P**	**19 03 13.5**	**+0.5**
LPL				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
MBDF	**Montbardon**	**85.16**	**314**	*e*P	**P**	**19 03 12.7**	**-0.3**
	comp=Z,5.6nm,0.6s,mb4.6						
MBDF	**Montbardon**	**85.16**	**314**	*e*P	**P**	**19 03 12.7**	**-0.3**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
BNI	**Bardonecchia**	**85.22**	**315**	*e*P	**P**	**19 03 12.9**	**-0.4**
BNI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
BNI	**Bardonecchia**	**85.22**	**315**	*e*P	**P**	**19 03 12.9**	**-0.4**
	comp=Z,4.9nm,0.8s,mb4.7						
FRF	**La Foret Royal**	**85.30**	**313⇑**	*i*P	**P**	**19 03 14.0**	**+0.3**
	comp=Z,20nm,0.7s,mb5.0						
FRF	**La Foret Royal**	**85.30**	**313⇑**	*i*P	**P**	**19 03 14.0**	**+0.3**
FRF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
HAU	**Haudompre**	**85.34**	**318⇑**	*i*P	**P**	**19 03 13.7**	**-0.1**
	comp=Z,14nm,0.6s,mb5.0						
HAU	**Haudompre**	**85.34**	**318⇑**	*i*P	**P**	**19 03 13.7**	**-0.1**
HAU				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.0						
LMR	**La Mourre**	**85.41**	**313⇑**	*i*P	**P**	**19 03 14.5**	**+0.2**
	comp=Z,7.5nm,0.6s,mb4.7						
LMR	**La Mourre**	**85.41**	**313⇑**	*i*P	**P**	**19 03 14.5**	**+0.2**
LMR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
CABF	**La Chapelle**	**85.57**	**316⇑**	*i*P	**P**	**19 03 15.4**	**+0.4**
	comp=Z,12nm,0.7s,mb5.0						
CABF	**La Chapelle**	**85.57**	**316⇑**	*i*P	**P**	**19 03 15.4**	**+0.4**
CABF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.9						
ORIF	**Oris-en-Rattie**	**85.79**	**315⇑**	*i*P	**P**	**19 03 16.7**	**+0.6**
	comp=Z,7.7nm,0.6s,mb4.8						
ORIF	**Oris-en-Rattie**	**85.79**	**315⇑**	*i*P	**P**	**19 03 16.7**	**+0.6**
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.8						
SMRF	**Simiane la Rot**	**86.06**	**314**	*e*P	**P**	**19 03 18.3**	**+0.9**
	comp=Z,6.1nm,0.6s,mb4.7						
BAIF	**Baives**	**86.64**	**320⇑**	*i*P	**P**	**19 03 20.7**	**+0.6**
	comp=Z,17nm,0.8s,mb5.0						
BAIF	**Baives**	**86.64**	**320⇑**	*i*P	**P**	**19 03 20.7**	**+0.6**

BAIF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.0						
VIVF	Saint-Julien-l	86.65	315	⇑*i*P	P	19 03 20.6	+0.3
	comp=Z,7.7nm,0.8s,mb4.7						
VIVF	Saint-Julien-l	86.65	315	⇑*i*P	P	19 03 20.6	+0.3
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
LOR	Lormes	87.06	317	⇑*i*P	P	19 03 22.4	+0.2
	comp=Z,13nm,0.6s,mb5.0						
LOR	Lormes	87.06	317	⇑*i*P	P	19 03 22.4	+0.2
LOR				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.0						
SMF	Signal de Mont	87.11	316	⇑*i*P	P	19 03 22.6	+0.1
	comp=Z,13nm,0.7s,mb5.0						
SMF	Signal de Mont	87.11	316	⇑*i*P	P	19 03 22.6	+0.1
SMF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.9						
LASF	Ste Croix	87.29	314	*e*P	P	19 03 24.7	+1.3
	comp=Z,5.5nm,0.8s,mb4.5						
AVF	Avril sur Loir	87.44	317	⇑*i*P	P	19 03 24.1	0.0
	comp=Z,9.9nm,0.9s,mb4.8						
AVF	Avril sur Loir	87.44	317	⇑*i*P	P	19 03 24.1	0.0
AVF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.7						
BGF	Bois d'Agland	87.80	316	*e*P	P	19 03 26.4	+0.6
TCF	Toulx Ste Croi	88.27	316	⇑*i*P	P	19 03 28.5	+0.4
	comp=Z,2.8nm,0.5s,mb4.4						
TCF	Toulx Ste Croi	88.27	316	⇑*i*P	P	19 03 28.5	+0.4
TCF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.3						
CAF	Calviac	88.49	315	*e*P	P	19 03 29.9	+0.7
MTLF	Montolieu	88.53	313	⇑*i*P	P	19 03 30.0	+0.6
	comp=Z,3.6nm,0.6s,mb4.6						
MTLF	Montolieu	88.53	313	⇑*i*P	P	19 03 30.0	+0.6
MTLF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.6						
RJF	Les Rejaudoux	88.84	315	*e*P	P	19 03 31.6	+0.7
	comp=Z,8.1nm,0.7s,mb4.9						
RJF	Les Rejaudoux	88.84	315	*e*P	P	19 03 31.6	+0.7
RJF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.9						
LFF	La Frestale	89.43	315	*e*P	P	19 03 34.5	+0.9
LDF	La Druitiere	89.60	319	⇑*i*P	P	19 03 34.8	+0.5
	comp=Z,13nm,0.8s,mb5.0						
LDF	La Druitiere	89.60	319	⇑*i*P	P	19 03 34.8	+0.5
LDF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.0						
FLN	La Foliniere	89.81	319	⇑*i*P	P	19 03 35.7	+0.4
	comp=Z,22nm,0.7s,mb5.3						
FLN	La Foliniere	89.81	319	⇑*i*P	P	19 03 35.7	+0.4
FLN				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.3						
MFF	Saint Martin d	89.85	317	⇑*i*P	P	19 03 35.9	+0.3
	comp=Z,3.4nm,0.5s,mb4.6						
MFF	Saint Martin d	89.85	317	⇑*i*P	P	19 03 35.9	+0.3
MFF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.7						
GRR	Gorron	90.11	318	*e*P	P	19 03 37.1	+0.4
ETSF	Etsaut	90.60	313	*e*P	P	19 03 40.3	+1.1
	comp=Z,4.4nm,0.6s,mb4.7						
ETSF	Etsaut	90.60	313	*e*P	P	19 03 40.3	+1.1
ETSF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.6						
SBA	Scott Base	91.02	168	*e*P	P	19 03 42.0	+1.6
SBA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.6						
SBA	Scott Base	91.02	168	*e*P	P	19 03 42.0	+1.6
	comp=Z,1.9nm,0.7s,mb4.5						
SJPF	Ste Jean	91.06	313	*e*P	P	19 03 42.3	+1.0
	comp=Z,13nm,1.0s,mb4.9						
SJPF	Ste Jean	91.06	313	*e*P	P	19 03 42.3	+1.0
SJPF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
SGMF	Saint Gilles	91.25	318	⇑*i*P	P	19 03 42.5	+0.4
	comp=Z,5.0nm,0.6s,mb4.7						
SGMF	Saint Gilles	91.25	318	⇑*i*P	P	19 03 42.5	+0.4
SGMF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.8						
QUIF	Quistinic	91.70	318	⇑*i*P	P	19 03 44.3	+0.1
	comp=Z,10nm,0.7s,mb5.0						
QUIF	Quistinic	91.70	318	⇑*i*P	P	19 03 44.3	+0.1
QUIF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb5.0						
ROSF	Rostrenen	91.71	319	*e*P	P	19 03 44.6	+0.4
ESDC	Sonseca Array	93.60	310	P	P	19 03 53.6	+0.5
	comp=Z,1.0nm,0.5s,mb4.5,baz=74,slow=5.2,SNR=7.5						
IMA	Indian Mountai	94.10	22	*e*P	P	19 03 55.3	+0.6
IMA				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.6						
IMA	Indian Mountai	94.10	22	*e*P	P	19 03 55.2	+0.6
	comp=Z,20nm,0.8s,mb5.6						
ILAR	Eielson Array	97.22	22	P	P	19 04 07.8	-1.1
	comp=Z,0.4nm,0.5s,mb4.2,baz=265,slow=5.0,SNR=6.3						
DBIC	Dimbokro	98.97	278	LR	LR	19 45 37.0	
	comp=Z,51nm,21.8s,MS4.0,baz=28,slow=33						
ULM	Lac du Bonnet	124.29	8	PKP	PKPdf	19 09 34.5	+0.1
	comp=Z,4.5nm,0.7s,baz=5.8,slow=3.5,SNR=4.3						
PDAR	Pinedale Array	127.66	23	PKP	PKPdf	19 09 42.6	+1.5
	comp=Z,1.4nm,0.5s,baz=100,slow=2.5,SNR=10						
TXAR	Lajitas Array	141.61	26	PKhKP		19 10 05.0	
	comp=Z,1.5nm,0.5s,baz=330,slow=2.0,SNR=11						
CPUP	Villa Florida	145.88	228	PKPbc	PKPbc	19 10 16.4	+0.6
	comp=Z,6.0nm,0.8s,baz=141,slow=4.3,SNR=11						
CFAA	Coronel Fontan	149.03	209	PKPbc	PKPdf	19 10 26.7	+6.9
	comp=Z,1.2nm,0.6s,baz=162,slow=2.7,SNR=28						
LPAZ	La Paz	159.78	235	PKP	PKPdf	19 10 37.8	+2.9
	comp=Z,0.4nm,0.3s,baz=17,slow=5.3,SNR=6.1						
LPAZ				PKPab	PKPab	19 11 16.9	+0.6
	comp=Z,0.8nm,0.3s,baz=135,slow=2.9,SNR=3.5						

GUC 20 18:55:57.2±0.4**, 19.96S**×**69.23W, h102**^{km}±2^{km}**, ML3.6, Northern Chile**

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*THE **20** 18:58:51.3, 40.57N×19.27E, h10^{km}, ML3.4*
*ATH **20** 18:58:54.4, 40.43N×19.50E, h17^{km}, MD3.1/3*
*CSEM **20** 18:58:56.5±0.3, 40.41N×19.73E, h5^{km}, ML3.4, Error ellipse: s-maj=8.5km s-min=6.5km az=36.0*
ISC 20 18:58:53.9±1.3**, 40.29N**±0.04×**19.4E**±0.1**, h3**^{km}±8^{km}**, n12,** σ**1^{s}08**/18**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	Vlora	0.19	24	*e*Pg	Pg	18 58 57.4	-0.3
VLO				*i* Sg	Sg	18 59 00.8	+0.5
VLO	Vlora	0.19	24	*i* Pg	Sg	18 59 00.8	+0.5
KEK	Kerkira	0.66	152	*e*PN	Pn	18 59 09.0	-0.8
IGT	Igoumenitsa	1.05	136	*e*Pg	Pg	18 59 16.1	+1.3
QSH	Qafa e Shtames	1.29	17	*e*Pn	Pn	18 59 18.2	-0.6
QSH				*i* Sn	Sn	18 59 38.2	+1.5
JAN	Janina	1.29	119	*e*PN	Pn	18 59 18.5	-0.3
JAN				*e*SN	Sn	18 59 36.5	-0.3
MEV	Metsovon	1.50	109	*e*Pb	Pb	18 59 21.3	-0.7
MEV				*e*Sb	Sb	18 59 44.4	+3.1
FNA	Florina	1.59	71	*e*Pb	Pb	18 59 20.2	-3.4
FNA				*e*Sb	Sb	18 59 42.9	-1.1
LKD	Levkas	1.86	148	*e*Pn	Pn	18 59 27.7	+0.7
EVR	Evrytania	2.32	126	*e*PN	Pn	18 59 34.5	+1.0
LIT	Litokhoron	2.38	94	*e*Pn	Pn	18 59 32.5	-1.9
LIT				*e*Sn	Sn	19 00 05.2	+0.7
AGG	Agios Georgios	2.60	118	*e*Pn	Pn	18 59 37.2	-0.3

GUC 20 18:59:56.8±0.5**, 19.83S**×**69.21W, h106**^{km}±3^{km}**, ML4.0, Northern Chile**

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*MOS **20** 19:03:47.9±1.1, 45.75N×148.28E, h33^{km}, mb4.2/3, Error ellipse: s-maj=54.5km s-min=36.8km az=64.5*
*IDC **20** 19:03:50.8±7.6, 45.56N×148.29E, h40^{km}±8^{km}, mb3.7/4, mb1 3.7/5, mb1mx3.4/21, mbtmp3.9/5, ML3.1/1, Error ellipse: s-maj=165.4km s-min=33.8km az=144.0*
ISC 20 19:03:49.7±7.9**, 45.7N**±0.9×**148.2E**±0.4**, h38**^{km}±109^{km}**, h41**^{km}±1.7^{km}**:pP-P, n11,** σ**0^{s}18**/11**, mb3.8**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.51	204	*e*PN	P	19 04 00.5	0.0
KUR				pmax	pmax		
	comp=Z,90nm,0.6s						
ASAJ	Asahikawa	4.26	250	PN	P	19 04 53.8	0.0
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	4.26	250	P	P	19 04 53.8	-0.1
	comp=Z,0.8nm,0.3s,baz=87,slow=14,SNR=7.5						
SONM	Songino Array	28.44	290	P	P	19 09 43.0	+0.3
	comp=Z,0.7nm,0.6s,mb3.4,baz=85,slow=8.2,SNR=10						
MKAR	Makanchi Array	44.35	296	P	P	19 11 57.3	-0.3
MKAR				*PP	pP	19 12 09.4	+0.8
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	44.35	296	P	P	19 11 57.3	-0.2
	comp=Z,1.6nm,0.7s,mb3.9,baz=80,slow=8.4,SNR=14						
MKAR				pP	pP	19 12 09.4	+0.9
	comp=Z,1.3nm,0.6s,baz=77,slow=8.2,SNR=7.8						
FINES	FINESS Array B	63.47	333	P	P	19 14 17.6	+0.1
FINES				*PP	pP	19 14 29.2	+0.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	63.47	333	P	P	19 14 17.6	+0.1
	comp=Z,0.9nm,0.6s,mb4.1,baz=45,slow=5.9,SNR=8.6						
FINES				pP	pP	19 14 29.2	+0.3
	comp=Z,1.1nm,0.6s,baz=34,slow=8.4,SNR=3.8						
NB2	NORSAR Subarra	68.04	339	P	P	19 14 46.8	+0.2
	comp=Z,0.9nm,0.7s,mb3.9,baz=30,slow=6.2						
NOA	NORSAR Array B	68.04	339	P	P	19 14 46.4	-0.2
NOA				*PP	pP	19 14 58.3	+0.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	68.04	339	P	P	19 14 46.4	-0.2
	comp=Z,0.6nm,0.5s,mb3.9,baz=30,slow=6.2,SNR=3.4						
NOA				pP	pP	19 14 58.3	+0.1
	comp=Z,0.7nm,0.6s,baz=32,slow=6.1,SNR=3.4						

MAN 20 19:07:19.3, 6.35N×**124.09E, h20**^{km}**, mb4.3, ML3.1, MS2.9, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	1.19	56	⇓*i*P	Pn	19 07 41.0	-0.1
KCP				*i* S	Sb	19 07 56.8	+0.6
PAGZ	Pagadian	1.65	335	*e*P	Pn	19 07 47.5	-0.1
PAGZ				*e*S	Sn	19 08 09.1	+0.8
BUKP	Musuan	1.80	32	*e*P	Pn	19 07 48.6	-1.2
IPIL	Ipil	2.08	314	*e*P	Pn	19 07 53.7	-0.1
IPIL				*e*S	Sn	19 08 19.6	+0.3

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*NEIC **20** 19:08:07.2±0.9, 32.11S×179.16E, h536^{km}±9^{km}, mb4.3/5, Error ellipse: s-maj=25.6km s-min=12.6km az=173.0*
*IDC **20** 19:08:07.3±21.0, 31.62S×179.07E, h521^{km}±202^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.3/15, mbtmp4.5/4, Error ellipse: s-maj=137.6km s-min=77.4km az=104.0*
ISC 20 19:07:50.8±1.4**, 32.2S**±0.1×**179.7E**±0.2**, h378**^{km}±15^{km}**, n36,** σ**1^{s}00**/39**, mb4.0**/6**, 1C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.58	36	*e*P	Px	19 09 26.8	
RAO				S	Sx	19 10 27.3	
MXZ	Matakaoa Point	5.50	191	SN	S	19 10 26.6	+0.8
PUZ	Puketiti	6.00	191	*e*P	P	19 09 22.3	-0.9
PUZ				S	S	19 10 35.9	+0.1
PUZ	Puketiti	6.00	191	PN	P	19 09 22.3	-0.9
PUZ				SN	S	19 10 35.9	+0.1
MWZ	Matawai	6.39	195	*e*P	P	19 09 31.1	+3.4
MWZ				S	S	19 10 46.5	+2.5
MWZ	Matawai	6.39	195	*e*PN	P	19 09 26.5	-1.2
MWZ				SN	S	19 10 46.5	+2.6
URZ	Urewera	6.43	198	*e*P	P	19 09 27.7	-0.4
URZ	Urewera	6.43	198	PN	P	19 09 27.7	-0.4
URZ				SN	S	19 10 45.4	+0.8
KNZ	Kokohu	7.03	193	*e*P	P	19 09 37.2	+2.2
KNZ	Kokohu	7.03	193	PN	P	19 09 34.0	-1.0
BFZ	Birch Farm	8.93	197	*e*P	P	19 09 57.0	-0.1
BFZ				S	S	19 11 37.3	+0.4
BFZ	Birch Farm	8.93	197	PN	P	19 09 57.0	-0.1
BFZ				SN	S	19 11 37.3	+0.4
MRZ	Mangatainoka R	9.09	200	*e*P	P	19 09 58.4	-0.7
MRZ				S	S	19 11 39.1	-1.2
MRZ	Mangatainoka R	9.09	200	PN	P	19 09 58.4	-0.6
MRZ				SN	S	19 11 39.1	-1.2
THZ	Tophouse	10.99	208	*e*P	P	19 10 20.9	-0.7
THZ				S	S	19 12 20.9	0.0
THZ	Tophouse	10.99	208	PN	P	19 10 20.9	-0.7
THZ				SN	S	19 12 20.9	-0.1
KHZ	Kahutara	11.33	204	*e*P	P	19 10 24.0	-1.5
KHZ	Kahutara	11.33	204	PN	P	19 10 24.0	-1.5
MQZ	McQueen's Vall	12.77	204	SN	S	19 12 57.8	-0.7
STKA	Stephens Creek	32.17	260	*e*P	P	19 13 48.4	+2.0
	1.7nm,0.3s,mb3.8						
STKA	Stephens Creek	32.17	260	P	P	19 13 48.5	+2.0
	2.0nm,0.3s,mb3.8,baz=95,slow=11,SNR=19						
CTA	Charters Tower	32.19	284	⇑*i*P	P	19 13 47.8	+1.1
	3.2nm,0.3s,mb4.0						
CTA	Charters Tower	32.19	284	P	P	19 13 47.5	+0.7
	3.7nm,0.3s,mb4.0,baz=97,slow=9.2,SNR=13						
CTAO	Charters Tower	32.19	284	*e*P	P	19 13 47.7	+1.0
	5.7nm,0.4s,mb4.2						
WB2	Warramunga Arr	42.21	275	*e*P	P	19 15 09.6	-0.2
WRAB	Tennant Creek	42.22	275	*e*P	P	19 15 09.4	-0.4
	5.5nm,0.4s,mb4.0						
WRA	Warramunga Arr	42.22	275	P	P	19 15 09.5	-0.3
	3.7nm,0.4s,mb3.9,baz=112,slow=8.1,SNR=190						
FITZ	Fitzroy Crossi	50.40	273	P	P	19 16 12.7	-0.5
	3.0nm,0.6s,mb3.7,baz=100,slow=3.0,SNR=5.6						
SNAA	Sanae	76.43	179	*e*P	P	19 19 01.4	+0.9
	1.5nm,0.3s,mb4.2						
BVAR	Borovoye Array	126.26	315	PKP	PKPdf	19 26 08.6	+0.1
	0.4nm,0.4s,baz=153,slow=3.3,SNR=4.6						
ARCES	ARCESS Array B	139.86	346	PKhKP		19 26 28.2	
	1.8nm,0.8s,baz=34,slow=4.4,SNR=3.8						
KAF	Kangasniemi	145.50	338	*e*pkp	PKPdf	19 26 43.3	0.0
FINES	FINESS Array B	146.07	337	PKPbc	PKPbc	19 26 45.9	+0.1
	3.1nm,0.4s,baz=45,slow=4.3,SNR=44						
NB2	NORSAR Subarra	150.15	349	PKPabc	PKPdf	19 26 56.5	+5.6
	0.8nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.15	349	PKPbc	PKPdf	19 26 56.3	+5.4
	0.8nm,0.5s,baz=15,slow=4.1,SNR=5.3						
HFS	Hagfors	150.52	346	PKPbc	PKPdf	19 26 56.9	+5.4
	1.4nm,0.5s,baz=90,slow=2.9,SNR=8.8						

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*IDC **20** 19:17:02.2±1.0, 2.62N×95.87E, mb4.3/12, mb1 4.4/13, mb1mx4.2/21, mbtmp4.3/13, ML4.5/1, MS3.4/2, Ms1 3.5/2, ms1mx3.1/31, Error ellipse: s-maj=47.1km s-min=15.7km az=53.0*
*BJI **20** 19:17:04.3, 2.45N×95.89E, h39^{km}, mB5.3, mb4.8, Ms4.4, Msz4.0*
*NEIC **20** 19:17:06.8±0.4, 2.64N×95.92E, h30^{km}, mb4.6/15, Error ellipse: s-maj=12.2km s-min=5.8km az=51.0*
ISC 20 19:17:04.9±0.6**, 2.63N**±0.07×**95.94E**±0.08**, h30**^{km}**, n37,** σ**0^{s}88**/37**, mb4.5**/27**, MS3.7**/1**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.39	61	*e*Pn	Pn	19 18 26.8	+1.3
SNG	Songkhla	6.49	46	P	Pn	19 18 41.5	+0.5
	148nm,0.8s						
KKTK	Khon Kaen	15.21	26	P	P	19 20 44.0	+4.4
CM31	Chiang Mai Arr	16.00	10	*e*P	P	19 20 52.2	+2.5
	13nm,0.9s						
CMAR	Chiang Mai Arr	16.00	10	Pn	P	19 20 49.1	-0.6
	0.6nm,0.3s,baz=200,slow=12,SNR=35						
CMAR				LR	LR	19 26 37.6	
	comp=Z,73nm,18.4s,baz=165,slow=36						
CMAR	Chiang Mai Arr	16.00	10	Pn	P	19 20 49.1	-0.6
CMAR				LR	LR	19 26 37.6	
NANT	Nan	16.73	16	P	P	19 20 58.0	-1.0
PKI	Pulchoki	26.76	339	*e*P	P	19 22 44.9	+0.7
	17nm,0.6s,mb4.8						
DMN	Daman	26.91	338	*e*P	P	19 22 45.8	+0.3
	22nm,0.7s,mb4.8						
GUN	Gumba	26.91	340	*e*P	P	19 22 46.4	+0.8
	52nm,0.7s,mb5.2						
KKN	Kakani	27.01	339	*e*P	P	19 22 46.9	+0.4
	44nm,0.8s,mb5.0						
LSA	Lhasa	27.30	351	*e*P	P	19 22 49.8	+0.7
	13nm,0.9s,mb4.5						
GKN	Gorkha	27.44	338	*e*P	P	19 22 50.8	+0.4
	52nm,0.8s,mb5.1						
KOLN	Koldanda	27.64	336	*e*P	P	19 22 52.7	+0.5
	26nm,0.8s,mb4.9						
ENH	Enshi	30.34	24	*e*P	P	19 23 14.9	-1.5
	4.8nm,0.6s,mb4.4						
XAN	Xi'an	33.52	20	P	P	19 23 42.8	-1.3
FITZ	Fitzroy Crossi	35.79	126	P	P	19 24 02.6	-1.2
	6.8nm,0.9s,mb4.5,baz=339,slow=7.0,SNR=3.3						
GTA	Gaotai	36.77	5	P	P	19 24 11.9	0.0
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
KAKA	Kakadu	39.32	114	*e*P	P	19 24 32.4	-1.1
	comp=Z,2.6nm,0.6s,mb4.1						
WRA	Warramunga Arr	43.86	123	P	P	19 25 11.3	+0.6
	comp=Z,1.2nm,0.5s,mb3.9,baz=301,slow=9.2,SNR=26						
WRAB	Tennant Creek	43.87	122	*e*P	P	19 25 11.5	+0.8
	comp=Z,1.9nm,0.6s,mb4.0						
WB2	Warramunga Arr	43.87	122	*e*P	P	19 25 11.2	+0.4
MKAR	Makanchi Array	45.56	347	P	P	19 25 24.1	+0.1
	comp=Z,4.7nm,0.4s,mb4.8,baz=159,slow=8.8,SNR=86						
SONM	Songino Array	45.92	10	P	P	19 25 26.8	0.0
	comp=Z,5.7nm,0.6s,mb4.7,baz=191,slow=9.1,SNR=32						
SONM				PcP	PcP	19 27 03.7	-0.2
	comp=Z,1.4nm,0.7s,baz=187,slow=4.0,SNR=4.5						
ULN	Ulaanbaatar	46.07	10	*e*P	P	19 25 27.8	-0.2
	comp=Z,3.2nm,0.6s,mb4.4						
ZAL	Zalesovo	51.95	352	P	P	19 26 13.0	-0.3
	comp=Z,5.0nm,0.6s,mb4.6,baz=314,slow=6.0,SNR=28						
BVAR	Borovoye Array	54.49	341	P	P	19 26 31.1	-1.0
	comp=Z,2.2nm,0.6s,mb4.3,baz=149,slow=8.5,SNR=17						
ZRNK	Zerenda	54.88	340	*e*P	P	19 26 33.7	-1.3
	comp=Z,3.4nm,0.8s,mb4.4						
STKA	Stephens Creek	55.25	132	P	P	19 26 38.6	+0.6
	comp=Z,2.5nm,0.6s,mb4.4,baz=333,slow=20,SNR=6.6						
ARU	Arti	61.38	337	*e*P	P	19 27 18.9	-1.6
	comp=Z,5.2nm,1.0s,mb4.6						
YAK	Yakutsk	64.41	17	*e*P	P	19 27 39.1	-1.3
	comp=Z,22nm,0.9s,mb5.2						
MLR	Muntele Rosu	74.16	317	P	P	19 28 41.1	+0.5
	comp=Z,1.6nm,0.4s,mb4.3,baz=122,slow=9.5,SNR=5.4						
FINES	FINESS Array B	78.15	333	P	P	19 29 02.6	-0.1
	comp=Z,1.4nm,0.6s,mb4.1,baz=90,slow=7.6,SNR=8.8						
FINES				LR	LR	20 09 10.0	
	comp=Z,36nm,18.8s,MS3.7,baz=130,slow=40						
ARCES	ARCESS Array B	80.77	340	P	P	19 29 17.4	+0.7
	comp=Z,0.9nm,0.4s,mb4.0,baz=95,slow=5.8,SNR=24						
ARCES	ARCESS Array B	80.77	340	P	P	19 29 17.4	+0.7
GERES	GERESS Array B	82.91	319	P	P	19 29 28.8	+0.5
	comp=Z,0.8nm,0.7s,mb3.8,baz=90,slow=6.7,SNR=7.6						
HFS	Hagfors	83.86	330	P	P	19 29 33.3	+0.5
	comp=Z,1.1nm,0.6s,mb4.1,baz=153,slow=3.3,SNR=4.4						

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*NIED **20** 19:18:00, 26.00N×128.70E, h11^{km}, Mw4.3 Best double couple: M$_0$3.7×10^{15} NP1:ϕ_s44°, δ51°, λ97°. NP2:ϕ_s214°, δ40°, λ82°.*
*IDC **20** 19:18:00.0±1.0, 26.08N×128.38E, mb4.1/8, mb1 4.2/9, mb1mx4.1/20, mbtmp4.1/9, ML4.1/1, MS3.2/3, Ms1 3.3/3, ms1mx2.9/33, Error ellipse: s-maj=50.3km s-min=14.7km az=81.0*
*JMA **20** 19:18:02.1±0.1, 26.04N×128.72E, h44^{km}, M3.9*
*BJI **20** 19:18:03.7, 26.18N×128.71E, h40^{km}, mB4.3, mb4.4, Ms4.2, Msz4.2*
*NEIC **20** 19:18:04.9±3.1, 26.14N×128.53E, h32^{km}±22^{km}, mb4.4/4, Error ellipse: s-maj=13.0km s-min=10.1km az=112.0*
ISC 20 19:18:01.5±1.0**, 26.03N**±0.03×**128.69E**±0.04**, h28**^{km}±7^{km}**, n42,** σ**0^{s}93**/50**, mb4.1**/13**, MS3.7**/2**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT2	Tamagusuku 2	0.86	278	P	Pn	19 18 18.2	+0.4
JJT2				*e*S	Sb	19 18 30.1	+1.2
JOW	Kunigami	0.89	335	Pn	Pn	19 18 18.1	-0.1
	818nm,0.3s,baz=144,slow=29,SNR=164						
JOW				Sn	Sn	19 18 30.0	-0.1
	1μm,0.3s,baz=134,slow=27,SNR=33						
JOW	Kunigami	0.89	335	P	Pn	19 18 18.2	0.0
JOW				*e*S	Sb	19 18 29.5	-0.2
NAH1	Naha	0.92	281	P	Pn	19 18 19.0	+0.3
NAH1				*e*S	Sn	19 18 31.7	+0.7
JIH	Iheya	1.20	327	P	Pn	19 18 23.0	+0.4
JIH				*e*S	Sn	19 18 38.0	0.0
JAGN	Aguni-jima	1.42	294	P	Pn	19 18 26.2	+0.4
JKE	Kume jima 2	1.74	280	P	Pn	19 18 30.0	-0.4
JKE				*e*S	Sn	19 18 50.8	-1.0
JTK	Tokunoshima	1.77	7	P	Pn	19 18 31.0	+0.2
JTK				*e*S	Sn	19 18 52.6	+0.1
JMZ	Minamidaito 2	2.29	95	P	Pn	19 18 38.2	0.0
JMZ				*e*S	Sn	19 19 03.5	-2.2
JAM	Amami Oshima	2.51	19	P	Pn	19 18 41.1	-0.3
JAM				*e*S	Sn	19 19 11.2	-0.2
JZK	Kikaishima	2.55	26	P	Pn	19 18 42.6	+0.6
JZK				*e*S	Sn	19 19 13.3	+0.9
JOGS	Gusukube	3.23	248	P	Pn	19 18 50.5	-1.1
JMJ	Miyako jima 2	3.30	249	P	Pn	19 18 52.0	-0.7
JTJ	Tarama	3.87	250	P	Pn	19 18 59.7	-1.0
JNN	Nakanoshima	3.94	15	P	Pn	19 19 02.2	+0.5
JIJ	Ishigaki jima	4.44	249	P	Pn	19 19 07.4	-1.5
YHNB	Yeheng	6.76	260	*e*Pn	Pn	19 19 41.1	-0.4
JNU	Nakatsue	7.32	15	Pn	Pn	19 19 49.0	-0.4
	2.7nm,0.3s,baz=170,slow=19,SNR=16						
JNU				Sn	Sn	19 21 10.7	-1.8
	0.4nm,0.3s,baz=304,slow=44,SNR=2.5						
JHJ	Hachijo jima 2	11.96	51	LR	LR	19 24 11.0	
	comp=Z,82nm,21.0s,baz=129,slow=30						
CBIJ	Chichi jima	12.12	82	LR	LR	19 24 16.8	
	comp=Z,80nm,20.7s,baz=319,slow=30						
MJAR	Matsushiro Arr	13.26	35	Pn	P	19 21 18.3	+7.8
	0.1nm,0.3s,baz=228,slow=9.5,SNR=2.3						
XAN	Xi'an	18.87	300	P	P	19 22 21.3	-0.8
XAN				AP		19 22 30.0	
KMI	Kunming	23.42	273	P	P	19 23 10.8	+1.5
	7.0nm,1.2s,mb4.0						
LZH	Lanzhou	23.47	301	*e*P	P	19 23 09.5	-0.2
LZH				AP		19 23 21.0	
LZH				XP		19 23 25.1	
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.4						
LZH	Lanzhou	23.47	301	*e*P	P	19 23 09.5	-0.2
	comp=Z,21nm,1.3s,mb4.4						
LZH				pP		19 23 21.0	
LZH				sP		19 23 25.1	
YSS	Yuzh-Sakhalins	23.68	24	*e*P	P	19 23 14.5	+2.9
	comp=Z,41nm,1.3s,mb4.7						
GTA	Gaotai	27.59	306	P	P	19 23 47.6	-0.7
GTA				AP	pP	19 23 56.0	-0.6
GTA				XP	sP	19 23 59.5	-0.9
GTA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
GTA				AMB	AMB		
	comp=Z,90nm,9.1s						
GTA				LR	LR		
	comp=N,120nm,15.2s,MS3.9						
GTA				LR	LR		
	comp=E,220nm,14.8s,MS3.9						
GTA				LR	LR		
	comp=Z,260nm,12.9s,MS4.0						
SONM	Songino Array	27.95	327	P	P	19 23 49.7	-1.8
	comp=Z,3.4nm,0.8s,mb4.0,baz=153,slow=8.3,SNR=30						
CMAR	Chiang Mai Arr	28.50	261	LR	LR	19 37 26.6	
	comp=Z,100nm,19.3s,MS3.4,baz=90,slow=41						
ZAL	Zalesovo	42.67	323	P	P	19 25 57.3	0.0
	comp=Z,0.7nm,0.5s,mb3.6,baz=6.5,slow=9.3,SNR=3.7						
WRA	Warramunga Arr	46.02	173	P	P	19 26 25.6	+0.9
	comp=Z,0.8nm,0.7s,mb3.7,baz=354,slow=9.6,SNR=8.3						
CTA	Charters Tower	48.91	158	P	P	19 26 49.2	+2.0
	comp=Z,3.8nm,0.9s,mb4.4,baz=338,slow=6.8,SNR=2.2						
CTA	Charters Tower	48.91	158	P	P	19 26 49.2	+2.0
ZRNK	Zerenda	51.52	318	*e*P	P	19 27 06.4	-0.4
	comp=Z,1.6nm,0.5s,mb4.2						
ARCES	ARCESS Array B	70.35	339	P	P	19 29 14.4	+0.2
	comp=Z,0.9nm,0.4s,mb4.0,baz=76,slow=7.4,SNR=24						
ARCES	ARCESS Array B	70.35	339	P	P	19 29 14.4	+0.2
FINES	FINESS Array B	73.24	331	P	P	19 29 32.2	+0.6
	comp=Z,0.9nm,0.6s,mb3.9,baz=45,slow=5.4,SNR=4.0						
FINES	FINESS Array B	73.24	331	P	P	19 29 32.2	+0.6
AKASG	Malin Array Be	75.96	320	P	P	19 29 47.5	+0.1
	comp=Z,0.6nm,0.3s,mb4.0,baz=53,slow=6.2,SNR=9.7						
NB2	NORSAR Subarra	79.68	334	P	P	19 30 08.3	+0.6
	comp=Z,1.6nm,0.7s,mb4.1,baz=54,slow=5.6						
NOA	NORSAR Array B	79.68	334	P	P	19 30 08.2	+0.4
	comp=Z,1.7nm,0.8s,mb4.1,baz=52,slow=5.4,SNR=7.8						

CLL	Collm	84.56	325	P	P	19 30 35.0	+1.8
CLL				*e*PCP	PcP	19 30 39.0	+1.9

IDC **20** *19:24:23.0±1.2, 60.27N×147.26W, h32^{km}±5^{km}, mb3.7/11, mb1 3.8/14, mb1mx3.7/26, mbtmp3.9/14, ML3.9/3, MS3.1/6, Ms1 3.1/6, ms1mx2.9/44, Error ellipse: s-maj=22.1km s-min=15.9km az=10.0*
BJI **20** *19:24:23.9, 60.40N×147.30W, h38^{km}, mB4.5, mb4.5, Ms4.1, Msz4.1*
NEIC **20** *19:24:24.9, 60.41N×147.29W, h39^{km}, mb4.4/3, ML4.2(AEIC), ML4.2(PMR), After AEIC.*
NEIC Felt at Chenega Bay.
ISC 20 19:24:23.4±0.3**, 60.42N**±0.03×**147.28W**±0.04**, h49^{km}**±4^{km}**, h32^{km}**±.7^{km}**:pP-P, n98, σ0^{s}89**/102**, mb4.0**/15**, MS3.4**/3**,**
Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HIN	Hinchinbrook I	0.39	94	P	P	19 24 33.0	-0.3
EYAK	Cordova Ski Ar	0.77	80	P	P	19 24 38.3	+0.3
EYAK				S	S	19 24 49.6	+0.7
VLZ	Valdez	0.85	33	P	P	19 24 38.8	-0.4
DIV	Divide	1.02	46	P	P	19 24 41.6	0.0
DIV				S	S	19 24 55.2	+0.1
MPA	Moose Pass	1.04	275	P	P	19 24 42.0	+0.3
MID	Middleton Isla	1.10	154	P	P	19 24 44.1	+1.3
SEW	Seward	1.13	254	P	P	19 24 43.4	+0.3
SEW				S	S	19 24 58.0	+0.2
KNK	Knik Glacier	1.15	330	P	P	19 24 43.6	+0.3
RAGM	Ragged Mountai	1.29	91	P	P	19 24 45.9	+0.5
RC01	Rabbit Creek A	1.38	300	P	P	19 24 47.0	+0.3
RC01				S	S	19 25 04.7	+0.6
SCM	Sheep Creek Mo	1.42	359	P	P	19 24 47.8	+0.6
SLKM	Skilak Lake	1.46	275	P	P	19 24 48.3	+0.4
PMR	Palmer	1.48	323	P	P	19 24 48.6	+0.4
PMR				S	S	19 25 06.7	+0.2
SML	Sawmill	1.48	340	P	P	19 24 49.0	+0.9
SML				S	S	19 25 07.2	+0.6
GHO	Glory Hole Cre	1.57	330	P	P	19 24 50.3	+0.8
GHO				S	S	19 25 09.2	+0.4
FIB	Fire Island	1.60	299	P	P	19 24 50.6	+0.7
VOGL	Vogel Lake	1.65	292	P	P	19 24 51.6	+1.1
PWA	Palmer West	1.77	315	P	P	19 24 52.5	+0.4
TZL	Tazlina	1.86	28	P	P	19 24 54.8	+1.4
BRLK	Bradley Lake	1.93	251	P	P	19 24 54.7	+0.3
GLB	Gilahina Butte	1.98	57	P	P	19 24 55.7	+0.6
NNL	Ninilchik	2.04	261	P	P	19 24 56.9	+0.9
WACK	Wrangell Chich	2.12	41	P	P	19 24 58.3	+1.2
CNPM	China Poot	2.19	247	P	P	19 24 58.4	+0.3
CYK	Cape Yakataga	2.41	96	P	P	19 25 01.1	-0.2
XLV	Seldovia	2.44	248	P	P	19 25 01.6	-0.1
CUT	Chulitna	2.45	325	P	P	19 25 02.3	+0.4
SPU	Mount Spurr	2.46	290	P	P	19 25 01.3	-0.7
BALM	Baldy	2.50	74	P	P	19 25 02.8	+0.2
CKN	Chakachatna No	2.53	291	P	P	19 25 02.9	-0.2
CKL	Chakachamna La	2.60	290	P	P	19 25 03.5	-0.5
PAX	Paxson	2.70	18	P	P	19 25 06.2	+0.8
RSO	Redoubt South	2.72	273	P	P	19 25 05.1	-0.6
YAH	Yahtse	2.75	89	P	P	19 25 06.0	0.0
HUR	Hurricane	2.80	337	P	P	19 25 07.6	+0.8
INE	Iliamna NE	2.91	265	P	P	19 25 07.6	-0.8
ILW	Iliamna West	2.94	265	P	P	19 25 08.1	-0.8
CTGM	Chitina Glacie	2.97	77	P	P	19 25 09.6	+0.3
RND	Reindeer	3.08	347	P	P	19 25 11.3	+0.5
THY	Trims Highway	3.09	13	*e*Pn	P	19 25 10.8	-0.1
AGU	Augustine-Summ	3.28	254	P	P	19 25 13.5	-0.1
AUI	Augustine Isla	3.29	253	P	P	19 25 13.7	0.0
TRF	Thorofare Moun	3.35	336	P	P	19 25 15.2	+0.5
KTH	Kantishna Hill	3.58	333	P	P	19 25 17.0	-0.9
KDAK	Kodiak Island	3.81	228	P	P	19 25 20.4	-0.6
BWN	Browne	3.90	346	P	P	19 25 22.3	0.0
PNL	Peninsula	4.02	97	P	P	19 25 22.7	-1.4
SVW2	Sparrevohn	4.13	283	*e*P	P	19 25 23.3	-2.3
CCB	Clear Creek Bu	4.25	357	P	P	19 25 26.8	-0.4
NEA	Nenana	4.25	349	P	P	19 25 26.7	-0.6
ILAR	Eielson Array	4.37	2	Pn	P	19 25 27.8	-1.2
	2.4nm,0.3s,baz=184,slow=14,SNR=48						
ILAR				Sn	S	19 26 25.1	+5.9
	30nm,0.3s,baz=178,slow=21,SNR=8.2						
ILAR				LR	LR	19 27 17.1	
	comp=Z,197nm,19.2s,baz=264,slow=38						
COLA	College	4.47	357	P	P	19 25 30.0	-0.5
MDM	Murphy Dome	4.57	355	P	P	19 25 31.4	-0.5
CAHL	Cahill	4.76	244	P	P	19 25 33.7	-0.7
TTA	Tatalina	4.86	305	P	P	19 25 33.5	-2.5
MLY	Manley	4.89	342	P	P	19 25 35.9	-0.4
WHY	Whitehorse	6.12	82	P	P	19 25 51.8	-1.7
IMA	Indian Mountai	6.36	336	*e*P	P	19 25 55.6	-1.2
COLD	Coldfoot	6.95	351	P	P	19 26 03.4	-1.7
BM3	Burnt Mountain	7.12	8	P	P	19 26 05.4	-2.1
DLBC	Dease Lake	9.01	95	Pn	P	19 26 31.8	-1.8
	1.6nm,0.3s,baz=270,slow=8.3,SNR=17						
DLBC				LR	LR	19 30 08.4	
	comp=Z,100nm,20.8s,baz=280,slow=38						
DLBC	Dease Lake	9.01	95	P	P	19 26 31.3	-2.3
INK	Inuvik	9.88	31	Pn	P	19 26 44.0	-1.3
	0.3nm,0.3s,baz=216,slow=14,SNR=5.3						
INK	Inuvik	9.88	31	*e*P	P	19 26 42.8	-2.5
UNV	Unalaska Valle	12.32	246	P	P	19 27 17.1	-1.3
BBB	Bella Bella	13.42	119	LR	LR	19 32 08.4	
	comp=Z,68nm,18.5s,baz=147,slow=35						
YKW3	Yellowknife Ar	15.64	68	P	P	19 28 01.7	+0.1
YKA	Yellowknife Ar	15.66	68	Pn	P	19 28 05.9	+4.2
	0.3nm,0.3s,baz=278,slow=11,SNR=7.9						
YKA				LR	LR	19 34 31.3	
	comp=Z,81nm,19.0s,baz=240,slow=39						
EDM	Edmonton	19.73	96	P	P	19 28 52.4	+1.1
NEW	Newport	21.15	112	LR	LR	19 37 18.2	
	comp=Z,78nm,20.0s,MS3.1,baz=278,slow=37						
FX1	Attu Island--F	22.71	268	P	P	19 29 22.4	+1.0
	18nm,0.6s,mb4.7,baz=316,slow=8.7,SNR=14						
FX1	Attu Island--F	22.71	268	*e*P	P	19 29 21.9	+0.5
BMO	Blue Mountains	23.65	118	*e*P	P	19 29 34.1	+3.5
	5.3nm,1.1s,mb3.9						
CHMT	Chamberlain Mo	23.94	109	P	P	19 29 36.4	+3.1
FFC	Flin Flon	24.54	83	P	P	19 29 38.3	-0.8
FCC	Fort Churchill	26.37	70	P	P	19 29 55.6	-0.7
ULM	Lac du Bonnet	30.18	86	LR	LR	19 43 16.1	
	comp=Z,42nm,18.4s,MS3.1,baz=265,slow=38						
MDJ	Mudanjiang	49.45	291	P	P	19 33 10.0	-0.1
MDJ				AMB	AMB		
	comp=Z,80nm,7.9s						
ARCES	ARCESS Array B	50.23	3	P	P	19 33 15.5	-0.2
	comp=Z,2.0nm,0.9s,mb4.2,baz=346,slow=7.4,SNR=3.5						
ARCES	ARCESS Array B	50.23	3	P	P	19 33 15.5	-0.2
CN2	Changchun	51.98	293	*e*P	P	19 33 34.6	+5.4
ULN	Ulaanbaatar	56.52	309	*e*P	P	19 34 02.9	+0.5
	comp=Z,3.0nm,0.9s,mb4.3						
SONM	Songino Array	56.80	309	P	P	19 34 05.5	+1.1
	comp=Z,3.5nm,0.9s,mb4.4,baz=42,slow=8.2,SNR=22						
NB2	NORSAR Subarra	57.73	12	P	P	19 34 20.1	+9.2
	comp=Z,0.8nm,0.8s,mb3.8,baz=349,slow=7.0						
NOA	NORSAR Array B	57.73	12	pP	pP	19 34 20.5	-4.0
	comp=Z,1.1nm,0.7s,baz=349,slow=6.9,SNR=5.0						
FINES	FINESS Array B	58.35	4	P	P	19 34 14.7	-0.5
	comp=Z,0.4nm,0.6s,mb3.6,baz=7.1,slow=11,SNR=5.2						
FINES				pP	pP	19 34 24.2	-4.6
	comp=Z,1.4nm,0.6s,baz=9.4,slow=8.0,SNR=5.5						
ZAL	Zalesovo	58.67	327	P	P	19 34 17.1	-0.3
	comp=Z,0.7nm,0.4s,mb4.1,baz=72,slow=11,SNR=3.1						
HFS	Hagfors	58.87	11	P	P	19 34 18.4	-0.4
	comp=Z,1.2nm,0.8s,mb4.0,baz=297,slow=3.2,SNR=2.8						
HFS				pP	pP	19 34 28.0	-4.5
	comp=Z,1.7nm,0.8s,baz=63,slow=3.3,SNR=3.2						
EKA	Eskdalemuir Ar	61.13	22	P	P	19 34 34.2	-0.1
	comp=Z,0.9nm,0.9s,mb3.9,baz=332,slow=5.7,SNR=2.5						
EKA				pP	pP	19 34 44.6	-3.4
	comp=Z,2.3nm,0.8s,baz=333,slow=5.6,SNR=5.9						
BVAR	Borovoye Array	62.95	336	P	P	19 34 46.1	-0.5
	comp=Z,0.6nm,0.5s,mb4.0,baz=56,slow=5.3,SNR=8.3						
NJ2	Nanjing	64.53	290	*e*P	P	19 35 00.9	+3.9
MKAR	Makanchi Array	65.81	325	P	P	19 35 04.3	-0.8
	comp=Z,0.6nm,0.5s,mb3.9,baz=45,slow=6.9,SNR=4.9						
GTA	Gaotai	66.46	309	P	P	19 35 10.6	+1.3
GTA				AP	pP	19 35 20.9	-2.3
WMQ	Urumqi	66.86	320	*e*P	P	19 35 14.9	+3.2
WMQ				AMB	AMB		
	comp=Z,10.0nm,4.2s						
WMQ				LR	LR		
	comp=N,60nm,17.6s						
WMQ				LR	LR		
	comp=Z,70nm,16.0s,MS4.0						
LZH	Lanzhou	67.72	304	*e*P	P	19 35 18.5	+1.2
LZH				AP	pP	19 35 28.3	-3.0
LZH				XP	sP	19 35 32.5	-4.1
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb5.0						
LZH	Lanzhou	67.72	304	*e*P	P	19 35 18.5	+1.2
	comp=Z,21nm,1.3s,mb5.0						
LZH				pP	pP	19 35 28.3	-3.0
LZH				sP	sP	19 35 32.5	-4.1
AKASG	Malin Array Be	69.19	2	P	P	19 35 26.7	+0.6
	comp=Z,0.2nm,0.2s,mb3.6,baz=358,slow=5.9,SNR=2.7						
AKASG				pP	pP	19 35 36.5	-3.6
	comp=Z,0.9nm,0.5s,baz=358,slow=5.8,SNR=2.0						
GERES	GERESS Array B	70.00	13	P	P	19 35 31.7	+0.7
	comp=Z,0.1nm,0.3s,mb3.2,baz=330,slow=7.9,SNR=2.4						
GERES				pP	pP	19 35 42.4	-2.7
	comp=Z,0.4nm,0.6s,baz=315,slow=3.8,SNR=3.5						

ISC 20 19:43:29.9±1.4**, 42.9N**±0.1×**16.82E**±0.10**, h10^{km}, n10, σ0^{s}78**/17**, 1C-2D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STON	Ston	0.65	95	*i* Pg	Pg	19 43 42.4	-0.6
STON				*i* Sg	Sg	19 43 52.6	+0.9
NVLJ	Novalja	2.15	320	*i* Pn	Pn	19 44 06.7	+0.3
NVLJ				*i* Sn	Sn	19 44 35.0	+1.6
BOJS	Bojanci	2.80	337	*i* Pn	Pn	19 44 16.7	+1.1
BOJS				*e*Sn	Sn	19 44 51.5	+1.6
VISS	Visnje	3.20	334	*i* Pn	Pn	19 44 21.6	+0.3
CEY	Cerknica	3.29	329	*i* Pn	Pn	19 44 22.7	+0.1
KOGS	Kog	3.54	354	*i* Pn	Pn	19 44 25.5	-0.6
VOY	Vojsko	3.74	327	*e*Pn	Pn	19 44 28.2	-0.7
VOY				*e*Sn	Sn	19 45 13.1	-0.4
OBKA	Obir	3.92	336	⇓*i*PN	Pn	19 44 31.0	-0.6
OBKA				*i* SN	Sn	19 45 17.5	-0.7
ARSA	Arzberg	4.41	348	⇓*i*PN	Pn	19 44 37.9	-0.6
ARSA				*i* SN	Sn	19 45 30.5	-0.1
MOA	Molln	5.23	341	⇑*i*PN	Pn	19 44 49.4	-0.7
MOA				*i* SN	Sn	19 45 50.6	-0.7

MOS **20** *19:50:03.7±0.8, 39.74N×29.29E, h10^{km}, mb4.3/23, Error ellipse: s-maj=5.9km s-min=3.9km az=117.6*
ISK **20** *19:50:03.9, 39.71N×29.13E, h10^{km}, ML4.2*
CSEM **20** *19:50:03.6±0.0, 39.73N×29.19E, h5^{km}, mb4.2/7, Ms3.2, Error ellipse: s-maj=1.4km s-min=0.9km az=17.0*
NEIC **20** *19:50:04.0, 39.72N×29.13E, h14^{km}, mb4.2/32, ML4.2(ISK), After ISK.*
ZUR_RM **20** *19:50:04, 39.72N×29.13E, h9^{km}, Mw4.3/16, Moment Tensor Solution. s16 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.86; M$_{\theta\theta}$1.05; M$_{\phi\phi}$-2.91; M$_{r\theta}$0.12; M$_{\theta\phi}$-2.38; M$_{\phi r}$-0.29; Best double couple: M$_0$3.17×10^{15} NP1:φ$_s$164°, δ72°, λ22°. NP2:φ$_s$67°, δ69°, λ161°. Principal axes: T 2.298, Plg28°, Azm26°; N 1.74, Plg61°, Azm201°; P -4.039, Plg2°, Azm295°;*
IDC **20** *19:50:06.3±4.4, 39.70N×29.13E, h19^{km}±30^{km}, mb3.9/11, mb1 4.0/17, mb1mx3.9/28, mbtmp3.9/17, ML3.7/6, MS3.4/9, Ms1 3.4/9, ms1mx3.1/46 Error ellipse: s-maj=16.2km s-min=12.5km az=87.0*
THE **20** *19:50:09.2, 39.75N×28.98E, h20^{km}, ML4.3*
ISC 20 19:50:03.8±0.5**, 39.73N**±0.02×**29.17E**±0.02**, h9^{km}**±3^{km}**, n251, σ1^{s}02**/268**, mb4.2**/32**, MS3.6**/4**, 15C-10D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORLT	Orhaneli	0.38	327	*i* PG	Pg	19 50 12.1	+0.5
DST	Dursunbey	0.43	254	*i* PG	Pg	19 50 11.6	-1.1
KCT	Karacabey	0.82	311	*i* PG	Pg	19 50 20.0	-0.3
YLV	Yalova	0.85	11	*i* PG	Pg	19 50 21.2	+0.3
YLV				*i* SG	Sg	19 50 34.0	+1.7
BALB	Balikesir	1.00	265	*i* PG	Pg	19 50 22.3	-1.5
BALB				*i* SG	Sg	19 50 36.6	-0.6
GPA	Golpazari	1.04	57	*i* PN	Pn	19 50 25.1	+0.6
EYL	Eskiyayla	1.13	42	*i* PN	Pn	19 50 26.4	+0.7
BNT	Bandirma	1.15	304	*i* PN	Pn	19 50 25.5	-0.5
HRT	Hereke	1.16	19	*i* PN	Pn	19 50 26.6	+0.5
HRT				*i* SN	Sn	19 50 44.2	+2.1
EDC	Edincik	1.18	302	*i* PN	Pn	19 50 27.1	+0.7
ESKT	Eskisehir	1.31	99	*i* PN	Pn	19 50 28.7	+0.3
ISK	Istanbul-Kandi	1.34	356	*i* PN	Pn	19 50 29.4	+0.7
AKS	Akhisar	1.35	232	*i* PN	Pn	19 50 29.1	+0.2
KHL	Karahalli	1.43	169	*i* PN	Pn	19 50 30.6	+0.5
MRMT	Marmara Adasi	1.49	306	*i* PN	Pn	19 50 30.6	-0.3
CTT	Catalca	1.52	339	*i* PN	Pn	19 50 32.4	+1.0
CANB	Canakkale	1.65	281	PN	Pn	19 50 33.3	+0.1
MDU	Mudurnu	1.73	64	PN	Pn	19 50 35.6	+1.2
LPK	Lapseki	1.96	290	PN	Pn	19 50 37.8	+0.2
DENT	Denizli	1.98	183	PN	Pn	19 50 37.7	-0.2
IZM	Izmir	1.99	229	PN	Pn	19 50 37.3	-0.8
BLCB	Balcova	2.13	232	PN	Pn	19 50 40.7	+0.6
ISP	Isparta	2.15	150	PN	Pn	19 50 41.3	+0.9
ISP	Isparta	2.15	150	*i* P	Pn	19 50 41.2	+0.8
ISP	Isparta	2.15	150	*e*Pn	Pn	19 50 40.5	0.0
EZN	Ezine	2.19	273	PN	Pn	19 50 41.2	+0.2
KIZT	Kizilcal	2.27	111	PN	Pn	19 50 43.2	+1.1
PRK	Paraskevi	2.29	259	*e*P	Pn	19 50 42.0	-0.4
BCK	Bucak	2.52	153	PN	Pn	19 50 46.5	+0.8
ALN	Alexandroupoli	2.66	297	*e*Pn	Pn	19 50 47.2	-0.4
ALN				*e*Sn	Sn	19 51 17.2	-3.0
MLSB	Milas	2.66	205	PN	Pn	19 50 47.5	-0.2
YER	Yerkesik	2.68	195	PN	Pn	19 50 48.2	+0.2
SMG	Samos	2.72	223	*e*P	Pn	19 50 55.0	+6.5
LOD	Lodumlu	2.77	86	PN	Pn	19 50 50.4	+1.1
ANTO	Ankara	2.80	86	PN	Pn	19 50 49.7	+0.1
ANTO	Ankara	2.80	86	⇑P	Pn	19 50 57.4	+7.8
ANTO	Ankara	2.80	86	P	Pn	19 50 57.4	+7.8
EDRB	Edirne	2.80	320	PN	Pn	19 50 49.9	+0.2
ELL	Elmali	3.03	169	PN	Pn	19 50 53.6	+0.6
BODT	Bodrum	3.04	209	PN	Pn	19 50 53.2	+0.2
KONT	Konya--Tatoy	3.06	125	PN	Pn	19 50 53.2	-0.2
SAFT	Safranbolu	3.08	60	PN	Pn	19 50 53.9	+0.3
FETY	Fethiye	3.09	181	PN	Pn	19 50 54.6	+0.8
RDO	Rodhopi	3.11	298	*e*P	Pn	19 50 53.8	-0.3
LOS	Limnos	3.15	275	*e*Pn	Pn	19 50 54.4	-0.3
KDZ	Kurdzhali	3.44	305	P	Pn	19 50 58.0	-0.7
NISR	Nisiros	3.50	208	*e*P	Pg	19 51 12.5	-1.3
CANT	Cankiri	3.52	74	PN	Pn	19 51 00.7	+0.8
KAMT	Kaman	3.53	94	PN	Pn	19 51 01.4	+1.4
KSL	Kastellorizon	3.59	175	*e*P	Pn	19 51 01.5	+0.6
ARG	Arkhangelos	3.60	194	*e*P	Pn	19 51 02.0	+0.9
HDMB	Hadim	3.80	136	PN	Pn	19 51 05.1	+1.3
APE	Apeiranthos	3.90	228	PN	Pn	19 51 05.1	-0.2
APE	Apeiranthos	3.90	228	*i* P	Pn	19 51 05.3	0.0
APE	Apeiranthos	3.90	228	*e*P	Pn	19 51 08.5	+3.2
RZN	Rozhen	3.91	301	P	Pn	19 51 05.0	-0.4
OUR	Ouranopolis	4.03	280	*e*Pn	Pn	19 51 06.0	-1.0
AOS	Alonnisos	4.13	264	*e*Pn	Pn	19 51 08.3	-0.3
CORM	Corum	4.22	82	*e*PN	Pn	19 51 10.8	+0.9
PAIG	Paliouri	4.23	274	*e*Pn	Pn	19 51 08.8	-1.2
PAIG				*e*Sn	Sn	19 51 56.0	-4.1
BZK	Bozkurt	4.29	57	*e*PN	Pn	19 51 11.5	+0.7
PLG	Polygyros	4.44	280	*e*P	Pn	19 51 11.8	-1.2
SANT	Santorini	4.45	222	*e*Pn	Pn	19 51 12.0	-1.1
KARP	Karpathos	4.47	202	*e*P	Pn	19 51 12.5	-0.9
SRS	Serrai	4.48	290	*e*Pn	Pn	19 51 12.7	-0.8
SRS				*e*Sn	Sn	19 52 02.7	-3.6
MPAR	Parnis Oros	4.52	251	*e*P	Pg	19 51 30.5	-3.6
MMB	Musomiste	4.54	296	P	Pn	19 51 14.0	-0.3
SOH	Sokhos	4.58	286	*e*Pn	Pn	19 51 14.1	-0.9
SOH				*e*Sn	Sn	19 52 04.8	-4.2
BYBT	Boyabat	4.60	66	*e*PN	Pn	19 51 15.8	+0.5
NEO	Neokhori	4.62	267	*e*P	Pn	19 51 17.0	+1.5
XOR	Xorichti	4.63	267	*e*Pn	Pn	19 51 14.9	-0.8
NSAL	Nisos Salamina	4.81	250	*e*P	Pg	19 51 35.0	-4.9
THE	Thessaloniki	4.84	283	*e*Pn	Pn	19 51 17.4	-1.2
THE				*e*Sn	Sn	19 52 10.8	-4.6
ZIMR		4.85	325	⇓P	Pn	19 51 19.4	+0.6
ZIMR		4.85	325	P	Pn	19 51 19.4	+0.6
NAIG	Nisos Aigina	4.86	248	*e*P	Pg	19 51 35.5	-5.3
MGER	Gerania Oros	4.93	251	*e*P	Pn	19 51 20.5	+0.6
IKL	Isikli	4.99	133	*e*PN	Pn	19 51 21.7	+1.0
KKB	Krupnik	5.09	297	P	Pn	19 51 21.0	-1.1
LIT	Litokhoron	5.15	276	*e*Pn	Pn	19 51 22.2	-0.8
LIT				*e*Sn	Sn	19 52 18.7	-4.6
NPS	Neapolis	5.28	213	*e*P	Pn	19 51 24.5	-0.3
GRG	Griva	5.31	286	*e*Pn	Pn	19 51 24.7	-0.6
VTS	Vitosha	5.33	304	⇑P	Pn	19 51 25.2	-0.3
VTS	Vitosha	5.33	304	P	Pn	19 51 25.0	-0.5
VTS	Vitosha	5.33	304	P	Pn	19 51 25.2	-0.3
VTS	Vitosha	5.33	304	P	Pn	19 51 25.2	-0.3
AGG	Agios Georgios	5.35	265	*e*Pn	Pn	19 51 25.0	-0.8
AGG				*e*Sn	Sn	19 52 23.8	-4.4
TLCR		5.46	357	⇓P	Pn	19 51 27.6	+0.2
IDI	Anoyia	5.59	219	Pn	Pn	19 51 27.9	-1.2
	0.8nm,0.3s,baz=52,slow=12,SNR=14						
IDI				Lg		19 53 01.9	
	0.8nm,0.3s,baz=324,slow=23,SNR=2.2						
IDI				LR	LR	19 53 53.7	
	comp=Z,170nm,19.0s,baz=38,slow=41						
VLI	Veliai	5.75	240	*e*P	Pn	19 51 30.5	-1.0
EVR	Evrytania	5.76	264	*e*P	Pn	19 51 31.5	-0.2
VAM	Vamos	5.85	224	*e*P	Pn	19 51 35.5	+2.7
SEV	Sevastopol’	5.86	33	⇓*i*P	Pn	19 51 32.2	-0.8
SEV				*e*S	Sn	19 52 37.1	-4.0
SEV				pmax	pmax		
	comp=Z,40nm,0.6s						
SEV				smax			
	comp=N,90nm,0.6s						
SEV				smax			
	comp=E,30nm,0.6s						
SEV	Sevastopol’	5.86	33	*i* P	Pn	19 51 32.2	-0.8
	comp=E,40nm,0.6s						
YAL	Yalta	6.03	36	*e*P	Pn	19 51 34.7	-0.7
YAL				*e*S	Sn	19 52 42.6	-2.7
YAL				pmax	pmax		
	comp=Z,50nm,0.5s						
YAL				smax			
	comp=N,90nm,0.4s						
YAL				smax			
	comp=E,160nm,0.4s						
YAL	Yalta	6.03	36	*e*P	Pn	19 51 34.7	-0.7
	comp=E,50nm,0.5s						
ZAPS	Zavoj/Pirot	6.07	308	⇓*i*Pn	Pn	19 51 34.6	-1.4
ZAPS				Sn	Sn	19 52 42.0	-4.4
ITM	Ithomi	6.23	248	*e*P	Pn	19 51 40.0	+1.8
MLR	Muntele Rosu	6.23	339	Pn	Pn	19 51 38.2	0.0
	comp=E,1.7nm,0.3s,baz=93,slow=2.3,SNR=33						
MLR				Lg		19 53 27.0	
	comp=E,1.9nm,0.3s,baz=108,slow=20,SNR=5.8						
MLR				LR	LR	19 54 07.9	
	comp=E,161nm,21.7s,baz=162,slow=39						
MLR	Muntele Rosu	6.23	339	⇑P	Pn	19 51 38.6	+0.3
MLR	Muntele Rosu	6.23	339	⇑P	Pn	19 51 38.6	+0.4
SKO	Skopje	6.27	293	*e*	Pn	19 51 40.0	+1.1
SKO				*i*		19 52 01.0	
ALU	Alushta	6.29	36	⇑*i*P	Pn	19 51 38.2	-0.9
ALU				*e*S	Sn	19 52 48.5	-3.4
ALU				pmax	pmax		
	comp=Z,100nm,0.7s						
ALU				smax			
	comp=N,80nm,0.5s						
ALU				smax			
	comp=E,140nm,0.5s						
ALU	Alushta	6.29	36	*i* P	Pn	19 51 38.2	-0.9
	comp=E,100nm,0.7s						
SIM	Simferopol’	6.37	33	*e*P	Pn	19 51 39.9	-0.4
SIM				*e*S	Sn	19 52 49.7	-4.3
SIM				pmax	pmax		
	comp=Z,29nm,0.6s						
SIM				MLR	MLR		
	comp=Z,250nm,20.0s						
VRI	Vrincioaia	6.39	344	⇓P	Pn	19 51 40.3	-0.2
VRI	Vrincioaia	6.39	344	⇓P	Pn	19 51 40.2	-0.3
VRI	Vrincioaia	6.39	344	⇓P	Pn	19 51 40.2	-0.3
JAN	Janina	6.42	272	*e*P	Pn	19 51 44.5	+3.6
VOIR		6.46	333	⇑P	Pn	19 51 41.5	0.0
VOIR		6.46	333	⇑P	Pn	19 51 41.0	-0.6
VOIR		6.46	333	⇑P	Pn	19 51 41.0	-0.5
LKD	Levkas	6.69	264	*e*Pn	Pn	19 51 44.2	-0.5
SUDU	Sudak	6.73	38	*e*P	Pn	19 51 44.7	-0.6
SUDU				*e*S	Sn	19 53 00.3	-2.5
SUDU				pmax	pmax		
	comp=Z,40nm,0.4s						
SUDU				smax			
	comp=N,100nm,0.5s						
SUDU				smax			
	comp=E,100nm,0.5s						
BOLS	Boljevac	6.77	310	⇑*i*Pn	Pn	19 51 44.7	-1.2
KIS	Kishinev	7.27	358	⇓*i*P	Pn	19 51 54.0	+1.1
KIS				*e*S	Sn	19 53 17.0	+0.6
KIS				MLR	MLR		
	comp=N,400nm,10.0s						
KIS				MLR	MLR		
	comp=E,500nm,10.0s						
KIS				MLR	MLR		
	comp=Z,300nm,10.0s						
KIS				MLR	MLR		
	comp=Z,300nm,10.0s						
ANN	Anapa	7.95	48	*e*P	Pn	19 52 08.2	+5.8
ANN				*e*S	Sn	19 53 38.9	+5.5
ANN				pmax	pmax		
	comp=Z,60nm,0.9s						
BZS	Buzias	8.10	319	⇑P	P	19 52 03.7	-0.7
BZS	Buzias	8.10	319	P	P	19 52 03.7	-0.7
BURAR	Bucovina Array	8.38	341	⇑P	P	19 52 07.6	-0.8
BURAR	Bucovina Array	8.38	341	⇑P	P	19 52 07.6	-0.8
TIP	Timpagrande	9.62	271	*e*P	P	19 52 24.5	-1.0
ASF	Jabal al Asfar	9.80	138	Pn	P	19 52 27.3	-0.7
	comp=Z,0.2nm,0.3s,baz=349,slow=14,SNR=2.5						
KOLS	Kolonicke sedl	10.44	334	*e*PN	P	19 52 36.1	-0.6
LVV	L’vov	10.73	342	*e*P	P	19 52 40.9	+0.3
KWP	Kalwaria	10.91	337	*e*P	P	19 52 43.1	-0.1
KWP				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KWP	Kalwaria	10.91	337	*e*Pn	P	19 52 43.1	-0.1
	comp=Z,6.5nm,0.8s						
KIV	Kislovodsk	10.93	63	*e*P	P	19 52 41.7	-1.8
KIV				*e*S	S	19 54 41.7	-5.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=N,151nm,17.0s						
KIV				MLR	MLR		
	comp=Z,75nm,17.0s						
AKASG	Malin Array Be	10.97	0	P	P	19 52 41.5	-2.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	10.97	0	Pn	P	19 52 41.5	-2.5
	comp=Z,0.9nm,0.3s,baz=173,slow=12,SNR=8.2						
EIL	Elat	11.10	153	Pn	P	19 52 42.7	-3.2
	comp=Z,0.6nm,0.3s,baz=334,slow=20,SNR=7.5						
EIL				Sn	S	19 54 44.4	-6.8
EIL	Elat	11.10	153	*e*Pn	P	19 52 42.6	-3.3
EIL				Sn	S	19 54 44.4	-6.8
ZEI	Tsey	11.50	70	*e*P	P	19 52 47.0	-4.2
GNI	Garni	11.97	83	*i* P	P	19 52 55.4	-2.2
GNI				pmax	pmax		
	comp=Z,21nm,1.3s						
GNI	Garni	11.97	83	LR	LR	19 58 24.2	
	comp=Z,184nm,18.5s,baz=328,slow=42						
OJC	Ojcow	12.40	331	*e*P	P	19 53 03.1	-0.2
ARSA	Arzberg	12.43	312	⇑*i*P	P	19 53 02.7	-1.0
	comp=Z,3.0nm,0.4s						
VRSR	Storozhevoye	13.45	28	*e*P	P	19 53 16.5	-0.8
VRSR				*e*S	S	19 55 45.4	-2.6
VRSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VRSR				pmax	pmax		
	comp=N,30nm,1.1s						
VRSR				pmax	pmax		
	comp=E,6.0nm,0.9s						
VRSR				smax			
	comp=N,30nm,0.9s						
VRSR				smax			
	comp=Z,8.0nm,1.4s						
VRSR				smax			
	comp=E,20nm,0.9s						
MOA	Molln	13.47	312	⇑*i*P	P	19 53 19.0	+1.5
	comp=E,3.4nm,0.8s						
DPC	Dobruska-Polom	13.95	324	*e*P	P	19 53 29.1	+5.3
DPC				AMS	AMS	19 59 50.0	
	comp=E,600nm,12.4s						
GERES	GERESS Array B	14.32	315	Pn	P	19 53 28.5	-0.2
	comp=E,0.1nm,0.3s,baz=127,slow=13,SNR=9.8						
GERES				LR	LR	19 59 20.2	
	comp=E,109nm,20.5s,baz=276,slow=39						
KHC	Kasperske Hory	14.55	315	*e*P	P	19 53 32.1	+0.4
KHC				MLR	MLR		
	comp=Z,400nm,13.4s						
KHC	Kasperske Hory	14.55	315	*e*P	P	19 53 32.1	+0.4
KHC				*e*		19 53 39.5	

KHC	**Kasperske Hory**	**14.55**	**315**	*e*P	**P**	**19 53 32.1**	**+0.4**
KHC				x	x	19 53 39.5	
KHC				AMS	AMS	20 00 00.0	
	comp=Z,400nm,13.4s						
PRU	**Pruhonice**	**14.56**	**320**	AMS	AMS	20 00 10.0	
	comp=Z,400nm,13.2s						
PGF	**Pioggiola**	**15.45**	**287**	*e*P	**P**	**19 53 44.3**	**+0.7**
	comp=Z,23nm,1.1s						
PGF	**Pioggiola**	**15.45**	**287**	*e*P	**P**	**19 53 44.3**	**+0.7**
PGF				pmax	pmax		
	comp=Z,12nm,1.1s						
DAVOX	**Davos**	**15.70**	**303**	LR	LR	20 00 51.4	
	comp=Z,83nm,18.8s,baz=83,slow=41						
NKC	**Novy Kostel**	**15.78**	**317**	AMS	AMS	20 00 50.0	
	comp=Z,300nm,14.3s						
CLL	**Collm**	**16.16**	**321**	*e*P	**P**	**19 53 53.0**	**+0.5**
CLL				*i*		19 53 57.2	
CLL	**Collm**	**16.16**	**321**	*e**PP		19 53 53.0	
CLL				*i* *SP		19 53 57.2	
OBN	**Obninsk**	**16.17**	**15**	⇓*e*P	**P**	**19 53 53.8**	**+1.1**
OBN				*e*S	**S**	**19 56 53.4**	**+1.3**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
MOX	**Moxa**	**16.45**	**317**	*i* P	**P**	**19 54 08.0**	**+12**
	comp=Z,logA/T=0.8						
MOX				L		20 01 19.0	
SBF	**Sospel**	**16.71**	**291**	*e*P	**P**	**19 54 00.5**	**+0.8**
	comp=Z,27nm,0.9s						
SBF	**Sospel**	**16.71**	**291**	*e*P	**P**	**19 54 00.5**	**+0.8**
SBF				pmax	pmax		
	comp=Z,13nm,0.9s						
FRF	**La Foret Royal**	**17.25**	**290**	*e*P	**P**	**19 54 07.0**	**+0.6**
MBDF	**Montbardon**	**17.30**	**294**	*e*P	**P**	**19 54 08.0**	**+0.9**
	comp=Z,14nm,0.8s						
MBDF	**Montbardon**	**17.30**	**294**	*e*P	**P**	**19 54 08.0**	**+0.9**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LMR	**La Mourre**	**17.33**	**289**	*e*P	**P**	**19 54 07.8**	**+0.3**
	comp=Z,40nm,1.6s						
LMR	**La Mourre**	**17.33**	**289**	*e*P	**P**	**19 54 07.8**	**+0.3**
LMR				pmax	pmax		
	comp=Z,20nm,1.6s						
BNI	**Bardonecchia**	**17.42**	**295**	*e*P	**P**	**19 54 10.1**	**+1.5**
BNI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BNI	**Bardonecchia**	**17.42**	**295**	*e*P	**P**	**19 54 10.1**	**+1.5**
	comp=Z,4.3nm,0.9s						
LPG	**La Plagne**	**17.45**	**297**	*e*P	**P**	**19 54 10.0**	**+1.0**
	comp=Z,62nm,1.6s						
LPG	**La Plagne**	**17.45**	**297**	*e*P	**P**	**19 54 10.0**	**+1.0**
LPG				pmax	pmax		
	comp=Z,31nm,1.6s						
LPL	**La Plagne**	**17.47**	**297**	*e*P	**P**	**19 54 10.0**	**+0.8**
CDF	**Champ du Feu**	**17.92**	**306**	*e*P	**P**	**19 54 16.0**	**+1.3**
	comp=Z,9.9nm,0.9s						
CDF	**Champ du Feu**	**17.92**	**306**	*e*P	**P**	**19 54 16.0**	**+1.3**
CDF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ORIF	**Oris-en-Rattie**	**17.96**	**294**	*e*P	**P**	**19 54 16.3**	**+1.0**
	comp=Z,6.8nm,0.8s						
ORIF				*e*R			
	comp=Z,417nm,21.5s						
HINF	**Hinteralfeld**	**17.99**	**304**	*e*P	**P**	**19 54 16.5**	**+0.9**
CABF	**La Chapelle**	**18.15**	**300**	*e*P	**P**	**19 54 18.5**	**+0.8**
HAU	**Haudompre**	**18.37**	**304**	*e*P	**P**	**19 54 22.0**	**+1.6**
	comp=Z,14nm,0.8s						
HAU				*e*R			
	comp=Z,153nm,17.3s						
VIVF	**Saint-Julien-l**	**18.80**	**294**	*e*P	**P**	**19 54 26.6**	**+0.9**
LASF	**Ste Croix**	**19.31**	**291**	*e*P	**P**	**19 54 32.3**	**+0.6**
	comp=Z,12nm,1.0s						
MEZF	**Maizieres J'vi**	**19.35**	**305**	*e*P	**P**	**19 54 32.9**	**+0.8**
SMF	**Signal de Mont**	**19.67**	**299**	*e*P	**P**	**19 54 35.7**	**-0.1**
	comp=Z,9.9nm,0.8s						
SMF	**Signal de Mont**	**19.67**	**299**	*e*P	**P**	**19 54 35.7**	**-0.1**
SMF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LOR	**Lormes**	**19.79**	**301**	*e*P	**P**	**19 54 36.9**	**-0.2**
	comp=Z,15nm,1.1s						
LOR				*e*R			
	comp=Z,150nm,21.8s						
AVF	**Avril sur Loir**	**20.03**	**299**	*e*P	**P**	**19 54 39.7**	**0.0**
	comp=Z,12nm,0.9s						
AVF	**Avril sur Loir**	**20.03**	**299**	*e*P	**P**	**19 54 39.7**	**0.0**
AVF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BGF	**Bois d'Agland**	**20.33**	**298**	*e*P	**P**	**19 54 43.0**	**+0.2**
BAIF	**Baives**	**20.39**	**309**	*e*P	**P**	**19 54 44.6**	**+1.2**
MTLF	**Montolieu**	**20.46**	**289**	*e*P	**P**	**19 54 43.9**	**-0.4**
	comp=Z,40nm,1.3s						
MTLF	**Montolieu**	**20.46**	**289**	*e*P	**P**	**19 54 43.9**	**-0.4**
MTLF				pmax	pmax		
	comp=Z,20nm,1.3s						
CAF	**Calviac**	**20.65**	**293**	*e*P	**P**	**19 54 48.4**	**+2.1**
TCF	**Toulx Ste Croi**	**20.72**	**297**	*e*P	**P**	**19 54 47.0**	**+0.1**
RJF	**Les Rejaudoux**	**21.07**	**294**	*e*P	**P**	**19 54 52.0**	**+1.4**
RJF				*e*R			
	comp=Z,160nm,18.2s						
FINES	**FINESS Array B**	**21.82**	**356**	P	**P**	**19 54 56.6**	**-1.4**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FINES	**FINESS Array B**	**21.82**	**356**	P	**P**	**19 54 56.6**	**-1.4**
	comp=Z,3.5nm,0.7s,mb3.9,baz=162,slow=12,SNR=11						
EPF	**Esparros**	**21.84**	**288**	*e*P	**P**	**19 54 59.4**	**+1.1**
MFF	**Saint Martin d**	**22.37**	**298**	*e*P	**P**	**19 55 04.2**	**+0.6**
	comp=Z,24nm,1.1s,mb4.2						
MFF	**Saint Martin d**	**22.37**	**298**	*e*P	**P**	**19 55 04.2**	**+0.6**
MFF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.2						
KAF	**Kangasniemi**	**22.48**	**356**	*e*p	**P**	**19 55 03.4**	**-1.2**
	comp=Z,5.0nm,0.8s,mb4.0,baz=176,slow=10						
KAF	**Kangasniemi**	**22.48**	**356**	*e*P	**P**	**19 55 03.4**	**-1.2**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
ETSF	**Etsaut**	**22.50**	**288**	*e*P	**P**	**19 55 06.7**	**+1.8**
	comp=Z,8.5nm,0.8s,mb3.9						
ETSF	**Etsaut**	**22.50**	**288**	*e*P	**P**	**19 55 06.7**	**+1.8**
ETSF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
HFS	**Hagfors**	**22.61**	**340**	P	**P**	**19 55 06.0**	**+0.2**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HFS				MLR	MLR		
	comp=Z,88nm,19.7s						
HFS	**Hagfors**	**22.61**	**340**	P	**P**	**19 55 06.0**	**+0.2**
	comp=Z,2.2nm,0.8s,mb3.6,baz=172,slow=10,SNR=4.8						
HFS				LR	LR	20 04 58.3	
	comp=Z,88nm,19.7s,MS3.2,baz=334,slow=39						
LDF	**La Druitiere**	**22.69**	**303**	*e*P	**P**	**19 55 06.8**	**+0.1**
FLN	**La Foliniere**	**22.96**	**303**	*e*P	**P**	**19 55 10.8**	**+1.5**
FLN				*e*R			
	comp=Z,127nm,17.5s						
SJPF	**Ste Jean**	**22.98**	**288**	*e*P	**P**	**19 55 11.5**	**+1.9**
	comp=Z,28nm,1.3s,mb4.2						
SJPF	**Ste Jean**	**22.98**	**288**	*e*P	**P**	**19 55 11.5**	**+1.9**
SJPF				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.2						
GRR	**Gorron**	**23.13**	**302**	*e*P	**P**	**19 55 12.8**	**+1.8**
	comp=Z,22nm,0.8s,mb4.3						
GRR	**Gorron**	**23.13**	**302**	*e*P	**P**	**19 55 12.8**	**+1.8**
GRR				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.3						
NAO01	**NORSAR Array S**	**23.99**	**338**	*e*P	**P**	**19 55 19.3**	**+0.2**
	comp=Z,7.4nm,0.8s,mb4.2						
NB2	**NORSAR Subarra**	**24.05**	**338**	P	**P**	**19 55 19.8**	**0.0**
	comp=Z,1.3nm,0.8s,mb3.4,baz=145,slow=9.3						
NOA	**NORSAR Array B**	**24.05**	**338**	P	**P**	**19 55 20.4**	**+0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
NOA	**NORSAR Array B**	**24.05**	**338**	P	**P**	**19 55 20.4**	**+0.6**
	comp=Z,1.0nm,1.0s,mb3.2,baz=152,slow=8.3,SNR=5.7						
SGMF	**Saint Gilles**	**24.23**	**301**	*e*P	**P**	**19 55 22.3**	**+0.7**
QUIF	**Quistinic**	**24.58**	**300**	*e*P	**P**	**19 55 25.7**	**+0.6**
	comp=Z,8.8nm,0.8s,mb4.0						
QUIF	**Quistinic**	**24.58**	**300**	*e*P	**P**	**19 55 25.7**	**+0.6**
QUIF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
ROSF	**Rostrenen**	**24.71**	**301**	*e*P	**P**	**19 55 26.6**	**+0.3**
	comp=Z,14nm,0.7s,mb4.3						
ROSF	**Rostrenen**	**24.71**	**301**	*e*P	**P**	**19 55 26.6**	**+0.3**
ROSF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.3						
ESDC	**Sonseca Array**	**25.41**	**281**	P	**P**	**19 55 33.1**	**0.0**
	comp=Z,0.8nm,0.6s,mb3.4,baz=68,slow=9.7,SNR=4.7						
ARU	**Arti**	**25.50**	**39**	⇓*i*P	**P**	**19 55 33.4**	**-0.3**
ARU				*e*		19 56 08.4	
ARU				*e*		19 59 02.0	
ARU				*e*S	**S**	**20 00 00.2**	**+1.8**
ARU				*e*SS	SS	20 00 55.9	-4.9
ARU				*e*		20 06 34.2	
ARU				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.2						
ARU	**Arti**	**25.50**	**39**	*e*P	**P**	**19 55 33.0**	**-0.8**
	comp=Z,5.3nm,0.6s,mb4.2						
SOKR	**Solikamsk**	**26.39**	**32**	⇑*i*P	**P**	**19 55 41.3**	**-0.7**
SOKR				*e*		19 55 49.0	
SOKR				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.2						
EKA	**Eskdalemuir Ar**	**26.52**	**317**	P	**P**	**19 55 42.2**	**-1.0**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**26.52**	**317**	P	**P**	**19 55 42.2**	**-1.0**
	comp=Z,1.5nm,0.5s,mb3.8,baz=114,slow=11,SNR=11						
SVE	**Sverdlovsk**	**26.70**	**40**	*e*P	**P**	**19 55 37.2**	**-7.6**
EVO	**Evora**	**28.74**	**280**	*e*P	**P**	**19 56 04.6**	**+1.1**
	comp=Z,10nm,1.0s,mb4.2						
EVO				*e*R			
	comp=Z,74nm,20.0s						
ARCES	**ARCESS Array B**	**29.93**	**357**	P	**P**	**19 56 13.0**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,41nm,20.7s						
ARCES	**ARCESS Array B**	**29.93**	**357**	P	**P**	**19 56 13.0**	**-0.9**
	comp=Z,3.2nm,0.8s,mb4.1,baz=173,slow=9.8,SNR=12						
ARCES				LR	LR	20 09 33.9	
	comp=Z,41nm,20.7s,MS3.0,baz=275,slow=39						
ARCES	**ARCESS Array B**	**29.93**	**357**	P	**P**	**19 56 13.0**	**-0.9**
ARCES				LR	LR	20 09 33.9	
ZRNK	**Zerenda**	**30.10**	**51**	*e*P	**P**	**19 56 14.5**	**-1.1**
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
ZRNK	**Zerenda**	**30.10**	**51**	*e*P	**P**	**19 56 14.5**	**-1.1**
	comp=Z,4.7nm,0.8s,mb4.3						
AAK	**Ala-Archa**	**33.93**	**70**	*i* P	**P**	**19 56 48.8**	**-0.4**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
AAK	**Ala-Archa**	**33.93**	**70**	*e*P	**P**	**19 56 47.2**	**-2.0**
	comp=Z,3.8nm,0.7s,mb4.4						
NVS	**Novosibirsk**	**38.64**	**49**	*i* P	**P**	**19 57 28.7**	**-0.3**
MKAR	**Makanchi Array**	**38.69**	**62**	P	**P**	**19 57 29.5**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**38.69**	**62**	P	**P**	**19 57 29.5**	**0.0**
	comp=Z,2.4nm,0.6s,mb4.1,baz=268,slow=9.2,SNR=30						
ZAL	**Zalesovo**	**39.57**	**50**	P	**P**	**19 57 36.2**	**-0.5**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZAL	**Zalesovo**	**39.57**	**50**	P	**P**	**19 57 36.2**	**-0.5**
	comp=Z,1.5nm,0.6s,mb3.9,baz=208,slow=8.5,SNR=7.5						
ZAL	**Zalesovo**	**39.57**	**50**	P	**P**	**19 57 36.2**	**-0.5**
DBIC	**Dimbokro**	**44.90**	**232**	P	**P**	**19 58 19.6**	**-1.1**
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DBIC	**Dimbokro**	**44.90**	**232**	P	**P**	**19 58 19.6**	**-1.2**
	comp=Z,3.9nm,0.7s,mb4.3,baz=62,slow=10,SNR=6.4						
KOLN	**Koldanda**	**46.17**	**88**	*e*P	**P**	**19 58 30.1**	**-0.5**
	comp=Z,13nm,0.6s,mb5.0						
GKN	**Gorkha**	**46.85**	**87**	*e*P	**P**	**19 58 35.9**	**-0.1**
	comp=Z,14nm,0.7s,mb5.0						
DMN	**Daman**	**47.41**	**87**	*e*P	**P**	**19 58 37.5**	**-2.9**
	comp=Z,12nm,0.7s,mb5.0						
KKN	**Kakani**	**47.45**	**87**	*e*P	**P**	**19 58 38.7**	**-2.1**
	comp=Z,12nm,0.6s,mb5.0						
KKN	**Kakani**	**47.45**	**87**	*e*P	**P**	**19 58 38.7**	**-2.1**
KKN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
GUN	**Gumba**	**47.85**	**86**	*e*P	**P**	**19 58 43.1**	**-0.8**
	comp=Z,9.2nm,0.6s,mb5.0						
LSA	**Lhasa**	**51.02**	**81**	*e*P	**P**	**19 59 08.6**	**+0.4**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
LSA	**Lhasa**	**51.02**	**81**	*e*P	**P**	**19 59 08.6**	**+0.4**
	comp=Z,3.1nm,0.6s,mb4.4						
SONM	**Songino Array**	**54.17**	**54**	P	**P**	**19 59 30.7**	**-0.8**
	comp=Z,0.9nm,0.6s,mb3.9,baz=304,slow=8.9,SNR=7.6						
ULN	**Ulaanbaatar**	**54.57**	**54**	*e*P	**P**	**19 59 33.6**	**-0.8**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
ULN	**Ulaanbaatar**	**54.57**	**54**	*e*P	**P**	**19 59 33.6**	**-0.8**
	comp=Z,0.9nm,0.7s,mb3.9						
CMAR	**Chiang Mai Arr**	**63.04**	**88**	*i* P	**P**	**20 00 34.3**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**63.04**	**88**	P	**P**	**20 00 32.3**	**-1.4**
	comp=Z,0.7nm,0.8s,mb3.9,baz=301,slow=6.8,SNR=4.3						
ENH	**Enshi**	**64.44**	**71**	*e*P	**P**	**20 00 41.1**	**-1.7**
	comp=Z,4.6nm,0.7s,mb4.6						
ANMO	**Albuquerque**	**95.15**	**325**	LR	LR	20 46 17.0	
	comp=Z,63nm,21.3s,MS4.0,slow=35						
TXAR	**Lajitas Array**	**98.49**	**320**	LR	LR	20 48 55.7	
	comp=Z,50nm,20.2s,MS4.0,baz=290,slow=36						

*OMAN **20** 20:05:53.9,28.21N×58.07E,h30^{km},Error ellipse: s-maj=139.3km s-min=13.5km az=13.0*
*IDC **20** 20:05:57.5±2.2,27.37N×57.66E,mb3.6/6,mb1 3.8/6, mb1mx3.5/21,mbtmp3.6/6,Error ellipse: s-maj=52.6km s-min=34.3km az=56.0*
*THR **20** 20:06:02.4±0.4,27.28N×57.79E,h26^{km}±7^{km},ML3.8*
*CSEM **20** 20:06:02.9±0.1,27.37N×57.77E,h20^{km},ML3.8,Error ellipse: s-maj=4.2km s-min=3.9km az=34.0*

ISC 20 20:05:58.9±0.5,27.60N±0.04×57.83E±0.06,h10^{km},n20, $\sigma 0\overset{s}{.}88$/21,mb3.5/6,2C-5D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**1.48**	**263**	*e*PG	**Pg**	**20 06 28.8**	**+0.2**
BNDS				*e*SG	**Sg**	**20 06 47.6**	**-0.8**
BNDS				AML	AML	20 06 52.5	
	comp=E,1μm,0.3s						
BANOM	**Banah**	**2.16**	**220**	⇓P	**Pn**	**20 06 36.5**	**+1.0**
	SNR=414						
KRBR	**Kerman**	**2.55**	**339**	*e*PN	**Pg**	**20 06 48.6**	**-1.2**
KRBR				AML	AML	20 07 36.4	
	comp=E,655nm,0.5s						
ZHSF	**Zahedan**	**3.27**	**52**	*e*PN	**Pn**	**20 06 57.5**	**+6.2**
ASHO	**Ashiyiah**	**3.31**	**209**	⇓P	**Pn**	**20 06 52.3**	**+0.4**
	SNR=50						
HOQ	**Hoqain**	**4.03**	**187**	⇑P	**Pn**	**20 07 00.7**	**-1.4**
	SNR=26						
BIDO	**Bidbid**	**4.07**	**176**	P	**Pn**	**20 07 02.0**	**-0.6**
	SNR=7.3						
BIDO	**Bidbid**	**4.07**	**176**	P	**Pn**	**20 07 02.0**	**-0.7**
	SNR=7.3						
GHIR	**Ghir-Karzin**	**4.33**	**280**	*e*PN	**Pn**	**20 07 09.4**	**+3.0**
GHIR				AML	AML	20 08 48.2	
	comp=N,62nm,0.6s						
ARQ	**Araqi**	**4.41**	**196**	⇓P	**Pn**	**20 07 08.2**	**+0.8**
	SNR=18						
SMDO	**Samad**	**4.53**	**177**	⇓P	**Pn**	**20 07 09.1**	**-0.1**
	SNR=13						
BSY	**Bisya**	**4.87**	**187**	⇓P	**Pn**	**20 07 14.5**	**+0.5**
	SNR=12						
BSYO	**Bisya**	**4.88**	**186**	P	**Pn**	**20 07 14.5**	**+0.4**
	SNR=12						
WBK	**Wadi Bani Khal**	**5.08**	**168**	⇑P	**Pn**	**20 07 16.0**	**-0.9**
	SNR=12						
BVAR	**Borovoye Array**	**27.06**	**17**	P	**P**	**20 11 44.5**	**+1.3**
	comp=N,0.6nm,0.7s,mb3.2,baz=217,slow=7.2,SNR=4.4						
MKAR	**Makanchi Array**	**27.14**	**39**	P	**P**	**20 11 44.1**	**+0.1**
	comp=N,0.2nm,0.4s,mb3.0,baz=229,slow=7.6,SNR=2.6						
ZAL	**Zalesovo**	**32.93**	**30**	P	**P**	**20 12 36.0**	**+0.6**
	comp=N,0.8nm,0.3s,mb4.1,baz=216,slow=5.1,SNR=3.4						
FINES	**FINESS Array B**	**39.93**	**337**	P	**P**	**20 13 33.9**	**-0.7**
	comp=N,0.3nm,0.4s,mb3.4,baz=146,slow=14,SNR=3.8						
ARCES	**ARCESS Array B**	**45.96**	**345**	P	**P**	**20 14 23.2**	**-0.2**
	comp=N,0.9nm,0.8s,mb3.8,baz=135,slow=7.7,SNR=4.3						
WRA	**Warramunga Arr**	**87.80**	**114**	P	**P**	**20 18 49.2**	**-0.8**
	comp=N,0.4nm,0.8s,mb3.7,baz=312,slow=4.2,SNR=4.1						

MAN 20 20:13:01.3,10.69N×126.18E,h32^{km},mb4.5,ML3.4, MS3.3,2C-2D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.13**	**217**	⇓*i*P	Pn	20 13 19.8	-1.3
BESP	**Borongan**	**1.16**	**321**	*e*P	Pn	20 13 21.5	-0.1
PLP	**Palo**	**1.27**	**292**	*e*P	Pn	20 13 22.6	-0.5
PLP				*e*S	Sn	20 13 39.2	0.0
MSLP	**Maasin**	**1.41**	**247**	*e*P	Pn	20 13 24.2	-1.0
BUTP	**Butuan**	**1.80**	**198**	*e*P	Pn	20 13 30.8	+0.1
CNP	**Catarman**	**2.34**	**321**	*e*P	Pn	20 13 38.8	+0.3
TBP	**Tagbilaran**	**2.49**	**247**	⇑*e*P	Pn	20 13 40.5	-0.1
TBP				*i* S	Sn	20 14 09.7	-0.4
CGP	**Cagayan de Oro**	**2.66**	**214**	⇑*e*P	Pn	20 13 43.3	+0.2
CGP				*e*S	Sn	20 14 14.9	+0.4
DCPH	**Dipolog City**	**3.49**	**233**	⇓*e*P	Pn	20 13 54.2	-0.6
PVCP	**Virac**	**3.50**	**326**	*e*P	Pn	20 13 54.4	-0.6
GUIM	**Jordan**	**3.53**	**269**	*e*P	Pn	20 13 54.9	-0.5
PAGZ	**Pagadian**	**3.95**	**225**	*e*P	Pn	20 14 01.1	-0.3

CASC 20 20:17:52.1±1.7,12.60N×87.99W,h53^{km}±26^{km},MD3.7, ML3.1,8C-3D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.69**	**13**	⇓*e*P	P	20 18 06.7	+0.8
CNCH				*e*S	S	20 18 17.4	+1.3
VSM	**San Miguel**	**0.87**	**342**	⇑*e*P	P	20 18 08.9	+0.6
VSM				*e*S	S	20 18 21.9	+1.5
BLLM	**Bellamira**	**0.88**	**344**	*e*P	P	20 18 08.9	+0.6
BLLM				*e*S	S	20 18 20.8	+0.3
CRIN	**San Cristobal**	**0.92**	**83**	⇑*i*P	P	20 18 09.7	+0.7
CRIN				*e*S	S	20 18 22.4	+0.8
LEON	**Leon**	**1.09**	**99**	⇑*e*P	P	20 18 10.7	-0.6
LEON				*e*S	S	20 18 25.5	-0.1
TEL3	**Telica 3**	**1.12**	**91**	⇓*e*P	P	20 18 11.8	0.0
TEL3				*e*S	S	20 18 26.8	+0.4
TELN	**Telica**	**1.13**	**89**	⇑*e*P	P	20 18 11.9	0.0
TELN				*e*S	S	20 18 27.0	+0.4
MIRN	**Miramar**	**1.26**	**97**	⇓*e*P	P	20 18 13.4	-0.3
MIRN				*e*S	S	20 18 29.8	-0.1
CNGN	**Cerro Negro**	**1.27**	**94**	*e*P	P	20 18 13.4	-0.5
LCBS	**La Ceiba**	**1.43**	**318**	*e*P	P	20 18 16.2	0.0
LCBS				*e*S	S	20 18 32.9	-1.1
MOMJ	**Momotombo**	**1.43**	**97**	⇑*e*P	P	20 18 15.7	-0.5
MOMJ				*e*S	S	20 18 32.2	-1.9
LFRS	**El Faro**	**1.46**	**315**	⇑*e*P	P	20 18 16.5	-0.2
LFRS				*e*S	S	20 18 34.0	-0.9
SOMN	**Somoto**	**1.57**	**58**	⇑*e*P	P	20 18 19.6	+1.4
SOMN				*e*S	S	20 18 40.8	+3.3
LFU	**La Fuente**	**1.58**	**316**	*e*P	P	20 18 18.6	+0.2
APYN	**Apoyeque**	**1.64**	**102**	⇑*e*P	P	20 18 19.2	+0.1
APYN				*e*S	S	20 18 38.7	-0.5
BOQS	**Boqueron**	**1.69**	**312**	*e*P	P	20 18 20.1	+0.3
BOQS				*e*S	S	20 18 40.5	+0.1
MGAN	**Managua**	**1.76**	**104**	*i*	P	20 18 45.9	+25
	comp=E,208nm,0.3s						
SBLS	**San Blas**	**2.01**	**308**	*e*P	P	20 18 24.7	+0.3
SBLS				*e*S	S	20 18 48.8	+0.5
RTR	**El Retiro**	**2.07**	**309**	*e*P	P	20 18 24.6	-0.5
RBDL	**Robledal**	**2.24**	**313**	*e*P	P	20 18 28.3	+0.8

MAN 20 20:24:50.6,10.50N×126.70E,h1^{km},mb4.3,ML3.2,MS3.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**1.66**	**312**	*e*P	Pn	20 25 21.2	+0.3
PLP	**Palo**	**1.82**	**292**	*e*P	Pn	20 25 23.1	-0.2
MSLP	**Maasin**	**1.85**	**259**	*e*P	Pn	20 25 23.6	-0.1
MSLP				*e*S	Sn	20 25 51.6	+3.5
BUTP	**Butuan**	**1.85**	**215**	*e*P	Pn	20 25 22.9	-0.8
CNP	**Catarman**	**2.83**	**315**	*e*P	Pn	20 25 36.4	-1.4
BUKP	**Musuan**	**3.06**	**212**	*e*P	Pn	20 25 41.9	+0.8
PVCP	**Virac**	**3.96**	**321**	*e*P	Pn	20 25 54.1	+0.2
GUIM	**Jordan**	**4.05**	**272**	*e*P	Pn	20 25 54.9	-0.1

IDC 20 20:45:35.9±1.7,0.96N×127.83E,mb3.5/3,mb1 3.6/3, mb1mx3.5/14,mbtmp3.5/3,MS3.0/1,Ms1 3.0/1, ms1mx2.7/11,Error ellipse: s-maj=122.8km s-min=28.4km az=70.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.73**	**163**	P	P	20 50 29.0	-1.9
	0.5nm,0.5s,baz=344,slow=11,SNR=7.2						
JNU	**Nakatsue**	**32.12**	**5**	LR	LR	21 03 56.8	
	comp=Z,28nm,20.1s,baz=355,slow=34						
SONM	**Songino Array**	**50.26**	**341**	P	P	20 54 34.5	-1.4
	0.3nm,0.7s,baz=153,slow=6.4,SNR=3.4						
MKAR	**Makanchi Array**	**60.45**	**326**	P	P	20 55 46.8	-2.9
	0.5nm,0.5s,baz=112,slow=7.2,SNR=5.2						

*ATH **20** 21:07:37.4,39.25N×21.18E,h26^{km}±2^{km},MD3.1/3*
*NEIC **20** 21:07:37.4,39.25N×21.18E,h26^{km},MD3.1(ATH),After ATH.*
*THE **20** 21:07:39.6,39.26N×21.31E,h10^{km},ML2.9*
*CSEM **20** 21:07:39.5±0.2,39.25N×21.23E,h25^{km},ML2.9,Error ellipse: s-maj=5.3km s-min=5.0km az=39.0*

ISC 20 21:07:39.1±0.7,39.23N±0.04×21.21E±0.05,h19^{km}±8^{km}, n14,$\sigma 1\overset{s}{.}27$/22,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.51**	**328**	*e*PB	**Pb**	**21 07 46.8**	**-2.5**
JAN				*e*SB	**Sb**	**21 07 55.1**	**-1.1**
MEV	**Metsovon**	**0.56**	**2**	*e*Pg	**Pb**	**21 07 49.6**	**-0.5**
EVR	**Evrytania**	**0.56**	**123**	*e*PN	**Pn**	**21 07 49.2**	**-2.8**
EVR				*e*SN	**Sn**	**21 07 58.2**	**-2.5**
LKD	**Levkas**	**0.68**	**220**	*e*Pg	**Pb**	**21 07 53.6**	**+1.5**
LKD				*e*Sg	**Sb**	**21 08 05.1**	**+4.2**
IGT	**Igoumenitsa**	**0.74**	**295**	*e*Pg	**Pb**	**21 07 54.5**	**+1.2**
AGG	**Agios Georgios**	**0.90**	**103**	*e*Pg	**Pb**	**21 07 55.3**	**-0.6**
AGG				*e*Sg	**Sb**	**21 08 07.4**	**0.0**
LSK	**Leskovik**	**1.03**	**333**	*e*Pn	**Pn**	**21 07 58.9**	**+0.2**
VLS	**Valsamata**	**1.15**	**205**	*e*PN	**Pn**	**21 07 59.9**	**-0.5**
KZN	**Kozani**	**1.16**	**22**	*e*PN	**Pn**	**21 07 59.1**	**-1.5**
KZN				*e*SN	**Sn**	**21 08 15.4**	**-0.6**
LIT	**Litokhoron**	**1.32**	**48**	*e*Pg	**Pn**	**21 08 02.7**	**-0.1**
LIT				*e*Sg	**Sb**	**21 08 20.9**	**+1.2**
LKR	**Lokris**	**1.51**	**112**	*e*PN	**Pn**	**21 08 06.1**	**+0.5**
XOR	**Xorichti**	**1.55**	**84**	*e*Pg	**Pn**	**21 08 06.8**	**+0.7**
XOR				*e*Sg	**Sn**	**21 08 27.1**	**+1.3**
FNA	**Florina**	**1.56**	**5**	*e*Pg	**Pn**	**21 08 07.3**	**+1.0**
FNA				*e*Sg	**Sn**	**21 08 29.0**	**+2.9**
NEO	**Neokhori**	**1.57**	**86**	*e*PN	**Pn**	**21 08 06.8**	**+0.4**

GUC 20 21:10:04.8±0.5,29.79S×70.90W,h87^{km}±8^{km},ML3.8,2D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLL	**Tololo Astrono**	**0.38**	**168**	⇓*i*P	P	21 10 19.4	+0.9
TLL				*i* S	S	21 10 30.0	+1.3
TLL				AMP		21 10 31.5	
	comp=E,4μm,0.4s						
VACH	**Vallenar**	**1.22**	**6**	*e*P	P	21 10 27.0	-0.2
VACH				*i* S	S	21 10 44.1	+0.1
VACH				AMP		21 10 45.0	
	comp=N,5μm,0.1s						
CMCH	**Combarbala**	**1.38**	**184**	*e*P	P	21 10 29.1	-0.2
CMCH				*i* S	S	21 10 48.0	+0.5
CMCH				AMP		21 11 04.3	
	comp=E,2μm,0.6s						
ILCH	**Illapel**	**1.85**	**187**	⇓*i*P	P	21 10 35.5	0.0
ILCH				*i* S	S	21 10 58.5	+0.4

CASC 20 21:13:29.4±2.6,14.28N×91.95W,h6^{km}±25^{km},MD3.9, 2C-1D,Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TP2	**Tecpan 2**	**1.03**	**61**	⇓*e*P	Pb	21 13 49.7	+0.5
TP2				*e*S	Sb	21 14 05.4	+2.6
IXG	**Ixpaco**	**1.45**	**94**	⇑*e*P	Pn	21 13 55.1	-1.1
IXG				*e*S	Sb	21 14 14.5	-0.5
RBDL	**Robledal**	**2.20**	**94**	*e*P	Pn	21 14 07.5	+0.5
SBLS	**San Blas**	**2.29**	**101**	*e*P	Pn	21 14 08.4	0.0
SBLS				*e*S	Sn	21 14 38.4	+1.1
SNJE	**San Jose**	**2.31**	**100**	*e*P	Pn	21 14 08.8	+0.3
SNJE				*e*S	Sn	21 14 39.4	+1.8
MRL	**Marmol**	**2.32**	**70**	⇑*e*P	Pn	21 14 07.2	-1.5
LFRS	**El Faro**	**2.87**	**103**	*e*P	Pn	21 14 15.6	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LFRS				*e*S	Sn	21 14 49.7	-2.2

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*CSEM **20** 22:23:34.7±0.1, 33.83N×47.06E, h10^{km}, ML3.1, Error ellipse: s-maj=3.5km s-min=1.9km az=88.0*

*THR **20** 22:23:35.9±0.4, 33.85N×46.96E, h14^{km}±6^{km}, ML3.1*

ISC 20 22:23:34.3±0.7, 33.82N±0.04×47.1E±0.1, h10^{km}, n11, σ1^{s}34/12, Western Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNGE	**Sanandaj**	1.28	9	*e*PG	Pg	22 23 59.8	-0.2
SNGE				*e*SG	Sg	22 24 16.9	-0.1
SNGE				AML	AML	22 24 19.4	
	comp=N,532nm,0.6s						
SHGO	**Shushtar**	2.22	140	*e*PG	Pg	22 24 18.0	-0.7
SHGR	**Shooshtar-Gavs**	2.22	140	*e*PG	Pg	22 24 18.0	-0.7
SHGR				AML	AML	22 25 19.2	
	comp=Z,86nm,0.6s						
ASAO	**Ashtian**	2.52	73	*e*PN	Pn	22 24 20.3	+4.3
ASAO				AML	AML	22 25 02.5	
	comp=N,73nm,0.6s						
UMR	**Umm Al-Rimmam**	4.29	173	*e*P	Pn	22 24 46.3	+5.1
KBD	**Kabd**	4.66	174	*e*P	Pn	22 24 50.5	+4.0
RDF	**Al-Radifah**	4.90	176	*e*P	Pn	22 24 52.8	+3.0
HILS	**Ha'il**	7.89	217	P	Pn	22 25 32.2	+0.3
ARSS	**Ar Rass**	8.60	204	P	P	22 25 41.0	-0.8
MZLS	**Mizel**	9.90	190	P	P	22 26 00.5	+0.6
AFFS	**'Afif**	10.50	201	P	P	22 26 06.3	-1.7

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*IDC **20** 22:27:01.3±2.8, 30.59S×177.59W, mb4.2/3, mb1 4.3/4, mb1mx4.0/15, mbtmp4.2/4, ML3.2/1, Error ellipse: s-maj=61.2km s-min=23.7km az=108.0*

*NEIC **20** 22:27:02.8±1.5, 30.55S×177.61W, h10^{km}, mb4.1/1, Error ellipse: s-maj=35.4km s-min=13.3km az=98.0*

ISC 20 22:27:04.2±2.3, 30.65S±0.09×177.7W±0.4, h33^{km}, n8, σ1^{s}02/9, mb4.1/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	1.42	351	Pn	Pn	22 27 27.2	-0.9
	74nm,0.3s,baz=64,slow=22,SNR=10						
RAO				Sn	Sn	22 27 41.0	-4.7
	255nm,0.3s,baz=112,slow=24,SNR=15						
URZ	**Urewera**	8.73	208	Pn	P	22 29 09.8	-1.3
	0.3nm,0.3s,baz=126,slow=19,SNR=4.7						
URZ				Sn	Sn	22 30 49.1	-0.5
	2.0nm,0.3s,baz=216,slow=21,SNR=9.0						
CTA	**Charters Tower**	34.13	279	P	P	22 33 49.2	+1.0
	2.4nm,0.6s,mb4.3,baz=110,slow=11,SNR=4.8						
STKA	**Stephens Creek**	34.71	257	P	P	22 33 54.4	+1.2
	3.8nm,0.9s,mb4.3,baz=102,slow=12,SNR=4.5						
WRAB	**Tennant Creek**	44.40	272	*e*P	P	22 35 13.3	-0.3
	1.2nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	44.40	272	P	P	22 35 13.3	-0.5
	1.2nm,0.5s,mb3.9,baz=110,slow=8.0,SNR=28						
CASY	**Casey**	55.05	208	P	P	22 36 36.2	+1.5
FINES	**FINESS Array B**	145.49	340	PKPbc	PKPbc	22 46 39.9	+1.1
	0.8nm,0.4s,baz=63,slow=3.1,SNR=14						

BJI 20 22:42:55.2, 25.41N×101.81E, h22^{km}, ML3.5, 1C, Yunnan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	0.89	109	⇑PG	Pb	22 43 08.3	-3.5
KMI				SG	Sb	22 43 19.5	-3.7
KMI				Smax			
	comp=N,1µm,0.7s						
KMI				Smax			
	comp=E,940nm,0.7s						
CD2	**Chengdu**	5.74	17	PG	Pn	22 44 41.4	+20
CD2				SG	Sn	22 45 52.6	+25
CD2				Smax			
	comp=E,80nm,1.2s						

MAN 20 22:43:39.6, 12.63N×125.42E, h1^{km}, mb3.8, ML2.5, MS2.1, Samar

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	0.74	261	*e*P	Pg	22 43 54.2	-0.3
BESP	**Borongan**	1.02	179	*e*P	Pb	22 44 00.0	+0.2
PLP	**Palo**	1.52	196	*e*P	Pn	22 44 07.4	-0.6
PLP				*e*S	Sb	22 44 46.5	+19
PVCP	**Virac**	1.56	308	*e*P	Pn	22 44 08.3	-0.4
MMPH	**Masbate**	1.77	261	*e*P	Pn	22 44 31.0	+19
MSLP	**Maasin**	2.54	192	*e*P	Pn	22 44 25.3	+2.7

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*MOS **20** 22:52:25.4±1.2, 36.23N×77.93E, h85^{km}, mb4.0/9, Error ellipse: s-maj=18.1km s-min=6.9km az=110.1*

*NEIC **20** 22:52:26.4±0.6, 36.23N×77.92E, h78^{km}±8^{km}, mb3.9/5, Error ellipse: s-maj=11.1km s-min=5.3km az=62.0*

*IDC **20** 22:52:26.8±6.2, 36.26N×77.95E, h80^{km}±52^{km}, mb3.6/9, mb1 3.8/12, mb1mx3.8/19, mbtmp4.0/12, ML4.1/3, Error ellipse: s-maj=41.3km s-min=20.0km az=15.0*

*BJI **20** 22:52:28.2, 36.63N×78.18E, h15^{km}, mb3.6, ML4.3*

*NNC **20** 22:52:34.7±4.5, 36.88N×77.95E, h114^{km}±52^{km}, mpv4.0, Error ellipse: s-maj=39.4km s-min=21.8km az=145.0*

ISC 20 22:52:26.5±0.4, 36.26N±0.02×78.07E±0.06, h102^{km}±7^{km}, n83, σ1^{s}14/98, mb3.8/14, 7C-2D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	3.65	334	P	P	22 53 23.3	+1.1
KSH				S	S	22 54 03.9	-0.6
KSH				Smax			
	comp=N,470nm,0.6s						
KSH				Smax			
	comp=E,300nm,0.5s						
THN	**Thein Dam**	4.29	208	*e*P	P	22 53 32.5	+1.6
THN				*e*x	x	22 54 20.4	
JMU	**Jammu**	4.40	217	*i* x	x	22 54 23.0	
PONG	**Pong**	4.64	203	*e*P	P	22 53 38.0	+2.2
PONG				*e*x	x	22 54 29.0	
BHK	**Bhakra**	5.02	196	*e*S	S	22 54 36.6	-1.6
SMLA	**Simla**	5.17	189	*e*P	P	22 53 42.2	-0.8
SMLA				*e*S	S	22 54 37.3	-4.6
ULHL	**Ulahol**	6.14	347	P	P	22 53 57.4	+1.2
	SNR=10						
KZA	**Kyzart**	6.21	340	P	P	22 53 57.7	+0.6
	SNR=23						
KKR	**Kurukshetra**	6.37	190	*e*P	P	22 54 00.5	+1.1
UCH	**Uchtor**	6.57	336	P	P	22 54 02.6	+0.5
	SNR=103						
AML	**Almayashu**	6.78	331	P	P	22 54 05.9	+0.9
	SNR=27						
KBK	**Karagaybulak**	6.83	340	P	P	22 54 07.2	+1.5
	SNR=16						
TKM2	**Tokmak 2**	6.92	345	P	P	22 54 07.5	+0.6
	SNR=6.2						
AAK	**Ala-Archa**	6.94	338	P	P	22 54 07.9	+0.6
	SNR=14						
AAK	**Ala-Archa**	6.94	338	⇓P	P	22 54 07.7	+0.4
	comp=E,27nm,0.8s						
AAK				⇓S	S	22 55 23.0	-2.2
	comp=E,49nm,0.9s						
AAK	**Ala-Archa**	6.94	338	P	P	22 54 07.6	+0.4
AAK				S	S	22 55 22.9	-2.3
AAK				pmax	pmax		
	comp=Z,22nm,0.8s						
AAK				smax			
	comp=N,47nm,1.0s						
AAK	**Ala-Archa**	6.94	338	*e*P	P	22 54 06.6	-0.7
	comp=N,20nm,0.5s						
LGTI	**Lohaghat**	7.03	164	*e*P	P	22 54 10.3	+1.8
LGTI				*e*S	S	22 55 26.0	-1.4
CHMS	**Chumysh**	7.20	340	P	P	22 54 11.0	+0.2
	SNR=9.8						
EKS2	**Erkin-Say**	7.20	334	P	P	22 54 12.4	+1.5
	SNR=9.2						
USP	**Ospenovka**	7.52	340	P	P	22 54 15.6	+0.5
	SNR=6.5						
NDI	**New Delhi**	7.59	186	*e*P	P	22 54 16.0	-0.1
NDI				*e*x	x	22 55 43.5	
AYAN	**Aya Nagar**	7.80	186	*e*P	P	22 54 19.2	+0.4
AYAN				*e*S	S	22 55 40.7	-5.5
AYAN				AML	AML	22 55 41.1	
	comp=Z,23nm,0.3s						
KUDL	**Kundal**	8.20	190	*e*P	P	22 54 24.6	+0.3
KUDL				*e*S	S	22 55 48.6	-7.4
KUDL				AML	AML	22 55 57.3	
	comp=Z,37nm,0.2s						
KHET	**Khetri**	8.38	194	*e*P	P	22 54 25.5	-1.3
KHET				*e*S	S	22 55 52.5	-8.0
KHET				AML	AML	22 55 57.1	
	comp=N,54nm,0.4s						
KHET				AML	AML	22 55 57.3	
	comp=E,64nm,0.4s						
KK31	**Karatay Array**	8.98	322	P	P	22 54 33.3	-1.5
	comp=E,1.2nm,0.3s,baz=137,slow=11,SNR=26						
KK31				⇑S	S	22 56 06.4	-8.5
	comp=E,7.3nm,0.6s,baz=144,slow=23,SNR=11						
KKAR	**Karatay Array**	8.98	322	P	P	22 54 33.3	-1.5
KKAR				*e*S	S	22 56 07.6	-7.3
KKAR				smax			
	comp=N,2.0nm,0.3s						
KOLN	**Koldanda**	9.67	149	*e*P	P	22 54 43.9	-0.3
	comp=N,38nm,0.6s						
GKN	**Gorkha**	9.93	144	*e*P	P	22 54 47.0	-0.7
	comp=N,34nm,0.3s						
AJM	**Ajmer**	10.18	198	*i* P	P	22 54 50.0	-1.0
KKN	**Kakani**	10.42	142	*e*P	P	22 54 53.7	-0.6
	comp=N,14nm,0.2s						
KKN	**Kakani**	10.42	142	*e*P	P	22 54 53.7	-0.6
KKN				pmax	pmax		
	comp=Z,7.0nm,0.2s						
DMN	**Daman**	10.49	143	*e*P	P	22 54 54.3	-0.8
	comp=Z,15nm,0.4s						
WMQ	**Urumqi**	10.55	41	*e*P	P	22 54 55.5	-0.4
WMQ				S	S	22 56 49.8	-2.9
GUN	**Gumba**	10.63	139	*e*P	P	22 54 57.2	+0.2
	comp=Z,9.6nm,0.2s						
PKI	**Pulchoki**	10.67	142	*e*P	P	22 54 56.8	-0.7
	comp=Z,15nm,0.2s						
PKI	**Pulchoki**	10.67	142	*e*P	P	22 54 56.8	-0.7
PKI				pmax	pmax		
	comp=Z,8.0nm,0.2s						
MK31	**Makanchi Array**	10.99	15	⇑P	P	22 55 00.5	-1.2
	comp=Z,4.9nm,0.5s,baz=201,slow=14,SNR=289						
MK31				⇑S	S	22 56 54.8	-8.3
	comp=Z,32nm,0.7s,baz=192,slow=17,SNR=25						
MKAR	**Makanchi Array**	10.99	15	P	P	22 55 00.5	-1.2
MKAR				S	S	22 56 55.2	-7.9
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MKAR	**Makanchi Array**	10.99	15	P	P	22 55 00.5	-1.3
	comp=Z,3.4nm,0.3s,baz=204,slow=14,SNR=178						
MKAR				S	S	22 56 55.2	-7.9
	comp=Z,3.5nm,0.3s,baz=196,slow=23,SNR=22						
MKAR	**Makanchi Array**	10.99	15	P	P	22 55 00.5	-1.3
MKAR				S	S	22 56 55.2	-7.9
LSA	**Lhasa**	12.77	117	P	P	22 55 27.4	+1.9
VOSK	**Vostochnaya**	17.21	345	⇑P	P	22 56 21.2	-0.5
	comp=Z,7.2nm,1.3s						
VOSK	**Vostochnaya**	17.21	345	P	P	22 56 21.1	-0.5
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA	**Gaotai**	17.45	73	*e*P	P	22 56 29.8	+5.0
GTA				AP		22 56 34.1	
GTA				XP		22 56 36.5	
BVA0	**Borovoye Array**	17.61	345	⇑P	P	22 56 29.0	+2.3
	comp=Z,1.1nm,0.8s,baz=146,slow=12,SNR=13						
BVA0	**Borovoye Array**	17.61	345	*e*P	P	22 56 28.0	+1.3
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	17.61	345	P	P	22 56 26.1	-0.5
	comp=Z,1.3nm,0.3s,baz=139,slow=10,SNR=16						
BVAR				pP		22 56 48.5	
	comp=Z,0.4nm,0.3s,baz=153,slow=9.7,SNR=9.9						
ZRNK	**Zerenda**	17.87	342	⇑P	P	22 56 29.3	-0.4
	comp=Z,4.3nm,1.0s						
ZRNK	**Zerenda**	17.87	342	P	P	22 56 29.3	-0.4
ZRNK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZRNK	**Zerenda**	17.87	342	*e*P	P	22 56 28.8	-1.0
	comp=Z,5.5nm,1.0s						
ZAL	**Zalesovo**	18.29	13	P	P	22 56 34.2	-0.4
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	18.29	13	P	P	22 56 34.2	-0.4
	comp=Z,0.7nm,0.3s,baz=257,slow=9.0,SNR=5.4						
AB31	**Akbulak array**	18.54	320	⇑P	P	22 56 36.4	-1.0
	comp=Z,2.5nm,0.8s,baz=119,slow=12,SNR=21						
AB31	**Akbulak array**	18.54	320	*e*P	P	22 56 36.1	-1.3
AB31				*i* S	S	22 59 49.7	-7.7
NVS	**Novosibirsk**	18.92	9	*i* P	P	22 56 40.0	-1.6
NVS				pmax	pmax		
	comp=N,4.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.5s						
SONM	**Songino Array**	23.86	52	P	P	22 57 34.7	+3.6
	comp=E,2.7nm,0.6s,mb3.8,baz=246,slow=9.7,SNR=25						
ARU	**Arti**	24.10	333	*e*P	P	22 57 34.2	+0.9
ARU	**Arti**	24.10	333	*e*P	P	22 57 34.0	+0.7
	comp=E,4.8nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	24.29	52	*e*P	P	22 57 38.5	+3.2
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.7						
ULN	**Ulaanbaatar**	24.29	52	*e*P	P	22 57 38.5	+3.2
	comp=Z,3.4nm,0.8s,mb3.7						
CMAR	**Chiang Mai Arr**	25.56	128	P	P	22 57 52.7	+5.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	25.56	128	P	P	22 57 52.7	+5.1
	comp=Z,0.7nm,0.3s,mb3.5,baz=309,slow=12,SNR=3.6						
OBN	**Obninsk**	33.93	317	P	P	22 59 01.0	-0.6
AKASG	**Malin Array Be**	37.56	308	P	P	22 59 32.1	-0.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	37.56	308	P	P	22 59 32.1	-0.3
	comp=Z,1.8nm,0.5s,mb4.2,baz=76,slow=7.8,SNR=8.5						
FINES	**FINESS Array B**	40.93	325	P	P	23 00 00.6	+0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	**FINESS Array B**	40.93	325	P	P	23 00 00.6	+0.6
	comp=Z,0.9nm,0.3s,mb4.0,baz=110,slow=9.2,SNR=24						
KAF	**Kangasniemi**	40.98	326	*e*p	P	22 59 56.5	-4.0
	comp=Z,0.2nm,0.4s,mb3.3,baz=104,slow=8.2						
KEV	**Kevo**	43.21	337	*e*p	P	23 00 17.2	-1.4
	comp=Z,4.2nm,0.8s,mb4.2						
KEV	**Kevo**	43.21	337	*e*P	P	23 00 17.2	-1.4
KEV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
ARCES	**ARCESS Array B**	43.61	336	P	P	23 00 22.7	+0.9
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ARCES	**ARCESS Array B**	43.61	336	P	P	23 00 22.7	+0.9
	comp=Z,4.5nm,0.5s,mb4.5,baz=104,slow=8.5,SNR=53						
GERES	**GERESS Array B**	47.70	306	P	P	23 00 55.2	+0.7
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	47.70	306	P	P	23 00 55.2	+0.8
	comp=Z,0.8nm,0.8s,mb3.6,baz=63,slow=3.0,SNR=8.4						
NB2	**NORSAR Subarra**	48.01	323	P	P	23 00 56.5	-0.2
	comp=Z,0.8nm,0.6s,mb3.7,baz=90,slow=7.9						
NOA	**NORSAR Array B**	48.01	323	P	P	23 00 56.5	-0.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	48.01	323	P	P	23 00 56.5	-0.2
	comp=Z,0.8nm,0.6s,mb3.8,baz=90,slow=7.5,SNR=6.8						
ESDC	**Sonseca Array**	62.56	301	P	P	23 02 41.6	-0.2
	comp=Z,0.5nm,0.5s,mb3.7,baz=57,slow=6.5,SNR=4.7						
ILAR	**Eielson Array**	73.33	18	P	P	23 03 48.7	+0.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	73.33	18	P	P	23 03 48.6	+0.5
	comp=Z,0.8nm,0.7s,mb3.6,baz=321,slow=5.7,SNR=8.1						
WRA	**Warramunga Arr**	77.14	127	P	P	23 04 12.1	+1.3
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	**Warramunga Arr**	77.14	127	P	P	23 04 12.1	+1.4
	comp=Z,0.5nm,1.0s,mb3.2,baz=328,slow=4.9,SNR=4.0						

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*NEIC **20** 22:55:49.4, 31.62S×71.67W, h34^{km}, ML3.3(GUC), After GUC.*

GUC 20 22:55:49.4±0.6, 31.62S×71.67W, h34^{km}±2^{km}, MD4.0, ML3.3, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ILCH	**Illapel**	0.43	92	⇑*i*P	P	22 55 59.3	+0.3
ILCH				*i* S	S	22 56 06.2	+0.5
ILCH				AMP		22 56 06.5	
	comp=N,3µm,0.2s						
CMCH	**Combarbala**	0.73	53	⇑*i*P	P	22 56 03.3	+0.1
CMCH				*i* S	S	22 56 13.8	+0.6
CMCH				AMP		22 56 14.9	
	comp=E,4µm,0.7s						
PACH	**Papudo**	0.94	168	⇑*i*P	P	22 56 06.2	0.0
PACH				*i* S	S	22 56 19.6	+1.0
JACH	**Jahuel**	1.40	139	*e*P	P	22 56 14.2	+1.3
JACH				*i* S	S	22 56 32.6	+2.3
ROCH	**El Roble**	1.46	158	*e*P	P	22 56 14.2	+0.5
ROCH				*i* S	S	22 56 33.5	+1.6
TLL	**Tololo Astrono**	1.63	28	*e*P	P	22 56 17.7	+1.6
TLL				*i* S	S	22 56 39.1	+3.0
TLL				AMP		22 56 43.0	
	comp=N,504nm,0.4s						
LCCH	**Las Cruces**	1.85	177	*e*P	P	22 56 19.1	-0.2
CLCH	**Cerro Calan**	2.02	152	*e*P	P	22 56 22.4	+0.8
CLCH				*i* S	S	22 56 47.8	+1.9
CLCH				AMP		22 56 58.0	
	comp=E,482nm,0.6s						
TACH	**Talagante**	2.12	163	*e*P	P	22 56 24.0	+0.9
PCH	**Pirque**	2.22	154	*e*P	P	22 56 25.4	+0.7
CICH	**Cipreses**	2.89	159	*e*P	P	22 56 34.5	+0.3
SFDO	**San Fernando**	3.04	170	*e*P	P	22 56 36.9	+0.7

IDC 20 23:12:00.3±1.9, 26.53S×176.49W, mb4.4/1, mb1 4.7/2, mb1mx4.1/14, mbtmp4.5/2, MS3.5/4, Ms1 3.5/4, ms1mx3.1/30, Error ellipse: s-maj=66.0km s-min=30.3km az=114.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	2.99	205	Pn	Pn	23 12 48.7	-1.1
	91nm,0.3s,baz=65,slow=23,SNR=5.3						
RAO				Sn	Sn	23 13 25.9	-1.1
	283nm,0.3s,baz=275,slow=22,SNR=5.8						
DZM	**Mont Dzumac**	16.17	282	LR	LR	23 20 48.8	
	comp=Z,136nm,21.6s,baz=209,slow=33						
HNR	**Honiara**	28.05	303	LR	LR	23 27 16.1	
	comp=Z,90nm,18.6s,baz=133,slow=33						
CTA	**Charters Tower**	34.72	273	LR	LR	23 31 50.0	
	comp=Z,92nm,18.8s,baz=50,slow=34						
WRA	**Warramunga Arr**	45.44	268	P	P	23 20 21.3	-1.7
	3.2nm,0.6s,baz=105,slow=7.6,SNR=32						
ANMO	**Albuquerque**	90.12	51	LR	LR	00 00 50.5	
	comp=Z,38nm,19.9s,baz=45,slow=32						
MKAR	**Makanchi Array**	116.27	311	PKP	PKPdf	23 30 44.9	-2.6
	0.4nm,0.8s,baz=90,slow=2.4,SNR=4.8						
NB2	**NORSAR Subarra**	145.10	353	PKPabc	PKPdf	23 31 38.8	-2.1
	0.6nm,0.7s,baz=8.0,slow=4.0						
NOA	**NORSAR Array B**	145.10	353	PKPbc	PKPbc	23 31 38.1	-1.3
	1.3nm,0.8s,baz=5.5,slow=2.4,SNR=5.1						
AKASG	**Malin Array Be**	148.89	328	PKPbc	PKPdf	23 31 49.5	+2.0
	0.2nm,0.3s,baz=35,slow=3.6,SNR=4.3						

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*NEIC **20** 23:33:44.0, 29.60S×70.60W, h88^{km}, MD3.6(GUC), After GUC.*

GUC 20 23:33:44.0±1.1, 29.60S×70.60W, h88^{km}±9^{km}, MD3.6, ML3.8, 1D, Central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	0.60	198	*e*P	P	23 34 00.6	+1.0
TLL				*i* S	S	23 34 12.5	+1.5
TLL				AMP		23 34 13.8	
	comp=E,2µm,0.2s						
LSCH	**La Serena**	0.65	241	*e*P	P	23 34 01.1	+1.1
LSCH				*i* S	S	23 34 12.6	+0.8
VACH	**Vallenar**	1.03	352	⇓*i*P	P	23 34 04.7	+0.6
VACH				*i* S	S	23 34 19.1	0.0
VACH				AMP		23 34 21.4	
	comp=N,6µm,0.1s						
CMCH	**Combarbala**	1.61	192	*e*P	P	23 34 11.9	+0.3
CMCH				*i* S	S	23 34 32.1	+0.3
CMCH				AMP		23 34 34.8	
	comp=N,2µm,0.7s						
ILCH	**Illapel**	2.09	194	*e*P	P	23 34 18.2	+0.3
ILCH				*i* S	S	23 34 43.4	+0.4
ILCH				AMP		23 34 52.3	
	comp=E,442nm,0.3s						
CPCH	**Copiapo**	2.24	6	*e*P	P	23 34 19.8	-0.2
CPCH				*i* S	S	23 34 46.4	-0.2
CPCH				AMP		23 34 48.6	
	comp=E,2µm,0.1s						
PACH	**Papudo**	3.02	194	*e*P	P	23 34 30.1	-0.7
JACH	**Jahuel**	3.08	180	*e*P	P	23 34 32.5	+0.9
MDZ	**Mendoza**	3.60	156	*e*P	P	23 34 39.4	+0.5
CLCH	**Cerro Calan**	3.79	179	*e*P	P	23 34 40.9	-0.6

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*NEIC **21** 00:06:36.1, 43.02N×13.28E, h6^{km}, ML2.9(ROM), ML2.7(LDG), After ROM.*

*CSEM **21** 00:06:36.2±0.1, 43.03N×13.42E, h30^{km}, ML3.1/9, Error ellipse: s-maj=2.1km s-min=1.2km az=80.0*

*LDG **21** 00:06:39.1±0.2, 43.06N×13.23E, h10^{km}, Ml2.7/7, Error ellipse: s-maj=7.3km s-min=4.2km az=72.0*

ROM 21 00:06:36.1±0.4, 43.02N×13.28E, h6^{km}±5^{km}, Md3.2/11, Ml2.9/15, 8C-7D, Error ellipse: s-maj=2.6km s-min=1.6km az=111.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	0.22	212	⇓*i*Pg	Pg	00 06 43.2	+2.5
CING	**Cingoli**	0.36	351	⇑*i*Pg	Pg	00 06 44.7	+1.4
CING				Sg	Sg	00 06 50.9	+2.7
	2µm,0.5s						
ASS	**Assisi**	0.46	275	⇓*i*Pg	Pg	00 06 46.6	+1.3
ASS				Sg	Sg	00 06 53.2	+1.7
TERO	**Teramo**	0.47	149	Pg	Pg	00 06 46.4	+0.9
	1µm,0.6s						
CAMP	**Campotosto**	0.50	169	⇑*i*Pg	Pg	00 06 47.1	+1.0
CAMP				Sg	Sg	00 06 55.5	+2.8
	552nm,0.5s						
ARV	**Arcevia**	0.54	333	⇑*i*Pg	Pg	00 06 47.7	+0.9
ARV				Sg	Sg	00 06 56.5	+2.5
ARVD	**Arcevia**	0.54	333	⇑*i*Pg	Pg	00 06 47.7	+0.9
MURB	**Monte Urbino**	0.60	294	Pg	Pg	00 06 49.0	+0.9
MURB				Sg	Sg	00 06 59.0	+2.8
	6µm,0.3s						
AQU	**L'Aquila**	0.67	172	Pg	Pg	00 06 49.8	+0.2
	343nm,0.3s						
FSSB	**Fossombrone**	0.76	332	⇑*i*Pg	Pg	00 06 51.6	+0.2
FSSB				Sg	Sg	00 07 03.9	+2.4
	204nm,0.3s						
FIAM	**Fiamignano**	0.76	189	⇑*i*Pg	Pg	00 06 51.5	+0.1
FIAM				Sg	Sg	00 07 03.4	+1.8
	421nm,0.6s						
MNS	**Montasola**	0.77	215	Pg	Pg	00 06 52.2	+0.6
MNS				Sg	Sg	00 07 04.5	+2.6
FAGN	**Fagnano**	0.79	163	Pg	Pg	00 06 51.9	0.0
	772nm,0.4s						
BADI	**Badiali**	0.90	303	Pg	Pg	00 06 54.3	+0.2
BADI				Sg	Sg	00 07 08.3	+2.3
	483nm,0.3s						
PTQR	**Pietraquaria**	1.00	175	Pg	Pg	00 06 55.5	-0.7
	52nm,0.4s						
SACS	**San Casciano d**	1.02	261	⇓*e*Pg	Pg	00 06 56.6	+0.1
SACS				Sg	Sg	00 07 12.7	+2.7
	180nm,0.7s						
MTCE	**Montecelio**	1.07	202	Pg	Pg	00 06 58.1	+0.5
MTCE				Sg	Sg	00 07 13.0	+1.1
	126nm,0.4s						
RSM	**Repubblica di**	1.09	327	Pg	Pg	00 06 57.9	0.0
	56nm,0.3s						
CERT	**Cerreto**	1.09	192	Pg	Pg	00 06 57.0	-1.0
CERT				Sg	Sg	00 07 16.2	+3.6
	280nm,0.4s						
VVLD	**Villa Vallelon**	1.18	167	Pg	Pg	00 06 58.8	-0.9
	233nm,0.5s						
ARCI	**Arcidosso**	1.33	263	Pg	Pg	00 07 01.8	-0.9
	35nm,0.9s						
TOLF	**Tolfa**	1.34	225	Pg	Pg	00 07 02.5	-0.4
TOLF				Sg	Sg	00 07 23.2	+2.3
	156nm,0.8s						
SFI	**Santa Sofia**	1.36	311	Pg	Pg	00 07 02.3	-1.1
	52nm,0.4s						
SDI	**San Donato**	1.37	163	Pg	Pg	00 07 02.1	-1.4
	77nm,0.2s						
LAV9	**Lanuvio**	1.41	198	Pg	Pg	00 07 04.3	0.0
	124nm,0.4s						
PGD	**Poggio Sodo**	1.42	308	Pg	Pg	00 07 03.1	-1.3
	59nm,0.6s						
RNI2	**Rionero Sannit**	1.47	153	Pg	Pg	00 07 06.3	+0.8

	241nm,1.1s						
CII	**Carovilli**	**1.51**	**149**	Pg	Pg	00 07 06.2	0.0
	39nm,0.6s						
TRIV	**Trivento**	**1.57**	**143**	Pg	Pg	00 07 06.4	-1.1
VMG	**Vicchio**	**1.57**	**307**	Pg	Pg	00 07 07.1	-0.4
	70nm,0.4s						
GRFL	**Gerfalco**	**1.69**	**275**	Pg	Pg	00 07 06.1	-3.7
	5.0nm,0.2s						
VAGA	**Valle Agricola**	**1.76**	**156**	Pg	Pg	00 07 09.8	-1.4
NVLJ	**Novalja**	**1.93**	**36**	*i* Pn	Pn	00 07 08.3	-1.5
NVLJ				*i* Sn	Sn	00 07 31.3	-3.3
VOY	**Vojsko**	**3.04**	**8**	*e*Pn	Pn	00 07 23.5	-2.2
VOY				*e*Sn	Sn	00 07 58.7	-4.2
PGF	**Pioggiola**	**3.18**	**263**	*e*Pn	Pn	00 07 26.9	-0.8
PGF				*e*Sn	Sn	00 08 02.0	-4.5
	1.8nm,0.3s						
OBKA	**Obir**	**3.60**	**14**	⇑*i*PN	Pn	00 07 31.0	-2.7
OBKA				*i* SN	Sn	00 08 12.2	-4.9
OBKA				*i* SG	Sg	00 08 32.4	-3.7
	8.9nm,0.5s						
OBKA	**Obir**	**3.60**	**14**	⇑*i*Pn	Pn	00 07 31.0	-2.7
OBKA				*i* Sg	Sg	00 08 32.4	-3.7
	8.9nm,0.5s						
KBA	**Koelnbreinsper**	**4.06**	**1**	⇓*i*PN	Pn	00 07 37.9	-2.2
KBA				*i* SN	Sn	00 08 24.7	-3.9
SBF	**Sospel**	**4.34**	**283**	*e*Pn	Pn	00 07 42.9	-1.2
SBF				*e*Sn	Sn	00 08 29.8	-5.8
	3.1nm,0.3s						
SQTA	**Sankt Quirin**	**4.45**	**342**	⇓*i*PN	Pn	00 07 44.3	-1.4
SQTA				*i* SN	Sn	00 08 36.1	-2.3
FRF	**La Foret Royal**	**4.87**	**279**	*e*Pn	Pn	00 07 49.6	-2.1
FRF				*e*Sn	Sn	00 08 42.2	-6.9
	1.8nm,0.3s						
MOA	**Molln**	**4.88**	**8**	⇓*i*PN	Pn	00 07 48.7	-3.1
MOA				*i* SN	Sn	00 08 45.2	-4.1
DAVA	**Damuels**	**4.89**	**332**	⇓*i*PN	Pn	00 07 50.9	-1.1
DAVA				*i* SN	Sn	00 08 47.6	-2.1
LMR	**La Mourre**	**4.96**	**276**	*e*Pn	Pn	00 07 50.5	-2.4
LMR				*e*Sn	Sn	00 08 44.7	-6.7
	1.0nm,0.3s						
MBDF	**Montbardon**	**5.00**	**292**	*e*Pn	Pn	00 07 51.6	-1.9
LPG	**La Plagne**	**5.30**	**300**	*e*Pn	Pn	00 07 55.6	-2.1
ORIF	**Oris-en-Rattie**	**5.66**	**292**	*e*Pn	Pn	00 08 00.9	-2.0
SMRF	**Simiane la Rot**	**5.68**	**282**	*e*Pn	Pn	00 08 02.0	-1.1
KHC	**Kasperske Hory**	**6.11**	**2**	*e*PN	Pn	00 08 04.7	-4.5
KHC				*e*x	x	00 08 13.0	
KHC				*e*SN	Sn	00 09 10.8	-10
CABF	**La Chapelle**	**6.25**	**308**	*e*Pn	Pn	00 08 08.1	-3.0
CABF				*e*Sn	Sn	00 09 15.0	-8.6
	1.0nm,0.3s						
HINF	**Hinteralfeld**	**6.59**	**319**	*e*Pn	Pn	00 08 12.2	-3.7
HINF				*e*Sn	Sn	00 09 23.4	-8.8
	2.8nm,0.3s						
CDF	**Champ du Feu**	**6.83**	**324**	*e*Pn	Pn	00 08 15.8	-3.5
CDF				*e*Sn	Sn	00 09 28.9	-9.4
LASF	**Ste Croix**	**6.92**	**282**	*e*Pn	Pn	00 08 17.6	-3.0
HAU	**Haudompre**	**6.96**	**318**	*e*Pn	Pn	00 08 18.1	-3.1
HAU				*e*Sn	Sn	00 09 32.2	-9.4
	3.7nm,0.3s						
CAF	**Calviac**	**8.31**	**287**	*e*Pn	P	00 08 37.1	-2.9

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*NEIC **21** 00:11:52.4±3.1, 37.33N×140.54E, h87^{km}±24^{km}, mb4.1/4, Error ellipse: s-maj=41.2km s-min=17.4km az=70.0*

*IDC **21** 00:11:54.8±1.5, 37.20N×140.24E, h101^{km}±13^{km}, mb3.6/8, mb1 3.7/10, mb1mx3.5/23, mbtmp3.9/10, Error ellipse: s-maj=16.6km s-min=11.3km az=82.0*

*JMA **21** 00:11:56.4±0.1, 37.19N×140.06E, h106^{km}±1^{km}, M3.1*

JMA Felt I J1.

ISC 21 00:11:55.0±0.4**, 37.19N**±0.03×**140.09E**±0.05**, h115**^{km}±2^{km}**, n34, σ0**^{s}.**74**/51**, mb3.9**/12**, 1D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSB	**Shiboa**	**0.26**	**212**	P	**P**	**00 12 11.9**	**+0.6**
JSB				S	**S**	**00 12 23.3**	**-0.3**
JFY	**Yanaizu**	**0.38**	**306**	P	**P**	**00 12 12.1**	**+0.3**
JFY				S	**S**	**00 12 23.5**	**-1.1**
JFT	**Otama**	**0.39**	**31**	P	**P**	**00 12 12.5**	**+0.6**
JFT				S	**S**	**00 12 24.3**	**-0.3**
JFK	**Kawauchi**	**0.65**	**74**	P	**P**	**00 12 14.1**	**+0.5**
JFK				S	**S**	**00 12 27.5**	**-0.2**
JKT	**Katashina**	**0.79**	**238**	P	**P**	**00 12 15.4**	**+0.6**
JHK	**Hiroka**	**0.86**	**274**	P	**P**	**00 12 15.5**	**0.0**
JHK				S	**S**	**00 12 30.2**	**-0.7**
JMM	**Marumori**	**0.88**	**39**	P	**P**	**00 12 16.4**	**+0.7**
JMM				S	**S**	**00 12 31.1**	**-0.1**
JAG	**Ashikaga**	**0.92**	**214**	P	**P**	**00 12 16.7**	**+0.6**
JYS	**Shirataka**	**1.03**	**359**	P	**P**	**00 12 17.9**	**+0.6**
JYS				S	**S**	**00 12 34.1**	**+0.2**
JAW	**Awa shima**	**1.43**	**333**	P	**P**	**00 12 21.9**	**+0.1**
JAW				S	**S**	**00 12 41.8**	**-0.2**
JRY	**Ryogami san**	**1.51**	**220**	P	**P**	**00 12 23.2**	**+0.5**
JRY				S	**S**	**00 12 43.2**	**-0.4**
MJAR	**Matsushiro Arr**	**1.64**	**247**	P	**P**	**00 12 24.9**	**+0.6**
	9.5nm,0.3s,baz=56,slow=9.8,SNR=152						
MJAR				S	**S**	**00 12 46.4**	**+0.1**
	6.3nm,0.3s,baz=68,slow=9.3,SNR=16						
MAJO	**Matsushiro**	**1.64**	**248**	⇓*i*Pn	**P**	**00 12 25.0**	**+0.7**
MAT	**Matsushiro**	**1.64**	**248**	*e*P	**P**	**00 12 25.0**	**+0.8**
MAT				*e*S	**S**	**00 12 47.0**	**+0.7**
MAT	**Matsushiro**	**1.64**	**248**	P	**P**	**00 12 24.9**	**+0.7**
MAT				S	**S**	**00 12 46.6**	**+0.3**
MAT	**Matsushiro**	**1.64**	**248**	P	**P**	**00 12 24.9**	**+0.7**
MAT				*e*S	**S**	**00 12 46.9**	**+0.6**
JSD	**Sado**	**1.68**	**301**	P	**P**	**00 12 24.5**	**-0.2**
JSD				S	**S**	**00 12 45.6**	**-1.6**
JYK	**Kaneyama**	**1.74**	**7**	P	**P**	**00 12 26.5**	**+1.0**
JYK				S	**S**	**00 12 48.5**	**+0.1**
JHJ	**Hachijo jima 2**	**4.07**	**184**	P	**P**	**00 12 56.1**	**-0.3**
	12nm,0.3s,baz=60,slow=18,SNR=6.9						
JHJ				S	**S**	**00 13 41.7**	**-1.7**
	34nm,0.3s,baz=49,slow=22,SNR=7.5						
ASAJ	**Asahikawa**	**7.18**	**15**	P	**P**	**00 13 37.2**	**-1.5**
	0.7nm,0.3s,baz=276,slow=18,SNR=3.2						
ASAJ				S	**S**	**00 14 55.5**	**-3.8**
	0.7nm,0.3s,baz=17,slow=34,SNR=2.7						
ULN	**Ulaanbaatar**	**26.39**	**304**	*e*P	**P**	**00 17 22.7**	**+0.5**
	1.6nm,0.5s,mb3.7						
SONM	**Songino Array**	**26.82**	**304**	P	**P**	**00 17 26.0**	**-0.1**
	1.8nm,0.6s,mb3.8,baz=107,slow=8.7,SNR=14						
ZAL	**Zalesovo**	**41.04**	**312**	P	**P**	**00 19 29.2**	**+1.1**
	1.2nm,0.3s,mb4.2,baz=36,slow=7.6,SNR=5.9						
MKAR	**Makanchi Array**	**43.14**	**302**	P	**P**	**00 19 46.0**	**+0.7**
	0.6nm,0.7s,mb3.5,baz=88,slow=10,SNR=6.4						
ZRNK	**Zerenda**	**50.52**	**312**	*e*P	**P**	**00 20 42.9**	**-0.1**
	1.7nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**57.08**	**186**	P	**P**	**00 21 31.0**	**-0.6**
	1.0nm,0.5s,mb4.1,baz=2.6,slow=7.5,SNR=27						
WRA				pP	pP	00 21 56.9	-2.5
	0.3nm,0.4s,baz=1.0,slow=7.5,SNR=2.1						
KEV	**Kevo**	**62.92**	**339**	*e*p	**P**	**00 22 07.2**	**-3.6**
	3.3nm,0.7s,mb4.4						
ARCES	**ARCESS Array B**	**63.48**	**339**	P	**P**	**00 22 13.8**	**-0.7**
	1.5nm,0.8s,mb4.0,baz=51,slow=7.8,SNR=3.6						
KAF	**Kangasniemi**	**67.69**	**332**	*e*p	**P**	**00 22 39.8**	**-1.5**
	0.9nm,0.4s,mb4.0,baz=50,slow=6.0						
FINES	**FINESS Array B**	**68.19**	**332**	P	**P**	**00 22 44.0**	**-0.4**
	0.7nm,0.5s,mb3.8,baz=56,slow=6.9,SNR=5.4						
NB2	**NORSAR Subarra**	**73.63**	**337**	P	**P**	**00 23 17.0**	**+0.1**
	0.5nm,0.6s,mb3.4,baz=40,slow=5.8						
NOA	**NORSAR Array B**	**73.63**	**337**	P	**P**	**00 23 16.7**	**-0.2**
	0.9nm,0.8s,mb3.6,baz=40,slow=5.8,SNR=4.7						
CLL	**Collm**	**80.43**	**329**	P	**P**	**00 23 56.0**	**+1.1**
GERES	**GERESS Array B**	**82.02**	**328**	P	**P**	**00 24 03.2**	**-0.1**
	0.3nm,0.4s,mb3.4,baz=45,slow=5.7,SNR=4.6						

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*NAO **21** 00:25:31.0±4.7, 76.03N×23.86E, h15^{km}±30^{km}, ML2.3*

*BER **21** 00:25:31.3±2.2, 76.12N×25.14E, h15^{km}±17^{km}, MD3.3, ML2.3, ML2.3(NAO)*

ISC 21 00:25:27.9±1.2**, 76.04N**±0.06×**24.8E**±0.4**, h10**^{km}**, n5, σ1**^{s}.**04**/10**, 1C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPEN	**Hopen**	**0.47**	**7**	⇑*i*P	**Pg**	**00 25 38.3**	**+0.8**
HOPEN				*e*S	**Sg**	**00 25 44.0**	**+0.1**
HOPEN				AML	AML	00 25 46.1	
	comp=Z,241nm,0.4s						
HSP	**Hornsund**	**2.37**	**299**	*e*P	**Pn**	**00 26 08.0**	**+0.6**
HSP				*e*S	**Sn**	**00 26 38.0**	**+1.2**
SPA0	**Spitsbergen Ar**	**2.85**	**323**	P	**Pn**	**00 26 13.8**	**-0.5**
	baz=142,slow=12						
SPA0				Sg	**Sg**	**00 26 56.3**	**-6.6**
	baz=134,slow=22						
KBS	**Kingsbay**	**4.01**	**322**	*e*P	**Pn**	**00 26 29.7**	**-1.2**
KBS				*e*S	**Sn**	**00 27 14.8**	**-3.7**
KBS				AML	AML	00 27 37.1	
	comp=Z,15nm,0.4s						
ARA0	**ARCESS Array S**	**6.55**	**178**	Pn	**Pn**	**00 27 06.7**	**0.0**
	baz=356,slow=10						
ARA0				Sn	**Sn**	**00 28 17.4**	**-4.8**
	baz=3.2,slow=22						

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*NEIC **21** 00:33:10.4, 37.29S×177.65E, h90^{km}, ML4.0(WEL), After WEL.*

WEL 21 00:33:10.4±0.2**, 37.30S×177.65E, h90**^{km}±2^{km}**, ML4.0**/6**, 2D, Error ellipse: s-maj=1.5km s-min=1.2km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.43**	**238**	P	P	00 33 24.2	-0.6
WIZ	**White Island**	**0.43**	**238**	P*	P	00 33 24.2	-0.6
MXZ	**Matakaoa Point**	**0.58**	**117**	P	P	00 33 25.7	-0.4
MXZ				S	S	00 33 37.5	-0.2
MXZ	**Matakaoa Point**	**0.58**	**117**	P*	P	00 33 25.6	-0.5
MXZ				S*	S	00 33 37.5	-0.2
MXZ				S*	S	00 33 37.5	-0.1
PUZ	**Puketiti**	**0.91**	**148**	PN	P	00 33 29.3	0.0
PUZ				SN	S	00 33 42.7	-0.7
MARZ	**Manawahe**	**1.03**	**228**	P	P	00 33 30.4	-0.4
MARZ	**Manawahe**	**1.03**	**228**	P*	P	00 33 30.3	-0.5
MWZ	**Matawai**	**1.04**	**185**	P	P	00 33 30.8	0.0
MWZ	**Matawai**	**1.04**	**185**	P*	P	00 33 30.7	-0.1
MWZ				S*	S	00 33 45.7	-0.5
URZ	**Urewera**	**1.05**	**204**	⇓P	P	00 33 30.8	-0.1
URZ	**Urewera**	**1.05**	**204**	⇓P*	P	00 33 30.8	-0.1
URZ				S*	S	00 33 46.1	-0.3
EDRZ	**Edgecumbe**	**1.08**	**222**	P	P	00 33 31.2	-0.2
EDRZ	**Edgecumbe**	**1.08**	**222**	P*	P	00 33 31.2	-0.1
TAZ	**Tarawera**	**1.30**	**224**	P	P	00 33 34.2	+0.1
TAZ	**Tarawera**	**1.30**	**224**	P*	P	00 33 34.2	+0.1
KUZ	**Kuaotunu**	**1.64**	**289**	P	P	00 33 37.9	-0.6
KUZ	**Kuaotunu**	**1.64**	**289**	PN	P	00 33 37.9	-0.6
KNZ	**Kokohu**	**1.72**	**179**	P	P	00 33 38.3	-1.1
KNZ				S	S	00 33 59.7	-1.1
KNZ	**Kokohu**	**1.72**	**179**	PN	P	00 33 38.4	-1.0
KNZ				SN	S	00 33 59.7	-1.1
BKZ	**Black Stump Fm**	**2.07**	**206**	P	P	00 33 43.5	-0.7
BKZ				S	S	00 34 12.4	+3.3
BKZ	**Black Stump Fm**	**2.07**	**206**	PN	P	00 33 43.5	-0.7
RITZ	**Rihia Road**	**2.19**	**220**	P	P	00 33 46.5	+0.7
RITZ	**Rihia Road**	**2.19**	**220**	PN	P	00 33 46.5	+0.7
WTVZ	**West Tongariro**	**2.43**	**221**	*e*PN	P	00 33 49.5	+0.3
NGZ	**Ngauruhoe**	**2.47**	**220**	P	P	00 33 49.8	+0.1
NGZ	**Ngauruhoe**	**2.47**	**220**	PN	P	00 33 49.7	0.0
TUVZ	**Tukino**	**2.52**	**218**	P	P	00 33 49.9	-0.4
TUVZ	**Tukino**	**2.52**	**218**	PN	P	00 33 49.9	-0.4
CNZ	**Chateau**	**2.52**	**221**	P	P	00 33 50.3	0.0
CNZ	**Chateau**	**2.52**	**221**	PN	P	00 33 50.3	0.0
HIZ	**Hauiti**	**2.52**	**240**	P	P	00 33 50.7	+0.3
HIZ	**Hauiti**	**2.52**	**240**	PN	P	00 33 50.7	+0.3
FWVZ	**Far West T-bar**	**2.56**	**220**	P	P	00 33 50.6	-0.3
FWVZ	**Far West T-bar**	**2.56**	**220**	PN	P	00 33 50.6	-0.2
MOVZ	**Moawhango**	**2.58**	**215**	P	P	00 33 50.0	-1.2
MOVZ	**Moawhango**	**2.58**	**215**	PN	P	00 33 50.0	-1.1
BFZ	**Birch Farm**	**3.55**	**198**	*e*P	P	00 34 00.5	-4.1
BFZ				S	S	00 34 41.3	-4.3
BFZ	**Birch Farm**	**3.55**	**198**	PN	P	00 34 00.5	-4.1
BFZ				SN	S	00 34 39.7	-5.9
MRZ	**Mangatainoka R**	**3.72**	**205**	P	P	00 34 02.7	-4.3
MRZ	**Mangatainoka R**	**3.72**	**205**	PN	P	00 34 02.7	-4.3
KIW	**Kapiti Island**	**4.15**	**210**	PN	P	00 34 08.6	-4.2
MTW	**Mount Morrison**	**4.20**	**203**	P	P	00 34 08.6	-4.9
MTW	**Mount Morrison**	**4.20**	**203**	PN	P	00 34 08.6	-4.9
CAW	**Cannon Point**	**4.30**	**207**	*e*P	P	00 34 10.1	-4.8
CAW	**Cannon Point**	**4.30**	**207**	*e*PN	P	00 34 09.7	-5.2
CAW				SN	S	00 35 00.3	-3.8
PAWZ	**Paruwai Farm**	**4.42**	**202**	*e*PN	P	00 34 11.3	-5.3
MRW	**Makara Radio**	**4.54**	**209**	*e*PN	P	00 34 13.4	-4.9
SNZO	**South Karori**	**4.61**	**209**	*e*P	P	00 34 13.8	-5.4
SNZO	**South Karori**	**4.61**	**209**	PN	P	00 34 13.8	-5.4
BHW	**Baring Head**	**4.63**	**207**	*e*P	P	00 34 14.4	-5.1
BHW	**Baring Head**	**4.63**	**207**	*e*PN	P	00 34 13.9	-5.6
TCW	**Tory Channel**	**4.70**	**213**	*e*P	P	00 34 15.5	-5.0
TCW	**Tory Channel**	**4.70**	**213**	*e*PN	P	00 34 15.4	-5.0
TCW				SN	S	00 35 07.0	-7.2
TUWZ	**Tuamarina**	**5.03**	**214**	PN	P	00 34 19.8	-5.1
NNZ	**Nelson**	**5.13**	**219**	PN	P	00 34 22.1	-4.1
QRZ	**Quartz Range**	**5.32**	**227**	PN	P	00 34 24.2	-4.6
THZ	**Tophouse**	**5.77**	**218**	*e*P	P	00 34 29.5	-5.5
THZ	**Tophouse**	**5.77**	**218**	*e*PN	P	00 34 29.4	-5.6
KHZ	**Kahutara**	**6.01**	**210**	*e*PN	P	00 34 32.2	-6.1
MQZ	**McQueen's Vall**	**7.45**	**209**	*e*PN	P	00 34 50.1	-8.0
MQZ				SN	S	00 36 09.2	-12
LBZ	**Lake Benmore**	**9.06**	**216**	*e*PN	P	00 35 13.0	-7.1

NNC 21 00:36:52.4±1.5**, 46.27N×82.25E, h8**^{km}±16^{km}**, mpv3.0, 4C-1D, Error ellipse: s-maj=23.2km s-min=14.2km az=88.0, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**0.52**	**3**	⇓P	Pg	00 37 03.3	+0.4
	29nm,0.2s,baz=38,slow=5.7,SNR=5947						
MK31				⇑S	Sg	00 37 11.3	+1.3
	17nm,0.2s,baz=150,slow=31,SNR=16						
KK31	**Karatay Array**	**8.94**	**253**	Pn	P	00 39 04.7	-0.1
	0.1nm,0.3s,baz=58,slow=14,SNR=4.8						
KK31				⇑Lg		00 41 35.7	
	1.6nm,0.6s,baz=55,slow=28,SNR=4.5						
VOSK	**Vostochnaya**	**9.76**	**315**	⇑Sn	Sn	00 41 03.8	-3.2
	1.5nm,0.9s						
VOSK				⇑Lg		00 41 59.3	
	3.9nm,1.1s						
BVA0	**Borovoye Array**	**10.23**	**316**	Lg		00 42 19.6	
AB31	**Akbulak array**	**15.28**	**289**	Pn	P	00 40 29.9	0.0
	0.1nm,0.2s,baz=103,slow=8.3,SNR=3.7						

GUC 21 01:18:32.7±0.4**, 20.19S×69.23W, h102**^{km}±4^{km}**, ML3.5, Northern Chile**

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*MOS **21** 01:24:25.0±1.9, 43.01N×45.08E, h1^{km}, mb3.7/1, Error ellipse: s-maj=21.4km s-min=8.8km az=19.5*

TIF 21 01:24:27.4, 43.09N×45.08E, h7^{km}±2^{km}**, 4C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNR	**Ardon**	**0.59**	**280**	⇓*i*PG	Pg	01 24 39.5	+0.1
ARNR				*e*S	Sg	01 24 49.6	+2.3
ZEI	**Tsey**	**0.93**	**250**	*e*PG	Pg	01 24 44.5	-1.5
ZEI				*e*		01 24 57.8	
ZEI				pmax	pmax		
	comp=Z,58nm,0.2s						
ZEI				smax			
	comp=N,86nm,0.2s						
TBLG	**Delisi**	**1.38**	**191**	P	Pg	01 24 54.5	-0.5
TBLG				S	Sg	01 25 18.7	+5.2
KUBR	**Kubataba**	**1.41**	**301**	⇑*e*PG	Pg	01 24 55.0	-0.6
KUBR				*e*S	Sb	01 25 16.3	+4.7
MTA	**Mtatsminda**	**1.41**	**189**	P	Pg	01 24 55.0	-0.7
MTA				S	Sg	01 25 16.7	+2.2
DGRG	**David-gareji**	**1.65**	**172**	P	Pg	01 25 00.6	+0.1
DGRG				S	Sg	01 25 28.0	+5.5
SHAR	**Shatzhatmas**	**1.87**	**291**	⇑*i*PN	Pn	01 25 02.0	+1.8
SHAR				*i* S	Sn	01 25 28.2	+3.9
KIV0	**Kislovodsk Arr**	**1.94**	**297**	⇑*e*PN	Pn	01 25 03.0	+1.9
KIV0				*e*S	Sn	01 25 30.3	+4.4
KIV	**Kislovodsk**	**1.94**	**297**	⇑*e*PN	Pn	01 25 02.8	+1.6
KIV				*e*S	Sn	01 25 30.5	+4.4

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*NEIC **21** 01:26:27.2, 9.22N×84.33W, h14^{km}, MD4.0(CASC), After CASC.*

CASC 21 01:26:27.2±1.6**, 9.24N×84.35W, h14**^{km}±8^{km}**, MD4.1, MW4.5, 10C-9D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAJ	**Bijagual**	**0.66**	**20**	⇓*e*P	Pb	01 26 37.2	-2.7
LAJ	**Bijagual**	**0.66**	**20**	⇓*e*P	Pb	01 26 37.2	-2.8
BUS	**Buena Vista**	**0.66**	**62**	⇑*e*P	Pb	01 26 40.0	0.0
BUS	**Buena Vista**	**0.66**	**62**	*e*P	Pb	01 26 40.0	0.0
BUS				⇑*e*P		01 26 40.1	
PRS1	**Puriscal**	**0.74**	**3**	⇑*e*P	Pb	01 26 39.5	-1.8
PRS1	**Puriscal**	**0.74**	**3**	⇑*e*P	Pb	01 26 39.4	-1.9
SJS	**Escuela Geolog**	**0.75**	**23**	⇓*e*P	Pb	01 26 41.6	0.0
SJS				*e*S	Sb	01 26 53.0	+1.6
SJS	**Escuela Geolog**	**0.75**	**23**	⇓*e*P	Pb	01 26 41.8	+0.2
SJS				*e*S	Sb	01 26 52.5	+1.1
CGA2	**Cerro Gallo 2**	**0.78**	**352**	⇑*e*P	Pb	01 26 41.8	-0.2
CGA2				*e*S	Sb	01 26 53.4	+1.3
CGA2	**Cerro Gallo 2**	**0.78**	**352**	*e*P	Pb	01 26 41.7	-0.3
CGA2				⇑*e*P		01 26 41.8	
CGA2				*e*S	Sb	01 26 52.4	+0.2
URSC	**Urasca**	**0.82**	**44**	*e*P	Pb	01 26 42.7	0.0
URSC	**Urasca**	**0.82**	**44**	⇑*e*P	Pb	01 26 42.8	+0.2
VPS2	**Volcan Poas 2**	**0.95**	**7**	⇓*e*P	Pb	01 26 45.0	+0.1
VPS2	**Volcan Poas 2**	**0.95**	**7**	⇓*e*P	Pb	01 26 45.0	0.0
JCR	**Jicaral**	**0.96**	**309**	*e*P	Pb	01 26 43.4	-1.8
JCR	**Jicaral**	**0.96**	**309**	*e*P	Pb	01 26 43.4	-1.8
FORC	**Fortuna**	**1.26**	**346**	⇓*i*P	Pb	01 26 49.9	-0.4
FORC	**Fortuna**	**1.26**	**346**	*i* P	Pb	01 26 49.5	-0.7
FORC				⇑*e*P		01 26 49.7	
ACR	**Cerro Adams**	**1.31**	**116**	*e*P	Pb	01 26 50.3	-0.8
SVTC	**San Vito de Co**	**1.45**	**108**	*e*P	Pn	01 26 52.0	-1.1
TRTC	**Tortuguero**	**1.47**	**25**	⇓*i*P	Pn	01 26 53.0	-0.4
TRTC	**Tortuguero**	**1.47**	**25**	⇓*e*P	Pn	01 26 53.0	-0.4
VCR	**Vista de Mar**	**1.54**	**305**	*e*P	Pn	01 26 56.0	+1.6
BRU2	**Volcan**	**1.70**	**105**	*e*P	Pn	01 26 56.4	-0.4
BRU2	**Volcan**	**1.70**	**105**	*e*P	Pn	01 26 58.7	+1.9
BRU	**Baru**	**1.82**	**104**	*e*P	Pn	01 26 58.6	+0.1
DVD	**David**	**2.04**	**113**	*e*P	Pn	01 27 01.4	-0.2
PTP1	**Petroterminal**	**2.16**	**118**	⇑*e*P	Pn	01 26 57.0	-6.3
UPA	**Univ. de Panam**	**4.76**	**93**	⇑*e*P	Pn	01 27 39.5	-0.9

MOS 21 01:32:11.9±0.7**, 42.17N×43.88E, h21**^{km}**, mb3.5**/1**, 1C-1D, Error ellipse: s-maj=61.0km s-min=13.9km az=83.1, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEI	**Tsey**	**0.60**	**1**	⇓*e*PG	Pb	01 32 24.5	+0.9
ZEI				*e*S	Sb	01 32 33.6	+2.0
ARNR	**Ardon**	**1.06**	**16**	⇑*e*PG	Pb	01 32 32.3	+0.9
ARNR				*e*S	Sb	01 32 47.2	+2.3

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*IDC **21** 01:37:33.6±0.7, 6.58N×92.52E, mb4.3/18, mb1 4.5/19, mb1mx4.4/24, mbtmp4.4/19, ML4.7/1, MS3.8/9, Ms1 3.8/9, ms1mx3.7/20, Error ellipse: s-maj=29.5km s-min=13.0km az=46.0*

*BJI **21** 01:37:35.2, 6.46N×92.59E, h29^{km}, mB4.9, mb4.8, Ms4.6, Msz4.3*

*MOS **21** 01:37:37.5±0.9, 6.70N×92.70E, h33^{km}, mb5.0/22, Error ellipse: s-maj=19.3km s-min=7.8km az=119.5*

*HRVD **21** 01:37:37.7±0.9, 6.75N×92.63E, h20^{km}±2^{km}, MW4.7/28, Centroid moment Tensor Solution. LP body waves: s8,c8; Mantle waves: s28,c39; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.20±.17; M$_{\theta\theta}$-0.13±.09; M$_{\phi\phi}$-1.07±.12; M$_{r\theta}$-0.12±.23; M$_{\theta\phi}$0.24±.08; M$_{\phi r}$-0.11±.19; Best double couple: M$_0$1.174×10^{16} NP1:φ$_s$341°, δ43°, λ81°. NP2: φ$_s$173°, δ47°, λ98°. Principal axes: T 1.218, Plg84°, Azm149°; N -.086, Plg6°, Azm347°; P -1.13, Plg2°, Azm257°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **21** 01:37:37.7±0.2, 6.61N×92.62E, mb4.9/51 Error ellipse: s-maj=6.2km s-min=4.2km az=215.0*

ISC 21 01:37:36.6±0.3**, 6.61N**±0.05×**92.66E**±0.04**, h27**^{km}**, h27**^{km}±1.7^{km}**:pP-P, n176, σ0**^{s}.**87**/180**, mb4.7**/80**, MS4.0**/19**, 19C-2D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**11.89**	**274**	*e*Pn	**P**	**01 40 24.1**	**-3.6**
PALK				*e*Sn	**S**	**01 42 29.1**	**-11**
CM31	**Chiang Mai Arr**	**13.28**	**27**	*e*P	**P**	**01 40 45.8**	**-0.3**
	48nm,1.0s						
CMAR	**Chiang Mai Arr**	**13.28**	**27**	Pn	**P**	**01 40 46.0**	**-0.1**
	1.2nm,0.3s,baz=232,slow=13,SNR=59						
CMAR				LR	LR	01 46 04.5	
	comp=Z,216nm,19.1s,baz=195,slow=38						
VIS	**Vishakhapatnam**	**14.32**	**321**	*i* P	**P**	**01 40 54.8**	**-5.2**
HYB	**Hyderabad**	**17.48**	**309**	*e*P	**P**	**01 41 40.0**	**-0.4**
HYB	**Hyderabad**	**17.48**	**309**	*i* P	**P**	**01 41 40.0**	**-0.4**
KSM	**Kuching**	**18.32**	**105**	*e*P	**P**	**01 41 51.6**	**+0.7**
QIZ	**Qiongzhong**	**20.78**	**52**	P	**P**	**01 42 21.3**	**+2.9**
QIZ				AP		01 42 28.9	
QIZ				S	**S**	**01 46 00.4**	**-3.7**
QIZ				LR	LR		
	comp=N,430nm,11.5s,MS4.2						
QIZ				LR	LR		
	comp=E,440nm,13.2s,MS4.2						
QIZ				LR	LR		
	comp=Z,690nm,12.6s,MS4.2						
KMI	**Kunming**	**20.79**	**27**	P	**P**	**01 42 18.8**	**+0.4**
KMI				AP		01 42 25.8	
KMI				XP		01 42 28.3	
KMI				PP	PP	01 42 41.8	+1.2
KMI				S	**S**	**01 46 06.3**	**+2.2**
KMI				XS		01 46 16.9	
KMI				PCP	PcP	01 46 25.9	-1.0
KMI				SS	SS	01 46 38.9	+3.1
KMI				SCP		01 49 59.9	
KMI				PCS		01 50 02.8	
KMI				AMB	AMB		
	comp=Z,20nm,1.1s						
KMI				AMB	AMB		
	comp=Z,110nm,3.1s						
KMI				LR	LR		
	comp=N,360nm,15.8s,MS4.0						
KMI				LR	LR		
	comp=E,300nm,14.0s,MS4.0						
KMI				LR	LR		
	comp=Z,430nm,14.5s,MS4.0						
PKI	**Pulchoki**	**21.96**	**343**	*e*P	**P**	**01 42 30.2**	**0.0**
	comp=Z,108nm,1.1s,mb5.2						
DMN	**Daman**	**22.09**	**342**	*e*P	**P**	**01 42 31.3**	**-0.2**
	comp=Z,94nm,1.1s,mb5.1						
GUN	**Gumba**	**22.15**	**344**	*e*P	**P**	**01 42 32.1**	**0.0**
	comp=Z,168nm,1.1s,mb5.4						
KKN	**Kakani**	**22.20**	**342**	*e*P	**P**	**01 42 32.6**	**-0.1**
	comp=Z,124nm,1.2s,mb5.2						
GKN	**Gorkha**	**22.60**	**341**	*e*P	**P**	**01 42 36.7**	**0.0**
	comp=Z,227nm,1.3s,mb5.5						
KOLN	**Koldanda**	**22.74**	**339**	*e*P	**P**	**01 42 38.3**	**+0.3**
	comp=Z,210nm,1.6s,mb5.3						
LSA	**Lhasa**	**23.02**	**357**	P	**P**	**01 42 42.0**	**+1.3**
LSA	**Lhasa**	**23.02**	**357**	*e*P	**P**	**01 42 41.5**	**+0.7**
	comp=Z,19nm,1.2s,mb4.4						
GYA	**Guiyang**	**23.83**	**32**	⇑*i*P	**P**	**01 42 48.9**	**+0.3**
GYA				AP		01 42 55.8	
GYA				XP		01 42 59.6	
GYA				PP	PP	01 43 22.4	+0.1
GYA				S	**S**	**01 47 00.3**	**+0.8**
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,90nm,3.9s						
GYA				LR	LR		
	comp=N,730nm,12.2s,MS4.4						
GYA				LR	LR		
	comp=E,330nm,12.2s,MS4.4						
GYA				LR	LR		
	comp=Z,880nm,13.5s,MS4.4						
CD2	**Chengdu**	**26.32**	**22**	P	**P**	**01 43 11.3**	**-1.0**
CD2				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.4						
NDI	**New Delhi**	**26.37**	**328**	*e*x	x	01 43 11.0	
LZH	**Lanzhou**	**31.08**	**18**	*e*P	**P**	**01 43 53.5**	**-1.5**
LZH				AP	pP	01 44 05.0	+2.1
LZH				XP	sP	01 44 08.5	+2.1
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
XAN	**Xi'an**	**31.17**	**27**	P	**P**	**01 43 53.4**	**-2.4**
WHN	**Wuhan**	**31.33**	**38**	*e*P	**P**	**01 43 57.3**	**+0.1**
GTA	**Gaotai**	**33.29**	**10**	*e*P	**P**	**01 44 14.1**	**-0.2**

GTA				AP	pP	01 44 22.8	+0.6
GTA				XP	sP	01 44 25.8	+0.2
GTA				PP	PP	01 45 26.6	+0.6
GTA				S	S	01 49 35.9	+4.0
GTA				XS		01 49 50.1	
GTA				SS	SS	01 51 40.4	+5.8
GTA				AMB	AMB		
	comp=Z,60nm,9.5s						
GTA				LR	LR		
	comp=N,180nm,12.9s,MS4.0						
GTA				LR	LR		
	comp=E,110nm,15.6s,MS4.0						
GTA				LR	LR		
	comp=Z,120nm,11.0s,MS3.9						
NJ2	Nanjing	35.18	41	eP	P	01 44 30.9	+0.3
NJ2				AP	pP	01 44 40.3	+1.7
NJ2				XP	sP	01 44 43.3	+1.3
NJ2				PP	PP	01 45 47.0	-2.8
NJ2				S	S	01 49 58.0	-3.3
NJ2				XS		01 50 13.0	
NJ2				AMB	AMB		
	comp=Z,150nm,6.5s						
NJ2				LR	LR		
	comp=N,430nm,13.6s,MS4.5						
NJ2				LR	LR		
	comp=E,320nm,11.0s,MS4.5						
NJ2				LR	LR		
	comp=Z,340nm,14.3s,MS4.2						
SSE	Sheshan	36.15	44	P	P	01 44 37.4	-1.4
SSE				XP	sP	01 44 49.8	-0.4
SSE				PP	PP	01 46 00.8	-0.7
SSE				PCP	PcP	01 47 00.3	-4.2
SSE				S	S	01 50 18.1	+1.9
SSE				XS		01 50 33.1	
SSE				PCS		01 50 48.3	
SSE				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
SSE				AMB	AMB		
	comp=Z,90nm,3.4s						
SSE				LR	LR		
	comp=N,80nm,21.9s,MS3.5						
SSE				LR	LR		
	comp=E,50nm,21.9s,MS3.5						
SSE				LR	LR		
	comp=Z,110nm,13.0s						
WMQ	Urumqi	37.32	354	eP	P	01 44 48.8	+0.2
WMQ				AP	pP	01 44 58.4	+1.8
WMQ				XP	sP	01 45 02.3	+2.4
WMQ				PP	PP	01 46 16.8	+0.4
WMQ				PCP	PcP	01 47 08.1	+0.2
WMQ				eS	S	01 50 33.8	-0.3
WMQ				SS	SS	01 53 06.8	+0.5
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,90nm,6.0s						
WMQ				LR	LR		
	comp=N,550nm,21.2s,MS4.5						
WMQ				LR	LR		
	comp=E,660nm,21.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,660nm,22.8s,MS4.4						
KZA	Kyzart	38.56	339	P	P	01 44 59.8	+0.9
	SNR=10						
UCH	Uchtor	38.95	338	P	P	01 45 03.6	+1.3
	SNR=12						
KBK	Karagaybulak	39.17	339	P	P	01 45 05.2	+1.2
	SNR=11						
AML	Almayashu	39.18	337	P	P	01 45 05.2	+1.1
	SNR=25						
AAK	Ala-Archa	39.31	339	i P	P	01 45 05.3	0.0
AAK				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.7						
AAK	Ala-Archa	39.31	339	eP	P	01 45 05.1	-0.2
	comp=Z,20nm,1.1s,mb4.8						
FRU	Bishkek	39.44	339	eP	P	01 45 07.0	+0.7
FRU				pmax	pmax		
	comp=Z,70nm,2.2s,mb5.0						
EKS2	Erkin-Say	39.60	338	P	P	01 45 08.7	+1.0
	SNR=7.7						
USP	Ospenovka	39.87	339	P	P	01 45 10.0	+0.2
	SNR=12						
FITZ	Fitzroy Crossi	40.77	128	⇓iP	P	01 45 17.6	+0.2
	comp=Z,12nm,0.9s,mb4.5						
FITZ	Fitzroy Crossi	40.77	128	P	P	01 45 17.7	+0.2
	comp=Z,17nm,0.9s,mb4.7,baz=203,slow=4.0,SNR=9.2						
MKAR	Makanchi Array	41.02	349	i P	P	01 45 18.6	-0.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	41.02	349	P	P	01 45 18.6	-0.7
	comp=Z,0.8nm,0.4s,mb3.7,baz=173,slow=9.8,SNR=8.7						
MKAR				LR	LR	02 05 26.1	
	comp=Z,67nm,19.4s,MS3.5,baz=167,slow=41						
SONM	Songino Array	42.72	14	P	P	01 45 32.7	-0.5
	comp=Z,3.5nm,0.9s,mb4.1,baz=198,slow=7.8,SNR=18						
SONM				LR	LR	02 05 26.5	
	comp=Z,113nm,18.7s,MS3.8,baz=138,slow=39						
SNY	Shenyang	44.53	33	⇑P	P	01 45 47.8	-0.2
SNY				AP	pP	01 45 59.4	+3.4
SNY				XP	sP	01 46 01.3	+2.0
SNY				XS		01 52 40.3	
SNY				AMB	AMB		
	comp=Z,10.0nm,3.1s						
SNY				LR	LR		
	comp=N,210nm,16.7s,MS4.5						
SNY				LR	LR		
	comp=E,350nm,12.6s,MS4.5						
SNY				LR	LR		
	comp=Z,180nm,12.4s,MS4.2						
ZAK	Zakamensk	44.53	10	eP	P	01 45 47.8	0.0
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.0						
TLY	Talaya	45.84	10	i P	P	01 45 58.8	+0.5
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
IRK	Irkutsk	46.49	10	eP	P	01 45 52.8	-11
IRK				e		01 47 50.4	
IRK				pmax	pmax		
	comp=Z,72nm,0.6s,mb5.8						
CN2	Changchun	46.88	32	eP	P	01 46 07.4	+0.9
CN2				eAP	pP	01 46 16.5	+1.9
CN2				eS	S	01 52 55.8	+1.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
CN2				AMB	AMB		
	comp=Z,500nm,3.0s						
CN2				LR	LR		
	comp=N,1µm,15.0s,MS5.1						
CN2				LR	LR		
	comp=E,1µm,15.0s,MS5.1						
CN2				LR	LR		
	comp=Z,2µm,16.0s,MS5.1						
ZAL	Zalesovo	47.62	354	i P	P	01 46 13.0	+0.7
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZAL	Zalesovo	47.62	354	P	P	01 46 11.8	-0.4
	comp=Z,1.5nm,0.3s,mb4.4,baz=298,slow=9.1,SNR=13						
NVS	Novosibirsk	48.69	353	i P	P	01 46 18.7	-1.9
WRA	Warramunga Arr	48.75	124	i P	P	01 46 21.6	+0.1
WRA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WRA	Warramunga Arr	48.75	124	P	P	01 46 21.0	-0.4
	comp=Z,8.5nm,0.9s,mb4.8,baz=302,slow=8.9,SNR=43						
WRAB	Tennant Creek	48.75	124	i P	P	01 46 22.0	+0.5
WRAB	Tennant Creek	48.75	124	eP	P	01 46 20.8	-0.7
	comp=Z,33nm,1.1s,mb5.3						
WRAB				ePcP	PcP	01 47 47.2	+0.6
WB2	Warramunga Arr	48.76	124	⇑iP	P	01 46 21.5	0.0
MDJ	Mudanjiang	49.67	34	P	P	01 46 28.0	-0.3
MDJ				AP	pP	01 46 37.0	+0.5
MDJ				XP	sP	01 46 40.8	+1.2
MDJ				PP	PP	01 48 22.8	-0.6
MDJ				PCS		01 51 45.1	
MDJ				XS		01 53 51.8	
MDJ				SCS	ScS	01 56 17.0	+2.0
MDJ				AMB	AMB		
	comp=Z,120nm,7.5s						
MDJ				LR	LR		
	comp=N,40nm,28.1s,MS3.4						
MDJ				LR	LR		
	comp=E,40nm,25.6s,MS3.4						
MDJ				LR	LR		
	comp=Z,40nm,25.6s,MS3.3						
MDJ	Mudanjiang	49.67	34	eP	P	01 46 28.0	-0.3
	comp=Z,30nm,1.6s,mb5.1						
BVAR	Borovoye Array	49.73	343	P	P	01 46 27.3	-1.3
	comp=Z,2.7nm,0.8s,mb4.3,baz=162,slow=9.4,SNR=11						
MJAR	Matsushiro Arr	51.09	48	P	P	01 46 39.7	+0.5
	comp=Z,0.9nm,0.3s,mb4.2,baz=233,slow=6.1,SNR=3.1						
MJAR				LR	LR	02 09 25.8	
	comp=Z,65nm,18.3s,MS3.7,baz=255,slow=37						
GNI	Garni	54.29	316	i P	P	01 47 02.2	-0.7
GNI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GNI	Garni	54.29	316	P	P	01 47 02.7	-0.3
	comp=Z,1.6nm,0.4s,mb4.3,baz=332,slow=20,SNR=2.9						
SVE	Sverdlovsk	56.05	339	eP	P	01 47 14.9	-0.6
SVE				e		01 47 27.5	
SVE				pmax	pmax		
	comp=Z,540nm,1.3s						
ARU	Arti	56.49	338	⇑iP	P	01 47 17.0	-1.7
ARU				e		01 48 11.8	
ARU				e		01 49 24.4	
ARU				eS	S	01 55 07.7	+1.2
ARU				eSS	SS	01 58 53.8	-0.7
ARU				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
ARU	Arti	56.49	338	eP	P	01 47 17.0	-1.7
	comp=Z,26nm,1.3s,mb5.1						
PMG	Port Moresby	56.58	106	i P	P	01 47 19.4	-0.5
PMG	Port Moresby	56.58	106	P	P	01 47 19.1	-0.8
	comp=Z,7.0nm,0.6s,mb4.9,baz=282,slow=9.3,SNR=5.2						
PMG	Port Moresby	56.58	106	eP	P	01 47 18.9	-1.0
	comp=Z,17nm,1.1s,mb5.0						
KIV	Kislovodsk	57.29	319	eP	P	01 47 22.6	-1.9
KIV				e		01 49 29.0	
KIV				eS	S	01 55 14.1	-3.0
KIV				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
YSS	Yuzh-Sakhalins	58.68	38	eP	P	01 47 33.8	-0.4
YSS				e		01 47 51.3	
EIL	Elat	58.79	301	eP	P	01 47 35.4	+0.1
	comp=Z,14nm,1.2s,mb4.9						
CTA	Charters Tower	58.99	118	P	P	01 47 35.6	-1.1
	comp=Z,6.0nm,0.9s,mb4.6,baz=292,slow=9.3,SNR=5.4						
STKA	Stephens Creek	60.31	132	P	P	01 47 45.7	0.0
	comp=Z,4.2nm,0.7s,mb4.6,baz=328,slow=11,SNR=4.4						
STKA	Stephens Creek	60.31	132	P	P	01 47 45.7	0.0
YAK	Yakutsk	61.66	19	eP	P	01 47 51.2	-3.2
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
YAK				MLR	MLR		
	comp=Z,150nm,13.0s,MS4.3						
YAK				MLR	MLR		
	comp=N,118nm,14.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,105nm,14.0s,MS4.3						
BRTR	Keskin Array B	62.16	312	P	P	01 47 56.1	-1.9
	comp=E,0.8nm,0.6s,mb4.0,baz=130,slow=9.6,SNR=6.4						
OBN	Obninsk	65.68	328	i P	P	01 48 19.5	-1.3
OBN				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
KIS	Kishinev	67.48	318	eP	P	01 48 30.0	-2.5
KIS				e	pP	01 48 37.0	-3.8
AKASG	Malin Array Be	68.24	322	P	P	01 48 34.4	-2.8
	comp=Z,0.2nm,0.3s,baz=90,slow=4.7,SNR=8.8						
VRI	Vrincioaia	68.61	317	⇑P	P	01 48 40.0	+0.5
MLR	Muntele Rosu	69.06	316	⇓P	P	01 48 42.4	+0.1
BURAR	Bucovina Array	70.01	318	⇑P	P	01 48 48.3	+0.2
BURAR	Bucovina Array	70.01	318	⇑P	P	01 48 48.3	+0.3
LVV	L’vov	71.25	320	eP	P	01 48 48.2	-7.3
LVV				ePS	S	01 58 08.8	-1.0
LVV				i		01 58 36.2	
KWP	Kalwaria	72.05	320	eP	P	01 48 59.6	-0.7
	comp=Z,18nm,1.2s,mb4.9						
KOLS	Kolonicke sedl	72.20	319	eP	P	01 48 57.7	-3.5
SUW	Suwalki	72.68	325	eP	P	01 49 02.3	-1.7
FINES	FINESS Array B	73.15	333	i P	P	01 49 05.5	-1.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	73.15	333	P	P	01 49 04.9	-1.6
	comp=Z,3.0nm,0.8s,mb4.2,baz=101,slow=9.7,SNR=14						
FINES				LR	LR	02 24 13.6	
	comp=Z,47nm,18.1s,MS3.8,baz=80,slow=38						
KAF	Kangasniemi	73.25	333	ep	P	01 49 05.4	-1.8
	baz=106,slow=5.6						
BOSA	Boshof	73.67	238	LR	LR	02 16 50.5	
	comp=Z,121nm,18.9s,MS4.2,baz=358,slow=32						
OJC	Ojcow	74.00	320	eP	P	01 49 11.2	-0.6
VYHS	Vyhne	74.37	318	eP	P	01 49 12.9	-1.0
OKC	Ostrava-Krasne	75.00	320	eP	P	01 49 17.7	+0.2
OKC				epP	pP	01 49 24.5	-1.5
MORC	Moravsky Berou	75.38	320	eP	P	01 49 19.2	-0.5
	comp=Z,15nm,1.4s,mb4.7						
ZST	Bratislava	75.48	318	eP	P	01 49 20.2	-0.1
KOGS	Kog	75.88	316	i P	P	01 49 22.3	-0.4
ARCES	ARCESS Array B	75.96	340	P	P	01 49 21.8	-0.8
	comp=Z,3.3nm,0.9s,mb4.2,baz=105,slow=5.6,SNR=7.5						
ARCES				LR	LR	02 24 50.7	
	comp=Z,75nm,19.6s,MS4.0,baz=141,slow=37						
DPC	Dobruska-Polom	76.23	320	eP	P	01 49 24.9	+0.4
DPC				epP	pP	01 49 32.0	-1.0
UPC	Upice	76.44	320	eP	P	01 49 26.3	+0.6
LJU	Ljubljana	77.04	316	eP	P	01 49 29.1	0.0
PRU	Pruhonice	77.33	320	eP	P	01 49 30.8	+0.1
PRU				epP	pP	01 49 37.7	-1.5
PVCC	Panska Ves	77.36	320	eP	P	01 49 31.5	+0.7
GORS	Gorjuse	77.43	316	eP	P	01 49 30.8	-0.5
BRG	Berggiesshubel	77.79	321	eP	P	01 49 33.2	+0.1
BRG				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.6						
BRG	Berggiesshubel	77.79	321	eP	P	01 49 33.2	0.0
	comp=Z,11nm,1.4s,mb4.6						
GEC2	GERESS Array S	77.79	318	eP	P	01 49 33.5	+0.3
GEC2				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
GEC2	GERESS Array S	77.79	318	eP	P	01 49 33.5	+0.3
	comp=Z,14nm,1.3s,mb4.7						
GERES	GERESS Array B	77.79	318	P	P	01 49 33.0	-0.2
	comp=Z,4.2nm,0.9s,mb4.3,baz=90,slow=6.7,SNR=34						
BILL	Bilibino	77.80	22	i P	P	01 49 32.4	-0.5
BILL				e		01 49 45.9	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
PTCC	Patocco-Chiusa	77.88	316	P	P	01 49 33.7	0.0
KHC	Kasperske Hory	77.89	319	eP	P	01 49 33.6	-0.2
WET	Wettzell	78.36	319	eP	P	01 49 36.5	+0.2
WET				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
WET	Wettzell	78.36	319	eP	P	01 49 36.5	+0.2
	comp=Z,13nm,1.3s,mb4.7						
CLL	Collm	78.41	321	eP	P	01 49 36.0	-0.6
CLL				pmax	pmax		
	comp=Z,11nm,1.6s,mb4.5						
CLL	Collm	78.41	321	eP	P	01 49 36.0	-0.6
	comp=Z,11nm,1.6s,mb4.5						
CLL	Collm	78.41	321	P	P	01 49 36.0	-0.6
	comp=Z,logA/T=0.8,mb4.5						
NKC	Novy Kostel	78.70	320	eP	P	01 49 38.4	+0.3
SFI	Santa Sofia	78.84	313	P	P	01 49 40.4	+1.3
	comp=Z,62nm,1.4s,mb5.3						
PGD	Poggio Sodo	78.93	313	P	P	01 49 41.1	+1.5
	comp=Z,48nm,1.2s,mb5.3						
CTI	Castel Tesino	79.04	316	P	P	01 49 40.9	+0.8
VMG	Vicchio	79.06	313	P	P	01 49 41.8	+1.5
MOX	Moxa	79.25	320	eP	P	01 49 41.2	0.0
MOX				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.6						
MOX	Moxa	79.25	320	eP	P	01 49 41.2	0.0
	comp=Z,13nm,1.5s,mb4.6						
MOX	Moxa	79.25	320	i P	P	01 49 41.2	0.0
	comp=Z,logA/T=0.9,mb4.6						
FUR	Furstenfeldbru	79.37	318	eP	P	01 49 41.4	-0.5
FUR				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
FUR	Furstenfeldbru	79.37	318	eP	P	01 49 41.4	-0.5
	comp=Z,10.0nm,0.5s,mb5.0						
GRA1	Grafenberg Arr	79.46	319	eP	P	01 49 42.9	+0.6
	comp=Z,20nm,1.3s,mb4.9						
GRA1				epP	pP	01 49 49.9	-0.9
GRF	Grafenberg Arr	79.46	319	eP	P	01 49 42.9	+0.6
GRF				e*PP	pP	01 49 49.9	-0.9
GRF				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
GRF	Grafenberg Arr	79.46	319	eP	P	01 49 42.9	+0.6
	comp=Z,20nm,1.3s,mb4.9						
GRF				epP	pP	01 49 49.9	-0.9
ZCCA	Zocca	79.48	314	P	P	01 49 44.4	+1.9
NB2	NORSAR Subarra	80.11	331	P	P	01 49 44.5	-1.1
	comp=Z,3.0nm,1.1s,mb4.1,baz=91,slow=5.8						
NOA	NORSAR Array B	80.11	331	P	P	01 49 44.5	-1.1
	comp=Z,2.8nm,1.2s,mb4.1,baz=100,slow=5.7,SNR=3.7						
NOA				LR	LR	02 29 12.4	
	comp=Z,55nm,19.5s,MS3.9,baz=95,slow=39						
BSEG	Bad Segeberg	80.19	324	eP	P	01 49 46.2	+0.1
BSEG				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
PGF	Pioggiola	80.91	312	⇑iP	P	01 49 50.3	+0.1
	comp=Z,25nm,1.3s,mb4.7						
TNS	Taunus Mts	81.27	320	eP	P	01 49 52.1	+0.2
TNS				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
TNS	Taunus Mts	81.27	320	eP	P	01 49 52.1	+0.2
	comp=Z,5.0nm,1.0s,mb4.4						
BFO	Black Forest	81.34	318	eP	P	01 49 52.0	-0.3
BFO				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
BFO	Black Forest	81.34	318	eP	P	01 49 52.0	-0.3
	comp=Z,7.0nm,1.2s,mb4.5						
SBF	Sospel	82.03	313	⇑iP	P	01 49 56.2	+0.2
	comp=Z,15nm,0.8s,mb4.7						
CDF	Champ du Feu	82.04	318	eP	P	01 49 55.7	-0.3
HINF	Hinteralfeld	82.34	317	eP	P	01 49 57.4	-0.1
LPG	La Plagne	82.47	315	⇑iP	P	01 49 58.9	+0.7
	comp=Z,24nm,1.1s,mb4.7						
MBDF	Montbardon	82.48	314	eP	P	01 49 58.1	-0.2
	comp=Z,8.7nm,1.0s,mb4.3						
LPL	La Plagne	82.48	315	⇑iP	P	01 49 58.9	+0.6
	comp=Z,29nm,1.1s,mb4.8						
BNI	Bardonecchia	82.54	315	eP	P	01 49 58.7	+0.1
	comp=Z,12nm,1.2s,mb4.8						
FRF	La Foret Royal	82.61	313	⇑iP	P	01 49 59.4	+0.4
	comp=Z,40nm,1.4s,mb5.0						
HAU	Haudompre	82.67	317	⇑iP	P	01 49 59.0	-0.2
LMR	La Mourre	82.72	313	⇑iP	P	01 50 00.0	+0.4
	comp=Z,27nm,1.3s,mb4.8						
CABF	La Chapelle	82.90	316	eP	P	01 50 01.0	+0.6
ORIF	Oris-en-Rattie	83.11	314	eP	P	01 50 02.1	+0.5
	comp=Z,8.6nm,0.9s,mb4.5						
SMRF	Simiane la Rot	83.37	313	eP	P	01 50 03.9	+1.0
	comp=Z,24nm,1.4s,mb4.7						
MEZF	Maizieres J’vi	83.52	318	eP	P	01 50 03.7	+0.1
	comp=Z,12nm,1.0s,mb4.7						
GIVF	Givet	83.60	320	eP	P	01 50 04.1	+0.1
VIVF	Saint-Julien-l	83.97	314	⇑iP	P	01 50 06.3	+0.3
	comp=Z,17nm,1.2s,mb4.8						
BAIF	Baives	84.00	320	eP	P	01 50 06.2	+0.2
LOR	Lormes	84.39	317	⇑iP	P	01 50 08.0	0.0
	comp=Z,30nm,1.4s,mb5.0						
SMF	Signal de Mont	84.44	316	⇑iP	P	01 50 08.3	0.0
	comp=Z,14nm,1.1s,mb4.7						
LASF	Ste Croix	84.60	314	⇑iP	P	01 50 09.8	+0.6
	comp=Z,26nm,1.4s,mb4.9						
AVF	Avril sur Loir	84.77	316	eP	P	01 50 09.9	0.0
	comp=Z,19nm,1.3s,mb4.8						
BGF	Bois d’Agland	85.13	316	eP	P	01 50 12.2	+0.5
TCF	Toulx Ste Croi	85.59	316	eP	P	01 50 14.6	+0.5
	comp=Z,14nm,1.4s,mb4.7						
CAF	Calviac	85.81	315	eP	P	01 50 15.9	+0.7
	comp=Z,14nm,1.3s,mb4.7						
MTLF	Montolieu	85.84	313	⇑iP	P	01 50 16.0	+0.6
	comp=Z,11nm,1.0s,mb4.7						
RJF	Les Rejaudoux	86.16	315	eP	P	01 50 17.7	+0.8
	comp=Z,23nm,1.3s,mb5.0						
LFF	La Frestale	86.75	315	eP	P	01 50 20.6	+0.8
	comp=Z,14nm,1.1s,mb4.8						
LDF	La Druitiere	86.94	318	eP	P	01 50 20.6	0.0
FLN	La Foliniere	87.16	319	eP	P	01 50 21.8	+0.1
MFF	Saint Martin d	87.18	316	eP	P	01 50 22.1	+0.2
	comp=Z,19nm,1.3s,mb4.9						
EPF	Esparros	87.24	313	eP	P	01 50 23.5	+1.3
GRR	Gorron	87.45	318	eP	P	01 50 23.3	+0.2
	comp=Z,20nm,1.1s,mb5.0						
SJPF	Ste Jean	88.37	313	eP	P	01 50 28.6	+1.0
	comp=Z,16nm,1.2s,mb4.8						
ESDC	Sonseca Array	90.91	310	P	P	01 50 40.4	+0.7
	comp=Z,3.0nm,1.0s,mb4.6,baz=72,slow=4.5,SNR=9.5						
DBIC	Dimbokro	96.66	277	LR	LR	02 34 13.2	
	comp=Z,70nm,20.3s,MS4.1,baz=354,slow=35						
NVAR	Mina Array Bea	126.75	30	PKP	PKPdf	01 56 41.4	-1.8
	comp=Z,0.8nm,0.8s,baz=311,slow=1.5,SNR=4.4						
PDAR	Pinedale Array	126.87	20	PKP	PKPdf	01 56 40.5	-2.8
	comp=Z,0.4nm,0.3s,baz=342,slow=4.7,SNR=6.1						
MVU	Marysvale	129.52	25	ePKPdf	PKPdf	01 56 46.7	-1.8
TXAR	Lajitas Array	140.97	23	PKP	PKPdf	01 57 05.7	-4.4
	comp=Z,0.2nm,0.5s,baz=323,slow=6.3,SNR=3.8						

IDC 21 01:41:47.0±4.8**, 49.11S**×**107.84E, mb3.8**/2**, mb1 4.1**/2**, mb1mx3.9**/11**, mbtmp3.8**/2**, Error ellipse: s-maj=169.5km s-min=35.3km az=103.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	34.94	162	P	P	01 48 40.9	-1.2
	1.4nm,1.0s,baz=288,slow=8.0,SNR=5.7						
WRA	Warramunga Arr	36.02	46	P	P	01 48 50.4	-1.4
	0.9nm,0.6s,baz=208,slow=8.7,SNR=5.1						
TXAR	Lajitas Array	148.94	118	PKPbc	PKPdf	02 01 34.6	+0.4
	0.3nm,0.7s,baz=194,slow=5.2,SNR=4.5						

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*IDC **21** 01:42:24.1±10.0, 17.43S×178.86W, h574km±128km, mb3.2/6, mb1 3.5/6, mb1mx3.2/17, mbtmp4.2/6, Error ellipse: s-maj=77.8km s-min=43.2km az=164.0*

*NEIC **21** 01:42:30.0±1.0, 17.62S×178.98W, h650km, mb4.2/3, Error ellipse: s-maj=57.2km s-min=13.5km az=152.0*

ISC 21 01:42:24.9±1.4**, 17.5S**±0.5×**179.0W**±0.3**, h600km, n13, σ0.ˢ46**/12**, mb3.9**/9**, 1C-3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.01	260	P	P	01 48 14.4	+0.8
	3.9nm,0.6s,mb4.2,baz=85,slow=9.5,SNR=3.7						
STKA	Stephens Creek	38.39	241	⇓iP	P	01 48 57.8	+0.1
	4.4nm,0.5s,mb4.2						
STKA	Stephens Creek	38.39	241	P	P	01 48 57.9	+0.2
	5.5nm,0.5s,mb4.4,baz=98,slow=11,SNR=18						
STKA	Stephens Creek	38.39	241	eP	P	01 48 57.6	-0.1
STKA				⇓iP		01 48 57.8	
WB2	Warramunga Arr	44.20	259	⇓iP	P	01 49 43.5	-0.4
WRAB	Tennant Creek	44.20	259	eP	P	01 49 43.6	-0.3
	7.2nm,0.7s,mb4.3						
WRA	Warramunga Arr	44.21	259	P	P	01 49 43.6	-0.4
	2.6nm,0.5s,mb4.0,baz=96,slow=7.3,SNR=55						
KAKA	Kakadu	47.08	269	⇑iP	P	01 50 06.6	+0.7
	6.2nm,0.4s,mb4.5						
FITZ	Fitzroy Crossi	52.59	260	P	P	01 50 46.4	+0.2
	4.5nm,0.8s,mb3.8,baz=138,slow=6.9,SNR=14						
MBWA	Marble Bar	57.68	256	P	P	01 51 20.9	-0.5
	5.9nm,0.6s,mb3.9						
ILAR	Eielson Array	85.59	13	P	P	01 54 01.1	-0.4
	0.2nm,0.4s,mb3.1,baz=217,slow=4.5,SNR=5.4						
TXAR	Lajitas Array	86.20	58	P	P	01 54 05.6	+0.4
	0.1nm,0.4s,mb2.8,baz=207,slow=5.6,SNR=5.6						
GERES	GERESS Array B	147.06	345	PKPbc	PKPdf	02 01 02.7	+4.9
	0.1nm,0.3s,baz=27,slow=3.0,SNR=4.7						

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*THR **21** 01:55:24.0±0.5, 30.79N×56.84E, h14km±5km, ML3.2*

*CSEM **21** 01:55:24.5±0.1, 30.79N×56.83E, h16km, ML3.8/1, Error ellipse: s-maj=5.4km s-min=3.1km az=44.0*

*TEH **21** 01:55:33.5, 30.98N×56.22E, h10km, Mn3.2*

ISC 21 01:55:24.0±0.8**, 30.82N**±0.06×**56.87E**±0.09**, h10km, n18, σ0.ˢ99**/19**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.84	186	ePG	Pg	01 55 39.3	-1.6
KRBR				AML	AML	01 55 56.6	
	comp=N,910nm,0.2s						
IBAF	Bafgh	1.35	305	Pg	Pn	01 55 47.5	-1.6
IMEH	Mehriz	2.02	287	Pn	Pn	01 55 58.1	-0.5
ICHK	Chekchek	2.54	305	Pn	Pn	01 56 05.6	-0.4
IPAR	Pars	3.44	255	Pn	Pn	01 56 19.7	+0.8
BNDS	Bandar-Abbas	3.46	190	ePN	Pn	01 56 19.2	0.0
BNDS				AML	AML	01 57 19.8	
	comp=N,44nm,0.4s						
BNDS	Bandar-Abbas	3.46	190	ePn	Pn	01 56 19.2	0.0
	SNR=52						
ZHSF	Zahedan	3.59	109	ePN	Pn	01 56 21.7	+0.7

NASN	Na'in	3.98	301	ePN	Pn	01 56 26.7	+0.2
NASN				eSG	Sb	01 57 27.5	+5.0
NASN				AML	AML	01 57 38.2	
	comp=N,37nm,0.6s						
NASN	Na'in	3.98	301	ePn	Pn	01 56 26.7	+0.2
	SNR=52						
NASN				eSg	Sb	01 57 27.5	+5.0
	comp=N,37nm,0.6s,SNR=90						
IMOK	Mook	4.02	245	Pn	Pn	01 56 29.6	+2.5
GHIR	Ghir-Karzin	4.22	234	ePN	Pn	01 56 29.8	-0.2
IGAR	Garneh	4.23	291	Pn	Pn	01 56 31.8	+1.7
IZEF	Zefreh	4.38	299	Pn	Pn	01 56 31.7	-0.5
IKLH	Kalahroud	5.13	300	Pn	Pn	01 56 42.1	-0.8
IFIR	Firoozkooh	5.92	325	Lg		01 58 24.6	
IFIR	Firoozkooh	5.92	325	Pn	Pn	01 56 54.1	+0.2
IDMV	Damavand	6.24	321	Pn	Pn	01 56 58.8	+0.3

*WAR **21** 02:08:26.9, 50.35N×18.85E, h0^{km}, ML2.4, Mining Induced*
*NEIC **21** 02:08:26.3±1.0, 50.37N×18.76E, h5^{km}, MG2.5(WAR), Error ellipse: s-maj=16.4km s-min=6.2km az=192.0*
*PRU **21** 02:08:27.7, 50.37N×18.76E*
ISC 21 02:08:25.2±0.6**, 50.39N**±0.05×**18.79E**±0.04**, n16, σ1^{s}42**/26**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.49	232	ePG	Pg	02 08 37.0	+2.1
RAC				eSG	Sg	02 08 44.0	+2.6
OJC	Ojcow	0.67	104	ePg	Pg	02 08 39.7	+1.2
OJC				eSg	Sg	02 08 49.2	+1.8
OKC	Ostrava-Krasne	0.69	217	ePG	Pg	02 08 39.8	+0.9
OKC				eSG	Sg	02 08 50.1	+2.1
	12nm,0.4s						
MORC	Moravsky Berou	1.01	233	ePn	Pn	02 08 45.4	-1.0
NIE	Niedzica	1.38	134	ePG	Pg	02 08 52.0	-0.7
NIE				eSG	Sg	02 09 10.0	-1.2
DPC	Dobruska-Polom	1.58	270	ePG	Pg	02 08 55.7	-1.0
DPC				eSG	Sg	02 09 17.7	-0.1
	6.3nm,0.3s						
KSP	Ksiaz	1.65	287	ePG	Pg	02 08 58.0	-0.2
KSP				eSG	Sg	02 09 22.0	+1.8
UPC	Upice	1.78	275	ePG	Pg	02 09 00.9	+0.2
VYHS	Vyhne	1.89	179	ePN	Pn	02 09 00.5	+1.5
VYHS				eSN	Sn	02 09 22.9	-1.1
KOLS	Kolonicke sedl	2.69	121	ePG	Pg	02 09 17.0	-1.9
PRU	Pruhonice	2.76	263	ePG	Pg	02 09 18.2	-2.0
PRU				eSG	Sg	02 09 56.9	-0.1
	3.4nm,0.5s						
BRG	Berggiesshubel	3.12	281	Pg	Pg	02 09 26.8	-0.7
BRG				Sg	Sg	02 10 07.6	-1.6
KHC	Kasperske Hory	3.60	252	ePG	Pg	02 09 33.5	-3.6
KHC				eSG	Sg	02 10 23.3	-1.9
	11nm,0.8s						
CLL	Collm	3.78	286	eSG	Sg	02 10 33.0	+2.0
MOA	Molln	3.91	231	i	Pn	02 09 33.6	+5.9
MOA	Molln	3.91	231	i SG	Sg	02 10 29.0	-6.2
	1.6nm,0.6s						

*IDC **21** 02:17:48.2±0.8, 26.76S×176.36W, mb3.8/5, mb1 4.3/8, mb1mx4.2/16, mbtmp4.2/8, ML3.2/2, MS3.6/3, Ms1 3.6/3, ms1mx3.1/22, Error ellipse: s-maj=36.3km s-min=18.5km az=117.0*
*NEIC **21** 02:17:51.0±5.1, 26.76S×176.30W, h20^{km}±31^{km}, mb4.7/4, Error ellipse: s-maj=18.3km s-min=12.4km az=103.0*
ISC 21 02:17:51.1±0.6**, 26.64S**±0.08×**176.5W**±0.1**, h33^{km}, n29, σ1^{s}16**/25**, mb4.2**/9**, MS3.8**/2**, 3C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.90	206	Pn	Pn	02 18 35.1	-1.1
	142nm,0.3s,baz=70,slow=16,SNR=7.6						
RAO				Sn	Sn	02 19 12.2	+1.8
	298nm,0.3s,baz=262,slow=24,SNR=5.2						
RAO	Raoul Island	2.90	206	ePn	Pn	02 18 35.0	-1.3
RAO				Pn	Pn	02 18 35.1	-1.1
RAO				Sn	Sn	02 19 12.2	+1.8
URZ	Urewera	12.79	203	Pn	P	02 20 49.9	-3.5
	0.4nm,0.3s,baz=134,slow=8.0,SNR=2.3						
URZ				Sn	S	02 23 02.7	-13
	0.8nm,0.3s,baz=163,slow=21,SNR=3.9						
AFI	Afiamalu	13.40	20	Pn	P	02 21 00.5	-1.0
	2.4nm,0.3s,baz=63,slow=23,SNR=3.3						
DZM	Mont Dzumac	16.23	283	Pn	P	02 21 42.7	+4.5
	0.1nm,0.3s,baz=119,slow=10,SNR=2.2						
DZM				LR	LR	02 26 43.3	
	comp=Z,79nm,19.8s,baz=26,slow=33						
HNR	Honiara	28.13	303	LR	LR	02 33 23.4	
	comp=Z,121nm,18.1s,MS3.5,baz=112,slow=33						
WB2	Warramunga Arr	45.45	268	eP	P	02 26 08.4	-0.7
WRAB	Tennant Creek	45.45	268	eP	P	02 26 09.6	+0.5
	6.1nm,0.6s,mb4.6						
WRA	Warramunga Arr	45.46	268	P	P	02 26 09.0	-0.2
	3.6nm,0.6s,mb4.4,baz=105,slow=7.8,SNR=42						
KAKA	Kakadu	49.76	276	eP	P	02 26 43.3	+0.5
	3.4nm,0.4s,mb4.7						
SBA	Scott Base	51.88	184	eP	P	02 26 59.6	+1.6
	27nm,2.0s,mb4.8						
VNDA	Vanda	51.96	186	P	P	02 26 57.0	-1.6
	0.3nm,0.6s,mb3.4,baz=45,slow=2.9,SNR=2.5						
QSPA	South Pole Qui	63.46	180	eP	P	02 28 19.4	-0.2
	4.7nm,0.7s,mb4.7						
QSPA				⇓iP		02 28 19.5	
MAW	Mawson	76.29	200	P	P	02 29 38.4	+0.6
	0.5nm,0.3s,mb4.0,baz=191,slow=16,SNR=2.6						
SNAA	Sanae	81.86	178	e	P	02 30 13.0	+5.0
SNAA	Sanae	81.86	178	⇑iP	P	02 30 07.2	-0.8
SNAA				e		02 30 13.0	
VNA3	Neumayer Olymp	81.95	176	e	P	02 30 13.8	+5.4
VNA3	Neumayer Olymp	81.95	176	⇑iP	P	02 30 07.4	-1.0
VNA3				e		02 30 13.8	
VNA2	Neumayer--Watz	82.40	176	e	P	02 30 17.6	+6.8
VNA2	Neumayer--Watz	82.40	176	⇑iP	P	02 30 11.2	+0.4
VNA2				e		02 30 17.6	
NVAR	Mina Array Bea	84.56	42	P	P	02 30 23.8	+1.4
	0.6nm,0.7s,mb3.8,baz=221,slow=9.6,SNR=3.8						
TXAR	Lajitas Array	89.21	57	P	P	02 30 46.0	+0.8
	0.1nm,0.3s,mb3.6,baz=207,slow=4.0,SNR=2.9						
ANMO	Albuquerque	90.16	51	LR	LR	03 02 20.5	
	comp=Z,71nm,20.9s,MS4.1,baz=72,slow=30						
FINES	FINESS Array B	142.03	343	PKhKP		02 37 18.5	
	0.6nm,1.0s,baz=132,slow=26,SNR=2.7						
NB2	NORSAR Subarra	145.22	353	PKPabc	PKPdf	02 37 26.6	+1.9
	2.0nm,0.9s,baz=4.0,slow=2.7						
NOA	NORSAR Array B	145.22	353	PKPbc	PKPbc	02 37 26.4	+1.3
	1.4nm,0.8s,baz=6.8,slow=2.5,SNR=5.8						
AKASG	Malin Array Be	148.99	328	PKPbc	PKPdf	02 37 37.4	+6.1
	0.8nm,0.6s,baz=39,slow=3.5,SNR=4.1						
AKASG	Malin Array Be	148.99	328	PKPbc	PKPdf	02 37 37.4	+6.1
BRTR	Keskin Array B	151.77	305	PKPab	PKPab	02 37 56.3	+2.7
	1.3nm,0.8s,baz=84,slow=3.5,SNR=4.5						

*CSEM **21** 02:18:38.3±0.3, 34.91N×3.79W, h5^{km}, MD2.6, Error ellipse: s-maj=9.4km s-min=5.0km az=119.0*
*MDD **21** 02:18:39.4±0.5, 35.01N×3.88W, mbLg2.3/2, Error ellipse: s-maj=5.3km s-min=2.6km az=54.0, PRXIMO*
*CNRM **21** 02:18:39.2, 35.03N×3.84W, h6^{km}, MD2.6*
*NEIC **21** 02:18:41.7, 35.05N×3.92W, MG2.6(MDD), After MDD.*
ISC 21 02:18:38.8±0.9**, 35.02N**±0.03×**3.95W**±0.05**, h5^{km}**±6^{km}**, n19, σ1^{s}46**/32**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOU	Touzarine	0.17	110	Pg	Pg	02 18 41.0	-1.4
TOU				Lg		02 18 43.0	
TOU	Touzarine	0.17	110	i P	Pg	02 18 41.0	-1.4
MPAL	Palemas	0.20	2	Pg	Pg	02 18 43.0	0.0
MPAL				Lg		02 18 46.0	
EMEL	Melilla	0.86	71	Pg	Pg	02 18 56.3	+0.3
	6.4nm,0.1s,SNR=7.9						
EMEL				Lg		02 19 09.0	
	107nm,0.2s,SNR=7.9						
EMLI	Melilla	0.86	71	P	Pb	02 18 56.3	+0.4
	6.4nm,0.1s,SNR=7.9						
EMLI				S	Sb	02 19 09.0	+1.4
	107nm,0.2s,SNR=7.9						
TZK	Tazeka	0.95	192	i P	Pb	02 18 57.0	-0.4
TZK				i S	Sb	02 19 11.0	+1.0
ZAI	Zaio	0.99	93	i P	Pb	02 18 55.0	-3.0
ZAI				i S	Sb	02 19 09.0	-2.2
EALB	Alboran	1.18	39	P	Pb	02 19 01.9	+0.6
EALB				S	Sb	02 19 17.3	+0.5
EALB	Alboran	1.18	39	Pg	Pg	02 19 01.9	-0.5
	0.4nm,0.0s,SNR=7.9						
EALB				Lg		02 19 17.3	
	6.3nm,0.2s,SNR=7.9						
EALB	Alboran	1.18	39	P	Pb	02 19 01.9	+0.6
	0.4nm,0.0s,SNR=7.9						
EALB				S	Sb	02 19 17.3	+0.5
	6.3nm,0.2s,SNR=7.9						
EMIJ	Mijas	1.68	337	Pn	Pn	02 19 10.5	+1.5
	0.2nm,0.1s,SNR=7.9						
EMIJ				Sn	Sn	02 19 28.4	-2.8
	2.3nm,0.2s,SNR=7.9						
EBER	Berja	2.06	24	P	Pn	02 19 17.2	+2.7
EBER				S	Sn	02 19 43.2	+2.4
EBER	Berja	2.06	24	Pn	Pn	02 19 14.7	+0.2
	0.2nm,0.1s,SNR=4.0						
EBER				Sn	Sn	02 19 40.1	-0.7
	1.7nm,0.2s,SNR=4.0						
EBER	Berja	2.06	24	P	Pn	02 19 17.2	+2.7
	0.2nm,0.1s,SNR=4.0						
EBER				S	Sn	02 19 43.2	+2.4
	1.7nm,0.2s,SNR=4.0						
EQES	Quesada	2.87	14	P	Pn	02 19 28.7	+2.7
EQES				S	Sn	02 19 59.6	-1.7
EQES	Quesada	2.87	14	Pn	Pn	02 19 28.7	+2.7
	0.0nm,0.0s,SNR=7.9						
EQES				Sn	Sn	02 19 59.6	-1.7
	1.0nm,0.3s,SNR=4.0						
EQES	Quesada	2.87	14	P	Pn	02 19 28.7	+2.7
	SNR=7.9						
EQES				S	Sn	02 19 59.6	-1.7
	1.0nm,0.3s,SNR=4.0						
EMIN	Mina Concepcio	3.51	322	Pn	Pn	02 19 35.8	+0.5
	0.1nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	02 20 15.0	-2.6
	0.1nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.51	322	P	Pn	02 19 35.8	+0.6
	0.1nm,0.1s,SNR=7.9						

*GUC **21** 02:35:25.9±0.4, 20.05S×69.21W, h100^{km}±2^{km}, ML4.7*
*NEIC **21** 02:35:26.1±1.1, 20.24S×68.89W, h105^{km}±11^{km}, Error ellipse: s-maj=18.3km s-min=10.4km az=103.0*
*IDC **21** 02:35:26.1±1.9, 20.28S×68.88W, h103^{km}±17^{km}, mb3.6/4, mb1 3.8/6, mb1mx3.5/17, mbtmp4.1/6, Error ellipse: s-maj=26.8km s-min=13.6km az=92.0*
ISC 21 02:35:25.0±1.2**, 20.33S**±0.06×**68.8W**±0.2**, h106^{km}**±16^{km}**, n11, σ0^{s}65**/11**, mb3.9**/2**, 1C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.07	9	P	P	02 36 26.2	-0.3
	6.0nm,0.3s,baz=208,slow=7.5,SNR=228						
LPAZ				S	S	02 37 13.7	+0.3
	0.8nm,0.3s,baz=286,slow=23,SNR=3.1						
LPAZ	La Paz	4.07	9	⇑ePn	P	02 36 26.1	-0.4
LPAZ				P		02 36 26.2	
LPAZ				S	S	02 37 13.7	+0.3
SIV	San Ignacio	8.53	61	P	P	02 37 26.7	-0.5
	5.5nm,0.3s,baz=259,slow=10,SNR=229						
CFAA	Coronel Fontan	11.24	177	P	P	02 38 04.4	+0.9
	0.0nm,0.3s,baz=6.7,slow=15,SNR=2.3						
CFAA				S	S	02 40 06.5	-1.0
	0.0nm,0.3s,baz=342,slow=14,SNR=2.5						
BDFB	Brasilia	20.32	80	P	P	02 39 55.6	+0.7
	1.0nm,0.4s,baz=237,slow=6.4,SNR=4.3						
PLCA	Paso Flores	20.39	184	P	P	02 39 56.1	+0.8
	2.7nm,0.6s,baz=343,slow=16,SNR=3.7						
DBIC	Dimbokro	68.32	74	P	P	02 46 17.0	-0.4
	6.3nm,1.1s,mb4.3,baz=229,slow=4.6,SNR=4.0						
NVAR	Mina Array Bea	74.64	322	P	P	02 46 54.2	-0.5
	0.2nm,0.3s,mb3.4,baz=180,slow=6.3,SNR=2.8						
WRA	Warramunga Arr	134.00	211	PKP	PKPdf	02 54 32.2	+1.5
	0.3nm,0.8s,baz=145,slow=1.7,SNR=5.3						
MKAR	Makanchi Array	144.63	35	PKP	PKPdf	02 54 48.9	-0.2
	0.3nm,0.5s,baz=297,slow=3.2,SNR=3.1						
SONM	Songino Array	152.29	7	PKPbc	PKPdf	02 55 09.5	+8.2
	0.5nm,0.4s,baz=310,slow=2.0,SNR=5.2						

*IDC **21** 02:37:26.4±1.9, 60.48S×45.32W, mb3.6/4, mb1 3.7/4, mb1mx3.6/13, mbtmp3.6/4, Error ellipse: s-maj=104.8km s-min=30.0km az=39.0*
*NEIC **21** 02:37:28.9±0.5, 60.11S×44.63W, h10^{km}, mb4.2/4, Error ellipse: s-maj=32.0km s-min=9.8km az=58.0*
ISC 21 02:37:27.5±0.7**, 60.1S**±0.1×**44.7W**±0.4**, h10^{km}, n19, σ0^{s}96**/15**, mb3.8**/8**, 4C, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	17.87	143	e	P	02 41 44.8	+7.4
VNA3	Neumayer Olymp	17.87	143	⇑iP	P	02 41 35.7	-1.7
VNA3				e		02 41 44.8	
VNA1	Neumayer--Stat	18.12	140	e	P	02 41 54.8	+14
VNA1	Neumayer--Stat	18.12	140	⇑iP	P	02 41 46.3	+5.8
VNA1				e		02 41 54.8	
VNA2	Neumayer--Watz	18.47	141	e	P	02 41 51.6	+6.7
VNA2	Neumayer--Watz	18.47	141	⇑iP	P	02 41 44.6	-0.3
VNA2				e		02 41 51.6	
VNA2				e		03 05 05.1	
SNAA	Sanae	20.09	142	⇑iP	P	02 42 04.2	+0.6
SNAA				eP		02 42 04.6	
SNAA				e		02 42 14.8	
TRQA	Tornquist	24.67	326	eP	P	02 42 51.7	+2.3
	8.0nm,0.7s,mb4.4						
PLCA	Paso Flores	25.17	309	P	P	02 42 53.0	-1.2
	0.9nm,0.7s,mb3.4,baz=135,slow=14,SNR=3.4						
CFAA	Coronel Fontan	32.54	321	P	P	02 43 59.8	-0.8
	0.1nm,0.7s,mb2.9,baz=168,slow=8.3,SNR=3.9						
SBA	Scott Base	40.93	190	eP	P	02 45 11.3	+0.3
	5.0nm,0.6s,mb4.3						
VNDA	Vanda	41.63	188	eP	P	02 45 16.8	+0.2
	3.9nm,1.3s,mb3.9						
SIV	San Ignacio	45.65	338	P	P	02 45 49.9	0.0
	1.2nm,0.8s,mb3.9,baz=188,slow=8.3,SNR=7.3						
LPAZ	La Paz	46.97	328	P	P	02 46 00.8	+0.5
	0.6nm,0.8s,mb3.6,baz=124,slow=7.3,SNR=3.1						
SAML	Samuel	52.92	337	eP	P	02 46 45.4	-0.6
	1.1nm,0.5s,mb4.0						
BVAR	Borovoye Array	144.89	72	PKPbc	PKPbc	02 57 04.1	+0.6
	3.0nm,0.7s,baz=225,slow=4.1,SNR=18						
ILAR	Eielson Array	145.84	312	PKPbc	PKPbc	02 57 05.2	-0.4
	2.7nm,0.8s,baz=133,slow=3.0,SNR=23						
MKAR	Makanchi Array	146.71	89	PKPbc	PKPbc	02 57 08.8	+0.6
	1.4nm,0.5s,baz=242,slow=1.6,SNR=11						
MKAR	Makanchi Array	146.71	89	PKPbc	PKPbc	02 57 08.8	+0.6

*IDC **21** 02:51:55.6±5.0, 30.54N×84.17E, mb3.5/2, mb1 3.8/4, mb1mx3.6/20, mbtmp3.5/4, ML3.9/2, MS3.3/1, Ms1 3.3/1, ms1mx2.4/18, Error ellipse: s-maj=193.5km s-min=31.7km az=67.0*
ISC 21 02:51:55.8±0.8**, 30.6N**±0.1×**84.21E**±0.07**, h10^{km}, n11, σ1^{s}16**/11**, mb3.5**/2**, MS3.3**/1**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	Pithoragarh	3.63	254	eP	Pn	02 52 53.0	-0.3
PTH				eS	Sn	02 53 36.4	-0.3
LGTI	Lohaghat	3.64	252	eP	Pn	02 52 55.5	+2.0
LGTI				eS	Sn	02 53 37.5	+0.6
SMLA	Simla	6.08	276	i P	Pn	02 53 19.0	-8.9
NDI	New Delhi	6.39	254	ex	Pn	02 53 29.5	-2.9
KHET	Khetri	7.77	253	eP	Pn	02 53 43.3	-8.5
MKAR	Makanchi Array	16.20	355	Pn	P	02 55 45.0	0.0
	0.1nm,0.3s,baz=173,slow=12,SNR=3.3						
CMAR	Chiang Mai Arr	18.05	129	P	P	02 56 09.3	+0.8
	0.3nm,0.3s,baz=315,slow=14,SNR=3.2						
SONM	Songino Array	24.15	38	PcP	PcP	03 00 54.7	-0.6
	0.3nm,0.5s,baz=270,slow=2.9,SNR=2.9						
FINES	FINESS Array B	48.44	327	LR	LR	03 22 49.4	
	comp=Z,27nm,18.0s,MS3.3,baz=117,slow=38						
WRA	Warramunga Arr	69.64	130	P	P	03 03 06.4	-1.3
	0.4nm,0.5s,mb3.6,baz=324,slow=6.3,SNR=8.4						
ILAR	Eielson Array	76.92	20	P	P	03 03 50.1	+0.6
	0.4nm,0.9s,mb3.3,baz=321,slow=5.8,SNR=4.4						

GUC 21 03:09:07.6±0.3**, 19.72S×69.36W, h101^{km}**±2^{km}**, ML4.1, Northern Chile**

*IDC **21** 03:24:03.9±1.7, 34.85S×100.72W, mb4.0/6, mb1 4.2/6, mb1mx4.0/18, mbtmp4.0/6, MS3.8/12, Ms1 3.8/12, ms1mx3.7/22, Error ellipse: s-maj=50.5km s-min=25.3km az=46.0*
*NEIC **21** 03:24:05.6±1.2, 34.85S×100.69W, h10^{km}, mb4.2/1, Error ellipse: s-maj=30.4km s-min=18.1km az=53.0*
ISC 21 03:24:03.8±1.4**, 34.9S**±0.2×**100.8W**±0.3**, h10^{km}, n19, σ0^{s}61**/9**, mb3.9**/7**, MS3.8**/11**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	10.68	314	LR	LR	03 29 36.8	
	comp=Z,602nm,18.2s,baz=19,slow=31						
PLCA	Paso Flores	24.49	113	P	P	03 29 24.5	+0.4
	3.9nm,0.9s,mb3.8,baz=275,slow=10,SNR=5.0						
PLCA				LR	LR	03 36 39.1	
	comp=Z,66nm,21.1s,MS3.1,baz=98,slow=31						
CFAA	Coronel Fontan	27.32	92	LR	LR	03 36 55.3	
	comp=Z,14nm,21.6s,baz=256,slow=28						
USHA	Ushuaia	29.96	142	P	P	03 30 14.0	-0.1
	2.7nm,0.8s,mb4.0,baz=293,slow=15,SNR=3.5						
USHA				LR	LR	03 38 56.9	
	comp=Z,467nm,20.6s,MS4.1,baz=210,slow=30						
LPAZ	La Paz	34.54	66	P	P	03 30 55.5	+0.9
	5.5nm,1.2s,mb4.4,baz=232,slow=8.3,SNR=8.8						
LPAZ				LR	LR	03 40 45.5	
	comp=Z,36nm,20.5s,MS3.1,baz=297,slow=29						
LPAZ	La Paz	34.54	66	P	P	03 30 55.5	+0.9
LPAZ				eP		03 30 55.9	
SIV	San Ignacio	40.14	72	P	P	03 31 40.5	-1.2
	0.6nm,0.7s,mb3.5,baz=269,slow=12,SNR=4.4						
SAML	Samuel	42.96	62	eP	P	03 32 04.8	-0.1
	5.5nm,1.0s,mb4.2						
ROSC	El Rosal	46.70	38	LR	LR	03 49 25.1	
	comp=Z,106nm,19.1s,MS3.8,baz=260,slow=33						
BDFB	Brasilia	50.79	82	LR	LR	03 52 37.1	
	comp=Z,135nm,18.1s,MS4.0,baz=352,slow=34						
URZ	Urewera	63.92	240	LR	LR	03 54 52.1	
	comp=Z,100nm,20.8s,MS4.0,baz=244,slow=29						
RPZ	Rata Peaks	65.75	233	LR	LR	03 55 51.2	
	comp=Z,178nm,19.0s,MS4.3,baz=55,slow=29						
NVAR	Mina Array Bea	74.74	346	P	P	03 35 45.9	+0.3
	0.2nm,0.3s,mb3.5,baz=180,slow=6.3,SNR=3.2						
NVAR				LR	LR	04 01 43.5	
	comp=Z,48nm,21.1s,MS3.8,baz=115,slow=30						
NVAR	Mina Array Bea	74.74	346	P	P	03 35 45.9	+0.3
PDAR	Pinedale Array	77.70	353	P	P	03 36 01.9	-0.3
	0.5nm,0.5s,mb3.8,baz=149,slow=5.3,SNR=3.4						
ULM	Lac du Bonnet	84.88	3	LR	LR	04 14 22.8	
	comp=Z,34nm,19.5s,MS3.8,baz=356,slow=36						
SCHQ	Schefferville	93.99	19	LR	LR	04 15 09.1	
	comp=Z,58nm,19.6s,MS4.0,baz=153,slow=33						
BOSA	Boshof	98.84	134	LR	LR	04 16 47.1	
	comp=Z,70nm,20.7s,MS4.1,baz=69,slow=32						
BRTR	Keskin Array B	143.70	69	PKhKP		03 43 34.0	
	0.9nm,0.9s,baz=243,slow=3.2,SNR=3.4						

*NEIC **21** 03:30:13.3, 38.21N×20.24E, h23^{km}, MD3.5(ATH), After ATH.*
*CSEM **21** 03:30:13.3, 38.21N×20.24E, h23^{km}, MD3.5/1, After ATH*
ATH 21 03:30:13.3, 38.21N×20.24E, h23^{km}±2^{km}**, MD3.5**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.28	97	ePB	Pb	03 30 20.0	+0.2
VLS				eSB	Sb	03 30 25.6	+1.3
RLS	Riolos of Patr	0.98	99	ePB	Pb	03 30 31.2	-0.3
EVR	Evrytania	1.42	60	ePN	Pn	03 30 39.7	+1.7
JAN	Janina	1.52	18	ePN	Pn	03 30 41.0	+1.5
KEK	Kerkira	1.54	347	ePN	Pn	03 30 41.7	+2.0
KEK				eSN	Sn	03 31 01.9	+2.7
ITM	Ithomi	1.69	127	ePN	Pn	03 30 43.8	+1.9

*JMA **21** 03:31:20.8±0.1, 24.86N×121.94E, h37^{km}*
*TAP **21** 03:31:20.2, 24.42N×121.84E, h8^{km}, ML3.2*
TAP Felt IV J at Nanau, II J at Suao, I J at Nioudou.
ISC 21 03:31:19.2±0.4**, 24.42N**±0.02×**121.89E**±0.02**, h6^{km}**±4^{km}**, n31, σ0^{s}76**/53**, 1C-6D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.14	273	⇓iP	Pg	03 31 22.5	+0.3
ENA				S	Sg	03 31 24.2	0.0
EHP	Heping Village	0.18	232	eP	Pg	03 31 23.2	+0.4
TWC	Suao	0.19	348	⇓iP	Pg	03 31 24.0	+0.8
TWC				S	Sg	03 31 26.5	+0.7
TWE	Neicheng	0.36	326	⇓iP	Pg	03 31 26.8	+0.3
TWE				S	Sg	03 31 30.6	-0.9
ILA	Ilan	0.37	339	i P	Pg	03 31 27.1	+0.5
ILA				S	Sg	03 31 32.3	+0.7
ENTT	Nioudou	0.37	306	⇓iP	Pg	03 31 26.8	+0.2
ENTT				S	Sg	03 31 31.2	-0.4
TWD	Chiawan	0.43	219	eP	Pg	03 31 27.6	-0.4
TWD				S	Sg	03 31 33.2	-0.5
NNS	Nan Shan	0.47	273	⇓iP	Pg	03 31 28.4	-0.3
NNS				S	Sg	03 31 34.0	-1.0
NSK	Sanguang	0.55	298	⇓iP	Pg	03 31 30.1	-0.1
NSK				S	Sg	03 31 36.7	-0.9
TWB1	Santiao Chiao	0.59	8	P	Pg	03 31 31.4	+0.4
TWB1				S	Sg	03 31 38.6	-0.4
TWA	Mucha	0.62	333	eP	Pg	03 31 32.0	+0.3
TWA				S	Sg	03 31 39.8	-0.2
WHF	Hehuan Shan	0.64	245	⇑iP	Pg	03 31 31.3	-0.6
WHF				S	Sg	03 31 40.4	0.0
NWF	Wu-fen Shan	0.66	351	eP	Pg	03 31 32.7	+0.4
NWF				S	Sg	03 31 40.9	-0.2
TWT	Tachien	0.68	256	eP	Pg	03 31 32.5	-0.2
TWT				S	Sg	03 31 41.4	-0.3
ESL	Shilin	0.74	215	eP	Pg	03 31 32.9	-1.0
TWS1	Kuangyinshan	0.80	328	eP	Pb	03 31 36.0	+0.8
TWS1				S	Sb	03 31 46.1	+0.1
NSTT	Nanjuang	0.84	285	eP	Pb	03 31 35.0	-0.8
NSTT				S	Sb	03 31 46.1	-0.9
YOJ	Yonaguni jima	1.02	87	P	Pb	03 31 39.5	+0.7
YOJ				eS	Sb	03 31 53.0	+0.7
TWQ1	Liyutan	1.02	266	eP	Pb	03 31 39.4	+0.4
SMLT	Sun Moon Lake	1.05	240	eP	Pb	03 31 39.3	-0.2
SMLT				S	Sb	03 31 52.3	-1.0
TYC	Yuchr	1.08	242	P	Pb	03 31 39.4	-0.4
TYC				S	Sb	03 31 54.0	+0.1
TWF1	Yuli	1.20	207	eP	Pb	03 31 41.3	-0.6
CHN5	Tsauling	1.38	234	eP	Pb	03 31 45.6	+0.5
CHN5				S	Sb	03 32 04.6	+1.8
CHN4	Tsaushan	1.60	228	eP	Pn	03 31 49.8	+1.7
WTP	Ta-pu	1.66	225	eP	Pn	03 31 49.3	+0.3
IRIF	Iriomote-Funau	1.68	93	P	Pn	03 31 49.1	-0.2
IRIF				eS	Sn	03 32 10.3	-1.0
TWK	Hsinying	1.73	229	eP	Pn	03 31 51.9	+2.0
CHN1	Nanshi	1.75	226	eP	Pn	03 31 51.8	+1.4
SGST	Jiashian	1.79	222	eP	Pn	03 31 51.6	+0.7
JKRS	Kuro-shima	1.94	95	P	Pn	03 31 53.0	0.0
JKRS				eS	Sn	03 32 17.0	-1.0
JIJ	Ishigaki jima	2.05	91	P	Pn	03 31 54.4	-0.3
JIJ				eS	Sn	03 32 18.1	-2.8

MAN 21 03:32:09.2, 17.14N×120.20E, h23^{km}, mb4.2, ML3.0, MS2.8, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	Dolores	0.71	44	eP	Pb	03 32 22.9	+0.2
ABRA				eS	Sb	03 32 34.5	+2.4
BOLP	Bolinao	0.80	200	eP	Pb	03 32 24.8	+0.4
BCPH	Baguio City Da	0.84	154	⇑eP	Pb	03 32 24.7	-0.3
BCPH				eS	Sb	03 32 38.0	+2.2
APYP	Conner	1.23	54	eP	Pn	03 32 30.2	-1.0
APYP				eS	Sb	03 32 45.0	-2.1
CAUP	Cauayan	1.57	97	eP	Pn	03 32 35.9	-0.2
CVP	Callao Caves	1.65	70	i P	Pn	03 32 35.7	-1.5
CVP				i S	Sn	03 32 57.0	-0.9
PCPH	Palayan	1.79	151	⇓eP	Pn	03 32 38.0	-1.2
BALP	Baler	1.92	136	eP	Pn	03 32 40.3	-0.8

TAP 21 03:42:26.9, 23.16N×120.49E, h10^{km}, ML3.5, 8C-11D, Taiwan

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

TWK	**Hsinying**	**0.11**	**359**	⇓iP	Pg	03 42 30.4	+0.7
SGST	**Jiashian**	**0.12**	**132**	⇑iP	Pg	03 42 30.6	+0.8
SGST				S	Sg	03 42 33.3	+1.5
CHN3	**Shinhua**	**0.14**	**234**	⇓iP	Pg	03 42 30.7	+0.4
CHN3				S	Sg	03 42 34.2	+1.7
WTP	**Ta-pu**	**0.14**	**53**	⇑iP	Pg	03 42 31.3	+1.0
WTP				S	Sg	03 42 34.4	+1.9
CHN4	**Tsaushan**	**0.21**	**26**	⇓iP	Pg	03 42 32.4	+0.9
CHN4				S	Sg	03 42 36.5	+1.9
TAI1	**Yung-k'ang**	**0.27**	**244**	⇑iP	Pg	03 42 33.5	+0.9
TAI1				S	Sg	03 42 38.8	+2.4
SCLT	**Jiali**	**0.27**	**273**	P	Pg	03 42 33.4	+0.7
SCLT				S	Sg	03 42 39.0	+2.5
CHN8	**Yiju**	**0.32**	**306**	eP	Pg	03 42 34.0	+0.5
CHN8				S	Sg	03 42 40.6	+2.7
TWM1	**Shoushan**	**0.34**	**191**	⇑P	Pg	03 42 36.0	+2.0
CHY	**Chiayi**	**0.34**	**350**	⇓iP	Pg	03 42 35.0	+1.0
CHY				S	Sg	03 42 41.0	+2.4
CHN2	**Minshiung**	**0.37**	**358**	⇓iP	Pg	03 42 35.7	+1.2
CHN2				S	Sg	03 42 42.3	+2.6
CHN5	**Tsauling**	**0.47**	**22**	P	Pg	03 42 37.0	+0.6
CHN5				S	Sg	03 42 45.1	+2.4
ELDTW	**Lidau**	**0.49**	**86**	i P	Pg	03 42 37.8	+1.0
ELDTW				S	Sg	03 42 45.4	+2.0
WGK	**Gukeng**	**0.53**	**7**	P	Pg	03 42 38.5	+0.9
WGK				S	Sg	03 42 47.9	+3.1
TWG	**Pinlang**	**0.63**	**122**	⇑iP	Pb	03 42 40.6	+1.0
TWG				S	Sg	03 42 50.0	+1.8
ECL	**Taimali**	**0.70**	**143**	⇑iP	Pb	03 42 41.3	+0.5
ECL				S	Sb	03 42 52.6	+2.3
WTCT	**Ta-ch'eng**	**0.73**	**345**	eP	Pb	03 42 41.5	+0.3
WTCT				S	Sb	03 42 52.9	+2.0
TTN	**Taitung**	**0.73**	**124**	eP	Pb	03 42 42.7	+1.5
WNT	**Mingjian**	**0.74**	**14**	⇓iP	Pb	03 42 42.1	+0.7
WNT				S	Sb	03 42 53.8	+2.6
TWF1	**Yuli**	**0.77**	**75**	⇓iP	Pb	03 42 42.6	+0.7
TWF1				S	Sb	03 42 53.4	+1.3
WDGT	**Dungji**	**0.77**	**278**	eP	Pb	03 42 41.4	-0.6
WDGT				S	Sb	03 42 51.7	-0.5
SCZT	**Fangliau**	**0.79**	**171**	eP	Pb	03 42 43.0	+0.7
CHKT	**Chengkung**	**0.81**	**94**	eP	Pb	03 42 43.9	+1.4
CHKT				S	Sb	03 42 56.1	+2.9
SMLT	**Sun Moon Lake**	**0.81**	**28**	⇓iP	Pb	03 42 43.4	+0.8
SMLT				S	Sb	03 42 56.1	+2.7
TYC	**Yuchr**	**0.81**	**24**	⇓iP	Pb	03 42 43.4	+0.7
TYC				S	Sb	03 42 56.0	+2.5
TWP	**Hsiaoliuchiu**	**0.82**	**188**	eP	Pb	03 42 44.8	+2.1
EHY	**Hungye**	**0.84**	**66**	P	Pb	03 42 43.9	+0.8
EHY				S	Sb	03 42 55.5	+1.3
EAST	**Anshuo**	**0.84**	**157**	⇑P	Pb	03 42 44.0	+0.8
EAST				S	Sb	03 42 57.1	+2.8
TAW	**Tawu**	**0.88**	**155**	eP	Pb	03 42 44.7	+0.8
PNG	**Penghu**	**0.95**	**295**	eP	Pb	03 42 44.1	-0.9
TCU	**Taichung**	**1.00**	**10**	eP	Pb	03 42 46.2	+0.4
TCU				S	Sb	03 43 01.4	+2.6
ESL	**Shilin**	**1.08**	**53**	⇑P	Pb	03 42 48.2	+0.9
ESL				S	Sb	03 43 04.1	+2.8
TWQ1	**Liyutan**	**1.21**	**12**	⇓iP	Pb	03 42 50.0	+0.6
TWQ1				S	Sb	03 43 07.7	+2.7
WHF	**Hehuan Shan**	**1.21**	**36**	i P	Pb	03 42 50.6	+1.2
WHF				S	Sb	03 43 08.4	+3.4
TWT	**Tachien**	**1.26**	**30**	P	Pb	03 42 50.9	+0.7
TWT				S	Sb	03 43 08.7	+2.4
NSY	**Sanyi**	**1.27**	**11**	⇓iP	Pb	03 42 51.2	+0.6
NSY				S	Sb	03 43 09.3	+2.5
TWD	**Chiawan**	**1.37**	**48**	P	Pn	03 42 53.2	+1.1
TWD				S	Sb	03 43 11.6	+2.0
NNS	**Nan Shan**	**1.51**	**32**	eP	Pn	03 42 54.8	+0.7
ENA	**Nanau**	**1.71**	**42**	eP	Pn	03 42 58.1	+1.2
NSK	**Sanguang**	**1.71**	**28**	eP	Pn	03 42 57.8	+0.8
NSK				S	Sn	03 43 20.9	+1.9
ENTT	**Nioudou**	**1.77**	**34**	eP	Pn	03 42 59.3	+1.4
ENTT				S	Sn	03 43 23.9	+3.2
TWE	**Neicheng**	**1.89**	**34**	eP	Pn	03 43 01.2	+1.6
TWE				S	Sn	03 43 27.8	+4.2
TWC	**Suao**	**1.91**	**40**	eP	Pn	03 43 01.0	+1.1
NWF	**Wu-fen Shan**	**2.24**	**32**	eP	Pn	03 43 06.8	+2.2

GUC 21 03:46:40.7±0.5**, 19.81S**×**69.19W, h106^{km}**±4^{km}**, ML4.6, Northern Chile**

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*IDC **21** 04:07:47.1±1.4, 0.86N×97.45E, mb4.0/7, mb1 4.2/8, mb1mx3.9/18, mbtmp4.0/8, ML4.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.9/27, Error ellipse: s-maj=58.1km s-min=25.3km az=55.0*

*NEIC **21** 04:07:52.1±0.8, 0.90N×97.44E, h30^{km}, mb4.2/1, Error ellipse: s-maj=20.8km s-min=16.7km az=81.0*

ISC 21 04:07:50.2±1.1**, 0.9N**±0.1×**97.5E**±0.2**, h30^{km}, n12, σ0^{s}59**/10**, mb4.0**/8**, MS3.2**/1**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.39**	**36**	ePn	**Pn**	**04 09 11.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**17.51**	**5**	P	**P**	**04 11 53.2**	**-0.8**
	0.2nm,0.3s,baz=191,slow=11,SNR=7.8						
WRA	**Warramunga Arr**	**41.63**	**122**	P	**P**	**04 15 37.4**	**-0.4**
	0.8nm,0.5s,mb3.6,baz=302,slow=8.9,SNR=9.6						
SONM	**Songino Array**	**47.39**	**8**	P	**P**	**04 16 23.7**	**0.0**
	1.8nm,0.8s,mb4.1,baz=187,slow=10.0,SNR=9.4						
ULN	**Ulaanbaatar**	**47.52**	**9**	eP	**P**	**04 16 25.2**	**+0.5**
	2.1nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**47.60**	**346**	P	**P**	**04 16 25.4**	**+0.1**
	3.2nm,0.7s,mb4.5,baz=156,slow=7.4,SNR=23						
CTA	**Charters Tower**	**52.11**	**116**	LR	LR	04 41 28.0	
	comp=Z,23nm,20.1s,MS3.2,baz=49,slow=39						
ZAL	**Zalesovo**	**53.90**	**351**	P	**P**	**04 17 11.7**	**-1.2**
	2.0nm,0.6s,mb4.3,baz=297,slow=7.8						
FINES	**FINESS Array B**	**80.40**	**332**	P	**P**	**04 20 00.3**	**+0.2**
	0.6nm,0.6s,mb3.7,baz=131,slow=15,SNR=4.3						
GERES	**GERESS Array B**	**85.23**	**319**	P	**P**	**04 20 26.1**	**+0.8**
	0.5nm,0.7s,mb3.7,baz=104,slow=5.5,SNR=5.6						
NOA	**NORSAR Array B**	**87.41**	**331**	P	**P**	**04 20 35.8**	**+0.2**
	0.4nm,0.6s,mb3.8,baz=98,slow=4.9,SNR=2.7						
TXAR	**Lajitas Array**	**143.78**	**32**	PKP	PKPdf	04 27 27.1	-1.1
	0.3nm,0.8s,baz=90,slow=3.8,SNR=3.6						

NNC 21 04:09:34.1±3.4**, 37.50N**×**71.65E, h143^{km}**±72^{km}**, mpv3.0, 1C-1D, Error ellipse: s-maj=34.4km s-min=24.2km az=17.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.57**	**22**	⇓P	P	04 10 54.7	-1.1
	0.3nm,0.2s						
AAK				⇑S	S	04 11 59.0	-0.2
	2.8nm,0.5s						
KK31	**Karatay Array**	**5.66**	**352**	P	P	04 10 56.4	-0.7
	1.8nm,0.7s,baz=166,slow=12,SNR=11						
KK31				S	S	04 12 00.5	-1.0
	6.9nm,0.6s,baz=168,slow=23,SNR=26						
AB31	**Akbulak array**	**14.48**	**328**	P	P	04 12 52.2	-0.9
	0.2nm,0.3s,baz=130,slow=13,SNR=14						

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*BJI **21** 04:19:30.7, 1.04N×97.21E, h39^{km}, mB4.8, mb4.8, Ms4.5, Msz4.4*

*NEIC **21** 04:19:33.9±0.3, 1.36N×97.15E, h30^{km}, mb4.7/11, Error ellipse: s-maj=9.1km s-min=5.6km az=47.0*

*IDC **21** 04:19:33.2±0.6, 1.41N×97.08E, h25^{km}±3^{km}, mb4.2/15, mb1 4.3/16, mb1mx4.2/21, mbtmp4.3/16, ML4.3/1, MS3.8/1, Ms1 4.0/1, ms1mx3.2/19, Error ellipse: s-maj=19.4km s-min=12.5km az=55.0*

ISC 21 04:19:31.8±0.4**, 1.40N**±0.06×**97.20E**±0.07**, h26^{km}, h26^{km}**±1.3^{km}**:pP-P, n49, σ0^{s}80**/49**, mb4.5**/30**, MS4.3**/3**, 4D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.18**	**42**	ePn	**Pn**	**04 20 50.9**	**+1.1**
CM31	**Chiang Mai Arr**	**17.04**	**6**	Pn	**P**	**04 23 22.7**	**-7.5**
CMAR	**Chiang Mai Arr**	**17.04**	**6**	P	**P**	**04 23 29.2**	**-0.9**
	0.4nm,0.3s,baz=196,slow=13,SNR=9.0						
CMAR				LR	LR	04 30 35.6	
	comp=Z,269nm,18.4s,baz=185,slow=39						
PALK	**Pallekele**	**17.45**	**290**	eP	**P**	**04 23 35.0**	**-0.2**
	202nm,2.2s						
KKM	**Kota Kinabalu**	**19.53**	**76**	eP	**P**	**04 24 00.8**	**+0.3**
KMI	**Kunming**	**24.19**	**12**	⇓P	**P**	**04 24 49.8**	**+2.4**
KMI				AP		04 24 58.1	
KMI				XP		04 25 02.3	
KMI				PP	PP	04 25 24.3	+1.9
KMI				S	**S**	**04 28 59.1**	**-1.9**
KMI				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.3						
KMI				AMB	AMB		
	comp=Z,170nm,6.6s						
KMI				LR	LR		
	comp=N,620nm,15.1s,MS4.3						
KMI				LR	LR		
	comp=E,480nm,13.8s,MS4.3						
KMI				LR	LR		
	comp=Z,720nm,13.5s,MS4.3						
SHL	**Shillong**	**24.57**	**348**	⇓iP	**P**	**04 24 50.7**	**-0.4**
GYA	**Guiyang**	**26.53**	**19**	⇓iP	**P**	**04 25 09.5**	**0.0**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.7						
PKI	**Pulchoki**	**28.37**	**338**	eP	**P**	**04 25 26.1**	**-0.1**
GUN	**Gumba**	**28.50**	**339**	eP	**P**	**04 25 27.9**	**+0.5**
	comp=Z,54nm,1.0s,mb5.2						
DMN	**Daman**	**28.52**	**337**	eP	**P**	**04 25 27.9**	**+0.3**
KKN	**Kakani**	**28.62**	**338**	eP	**P**	**04 25 28.4**	**0.0**
	comp=Z,22nm,0.9s,mb4.9						
LSA	**Lhasa**	**28.73**	**349**	P	**P**	**04 25 30.0**	**+0.6**
	comp=Z,4.6nm,0.9s,mb4.2						
GKN	**Gorkha**	**29.06**	**337**	eP	**P**	**04 25 32.5**	**+0.1**
	comp=Z,19nm,0.7s,mb5.0						
KOLN	**Koldanda**	**29.28**	**335**	eP	**P**	**04 25 34.7**	**+0.3**
	comp=Z,29nm,0.9s,mb5.0						
ENH	**Enshi**	**31.00**	**21**	eP	**P**	**04 25 48.5**	**-1.1**
	comp=Z,31nm,0.8s,mb5.2						
FITZ	**Fitzroy Crossi**	**34.05**	**126**	P	**P**	**04 26 15.0**	**-1.3**
	comp=Z,9.2nm,0.9s,mb4.7,baz=18,slow=4.1,SNR=5.7						
XAN	**Xi'an**	**34.28**	**17**	P	**P**	**04 26 16.9**	**-1.2**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
LZH	**Lanzhou**	**35.06**	**9**	eP	**P**	**04 26 24.6**	**-0.3**
LZH				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.3						
LZH				LR	LR		
	comp=E,510nm,14.0s						
LZH				LR	LR		
	comp=Z,580nm,16.2s,MS4.4						
KAKA	**Kakadu**	**37.68**	**113**	eP	**P**	**04 26 46.2**	**-0.9**
	comp=Z,6.5nm,0.6s,mb4.5						
GTA	**Gaotai**	**37.91**	**3**	eP	**P**	**04 26 49.1**	**+0.3**
GTA				AP	pP	04 27 00.3	+3.8
GTA				XP	sP	04 27 05.8	+6.0
GTA				PP	PP	04 28 19.3	+0.6
GTA				S	**S**	**04 32 36.3**	**-2.1**
GTA				AMB	AMB		
	comp=Z,120nm,7.6s						
GTA				LR	LR		
	comp=N,220nm,14.1s,MS4.2						
GTA				LR	LR		
	comp=E,130nm,15.6s,MS4.2						
GTA				LR	LR		
	comp=Z,230nm,15.2s,MS4.1						
HHC	**Hu-ho-hao-te**	**41.37**	**17**	eP	**P**	**04 27 19.9**	**+2.4**
HHC				AMB	AMB		
	comp=Z,80nm,6.1s						
WRA	**Warramunga Arr**	**42.14**	**122**	P	**P**	**04 27 24.1**	**0.0**
	comp=Z,3.2nm,0.7s,mb4.0,baz=301,slow=9.1,SNR=33						
WRAB	**Tennant Creek**	**42.15**	**122**	eP	**P**	**04 27 23.4**	**-0.8**
	comp=Z,6.7nm,0.7s,mb4.4						
WB2	**Warramunga Arr**	**42.15**	**122**	⇓iP	**P**	**04 27 24.5**	**+0.3**
JNU	**Nakatsue**	**44.66**	**41**	P	**P**	**04 27 45.2**	**+0.7**
	comp=Z,8.3nm,0.8s,mb4.6,baz=270,slow=19,SNR=6.1						
AAK	**Ala-Archa**	**45.82**	**337**	P	**P**	**04 27 54.3**	**+0.9**
SONM	**Songino Array**	**46.94**	**8**	P	**P**	**04 28 02.6**	**+0.3**
	comp=Z,9.0nm,0.9s,mb4.7,baz=188,slow=8.7,SNR=35						
SONM				pP	pP	04 28 10.2	+0.1
	comp=Z,4.2nm,0.8s,baz=186,slow=8.8,SNR=7.8						
SONM				PcP	PcP	04 29 34.6	-0.4
	comp=Z,1.2nm,0.8s,baz=180,slow=4.3,SNR=2.7						
MKAR	**Makanchi Array**	**47.05**	**346**	P	**P**	**04 28 03.0**	**-0.1**
	comp=Z,5.5nm,0.8s,mb4.6,baz=162,slow=7.7,SNR=40						
MKAR				pP	pP	04 28 10.4	-0.6
	comp=Z,2.9nm,0.6s,baz=162,slow=8.4,SNR=7.4						
ULN	**Ulaanbaatar**	**47.07**	**9**	eP	**P**	**04 28 03.6**	**+0.3**
	comp=Z,6.1nm,0.9s,mb4.5						
CN2	**Changchun**	**49.13**	**27**	eP	**P**	**04 28 19.3**	**-0.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
PMG	**Port Moresby**	**50.90**	**103**	P	**P**	**04 28 33.3**	**0.0**
	comp=Z,1.6nm,0.3s,mb4.4,baz=263,slow=8.1,SNR=3.6						
MJAR	**Matsushiro Arr**	**51.55**	**42**	P	**P**	**04 28 37.5**	**-0.5**
	comp=Z,1.2nm,0.3s,mb4.3,baz=227,slow=8.0,SNR=5.8						
MDJ	**Mudanjiang**	**51.70**	**29**	P	**P**	**04 28 38.8**	**-0.2**
MDJ				AMB	AMB		
	comp=Z,80nm,7.2s						
MDJ	**Mudanjiang**	**51.70**	**29**	eP	**P**	**04 28 38.8**	**-0.1**
	comp=Z,10nm,1.3s,mb4.6						
CTA	**Charters Tower**	**52.59**	**117**	P	**P**	**04 28 46.4**	**+0.4**
	comp=Z,1.8nm,0.3s,mb4.5,baz=274,slow=13,SNR=3.1						
CTA				pP	pP	04 28 54.4	+0.4
	comp=Z,1.7nm,0.3s,baz=264,slow=9.2,SNR=1.6						
CTA	**Charters Tower**	**52.59**	**117**	P	**P**	**04 28 46.4**	**+0.4**
CTA				pP	pP	04 28 54.4	+0.4
STKA	**Stephens Creek**	**53.49**	**132**	P	**P**	**04 28 52.8**	**+0.3**
	comp=Z,3.5nm,0.7s,mb4.4,baz=288,slow=12,SNR=5.2						
STKA				pP	pP	04 29 01.1	+0.7
	comp=Z,4.4nm,0.7s,baz=123,slow=5.2,SNR=2.9						
BRTR	**Keskin Array B**	**68.98**	**312**	pP	pP	04 30 43.3	-2.0
	comp=Z,0.7nm,0.8s,baz=117,slow=3.2,SNR=2.6						
MATP	**Matopo**	**70.59**	**248**	P	**P**	**04 30 47.1**	**-0.3**
	comp=Z,2.0nm,1.0s,mb4.0,baz=69,slow=8.6,SNR=2.6						
MATP				pP	pP	04 30 54.7	-0.7
	comp=Z,3.5nm,0.9s,baz=92,slow=6.2,SNR=4.6						
MATP	**Matopo**	**70.59**	**248**	P	**P**	**04 30 47.1**	**-0.3**
MATP				pP	pP	04 30 54.7	-0.7
FINES	**FINESS Array B**	**79.82**	**332**	P	**P**	**04 31 38.4**	**-0.9**
	comp=Z,2.4nm,0.9s,mb4.1,baz=127,slow=9.5,SNR=7.4						
FINES				pP	pP	04 31 46.1	-1.4
	comp=Z,1.6nm,0.8s,baz=90,slow=7.6,SNR=4.6						
FINES	**FINESS Array B**	**79.82**	**332**	P	**P**	**04 31 38.4**	**-0.9**
FINES				pP	pP	04 31 46.1	-1.4
ARCES	**ARCESS Array B**	**82.35**	**340**	P	**P**	**04 31 52.4**	**-0.1**
	comp=Z,2.6nm,0.8s,mb4.2,baz=90,slow=4.9,SNR=12						
GERES	**GERESS Array B**	**84.67**	**319**	P	**P**	**04 32 04.2**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.9,baz=117,slow=6.0,SNR=7.9						
GERES				pP	pP	04 32 12.0	-1.0
	comp=Z,0.6nm,0.8s,baz=63,slow=3.0,SNR=3.4						
VNDA	**Vanda**	**86.02**	**169**	P	**P**	**04 32 12.2**	**+1.4**
	comp=Z,0.2nm,0.4s,mb3.7,baz=326,slow=3.6,SNR=2.4						
NB2	**NORSAR Subarra**	**86.83**	**331**	P	**P**	**04 32 14.9**	**-0.2**
	comp=Z,0.8nm,0.8s,mb4.0,baz=97,slow=4.8						
NOA	**NORSAR Array B**	**86.83**	**331**	P	**P**	**04 32 14.9**	**-0.2**
	comp=Z,1.2nm,0.8s,mb4.2,baz=94,slow=4.9,SNR=5.5						
NOA				pP	pP	04 32 22.6	-0.8
	comp=Z,0.8nm,0.8s,baz=94,slow=4.8,SNR=4.1						
TXAR	**Lajitas Array**	**143.50**	**32**	PKP	PKPdf	04 39 04.4	-5.2
	comp=Z,0.3nm,0.7s,SNR=4.6						

NEIC 21 04:27:20.4±3.6**, 40.75N**×**126.87W, h10^{km}, mb3.2**/1**, Error ellipse: s-maj=41.8km s-min=12.9km az=73.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YBH	**Yreka Blue Hor**	**3.29**	**71**	eP	Pn	04 28 11.1	-1.9
WDC	**Whiskeytown Da**	**3.30**	**92**	eP	Pn	04 28 11.2	-2.0
LAMM	**Antelope Mount**	**3.32**	**74**	P	Pn	04 28 13.4	-0.1
HUMO	**Hull Mountain**	**3.47**	**56**	P	Pn	04 28 13.7	-1.9
DBO	**Dodson Butte**	**3.59**	**48**	P	Pn	04 28 15.6	-1.9
LHEM	**Herd Peak**	**3.62**	**74**	P	Pn	04 28 17.6	-0.2
BBOR	**Butler Butte**	**3.79**	**54**	P	Pn	04 28 19.1	-1.1
BUOR	**Burton Butte**	**3.79**	**65**	P	Pn	04 28 20.4	+0.1
HOG	**Hogback Mounta**	**4.16**	**67**	P	Pn	04 28 24.6	-0.8
HBO	**Huckleberry Mo**	**4.58**	**46**	P	Pn	04 28 30.3	-1.1
IRO	**Indian Ridge**	**4.72**	**45**	P	Pn	04 28 32.2	-1.2
FRIS	**Frissel Point**	**4.94**	**44**	P	Pn	04 28 35.3	-1.3
MOD	**Modoc**	**5.08**	**75**	eP	Pn	04 28 35.9	-2.6
CMB	**Columbia Colle**	**5.71**	**116**	eP	Pn	04 28 45.6	-1.7
BMO	**Blue Mountains**	**8.14**	**57**	P	P	04 29 17.9	-3.6
FFC	**Flin Flon**	**21.65**	**41**	P	P	04 32 10.6	-2.2
	0.8nm,0.8s						

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*IDC **21** 04:56:08.3±6.3, 35.71S×179.40W, h52^{km}±50^{km}, mb4.4/3, mb1 4.5/5, mb1mx4.0/14, mbtmp4.5/5, ML3.7/2, MS3.9/7, Ms1 3.9/7, ms1mx3.6/20, Error ellipse: s-maj=41.6km s-min=28.8km az=72.0*

*NEIC **21** 04:56:09.7±3.0, 35.79S×179.56W, h61^{km}±23^{km}, mb4.9/4, Error ellipse: s-maj=32.9km s-min=17.3km az=47.0*

ISC 21 04:56:05.8±2.1**, 36.0S**±0.2×**179.0W**±0.2**, h80^{km}**±18^{km}**, n36, σ1^{s}15**/34**, mb4.7**/5**, 2D, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.67**	**233**	eP	**P**	**04 56 48.0**	**+0.4**
MXZ				S	**S**	**04 57 19.2**	**+0.3**
MXZ	**Matakaoa Point**	**2.67**	**233**	ePN	**P**	**04 56 48.0**	**+0.3**
MXZ				SN	**S**	**04 57 19.2**	**+0.3**
PUZ	**Puketiti**	**3.02**	**226**	eP	**P**	**04 56 53.1**	**+0.6**
PUZ				S	**S**	**04 57 26.7**	**-1.0**
PUZ	**Puketiti**	**3.02**	**226**	PN	**P**	**04 56 53.1**	**+0.6**
PUZ				SN	**S**	**04 57 26.7**	**-1.0**
MWZ	**Matawai**	**3.63**	**229**	P	**P**	**04 57 01.0**	**+0.1**
MWZ				S	**S**	**04 57 44.9**	**+2.1**
MWZ	**Matawai**	**3.63**	**229**	PN	**P**	**04 57 01.0**	**0.0**
MWZ				SN	**S**	**04 57 44.7**	**+1.9**
MWZ				SN	**S**	**04 57 44.7**	**+1.9**
URZ	**Urewera**	**3.84**	**233**	P	**P**	**04 57 03.2**	**-0.8**
	11nm,0.3s,baz=15,slow=7.1,SNR=34						
URZ				S	**S**	**04 57 48.1**	**-0.1**
	20nm,0.3s,baz=141,slow=22,SNR=7.0						
URZ				LR	LR	04 58 39.1	
	comp=Z,368nm,18.2s,baz=120,slow=40						
URZ	**Urewera**	**3.84**	**233**	eP	**P**	**04 57 03.2**	**-0.7**
URZ	**Urewera**	**3.84**	**233**	PN	**P**	**04 57 03.1**	**-0.8**
URZ				SN	**S**	**04 57 47.3**	**-0.9**
KNZ	**Kokohu**	**4.02**	**220**	eP	**P**	**04 57 06.8**	**+0.4**
KNZ	**Kokohu**	**4.02**	**220**	ePN	**P**	**04 57 06.8**	**+0.5**
KNZ				SN	**S**	**04 57 54.7**	**+2.2**
MRZ	**Mangatainoka R**	**6.32**	**221**	ePN	**P**	**04 57 37.2**	**-0.9**
MRZ				SN	**S**	**04 58 45.9**	**-3.6**
RAO	**Raoul Island**	**6.77**	**8**	LR	LR	04 59 37.7	
	comp=Z,265nm,19.2s,baz=117,slow=32						
TCW	**Tory Channel**	**7.41**	**223**	SN	**S**	**04 59 10.9**	**-5.5**
MQZ	**McQueen's Vall**	**10.03**	**217**	SN	**S**	**05 00 11.7**	**-8.6**
DZM	**Mont Dzumac**	**18.78**	**314**	P	**P**	**05 00 19.1**	**-2.0**
	0.1nm,0.3s,baz=103,slow=15,SNR=4.7						
DZM				LR	LR	05 06 07.0	
	comp=Z,536nm,18.9s,baz=201,slow=33						
STKA	**Stephens Creek**	**32.79**	**266**	P	**P**	**05 02 34.8**	**+1.4**
	4.3nm,0.9s,mb4.3,baz=109,slow=15,SNR=2.8						
CTA	**Charters Tower**	**34.29**	**288**	eP	**P**	**05 02 46.8**	**+0.5**
	11nm,1.0s,mb4.7						
CTA	**Charters Tower**	**34.29**	**288**	P	**P**	**05 02 46.9**	**+0.6**
	16nm,1.0s,mb4.8,baz=114,slow=7.9,SNR=9.6						
CTAO	**Charters Tower**	**34.29**	**288**	eP	**P**	**05 02 44.8**	**-1.6**
	25nm,1.1s,mb5.0						
PMG	**Port Moresby**	**40.55**	**302**	LR	LR	05 17 19.9	
	comp=Z,172nm,21.9s,baz=243,slow=32						
WB2	**Warramunga Arr**	**43.76**	**279**	⇓iP	**P**	**05 04 05.2**	**+0.1**
WRAB	**Tennant Creek**	**43.77**	**279**	eP	**P**	**05 04 04.8**	**-0.3**
	15nm,0.6s,mb4.9						
WRA	**Warramunga Arr**	**43.77**	**279**	P	**P**	**05 04 05.3**	**+0.2**
	11nm,0.7s,mb4.7,baz=120,slow=7.6,SNR=92						
FITZ	**Fitzroy Crossi**	**51.74**	**275**	⇓iP	**P**	**05 05 07.5**	**+0.3**
	10nm,0.9s,mb4.9						
FITZ	**Fitzroy Crossi**	**51.74**	**275**	LR	LR	05 27 25.6	
	comp=Z,268nm,18.6s,baz=91,slow=36						
TXAR	**Lajitas Array**	**96.08**	**58**	LR	LR	05 44 48.1	
	comp=Z,130nm,20.3s,baz=165,slow=30						
LPAZ	**La Paz**	**96.58**	**115**	LR	LR	05 46 49.6	
	comp=Z,55nm,19.0s,baz=199,slow=31						
ARCES	**ARCESS Array B**	**143.81**	**346**	PKP	PKPdf	05 15 34.2	+3.8
	1.1nm,0.8s,baz=56,slow=3.3,SNR=3.8						
KAF	**Kangasniemi**	**149.43**	**337**	epkp	PKPdf	05 15 48.7	+8.7
FINES	**FINESS Array B**	**149.99**	**336**	PKPbc	PKPdf	05 15 51.3	+10
	3.8nm,0.8s,baz=63,slow=4.3,SNR=18						
DBIC	**Dimbokro**	**150.34**	**168**	PKPab	PKPab	05 16 01.5	+4.5
	7.6nm,1.0s,baz=148,slow=9.5,SNR=2.3						
BRTR	**Keskin Array B**	**154.03**	**288**	PKPbc	PKPdf	05 16 01.4	+14
	1.4nm,0.9s,baz=153,slow=2.8,SNR=5.4						
BRTR				PKPab	PKPab	05 16 12.4	+0.7
	2.8nm,0.9s,baz=135,slow=5.2,SNR=8.5						
NB2	**NORSAR Subarra**	**154.09**	**349**	PKPabc	PKPdf	05 16 00.5	+14
	0.9nm,0.8s,baz=16,slow=3.8						
NOA	**NORSAR Array B**	**154.09**	**349**	PKPbc	PKPdf	05 16 01.3	+15
	0.9nm,0.9s,baz=4.2,slow=3.8,SNR=3.8						
NOA				PKPab	PKPab	05 16 13.3	+2.0
	1.8nm,0.9s,baz=23,slow=2.7,SNR=4.6						
NOA	**NORSAR Array B**	**154.09**	**349**	PKPbc	PKPdf	05 16 01.3	+15
NOA				PKPab	PKPab	05 16 13.3	+2.0

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*BJI **21** 05:11:17.1, 19.24S×69.37W, h93^{km}, mB5.3*

*GUC **21** 05:11:17.1±0.7, 20.10S×69.14W, h102^{km}±5^{km}, ML5.5*

*MOS **21** 05:11:18.2±1.1, 19.69S×68.74W, h110^{km}, mb5.4/47, Error ellipse: s-maj=9.7km s-min=5.9km az=103.7*

*LDG **21** 05:11:18.0±1.5, 18.98S×68.64W, h89^{km}, Mb5.0/14, Ms4.2/9, Error ellipse: s-maj=96.1km s-min=11.9km az=58.0*

*IDC **21** 05:11:18.1±0.4, 20.00S×69.00W, h103^{km}±2^{km}, mb4.9/23, mb1 5.0/24, mb1mx5.0/25, mbtmp5.2/24, MS4.3/11, Ms1 4.2/11, ms1mx4.1/17, Error ellipse: s-maj=13.2km s-min=9.8km az=60.0*

*NEIC **21** 05:11:18.2±0.1, 19.99S×68.81W, mb5.4/125, MW5.5, Error ellipse: s-maj=5.4km s-min=3.8km az=49.0, Moment Tensor Solution. s39 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.49; M$_{\theta\theta}$-0.23; M$_{\phi\phi}$1.72; M$_{r\theta}$0.05; M$_{\theta\phi}$-0.61; M$_{\phi r}$-2.01; Best double couple: M$_0$2.6×10^{17} NP1:φ$_s$148°, δ22°, λ-117°. NP2:φ$_s$356°, δ70°, λ-80°. Principal axes: T 2.8, Plg25°, Azm78°; N -.32, Plg10°, Azm173°; P -2.48, Plg63°, Azm283°;*

NEIC Felt [V] at Pozo Almonte; [IV] at Iquique and Pica; [III] at Arica, Huara and Putre; [II] at Calama and Tocopilla. Also felt [II] at Arequipa, Peru.

*HRVD **21** 05:11:18.2±0.2, 20.14S×69.30W, h121^{km}±1^{km}, MW5.5/67, Centroid moment Tensor Solution. LP body waves: s65,c125;Mantle waves: s67,c142; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.34±.03; M$_{\theta\theta}$0.10±.04; M$_{\phi\phi}$1.24±.04; M$_{r\theta}$0.07±.02; M$_{\theta\phi}$-0.31±.04; M$_{\phi r}$-1.31±.03; Best double couple: M$_0$1.868×10^{17} NP1: φ$_s$158°, δ23°, λ-104°. NP2:φ$_s$354°, δ67°, λ-84°. Principal axes: T 1.845, Plg22°, Azm79°; N .044, Plg6°, Azm171°; P -1.89, Plg67°, Azm274°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*INMG **21** 05:11:18.2, 19.98S×68.81W, h106^{km}, Mb5.4*

ISC 21 05:11:16.6±0.2**, 19.95S**±0.03×**68.88W**±0.03**, h103^{km}, h103^{km}**±.9^{km}**:pP-P, n436, σ1^{s}07**/369**, mb5.3**/143**, 13C-141D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**3.01**	**168**	eP	**P**	**05 12 03.9**	**+0.3**
SPCH				i S	**S**	**05 12 38.8**	**-0.2**
LPAZ	**La Paz**	**3.71**	**11**	Pn	**P**	**05 12 18.7**	**+5.6**
LPAZ	**La Paz**	**3.71**	**11**	P	**P**	**05 12 19.1**	**+6.0**
	204nm,0.3s,baz=194,slow=7.6,SNR=1819						
LPAZ				S	**S**	**05 12 58.8**	**+2.7**
	baz=191,slow=17,SNR=3.4						
LPAZ				LR	LR	05 13 16.1	
	comp=Z,3μm,19.4s,baz=206,slow=31						
LPAZ	**La Paz**	**3.71**	**11**	ePn	**P**	**05 12 18.7**	**+5.5**
LPAZ				eS	**S**	**05 13 01.9**	**+5.7**
ANCH	**Antofagasta**	**3.97**	**201**	eP	**P**	**05 12 12.1**	**-4.6**
ANCH				i S	**S**	**05 12 56.0**	**-6.5**
ARE	**Arequipa**	**4.27**	**324**	⇓iP	**P**	**05 12 19.5**	**-1.2**
CPCH	**Copiapo**	**7.49**	**190**	eP	**P**	**05 12 56.9**	**-7.9**
SIV	**San Ignacio**	**8.41**	**63**	P	**P**	**05 13 18.1**	**+1.0**
	134nm,0.3s,baz=252,slow=12,SNR=1642						
SIV				S	**S**	**05 14 54.1**	**+3.0**
	baz=168,slow=18,SNR=4.0						
NNA	**Nana**	**11.01**	**315**	ePn	**P**	**05 13 49.7**	**-2.5**
	117nm,0.7s						
ZON	**Zonda**	**11.55**	**179**	eP	**P**	**05 13 55.0**	**-4.3**
CFAA	**Coronel Fontan**	**11.62**	**177**	P	**P**	**05 13 54.9**	**-5.3**
	0.4nm,0.3s,baz=350,slow=13,SNR=45						
CFAA				LR	LR	05 17 56.4	
	comp=Z,80nm,21.6s,baz=336,slow=34						
CFAA	**Coronel Fontan**	**11.62**	**177**	P	**P**	**05 13 54.9**	**-5.3**
CFAA				LR	LR	05 17 56.4	
SAML	**Samuel**	**12.25**	**28**	⇑ePn	**P**	**05 14 08.2**	**-0.4**
	0.2nm,0.6s						
SAML				eS	**S**	**05 16 21.9**	**-1.3**
MDZ	**Mendoza**	**12.88**	**180**	eP	**P**	**05 14 16.3**	**-0.6**
MDZ				i		05 14 44.3	
JATB	**Jatai**	**16.58**	**86c**	iP	**P**	**05 15 05.0**	**+0.9**
JATB				i		05 15 19.7	

JATB				*i*		05 15 27.0	
JATB				*i*		05 15 34.1	
JATB				*i*		05 15 51.4	
JATB				*i*		05 16 24.3	
LPA	**La Plata**	**17.77**	**149**	*de*P	**P**	**05 15 19.0**	**+0.3**
LPA				*e*pP		05 15 36.0	
LPA				*e*S	**S**	**05 18 33.0**	**+2.7**
LPA				*e*S	**S**	**05 18 36.0**	**+5.7**
LPA				*e*S	**S**	**05 18 48.0**	**+18**
TRQA	**Tornquist**	**19.01**	**163**	⇓*e*P	**P**	**05 15 30.2**	**-2.5**
	51nm,0.6s						
BDFB	**Brasilia**	**20.32**	**81**	P	**P**	**05 15 47.0**	**+0.4**
	96nm,0.5s,baz=264,slow=11,SNR=143						
BDFB				LR	LR	05 25 02.1	
	comp=Z,4µm,18.3s,baz=80,slow=40						
BAO	**Brasilia Array**	**20.34**	**81**	P	**P**	**05 15 47.0**	**+0.2**
PLCA	**Paso Flores**	**20.76**	**184**	P	**P**	**05 15 48.6**	**-2.3**
PLCA	**Paso Flores**	**20.76**	**184**	⇓*e*P	**P**	**05 15 48.7**	**-2.2**
PLCA				pmax	pmax		
	comp=Z,95nm,0.7s						
PLCA	**Paso Flores**	**20.76**	**184**	P	**P**	**05 15 48.7**	**-2.2**
	comp=Z,83nm,0.7s,baz=5.3,slow=12,SNR=90						
PLCA				PcP	PcP	05 19 56.3	-0.6
	comp=Z,4.1nm,0.7s,baz=16,slow=3.4,SNR=3.7						
PLCA	**Paso Flores**	**20.76**	**184**	⇓*e*P	**P**	**05 15 48.7**	**-2.3**
	comp=Z,95nm,0.7s						
OTAV	**Otavalo**	**22.15**	**334**	⇓*e*P	**P**	**05 16 07.0**	**+2.1**
	comp=Z,134nm,1.0s,mb5.2						
CAM4	**Nova Friburgo**	**24.65**	**100**	⇓*i*P	**P**	**05 16 30.3**	**+1.3**
CAM4				*i*		05 16 31.2	
CAM4				*i*		05 16 32.9	
CAM4				*i*		05 16 56.2	
ROSC	**El Rosal**	**25.23**	**347**	P	**P**	**05 16 35.5**	**+0.9**
	comp=Z,32nm,0.5s,mb5.0,baz=161,slow=0.2,SNR=20						
SDV	**Santo Domingo**	**28.71**	**356**	P	**P**	**05 17 05.5**	**-0.9**
	comp=Z,31nm,0.7s,mb5.0,baz=196,slow=8.0,SNR=35						
SDV				LR	LR	05 29 55.4	
	comp=Z,831nm,19.3s,baz=14,slow=39						
SDV	**Santo Domingo**	**28.71**	**356**	*e*P	**P**	**05 17 05.1**	**-1.3**
	comp=Z,42nm,0.6s,mb5.2						
SDV				*e*S	**S**	**05 21 47.6**	**+1.2**
JTS	**JuntasAbangare**	**33.97**	**331**	⇓*e*P	**P**	**05 17 53.7**	**+1.4**
JTS				*e**PP	pP	05 18 17.5	+1.5
JTS				*e**SP	sP	05 18 28.4	+0.1
JTS				pmax	pmax		
	comp=Z,63nm,1.0s						
JTS	**JuntasAbangare**	**33.97**	**331**	⇓*e*P	**P**	**05 17 53.6**	**+1.3**
	comp=Z,63nm,1.0s,mb5.4						
JTS				*e*pP	pP	05 18 17.5	+1.5
JTS				*e*sP	sP	05 18 28.4	0.0
USHA	**Ushuaia**	**34.82**	**180**	P	**P**	**05 17 57.7**	**-1.5**
	comp=Z,28nm,0.8s,mb5.1,baz=15,slow=4.9,SNR=20						
RCBR	**Riachuelo**	**34.98**	**71**	*e*P	**P**	**05 18 01.0**	**0.0**
	comp=Z,40nm,0.7s,mb5.3						
RCBR				*e*pP	pP	05 18 27.3	+2.5
BIM	**Bigot**	**35.10**	**13**	⇑*e*P	**P**	**05 18 01.4**	**-0.6**
MVM	**Montagne Vaucl**	**35.18**	**14**	⇑*i*P	**P**	**05 18 02.0**	**-0.6**
FDF	**Fort de France**	**35.30**	**13**	⇑*e*P	**P**	**05 18 02.7**	**-0.9**
CRM	**Caravelle**	**35.37**	**13**	⇑*e*P	**P**	**05 18 03.9**	**-0.3**
YHJ	**Yallahs**	**38.34**	**348**	⇓*e*P	**P**	**05 18 26.6**	**-2.6**
GWJ	**Greenwich**	**38.57**	**348**	⇑*i*P	**P**	**05 18 31.1**	**+0.1**
STH	**Stony Hill**	**38.59**	**348**	⇑*i*P	**P**	**05 18 31.3**	**+0.1**
MCJ	**Malvern**	**38.62**	**346**	⇑*e*P	**P**	**05 18 31.4**	**0.0**
CVJ	**Coleyville**	**38.88**	**347**	⇑*i*P	**P**	**05 18 34.3**	**+0.7**
BBJ	**Bamboo Saint A**	**38.98**	**347**	⇑*e*P	**P**	**05 18 31.7**	**-2.7**
CCIG	**Comitan**	**42.65**	**326**	⇑*i*P	**P**	**05 19 04.6**	**-0.1**
CMIG	**Matias Romero**	**44.80**	**323**	⇓*i*P	**P**	**05 19 22.1**	**0.0**
VHO	**Vista Hermosa**	**45.85**	**321**	⇓*i*P	**P**	**05 19 31.5**	**+1.1**
OXX	**Oaxaca**	**45.85**	**321**	*i* P	**P**	**05 19 32.0**	**+1.6**
CAIG	**El Cayaco**	**47.98**	**318**	⇓*i*P	**P**	**05 19 46.8**	**-0.3**
PPM	**Popocatepetl**	**48.52**	**321**	*i* P	**P**	**05 19 53.0**	**+1.7**
PPM				⇓*i*P		05 19 53.3	
PLIG	**Platanillo**	**48.52**	**320**	⇓*i*P	**P**	**05 19 52.1**	**+0.8**
DWPF	**Disney**	**49.30**	**345**	*e*P	**P**	**05 19 57.1**	**-0.1**
	comp=Z,124nm,0.7s,mb6.0						
DWPF				*e*pP	pP	05 20 22.4	+0.5
DWPF				*e*sP	sP	05 20 32.9	-0.5
DWPF				*e*PP	PP	05 21 54.5	+2.2
BBSR	**BB Station**	**52.18**	**4**	*e*P	**P**	**05 20 18.1**	**-0.9**
	comp=Z,38nm,0.7s,mb5.5						
BBSR				*e*pP	pP	05 20 43.4	-0.5
BBSR				*e*sP	sP	05 20 55.5	+0.2
RGRS	**Roger Stewart**	**53.66**	**348**	*e*P	**P**	**05 20 29.8**	**-0.1**
RGRS				*e*pP	pP	05 20 55.1	+0.1
RGRS				*e*sP	sP	05 21 04.8	-1.7
CSU	**Charleston Sou**	**53.72**	**348**	*e*P	**P**	**05 20 30.3**	**0.0**
TWB	**Tillmans-White**	**53.85**	**348**	*e*P	**P**	**05 20 31.3**	**+0.1**
NHSC	**New Hope**	**53.85**	**348**	*e*P	**P**	**05 20 31.1**	**-0.2**
	comp=Z,681nm,1.0s						
NHSC				*e*pP	pP	05 20 56.6	+0.2
COW	**Cow Castle Cre**	**54.22**	**348**	*e*P	**P**	**05 20 33.7**	**-0.2**
COW				*e*pP	pP	05 20 58.9	-0.2
JSC	**Jenkinsville**	**55.20**	**348**	*e*P	**P**	**05 20 40.6**	**-0.5**
LRAL	**Lakeview Retre**	**55.46**	**342**	*e*P	**P**	**05 20 41.4**	**-1.6**
	comp=Z,151nm,1.6s,mb5.8						
LRAL				*e*sP	sP	05 21 15.6	-4.2
NATX	**Nacogdoches**	**57.05**	**334**	⇓*e*P	**P**	**05 20 54.0**	**-0.3**
	comp=Z,270nm,1.2s,mb6.2						
CPCT	**Cooper Cave**	**57.06**	**345**	⇓*i*P	**P**	**05 20 53.1**	**-1.2**
CPCT				*e*pP	pP	05 21 21.5	+1.8
CPCT				*e*sP	sP	05 21 28.9	-2.4
SWET	**Sewanee**	**57.20**	**343**	*e*P	**P**	**05 20 53.8**	**-1.5**
SWET				*e*pP	pP	05 21 19.4	-1.3
SWET				*e*sP	sP	05 21 29.9	-2.3
OXF	**Oxford**	**57.58**	**340**	⇓*i*P	**P**	**05 20 55.6**	**-2.4**
OXF				pmax	pmax		
	comp=Z,337nm,1.1s,mb6.3						
OXF	**Oxford**	**57.58**	**340**	⇓*i*P	**P**	**05 20 55.6**	**-2.4**
	comp=Z,337nm,1.1s,mb6.3						
PLAL	**Pickwick Lake**	**57.59**	**341**	⇓*i*P	**P**	**05 20 55.8**	**-2.3**
	comp=Z,108nm,1.0s,mb5.8						
PLAL				*e*sP	sP	05 21 31.5	-3.6
TZTN	**Tazewell**	**57.88**	**346**	*e*P	**P**	**05 20 58.8**	**-1.2**
TZTN				*e*sP	sP	05 21 32.6	-4.4
BLA	**Blacksburg**	**57.89**	**349**	⇓*e*P	**P**	**05 20 59.8**	**-0.3**
BLA				*e**SP	sP	05 21 35.2	-1.9
BLA				pmax	pmax		
	comp=Z,140nm,1.1s,mb5.9						
BLA	**Blacksburg**	**57.89**	**349**	⇓*e*P	**P**	**05 20 59.8**	**-0.3**
	comp=Z,140nm,1.1s,mb5.9						
BLA				*e*sP	sP	05 21 35.1	-2.0
MET	**Memphis--Engin**	**58.31**	**340**	*e*P	**P**	**05 21 01.4**	**-1.6**
CBN	**Corbin**	**58.39**	**352**	⇓*e*P	**P**	**05 21 02.8**	**-0.9**
	comp=Z,161nm,1.5s,mb5.8						
WVT	**Waverly**	**58.59**	**342**	⇓*e*P	**P**	**05 21 02.8**	**-2.2**
WVT				*e**PP	pP	05 21 28.7	-1.8
WVT				pmax	pmax		
	comp=Z,90nm,0.7s,mb5.9						
WVT	**Waverly**	**58.59**	**342**	⇓*e*P	**P**	**05 21 02.8**	**-2.2**
	comp=Z,90nm,0.7s,mb5.9						
WVT				*e*pP	pP	05 21 28.7	-1.8
UALR	**University of**	**58.82**	**337**	*e*P	**P**	**05 21 04.8**	**-1.8**
	comp=Z,189nm,1.5s,mb5.9						
UALR				*e*sP	sP	05 21 40.5	-3.2
UALR				*e*PP	PP	05 23 18.1	-1.4
HALT	**Halls**	**58.84**	**341**	⇓*e*P	**P**	**05 21 04.7**	**-2.1**
HALT				*e*PcP	PcP	05 21 56.9	+2.0
HBAR	**Harrisburg**	**58.94**	**339**	⇓*e*P	**P**	**05 21 06.0**	**-1.4**
UTMT	**University of**	**59.09**	**341**	⇓*e*P	**P**	**05 21 06.9**	**-1.5**
	comp=Z,366nm,1.1s,mb6.3						
GNAR	**Gosnell**	**59.10**	**340**	⇓*e*P	**P**	**05 21 07.3**	**-1.3**
GLAT	**Glass**	**59.16**	**341**	⇓*e*P	**P**	**05 21 07.4**	**-1.5**
GLAT				*e*pP	pP	05 21 34.5	+0.1
LTX	**Lajitas**	**59.38**	**325**	⇓*e*P	**P**	**05 21 09.5**	**-1.1**
LTX				*e**SP	sP	05 21 45.6	-2.1
LTX				pmax	pmax		
	comp=Z,83nm,1.8s,mb5.5						
LTX	**Lajitas**	**59.38**	**325**	⇓*e*P	**P**	**05 21 09.5**	**-1.1**
	comp=Z,83nm,1.8s,mb5.5						
LTX				*e*sP	sP	05 21 45.6	-2.1
TXAR	**Lajitas Array**	**59.38**	**325**	P	**P**	**05 21 09.5**	**-1.1**
	comp=Z,5.0nm,0.5s,mb4.8,baz=150,slow=8.3,SNR=84						
TXAR				pP	pP	05 21 34.4	-1.7
	comp=Z,4.6nm,0.8s,baz=150,slow=9.2,SNR=4.9						
TXAR				sP	sP	05 21 45.3	-2.4
	comp=Z,8.6nm,1.0s,baz=126,slow=11,SNR=4.6						
SDMD	**Soldier's Deli**	**59.52**	**353**	⇓*e*P	**P**	**05 21 10.6**	**-0.8**
SDMD				*e*pP	pP	05 21 36.5	-0.5
PARMO	**Parma**	**59.66**	**341**	⇓*i*P	**P**	**05 21 11.2**	**-1.2**
PARMO				*e*pP	pP	05 21 36.6	-1.3
WCI	**Wyandotte Cave**	**60.14**	**344**	⇓*i*P	**P**	**05 21 13.8**	**-1.8**
WCI				*e**PP	pP	05 21 42.9	+1.6
WCI				pmax	pmax		
	comp=Z,261nm,1.6s,mb6.0						
WCI	**Wyandotte Cave**	**60.14**	**344**	⇓*i*P	**P**	**05 21 13.8**	**-1.8**
	comp=Z,261nm,1.6s,mb6.0						
WCI				*e*pP	pP	05 21 42.9	+1.7
MCWV	**Mont Chateau**	**60.18**	**350**	⇓*e*P	**P**	**05 21 15.6**	**-0.2**
	comp=Z,187nm,0.8s,mb6.2						
FVM	**French Village**	**61.09**	**341**	⇓*i*P	**P**	**05 21 20.5**	**-1.6**
FVM				pmax	pmax		
	comp=Z,179nm,0.9s,mb6.1						
FVM	**French Village**	**61.09**	**341**	⇓*i*P	**P**	**05 21 20.5**	**-1.6**
	comp=Z,179nm,0.9s,mb6.1						
BLO	**Bloomington**	**61.09**	**344**	⇓*e*P	**P**	**05 21 20.4**	**-1.7**
BLO				pmax	pmax		
	comp=Z,73nm,0.6s,mb5.9						
BLO	**Bloomington**	**61.09**	**344**	⇓*e*P	**P**	**05 21 20.4**	**-1.7**
	comp=Z,73nm,0.6s,mb5.9						
WMOK	**Wichita Mounta**	**61.37**	**332**	⇓*e*P	**P**	**05 21 22.1**	**-1.9**
WMOK				*e**SP	sP	05 21 58.2	-3.1
WMOK				pmax	pmax		
	comp=Z,77nm,1.7s,mb5.5						
WMOK	**Wichita Mounta**	**61.37**	**332**	⇓*e*P	**P**	**05 21 22.1**	**-1.9**
	comp=Z,76nm,1.7s,mb5.5						
WMOK				*e*sP	sP	05 21 58.2	-3.1
CCM	**Cathedral Cave**	**61.41**	**340**	⇓*i*P	**P**	**05 21 22.7**	**-1.6**
CCM				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.8						
CCM	**Cathedral Cave**	**61.41**	**340**	⇓*i*P	**P**	**05 21 22.7**	**-1.6**
	comp=Z,98nm,1.0s,mb5.8						
VNA3	**Neumayer Olymp**	**61.53**	**162**	⇓*i*P	**P**	**05 21 23.6**	**-1.0**
VNA3				*e*	pP	05 21 49.7	-0.6
VNA3				*e*		05 21 58.7	
VNA3				*e*		05 22 01.7	
BRYW	**Bryant College**	**61.60**	**358**	⇓*e*P	**P**	**05 21 25.1**	**-0.4**
	comp=Z,254nm,1.0s,mb6.2						
BRYW				*e*pP	pP	05 21 51.4	+0.1
SLM	**Saint Louis**	**61.63**	**341**	*e*P	**P**	**05 21 24.0**	**-1.7**
SLM				pmax	pmax		
	comp=Z,159nm,1.2s,mb5.9						
SLM	**Saint Louis**	**61.63**	**341**	*e*P	**P**	**05 21 24.0**	**-1.7**
	comp=Z,159nm,1.2s,mb5.9						
VNA1	**Neumayer--Stat**	**61.73**	**161**	⇓*i*P	**P**	**05 21 25.4**	**-0.5**
VNA1				*e*	pP	05 21 50.4	-1.3
VNA1				*e*		05 22 00.8	
VNA1				*e*		05 22 03.4	
CLNB	**Carlsbad**	**61.79**	**327**	*e*P	**P**	**05 21 26.2**	**-0.7**
GDL2	**Guadalupe Moun**	**62.00**	**326**	*e*P	**P**	**05 21 27.5**	**-0.7**
QUA2	**Belchertown**	**62.00**	**357**	*e*P	**P**	**05 21 27.2**	**-0.9**
	comp=Z,62nm,1.1s,mb5.5						
QUA2				*e*pP	pP	05 21 53.8	0.0
WES	**Weston**	**62.06**	**358**	⇓*e*P	**P**	**05 21 27.9**	**-0.6**
WES				*e**PP	pP	05 21 52.5	-1.8
WES				pmax	pmax		
	comp=Z,62nm,1.1s,mb5.5						
WES	**Weston**	**62.06**	**358**	⇓*e*P	**P**	**05 21 27.9**	**-0.6**
	comp=Z,62nm,1.1s,mb5.5						
WES				*e*pP	pP	05 21 52.5	-1.8
VNA2	**Neumayer--Watz**	**62.10**	**161**	⇓*i*P	**P**	**05 21 27.6**	**-0.8**
VNA2				*e*	pP	05 21 53.9	-0.2
VNA2				*e*		05 22 02.3	
VNA2				*e*		05 22 05.2	
MNTX	**Cornudas Mount**	**62.15**	**325**	⇓*e*P	**P**	**05 21 27.5**	**-1.7**
	comp=Z,44nm,1.1s,mb5.4						
MNTX				*e*pP	pP	05 21 52.8	-2.2
ALLY	**Alegheny Colle**	**62.17**	**350**	⇓*e*P	**P**	**05 21 28.7**	**-0.6**
ALLY				*e*pP	pP	05 21 57.1	+2.1
BINY	**Binghamton**	**62.18**	**354**	⇓*i*P	**P**	**05 21 29.1**	**-0.2**
	comp=Z,110nm,1.0s,mb5.8						
BINY				*e*pP	pP	05 21 55.4	+0.3
HRV	**Harvard--Oak R**	**62.19**	**358**	⇓*i*P	**P**	**05 21 29.1**	**-0.3**
HRV				*e**PP	pP	05 21 55.4	+0.2
HRV				pmax	pmax		
	comp=Z,85nm,1.0s,mb5.7						
HRV	**Harvard--Oak R**	**62.19**	**358**	⇓*i*P	**P**	**05 21 29.1**	**-0.4**
	comp=Z,85nm,1.0s,mb5.7						
HRV				*e*pP	pP	05 21 55.4	+0.3
AMTX	**Amarillo**	**62.81**	**330**	⇓*e*P	**P**	**05 21 32.2**	**-1.5**
	comp=Z,96nm,1.6s,mb5.5						
GENY	**Geneseo**	**62.95**	**353**	*e*P	**P**	**05 21 34.1**	**-0.3**
FFD	**Franklin Falls**	**63.16**	**358**	*e*P	**P**	**05 21 31.4**	**-4.4**
	comp=Z,125nm,1.6s,mb5.6						
FFD				*e*pP	pP	05 21 58.5	-3.2
ACCN	**Adirondack Com**	**63.17**	**356**	⇓*e*P	**P**	**05 21 35.8**	**-0.1**
ACCN				*e*pP	pP	05 22 02.8	+1.0
HNH	**Hanover**	**63.42**	**357**	⇓*e*P	**P**	**05 21 38.7**	**+1.2**
	comp=Z,9.3nm,1.4s,mb4.5						
HNH				*e*pP	pP	05 22 05.3	+1.9
SNAA	**Sanae**	**63.73**	**161**	*e*P	**P**	**05 21 38.1**	**-1.0**
SNAA				*e**PP	pP	05 22 04.9	0.0
SNAA				pmax	pmax		
	comp=Z,53nm,1.0s						
SNAA	**Sanae**	**63.73**	**161**	*e*P	**P**	**05 21 38.1**	**-1.0**
	comp=Z,53nm,1.0s,mb5.3						
SNAA				*e*pP	pP	05 22 04.9	0.0
NCB	**Newcomb**	**63.80**	**356**	⇓*e*P	**P**	**05 21 39.6**	**-0.3**
	comp=Z,103nm,1.4s,mb5.5						
MIV	**Mineville/With**	**63.85**	**356**	*e*P	**P**	**05 21 39.8**	**-0.5**
WVL	**Waterville**	**64.20**	**359**	*e*P	**P**	**05 21 42.6**	**0.0**
	comp=Z,213nm,1.3s,mb5.8						
KSU1	**Kansas State U**	**64.22**	**336**	⇓*i*P	**P**	**05 21 41.4**	**-1.5**
EMMW	**East Machias**	**64.36**	**1**	*e*P	**P**	**05 21 42.9**	**-0.7**
	comp=Z,209nm,1.2s,mb5.8						
EMMW				*e*pP	pP	05 22 09.6	+0.1
FRNY	**Flat Rock**	**64.61**	**356**	⇓*e*P	**P**	**05 21 44.6**	**-0.6**
FRNY				*e*pP	pP	05 22 11.6	+0.4
BNM	**Barren Site**	**64.70**	**326**	*e*P	**P**	**05 21 45.9**	**-0.2**
BNM				*e*sP	sP	05 22 22.3	-1.0
MSNY	**Massena**	**64.86**	**355**	*e*P	**P**	**05 21 46.8**	**-0.1**
LENM	**Lemitar**	**64.90**	**326**	*e*P	**P**	**05 21 47.2**	**-0.1**
CBKS	**Cedar Bluff**	**65.22**	**334**	⇓*e*P	**P**	**05 21 48.5**	**-0.8**
CBKS				pmax	pmax		
	comp=Z,219nm,1.4s,mb5.8						
CBKS	**Cedar Bluff**	**65.22**	**334**	⇓*e*P	**P**	**05 21 48.5**	**-0.8**
	comp=Z,219nm,1.4s,mb5.8						
ANMO	**Albuquerque**	**65.23**	**327**	P	**P**	**05 21 49.1**	**-0.4**
ANMO				PcP	PcP	05 22 25.4	+4.6
ANMO	**Albuquerque**	**65.23**	**327**	⇓*i*P	**P**	**05 21 49.1**	**-0.4**
ANMO				*e**SP	sP	05 22 25.7	-1.1
ANMO				pmax	pmax		
	comp=Z,130nm,1.8s						
ANMO	**Albuquerque**	**65.23**	**327**	P	**P**	**05 21 49.1**	**-0.4**
	comp=Z,11nm,0.9s,mb4.7,baz=145,slow=7.9,SNR=47						
ANMO				pP	pP	05 22 14.8	-0.6
	comp=Z,4.4nm,0.8s,baz=171,slow=8.7,SNR=3.2						
ANMO				sP	sP	05 22 25.4	-1.4
	comp=Z,7.7nm,0.9s,baz=133,slow=7.5,SNR=3.4						
ANMO	**Albuquerque**	**65.23**	**327**	⇓*i*P	**P**	**05 21 49.1**	**-0.4**
	comp=Z,130nm,1.8s,mb5.5						
ANMO				*e*sP	sP	05 22 25.7	-1.0
JFWS	**Jewell Farm**	**65.58**	**343**	⇓*i*P	**P**	**05 21 50.1**	**-1.4**
JFWS				pmax	pmax		
	comp=Z,277nm,1.5s,mb5.9						
JFWS	**Jewell Farm**	**65.58**	**343**	⇓*i*P	**P**	**05 21 50.1**	**-1.4**
	comp=Z,277nm,1.5s,mb5.9						
TUC	**Tucson**	**65.64**	**322**	⇓*i*P	**P**	**05 21 51.9**	**-0.2**
TUC				*e**SP	sP	05 22 28.6	-0.8
TUC				pmax	pmax		
	comp=Z,122nm,1.7s,mb5.5						
TUC	**Tucson**	**65.64**	**322**	⇓*i*P	**P**	**05 21 51.9**	**-0.2**
	comp=Z,122nm,1.7s,mb5.5						
TUC				*e*sP	sP	05 22 28.6	-0.8
SDCO	**Great Sand Dun**	**66.94**	**329**	⇓*i*P	**P**	**05 22 00.4**	**+0.2**
	comp=Z,216nm,1.7s,mb5.7						
SDCO				*e*sP	sP	05 22 35.9	-1.7
MAIT	**Maitri**	**68.23**	**159**	*e*P	**P**	**05 22 07.5**	**-0.2**
NVL	**N'lazarevskaya**	**68.26**	**159**	⇓*i*P	**P**	**05 22 07.1**	**-0.8**
NVL				*i* *PP	pP	05 22 34.1	0.0
NVL				*i* *SP	sP	05 22 37.7	-7.5
NVL				*i*		05 22 45.5	
NVL				*e*SSS	SSS	05 38 27.6	+0.7
NVL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
DBIC	**Dimbokro**	**68.28**	**74**	P	**P**	**05 22 08.5**	**-0.4**
DBIC				PcP	PcP	05 22 35.8	+1.9
DBIC				S	S	05 31 01.7	+1.8
DBIC	**Dimbokro**	**68.28**	**74**	P	**P**	**05 22 08.6**	**-0.3**
	comp=Z,85nm,0.8s,mb5.6,baz=225,slow=6.1,SNR=52						
DBIC				pP	pP	05 22 36.2	+1.1
	comp=Z,49nm,0.7s,baz=212,slow=6.7,SNR=5.1						
DBIC				LR	LR	05 50 08.2	
	comp=Z,345nm,21.2s,baz=308,slow=34						
WUAZ	**Wupatki**	**68.31**	**324**	⇓*i*P	**P**	**05 22 09.5**	**+0.7**
	comp=Z,184nm,1.4s,mb5.7						
WUAZ				*e*	pP	05 22 34.5	-0.4
WUAZ				*e*sP	sP	05 22 45.9	-0.2
ISCO	**Idaho Springs**	**68.62**	**330**	⇓*i*P	**P**	**05 22 10.8**	**+0.2**
ISCO				*e*	pP	05 22 35.0	-1.8
ISCO				*e**SP	sP	05 22 47.7	-0.3
ISCO				pmax	pmax		
	comp=Z,129nm,1.6s,mb5.5						
ISCO	**Idaho Springs**	**68.62**	**330**	⇓*i*P	**P**	**05 22 10.8**	**+0.2**
	comp=Z,129nm,1.6s,mb5.5						
ISCO				*e*	pP	05 22 35.0	-1.9
ISCO				*e*sP	sP	05 22 47.7	-0.3
EGOM	**La Gomera**	**69.15**	**48**	P	**P**	**05 22 15.5**	**+1.4**
	comp=Z,31nm,1.0s,mb5.1						
EGOM				pP	pP	05 22 41.7	+1.3
BAR	**Barrett**	**69.47**	**318**	*e*P	**P**	**05 22 16.5**	**+0.5**
BAR				*e*sP	sP	05 22 53.1	-0.3
TAOE	**Nuku Hiva Isla**	**69.49**	**268**	*e*P	**P**	**05 22 04.3**	**-12**
	comp=Z,1µm,25.6s						
TAOE				*e*SS	SS	05 35 22.7	-23
	comp=Z,879nm,24.4s						
TAOE				*e*LQ		05 41 00.4	
	comp=Z,2µm,31.8s						
TAOE				*e*LR	LR	05 43 06.0	
	comp=Z,1µm,38.3s						
CCAN	**Las Canadas**	**69.61**	**48**	P	**P**	**05 22 19.5**	**+2.6**
	comp=Z,4.5nm,0.7s,mb4.4						
CCAN				pP	pP	05 22 46.4	+3.2
PHWY	**Pilot Hill**	**69.75**	**331**	*e*P	**P**	**05 22 17.9**	**+0.3**
PFO	**Pinyon Flat Ob**	**69.96**	**319**	⇓*e*P	**P**	**05 22 19.8**	**+0.9**
PFO				*e**SP	sP	05 22 56.2	-0.1
PFO				pmax	pmax		
	comp=Z,81nm,1.2s,mb5.4						
PFO	**Pinyon Flat Ob**	**69.96**	**319**	⇓*e*P	**P**	**05 22 19.8**	**+0.8**
	comp=Z,81nm,1.2s,mb5.4						
PFO				*e*sP	sP	05 22 56.2	-0.1
LDFC	**Landfair**	**70.14**	**321**	⇓*i*P	**P**	**05 22 21.1**	**+1.1**
LDFC				*e*sP	sP	05 22 57.3	-0.1
QSPA	**South Pole Qui**	**70.23**	**180**	⇓*i*P	**P**	**05 22 19.7**	**-0.1**
	comp=Z,41nm,0.9s,mb5.3						
NEN	**Nelson**	**70.38**	**322**	*e*P	**P**	**05 22 21.6**	**+0.1**
NEN				*e*sP	sP	05 22 58.1	-0.8
SRU	**San Rafael**	**70.50**	**327**	⇓*i*P	**P**	**05 22 22.4**	**+0.3**
SRU				*e**SP	sP	05 22 59.0	-0.5
RWWY	**Rawlins**	**70.86**	**331**	⇓*e*P	**P**	**05 22 24.5**	**+0.3**
	comp=Z,156nm,1.6s,mb5.6						
MSU	**Marysvale**	**70.93**	**325**	⇓*i*P	**P**	**05 22 25.6**	**+0.9**
MSU				*e*pP	pP	05 22 51.5	+0.4
MSU				*e*sP	sP	05 22 59.8	-2.3
MVU	**Marysvale**	**70.94**	**325**	⇓*e*P	**P**	**05 22 25.8**	**+1.1**
	comp=Z,171nm,1.5s,mb5.7						
MVU				*e*sP	sP	05 23 02.4	+0.2
TMUT	**Trail Mountain**	**70.99**	**326**	⇓*e*P	**P**	**05 22 25.6**	**+0.6**
TMUT				*e*sP	sP	05 23 03.3	+0.8
ARUT	**Antelope Range**	**71.09**	**324**	*e*P	**P**	**05 22 27.0**	**+1.4**
MWC	**Mount Wilson**	**71.36**	**319**	⇓*i*P	**P**	**05 22 28.0**	**+0.7**
MWC				*e**SP	sP	05 23 04.9	+0.1
RSSD	**Black Hills**	**71.42**	**334**	⇓*i*P	**P**	**05 22 27.6**	**+0.1**
RSSD				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.3						
RSSD	**Black Hills**	**71.42**	**334**	⇓*i*P	**P**	**05 22 27.6**	**+0.1**
	comp=Z,47nm,1.0s,mb5.3						
MPU	**Maple Canyon**	**71.75**	**327**	⇓*i*P	**P**	**05 22 30.2**	**+0.7**
MPU				*e*sP	sP	05 23 07.2	+0.1
DAU	**Daniels Canyon**	**71.85**	**327**	⇓*e*P	**P**	**05 22 31.1**	**+1.0**
NLU	**North Lily Min**	**71.93**	**326**	⇓*e*P	**P**	**05 22 31.7**	**+1.1**
JLU	**Jordanelle**	**72.09**	**327**	⇓*i*P	**P**	**05 22 32.3**	**+0.7**
JLU				*e*sP	sP	05 23 09.3	+0.2
CTU	**Camp Tracy**	**72.31**	**327**	*e*P	**P**	**05 22 33.0**	**+0.2**
EFAM	**Famara**	**72.32**	**49**	P	**P**	**05 22 34.0**	**+0.9**
	comp=Z,323nm,2.1s,mb5.8						
EFAM				pP	pP	05 23 02.5	+2.9
TCUT	**Toone Canyon**	**72.45**	**328**	⇓*e*P	**P**	**05 22 34.3**	**+0.7**
NOQ	**North Oquirrh**	**72.47**	**327**	*e*P	**P**	**05 22 34.1**	**+0.4**
TRCR	**Troy Canyon**	**72.69**	**323**	⇓*e*P	**P**	**05 22 36.4**	**+1.3**
TRCR				*e*sP	sP	05 23 13.4	+0.7
PDAR	**Pinedale Array**	**72.79**	**330**	P	**P**	**05 22 35.5**	**-0.2**
	comp=Z,6.0nm,0.8s,mb4.5,baz=153,slow=6.6,SNR=39						
HWUT	**Hardware Ranch**	**72.89**	**328**	⇓*i*P	**P**	**05 22 36.5**	**+0.3**
	comp=Z,39nm,0.9s,mb5.2						
HWUT				*e*sP	sP	05 23 12.8	-1.0
SPUT	**South Promonto**	**73.12**	**327**	⇓*i*P	**P**	**05 22 38.0**	**+0.5**
SPUT				*e*sP	sP	05 23 15.1	-0.1
TPH	**Tonopah**	**73.43**	**322**	⇓*i*P	**P**	**05 22 40.3**	**+0.8**
TPH				*e**SP	sP	05 23 17.0	-0.1
TPH				pmax	pmax		
	comp=Z,108nm,1.6s,mb5.4						
TPH	**Tonopah**	**73.43**	**322**	⇓*i*P	**P**	**05 22 40.3**	**+0.9**
	comp=Z,108nm,1.6s,mb5.4						
TPH				*e*sP	sP	05 23 17.0	-0.1
AHID	**Auburn Hatcher**	**73.53**	**329**	⇓*e*P	**P**	**05 22 40.2**	**+0.3**
	comp=Z,185nm,1.6s,mb5.6						
HVU	**Hansel Valley**	**73.63**	**327**	⇓*e*P	**P**	**05 22 40.6**	**+0.1**
HVU				*e**SP	sP	05 23 17.8	-0.4
MTUM	**Tungsten Hills**	**73.73**	**321**	*e*P	**P**	**05 22 42.2**	**+0.9**
MTUM				*e*sP	sP	05 23 18.9	-0.1
ULM	**Lac du Bonnet**	**73.86**	**342**	P	**P**	**05 22 40.8**	**-0.9**
	comp=Z,29nm,0.6s,mb5.2,baz=154,slow=6.1,SNR=38						
ULM				LR	LR	05 55 44.6	
	comp=Z,106nm,19.0s,baz=45,slow=36						
ULM	**Lac du Bonnet**	**73.86**	**342**	⇓*i*P	**P**	**05 22 40.7**	**-1.0**
	comp=Z,85nm,0.9s,mb5.5						
REDW	**Red Top Meadow**	**73.86**	**329**	⇓*i*P	**P**	**05 22 42.3**	**+0.5**
	comp=Z,195nm,1.7s,mb5.6						
SNOW	**Snow King Moun**	**73.89**	**330**	⇓*i*P	**P**	**05 22 42.7**	**+0.7**
	comp=Z,48nm,1.0s,mb5.2						
LOHW	**Long Hollow**	**73.93**	**330**	⇓*e*P	**P**	**05 22 42.7**	**+0.4**
	comp=Z,133nm,1.7s,mb5.4						
TPAW	**Teton Pass**	**74.00**	**330**	⇓*i*P	**P**	**05 22 43.3**	**+0.6**
	comp=Z,141nm,1.5s,mb5.5						
TBI	**Tubuai**	**74.03**	**251**	*e*P	**P**	**05 22 34.8**	**-8.5**
	comp=Z,168nm,25.2s						
TBI				*e*S	S	05 32 16.6	+11
	comp=Z,607nm,27.8s						
TBI				*e*SS	SS	05 37 02.0	+7.1
	comp=Z,126nm,23.5s						
TBI				*e*LR	LR	05 45 25.7	
	comp=Z,954nm,31.5s,baz=112						
RRI2	**Red Ridge**	**74.07**	**329**	⇓*i*P	**P**	**05 22 43.8**	**+0.7**
	comp=Z,319nm,1.7s,mb5.8						
RRI2				*e*sP	sP	05 23 20.6	-0.3
MOOW	**Moose Ponds**	**74.10**	**330**	*e*P	**P**	**05 22 43.9**	**+0.6**
	comp=Z,120nm,1.7s,mb5.3						
OMM	**Old Mammoth Mi**	**74.17**	**321**	⇓*i*P	**P**	**05 22 44.6**	**+0.9**
OMM				*e*sP	sP	05 23 21.2	-0.4
ELK	**Elko**	**74.17**	**325**	⇓*e*P	**P**	**05 22 44.1**	**+0.3**
ELK				*e**SP	sP	05 23 21.3	-0.2
ELK				pmax	pmax		
	comp=Z,96nm,1.8s						
ELK	**Elko**	**74.17**	**325**	P	**P**	**05 22 44.4**	**+0.6**
	comp=Z,15nm,1.0s,mb4.7,baz=126,slow=4.3,SNR=50						
ELK				sP	sP	05 23 20.7	-0.8
	comp=Z,14nm,1.0s,baz=140,slow=4.7,SNR=5.4						
ELK	**Elko**	**74.17**	**325**	⇓*e*P	**P**	**05 22 44.1**	**+0.4**
	comp=Z,96nm,1.8s,mb5.2						
ELK				*e*sP	sP	05 23 21.3	-0.2
MNV	**Mina**	**74.21**	**322**	⇓*i*P	**P**	**05 22 44.7**	**+0.7**
MNV				*e**SP	sP	05 23 20.7	-1.1
MNV				pmax	pmax		
	comp=Z,90nm,1.8s,mb5.2						
MNV	**Mina**	**74.21**	**322**	⇓*i*P	**P**	**05 22 44.7**	**+0.7**
	comp=Z,90nm,1.8s,mb5.2						
MNV				*e*sP	sP	05 23 20.7	-1.1
NVAR	**Mina Array Bea**	**74.30**	**322**	P	**P**	**05 22 45.4**	**+0.8**
	comp=Z,18nm,0.9s,mb4.8,baz=137,slow=7.3,SNR=102						
NVAR				pP	pP	05 23 11.6	+0.5
	comp=Z,8.5nm,0.9s,baz=144,slow=7.8,SNR=4.6						
NVAR				sP	sP	05 23 22.4	0.0
	comp=Z,6.3nm,0.7s,baz=135,slow=5.1,SNR=3.1						
IMW	**Indian Meadow**	**74.30**	**330**	⇓*i*P	**P**	**05 22 45.1**	**+0.7**
	comp=Z,77nm,1.1s,mb5.3						
LAO	**LASA Array**	**74.41**	**334**	⇓*i*P	**P**	**05 22 45.0**	**+0.1**
	comp=Z,226nm,1.6s,mb5.7						
SCHQ	**Schefferville**	**74.50**	**1**	P	**P**	**05 22 45.2**	**-0.1**
	comp=Z,41nm,0.9s,mb5.2,baz=182,slow=4.6,SNR=36						
SCHQ				LR	LR	05 55 02.9	
	comp=Z,83nm,19.0s,baz=88,slow=35						
SCHQ	**Schefferville**	**74.50**	**1**	⇓*i*P	**P**	**05 22 45.1**	**-0.2**
	comp=Z,89nm,1.0s,mb5.5						
LKWY	**Lake**	**74.56**	**331**	⇓*i*P	**P**	**05 22 47.7**	**+1.8**
LKWY				pmax	pmax		
	comp=Z,190nm,1.1s,mb5.7						
LKWY	**Lake**	**74.56**	**331**	⇓*i*P	**P**	**05 22 47.7**	**+1.8**
	comp=Z,190nm,1.1s,mb5.7						
LKWY				*e*sP	sP	05 23 21.5	-2.2
LRV	**Little Rabbit**	**74.62**	**319**	*e*P	**P**	**05 22 48.0**	**+1.6**
LRV				*e*sP	sP	05 23 23.3	-1.0
YFT	**Old Faithful**	**74.67**	**330**	⇓*e*P	**P**	**05 22 48.5**	**+1.9**

YNR	**Norris Junctio**	**74.80**	**330**	⇓*e*P	**P**	**05 22 48.7**	**+1.5**
YMR	**Madison River**	**74.90**	**330**	⇓*e*P	**P**	**05 22 49.2**	**+1.4**
BMN	**Battle Mountai**	**75.04**	**324**	⇓*e*P	**P**	**05 22 48.7**	**0.0**
BMN				*e**SP	sP	05 23 26.3	-0.3
BMN				pmax	pmax		
	comp=Z,40nm,1.7s,mb4.9						
BMN	**Battle Mountai**	**75.04**	**324**	⇓*e*P	**P**	**05 22 48.7**	**+0.1**
	comp=Z,40nm,1.7s,mb4.9						
BMN				*e*sP	sP	05 23 26.3	-0.3
DGMT	**Dagmar**	**75.07**	**337**	⇓*e*P	**P**	**05 22 49.4**	**+0.7**
	comp=Z,283nm,1.6s,mb5.8						
SAO	**San Andreas Ge**	**75.11**	**319**	⇓*e*P	**P**	**05 22 49.6**	**+0.4**
SAO				*e**SP	sP	05 23 26.1	-0.9
SAO				pmax	pmax		
	comp=Z,91nm,1.9s,mb5.2						
SAO	**San Andreas Ge**	**75.11**	**319**	⇓*e*P	**P**	**05 22 49.6**	**+0.5**
	comp=Z,90nm,1.9s,mb5.2						
SAO				*e*sP	sP	05 23 26.1	-0.9
GCMT	**Greycliff**	**75.17**	**332**	*e*P	**P**	**05 22 49.8**	**+0.5**
QLMT	**Earthquake Lak**	**75.24**	**330**	*e*P	**P**	**05 22 51.3**	**+1.6**
CMB	**Columbia Colle**	**75.27**	**320**	*e*P	**P**	**05 22 50.4**	**+0.3**
CMB				*e**SP	sP	05 23 25.9	-2.1
CMB				pmax	pmax		
	comp=Z,58nm,1.7s,mb5.0						
CMB	**Columbia Colle**	**75.27**	**320**	*e*P	**P**	**05 22 50.4**	**+0.3**
	comp=Z,58nm,1.7s,mb5.0						
CMB				*e*sP	sP	05 23 25.9	-2.1
PPT	**Papeete**	**75.71**	**256**	*e*P	**P**	**05 22 42.9**	**-10**
	comp=Z,203nm,24.0s						
PPT				*e*PP	PP	05 26 05.1	+20
	comp=Z,62nm,21.2s						
PPT				*e*S	S	05 32 40.0	+16
	comp=Z,222nm,24.8s						
PPT				*e*SS	SS	05 36 38.1	-43
	comp=Z,91nm,22.8s						
PPT				*e*LQ		05 42 56.3	
	comp=Z,316nm,24.0s						
PPT				*e*LR	LR	05 46 35.8	
	comp=Z,808nm,27.2s,baz=106						
PPT	**Papeete**	**75.71**	**256**	LR	LR	05 48 41.9	
	comp=Z,157nm,18.6s,baz=358,slow=30						
WCN	**Washoe City**	**75.72**	**322**	⇓*e*P	**P**	**05 22 53.8**	**+1.2**
WCN				pmax	pmax		
	comp=Z,87nm,1.8s,mb5.2						
WCN	**Washoe City**	**75.72**	**322**	⇓*e*P	**P**	**05 22 53.8**	**+1.1**
	comp=Z,87nm,1.8s,mb5.2						
HLID	**Hailey**	**75.75**	**328**	⇓*e*P	**P**	**05 22 53.8**	**+1.2**
	comp=Z,73nm,1.1s,mb5.3						
HLID				*e*sP	sP	05 23 30.5	-0.2
PAHR	**Pah Rah Range**	**75.78**	**322**	⇓*e*P	**P**	**05 22 54.2**	**+1.4**
	comp=Z,39nm,0.9s,mb5.1						
PAHR				*e*sP	sP	05 23 31.3	+0.5
MCMT	**McKenzie Canyo**	**75.91**	**329**	*e*P	**P**	**05 22 54.8**	**+1.2**
BOZ	**Bozeman (W)**	**75.95**	**331**	⇓*i*P	**P**	**05 22 54.1**	**+0.4**
BOZ				*e**SP	sP	05 23 30.6	-1.1
BOZ				pmax	pmax		
	comp=Z,131nm,1.7s,mb5.4						
BOZ	**Bozeman (W)**	**75.95**	**331**	⇓*i*P	**P**	**05 22 54.1**	**+0.3**
	comp=Z,131nm,1.7s,mb5.4						
BOZ				*e*sP	sP	05 23 30.6	-1.2
BEKR	**Beckwourth**	**76.45**	**322**	⇓*e*P	**P**	**05 22 57.4**	**+0.8**
	comp=Z,114nm,1.8s,mb5.3						
BEKR				*e*sP	sP	05 23 34.5	-0.2
HRY	**Holter Researc**	**76.84**	**331**	*e*P	**P**	**05 22 59.5**	**+0.8**
WVOR	**Wild Horse Val**	**77.18**	**325**	*e*P	**P**	**05 23 01.2**	**+0.5**
WVOR				*e**SP	sP	05 23 38.2	-0.6
WVOR				pmax	pmax		
	comp=Z,62nm,1.9s,mb5.0						
WVOR	**Wild Horse Val**	**77.18**	**325**	*e*P	**P**	**05 23 01.1**	**+0.4**
	comp=Z,62nm,1.9s,mb5.0						
WVOR				*e*sP	sP	05 23 38.2	-0.6
SBA	**Scott Base**	**77.35**	**190**	*e*P	**P**	**05 23 01.1**	**+0.1**
SBA				pmax	pmax		
	comp=Z,99nm,2.0s,mb5.2						
SBA	**Scott Base**	**77.35**	**190**	*e*P	**P**	**05 23 01.1**	**+0.1**
	comp=Z,99nm,2.0s,mb5.2						
CHMT	**Chamberlain Mo**	**77.64**	**331**	*e*P	**P**	**05 23 04.0**	**+0.9**
LBCM	**Butte Creek Ri**	**77.65**	**322**	P	**P**	**05 23 03.6**	**+0.2**
MOD	**Modoc**	**77.75**	**323**	⇓*e*P	**P**	**05 23 04.6**	**+0.8**
	comp=Z,123nm,1.7s,mb5.4						
MOD				*e*sP	sP	05 23 41.8	-0.3
MSO	**Missoula**	**77.90**	**330**	⇓*i*P	**P**	**05 23 05.5**	**+0.9**
	comp=Z,62nm,1.5s,mb5.1						
SYO	**Syowa Base**	**77.94**	**160**	⇑P	**P**	**05 23 03.0**	**-1.3**
SYO	**Syowa Base**	**77.94**	**160**	⇓pP	pP	05 23 30.5	-0.6
BMO	**Blue Mountains**	**78.14**	**327**	⇓*i*P	**P**	**05 23 06.4**	**+0.5**
	comp=Z,130nm,1.6s,mb5.4						
WDC	**Whiskeytown Da**	**78.18**	**321**	⇓*i*P	**P**	**05 23 05.3**	**-1.0**
WDC				*e**SP	sP	05 23 42.1	-2.4
WDC				pmax	pmax		
	comp=Z,73nm,1.8s,mb5.1						
WDC	**Whiskeytown Da**	**78.18**	**321**	⇓*i*P	**P**	**05 23 05.3**	**-1.0**
	comp=Z,72nm,1.8s,mb5.1						
WDC				*e*sP	sP	05 23 42.1	-2.3
VNDA	**Vanda**	**78.37**	**190**	*e*P	**P**	**05 23 07.3**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,32nm,1.5s						
VNDA	**Vanda**	**78.37**	**190**	P	**P**	**05 23 07.1**	**+0.5**
	comp=Z,5.2nm,0.9s,mb4.3,baz=130,slow=4.8,SNR=26						
VNDA				LR	LR	05 57 59.6	
	comp=Z,90nm,19.8s,baz=130,slow=36						
VNDA	**Vanda**	**78.37**	**190**	*e*P	**P**	**05 23 07.3**	**+0.7**
	comp=Z,32nm,1.5s,mb4.8						
LHEM	**Herd Peak**	**78.66**	**322**	P	**P**	**05 23 09.3**	**+0.5**
YBH	**Yreka Blue Hor**	**79.01**	**322**	*e*P	**P**	**05 23 10.2**	**-0.6**
YBH				*e**SP	sP	05 23 46.1	-3.0
YBH				pmax	pmax		
	comp=Z,31nm,1.4s						
YBH	**Yreka Blue Hor**	**79.01**	**322**	P	**P**	**05 23 10.2**	**-0.6**
	comp=Z,8.7nm,0.8s,mb4.7,baz=138,slow=3.9,SNR=31						
YBH	**Yreka Blue Hor**	**79.01**	**322**	*e*P	**P**	**05 23 10.2**	**-0.6**
	comp=Z,31nm,1.4s,mb5.0						
YBH				*e*sP	sP	05 23 46.0	-3.0
KHMM	**Horse Mountain**	**79.07**	**321**	*e*P	**P**	**05 23 12.1**	**+1.0**
PINOR	**Pine Mountain**	**79.32**	**325**	P	**P**	**05 23 13.9**	**+1.5**
FFC	**Flin Flon**	**79.58**	**341**	⇓*i*P	**P**	**05 23 13.4**	**-0.2**
FFC				*e**SP	sP	05 23 50.6	-1.3
FFC				pmax	pmax		
	comp=Z,98nm,1.6s,mb5.4						
FFC	**Flin Flon**	**79.58**	**341**	⇓*i*P	**P**	**05 23 13.4**	**-0.2**
	comp=Z,98nm,1.6s,mb5.4						
FFC				*e*sP	sP	05 23 50.6	-1.3
HUMO	**Hull Mountain**	**79.71**	**323**	*e*P	**P**	**05 23 14.1**	**-0.5**
	comp=Z,32nm,1.3s,mb5.0						
WIFE	**Three Sisters-**	**80.00**	**324**	P	**P**	**05 23 17.2**	**+1.2**
CROR	**Criterion Ridg**	**80.15**	**325**	P	**P**	**05 23 18.3**	**+1.5**
PTEO	**Sao Teotonio**	**80.43**	**44**	*e*P	**P**	**05 23 18.4**	**-0.1**
	comp=Z,60nm,1.4s,mb5.2						
PTEO				*e*pP	pP	05 23 47.9	+2.5
NEW	**Newport**	**80.43**	**330**	*e*P	**P**	**05 23 18.0**	**-0.3**
NEW				*e**SP	sP	05 23 56.0	-0.7
NEW				pmax	pmax		
	comp=Z,71nm,1.6s						
NEW	**Newport**	**80.43**	**330**	P	**P**	**05 23 18.1**	**-0.1**
	comp=Z,11nm,1.0s,mb4.6,baz=131,slow=4.9,SNR=24						
NEW	**Newport**	**80.43**	**330**	*e*P	**P**	**05 23 18.0**	**-0.2**
	comp=Z,71nm,1.6s,mb5.2						
NEW				*e*sP	sP	05 23 56.0	-0.7
TSUM	**Tsumeb**	**80.46**	**107**	*e*P	**P**	**05 23 20.2**	**+1.2**
	comp=Z,40nm,1.0s,mb5.2						
TSUM				*e*pP	pP	05 23 47.5	+1.5
OD2	**Odessa Site #2**	**80.59**	**328**	P	**P**	**05 23 19.9**	**+0.8**
KEBM	**Edson Butte**	**80.67**	**322**	⇓*e*P	**P**	**05 23 20.6**	**+0.9**
KEBM				*e*sP	sP	05 23 56.6	-1.4
COR	**Corvallis**	**81.15**	**324**	⇓*i*P	**P**	**05 23 23.3**	**+1.1**
COR				*e**SP	sP	05 24 00.2	-0.4
COR				pmax	pmax		
	comp=Z,184nm,1.3s,mb5.8						
COR	**Corvallis**	**81.15**	**324**	⇓*i*P	**P**	**05 23 23.2**	**+1.1**
	comp=Z,184nm,1.3s,mb5.8						
COR				*e*sP	sP	05 24 00.1	-0.4
PBEJ	**Beja**	**81.26**	**44**	*e*P	**P**	**05 23 24.4**	**+1.5**
	comp=Z,20nm,1.1s,mb4.8						
PBEJ				*e*pP	pP	05 23 52.1	+2.3
TBM	**Table Mountain**	**81.39**	**327**	P	**P**	**05 23 24.6**	**+1.2**
EVO	**Evora**	**81.44**	**44**	*e*P	**P**	**05 23 21.4**	**-2.4**
	comp=Z,23nm,1.0s,mb4.7						
EVO				*e*R			
	comp=Z,108nm,21.2s						
PTOM	**Tomar**	**81.80**	**43**	*e*P	**P**	**05 23 26.5**	**+0.9**
	comp=Z,35nm,1.3s,mb5.0						
PTOM				*e*pP	pP	05 23 54.3	+1.7
EMIN	**Mina Concepcio**	**81.91**	**45**	P	**P**	**05 23 27.8**	**+1.5**
	comp=Z,17nm,1.0s,mb4.8						
EMIN				pP	pP	05 23 55.2	+2.0

ESPR	**Espera**	**81.98**	**46**	P	**P**	**05 23 28.3**	**+1.7**
	comp=Z,4.8nm,0.7s,mb4.4						
ESPR				pP	pP	05 23 56.0	+2.4
EBAD	**Badajoz**	**82.22**	**44**	P	**P**	**05 23 29.4**	**+1.6**
	comp=Z,8.7nm,0.9s,mb4.6						
EBAD				pP	pP	05 23 56.8	+1.9
PCBR	**Castelo Branco**	**82.52**	**43**	*e*P	**P**	**05 23 30.1**	**+0.8**
	comp=Z,13nm,1.1s,mb4.7						
PCBR				*e*pP	pP	05 23 55.7	-0.6
EMIJ	**Mijas**	**82.56**	**47**	P	**P**	**05 23 30.9**	**+1.3**
	comp=Z,6.7nm,0.6s,mb4.7						
RPW	**Rockport**	**82.70**	**328**	P	**P**	**05 23 30.1**	**0.0**
PVIS	**Viseu**	**82.74**	**42**	*e*P	**P**	**05 23 32.0**	**+1.6**
	comp=Z,18nm,1.1s,mb4.8						
PVIS				*e*pP	pP	05 23 58.9	+1.4
MTE	**Manteigas**	**82.78**	**42**	*e*P	**P**	**05 23 31.7**	**+1.1**
MTE				*e*pP	pP	05 23 58.1	+0.4
ECAB	**El Cabril**	**82.91**	**45**	P	**P**	**05 23 34.5**	**+3.1**
	comp=Z,3.9nm,0.8s,mb4.3						
PVRL	**Vila Real**	**83.16**	**42**	*e*P	**P**	**05 23 34.1**	**+1.6**
	comp=Z,34nm,1.6s,mb4.9						
PVRL				*e*pP	pP	05 24 01.1	+1.5
ELOB	**Lobios**	**83.28**	**41**	P	**P**	**05 23 33.9**	**+0.8**
	comp=Z,15nm,1.4s,mb4.6						
ELOJ	**Sierra Loja**	**83.28**	**47**	P	**P**	**05 23 35.2**	**+2.0**
ELOJ				*PP	pP	05 24 02.4	+2.1
ELOJ				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.9						
ELOJ	**Sierra Loja**	**83.28**	**47**	P	**P**	**05 23 35.2**	**+2.0**
	comp=Z,25nm,1.2s,mb4.9						
ELOJ				pP	pP	05 24 02.4	+2.0
EADA	**Adamuz**	**83.52**	**46**	P	**P**	**05 23 35.5**	**+1.0**
	comp=Z,9.6nm,1.1s,mb4.5						
EADA				pP	pP	05 24 03.2	+1.6
OCWA	**Octopus Mounta**	**83.62**	**326**	P	**P**	**05 23 35.7**	**+1.0**
	comp=Z,147nm,1.8s,mb5.5						
EBER	**Berja**	**84.03**	**47**	P	**P**	**05 23 38.3**	**+1.3**
	comp=Z,81nm,1.8s,mb5.2						
EBER				pP	pP	05 24 04.8	+0.6
EBAN	**Banos Encina**	**84.06**	**46**	P	**P**	**05 23 38.9**	**+1.8**
EBAN				*PP	pP	05 24 06.2	+1.9
EBAN				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.0						
EBAN	**Banos Encina**	**84.06**	**46**	P	**P**	**05 23 38.9**	**+1.8**
	comp=Z,23nm,0.9s,mb5.0						
EBAN				pP	pP	05 24 06.2	+1.9
ERUA	**La Rua**	**84.14**	**41**	P	**P**	**05 23 39.0**	**+1.6**
ERUA				pmax	pmax		
	comp=Z,82nm,1.4s,mb5.4						
ERUA	**La Rua**	**84.14**	**41**	P	**P**	**05 23 39.0**	**+1.6**
	comp=Z,82nm,1.4s,mb5.4						
ECAL	**Calabor**	**84.14**	**42**	P	**P**	**05 23 39.0**	**+1.5**
	comp=Z,17nm,0.8s,mb4.9						
BOSA	**Boshof**	**84.15**	**118**	P	**P**	**05 23 38.4**	**+0.6**
BOSA	**Boshof**	**84.15**	**118**	P	**P**	**05 23 38.8**	**+1.0**
BOSA				*e*	pP	05 24 06.5	+1.5
BOSA				pmax	pmax		
	comp=Z,48nm,1.5s,mb5.1						
BOSA	**Boshof**	**84.15**	**118**	P	**P**	**05 23 38.6**	**+0.9**
	comp=Z,24nm,0.9s,mb5.0,baz=268,slow=3.7,SNR=20						
BOSA				pP	pP	05 24 06.2	+1.3
	comp=Z,7.9nm,0.8s,baz=231,slow=5.0,SNR=2.6						
BOSA				LR	LR	05 59 37.7	
	comp=Z,127nm,18.3s,baz=259,slow=34						
BOSA	**Boshof**	**84.15**	**118**	*e*P	**P**	**05 23 38.7**	**+0.9**
	comp=Z,37nm,1.1s,mb5.1						
EQES	**Quesada**	**84.36**	**47**	P	**P**	**05 23 38.9**	**+0.3**
	comp=Z,15nm,0.9s,mb4.8						
EQES				pP	pP	05 24 07.1	+1.3
ESDC	**Sonseca Array**	**84.72**	**45**	P	**P**	**05 23 42.0**	**+1.7**
	comp=Z,9.8nm,1.0s,mb4.7,baz=240,slow=5.2,SNR=28						
ESDC				pP	pP	05 24 09.4	+1.8
	comp=Z,12nm,1.1s,baz=237,slow=5.2,SNR=4.9						
ESLA	**Sonseca Array**	**84.72**	**45**	*e*P	**P**	**05 23 40.2**	**-0.2**
	comp=Z,7.9nm,1.2s,mb4.5						
ESLA				*e*	pP	05 24 09.2	+1.6
LBTB	**Lobatse**	**85.64**	**115**	P	**P**	**05 23 46.6**	**+1.3**
LBTB				pP	pP	05 24 14.1	+1.6
LBTB	**Lobatse**	**85.64**	**115**	*e*P	**P**	**05 23 45.3**	**0.0**
LBTB				*e**PP	pP	05 24 14.2	+1.7
LBTB				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1						
LBTB	**Lobatse**	**85.64**	**115**	*e*P	**P**	**05 23 45.3**	**0.0**
	comp=Z,25nm,1.1s,mb5.1						
LBTB				*e*pP	pP	05 24 14.2	+1.7
MAW	**Mawson**	**85.80**	**163**	P	**P**	**05 23 45.6**	**+0.6**
	comp=Z,8.9nm,0.5s,mb5.0,baz=210,slow=6.3,SNR=39						
MAW				LR	LR	06 03 37.7	
	comp=Z,102nm,19.9s,baz=243,slow=37						
ETOB	**Tobarra**	**85.82**	**46**	P	**P**	**05 23 46.8**	**+0.9**
	comp=Z,13nm,1.2s,mb4.7						
ETOB				pP	pP	05 24 14.2	+1.1
ECRI	**Cripan**	**87.16**	**43**	P	**P**	**05 23 53.7**	**+1.4**
ECRI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
ECRI	**Cripan**	**87.16**	**43**	P	**P**	**05 23 53.7**	**+1.5**
	comp=Z,8.0nm,0.8s,mb4.7						
SJPF	**Ste Jean**	**88.23**	**43**	*e*P	**P**	**05 23 57.0**	**-0.4**
	comp=Z,19nm,1.0s,mb4.8						
SJPF				*e*pP	pP	05 24 21.3	-3.5
SJPF	**Ste Jean**	**88.23**	**43**	*e*P	**P**	**05 23 57.0**	**-0.4**
SJPF				*e**PP	pP	05 24 21.3	-3.5
SJPF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
BBB	**Bella Bella**	**88.34**	**328**	P	**P**	**05 23 57.7**	**0.0**
	comp=Z,14nm,1.1s,mb4.9,baz=132,slow=6.9,SNR=8.6						
BBB	**Bella Bella**	**88.34**	**328**	P	**P**	**05 23 57.7**	**0.0**
ETSF	**Etsaut**	**88.55**	**43**	*e*P	**P**	**05 23 58.5**	**-0.4**
EBIE	**Bielsa**	**88.90**	**44**	P	**P**	**05 24 01.8**	**+1.2**
	comp=Z,4.4nm,0.9s,mb4.5						
EBIE				pP	pP	05 24 28.1	+0.1
EPF	**Esparros**	**89.19**	**43**	*e*P	**P**	**05 24 01.3**	**-0.6**
	comp=Z,7.5nm,0.9s,mb4.4						
EPF	**Esparros**	**89.19**	**43**	*e*P	**P**	**05 24 01.3**	**-0.6**
EPF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
QUIF	**Quistinic**	**89.47**	**38**	*e*P	**P**	**05 24 01.4**	**-1.7**
ROSF	**Rostrenen**	**89.62**	**37**	*e*P	**P**	**05 24 02.4**	**-1.4**
YKA	**Yellowknife Ar**	**89.74**	**341**	P	**P**	**05 24 04.5**	**+0.5**
	comp=Z,50nm,0.8s,mb5.7,baz=134,slow=4.7,SNR=127						
YKA				pP	pP	05 24 31.2	-0.3
	comp=Z,24nm,0.8s,baz=132,slow=4.6,SNR=3.5						
YKA				sP	sP	05 24 41.1	-1.4
	comp=Z,36nm,0.9s,baz=134,slow=4.8,SNR=4.6						
YKA				LR	LR	06 10 02.4	
	comp=Z,124nm,19.1s,baz=100,slow=39						
SGMF	**Saint Gilles**	**89.99**	**38**	*e*P	**P**	**05 24 03.9**	**-1.6**
SGMF				*e*pP	pP	05 24 28.1	-4.9
LFF	**La Frestale**	**90.35**	**42**	*e*P	**P**	**05 24 06.3**	**-1.0**
	comp=Z,42nm,0.8s,mb5.3						
LFF				*e*pP	pP	05 24 30.5	-4.3
LFF	**La Frestale**	**90.35**	**42**	*e*P	**P**	**05 24 06.3**	**-1.0**
LFF				*e**PP	pP	05 24 30.5	-4.3
LFF				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.3						
MTLF	**Montolieu**	**90.55**	**44**	*e*P	**P**	**05 24 06.9**	**-1.4**
MTLF				*e*pP	pP	05 24 31.1	-4.7
MFF	**Saint Martin d**	**90.60**	**40**	*e*P	**P**	**05 24 07.2**	**-1.2**
DRV	**Dumont d'Urvil**	**90.97**	**191**	P	**P**	**05 24 16.0**	**+6.3**
RJF	**Les Rejaudoux**	**91.01**	**42**	*e*P	**P**	**05 24 09.0**	**-1.4**
	comp=Z,20nm,1.0s,mb4.9						
RJF				*e*R			
	comp=Z,169nm,23.0s						
RJF	**Les Rejaudoux**	**91.01**	**42**	*e*P	**P**	**05 24 09.0**	**-1.4**
RJF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
RJF				MLR	MLR		
	comp=Z,170nm,23.0s						
GRR	**Gorron**	**91.04**	**38**	*e*P	**P**	**05 24 08.7**	**-1.7**
	comp=Z,32nm,1.1s,mb5.0						
GRR	**Gorron**	**91.04**	**38**	*e*P	**P**	**05 24 08.7**	**-1.7**
GRR				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.1						
CAF	**Calviac**	**91.18**	**42**	*e*P	**P**	**05 24 10.1**	**-1.1**
	comp=Z,11nm,0.8s,mb4.7						
CAF	**Calviac**	**91.18**	**42**	*e*P	**P**	**05 24 10.1**	**-1.1**
CAF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
LSZ	**Lusaka**	**91.31**	**107**	P	**P**	**05 24 12.8**	**+0.4**
LSZ				*e**PP	pP	05 24 42.8	+2.8
LSZ				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.8						
LSZ	**Lusaka**	**91.31**	**107**	P	**P**	**05 24 12.8**	**+0.3**
	comp=Z,12nm,1.4s,mb4.8						
LSZ				*e*pP	pP	05 24 42.8	+2.8

FLN	**La Foliniere**	**91.44**	**38**	*e*P	**P**	**05 24 10.7**	**-1.6**
FLN				*e*R			
	comp=Z,135nm,19.0s						
LDF	**La Druitiere**	**91.57**	**38**	*e*P	**P**	**05 24 11.3**	**-1.6**
	comp=Z,9.5nm,0.8s,mb4.8						
LDF	**La Druitiere**	**91.57**	**38**	*e*P	**P**	**05 24 11.3**	**-1.6**
LDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.8						
TCF	**Toulx Ste Croi**	**91.89**	**41**	*e*P	**P**	**05 24 13.0**	**-1.4**
	comp=Z,6.7nm,0.9s,mb4.6						
TCF				*e*pP	pP	05 24 37.2	-4.8
TCF	**Toulx Ste Croi**	**91.89**	**41**	*e*P	**P**	**05 24 13.0**	**-1.4**
TCF				*e**PP	pP	05 24 37.2	-4.8
TCF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5						
LASF	**Ste Croix**	**91.94**	**44**	*e*P	**P**	**05 24 13.9**	**-0.8**
BGF	**Bois d'Agland**	**92.40**	**41**	*e*P	**P**	**05 24 15.5**	**-1.3**
	comp=Z,38nm,1.2s,mb5.2						
BGF	**Bois d'Agland**	**92.40**	**41**	*e*P	**P**	**05 24 15.5**	**-1.3**
BGF				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.2						
VIVF	**Saint-Julien-l**	**92.81**	**43**	*e*P	**P**	**05 24 18.2**	**-0.5**
AVF	**Avril sur Loir**	**92.82**	**41**	*e*P	**P**	**05 24 17.1**	**-1.6**
AVF				*e*pP	pP	05 24 41.3	-5.0
DLBC	**Dease Lake**	**92.85**	**333**	P	**P**	**05 24 19.2**	**+0.7**
	comp=Z,18nm,1.2s,mb5.3,baz=142,slow=3.8,SNR=16						
DLBC				pP	pP	05 24 46.2	+0.1
	comp=Z,5.2nm,0.9s,baz=155,slow=10,SNR=2.7						
SMRF	**Simiane la Rot**	**93.02**	**44**	*e*P	**P**	**05 24 19.2**	**-0.5**
SMF	**Signal de Mont**	**93.06**	**41**	*e*P	**P**	**05 24 18.5**	**-1.3**
	comp=Z,20nm,0.9s,mb5.1						
SMF	**Signal de Mont**	**93.06**	**41**	*e*P	**P**	**05 24 18.5**	**-1.3**
SMF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
LOR	**Lormes**	**93.34**	**41**	*e*P	**P**	**05 24 19.4**	**-1.6**
LOR				*e*R			
	comp=Z,153nm,19.2s						
LMR	**La Mourre**	**93.37**	**45**	*e*P	**P**	**05 24 20.4**	**-0.9**
	comp=Z,12nm,1.0s,mb4.9						
LMR				*e*pP	pP	05 24 44.6	-4.3
LMR	**La Mourre**	**93.37**	**45**	*e*P	**P**	**05 24 20.4**	**-0.9**
LMR				*e**PP	pP	05 24 44.6	-4.3
LMR				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
FRF	**La Foret Royal**	**93.56**	**45**	*e*P	**P**	**05 24 21.2**	**-0.9**
ORIF	**Oris-en-Rattie**	**93.61**	**43**	*e*P	**P**	**05 24 22.1**	**-0.2**
ORIF				*e*R			
	comp=Z,296nm,23.0s						
CASY	**Casey**	**94.03**	**180**	*e*P	**P**	**05 24 23.9**	**+0.3**
	comp=Z,11nm,0.8s,mb5.2						
MBDF	**Montbardon**	**94.11**	**44**	*e*P	**P**	**05 24 24.2**	**-0.4**
SBF	**Sospel**	**94.20**	**45**	*e*P	**P**	**05 24 24.2**	**-0.8**
LPL	**La Plagne**	**94.41**	**43**	*e*P	**P**	**05 24 25.8**	**-0.1**
LPG	**La Plagne**	**94.41**	**43**	*e*P	**P**	**05 24 26.1**	**+0.2**
LPG				*e*pP	pP	05 24 50.2	-3.3
CABF	**La Chapelle**	**94.44**	**42**	*e*P	**P**	**05 24 25.2**	**-0.8**
PGF	**Pioggiola**	**94.74**	**46**	*e*P	**P**	**05 24 26.8**	**-0.7**
GIVF	**Givet**	**95.14**	**38**	*e*P	**P**	**05 24 27.7**	**-1.4**
HAU	**Haudompre**	**95.18**	**41**	*e*P	**P**	**05 24 28.0**	**-1.4**
HAU				*e*R			
	comp=Z,144nm,18.4s						
HINF	**Hinteralfeld**	**95.41**	**41**	*e*P	**P**	**05 24 28.8**	**-1.6**
CDF	**Champ du Feu**	**95.91**	**41**	*e*P	**P**	**05 24 31.3**	**-1.4**
CDF				*e*pP	pP	05 24 55.5	-4.8
GRA1	**Grafenberg Arr**	**98.80**	**40**	*e*P	**P**	**05 24 47.3**	**+1.5**
	comp=Z,8.0nm,1.5s,mb5.0						
GRA1				*e*pP	pP	05 25 13.9	+0.5
GRF	**Grafenberg Arr**	**98.80**	**40**	*e*P	**P**	**05 24 47.3**	**+1.5**
GRF				*e**PP	pP	05 25 13.9	+0.5
GRF				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb5.0						
GRF	**Grafenberg Arr**	**98.80**	**40**	*e*P	**P**	**05 24 47.3**	**+1.5**
GRF				*e**PP	pP	05 25 13.9	+0.5
GRF				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb5.0						
GRF	**Grafenberg Arr**	**98.80**	**40**	*e*P	**P**	**05 24 47.3**	**+1.5**
	comp=Z,8.0nm,1.5s,mb5.0						
GRF				*e*pP	pP	05 25 13.9	+0.5
INK	**Inuvik**	**99.50**	**340**	P	**P**	**05 24 49.0**	**+0.4**
	comp=Z,4.9nm,1.0s,mb5.1,baz=132,slow=2.7,SNR=6.9						
INK				PKKPbc		05 41 11.8	
	comp=Z,1.7nm,0.7s,baz=167,slow=1.2,SNR=3.3						
INK	**Inuvik**	**99.50**	**340**	P	**P**	**05 24 49.0**	**+0.4**
INK				PKKPbc		05 41 11.8	
NKC	**Novy Kostel**	**99.72**	**40**	AMS	AMS	06 02 40.0	
	comp=Z,200nm,30.6s						
GERES	**GERESS Array B**	**100.04**	**42**	P	P	05 24 52.1	+0.6
	comp=Z,0.4nm,0.2s,baz=270,slow=2.7,SNR=4.4						
KHC	**Kasperske Hory**	**100.06**	**41**	AMS	AMS	06 03 00.0	
	comp=Z,100nm,19.2s						
CLL	**Collm**	**100.41**	**39**	P	P	05 24 52.0	-1.0
PRU	**Pruhonice**	**100.92**	**41**	AMS	AMS	06 10 50.0	
	comp=Z,100nm,16.4s						
PVCC	**Panska Ves**	**101.11**	**40**	AMS	AMS	06 07 20.0	
	comp=Z,100nm,24.5s						
DPC	**Dobruska-Polom**	**102.12**	**41**	AMS	AMS	06 05 40.0	
	comp=Z,100nm,17.5s						
NOA	**NORSAR Array B**	**102.57**	**29**	P	Pdif	05 25 03.4	+1.1
	comp=Z,0.3nm,0.5s,baz=230,slow=15,SNR=2.2						
NOA				pP		05 25 30.7	
	comp=Z,0.2nm,0.5s,baz=218,slow=13,SNR=1.6						
ILAR	**Eielson Array**	**102.87**	**335**	Pdiff	Pdif	05 25 03.0	-0.6
	comp=Z,0.5nm,0.7s,baz=148,slow=3.3,SNR=4.4						
ILAR				PP	PP	05 29 07.7	-14
	comp=Z,0.9nm,0.9s,baz=94,slow=5.4,SNR=4.8						
ILAR				PKKPbc		05 40 59.8	
	comp=Z,0.3nm,0.6s,baz=301,slow=4.4,SNR=5.0						
OKC	**Ostrava-Krasne**	**103.11**	**42**	AMS	AMS	06 12 10.0	
	comp=Z,100nm,17.1s						
ARCES	**ARCESS Array B**	**110.05**	**22**	PKKPbc		05 40 38.4	
	comp=Z,0.7nm,0.5s,baz=90,slow=2.7,SNR=8.9						
BRTR	**Keskin Array B**	**111.91**	**54**	PKiKP		05 29 41.6	
	comp=Z,0.7nm,0.7s,baz=135,slow=1.7,SNR=3.8						
OBN	**Obninsk**	**114.94**	**38**	*i* PKIKP	PKPdf	05 29 43.8	-1.3
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
OBN	**Obninsk**	**114.94**	**38**	*i* PKP	PKPdf	05 29 43.9	-1.2
OBN				LR	LR		
	comp=Z,100nm,17.0s						
SOC	**Sochi**	**116.81**	**51**	*i* PKIKP	PKPdf	05 29 48.8	-0.2
SOC				*e*		05 30 59.9	
SOC				*e*		05 36 28.4	
SOC				*e*SS	SS	05 47 05.6	+7.4
SOC				pmax	pmax		
	comp=Z,78nm,1.0s						
SOC				pmax	pmax		
	comp=N,109nm,1.1s						
SOC				pmax	pmax		
	comp=E,67nm,1.0s						
ZEI	**Tsey**	**119.85**	**52**	*e*PKIKP	PKPdf	05 29 56.4	+1.5
ZEI				*i*		05 31 20.7	
STKA	**Stephens Creek**	**120.76**	**210**	PKP	PKPdf	05 29 58.3	+1.3
	comp=E,2.3nm,0.5s,baz=140,slow=7.9,SNR=6.0						
ARU	**Arti**	**126.85**	**33**	*i* PKIKP	PKPdf	05 30 10.0	+2.0
ARU				*e*		05 32 07.7	
ARU				*e*		05 37 11.2	
ARU				*e*SS	SS	05 49 06.0	-0.1
ARU	**Arti**	**126.85**	**33**	*e*PKPdf	PKPdf	05 30 09.7	+1.7
ARU				*e*pPKPdf		05 30 38.3	
CTA	**Charters Tower**	**127.39**	**223**	PKP	PKPdf	05 30 11.2	+1.2
	comp=E,4.0nm,0.8s,baz=198,slow=3.2,SNR=5.1						
SEY	**Seymchan**	**128.69**	**337**	*e*PKIKP	PKPdf	05 30 13.2	+1.8
SEY				*e*		05 30 39.8	
SEY				*e*		05 32 18.8	
SEY				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AB31	**Akbulak array**	**129.99**	**42**	*i* PKIKP	PKPdf	05 30 16.3	+2.0
AB31				pmax	pmax		
	comp=Z,18nm,1.1s						
PMG	**Port Moresby**	**134.07**	**234**	PKP	PKPdf	05 30 24.6	+1.8
	comp=Z,2.1nm,0.3s,baz=163,slow=11,SNR=6.9						
WB2	**Warramunga Arr**	**134.28**	**211**	*e*	PKPdf	05 30 23.9	+0.8
WRA	**Warramunga Arr**	**134.29**	**211**	PKIKP	PKPdf	05 30 24.2	+1.1
WRA						05 30 52.0	
WRA	**Warramunga Arr**	**134.29**	**211**	PKhKP		05 30 10.8	
	comp=Z,0.6nm,0.5s,baz=135,slow=1.3,SNR=20						
WRA				PKP	PKPdf	05 30 24.2	+1.1
	comp=Z,5.1nm,0.5s,baz=153,slow=1.8,SNR=36						
WRA				pPKP		05 30 52.0	
	comp=Z,4.3nm,0.7s,baz=159,slow=1.6,SNR=5.1						
WRAB	**Tennant Creek**	**134.29**	**211**	*i* PKIKP	PKPdf	05 30 25.3	+2.2
WRAB	**Tennant Creek**	**134.29**	**211**	*e*PKPdf	PKPdf	05 30 23.7	+0.5
BVAR	**Borovoye Array**	**134.50**	**34**	PKP	PKPdf	05 30 24.7	+2.1

	comp=Z,3.0nm,0.7s,baz=270,slow=4.4,SNR=17						
BVAR				pPKP		05 30 53.0	
	comp=Z,4.3nm,0.8s,baz=270,slow=3.0,SNR=6.7						
YAK	**Yakutsk**	**136.02**	**348**	*i* PKIKP	PKPdf	05 30 26.0	+0.8
NVS	**Novosibirsk**	**139.26**	**24**	*e*PKHKP		05 30 26.2	
NVS				*i*		05 33 23.0	
NVS				pmax	pmax		
	comp=Z,27nm,1.5s						
NVS				pmax	pmax		
	comp=N,2.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,1.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**139.59**	**202**	*e*P		05 30 24.0	
	comp=E,8.5nm,0.7s						
CLNS	**Chul'man**	**141.77**	**348**	*e*PKHKP		05 30 31.4	
CLNS				pmax	pmax		
	comp=Z,12nm,0.7s						
CLNS				pmax	pmax		
	comp=N,7.0nm,1.1s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.9s						
FRU	**Bishkek**	**141.81**	**45**	*e*PKIKP	PKPdf	05 30 36.0	-0.2
FRU				pmax	pmax		
	comp=Z,50nm,2.2s						
AAK	**Ala-Archa**	**141.82**	**45**	*e*PKIKP	PKPdf	05 30 38.4	+2.2
AAK				*e*		05 31 05.6	
YSS	**Yuzh-Sakhalins**	**142.73**	**324**	*e*PKHKP		05 30 35.0	
YSS				*e*		05 30 40.0	
KSH	**Kashi**	**144.09**	**49**	*i* PKP	PKPdf	05 30 41.1	+0.9
KSH				XPKP		05 31 19.3	
KSH				*e*PKS	PKS	05 34 16.1	+1.3
KSH				*e*SKS	SKS	05 37 40.3	+3.0
KSH				PP	PP		
	comp=Z,340nm,6.2s						
KSH				LR	LR		
	comp=N,490nm,6.0s						
KSH				LR	LR		
	comp=E,550nm,6.1s						
MKAR	**Makanchi Array**	**144.36**	**35**	PKP	PKPdf	05 30 41.2	+0.8
	comp=E,18nm,0.8s,baz=315,slow=3.4,SNR=120						
MKAR				pPKP		05 31 09.3	
	comp=E,12nm,0.7s,baz=315,slow=3.5,SNR=5.7						
MKAR	**Makanchi Array**	**144.36**	**35**	PKP	PKPdf	05 30 41.2	+0.8
MKAR				pPKP		05 31 09.3	
KLR	**Kul'dur**	**146.44**	**335**	*e*PKHKP		05 30 42.8	
KLR				pmax	pmax		
	comp=N,24nm,1.4s						
KLR				pmax	pmax		
	comp=Z,28nm,1.4s						
KLR				pmax	pmax		
	comp=Z,600nm,5.5s						
IRK	**Irkutsk**	**147.33**	**8**	*e*PKIKP	PKPdf	05 30 47.3	+2.0
IRK				*e*		05 31 14.4	
IRK				pmax	pmax		
	comp=Z,137nm,1.7s						
MOY	**Mondy**	**147.37**	**12**	*e*PKP2	PKPab	05 30 49.1	-3.2
MOY				pmax	pmax		
	comp=Z,127nm,1.6s						
TLY	**Talaya**	**147.80**	**9**	*i* PKP2	PKPab	05 30 49.6	-4.3
TLY				pmax	pmax		
	comp=Z,36nm,0.9s						
TLY	**Talaya**	**147.80**	**9**	*i* PKP	PKPdf	05 30 50.1	+4.0
CIT	**Chita**	**147.94**	**357**	*e*PKIKP	PKPdf	05 30 49.1	+2.8
CIT				*e*		05 31 17.6	
CIT				*e*		05 34 17.6	
CIT				pmax	pmax		
	comp=Z,131nm,2.6s						
ZAK	**Zakamensk**	**149.00**	**10**	*e*PKIKP	PKPdf	05 30 50.8	+2.8
ZAK				*e*		05 34 23.2	
ZAK				pmax	pmax		
	comp=Z,20nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
HYB	**Hyderabad**	**149.07**	**89**	*e*P	PKPdf	05 30 55.0	+5.9
HYB				*e*		05 31 24.0	
HYB	**Hyderabad**	**149.07**	**89**	*i* PKP	PKPdf	05 30 50.0	+0.9
HYB				*e*		05 31 00.5	
WMQ	**Urumqi**	**149.19**	**34**	*e*PKP	PKPdf	05 30 51.0	+2.4
WMQ				APKP		05 31 17.8	
WMQ				XPKP		05 31 28.4	
WMQ				PP	PP	05 34 30.6	+2.5
WMQ				SKKS		05 41 09.3	
WMQ				SS	SS	05 53 33.5	+3.2
WMQ				PP	PP		
	comp=Z,170nm,4.4s						
WMQ				LR	LR		
	comp=N,160nm,28.0s						
WMQ				LR	LR		
	comp=Z,130nm,28.0s						
HIA	**Hailar**	**149.95**	**349**	*e*PKPdf	PKPdf	05 30 51.2	+1.7
HIA				*e*PKPbc	PKPdf	05 30 56.4	+6.8
HIA				*e*PKPab	PKPab	05 31 03.3	+0.5
MDJ	**Mudanjiang**	**151.00**	**332**	PKP	PKPdf	05 30 52.8	+1.5
MDJ				PP	PP	05 34 37.6	-1.4
MDJ				PP	PP		
	comp=Z,40nm,22.3s						
MDJ				LR	LR		
	comp=N,50nm,37.4s						
MDJ				LR	LR		
	comp=E,90nm,42.9s						
MDJ				LR	LR		
	comp=Z,130nm,41.5s						
MDJ	**Mudanjiang**	**151.00**	**332**	*e*PKPdf	PKPdf	05 30 52.8	+1.5
MDJ				*e*PKPbc	PKPdf	05 30 58.7	+7.3
MJAR	**Matsushiro Arr**	**151.11**	**311**	PKIKP	PKPdf	05 30 53.0	+1.2
MJAR						05 31 07.1	
MJAR						05 31 27.0	
MJAR	**Matsushiro Arr**	**151.11**	**311**	PKP	PKPdf	05 30 53.0	+1.2
	comp=Z,0.7nm,0.3s,baz=130,slow=1.4,SNR=4.0						
MJAR				PKPbc	PKPdf	05 30 59.0	+7.2
	comp=Z,15nm,0.8s,baz=96,slow=1.0,SNR=39						
MJAR				PKPab	PKPab	05 31 07.1	-1.0
	comp=Z,5.5nm,0.7s,baz=101,slow=1.5,SNR=7.8						
MJAR				pPKPbc		05 31 27.0	
	comp=Z,9.8nm,0.8s,baz=68,slow=1.9,SNR=3.8						
MAJO	**Matsushiro**	**151.11**	**311**	*e*PKIKP	PKPdf	05 30 59.3	+7.5
MAT	**Matsushiro**	**151.11**	**311**	PKP	PKPdf	05 30 58.6	+6.8
SONM	**Songino Array**	**151.92**	**7**	PKP	PKPdf	05 30 55.2	+2.6
	comp=Z,4.7nm,0.8s,baz=303,slow=0.6,SNR=27						
SONM				PKPbc	PKPdf	05 31 01.5	+8.9
	comp=Z,16nm,0.7s,baz=312,slow=1.4,SNR=48						
SONM				PKPab	PKPab	05 31 11.7	+0.5
	comp=Z,9.0nm,0.7s,baz=332,slow=3.4,SNR=7.8						
SONM				pPKPbc		05 31 29.5	
	comp=Z,18nm,0.8s,baz=327,slow=1.7,SNR=6.9						
ULN	**Ulaanbaatar**	**151.96**	**6**	PKPdf	PKPdf	05 30 55.4	+2.7
ULN				PKPbc	PKPdf	05 31 01.7	+9.1
ULN				PKPab	PKPab	05 31 12.3	+1.0
ULN				pPKPdf		05 31 29.5	
ULN	**Ulaanbaatar**	**151.96**	**6**	*e*PKIKP	PKPdf	05 30 55.2	+2.6
ULN				*e*		05 31 11.6	
ULN	**Ulaanbaatar**	**151.96**	**6**	*e*PKPdf	PKPdf	05 30 55.2	+2.6
ULN				*e*PKPbc	PKPdf	05 31 01.3	+8.6
ULN				*e*PKPab	PKPab	05 31 11.6	+0.3
CN2	**Changchun**	**153.37**	**336**	*e*PKP	PKPdf	05 30 55.4	+0.7
CN2				PKP2	PKPab	05 31 16.0	-1.4
CN2				PP	PP	05 34 53.0	+0.8
CN2				PP	PP		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=N,300nm,19.0s						
CN2				LR	LR		
	comp=E,300nm,19.0s						
CN2				LR	LR		
	comp=Z,300nm,19.0s						
KS15	**Wonju Array Si**	**157.26**	**324**	*e*PKPab	PKPab	05 31 33.6	-0.6
GTA	**Gaotai**	**158.30**	**24**	PKP	PKPdf	05 31 04.1	+2.7
GTA				PKP2	PKPab	05 31 42.3	+3.8
GTA				SKKS		05 41 58.1	
GTA				PP	PP		
	comp=Z,120nm,7.6s						
GTA				LR	LR		
	comp=N,120nm,17.9s						
GTA				LR	LR		
	comp=E,220nm,20.1s						
GTA				LR	LR		
	comp=Z,90nm,17.5s						
HHC	**Hu-ho-hao-te**	**159.17**	**359**	*e*PKP	PKPdf	05 31 05.3	+2.9
HHC				APKP		05 31 33.4	
HHC				XPKP		05 31 42.1	
HHC				PKS	PKS	05 34 36.4	+1.5
HHC				PP	PP		
	comp=Z,270nm,17.6s						
HHC				LR	LR		
	comp=N,180nm,23.9s						
HHC				LR	LR		
	comp=E,210nm,24.3s						
HHC				LR	LR		
	comp=Z,420nm,24.1s						
BTO	**Baotou**	**159.39**	**2**	*e*PKP	PKPdf	05 31 05.8	+3.2
LSA	**Lhasa**	**159.47**	**58**	PKP	PKPdf	05 31 06.0	+3.0
SHL	**Shillong**	**161.41**	**69**	*e*P	PKPdf	05 31 05.2	+0.1
LZH	**Lanzhou**	**162.70**	**20**	PKP	PKPdf	05 31 10.0	+3.9
LZH				SKKS		05 42 23.0	
LZH				PP	PP		
	comp=Z,220nm,8.1s						
LZH				LR	LR		
	comp=E,290nm,16.0s						
LZH				LR	LR		
	comp=Z,310nm,21.0s						
SSE	**Sheshan**	**165.67**	**323**	PKP	PKPdf	05 31 12.8	+3.6
SSE				PP	PP	05 35 59.4	+0.7
SSE				PP	PP		
	comp=Z,150nm,4.3s						
SSE				LR	LR		
	comp=N,20nm,25.2s						
SSE				LR	LR		
	comp=E,70nm,25.2s						
SSE				LR	LR		
	comp=Z,90nm,37.0s						
NJ2	**Nanjing**	**166.10**	**332**	*e*PKP	PKPdf	05 31 11.9	+2.4
NJ2				APKP		05 31 38.3	
NJ2				XPKP		05 31 48.0	
NJ2				PKS	PKS	05 34 42.0	+0.8
NJ2				PP	PP		
	comp=Z,1μm,9.5s						
NJ2				LR	LR		
	comp=N,2μm,23.1s						
NJ2				LR	LR		
	comp=E,3μm,23.1s						
NJ2				LR	LR		
	comp=Z,1μm,25.6s						
CD2	**Chengdu**	**167.23**	**30**	*e*PKP	PKPdf	05 31 12.3	+2.0
CMAR	**Chiang Mai Arr**	**168.40**	**95**	PKP	PKPdf	05 31 13.2	+1.9
	comp=Z,2.1nm,0.9s,baz=306,slow=2.1,SNR=8.5						
CMAR				pPKP		05 31 43.2	
	comp=Z,1.4nm,0.8s,baz=270,slow=2.7,SNR=2.4						
CMAR				PKPab	PKPab	05 32 23.6	+0.6
	comp=Z,1.9nm,0.8s,baz=252,slow=5.9,SNR=4.7						
CMAR				pPKPab		05 32 51.8	
	comp=Z,3.4nm,0.8s,baz=250,slow=6.1,SNR=7.8						
KMI	**Kunming**	**170.70**	**55**	PKP	PKPdf	05 31 15.4	+2.8
KMI				XPKP		05 31 53.8	
KMI				PKP2	PKPab	05 32 33.8	+0.8
KMI				PKS	PKS	05 34 45.9	+1.7
KMI				PP	PP	05 36 23.8	-0.2
KMI				SKKS		05 43 01.6	
KMI				PP	PP		
	comp=Z,70nm,7.9s						
KMI				PP	PP		
	comp=Z,20nm,19.8s						
KMI				LR	LR		
	comp=N,130nm,43.5s						
KMI				LR	LR		
	comp=E,170nm,44.5s						
KMI				LR	LR		
	comp=Z,240nm,37.6s						
GYA	**Guiyang**	**172.34**	**31**	*i* PKP	PKPdf	05 31 15.3	+1.8
GYA				APKP		05 31 45.8	
GYA				XPKP		05 31 55.3	
GYA				PKP2	PKPab	05 32 43.6	+3.4
GYA				SKKS		05 43 11.4	
GYA				PP	PP		
	comp=Z,160nm,9.2s						
GYA				LR	LR		
	comp=N,280nm,21.8s						
GYA				LR	LR		
	comp=E,290nm,22.0s						
GYA				LR	LR		
	comp=Z,350nm,21.6s						
QIZ	**Qiongzhong**	**178.49**	**127**	PKP	PKPdf	05 31 18.0	+2.8
QIZ				PP	PP	05 37 02.3	+0.2
QIZ				SKKS		05 43 43.9	
QIZ				PP	PP		
	comp=Z,200nm,8.6s						

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*IDC **21** 05:22:40.5±3.1, 23.69S×115.50W, mb3.7/4, mb1 4.1/4, mb1mx3.9/16, mbtmp3.7/4, MS3.7/5, Ms1 3.7/5, ms1mx3.5/21, Error ellipse: s-maj=92.7km s-min=40.7km az=41.0*

NEIC 21 05:22:41.4±2.5**, 23.77S**×**115.56W, h10^{km}, mb4.4**/1**, Error ellipse: s-maj=79.9km s-min=36.6km az=219.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**6.55**	**122**	LR	LR	05 26 14.1	
	comp=Z,1μm,18.7s,baz=273,slow=33						
PLCA	**Paso Flores**	**41.17**	**125**	LR	LR	05 43 03.1	
	comp=Z,113nm,21.6s,baz=359,slow=30						
CFAA	**Coronel Fontan**	**42.36**	**111**	LR	LR	05 43 20.7	
	comp=Z,23nm,21.5s,baz=88,slow=29						
LPAZ	**La Paz**	**45.02**	**90**	P	P	05 30 57.7	-1.6
	1.4nm,1.0s,baz=259,slow=5.2,SNR=3.7						
LPAZ	**La Paz**	**45.02**	**90**	*e*P	P	05 30 57.6	-1.7
	6.7nm,1.3s						
LPAZ				P		05 30 57.7	
USHA	**Ushuaia**	**46.56**	**144**	LR	LR	05 45 52.1	
	comp=Z,208nm,21.1s,baz=84,slow=30						
ROSC	**El Rosal**	**49.24**	**60**	LR	LR	05 49 29.9	
	comp=Z,126nm,18.5s,baz=254,slow=33						
TXAR	**Lajitas Array**	**54.02**	**13**	P	P	05 32 05.8	-2.4
	0.2nm,0.6s,baz=197,slow=9.4,SNR=4.4						
NVAR	**Mina Array Bea**	**61.92**	**358**	P	P	05 33 03.0	-0.6
	0.8nm,0.7s,baz=170,slow=8.5,SNR=5.7						
PDAR	**Pinedale Array**	**66.43**	**5**	P	P	05 33 30.2	-2.8
	0.5nm,0.8s,baz=162,slow=2.9,SNR=4.0						
BRTR	**Keskin Array B**	**149.55**	**51**	PKPbc	PKPdf	05 42 33.2	+3.6
	0.4nm,0.5s,baz=288,slow=4.6,SNR=3.8						
MKAR	**Makanchi Array**	**152.92**	**332**	PKPab	PKPab	05 42 48.4	-3.8
	0.2nm,0.4s,baz=46,slow=3.3,SNR=3.5						

NDI 21 05:30:00.8±4.1**, 33.66N**×**78.68E, h30^{km}, mb3.9, Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDNR	**Sundarnagar**	**2.60**	**214**	*e*PG	Pn	05 30 47.0	+5.2
THN	**Thein Dam**	**2.77**	**245**	*e*P	Pn	05 30 45.1	+0.8
	17nm,0.9s						
BHK	**Bhakra**	**2.94**	**221**	*e*S	Sn	05 31 17.1	-4.4
PTH	**Pithoragarh**	**4.31**	**162**	*e*S	Sn	05 31 52.0	-3.9
LGTI	**Lohaghat**	**4.41**	**162**	*e*P	Pn	05 31 02.7	-4.8

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*HLW **21** 05:55:45.1, 35.22N×26.25E, h33^{km}, Mb3.2*

*CSEM **21** 05:55:47.9±0.7, 34.88N×26.34E, h40^{km}, ML3.2, Error ellipse: s-maj=31.7km s-min=8.2km az=111.0*

*ATH **21** 05:55:49.2, 35.19N×26.25E, h10^{km}, MD3.0/3*

ISC 21 05:55:47.2±0.9**, 34.92N**±0.06×**26.3E**±0.1**, h33^{km}, n8, σ1^{s}08**/11**, 2C, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	**Khrisi**	**0.51**	**265**	*e*PB	**Pb**	**05 55 59.8**	**+1.8**
NPS	**Neapolis**	**0.67**	**301**	*e*PB	**Pb**	**05 55 59.0**	**-1.5**
KARP	**Karpathos**	**0.94**	**48**	*e*PB	**Pb**	**05 56 04.9**	**0.0**
SLUM		**3.54**	**195**	⇑P	**P**	**05 56 41.8**	**+0.6**
HMAT	**Matruh**	**3.87**	**170**	⇑P	**P**	**05 56 46.6**	**+0.7**
HMAT				S	**S**	**05 57 31.6**	**+0.8**
SWA1		**5.66**	**185**	P	**P**	**05 57 11.2**	**+0.1**
SWA1				S	**S**	**05 58 14.0**	**-2.0**
SWA1		**5.66**	**185**	P	**P**	**05 57 11.2**	**0.0**
SWA1				S	**S**	**05 58 14.0**	**-1.9**
HFRF	**Wahat Farafira**	**7.93**	**167**	P	**P**	**05 57 42.4**	**-0.6**

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*KNET **21** 06:39:44.5±0.3, 43.03N×74.90E, h13^{km}±2^{km}, ml1.9, Error ellipse: s-maj=2.4km s-min=1.8km az=175.0*

*NNC **21** 06:39:45.1±2.9, 42.89N×75.08E, mpv2.6, Error ellipse: s-maj=27.3km s-min=19.2km az=129.0*

ISC 21 06:39:44.8±0.7**, 43.06N**±0.04×**74.91E**±0.04**, h6^{km}**±5^{km}**, n12, σ0^{s}41**/23**, 17C-5D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHMS	**Chumysh**	**0.13**	**242**	⇑P	**Pg**	**06 39 47.5**	**-0.2**
	138nm,0.1s,SNR=394						
CHMS				⇓S	**Sg**	**06 39 49.4**	**-0.2**
	365nm,0.2s						
USP	**Ospenovka**	**0.37**	**304**	P	**Pg**	**06 39 52.4**	**+0.2**
	84nm,0.1s,SNR=139						
USP				⇓S	**Sg**	**06 39 57.7**	**+0.6**
	177nm,0.2s						
KBK	**Karagaybulak**	**0.41**	**176**	⇑P	**Pg**	**06 39 53.1**	**+0.1**
	181nm,0.2s,SNR=72						
KBK				⇑S	**Sg**	**06 39 59.3**	**+0.9**
	350nm,0.2s						
TKM2	**Tokmak 2**	**0.52**	**105**	⇑P	**Pg**	**06 39 55.0**	**-0.3**
	15nm,0.1s,SNR=64						
TKM2				⇑S	**Sg**	**06 40 02.3**	**+0.1**
	82nm,0.2s						
AAK	**Ala-Archa**	**0.53**	**216**	⇑P	**Pg**	**06 39 55.0**	**-0.4**
	28nm,0.2s,SNR=14						
AAK				⇑S	**Sg**	**06 40 02.2**	**-0.2**
	74nm,0.3s						
AAK	**Ala-Archa**	**0.53**	**216**	⇑P	**Pg**	**06 39 54.9**	**-0.5**
	8.2nm,0.2s						
AAK				⇑S	**Sg**	**06 40 02.1**	**-0.3**
	26nm,0.3s						
UCH	**Uchtor**	**0.88**	**200**	⇑P	**Pb**	**06 40 01.5**	**-0.7**
	7.3nm,0.2s,SNR=47						
UCH				⇓S	**Sb**	**06 40 13.6**	**-0.4**
	11nm,0.2s						
EKS2	**Erkin-Say**	**0.93**	**245**	⇑P	**Pb**	**06 40 02.6**	**-0.3**
	17nm,0.1s,SNR=34						
EKS2				⇑S	**Sb**	**06 40 15.8**	**+0.5**
	12nm,0.2s						
KZA	**Kyzart**	**1.01**	**166**	⇑P	**Pb**	**06 40 04.3**	**-0.1**
	12nm,0.2s,SNR=19						
KZA				⇓S	**Sb**	**06 40 18.5**	**+0.7**
	24nm,0.2s						
ULHL	**Ulahol**	**1.27**	**129**	⇑P	**Pb**	**06 40 08.6**	**-0.3**
	5.3nm,0.2s,SNR=8.6						
AML	**Almayashu**	**1.29**	**225**	⇑P	**Pb**	**06 40 09.1**	**-0.1**
	7.7nm,0.2s,SNR=38						
AML				⇓S	**Sb**	**06 40 26.1**	**+0.2**
	18nm,0.2s						
KK31	**Karatay Array**	**3.23**	**272**	Pn	**Pn**	**06 40 42.3**	**+5.3**
	0.4nm,0.2s,baz=95,slow=16,SNR=46						
KK31				⇑Sn	**Sn**	**06 41 24.4**	**+8.1**
	1.4nm,0.3s,baz=91,slow=28,SNR=7.1						
KK31				⇑Lg		06 41 33.4	
	1.5nm,0.3s						

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*BJI **21** 06:48:43.3, 2.60N×95.70E, h30^{km}, mB4.9, mb4.8, Ms4.1, Msz3.8*

*NEIC **21** 06:48:43.4±0.8, 2.60N×95.73E, h30^{km}, mb4.5/8, Error ellipse: s-maj=17.3km s-min=12.3km az=216.0*

NEIC Felt at Banda Aceh, Sumatra.

*IDC **21** 06:48:50.0±10.0, 2.88N×95.98E, h79^{km}±90^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.9/18, mbtmp4.3/8, ML4.5/1, MS3.3/1, Ms1 3.5/1, ms1mx3.0/13, Error ellipse: s-maj=53.9km s-min=21.2km az=57.0*

ISC 21 06:48:41.6±1.1**, 2.6N**±0.1×**95.75E**±0.10**, h33^{km}, n28, σ1^{s}10**/27**, mb4.5**/16**, MS3.8**/1**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.59**	**61**	*e*Pn	**Pn**	**06 50 05.0**	**+0.4**
CM31	**Chiang Mai Arr**	**16.10**	**11**	*e*P	**P**	**06 52 28.8**	**+1.6**
	15nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.10**	**11**	P	**P**	**06 52 27.6**	**+0.3**
	0.7nm,0.3s,baz=199,slow=11,SNR=32						
CMAR				LR	LR	06 58 24.2	
	comp=Z,93nm,18.7s,baz=205,slow=36						
KKM	**Kota Kinabalu**	**20.70**	**80**	*e*P	**P**	**06 53 22.0**	**+0.3**
KMI	**Kunming**	**23.42**	**16**	P	**P**	**06 53 50.9**	**+2.1**
KMI				AP		06 53 59.3	
KMI				XP		06 54 03.4	
KMI				PP	PP	06 54 25.1	+4.3
KMI				S	**S**	**06 58 02.0**	**+5.9**
KMI				XS		06 58 16.6	
KMI				SS	SS	06 58 51.1	+7.2
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
KMI				AMB	AMB		
	comp=Z,80nm,6.8s						
KMI				LR	LR		
	comp=N,230nm,10.6s,MS3.9						
KMI				LR	LR		
	comp=E,170nm,15.1s,MS3.9						
KMI				LR	LR		
	comp=Z,260nm,18.1s,MS3.7						
PKI	**Pulchoki**	**26.76**	**339**	*e*P	**P**	**06 54 22.1**	**+1.6**
	comp=Z,12nm,0.6s,mb4.6						
DMN	**Daman**	**26.90**	**339**	*e*P	**P**	**06 54 23.9**	**+2.1**
GUN	**Gumba**	**26.91**	**340**	*e*P	**P**	**06 54 22.3**	**+0.5**
	comp=Z,47nm,0.6s,mb5.2						
KKN	**Kakani**	**27.01**	**339**	*e*P	**P**	**06 54 23.7**	**+1.0**
LSA	**Lhasa**	**27.34**	**351**	P	**P**	**06 54 26.0**	**+0.2**
	comp=Z,8.0nm,0.6s,mb4.4						
GKN	**Gorkha**	**27.43**	**338**	*e*P	**P**	**06 54 25.9**	**-0.7**
	comp=Z,27nm,0.8s,mb4.8						
KOLN	**Koldanda**	**27.62**	**336**	*e*P	**P**	**06 54 28.2**	**-0.2**
	comp=Z,45nm,1.0s,mb5.0						
CD2	**Chengdu**	**29.19**	**14**	P	**P**	**06 54 40.8**	**-1.6**
XAN	**Xi'an**	**33.64**	**20**	P	**P**	**06 55 19.6**	**-1.8**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GTA	**Gaotai**	**36.86**	**5**	*e*P	**P**	**06 55 48.3**	**-0.5**
WRA	**Warramunga Arr**	**43.98**	**122**	P	**P**	**06 56 49.2**	**+1.3**
	comp=Z,2.0nm,0.7s,mb4.0,baz=300,slow=9.1,SNR=11						
MKAR	**Makanchi Array**	**45.59**	**347**	P	**P**	**06 57 00.1**	**-0.3**
	comp=Z,6.3nm,0.5s,mb4.8,baz=159,slow=8.1,SNR=87						
SONM	**Songino Array**	**46.02**	**10**	P	**P**	**06 57 03.3**	**-0.6**
	comp=Z,2.3nm,0.4s,mb4.4,baz=192,slow=9.8,SNR=8.6						
ULN	**Ulaanbaatar**	**46.17**	**11**	*e*P	**P**	**06 57 03.4**	**-1.6**
	comp=Z,2.2nm,0.4s,mb4.4						
CN2	**Changchun**	**48.78**	**28**	*e*P	**P**	**06 57 25.0**	**-0.4**
MJAR	**Matsushiro Arr**	**51.69**	**44**	P	**P**	**06 57 46.7**	**-1.1**
	comp=Z,1.6nm,0.4s,mb4.3,baz=219,slow=6.3,SNR=3.2						
MJAR	**Matsushiro Arr**	**51.69**	**44**	P	**P**	**06 57 46.7**	**-1.1**
ZAL	**Zalesovo**	**51.99**	**352**	P	**P**	**06 57 49.0**	**-0.7**
	comp=Z,4.9nm,0.6s,mb4.6,baz=305,slow=7.4,SNR=8.1						
ZRNK	**Zerenda**	**54.89**	**341**	*e*P	**P**	**06 58 09.3**	**-1.8**
	comp=Z,2.7nm,0.6s,mb4.5						
FINES	**FINESS Array B**	**78.13**	**333**	P	**P**	**07 00 38.6**	**-0.2**
	comp=Z,1.0nm,0.7s,mb3.8,baz=108,slow=6.0,SNR=4.8						
ARCES	**ARCESS Array B**	**80.77**	**340**	P	**P**	**07 00 53.4**	**+0.4**
	comp=Z,1.3nm,0.5s,mb4.1,baz=101,slow=6.2,SNR=12						
TXAR	**Lajitas Array**	**143.23**	**29**	PKP	PKPdf	07 08 13.5	+0.4
	comp=Z,0.3nm,0.8s,baz=270,slow=1.8,SNR=2.9						
CFAA	**Coronel Fontan**	**147.41**	**206**	PKPbc	PKPdf	07 08 27.1	+6.9
	comp=Z,0.2nm,0.6s,baz=206,slow=1.9,SNR=3.6						

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*ISK **21** 06:58:02.2, 37.50N×36.48E, h14^{km}, MD3.6, ML3.6*

*CSEM **21** 06:58:02.2±0.1, 37.53N×36.51E, h15^{km}, MD3.6, Error ellipse: s-maj=1.7km s-min=1.3km az=38.0*

ISC 21 06:58:03.0±0.6**, 37.50N**±0.03×**36.52E**±0.03**, h14^{km}**±4^{km}**, n27, σ1^{s}00**/41**, 2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAHT	**Ahir Dag**	**0.31**	**65**	*i* P	**Pg**	**06 58 09.2**	**-0.5**
KAHT				*i* S	**Sg**	**06 58 14.8**	**+0.7**
GAZ	**Gaziantep**	**0.64**	**120**	*i* PG	**Pg**	**06 58 15.8**	**-0.2**
GAZ				*i* SG	**Sg**	**06 58 25.7**	**+0.9**
CEYT	**Ceyhan**	**0.78**	**232**	*i* PG	**Pg**	**06 58 16.9**	**-1.9**
GZT	**Gaziantep**	**0.85**	**99**	*i* P	**Pb**	**06 58 19.3**	**+0.3**
GZT				*i* S	**Sb**	**06 58 31.8**	**+1.8**
DRWC	**Darouich**	**0.88**	**172**	⇓*i*P	**Pb**	**06 58 20.5**	**+0.9**
DRWC				⇓*i*S	**Sb**	**06 58 33.2**	**+2.2**
COBT	**Iskenderun**	**1.00**	**192**	*i* P	**Pb**	**06 58 21.6**	**+0.1**
COBT				*i* S	**Sb**	**06 58 36.9**	**+2.6**
HTY	**Hatay**	**1.41**	**193**	*i* PN	**Pn**	**06 58 28.1**	**-0.3**
BNN	**Bunyan**	**1.45**	**339**	*i* PN	**Pn**	**06 58 28.5**	**-0.5**
BTCH	**Batrach**	**1.46**	**182**	⇑*i*P	**Pn**	**06 58 29.1**	**0.0**
BTCH				⇑*i*S	**Sb**	**06 58 46.3**	**-1.4**
NIG	**Nigde**	**1.63**	**293**	*i* PN	**Pn**	**06 58 31.5**	**0.0**
SLMH	**Al Salmeh**	**1.71**	**138**	⇑*i*P	**Pn**	**06 58 32.5**	**-0.2**
SLMH				⇑*i*S	**Sn**	**06 58 54.1**	**-0.5**
MALT	**Malatya**	**1.72**	**61**	PN	**Pn**	**06 58 32.5**	**-0.3**
MALT				SN	**Sn**	**06 58 55.9**	**+1.3**
MYA	**Malataya**	**1.72**	**61**	PN	**Pn**	**06 58 32.2**	**-0.6**
AVNT	**Avonos**	**1.83**	**315**	*i* P	**Pn**	**06 58 34.2**	**-0.2**
AVNT				*i* S	**Sn**	**06 58 58.2**	**+0.7**
URFA	**Urfa**	**1.83**	**91**	PN	**Pn**	**06 58 33.6**	**-0.9**

MEST	Erdemli	2.10	245	iP	Pn	06 58 38.2	-0.1
MEST				iS	Sn	06 59 05.2	+0.8
ELZG	Elazig	2.19	62	iP	Pn	06 58 41.3	+1.8
ELZG				iS	Sn	06 59 12.4	+5.8
JHLN	Al Jahlan	2.39	139	⇑iP	Pn	06 58 42.1	-0.3
JHLN				⇑iS	Sn	06 59 10.1	-1.7
IKL	Isikli	2.59	242	ePN	Pn	06 58 44.9	-0.4
PTK	Pertek	2.66	58	ePN	Pn	06 58 45.9	-0.3
MNKR	ALMNKUR	2.70	124	⇑iP	Pn	06 58 47.2	+0.3
MNKR				⇑iS	Sn	06 59 18.5	-1.2
KAMT	Kaman	2.89	311	ePN	Pn	06 58 49.0	-0.5
ERMK	Ermenek	3.01	255	iP	Pn	06 58 53.4	+2.2
CORM	Corum	3.05	332	ePN	Pn	06 58 51.0	-0.9
SFNV	Sufian	3.08	109	⇑iP	Pn	06 58 51.7	-0.5
SFNV				⇑iS	Sn	06 59 27.5	-1.6
HDMB	Hadim	3.26	262	ePN	Pn	06 58 54.8	0.0
BEST	Besiri	3.79	83	iP	Pn	06 59 11.2	+8.9

*NNC **21** 07:14:29.9±6.7, 37.53N×71.46E, h206^{km}±98^{km}, mpv4.1, Error ellipse: s-maj=68.7km s-min=39.5km az=18.0*

ISC 21 07:14:27.3±2.5**, 37.4N**±0.2×**71.5E**±0.2**, h187**^{km}±43^{km}**, n10, σ0^{s}68**/13**, 3C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.03	19	P	P	07 15 42.1	-0.4
	SNR=65						
UCH	Uchtor	5.36	24	P	P	07 15 46.4	-0.4
	SNR=20						
KZA	Kyzart	5.50	30	P	P	07 15 40.4	-8.2
	SNR=5.5						
EKS2	Erkin-Say	5.55	17	P	P	07 15 49.2	-0.2
	SNR=14						
AAK	Ala-Archa	5.72	22	P	P	07 15 51.6	0.0
	SNR=9.3						
AAK	Ala-Archa	5.72	22	⇑P	P	07 15 51.4	-0.2
	8.9nm,0.4s						
AAK				⇑S	S	07 16 57.8	+0.8
	9.0nm,0.7s						
KK31	Karatay Array	5.77	353	P	P	07 15 52.2	0.0
	11nm,0.6s,baz=175,slow=13,SNR=148						
KK31				⇓S	S	07 16 58.3	+0.1
	2.8nm,0.3s,baz=173,slow=21						
CHMS	Chumysh	6.13	23	P	P	07 15 56.6	-0.3
	SNR=6.7						
TKM2	Tokmak 2	6.35	28	P	P	07 15 59.7	-0.1
	SNR=8.6						
AB31	Akbulak array	14.54	328	P	P	07 17 47.1	+1.8
	0.2nm,0.3s,baz=135,slow=14,SNR=9.6						
AB31				⇑S	S	07 20 20.9	-1.0
	0.4nm,0.5s,baz=159,slow=22,SNR=5.2						

NEIC 21 07:54:26.4, 52.30N×176.09W, h252^{km}**, MG3.6**(AEIC)**, After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	0.21	175	P	P	07 54 58.2	-0.9
GSTR				S	S	07 55 23.5	-1.0
GSSP	Great Sitkin S	0.22	194	P	P	07 54 58.0	-1.1
GSTD	Great Sitkin T	0.25	188	P	P	07 54 58.1	-1.1
GSMY	Great Sitkin M	0.26	175	P	P	07 54 58.0	-1.2
GSMY				S	S	07 55 23.9	-0.7
GSCK	Great Sitkin C	0.29	189	P	P	07 54 58.8	-0.5
GSIG	Igitkin Island	0.33	162	P	P	07 54 58.3	-1.0
GSIG				S	S	07 55 23.5	-1.5
ADAG	Mount Adagdak	0.45	224	P	P	07 54 58.6	-1.0
KINC	Kanaga Island	0.74	240	P	P	07 54 59.7	-0.8
KIKV	Kanaga Island	0.79	238	P	P	07 55 00.1	-0.7
KIWB	Kanaga Island	0.79	236	P	P	07 55 00.0	-0.8
KIMD	Kanaga Island	0.89	233	P	P	07 55 00.3	-0.9
KIMD				S	S	07 55 26.7	-1.7
ATKA	Atka Island	1.17	94	P	P	07 55 01.7	-1.2
ATKA				S	S	07 55 29.8	-1.4
UNV	Unalaska Valle	5.98	71	P	P	07 55 53.1	-1.8
FX1	Attu Island--F	6.57	279	eP	P	07 55 59.9	-2.5
BILL	Bilibino	17.93	338	eP	P	07 58 14.0	-5.9
	14nm,1.0s						

*BJI **21** 07:58:25.2, 0.21S×98.40E, h30^{km}, mB4.9, mb4.8, Ms4.5, Msz4.3*
*MOS **21** 07:58:31.7±1.3, 0.56N×98.25E, h29^{km}, mb4.7/9, Error ellipse: s-maj=29.2km s-min=10.8km az=111.3*
*NEIC **21** 07:58:33.0±0.6, 0.47N×98.39E, h30^{km}, mb4.6/8, Error ellipse: s-maj=14.8km s-min=11.7km az=45.0*
*IDC **21** 07:58:33.9±0.8, 0.52N×98.46E, h38^{km}±5^{km}, mb4.1/11, mb1 4.2/12, mb1mx4.0/19, mbtmp4.3/12, ML4.9/1, MS3.4/2, Ms1 3.5/2, ms1mx3.1/18, Error ellipse: s-maj=35.4km s-min=15.3km az=50.0*

ISC 21 07:58:32.1±0.6**, 0.49N**±0.08×**98.39E**±0.07**, h38**^{km}**, h38**^{km}±2.2^{km}**:pP-P, n55, σ0^{s}93**/53**, mb4.6**/29**, MS3.9**/3**, 1C-3D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	4.84	33	P	P	07 59 45.0	+0.5
KGM	Kluang	5.16	73	P	P	07 59 49.6	+0.6
KULM	Kulim	5.28	25	⇓ePn	P	07 59 51.1	+0.5
CM31	Chiang Mai Arr	17.86	2	ePn	P	08 02 39.3	-0.3
	9.3nm,0.4s						
CMAR	Chiang Mai Arr	17.86	2	P	P	08 02 39.0	-0.6
	1.4nm,0.3s,baz=191,slow=11,SNR=14						
CMAR				LR	LR	08 09 31.7	
	comp=Z,85nm,19.3s,baz=180,slow=37						
KKM	Kota Kinabalu	18.63	72	eP	P	08 02 51.0	+1.9
KMI	Kunming	24.85	9	P	P	08 03 53.8	+1.1
KMI				XP		08 04 07.3	
KMI				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
SHL	Shillong	25.71	346	iP	P	08 04 00.7	-0.2
PKI	Pulchoki	29.67	336	eP	P	08 04 36.8	+0.1
	comp=Z,18nm,1.0s,mb4.7						
PKI	Pulchoki	29.67	336	eP	P	08 04 36.8	+0.1
PKI				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
GUN	Gumba	29.79	337	eP	P	08 04 38.5	+0.7
	comp=Z,19nm,0.4s,mb5.2						
DMN	Daman	29.83	336	eP	P	08 04 39.0	+0.9
LSA	Lhasa	29.86	347	eP	P	08 04 38.7	+0.3
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
LSA	Lhasa	29.86	347	eP	P	08 04 38.7	+0.3
	comp=Z,8.8nm,0.8s,mb4.5						
KKN	Kakani	29.92	336	eP	P	08 04 38.7	-0.2
	comp=Z,9.0nm,0.4s,mb4.8						
GKN	Gorkha	30.37	335	eP	P	08 04 43.1	+0.2
	comp=Z,9.8nm,0.4s,mb4.9						
KOLN	Koldanda	30.61	334	eP	P	08 04 45.7	+0.6
	comp=Z,20nm,0.8s,mb5.0						
ENH	Enshi	31.44	19	eP	P	08 04 49.3	-3.1
	comp=Z,16nm,0.4s,mb5.2						
XAN	Xi’an	34.81	15	P	P	08 05 19.6	-1.9
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GTA	Gaotai	38.76	2	eP	P	08 05 55.0	+0.3
GTA				AP	pP	08 06 03.6	-1.8
GTA				XP	sP	08 06 07.3	-2.9
GTA				PP	PP	08 07 26.8	-0.8
GTA				S	S	08 11 49.3	+0.1
GTA				XS		08 12 05.5	
GTA				AMB	AMB		
	comp=Z,70nm,6.5s						
GTA				LR	LR		
	comp=N,40nm,10.6s,MS3.9						
GTA				LR	LR		
	comp=E,110nm,13.3s,MS3.9						
GTA				LR	LR		
	comp=Z,80nm,11.4s,MS3.8						
WRA	Warramunga Arr	40.65	122	P	P	08 06 10.0	-0.6
	comp=Z,0.9nm,0.4s,mb3.8,baz=306,slow=8.9,SNR=4.5						
WRAB	Tennant Creek	40.66	122	eP	P	08 06 15.2	+4.5
WRAB				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.0						
WRAB	Tennant Creek	40.66	122	eP	P	08 06 15.2	+4.6
	comp=Z,25nm,0.7s,mb5.0						
WMQ	Urumqi	44.19	349	eP	P	08 06 40.0	+0.7
WMQ				AP	pP	08 06 49.9	-0.2
WMQ				XP	sP	08 06 53.8	-0.9
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,150nm,4.8s						
WMQ				LR	LR		
	comp=Z,330nm,19.0s,MS4.3						
JNU	Nakatsue	44.57	40	P	P	08 06 40.7	-1.8
	comp=Z,6.9nm,0.7s,mb4.6,baz=270,slow=20,SNR=5.9						
SONM	Songino Array	47.67	7	P	P	08 07 07.6	+0.7
	comp=Z,3.5nm,0.4s,mb4.7,baz=180,slow=9.9,SNR=3.8						
ULN	Ulaanbaatar	47.78	8	eP	P	08 07 07.4	-0.4
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ULN	Ulaanbaatar	47.78	8	eP	P	08 07 07.4	-0.3
	comp=Z,5.3nm,0.8s,mb4.6						
MKAR	Makanchi Array	48.22	345	eP	P	08 07 11.4	+0.2
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR	Makanchi Array	48.22	345	P	P	08 07 11.4	+0.3
	comp=Z,8.9nm,0.5s,mb5.0,baz=152,slow=8.3,SNR=105						
CN2	Changchun	49.41	26	eP	P	08 07 19.0	-1.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
ZAK	Zakamensk	49.88	4	eP	P	08 07 22.9	-1.0
ZAK				e	pP	08 07 35.8	+1.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
MJAR	Matsushiro Arr	51.42	41	LR	LR	08 29 16.0	
	comp=Z,48nm,20.8s,MS3.5,baz=90,slow=36						
MDJ	Mudanjiang	51.92	28	P	P	08 07 40.3	+0.9
MDJ				AMB	AMB		
	comp=Z,110nm,5.8s						
STKA	Stephens Creek	52.00	132	P	P	08 07 39.7	-0.5
	comp=Z,2.5nm,0.8s,mb4.2,baz=324,slow=11,SNR=2.4						
STKA				pP	pP	08 07 50.8	-0.3
	comp=Z,3.2nm,0.7s,baz=258,slow=3.5,SNR=4.2						
KLR	Kul’dur	56.37	26	eP	P	08 08 08.0	-3.9
VOSK	Vostochnaya	56.86	340	P	P	08 08 14.3	-1.2
VOSK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
BVAR	Borovoye Array	57.31	340	P	P	08 08 17.6	-1.1
	comp=Z,2.2nm,0.4s,mb4.5,baz=141,slow=9.5,SNR=19						
BVAR				pP	pP	08 08 29.4	-0.4
	comp=Z,3.1nm,0.5s,baz=142,slow=8.8,SNR=13						
ZRNK	Zerenda	57.73	339	eP	P	08 08 19.9	-1.7
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
ZRNK	Zerenda	57.73	339	eP	P	08 08 19.9	-1.7
	comp=Z,2.8nm,0.7s,mb4.4						
BOD	Bodaibo	58.50	10	eP	P	08 08 19.3	-7.5
BOD				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
BOD				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
AB31	Akbulak array	58.70	332	iP	P	08 08 27.5	-0.9
AB31				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BRTR	Keskin Array B	70.47	312	P	P	08 09 45.0	0.0
	comp=Z,1.9nm,0.8s,mb4.1,baz=135,slow=7.0,SNR=7.2						
BRTR				pP	pP	08 09 56.7	+0.4
	comp=Z,0.9nm,0.6s,baz=153,slow=7.3,SNR=4.5						
AKASG	Malin Array Be	76.54	322	P	P	08 10 19.7	-0.6
	comp=Z,1.2nm,0.4s,mb4.2,baz=85,slow=4.8,SNR=5.2						
AKASG	Malin Array Be	76.54	322	P	P	08 10 19.7	-0.6
VRI	Vrincioaia	76.94	317	⇓P	P	08 10 23.1	+0.4
MLR	Muntele Rosu	77.40	317	⇓P	P	08 10 26.7	+1.5
BURAR	Bucovina Array	78.34	319	⇑P	P	08 10 32.0	+1.7
FINES	FINESS Array B	81.17	332	P	P	08 10 45.6	+0.3
	comp=Z,2.4nm,0.5s,mb4.4,baz=102,slow=5.1,SNR=33						
FINES				pP	pP	08 10 56.8	0.0
	comp=Z,0.7nm,0.5s,baz=103,slow=6.4,SNR=4.6						
KAF	Kangasniemi	81.25	333	ep	P	08 10 45.8	+0.1
ARCES	ARCESS Array B	83.60	340	P	P	08 10 58.2	+0.6
	comp=Z,1.2nm,0.4s,mb4.3,baz=104,slow=4.7,SNR=17						
ARCES	ARCESS Array B	83.60	340	P	P	08 10 58.2	+0.6
NOA	NORSAR Array B	88.20	331	P	P	08 11 20.5	+0.2
	comp=Z,0.2nm,0.5s,mb3.6,baz=87,slow=7.2,SNR=3.0						
NVAR	Mina Array Bea	128.65	37	PKP	PKPdf	08 17 38.9	+2.9
	comp=Z,0.6nm,0.7s,baz=288,slow=2.2,SNR=4.7						
TXAR	Lajitas Array	143.62	34	PKP	PKPdf	08 18 03.3	-0.4
	comp=Z,0.6nm,0.5s,baz=211,slow=2.2,SNR=12						

*IDC **21** 08:00:45.7±5.7, 7.52S×128.67E, h64^{km}±53^{km}, mb4.0/3, mb1 4.2/5, mb1mx3.9/14, mbtmp4.3/5, ML4.2/2, Error ellipse: s-maj=45.4km s-min=29.5km az=69.0*
*NEIC **21** 08:00:46.5±1.0, 7.45S×128.64E, h75^{km}, mb4.3/1, Error ellipse: s-maj=27.7km s-min=14.3km az=68.0*

ISC 21 08:00:48.9±3.8**, 7.7S**±0.2×**128.4E**±0.2**, h103**^{km}±34^{km}**, n10, σ1^{s}16**/12**, mb4.0**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.65	194	P	P	08 03 20.6	+1.0
	2.3nm,0.3s,baz=15,slow=9.1,SNR=34						
FITZ				S	S	08 05 16.1	-1.3
	9.6nm,0.3s,baz=154,slow=20,SNR=6.7						
WRAB	Tennant Creek	13.42	155	ePn	P	08 03 56.5	+0.3
	20nm,1.0s						
WRA	Warramunga Arr	13.43	155	P	P	08 03 55.9	-0.4
	1.0nm,0.3s,baz=336,slow=12,SNR=24						
WRA				S	S	08 06 18.0	-5.3
	2.3nm,0.3s,baz=336,slow=22,SNR=8.3						
STKA	Stephens Creek	26.98	155	P	P	08 06 22.8	-0.2
	2.1nm,0.7s,mb3.8,baz=343,slow=14,SNR=5.5						
STKA	Stephens Creek	26.98	155	P	P	08 06 22.8	-0.2
NWAO	Narrogin (SRO)	27.12	201	P	P	08 06 26.2	+1.9
	12nm,1.0s,mb4.4,baz=22,slow=9.4,SNR=3.9						
NWAO	Narrogin (SRO)	27.12	201	P	P	08 06 26.2	+1.9
MKAR	Makanchi Array	67.99	328	P	P	08 11 37.2	-1.8
	0.6nm,0.5s,mb3.7,baz=118,slow=7.6,SNR=6.3						
MKAR	Makanchi Array	67.99	328	P	P	08 11 37.2	-1.8
QSPA	South Pole Qui	82.24	180	eP	P	08 12 60.0	+0.4
	1.7nm,0.5s,mb4.1						

IDC 21 08:28:12.0±3.4**, 2.01N**×**96.50E, mb3.7**/2**, mb1 4.1**/3**, mb1mx3.7**/17**, mbtmp3.8**/3**, ML4.4**/1**, Error ellipse: s-maj=130.5km s-min=29.2km az=58.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.52	8	Pn	P	08 32 05.8	-1.0
	0.5nm,0.3s,baz=198,slow=12,SNR=13						
WRA	Warramunga Arr	43.06	122	P	P	08 36 13.8	-1.8
	0.4nm,0.5s,baz=301,slow=9.0,SNR=4.5						
MKAR	Makanchi Array	46.29	347	P	P	08 36 39.2	-2.0
	2.6nm,0.7s,baz=162,slow=7.8,SNR=22						

*GUC **21** 08:36:49.4±0.7, 22.64S×70.04W, h47^{km}±7^{km}, ML4.6*
*IDC **21** 08:36:49.3±0.9, 22.72S×69.84W, h37^{km}±5^{km}, mb3.6/3, mb1 3.9/7, mb1mx3.7/18, mbtmp3.7/7, ML3.7/4, Error ellipse: s-maj=36.1km s-min=22.5km az=83.0*
*NEIC **21** 08:36:50.5±1.0, 22.69S×69.92W, h47^{km}±12^{km}, mb4.0/6, Error ellipse: s-maj=17.1km s-min=8.5km az=102.0*
NEIC Felt [III] at Maria Elena and Tocopilla; [II] at Quillagua.

ISC 21 08:36:50.2±0.9**, 22.70S**±0.07×**70.04W**±0.08**, h57**^{km}±11^{km}**, h42**^{km}±6.9^{km}**:pP-P, n23, σ1^{s}04**/24**, mb4.0**/6**, 3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANCH	Antofagasta	1.03	199	⇓iP	P	08 37 08.8	-0.1
ANCH				iS	S	08 37 23.6	+0.9
ANCH				AMP		08 37 25.2	
	comp=E,5µm,0.1s						
SPCH	San Pedro de A	1.71	97	⇓iP	P	08 37 18.6	+0.2
SPCH				iS	S	08 37 40.5	+1.4
SPCH				AMP		08 37 41.9	
	comp=N,6µm,0.5s						
SPCH	San Pedro de A	1.71	97	⇓iP	P	08 37 18.6	+0.2
SPCH				iS	S	08 37 40.1	+1.0
LPAZ	La Paz	6.63	16	Pn	P	08 38 26.2	-1.1
	comp=N,1.0nm,0.3s,baz=189,slow=7.1,SNR=42						
LPAZ	La Paz	6.63	16	ePn	P	08 38 26.6	-0.7
	comp=N,371nm,0.6s						
CFAA	Coronel Fontan	9.01	170	Pn	P	08 38 57.5	-2.7
	comp=N,0.1nm,0.3s,baz=351,slow=12,SNR=17						
SIV	San Ignacio	10.78	53	Pn	P	08 39 18.3	-6.1
	comp=N,0.7nm,0.3s,baz=248,slow=13,SNR=13						
SAML	Samuel	15.18	27	ePn	P	08 40 21.3	-1.2
	comp=N,14nm,1.8s						
TRQA	Tornquist	16.80	157	eP	P	08 40 42.9	0.0
	comp=N,14nm,0.7s						
PLCA	Paso Flores	17.98	181	P	P	08 40 55.4	-2.3
	comp=N,0.1nm,0.3s,baz=0.1,slow=11,SNR=4.7						
PLCA	Paso Flores	17.98	181	eP	P	08 40 56.9	-0.8
	comp=N,3.0nm,0.9s						
OTAV	Otavalo	24.22	339	P	P	08 42 03.5	+0.6
	comp=N,7.3nm,1.6s,mb3.9						
TXAR	Lajitas Array	61.02	326	P	P	08 46 59.4	-1.0
	comp=N,0.4nm,0.7s,mb3.6,baz=153,slow=8.4,SNR=5.1						
TXAR				sP	sP	08 47 15.4	-7.2
	comp=N,1.1nm,0.9s,baz=141,slow=6.9,SNR=10.0						
GDL2	Guadalupe Moun	63.70	328	eP	P	08 47 18.9	+0.7
SRU	San Rafael	72.22	328	eP	P	08 48 11.8	+0.8
SRU				e	pP	08 48 23.4	-3.7
SRU				ePcP	PcP	08 48 27.3	-2.0
AHID	Auburn Hatcher	75.33	330	eP	P	08 48 28.0	-1.1
	comp=N,4.6nm,0.9s,mb4.4						
AHID				e	pP	08 48 44.9	-0.3
HVU	Hansel Valley	75.36	328	eP	P	08 48 30.0	+0.7
NVAR	Mina Array Bea	75.80	323	P	P	08 48 33.6	+1.7
	comp=N,0.4nm,0.7s,mb3.4,baz=144,slow=7.3,SNR=4.1						
NVAR				pP	pP	08 48 44.5	-3.6
	comp=N,0.4nm,0.6s,baz=135,slow=6.3,SNR=2.3						
NVAR				sP	sP	08 48 49.1	-5.2
	comp=N,0.6nm,0.6s,baz=145,slow=7.7,SNR=3.5						
BMO	Blue Mountains	79.86	328	eP	P	08 48 55.1	+0.9
	comp=N,1.8nm,0.9s,mb4.0						
YKA	Yellowknife Ar	91.97	341	P	P	08 49 53.0	-0.4
	comp=N,1.7nm,0.8s,mb4.5,baz=142,slow=4.7,SNR=4.8						
YKA	Yellowknife Ar	91.97	341	P	P	08 49 53.0	-0.4
WRA	Warramunga Arr	131.39	211	PKP	PKPdf	08 55 58.4	+1.4
	comp=N,0.3nm,0.6s,baz=170,slow=1.7,SNR=5.2						
WRA				pPKP		08 56 10.3	
	comp=N,0.2nm,0.5s,baz=150,slow=1.6,SNR=1.6						
MKAR	Makanchi Array	147.22	36	PKPbc	PKPdf	08 56 27.6	+2.9
	comp=N,1.8nm,0.7s,baz=333,slow=3.2,SNR=8.7						
MKAR				pPKPbc		08 56 39.5	
	comp=N,1.3nm,0.8s,slow=3.6,SNR=3.6						

IDC 21 08:38:18.7±1.3**, 16.88S**×**70.62W, mb3.5**/2**, mb1 4.1**/4**, mb1mx3.8**/19**, mbtmp3.8**/4**, ML4.0**/2**, MS3.5**/4**, Ms1 3.5**/4**, ms1mx3.1**/14**, Error ellipse: s-maj=31.4km s-min=24.8km az=177.0, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.46	76	Pn	Pn	08 39 01.5	+0.9
	19nm,0.3s,baz=258,slow=18,SNR=11						
LPAZ				Sn	Sn	08 39 33.0	+1.2
	17nm,0.3s,baz=121,slow=16,SNR=6.7						
LPAZ				LR	LR	08 40 10.7	
	comp=Z,1µm,20.6s,baz=262,slow=46						
SIV	San Ignacio	9.20	86	Pn	P	08 40 31.0	-4.7
	1.3nm,0.3s,baz=274,slow=14,SNR=3.9						
BDFB	Brasilia	21.73	90	LR	LR	08 52 05.7	
	comp=Z,93nm,18.4s,baz=128,slow=38						
PLCA	Paso Flores	23.77	180	P	P	08 43 33.0	-0.6
	2.0nm,1.0s,baz=359,slow=16,SNR=2.5						
TXAR	Lajitas Array	55.94	325	P	P	08 47 58.6	-2.5
	0.4nm,0.7s,baz=148,slow=8.5,SNR=4.3						
DBIC	Dimbokro	69.08	76	LR	LR	09 17 10.5	
	comp=Z,48nm,20.1s,baz=252,slow=34						
NVAR	Mina Array Bea	70.88	322	LR	LR	09 19 18.7	
	comp=Z,19nm,19.1s,baz=170,slow=35						
MJAR	Matsushiro Arr	147.84	313	PKPbc	PKPdf	08 58 05.7	+0.8
	2.5nm,0.9s,baz=87,slow=1.0,SNR=7.2						

MEX 21 08:52:18.6±0.9**, 16.25N**×**96.19W, h66**^{km}±16^{km}**, MD3.6, 2D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.48	171	⇓iP	P	08 52 29.4	-1.6
HUIG				iS	S	08 52 38.4	-1.7
VHO	Vista Hermosa	0.97	328	⇓iP	P	08 52 35.2	-1.6
VHO				iS	S	08 52 47.9	-2.4
OXX	Oaxaca	0.98	328	iP	P	08 52 36.0	-0.8
OXX				iS	S	08 52 49.0	-1.4
CMIG	Matias Romero	1.50	56	iP	P	08 52 42.1	-1.9
CMIG				iS	S	08 53 00.4	-2.4

*MOS **21** 08:56:40.6±0.9, 51.49N×179.61E, h63^{km}, mb4.8/5, Error ellipse: s-maj=17.2km s-min=13.1km az=108.7*
*NEIC **21** 08:56:40.1±0.7, 51.13N×179.67E, h56^{km}±5^{km}, mb4.6/9, ML4.5(AEIC), Error ellipse: s-maj=14.1km s-min=4.9km az=181.0*
*IDC **21** 08:56:42.6±3.5, 51.43N×179.62E, h71^{km}±31^{km}, mb3.9/14, mb1 4.1/15, mb1mx3.9/26, mbtmp4.2/15, ML3.7/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/29, Error ellipse: s-maj=29.9km s-min=13.3km az=177.0*

ISC 21 08:56:39.2±0.9**, 51.2N**±0.1×**179.61E**±0.06**, h61**^{km}±7^{km}**, n61, σ0^{s}96**/67**, mb4.4**/23**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	2.05	73	P	P	08 57 11.6	-0.4
KIMD				S	S	08 57 39.0	+2.7
KIKV	Kanaga Island	2.12	70	P	P	08 57 12.7	-0.3
KIKV				S	S	08 57 40.3	+2.2
KIWB	Kanaga Island	2.12	71	P	P	08 57 12.8	-0.2
KINC	Kanaga Island	2.16	69	P	P	08 57 13.4	-0.2
ADAG	Mount Adagdak	2.48	70	P	P	08 57 17.8	-0.4
GSTD	Great Sitkin T	2.78	71	P	P	08 57 21.6	-0.7
GSTD				S	S	08 57 56.0	+1.2
GSMY	Great Sitkin M	2.83	71	P	P	08 57 22.2	-0.8
GSTR	Great Sitkin T	2.84	70	eP	P	08 57 22.5	-0.7
GSIG	Igitkin Island	2.89	73	P	P	08 57 23.3	-0.6
GSIG				S	S	08 57 58.6	+1.0
SMY	Shemya	3.73	296	P	P	08 57 36.1	+0.3
ATKA	Atka Island	3.98	73	P	P	08 57 38.0	-1.2
ATKA				S	S	08 58 24.0	-1.0
FX1	Attu Island--F	4.32	295	P	P	08 57 44.4	+0.4
FX1				S	S	08 58 40.3	+6.8
FX1				pmax	pmax		
	comp=Z,15nm,0.3s						
FX1	Attu Island--F	4.32	295	P	P	08 57 44.4	+0.4
	comp=Z,15nm,0.3s,baz=191,slow=5.3,SNR=79						
FX1				S	S	08 58 40.3	+6.8
	comp=Z,26nm,0.3s,baz=86,slow=23,SNR=8.3						
FX1	Attu Island--F	4.32	295	P	P	08 57 44.8	+0.9
SPIA	Saint Paul Isl	8.43	41	P	P	08 58 40.6	-0.4
UNV	Unalaska Valle	8.87	67	P	P	08 58 45.7	-1.4
RSO	Redoubt South	17.94	48	eP	P	09 00 46.7	+1.1
BILL	Bilibino	18.10	344	eP	P	09 00 49.8	+2.3
BILL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BILL	Bilibino	18.10	344	eP	P	09 00 49.8	+2.3
	comp=Z,4.6nm,0.6s						
SPU	Mount Spurr	18.50	46	eP	P	09 00 53.3	+0.9
IMA	Indian Mountai	20.12	32	eP	P	09 01 10.7	+0.6
IMA				pmax	pmax		
	comp=Z,22nm,0.6s						
IMA	Indian Mountai	20.12	32	eP	P	09 01 10.7	+0.6
	comp=Z,22nm,0.6s						
ILAR	Eielson Array	22.00	39	P	P	09 01 28.2	-0.9
	comp=Z,1.3nm,0.7s,mb3.5,baz=243,slow=9.3,SNR=19						
ILAR				PcP	PcP	09 05 25.1	-1.6
	comp=Z,0.3nm,0.5s,baz=278,slow=2.9,SNR=4.6						
ASAJ	Asahikawa	25.71	269	P	P	09 02 06.2	+1.2
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ASAJ	Asahikawa	25.71	269	P	P	09 02 06.2	+1.2
	comp=Z,7.6nm,0.6s,mb4.4,baz=50,slow=12,SNR=7.4						
INK	Inuvik	28.17	35	P	P	09 02 26.5	-0.8
	comp=Z,2.7nm,0.9s,mb3.9,baz=232,slow=8.2,SNR=8.1						
KLR	Kul’dur	30.26	285	eP	P	09 02 42.8	-3.3
MJAR	Matsushiro Arr	32.77	260	LR	LR	09 14 22.7	
	comp=Z,86nm,20.5s,baz=80,slow=32						
YKA	Yellowknife Ar	36.07	46	P	P	09 03 35.4	-0.8
	comp=Z,1.7nm,0.5s,mb4.3,baz=282,slow=7.6,SNR=7.6						
YKA	Yellowknife Ar	36.07	46	P	P	09 03 35.4	-0.8
BOD	Bodaibo	37.28	306	eP	P	09 03 45.9	-0.5
BOD				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
MCMT	McKenzie Canyo	44.18	71	eP	P	09 04 43.3	+0.1
BOZ	Bozeman (W)	44.45	69	eP	P	09 04 45.6	+0.2
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
BOZ	Bozeman (W)	44.45	69	eP	P	09 04 45.5	+0.1
	comp=Z,4.6nm,0.7s,mb4.3						
NVAR	Mina Array Bea	44.56	82	P	P	09 04 47.4	+1.0

	comp=Z,0.6nm,0.7s,mb3.5,baz=306,slow=5.7,SNR=5.6						
NVAR	Mina Array Bea	44.56	82	P	P	09 04 47.4	+1.0
ZAK	Zakamensk	46.18	300	eP	P	09 05 00.1	+1.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
BW06	Boulder Array	47.31	71	eP	P	09 05 08.4	+0.3
	comp=Z,6.3nm,0.8s,mb4.6						
PDAR	Pinedale Array	47.31	71	P	P	09 05 08.6	+0.4
	comp=Z,7.4nm,0.7s,mb4.7,baz=305,slow=4.3,SNR=39						
MSU	Marysvale	48.30	77	eP	P	09 05 16.9	+1.0
NVS	Novosibirsk	53.58	314	i P	P	09 05 54.5	-1.1
ARCES	ARCESS Array B	58.08	350	P	P	09 06 26.5	-1.2
	comp=Z,2.3nm,0.7s,mb4.3,baz=31,slow=7.1,SNR=9.4						
ARCES	ARCESS Array B	58.08	350	P	P	09 06 26.5	-1.2
MKAR	Makanchi Array	59.35	308	P	P	09 06 35.9	-1.0
	comp=Z,1.7nm,0.3s,mb4.5,baz=51,slow=7.8,SNR=21						
MKAR				LR	LR	09 34 48.5	
	comp=Z,38nm,18.7s,baz=256,slow=39						
TXAR	Lajitas Array	59.67	80	P	P	09 06 38.9	-0.4
	comp=Z,0.7nm,0.7s,mb3.8,baz=298,slow=5.0,SNR=9.5						
BVAR	Borovoye Array	60.37	319	P	P	09 06 43.6	-0.2
	comp=Z,5.4nm,0.6s,mb4.8,baz=49,slow=6.9,SNR=28						
SCHQ	Schefferville	60.75	37	P	P	09 06 45.1	-1.2
	comp=Z,1.4nm,0.6s,mb4.3,baz=246,slow=18,SNR=3.6						
ZRNK	Zerenda	60.99	320	eP	P	09 06 47.3	-0.7
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
ZRNK	Zerenda	60.99	320	eP	P	09 06 47.3	-0.6
	comp=Z,4.9nm,0.6s,mb4.8						
FINES	FINESS Array B	65.72	346	P	P	09 07 16.8	-2.0
	comp=Z,0.8nm,0.7s,mb3.9,baz=18,slow=8.8,SNR=4.5						
NB2	NORSAR Subarra	67.71	354	P	P	09 07 30.9	-0.4
	comp=Z,4.2nm,0.8s,mb4.5,baz=8.0,slow=6.2						
NOA	NORSAR Array B	67.71	354	P	P	09 07 30.6	-0.7
	comp=Z,3.3nm,0.7s,mb4.5,baz=8.1,slow=6.3,SNR=13						
CMAR	Chiang Mai Arr	70.03	275	P	P	09 07 46.5	+0.2
	comp=Z,1.1nm,0.5s,mb4.0,baz=35,slow=6.4,SNR=5.0						
GUN	Gumba	70.99	291	eP	P	09 07 53.1	+1.1
	comp=Z,20nm,0.6s,mb5.2						
KKN	Kakani	71.43	291	eP	P	09 07 55.9	+1.2
	comp=Z,10nm,0.5s,mb5.0						
KKN	Kakani	71.43	291	eP	P	09 07 55.9	+1.2
KKN				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
PKI	Pulchoki	71.52	291	eP	P	09 07 56.3	+1.1
GKN	Gorkha	71.65	292	eP	P	09 07 56.4	+0.5
	comp=Z,12nm,0.6s,mb5.0						
DMN	Daman	71.67	291	eP	P	09 07 56.6	+0.5
KOLN	Koldanda	72.43	292	eP	P	09 08 00.1	-0.5
	comp=Z,9.6nm,0.9s,mb4.7						
MOX	Moxa	78.01	352	eP	P	09 08 32.0	+0.1

UCR **21** *09:14:03.0, 9.44N×84.27W, h3^{km}, MD4.1, MW3.9*
NEIC **21** *09:14:05.1, 9.52N×84.23W, h1^{km}, MD4.0(CASC), After CASC.*
UPA **21** *09:14:05.2, 9.60N×84.37W, h10^{km}, MD5.0, MW4.9*
CASC **21** *09:14:05.6±2.4, 9.54N×84.24W, h2^{km}±7^{km}, MD4.1, MW4.4*
ISC 21 09:14:05.0±1.0, **9.46N**±0.05×**84.29W**±0.03, **h2**^{km}±8^{km}**, n34,** σ**1**^{s}**05**/45**, 14C-10D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAJ	Bijagual	0.43	22	⇓eP	Pg	09 14 13.9	+0.3
LAJ	Bijagual	0.43	22	⇓eP	Pg	09 14 13.8	+0.2
LAJ				eS	Sg	09 14 19.9	+0.6
PRS1	Puriscal	0.52	357	⇑iP	Pg	09 14 14.0	-1.3
PRS1	Puriscal	0.52	357	⇑eP	Pg	09 14 13.8	-1.5
SJS	Escuela Geolog	0.52	26	⇓iP	Pg	09 14 15.5	0.0
SJS				eS	Sg	09 14 22.8	+0.3
SJS				eS	Sg	09 14 23.3	+0.8
SJS	Escuela Geolog	0.52	26	⇑iP	Pg	09 14 15.5	0.0
SJS				eS	Sg	09 14 22.4	0.0
BUS	Buena Vista	0.53	80	⇑iP	Pg	09 14 15.5	-0.1
BUS	Buena Vista	0.53	80	⇑eP	Pg	09 14 15.4	-0.1
BUS				eS	Sg	09 14 23.9	+1.3
CGA2	Cerro Gallo 2	0.58	342	⇑eP	Pg	09 14 16.6	+0.1
CGA2	Cerro Gallo 2	0.58	342	⇑eP	Pg	09 14 16.6	+0.1
URSC	Urasca	0.62	54	i P	Pg	09 14 17.1	-0.3
URSC	Urasca	0.62	54	eP	Pg	09 14 17.2	-0.3
VPS2	Volcan Poas 2	0.72	4	⇑iP	Pg	09 14 19.3	-0.2
VPS2	Volcan Poas 2	0.72	4	⇑eP	Pg	09 14 19.3	-0.2
JCR	Jicaral	0.90	295	⇓iP	Pg	09 14 22.7	-0.3
JCR	Jicaral	0.90	295	⇓eP	Pg	09 14 22.7	-0.3
JCR				eS	Sg	09 14 36.6	+1.6
FORC	Fortuna	1.07	339	⇓iP	Pb	09 14 25.5	-0.4
FORC	Fortuna	1.07	339	i P	Pb	09 14 25.4	-0.5
TRTC	Tortuguero	1.24	27	⇑iP	Pb	09 14 27.6	-1.2
TRTC	Tortuguero	1.24	27	⇑eP	Pb	09 14 27.7	-1.2
LIO	Limon	1.34	66	eP	Pb	09 14 30.4	-0.2
LIO	Limon	1.34	66	eP	Pb	09 14 29.1	-1.6
ACR	Cerro Adams	1.37	126	⇑iP	Pb	09 14 30.4	-0.6
SVTC	San Vito de Co	1.47	117	eP	Pn	09 14 31.1	-1.6
VCR	Vista de Mar	1.48	297	⇑eP	Pn	09 14 31.6	-1.2
VCR				eS	Sb	09 14 53.6	+1.5
VCR	Vista de Mar	1.48	297	⇓eP	Pn	09 14 31.7	-1.1
BRU2	Volcan	1.71	113	⇓iP	Pn	09 14 36.3	+0.2
BRU2				eS	Sb	09 15 00.1	+1.3
BRU	Baru	1.82	111	eP	Pn	09 14 40.1	+2.4
BRU	Baru	1.82	111	⇑eP	Pn	09 14 40.1	+2.4
BRU				eS	Sn	09 15 04.8	+3.1
DVD	David	2.08	119	eP	Pn	09 14 41.2	-0.2
DVD	David	2.08	119	⇓eP	Pn	09 14 41.1	-0.3
PTP1	Petroterminal	2.22	124	eP	Pn	09 14 39.6	-3.8
PTP1				eS	Sn	09 15 06.5	-5.3
PTP1	Petroterminal	2.22	124	eP	Pn	09 14 39.6	-3.8
PTP1				eS	Sn	09 15 05.5	-6.2
UPA	Univ. de Panam	4.71	95	⇓eP	Pn	09 15 18.1	-0.7

IDC 21 09:38:29.8±1.5**, 6.17S**×**146.76E, mb3.9**/3**, mb1 4.1**/5**, mb1mx3.9**/14**, mbtmp3.9**/5**, ML3.1**/2**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.8**/18**, Error ellipse: s-maj=55.9km s-min=19.0km az=91.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.24	173	Pn	Pn	09 39 22.0	-0.9
	5.4nm,0.3s,baz=348,slow=9.3,SNR=22						
PMG				Pg	Pg	09 39 29.1	-5.4
	16nm,0.3s,baz=9.7,slow=12,SNR=38						
PMG				Sn	Sn	09 39 59.7	-3.1
	13nm,0.3s,baz=150,slow=23,SNR=4.1						
PMG				Lg		09 40 13.1	
	18nm,0.3s,baz=135,slow=22,SNR=7.9						
CTA	Charters Tower	13.85	182	LR	LR	09 46 38.9	
	comp=Z,114nm,18.1s,baz=45,slow=35						
WRA	Warramunga Arr	18.25	220	P	P	09 42 44.7	-1.7
	0.1nm,0.3s,baz=45,slow=12,SNR=15						
STKA	Stephens Creek	26.03	190	P	P	09 44 04.6	-1.9
	2.7nm,0.8s,baz=8.7,slow=13,SNR=3.2						
VNDA	Vanda	71.76	177	P	P	09 49 53.5	-2.1
	0.7nm,0.5s,baz=349,slow=7.0,SNR=4.0						
ILAR	Eielson Array	85.72	23	P	P	09 51 10.6	-1.1
	0.3nm,0.7s,baz=247,slow=4.4,SNR=6.2						

IGQ **21** *10:03:46.8, 1.96S×78.01W, h190^{km}±3^{km}, mb4.6, Error ellipse: s-maj=2.8km s-min=1.4km az=70.8*
CRAAG **21** *10:03:49.3, 1.74S×77.83W, Mb5.0*
MOS **21** *10:03:51.1±0.7, 1.70S×77.89W, h164^{km}, mb5.2/64, Error ellipse: s-maj=7.3km s-min=4.9km az=75.3*
BGS **21** *10:03:51.7±2.7, 1.74S×77.82W, h163^{km}, mb5.4*
IDC **21** *10:03:51.7±0.6, 1.71S×77.78W, h158^{km}±4^{km}, mb4.5/18, mb1 4.6/22, mb1mx4.6/23, mbtmp4.9/22, MS3.5/4, Ms1 3.5/4, ms1mx3.0/24, Error ellipse: s-maj=15.7km s-min=8.1km az=56.0*
BJI **21** *10:03:52.1, 1.70S×77.80W, h162^{km}, mB5.1*
HRVD **21** *10:03:52.2±0.5, 1.86S×78.02W, h166^{km}±4^{km}, MW5.0/54, Centroid moment Tensor Solution. LP body waves: s17,c20;Mantle waves: s54,c79; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.61±.19; M$_{\theta\theta}$0.85±.22; M$_{\phi\phi}$0.75±.28; M$_{r\theta}$2.03±.13; M$_{\theta\phi}$-1.24±.18; M$_{\phi r}$-2.08±.17; Best double couple: M$_{0}$3.434×10^{16} NP1:ϕ_s131°,δ16°, λ-94°. NP2:ϕ_s316°,δ74°,λ-89°. Principal axes: T 3.651, Plg29°, Azm45°; N -.434, Plg1°, Azm135°; P -3.217, Plg61°, Azm227°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC **21** *10:03:52.2±0.1, 1.74S×77.82W, mb5.0/142, MD4.6(IGQ) Error ellipse: s-maj=4.4km s-min=2.8km az=50.0*
NEIC Felt at Guayaquil.
ISC 21 10:03:50.9±0.3**, 1.76S**±0.03×**77.90W**±0.04**, h164**^{km}±2^{km}**, h161**^{km}±1.3^{km}**:pP-P, n490,** σ**0**^{s}**77**/457**, mb4.9**/162**, 139C-34D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULBA	Ulba	0.60	301	⇓P	P	10 04 14.0	-0.8
ARRY	Arrayan	0.61	295	⇑P	P	10 04 13.7	-1.1
RUN5	Runtun	0.63	303	⇓P	P	10 04 14.2	-0.7
JUIV	Juive	0.66	301	⇓P	P	10 04 14.3	-0.8
CUSU	Cusua	0.66	299	⇓P	P	10 04 14.5	-0.6
IGUA	Igualata	0.79	290	⇑P	P	10 04 15.1	-0.7
PISA	Pisayambo	0.85	325	⇓P	P	10 04 16.4	+0.2
TAMB	Tambo	1.16	336	⇓P	P	10 04 19.2	+0.5
VC1	Cotopaxi 1	1.22	336	⇓P	P	10 04 19.8	+0.6
CAMI	Rancho Maria	1.24	331	⇓P	P	10 04 19.7	+0.3
ANTI	Antisana	1.33	349	⇓P	P	10 04 20.8	+0.5
ECOPE	Copete-Rev Vol	1.67	10	⇓P	P	10 04 24.1	+0.4
LAV3	Lava3-Reventad	1.68	9	⇓P	P	10 04 24.1	+0.4
CHAR	Charly	1.68	8	P	P	10 04 24.5	+0.8
JUA2	San Juan 2	1.69	335	⇓P	P	10 04 24.2	+0.3
CONE	Cono NE Rev Vo	1.70	9	⇑P	P	10 04 24.6	+0.6
GGP	Refugio Guagua	1.72	336	⇓P	P	10 04 24.6	+0.3
TERV	Terraza Guagua	1.73	336	⇓P	P	10 04 24.7	+0.5
PINO	Pino	1.74	336	⇓P	P	10 04 24.9	+0.4
YANA	Yana	1.77	338	⇓P	P	10 04 24.9	+0.2
CAYR	Refugio Cayamb	1.77	357	⇓P	P	10 04 25.9	+1.1
CAYA	Cayambe	1.82	357	⇓P	P	10 04 26.4	+1.1
JOR1	San Jorge 1	1.90	337	⇓P	P	10 04 24.0	-2.1
OTAV	Otavalo	2.06	344	⇓iPn	P	10 04 28.0	+0.1
COTA	Cotacachi	2.13	348	⇓P	P	10 04 29.7	+0.9
HOJA	Cerro de Hojas	2.74	285	⇑P	P	10 04 32.7	-3.5
JAMA	Jama	2.75	303	P	P	10 04 33.4	-3.0
JAMA				S	S	10 05 06.8	-4.4
ROSC	El Rosal	7.48	28	P	P	10 05 38.7	+0.4
	11nm,0.3s,baz=284,slow=5.6,SNR=16						
ROSC				S	S	10 06 55.4	-6.5
	baz=220,slow=16,SNR=1.3						
ROSC				LR	LR	10 08 43.1	
	comp=Z,227nm,19.9s,baz=229,slow=40						
NNA	Nana	10.21	174	ePn	P	10 06 12.5	-1.9
	66nm,0.5s						
NNA				eSn	S	10 08 01.4	-5.3
SDV	Santo Domingo	12.82	34	P	P	10 06 47.8	-0.3
	12nm,0.3s,baz=206,slow=8.0,SNR=41						
SDV	Santo Domingo	12.82	34	ePn	P	10 06 47.5	-0.7
	66nm,0.6s						
JTS	JuntasAbangare	13.88	330	eP	P	10 07 02.7	+0.9
JTS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JTS	JuntasAbangare	13.88	330	P	P	10 07 03.5	+1.7
	comp=Z,0.4nm,0.3s,baz=114,slow=18,SNR=5.8						
JTS				LR	LR	10 11 28.2	
	comp=Z,266nm,20.1s,baz=5.4,slow=33						
JTS	JuntasAbangare	13.88	330	ePn	P	10 07 02.7	+0.9
	comp=Z,10nm,0.7s						
ARE	Arequipa	15.91	157	eP	P	10 07 29.0	+1.8
SAML	Samuel	16.29	117	eP	P	10 07 29.0	-2.9
	comp=Z,116nm,0.7s						
LPAZ	La Paz	17.35	147	eP	P	10 07 43.9	-0.6
LPAZ				pmax	pmax		
	comp=Z,43nm,0.9s						
LPAZ	La Paz	17.35	147	P	P	10 07 44.8	+0.2
	comp=Z,4.5nm,0.3s,baz=332,slow=12,SNR=59						
LPAZ				S	S	10 10 56.0	+5.7
	comp=Z,0.1nm,0.3s,baz=84,slow=18,SNR=2.8						
LPAZ	La Paz	17.35	147	eP	P	10 07 43.9	-0.6
	comp=Z,43nm,0.9s						
PCJ	Portland Cotta	19.39	2	⇑eP	P	10 08 06.8	+0.3
MCJ	Malvern	19.56	1	⇑eP	P	10 08 09.1	+0.9
YHJ	Yallahs	19.58	4	⇓eP	P	10 08 07.8	-0.6
STH	Stony Hill	19.74	3	⇑eP	P	10 08 10.5	+0.4
GWJ	Greenwich	19.74	3	⇑eP	P	10 08 10.5	+0.4
CVJ	Coleyville	19.86	1	⇑eP	P	10 08 12.8	+1.5
BBJ	Bamboo Saint A	20.03	2	⇑eP	P	10 08 14.5	+1.6
TPP	Pointe-a-Pierr	20.30	53	eP	P	10 08 16.4	+0.7
TRN	Trinidad (W)	20.53	53	eP	P	10 08 17.6	-0.4
SIV	San Ignacio	21.79	131	P	P	10 08 31.4	+0.9
	comp=Z,22nm,0.7s,mb4.7,baz=316,slow=10,SNR=71						
SIV				S	S	10 12 21.2	+5.3
	comp=Z,4.0nm,0.8s,baz=72,slow=19,SNR=1.8						
TLL	Tololo Astrono	29.04	167	i P	P	10 09 38.2	+0.3
CFAA	Coronel Fontan	31.05	164	PcP	PcP	10 12 47.9	+0.6
	comp=Z,0.4nm,0.6s,baz=269,slow=7.1,SNR=4.6						
SJCH	San Jose de Ma	32.49	168	i P	P	10 10 08.9	+0.8
BDFB	Brasilia	32.53	117	P	P	10 10 07.8	-0.8
	comp=Z,15nm,0.6s,mb4.9,baz=286,slow=9.7,SNR=22						
BAO	Brasilia Array	32.55	117	P	P	10 10 07.5	-1.3
COW	Cow Castle Cre	35.05	356	eP	P	10 10 29.4	-0.6
LRAL	Lakeview Retre	35.66	347	⇑eP	P	10 10 34.2	-0.9
	comp=Z,21nm,0.5s,mb5.0						
JSC	Jenkinsville	35.99	355	eP	P	10 10 37.4	-0.4
CPCT	Cooper Cave	37.53	351	eP	P	10 10 50.2	-0.5
SWET	Sewanee	37.55	349	eP	P	10 10 49.5	-1.4
PLAL	Pickwick Lake	37.78	346	⇑eP	P	10 10 50.9	-1.9
	comp=Z,18nm,0.9s,mb4.7						
TZTN	Tazewell	38.47	353	eP	P	10 10 57.8	-0.7
UALR	University of	38.79	341	eP	P	10 10 59.8	-1.4
	comp=Z,22nm,0.8s,mb4.8						
WVT	Waverly	38.82	347	⇑eP	P	10 10 59.4	-2.1
WVT				pmax	pmax		
	comp=Z,19nm,0.5s,mb5.0						
WVT	Waverly	38.82	347	⇑eP	P	10 10 59.4	-2.1
	comp=Z,19nm,0.5s,mb5.0						
BLA	Blacksburg	38.85	357	eP	P	10 11 01.8	+0.1
BLA				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.1						
BLA	Blacksburg	38.85	357	eP	P	10 11 01.8	+0.1
	comp=Z,33nm,0.7s,mb5.1						
TRQA	Tornquist	38.97	160	eP	P	10 11 02.1	-0.6
	comp=Z,32nm,0.9s,mb5.0						
PLCA	Paso Flores	39.36	171	eP	P	10 11 06.4	+0.5
PLCA				e*PP	pP	10 11 38.8	-3.0
PLCA				e		10 13 11.3	
PLCA				pmax	pmax		
	comp=Z,46nm,0.8s						
PLCA	Paso Flores	39.36	171	P	P	10 11 06.3	+0.4
	comp=Z,33nm,0.7s,mb5.1,baz=342,slow=9.6,SNR=69						
PLCA				pP	pP	10 11 39.1	-2.7
	comp=Z,7.6nm,0.6s,baz=344,slow=7.3,SNR=3.2						
PLCA				PcP	PcP	10 13 11.6	+0.2
	comp=Z,5.1nm,0.6s,baz=357,slow=3.0,SNR=5.3						
PLCA	Paso Flores	39.36	171	eP	P	10 11 06.3	+0.5
	comp=Z,46nm,0.8s,mb5.2						
PLCA				epP	pP	10 11 38.8	-3.0
PLCA				ePcP	PcP	10 13 11.3	-0.2
TXAR	Lajitas Array	39.55	323	P	P	10 11 08.4	+0.9
	comp=Z,2.1nm,0.7s,mb3.9,baz=148,slow=8.3,SNR=35						
TXAR				pP	pP	10 11 42.5	-1.0
	comp=Z,1.9nm,1.0s,baz=135,slow=8.8,SNR=2.6						
TXAR				PcP	PcP	10 13 12.8	+0.6
	comp=Z,1.2nm,0.7s,baz=152,slow=6.7,SNR=5.4						
TXAR				pPcP		10 13 53.5	
	comp=Z,3.6nm,0.9s,baz=146,slow=5.5,SNR=10						
TXAR				ScP		10 16 46.7	
	comp=Z,2.6nm,0.8s,baz=148,slow=6.4,SNR=18						
TXAR				LR	LR	10 27 36.8	
	comp=Z,52nm,18.7s,baz=320,slow=36						
TXAR	Lajitas Array	39.55	323	P	P	10 11 08.4	+0.9
TXAR				pP	pP	10 11 42.5	-1.0
TXAR				PcP	PcP	10 13 12.8	+0.6
TXAR				pPcP		10 13 53.5	
TXAR				ScP		10 16 46.7	
TXAR				LR	LR	10 27 36.8	
CBN	Corbin	39.77	1	eP	P	10 11 09.7	+0.5
	comp=Z,78nm,0.5s,mb5.6						
PARMO	Parma	39.79	345	eP	P	10 11 08.6	-0.9
CAM4	Nova Friburgo	39.97	124	(P)	P	10 11 12.1	+1.0
CAM4				i		10 11 12.1	
CAM4				i		10 11 13.8	
CAM4				i		10 11 20.4	
CAM4				i		10 11 23.4	
CAM4				i		10 11 28.0	
WCI	Wyandotte Cave	40.54	350	eP	P	10 11 14.0	-1.6
WCI				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.7						
WCI	Wyandotte Cave	40.54	350	eP	P	10 11 14.0	-1.6
	comp=Z,12nm,0.6s,mb4.7						
SDMD	Soldier's Deli	40.98	1	eP	P	10 11 19.6	+0.4
FVM	French Village	41.21	345	eP	P	10 11 19.4	-1.7
FVM				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.2						
FVM	French Village	41.21	345	eP	P	10 11 19.4	-1.6
	comp=Z,53nm,0.9s,mb5.2						
WMOK	Wichita Mounta	41.26	334	eP	P	10 11 21.4	-0.1
WMOK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
WMOK	Wichita Mounta	41.26	334	eP	P	10 11 21.4	-0.1
	comp=Z,9.7nm,0.8s,mb4.5						
CCM	Cathedral Cave	41.50	344	eP	P	10 11 21.5	-1.9
CCM				eScP		10 16 53.3	
BLO	Bloomington	41.50	350	⇑eP	P	10 11 21.5	-1.9
BLO				pmax	pmax		
	comp=Z,49nm,0.7s,mb5.2						
BLO	Bloomington	41.50	350	⇑eP	P	10 11 21.5	-1.9
	comp=Z,50nm,0.7s,mb5.2						
GDL2	Guadalupe Moun	42.06	326	eP	P	10 11 29.4	+1.2
RCBR	Riachuelo	42.09	97	eP	P	10 11 27.1	-1.5
	comp=Z,17nm,0.6s,mb4.9						
MNTX	Cornudas Mount	42.28	324	eP	P	10 11 30.3	+0.4
	comp=Z,5.4nm,0.7s,mb4.3						
PAL	Palisades	42.72	4	eP	P	10 11 33.3	-0.1
PAL				pmax	pmax		
	comp=Z,56nm,1.1s,mb5.1						
PAL	Palisades	42.72	4	eP	P	10 11 33.3	-0.1
	comp=Z,56nm,1.1s,mb5.1						
AMTX	Amarillo	42.73	331	eP	P	10 11 34.0	+0.5
	comp=Z,11nm,0.6s,mb4.7						
AMTX				epP	pP	10 12 10.8	+0.9
ALLY	Alegheny Colle	43.26	358	eP	P	10 11 36.8	-0.9
BINY	Binghamton	43.79	2	⇑eP	P	10 11 42.2	+0.3
	comp=Z,89nm,0.7s,mb5.5						
BRYW	Bryant College	43.86	7	eP	P	10 11 42.4	-0.1
BRYW				epP	pP	10 12 16.9	-2.0
GENY	Geneseo	44.32	0	eP	P	10 11 46.0	-0.2
WES	Weston	44.34	7	eP	P	10 11 46.1	-0.3
WES				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.2						
WES	Weston	44.34	7	eP	P	10 11 46.1	-0.2
	comp=Z,62nm,1.0s,mb5.2						
HRV	Harvard--Oak R	44.44	7	eP	P	10 11 47.1	0.0
HRV				e*PP	pP	10 12 20.9	-2.7
HRV				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.2						
HRV	Harvard--Oak R	44.44	7	eP	P	10 11 47.1	0.0
	comp=Z,46nm,0.8s,mb5.2						
HRV				epP	pP	10 12 20.9	-2.7
BNM	Barren Site	44.78	326	eP	P	10 11 51.1	+1.1
ACCN	Adirondack Com	45.10	4	eP	P	10 11 52.4	0.0
ANMO	Albuquerque	45.27	326	⇓eP	P	10 11 55.1	+1.2
ANMO				e*PP	pP	10 12 31.1	+0.6
ANMO				pmax	pmax		
	comp=Z,12nm,0.6s						
ANMO	Albuquerque	45.27	326	⇓eP	P	10 11 55.1	+1.2
	comp=Z,12nm,0.6s,mb4.7						
ANMO				epP	pP	10 12 31.1	+0.7
HNH	Hanover	45.54	6	eP	P	10 11 57.2	+1.3
	comp=Z,4.2nm,0.8s,mb4.1						
NCB	Newcomb	45.65	4	⇑eP	P	10 11 56.6	-0.1
	comp=Z,44nm,0.6s,mb5.3						
MIV	Mineville/With	45.80	4	eP	P	10 11 57.5	-0.4
JFWS	Jewell Farm	45.84	347	eP	P	10 11 56.1	-2.2
JFWS				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.2						
JFWS	Jewell Farm	45.84	347	eP	P	10 11 56.1	-2.2
	comp=Z,50nm,0.7s,mb5.3						
TUC	Tucson	46.01	320	⇓iP	P	10 12 00.4	+0.6
TUC				e*SP	sP	10 12 53.6	-1.6
TUC				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
TUC	Tucson	46.01	320	⇓iP	P	10 12 00.4	+0.7
	comp=Z,14nm,0.8s,mb4.6						
TUC				esP	sP	10 12 53.6	-1.7
FRNY	Flat Rock	46.55	4	⇑iP	P	10 12 03.6	-0.2
WUAZ	Wupatki	48.51	323	⇓eP	P	10 12 20.2	+1.1
	comp=Z,22nm,1.0s,mb4.7						
ISCO	Idaho Springs	48.53	331	eP	P	10 12 19.7	+0.5
ISCO				e*PP	pP	10 12 57.1	+0.8
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
ISCO	Idaho Springs	48.53	331	eP	P	10 12 19.7	+0.5
	comp=Z,2.7nm,0.6s,mb4.0						
ISCO				epP	pP	10 12 57.1	+0.8
PHWY	Pilot Hill	49.64	333	eP	P	10 12 27.8	+0.1
SRU	San Rafael	50.52	327	eP	P	10 12 35.0	+0.6
SRU				epP	pP	10 13 13.0	+1.2
SRU				eScP		10 17 31.5	
LDFC	Landfair	50.55	320	eP	P	10 12 36.2	+1.6
NEN	Nelson	50.73	321	eP	P	10 12 36.0	-0.1
NEN				epP	pP	10 13 14.1	+0.7
MSU	Marysvale	51.02	325	eP	P	10 12 38.8	+0.5
MSU				ePP	PP	10 14 32.6	-4.3
MSU				eScP		10 17 34.4	
MVU	Marysvale	51.04	325	eP	P	10 12 39.1	+0.8
	comp=Z,4.0nm,0.9s,mb4.0						
MVU				epP	pP	10 13 16.1	+0.3
MVU				ePcP	PcP	10 13 52.8	+0.7
MVU				ePP	PP	10 14 33.5	-3.6
RSSD	Black Hills	51.31	336	eP	P	10 12 40.8	+0.5
RSSD				e*PP	pP	10 13 17.0	-0.8
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
RSSD	Black Hills	51.31	336	eP	P	10 12 40.8	+0.5
	comp=Z,4.8nm,0.7s,mb4.2						
RSSD				epP	pP	10 13 17.0	-0.8
MWC	Mount Wilson	51.98	317	eP	P	10 12 46.3	+0.8
JLU	Jordanelle	52.09	328	eP	P	10 12 46.6	+0.5
JLU				epP	pP	10 13 24.2	+0.5
JLU				eScP		10 17 38.5	
TCUT	Toone Canyon	52.43	328	eP	P	10 12 49.4	+0.7
TCUT				epP	pP	10 13 27.0	+0.7
PDAR	Pinedale Array	52.71	331	P	P	10 12 50.5	-0.2
	comp=Z,1.5nm,0.5s,mb4.0,baz=123,slow=9.4,SNR=12						
PDAR				ScP		10 17 40.1	
	comp=Z,0.9nm,0.7s,baz=146,slow=5.3,SNR=7.1						
PDAR				LR	LR	10 36 31.0	
	comp=Z,48nm,20.6s,baz=315,slow=37						
HWUT	Hardware Ranch	52.87	329	eP	P	10 12 51.8	-0.1
	comp=Z,5.3nm,0.5s,mb4.5						
HWUT				epP	pP	10 13 29.2	-0.3
HWUT				eScP		10 17 41.3	
SPUT	South Promonto	53.12	328	eP	P	10 12 53.9	+0.1
SPUT				epP	pP	10 13 31.6	+0.1
AHID	Auburn Hatcher	53.47	330	eP	P	10 12 55.9	-0.5
	comp=Z,4.7nm,0.6s,mb4.4						
REDW	Red Top Meadow	53.78	331	eP	P	10 13 00.2	+1.6
	comp=Z,10nm,1.1s,mb4.5						
SNOW	Snow King Moun	53.81	331	eP	P	10 12 58.7	-0.2
	comp=Z,3.8nm,0.5s,mb4.4						
SNOW				epP	pP	10 13 36.3	-0.2
LOHW	Long Hollow	53.85	331	eP	P	10 12 59.0	-0.1
	comp=Z,3.7nm,0.8s,mb4.2						
TPAW	Teton Pass	53.93	331	eP	P	10 12 59.5	-0.1
	comp=Z,2.9nm,0.6s,mb4.2						
RRI2	Red Ridge	54.01	330	eP	P	10 12 60.0	-0.2
	comp=Z,10.0nm,0.9s,mb4.5						
RRI2				epP	pP	10 13 38.2	+0.2
ULM	Lac du Bonnet	54.06	346	P	P	10 12 57.9	-2.6
	comp=Z,14nm,0.5s,mb4.9,baz=157,slow=7.7,SNR=21						
IMW	Indian Meadow	54.22	331	eP	P	10 13 01.8	0.0
	comp=Z,5.3nm,0.6s,mb4.5						
IMW				epP	pP	10 13 39.6	0.0
ELK	Elko	54.27	325	eP	P	10 13 02.8	+0.6
ELK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ELK	Elko	54.27	325	eP	P	10 13 02.8	+0.6
	comp=Z,1.9nm,0.7s,mb3.9						
MNV	Mina	54.53	321	eP	P	10 13 04.6	+0.4
MNV				e*PP	pP	10 13 42.3	+0.3
MNV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
MNV	Mina	54.53	321	eP	P	10 13 04.6	+0.4
	comp=Z,9.8nm,1.1s,mb4.5						
MNV				epP	pP	10 13 42.3	+0.3
OMM	Old Mammoth Mi	54.58	320	eP	P	10 13 05.0	+0.5
OMM				epP	pP	10 13 43.3	+1.0
NVAR	Mina Array Bea	54.63	321	P	P	10 13 05.3	+0.5
	comp=Z,3.5nm,0.6s,mb4.3,baz=122,slow=7.1,SNR=34						
NVAR				pP	pP	10 13 41.5	-1.2
	comp=Z,5.9nm,0.9s,baz=131,slow=8.1,SNR=6.5						
NVAR				PcP	PcP	10 14 05.2	-0.3
	comp=Z,3.0nm,0.7s,baz=148,slow=3.7,SNR=7.4						
NVAR				ScP		10 17 49.6	
	comp=Z,0.6nm,0.7s,baz=129,slow=5.3,SNR=4.3						
NVAR	Mina Array Bea	54.63	321	P	P	10 13 05.3	+0.5
NVAR				pP	pP	10 13 41.5	-1.2
NVAR				PcP	PcP	10 14 05.2	-0.3

NVAR				ScP		10 17 49.6	
GCMT	Greycliff	55.06	333	eP	P	10 13 07.4	-0.4
GCMT				epP	pP	10 13 44.7	-1.0
HLID	Hailey	55.74	328	eP	P	10 13 12.9	+0.1
	comp=Z,2.0nm,0.6s,mb4.1						
HLID				epP	pP	10 13 50.8	+0.1
BOZ	Bozeman (W)	55.85	332	eP	P	10 13 12.9	-0.7
BOZ				e*PP	pP	10 13 50.1	-1.5
BOZ				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.5						
BOZ	Bozeman (W)	55.85	332	eP	P	10 13 12.9	-0.7
	comp=Z,12nm,1.4s,mb4.5						
BOZ				epP	pP	10 13 50.1	-1.5
WCN	Washoe City	56.06	321	eP	P	10 13 15.6	+0.5
WCN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
WCN	Washoe City	56.06	321	eP	P	10 13 15.6	+0.5
	comp=Z,6.6nm,0.8s,mb4.5						
HRY	Holter Researc	56.73	333	eP	P	10 13 19.3	-0.5
SCHQ	Schefferville	57.14	8	P	P	10 13 21.1	-1.4
	comp=Z,27nm,0.6s,mb5.3,baz=203,slow=5.2,SNR=75						
SCHQ	Schefferville	57.14	8	eP	P	10 13 20.9	-1.6
	comp=Z,39nm,0.6s,mb5.4						
WVOR	Wild Horse Val	57.31	325	eP	P	10 13 23.9	+0.1
WVOR				e*PP	pP	10 14 02.5	+0.5
WVOR				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.6						
WVOR	Wild Horse Val	57.31	325	eP	P	10 13 23.9	+0.1
	comp=Z,13nm,1.2s,mb4.6						
WVOR				epP	pP	10 14 02.5	+0.5
MOD	Modoc	57.95	324	eP	P	10 13 27.9	-0.4
	comp=Z,10nm,1.5s,mb4.4						
YBH	Yreka Blue Hor	59.30	322	eP	P	10 13 36.3	-1.5
YBH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YBH	Yreka Blue Hor	59.30	322	eP	P	10 13 36.3	-1.4
	comp=Z,4.4nm,0.8s,mb4.3						
FFC	Flin Flon	59.70	344	eP	P	10 13 38.7	-1.6
FFC				e*PP	pP	10 14 16.0	-2.9
FFC				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
FFC	Flin Flon	59.70	344	eP	P	10 13 38.7	-1.6
	comp=Z,4.4nm,0.6s,mb4.5						
FFC				epP	pP	10 14 15.9	-2.9
NEW	Newport	60.35	331	eP	P	10 13 44.4	-0.4
NEW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NEW	Newport	60.35	331	eP	P	10 13 44.4	-0.3
	comp=Z,3.5nm,0.7s,mb4.3						
CHIE	El Hierro	64.55	58	P	P	10 14 10.2	-2.8
	comp=Z,14nm,0.7s,mb4.9						
YKA	Yellowknife Ar	69.82	343	P	P	10 14 43.5	-1.7
	comp=Z,1.9nm,0.5s,mb4.1,baz=137,slow=5.6,SNR=12						
SFJD	Kangerlussuaq	71.27	11	⇑iP	P	10 14 52.5	-1.4
SFJD				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.3						
SFJD	Kangerlussuaq	71.27	11	⇑iP	P	10 14 52.5	-1.4
	comp=Z,46nm,0.8s,mb5.3						
DBIC	Dimbokro	73.38	83	P	P	10 15 06.3	-1.1
	comp=Z,39nm,0.7s,mb5.2,baz=248,slow=4.9,SNR=50						
DBIC				pP	pP	10 15 44.5	-2.8
	comp=Z,18nm,0.9s,baz=251,slow=5.4,SNR=3.7						
PTEO	Sao Teotonio	74.70	50	eP	P	10 15 14.3	-0.2
EVO	Evora	75.48	50	eP	P	10 15 16.9	-2.0
	comp=Z,21nm,0.6s,mb4.7						
PVIS	Viseu	76.12	47	eP	P	10 15 21.5	-0.9
	comp=Z,20nm,0.8s,mb4.8						
PCBR	Castelo Branco	76.21	48	eP	P	10 15 22.1	-0.8
	comp=Z,16nm,0.9s,mb4.6						
MTE	Manteigas	76.30	48	eP	P	10 15 22.7	-0.7
	comp=Z,21nm,1.1s,mb4.7						
EBAD	Badajoz	76.30	50	P	P	10 15 22.8	-0.6
	comp=Z,7.5nm,0.8s,mb4.4						
PVRL	Vila Real	76.39	47	eP	P	10 15 23.1	-0.8
ECAL	Calabor	77.26	46	P	P	10 15 28.5	-0.3
	comp=Z,7.4nm,0.7s,mb4.4						
EPON	Pontenova	77.31	45	P	P	10 15 28.7	-0.3
	comp=Z,18nm,0.7s,mb4.8						
EMIJ	Mijas	77.56	52	P	P	10 15 30.7	+0.2
	comp=Z,9.4nm,0.5s,mb4.7						
EADA	Adamuz	78.03	51	P	P	10 15 32.6	-0.4
	comp=Z,5.6nm,1.0s,mb4.2						
ELOJ	Sierra Loja	78.16	52	P	P	10 15 34.7	+0.9
ELOJ				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.5						
ELOJ	Sierra Loja	78.16	52	P	P	10 15 34.7	+0.9
	comp=Z,6.9nm,0.5s,mb4.5						
SUMG	Summit	78.26	11	eP	P	10 15 33.8	+0.2
	comp=Z,65nm,0.7s,mb5.4						
SUMG				epP	pP	10 16 12.8	-1.4
ERON	Agron	78.41	52	P	P	10 15 35.8	+0.7
	comp=Z,14nm,0.6s,mb4.8						
EARI	Arriondas	78.68	45	P	P	10 15 36.6	+0.2
	comp=Z,14nm,0.7s,mb4.7						
ESDC	Sonseca Array	78.81	49	P	P	10 15 36.8	-0.4
	comp=Z,7.9nm,0.7s,mb4.5,baz=273,slow=4.7,SNR=17						
ESLA	Sonseca Array	78.81	49	eP	P	10 15 36.9	-0.4
	comp=Z,9.4nm,1.5s,mb4.2						
ESLA				epP	pP	10 16 17.8	0.0
EBER	Berja	79.11	52	P	P	10 15 39.3	+0.5
	comp=Z,21nm,0.7s,mb4.9						
EQES	Quesada	79.13	51	P	P	10 15 39.3	+0.3
	comp=Z,17nm,0.8s,mb4.7						
EVIA	Vianos	79.72	50	P	P	10 15 42.5	+0.3
EVIA				pmax	pmax		
	comp=Z,35nm,0.7s,mb5.1						
EVIA	Vianos	79.72	50	P	P	10 15 42.5	+0.4
	comp=Z,35nm,0.7s,mb5.1						
ELAN	Lanestosa	79.93	46	P	P	10 15 43.0	-0.1
	comp=Z,4.8nm,0.6s,mb4.3						
DCN	Croghan	79.96	35	eP	P	10 15 41.8	-1.3
DCN	Croghan	79.96	35	eP	P	10 15 41.8	-1.3
DCN	Croghan	79.96	35	eP	P	10 15 38.0	-5.1
DCN				eP		10 15 41.8	
DLF	Lyons Farm	80.37	35	eP	P	10 15 43.8	-1.5
DLF	Lyons Farm	80.37	35	eP	P	10 15 43.8	-1.5
ETOB	Tobarra	80.46	51	P	P	10 15 46.2	+0.1
	comp=Z,24nm,0.7s,mb4.9						
ECHE	Chera	81.07	50	P	P	10 15 51.1	+1.8
ECHE				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.7						
ECHE	Chera	81.07	50	P	P	10 15 51.1	+1.9
	comp=Z,13nm,0.6s,mb4.7						
QUIF	Quistinic	81.11	41	⇑iP	P	10 15 49.0	-0.3
	comp=Z,49nm,1.0s,mb4.8						
QUIF	Quistinic	81.11	41	⇑iP	P	10 15 49.0	-0.3
QUIF				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.8						
ROSF	Rostrenen	81.14	41	⇑iP	P	10 15 49.2	-0.2
	comp=Z,58nm,0.7s,mb5.0						
ROSF	Rostrenen	81.14	41	⇑iP	P	10 15 49.2	-0.2
ROSF				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.0						
EALK	Alkurruntz	81.31	46	P	P	10 15 51.0	+0.5
	comp=Z,5.8nm,0.5s,mb4.5						
VNA3	Neumayer Olymp	81.44	162	e	P	10 15 57.9	+7.3
VNA3	Neumayer Olymp	81.44	162	⇓iP	P	10 15 51.0	+0.4
VNA3				e		10 15 57.9	
VNA3				e	pP	10 16 29.4	-2.0
VNA3				e		10 16 44.9	
VNA3				e		10 18 58.9	
EBEN	Beniarda	81.49	51	P	P	10 15 51.6	+0.1
	comp=Z,41nm,0.9s,mb5.1						
OSSF	Osses	81.49	46	eP	P	10 15 50.9	-0.5
SJPF	Ste Jean	81.49	46	⇑iP	P	10 15 51.6	+0.2
	comp=Z,33nm,0.6s,mb4.8						
SJPF	Ste Jean	81.49	46	⇑iP	P	10 15 51.6	+0.2
SJPF				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.8						
EMOS	Mosqueruela	81.57	49	P	P	10 15 52.4	+0.5
	comp=Z,31nm,0.7s,mb5.0						
SGMF	Saint Gilles	81.59	41	⇑iP	P	10 15 51.5	-0.3
	comp=Z,83nm,0.8s,mb5.1						
SGMF	Saint Gilles	81.59	41	⇑iP	P	10 15 51.5	-0.3
SGMF				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.1						
LARF	Larrau	81.65	46	⇑eP	P	10 15 52.6	+0.4
VNA1	Neumayer--Stat	81.68	162	e	P	10 15 59.3	+7.5
VNA1	Neumayer--Stat	81.68	162	⇓iP	P	10 15 52.6	+0.8
VNA1				e		10 15 59.3	
VNA1				e	pP	10 16 29.2	-3.5
VNA1				e		10 16 45.3	
ETSF	Etsaut	81.94	46	⇑iP	P	10 15 54.0	+0.3
	comp=Z,15nm,0.7s,mb4.5						
ETSF	Etsaut	81.94	46	⇑iP	P	10 15 54.0	+0.3
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.5						
VNA2	Neumayer--Watz	82.04	162	e	P	10 16 00.5	+6.8
VNA2	Neumayer--Watz	82.04	162	⇓iP	P	10 15 54.0	+0.3
VNA2				e		10 16 00.5	
VNA2				e	pP	10 16 31.0	-3.6
VNA2				e		10 16 46.7	
VNA2				e		10 19 03.8	
ERTA	Horta de San J	82.27	48	P	P	10 15 56.1	+0.6
	comp=Z,30nm,0.6s,mb5.1						
VIEF	Viey	82.36	46	⇑eP	P	10 15 56.3	+0.4
EBR	Ebro Roquetas	82.37	49	eP	P	10 15 56.3	+0.3
EBIE	Bielsa	82.41	47	P	P	10 15 56.9	+0.7
	comp=Z,22nm,0.6s,mb5.0						
LABF	Labassere	82.42	46	⇑eP	P	10 15 56.6	+0.4
LCHF	La Chataignera	82.48	43	⇑eP	P	10 15 56.5	+0.1
EPF	Esparros	82.61	46	⇑iP	P	10 15 57.5	+0.3
	comp=Z,55nm,0.8s,mb5.0						
EPF	Esparros	82.61	46	⇑iP	P	10 15 57.5	+0.3
EPF				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.0						
MDO	Dochfour	82.67	32	eP	P	10 15 56.8	-0.4
MDO				AMb	AMB	10 15 57.9	
	comp=Z,73nm,0.9s,mb5.4						
GRR	Gorron	82.72	41	⇑iP	P	10 15 57.4	-0.2
	comp=Z,75nm,0.8s,mb5.2						
GRR	Gorron	82.72	41	⇑iP	P	10 15 57.4	-0.2
GRR				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.2						
EIBI	Ibiza	82.75	50	P	P	10 15 58.2	+0.2
	comp=Z,17nm,0.7s,mb4.9						
ILAR	Eielson Array	82.76	336	P	P	10 15 57.4	-0.1
	comp=Z,2.8nm,0.9s,mb4.0,baz=120,slow=3.2,SNR=24						
ILAR				pP	pP	10 16 36.8	-1.7
	comp=Z,1.7nm,0.8s,baz=116,slow=2.7,SNR=4.0						
ILAR				PP	PP	10 19 09.6	-1.8
	comp=Z,0.7nm,0.8s,baz=107,slow=5.3,SNR=5.0						
MFF	Saint Martin d	82.87	43	⇑iP	P	10 15 58.3	-0.1
	comp=Z,43nm,0.5s,mb5.1						
MFF	Saint Martin d	82.87	43	⇑iP	P	10 15 58.3	-0.1
MFF				pmax	pmax		
	comp=Z,22nm,0.5s,mb5.1						
MELF	Melles	82.89	47	⇑eP	P	10 15 59.3	+0.7
EPOB	Poblet	82.89	48	P	P	10 15 58.4	-0.2
	comp=Z,9.4nm,0.5s,mb4.8						
MVH1	Achvaich	82.89	31	eP	P	10 15 57.9	-0.3
MVH1				AMb	AMB	10 15 58.6	
	comp=Z,96nm,0.6s,mb5.7						
FLN	La Foliniere	83.04	41	⇑iP	P	10 15 59.2	0.0
	comp=Z,79nm,0.6s,mb5.3						
FLN	La Foliniere	83.04	41	⇑iP	P	10 15 59.2	0.0
FLN				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.3						
MLS	Moulis	83.14	47	⇑eP	P	10 15 59.9	0.0
SALF	Salau	83.18	47	⇑eP	P	10 16 00.9	+0.8
LFF	La Frestale	83.20	45	⇑iP	P	10 16 00.1	0.0
	comp=Z,128nm,0.8s,mb5.4						
LFF	La Frestale	83.20	45	⇑iP	P	10 16 00.1	0.0
LFF				pmax	pmax		
	comp=Z,64nm,0.8s,mb5.4						
LDF	La Druitiere	83.24	41	⇑iP	P	10 16 00.1	-0.1
	comp=Z,78nm,0.8s,mb5.2						
LDF	La Druitiere	83.24	41	⇑iP	P	10 16 00.1	-0.1
LDF				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.2						
MCD	Coleburn Disti	83.29	32	eP	P	10 16 00.1	-0.2
MCD				AMb	AMB	10 16 01.1	
	comp=Z,78nm,0.7s,mb5.6						
EMIR	Miracle	83.31	48	P	P	10 16 01.1	+0.3
	comp=Z,31nm,0.8s,mb5.1						
MLA1	Latheron	83.41	31	eP	P	10 16 00.7	-0.2
MLA1				AMb	AMB	10 16 01.4	
	comp=Z,47nm,0.7s,mb5.3						
SNAA	Sanae	83.66	162	eP	P	10 16 02.1	+0.3
SNAA				pmax	pmax		
	comp=Z,12nm,0.7s						
SNAA	Sanae	83.66	162	eP	P	10 16 02.0	+0.2
	comp=Z,12nm,0.7s,mb4.7						
VALF	Valcebollere	83.74	47	eP	P	10 16 04.5	+1.6
RJF	Les Rejaudoux	83.80	44	⇑iP	P	10 16 03.0	-0.2
	comp=Z,109nm,0.8s,mb5.3						
RJF	Les Rejaudoux	83.80	44	⇑iP	P	10 16 03.0	-0.2
RJF				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.3						
ETOS	Mallorca	83.98	50	P	P	10 16 04.5	+0.3
	comp=Z,38nm,0.9s,mb5.1						
MTLF	Montolieu	84.01	46	⇑iP	P	10 16 04.1	-0.1
	comp=Z,113nm,0.9s,mb5.3						
MTLF	Montolieu	84.01	46	⇑iP	P	10 16 04.1	-0.1
MTLF				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.3						
ADJB	Djebel Djouab	84.04	54	P	P	10 16 05.0	+0.5
CAF	Calviac	84.13	45	⇑iP	P	10 16 04.7	-0.1
	comp=Z,90nm,0.9s,mb5.2						
CAF	Calviac	84.13	45	⇑iP	P	10 16 04.7	-0.1
CAF				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.2						
FILF	Fillols	84.16	47	⇑eP	P	10 16 04.9	-0.1
AKET	Djebel Ketaf	84.38	54	P	P	10 16 07.7	+1.4
EJON	La Jonquera	84.38	47	P	P	10 16 06.7	+0.6
	comp=Z,25nm,1.0s,mb4.9						
SJAF	Saint Jean de	84.38	47	⇑eP	P	10 16 06.1	0.0
TCF	Toulx Ste Croi	84.43	43	⇑iP	P	10 16 05.9	-0.4
	comp=Z,84nm,0.7s,mb5.3						
TCF	Toulx Ste Croi	84.43	43	⇑iP	P	10 16 05.9	-0.4
TCF				pmax	pmax		
	comp=Z,42nm,0.7s,mb5.3						
ATAF	Djebel Tarf	84.68	54	P	P	10 16 08.7	+0.9
HYF	Humbligny	84.86	42	⇑iP	P	10 16 08.6	+0.2
BGF	Bois d'Agland	84.90	43	⇑iP	P	10 16 08.5	-0.1
	comp=Z,167nm,1.0s,mb5.4						
BGF	Bois d'Agland	84.90	43	⇑iP	P	10 16 08.5	-0.1
BGF				pmax	pmax		
	comp=Z,83nm,1.0s,mb5.4						
PYM	Petit Puy Mans	84.91	44	eP	P	10 16 09.4	+0.8
LBL	Lubilhac	85.00	44	eP	P	10 16 10.1	+1.0
AGO	Saint Agoulin	85.03	44	eP	P	10 16 09.9	+0.6
AVF	Avril sur Loir	85.28	43	⇑iP	P	10 16 09.9	-0.6
	comp=Z,63nm,0.8s,mb5.1						
AVF	Avril sur Loir	85.28	43	⇑iP	P	10 16 09.9	-0.6
AVF				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.1						
LASF	Ste Croix	85.29	46	eP	P	10 16 11.1	+0.5
	comp=Z,53nm,0.8s,mb5.0						
COLF	Collangettes	85.35	44	⇑eP	P	10 16 10.8	-0.1
PLDF	La Plantade	85.36	44	eP	P	10 16 11.3	+0.4
SMF	Signal de Mont	85.59	43	⇑iP	P	10 16 11.6	-0.4
	comp=Z,103nm,1.1s,mb5.2						
SMF	Signal de Mont	85.59	43	⇑iP	P	10 16 11.6	-0.4
SMF				pmax	pmax		
	comp=Z,52nm,1.1s,mb5.2						
LOR	Lormes	85.69	43	⇑iP	P	10 16 11.9	-0.5
	comp=Z,57nm,0.8s,mb5.1						
LOR	Lormes	85.69	43	⇑iP	P	10 16 11.9	-0.5
LOR				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.1						
IMA	Indian Mountai	85.86	337	eP	P	10 16 13.4	+0.6
IMA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
IMA	Indian Mountai	85.86	337	eP	P	10 16 13.4	+0.6
	comp=Z,11nm,0.9s,mb4.6						
VIVF	Saint-Julien-l	85.96	45	⇑iP	P	10 16 14.0	+0.2
	comp=Z,32nm,0.9s,mb4.8						
VIVF	Saint-Julien-l	85.96	45	⇑iP	P	10 16 14.0	+0.2
VIVF				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
DFRA	Djebel Bou Aff	86.03	53	P	P	10 16 15.5	+1.1
PRAF	Pradon	86.20	46	eP	P	10 16 15.6	+0.6
BAIF	Baives	86.27	40	⇑iP	P	10 16 15.1	-0.1
	comp=Z,31nm,0.7s,mb4.8						
BAIF	Baives	86.27	40	⇑iP	P	10 16 15.1	-0.1
BAIF				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.9						
TREF	Trevaresse	86.34	46	eP	P	10 16 16.1	+0.4
GELF	Grande-Etoile	86.34	47	eP	P	10 16 16.5	+0.8
CTEI	Djebel Teioual	86.42	54	P	P	10 16 14.0	-2.3
CASM	Ain Smara	86.50	54	P	P	10 16 17.0	+0.3
SMRF	Simiane la Rot	86.51	46	⇑iP	P	10 16 16.8	+0.3
	comp=Z,14nm,0.7s,mb4.6						
BERF	Bertagne	86.53	47	eP	P	10 16 16.8	+0.2
PUYF	Puyloubier	86.56	46	eP	P	10 16 16.1	-0.7
VILF	Villemus	86.60	46	eP	P	10 16 17.0	+0.1
MEZF	Maizieres J'vi	86.63	41	⇑iP	P	10 16 16.9	-0.1
	comp=Z,68nm,0.6s,mb5.4						
GIVF	Givet	86.67	40	⇑iP	P	10 16 17.4	+0.3
	comp=Z,201nm,0.8s,mb5.7						
GIVF	Givet	86.67	40	⇑iP	P	10 16 17.4	+0.3
GIVF				pmax	pmax		
	comp=Z,100nm,0.8s,mb5.7						
CKFL	Kef-Lekhel	86.70	54	P	P	10 16 18.0	+0.4
STOF	St-Etienne Org	86.75	46	eP	P	10 16 17.7	0.0
ORIF	Oris-en-Rattie	86.82	45	⇑iP	P	10 16 18.5	+0.5
	comp=Z,36nm,0.7s,mb5.0						
ORIF	Oris-en-Rattie	86.82	45	⇑iP	P	10 16 18.5	+0.5
ORIF				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.0						
TAVF	Tavernes	86.82	46	eP	P	10 16 18.0	0.0
CAEH	'Ain El Ouahch	86.83	53	P	P	10 16 18.5	+0.2
LMR	La Mourre	87.12	47	⇑iP	P	10 16 19.1	-0.4
	comp=Z,20nm,0.7s,mb4.8						
LMR	La Mourre	87.12	47	⇑iP	P	10 16 19.1	-0.4
LMR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
CABF	La Chapelle	87.13	43	⇑iP	P	10 16 19.4	0.0
	comp=Z,36nm,0.7s,mb5.0						
CABF	La Chapelle	87.13	43	⇑iP	P	10 16 19.4	0.0
CABF				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.0						
THEF	They Montfort	87.22	42	⇑eP	P	10 16 19.6	-0.2
FRF	La Foret Royal	87.24	46	⇑iP	P	10 16 19.7	-0.3
	comp=Z,66nm,0.8s,mb5.2						
FRF	La Foret Royal	87.24	46	⇑iP	P	10 16 19.7	-0.3
FRF				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.2						
CMAH	Djebel Manchou	87.28	53	P	P	10 16 21.0	+0.6
ABSA	Djebel Ababsia	87.30	54	P	P	10 16 22.0	+1.5
BNI	Bardonecchia	87.40	45	eP	P	10 16 20.9	+0.2
BNI				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.1						
BNI	Bardonecchia	87.40	45	eP	P	10 16 20.9	+0.1
	comp=Z,25nm,0.8s,mb5.1						
MBDF	Montbardon	87.43	45	⇑iP	P	10 16 21.1	+0.2
	comp=Z,10nm,0.6s,mb4.5						
MBDF	Montbardon	87.43	45	⇑iP	P	10 16 21.1	+0.2
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
CALN	Calern	87.44	46	⇑eP	P	10 16 20.9	-0.1
HAU	Haudompre	87.44	42	⇑iP	P	10 16 20.5	-0.4
	comp=Z,25nm,0.6s,mb4.9						
HAU	Haudompre	87.44	42	⇑iP	P	10 16 20.5	-0.4
HAU				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.9						
RRL	Cesana Torines	87.46	45	P	P	10 16 21.1	+0.1
WLF	Walferdange	87.47	40	eP	P	10 16 21.2	+0.2
WLF				pmax	pmax		
	comp=Z,115nm,0.9s,mb5.7						
WLF	Walferdange	87.47	40	eP	P	10 16 21.2	+0.2
	comp=Z,115nm,0.9s,mb5.7						
LPL	La Plagne	87.48	44	⇑iP	P	10 16 21.7	+0.6
	comp=Z,23nm,0.6s,mb4.8						
LPL	La Plagne	87.48	44	⇑iP	P	10 16 21.7	+0.6
LPL				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
LPG	La Plagne	87.49	45	⇑iP	P	10 16 21.9	+0.7
	comp=Z,22nm,0.7s,mb4.8						
LPG	La Plagne	87.49	45	⇑iP	P	10 16 21.9	+0.7
LPG				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
MVIF	Mont Vial	87.64	46	⇑eP	P	10 16 21.9	0.0
FENE	Fenestrelle	87.67	45	P	P	10 16 22.3	+0.3
LOMF	Lomont	87.70	43	eP	P	10 16 21.7	-0.4
TOUF	Mont Tournerai	87.72	46	⇑eP	P	10 16 22.2	-0.1
HINF	Hinteralfeld	87.76	42	⇑iP	P	10 16 21.9	-0.5
	comp=Z,18nm,0.5s,mb4.8						
HINF	Hinteralfeld	87.76	42	⇑iP	P	10 16 21.9	-0.5
HINF				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.9						
LSD	Ceresole Reale	87.77	45	P	P	10 16 23.1	+0.6
REVF	Revere	87.78	46	⇑eP	P	10 16 22.3	-0.3
STV	Sta Anna Valdi	87.79	46	P	P	10 16 22.0	-0.6
STV2	Anna di Valdie	87.79	46	P	P	10 16 22.0	-0.6
BHB	Bricherasio	87.79	45	P	P	10 16 22.2	-0.4
RSP	Reno Superiore	87.81	45	P	P	10 16 23.0	+0.3
SBF	Sospel	87.84	46	⇑iP	P	10 16 22.6	-0.3
	comp=Z,81nm,0.7s,mb5.4						
SBF	Sospel	87.84	46	⇑iP	P	10 16 22.6	-0.3
SBF				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.4						
AUTN	L'Aution	87.84	46	eP	P	10 16 23.2	+0.3
ENR	Entracque	87.86	46	P	P	10 16 22.5	-0.5
SAOF	Saorge	87.93	46	⇑eP	P	10 16 23.1	-0.2
MOF	Molkenrain	87.95	42	⇑eP	P	10 16 22.9	-0.4
ECH	Echery	88.00	42	⇑eP	P	10 16 23.4	-0.1
NEGI	Negi	88.03	46	P	P	10 16 22.9	-0.9
RUP	Ruppelstein	88.06	40	⇑eP	P	10 16 24.2	+0.4
RUP	Ruppelstein	88.06	40	⇑eP	P	10 16 24.4	+0.6
MONE	Monesi	88.08	46	P	P	10 16 23.5	-0.6
CDF	Champ du Feu	88.09	42	⇑iP	P	10 16 23.9	-0.1
	comp=Z,77nm,0.8s,mb5.3						
CDF	Champ du Feu	88.09	42	⇑iP	P	10 16 23.9	-0.1
CDF				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.3						
WLS	Welschbruch	88.15	42	⇑eP	P	10 16 24.1	-0.1
IMI	Imperia	88.17	46	P	P	10 16 23.7	-0.8
BBS	Basel-Blauen	88.17	43	⇑eP	P	10 16 24.0	-0.4
BBS	Basel-Blauen	88.17	43	⇑eP	P	10 16 24.1	-0.3
ROB	Roburent	88.18	46	P	P	10 16 23.8	-0.7
TRAV		88.19	45	P	P	10 16 23.6	-0.9
LIBD	Limburg	88.29	42	eP	P	10 16 25.0	+0.1
LIBD	Limburg	88.29	42	⇑eP	P	10 16 25.2	+0.3
QSPA	South Pole Qui	88.30	180	⇓iP	P	10 16 26.0	+1.7
	comp=Z,48nm,0.9s,mb5.3						
ORX	Oropa	88.36	44	P	P	10 16 24.4	-0.9
ABH	Alteburg	88.39	40	⇑eP	P	10 16 25.8	+0.4
FIN	Finale Ligure	88.42	46	P	P	10 16 24.4	-1.2
KIZ	Kirchzarten	88.49	42	eP	P	10 16 25.7	-0.2
LANF	Langenberg	88.49	41	⇑eP	P	10 16 26.0	+0.2
FELD	Feldberg	88.54	42	⇑eP	P	10 16 26.0	-0.1
FELD	Feldberg	88.54	42	eP	P	10 16 25.9	-0.2
PCP	Pian Castagno	88.68	46	P	P	10 16 25.7	-1.2
KTD	Kalmit	88.70	41	eP	P	10 16 26.6	-0.2
KTD	Kalmit	88.70	41	eP	P	10 16 27.5	+0.7
BFO	Black Forest	88.79	42	eP	P	10 16 26.7	-0.6
BFO				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
BFO	Black Forest	88.79	42	eP	P	10 16 26.7	-0.6
	comp=Z,14nm,1.0s,mb4.8						
PGF	Pioggiola	88.89	48	⇑iP	P	10 16 27.5	-0.4
	comp=Z,24nm,0.7s,mb4.9						
PGF	Pioggiola	88.89	48	⇑iP	P	10 16 27.5	-0.4
PGF				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
TNS	Taunus Mts	89.00	40	eP	P	10 16 28.6	+0.4
TNS				pmax	pmax		
	comp=Z,43nm,1.2s,mb5.2						
TNS	Taunus Mts	89.00	40	eP	P	10 16 28.6	+0.4
	comp=Z,43nm,1.2s,mb5.2						
VSL	Villasalto	89.00	51	eP	P	10 16 28.1	-0.4
	comp=Z,78nm,0.6s,mb5.8						
LBG	Lerchenberg	89.12	41	eP	P	10 16 28.8	0.0
GUT	Gutenstein	89.30	42	eP	P	10 16 29.5	-0.1
STU	Stuttgart	89.39	41	eP	P	10 16 30.0	-0.1
STU				pmax	pmax		
	comp=Z,47nm,0.6s,mb5.6						
STU	Stuttgart	89.39	41	eP	P	10 16 30.0	-0.1
	comp=Z,47nm,0.6s,mb5.6						
BUCH	Bad Urach	89.48	42	eP	P	10 16 30.2	-0.3
CODM		89.61	46	P	P	10 16 29.3	-1.9
SIND	Sindeldorf	89.69	41	⇑eP	P	10 16 31.8	+0.3
DAVOX	Davos	89.75	43	P	P	10 16 32.5	+0.8
	comp=Z,39nm,0.7s,mb5.4,baz=252,slow=5.2,SNR=39						
GRAM		89.77	46	P	P	10 16 30.9	-1.0
DAVA	Damuels	89.77	43	⇑iP	P	10 16 32.4	+0.5
	comp=Z,47nm,1.1s,mb5.3						
MUD	Monsted U'grnd	89.83	34	eP	P	10 16 33.0	+1.1
MUD				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
MUD	Monsted U'grnd	89.83	34	eP	P	10 16 33.0	+1.1
	comp=Z,14nm,1.0s,mb4.8						
MUD	Monsted U'grnd	89.83	34	i P	P	10 16 33.0	+1.1
	comp=Z,14nm,1.0s,mb4.8						
VALM		89.89	46	P	P	10 16 31.4	-1.2
UBR	Uberruh	89.94	42	⇑eP	P	10 16 33.0	+0.3
SARO	Sassorosso	89.99	46	P	P	10 16 31.9	-1.1
BSEG	Bad Segeberg	90.36	36	eP	P	10 16 34.9	+0.4
SQTA	Sankt Quirin	90.67	43	⇑iP	P	10 16 36.5	+0.4
	comp=Z,18nm,0.8s,mb5.2						
SQTA	Sankt Quirin	90.67	43	⇑iP	P	10 16 36.5	+0.4
SQTA				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.2						

FUR	Furstenfeldbru	90.75	42	eP	P	10 16 36.8	+0.3
FUR				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
FUR	Furstenfeldbru	90.75	42	eP	P	10 16 36.8	+0.3
	comp=Z,21nm,0.8s,mb5.2						
GRA1	Grafenberg Arr	90.76	40	eP	P	10 16 36.9	+0.4
	comp=Z,24nm,1.1s,mb5.1						
GRF	Grafenberg Arr	90.76	40	eP	P	10 16 36.9	+0.4
GRF				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.1						
GRF	Grafenberg Arr	90.76	40	eP	P	10 16 36.9	+0.4
GRF				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.1						
GRF	Grafenberg Arr	90.76	40	eP	P	10 16 36.9	+0.4
	comp=Z,24nm,1.1s,mb5.1						
WATA	Walderalm	90.93	43	⇑iP	P	10 16 37.3	0.0
	comp=Z,24nm,1.3s,mb5.1						
WATA	Walderalm	90.93	43	⇑iP	P	10 16 37.3	0.0
WATA				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.1						
WTTA	Wattenberg	90.97	43	⇑iP	P	10 16 37.7	+0.2
	comp=Z,29nm,1.0s,mb5.3						
WTTA	Wattenberg	90.97	43	⇑iP	P	10 16 37.7	+0.2
WTTA				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.3						
MOX	Moxa	91.04	40	eP	P	10 16 38.4	+0.6
MOX				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.8						
MOX	Moxa	91.04	40	eP	P	10 16 38.4	+0.6
	comp=Z,15nm,1.4s,mb4.8						
MOX	Moxa	91.04	40	i P	P	10 16 38.4	+0.6
	comp=Z,logA/T=1.0,mb4.8						
NB2	NORSAR Subarra	91.10	29	P	P	10 16 38.0	+0.2
	comp=Z,6.8nm,0.8s,mb4.7,baz=269,slow=4.6						
NB2	NORSAR Subarra	91.10	29	P	P	10 16 38.0	+0.2
	baz=269,slow=4.6						
NOA	NORSAR Array B	91.10	29	P	P	10 16 38.0	+0.2
	comp=Z,7.1nm,0.9s,mb4.7,baz=269,slow=4.8,SNR=13						
NKC	Novy Kostel	91.56	40	eP	P	10 16 41.3	+1.1
WET	Wettzell	91.83	41	eP	P	10 16 42.1	+0.7
WET				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
WET	Wettzell	91.83	41	eP	P	10 16 42.1	+0.7
	comp=Z,15nm,0.9s,mb5.0						
CLL	Collm	91.93	39	⇑iP	P	10 16 42.3	+0.5
CLL				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
CLL	Collm	91.93	39	⇑iP	P	10 16 42.3	+0.5
	comp=Z,15nm,0.9s,mb5.0						
CLL	Collm	91.93	39	⇑P	P	10 16 42.3	+0.5
	comp=Z,logA/T=1.2,mb5.0						
KBA	Koelnbreinsper	92.13	43	⇑iP	P	10 16 42.9	0.0
	comp=Z,11nm,1.2s,mb4.8						
KBA	Koelnbreinsper	92.13	43	⇑iP	P	10 16 42.9	0.0
KBA				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
KHC	Kasperske Hory	92.29	41	⇑iP	P	10 16 43.6	0.0
KHC	Kasperske Hory	92.29	41	eP	P	10 16 44.3	+0.7
KHC	Kasperske Hory	92.29	41	eP	P	10 16 44.3	+0.7
GEC2	GERESS Array S	92.37	41	eP	P	10 16 44.1	+0.2
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
GEC2	GERESS Array S	92.37	41	eP	P	10 16 44.1	+0.2
	comp=Z,6.0nm,0.7s,mb4.7						
GERES	GERESS Array B	92.37	41	P	P	10 16 44.1	+0.1
	comp=Z,4.9nm,0.6s,mb4.7,baz=252,slow=4.2,SNR=32						
CADS	Cadrg	92.39	44	eP	P	10 16 44.0	-0.1
VOY	Vojsko	92.50	44	eP	P	10 16 44.8	+0.2
BRG	Berggiesshubel	92.52	39	⇑iP	P	10 16 45.1	+0.5
BRG				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.3						
BRG	Berggiesshubel	92.52	39	⇑iP	P	10 16 45.1	+0.5
	comp=Z,24nm,1.0s,mb5.3						
BRG				i		10 16 54.6	
JAVS	Javornik	92.62	44	eP	P	10 16 45.3	+0.2
	comp=Z,44nm,1.3s,mb5.4						
MOA	Molln	92.75	42	⇓iP	P	10 16 45.7	0.0
	comp=Z,21nm,1.1s,mb5.2						
PRU	Pruhonice	92.91	40	eP	P	10 16 47.3	+0.9
PVCC	Panska Ves	92.92	40	eP	P	10 16 47.3	+0.9
LJU	Ljubljana	92.95	44	eP	P	10 16 47.0	+0.3
OBKA	Obir	92.96	44	⇑iP	P	10 16 46.8	+0.1
	comp=Z,8.4nm,0.9s,mb4.9						
BSD	Bornholm Skovb	93.05	35	eP	P	10 16 47.9	+1.0
BSD				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
BSD	Bornholm Skovb	93.05	35	eP	P	10 16 47.9	+1.0
	comp=Z,9.1nm,0.8s,mb5.0						
BSD	Bornholm Skovb	93.05	35	i P	P	10 16 47.9	+1.0
	comp=Z,9.1nm,0.8s,mb5.0						
ARSA	Arzberg	93.61	43	⇑iP	P	10 16 49.7	+0.1
	comp=Z,15nm,1.1s,mb5.0						
UPC	Upice	93.84	40	eP	P	10 16 52.0	+1.4
KSP	Ksiaz	94.01	39	eP	P	10 16 52.4	+1.1
DPC	Dobruska-Polom	94.05	40	eP	P	10 16 52.6	+1.1
VNDA	Vanda	94.57	191	P	P	10 16 54.2	+0.8
	comp=Z,3.3nm,0.7s,mb4.7,baz=130,slow=3.6,SNR=19						
VNDA	Vanda	94.57	191	P	P	10 16 54.2	+0.8
ZST	Bratislava	94.65	42	eP	P	10 16 54.1	-0.2
TIP	Timpagrande	94.72	51	eP	P	10 16 53.6	-1.2
TIP				epP	pP	10 17 35.7	-0.8
OJC	Ojcow	96.28	40	eP	P	10 17 02.7	+1.0
ARCES	ARCESS Array B	96.32	20	P	P	10 17 00.6	-0.8
	comp=Z,3.9nm,0.7s,mb4.8,baz=288,slow=3.8,SNR=13						
KAF	Kangasniemi	98.18	27	ep	P	10 17 08.8	-1.2
FINES	FINESS Array B	98.21	28	P	P	10 17 09.2	-0.9
	comp=Z,3.5nm,0.7s,mb4.9,baz=297,slow=4.3,SNR=18						
BRTR	Keskin Array B	107.60	49	PKKP	PKKP	10 33 30.1	+23
	comp=Z,1.1nm,0.8s,baz=90,slow=5.8,SNR=3.9						
ARU	Arti	115.34	25	ePKIKP	PKPdf	10 22 16.4	+3.6
ZAL	Zalesovo	126.08	13	PKP	PKPdf	10 22 34.5	+0.9
	comp=Z,2.0nm,0.3s,baz=97,slow=5.1,SNR=5.5						
ZAL				pPKP		10 23 16.0	
	comp=Z,1.5nm,0.4s,baz=5.9,slow=0.8,SNR=1.5						
ZAL	Zalesovo	126.08	13	PKP	PKPdf	10 22 34.5	+0.9
ZAL				pPKP		10 23 16.0	
STKA	Stephens Creek	129.81	225	PKP	PKPdf	10 22 42.2	+0.8
	comp=Z,4.7nm,0.7s,baz=195,slow=10,SNR=5.5						
MDJ	Mudanjiang	130.89	334	PKP	PKPdf	10 22 43.6	+0.5
CTA	Charters Tower	131.58	241	eP	PKPdf	10 22 46.3	+1.2
	comp=Z,3.1nm,0.6s						
MKAR	Makanchi Array	131.94	18	PKP	PKPdf	10 22 45.9	+0.9
	comp=Z,0.7nm,0.5s,baz=315,slow=1.7,SNR=6.8						
MKAR				pPKP		10 23 27.5	
	comp=Z,1.0nm,0.8s,baz=270,slow=1.2,SNR=2.6						
MKAR				PP	PP	10 25 06.3	-5.8
	comp=Z,1.9nm,0.9s,baz=346,slow=5.0,SNR=6.7						
MKAR				SKPbc		10 25 57.7	
	comp=Z,1.9nm,0.7s,baz=349,slow=3.8,SNR=9.8						
MKAR	Makanchi Array	131.94	18	PKP	PKPdf	10 22 45.9	+0.9
MKAR				pPKP		10 23 27.5	
MKAR				PP	PP	10 25 06.3	-5.8
MKAR				SKPbc		10 25 57.7	
MJAR	Matsushiro Arr	131.95	320	PKP	PKPdf	10 22 45.6	+0.2
	comp=Z,1.5nm,0.5s,baz=104,slow=1.3,SNR=5.3						
MJAR				SKPbc		10 25 58.1	
	comp=Z,2.1nm,0.7s,baz=24,slow=0.3,SNR=12						
MJAR	Matsushiro Arr	131.95	320	PKP	PKPdf	10 22 45.6	+0.2
MJAR				SKPbc		10 25 58.1	
ULN	Ulaanbaatar	133.88	355	i PKIKP	PKPdf	10 22 52.9	+4.3
WMQ	Urumqi	136.21	15	ePKP	PKPdf	10 22 54.4	+1.4
WMQ				LR	LR		
	comp=N,70nm,21.0s						
WMQ				LR	LR		
	comp=Z,90nm,20.0s						
KS15	Wonju Array Si	137.29	329	ePKPdf	PKPdf	10 22 56.9	+1.7
WB2	Warramunga Arr	141.71	234	eP		10 22 58.5	
WRAB	Tennant Creek	141.72	234	ePKHKP		10 22 58.0	
WRAB	Tennant Creek	141.72	234	ePKPpre		10 22 59.5	
WRA	Warramunga Arr	141.72	234	PKhKP		10 22 59.5	
	comp=Z,6.6nm,0.6s,baz=121,slow=2.8,SNR=81						
WRA				PKP	PKPdf	10 23 04.8	+1.1
	comp=Z,5.4nm,0.6s,baz=115,slow=2.2,SNR=21						
WRA				SKPbc		10 26 27.0	
	comp=Z,1.6nm,0.9s,baz=120,slow=2.3,SNR=5.8						
WRA	Warramunga Arr	141.72	234	PKP	PKPdf	10 23 04.8	+1.1
WRA				SKPbc		10 26 27.0	
KLBR	Kellerberrin	143.65	203	eP	PKPbc	10 23 05.3	-0.3
	comp=Z,10nm,0.5s						
MUN	Mundaring	143.88	201	⇓iP	PKPbc	10 23 06.3	+0.1
	comp=Z,34nm,0.7s						
NDI	New Delhi	144.22	39	ex	PKPbc	10 23 07.0	-0.3
SSE	Sheshan	145.69	330	PKP	PKPdf	10 23 10.8	+0.5
SSE				PP	PP	10 26 36.8	+0.5
SSE				SS	SS	10 45 12.4	-0.9
SSE				PP	PP		
	comp=Z,170nm,3.8s						
SSE				LR	LR		
	comp=N,50nm,26.5s						
SSE				LR	LR		
	comp=E,50nm,27.0s						
SSE				LR	LR		
	comp=Z,50nm,15.9s						
LZH	Lanzhou	145.81	357	⇑PKP	PKPdf	10 23 13.5	+3.2
LZH				APKP		10 23 54.0	
LZH				XPKP		10 24 12.5	
LZH				LR	LR		
	comp=N,370nm,16.0s						
LZH				LR	LR		
	comp=Z,370nm,20.0s						
NJ2	Nanjing	145.98	334	ePKP	PKPdf	10 23 11.9	+1.1
NJ2				APKP		10 23 53.3	
NJ2				PP	PP	10 26 39.0	+1.0
NJ2				PKS	PKS	10 26 45.0	+0.1
NJ2				PP	PP		
	comp=Z,160nm,6.6s						
NJ2				LR	LR		
	comp=N,1µm,23.4s						
NJ2				LR	LR		
	comp=E,2µm,23.5s						
NJ2				LR	LR		
	comp=Z,2µm,24.5s						
KAKA	Kakadu	146.63	244	⇓iP	PKPdf	10 23 13.1	+0.9
	comp=Z,27nm,0.5s						
XAN	Xi’an	147.26	349	PKP	PKPdf	10 23 17.9	+5.1
KOLN	Koldanda	148.66	33	eP	PKPdf	10 23 20.8	+5.5
	comp=Z,24nm,0.7s						
GKN	Gorkha	149.02	31	eP	PKPdf	10 23 21.9	+6.1
	comp=Z,72nm,0.9s						
KKN	Kakani	149.52	30	eP	PKPdf	10 23 23.2	+6.6
	comp=Z,67nm,0.6s						
FITZ	Fitzroy Crossi	149.56	229	eP	PKPdf	10 23 18.3	+1.4
	comp=Z,1µm,11.5s						
DMN	Daman	149.58	31	eP	PKPdf	10 23 23.5	+6.8
	comp=Z,46nm,0.6s						
GUN	Gumba	149.72	29	eP	PKPdf	10 23 24.0	+7.1
	comp=Z,40nm,0.6s						
PKI	Pulchoki	149.76	30	eP	PKPdf	10 23 23.7	+6.7
	comp=Z,30nm,0.6s						
HYB	Hyderabad	152.12	55	eP	PKPab	10 23 38.5	-1.7
SHL	Shillong	154.37	22	eP	PKPab	10 23 46.5	-2.9
KMI	Kunming	156.77	359	PKP	PKPdf	10 23 27.9	+1.1
KMI				APKP		10 24 08.9	
KMI				PP	PP	10 27 38.5	-0.7
KMI				SS	SS	10 47 12.3	-2.6
KMI				PP	PP		
	comp=Z,60nm,7.2s						
KMI				PP	PP		
	comp=Z,20nm,16.8s						
KMI				LR	LR		
	comp=E,600nm,43.6s						
KMI				LR	LR		
	comp=Z,680nm,50.3s						

NIED ***21*** *10:11:00,36.20N×140.90E,h44^{km},Mw3.6 Best double couple: $M_0$3.21×10^{14} NP1:ϕ_s343°,δ73°,λ82°. NP2:ϕ_s190°, δ19°,λ115°.*

IDC ***21*** *10:11:03.1±1.3,36.17N×140.78E,mb3.4/3,mb1 3.6/5, mb1mx3.5/23,mbtmp3.4/5,ML3.3/2,MS2.5/1,Ms1 2.5/1, ms1mx2.0/15,Error ellipse: s-maj=22.6km s-min=17.4km az=17.0*

JMA ***21*** *10:11:07.5±0.1,36.16N×140.87E,h44^{km}±1^{km},M3.6*

JMA Felt II J1.

ISC 21 10:11:06.9±0.7**,36.19N**±0.04×**140.91E**±0.08**,h43**^{km}±8^{km}**, n13,**σ**0**^{s}**63**/18**,mb3.4**/3**,4C-2D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.49	185	⇑P	P	10 11 17.8	+0.2
CHOJ				S	S	10 11 24.7	-0.5
JHO	Hitachi	0.51	327	⇑P	P	10 11 18.3	+0.5
JHO				S	S	10 11 25.7	+0.1
JYT	Yasato	0.58	274	⇓P	P	10 11 19.2	+0.3
JYT				S	S	10 11 26.7	-0.8
ONAJ	Iwakimizuishiy	0.92	354	⇑P	P	10 11 23.6	+0.1
ONAJ				S	S	10 11 35.2	-0.5
JFK	Kawauchi	1.18	358	⇑P	P	10 11 27.1	0.0
JAG	Ashikaga	1.20	282	⇓P	P	10 11 27.8	+0.3
MJAR	Matsushiro Arr	2.21	280	Pn	P	10 11 40.8	-1.1
	9.4nm,0.3s,baz=88,slow=9.3,SNR=63						
MJAR				Lg		10 12 08.0	
	7.2nm,0.3s,baz=149,slow=38,SNR=7.0						
MAT	Matsushiro	2.21	280	P	P	10 11 42.6	+0.7
MAT				S	S	10 12 08.5	+0.3
JHJ	Hachijo jima 2	3.20	197	Pn	P	10 11 56.1	+0.1
	12nm,0.3s,baz=31,slow=20,SNR=9.4						
JHJ				Sn	S	10 12 34.1	+0.8
	20nm,0.3s,baz=97,slow=24,SNR=7.6						
JNU	Nakatsue	8.81	253	LR	LR	10 16 22.0	
	comp=Z,28nm,18.6s,baz=197,slow=37						
MKAR	Makanchi Array	44.23	303	P	P	10 19 13.9	+0.4
	0.2nm,0.3s,mb3.3,baz=90,slow=8.6,SNR=2.8						
ILAR	Eielson Array	50.42	32	P	P	10 20 02.2	+0.5
	0.4nm,0.9s,mb3.5,baz=270,slow=5.4,SNR=3.3						
WRA	Warramunga Arr	56.17	187	P	P	10 20 43.1	-1.7
	0.3nm,0.5s,mb3.5,baz=0.9,slow=7.5,SNR=7.6						

IDC ***21*** *10:43:27.9±0.5,36.15S×101.09W,mb5.0/20,mb1 5.2/21, mb1mx5.1/26,mbtmp5.0/21,ML4.5/1,MS5.2/22,Ms1 5.2/22, ms1mx5.2/23,Error ellipse: s-maj=11.6km s-min=10.8km az=49.0*

MOS ***21*** *10:43:28.2±1.1,36.14S×101.08W,h10^{km},mb5.5/35, MS5.2/15,Error ellipse: s-maj=16.3km s-min=7.6km az=88.8*

BJI ***21*** *10:43:28.3,35.67S×101.75W,h10^{km},mB5.5,Ms5.6, Msz5.4*

HRVD ***21*** *10:43:29.3±0.1,36.17S×101.12W,h12^{km},MW5.8/75, Centroid moment Tensor Solution. LP body waves: s70,c163;Mantle waves: s75,c179; Half duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.44±.07; $M_{\theta\theta}$-0.96±.07; $M_{\phi\phi}$1.40±.07; $M_{r\theta}$0.35±.17; $M_{\theta\phi}$-6.06±.06; $M_{\phi r}$-0.88±.18; Best double couple: $M_0$6.241×10^{17} NP1: ϕ_s95°,δ83°,λ177°. NP2:ϕ_s186°,δ87°,λ7°. Principal axes: T 6.512, Plg7°, Azm51°; N -.542, Plg82°, Azm208°; P -5.969, Plg3°, Azm320°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***21*** *10:43:29.3±0.2,36.16S×100.96W,h10^{km},mb5.4/63, MS5.3/17,MW5.8 Error ellipse: s-maj=9.6km s-min=5.7km az=61.0,Moment Tensor Solution. s24 Moment tensor: Scale 10^{17}Nm; M_{rr}0.90; $M_{\theta\theta}$-0.33; $M_{\phi\phi}$-0.58; $M_{r\theta}$-0.06; $M_{\theta\phi}$-5.81; $M_{\phi r}$-0.91; Best double couple: $M_0$5.9×10^{17} NP1:ϕ_s89°,δ81°,λ179°. NP2:ϕ_s180°,δ89°,λ9°. Principal axes: T 5.44, Plg8°, Azm45°; N .89, Plg81°, Azm188°; P -6.33, Plg5°, Azm314°;*

ISC 21 10:43:28.1±0.3**,36.14S**±0.05×**101.09W**±0.06**,h10**^{km}**, (h11**^{km}±.4^{km}**:pP-P),n361,**σ**1**^{s}**18**/211**,mb5.2**/79**,MS5.3**/54**, 15C-13D,Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	11.40	320	Pn	P	10 46 12.2	-1.9
	3.6nm,0.3s,baz=138,slow=7.0,SNR=6.5						
RPN				LR	LR	10 49 20.1	
	comp=Z,25µm,21.2s,baz=80,slow=31						
RPN	Rapa Nui	11.40	320	Pn	P	10 46 12.2	-1.9
RPN				ePn	P	10 46 15.3	+1.2
RPN				LR	LR	10 49 20.1	
CCHI	Chillan	23.33	100	⇓iP	P	10 48 39.9	+2.7
PLCA	Paso Flores	24.29	110	⇓eP	P	10 48 48.7	+2.2
PLCA				pmax	pmax		
	comp=Z,172nm,1.0s						
PLCA	Paso Flores	24.29	110	P	P	10 48 48.6	+2.1
	comp=Z,82nm,0.9s,mb5.2,baz=269,slow=9.5,SNR=39						
PLCA				S	S	10 53 09.2	+6.9
	comp=Z,2.1nm,0.9s,baz=100,slow=19,SNR=1.9						
PLCA	Paso Flores	24.29	110	⇓eP	P	10 48 48.6	+2.1
	comp=Z,172nm,1.0s,mb5.4						
DSCH	Colegio Aleman	25.17	93	⇑iP	P	10 48 56.0	+1.0
CLCH	Cerro Calan	25.20	93	⇑iP	P	10 48 56.0	+0.8
SJCH	San Jose de Ma	25.28	93	i P	P	10 48 56.0	-0.1
TLL	Tololo Astrono	25.98	86	⇑iP	P	10 49 03.1	+0.4
ZON	Zonda	27.23	90	eP	P	10 49 10.0	-4.2
USHA	Ushuaia	29.16	140	P	P	10 49 31.6	+0.3
	comp=Z,29nm,1.0s,mb5.0,baz=265,slow=8.4,SNR=10						
USHA				LR	LR	10 58 26.5	
	comp=Z,17µm,19.5s,MS5.7,baz=252,slow=31						
TRQA	Tornquist	31.10	105	eP	P	10 49 48.9	+0.2
	comp=Z,88nm,0.9s,mb5.6						
TRQA				LR	LR		
	comp=Z,6µm,20.0s,MS5.3						
NNA	Nana	32.50	48	eP	P	10 49 58.8	-2.4
	comp=Z,130nm,1.4s,mb5.7						
NNA				ePP	PP	10 51 11.9	+2.3
ARE	Arequipa	32.78	61	⇑iP	P	10 50 03.6	0.0
LPAZ	La Paz	35.32	65	P	P	10 50 26.8	+1.2
LPAZ				S	S	10 56 03.6	+4.8
LPAZ	La Paz	35.32	65	⇑eP	P	10 50 26.7	+1.2
LPAZ				pmax	pmax		
	comp=Z,223nm,1.2s						
LPAZ	La Paz	35.32	65	P	P	10 50 26.9	+1.3
	comp=Z,91nm,1.1s,mb5.6,baz=227,slow=7.5,SNR=97						
LPAZ				S	S	10 56 01.8	+3.1
	comp=Z,0.7nm,0.8s,baz=284,slow=19,SNR=1.6						
LPAZ				LR	LR	11 01 48.7	
	comp=Z,2µm,21.9s,MS4.9,baz=246,slow=31						
LPAZ	La Paz	35.32	65	⇑eP	P	10 50 26.7	+1.1
	comp=Z,223nm,1.2s,mb6.0						
SIV	San Ignacio	40.80	71	P	P	10 51 10.9	-0.4
	comp=Z,15nm,0.6s,mb4.8,baz=241,slow=8.0,SNR=110						
OTAV	Otavalo	41.87	35	eP	P	10 51 19.9	-0.4
	comp=Z,58nm,1.0s,mb5.2						
OTAV				ePP	PP	10 52 59.5	-0.9
TBI	Tubuai	43.48	273	eP	P	10 51 21.9	-11
	comp=Z,144nm,24.5s						
TBI				ePP	PP	10 52 36.6	-40
	comp=Z,108nm,29.0s						
TBI				eS	S	10 57 47.4	-14
	comp=Z,2µm,27.8s						
TBI				eLQ		11 02 00.4	
	comp=Z,5µm,25.5s						
TBI				eLR	LR	11 03 00.8	
	comp=Z,5µm,27.8s,baz=118						
SAML	Samuel	43.80	61	⇑eP	P	10 51 35.4	-0.6
	comp=Z,282nm,1.4s,mb5.8						
TAOE	Nuku Hiva Isla	44.69	298	eS	S	10 58 12.6	-6.5
	comp=Z,6µm,26.1s						
TAOE				eLQ		11 02 19.3	
	comp=Z,14µm,26.8s						
TAOE				eLR	LR	11 04 14.3	
	comp=Z,9µm,27.3s						
PPT	Papeete	46.53	280	eP	P	10 51 33.6	-24
	comp=Z,178nm,23.0s						
PPT				ePP	PP	10 53 26.0	-21
	comp=Z,122nm,24.2s						
PPT				eS	S	10 58 31.2	-14
	comp=Z,4µm,26.5s						
PPT				eLQ		11 02 10.4	
	comp=Z,7µm,27.0s						
PPT				eLR	LR	11 04 25.8	
	comp=Z,2µm,23.8s,baz=109						
JATB	Jatai	47.24	81	c iP	P	10 52 03.1	-0.3
JATB				i	pP	10 52 05.9	-0.5
JATB				i		10 52 10.8	
JATB				e		10 52 23.2	
JATB				e		10 53 53.7	
ROSC	El Rosal	47.87	37	P	P	10 52 09.1	+0.7
	comp=Z,36nm,0.9s,mb5.4,baz=96,slow=14,SNR=21						
ROSC				S	S	10 59 08.9	+4.5
	comp=Z,3.3nm,0.3s,baz=83,slow=19,SNR=2.0						
ROSC				LR	LR	11 08 55.3	
	comp=Z,4µm,19.9s,MS5.4,baz=298,slow=32						
JTS	JuntasAbangare	48.62	21	eP	P	10 52 13.5	-0.7
JTS				e		10 53 38.2	
JTS				pmax	pmax		
	comp=Z,130nm,1.6s						
JTS	JuntasAbangare	48.62	21	P	P	10 52 14.0	-0.2
	comp=Z,22nm,1.0s,mb5.1,baz=227,slow=4.3,SNR=10						
JTS				S	S	10 59 17.3	+2.3
	comp=Z,1.0nm,0.4s,baz=245,slow=17,SNR=1.9						
JTS	JuntasAbangare	48.62	21	eP	P	10 52 13.5	-0.7
	comp=Z,130nm,1.6s,mb5.7						
JTS				ePcP	PcP	10 53 38.2	-1.9
BDFB	Brasilia	51.25	81	P	P	10 52 33.5	-0.8
	comp=Z,28nm,0.7s,mb5.3,baz=245,slow=7.2,SNR=39						
BDFB				S	S	10 59 52.2	+0.7
	comp=Z,2.0nm,0.6s,baz=191,slow=10,SNR=1.8						
BDFB				LR	LR	11 12 07.4	
	comp=Z,3µm,20.1s,MS5.4,baz=236,slow=34						
BAO	Brasilia Array	51.27	81	P	P	10 52 33.0	-1.4
CAM4	Nova Friburgo	52.17	92	i	P	10 52 40.0	-1.1
CAM4	Nova Friburgo	52.17	92	⇓iP	P	10 52 43.4	+2.3
CAM4				i		10 52 44.4	
CAM4				i		10 52 52.3	
SDV	Santo Domingo	53.17	39	P	P	10 52 45.5	-3.3
	comp=Z,18nm,0.8s,mb5.0,baz=257,slow=5.2,SNR=21						
SDV				S	S	11 00 19.6	+1.9
	comp=Z,0.8nm,0.3s,baz=113,slow=15,SNR=2.0						
SDV	Santo Domingo	53.17	39	eP	P	10 52 45.5	-3.2
	comp=Z,24nm,0.9s,mb5.1						
QSPA	South Pole Qui	54.08	180	⇓iP	P	10 52 54.8	+0.3
	comp=Z,57nm,1.3s,mb5.3						
SBA	Scott Base	55.43	195	eP	P	10 53 04.3	-0.2
SBA				pmax	pmax		
	comp=Z,98nm,1.8s,mb5.5						
SBA	Scott Base	55.43	195	eP	P	10 53 03.4	-1.1
	comp=Z,13nm,1.1s,mb4.9						
VNDA	Vanda	56.53	195	eP	P	10 53 11.2	-1.2
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
VNDA	Vanda	56.53	195	P	P	10 53 12.2	-0.2
	comp=Z,3.0nm,1.0s,mb4.3,baz=98,slow=6.3,SNR=6.4						
VNDA				LR	LR	11 12 55.6	
	comp=Z,2µm,18.2s,MS5.3,baz=98,slow=31						
VNDA	Vanda	56.53	195	eP	P	10 53 11.2	-1.3
	comp=Z,7.6nm,1.2s,mb4.6						
VNA3	Neumayer Olymp	56.70	157	e	P	10 53 16.5	+2.9
VNA3	Neumayer Olymp	56.70	157	e	P	10 53 20.2	+6.6
VNA3	Neumayer Olymp	56.70	157	⇓iP	P	10 53 12.7	-0.9
VNA3				e	pP	10 53 16.5	-0.2
VNA3				e		10 53 20.2	
VNA3				e		10 54 07.4	
VNA3				e		10 55 18.6	
VNA1	Neumayer--Stat	57.30	157	e	P	10 53 20.8	+2.9
VNA1	Neumayer--Stat	57.30	157	e	P	10 53 24.4	+6.5
VNA1	Neumayer--Stat	57.30	157	⇓iP	P	10 53 17.4	-0.5
VNA1				e	pP	10 53 20.8	-0.2
VNA1				e		10 53 24.4	
VNA1				e		10 54 10.6	
VNA1				e		10 55 23.4	
VNA2	Neumayer--Watz	57.50	157	e	P	10 53 21.9	+2.6
VNA2	Neumayer--Watz	57.50	157	e	P	10 53 25.5	+6.2
VNA2	Neumayer--Watz	57.50	157	⇓iP	P	10 53 18.5	-0.8
VNA2				e	pP	10 53 21.9	-0.5
VNA2				e		10 53 25.5	
VNA2				e		10 54 11.8	
VNA2				e		10 55 23.0	
SNAA	Sanae	58.65	158	eP	P	10 53 24.6	-2.8
SNAA				pmax	pmax		
	comp=Z,46nm,1.1s						
SNAA	Sanae	58.65	158	P	P	10 53 26.2	-1.2
	comp=Z,14nm,1.0s,mb4.9,baz=243,slow=6.8,SNR=20						
SNAA	Sanae	58.65	158	eP	P	10 53 24.6	-2.8
	comp=Z,46nm,1.1s,mb5.4						
URZ	Urewera	63.07	241	LR	LR	11 14 25.1	
	comp=Z,2µm,21.7s,MS5.3,baz=22,slow=30						
MAIT	Maitri	63.26	160	eP	P	10 53 58.5	-0.1
MAIT	Maitri	63.26	160	eP	P	10 53 57.9	-0.7
NVL	N’lazarevskaya	63.29	160	⇓iP	P	10 54 00.2	+1.4
NVL				i *PP	pP	10 54 03.5	+1.5
NVL				i *SP	sP	10 54 05.4	+2.3
NVL				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
RAO	Raoul Island	63.48	252	LR	LR	11 14 26.5	
	comp=Z,2µm,20.4s,MS5.2,baz=137,slow=29						
RPZ	Rata Peaks	64.77	233	LR	LR	11 15 32.5	
	comp=Z,3µm,19.6s,MS5.5,baz=38,slow=30						
LTX	Lajitas	65.17	358	eP	P	10 54 11.2	-0.5
LTX				pmax	pmax		
	comp=Z,73nm,1.6s,mb5.5						
LTX	Lajitas	65.17	358	eP	P	10 54 11.2	-0.5
	comp=Z,74nm,1.6s,mb5.5						
TXAR	Lajitas Array	65.17	358	P	P	10 54 10.9	-0.8
	comp=Z,7.6nm,1.1s,mb4.7,baz=180,slow=6.3,SNR=40						
TXAR				LR	LR	11 16 24.9	
	comp=Z,1µm,20.4s,MS5.0,baz=200,slow=30						
RCBR	Riachuelo	66.59	80	PFAKE		10 54 30.0	+9.0
RCBR				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						

DRV	**Dumont d'Urvil**	**67.50**	**202**	P	**P**	**10 54 26.0**	**+0.1**
DRV				S	S	11 03 21.0	+0.3
MNTX	**Cornudas Mount**	**67.60**	**356**	*e*P	**P**	**10 54 25.5**	**-1.7**
	comp=Z,14nm,1.2s,mb4.8						
NATX	**Nacogdoches**	**67.81**	**6**	*e*P	**P**	**10 54 27.2**	**-1.2**
	comp=Z,92nm,1.3s,mb5.7						
GDL2	**Guadalupe Moun**	**68.05**	**357**	*e*P	**P**	**10 54 28.1**	**-1.9**
CLNB	**Carlsbad**	**68.09**	**357**	*e*P	**P**	**10 54 29.8**	**-0.4**
TUC	**Tucson**	**68.69**	**351**	*e*P	**P**	**10 54 33.7**	**-0.2**
TUC				pmax	pmax		
	comp=Z,62nm,1.8s,mb5.2						
TUC	**Tucson**	**68.69**	**351**	*e*P	**P**	**10 54 33.7**	**-0.2**
	comp=Z,62nm,1.8s,mb5.2						
BAR	**Barrett**	**70.00**	**346**	*e*P	**P**	**10 54 41.7**	**-0.2**
LRAL	**Lakeview Retre**	**70.06**	**13**	*e*P	**P**	**10 54 40.5**	**-1.8**
BNM	**Barren Site**	**70.12**	**355**	*e*P	**P**	**10 54 43.8**	**+1.2**
WMOK	**Wichita Mounta**	**70.54**	**2**	P	**P**	**10 54 43.8**	**-1.4**
WMOK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
WMOK	**Wichita Mounta**	**70.54**	**2**	*e*P	**P**	**10 54 42.2**	**-3.0**
	comp=Z,11nm,1.2s,mb4.7						
AMTX	**Amarillo**	**70.66**	**359**	*e*P	**P**	**10 54 45.1**	**-0.8**
	comp=Z,68nm,1.3s,mb5.4						
PFO	**Pinyon Flat Ob**	**70.86**	**346**	P	**P**	**10 54 49.5**	**+2.4**
PFO				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
PFO	**Pinyon Flat Ob**	**70.86**	**346**	P	**P**	**10 54 49.3**	**+2.1**
	comp=Z,65nm,1.8s,mb5.3						
ANMO	**Albuquerque**	**70.90**	**355**	P	**P**	**10 54 47.4**	**0.0**
	comp=Z,4.9nm,1.0s,mb4.4,baz=172,slow=8.9,SNR=13						
ANMO				LR	LR	11 20 25.9	
	comp=Z,1µm,20.0s,MS5.2,slow=31						
ANMO	**Albuquerque**	**70.90**	**355**	*e*P	**P**	**10 54 46.5**	**-0.9**
	comp=Z,26nm,1.7s,mb4.9						
UALR	**University of**	**71.02**	**8**	*e*P	**P**	**10 54 46.1**	**-2.0**
	comp=Z,30nm,1.4s,mb5.0						
OXF	**Oxford**	**71.13**	**10**	*e*P	**P**	**10 54 48.0**	**-0.8**
OXF				pmax	pmax		
	comp=Z,106nm,1.4s,mb5.6						
OXF	**Oxford**	**71.13**	**10**	*e*P	**P**	**10 54 48.0**	**-0.8**
	comp=Z,106nm,1.4s,mb5.6						
SYO	**Syowa Base**	**71.21**	**166**	⇓P	**P**	**10 54 46.0**	**-2.7**
MWC	**Mount Wilson**	**71.77**	**345**	P	**P**	**10 54 55.2**	**+2.6**
MWC				*e*		10 55 06.1	
MWC	**Mount Wilson**	**71.77**	**345**	*e*P	**P**	**10 54 50.4**	**-2.3**
PLAL	**Pickwick Lake**	**71.79**	**11**	*e*P	**P**	**10 54 49.9**	**-2.8**
	comp=Z,32nm,1.2s,mb5.1						
WUAZ	**Wupatki**	**71.93**	**351**	*e*P	**P**	**10 54 53.6**	**+0.1**
	comp=Z,76nm,1.8s,mb5.3						
LDFC	**Landfair**	**72.05**	**348**	*e*P	**P**	**10 54 54.1**	**-0.1**
SWET	**Sewanee**	**72.38**	**13**	*e*P	**P**	**10 54 54.4**	**-1.8**
JSC	**Jenkinsville**	**72.46**	**17**	P	**P**	**10 54 55.8**	**-0.9**
JSC	**Jenkinsville**	**72.46**	**17**	*e*P	**P**	**10 54 55.2**	**-1.5**
NEN	**Nelson**	**72.56**	**348**	*e*P	**P**	**10 54 56.5**	**-0.8**
CPCT	**Cooper Cave**	**72.87**	**14**	*e*P	**P**	**10 54 56.5**	**-2.6**
WVT	**Waverly**	**72.95**	**11**	P	**P**	**10 54 57.6**	**-2.0**
WVT				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
WVT	**Waverly**	**72.95**	**11**	*e*P	**P**	**10 54 56.2**	**-3.4**
	comp=Z,10nm,0.8s,mb4.8						
DAC	**Darwin (Calif)**	**73.66**	**346**	*e*P	**P**	**10 55 03.5**	**-0.2**
DAC				pmax	pmax		
	comp=Z,57nm,1.8s,mb5.2						
DAC	**Darwin (Calif)**	**73.66**	**346**	*e*P	**P**	**10 55 03.5**	**-0.3**
	comp=Z,57nm,1.8s,mb5.2						
TZTN	**Tazewell**	**74.13**	**15**	*e*P	**P**	**10 55 07.4**	**+1.0**
TZTN				*e*PcP	PcP	10 55 21.5	-0.4
CCM	**Cathedral Cave**	**74.38**	**8**	P	**P**	**10 55 07.0**	**-0.8**
CCM				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
CCM	**Cathedral Cave**	**74.38**	**8**	*e*P	**P**	**10 55 06.9**	**-0.9**
	comp=Z,37nm,1.0s,mb5.3						
FVM	**French Village**	**74.41**	**9**	P	**P**	**10 55 05.9**	**-2.1**
FVM				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
FVM	**French Village**	**74.41**	**9**	*e*P	**P**	**10 55 05.0**	**-3.0**
	comp=Z,57nm,1.7s,mb5.2						
ARUT	**Antelope Range**	**74.44**	**350**	*e*P	**P**	**10 55 08.1**	**-0.1**
LRV	**Little Rabbit**	**74.53**	**343**	*e*P	**P**	**10 55 09.1**	**+0.3**
MTUM	**Tungsten Hills**	**74.90**	**346**	*e*P	**P**	**10 55 10.9**	**+0.1**
SAO	**San Andreas Ge**	**74.96**	**343**	*e*P	**P**	**10 55 12.4**	**+1.2**
SAO				pmax	pmax		
	comp=Z,67nm,1.4s,mb5.4						
SAO	**San Andreas Ge**	**74.96**	**343**	*e*P	**P**	**10 55 12.4**	**+1.2**
	comp=Z,67nm,1.4s,mb5.4						
MVU	**Marysvale**	**74.98**	**351**	*e*P	**P**	**10 55 10.9**	**-0.4**
	comp=Z,55nm,1.7s,mb5.2						
MSU	**Marysvale**	**74.98**	**351**	*e*P	**P**	**10 55 09.8**	**-1.5**
CASY	**Casey**	**75.04**	**193**	*e*P	**P**	**10 55 06.7**	**-4.4**
	comp=Z,34nm,1.5s,mb5.0						
CASY				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
OMM	**Old Mammoth Mi**	**75.24**	**345**	*e*P	**P**	**10 55 12.9**	**+0.1**
WCI	**Wyandotte Cave**	**75.25**	**12**	*e*P	**P**	**10 55 10.4**	**-2.4**
WCI				pmax	pmax		
	comp=Z,34nm,1.6s,mb5.0						
WCI	**Wyandotte Cave**	**75.25**	**12**	*e*P	**P**	**10 55 10.4**	**-2.4**
	comp=Z,34nm,1.6s,mb5.0						
TRCR	**Troy Canyon**	**75.32**	**348**	*e*P	**P**	**10 55 14.2**	**+0.9**
TPH	**Tonopah**	**75.34**	**347**	*e*P	**P**	**10 55 14.1**	**+0.8**
TPH				pmax	pmax		
	comp=Z,62nm,1.2s,mb5.4						
TPH	**Tonopah**	**75.34**	**347**	*e*P	**P**	**10 55 14.1**	**+0.7**
	comp=Z,62nm,1.2s,mb5.4						
SRU	**San Rafael**	**75.38**	**352**	*e*P	**P**	**10 55 13.4**	**-0.2**
BLA	**Blacksburg**	**75.45**	**17**	P	**P**	**10 55 15.9**	**+1.9**
TMUT	**Trail Mountain**	**75.64**	**352**	*e*P	**P**	**10 55 14.8**	**-0.2**
ISCO	**Idaho Springs**	**75.68**	**356**	*e*P	**P**	**10 55 15.7**	**+0.4**
ISCO				pmax	pmax		
	comp=Z,25nm,1.7s,mb4.9						
ISCO	**Idaho Springs**	**75.68**	**356**	*e*P	**P**	**10 55 15.7**	**+0.5**
	comp=Z,25nm,1.7s,mb4.9						
MNV	**Mina**	**75.86**	**346**	*e*P	**P**	**10 55 16.5**	**+0.2**
MNV				*e*		10 55 30.7	
MNV				pmax	pmax		
	comp=Z,82nm,1.2s,mb5.5						
MNV	**Mina**	**75.86**	**346**	*e*P	**P**	**10 55 16.5**	**+0.2**
	comp=Z,82nm,1.2s,mb5.5						
MNV				*e*PcP	PcP	10 55 30.7	+1.5
MAW	**Mawson**	**75.87**	**174**	*e*P	**P**	**10 55 15.0**	**-0.7**
MAW				pmax	pmax		
	comp=Z,30nm,1.4s						
MAW	**Mawson**	**75.87**	**174**	P	**P**	**10 55 15.4**	**-0.3**
	comp=Z,13nm,1.1s,mb4.8,baz=183,slow=8.3,SNR=13						
MAW				LR	LR	11 26 26.2	
	comp=Z,2µm,19.5s,MS5.5,baz=193,slow=34						
MAW	**Mawson**	**75.87**	**174**	*e*P	**P**	**10 55 15.0**	**-0.7**
	comp=Z,30nm,1.4s,mb5.0						
NVAR	**Mina Array Bea**	**75.89**	**346**	P	**P**	**10 55 16.6**	**+0.2**
	comp=Z,21nm,0.9s,mb5.1,baz=158,slow=6.1,SNR=68						
NVAR				LR	LR	11 21 37.4	
	comp=Z,413nm,20.3s,MS4.7,baz=170,slow=30						
CMB	**Columbia Colle**	**75.93**	**344**	*e*P	**P**	**10 55 17.0**	**+0.3**
CMB				pmax	pmax		
	comp=Z,54nm,1.4s,mb5.3						
CMB	**Columbia Colle**	**75.93**	**344**	*e*P	**P**	**10 55 17.0**	**+0.3**
	comp=Z,54nm,1.4s,mb5.3						
NLU	**North Lily Min**	**76.39**	**351**	*e*P	**P**	**10 55 19.9**	**+0.6**
NLU				*e*PcP	PcP	10 55 33.0	+1.6
MPU	**Maple Canyon**	**76.40**	**352**	*e*P	**P**	**10 55 20.3**	**+1.0**
DAU	**Daniels Canyon**	**76.75**	**352**	*e*P	**P**	**10 55 21.8**	**+0.5**
JLU	**Jordanelle**	**76.96**	**352**	*e*P	**P**	**10 55 21.0**	**-1.4**
WCN	**Washoe City**	**77.02**	**345**	*e*P	**P**	**10 55 23.3**	**+0.5**
WCN				pmax	pmax		
	comp=Z,54nm,1.9s,mb5.2						
WCN	**Washoe City**	**77.02**	**345**	*e*P	**P**	**10 55 23.3**	**+0.5**
	comp=Z,54nm,1.9s,mb5.2						
MIR	**Mirnyy**	**77.06**	**186**	*e*P	**P**	**10 55 22.0**	**-0.5**
MIR				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.2						
CTU	**Camp Tracy**	**77.08**	**352**	*e*P	**P**	**10 55 23.3**	**+0.2**
NOQ	**North Oquirrh**	**77.09**	**351**	*e*P	**P**	**10 55 24.5**	**+1.4**
TCUT	**Toone Canyon**	**77.46**	**352**	*e*P	**P**	**10 55 25.0**	**-0.2**
HOPS	**Hopland**	**77.47**	**343**	*e*P	**P**	**10 55 27.4**	**+2.1**
	comp=Z,105nm,1.3s,mb5.6						
ELK	**Elko**	**77.61**	**349**	*e*P	**P**	**10 55 26.3**	**+0.3**
ELK				pmax	pmax		
	comp=Z,36nm,1.3s						
ELK	**Elko**	**77.61**	**349**	P	**P**	**10 55 26.4**	**+0.4**
	comp=Z,11nm,1.1s,mb4.7,baz=180,slow=4.9,SNR=22						
ELK	**Elko**	**77.61**	**349**	*e*P	**P**	**10 55 26.3**	**+0.3**
	comp=Z,36nm,1.3s,mb5.1						
BMN	**Battle Mountai**	**77.63**	**347**	*e*P	**P**	**10 55 27.2**	**+1.1**
BMN				pmax	pmax		
	comp=Z,90nm,1.8s,mb5.4						
BMN	**Battle Mountai**	**77.63**	**347**	*e*P	**P**	**10 55 27.2**	**+1.1**
	comp=Z,90nm,1.8s,mb5.4						
RWWY	**Rawlins**	**77.65**	**355**	*e*P	**P**	**10 55 25.9**	**-0.3**
	comp=Z,42nm,1.2s,mb5.2						
BEKR	**Beckwourth**	**77.69**	**345**	*e*P	**P**	**10 55 27.0**	**+0.6**
	comp=Z,88nm,1.8s,mb5.4						
SPUT	**South Promonto**	**77.77**	**351**	*e*P	**P**	**10 55 27.9**	**+1.0**
HWUT	**Hardware Ranch**	**77.96**	**352**	*e*P	**P**	**10 55 28.4**	**+0.4**
	comp=Z,5.5nm,0.8s,mb4.5						
HVU	**Hansel Valley**	**78.28**	**351**	P	**P**	**10 55 31.7**	**+2.0**
HVU	**Hansel Valley**	**78.28**	**351**	*e*P	**P**	**10 55 30.0**	**+0.3**
SDMD	**Soldier's Deli**	**78.43**	**19**	*e*P	**P**	**10 55 28.2**	**-2.4**
WDC	**Whiskeytown Da**	**78.85**	**344**	*e*P	**P**	**10 55 32.7**	**-0.1**
WDC				pmax	pmax		
	comp=Z,81nm,1.4s,mb5.5						
WDC	**Whiskeytown Da**	**78.85**	**344**	*e*P	**P**	**10 55 32.7**	**-0.2**
	comp=Z,81nm,1.4s,mb5.5						
PDAR	**Pinedale Array**	**78.91**	**354**	P	**P**	**10 55 32.8**	**-0.3**
	comp=Z,23nm,1.0s,mb5.1,baz=160,slow=5.6,SNR=36						
PDAR				LR	LR	11 26 06.8	
	comp=Z,534nm,18.2s,MS4.9,baz=178,slow=32						
AHID	**Auburn Hatcher**	**79.06**	**353**	*e*P	**P**	**10 55 34.0**	**0.0**
DZM	**Mont Dzumac**	**79.22**	**251**	LR	LR	11 22 11.1	
	comp=Z,2µm,21.5s,MS5.5,baz=128,slow=29						
JFWS	**Jewell Farm**	**79.30**	**8**	P	**P**	**10 55 38.3**	**+3.1**
JFWS				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
JFWS	**Jewell Farm**	**79.30**	**8**	*e*P	**P**	**10 55 33.8**	**-1.4**
	comp=Z,32nm,1.2s,mb5.1						
REDW	**Red Top Meadow**	**79.62**	**353**	*e*P	**P**	**10 55 36.6**	**-0.3**
	comp=Z,52nm,1.3s,mb5.3						
MOD	**Modoc**	**79.63**	**346**	*e*P	**P**	**10 55 37.8**	**+0.7**
	comp=Z,61nm,1.3s,mb5.4						
RRI2	**Red Ridge**	**79.66**	**352**	*e*P	**P**	**10 55 37.2**	**+0.1**
	comp=Z,67nm,1.4s,mb5.4						
TAU	**Tasmania Unive**	**79.66**	**224**	PFAKE		10 55 50.0	+13
TAU				LR	LR		
	comp=Z,619nm,21.0s,MS4.9						
SNOW	**Snow King Moun**	**79.71**	**353**	*e*P	**P**	**10 55 37.3**	**-0.1**
	comp=Z,33nm,1.2s,mb5.1						
TPAW	**Teton Pass**	**79.76**	**353**	*e*P	**P**	**10 55 38.1**	**+0.4**
	comp=Z,50nm,1.1s,mb5.4						
WVOR	**Wild Horse Val**	**79.82**	**347**	P	**P**	**10 55 39.3**	**+1.2**
WVOR				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
WVOR	**Wild Horse Val**	**79.82**	**347**	*e*P	**P**	**10 55 38.9**	**+0.8**
	comp=Z,45nm,1.3s,mb5.2						
LOHW	**Long Hollow**	**79.84**	**353**	*e*P	**P**	**10 55 37.8**	**-0.4**
	comp=Z,32nm,1.2s,mb5.1						
RSSD	**Black Hills**	**79.93**	**358**	P	**P**	**10 55 38.3**	**-0.3**
RSSD				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
RSSD	**Black Hills**	**79.93**	**358**	*e*P	**P**	**10 55 38.1**	**-0.4**
	comp=Z,33nm,1.2s,mb5.1						
YBH	**Yreka Blue Hor**	**79.99**	**344**	P	**P**	**10 55 39.6**	**+0.6**
	comp=Z,5.1nm,0.4s,mb4.8,baz=352,slow=5.7,SNR=14						
MOOW	**Moose Ponds**	**79.99**	**353**	*e*P	**P**	**10 55 39.9**	**+0.9**
	comp=Z,15nm,1.0s,mb4.9						
IMW	**Indian Meadow**	**80.16**	**353**	*e*P	**P**	**10 55 39.9**	**+0.1**
	comp=Z,42nm,1.1s,mb5.3						
HLID	**Hailey**	**80.25**	**350**	*e*P	**P**	**10 55 40.8**	**+0.5**
	comp=Z,42nm,0.9s,mb5.4						
LKWY	**Lake**	**80.77**	**353**	*e*P	**P**	**10 55 44.1**	**+1.1**
LKWY				pmax	pmax		
	comp=Z,52nm,1.9s,mb5.1						
LKWY	**Lake**	**80.77**	**353**	*e*P	**P**	**10 55 44.1**	**+1.1**
	comp=Z,52nm,1.9s,mb5.1						
KBO	**Bosley Butte**	**80.80**	**343**	*e*P	**P**	**10 55 44.2**	**+1.0**
HUMO	**Hull Mountain**	**80.88**	**344**	PFAKE		10 55 50.0	+6.4
HUMO				LR	LR		
	comp=Z,2µm,21.0s,MS5.3						
YMR	**Madison River**	**80.93**	**353**	*e*P	**P**	**10 55 45.8**	**+2.0**
QLMT	**Earthquake Lak**	**81.14**	**353**	*e*P	**P**	**10 55 46.1**	**+1.2**
MCMT	**McKenzie Canyo**	**81.29**	**352**	*e*P	**P**	**10 55 46.4**	**+0.6**
KEBM	**Edson Butte**	**81.44**	**343**	*e*P	**P**	**10 55 46.4**	**-0.2**
GCMT	**Greycliff**	**81.92**	**354**	*e*P	**P**	**10 55 46.6**	**-2.4**
BMO	**Blue Mountains**	**81.94**	**348**	*e*P	**P**	**10 55 49.4**	**+0.2**
	comp=Z,24nm,1.8s,mb4.8						
BOZ	**Bozeman (W)**	**81.96**	**353**	P	**P**	**10 55 49.5**	**+0.3**
BOZ				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
BOZ	**Bozeman (W)**	**81.96**	**353**	*e*P	**P**	**10 55 49.3**	**+0.1**
	comp=Z,24nm,1.0s,mb5.1						
LAO	**LASA Array**	**82.58**	**356**	*e*P	**P**	**10 55 52.2**	**-0.2**
	comp=Z,46nm,1.0s,mb5.5						
COR	**Corvallis**	**82.83**	**344**	*e*P	**P**	**10 55 55.2**	**+1.4**
COR				pmax	pmax		
	comp=Z,117nm,1.3s,mb5.8						
COR	**Corvallis**	**82.83**	**344**	*e*P	**P**	**10 55 55.2**	**+1.4**
	comp=Z,117nm,1.3s,mb5.8						
SADO	**Sadowa**	**82.95**	**16**	P	**P**	**10 55 52.0**	**-2.4**
	comp=Z,13nm,0.9s,mb4.9,baz=211,slow=6.3,SNR=9.0						
HRY	**Holter Researc**	**83.04**	**353**	*e*P	**P**	**10 55 55.0**	**+0.2**
NCB	**Newcomb**	**83.39**	**19**	*e*P	**P**	**10 55 55.2**	**-1.5**
CHMT	**Chamberlain Mo**	**83.39**	**352**	*e*P	**P**	**10 55 57.2**	**+0.6**
MSO	**Missoula**	**83.39**	**351**	*e*P	**P**	**10 55 57.6**	**+0.9**
	comp=Z,17nm,1.2s,mb5.0						
DGMT	**Dagmar**	**84.28**	**358**	*e*P	**P**	**10 56 03.0**	**+1.9**
FRNY	**Flat Rock**	**84.36**	**19**	*e*P	**P**	**10 56 00.2**	**-1.3**
TBM	**Table Mountain**	**84.76**	**347**	P	**P**	**10 56 07.1**	**+3.6**
WTV	**Waterville**	**85.15**	**347**	P	**P**	**10 56 07.7**	**+2.3**
NEW	**Newport**	**85.24**	**349**	P	**P**	**10 56 07.2**	**+1.4**
NEW				pmax	pmax		
	comp=Z,34nm,1.0s						
NEW	**Newport**	**85.24**	**349**	P	**P**	**10 56 06.8**	**+0.9**
	comp=Z,14nm,0.9s,mb5.1,baz=164,slow=4.5,SNR=21						
NEW	**Newport**	**85.24**	**349**	*e*P	**P**	**10 56 06.6**	**+0.8**
	comp=Z,49nm,1.2s,mb5.5						
ULM	**Lac du Bonnet**	**86.14**	**3**	P	**P**	**10 56 08.8**	**-1.5**
	comp=Z,8.4nm,0.7s,mb5.1,baz=197,slow=3.9,SNR=7.9						
ULM				LR	LR	11 30 44.1	
	comp=Z,453nm,20.1s,MS4.9,baz=188,slow=33						
ULM	**Lac du Bonnet**	**86.14**	**3**	*e*P	**P**	**10 56 09.0**	**-1.2**
	comp=Z,17nm,0.9s,mb5.3						
STKA	**Stephens Creek**	**90.43**	**229**	LR	LR	11 29 27.2	
	comp=Z,2µm,19.5s,MS5.5,baz=84,slow=30						
FFC	**Flin Flon**	**90.50**	**359**	P	**P**	**10 56 33.7**	**+2.7**
FFC				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.0						
HNR	**Honiara**	**91.66**	**257**	LR	LR	11 29 17.8	
	comp=Z,841nm,21.6s,MS5.2,baz=133,slow=30						
HNR	**Honiara**	**91.66**	**257**	PFAKE		10 56 50.0	+13
HNR				LR	LR		
	comp=Z,882nm,22.0s,MS5.2						
SCHQ	**Schefferville**	**95.27**	**19**	LR	LR	11 35 44.8	
	comp=Z,2µm,20.3s,MS5.5,baz=207,slow=33						
DLBC	**Dease Lake**	**97.28**	**345**	P	**P**	**10 57 03.2**	**+1.3**
	comp=Z,3.7nm,0.9s,mb4.8,baz=171,slow=4.0,SNR=6.9						
DLBC	**Dease Lake**	**97.28**	**345**	P	**P**	**10 57 03.2**	**+1.3**
BOSA	**Boshof**	**98.17**	**134**	LR	LR	11 35 00.1	
	comp=Z,1µm,19.0s,MS5.4,baz=227,slow=32						
YKA	**Yellowknife Ar**	**98.89**	**354**	P	**P**	**10 57 09.6**	**+0.5**
	comp=Z,1.7nm,0.9s,mb4.6,baz=169,slow=4.3,SNR=6.7						
YKA				LR	LR	11 37 30.5	
	comp=Z,768nm,18.4s,MS5.2,baz=140,slow=33						
DBIC	**Dimbokro**	**98.92**	**88**	LR	LR	11 38 10.0	
	comp=Z,1µm,21.1s,MS5.4,baz=214,slow=33						
LBTB	**Lobatse**	**101.06**	**132**	PFAKE		10 57 30.0	+10
LBTB				LR	LR		
	comp=Z,919nm,19.0s,MS5.3						
PMG	**Port Moresby**	**101.58**	**249**	PFAKE		10 57 30.0	+7.6
PMG				LR	LR		
	comp=Z,871nm,20.0s,MS5.3						
WRA	**Warramunga Arr**	**103.48**	**233**	Pdiff	Pdif	10 57 28.3	-2.5
	comp=Z,2.0nm,0.9s,baz=140,slow=4.6,SNR=12						
ILAR	**Eielson Array**	**106.78**	**341**	PP	PP	11 02 09.2	-3.8
	comp=Z,0.6nm,0.8s,baz=149,slow=5.3,SNR=6.1						
ILAR				PKKPbc		11 13 14.9	
	comp=Z,0.3nm,0.6s,baz=307,slow=3.3,SNR=5.2						
SFJD	**Kangerlussuaq**	**109.72**	**19**	*i* P		11 02 33.9	
SFJD				*i* S	SKS	11 08 32.6	-7.8
SFJD				*e*		11 09 39.9	
SFJD				*i*		11 10 15.0	
SFJD				*i*		11 11 53.5	
	comp=Z,2µm,22.0s						
LSZ	**Lusaka**	**109.93**	**127**	PFAKE		11 02 10.0	
LSZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
EVO	**Evora**	**113.47**	**59**	*e*PKIKP	PKPdf	11 02 05.9	-3.5
	comp=Z,54nm,1.6s						
MTE	**Manteigas**	**114.66**	**57**	*e*PP	PP	11 03 14.6	+3.5
MTE				*e*-		11 12 49.6	
MTE				*e*-		11 14 01.6	
MTE				*e*SS	SS	11 19 05.0	+3.9
MTE	**Manteigas**	**114.66**	**57**	*e*LR	LR	11 38 00.0	
	comp=Z,2µm,20.7s						
ESLA	**Sonseca Array**	**116.80**	**59**	PFAKE		11 02 30.0	+14
ESLA				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
ESDC	**Sonseca Array**	**116.80**	**59**	PP	PP	11 03 24.4	-1.7
	comp=Z,0.3nm,0.3s,baz=248,slow=8.0,SNR=6.6						
SJPF	**Ste Jean**	**120.09**	**56**	*e*PKP1	PKPdf	11 02 19.0	-3.0
	comp=Z,10.0nm,0.9s						
ETSF	**Etsaut**	**120.46**	**57**	*e*PKP1	PKPdf	11 02 20.1	-2.7
	comp=Z,7.2nm,0.8s						
EPF	**Esparros**	**121.12**	**57**	*e*PKP1	PKPdf	11 02 21.2	-2.9
	comp=Z,18nm,1.1s						
MFF	**Saint Martin d**	**122.08**	**53**	*e*PKP1	PKPdf	11 02 22.3	-3.6
GRR	**Gorron**	**122.24**	**51**	*e*PKP1	PKPdf	11 02 22.5	-3.6
	comp=Z,55nm,1.3s						
MTLF	**Montolieu**	**122.51**	**57**	*e*PKP1	PKPdf	11 02 23.2	-3.5
FLN	**La Foliniere**	**122.60**	**51**	*e*PKP1	PKPdf	11 02 23.3	-3.4
	comp=Z,22nm,0.9s						
FLN				*e*R			
	comp=Z,670nm,20.5s						
LDF	**La Druitiere**	**122.77**	**51**	*e*PKP1	PKPdf	11 02 23.6	-3.4
CAF	**Calviac**	**122.96**	**56**	*e*PKP1	PKPdf	11 02 24.6	-2.9
TCF	**Toulx Ste Croi**	**123.51**	**54**	*e*PKP1	PKPdf	11 02 25.0	-3.6
LASF	**Ste Croix**	**123.88**	**57**	*e*PKP1	PKPdf	11 02 26.3	-3.1
BGF	**Bois d'Agland**	**124.02**	**54**	*e*PKP1	PKPdf	11 02 26.2	-3.5
AVF	**Avril sur Loir**	**124.42**	**54**	*e*PKP1	PKPdf	11 02 26.5	-3.9
	comp=Z,8.7nm,0.9s						
SMF	**Signal de Mont**	**124.69**	**54**	*e*PKP1	PKPdf	11 02 27.3	-3.6
LOR	**Lormes**	**124.90**	**53**	*e*PKP1	PKPdf	11 02 27.6	-3.7
LOR				*e*R			
	comp=Z,1µm,22.5s						
SMRF	**Simiane la Rot**	**125.02**	**58**	*e*PKP1	PKPdf	11 02 28.9	-2.7
LMR	**La Mourre**	**125.45**	**59**	*e*PKP1	PKPdf	11 02 29.1	-3.4
ORIF	**Oris-en-Rattie**	**125.52**	**57**	*e*PKP1	PKPdf	11 02 29.7	-2.8
	comp=Z,14nm,1.1s						
ORIF				*e*R			
	comp=Z,2µm,23.0s						
FRF	**La Foret Royal**	**125.62**	**58**	*e*PKP1	PKPdf	11 02 29.4	-3.4
BAIF	**Baives**	**125.91**	**50**	*e*PKP1	PKPdf	11 02 29.8	-3.3
MEZF	**Maizieres J'vi**	**126.02**	**52**	*e*PKP1	PKPdf	11 02 30.3	-3.1
MBDF	**Montbardon**	**126.07**	**57**	*e*PKP1	PKPdf	11 02 30.6	-2.9
CABF	**La Chapelle**	**126.16**	**55**	*e*PKP1	PKPdf	11 02 30.6	-3.1
LPL	**La Plagne**	**126.28**	**56**	*e*PKP1	PKPdf	11 02 31.6	-2.3
	comp=Z,14nm,1.0s						
LPG	**La Plagne**	**126.28**	**56**	*e*PKP1	PKPdf	11 02 31.8	-2.1
	comp=Z,15nm,1.0s						
GIVF	**Givet**	**126.31**	**50**	*e*PKP1	PKPdf	11 02 30.6	-3.2
PGF	**Pioggiola**	**126.94**	**60**	*e*PKP1	PKPdf	11 02 32.2	-3.0
	comp=Z,40nm,1.3s						
HINF	**Hinteralfeld**	**127.00**	**53**	*e*PKP1	PKPdf	11 02 31.9	-3.3
CDF	**Champ du Feu**	**127.43**	**53**	*e*PKP1	PKPdf	11 02 32.8	-3.3
DAVA	**Damuels**	**128.85**	**55**	⇑*i*P	PKPdf	11 02 34.0	-4.9
MA2	**Magadan**	**129.32**	**321**	PFAKE		11 02 50.0	+11
MA2				LR	LR		
	comp=Z,494nm,22.0s,MS5.2						
WTTA	**Wattenberg**	**130.00**	**55**	⇑*i*P	PKPdf	11 02 40.8	-0.3
GRA1	**Grafenberg Arr**	**130.24**	**52**	*e*PKPdf	PKPdf	11 02 43.5	+2.1
GRA1				*e*PP	PP	11 04 55.3	-0.6
GRA1				*e*SKP		11 06 06.8	
GRA1				*e*SP	SP	11 15 05.5	+4.4
GRA1				*e*SKKS		11 19 47.6	
GRA1				*e*SS	SS	11 22 43.3	+24
GRA1				LR	LR		
	comp=Z,700nm,21.9s,MS5.3						
GRF	**Grafenberg Arr**	**130.24**	**52**	*e*PKIKP	PKPdf	11 02 43.5	+2.1
GRF				*e*		11 04 55.3	
GRF				*e*SP	SP	11 15 05.5	+4.4
GRF				*e*SS	SS	11 22 43.3	+24
GRF				MLR	MLR		
	comp=Z,700nm,21.9s,MS5.3						
GRF	**Grafenberg Arr**	**130.24**	**52**	*e*PKIKP	PKPdf	11 02 43.5	+2.1
GRF				*e*		11 04 55.3	
GRF				*e*SP	SP	11 15 05.5	+4.4
GRF				*e*SS	SS	11 22 43.3	+24
GRF				MLR	MLR		
	comp=Z,700nm,21.9s,MS5.3						
GRF	**Grafenberg Arr**	**130.24**	**52**	*e*PKP	PKPdf	11 02 43.5	+2.1
GRF				*e*PP	PP	11 04 55.3	-0.6
GRF				*e*SKP		11 06 06.8	
GRF				*e*SP	SP	11 15 05.5	+4.4
GRF				*e*SKKS		11 19 47.6	
GRF				*e*SS	SS	11 22 43.3	+24
GRF				LR	LR		
	comp=Z,700nm,21.9s,MS5.3						
MOX	**Moxa**	**130.67**	**51**	*e*PKIKP	PKPdf	11 02 48.6	+6.4
MOX				pmax	pmax		
	comp=Z,18nm,0.9s						
MOX				MLR	MLR		
	comp=Z,500nm,20.0s,MS5.2						
MOX	**Moxa**	**130.67**	**51**	*i* P	PKPdf	11 02 48.6	+6.4
	comp=Z,logA/T=1.3						
MOX				PP	PP	11 04 58.0	-0.8
MOX				PKS	PKS	11 06 08.0	-6.4
MOX				SKS	tx	11 14 46.0	
MOX				SS	SS	11 22 37.0	+13
MOX				L		12 01 45.0	
NKC	**Novy Kostel**	**131.12**	**51**	*e*PKIKP	PKPdf	11 02 48.0	+4.9
NKC				*e*SS	SS	11 22 48.4	+19
NKC				*e*		11 27 27.7	
NKC				MLR	MLR		
	comp=Z,900nm,24.0s,MS5.4						
NKC	**Novy Kostel**	**131.12**	**51**	*e*PKPDF	PKPdf	11 02 48.0	+4.9
NKC				*e*PP	PP	11 05 12.1	+10
NKC				*e*PKS	PKS	11 06 13.3	-2.0
NKC				*e*x	x	11 22 48.4	
NKC				*e*x	x	11 27 27.7	
NKC				AMS	AMS	11 50 00.0	
	comp=Z,900nm,24.0s						
CADS	**Cadrg**	**131.19**	**57**	*e*PKPdf	PKPdf	11 02 43.5	+0.1
CADS				*e*PP	PP	11 04 56.6	-5.8
NOA	**NORSAR Array B**	**131.48**	**37**	PKP	PKPdf	11 02 40.1	-3.4
	comp=Z,0.3nm,0.4s,baz=148,slow=20,SNR=2.1						
CLL	**Collm**	**131.64**	**50**	*e*PKIKP	PKPdf	11 02 42.0	-2.1
CLL				*i* *PPKP		11 02 49.3	
CLL				*e*PP	PP	11 05 02.0	-2.9
CLL				*e*PKS	PKS	11 06 10.0	-6.2
CLL				*e*PPP	PPP	11 08 07.0	+12
CLL				*e*		11 11 59.0	
CLL				*e*PS	PS	11 15 24.0	+10
CLL				*e*PPS	PPS	11 16 58.0	+3.5
CLL				*e*SS	SS	11 22 44.0	+7.5
CLL				*e*SSS	tx	11 26 58.0	
KHC	**Kasperske Hory**	**131.65**	**53**	*e*PKIKP	PKPdf	11 02 47.5	+3.4
KHC				*e*		11 05 02.1	
KHC				*e*SS	SS	11 22 34.7	-2.0
KHC				MLR	MLR		
	comp=Z,700nm,20.9s,MS5.3						
KHC	**Kasperske Hory**	**131.65**	**53**	*e*PKP	PKPdf	11 02 42.3	-1.8
KHC	**Kasperske Hory**	**131.65**	**53**	*e*PKPDF	PKPdf	11 02 47.5	+3.4
KHC				*e*PP	PP	11 05 02.1	-3.0
KHC				*e*PKS	PKS	11 06 08.6	-7.6
KHC				*e*SS	SS	11 22 34.7	-2.0
KHC				AMS	AMS	11 55 40.0	
	comp=Z,700nm,20.9s						
GERES	**GERESS Array B**	**131.68**	**53**	PKP	PKPdf	11 02 41.0	-3.2
	comp=Z,1.1nm,0.7s,baz=180,slow=1.3,SNR=8.1						
BRG	**Berggiesshubel**	**132.16**	**51**	*e*PKIKP	PKPdf	11 02 45.7	+0.6
BRG				*i*		11 02 51.2	
BRG				*i*		11 05 07.0	
BRG				*i*		11 17 02.0	
BRG				*e*		11 23 08.0	
BRG				MLR	MLR		
	comp=Z,890nm,21.0s,MS5.5						
BRG	**Berggiesshubel**	**132.16**	**51**	*e*PKP	PKPdf	11 02 45.7	+0.7
BRG				*i*		11 02 51.2	
BRG				*i*		11 05 07.0	
BRG				*i*		11 06 15.0	
BRG				*i*		11 12 11.0	
BRG				*i*		11 17 02.0	
BRG				*e*		11 23 08.0	
BRG				*e*		11 27 46.0	
BRG				LR	LR		
	comp=Z,890nm,21.0s,MS5.5						
PRU	**Pruhonice**	**132.41**	**52**	*e*PP	PP	11 05 07.7	-1.9
PRU				*e*PKS	PKS	11 06 14.1	-3.5
PRU				*e*x	x	11 23 02.7	
PRU				*e*x	x	11 27 43.9	
PRU				AMS	AMS	11 51 20.0	
	comp=Z,800nm,23.8s						
PVCC	**Panska Ves**	**132.51**	**51**	*e*PKIKP	PKPdf	11 02 49.1	+3.3
PVCC				*e*		11 05 04.8	
PVCC				*e*		11 27 42.7	
PVCC				MLR	MLR		
	comp=Z,900nm,18.9s,MS5.5						

PVCC	**Panska Ves**	132.51	51	*e*PKPDF	PKPdf	11 02 49.1	+3.3
PVCC				*e*PP	PP	11 05 04.8	-5.4
PVCC				*e*PKS	PKS	11 06 13.6	-4.2
PVCC				*e*x	x	11 23 00.1	
PVCC				*e*x	x	11 27 42.7	
PVCC				AMS	AMS	11 57 50.0	
	comp=Z,900nm,18.9s						
DPC	**Dobruska-Polom**	133.59	52	*e*PKIKP	PKPdf	11 02 51.0	+3.3
DPC				*e*		11 05 14.6	
DPC				*e*		11 28 02.6	
DPC				MLR	MLR		
	comp=Z,700nm,21.6s,MS5.3						
DPC	**Dobruska-Polom**	133.59	52	*e*PKPDF	PKPdf	11 02 51.0	+3.3
DPC				*e*PP	PP	11 05 14.6	-2.7
DPC				*e*PKS	PKS	11 06 18.2	-1.6
DPC				*e*SS	SS	11 23 16.1	+16
DPC				*e*x	x	11 28 02.6	
DPC				AMS	AMS	11 57 00.0	
	comp=Z,700nm,21.6s						
OKC	**Ostrava-Krasne**	134.70	53	*e*PKIKP	PKPdf	11 02 57.1	+7.3
OKC				*e*		11 05 21.6	
OKC				*e*		11 28 15.9	
OKC				MLR	MLR		
	comp=Z,400nm,19.5s,MS5.2						
OKC	**Ostrava-Krasne**	134.70	53	*e*PKPDF	PKPdf	11 02 57.1	+7.3
OKC				*e*PP	PP	11 05 21.6	-2.8
OKC				*e*PKS	PKS	11 06 24.8	+2.9
OKC				*e*x	x	11 23 29.7	
OKC				*e*x	x	11 28 15.9	
OKC				AMS	AMS	11 58 50.0	
	comp=Z,400nm,19.5s						
OJC	**Ojcow**	135.80	52	*e*PKPdf	PKPdf	11 02 52.0	+0.2
OJC				*e*PP	PP	11 05 26.6	-4.3
OJC				*e*SS	SS	11 23 23.1	-3.5
OJC				MLR	MLR	11 56 08.0	
	comp=Z,500nm,22.8s,MS5.2						
ARCES	**ARCESS Array B**	136.00	24	PKP	PKPdf	11 02 48.0	-3.7
	comp=Z,2.5nm,0.8s,baz=35,slow=19,SNR=4.2						
TIXI	**Tiksi**	136.21	339	PFAKE		11 03 00.0	+8.0
TIXI				LR	LR		
	comp=Z,637nm,21.0s,MS5.3						
JOW	**Kunigami**	137.28	272	PKP	PKPdf	11 02 53.6	-1.5
	comp=Z,19nm,0.8s,baz=245,slow=19,SNR=3.4						
FINES	**FINESS Array B**	138.58	35	*i* PKIKP	PKPdf	11 02 55.0	-1.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	138.58	35	PKP	PKPdf	11 02 54.3	-2.3
	comp=Z,1.2nm,0.8s,baz=90,slow=5.7,SNR=5.2						
YAK	**Yakutsk**	139.39	326	*e*PKIKP	PKPdf	11 02 58.2	+0.1
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.3s						
YAK	**Yakutsk**	139.39	326	⇑*i*PKP	PKPdf	11 02 57.9	-0.2
APA	**Apatity**	139.45	25	⇓*i*PKIKP	PKPdf	11 02 53.3	-4.7
LVZ	**Lovozero**	139.72	24	⇑*i*PKIKP	PKPdf	11 03 05.0	+6.5
LVZ				*e*		11 06 01.3	
LVZ				*e*		11 18 16.6	
LVZ				*e*SSS	SSS	11 29 25.8	0.0
KLR	**Kul’dur**	139.81	306	*e*PKIKP	PKPdf	11 02 54.8	-4.4
MDJ	**Mudanjiang**	141.02	299	PKP	PKPdf	11 02 59.5	-1.9
MDJ				XPKP		11 03 04.0	
MDJ				PP	PP		
	comp=Z,190nm,8.2s						
MDJ				LR	LR		
	comp=N,320nm,32.6s,MS5.0						
MDJ				LR	LR		
	comp=E,360nm,36.4s,MS5.0						
MDJ				LR	LR		
	comp=Z,190nm,37.3s,MS4.6						
KIS	**Kishinev**	141.58	58	*e*PKIKP	PKPdf	11 03 04.0	+1.7
KIS				MLR	MLR		
	comp=Z,600nm,20.0s,MS5.3						
AKASG	**Malin Array Be**	141.83	52	*i* PKIKP	PKPdf	11 03 03.4	+0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TAYS	**Tayyib Ism**	142.28	89	P	PKPdf	11 03 07.0	+2.9
BDAS	**Al Bad‘**	142.42	89	P	PKPdf	11 03 07.5	+3.2
DBAS	**Duba**	142.64	91	P	PKPdf	11 03 03.2	-1.6
JMOS	**Jabal al Moall**	142.71	88	P	PKPdf	11 03 01.1	-3.8
ALWS	**Ilw as Safayha**	142.73	88	P	PKPdf	11 03 00.4	-4.4
EIL	**Elat**	142.77	87	*e*PKPdf	PKPdf	11 03 02.2	-2.7
CLNS	**Chul’man**	143.10	319	*e*PKHKP		11 02 51.9	
CLNS				pmax	pmax		
	comp=Z,22nm,1.1s						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.7s						
JMQS	**Jabal Moqyreh**	143.23	89	P	PKPbc	11 03 04.5	+3.6
TBKS	**Tabuk**	143.51	90	P	PKPbc	11 03 06.2	+4.5
BLJS	**Baljurashi**	143.55	106	P	PKPbc	11 03 06.7	+4.6
DJNS	**Zahran al Janu**	143.77	111	P	PKPbc	11 03 05.3	+2.5
CN2	**Changchun**	143.92	297	*e*PKP	PKPdf	11 03 01.0	-5.4
CN2				PP	PP	11 06 21.3	+0.5
CN2				PP	PP		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=N,400nm,17.0s,MS5.4						
CN2				LR	LR		
	comp=E,400nm,17.0s,MS5.4						
CN2				LR	LR		
	comp=Z,400nm,17.0s,MS5.2						
QZH	**Quanzhou**	144.27	263	*e*PKP	PKPdf	11 03 04.8	-2.8
QZH				*e*PP	PP	11 06 21.8	-1.7
QZH				LR	LR		
	comp=Z,980nm,24.3s,MS5.5						
BRTR	**Keskin Array B**	144.40	70	PKP	PKPdf	11 03 04.2	-3.1
	comp=Z,13nm,0.9s,baz=198,slow=3.9,SNR=41						
SSE	**Sheshan**	144.64	274	PKP	PKPdf	11 03 05.5	-2.6
SSE				PP	PP		
	comp=Z,60nm,12.0s						
SSE				LR	LR		
	comp=N,770nm,40.8s,MS5.2						
SSE				LR	LR		
	comp=E,450nm,40.8s,MS5.2						
SSE				LR	LR		
	comp=Z,270nm,31.4s						
TATS	**Tathlith**	144.81	108	P	PKPbc	11 03 06.9	+1.2
SNY	**Shenyang**	145.12	293	⇑PKP	PKPdf	11 03 04.5	-4.1
SNY				LR	LR		
	comp=N,270nm,15.9s						
SNY				LR	LR		
	comp=Z,240nm,14.0s,MS5.1						
SIM	**Simferopol’**	145.21	61	⇓*e*PKIKP	PKPdf	11 03 07.0	-1.7
SIM				*e*SS	SS	11 25 17.7	+1.3
SIM				pmax	pmax		
	comp=Z,48nm,0.7s						
QURS	**Qurayyt al Mil**	145.29	86	P	PKPbc	11 03 09.7	+3.1
OBN	**Obninsk**	145.52	43	⇑*i*PKIKP	PKPdf	11 03 06.2	-2.6
OBN				*e*		11 03 14.2	
OBN				*e*		11 06 30.2	
OBN				pmax	pmax		
	comp=Z,77nm,1.0s						
OBN				MLR	MLR		
	comp=Z,500nm,18.0s,MS5.3						
OBN	**Obninsk**	145.52	43	*e*PKPdf	PKPdf	11 03 06.6	-2.2
MOS	**Moscow**	145.92	42	*e*PKP2	PKPab	11 03 08.4	-1.3
DL2	**Dalian**	146.23	288	PKP	PKPdf	11 03 08.4	-2.2
DL2				SKKS		11 13 23.3	
DL2				PP	PP		
	comp=Z,130nm,8.1s						
DL2				LR	LR		
	comp=N,140nm,22.9s,MS4.7						
DL2				LR	LR		
	comp=E,90nm,25.1s,MS4.7						
DL2				LR	LR		
	comp=Z,360nm,24.7s,MS5.1						
NJ2	**Nanjing**	146.84	275	*e*PKP	PKPdf	11 03 06.0	-5.8
NJ2				PP	PP	11 06 37.0	-1.7
NJ2				PKS	PKS	11 06 40.0	-2.8
NJ2				PP	PP		
	comp=Z,1µm,5.4s						
NJ2				LR	LR		
	comp=N,1µm,22.1s,MS6.2						
NJ2				LR	LR		
	comp=E,4µm,21.2s,MS6.2						
NJ2				LR	LR		
	comp=Z,1µm,21.4s,MS5.7						
HILS	**Ha’il**	147.41	95	P	PKPdf	11 03 14.7	+1.8
ANN	**Anapa**	147.57	62	*i* PKHKP		11 03 03.6	
ANN				*e*		11 10 12.1	
ANN				pmax	pmax		
	comp=Z,60nm,1.4s						
HIA	**Hailar**	147.66	307	*e*PKPdf	PKPdf	11 03 12.1	-0.5
HIA				*e*PKPbc	PKPdf	11 03 14.8	+2.2
MALT	**Malatya**	147.87	74	*e*PKP2	PKPab	11 03 15.5	-2.4
VOR	**Voronezh**	147.89	48	PKP2	PKPab	11 03 16.0	-1.5
VOR				pmax	pmax		
	comp=Z,170nm,2.0s						
QIZ	**Qiongzhong**	147.91	246	PKP	PKPdf	11 03 07.0	-6.9
QIZ				APKP		11 03 17.5	
QIZ				LR	LR		
	comp=N,220nm,26.3s,MS5.0						
QIZ				LR	LR		
	comp=E,290nm,26.1s,MS5.0						
QIZ				LR	LR		
	comp=Z,520nm,32.6s						
ARSS	**Ar Rass**	147.91	98	P	PKPdf	11 03 15.6	+1.8
BOD	**Bodaibo**	148.26	324	*e*PKIKP	PKPdf	11 03 10.8	-2.5
BOD				pmax	pmax		
	comp=Z,25nm,1.4s						
MZLS	**Mizel**	148.59	103	P	PKPdf	11 03 20.1	+5.3
PECR	**Pechory**	149.07	38	*e*PKP2	PKPab	11 03 16.6	-5.6
PECR				pmax	pmax		
	comp=Z,1µm,1.6s						
SOC	**Sochi**	149.23	64	*e*PKIKP	PKPdf	11 03 16.4	+1.1
SOC				*e*		11 06 51.7	
SOC				*e*SS	tx	11 26 41.8	
WHN	**Wuhan**	149.99	270	PKP	PKPdf	11 03 18.8	+1.9
CIT	**Chita**	150.83	314	*e*PKIKP	PKPdf	11 03 19.4	+1.9
CIT				*e*		11 07 00.2	
CIT				pmax	pmax		
	comp=Z,66nm,1.8s						
MSL	**Mosul**	151.19	79	*e*	PKPdf	11 03 18.5	-0.1
KIV	**Kislovodsk**	151.37	63	*i* PKIKP	PKPdf	11 03 23.1	+4.5
KIV				*e*		11 06 59.3	
KIV				*e*PPP	PPP	11 10 21.6	-9.3
KIV				*e*SS	SS	11 26 18.5	-6.6
KIV				pmax	pmax		
	comp=N,20nm,1.2s						
KIV				pmax	pmax		
	comp=Z,35nm,1.2s						
GOF	**Gofitskoye**	151.53	61	*e*PKIKP	PKPdf	11 03 20.0	+1.2
GOF				pmax	pmax		
	comp=Z,80nm,1.0s						
BHD	**Baghdad**	151.55	86	*e*	PKPdf	11 03 18.0	-1.2
ZEI	**Tsey**	152.31	65	*e*PKIKP	PKPdf	11 03 19.5	-0.5
SOKR	**Solikamsk**	152.51	25	⇑*i*PKIKP	PKPdf	11 03 31.9	+12
SOKR				pmax	pmax		
	comp=Z,70nm,1.2s						
GNI	**Garni**	152.93	71	*i* PKIKP	PKPdf	11 03 29.2	+8.2
GNI	**Garni**	152.93	71	PFAKE		11 03 30.0	+9.0
GNI				LR	LR		
	comp=Z,448nm,21.0s,MS5.3						
TI2	**Plekhanov**	152.96	68	*e*PKIKP	PKPdf	11 03 26.2	+5.3
MAK	**Makhachkala**	154.94	65	*e*PKP2	PKPab	11 03 48.0	+0.8
CMAR	**Chiang Mai Arr**	155.05	230	PKP	PKPdf	11 03 22.5	-1.9
	comp=Z,1.4nm,0.8s,baz=165,slow=3.2,SNR=4.7						
CMAR				PKPab	PKPab	11 03 46.4	-2.0
	comp=Z,10.0nm,0.9s,baz=159,slow=2.8,SNR=16						
ARU	**Arti**	155.48	28	*i* PKIKP	PKPdf	11 03 29.2	+5.4
ARU	**Arti**	155.48	28	*e*PKPbc	PKPdf	11 03 30.1	+6.3
IRK	**Irkutsk**	155.90	320	*e*PKIKP	PKPdf	11 03 14.4	-10
SVE	**Sverdlovsk**	155.93	25	*i* PKIKP	PKPdf	11 03 23.0	-1.4
SVE				*e*PPP	PPP	11 11 09.0	+3.7
SVE				*e*SS	SS	11 27 12.0	-2.8
SVE				*e*		11 28 11.0	
ULN	**Ulaanbaatar**	156.17	308	⇓*i*PKIKP	PKPdf	11 03 28.9	+3.9
TLY	**Talaya**	156.53	319	*i* PKIKP	PKPdf	11 03 30.8	+5.4
TLY				pmax	pmax		
	comp=Z,12nm,1.0s						
SONM	**Songino Array**	156.60	308	PKPab	PKPab	11 03 52.9	-1.3
	comp=Z,1.6nm,0.3s,baz=45,slow=2.0,SNR=3.1						
KMI	**Kunming**	156.80	248	PKP	PKPdf	11 03 26.3	-0.3
KMI				PKP2	PKPab	11 03 59.3	+3.6
KMI				PKS	PKS	11 06 57.8	+1.4
KMI				PP	PP	11 07 38.6	+3.7
KMI				SKKS		11 14 22.1	
KMI				PP	PP		
	comp=Z,140nm,8.6s						
KMI				LR	LR		
	comp=N,340nm,21.9s,MS5.3						
KMI				LR	LR		
	comp=E,310nm,21.9s,MS5.3						
KMI				LR	LR		
	comp=Z,610nm,25.6s,MS5.3						
LZH	**Lanzhou**	159.87	277	*e*PKP	PKPdf	11 03 26.0	-4.0
LZH				APKP		11 03 34.5	
LZH				PP	PP	11 07 50.0	-0.9
LZH				SKKS		11 14 37.4	
LZH				*e*SS	SS	11 27 56.0	-1.0
LZH				PP	PP		
	comp=Z,260nm,6.2s						
LZH				LR	LR		
	comp=N,1µm,20.0s						
LZH				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
ZAL	**Zalesovo**	161.74	349	*i* PKIKP	PKPdf	11 03 29.4	-1.9
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAL	**Zalesovo**	161.74	349	PKP	PKPdf	11 03 27.9	-3.4
	comp=Z,1.0nm,0.3s,baz=182,slow=5.0,SNR=4.3						
ZRNK	**Zerenda**	161.80	19	*e*PKIKP	PKPdf	11 03 32.3	+0.9
BVAR	**Borovoye Array**	162.08	17	PKP	PKPdf	11 03 30.0	-1.6
	comp=Z,0.3nm,0.3s,baz=344,slow=3.6,SNR=3.4						
BVAR				PKPab	PKPab	11 04 16.1	-1.6
	comp=Z,1.7nm,0.8s,baz=270,slow=3.0,SNR=5.3						
BVAR				PP	PP	11 08 05.2	+2.8
	comp=Z,1.0nm,0.8s,baz=270,slow=5.8,SNR=3.8						
GTA	**Gaotai**	163.16	287	PKP	PKPdf	11 03 33.4	+0.2
GTA				PKP2	PKPab	11 04 24.6	+1.8
GTA				PP	PP	11 08 09.9	+1.5
GTA				SKKS		11 14 52.8	
GTA				PP	PP		
	comp=Z,140nm,8.0s						
GTA				LR	LR		
	comp=N,330nm,27.8s						
GTA				LR	LR		
	comp=E,180nm,20.2s						
GTA				LR	LR		
	comp=Z,220nm,25.5s						
MKAR	**Makanchi Array**	169.06	348	PKP	PKPdf	11 03 35.7	-2.0
	comp=Z,0.4nm,0.5s,baz=63,slow=2.7,SNR=3.6						
MKAR				PKPab	PKPab	11 04 47.2	-1.1
	comp=Z,1.8nm,0.9s,baz=346,slow=5.0,SNR=3.6						
MKAR				PP	PP	11 08 39.0	+0.5
	comp=Z,1.6nm,1.0s,baz=34,slow=4.4,SNR=4.9						
WMQ	**Urumqi**	169.79	321	*e*PKP	PKPdf	11 03 36.5	-1.7
WMQ				PP	PP	11 08 43.9	+1.6
WMQ				LR	LR		
	comp=N,1µm,26.8s						
WMQ				LR	LR		
	comp=E,660nm,28.0s						
WMQ				LR	LR		
	comp=Z,1µm,30.0s						
FRU	**Bishkek**	172.53	25	*e*PKIKP	PKPdf	11 03 39.0	-0.8
FRU				*e*		11 08 56.0	

MAN 21 11:10:19.9,15.54N×120.11E,h1^{km},mb3.5,ML2.2,MS1.6, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	0.30	320	*e*P	Pg	11 10 25.8	-0.2
SCZP				*e*S	Sg	11 10 31.4	+1.5
BOLP	**Bolinao**	0.85	347	*e*P	Pg	11 10 32.8	-4.1
PCPH	**Palayan**	0.95	89	⇓*e*P	Pb	11 10 38.9	+0.1
PCPH				*i* S	Sg	11 10 54.0	+2.6
BALP	**Baler**	1.42	82	*e*P	Pb	11 10 46.8	-0.1
LUBP	**Lubang**	1.80	176	*e*P	Pn	11 10 52.2	-0.1

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*NEIC **21** 11:24:01.0,19.49N×98.93W,h1^{km},MD3.5(MEX),After MEX.*

NEIC Felt at Texcoco.

MEX 21 11:24:01.0±0.6**,19.49N×98.93W,h1^{km}**±58^{km}**,MD3.5, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTVM	**Pico Tres Padr**	0.21	301	*i* P	Pg	11 24 04.8	-0.3
PTVM				*i* S	Sg	11 24 07.1	-0.8
IIO	**Organos**	0.22	62	*i* P	Pg	11 24 02.5	-2.9
IIO				*i* P		11 24 05.2	
IIO				*i* S	Sg	11 24 06.6	-1.7
IIO				*i* S	Sg	11 24 07.5	-0.7
IIC	**Rita Coyotepec**	0.42	312	*i* P	Pg	11 24 09.1	-0.2
IIC				*i* S	Sg	11 24 15.1	+0.1
IIZ	**Mezontepec**	0.42	225	*i* P	Pg	11 24 08.9	-0.6
IIZ				*i* S	Sg	11 24 13.4	-1.6
PPM	**Popocatepetl**	0.51	146	*e*P	Pg	11 24 10.7	-0.4
PPM				*i* S	Sg	11 24 16.9	-0.9

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*NEIC **21** 12:00:48.1±1.0,30.47S×179.07W,h366^{km}±11^{km},mb3.9/1, Error ellipse: s-maj=26.2km s-min=20.5km az=128.0*

*IDC **21** 12:00:48.4±1.4,30.33S×179.31W,h355^{km}±16^{km},mb3.4/3, mb1 3.5/4,mb1mx3.2/15,mbtmp4.2/4,Error ellipse: s-maj=41.0km s-min=25.5km az=145.0*

ISC 21 12:00:45.7±1.7**,30.60S**±0.08×**178.8W**±0.4**,h386^{km}**±20^{km}**, n17,σ0^{s}81**/16**,mb3.7**/4**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	1.54	30	P	**P**	**12 01 37.8**	**-0.2**
	45nm,0.3s,baz=4.2,slow=9.0,SNR=5.1						
RAO				S	**S**	**12 02 10.2**	**-8.8**
	40nm,0.3s,baz=46,slow=22,SNR=2.4						
PUZ	**Puketiti**	7.85	197	*e*PN	**P**	**12 02 40.9**	**+1.3**
PUZ				SN	**S**	**12 04 09.0**	**-0.3**
MWZ	**Matawai**	8.30	201	*e*PN	**P**	**12 02 44.9**	**+0.1**
URZ	**Urewera**	8.36	203	P	**P**	**12 02 47.4**	**+1.8**
	3.7nm,0.3s,baz=270,slow=5.7,SNR=27						
URZ				S	**S**	**12 04 19.8**	**-0.2**
	4.7nm,0.3s,baz=246,slow=23,SNR=10						
URZ	**Urewera**	8.36	203	*e*PN	**P**	**12 02 45.8**	**+0.3**
BKZ	**Black Stump Fm**	9.39	203	*e*PN	**P**	**12 02 56.6**	**-1.0**
CAW	**Cannon Point**	11.61	204	*e*PN	**P**	**12 03 22.8**	**-0.8**
MQZ	**McQueen’s Vall**	14.75	205	SN	**S**	**12 06 33.2**	**+0.1**
DZM	**Mont Dzumac**	15.72	299	P	**P**	**12 04 08.7**	**+0.2**
	0.2nm,0.3s,baz=345,slow=16,SNR=6.8						
CTA	**Charters Tower**	33.16	280	P	**P**	**12 06 49.6**	**+0.3**
	2.0nm,0.7s,mb3.6,baz=103,slow=14,SNR=3.1						
STKA	**Stephens Creek**	33.77	257	P	**P**	**12 06 56.0**	**+1.6**
	2.4nm,0.9s,mb3.5,baz=99,slow=9.3,SNR=3.6						
WRAB	**Tennant Creek**	43.42	273	*e*P	**P**	**12 08 13.0**	**-0.8**
	4.5nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	43.43	273	P	**P**	**12 08 12.8**	**-1.1**
	2.5nm,0.6s,mb3.7,baz=112,slow=7.5,SNR=16						
KAF	**Kangasniemi**	144.50	340	*e*pkp	PKPdf	12 19 39.1	+3.3
FINES	**FINESS Array B**	145.09	339	PKP	PKPdf	12 19 41.6	+4.8
	3.8nm,0.6s,baz=52,slow=3.6,SNR=29						
NB2	**NORSAR Subarra**	148.84	351	PKPabc	PKPdf	12 19 52.6	+10
	0.7nm,0.6s,baz=15,slow=2.5						
NOA	**NORSAR Array B**	148.84	351	PKPbc	PKPdf	12 19 52.8	+10
	0.8nm,0.6s,baz=17,slow=4.2,SNR=4.2						

MOS 21 12:13:32.7±0.5**,43.26N×45.87E,h20^{km},mb3.7**/1**,1C-1D, Error ellipse: s-maj=99.9km s-min=17.7km az=165.3, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNR	**Ardon**	1.17	267	⇓*e*PG	Pb	12 13 54.3	+0.3
ARNR				*e*S	Sb	12 14 10.2	+1.5
ZEI	**Tsey**	1.53	252	⇑*e*PG	Pn	12 13 59.7	+0.5
ZEI				*e*S	Sn	12 14 19.7	+1.1

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*JMA **21** 12:18:31.4±0.3,23.64N×121.60E,h82^{km}*

TAP 21 12:18:30.7,23.60N×121.60E,h33^{km},ML3.1,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	1.55	56	P	Pn	12 18 57.5	+1.0
YOJ				*e*S	Sn	12 19 17.3	+1.7
HATJ	**Hateruma jima**	2.07	77	P	Pn	12 19 04.5	+0.6
HATJ				*e*S	Sn	12 19 29.5	+0.7
IRIF	**Iriomote-Funau**	2.08	69	P	Pn	12 19 04.8	+0.7
IRIF				S	Sn	12 19 30.1	+1.0
JKRS	**Kuro-shima**	2.29	73	P	Pn	12 19 08.3	+1.2
JKRS				*e*S	Sn	12 19 35.6	+1.1
JIJ	**Ishigaki jima**	2.45	71	P	Pn	12 19 09.6	+0.3
JIJ				S	Sn	12 19 37.6	-0.8
JTJ	**Tarama**	3.02	69	P	Pn	12 19 17.7	+0.3
JTJ				*e*S	Sn	12 19 52.4	-0.4

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*IDC **21** 12:33:41.4±9.7,3.22S×102.58E,h172^{km}±85^{km},mb3.7/6, mb1 3.9/6,mb1mx3.6/15,mbtmp4.2/6,Error ellipse: s-maj=100.6km s-min=13.5km az=59.0*

*NEIC **21** 12:33:46.5±2.8,3.20S×102.56E,h229^{km}±20^{km},mb4.0/4, Error ellipse: s-maj=69.2km s-min=9.2km az=56.0*

ISC 21 12:33:45.3±3.9**,3.3S**±0.4×**102.5E**±0.5**,h238^{km}**±27^{km}**,n13, σ0^{s}58**/13**,mb3.8**/9**,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	8.71	348	P	**P**	**12 35 48.2**	**-0.2**
CMAR	**Chiang Mai Arr**	21.88	351	P	**P**	**12 38 20.6**	**+0.8**
	1.9nm,0.5s,mb3.9,baz=181,slow=8.7,SNR=22						
FITZ	**Fitzroy Crossi**	27.05	125	*e*P	**P**	**12 39 08.4**	**+0.4**
	8.7nm,1.9s,mb4.1						
FITZ	**Fitzroy Crossi**	27.05	125	P	**P**	**12 39 07.7**	**-0.4**
	4.0nm,0.6s,mb4.2,baz=340,slow=7.9,SNR=14						
WRA	**Warramunga Arr**	35.22	121	P	**P**	**12 40 18.1**	**-0.9**
	1.1nm,0.3s,mb3.9,baz=308,slow=8.8,SNR=74						
WRA				PcP	PcP	12 42 46.3	+1.6
	0.3nm,0.6s,baz=314,slow=2.1,SNR=5.2						
WRAB	**Tennant Creek**	35.22	121	*e*P	**P**	**12 40 18.9**	**-0.2**
	5.7nm,0.7s,mb4.2						
WB2	**Warramunga Arr**	35.23	121	*e*P	**P**	**12 40 19.0**	**-0.1**
STKA	**Stephens Creek**	46.46	132	P	**P**	**12 41 51.6**	**+1.2**
	3.0nm,0.3s,mb4.1,baz=317,slow=8.8,SNR=28						
STKA	**Stephens Creek**	46.46	132	P	**P**	**12 41 51.6**	**+1.2**
STKA				*e*P		12 41 51.9	
SONM	**Songino Array**	51.02	3	P	**P**	**12 42 25.5**	**+0.5**
	1.4nm,0.4s,mb3.7,baz=183,slow=9.1,SNR=2.9						
ULN	**Ulaanbaatar**	51.09	4	P	**P**	**12 42 25.2**	**-0.3**
	0.8nm,0.5s,mb3.4						
MKAR	**Makanchi Array**	52.95	343	P	**P**	**12 42 39.0**	**-0.2**
	0.6nm,0.5s,mb3.3,baz=151,slow=7.4,SNR=6.5						
ZRNK	**Zerenda**	62.70	338	*e*P	**P**	**12 43 46.3**	**-0.6**
	1.1nm,0.6s,mb3.7						

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*NIED **21** 12:56:00,44.40N×149.40E,h23^{km},Mw4.3 Best double couple: M$_0$3.71×10^{15} NP1:φ$_s$36°,δ62°,λ91°. NP2:φ$_s$213°, δ28°,λ88°.*

*SKHL **21** 12:56:20.1±3.0,44.18N×149.60E,h50^{km}±19^{km},mb4.7/2, Ms3.8/1,msh5.4/1*

*BJI **21** 12:56:20.3,44.29N×149.28E,h18^{km},mB5.0,mb4.6, Ms4.0,Msz3.9*

*NEIC **21** 12:56:21.3±0.3,44.22N×149.13E,h10^{km},mb4.7/22,Error ellipse: s-maj=8.7km s-min=4.8km az=148.0*

*MOS **21** 12:56:22.7±1.2,44.10N×149.08E,h33^{km},mb4.9/24,Error ellipse: s-maj=10.9km s-min=6.9km az=100.8*

*IDC **21** 12:56:27.2±0.8,44.27N×149.07E,h54^{km}±5^{km},mb3.9/15, mb1 4.1/18,mb1mx4.0/25,mbtmp4.2/18,MS3.8/8, Ms1 3.8/8,ms1mx3.4/28,Error ellipse: s-maj=21.0km s-min=13.9km az=167.0*

ISC 21 12:56:25.5±0.4**,44.27N**±0.06×**149.08E**±0.05**,h49^{km}, h49^{km}**±3.9^{km}**:pP-P,n137,**σ**1^{s}11**/136**,mb4.5**/46**,MS3.9**/11**, 4C-1D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril’sk**	1.29	319	*i* P	**P**	**12 56 45.4**	**-2.2**
KUR				AMB	AMB	12 56 46.4	
	7µm,1.2s						
KUR				AMB	AMB	12 56 46.5	
	430nm,0.8s						
KUR				AMB	AMB	12 56 46.5	
	480nm,0.8s						
KUR				AMB	AMB	12 56 46.5	
	2µm,0.8s						
KUR				*e*S	**S**	**12 57 04.4**	**+0.3**
KUR				A		12 57 07.6	
	8µm,1.0s						
KUR				A		12 57 07.6	
	6µm,1.0s						
KUR				A		12 57 07.7	
	1µm,0.6s						
KUR				A		12 57 07.7	
	630nm,0.6s						
YUK	**Yuzh-Kuril’sk**	2.33	265	*e*P	**P**	**12 57 00.5**	**-1.7**
YUK				*i* S	**S**	**12 57 35.5**	**+5.8**

YUK				A		12 57 38.3	
	880nm,0.5s						
YUK				A		12 57 38.3	
	1μm,0.5s						
YUK				A		12 57 46.9	
	5μm,2.0s						
YUK				A		12 57 46.9	
	3μm,2.0s						
ASAJ	**Asahikawa**	**4.66**	**270**	PN	**P**	**12 57 36.4**	**+1.1**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,19.1s						
ASAJ	**Asahikawa**	**4.66**	**270**	P	**P**	**12 57 36.4**	**+1.1**
	comp=Z,2.7nm,0.3s,baz=105,slow=11,SNR=16						
ASAJ				LR	LR	12 59 39.0	
	comp=Z,1μm,19.1s,baz=310,slow=41						
YSS	**Yuzh-Sakhalins**	**5.18**	**303**	*e*PN	**P**	**12 57 43.0**	**+0.5**
YSS				*e*		12 58 48.0	
YSS				MLR	MLR		
	comp=Z,600nm,16.0s						
YSS				MLR	MLR		
	comp=E,800nm,17.0s						
YSS	**Yuzh-Sakhalins**	**5.18**	**303**	*e*Pn	**P**	**12 57 39.6**	**-3.0**
	comp=E,28nm,0.6s						
YSS	**Yuzh-Sakhalins**	**5.18**	**303**	*e*P	**P**	**12 57 43.0**	**+0.5**
YSS				*e*S	**S**	**12 58 43.0**	**+1.2**
YSS				A		12 58 50.0	
	comp=E,40nm,0.9s						
YSS				A		12 58 50.0	
	comp=E,60nm,0.9s						
YSS				AMS	AMS	13 00 02.0	
	comp=E,800nm,17.0s						
YSS				AMS	AMS	13 00 02.0	
	comp=E,600nm,17.0s						
UGL	**Uglegorsk**	**6.81**	**317**	PN	**P**	**12 58 22.0**	**+17**
UGL				pmax	pmax		
	comp=Z,51nm,0.7s						
UGL				MLR	MLR		
	comp=N,1μm,16.0s						
UGL				MLR	MLR		
	comp=E,500nm,16.0s						
UGL				MLR	MLR		
	comp=Z,1μm,16.0s						
TYV	**Tymovskoe**	**7.89**	**329**	*e*P	**P**	**12 58 16.7**	**-3.6**
TYV				AMB	AMB	12 58 33.4	
	comp=Z,5.0nm,0.6s						
TYV				AMB	AMB	12 58 33.4	
	comp=Z,8.0nm,0.6s						
TEY	**Ternei**	**8.93**	**279**	*e*P	**P**	**12 58 33.0**	**-1.6**
PET	**Petropavlovsk**	**10.80**	**32**	*e*PN	**P**	**12 59 10.7**	**+11**
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
MJAR	**Matsushiro Arr**	**11.31**	**231**	P	**P**	**12 59 02.0**	**-5.2**
	comp=Z,0.4nm,0.3s,baz=24,slow=13,SNR=5.5						
MAJO	**Matsushiro**	**11.31**	**231**	*e*PN	**P**	**12 59 02.5**	**-4.6**
KLR	**Kul'dur**	**12.87**	**299**	*e*PN	**P**	**12 59 37.0**	**+9.1**
KLR				MLR	MLR		
	comp=E,500nm,14.0s						
KLR				MLR	MLR		
	comp=Z,600nm,14.0s						
MDJ	**Mudanjiang**	**13.93**	**278**	P	**P**	**12 59 40.3**	**-1.4**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,60nm,7.4s						
MDJ				LR	LR		
	comp=N,110nm,17.1s						
MDJ				LR	LR		
	comp=E,170nm,20.2s						
MDJ				LR	LR		
	comp=Z,320nm,17.6s						
MDJ	**Mudanjiang**	**13.93**	**278**	*e*Pn	**P**	**12 59 40.6**	**-1.1**
	comp=Z,9.7nm,0.8s						
MA2	**Magadan**	**15.37**	**3**	*i* P	**P**	**12 59 59.0**	**-1.3**
CN2	**Changchun**	**16.99**	**277**	*e*P	**P**	**13 00 21.8**	**+0.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
JNU	**Nakatsue**	**18.00**	**238**	P	**P**	**13 00 33.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=46,slow=13,SNR=3.7						
JNU				LR	LR	13 07 08.8	
	comp=Z,195nm,20.6s,baz=184,slow=36						
FX1	**Attu Island--F**	**18.05**	**53**	P	**P**	**13 00 34.8**	**+0.7**
FX1				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FX1	**Attu Island--F**	**18.05**	**53**	P	**P**	**13 00 34.8**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=346,slow=8.3,SNR=4.2						
SNY	**Shenyang**	**18.77**	**271**	⇑P	**P**	**13 00 41.8**	**-1.2**
SNY				AP		13 00 52.3	
SNY				PP	PP	13 00 56.0	-3.5
SNY				AMB	AMB		
	comp=Z,20nm,0.8s						
SNY				LR	LR		
	comp=N,190nm,17.5s						
SNY				LR	LR		
	comp=E,260nm,17.1s						
SNY				LR	LR		
	comp=Z,260nm,16.7s						
SEY	**Seymchan**	**18.80**	**5**	*e*P	**P**	**13 00 42.6**	**-0.5**
SEY				pmax	pmax		
	comp=Z,90nm,0.9s						
SEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
SEY				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK	**Yakutsk**	**21.10**	**334**	*e*P	**P**	**13 01 04.3**	**-3.4**
YAK				*e*		13 05 07.1	
YAK				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.3						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK	**Yakutsk**	**21.10**	**334**	*e*P	**P**	**13 01 05.0**	**-2.7**
	comp=E,34nm,1.0s,mb4.6						
SSE	**Sheshan**	**25.55**	**248**	P	**P**	**13 01 52.5**	**+1.2**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,60nm,5.1s						
TIA	**Tai'an**	**25.56**	**263**	*e*P	**P**	**13 01 50.8**	**-0.5**
NJ2	**Nanjing**	**26.55**	**253**	*e*P	**P**	**13 02 02.1**	**+1.5**
NJ2				AMB	AMB		
	comp=Z,560nm,4.8s						
NJ2				LR	LR		
	comp=N,740nm,18.9s,MS4.3						
NJ2				LR	LR		
	comp=E,420nm,18.4s,MS4.3						
NJ2				LR	LR		
	comp=Z,290nm,19.0s,MS3.9						
BTO	**Baotou**	**28.87**	**276**	*e*P	**P**	**13 02 25.8**	**+4.4**
BTO				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
ULN	**Ulaanbaatar**	**29.11**	**292**	*e*P	**P**	**13 02 23.2**	**-0.3**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
ULN	**Ulaanbaatar**	**29.11**	**292**	*e*P	**P**	**13 02 23.2**	**-0.4**
	comp=Z,6.2nm,1.0s,mb4.3						
SONM	**Songino Array**	**29.56**	**292**	LR	LR	13 15 31.2	
	comp=Z,268nm,19.1s,MS3.9,baz=69,slow=39						
TLY	**Talaya**	**30.88**	**300**	*i* P	**P**	**13 02 36.8**	**-2.4**
ZAK	**Zakamensk**	**31.23**	**298**	*e*P	**P**	**13 02 40.9**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.6						
LZH	**Lanzhou**	**35.14**	**272**	⇑P	**P**	**13 03 16.5**	**+0.2**
LZH				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
GTA	**Gaotai**	**36.58**	**280**	*e*P	**P**	**13 03 29.3**	**+0.9**
GTA				PP	PP	13 04 55.8	+2.1
GTA				S	**S**	**13 09 07.8**	**+0.9**
GTA				SS	SS	13 11 37.8	+2.5
GTA				AMB	AMB		
	comp=Z,70nm,8.0s						
GTA				LR	LR		
	comp=N,140nm,18.3s,MS4.0						
GTA				LR	LR		
	comp=E,150nm,17.1s,MS4.0						
GTA				LR	LR		
	comp=Z,150nm,13.7s,MS3.9						
IMA	**Indian Mountai**	**37.47**	**34**	*e*P	**P**	**13 03 34.3**	**-1.3**
IMA				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.1						
IMA	**Indian Mountai**	**37.47**	**34**	*e*P	**P**	**13 03 34.3**	**-1.2**
	comp=Z,24nm,0.8s,mb5.1						
CD2	**Chengdu**	**37.84**	**265**	P	**P**	**13 03 39.0**	**0.0**
ILAR	**Eielson Array**	**40.25**	**37**	P	**P**	**13 03 57.5**	**-1.2**
	comp=Z,1.0nm,0.8s,mb3.6,baz=268,slow=7.4,SNR=11						
ZAL	**Zalesovo**	**41.81**	**307**	LR	LR	13 23 31.9	
	comp=Z,148nm,18.1s,MS3.9,baz=237,slow=39						
WMQ	**Urumqi**	**43.20**	**292**	P	**P**	**13 04 23.5**	**+0.5**
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,150nm,4.6s						
WMQ				LR	LR		
	comp=N,120nm,17.0s,MS4.0						
WMQ				LR	LR		
	comp=E,110nm,17.2s,MS4.0						
WMQ				LR	LR		
	comp=Z,150nm,20.0s,MS3.9						
INK	**Inuvik**	**45.25**	**31**	P	**P**	**13 04 38.7**	**-0.6**
	comp=Z,3.8nm,0.8s,mb4.3,baz=292,slow=6.0,SNR=10						
INK	**Inuvik**	**45.25**	**31**	P	**P**	**13 04 38.7**	**-0.6**
MKAR	**Makanchi Array**	**45.57**	**298**	*i* P	**P**	**13 04 42.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	**Makanchi Array**	**45.57**	**298**	P	**P**	**13 04 42.2**	**+0.1**
	comp=Z,6.1nm,0.8s,mb4.6,baz=74,slow=8.8,SNR=46						
MKAR				LR	LR	13 25 16.9	
	comp=Z,235nm,18.5s,MS4.2,baz=13,slow=38						
MKAR	**Makanchi Array**	**45.57**	**298**	P	**P**	**13 04 42.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**49.00**	**255**	pP	pP	13 05 23.1	+0.4
	comp=Z,2.5nm,0.9s,baz=39,slow=7.7,SNR=8.3						
CMAR				LR	LR	13 29 06.7	
	comp=Z,86nm,18.0s,MS3.8,baz=290,slow=40						
DLBC	**Dease Lake**	**49.35**	**43**	P	**P**	**13 05 11.6**	**+0.1**
	comp=Z,2.0nm,0.8s,mb4.2,baz=202,slow=11,SNR=3.6						
DLBC	**Dease Lake**	**49.35**	**43**	P	**P**	**13 05 11.6**	**+0.1**
BVAR	**Borovoye Array**	**50.25**	**310**	P	**P**	**13 05 17.1**	**-1.3**
	comp=Z,1.0nm,0.6s,mb4.0,baz=51,slow=9.5,SNR=7.9						
TKM2	**Tokmak 2**	**51.53**	**296**	P	**P**	**13 05 29.3**	**+1.0**
	SNR=8.1						
USP	**Ospenovka**	**52.08**	**297**	P	**P**	**13 05 32.5**	**+0.2**
	SNR=9.8						
KBK	**Karagaybulak**	**52.08**	**296**	P	**P**	**13 05 33.2**	**+0.9**
	SNR=10						
KZA	**Kyzart**	**52.16**	**295**	P	**P**	**13 05 34.3**	**+1.3**
	SNR=16						
GUN	**Gumba**	**52.37**	**274**	*e*P	**P**	**13 05 34.4**	**-0.3**
	comp=Z,24nm,0.8s,mb5.2						
AAK	**Ala-Archa**	**52.38**	**296**	*e*P	**P**	**13 05 33.2**	**-1.4**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
AAK	**Ala-Archa**	**52.38**	**296**	*e*P	**P**	**13 05 33.2**	**-1.4**
	comp=Z,5.8nm,0.6s,mb4.7						
EKS2	**Erkin-Say**	**52.83**	**296**	P	**P**	**13 05 38.4**	**+0.4**
	SNR=7.3						
KKN	**Kakani**	**52.87**	**274**	*e*P	**P**	**13 05 38.1**	**-0.4**
	comp=Z,23nm,1.0s,mb5.1						
KKN	**Kakani**	**52.87**	**274**	*e*P	**P**	**13 05 38.1**	**-0.4**
KKN				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
PKI	**Pulchoki**	**52.90**	**274**	*e*P	**P**	**13 05 37.3**	**-1.5**
DMN	**Daman**	**53.10**	**274**	*e*P	**P**	**13 05 39.2**	**-1.0**
	comp=Z,25nm,0.9s,mb5.2						
GKN	**Gorkha**	**53.20**	**275**	*e*P	**P**	**13 05 40.8**	**-0.2**
	comp=Z,25nm,0.9s,mb5.2						
KOLN	**Koldanda**	**54.08**	**275**	*e*P	**P**	**13 05 46.0**	**-1.4**
	comp=Z,17nm,0.9s,mb5.0						
YKA	**Yellowknife Ar**	**54.59**	**34**	P	**P**	**13 05 49.6**	**-1.1**
YKA				*PP	pP	13 06 03.4	-0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**54.59**	**34**	P	**P**	**13 05 49.6**	**-1.1**
	comp=Z,0.6nm,0.6s,mb3.8,baz=298,slow=6.2,SNR=3.6						
YKA				pP	pP	13 06 03.4	-0.9
	comp=Z,1.4nm,0.7s,baz=299,slow=7.1,SNR=5.4						
YKA	**Yellowknife Ar**	**54.59**	**34**	P	**P**	**13 05 49.6**	**-1.0**
YKA				pP	pP	13 06 03.4	-0.9
KKAR	**Karatay Array**	**54.70**	**298**	*i* P	**P**	**13 05 51.3**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
ARU	**Arti**	**54.91**	**317**	⇑*i*P	**P**	**13 05 51.2**	**-1.9**
ARU				*e*		13 06 52.8	
ARU				*e*PPP	PPP	13 09 04.7	-6.2
ARU				*e*		13 15 34.2	
ARU				*e*SS	SS	13 17 07.9	-5.0
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ARCES	**ARCESS Array B**	**59.24**	**340**	P	**P**	**13 06 23.1**	**-0.5**
	comp=Z,1.3nm,0.7s,mb4.1,baz=34,slow=6.5,SNR=3.5						
SUMG	**Summit**	**63.34**	**3**	*e*P	**P**	**13 06 50.9**	**-0.3**
	comp=Z,13nm,1.1s,mb5.0						
FFC	**Flin Flon**	**64.45**	**37**	*e*P	**P**	**13 06 57.0**	**-1.5**
FFC				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
FFC	**Flin Flon**	**64.45**	**37**	*e*P	**P**	**13 06 57.0**	**-1.6**
	comp=Z,3.0nm,0.6s,mb4.5						
KAF	**Kangasniemi**	**64.47**	**334**	*e*p	**P**	**13 06 56.9**	**-1.6**
FINES	**FINESS Array B**	**65.04**	**334**	P	**P**	**13 07 00.6**	**-1.7**
	comp=Z,7.1nm,0.8s,mb4.7,baz=45,slow=8.1,SNR=26						
FINES				LR	LR	13 37 38.1	
	comp=Z,40nm,19.5s,MS3.6,baz=19,slow=38						
FINES	**FINESS Array B**	**65.04**	**334**	P	**P**	**13 07 00.6**	**-1.7**
WRA	**Warramunga Arr**	**65.31**	**195**	P	**P**	**13 07 02.8**	**-1.8**
	comp=Z,0.8nm,0.8s,mb3.8,baz=15,slow=6.8,SNR=5.6						
BOZ	**Bozeman (W)**	**65.52**	**50**	*e*P	**P**	**13 07 05.0**	**-0.6**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
BOZ	**Bozeman (W)**	**65.52**	**50**	*e*P	**P**	**13 07 05.0**	**-0.6**
	comp=Z,2.0nm,0.6s,mb4.3						
OBN	**Obninsk**	**65.71**	**324**	*c i*P	**P**	**13 07 05.7**	**-1.0**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.1						
NVAR	**Mina Array Bea**	**66.12**	**59**	P	**P**	**13 07 09.5**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.8,baz=294,slow=5.7,SNR=8.8						
NVAR				pP	pP	13 07 25.0	+1.4
	comp=Z,1.6nm,0.7s,baz=303,slow=5.4,SNR=8.9						
NVAR	**Mina Array Bea**	**66.12**	**59**	P	**P**	**13 07 09.5**	**-0.1**
NVAR				pP	pP	13 07 25.0	+1.4
PDAR	**Pinedale Array**	**68.51**	**51**	P	**P**	**13 07 23.6**	**-0.9**
	comp=Z,0.7nm,0.6s,mb3.8,baz=270,slow=1.5,SNR=5.2						
PDAR				pP	pP	13 07 38.7	+0.2
	comp=Z,1.1nm,0.7s,baz=315,slow=2.1,SNR=5.5						
GOF	**Gofitskoye**	**69.51**	**313**	⇓*i*P	**P**	**13 07 33.4**	**+2.8**
GOF				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.3						
NB2	**NORSAR Subarra**	**69.61**	**340**	P	**P**	**13 07 29.5**	**-1.4**
	comp=Z,7.9nm,0.7s,mb4.8,baz=30,slow=6.2						
NOA	**NORSAR Array B**	**69.61**	**340**	P	**P**	**13 07 30.0**	**-0.9**
	comp=Z,9.0nm,0.8s,mb4.8,baz=31,slow=6.1,SNR=32						
NOA				pP	pP	13 07 44.5	-0.5
	comp=Z,1.8nm,0.6s,baz=31,slow=6.2,SNR=4.1						
NOA				LR	LR	13 41 39.9	
	comp=Z,33nm,19.6s,MS3.6,baz=75,slow=39						
NOA	**NORSAR Array B**	**69.61**	**340**	P	**P**	**13 07 30.0**	**-0.9**
NOA				pP	pP	13 07 44.5	-0.5
KIV	**Kislovodsk**	**70.44**	**313**	*e*P	**P**	**13 07 37.3**	**+1.0**
KIV				pmax	pmax		
	comp=E,6.0nm,1.0s						
KIV				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
KIV				MLR	MLR		
	comp=N,95nm,17.0s,MS4.3						
KIV				MLR	MLR		
	comp=E,93nm,17.0s,MS4.3						
KIV				MLR	MLR		
	comp=Z,140nm,17.0s,MS4.3						
AKASG	**Malin Array Be**	**71.97**	**325**	P	**P**	**13 07 44.9**	**-0.4**
	comp=Z,2.8nm,0.5s,mb4.4,baz=35,slow=5.5,SNR=15						
KWP	**Kalwaria**	**75.44**	**327**	*e*P	**P**	**13 08 06.6**	**+1.2**
OJC	**Ojcow**	**76.06**	**329**	*e*P	**P**	**13 08 09.4**	**+0.4**
UPC	**Upice**	**77.17**	**331**	*e*P	**P**	**13 08 15.9**	**+0.7**
DPC	**Dobruska-Polom**	**77.19**	**331**	*e*P	**P**	**13 08 16.0**	**+0.6**
DPC				AMS	AMS	13 44 40.0	
	comp=Z,100nm,19.8s						
MORC	**Moravsky Berou**	**77.24**	**330**	*e*P	**P**	**13 08 15.8**	**+0.2**
MORC				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
MORC	**Moravsky Berou**	**77.24**	**330**	*e*P	**P**	**13 08 15.8**	**+0.1**
	comp=Z,9.0nm,1.2s,mb4.6						
CLL	**Collm**	**77.48**	**334**	*i* P	**P**	**13 08 16.6**	**-0.3**
CLL				*e*	pP	13 08 28.0	-3.2
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
CLL	**Collm**	**77.48**	**334**	*i* P	**P**	**13 08 16.6**	**-0.3**
	comp=Z,7.0nm,1.0s,mb4.5						
CLL				*e*	pP	13 08 28.0	-3.2
CLL	**Collm**	**77.48**	**334**	P	**P**	**13 08 16.6**	**-0.3**
	comp=Z,logA/T=0.8,mb4.5						
CLL				*e*	pP	13 08 28.0	-3.2
PRU	**Pruhonice**	**78.11**	**332**	*e*P	**P**	**13 08 20.9**	**+0.5**
PRU				AMS	AMS	13 46 20.0	
	comp=Z,100nm,23.6s						
MOX	**Moxa**	**78.50**	**334**	*e*P	**P**	**13 08 22.0**	**-0.5**
NKC	**Novy Kostel**	**78.59**	**333**	AMS	AMS	13 47 20.0	
	comp=Z,100nm,17.7s						
KHC	**Kasperske Hory**	**79.17**	**332**	*e*P	**P**	**13 08 27.3**	**+1.1**
KHC				*e*	pP	13 08 39.5	-1.0
KHC	**Kasperske Hory**	**79.17**	**332**	*e*P	**P**	**13 08 27.3**	**+1.1**
KHC				x	x	13 08 39.5	
KHC				AMS	AMS	13 47 00.0	
	comp=Z,100nm,17.6s						
GERES	**GERESS Array B**	**79.37**	**332**	P	**P**	**13 08 27.1**	**-0.3**
	comp=Z,2.0nm,0.6s,mb4.2,baz=34,slow=4.8,SNR=17						
GRA1	**Grafenberg Arr**	**79.45**	**334**	*e*P	**P**	**13 08 26.2**	**-1.6**
	comp=Z,5.0nm,0.9s,mb4.4						
GRF	**Grafenberg Arr**	**79.45**	**334**	*e*P	**P**	**13 08 26.2**	**-1.6**
GRF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
GRF	**Grafenberg Arr**	**79.45**	**334**	*e*P	**P**	**13 08 26.2**	**-1.6**
GRF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
GRF	**Grafenberg Arr**	**79.45**	**334**	*e*P	**P**	**13 08 26.2**	**-1.6**
	comp=Z,5.0nm,0.9s,mb4.4						
TXAR	**Lajitas Array**	**81.20**	**58**	P	**P**	**13 08 37.0**	**-0.5**
	comp=Z,1.6nm,0.6s,mb4.2,baz=298,slow=4.2,SNR=11						
TXAR				pP	pP	13 08 52.9	+1.1
	comp=Z,3.2nm,0.7s,baz=304,slow=4.9,SNR=8.0						
PDKS	**Podkum**	**81.30**	**330**	*e*P	**P**	**13 08 38.6**	**+0.9**
BOJS	**Bojanci**	**81.68**	**329**	*e*P	**P**	**13 08 40.4**	**+0.8**
CDF	**Champ du Feu**	**81.80**	**335**	*e*P	**P**	**13 08 41.2**	**+1.0**
	comp=Z,9.8nm,0.8s,mb4.5						
CDF	**Champ du Feu**	**81.80**	**335**	*e*P	**P**	**13 08 41.2**	**+1.0**
CDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CABF	**La Chapelle**	**83.78**	**335**	*e*P	**P**	**13 08 51.5**	**+1.3**
LOR	**Lormes**	**83.83**	**337**	*e*P	**P**	**13 08 51.7**	**+1.2**
GRR	**Gorron**	**84.03**	**340**	*e*P	**P**	**13 08 52.9**	**+1.5**
SMF	**Signal de Mont**	**84.40**	**337**	*e*P	**P**	**13 08 54.6**	**+1.2**
AVF	**Avril sur Loir**	**84.41**	**337**	*e*P	**P**	**13 08 54.2**	**+0.8**
	comp=Z,4.7nm,0.7s,mb4.4						
AVF	**Avril sur Loir**	**84.41**	**337**	*e*P	**P**	**13 08 54.2**	**+0.8**
AVF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
SGMF	**Saint Gilles**	**84.55**	**341**	*e*P	**P**	**13 08 55.0**	**+0.9**
LPL	**La Plagne**	**84.56**	**334**	*e*P	**P**	**13 08 55.9**	**+1.7**
LPG	**La Plagne**	**84.58**	**334**	*e*P	**P**	**13 08 55.4**	**+1.1**
	comp=Z,7.8nm,0.7s,mb4.7						
LPG	**La Plagne**	**84.58**	**334**	*e*P	**P**	**13 08 55.4**	**+1.1**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
ROSF	**Rostrenen**	**84.64**	**342**	*e*P	**P**	**13 08 55.8**	**+1.3**
TCF	**Toulx Ste Croi**	**85.18**	**338**	*e*P	**P**	**13 08 58.2**	**+0.9**
MBDF	**Montbardon**	**85.26**	**334**	*e*P	**P**	**13 08 59.1**	**+1.4**
	comp=Z,3.6nm,0.5s,mb4.5						
MBDF	**Montbardon**	**85.26**	**334**	*e*P	**P**	**13 08 59.1**	**+1.4**
MBDF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.6						
ORIF	**Oris-en-Rattie**	**85.36**	**335**	*e*P	**P**	**13 08 59.5**	**+1.3**
	comp=Z,12nm,0.8s,mb4.7						
ORIF	**Oris-en-Rattie**	**85.36**	**335**	*e*P	**P**	**13 08 59.5**	**+1.3**
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
MFF	**Saint Martin d**	**85.51**	**339**	*e*P	**P**	**13 08 59.9**	**+1.0**
	comp=Z,19nm,1.1s,mb5.0						
MFF	**Saint Martin d**	**85.51**	**339**	*e*P	**P**	**13 08 59.9**	**+1.0**
MFF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.0						
VIVF	**Saint-Julien-l**	**85.79**	**335**	*e*P	**P**	**13 09 01.5**	**+1.2**
SBF	**Sospel**	**85.82**	**333**	*e*P	**P**	**13 09 01.7**	**+1.2**
SMRF	**Simiane la Rot**	**86.31**	**335**	*e*P	**P**	**13 09 04.2**	**+1.3**
FRF	**La Foret Royal**	**86.35**	**334**	*e*P	**P**	**13 09 04.1**	**+1.1**
SNAA	**Sanae**	**149.36**	**197**	PKPbc	PKPdf	13 16 08.7	+5.7
	comp=Z,0.3nm,0.8s,baz=180,slow=5.1,SNR=3.6						

MAN 21 13:16:05.2, 13.68N×119.92E, h30^{km}, mb4.2, ML3.0, MS2.7, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**1.02**	**100**	*e*P	Pn	13 16 22.1	-1.6
PGP				*e*S	Sn	13 16 22.1	-15
TGY	**Tagaytay City**	**1.07**	**67**	⇓*e*P	Pn	13 16 26.9	+2.5
TGY				*e*S	Sn	13 16 40.8	+2.5
ENPP	**El Nido**	**2.51**	**191**	*e*P	Pn	13 16 45.0	0.0
BALP	**Baler**	**2.60**	**38**	*e*P	Pn	13 16 51.2	+4.9
CUYO	**Cuyo Island**	**3.01**	**159**	*e*P	Pn	13 16 49.6	-2.5

NEIC ***21*** *13:50:30.3±1.0, 51.59N×16.14E, h5^{km}, ML3.0(SZGRF), Error ellipse: s-maj=11.0km s-min=5.1km az=199.0*

IPEC ***21*** *13:50:30.7±0.3, 51.54N×16.04E, ML2.5/4, Error ellipse: s-maj=4.3km s-min=1.9km az=79.0*

PRU ***21*** *13:50:31.8, 51.52N×16.07E*

BGR ***21*** *13:50:32.4±0.7, 51.55N×15.98E, h1^{km}, ML3.0/11, Error ellipse: s-maj=7.8km s-min=4.4km az=165.0*

CSEM ***21*** *13:50:32.0±0.1, 51.51N×16.03E, h2^{km}, ML3.5/9, Error ellipse: s-maj=2.5km s-min=1.1km az=16.0*

WAR ***21*** *13:50:32.0, 51.54N×16.06E, h1^{km}, ML3.0, Mining Induced*

ISC 21 13:50:30.0±0.7, 51.52N±0.04×16.00E±0.03, n41, σ1^{s}08/84, 1C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**165**	*e*PG	**Pg**	**13 50 45.0**	**+1.1**
KSP				*e*SG	**Sg**	**13 50 54.0**	**+0.7**
KSP	**Ksiaz**	**0.70**	**165**	⇓*i*Pg	**Pg**	**13 50 45.0**	**+1.1**
KSP				*e*Sg	**Sg**	**13 50 54.4**	**+1.1**
UPC	**Upice**	**1.01**	**180**	*e*PG	**Pg**	**13 50 50.8**	**+0.6**
DPC	**Dobruska-Polom**	**1.19**	**170**	*e*PG	**Pg**	**13 50 53.7**	**0.0**
DPC				*e*SG	**Sg**	**13 51 09.4**	**-0.1**
	109nm,0.6s						
PVCC	**Panska Ves**	**1.34**	**223**	*e*PG	**Pg**	**13 50 57.3**	**+0.5**
BRG	**Berggiesshubel**	**1.45**	**244**	*e*Pg	**Pg**	**13 50 59.3**	**+0.4**
BRG				*e*Sg	**Sg**	**13 51 19.7**	**+1.5**
BRG	**Berggiesshubel**	**1.45**	**244**	Pg	**Pg**	**13 50 59.4**	**+0.5**
BRG				Sg	**Sg**	**13 51 19.7**	**+1.5**
BRG	**Berggiesshubel**	**1.45**	**244**	Pg	**Pg**	**13 50 59.4**	**+0.5**
BRG				Sg	**Sg**	**13 51 19.7**	**+1.5**
FBE	**Freiberg**	**1.77**	**251**	Pg	**Pg**	**13 51 05.4**	**+0.1**
FBE				Sg	**Sg**	**13 51 29.2**	**+0.3**
PRU	**Pruhonice**	**1.79**	**212**	*e*PN	**Pn**	**13 51 03.1**	**+0.7**
PRU				*e*PG	**Pg**	**13 51 04.9**	**-0.8**
PRU				*e*SG	**Sg**	**13 51 28.8**	**-0.8**
	51nm,0.3s						
CLL	**Collm**	**1.89**	**265**	*e*Pn	**Pn**	**13 51 04.1**	**+0.3**
CLL				*e*Sg	**Sg**	**13 51 32.5**	**-0.5**
CLL	**Collm**	**1.89**	**265**	*i* Pn	**Pn**	**13 51 04.1**	**+0.3**
CLL				*e*Pg	**Pg**	**13 51 07.0**	**-0.8**
CLL				*i* Sg	**Sg**	**13 51 33.4**	**+0.4**
CLL	**Collm**	**1.89**	**265**	*i* PN	**Pn**	**13 51 04.1**	**+0.3**
	logA/T=1.4						
CLL				*e*PG	**Pg**	**13 51 07.0**	**-0.8**
CLL				*e*		13 51 10.0	
CLL				*i* SG	**Sg**	**13 51 33.4**	**+0.4**
CLL	**Collm**	**1.89**	**265**	*e*Pg	**Pg**	**13 51 07.0**	**-0.8**
CLL				Sg	**Sg**	**13 51 32.5**	**-0.5**
MORC	**Moravsky Berou**	**2.00**	**150**	*e*Pn	**Pn**	**13 51 05.1**	**-0.2**
MORC	**Moravsky Berou**	**2.00**	**150**	*e*Pn	**Pn**	**13 51 05.1**	**-0.3**
MORC				*e*Sg	**Sn**	**13 51 33.6**	**+2.1**
	33nm,0.3s						
RAC	**Raciborz**	**2.00**	**135**	*e*P	**Pn**	**13 51 09.0**	**+3.6**
RAC				*e*S	**Sn**	**13 51 35.0**	**+3.6**
OKC	**Ostrava-Krasne**	**2.16**	**140**	*e*PG	**Pg**	**13 51 11.6**	**-1.6**
OKC				*e*SG	**Sn**	**13 51 40.9**	**+5.2**
	34nm,0.6s						
VRAC	**Vranov**	**2.24**	**170**	*e*Pn	**Pn**	**13 51 09.4**	**+0.5**
VRAC				*e*Sg	**Sn**	**13 51 41.1**	**+3.4**
	22nm,0.3s						
KRUC	**Moravsky**	**2.47**	**174**	*e*Pn	**Pn**	**13 51 12.9**	**+0.8**
KRUC				*e*Sg	**Sn**	**13 51 48.2**	**+4.7**
	19nm,0.3s						

TANN	**Tannenbergstha**	**2.50**	**245**	*e*Pn	**Pn**	**13 51 13.1**	**+0.6**
TANN				*e*Sg	**Sn**	**13 51 52.1**	**+7.9**
WERD	**Werda**	**2.57**	**247**	*e*Pn	**Pn**	**13 51 13.7**	**+0.1**
WERD				*e*Sg	**Sg**	**13 51 55.2**	**-0.3**
GUNZ	**Gunzen**	**2.59**	**245**	*e*Pn	**Pn**	**13 51 14.4**	**+0.5**
GUNZ				*e*Sg	**Sg**	**13 51 55.4**	**-1.0**
NKC	**Novy Kostel**	**2.59**	**242**	*e*PN	**Pn**	**13 51 15.0**	**+1.1**
NKC				*e*PG	**Pg**	**13 51 20.7**	**-1.1**
NKC				*e*SG	**Sg**	**13 51 56.5**	**+0.2**
	54nm,0.3s						
OJC	**Ojcow**	**2.73**	**117**	*e*PN	**Pn**	**13 51 14.0**	**-1.9**
OJC				*i* PG	**Pg**	**13 51 23.5**	**-1.0**
OJC				*e*SN	**Sn**	**13 51 45.5**	**-4.6**
OJC				*e*SG	**Sg**	**13 51 59.5**	**-1.5**
OJC	**Ojcow**	**2.73**	**117**	*e*Pn	**Pn**	**13 51 13.8**	**-2.1**
OJC				*e*Pg	**Pg**	**13 51 23.5**	**-1.0**
OJC				*e*Sn	**Sn**	**13 51 45.5**	**-4.6**
OJC				*e*Sg	**Sg**	**13 51 59.1**	**-1.9**
KHC	**Kasperske Hory**	**2.85**	**214**	*e*PN	**Pn**	**13 51 18.0**	**+0.4**
KHC				*e*PG	**Pg**	**13 51 23.8**	**-3.1**
KHC				*e*SN	**Sn**	**13 51 52.8**	**-0.3**
KHC				*e*SG	**Sg**	**13 52 04.0**	**-0.9**
	23nm,0.6s						
MOX	**Moxa**	**2.90**	**254**	*e*Pn	**Pn**	**13 51 18.6**	**+0.3**
MOX				*e*Sg	**Sg**	**13 52 04.5**	**-2.1**
MOX	**Moxa**	**2.90**	**254**	*e*Pn	**Pn**	**13 51 18.5**	**+0.2**
MOX				*e*Pg	**Pg**	**13 51 26.9**	**-1.0**
MOX				*e*Sg	**Sg**	**13 52 06.4**	**-0.2**
MOX	**Moxa**	**2.90**	**254**	*i* P	**Pn**	**13 51 18.5**	**+0.2**
MOX				Pg	**Pg**	**13 51 27.0**	**-0.9**
MOX				Sg	**Sg**	**13 52 06.0**	**-0.6**
MOX	**Moxa**	**2.90**	**254**	*e*Pg	**Pg**	**13 51 26.9**	**-1.0**
MOX				Sg	**Sg**	**13 52 04.5**	**-2.1**
NOTT	**Nottersdorf**	**3.00**	**237**	*e*Pn	**Pn**	**13 51 20.8**	**+1.0**
GEC2	**GERESS Array S**	**3.06**	**210**	*e*Pn	**Pn**	**13 51 21.6**	**+1.1**
GEC2				*e*Sg	**Sn**	**13 52 09.2**	**+11**
GEC2	**GERESS Array S**	**3.06**	**210**	*e*Pn	**Pn**	**13 51 21.6**	**+1.1**
GEC2				*e*Sg	**Sn**	**13 52 09.2**	**+11**
WET	**Wettzell**	**3.11**	**221**	*e*Pn	**Pn**	**13 51 22.0**	**+0.7**
WET	**Wettzell**	**3.11**	**221**	*e*Pn	**Pn**	**13 51 22.0**	**+0.8**
SMOL	**Smolenice**	**3.14**	**162**	*e*SG	**Sg**	**13 52 10.7**	**-3.9**
VYHS	**Vyhne**	**3.53**	**148**	*e*SG	**Sg**	**13 52 26.0**	**-1.7**
GRA1	**Grafenberg Arr**	**3.55**	**241**	Sg	**Sg**	**13 52 25.3**	**-3.0**
GRF	**Grafenberg Arr**	**3.55**	**241**	*e*Sg	**Sg**	**13 52 25.3**	**-3.0**
MOA	**Molln**	**3.84**	**198**	⇑*i*PN	**Pn**	**13 51 32.1**	**+0.5**
MOA				*i* SG	**Sn**	**13 52 35.5**	**+17**
	26nm,0.7s						

NEIC 21 14:22:30.9, 54.17N×162.42W, h11^{km}, ML3.8(AEIC), After AEIC., Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRIA	**Deer Island**	**0.80**	**7**	P	Pb	14 22 45.2	-1.0
FALS	**False Pass**	**0.90**	**320**	P	Pb	14 22 46.7	-1.3
FALS				S	Sb	14 22 58.6	-1.0
DT1	**Dutton Round H**	**0.94**	**5**	P	Pb	14 22 47.4	-1.3
DT1				S	Sb	14 22 59.2	-1.7
DTNA	**Dutton South F**	**0.98**	**6**	P	Pb	14 22 48.2	-1.2
DTNA				S	Sb	14 23 01.8	-0.4
DOL	**Dolgoi Island**	**1.03**	**18**	P	Pb	14 22 48.7	-1.5
DOL				S	Sb	14 23 02.9	-0.6
BALA	**Baldy Mountain**	**1.04**	**349**	P	Pb	14 22 50.2	-0.3
BALA				S	Sb	14 23 04.2	+0.2
SSLS	**Shishaldin Sou**	**1.07**	**301**	P	Pb	14 22 50.0	-0.9
SSLS				S	Sb	14 23 02.7	-1.9
SSLN	**Shishaldin Nor**	**1.12**	**306**	P	Pb	14 22 50.6	-1.1
SSLW	**Shishaldin Wes**	**1.16**	**302**	P	Pb	14 22 51.0	-1.5
HAG	**Hague Volcano**	**1.19**	**14**	P	Pb	14 22 51.9	-1.0
PVV	**Pavlof Volcano**	**1.26**	**17**	P	Pb	14 22 52.2	-1.9
PS1A	**Pavlof South-1**	**1.31**	**17**	P	Pb	14 22 53.6	-1.5
PN6	**Pavlof North-6**	**1.31**	**13**	P	Pb	14 22 54.9	-0.2
WESN	**West Dahl Nort**	**1.32**	**288**	P	Pb	14 22 53.2	-2.0
WTUG	**Tugumak**	**1.33**	**301**	P	Pb	14 22 53.8	-1.6
WESS	**West Dahl Sout**	**1.38**	**284**	P	Pn	14 22 53.7	-2.4
WESS				S	Sb	14 23 10.2	-3.5
BLHA	**Black Hill**	**1.55**	**7**	P	Pn	14 22 57.9	-0.6
SDPT	**Sand Point**	**1.63**	**43**	P	Pn	14 22 58.4	-1.3
SDPT				S	Sn	14 23 18.8	-2.0
AKA	**Akutan**	**1.97**	**270**	P	Pn	14 23 02.7	-1.8
AKA				S	Sn	14 23 27.1	-2.3
AKUT	**Akutan**	**1.97**	**270**	P	Pn	14 23 01.6	-3.0
AKUT				S	Sn	14 23 26.8	-2.6
AKGG	**Akutan Green G**	**2.10**	**272**	P	Pn	14 23 03.9	-2.5
AKGG				S	Sn	14 23 29.5	-3.2
LVA	**Lava Point**	**2.12**	**271**	P	Pn	14 23 04.6	-2.2
UNV	**Unalaska Valle**	**2.43**	**264**	P	Pn	14 23 07.8	-3.3
UNV				S	Sn	14 23 37.0	-4.2
MTBL	**Makushin Table**	**2.52**	**267**	P	Pn	14 23 09.6	-2.8
MTBL				S	Sn	14 23 42.3	-1.0
MNAT	**Makushin Natee**	**2.53**	**265**	P	Pn	14 23 09.3	-3.3
MSW	**Makushin Switc**	**2.58**	**266**	P	Pn	14 23 11.4	-1.9
MSW				S	Sn	14 23 42.4	-2.6
OKCD	**Okmok Cone D**	**3.46**	**260**	P	Pn	14 23 24.0	-1.8
KJL	**Kejulik**	**5.46**	**42**	P	Pn	14 23 51.0	-3.2
CAHL	**Cahill**	**5.57**	**43**	P	Pn	14 23 52.9	-2.8

NEIC 21 14:54:08.5, 54.21N×162.47W, h6^{km}, ML3.5(AEIC), After AEIC., Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRIA	**Deer Island**	**0.77**	**9**	P	Pg	14 54 22.9	-1.0
DRIA				S	Sg	14 54 34.0	-0.2
FALS	**False Pass**	**0.85**	**320**	P	Pb	14 54 24.3	-1.0
FALS				S	Sb	14 54 36.4	-0.5
DT1	**Dutton Round H**	**0.91**	**7**	P	Pb	14 54 25.0	-1.3
DT1				S	Sb	14 54 37.6	-0.9
DTNA	**Dutton South F**	**0.95**	**8**	P	Pb	14 54 25.8	-1.3
DTNA				S	Sb	14 54 39.4	-0.3
BALA	**Baldy Mountain**	**1.00**	**350**	P	Pb	14 54 27.9	-0.1
DOL	**Dolgoi Island**	**1.01**	**20**	P	Pb	14 54 26.4	-1.6
DOL				S	Sb	14 54 43.0	+1.7
SSLS	**Shishaldin Sou**	**1.02**	**300**	P	Pb	14 54 27.5	-0.8
SSLS				S	Sb	14 54 41.6	-0.2
SSLN	**Shishaldin Nor**	**1.07**	**305**	P	Pb	14 54 28.5	-0.7
SSLN				S	Sb	14 54 43.0	-0.3
SSLW	**Shishaldin Wes**	**1.11**	**301**	P	Pb	14 54 28.5	-1.3
SSLW				S	Sb	14 54 43.5	-0.9
HAG	**Hague Volcano**	**1.16**	**16**	P	Pb	14 54 29.5	-1.1
HAG				S	Sb	14 54 45.8	0.0
PVV	**Pavlof Volcano**	**1.23**	**18**	P	Pb	14 54 30.4	-1.5
WESN	**West Dahl Nort**	**1.29**	**287**	P	Pb	14 54 31.1	-1.7
WESN				S	Sb	14 54 49.4	0.0
WTUG	**Tugumak**	**1.29**	**301**	P	Pb	14 54 31.3	-1.4
PN6	**Pavlof North-6**	**1.29**	**14**	P	Pb	14 54 32.8	0.0
PN6				S	Sb	14 54 49.2	-0.3
WESS	**West Dahl Sout**	**1.34**	**283**	P	Pb	14 54 31.4	-2.4
WESS				S	Sb	14 54 50.7	-0.4
WPOG	**Pogromni**	**1.38**	**287**	P	Pb	14 54 32.3	-2.1
WPOG				S	Sb	14 54 51.4	-0.9
WFAR	**Faris Peak**	**1.39**	**285**	P	Pb	14 54 32.6	-1.9
BLHA	**Black Hill**	**1.52**	**9**	P	Pn	14 54 35.6	-0.7
SDPT	**Sand Point**	**1.63**	**44**	P	Pn	14 54 36.3	-1.6
SDPT				S	Sb	14 54 56.8	-2.5
AKA	**Akutan**	**1.94**	**269**	P	Pn	14 54 40.2	-2.2
AKA				S	Sn	14 55 04.7	-2.7
AKUT	**Akutan**	**1.94**	**269**	P	Pn	14 54 40.6	-1.8
AKUT				S	Sn	14 55 04.3	-3.1
AHB	**Akutan Harbor**	**1.97**	**269**	P	Pn	14 54 40.9	-1.9
AKLV	**Akutan Long Va**	**2.05**	**270**	P	Pn	14 54 41.8	-2.1
AKLV				S	Sn	14 55 07.2	-2.9
AKGG	**Akutan Green G**	**2.07**	**271**	P	Pn	14 54 41.8	-2.4
AKGG				S	Sn	14 55 08.2	-2.4
LVA	**Lava Point**	**2.09**	**270**	P	Pn	14 54 42.5	-2.1
UNV	**Unalaska Valle**	**2.40**	**263**	P	Pn	14 54 46.1	-3.0
UNV				S	Sn	14 55 15.4	-3.7
MTBL	**Makushin Table**	**2.49**	**266**	P	Pn	14 54 47.9	-2.4
MTBL				S	Sn	14 55 18.1	-3.3
MNAT	**Makushin Natee**	**2.50**	**264**	P	Pn	14 54 47.5	-2.9
MNAT				S	Sn	14 55 18.5	-3.2
MSW	**Makushin Switc**	**2.56**	**265**	P	Pn	14 54 48.2	-3.0
MSW				S	Sn	14 55 20.0	-3.1
SPIA	**Saint Paul Isl**	**5.31**	**307**	P	Pn	14 55 25.9	-4.4
CAHL	**Cahill**	**5.56**	**43**	P	Pn	14 55 30.7	-3.1
RSO	**Redoubt South**	**8.18**	**36**	P	P	14 56 08.9	-1.7

MAN 21 15:17:42.9, 17.81N×120.37E, h8^{km}, mb3.7, ML2.4, MS1.9, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.36**	**116**	*e*P	Pg	15 17 52.4	+2.1
APYP	**Conner**	**0.83**	**86**	*e*P	Pb	15 17 57.9	-1.3
APYP				*e*S	Sb	15 18 09.7	-0.6
CVP	**Callao Caves**	**1.39**	**94**	⇑*i*P	Pn	15 18 07.0	-1.6
BCPH	**Baguio City Da**	**1.44**	**172**	⇑*e*P	Pn	15 18 08.2	-1.2
BCPH				*e*S	Sb	15 18 27.4	-0.4
CAUP	**Cauayan**	**1.63**	**122**	*e*P	Pn	15 18 12.2	+0.1
BALP	**Baler**	**2.36**	**151**	*e*P	Pn	15 18 22.7	+0.1

BJI ***21*** *15:23:34.2, 0.62N×124.89E, h251^{km}, mB4.7, mb4.5*
MOS ***21*** *15:23:41.7±1.1, 1.64N×124.68E, h255^{km}, mb4.6/18, Error ellipse: s-maj=16.6km s-min=7.4km az=108.9*
NEIC ***21*** *15:23:43.1±1.1, 1.58N×124.64E, h252^{km}±11^{km}, mb4.7/29, Error ellipse: s-maj=8.0km s-min=4.0km az=66.0*
IDC ***21*** *15:23:44.9±2.2, 1.51N×124.60E, h271^{km}±22^{km}, mb4.2/15, mb1 4.3/16, mb1mx4.2/20, mbtmp4.9/16, Error ellipse: s-maj=17.1km s-min=6.6km az=77.0*

ISC 21 15:23:41.8±0.9, 1.57N±0.04×124.66E±0.06, h254^{km}±9^{km}, h251^{km}±3.5^{km}:pP-P, n100, σ1^{s}00/113, mb4.6/57, 1C-13D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**8.20**	**6**	*e*P	**P**	**15 25 38.5**	**+0.1**
KKM	**Kota Kinabalu**	**9.53**	**298**	⇑*e*Pn	**P**	**15 25 55.4**	**+0.2**
KSM	**Kuching**	**14.35**	**270**	*e*Pn	**P**	**15 26 56.0**	**+0.5**
KAKA	**Kakadu**	**16.15**	**152**	⇓*i*P	**P**	**15 27 15.0**	**-1.8**
	60nm,0.8s						
KAKA				*e*S	**S**	**15 30 03.8**	**-4.5**
FITZ	**Fitzroy Crossi**	**19.57**	**177**	*e*P	**P**	**15 27 51.2**	**-1.1**
	9.2nm,0.3s						
FITZ				*i*		15 27 54.7	
FITZ				*e*S	**S**	**15 31 16.4**	**+1.9**
FITZ	**Fitzroy Crossi**	**19.57**	**177**	P	**P**	**15 27 51.2**	**-1.1**
	22nm,0.3s,baz=6.4,slow=8.3,SNR=38						
FITZ				S	**S**	**15 31 17.5**	**+3.0**
	0.9nm,0.3s,baz=178,slow=21,SNR=7.7						
QIZ	**Qiongzhong**	**22.62**	**321**	P	**P**	**15 28 23.6**	**+1.2**
QIZ				XP		15 29 38.4	
QIZ				S	**S**	**15 32 11.9**	**+3.6**
QIZ				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.4						
MBWA	**Marble Bar**	**23.10**	**192**	*e*P	**P**	**15 28 26.7**	**-0.1**
	comp=Z,50nm,0.6s,mb5.2						
YHNB	**Yeheng**	**23.18**	**352**	*e*P	**P**	**15 28 27.1**	**-0.5**
WRAB	**Tennant Creek**	**23.39**	**156**	⇓*i*P	**P**	**15 28 29.2**	**-0.4**
WRAB				*e*S	**S**	**15 32 20.5**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,176nm,0.5s						
WRAB	**Tennant Creek**	**23.39**	**156**	⇓*i*P	**P**	**15 28 29.2**	**-0.4**
	comp=Z,176nm,0.5s						
WRAB				*e*S	**S**	**15 32 20.5**	**-0.6**
WRA	**Warramunga Arr**	**23.39**	**157**	P	**P**	**15 28 29.2**	**-0.4**
	comp=Z,201nm,0.9s,mb5.7,baz=335,slow=9.9,SNR=488						
WRA				S	**S**	**15 32 22.1**	**+0.9**
	comp=Z,16nm,0.7s,baz=338,slow=16,SNR=13						
WB2	**Warramunga Arr**	**23.40**	**156**	⇓*i*P	**P**	**15 28 29.4**	**-0.2**
WB2				*i* PCS		15 32 22.2	
WB2				*i* S	**S**	**15 32 29.7**	**+8.5**
QZH	**Quanzhou**	**23.96**	**346**	P	**P**	**15 28 38.3**	**+3.4**
QZH				AMB	AMB		
	comp=Z,90nm,0.7s,mb5.5						
KULM	**Kulim**	**24.25**	**279**	*e*P	**P**	**15 28 37.3**	**-0.4**
PMG	**Port Moresby**	**24.92**	**116**	*e*P	**P**	**15 28 43.5**	**-0.3**
PMG				pmax	pmax		
	comp=Z,59nm,0.9s						
PMG	**Port Moresby**	**24.92**	**116**	P	**P**	**15 28 44.5**	**+0.7**
	comp=Z,47nm,0.8s,mb5.2,baz=296,slow=4.9,SNR=18						
PMG	**Port Moresby**	**24.92**	**116**	*e*P	**P**	**15 28 43.5**	**-0.4**
	comp=Z,60nm,0.9s,mb5.2						
JOW	**Kunigami**	**25.36**	**8**	P	**P**	**15 28 48.6**	**+0.9**
	comp=Z,22nm,0.5s,mb5.0,baz=194,slow=11,SNR=7.7						
CTA	**Charters Tower**	**30.19**	**137**	*e*P	**P**	**15 29 31.2**	**+0.1**
	comp=Z,8.6nm,1.0s,mb4.3						
CTA	**Charters Tower**	**30.19**	**137**	*e*P	**P**	**15 29 31.2**	**+0.1**
CTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CTAO	**Charters Tower**	**30.19**	**137**	*e*P	**P**	**15 29 30.8**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.6						
CTAO	**Charters Tower**	**30.19**	**137**	*e*P	**P**	**15 29 30.8**	**-0.2**
	comp=Z,17nm,1.0s,mb4.6						
GYA	**Guiyang**	**30.19**	**327**	*e*P	**P**	**15 29 31.5**	**+0.5**
GYA				AP	pP	15 30 21.8	+0.5
GYA				XP	sP	15 30 51.3	+0.5
GYA				S	**S**	**15 34 08.1**	**-2.3**
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,80nm,2.9s,mb4.8						
CMAR	**Chiang Mai Arr**	**30.30**	**305**	P	**P**	**15 29 32.0**	**+0.1**
	comp=Z,1.5nm,1.0s,mb3.6,baz=128,slow=7.8,SNR=5.5						
CMAR				ScP		15 35 46.8	
	comp=Z,1.7nm,1.1s,baz=172,slow=1.8,SNR=5.1						
KMI	**Kunming**	**31.56**	**320**	P	**P**	**15 29 44.0**	**+1.1**
FORT	**Forrest**	**32.33**	**175**	⇓*i*P	**P**	**15 29 49.0**	**-0.5**
	comp=Z,62nm,0.5s,mb5.4						
KLBR	**Kellerberrin**	**33.62**	**191**	⇓*i*P	**P**	**15 29 59.8**	**-0.7**
	comp=Z,31nm,0.5s,mb5.1						
MUN	**Mundaring**	**34.31**	**193**	⇓*i*P	**P**	**15 30 06.0**	**-0.4**
	comp=Z,33nm,0.5s,mb5.1						
MUN	**Mundaring**	**34.31**	**193**	⇓*i*P	**P**	**15 30 06.0**	**-0.4**
MUN				pmax	pmax		
	comp=Z,33nm,0.5s,mb5.1						
NWAO	**Narrogin (SRO)**	**35.02**	**191**	P	**P**	**15 30 12.2**	**-0.1**
	comp=Z,15nm,0.4s,mb4.9,baz=22,slow=7.3,SNR=46						
STKA	**Stephens Creek**	**36.94**	**156**	⇓*i*P	**P**	**15 30 28.9**	**+0.4**
	comp=Z,30nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**36.94**	**156**	P	**P**	**15 30 29.0**	**+0.5**
	comp=Z,29nm,0.6s,mb5.0,baz=324,slow=7.9,SNR=80						
MAJO	**Matsushiro**	**36.99**	**18**	*e*P	**P**	**15 30 28.4**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,22nm,0.7s,mb4.8						
MAJO	**Matsushiro**	**36.99**	**18**	*e*P	**P**	**15 30 28.4**	**-0.5**
	comp=Z,22nm,0.7s,mb4.8						
MAT	**Matsushiro**	**36.99**	**18**	*e*P	**P**	**15 30 28.0**	**-0.8**
MAT				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.6						
MAT	**Matsushiro**	**36.99**	**18**	*e*P	**P**	**15 30 28.0**	**-0.8**
	comp=Z,17nm,0.8s,mb4.6						
MAT	**Matsushiro**	**36.99**	**18**	P	**P**	**15 30 28.2**	**-0.6**
MJAR	**Matsushiro Arr**	**36.99**	**18**	P	**P**	**15 30 28.5**	**-0.4**
	comp=Z,16nm,0.7s,mb4.7,baz=196,slow=9.7,SNR=40						
LZH	**Lanzhou**	**39.39**	**333**	⇓P	**P**	**15 30 50.5**	**+1.8**
LZH				AMB	AMB		
	comp=Z,50nm,1.5s,mb4.8						
SNY	**Shenyang**	**40.09**	**359**	⇓P	**P**	**15 30 56.8**	**+2.4**
SNY				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.3						
HHC	**Hu-ho-hao-te**	**40.86**	**345**	*e*P	**P**	**15 31 01.8**	**+1.1**
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
HHC				AMB	AMB		
	comp=Z,120nm,6.1s						
HHC				LR	LR		
	comp=N,140nm,15.5s						
HHC				LR	LR		
	comp=E,170nm,7.4s						
HHC				LR	LR		
	comp=Z,90nm,14.9s						
CN2	**Changchun**	**42.06**	**1**	*e*P	**P**	**15 31 11.8**	**+1.4**
CN2				*e*AP	pP	15 32 05.0	+1.6
CN2				*e*S	**S**	**15 37 12.3**	**+2.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
LSA	**Lhasa**	**42.39**	**315**	*e*P	**P**	**15 31 14.9**	**+1.6**
LSA				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.4						
LSA	**Lhasa**	**42.39**	**315**	*e*P	**P**	**15 31 14.9**	**+1.7**
	comp=Z,22nm,1.4s,mb4.4						
MDJ	**Mudanjiang**	**43.09**	**5**	P	**P**	**15 31 19.6**	**+0.9**
MDJ				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,60nm,7.0s						
MDJ	**Mudanjiang**	**43.09**	**5**	*e*P	**P**	**15 31 18.9**	**+0.2**
	comp=Z,25nm,0.6s,mb4.8						
CNB	**Canberra Magne**	**43.36**	**150**	*e*P	**P**	**15 31 23.0**	**+2.0**
	comp=Z,26nm,0.8s,mb4.7						
TOO	**Toolangi**	**43.46**	**156**	⇓*i*P	**P**	**15 31 23.6**	**+1.8**
	comp=Z,43nm,0.9s,mb4.9						
TOO	**Toolangi**	**43.46**	**156**	⇓*i*P	**P**	**15 31 23.6**	**+1.8**
TOO				pmax	pmax		
	comp=Z,43nm,0.9s,mb4.9						
GTA	**Gaotai**	**43.95**	**332**	*e*P	**P**	**15 31 24.9**	**-0.8**
GTA				AP	pP	15 32 19.8	+0.8
GTA				XP	sP	15 32 48.8	+0.8
GTA				PCP	PcP	15 33 01.9	-5.3
GTA				PP	PP	15 33 14.3	+2.0
GTA				S	**S**	**15 37 38.3**	**+0.8**
GTA				XS		15 39 13.8	
GTA				SCS	ScS	15 40 57.0	+2.7
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.1						
GTA				AMB	AMB		
	comp=Z,70nm,5.7s						
GTA				LR	LR		
	comp=N,100nm,13.7s						
GTA				LR	LR		
	comp=E,60nm,14.8s						
GTA				LR	LR		
	comp=Z,90nm,14.8s						
ASAJ	**Asahikawa**	**45.26**	**18**	P	**P**	**15 31 37.1**	**+1.2**
	comp=Z,4.3nm,0.4s,mb4.1,baz=232,slow=12,SNR=6.4						
GUN	**Gumba**	**45.39**	**309**	*e*P	**P**	**15 31 37.3**	**+0.1**
	comp=Z,36nm,0.7s,mb4.8						
PKI	**Pulchoki**	**45.60**	**308**	*e*P	**P**	**15 31 38.8**	**0.0**
	comp=Z,8.3nm,0.4s,mb4.4						
KKN	**Kakani**	**45.80**	**308**	*e*P	**P**	**15 31 40.0**	**-0.4**
	comp=Z,14nm,0.7s,mb4.4						
KKN	**Kakani**	**45.80**	**308**	*e*P	**P**	**15 31 40.0**	**-0.4**
KKN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.1						
DMN	**Daman**	**45.85**	**308**	*e*P	**P**	**15 31 40.7**	**-0.1**
	comp=Z,18nm,0.9s,mb4.4						
GKN	**Gorkha**	**46.40**	**308**	*e*P	**P**	**15 31 44.6**	**-0.5**
	comp=Z,15nm,0.7s,mb4.4						
KOLN	**Koldanda**	**47.12**	**307**	*e*P	**P**	**15 31 50.6**	**0.0**
	comp=Z,27nm,0.6s,mb4.8						
HIA	**Hailar**	**47.70**	**356**	*e*P	**P**	**15 31 54.7**	**-0.2**
HIA				pmax	pmax		
	comp=Z,25nm,1.2s						
HIA	**Hailar**	**47.70**	**356**	*e*P	**P**	**15 31 54.7**	**-0.2**
	comp=Z,25nm,1.2s,mb4.4						
KLR	**Kul’dur**	**47.87**	**6**	*e*P	**P**	**15 31 53.0**	**-3.2**
ULN	**Ulaanbaatar**	**48.57**	**344**	*e*P	**P**	**15 32 00.6**	**-0.9**
ULN				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.4						
ULN	**Ulaanbaatar**	**48.57**	**344**	*e*P	**P**	**15 32 00.6**	**-0.9**
	comp=Z,23nm,1.1s,mb4.4						
SONM	**Songino Array**	**48.73**	**344**	P	**P**	**15 32 03.0**	**+0.3**
	comp=Z,5.5nm,0.5s,mb4.1,baz=162,slow=7.8,SNR=7.8						
ZAK	**Zakamensk**	**51.91**	**343**	*e*P	**P**	**15 32 25.8**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.6						
IRK	**Irkutsk**	**53.30**	**345**	*e*P	**P**	**15 32 37.0**	**+0.4**
IRK				*e*	pP	15 33 28.2	-4.2
IRK				pmax	pmax		
	comp=Z,28nm,2.1s,mb4.3						
WMQ	**Urumqi**	**53.35**	**327**	P	**P**	**15 32 37.8**	**+0.7**
WMQ				AP	pP	15 33 33.8	+0.9
WMQ				XP	sP	15 34 01.6	+0.7
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,200nm,6.0s						
CLNS	**Chul’man**	**55.10**	**0**	*e*P	**P**	**15 32 47.2**	**-2.3**
CLNS				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.5						
CLNS				pmax	pmax		
	comp=N,13nm,1.0s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.8s						
BOD	**Bodaibo**	**56.72**	**353**	*e*P	**P**	**15 33 00.5**	**-0.5**
BOD				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.5						
MKAR	**Makanchi Array**	**58.18**	**327**	P	**P**	**15 33 10.7**	**-0.7**
	comp=Z,11nm,0.5s,mb4.8,baz=124,slow=7.6,SNR=188						
MKAR				PcP	PcP	15 33 59.3	-0.7
	comp=Z,1.5nm,0.5s,baz=116,slow=4.4,SNR=4.1						
KZA	**Kyzart**	**59.84**	**319**	P	**P**	**15 33 23.4**	**+0.6**
	SNR=13						
UCH	**Uchtor**	**60.40**	**319**	P	**P**	**15 33 27.4**	**+0.9**
	SNR=12						
YAK	**Yakutsk**	**60.43**	**3**	*e*P	**P**	**15 33 26.2**	**-0.3**
YAK				*e*S	**S**	**15 41 20.1**	**0.0**
YAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.2s						
YAK				smax			
	comp=N,8.0nm,1.2s						
YAK				smax			
	comp=E,5.0nm,1.1s						
YAK	**Yakutsk**	**60.43**	**3**	*e*P	**P**	**15 33 25.9**	**-0.6**
	comp=E,15nm,0.5s,mb4.9						
AAK	**Ala-Archa**	**60.60**	**319**	*e*P	**P**	**15 33 27.6**	**-0.3**
AAK				*e**PP	pP	15 34 24.8	-0.6
AAK				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.4						
AAK	**Ala-Archa**	**60.60**	**319**	*e*P	**P**	**15 33 27.6**	**-0.3**
	comp=Z,15nm,1.4s,mb4.4						
AAK				*e*pP	pP	15 34 24.8	-0.5
AML	**Almayashu**	**60.89**	**319**	P	**P**	**15 33 30.3**	**+0.4**
	SNR=18						
USP	**Ospenovka**	**60.90**	**320**	P	**P**	**15 33 29.6**	**-0.3**
	SNR=11						
EKS2	**Erkin-Say**	**61.08**	**319**	P	**P**	**15 33 31.3**	**+0.1**
	SNR=10.0						
MA2	**Magadan**	**61.30**	**15**	*e*P	**P**	**15 33 32.5**	**+0.1**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
MA2	**Magadan**	**61.30**	**15**	*e*P	**P**	**15 33 32.5**	**+0.1**
	comp=Z,9.8nm,0.6s,mb4.6						
ZAL	**Zalesovo**	**61.60**	**334**	P	**P**	**15 33 32.9**	**-1.6**
	comp=Z,4.6nm,0.3s,mb4.5,baz=2.9,slow=4.9,SNR=16						
NVS	**Novosibirsk**	**62.89**	**335**	*i* P	**P**	**15 33 40.2**	**-2.7**
NVS				*e*	pP	15 34 36.1	-4.7
NVS				*e*S	**S**	**15 41 47.5**	**-3.4**
NVS				*e*		15 42 59.0	
NVS				pmax	pmax		
	comp=N,11nm,0.9s						
NVS				pmax	pmax		
	comp=E,10.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.6						
NVS				smax			
	comp=N,7.0nm,1.7s						
NVS				smax			
	comp=E,12nm,1.7s						
KKAR	**Karatay Array**	**63.43**	**318**	*i* P	**P**	**15 33 45.5**	**-1.1**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
BVAR	**Borovoye Array**	**68.02**	**328**	P	**P**	**15 34 14.7**	**-0.9**
	comp=Z,3.4nm,0.3s,mb4.4,baz=121,slow=8.6,SNR=31						
ZRNK	**Zerenda**	**68.72**	**328**	*e*P	**P**	**15 34 18.8**	**-1.0**
ZRNK				pmax	pmax		
	comp=Z,29nm,0.4s,mb5.3						
ZRNK	**Zerenda**	**68.72**	**328**	*e*P	**P**	**15 34 18.8**	**-1.0**
	comp=Z,29nm,0.4s,mb5.3						
AB31	**Akbulak array**	**72.53**	**322**	*i* P	**P**	**15 34 42.0**	**-0.8**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
SVE	**Sverdlovsk**	**74.73**	**329**	*e*P	**P**	**15 34 55.0**	**-0.4**
SVE				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.5						
ARU	**Arti**	**75.66**	**328**	*e*P	**P**	**15 34 59.4**	**-1.3**
ARU	**Arti**	**75.66**	**328**	*e*P	**P**	**15 34 59.2**	**-1.5**
	comp=Z,19nm,1.0s,mb4.7						
MAW	**Mawson**	**81.03**	**200**	P	**P**	**15 35 30.4**	**+1.0**
	comp=Z,4.0nm,0.7s,mb4.2,baz=46,slow=2.9,SNR=7.8						
VNDA	**Vanda**	**81.56**	**172**	*e*P	**P**	**15 35 32.4**	**+0.4**
VNDA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VNDA	**Vanda**	**81.56**	**172**	P	**P**	**15 35 33.0**	**+0.9**
	comp=Z,4.6nm,0.6s,mb4.3,baz=313,slow=5.6,SNR=34						
VNDA	**Vanda**	**81.56**	**172**	*e*P	**P**	**15 35 32.4**	**+0.4**
	comp=Z,8.3nm,0.9s,mb4.4						
ILAR	**Eielson Array**	**87.93**	**25**	P	**P**	**15 36 03.9**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=251,slow=4.7,SNR=4.8						
ARCES	**ARCESS Array B**	**91.75**	**340**	P	**P**	**15 36 21.1**	**-0.3**

	comp=Z,0.9nm,0.4s,mb4.0,baz=82,slow=5.7,SNR=15						
KAF	Kangasniemi	92.54	332	ep	P	15 36 24.1	-1.1
FINES	FINESS Array B	92.74	332	P	P	15 36 27.5	+1.3
	comp=Z,1.1nm,0.5s,mb4.1,baz=56,slow=6.9,SNR=7.9						

*IDC **21** 15:56:01.7±0.6, 7.38N×94.13E, mb4.4/21, mb1 4.5/22, mb1mx4.5/25, mbtmp4.4/22, ML4.6/1, MS4.1/16, Ms1 4.1/16, ms1mx4.0/22, Error ellipse: s-maj=24.0km s-min=15.0km az=49.0*

*MOS **21** 15:56:04.4±0.8, 7.43N×94.35E, h33^{km}, mb5.0/16, Error ellipse: s-maj=19.7km s-min=9.5km az=104.4*

*BJI **21** 15:56:05.3, 7.30N×94.10E, h43^{km}, mB5.1, mb4.7, Ms4.7, Msz4.3*

*NEIC **21** 15:56:06.3±0.3, 7.50N×94.25E, h30^{km}, mb4.8/19, Error ellipse: s-maj=9.6km s-min=5.8km az=46.0*

ISC 21 15:56:04.5±0.3**, 7.44N**±0.04×**94.25E**±0.04**, h31^{km}, h31^{km}±.8^{km}:pP-P, n115, σ1^{s}.17**/119**, mb4.7**/60**, MS4.2**/32**, 7C-3D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNG	Songkhla	6.32	92	P	Pn	15 57 37.0	-1.1
	240nm,0.8s						
KULM	Kulim	6.71	108	⇓ePn	Pn	15 57 41.8	-1.8
KULM				eSn	Sn	15 58 52.9	-6.8
IPM	Ipoh	7.31	112	P	Pn	15 57 50.3	-1.7
NNT	Nongplab	7.44	46	P	Pn	15 57 52.0	-1.8
NST	Nakhon Sawan	10.01	35	P	P	15 58 26.0	-3.5
	57nm,0.4s						
KGM	Kluang	10.52	120	P	P	15 58 34.3	-2.2
CM31	Chiang Mai Arr	11.87	22	ePn	P	15 58 53.5	-1.2
	6.0nm,0.3s						
CM31				eSn	S	16 01 07.1	0.0
CMAR	Chiang Mai Arr	11.87	22	iP	P	15 58 54.6	-0.2
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
CMAR	Chiang Mai Arr	11.87	22	Pn	P	15 58 54.5	-0.2
	comp=Z,1.2nm,0.3s,baz=214,slow=14,SNR=32						
CMAR				LR	LR	16 03 35.4	
	comp=Z,776nm,19.4s,baz=205,slow=38						
VIS	Vishakhapatnam	14.76	315	iP	P	15 59 30.7	-2.4
VIS				iS	S	16 02 00.6	-16
KSM	Kuching	17.06	110	eP	P	16 00 04.5	+1.9
HYB	Hyderabad	18.24	304	iP	P	16 00 19.0	+1.6
QIZ	Qiongzhong	19.03	51	eP	P	16 00 28.0	+1.1
QIZ				XP		16 00 40.5	
QIZ				S	S	16 04 01.8	+7.2
QIZ				AMB	AMB		
	comp=Z,20nm,1.6s						
QIZ				LR	LR		
	comp=N,2µm,12.3s						
QIZ				LR	LR		
	comp=E,860nm,12.7s						
QIZ				LR	LR		
	comp=Z,660nm,11.8s						
KMI	Kunming	19.37	24	P	P	16 00 33.1	+2.4
KMI				PP	PP	16 00 50.6	+2.5
KMI				S	S	16 04 09.3	+7.3
KMI				XS		16 04 20.8	
KMI				SS	SS	16 04 37.6	+9.3
KMI				AMB	AMB		
	comp=Z,20nm,1.6s						
KMI				AMB	AMB		
	comp=Z,160nm,3.4s						
KMI				LR	LR		
	comp=N,670nm,13.5s						
KMI				LR	LR		
	comp=E,740nm,15.9s						
KMI				LR	LR		
	comp=Z,520nm,19.8s						
PKI	Pulchoki	21.71	338	eP	P	16 00 53.7	-1.4
	comp=Z,159nm,1.2s,mb5.3						
GUN	Gumba	21.85	340	eP	P	16 00 55.2	-1.3
	comp=Z,282nm,1.3s,mb5.5						
DMN	Daman	21.85	338	eP	P	16 00 55.9	-0.6
	comp=Z,117nm,0.9s,mb5.3						
KKM	Kota Kinabalu	21.86	92	eP	P	16 00 55.2	-1.5
KKM	Kota Kinabalu	21.86	92	P	P	16 01 00.7	+4.1
KKN	Kakani	21.95	338	eP	P	16 00 56.6	-0.9
	comp=Z,110nm,1.0s,mb5.2						
GYA	Guiyang	22.30	31	P	P	16 01 02.1	+1.1
GYA				AP		16 01 11.4	
GYA				XP		16 01 15.0	
GYA				S	S	16 05 08.5	+9.1
GYA				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.3						
GYA				AMB	AMB		
	comp=Z,170nm,2.8s,mb5.0						
GYA				LR	LR		
	comp=N,570nm,13.2s,MS4.3						
GYA				LR	LR		
	comp=E,560nm,12.3s,MS4.3						
GYA				LR	LR		
	comp=Z,570nm,12.6s,MS4.2						
LSA	Lhasa	22.34	353	P	P	16 01 02.0	+0.7
LSA	Lhasa	22.34	353	eP	P	16 01 00.3	-1.0
	comp=Z,31nm,0.8s,mb4.8						
GKN	Gorkha	22.39	337	eP	P	16 01 00.8	-1.0
	comp=Z,77nm,0.9s,mb5.2						
KOLN	Koldanda	22.60	335	eP	P	16 01 03.8	-0.2
	comp=Z,186nm,1.3s,mb5.4						
TSM	Tawau	23.70	96	P	P	16 01 17.0	+2.2
CD2	Chengdu	24.99	20	P	P	16 01 27.8	+0.6
CD2				LR	LR		
	comp=N,770nm,13.7s						
CD2				LR	LR		
	comp=Z,770nm,11.4s,MS4.5						
NDI	New Delhi	26.55	325	eP	P	16 01 41.0	-0.7
QZH	Quanzhou	29.05	50	eP	P	16 02 05.8	+1.4
QZH				S	S	16 06 54.6	+2.2
QZH				LR	LR		
	comp=N,3µm,16.6s						
QZH				LR	LR		
	comp=E,730nm,11.3s						
QZH				LR	LR		
	comp=Z,2µm,11.2s						
WHN	Wuhan	29.71	37	⇑P	P	16 02 12.5	+2.2
XAN	Xi’an	29.74	25	P	P	16 02 09.9	-0.6
XAN				AP	pP	16 02 18.3	-1.3
LZH	Lanzhou	29.83	16	eP	P	16 02 10.8	-0.5
LZH				AP	pP	16 02 19.6	-0.9
LZH				XP	sP	16 02 23.8	-0.8
LZH				S	S	16 07 14.6	+10
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,270nm,4.0s						
LZH				LR	LR		
	comp=E,970nm,15.0s						
LZH				LR	LR		
	comp=Z,770nm,15.8s,MS4.4						
GTA	Gaotai	32.22	8	eP	P	16 02 32.0	-0.3
GTA				AP	pP	16 02 41.3	-0.2
GTA				PP	PP	16 03 40.5	+0.7
GTA				S	S	16 07 44.5	+2.3
GTA				XS		16 07 59.5	
GTA				SS	SS	16 09 42.1	+5.0
GTA				AMB	AMB		
	comp=Z,120nm,7.6s						
GTA				LR	LR		
	comp=N,300nm,22.1s,MS4.0						
GTA				LR	LR		
	comp=E,210nm,19.4s,MS4.0						
GTA				LR	LR		
	comp=Z,380nm,18.6s,MS4.1						
SSE	Sheshan	34.46	43	P	P	16 02 49.4	-2.4
SSE				PP	PP	16 04 08.1	+0.1
SSE				PCP	PcP	16 05 23.1	-3.7
SSE				S	S	16 08 17.8	+0.8
SSE				SCP		16 09 05.4	
SSE				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
SSE				AMB	AMB		
	comp=Z,90nm,3.2s						
SSE				LR	LR		
	comp=N,180nm,23.7s,MS4.0						
SSE				LR	LR		
	comp=E,260nm,23.7s,MS4.0						
SSE				LR	LR		
	comp=Z,180nm,22.5s,MS3.8						
HHC	Hu-ho-hao-te	36.68	22	eP	P	16 03 13.5	+3.0
HHC				AP	pP	16 03 23.3	+3.6
HHC				XP	sP	16 03 26.4	+2.7
HHC				PP	PP	16 04 41.4	+5.7
HHC				S	S	16 08 55.9	+4.8
HHC				XS		16 09 11.3	
HHC				SS	SS	16 11 24.5	+5.6
HHC				SCS	ScS	16 13 23.3	+1.7
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
HHC				AMB	AMB		
	comp=Z,90nm,7.9s						
HHC				LR	LR		
	comp=N,450nm,17.1s,MS4.6						
HHC				LR	LR		
	comp=E,610nm,15.1s,MS4.6						
HHC				LR	LR		
	comp=Z,420nm,19.1s,MS4.2						
WMQ	Urumqi	36.69	352	eP	P	16 03 11.0	+0.5
WMQ				AP	pP	16 03 20.8	+1.0
WMQ				XP	sP	16 03 24.6	+0.8
WMQ				PP	PP	16 04 36.4	+0.6
WMQ				PCP	PcP	16 05 34.0	+0.8
WMQ				S	S	16 08 51.8	+0.5
WMQ				SS	SS	16 11 19.8	+0.6
WMQ				SCS	ScS	16 13 22.0	+0.3
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,70nm,3.0s						
WMQ				LR	LR		
	comp=N,160nm,28.0s,MS4.1						
WMQ				LR	LR		
	comp=E,440nm,26.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,160nm,27.0s,MS3.7						
AAK	Ala-Archa	39.15	337c	iP	P	16 03 30.7	-0.5
AAK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
AAK				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.3						
AAK	Ala-Archa	39.15	337	eP	P	16 03 29.7	-1.5
	comp=Z,25nm,1.3s,mb4.8						
FRU	Bishkek	39.27	337	eP	P	16 03 25.0	-7.2
FITZ	Fitzroy Crossi	40.05	130	P	P	16 03 39.6	+0.7
	comp=Z,3.5nm,0.6s,mb4.3,baz=1.5,slow=15,SNR=6.5						
MKAR	Makanchi Array	40.53	347	iP	P	16 03 41.9	-0.7
MKAR				pmax	pmax		
	comp=Z,34nm,1.1s						
MKAR	Makanchi Array	40.53	347	P	P	16 03 42.0	-0.5
	comp=Z,6.0nm,0.8s,mb4.3,baz=164,slow=8.8,SNR=19						
MKAR				LR	LR	16 23 55.2	
	comp=Z,82nm,19.0s,MS3.6,baz=173,slow=41						
KKAR	Karatay Array	41.20	333	iP	P	16 03 48.0	0.0
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
SONM	Songino Array	41.56	12	P	P	16 03 52.8	+1.8
	comp=Z,4.1nm,0.8s,mb4.1,baz=207,slow=9.7,SNR=3.3						
SONM				LR	LR	16 21 36.4	
	comp=Z,223nm,21.4s,MS4.0,baz=70,slow=37						
ULN	Ulaanbaatar	41.73	13	eP	P	16 03 52.1	-0.3
	comp=Z,8.4nm,1.3s,mb4.2						
SNY	Shenyang	42.98	32	⇑P	P	16 04 03.8	+1.1
SNY				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.3						
SNY				LR	LR		
	comp=N,220nm,14.1s,MS4.4						
SNY				LR	LR		
	comp=E,350nm,17.8s,MS4.4						
SNY				LR	LR		
	comp=Z,360nm,16.3s,MS4.4						
ZAK	Zakamensk	43.46	8	eP	P	16 04 06.4	-0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.7						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
TLY	Talaya	44.78	8	eP	P	16 04 17.1	0.0
TLY				e		16 10 50.6	
TLY				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
TLY				MLR	MLR		
	comp=Z,150nm,17.0s,MS4.0						
ZAL	Zalesovo	46.99	352	P	P	16 04 34.5	0.0
	comp=Z,4.3nm,0.4s,mb4.7,baz=303,slow=4.0,SNR=10						
ZAL				LR	LR	16 29 29.9	
	comp=Z,189nm,19.5s,MS4.1,baz=289,slow=43						
CIT	Chita	47.20	16	eP	P	16 04 36.5	+0.2
CIT				pmax	pmax		
	comp=Z,34nm,1.5s,mb5.1						
WRA	Warramunga Arr	47.92	125	P	P	16 04 41.6	-0.8
	comp=Z,1.7nm,0.5s,mb4.3,baz=303,slow=8.9,SNR=32						
WRAB	Tennant Creek	47.92	125	eP	P	16 04 40.6	-1.8
WRAB	Tennant Creek	47.92	125	eP	P	16 04 41.7	-0.7
WB2	Warramunga Arr	47.93	125	eP	P	16 04 41.9	-0.6
NVS	Novosibirsk	48.09	351	eP	P	16 04 40.2	-3.0
NVS				pmax	pmax		
	comp=Z,21nm,1.7s,mb4.9						
NVS				pmax	pmax		
	comp=N,36nm,2.0s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.4s						
MDJ	Mudanjiang	48.10	34	P	P	16 04 43.3	-0.2
MDJ				PCP	PcP	16 06 09.5	-1.6
MDJ				PP	PP	16 06 35.6	+0.6
MDJ				SCP		16 10 01.8	
MDJ				PCS		16 10 05.1	
MDJ				S	S	16 11 43.3	+4.3
MDJ				XS		16 11 57.1	
MDJ				AMB	AMB		
	comp=Z,40nm,7.9s						
MDJ				LR	LR		
	comp=N,270nm,16.6s,MS4.5						
MDJ				LR	LR		
	comp=E,230nm,13.7s,MS4.5						
MDJ				LR	LR		
	comp=Z,300nm,17.4s,MS4.3						
MDJ	Mudanjiang	48.10	34	eP	P	16 04 44.2	+0.7
	comp=Z,31nm,1.5s,mb5.1						
MJAR	Matsushiro Arr	49.37	47	P	P	16 04 55.3	+2.0
	comp=Z,2.0nm,1.1s,mb4.1,baz=217,slow=8.3,SNR=5.0						
MJAR				LR	LR	16 27 49.9	
	comp=Z,158nm,18.4s,MS4.0,baz=230,slow=38						
ZRNK	Zerenda	49.83	340	eP	P	16 04 55.4	-1.2
	comp=Z,8.2nm,0.8s,mb4.8						
AB31	Akbulak array	50.66	331	iP	P	16 05 02.8	-0.2
AB31				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
KLR	Kul’dur	52.20	30	eP	P	16 05 21.0	+6.3
KLR				MLR	MLR		
	comp=Z,600nm,15.0s,MS4.8						
KLR				MLR	MLR		
	comp=E,500nm,16.0s						
CLNS	Chul’man	54.80	20	eP	P	16 05 34.3	+0.5
CLNS				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
CLNS				pmax	pmax		
	comp=N,8.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,8.0nm,1.0s						
CLNS				MLR	MLR		
	comp=Z,200nm,14.0s,MS4.3						
CLNS				MLR	MLR		
	comp=N,300nm,16.0s,MS4.5						
CLNS				MLR	MLR		
	comp=E,100nm,13.0s,MS4.5						
PMG	Port Moresby	55.30	107	eP	P	16 05 37.9	-0.1
	comp=E,3.3nm,0.6s,mb4.5						
SVE	Sverdlovsk	55.84	338	eP	P	16 05 41.0	-0.3
SVE				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.3						
ARU	Arti	56.33	337	⇑iP	P	16 05 43.5	-1.3
ARU				e		16 06 37.7	
ARU				e		16 07 48.2	
ARU				ePPP	PPP	16 09 07.2	-1.8
ARU				eS	S	16 13 31.7	+0.5
ARU				eSS	SS	16 17 16.7	-1.8
ARU				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
ARU				MLR	MLR		
	comp=Z,400nm,21.0s,MS4.5						
ARU				MLR	MLR		
	comp=N,200nm,20.0s,MS4.4						
ARU				MLR	MLR		
	comp=E,200nm,20.0s,MS4.4						
ARU	Arti	56.33	337	eP	P	16 05 43.5	-1.3
	comp=E,37nm,1.4s,mb5.2						
KIV	Kislovodsk	57.71	318	eP	P	16 05 54.4	-0.4
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
KIV				MLR	MLR		
	comp=N,54nm,19.0s,MS4.0						
KIV				MLR	MLR		
	comp=E,87nm,19.0s,MS4.0						
KIV				MLR	MLR		
	comp=Z,111nm,19.0s,MS4.0						
SOKR	Solikamsk	59.24	339c	iP	P	16 06 04.0	-1.2
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,380nm,21.0s,MS4.5						
STKA	Stephens Creek	59.73	134	P	P	16 06 08.5	-0.5
	comp=Z,4.5nm,0.9s,mb4.5,baz=331,slow=14,SNR=5.1						
STKA				LR	LR	16 33 20.6	
	comp=Z,182nm,18.8s,MS4.2,baz=27,slow=38						
EIL	Elat	59.74	300	LR	LR	16 31 01.0	
	comp=Z,146nm,21.4s,MS4.1,baz=22,slow=35						
YAK	Yakutsk	60.37	18	eP	P	16 06 11.4	-1.5
YAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK	Yakutsk	60.37	18	eP	P	16 06 11.7	-1.3
	comp=E,34nm,1.5s,mb5.2						
BRTR	Keskin Array B	62.80	311	P	P	16 06 27.9	-1.7
	comp=E,1.2nm,0.6s,mb4.2,baz=128,slow=6.6,SNR=5.7						
MBAR	Mbarara	63.84	266	⇑iP	P	16 06 37.6	+0.7
MOS	Moscow	65.51	329	eP	P	16 06 47.4	+0.4
MOS				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.4						
OBN	Obninsk	65.80	328d	iP	P	16 06 47.9	-1.0
OBN				eS	S	16 15 47.7	+16
OBN				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.1						
OBN				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.0						
AKASG	Malin Array Be	68.56	322	P	P	16 07 06.5	+0.1
	comp=Z,0.7nm,0.5s,mb3.8,baz=89,slow=5.3,SNR=4.4						
AKASG				PcP	PcP	16 07 32.8	+1.5
	comp=Z,0.3nm,0.3s,baz=93,slow=4.5,SNR=4.2						
IDI	Anoyia	68.91	305	P	P	16 07 07.8	-1.0
	comp=Z,5.2nm,0.6s,mb4.7,baz=89,slow=9.8,SNR=6.7						
MLR	Muntele Rosu	69.56	316	P	P	16 07 12.9	+0.3
	comp=Z,6.0nm,1.0s,mb4.5,baz=273,slow=9.6,SNR=5.5						
FINES	FINESS Array B	73.14	332	P	P	16 07 33.3	-0.5
	comp=Z,3.9nm,0.7s,mb4.4,baz=91,slow=5.3,SNR=22						
FINES				LR	LR	16 45 51.8	
	comp=Z,140nm,18.1s,MS4.3,baz=294,slow=41						
KAF	Kangasniemi	73.23	333	ep	P	16 07 33.6	-0.7
	comp=Z,2.5nm,0.6s,mb4.3,baz=104,slow=5.6						
KAF	Kangasniemi	73.23	333	eP	P	16 07 33.6	-0.7
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
LBTB	Lobatse	74.13	241	P	P	16 07 41.2	+0.9
	comp=Z,2.5nm,0.7s,mb4.3,baz=174,slow=8.3,SNR=4.2						
KEV	Kevo	75.28	341	ep	P	16 07 44.9	-1.1
	comp=Z,8.9nm,0.9s,mb4.7						
KEV	Kevo	75.28	341	eP	P	16 07 44.9	-1.1
KEV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
OKC	Ostrava-Krasne	75.39	319	eP	P	16 07 48.0	+1.0
OKC				AMS	AMS	16 45 20.0	
BOSA	Boshof	75.45	238	P	P	16 07 50.0	+2.2
	comp=Z,1.8nm,0.6s,mb4.2,baz=8.7,slow=19,SNR=4.7						
BOSA				LR	LR	16 37 55.0	
	comp=Z,68nm,21.2s,MS3.9,baz=251,slow=33						
ARCES	ARCESS Array B	75.71	340	P	P	16 07 47.9	-0.6
	comp=Z,1.1nm,0.4s,mb4.1,baz=92,slow=5.9,SNR=13						
ARCES				LR	LR	16 44 06.3	
	comp=Z,346nm,20.4s,MS4.7,baz=115,slow=38						
DPC	Dobruska-Polom	76.61	320	eP	P	16 07 55.0	+1.1
DPC				AMS	AMS	16 47 40.0	
	comp=Z,100nm,19.0s						
UPC	Upice	76.82	320	eP	P	16 07 56.1	+1.1
PRU	Pruhonice	77.73	319	AMS	AMS	16 45 00.0	
PVCC	Panska Ves	77.74	320	AMS	AMS	16 48 20.0	
	comp=Z,100nm,20.9s						
MAW	Mawson	78.13	192	LR	LR	16 33 38.5	
	comp=Z,93nm,21.6s,MS4.1,baz=58,slow=29						
GERES	GERESS Array B	78.22	318	P	P	16 08 03.6	+0.8
	comp=Z,1.5nm,0.7s,mb4.0,baz=90,slow=4.0,SNR=9.5						
GERES				LR	LR	16 47 19.3	
	comp=Z,48nm,21.9s,MS3.8,baz=258,slow=39						
KHC	Kasperske Hory	78.31	319	eP	P	16 08 03.7	+0.4
KHC	Kasperske Hory	78.31	319	eP	P	16 07 57.5	-5.8
KHC				AMS	AMS	16 47 00.0	
	comp=Z,100nm,22.5s						
HFS	Hagfors	78.89	330	P	P	16 08 06.3	+0.1
	comp=Z,3.8nm,0.4s,mb4.7,baz=104,slow=6.1,SNR=24						
NKC	Novy Kostel	79.08	320	AMS	AMS	16 48 30.0	
GRA1	Grafenberg Arr	79.87	319	eP	P	16 08 12.8	+1.1
	comp=Z,5.0nm,1.0s,mb4.4						
GRF	Grafenberg Arr	79.87	319	eP	P	16 08 12.8	+1.1
GRF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
GRF	Grafenberg Arr	79.87	319	eP	P	16 08 12.8	+1.1
	comp=Z,5.0nm,1.0s,mb4.4						
NOA	NORSAR Array B	80.16	331	P	P	16 08 13.3	+0.2
	comp=Z,2.2nm,0.8s,mb4.1,baz=97,slow=5.5,SNR=5.8						
NOA				LR	LR	16 48 40.3	
	comp=Z,93nm,18.8s,MS4.2,baz=45,slow=39						
DAVOX	Davos	80.78	316	P	P	16 08 17.4	+0.7
	comp=Z,4.3nm,0.7s,mb4.5,baz=129,slow=9.5,SNR=3.8						
LPG	La Plagne	83.00	315	eP	P	16 08 28.0	-0.2
	comp=Z,7.1nm,0.8s,mb4.5						
SYO	Syowa Base	85.02	197	⇓P	P	16 08 38.5	+0.6
SYO	Syowa Base	85.02	197	⇑PcP	PcP	16 08 41.8	+0.2
JMIC	Jan Mayen	87.15	341	P	P	16 08 52.0	+3.5
	comp=Z,28nm,0.5s,mb5.7,baz=305,slow=3.1,SNR=3.2						
EKA	Eskdalemuir Ar	88.14	325	P	P	16 08 54.9	+1.4
	comp=Z,3.0nm,0.8s,mb4.5,baz=94,slow=5.2,SNR=8.0						
URZ	Urewera	88.98	129	LR	LR	16 50 15.9	
	comp=Z,135nm,18.8s,MS4.4,baz=331,slow=36						
ESDC	Sonseca Array	91.58	310	P	P	16 09 11.7	+1.7
	comp=Z,0.4nm,0.3s,mb4.2,baz=73,slow=4.3,SNR=3.6						
IMA	Indian Mountai	91.98	22	eP	P	16 09 11.3	+0.2
	comp=Z,21nm,0.9s,mb5.5						
VNDA	Vanda	92.48	168	LR	LR	16 49 10.1	
	comp=Z,78nm,18.0s,MS4.2,baz=302,slow=34						
ILAR	Eielson Array	95.10	22	P	P	16 09 27.5	+1.9
	comp=Z,0.4nm,0.8s,mb3.9,baz=292,slow=5.5,SNR=4.0						
ILAR				LR	LR	16 54 38.0	
	comp=Z,83nm,21.4s,MS4.2,baz=174,slow=37						
PDAR	Pinedale Array	125.53	21	PKP	PKPdf	16 15 05.4	-2.9
	comp=Z,0.3nm,0.4s,baz=304,slow=9.8,SNR=3.5						
PLCA	Paso Flores	144.18	200	PKP	PKPdf	16 15 39.4	-3.4
	comp=Z,2.3nm,0.8s,baz=82,slow=17,SNR=2.9						

*MOS **21** 16:02:15.3±1.4, 51.69N×15.98E, h10^{km}, mb3.7/1, Error ellipse: s-maj=12.8km s-min=6.3km az=79.5*

*NEIC **21** 16:02:15.8±0.3, 51.64N×16.08E, h5^{km}, ML3.4(VIE), ML3.2(SZGRF), Error ellipse: s-maj=4.5km s-min=3.8km az=101.0*

*IPEC **21** 16:02:16.1±0.3, 51.56N×15.88E, ML2.7/4, Error ellipse: s-maj=4.3km s-min=1.9km az=74.0*

*WAR **21** 16:02:17.3, 51.58N×15.99E, h1^{km}, ML3.2, Mining Induced*

*IDC **21** 16:02:17.2±0.8, 51.60N×15.91E, mb1 3.3/6, mb1mx3.2/23, mbtmp3.3/6, ML3.1/6, Error ellipse: s-maj=13.0km s-min=7.6km az=103.0*

*CSEM **21** 16:02:17.1±0.1, 51.55N×15.98E, h2^{km}, ML3.7/9, Error ellipse: s-maj=1.8km s-min=1.0km az=9.0*

*PRU **21** 16:02:17.6, 51.53N×15.99E*

*BGR **21** 16:02:18.1±0.6, 51.60N×15.87E, h1^{km}, ML3.2/11, Error ellipse: s-maj=10.0km s-min=4.4km az=159.0*

ISC 21 16:02:15.3±0.5**, 51.53N**±0.03×**15.95E**±0.03**, n67, σ1^{s}.25**/119**, 3C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.72	163	⇓iPg	Pg	16 02 31.3	+1.6
KSP				iSg	Sg	16 02 41.4	+2.1
KSP	Ksiaz	0.72	163	ePG	Pg	16 02 31.0	+1.3
KSP				eSG	Sg	16 02 41.0	+1.7
KSP	Ksiaz	0.72	163	ePg	Pg	16 02 31.2	+1.5
KSP				eSg	Sg	16 02 40.4	+1.1
UPC	Upice	1.03	178	ePG	Pg	16 02 37.0	+1.2
DPC	Dobruska-Polom	1.21	169	eP	Pg	16 02 39.9	+0.5
DPC				e		16 02 56.8	
DPC				smax			
	comp=N,44nm,0.2s						

DPC	**Dobruska-Polom**	**1.21**	**169**	*e*PG	**Pg**	**16 02 39.9**	**+0.5**
DPC				*e*SG	**Sg**	**16 02 56.8**	**+1.4**
	comp=N,44nm,0.2s						
DPC	**Dobruska-Polom**	**1.21**	**169**	*e*Pg	**Pg**	**16 02 39.9**	**+0.5**
DPC				*e*Sg	**Sg**	**16 02 55.7**	**+0.3**
PVCC	**Panska Ves**	**1.33**	**222**	*e*PG	**Pg**	**16 02 42.6**	**+0.7**
BRG	**Berggiesshubel**	**1.43**	**243**	*e*Pg	**Pg**	**16 02 44.3**	**+0.5**
BRG				*e*Sg	**Sg**	**16 03 04.3**	**+1.5**
BRG	**Berggiesshubel**	**1.43**	**243**	P	**Pb**	**16 02 43.6**	**+1.2**
BRG						16 03 04.4	
BRG				smax			
	comp=N,283nm,0.3s						
BRG	**Berggiesshubel**	**1.43**	**243**	Pn	**Pn**	**16 02 43.7**	**+1.2**
BRG				Pg	**Pg**	**16 02 44.7**	**+0.9**
BRG				Sg	**Sg**	**16 03 04.4**	**+1.6**
BRG	**Berggiesshubel**	**1.43**	**243**	Pn	**Pn**	**16 02 43.7**	**+1.2**
BRG	**Berggiesshubel**	**1.43**	**243**	Pg	**Pg**	**16 02 44.3**	**+0.6**
BRG				Sg	**Sg**	**16 03 04.3**	**+1.6**
RUE	**Ruedersdorf**	**1.65**	**306**	*e*Pn	**Pn**	**16 02 45.4**	**-0.2**
RUE				*e*Sn	**Sn**	**16 03 05.6**	**-2.2**
RUE	**Ruedersdorf**	**1.65**	**306**	*e*Pn	**Pn**	**16 02 45.4**	**-0.2**
RUE				*e*Sn	**Sn**	**16 03 05.6**	**-2.2**
FBE	**Freiberg**	**1.74**	**251**	Pn	**Pn**	**16 02 49.2**	**+2.2**
FBE				Sg	**Sg**	**16 03 13.6**	**+0.3**
PRU	**Pruhonice**	**1.79**	**211**	*e*P	**Pn**	**16 02 48.6**	**+1.0**
PRU				*e*		16 03 15.2	
PRU				smax			
	comp=N,57nm,0.2s						
PRU	**Pruhonice**	**1.79**	**211**	*e*PN	**Pn**	**16 02 48.6**	**+1.0**
PRU				*e*PG	**Pg**	**16 02 50.6**	**-0.3**
PRU				*e*SG	**Sg**	**16 03 15.2**	**+0.5**
	comp=N,57nm,0.2s						
CLL	**Collm**	**1.86**	**264**	*e*Pn	**Pn**	**16 02 48.9**	**+0.2**
CLL				*e*Sg	**Sg**	**16 03 16.8**	**-0.4**
CLL	**Collm**	**1.86**	**264**	*i* P	**Pn**	**16 02 48.8**	**+0.1**
CLL				*i*		16 03 16.8	
CLL				pmax	pmax		
	comp=Z,35nm,0.4s						
CLL	**Collm**	**1.86**	**264**	*i* Pn	**Pn**	**16 02 48.8**	**+0.1**
CLL				*e*Pg	**Pg**	**16 02 52.0**	**-0.4**
CLL				*i* Sg	**Sg**	**16 03 16.8**	**-0.4**
CLL	**Collm**	**1.86**	**264**	*i* PN	**Pn**	**16 02 48.8**	**+0.1**
	comp=Z,logA/T=1.9						
CLL				*e*PG	**Pg**	**16 02 52.0**	**-0.4**
CLL				*e*		16 02 56.0	
CLL				*i* SG	**Sg**	**16 03 16.8**	**-0.4**
CLL	**Collm**	**1.86**	**264**	*e*Pg	**Pg**	**16 02 52.0**	**-0.4**
CLL				Sg	**Sg**	**16 03 16.8**	**-0.4**
MORC	**Moravsky Berou**	**2.03**	**149**	*e*Pn	**Pn**	**16 02 51.3**	**+0.2**
MORC				*e*S	**Sn**	**16 03 21.3**	**+3.8**
MORC	**Moravsky Berou**	**2.03**	**149**	*e*Pn	**Pn**	**16 02 51.3**	**+0.2**
MORC				*e*Sg	**Sn**	**16 03 21.2**	**+3.7**
	comp=Z,24nm,0.2s						
RAC	**Raciborz**	**2.03**	**135**	*e*Pg	**Pg**	**16 02 55.6**	**-0.2**
RAC				*e*Sg	**Sn**	**16 03 21.4**	**+3.8**
OKC	**Ostrava-Krasne**	**2.20**	**140**	*e*P	**Pg**	**16 02 57.8**	**-1.3**
OKC				*e*		16 03 27.7	
OKC				smax			
	comp=N,81nm,0.5s						
OKC	**Ostrava-Krasne**	**2.20**	**140**	*e*PG	**Pg**	**16 02 57.8**	**-1.3**
OKC				*e*SG	**Sg**	**16 03 27.7**	**-0.7**
	comp=N,81nm,0.5s						
VRAC	**Vranov**	**2.26**	**169**	Pn	**Pn**	**16 02 55.6**	**+1.1**
	comp=N,3.2nm,0.3s,baz=344,slow=14,SNR=24						
VRAC				Pg	**Pg**	**16 03 02.4**	**+1.9**
	comp=N,5.9nm,0.3s,baz=336,slow=15,SNR=10						
VRAC				Lg		16 03 30.9	
	comp=N,11nm,0.3s,baz=89,slow=18,SNR=9.8						
VRAC	**Vranov**	**2.26**	**169**	*e*Pn	**Pn**	**16 02 55.3**	**+0.8**
VRAC	**Vranov**	**2.26**	**169**	Pg	**Pg**	**16 03 02.4**	**+1.9**
VRAC				*e*Sg	**Sn**	**16 03 27.9**	**+4.4**
	comp=N,25nm,0.3s						
TANN	**Tannenbergstha**	**2.47**	**244**	*e*Pn	**Pn**	**16 02 58.2**	**+0.8**
TANN				*e*Sg	**Sn**	**16 03 36.6**	**+7.8**
KRUC	**Moravsky**	**2.49**	**173**	*e*Pn	**Pn**	**16 02 59.0**	**+1.3**
KRUC				*e*Sg	**Sn**	**16 03 34.6**	**+5.4**
	comp=N,42nm,0.5s						
WERD	**Werda**	**2.55**	**246**	*e*Pn	**Pn**	**16 02 59.2**	**+0.7**
WERD				*e*Sg	**Sg**	**16 03 38.5**	**-1.6**
GUNZ	**Gunzen**	**2.57**	**244**	*e*Pn	**Pn**	**16 02 59.2**	**+0.4**
NKC	**Novy Kostel**	**2.57**	**241**	*e*P	**Pn**	**16 02 59.8**	**+0.9**
NKC				*e*		16 03 40.0	
NKC				smax			
	comp=N,98nm,0.2s						
NKC	**Novy Kostel**	**2.57**	**241**	*e*PN	**Pn**	**16 02 59.8**	**+0.9**
NKC				*e*PG	**Pg**	**16 03 06.3**	**-0.3**
NKC				*e*SG	**Sg**	**16 03 40.0**	**-0.9**
	comp=N,98nm,0.2s						
NEUB	**Neuenburg**	**2.64**	**265**	*e*Pn	**Pn**	**16 03 00.4**	**+0.6**
OJC	**Ojcow**	**2.77**	**117**	*e*P	**Pn**	**16 03 01.0**	**-0.7**
OJC				*e*		16 03 45.2	
OJC	**Ojcow**	**2.77**	**117**	*e*PN	**Pn**	**16 03 01.0**	**-0.7**
OJC				*e*PG	**Pg**	**16 03 09.0**	**-1.5**
OJC				*e*SG	**Sg**	**16 03 45.0**	**-2.4**
OJC	**Ojcow**	**2.77**	**117**	*e*Pg	**Pg**	**16 03 09.4**	**-1.1**
OJC				*e*Sg	**Sg**	**16 03 45.2**	**-2.2**
KHC	**Kasperske Hory**	**2.84**	**213**	*e*P	**Pn**	**16 03 03.8**	**+1.0**
KHC				*e*		16 03 38.8	
KHC				smax			
	comp=N,23nm,0.4s						
KHC	**Kasperske Hory**	**2.84**	**213**	*e*PN	**Pn**	**16 03 03.8**	**+1.0**
KHC				*e*PG	**Pg**	**16 03 09.5**	**-2.6**
KHC				*e*SN	**Sn**	**16 03 38.8**	**+0.6**
KHC				*e*SG	**Sg**	**16 03 48.1**	**-1.9**
	comp=N,23nm,0.4s						
MOX	**Moxa**	**2.88**	**254**	*e*Pn	**Pn**	**16 03 03.3**	**+0.1**
MOX				*e*Sg	**Sg**	**16 03 49.4**	**-1.6**
MOX	**Moxa**	**2.88**	**254**	*e*Pn	**Pn**	**16 03 03.3**	**+0.1**
MOX				*e*Pg	**Pg**	**16 03 11.8**	**-0.9**
MOX				*e*Sg	**Sg**	**16 03 50.8**	**-0.2**
MOX	**Moxa**	**2.88**	**254**	*i* P	**Pn**	**16 03 03.3**	**+0.1**
MOX				Pg	**Pg**	**16 03 12.0**	**-0.7**
MOX				Sg	**Sg**	**16 03 51.0**	**0.0**
MOX	**Moxa**	**2.88**	**254**	*e*Pg	**Pg**	**16 03 11.8**	**-0.9**
MOX				Sg	**Sg**	**16 03 49.4**	**-1.6**
NOTT	**Nottersdorf**	**2.98**	**236**	*e*Pn	**Pn**	**16 03 05.2**	**+0.5**
NOTT				*e*Sg	**Sg**	**16 03 52.9**	**-1.7**
GEC2	**GERESS Array S**	**3.05**	**209**	*e*Pn	**Pn**	**16 03 07.1**	**+1.4**
GEC2	**GERESS Array S**	**3.05**	**209**	*e*Pn	**Pn**	**16 03 07.1**	**+1.4**
GERES	**GERESS Array B**	**3.05**	**209**	Pn	**Pn**	**16 03 06.8**	**+1.1**
	comp=N,1.7nm,0.3s,baz=30,slow=12,SNR=41						
GERES				Pg	**Pg**	**16 03 13.8**	**-2.5**
	comp=N,5.0nm,0.3s,baz=28,slow=16,SNR=36						
GERES				Lg		16 03 55.7	
	comp=N,7.6nm,0.3s,baz=28,slow=25,SNR=10						
GERES	**GERESS Array B**	**3.05**	**209**	Pg	**Pg**	**16 03 13.8**	**-2.4**
WET	**Wettzell**	**3.10**	**221**	*e*Pn	**Pn**	**16 03 07.2**	**+0.9**
WET	**Wettzell**	**3.10**	**221**	*e*Pn	**Pn**	**16 03 07.2**	**+0.8**
SMOL	**Smolenice**	**3.17**	**162**	*e*SG	**Sg**	**16 04 00.7**	**0.0**
VKA	**Vienna**	**3.28**	**176**	⇓*i*PG	**Pg**	**16 03 19.2**	**-1.5**
VKA				*i* SG	**Sg**	**16 04 03.0**	**-1.4**
ZST	**Bratislava**	**3.42**	**167**	*e*SG	**Sg**	**16 04 05.8**	**-3.4**
GRA1	**Grafenberg Arr**	**3.53**	**240**	*e*Pn	**Pn**	**16 03 13.6**	**+1.1**
GRA1				*e*Sg	**Sg**	**16 04 09.3**	**-3.5**
GRA1	**Grafenberg Arr**	**3.53**	**240**	Pn	**Pn**	**16 03 13.6**	**+1.1**
GRA1				Sg	**Sg**	**16 04 09.3**	**-3.5**
GRF	**Grafenberg Arr**	**3.53**	**240**	*e*Pn	**Pn**	**16 03 13.6**	**+1.1**
GRF				*e*Sg	**Sg**	**16 04 09.3**	**-3.5**
MOA	**Molln**	**3.84**	**197**	⇑*i*PN	**Pn**	**16 03 17.7**	**+0.7**
MOA				*i* SG	**Sg**	**16 04 21.1**	**-2.2**
	comp=N,13nm,0.4s						
ARSA	**Arzberg**	**4.29**	**184**	⇑*i*PN	**Pn**	**16 03 23.0**	**-0.4**
ARSA				*i* SG	**Sg**	**16 04 31.8**	**-6.4**
	comp=N,13nm,0.5s						
KBA	**Koelnbreinsper**	**4.77**	**202**	⇑*i*PN	**Pn**	**16 03 31.0**	**+0.8**
KBA				*i* SG	**Sg**	**16 04 51.1**	**-3.1**
	comp=N,12nm,0.6s						
AKASG	**Malin Array Be**	**8.39**	**90**	Pn	**P**	**16 04 16.9**	**-4.2**
	comp=N,1.1nm,0.3s,baz=277,slow=13,SNR=7.5						
AKASG				Lg		16 06 47.3	
	comp=N,0.2nm,0.3s,baz=85,slow=31,SNR=3.2						
HFS	**Hagfors**	**8.71**	**353**	Pn	**P**	**16 04 21.1**	**-4.4**
	comp=N,0.0nm,0.3s,baz=169,slow=15,SNR=6.3						
FINES	**FINESS Array B**	**11.39**	**25**	Pn	**P**	**16 04 55.7**	**-6.4**
	comp=N,0.2nm,0.3s,baz=210,slow=13,SNR=6.9						
ARCES	**ARCESS Array B**	**18.62**	**11**	P	**P**	**16 06 33.5**	**-2.4**
	comp=N,0.1nm,0.3s,baz=192,slow=14,SNR=5.3						

IDC 21 16:22:08.6±1.9**,7.73N**×**94.77E,mb3.9**/4**,mb1 3.9**/5**, mb1mx3.6**/19**,mbtmp3.7**/5**,ML3.6**/1**,Error ellipse: s-maj=70.0km s-min=27.7km az=58.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.41**	**20**	Pn	P	16 24 54.9	-1.1
	0.1nm,0.3s,baz=212,slow=14,SNR=5.7						
MKAR	**Makanchi Array**	**40.37**	**347**	P	P	16 29 47.0	-2.9
	1.2nm,0.7s,baz=170,slow=7.7,SNR=15						
ZAL	**Zalesovo**	**46.77**	**352**	P	P	16 30 38.6	-2.9
	1.3nm,0.3s,baz=99,slow=22,SNR=3.1						
WRA	**Warramunga Arr**	**47.67**	**126**	P	P	16 30 46.8	-2.3
	0.2nm,0.5s,baz=305,slow=8.7,SNR=5.7						
FINES	**FINESS Array B**	**73.13**	**332**	P	P	16 33 42.5	-0.2
	1.4nm,0.8s,baz=108,slow=8.8,SNR=5.2						

NEIC ***21*** *16:43:02.9±9.4, 30.41S×177.52W, h41^{km}±63^{km}, mb4.5/2, Error ellipse: s-maj=107.7km s-min=25.6km az=147.0*

IDC ***21*** *16:43:07.6±5.6, 29.89S×177.75W, h71^{km}±33^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.7/14, mbtmp4.3/3, Error ellipse: s-maj=128.4km s-min=40.8km az=159.0*

ISC 21 16:43:03.3±3.7**,30.4S**±0.2×**178.0W**±0.5**,h33**^{km}**,n10,** σ**0**^{s}**54**/10**,mb4.3**/4**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.13**	**2**	P	**P**	**16 43 22.8**	**0.0**
	169nm,0.3s,baz=125,slow=21,SNR=11						
RAO				S	**S**	**16 43 37.5**	**+0.1**
	349nm,0.3s,baz=178,slow=24,SNR=10						
RAO	**Raoul Island**	**1.13**	**2**	*e*Pn	**Pn**	**16 43 23.1**	**+0.1**
RAO				*e*S	**S**	**16 43 37.4**	**0.0**
CTA	**Charters Tower**	**33.82**	**279**	P	**P**	**16 49 45.2**	**+0.6**
	7.6nm,1.0s,mb4.6,baz=79,slow=4.3,SNR=5.3						
CTAO	**Charters Tower**	**33.82**	**279**	*e*P	**P**	**16 49 45.1**	**+0.5**
	8.3nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**34.50**	**257**	P	**P**	**16 49 51.4**	**+1.0**
	3.4nm,0.8s,mb4.4,baz=91,slow=12,SNR=5.9						
WB2	**Warramunga Arr**	**44.11**	**272**	*e*P	**P**	**16 51 09.9**	**-0.5**
WRAB	**Tennant Creek**	**44.11**	**272**	*e*P	**P**	**16 51 09.7**	**-0.8**
	4.2nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**44.12**	**272**	P	**P**	**16 51 10.1**	**-0.4**
	1.5nm,0.5s,mb4.0,baz=111,slow=7.8,SNR=136						
MKAR	**Makanchi Array**	**117.78**	**310**	PKP	PKPdf	17 01 44.0	-2.1
	0.6nm,0.9s,baz=143,slow=7.2,SNR=4.9						
FINES	**FINESS Array B**	**145.14**	**340**	PKP	PKPdf	17 02 36.4	-0.2
	1.2nm,0.5s,baz=42,slow=2.8,SNR=14						

IDC ***21*** *17:04:34.9±0.7, 13.12N×88.59W, h51^{km}±5^{km}, mb4.1/11, mb1 4.4/13, mb1mx4.1/22, mbtmp4.4/13, MS3.5/10, Ms1 3.5/10, ms1mx3.4/19, Error ellipse: s-maj=30.5km s-min=8.9km az=50.0*

CASC ***21*** *17:04:34.5±2.6, 12.87N×88.89W, h29^{km}±8^{km}, MD4.4, ML4.8, mb4.5(NEIC)*

NEIC ***21*** *17:04:35.0±0.4, 13.12N×88.52W, mb4.5/20, MD4.8(SNET), Error ellipse: s-maj=13.4km s-min=5.3km az=47.0*

NEIC Felt [IV] at San Salvador. Also felt at Aguilares and Antiguo Cuscatlan.

MEX ***21*** *17:04:38.9±0.4, 17.96N×87.88W, h20^{km}±999^{km}, MD4.5*

ISC 21 17:04:33.1±0.3**,12.77N**±0.05×**88.98W**±0.04**,h51**^{km}**, h51**^{km}±.7^{km}**:pP-P,n102,**σ**1**^{s}**23**/110**,mb4.5**/28**,MS3.5**/9**, 12C-21D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.85**	**354**	⇓*i*P	**P**	**17 04 58.2**	**+9.2**
LCBS	**La Ceiba**	**0.88**	**360**	⇓*i*P	**P**	**17 04 58.6**	**+9.2**
SNET	**Serv Nac Est T**	**0.94**	**345**	⇓*e*P	**P**	**17 04 50.4**	**+0.1**
	comp=Z,47µm,0.2s						
SNET				*e*		17 05 00.2	
	comp=Z,47µm,0.2s						
SNET				*e*S	**S**	**17 05 02.2**	**-0.8**
VSM	**San Miguel**	**0.94**	**46**	⇓*i*P	**P**	**17 04 59.6**	**+9.3**
LBRS	**Las Brisas**	**0.96**	**356**	⇓*i*P	**P**	**17 05 00.1**	**+10**
LBRS				*e*S	**S**	**17 05 13.8**	**+10**
BLLM	**Bellamira**	**0.98**	**47**	⇓*i*P	**P**	**17 04 59.8**	**+9.0**
BOQS	**Boqueron**	**1.00**	**343**	⇓*i*P	**P**	**17 05 01.1**	**+10**
CNCH	**Conchagua**	**1.22**	**66**	⇓*e*P	**P**	**17 05 03.0**	**+8.8**
SBLS	**San Blas**	**1.24**	**329**	⇓*i*P	**P**	**17 05 04.7**	**+10**
CAHU	**Cacacuatique**	**1.24**	**37**	⇓*i*P	**P**	**17 05 04.1**	**+10**
SNJE	**San Jose**	**1.25**	**331**	⇓*i*P	**P**	**17 05 04.8**	**+10**
SNJE				*e*S	**S**	**17 05 27.2**	**+17**
RTR	**El Retiro**	**1.30**	**330**	⇓*i*P	**P**	**17 05 05.7**	**+10**
RBDL	**Robledal**	**1.50**	**333**	⇑*i*P	**P**	**17 05 08.6**	**+10**
MTO2	**Montecristo 2**	**1.66**	**347**	⇓*e*P	**P**	**17 05 10.1**	**+10**
CRIN	**San Cristobal**	**1.88**	**92**	⇓*e*P	**P**	**17 05 04.4**	**+0.9**
CRIN				*e*S	**S**	**17 05 27.0**	**+1.0**
CHIN	**Chinandega**	**1.91**	**94**	*e*	**P**	**17 05 06.4**	**+2.5**
	comp=Z,53µm,0.5s						
IXG	**Ixpaco**	**2.00**	**314**	⇑*e*P	**P**	**17 05 05.9**	**+0.6**
IXG				*e*S	**S**	**17 05 29.3**	**+0.2**
LEON	**Leon**	**2.06**	**100**	⇓*e*P	**P**	**17 05 05.9**	**-0.2**
TEL3	**Telica 3**	**2.09**	**95**	⇓*e*P	**P**	**17 05 06.7**	**+0.3**
TELN	**Telica**	**2.10**	**94**	⇓*e*P	**P**	**17 05 06.7**	**+0.1**
MIRN	**Miramar**	**2.23**	**98**	⇓*e*P	**P**	**17 05 08.6**	**+0.1**
CNGN	**Cerro Negro**	**2.24**	**97**	⇑*e*P	**P**	**17 05 08.7**	**+0.1**
MRL	**Marmol**	**2.38**	**343**	⇓*e*P	**P**	**17 05 11.6**	**+0.9**
MRL				*e*S	**S**	**17 05 42.4**	**+3.6**
MOMJ	**Momotombo**	**2.40**	**98**	⇑*e*P	**P**	**17 05 10.9**	**-0.1**
APYN	**Apoyeque**	**2.62**	**101**	⇑*e*P	**P**	**17 05 14.2**	**+0.2**
XAVN	**Gruta Xavier**	**2.66**	**103**	⇑*e*P	**P**	**17 05 14.7**	**+0.1**
XAVN				*e*S	**S**	**17 05 46.7**	**+1.0**
CRUN	**El Crucero**	**2.73**	**106**	*e*P	**P**	**17 05 16.4**	**+0.8**
MGAN	**Managua**	**2.73**	**103**	*e*P	**P**	**17 05 14.6**	**-1.0**
MGAN				*e*S	**S**	**17 05 46.2**	**-1.5**
MGAN				*i*		17 05 51.4	
	comp=E,2µm,0.3s						
TICN	**Ticuantepe**	**2.78**	**105**	*e*P	**P**	**17 05 16.5**	**+0.2**
WILN	**Americas 2**	**2.79**	**102**	*e*P	**P**	**17 05 16.2**	**-0.2**
WILN				*e*S	**S**	**17 05 47.7**	**-1.3**
TP2	**Tecpan 2**	**2.82**	**315**	⇑*e*P	**P**	**17 05 19.6**	**+2.7**
TP2				*e*S	**S**	**17 05 52.9**	**+3.1**
PYTN	**Playitas**	**2.86**	**94**	⇑*e*P	**P**	**17 05 17.2**	**-0.2**
MASN	**Masaya**	**2.87**	**105**	*e*P	**P**	**17 05 19.0**	**+1.5**
CONN	**Concepcion**	**3.49**	**110**	⇓*e*P	**P**	**17 05 27.5**	**+1.2**
VCR	**Vista de Mar**	**4.20**	**128**	*e*P	**P**	**17 05 37.0**	**+0.7**
CCIG	**Comitan**	**4.64**	**319**	*i* P	**P**	**17 05 43.9**	**+1.3**
CCIG				*i* S	**S**	**17 06 52.0**	**+16**
CCIG	**Comitan**	**4.64**	**319**	*i* P	**P**	**17 05 42.7**	**+0.1**
CCIG				*i* S	**S**	**17 06 32.9**	**-2.9**
JTS	**JuntasAbangare**	**4.65**	**122**	P	**P**	**17 05 43.0**	**+0.3**
	comp=E,8.3nm,0.3s,baz=306,slow=22,SNR=43						
JTS				S	**S**	**17 06 33.9**	**-2.1**
	comp=E,24nm,0.3s,baz=310,slow=23,SNR=5.1						
JTS				LR	LR	17 07 56.1	
	comp=E,384nm,21.0s,baz=17,slow=44						
JTS	**JuntasAbangare**	**4.65**	**122**	*e*Pn	**P**	**17 05 43.6**	**+1.0**
JTS				*e*Pg	**P**	**17 05 52.8**	**+10**
JTS				*e*Sg	**S**	**17 06 53.3**	**+17**
JCR	**Jicaral**	**4.77**	**127**	*e*P	**P**	**17 05 45.3**	**+0.9**
CGA2	**Cerro Gallo 2**	**5.20**	**121**	⇑*e*P	**P**	**17 05 52.4**	**+2.1**
PRS1	**Puriscal**	**5.35**	**121**	*e*P	**P**	**17 05 54.5**	**+2.1**
PRS1				*e*S	**S**	**17 06 53.2**	**-0.3**
LAJ	**Bijagual**	**5.57**	**121**	*e*P	**P**	**17 05 52.7**	**-2.8**
TRTC	**Tortuguero**	**5.60**	**112**	*e*P	**P**	**17 05 55.1**	**-0.7**
URSC	**Urasca**	**5.87**	**119**	*e*P	**P**	**17 06 01.4**	**+1.7**
BUS	**Buena Vista**	**6.03**	**121**	⇑*e*P	**P**	**17 06 04.3**	**+2.4**
CMIG	**Matias Romero**	**7.14**	**308**	*e*P	**P**	**17 06 31.9**	**+14**
CMIG				*i* S	**S**	**17 07 41.8**	**+3.6**
CMIG	**Matias Romero**	**7.14**	**308**	*i* P	**P**	**17 06 16.1**	**-1.5**
CMIG				*i* S	**S**	**17 07 30.0**	**-8.2**
OXX	**Oaxaca**	**8.63**	**301**	*e*P	**P**	**17 06 42.0**	**+4.0**
OXX	**Oaxaca**	**8.63**	**301**	*e*P	**P**	**17 06 39.0**	**+1.0**
VHO	**Vista Hermosa**	**8.63**	**301**	*i* S	**S**	**17 08 15.1**	**0.0**
PPM	**Popocatepetl**	**11.19**	**305**	*e*P	**P**	**17 07 17.0**	**+3.8**
OTAV	**Otavalo**	**16.25**	**139**	P	**P**	**17 08 18.7**	**-0.9**
SDV	**Santo Domingo**	**18.42**	**100**	P	**P**	**17 08 44.2**	**-2.5**
	comp=E,1.4nm,0.3s,baz=304,slow=6.2,SNR=18						
SDV	**Santo Domingo**	**18.42**	**100**	⇑*e*P	**P**	**17 08 44.2**	**-2.5**
	comp=E,9.7nm,0.6s						
NATX	**Nacogdoches**	**19.61**	**345**	P	**P**	**17 08 56.8**	**-3.3**
	comp=E,40nm,0.6s						
LRAL	**Lakeview Retre**	**20.25**	**5**	P	**P**	**17 09 00.8**	**-6.1**
	comp=E,7.0nm,0.7s						
LTX	**Lajitas**	**21.40**	**323**	*e*P	**P**	**17 09 18.6**	**-0.1**
	comp=E,8.8nm,0.8s,mb4.1						
TXAR	**Lajitas Array**	**21.40**	**323**	P	**P**	**17 09 19.4**	**+0.8**
	comp=E,5.3nm,0.5s,mb4.1,baz=144,slow=11,SNR=70						
TXAR				pP		17 09 31.4	
	comp=E,3.8nm,0.5s,baz=140,slow=9.8,SNR=9.6						
TXAR				PcP	PcP	17 13 21.2	-0.1
	comp=E,0.8nm,0.8s,baz=158,slow=4.9,SNR=4.3						
TXAR				pPcP		17 13 34.5	
	comp=E,1.1nm,0.9s,baz=180,slow=3.8,SNR=4.4						
TXAR	**Lajitas Array**	**21.40**	**323**	P	**P**	**17 09 19.4**	**+0.8**
TXAR				pP		17 09 31.4	
TXAR				PcP	PcP	17 13 21.2	-0.1
TXAR				pPcP		17 13 34.5	
COW	**Cow Castle Cre**	**21.86**	**19**	P	**P**	**17 09 18.6**	**-4.7**
JSC	**Jenkinsville**	**22.53**	**17**	*e*P	**P**	**17 09 29.8**	**-0.1**
JSC				*e*		17 09 44.5	
WMOK	**Wichita Mounta**	**23.61**	**339**	*e*P	**P**	**17 09 40.0**	**-0.3**
	comp=E,4.6nm,0.6s,mb4.1						
WMOK				*e*pP		17 09 51.9	
MNTX	**Cornudas Mount**	**24.14**	**324**	*e*P	**P**	**17 09 45.1**	**-0.4**
	comp=E,1.7nm,0.4s,mb3.8						
AMTX	**Amarillo**	**24.84**	**335**	⇓*e*P	**P**	**17 09 52.5**	**+0.2**
	comp=E,12nm,0.6s,mb4.6						
CCM	**Cathedral Cave**	**25.26**	**356**	*e*P	**P**	**17 09 54.3**	**-2.0**
	comp=E,13nm,0.6s,mb4.6						
CCM				*e*	pP	17 10 08.1	-0.9
ANMO	**Albuquerque**	**27.17**	**327**	LR	LR	17 23 18.3	
	comp=E,72nm,18.9s,MS3.3,slow=42						
PHWY	**Pilot Hill**	**31.87**	**336**	*e*P	**P**	**17 10 54.9**	**-0.8**
SADO	**Sadowa**	**32.98**	**13**	P	**P**	**17 11 02.1**	**-3.3**
	comp=E,15nm,0.5s,mb5.1,baz=209,slow=9.4,SNR=13						
SAML	**Samuel**	**33.50**	**129**	*e*P	**P**	**17 11 08.3**	**-1.8**
	comp=E,9.6nm,0.9s,mb4.7						
SAML				*e*pP	pP	17 11 21.0	-2.4
RSSD	**Black Hills**	**33.81**	**340**	*e*P	**P**	**17 11 11.7**	**-0.8**
	comp=E,5.3nm,0.6s,mb4.7						
RSSD				*e*pP	pP	17 11 25.1	-0.7
RSSD				*e*PcP	PcP	17 13 49.8	-1.1
PDAR	**Pinedale Array**	**34.80**	**333**	P	**P**	**17 11 20.6**	**-0.5**
	comp=E,1.6nm,0.6s,mb4.1,baz=132,slow=11,SNR=12						
PDAR				pP	pP	17 11 33.1	-1.2
	comp=E,1.3nm,0.7s,baz=143,slow=7.4,SNR=3.7						
PDAR				PcP	PcP	17 13 52.0	-1.8
	comp=E,2.0nm,0.5s,baz=144,slow=5.4,SNR=13						
PDAR				pPcP		17 14 06.6	
	comp=E,1.2nm,0.6s,baz=151,slow=5.0,SNR=5.0						
HWUT	**Hardware Ranch**	**34.84**	**330**	*e*P	**P**	**17 11 20.7**	**-0.7**
	comp=E,2.3nm,0.6s,mb4.3						
HWUT				*e*PcP	PcP	17 13 53.1	-0.8
LPAZ	**La Paz**	**35.47**	**144**	P	**P**	**17 11 28.1**	**+1.0**
	comp=E,0.8nm,0.5s,mb3.9,baz=352,slow=18,SNR=6.5						
LPAZ				LR	LR	17 25 57.4	
	comp=E,74nm,21.2s,MS3.4,baz=304,slow=36						
REDW	**Red Top Meadow**	**35.85**	**332**	*e*P	**P**	**17 11 29.6**	**-0.4**
	comp=E,16nm,0.8s,mb5.0						
REDW				*i* pP	pP	17 11 43.0	-0.3
LOHW	**Long Hollow**	**35.94**	**333**	*e*P	**P**	**17 11 30.3**	**-0.4**
	comp=E,6.3nm,0.8s,mb4.6						
LOHW				*i* pP	pP	17 11 43.8	-0.2
TPAW	**Teton Pass**	**35.99**	**332**	*e*P	**P**	**17 11 31.2**	**0.0**
	comp=E,7.3nm,0.8s,mb4.7						
TPAW				*e*pP	pP	17 11 45.0	+0.4
RRI2	**Red Ridge**	**36.05**	**332**	*e*P	**P**	**17 11 31.2**	**-0.5**
	comp=E,3.5nm,0.5s,mb4.5						
RRI2				*e*pP	pP	17 11 44.6	-0.4
RRI2				*i* PcP	PcP	17 13 56.8	-0.6
MOOW	**Moose Ponds**	**36.11**	**333**	*e*P	**P**	**17 11 31.3**	**-0.8**
	comp=E,2.9nm,0.7s,mb4.3						
MOOW				*e*pP	pP	17 11 45.5	0.0
MOOW				*e*PcP	PcP	17 13 56.4	-1.2
MOOW				*e*		17 14 11.1	
NVAR	**Mina Array Bea**	**36.49**	**320**	P	**P**	**17 11 36.8**	**+1.4**
	comp=E,1.4nm,0.6s,mb4.1,baz=115,slow=7.8,SNR=5.0						
NVAR				pP	pP	17 11 50.0	+1.2
	comp=E,1.0nm,0.4s,baz=129,slow=8.6,SNR=3.9						
NVAR				PcP	PcP	17 13 59.0	+0.2
	comp=E,2.9nm,0.7s,baz=127,slow=5.2,SNR=10						
NVAR				pPcP		17 14 13.6	
	comp=E,2.3nm,0.7s,baz=121,slow=5.0,SNR=6.7						
NVAR				LR	LR	17 28 52.6	
	comp=E,55nm,18.1s,MS3.4,baz=80,slow=40						
DGMT	**Dagmar**	**37.77**	**343**	⇑*i*P	**P**	**17 11 45.1**	**-1.0**
	comp=E,20nm,0.4s,mb5.2						
DGMT				*e*pP	pP	17 11 58.7	-0.8
MCMT	**McKenzie Canyo**	**37.90**	**332**	*e*P	**P**	**17 11 47.7**	**+0.6**
BOZ	**Bozeman (W)**	**37.99**	**334**	*e*P	**P**	**17 11 47.3**	**-0.7**
	comp=E,3.1nm,0.6s,mb4.2						
WVOR	**Wild Horse Val**	**39.17**	**325**	*e*P	**P**	**17 11 57.5**	**-0.2**
	comp=E,2.2nm,0.6s,mb4.1						
SIV	**San Ignacio**	**39.73**	**135**	P	**P**	**17 12 02.7**	**+0.1**
	comp=E,4.1nm,0.7s,mb4.3,baz=319,slow=10,SNR=22						
SIV				pP	pP	17 12 15.6	-0.4
	comp=E,6.5nm,0.8s,baz=316,slow=9.8,SNR=9.6						
SIV				PcP	PcP	17 14 09.0	0.0
	comp=E,3.1nm,0.6s,baz=262,slow=2.5,SNR=9.4						
SIV				pPcP		17 14 23.6	
	comp=E,1.1nm,0.8s,baz=358,slow=2.4,SNR=3.5						
YBH	**Yreka Blue Hor**	**41.16**	**321**	LR	LR	17 29 32.8	
	comp=E,84nm,20.8s,MS3.6,baz=137,slow=36						
NEW	**Newport**	**42.42**	**332**	LR	LR	17 30 51.0	
	comp=E,48nm,18.9s,MS3.4,baz=8.2,slow=37						
FFC	**Flin Flon**	**43.09**	**349**	*e*P	**P**	**17 12 28.0**	**-1.9**
	comp=E,37nm,0.6s,mb5.3						
FFC				*e*pP	pP	17 12 41.3	-2.1
SCHQ	**Schefferville**	**45.41**	**18**	P	**P**	**17 12 44.9**	**-3.7**
	comp=E,5.9nm,0.5s,mb4.7,baz=221,slow=9.2						
BDFB	**Brasilia**	**49.39**	**124**	P	**P**	**17 13 18.6**	**-1.6**
	comp=E,2.2nm,0.3s,mb4.6,baz=316,slow=6.6,SNR=5.7						
YKA	**Yellowknife Ar**	**52.92**	**345**	P	**P**	**17 13 43.5**	**-2.7**
	comp=E,5.4nm,0.3s,mb4.9,baz=146,slow=6.8,SNR=43						
YKA				pP	pP	17 13 56.6	-3.4
	comp=E,3.1nm,0.7s,baz=142,slow=7.6,SNR=5.3						
YKA				PcP	PcP	17 14 51.7	-2.9
	comp=E,0.5nm,0.3s,baz=146,slow=3.7,SNR=4.8						
YKA				pPcP		17 15 06.1	
	comp=E,0.6nm,0.6s,baz=144,slow=3.5,SNR=2.3						
YKA	**Yellowknife Ar**	**52.92**	**345**	P	**P**	**17 13 43.5**	**-2.7**
YKA				pP	pP	17 13 56.6	-3.4
YKA				PcP	PcP	17 14 51.7	-2.9
YKA				pPcP		17 15 06.1	
ILAR	**Eielson Array**	**65.13**	**336**	P	**P**	**17 15 07.9**	**-2.8**
	comp=E,0.7nm,0.3s,mb4.1,baz=136,slow=4.8,SNR=12						
ILAR				pP	pP	17 15 22.3	-2.7
	comp=E,1.3nm,0.9s,baz=130,slow=4.1,SNR=5.0						
ILAR				LR	LR	17 45 59.9	
	comp=E,36nm,19.8s,MS3.6,slow=38						
NOA	**NORSAR Array B**	**83.81**	**29**	LR	LR	17 49 46.2	
	comp=E,17nm,21.9s,MS3.4,baz=315,slow=32						
FX1	**Attu Island--F**	**84.61**	**323**	*e*P	**P**	**17 17 02.0**	**-0.4**
ARCES	**ARCESS Array B**	**86.36**	**19**	P	**P**	**17 17 09.3**	**-1.3**
	comp=E,1.3nm,0.7s,mb4.3,baz=288,slow=3.8,SNR=10						
GERES	**GERESS Array B**	**88.66**	**40**	LR	LR	17 51 04.7	
	comp=E,30nm,20.2s,MS3.7,baz=348,slow=32						
FINES	**FINESS Array B**	**90.34**	**26**	LR	LR	18 01 34.0	
	comp=E,21nm,18.9s,MS3.6,baz=284,slow=38						
MATP	**Matopo**	**119.89**	**106**	PKP	PKPdf	17 23 19.6	+0.8
	comp=E,1.7nm,0.5s,baz=314,slow=2.1,SNR=7.8						
MKAR	**Makanchi Array**	**120.19**	**7**	PKP	PKPdf	17 23 18.2	-0.6
	comp=E,0.2nm,0.3s,baz=331,slow=2.9,SNR=7.3						
WRA	**Warramunga Arr**	**137.93**	**254**	PKP	PKPdf	17 23 55.1	+2.0
	comp=E,1.4nm,0.6s,baz=88,slow=2.4,SNR=17						
CMAR	**Chiang Mai Arr**	**148.00**	**346**	PKPbc	PKPdf	17 24 13.4	+2.7
	comp=E,2.8nm,0.6s,baz=337,slow=2.9,SNR=23						

IDC 21 17:05:34.7±1.1**,26.04S**×**70.79E,mb4.0**/5**,mb1 4.2**/5**, mb1mx3.9**/17**,mbtmp4.0**/5**,MS3.9**/4**,Ms1 3.9**/4**, ms1mx3.5**/16**,Error ellipse: s-maj=52.9km s-min=25.7km az=70.0,Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	**Boshof**	**40.35**	**256**	LR	LR	17 27 20.8	
	comp=Z,168nm,18.7s,baz=133,slow=32						
LBTB	**Lobatse**	**40.64**	**261**	LR	LR	17 27 37.6	
	comp=Z,153nm,19.2s,baz=329,slow=33						
MAW	**Mawson**	**41.87**	**185**	LR	LR	17 27 31.1	
	comp=Z,126nm,18.2s,baz=261,slow=31						
CMAR	**Chiang Mai Arr**	**52.01**	**35**	LR	LR	17 33 16.2	
	comp=Z,88nm,18.9s,baz=190,slow=32						
WRA	**Warramunga Arr**	**58.33**	**98**	P	P	17 15 32.1	-2.0
	1.0nm,0.8s,baz=254,slow=7.1,SNR=5.8						
VNDA	**Vanda**	**65.01**	**166**	P	P	17 16 15.9	-2.3
	1.1nm,0.8s,baz=274,slow=6.1,SNR=8.9						
MKAR	**Makanchi Array**	**73.23**	**8**	P	P	17 17 07.2	-2.2
	2.3nm,0.7s,baz=194,slow=5.9,SNR=24						
BRTR	**Keskin Array B**	**74.03**	**331**	P	P	17 17 12.6	-1.5
	0.3nm,0.3s,baz=155,slow=5.8,SNR=3.1						
ZAL	**Zalesovo**	**80.56**	**8**	P	P	17 17 48.5	-1.5
	1.4nm,0.7s,baz=297,slow=4.1,SNR=9.2						

*CRAAG **21** 17:06:16.0,36.26N×1.99E,Ml3.1*

*NEIC **21** 17:06:18.8±0.5,36.58N×1.53E,h10^{km},ML3.1(ALG), Error ellipse: s-maj=8.1km s-min=5.2km az=90.0*

*CSEM **21** 17:06:18.6±0.2,36.53N×1.52E,h8^{km},ML3.1,Error ellipse: s-maj=7.2km s-min=4.5km az=80.0*

*MDD **21** 17:06:19.2±0.5,36.61N×1.46E,mb3.6/3,Error ellipse: s-maj=7.4km s-min=5.2km az=85.0,PRXIMO*

ISC 21 17:06:18.0±0.5,**36.64N**±0.03×**1.45E**±0.06,**h10^{km},n26,** σ**1^{s}04**/44,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EBNR	**Beni Rached**	**0.35**	**169**	P	**Pg**	**17 06 24.0**	**-1.3**
ECHF	**Ech Chlef**	**0.49**	**190**	P	**Pg**	**17 06 27.0**	**-0.9**
ECHA	**Ech Chlef**	**0.49**	**188**	P	**Pg**	**17 06 27.0**	**-1.0**
EANR	**’Ain N’Sour**	**0.74**	**202**	P	**Pb**	**17 06 33.0**	**+0.5**
ETRT	**Tiaret**	**1.25**	**186**	P	**Pb**	**17 06 35.0**	**-6.2**
ABA	**Alger-Bouzarea**	**1.28**	**82**	P	**Pb**	**17 06 42.4**	**+0.6**
EMHD	**Djebel Mahouad**	**1.29**	**109**	P	**Pb**	**17 06 43.0**	**+1.1**
EIBI	**Ibiza**	**2.39**	**358**	Pn	**Pn**	**17 06 58.8**	**+1.0**
	2.0nm,0.1s,SNR=13						
EIBI				Sn	**Sn**	**17 07 26.4**	**-1.0**
	5.7nm,0.3s,SNR=11						
EIBI	**Ibiza**	**2.39**	**358**	Pn	**Pn**	**17 06 58.8**	**+1.0**
	2.0nm,0.1s,SNR=13						
EIBI				Sn	**Sn**	**17 07 26.4**	**-1.0**
	SNR=11						
EBEN	**Beniarda**	**2.45**	**328**	Pn	**Pn**	**17 07 00.1**	**+1.4**
	0.4nm,0.1s,SNR=7.9						
EBEN				Sn	**Sn**	**17 07 28.9**	**-0.1**
	SNR=7.9						
EBEN	**Beniarda**	**2.45**	**328**	Pn	**Pn**	**17 07 00.1**	**+1.4**
	0.4nm,0.1s,SNR=7.9						
EBEN				Sn	**Sn**	**17 07 28.9**	**-0.2**
	SNR=7.9						
ETOB	**Tobarra**	**3.11**	**311**	Pn	**Pn**	**17 07 08.4**	**+0.3**
	1.3nm,0.2s,SNR=7.9						
ETOB				Sn	**Sn**	**17 07 45.9**	**+0.2**
	SNR=7.9						
ETOB	**Tobarra**	**3.11**	**311**	Pn	**Pn**	**17 07 08.4**	**+0.3**
	1.3nm,0.2s,SNR=7.9						
ETOB				Sn	**Sn**	**17 07 45.9**	**+0.2**
	SNR=7.9						
ETOS	**Mallorca**	**3.30**	**19**	Pn	**Pn**	**17 07 09.6**	**-1.3**
ETOS				Sn	**Sn**	**17 07 45.9**	**-4.8**
ETOS	**Mallorca**	**3.30**	**19**	Pn	**Pn**	**17 07 10.4**	**-0.4**
	0.2nm,0.1s,SNR=5.6						
ETOS				Sn	**Sn**	**17 07 46.6**	**-4.0**
	SNR=7.9						
ETOS	**Mallorca**	**3.30**	**19**	Pn	**Pn**	**17 07 09.6**	**-1.3**
	0.2nm,0.1s,SNR=5.6						
ETOS				Sn	**Sn**	**17 07 45.8**	**-4.8**
	SNR=7.9						
EQES	**Quesada**	**3.79**	**289**	Pn	**Pn**	**17 07 19.8**	**+2.0**
EQES				Sn	**Sn**	**17 08 03.8**	**+0.8**
EQES	**Quesada**	**3.79**	**289**	Pn	**Pn**	**17 07 18.4**	**+0.7**
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**17 08 01.5**	**-1.5**
	SNR=7.9						
EQES	**Quesada**	**3.79**	**289**	Pn	**Pn**	**17 07 19.8**	**+2.0**
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**17 08 03.8**	**+0.9**
	SNR=7.9						
EMOS	**Mosqueruela**	**4.01**	**339**	Pn	**Pn**	**17 07 21.7**	**+0.7**
EMOS				Sn	**Sn**	**17 08 06.4**	**-2.1**
EMOS				S	**Sn**	**17 08 07.3**	**-1.3**
EMOS	**Mosqueruela**	**4.01**	**339**	Pn	**Pn**	**17 07 21.7**	**+0.7**
	0.6nm,0.1s,SNR=9.4						
EMOS				Sn	**Sn**	**17 08 06.4**	**-2.1**
	1.8nm,0.3s,SNR=6.3						
EMOS	**Mosqueruela**	**4.01**	**339**	Pn	**Pn**	**17 07 21.7**	**+0.8**
	0.6nm,0.1s,SNR=9.4						
EMOS				Sn	**Sn**	**17 08 06.4**	**-2.2**
	SNR=6.3						
ERTA	**Horta de San J**	**4.40**	**349**	Pn	**Pn**	**17 07 26.7**	**+0.3**
	0.3nm,0.1s,SNR=7.9						
ERTA				Sn	**Sn**	**17 08 15.0**	**-3.4**
	SNR=7.9						
ERTA	**Horta de San J**	**4.40**	**349**	Pn	**Pn**	**17 07 26.7**	**+0.3**
	0.3nm,0.1s,SNR=7.9						
ERTA				Sn	**Sn**	**17 08 15.0**	**-3.4**
	SNR=7.9						
EPOB	**Poblet**	**4.72**	**357**	Pn	**Pn**	**17 07 31.1**	**+0.2**
	0.2nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**4.72**	**357**	Pn	**Pn**	**17 07 31.1**	**+0.2**
	0.2nm,0.1s,SNR=7.9						

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*JMA **21** 17:28:56.9±0.3,23.57N×121.66E,h79^{km},M2.7*

TAP 21 17:28:56.2,23.53N×121.64E,h32^{km},ML3.2,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**1.56**	**53**	P	Pn	17 29 22.9	+0.8
YOJ				S	Sn	17 29 42.4	+1.0
HATJ	**Hateruma jima**	**2.05**	**75**	P	Pn	17 29 29.7	+0.5
HATJ				*e*S	Sn	17 29 54.1	+0.2
IRIF	**Iriomote-Funau**	**2.07**	**67**	P	Pn	17 29 30.2	+0.7
IRIF				S	Sn	17 29 55.3	+0.8
JKRS	**Kuro-shima**	**2.28**	**72**	P	Pn	17 29 32.8	+0.4
JKRS				*e*S	Sn	17 30 00.3	+0.6
JIJ	**Ishigaki jima**	**2.44**	**70**	P	Pn	17 29 34.4	-0.3
JIJ				*e*S	Sn	17 30 02.4	-1.2
JTJ	**Tarama**	**3.01**	**68**	P	Pn	17 29 43.4	+0.6
JTJ				*e*S	Sn	17 30 17.4	-0.7

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*IDC **21** 18:02:09.3±6.0,36.30N×69.91E,mb3.7/4,mb1 3.8/6, mb1mx3.6/20,mbtmp3.8/6,ML3.5/2,Error ellipse: s-maj=102.2km s-min=29.3km az=154.0*

*NNC **21** 18:02:27.9±9.3,38.20N×69.29E,h19^{km}±39^{km},mpv3.4, Error ellipse: s-maj=60.4km s-min=28.7km az=19.0*

*MOS **21** 18:02:29.1±2.3,38.23N×69.12E,h53^{km},mb4.0/1,Error ellipse: s-maj=26.4km s-min=10.5km az=87.4*

*NEIC **21** 18:02:34.2±4.5,38.64N×69.19E,h48^{km}±32^{km},mb4.3/2, Error ellipse: s-maj=47.0km s-min=17.8km az=201.0*

ISC 21 18:02:25.6±0.7,**38.28N**±0.06×**69.2E**±0.1,**h10^{km},n21,** σ**1^{s}64**/25,**mb3.8**/4,**5C-2D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.92**	**11**	Pn	**Pn**	**18 03 43.6**	**+2.3**
	0.8nm,0.3s,baz=187,slow=10,SNR=22						
KK31				⇑Pg	**Pg**	**18 03 59.9**	**-3.9**
	2.0nm,0.3s,baz=191,slow=16,SNR=14						
KK31				⇑Lg		18 05 06.8	
	28nm,0.6s,baz=190,slow=24,SNR=8.7						
KK31	**Karatay Array**	**4.92**	**11**	Pn	**Pn**	**18 03 43.6**	**+2.3**
KK31				Pg	**Pg**	**18 03 59.9**	**-3.9**
KK31				Lg		18 05 06.8	
CEP	**Cherat**	**4.95**	**153**	P	**Pn**	**18 03 44.1**	**+2.3**
CEP				S	**Sn**	**18 04 39.0**	**-0.8**
AAK	**Ala-Archa**	**5.92**	**41**	⇓Pn	**Pn**	**18 03 57.6**	**+2.1**
	7.6nm,0.7s						
AAK				⇑Lg		18 05 34.8	
	29nm,1.0s						
AAK	**Ala-Archa**	**5.92**	**41**	*e*PN	**Pn**	**18 03 57.4**	**+1.9**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AAK	**Ala-Archa**	**5.92**	**41**	*e*Pn	**Pn**	**18 03 57.4**	**+1.9**
	comp=Z,4.8nm,0.6s						
MK31	**Makanchi Array**	**12.84**	**44**	⇑P	**P**	**18 05 29.1**	**-1.7**
	comp=Z,2.0nm,0.9s,baz=219,slow=14,SNR=12						
MKAR	**Makanchi Array**	**12.84**	**44**	Pn	**P**	**18 05 29.4**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=228,slow=15,SNR=13						
MKAR				Lg		18 09 31.8	
	comp=Z,0.0nm,0.3s,baz=238,slow=27,SNR=3.4						
AB31	**Akbulak array**	**12.85**	**332**	P	**P**	**18 05 28.7**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=156,slow=12,SNR=34						
AB31				⇑S	**S**	**18 07 56.0**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=147,slow=27						
VOSK	**Vostochnaya**	**14.50**	**4**	P	**P**	**18 05 55.4**	**+2.8**
ZRNK	**Zerenda**	**14.67**	**359**	⇓P	**P**	**18 05 55.4**	**+0.4**
	comp=Z,0.6nm,0.6s						
ZRNK	**Zerenda**	**14.67**	**359**	Pn	**P**	**18 05 54.1**	**-0.8**
ZRNK				*e*		18 06 01.8	
BVAR	**Borovoye Array**	**14.77**	**3**	Pn	**P**	**18 06 00.9**	**+4.7**
	comp=Z,0.8nm,0.3s,baz=165,slow=9.4,SNR=18						
BRVK	**Borovoye**	**14.80**	**2**	*e*P	**P**	**18 06 00.7**	**+4.1**
ZAL	**Zalesovo**	**18.95**	**29**	P	**P**	**18 06 47.9**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=283,slow=4.8,SNR=5.3						
ARU	**Arti**	**19.50**	**342**	*e*P	**P**	**18 06 52.0**	**-3.5**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ARU	**Arti**	**19.50**	**342**	*e*P	**P**	**18 06 52.0**	**-3.5**
	comp=Z,5.8nm,0.5s						
FINES	**FINESS Array B**	**35.22**	**325**	P	**P**	**18 09 21.4**	**-0.4**
	comp=Z,0.2nm,0.3s,mb3.5,baz=117,slow=8.5,SNR=4.5						
ARCES	**ARCESS Array B**	**38.96**	**337**	P	**P**	**18 09 53.8**	**+0.6**
	comp=Z,1.3nm,0.5s,mb3.9,baz=110,slow=7.5,SNR=15						
NOA	**NORSAR Array B**	**42.12**	**322**	P	**P**	**18 10 17.8**	**-1.3**
	comp=Z,0.4nm,0.7s,mb3.1,baz=102,slow=7.9,SNR=2.8						
WRAB	**Tennant Creek**	**84.12**	**121**	*e*P	**P**	**18 15 02.0**	**+3.7**
	comp=Z,4.0nm,0.8s,mb4.6						
WRAB				*e*		18 15 11.5	

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*MOS **21** 18:04:56.5±1.4,7.50N×94.48E,h33^{km},mb4.9/11,Error ellipse: s-maj=21.9km s-min=9.6km az=110.2*

*BJI **21** 18:04:57.1,7.59N×93.48E,h25^{km},mB4.8,mb4.5,Ms4.6, Msz4.4*

*NEIC **21** 18:04:58.1±0.5,7.53N×94.25E,mb4.8/19,Error ellipse: s-maj=11.5km s-min=9.6km az=221.0*

*IDC **21** 18:04:58.9±0.5,8.00N×93.49E,mb4.3/19,mb1 4.4/20, mb1mx4.4/23,mbtmp4.3/20,ML4.3/1,MS4.2/18,Ms1 4.2/18, ms1mx4.2/22,Error ellipse: s-maj=20.7km s-min=14.0km az=68.0*

ISC 21 18:04:56.6±0.5,**7.56N**±0.07×**94.07E**±0.06,**h19^{km}, h19^{km}**±.8^{km}**:pP-P,n103,**σ**1^{s}32**/98,**mb4.6**/49,**MS4.4**/29, **7C-1D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.91**	**109**	*e*P	**Pn**	**18 06 33.8**	**-5.8**
IPM	**Ipoh**	**7.52**	**113**	P	**Pn**	**18 06 42.6**	**-5.5**
CM31	**Chiang Mai Arr**	**11.83**	**23**	*e*P	**P**	**18 07 47.6**	**+0.1**
	3.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**11.83**	**23**	Pn	**P**	**18 07 45.5**	**-2.0**
	0.6nm,0.3s,baz=212,slow=14,SNR=18						
CMAR				LR	LR	18 12 26.9	
	comp=Z,1μm,18.6s,baz=215,slow=38						
PALK	**Pallekele**	**13.26**	**270**	P	**P**	**18 08 02.2**	**-4.5**
PALK				*e*S	**S**	**18 10 27.7**	**-7.0**
VIS	**Vishakhapatnam**	**14.55**	**315**	*i* P	**P**	**18 08 23.8**	**+0.1**
VIS				*i* S	**S**	**18 11 06.5**	**+1.1**
HYB	**Hyderabad**	**18.03**	**304**	*e*P	**P**	**18 09 11.5**	**+3.4**
HYB	**Hyderabad**	**18.03**	**304**	*i* P	**P**	**18 09 11.5**	**+3.4**
SHL	**Shillong**	**18.03**	**354**	*e*P	**P**	**18 09 06.5**	**-1.6**
KMI	**Kunming**	**19.33**	**24**	P	**P**	**18 09 25.8**	**+2.0**
KMI				AP		18 09 30.9	
KMI				XP		18 09 33.6	
KMI				PP	PP	18 09 43.5	+2.3
KMI				S	**S**	**18 13 02.3**	**+7.0**
KMI				XS		18 13 15.8	
KMI				SS	SS	18 13 29.9	+8.2
KMI				AMB	AMB		
	comp=Z,10.0nm,1.6s						
KMI				AMB	AMB		
	comp=Z,140nm,4.1s						
KMI				LR	LR		
	comp=N,720nm,12.9s						
KMI				LR	LR		
	comp=E,920nm,17.2s						
KMI				LR	LR		
	comp=Z,1μm,12.8s						
PKI	**Pulchoki**	**21.53**	**339**	*e*P	**P**	**18 09 47.6**	**+0.6**
	comp=Z,114nm,1.2s,mb5.2						
DMN	**Daman**	**21.68**	**338**	*e*P	**P**	**18 09 49.8**	**+1.4**
	comp=Z,119nm,1.0s,mb5.3						
GUN	**Gumba**	**21.68**	**340**	*e*P	**P**	**18 09 46.3**	**-2.1**
	comp=Z,191nm,1.0s,mb5.5						
KKN	**Kakani**	**21.78**	**339**	*e*P	**P**	**18 09 48.2**	**-1.2**
	comp=Z,134nm,1.1s,mb5.3						
KKM	**Kota Kinabalu**	**22.04**	**93**	*e*P	**P**	**18 09 49.5**	**-2.6**
KKM	**Kota Kinabalu**	**22.04**	**93**	P	**P**	**18 09 53.9**	**+1.9**
LSA	**Lhasa**	**22.20**	**353**	P	**P**	**18 09 54.0**	**+0.4**
LSA	**Lhasa**	**22.20**	**353**	*e*P	**P**	**18 09 53.3**	**-0.3**
	comp=Z,42nm,0.9s,mb4.9						
GKN	**Gorkha**	**22.21**	**337**	*e*P	**P**	**18 09 50.9**	**-2.8**
	comp=Z,124nm,1.0s,mb5.3						
GYA	**Guiyang**	**22.29**	**31**	⇑*i*P	**P**	**18 09 56.4**	**+1.9**
GYA				AP		18 10 03.8	
GYA				XP		18 10 07.3	
GYA				S	**S**	**18 13 58.8**	**+5.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
GYA				AMB	AMB		
	comp=Z,200nm,5.1s						
GYA				LR	LR		
	comp=N,1μm,13.9s,MS4.8						
GYA				LR	LR		
	comp=E,3μm,14.8s,MS4.8						
GYA				LR	LR		
	comp=Z,1μm,15.7s,MS4.4						
KOLN	**Koldanda**	**22.42**	**335**	*e*P	**P**	**18 09 55.4**	**-0.4**
TSM	**Tawau**	**23.89**	**96**	P	**P**	**18 10 10.2**	**-0.1**
CD2	**Chengdu**	**24.94**	**20**	P	**P**	**18 10 25.3**	**+4.9**
CD2				S	**S**	**18 14 43.9**	**+3.9**
CD2				XS		18 14 54.3	
CD2				LR	LR		
	comp=N,820nm,10.8s						
CD2				LR	LR		
	comp=Z,890nm,12.0s,MS4.5						
NDI	**New Delhi**	**26.36**	**325**	*e*x	**P**	**18 10 37.0**	**+3.4**
ENH	**Enshi**	**26.83**	**31**	*e*P	**P**	**18 10 37.8**	**-0.1**
	comp=Z,16nm,1.0s,mb4.5						
XAN	**Xi’an**	**29.71**	**25**	P	**P**	**18 11 06.1**	**+2.2**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
GTA	**Gaotai**	**32.13**	**8**	*e*P	**P**	**18 11 24.6**	**-0.6**
GTA				AMB	AMB		
	comp=Z,70nm,5.7s						
GTA				LR	LR		
	comp=N,360nm,19.4s						
GTA				LR	LR		
	comp=E,490nm,13.3s						
GTA				LR	LR		
	comp=Z,500nm,20.2s,MS4.2						
WMQ	**Urumqi**	**36.55**	**352**	P	**P**	**18 12 03.3**	**+0.2**
WMQ				AP	pP	18 12 08.0	-0.8
WMQ				XP	sP	18 12 10.3	-0.9
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,180nm,5.2s						
WMQ				LR	LR		
	comp=N,250nm,18.0s						
WMQ				LR	LR		
	comp=E,510nm,24.0s						
WMQ				LR	LR		
	comp=Z,260nm,20.0s,MS4.0						
HHC	**Hu-ho-hao-te**	**36.64**	**22**	*e*P	**P**	**18 12 08.3**	**+4.4**
HHC				AP	pP	18 12 13.3	+3.8
HHC				XP	sP	18 12 15.9	+4.0
HHC				PP	PP	18 13 36.0	+7.3
HHC				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
HHC				AMB	AMB		
	comp=Z,90nm,6.1s						
HHC				LR	LR		
	comp=N,530nm,13.2s,MS4.8						
HHC				LR	LR		
	comp=E,930nm,14.1s,MS4.8						
HHC				LR	LR		
	comp=Z,560nm,15.7s,MS4.5						
FITZ	**Fitzroy Crossi**	**40.26**	**130**	P	**P**	**18 12 43.4**	**+9.0**
	comp=Z,13nm,1.0s,mb4.6,baz=350,slow=9.3,SNR=4.2						
MKAR	**Makanchi Array**	**40.38**	**347**	*i* P	**P**	**18 12 34.6**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MKAR	**Makanchi Array**	**40.38**	**347**	P	**P**	**18 12 34.0**	**-1.1**
	comp=Z,6.0nm,0.7s,mb4.4,baz=165,slow=8.0,SNR=37						
MKAR				LR	LR	18 34 14.7	
	comp=Z,164nm,18.1s,MS3.9,baz=173,slow=44						
MKAR	**Makanchi Array**	**40.38**	**347**	P	**P**	**18 12 34.0**	**-1.1**
MKAR				LR	LR	18 34 14.7	
KKAR	**Karatay Array**	**41.02**	**334**	*i* P	**P**	**18 12 41.1**	**+0.8**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
SONM	**Songino Array**	**41.48**	**13**	P	**P**	**18 12 46.3**	**+2.2**
	comp=Z,4.5nm,0.9s,mb4.1,baz=180,slow=7.2,SNR=2.9						
SONM				LR	LR	18 31 05.2	
	comp=Z,332nm,19.6s,MS4.2,baz=249,slow=38						
SNY	**Shenyang**	**42.97**	**33**	⇑P	**P**	**18 13 01.3**	**+4.9**
SNY				S	**S**	**18 19 20.3**	**-0.1**
SNY				LR	LR		
	comp=N,430nm,14.7s						
SNY				LR	LR		
	comp=Z,440nm,16.2s,MS4.5						
ZAK	**Zakamensk**	**43.37**	**9**	*e*P	**P**	**18 12 55.6**	**-3.9**
ZAK				*e*		18 14 48.0	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.5						
TLY	**Talaya**	**44.69**	**8**	*e*P	**P**	**18 13 14.9**	**+4.7**
TLY				*e*		18 19 46.7	
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
TLY				MLR	MLR		
	comp=Z,327nm,22.0s,MS4.2						
HIA	**Hailar**	**46.84**	**23**	*e*P	**P**	**18 13 27.2**	**0.0**
	comp=Z,7.5nm,0.9s,mb4.6						
ZAL	**Zalesovo**	**46.85**	**352**	P	**P**	**18 13 26.7**	**-0.6**
	comp=Z,4.7nm,0.4s,mb4.8,baz=289,slow=5.9,SNR=12						
CIT	**Chita**	**47.13**	**16**	*e*P	**P**	**18 13 28.2**	**-1.4**
NVS	**Novosibirsk**	**47.95**	**352**	*e*P	**P**	**18 13 30.1**	**-5.8**
NVS				*e*		18 15 06.8	
NVS				*e*		18 16 11.4	
NVS				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
NVS				pmax	pmax		
	comp=N,7.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.8s						
MDJ	**Mudanjiang**	**48.11**	**34**	P	**P**	**18 13 37.8**	**+0.5**
MDJ				PCP	PcP	18 15 04.3	-0.9
MDJ				PCS		18 18 59.9	
MDJ				S	**S**	**18 20 36.1**	**+2.2**
MDJ				XS		18 20 47.3	
MDJ				SCS	ScS	18 23 28.8	+2.1
MDJ				SS	SS	18 24 07.0	+9.0
MDJ				AMB	AMB		
	comp=Z,60nm,5.0s						
MDJ				LR	LR		
	comp=N,390nm,16.1s,MS4.6						
MDJ				LR	LR		
	comp=E,270nm,14.8s,MS4.6						
MDJ				LR	LR		
	comp=Z,440nm,15.5s,MS4.5						
WRA	**Warramunga Arr**	**48.13**	**125**	P	**P**	**18 13 48.4**	**+11**
	comp=Z,2.6nm,0.6s,mb4.4,baz=305,slow=8.5,SNR=12						
WRA				PcP	PcP	18 15 08.3	+2.7
	comp=Z,1.3nm,0.7s,baz=302,slow=3.7,SNR=4.7						
WRAB	**Tennant Creek**	**48.13**	**125**	*e*P	**P**	**18 13 36.3**	**-1.5**
	comp=Z,7.9nm,0.8s,mb4.8						
BVAR	**Borovoye Array**	**49.27**	**341**	P	**P**	**18 13 45.1**	**-1.0**
	comp=Z,3.3nm,0.8s,mb4.4,baz=143,slow=7.4,SNR=10						
BVAR				PcP	PcP	18 15 08.9	-0.4
	comp=Z,1.6nm,0.7s,baz=162,slow=4.6,SNR=3.3						
MJAR	**Matsushiro Arr**	**49.42**	**48**	P	**P**	**18 13 52.0**	**+4.5**
	comp=Z,2.2nm,0.8s,mb4.2,baz=222,slow=5.9,SNR=6.2						
MJAR				LR	LR	18 37 02.7	
	comp=Z,231nm,18.7s,MS4.2,baz=240,slow=39						
ZRNK	**Zerenda**	**49.66**	**340**	*e*P	**P**	**18 13 47.7**	**-1.4**
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ZRNK	**Zerenda**	**49.66**	**340**	*e*P	**P**	**18 13 47.7**	**-1.4**
	comp=Z,5.3nm,0.8s,mb4.6						
AB31	**Akbulak array**	**50.48**	**332**	*i* P	**P**	**18 13 55.5**	**+0.1**
AB31				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.0						
KLR	**Kul’dur**	**52.19**	**30**	*e*P	**P**	**18 14 11.7**	**+3.3**
KLR				MLR	MLR		
	comp=Z,700nm,14.0s,MS4.8						
SVE	**Sverdlovsk**	**55.67**	**338**	*e*P	**P**	**18 14 32.0**	**-1.9**
SVE				*e*	pP	18 14 37.0	-2.7
SVE				MLR	MLR		
	comp=N,200nm,18.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,200nm,18.0s,MS4.4						
SVE				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.4						
ARU	**Arti**	**56.16**	**337**	⇑*i*P	**P**	**18 14 36.4**	**-1.0**
ARU				*e*		18 16 41.0	
ARU				*e*PPP	PPP	18 17 57.3	-3.0
ARU				*e*S	**S**	**18 22 26.2**	**+2.4**
ARU				*e*SS	SS	18 26 14.3	+3.7
ARU				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
ARU	**Arti**	**56.16**	**337**	P	**P**	**18 14 36.6**	**-0.8**
	comp=Z,14nm,0.9s,mb5.0						
KIV	**Kislovodsk**	**57.51**	**318**	*e*P	**P**	**18 14 48.3**	**+1.1**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
ASF	**Jabal al Asfar**	**58.33**	**303**	LR	LR	18 42 34.6	
	comp=Z,200nm,18.1s,MS4.3,baz=119,slow=39						
SOKR	**Solikamsk**	**59.07**	**339**	⇑*i*P	**P**	**18 14 56.5**	**-1.4**
SOKR				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
SOKR				MLR	MLR		
	comp=Z,560nm,21.0s,MS4.7						
STKA	**Stephens Creek**	**59.94**	**134**	P	**P**	**18 15 12.7**	**+8.4**
	comp=Z,3.0nm,0.8s,mb4.3,baz=318,slow=6.8,SNR=3.1						
STKA				LR	LR	18 41 33.8	
	comp=Z,335nm,19.9s,MS4.5,baz=204,slow=36						
YAK	**Yakutsk**	**60.31**	**18**	⇑*i*P	**P**	**18 15 04.3**	**-2.1**
YAK				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
YAK	**Yakutsk**	**60.31**	**18**	*e*P	**P**	**18 15 04.3**	**-2.1**
	comp=Z,16nm,0.9s,mb5.0						
MOS	**Moscow**	**65.31**	**329**	*e*P	**P**	**18 15 36.0**	**-3.6**
OBN	**Obninsk**	**65.61**	**328**	⇑*i*P	**P**	**18 15 35.2**	**-6.3**
OBN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
AKASG	**Malin Array Be**	**68.36**	**322**	P	**P**	**18 15 57.5**	**-1.5**
	comp=Z,0.8nm,0.7s,mb3.9,baz=89,slow=4.9,SNR=5.4						
IDI	**Anoyia**	**68.69**	**305**	P	**P**	**18 16 00.7**	**-0.7**
	comp=Z,8.8nm,0.8s,mb4.7,baz=100,slow=5.8,SNR=5.6						
LSZ	**Lusaka**	**69.10**	**251**	*e*P	**P**	**18 16 05.6**	**+1.4**
	comp=Z,5.5nm,1.1s,mb4.4						
VSU	**Vasula**	**71.83**	**329**	⇑*i*P	**P**	**18 16 18.8**	**-1.2**
APA	**Apatity**	**72.12**	**339**	⇓*e*P	**P**	**18 16 22.0**	**+0.4**
APA				*i*	pP	18 16 27.6	+0.1
APA				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.1						
APA				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.8						
FINES	**FINESS Array B**	**72.96**	**332**	*i* P	**P**	**18 16 26.1**	**-0.5**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FINES	**FINESS Array B**	**72.96**	**332**	P	**P**	**18 16 25.6**	**-1.0**
	comp=Z,4.4nm,0.7s,mb4.5,baz=90,slow=5.7,SNR=13						
FINES				LR	LR	18 55 43.0	
	comp=Z,124nm,18.1s,MS4.2,baz=289,slow=42						
KAF	**Kangasniemi**	**73.04**	**333**	*e*p	**P**	**18 16 23.3**	**-3.8**
LBTB	**Lobatse**	**74.03**	**241**	P	**P**	**18 16 35.1**	**+1.5**
	comp=Z,2.2nm,0.8s,mb4.2,baz=78,slow=10.0,SNR=3.1						
LBTB				LR	LR	18 45 14.6	
	comp=Z,185nm,19.2s,MS4.4,baz=93,slow=33						
OJC	**Ojcow**	**74.17**	**320**	*e*P	**P**	**18 16 34.2**	**+0.3**
OKC	**Ostrava-Krasne**	**75.19**	**319**	AMS	AMS	18 52 50.0	
	comp=Z,100nm,22.0s						
BOSA	**Boshof**	**75.36**	**238**	P	**P**	**18 16 45.5**	**+4.3**
	comp=Z,3.1nm,0.8s,mb4.3,baz=93,slow=6.4,SNR=5.1						
BOSA				LR	LR	18 46 36.8	
	comp=Z,124nm,18.8s,MS4.2,baz=226,slow=33						
BOSA	**Boshof**	**75.36**	**238**	P	**P**	**18 16 40.0**	**-1.2**
	comp=Z,5.8nm,1.0s,mb4.5						
BOSA				*e*pP	pP	18 16 46.4	-0.8
ARCES	**ARCESS Array B**	**75.54**	**340**	P	**P**	**18 16 41.8**	**+0.3**
	comp=Z,1.9nm,0.8s,mb4.0,baz=106,slow=6.6,SNR=5.2						
ARCES				LR	LR	18 52 48.8	
	comp=Z,333nm,20.6s,MS4.6,baz=121,slow=38						
DPC	**Dobruska-Polom**	**76.41**	**320**	AMS	AMS	18 54 50.0	
	comp=Z,100nm,19.1s						
PRU	**Pruhonice**	**77.52**	**319**	AMS	AMS	18 50 40.0	
	comp=Z,100nm,19.2s						
PVCC	**Panska Ves**	**77.54**	**320**	AMS	AMS	18 56 50.0	
	comp=Z,100nm,15.2s						
BRG	**Berggiesshubel**	**77.95**	**320**	*e*P	**P**	**18 17 01.8**	**+6.6**
BRG				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
BRG	**Berggiesshubel**	**77.95**	**320**	*e*P	**P**	**18 17 01.8**	**+6.6**
	comp=Z,6.7nm,1.3s,mb4.4						
GERES	**GERESS Array B**	**78.02**	**318**	P	**P**	**18 16 56.1**	**+0.5**
	comp=Z,1.7nm,0.7s,mb4.1,baz=90,slow=5.3,SNR=14						
GERES				LR	LR	18 55 49.9	
	comp=Z,62nm,20.1s,MS3.9,baz=223,slow=40						
KHC	**Kasperske Hory**	**78.11**	**319**	*e*P	**P**	**18 16 56.5**	**+0.4**
KHC				AMS	AMS	18 55 50.0	
	comp=Z,100nm,17.7s						
MAW	**Mawson**	**78.21**	**192**	P	**P**	**18 17 01.4**	**+5.1**

	comp=Z,2.4nm,0.6s,mb4.3,baz=26,slow=5.0,SNR=4.1						
MAW				LR	LR	18 45 51.1	
	comp=Z,87nm,20.5s,MS4.1,baz=61,slow=31						
CLL	**Collm**	**78.56**	**321**	P	**P**	**18 17 00.0**	**+1.4**
NKC	**Novy Kostel**	**78.88**	**320**	AMS	AMS	18 57 40.0	
	comp=Z,100nm,22.1s						
GRA1	**Grafenberg Arr**	**79.66**	**319**	*e*P	**P**	**18 17 06.5**	**+1.9**
	comp=Z,5.0nm,1.1s,mb4.4						
GRA1				*e*pP	pP	18 17 13.2	+2.6
GRF	**Grafenberg Arr**	**79.66**	**319**	*e*P	**P**	**18 17 06.5**	**+1.9**
GRF				*e**PP	pP	18 17 13.2	+2.6
GRF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**79.66**	**319**	*e*P	**P**	**18 17 06.5**	**+1.9**
	comp=Z,5.0nm,1.1s,mb4.4						
GRF				*e*pP	pP	18 17 13.2	+2.6
TSUM	**Tsumeb**	**79.85**	**249**	LR	LR	18 49 33.2	
	comp=Z,266nm,18.0s,MS4.6,baz=211,slow=34						
NB2	**NORSAR Subarra**	**79.97**	**331**	P	**P**	**18 17 05.7**	**-0.3**
	comp=Z,3.6nm,1.0s,mb4.3,baz=91,slow=5.3						
NOA	**NORSAR Array B**	**79.97**	**331**	P	**P**	**18 17 06.0**	**0.0**
	comp=Z,1.4nm,0.7s,mb4.0,baz=97,slow=5.5,SNR=8.2						
NOA				LR	LR	18 57 33.8	
	comp=Z,94nm,19.1s,MS4.2,baz=85,slow=40						
NOA	**NORSAR Array B**	**79.97**	**331**	P	**P**	**18 17 06.0**	**0.0**
NOA				LR	LR	18 57 33.8	
DAVOX	**Davos**	**80.57**	**316**	P	**P**	**18 17 08.6**	**-0.9**
	comp=Z,2.0nm,0.7s,mb4.2,baz=90,slow=7.1,SNR=2.8						
LPG	**La Plagne**	**82.80**	**315**	*e*P	**P**	**18 17 21.6**	**+0.5**
	comp=Z,12nm,0.8s,mb4.7						
RPZ	**Rata Peaks**	**85.87**	**135**	LR	LR	18 53 34.5	
	comp=Z,263nm,20.4s,MS4.6,baz=17,slow=34						
IMA	**Indian Mountai**	**91.94**	**22**	*e*P	**P**	**18 18 05.8**	**+0.9**
	comp=Z,40nm,1.3s,mb5.6						
VNDA	**Vanda**	**92.63**	**168**	P	**P**	**18 18 13.9**	**+6.0**
	comp=Z,0.5nm,0.8s,mb4.0,baz=320,slow=5.8,SNR=3.0						
VNDA				LR	LR	18 56 51.5	
	comp=Z,106nm,21.1s,MS4.3,baz=307,slow=33						
ILAR	**Eielson Array**	**95.06**	**22**	LR	LR	19 05 36.1	
	comp=Z,90nm,18.2s,MS4.3,baz=179,slow=38						
DBIC	**Dimbokro**	**97.92**	**278**	LR	LR	19 02 33.3	
	comp=Z,187nm,18.9s,MS4.6,baz=66,slow=36						
PDAR	**Pinedale Array**	**125.48**	**21**	PKhKP		18 23 59.1	
	comp=Z,0.7nm,0.9s,baz=288,slow=5.7,SNR=3.4						
PDAR				PKP	PKPdf	18 24 02.6	+1.5
	comp=Z,1.3nm,1.0s,slow=1.5,SNR=5.8						
PLCA	**Paso Flores**	**144.23**	**200**	PKP	PKPdf	18 24 36.7	+1.0
	comp=Z,2.0nm,0.7s,baz=199,slow=2.8,SNR=5.8						
PLCA	**Paso Flores**	**144.23**	**200**	*e*PKPdf	PKPdf	18 24 34.0	-1.7
PLCA				*e*pPKPdf		18 24 39.5	

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*IDC **21** 18:08:26.6±2.2, 7.33N×94.07E, mb3.7/4, mb1 3.8/5, mb1mx3.6/19, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=78.8km s-min=26.4km az=59.0*

*NEIC **21** 18:08:31.1±1.4, 7.31N×94.18E, h30^{km}, mb3.7/1, Error ellipse: s-maj=33.4km s-min=13.9km az=51.0*

ISC 21 18:08:29.6±1.6**, 7.4N**±0.2×**94.3E**±0.2**, h30**^{km}**, n8,** σ**1.^{s}04**/8**, mb3.8**/5**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.65**	**108**	*e*P	**Pn**	**18 10 07.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**11.89**	**22**	Pn	**P**	**18 11 20.4**	**+0.1**
	0.2nm,0.3s,baz=212,slow=14,SNR=4.3						
LSA	**Lhasa**	**22.39**	**353**	*e*P	**P**	**18 13 29.9**	**+2.8**
	1.6nm,0.6s,mb3.6						
MKAR	**Makanchi Array**	**40.59**	**347**	P	**P**	**18 16 08.1**	**-0.2**
	1.9nm,0.6s,mb3.9,baz=166,slow=8.1,SNR=4.1						
ZAL	**Zalesovo**	**47.05**	**352**	P	**P**	**18 16 58.7**	**-1.5**
	0.9nm,0.3s,mb4.2,baz=310,slow=7.9,SNR=2.6						
ZAL	**Zalesovo**	**47.05**	**352**	P	**P**	**18 16 58.7**	**-1.6**
WRA	**Warramunga Arr**	**47.86**	**125**	P	**P**	**18 17 07.8**	**+0.6**
	0.4nm,0.8s,mb3.5,baz=304,slow=8.9,SNR=2.8						
BVAR	**Borovoye Array**	**49.49**	**341**	P	**P**	**18 17 19.1**	**-0.2**
	0.4nm,0.6s,mb3.6,baz=162,slow=4.6,SNR=2.2						

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*IDC **21** 18:08:34.8±1.3, 7.43N×94.10E, mb3.9/8, mb1 4.0/9, mb1mx3.9/18, mbtmp3.8/9, ML4.0/1, Error ellipse: s-maj=52.8km s-min=27.8km az=52.0*

*NEIC **21** 18:08:39.2±1.1, 7.41N×94.12E, h30^{km}, mb4.2/2, Error ellipse: s-maj=30.1km s-min=22.6km az=71.0*

ISC 21 18:08:37.7±1.0**, 7.5N**±0.2×**94.2E**±0.2**, h30**^{km}**, n18,** σ**1.^{s}10**/18**, mb3.8**/10**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.82**	**22**	Pn	**P**	**18 11 27.4**	**-0.1**
	0.3nm,0.3s,baz=212,slow=14,SNR=5.3						
CMAR	**Chiang Mai Arr**	**11.82**	**22**	Pn	**P**	**18 11 27.4**	**-0.1**
LSA	**Lhasa**	**22.27**	**353**	*e*P	**P**	**18 13 37.2**	**+3.2**
	9.8nm,0.7s,mb4.3						
LSA				*e*pP		18 13 43.8	
MKAR	**Makanchi Array**	**40.47**	**347**	P	**P**	**18 16 15.6**	**+0.2**
	1.6nm,0.7s,mb3.9,baz=164,slow=6.2,SNR=4.9						
MKAR	**Makanchi Array**	**40.47**	**347**	P	**P**	**18 16 15.6**	**+0.2**
ZAL	**Zalesovo**	**46.93**	**352**	P	**P**	**18 17 07.5**	**+0.1**
	1.9nm,0.4s,mb4.4,baz=328,slow=2.5,SNR=4.3						
ZAL	**Zalesovo**	**46.93**	**352**	P	**P**	**18 17 07.5**	**+0.1**
WRA	**Warramunga Arr**	**47.97**	**125**	P	**P**	**18 17 16.2**	**+0.1**
	0.3nm,0.3s,mb3.7,baz=303,slow=8.9,SNR=5.5						
WRA	**Warramunga Arr**	**47.97**	**125**	P	**P**	**18 17 16.2**	**+0.1**
ZRNK	**Zerenda**	**49.76**	**340**	P	**P**	**18 17 26.5**	**-2.9**
	1.1nm,0.8s,mb3.9						
AKASG	**Malin Array Be**	**68.50**	**322**	P	**P**	**18 19 40.5**	**+1.1**
	0.3nm,0.5s,mb3.5,baz=84,slow=9.3,SNR=4.1						
AKASG	**Malin Array Be**	**68.50**	**322**	P	**P**	**18 19 40.5**	**+1.1**
FINES	**FINESS Array B**	**73.08**	**332**	P	**P**	**18 20 05.1**	**-1.7**
	0.9nm,0.5s,mb4.0,baz=90,slow=5.7,SNR=7.4						
FINES	**FINESS Array B**	**73.08**	**332**	P	**P**	**18 20 05.1**	**-1.7**
KAF	**Kangasniemi**	**73.16**	**333**	*e*p	**P**	**18 20 06.8**	**-0.4**
ARCES	**ARCESS Array B**	**75.65**	**340**	P	**P**	**18 20 21.6**	**+0.2**
	1.4nm,0.8s,mb3.9,baz=106,slow=6.6,SNR=5.0						
GERES	**GERESS Array B**	**78.16**	**318**	P	**P**	**18 20 37.0**	**+1.2**
	0.2nm,0.5s,mb3.3,baz=127,slow=4.9,SNR=2.7						
NOA	**NORSAR Array B**	**80.10**	**331**	P	**P**	**18 20 45.5**	**-0.6**
	0.3nm,0.6s,mb3.4,baz=103,slow=7.4,SNR=3.4						

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*BJI **21** 18:55:35.6, 6.82N×93.81E, h30^{km}, mB4.6, mb4.6, Ms4.4, Msz4.2*

*NEIC **21** 18:55:43.9±0.4, 7.69N×94.44E, h30^{km}, mb4.6/12, Error ellipse: s-maj=14.7km s-min=7.6km az=56.0*

*IDC **21** 18:55:47.5±6.1, 7.62N×94.36E, h62^{km}±56^{km}, mb3.8/12, mb1 4.0/13, mb1mx3.9/19, mbtmp4.1/13, ML4.3/1, MS3.9/7, Ms1 4.0/7, ms1mx3.7/21, Error ellipse: s-maj=37.6km s-min=15.8km az=65.0*

ISC 21 18:55:42.4±0.5**, 7.61N**±0.06×**94.40E**±0.06**, h33**^{km}**, (h12**^{km}±10.0^{km}**:pP-P), n44,** σ**1.^{s}16**/45**, mb4.3**/25**, MS4.0**/8**, 1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	**Songkhla**	**6.18**	**94**	P	**P**	**18 57 14.0**	**+0.3**
	120nm,0.8s						
KULM	**Kulim**	**6.62**	**110**	*e*Pn	**Pn**	**18 57 18.1**	**-2.0**
KULM				*e*Sn	**Sn**	**18 58 31.8**	**-3.5**
NNT	**Nongplab**	**7.21**	**46**	P	**P**	**18 57 28.3**	**+0.1**
NST	**Nakhon Sawan**	**9.78**	**35**	P	**P**	**18 58 03.5**	**-0.4**
CM31	**Chiang Mai Arr**	**11.65**	**22**	Pn	**P**	**18 58 27.4**	**-2.0**
CMAR	**Chiang Mai Arr**	**11.65**	**22**	P	**P**	**18 58 31.1**	**+1.7**
	0.6nm,0.3s,baz=213,slow=14,SNR=15						
CMAR				LR	LR	19 03 11.5	
	comp=Z,550nm,19.1s,baz=210,slow=38						
SHL	**Shillong**	**18.02**	**353**	*e*P	**P**	**18 59 51.0**	**-1.0**
SHL				*e*x	x	19 05 45.0	
KMI	**Kunming**	**19.15**	**24**	⇑P	**P**	**19 00 10.4**	**+4.6**
KMI				AP		19 00 15.0	
KMI				XP		19 00 18.6	
KMI				PP	PP	19 00 28.8	+6.1
KMI				S	**S**	**19 03 46.1**	**+11**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.5s						
KMI				AMB	AMB		
	comp=Z,130nm,6.3s						
KMI				LR	LR		
	comp=N,430nm,10.3s						
KMI				LR	LR		
	comp=E,370nm,14.2s						
KMI				LR	LR		
	comp=Z,470nm,14.6s						
PKI	**Pulchoki**	**21.60**	**338**	*e*P	**P**	**19 00 30.4**	**-1.1**
	comp=Z,44nm,1.0s,mb4.8						
GUN	**Gumba**	**21.74**	**339**	*e*P	**P**	**19 00 32.1**	**-0.8**
	comp=Z,81nm,1.0s,mb5.1						
DMN	**Daman**	**21.75**	**337**	*e*P	**P**	**19 00 31.8**	**-1.2**
	comp=Z,38nm,0.7s,mb4.9						
KKN	**Kakani**	**21.85**	**338**	*e*P	**P**	**19 00 33.6**	**-0.4**
	comp=Z,54nm,1.0s,mb4.9						
GYA	**Guiyang**	**22.08**	**30**	P	**P**	**19 00 41.6**	**+5.3**
GYA				AP		19 00 48.9	
GYA				XP		19 00 52.4	
GYA				S	**S**	**19 04 44.8**	**+12**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.0						
GYA				AMB	AMB		
	comp=Z,80nm,3.0s						
GYA				LR	LR		
	comp=N,480nm,15.0s,MS4.2						
GYA				LR	LR		
	comp=E,370nm,11.7s,MS4.2						
GYA				LR	LR		
	comp=Z,500nm,13.2s,MS4.1						
LSA	**Lhasa**	**22.18**	**352**	P	**P**	**19 00 38.6**	**+1.3**
LSA	**Lhasa**	**22.18**	**352**	*e*P	**P**	**19 00 37.9**	**+0.6**
	comp=Z,17nm,0.8s,mb4.5						
GKN	**Gorkha**	**22.29**	**337**	*e*P	**P**	**19 00 37.9**	**-0.4**
	comp=Z,25nm,0.6s,mb4.8						
KOLN	**Koldanda**	**22.51**	**334**	*e*P	**P**	**19 00 39.5**	**-1.1**
	comp=Z,68nm,1.2s,mb5.0						
CD2	**Chengdu**	**24.78**	**19**	P	**P**	**19 01 06.3**	**+3.6**
CD2				S	**S**	**19 05 21.6**	**+1.4**
CD2				LR	LR		
	comp=N,440nm,11.4s						
CD2				LR	LR		
	comp=Z,520nm,11.3s,MS4.3						
GTA	**Gaotai**	**32.03**	**8**	*e*P	**P**	**19 02 09.4**	**+1.2**
GTA				AP	pP	19 02 14.1	-3.8
GTA				XP	sP	19 02 17.5	-4.7
HHC	**Hu-ho-hao-te**	**36.46**	**22**	*e*P	**P**	**19 02 48.0**	**+1.8**
HHC				AP	pP	19 02 52.1	-3.9
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,90nm,7.2s						
FITZ	**Fitzroy Crossi**	**40.05**	**130**	P	**P**	**19 03 18.1**	**+1.8**
	comp=Z,9.2nm,1.2s,mb4.4,slow=6.1,SNR=3.4						
MKAR	**Makanchi Array**	**40.40**	**347**	P	**P**	**19 03 18.5**	**-0.5**
	comp=Z,4.4nm,0.7s,mb4.3,baz=168,slow=7.7,SNR=43						
MKAR	**Makanchi Array**	**40.40**	**347**	P	**P**	**19 03 18.5**	**-0.5**
SONM	**Songino Array**	**41.36**	**12**	P	**P**	**19 03 28.7**	**+1.7**
	comp=Z,1.4nm,0.7s,mb3.7,baz=207,slow=5.5,SNR=5.5						
SONM				LR	LR	19 21 59.5	
	comp=Z,154nm,19.6s,MS3.9,baz=80,slow=38						
ZAL	**Zalesovo**	**46.84**	**352**	P	**P**	**19 04 11.4**	**+0.4**
	comp=Z,2.1nm,0.7s,mb4.2,baz=283,slow=5.5,SNR=14						
WRA	**Warramunga Arr**	**47.90**	**126**	P	**P**	**19 04 19.0**	**-0.7**
	comp=Z,0.8nm,0.5s,mb4.0,baz=306,slow=8.3,SNR=17						
WRAB	**Tennant Creek**	**47.90**	**125**	*e*P	**P**	**19 04 19.1**	**-0.7**
	comp=Z,5.0nm,0.7s,mb4.7						
WRAB				*e*pP	pP	19 04 30.1	+0.4
MJAR	**Matsushiro Arr**	**49.15**	**47**	LR	LR	19 24 32.7	
	comp=Z,93nm,21.3s,MS3.8,baz=235,slow=35						
BVAR	**Borovoye Array**	**49.32**	**341**	PcP	PcP	19 05 53.8	+0.8
	comp=Z,0.5nm,0.5s,baz=117,slow=3.3,SNR=3.7						
ZRNK	**Zerenda**	**49.71**	**340**	*e*P	**P**	**19 04 32.0**	**-1.3**
	comp=Z,3.1nm,0.9s,mb4.3						
ASF	**Jabal al Asfar**	**58.57**	**303**	LR	LR	19 33 56.3	
	comp=Z,70nm,18.1s,MS3.8,baz=86,slow=39						
AKASG	**Malin Array Be**	**68.52**	**322**	P	**P**	**19 06 42.3**	**-1.3**
	comp=Z,0.2nm,0.2s,mb3.7,baz=92,slow=4.8,SNR=4.4						
FINES	**FINESS Array B**	**73.06**	**332**	P	**P**	**19 07 11.2**	**+0.4**
	comp=Z,1.8nm,0.7s,mb4.1,baz=225,slow=2.7,SNR=12						
FINES				LR	LR	19 45 37.7	
	comp=Z,85nm,18.6s,MS4.0,baz=113,slow=41						
KAF	**Kangasniemi**	**73.14**	**333**	*e*p	**P**	**19 07 10.7**	**-0.6**
ARCES	**ARCESS Array B**	**75.60**	**340**	P	**P**	**19 07 24.9**	**-0.4**
	comp=Z,2.7nm,1.0s,mb4.1,baz=72,slow=3.8,SNR=4.9						
ARCES				LR	LR	19 43 12.1	
	comp=Z,203nm,21.1s,MS4.4,baz=308,slow=38						
ARCES	**ARCESS Array B**	**75.60**	**340**	P	**P**	**19 07 24.9**	**-0.4**
ARCES				LR	LR	19 43 12.1	
BOSA	**Boshof**	**75.66**	**238**	P	**P**	**19 07 27.2**	**+0.7**
	comp=Z,1.5nm,0.7s,mb4.0,baz=85,slow=6.7,SNR=4.1						
BRG	**Berggiesshubel**	**78.12**	**320**	P	**P**	**19 07 41.8**	**+1.9**
	comp=Z,7.9nm,1.8s,mb4.3						
GERES	**GERESS Array B**	**78.19**	**318**	P	**P**	**19 07 39.9**	**-0.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=90,slow=4.0,SNR=10						
MAW	**Mawson**	**78.33**	**192**	P	**P**	**19 07 41.0**	**+0.4**
	comp=Z,1.2nm,0.6s,mb4.0,baz=33,slow=5.2,SNR=6.5						
GRA1	**Grafenberg Arr**	**79.83**	**319**	*e*P	**P**	**19 07 50.9**	**+1.7**
	comp=Z,3.0nm,1.0s,mb4.2						
GRF	**Grafenberg Arr**	**79.83**	**319**	*e*P	**P**	**19 07 50.9**	**+1.7**
	comp=Z,3.0nm,1.0s,mb4.2						
NB2	**NORSAR Subarra**	**80.08**	**331**	P	**P**	**19 07 50.7**	**+0.4**
	comp=Z,2.0nm,0.8s,mb4.1,baz=90,slow=5.0						
NOA	**NORSAR Array B**	**80.08**	**331**	P	**P**	**19 07 51.0**	**+0.7**
	comp=Z,1.5nm,0.8s,mb4.0,baz=93,slow=5.4,SNR=5.1						
NOA				LR	LR	19 48 08.1	
	comp=Z,59nm,18.6s,MS4.0,baz=50,slow=39						

MAN 21 18:59:26.3, 17.92N×120.55E, h13^{km}**, mb3.6, ML2.4, MS1.9, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.31**	**151**	*e*P	Pg	18 59 33.3	+0.4
APYP	**Conner**	**0.66**	**95**	*e*P	Pb	18 59 38.9	-0.2
APYP				*e*S	Sb	18 59 50.9	+3.0
CAUP	**Cauayan**	**1.56**	**129**	*e*P	Pn	18 59 53.7	-0.1

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*IDC **21** 19:01:39.3±0.9, 7.79N×94.53E, mb4.1/12, mb1 4.2/12, mb1mx4.0/20, mbtmp4.1/12, Error ellipse: s-maj=29.0km s-min=19.4km az=96.0*

*NEIC **21** 19:01:42.1±0.4, 7.73N×94.55E, mb4.5/15, Error ellipse: s-maj=10.4km s-min=8.0km az=73.0*

*BJI **21** 19:01:45.5, 7.87N×93.68E, h21^{km}, mb4.3, Ms4.5, Msz4.3*

ISC 21 19:01:43.2±2.5**, 7.72N**±0.08×**94.7E**±0.1**, h44**^{km}±24^{km}**, n39,** σ**0.^{s}69**/41**, mb4.3**/26**, MS4.3**/1**, 1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.43**	**112**	*e*Pn	**P**	**19 03 17.5**	**-0.3**
KULM				*e*Sn	**S**	**19 04 30.4**	**-0.4**
CM31	**Chiang Mai Arr**	**11.46**	**21**	Pn	**P**	**19 04 22.9**	**-4.2**
CMAR	**Chiang Mai Arr**	**11.46**	**21**	Pn	**P**	**19 04 27.6**	**+0.4**
	0.3nm,0.3s,baz=214,slow=14,SNR=7.7						
KMI	**Kunming**	**18.95**	**23**	⇑P	**P**	**19 06 09.6**	**+6.1**
KMI				XP		19 06 19.9	
PKI	**Pulchoki**	**21.59**	**337**	*e*P	**P**	**19 06 31.3**	**0.0**
	40nm,1.1s,mb4.8						
GUN	**Gumba**	**21.73**	**339**	*e*P	**P**	**19 06 33.4**	**+0.8**
	93nm,1.2s,mb5.1						
DMN	**Daman**	**21.75**	**337**	*e*P	**P**	**19 06 33.4**	**+0.6**
	72nm,1.1s,mb5.0						
KKN	**Kakani**	**21.84**	**337**	*e*P	**P**	**19 06 34.4**	**+0.7**
	46nm,1.0s,mb4.9						
GYA	**Guiyang**	**21.86**	**30**	P	**P**	**19 06 41.0**	**+7.1**
GYA				AP		19 06 48.9	
GYA				XP		19 06 52.1	
GYA				S	**S**	**19 10 47.5**	**+20**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
GYA				AMB	AMB		
	comp=Z,80nm,2.6s,mb4.7						
GYA				LR	LR		
	comp=N,540nm,12.8s,MS4.3						
GYA				LR	LR		
	comp=E,670nm,13.1s,MS4.3						
GYA				LR	LR		
	comp=Z,520nm,9.8s						
LSA	**Lhasa**	**22.11**	**352**	P	**P**	**19 06 41.0**	**+4.6**
LSA	**Lhasa**	**22.11**	**352**	*e*P	**P**	**19 06 40.4**	**+4.0**
	comp=Z,19nm,0.8s,mb4.6						
GKN	**Gorkha**	**22.28**	**336**	*e*P	**P**	**19 06 37.9**	**-0.2**
	comp=Z,28nm,0.7s,mb4.8						
KOLN	**Koldanda**	**22.52**	**334**	*e*P	**P**	**19 06 40.3**	**-0.2**
	comp=Z,57nm,1.3s,mb4.8						
XAN	**Xi’an**	**29.32**	**25**	P	**P**	**19 07 50.6**	**+6.6**
GTA	**Gaotai**	**31.89**	**8**	*e*P	**P**	**19 08 14.4**	**+7.7**
AAK	**Ala-Archa**	**39.04**	**336**	P	**P**	**19 09 06.6**	**-0.9**
	comp=Z,3.7nm,0.9s,mb4.1						
MKAR	**Makanchi Array**	**40.35**	**347**	P	**P**	**19 09 18.2**	**-0.1**
	comp=Z,2.8nm,0.8s,mb4.0,baz=164,slow=7.7,SNR=20						
MKAR	**Makanchi Array**	**40.35**	**347**	P	**P**	**19 09 18.2**	**-0.1**
SONM	**Songino Array**	**41.20**	**12**	P	**P**	**19 09 24.9**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.4,baz=169,slow=7.3,SNR=2.7						
ZAL	**Zalesovo**	**46.77**	**352**	P	**P**	**19 10 11.1**	**+1.1**
	comp=Z,1.8nm,0.6s,mb4.2,baz=281,slow=4.2,SNR=7.5						
WRA	**Warramunga Arr**	**47.76**	**126**	P	**P**	**19 10 19.5**	**+1.2**
	comp=Z,1.0nm,0.6s,mb4.0,baz=304,slow=8.5,SNR=11						
WRAB	**Tennant Creek**	**47.77**	**126**	*e*P	**P**	**19 10 18.7**	**+0.3**
	comp=Z,4.2nm,0.7s,mb4.6						
BVAR	**Borovoye Array**	**49.30**	**341**	P	**P**	**19 10 29.3**	**-0.4**
	comp=Z,1.4nm,0.8s,mb4.0,baz=135,slow=8.4,SNR=10						
ZRNK	**Zerenda**	**49.69**	**340**	*e*P	**P**	**19 10 31.8**	**-1.0**
	comp=Z,4.4nm,0.9s,mb4.5						
ZRNK				*e*pP	pP	19 10 38.0	-7.1
OPO	**Ambohidratompo**	**53.60**	**240**	P	**P**	**19 11 02.7**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=32,slow=9.5,SNR=2.7						
LSZ	**Lusaka**	**69.69**	**251**	*e*P	**P**	**19 12 50.6**	**-0.4**
	comp=Z,2.0nm,0.5s,mb4.3						
LSZ				*e*pP	pP	19 12 55.9	-7.9
MATP	**Matopo**	**70.76**	**245**	P	**P**	**19 12 57.0**	**-0.4**
	comp=Z,2.0nm,0.6s,mb4.2,baz=34,slow=7.3,SNR=3.8						
MATP	**Matopo**	**70.76**	**245**	P	**P**	**19 12 57.0**	**-0.4**
FINES	**FINESS Array B**	**73.08**	**332**	P	**P**	**19 13 09.9**	**-0.5**
	comp=Z,2.0nm,0.8s,mb4.1,baz=104,slow=5.7,SNR=5.6						
KAF	**Kangasniemi**	**73.16**	**333**	*e*pkp	**P**	**19 13 09.5**	**-1.4**
LBTB	**Lobatse**	**74.61**	**242**	P	**P**	**19 13 19.7**	**-0.5**
	comp=Z,3.0nm,0.8s,mb4.3						
ARCES	**ARCESS Array B**	**75.58**	**340**	P	**P**	**19 13 25.6**	**+0.8**
	comp=Z,0.9nm,0.7s,mb3.8,baz=97,slow=7.3,SNR=3.4						
BOSA	**Boshof**	**75.93**	**238**	P	**P**	**19 13 29.1**	**+1.4**
	comp=Z,1.7nm,0.6s,mb4.2,baz=52,slow=8.1,SNR=6.0						
BOSA	**Boshof**	**75.93**	**238**	*e*P	**P**	**19 13 28.9**	**+1.3**
	comp=Z,3.1nm,0.9s,mb4.2						
GERES	**GERESS Array B**	**78.27**	**318**	P	**P**	**19 13 40.1**	**-0.2**
	comp=Z,1.1nm,0.8s,mb3.9,baz=108,slow=4.2,SNR=7.2						
GRA1	**Grafenberg Arr**	**79.91**	**319**	*e*P	**P**	**19 13 49.8**	**+0.6**
	comp=Z,2.0nm,0.9s,mb4.0						
GRF	**Grafenberg Arr**	**79.91**	**319**	*e*P	**P**	**19 13 49.8**	**+0.6**
	comp=Z,2.0nm,0.9s,mb4.0						
NB2	**NORSAR Subarra**	**80.11**	**331**	P	**P**	**19 13 49.3**	**-0.7**
	comp=Z,2.8nm,1.0s,mb4.2,baz=90,slow=5.3						
NOA	**NORSAR Array B**	**80.11**	**331**	P	**P**	**19 13 49.5**	**-0.5**
	comp=Z,1.4nm,0.9s,mb3.9,baz=96,slow=5.5,SNR=3.4						

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*IDC **21** 19:25:10.6±1.4, 7.43N×94.25E, mb4.1/7, mb1 4.2/8, mb1mx4.0/18, mbtmp4.0/8, ML4.0/1, MS3.7/11, Ms1 3.7/11, ms1mx3.5/27, Error ellipse: s-maj=54.8km s-min=25.4km az=56.0*

*NEIC **21** 19:25:12.7±0.7, 7.36N×94.24E, mb4.5/13, Error ellipse: s-maj=18.4km s-min=9.2km az=48.0*

*BJI **21** 19:25:16.6, 7.76N×93.95E, h12^{km}, mB4.2, mb4.3, Ms4.0, Msz3.7*

ISC 21 19:25:09.6±0.8**, 6.93N**±0.09×**93.7E**±0.1**, h19**^{km}**, h19**^{km}±1.4^{km}**:pP-P, n35,** σ**1.^{s}31**/28**, mb4.4**/21**, MS3.7**/12**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**7.10**	**103**	*e*Pn	**Pn**	**19 26 50.6**	**-4.6**
CM31	**Chiang Mai Arr**	**12.55**	**24**	*e*Pn	**P**	**19 28 01.9**	**-8.2**
CMAR	**Chiang Mai Arr**	**12.55**	**24**	Pn	**P**	**19 28 03.4**	**-6.7**
	0.3nm,0.3s,baz=211,slow=14,SNR=10.0						
CMAR				LR	LR	19 32 43.4	
	comp=Z,265nm,19.0s,baz=210,slow=38						
KMI	**Kunming**	**20.05**	**25**	P	**P**	**19 29 46.1**	**+1.4**
KMI				AP		19 29 50.3	
KMI				XP		19 29 53.4	
KMI				PP	PP	19 30 05.3	+1.1
KMI				S	**S**	**19 33 22.9**	**-0.9**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.7s						
KMI				LR	LR		
	comp=N,220nm,12.6s,MS3.8						
KMI				LR	LR		
	comp=E,220nm,17.6s,MS3.8						
KMI				LR	LR		
	comp=Z,240nm,17.3s,MS3.6						
PKI	**Pulchoki**	**21.99**	**340**	*e*P	**P**	**19 30 05.4**	**+0.9**
	comp=Z,57nm,1.2s,mb4.9						
DMN	**Daman**	**22.13**	**339**	*e*P	**P**	**19 30 06.8**	**+1.0**
	comp=Z,62nm,1.0s,mb5.0						
GUN	**Gumba**	**22.15**	**341**	*e*P	**P**	**19 30 05.9**	**-0.1**
	comp=Z,86nm,1.1s,mb5.1						
KKN	**Kakani**	**22.23**	**340**	*e*P	**P**	**19 30 06.8**	**-0.1**
	comp=Z,68nm,1.2s,mb5.0						
GKN	**Gorkha**	**22.65**	**339**	*e*P	**P**	**19 30 09.6**	**-1.5**
	comp=Z,60nm,1.1s,mb5.0						
LSA	**Lhasa**	**22.78**	**354**	*e*P	**P**	**19 30 10.6**	**-1.8**
	comp=Z,14nm,0.9s,mb4.4						
KOLN	**Koldanda**	**22.83**	**336**	*e*P	**P**	**19 30 13.4**	**+0.5**
	comp=Z,66nm,1.5s,mb4.8						
GYA	**Guiyang**	**23.02**	**31**	P	**P**	**19 30 15.5**	**+0.8**
GYA				S	**S**	**19 34 18.3**	**-1.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
GYA				LR	LR		
	comp=N,220nm,12.6s,MS3.9						
GYA				LR	LR		
	comp=E,190nm,12.0s,MS3.9						
GYA				LR	LR		
	comp=Z,130nm,10.2s,MS3.7						
LZH	**Lanzhou**	**30.47**	**16**	*e*P	**P**	**19 31 25.0**	**+1.4**
LZH				AP	pP	19 31 31.5	+2.3
LZH				XP	sP	19 31 35.0	+3.4
LZH				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
GTA	**Gaotai**	**32.80**	**9**	*e*P	**P**	**19 31 45.8**	**+1.8**
GTA				AP	pP	19 31 52.4	+2.8
GTA				XP	sP	19 31 56.3	+4.3
AAK	**Ala-Archa**	**39.40**	**338**	*e*P	**P**	**19 32 39.0**	**-1.0**
	comp=Z,4.6nm,1.0s,mb4.2						
AAK				*e*pP	pP	19 32 44.7	-0.9
FITZ	**Fitzroy Crossi**	**40.15**	**129**	LR	LR	19 51 50.8	
	comp=Z,148nm,18.9s,MS3.9,baz=273,slow=40						
MKAR	**Makanchi Array**	**40.91**	**348**	P	**P**	**19 32 50.9**	**-1.5**
	comp=Z,3.8nm,0.8s,mb4.1,baz=164,slow=8.8,SNR=20						
SONM	**Songino Array**	**42.18**	**13**	P	**P**	**19 33 04.9**	**+2.1**
	comp=Z,1.4nm,1.0s,mb3.6,baz=202,slow=6.7,SNR=5.1						
SONM				LR	LR	19 50 14.3	
	comp=Z,94nm,21.5s,MS3.6,baz=70,slow=36						
ZAL	**Zalesovo**	**47.42**	**353**	P	**P**	**19 33 44.4**	**-0.4**
	comp=Z,2.1nm,0.3s,mb4.5,baz=288,slow=7.5,SNR=9.5						
ZAL				LR	LR	19 56 08.9	
	comp=Z,48nm,18.5s,MS3.5,baz=294,slow=40						
WRA	**Warramunga Arr**	**48.08**	**125**	P	**P**	**19 33 50.7**	**+0.4**
	comp=Z,1.3nm,0.8s,mb4.0,baz=305,slow=8.5,SNR=8.5						
WRAB	**Tennant Creek**	**48.08**	**125**	*e*P	**P**	**19 33 49.3**	**-1.1**
	comp=Z,2.2nm,0.7s,mb4.3						
BVAR	**Borovoye Array**	**49.74**	**342**	P	**P**	**19 34 00.4**	**-2.3**
	comp=Z,4.0nm,1.0s,mb4.4,baz=153,slow=9.9,SNR=17						
MJAR	**Matsushiro Arr**	**50.12**	**47**	LR	LR	19 56 59.0	
	comp=Z,107nm,18.6s,MS3.9,baz=205,slow=39						
ZRNK	**Zerenda**	**50.12**	**341**	*e*P	**P**	**19 34 05.1**	**-0.5**
	comp=Z,4.4nm,1.0s,mb4.4						
ZRNK				*e*pP	pP	19 34 09.6	-1.8
GNI	**Garni**	**54.79**	**315**	LR	LR	19 59 08.1	
	comp=Z,33nm,19.0s,MS3.4,baz=342,slow=37						
ASAJ	**Asahikawa**	**56.41**	**41**	LR	LR	20 00 11.9	
	comp=Z,75nm,18.4s,MS3.8,baz=317,slow=38						
ARU	**Arti**	**56.59**	**337**	*e*P	**P**	**19 34 52.8**	**-0.6**
	comp=Z,16nm,1.4s,mb4.9						
ARU				*e*pP	pP	19 34 57.9	-1.3
FINES	**FINESS Array B**	**73.34**	**332**	P	**P**	**19 36 42.5**	**+0.7**
	comp=Z,1.5nm,0.7s,mb4.0,baz=90,slow=3.8,SNR=5.8						
FINES				LR	LR	20 15 10.4	
	comp=Z,42nm,20.7s,MS3.7,baz=120,slow=41						
ARCES	**ARCESS Array B**	**76.00**	**340**	LR	LR	20 12 54.5	
	comp=Z,60nm,19.1s,MS3.9,baz=312,slow=38						
GERES	**GERESS Array B**	**78.24**	**318**	P	**P**	**19 37 14.0**	**+4.2**
	comp=Z,0.7nm,0.7s,mb3.7,baz=104,slow=5.5,SNR=6.2						
GRA1	**Grafenberg Arr**	**79.89**	**319**	*e*P	sP	19 37 27.0	+0.3
	comp=Z,3.0nm,1.0s						
GRF	**Grafenberg Arr**	**79.89**	**319**	*e*P	sP	19 37 27.0	+0.3
	comp=Z,3.0nm,1.0s						
NB2	**NORSAR Subarra**	**80.34**	**331**	P	pP	19 37 26.4	-0.5
	comp=Z,0.6nm,0.6s,baz=90,slow=5.3						
NOA	**NORSAR Array B**	**80.34**	**331**	P	**P**	**19 37 23.3**	**+2.4**
	comp=Z,1.4nm,0.9s,mb3.9,baz=90,slow=5.8,SNR=3.6						
NOA				LR	LR	20 16 39.5	
	comp=Z,41nm,19.1s,MS3.8,baz=90,slow=38						
JMIC	**Jan Mayen**	**87.46**	**341**	LR	LR	20 18 23.8	
	comp=Z,32nm,21.8s,MS3.7,baz=216,slow=37						

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*NNC **21** 19:32:37.7±7.5, 40.70N×74.23E, mpv3.6, Error ellipse: s-maj=56.9km s-min=16.6km az=163.0*

*IDC **21** 19:32:37.1±2.5, 40.46N×73.83E, mb3.7/4, mb1 3.9/6,*

mb1mx3.7/20, mbtmp3.8/6, ML3.4/3, Error ellipse: s-maj=37.8km s-min=17.7km az=163.0
*KNET **21** 19:32:41.9±1.0, 41.04N×74.21E, ml3.6, Error ellipse: s-maj=5.7km s-min=3.8km az=16.0*
*MOS **21** 19:32:45.3±2.0, 41.15N×73.73E, h33^{km}, mb3.8/1, Error ellipse: s-maj=19.6km s-min=9.3km az=92.6*
*NEIC **21** 19:32:50.7±2.5, 41.49N×73.73E, h35^{km}, mb3.5/1, Error ellipse: s-maj=34.3km s-min=12.8km az=173.0*
ISC 21 19:32:39.0±1.6**, 40.74N**±0.07×**73.92E**±0.07**, h7**^{km}±13^{km}**, n35, σ1^{s}34**/54**, mb3.6**/4**, 16C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	1.40	353	P	Pn	19 33 03.8	-1.3
	494nm,0.2s,SNR=741						
AML				⇑S	Sb	19 33 20.8	-2.3
	727nm,0.3s						
UCH	Uchtor	1.56	17	P	Pn	19 33 05.8	-1.5
	126nm,0.2s,SNR=453						
UCH				⇑S	Sb	19 33 24.2	-3.4
	1µm,0.5s						
KZA	Kyzart	1.67	36	⇑P	Pn	19 33 07.4	-1.5
	96nm,0.2s,SNR=212						
KZA				⇑S	Sn	19 33 27.4	-3.5
	613nm,0.3s						
EKS2	Erkin-Say	1.93	357	P	Pn	19 33 13.1	+0.5
	96nm,0.2s,SNR=206						
AAK	Ala-Archa	1.94	13	⇓P	Pn	19 33 12.9	+0.1
	77nm,0.2s,SNR=24						
AAK				⇑S	Sn	19 33 36.6	-1.2
	198nm,0.2s						
AAK	Ala-Archa	1.94	13	⇓P	Pn	19 33 12.9	+0.1
	113nm,0.6s						
AAK				⇑S	Sn	19 33 36.2	-1.6
	292nm,0.5s						
AAK	Ala-Archa	1.94	13	*e*P	Pn	19 33 11.9	-0.9
AAK				*e*S	Sn	19 33 33.3	-4.5
KBK	Karagaybulak	2.07	22	⇓P	Pn	19 33 15.0	+0.4
	134nm,0.2s,SNR=101						
KBK				⇑S	Sn	19 33 41.0	+0.1
	1µm,0.2s						
FRU	Bishkek	2.16	14	*e*PN	Pn	19 33 17.8	+1.9
FRU				*e*		19 33 23.0	
FRU				pmax	pmax		
	comp=Z,410nm,1.1s						
ULHL	Ulahol	2.31	48	⇑P	Pn	19 33 18.2	+0.2
	comp=Z,225nm,0.2s,SNR=869						
ULHL				⇓S	Sn	19 33 46.0	-1.0
	comp=Z,288nm,0.3s						
CHMS	Chumysh	2.34	15	⇓P	Pn	19 33 20.0	+1.4
	comp=Z,112nm,0.3s,SNR=124						
CHMS				⇑S	Sn	19 33 48.2	+0.3
	comp=Z,274nm,0.4s						
TKM2	Tokmak 2	2.52	29	⇑P	Pn	19 33 22.4	+1.4
	comp=Z,82nm,0.2s,SNR=85						
TKM2				⇑S	Sn	19 33 52.7	+0.3
	comp=Z,400nm,0.2s						
USP	Ospenovka	2.56	10	⇓P	Pn	19 33 23.7	+1.9
	comp=Z,122nm,0.2s,SNR=242						
USP				⇑S	Sn	19 33 55.5	+1.9
	comp=Z,437nm,0.5s						
KK31	Karatay Array	3.47	314	⇓Pn	Pn	19 33 36.4	+1.7
	comp=Z,1.3nm,0.3s,baz=129,slow=13,SNR=135						
KK31				⇓Pg	Pg	19 33 42.4	-6.0
	comp=Z,12nm,0.3s,baz=127,slow=17,SNR=42						
KK31				⇓Sn	Sn	19 34 29.1	+13
	comp=Z,35nm,0.3s,baz=136,slow=29						
KKAR	Karatay Array	3.47	314	PN	Pn	19 33 36.3	+1.7
KKAR				*e*		19 33 42.9	
KKAR						19 34 28.1	
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KKAR				smax			
	comp=E,29nm,0.3s						
MK31	Makanchi Array	8.56	42	⇓Pn	P	19 34 46.8	+0.5
	comp=E,1.1nm,0.4s,baz=218,slow=15						
MK31				⇑Lg		19 37 03.1	
	comp=E,7.1nm,0.6s,baz=204,slow=29						
MKAR	Makanchi Array	8.56	42	Pn	P	19 34 46.7	+0.3
	comp=E,0.1nm,0.3s,baz=229,slow=14,SNR=5.4						
MKAR				Sn	Sn	19 36 26.0	+1.7
	comp=E,0.2nm,0.3s,baz=198,slow=18,SNR=2.4						
MKAR				Lg		19 36 59.1	
	comp=E,0.7nm,0.3s,baz=240,slow=20,SNR=3.9						
MKAR	Makanchi Array	8.56	42	Pn	P	19 34 46.7	+0.3
MKAR				Sn	Sn	19 36 26.0	+1.7
MKAR				Lg		19 36 59.1	
VOSK	Vostochnaya	12.16	351	⇑Pn	P	19 35 30.4	-5.1
	comp=E,4.5nm,1.7s						
VOSK				⇑Lg		19 38 55.3	
	comp=E,28nm,1.4s						
BVAR	Borovoye Array	12.53	350	Pn	P	19 35 36.6	-3.9
	comp=E,0.4nm,0.3s,baz=159,slow=13,SNR=12						
BVAR				Sn	S	19 38 04.7	+3.3
	comp=E,0.1nm,0.3s,baz=172,slow=22,SNR=3.1						
BVAR				Lg		19 39 11.2	
	comp=E,0.3nm,0.3s,baz=165,slow=23,SNR=5.5						
ZRNK	Zerenda	12.67	346	⇓Pn	P	19 35 38.9	-3.4
	comp=E,2.7nm,0.6s						
ZRNK				⇓Lg		19 39 18.8	
	comp=E,20nm,1.4s						
ZRNK	Zerenda	12.67	346	*e*Pn	P	19 35 38.8	-3.6
ZRNK				*e*Sn	S	19 37 55.3	-10
AB31	Akbulak array	13.04	315	⇑Pn	P	19 35 45.0	-2.2
	comp=E,1.3nm,0.6s						
AB31	Akbulak array	13.04	315	P	P	19 35 45.7	-1.6
ZAL	Zalesovo	15.10	25	Pn	P	19 36 12.6	-1.7
	comp=E,0.5nm,0.3s,baz=90,slow=2.0,SNR=2.7						
ZAL				Sn	S	19 39 16.3	+14
	comp=E,0.5nm,0.3s,baz=80,slow=8.9,SNR=5.0						
ZAL				Lg		19 40 31.0	
	comp=E,1.2nm,0.3s,baz=8.3,slow=19,SNR=3.0						
ZAL	Zalesovo	15.10	25	Pn	P	19 36 12.6	-1.7
ZAL				Sn	S	19 39 16.3	+14
ZAL				Lg		19 40 31.0	
ARU	Arti	18.63	333	P	P	19 36 54.3	-4.7
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARU	Arti	18.63	333	P	P	19 36 54.3	-4.7
	comp=Z,3.0nm,0.7s						
ZAK	Zakamensk	22.58	55	*e*P	P	19 37 41.0	0.0
SONM	Songino Array	24.18	62	P	P	19 37 55.8	-0.9
	comp=Z,0.6nm,0.7s,mb3.1,baz=262,slow=10,SNR=4.1						
FINES	FINESS Array B	35.40	322	P	P	19 39 36.5	-0.6
	comp=Z,0.5nm,0.6s,mb3.6,baz=127,slow=9.5,SNR=3.5						
FINES	FINESS Array B	35.40	322	P	P	19 39 36.5	-0.6
ARCES	ARCESS Array B	38.19	335	P	P	19 40 00.0	-0.6
	comp=Z,2.8nm,1.0s,mb3.9,baz=107,slow=9.4,SNR=5.1						
NOA	NORSAR Array B	42.48	320	P	P	19 40 36.0	0.0
	comp=Z,1.1nm,0.7s,mb3.6,baz=43,slow=5.5,SNR=3.8						
NOA	NORSAR Array B	42.48	320	P	P	19 40 36.0	0.0

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*JMA **21** 19:49:07.1±0.2, 36.84N×137.59E, h239^{km}±2^{km}, M3.0*
*IDC **21** 19:49:07.8±1.2, 36.49N×136.87E, h210^{km}±33^{km}, mb2.9/2, mb1 3.1/2, mb1mx2.8/21, mbtmp3.4/2, Error ellipse: s-maj=93.5km s-min=27.0km az=58.0*
ISC 21 19:49:06.7±0.7**, 36.85N**±0.06×**137.58E**±0.08**, h237**^{km}±5^{km}**, n18, σ0^{s}60**/27**, mb3.0**/2**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTT	Ttatey	0.31	219	P	P	19 49 38.1	+0.3
MAT	Matsushiro	0.59	121	P	P	19 49 38.8	+0.2
MAT				S	S	19 50 03.7	+0.2
MAT	Matsushiro	0.59	121	P	P	19 49 38.8	+0.2
MAT				*e*S	S	19 50 02.2	-1.3
MJAR	Matsushiro Arr	0.59	121	P	P	19 49 39.3	+0.7
	5.5nm,0.3s,baz=260,slow=6.3,SNR=48						
MJAR				S	S	19 50 04.0	+0.5
	1.0nm,0.3s,baz=211,slow=28,SNR=9.9						
JSZ	Suzu	0.62	344	P	P	19 49 39.0	+0.3
JHG	Hegura jima	1.13	332	P	P	19 49 41.9	+0.6
JHG				*e*S	S	19 50 08.0	-0.3
JKG	Kaga	1.15	241	P	P	19 49 41.9	+0.4
JSD	Sado	1.31	24	P	P	19 49 43.0	+0.4
JSD				*e*S	S	19 50 09.5	-1.0
JGM	Miyama	1.34	212	P	P	19 49 43.3	+0.4
JGM				*e*S	S	19 50 11.2	+0.3
JRY	Ryogami san	1.35	127	P	P	19 49 42.9	0.0
JRY				*e*S	S	19 50 09.9	-1.2
JYN	Shimob	1.56	150	*e*S	S	19 50 14.2	+0.3
JAG	Ashikaga	1.57	105	P	P	19 49 44.0	-0.6
JOD2	Odawara 2	2.00	142	P	P	19 49 49.4	+1.1
JOD2				*e*S	S	19 50 20.4	-0.2
JWT	Wachi	2.36	229	P	P	19 49 52.1	+0.2
JWT				*e*S	S	19 50 25.7	-1.3
JIE	Ise	2.55	196	P	P	19 49 54.3	+0.4
JMM	Marumori	2.76	67	P	P	19 49 56.3	+0.2
MKAR	Makanchi Array	41.61	302	P	P	19 56 32.5	-0.3
	0.2nm,0.5s,mb2.8,baz=81,slow=9.7,SNR=4.9						
WRA	Warramunga Arr	56.56	184	P	P	19 58 25.9	-0.8
	0.3nm,0.5s,mb3.1,baz=360,slow=7.4,SNR=6.0						

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*TAP **21** 19:58:17.2, 23.76N×122.51E, h16^{km}, ML3.7*
JMA 21 19:58:18.4±0.2**, 23.88N×122.47E, h37**^{km}**, M3.2, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.76	40	P	P	19 58 32.7	0.0
YOJ				S	S	19 58 42.9	-0.2
HATJ	Hateruma jima	1.23	82	P	P	19 58 39.7	+0.3
HATJ				S	S	19 58 55.1	-0.1
IRIF	Iriomote-Funau	1.24	68	P	P	19 58 39.7	+0.3
IRIF				S	S	19 58 55.2	0.0
JKRS	Kuro-shima	1.45	75	P	P	19 58 43.1	+0.5
JKRS				S	S	19 59 01.3	+0.7
JIJ	Ishigaki jima	1.60	72	P	P	19 58 44.6	-0.1
JIJ				S	S	19 59 03.8	-0.6
JTJ	Tarama	2.17	69	P	P	19 58 53.3	+0.4

CASC 21 20:38:09.1±2.5**, 9.70N×76.89W, h36**^{km}±999^{km}**, MD4.6, MW4.0, 9C, Fault plane solution: NP1:**ϕ_s128.78°, δ48.44°, λ-30.79°.**, Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPD1	Univ de Panama	1.59	224	⇑*i*P	P	20 38 36.1	+0.8
UPD1				*e*S	S	20 38 54.1	-0.8
UPA	Univ. de Panam	2.70	255	⇑*i*P	P	20 38 50.9	-0.2
ACLA	Agua Clara, Si	2.79	263	⇑*e*P	P	20 38 51.4	-1.1
ZANG	Zanguenga, Cho	3.03	256	⇑*e*P	P	20 38 55.3	-0.5
ZANG				*e*S	S	20 39 29.6	-1.6
PINA	Piqa, Costa Ab	3.16	262	⇑*e*P	P	20 38 57.5	-0.1
PINA				*e*S	S	20 39 32.2	-2.3
OCAC	Ocana	3.82	112	⇑*i*P	P	20 39 06.4	-0.6
OCAC				*e*S	S	20 39 51.0	-0.3
BARC	Barichara	4.77	129	*e*P	P	20 39 20.0	-0.5
TOLC	Tolima	5.31	163	*e*P	P	20 39 28.5	+0.4
RUSC	La Rusia	5.33	134	⇑*i*P	P	20 39 26.7	-1.6
BUS	Buena Vista	6.77	269	⇑*e*P	P	20 39 46.6	-2.0
TRTC	Tortuguero	6.77	278	*e*P	P	20 39 47.6	-1.1
URSC	Urasca	6.79	272	*e*P	P	20 39 46.8	-2.0
PRS1	Puriscal	7.32	273	⇑*e*P	P	20 39 56.1	-0.1

IDC 21 20:50:45.3±2.1**, 3.42N×128.41E, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/18**, mbtmp3.8**/4**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.6**/25**, Error ellipse: s-maj=82.1km s-min=22.1km az=68.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.56	187	P	P	20 55 35.8	-2.8
	2.8nm,0.5s,baz=357,slow=17,SNR=4.2						
WRA	Warramunga Arr	23.94	166	P	P	20 56 01.5	-0.6
	1.2nm,0.5s,baz=345,slow=10,SNR=15						
WB2	Warramunga Arr	23.94	166	*e*P	P	20 56 02.0	-0.2
CMAR	Chiang Mai Arr	32.48	300	P	P	20 57 18.8	-1.1
	0.8nm,0.8s,baz=101,slow=7.3,SNR=5.1						
MKAR	Makanchi Array	58.77	325	P	P	21 00 44.9	-2.7
	0.8nm,0.6s,baz=121,slow=8.1,SNR=12						
MKAR				LR	LR	21 30 21.0	
	comp=Z,30nm,18.2s,baz=354,slow=40						

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*NEIC **21** 20:57:19.1±1.3, 7.53N×94.46E, h30^{km}, mb4.1/1, Error ellipse: s-maj=25.5km s-min=16.6km az=224.0*
*IDC **21** 20:57:27.4±5.7, 9.08N×93.34E, mb3.9/8, mb1 4.0/9, mb1mx3.8/20, mbtmp3.9/9, ML3.5/1, MS3.4/3, Ms1 3.4/3, ms1mx3.1/18, Error ellipse: s-maj=133.5km s-min=44.3km az=140.0*
ISC 21 20:57:19.7±1.1**, 7.7N**±0.1×**94.8E**±0.1**, h30**^{km}**, n16, σ1^{s}38**/16**, mb3.9**/9**, MS3.6**/2**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.32	112	*e*Pn	Pn	20 58 53.0	-0.3
KULM				Sn	Sn	20 59 58.2	-7.1
CM31	Chiang Mai Arr	11.42	20	*e*Pn	P	21 00 04.3	+0.3
CMAR	Chiang Mai Arr	11.42	20	Pn	P	21 00 03.9	-0.1
	0.1nm,0.3s,baz=215,slow=14,SNR=5.8						
CMAR				LR	LR	21 04 24.5	
	comp=Z,80nm,18.7s,baz=215,slow=39						
LSA	Lhasa	22.13	352	*e*P	P	21 02 14.5	-0.1
	5.6nm,0.7s,mb4.1						
MKAR	Makanchi Array	40.38	347	P	P	21 04 52.9	-3.7
	2.4nm,0.7s,mb4.0,baz=166,slow=7.6,SNR=19						
SONM	Songino Array	41.18	12	P	P	21 05 04.9	+1.7
	2.2nm,0.7s,mb3.9,baz=202,slow=6.7,SNR=3.6						
ZAL	Zalesovo	46.79	352	P	P	21 05 46.9	-1.4
	1.3nm,0.7s,mb4.0,baz=278,slow=6.2,SNR=3.7						
ZAL	Zalesovo	46.79	352	P	P	21 05 46.9	-1.4
MJAR	Matsushiro Arr	48.80	47	LR	LR	21 25 54.4	
	comp=Z,55nm,19.9s,MS3.5,baz=185,slow=35						
BVAR	Borovoye Array	49.34	341	P	P	21 06 05.0	-3.2
	1.4nm,0.7s,mb4.1,baz=143,slow=7.4,SNR=8.3						
FINES	FINESS Array B	73.14	332	P	P	21 08 47.1	-2.0
	1.7nm,0.8s,mb4.0,baz=124,slow=6.9,SNR=6.1						
KAF	Kangasniemi	73.22	333	*e*p	P	21 08 50.6	+1.1
ARCES	ARCESS Array B	75.62	340	P	P	21 09 05.5	+2.1
	1.7nm,0.8s,mb4.0,baz=76,slow=5.0,SNR=4.7						
GERES	GERESS Array B	78.36	318	P	P	21 09 20.4	+1.4
	0.9nm,0.8s,mb3.8,baz=90,slow=4.0,SNR=7.7						
GERES				LR	LR	21 45 23.8	
	comp=Z,37nm,20.9s,MS3.7,baz=165,slow=38						
NB2	NORSAR Subarra	80.17	331	P	P	21 09 28.2	-0.3
	0.7nm,0.7s,mb3.7,baz=91,slow=5.8						
NOA	NORSAR Array B	80.17	331	P	P	21 09 27.7	-0.8
	0.4nm,0.7s,mb3.5,baz=116,slow=3.9,SNR=3.3						

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*MDD **21** 21:03:34.7±0.8, 35.01N×2.61W, h8^{km}±4^{km}, mbLg2.9/2, Error ellipse: s-maj=6.9km s-min=3.8km az=99.0, PRXIMO*
*CNRM **21** 21:03:34.6, 35.03N×2.58W, h4^{km}, MD3.5*
*CSEM **21** 21:03:35.8±0.2, 35.06N×2.69W, h30^{km}, MD3.5, Error ellipse: s-maj=6.5km s-min=4.5km az=102.0*
*NEIC **21** 21:03:38.4, 35.21N×2.65W, h15^{km}, MG3.3(MDD), After MDD.*
ISC 21 21:03:33.9±0.7**, 35.08N**±0.03×**2.63W**±0.05**, h10**^{km}**, n42, σ1^{s}42**/78**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAI	Zaio	0.15	222	Pg	Pg	21 03 36.5	-0.9
ZAI				Lg		21 03 39.5	
TAF	Taforalt	0.32	147	P	Pg	21 03 46.0	+5.5
TAF				S	Sg	21 03 51.0	+6.1
EMLI	Melilla	0.34	310	P	Pg	21 03 43.3	+2.3
	180nm,0.1s,SNR=6.7						
EMLI				S	Sg	21 03 47.9	+2.1
	397nm,0.2s,SNR=10.0						
EMEL	Melilla	0.35	309	Pg	Pg	21 03 43.3	+2.2
	180nm,0.1s,SNR=6.7						
EMEL				Lg		21 03 47.9	
	397nm,0.2s,SNR=10.0						
EALB	Alboran	0.92	339	P	Pb	21 03 53.2	+1.7
EALB				S	Sb	21 04 04.1	+0.5
EALB	Alboran	0.92	339	Pg	Pg	21 03 52.8	+0.4
	21nm,0.2s,SNR=5.0						
EALB				Lg		21 04 04.1	
	160nm,0.4s,SNR=14						
EALB	Alboran	0.92	339	P	Pb	21 03 53.2	+1.7
	28nm,0.2s,SNR=5.0						
EALB				S	Sb	21 04 04.1	+0.5
	160nm,0.4s,SNR=14						
TOU	Touzarine	0.93	263	*i* P	Pb	21 03 52.0	+0.2
TOU				*i* S	Sb	21 04 06.0	+2.0
MPAL	Palemas	1.09	278	*i* P	Pb	21 03 54.5	+0.1
MPAL				*i* S	Sb	21 04 10.5	+2.0
TZK	Tazeka	1.62	233	*i* P	Pn	21 04 02.0	-0.8
TZK				*i* S	Sb	21 04 23.0	-1.0
EBER	Berja	1.83	353	Pn	Pn	21 04 06.2	+0.4
	0.8nm,0.2s,SNR=4.9						
EBER				Sn	Sn	21 04 26.0	-3.1
	27nm,0.4s						
EBER	Berja	1.83	353	P	Pn	21 04 06.2	+0.5
	2.3nm,0.2s,SNR=4.9						
EBER				S	Sn	21 04 26.0	-3.1
	27nm,0.4s						
ENIJ	Nijar	1.92	10	P	Pn	21 04 06.8	-0.2
ENIJ				S	Sn	21 04 29.3	-2.1
ENIJ	Nijar	1.92	10	Pn	Pn	21 04 06.8	-0.2
	2.0nm,0.2s,SNR=4.6						
ENIJ				Sn	Sn	21 04 30.6	-0.8
	8.2nm,0.3s,SNR=7.9						
ENIJ	Nijar	1.92	10	P	Pn	21 04 06.8	-0.2
	3.9nm,0.2s,SNR=4.6						
ENIJ				S	Sn	21 04 29.3	-2.1
	8.2nm,0.3s,SNR=7.9						
EMIJ	Mijas	2.29	311	P	Pn	21 04 13.0	+0.7
EMIJ				S	Sn	21 04 38.4	-2.5
EMIJ	Mijas	2.29	311	Pn	Pn	21 04 13.0	+0.7
	0.7nm,0.2s,SNR=5.8						
EMIJ				Sn	Sn	21 04 38.8	-2.1
	4.1nm,0.2s,SNR=7.9						
EMIJ	Mijas	2.29	311	P	Pn	21 04 13.0	+0.7
	1.8nm,0.3s,SNR=5.8						
EMIJ				S	Sn	21 04 38.4	-2.4
	4.1nm,0.2s,SNR=7.9						
ELOJ	Sierra Loja	2.41	330	Pn	Pn	21 04 13.4	-0.7
	0.6nm,0.4s,SNR=4.0						
EQES	Quesada	2.74	353	P	Pn	21 04 19.8	+1.0
EQES				S	Sn	21 04 52.7	+0.4
EQES	Quesada	2.74	353	Pn	Pn	21 04 21.1	+2.3
	1.6nm,0.2s,SNR=14						
EQES				Sn	Sn	21 04 52.7	+0.4
	6.4nm,0.3s						
EQES	Quesada	2.74	353	P	Pn	21 04 19.8	+1.0
	1.9nm,0.2s,SNR=14						
EQES				S	Sn	21 04 52.7	+0.4
	6.4nm,0.3s						
ELUQ	Luque	2.81	332	P	Pn	21 04 21.9	+2.2
ELUQ				S	Sn	21 04 51.4	-2.6
ELUQ	Luque	2.81	332	Pn	Pn	21 04 20.2	+0.4
	0.9nm,0.2s,SNR=4.0						
ELUQ				Sn	Sn	21 04 53.1	-0.9
	2.8nm,0.3s,SNR=4.0						
ELUQ	Luque	2.81	332	P	Pn	21 04 21.9	+2.1
	1.5nm,0.2s,SNR=4.0						
ELUQ				S	Sn	21 04 51.4	-2.6
	2.8nm,0.3s,SNR=4.0						
CZD	Col de Zad	2.86	225	*e*P	Pn	21 04 19.0	-1.6
CZD				*e*S	Sn	21 04 51.0	-4.4
EMUR	La Murta	2.97	22	P	Pn	21 04 22.2	0.0
EMUR				S	Sn	21 04 54.6	-3.6
EMUR	La Murta	2.97	22	Pn	Pn	21 04 22.2	0.0
	3.9nm,0.3s,SNR=6.2						
EMUR				Sn	Sn	21 04 56.9	-1.3
	8.8nm,0.6s,SNR=7.9						
EMUR	La Murta	2.97	22	P	Pn	21 04 22.2	+0.1
	3.9nm,0.3s,SNR=6.2						
EMUR				S	Sn	21 04 54.6	-3.6
	8.8nm,0.6s,SNR=7.9						
ESPR	Espera	3.17	305	P	Pn	21 04 27.2	+2.3
ESPR				S	Sn	21 05 01.1	-2.1
ESPR	Espera	3.17	305	Pn	Pn	21 04 23.7	-1.2
	0.8nm,0.4s,SNR=7.9						
ESPR				Sn	Sn	21 05 01.0	-2.1
	13nm,0.7s,SNR=7.9						
ESPR	Espera	3.17	305	S	Sn	21 05 01.0	-2.2
	13nm,0.7s,SNR=7.9						
ZFT	Errachidia	3.36	206	*e*P	Pn	21 04 28.5	+0.8
ZFT				*e*S	Sn	21 05 04.0	-4.1
EADA	Adamuz	3.46	334	P	Pn	21 04 28.9	-0.1
EADA				S	Sn	21 05 05.1	-5.3
EADA	Adamuz	3.46	334	Pn	Pn	21 04 28.9	-0.1
	0.3nm,0.1s,SNR=7.9						
EADA				Sn	Sn	21 05 07.7	-2.8
	6.1nm,0.4s,SNR=4.6						
EADA	Adamuz	3.46	334	P	Pn	21 04 28.9	-0.1
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	21 05 05.1	-5.4
	6.1nm,0.4s,SNR=4.6						
ETOB	Tobarra	3.66	13	Pn	Pn	21 04 33.6	+1.7
	2.2nm,0.3s,SNR=8.2						
ETOB				Sn	Sn	21 05 11.5	-4.1
	1.7nm,0.3s						
ETOB	Tobarra	3.66	13	P	Pn	21 04 33.6	+1.7
	2.2nm,0.3s,SNR=8.2						
ETOB				S	Sn	21 05 11.5	-4.1
	1.7nm,0.3s						
EMIN	Mina Concepcio	4.22	311	Pn	Pn	21 04 39.5	-0.4
	0.7nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	21 05 25.4	-4.5
	0.4nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	4.22	311	P	Pn	21 04 39.5	-0.4
	0.7nm,0.2s,SNR=7.9						
EMIN				S	Sn	21 05 25.4	-4.5
	0.4nm,0.3s,SNR=7.9						
EBAD	Badajoz	5.08	318	Pn	Pn	21 04 52.0	0.0
	1.0nm,0.3s,SNR=7.9						
EBAD				Sn	Sn	21 05 44.3	-7.2
	1.3nm,0.2s,SNR=7.9						
EBAD	Badajoz	5.08	318	P	Pn	21 04 52.0	0.0
	1.0nm,0.3s,SNR=7.9						

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*NEIC **21** 21:17:01.1, 60.05N×152.62W, h89^{km}, MG3.4(AEIC), After AEIC.*
*IDC **21** 21:17:04.5±5.1, 60.42N×152.42W, h130^{km}±43^{km}, mb3.6/6, mb1 3.8/10, mb1mx3.5/24, mbtmp4.0/10, Error ellipse: s-maj=43.3km s-min=16.2km az=38.0*
ISC 21 21:16:58.6±0.3**, 60.06N**±0.02×**152.58W**±0.05**, h105**^{km}±2^{km}**, n77, σ0^{s}85**/109**, mb3.9**/6**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILIM	Iliamna	0.19	275	P	P	21 17 13.6	+0.1
ILIM				S	S	21 17 23.7	-1.0
IVE	Iliamna Volcan	0.23	258	P	P	21 17 13.7	0.0
IVE				S	S	21 17 24.2	-0.6
INE	Iliamna NE	0.24	270	P	P	21 17 13.8	+0.1
INE				S	S	21 17 24.7	-0.3
IVS	Iliamna South	0.26	258	P	P	21 17 14.0	+0.2
IVS				S	S	21 17 24.8	-0.3
ILS	Iliamna Low So	0.27	247	P	P	21 17 13.8	0.0
ILS				S	S	21 17 24.8	-0.4
ILW	Iliamna West	0.28	270	P	P	21 17 13.9	0.0
ILW				S	S	21 17 24.5	-0.7
RSO	Redoubt South	0.41	348	P	P	21 17 14.9	+0.4
RSO				S	S	21 17 25.5	-0.9
RDT	Redoubt	0.52	9	P	P	21 17 15.5	+0.2
RDT				S	S	21 17 27.2	-0.5
OPT	Oil Point	0.53	219	P	P	21 17 15.4	+0.1
HOM	Homer	0.62	130	P	P	21 17 16.8	+0.7
HOM				S	S	21 17 29.9	+0.8
NNL	Ninilchik	0.64	91	P	P	21 17 17.7	+1.5
XLV	Seldovia	0.75	144	P	P	21 17 17.4	+0.2
AUL	Augustine Lava	0.81	213	P	P	21 17 18.2	+0.4
AUL				S	S	21 17 32.5	+0.5
AUE	Augustine Isla	0.81	210	P	P	21 17 17.8	0.0
AGU	Augustine-Summ	0.83	212	P	P	21 17 18.3	+0.3
AUI	Augustine Isla	0.85	211	P	P	21 17 18.1	0.0
AUI				S	S	21 17 32.2	-0.6
CNPM	China Poot	0.87	128	P	P	21 17 18.9	+0.5
CNPM				S	S	21 17 33.5	+0.5
BRLK	Bradley Lake	0.90	109	P	P	21 17 19.1	+0.4
BRLK				S	S	21 17 34.3	+0.5
CKL	Chakachamna La	1.14	6	P	P	21 17 22.0	+0.6
CKL				S	S	21 17 38.8	+0.3
SPU	Mount Spurr	1.15	13	*e*P	P	21 17 21.9	+0.4
CKN	Chakachatna No	1.18	9	P	P	21 17 22.6	+0.7
CKN				S	S	21 17 39.0	-0.3
BGL	Barrier Glacie	1.21	4	P	P	21 17 22.9	+0.8
BGL				S	S	21 17 40.6	+0.8
MCNL	McNeil River	1.25	226	P	P	21 17 22.5	-0.1
MCNL				S	S	21 17 39.2	-1.5
SLKM	Skilak Lake	1.26	68	P	P	21 17 23.1	+0.4
SLKM				S	S	21 17 40.8	0.0
VOGL	Vogel Lake	1.42	48	P	P	21 17 26.9	+2.3
VOGL				S	S	21 17 46.4	+2.4
SYI	Shuyak Island	1.46	176	P	P	21 17 25.6	+0.5
SYI				S	S	21 17 45.3	+0.4
SEW	Seward	1.57	87	P	P	21 17 26.5	+0.1
SEW				S	S	21 17 47.3	0.0
FIB	Fire Island	1.62	46	P	P	21 17 29.0	+1.9

FIB				S	S	21 17 50.5	+2.1
MPA	Moose Pass	1.66	74	P	P	21 17 27.9	+0.4
MPA				S	S	21 17 48.8	-0.4
KAPH	Katmai Pasha	1.73	212	P	P	21 17 28.8	+0.4
RC01	Rabbit Creek A	1.74	52	P	P	21 17 29.4	+0.8
RC01				S	S	21 17 51.2	+0.3
SVW2	Sparrevohn	1.81	306	P	P	21 17 29.1	-0.4
KAHG	Katmai Hook Gl	1.87	214	P	P	21 17 30.5	+0.3
KAHG				S	S	21 17 53.3	-0.5
PWA	Palmer West	2.07	38	P	P	21 17 33.7	+0.9
PMR	Palmer	2.28	46	P	P	21 17 36.0	+0.2
PMR				S	S	21 18 02.3	-1.1
KDAK	Kodiak Island	2.29	180	P	P	21 17 34.6	-1.2
KDAK				S	S	21 18 01.9	-1.7
ACHA	Angle Creek He	2.34	219	P	P	21 17 37.0	+0.5
MGLS	Mageik LS	2.34	219	P	P	21 17 37.2	+0.7
KNK	Knik Glacier	2.44	54	P	P	21 17 37.8	0.0
CAHL	Cahill	2.46	216	P	P	21 17 38.7	+0.6
GHO	Glory Hole Cre	2.48	45	P	P	21 17 38.5	+0.2
GHO				S	S	21 18 07.4	-0.7
SML	Sawmill	2.71	48	P	P	21 17 41.3	-0.3
HIN	Hinchinbrook I	3.05	81	P	P	21 17 44.9	-1.3
SCM	Sheep Creek Mo	3.12	53	P	P	21 17 46.8	-0.3
MID	Middleton Isla	3.22	99	P	P	21 17 48.8	+0.2
VLZ	Valdez	3.26	68	P	P	21 17 48.0	-1.0
VLZ				S	S	21 18 24.4	-2.8
TT01	Tatalina	3.30	331	P	P	21 17 49.0	-0.5
TTA	Tatalina	3.31	332	P	P	21 17 49.2	-0.6
EYAK	Cordova Ski Ar	3.43	79	P	P	21 17 51.2	-0.2
EYAK				S	S	21 18 28.8	-2.6
DIV	Divide	3.52	69	P	P	21 17 51.9	-0.7
DIV				S	S	21 18 30.9	-2.6
KTH	Kantishna Hill	3.59	12	P	P	21 17 54.1	+0.6
PAX	Paxson	4.48	46	P	P	21 18 05.8	+0.1
GLB	Gilahina Butte	4.52	68	P	P	21 18 04.9	-1.3
THY	Trims Highway	4.67	41	P	P	21 18 09.2	+1.0
WRH	Wood River Hil	4.89	23	P	P	21 18 11.0	-0.3
MLY	Manley	5.06	9	P	P	21 18 13.9	+0.4
CCB	Clear Creek Bu	5.11	24	P	P	21 18 13.8	-0.4
BALM	Baldy	5.14	75	P	P	21 18 13.7	-1.0
MDM	Murphy Dome	5.31	20	P	P	21 18 16.8	-0.1
IL1	Eielson Array	5.41	27	P	P	21 18 17.8	-0.5
ILAR	Eielson Array	5.41	27	P	P	21 18 17.6	-0.6
	1.7nm,0.3s,baz=212,slow=14,SNR=40						
ILAR				S	S	21 19 15.8	-4.1
	3.9nm,0.3s,baz=191,slow=18,SNR=7.7						
IM3	Indian Mountai	5.97	355	P	P	21 18 25.5	-0.4
BCA3	Beaver Creek A	5.97	55	P	P	21 18 25.3	-0.6
IMA	Indian Mountai	6.05	356	*e*P	P	21 18 27.1	+0.2
PNL	Peninsula	6.65	88	P	P	21 18 34.7	-0.6
BM3	Burnt Mountain	8.18	22	P	P	21 18 54.1	-2.0
DLBC	Dease Lake	11.64	88	P	P	21 19 46.2	+3.9
	4.8nm,0.3s,baz=245,slow=9.7,SNR=22						
INK	Inuvik	11.66	37	P	P	21 19 42.9	+0.4
	0.1nm,0.3s,baz=239,slow=12,SNR=2.7						
YKA	Yellowknife Ar	18.23	66	P	P	21 21 05.6	+0.1
	0.2nm,0.3s,baz=277,slow=9.9,SNR=5.6						
YKA	Yellowknife Ar	18.23	66	P	P	21 21 05.6	0.0
PDAR	Pinedale Array	31.20	104	P	P	21 23 11.3	+1.6
	1.2nm,0.7s,mb3.7,baz=309,slow=9.5,SNR=7.8						
TXAR	Lajitas Array	44.81	111	P	P	21 25 05.1	+1.8
	0.4nm,0.4s,mb3.5,baz=315,slow=5.3,SNR=4.7						
SONM	Songino Array	54.93	306	P	P	21 26 21.2	+1.0
	5.6nm,0.7s,mb4.7,baz=30,slow=10.0,SNR=6.3						
ZAL	Zalesovo	57.47	324	P	P	21 26 37.7	-0.6
	1.5nm,0.4s,mb4.3,baz=66,slow=7.0,SNR=6.2						
ZAL	Zalesovo	57.47	324	P	P	21 26 37.7	-0.6
MKAR	Makanchi Array	64.52	322	P	P	21 27 24.6	-1.2
	0.7nm,0.5s,mb3.7,baz=38,slow=7.0,SNR=17						
GERES	GERESS Array B	70.88	10	P	P	21 28 05.2	-0.2
	0.2nm,0.3s,mb3.4,baz=14,slow=5.5,SNR=4.3						

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*IDC **21** 21:21:31.9±6.7, 7.50N×94.12E, mb3.8/4, mb1 3.9/5, mb1mx3.7/19, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=154.4km s-min=57.7km az=135.0*

*NEIC **21** 21:21:36.0±1.0, 7.42N×94.31E, h30^{km}, mb4.5/2, Error ellipse: s-maj=25.6km s-min=12.9km az=49.0*

ISC 21 21:21:34.4±1.2**, 7.5N**±0.2×**94.4E**±0.2**, h30^{km}, n8,** σ**0^{s}96**/8**, mb4.0**/6**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.56	109	*e*Pn	Pn	21 23 10.9	-0.6
CMAR	Chiang Mai Arr	11.76	22	Pn	P	21 24 23.4	0.0
	0.1nm,0.3s,baz=213,slow=14,SNR=6.0						
LSA	Lhasa	22.31	352	*e*P	P	21 26 33.6	+2.4
	7.3nm,0.7s,mb4.2						
MKAR	Makanchi Array	40.53	347	P	P	21 29 11.9	-0.7
	1.5nm,0.7s,mb3.7,baz=166,slow=7.9,SNR=18						
ZAL	Zalesovo	46.97	352	P	P	21 30 03.5	-0.9
	1.1nm,0.5s,mb4.1,baz=279,slow=6.8,SNR=7.2						
WRAB	Tennant Creek	47.81	125	P	P	21 30 12.7	+1.0
	9.3nm,1.1s,mb4.7						
FINES	FINESS Array B	73.18	332	P	P	21 33 03.7	-0.4
	1.0nm,0.9s,mb3.8,baz=135,slow=3.9,SNR=3.7						
GERES	GERESS Array B	78.30	318	P	P	21 33 33.2	-0.1
	0.1nm,0.3s,mb3.2,baz=72,slow=9.3,SNR=3.4						

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*NEIC **21** 21:26:14.4, 50.76N×172.86W, h44^{km}, mb3.7/1, ML3.2(AEIC), After AEIC.*

*IDC **21** 21:26:16.5±5.4, 50.84N×172.92W, h49^{km}±46^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.3/25, mbtmp3.7/5, ML3.3/2, Error ellipse: s-maj=74.3km s-min=26.7km az=174.0*

ISC 21 21:26:13.2±1.5**, 50.8N**±0.1×**172.9W**±0.1**, h40^{km}**±16^{km}**, n15,** σ**0^{s}49**/21**, mb3.6**/3**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	1.65	331	P	P	21 26 39.8	-0.3
ATKA				S	S	21 27 00.8	+0.5
GSMY	Great Sitkin M	2.35	304	P	P	21 26 50.0	-0.2
GSMY				S	S	21 27 17.2	-0.8
GSTR	Great Sitkin T	2.38	305	P	P	21 26 50.5	0.0
GSTD	Great Sitkin T	2.40	304	P	P	21 26 50.8	-0.1
GSTD				S	S	21 27 19.0	-0.3
GSSP	Great Sitkin S	2.44	304	P	P	21 26 51.6	+0.2
GSSP				S	S	21 27 20.2	0.0
ADAG	Mount Adagdak	2.61	299	P	P	21 26 54.0	+0.1
ADAG				S	S	21 27 26.0	+1.3
KIWB	Kanaga Island	2.88	294	P	P	21 26 57.6	-0.1
KINC	Kanaga Island	2.89	295	P	P	21 26 58.4	+0.5
KIMD	Kanaga Island	2.90	292	P	P	21 26 57.7	-0.3
KIMD				S	S	21 27 31.7	-0.2
FX1	Attu Island--F	8.88	289	P	P	21 28 21.7	-0.2
	0.5nm,0.3s,baz=188,slow=7.1,SNR=5.3						
ILAR	Eielson Array	19.52	34	P	P	21 30 38.6	-0.9
	0.1nm,0.3s,baz=231,slow=8.8,SNR=7.3						
INK	Inuvik	25.89	33	P	P	21 31 43.0	+0.5
	1.6nm,0.6s,mb3.8,baz=233,slow=8.7,SNR=6.4						
INK	Inuvik	25.89	33	*e*P	P	21 31 42.3	-0.2
	1.7nm,0.7s,mb3.7						
PDAR	Pinedale Array	42.91	75	P	P	21 34 10.1	+0.9
	0.5nm,0.7s,mb3.4,baz=329,slow=5.3,SNR=3.9						
MKAR	Makanchi Array	63.27	312	P	P	21 36 39.4	-0.3
	0.3nm,0.5s,mb3.7,baz=49,slow=5.6,SNR=7.2						

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*IDC **21** 21:51:01.8±1.2, 7.34N×94.08E, mb3.9/8, mb1 4.1/9, mb1mx3.9/19, mbtmp3.9/9, ML4.0/1, MS3.5/5, Ms1 3.6/5, ms1mx3.1/32, Error ellipse: s-maj=49.4km s-min=26.6km az=54.0*

*NEIC **21** 21:51:05.9±0.6, 7.33N×94.16E, h30^{km}, mb4.4/8, Error ellipse: s-maj=16.5km s-min=7.3km az=47.0*

*BJI **21** 21:51:05.8, 7.30N×94.20E, h30^{km}, mb4.4*

ISC 21 21:51:04.7±0.8**, 7.4N**±0.1×**94.31E**±0.10**, h33^{km}, n28,** σ**0^{s}62**/25**, mb4.2**/16**, MS3.7**/4**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.64	108	*e*Pn	Pn	21 52 42.4	-0.2
KULM				*e*S	S	21 53 57.3	-0.5
CMAR	Chiang Mai Arr	11.88	22	Pn	P	21 53 55.3	+0.5
	0.3nm,0.3s,baz=215,slow=14,SNR=7.9						
CMAR				LR	LR	21 58 25.8	
	comp=Z,131nm,20.0s,baz=210,slow=37						
PKI	Pulchoki	21.77	338	*e*P	P	21 55 55.5	+0.1
	16nm,0.6s,mb4.6						
GUN	Gumba	21.91	340	*e*P	P	21 55 56.5	-0.4
	38nm,1.0s,mb4.8						
DMN	Daman	21.91	338	*e*P	P	21 55 57.4	+0.5
	43nm,1.1s,mb4.8						
KKN	Kakani	22.01	338	*e*P	P	21 55 57.3	-0.6
	32nm,1.0s,mb4.7						
LSA	Lhasa	22.38	353	P	P	21 56 05.4	+3.8
LSA	Lhasa	22.38	353	*e*P	P	21 56 04.7	+3.1
	10.0nm,0.7s,mb4.3						
GKN	Gorkha	22.45	337	*e*P	P	21 56 02.0	-0.2
	15nm,0.5s,mb4.7						
KOLN	Koldanda	22.66	335	*e*P	P	21 56 04.5	+0.1
	12nm,0.7s,mb4.5						
MKAR	Makanchi Array	40.59	347	P	P	21 58 42.7	-0.2
	3.1nm,0.8s,mb4.0,baz=166,slow=7.7,SNR=24						
MKAR	Makanchi Array	40.59	347	P	P	21 58 42.7	-0.2
WRA	Warramunga Arr	47.85	125	P	P	21 59 42.5	+0.8
	0.9nm,0.8s,mb3.9,baz=304,slow=9.1,SNR=5.0						
WRAB	Tennant Creek	47.86	125	P	P	21 59 42.0	+0.3
BVAR	Borovoye Array	49.49	341	P	P	21 59 53.6	-0.3
	1.2nm,0.7s,mb4.0,baz=141,slow=9.5,SNR=11						
BVAR				PcP	PcP	22 01 16.7	+0.9
	0.6nm,0.6s,baz=166,slow=6.1,SNR=4.1						
ZRNK	Zerenda	49.88	340	*e*P	P	21 59 56.0	-0.9
	1.3nm,0.7s,mb4.1						
EIL	Elat	59.80	300	LR	LR	22 26 35.8	
	comp=Z,43nm,18.6s,MS3.6,baz=115,slow=36						
BRTR	Keskin Array B	62.86	311	P	P	22 01 28.6	-1.3
	0.5nm,0.5s,mb3.9,baz=132,slow=7.3,SNR=4.0						
MATP	Matopo	70.32	245	LR	LR	22 32 17.9	
	comp=Z,76nm,18.6s,MS4.0,baz=345,slow=35						
FINES	FINESS Array B	73.21	332	P	P	22 02 34.0	0.0
	1.7nm,0.7s,mb4.1,baz=90,slow=5.7,SNR=9.3						
FINES	FINESS Array B	73.21	332	P	P	22 02 34.0	0.0
KAF	Kangasniemi	73.29	333	*e*p	P	22 02 34.4	0.0
ARCES	ARCESS Array B	75.77	340	P	P	22 02 49.1	+0.5
	1.5nm,0.8s,mb4.0,baz=45,slow=3.4,SNR=4.3						
GERES	GERESS Array B	78.29	318	P	P	22 03 03.9	+0.9
	0.6nm,0.7s,mb3.6,baz=90,slow=5.3,SNR=7.1						
NB2	NORSAR Subarra	80.22	331	P	P	22 03 13.5	+0.2
	0.8nm,0.7s,mb3.8,baz=94,slow=5.0						
NOA	NORSAR Array B	80.22	331	P	P	22 03 13.4	+0.1
	1.1nm,0.7s,mb3.9,baz=93,slow=5.4,SNR=5.2						
NOA				LR	LR	22 43 32.0	
	comp=Z,26nm,19.2s,MS3.6,baz=115,slow=39						
JMIC	Jan Mayen	87.21	341	LR	LR	22 44 48.9	
	comp=Z,18nm,18.3s,MS3.5,baz=80,slow=37						
PLCA	Paso Flores	144.16	200	PKP	PKPdf	22 10 40.0	+2.6
	4.0nm,1.0s,baz=203,slow=5.7,SNR=4.3						

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*CSEM **21** 21:57:00.7±0.2, 37.14N×24.83W, h5^{km}, ML2.2, Error ellipse: s-maj=5.2km s-min=2.3km az=161.0, After PDA*

*PDA **21** 21:57:00.7±1.1, 37.14N×24.83W, h5^{km}, MD2.6, ML2.2, Error ellipse: s-maj=11.3km s-min=5.9km az=66.0*

SVSA 21 21:57:00.7±1.1**, 37.14N×24.83W, h5^{km}, MD2.6, ML2.2, Error ellipse: s-maj=11.3km s-min=5.9km az=66.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.23	234	*i* P	Pg	21 57 04.2	-1.2
PSMN				*e*S	Sg	21 57 07.3	-1.3
PSMN	Pico do Norte,	0.23	234	*e*S	Sg	21 57 07.3	-1.3
FRA1	Furnas	0.73	325	*e*P	Pg	21 57 12.6	-2.8
FRA1				*e*S	Sg	21 57 21.5	-3.7
MIRA	Miradouro	0.74	331	*e*P	Pg	21 57 13.7	-1.8
MIRA				*e*S	Sg	21 57 23.0	-2.3
PCNG	Congro	0.77	324	*e*S	Sg	21 57 23.3	-3.1
	38nm,0.1s						
PCNG	Congro	0.77	324	*e*S	Sg	21 57 23.3	-3.1
	38nm,0.1s						
VIF	Vila Franca	0.78	321	*e*P	Pg	21 57 13.3	-2.9
VIF				*e*S	Sg	21 57 23.0	-3.6
	22nm,0.2s						
VIF	Vila Franca	0.78	321	*e*P	Pg	21 57 13.3	-2.9
VIF				*e*S	Sg	21 57 23.0	-3.6
	22nm,0.2s						
PRCH	Ribeira Ch	0.78	319	*e*S	Sg	21 57 23.2	-3.6
	46nm,0.2s						
PRCH	Ribeira Ch	0.78	319	*e*S	Sg	21 57 23.2	-3.6
	46nm,0.2s						
PFAD	Fenais da Ajud	0.80	331	*e*P	Pg	21 57 14.4	-2.3
PFAD				*e*S	Sg	21 57 23.9	-3.5
MESC	Monte Escuro	0.82	323	*e*P	Pb	21 57 13.9	-3.1
MESC				*e*S	Sg	21 57 24.3	-3.6
LFA	Lagoa do Fogo	0.82	321	*i* P	Pb	21 57 14.1	-2.9
CML	Cha da Macela	0.85	318	*e*P	Pb	21 57 15.5	-2.1
CML				*e*S	Sg	21 57 24.9	-4.1
PSAN	Santo Antonio	1.01	315	*e*P	Pb	21 57 19.0	-1.2
PFET	Feteiras	1.02	312	*e*P	Pb	21 57 18.4	-2.1
SET2	Ginetes	1.05	312	*e*S	Sb	21 57 30.5	-4.3

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*NAO **21** 22:08:36.5±0.8, 67.17N×20.98E, ML2.3*

*HEL **21** 22:08:36.7±0.1, 67.20N×20.73E, ML2.3, MD3.0(BER), ML2.1(BER), Explosion*

*IDC **21** 22:08:36.2±0.8, 67.22N×20.82E, mb1 3.0/4, mb1mx3.0/21, mbtmp3.0/4, ML2.9/4, Error ellipse: s-maj=14.8km s-min=6.2km az=118.0*

*BER **21** 22:08:38.1±4.2, 67.25N×20.65E, MD3.0, ML2.1, ML2.3(NAO), Suspected explosion*

ISC 21 22:08:33.7±0.4**, 67.10N**±0.03×**20.72E**±0.07**, n28,** σ**1^{s}67**/58**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIF	Kilpisjarvi	1.92	1	*e*P	Pn	22 09 09.3	+1.3
KIF				*e*S	Sn	22 09 33.7	+0.6
SGF	Sodankyl	2.28	79	*e*P	Pn	22 09 15.2	+1.9
SGF				*e*S	Sn	22 09 43.2	+0.7
SGF				*e*SG	Sg	22 09 45.8	-4.0
SGF				MSG		22 09 48.2	
	comp=Z,18nm,0.2s						
TRO	Tromso	2.63	346	*e*P	Pn	22 09 18.4	+0.2
TRO				*e*SG	Sg	22 09 54.6	-6.8
TRO				AML	AML	22 09 56.3	
	comp=Z,13nm,0.4s						
MOR8	Moi Rana	2.67	253	*e*P	Pn	22 09 20.3	+1.6
MOR8				*e*SG	Sg	22 09 54.6	-8.0
MOR8				AML	AML	22 09 56.7	
	comp=Z,32nm,0.4s						
MELSS	Ber_school_2	2.76	268	*e*P	Pn	22 09 21.8	+1.8
MELSS				*e*Sg	Sg	22 10 02.4	-3.2
OUL	Oulu	2.92	131	*e*P	Pn	22 09 25.4	+3.1
OUL				*e*SG	Sg	22 10 08.6	-2.3
OUL				MSG		22 10 11.8	
	comp=Z,11nm,0.3s						
LOF	Lofoten	2.94	294	*e*P	Pn	22 09 22.8	+0.3
LOF				*e*SG	Sg	22 10 07.2	-4.3
LOF				AML	AML	22 10 11.1	
	comp=Z,14nm,0.5s						
ARA0	ARCESS Array S	3.03	34	Pn	Pn	22 09 24.5	+0.7
	baz=210,slow=16						
ARA0				Sn	Sn	22 10 00.6	-0.7
	baz=215,slow=22						
ARA0				Lg		22 10 05.1	
	baz=213,slow=28						
ARA0	ARCESS Array S	3.03	34	*e*P	Pn	22 09 24.5	+0.7
ARA0				*e*S	Sn	22 10 00.6	-0.7
ARA0				*e*SB	Sb	22 10 05.1	-1.0
ARCES	ARCESS Array B	3.03	34	Pn	Pn	22 09 24.6	+0.7
	comp=Z,2.2nm,0.3s,baz=212,slow=14,SNR=108						
ARCES				Sn	Sn	22 10 00.5	-0.9
	comp=Z,4.3nm,0.3s,baz=210,slow=27,SNR=11						
ARCES				Lg		22 10 05.0	
	comp=Z,4.3nm,0.3s,baz=211,slow=28,SNR=11						
STOK	Stokkvaagen	3.15	260	*e*P	Pn	22 09 27.7	+2.1
STOK				*e*SG	Sg	22 10 15.3	-3.4
STOK				AML	AML	22 10 24.2	
	comp=Z,18nm,0.8s						
KEV	Kevo	3.54	38	*e*P	Pn	22 09 31.7	+0.6
KEV				*e*S	Sn	22 10 12.2	-2.1
KU4	Liikasenvaara	3.59	98	*e*P	Pn	22 09 33.7	+1.8
KJN	Kajaani	4.19	133	*e*P	Pn	22 09 42.9	+2.6
KJN				*e*SG	Sg	22 10 47.6	-5.6
KJN				MSG		22 10 50.7	
	comp=Z,7.1nm,0.3s						
NSS	Namsos	4.42	238	*e*P	Pn	22 09 44.9	+1.3
NSS				*e*SG	Sg	22 10 54.6	-6.4
APA0	Apatity Array	4.78	78	Pn	Pn	22 09 49.5	+0.8
	baz=269,slow=14						
APA0				Sn	Sn	22 10 43.2	-2.3
	baz=270,slow=22						
APA0				Lg		22 11 02.1	
	baz=280,slow=28						
APA0	Apatity Array	4.78	78	*e*P	Pn	22 09 49.5	+0.8
APA0				*e*S	Sn	22 10 43.2	-2.3
APA0				*e*SG	Sg	22 11 02.1	-11
SUF	Sumiainen	4.96	150	*e*SG	Sg	22 11 12.1	-6.9
SUF				MSG		22 11 14.4	
	comp=Z,2.8nm,0.3s						
FIA0	FINESS Array S	6.13	155	Pn	Pn	22 10 10.3	+2.5
	baz=344,slow=14						
FIA0				Sn	Sn	22 11 17.9	-1.8
	baz=339,slow=28						
FIA0				Lg		22 11 51.2	
	baz=343,slow=37						
FIA0	FINESS Array S	6.13	155	*e*P	Pn	22 10 10.3	+2.5
FIA0				*e*S	Sn	22 11 17.9	-1.8
FIA0				*e*SG	Sg	22 11 51.2	-6.8
FINES	FINESS Array B	6.13	155	Pn	Pn	22 10 09.9	+2.1
	comp=Z,0.2nm,0.3s,baz=346,slow=12,SNR=16						
FINES				Sn	Sn	22 11 20.3	+0.7
	comp=Z,0.6nm,0.3s,baz=344,slow=22,SNR=7.7						
FINES				Lg		22 11 50.2	
	comp=Z,0.8nm,0.3s,baz=344,slow=26,SNR=8.0						
NB2	NORSAR Subarra	7.36	219	Pn	Pn	22 10 26.1	+1.0
	baz=26,slow=14						
NB2				Sn	Sn	22 11 51.0	+0.6
NB2				Lg		22 12 31.4	
NB2	NORSAR Subarra	7.36	219	*e*P	Pn	22 10 26.1	+1.0
NB2				*e*S	Sn	22 11 51.0	+0.6
NB2				*e*		22 12 31.4	
NOA	NORSAR Array B	7.36	219	Pn	Pn	22 10 25.7	+0.6
	comp=Z,0.2nm,0.3s,baz=27,slow=11,SNR=2.4						
NOA				Sn	Sn	22 11 45.4	-4.9
	comp=Z,0.3nm,0.3s,baz=330,slow=24,SNR=2.8						
NOA				Lg		22 12 28.4	
	comp=Z,0.6nm,0.3s,baz=33,slow=13,SNR=4.0						
HFS	Hagfors	7.65	207	Pn	Pn	22 10 28.3	-0.8
	baz=32,slow=12						
HFS				Sn	Sn	22 11 54.0	-3.6
	baz=24,slow=22						
HFS				Lg		22 12 37.9	
	baz=19,slow=56						
HFS	Hagfors	7.65	207	*e*P	Pn	22 10 28.3	-0.8
HFS				*e*S	Sn	22 11 54.0	-3.6
HFS				*e*SG	Sg	22 12 37.9	-11
HFS	Hagfors	7.65	207	Pn	Pn	22 10 28.6	-0.6
	comp=Z,0.1nm,0.3s,baz=24,slow=13,SNR=11						
HFS				Sn	Sn	22 11 55.2	-2.4
	comp=Z,0.1nm,0.3s,baz=20,slow=22,SNR=5.5						
SPA0	Spitsbergen Ar	11.21	355	*e*P	P	22 11 15.5	-2.6

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*CSEM **21** 22:10:34.9±0.2, 37.01N×24.33W, h10^{km}, ML2.5, Error ellipse: s-maj=7.1km s-min=3.3km az=68.0, After PDA*

*PDA **21** 22:10:34.9±0.9, 37.01N×24.33W, h10^{km}, MD3.1, ML2.5, Error ellipse: s-maj=5.9km s-min=3.3km az=56.0*

SVSA 21 22:10:34.9±0.9**, 37.01N×24.33W, h10^{km}, MD3.1, ML2.5, Error ellipse: s-maj=5.9km s-min=3.3km az=56.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.59	270	*e*P	Pg	22 10 44.4	-2.4
PSMN				*e*S	Sg	22 10 51.9	-2.9
MIRA	Miradouro	1.09	316	*e*P	Pb	22 10 51.1	-4.2
MIRA				*e*S	Sb	22 11 04.1	-5.3
FRA1	Furnas	1.10	312	*e*P	Pb	22 10 51.4	-4.2
FRA1				*e*S	Sb	22 11 04.2	-5.6
PCNG	Congro	1.14	312	*e*S	Sb	22 11 05.5	-5.5
	47nm,0.2s						
PCNG	Congro	1.14	312	*e*S	Sb	22 11 05.5	-5.5
	47nm,0.2s						
PFAD	Fenais da Ajud	1.15	317	*e*P	Pb	22 10 52.2	-4.2
PFAD				*e*S	Sb	22 11 05.2	-6.0
VIF	Vila Franca	1.15	310	*e*P	Pb	22 10 52.8	-3.7
VIF				*e*S	Sb	22 11 05.8	-5.5
	35nm,0.2s						
VIF	Vila Franca	1.15	310	*e*P	Pb	22 10 52.8	-3.7
VIF				*e*S	Sb	22 11 05.8	-5.5
	35nm,0.2s						
PRCH	Ribeira Ch	1.17	309	*e*P	Pb	22 10 52.9	-3.8
PRCH				*e*S	Sb	22 11 06.0	-5.7
	68nm,0.1s						
PRCH	Ribeira Ch	1.17	309	*e*P	Pb	22 10 52.9	-3.8
PRCH				*e*S	Sb	22 11 06.0	-5.7
	68nm,0.1s						
MESC	Monte Escuro	1.19	312	*e*P	Pb	22 10 53.2	-3.9
MESC				*e*S	Sb	22 11 06.9	-5.4
LFA	Lagoa do Fogo	1.20	310	*e*P	Pb	22 10 53.5	-3.7
PMAT	Coroa da Mata	1.22	312	*e*S	Sb	22 11 07.2	-6.0
	28nm,0.2s						
PMAT	Coroa da Mata	1.22	312	*e*S	Sb	22 11 07.2	-6.0
	28nm,0.2s						
PVER	Pico Vermelho	1.23	310	*e*P	Pb	22 10 54.7	-3.1
PVER				*e*S	Sb	22 11 08.3	-5.3
CML	Cha da Macela	1.24	309	*e*P	Pb	22 10 54.9	-3.0
CML				*e*S	Sb	22 11 09.4	-4.3
FAC	Faja de Cima	1.30	306	*e*P	Pb	22 10 56.2	-2.9
FAC				*e*S	Sb	22 11 10.5	-5.2
PSAN	Santo Antonio	1.40	308	*e*P	Pn	22 10 57.3	-3.3
PSAN				*e*S	Sb	22 11 13.2	-5.2
PFET	Feteiras	1.42	305	*e*P	Pn	22 10 57.2	-3.7
PFET				*e*S	Sb	22 11 12.8	-6.2
SET2	Ginetes	1.45	306	*e*P	Pn	22 10 58.0	-3.2
SET2				*e*S	Sb	22 11 14.1	-5.7
PICO	Pico	3.58	296	*i* P	Pn	22 11 27.2	-4.4
PICO				*e*S	Sn	22 12 04.7	-10
CALA	Caldeira	3.81	296	*e*P	Pn	22 11 26.9	-8.0
CALA				*e*S	Sn	22 12 10.3	-10

IDC 21 22:11:50.6±21.0**, 20.90S**×**178.78W, h552^{km}**±210^{km}**, mb3.3**/4**, mb1 3.4**/4**, mb1mx3.1**/16**, mbtmp4.3**/4**, Error ellipse: s-maj=140.2km s-min=58.8km az=91.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	34.72	284	P	P	22 17 55.2	-1.0
	6.7nm,0.8s,baz=99,slow=13,SNR=4.9						
STKA	Stephens Creek	36.95	244	P	P	22 18 13.2	-1.3
	3.6nm,1.0s,baz=71,slow=11,SNR=3.3						
WB2	Warramunga Arr	43.81	263	*e*P	P	22 19 07.1	-2.4
WRA	Warramunga Arr	43.82	263	P	P	22 19 07.7	-1.9
	0.8nm,0.3s,baz=96,slow=7.3,SNR=61						
FITZ	Fitzroy Crossi	52.25	263	P	P	22 20 11.7	-1.2
	2.1nm,0.5s,baz=164,slow=7.4,SNR=3.3						
AKASG	Malin Array Be	143.00	330	PKP	PKPdf	22 30 19.2	-1.9
	1.2nm,0.4s,baz=44,slow=3.8,SNR=13						
GERES	GERESS Array B	150.38	343	PKPbc	PKPdf	22 30 40.6	+7.2
	0.4nm,0.5s,baz=27,slow=3.0,SNR=5.6						

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*IDC **21** 22:14:45.1±1.6, 2.65N×94.03E, mb4.0/7, mb1 4.2/8, mb1mx3.9/19, mbtmp4.1/8, ML4.5/1, MS3.3/1, Ms1 3.5/1, ms1mx2.9/21, Error ellipse: s-maj=56.6km s-min=28.7km az=53.0*

*NEIC **21** 22:14:48.1±1.4, 2.43N×94.16E, h30^{km}, mb4.1/3, Error ellipse: s-maj=27.0km s-min=14.8km az=168.0*

ISC 21 22:14:47.6±1.1**, 2.6N**±0.1×**94.2E**±0.1**, h30^{km}, n13,** σ**1^{s}02**/13**, mb4.0**/9**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	7.01	67	*e*Pn	Pn	22 16 29.7	-1.3
CM31	Chiang Mai Arr	16.45	16	*e*P	P	22 18 39.0	+1.0
	3.2nm,0.4s						
CMAR	Chiang Mai Arr	16.45	16	Pn	P	22 18 39.2	+1.1
	0.7nm,0.3s,baz=212,slow=12,SNR=32						
CMAR				LR	LR	22 24 35.2	
	comp=Z,97nm,18.9s,baz=180,slow=36						
LSA	Lhasa	27.10	354	*e*P	P	22 20 31.3	+1.3
	12nm,1.0s,mb4.4						
MKAR	Makanchi Array	45.22	349	P	P	22 23 03.7	-0.2
	2.7nm,0.5s,mb4.3,baz=166,slow=9.1,SNR=61						
MKAR	Makanchi Array	45.22	349	P	P	22 23 03.7	-0.2
WRA	Warramunga Arr	45.36	121	P	P	22 23 06.6	+1.2
	1.4nm,1.0s,mb3.8,baz=302,slow=9.1,SNR=4.7						
SONM	Songino Array	46.29	11	P	P	22 23 11.4	-0.9
	2.4nm,0.9s,mb4.2,baz=190,slow=7.5,SNR=4.0						
BVAR	Borovoye Array	53.97	342	P	P	22 24 09.9	-1.1
	1.0nm,0.5s,mb4.0,baz=151,slow=8.5,SNR=10						
ZRNK	Zerenda	54.34	342	*e*P	P	22 24 12.2	-1.5
	2.3nm,1.0s,mb4.1						
ZRNK				*e*pP	pP	22 24 21.4	-1.4
FINES	FINESS Array B	77.36	333	P	P	22 26 40.6	-0.6
	1.1nm,1.0s,mb3.7,baz=56,slow=6.9,SNR=4.3						

ARCES	ARCESS Array B	80.21	341	P	P	22 26 56.4	-0.1
	2.0nm,0.9s,mb4.0,baz=80,slow=5.5,SNR=3.9						
GERES	GERESS Array B	81.76	319	P	P	22 27 06.0	+1.0
	0.6nm,0.7s,mb3.7,baz=90,slow=2.7,SNR=7.9						

WEL 21 22:25:19.3±0.6**, 38.50S**×**176.12E, h192**^{km}±5^{km}**, ML3.5**/10**,**
Error ellipse: s-maj=13.0km s-min=6.0km az=90.0,
North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKZ	Black Stump Fm	0.73	157	PN	P	22 25 47.3	+0.5
BKZ				SN	S	22 26 08.0	-0.1
URZ	Urewera	0.81	74	PN	P	22 25 46.8	-0.4
URZ				SN	S	22 26 07.7	-1.2
WNVZ	Wahianoa	0.93	206	*e*PN	P	22 25 47.9	0.0
MOVZ	Moawhango	0.95	197	PN	P	22 25 47.8	-0.2
MOVZ				SN	S	22 26 09.0	-1.4
TSZ	Takapari Road	1.57	184	PN	P	22 25 53.5	+0.1
TSZ				SN	S	22 26 20.8	+1.3
MRZ	Mangatainoka R	2.21	191	PN	P	22 25 59.0	-0.8
MRZ				SN	S	22 26 29.5	-1.5
KIW	Kapiti Island	2.54	201	PN	P	22 26 01.8	-1.9
DUWZ	D'Urville Isla	2.86	216	PN	P	22 26 04.6	-2.8
SNZO	South Karori	3.01	201	PN	P	22 26 06.7	-2.5
SNZO				SN	S	22 26 44.6	-3.2
TCW	Tory Channel	3.06	207	PN	P	22 26 07.4	-2.5
TCW				SN	S	22 26 45.7	-3.1
BHW	Baring Head	3.06	198	PN	P	22 26 07.5	-2.4
TUWZ	Tuamarina	3.38	209	PN	P	22 26 10.8	-2.9
NNZ	Nelson	3.44	217	*e*PN	P	22 26 10.9	-3.6
QRZ	Quartz Range	3.62	229	PN	P	22 26 11.6	-5.1
BSWZ	Blackbirch Sta	3.65	207	*e*PN	P	22 26 14.3	-2.7
THZ	Tophouse	4.09	216	*e*PN	P	22 26 19.0	-3.6
KHZ	Kahutara	4.38	206	PN	P	22 26 23.5	-2.9
LTZ	Lake Taylor	5.19	213	*e*PN	P	22 26 32.2	-4.4
MQZ	McQueen's Vall	5.83	206	SN	S	22 27 43.6	-7.9

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*BJI **21** 22:41:03.5, 51.40N×178.50W, h28^{km}, mB4.8, mb4.6,*
Ms4.2, Msz4.2
*MOS **21** 22:41:04.3±0.9, 51.54N×178.30W, h33^{km}, mb4.8/25,*
Error ellipse: s-maj=11.6km s-min=7.3km az=84.4
*NEIC **21** 22:41:04.5±0.3, 51.41N×178.45W, mb4.6/41,*
ML4.5(AEIC), Error ellipse: s-maj=7.9km s-min=3.1km
az=177.0
*IDC **21** 22:41:10.2±2.6, 51.58N×178.31W, h73^{km}±22^{km}, mb3.8/18,*
mb1 4.0/19, mb1mx4.0/27, mbtmp4.1/19, MS3.5/11,
Ms1 3.5/11, ms1mx3.3/31, Error ellipse: s-maj=22.6km
s-min=10.9km az=174.0
ISC 21 22:41:03.8±0.3**, 51.31N**±0.07×**178.44W**±0.04**, h36**^{km}**,**
h36^{km}±3.9^{km}**:pP-P, n170,** σ**0**^{s}**97**/163**, mb4.5**/57**, MS3.6**/13**,**
5C-1D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	0.88	58	P	P	22 41 20.4	+0.7
KIWB	Kanaga Island	0.97	55	P	P	22 41 22.1	+1.0
KIKV	Kanaga Island	0.97	54	P	P	22 41 22.1	+1.0
KIRH	Kanaga Island	1.02	54	P	P	22 41 23.6	+1.7
KINC	Kanaga Island	1.03	52	P	P	22 41 23.0	+1.1
ADAG	Mount Adagdak	1.33	59	P	P	22 41 27.1	+0.9
GSTD	Great Sitkin T	1.61	61	P	P	22 41 31.4	+1.1
GSTD				S	S	22 41 52.3	+2.3
GSMY	Great Sitkin M	1.65	63	P	P	22 41 31.9	+1.1
GSTR	Great Sitkin T	1.68	61	P	P	22 41 32.6	+1.4
ATKA	Atka Island	2.78	70	P	P	22 41 47.5	+0.5
ATKA				S	S	22 42 19.4	-0.3
SMY	Shemya	4.83	290	P	P	22 42 20.8	+4.8
FX1	Attu Island--F	5.41	290	P	P	22 42 27.2	+3.0
FX1				S	S	22 43 30.8	+4.6
FX1				pmax	pmax		
	comp=Z,4.0nm,0.3s						
FX1	Attu Island--F	5.41	290	P	P	22 42 27.2	+3.0
	comp=Z,3.7nm,0.3s,baz=111,slow=23,SNR=11						
FX1				S	S	22 43 30.8	+4.7
	comp=Z,1.5nm,0.3s,baz=73,slow=19,SNR=2.0						
FX1	Attu Island--F	5.41	290	Pn	P	22 42 21.6	-2.6
NIKO	Nikolski	6.13	70	P	P	22 42 34.4	+0.1
MSW	Makushin Switc	7.56	65	P	P	22 42 55.2	+0.9
SPIA	Saint Paul Isl	7.58	36	P	P	22 42 56.0	+1.3
UNV	Unalaska Valle	7.70	66	P	P	22 42 57.0	+0.7
AHB	Akutan Harbor	8.16	65	P	P	22 43 03.9	+1.2
RSO	Redoubt South	16.97	47	*e*P	P	22 44 59.9	+0.3
SPU	Mount Spurr	17.55	46	P	P	22 45 06.8	-0.1
SLKM	Skilak Lake	18.16	49	*e*P	P	22 45 14.2	-0.4
BILL	Bilibino	18.37	342	*e*P	P	22 45 15.5	-1.6
BILL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BILL	Bilibino	18.37	342	*e*P	P	22 45 15.5	-1.7
	comp=Z,7.9nm,0.8s						
IMA	Indian Mountai	19.39	31	*e*P	P	22 45 28.6	-0.5
IMA				pmax	pmax		
	comp=Z,80nm,1.0s						
IMA	Indian Mountai	19.39	31	*e*P	P	22 45 28.6	-0.5
	comp=Z,80nm,1.0s						
ILAR	Eielson Array	21.16	38	P	P	22 45 45.3	-2.4
	comp=Z,1.4nm,0.5s,mb3.5,baz=237,slow=10,SNR=10.0						
ILAR				PcP	PcP	22 49 50.5	-2.4
	comp=Z,0.7nm,0.7s,baz=296,slow=3.1,SNR=4.4						
ILAR				LR	LR	22 54 57.6	
	comp=Z,83nm,20.2s,MS3.1,baz=4.2,slow=40						
YSS	Yuzh-Sakhalins	25.55	276	*e*P	P	22 46 32.5	+1.9
YSS				*e*	pP	22 46 44.7	+4.1
ASAJ	Asahikawa	26.93	270	P	P	22 46 45.1	+1.7
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ASAJ				MLR	MLR		
	comp=Z,64nm,21.3s						
ASAJ	Asahikawa	26.93	270	P	P	22 46 45.1	+1.7
	comp=Z,7.5nm,0.6s,mb4.4,baz=46,slow=3.0,SNR=7.9						
ASAJ				LR	LR	22 55 17.4	
	comp=Z,64nm,21.3s,MS3.1,baz=23,slow=31						
INK	Inuvik	27.39	35	P	P	22 46 45.1	-2.2
	comp=Z,0.7nm,0.4s,mb3.5,baz=239,slow=10,SNR=3.1						
INK				PcP	PcP	22 50 03.9	-2.1
	comp=Z,1.4nm,0.6s,baz=201,slow=4.1,SNR=3.9						
INK				LR	LR	22 59 06.1	
	comp=Z,65nm,18.1s,MS3.2,baz=28,slow=40						
DLBC	Dease Lake	28.21	56	LR	LR	22 59 03.8	
	comp=Z,89nm,18.1s,MS3.4,baz=171,slow=38						
MAT	Matsushiro	34.00	261	*e*P	P	22 47 47.0	+1.0
MAT				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
MAT	Matsushiro	34.00	261	*e*P	P	22 47 47.0	+1.0
	comp=Z,8.2nm,0.7s,mb4.8						
MAT	Matsushiro	34.00	261	P	P	22 47 46.5	+0.5
MJAR	Matsushiro Arr	34.00	261	P	P	22 47 47.2	+1.2
	comp=Z,3.2nm,0.7s,mb4.3,baz=56,slow=6.4,SNR=12						
MDJ	Mudanjiang	34.81	280	P	P	22 47 52.0	-0.9
MDJ				AMB	AMB		
	comp=Z,50nm,4.2s						
YKA	Yellowknife Ar	35.12	46	P	P	22 47 53.8	-1.5
YKA						22 50 24.9	
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	35.12	46	P	P	22 47 53.8	-1.4
	comp=Z,1.6nm,0.8s,mb4.0,baz=282,slow=8.0,SNR=5.2						
YKA				PcP	PcP	22 50 24.9	-1.7
	comp=Z,1.7nm,0.8s,baz=284,slow=2.9,SNR=4.2						
YBH	Yreka Blue Hor	38.66	82	P	P	22 48 26.5	+1.2
	comp=Z,1.6nm,0.6s,mb4.0,baz=318,slow=3.1,SNR=7.0						
YBH				LR	LR	23 01 01.3	
	comp=Z,73nm,20.6s,MS3.5,baz=326,slow=31						
NEW	Newport	38.69	70	*e*P	P	22 48 25.2	-0.3
NEW				pmax	pmax		
	comp=Z,11nm,0.9s						
NEW	Newport	38.69	70	P	P	22 48 25.2	-0.3
	comp=Z,11nm,0.8s,mb4.6,baz=303,slow=6.8,SNR=16						
NEW	Newport	38.69	70	*e*P	P	22 48 25.2	-0.3
	comp=Z,10nm,0.9s,mb4.6						
SNY	Shenyang	40.01	280	⇑P	P	22 48 35.3	-1.2
SNY				AMB	AMB		
	comp=Z,20nm,1.8s,mb4.5						
MSO	Missoula	41.28	70	*e*P	P	22 48 46.3	-0.6
	comp=Z,3.4nm,0.9s,mb4.0						
CHMT	Chamberlain Mo	41.64	69	*e*P	P	22 48 49.0	-0.8
CHMT				*e*	pP	22 48 58.0	-2.3
HRY	Holter Researc	42.58	69	*e*P	P	22 48 57.0	-0.6
HLID	Hailey	42.74	74	*e*P	P	22 48 58.8	-0.1
	comp=Z,3.1nm,0.9s,mb4.0						
HLID				*e*pP	pP	22 49 08.1	-1.4
BOZ	Bozeman (W)	43.26	70	*e*P	P	22 49 02.7	-0.4
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
BOZ	Bozeman (W)	43.26	70	*e*P	P	22 49 02.7	-0.4
	comp=Z,4.7nm,0.6s,mb4.4						
ELK	Elko	43.85	78	*e*P	P	22 49 08.1	+0.2
ELK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ELK	Elko	43.85	78	*e*P	P	22 49 08.1	+0.2
	comp=Z,5.1nm,0.8s,mb4.3						
RRI2	Red Ridge	44.72	73	*e*P	P	22 49 15.7	+0.8
	comp=Z,5.4nm,1.0s,mb4.3						
HVU	Hansel Valley	44.75	75	*e*P	P	22 49 15.3	+0.2
HWUT	Hardware Ranch	45.58	75	*e*P	P	22 49 21.6	-0.3
	comp=Z,3.1nm,0.9s,mb4.2						
CTU	Camp Tracy	46.01	76	*e*P	P	22 49 24.6	-0.6
BW06	Boulder Array	46.11	72	*e*P	P	22 49 25.4	-0.6
	comp=Z,11nm,1.1s,mb4.7						
BW06				*e*pP	pP	22 49 34.1	-2.4
PDAR	Pinedale Array	46.11	72	P	P	22 49 25.9	-0.1
	comp=Z,3.7nm,0.5s,mb4.5,baz=300,slow=5.3,SNR=22						
DAU	Daniels Canyon	46.48	76	P	P	22 49 29.2	+0.3
SONM	Songino Array	46.88	297	LR	LR	23 10 29.8	
	comp=Z,102nm,18.6s,MS3.8,baz=253,slow=38						
MVU	Marysvale	47.06	79	*e*P	P	22 49 33.6	+0.1
	comp=Z,3.7nm,0.8s,mb4.4						
MSU	Marysvale	47.08	79	*e*P	P	22 49 33.7	+0.1
ZAK	Zakamensk	47.19	301	*e*P	P	22 49 34.0	-0.3
ZAK				*e*		22 51 05.8	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.9s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SRU	San Rafael	47.72	77	*e*P	P	22 49 38.4	-0.3
ULM	Lac du Bonnet	49.53	57	LR	LR	23 13 03.2	
	comp=Z,45nm,19.9s,MS3.5,baz=22,slow=39						
RW3	Ridgway	49.99	76	*e*P	P	22 49 55.7	-0.5
SDCO	Great Sand Dun	51.64	75	*e*P	P	22 50 08.0	-0.8
	comp=Z,4.4nm,1.0s,mb4.3						
LAZ	Ladron	52.83	79	*e*P	P	22 50 17.3	-0.3
ANMO	Albuquerque	52.88	78	*e*P	P	22 50 17.7	-0.3
ANMO				*e**PP	pP	22 50 25.8	-2.9
ANMO	Albuquerque	52.88	78	LR	LR	23 10 34.9	
	comp=Z,49nm,18.9s,MS3.6,slow=34						
WHN	Wuhan	52.89	274	⇑P	P	22 50 18.6	+0.4
ZAL	Zalesovo	54.26	314	LR	LR	23 15 15.9	
	comp=Z,46nm,20.1s,MS3.5,baz=266,slow=38						
LZH	Lanzhou	55.62	286	*e*P	P	22 50 38.5	+0.4
LZH				AP	pP	22 50 49.0	+0.1
LZH				XP	sP	22 50 55.0	+1.8
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.1						
MNTX	Cornudas Mount	55.74	81	*e*P	P	22 50 37.6	-1.3
	comp=Z,3.5nm,0.9s,mb4.4						
GTA	Gaotai	55.80	292	*e*P	P	22 50 40.1	+0.7
GTA				AP	pP	22 50 53.5	+3.3
GTA				PP	PP	22 52 47.3	+1.8
GTA				S	S	22 58 26.1	+3.9
GTA				SS	SS	23 02 11.9	+4.1
GTA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,80nm,4.2s						
GTA				LR	LR		
	comp=N,60nm,16.0s,MS4.2						
GTA				LR	LR		
	comp=E,120nm,14.1s,MS4.2						
GTA				LR	LR		
	comp=Z,130nm,11.0s,MS4.3						
WMOK	Wichita Mounta	57.70	73	*e*P	P	22 50 51.3	-1.6
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
WMOK	Wichita Mounta	57.70	73	*e*P	P	22 50 51.2	-1.7
	comp=Z,2.8nm,0.8s,mb4.3						
ARCES	ARCESS Array B	58.20	350	P	P	22 50 54.0	-2.0
	comp=Z,2.3nm,0.8s,mb4.2,baz=24,slow=7.8,SNR=11						
ARCES	ARCESS Array B	58.20	350	P	P	22 50 54.0	-2.0
TXAR	Lajitas Array	58.44	81	P	P	22 50 56.6	-1.6
	comp=Z,1.1nm,0.7s,mb4.0,baz=297,slow=5.6,SNR=9.2						
WMQ	Urumqi	59.57	303	*e*P	P	22 51 07.1	+1.3
WMQ				AP	pP	22 51 21.5	+4.8
WMQ				AMB	AMB		
	comp=Z,50nm,4.2s						
WMQ				LR	LR		
	comp=N,550nm,24.0s,MS4.8						
WMQ				LR	LR		
	comp=E,550nm,20.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,550nm,19.0s,MS4.7						
MKAR	Makanchi Array	60.26	309	P	P	22 51 09.2	-1.3
	comp=Z,1.1nm,0.8s,mb3.9,baz=53,slow=6.1,SNR=12						
SADO	Sadowa	61.70	53	LR	LR	23 16 58.1	
	comp=Z,38nm,19.0s,MS3.6,baz=216,slow=35						
ZRNK	Zerenda	61.70	321	*e*P	P	22 51 18.8	-1.4
ZRNK				pmax	pmax		
	comp=Z,70nm,0.6s						
ZRNK	Zerenda	61.70	321	*e*P	P	22 51 18.8	-1.4
	comp=Z,70nm,0.6s						
WCI	Wyandotte Cave	62.53	62	*e*P	P	22 51 24.2	-1.7
WCI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
WCI	Wyandotte Cave	62.53	62	*e*P	P	22 51 24.2	-1.8
	comp=Z,5.6nm,0.7s,mb4.8						
KMI	Kunming	63.96	278	P	P	22 51 35.9	+0.4
SWET	Sewanee	64.89	65	*e*P	P	22 51 39.2	-2.1
KAF	Kangasniemi	65.23	347	*e*p	P	22 51 41.0	-2.1
CPCT	Cooper Cave	65.51	64	*e*P	P	22 51 43.4	-1.9
FINES	FINESS Array B	65.90	347	P	P	22 51 45.3	-2.1
	comp=Z,1.2nm,0.7s,mb4.1,baz=14,slow=7.9,SNR=7.3						
LSA	Lhasa	67.68	290	P	P	22 52 01.8	+2.7
LSA	Lhasa	67.68	290	*e*P	P	22 52 00.9	+1.8
LSA				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.3						
LSA	Lhasa	67.68	290	*e*P	P	22 52 00.9	+1.8
	comp=Z,36nm,1.1s,mb5.3						
NOA	NORSAR Array B	67.74	355	P	P	22 51 57.6	-1.3
	comp=Z,2.0nm,1.1s,mb4.1,baz=360,slow=4.3,SNR=3.0						
NOA				LR	LR	23 22 21.5	
	comp=Z,20nm,18.1s,MS3.4,baz=165,slow=37						
HFS	Hagfors	68.48	354	P	P	22 52 03.4	-0.2
	comp=Z,1.4nm,0.5s,mb4.2,baz=63,slow=6.4,SNR=6.2						
CMAR	Chiang Mai Arr	71.25	276	P	P	22 52 21.1	-0.1
	comp=Z,1.2nm,0.4s,mb4.2,baz=32,slow=6.6,SNR=6.6						
GUN	Gumba	72.09	292	*e*P	P	22 52 27.6	+1.6
	comp=Z,161nm,0.6s						
KKN	Kakani	72.53	293	*e*P	P	22 52 30.0	+1.4
	comp=Z,60nm,0.7s						
KKN	Kakani	72.53	293	*e*P	P	22 52 30.0	+1.4
KKN				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.3						
PKI	Pulchoki	72.62	292	*e*P	P	22 52 30.3	+1.1
	comp=Z,88nm,1.0s,mb5.6						
PKI	Pulchoki	72.62	292	*e*P	P	22 52 30.3	+1.1
PKI				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.3						
GKN	Gorkha	72.74	293	*e*P	P	22 52 30.9	+1.0
	comp=Z,95nm,1.0s						
DMN	Daman	72.77	293	*e*P	P	22 52 31.4	+1.3
	comp=Z,47nm,0.8s,mb5.5						
KOLN	Koldanda	73.52	294	*e*P	P	22 52 35.6	+1.1
	comp=Z,41nm,1.0s,mb5.3						
AKASG	Malin Array Be	75.69	342	P	P	22 52 45.5	-0.9
	comp=Z,1.2nm,0.5s,mb4.0,baz=19,slow=6.0,SNR=5.9						
GOF	Gofitskoye	77.54	331	*e*P	P	22 52 57.0	0.0
KWP	Kalwaria	77.83	346	*e*P	P	22 52 58.1	-0.5
KWP				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
KWP	Kalwaria	77.83	346	*e*P	P	22 52 58.1	-0.5
	comp=Z,12nm,1.0s,mb4.8						
BAIF	Baives	78.98	358	*e*P	P	22 53 04.2	-0.7
GRA1	Grafenberg Arr	79.04	354	*e*P	P	22 53 05.6	+0.4
	comp=Z,3.0nm,1.0s,mb4.2						
GRF	Grafenberg Arr	79.04	354	*e*P	P	22 53 05.6	+0.4
GRF				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
GRF	Grafenberg Arr	79.04	354	*e*P	P	22 53 05.6	+0.4
GRF				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
GRF	Grafenberg Arr	79.04	354	*e*P	P	22 53 05.6	+0.4
	comp=Z,3.0nm,1.0s,mb4.2						
BURAR	Bucovina Array	79.38	344	⇑P	P	22 53 06.6	-0.5
BURAR	Bucovina Array	79.38	344	⇑P	P	22 53 06.6	-0.5
GERES	GERESS Array B	79.69	352	P	P	22 53 08.6	-0.1
	comp=Z,0.9nm,0.6s,mb3.9,baz=27,slow=6.0,SNR=11						
FLN	La Foliniere	80.29	1	*e*P	P	22 53 11.9	0.0
LDF	La Druitiere	80.47	1	*e*P	P	22 53 12.9	0.0
	comp=Z,4.2nm,0.7s,mb4.2						
LDF	La Druitiere	80.47	1	*e*P	P	22 53 12.9	0.0
LDF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
MEZF	Maizieres J'vi	80.52	358	*e*P	P	22 53 12.4	-0.8
ROSF	Rostrenen	80.65	3	*e*P	P	22 53 14.3	+0.5
	comp=Z,44nm,1.4s,mb4.9						
ROSF	Rostrenen	80.65	3	*e*P	P	22 53 14.3	+0.5
ROSF				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.9						
GRR	Gorron	80.66	2	*e*P	P	22 53 13.7	-0.2
SGMF	Saint Gilles	80.75	3	*e*P	P	22 53 14.6	+0.2
VRI	Vrincioaia	80.80	342	⇓P	P	22 53 16.6	+1.9
QUIF	Quistinic	81.07	3	*e*P	P	22 53 16.2	+0.1
MLR	Muntele Rosu	81.31	343	⇑P	P	22 53 17.7	+0.3
LOR	Lormes	81.78	358	*e*P	P	22 53 19.3	-0.5
	comp=Z,4.3nm,0.6s,mb4.2						
LOR	Lormes	81.78	358	*e*P	P	22 53 19.3	-0.5
LOR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
AVF	Avril sur Loir	82.27	359	*e*P	P	22 53 22.4	+0.1
	comp=Z,7.8nm,1.0s,mb4.3						
AVF	Avril sur Loir	82.27	359	*e*P	P	22 53 22.4	+0.1
AVF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
SMF	Signal de Mont	82.41	358	*e*P	P	22 53 23.3	+0.3
	comp=Z,15nm,1.0s,mb4.6						
SMF	Signal de Mont	82.41	358	*e*P	P	22 53 23.3	+0.3
SMF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
MFF	Saint Martin d	82.46	1	*e*P	P	22 53 22.7	-0.6
	comp=Z,22nm,1.2s,mb4.7						
MFF	Saint Martin d	82.46	1	*e*P	P	22 53 22.7	-0.6
MFF				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
TCF	Toulx Ste Croi	82.78	360	*e*P	P	22 53 25.2	+0.3
	comp=Z,5.7nm,0.9s,mb4.3						
TCF	Toulx Ste Croi	82.78	360	*e*P	P	22 53 25.2	+0.3
TCF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
LPL	La Plagne	83.45	356	*e*P	P	22 53 28.2	-0.2
LPG	La Plagne	83.47	356	*e*P	P	22 53 28.4	-0.1
RJF	Les Rejaudoux	83.77	0	*e*P	P	22 53 30.2	+0.3
	comp=Z,9.8nm,0.9s,mb4.6						
RJF	Les Rejaudoux	83.77	0	*e*P	P	22 53 30.2	+0.3
RJF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
ORIF	Oris-en-Rattie	84.08	357	*e*P	P	22 53 31.3	-0.2
LFF	La Frestale	84.13	1	*e*P	P	22 53 31.7	0.0
	comp=Z,10nm,0.8s,mb4.7						
LFF	La Frestale	84.13	1	*e*P	P	22 53 31.7	0.0
LFF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
CAF	Calviac	84.15	360	*e*P	P	22 53 32.0	+0.2
	comp=Z,31nm,1.4s,mb4.9						
CAF	Calviac	84.15	360	*e*P	P	22 53 32.0	+0.2
CAF				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.9						
VIVF	Saint-Julien-l	84.18	358	*e*P	P	22 53 32.2	+0.2
MBDF	Montbardon	84.24	356	*e*P	P	22 53 32.5	+0.2
	comp=Z,4.6nm,0.7s,mb4.4						
MBDF	Montbardon	84.24	356	*e*P	P	22 53 32.5	+0.2
MBDF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
LASF	Ste Croix	84.97	358	*e*P	P	22 53 36.1	+0.1
SMRF	Simiane la Rot	85.03	357	*e*P	P	22 53 36.3	0.0
	comp=Z,12nm,1.1s,mb4.6						
SBF	Sospel	85.07	356	*e*P	P	22 53 36.4	-0.1
	comp=Z,30nm,1.1s,mb5.0						
SBF	Sospel	85.07	356	*e*P	P	22 53 36.4	-0.1
SBF				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.0						
FRF	La Foret Royal	85.41	356	*e*P	P	22 53 37.6	-0.5
	comp=Z,7.8nm,1.1s,mb4.5						
FRF	La Foret Royal	85.41	356	*e*P	P	22 53 37.6	-0.5
FRF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
LMR	La Mourre	85.64	356	*e*P	P	22 53 38.9	-0.4
	comp=Z,8.8nm,1.0s,mb4.6						
LMR	La Mourre	85.64	356	*e*P	P	22 53 38.9	-0.4
LMR				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.6						
MTLF	Montolieu	85.73	360	*e*P	P	22 53 39.5	-0.2
SJPF	Ste Jean	85.93	2	*e*P	P	22 53 41.2	+0.5
PGF	Pioggiola	86.30	355	*e*P	P	22 53 42.3	-0.2
	comp=Z,17nm,0.9s,mb5.0						
PGF	Pioggiola	86.30	355	*e*P	P	22 53 42.3	-0.2
PGF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.0						
ESDC	Sonseca Array	89.27	4	P	P	22 53 56.3	-0.6
	comp=Z,1.0nm,0.6s,mb4.3,baz=347,slow=4.3,SNR=5.6						
DBIC	Dimbokro	121.99	8	PKP	PKPdf	22 59 55.4	+0.7
	comp=Z,1.7nm,0.5s,baz=301,slow=8.5,SNR=9.0						
MAW	Mawson	146.57	218	PKPbc	PKPbc	23 00 41.6	+1.9
	comp=Z,5.9nm,0.9s,baz=23,slow=2.2,SNR=9.0						
LBTB	Lobatse	147.94	316	*e*PKP2	PKPab	23 00 46.6	-3.1
LBTB	Lobatse	147.94	316	PKPbc	PKPdf	23 00 47.1	+5.2
	comp=Z,12nm,0.6s,baz=40,slow=1.9,SNR=24						
BOSA	Boshof	151.19	313	PKPbc	PKPdf	23 00 54.9	+8.0
	comp=Z,4.1nm,0.8s,baz=50,slow=1.8,SNR=12						
BOSA	Boshof	151.19	313	*e*PKPbc	PKPdf	23 00 54.5	+7.7

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*NEIC **21** 22:57:27.4±1.2, 20.13S×69.04W, h108^{km}±11^{km}, mb4.1/6,*
Error ellipse: s-maj=13.6km s-min=10.4km az=54.0
*IDC **21** 22:57:29.1±2.6, 20.14S×68.94W, h122^{km}±22^{km}, mb3.7/6,*
mb1 3.9/8, mb1mx3.7/17, mbtmp4.2/8, Error ellipse:
s-maj=26.0km s-min=18.9km az=68.0
ISC 21 22:57:25.8±1.4**, 20.19S**±0.08×**69.12W**±0.09**,**
h116^{km}±12^{km}**, n21,** σ**1**^{s}**22**/21**, mb4.1**/8**, 1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.99	14	P	P	22 58 29.1	+2.9
	8.3nm,0.3s,baz=194,slow=7.8,SNR=193						
LPAZ				S	S	22 59 14.3	+1.9
	2.9nm,0.3s,baz=224,slow=4.9,SNR=3.8						
LPAZ	La Paz	3.99	14	⇓*i*P	P	22 58 28.8	+2.5
ARE	Arequipa	4.34	328	*e*P	P	22 58 30.0	-0.9
ARE				*e*S	S	22 59 20.0	-0.9
SIV	San Ignacio	8.71	63	P	P	22 59 28.5	-1.7
	8.0nm,0.3s,baz=255,slow=11,SNR=209						
SAML	Samuel	12.56	28	P	P	23 00 21.2	-0.2
	3.2nm,0.6s						
SAML				*e*		23 00 31.1	
TRQA	Tornquist	18.85	162	*e*P	P	23 01 39.0	-0.3
	2.3nm,0.8s						
PLCA	Paso Flores	20.51	183	P	P	23 01 58.2	+1.6
	4.0nm,0.8s,baz=360,slow=11,SNR=5.7						
PLCA	Paso Flores	20.51	183	P	P	23 01 58.2	+1.6
BDFB	Brasilia	20.58	81	P	P	23 01 57.0	-0.4
	4.1nm,0.4s,baz=265,slow=9.8,SNR=12						
BAO	Brasilia Array	20.60	81	P	P	23 01 57.0	-0.6
WVT	Waverly	58.75	342	*e*P	P	23 07 12.3	-1.6
	4.1nm,0.8s,mb4.5						
TXAR	Lajitas Array	59.45	325	P	P	23 07 19.1	+0.2
	0.5nm,0.5s,mb3.8,baz=143,slow=11,SNR=4.5						
CCM	Cathedral Cave	61.56	340	*e*P	P	23 07 32.9	-0.2
	2.3nm,0.6s,mb4.4						
MNTX	Cornudas Mount	62.21	325	*e*P	P	23 07 36.3	-1.3
	1.2nm,0.7s,mb4.0						
DBIC	Dimbokro	68.55	74	P	P	23 08 18.3	-0.2
	1.1nm,0.3s,mb4.1,baz=256,slow=7.7,SNR=9.5						
DBIC	Dimbokro	68.55	74	*e*P	P	23 08 18.2	-0.2
DBIC				*e*pP	pP	23 08 46.5	-0.8
SCHQ	Schefferville	74.74	1	P	P	23 08 54.6	+0.2
	0.7nm,0.4s,mb3.7,baz=217,slow=5.1,SNR=5.0						
HLID	Hailey	75.83	328	*e*P	P	23 09 03.6	+2.7
	2.3nm,1.0s,mb3.9						
YKA	Yellowknife Ar	89.89	341	P	P	23 10 13.9	+1.5
	2.2nm,0.6s,mb4.4,baz=135,slow=4.5,SNR=10						
WRA	Warramunga Arr	133.97	211	PKP	PKPdf	23 16 33.3	+3.1
	0.5nm,0.6s,baz=147,slow=1.6,SNR=8.7						
MJAR	Matsushiro Arr	151.10	310	PKPbc	PKPdf	23 17 08.6	+9.2
	0.8nm,0.4s,baz=71,slow=1.7,SNR=5.0						

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*NEIC **21** 23:06:31.1±1.2, 19.91S×69.07W, h113^{km}±11^{km}, mb4.3/4,*
Error ellipse: s-maj=15.7km s-min=11.7km az=72.0
*IDC **21** 23:06:33.1±2.3, 19.90S×68.92W, h125^{km}±19^{km}, mb3.9/6,*
mb1 4.0/8, mb1mx3.7/19, mbtmp4.3/8, Error ellipse:
s-maj=27.2km s-min=16.0km az=82.0

ISC 21 23:06:30.2±1.3**, 19.94S**±0.08×**69.24W**±0.10**,**
h127^{km}±13^{km}**, n22,** σ**1**^{s}**27**/18**, mb4.3**/6**, 1C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.78	16	P	P	23 07 29.8	+1.9
	7.4nm,0.3s,baz=195,slow=8.4,SNR=172						
LPAZ				S	S	23 08 13.1	+1.0
	2.5nm,0.3s,baz=223,slow=8.9,SNR=4.5						
LPAZ	La Paz	3.78	16	⇑*i*P	P	23 07 29.8	+1.9
ARE	Arequipa	4.07	328	*e*P	P	23 07 31.0	-0.8
ARE				*e*S	S	23 08 18.0	-1.0
SIV	San Ignacio	8.70	65	P	P	23 08 30.3	-4.0
	10nm,0.3s,baz=260,slow=11,SNR=293						
SAML	Samuel	12.39	29	*e*P	P	23 09 23.7	+0.5
SAML				*e*		23 09 36.0	
TRQA	Tornquist	19.12	162	*e*P	P	23 10 44.8	-1.0
	3.2nm,0.7s						
BDFB	Brasilia	20.65	81	P	P	23 10 59.9	-1.7
	2.5nm,0.6s,baz=243,slow=14,SNR=3.8						
PLCA	Paso Flores	20.76	183	P	P	23 11 03.8	+1.3
	4.9nm,0.7s,baz=354,slow=11,SNR=13						
WVT	Waverly	58.47	342	*e*P	P	23 16 14.4	-0.9
	3.6nm,0.7s,mb4.5						
CCM	Cathedral Cave	61.28	340	*e*P	P	23 16 34.2	-0.3
	2.6nm,0.7s,mb4.4						
SNAA	Sanae	63.85	161	P	P	23 16 52.2	+1.3
	1.0nm,0.7s,mb3.8,baz=296,slow=3.9,SNR=11						
SADO	Sadowa	65.02	352	P	P	23 16 59.1	+0.1
	2.1nm,0.3s,mb4.4,baz=193,slow=5.5,SNR=3.7						
SADO	Sadowa	65.02	352	P	P	23 16 59.1	+0.1
DBIC	Dimbokro	68.59	74	P	P	23 17 21.2	-0.7
	3.3nm,0.9s,mb4.2,baz=238,slow=9.9,SNR=8.9						
DBIC	Dimbokro	68.59	74	*e*P	P	23 17 20.6	-1.3
	2.3nm,0.7s,mb4.1						
DBIC				*e*pP	pP	23 17 49.0	-4.1
YKA	Yellowknife Ar	89.62	341	P	P	23 19 16.4	+2.1
	3.1nm,0.6s,mb4.6,baz=136,slow=4.7,SNR=14						
WRA	Warramunga Arr	134.13	212	PKP	PKPdf	23 25 37.0	+3.5
	0.8nm,0.6s,baz=151,slow=1.6,SNR=9.7						
MKAR	Makanchi Array	144.54	34	PKP	PKPdf	23 25 53.5	+2.0
	0.5nm,0.6s,baz=305,slow=3.6,SNR=6.5						
MKAR	Makanchi Array	144.54	34	PKP	PKPdf	23 25 53.5	+2.0
MJAR	Matsushiro Arr	150.85	310	PKPbc	PKPdf	23 26 10.5	+8.5
	1.0nm,0.4s,baz=102,slow=0.8,SNR=5.0						
MJAR	Matsushiro Arr	150.85	310	PKPbc	PKPdf	23 26 10.5	+8.5
SONM	Songino Array	151.95	6	PKPbc	PKPdf	23 26 13.8	+11
	5.2nm,1.2s,baz=314,slow=1.5,SNR=4.3						

ORF ***21*** *23:06:03.8, 35.07N×22.59E, h30*^{km}*, mb4.1, ML4.8*

BJI ***21*** *23:06:31.1, 37.73N×20.80E, h5*^{km}*, mB5.0, mb4.7, Ms4.7, Msz4.6*

MOS ***21*** *23:06:32.6±1.1, 37.24N×20.85E, h10*^{km}*, mb4.6/13, Error ellipse: s-maj=4.4km s-min=2.5km az=111.8*

IDC ***21*** *23:06:32.2±0.7, 37.24N×20.91E, mb4.3/12, mb1 4.3/21, mb1mx4.2/31, mbtmp4.1/21, ML4.2/9, MS3.6/9, Ms1 3.6/9, ms1mx3.4/29, Error ellipse: s-maj=14.6km s-min=12.9km az=53.0*

ATH ***21*** *23:06:34.0, 37.18N×20.79E, h18*^{km}*±2*^{km}*, MD4.3/18, ML4.3*

NEIC ***21*** *23:06:34.1, 37.18N×20.79E, h18*^{km}*, mb4.2/49, MD4.2(PDG), ML4.3(ATH), After ATH.*

ZUR_RM ***21*** *23:06:34, 37.18N×20.79E, h24*^{km}*, Mw4.5/26, Moment Tensor Solution. s26 Moment tensor: Scale 10*^{15}*Nm; M*$_{rr}$*3.25; M*$_{\theta\theta}$*1.30; M*$_{\phi\phi}$*-4.54; M*$_{r\theta}$*-0.93; M*$_{\theta\phi}$*5.23; M*$_{\phi r}$*-0.99; Best double couple: M*$_{0}$*6.43×10*^{15} *NP1:*ϕ_{s}*189°, δ69°, λ154°. NP2:*ϕ_{s}*289°, δ65°, λ24°. Principal axes: T 5.231, Plg33°, Azm148°; N 2.398, Plg56°, Azm333°; P -7.629, Plg2°, Azm240°;*

HLW ***21*** *23:06:35.4, 37.17N×21.13E, h33*^{km}*, Mb4.3*

PDG ***21*** *23:06:36.2±0.1, 37.33N×19.70E, h11*^{km}*±1*^{km}

CSEM ***21*** *23:06:36.5±0.1, 37.17N×20.84E, h60*^{km}*, mb4.5/18, Ms3.0, Error ellipse: s-maj=1.6km s-min=0.9km az=6.0*

THE ***21*** *23:06:37.5, 37.17N×20.90E, h20*^{km}*, ML4.5*

ISC 21 23:06:32.5±0.2**, 37.19N**±0.02×**20.79E**±0.01**, h10**^{km}**, n396,**
σ**1**^{s}**35**/461**, mb4.5**/34**, MS3.8**/10**, 46C-6D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	0.91	91	*e*PN	Pn	23 06 51.3	+0.1
ITM				*e*SN	Sn	23 07 04.3	0.0
VLS	Valsamata	0.99	351	*e*PN	Pn	23 06 53.0	+0.6
RLS	Riolos of Patr	1.01	32	*e*PN	Pn	23 06 53.4	+0.7
RLS				*e*SN	Sn	23 07 08.6	+1.5
LKD	Levkas	1.52	356	*e*Pg	Pg	23 07 02.1	-0.7
LKD				*e*Sg	Sg	23 07 22.3	-0.7
VLI	Veliai	1.78	105	*e*PN	Pn	23 07 07.0	+3.3
EVR	Evrytania	1.90	25	*e*PN	Pn	23 07 08.7	+3.4
KYTH	Kithira	2.02	116	*e*PN	Pn	23 07 09.8	+2.7
MGER	Gerania Oros	2.11	67	*e*PB	Pb	23 07 10.0	-0.5
AGG	Agios Georgios	2.19	33	*e*Sn	Sn	23 07 37.4	+0.5
NAIG	Nisos Aigina	2.22	74	*e*PN	Pn	23 07 12.5	+2.6
NSAL	Nisos Salamina	2.24	71	*e*PB	Pb	23 07 12.0	-0.7
LKR	Lokris	2.27	50	*e*PN	Pn	23 07 13.2	+2.5
ATH	Athens Observa	2.45	71	*e*PN	Pn	23 07 15.1	+1.9
JAN	Janina	2.46	1	*e*PB	Pb	23 07 16.2	-0.2
PTL	Penteli	2.58	70	*e*PN	Pn	23 07 17.5	+2.3
MEV	Metsovon	2.61	7	*e*Pn	Pn	23 07 17.6	+2.1
MEV	Metsovon	2.61	7	*e*Pn	Pn	23 07 17.6	+2.1
KEK	Kerkira	2.63	343	*e*PB	Pb	23 07 18.6	-0.8
KEK	Kerkira	2.63	343	Pn	Pn	23 07 18.2	+2.3
KEK	Kerkira	2.63	343	*e*Pb	Pb	23 07 18.6	-0.8
NEO	Neokhori	2.85	41	*e*PN	Pn	23 07 21.0	+2.1
XOR	Xorichti	2.88	40	*e*Pn	Pn	23 07 21.2	+1.9
XOR				*e*Sn	Sn	23 07 53.9	-0.5
LSK	Leskovik	2.96	357	*e*Pn	Pn	23 07 22.4	+1.9
AOS	Alonnisos	3.13	50	*e*Pn	Pn	23 07 24.3	+1.4
LIT	Litokhoron	3.19	24	*e*Pn	Pn	23 07 25.5	+1.7
LIT				*e*Sn	Sn	23 08 02.3	0.0
KZN	Kozani	3.20	14	*e*PN	Pn	23 07 26.5	+2.6
VAM	Vamos	3.28	122	*e*PN	Pn	23 07 26.6	+1.5
PAIG	Paliouri	3.55	39	*e*Pn	Pn	23 07 29.9	+1.0
PAIG				*e*Sn	Sn	23 08 11.2	-0.1
GVD	Gavdhos	3.56	130	*e*PN	Pn	23 07 32.0	+3.0
FNA	Florina	3.61	7	*e*Pn	Pn	23 07 31.8	+2.0
FNA				*e*Sn	Sn	23 08 13.9	+0.9
TIP	Timpagrande	3.75	303	Pn	Pn	23 07 33.6	+1.9
LCI	Lecce	3.77	327	Pn	Pn	23 07 33.7	+1.7
LCI				Sn	Sn	23 08 18.9	+1.9
THR3	Thira Island,	3.78	101	*e*Pn	Pn	23 07 32.7	+0.5
APE	Apeiranthos	3.79	90	*e*PN	Pn	23 07 33.0	+0.7
PLG	Polygyros	3.79	32	*e*PN	Pn	23 07 33.2	+0.9
GRI	Girifalco	3.82	297	Pn	Pn	23 07 34.2	+1.5
IDI	Anoyia	3.82	119	Pn	Pn	23 07 32.9	+0.2
	2.6nm,0.3s,baz=294,slow=18,SNR=25						
IDI				Sn	Sn	23 08 18.6	+0.3
	33nm,0.3s,baz=342,slow=23,SNR=16						
IDI				LR	LR	23 08 56.2	
	comp=Z,252nm,21.3s,baz=293,slow=38						
IDI	Anoyia	3.82	119	Pn	Pn	23 07 32.9	+0.2
IDI				Sn	Sn	23 08 18.5	+0.3
THE	Thessaloniki	3.83	26	*e*Pn	Pn	23 07 34.0	+1.1
THE				*e*Sn	Sn	23 08 18.8	+0.4
SANT	Santorini	3.84	101	*e*Pn	Pn	23 07 33.5	+0.5
SANT	Santorini	3.84	101	*e*Pn	Pn	23 07 33.5	+0.5
THR1	Thera Island	3.84	101	*e*Pn	Pn	23 07 33.6	+0.7
SOI	Samo	3.86	285	Pn	Pn	23 07 34.1	+0.8
SOI				Sn	Sn	23 08 17.1	-2.1
OHR	Ohrid	3.91	0	⇑*i*Pn	Pn	23 07 36.1	+2.1
OHR				⇑*i*Pg	Pg	23 07 48.8	-1.8
OHR				*e*Sn	Sn	23 08 23.0	+2.5
OHR				*e*Sg	Sg	23 08 44.4	+1.6
OHR	Ohrid	3.91	0	⇑*i*Pn	Pn	23 07 36.1	+2.1
OHR				*e*Sn	Sn	23 08 23.0	+2.5
GRG	Griva	3.96	18	*e*Pn	Pn	23 07 36.0	+1.2
OUR	Ouranopolis	4.01	38	*e*Pn	Pn	23 07 36.3	+1.0
MTTG	Motta San Giov	4.13	283	Pn	Pn	23 07 38.0	+0.9
MTTG				Sn	Sn	23 08 23.5	-2.5
SOH	Sokhos	4.14	28	*e*Pn	Pn	23 07 38.7	+1.4
SOH				*e*Sn	Sn	23 08 26.6	+0.3
SCLL	Scilla	4.16	286	P	Pn	23 07 38.6	+1.0
SCLL				Sn	Sn	23 08 25.3	-1.6
TIR	Tirane	4.21	350	*e*Pn	Pn	23 07 40.0	+1.7
TIR				*i* Sn	Sg	23 08 58.0	+5.3
TIR	Tirane	4.21	350	Pn	Pn	23 07 40.3	+2.0
MSI	Messina ING	4.28	285	Pn	Pn	23 07 40.6	+1.4
MSI				Sn	Sn	23 08 28.3	-1.4
LOS	Limnos	4.33	50	*e*Pn	Pn	23 07 41.0	+0.9
VAY	Valandovo	4.35	18	⇑*i*Pn	Pn	23 07 41.4	+1.2
VAY				*i*		23 07 44.4	
VAY				*i* Pb	Pb	23 07 51.7	+3.0
VAY				*i* Pg	Pg	23 07 58.3	-1.0
VAY				*i* Sn	Sn	23 08 34.2	+2.6
VAY				*i* Sb	Sb	23 08 48.7	+7.1
VAY				*i* Sg	Sg	23 08 57.1	-0.2
VAY	Valandovo	4.35	18	⇑*i*Pn	Pn	23 07 41.4	+1.2
VAY				*i* S	Sn	23 08 34.2	+2.6
NPS	Neapolis	4.35	115	*e*PN	Pn	23 07 41.7	+1.5
LIA	Limnos Island	4.38	51	*e*PN	Pn	23 07 41.3	+0.7
AGST	Augusta-Monte	4.44	272	Pn	Pn	23 07 40.4	-1.2
ORI	Oriolo Calabro	4.45	311	Pn	Pn	23 07 43.6	+2.0
ORI				S	Sn	23 08 35.4	+1.3
SRS	Serrai	4.48	28	*e*Pn	Pn	23 07 43.2	+1.0
SSY	Sortino	4.57	271	Pn	Pn	23 07 42.4	-1.0
SSY				Sn	Sn	23 08 34.0	-3.2
XRY	Khrisi	4.60	119	*e*PN	Pn	23 07 46.0	+2.2
XRY	Khrisi	4.60	119	*e*Pn	Pn	23 07 47.5	+3.7
LTRZ	Laterza	4.60	319	Pn	Pn	23 07 44.3	+0.4
LTRZ				Sn	Sn	23 08 34.5	-3.5
BRT	Bari-Castellan	4.62	324	Pn	Pn	23 07 44.8	+0.7
BRT				Sn	Sn	23 08 35.9	-2.5
PRK	Paraskevi	4.78	63	*e*PN	Pn	23 07 48.0	+1.7
NVR	Nevrokopi	4.79	29	*e*PN	Pn	23 07 47.3	+0.9
SKO	Skopje	4.80	6	⇑*i*Pn	Pn	23 07 47.5	+0.9
	comp=Z,0.1nm,0.6s						
SKO				*i* Pb	Pb	23 08 00.4	+3.9
SKO				*i* Pg	Pg	23 08 07.0	-1.3
SKO				*i* Sn	Sn	23 08 41.9	-1.1
SKO	Skopje	4.80	6	⇑*i*Pn	Pn	23 07 47.5	+0.9
SKO				*i* Sn	Sn	23 08 41.9	-1.1
SG1	Sgolgore (BA)	4.85	320	*e*Pn	Pn	23 07 47.8	+0.5
KKS	Kukesi	4.88	357	*e*Pn	Pn	23 07 48.4	+0.6
MNO	Monte Soro	4.90	281	Pn	Pn	23 07 48.8	+0.7
MNO				Sn	Sn	23 08 42.6	-2.9
SLNA	Salina	4.91	288	Pn	Pn	23 07 50.7	+2.5
SLNA				Sn	Sn	23 08 45.0	-0.8
ULC	Ulcinj	4.91	346	⇑*i*Pn	Pn	23 07 47.8	-0.4
ULC				*e*Sn	Sn	23 08 41.8	-4.0
MMB	Musomiste	4.94	26	*i* P	Pn	23 07 49.0	+0.3
BAI	Bari	4.95	323	*e*Pn	Pn	23 07 48.9	+0.1
KKB	Krupnik	4.99	20	*i* P	Pn	23 07 49.5	+0.1
MGR	Morigerati	5.04	307	Pn	Pn	23 07 51.5	+1.4
	comp=Z,58nm,0.4s						
VAE	Valguarnera	5.09	275	Pn	Pn	23 07 51.7	+1.0
	comp=Z,24nm,0.3s,baz=310,slow=3.7,SNR=31						
VAE				Sn	Sn	23 08 55.2	+4.9
	comp=Z,26nm,0.3s,baz=78,slow=22,SNR=3.7						
VAE	Valguarnera	5.09	275	Pn	Pn	23 07 51.8	+1.0
SLCN	Sala Consilina	5.14	310	Pn	Pn	23 07 53.7	+2.2
SLCN				Sn	Sn	23 08 54.8	+3.2
WDD	Wield Dalam	5.22	257	Pn	Pn	23 07 52.2	-0.4
WDD				Sn	Sn	23 08 49.7	-3.9
CDT	Castel del Mon	5.24	319	*e*Pn	Pn	23 07 53.2	+0.4
BUM	Brajici-Budva	5.30	345	⇑*i*Pn	Pn	23 07 52.8	-1.0
BUM				*e*Sn	Sn	23 08 50.5	-5.2
TTG	Podgorica	5.36	348	⇑*i*Pn	Pn	23 07 53.9	-0.6
TTG				*e*Sn	Sn	23 08 52.8	-4.3
CSLB	Castelbuono	5.40	280	Pn	Pn	23 07 56.2	+1.1
RDO	Rodhopi	5.40	42	*e*PN	Pn	23 07 57.0	+1.9
RDO	Rodhopi	5.40	42	*e*Pn	Pn	23 07 55.6	+0.5
RZN	Rozhen	5.42	33	*i* P	Pn	23 07 56.0	+0.6
GIB	Gibilmanna	5.43	280	P	Pn	23 07 56.4	+0.8
GIB				pmax	pmax		
	comp=Z,411nm,0.9s						
GIB	Gibilmanna	5.43	280	Pn	Pn	23 07 56.4	+0.8
	comp=Z,411nm,0.9s						
PVY	Plav	5.43	354	⇑*i*Pn	Pn	23 07 56.2	+0.7
PVY				*e*Sn	Sn	23 08 56.8	-2.1
SGO	Sicignano	5.44	310	P	Pn	23 07 57.2	+1.5
SGO				pmax	pmax		
	comp=Z,50nm,0.3s						
SGO	Sicignano	5.44	310	Pn	Pn	23 07 57.2	+1.5
	comp=Z,50nm,0.3s						
MRLC	Muro Lucano	5.45	312	Pn	Pn	23 07 57.3	+1.5
ALN	Alexandroupoli	5.51	46	*e*Pn	Pn	23 07 57.3	+0.6
HCY	Herceg Novi	5.54	342	⇑*i*Pn	Pn	23 07 55.2	-1.8
HCY				*e*Sn	Sn	23 08 55.2	-6.3
HCY	Herceg Novi	5.54	342	⇑*i*Pn	Pn	23 07 55.2	-1.8
HCY				*e*Sn	Sn	23 08 55.2	-6.3
FG4	Candela	5.68	315	P	Pn	23 08 00.3	+1.2
FG4				pmax	pmax		
	comp=Z,62nm,0.6s						
FG4	Candela	5.68	315	Pn	Pn	23 08 00.3	+1.2
	comp=Z,62nm,0.6s						
FAVR	Favara	5.69	273	Pn	Pn	23 08 00.0	+0.9
VTS	Vitosha	5.70	18	*i* P	Pn	23 08 00.0	+0.6
KDZ	Kurdzhali	5.71	37	*i* P	Pn	23 07 58.5	-1.0
IVA	Berane	5.71	353	⇑*i*Pn	Pn	23 08 00.1	+0.6
IVA				*e*Sn	Sn	23 09 03.3	-2.6
NKY	Niksic	5.78	347	*e*Pn	Pn	23 07 59.6	-0.9
NKY				*e*Sn	Sn	23 09 02.4	-5.2
NKY	Niksic	5.78	347	*e*Pn	Pn	23 07 59.6	-0.9
NKY				*e*Sn	Sn	23 09 02.3	-5.3
CSSN	Cassano Irpino	5.79	311	Pn	Pn	23 08 02.1	+1.4
CSSN				Sn	Sn	23 09 06.2	-1.8
MS1	Monte Sant’Ang	5.86	322	*e*Pn	Pn	23 08 01.3	-0.3
FG5	Orsara di Pugl	5.92	315	Pn	Pn	23 08 03.6	+1.2
FG5				Sn	Sn	23 09 08.7	-2.4
BRY	Bratogost	5.96	344	⇑*i*Pn	Pn	23 08 01.3	-1.6
BRY				*e*Sn	Sn	23 09 05.8	-6.3
MRB1	Monte Rocchett	5.99	313	Pn	Pn	23 08 04.8	+1.4
RGNG	Rignano Grg	6.02	320	Pn	Pn	23 08 03.6	-0.3
STON	Ston	6.15	338	*i* Pn	Pn	23 08 03.6	-2.1
STON				*i* Sn	Sn	23 09 12.0	-4.8
UPM	Unac-Piva	6.17	347	⇑*i*Pn	Pn	23 08 05.2	-0.8
UPM				*e*Sn	Sn	23 09 12.1	-5.3
USI	Ustica	6.20	286	Pn	Pn	23 08 05.9	-0.5
	comp=Z,60nm,0.3s						
PLE	Pljevlja	6.22	351	⇑*i*Pn	Pn	23 08 06.5	-0.2
PLE				*e*Sn	Sn	23 09 14.3	-4.4
ZAPS	Zavoj/Pirot	6.25	12	⇑*i*Pn	Pn	23 08 07.0	-0.2
FG2	Serracapriola	6.34	318	Pn	Pn	23 08 08.7	+0.4
NVSS	Nova Varos 2	6.36	353	⇑*i*Pn	Pn	23 08 07.1	-1.6
CIGN	Sant’Elia a Pi	6.37	316	Pn	Pn	23 08 09.8	+1.0
	comp=Z,28nm,0.5s						
BOLS	Boljevac	6.69	7	⇓*i*Pn	Pn	23 08 11.8	-1.5
BBLS	Bajina Basta -	6.75	351	⇓*i*Pn	Pn	23 08 12.5	-1.6
BBLS				Sn	Sn	23 09 23.7	-8.2
CII	Carovilli	6.75	314	*e*Pn	Pn	23 08 15.2	+0.9
CII				*e*Sn	Sn	23 09 26.5	-5.5
CII	Carovilli	6.75	314	*e*Pn	Pn	23 08 15.1	+0.9
CII				*e*Sn	Sn	23 09 26.5	-5.5
SLUM		6.76	146	⇑P	Pn	23 08 10.4	-4.0
DIVS	Divcibare	6.92	355	⇓*i*Pn	Pn	23 08 14.4	-2.2
PVL	Pavlikeni	6.95	29	*i* P	Pn	23 08 16.0	-0.9
AQU	L’Aquila	7.67	314	*e*Pn	Pn	23 08 25.0	-2.1
HMAT	Matruh	8.02	138	P	P	23 08 28.2	-3.7
HMAT				S	Sn	23 09 49.6	-14
BZS	Buzias	8.44	4	⇑P	P	23 08 34.7	-3.1
ASS	Assisi	8.55	316	P	P	23 08 40.9	+1.5
ASS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ASS	Assisi	8.55	316	P	P	23 08 40.9	+1.5
	comp=Z,10nm,0.5s						
NVLJ	Novalja	8.62	331	*i* Pn	P	23 08 39.3	-1.0
NVLJ				*i* Sn	Sn	23 10 11.8	-6.7
NVLJ	Novalja	8.62	331	*i* Pn	P	23 08 39.2	-1.0
DABA	Dabaa	8.75	133	P	P	23 08 37.4	-4.7
DABA	Dabaa	8.75	133	⇓P	P	23 08 37.4	-4.7
VOIR		8.84	20	⇓P	P	23 08 43.3	0.0
SWA2		8.84	152	⇑P	P	23 08 39.5	-3.8
SWA1		8.92	151	⇑P	P	23 08 40.7	-3.7
SWA1				S	Sn	23 10 12.3	-14
MLR	Muntele Rosu	9.15	23	Pn	P	23 08 47.4	-0.2
	comp=Z,0.9nm,0.3s,baz=211,slow=6.1,SNR=16						
MLR	Muntele Rosu	9.15	23	⇑P	P	23 08 48.8	+1.2
MLR	Muntele Rosu	9.15	23	⇑P	P	23 08 48.8	+1.2
VSL	Villasalto	9.26	288	*e*Pn	P	23 08 47.5	-1.6
VSL	Villasalto	9.26	288	*e*Pn	P	23 08 47.5	-1.6
BOJS	Bojanci	9.29	335	*e*Pn	P	23 08 47.1	-2.4
BOJS				*e*		23 10 27.1	
GCIS	Gornji Cirnik	9.49	338	*e*Pn	P	23 08 49.4	-3.0
PGD	Poggio Sodo	9.60	317	P	P	23 08 55.6	+1.8
PGD				pmax	pmax		
	comp=Z,11nm,0.6s						
PGD	Poggio Sodo	9.60	317	P	P	23 08 55.6	+1.8
	comp=Z,11nm,0.6s						
PKSN	Nyarlorinc	9.72	356	*e*P	P	23 08 57.2	+1.8
VRI	Vrincioaia	9.74	25	⇓P	P	23 08 56.7	+1.0
VOY	Vojsko	10.22	332	*e*Pn	P	23 09 00.7	-1.7
VOY				*e*Sn	S	23 10 50.4	-7.8
PERS	Pernice	10.34	338	*i* Pn	P	23 09 01.6	-2.3
PKSG		10.34	351	*e*P	P	23 09 03.3	-0.7
OBKA	Obir	10.40	335	⇑*i*PN	P	23 09 02.3	-2.5
OBKA				*i* SN	S	23 10 55.1	-7.4
PGF	Pioggiola	10.52	304	*e*P	P	23 09 06.3	-0.1
	comp=Z,19nm,0.9s						
PGF	Pioggiola	10.52	304	*e*P	P	23 09 06.3	-0.1
PGF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PSZ	Piszkesteto	10.74	357	*e*P	P	23 09 06.3	-3.1
PSZ	Piszkesteto	10.74	357	*e*P	P	23 09 06.7	-2.7
ARSA	Arzberg	10.78	340	⇑*i*PN	P	23 09 07.6	-2.4
ARSA				*i* SN	S	23 11 02.9	-8.8
MANS	Anshas	10.85	122	P	P	23 09 11.1	+0.1
BURAR	Bucovina Array	10.91	16	⇑P	P	23 09 12.2	+0.4
BURAR	Bucovina Array	10.91	16	⇑P	P	23 09 12.2	+0.4
AANS		11.19	125	⇑P	P	23 09 11.1	-4.5
KBA	Koelnbreinsper	11.31	333	⇑*i*Pn	P	23 09 15.9	-1.3
KBA				*i* Sn	S	23 11 17.9	-6.9
VYHS	Vyhne	11.38	353	*e*Pn	P	23 09 16.6	-1.6
VYHS				*e*Sn	S	23 11 44.8	+18
VYHS	Vyhne	11.38	353	*e*SN	S	23 11 44.8	+18
KIS	Kishinev	11.46	29	*e*P	P	23 09 20.0	+0.7
KIS				MLR	MLR		
	comp=N,1µm,10.0s						
KIS				MLR	MLR		
	comp=Z,900nm,10.0s						
KIS				MLR	MLR		
	comp=E,1µm,9.0s						
KIS				MLR	MLR		
	comp=Z,100nm,12.0s						
SMOL	Smolenice	11.58	349	*e*PN	P	23 09 20.9	0.0
MOA	Molln	11.68	338	⇑*i*Pn	P	23 09 20.8	-1.4
MOA				*i* Sn	S	23 11 26.1	-7.6
KOT	Kottamia	11.71	125	⇑P	P	23 09 18.6	-4.1
KOLS	Kolonicke sedl	11.78	5	*e*PN	P	23 09 21.8	-1.8
GLL	Jalalah	11.87	127	⇑P	P	23 09 20.5	-4.3
SAOF	Saorge	12.13	308	*e*P	P	23 09 28.6	+0.3
SBF	Sospel	12.14	307	*e*P	P	23 09 28.6	+0.1
	comp=Z,51nm,1.2s						
SBF	Sospel	12.14	307	*e*P	P	23 09 28.6	+0.1
SBF				pmax	pmax		
	comp=Z,25nm,1.2s						
AMAG	Maghara	12.20	119	⇑P	P	23 09 25.1	-4.3
AUTN	L’Aution	12.21	308	*e*P	P	23 09 30.2	+0.8
NIE	Niedzica	12.22	359	*e*P	P	23 09 28.6	-1.0
TOUF	Mont Tournerai	12.33	308	*e*P	P	23 09 35.6	+4.5
MVIF	Mont Vial	12.34	307	*e*P	P	23 09 31.6	+0.5
HRSH	Kfar Ka’horesh	12.39	116	⇑P	P	23 09 27.4	-4.5
CALN	Calern	12.44	306	*e*P	P	23 09 31.6	-0.9
VRAC	Vranov	12.49	347	Pn	P	23 09 31.5	-1.6
	comp=Z,0.3nm,0.3s,baz=177,slow=12,SNR=4.1						
LMR	La Mourre	12.51	304	*e*P	P	23 09 33.9	+0.5
	comp=Z,2.7nm,0.6s						
LMR	La Mourre	12.51	304	*e*P	P	23 09 33.9	+0.5
LMR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KWP	Kalwaria	12.51	6	*e*P	P	23 09 33.3	-0.1
FRF	La Foret Royal	12.51	305	*e*P	P	23 09 33.9	+0.4
	comp=Z,12nm,1.0s						
FRF	La Foret Royal	12.51	305	*e*P	P	23 09 33.9	+0.4
FRF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DAVOX	Davos	12.54	323	Pn	P	23 09 35.9	+2.1
	comp=Z,0.3nm,0.3s,baz=152,slow=18,SNR=5.0						
DAVOX				Sn	S	23 11 51.2	-3.5
	comp=Z,0.9nm,0.3s,baz=302,slow=20,SNR=3.6						
GERES	GERESS Array B	12.74	338	Pn	P	23 09 34.4	-2.1
	comp=Z,0.4nm,0.3s,baz=156,slow=13,SNR=16						
GERES				Sn	S	23 11 50.2	-9.3
	comp=Z,0.5nm,0.3s,baz=154,slow=24,SNR=5.6						
OKC	Ostrava-Krasne	12.78	352	*e*P		23 09 48.1	
OKC				AMS	AMS	23 15 50.0	
	comp=Z,400nm,12.1s						
MORC	Moravsky Berou	12.79	350	*e*P	P	23 09 35.1	-2.1
MORC				*e*		23 09 48.1	
MORC	Moravsky Berou	12.79	350	*e*Pn	P	23 09 35.3	-1.9
DAVA	Damuels	12.91	325	⇑*i*Pn	P	23 09 39.6	+0.8
DAVA				*i* Sn	S	23 11 58.5	-5.1
MBDF	Montbardon	12.98	310	*e*P	P	23 09 39.8	0.0
	comp=Z,11nm,0.7s						
MBDF	Montbardon	12.98	310	*e*P	P	23 09 39.8	0.0
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KHC	Kasperske Hory	13.03	339	*e*P	P	23 09 39.0	-1.4
KHC				*e*x	x	23 09 49.7	
KHC				AMS	AMS	23 15 50.0	
	comp=Z,400nm,15.4s						
OJC	Ojcow	13.04	357	*e*P	P	23 09 41.4	+0.9
OJC				*e*S	S	23 12 10.5	+3.8
OJC	Ojcow	13.04	357	*e*P	P	23 09 41.4	+0.9
OJC				*e*PP	PP	23 09 51.2	+0.4
OJC				*e*S	S	23 12 10.5	+3.8
OJC				MLR	MLR	23 15 07.6	
	comp=Z,300nm,19.2s						
HNKL	Nakhl	13.16	120	⇑P	P	23 09 38.4	-3.8
SMRF	Simiane la Rot	13.39	305	*e*P	P	23 09 45.5	+0.3
	comp=Z,8.1nm,1.0s						
LPG	La Plagne	13.40	313	*e*P	P	23 09 45.9	+0.6
	comp=Z,12nm,0.8s						
LPG	La Plagne	13.40	313	*e*P	P	23 09 45.9	+0.6
LPG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LPL	La Plagne	13.43	313	*e*P	P	23 09 45.7	+0.1
	comp=Z,9.3nm,0.8s						
LPL	La Plagne	13.43	313	*e*P	P	23 09 45.7	+0.1
LPL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DPC	Dobruska-Polom	13.54	348	*e*P	P	23 09 46.5	-0.5
DPC				*e*x	x	23 09 56.6	
DPC				AMS	AMS	23 16 10.0	
	comp=Z,500nm,11.1s						
PRU	Pruhonice	13.56	343	*e*P	P	23 09 45.5	-1.8
PRU				*e*x	x	23 09 57.0	
PRU				AMS	AMS	23 16 10.0	
	comp=Z,400nm,8.6s						
ORIF	Oris-en-Rattie	13.63	309	*e*P	P	23 09 48.9	+0.7
	comp=Z,11nm,0.9s						
ORIF				*e*R			
	comp=Z,235nm,19.8s						
UPC	Upice	13.74	347	*e*P		23 09 59.5	
EIL	Elat	13.99	118	Pn	P	23 09 50.9	-2.2
	comp=Z,0.7nm,0.3s,baz=337,slow=17,SNR=4.7						
EIL				Sn	S	23 12 12.3	-17
	comp=Z,1.2nm,0.3s,baz=257,slow=18,SNR=5.3						
EIL	Elat	13.99	118	*e*Pn	P	23 09 49.8	-3.4
	comp=Z,8.3nm,0.6s						
MALT	Malatya	14.00	80	*e*P	P	23 09 53.6	+0.4
PVCC	Panska Ves	14.06	343	*e*P	P	23 09 54.1	+0.3
PVCC				*e*x	x	23 10 05.2	
PVCC				AMS	AMS	23 16 00.0	
	comp=Z,400nm,10.8s						
ASF	Jabal al Asfar	14.16	106	Pn	P	23 09 53.8	-1.5
	comp=Z,0.4nm,0.3s,baz=90,slow=2.0,SNR=3.5						
ASF				Sn	S	23 12 32.2	-1.4
	comp=Z,0.4nm,0.3s,baz=341,slow=20,SNR=4.3						
BBS	Basel-Blauen	14.19	320	*e*P		23 10 03.7	
FELD	Feldberg	14.22	323	*e*P		23 10 04.0	
FELD	Feldberg	14.22	323	*e*P	P	23 09 57.5	+1.5
GRA1	Grafenberg Arr	14.28	334	*e*P		23 10 05.1	
GRF	Grafenberg Arr	14.28	334	*e*P		23 10 05.1	
NKC	Novy Kostel	14.35	338	*e*P		23 10 08.4	
NKC				AMS	AMS	23 16 40.0	
	comp=Z,600nm,11.6s						
VIVF	Saint-Julien-l	14.36	307	*e*P	P	23 09 58.1	+0.3
BFO	Black Forest	14.39	325	*e*P		23 10 06.5	
CABF	La Chapelle	14.42	315	*e*P	P	23 09 58.9	+0.4
	comp=Z,6.9nm,0.6s						
CABF	La Chapelle	14.42	315	*e*P	P	23 09 58.9	+0.4
CABF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LOMF	Lomont	14.46	319	*e*P		23 10 07.6	
BRG	Berggiesshubel	14.53	342	*e*P	P	23 10 04.4	+4.5
BRG				pmax	pmax		
	comp=Z,21nm,2.0s						
BRG	Berggiesshubel	14.53	342	*e*P	P	23 10 04.4	+4.5
	comp=Z,21nm,2.0s						
LASF	Ste Croix	14.57	303	*e*P	P	23 10 01.2	+0.6
MOF	Molkenrain	14.63	321	*e*P		23 10 09.5	
HHRG	Al Ghardaqah	14.68	129	P	P	23 09 59.8	-2.4
HINF	Hinteralfeld	14.75	320	*e*P	P	23 10 02.7	-0.2
	comp=Z,11nm,0.7s						
HINF	Hinteralfeld	14.75	320	*e*P	P	23 10 02.7	-0.2

HINF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKASG	Malin Array Be	14.79	21	*i* P	P	23 10 05.0	+1.6
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKASG	Malin Array Be	14.79	21	Pn	P	23 10 01.7	-1.7
	comp=Z,1.4nm,0.3s,baz=213,slow=11,SNR=12						
AKASG				Sn	S	23 12 45.8	-2.4
	comp=Z,0.4nm,0.3s,baz=242,slow=14,SNR=3.4						
ECH	Echery	14.87	322	*e*P	P	23 10 02.6	-1.8
CDF	Champ du Feu	14.94	323	*e*P	P	23 10 05.3	-0.1
	comp=Z,21nm,0.9s						
CDF	Champ du Feu	14.94	323	*e*P	P	23 10 05.3	-0.1
CDF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MOX	Moxa	14.97	337	*e*P	P	23 10 05.6	-0.1
MOX				*e*P		23 10 12.8	
MOX	Moxa	14.97	337	*i* P	P	23 10 05.6	-0.1
	comp=Z,logA/T=1.2						
MOX				*i*		23 10 13.0	
LANF	Langenberg	15.10	325	*e*P		23 10 15.1	
HAU	Haudompre	15.13	320	*e*P	P	23 10 08.2	+0.3
	comp=Z,23nm,0.6s						
HAU				*e*R			
	comp=Z,136nm,20.8s						
CLL	Collm	15.16	341⇑	*i*P		23 10 14.8	
CLL				pmax	pmax		
	comp=Z,29nm,1.4s						
CLL	Collm	15.16	341⇑	*i*P		23 10 14.8	
	comp=Z,29nm,1.4s						
CLL	Collm	15.16	341⇑	*i**SP		23 10 14.8	
HSFG		15.37	130	P	P	23 10 09.1	-2.1
EIBI	Ibiza	15.42	283	P	P	23 10 12.5	+0.8
	comp=Z,29nm,1.4s						
EIBI	Ibiza	15.42	283	P	P	23 10 12.5	+0.8
	comp=Z,29nm,1.4s,SNR=7.9						
MTLF	Montolieu	15.44	299	*e*P	P	23 10 12.6	+0.7
THEF	They Montfort	15.46	320	*e*P	P	23 10 18.7	+6.5
SMF	Signal de Mont	15.73	312	*e*P	P	23 10 15.8	+0.1
	comp=Z,6.9nm,0.7s						
SMF	Signal de Mont	15.73	312	*e*P	P	23 10 15.8	+0.1
SMF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SOC	Sochi	15.76	60	*e*P	P	23 10 14.6	-1.4
SOC				*i*		23 13 12.0	
SOC				pmax	pmax		
	comp=Z,49nm,0.9s						
SOC				pmax	pmax		
	comp=N,59nm,1.3s						
SOC				pmax	pmax		
	comp=E,28nm,1.0s						
SOC				MLR	MLR		
	comp=N,110nm,11.0s						
SOC				MLR	MLR		
	comp=E,158nm,11.0s						
SOC				MLR	MLR		
	comp=Z,139nm,11.0s						
SOC	Sochi	15.76	60	*e*P	P	23 10 14.6	-1.4
	comp=Z,59nm,1.3s						
TNS	Taunus Mts	15.76	330	*e*P	P	23 10 21.9	+5.9
TNS				pmax	pmax		
	comp=Z,12nm,1.2s						
TNS	Taunus Mts	15.76	330	*e*P	P	23 10 21.9	+5.9
	comp=Z,12nm,1.2s						
RUP	Ruppelstein	15.96	326	*e*P	P	23 10 23.9	+5.3
LOR	Lormes	16.05	314	*e*P	P	23 10 19.9	+0.1
	comp=Z,10nm,0.9s						
LOR				*e*R			
	comp=Z,90nm,17.8s						
CAF	Calviac	16.08	305	*e*P	P	23 10 20.6	+0.4
AVF	Avril sur Loir	16.09	312	*e*P	P	23 10 18.6	-1.8
MEZF	Maizieres J'vi	16.12	319	*e*P	P	23 10 25.1	+4.4
	comp=Z,18nm,0.7s						
BGF	Bois d'Agland	16.28	311	*e*P	P	23 10 23.1	+0.3
WLF	Walferdange	16.35	324	*e*P	P	23 10 28.1	+4.6
WLF				pmax	pmax		
	comp=Z,42nm,1.4s						
WLF	Walferdange	16.35	324	*e*P	P	23 10 28.1	+4.5
	comp=Z,42nm,1.4s						
TCF	Toulx Ste Croi	16.55	309	*e*P	P	23 10 26.6	+0.5
	comp=Z,11nm,1.1s						
TCF	Toulx Ste Croi	16.55	309	*e*P	P	23 10 26.6	+0.5
TCF				pmax	pmax		
	comp=Z,6.0nm,1.1s						
EPF	Esparros	16.68	297	*e*P	P	23 10 28.2	+0.4
	comp=Z,10nm,1.1s						
EPF	Esparros	16.68	297	*e*P	P	23 10 28.2	+0.4
EPF				pmax	pmax		
	comp=Z,5.0nm,1.1s						
EBIE	Bielsa	16.75	296	P	P	23 10 32.8	+4.1
	comp=Z,23nm,1.8s						
HYF	Humbligny	16.76	313	*e*P	P	23 10 29.2	+0.4
SUW	Suwalki	16.90	5	*e*P	P	23 10 29.6	-1.0
SUW				pmax	pmax		
	comp=Z,42nm,0.7s						
SUW	Suwalki	16.90	5	*e*P	P	23 10 29.6	-0.9
	comp=Z,42nm,0.7s						
SUW	Suwalki	16.90	5	*e*P	P	23 10 29.6	-1.0
	comp=Z,42nm,0.7s						
LFF	La Frestale	16.96	303	*e*P	P	23 10 31.6	+0.3
HGN	Heimansgroeve	17.23	327	*e*P	P	23 10 38.6	+4.0
	comp=Z,7.4nm,1.6s						
GIVF	Givet	17.27	323	*e*P	P	23 10 35.8	+0.6
ETSF	Etsaut	17.30	296	*e*P	P	23 10 36.0	+0.4
	comp=Z,19nm,1.0s						
ETSF	Etsaut	17.30	296	*e*P	P	23 10 36.0	+0.4
ETSF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BAIF	Baives	17.54	322	*e*P	P	23 10 39.0	+0.4
	comp=Z,11nm,0.7s						
BAIF	Baives	17.54	322	*e*P	P	23 10 39.0	+0.4
BAIF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WTSB	Winterswijk	17.77	331	*e*P	P	23 10 41.9	+0.5
	comp=Z,12nm,2.0s						
SJPF	Ste Jean	17.82	296	*e*P	P	23 10 42.9	+0.8
	comp=Z,9.8nm,0.7s						
SJPF	Ste Jean	17.82	296	*e*P	P	23 10 42.9	+0.8
SJPF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KIV	Kislovodsk	17.93	61	*e*P	P	23 10 42.7	-0.7
KIV				*e*S	S	23 13 56.3	-4.6
KIV				pmax	pmax		
	comp=Z,13nm,1.2s						
KIV				MLR	MLR		
	comp=N,53nm,18.0s						
KIV				MLR	MLR		
	comp=E,106nm,18.0s						
KIV				MLR	MLR		
	comp=Z,69nm,18.0s						
KIV	Kislovodsk	17.93	61	*e*P	P	23 10 41.7	-1.7
	comp=Z,10nm,0.7s						
KIV	Kislovodsk	17.93	61	*e*P	P	23 10 42.7	-0.7
	comp=Z,13nm,1.2s						
KIV				*e*S	S	23 13 56.3	-4.6
UCC	Uccle	17.96	324	P	P	23 10 45.9	+2.1
ELIZ	Elizondo	18.05	296	P	P	23 10 49.7	+4.7
ELIZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ELIZ	Elizondo	18.05	296	P	P	23 10 49.7	+4.8
	comp=Z,3.9nm,0.6s						
MFF	Saint Martin d	18.16	308	*e*P	P	23 10 46.7	+0.4
	comp=Z,7.1nm,0.6s						
MFF	Saint Martin d	18.16	308	*e*P	P	23 10 46.7	+0.4
MFF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BSEG	Bad Segeberg	18.24	340	*e*P	P	23 10 47.9	+0.6
	comp=Z,13nm,0.9s						
ENIJ	Nijar	18.35	276	P	P	23 10 50.7	+1.9
ENIJ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ENIJ	Nijar	18.35	276	P	P	23 10 50.7	+1.9
	comp=Z,5.0nm,0.7s						
ENIJ	Nijar	18.35	276	P	P	23 10 50.7	+1.9
	comp=Z,5.0nm,0.7s,SNR=7.9						
ZEI	Tsey	18.54	65	*e*P	P	23 10 50.5	-0.6
ECRI	Cripan	18.66	294	P	P	23 10 54.5	+2.0
ECRI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ECRI	Cripan	18.66	294	P	P	23 10 54.5	+2.0
	comp=Z,6.6nm,0.6s						
ECRI	Cripan	18.66	294	P	P	23 10 54.5	+2.0
	comp=Z,6.6nm,0.6s,SNR=6.4						
GNI	Garni	18.92	74	P	P	23 10 56.1	+0.4
	comp=Z,0.8nm,0.3s,baz=288,slow=3.8,SNR=13						
GNI				LR	LR	23 18 21.7	
	comp=Z,131nm,18.9s,baz=274,slow=38						
EQES	Quesada	18.94	279	P	P	23 10 57.1	+1.1
	comp=Z,8.6nm,0.8s						
EQES	Quesada	18.94	279	P	P	23 10 57.1	+1.2
	comp=Z,8.6nm,0.8s,SNR=5.0						
TI2	Plekhanov	19.03	69	*e*P	P	23 11 00.6	+3.7
LDF	La Druitiere	19.03	313	*e*P	P	23 10 56.1	-0.8
	comp=Z,10nm,0.6s						
LDF	La Druitiere	19.03	313	*e*P	P	23 10 56.1	-0.8
LDF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FLN	La Foliniere	19.32	313	*e*P	P	23 10 59.7	-0.6
	comp=Z,7.8nm,0.4s						
FLN				*e*R			
	comp=Z,66nm,18.5s						
GRR	Gorron	19.36	312	*e*P	P	23 11 00.1	-0.7
	comp=Z,8.7nm,0.6s						
GRR	Gorron	19.36	312	*e*P	P	23 11 00.1	-0.7
GRR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
VOR	Voronezh	19.51	36	P	P	23 11 00.0	-2.5
VOR				pmax	pmax		
	comp=Z,40nm,1.5s						
VOR				pmax	pmax		
	comp=N,20nm,1.4s						
VOR				pmax	pmax		
	comp=E,30nm,1.4s						
VOR	Voronezh	19.51	36	P	P	23 11 00.0	-2.5
	comp=E,40nm,1.5s						
ESDC	Sonseca Array	19.54	285	P	P	23 11 04.0	+1.0
	comp=E,0.4nm,0.3s,baz=83,slow=10.0,SNR=11						
ESDC	Sonseca Array	19.54	285	P	P	23 11 03.6	+0.7
	comp=E,2.9nm,0.7s						
ESDC	Sonseca Array	19.54	285	P	P	23 11 03.6	+0.7
	comp=E,2.9nm,0.7s,SNR=10						
ELOJ	Sierra Loja	19.87	277	P	P	23 11 07.9	+1.3
ELOJ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ELOJ	Sierra Loja	19.87	277	P	P	23 11 07.9	+1.3
	comp=Z,2.7nm,0.8s,SNR=4.6						
EADA	Adamuz	20.09	281	P	P	23 11 10.4	+1.4
	comp=Z,17nm,1.5s						
EADA	Adamuz	20.09	281	P	P	23 11 10.4	+1.4
	comp=Z,17nm,1.5s,SNR=5.4						
SGMF	Saint Gilles	20.32	310	*e*P	P	23 11 10.8	-0.6
	comp=Z,22nm,1.0s						
SGMF	Saint Gilles	20.32	310	*e*P	P	23 11 10.8	-0.6
SGMF				pmax	pmax		
	comp=Z,11nm,1.0s						
EMIJ	Mijas	20.45	276	P	P	23 11 12.7	-0.1
	comp=Z,18nm,1.0s						
EMIJ	Mijas	20.45	276	P	P	23 11 12.6	-0.1
	comp=Z,18nm,1.0s,SNR=10						
QUIF	Quistinic	20.56	309	*e*P	P	23 11 13.4	-0.5
	comp=Z,26nm,0.8s						
QUIF	Quistinic	20.56	309	*e*P	P	23 11 13.4	-0.5
QUIF				pmax	pmax		
	comp=Z,13nm,0.8s						
MUD	Monsted U'grnd	20.79	342⇑	*e*P	P	23 11 15.6	-0.5
MUD				*e*	S	23 15 10.1	+6.9
MUD				pmax	pmax		
	comp=Z,11nm,0.8s						
MUD	Monsted U'grnd	20.79	342⇑	*e*P	P	23 11 15.6	-0.5
	comp=Z,11nm,0.8s						
MUD				*e*	S	23 15 10.1	+6.9
MUD	Monsted U'grnd	20.79	342⇑	*i*P	P	23 11 15.6	-0.5
	comp=Z,11nm,0.8s						
MUD				*e*	S	23 15 10.1	+6.9
ROSF	Rostrenen	20.80	310	*e*P	P	23 11 15.8	-0.5
OBN	Obninsk	20.90	26*c*	*i*P	P	23 11 14.8	-2.5
OBN				*e*S	S	23 15 10.0	+4.5
OBN				pmax	pmax		
	comp=Z,26nm,0.8s						
OBN				MLR	MLR		
	comp=Z,200nm,13.0s,MS3.7						
OBN	Obninsk	20.90	26	*e*P	P	23 11 14.6	-2.7
	comp=Z,22nm,0.6s						
OBN	Obninsk	20.90	26	*i* P	P	23 11 14.8	-2.5
	comp=Z,26nm,0.8s						
ESPR	Espera	21.26	277	P	P	23 11 21.9	+0.8
	comp=Z,21nm,1.3s,mb4.3						
ESPR	Espera	21.26	277	P	P	23 11 21.9	+0.8
	comp=Z,21nm,1.3s,mb4.3,SNR=6.2						
VSU	Vasula	21.64	8*c*	*i*P	P	23 11 23.4	-1.3
VSU	Vasula	21.64	8	*i* P	P	23 11 23.4	-1.3
ECAL	Calabor	21.70	291	P	P	23 11 24.8	-0.7
	comp=Z,21nm,1.1s,mb4.5						
ECAL	Calabor	21.70	291	P	P	23 11 24.8	-0.7
	comp=Z,21nm,1.1s,mb4.5,SNR=7.0						
MOS	Moscow	21.77	26	*e*P	P	23 11 24.1	-2.0
MOS				*e*		23 11 51.2	
MOS				*e*		23 15 31.2	
MOS				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.0						
MOS	Moscow	21.77	26	*e*P	P	23 11 24.1	-2.0
	comp=Z,50nm,0.7s,mb5.0						
EMIN	Mina Concepcio	21.78	280	P	P	23 11 27.8	+1.5
	comp=Z,22nm,1.6s,mb4.3						
EVO	Evora	22.75	282	*e*P	P	23 11 36.6	+0.7
	comp=Z,16nm,1.2s,mb4.0						
EVO				*e*R			
	comp=Z,71nm,17.0s						
HFS	Hagfors	23.40	351	P	P	23 11 41.2	-0.9
	comp=Z,18nm,0.5s,mb4.7,baz=157,slow=11,SNR=57						
HFS				LR	LR	23 21 11.7	
	comp=Z,99nm,18.1s,MS3.3,baz=166,slow=38						
EKA	Eskdalemuir Ar	24.36	326	P	P	23 11 52.4	+1.0
	comp=Z,7.4nm,0.6s,mb4.3,baz=123,slow=8.5,SNR=43						
ESK	Eskdalemuir	24.37	326	*e*P	P	23 11 51.7	+0.2
ESK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.3						
ESK	Eskdalemuir	24.37	326	*e*P	P	23 11 51.7	+0.2
	comp=Z,8.4nm,0.6s,mb4.3						
ESK	Eskdalemuir	24.37	326	*e*P	P	23 11 51.7	+0.2
	comp=Z,8.4nm,0.6s,mb4.3						
NAO01	NORSAR Array S	24.49	348	*e*P	P	23 11 51.6	-1.0
	comp=Z,11nm,0.6s,mb4.5						
NAO01	NORSAR Array S	24.49	348	*e*P	P	23 11 51.6	-1.0
	comp=Z,11nm,0.6s,mb4.5						
FINES	FINESS Array B	24.50	6	P	P	23 11 52.0	-0.7
	comp=Z,6.4nm,0.5s,mb4.3,baz=164,slow=8.5,SNR=51						
FINES				LR	LR	23 22 11.2	
	comp=Z,170nm,18.3s,MS3.6,baz=5.7,slow=38						
NB2	NORSAR Subarra	24.62	349	P	P	23 11 53.5	-0.4
	comp=Z,1.1nm,0.6s,mb3.6,baz=155,slow=9.3						
NOA	NORSAR Array B	24.62	349	P	P	23 11 53.1	-0.8
	comp=Z,6.0nm,0.6s,mb4.3,baz=157,slow=9.1,SNR=40						
KAF	Kangasniemi	25.18	6	*e*p	P	23 11 58.3	-0.9
	comp=Z,8.0nm,0.7s,mb4.4,baz=188,slow=9.4						
KAF	Kangasniemi	25.18	6	*e*P	P	23 11 58.3	-0.9
KAF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
ARU	Arti	31.66	40	*i* P	P	23 12 55.3	-2.6
ARU				*e*		23 13 54.7	
ARU				*e*PPP	PPP	23 14 09.8	-7.9
ARU				*e*		23 15 42.6	
ARU				*e*S	S	23 18 02.0	-3.9
ARU				*e*SS	SS	23 19 52.3	-3.0
ARU				*e*SSS	SSS	23 20 13.5	-4.5
ARU				*e*		23 23 25.0	
ARU	Arti	31.66	40	*e*PcP	PcP	23 15 42.6	-7.4
ARU				*e*S	S	23 18 02.0	-3.9
ARCES	ARCESS Array B	32.50	3	P	P	23 13 03.6	-1.5
	comp=Z,3.9nm,0.6s,mb4.5,baz=185,slow=8.9,SNR=45						
ARCES				LR	LR	23 27 10.9	
	comp=Z,142nm,20.1s,MS3.7,baz=44,slow=38						
KEV	Kevo	32.80	4	*e*p	P	23 13 05.4	-2.2
	comp=Z,5.5nm,0.6s,mb4.7						
KEV	Kevo	32.80	4	*e*P	P	23 13 05.4	-2.2
KEV				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
SVE	Sverdlovsk	32.87	40	*e*P	P	23 13 06.0	-2.5
SVE				MLR	MLR		
	comp=N,200nm,12.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,400nm,12.0s,MS4.4						
SVE				MLR	MLR		
	comp=Z,400nm,12.0s,MS4.3						
ZRNK	Zerenda	36.75	49	*e*P	P	23 13 39.6	-2.1
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
ZRNK	Zerenda	36.75	49	*e*P	P	23 13 39.6	-2.1
	comp=Z,4.7nm,0.6s,mb4.5						
DBIC	Dimbokro	38.32	224	P	P	23 13 55.1	-0.2
	comp=Z,2.6nm,0.5s,mb4.2,baz=13,slow=11,SNR=16						
DBIC				LR	LR	23 30 05.1	
	comp=Z,73nm,20.8s,MS3.5,baz=29,slow=37						
MBAR	Mbarara	38.72	164	*e*P	P	23 13 54.0	-4.6
MBAR				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
MBAR	Mbarara	38.72	164	*e*P	P	23 13 54.0	-4.7
	comp=Z,0.9nm,0.6s,mb3.7						
MBAR	Mbarara	38.72	164	*e*P	P	23 13 54.0	-4.6
	comp=Z,0.9nm,0.6s,mb3.7						
AAK	Ala-Archa	40.97	65	*e*P	P	23 14 19.1	+2.2
AAK				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.0						
FRU	Bishkek	41.02	65	*e*P	P	23 14 19.0	+1.7
NVS	Novosibirsk	45.20	46	*i* P	P	23 14 48.8	-2.3
NVS				*i*		23 16 38.0	
NVS				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.4						
NVS				pmax	pmax		
	comp=N,3.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.2s						
NVS	Novosibirsk	45.20	46	*i* P	P	23 14 48.8	-2.3
	comp=E,3.0nm,1.1s,mb4.0						
MKAR	Makanchi Array	45.64	58	P	P	23 14 52.9	-1.9
	comp=E,1.8nm,0.5s,mb4.2,baz=280,slow=6.9,SNR=24						
MKAR	Makanchi Array	45.64	58	P	P	23 14 52.8	-1.9
ZAL	Zalesovo	46.18	47	P	P	23 14 57.1	-1.8
	comp=E,2.3nm,0.6s,mb4.3,baz=195,slow=7.2,SNR=9.9						
ZAL				LR	LR	23 34 47.9	
	comp=E,66nm,19.0s,MS3.6,baz=201,slow=37						
KOLN	Koldanda	52.96	81	*e*P	P	23 15 49.2	-2.3
	comp=E,17nm,0.9s,mb5.0						
GKN	Gorkha	53.67	80	*e*P	P	23 15 54.4	-2.3
	comp=E,19nm,0.5s,mb5.2						
DMN	Daman	54.22	80	*e*P	P	23 15 59.3	-1.4
	comp=E,14nm,0.4s,mb5.2						
KKN	Kakani	54.28	80	*e*P	P	23 15 59.2	-1.9
	comp=E,21nm,0.6s,mb5.2						
KKN	Kakani	54.28	80	*e*P	P	23 15 59.2	-1.9
KKN				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
PKI	Pulchoki	54.48	80	*e*P	P	23 16 01.1	-1.5
	comp=Z,35nm,1.3s,mb5.1						
PKI	Pulchoki	54.48	80	*e*P	P	23 16 01.1	-1.5
PKI				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
GUN	Gumba	54.69	80	*e*P	P	23 16 02.3	-1.8
	comp=Z,11nm,0.4s,mb5.2						
LSA	Lhasa	57.98	75	P	P	23 16 27.0	-0.6
ZAK	Zakamensk	58.05	48	*e*P	P	23 16 26.4	-1.4
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
ZAK	Zakamensk	58.05	48	*e*P	P	23 16 26.4	-1.4
	comp=Z,4.0nm,1.0s,mb4.4						
SCHQ	Schefferville	59.33	318	P	P	23 16 36.0	-0.7
	comp=Z,2.5nm,0.7s,mb4.3,baz=37,slow=5.1,SNR=3.8						
SCHQ	Schefferville	59.33	318	P	P	23 16 36.0	-0.7
BOSA	Boshof	65.59	176	*e*P	P	23 17 18.3	-0.5
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BOSA	Boshof	65.59	176	P	P	23 17 18.3	-0.5
	comp=Z,1.6nm,0.5s,mb4.3,baz=5.4,slow=9.9,SNR=3.9						
BOSA	Boshof	65.59	176	*e*P	P	23 17 18.3	-0.5
	comp=Z,2.7nm,0.8s,mb4.3						
BOSA	Boshof	65.59	176	*e*P	P	23 17 18.3	-0.5
	comp=Z,3.0nm,0.8s,mb4.4						
CMAR	Chiang Mai Arr	69.81	82	P	P	23 17 43.7	-1.7
	comp=Z,2.2nm,0.7s,mb4.2,baz=300,slow=7.1,SNR=6.6						
ENH	Enshi	71.48	66	*e*P	P	23 17 53.9	-1.5
	comp=Z,10nm,0.6s,mb4.9						
NJ2	Nanjing	77.13	60	*e*P	P	23 18 29.4	+1.5
NJ2				PP	PP	23 21 23.5	+0.3
NJ2				S	S	23 28 14.0	-1.6
NJ2				AMB	AMB		
	comp=Z,460nm,4.3s						
NJ2				LR	LR		
	comp=N,130nm,28.0s,MS4.5						
NJ2				LR	LR		
	comp=E,310nm,26.0s,MS4.5						
NJ2				LR	LR		
	comp=Z,360nm,26.0s,MS4.6						
ILAR	Eielson Array	77.91	355	P	P	23 18 32.6	+1.1
	comp=Z,0.6nm,0.6s,mb3.7,baz=350,slow=4.3,SNR=4.8						
SSE	Sheshan	79.30	59	P	P	23 18 35.6	-4.2
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,80nm,5.0s						
BDFB	Brasilia	83.29	245	LR	LR	23 54 09.5	
	comp=Z,104nm,18.0s,MS4.2,baz=105,slow=34						
LPAZ	La Paz	98.82	256	LR	LR	00 05 07.7	
	comp=Z,34nm,19.7s,MS3.9,baz=239,slow=36						
WRA	Warramunga Arr	120.28	93	PKP	PKPdf	23 25 24.9	-2.4
	comp=Z,0.4nm,0.6s,baz=328,slow=1.9,SNR=5.0						

MOS 22 00:00:40.6±3.2, 52.00N×98.90E, h15^{km}, mb4.2/1, Error ellipse: s-maj=50.4km s-min=27.1km az=166.8, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORL	Orlik	0.78	46	*e*PG	Pg	00 00 54.6	-1.7
ORL				*e*		00 01 05.4	
ORL				pmax	pmax		
	comp=Z,136nm,0.1s						
ORL				smax			
	comp=N,286nm,0.2s						
MOY	Mondy	1.34	104	*e*PG	Pg	00 01 04.8	-2.7
MOY				*e*		00 01 23.2	
MOY				pmax	pmax		
	comp=Z,76nm,0.4s						
MOY				smax			
	comp=N,511nm,1.2s						
ARS	Arshan	2.18	91	*e*PN	Pn	00 01 19.9	+3.0
ARS				*e*		00 01 48.5	
ARS				pmax	pmax		
	comp=Z,46nm,0.2s						
ARS				smax			
	comp=E,535nm,0.4s						
TLY	Talaya	2.96	94	*e*PN	Pn	00 01 32.9	+4.9
TLY				*e*		00 02 11.9	
TLY				pmax	pmax		
	comp=Z,16nm,0.4s						
TLY				smax			
	comp=N,89nm,0.5s						
IRK	Irkutsk	3.32	84	*e*PN	Pn	00 01 38.8	+5.7
IRK				*e*		00 02 21.4	
IRK				pmax	pmax		
	comp=Z,123nm,0.1s						
IRK				smax			
	comp=E,364nm,0.4s						
TRG	Tyrgan	4.63	78	*e*PN	Pn	00 02 03.0	+11
TRG				*e*S	Sn	00 02 43.5	-2.2
TRG				*e*		00 03 02.7	
TRG				pmax	pmax		
	comp=Z,8.0nm,0.3s						
TRG				smax			
	comp=N,113nm,0.6s						

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*ATH **22** 00:38:13.7, 39.00N×21.73E, h5^{km}±4^{km}, MD3.0/4*

*THE **22** 00:38:13.9, 39.01N×21.75E, h10^{km}, ML2.8*

*NEIC **22** 00:38:13.4, 39.02N×21.74E, h5^{km}, MD3.0(ATH), After ATH.*

*CSEM **22** 00:38:13.7±0.2, 38.96N×21.71E, h2^{km}, MD3.0, Error ellipse: s-maj=5.5km s-min=2.3km az=24.0*

ISC 22 00:38:13.0±0.7**, 39.00N**±0.04×**21.71E**±0.04**, h2^{km}, n13, σ0.87**/21**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.12	137	*e*PG	Pg	00 38 15.4	+0.1
EVR				*e*SG	Sg	00 38 17.6	+0.7
AGG	Agios Georgios	0.48	87	*e*Pg	Pg	00 38 22.7	0.0
AGG				*e*Sg	Sg	00 38 29.6	+0.4
MEV	Metsovon	0.87	335	*e*Pg	Pg	00 38 30.3	0.0
MEV				*e*Sg	Sg	00 38 43.4	+1.5
JAN	Janina	0.93	315	*e*PB	Pb	00 38 32.0	+0.5
LKR	Lokris	1.07	109	*e*PN	Pn	00 38 34.5	-0.3
LKR				*e*SB	Sb	00 38 48.8	+0.7
IGT	Igoumenitsa	1.19	297	*e*Pg	Pg	00 38 36.8	0.0
XOR	Xorichti	1.21	72	*e*Pg	Pg	00 38 36.0	-1.2
XOR				*e*Sg	Sg	00 38 53.3	0.0
NEO	Neokhori	1.22	75	*e*Pb	Pb	00 38 36.4	0.0
NEO				*e*Sb	Sb	00 38 53.7	+1.3
LIT	Litokhoron	1.25	29	*e*Pg	Pg	00 38 36.7	-1.4

LIT				*e*Sg	**Sg**	**00 38 54.9**	**+0.2**
KZN	**Kozani**	**1.30**	**2**	*e*PB	**Pb**	**00 38 38.6**	**+0.7**
KZN	**Kozani**	**1.30**	**2**	*e*Pg	**Pg**	**00 38 37.1**	**-1.9**
AOS	**Alonnisos**	**1.70**	**84**	*e*Pb	**Pb**	**00 38 43.1**	**-1.5**
FNA	**Florina**	**1.80**	**352**	*e*Pb	**Pb**	**00 38 45.6**	**-0.8**
FNA				*e*Sb	**Sb**	**00 39 10.0**	**+0.7**

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*TAP **22** 00:50:37.0,23.75N×122.45E,h7^{km}±1^{km},ML3.2*

JMA 22 00:50:38.2±0.3,23.96N×122.43E,h32^{km},M2.6,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.73**	**47**	P	Pn	00 50 52.0	-0.3
YOJ				*e*S	Sb	00 51 01.9	-0.3
IRIF	**Iriomote-Funau**	**1.25**	**72**	P	Pn	00 50 59.5	-0.2
IRIF				*e*S	Sn	00 51 16.0	+0.6
HATJ	**Hateruma jima**	**1.26**	**85**	*e*S	Sn	00 51 16.2	+0.3
JKRS	**Kuro-shima**	**1.47**	**79**	P	Pn	00 51 03.6	+0.7
JIJ	**Ishigaki jima**	**1.61**	**75**	P	Pn	00 51 05.6	+0.6
JIJ				*e*S	Sn	00 51 25.9	+1.0

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*NEIC **22** 01:06:55.2±2.4,5.03S×146.24E,h142^{km}±20^{km},mb4.8/2, Error ellipse: s-maj=27.4km s-min=16.0km az=158.0*

*IDC **22** 01:06:55.4±4.2,5.17S×146.34E,h143^{km}±37^{km},mb4.0/3, mb1 4.3/5,mb1mx3.8/14,mbtmp4.5/5,MS2.8/1,Ms1 2.8/1, ms1mx2.5/21,Error ellipse: s-maj=39.0km s-min=27.5km az=139.0*

ISC 22 01:06:56.1±3.0,5.3S±0.2×146.3E±0.2,h162^{km}±26^{km},n9, σ0.^{s}46/9,mb4.2/3,2C,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby** 6.3nm,0.3s,baz=359,slow=8.8,SNR=15	**4.20**	**168**	P	**P**	**01 08 01.0**	**+0.9**
PMG	12nm,0.3s,baz=184,slow=20,SNR=16			S	**S**	**01 08 48.7**	**-0.7**
HNR	**Honiara** comp=Z,35nm,18.2s,baz=124,slow=33	**14.15**	**108**	LR	LR	01 14 36.9	
KAKA	**Kakadu** 28nm,0.6s	**15.56**	**241**	⇑*i*P	**P**	**01 10 27.9**	**-0.2**
WRAB	**Tennant Creek** 31nm,0.5s	**18.65**	**218**	*e*P	**P**	**01 11 04.0**	**-0.2**
WB2	**Warramunga Arr**	**18.66**	**218**	⇑*i*P	**P**	**01 11 04.3**	**+0.1**
WRA	**Warramunga Arr** 6.0nm,0.3s,baz=38,slow=12,SNR=92	**18.66**	**218**	P	**P**	**01 11 04.3**	**0.0**
FITZ	**Fitzroy Crossi** 45nm,0.5s,mb5.2,baz=39,slow=7.4,SNR=62	**23.88**	**236**	P	**P**	**01 11 56.2**	**0.0**
VNDA	**Vanda** 0.6nm,0.6s,mb3.5,baz=333,slow=7.5,SNR=6.0	**72.68**	**176**	P	**P**	**01 18 08.1**	**+0.5**
ILAR	**Eielson Array** 1.1nm,0.6s,mb3.8,baz=252,slow=5.2,SNR=9.5	**85.08**	**23**	P	**P**	**01 19 14.0**	**-0.5**

MOS 22 01:17:02.8±1.2,43.17N×44.77E,h10^{km},mb3.5/1,2C, Error ellipse: s-maj=30.9km s-min=16.4km az=144.4, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARNR	**Ardon**	**0.36**	**273**	⇑*i*PG	Pg	01 17 10.2	0.0
ARNR				*i* S	Sg	01 17 15.5	+0.4
ZEI	**Tsey**	**0.75**	**238**	⇑*e*PG	Pg	01 17 17.1	-0.9
ZEI				*e*S	Sb	01 17 27.6	0.0

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*NDI **22** 01:24:00.3±3.4,34.52N×73.81E,h15^{km},ML3.3, mb3.7(NEIC)*

*IDC **22** 01:24:00.5±1.7,34.33N×74.22E,mb3.8/5,mb1 4.0/7, mb1mx3.7/18,mbtmp3.8/7,ML3.7/2,MS3.4/2,Ms1 3.4/2, ms1mx2.8/24,Error ellipse: s-maj=52.9km s-min=22.4km az=58.0*

*MOS **22** 01:24:02.6±1.3,34.31N×74.28E,h33^{km},mb3.8/1,Error ellipse: s-maj=26.6km s-min=15.2km az=113.2*

*NEIC **22** 01:24:06.3±1.0,34.38N×74.49E,h45^{km},mb3.7/1,Error ellipse: s-maj=25.3km s-min=7.0km az=56.0*

*NNC **22** 01:24:14.0±6.2,34.73N×72.68E,h59^{km}±59^{km},mpv3.7, Error ellipse: s-maj=69.8km s-min=34.7km az=54.0*

ISC 22 01:24:00.1±0.5,34.37N±0.04×74.44E±0.08,h10^{km},n31, σ1.^{s}24/41,mb3.5/4,MS3.3/2,2C-1D,Southwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam** 344nm,0.2s	**2.21**	**151**	*e*P	**Pg**	**01 24 44.1**	**0.0**
THN				*e*x	**Sg**	**01 25 17.8**	**+4.3**
PONG	**Pong**	**2.72**	**152**	*e*P	**Pg**	**01 24 57.0**	**+2.6**
PONG				*e*S	**Sg**	**01 25 32.0**	**+1.3**
BHK	**Bhakra**	**3.38**	**150**	*e*x	**Sg**	**01 25 52.4**	**-0.2**
SMLA	**Simla**	**3.96**	**144**	*e*P	**Pn**	**01 25 04.4**	**+2.1**
SMLA				*e*x	**Sg**	**01 26 09.6**	**-2.4**
KLP	**Kalpa**	**4.27**	**130**	*e*P	**Pn**	**01 25 12.1**	**+5.4**
KLP				*e*S	**Sn**	**01 26 05.2**	**+8.0**
KLP	comp=N,71nm,0.3s			AML	AML	01 26 05.5	
KLP	comp=E,82nm,0.3s			AML	AML	01 26 05.6	
NDI	**New Delhi**	**6.14**	**157**	*e*x	x	01 25 20.0	
NDI				*e*S	**Sn**	**01 26 42.5**	**-1.7**
AYAN	**Aya Nagar**	**6.30**	**158**	*e*P	**Pn**	**01 25 36.9**	**+1.5**
AYAN				*e*S	**Sn**	**01 26 46.7**	**-1.5**
KHET	**Khetri**	**6.38**	**169**	*e*P	**Pn**	**01 25 36.7**	**+0.2**
KHET				*e*S	**Sn**	**01 26 48.9**	**-1.4**
KUDL	**Kundal**	**6.45**	**164**	*e*P	**Pn**	**01 25 38.5**	**+1.1**
KUDL				*e*S	**Sn**	**01 26 51.1**	**-0.7**
SONA	**Sohna**	**6.50**	**159**	*e*P	**Pn**	**01 25 40.0**	**+1.8**
SONA				*e*S	**Sn**	**01 26 53.3**	**0.0**
SONA	comp=N,15nm,0.5s			AML	AML	01 27 45.1	
SONA	comp=E,26nm,0.2s			AML	AML	01 27 45.5	
KK31	**Karatay Array** comp=E,1.3nm,0.4s,baz=157,slow=11,SNR=41	**9.25**	**342**	P	**P**	**01 26 14.5**	**-2.0**
KK31	comp=E,5.4nm,0.5s,baz=171,slow=25,SNR=7.2			⇑S	**Sn**	**01 27 51.2**	**-10**
KOLN	**Koldanda**	**10.24**	**127**	*e*P	**P**	**01 26 30.6**	**+0.4**
GKN	**Gorkha**	**10.79**	**123**	*e*P	**P**	**01 26 37.5**	**-0.2**
GKN				*e*S	**S**	**01 28 39.2**	**-0.4**
DMN	**Daman**	**11.36**	**123**	*e*P	**P**	**01 26 45.1**	**-0.4**
KKN	**Kakani**	**11.37**	**122**	*e*P	**P**	**01 26 45.1**	**-0.5**
KKN				*e*S	**S**	**01 28 51.9**	**-1.9**
PKI	**Pulchoki**	**11.59**	**123**	*e*P	**P**	**01 26 49.2**	**+0.5**
GUN	**Gumba**	**11.72**	**120**	*e*P	**P**	**01 26 50.4**	**0.0**
MKAR	**Makanchi Array** comp=E,0.1nm,0.3s,baz=208,slow=15,SNR=6.6	**13.76**	**23**	Pn	**P**	**01 27 18.9**	**+1.4**
AB31	**Akbulak array** comp=E,1.6nm,0.8s,baz=136,slow=13,SNR=15	**18.34**	**329**	⇑P	**P**	**01 28 12.8**	**-3.3**
AB31	comp=E,0.5nm,0.5s,baz=140,slow=24,SNR=3.3			⇓S	**S**	**01 31 22.7**	**-15**
BVA0	**Borovoye Array** comp=E,0.2nm,0.8s,baz=162,slow=11,SNR=17	**18.87**	**352**	P	**P**	**01 28 23.3**	**+0.7**
BVAR	**Borovoye Array** comp=E,0.7nm,0.3s,baz=157,slow=11,SNR=19	**18.87**	**352**	P	**P**	**01 28 22.2**	**-0.4**
ZRNK	**Zerenda**	**18.98**	**350**	*e*P	**P**	**01 28 22.5**	**-1.3**
ZRNK	comp=Z,3.0nm,0.6s			pmax	pmax		
ZRNK	**Zerenda** comp=Z,2.7nm,0.6s	**18.98**	**350**	*e*P	**P**	**01 28 22.5**	**-1.3**
ZAL	**Zalesovo** comp=Z,3.1nm,0.5s,baz=315,slow=5.4,SNR=9.3	**20.89**	**17**	P	**P**	**01 28 45.0**	**+0.3**
ZAL	**Zalesovo**	**20.89**	**17**	P	**P**	**01 28 45.0**	**+0.2**
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.5s,mb3.4,baz=299,slow=11,SNR=5.5	**26.96**	**120**	P	**P**	**01 29 45.8**	**+2.0**
EIL	**Elat** comp=Z,45nm,19.2s,MS3.2,baz=61,slow=38	**33.66**	**273**	LR	LR	01 45 06.5	
ARCES	**ARCESS Array B** comp=Z,1.0nm,0.7s,mb3.7,baz=108,slow=7.7,SNR=5.0	**44.18**	**338**	P	**P**	**01 32 09.6**	**-0.8**
JNU	**Nakatsue** comp=Z,45nm,18.6s,MS3.5,baz=161,slow=38	**46.42**	**75**	LR	LR	01 53 41.0	
NOA	**NORSAR Array B** comp=Z,0.4nm,0.8s,mb3.5,baz=100,slow=6.9,SNR=2.9	**47.76**	**324**	P	**P**	**01 32 39.5**	**+0.6**
WRA	**Warramunga Arr** comp=Z,0.5nm,0.5s,mb3.7,baz=322,slow=5.6,SNR=4.0	**78.48**	**124**	P	**P**	**01 36 03.7**	**+0.6**

GUC 22 01:38:52.0±0.8,33.43S×70.12W,h2^{km}±3^{km},MD3.6, ML2.0,1C-2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**0.18**	**305**	⇓*i*P	Pg	01 38 56.0	+0.5
FCH				*i* S	Sg	01 38 58.9	+0.9
SJCH	**San Jose de Ma**	**0.29**	**223**	*e*P	Pg	01 38 58.1	+0.3
SJCH				*i* S	Sg	01 39 03.2	+1.5
CLCH	**Cerro Calan**	**0.35**	**275**	⇓*i*P	Pg	01 38 59.5	+0.5
CLCH				*i* S	Sg	01 39 05.2	+1.4
CLCH	comp=E,323nm,0.8s			AMP		01 39 06.6	
PCH	**Pirque**	**0.38**	**240**	*e*P	Pg	01 39 00.3	+0.6
LMEL	**Las Melosas**	**0.42**	**190**	*e*P	Pg	01 39 00.8	+0.3
LMEL				*i* S	Sg	01 39 07.9	+1.8
LMEL	comp=N,209nm,0.2s			AMP		01 39 09.5	
CHCH	**Chadas Angostu**	**0.67**	**222**	*i* P	Pg	01 39 05.6	+0.1
CHCH				*i* S	Sg	01 39 15.9	+1.6
TACH	**Talagante**	**0.72**	**252**	*i* P	Pg	01 39 06.2	-0.2
TACH				*i* S	Sg	01 39 16.6	+0.7
CACH	**El Canelo**	**0.80**	**210**	⇑*i*P	Pg	01 39 08.3	+0.4
CACH				*i* S	Sg	01 39 20.6	+2.2
LNV	**Longovilo**	**1.20**	**244**	*i* P	Pb	01 39 13.6	-1.5
PACH	**Papudo**	**1.42**	**308**	*i* P	Pn	01 39 18.1	-0.8
PACH				*i* S	Sb	01 39 38.1	+0.7

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*MOS **22** 01:44:00.7±1.3,36.13N×71.17E,h72^{km},mb3.7/1,Error ellipse: s-maj=22.3km s-min=10.7km az=95.6*

*NEIC **22** 01:44:04.7±1.4,36.28N×71.28E,h85^{km}±16^{km},mb3.3/1, Error ellipse: s-maj=15.7km s-min=7.3km az=62.0*

*IDC **22** 01:44:04.0±9.9,36.23N×71.31E,h81^{km}±60^{km},mb3.8/5, mb1 3.8/7,mb1mx3.5/18,mbtmp3.9/7,ML3.5/2,Error ellipse: s-maj=109.0km s-min=32.1km az=162.0*

*NNC **22** 01:44:14.5±6.6,37.05N×70.98E,h218^{km}±102^{km},mpv3.9, Error ellipse: s-maj=72.8km s-min=45.0km az=38.0*

ISC 22 01:44:01.4±1.4,36.14N±0.06×71.1E±0.1,h78^{km}±16^{km}, n40,σ1.^{s}05/44,mb3.9/4,4C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam** 72nm,0.2s	**5.34**	**132**	*e*x	x	01 45 26.8	
THN				*e*S	**S**	**01 46 26.3**	**+5.1**
AML	**Almayashu** SNR=78	**6.32**	**18**	P	**P**	**01 45 34.5**	**+0.6**
BHK	**Bhakra**	**6.49**	**135**	*e*x	**S**	**01 46 53.4**	**+3.9**
UCH	**Uchtor** SNR=12	**6.64**	**23**	P	**P**	**01 45 39.1**	**+0.7**
KZA	**Kyzart** SNR=12	**6.77**	**28**	P	**P**	**01 45 40.8**	**+0.7**
EKS2	**Erkin-Say** SNR=5.7	**6.84**	**17**	P	**P**	**01 45 41.4**	**+0.2**
KK31	**Karatay Array** 2.9nm,0.3s,baz=176,slow=11,SNR=148	**6.97**	**357**	⇓P	**P**	**01 45 42.2**	**-0.6**
KK31	5.5nm,0.3s,baz=31,slow=153,SNR=8.6			⇓S	**S**	**01 46 53.5**	**-7.8**
KKAR	**Karatay Array**	**6.97**	**357**	PN	**P**	**01 45 42.2**	**-0.7**
KKAR	comp=Z,1.0nm,0.2s			pmax	pmax		
AAK	**Ala-Archa** SNR=6.4	**7.01**	**21**	P	**P**	**01 45 44.2**	**+0.8**
AAK	**Ala-Archa** comp=Z,5.0nm,0.3s	**7.01**	**21**	⇑P	**P**	**01 45 44.0**	**+0.5**
AAK	comp=Z,31nm,1.1s			⇑S	**S**	**01 46 56.9**	**-5.4**
AAK	**Ala-Archa** comp=Z,9.9nm,0.4s	**7.01**	**21**	*e*P	**P**	**01 45 42.9**	**-0.6**
SMLA	**Simla**	**7.14**	**133**	*i* P	**P**	**01 45 46.4**	**+1.1**
SMLA				*i* S	**S**	**01 47 05.1**	**-0.4**
CHMS	**Chumysh** SNR=6.0	**7.42**	**21**	P	**P**	**01 45 49.6**	**+0.5**
KLP	**Kalpa**	**7.55**	**125**	*e*P	**P**	**01 45 50.5**	**-0.4**
KLP				*e*S	**S**	**01 47 16.8**	**+1.3**
USP	**Ospenovka** SNR=5.8	**7.60**	**19**	P	**P**	**01 45 51.7**	**+0.2**
TKM2	**Tokmak 2** SNR=7.6	**7.63**	**26**	P	**P**	**01 45 52.0**	**+0.1**
KHET	**Khetri** comp=E,24nm,0.6s	**8.99**	**152**	AML	AML	01 47 53.2	
KHET	comp=N,25nm,0.1s			AML	AML	01 47 53.6	
NDI	**New Delhi**	**9.08**	**143**	*e*S	**S**	**01 47 52.0**	**-1.1**
SONA	**Sohna**	**9.38**	**145**	*e*S	**S**	**01 47 58.1**	**-2.4**
SONA	comp=N,16nm,0.5s			AML	AML	01 48 04.4	
SONA	comp=E,21nm,0.3s			AML	AML	01 48 04.9	
KOLN	**Koldanda** comp=E,12nm,0.5s	**13.52**	**125**	*e*P	**P**	**01 47 11.8**	**+0.6**
MKAR	**Makanchi Array** comp=E,0.1nm,0.3s,baz=215,slow=9.6,SNR=2.6	**13.56**	**35**	P	**P**	**01 47 10.0**	**-1.5**
MKAR	**Makanchi Array**	**13.56**	**35**	P	**P**	**01 47 10.0**	**-1.5**
GKN	**Gorkha** comp=E,25nm,0.4s	**14.08**	**121**	*e*P	**P**	**01 47 19.5**	**+1.1**
DMN	**Daman**	**14.65**	**122**	*e*P	**P**	**01 47 20.9**	**-4.9**
KKN	**Kakani** comp=E,29nm,0.5s	**14.65**	**121**	*e*P	**P**	**01 47 23.6**	**-2.3**
KKN	**Kakani**	**14.65**	**121**	*e*P	**P**	**01 47 23.6**	**-2.3**
KKN	comp=Z,14nm,0.5s			pmax	pmax		
GUN	**Gumba** comp=Z,27nm,0.4s	**15.00**	**119**	*e*P	**P**	**01 47 31.2**	**+0.8**
AB31	**Akbulak array** comp=Z,1.3nm,0.5s,baz=130,slow=13,SNR=59	**15.42**	**332**	⇑P	**P**	**01 47 33.4**	**-2.1**
AB31	comp=Z,3.4nm,0.6s,baz=148,slow=24,SNR=10			⇑S	**S**	**01 50 10.6**	**-14**
AB31	**Akbulak array**	**15.42**	**332**	P	**P**	**01 47 34.1**	**-1.4**
ZRNK	**Zerenda**	**16.87**	**356**	P	**P**	**01 47 52.4**	**-1.3**
ZRNK	comp=Z,1.0nm,0.6s			pmax	pmax		
ZRNK	**Zerenda** comp=Z,1.4nm,0.6s	**16.87**	**356**	P	**P**	**01 47 52.4**	**-1.2**
BVAR	**Borovoye Array** comp=Z,0.4nm,0.3s,baz=160,slow=9.2,SNR=6.8	**16.89**	**359**	P	**P**	**01 47 53.7**	**-0.2**
ZAL	**Zalesovo** comp=Z,4.6nm,0.3s,baz=235,slow=5.7,SNR=12	**20.21**	**24**	P	**P**	**01 48 30.8**	**-1.3**
GNI	**Garni** comp=Z,4.3nm,0.6s,mb4.0,baz=204,slow=3.4,SNR=4.3	**21.05**	**289**	P	**P**	**01 48 43.5**	**+2.7**
ESKT	**Eskisehir**	**31.75**	**288**	*i* P	**P**	**01 50 19.7**	**-0.4**
KAF	**Kangasniemi**	**37.95**	**327**	*e*p	**P**	**01 51 13.2**	**+0.5**
ARCES	**ARCESS Array B** comp=Z,4.0nm,1.1s,mb4.2,baz=121,slow=7.1,SNR=13	**41.49**	**338**	P	**P**	**01 51 42.8**	**+0.9**
NB2	**NORSAR Subarra** comp=Z,1.5nm,0.4s,mb4.1,baz=97,slow=7.9	**44.69**	**323**	P	**P**	**01 52 08.1**	**+0.2**
NOA	**NORSAR Array B** comp=Z,1.6nm,0.5s,mb4.0,baz=96,slow=7.7,SNR=12	**44.69**	**323**	P	**P**	**01 52 08.6**	**+0.7**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.4s,mb3.3,baz=353,slow=5.6,SNR=4.3	**81.60**	**3**	P	**P**	**01 56 12.1**	**+0.4**

IDC 22 01:47:15.3±3.8,19.48S×178.58E,h475^{km}±53^{km},mb3.8/2, mb1 4.1/2,mb1mx3.2/14,mbtmp4.7/2,1C-1D,Error ellipse: s-maj=228.4km s-min=21.7km az=160.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WB2	**Warramunga Arr**	**41.54**	**262**	⇓*i*P	P	01 54 20.5	-1.2
WRA	**Warramunga Arr** 4.6nm,0.3s,baz=93,slow=8.4,SNR=32	**41.56**	**262**	P	P	01 54 20.4	-1.4
WRA	0.6nm,0.7s,baz=104,slow=14,SNR=3.3			S	S	02 00 02.1	-1.2
FITZ	**Fitzroy Crossi** 4.1nm,0.4s,baz=81,slow=7.1,SNR=7.8	**49.97**	**262**	P	P	01 55 25.1	-1.6
ARCES	**ARCESS Array B** 1.6nm,1.0s,baz=27,slow=2.0,SNR=6.2	**127.31**	**348**	PKP	PKPdf	02 05 22.9	-1.6
AKASG	**Malin Array Be** 1.2nm,0.5s,baz=43,slow=3.8,SNR=15	**140.53**	**329**	PKP	PKPdf	02 05 47.7	-1.8
BRTR	**Keskin Array B** 1.4nm,0.6s,baz=85,slow=3.4,SNR=5.6	**143.77**	**311**	PKP	PKPdf	02 05 56.1	+0.7
CLL	**Collm** logA/T=0.8	**146.26**	**344**	⇑P	PKPdf	02 06 04.1	+4.7
GERES	**GERESS Array B** 0.2nm,0.5s,baz=27,slow=2.2,SNR=2.9	**148.27**	**341**	PKPbc	PKPdf	02 06 07.7	+5.1

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*NNC **22** 02:04:31.2±4.1,39.82N×72.50E,mpv2.8,Error ellipse: s-maj=45.3km s-min=29.2km az=169.0*

ISC 22 02:04:08.3±10.0,37.8N±0.8×72.8E±0.2,h33^{km},n8, σ0.^{s}25/8,2C-3D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu** SNR=43	**4.40**	**9**	P	**P**	**02 05 14.6**	**+0.1**
UCH	**Uchtor** SNR=11	**4.63**	**16**	P	**P**	**02 05 18.0**	**+0.2**
KZA	**Kyzart** SNR=6.9	**4.69**	**23**	P	**P**	**02 05 18.3**	**-0.3**
AAK	**Ala-Archa** 2.1nm,0.7s	**5.02**	**15**	⇓Pn	**Pn**	**02 05 23.1**	**-0.2**
AAK	44nm,0.9s			⇓Lg		02 06 11.7	
KBK	**Karagaybulak** SNR=7.6	**5.14**	**18**	P	**P**	**02 05 25.4**	**+0.5**
ULHL	**Ulahol** SNR=15	**5.19**	**30**	P	**P**	**02 05 25.6**	**-0.1**
KK31	**Karatay Array** 1.1nm,0.4s,baz=145,slow=11,SNR=5.5	**5.58**	**343**	⇑Pn	**Pn**	**02 05 31.1**	**-0.2**
KK31	3.7nm,0.4s,baz=81,slow=48,SNR=4.2			⇑Lg		02 06 25.5	
AB31	**Akbulak array** 0.9nm,0.8s,baz=134,slow=14,SNR=5.8	**14.74**	**325**	⇓P	**P**	**02 07 36.1**	**+0.1**

IDC 22 02:23:45.3±2.5,11.40N×91.99E,mb3.5/3,mb1 3.7/4, mb1mx3.5/17,mbtmp3.5/4,ML3.9/1,Error ellipse: s-maj=67.9km s-min=28.8km az=67.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr** 0.3nm,0.3s,baz=232,slow=15,SNR=3.0	**9.71**	**43**	Pn	P	02 26 06.5	-2.9
MKAR	**Makanchi Array** 0.8nm,0.7s,baz=162,slow=7.7,SNR=6.3	**36.22**	**349**	P	P	02 30 49.6	-2.2
SONM	**Songino Array** 0.2nm,0.5s,baz=211,slow=8.4,SNR=2.8	**38.28**	**16**	P	P	02 31 07.5	-1.6
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=305,slow=8.6,SNR=3.1	**52.04**	**127**	P	P	02 32 57.2	-2.0

CASC 22 02:35:01.3±2.6,12.75N×87.82W,h157^{km}±18^{km},MD3.7, 2C-2D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.76**	**94**	⇑*e*P	P	02 35 24.9	-0.3
CRIN				*e*S	S	02 35 44.1	+0.6
TEL3	**Telica 3**	**0.97**	**101**	*e*P	P	02 35 26.7	+0.1
TEL3				*e*S	S	02 35 46.9	+0.7
MIRN	**Miramar**	**1.13**	**106**	⇑*e*P	P	02 35 27.6	-0.4
MIRN				*e*S	S	02 35 49.7	+1.1
APYN	**Apoyeque**	**1.53**	**110**	*e*P	P	02 35 31.4	-0.6
APYN				*e*S	S	02 35 55.9	+0.2
MGAN	**Managua**	**1.65**	**111**	*e*S	S	02 35 59.0	+0.9
PYTN	**Playitas**	**1.73**	**97**	*e*P	P	02 35 32.9	-1.3
VCR	**Vista de Mar**	**3.38**	**140**	⇓*e*P	P	02 35 56.0	+1.5
VCR				*e*S	S	02 36 34.2	-1.1
CGA2	**Cerro Gallo 2**	**4.27**	**129**	⇓*e*P	P	02 36 07.9	+1.9
CGA2				*e*S	S	02 36 58.3	+2.3
PRS1	**Puriscal**	**4.41**	**128**	*e*P	P	02 36 10.2	+2.4
LAJ	**Bijagual**	**4.63**	**128**	*e*P	P	02 36 08.8	-2.0
LAJ				*e*S	S	02 36 58.7	-5.7
URSC	**Urasca**	**4.91**	**126**	*e*P	P	02 36 16.3	+1.7
URSC				*e*S	S	02 37 14.1	+3.0
BUS	**Buena Vista**	**5.10**	**128**	*e*P	P	02 36 18.9	+1.9

IDC 22 03:11:21.1±2.9,0.89N×97.98E,mb3.9/4,mb1 4.0/4, mb1mx3.7/15,mbtmp3.9/4,MS3.5/1,Ms1 3.5/1, ms1mx2.9/22,Error ellipse: s-maj=121.1km s-min=28.3km az=55.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.4nm,0.5s,baz=304,slow=9.0,SNR=3.9	**41.22**	**122**	P	P	03 19 08.0	-1.4
SONM	**Songino Array** 0.6nm,0.5s,baz=189,slow=7.6,SNR=5.8	**47.32**	**8**	P	P	03 19 56.6	-1.8
SONM	comp=Z,46nm,19.6s,baz=259,slow=36			LR	LR	03 39 46.8	
MKAR	**Makanchi Array** 2.1nm,0.6s,baz=155,slow=7.5,SNR=13	**47.73**	**345**	P	P	03 20 00.6	-1.1
ARCES	**ARCESS Array B** 0.6nm,0.8s,baz=76,slow=3.7,SNR=3.9	**83.08**	**340**	P	P	03 23 46.9	-2.7

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*JMA **22** 03:20:45.5±0.3,37.63N×134.59E,h410^{km}±3^{km},M3.5*

*IDC **22** 03:20:45.2±1.6,37.68N×134.64E,h377^{km}±18^{km}, mb3.1/10,mb1 3.4/12,mb1mx3.3/22,mbtmp3.9/12,Error ellipse: s-maj=18.1km s-min=12.7km az=141.0*

*NEIC **22** 03:20:46.6±0.5,37.62N×134.57E,h396^{km}±6^{km},mb4.8/1, Error ellipse: s-maj=14.7km s-min=8.2km az=169.0*

ISC 22 03:20:45.9±0.3,37.65N±0.07×134.59E±0.07,h403^{km}±5^{km}, n39,σ0.^{s}95/46,mb3.5/11,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHG	**Hegura jima**	**1.86**	**83**	P	**P**	**03 21 41.7**	**0.0**
JHG				*e*S	**S**	**03 22 26.0**	**+0.5**
JKG	**Kaga**	**1.96**	**134**	P	**P**	**03 21 41.5**	**-0.8**
JSZ	**Suzu**	**2.21**	**94**	P	**P**	**03 21 44.2**	**+0.3**
JSZ				S	**S**	**03 22 30.6**	**+1.1**
JWT	**Wachi**	**2.45**	**164**	P	**P**	**03 21 45.8**	**+0.3**
JWT				*e*S	**S**	**03 22 32.2**	**-0.2**
JGM	**Miyama**	**2.59**	**138**	P	**P**	**03 21 46.4**	**-0.2**
JHS	**Saijyo**	**2.90**	**205**	P	**P**	**03 21 48.7**	**-0.2**
JSD	**Sado**	**2.93**	**81**	P	**P**	**03 21 49.1**	**0.0**
MAJO	**Matsushiro**	**3.10**	**110**	*e*P	**P**	**03 21 50.2**	**-0.3**
MAT	**Matsushiro**	**3.10**	**110**	*e*P	**P**	**03 21 50.0**	**-0.5**
MAT	**Matsushiro**	**3.10**	**110**	P	**P**	**03 21 50.4**	**-0.1**
MAT				*e*S	**S**	**03 22 43.3**	**+1.9**
JGT	**Gotsu**	**3.19**	**216**	P	**P**	**03 21 51.2**	**-0.1**
JHT	**Toyohira**	**3.46**	**211**	P	**P**	**03 21 53.2**	**-0.5**
JIE	**Ise**	**3.67**	**152**	P	**P**	**03 21 55.8**	**+0.2**
JRY	**Ryogami san**	**3.82**	**114**	P	**P**	**03 21 58.6**	**+1.6**
JOD2	**Odawara 2**	**4.34**	**122**	P	**P**	**03 22 02.2**	**+0.2**
JOD2				*e*S	**S**	**03 23 02.5**	**+0.9**
KS15	**Wonju Array Si**	**5.33**	**270**	*e*P	**P**	**03 22 12.3**	**+0.2**
JMK	**Ichinoseki**	**5.38**	**74**	P	**P**	**03 22 11.9**	**-0.6**
JNU	**Nakatsue** 0.8nm,0.3s,baz=189,slow=4.8,SNR=4.9	**5.44**	**215**	P	**P**	**03 22 12.8**	**-0.4**
BSO1	**Boso 1**	**5.97**	**118**	P	**P**	**03 22 17.2**	**-1.7**
BSO1				*e*S	**S**	**03 23 29.8**	**-2.2**
JOT	**Ohata**	**6.23**	**51**	P	**P**	**03 22 21.3**	**-0.5**
JKB	**Kayabe**	**6.52**	**48**	P	**P**	**03 22 24.6**	**-0.4**
ASAJ	**Asahikawa** 7.9nm,0.3s,baz=238,slow=11,SNR=38	**8.86**	**41**	P	**P**	**03 22 49.8**	**-1.9**
ASAJ	1.2nm,0.3s,baz=304,slow=34,SNR=13			S	**S**	**03 24 26.4**	**-4.6**
ENH	**Enshi** 18nm,0.5s,mb4.8	**22.04**	**258**	*e*P	**P**	**03 25 08.5**	**-1.4**
SONM	**Songino Array** 1.2nm,0.6s,mb3.5,baz=106,slow=9.0,SNR=8.5	**22.96**	**305**	P	**P**	**03 25 18.2**	**+0.2**
CMAR	**Chiang Mai Arr** 1.0nm,0.4s,mb3.5,baz=45,slow=7.7,SNR=3.7	**36.52**	**248**	P	**P**	**03 27 17.6**	**+1.3**
MKAR	**Makanchi Array** 0.6nm,0.5s,mb3.2,baz=94,slow=10,SNR=4.6	**39.16**	**301**	P	**P**	**03 27 36.9**	**-0.8**
GUN	**Gumba**	**41.69**	**271**	*e*P	**P**	**03 27 59.6**	**+1.1**
PKI	**Pulchoki**	**42.22**	**271**	*e*P	**P**	**03 28 03.9**	**+1.2**
KKN	**Kakani**	**42.22**	**271**	*e*P	**P**	**03 28 03.2**	**+0.5**
DMN	**Daman**	**42.44**	**271**	*e*P	**P**	**03 28 05.4**	**+0.9**
GKN	**Gorkha**	**42.64**	**272**	*e*P	**P**	**03 28 05.4**	**-0.7**
KOLN	**Koldanda**	**43.56**	**272**	*e*P	**P**	**03 28 13.1**	**-0.3**
BVAR	**Borovoye Array** 0.7nm,0.4s,mb3.3,baz=97,slow=8.8,SNR=5.0	**46.10**	**311**	P	**P**	**03 28 31.8**	**-1.2**
ILAR	**Eielson Array** 0.6nm,0.6s,mb3.0,baz=281,slow=8.1,SNR=12	**51.89**	**32**	P	**P**	**03 29 16.3**	**-0.2**
WRA	**Warramunga Arr** 0.5nm,0.3s,mb3.3,baz=356,slow=7.0,SNR=6.9	**57.28**	**180**	P	**P**	**03 29 53.7**	**-1.6**
ARCES	**ARCESS Array B** 1.9nm,0.8s,mb3.5,baz=51,slow=7.8,SNR=3.8	**61.44**	**338**	P	**P**	**03 30 22.1**	**-0.4**
NVAR	**Mina Array Bea** 0.4nm,0.3s,mb3.5,baz=297,slow=4.0,SNR=7.4	**78.87**	**50**	P	**P**	**03 32 07.2**	**+0.5**
PDAR	**Pinedale Array** 0.4nm,0.5s,mb3.4,baz=326,slow=3.3,SNR=3.2	**80.99**	**42**	P	**P**	**03 32 19.7**	**+2.0**
TXAR	**Lajitas Array** 0.3nm,0.6s,mb3.5,baz=295,slow=3.1,SNR=4.4	**93.91**	**48**	P	**P**	**03 33 21.5**	**+1.7**

IDC 22 03:22:10.9±1.1,7.02N×126.96E,mb3.8/5,mb1 4.0/5, mb1mx3.8/16,mbtmp3.8/5,MS3.2/1,Ms1 3.2/1, ms1mx2.8/22,Error ellipse: s-maj=68.5km s-min=23.6km az=80.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**24.99**	**183**	P	P	03 27 36.2	-1.8

	4.1nm,0.5s,baz=356,slow=9.1,SNR=6.8						
JNU	Nakatsue	26.23	7	LR	LR	03 37 40.4	
	comp=Z,47nm,19.8s,baz=181,slow=35						
WRA	Warramunga Arr	27.76	165	P	P	03 28 01.9	-1.6
	0.8nm,0.5s,baz=346,slow=10,SNR=6.9						
MKAR	Makanchi Array	55.02	324	P	P	03 31 44.8	-1.8
	0.3nm,0.5s,baz=129,slow=7.8,SNR=3.7						
ILAR	Eielson Array	82.06	26	P	P	03 34 33.3	-0.9
	0.4nm,0.7s,baz=241,slow=6.1,SNR=4.4						
ARCES	ARCESS Array B	87.46	340	P	P	03 34 59.2	-2.0
	0.5nm,0.5s,baz=74,slow=6.6,SNR=4.7						

PRU 22 03:28:29.2,50.31N×18.73E

WAR 22 03:28:29.1,50.28N×18.84E,h0^{km},ML2.4,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.46	245	ePG	Pg	03 28 39.0	+0.8
RAC				eSG	Sg	03 28 44.0	-0.3
OJC	Ojcow	0.62	95	ePG	Pg	03 28 41.0	-0.5
OJC				eSG	Sg	03 28 51.0	+1.2
OKC	Ostrava-Krasne	0.63	225	ePG	Pg	03 28 41.4	-0.2
OKC				eSG	Sg	03 28 50.4	+0.4
LIKS	Likavka	1.24	172	eSN	Sn	03 29 11.2	-0.1
NIE	Niedzica	1.29	131	ePG	Pg	03 28 53.0	-1.8
NIE				eSG	Sg	03 29 11.0	-1.0
NIE	Niedzica	1.29	131	ePg	Pg	03 28 53.3	-1.5
NIE				e		03 29 10.1	
NIE				eSg	Sg	03 29 11.4	-0.6
DPC	Dobruska-Polom	1.61	273	ePG	Pg	03 28 58.2	-3.1
DPC				eSG	Sg	03 29 19.2	-3.6
	12nm,0.3s						
KSP	Ksiaz	1.72	290	ePG	Pg	03 29 01.0	-2.4
KSP				eSG	Sg	03 29 24.0	-2.3
VYHS	Vyhne	1.79	180	ePN	Pn	03 29 00.6	-0.8
VYHS				eSN	Sn	03 29 22.8	-2.3
SMOL	Smolenice	1.99	208	eSN	Sn	03 29 29.2	-1.1
PRU	Pruhonice	2.78	266	eSG	Sg	03 29 55.0	-6.6
KHC	Kasperske Hory	3.60	253	ePG	Pg	03 29 32.7	-8.3
KHC				eSG	Sg	03 30 20.8	-8.2
MOA	Molln	3.87	233	i	Pn	03 29 37.2	+6.2
MOA	Molln	3.87	233	i SG	Sg	03 30 30.1	-7.7
	3.5nm,0.6s						

NEIC 22 03:30:49.5±1.3,10.22S×161.54E,h84^{km}±11^{km},mb4.2/3, Error ellipse: s-maj=16.6km s-min=10.9km az=53.0

IDC 22 03:30:49.5±2.1,10.34S×161.39E,h85^{km}±17^{km},mb3.7/7, mb1 4.1/8,mb1mx3.9/16,mbtmp4.2/8,MS2.9/3,Ms1 2.9/3, ms1mx2.8/23,Error ellipse: s-maj=24.7km s-min=16.0km az=63.0

ISC 22 03:30:49.1±1.3,10.32S±0.09×161.4E±0.1,h91^{km}±11^{km}, n18,$\sigma 1\overset{s}{.}00$/21,mb3.9/9,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.70	301	P	P	03 31 17.9	0.0
	569nm,0.3s,baz=152,slow=5.7,SNR=80						
HNR				S	S	03 31 38.7	-0.4
	1µm,0.3s,baz=357,slow=23,SNR=12						
NOUC	Port Laguerre	12.61	159	eP	P	03 33 46.8	+0.4
NOUC	Port Laguerre	12.61	159	eP	P	03 33 46.8	+0.4
DZM	Mont Dzumac	12.64	158	eP	P	03 33 46.7	-0.1
DZM				eS	S	03 36 01.7	-4.1
DZM	Mont Dzumac	12.64	158	P	P	03 33 47.0	+0.2
	7.4nm,0.3s,baz=314,slow=13,SNR=52						
DZM				S	S	03 36 02.0	-3.8
	0.9nm,0.3s,baz=321,slow=21,SNR=4.2						
DZM				LR	LR	03 38 02.7	
	comp=Z,74nm,20.8s,baz=34,slow=34						
DZM	Mont Dzumac	12.64	158	eP	P	03 33 46.7	-0.1
DZM				eS	S	03 36 01.7	-4.1
PMG	Port Moresby	14.08	272	LR	LR	03 39 26.0	
	comp=Z,26nm,18.0s,baz=153,slow=37						
CTA	Charters Tower	17.55	235	P	P	03 34 51.5	+2.0
	0.7nm,0.3s,baz=71,slow=12,SNR=9.8						
CTA				LR	LR	03 41 03.6	
	comp=Z,53nm,18.5s,baz=230,slow=35						
CTAO	Charters Tower	17.55	235	eP	P	03 34 51.2	+1.8
	14nm,0.9s						
WRAB	Tennant Creek	27.78	247	eP	P	03 36 33.0	+1.2
	6.1nm,0.8s,mb4.2						
WRA	Warramunga Arr	27.80	247	P	P	03 36 30.8	-1.1
	1.3nm,0.5s,mb3.8,baz=76,slow=9.1,SNR=8.0						
FITZ	Fitzroy Crossi	35.48	253	P	P	03 37 38.1	-1.0
	7.3nm,0.5s,mb4.8,baz=58,slow=3.9,SNR=9.3						
VNDA	Vanda	67.18	180	P	P	03 41 33.8	-1.3
	0.3nm,0.7s,mb3.2,baz=2.8,slow=8.5,SNR=2.6						
SONM	Songino Array	75.61	325	P	P	03 42 25.7	-0.1
	0.8nm,0.6s,mb3.6,baz=145,slow=4.9,SNR=5.1						
ILAR	Eielson Array	84.23	20	P	P	03 43 10.8	-0.6
	0.7nm,0.7s,mb3.6,baz=243,slow=4.9,SNR=11						
NVAR	Mina Array Bea	88.83	51	P	P	03 43 35.9	+1.4
	0.5nm,0.7s,mb3.6,baz=231,slow=6.5,SNR=4.8						
MKAR	Makanchi Array	90.11	318	P	P	03 43 39.5	-0.7
	0.6nm,0.3s,mb4.2,baz=108,slow=4.6,SNR=3.5						
BRVK	Borovoye	98.84	322	eP	P	03 44 20.9	+0.9
	0.3nm,0.6s,mb4.0						

GUC 22 03:31:32.7±0.8,23.33S×69.32W,h99^{km}±11^{km},ML3.8,1C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANCH	Antofagasta	1.06	251	⇑iP	P	03 31 54.4	+0.5
ANCH				i S	S	03 32 09.7	-0.2
ANCH				AMP		03 32 12.2	
	comp=N,1µm,0.2s						
SPCH	San Pedro de A	1.11	68	eP	P	03 31 55.1	+0.4
SPCH				i S	S	03 32 12.6	+1.5
SPCH				AMP		03 32 14.4	
	comp=E,6µm,0.1s						
CPN1	Cerro Paranal	1.62	217	eP	P	03 32 01.8	+0.9
CPN1				i S	S	03 32 23.8	+2.0
CPN1				AMP		03 32 26.5	
	comp=E,2µm,0.3s						
CRCH	Chaqaral	3.22	201	eP	P	03 32 22.2	-0.3
CRCH				i S	S	03 33 00.9	+0.8

GUC 22 03:34:21.3±0.7,19.92S×69.68W,h102^{km}±5^{km},ML4.9

NEIC 22 03:34:22.1±1.0,19.80S×68.89W,h114^{km}±10^{km},mb4.3/5, Error ellipse: s-maj=12.1km s-min=9.1km az=56.0

IDC 22 03:34:22.4±2.2,19.84S×68.89W,h122^{km}±19^{km},mb3.7/7, mb1 4.0/9,mb1mx3.8/17,mbtmp4.3/9,MS3.1/2,Ms1 3.1/2, ms1mx2.9/17,Error ellipse: s-maj=23.0km s-min=16.4km az=74.0,Incorrectly calculated travel-time residual on T phase at H03N

ISC 22 03:34:19.8±0.9,19.84S±0.06×68.96W±0.08, h110^{km}±10^{km},n26,$\sigma 1\overset{s}{.}32$/27,mb3.9/7,5C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	3.13	167	⇑iP	P	03 35 13.1	+4.5
SPCH				i S	S	03 35 51.6	+6.1
SPCH				AMP		03 36 17.2	
	comp=E,972nm,0.5s						
LPAZ	La Paz	3.62	13	P	P	03 35 17.9	+2.7
	comp=E,16nm,0.3s,baz=191,slow=8.3,SNR=196						
LPAZ				S	S	03 36 00.7	+3.3
	comp=E,0.9nm,0.3s,baz=12,slow=24,SNR=1.6						
LPAZ				LR	LR	03 36 56.0	
	comp=E,147nm,18.5s,baz=218,slow=43						
LPAZ	La Paz	3.62	13	eP	P	03 35 17.8	+2.6
ANCH	Antofagasta	4.05	199	⇑iP	P	03 35 19.7	-1.3
ANCH				i S	S	03 36 03.4	-4.4
ARE	Arequipa	4.13	324	eP	P	03 35 23.0	+0.8
ARE				eS	S	03 36 08.0	-1.8
SIV	San Ignacio	8.43	64	P	P	03 36 19.3	-1.2
	comp=E,13nm,0.3s,baz=257,slow=11,SNR=199						
SAML	Samuel	12.19	28	eP	P	03 37 08.6	-2.2
	comp=E,5.8nm,0.8s						
TRQA	Tornquist	19.14	163	eP	P	03 38 36.2	-0.5
	comp=E,16nm,0.9s						
BDFB	Brasilia	20.38	82	P	P	03 38 49.2	-0.6
	comp=E,6.6nm,0.4s,baz=273,slow=11,SNR=8.7						
BAO	Brasilia Array	20.40	82	P	P	03 38 49.8	-0.3
PLCA	Paso Flores	20.87	183	P	P	03 38 54.8	+0.1
	comp=E,8.1nm,0.8s,baz=6.1,slow=11,SNR=12						
PLCA	Paso Flores	20.87	183	eP	P	03 38 54.8	+0.2
	comp=E,11nm,1.0s						
OTAV	Otavalo	22.02	334	eP	P	03 39 09.4	+3.2
	comp=E,3.7nm,0.8s,mb3.8						
SDV	Santo Domingo	28.59	357	LR	LR	03 52 34.3	
	comp=E,49nm,18.4s,baz=204,slow=38						
TXAR	Lajitas Array	59.25	325	P	P	03 44 10.5	-1.7
	comp=E,0.2nm,0.6s,mb3.3,baz=135,slow=6.4,SNR=3.5						
VNA3	Neumayer Olymp	61.65	162	⇑iP	P	03 44 28.5	+0.6
VNA3				e		03 45 08.0	
VNA1	Neumayer--Stat	61.86	161	⇑iP	P	03 44 30.3	+1.0
VNA1				e		03 45 09.3	
VNA2	Neumayer--Watz	62.22	161	⇑iP	P	03 44 32.3	+0.6
VNA2				e		03 45 11.3	
DBIC	Dimbokro	68.32	74	P	P	03 45 10.6	-1.1
	comp=E,10nm,1.0s,mb4.6,baz=220,slow=6.1,SNR=14						
QSPA	South Pole Qui	70.34	180	eP	P	03 45 24.1	+1.1
	comp=E,5.6nm,0.9s,mb4.4						
NVAR	Mina Array Bea	74.17	322	P	P	03 45 46.6	+0.4
	comp=E,0.8nm,0.8s,mb3.5,baz=145,slow=6.8,SNR=4.5						
VNDA	Vanda	78.47	190	P	P	03 46 09.9	+0.4
	comp=E,0.8nm,0.7s,mb3.6,baz=139,slow=3.8,SNR=5.6						
YKA	Yellowknife Ar	89.61	341	P	P	03 47 05.9	+0.1
	comp=E,2.0nm,0.7s,mb4.3,baz=134,slow=4.7,SNR=7.9						
YKA				pP	pP	03 47 33.0	-1.9
	comp=E,1.1nm,0.6s,baz=132,slow=4.9,SNR=3.9						
YKA				sP	sP	03 47 46.2	-0.7
	comp=E,1.1nm,0.7s,baz=134,slow=5.6,SNR=3.2						
YKA	Yellowknife Ar	89.61	341	P	P	03 47 06.0	+0.1
YKA				pP	pP	03 47 33.0	-1.9
YKA				sP	sP	03 47 46.2	-0.7
WRA	Warramunga Arr	134.34	211	PKP	PKPdf	03 53 26.7	+1.1
	comp=E,1.1nm,0.6s,baz=157,slow=1.7,SNR=8.0						
SONM	Songino Array	151.82	7	PKPbc	PKPdf	03 54 03.4	+8.6
	comp=E,1.3nm,0.6s,baz=338,slow=1.4,SNR=7.7						

IDC 22 03:51:01.7±0.9,1.12N×97.27E,mb4.1/8,mb1 4.2/9, mb1mx4.0/17,mbtmp4.1/9,ML4.3/1,Error ellipse: s-maj=35.5km s-min=18.5km az=56.0

BJI 22 03:51:05.6,1.29N×97.72E,h19^{km},mB5.4,mb5.0

NEIC 22 03:51:07.4±2.8,1.13N×97.33E,h39^{km}±24^{km},mb4.4/5, Error ellipse: s-maj=23.5km s-min=9.2km az=54.0

ISC 22 03:51:04.8±0.6,1.08N±0.08×97.24E±0.08,h33^{km},n26, $\sigma 1\overset{s}{.}02$/25,mb4.3/15,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	5.14	47	P	P	03 52 22.3	+0.9
KULM	Kulim	5.39	39	eP	P	03 52 25.1	+0.1
KGM	Kluang	6.15	81	P	P	03 52 37.0	+1.3
CMAR	Chiang Mai Arr	17.35	5	P	P	03 55 03.6	-2.5
	0.4nm,0.3s,baz=190,slow=10,SNR=14						
KKM	Kota Kinabalu	19.57	75	P	P	03 55 25.3	-7.7
KMI	Kunming	24.49	12	P	P	03 56 24.8	+2.4
KMI				AP		03 56 30.8	
KMI				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.5						
PKI	Pulchoki	28.68	338	eP	P	03 57 01.4	+0.4
GUN	Gumba	28.81	339	eP	P	03 57 03.1	+0.9
KKN	Kakani	28.92	338	eP	P	03 57 03.6	+0.4
GKN	Gorkha	29.36	337	eP	P	03 57 07.7	+0.6
KOLN	Koldanda	29.58	335	eP	P	03 57 08.9	-0.2
	comp=Z,14nm,0.7s,mb4.8						
ENH	Enshi	31.28	21	P	P	03 57 22.6	-1.5
	comp=Z,6.8nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	33.83	126	P	P	03 57 44.7	-1.7
	comp=Z,5.7nm,0.8s,mb4.5,baz=20,slow=12,SNR=3.3						
XAN	Xi'an	34.56	17	P	P	03 57 51.0	-1.6
XAN				AP	pP	03 57 58.5	-3.8
GTA	Gaotai	38.22	3	eP	P	03 58 23.6	+0.2
GTA				AP	pP	03 58 30.6	-2.6
GTA				XP	sP	03 58 33.9	-3.5
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
WRA	Warramunga Arr	41.94	122	P	P	03 58 54.7	+0.2
	comp=Z,1.9nm,0.7s,mb3.8,baz=300,slow=9.1,SNR=14						
WRAB	Tennant Creek	41.95	122	eP	P	03 58 53.7	-0.8
	comp=Z,3.6nm,0.8s,mb4.0						
SONM	Songino Array	47.24	8	P	P	03 59 36.6	-0.1
	comp=Z,2.7nm,0.8s,mb4.2,baz=194,slow=9.3,SNR=11						
SONM				PcP	PcP	04 01 08.0	0.0
	comp=Z,0.8nm,0.8s,baz=207,slow=2.8,SNR=4.4						
MKAR	Makanchi Array	47.37	346	P	P	03 59 37.5	-0.1
	comp=Z,2.8nm,0.7s,mb4.3,baz=159,slow=7.4,SNR=21						
HIA	Hailar	51.74	19	eP	P	04 00 11.0	-0.2
	comp=Z,5.2nm,0.7s,mb4.6						
STKA	Stephens Creek	53.25	132	P	P	04 00 23.3	+0.6
	comp=Z,8.7nm,1.3s,mb4.5,baz=293,slow=7.7,SNR=2.9						
ZRNK	Zerenda	56.77	340	eP	P	04 00 46.5	-1.5
	comp=Z,0.8nm,0.6s,mb3.9						
MATP	Matopo	70.52	248	P	P	04 02 19.4	+0.6
	comp=Z,2.4nm,0.9s,mb4.1,baz=90,slow=4.1,SNR=3.6						
ARCES	ARCESS Array B	82.66	340	P	P	04 03 26.7	+0.7
	comp=Z,0.7nm,0.8s,mb3.8,baz=90,slow=3.6,SNR=5.4						
GERES	GERESS Array B	84.93	319	P	P	04 03 38.4	+0.5
	comp=Z,0.4nm,0.7s,mb3.7,baz=101,slow=6.8,SNR=6.2						
TXAR	Lajitas Array	143.75	32	PKhKP		04 10 32.9	
	comp=Z,0.3nm,1.0s,baz=198,slow=4.0,SNR=3.6						

NEIC 22 04:03:59.2,48.34N×6.63E,h11^{km},ML2.6(LDG), ML2.2(STR),After LDG.

STR 22 04:03:59.3±0.2,48.35N×6.65E,h5^{km}±1^{km},Ml2.2,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0

CSEM 22 04:03:59.0±0.1,48.34N×6.63E,h12^{km},ML2.6/9,Error ellipse: s-maj=2.0km s-min=1.1km az=2.0

LDG 22 04:03:59.2±0.1,48.34N×6.63E,h11^{km},Ml2.6/10,Error ellipse: s-maj=1.8km s-min=1.1km az=176.0,France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECH	Echery	0.38	109	Pg	Pg	04 04 05.9	-1.1
ECH				Sg	Sg	04 04 11.1	-1.1
HAU	Haudompre	0.38	209	ePg	Pg	04 04 06.9	-0.2
HAU				eSg	Sg	04 04 11.8	-0.6
	33nm,0.2s						
CDF	Champ du Feu	0.44	81	ePg	Pg	04 04 07.6	-0.6
CDF				eSg	Sg	04 04 12.1	-2.1
	29nm,0.2s						
THEF	They Montfort	0.44	255	Pg	Pg	04 04 07.8	-0.4
THEF				Sg	Sg	04 04 14.7	+0.4
WLS	Welschbruch	0.49	81	Pg	Pg	04 04 08.5	-0.7
WLS				Sg	Sg	04 04 15.1	-0.8
HINF	Hinteralfeld	0.55	164	ePg	Pg	04 04 09.6	-0.7
HINF				eSg	Sg	04 04 16.6	-1.1
	25nm,0.2s						
HINF				eSn	Sn	04 04 19.7	-2.0
	26nm,0.2s						
MOF	Molkenrain	0.60	145	Pg	Pg	04 04 10.8	-0.5
MOF				Sg	Sg	04 04 19.1	-0.2
LIBD	Limburg	0.68	106	Pg	Pg	04 04 12.8	-0.1
RFYF	Reffroy	0.82	291	ePg	Pg	04 04 15.2	-0.5
	baz=113						
RFYF				eSn	Sn	04 04 26.5	-2.0
	21nm,0.2s						
LOMF	Lomont	1.00	172	Pg	Pg	04 04 18.4	-0.9
LOMF				Sg	Sg	04 04 32.4	-0.3
FELD	Feldberg	1.03	116	Pg	Pg	04 04 18.9	-1.1
FELD				Sg	Sg	04 04 32.6	-1.2
MEZF	Maizieres J'vi	1.06	279	ePg	Pg	04 04 19.0	-1.5
MEZF				eSn	Sn	04 04 32.0	-2.7
MEZF				eSg	Sg	04 04 33.3	-1.4
	17nm,0.3s						
SFTF	Sexfontaines	1.07	263	ePg	Pg	04 04 19.2	-1.4
	baz=82						
SFTF				eSg	Sg	04 04 33.8	-1.1
	19nm,0.2s,baz=80						
BFO	Black Forest	1.14	90	ePg	Pg	04 04 20.6	-1.4
BFO				eSg	Sg	04 04 33.5	-3.7
WLF	Walferdange	1.36	347	eSg	Sg	04 04 43.0	-1.6
CABF	La Chapelle	1.77	192	ePn	Pn	04 04 28.9	-1.2
CABF				ePg	Pg	04 04 32.8	-1.8
CABF				eSg	Sg	04 04 55.0	-3.2
	11nm,0.6s						
LOR	Lormes	2.15	241	ePn	Pn	04 04 32.9	-2.6
	baz=64						
LOR				ePg	Pg	04 04 39.6	-2.6
	baz=57						
LOR				eSg	Sg	04 05 06.0	-4.9
	9.8nm,0.2s,baz=64						
LOR	Lormes	2.15	241	ePg	Pg	04 04 39.6	-2.6
LOR				eSg	Sg	04 05 06.0	-4.9
	4.9nm,0.2s						
SMF	Signal de Mont	2.54	229	ePn	Pn	04 04 37.4	-3.7
SMF				ePg	Pg	04 04 46.1	-3.8
SMF				eSg	Sg	04 05 18.3	-5.5
	7.1nm,0.3s						
AVF	Avril sur Loir	2.71	236	ePn	Pn	04 04 40.0	-3.5
AVF				ePg	Pg	04 04 49.5	-3.7
AVF				eSg	Sg	04 05 24.0	-5.3
	1.7nm,0.2s						
LPG	La Plagne	2.85	178	ePn	Pn	04 04 44.2	-1.3
LPG				eSg	Sg	04 05 27.9	-6.1
	0.8nm,0.2s						
HYF	Humbligny	2.89	250	ePn	Pn	04 04 43.4	-2.7
HYF				eSg	Sg	04 05 29.8	-5.8
BGF	Bois d'Agland	3.12	237	ePn	Pn	04 04 45.9	-3.5
BGF				ePg	Pg	04 04 57.5	-4.1
BGF				eSg	Sg	04 05 36.5	-6.8
	9.7nm,0.3s						

ROM 22 04:14:04.3±0.1,44.15N×10.99E,h10^{km}±1^{km},Md2.5/9, Ml2.1/3,Error ellipse: s-maj=2.4km s-min=1.1km az=12.0

LDG 22 04:14:08.3±0.3,43.92N×10.87E,h10^{km},Ml2.2/4,Error ellipse: s-maj=7.2km s-min=5.1km az=89.0

ISC 22 04:14:05.0±0.4,44.11N±0.03×10.97E±0.03,h10^{km},n19, $\sigma 0\overset{s}{.}84$/33,2C-1D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	Fontana Vidola	0.12	64	⇓iPg	Pg	04 14 07.2	-0.8
FNVD				Sg	Sg	04 14 09.4	-0.6
	3µm,0.3s						
ZCCA	Zocca	0.24	1	⇑ePg	Pg	04 14 09.0	-1.0
ZCCA				Sg	Sg	04 14 13.9	+0.5
	154nm,0.4s						
BDI	Bagni Di Lucca	0.27	259	Pg	Pg	04 14 10.9	+0.2
BDI				Sg	Sg	04 14 16.2	+1.6
	83nm,0.2s						
SEI	Scarperia	0.28	102	Pg	Pg	04 14 10.8	-0.1
SEI				Sg	Sg	04 14 15.5	+0.6
	198nm,0.2s						
GSCL	Gusciola	0.36	311	Pg	Pg	04 14 11.6	-0.8
GSCL				Sg	Sg	04 14 17.6	+0.2
	47nm,0.2s						
VLC	Villacollemand	0.42	276	Pg	Pg	04 14 13.4	-0.2
VLC				Sg	Sg	04 14 19.9	+0.5
	60nm,0.2s						
VMG	Vicchio	0.44	110	Pg	Pg	04 14 13.6	-0.4
VMG				Sg	Sg	04 14 20.7	+0.7
	39nm,0.2s						
ERBM	Eremo	0.50	307	⇑iPg	Pg	04 14 14.6	-0.6
ERBM				Sg	Sg	04 14 22.8	+0.8
PII	Pisa	0.51	219	Pg	Pg	04 14 15.2	-0.1
	58nm,0.2s						
PGD	Poggio Sodo	0.59	114	Pg	Pg	04 14 17.2	+0.3
PGD				Sg	Sg	04 14 25.8	+0.9
	33nm,0.6s						
SFI	Santa Sofia	0.67	108	Pg	Pg	04 14 17.9	-0.5
SFI				Sg	Sg	04 14 27.9	+0.5
	16nm,0.3s						
GRFL	Gerfalco	0.97	180	Pg	Pg	04 14 24.4	+0.1
	10.0nm,0.5s						
BOB	Bobbio (Coli)	1.27	301	Pg	Pg	04 14 31.3	+0.9
PGF	Pioggiola	2.12	223	ePn	Pn	04 14 39.7	-1.3
PGF				eSn	Sn	04 15 03.1	-4.6
	1.3nm,0.3s						
SBF	Sospel	2.56	266	ePn	Pn	04 14 47.1	-0.2
SBF				eSn	Sn	04 15 15.2	-3.7
	2.9nm,0.3s						
MBDF	Montbardon	3.07	283	ePn	Pn	04 14 55.6	+1.1
FRF	La Foret Royal	3.18	261	ePn	Pn	04 14 55.1	-0.9
FRF				eSn	Sn	04 15 30.0	-4.4
	2.3nm,0.3s						
LPL	La Plagne	3.33	296	ePn	Pn	04 14 59.3	+1.1
LMR	La Mourre	3.33	258	ePn	Pn	04 14 56.6	-1.6
LMR				eSn	Sn	04 15 33.1	-5.1
	1.5nm,0.3s						

NEIC 22 04:44:47.9±0.8,17.45S×178.99W,h522^{km}±10^{km},mb4.5/8, Error ellipse: s-maj=22.2km s-min=7.7km az=151.0

IDC 22 04:44:49.6±5.0,17.52S×179.00W,h540^{km}±58^{km},mb3.4/8, mb1 3.7/9,mb1mx3.5/15,mbtmp4.3/9,Error ellipse: s-maj=32.4km s-min=23.5km az=142.0

ISC 22 04:44:47.2±1.3,17.5S±0.2×179.0W±0.1,h527^{km}±18^{km}, n24,$\sigma 0\overset{s}{.}86$/20,mb4.1/14,2D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.81	63	eP	P	04 46 42.5	-0.7
	72nm,0.6s						
DZM	Mont Dzumac	14.45	249	P	P	04 47 53.0	+1.6
	0.6nm,0.3s,baz=70,slow=19,SNR=13						
CTA	Charters Tower	32.99	260	P	P	04 50 40.2	+0.5
	9.3nm,0.8s,mb4.3,baz=100,slow=9.2,SNR=6.7						
CTA	Charters Tower	32.99	260	P	P	04 50 40.2	+0.5
CTAO	Charters Tower	32.99	260	P	P	04 50 38.3	-1.4
	10nm,0.9s,mb4.4						
CNB	Canberra Magne	33.23	232	eP	P	04 50 42.4	+0.7
	15nm,0.5s,mb4.8						
TOO	Toolangi	36.99	230	eP	P	04 51 13.5	+0.6
	14nm,0.8s,mb4.5						
STKA	Stephens Creek	38.34	241	P	P	04 51 24.6	+0.7
	8.8nm,0.5s,mb4.5,baz=115,slow=10,SNR=11						
WB2	Warramunga Arr	44.17	259	eP	P	04 52 10.1	-0.5
WRAB	Tennant Creek	44.17	259	eP	P	04 52 10.3	-0.3
	8.4nm,0.8s,mb4.3						
WRA	Warramunga Arr	44.18	259	P	P	04 52 10.4	-0.3
	3.5nm,0.6s,mb4.0,baz=94,slow=7.0,SNR=44						
FORT	Forrest	49.69	244	eP	P	04 52 51.3	-1.2
	15nm,0.5s,mb4.7						
FITZ	Fitzroy Crossi	52.57	260	eP	P	04 53 13.6	0.0
	7.3nm,0.9s,mb4.0						
KLBR	Kellerberrin	58.52	243	eP	P	04 53 53.5	-1.2
	8.3nm,0.6s,mb4.1						
VNDA	Vanda	60.76	185	P	P	04 54 08.2	-0.8
	1.0nm,0.7s,mb3.2,baz=351,slow=8.5,SNR=4.8						
NVAR	Mina Array Bea	79.53	44	P	P	04 56 01.0	+0.7
	1.3nm,0.7s,mb3.4,baz=222,slow=7.8,SNR=10						
ILAR	Eielson Array	85.65	13	P	P	04 56 29.4	-0.9
	1.0nm,0.4s,mb3.8,baz=227,slow=5.1,SNR=16						
TXAR	Lajitas Array	86.25	58	P	P	04 56 35.5	+1.4
	0.8nm,0.8s,mb3.4,baz=221,slow=6.3,SNR=12						
TXAR	Lajitas Array	86.25	58	P	P	04 56 35.5	+1.4
PDAR	Pinedale Array	87.45	44	P	P	04 56 39.9	+0.5
	0.8nm,0.5s,mb3.6,baz=233,slow=2.5,SNR=6.4						
BRTR	Keskin Array B	144.15	315	PKP	PKPdf	05 03 23.3	+0.7
	0.8nm,0.5s,baz=67,slow=5.2,SNR=4.1						
CLL	Collm	144.99	347	⇓iP	PKPdf	05 03 26.0	+2.2
CLL				i		05 04 24.0	
CLL	Collm	144.99	347	⇓iPKIKP	PKPdf	05 03 26.0	+2.2
	logA/T=0.9						
GERES	GERESS Array B	147.12	345	PKPbc	PKPdf	05 03 31.8	+4.5
	1.2nm,0.5s,slow=2.7,SNR=10						

ROM 22 04:48:16.6±0.2,40.90N×19.73E,h10^{km},Md3.0/2,Ml2.8/1, Error ellipse: s-maj=3.9km s-min=2.5km az=76.0

TIR 22 04:48:16.9,40.90N×19.90E,h14^{km},Ml2.8

CSEM 22 04:48:17.0±0.1,40.93N×19.79E,h8^{km},ML3.6/2,Error ellipse: s-maj=1.9km s-min=1.3km az=66.0

NEIC 22 04:48:19.1,41.09N×19.66E,h4^{km},MD2.9(PDG), ML2.8(ROM),After PDG.

PDG 22 04:48:19.1±0.2,41.09N×19.66E,h4^{km}

ATH 22 04:48:32.9,39.72N×20.02E,h39^{km}±12^{km},MD3.4/5

ISC 22 04:48:17.1±0.3,40.91N±0.02×19.75E±0.03,h10^{km},n50, $\sigma 1\overset{s}{.}35$/79,11C,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.45	11	ePg	Pg	04 48 26.5	+0.3
TIR				i Sg	Sg	04 48 34.0	+1.8
TIR	Tirane	0.45	11	Pg	Pg	04 48 26.3	+0.1
	790nm,0.6s						
TIR				i Sg	Sg	04 48 34.0	+1.8
QSH	Qafa e Shtames	0.62	11	i Pg	Pg	04 48 29.0	-0.7
QSH				i Sg	Sg	04 48 39.0	+1.0
QSH	Qafa e Shtames	0.62	11	ePg	Pg	04 48 29.0	-0.7
QSH				i Sg	Sg	04 48 39.0	+1.0
TPE	Tepelena	0.65	162	i Pg	Pg	04 48 29.3	-0.8
TPE				i Sg	Sg	04 48 40.2	+1.4
TPE	Tepelena	0.65	162	ePg	Pg	04 48 29.3	-0.8
TPE				i Sg	Sg	04 48 40.2	+1.4
KBN	Korca	0.84	110	i Pg	Pg	04 48 31.5	-2.4

KBN				*i* Sg	Sg	04 48 45.8	+0.7
KBN	**Korca**	0.84	110	*e*Pg	Pg	04 48 31.5	-2.4
KBN				*i* Sg	Sg	04 48 45.8	+0.7
LSK	**Leskovik**	1.00	139	*e*Pg	Pg	04 48 35.8	-1.3
LSK				*i* Sg	Sg	04 48 50.0	-0.5
ULC	**Ulcinj**	1.12	340	⇑*i*Pg	Pg	04 48 36.5	-3.0
ULC				*e*Sg	Sg	04 48 50.8	-3.6
PUK	**Puka**	1.14	5	*i* Pn	Pn	04 48 40.0	+1.0
PUK				*i* Sn	Sn	04 48 59.3	+4.6
PUK	**Puka**	1.14	5	*e*Pn	Pn	04 48 40.0	+1.0
PUK				*i* Sn	Sn	04 48 59.3	+4.6
KEK	**Kerkira**	1.20	178	*e*PB	Pn	04 48 40.2	+0.3
KEK	**Kerkira**	1.20	178	Pn	Pn	04 48 40.2	+0.3
KEK				Sn	Sn	04 48 57.3	+1.0
	182nm,0.4s						
KEK	**Kerkira**	1.20	178	Pn	Pn	04 48 40.2	+0.3
KEK				*e*S	Sb	04 48 54.0	-0.8
KEK				Sn	Sn	04 48 57.3	+1.0
	182nm,0.4s						
FNA	**Florina**	1.24	95	*e*P	Pb	04 48 39.4	-0.8
LCI	**Lecce**	1.38	246	Pn	Pn	04 48 42.8	+0.3
LCI				Sn	Sn	04 49 04.0	+3.2
	34nm,0.2s						
IGT	**Igoumenitsa**	1.45	162	*e*P	Pn	04 48 45.4	+1.9
JAN	**Janina**	1.51	146	*e*PN	Pn	04 48 46.2	+1.8
JAN	**Janina**	1.51	146	*e*P	Pn	04 48 45.0	+0.6
BUM	**Brajici-Budva**	1.53	336	⇑*i*Pg	Pg	04 48 43.8	-3.9
BUM				*e*Sg	Sg	04 49 05.0	-3.2
TTG	**Podgorica**	1.56	347	⇑*i*Pg	Pg	04 48 43.9	-4.4
TTG				*e*Sg	Sg	04 49 06.3	-2.9
MEV	**Metsovon**	1.59	134	*e*P	Pn	04 48 46.7	+1.1
SKO	**Skopje**	1.65	50	*i* Pn	Pn	04 48 47.0	+0.6
SKO				*i* Sg	Sg	04 49 10.0	-2.2
SKO				Lg		04 49 11.0	
	comp=Z,0.0nm,0.5s						
PVY	**Plav**	1.69	6	⇑*i*Pg	Pg	04 48 47.3	-3.6
PVY				*e*Sg	Sg	04 49 11.0	-2.5
HCY	**Herceg Novi**	1.80	329	⇑*i*Pn	Pn	04 48 48.6	+0.1
HCY				*e*Sn	Sn	04 49 14.0	+2.4
IVA	**Berane**	1.96	3	⇑*i*Pn	Pn	04 48 51.5	+0.6
IVA				*e*Sn	Sn	04 49 17.5	+1.8
NKY	**Niksic**	1.98	344	⇑*i*Pn	Pn	04 48 52.0	+0.9
NKY				*e*Sn	Sn	04 49 18.3	+2.0
GRG	**Griva**	2.01	88	*e*P	Pn	04 48 51.3	-0.2
BRY	**Bratogost**	2.18	336	⇑*i*Pn	Pn	04 48 54.9	+0.8
BRY				*e*Sn	Sn	04 49 22.9	+1.5
BRY	**Bratogost**	2.18	336	⇑*i*Pn	Pn	04 48 54.8	+0.8
LIT	**Litokhoron**	2.24	110	*e*P	Pn	04 48 54.4	-0.4
LTRZ	**Laterza**	2.25	263	Pn	Pn	04 48 54.0	-1.0
	comp=Z,40nm,0.6s						
SG1	**Sgolgore (BA)**	2.33	269	*e*Pn	Pn	04 48 56.7	+0.5
UPM	**Unac-Piva**	2.38	345	⇑*i*Pn	Pn	04 48 57.8	+1.0
UPM				*e*Sn	Sn	04 49 27.7	+1.5
PLE	**Pljevlja**	2.43	354	⇑*i*Pn	Pn	04 48 58.0	+0.4
PLE				*e*Sn	Sn	04 49 28.9	+1.2
STON	**Ston**	2.49	323	*i* Pn	Pn	04 48 57.0	-1.4
STON				*i* Sn	Sn	04 49 26.6	-2.5
EVR	**Evrytania**	2.54	141	*e*P	Pn	04 49 00.5	+1.3
EVR				*e*S	Sn	04 49 32.2	+1.7
KKB	**Krupnik**	2.68	68	P	Pn	04 49 01.0	-0.2
AGG	**Agios Georgios**	2.73	133	*e*P	Pn	04 49 02.4	+0.5
VLS	**Valsamata**	2.81	166	*e*P	Pn	04 49 00.9	-2.0
VLS				*e*S	Sn	04 49 31.1	-6.1
XOR	**Xorichti**	3.05	119	*e*P	Pn	04 49 06.6	+0.2
MMB	**Musomiste**	3.07	76	P	Pn	04 49 06.2	-0.5
VTS	**Vitosha**	3.08	56	P	Pn	04 49 06.5	-0.4
RLS	**Riolos of Patr**	3.14	154	*e*PN	Pn	04 49 05.2	-2.5
PAIG	**Paliouri**	3.15	107	*e*P	Pn	04 49 07.0	-0.8
MRLC	**Muro Lucano**	3.24	269	Pn	Pn	04 49 08.6	-0.5
MGR	**Morigerati**	3.29	258	Pn	Pn	04 49 08.8	-1.0
	comp=Z,9.0nm,0.2s						
VAGA	**Valle Agricola**	4.20	279	Pn	Pn	04 49 22.3	-0.4
NRCA	**Norcia**	5.32	293	Pn	Pn	04 49 36.6	-1.9
	comp=Z,6.0nm,0.6s						

*THR **22** 04:52:06.0±0.3, 30.70N×49.65E, h14km±9km, ML3.0*
*CSEM **22** 04:52:06.6±0.2, 30.83N×49.64E, h10km, ML3.0, Error ellipse: s-maj=5.8km s-min=2.2km az=45.0*
*TEH **22** 04:52:15.8, 31.08N×50.23E, h10km, Mn3.0*
ISC 22 04:52:08.0±1.2, **30.93N**±0.07×**49.65E**±0.09, **h10km, n12,** σ**1^{s}17**/15, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGO	**Shushtar**	1.38	329	*e*PG	Pg	04 52 34.9	-0.8
SHGR	**Shooshtar-Gavs**	1.38	329	*e*PG	Pg	04 52 34.9	-0.8
SHGR				*e*SG	Sg	04 52 56.0	+1.7
SHGR				AML	AML	04 52 59.1	
	comp=E,253nm,0.5s						
IPAR	**Pars**	3.13	109	Pn	Pn	04 52 59.3	+0.9
IMOK	**Mook**	3.25	124	Pn	Pn	04 52 59.2	-1.0
NASN	**Na'in**	3.27	54	*e*PN	Pn	04 53 01.1	+0.6
ASAO	**Ashtian**	3.62	5	*e*PN	Pn	04 53 07.2	+1.7
ASAO				AML	AML	04 53 51.4	
	comp=N,19nm,0.8s						
IQOM	**Qom**	4.08	17	Pn	Pn	04 53 11.8	-0.2
IQOM				Sn	Sn	04 53 57.4	-3.0
IVRN	**Varamin**	4.42	23	Pn	Pn	04 53 16.6	-0.2
IRAZ	**Razeghan**	4.47	3	Pn	Pn	04 53 20.9	+3.4
IRAZ				Sn	Sn	04 54 09.4	-0.9
IDHR	**Dehrash**	4.66	325	Pn	Pn	04 53 19.0	-1.2
IDMV	**Damavand**	5.05	23	Pn	Pn	04 53 26.5	+0.8
IFIR	**Firoozkooh**	5.37	28	Pn	Pn	04 53 30.4	+0.2

*CSEM **22** 04:55:43.6±0.1, 34.99N×2.53W, h20km, MD3.7, Error ellipse: s-maj=2.6km s-min=2.0km az=123.0*
*CRAAG **22** 04:55:45.7, 35.17N×2.51W, Mb3.6*
*CNRM **22** 04:55:45.2, 35.11N×2.54W, h18km, MD3.7*
*INMG **22** 04:55:46.3±1.1, 35.11N×2.50W, ML2.7, Error ellipse: s-maj=5.6km s-min=3.6km az=170.0*
*MDD **22** 04:55:46.3±0.4, 34.98N×2.65W, h12km±2km, mbLg3.6/2, Error ellipse: s-maj=4.0km s-min=2.7km az=44.0, PRXIMO*
*LDG **22** 04:55:47.6±0.5, 35.04N×2.58W, h10km, Ml3.5/1, Error ellipse: s-maj=10.7km s-min=4.8km az=177.0*
*SFS **22** 04:55:47.0, 35.17N×2.52W*
*NEIC **22** 04:55:47.4, 35.17N×2.53W, MG3.7(MDD), After MDD.*
ISC 22 04:55:44.0±0.3, **35.07N**±0.02×**2.55W**±0.03, **h10km, n92,** σ**1^{s}30**/159, **1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAI	**Zaio**	0.18	239	Pg	Pg	04 55 48.0	-0.1
ZAI				Lg		04 55 55.0	
ZAI	**Zaio**	0.18	239	*i* P	Pg	04 55 48.0	-0.1
MELI	**Melilla**	0.39	306	*i* P	Pg	04 55 53.5	+1.6
MELI				*e*S	Sg	04 55 59.0	+1.8
EMLI	**Melilla**	0.40	306	P	Pg	04 55 53.9	+1.7
	485nm,0.1s,SNR=18						
EMLI				S	Sg	04 55 59.5	+1.9
	2µm,0.2s,SNR=12						
EMEL	**Melilla**	0.41	306	⇓Pg	Pg	04 55 53.9	+1.6
	485nm,0.1s,SNR=18						
EMEL				Lg		04 55 59.5	
	2µm,0.2s,SNR=12						
OUJ	**Oujda**	0.67	127	Pg	Pg	04 56 00.0	+2.5
OUJ				Lg		04 56 07.0	
OUJ	**Oujda**	0.67	127	*i* S	Sb	04 56 07.0	+0.5
OLHC	**Oulhaca**	0.95	78	P	Pb	04 56 05.0	+3.0
EALB	**Alboran**	0.96	336	P	Pb	04 56 03.4	+1.1
EALB				S	Sb	04 56 14.1	-0.7
EALB	**Alboran**	0.96	336	Pg	Pg	04 56 03.8	+0.7
	53nm,0.2s,SNR=36						
EALB				Lg		04 56 17.6	
	617nm,0.4s,SNR=13						
EALB	**Alboran**	0.96	336	P	Pb	04 56 03.3	+1.1
	53nm,0.2s,SNR=36						
EALB				S	Sb	04 56 14.0	-0.7
	617nm,0.4s,SNR=13						
TOU	**Touzarine**	0.99	264	*i* P	Pb	04 56 03.0	+0.2
TOU				*i* S	Sb	04 56 16.0	+0.3
ODZI	**Dziouia**	1.11	78	P	Pb	04 56 07.0	+2.2
MPAL	**Palemas**	1.15	278	*i* P	Pb	04 56 05.0	-0.5
MPAL				*i* S	Sb	04 56 20.5	+0.2
OTSS	**Djebel Tessala**	1.46	81	P	Pn	04 56 09.0	-1.5
TZK	**Tazeka**	1.66	235	*e*P	Pn	04 56 12.5	-0.9
TZK				*i* S	Sn	04 56 33.0	-1.9
USTO	**Oran**	1.77	67	P	Pg	04 56 24.0	+4.7
EBER	**Berja**	1.85	352	P	Pn	04 56 17.5	+1.4
EBER				S	Sn	04 56 37.8	-1.9
EBER				S	Sn	04 56 37.9	-1.8
EBER	**Berja**	1.85	352	Pn	Pn	04 56 17.5	+1.4
	1.8nm,0.2s,SNR=9.5						
EBER				Sn	Sn	04 56 37.8	-1.9
	173nm,0.5s,SNR=12						
EBER	**Berja**	1.85	352	P	Pn	04 56 17.5	+1.4
	1.8nm,0.2s,SNR=9.5						
EBER				S	Sn	04 56 37.8	-1.9
	173nm,0.5s,SNR=12						
ENIJ	**Nijar**	1.92	8	Pn	Pn	04 56 16.8	-0.3
	3.7nm,0.2s,SNR=12						
ENIJ				Sn	Sn	04 56 41.7	+0.1
	44nm,0.3s,SNR=6.4						
ERON	**Agron**	2.20	333	Pn	Pn	04 56 22.6	+1.5
	2.4nm,0.2s,SNR=6.4						
ERON				Sn	Sn	04 56 47.9	-0.7
	8.8nm,0.3s,SNR=9.1						
EMIJ	**Mijas**	2.34	310	P	Pn	04 56 22.6	-0.6
EMIJ				S	Sn	04 56 49.1	-3.1
EMIJ				S	Sn	04 56 49.5	-2.8
EMIJ	**Mijas**	2.34	310	Pn	Pn	04 56 22.6	-0.6
	2.2nm,0.1s,SNR=8.8						
EMIJ				Sn	Sn	04 56 49.1	-3.1
	33nm,0.4s,SNR=5.4						
ECOG	**Cogollos-Vega**	2.35	340	P	Pn	04 56 24.6	+1.2
ECOG				S	Sn	04 56 53.4	+0.8
ECOG				S	Sn	04 56 53.5	+0.9
ECOG	**Cogollos-Vega**	2.35	340	Pn	Pn	04 56 24.6	+1.2
	7.8nm,0.2s,SNR=4.0						
ECOG				Sn	Sn	04 56 53.4	+0.8
	26nm,0.3s						
ELOJ	**Sierra Loja**	2.45	329	P	Pn	04 56 27.8	+3.1
ELOJ				S	Sn	04 56 56.2	+1.3
ELOJ	**Sierra Loja**	2.45	329	Pn	Pn	04 56 25.3	+0.7
	2.4nm,0.2s,SNR=4.6						
ELOJ				Sn	Sn	04 56 54.8	-0.1
	9.9nm,0.4s,SNR=5.1						
ELOJ	**Sierra Loja**	2.45	329	S	Sn	04 56 56.2	+1.2
	9.9nm,0.4s,SNR=5.1						
EQES	**Quesada**	2.76	351	P	Pn	04 56 30.8	+1.6
EQES				S	Sn	04 57 03.3	+0.3
EQES				S	Sn	04 57 03.7	+0.7
EQES	**Quesada**	2.76	351	Pn	Pn	04 56 30.8	+1.6
	2.2nm,0.1s,SNR=32						
EQES				Sn	Sn	04 57 02.8	-0.1
	55nm,0.5s,SNR=5.8						
EQES	**Quesada**	2.76	351	P	Pn	04 56 30.8	+1.6
	2.2nm,0.1s,SNR=32						
EQES				S	Sn	04 57 03.3	+0.3
	55nm,0.5s,SNR=5.8						
CZD	**Col de Zad**	2.89	226	*i* P	Pn	04 56 30.0	-1.0
CZD				*i* S	Sn	04 57 02.0	-4.3
EMUR	**La Murta**	2.97	21	Pn	Pn	04 56 32.8	+0.7
	12nm,0.3s,SNR=13						
EMUR				Sn	Sn	04 57 06.0	-2.1
	16nm,0.4s,SNR=6.8						
EMUR	**La Murta**	2.97	21	P	Pn	04 56 32.8	+0.7
	12nm,0.3s,SNR=13						
EMUR				S	Sn	04 57 06.0	-2.1
	16nm,0.4s,SNR=6.8						
ESPR	**Espera**	3.23	305	P	Pn	04 56 38.8	+3.0
ESPR				S	Sn	04 57 15.3	+0.7
ESPR	**Espera**	3.23	305	Pn	Pn	04 56 36.5	+0.8
	2.4nm,0.2s,SNR=4.0						
ESPR				Sn	Sn	04 57 11.6	-3.1
	27nm,0.6s,SNR=4.5						
ESPR	**Espera**	3.23	305	S	Sn	04 57 15.3	+0.6
	27nm,0.6s,SNR=4.5						
EBAN	**Banos Encina**	3.25	343	P	Pn	04 56 39.7	+3.6
EBAN				S	Sn	04 57 15.3	+0.1
EBAN	**Banos Encina**	3.25	343	Pn	Pn	04 56 36.8	+0.8
	SNR=7.9						
EBAN				Sn	Sn	04 57 15.3	+0.1
	12nm,0.3s,SNR=5.7						
EBAN	**Banos Encina**	3.25	343	S	Sn	04 57 15.3	+0.1
	12nm,0.3s,SNR=5.7						
ZFT	**Errachidia**	3.38	207	*i* P	Pn	04 56 36.0	-1.9
ZFT				*i* S	Sn	04 57 14.0	-4.4
EADA	**Adamuz**	3.50	333	P	Pn	04 56 40.0	+0.3
EADA				S	Sn	04 57 18.5	-3.0
EADA				S	Sn	04 57 19.0	-2.6
EADA	**Adamuz**	3.50	333	Pn	Pn	04 56 39.9	+0.3
	0.2nm,0.1s,SNR=11						
EADA				Sn	Sn	04 57 18.5	-3.0
	15nm,0.4s,SNR=9.5						
EADA	**Adamuz**	3.50	333	P	Pn	04 56 39.9	+0.3
	0.2nm,0.1s,SNR=11						
EADA				S	Sn	04 57 18.5	-3.0
	15nm,0.4s,SNR=9.5						
EVIA	**Vianos**	3.57	1	Pn	Pn	04 56 42.6	+2.0
	1.7nm,0.2s,SNR=7.3						
EVIA				Sn	Sn	04 57 22.1	-1.2
	18nm,0.4s,SNR=6.1						
ETOB	**Tobarra**	3.66	12	P	Pn	04 56 42.7	+0.7
ETOB				S	Sn	04 57 23.8	-1.9
ETOB				S	Sn	04 57 25.3	-0.4
ETOB	**Tobarra**	3.66	12	Pn	Pn	04 56 42.7	+0.7
	0.9nm,0.2s,SNR=25						
ETOB				Sn	Sn	04 57 25.3	-0.4
	5.1nm,0.3s,SNR=4.7						
ETOB	**Tobarra**	3.66	12	P	Pn	04 56 42.7	+0.7
	0.9nm,0.2s,SNR=25						
ETOB				S	Sn	04 57 25.3	-0.4
	5.1nm,0.3s,SNR=4.7						
ECAB	**El Cabril**	3.79	323	Pn	Pn	04 56 44.7	+0.9
	0.0nm,0.2s,SNR=6.6						
ECAB				Sn	Sn	04 57 28.6	-0.2
	6.6nm,0.3s,SNR=4.7						
ECAB	**El Cabril**	3.79	323	P	Pn	04 56 44.7	+1.0
	SNR=6.6						
ECAB				S	Sn	04 57 28.6	-0.2
	6.6nm,0.3s,SNR=4.7						
EBEN	**Beniarda**	4.08	27	Pn	Pn	04 56 48.8	+0.8
	1.3nm,0.3s,SNR=8.4						
EBEN				Sn	Sn	04 57 34.3	-2.1
	4.5nm,0.5s,SNR=7.9						
EBEN	**Beniarda**	4.08	27	P	Pn	04 56 48.8	+0.9
	1.3nm,0.3s,SNR=8.4						
EBEN				S	Sn	04 57 34.3	-2.1
	4.5nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	4.28	310	Pn	Pn	04 56 49.7	-1.0
	1.3nm,0.2s,SNR=18						
EMIN				Sn	Sn	04 57 36.4	-4.9
	2.1nm,0.3s,SNR=10						
EMIN	**Mina Concepcio**	4.28	310	P	Pn	04 56 49.8	-0.9
EMIN				S	Sn	04 57 36.4	-4.9
	2.1nm,0.3s,SNR=10						
ESDC	**Sonseca Array**	4.74	347	Pn	Pn	04 56 58.4	+1.2
	5.2nm,0.1s,baz=170,slow=12,SNR=12						
ESDC	**Sonseca Array**	4.74	347	P	Pn	04 56 58.4	+1.2
	5.2nm,0.1s,SNR=12						
EIBI	**Ibiza**	5.04	37	P	Pn	04 57 01.1	-0.3
EIBI				S	Sn	04 57 55.5	-4.8
EIBI				S	Sn	04 57 55.8	-4.6
EIBI	**Ibiza**	5.04	37	Pn	Pn	04 57 01.1	-0.3
	1.2nm,0.2s,SNR=18						
EIBI				Sn	Sn	04 57 55.8	-4.6
	2.6nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	5.04	37	P	Pn	04 57 01.1	-0.3
	1.2nm,0.2s,SNR=18						
EIBI				S	Sn	04 57 55.5	-4.9
EBAD	**Badajoz**	5.13	317	P	Pn	04 57 01.8	-1.0
EBAD				S	Sn	04 57 56.9	-5.9
EBAD				S	Sn	04 57 57.4	-5.4
EBAD	**Badajoz**	5.13	317	Pn	Pn	04 57 01.8	-1.0
	0.8nm,0.1s,SNR=9.5						
EBAD				Sn	Sn	04 57 56.9	-6.0
	6.5nm,0.2s,SNR=4.8						
EBAD	**Badajoz**	5.13	317	P	Pn	04 57 01.8	-1.0
	0.8nm,0.1s,SNR=9.5						
PBEJ	**Beja**	5.20	306	*e*Pn	Pn	04 57 02.9	-0.8
PBEJ				*e*Sn	Sn	04 57 58.5	-6.0
	6.8nm,0.6s						
PBEJ	**Beja**	5.20	306	*e*Pn	Pn	04 57 02.9	-0.8
PBEJ				*e*Sn	Sn	04 57 58.5	-6.0
	6.8nm,0.6s						
EMOS	**Mosqueruela**	5.54	17	Pn	Pn	04 57 09.5	+1.0
	0.6nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	5.54	17	P	Pn	04 57 09.5	+0.9
PTEO	**Sao Teotonio**	5.56	298	*e*Pn	Pn	04 57 09.5	+0.6
PTEO				*e*Sn	Sn	04 58 10.1	-3.6
	8.9nm,0.4s						
PTEO	**Sao Teotonio**	5.56	298	Pn	Pn	04 57 09.5	+0.6
PTEO				Sn	Sn	04 58 10.1	-3.6
	4.4nm,0.4s						
EVO	**Evora**	5.58	310	*e*Pn	Pn	04 57 09.9	+0.8
EVO				*e*Sn	Sn	04 58 09.4	-4.7
	16nm,0.5s						
PCBR	**Castelo Branco**	6.17	322	*e*Pn	Pn	04 57 16.2	-1.2
PCBR				*e*Sn	Sn	04 58 21.3	-7.5
	8.1nm,0.5s						
PCBR	**Castelo Branco**	6.17	322	Pn	Pn	04 57 16.2	-1.2
PCBR				Sn	Sn	04 58 21.3	-7.5
	4.1nm,0.5s						
ERTA	**Horta de San J**	6.31	20	Pn	Pn	04 57 19.2	-0.2
	1.9nm,0.5s,SNR=7.9						
ERTA	**Horta de San J**	6.31	20	P	Pn	04 57 19.2	-0.2
ETOS	**Mallorca**	6.35	41	Pn	Pn	04 57 21.0	+1.1
	0.7nm,0.3s,SNR=4.6						
ETOS	**Mallorca**	6.35	41	P	Pn	04 57 21.0	+1.1
MTE	**Manteigas**	6.63	325	*e*Sn	Sn	04 58 32.2	-8.2
	5.5nm,0.5s						
MTE	**Manteigas**	6.63	325	Sn	Sn	04 58 32.2	-8.2
	2.8nm,0.5s						
PVIS	**Viseu**	7.04	325	*e*Pn	Pn	04 57 29.1	-0.7
PVIS				*e*Sn	Sn	04 58 41.8	-8.9
	4.9nm,0.5s						
PVIS	**Viseu**	7.04	325	Pn	Pn	04 57 29.1	-0.7
PVIS				Sn	Sn	04 58 41.8	-8.9
	2.5nm,0.5s						
ECAL	**Calabor**	7.61	336	P	Pn	04 57 37.8	+0.2
ECAL				S	Sn	04 58 56.5	-8.3
ECAL	**Calabor**	7.61	336	Pn	Pn	04 57 37.8	+0.2
	0.9nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	04 58 56.5	-8.3
	1.9nm,0.3s,SNR=7.9						
ECAL	**Calabor**	7.61	336	P	Pn	04 57 37.8	+0.2
ETSF	**Etsaut**	7.97	11	*e*Pn	Pn	04 57 42.1	-0.7
ELOB	**Lobios**	8.05	329	Pn	P	04 57 42.6	-1.1
	0.9nm,0.3s,SNR=7.9						
ELOB				Sn	Sn	04 59 07.1	-8.6
	1.1nm,0.3s,SNR=7.9						
ELOB	**Lobios**	8.05	329	P	P	04 57 42.6	-1.2
SJPF	**Ste Jean**	8.10	7	*e*Pn	P	04 57 42.9	-1.7
EPF	**Esparros**	8.27	15	*e*Pn	P	04 57 46.7	-0.1
CAF	**Calviac**	10.46	18	*e*Pn	P	04 58 16.4	-0.7
LMR	**La Mourre**	10.84	38	*e*Pn	P	04 58 20.2	-2.1
SBF	**Sospel**	11.69	38	*e*Pn	P	04 58 32.3	-1.5
PGF	**Pioggiola**	11.70	47	*e*Pn	P	04 58 32.5	-1.5

*CSEM **22** 05:00:48.8±0.2, 34.89N×2.57W, h5km, MD3.4, Error ellipse: s-maj=4.2km s-min=2.1km az=110.0*
*CNRM **22** 05:00:50.0, 35.03N×2.49W, h6km, MD3.4*
*MDD **22** 05:00:51.0±0.6, 34.97N×2.57W, mbLg3.0/2, Error ellipse: s-maj=4.4km s-min=3.7km az=142.0, PRXIMO*
*INMG **22** 05:00:54.6±1.2, 35.05N×2.86W, h20km±3km, ML2.3, Error ellipse: s-maj=8.8km s-min=6.9km az=33.0*
*NEIC **22** 05:00:54.3, 35.07N×2.79W, h18km, MG3.5(MDD), After MDD.*
*CRAAG **22** 05:00:55.0, 35.13N×2.81W, Mb3.4*
*SFS **22** 05:00:55.0, 35.13N×2.81W*
ISC 22 05:00:50.4±0.5, **35.04N**±0.03×**2.69W**±0.04, **h10km, n52,** σ**1^{s}52**/79, **1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAI	**Zaio**	0.08	215	Pg	Pg	05 00 53.0	+0.2
ZAI				Lg		05 00 56.5	
ZAI	**Zaio**	0.08	215	*i* P	Pg	05 00 53.0	+0.2
MELI	**Melilla**	0.33	322	*i* P	Pg	05 00 59.5	+2.4
EMLI	**Melilla**	0.34	321	P	Pg	05 00 59.8	+2.5
	298nm,0.1s,SNR=18						
EMEL	**Melilla**	0.34	320	⇓Pg	Pg	05 00 59.8	+2.4
	298nm,0.1s,SNR=18						
EMEL				Lg		05 01 04.5	
	466nm,0.2s,SNR=10						
TOU	**Touzarine**	0.88	265	*i* P	Pb	05 01 09.0	+1.8
TOU				*i* S	Sb	05 01 24.0	+5.2
EALB	**Alboran**	0.94	343	P	Pg	05 01 09.3	0.0
EALB				S	Sb	05 01 21.3	+0.6
EALB	**Alboran**	0.94	343	Pg	Pg	05 01 09.3	0.0
	22nm,0.2s,SNR=25						
EALB				Lg		05 01 21.3	
	114nm,0.2s,SNR=16						
EALB	**Alboran**	0.94	343	P	Pb	05 01 09.3	+1.0
	22nm,0.2s,SNR=25						
MPAL	**Palemas**	1.04	281	Pg	Pg	05 01 12.0	+0.7
MPAL				Lg		05 01 26.0	
MPAL	**Palemas**	1.04	281	*i* P	Pg	05 01 12.0	+0.7
OLHC	**Oulhaca**	1.06	78	P	Pb	05 01 10.0	-0.4
ODZI	**Dziouia**	1.22	78	P	Pb	05 01 13.0	-0.1
TZK	**Tazeka**	1.56	233	*i* P	Pn	05 01 19.5	+1.2
TZK				*i* S	Sb	05 01 39.0	+0.6
EBER	**Berja**	1.86	355	P	Pn	05 01 25.6	+2.9
EBER				S	Sn	05 01 42.7	-3.7
EBER	**Berja**	1.86	355	Pn	Pn	05 01 24.4	+1.7
	0.5nm,0.1s,SNR=5.9						
EBER				Sn	Sn	05 01 42.7	-3.7
	19nm,0.3s,SNR=11						
EBER	**Berja**	1.86	355	P	Pn	05 01 25.6	+2.9
	0.5nm,0.1s,SNR=5.9						
USTO	**Oran**	1.88	68	P	Pg	05 01 40.0	+12
ENIJ	**Nijar**	1.97	11	P	Pn	05 01 27.9	+3.7
ENIJ				S	Sn	05 01 44.8	-4.3
ENIJ	**Nijar**	1.97	11	Pn	Pn	05 01 25.1	+0.9
	2.2nm,0.2s,SNR=5.9						
ENIJ				Sn	Sn	05 01 44.8	-4.3
	9.0nm,0.2s,SNR=4.7						
EMIJ	**Mijas**	2.28	313	Pn	Pn	05 01 27.4	-1.2
	1.1nm,0.2s,SNR=7.9						
EMIJ				Sn	Sn	05 01 54.0	-3.0
	13nm,0.3s,SNR=7.9						
EQES	**Quesada**	2.78	354	Pn	Pn	05 01 37.3	+1.5
	1.0nm,0.1s,SNR=9.3						
EQES				Sn	Sn	05 02 08.6	-1.1
	21nm,0.5s,SNR=4.8						
EQES	**Quesada**	2.78	354	P	Pn	05 01 37.3	+1.6
	1.0nm,0.1s,SNR=9.3						
EQES				S	Sn	05 02 08.6	-1.1
	21nm,0.5s,SNR=4.8						
CZD	**Col de Zad**	2.80	225	*i* P	Pn	05 01 34.0	-2.0
CZD				*i* S	Sn	05 02 10.0	-0.2
EMUR	**La Murta**	3.03	22	Pn	Pn	05 01 40.7	+1.3
	5.0nm,0.3s,SNR=4.0						
EMUR	**La Murta**	3.03	22	P	Pn	05 01 40.7	+1.3
	5.0nm,0.3s,SNR=4.0						
ESPR	**Espera**	3.15	306	Pn	Pn	05 01 43.0	+1.9
	SNR=7.9						
ESPR				Sn	Sn	05 02 19.6	+0.4
	SNR=7.9						
EBAN	**Banos Encina**	3.24	345	P	Pn	05 01 44.3	+1.9
EBAN				S	Sn	05 02 22.9	+1.5
EBAN	**Banos Encina**	3.24	345	Pn	Pn	05 01 44.3	+1.9
	1.1nm,0.2s,SNR=7.9						
EBAN				Sn	Sn	05 02 22.2	+0.8
	4.4nm,0.3s,SNR=7.9						
EBAN	**Banos Encina**	3.24	345	P	Pn	05 01 44.3	+1.9
	1.1nm,0.2s,SNR=7.9						
EBAN				S	Sn	05 02 22.9	+1.4
	4.4nm,0.3s,SNR=7.9						
ZFT	**Errachidia**	3.30	205	*e*P	Pn	05 01 41.0	-2.2
ZFT				*e*S	Sn	05 02 20.0	-3.0
EADA	**Adamuz**	3.47	335	Pn	Pn	05 01 46.5	+0.9
	0.6nm,0.2s,SNR=5.3						
EADA				Sn	Sn	05 02 24.1	-3.2
	1.5nm,0.2s						
EADA	**Adamuz**	3.47	335	P	Pn	05 01 46.5	+0.9
	0.6nm,0.2s,SNR=5.3						
ETOB	**Tobarra**	3.71	14	P	Pn	05 01 50.1	+1.1
ETOB				S	Sn	05 02 30.1	-3.3
ETOB	**Tobarra**	3.71	14	Pn	Pn	05 01 49.0	-0.1
	0.4nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	05 02 31.0	-2.4
	4.0nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	3.71	14	P	Pn	05 01 50.2	+1.1
	0.4nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	3.74	325	Pn	Pn	05 01 49.0	-0.4
	0.2nm,0.2s,SNR=4.8						
ECAB				Sn	Sn	05 02 29.8	-4.3
	0.5nm,0.2s						
ECAB	**El Cabril**	3.74	325	P	Pn	05 01 49.0	-0.5
	0.2nm,0.2s,SNR=4.8						
EMIN	**Mina Concepcio**	4.21	311	P	Pn	05 01 55.7	-0.4
EMIN				S	Sn	05 02 40.9	-5.1
EMIN	**Mina Concepcio**	4.21	311	Pn	Pn	05 01 55.7	-0.4
	1.0nm,0.2s,SNR=8.8						
EMIN				Sn	Sn	05 02 41.8	-4.2
	1.3nm,0.3s						

EMIN	**Mina Concepcio**	**4.21**	**311**	P	**Pn**	**05 01 55.7**	**-0.4**
	1.0nm,0.2s,SNR=8.8						
EBAD	**Badajoz**	**5.08**	**318**	P	**Pn**	**05 02 06.6**	**-1.8**
EBAD				S	**Sn**	**05 03 01.3**	**-6.6**
EBAD	**Badajoz**	**5.08**	**318**	Pn	**Pn**	**05 02 07.8**	**-0.6**
	1.3nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**05 03 02.6**	**-5.2**
	3.1nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**5.08**	**318**	P	**Pn**	**05 02 06.6**	**-1.8**
EIBI	**Ibiza**	**5.12**	**38**	Pn	**Pn**	**05 02 08.2**	**-0.8**
	0.5nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**5.12**	**38**	P	**Pn**	**05 02 08.2**	**-0.9**
PBEJ	**Beja**	**5.13**	**307**	*e*Pn	**Pn**	**05 02 09.2**	**+0.1**
PBEJ				*e*Sn	**Sn**	**05 03 05.9**	**-3.2**
PCBR	**Castelo Branco**	**6.12**	**323**	*e*Pn	**Pn**	**05 02 22.3**	**-0.8**
PCBR				*e*Sn	**Sn**	**05 03 27.5**	**-6.5**
	2.4nm,0.5s						
PCBR	**Castelo Branco**	**6.12**	**323**	Pn	**Pn**	**05 02 22.3**	**-0.8**
PCBR				Sn	**Sn**	**05 03 27.5**	**-6.5**
	1.2nm,0.5s						
PTOM	**Tomar**	**6.46**	**317**	*e*Pn	**Pn**	**05 02 27.2**	**-0.6**
PVIS	**Viseu**	**7.00**	**326**	*e*Sn	**Sn**	**05 03 48.0**	**-8.1**
PVRL	**Vila Real**	**7.38**	**329**	*e*Pn	**Pn**	**05 02 38.8**	**-2.0**

KRSC 22 05:16:52.8±0.8**, 55.09N**×**162.38E, h23**^{km}±5^{km}**, ML4.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.65**	**215**	*i* P	Pb	05 17 05.8	+0.3
MKZ				*i* S	Sb	05 17 15.2	+1.1
KBTR	**Krutoberegovo**	**1.15**	**12**	*e*P	Pn	05 17 13.5	-0.1
KBTR				*e*S	Sb	05 17 30.9	+2.6
ZLN	**Zelenaya**	**1.29**	**317**	*e*P	Pn	05 17 16.5	+0.8
ZLN				*i* S	Sn	05 17 34.0	+1.6
TUMR	**Tumrok**	**1.30**	**280**	*e*P	Pn	05 17 16.0	+0.2
TUMR				*e*S	Sn	05 17 33.1	+0.6
LGNR	**Loginova**	**1.38**	**317**	*e*P	Pn	05 17 17.5	+0.5
LGNR				*e*S	Sn	05 17 35.3	+0.6
CIRR	**Tsirk**	**1.38**	**319**	*e*P	Pn	05 17 17.8	+0.8
CIRR				*e*S	Sn	05 17 35.6	+0.9
KMNR	**Kamenistaya**	**1.39**	**300**	*i* P	Pn	05 17 17.4	+0.3
KMNR				*i* S	Sn	05 17 34.9	0.0
KPT	**Kopyto**	**1.51**	**306**	*e*P	Pn	05 17 19.0	+0.2
KPT				*e*S	Sn	05 17 38.1	+0.2
KRSR	**Krestovskiy**	**1.53**	**318**	*e*P	Pn	05 17 18.8	-0.3
KRSR				*e*S	Sn	05 17 37.3	-1.1
KLY	**Klyuchi**	**1.57**	**322**	*e*P	Pn	05 17 18.7	-1.0
KLY				*e*S	Sn	05 17 37.1	-2.3
KOZ	**Kozyrevsk**	**1.72**	**305**	*e*P	Pn	05 17 22.3	+0.4
KOZ				*e*S	Sn	05 17 43.6	+0.3
SRDR	**Sredinnyy**	**1.94**	**310**	*e*P	Pn	05 17 25.4	+0.4
SRDR				*e*S	Sn	05 17 49.3	+0.3
KII	**Karymskiy**	**2.01**	**239**	*e*P	Pn	05 17 26.3	+0.4
KII				*e*S	Sn	05 17 50.5	-0.1
BKI	**Bering**	**2.06**	**85**	*e*P	Pn	05 17 25.4	-1.4
BKI				*i* S	Sn	05 17 48.9	-3.1
BKI				Smax			
	100nm,1.5s						
ESO	**Esso**	**2.25**	**293**	*i* P	Pn	05 17 28.7	-0.8
ESO				*e*S	Sn	05 17 56.0	-0.8
SPN	**Mys Shipunski**	**2.43**	**216**	*i* P	Pn	05 17 31.3	-0.7
SPN				*i* S	Sn	05 18 00.0	-1.3
NLC	**Nalytchevo**	**2.62**	**224**	*e*P	Pn	05 17 34.5	-0.3
NLC				*e*S	Sn	05 18 04.7	-1.5
SDLR	**Sedlovina**	**2.74**	**230**	*i* P	Pn	05 17 36.9	+0.5
AVH	**Avacha**	**2.81**	**231**	*e*P	Pn	05 17 38.1	+0.6
AVH				*e*S	Sn	05 18 10.7	-0.4
UGLR	**Uglovaya**	**2.81**	**229**	*i* P	Pn	05 17 37.9	+0.4
KOK	**Koryaka**	**2.84**	**232**	*e*P	Pn	05 17 39.6	+1.7
GNL	**Ganaly**	**2.95**	**244**	*e*P	Pn	05 17 39.7	+0.3
PET	**Petropavlovsk**	**3.02**	**228**	*e*P	Pn	05 17 40.6	+0.2
PET				*e*S	Sn	05 18 15.5	-0.7
RUS	**Russkaya**	**3.51**	**222**	*i* P	Pn	05 17 47.6	+0.2
RUS				*e*S	Sn	05 18 27.6	-1.2
GRL	**Gorelyy**	**3.60**	**227**	*e*P	Pn	05 17 49.4	+0.7
GRL				*e*S	Sn	05 18 30.5	-0.5
APC	**Apacha**	**3.77**	**237**	*e*P	Pn	05 17 52.3	+1.3
APC				*e*S	Sn	05 18 35.2	0.0
MIPR	**Malaya Ipel'ka**	**4.37**	**232**	P	Pn	05 17 59.8	+0.2

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*IDC **22** 05:22:23.3±2.2, 2.24N×95.93E, mb4.0/6, mb1 4.1/7, mb1mx3.9/17, mbtmp3.9/7, Error ellipse: s-maj=92.8km s-min=21.3km az=60.0*

*NEIC **22** 05:22:28.0±0.9, 2.27N×96.08E, h30^{km}, mb4.5/1, Error ellipse: s-maj=20.7km s-min=11.8km az=61.0*

ISC 22 05:22:25.7±1.2**, 2.3N**±0.1×**96.1E**±0.2**, h30**^{km}**, n9,** σ**0**^{s}.**71**/9**, mb4.1**/7**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.48**	**57**	*e*P	**Pn**	**05 23 47.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**16.34**	**10**	Pn	**P**	**05 26 15.8**	**+0.9**
	baz=203,slow=11,SNR=4.2						
WRA	**Warramunga Arr**	**43.56**	**122**	P	**P**	**05 30 30.7**	**+1.6**
	0.5nm,0.5s,mb3.5,baz=302,slow=9.5,SNR=5.7						
MKAR	**Makanchi Array**	**45.95**	**347**	P	**P**	**05 30 48.1**	**+0.2**
	1.6nm,0.5s,mb4.2,baz=165,slow=7.8,SNR=12						
SONM	**Songino Array**	**46.27**	**10**	P	**P**	**05 30 50.2**	**-0.2**
	1.0nm,0.7s,mb3.9,baz=184,slow=8.1,SNR=6.4						
PMG	**Port Moresby**	**52.21**	**104**	P	**P**	**05 31 35.8**	**-0.8**
	3.3nm,0.5s,mb4.5						
ZAL	**Zalesovo**	**52.34**	**352**	P	**P**	**05 31 36.6**	**-0.4**
	1.6nm,0.5s,mb4.2,baz=337,slow=2.5,SNR=7.0						
BVAR	**Borovoye Array**	**54.88**	**341**	P	**P**	**05 31 55.5**	**-0.4**
	0.7nm,0.8s,mb3.8,baz=164,slow=10,SNR=5.0						
STKA	**Stephens Creek**	**54.91**	**132**	P	**P**	**05 31 55.9**	**-0.5**
	3.9nm,0.8s,mb4.5,baz=321,slow=13,SNR=2.8						

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*TEH **22** 05:58:30.0, 33.77N×45.38E, h14^{km}, Mn3.8*

*CSEM **22** 05:58:31.6±0.3, 33.86N×45.46E, h40^{km}, ML3.8, Error ellipse: s-maj=8.6km s-min=6.1km az=161.0*

*THR **22** 05:58:38.6±0.6, 34.28N×46.22E, h18^{km}±8^{km}, ML3.7*

ISC 22 05:58:33.7±2.0**, 33.82N**±0.09×**45.8E**±0.1**, h14**^{km}**, n19,** σ**1**^{s}.**14**/22**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGHG	**Ghaleghazi**	**0.79**	**50**	Pg	**Pg**	**05 58 50.5**	**+0.8**
IDHR	**Dehrash**	**0.99**	**28**	Pn	**Pn**	**05 58 52.9**	**-0.1**
IVIS	**Veys**	**1.10**	**50**	Pn	**Pn**	**05 58 55.5**	**+0.9**
BHD	**Baghdad**	**1.33**	**246**	*i* Pb	x	05 58 50.0	
BHD				*i* Sg	x	05 59 06.0	
ILIN	**Laeen**	**1.44**	**40**	Pn	**Pn**	**05 59 00.5**	**+1.0**
IKOM	**Komasi**	**1.44**	**75**	Pn	**Pn**	**05 59 01.0**	**+1.5**
SHGO	**Shushtar**	**3.02**	**124**	*e*PN	**Pn**	**05 59 28.1**	**+6.0**
SHGR	**Shooshtar-Gavs**	**3.02**	**124**	*e*PN	**Pn**	**05 59 28.1**	**+6.0**
SHGR				*e*SG	**Sg**	**06 00 14.0**	**-0.5**
SHGR				AML	AML	06 00 34.0	
	comp=N,355nm,0.6s						
ASAO	**Ashtian**	**3.55**	**77**	*e*PN	**Pn**	**05 59 30.0**	**+0.4**
ASAO				AML	AML	06 00 42.0	
	comp=N,115nm,0.7s						
IRAZ	**Razeghan**	**3.73**	**64**	Pn	**Pn**	**05 59 36.5**	**+4.4**
IBST	**Bostanabad**	**3.96**	**12**	Pn	**Pn**	**05 59 31.4**	**-4.1**
ISRB	**Sarab**	**4.26**	**20**	Pn	**Pn**	**05 59 36.8**	**-2.9**
IQOM	**Qom**	**4.45**	**75**	Pn	**Pn**	**05 59 42.5**	**+0.1**
IQOM				Sn	**Sn**	**06 00 34.6**	**0.0**
IKLH	**Kalahroud**	**4.82**	**94**	Pn	**Pn**	**05 59 43.4**	**-4.3**
IVRN	**Varamin**	**5.01**	**75**	Pn	**Pn**	**05 59 49.0**	**-1.3**
IVRN				Sn	**Sn**	**06 00 48.3**	**-0.4**
IDMV	**Damavand**	**5.40**	**69**	Pn	**Pn**	**05 59 54.4**	**-1.4**
IZEF	**Zefreh**	**5.51**	**98**	Pn	**Pn**	**05 59 53.0**	**-4.4**
IGAR	**Garneh**	**5.57**	**105**	Pn	**Pn**	**05 59 51.1**	**-7.1**
NASN	**Na'in**	**5.93**	**98**	*e*PN	**Pn**	**06 00 04.5**	**+1.3**
NASN				SN	**Sn**	**06 01 07.7**	**-4.0**

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*TEH **22** 06:04:46.7, 33.63N×45.46E, h15^{km}, Mn3.7*

*CSEM **22** 06:04:56.7±0.3, 34.36N×46.34E, h10^{km}, ML2.6, Error ellipse: s-maj=10.3km s-min=3.5km az=76.0*

THR 22 06:04:57.4±0.3**, 34.38N**×**46.37E, h15**^{km}**, ML3.3, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHD	**Baghdad**	**1.99**	**237**	*i* Pb	x	06 05 07.0	
BHD				*i* Sg	x	06 05 23.0	
ASAO	**Ashtian**	**3.02**	**86**	*e*PN	Pn	06 05 47.0	+1.2
ASAO				AML	AML	06 06 58.6	
	comp=N,60nm,0.7s						
SHGO	**Shushtar**	**3.05**	**137**	*e*PN	Pn	06 05 47.0	+0.9
SHGO				AML	AML	06 06 50.1	
	comp=N,133nm,0.6s						
SHGR	**Shooshtar-Gavs**	**3.05**	**137**	*e*PN	Pn	06 05 47.0	+0.9
MSL	**Mosul**	**3.29**	**306**	*e*Pn	x	06 05 44.0	
MSL				*e*Pb	x	06 05 48.5	
MSL				*i* Sn	x	06 06 27.5	
MSL				*i* Sb	Sb	06 06 39.5	+4.4
MSL				*i* Sg	Sg	06 06 44.5	-2.5
GRMI	**Germi**	**4.58**	**15**	*e*PN	Pn	06 06 08.4	+0.5
NASN	**Na'in**	**5.60**	**105**	*e*PN	Pn	06 06 22.7	+0.5
NASN				AML	AML	06 07 43.9	
	comp=N,9.3nm,0.4s						

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*IDC **22** 06:30:09.0±0.4, 9.69N×126.18E, mb5.2/33, mb1 5.2/33, mb1mx5.2/34, mbtmp5.1/33, MS4.7/20, Ms1 4.7/20, ms1mx4.7/23, Error ellipse: s-maj=16.9km s-min=9.7km az=69.0*

*MAN **22** 06:30:13.5, 9.69N×126.40E, h11^{km}, mb5.8, ML4.9, MS5.3*

MAN BUTUAN CITY - INTENSITY III CAGAYAN DE ORO CITY INTENSITY II BISLIG INTENSITY II.

*BJI **22** 06:30:14.9, 9.43N×126.53E, h80^{km}, mB5.2, mb5.0, Ms5.0, Msz4.9*

*MOS **22** 06:30:16.5±1.1, 9.72N×126.19E, h66^{km}, mb5.5/40, Error ellipse: s-maj=11.3km s-min=5.5km az=114.2*

*HRVD **22** 06:30:18.3±0.2, 9.61N×126.30E, h48^{km}±1^{km}, MW5.3/72, Centroid moment Tensor Solution. LP body waves: s65,c110;Mantle waves: s72,c132; Half duration: 1^{s}.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.77±.02; $M_{\theta\theta}$0.04±.02; $M_{\phi\phi}$0.73±.02; $M_{r\theta}$-0.18±.01; $M_{\theta\phi}$-0.23±.01; $M_{\phi r}$0.60±.02; Best double couple: $M_0$1.006×10^{17} NP1: ϕ_s344°, δ26°, λ-90°. NP2: ϕ_s163°, δ64°, λ-90°. Principal axes: T 1.021, Plg19°, Azm253°; N -.03, Plg0°, Azm163°; P -.991, Plg71°, Azm73°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **22** 06:30:18.3±1.0, 9.66N×126.25E, h70^{km}±9^{km}, mb5.3/51 Error ellipse: s-maj=6.4km s-min=3.8km az=74.0*

ISC 22 06:30:09.2±0.2**, 9.74N**±0.02×**126.59E**±0.02**, h11**^{km}**, (h55**^{km}±3.0^{km}**:pP-P), n318,** σ**1**^{s}.**41**/331**, mb5.2**/109**, MS4.8**/62**, 23C-24D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.08**	**272**	⇑*e*P	**Pb**	**06 30 30.4**	**+0.9**
SCPH				*e*S	**Sb**	**06 30 44.2**	**+0.7**
BUTP	**Butuan**	**1.22**	**231**	*e*P	**Pb**	**06 30 32.6**	**+0.8**
BUTP				*e*S	**Sb**	**06 30 47.3**	**-0.2**
MSLP	**Maasin**	**1.75**	**283**	*e*P	**Pn**	**06 30 41.8**	**+2.0**
MSLP				*e*S	**Sn**	**06 31 04.5**	**+2.3**
PLP	**Palo**	**2.13**	**312**	⇑*e*P	**Pn**	**06 30 47.6**	**+2.4**
PLP				*e*S	**Sn**	**06 31 14.9**	**+3.1**
BESP	**Borongan**	**2.17**	**329**	*e*P	**Pn**	**06 30 48.8**	**+2.9**
BESP				*e*S	**Sn**	**06 31 18.8**	**+5.9**
CGP	**Cagayan de Oro**	**2.26**	**236**	⇓*e*P	**Pn**	**06 30 48.3**	**+1.1**
CGP				*e*S	**Sn**	**06 31 16.3**	**+1.0**
BUKP	**Musuan**	**2.38**	**219**	*e*P	**Pn**	**06 30 51.4**	**+2.5**
LLP	**Lapu-Lapu**	**2.65**	**283**	⇑*i*P	**Pn**	**06 30 55.0**	**+2.3**
LLP				*i* S	**Sn**	**06 31 24.1**	**-1.0**
TBP	**Tagbilaran**	**2.69**	**269**	⇑*e*P	**Pn**	**06 30 54.5**	**+1.3**
TBP				*e*S	**Sn**	**06 31 23.8**	**-2.3**
MATI	**Mati**	**2.79**	**187**	*e*P	**Pn**	**06 30 57.3**	**+2.6**
MATI				*e*S	**Sn**	**06 31 32.9**	**+4.2**
DAV	**Davao City (W)**	**2.83**	**201**	*i* P	**Pn**	**06 30 59.3**	**+4.0**
KCP	**Kidapawan**	**3.09**	**209**	⇓*e*P	**Pn**	**06 31 01.7**	**+2.8**
KCP				*i* S	**Sn**	**06 31 37.7**	**+1.5**
SNPH	**Sibulan**	**3.33**	**264**	⇑*i*P	**Pn**	**06 31 03.7**	**+1.4**
SNPH				*i* S	**Sn**	**06 31 42.1**	**-0.2**
CNP	**Catarman**	**3.34**	**326**	*e*P	**Pn**	**06 31 05.4**	**+2.8**
CNP				*e*S	**Sn**	**06 31 44.0**	**+1.4**
DCPH	**Dipolog City**	**3.40**	**251**	⇑*i*P	**Pn**	**06 31 04.4**	**+1.1**
DCPH				*e*S	**Sn**	**06 31 41.1**	**-2.8**
PAGZ	**Pagadian**	**3.68**	**240**	*e*P	**Pn**	**06 31 08.8**	**+1.4**
PAGZ				*e*S	**Sn**	**06 31 51.5**	**+0.2**
MMPH	**Masbate**	**3.91**	**312**	⇑*e*P	**Pn**	**06 31 14.0**	**+3.5**
MMPH				*i* S	**Sn**	**06 31 56.0**	**-0.9**
GUIM	**Jordan**	**4.04**	**283**	*e*P	**Pn**	**06 31 14.2**	**+1.8**
GUIM				*e*S	**Sn**	**06 31 54.7**	**-5.5**
RCP	**Roxas**	**4.19**	**296**	⇑*e*P	**Pn**	**06 31 17.4**	**+2.8**
PVCP	**Virac**	**4.52**	**328**	*e*P	**Pn**	**06 31 22.8**	**+3.6**
PVCP				*e*S	**Sn**	**06 32 12.5**	**+0.1**
KALP	**Kalibo**	**4.60**	**295**	⇑*e*P	**Pn**	**06 31 25.0**	**+4.6**
AAP	**Anini-y**	**4.62**	**279**	⇑*e*P	**Pn**	**06 31 25.2**	**+4.5**
OTRP	**Odiongan**	**5.19**	**301**	*e*P	**Pn**	**06 31 31.0**	**+2.3**
AUQP	**San Andres**	**5.24**	**313**	*e*P	**Pn**	**06 31 32.5**	**+3.2**
ZMPH	**Zamboanga City**	**5.26**	**239**	⇓*e*P	**Pn**	**06 31 30.3**	**+0.6**
CUYO	**Cuyo Island**	**5.59**	**282**	*e*P	**Pn**	**06 31 35.2**	**+0.8**
CUYO				*e*S	**Sn**	**06 32 38.0**	**-1.4**
SJMP	**San Jose**	**6.01**	**297**	*e*P	**Pn**	**06 31 43.0**	**+2.7**
BUSP	**Coron**	**6.67**	**290**	*e*P	**Pn**	**06 31 51.1**	**+1.5**
POLP	**Polilio Island**	**6.73**	**318**	*e*P	**Pn**	**06 31 51.8**	**+1.4**
POLP				*e*S	**Sn**	**06 33 06.7**	**-1.1**
ENPP	**El Nido**	**7.20**	**282**	*e*P	**Pn**	**06 31 57.5**	**+0.5**
LUBP	**Lubang**	**7.37**	**303**	*e*P	**Pn**	**06 32 02.2**	**+2.7**
NZB	**Bigte**	**7.40**	**314**	⇓*e*P	**Pn**	**06 32 01.9**	**+2.1**
BALP	**Baler**	**7.71**	**321**	*e*P	**Pn**	**06 32 05.9**	**+1.7**
BATP	**Bataraza**	**8.72**	**265**	*e*P	**P**	**06 32 19.8**	**+1.5**
BCPH	**Baguio City Da**	**8.82**	**319**	⇓*i*P	**P**	**06 32 20.6**	**+0.9**
APYP	**Conner**	**9.60**	**328**	*e*P	**P**	**06 32 29.9**	**-0.7**
APYP				*e*S	**Sn**	**06 34 13.9**	**-5.6**
ABRA	**Dolores**	**9.72**	**325**	*e*P	**P**	**06 32 33.5**	**+1.4**
TSM	**Tawau**	**10.20**	**239**	P	**P**	**06 32 40.3**	**+1.5**
KKM	**Kota Kinabalu**	**10.91**	**251**	*e*P	**P**	**06 32 48.4**	**-0.1**
KKM	**Kota Kinabalu**	**10.91**	**251**	P	**P**	**06 32 49.6**	**+1.1**
YHNB	**Yeheng**	**15.66**	**342**	*e*P	**P**	**06 33 55.2**	**+3.5**
QZH	**Quanzhou**	**16.93**	**334**	P	**P**	**06 34 12.8**	**+5.0**
QZH				S	**S**	**06 37 18.5**	**+3.6**
QZH				AMB	AMB		
	comp=Z,130nm,1.2s						
QZH				LR	LR		
	comp=N,7µm,16.5s						
QZH				LR	LR		
	comp=E,7µm,23.4s						
QZH				LR	LR		
	comp=Z,8µm,17.8s						
JOW	**Kunigami**	**17.08**	**5**	P	**P**	**06 34 14.2**	**+4.5**
	baz=150,slow=8.1,SNR=2.0						
JOW				LR	LR	06 40 37.8	
	comp=Z,1µm,18.2s,baz=176,slow=37						
KSM	**Kuching**	**18.15**	**244**	⇑*i*P	**P**	**06 34 23.4**	**+0.2**
KSM				*i* S	**S**	**06 37 49.1**	**+6.3**
GZH	**Guangzhou**	**18.35**	**318**	P	**P**	**06 34 29.9**	**+4.3**
QIZ	**Qiongzhong**	**18.65**	**302**	⇑P	**P**	**06 34 30.3**	**+1.0**
QIZ				XP		06 34 52.4	
QIZ				S	**S**	**06 37 58.8**	**+4.7**
QIZ				AMB	AMB		
	comp=Z,30nm,1.3s						
QIZ				AMB	AMB		
	comp=Z,590nm,6.2s						
QIZ				LR	LR		
	comp=N,2µm,19.9s						
QIZ				LR	LR		
	comp=E,3µm,19.3s						
QIZ				LR	LR		
	comp=Z,5µm,23.5s						
QIZ	**Qiongzhong**	**18.65**	**302**	*e*P	**P**	**06 34 29.2**	**-0.1**
	comp=Z,38nm,0.8s						
SSE	**Sheshan**	**21.84**	**347**	P	**P**	**06 35 03.6**	**-0.1**
SSE				S	**S**	**06 39 06.4**	**+6.5**
SSE				AMB	AMB		
	comp=Z,140nm,1.1s,mb5.3						
SSE				AMB	AMB		
	comp=Z,150nm,12.0s						
SSE				LR	LR		
	comp=N,720nm,20.2s,MS4.1						
SSE				LR	LR		
	comp=E,340nm,20.1s,MS4.1						
SSE				LR	LR		
	comp=Z,1µm,20.2s,MS4.2						
CBIJ	**Chichi jima**	**22.70**	**38**	P	**P**	**06 35 14.6**	**+2.3**
	comp=Z,175nm,0.7s,mb5.6,baz=290,slow=5.7,SNR=8.5						
CBIJ				LR	LR	06 42 18.9	
	comp=Z,2µm,20.8s,MS4.6,baz=260,slow=32						
KAKA	**Kakadu**	**23.05**	**165**	⇓*i*P	**P**	**06 35 15.9**	**+0.1**
	comp=Z,207nm,0.9s,mb5.6						
KAKA				*i* S	**S**	**06 39 25.4**	**+3.4**
NJ2	**Nanjing**	**23.33**	**343**	*e*P	**P**	**06 35 20.3**	**+1.8**
NJ2				PP	PP	06 35 52.1	+2.3
NJ2				S	**S**	**06 39 24.0**	**-2.9**
NJ2				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,230nm,5.9s						
NJ2				LR	LR		
	comp=N,4µm,18.3s,MS5.0						
NJ2				LR	LR		
	comp=E,2µm,15.0s,MS5.0						
NJ2				LR	LR		
	comp=Z,2µm,19.3s,MS4.6						
JNU	**Nakatsue**	**23.61**	**9**	P	**P**	**06 35 22.8**	**+1.7**
	comp=Z,54nm,0.9s,mb5.0,baz=162,slow=4.2,SNR=26						
JNU				LR	LR	06 44 54.5	
	comp=Z,959nm,18.3s,MS4.3,baz=168,slow=37						
WHN	**Wuhan**	**23.64**	**333**	⇓P	**P**	**06 35 23.5**	**+2.1**
WHN				S	**S**	**06 39 36.0**	**+3.7**
WHN				LR	LR		
	comp=N,4µm,17.2s,MS5.1						
WHN				LR	LR		
	comp=E,2µm,14.2s,MS5.1						
WHN				LR	LR		
	comp=Z,6µm,18.4s,MS5.1						
KKTK	**Khon Kaen**	**24.05**	**288**	P	**P**	**06 35 25.0**	**-0.6**
	comp=Z,494nm,0.8s,mb6.0						
KGM	**Kluang**	**24.37**	**253**	P	**P**	**06 35 29.8**	**+1.1**
GYA	**Guiyang**	**25.14**	**314**	⇑*i*P	**P**	**06 35 35.9**	**-0.1**
GYA				AP	pP	06 35 50.3	+11
GYA				PP	PP	06 36 18.3	+4.3
GYA				S	**S**	**06 40 00.3**	**+2.4**
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,130nm,4.5s						
GYA				LR	LR		
	comp=N,2µm,16.4s,MS4.9						
GYA				LR	LR		
	comp=E,3µm,17.3s,MS4.9						
GYA				LR	LR		
	comp=Z,4µm,17.3s,MS5.0						
SNG	**Songkhla**	**25.81**	**266**	P	**P**	**06 35 44.0**	**+1.6**
	comp=Z,200nm,1.0s,mb5.6						
IPM	**Ipoh**	**25.87**	**260**	P	**P**	**06 35 42.8**	**-0.1**
ENH	**Enshi**	**25.92**	**324**	*e*P	**P**	**06 35 39.6**	**-3.8**
	comp=Z,23nm,0.7s,mb4.8						
KULM	**Kulim**	**26.09**	**262**	*e*P	**P**	**06 35 44.6**	**-0.4**
NST	**Nakhon Sawan**	**26.46**	**286**	P	**P**	**06 35 46.0**	**-2.4**
	comp=Z,67nm,1.0s,mb5.1						
NNT	**Nongplab**	**26.49**	**279**	P	**P**	**06 35 51.2**	**+2.5**
KMI	**Kunming**	**27.35**	**307**	P	**P**	**06 35 59.4**	**+3.0**
KMI				PP	PP	06 36 44.5	+0.8
KMI				S	**S**	**06 40 30.8**	**-3.5**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
KMI				LR	LR		
	comp=N,2µm,17.7s,MS4.8						
KMI				LR	LR		
	comp=E,2µm,20.5s,MS4.8						
KMI				LR	LR		
	comp=Z,3µm,19.8s,MS4.8						
KS15	**Wonju Array Si**	**27.61**	**2**	*e*P	**P**	**06 36 00.1**	**+1.4**
FITZ	**Fitzroy Crossi**	**27.68**	**182**	P	**P**	**06 35 58.7**	**-0.7**
	comp=Z,323nm,0.9s,mb6.0,baz=8.3,slow=8.3,SNR=164						
TIA	**Tai'an**	**27.72**	**343**	P	**P**	**06 35 59.8**	**+0.1**
TIA				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.2						
PMG	**Port Moresby**	**27.94**	**132**	*e*P	**P**	**06 36 02.9**	**+0.9**
PMG				pmax	pmax		
	comp=Z,79nm,1.0s						
PMG	**Port Moresby**	**27.94**	**132**	P	**P**	**06 36 02.9**	**+1.0**
	comp=Z,53nm,0.9s,mb5.2,baz=337,slow=5.2,SNR=15						
PMG	**Port Moresby**	**27.94**	**132**	*e*P	**P**	**06 36 02.9**	**+0.9**
	comp=Z,79nm,1.0s,mb5.3						
CMAR	**Chiang Mai Arr**	**28.15**	**291**	P	**P**	**06 36 01.6**	**-2.2**
	comp=Z,10nm,0.9s,mb4.5,baz=102,slow=6.8,SNR=23						
CMAR				PcP	PcP	06 39 17.8	-0.3
	comp=Z,5.7nm,0.9s,baz=110,slow=0.5,SNR=8.2						
CMAR				LR	LR	06 47 43.2	
	comp=Z,2µm,18.4s,MS4.8,baz=110,slow=38						
MAJO	**Matsushiro**	**28.69**	**20**	P	**P**	**06 36 09.6**	**+1.1**
MAT	**Matsushiro**	**28.69**	**20**	*e*P	**P**	**06 36 09.0**	**+0.5**
MAT				*e*S	**S**	**06 40 59.0**	**+3.1**
MAT				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.8						
MAT	**Matsushiro**	**28.69**	**20**	P	**P**	**06 36 09.0**	**+0.5**
MAT				S	**S**	**06 40 58.0**	**+2.1**
XAN	**Xi'an**	**29.12**	**329**	P	**P**	**06 36 10.3**	**-2.1**
XAN				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
DL2	**Dalian**	**29.38**	**352**	P	**P**	**06 36 16.3**	**+1.6**
DL2				S	**S**	**06 41 06.5**	**-0.4**
DL2				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.9						
DL2				LR	LR		
	comp=N,730nm,18.2s						
DL2				LR	LR		
	comp=Z,850nm,20.3s,MS4.4						
CD2	**Chengdu**	**29.91**	**318**	*e*P	**P**	**06 36 18.5**	**-1.0**
CD2				S	**S**	**06 41 07.9**	**-7.5**
CD2				LR	LR		
	comp=N,3µm,22.8s						
CD2				LR	LR		
	comp=Z,4µm,15.6s						
WRAB	**Tennant Creek**	**30.46**	**165**	*e*P	**P**	**06 36 23.1**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.3						
WRAB				MLR	MLR		
	comp=Z,510nm,21.0s,MS4.2						
WRAB	**Tennant Creek**	**30.46**	**165**	*e*P	**P**	**06 36 23.1**	**-1.4**
	comp=Z,49nm,0.8s,mb5.3						
WRAB				LR	LR		
	comp=Z,510nm,21.0s,MS4.2						
WRA	**Warramunga Arr**	**30.46**	**166**	P	**P**	**06 36 22.6**	**-1.8**
	comp=Z,12nm,0.7s,mb4.7,baz=343,slow=9.8,SNR=53						
WRA				S	**S**	**06 41 18.3**	**-5.9**
	comp=Z,2.8nm,0.7s,baz=339,slow=12,SNR=4.8						
WB2	**Warramunga Arr**	**30.47**	**165**	*e*P	**P**	**06 36 22.4**	**-2.1**
MBWA	**Marble Bar**	**31.43**	**192**	*e*P	**P**	**06 36 31.3**	**-1.7**
	comp=Z,26nm,0.7s,mb5.2						
SNY	**Shenyang**	**32.07**	**356**	⇓P	**P**	**06 36 39.4**	**+1.0**
SNY				PP	PP	06 37 53.4	+8.4
SNY				S	**S**	**06 41 41.4**	**-7.8**
SNY				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.6						
SNY				AMB	AMB		
	comp=Z,330nm,6.7s						
SNY				LR	LR		
	comp=N,370nm,15.0s						
SNY				LR	LR		
	comp=E,1µm,21.0s						
SNY				LR	LR		
	comp=Z,860nm,20.2s						
LZH	**Lanzhou**	**33.39**	**325**	⇓P	**P**	**06 36 49.9**	**-0.1**
LZH				PP	PP	06 38 02.0	+0.2
LZH				S	**S**	**06 42 06.0**	**-3.8**
LZH				SS	SS	06 44 09.3	-3.1
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,180nm,4.6s						
LZH				LR	LR		
	comp=E,4µm,17.1s						
LZH				LR	LR		
	comp=Z,4µm,19.3s,MS5.2						
HHC	**Hu-ho-hao-te**	**33.72**	**339**	*e*P	**P**	**06 36 52.9**	**+0.1**
HHC				AP	pP	06 37 09.8	+14
HHC				XP	sP	06 37 19.0	+22
HHC				PP	PP	06 38 06.3	+0.6
HHC				PCP	PcP	06 39 33.4	+0.9
HHC				S	**S**	**06 42 07.8**	**-7.0**
HHC				XS		06 42 41.0	
HHC				SCP		06 43 10.8	
HHC				PCS		06 43 17.8	
HHC				SCS	ScS	06 47 07.4	-8.6
HHC				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
HHC				AMB	AMB		
	comp=Z,300nm,7.1s						
HHC				LR	LR		
	comp=N,1µm,17.7s,MS4.8						
HHC				LR	LR		
	comp=E,970nm,16.7s,MS4.8						
HHC				LR	LR		
	comp=Z,2µm,17.6s,MS4.8						
CN2	**Changchun**	**33.95**	**359**	*e*P	**P**	**06 36 55.9**	**+1.2**
CN2				*e*AP	pP	06 37 14.0	+16

CN2				*e*S	**S**	**06 42 16.9**	**-1.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				AMB	AMB		
	comp=Z,190nm,5.0s						
CN2				LR	LR		
	comp=N,1µm,16.0s,MS4.7						
CN2				LR	LR		
	comp=E,600nm,16.0s,MS4.7						
CN2				LR	LR		
	comp=Z,1µm,17.0s,MS4.7						
BTO	**Baotou**	**34.07**	**337**	*e*P	**P**	**06 36 55.9**	**+0.1**
MDJ	**Mudanjiang**	**34.85**	**4**	P	**P**	**06 37 04.3**	**+1.9**
MDJ				AP	pP	06 37 19.1	+13
MDJ				PP	PP	06 38 25.9	+5.9
MDJ				PCP	PcP	06 39 35.1	-0.6
MDJ				S	**S**	**06 42 32.4**	**+0.2**
MDJ				XS		06 42 58.6	
MDJ				PCS		06 43 22.3	
MDJ				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,160nm,8.7s						
MDJ				LR	LR		
	comp=N,750nm,17.9s,MS4.6						
MDJ				LR	LR		
	comp=E,460nm,16.3s,MS4.6						
MDJ				LR	LR		
	comp=Z,1µm,17.9s,MS4.7						
MDJ	**Mudanjiang**	**34.85**	**4**	*e*P	**P**	**06 37 04.3**	**+1.9**
	comp=Z,70nm,1.1s,mb5.5						
CTA	**Charters Tower**	**35.40**	**147**	⇓*i*P	**P**	**06 37 08.5**	**+1.1**
	comp=Z,22nm,0.6s,mb5.3						
CTA	**Charters Tower**	**35.40**	**147**	P	**P**	**06 37 08.6**	**+1.2**
CTA				pmax	pmax		
	comp=Z,27nm,0.7s						
CTA				MLR	MLR		
	comp=Z,1µm,18.0s						
CTA	**Charters Tower**	**35.40**	**147**	P	**P**	**06 37 08.6**	**+1.3**
	comp=Z,27nm,0.7s,mb5.3,baz=334,slow=11,SNR=41						
CTA				LR	LR	06 54 25.6	
	comp=Z,1µm,18.0s,MS4.7,baz=340,slow=41						
CTAO	**Charters Tower**	**35.40**	**147**	*e*P	**P**	**06 37 08.1**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.3						
CTAO	**Charters Tower**	**35.40**	**147**	*e*P	**P**	**06 37 08.1**	**+0.8**
	comp=Z,24nm,0.6s,mb5.3						
SHL	**Shillong**	**36.48**	**300**	*e*P	**P**	**06 37 16.0**	**-0.4**
SHL				*i* S	**S**	**06 42 48.0**	**-10**
ASAJ	**Asahikawa**	**36.96**	**19**	P	**P**	**06 37 23.3**	**+3.0**
ASAJ				pmax	pmax		
	comp=Z,29nm,0.9s						
ASAJ	**Asahikawa**	**36.96**	**19**	P	**P**	**06 37 23.3**	**+3.0**
	comp=Z,29nm,0.9s,mb5.1,baz=239,slow=16,SNR=15						
GTA	**Gaotai**	**38.00**	**325**	*e*P	**P**	**06 37 28.3**	**-0.7**
GTA				PP	PP	06 38 58.8	-0.2
GTA				PCP	PcP	06 39 44.5	-0.7
GTA				S	**S**	**06 43 18.5**	**-2.2**
GTA				SS	SS	06 45 56.3	-1.0
GTA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
GTA				AMB	AMB		
	comp=Z,120nm,6.8s						
GTA				LR	LR		
	comp=N,1µm,19.0s,MS5.0						
GTA				LR	LR		
	comp=E,2µm,19.0s,MS5.0						
GTA				LR	LR		
	comp=Z,2µm,17.9s,MS5.0						
HNR	**Honiara**	**38.28**	**119**	LR	LR	06 51 26.0	
	comp=Z,1µm,21.0s,MS4.7,baz=299,slow=33						
LSA	**Lhasa**	**38.59**	**306**	P	**P**	**06 37 37.0**	**+2.8**
LSA	**Lhasa**	**38.59**	**306**	*e*P	**P**	**06 37 33.7**	**-0.5**
LSA				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.1						
LSA	**Lhasa**	**38.59**	**306**	*e*P	**P**	**06 37 33.7**	**-0.5**
	comp=Z,48nm,1.1s,mb5.1						
CAL	**Calcutta**	**38.77**	**294**	*e*x	x	06 38 01.4	
CAL				*e*x	x	06 46 42.5	
YSS	**Yuzh-Sakhalins**	**39.56**	**17**	*e*P	**P**	**06 37 44.0**	**+2.0**
YSS				*e**SP	sP	06 37 59.0	+12
YSS				S	**S**	**06 43 40.0**	**-4.2**
YSS				*e*		06 47 46.0	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.0						
YSS				MLR	MLR		
	comp=N,500nm,17.0s,MS4.6						
YSS				MLR	MLR		
	comp=E,500nm,17.0s,MS4.6						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.3						
YSS	**Yuzh-Sakhalins**	**39.56**	**17**	*e*P	**P**	**06 37 44.5**	**+2.4**
	comp=Z,16nm,0.7s,mb4.8						
KLR	**Kul'dur**	**39.60**	**5**	*e*P	**P**	**06 37 40.5**	**-1.9**
KLR				*e*PPP	PPP	06 39 25.5	-16
KLR				*e*S	**S**	**06 43 35.0**	**-10**
KLR				*e*SSS	SSS	06 46 39.5	-28
KLR				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.8						
KLR				MLR	MLR		
	comp=E,500nm,16.0s						
KLR				MLR	MLR		
	comp=Z,900nm,16.0s,MS4.7						
HIA	**Hailar**	**39.82**	**353**	*e*P	**P**	**06 37 45.3**	**+1.1**
HIA				pmax	pmax		
	comp=Z,49nm,1.0s						
HIA	**Hailar**	**39.82**	**353**	*e*P	**P**	**06 37 45.3**	**+1.1**
	comp=Z,49nm,1.0s,mb5.2						
FORT	**Forrest**	**40.31**	**178**	⇓*i*P	**P**	**06 37 48.5**	**+0.1**
	comp=Z,175nm,0.6s,mb6.0						
ULN	**Ulaanbaatar**	**41.43**	**340**	*i* P	**P**	**06 37 58.0**	**+0.6**
ULN	**Ulaanbaatar**	**41.43**	**340**	*e*P	**P**	**06 37 57.9**	**+0.5**
	comp=Z,26nm,0.9s,mb4.9						
ULN				LR	LR		
	comp=Z,940nm,19.0s,MS4.7						
SONM	**Songino Array**	**41.62**	**340**	P	**P**	**06 37 59.3**	**+0.3**
	comp=Z,9.9nm,1.0s,mb4.4,baz=157,slow=9.4,SNR=28						
SONM				PcP	PcP	06 39 56.0	-0.7
	comp=Z,5.4nm,0.8s,baz=162,slow=3.6,SNR=4.3						
SONM				LR	LR	06 57 17.5	
	comp=Z,1µm,19.5s,MS4.8,baz=156,slow=39						
KLBR	**Kellerberrin**	**41.95**	**191**	⇓*i*P	**P**	**06 38 01.4**	**-0.6**
	comp=Z,78nm,0.8s,mb5.4						
GUN	**Gumba**	**42.31**	**301**	*e*P	**P**	**06 38 03.1**	**-1.8**
	comp=Z,220nm,1.0s,mb5.8						
PKI	**Pulchoki**	**42.61**	**300**	*e*P	**P**	**06 38 05.1**	**-2.3**
	comp=Z,114nm,1.2s,mb5.5						
PKI	**Pulchoki**	**42.61**	**300**	*e*P	**P**	**06 38 05.1**	**-2.3**
PKI				pmax	pmax		
	comp=Z,57nm,1.2s,mb5.2						
MUN	**Mundaring**	**42.65**	**193**	⇑*i*P	**P**	**06 38 07.7**	**0.0**
	comp=Z,116nm,0.8s,mb5.7						
MUN	**Mundaring**	**42.65**	**193**	⇑*i*P	**P**	**06 38 07.7**	**0.0**
MUN				pmax	pmax		
	comp=Z,116nm,0.8s,mb5.7						
KKN	**Kakani**	**42.78**	**301**	*e*P	**P**	**06 38 06.9**	**-1.9**
DMN	**Daman**	**42.88**	**300**	*e*P	**P**	**06 38 08.0**	**-1.6**
	comp=Z,97nm,1.0s,mb5.5						
NWAO	**Narrogin (SRO)**	**43.35**	**191**	*e*P	**P**	**06 38 13.2**	**-0.2**
NWAO				pmax	pmax		
	comp=Z,152nm,0.8s						
NWAO	**Narrogin (SRO)**	**43.35**	**191**	P	**P**	**06 38 12.4**	**-0.9**
	comp=Z,201nm,0.8s,mb5.9,baz=18,slow=8.2,SNR=79						
NWAO				LR	LR	06 56 32.3	
	comp=Z,492nm,18.3s,MS4.5,baz=165,slow=37						
NWAO	**Narrogin (SRO)**	**43.35**	**191**	*e*P	**P**	**06 38 13.2**	**-0.2**
	comp=Z,152nm,0.8s,mb5.8						
GKN	**Gorkha**	**43.39**	**301**	*e*P	**P**	**06 38 11.7**	**-2.0**
	comp=Z,90nm,1.1s,mb5.4						
STKA	**Stephens Creek**	**43.80**	**161**	⇓*i*P	**P**	**06 38 16.9**	**-0.1**
	comp=Z,24nm,0.6s,mb5.1						
STKA	**Stephens Creek**	**43.80**	**161**	P	**P**	**06 38 16.9**	**0.0**
	comp=Z,58nm,1.0s,mb5.2,baz=342,slow=8.2,SNR=32						
STKA				LR	LR	06 57 54.3	
	comp=Z,750nm,18.8s,MS4.6,baz=124,slow=38						
KOLN	**Koldanda**	**44.21**	**300**	*e*P	**P**	**06 38 18.0**	**-2.4**
	comp=Z,121nm,0.9s,mb5.6						
ZAK	**Zakamensk**	**44.87**	**339**	⇓*i*P	**P**	**06 38 24.7**	**-0.7**
ZAK				*e*		06 40 07.4	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
MDRS	**Chennai**	**45.50**	**279**	*e*x	x	06 44 40.0	
TLY	**Talaya**	**45.84**	**340**	*e*P	**P**	**06 38 33.7**	**+0.6**
TLY				*e*S	**S**	**06 45 06.4**	**-10**
TLY				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
TLY				MLR	MLR		
	comp=Z,757nm,18.0s,MS4.7						
TLY	**Talaya**	**45.84**	**340**	*e*P	**P**	**06 38 32.5**	**-0.6**
	comp=Z,23nm,0.9s,mb5.1						
ADE	**Adelaide**	**45.91**	**166**	*e*P	**P**	**06 38 34.9**	**+1.0**
IRK	**Irkutsk**	**46.11**	**341**	*e*P	**P**	**06 38 44.3**	**+9.1**
IRK				*e*		06 40 10.0	
IRK				pmax	pmax		
	comp=Z,36nm,1.8s,mb5.0						
ARMA	**Armidale**	**46.62**	**150**	⇓*i*P	**P**	**06 38 41.2**	**+1.7**
MOY	**Mondy**	**46.75**	**338**	*e*P	**P**	**06 38 41.5**	**+1.2**
CLNS	**Chul'man**	**47.01**	**359**	*e*P	**P**	**06 38 42.3**	**+0.1**
CLNS				pmax	pmax		
	comp=Z,132nm,1.2s,mb5.7						
CLNS				pmax	pmax		
	comp=N,72nm,1.1s						
CLNS				pmax	pmax		
	comp=E,25nm,0.7s						
CLNS				MLR	MLR		
	comp=Z,500nm,15.0s,MS4.6						
CLNS				MLR	MLR		
	comp=N,500nm,16.0s,MS4.6						
CLNS				MLR	MLR		
	comp=E,100nm,13.0s,MS4.6						
HYB	**Hyderabad**	**47.21**	**285**	*e*P	**P**	**06 38 43.0**	**-1.4**
HYB	**Hyderabad**	**47.21**	**285**	*i* P	**P**	**06 38 43.0**	**-1.4**
WMQ	**Urumqi**	**47.83**	**322**	*e*P	**P**	**06 38 49.3**	**+0.4**
WMQ				AP	pP	06 39 06.3	+14
WMQ				XP	sP	06 39 14.3	+21
WMQ				PCP	PcP	06 40 18.3	+0.2
WMQ				PP	PP	06 40 40.8	+0.6
WMQ				S	**S**	**06 45 38.6**	**-6.0**
WMQ				SCS	ScS	06 48 33.3	-6.4
WMQ				SS	SS	06 49 01.3	-6.4
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,260nm,6.0s						
WMQ				LR	LR		
	comp=N,880nm,17.0s,MS5.0						
WMQ				LR	LR		
	comp=E,1µm,17.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,990nm,17.0s,MS4.8						
BOD	**Bodaibo**	**48.94**	**351**	*e*P	**P**	**06 38 58.3**	**+1.0**
BOD				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
CNB	**Canberra Magne**	**49.71**	**155**	*e*P	**P**	**06 39 04.7**	**+1.2**
	comp=Z,82nm,1.1s,mb5.7						
NDI	**New Delhi**	**49.89**	**299**	*e*P	**P**	**06 39 04.0**	**-1.0**
DZM	**Mont Dzumac**	**50.27**	**129**	*e*P	**P**	**06 39 09.4**	**+1.5**
DZM	**Mont Dzumac**	**50.27**	**129**	P	**P**	**06 39 10.3**	**+2.3**
	comp=Z,54nm,0.8s,mb5.7,baz=302,slow=6.2,SNR=66						
DZM				LR	LR	06 58 23.7	
	comp=Z,390nm,20.7s,MS4.4,baz=117,slow=34						
TOO	**Toolangi**	**50.28**	**160**	⇓*i*P	**P**	**06 39 08.8**	**+0.9**
	comp=Z,14nm,0.6s,mb5.2						
TOO	**Toolangi**	**50.28**	**160**	⇓*i*P	**P**	**06 39 08.8**	**+0.9**
TOO				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.2						
PET	**Petropavlovsk**	**50.32**	**25**	*d i*P	**P**	**06 39 09.5**	**+1.6**
PET				*e*S	**S**	**06 46 25.5**	**+6.3**
PET				pmax	pmax		
	comp=Z,500nm,21.3s						
PET				pmax	pmax		
	comp=Z,300nm,10.8s						
PET				smax			
	comp=N,500nm,20.6s						
PET				smax			
	comp=N,600nm,24.1s						
PET				MLR	MLR		
	comp=Z,700nm,18.0s,MS4.7						
PET				MLR	MLR		
	comp=Z,800nm,16.0s						
YAK	**Yakutsk**	**52.25**	**2**	*d i*P	**P**	**06 39 22.9**	**+0.5**
YAK				*e*		06 40 33.6	
YAK				*e*		06 41 18.6	
YAK				*e*S	**S**	**06 46 45.3**	**-0.4**
YAK				*e*		06 49 07.5	
YAK				*e*SS	SS	06 50 24.5	+2.9
YAK				pmax	pmax		
	comp=Z,106nm,1.0s,mb5.7						
YAK				pmax	pmax		
	comp=N,50nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				smax			
	comp=N,22nm,1.4s						
YAK				smax			
	comp=E,27nm,1.9s						
YAK				MLR	MLR		
	comp=Z,398nm,15.0s,MS4.6						
YAK				MLR	MLR		
	comp=N,364nm,17.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,123nm,17.0s,MS4.5						
YAK	**Yakutsk**	**52.25**	**2**	*e*P	**P**	**06 39 23.3**	**+0.9**
	comp=E,179nm,0.9s,mb6.0						
MKAR	**Makanchi Array**	**52.64**	**323**	P	**P**	**06 39 23.6**	**-2.0**
	comp=E,15nm,0.8s,mb5.0,baz=122,slow=7.8,SNR=46						
MKAR				PcP	PcP	06 40 33.8	-1.8
	comp=E,9.0nm,0.8s,baz=108,slow=3.8,SNR=4.3						
MKAR				LR	LR	07 03 35.2	
	comp=E,1µm,20.2s,MS5.0,baz=156,slow=38						
MA2	**Magadan**	**52.96**	**15**	*e*P	**P**	**06 39 29.1**	**+1.3**
MA2				*e*		06 41 35.0	
MA2				*e*S	**S**	**06 46 56.7**	**+1.3**
MA2				*e*		06 49 12.6	
MA2				*e*SS	SS	06 50 33.7	-0.2
MA2				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
MA2				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.0						
MA2	**Magadan**	**52.96**	**15**	*e*P	**P**	**06 39 29.7**	**+1.9**
	comp=Z,9.9nm,0.7s,mb4.8						
ULHL	**Ulahol**	**54.58**	**315**	P	**P**	**06 39 38.5**	**-1.4**
	SNR=16						
KZA	**Kyzart**	**55.20**	**315**	P	**P**	**06 39 43.8**	**-0.8**
	SNR=25						
ZAL	**Zalesovo**	**55.24**	**331**	P	**P**	**06 39 42.7**	**-2.0**
	comp=Z,5.5nm,0.4s,mb4.9,baz=354,slow=6.5,SNR=30						
ZAL	**Zalesovo**	**55.24**	**331**	P	**P**	**06 39 42.7**	**-2.0**
TKM2	**Tokmak 2**	**55.26**	**316**	P	**P**	**06 39 44.4**	**-0.5**
	SNR=8.7						
KBK	**Karagaybulak**	**55.62**	**315**	P	**P**	**06 39 47.0**	**-0.5**
	SNR=7.7						
UCH	**Uchtor**	**55.77**	**315**	P	**P**	**06 39 47.9**	**-0.7**
	SNR=49						
CHMS	**Chumysh**	**55.87**	**316**	P	**P**	**06 39 47.5**	**-1.8**
	SNR=7.1						
FRU	**Bishkek**	**55.91**	**316**	*e*P	**P**	**06 39 47.5**	**-2.1**
FRU				MLR	MLR		
	comp=Z,2µm,25.0s,MS5.0						
AAK	**Ala-Archa**	**55.92**	**315**	*e*P	**P**	**06 39 48.2**	**-1.5**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
AAK	**Ala-Archa**	**55.92**	**315**	*e*P	**P**	**06 39 48.2**	**-1.5**
	comp=Z,7.9nm,0.9s,mb4.7						
USP	**Ospenovka**	**56.14**	**316**	P	**P**	**06 39 49.3**	**-1.9**
	SNR=22						
SEY	**Seymchan**	**56.26**	**14**	*e*P	**P**	**06 39 58.1**	**+6.3**
SEY				*e*	PP	06 42 05.5	+6.7
SEY				*e*SS		06 47 59.9	
SEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
SEY				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
SEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
AML	**Almayashu**	**56.31**	**315**	P	**P**	**06 39 51.8**	**-0.7**
	SNR=15						
EKS2	**Erkin-Say**	**56.43**	**315**	P	**P**	**06 39 51.9**	**-1.4**
	SNR=19						
NVS	**Novosibirsk**	**56.52**	**332**	*i* P	**P**	**06 39 50.9**	**-2.9**
NVS				*e*		06 40 19.2	
NVS				*e*		06 40 52.7	
NVS				*e*S	**S**	**06 47 35.6**	**-7.6**
NVS				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
NVS				pmax	pmax		
	comp=N,5.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.1s						
NVS				smax			
	comp=N,15nm,1.8s						
NVS				smax			
	comp=E,11nm,1.8s						
FX1	**Attu Island--F**	**57.02**	**32**	*e*P	**P**	**06 40 00.3**	**+2.9**
KKAR	**Karatay Array**	**58.85**	**315**	*i* P	**P**	**06 40 07.9**	**-2.4**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
VOSK	**Vostochnaya**	**61.83**	**325**	P	**P**	**06 40 27.6**	**-3.0**
VOSK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
TIXI	**Tiksi**	**61.88**	**1**	*i* P	**P**	**06 40 30.4**	**-0.3**
TIXI	**Tiksi**	**61.88**	**1**	*i* Pr		06 40 30.4	
BVA0	**Borovoye Array**	**62.28**	**325**	*i* P	**P**	**06 40 31.7**	**-1.9**
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
BVAR	**Borovoye Array**	**62.28**	**325**	P	**P**	**06 40 31.5**	**-2.1**
	comp=Z,14nm,0.8s,mb5.1,baz=112,slow=8.0,SNR=48						
BVAR				PcP	PcP	06 41 11.4	-1.8
	comp=Z,3.9nm,0.5s,baz=108,slow=4.7,SNR=3.5						
ZRNK	**Zerenda**	**63.03**	**325**	P	**P**	**06 40 36.5**	**-2.1**
ZRNK				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.2						
BILL	**Bilibino**	**63.83**	**16**	⇓*i*P	**P**	**06 40 44.7**	**+1.1**
BILL				*i*		06 41 17.8	
BILL				*e*S	**S**	**06 49 23.7**	**+6.7**
BILL				pmax	pmax		
	comp=Z,65nm,1.1s,mb5.6						
BILL	**Bilibino**	**63.83**	**16**	*e*P	**P**	**06 40 44.4**	**+0.8**
	comp=Z,55nm,1.0s,mb5.5						
AB31	**Akbulak array**	**67.48**	**319**	P	**P**	**06 41 05.3**	**-2.1**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
SVE	**Sverdlovsk**	**68.83**	**327**	⇓*e*P	**P**	**06 41 14.0**	**-1.6**
SVE				*e*		06 41 43.0	
SVE				*e*S	S	06 50 11.0	-6.8
SVE				*e*		06 50 56.0	
SVE				*e*		06 51 08.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.2						
SVE				MLR	MLR		
	comp=N,400nm,16.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,300nm,16.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.9						
ARU	**Arti**	**69.84**	**327**	*i* P	**P**	**06 41 19.8**	**-2.0**
SOKR	**Solikamsk**	**71.46**	**330**	⇑*i*P	**P**	**06 41 30.1**	**-1.5**
SOKR				S	S	06 50 44.3	-4.4
SOKR				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
SOKR				MLR	MLR		
	comp=Z,800nm,19.0s,MS5.0						
CASY	**Casey**	**76.73**	**187**	*e*P	**P**	**06 42 01.2**	**-0.7**
DRV	**Dumont d'Urvil**	**76.83**	**175**	P	**P**	**06 42 01.0**	**-1.5**
DRV				S	S	06 51 46.0	-2.5
IMA	**Indian Mountai**	**76.99**	**24**	*e*P	**P**	**06 42 06.1**	**+2.7**
IMA				pmax	pmax		
	comp=Z,136nm,1.0s,mb5.8						
IMA	**Indian Mountai**	**76.99**	**24**	*e*P	**P**	**06 42 06.1**	**+2.7**
	comp=Z,136nm,1.0s,mb5.8						
TI2	**Plekhanov**	**77.52**	**311**	*e*P	**P**	**06 42 07.0**	**+0.2**
GNI	**Garni**	**77.58**	**309**	P	**P**	**06 42 05.4**	**-1.8**
	comp=Z,3.0nm,0.4s,mb4.6,baz=130,slow=7.9,SNR=3.0						
ZEI	**Tsey**	**78.11**	**312**	*e*P	**P**	**06 42 06.8**	**-3.3**
ZEI				*i* *PP	pP	06 42 14.0	+0.5
ZEI				*i*		06 45 00.7	
ZEI				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.2						
MZLS	**Mizel**	**78.28**	**293**	P	**P**	**06 42 10.2**	**-1.1**
GOF	**Gofitskoye**	**78.64**	**314**	*e*P	**P**	**06 42 11.3**	**-1.6**
KIV	**Kislovodsk**	**78.94**	**313**	*e*P	**P**	**06 42 13.4**	**-1.2**
KIV				*e*		06 42 21.9	
KIV				*e*S	S	06 52 10.1	-1.6
KIV				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
KIV				pmax	pmax		
	comp=N,35nm,1.4s						
KIV				pmax	pmax		
	comp=E,16nm,1.0s						
KIV				MLR	MLR		
	comp=N,297nm,18.0s,MS5.0						
KIV				MLR	MLR		
	comp=E,492nm,18.0s,MS5.0						
KIV				MLR	MLR		
	comp=Z,799nm,18.0s,MS5.1						
KIV	**Kislovodsk**	**78.94**	**313**	*e*P	**P**	**06 42 13.8**	**-0.8**
	comp=Z,32nm,0.9s,mb5.3						
ILAR	**Eielson Array**	**79.78**	**26**	P	**P**	**06 42 19.1**	**+0.3**
	comp=Z,9.9nm,0.9s,mb4.8,baz=228,slow=5.5,SNR=84						
ILAR				LR	LR	07 21 03.3	
	comp=Z,207nm,18.2s,MS4.5,baz=118,slow=38						
ARSS	**Ar Rass**	**79.88**	**295**	P	**P**	**06 42 18.9**	**-1.1**
MIR	**Mirnyy**	**79.94**	**193**	*c i*P	**P**	**06 42 18.4**	**-1.1**
MIR				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.5						
DJNS	**Zahran al Janu**	**80.53**	**286**	P	**P**	**06 42 23.5**	**-0.1**
HILS	**Ha'il**	**81.00**	**296**	P	**P**	**06 42 24.5**	**-1.4**
SOC	**Sochi**	**81.11**	**313**	*e*P	**P**	**06 42 21.8**	**-4.4**
SOC				*e*		06 45 26.3	
SOC				*e*S	S	06 52 22.4	-12
SOC				MLR	MLR		
	comp=N,205nm,20.0s,MS4.7						
SOC				MLR	MLR		
	comp=E,306nm,20.0s,MS4.7						
SOC				MLR	MLR		
	comp=Z,640nm,20.0s,MS5.0						
MOS	**Moscow**	**81.45**	**325**	*e*P	**P**	**06 42 25.9**	**-1.8**
MOS				pmax	pmax		
	comp=Z,63nm,0.7s,mb5.7						
MOS				MLR	MLR		
	comp=Z,900nm,19.0s,MS5.2						
LVZ	**Lovozero**	**81.78**	**338**	⇓*e*P	**P**	**06 42 29.7**	**+0.5**
LVZ				*i* S	S	06 52 35.8	-5.0
LVZ				smax			
	comp=N,250nm,6.7s						
LVZ				MLR	MLR		
	comp=Z,890nm,15.0s,MS5.2						
LVZ				MLR	MLR		
	comp=N,130nm,14.0s,MS5.1						
LVZ				MLR	MLR		
	comp=E,610nm,17.0s,MS5.1						
BLJS	**Baljurashi**	**82.08**	**289**	P	**P**	**06 42 31.8**	**+0.1**
OBN	**Obninsk**	**82.11**	**325**	⇓*i*P	**P**	**06 42 30.0**	**-1.1**
OBN				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.3						
OBN				MLR	MLR		
	comp=Z,700nm,19.0s,MS5.0						
OBN	**Obninsk**	**82.11**	**325**	*i* P	**P**	**06 42 29.6**	**-1.5**
OBN				LR	LR		
	comp=Z,700nm,19.0s,MS5.0						
APA	**Apatity**	**82.29**	**337**	⇑*i*P	**P**	**06 42 32.0**	**+0.2**
APA				*i*		06 42 55.7	
APA				*i* S	S	06 52 40.0	-6.0
APA				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
APA				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.5						
MALT	**Malatya**	**82.61**	**308**	*e*P	**P**	**06 42 33.7**	**-0.4**
MALT				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
MALT	**Malatya**	**82.61**	**308**	*e*P	**P**	**06 42 33.7**	**-0.4**
	comp=Z,13nm,1.0s,mb4.9						
ANN	**Anapa**	**82.63**	**314**	*e*P	**P**	**06 42 32.3**	**-1.8**
ANN				*e*S	S	06 52 49.1	-0.8
ANN				pmax	pmax		
	comp=Z,81nm,0.9s,mb5.8						
KBRS	**Khaybar**	**83.44**	**295**	P	**P**	**06 42 38.9**	**+0.2**
KEV	**Kevo**	**84.24**	**340**	*e*p	**P**	**06 42 41.2**	**-0.5**
	comp=Z,16nm,0.9s,mb5.1						
KEV	**Kevo**	**84.24**	**340**	*e*P	**P**	**06 42 41.2**	**-0.5**
KEV				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
ASF	**Jabal al Asfar**	**84.63**	**302**	P	**P**	**06 42 43.8**	**-0.8**
	comp=Z,6.7nm,0.8s,mb4.8,baz=11,slow=1.5,SNR=8.0						
ASF				LR	LR	07 25 03.9	
	comp=Z,371nm,20.3s,MS4.8,baz=310,slow=39						
INK	**Inuvik**	**84.66**	**22**	P	**P**	**06 42 45.9**	**+2.0**
INK				pmax	pmax		
	comp=Z,30nm,1.0s						

INK	Inuvik	84.66	22	P	P	06 42 45.9	+2.0
	comp=Z,30nm,1.0s,mb5.4,baz=281,slow=6.7,SNR=28						
INK	Inuvik	84.66	22	eP	P	06 42 45.5	+1.6
	comp=Z,52nm,1.1s,mb5.6						
ARCES	ARCESS Array B	84.80	340	P	P	06 42 44.6	+0.1
	comp=Z,23nm,0.8s,mb5.4,baz=82,slow=6.2,SNR=88						
ARCES				LR	LR	07 25 37.2	
	comp=Z,604nm,18.4s,MS5.0,baz=244,slow=39						
ARE0	ARCESS Array S	84.80	340	eP	P	06 42 44.5	0.0
PUL	Pulkovo	84.81	330	eP	P	06 42 41.2	-3.6
PUL				eS	S	06 53 05.6	-5.8
PUL				MLR	MLR		
	comp=Z,682nm,18.0s,MS5.1						
PUL				MLR	MLR		
	comp=E,453nm,14.0s						
SIM	Simferopol’	84.95	315	eP	P	06 42 45.2	-0.6
SIM				S	S	06 53 05.2	-7.8
SIM				SS	SS	06 58 36.8	-12
SIM				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.6						
SIM				MLR	MLR		
	comp=Z,690nm,22.0s,MS5.0						
KBS	Kingsbay	85.10	350	eP	P	06 42 50.8	+4.9
KBS				e		06 53 01.4	
KBS				AMS	AMS	07 25 29.6	
	comp=Z,307nm,20.4s,MS4.7						
UMJS	Umm Lajj	85.27	295	P	P	06 42 48.0	+0.1
JMQS	Jabal Moqyreh	85.98	298	P	P	06 42 51.2	-0.2
BR131	Keskin Array S	86.11	309	eP	P	06 42 50.4	-1.4
	comp=Z,6.8nm,0.9s,mb4.9						
BRTR	Keskin Array B	86.11	309	P	P	06 42 50.0	-1.7
	comp=Z,6.8nm,0.9s,mb4.9,baz=104,slow=5.1,SNR=21						
KAF	Kangasniemi	86.24	332	ep	P	06 42 50.8	-1.1
	comp=Z,47nm,0.9s,mb5.7,baz=74,slow=4.4						
KAF	Kangasniemi	86.24	332	eP	P	06 42 50.8	-1.1
KAF				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.7						
JMOS	Jabal al Moall	86.61	299	P	P	06 42 54.1	-0.4
ALWS	Ilw as Safayha	86.62	299	P	P	06 42 54.1	-0.4
EIL	Elat	86.66	299	P	P	06 42 53.1	-1.7
	comp=Z,15nm,0.9s,mb5.2,baz=227,slow=0.3,SNR=11						
EIL	Elat	86.66	299	eP	P	06 42 53.8	-0.9
	comp=Z,17nm,0.9s,mb5.3						
HAQS	Haql	86.78	299	P	P	06 42 55.1	-0.2
VSU	Vasula	86.89	329	i P	P	06 42 53.9	-1.2
TAYS	Tayyib Ism	86.91	298	P	P	06 42 55.6	-0.4
TRO	Tromso	86.98	340	AMS	AMS	07 30 17.6	
	comp=Z,319nm,18.2s,MS4.8						
PPT	Papeete	87.10	108	eP	P	06 42 47.7	-9.4
	comp=Z,146nm,23.0s						
PPT				ePP	PP	06 46 13.1	-10
	comp=Z,55nm,22.0s						
PPT				eS	S	06 53 33.8	-0.6
	comp=Z,453nm,25.5s						
PPT				eSS	SS	06 59 23.1	+2.2
	comp=Z,95nm,23.5s						
PPT				eLR	LR	07 10 26.2	
	comp=Z,1µm,23.0s,baz=295						
PPT	Papeete	87.10	108	LR	LR	07 15 14.9	
	comp=Z,528nm,19.1s,MS5.0,baz=259,slow=31						
CSS	Prodhromos	87.14	305	eP	P	06 42 55.9	-1.0
	comp=Z,22nm,0.8s,mb5.4						
AKASG	Malin Array Be	87.17	321	P	P	06 42 54.8	-2.0
	comp=Z,1.3nm,0.4s,mb4.6,baz=68,slow=3.7,SNR=15						
KIS	Kishinev	88.21	317	eP	P	06 43 14.0	+12
KIS				e		06 53 40.0	
DLBC	Dease Lake	88.69	31	eP	P	06 43 06.6	+2.8
MAW	Mawson	89.31	200	⇑iP	P	06 43 06.4	-0.1
	comp=Z,11nm,0.9s,mb5.2						
MAW	Mawson	89.31	200	⇑iP	P	06 43 06.4	-0.1
MAW				pmax	pmax		
	comp=Z,11nm,0.9s						
MAW	Mawson	89.31	200	P	P	06 43 06.5	0.0
	comp=Z,18nm,1.0s,mb5.4,baz=60,slow=5.9,SNR=22						
MAW				LR	LR	07 19 12.4	
	comp=Z,296nm,18.2s,MS4.8,baz=57,slow=33						
VNDA	Vanda	89.36	173	eP	P	06 43 06.7	+0.1
VNDA				pmax	pmax		
	comp=Z,12nm,0.8s						
VNDA	Vanda	89.36	173	P	P	06 43 06.7	+0.1
	comp=Z,12nm,0.8s,mb5.3,baz=313,slow=5.9,SNR=39						
VNDA				LR	LR	07 24 44.6	
	comp=Z,498nm,18.3s,MS5.0,baz=350,slow=37						
VNDA	Vanda	89.36	173	eP	P	06 43 06.7	0.0
	comp=Z,12nm,0.8s,mb5.3						
SUW	Suwalki	89.96	325	eP	P	06 43 08.8	-1.0
SBA	Scott Base	90.27	172	eP	P	06 43 12.1	+1.3
SBA				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.2						
SBA	Scott Base	90.27	172	eP	P	06 43 12.1	+1.3
	comp=Z,12nm,0.9s,mb5.2						
MLR	Muntele Rosu	90.50	316	P	P	06 43 11.8	-0.8
	comp=Z,4.7nm,0.8s,mb4.8,baz=79,slow=9.8,SNR=4.9						
MLR	Muntele Rosu	90.50	316	P	P	06 43 11.8	-0.8
LVV	L’vov	90.62	321	eP	P	06 43 11.6	-1.4
NSS	Namsos	91.50	337	AMS	AMS	07 29 35.3	
	comp=Z,890nm,18.0s,MS5.2						
KWP	Kalwaria	91.50	321	eP	P	06 43 16.9	-0.1
RES	Resolute Bay	91.97	10	eP	P	06 43 20.7	+2.0
RES				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.5						
RES	Resolute Bay	91.97	10	eP	P	06 43 20.7	+2.0
	comp=Z,22nm,0.9s,mb5.5						
KOLS	Kolonicke sedl	91.97	320	eP	P	06 43 19.4	+0.1
KOLS	Kolonicke sedl	91.97	320	e	P	06 43 19.4	+0.1
UZH	Uzhgorod	92.05	320	eP	P	06 43 19.0	-0.6
UZH				eS	S	06 54 12.0	-6.9
HFS	Hagfors	92.67	333	P	P	06 43 21.0	-1.2
	comp=Z,21nm,0.8s,mb5.6,baz=90,slow=4.4,SNR=31						
OJC	Ojcow	93.11	322	eP	P	06 43 22.9	-1.6
OJC				eS	S	06 54 11.8	-16
OJC				MLR	MLR	07 30 55.4	
	comp=Z,400nm,21.8s,MS4.8						
KECS	Kecovo	93.24	320	eP	P	06 43 21.8	-3.3
NB2	NORSAR Subarra	93.37	334	P	P	06 43 23.9	-1.5
	comp=Z,12nm,1.0s,mb5.3,baz=62,slow=4.6						
NB2	NORSAR Subarra	93.37	334	P	P	06 43 23.9	-1.5
	baz=62,slow=4.6						
NOA	NORSAR Array B	93.37	334	P	P	06 43 24.1	-1.3
	comp=Z,8.5nm,0.8s,mb5.2,baz=63,slow=4.6,SNR=17						
NOA				LR	LR	07 30 09.2	
	comp=Z,282nm,18.6s,MS4.8,baz=90,slow=39						
JMIC	Jan Mayen	94.02	347	P	P	06 43 28.4	+0.1
	comp=Z,34nm,0.8s,mb5.8,baz=106,slow=2.8,SNR=3.6						
JMIC	Jan Mayen	94.02	347	AMS	AMS	07 30 46.2	
	comp=Z,399nm,20.1s,MS4.9						
YKA	Yellowknife Ar	94.11	24	P	P	06 43 30.3	+1.5
	comp=Z,17nm,0.9s,mb5.5,baz=301,slow=4.7,SNR=40						
YKA				LR	LR	07 24 38.8	
	comp=Z,315nm,21.1s,MS4.8,baz=275,slow=35						
OKC	Ostrava-Krasne	94.24	322	AMS	AMS	07 32 20.0	
	comp=Z,300nm,18.0s						
DPC	Dobruska-Polom	95.15	323	eP	P	06 43 33.7	-0.2
DPC				epP	pP	06 43 53.7	+16
DPC				eS	S	06 54 46.5	+0.9
DPC				AMS	AMS	07 28 30.0	
	comp=Z,500nm,21.4s						
UPC	Upice	95.27	323	eP	P	06 43 35.0	+0.6
UPC				epP	pP	06 43 51.2	+13
VRAC	Vranov	95.37	322	P	P	06 43 34.5	-0.4
	comp=Z,13nm,1.0s,mb5.3,baz=12,slow=6.3,SNR=5.8						
PVCC	Panska Ves	96.12	323	AMS	AMS	07 34 10.0	
	comp=Z,400nm,20.6s						
BER	Bergen	96.21	335	AMS	AMS	07 32 29.6	
	comp=Z,615nm,17.8s,MS5.1						
BRG	Berggiesshubel	96.34	324	i P	P	06 43 39.0	-0.3
BRG				i		06 54 57.0	
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.1						
BRG				MLR	MLR		
	comp=Z,590nm,20.5s,MS5.0						
BRG	Berggiesshubel	96.34	324	i P	P	06 43 39.0	-0.3
	comp=Z,6.3nm,0.8s,mb5.1						
BRG				i		06 54 57.0	
BRG				LR	LR		
	comp=Z,590nm,20.5s,MS5.0						
PRU	Pruhonice	96.35	323	eP	P	06 43 39.6	+0.3
PRU				eS	S	06 54 52.9	-2.8
PRU				AMS	AMS	07 33 30.0	
	comp=Z,500nm,18.2s						
CLL	Collm	96.71	325	eP	P	06 43 41.0	+0.1
CLL				eS	S	06 54 58.0	-0.8
CLL				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb5.0						
CLL				MLR	MLR		
	comp=Z,600nm,19.6s,MS5.1						
CLL	Collm	96.71	325	eP	P	06 43 41.0	+0.1
	comp=Z,7.0nm,1.1s,mb5.0						
CLL				eS	S	06 54 58.0	-0.8
CLL				LR	LR		
	comp=Z,600nm,19.6s,MS5.1						
CLL	Collm	96.71	325	P	P	06 43 41.0	+0.1
	comp=Z,logA/T=0.8,mb5.0						
CLL				eS	S	06 54 58.0	-0.8
KHC	Kasperske Hory	97.26	322	eP	P	06 43 42.9	-0.6
KHC				epP	pP	06 44 00.6	+14
KHC				ePP	PP	06 47 39.5	-3.3
KHC				eS	S	06 55 04.1	+0.5
KHC				AMS	AMS	07 34 00.0	
	comp=Z,400nm,20.4s						
SUMG	Summit	97.28	356	eP	P	06 43 44.2	+1.1
	comp=Z,11nm,1.0s,mb5.2						
GERES	GERESS Array B	97.30	322	P	P	06 43 43.2	-0.5
	comp=Z,4.7nm,0.9s,mb4.9,baz=56,slow=4.8,SNR=16						
GERES				LR	LR	07 33 50.6	
	comp=Z,334nm,18.1s,MS4.9,baz=267,slow=39						
NKC	Novy Kostel	97.48	324	AMS	AMS	07 30 20.0	
	comp=Z,500nm,19.8s						
MOX	Moxa	97.78	324	eP	P	06 43 44.0	-1.8
MOX				MLR	MLR		
	comp=Z,400nm,20.0s,MS4.9						
SYO	Syowa Base	97.94	201	⇓P	P	06 43 44.0	-2.1
SYO	Syowa Base	97.94	201	⇑sP	sP	06 44 13.5	+23
HUMO	Hull Mountain	98.11	44	eP	P	06 43 50.0	+2.6
	comp=Z,3.1nm,0.9s,mb4.8						
GRA1	Grafenberg Arr	98.42	324	eP	P	06 43 48.9	+0.2
	comp=Z,8.0nm,0.9s,mb5.2						
GRF	Grafenberg Arr	98.42	324	eP	P	06 43 48.9	+0.2
GRF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.2						
GRF	Grafenberg Arr	98.42	324	eP	P	06 43 48.9	+0.2
GRF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.2						
GRF	Grafenberg Arr	98.42	324	eP	P	06 43 48.9	+0.2
	comp=Z,8.0nm,0.9s,mb5.2						
YBH	Yreka Blue Hor	98.59	45	P	P	06 43 52.0	+2.4
	comp=Z,0.8nm,0.4s,mb4.7,baz=288,slow=0.6,SNR=5.4						
NEW	Newport	99.60	37	P	P	06 43 56.3	+2.2
	comp=Z,5.6nm,0.9s,mb5.0,baz=293,slow=2.4,SNR=8.6						
QSPA	South Pole Qui	99.60	180	eP	P	06 43 53.7	+0.2
	comp=Z,9.3nm,1.1s,mb5.1						
MOD	Modoc	100.20	44	eP	P	06 43 58.7	+1.7
	comp=Z,3.0nm,0.9s						
DAVOX	Davos	100.51	321	P	P	06 43 58.1	-0.1
	comp=Z,1.4nm,0.4s,baz=35,slow=13,SNR=3.3						
NVAR	Mina Array Bea	102.98	47	Pdiff	Pdif	06 44 11.6	+2.0
	comp=Z,1.4nm,0.9s,baz=273,slow=3.5,SNR=7.7						
NVAR				PP	PP	06 48 23.1	-3.6
	comp=Z,1.2nm,1.1s,baz=295,slow=4.5,SNR=3.7						
NVAR				PKKPbc		07 00 06.1	
	comp=Z,1.2nm,0.8s,baz=181,slow=3.5,SNR=6.8						
PDAR	Pinedale Array	106.90	40	PKKPbc		06 59 52.5	
	comp=Z,0.3nm,0.4s,baz=153,slow=3.3,SNR=4.1						
PDAR				PKKP	PKKP	07 00 07.4	+5.3
	comp=Z,2.8nm,0.9s,baz=124,slow=5.3,SNR=16						
SNAA	Sanae	110.94	195	PP	PP	06 49 19.8	-5.0
	comp=Z,2.3nm,1.1s,baz=158,slow=8.8,SNR=3.3						
VNA2	Neumayer--Watz	112.56	195	⇑iP	PKPdf	06 48 46.4	-1.9
VNA3	Neumayer Olymp	112.92	194	⇑iP	PKPdf	06 48 46.4	-2.6
TXAR	Lajitas Array	117.94	49	PKP	PKPdf	06 48 59.3	-0.5
	comp=Z,3.4nm,1.1s,baz=310,slow=0.8,SNR=16						
TXAR				PP	PP	06 50 19.0	+3.3
	comp=Z,1.0nm,1.0s,baz=284,slow=5.2,SNR=3.9						
TXAR				PKKPbc		06 59 17.9	
	comp=Z,1.0nm,0.9s,baz=139,slow=3.9,SNR=10						
TXAR	Lajitas Array	117.94	49	PKP	PKPdf	06 48 59.3	-0.5
TXAR				PP	PP	06 50 19.0	+3.3
TXAR				PKKPbc		06 59 17.9	
WMOK	Wichita Mounta	118.36	42	ePKIKP	PKPdf	06 48 58.4	-2.1
WVT	Waverly	124.04	34	ePKIKP	PKPdf	06 49 10.1	-1.4
PLAL	Pickwick Lake	124.74	35	ePKPdf	PKPdf	06 49 10.9	-2.0
LRAL	Lakeview Retre	126.78	35	ePKPdf	PKPdf	06 49 15.0	-1.8
DBIC	Dimbokro	128.96	287	PKP	PKPdf	06 49 18.9	-2.7
	comp=Z,3.0nm,0.8s,baz=215,slow=4.2,SNR=3.2						
DBIC	Dimbokro	128.96	287	PKP	PKPdf	06 49 18.9	-2.7
PLCA	Paso Flores	145.59	157	PKPbc	PKPbc	06 49 50.6	+1.9
	comp=Z,38nm,0.8s,baz=220,slow=3.3,SNR=71						
PLCA	Paso Flores	145.59	157	ePKPdf	PKPdf	06 49 50.6	-0.5
TRQA	Tornquist	150.77	166	ePKPbc	PKPdf	06 50 03.3	+3.7
OTAV	Otavalo	153.18	70	ePKPbc	PKPdf	06 50 11.9	+8.2
SDV	Santo Domingo	154.78	43	ePKPdf	PKPdf	06 50 05.4	-0.5
SDV				LR	LR		
	comp=Z,300nm,22.0s,MS5.1						
LPAZ	La Paz	164.25	116	PKIKP	PKPdf	06 50 16.7	+0.1
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LPAZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LPAZ	La Paz	164.25	116	PKP	PKPdf	06 50 16.6	0.0
	comp=Z,1.8nm,0.9s,baz=175,slow=23,SNR=8.3						
LPAZ				PKPab	PKPab	06 51 12.1	+2.3
	comp=Z,7.2nm,0.9s,baz=297,slow=2.4,SNR=8.8						
LPAZ	La Paz	164.25	116	ePKPdf	PKPdf	06 50 16.2	-0.4
BDFB	Brasilia	172.12	221	PKP	PKPdf	06 50 20.0	-2.0
	comp=Z,4.5nm,1.1s,baz=169,slow=5.2,SNR=3.0						
BDFB				PKPab	PKPab	06 51 42.7	-1.6
	comp=Z,7.0nm,0.9s,baz=230,slow=3.1,SNR=8.2						

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*IDC **22** 06:34:28.0±0.7, 9.77N×126.37E, mb4.4/11, mb1 4.5/11, mb1mx4.3/20, mbtmp4.3/11, Error ellipse: s-maj=35.3km s-min=15.7km az=69.0*

*NEIC **22** 06:34:29.6±0.5, 9.78N×126.37E, h10^{km}, mb4.8/4, Error ellipse: s-maj=27.2km s-min=11.0km az=69.0*

*MAN **22** 06:34:31.9, 9.68N×126.39E, h4^{km}, mb5.0, ML4.0, MS4.1*

ISC 22 06:34:29.5±0.5**, 9.66N**±0.03×**126.56E**±0.04**, h10^{km}, n36, σ1ş34**/49**, mb4.4**/15**, 1C-7D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	1.06	277	⇓eP	Pb	06 34 49.1	-0.4
SCPH				eS	Sb	06 35 00.8	-2.4
BUTP	Butuan	1.15	233	eP	Pb	06 34 51.5	+0.5
BUTP				eS	Sb	06 35 06.0	+0.2
MSLP	Maasin	1.74	286	eP	Pn	06 35 01.3	+1.3
MSLP				eS	Sn	06 35 20.9	-1.5
PLP	Palo	2.15	314	⇑eP	Pn	06 35 06.4	+0.4
PLP				eS	Sn	06 35 33.7	+0.7
CGP	Cagayan de Oro	2.19	237	⇓iP	Pn	06 35 07.1	+0.5
CGP				eS	Sn	06 35 32.7	-1.3
BESP	Borongan	2.22	330	eP	Pn	06 35 08.9	+2.0
BESP				eS	Sn	06 35 39.8	+5.1
BUKP	Musuan	2.31	220	eP	Pn	06 35 10.4	+2.3
LLP	Lapu-Lapu	2.63	285	eP	Pn	06 35 14.1	+1.3
LLP				eS	Sn	06 35 44.9	-0.2
TBP	Tagbilaran	2.66	271	⇓eP	Pn	06 35 13.3	+0.1
TBP				eS	Sn	06 35 40.2	-5.5
MATI	Mati	2.71	186	eP	Pn	06 35 19.1	+5.1
KCP	Kidapawan	3.01	209	⇓eP	Pn	06 35 20.8	+2.6
KCP				i S	Sn	06 35 56.6	+2.0
SNPH	Sibulan	3.29	265	⇓iP	Pn	06 35 23.4	+1.3
SNPH				i S	Sn	06 36 01.5	-0.3
DCPH	Dipolog City	3.34	252	⇓eP	Pn	06 35 23.4	+0.5
DCPH				eS	Sn	06 36 00.8	-2.2
CNP	Catarman	3.39	327	eP	Pn	06 35 24.2	+0.7
CNP				eS	Sn	06 36 04.2	0.0
PAGZ	Pagadian	3.62	240	eP	Pn	06 35 27.8	+1.0
PAGZ				eS	Sn	06 36 08.9	-1.1
GUIM	Jordan	4.02	284	eP	Pn	06 35 33.3	+0.7
GUIM				eS	Sn	06 36 14.4	-5.9
RCP	Roxas	4.19	297	⇓iP	Pn	06 35 37.2	+2.2
PVCP	Virac	4.56	329	eP	Pn	06 35 41.1	+0.9
OTRP	Odiongan	5.20	302	eP	Pn	06 35 50.2	+0.9
BUSP	Coron	6.66	291	eP	Pn	06 36 10.0	0.0
FITZ	Fitzroy Crossi	27.60	182	P	P	06 40 16.7	-2.6
	29nm,0.9s,mb4.9,baz=20,slow=8.5,SNR=5.7						
CMAR	Chiang Mai Arr	28.14	291	P	P	06 40 22.2	-1.9
	1.5nm,0.5s,mb3.9,baz=102,slow=8.3,SNR=3.4						
WRAB	Tennant Creek	30.39	165	P	P	06 40 44.7	+0.4
	21nm,1.0s,mb4.8						
WRA	Warramunga Arr	30.40	165	P	P	06 40 43.4	-0.9
	0.7nm,0.4s,mb3.7,baz=341,slow=9.2,SNR=2.8						
LSA	Lhasa	38.61	306	P	P	06 41 56.3	+1.6
	5.6nm,0.3s,mb4.8						
SONM	Songino Array	41.68	340	P	P	06 42 18.3	-1.7
	0.4nm,0.5s,mb3.3,baz=165,slow=9.3,SNR=2.9						
NWAO	Narrogin (SRO)	43.27	191	P	P	06 42 31.8	-1.3
	18nm,0.8s,mb4.8,baz=47,slow=2.4,SNR=3.8						
DZM	Mont Dzumac	50.25	129	P	P	06 43 28.5	+0.2
	1.9nm,0.6s,mb4.3,baz=284,slow=8.3,SNR=5.6						
MKAR	Makanchi Array	52.68	323	P	P	06 43 41.6	-4.7
	2.4nm,0.6s,mb4.3,baz=123,slow=7.8,SNR=5.6						
ZAL	Zalesovo	55.29	331	P	P	06 44 00.1	-5.4
	1.2nm,0.3s,mb4.4,baz=270,slow=2.0,SNR=2.3						
ILAR	Eielson Array	79.86	26	P	P	06 46 38.4	-1.3
	0.6nm,0.7s,mb3.7,baz=234,slow=5.3,SNR=4.4						
KEV	Kevo	84.30	340	ep	P	06 46 53.4	-9.1
	5.3nm,0.9s,mb4.7						
ARCES	ARCESS Array B	84.86	340	P	P	06 47 03.3	-2.0
	2.4nm,0.6s,mb4.5,baz=82,slow=6.3,SNR=16						
KAF	Kangasniemi	86.29	332	ep	P	06 47 10.6	-2.0
	5.5nm,0.8s,mb4.8,baz=71,slow=7.1						
HFS	Hagfors	92.72	333	P	P	06 47 40.4	-2.4
	1.6nm,0.5s,mb4.7,baz=135,slow=2.1,SNR=5.7						
PLCA	Paso Flores	145.54	157	PKPbc	PKPbc	06 54 10.2	+1.2
	2.0nm,0.7s,baz=200,slow=6.3,SNR=3.5						

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*NEIC **22** 06:36:28.7±0.6, 51.57N×16.22E, h5^{km}, ML3.6(VIE), ML3.5(SZGRF), ML3.0(BRG), ML2.9(CLL), Error ellipse: s-maj=7.0km s-min=6.0km az=62.0*

*IDC **22** 06:36:29.8±0.7, 51.53N×15.94E, mb1 3.6/7, mb1mx3.5/22, mbtmp3.5/7, ML3.5/7, Error ellipse: s-maj=11.3km s-min=7.3km az=103.0*

*BGR **22** 06:36:30.8±1.0, 51.45N×16.20E, h1^{km}, ML3.5/5, Error ellipse: s-maj=26.7km s-min=8.9km az=8.0*

*CSEM **22** 06:36:30.7±0.1, 51.44N×16.17E, h2^{km}, ML3.8/9, Error ellipse: s-maj=2.0km s-min=1.3km az=33.0*

*IPEC **22** 06:36:30.9±0.2, 51.45N×16.19E, h7^{km}±1^{km}, ML2.8/3, Error ellipse: s-maj=1.4km s-min=0.6km az=22.0*

*WAR **22** 06:36:31.5, 51.45N×16.19E, h1^{km}, ML3.3, Mining Induced*

*PRU **22** 06:36:31.3, 51.43N×16.19E*

*LDG **22** 06:36:32.7±0.3, 51.26N×15.89E, h1^{km}, Ml3.9/10, Error ellipse: s-maj=6.6km s-min=2.5km az=11.0, Suspected Mining induced.*

ISC 22 06:36:28.8±0.5**, 51.40N**±0.02×**16.19E**±0.03**, n95, σ1ş30**/166**, 8C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.57	173	⇓iPg	Pg	06 36 42.6	+2.5
KSP				eSg	Sg	06 36 49.9	+2.2
KSP				e		06 36 55.0	
KSP	Ksiaz	0.57	173	i PG	Pg	06 36 42.6	+2.5
KSP				eSG	Sg	06 36 50.6	+2.9
KSP	Ksiaz	0.57	173	ePg	Pg	06 36 42.6	+2.5
KSP				eSg	Sg	06 36 50.7	+3.0
KSP	Ksiaz	0.57	173	ePg	Pg	06 36 42.6	+2.5
KSP				eSg	Sg	06 36 49.9	+2.2
UPC	Upice	0.91	187	ePG	Pg	06 36 48.7	+1.8
DPC	Dobruska-Polom	1.06	175	ePG	Pg	06 36 51.5	+1.6
DPC				eSG	Sg	06 37 05.9	+1.8
	191nm,0.6s						
DPC	Dobruska-Polom	1.06	175	ePg	Pg	06 36 51.4	+1.5
DPC				eSg	Sg	06 37 05.0	+0.9
PVCC	Panska Ves	1.35	230	ePG	Pg	06 36 56.5	+0.8
PVCC	Panska Ves	1.35	230	ePn	Pn	06 36 57.0	+2.1
BRG	Berggiesshubel	1.51	250	ePg	Pg	06 36 58.7	-0.2
BRG	Berggiesshubel	1.51	250	Pn	Pn	06 36 58.0	+0.8
BRG				Pg	Pg	06 36 60.0	+1.0
BRG				Sg	Sg	06 37 20.2	+1.1
BRG	Berggiesshubel	1.51	250	Pn	Pn	06 36 58.0	+0.8
BRG	Berggiesshubel	1.51	250	Pg	Pg	06 37 00.0	+1.0
BRG				eSg	Sg	06 37 18.6	-0.5
PRU	Pruhonice	1.76	217	ePN	Pn	06 37 01.9	+1.1
PRU				ePG	Pg	06 37 03.9	-0.1
PRU				eSG	Sg	06 37 28.1	+0.6
	52nm,0.2s						
PRU	Pruhonice	1.76	217	ePg	Pg	06 37 03.9	-0.1
PRU				eSg	Sg	06 37 27.5	0.0
RAC	Raciborz	1.84	135	eP	Pn	06 37 06.0	+4.1
RAC				eS	Sn	06 37 31.0	+4.9
RUE	Ruedersdorf	1.84	307	eP	Pn	06 37 01.9	-0.1
RUE	Ruedersdorf	1.84	307	ePn	Pn	06 37 01.8	-0.1
MORC	Moravsky Berou	1.84	152	ePn	Pn	06 37 02.9	+1.0
MORC	Moravsky Berou	1.84	152	ePn	Pn	06 37 02.9	+0.9
MORC				eSg	Sg	06 37 29.3	-0.9
	58nm,0.3s						
FBE	Freiberg	1.85	256	Pg	Pg	06 37 05.7	0.0
FBE				Sg	Sg	06 37 29.4	-1.0
CLL	Collm	2.00	268	ePn	Pn	06 37 04.4	+0.2
CLL				eSg	Sg	06 37 33.5	-1.9
CLL	Collm	2.00	268	i PN	Pn	06 37 04.4	+0.2
	logA/T=1.5						
CLL				i PG	Pg	06 37 08.4	-0.3
CLL				i SG	Sg	06 37 34.9	-0.5
CLL				i		06 37 49.7	
CLL	Collm	2.00	268	i Pg	Pg	06 37 08.4	-0.3
CLL				Sg	Sg	06 37 33.5	-1.9
OKC	Ostrava-Krasne	2.00	141	ePG	Pg	06 37 08.7	-0.1
OKC				eSG	Sg	06 37 34.1	-1.4
	213nm,0.9s						
VRAC	Vranov	2.12	173	Pn	Pn	06 37 07.1	+1.2
	7.8nm,0.3s,baz=340,slow=13,SNR=19						
VRAC				Sn	Sn	06 37 37.7	+4.4
	10nm,0.3s,baz=73,slow=19,SNR=9.2						
VRAC	Vranov	2.12	173	Pn	Pn	06 37 07.1	+1.3
VRAC				eSg	Sg	06 37 38.4	-0.8
	54nm,0.5s						
KRUC	Moravsky	2.35	177	ePn	Pn	06 37 10.8	+1.6
KRUC				eSg	Sg	06 37 46.7	-0.3
	64nm,0.6s						
TANN	Tannenbergstha	2.56	249	ePn	Pn	06 37 13.1	+0.9
OJC	Ojcow	2.58	116	ePg	Pg	06 37 11.7	-8.6
OJC				ePg	Pg	06 37 21.0	+0.7
OJC				eSn	Sn	06 37 42.7	-2.3
OJC				eSg	Sg	06 37 55.4	+0.8
OJC	Ojcow	2.58	116	ePg	Pg	06 37 21.0	+0.7
OJC				eSn	Sn	06 37 42.7	-2.3
OJC				eSg	Sg	06 37 53.1	-1.5
NKC	Novy Kostel	2.65	245	ePN	Pn	06 37 14.5	+1.0
NKC				ePG	Pg	06 37 21.5	-0.1
NKC				eSG	Sg	06 37 57.8	+0.9
	174nm,0.6s						
GUNZ	Gunzen	2.66	248	ePn	Pn	06 37 14.9	+1.3
NEUB	Neuenburg	2.78	268	ePg	Pg	06 37 22.7	-1.5
NEUB				eSg	Sg	06 38 00.2	-1.0
KHC	Kasperske Hory	2.83	217	ePN	Pn	06 37 17.1	+1.1
KHC				ePG	Pg	06 37 23.3	-1.9
KHC				eSN	Sn	06 37 52.5	+1.2
KHC				eSG	Sg	06 38 03.8	+0.9
	76nm,0.6s						
KHC	Kasperske Hory	2.83	217	Pg	Pg	06 37 23.3	-1.9
KHC				eSg	Sg	06 37 59.8	-3.1
MOX	Moxa	2.99	257	ePn	Pn	06 37 18.6	+0.3
MOX	Moxa	2.99	257	ePn	Pn	06 37 18.5	+0.2
MOX				ePg	Pg	06 37 27.5	-0.9
MOX				eSg	Sg	06 38 07.4	-0.8
MOX	Moxa	2.99	257	i P	Pn	06 37 18.5	+0.2
MOX				Pg	Pg	06 37 28.0	-0.4
MOX				Sg	Sg	06 38 07.0	-1.2
MOX	Moxa	2.99	257	ePg	Pg	06 37 27.5	-0.9
MOX				eSg	Sg	06 38 05.7	-2.5
SMOL	Smolenice	3.00	164	ePG	Pg	06 37 28.6	-0.1
SMOL				eSG	Sg	06 38 08.7	-0.1
GEC2	GERESS Array S	3.02	213	ePn	Pn	06 37 20.9	+2.1
GEC2	GERESS Array S	3.02	213	ePn	Pn	06 37 20.9	+2.1
GERES	GERESS Array B	3.02	213	Pn	Pn	06 37 19.3	+0.5
	2.8nm,0.3s,baz=30,slow=14,SNR=49						
GERES				Pg	Pg	06 37 26.2	-2.9
	14nm,0.3s,baz=28,slow=16,SNR=61						
GERES				Lg		06 38 06.9	
	13nm,0.3s,baz=31,slow=26,SNR=8.5						
GERES	GERESS Array B	3.02	213	Pg	Pg	06 37 26.2	-2.9
NOTT	Nottersdorf	3.04	240	ePn	Pn	06 37 19.6	+0.5
WET	Wettzell	3.10	224	ePn	Pn	06 37 21.2	+1.2
WET				eSg	Sg	06 38 08.6	-3.5
VKA	Vienna	3.14	178	⇑iPN	Pn	06 37 22.0	+1.5
VKA				i PG	Pg	06 37 30.1	-1.5
VKA				i SG	Sg	06 38 12.2	-1.3
VKA	Vienna	3.14	178	i Pg	Pg	06 37 30.1	-1.5
VKA				i Sg	Sg	06 38 12.2	-1.3
ZST	Bratislava	3.27	169	ePG	Pg	06 37 33.6	-0.4
ZST				eSG	Sg	06 38 15.2	-2.3
NIE	Niedzica	3.30	125	eP	Pg	06 37 33.1	-1.6
NIE				eS	Sg	06 38 18.9	+0.1
VYHS	Vyhne	3.38	149	ePG	Pg	06 37 35.9	-0.3
VYHS				eSG	Sg	06 38 22.2	+0.9
GRA1	Grafenberg Arr	3.60	244	ePn	Pn	06 37 27.8	+0.7

GRA1	Grafenberg Arr	3.60	244	Pn	Pn	06 37 27.8	+0.7
GRF	Grafenberg Arr	3.60	244	*e*Pn	Pn	06 37 27.8	+0.7
MOA	Molln	3.77	200	⇑*i*PN	Pn	06 37 30.5	+1.0
MOA				*i* SG	Sg	06 38 33.1	-1.3
	56nm,0.6s						
BSD	Bornholm Skovb	3.79	349	*i* P	Pn	06 37 26.3	-3.5
BSD	Bornholm Skovb	3.79	349	*e*P	Pn	06 37 26.3	-3.5
ARSA	Arzberg	4.18	186	⇑*i*PN	Pn	06 37 36.1	+0.8
ARSA				*i* SG	Sg	06 38 44.9	-3.1
	64nm,0.8s						
KWP	Kalwaria	4.52	111	Pn	Pn	06 37 38.0	-2.1
KWP				*e*Pn	Pn	06 37 47.4	+7.3
KWP				*e*Pg	Pg	06 37 53.7	-5.4
KWP				*e*Sg	Sg	06 39 03.1	+3.8
KWP	Kalwaria	4.52	111	*e*P	Pn	06 37 47.0	+6.9
KWP				*e*SG	Sg	06 39 03.0	+3.7
KWP	Kalwaria	4.52	111	*e*Pn	Pn	06 37 47.4	+7.3
KWP				*e*Pg	Pg	06 37 53.7	-5.4
KWP				*e*Sg	Sg	06 39 03.1	+3.7
KWP	Kalwaria	4.52	111	Pn	Pn	06 37 38.0	-2.1
KWP	Kalwaria	4.52	111	*e*Pg	Pg	06 37 53.7	-5.4
KBA	Koelnbreinsper	4.71	204	⇑*i*PN	Pn	06 37 43.8	+1.0
KBA				*i* SG	Sg	06 39 03.2	-2.5
	34nm,0.5s						
GROS	Grobnik	4.97	185	*e*Pn	Pn	06 37 47.2	+0.7
WATA	Walderalm	5.07	218	⇓*i*Pn	Pn	06 37 47.5	-0.3
	22nm,0.6s						
WATA				*i* Sg	Sg	06 39 11.9	-5.5
	22nm,0.6s						
WTTA	Wattenberg	5.10	217	⇑*i*PN	Pn	06 37 48.7	+0.4
WTTA				*i* SG	Sg	06 39 12.8	-5.8
	13nm,0.6s						
WTTA	Wattenberg	5.10	217	⇑*i*Pn	Pn	06 37 48.7	+0.4
	13nm,0.6s						
WTTA				*i* Sg	Sg	06 39 12.8	-5.8
SQTA	Sankt Quirin	5.30	220	⇑*i*PN	Pn	06 37 50.2	-1.0
SQTA				*i* SG	Sg	06 39 20.6	-4.8
	15nm,0.5s						
SQTA	Sankt Quirin	5.30	220	⇑*i*Pn	Pn	06 37 50.2	-1.0
	15nm,0.5s						
SQTA				*i* Sg	Sg	06 39 20.6	-4.8
ROBS	Robic	5.46	200	*e*Pn	Pg	06 38 14.3	-3.5
VOY	Vojsko	5.59	197	*e*Pn	Pn	06 38 03.3	+8.1
VOY				*e*Sn	Sg	06 39 32.4	-2.4
VISS	Visnje	5.68	190	*i* Pn	Pn	06 37 57.1	+0.7
BOJS	Bojanci	5.94	186	*e*Pn	Pn	06 38 01.1	+0.9
DAVOX	Davos	6.21	224	Pn	Pn	06 38 02.8	-1.2
	0.3nm,0.3s,baz=356,slow=19,SNR=2.6						
DAVOX				Sn	Sn	06 39 14.6	-2.0
	0.9nm,0.3s,baz=308,slow=18,SNR=2.2						
DAVOX				Lg		06 39 47.5	
	1.2nm,0.3s,baz=349,slow=23,SNR=7.9						
CDF	Champ du Feu	6.49	246	*e*Pn	Pn	06 38 04.1	-3.8
CDF				*e*Sg	Sb	06 39 48.4	+6.8
	37nm,0.8s						
HINF	Hinteralfeld	7.05	243	*e*Pn	Pn	06 38 11.8	-4.0
HINF				*e*Sg	Sb	06 40 05.8	+8.0
	37nm,1.0s						
HAU	Haudompre	7.23	246	*e*Pn	Pn	06 38 14.3	-4.0
HAU				*e*Sg	Sb	06 40 11.4	+8.3
	25nm,0.9s						
GIVF	Givet	7.33	264	*e*Pn	Pn	06 38 16.2	-3.5
GIVF				*e*Sg	Sb	06 40 16.0	+10
	50nm,1.1s						
RFYF	Reffroy	7.44	252	*e*Sg	Sb	06 40 18.8	+10
	39nm,1.1s						
BAIF	Baives	7.72	265	*e*Sg	Sb	06 40 28.1	+11
	36nm,1.2s						
SFTF	Sexfontaines	7.89	250	*e*Sg	Sb	06 40 32.5	+10
	44nm,1.1s						
CABF	La Chapelle	8.19	238	*e*Pn	P	06 38 27.5	-4.2
CABF				*e*Sg	Sb	06 40 41.6	+11
	59nm,1.2s						
AKASG	Malin Array Be	8.25	90	Pn	P	06 38 29.2	-3.3
	1.1nm,0.3s,baz=278,slow=12,SNR=9.6						
AKASG				Lg		06 41 00.2	
	baz=274,slow=26,SNR=5.1						
LPL	La Plagne	8.61	231	*e*P	P	06 38 37.9	+0.3
LPG	La Plagne	8.61	230	*e*Pn	P	06 38 33.0	-4.7
LPG				*e*P		06 38 37.8	
LPG				*e*Sg	Sb	06 40 55.2	+12
	32nm,1.2s						
LPG	La Plagne	8.61	230	*e*P	P	06 38 37.8	+0.1
HFS	Hagfors	8.86	352	Pn	P	06 38 34.6	-6.5
	0.1nm,0.3s,baz=168,slow=13,SNR=7.3						
MBDF	Montbardon	9.18	227	*e*Pn	P	06 38 40.7	-4.8
MBDF				*e*P		06 38 46.4	
MBDF	Montbardon	9.18	227	*e*P	P	06 38 46.4	+0.9
SBF	Sospel	9.58	221	*e*P	P	06 38 51.4	+0.5
NOA	NORSAR Array B	10.04	346	Pn	P	06 38 49.7	-7.6
	0.3nm,0.3s,baz=168,slow=13,SNR=2.2						
KAF	Kangasniemi	12.06	23	*e*p	P	06 39 20.5	-4.3
ARCES	ARCESS Array B	18.72	10	Pn	P	06 40 45.6	-5.0
	0.8nm,0.3s,baz=194,slow=12,SNR=23						

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*IDC **22** 06:45:39.6±1.0, 9.58N×126.26E, mb3.9/6, mb1 4.0/6, mb1mx3.8/18, mbtmp3.9/6, Error ellipse: s-maj=62.9km s-min=19.1km az=68.0*

*MAN **22** 06:45:42.5, 9.61N×126.36E, h1^{km}, mb4.9, ML3.9, MS3.9*

ISC 22 06:45:43.3±0.7, **9.54N**±0.04×**126.53E**±0.05, **h33**^{km}**, n22, σ1^{s}19**/31**, mb3.7**/6**, 4C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	1.06	283	⇑*e*P	P	06 45 58.9	-2.9
BUTP	Butuan	1.07	238	*e*P	P	06 46 01.8	-0.1
BUTP				*e*S	S	06 46 39.8	+24
MSLP	Maasin	1.75	290	*e*P	P	06 46 13.3	+1.6
CGP	Cagayan de Oro	2.12	239	⇑*e*P	P	06 46 17.4	+0.4
CGP				*e*S	S	06 46 32.7	-10
BUKP	Musuan	2.20	221	*e*P	P	06 46 19.4	+1.2
PLP	Palo	2.22	317	⇑*e*P	P	06 46 19.4	+0.9
PLP				*e*S	S	06 46 45.3	+0.3
BESP	Borongan	2.31	332	*e*P	P	06 46 21.0	+1.2
TBP	Tagbilaran	2.64	273	*e*P	P	06 46 24.8	+0.4
TBP				*e*S	S	06 46 54.9	-0.7
LLP	Lapu-Lapu	2.64	287	*i* P	P	06 46 24.9	+0.4
LLP				*e*S	S	06 46 56.1	+0.4
KCP	Kidapawan	2.90	210	*e*P	P	06 46 27.7	-0.4
KCP				*i* S	S	06 47 07.5	+5.4
SNPH	Sibulan	3.26	267	⇓*e*P	P	06 46 34.2	+0.9
SNPH				*e*S	S	06 47 13.0	+1.6
DCPH	Dipolog City	3.28	253	⇑*e*P	S	06 47 10.5	-1.5
CNP	Catarman	3.47	328	*e*P	P	06 46 35.2	-1.1
CNP				*e*S	S	06 47 13.2	-3.6
PAGZ	Pagadian	3.54	242	*e*P	P	06 46 38.6	+1.3
PAGZ				*e*S	S	06 47 17.0	-1.6
RCP	Roxas	4.23	299	*e*P	S	06 47 26.0	-10
PVCP	Virac	4.65	330	*e*P	P	06 46 58.6	+5.6
PVCP				*e*S	S	06 47 36.3	-10
FITZ	Fitzroy Crossi	27.48	182	P	P	06 51 28.6	-0.3
	2.7nm,0.4s,mb4.1,baz=9.5,slow=12,SNR=8.5						
WRA	Warramunga Arr	30.29	165	P	P	06 51 53.5	-0.4
	0.5nm,0.9s,mb3.3,baz=343,slow=8.1,SNR=3.5						
SONM	Songino Array	41.79	340	P	P	06 53 31.8	+0.5
	0.2nm,0.3s,mb3.2,baz=149,slow=8.4,SNR=2.2						
DZM	Mont Dzumac	50.19	129	P	P	06 54 39.1	+0.9
	2.6nm,1.0s,mb4.2,baz=287,slow=14,SNR=5.8						
MKAR	Makanchi Array	52.76	323	P	P	06 54 54.5	-2.8
	0.3nm,0.5s,mb3.5,baz=120,slow=8.9,SNR=5.9						
ARCES	ARCESS Array B	84.96	340	P	P	06 58 14.3	-1.7
	1.2nm,0.7s,mb4.1,baz=76,slow=5.0,SNR=6.8						

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*TEH **22** 06:55:39.0, 33.63N×45.02E, h10^{km}, Mn3.9*

*IDC **22** 06:55:40.4±2.5, 33.57N×45.73E, mb3.6/4, mb1 3.8/7, mb1mx3.6/19, mbtmp3.7/7, ML3.3/3, MS3.7/5, Ms1 3.8/5, ms1mx3.5/22, Error ellipse: s-maj=46.2km s-min=20.2km az=167.0*

*MOS **22** 06:55:44.5±0.8, 33.71N×45.41E, h33^{km}, mb4.5/8, Error ellipse: s-maj=32.1km s-min=9.8km az=43.8*

*NEIC **22** 06:55:46.0±0.6, 33.66N×45.58E, h41^{km}±7^{km}, mb4.4/8, Error ellipse: s-maj=9.5km s-min=5.6km az=183.0*

*THR **22** 06:55:46.5±0.4, 34.16N×45.37E, h15^{km}, ML4.0*

*CSEM **22** 06:55:47.3±0.1, 34.03N×45.20E, h40^{km}, mb4.4/8, Error ellipse: s-maj=5.2km s-min=2.2km az=8.0*

ISC 22 06:55:40.5±1.4, **33.64N**±0.07×**45.43E**±0.04, **h7**^{km}±10^{km}, **n72, σ1^{s}36**/67, **mb4.2**/12, **MS3.7**/3, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHD	Baghdad	0.95	248	*i* Pb	x	06 56 02.0	
BHD				*i* Sg	x	06 56 18.0	
IGHG	Ghaleghazi	1.18	54	Pg	Pg	06 56 03.8	-0.2
IGHG	Ghaleghazi	1.18	54	Pn	Pg	06 56 03.8	-0.2
IDHR	Dehrash	1.33	37	Pn	Pn	06 56 06.9	+1.4
IDHR	Dehrash	1.33	37	Pn	Pn	06 56 06.9	+1.4
IVIS	Veys	1.48	53	Pn	Sn	06 56 29.4	+2.0
IVIS	Veys	1.48	53	Pn	Sn	06 56 29.4	+2.0
ILIN	Laeen	1.81	44	Pn	Pn	06 56 14.6	+2.3
ILIN	Laeen	1.81	44	Pn	Pn	06 56 14.6	+2.3
IKOM	Komasi	1.82	72	Pn	Pn	06 56 14.6	+2.1
IKOM	Komasi	1.82	72	Pn	Pn	06 56 14.6	+2.1
SHGO	Shushtar	3.22	117	*e*PN	Pn	06 56 42.9	+10
MSL	Mosul	3.27	325	*e*Pn	x	06 56 45.5	
MSL				*i* Sn	x	06 57 29.0	
MSL				*i* Sb	x	06 57 34.0	
MSL				*i* Sg	x	06 57 45.5	
ASAO	Ashtian	3.92	75	*e*PN	Pn	06 56 48.0	+5.5
ASAO				AML	AML	06 57 58.2	
	comp=N,281nm,0.7s						
IRAZ	Razeghan	4.12	63	Pn	Pn	06 56 51.4	+6.2
IRAZ	Razeghan	4.12	63	Pn	Pn	06 56 51.0	+5.8
IRAZ	Razeghan	4.12	63	Pn	Pn	06 56 51.0	+5.8
IRAZ				Sn	Sn	06 57 35.0	+0.8
KBD	Kabd	4.85	156	*e*P	Pn	06 56 58.0	+2.3
IVRN	Varamin	5.39	74	Sn	Sn	06 58 02.4	-4.0
IVRN	Varamin	5.39	74	Pn	Pn	06 57 02.2	-1.1
IVRN	Varamin	5.39	74	Pn	Pn	06 57 02.1	-1.2
IVRN	Varamin	5.39	74	Pn	Pn	06 57 02.1	-1.2
GRMI	Germi	5.54	20	*e*Pn	Pn	06 57 04.0	-1.3
GRMI	Germi	5.54	20	*e*PN	Pn	06 57 04.2	-1.1
IDMV	Damavand	5.78	69	Pn	Pn	06 57 07.9	-0.9
IDMV	Damavand	5.78	69	Pn	Pn	06 57 07.7	-1.1
IDMV	Damavand	5.78	69	Pn	Pn	06 57 07.7	-1.1
NASN	Na’in	6.24	96	*e*Pn	Pn	06 57 22.0	+6.7
NASN	Na’in	6.24	96	*e*PN	Pn	06 57 22.1	+6.7
NASN				AML	AML	06 58 42.3	
	comp=N,35nm,0.4s						
IFIR	Firoozkooh	6.36	70	Pn	Pn	06 57 16.2	-0.8
IFIR	Firoozkooh	6.36	70	Pn	Pn	06 57 16.2	-0.8
GNI	Garni	6.52	355	Pg	Pg	06 57 40.7	-10
	comp=N,1.4nm,0.3s,baz=111,slow=8.6,SNR=2.2						
GNI				Lg		06 59 20.5	
	baz=98,slow=21,SNR=3.9						
GNI				LR	LR	07 00 07.2	
	comp=N,825nm,19.3s,baz=163,slow=40						
ASF	Jabal al Asfar	7.32	261	Pn	Pn	06 57 32.1	+1.7
	comp=N,0.6nm,0.3s,baz=299,slow=10,SNR=3.7						
ASF				Lg		06 59 40.1	
	comp=N,9.1nm,0.3s,baz=142,slow=19,SNR=10						
MALT	Malatya	7.34	311	*e*P	Pn	06 57 30.8	0.0
MALT				pmax	pmax		
	comp=Z,130nm,1.3s						
MALT	Malatya	7.34	311	*e*P	Pn	06 57 30.8	0.0
	comp=Z,130nm,1.3s						
IPAR	Pars	7.51	118	Pn	Pn	06 57 31.5	-1.7
IPAR	Pars	7.51	118	Pn	Pn	06 57 31.5	-1.7
IMOK	Mook	7.73	124	Pn	Pn	06 57 34.4	-1.8
IMOK	Mook	7.73	124	Pn	Pn	06 57 34.4	-1.8
EIL	Elat	9.76	249	Lg		07 01 02.4	
	comp=Z,2.9nm,0.3s,baz=227,slow=18,SNR=5.1						
EIL				LR	LR	07 02 38.5	
	comp=Z,279nm,18.1s,baz=249,slow=42						
BR131	Keskin Array S	11.24	306	P	P	06 58 28.4	+3.8
BRTR	Keskin Array B	11.24	306	Pn	P	06 58 26.1	+1.4
	comp=Z,0.0nm,0.3s,baz=135,slow=14,SNR=2.2						
IDI	Anoyia	17.02	281	P	P	06 59 43.6	+3.1
	comp=Z,0.4nm,0.3s,baz=90,slow=10,SNR=2.9						
AKASG	Malin Array Be	20.78	330	P	P	07 00 22.8	-1.7
	comp=Z,2.0nm,0.4s,baz=139,slow=9.8,SNR=26						
MOS	Moscow	22.76	349	*e*P	P	07 00 49.1	+4.9
MOS				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.0						
BVAR	Borovoye Array	26.33	35	P	P	07 01 15.8	-2.7
	comp=Z,0.2nm,0.3s,mb3.1,baz=239,slow=8.4,SNR=2.5						
GERES	GERESS Array B	28.03	312	LR	LR	07 14 27.2	
	comp=Z,91nm,21.8s,MS3.3,baz=236,slow=40						
PGF	Pioggiola	29.83	298	*e*P	P	07 01 51.7	+1.4
	comp=Z,5.4nm,0.7s,mb4.1						
PGF	Pioggiola	29.83	298	*e*P	P	07 01 51.7	+1.4
PGF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
MKAR	Makanchi Array	30.77	54	P	P	07 01 56.6	-2.0
	comp=Z,0.7nm,0.5s,mb3.8,baz=261,slow=8.5,SNR=4.6						
MBDF	Montbardon	31.67	302	*e*P	P	07 02 06.4	-0.1
	comp=Z,8.2nm,0.7s,mb4.3						
MBDF	Montbardon	31.67	302	*e*P	P	07 02 06.4	-0.1
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
BNI	Bardonecchia	31.77	303	*e*P	P	07 02 07.9	+0.5
BNI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
BNI	Bardonecchia	31.77	303	*e*P	P	07 02 07.9	+0.5
	comp=Z,4.5nm,0.7s,mb4.4						
BNI	Bardonecchia	31.77	303	*e*P	P	07 02 07.9	+0.5
	comp=Z,4.5nm,0.7s,mb4.4						
LPG	La Plagne	31.79	303	*e*P	P	07 02 07.4	-0.1
	comp=Z,5.7nm,0.8s,mb4.2						
LPG	La Plagne	31.79	303	*e*P	P	07 02 07.4	-0.1
LPG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
LPL	La Plagne	31.80	303	*e*P	P	07 02 07.4	-0.3
CABF	La Chapelle	32.41	305	*e*P	P	07 02 12.8	-0.2
	comp=Z,7.8nm,0.9s,mb4.2						
CABF	La Chapelle	32.41	305	*e*P	P	07 02 12.8	-0.2
CABF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
SMF	Signal de Mont	33.95	305	*e*P	P	07 02 25.6	-0.8
	comp=Z,16nm,0.9s,mb4.6						
SMF	Signal de Mont	33.95	305	*e*P	P	07 02 25.6	-0.8
SMF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
LOR	Lormes	34.02	306	*e*P	P	07 02 26.0	-1.0
SSF	Saint Saulge	34.23	306	*e*P	P	07 02 28.8	0.0
AVF	Avril sur Loir	34.30	305	*e*P	P	07 02 28.5	-0.9
	comp=Z,10nm,0.9s,mb4.5						
AVF	Avril sur Loir	34.30	305	*e*P	P	07 02 28.5	-0.9
AVF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
TCF	Toulx Ste Croi	35.03	304	*e*P	P	07 02 35.3	-0.3
	comp=Z,10nm,0.9s,mb4.4						
TCF	Toulx Ste Croi	35.03	304	*e*P	P	07 02 35.3	-0.3
TCF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
GRR	Gorron	37.31	307	*e*P	P	07 02 53.9	-1.0
ARCES	ARCESS Array B	37.63	349	P	P	07 02 58.6	+1.3
	comp=Z,0.8nm,0.8s,mb3.5,baz=135,slow=10,SNR=3.2						
CMAR	Chiang Mai Arr	49.88	94	LR	LR	07 26 51.6	
	comp=Z,102nm,19.3s,MS3.8,baz=300,slow=38						
JNU	Nakatsue	69.19	64	LR	LR	07 40 14.9	
	comp=Z,97nm,18.9s,MS4.1,baz=294,slow=39						

MAN 22 06:55:50.2, 9.67N×126.34E, h15^{km}, mb4.5, ML3.3, MS3.2, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.85	277	⇓*e*P	Pb	06 56 05.4	-0.6
SCPH				*e*S	Sb	06 56 17.5	+0.5
BUTP	Butuan	1.00	226	*e*P	Pb	06 56 07.1	-1.5
MSLP	Maasin	1.53	288	*e*P	Pn	06 56 17.5	+0.4
PLP	Palo	2.00	318	*e*P	Pn	06 56 24.8	+0.9
PLP				*e*S	Sn	06 56 50.9	+2.2
BESP	Borongan	2.11	335	*e*P	Pn	06 56 23.6	-1.9
BESP				*e*S	Sn	06 56 48.6	-3.0
BUKP	Musuan	2.19	215	*e*P	Pn	06 56 26.3	-0.3
BUKP				*e*S	Sn	06 56 50.7	-2.8
TBP	Tagbilaran	2.44	271	*e*P	Pn	06 56 30.2	0.0
TBP				*e*S	Sn	06 57 00.1	+0.1
DCPH	Dipolog City	3.14	250	⇓*e*P	Pn	06 56 39.7	-0.5
PAGZ	Pagadian	3.44	238	*e*P	Pn	06 56 44.3	-0.2

CSEM 22 07:43:13.9, 63.93N×21.99W, h5^{km}, ML3.6, After REY, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRI	Krysuvik	0.06	217	P	Pg	07 43 15.5	+0.1
IVOS	Vogsosar	0.15	120	P	Pg	07 43 17.1	+0.1
IVOS				S	Sg	07 43 19.7	+0.7
IVOG	Vogar	0.18	284	P	Pg	07 43 17.8	+0.2
IVOG				S	Sg	07 43 20.8	+0.7
ISAN	Sandskeio	0.23	55	P	Pg	07 43 18.5	0.0
ISAN				S	Sg	07 43 22.1	+0.5
IBJA	Bjarnastaoir	0.30	86	P	Pg	07 43 19.9	-0.2
IBJA				S	Sg	07 43 24.4	+0.2
INYL	Nylenda	0.33	279	P	Pg	07 43 20.2	-0.4
IKUD	Kuludalsa	0.40	7	P	Pg	07 43 21.3	-0.6
IKUD				S	Sg	07 43 26.8	-0.5
IKRO	Krokur	0.42	66	P	Pg	07 43 21.6	-0.7
IKRO				S	Sg	07 43 28.0	0.0
IHEI	Heioarbar	0.43	50	P	Pg	07 43 21.8	-0.8
IHEI				S	Sg	07 43 28.2	-0.1
ISOL	Solvholt	0.46	89	P	Pg	07 43 22.3	-0.9
ISOL				S	Sg	07 43 28.7	-0.7
ISAU	Saurbar	0.70	84	P	Pg	07 43 26.3	-1.6
ISAU				S	Sg	07 43 36.3	-0.9
IGYG	Gygjarholskot	0.86	65	P	Pb	07 43 28.8	-2.1
IASB	`sbjarnarst	0.87	19	P	Pb	07 43 29.0	-2.2
IASB				S	Sb	07 43 41.3	-1.7
IHAU	Haukadalur	0.90	86	P	Pb	07 43 29.5	-2.1
IHAU				S	Sb	07 43 42.2	-1.4
IVES	Vestmannaeyjar	0.90	122	P	Pb	07 43 29.6	-2.1
IVES				S	Sb	07 43 41.9	-1.9
IMID	Miomork	0.97	105	P	Pb	07 43 30.5	-2.4
IMID				S	Sb	07 43 44.0	-1.8
IESK	Eystri-Skogar	1.20	108	P	Pb	07 43 33.5	-3.3
IESK				S	Sb	07 43 50.2	-2.2
IHVE	Hveravellir	1.42	47	P	Pn	07 43 38.1	-2.3
IHVO	Lagu-Hvolar	1.46	105	P	Pn	07 43 38.4	-2.6
IHVO				S	Sb	07 43 57.3	-2.5
ISNB	Snabyli	1.50	96	P	Pn	07 43 38.6	-3.0
ISNB				S	Sb	07 43 59.3	-1.9
IHRN	Hraun	2.33	19	P	Pn	07 43 52.3	-1.2
IFAG	Fagurholsmyri	2.36	89	P	Pn	07 43 52.9	-1.0

CSEM 22 07:43:14.9, 63.92N×21.99W, h4^{km}, ML3.7, After REY, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRI	Krysuvik	0.06	219	P	Pg	07 43 16.4	+0.1
IKRI				S	Sg	07 43 17.7	+0.4
IVOS	Vogsosar	0.15	119	P	Pg	07 43 18.1	+0.2
IVOS				S	Sg	07 43 20.6	+0.7
IVOG	Vogar	0.18	285	P	Pg	07 43 18.8	+0.2
IVOG				S	Sg	07 43 21.8	+0.7
ISAN	Sandskeio	0.23	54	P	Pg	07 43 19.5	0.0
ISAN				S	Sg	07 43 23.1	+0.5
IBJA	Bjarnastaoir	0.31	86	P	Pg	07 43 20.9	-0.1
IBJA				S	Sg	07 43 25.3	+0.1
INYL	Nylenda	0.33	279	P	Pg	07 43 21.1	-0.5
INYL				S	Sg	07 43 26.0	-0.1
IKUD	Kuludalsa	0.40	7	P	Pg	07 43 22.2	-0.8
IKUD				S	Sg	07 43 27.7	-0.6
IKRO	Krokur	0.42	65	P	Pg	07 43 22.6	-0.8
IHEI	Heioarbar	0.43	50	P	Pg	07 43 22.8	-0.8
ISOL	Solvholt	0.46	89	P	Pg	07 43 23.2	-1.0
ISOL				S	Sg	07 43 29.6	-0.8
ISAU	Saurbar	0.70	84	P	Pg	07 43 27.5	-1.4
ISAU				S	Sg	07 43 37.7	-0.5
IGYG	Gygjarholskot	0.86	65	P	Pb	07 43 29.8	-2.2
IASB	`sbjarnarst	0.88	19	P	Pb	07 43 30.4	-1.9
IHAU	Haukadalur	0.90	86	P	Pb	07 43 30.6	-2.0
IHAU				S	Sb	07 43 43.2	-1.5
IVES	Vestmannaeyjar	0.90	122	P	Pb	07 43 30.7	-2.0
IVES				S	Sb	07 43 42.8	-2.0
IMID	Miomork	0.97	105	P	Pb	07 43 31.7	-2.2
IMID				S	Sb	07 43 44.8	-2.1
IHVO	Lagu-Hvolar	1.46	105	P	Pn	07 43 40.0	-2.0
IHVO				S	Sb	07 43 58.9	-2.0
ISNB	Snabyli	1.50	96	P	Pn	07 43 42.2	-0.5
ISNB				S	Sb	07 44 00.2	-2.1
ISKR	Skrokkalda	1.70	66	P	Pn	07 43 43.9	-1.6
IGRF	Grimsfjall	2.13	75	P	Pn	07 43 52.6	+1.0
IFAG	Fagurholsmyri	2.36	89	P	Pn	07 43 56.6	+1.6

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*BJI **22** 07:48:17.9, 36.60N×69.53E, h4^{km}, mB5.1, mb4.9, ML5.3, Ms4.5, Msz4.4*

*HRVD **22** 07:48:19.3±0.6, 36.41N×69.37E, h23^{km}±2^{km}, MW4.8/45, Centroid moment Tensor Solution. LP body waves: s11,c13;Mantle waves: s45,c65; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.86±.14; $M_{\theta\theta}$-0.45±.10; $M_{\phi\phi}$-0.41±.09; $M_{r\theta}$0.31±.14; $M_{\theta\phi}$-1.06±.07; $M_{\phi r}$-1.13±.16; Best double couple: $M_0$1.739×10^{16} NP1:ϕ_s78°,δ44°,λ150°. NP2:ϕ_s190°,δ70°,λ50°. Principal axes: T 1.83, Plg49°, Azm57°; N -.18, Plg37°, Azm206°; P -1.649, Plg15°, Azm308°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **22** 07:48:19.3±0.2, 36.24N×69.61E, h10^{km}, mb4.9/42, MS4.1/2 Error ellipse: s-maj=6.3km s-min=3.3km az=198.0*

*MOS **22** 07:48:21.9±0.8, 36.40N×69.49E, h33^{km}, mb5.0/41, MS4.1/15, Error ellipse: s-maj=7.1km s-min=4.8km az=118.3*

*IDC **22** 07:48:23.2±3.0, 36.33N×69.59E, h36^{km}±24^{km}, mb4.3/20, mb1 4.4/23, mb1mx4.4/25, mbtmp4.5/23, ML3.8/3, MS4.0/15, Ms1 4.1/15, ms1mx3.9/24, Error ellipse: s-maj=17.9km s-min=11.2km az=6.0*

*NNC **22** 07:48:29.3±2.2, 36.87N×69.08E, h114^{km}±37^{km}, mpv5.2, Error ellipse: s-maj=22.3km s-min=16.3km az=89.0*

ISC 22 07:48:19.5±1.0, **36.28N**±0.02×**69.56E**±0.03, **h21**^{km}±7^{km}, **h25**^{km}±2.9^{km}**:pP-P, n246, σ1^{s}21**/275, **mb4.7**/79, **MS4.2**/29, **20C-10D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.11	141	⇑P	Pn	07 49 15.6	+7.1
CEP				S	Sn	07 49 40.0	-5.5
CHCP	Chirah Chowk	4.01	130	⇑P	Pn	07 49 27.0	+5.8
SARP	Sargodha	5.05	148	⇑P	Pn	07 49 39.8	+3.8
THN	Thein Dam	6.37	125	*e*P	Pn	07 49 58.1	+3.5
THN				*e*x	Sn	07 51 13.4	+5.9
AML	Almayashu	6.67	27	P	Pn	07 50 00.1	+1.2
	SNR=292						
PONG	Pong	6.83	127	*e*P	Pn	07 50 04.0	+2.9
PONG				*e*x	x	07 51 23.0	
KK31	Karatay Array	6.86	6	Pn	Pn	07 50 01.4	-0.2
	35nm,0.3s,baz=195,slow=14,SNR=979						
KK31				⇓Sn	Sn	07 51 13.9	-5.8
	66nm,0.4s,baz=190,slow=23,SNR=5.5						
KK31				⇓Lg		07 51 53.8	
	224nm,0.6s,baz=204,slow=31,SNR=3.9						
KKAR	Karatay Array	6.86	6	*i* PN	Pn	07 50 01.3	-0.2
KKAR				pmax	pmax		
	comp=Z,13nm,0.3s						
UCH	Uchtor	7.08	31	P	Pn	07 50 05.8	+1.2
	SNR=519						
EKS2	Erkin-Say	7.16	26	P	Pn	07 50 06.7	+0.9
	SNR=176						
KZA	Kyzart	7.29	36	P	Pn	07 50 08.3	+0.9
	SNR=205						
AAK	Ala-Archa	7.41	29	⇑Pn	Pn	07 50 10.3	+1.2
	comp=Z,182nm,0.6s						
AAK				⇓Sn	Sn	07 51 31.0	-2.4
	comp=Z,324nm,0.6s						
AAK	Ala-Archa	7.41	29	P	Pn	07 50 10.3	+1.1
AAK						07 51 31.0	
AAK				pmax	pmax		
	comp=Z,100nm,0.6s						
AAK				smax			
	comp=N,178nm,0.6s						
AAK	Ala-Archa	7.41	29	*e*P	Pn	07 50 09.2	0.0
	comp=N,196nm,0.4s						
KBK	Karagaybulak	7.61	32	P	Pn	07 50 13.4	+1.4
	SNR=82						
FRU	Bishkek	7.62	29	⇑*i*P	Pn	07 50 13.5	+1.3
FRU				*e*S	Sn	07 51 36.0	-2.9
FRU				pmax	pmax		
	comp=Z,546nm,1.5s						
FRU				smax			
	comp=N,560nm,1.5s						
SDNR	Sundarnagar	7.78	126	*e*P	Pn	07 50 17.0	+2.6
SDNR				*e*S	Sn	07 51 43.0	+0.1
CHMS	Chumysh	7.82	29	P	Pn	07 50 15.5	+0.6
	SNR=211						
ULHL	Ulahol	7.90	39	P	Pn	07 50 16.5	+0.5
	SNR=152						
USP	Ospenovka	7.95	27	P	Pn	07 50 16.7	0.0
	SNR=227						

TKM2	**Tokmak 2**	8.11	33	P	P	07 50 19.5	+0.6
	SNR=230						
SMLA	**Simla**	8.15	127	*i* P	P	07 50 19.3	-0.2
SMLA				*i* S	Sn	07 51 51.2	-0.8
KLP	**Kalpa**	8.63	121	*e*P	P	07 50 27.9	+1.7
DDI	**Dehra Dun**	9.26	127	*e*x	P	07 50 32.0	-2.9
VAN	**Vannovskaya**	9.30	284	*e*P	P	07 50 31.9	-3.6
VAN				S	Sn	07 52 09.8	-11
JASL	**Jaisalmer**	9.39	173	*e*P	P	07 50 36.7	-0.1
KHET	**Khetri**	9.74	145	*e*P	P	07 50 41.0	-0.5
KHET				*e*S	Sn	07 52 24.5	-6.8
BHGR	**Bahadurgarh**	9.80	138	*e*x	Sn	07 52 29.6	-3.2
NDI	**New Delhi**	9.95	137	*e*P	P	07 50 44.8	+0.3
NDI				*e*x	x	07 50 52.5	
NDI				*e*x	Sn	07 52 32.8	-3.8
AYAN	**Aya Nagar**	10.06	138	*e*P	P	07 50 47.6	+1.7
AYAN				*e*x	S	07 52 36.9	-2.3
SONA	**Sohna**	10.22	139	*e*P	P	07 50 49.4	+1.2
SONA				*e*x	S	07 52 38.2	-4.9
AJM	**Ajmer**	10.68	155	*e*P	P	07 50 54.6	+0.1
AJM				*e*S	S	07 52 43.5	-11
AJM				AML	AML	07 52 55.0	
	comp=E,316nm,0.6s						
AJM				AML	AML	07 52 56.1	
	comp=N,250nm,0.4s						
PTH	**Pithoragarh**	11.18	124	*e*P	P	07 51 05.8	+4.5
PTH				*e*S	S	07 53 03.0	-3.7
LGTI	**Lohaghat**	11.27	124	*e*P	P	07 51 01.5	-0.9
LGTI				*e*x	S	07 53 04.5	-4.2
AGRA	**Agra**	11.49	139	*e*S	S	07 53 04.4	-10
JHNI	**Jhansi**	13.24	142	*e*P	P	07 51 27.0	-1.9
JHNI				*e*x	S	07 53 48.0	-8.5
MK31	**Makanchi Array**	14.17	38	P	P	07 51 38.9	-2.2
	comp=N,45nm,0.8s,baz=216,slow=12,SNR=195						
MKAR	**Makanchi Array**	14.17	38	*i* P	P	07 51 38.8	-2.2
MKAR				pmax	pmax		
	comp=Z,30nm,0.7s						
MKAR	**Makanchi Array**	14.17	38	Pn	P	07 51 39.1	-1.9
	comp=Z,2.1nm,0.3s,baz=226,slow=15,SNR=141						
MKAR				LR	LR	07 58 08.8	
	comp=Z,350nm,19.9s,baz=185,slow=42						
KOLN	**Koldanda**	14.61	122	*e*P	P	07 51 45.5	-1.4
	comp=Z,261nm,0.8s						
KOLN				*e*S	S	07 54 20.3	-8.7
BHPL	**Bhopal**	14.66	150	*e*P	P	07 51 47.0	-0.7
BHPL				*e*x	S	07 54 24.1	-6.3
AB31	**Akbulak array**	14.75	335	⇓P	P	07 51 44.3	-4.4
	comp=Z,49nm,0.5s,baz=157,slow=13,SNR=1294						
AB31				S	S	07 54 14.8	-18
	comp=Z,33nm,0.8s,baz=157,slow=22,SNR=3.5						
AB31	**Akbulak array**	14.75	335	*e*P	P	07 51 44.2	-4.5
AB31				pmax	pmax		
	comp=Z,17nm,0.4s						
GKN	**Gorkha**	15.19	119	*e*P	P	07 51 52.9	-1.6
	comp=Z,333nm,0.6s						
GKN				*e*S	S	07 54 32.8	-10
DMN	**Daman**	15.76	119	*e*P	P	07 51 59.9	-2.0
	comp=Z,237nm,0.7s						
KKN	**Kakani**	15.77	118	*e*P	P	07 52 00.1	-2.0
	comp=Z,421nm,0.6s						
KKN				*e*S	S	07 54 47.7	-8.7
KKN	**Kakani**	15.77	118	*e*P	P	07 52 00.1	-2.0
KKN				pmax	pmax		
	comp=Z,210nm,0.6s						
WMQ	**Urumqi**	15.78	56	P	P	07 52 01.4	-0.7
WMQ				AP		07 52 05.4	
WMQ				XP		07 52 08.4	
WMQ				PP	PP	07 52 15.8	+1.0
WMQ				AMB	AMB		
	comp=Z,50nm,0.8s						
WMQ				AMB	AMB		
	comp=Z,220nm,5.6s						
WMQ				LR	LR		
	comp=N,940nm,17.0s						
WMQ				LR	LR		
	comp=E,1µm,10.0s						
WMQ				LR	LR		
	comp=Z,1µm,13.0s						
PKI	**Pulchoki**	15.99	118	*e*P	P	07 52 03.4	-1.5
	comp=Z,341nm,0.6s						
PKI	**Pulchoki**	15.99	118	*e*P	P	07 52 03.4	-1.5
PKI				pmax	pmax		
	comp=Z,171nm,0.6s						
GUN	**Gumba**	16.13	117	*e*P	P	07 52 04.0	-2.7
	comp=Z,337nm,0.7s						
VOSK	**Vostochnaya**	16.48	3	⇑P	P	07 52 07.2	-3.6
	comp=Z,37nm,0.8s						
VOSK				⇓S	S	07 55 03.9	-8.7
	comp=Z,130nm,1.1s						
VOSK	**Vostochnaya**	16.48	3	P	P	07 52 07.2	-3.7
VOSK						07 55 17.1	
VOSK				pmax	pmax		
	comp=Z,31nm,0.9s						
VOSK				smax			
	comp=N,136nm,1.1s						
ZRNK	**Zerenda**	16.68	359	⇑P	P	07 52 10.1	-3.3
	comp=N,29nm,1.1s						
ZRNK				⇓S	S	07 55 06.2	-11
	comp=N,48nm,1.2s						
ZRNK	**Zerenda**	16.68	359	P	P	07 52 10.1	-3.3
ZRNK						07 55 06.2	
ZRNK				pmax	pmax		
	comp=Z,1.0nm,1.4s						
ZRNK				smax			
	comp=N,60nm,1.3s						
BVA0	**Borovoye Array**	16.76	2	P	P	07 52 11.7	-2.7
	comp=N,9.0nm,1.4s,baz=180,slow=12,SNR=113						
BVA0				⇑S	S	07 55 10.5	-8.5
	comp=N,6.7nm,1.0s,baz=173,slow=20,SNR=6.3						
BVA0	**Borovoye Array**	16.76	2	*i* P	P	07 52 11.6	-2.8
BVA0				*i*		07 55 21.6	
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BVA0				smax			
	comp=N,7.0nm,1.0s						
BVAR	**Borovoye Array**	16.76	2	Pn	P	07 52 11.7	-2.7
	comp=N,3.6nm,0.3s,baz=164,slow=11,SNR=36						
BVAR				Sn	S	07 55 21.6	+2.6
	comp=N,0.9nm,0.3s,baz=175,slow=17,SNR=4.3						
AKL	**Akola**	16.83	155	*e*P	P	07 52 18.7	+3.1
AKL				*e*x	x	07 55 15.5	
AKL				AML	AML	07 55 21.7	
	comp=E,82nm,0.7s						
AKL				AML	AML	07 55 21.9	
	comp=N,96nm,0.8s						
NGP	**Nagpur**	17.20	149	*e*P	P	07 52 23.1	+2.9
NGP				*e*x	x	07 52 24.4	
NGP				AMb	AMB	07 52 34.0	
	comp=Z,76nm,1.1s						
NGP				*e*S	S	07 55 18.9	-10
NGP				*e*x	x	07 55 25.6	
BLSP	**Bilaspur**	17.84	139	*e*P	P	07 52 28.6	+0.5
BLSP				AMb	AMB	07 52 31.5	
	comp=Z,68nm,0.9s						
BLSP				*e*x	S	07 55 37.5	-6.3
POO	**Poona**	18.08	167	*e*x	P	07 52 25.5	-5.7
POO				AMb	AMB	07 52 31.8	
	comp=Z,73nm,1.6s						
POO				*e*x	S	07 55 50.4	+1.1
LATR	**Latur**	18.83	159	*e*x	P	07 52 44.4	+4.0
LATR				*e*x	S	07 55 43.5	-23
LSA	**Lhasa**	19.24	104	P	P	07 52 48.6	+3.4
LSA	**Lhasa**	19.24	104	*e*P	P	07 52 47.4	+2.2
LSA				pmax	pmax		
	comp=Z,56nm,0.6s						
LSA	**Lhasa**	19.24	104	*e*P	P	07 52 47.4	+2.3
	comp=Z,56nm,0.6s						
DGRG	**David-gareji**	19.51	293	P	P	07 52 46.7	-1.5
GNI	**Garni**	19.86	289	P	P	07 52 50.5	-1.6
GNI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GNI				MLR	MLR		
	comp=Z,343nm,19.8s						
GNI	**Garni**	19.86	289	P	P	07 52 50.5	-1.6
	comp=Z,1.2nm,0.3s,baz=284,slow=5.4,SNR=7.9						
GNI				LR	LR	08 02 49.8	
	comp=Z,343nm,19.8s,baz=240,slow=44						
GNI	**Garni**	19.86	289	*e*P	P	07 52 52.9	+0.8
	comp=Z,72nm,0.9s						
TI2	**Plekhanov**	20.01	293	⇓*i*P	P	07 52 52.6	-1.0
HYB	**Hyderabad**	20.40	155	*e*P	P	07 53 00.0	+2.1
HYB				*e*		07 53 09.0	
HYB				*e*S	S	07 56 40.0	-0.3
HYB	**Hyderabad**	20.40	155	*i* P	P	07 53 00.0	+2.1
HYB				*e*		07 53 09.0	
HYB				*e*S	S	07 56 41.5	+1.2
ZAL	**Zalesovo**	20.60	26	P	P	07 52 58.0	-1.7
	comp=Z,42nm,0.6s,baz=256,slow=10.0,SNR=168						
ZAL				LR	LR	08 02 27.1	
	comp=Z,1µm,19.5s,MS4.2,baz=250,slow=41						
ZEI	**Tsey**	20.79	296	*e*P	P	07 52 58.0	-3.7
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NVS	**Novosibirsk**	20.82	23	⇑*i*P	P	07 52 59.6	-2.3
NVS				*e*		07 53 09.8	
NVS				*i* S	S	07 56 43.3	-5.1
NVS				pmax	pmax		
	comp=N,79nm,1.1s						
NVS				pmax	pmax		
	comp=E,29nm,1.1s						
NVS				pmax	pmax		
	comp=Z,92nm,1.1s						
NVS				smax			
	comp=N,93nm,1.9s						
NVS				smax			
	comp=E,44nm,1.7s						
BHD	**Baghdad**	20.89	269	*e*P	P	07 53 00.5	-2.3
CAL	**Calcutta**	21.27	125	*e*x	x	07 57 38.0	
CAL				*e*x	x	07 59 06.8	
CAL				*i* x	x	08 02 06.5	
BWNR	**Bhubaneshwar**	21.35	134	*e*P	P	07 53 17.6	+10
BWNR				AMb	AMB	07 53 21.6	
	comp=Z,92nm,1.0s,mb5.1						
BWNR				*e*x	x	07 57 14.3	
SVE	**Sverdlovsk**	21.42	346	⇑*e*P	P	07 53 07.0	-1.0
SVE				*e*		07 53 19.0	
SVE				*e*PPP	PPP	07 53 44.2	+2.6
SVE				*e*S	S	07 57 18.0	+18
SVE				pmax	pmax		
	comp=Z,40nm,1.5s,mb4.5						
SVE				MLR	MLR		
	comp=N,900nm,10.0s,MS4.5						
SVE				MLR	MLR		
	comp=E,500nm,10.0s,MS4.5						
SVE				MLR	MLR		
	comp=Z,2µm,10.0s,MS4.7						
ARU	**Arti**	21.49	343	⇑*i*P	P	07 53 08.0	-0.7
ARU				*e*PPP	PPP	07 53 34.5	-8.1
ARU				*i* S	S	07 57 05.6	+4.6
ARU				*e*SS	SS	07 57 32.0	-4.7
ARU				*e*SSS	SSS	07 57 45.3	-6.0
ARU				pmax	pmax		
	comp=Z,36nm,1.0s,mb4.7						
ARU				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.0						
ARU				MLR	MLR		
	comp=N,300nm,15.0s,MS4.0						
ARU				MLR	MLR		
	comp=E,300nm,15.0s,MS4.0						
ARU	**Arti**	21.49	343	*e*P	P	07 53 07.2	-1.5
	comp=E,97nm,1.2s,mb5.0						
KIV	**Kislovodsk**	21.87	299	*e*P	P	07 53 11.8	-0.9
KIV				pmax	pmax		
	comp=Z,38nm,0.8s,mb4.9						
KIV	**Kislovodsk**	21.87	299	*e*P	P	07 53 11.8	-0.9
	comp=Z,38nm,0.8s,mb4.9						
SHL	**Shillong**	21.87	113	*e*x	P	07 53 14.7	+1.9
SHL				*e*x	S	07 57 13.0	+4.6
GOF	**Gofitskoye**	21.88	302	⇑*i*P	P	07 53 11.1	-1.6
GOF				pmax	pmax		
	comp=Z,150nm,1.7s,mb5.2						
VIS	**Vishakhapatnam**	22.14	143	*e*x	P	07 53 12.8	-2.7
VIS				*e*x	S	07 57 18.0	+4.7
IMP	**Imphal**	23.85	112	*e*x	P	07 53 35.0	+2.8
GTA	**Gaotai**	24.04	73	P	P	07 53 36.5	+2.6
GTA				AP		07 53 45.1	
GTA				XP		07 53 48.0	
GTA				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.6						
GTA				AMB	AMB		
	comp=Z,290nm,4.2s						
GTA				LR	LR		
	comp=N,1µm,17.9s,MS4.5						
GTA				LR	LR		
	comp=E,810nm,14.8s,MS4.5						
GTA				LR	LR		
	comp=Z,950nm,17.5s,MS4.3						
SOKR	**Solikamsk**	24.74	344	*c* *i*P	P	07 53 41.8	+1.3
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
SOKR				MLR	MLR		
	comp=Z,430nm,15.0s,MS4.1						
MALT	**Malatya**	24.80	284	*e*P	P	07 53 44.0	+2.7
MALT				pmax	pmax		
	comp=Z,652nm,3.6s						
MALT	**Malatya**	24.80	284	*e*P	P	07 53 44.0	+2.8
	comp=Z,652nm,3.6s						
ANN	**Anapa**	25.73	299	*e*P	P	07 54 02.3	+12
ANN				*i* *PP	pP	07 54 10.3	+14
ANN				*e*		07 54 40.6	
ANN				pmax	pmax		
	comp=Z,56nm,0.9s,mb5.1						
ANN				MLR	MLR		
	comp=N,668nm,17.0s,MS4.6						
ANN				MLR	MLR		
	comp=E,1µm,17.0s,MS4.6						
ANN				MLR	MLR		
	comp=Z,1µm,17.0s,MS4.5						
MOY	**Mondy**	27.09	45	*e*P	P	07 54 04.4	+2.0
MOY				pmax	pmax		
	comp=Z,19nm,1.9s,mb4.3						
ASF	**Jabal al Asfar**	27.24	271	P	P	07 54 05.4	+1.3
	comp=Z,1.3nm,0.2s,mb4.0,baz=148,slow=15,SNR=3.5						
ASF				LR	LR	08 07 19.3	
	comp=Z,224nm,19.6s,MS3.7,baz=308,slow=42						
LZH	**Lanzhou**	27.59	80	*e*P	P	07 54 08.8	+1.6
LZH				AP	pP	07 54 15.1	+1.8
LZH				AMB	AMB		
	comp=Z,40nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,140nm,4.0s						
LZH				LR	LR		
	comp=E,670nm,12.6s						
LZH				LR	LR		
	comp=Z,740nm,13.6s,MS4.4						
ZAK	**Zakamensk**	28.01	49	⇑*i*P	P	07 54 12.0	+1.2
ZAK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						
BRTR	**Keskin Array B**	28.40	288	P	P	07 54 14.5	+0.1
	comp=Z,1.7nm,0.8s,mb3.7,baz=99,slow=7.7,SNR=8.6						
TLY	**Talaya**	28.64	47	⇑*i*P	P	07 54 17.8	+1.4
TLY				*e*		07 55 23.9	
TLY				*e*SS	SS	08 00 28.8	-0.3
TLY				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
TLY				MLR	MLR		
	comp=Z,360nm,24.0s,MS3.9						
TLY	**Talaya**	28.64	47	*e*P	P	07 54 17.9	+1.5
	comp=Z,10nm,0.8s,mb4.6						
CD2	**Chengdu**	28.89	91	P	P	07 54 20.0	+1.1
OBN	**Obninsk**	29.36	320	⇓*i*P	P	07 54 22.2	-0.7
OBN				*e*		07 54 30.8	
OBN				*i*		07 55 16.9	
OBN				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.1						
OBN				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.1						
SONM	**Songino Array**	29.42	55	P	P	07 54 24.0	+0.5
	comp=Z,16nm,1.0s,mb4.7,baz=265,slow=9.2,SNR=38						
SONM				LR	LR	08 07 45.2	
	comp=Z,807nm,21.9s,MS4.3,baz=255,slow=40						
EIL	**Elat**	29.66	267	LR	LR	08 09 05.1	
	comp=Z,191nm,18.3s,MS3.8,baz=290,slow=42						
ULN	**Ulaanbaatar**	29.86	55	*e*P	P	07 54 28.2	+0.7
ULN				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	29.86	55	*e*P	P	07 54 28.2	+0.7
	comp=Z,13nm,0.8s,mb4.7						
CMAR	**Chiang Mai Arr**	31.38	117	P	P	07 54 41.5	+0.4
	comp=Z,4.6nm,0.9s,mb4.3,baz=298,slow=8.3,SNR=18						
CMAR				ScP		08 01 13.2	
	comp=Z,1.6nm,0.7s,baz=294,slow=5.4,SNR=5.3						
CMAR				LR	LR	08 08 34.1	
	comp=Z,196nm,19.1s,MS3.8,baz=300,slow=39						
XAN	**Xi’an**	32.11	82	P	P	07 54 47.8	+0.4
XAN				AP	pP	07 54 53.8	+0.2
XAN				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.5						
AKASG	**Malin Array Be**	32.19	309	P	P	07 54 46.5	-1.4
	comp=Z,11nm,0.7s,mb4.8,baz=86,slow=7.3,SNR=61						
HHC	**Hu-ho-hao-te**	32.93	69	*e*P	P	07 54 55.4	+0.9
HHC				AP	pP	07 54 59.9	-0.8
HHC				XP	sP	07 55 03.8	+0.4
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,140nm,13.5s						
HHC				LR	LR		
	comp=N,460nm,19.0s,MS4.3						
HHC				LR	LR		
	comp=E,480nm,20.4s,MS4.3						
HHC				LR	LR		
	comp=Z,2µm,18.6s,MS4.8						
GYA	**Guiyang**	32.99	97	⇑*i*P	P	07 54 55.4	+0.3
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
ENH	**Enshi**	33.74	89	*e*P	P	07 55 02.6	+1.0
	comp=Z,11nm,0.6s,mb5.0						
CIT	**Chita**	34.67	49	*e*P	P	07 55 10.1	+0.6
CIT				pmax	pmax		
	comp=Z,93nm,1.3s,mb5.5						
VSU	**Vasula**	35.65	322	*i* P	P	07 55 16.9	-0.8
IDI	**Anoyia**	36.01	282	P	P	07 55 20.6	-0.4
	comp=Z,4.0nm,0.4s,mb4.7,baz=140,slow=6.8,SNR=3.5						
BOD	**Bodaibo**	36.26	39	*e*P	P	07 55 23.4	+0.6
BOD				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3						
KAF	**Kangasniemi**	37.19	328	*e*p	P	07 55 29.9	-0.7
	comp=Z,8.1nm,0.7s,mb4.7,baz=113,slow=8.5						
KAF	**Kangasniemi**	37.19	328	*e*P	P	07 55 29.9	-0.7
KAF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
APA	**Apatity**	37.41	338	⇑*i*P	P	07 55 33.1	+0.7
APA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
APA				MLR	MLR		
	comp=Z,400nm,13.0s,MS4.4						
TIA	**Tai’an**	38.05	76	*e*P	P	07 55 39.0	+0.9
TIA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
HIA	**Hailar**	38.37	54	*e*P	P	07 55 41.9	+1.3
HIA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HIA	**Hailar**	38.37	54	*e*P	P	07 55 41.9	+1.2
	comp=Z,5.2nm,0.5s,mb4.5						
KEV	**Kevo**	40.59	339	*e*p	P	07 55 57.9	-0.9
	comp=Z,2.0nm,0.4s,mb4.1						
KEV	**Kevo**	40.59	339	*e*P	P	07 55 57.9	-0.9
KEV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
NJ2	**Nanjing**	40.66	81	*e*P	P	07 56 02.3	+2.5
NJ2				PP	PP	07 57 40.3	+3.5
NJ2				S	S	08 02 10.0	+1.7
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,1µm,5.1s						
NJ2				LR	LR		
	comp=N,2µm,25.3s						
NJ2				LR	LR		
	comp=E,730nm,18.1s						
NJ2				LR	LR		
	comp=Z,350nm,18.6s						
ARCES	**ARCESS Array B**	40.91	338	P	P	07 56 01.6	0.0
	comp=Z,5.6nm,0.7s,mb4.3,baz=117,slow=8.1,SNR=30						
ARCES				LR	LR	08 14 15.0	
	comp=Z,254nm,22.0s,MS4.0,baz=122,slow=38						
ARE0	**ARCESS Array S**	40.91	338	*e*P	P	07 56 01.4	-0.2
BRG	**Berggiesshubel**	41.85	308	*i* P	P	07 56 09.5	+0.1
BRG				*e*		07 56 21.1	
BRG				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
BRG				MLR	MLR		
	comp=Z,310nm,14.2s,MS4.3						
BRG	**Berggiesshubel**	41.85	308	*i* P	P	07 56 09.5	+0.1
	comp=Z,7.6nm,0.8s,mb4.4						
BRG				*e*		07 56 21.1	
BRG				LR	LR		
	comp=Z,310nm,14.2s,MS4.3						
CLNS	**Chul’man**	41.86	43	*e*P	P	07 56 09.2	-0.1
CLNS				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.0						
CLNS				pmax	pmax		
	comp=N,21nm,1.2s						
CLNS				pmax	pmax		
	comp=E,25nm,1.0s						
CLNS				MLR	MLR		
	comp=N,100nm,13.0s,MS4.1						
CLNS				MLR	MLR		
	comp=Z,400nm,13.0s,MS4.5						
CLNS				MLR	MLR		
	comp=E,100nm,11.0s,MS4.1						
MGR	**Morigerati**	42.07	292	P	P	07 56 12.0	+0.7
GERES	**GERESS Array B**	42.11	305	P	P	07 56 11.2	-0.4
	comp=E,0.3nm,0.2s,mb3.5,baz=90,slow=6.7,SNR=5.8						
GERES				LR	LR	08 17 44.4	
	comp=E,138nm,18.6s,MS3.9,baz=83,slow=42						
SGO	**Sicignano**	42.16	293	P	P	07 56 12.9	+0.8
KHC	**Kasperske Hory**	42.17	306	*e*P	P	07 56 12.5	+0.5
KHC				*e*		07 56 38.5	
KHC	**Kasperske Hory**	42.17	306	*e*P	P	07 56 12.5	+0.5
KHC				x	x	07 56 38.5	
CLL	**Collm**	42.43	309	P	P	07 56 14.0	-0.1
CLL				*e*PP	PP	07 57 57.0	+1.7
CLL				*e*		07 58 10.0	
CN2	**Changchun**	42.74	62	*e*P	P	07 56 16.8	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,200nm,17.0s,MS4.3						
CN2				LR	LR		
	comp=E,300nm,17.0s,MS4.3						
CN2				LR	LR		
	comp=Z,600nm,15.0s,MS4.6						
SSE	**Sheshan**	42.85	81	P	P	07 56 16.4	-1.5
SSE				AP	pP	07 56 25.3	+1.1
SSE				XP	sP	07 56 29.3	+2.5
SSE				S	S	08 02 38.6	-2.2
SSE				XS		08 02 54.5	
SSE				SS	SS	08 05 52.3	+6.1
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,160nm,8.5s						
SSE				LR	LR		
	comp=N,160nm,19.0s,MS4.1						
SSE				LR	LR		
	comp=E,140nm,19.0s,MS4.1						
SSE				LR	LR		
	comp=Z,240nm,19.6s,MS4.1						
VVLD	**Villa Vallelon**	43.14	295	P	P	07 56 21.3	+1.3
	comp=Z,39nm,1.6s,mb4.9						
CING	**Cingoli**	43.16	297	P	P	07 56 21.1	+1.0
ARV	**Arcevia**	43.32	298	P	P	07 56 22.5	+1.1
MOX	**Moxa**	43.34	308	*e*P	P	07 56 21.0	-0.5
MURB	**Monte Urbino**	43.66	297	P	P	07 56 26.4	+2.2
	comp=Z,37nm,1.0s,mb5.1						
GRA1	**Grafenberg Arr**	43.66	307	*e*P	P	07 56 25.2	+1.0
	comp=Z,9.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	43.66	307	*e*P	P	07 56 25.2	+1.0
GRF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	43.66	307	*e*P	P	07 56 25.2	+1.0
GRF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	43.66	307	*e*P	P	07 56 25.2	+1.0
	comp=Z,9.0nm,1.0s,mb4.5						
NB2	**NORSAR Subarra**	43.87	323	P	P	07 56 24.4	-1.2
	comp=Z,16nm,0.8s,mb4.8,baz=98,slow=7.9						
NOA	**NORSAR Array B**	43.87	323	P	P	07 56 24.8	-0.8
	comp=Z,5.4nm,0.4s,mb4.6,baz=99,slow=8.0,SNR=29						
NOA				LR	LR	08 15 58.8	
	comp=Z,162nm,19.1s,MS4.0,baz=105,slow=38						
SFI	**Santa Sofia**	44.02	298	P	P	07 56 28.6	+1.4
SFI				pmax	pmax		
	comp=Z,25nm,1.4s,mb4.8						
SFI	**Santa Sofia**	44.02	298	P	P	07 56 28.6	+1.4
	comp=Z,25nm,1.4s,mb4.8						
PGD	**Poggio Sodo**	44.12	298	P	P	07 56 29.7	+1.8
PGD				pmax	pmax		
	comp=Z,35nm,1.5s,mb4.9						
PGD	**Poggio Sodo**	44.12	298	P	P	07 56 29.7	+1.8
	comp=Z,35nm,1.5s,mb4.9						
VMG	**Vicchio**	44.23	299	P	P	07 56 30.8	+2.0
YAK	**Yakutsk**	44.82	35	*e*P	P	07 56 33.3	-0.1

YAK				e*PP	pP	07 56 43.9	+4.2
YAK				e		07 58 12.6	
YAK				e		07 58 17.4	
YAK				eS	S	08 03 08.9	0.0
YAK				e		08 06 22.4	
YAK				eSS	SS	08 06 30.8	+9.2
YAK				eSSS	SSS	08 07 15.4	-4.6
YAK				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.1						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
YAK				smax			
	comp=N,8.0nm,1.2s						
YAK				smax			
	comp=E,5.0nm,1.3s						
YAK				MLR	MLR		
	comp=Z,192nm,18.0s,MS4.1						
YAK				MLR	MLR		
	comp=N,91nm,15.0s,MS4.0						
YAK				MLR	MLR		
	comp=E,88nm,14.0s,MS4.0						
YAK	Yakutsk	44.82	35	eP	P	07 56 33.4	0.0
	comp=E,65nm,0.8s,mb5.5						
DAVOX	Davos	44.91	303	P	P	07 56 33.5	-0.8
	comp=E,3.4nm,0.7s,mb4.3,baz=40,slow=8.3,SNR=3.8						
MDJ	Mudanjiang	45.52	60	P	P	07 56 39.0	-0.1
FELD	Feldberg	46.00	305	eP	P	07 56 42.5	-0.4
KLR	Kul'dur	46.21	53	eP	P	07 56 42.0	-2.5
KLR				pmax	pmax		
	comp=E,24nm,1.4s						
KLR				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.0						
PGF	Pioggiola	46.34	297	eP	P	07 56 45.2	-0.5
	comp=Z,21nm,0.9s,mb4.8						
PGF	Pioggiola	46.34	297	eP	P	07 56 45.2	-0.5
PGF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
CDF	Champ du Feu	46.40	305	eP	P	07 56 46.1	+0.1
TIXI	Tiksi	46.42	22	eP	P	07 56 41.9	-4.0
TIXI				eS	S	08 03 22.1	-10
TIXI				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
HINF	Hinteralfeld	46.77	305	eP	P	07 56 48.4	-0.6
LOMF	Lomont	46.87	304	eP	P	07 56 44.2	-5.6
SAOF	Saorge	47.04	299	eP	P	07 56 51.5	+0.3
HAU	Haudompre	47.08	305	eP	P	07 56 51.0	-0.4
HAU				eR			
	comp=Z,192nm,18.4s						
AUTN	L'Aution	47.13	299	eP	P	07 56 52.7	+0.8
SBF	Sospel	47.16	299	eP	P	07 56 52.0	-0.1
TOUF	Mont Tournerai	47.25	300	eP	P	07 56 53.7	+0.8
LPG	La Plagne	47.28	302	eP	P	07 56 53.3	+0.3
	comp=Z,18nm,0.8s,mb4.8						
LPG	La Plagne	47.28	302	eP	P	07 56 53.3	+0.3
LPG				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
LPL	La Plagne	47.29	302	eP	P	07 56 53.2	+0.1
	comp=Z,24nm,1.0s,mb4.8						
LPL	La Plagne	47.29	302	eP	P	07 56 53.2	+0.1
LPL				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
MVIF	Mont Vial	47.35	299	eP	P	07 56 54.0	+0.4
BNI	Bardonecchia	47.42	301	eP	P	07 56 53.8	-0.4
BNI				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
BNI	Bardonecchia	47.42	301	eP	P	07 56 53.8	-0.4
	comp=Z,15nm,1.2s,mb4.8						
MBDF	Montbardon	47.43	301	eP	P	07 56 53.7	-0.5
	comp=Z,22nm,0.7s,mb4.9						
MBDF	Montbardon	47.43	301	eP	P	07 56 53.7	-0.5
MBDF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
CABF	La Chapelle	47.51	303	eP	P	07 56 54.8	0.0
	comp=Z,13nm,0.7s,mb4.8						
CABF	La Chapelle	47.51	303	eP	P	07 56 54.8	0.0
CABF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
CALN	Calern	47.56	299	eP	P	07 56 55.3	0.0
GIVF	Givet	47.72	308	eP	P	07 56 57.0	+0.5
FRF	La Foret Royal	47.78	299	eP	P	07 56 56.4	-0.6
MEZF	Maizieres J'vi	47.84	306	eP	P	07 56 57.4	0.0
LMR	La Mourre	47.93	299	eP	P	07 56 58.1	-0.1
	comp=Z,3.7nm,0.4s,mb4.5						
BAIF	Baives	48.12	308	eP	P	07 56 59.9	+0.4
SMRF	Simiane la Rot	48.44	300	eP	P	07 57 02.0	-0.1
PUYF	Puyloubier	48.45	299	eP	P	07 57 02.2	0.0
PRAF	Pradon	48.76	300	eP	P	07 57 05.9	+1.3
VIVF	Saint-Julien-l	48.85	301	eP	P	07 57 05.3	0.0
	comp=Z,40nm,1.1s,mb5.0						
VIVF	Saint-Julien-l	48.85	301	eP	P	07 57 05.3	0.0
VIVF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
LOR	Lormes	48.87	305	eP	P	07 57 05.1	-0.3
LOR				eR			
	comp=Z,176nm,19.0s						
SMF	Signal de Mont	49.01	304	eP	P	07 57 06.0	-0.5
	comp=Z,29nm,0.9s,mb5.0						
SMF	Signal de Mont	49.01	304	eP	P	07 57 06.0	-0.5
SMF				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
AVF	Avril sur Loir	49.31	304	eP	P	07 57 08.1	-0.7
	comp=Z,22nm,0.8s,mb4.9						
AVF	Avril sur Loir	49.31	304	eP	P	07 57 08.1	-0.7
AVF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
LASF	Ste Croix	49.61	300	eP	P	07 57 11.2	+0.1
	comp=Z,31nm,1.0s,mb5.0						
LBL	Lubilhac	49.74	302	eP	P	07 57 12.5	+0.4
JNU	Nakatsue	49.77	75	P	P	07 57 12.2	-0.3
	comp=Z,14nm,0.8s,mb5.0,baz=327,slow=8.9,SNR=8.2						
JNU				LR	LR	08 20 53.9	
	comp=Z,181nm,18.1s,MS4.1,baz=0.3,slow=39						
TCF	Toulx Ste Croi	50.19	304	eP	P	07 57 15.3	-0.3
	comp=Z,29nm,0.9s,mb5.0						
TCF	Toulx Ste Croi	50.19	304	eP	P	07 57 15.3	-0.3
TCF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
JOW	Kunigami	50.25	83	LR	LR	08 20 19.4	
	comp=Z,307nm,21.2s,MS4.3,baz=276,slow=38						
CAF	Calviac	50.63	302	eP	P	07 57 18.9	0.0
RJF	Les Rejaudoux	50.91	303	eP	P	07 57 21.3	+0.3
RJF				eR			
	comp=Z,167nm,17.8s						
MTLF	Montolieu	50.95	300	eP	P	07 57 21.0	-0.4
	comp=Z,12nm,0.9s,mb4.5						
MTLF	Montolieu	50.95	300	eP	P	07 57 21.0	-0.4
MTLF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
LDF	La Druitiere	51.19	307	eP	P	07 57 22.2	-0.9
FLN	La Foliniere	51.38	307	eP	P	07 57 24.3	-0.2
FLN				eR			
	comp=Z,146nm,17.8s						
LFF	La Frestale	51.54	302	eP	P	07 57 25.4	-0.4
MFF	Saint Martin d	51.69	304	eP	P	07 57 26.0	-0.9
ETSF	Etsaut	53.03	300	eP	P	07 57 36.4	-0.6
	comp=Z,15nm,0.8s,mb4.7						
ETSF	Etsaut	53.03	300	eP	P	07 57 36.4	-0.6
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
YSS	Yuzh-Sakhalins	53.90	54	eP	P	07 57 43.4	+0.1
YSS				pmax	pmax		
	comp=Z,57nm,0.8s,mb5.5						
YSS	Yuzh-Sakhalins	53.90	54	eP	P	07 57 43.4	+0.1
	comp=Z,57nm,0.8s,mb5.5						
DAG	Danmarks Havn	54.62	344	⇓iP	P	07 57 46.0	-2.3
DAG				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
DAG	Danmarks Havn	54.62	344	⇓iP	P	07 57 46.0	-2.3
	comp=Z,4.0nm,0.6s,mb4.6						
ASAJ	Asahikawa	54.66	58	P	P	07 57 48.0	-0.9
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ASAJ	Asahikawa	54.66	58	P	P	07 57 48.0	-0.9
	comp=Z,6.8nm,0.5s,mb4.9,baz=241,slow=8.1,SNR=9.2						
SEY	Seymchan	55.25	34	eP	P	07 57 56.7	+3.7
SEY				e		07 58 54.7	
SEY				e		08 05 42.1	
SEY				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
SEY				pmax	pmax		
	comp=E,5.0nm,0.8s						
ESDC	Sonseca Array	56.53	297	P	P	07 58 01.5	-1.0
	comp=E,0.5nm,0.4s,mb3.9,baz=72,slow=7.5,SNR=4.7						
BILL	Bilibino	59.32	26	⇑eP	P	07 58 21.6	-0.1
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
BILL				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.7						
BILL	Bilibino	59.32	26	eP	P	07 58 21.7	0.0
	comp=Z,12nm,1.0s,mb4.9						
SUMG	Summit	60.90	341	eP	P	07 58 33.1	+0.6
	comp=Z,2.9nm,0.6s,mb4.6						
IMA	Indian Mountai	72.68	17	eP	P	07 59 47.0	0.0
IMA				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
IMA	Indian Mountai	72.68	17	eP	P	07 59 47.0	0.0
	comp=Z,32nm,1.1s,mb5.2						
DBIC	Dimbokro	73.53	266	P	P	07 59 53.9	+0.9
	comp=Z,3.6nm,0.9s,mb4.3,baz=33,slow=11,SNR=3.2						
LBTB	Lobatse	73.74	221	eP	P	07 59 53.8	-0.2
LBTB				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
LBTB	Lobatse	73.74	221	eP	P	07 59 53.8	-0.2
	comp=Z,6.5nm,0.7s,mb4.7						
INK	Inuvik	74.31	9	eP	P	07 59 56.5	+0.1
INK				pmax	pmax		
	comp=Z,14nm,1.0s						
INK	Inuvik	74.31	9	eP	P	07 59 56.5	+0.1
	comp=Z,14nm,1.0s,mb4.8						
ILAR	Eielson Array	75.31	15	P	P	08 00 01.6	-0.7
	comp=Z,3.9nm,0.9s,mb4.3,baz=322,slow=4.8,SNR=43						
ILAR				LR	LR	08 40 26.7	
	comp=Z,83nm,18.3s,MS4.1,baz=359,slow=42						
FITZ	Fitzroy Crossi	75.70	125	P	P	08 00 04.9	-0.5
	comp=Z,3.8nm,0.8s,mb4.4,baz=287,slow=0.7,SNR=3.1						
BOSA	Boshof	76.83	219	P	P	08 00 11.6	0.0
	comp=Z,3.7nm,0.9s,mb4.3,baz=18,slow=7.2,SNR=4.5						
BOSA				LR	LR	08 34 08.4	
	comp=Z,139nm,19.4s,MS4.3,baz=350,slow=36						
YKA	Yellowknife Ar	81.52	2	P	P	08 00 36.4	+0.2
	comp=Z,4.8nm,0.8s,mb4.5,baz=349,slow=5.2,SNR=13						
WRA	Warramunga Arr	82.86	121	P	P	08 00 42.4	-1.6
	comp=Z,4.6nm,0.8s,mb4.5,baz=322,slow=5.2,SNR=23						
WB2	Warramunga Arr	82.87	121	eP	P	08 00 38.4	-5.7
PMG	Port Moresby	85.66	105	LR	LR	08 43 47.4	
	comp=Z,68nm,21.3s,MS4.0,baz=347,slow=39						
EDM	Edmonton	90.84	2	eP	P	08 01 23.2	+1.1
VNA2	Neumayer--Watz	119.76	202	⇑iPKPdf	PKPdf	08 07 08.6	-2.9
VNA2				e		08 07 18.7	
VNA2				e		08 07 21.7	
VNA1	Neumayer--Stat	119.91	202	PKPdf	PKPdf	08 07 09.8	-2.0
VNA1				e		08 07 22.3	
VNA1				e		08 07 25.3	
VNA3	Neumayer Olymp	120.57	202	⇑iPKPdf	PKPdf	08 07 09.8	-3.3
VNA3				e		08 07 20.1	
VNA3				e		08 07 23.0	
VNDA	Vanda	125.59	164	PKP	PKPdf	08 07 19.8	-2.8
	comp=Z,0.7nm,0.8s,baz=90,slow=2.0,SNR=2.9						
VNDA	Vanda	125.59	164	PKP	PKPdf	08 07 19.8	-2.8
PLCA	Paso Flores	148.66	250	PKPbc	PKPdf	08 08 06.9	+1.7
	comp=Z,3.6nm,1.1s,baz=57,slow=5.7,SNR=2.6						

IDC ***22*** *08:07:55.8±1.2, 4.01N×75.44W, mb3.4/4, mb1 3.9/4, mb1mx3.7/16, mbtmp3.5/4, Error ellipse: s-maj=26.6km s-min=15.8km az=150.0*

NEIC ***22*** *08:07:56.9±2.2, 4.04N×75.29W, h10^{km}±15^{km}, mb3.4/1, Error ellipse: s-maj=19.4km s-min=11.5km az=111.0*

NEIC Felt at Pereira and Quindio.

ISC 22 08:07:57.5±4.5**, 4.1N**±0.1×**75.3W**±0.1**, h25**^{km}±39^{km}**, n10, σ0^{s}89**/9**, mb3.4**/4**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	El Rosal	1.27	52	Pg	Pn	08 08 20.8	+0.9
	112nm,0.3s,baz=268,slow=4.0,SNR=217						
ROSC				Lg		08 08 41.7	
	105nm,0.3s,baz=89,slow=22,SNR=7.0						
OTAV	Otavalo	4.92	219	eP	Pn	08 09 11.6	-0.2
SDV	Santo Domingo	6.69	44	eP	Pn	08 09 36.0	-0.8
	21nm,0.5s						
LPAZ	La Paz	21.44	161	P	P	08 12 46.8	+0.6
	1.2nm,0.7s,mb3.4,baz=332,slow=13,SNR=6.4						
LPAZ	La Paz	21.44	161	P	P	08 12 45.9	-0.4
	1.5nm,0.8s,mb3.4						
TXAR	Lajitas Array	36.77	316	P	P	08 15 05.0	-0.2
	0.4nm,0.9s,mb3.3,baz=127,slow=6.3,SNR=4.3						
NVAR	Mina Array Bea	51.91	317	P	P	08 17 08.1	+1.5
	0.3nm,0.5s,mb3.5,baz=131,slow=8.3,SNR=3.4						
YKA	Yellowknife Ar	65.11	341	P	P	08 18 36.9	-1.2
	0.2nm,0.3s,mb3.6,baz=136,slow=6.3,SNR=4.2						
YKA	Yellowknife Ar	65.11	341	P	P	08 18 36.9	-1.2
WRA	Warramunga Arr	147.06	239	PKPbc	PKPdf	08 27 40.2	-1.5
	0.2nm,0.4s,baz=104,slow=4.2,SNR=5.6						

BGR ***22*** *08:19:52.4±0.3, 48.35N×6.65E, h10^{km}, ML2.0/2, Error ellipse: s-maj=2.2km s-min=2.2km az=110.0*

LDG ***22*** *08:19:52.4±0.1, 48.33N×6.63E, h11^{km}, Md2.9/1, Ml2.8/13, Error ellipse: s-maj=1.1km s-min=0.8km az=166.0*

NEIC ***22*** *08:19:52.4, 48.33N×6.63E, h11^{km}, ML2.8(LDG), ML2.4(STR), After LDG.*

STR ***22*** *08:19:52.2±0.3, 48.35N×6.67E, h10^{km}±1^{km}, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

CSEM ***22*** *08:19:52.2±0.0, 48.33N×6.66E, h12^{km}, ML2.8/12, Error ellipse: s-maj=1.1km s-min=0.7km az=167.0*

ISC 22 08:19:50.5±0.3**, 48.35N**±0.02×**6.61E**±0.02**, h13**^{km}±3^{km}**, n49, σ1^{s}15**/99**, 1D, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAU	Haudompre	0.39	207	ePg	Pg	08 19 59.9	+1.4
HAU				eSg	Sg	08 20 04.8	+0.9
	44nm,0.2s						
ECH	Echery	0.39	110	ePg	Pg	08 19 59.5	+1.0
	SNR=7.9						
ECH				eSg	Sg	08 20 04.2	+0.3
	SNR=5.7						
ECH	Echery	0.39	110	Pg	Pg	08 19 59.5	+0.9
ECH				Sg	Sg	08 20 04.3	+0.3
THEF	They Montfort	0.43	254	ePg	Pg	08 20 01.0	+1.5
	SNR=5.0						
THEF				eSg	Sg	08 20 06.9	+1.5
	SNR=1.9						
THEF	They Montfort	0.43	254	Pg	Pg	08 20 00.8	+1.3
THEF				Sg	Sg	08 20 07.9	+2.4
CDF	Champ du Feu	0.45	81	ePg	Pg	08 20 00.5	+0.8
CDF				eSg	Sg	08 20 05.9	0.0
	63nm,0.2s						
WLS	Welschbruch	0.50	82	ePg	Pg	08 20 01.5	+0.8
	SNR=5.2						
WLS				eSg	Sg	08 20 07.7	+0.2
	SNR=4.0						
WLS				SmS		08 20 11.5	
HINF	Hinteralfeld	0.56	163	ePg	Pg	08 20 02.6	+0.8
HINF				eSg	Sg	08 20 09.6	+0.2
HINF				eSn	Sn	08 20 12.6	-0.1
	47nm,0.2s						
MOF	Molkenrain	0.61	145	ePg	Pg	08 20 04.1	+1.3
	SNR=6.8						
MOF				eSg	Sg	08 20 12.3	+1.3
	SNR=3.6						
MOF	Molkenrain	0.61	145	Pg	Pg	08 20 04.8	+2.0
LIBD	Limburg	0.69	106	ePg	Pg	08 20 05.7	+1.3
LIBD	Limburg	0.69	106	P	Pb	08 20 06.1	+2.3
LIBD	Limburg	0.69	106	Pg	Pg	08 20 05.9	+1.5
RFYF	Reffroy	0.81	291	ePg	Pg	08 20 08.0	+1.2
	baz=112						
RFYF				ePn	Pn	08 20 08.6	+1.3
RFYF				eSg	Sg	08 20 19.1	+1.4
RFYF				eSn	Sn	08 20 20.2	+1.1
	45nm,0.2s						
RFYF	Reffroy	0.81	291	ePn	Pn	08 20 08.6	+1.3
RFYF				eSg	Sg	08 20 19.1	+1.4
RFYF				eSn	Sn	08 20 20.2	+1.1
	23nm,0.2s						
KIZ	Kirchzarten	0.96	114	Pg	Pg	08 20 10.1	+0.3
KIZ				Sg	Sg	08 20 22.5	-0.1
LOMF	Lomont	1.01	172	Pg	Pg	08 20 11.5	+0.8
LOMF				Sg	Sg	08 20 25.1	+0.9
LOMF	Lomont	1.01	172	ePg	Pg	08 20 11.5	+0.7
	SNR=10.0						
LOMF				Pn	Pn	08 20 11.5	+1.4
LOMF				eSg	Sg	08 20 24.3	+0.1
	SNR=2.1						
LANF	Langenberg	1.01	51	Pg	Pg	08 20 10.7	-0.1
LANF				Sg	Sg	08 20 24.0	-0.4
LANF	Langenberg	1.01	51	ePg	Pg	08 20 10.8	0.0
	SNR=2.7						
LANF				Pn	Pn	08 20 10.8	+0.6
LANF				eSg	Sg	08 20 24.0	-0.4
	SNR=1.6						
FELD	Feldberg	1.04	116	Pg	Pg	08 20 11.8	+0.3
FELD				Sg	Sg	08 20 24.2	-1.3
FELD	Feldberg	1.04	116	Pn	Pn	08 20 11.7	+0.9
FELD				ePg	Pg	08 20 11.7	+0.2
	SNR=11						
FELD				eSg	Sg	08 20 24.5	-1.0
	SNR=6.7						
MEZF	Maizieres J'vi	1.05	279	ePn	Pn	08 20 11.7	+0.9
MEZF				ePg	Pg	08 20 12.5	+0.9
MEZF				eSn	Sn	08 20 26.4	+1.1
	34nm,0.3s						
SFTF	Sexfontaines	1.06	263	ePn	Pn	08 20 11.9	+1.0
	baz=86						
SFTF				ePg	Pg	08 20 12.6	+0.8
	baz=85						
SFTF				eSg	Sg	08 20 26.7	+0.7
	32nm,0.2s						
SFTF	Sexfontaines	1.06	263	ePg	Pg	08 20 12.6	+0.8
SFTF				eSg	Sg	08 20 26.7	+0.7
	16nm,0.2s						
BBS	Basel-Blauen	1.07	145	Pg	Pg	08 20 16.0	+4.1
BBS				eSg	Sg	08 20 26.1	-0.2
	SNR=2.1						
BFO	Black Forest	1.15	90	Pn	Pn	08 20 12.4	+0.2
BFO				ePg	Pg	08 20 13.5	+0.1
BFO				eSg	Sg	08 20 28.0	-0.8
	SNR=4.5						
KTD	Kalmit	1.38	44	eSg	Sg	08 20 36.0	-0.4
	SNR=3.5						
KTD	Kalmit	1.38	44	Pg	Pg	08 20 18.4	+0.4
RUP	Ruppelstein	1.39	12	eSg	Sg	08 20 36.2	-0.6
	SNR=3.1						
LBG	Lerchenberg	1.49	77	Pn	Pn	08 20 17.1	+0.1
GUT	Gutenstein	1.70	98	⇓ePg	Pg	08 20 24.1	-0.3
GUT				Sg	Sg	08 20 45.4	-1.7
SISB	Singen-Sch Ber	1.71	112	Pg	Pg	08 20 24.4	-0.3
SISB				Sg	Sg	08 20 46.1	-1.5
CABF	La Chapelle	1.77	192	ePn	Pn	08 20 21.6	+0.5
CABF				ePg	Pg	08 20 25.6	-0.3
CABF				eSg	Sg	08 20 48.1	-1.5
	21nm,0.6s						
BUCH	Bad Urach	1.83	86	Pn	Pn	08 20 26.6	+4.7
TOD	Tromm	1.92	48	eSg	Sg	08 20 52.5	-1.9
	SNR=2.5						
GIVF	Givet	2.11	327	eSg	Sg	08 20 59.3	-1.6
	4.0nm,0.2s						
LOR	Lormes	2.15	241	ePn	Pn	08 20 26.3	-0.2
	baz=58						
LOR				ePg	Pg	08 20 32.6	-0.8
	baz=59						
LOR				eSn	Sn	08 20 51.7	-1.4
LOR				eSg	Sg	08 21 00.0	-2.1
	18nm,0.2s						
LOR	Lormes	2.15	241	ePg	Pg	08 20 32.6	-0.8
LOR				eSn	Sn	08 20 51.7	-1.4
LOR				eSg	Sg	08 21 00.0	-2.1
	9.0nm,0.2s						
TNS	Taunus Mts	2.23	32	ePn	Pn	08 20 28.1	+0.5
	SNR=1.5						
TNS				eSg	Sg	08 21 03.0	-1.8
	SNR=3.2						
SMF	Signal de Mont	2.54	229	ePg	Pg	08 20 39.6	-1.5
SMF				eSg	Sg	08 21 11.2	-3.8
	15nm,0.3s						
AVF	Avril sur Loir	2.70	236	ePn	Pn	08 20 34.0	-0.4
AVF				ePg	Pg	08 20 42.7	-1.7
AVF				eSn	Sn	08 21 04.7	-2.5
AVF				eSg	Sg	08 21 17.7	-2.8
	4.0nm,0.2s						
LPG	La Plagne	2.85	178	eSg	Sg	08 21 21.4	-4.1
	3.0nm,0.5s						
HYF	Humbligny	2.89	250	ePg	Pg	08 20 46.0	-2.1
HYF				eSg	Sg	08 21 22.7	-4.0
BGF	Bois d'Agland	3.12	236	ePn	Pn	08 20 39.8	-0.6
BGF				ePg	Pg	08 20 50.2	-2.6
BGF				eSg	Sg	08 21 29.9	-4.5
	21nm,0.4s						
ORIF	Oris-en-Rattie	3.47	189	ePn	Pn	08 20 44.3	-1.0
TCF	Toulx Ste Croi	3.63	237	eSg	Sg	08 21 46.4	-5.1
	4.7nm,0.2s						
VIVF	Saint-Julien-l	3.74	202	eSg	Sg	08 21 49.4	-5.6
	2.6nm,0.2s						
CAF	Calviac	4.64	224	ePn	Pn	08 21 01.1	-0.8

IDC ***22*** *08:28:27.1±1.6, 24.91N×99.75E, mb3.9/2, mb1 4.0/3, mb1mx3.5/17, mbtmp3.8/3, ML4.0/1, MS3.0/1, Ms1 3.2/1, ms1mx2.7/21, Error ellipse: s-maj=43.8km s-min=20.0km az=80.0*

BJI ***22*** *08:28:29.0, 24.96N×99.31E, h16^{km}, ML3.6, Ms3.6, Msz3.3*

ISC 22 08:28:27.0±1.1**, 24.7N**±0.1×**99.56E**±0.08**, h10**^{km}**, n5, σ0^{s}97**/7**, mb3.8**/2**, 1C, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	Kunming	2.91	82	PG	Pg	08 29 24.6	-0.6
KMI				SG	Sg	08 30 03.8	-0.2
KMI				Smax			
	comp=N,270nm,0.9s						
KMI				Smax			
	comp=E,130nm,0.7s						
KMI				LR	LR		
	comp=N,440nm,4.4s						
KMI				LR	LR		
	comp=E,430nm,5.2s						
KMI				LR	LR		
	comp=Z,270nm,5.2s						
CMAR	Chiang Mai Arr	6.28	185	Pn	Pn	08 30 02.6	+0.6
	comp=Z,0.9nm,0.3s,baz=0.6,slow=12,SNR=12						
CMAR				Pg	Pg	08 30 26.8	-5.7
	comp=Z,1.5nm,0.3s,baz=357,slow=19,SNR=53						
CMAR				Lg		08 31 53.3	
	comp=Z,2.4nm,0.3s,baz=355,slow=29,SNR=19						
CMAR				LR	LR	08 32 48.3	
	comp=Z,113nm,19.2s,baz=137,slow=40						
GYA	Guiyang	6.64	74	⇑iP	Pn	08 30 09.0	+1.9
MKAR	Makanchi Array	25.98	332	P	P	08 34 01.2	-0.3
	comp=Z,2.2nm,0.7s,mb3.8,baz=141,slow=11,SNR=16						
WRA	Warramunga Arr	55.84	140	P	P	08 38 06.1	-1.1
	comp=Z,0.9nm,0.9s,mb3.8,baz=328,slow=7.4,SNR=5.0						

CSEM ***22*** *08:36:09.8, 32.58N×46.14E, h10^{km}, ML3.5, After TEH*

TEH 22 08:36:09.8, 32.58N×46.14E, h10^{km}**, Mn3.5, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHD	Baghdad	1.63	295	eSn	x	08 37 12.5	
BHD				i Sg	x	08 37 15.5	
IGHG	Ghaleghazi	1.78	11	Pn	Pn	08 36 40.9	-0.1
IKOM	Komasi	1.96	35	Pn	Pn	08 36 41.6	-2.0
IVIS	Veys	2.03	17	Pn	Pn	08 36 43.5	-1.0
IDHR	Dehrash	2.12	5	Pn	Pn	08 36 49.1	+3.2
ILIN	Laeen	2.43	16	Pn	Pn	08 36 51.0	+0.7
IPIR	Pirpir	4.01	87	Pn	Pn	08 37 09.5	-3.2
IRAZ	Razeghan	4.22	47	Pn	Pn	08 37 22.2	+6.5
IRAZ	Razeghan	4.22	47	Lg		08 38 21.4	
IKLH	Kalahroud	4.63	79	Pn	Pn	08 37 22.0	+0.5
IVRN	Varamin	5.24	61	Pn	Pn	08 37 27.3	-2.8
IDMV	Damavand	5.73	57	Pn	Pn	08 37 34.3	-2.7

IDC ***22*** *08:45:13.3±2.0, 51.35N×179.40E, mb3.7/7, mb1 4.0/7, mb1mx3.8/21, mbtmp3.7/7, Error ellipse: s-maj=65.1km s-min=21.2km az=6.0*

NEIC ***22*** *08:45:15.9, 50.95N×179.60E, h1^{km}, ML4.0(AEIC), After AEIC.*

ISC 22 08:45:12.1±1.9**, 50.4N**±0.3×**179.47E**±0.09**, h33**^{km}**, n20, σ0^{s}99**/20**, mb3.7**/7**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	Kanaga Island	2.49	55	P	P	08 45 51.5	+0.4
KIWB	Kanaga Island	2.58	54	eP	P	08 45 52.5	0.0
KIKV	Kanaga Island	2.58	54	P	P	08 45 52.5	0.0

KIRH	Kanaga Island	2.64	54	P	P	08 45 53.6	+0.3
ADAG	Mount Adagdak	2.94	56	P	P	08 45 57.7	+0.1
GSTD	Great Sitkin T	3.22	57	P	P	08 46 02.5	+1.0
GSMY	Great Sitkin M	3.26	58	P	P	08 46 02.0	-0.1
GSTR	Great Sitkin T	3.28	57	*e*P	P	08 46 02.7	+0.2
SMY	Shemya	4.09	307	P	P	08 46 15.0	+1.1
ATKA	Atka Island	4.37	63	P	P	08 46 17.9	+0.1
FX1	Attu Island--F	4.65	305	P	P	08 46 22.4	+0.5
UNV	Unalaska Valle	9.29	63	P	P	08 47 23.4	-3.4
ILAR	Eielson Array	22.70	38	P	P	08 50 09.3	-2.2
	0.3nm,0.6s,mb2.9,baz=241,slow=8.3,SNR=6.4						
SONM	Songino Array	46.11	297	P	P	08 53 35.3	+0.8
	0.3nm,0.4s,mb3.5,baz=63,slow=6.4,SNR=3.3						
PDAR	Pinedale Array	47.66	70	P	P	08 53 47.9	+1.0
	1.7nm,0.7s,mb4.2,baz=326,slow=5.3,SNR=11						
MKAR	Makanchi Array	59.78	308	P	P	08 55 15.1	-0.8
	0.5nm,0.3s,mb4.0,baz=68,slow=7.8,SNR=4.5						
TXAR	Lajitas Array	59.90	79	P	P	08 55 21.1	+4.1
	0.1nm,0.5s,mb3.1,baz=315,slow=5.1,SNR=3.6						
BVAR	Borovoye Array	60.93	319	P	P	08 55 23.0	-0.7
	2.2nm,0.5s,mb4.5,baz=44,slow=8.6,SNR=15						
NB2	NORSAR Subarra	68.52	354	P	P	08 56 10.0	-2.5
	0.7nm,0.7s,mb3.7,baz=7.0,slow=6.2						
NOA	NORSAR Array B	68.52	354	P	P	08 56 10.3	-2.2
	0.7nm,0.5s,mb3.9,baz=8.1,slow=6.6,SNR=3.6						

IGQ 22 08:59:58.1,2.42S×78.56W,h114^{km}±5^{km},mb4.0,1C-4D, Error ellipse: s-maj=7.7km s-min=3.0km az=82.6, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARRY	Arrayan	0.91	7	⇓P	P	09 00 19.1	0.0
IGUA	Igualata	0.93	355	P	P	09 00 20.1	+0.9
CUSU	Cusua	0.97	5	P	P	09 00 20.8	+1.1
ULBA	Ulba	0.98	9	⇓P	P	09 00 20.0	+0.3
ULBA				S	S	09 00 36.2	+0.4
JUIV	Juive	0.99	6	P	P	09 00 19.9	+0.1
RUN5	Runtun	1.01	8	P	P	09 00 20.4	+0.4
PISA	Pisayambo	1.36	8	P	P	09 00 25.0	+1.0
TAMB	Tambo	1.73	7	P	P	09 00 29.5	+1.2
CAMI	Rancho Maria	1.73	2	P	P	09 00 30.1	+1.7
VC1	Cotopaxi 1	1.77	5	P	P	09 00 30.5	+1.6
ANTI	Antisana	2.00	12	⇑P	P	09 00 32.5	+0.8
TERV	Terraza Guagua	2.23	359	P	P	09 00 36.2	+1.4
PINO	Pino	2.25	359	⇓P	P	09 00 36.2	+1.2
YANA	Yana	2.29	360	P	P	09 00 36.4	+0.8
HOJA	Cerro de Hojas	2.40	304	P	P	09 00 37.1	0.0
HOJA				S	S	09 01 03.1	-3.4
CHAR	Charly	2.48	21	⇓P	P	09 00 38.2	+0.1
ECOPE	Copete-Rev Vol	2.48	22	P	P	09 00 37.7	-0.5
CAYA	Cayambe	2.54	13	P	P	09 00 39.8	+0.8

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*IDC **22** 09:06:51.9±1.2,41.52S×86.39W,mb3.9/7,mb1 4.2/8, mb1mx4.0/16,mbtmp3.9/8,ML3.7/1,MS3.9/15,Ms1 3.9/15, ms1mx3.9/17,Error ellipse: s-maj=37.4km s-min=26.8km az=47.0*

*NEIC **22** 09:06:52.9±0.7,41.45S×86.47W,h10^{km},mb4.3/2,Error ellipse: s-maj=15.6km s-min=12.7km az=64.0*

ISC 22 09:06:51.9±0.7,**41.5S**±0.1×**86.3W**±0.1,**h10^{km},n24, σ0^{s}.99**/14,**mb3.8**/8,**MS3.9**/13,**3C,West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	11.90	92	Pn	P	09 09 44.6	0.0
	0.1nm,0.3s,baz=360,slow=7.1,SNR=2.8						
PLCA				LR	LR	09 13 18.5	
	comp=Z,632nm,20.4s,baz=262,slow=32						
USHA	Ushuaia	17.82	145	LR	LR	09 16 51.6	
	comp=Z,602nm,18.3s,baz=287,slow=34						
TRQA	Tornquist	18.99	88	*e*P	P	09 11 15.1	-0.7
	18nm,1.2s						
RPN	Rapa Nui	23.73	300	LR	LR	09 18 10.3	
	comp=Z,150nm,22.0s,MS3.4,baz=193,slow=29						
LPAZ	La Paz	29.60	37	P	P	09 12 59.8	+0.4
	1.2nm,0.7s,mb3.7,baz=185,slow=3.4,SNR=5.6						
LPAZ				LR	LR	09 22 34.7	
	comp=Z,132nm,20.0s,MS3.6,baz=256,slow=32						
BDFB	Brasilia	41.84	63	P	P	09 14 44.3	+0.6
	1.1nm,0.3s,mb3.9,baz=135,slow=6.2,SNR=3.3						
BDFB				LR	LR	09 31 18.5	
	comp=Z,310nm,20.1s,MS4.2,baz=19,slow=35						
VNA3	Neumayer Olymp	47.10	155	⇑*i*P	P	09 15 25.3	+0.1
VNA3				*e*		09 15 35.3	
VNA3				*e*		09 15 41.6	
ROSC	El Rosal	47.40	16	LR	LR	09 32 39.2	
	comp=Z,241nm,20.8s,MS4.1,baz=220,slow=33						
VNA1	Neumayer--Stat	47.61	154	⇑*i*P	P	09 15 29.8	+0.5
VNA1				*e*		09 15 39.5	
VNA2	Neumayer--Watz	47.87	154	⇑*i*P	P	09 15 31.5	+0.2
VNA2				*e*		09 15 41.3	
VNA2				*e*		09 15 47.0	
SNAA	Sanae	49.22	155	P	P	09 15 41.1	-0.6
	0.7nm,0.9s,mb3.7,baz=239,slow=4.7,SNR=5.1						
SDV	Santo Domingo	52.16	20	LR	LR	09 35 40.3	
	comp=Z,98nm,21.6s,MS3.8,baz=284,slow=33						
VNDA	Vanda	54.31	194	LR	LR	09 35 03.0	
	comp=Z,132nm,19.5s,MS4.0,baz=132,slow=31						
PPT	Papeete	58.65	274	LR	LR	09 33 12.8	
	comp=Z,134nm,21.9s,MS4.0,baz=75,slow=27						
MAW	Mawson	68.75	168	LR	LR	09 46 42.0	
	comp=Z,80nm,18.6s,MS4.0,baz=63,slow=35						
TXAR	Lajitas Array	72.28	344	P	P	09 18 18.0	-1.4
	0.8nm,0.8s,mb3.7,baz=167,slow=9.5,SNR=12						
TXAR				LR	LR	09 44 53.2	
	comp=Z,60nm,19.1s,MS3.9,baz=175,slow=32						
TXAR	Lajitas Array	72.28	344	P	P	09 18 18.0	-1.4
TXAR				LR	LR	09 44 53.2	
ANMO	Albuquerque	78.29	343	P	P	09 18 53.8	+0.2
	0.8nm,0.6s,mb3.8,baz=177,slow=9.2,SNR=5.3						
NVAR	Mina Array Bea	84.73	335	P	P	09 19 27.8	+0.6
	0.3nm,0.7s,mb3.6,baz=146,slow=7.3,SNR=3.8						
BOSA	Boshof	85.88	125	LR	LR	09 51 22.8	
	comp=Z,94nm,20.4s,MS4.2,baz=208,slow=31						
ELK	Elko	85.96	338	P	P	09 19 31.1	-2.2
	2.7nm,1.0s,mb4.4						
PDAR	Pinedale Array	86.46	343	P	P	09 19 38.2	+2.6
	0.5nm,0.8s,mb3.8,baz=106,slow=6.6,SNR=3.2						
PDAR				LR	LR	09 55 55.3	
	comp=Z,48nm,18.7s,MS3.9,baz=161,slow=34						
DBIC	Dimbokro	88.00	79	LR	LR	09 56 36.6	
	comp=Z,60nm,19.9s,MS4.0,baz=206,slow=34						
SCHQ	Schefferville	97.38	11	LR	LR	10 00 22.7	
	comp=Z,45nm,19.9s,MS4.0,baz=98,slow=33						

PGC 22 09:08:03.4,50.46N×130.21W,h10^{km},Mw4.1,2C-1D, West of Vancouver Island, British Columbia, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.34	82	Pn	Pn	09 08 26.1	-2.0
HOLB				Sn	Sn	09 08 42.0	-4.1
	comp=Z,67nm,0.2s						
HOLB				Trac		09 08 43.0	
	comp=Z,67nm,0.2s						
BPBC	Brooks Peninsu	1.59	100	Pn	Pn	09 08 29.1	-2.8
BPBC				Sn	Sn	09 08 47.5	-5.1
	comp=Z,53nm,0.1s						
BPBC				Trac		09 08 49.4	
	comp=Z,53nm,0.1s						
PHC	Port Hardy	1.79	81	⇑Pn	Pn	09 08 32.6	-2.0
PHC				Sn	Sn	09 08 52.9	-4.6
PHC				Trac		09 08 54.2	
	comp=Z,115nm,0.2s						
MAYB	Maynard	1.94	91	⇑Pn	Pn	09 08 34.6	-2.3
MAYB				Sn	Sn	09 08 56.5	-5.1
	comp=Z,20nm,0.2s						
MAYB				Trac		09 08 58.1	
	comp=Z,20nm,0.2s						
EDB	Eliza Dome	2.07	105	Pn	Pn	09 08 36.0	-2.7
EDB				Trac		09 09 05.5	
	comp=Z,15nm,0.2s						
BBB	Bella Bella	2.17	37	⇓Pn	Pn	09 08 37.9	-2.2
BBB				Trac		09 09 04.0	
	comp=Z,25nm,0.1s						
BNB	Barry Inlet	2.33	336	Pn	Pn	09 08 39.5	-2.9
BNB				Sn	Sn	09 09 07.0	-4.3
	comp=Z,153nm,0.1s						
BNB				Trac		09 09 10.0	
	comp=Z,153nm,0.1s						
WOSB	Woss	2.35	96	Pn	Pn	09 08 40.8	-1.9
WOSB				Sn	Sn	09 09 07.9	-4.0
	comp=Z,29nm,0.3s						
WOSB				Trac		09 09 08.8	
	comp=Z,29nm,0.3s						
ETB	Estevan Point	2.61	113	Pn	Pn	09 08 44.4	-2.0
NCRB	Newcastle Ridg	2.66	90	Pn	Pn	09 08 44.9	-2.2
NCRB				Trac		09 09 38.5	
	comp=Z,21nm,0.4s						
GDR	Gold River	2.77	103	Pn	Pn	09 08 46.2	-2.6
GDR				Trac		09 09 44.9	
	comp=Z,25nm,0.5s						
MOBC	Moresby Island	2.93	340	Pn	Pn	09 08 47.8	-3.3
MOBC				Trac		09 09 23.5	
	comp=Z,4.0nm,0.1s						
CBB	Campbell River	3.14	96	Pn	Pn	09 08 52.0	-2.0
CBB				Sn	Sn	09 09 26.6	-5.3
CBB				Trac		09 09 28.8	
	comp=Z,12nm,0.3s						
VIB	Van Inlet	3.15	334	Pn	Pn	09 08 51.0	-3.0
VIB				Sn	Sn	09 09 27.4	-4.6
	comp=Z,5.0nm,0.2s						
VIB				Trac		09 09 32.4	
	comp=Z,5.0nm,0.2s						
BTB	Buttle Lake	3.19	106	Pn	Pn	09 08 52.2	-2.4
BTB				Sn	Sn	09 09 29.8	-3.2
	comp=Z,27nm,0.5s						
BTB				Trac		09 09 32.3	
	comp=Z,27nm,0.5s						
OZB	Mount Ozzard	3.41	114	Pn	Pn	09 08 54.9	-2.9
OZB				Sn	Sn	09 09 30.9	-7.8
OZB				Trac		09 09 36.0	
	comp=Z,19nm,0.5s						
TXB	Texada	3.80	99	Pn	Pn	09 09 01.9	-1.4
MGB	Mount Grey	3.87	110	Pn	Pn	09 09 02.1	-2.2
MGB				Trac		09 09 46.9	
	comp=Z,4.0nm,0.3s						
RUBB	Prince Rupert	3.87	360	Pn	Pn	09 09 01.7	-2.6
RUBB				Sn	Sn	09 09 44.1	-6.2
RUBB				Trac		09 09 47.2	
	comp=Z,8.0nm,0.1s						
NDB	Naden	3.88	335	Pn	Pn	09 09 01.7	-2.8
NDB				Sn	Sn	09 09 45.3	-5.3
	comp=Z,3.0nm,0.3s						
NDB				Trac		09 09 49.5	
	comp=Z,3.0nm,0.3s						
SHB	Sechelt	4.17	100	Pn	Pn	09 09 07.1	-1.5
SHB				Trac		09 10 07.9	
	comp=Z,30nm,0.7s						
PFB	Port Renfrew	4.21	115	Pn	Pn	09 09 06.9	-2.3
NLLB	Nanaimo Lost L	4.21	105	Pn	Pn	09 09 07.3	-1.9
BIB	Bowen Island	4.58	101	Pn	Pn	09 09 13.4	-1.0
GOBB	Galiano Island	4.60	107	Pn	Pn	09 09 12.3	-2.5
SNB	Saturna Island	4.88	108	Pn	Pn	09 09 17.8	-0.8
VDB	Vedder Mountai	5.45	102	Pn	Pn	09 09 25.8	-0.8

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*MEX **22** 09:15:27.5±1.3,17.11N×93.84W,h184^{km}±9^{km},MD4.6*

*NEIC **22** 09:15:27.2,17.12N×93.84W,h186^{km},mb4.5/19, MD4.6(MEX),After MEX.*

*IDC **22** 09:15:29.1±0.8,17.25N×93.45W,h200^{km}±7^{km},mb3.7/11, mb1 3.9/13,mb1mx3.8/21,mbtmp4.2/13,Error ellipse: s-maj=28.9km s-min=8.8km az=54.0*

ISC 22 09:15:25.5±0.3,**17.16N**±0.04×**93.79W**±0.02,**h184^{km}**±3^{km}, **h203^{km}**±5.3^{km}**:pP-P,n78,**σ**1^{s}.26**/110,**mb4.1**/15,**9C-5D, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	1.05	266	⇑*i*P	P	09 15 54.5	+0.4
CMIG				*i*S	S	09 16 14.8	-1.4
TUIG	Tuzandepetl	1.06	325	⇓*i*P	P	09 15 55.5	+1.3
TUIG				*i*S	S	09 16 15.5	-0.9
SCX	San Cristobal	1.18	111	⇓*i*P	P	09 15 56.4	+1.1
SCX				*i*S	S	09 16 18.5	+0.2
CCIG	Comitan	1.81	119	⇓*i*P	P	09 16 02.6	+1.4
CCIG				*i*S	S	09 16 28.9	+0.3
HUIG	Huatulco	2.62	238	⇑*i*P	P	09 16 07.8	-2.5
HUIG				*i*S	S	09 16 42.6	-2.2
OXX	Oaxaca	2.81	269	⇓*i*P	P	09 16 12.8	+0.3
OXX				*i*S	S	09 16 48.8	0.0
VHO	Vista Hermosa	2.82	269	*i*P	P	09 16 13.0	+0.3
VHO				*i*S	S	09 16 48.1	-0.9
SCIG		3.06	54	⇓*i*P	P	09 16 16.2	+0.6
SCIG				*i*S	S	09 16 53.7	-0.5
LVIG	Laguna Verde	3.57	316	*i*P	P	09 16 22.7	+0.7
LVIG				*i*S	S	09 17 04.1	-1.4
IISM	Ciudad Serdan	3.87	299	⇑*i*P	P	09 16 26.6	+0.9
IISM				*i*S	S	09 17 11.1	-1.1
PNIG	Pinotepa	4.22	260	⇑*i*P	P	09 16 28.5	-1.8
PNIG				*i*S	S	09 17 18.0	-2.3
IIB	San Bernardino	4.69	293	*i*P	P	09 16 36.2	0.0
IIB				*i*S	S	09 17 28.2	-2.8
PPM	Popocatepetl	4.97	293	*i*P	P	09 16 42.0	+2.1
PPM				*i*S	S	09 17 37.7	+0.1
PPM				*i*S	S	09 17 37.9	+0.3
PPM	Popocatepetl	4.97	293	*i*P	P	09 16 42.0	+2.1
PPM				*i*P		09 16 42.5	
PPM				*i*P		09 16 42.7	
PPM				*i*S	S	09 17 37.7	+0.1
PPM				*i*S	S	09 17 37.8	+0.2
PPM				*i*S	S	09 17 37.9	+0.3
RBDL	Robledal	4.98	127	*e*P	P	09 16 57.0	+17
RTR	El Retiro	5.15	129	*e*P	P	09 16 59.1	+17
SNJE	San Jose	5.19	128	*e*P	P	09 16 59.9	+17
SBLS	San Blas	5.20	129	*e*P	P	09 17 00.1	+17
IIO	Organos	5.27	298	*i*P	P	09 16 45.1	+1.3
IIO				*i*S	S	09 17 42.7	-1.8
YAIG	Yautepec	5.30	289	⇑*i*P	P	09 16 45.8	+1.7
YAIG				*e*S	S	09 17 43.2	-1.9
CHVM	Chichinautzin	5.44	291	*i*P	P	09 16 47.3	+1.3
CHVM				*i*S	S	09 17 48.1	-0.4
UNM	Universidad Na	5.56	294	*e*P	P	09 16 49.0	+1.5
UNM				*i*S	S	09 17 50.0	-1.2
UNM				*i*S	S	09 17 51.4	+0.2
UNM	Universidad Na	5.56	294	*e*P	P	09 16 49.0	+1.5
UNM				*i*P		09 16 50.0	
UNM				*i*S	S	09 17 50.0	-1.2
UNM				*i*S	S	09 17 51.4	+0.2
IIZ	Mezontepec	5.56	292	*i*P	P	09 16 48.3	+0.8
IIZ				*i*S	S	09 17 48.1	-3.1
PLIG	Platanillo	5.58	284	⇑*i*P	P	09 16 49.2	+1.4
PLIG				*i*S	S	09 17 52.0	+0.3
PTVM	Pico Tres Padr	5.60	296	*i*P	P	09 16 49.3	+1.2
PTVM				*i*S	S	09 17 51.7	-0.6
SZVM	Salazar	5.73	293	*i*P	P	09 16 51.6	+1.8
SZVM				*i*S	S	09 17 55.4	+0.1
LFRS	El Faro	5.76	127	*e*P	Px	09 17 13.2	
IIC	Rita Coyotepec	5.80	297	*i*P	P	09 16 51.9	+1.2
IIC				*i*S	S	09 17 53.4	-3.5
LCBS	La Ceiba	5.80	126	*e*P	P	09 17 09.7	+19
ACX	Acapulco	5.87	268	⇑*i*P	P	09 16 49.6	-2.0
ACX				*i*S	S	09 17 59.1	+0.6
CAIG	El Cayaco	6.20	270	⇑*i*P	P	09 16 55.3	-0.6
CAIG				*i*S	S	09 18 07.3	+1.1
ZIIG	Zihuatanejo	7.34	275	⇑*i*P	P	09 17 11.6	+0.7
ZIIG				*i*S	S	09 18 33.8	+0.5
MOIG	Morelia	7.46	291	*i*P	P	09 17 14.0	+1.6
MOIG				*i*S	S	09 18 35.9	-0.1
SFJM	Santa Fe	9.36	292	*i*P	P	09 17 39.9	+2.4
JTS	JuntasAbangare	10.97	127	P	P	09 17 58.7	+0.3
	1.4nm,0.3s,baz=325,slow=17,SNR=9.3						
JTS				S	S	09 19 58.5	+0.2
	0.6nm,0.3s,baz=323,slow=22,SNR=2.3						
JTS	JuntasAbangare	10.97	127	*e*P	P	09 17 58.4	0.0
	13nm,0.4s						
NATX	Nacogdoches	14.56	357	*e*P	P	09 18 46.8	+2.9
	40nm,0.6s						
NATX				*e*		09 18 52.1	
TXAR	Lajitas Array	15.13	325	P	P	09 18 54.0	+2.9
	0.2nm,0.3s,baz=148,slow=13,SNR=17						
DWPF	Disney	15.76	44	*e*P	P	09 18 59.0	0.0
	160nm,1.3s						
LRAL	Lakeview Retre	16.95	20	*e*P	P	09 19 12.8	-0.5
	15nm,0.9s						
UALR	University of	17.59	4	*e*P	P	09 19 19.4	-1.1
	37nm,1.2s						
CLNB	Carlsbad	17.59	331	*e*P	P	09 19 21.6	+1.0
OXF	Oxford	17.72	12	*e*P	P	09 19 20.4	-1.5
	37nm,0.8s						
GDL2	Guadalupe Moun	17.77	329	*e*P	P	09 19 23.6	+1.2
MNTX	Cornudas Mount	17.89	326	*e*P	P	09 19 23.7	-0.1
	1.6nm,0.6s						
WMOK	Wichita Mounta	18.07	347	*e*P	P	09 19 24.3	-1.3
	13nm,0.5s						
PLAL	Pickwick Lake	18.47	15	*e*P	P	09 19 27.4	-2.4
	19nm,0.9s						
AMTX	Amarillo	19.01	340	*e*P	P	09 19 35.5	+0.1
	53nm,0.5s						
SWET	Sewanee	19.30	20	*e*P	P	09 19 37.0	-1.4
WVT	Waverly	19.62	14	*e*P	P	09 19 40.8	-1.0
	4.5nm,0.5s						
NHSC	New Hope	20.06	35	*e*P	P	09 19 45.3	-1.0
	79nm,1.1s						
BNM	Barren Site	20.46	328	*e*P	P	09 19 53.3	+3.1
CCM	Cathedral Cave	20.93	6	*e*P	P	09 19 52.9	-2.0
	6.0nm,0.6s						
ANMO	Albuquerque	21.02	330	P	P	09 19 58.4	+2.6
	2.3nm,0.7s,mb3.6,baz=146,slow=11,SNR=8.3						
TZTN	Tazewell	21.33	23	*e*P	P	09 19 57.9	-0.8
TZTN				*e*		09 20 20.5	
WCI	Wyandotte Cave	22.00	16	*e*P	P	09 20 04.1	-1.1
	7.2nm,0.5s,mb4.4						
SDV	Santo Domingo	23.99	107	P	P	09 20 23.4	-1.3
	11nm,0.5s,mb4.6,baz=337,slow=4.0,SNR=12						
SDV	Santo Domingo	23.99	107	*e*P	P	09 20 23.6	-1.1
	8.9nm,0.5s,mb4.5						
SDV				*e*		09 21 01.7	
PDAR	Pinedale Array	28.84	335	P	P	09 21 09.4	+0.6
	0.4nm,0.5s,mb3.5,baz=119,slow=9.3,SNR=3.6						
TPAW	Teton Pass	30.01	335	*e*P	P	09 21 19.8	+0.6
	8.7nm,1.1s,mb4.4						
NVAR	Mina Array Bea	30.15	320	P	P	09 21 22.7	+2.3
	3.4nm,0.7s,mb4.2,baz=126,slow=10,SNR=25						
NVAR				pP	pP	09 22 01.6	+3.2
	1.0nm,0.7s,baz=129,slow=11,SNR=3.4						
NVAR				PcP	PcP	09 24 17.4	+0.4
	0.3nm,0.4s,baz=135,slow=3.8,SNR=3.2						
NVAR				ScP		09 27 42.0	
	0.1nm,0.4s,baz=123,slow=2.6,SNR=3.5						
NVAR	Mina Array Bea	30.15	320	P	P	09 21 22.7	+2.2
NVAR				pP	pP	09 22 01.6	+3.2
NVAR				PcP	PcP	09 24 17.4	+0.3
NVAR				ScP		09 27 42.0	
MSO	Missoula	33.96	335	P	P	09 21 53.6	+0.4
	1.1nm,0.6s,mb3.8						
FFC	Flin Flon	38.02	352	*e*P	P	09 22 26.6	-0.7
	3.5nm,0.5s,mb4.2						
LPAZ	La Paz	41.77	141	P	P	09 22 58.4	-0.2
	0.7nm,0.4s,mb3.7,baz=315,slow=8.3,SNR=7.2						
LPAZ				pP	pP	09 23 42.5	+4.1
	1.4nm,0.9s,baz=329,slow=11,SNR=3.0						
LPAZ	La Paz	41.77	141	P	P	09 22 57.4	-1.2
	1.2nm,0.8s,mb3.6						
SIV	San Ignacio	46.10	134	P	P	09 23 31.0	-2.3
	1.4nm,0.7s,mb3.7,baz=328,slow=7.5,SNR=8.8						
SIV				pP	pP	09 24 16.7	+3.0
	1.2nm,0.6s,baz=308,slow=8.2,SNR=2.6						
YKA	Yellowknife Ar	47.57	347	P	P	09 23 43.2	-0.9
	5.0nm,0.6s,mb4.3,baz=151,slow=7.4,SNR=16						
YKA				pP	pP	09 24 27.7	+2.9
	1.9nm,0.8s,baz=146,slow=8.2,SNR=3.4						
YKA	Yellowknife Ar	47.57	347	P	P	09 23 43.2	-0.9
YKA				pP	pP	09 24 27.8	+2.9
DLBC	Dease Lake	49.08	336	*e*P	P	09 23 57.5	+1.8
ILAR	Eielson Array	59.27	337	P	P	09 25 09.2	-0.4
	1.6nm,0.6s,mb4.0,baz=152,slow=4.9,SNR=33						
ILAR				PcP	PcP	09 25 56.6	+1.0
	0.5nm,0.7s,baz=124,slow=2.3,SNR=4.2						
PLCA	Paso Flores	61.51	160	P	P	09 25 24.8	-0.3
	5.9nm,0.9s,mb4.4,baz=351,slow=9.3,SNR=8.3						
NB2	NORSAR Subarra	82.20	28	P	P	09 27 27.2	+0.3
	6.2nm,1.0s,mb4.2,baz=290,slow=4.8						
NOA	NORSAR Array B	82.20	28	P	P	09 27 27.2	+0.3
	4.0nm,0.8s,mb4.1,baz=291,slow=5.0,SNR=12						
ARCES	ARCESS Array B	83.69	18	P	P	09 27 34.5	+0.2
	3.4nm,0.8s,mb4.1,baz=290,slow=4.8,SNR=21						
ARCES	ARCESS Array B	83.69	18	P	P	09 27 34.5	+0.2
WRA	Warramunga Arr	134.41	259	PKP	PKPdf	09 34 24.1	+1.6
	1.9nm,0.7s,baz=86,slow=2.5,SNR=27						

WEL 22 09:19:43.4±0.1,**37.42S**×**176.56E,h219^{km}**±1^{km},**ML3.8**/19, **Error ellipse: s-maj=2.5km s-min=2.3km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.94	153	PN	P	09 20 14.8	-0.2
URZ				SN	S	09 20 39.0	-0.5
MWZ	Matawai	1.19	140	PN	P	09 20 16.6	-0.2
MWZ				SN	S	09 20 42.1	-0.4
MXZ	Matakaoa Point	1.40	96	PN	P	09 20 18.1	-0.3
MXZ				SN	S	09 20 45.4	+0.1
PUZ	Puketiti	1.49	116	PN	P	09 20 18.8	-0.4
PUZ				SN	S	09 20 45.4	-1.3
BKZ	Black Stump Fm	1.74	182	PN	P	09 20 21.1	-0.2
BKZ				SN	S	09 20 50.3	-0.2
KNZ	Kokohu	1.82	152	PN	P	09 20 21.9	-0.1
KNZ				*e*SN	S	09 20 51.0	-0.8
NGZ	Ngauruhoe	1.91	203	PN	P	09 20 23.9	+1.0
CNZ	Chateau	1.95	204	PN	P	09 20 23.5	+0.3
TUVZ	Tukino	1.98	201	PN	P	09 20 24.1	+0.6
FWVZ	Far West T-bar	2.00	203	PN	P	09 20 24.9	+1.2
MOVZ	Moawhango	2.08	198	PN	P	09 20 24.2	-0.4
PKVZ	Pokaka	2.10	207	PN	P	09 20 25.0	+0.2
MTVZ	Mangateitei	2.14	203	PN	P	09 20 25.2	0.0
PWZ	Pawanui	2.62	175	PN	P	09 20 29.7	-0.5
PWZ				SN	S	09 21 05.6	-0.8
WAZ	Wanganui	2.64	207	PN	P	09 20 30.3	-0.2
TSZ	Takapari Road	2.68	190	PN	P	09 20 30.3	-0.6
TSZ				SN	S	09 21 06.5	-1.1
BFZ	Birch Farm	3.27	184	PN	P	09 20 36.4	-1.2
MRZ	Mangatainoka R	3.33	193	PN	P	09 20 36.7	-1.7
MRZ				SN	S	09 21 18.3	-2.7
KIW	Kapiti Island	3.67	200	PN	P	09 20 40.4	-2.1
KIW				SN	S	09 21 25.2	-3.0
MTW	Mount Morrison	3.82	192	PN	P	09 20 41.9	-2.5
MTW				SN	S	09 21 28.0	-3.5
CAW	Cannon Point	3.86	197	PN	P	09 20 42.6	-2.2
DUWZ	D’Urville Isla	3.95	210	PN	P	09 20 43.7	-2.2
PAWZ	Paruwai Farm	4.05	192	PN	P	09 20 44.8	-2.3

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*NNC **22** 09:41:52.2±6.3,37.34N×70.88E,h165^{km}±118^{km},mpv4.0, Error ellipse: s-maj=65.1km s-min=36.4km az=30.0*

ISC 22 09:41:50.4±2.4,**37.3N**±0.1×**70.9E**±0.2,**h149^{km}**±44^{km}**,n13,** σ**0^{s}.45**/16,**3C-2D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.32	23	P	P	09 43 09.3	+0.5
	SNR=22						
UCH	Uchtor	5.68	28	P	P	09 43 13.3	-0.4
	SNR=13						
EKS2	Erkin-Say	5.83	21	P	P	09 43 16.0	+0.4
	SNR=12						
KK31	Karatay Array	5.85	357	P	P	09 43 16.1	+0.1
	5.2nm,0.5s,baz=194,slow=15,SNR=66						
KK31				⇓S	S	09 44 22.2	-0.3
	2.9nm,0.3s,baz=180,slow=22,SNR=4.1						
KZA	Kyzart	5.86	33	P	P	09 43 15.6	-0.5
	SNR=9.9						
AAK	Ala-Archa	6.03	26	P	P	09 43 18.4	0.0
	SNR=10						
AAK	Ala-Archa	6.03	26	⇓P	P	09 43 18.0	-0.4
	7.3nm,0.3s						
AAK				⇑S	S	09 44 27.2	+0.5
	12nm,0.6s						
CHMS	Chumysh	6.44	26	P	P	09 43 23.7	-0.2
	SNR=11						
ULHL	Ulahol	6.45	38	P	P	09 43 24.2	+0.2
	SNR=5.6						
USP	Ospenovka	6.60	23	P	P	09 43 25.9	-0.1
	SNR=9.9						
TKM2	Tokmak 2	6.69	31	P	P	09 43 27.0	-0.4
	SNR=18						
SMLA	Simla	7.99	138	*i*P	Px	09 43 30.1	
SMLA				*i*S	S	09 44 43.3	-31
AB31	Akbulak array	14.41	330	⇑P	P	09 45 08.7	+0.5
	1.2nm,0.4s,baz=132,slow=13,SNR=48						
AB31				⇑S	S	09 47 44.1	-0.3
	0.3nm,0.4s,baz=158,slow=22,SNR=3.1						

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*NIED **22** 09:43:00,23.90N×126.20E,h26^{km},Mw4.1 Best double couple: M$_0$1.66×10^{15} NP1:φ$_s$81°,δ89°,λ45°. NP2:φ$_s$350°, δ45°,λ178°.*

*IDC **22** 09:43:09.1±0.9,23.61N×126.50E,mb4.2/6,mb1 4.3/8, mb1mx4.0/19,mbtmp4.2/8,ML4.2/2,MS3.3/2,Ms1 3.3/2, ms1mx2.6/25,Error ellipse: s-maj=33.1km s-min=15.7km az=84.0*

*JMA **22** 09:43:13.9±0.2,23.85N×126.17E,h114^{km},M3.9*

*NEIC **22** 09:43:14.0±0.5,23.64N×126.44E,h35^{km},mb4.5/4, MW4.1(NIED),Error ellipse: s-maj=12.4km s-min=8.3km az=88.0*

ISC 22 09:43:11.6±0.8,**23.66N**±0.05×**126.39E**±0.03,**h33**^{km}±9^{km}, **n33,**σ**1**^{s}**08**/50,**mb4.2**/9,**MS3.4**/1,**Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.42**	**321**	P	**P**	**09 43 37.0**	**+1.7**
JOGS				S	**S**	**09 43 54.5**	**+1.5**
JMJ	**Miyako jima 2**	**1.52**	**319**	P	**P**	**09 43 38.3**	**+1.5**
JMJ				*e*S	**S**	**09 43 57.0**	**+1.3**
JTJ	**Tarama**	**1.82**	**303**	P	**P**	**09 43 41.8**	**+0.7**
JTJ				S	**S**	**09 44 02.9**	**-0.4**
JIJ	**Ishigaki jima**	**2.17**	**289**	P	**P**	**09 43 46.4**	**+0.3**
JIJ				S	**S**	**09 44 09.9**	**-2.1**
JKRS	**Kuro-shima**	**2.25**	**285**	P	**P**	**09 43 47.8**	**+0.6**
JKRS				*e*S	**S**	**09 44 12.5**	**-1.6**
HATJ	**Hateruma jima**	**2.40**	**280**	P	**P**	**09 43 49.4**	**+0.1**
HATJ				*e*S	**S**	**09 44 15.3**	**-2.5**
IRIF	**Iriomote-Funau**	**2.52**	**286**	P	**P**	**09 43 51.2**	**+0.1**
IRIF				*e*S	**S**	**09 44 19.5**	**-1.5**
JKE	**Kume jima 2**	**2.68**	**8**	P	**P**	**09 43 54.0**	**+0.6**
JKE				*e*S	**S**	**09 44 24.5**	**-0.5**
JJT2	**Tamagusuku 2**	**2.76**	**26**	P	**P**	**09 43 55.9**	**+1.4**
NAH1	**Naha**	**2.80**	**25**	*e*S	**S**	**09 44 29.4**	**+1.4**
JAGN	**Aguni-jima**	**3.02**	**15**	P	**P**	**09 43 59.0**	**+0.8**
YOJ	**Yonaguni jima**	**3.19**	**285**	P	**P**	**09 44 00.5**	**-0.1**
YOJ				*e*S	**S**	**09 44 33.6**	**-4.3**
JOW	**Kunigami**	**3.59**	**28**	Pn	**P**	**09 44 06.8**	**+0.4**
	33nm,0.3s,baz=180,slow=14,SNR=87						
JOW				Sn	**S**	**09 44 48.5**	**+0.2**
	29nm,0.3s,baz=128,slow=26,SNR=6.8						
JOW	**Kunigami**	**3.59**	**28**	P	**P**	**09 44 07.0**	**+0.7**
JOW				*e*S	**S**	**09 44 46.8**	**-1.4**
JIH	**Iheya**	**3.65**	**23**	P	**P**	**09 44 08.0**	**+0.8**
JIH				*e*S	**S**	**09 44 48.7**	**-1.1**
YHNB	**Yeheng**	**4.69**	**283**	*e*P	**P**	**09 44 21.5**	**-0.4**
JTK	**Tokunoshima**	**4.72**	**29**	P	**P**	**09 44 21.8**	**-0.5**
JTK				*e*S	**S**	**09 45 16.1**	**-0.5**
JMZ	**Minamidaito 2**	**4.89**	**63**	P	**P**	**09 44 23.4**	**-1.4**
JMZ				*e*S	**S**	**09 45 15.9**	**-5.1**
JAM	**Amami Oshima**	**5.55**	**31**	P	**P**	**09 44 33.0**	**-1.0**
JAM				*e*S	**S**	**09 45 32.5**	**-5.0**
JZK	**Kikaishima**	**5.65**	**34**	P	**P**	**09 44 35.2**	**-0.2**
JZK				*e*S	**S**	**09 45 38.7**	**-1.3**
JNU	**Nakatsue**	**10.22**	**22**	Pn	**P**	**09 45 37.2**	**-1.9**
	1.7nm,0.3s,baz=86,slow=3.8,SNR=9.2						
JNU				Sn	**S**	**09 47 32.3**	**-1.4**
	0.8nm,0.3s,baz=279,slow=38,SNR=4.2						
JNU				LR	LR	09 50 05.1	
	comp=Z,82nm,19.0s,baz=358,slow=41						
YSS	**Yuzh-Sakhalins**	**26.70**	**25**	P	**P**	**09 48 50.2**	**+0.6**
	7.9nm,0.8s,mb4.3						
SONM	**Songino Array**	**28.91**	**332**	P	**P**	**09 49 09.9**	**+0.4**
	0.3nm,0.4s,mb3.4,baz=149,slow=8.4,SNR=3.2						
SONM				LR	LR	10 02 03.5	
	comp=Z,88nm,18.1s,MS3.4,baz=346,slow=39						
SONM	**Songino Array**	**28.91**	**332**	P	**P**	**09 49 09.9**	**+0.4**
SONM				LR	LR	10 02 03.5	
FITZ	**Fitzroy Crossi**	**41.51**	**181**	*e*P	**P**	**09 50 57.1**	**-0.5**
	5.2nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**41.51**	**181**	P	**P**	**09 50 57.2**	**-0.5**
	9.0nm,0.7s,mb4.5,baz=19,slow=7.5,SNR=8.4						
MKAR	**Makanchi Array**	**42.07**	**314**	P	**P**	**09 51 03.7**	**+1.8**
	2.2nm,0.6s,mb4.0,baz=98,slow=9.6,SNR=12						
WRAB	**Tennant Creek**	**44.02**	**169**	*e*P	**P**	**09 51 18.0**	**0.0**
	20nm,1.0s,mb4.8						
WRA	**Warramunga Arr**	**44.02**	**169**	P	**P**	**09 51 18.2**	**+0.1**
	8.3nm,0.5s,mb4.7,baz=348,slow=8.9,SNR=82						
WB2	**Warramunga Arr**	**44.02**	**169**	*e*P	**P**	**09 51 18.3**	**+0.2**
BVAR	**Borovoye Array**	**51.12**	**320**	P	**P**	**09 52 14.6**	**+1.5**
	0.7nm,0.5s,mb3.8,baz=90,slow=10,SNR=6.9						
ZRNK	**Zerenda**	**51.92**	**320**	*e*P	**P**	**09 52 20.3**	**+1.1**
	6.0nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**57.10**	**165**	P	**P**	**09 52 56.9**	**-0.5**
	1.7nm,0.7s,mb4.2,baz=354,slow=9.2,SNR=3.6						

MAN 22 09:46:21.8,9.66N×126.31E,h6^{km},mb4.4,ML3.3,MS3.1, 2C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.81**	**279**	⇓*e*P	Pb	09 46 37.9	0.0
SCPH				*e*S	Sb	09 46 49.9	+1.0
BUTP	**Butuan**	**0.96**	**225**	*e*P	Pb	09 46 40.0	-0.5
BUTP				*e*S	Sb	09 46 54.6	+1.4
MSLP	**Maasin**	**1.50**	**288**	*e*P	Pn	09 46 49.9	+0.6
MSLP				*e*S	Sb	09 47 08.0	-0.9
PLP	**Palo**	**1.98**	**319**	⇑*e*P	Pn	09 46 56.1	-0.2
PLP				*e*S	Sn	09 47 22.1	+0.4
CGP	**Cagayan de Oro**	**1.99**	**233**	⇑*e*P	Pn	09 46 55.5	-0.9
CGP				*e*S	Sn	09 47 21.2	-0.7
BESP	**Borongan**	**2.11**	**336**	*e*P	Pn	09 46 57.1	-1.0
BESP				*e*S	Sn	09 47 22.9	-2.0
BUKP	**Musuan**	**2.15**	**215**	*e*P	Pn	09 46 59.2	+0.5
BUKP				*e*S	Sn	09 47 27.0	+1.0
TBP	**Tagbilaran**	**2.41**	**271**	*e*P	Pn	09 47 01.9	-0.5
TBP				*e*S	Sn	09 47 32.2	-0.4
SNPH	**Sibulan**	**3.04**	**264**	⇓*e*P	Pn	09 47 12.0	+0.6
SNPH				*e*S	Sn	09 47 50.9	+2.2
CNP	**Catarman**	**3.26**	**331**	*e*P	Pn	09 47 13.5	-1.0
CNP				*e*S	Sn	09 47 50.8	-3.3
PAGZ	**Pagadian**	**3.41**	**238**	*e*P	Pn	09 47 16.4	-0.1
PAGZ				*e*S	Sn	09 47 40.0	-18
PVCP	**Virac**	**4.44**	**332**	*e*P	Pn	09 47 32.9	+1.6

WEL 22 09:56:44.3±0.1,**35.40S**×**178.78E,h33**^{km}**,ML3.8**/4,**Error ellipse: s-maj=1.3km s-min=0.5km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**2.70**	**189**	PN	Pn	09 57 24.7	-1.7
PUZ				SN	Sn	09 57 54.8	-3.5
PUZ				SN	Sn	09 57 55.1	-3.2
MWZ	**Matawai**	**3.10**	**199**	P*	Pb	09 57 31.1	-7.4
MWZ				S*	Sb	09 58 06.8	-9.4
URZ	**Urewera**	**3.15**	**205**	P*	Pb	09 57 32.0	-7.5

IDC 22 10:01:37.8±13.0,**21.52S**×**177.76W,h447**^{km}±134^{km}, **mb3.2**/4,**mb1 3.5**/4,**mb1mx3.2**/13,**mbtmp4.0**/4,**Error ellipse: s-maj=118.9km s-min=58.3km az=141.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.56**	**245**	P	P	10 08 12.9	-0.6
	1.1nm,0.4s,baz=123,slow=14,SNR=6.6						
WRA	**Warramunga Arr**	**44.69**	**263**	P	P	10 09 08.9	-2.2
	0.5nm,0.3s,baz=96,slow=7.4,SNR=49						
ILAR	**Eielson Array**	**89.25**	**13**	P	P	10 13 44.7	-0.7
	0.2nm,0.5s,baz=218,slow=4.5,SNR=7.3						
CMAR	**Chiang Mai Arr**	**90.66**	**289**	P	P	10 13 53.5	+0.5
	0.5nm,0.3s,baz=128,slow=3.9,SNR=4.8						
AKASG	**Malin Array Be**	**144.00**	**331**	PKP	PKPdf	10 20 19.9	-0.9
	1.7nm,0.4s,baz=44,slow=4.3,SNR=12						
GERES	**GERESS Array B**	**151.23**	**344**	PKPbc	PKPdf	10 20 39.1	+6.5
	0.5nm,0.3s,baz=72,slow=4.2,SNR=5.1						

IGQ 22 10:10:22.4,1.95S×**78.92W,h12**^{km}±3^{km}**,mb4.1,7C-11D, Error ellipse: s-maj=6.1km s-min=4.0km az=58.6, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	**Igualata**	**0.53**	**32**	⇓P	Pb	10 10 33.0	-0.3
ARRY	**Arrayan**	**0.64**	**47**	⇓P	Pb	10 10 34.1	-0.9
CUSU	**Cusua**	**0.67**	**41**	P	Pb	10 10 35.2	-0.3
RETU	**Refugio**	**0.68**	**44**	⇑P	Pb	10 10 35.6	-0.2
JUIV	**Juive**	**0.69**	**41**	⇓P	Pb	10 10 35.4	-0.5
ULBA	**Ulba**	**0.71**	**46**	⇓P	Pb	10 10 35.9	-0.4
ULBA				S	Sb	10 10 46.4	+0.7
RUN5	**Runtun**	**0.72**	**43**	⇓P	Pb	10 10 36.0	-0.5
PISA	**Pisayambo**	**1.03**	**31**	⇑P	Pb	10 10 42.1	+0.3
CAMI	**Rancho Maria**	**1.33**	**18**	⇓P	Pb	10 10 47.9	+1.0
TAMB	**Tambo**	**1.36**	**24**	P	Pn	10 10 48.5	+1.2
VC1	**Cotopaxi 1**	**1.40**	**22**	⇑P	Pn	10 10 49.3	+1.4
VC1				S	Sb	10 11 09.6	+4.0
ANTI	**Antisana**	**1.67**	**27**	⇑P	Pn	10 10 53.8	+2.0
JUA2	**San Juan 2**	**1.75**	**10**	⇑P	Pn	10 10 55.3	+2.4
TERV	**Terraza Guagua**	**1.79**	**10**	P	Pn	10 10 55.5	+2.0
GGP	**Refugio Guagua**	**1.79**	**10**	⇓P	Pn	10 10 55.8	+2.3
PINO	**Pino**	**1.81**	**10**	⇑P	Pn	10 10 56.3	+2.6
YANA	**Yana**	**1.85**	**11**	⇑P	Pn	10 10 56.7	+2.3
YANA				S	Sn	10 11 22.6	+4.8
HOJA	**Cerro de Hojas**	**1.85**	**299**	⇓P	Pn	10 10 54.5	+0.1
CAYR	**Refugio Cayamb**	**2.15**	**25**	P	Pn	10 11 02.9	+4.2
CAYA	**Cayambe**	**2.21**	**25**	P	Pn	10 11 03.5	+4.0
CHAR	**Charly**	**2.23**	**34**	P	Pn	10 11 03.4	+3.6
ECOPE	**Copete-Rev Vol**	**2.24**	**35**	⇓P	Pn	10 11 03.2	+3.2
ECOPE				S	Sn	10 11 36.0	+8.2
LAV3	**Lava3-Reventad**	**2.24**	**35**	⇓P	Pn	10 11 03.3	+3.3
LAV3				S	Sn	10 11 35.7	+7.9
CONE	**Cono NE Rev Vo**	**2.26**	**34**	⇓P	Pn	10 11 03.8	+3.6
CONE				S	Sn	10 11 35.3	+7.0
COTA	**Cotacachi**	**2.34**	**14**	P	Pn	10 11 05.8	+4.5

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*CSEM **22** 10:17:54.0±0.1,34.98N×23.11E,h80^{km},ML4.0,Error ellipse: s-maj=3.1km s-min=1.1km az=65.0*

*HLW **22** 10:17:55.0,35.16N×23.30E,h33^{km},Mb4.2*

*ATH **22** 10:17:56.8,35.17N×23.18E,h59^{km}±5^{km},MD4.1/15, ML4.0*

*NEIC **22** 10:17:56.7,35.17N×23.17E,h59^{km},MD4.1(ATH),After ATH.*

*IDC **22** 10:18:00.1±2.1,35.33N×23.26E,h75^{km}±21^{km},mb3.6/5, mb1 3.6/10,mb1mx3.5/22,mbtmp3.8/10,MS3.2/3, Ms1 3.2/3,ms1mx2.8/21,Error ellipse: s-maj=23.7km s-min=21.6km az=62.0*

ISC 22 10:17:54.5±0.5,**34.97N**±0.03×**23.11E**±0.05,**h72**^{km}±7^{km}, **n67,**σ**1**^{s}**01**/78,**mb3.8**/5,**12C-1D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.82**	**99**	*e*P	**P**	**10 18 13.0**	**+1.9**
VAM	**Vamos**	**1.00**	**64**	*e*P	**P**	**10 18 13.5**	**+0.2**
VAM				*e*S	**S**	**10 18 26.9**	**-0.5**
KYTH	**Kithira**	**1.31**	**358**	*e*P	**P**	**10 18 17.7**	**+0.2**
IDI	**Anoyia**	**1.50**	**77**	P	**P**	**10 18 21.0**	**+1.0**
	32nm,0.3s,baz=259,slow=14,SNR=137						
IDI				S	**S**	**10 18 40.7**	**+1.9**
	127nm,0.3s,baz=306,slow=18,SNR=12						
IDI				LR	LR	10 19 01.0	
	comp=Z,795nm,19.9s,baz=9.7,slow=46						
IDI	**Anoyia**	**1.50**	**77**	P	**P**	**10 18 21.0**	**+1.0**
IDI				S	**S**	**10 18 40.7**	**+1.9**
IDI				LR	LR	10 19 01.0	
VLI	**Veliai**	**1.75**	**356**	*e*P	**P**	**10 18 23.2**	**-0.2**
VLI				*e*S	**S**	**10 18 42.9**	**-1.8**
NPS	**Neapolis**	**2.08**	**81**	*e*P	**P**	**10 18 29.4**	**+1.5**
NPS				*e*S	**S**	**10 18 52.8**	**+0.2**
XRY	**Khrisi**	**2.13**	**92**	*e*P	**P**	**10 18 32.0**	**+3.4**
XRY	**Khrisi**	**2.13**	**92**	*e*P	**P**	**10 18 31.0**	**+2.4**
SANT	**Santorini**	**2.37**	**53**	*e*P	**P**	**10 18 31.4**	**-0.6**
SANT	**Santorini**	**2.37**	**53**	*e*P	**P**	**10 18 31.4**	**-0.7**
ITM	**Ithomi**	**2.40**	**337**	*e*P	**P**	**10 18 33.2**	**+0.7**
ITM				*e*S	**S**	**10 18 59.7**	**-1.0**
NAIG	**Nisos Aigina**	**2.80**	**6**	*e*P	**P**	**10 18 37.7**	**-0.4**
APE	**Apeiranthos**	**2.87**	**43**	*i* P	**P**	**10 18 36.7**	**-2.4**
APE	**Apeiranthos**	**2.87**	**43**	*e*P	**P**	**10 18 38.9**	**-0.2**
APE				*e*S	**S**	**10 19 10.1**	**-2.5**
NSAL	**Nisos Salamina**	**2.94**	**6**	*e*P	**P**	**10 18 40.0**	**-0.1**
MGER	**Gerania Oros**	**3.01**	**2**	*e*P	**P**	**10 18 41.7**	**+0.7**
ATH	**Athens Observa**	**3.04**	**9**	*e*P	**P**	**10 18 40.8**	**-0.6**
MPAR	**Parnis Oros**	**3.21**	**9**	*e*P	**P**	**10 18 43.7**	**-0.2**
RLS	**Riolos of Patr**	**3.35**	**337**	*e*P	**P**	**10 18 46.6**	**+0.8**
KARP	**Karpathos**	**3.37**	**79**	*e*P	**P**	**10 18 46.5**	**+0.5**
KARP				*e*S	**S**	**10 19 25.2**	**+0.2**
VLS	**Valsamata**	**3.79**	**328**	*e*P	**P**	**10 18 51.0**	**-0.8**
SLUM		**3.89**	**152**	⇑P	**P**	**10 18 53.8**	**+0.5**
SLUM				S	**S**	**10 19 37.5**	**-0.7**
SMG	**Samos**	**4.07**	**47**	*e*P	**P**	**10 18 56.5**	**+0.7**
EVR	**Evrytania**	**4.07**	**346**	*e*P	**P**	**10 18 57.2**	**+1.4**
MLSB	**Milas**	**4.44**	**57**	*e*P	**P**	**10 18 55.5**	**-5.4**
YER	**Yerkesik**	**4.72**	**61**	*i* P	**P**	**10 19 05.7**	**+0.9**
HMAT	**Matruh**	**5.12**	**138**	⇑P	**P**	**10 19 10.9**	**+0.6**
HMAT	**Matruh**	**5.12**	**138**	P	**P**	**10 19 10.9**	**+0.6**
FETY	**Fethiye**	**5.13**	**69**	*i* P	**P**	**10 19 10.1**	**-0.5**
ELL	**Elmali**	**5.80**	**70**	*i* P	**P**	**10 19 19.4**	**-0.3**
DABA	**Dabaa**	**5.88**	**131**	⇓P	**P**	**10 19 20.8**	**+0.1**
SWA2		**6.05**	**160**	⇑P	**P**	**10 19 23.9**	**+0.8**
SWA1		**6.11**	**158**	⇑P	**P**	**10 19 25.1**	**+1.1**
SWA1				S	**S**	**10 20 29.7**	**-3.5**
TIP	**Timpagrande**	**6.58**	**311**	*e*P	**P**	**10 19 28.3**	**-2.4**
HBRG	**Burj al ‘Arab**	**7.17**	**126**	⇑P	**P**	**10 19 38.0**	**-0.8**
HBRG				S	**S**	**10 20 53.0**	**-6.4**
HNAT	**Natroun**	**8.29**	**128**	⇑P	**P**	**10 19 53.8**	**-0.4**
HMYD	**Mayadein**	**8.30**	**126**	⇑P	**P**	**10 19 54.0**	**-0.4**
FYM	**Al Fayyum**	**8.53**	**126**	P	**P**	**10 19 56.8**	**-0.6**
AYT	**Al ‘Ayyat**	**8.60**	**125**	⇑P	**P**	**10 19 57.5**	**-0.8**
AYT	**Al ‘Ayyat**	**8.60**	**125**	P	**P**	**10 19 57.5**	**-0.8**
HSAF	**As Saff**	**8.92**	**124**	⇑P	**P**	**10 20 02.1**	**-0.6**
KOT	**Kottamia**	**8.92**	**122**	⇑P	**P**	**10 20 02.0**	**-0.7**
HFRF	**Wahat Farafira**	**8.98**	**149**	P	**P**	**10 20 04.1**	**+0.5**
GLL	**Jalalah**	**9.05**	**124**	⇑P	**P**	**10 20 04.0**	**-0.6**
HHAG	**Hagoal**	**9.10**	**121**	⇑P	**P**	**10 20 04.4**	**-0.7**
AMAG	**Maghara**	**9.53**	**114**	P	**P**	**10 20 10.1**	**-1.1**
BR131	**Keskin Array S**	**9.63**	**57**	P	**P**	**10 20 08.3**	**-4.2**
	2.2nm,0.6s						
BRTR	**Keskin Array B**	**9.63**	**57**	P	**P**	**10 20 12.8**	**+0.3**
	0.1nm,0.3s,baz=232,slow=14,SNR=6.2						
SUZ		**9.68**	**119**	P	**P**	**10 20 11.5**	**-1.7**
HNKL	**Nakhl**	**10.47**	**116**	P	**P**	**10 20 22.4**	**-1.4**
MLR	**Muntele Rosu**	**10.73**	**11**	P	**P**	**10 20 27.0**	**-0.3**
	0.1nm,0.3s,baz=167,slow=11,SNR=2.7						
MLR				LR	LR	10 24 45.4	
	comp=Z,111nm,20.3s,baz=296,slow=39						
HDK1	**Dakhla**	**10.86**	**148**	P	**P**	**10 20 30.0**	**+1.0**
HKAT	**Jabal Katrina**	**11.28**	**122**	P	**P**	**10 20 34.2**	**-0.5**
EIL	**Elat**	**11.33**	**115**	P	**P**	**10 20 39.9**	**+4.5**
	1.2nm,0.3s,baz=297,slow=11,SNR=6.6						
EIL				S	**S**	**10 22 35.0**	**-5.9**
	2.0nm,0.3s,baz=276,slow=38,SNR=6.4						
GERES	**GERESS Array B**	**15.51**	**336**	P	**P**	**10 21 31.5**	**+1.5**
	0.1nm,0.3s,baz=157,slow=13,SNR=3.7						
KHC	**Kasperske Hory**	**15.80**	**336**	*e*P	**P**	**10 21 37.5**	**+3.8**
KHC				*e*		10 21 55.0	
KHC				*e*		10 22 09.5	
KHC	**Kasperske Hory**	**15.80**	**336**	*e*P	**P**	**10 21 37.5**	**+3.8**
KHC				x	x	10 21 55.0	
KHC				x	x	10 22 09.5	
AKASG	**Malin Array Be**	**16.34**	**14**	P	**P**	**10 21 41.0**	**+0.6**
	1.0nm,0.3s,baz=201,slow=8.9,SNR=4.5						
AKASG	**Malin Array Be**	**16.34**	**14**	P	**P**	**10 21 41.0**	**+0.6**
GNI	**Garni**	**17.90**	**67**	LR	LR	10 30 14.3	
	comp=Z,67nm,19.5s,baz=278,slow=42						
HFS	**Hagfors**	**25.91**	**349**	P	**P**	**10 23 22.3**	**+1.1**
	1.7nm,0.5s,mb3.8,baz=149,slow=8.6,SNR=9.0						
HFS				LR	LR	10 34 36.5	
	comp=Z,49nm,18.4s,baz=170,slow=39						
ARCES	**ARCESS Array B**	**34.64**	**1**	P	**P**	**10 24 37.7**	**-0.7**
	1.1nm,0.8s,mb3.7,baz=180,slow=9.9,SNR=4.4						
DBIC	**Dimbokro**	**38.15**	**229**	P	**P**	**10 25 15.6**	**+7.1**
	3.2nm,0.8s,mb4.2,baz=60,slow=1.1,SNR=3.7						
MKAR	**Makanchi Array**	**45.28**	**56**	P	**P**	**10 26 07.8**	**+1.4**
	0.4nm,0.4s,mb3.5,baz=274,slow=7.0,SNR=4.3						
MKAR	**Makanchi Array**	**45.28**	**56**	P	**P**	**10 26 07.8**	**+1.4**
SONM	**Songino Array**	**60.90**	**50**	P	**P**	**10 28 02.9**	**+1.0**
	0.4nm,0.4s,mb3.8,baz=288,slow=8.3,SNR=4.2						

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*NIED **22** 11:07:00,42.80N×145.00E,h56^{km},Mw3.5 Best double couple: M$_0$2.17×10^{14} NP1:ϕ_s4°,δ78°,λ78°. NP2:ϕ_s230°, δ18°,λ134°.*

JMA 22 11:07:39.4±0.1,**42.83N**×**145.02E,h47**^{km}±1^{km}**,M3.5, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.29**	**305**	P	P	11 07 48.1	-0.1
JAK				S	S	11 07 54.5	+0.1
NEM2	**Nemuro 2**	**0.75**	**44**	P	P	11 07 53.3	-0.5
NEM2				S	S	11 08 03.2	-1.1
JNK	**Nakash**	**0.79**	**344**	P	P	11 07 54.1	-0.1
JNK				S	S	11 08 04.5	-0.7
JOB	**Onbets**	**0.88**	**275**	P	P	11 07 55.2	-0.3
JAR	**Ashorobuto**	**1.03**	**297**	P	P	11 07 57.4	-0.2
JAR				*e*S	S	11 08 10.6	-0.6
JRA	**Rausu**	**1.11**	**4**	P	P	11 07 58.8	0.0
JRA				S	S	11 08 12.7	-0.5
JCH	**Churui**	**1.24**	**261**	P	P	11 07 59.8	-0.8
JTKR	**Abashiri--Toko**	**1.40**	**325**	P	P	11 08 03.3	+0.3

MAN 22 12:34:29.7,17.00N×120.32E,h15^{km},mb3.9,ML2.6, MS2.2,1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCPH	**Baguio City Da**	**0.67**	**158**	⇑*i*P	Pb	12 34 42.4	-0.2
BCPH				*i* S	Sb	12 34 50.2	-1.1
BOLP	**Bolinao**	**0.73**	**212**	*e*P	Pb	12 34 43.9	+0.3
BOLP				*e*S	Sb	12 34 54.9	+1.8
ABRA	**Dolores**	**0.75**	**30**	*e*P	Pb	12 34 44.0	+0.2
APYP	**Conner**	**1.23**	**46**	*e*P	Pb	12 34 51.0	-1.1
APYP				*e*S	Sb	12 35 06.8	-0.9
CAUP	**Cauayan**	**1.44**	**92**	*e*P	Pn	12 34 56.5	+1.0
BALP	**Baler**	**1.74**	**136**	*e*P	Pn	12 34 58.6	-1.2
BALP				*e*S	Sn	12 35 20.9	-0.9

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*IDC **22** 13:11:42.3±5.7,23.73N×93.34E,h134^{km}±44^{km},mb3.0/2, mb1 3.1/3,mb1mx2.9/18,mbtmp3.3/3,Error ellipse: s-maj=170.9km s-min=23.8km az=59.0*

ISC 22 13:11:47.0±3.1,**24.9N**±0.3×**95.9E**±0.3,**h155**^{km}±39^{km},**n10,** σ**1**^{s}**26**/11,**mb3.3**/2,**1C,Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	**Shillong**	**3.65**	**281**	⇑*i*PN	**P**	**13 12 46.3**	**+2.6**
SHL				*i* SN	**S**	**13 13 25.5**	**-1.7**
CMAR	**Chiang Mai Arr**	**7.04**	**155**	P	**P**	**13 13 27.9**	**-0.8**
	0.2nm,0.3s,baz=310,slow=16,SNR=4.9						
GUN	**Gumba**	**9.42**	**291**	*e*P	**P**	**13 14 02.2**	**+2.0**
	11nm,0.4s						
PKI	**Pulchoki**	**9.74**	**288**	*e*P	**P**	**13 14 04.3**	**-0.1**
	9.4nm,0.4s						
KKN	**Kakani**	**9.90**	**289**	*e*P	**P**	**13 14 07.7**	**+1.2**
DMN	**Daman**	**10.01**	**288**	*e*P	**P**	**13 14 07.6**	**-0.3**
GKN	**Gorkha**	**10.51**	**289**	*e*P	**P**	**13 14 14.8**	**+0.3**
	16nm,0.4s						
KOLN	**Koldanda**	**11.35**	**287**	*e*P	**P**	**13 14 24.2**	**-1.3**
	4.3nm,0.3s						
MKAR	**Makanchi Array**	**24.37**	**337**	P	**P**	**13 16 50.5**	**-1.4**
	0.3nm,0.4s,mb3.2,baz=172,slow=8.6,SNR=5.4						
WRA	**Warramunga Arr**	**58.23**	**136**	P	**P**	**13 21 28.2**	**+0.6**
	0.3nm,0.5s,mb3.4,baz=324,slow=7.4,SNR=9.5						

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*BJI **22** 13:15:32.8,0.28N×97.28E,h32^{km},mB5.1,mb4.7,Ms4.5, Msz4.3*

*MOS **22** 13:15:35.2±1.0,0.67N×96.89E,h33^{km},mb4.9/5,Error ellipse: s-maj=22.3km s-min=10.7km az=111.3*

*NEIC **22** 13:15:36.5±0.4,0.67N×96.94E,mb4.7/8,Error ellipse: s-maj=12.9km s-min=7.4km az=58.0*

*IDC **22** 13:15:36.3±0.6,0.65N×96.85E,h28^{km}±3^{km},mb4.1/15, mb1 4.2/16,mb1mx4.2/20,mbtmp4.3/16,ML4.2/1,MS4.0/4, Ms1 4.1/4,ms1mx3.3/30,Error ellipse: s-maj=21.9km s-min=12.4km az=46.0*

ISC 22 13:15:34.6±0.5,**0.69N**±0.06×**96.94E**±0.06,**h28**^{km}, **h28**^{km}±.7^{km}**:pP-P,n61,**σ**0**^{s}**94**/55,**mb4.5**/28,**MS4.3**/8,**3D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.62**	**46**	P	**Pn**	**13 16 58.4**	**-0.1**
KULM	**Kulim**	**5.88**	**39**	*e*P	**Pn**	**13 17 01.5**	**-0.7**
KGM	**Kluang**	**6.51**	**78**	P	**Pn**	**13 17 11.6**	**+0.5**
CM31	**Chiang Mai Arr**	**17.77**	**6**	*e*P	**P**	**13 19 42.8**	**+1.0**
	7.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**17.77**	**6**	P	**P**	**13 19 41.2**	**-0.6**
	0.3nm,0.3s,baz=194,slow=10,SNR=26						
CMAR				LR	LR	13 27 05.8	
	comp=Z,226nm,18.4s,baz=195,slow=39						
KKM	**Kota Kinabalu**	**19.95**	**74**	P	**P**	**13 20 03.0**	**-4.7**
KKM	**Kota Kinabalu**	**19.95**	**74**	P	**P**	**13 20 08.3**	**+0.6**
TSM	**Tawau**	**21.21**	**80**	P	**P**	**13 20 20.8**	**+0.2**
KMI	**Kunming**	**24.93**	**13**	P	**P**	**13 20 58.9**	**+1.8**
KMI				AP		13 21 08.8	
KMI				XP		13 21 12.8	
KMI				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.5						
KMI				AMB	AMB		
	comp=Z,110nm,3.3s						
KMI				LR	LR		
	comp=N,510nm,11.4s,MS4.3						
KMI				LR	LR		
	comp=E,240nm,12.0s,MS4.3						
KMI				LR	LR		
	comp=Z,520nm,11.6s,MS4.3						
GYA	**Guiyang**	**27.28**	**19**	⇓*i*P	**P**	**13 21 19.3**	**+0.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
GYA				LR	LR		
	comp=N,390nm,13.0s,MS4.3						
GYA				LR	LR		
	comp=E,400nm,12.6s,MS4.3						
GYA				LR	LR		
	comp=Z,450nm,11.0s,MS4.3						
PKI	**Pulchoki**	**28.93**	**338**	*e*P	**P**	**13 21 40.0**	**+6.2**
GUN	**Gumba**	**29.07**	**340**	*e*P	**P**	**13 21 40.2**	**+5.1**
	comp=Z,100nm,1.0s,mb5.5						
DMN	**Daman**	**29.08**	**338**	*e*P	**P**	**13 21 39.9**	**+4.8**
KKN	**Kakani**	**29.18**	**338**	*e*P	**P**	**13 21 40.8**	**+4.8**
	comp=Z,54nm,1.0s,mb5.2						
LSA	**Lhasa**	**29.38**	**350**	P	**P**	**13 21 39.8**	**+2.0**
LSA	**Lhasa**	**29.38**	**350**	*e*P	**P**	**13 21 39.8**	**+2.0**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
LSA	**Lhasa**	**29.38**	**350**	*e*P	**P**	**13 21 39.8**	**+2.0**
	comp=Z,5.7nm,0.6s,mb4.5						
GKN	**Gorkha**	**29.61**	**338**	*e*P	**P**	**13 21 40.6**	**+0.7**
KOLN	**Koldanda**	**29.81**	**336**	*e*P	**P**	**13 21 42.5**	**+0.8**
	comp=Z,24nm,1.1s,mb4.9						
ENH	**Enshi**	**31.75**	**21**	*e*P	**P**	**13 21 57.4**	**-1.3**
	comp=Z,17nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**33.84**	**125**	⇓*i*P	**P**	**13 22 16.6**	**-0.5**
	comp=Z,11nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**33.84**	**125**	P	**P**	**13 22 16.4**	**-0.7**
	comp=Z,14nm,0.8s,mb4.9,baz=188,slow=9.0,SNR=12						
XAN	**Xi’an**	**35.03**	**17**	P	**P**	**13 22 25.8**	**-1.3**
XAN				AP	pP	13 22 34.5	-0.9
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GTA	**Gaotai**	**38.63**	**4**	*e*P	**P**	**13 22 57.9**	**+0.5**
GTA				AP	pP	13 23 05.1	-0.7
GTA				XP	sP	13 23 09.0	-0.3
GTA				PP	PP	13 24 29.1	-0.5
GTA				AMB	AMB		
	comp=Z,40nm,6.1s						
GTA				LR	LR		
	comp=N,110nm,13.3s,MS4.1						
GTA				LR	LR		
	comp=E,130nm,10.7s,MS4.1						
GTA				LR	LR		
	comp=Z,140nm,12.9s,MS4.0						
WRA	**Warramunga Arr**	**41.98**	**121**	P	**P**	**13 23 25.2**	**-0.1**
	comp=Z,5.6nm,0.7s,mb4.3,baz=299,slow=9.0,SNR=38						
WRAB	**Tennant Creek**	**41.99**	**121**	*e*P	**P**	**13 23 25.5**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
WRAB	**Tennant Creek**	**41.99**	**121**	*e*P	**P**	**13 23 25.5**	**+0.1**
	comp=Z,8.0nm,0.8s,mb4.4						
WB2	**Warramunga Arr**	**42.00**	**121**	⇓*i*P	**P**	**13 23 25.7**	**+0.3**
JNU	**Nakatsue**	**45.36**	**41**	LR	LR	13 42 57.4	
	comp=Z,82nm,19.7s,MS3.7,baz=180,slow=36						
SONM	**Songino Array**	**47.67**	**9**	P	**P**	**13 24 11.1**	**+0.6**
	comp=Z,1.3nm,0.5s,mb4.2,baz=190,slow=7.5,SNR=15						
SONM				pP	pP	13 24 20.0	+1.0
	comp=Z,3.4nm,0.8s,baz=191,slow=8.8,SNR=11						
SONM				PcP	PcP	13 25 40.4	+0.3
	comp=Z,1.9nm,0.9s,baz=188,slow=4.7,SNR=3.9						
SONM				pPcP		13 25 48.6	
	comp=Z,2.5nm,0.6s,baz=192,slow=3.2,SNR=6.8						
MKAR	**Makanchi Array**	**47.67**	**346**	*i* P	**P**	**13 24 10.9**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						

MKAR	Makanchi Array	47.67	346	P	P	13 24 11.1	+0.5
	comp=Z,5.8nm,0.8s,mb4.7,baz=153,slow=8.1,SNR=37						
KKAR	Karatay Array	48.40	334	i P	P	13 24 16.8	+0.5
ZAK	Zakamensk	49.80	5	eP	P	13 24 27.1	+0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.8						
CN2	Changchun	49.87	27	eP	P	13 24 27.8	+0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
CN2				LR	LR		
	comp=N,200nm,14.0s,MS4.4						
CN2				LR	LR		
	comp=E,200nm,14.0s,MS4.4						
CN2				LR	LR		
	comp=Z,200nm,15.0s,MS4.2						
PMG	Port Moresby	50.99	103	P	P	13 24 36.8	+0.3
	comp=Z,12nm,0.8s,mb4.9,baz=302,slow=6.9,SNR=5.1						
PMG				pP	pP	13 24 45.1	0.0
	comp=Z,14nm,0.7s,baz=280,slow=3.5,SNR=4.7						
HIA	Hailar	52.20	19	eP	P	13 24 45.5	+0.3
CTA	Charters Tower	52.51	116	P	P	13 24 48.0	+0.1
	comp=Z,3.7nm,1.0s,mb4.3,baz=324,slow=14,SNR=4.3						
STKA	Stephens Creek	53.21	132	P	P	13 24 53.1	+0.2
	comp=Z,3.6nm,0.8s,mb4.3,baz=158,slow=24,SNR=6.0						
ZAL	Zalesovo	54.01	351	P	P	13 24 58.7	+0.2
	comp=Z,4.1nm,0.5s,mb4.6,baz=308,slow=5.6,SNR=23						
ZAL	Zalesovo	54.01	351	P	P	13 24 58.7	+0.2
NVS	Novosibirsk	55.13	350	eP	P	13 25 05.1	-1.7
NVS				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
BVAR	Borovoye Array	56.65	341	P	P	13 25 16.7	-1.0
	comp=Z,2.0nm,0.8s,mb4.2,baz=143,slow=7.4,SNR=13						
KLR	Kul'dur	56.82	27	eP	P	13 25 16.6	-2.4
KLR				MLR	MLR		
	comp=Z,600nm,11.5s,MS4.9						
ZRNK	Zerenda	57.04	340	eP	P	13 25 18.7	-1.8
AB31	Akbulak array	57.84	332	P	P	13 25 25.2	-0.9
ARU	Arti	63.55	337	P	P	13 26 06.3	+1.5
ARU				e	pP	13 26 14.3	+0.7
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
ARU	Arti	63.55	337	P	P	13 26 06.3	+1.4
	comp=Z,8.0nm,0.8s,mb4.8						
ARU				e	pP	13 26 14.3	+0.7
EIL	Elat	65.51	302	LR	LR	13 52 41.7	
	comp=Z,239nm,21.1s,MS4.4,baz=300,slow=34						
BRTR	Keskin Array B	69.27	313	P	P	13 26 39.5	-2.0
	comp=Z,0.5nm,0.5s,mb3.7,baz=326,slow=4.5,SNR=2.4						
BRTR				pP	pP	13 26 48.3	-1.9
	comp=Z,1.4nm,0.9s,baz=141,slow=7.9,SNR=4.4						
MATP	Matopo	70.10	248	P	P	13 26 47.3	+0.5
	comp=Z,1.1nm,0.6s,mb4.0,baz=76,slow=9.5,SNR=2.7						
MATP				pP	pP	13 26 55.4	-0.2
	comp=Z,1.9nm,0.8s,baz=159,slow=5.6,SNR=2.6						
AKASG	Malin Array Be	75.51	323	P	P	13 27 17.6	-0.6
	comp=Z,1.6nm,0.8s,mb4.0,baz=95,slow=4.6,SNR=3.6						
AKASG				pP	pP	13 27 27.5	+0.4
	comp=Z,0.8nm,0.4s,baz=94,slow=4.8,SNR=3.4						
MLR	Muntele Rosu	76.26	317	LR	LR	14 02 13.4	
	comp=Z,208nm,18.7s,MS4.5,baz=149,slow=37						
ARCES	ARCESS Array B	82.93	340	P	P	13 27 57.1	-0.8
	comp=Z,1.2nm,0.8s,mb4.0,baz=63,slow=5.4,SNR=4.5						
ARCES				pP	pP	13 28 06.6	-0.3
	comp=Z,1.4nm,0.7s,baz=90,slow=4.9,SNR=3.0						
ARCES	ARCESS Array B	82.93	340	P	P	13 27 57.1	-0.8
ARCES				pP	pP	13 28 06.6	-0.3
GERES	GERESS Array B	85.03	319	P	P	13 28 10.2	+1.2
	comp=Z,0.3nm,0.2s,mb4.0,baz=90,slow=5.3,SNR=4.9						
GERES				pP	pP	13 28 18.9	+0.9
	comp=Z,1.7nm,0.8s,baz=104,slow=5.5,SNR=4.2						
NB2	NORSAR Subarra	87.33	331	P	P	13 28 20.9	+0.9
	comp=Z,0.7nm,0.7s,mb4.0,baz=91,slow=4.8						
NOA	NORSAR Array B	87.33	331	P	P	13 28 20.2	+0.2
	comp=Z,0.8nm,0.8s,mb4.0,baz=95,slow=4.8,SNR=2.9						
NOA				pP	pP	13 28 29.9	+0.9
	comp=Z,1.5nm,0.9s,baz=89,slow=5.7,SNR=4.5						
NVAR	Mina Array Bea	129.35	36	pPKP		13 34 53.9	
	comp=Z,0.2nm,0.5s,baz=359,slow=1.3,SNR=2.9						
TXAR	Lajitas Array	144.24	32	PKP	PKPdf	13 35 09.6	-3.9
	comp=Z,0.2nm,0.3s,baz=288,slow=4.0,SNR=4.6						
LRAL	Lakeview Retre	146.25	6	PKPdf	PKPdf	13 35 14.2	-2.8

IDC 22 13:17:13.6±3.2**, 0.66N**×**97.02E, mb4.2**/3**, mb1 4.3**/4**, mb1mx3.9**/15**, mbtmp4.1**/4**, ML3.9**/1**, MS3.8**/2**, Ms1 3.8**/2**, ms1mx2.9**/31**, Error ellipse: s-maj=122.4km s-min=27.9km az=58.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	17.79	6	P	P	13 21 24.1	-0.2
	0.2nm,0.3s,baz=194,slow=11,SNR=4.7						
WRA	Warramunga Arr	41.91	121	P	P	13 25 06.1	-1.6
	1.4nm,0.4s,baz=303,slow=9.0,SNR=6.1						
WB2	Warramunga Arr	41.92	121	eP	P	13 25 06.1	-1.7
SONM	Songino Array	47.69	9	LR	LR	13 46 39.6	
	comp=Z,88nm,18.2s,baz=13,slow=37						
MKAR	Makanchi Array	47.72	346	P	P	13 25 52.0	-2.1
	1.6nm,0.6s,baz=156,slow=8.6,SNR=3.7						
CTA	Charters Tower	52.42	116	LR	LR	13 52 21.9	
	comp=Z,98nm,19.1s,baz=106,slow=40						
ZAL	Zalesovo	54.05	351	P	P	13 26 39.2	-2.7
	2.0nm,0.4s,baz=318,slow=8.3,SNR=3.4						

MAN 22 13:26:29.6, 9.87N×**126.14E, h27**^{km}**, mb4.2, ML3.0, MS2.8, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	1.03	210	eP	Pn	13 26 48.0	-0.4
BUTP				eS	Sb	13 27 04.6	+2.6
MSLP	Maasin	1.29	282	eP	Pn	13 26 51.6	-0.5
MSLP				eS	Sn	13 27 04.8	-3.8
PLP	Palo	1.72	318	⇓eP	Pn	13 26 58.1	-0.1
PLP				eS	Sn	13 27 19.9	+0.5
BESP	Borongan	1.85	338	eP	Pn	13 27 00.1	0.0
BESP				eS	Sn	13 27 25.2	+2.4
BUKP	Musuan	2.25	208	eP	Pn	13 27 06.4	+0.5
BUKP				eS	Sn	13 27 29.8	-3.2
CNP	Catarman	2.99	331	eP	Pn	13 27 15.5	-0.9
CNP				eS	Sn	13 27 48.4	-3.5
PAGZ	Pagadian	3.39	234	eP	Pn	13 27 21.3	-0.8
PVCP	Virac	4.18	332	eP	Pn	13 27 32.4	-0.9

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*OMAN **22** 13:37:03.2, 28.95N×52.59E, h30^{km}, Error ellipse: s-maj=160.8km s-min=21.5km az=329.0*

*THR **22** 13:37:09.8±0.5, 28.24N×52.90E, h15^{km}, ML4.3*

*CSEM **22** 13:37:09.6±0.1, 28.41N×53.26E, h2^{km}, mb4.1/16, Error ellipse: s-maj=2.9km s-min=1.8km az=44.0*

*BJI **22** 13:37:11.3, 28.46N×52.63E, h37^{km}, mB5.0, mb4.8*

*MOS **22** 13:37:13.0±1.5, 28.28N×53.21E, h33^{km}, mb4.4/16, Error ellipse: s-maj=11.0km s-min=6.7km az=113.5*

*TEH **22** 13:37:19.5, 28.76N×52.78E, h17^{km}, Mn4.1*

*NEIC **22** 13:37:19.5, 28.76N×52.78E, h17^{km}, mb4.2/14, ML4.1(TEH), After TEH.*

NEIC Felt at Qir-va-Karzin.

*IDC **22** 13:37:19.7±5.2, 28.37N×52.99E, h83^{km}±48^{km}, mb4.0/20, mb1 4.1/22, mb1mx4.1/25, mbtmp4.3/22, ML3.8/2, Error ellipse: s-maj=15.8km s-min=12.8km az=166.0*

ISC 22 13:37:09.0±0.8**, 28.26N**±0.03×**53.04E**±0.03**, h3**^{km}±5^{km}**, n127, σ1**^{s}**44**/129**, mb4.2**/39**, 4C-2D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMOK	Mook	0.83	340	Pg	Pg	13 37 25.4	-0.2
SHI	Shiraz	1.45	341	Pn	Pn	13 37 37.5	+1.3
IPAR	Pars	1.57	0	Pn	Pn	13 37 40.1	+2.2
BNDS	Bandar-Abbas	2.90	107	ePN	Pn	13 37 59.1	+2.1
BNDS				AML	AML	13 39 11.9	
	comp=N,867nm,0.5s						
IMEH	Mehriz	3.40	23	Pn	Pn	13 38 06.7	+2.7
KRBR	Kerman	3.68	61	ePN	Pn	13 38 10.3	+2.4
KRBR				AML	AML	13 39 12.3	
	comp=N,693nm,0.6s						
ISAD	Sadrabad	3.68	9	Pn	Pn	13 38 09.8	+1.8
IBAF	Bafgh	3.97	33	Pn	Pn	13 38 14.2	+2.0
IGAR	Garneh	4.03	350	Pn	Pn	13 38 13.3	+0.3
ICHK	Chekchek	4.14	16	Pn	Pn	13 38 16.4	+1.9
ASHO	Ashiyiah	4.47	142	⇓P	Pn	13 38 20.1	+0.8
	SNR=32						
NASN	Na'in	4.53	357	ePN	Pn	13 38 20.4	+0.4
IZEF	Zefreh	4.66	353	Pn	Pn	13 38 20.1	-1.8
KBD	Kabd	4.79	282	eP	Pg	13 38 45.4	+0.9
KBD				eS	Sn	13 39 19.8	-0.7
RDF	Al-Radifah	4.87	279	eP	Pg	13 38 44.8	-1.5
RDF				eS	Sn	13 39 18.9	-3.8
IKLH	Kalahroud	5.19	346	Pn	Pn	13 38 26.3	-3.2
SHGO	Shushtar	5.31	317	ePN	Pn	13 38 30.0	-1.1
SHGO				AML	AML	13 40 40.9	
	comp=N,141nm,0.9s						
RST	Umm Al-Ruwaisa	5.44	285	eP	Pg	13 38 56.2	-1.4
ARQ	Araqi	5.82	147	⇑P	Pn	13 38 39.2	+0.9
	SNR=18						
HOQ	Hoqain	6.04	140	P	Pn	13 38 42.2	+0.8
	SNR=14						
BIDO	Bidbid	6.58	135	⇓P	Pn	13 38 49.2	+0.2
	SNR=8.1						
BSY	Bisya	6.66	145	⇑P	Pn	13 38 50.4	+0.4
	SNR=17						
BSYO	Bisya	6.69	145	P	Pn	13 38 50.4	-0.1
	SNR=17						
ASAO	Ashtian	6.77	338	ePN	Pn	13 38 50.3	-1.4
IVRN	Varamin	6.80	351	Pn	Pn	13 38 50.6	-1.6
IVRN				Sn	Sn	13 39 58.1	-13
SMDO	Samad	6.87	138	⇑P	Pn	13 38 53.4	+0.3
	SNR=57						
ZHSF	Zahedan	6.91	77	ePN	Pn	13 38 54.6	+1.0
IDMV	Damavand	7.34	354	Pn	Pn	13 38 58.0	-1.7
JMDO	Jabal Madar	7.44	141	P	Pn	13 39 00.1	-1.0
	SNR=8.1						
IKOM	Komasi	7.56	323	Pn	Pn	13 39 03.1	+0.4
WBK	Wadi Bani Khal	7.77	135	P	Pn	13 39 04.9	-0.8
	SNR=11						
BHD	Baghdad	8.97	306	eP	x	13 39 32.0	
BHD				eS	x	13 40 57.0	
WHFO	Wadi Hawf	10.32	176	⇑P	P	13 39 38.9	-2.2
	SNR=6.5						
ASF	Jabal al Asfar	14.49	290	P	P	13 40 45.2	+8.1
	comp=N,0.8nm,0.3s,baz=238,slow=0.9,SNR=3.6						
MALT	Malatya	15.79	313	eP	P	13 40 51.3	-2.6
MALT				pmax	pmax		
	comp=Z,13nm,0.9s						
MALT	Malatya	15.79	313	eP	P	13 40 51.3	-2.6
	comp=Z,13nm,0.9s						
EIL	Elat	15.90	279	P	P	13 40 58.1	+2.7
	comp=Z,0.3nm,0.3s,baz=104,slow=13,SNR=5.7						
EIL	Elat	15.90	279	P	P	13 40 58.0	+2.6
	comp=Z,12nm,0.9s						
EIL	Elat	15.90	279	P	P	13 40 58.0	+2.6
	comp=Z,12nm,0.9s						
ZEI	Tsey	16.26	335	eP	P	13 40 57.4	-2.5
KIV	Kislovodsk	17.73	335	eP	P	13 41 21.8	+3.4
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
BR131	Keskin Array S	19.69	311	eP	P	13 41 41.0	-1.1
	comp=Z,2.1nm,0.6s						
BR131	Keskin Array S	19.69	311	eP	P	13 41 41.0	-1.1
	comp=Z,2.1nm,0.6s						
BRTR	Keskin Array B	19.69	311	P	P	13 41 41.2	-0.9
	comp=Z,0.3nm,0.3s,baz=133,slow=14,SNR=10						
KKAR	Karatay Array	20.45	39	i P	P	13 41 49.0	-1.2
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KKAR	Karatay Array	20.45	39	i P	P	13 41 49.0	-1.2
	comp=Z,2.0nm,0.4s						
AB31	Akbulak array	21.62	12	eP	P	13 42 01.3	-0.9
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.6						
AB31	Akbulak array	21.62	12	eP	P	13 42 01.3	-0.9
	comp=Z,1.0nm,0.4s,mb3.6						
AAK	Ala-Archa	22.52	45	eP	P	13 42 12.2	+1.0
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
AAK	Ala-Archa	22.52	45	eP	P	13 42 12.2	+1.1
	comp=Z,5.3nm,0.7s,mb4.1						
AAK	Ala-Archa	22.52	45	eP	P	13 42 12.2	+1.0
	comp=Z,5.3nm,0.7s,mb4.1						
FRU	Bishkek	22.70	44	eP	P	13 42 21.0	+8.0
FRU				e		13 46 58.5	
IDI	Anoyia	24.88	293	P	P	13 42 34.3	0.0
	comp=Z,16nm,0.8s,mb4.6,baz=102,slow=11,SNR=7.4						
IDI	Anoyia	24.88	293	P	P	13 42 34.2	-0.1
ZRNK	Zerenda	27.35	21	P	P	13 42 56.1	-0.9
ZRNK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.7						
ZRNK	Zerenda	27.35	21	P	P	13 42 56.1	-0.9
	comp=Z,3.0nm,1.1s,mb3.7						
VOSK	Vostochnaya	27.83	24	P	P	13 43 00.0	-1.3
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
VOSK	Vostochnaya	27.83	24	P	P	13 43 00.0	-1.3
	comp=Z,1.0nm,0.6s,mb3.6						
BVA0	Borovoye Array	27.87	23	P	P	13 43 00.4	-1.3
BVAR	Borovoye Array	27.87	23	P	P	13 43 00.9	-0.9
	comp=Z,2.1nm,0.4s,mb4.1,baz=224,slow=7.5,SNR=21						
AKASG	Malin Array Be	28.75	328	P	P	13 43 07.2	-2.5
	comp=Z,0.6nm,0.4s,mb3.6,baz=137,slow=8.4,SNR=6.7						
AKASG	Malin Array Be	28.75	328	P	P	13 43 07.2	-2.5
MKAR	Makanchi Array	29.42	43	P	P	13 43 15.0	-0.7
	comp=Z,1.0nm,0.4s,mb3.9,baz=225,slow=6.9,SNR=12						
MKAR	Makanchi Array	29.42	43	i P	P	13 43 14.9	-0.8
TIP	Timpagrande	31.89	299	eP	P	13 43 37.2	-0.5
TIP	Timpagrande	31.89	299	eP	P	13 43 37.2	-0.5
LSA	Lhasa	33.27	78	P	P	13 43 47.8	-2.0
ZAL	Zalesovo	34.58	33	P	P	13 43 59.7	-1.1
	comp=Z,12nm,0.3s,mb5.2,baz=228,slow=5.7,SNR=25						
ZAL	Zalesovo	34.58	33	P	P	13 43 59.7	-1.1
GERES	GERESS Array B	36.46	315	P	P	13 44 16.7	-0.2
	comp=Z,0.9nm,0.5s,mb4.0,baz=117,slow=6.0,SNR=5.8						
CLL	Collm	37.76	319	P	P	13 44 31.0	+3.2
KAF	Kangasniemi	38.17	340	ep	P	13 44 29.8	-1.3
PGF	Pioggiola	38.19	304	eP	P	13 44 33.7	+2.2
	comp=Z,18nm,1.3s,mb4.3						
PGF	Pioggiola	38.19	304	eP	P	13 44 33.7	+2.2
PGF				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.3						
DAVOX	Davos	38.34	311	P	P	13 44 32.9	+0.2
	comp=Z,4.7nm,0.8s,mb4.3,baz=117,slow=14,SNR=5.5						
GTA	Gaotai	40.01	61	eP	P	13 44 47.6	+0.9
GTA				AP	pP	13 44 56.1	+8.5
GTA				XP	sP	13 45 00.3	+12
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
MBDF	Montbardon	40.09	307	eP	P	13 44 49.9	+2.6
	comp=Z,6.4nm,0.7s,mb4.2						
MBDF	Montbardon	40.09	307	eP	P	13 44 49.9	+2.6
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
LMR	La Mourre	40.10	305	eP	P	13 44 49.3	+1.9
	comp=Z,6.6nm,0.8s,mb4.1						
LMR	La Mourre	40.10	305	eP	P	13 44 49.3	+1.9
LMR				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
LPG	La Plagne	40.22	308	eP	P	13 44 49.9	+1.5
LPL	La Plagne	40.24	308	eP	P	13 44 50.4	+1.9
CDF	Champ du Feu	40.42	313	eP	P	13 44 51.6	+1.6
CABF	La Chapelle	40.86	310	eP	P	13 44 55.4	+1.8
	comp=Z,11nm,0.9s,mb4.2						
CABF	La Chapelle	40.86	310	eP	P	13 44 55.4	+1.8
CABF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
HFS	Hagfors	41.48	331	P	P	13 44 56.7	-1.8
	comp=Z,5.4nm,0.4s,mb4.5,baz=121,slow=8.6,SNR=20						
LASF	Ste Croix	42.09	306	eP	P	13 45 05.1	+1.4
	comp=Z,1.6nm,0.4s,mb3.7						
SMF	Signal de Mont	42.40	309	eP	P	13 45 08.0	+1.8
	comp=Z,7.6nm,0.6s,mb4.2						
SMF	Signal de Mont	42.40	309	eP	P	13 45 08.0	+1.8
SMF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
LOR	Lormes	42.47	310	eP	P	13 45 08.3	+1.5
BAIF	Baives	42.74	314	eP	P	13 45 11.1	+2.1
NB2	NORSAR Subarra	42.99	332	P	P	13 45 08.2	-2.7
	comp=Z,1.9nm,0.5s,mb4.1,baz=121,slow=7.9						
NOA	NORSAR Array B	42.99	332	P	P	13 45 08.6	-2.3
	comp=Z,1.7nm,0.5s,mb4.1,baz=122,slow=8.3,SNR=10						
CMAR	Chiang Mai Arr	43.04	93	P	P	13 45 11.2	-0.6
	comp=Z,2.2nm,0.7s,mb4.0,baz=287,slow=9.1,SNR=14						
CMAR				PcP	PcP	13 47 00.1	-2.5
	comp=Z,1.3nm,0.6s,baz=291,slow=4.6,SNR=6.7						
CMAR	Chiang Mai Arr	43.04	93	P	P	13 45 11.2	-0.6
TCF	Toulx Ste Croi	43.47	309	eP	P	13 45 16.4	+1.5
	comp=Z,3.6nm,0.6s,mb4.0						
TCF	Toulx Ste Croi	43.47	309	eP	P	13 45 16.4	+1.5
TCF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
ZAK	Zakamensk	43.69	45	eP	P	13 45 16.6	-0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
ZAK	Zakamensk	43.69	45	eP	P	13 45 16.6	-0.1
	comp=Z,2.0nm,0.9s,mb3.9						
RJF	Les Rejaudoux	43.86	307	eP	P	13 45 19.6	+1.5
	comp=Z,2.3nm,0.3s,mb4.0						
KEV	Kevo	44.15	347	ep	P	13 45 17.8	-2.4
ARCES	ARCESS Array B	44.27	347	P	P	13 45 19.3	-1.8
	comp=Z,1.5nm,0.5s,mb3.9,baz=149,slow=9.3,SNR=16						
ETSF	Etsaut	45.24	304	eP	P	13 45 30.8	+1.5
	comp=Z,2.8nm,0.3s,mb4.3						
LDF	La Druitiere	45.30	312	eP	P	13 45 31.0	+1.3
SONM	Songino Array	45.34	49	P	P	13 45 29.9	-0.2
	comp=Z,1.9nm,0.8s,mb4.0,baz=269,slow=9.0,SNR=16						
FLN	La Foliniere	45.56	312	eP	P	13 45 33.2	+1.5
SJPF	Ste Jean	45.73	304	eP	P	13 45 34.9	+1.7
	comp=Z,5.3nm,0.6s,mb4.3						
SJPF	Ste Jean	45.73	304	eP	P	13 45 34.9	+1.7
SJPF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ULN	Ulaanbaatar	45.79	49	eP	P	13 45 32.9	-0.6
	comp=Z,1.7nm,0.7s,mb4.1						
ULN	Ulaanbaatar	45.79	49	eP	P	13 45 32.9	-0.7
	comp=Z,1.7nm,0.7s,mb4.1						
QUIF	Quistinic	47.27	310	eP	P	13 45 46.2	+1.0
EVO	Evora	51.17	298	eP	P	13 46 16.2	+0.8
	comp=Z,3.7nm,0.5s,mb4.3						
MATP	Matopo	53.90	209	P	P	13 46 35.3	-0.8
	comp=Z,4.3nm,0.8s,mb4.5,baz=34,slow=10,SNR=6.6						
DBIC	Dimbokro	58.67	260	P	P	13 47 07.9	-2.5
	comp=Z,6.0nm,0.5s,mb4.8,baz=43,slow=8.6,SNR=14						
LBTB	Lobatse	59.19	209	P	P	13 47 13.2	-0.7
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
LBTB	Lobatse	59.19	209	P	P	13 47 13.2	-0.7
	comp=Z,2.7nm,0.4s,mb4.6,baz=39,slow=4.6,SNR=5.2						
BILL	Bilibino	72.21	21	eP	P	13 48 33.4	-3.4
BILL				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
BILL	Bilibino	72.21	21	eP	P	13 48 33.4	-3.3
	comp=Z,1.7nm,0.7s,mb4.1						
SCHQ	Schefferville	82.53	330	P	P	13 49 33.1	-1.1
	comp=Z,2.1nm,0.7s,mb4.2,baz=241,slow=17,SNR=2.2						
FITZ	Fitzroy Crossi	83.95	114	eP	P	13 49 41.5	-0.7
	comp=Z,9.0nm,0.8s,mb5.0						
FITZ	Fitzroy Crossi	83.95	114	P	P	13 49 41.6	-0.6
	comp=Z,11nm,0.7s,mb5.1,baz=249,slow=2.4,SNR=12						
ILAR	Eielson Array	85.98	8	P	P	13 49 49.5	-1.7
	comp=Z,0.8nm,0.7s,mb4.0,baz=334,slow=4.7,SNR=11						
YKA	Yellowknife Ar	89.02	354	P	P	13 50 05.5	-0.6
	comp=Z,1.9nm,0.9s,mb4.4,baz=7.4,slow=4.4,SNR=4.6						
YKA	Yellowknife Ar	89.02	354	P	P	13 50 05.5	-0.6
WRA	Warramunga Arr	91.96	111	P	P	13 50 19.3	-1.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	91.96	111	P	P	13 50 19.3	-1.4
	comp=Z,0.7nm,0.6s,mb4.2,baz=316,slow=4.1,SNR=9.6						
WB2	Warramunga Arr	91.97	111	eP	P	13 50 20.0	-0.7

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*BJI **22** 13:41:45.6, 28.27N×52.53E, h25^{km}, mB4.9, mb4.6, Ms4.0, Msz3.7*

*MOS **22** 13:41:50.1±1.2, 28.24N×53.13E, h33^{km}, mb4.4/21, Error ellipse: s-maj=12.8km s-min=7.3km az=103.4*

*TEH **22** 13:41:50.7, 28.39N×52.76E, h10^{km}, Mn4.0*

*NEIC **22** 13:41:50.7, 28.39N×52.76E, h10^{km}, mb4.3/16, ML4.0(TEH), After TEH.*

*CSEM **22** 13:41:50.8±0.1, 28.38N×53.14E, h35^{km}, mb4.1/20, Error ellipse: s-maj=2.6km s-min=2.3km az=168.0*

*THR **22** 13:41:51.1±0.4, 28.43N×52.92E, h31^{km}±13^{km}, ML4.3*

*IDC **22** 13:41:56.4±5.3, 28.32N×53.12E, h75^{km}±50^{km}, mb4.0/23, mb1 4.2/25, mb1mx4.2/26, mbtmp4.4/25, ML4.3/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/22, Error ellipse: s-maj=14.1km s-min=12.0km az=133.0*

ISC 22 13:41:50.7±0.6**, 28.30N**±0.03×**53.11E**±0.04**, h35**^{km}±6^{km}**, n154, σ1**^{s}**07**/153**, mb4.2**/44**, MS3.7**/5**, 6D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	2.85	108	ePN	P	13 42 39.6	+4.7
BNDS				AML	AML	13 43 47.9	
	comp=N,1µm,0.6s						
IMEH	Mehriz	3.34	23	Pn	P	13 42 43.4	+1.5
KRBR	Kerman	3.60	61	ePN	P	13 42 48.5	+2.9
KRBR				eS	S	13 43 30.7	+3.1
KRBR				AML	AML	13 43 51.8	
	comp=N,330nm,0.5s						
ISAD	Sadrabad	3.64	8	Pn	P	13 42 46.8	+0.8
BANOM	Banah	3.70	129	P	P	13 42 49.2	+2.4
	SNR=35						
IBAF	Bafgh	3.91	32	Pn	P	13 42 51.3	+1.4
IGAR	Garneh	4.01	349	Pn	P	13 42 51.9	+0.6
ICHK	Chekchek	4.09	16	Pn	P	13 42 53.2	+0.8
ASHO	Ashiyiah	4.46	143	⇓P	P	13 42 58.5	+0.7
	SNR=32						
NASN	Na'in	4.49	357	ePN	P	13 42 57.9	-0.3
NASN				eS	S	13 43 46.3	-3.7
IZEF	Zefreh	4.63	352	Pn	P	13 42 58.5	-1.6
IKLH	Kalahroud	5.17	346	Pn	P	13 43 04.9	-2.9
ARQ	Araqi	5.82	147	⇓P	P	13 43 16.5	-0.3
	SNR=12						
HOQ	Hoqain	6.03	140	⇓P	P	13 43 20.3	+0.6
	SNR=9.3						
BIDO	Bidbid	6.56	135	⇓P	P	13 43 26.7	-0.6
BSY	Bisya	6.65	145	P	P	13 43 28.1	-0.5
	SNR=11						
BSYO	Bisya	6.68	145	P	P	13 43 28.1	-0.9
	SNR=11						
ASAO	Ashtian	6.76	338	ePN	P	13 43 28.4	-1.8
IVRN	Varamin	6.78	350	Pn	P	13 43 27.7	-2.7
IVRN				Sn	S	13 44 39.2	-8.0
SMDO	Samad	6.86	138	P	P	13 43 31.2	-0.2
	SNR=28						
SMDO	Samad	6.86	138	P	P	13 43 31.2	-0.3
	SNR=28						
IDMV	Damavand	7.31	353	Pn	P	13 43 35.1	-2.7
IFIR	Firoozkooh	7.33	358	Sn	S	13 44 53.1	-7.7
JMDO	Jabal Madar	7.43	141	⇓P	P	13 43 38.7	-0.8
WBK	Wadi Bani Khal	7.75	136	⇓P	P	13 43 42.6	-1.3
	SNR=6.2						
BHD	Baghdad	9.00	306	eP	x	13 44 24.5	
BHD				i S	x	13 47 08.0	
BHD				eLQ	x	13 49 03.0	
MSL	Mosul	11.63	316	eP	x	13 44 04.5	
GNI	Garni	13.69	332	P	P	13 45 12.7	+8.1
GNI				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GNI				MLR	MLR		
	comp=Z,69nm,18.8s						
GNI	Garni	13.69	332	P	P	13 45 12.7	+8.1
	comp=Z,2.0nm,0.3s,baz=3.1,slow=7.6,SNR=3.5						
GNI				LR	LR	13 50 15.0	
	comp=Z,69nm,18.8s,baz=331,slow=36						
GNI	Garni	13.69	332	P	P	13 45 12.7	+8.1
GNI				LR	LR	13 50 15.0	
ASF	Jabal al Asfar	14.54	289	P	P	13 45 20.7	+4.9
	comp=Z,0.8nm,0.3s,baz=141,slow=21,SNR=3.0						
ASF				LR	LR	13 51 19.7	
	comp=Z,103nm,21.6s,baz=283,slow=39						
MALT	Malatya	15.81	313	eP	P	13 45 31.3	-0.9
	comp=Z,17nm,1.0s						
MALT	Malatya	15.81	313	eP	P	13 45 31.3	-0.9
	comp=Z,17nm,1.0s						
EIL	Elat	15.95	279	P	P	13 45 36.3	+2.1
	comp=Z,0.8nm,0.3s,baz=32,slow=12,SNR=6.5						
ZEI	Tsey	16.25	335	eP	P	13 45 39.0	+1.1
KIV	Kislovodsk	17.72	335	eP	P	13 45 55.2	-1.1
KIV				pmax	pmax		
	comp=E,6.0nm,0.6s						
KIV				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BR131	Keskin Array S	19.71	310	eP	P	13 46 20.2	+0.2
	comp=Z,2.2nm,0.4s						
BRTR	Keskin Array B	19.71	310	P	P	13 46 20.4	+0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRTR	Keskin Array B	19.71	310	P	P	13 46 20.4	+0.5
	comp=Z,0.7nm,0.3s,baz=128,slow=13,SNR=12						
BOYT	Boyabat	19.81	316	i P	P	13 46 21.1	0.0
ELDT	Eldivan	20.24	312	i P	P	13 46 27.6	+2.1
KKAR	Karatay Array	20.38	39	P	P	13 46 26.0	-1.0
KKAR				pmax	pmax		

	comp=Z,10.0nm,0.7s						
KKAR	**Karatay Array**	**20.38**	**39**	P	**P**	**13 46 26.0**	**-1.0**
	comp=Z,10.0nm,0.7s						
SGKT	**Sivrigoynuk**	**21.19**	**311**	*i* P	**P**	**13 46 34.6**	**-0.7**
TKTP	**Tekketepe**	**21.36**	**303**	*i* P	**P**	**13 46 36.9**	**-0.2**
ESKT	**Eskisehir**	**21.54**	**307**	*i* P	**P**	**13 46 39.8**	**+0.9**
AB31	**Akbulak array**	**21.57**	**12**	P	**P**	**13 46 38.8**	**-0.3**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.6						
AB31	**Akbulak array**	**21.57**	**12**	P	**P**	**13 46 38.8**	**-0.3**
	comp=Z,1.0nm,0.4s,mb3.6						
GOLH	**Golhisar**	**21.67**	**300**	*i* P	**P**	**13 46 43.0**	**+2.8**
AAK	**Ala-Archa**	**22.45**	**45**	P	**P**	**13 46 54.7**	**+6.8**
AAK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.2						
AAK	**Ala-Archa**	**22.45**	**45**	*e*P	**P**	**13 46 54.3**	**+6.4**
	comp=Z,8.8nm,0.9s,mb4.2						
ULDT	**Uludag**	**23.00**	**307**	*i* P	**P**	**13 46 55.1**	**+1.8**
IDI	**Anoyia**	**24.93**	**293**	P	**P**	**13 47 13.4**	**+1.3**
	comp=Z,31nm,0.6s,mb5.0,baz=92,slow=7.2,SNR=23						
ZRNK	**Zerenda**	**27.30**	**21**	P	**P**	**13 47 33.6**	**-0.3**
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
ZRNK	**Zerenda**	**27.30**	**21**	*e*P	**P**	**13 47 33.9**	**0.0**
ZRNK	**Zerenda**	**27.30**	**21**	P	**P**	**13 47 33.6**	**-0.3**
	comp=Z,2.0nm,0.8s,mb3.7						
MLR	**Muntele Rosu**	**27.49**	**316**	P	**P**	**13 47 36.8**	**+1.0**
MLR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MLR	**Muntele Rosu**	**27.49**	**316**	P	**P**	**13 47 36.8**	**+1.0**
	comp=Z,6.6nm,0.6s,mb4.3,baz=333,slow=4.5,SNR=7.7						
VOSK	**Vostochnaya**	**27.77**	**24**	P	**P**	**13 47 37.1**	**-1.1**
VOSK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.7						
VOSK	**Vostochnaya**	**27.77**	**24**	P	**P**	**13 47 37.1**	**-1.1**
	comp=Z,2.0nm,1.0s,mb3.7						
BVA0	**Borovoye Array**	**27.81**	**23**	P	**P**	**13 47 38.1**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.3						
BVA0	**Borovoye Array**	**27.81**	**23**	P	**P**	**13 47 38.1**	**-0.5**
	comp=Z,1.0nm,1.3s,mb3.3						
BVAR	**Borovoye Array**	**27.81**	**23**	P	**P**	**13 47 38.4**	**-0.2**
	comp=Z,2.5nm,0.5s,mb4.1,baz=228,slow=7.7,SNR=11						
AKASG	**Malin Array Be**	**28.75**	**328**	P	**P**	**13 47 46.3**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**28.75**	**328**	P	**P**	**13 47 46.2**	**-0.8**
	comp=Z,0.8nm,0.4s,mb3.8,baz=137,slow=8.0,SNR=7.4						
MKAR	**Makanchi Array**	**29.35**	**43**	P	**P**	**13 47 51.4**	**-1.0**
MKAR						13 50 59.1	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,57nm,18.4s						
MKAR	**Makanchi Array**	**29.35**	**43**	P	**P**	**13 47 51.4**	**-1.0**
	comp=Z,1.0nm,0.6s,mb3.7,baz=225,slow=8.6,SNR=7.9						
MKAR				PcP	PcP	13 50 59.1	+0.8
	comp=Z,0.3nm,0.4s,baz=231,slow=2.8,SNR=4.3						
MKAR				LR	LR	14 02 21.4	
	comp=Z,57nm,18.4s,MS3.2,baz=112,slow=42						
KOLS	**Kolonicke sedl**	**31.37**	**320**	*e*P	**P**	**13 48 12.1**	**+1.8**
CRVS	**Cervenica-Dubn**	**31.82**	**319**	*e*	**P**	**13 48 21.2**	**+6.9**
TIP	**Timpagrande**	**31.93**	**299**	*e*P	**P**	**13 48 14.2**	**-1.1**
TIP	**Timpagrande**	**31.93**	**299**	*e*P	**P**	**13 48 14.1**	**-1.2**
VYHS	**Vyhne**	**33.19**	**317**	*e*P	**P**	**13 48 25.0**	**-1.2**
ZAL	**Zalesovo**	**34.51**	**33**	P	**P**	**13 48 37.2**	**-0.3**
ZAL				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ZAL				MLR	MLR		
	comp=Z,150nm,18.0s						
ZAL	**Zalesovo**	**34.51**	**33**	P	**P**	**13 48 37.2**	**-0.3**
	comp=Z,5.6nm,0.4s,mb4.8,baz=230,slow=8.0,SNR=12						
ZAL				LR	LR	14 05 13.2	
	comp=Z,150nm,18.0s,MS3.8,baz=129,slow=40						
ZAL	**Zalesovo**	**34.51**	**33**	P	**P**	**13 48 37.2**	**-0.3**
ZAL				LR	LR	14 05 13.2	
DPC	**Dobruska-Polom**	**35.46**	**319**	*e*P	**P**	**13 48 46.7**	**+1.1**
DPC				AMS	AMS	14 05 20.0	
	comp=Z,100nm,21.6s						
UPC	**Upice**	**35.70**	**319**	*e*P	**P**	**13 48 50.5**	**+2.8**
PRU	**Pruhonice**	**36.37**	**317**	*e*P	**P**	**13 48 56.5**	**+3.2**
PRU				AMS	AMS	14 07 20.0	
	comp=Z,100nm,19.3s						
GERES	**GERESS Array B**	**36.47**	**315**	P	**P**	**13 48 55.1**	**+0.9**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES	**GERESS Array B**	**36.47**	**315**	P	**P**	**13 48 55.1**	**+0.9**
	comp=Z,0.5nm,0.3s,mb4.0,baz=108,slow=8.4,SNR=5.7						
PVCC	**Panska Ves**	**36.56**	**318**	AMS	AMS	14 06 00.0	
	comp=Z,100nm,19.0s						
KHC	**Kasperske Hory**	**36.65**	**316**	*e*P	**P**	**13 48 55.4**	**-0.3**
KHC				AMS	AMS	14 03 40.0	
	comp=Z,100nm,15.1s						
NKC	**Novy Kostel**	**37.72**	**317**	AMS	AMS	14 09 30.0	
	comp=Z,100nm,18.9s						
CLL	**Collm**	**37.77**	**319**	*i* P	**P**	**13 49 05.2**	**+0.1**
CLL				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
CLL	**Collm**	**37.77**	**319**	P	**P**	**13 49 05.2**	**+0.1**
	comp=Z,logA/T=1.0,mb4.5						
CLL	**Collm**	**37.77**	**319**	*i* P	**P**	**13 49 05.2**	**+0.1**
	comp=Z,10.0nm,0.9s,mb4.5						
KAF	**Kangasniemi**	**38.16**	**340**	*e*p	**P**	**13 49 07.3**	**-0.9**
	comp=Z,1.5nm,0.4s,mb4.1,baz=139,slow=8.8						
KAF	**Kangasniemi**	**38.16**	**340**	*e*P	**P**	**13 49 07.3**	**-0.9**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
PGF	**Pioggiola**	**38.23**	**304**	*e*P	**P**	**13 49 08.9**	**-0.1**
	comp=Z,14nm,1.1s,mb4.3						
DAVOX	**Davos**	**38.36**	**311**	P	**P**	**13 49 11.0**	**+0.9**
	comp=Z,3.3nm,0.5s,mb4.3,baz=70,slow=4.7,SNR=4.3						
GTA	**Gaotai**	**39.94**	**61**	*e*P	**P**	**13 49 24.6**	**+1.4**
GTA				AP	pP	13 49 32.9	-0.5
GTA				XP	sP	13 49 36.6	-1.2
GTA				LR	LR		
	comp=N,100nm,16.7s,MS3.9						
GTA				LR	LR		
	comp=E,80nm,15.2s,MS3.9						
GTA				LR	LR		
	comp=Z,80nm,14.1s,MS3.7						
MBDF	**Montbardon**	**40.12**	**307**	*e*P	**P**	**13 49 24.4**	**-0.3**
	comp=Z,10nm,0.7s,mb4.3						
LMR	**La Mourre**	**40.13**	**305**	*e*P	**P**	**13 49 24.6**	**-0.2**
	comp=Z,10.0nm,0.9s,mb4.2						
LPG	**La Plagne**	**40.25**	**308**	*e*P	**P**	**13 49 25.8**	**+0.1**
	comp=Z,3.6nm,0.4s,mb4.2						
LPL	**La Plagne**	**40.26**	**308**	*e*P	**P**	**13 49 26.0**	**+0.1**
CDF	**Champ du Feu**	**40.45**	**313**	*e*P	**P**	**13 49 26.8**	**-0.5**
ORIF	**Oris-en-Rattie**	**40.77**	**307**	*e*P	**P**	**13 49 30.0**	**-0.1**
CABF	**La Chapelle**	**40.88**	**310**	*e*P	**P**	**13 49 30.3**	**-0.7**
	comp=Z,12nm,0.7s,mb4.3						
HFS	**Hagfors**	**41.48**	**331**	P	**P**	**13 49 34.2**	**-1.5**
HFS				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HFS	**Hagfors**	**41.48**	**331**	P	**P**	**13 49 34.2**	**-1.5**
	comp=Z,6.3nm,0.5s,mb4.5,baz=129,slow=9.5,SNR=16						
VIVF	**Saint-Julien-l**	**41.62**	**307**	*e*P	**P**	**13 49 37.1**	**+0.1**
LASF	**Ste Croix**	**42.12**	**305**	*e*P	**P**	**13 49 41.3**	**+0.1**
SMF	**Signal de Mont**	**42.42**	**309**	*e*P	**P**	**13 49 43.7**	**+0.1**
	comp=Z,13nm,0.8s,mb4.3						
LOR	**Lormes**	**42.50**	**310**	*e*P	**P**	**13 49 44.1**	**-0.1**
	comp=Z,1.7nm,0.4s,mb3.8						
MOY	**Mondy**	**42.50**	**43**	*e*P	**P**	**13 49 45.8**	**+1.7**
CMAR	**Chiang Mai Arr**	**42.98**	**93**	P	**P**	**13 49 48.0**	**-0.5**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**42.98**	**93**	P	**P**	**13 49 48.0**	**-0.5**
	comp=Z,1.9nm,0.9s,mb3.8,baz=287,slow=9.1,SNR=9.3						
NB2	**NORSAR Subarra**	**42.99**	**332**	P	**P**	**13 49 46.2**	**-1.9**
	comp=Z,4.2nm,0.8s,mb4.2,baz=121,slow=8.6						
NOA	**NORSAR Array B**	**42.99**	**332**	P	**P**	**13 49 46.5**	**-1.6**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NOA	**NORSAR Array B**	**42.99**	**332**	P	**P**	**13 49 46.5**	**-1.6**
	comp=Z,3.7nm,0.7s,mb4.2,baz=121,slow=8.2,SNR=13						
MTLF	**Montolieu**	**43.25**	**304**	*e*P	**P**	**13 49 50.3**	**-0.1**
TCF	**Toulx Ste Croi**	**43.49**	**309**	*e*P	**P**	**13 49 53.2**	**+0.8**
ZAK	**Zakamensk**	**43.62**	**45**	*e*P	**P**	**13 49 54.0**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.5						
ZAK	**Zakamensk**	**43.62**	**45**	*e*P	**P**	**13 49 54.0**	**+0.7**
	comp=Z,1.0nm,1.0s,mb3.5						
RJF	**Les Rejaudoux**	**43.89**	**307**	*e*P	**P**	**13 49 55.7**	**+0.2**
KEV	**Kevo**	**44.13**	**347**	*e*p	**P**	**13 49 58.4**	**+1.2**
	comp=Z,5.2nm,0.7s,mb4.4						
KEV	**Kevo**	**44.13**	**347**	*e*P	**P**	**13 49 58.4**	**+1.2**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
ARCES	**ARCESS Array B**	**44.25**	**346**	P	**P**	**13 49 57.5**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**44.25**	**346**	P	**P**	**13 49 57.5**	**-0.7**
	comp=Z,1.6nm,0.6s,mb4.0,baz=145,slow=8.4,SNR=17						
ETSF	**Etsaut**	**45.27**	**304**	*e*P	**P**	**13 50 07.1**	**+0.4**
	comp=Z,3.3nm,0.5s,mb4.1						
SONM	**Songino Array**	**45.27**	**49**	P	**P**	**13 50 06.5**	**-0.2**
	comp=Z,2.3nm,1.1s,mb3.9,baz=262,slow=8.7,SNR=9.0						
SONM				LR	LR	14 11 43.1	
	comp=Z,120nm,18.1s,MS3.9,baz=81,slow=40						
LDF	**La Druitiere**	**45.33**	**312**	*e*P	**P**	**13 50 07.1**	**+0.1**
FLN	**La Foliniere**	**45.58**	**312**	*e*P	**P**	**13 50 09.0**	**-0.1**
ULN	**Ulaanbaatar**	**45.72**	**49**	*e*P	**P**	**13 50 10.5**	**+0.4**
	comp=Z,1.2nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**45.72**	**49**	*e*P	**P**	**13 50 10.5**	**+0.3**
	comp=Z,1.1nm,0.6s,mb4.0						
SJPF	**Ste Jean**	**45.76**	**304**	*e*P	**P**	**13 50 10.3**	**-0.3**
	comp=Z,6.2nm,0.5s,mb4.5						
SGMF	**Saint Gilles**	**46.91**	**311**	*e*P	**P**	**13 50 19.2**	**-0.3**
OPO	**Ambohidratompo**	**46.94**	**188**	P	**P**	**13 50 21.0**	**+0.8**
	comp=Z,2.4nm,0.8s,mb4.2,baz=109,slow=23,SNR=5.7						
OPO				LR	LR	14 09 19.6	
	comp=Z,66nm,18.3s,MS3.6,baz=333,slow=35						
OPO	**Ambohidratompo**	**46.94**	**188**	P	**P**	**13 50 21.0**	**+0.8**
OPO				LR	LR	14 09 19.6	
QUIF	**Quistinic**	**47.29**	**310**	*e*P	**P**	**13 50 21.9**	**-0.6**
ROSF	**Rostrenen**	**47.39**	**311**	*e*P	**P**	**13 50 22.7**	**-0.6**
ESDC	**Sonseca Array**	**47.95**	**299**	P	**P**	**13 50 27.2**	**-0.7**
	comp=Z,1.2nm,0.5s,mb4.2,baz=68,slow=10,SNR=5.6						
EVO	**Evora**	**51.20**	**298**	*e*P	**P**	**13 50 53.8**	**+1.0**
	comp=Z,7.2nm,0.6s,mb4.5						
MATP	**Matopo**	**53.97**	**209**	P	**P**	**13 51 12.1**	**-1.5**
	comp=Z,4.8nm,0.6s,mb4.6,baz=31,slow=8.6,SNR=12						
MATP	**Matopo**	**53.97**	**209**	P	**P**	**13 51 12.1**	**-1.5**
DBIC	**Dimbokro**	**58.73**	**260**	P	**P**	**13 51 45.5**	**-2.3**
DBIC				pmax	pmax		
	comp=Z,14nm,0.7s						
DBIC	**Dimbokro**	**58.73**	**260**	P	**P**	**13 51 45.5**	**-2.3**
	comp=Z,14nm,0.7s,mb5.1,baz=45,slow=7.3,SNR=26						
DBIC	**Dimbokro**	**58.73**	**260**	*e*P	**P**	**13 51 48.0**	**+0.2**
	comp=Z,18nm,0.8s,mb5.2						
DBIC	**Dimbokro**	**58.73**	**260**	*e*P	**P**	**13 51 48.0**	**+0.2**
	comp=Z,18nm,0.8s,mb5.2						
LBTB	**Lobatse**	**59.25**	**209**	P	**P**	**13 51 50.3**	**-1.0**
LBTB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
LBTB	**Lobatse**	**59.25**	**209**	P	**P**	**13 51 50.3**	**-1.0**
	comp=Z,6.4nm,0.6s,mb4.8,baz=30,slow=6.7,SNR=12						
LBTB	**Lobatse**	**59.25**	**209**	P	**P**	**13 51 52.0**	**+0.7**
	comp=Z,6.6nm,0.6s,mb4.8						
LBTB	**Lobatse**	**59.25**	**209**	P	**P**	**13 51 52.0**	**+0.7**
	comp=Z,6.6nm,0.6s,mb4.8						
BOSA	**Boshof**	**62.56**	**208**	P	**P**	**13 52 13.9**	**+0.3**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
BOSA	**Boshof**	**62.56**	**208**	P	**P**	**13 52 13.9**	**+0.2**
	comp=Z,1.5nm,0.5s,mb4.3,baz=1.7,slow=21,SNR=4.3						
SCHQ	**Schefferville**	**82.53**	**330**	P	**P**	**13 54 15.7**	**+4.6**
	comp=Z,4.5nm,1.0s,mb4.5,baz=20,slow=4.3,SNR=4.2						
FITZ	**Fitzroy Crossi**	**83.90**	**114**	P	**P**	**13 54 17.6**	**-1.2**
	comp=Z,9.5nm,0.9s,mb4.9,baz=351,slow=5.5,SNR=4.3						
ILAR	**Eielson Array**	**85.93**	**8**	P	**P**	**13 54 27.5**	**-0.3**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**85.93**	**8**	P	**P**	**13 54 27.5**	**-0.3**
	comp=Z,0.9nm,0.7s,mb4.1,baz=319,slow=4.4,SNR=12						
YKA	**Yellowknife Ar**	**88.99**	**354**	P	**P**	**13 54 42.8**	**+0.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**88.99**	**354**	P	**P**	**13 54 42.8**	**+0.2**
	comp=Z,1.1nm,0.6s,mb4.4,baz=5.9,slow=5.2,SNR=3.7						
YKA	**Yellowknife Ar**	**88.99**	**354**	P	**P**	**13 54 42.8**	**+0.2**
WRA	**Warramunga Arr**	**91.91**	**112**	P	**P**	**13 54 56.9**	**-0.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**91.91**	**112**	P	**P**	**13 54 56.9**	**-0.4**
	comp=Z,0.6nm,0.7s,mb4.0,baz=315,slow=4.0,SNR=6.0						

WEL 22 13:49:50.4±0.2**, 41.34S**×**172.54E, h198**^{km}±1^{km}**, ML3.8**/9**, Error ellipse: s-maj=1.7km s-min=1.6km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.51**	**359**	PN	P	13 50 17.2	-0.4
QRZ				SN	S	13 50 36.7	-1.9
THZ	**Tophouse**	**0.51**	**147**	PN	P	13 50 17.4	-0.2
THZ				SN	S	13 50 37.3	-1.3
NNZ	**Nelson**	**0.64**	**80**	PN	P	13 50 17.6	-0.6
NNZ				SN	S	13 50 38.1	-1.5
DSZ	**Denniston Nort**	**0.69**	**233**	PN	P	13 50 17.7	-0.6
DSZ				SN	S	13 50 37.8	-2.2
TUWZ	**Tuamarina**	**1.06**	**96**	PN	P	13 50 20.3	-0.2
TUWZ				SN	S	13 50 42.4	-1.4
BSWZ	**Blackbirch Sta**	**1.07**	**111**	PN	P	13 50 20.4	-0.2
BSWZ				SN	S	13 50 43.5	-0.5
DUWZ	**D'Urville Isla**	**1.17**	**63**	PN	P	13 50 21.2	-0.2
DUWZ				SN	S	13 50 45.0	-0.5
KHZ	**Kahutara**	**1.31**	**146**	PN	P	13 50 22.3	-0.4
KHZ				SN	S	13 50 45.9	-1.6
TCW	**Tory Channel**	**1.31**	**85**	PN	P	13 50 22.3	-0.4
TCW				SN	S	13 50 46.0	-1.6
CMWZ	**Cape Campbell**	**1.32**	**109**	PN	P	13 50 22.6	-0.1
LTZ	**Lake Taylor**	**1.46**	**188**	PN	P	13 50 23.4	-0.5
MRW	**Makara Radio**	**1.63**	**87**	PN	P	13 50 24.8	-0.7
SNZO	**South Karori**	**1.63**	**90**	PN	P	13 50 24.7	-0.8
WEL	**Wellington**	**1.68**	**89**	PN	P	13 50 25.3	-0.7
BHW	**Baring Head**	**1.76**	**93**	PN	P	13 50 25.9	-0.8
KIW	**Kapiti Island**	**1.85**	**76**	PN	P	13 50 27.0	-0.6
CAW	**Cannon Point**	**1.92**	**84**	PN	P	13 50 27.5	-0.8
MSWZ	**Moikau Station**	**2.04**	**93**	PN	P	13 50 28.8	-0.7
PAWZ	**Paruwai Farm**	**2.17**	**92**	PN	P	13 50 30.2	-0.8
CRLZ	**Canterbury Las**	**2.24**	**178**	PN	P	13 50 30.7	-1.0
MTW	**Mount Morrison**	**2.24**	**86**	PN	P	13 50 30.9	-0.8
MQZ	**McQueen's Vall**	**2.37**	**178**	PN	P	13 50 31.6	-1.6
MRZ	**Mangatainoka R**	**2.40**	**75**	PN	P	13 50 32.4	-1.1
PKE	**Pukeiti**	**2.41**	**28**	PN	P	13 50 32.8	-0.8
WAZ	**Wanganui**	**2.44**	**51**	PN	P	13 50 33.4	-0.6
RPZ	**Rata Peaks**	**2.62**	**204**	PN	P	13 50 34.8	-1.2

IDC 22 14:10:18.4±13.0**, 9.15N**×**91.80E, mb3.9**/2**, mb1 4.0**/3**, mb1mx3.6**/17**, mbtmp3.9**/3**, ML3.7**/1**, Error ellipse: s-maj=244.2km s-min=71.9km az=170.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.56**	**36**	Pn	P	14 13 06.0	-2.0
	0.2nm,0.3s,baz=228,slow=14,SNR=9.8						
MKAR	**Makanchi Array**	**38.38**	**349**	P	P	14 17 42.0	-1.1
	1.2nm,0.6s,baz=166,slow=8.1,SNR=11						
SONM	**Songino Array**	**40.48**	**15**	P	P	14 17 58.1	-2.5
	1.2nm,0.7s,baz=195,slow=8.2,SNR=11						

ATH ***22*** *14:12:20.2, 38.08N×20.18E, h5*^{km}*±5*^{km}*, MD3.6/5*

NEIC ***22*** *14:12:20.2, 38.08N×20.18E, h5*^{km}*, MD3.6(ATH), After ATH.*

CSEM ***22*** *14:12:20.9±0.4, 38.11N×20.15E, h2*^{km}*, MD3.6, Error ellipse: s-maj=8.7km s-min=5.3km az=34.0*

ISC 22 14:12:19.7±0.8**, 38.06N**±0.05×**20.12E**±0.05**, h2**^{km}**, n15, σ1**^{s}**.45**/22**, 1C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.39**	**73**	⇓*i*PB	**Pb**	**14 12 27.2**	**-1.7**
VLS				*e*SB	**Sb**	**14 12 31.3**	**-3.8**
LKD	**Levkas**	**0.77**	**33**	*e*P	**Pg**	**14 12 34.1**	**-1.0**
RLS	**Riolos of Patr**	**1.06**	**90**	⇑*i*PB	**Pb**	**14 12 39.3**	**-1.2**
RLS				*e*SB	**Sb**	**14 12 53.2**	**-1.5**
IGT	**Igoumenitsa**	**1.48**	**6**	*e*P	**Pn**	**14 12 47.7**	**+0.3**
EVR	**Evrytania**	**1.57**	**57**	*e*PB	**Pb**	**14 12 48.8**	**-0.5**
EVR				*e*SB	**Sb**	**14 13 10.3**	**+0.7**
KEK	**Kerkira**	**1.67**	**351**	*e*PG	**Pg**	**14 12 50.8**	**-2.2**
KEK				*e*SB	**Sb**	**14 13 14.5**	**+2.2**
ITM	**Ithomi**	**1.68**	**121**	*e*PB	**Pb**	**14 12 51.1**	**0.0**
ITM				*e*SB	**Sb**	**14 13 14.5**	**+1.8**
JAN	**Janina**	**1.69**	**19**	*e*PG	**Pg**	**14 12 51.1**	**-2.4**
JAN				*e*SB	**Sb**	**14 13 13.7**	**+0.8**
AGG	**Agios Georgios**	**1.98**	**60**	*e*P	**Pn**	**14 12 56.9**	**+2.3**
LKR	**Lokris**	**2.34**	**75**	*e*PN	**Pn**	**14 13 00.6**	**+0.8**
XOR	**Xorichti**	**2.73**	**61**	*e*P	**Pn**	**14 13 07.7**	**+2.3**
LIT	**Litokhoron**	**2.75**	**41**	*e*P	**Pn**	**14 13 09.9**	**+4.3**
TIP	**Timpagrande**	**2.86**	**294**	*e*Pn	**Pn**	**14 13 07.9**	**+0.6**
TIP				*e*Pg	**Pg**	**14 13 16.0**	**-0.8**
TIP	**Timpagrande**	**2.86**	**294**	*e*Pn	**Pn**	**14 13 07.9**	**+0.7**
TIP	**Timpagrande**	**2.86**	**294**	*e*Pg	**Pg**	**14 13 16.0**	**-0.9**

MAN 22 14:47:40.6, 9.67N×**126.50E, h3**^{km}**, mb4.2, ML3.0, MS2.7, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.00**	**277**	⇓*e*P	Pb	14 47 58.9	-1.5
BUTP	**Butuan**	**1.11**	**231**	*e*P	Pb	14 48 01.1	-1.0
BUTP						14 48 15.2	
MSLP	**Maasin**	**1.68**	**286**	*e*P	Pn	14 48 11.1	-0.1
MSLP						14 48 31.2	
BESP	**Borongan**	**2.19**	**332**	*e*P	Pn	14 48 18.0	-0.3
BESP						14 48 42.5	
BUKP	**Musuan**	**2.28**	**219**	*e*P	Pn	14 48 20.1	+0.4
BUKP						14 48 48.4	
PAGZ	**Pagadian**	**3.58**	**240**	*e*P	Pn	14 48 38.1	-0.1

IDC ***22*** *14:51:43.1±2.0, 1.91S×99.65E, mb3.9/8, mb1 4.1/8, mb1mx4.0/15, mbtmp4.0/8, Error ellipse: s-maj=89.6km s-min=18.7km az=54.0*

ISC 22 14:51:47.0±1.8**, 1.7S**±0.3×**99.9E**±0.4**, h33**^{km}**, n10, σ0**^{s}**.58**/8**, mb4.1**/7**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.07**	**357**	P	**P**	**14 56 20.2**	**-0.2**
	0.8nm,0.7s,baz=183,slow=9.4,SNR=7.2						
FITZ	**Fitzroy Crossi**	**30.07**	**124**	P	**P**	**14 57 55.9**	**+0.2**
	4.1nm,0.7s,mb4.3,baz=333,slow=5.5,SNR=3.8						
WRA	**Warramunga Arr**	**38.24**	**121**	P	**P**	**14 59 05.5**	**-0.4**
	0.8nm,0.4s,mb3.8,baz=304,slow=8.6,SNR=21						
STKA	**Stephens Creek**	**49.43**	**132**	P	pP	15 00 47.9	+2.0
	2.5nm,0.9s,baz=313,slow=8.4,SNR=5.9						
SONM	**Songino Array**	**49.68**	**6**	P	**P**	**15 00 38.3**	**+0.6**
	0.7nm,0.6s,mb3.9,baz=188,slow=8.7,SNR=6.4						
MKAR	**Makanchi Array**	**50.73**	**344**	P	**P**	**15 00 46.1**	**+0.4**
	0.7nm,0.4s,mb4.0,baz=152,slow=8.1,SNR=17						
ZAL	**Zalesovo**	**56.86**	**349**	P	**P**	**15 01 30.5**	**-0.3**
	1.6nm,0.3s,mb4.5,baz=316,slow=2.8,SNR=8.4						
BVAR	**Borovoye Array**	**59.88**	**340**	P	**P**	**15 01 50.8**	**-1.1**
	0.8nm,0.6s,mb3.9,baz=141,slow=9.2,SNR=6.1						
ARCES	**ARCESS Array B**	**86.17**	**340**	P	**P**	**15 04 26.6**	**+0.9**
	0.8nm,0.8s,mb4.0,baz=98,slow=6.4,SNR=3.5						
TXAR	**Lajitas Array**	**144.56**	**37**	PKP	PKPdf	15 11 22.2	+1.4
	0.5nm,0.5s,baz=315,slow=1.3,SNR=4.6						

IDC ***22*** *15:00:48.2±0.9, 11.66N×92.68E, mb4.1/11, mb1 4.3/12, mb1mx4.2/19, mbtmp4.1/12, ML4.1/1, MS3.2/2, Ms1 3.3/2, ms1mx3.0/20, Error ellipse: s-maj=29.9km s-min=17.5km az=54.0*

BJI ***22*** *15:00:49.8, 11.11N×93.17E, h47*^{km}*, mB5.3, mb4.7*

NEIC ***22*** *15:00:55.8±1.9, 11.76N×92.81E, h55*^{km}*±15*^{km}*, mb4.2/10, Error ellipse: s-maj=17.6km s-min=8.0km az=224.0*

ISC 22 15:00:53.3±2.3**, 11.67N**±0.09×**92.82E**±0.07**, h53**^{km}±19^{km}**, n34, σ0**^{s}**.70**/34**, mb4.2**/16**, MS3.3**/1**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**8.97**	**40**	*e*P	**P**	**15 03 02.0**	**-0.9**
	11nm,0.7s						
CMAR	**Chiang Mai Arr**	**8.97**	**40**	Pn	**P**	**15 03 01.8**	**-1.1**
	0.6nm,0.3s,baz=236,slow=14,SNR=26						
CMAR				Sn	**S**	**15 04 45.7**	**+2.1**
	0.2nm,0.3s,baz=234,slow=28,SNR=5.3						
CMAR				LR	LR	15 07 17.7	
	comp=Z,77nm,18.1s,baz=220,slow=43						
PKI	**Pulchoki**	**17.29**	**337**	*e*P	**P**	**15 04 52.5**	**0.0**
	27nm,0.7s						
GUN	**Gumba**	**17.42**	**339**	*e*P	**P**	**15 04 54.5**	**+0.3**
DMN	**Daman**	**17.43**	**337**	*e*P	**P**	**15 04 54.8**	**+0.4**
	18nm,0.6s						
KKN	**Kakani**	**17.53**	**337**	*e*P	**P**	**15 04 56.3**	**+0.7**
	25nm,1.0s						
GKN	**Gorkha**	**17.97**	**336**	*e*P	**P**	**15 05 01.7**	**+0.7**
	12nm,0.3s						
LSA	**Lhasa**	**18.01**	**355**	*e*P	**P**	**15 05 01.0**	**-0.5**
	3.9nm,0.4s						
KOLN	**Koldanda**	**18.21**	**333**	*e*P	**P**	**15 05 04.3**	**+0.4**
	15nm,0.5s						
CD2	**Chengdu**	**21.66**	**26**	P	**P**	**15 05 40.3**	**-0.9**
ENH	**Enshi**	**24.13**	**37**	*e*P	**P**	**15 06 04.5**	**-0.9**
	38nm,0.9s,mb4.8						
XAN	**Xi'an**	**26.69**	**31**	P	**P**	**15 06 28.3**	**-1.1**
GTA	**Gaotai**	**28.32**	**11**	*e*P	**P**	**15 06 44.4**	**+0.2**
MKAR	**Makanchi Array**	**36.13**	**348**	P	**P**	**15 07 52.1**	**0.0**
	2.2nm,0.6s,mb4.3,baz=164,slow=8.5,SNR=32						
SONM	**Songino Array**	**37.81**	**15**	P	**P**	**15 08 06.6**	**+0.3**
	0.9nm,0.3s,mb3.9,baz=202,slow=7.6,SNR=15						
SONM				PcP	PcP	15 10 23.8	+1.2
	0.7nm,0.7s,baz=195,slow=4.0,SNR=4.8						
SONM				LR	LR	15 25 40.4	
	comp=Z,47nm,18.7s,MS3.3,baz=85,slow=39						
CN2	**Changchun**	**42.62**	**35**	*e*P	**P**	**15 08 45.8**	**-0.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
ZAL	**Zalesovo**	**42.65**	**353**	P	**P**	**15 08 45.8**	**-0.3**
	comp=Z,2.5nm,0.3s,mb4.5,baz=309,slow=4.7,SNR=7.0						
FITZ	**Fitzroy Crossi**	**43.87**	**132**	*e*P	**P**	**15 08 59.9**	**+3.4**
	comp=Z,5.7nm,1.2s,mb4.2						
FITZ	**Fitzroy Crossi**	**43.87**	**132**	P	**P**	**15 08 57.7**	**+1.2**
	comp=Z,3.2nm,0.5s,mb4.3,baz=8.0,slow=5.8,SNR=5.5						
BVAR	**Borovoye Array**	**45.00**	**341**	P	**P**	**15 09 05.0**	**-0.2**
	comp=Z,1.2nm,0.5s,mb4.0,baz=143,slow=7.4,SNR=13						
ZRNK	**Zerenda**	**45.40**	**340**	*e*P	**P**	**15 09 08.2**	**-0.1**
	comp=Z,2.2nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**51.54**	**127**	P	**P**	**15 09 56.7**	**+0.3**
	comp=Z,1.4nm,0.6s,mb4.1,baz=302,slow=10.0,SNR=17						
WRAB	**Tennant Creek**	**51.55**	**127**	*e*P	**P**	**15 09 57.0**	**+0.6**
	comp=Z,7.3nm,1.0s,mb4.6						
WB2	**Warramunga Arr**	**51.55**	**127**	*e*P	**P**	**15 09 56.7**	**+0.3**
BRTR	**Keskin Array B**	**59.01**	**309**	P	**P**	**15 10 49.6**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.8,baz=112,slow=7.8,SNR=3.2						
KAF	**Kangasniemi**	**68.85**	**332**	*e*p	**P**	**15 11 54.1**	**+0.1**
ARCES	**ARCESS Array B**	**71.28**	**340**	P	**P**	**15 12 08.8**	**+0.2**
	comp=Z,1.1nm,0.5s,mb4.0,baz=92,slow=6.9,SNR=14						
ARCES	**ARCESS Array B**	**71.28**	**340**	P	**P**	**15 12 08.8**	**+0.1**
GERES	**GERESS Array B**	**74.16**	**318**	P	**P**	**15 12 26.6**	**+0.6**
	comp=Z,1.2nm,0.7s,mb3.9,baz=79,slow=6.8,SNR=10						
NB2	**NORSAR Subarra**	**75.81**	**330**	P	**P**	**15 12 35.1**	**-0.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=91,slow=5.8						
NOA	**NORSAR Array B**	**75.81**	**330**	P	**P**	**15 12 35.5**	**+0.3**
	comp=Z,1.0nm,0.5s,mb4.0,baz=92,slow=5.6,SNR=4.4						
BOSA	**Boshof**	**76.53**	**237**	*e*P	**P**	**15 12 38.6**	**-1.4**
	comp=Z,5.5nm,0.4s,mb4.8						
ILAR	**Eielson Array**	**91.74**	**22**	P	**P**	**15 13 56.4**	**+0.3**
	comp=Z,0.9nm,0.7s,mb4.2,baz=302,slow=4.5,SNR=13						
NVAR	**Mina Array Bea**	**122.30**	**29**	PKP	PKPdf	15 19 47.0	+4.1
	comp=Z,0.7nm,0.5s,baz=348,slow=2.0,SNR=7.1						

NEIC ***22*** *15:10:38.9±1.4, 57.84S×25.51W, h50*^{km}*±12*^{km}*, mb4.6/7, Error ellipse: s-maj=9.2km s-min=6.9km az=199.0*

IDC ***22*** *15:10:39.1±4.7, 57.86S×25.64W, h50*^{km}*±42*^{km}*, mb4.2/10, mb1 4.3/11, mb1mx4.3/14, mbtmp4.5/11, ML4.2/1, MS3.7/7, Ms1 3.7/7, ms1mx3.5/16, Error ellipse: s-maj=20.0km s-min=15.9km az=34.0*

ISC 22 15:10:37.8±3.4**, 57.8S**±0.1×**25.6W**±0.2**, h55**^{km}±32^{km}**, n51, σ0**^{s}**.75**/27**, mb4.5**/13**, MS3.7**/7**, 3C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.82**	**157**		**P**	**15 14 05.0**	**-0.1**
VNA1	**Neumayer--Stat**	**14.82**	**157**		**P**	**15 14 09.2**	**+4.1**
VNA3	**Neumayer Olymp**	**15.03**	**160**	⇑*i*	**P**	**15 14 07.0**	**-0.8**
VNA3	**Neumayer Olymp**	**15.03**	**160**		**P**	**15 14 10.2**	**+2.4**
VNA2	**Neumayer--Watz**	**15.22**	**157**		**P**	**15 14 09.4**	**-0.8**
VNA2	**Neumayer--Watz**	**15.22**	**157**	⇑*i*	**P**	**15 14 11.3**	**+1.1**
SNAA	**Sanae**	**16.77**	**155**	P	**P**	**15 14 29.3**	**-0.5**
	0.8nm,0.3s,baz=315,slow=13,SNR=65						
SNAA	**Sanae**	**16.77**	**155**	*e*P	**P**	**15 14 28.4**	**-1.4**
	12nm,0.7s						

PMSA	Palmer Station	19.49	233	eP	P	15 15 03.1	+0.5
USHA	Ushuaia	23.67	259	P	P	15 15 45.7	+1.1
	6.1nm,0.8s,mb4.1,baz=79,slow=5.7,SNR=6.6						
QSPA	South Pole Qui	32.44	180	⇑iP	P	15 17 03.7	-0.4
	7.9nm,0.6s,mb4.7						
PLCA	Paso Flores	33.21	281	P	P	15 17 10.1	-1.1
	2.6nm,0.4s,mb4.5,baz=153,slow=6.2,SNR=8.1						
PLCA				LR	LR	15 29 52.8	
	comp=Z,66nm,19.9s,MS3.4,baz=290,slow=35						
PLCA	Paso Flores	33.21	281	eP	P	15 17 10.6	-0.6
	12nm,1.1s,mb4.7						
MAW	Mawson	38.20	142	P	P	15 17 52.6	-0.6
	3.9nm,0.7s,mb4.2,baz=302,slow=3.9,SNR=6.5						
MAW				LR	LR	15 31 10.7	
	comp=Z,60nm,21.6s,MS3.4,baz=66,slow=32						
VNDA	Vanda	44.85	182	P	P	15 18 47.6	+0.2
	6.2nm,0.8s,mb4.5,baz=185,slow=6.3,SNR=25						
VNDA				LR	LR	15 34 48.7	
	comp=Z,72nm,20.1s,MS3.6,baz=315,slow=32						
VNDA	Vanda	44.85	182	eP	P	15 18 47.6	+0.1
	5.6nm,0.8s,mb4.5						
BDFB	Brasilia	45.34	329	P	P	15 18 51.9	-0.2
	7.5nm,0.6s,mb4.7,baz=166,slow=4.5,SNR=9.4						
BDFB				LR	LR	15 34 06.7	
	comp=Z,53nm,18.4s,MS3.5,baz=2.0,slow=31						
BOSA	Boshof	45.58	73	P	P	15 18 54.2	+0.3
	2.7nm,0.8s,mb4.2,baz=234,slow=6.7,SNR=5.1						
BOSA				LR	LR	15 33 37.3	
	comp=Z,126nm,19.8s,MS3.9,baz=211,slow=30						
LBTB	Lobatse	48.71	70	P	P	15 19 18.9	+0.5
	4.2nm,0.8s,mb4.5,baz=230,slow=9.4,SNR=5.6						
LBTB				LR	LR	15 35 04.9	
	comp=Z,102nm,18.8s,MS3.8,baz=253,slow=30						
LBTB	Lobatse	48.71	70	P	P	15 19 18.9	+0.5
LBTB				LR	LR	15 35 04.9	
LPAZ	La Paz	52.12	305	P	P	15 19 44.7	+0.2
	3.3nm,0.5s,mb4.5,baz=160,slow=5.6,SNR=13						
LPAZ	La Paz	52.12	305	eP	P	15 19 44.3	-0.2
	2.6nm,0.4s,mb4.5						
SAML	Samuel	56.68	314	eP	P	15 20 16.6	-1.2
	8.9nm,0.5s,mb5.0						
LSZ	Lusaka	58.21	66	eP	P	15 20 28.4	-0.1
	2.7nm,0.8s,mb4.3						
DBIC	Dimbokro	66.42	23	P	P	15 21 23.9	+0.7
	6.8nm,0.6s,mb4.9,baz=165,slow=7.7,SNR=18						
STKA	Stephens Creek	90.01	169	P	P	15 23 32.4	+0.3
	2.6nm,0.9s,mb4.6,baz=167,slow=12,SNR=4.2						
STKA	Stephens Creek	90.01	169	P	P	15 23 32.4	+0.3
PPT	Papeete	91.86	232	LR	LR	15 56 19.4	
	comp=Z,164nm,18.1s,MS4.5,baz=204,slow=30						
PDAR	Pinedale Array	122.03	300	PKP	PKPdf	15 29 26.1	+0.5
	1.1nm,0.5s,baz=117,slow=3.3,SNR=6.4						
MNV	Mina	122.82	291	P	PKPdf	15 29 28.7	+1.6
NVAR	Mina Array Bea	122.89	291	PKP	PKPdf	15 29 29.6	+2.3
	1.2nm,0.6s,baz=132,slow=3.6,SNR=11						
ELK	Elko	123.16	295	ePKPdf	PKPdf	15 29 30.0	+2.2
LOHW	Long Hollow	123.16	300	ePKPdf	PKPdf	15 29 28.3	+0.6
MOOW	Moose Ponds	123.33	300	ePKPdf	PKPdf	15 29 29.4	+1.4
CMAR	Chiang Mai Arr	123.61	110	PKP	PKPdf	15 29 30.1	+1.0
	1.6nm,0.8s,baz=221,slow=3.6,SNR=11						
CHMT	Chamberlain Mo	126.89	301	ePKPdf	PKPdf	15 29 36.3	+1.7
BMO	Blue Mountains	127.25	297	ePKPdf	PKPdf	15 29 36.9	+1.5
ARCES	ARCESS Array B	132.25	22	PKP	PKPdf	15 29 45.2	+1.0
	2.2nm,0.7s,baz=218,slow=2.0,SNR=14						
MKAR	Makanchi Array	136.58	72	PKP	PKPdf	15 29 55.2	+2.3
	0.5nm,0.8s,baz=225,slow=1.7,SNR=5.7						
MKAR	Makanchi Array	136.58	72	PKP	PKPdf	15 29 55.2	+2.3
YKA	Yellowknife Ar	138.07	316	PKP	PKPdf	15 29 56.5	+1.3
	1.4nm,0.3s,baz=131,slow=2.2,SNR=11						
YKA	Yellowknife Ar	138.07	316	PKP	PKPdf	15 29 56.5	+1.3
INK	Inuvik	147.73	319	ePKPbc	PKPdf	15 30 16.0	+4.4
SONM	Songino Array	149.91	88	PKPbc	PKPdf	15 30 22.3	+6.6
	4.5nm,0.4s,baz=222,slow=3.6,SNR=60						
EYAK	Cordova Ski Ar	150.15	301	ePKPbc	PKPdf	15 30 23.3	+7.6
ULN	Ulaanbaatar	150.28	89	ePKPbc	PKPdf	15 30 22.8	+6.5
DIV	Divide	150.38	302	ePKPbc	PKPdf	15 30 23.4	+7.4
SML	Sawmill	151.76	302	ePKPbc	PKPdf	15 30 26.6	+8.5
ILAR	Eielson Array	151.94	309	PKPbc	PKPdf	15 30 26.6	+8.3
	42nm,1.1s,baz=144,slow=2.9,SNR=132						
KDAK	Kodiak Island	152.37	293	ePKPbc	PKPdf	15 30 28.0	+8.9
IMA	Indian Mountai	154.96	311	ePKPbc	PKPdf	15 30 34.0	+12
IMA				ePKPab	PKPab	15 30 49.7	+0.5

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*BJI **22** 15:41:02.6,23.40S×179.22W,h546^{km},mB4.8,mb4.7*
*IDC **22** 15:41:03.0±1.1,23.61S×179.99W,h522^{km}±11^{km}, mb4.2/17,mb1 4.3/18,mb1mx4.2/20,mbtmp5.0/18,Error ellipse: s-maj=12.6km s-min=10.8km az=178.0*
*NEIC **22** 15:41:03.1±0.8,23.58S×179.99W,h527^{km}±9^{km},mb4.6/27, Error ellipse: s-maj=9.3km s-min=6.9km az=172.0*
*MOS **22** 15:41:05.2±3.4,23.75S×179.70E,h527^{km},mb4.6/6,Error ellipse: s-maj=14.9km s-min=13.2km az=17.5*
ISC 22 15:41:02.4±0.8**,23.67S**±0.07×**179.96E**±0.06**, h528**^{km}±10^{km}**,n129,**σ**0^{s}98**/86**,mb4.6**/40**,7C-16D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.88	162	eP	P	15 42 39.7	0.0
RAO				pmax	pmax		
	comp=Z,433nm,0.4s						
RAO	Raoul Island	5.88	162	P	P	15 42 39.2	-0.5
	comp=Z,207nm,0.3s,baz=258,slow=20,SNR=9.8						
RAO				S	S	15 43 56.6	-0.2
	comp=Z,94nm,0.3s,baz=93,slow=22,SNR=6.2						
RAO	Raoul Island	5.88	162	eP	P	15 42 39.6	0.0
	comp=Z,433nm,0.4s						
AFI	Afiamalu	12.46	40	eP	P	15 43 39.5	-6.8
	comp=Z,43nm,0.5s						
DZM	Mont Dzumac	12.56	275	eP	P	15 43 48.2	+0.9
DZM	Mont Dzumac	12.56	275	P	P	15 43 49.7	+2.4
	comp=Z,0.7nm,0.3s,baz=97,slow=14,SNR=17						
URZ	Urewera	14.75	189	P	P	15 44 07.8	-1.7
	comp=Z,3.6nm,0.3s,baz=24,slow=2.4,SNR=16						
URZ				S	S	15 46 41.8	+1.4
	comp=Z,1.6nm,0.3s,baz=68,slow=22,SNR=8.8						
RPZ	Rata Peaks	21.30	198	P	P	15 45 12.2	-0.1
	comp=Z,12nm,0.6s,mb4.7,baz=271,slow=15,SNR=11						
HNR	Honiara	23.79	303	eP	P	15 45 33.9	-1.2
HNR				pmax	pmax		
	comp=Z,123nm,0.8s,mb5.6						
HNR	Honiara	23.79	303	P	P	15 45 33.9	-1.2
	comp=Z,78nm,0.7s,mb5.5,baz=203,slow=4.4,SNR=7.6						
HNR	Honiara	23.79	303	eP	P	15 45 33.9	-1.3
	comp=Z,123nm,0.8s,mb5.6						
CTA	Charters Tower	31.44	270	⇓iP	P	15 46 43.0	+1.2
	comp=Z,126nm,0.4s						
CTA	Charters Tower	31.44	270	⇓iP	P	15 46 43.0	+1.2
CTA				pmax	pmax		
	comp=Z,125nm,0.4s						
CTA	Charters Tower	31.44	270	P	P	15 46 43.0	+1.2
	comp=Z,141nm,0.5s,baz=96,slow=11,SNR=441						
CTAO	Charters Tower	31.44	270	eP	P	15 46 42.8	+1.0
CTAO				pmax	pmax		
	comp=Z,142nm,0.6s,mb5.7						
CTAO	Charters Tower	31.44	270	eP	P	15 46 42.8	+1.0
	comp=Z,142nm,0.6s,mb5.7						
TOO	Toolangi	32.54	237	⇓iP	P	15 46 52.3	+1.3
	comp=Z,10nm,0.6s,mb4.5						
TOO	Toolangi	32.54	237	⇓iP	P	15 46 52.3	+1.3
TOO				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
PMG	Port Moresby	34.38	289	eP	P	15 47 06.6	0.0
PMG				pmax	pmax		
	comp=Z,114nm,0.8s						
PMG	Port Moresby	34.38	289	P	P	15 47 07.2	+0.6
	comp=Z,134nm,0.8s,mb5.5,baz=96,slow=5.1,SNR=49						
PMG	Port Moresby	34.38	289	eP	P	15 47 06.6	0.0
	comp=Z,114nm,0.8s,mb5.5						
STKA	Stephens Creek	34.77	248	⇓iP	P	15 47 10.9	+1.2
	comp=Z,10nm,0.6s,mb4.5						
STKA	Stephens Creek	34.77	248	P	P	15 47 10.8	+1.1
	comp=Z,15nm,0.6s,mb4.7,baz=93,slow=9.3,SNR=29						
WB2	Warramunga Arr	42.37	266	⇓iP	P	15 48 11.5	-0.1
WB2				eS	S	15 53 52.8	-2.5
WRAB	Tennant Creek	42.38	266	eP	P	15 48 11.0	-0.6
WRAB				pmax	pmax		
	comp=Z,107nm,0.8s,mb5.4						
WRAB	Tennant Creek	42.38	266	eP	P	15 48 11.0	-0.6
	comp=Z,107nm,0.8s,mb5.4						
WRA	Warramunga Arr	42.38	266	P	P	15 48 11.5	-0.2
WRA				S	S	15 53 53.0	-2.5
WRA	Warramunga Arr	42.38	266	P	P	15 48 11.5	-0.2
	comp=Z,63nm,0.5s,mb5.4,baz=102,slow=8.5,SNR=594						
WRA				ScP		15 52 56.6	
	comp=Z,5.7nm,0.9s,baz=98,slow=4.1,SNR=11						
WRA				S	S	15 53 53.0	-2.4
	comp=Z,2.9nm,0.8s,baz=100,slow=13,SNR=8.3						
KAKA	Kakadu	46.25	275	⇓iP	P	15 48 41.2	-0.6
	comp=Z,32nm,0.4s,mb5.2						
FORT	Forrest	46.36	249	⇓iP	P	15 48 42.0	-0.5
	comp=Z,89nm,0.6s,mb5.5						
FITZ	Fitzroy Crossi	50.81	265	⇓iP	P	15 49 15.8	-0.1
	comp=Z,63nm,0.7s,mb5.0						
FITZ	Fitzroy Crossi	50.81	265	P	P	15 49 15.9	0.0
	comp=Z,83nm,0.8s,mb5.1,baz=103,slow=2.6,SNR=83						
SBA	Scott Base	54.61	183	P	P	15 49 42.5	+0.1
SBA				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.0						
SBA	Scott Base	54.61	183	P	P	15 49 42.5	+0.1
	comp=Z,15nm,1.4s,mb4.0						
VNDA	Vanda	54.61	185	P	P	15 49 42.7	+0.3
	comp=Z,1.0nm,0.6s,baz=14,slow=4.2,SNR=5.5						
VNDA				ScP		15 53 44.8	
	comp=Z,1.5nm,0.7s,baz=346,slow=3.6,SNR=6.0						
VNDA	Vanda	54.61	185	eP	P	15 49 43.0	+0.6
KLBR	Kellerberrin	55.04	247	⇓iP	P	15 49 45.4	-0.6
	comp=Z,34nm,0.7s,mb4.7						
MBWA	Marble Bar	55.38	260	eP	P	15 49 47.3	-1.2
	comp=Z,54nm,1.0s,mb4.7						
MUN	Mundaring	56.29	246	⇓iP	P	15 49 54.3	-0.3
	comp=Z,20nm,0.8s,mb4.4						
MUN	Mundaring	56.29	246	⇓iP	P	15 49 54.3	-0.3
MUN				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.4						
CASY	Casey	60.30	206	eP	P	15 50 19.6	-1.6
	comp=Z,7.1nm,0.5s,mb4.2						
JOW	Kunigami	70.81	312	P	P	15 51 24.5	-2.7
	comp=Z,39nm,0.6s,mb5.1,baz=146,slow=6.2,SNR=7.7						
MAJO	Matsushiro	71.68	326	eP	P	15 51 31.2	-0.9
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
MAJO	Matsushiro	71.68	326	eP	P	15 51 31.2	-0.9
	comp=Z,9.8nm,0.7s,mb4.3						
MAT	Matsushiro	71.68	326	eP	P	15 51 31.0	-1.1
MAT				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
MAT	Matsushiro	71.68	326	eP	P	15 51 31.0	-1.1
	comp=Z,9.6nm,0.7s,mb4.3						
MAT	Matsushiro	71.68	326	P	P	15 51 31.3	-0.8
KSM	Kuching	72.03	280	eP	P	15 51 34.4	-0.1
JNU	Nakatsue	73.33	319	P	P	15 51 40.1	-1.5
	comp=Z,12nm,0.9s,mb4.3,baz=64,slow=10,SNR=5.5						
ASAJ	Asahikawa	75.64	333	P	P	15 51 55.3	+1.0
	comp=Z,11nm,0.8s,mb4.4,baz=243,slow=9.0,SNR=14						
MAW	Mawson	77.96	200	P	P	15 52 07.5	+1.1
	comp=Z,5.8nm,0.7s,mb4.0,baz=124,slow=5.8,SNR=10						
MDJ	Mudanjiang	82.05	326	P	P	15 52 28.8	+0.8
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,60nm,7.3s						
MDJ	Mudanjiang	82.05	326	eP	P	15 52 28.4	+0.4
	comp=Z,5.4nm,0.7s,mb4.1						
CMB	Columbia Colle	83.06	43	eP	P	15 52 32.8	-0.5
CMB				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
CMB	Columbia Colle	83.06	43	eP	P	15 52 32.8	-0.6
	comp=Z,12nm,1.0s,mb4.4						
SYO	Syowa Base	83.23	193	⇓P	P	15 52 32.0	-1.5
CN2	Changchun	83.68	324	eP	P	15 52 37.0	+0.8
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
YBH	Yreka Blue Hor	83.93	39	P	P	15 52 37.8	+0.3
	comp=Z,3.4nm,0.7s,mb4.0,baz=209,slow=0.7,SNR=13						
YBH	Yreka Blue Hor	83.93	39	eP	P	15 52 37.8	+0.3
	comp=Z,3.0nm,0.9s,mb3.8						
HUMO	Hull Mountain	84.34	39	eP	P	15 52 39.7	+0.2
	comp=Z,9.7nm,1.2s,mb4.2						
NVAR	Mina Array Bea	84.61	44	P	P	15 52 40.6	-0.3
	comp=Z,3.8nm,0.9s,mb3.9,baz=211,slow=6.1,SNR=20						
ENH	Enshi	86.28	305	eP	P	15 52 50.1	+1.0
	comp=Z,18nm,0.8s,mb4.8						
WVOR	Wild Horse Val	86.76	41	eP	P	15 52 50.9	-0.2
WVOR				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.4						
WVOR	Wild Horse Val	86.76	41	eP	P	15 52 50.9	-0.2
	comp=Z,13nm,1.4s,mb4.4						
XAN	Xi’an	88.56	308	P	P	15 53 00.8	+1.0
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
MVU	Marysvale	88.62	47	eP	P	15 53 00.5	+0.5
	comp=Z,7.8nm,1.3s,mb4.4						
CM31	Chiang Mai Arr	89.41	290	eP	P	15 53 06.0	+2.0
	comp=Z,11nm,0.9s,mb4.7						
CMAR	Chiang Mai Arr	89.41	290	P	P	15 53 06.1	+2.0
	comp=Z,7.8nm,0.9s,mb4.5,baz=131,slow=3.3,SNR=38						
TMUT	Trail Mountain	89.71	46	eP	P	15 53 05.4	+0.4
SRU	San Rafael	90.07	47	eP	P	15 53 06.2	-0.5
MNTX	Cornudas Mount	90.11	55	eP	P	15 53 06.6	-0.4
	comp=Z,9.9nm,1.4s,mb4.5						
LTX	Lajitas	90.34	58	eP	P	15 53 08.3	+0.2
LTX				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
LTX	Lajitas	90.34	58	eP	P	15 53 08.2	+0.1
	comp=Z,1.7nm,0.6s,mb4.0						
TXAR	Lajitas Array	90.34	58	P	P	15 53 08.4	+0.3
	comp=Z,4.1nm,0.7s,mb4.3,baz=217,slow=6.3,SNR=32						
BNM	Barren Site	90.34	53	eP	P	15 53 07.7	-0.4
HWUT	Hardware Ranch	90.67	44	eP	P	15 53 08.7	-0.7
	comp=Z,2.4nm,0.6s,mb4.3						
CD2	Chengdu	90.92	303	P	P	15 53 13.0	+2.2
GDL2	Guadalupe Moun	91.11	55	eP	P	15 53 11.2	-0.4
ILAR	Eielson Array	91.81	14	P	P	15 53 15.0	+1.0
	comp=Z,0.2nm,0.5s,baz=231,slow=5.8,SNR=3.8						
PDAR	Pinedale Array	92.55	44	P	P	15 53 17.9	0.0
	comp=Z,1.9nm,0.8s,mb4.2,baz=243,slow=3.3,SNR=13						
PDAR				PP	PP	15 57 04.8	-5.4
	comp=Z,0.4nm,0.3s,baz=236,slow=5.3,SNR=4.0						
SONM	Songino Array	96.90	319	P	P	15 53 37.8	+0.1
	comp=Z,0.5nm,0.6s,mb4.0,baz=124,slow=4.3,SNR=5.0						
SONM				PP	PP	15 57 37.7	-5.3
	comp=Z,0.4nm,0.6s,baz=135,slow=5.2,SNR=4.6						
MKAR	Makanchi Array	111.97	313	PKiKP		15 58 37.0	
	comp=Z,1.2nm,0.6s,baz=198,slow=0.7,SNR=24						
MKAR				PP	PP	15 59 25.4	-8.4
	comp=Z,1.1nm,1.1s,baz=97,slow=9.8,SNR=5.1						
MKAR				PKKPbc		16 09 40.7	
	comp=Z,0.4nm,0.8s,baz=288,slow=3.8,SNR=4.3						
MKAR	Makanchi Array	111.97	313	PKPdf	PKPdf	15 58 37.0	+0.1
MKAR				PP	PP	15 59 25.4	-8.4
MKAR				PKKPbc		16 09 40.7	
AAK	Ala-Archa	116.73	307	PKIKP	PKPdf	15 58 46.9	+0.6
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKAR	Karatay Array	119.69	307	i PKIKP	PKPdf	15 58 52.1	0.0
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VOSK	Vostochnaya	119.88	318	PKIKP	PKPdf	15 58 51.8	-0.4
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVA0	Borovoye Array	120.24	319	i PKIKP	PKPdf	15 58 52.7	-0.1
BVAR	Borovoye Array	120.24	319	PKP	PKPdf	15 58 53.0	+0.1
	comp=Z,3.0nm,0.5s,baz=129,slow=1.4,SNR=21						
BVAR				PP	PP	16 00 31.3	+1.4
	comp=Z,0.3nm,0.4s,baz=79,slow=7.6,SNR=3.5						
ZRNK	Zerenda	121.08	319	ePKIKP	PKPdf	15 58 54.4	-0.1
AB31	Akbulak array	127.02	315	PKIKP	PKPdf	15 59 06.4	+0.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	131.65	348	PKhKP		15 59 05.1	
	comp=Z,1.8nm,1.1s,SNR=7.2						
ARCES				PKP	PKPdf	15 59 14.2	-0.2
	comp=Z,1.8nm,0.5s,baz=34,slow=1.1,SNR=22						
ARCES				SKPbc		16 01 51.7	
	comp=Z,3.4nm,0.9s,baz=14,slow=5.0,SNR=7.2						
ARCES	ARCESS Array B	131.65	348	PKP		15 59 05.1	
ARCES				PKP	PKPdf	15 59 14.2	-0.2
ARCES				SKPbc		16 01 51.7	
KAF	Kangasniemi	137.61	342	ep	PKPdf	15 59 26.2	+0.7
NB2	NORSAR Subarra	141.84	351	PKPabc	PKPdf	15 59 29.0	-3.9
	comp=Z,2.2nm,0.6s,baz=13,slow=3.1						
NOA	NORSAR Array B	141.84	351	PKhKP		15 59 29.2	
	comp=Z,2.4nm,0.6s,baz=16,slow=4.6,SNR=11						
NOA				SKPbc		16 02 21.6	
	comp=Z,2.1nm,0.8s,baz=15,slow=4.2,SNR=5.5						
MALT	Malatya	144.21	303	ePKIKP	PKPdf	15 59 39.8	+2.1
AKASG	Malin Array Be	144.75	327	PKP	PKPdf	15 59 38.9	+0.6
	comp=Z,8.7nm,0.6s,baz=43,slow=3.9,SNR=57						
SUW	Suwalki	145.04	336	ePKHKP		15 59 39.7	
BR131	Keskin Array S	147.41	307	ePKPdf	PKPdf	15 59 47.2	+4.1
BRTR	Keskin Array B	147.41	307	PKPbc	PKPdf	15 59 47.4	+4.3
	comp=Z,8.6nm,0.6s,baz=141,slow=5.5,SNR=20						
LVV	L’vov	147.82	330	ePKHKP		15 59 48.1	
EIL	Elat	148.24	288	ePKPbc	PKPdf	15 59 50.7	+6.0
CSS	Prodhromos	148.94	299	ePKPbc	PKPdf	15 59 51.7	+6.0
KOLS	Kolonicke sedl	149.25	331	ePKP	PKPdf	15 59 52.5	+6.8
KOLS				e		15 59 59.1	
OJC	Ojcow	149.31	335	ePKP	PKPdf	15 59 51.7	+6.0
CRVS	Cervenica-Dubn	149.63	331	ePKP	PKPdf	15 59 53.1	+6.8
NIE	Niedzica	149.73	333	ePKP	PKPdf	15 59 50.4	+4.0
KSP	Ksiaz	150.06	339	ePKIKP	PKPdf	15 59 53.8	+6.9
OKC	Ostrava-Krasne	150.25	336	ePKIKP	PKPdf	15 59 54.4	+7.2
OKC				e		16 00 03.2	
OKC	Ostrava-Krasne	150.25	336	⇑ePKPB	PKPdf	15 59 54.4	+7.2
OKC				ePKPAB	PKPab	16 00 03.2	-0.6
UPC	Upice	150.44	339	ePKIKP	PKPdf	15 59 54.8	+7.3
UPC				e		16 00 04.1	
UPC	Upice	150.44	339	⇑ePKPB	PKPdf	15 59 54.8	+7.3
UPC				ePKPAB	PKPab	16 00 04.1	-0.5
DPC	Dobruska-Polom	150.47	339	ePKIKP	PKPdf	15 59 54.9	+7.3
DPC				e		16 00 04.0	
DPC	Dobruska-Polom	150.47	339	⇑ePKPB	PKPdf	15 59 54.9	+7.3
DPC				ePKPAB	PKPab	16 00 04.0	-0.7
MORC	Moravsky Berou	150.52	337	ePKIKP	PKPdf	15 59 54.9	+7.2
CLL	Collm	150.62	343	⇓iPKIKP	PKPdf	15 59 54.6	+6.8
CLL				pmax	pmax		
	comp=Z,18nm,0.8s						
CLL	Collm	150.62	343	⇓iPKP	PKPdf	15 59 54.6	+6.8
CLL				⇑iPKP	PKPab	16 00 03.7	-1.6
CLL				epPKP		16 02 02.0	
CLL	Collm	150.62	343	⇓iPKP1	PKPdf	15 59 54.6	+6.8
CLL				i PKP2	PKPab	16 00 03.7	-1.6
CLL				e*PPKP		16 02 02.0	
BRG	Berggiesshubel	150.75	342	i PKIKP	PKPdf	15 59 55.2	+7.2
BRG				i		16 00 04.8	
BRG				pmax	pmax		
	comp=Z,13nm,0.5s						
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRG	Berggiesshubel	150.75	342	i P	PKPdf	15 59 55.2	+7.3
BRG				i		16 00 04.8	
PVCC	Panska Ves	150.87	341	ePKIKP	PKPdf	15 59 56.0	+7.8
PVCC				e		16 00 06.1	
PVCC	Panska Ves	150.87	341	⇑ePKPB	PKPdf	15 59 56.0	+7.8
PVCC				ePKPAB	PKPab	16 00 06.1	-0.3
VYHS	Vyhne	151.06	334	ePKP	PKPdf	15 59 56.2	+7.7
VYHS				e		16 00 06.5	
PRU	Pruhonice	151.36	340	ePKIKP	PKPdf	15 59 56.6	+7.7
PRU	Pruhonice	151.36	340	⇑ePKPB	PKPdf	15 59 56.6	+7.7
NKC	Novy Kostel	151.75	343	ePKPAB	PKPab	16 00 09.2	-0.9
KHC	Kasperske Hory	152.41	340	eP	PKPdf	15 59 58.8	+8.4
KHC				e		16 00 12.3	
KHC				e		16 00 35.0	
KHC	Kasperske Hory	152.41	340	⇑ePKPB	PKPdf	15 59 58.8	+8.4
KHC				ePKPAB	PKPab	16 00 12.3	-0.6
KHC				x	x	16 00 35.0	
GERES	GERESS Array B	152.62	340	PKPbc	PKPdf	15 59 58.5	+7.9
	comp=Z,0.7nm,0.5s,SNR=8.9						
GERES				PKPab	PKPab	16 00 12.3	-1.6
	comp=Z,0.7nm,0.6s,baz=34,slow=4.8,SNR=4.3						

MAN 22 15:41:57.6,9.42N×126.22E,h66^{km},mb4.1,ML2.9,MS2.5, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.74	233	eP	P	15 42 16.3	+3.5
BUTP				eS	S	15 42 30.5	+6.3
SCPH	Surigao	0.80	297	⇓eP	P	15 42 14.5	+0.8
MSLP	Maasin	1.52	298	eP	P	15 42 27.0	+3.8
MSLP				eS	S	15 42 49.6	+7.5
BUKP	Musuan	1.91	217	eP	P	15 42 28.6	0.0
BUKP				eS	S	15 42 59.4	+7.9
BESP	Borongan	2.30	341	eP	P	15 42 34.4	+0.3
CNP	Catarman	3.43	334	eP	P	15 42 50.0	0.0
CNP				eS	S	15 43 30.3	+0.7

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*BER **22** 15:43:02.4±3.6,66.76N×22.95E,MD2.8,ML1.8, Suspected explosion*
*HEL **22** 15:43:10.1±0.1,67.07N×20.90E,ML1.9,ML2.2(UPP), Explosion*
ISC 22 15:43:09.2±0.4**,67.10N**±0.03×**20.95E**±0.07**,n21,**σ**0^{s}96**/30**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.15	280	i P	Pg	15 43 12.6	+0.3
MASU	Masugnsbyn	0.55	48	i P	Pg	15 43 20.2	+0.1
ERTU	Ertsjaerv	0.73	137	i P	Pg	15 43 22.9	-0.9
PAJU	Pajala	0.85	94	i P	Pg	15 43 25.3	-0.9
KUA	Kurravaara	0.89	345	eP	Pg	15 43 26.1	-0.9
NIKU	Nikkaluokta	1.07	317	eP	Pb	15 43 29.3	-1.0
LILU	Lilltraesk	1.87	194	eP	Pn	15 43 42.5	-0.3
KIF	Kilpisjarvi	1.92	358	eP	Pn	15 43 44.8	+1.4
KIF				eSG	Sg	15 44 11.8	-1.3
SGF	Sodankyl	2.19	78	eP	Pn	15 43 48.5	+1.1
SGF				eSG	Sg	15 44 18.4	-3.9
SGF				MSG		15 44 20.7	
	comp=Z,7.4nm,0.2s						
BURU	Burvik	2.53	176	eP	Pn	15 43 52.3	0.0
TRO	Tromso	2.66	345	eS	Sn	15 44 30.4	+3.0
TRO				AML	AML	15 44 34.1	
	comp=Z,4.3nm,0.4s						
SVAU	Svanoeiden	2.67	193	eP	Pn	15 43 54.0	-0.3
MOR8	Moi Rana	2.76	253	eP	Pn	15 43 55.6	+0.1
MOR8				eS	Sn	15 44 30.2	+0.2
MOR8				AML	AML	15 44 38.2	
	comp=Z,7.3nm,0.4s						
MELSS	Ber_school_2	2.85	269	eP	Pn	15 43 59.6	+2.8
MELSS				eS	Sn	15 44 40.4	+8.1
OUL	Oulu	2.85	133	eP	Pn	15 43 57.6	+0.7
OUL				eS	Sn	15 44 32.9	+0.5
OUL				MSG		15 44 43.3	
	comp=Z,2.7nm,0.2s						
LOF	Lofoten	3.02	294	eP	Pn	15 43 58.6	-0.6
LOF				eS	Sn	15 44 44.9	+8.3
LOF				AML	AML	15 44 50.9	
	comp=Z,4.3nm,0.3s						
UMAU	Umeaa	3.23	182	eP	Pn	15 44 01.5	-0.7
STOK	Stokkvaagen	3.24	260	eP	Pn	15 44 02.1	-0.3
STOK				eS	Sn	15 44 47.9	+5.7
STOK				AML	AML	15 44 56.9	
	comp=Z,6.4nm,0.5s						
BREU	Bredtraesk	3.37	198	eP	Pn	15 44 03.1	-1.1
KEV	Kevo	3.48	37	eP	Pn	15 44 06.0	+0.2
KEV				eS	Sn	15 44 47.9	-0.5
KEV				MSG		15 44 50.5	
	comp=Z,2.1nm,0.3s						
KU4	Liikasenvaara	3.50	98	eP	Pn	15 44 07.1	+1.1
KU4				eS	Sn	15 44 49.1	+0.2

MAN 22 15:49:42.3,8.96N×126.18E,h152^{km},mb4.2,ML3.0, MS2.8,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.55	271	eP	P	15 50 10.8	+6.2
BUTP				eS	S	15 50 25.3	+3.6
SCPH	Surigao	1.07	320	⇓eP	P	15 50 08.3	+0.2
SCPH				eS	S	15 50 20.4	-7.5
BUKP	Musuan	1.54	226	eP	P	15 50 13.1	+0.3
MSLP	Maasin	1.75	312	eP	P	15 50 20.7	+5.6
MSLP				eS	S	15 50 40.8	+0.4
BESP	Borongan	2.73	344	eP	P	15 50 26.7	-0.3
BESP				eS	S	15 50 53.1	-8.1
CNP	Catarman	3.83	337	eP	P	15 50 41.7	+0.4
CNP				eS	S	15 51 20.6	-6.1

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*CSEM **22** 16:18:06.2±0.2,35.05N×3.78W,h4^{km},MD2.8,Error ellipse: s-maj=5.3km s-min=4.8km az=122.0,After CNRM*
*CNRM **22** 16:18:06.2,35.05N×3.78W,h4^{km},MD2.8*
MDD 22 16:18:06.3±0.4**,35.03N×3.83W,h5**^{km}±5^{km}**,mbLg1.7**/1**, Error ellipse: s-maj=6.2km s-min=2.7km az=62.0, PRXIMO,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOU	Touzarine	0.09	138	i P	Pg	16 18 08.0	-0.3

TOU				*i* S	Sg	16 18 10.0	+0.3
MPAL	**Palemas**	**0.22**	**334**	*e*P	Pg	16 18 10.0	-0.8
MPAL				*e*S	Sg	16 18 13.5	-0.2
EMEL	**Melilla**	**0.76**	**69**	Pg	Pg	16 18 24.1	+2.6
	SNR=7.9						
EMEL				Lg		16 18 37.1	
	SNR=7.9						
ZAI	**Zaio**	**0.89**	**93**	*e*P	Pb	16 18 21.0	-2.8
ZAI				*e*S	Sb	16 18 35.0	-0.8
TZK	**Tazeka**	**0.98**	**198**	*e*P	Pb	16 18 25.0	-0.4
TZK				*e*S	Sb	16 18 38.0	-0.5
EALB	**Alboran**	**1.12**	**35**	Pg	Pg	16 18 28.7	0.0
	1.4nm,0.4s,SNR=7.9						
EALB				Lg		16 18 44.6	
	6.0nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**1.71**	**334**	Pn	Pn	16 18 36.5	-0.6
	0.2nm,0.3s,SNR=7.9						
EMIJ				Sn	Sn	16 18 56.8	-2.8
	0.2nm,0.3s,SNR=7.9						
CZD	**Col de Zad**	**2.23**	**207**	*e*P	Pn	16 18 42.0	-2.5
CZD				*e*S	Sn	16 19 11.0	-1.7

MAN 22 16:36:45.7, 9.69N×126.33E, h21^{km}, mb4.2, ML3.0, MS2.7, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.83**	**276**	⇑*e*P	Pb	16 37 01.3	-0.1
SCPH				*e*S	Sb	16 37 13.3	+1.2
BUTP	**Butuan**	**1.00**	**224**	*e*P	Pb	16 37 02.5	-1.8
BUTP				*e*S	Sb	16 37 17.7	+0.6
MSLP	**Maasin**	**1.51**	**287**	*e*P	Pn	16 37 13.9	+1.9
MSLP				*e*S	Sn	16 37 33.8	+2.6
BESP	**Borongan**	**2.09**	**335**	*e*P	Pn	16 37 19.4	-0.8
BESP				*e*S	Sn	16 37 49.0	+3.2
BUKP	**Musuan**	**2.20**	**215**	*e*P	Pn	16 37 21.7	-0.1
BUKP				*e*S	Sn	16 37 53.6	+5.1
TBP	**Tagbilaran**	**2.43**	**270**	*e*P	Pn	16 37 25.8	+0.6
TBP				*e*S	Sn	16 37 54.3	-0.3
DCPH	**Dipolog City**	**3.14**	**250**	⇓*e*P	Pn	16 37 35.7	+0.5
CNP	**Catarman**	**3.24**	**330**	*e*P	Pn	16 37 36.6	-0.1
CNP				*e*S	Sn	16 38 16.9	+1.9
PAGZ	**Pagadian**	**3.44**	**238**	*e*P	Pn	16 37 39.8	+0.3
PAGZ				*e*S	Sn	16 38 20.0	-0.2
IPIL	**Ipil**	**4.17**	**243**	*e*P	Pn	16 37 48.9	-0.9

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*IDC **22** 17:07:05.7±1.0, 1.42N×98.16E, mb4.2/7, mb1 4.3/7, mb1mx4.1/15, mbtmp4.2/7, MS3.2/1, Ms1 3.4/1, ms1mx3.0/15, Error ellipse: s-maj=46.8km s-min=20.3km az=57.0*

*NEIC **22** 17:07:06.3±0.9, 0.76N×97.09E, h30^{km}, mb4.1/3, Error ellipse: s-maj=23.5km s-min=13.2km az=62.0*

ISC 22 17:07:04.6±1.1, **0.8N**±0.1×**97.2E**±0.2, **h30^{km}, n14, σ1^{s}13**/12, **mb4.1**/10, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.63**	**38**	*e*P	**Pn**	**17 08 29.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**17.59**	**6**	Pn	**P**	**17 11 07.9**	**-1.6**
	0.2nm,0.3s,baz=195,slow=11,SNR=12						
CMAR				LR	LR	17 18 04.6	
	comp=Z,81nm,21.4s,baz=205,slow=39						
LSA	**Lhasa**	**29.26**	**349**	*e*P	**P**	**17 13 07.9**	**+1.4**
	2.5nm,0.7s,mb4.0						
ENH	**Enshi**	**31.53**	**21**	P	**P**	**17 13 23.0**	**-3.6**
	3.0nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**41.89**	**122**	P	**P**	**17 14 54.0**	**-0.3**
	2.9nm,0.7s,mb4.0,baz=300,slow=9.0,SNR=9.1						
SONM	**Songino Array**	**47.49**	**8**	P	**P**	**17 15 38.9**	**+0.1**
	0.8nm,0.6s,mb3.9,baz=197,slow=9.8,SNR=8.5						
SONM				PcP	PcP	17 17 08.8	-0.4
	0.8nm,0.8s,baz=189,slow=4.4,SNR=4.5						
MKAR	**Makanchi Array**	**47.57**	**346**	P	**P**	**17 15 39.7**	**+0.1**
	2.4nm,0.7s,mb4.3,baz=159,slow=8.5,SNR=28						
STKA	**Stephens Creek**	**53.16**	**132**	P	**P**	**17 16 22.2**	**-0.1**
	2.7nm,0.8s,mb4.2,baz=280,slow=3.7,SNR=3.9						
ZAL	**Zalesovo**	**53.89**	**351**	P	**P**	**17 16 27.1**	**-0.2**
	2.9nm,0.3s,mb4.7,baz=77,slow=2.0,SNR=9.1						
ZRNK	**Zerenda**	**56.97**	**340**	P	**P**	**17 16 48.6**	**-1.1**
	1.0nm,0.8s,mb3.9						
BRTR	**Keskin Array B**	**69.31**	**312**	P	**P**	**17 18 18.2**	**+6.7**
	0.5nm,0.4s,mb3.8,baz=104,slow=5.9,SNR=2.6						
ARCES	**ARCESS Array B**	**82.85**	**340**	P	**P**	**17 19 30.4**	**+3.1**
	1.2nm,0.8s,mb4.0,baz=101,slow=4.6,SNR=3.2						
TXAR	**Lajitas Array**	**144.00**	**32**	PKhKP		17 26 37.5	
	0.3nm,0.7s,baz=270,slow=2.5,SNR=3.7						
CPUP	**Villa Florida**	**144.71**	**222**	PKPbc	PKPbc	17 26 47.5	+8.3
	1.9nm,0.7s,baz=149,slow=5.9,SNR=4.9						

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*CSEM **22** 17:18:09.1, 37.03N×25.47E, h6^{km}, MD3.6/10, After ATH*

*ATH **22** 17:18:20.2, 36.63N×22.73E, h19^{km}±1^{km}, MD3.5/10, ML3.3*

ISC 22 17:18:19.3±0.7, **36.56N**±0.04×**22.68E**±0.07, **h10^{km}, n17, σ1^{s}25**/21, **2C, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.26**	**53**	⇑*i*PB	**Pb**	**17 18 25.4**	**-0.2**
VLI				*e*SB	**Sb**	**17 18 28.5**	**-1.3**
KYTH	**Kithira**	**0.40**	**134**	*e*PB	**Pb**	**17 18 29.0**	**+1.0**
KYTH	**Kithira**	**0.40**	**134**	*e*Pn	**Pn**	**17 18 30.0**	**-0.7**
ITM	**Ithomi**	**0.86**	**316**	⇑*i*PN	**Pn**	**17 18 36.9**	**-0.4**
ITM				*e*SN	**Sn**	**17 18 47.9**	**-2.1**
NAIG	**Nisos Aigina**	**1.36**	**28**	*e*PN	**Pn**	**17 18 45.0**	**+0.6**
NSAL	**Nisos Salamina**	**1.48**	**25**	*e*PN	**Pn**	**17 18 47.5**	**+1.3**
NSAL	**Nisos Salamina**	**1.48**	**25**	*e*Pn	**Pn**	**17 18 48.0**	**+1.8**
MGER	**Gerania Oros**	**1.50**	**18**	*e*PN	**Pn**	**17 18 47.0**	**+0.6**
ATH	**Athens Observa**	**1.64**	**30**	*e*PN	**Pn**	**17 18 49.5**	**+1.1**
ATH	**Athens Observa**	**1.64**	**30**	*e*Pb	**Pb**	**17 18 50.0**	**+0.9**
VAM	**Vamos**	**1.69**	**133**	*e*Pg	**Pg**	**17 18 50.7**	**-2.3**
VAM				*e*Sn	**Sn**	**17 19 12.0**	**+1.1**
RLS	**Riolos of Patr**	**1.78**	**328**	*e*PN	**Pn**	**17 18 51.4**	**+1.0**
MPAR	**Parnis Oros**	**1.80**	**28**	*e*PN	**Pn**	**17 18 51.5**	**+0.8**
MPAR	**Parnis Oros**	**1.80**	**28**	*e*Pn	**Pn**	**17 18 53.7**	**+3.0**
LKR	**Lokris**	**2.10**	**7**	*e*PB	**Pb**	**17 18 55.3**	**-1.8**
LKR				*e*SN	**Sn**	**17 19 21.6**	**+0.1**
APE	**Apeiranthos**	**2.34**	**77**	*e*PB	**Pb**	**17 18 59.0**	**-2.3**
EVR	**Evrytania**	**2.45**	**344**	*e*PN	**Pn**	**17 19 00.8**	**+0.7**

MAN 22 17:26:29.9, 9.72N×126.64E, h63^{km}, mb4.2, ML3.0, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.13**	**273**	⇓*e*P	P	17 26 50.7	+0.6
SCPH				*e*S	S	17 27 01.8	-3.2
BUTP	**Butuan**	**1.25**	**234**	*e*P	P	17 26 51.9	+0.3
BUTP				*e*S	S	17 27 15.0	+7.2
MSLP	**Maasin**	**1.80**	**284**	*e*P	P	17 27 00.1	+0.7
MSLP				*e*S	S	17 27 17.9	-3.1
BESP	**Borongan**	**2.21**	**328**	*e*P	P	17 27 06.1	+1.0
BESP				*e*S	S	17 27 31.6	+0.3
CNP	**Catarman**	**3.39**	**325**	*e*P	P	17 27 21.1	-0.5
CNP				*e*S	S	17 27 55.2	-5.6

MAN 22 17:38:03.1, 9.49N×126.09E, mb3.6, ML2.4, MS1.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.66**	**296**	⇑*e*P	Pg	17 38 15.5	-0.7
BUTP	**Butuan**	**0.69**	**222**	*e*P	Pg	17 38 17.9	+0.9
BUTP				*e*S	Sg	17 38 31.2	+5.0
MSLP	**Maasin**	**1.37**	**298**	*e*P	Pb	17 38 28.4	-0.9
MSLP						17 38 49.3	

IDC 22 17:59:13.8±8.8, **3.02N×95.27E, mb3.9**/4, **mb1 4.0**/4, **mb1mx3.7**/16, **mbtmp3.9**/4, **Error ellipse: s-maj=192.4km s-min=112.2km az=146.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**45.04**	**347**	P	P	18 07 31.1	-1.9
	1.3nm,0.8s,baz=158,slow=7.8,SNR=12						
SONM	**Songino Array**	**45.66**	**10**	P	P	18 07 36.3	-1.7
	0.5nm,0.4s,baz=192,slow=8.8,SNR=9.0						
ZAL	**Zalesovo**	**51.47**	**352**	P	P	18 08 20.7	-2.3
	0.9nm,0.4s,baz=304,slow=3.8,SNR=3.7						
ARCES	**ARCESS Array B**	**80.18**	**340**	P	P	18 11 25.8	-1.4
	1.4nm,1.1s,baz=104,slow=5.0,SNR=4.0						

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*IDC **22** 18:01:15.9±11.0, 48.93N×153.74E, h137^{km}±76^{km}, mb3.2/4, mb1 3.5/5, mb1mx3.2/20, mbtmp3.8/5, Error ellipse: s-maj=102.4km s-min=30.1km az=64.0*

*MOS **22** 18:01:16.6±1.7, 48.82N×153.68E, h159^{km}, mb4.0/1, Error ellipse: s-maj=40.2km s-min=21.3km az=64.8*

*BJI **22** 18:01:17.3, 48.74N×153.89E, h186^{km}, mB4.7, mb4.4*

*NEIC **22** 18:01:19.3±2.6, 48.83N×153.70E, h168^{km}±35^{km}, mb4.4/3, Error ellipse: s-maj=31.5km s-min=25.3km az=216.0*

ISC 22 18:01:16.4±1.2, **48.8N**±0.1×**153.7E**±0.2, **h158^{km}**±14^{km}, **n13, σ0^{s}88**/15, **mb3.4**/4, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.44**	**39**	*e*PN	**P**	**18 01 56.0**	**-1.7**
SKR				*e*S	**S**	**18 02 29.7**	**+0.3**
SKR				pmax	pmax		
	comp=Z,160nm,0.7s						
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				smax			
	comp=N,200nm,0.3s						
SKR				smax			
	comp=E,310nm,0.3s						
PET	**Petropavlovsk**	**5.25**	**35**	*e*PN	**P**	**18 02 36.1**	**+2.0**
PET				*e*S	**S**	**18 03 34.0**	**-0.3**
PET				pmax	pmax		
	comp=Z,25nm,0.5s						
PET				smax			
	comp=E,32nm,0.7s						
PET				smax			
	comp=N,43nm,0.5s						
PET	**Petropavlovsk**	**5.25**	**35**	*e*P	**P**	**18 02 35.8**	**+1.7**
	comp=N,14nm,0.4s						
ASAJ	**Asahikawa**	**8.99**	**243**	PN	**P**	**18 03 24.0**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**8.99**	**243**	P	**P**	**18 03 23.9**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=87,slow=12,SNR=13						
MDJ	**Mudanjiang**	**17.03**	**265**	P	**P**	**18 05 06.5**	**+0.2**
MDJ				AMB	AMB		
	comp=Z,40nm,5.3s						
MDJ	**Mudanjiang**	**17.03**	**265**	*e*P	**P**	**18 05 06.5**	**+0.3**
	comp=Z,6.7nm,0.7s						
YAK	**Yakutsk**	**18.85**	**324**	*e*P	**P**	**18 05 27.0**	**+0.7**
YAK				pmax	pmax		
	comp=Z,17nm,0.7s						
YAK	**Yakutsk**	**18.85**	**324**	*e*P	**P**	**18 05 27.0**	**+0.7**
	comp=Z,17nm,0.7s						
SONM	**Songino Array**	**31.08**	**286**	P	**P**	**18 07 20.4**	**-1.1**
	comp=Z,0.3nm,0.6s,mb3.2,baz=82,slow=8.7,SNR=5.6						
SONM				PcP	PcP	18 10 13.8	+0.7
	comp=Z,0.3nm,0.6s,baz=87,slow=1.5,SNR=3.8						
MKAR	**Makanchi Array**	**46.37**	**296**	P	**P**	**18 09 27.4**	**-0.7**
	comp=Z,1.1nm,0.7s,mb3.6,baz=63,slow=8.0,SNR=13						
CMAR	**Chiang Mai Arr**	**53.26**	**255**	P	**P**	**18 10 21.4**	**+0.5**
	comp=Z,2.1nm,0.8s,mb3.9,baz=31,slow=7.3,SNR=9.4						
WRA	**Warramunga Arr**	**70.59**	**199**	P	**P**	**18 12 16.3**	**0.0**
	comp=Z,0.2nm,0.6s,mb3.0,baz=16,slow=6.6,SNR=3.5						

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*NIED **22** 18:42:00, 42.10N×144.40E, h8^{km}, Mw4.8 Best double couple: M$_0$1.5×10^{16} NP1:φ$_s$216°, δ85°, λ163°. NP2:φ$_s$307°, δ73°, λ5°.*

*IDC **22** 18:42:15.8±0.6, 42.08N×144.32E, mb4.2/22, mb1 4.4/24, mb1mx4.4/27, mbtmp4.3/24, ML4.2/2, MS4.0/21, Ms1 4.0/21, ms1mx3.9/33, Error ellipse: s-maj=15.6km s-min=12.9km az=11.0*

*JMA **22** 18:42:18.8, 42.15N×144.39E, h26^{km}±2^{km}, M4.9*

JMA Felt II J1.

*BJI **22** 18:42:20.3, 42.16N×144.10E, h30^{km}, mB5.0, mb4.7, Ms4.5, Msz4.1*

*NEIC **22** 18:42:22.5±0.8, 42.16N×144.19E, h41^{km}±7^{km}, mb4.8/48, MS4.4/4, MW4.7(NIED), Error ellipse: s-maj=8.8km s-min=5.7km az=155.0*

NEIC Recorded [2 JMA] in the Kushiro and Obihiro areas.

*MOS **22** 18:42:23.3±0.9, 42.36N×144.02E, h51^{km}, mb4.9/47, MS4.3/19, Error ellipse: s-maj=12.1km s-min=5.4km az=114.3*

ISC 22 18:42:19.1±0.7, **42.15N**±0.03×**144.28E**±0.04, **h28^{km}**±4^{km}, **h32^{km}**±1.6^{km}**:pP-P, n231, σ1^{s}11**/236, **mb4.6**/90, **MS4.2**/45, **5C-8D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOB	**Onbets**	**0.82**	**337**	⇑P	**Pb**	**18 42 35.4**	**+0.8**
JCH	**Churui**	**0.82**	**304**	⇓P	**Pb**	**18 42 34.9**	**+0.3**
JCH				*e*S	**Sb**	**18 42 47.9**	**+2.5**
JEM	**Erimo**	**0.84**	**261**	⇓P	**Pb**	**18 42 35.2**	**+0.1**
JAK	**Akkeshi**	**0.90**	**20**	⇑P	**Pn**	**18 42 35.1**	**-0.8**
JAK				*e*S	**Sb**	**18 42 48.5**	**+1.0**
JNBK	**Urakawa-nobuka**	**1.14**	**277**	⇓P	**Pn**	**18 42 39.8**	**+0.4**
JNBK				*e*S	**Sn**	**18 42 55.9**	**+1.7**
JAR	**Ashorobuto**	**1.20**	**342**	⇓P	**Pn**	**18 42 40.4**	**+0.1**
JAR				*e*S	**Sn**	**18 42 56.8**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**2.21**	**31**	*e*PN	**Pn**	**18 42 53.5**	**-1.2**
YUK				*i* S	**Sn**	**18 43 20.6**	**-0.8**
YUK				pmax	pmax		
	comp=E,270nm,0.3s						
YUK				pmax	pmax		
	comp=Z,720nm,0.3s						
YUK				pmax	pmax		
	comp=N,350nm,0.4s						
YUK				pmax	pmax		
	comp=Z,2µm,1.0s						
YUK				smax			
	comp=N,8µm,0.5s						
YUK				smax			
	comp=E,4µm,0.5s						
YUK				smax			
	comp=E,36µm,1.0s						
YUK				smax			
	comp=N,24µm,0.5s						
YUK				MLR	MLR		
	comp=Z,8µm,13.0s						
ASAJ	**Asahikawa**	**2.32**	**328**	PN	**Pn**	**18 42 57.4**	**+1.2**
ASAJ						18 43 24.3	
ASAJ				pmax	pmax		
	comp=Z,39nm,0.3s						
ASAJ				smax			
	comp=N,297nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1µm,20.2s						
ASAJ	**Asahikawa**	**2.32**	**328**	Pn	**Pn**	**18 42 57.4**	**+1.2**
	comp=Z,39nm,0.3s,baz=195,slow=11,SNR=207						
ASAJ				Sn	**Sn**	**18 43 24.3**	**+0.2**
	comp=Z,297nm,0.3s,baz=220,slow=22,SNR=12						
ASAJ				Lg		18 43 31.2	
	comp=Z,263nm,0.3s,baz=75,slow=19,SNR=11						
ASAJ				LR	LR	18 43 53.9	
	comp=Z,1µm,20.2s,baz=151,slow=41						
YSS	**Yuzh-Sakhalins**	**4.92**	**348**	*e*PN	**Pn**	**18 43 34.1**	**+0.9**
YSS				*e*S	**Sn**	**18 44 29.0**	**-1.0**
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				pmax	pmax		
	comp=N,100nm,1.0s						
YSS				pmax	pmax		
	comp=Z,90nm,1.0s						
YSS				pmax	pmax		
	comp=E,60nm,0.9s						
YSS				smax			
	comp=N,290nm,0.8s						
YSS				smax			
	comp=E,200nm,0.8s						
YSS				MLR	MLR		
	comp=Z,2µm,11.0s						
YSS				MLR	MLR		
	comp=N,2µm,10.0s						
YSS				MLR	MLR		
	comp=E,2µm,13.0s						
YSS	**Yuzh-Sakhalins**	**4.92**	**348**	*e*P	**Pn**	**18 43 32.7**	**-0.5**
UGL	**Uglegorsk**	**7.10**	**348**	*e*PN	**Pn**	**18 44 03.0**	**-0.9**
UGL				*e*		18 45 25.0	
UGL				pmax	pmax		
	comp=Z,96nm,0.8s						
UGL				MLR	MLR		
	comp=N,2µm,19.0s						
UGL				MLR	MLR		
	comp=Z,1µm,19.0s						
UGL				MLR	MLR		
	comp=E,4µm,16.0s						
MAJO	**Matsushiro**	**7.31**	**222**	*e*PN	**Pn**	**18 44 05.4**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,29nm,0.6s						
MAJO	**Matsushiro**	**7.31**	**222**	*e*P	**Pn**	**18 44 05.4**	**-1.5**
	comp=Z,29nm,0.6s						
MAT	**Matsushiro**	**7.31**	**222**	*e*PN	**Pn**	**18 44 06.0**	**-0.9**
MAT				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MAT	**Matsushiro**	**7.31**	**222**	*e*P	**Pn**	**18 44 06.0**	**-0.9**
	comp=Z,7.5nm,0.7s						
MAT				*e*S	**Sn**	**18 45 29.0**	**-0.9**
MAT	**Matsushiro**	**7.31**	**222**	P	**Pn**	**18 44 05.2**	**-1.7**
MAT				S	**Sn**	**18 45 28.9**	**-1.0**
JHJ	**Hachijo jima 2**	**9.70**	**203**	Pn	**P**	**18 44 35.8**	**-4.1**
	comp=Z,7.9nm,0.3s,baz=66,slow=19,SNR=4.1						
JHJ				Sn	**Sn**	**18 46 17.1**	**-12**
	comp=Z,17nm,0.3s,baz=73,slow=19,SNR=5.0						
JHJ				LR	LR	18 49 13.3	
	comp=Z,1µm,18.2s,baz=97,slow=43						
MDJ	**Mudanjiang**	**10.97**	**288**	P	**P**	**18 44 57.4**	**+0.1**
MDJ				AP		18 44 59.5	
MDJ				S	**S**	**18 46 58.0**	**-2.1**
MDJ				PCS		18 54 27.1	
MDJ				SCS	ScS	18 57 59.4	+1.7
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,40nm,3.5s						
MDJ				LR	LR		
	comp=N,720nm,12.3s						
MDJ				LR	LR		
	comp=E,170nm,12.0s						
MDJ				LR	LR		
	comp=Z,500nm,13.2s						
MDJ	**Mudanjiang**	**10.97**	**288**	*e*P	**P**	**18 44 57.6**	**+0.3**
	comp=Z,21nm,0.9s						
KLR	**Kul'dur**	**11.25**	**313**	*e*PN	**P**	**18 45 00.0**	**-1.2**
KLR				MLR	MLR		
	comp=E,900nm,11.5s						
KLR				MLR	MLR		
	comp=Z,2µm,11.5s						
SKR	**Severo-Kuril's**	**11.80**	**40**	*e*PN	**P**	**18 45 06.0**	**-2.6**
SKR				*e*S	**S**	**18 47 28.0**	**+7.7**
SKR				pmax	pmax		
	comp=N,70nm,0.8s						
SKR				pmax	pmax		
	comp=E,70nm,0.8s						
SKR				pmax	pmax		
	comp=Z,120nm,0.8s						
SKR				pmax	pmax		
	comp=Z,500nm,2.0s						
SKR				pmax	pmax		
	comp=N,1µm,3.0s						
SKR				pmax	pmax		
	comp=E,1µm,3.0s						
SKR				smax			
	comp=E,2µm,8.0s						
SKR				MLR	MLR		
	comp=N,3µm,16.0s						
SKR				MLR	MLR		
	comp=E,3µm,16.0s						
SKR				MLR	MLR		
	comp=Z,3µm,16.0s						
JNU	**Nakatsue**	**13.91**	**234**	Pn	**P**	**18 45 37.6**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=112,slow=5.4,SNR=3.5						
JNU				LR	LR	18 51 17.6	
	comp=Z,748nm,20.4s,baz=24,slow=39						
PET	**Petropavlovsk**	**14.54**	**37**	*e*P		18 45 59.9	
PET				pmax	pmax		
	comp=Z,25nm,1.8s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
CBIJ	**Chichi jima**	**15.12**	**187**	LR	LR	18 50 46.4	
	comp=Z,234nm,19.3s,baz=4.0,slow=34						
SNY	**Shenyang**	**15.40**	**276**	⇑P	**P**	**18 45 55.5**	**-0.5**
SNY				AMB	AMB		
	comp=Z,10.0nm,1.0s						
SNY				AMB	AMB		
	comp=Z,110nm,11.4s						
SNY				LR	LR		
	comp=N,370nm,12.0s						
SNY				LR	LR		
	comp=E,590nm,15.6s						
SNY				LR	LR		
	comp=Z,610nm,13.8s						
DL2	**Dalian**	**17.51**	**267**	P	**P**	**18 46 21.3**	**-1.5**
DL2				*e*S	**S**	**18 49 34.9**	**+0.1**
DL2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
DL2				AMB	AMB		
	comp=Z,120nm,2.7s						
DL2				LR	LR		
	comp=N,300nm,13.9s						
DL2				LR	LR		
	comp=E,210nm,15.5s						
DL2				LR	LR		
	comp=Z,360nm,20.1s						
MA2	**Magadan**	**17.90**	**11**	*e*P	**P**	**18 46 25.4**	**-2.1**
MA2				*e*S	**S**	**18 49 38.3**	**-5.3**
MA2				pmax	pmax		
	comp=Z,20nm,1.3s						
MA2				MLR	MLR		
	comp=Z,400nm,20.0s						
HIA	**Hailar**	**18.50**	**301**	*e*P	**P**	**18 46 32.7**	**-2.4**
HIA				pmax	pmax		
	comp=Z,13nm,0.8s						
HIA	**Hailar**	**18.50**	**301**	*e*P	**P**	**18 46 32.7**	**-2.4**
	comp=Z,13nm,0.8s						
CLNS	**Chul'man**	**19.25**	**326**	*e*P	**P**	**18 46 41.4**	**-2.5**
CLNS				*e*S	**S**	**18 50 04.4**	**-10**
CLNS				pmax	pmax		
	comp=Z,23nm,0.8s						
CLNS				pmax	pmax		
	comp=N,10.0nm,1.0s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,15nm,0.6s						
CLNS				pmax	pmax		
	comp=N,19nm,0.8s						
CLNS				pmax	pmax		
	comp=E,22nm,0.9s						
CLNS				smax			
	comp=N,170nm,14.5s						
CLNS				smax			
	comp=Z,45nm,11.9s						
CLNS				smax			
	comp=E,55nm,11.7s						
CLNS				MLR	MLR		
	comp=Z,400nm,12.0s						
CLNS				MLR	MLR		
	comp=N,600nm,13.0s						
CLNS				MLR	MLR		
	comp=E,600nm,13.0s						
SEY	**Seymchan**	**21.36**	**10**	*e*P	**P**	**18 47 08.7**	**+2.6**
SEY				*e*		18 47 39.3	
SEY						18 50 58.7	
SEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
SEY				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.6						
SEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
SEY				MLR	MLR		
	comp=Z,600nm,17.0s,MS4.0						
SEY				MLR	MLR		
	comp=N,600nm,16.0s,MS4.2						
SEY				MLR	MLR		
	comp=E,500nm,14.0s,MS4.2						
SSE	**Sheshan**	**21.50**	**247**	P	**P**	**18 47 04.3**	**-3.5**
SSE				AP		18 47 12.4	
SSE				XP		18 47 16.6	
SSE				S	**S**	**18 51 01.0**	**+1.3**
SSE				XS		18 51 14.8	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,60nm,3.8s						
SSE				LR	LR		
	comp=N,380nm,20.9s,MS3.8						

SSE				LR	LR		
	comp=E,190nm,21.0s,MS3.8						
SSE				LR	LR		
	comp=Z,330nm,16.2s,MS3.8						
YAK	**Yakutsk**	**21.73**	**341**	*e*P	**P**	**18 47 05.5**	**-4.4**
YAK				*e*		18 47 24.2	
YAK				*e*S	**S**	**18 51 02.2**	**-1.6**
YAK				*e*		18 51 08.8	
YAK				*e*SSS	SSS	18 51 40.2	-16
YAK				*e*		18 58 27.3	
YAK				pmax	pmax		
	comp=N,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.4						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.4						
YAK				smax			
	comp=N,65nm,1.1s						
YAK				smax			
	comp=Z,20nm,1.0s						
YAK				smax			
	comp=E,60nm,1.1s						
YAK				MLR	MLR		
	comp=Z,245nm,13.0s,MS3.8						
YAK				MLR	MLR		
	comp=N,111nm,12.0s,MS3.9						
YAK				MLR	MLR		
	comp=E,272nm,13.0s,MS3.9						
YAK	**Yakutsk**	**21.73**	**341**	*e*P	**P**	**18 47 05.3**	**-4.6**
	comp=E,56nm,0.7s,mb5.1						
TIA	**Tai'an**	**21.82**	**263**	*e*P	**P**	**18 47 07.8**	**-3.1**
TIA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
FX1	**Attu Island--F**	**22.11**	**51**	*e*P	**P**	**18 47 14.4**	**+0.7**
CIT	**Chita**	**22.97**	**306**	*e*P	**P**	**18 47 23.3**	**+1.2**
CIT				*e*		18 51 31.2	
CIT				pmax	pmax		
	comp=Z,49nm,1.5s,mb4.7						
HHC	**Hu-ho-hao-te**	**24.46**	**278**	*e*P	**P**	**18 47 38.9**	**+2.2**
HHC				AP		18 47 48.6	
HHC				XP		18 47 52.1	
HHC				PP	PP	18 48 14.5	+2.0
HHC				PCP	PcP	18 51 21.4	+5.1
HHC				S	**S**	**18 51 53.3**	**+1.2**
HHC				XS		18 52 06.6	
HHC				SS	SS	18 52 49.4	+2.1
HHC				PCS		18 54 50.0	
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
HHC				AMB	AMB		
	comp=Z,120nm,6.9s						
HHC				LR	LR		
	comp=N,490nm,16.5s,MS4.2						
HHC				LR	LR		
	comp=E,400nm,19.2s,MS4.2						
HHC				LR	LR		
	comp=Z,460nm,19.6s,MS4.0						
BTO	**Baotou**	**25.66**	**278**	*e*P	**P**	**18 47 48.6**	**+0.6**
WHN	**Wuhan**	**26.61**	**254**	*e*P	**P**	**18 47 57.0**	**0.0**
WHN				LR	LR		
	comp=N,1µm,11.4s						
WHN				LR	LR		
	comp=E,350nm,8.4s						
WHN				LR	LR		
	comp=Z,1µm,15.3s,MS4.6						
ULN	**Ulaanbaatar**	**26.74**	**295**	*e*P	**P**	**18 47 57.3**	**-0.7**
ULN				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4						
ULN	**Ulaanbaatar**	**26.74**	**295**	*e*P	**P**	**18 47 57.3**	**-0.7**
	comp=Z,11nm,0.8s,mb4.5						
SONM	**Songino Array**	**27.19**	**295**	P	**P**	**18 48 01.8**	**-0.2**
	comp=Z,12nm,0.8s,mb4.5,baz=78,slow=8.3,SNR=73						
SONM				LR	LR	18 59 57.7	
	comp=Z,330nm,19.0s,MS3.9,baz=273,slow=39						
SONM	**Songino Array**	**27.19**	**295**	P	**P**	**18 48 01.8**	**-0.2**
SONM				LR	LR	18 59 57.7	
QZH	**Quanzhou**	**27.28**	**239**	*e*P	**P**	**18 48 05.3**	**+2.1**
QZH				S	**S**	**18 52 42.0**	**+3.0**
QZH				LR	LR		
	comp=N,1µm,15.5s,MS4.8						
QZH				LR	LR		
	comp=E,2µm,18.0s,MS4.8						
QZH				LR	LR		
	comp=Z,890nm,17.4s,MS4.4						
BILL	**Bilibino**	**28.49**	**17**	*e*P	**P**	**18 48 14.3**	**+0.6**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.0						
BILL				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.1						
IRK	**Irkutsk**	**28.66**	**304**	*e*P	**P**	**18 48 14.8**	**-0.5**
IRK				*e*		18 49 03.6	
IRK				pmax	pmax		
	comp=Z,26nm,1.4s,mb4.8						
XAN	**Xi'an**	**28.82**	**265**	P	**P**	**18 48 16.8**	**-0.1**
XAN				AP	pP	18 48 24.4	-0.7
TLY	**Talaya**	**29.01**	**303**	⇓*i*P	**P**	**18 48 17.7**	**-0.7**
TLY				*e*S	**S**	**18 52 55.9**	**-11**
TLY				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
TLY				MLR	MLR		
	comp=Z,168nm,13.0s,MS3.8						
TLY	**Talaya**	**29.01**	**303**	*e*P	**P**	**18 48 18.1**	**-0.3**
	comp=Z,13nm,1.0s,mb4.6						
ZAK	**Zakamensk**	**29.20**	**301**	*e*P	**P**	**18 48 19.3**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.6						
ENH	**Enshi**	**30.27**	**258**	*e*P	**P**	**18 48 28.9**	**-1.1**
	comp=Z,9.2nm,0.8s,mb4.6						
MOY	**Mondy**	**30.66**	**303**	*e*P	**P**	**18 48 33.1**	**0.0**
MOY				pmax	pmax		
	comp=Z,39nm,2.1s,mb4.9						
LZH	**Lanzhou**	**31.73**	**273**	P	**P**	**18 48 43.8**	**+1.1**
LZH				AP	pP	18 48 53.6	+2.7
LZH				XP	sP	18 48 57.4	+2.9
LZH				PP	PP	18 49 50.0	+1.9
LZH				S	**S**	**18 53 51.4**	**+1.9**
LZH				XS		18 54 08.0	
LZH				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,110nm,4.5s						
LZH				LR	LR		
	comp=E,920nm,16.4s						
LZH				LR	LR		
	comp=Z,800nm,17.6s,MS4.5						
GTA	**Gaotai**	**33.50**	**280**	*e*P	**P**	**18 48 58.4**	**+0.3**
GTA				AP	pP	18 49 07.8	+1.5
GTA				XP	sP	18 49 11.3	+1.4
GTA				PP	PP	18 50 10.8	+0.3
GTA				S	**S**	**18 54 18.8**	**+1.8**
GTA				XS		18 54 34.8	
GTA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GTA				AMB	AMB		
	comp=Z,50nm,6.5s						
GTA				LR	LR		
	comp=N,330nm,12.9s,MS4.4						
GTA				LR	LR		
	comp=E,380nm,14.4s,MS4.4						
GTA				LR	LR		
	comp=Z,450nm,16.0s,MS4.3						
CD2	**Chengdu**	**34.15**	**264**	P	**P**	**18 49 04.0**	**+0.2**
GYA	**Guiyang**	**34.48**	**255**	⇓*i*P	**P**	**18 49 05.9**	**-0.8**
GYA				AP	pP	18 49 15.6	+0.6
GYA				XP	sP	18 49 19.3	+0.8
GYA				PP	PP	18 50 20.4	-2.5
GYA				S	**S**	**18 54 29.8**	**-2.6**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,100nm,3.4s						
GYA				LR	LR		
	comp=N,310nm,16.4s,MS4.4						
GYA				LR	LR		
	comp=E,420nm,16.0s,MS4.4						
GYA				LR	LR		
	comp=Z,260nm,16.8s,MS4.0						
QIZ	**Qiongzhong**	**37.17**	**242**	P	**P**	**18 49 30.3**	**+0.8**
QIZ				*e*S	**S**	**18 55 15.5**	**+1.7**
QIZ				LR	LR		
	comp=N,450nm,17.2s,MS4.5						
QIZ				LR	LR		
	comp=E,460nm,18.3s,MS4.5						
QIZ				LR	LR		
	comp=Z,390nm,15.6s,MS4.3						
KMI	**Kunming**	**38.11**	**257**	P	**P**	**18 49 38.0**	**+0.6**
KMI				AP	pP	18 49 50.0	+4.3
KMI				S	**S**	**18 55 27.9**	**-0.2**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
KMI				AMB	AMB		
	comp=Z,140nm,3.3s						
KMI				LR	LR		
	comp=N,420nm,13.0s,MS4.5						
KMI				LR	LR		
	comp=E,320nm,12.6s,MS4.5						
KMI				LR	LR		
	comp=Z,410nm,15.0s,MS4.4						
ZAL	**Zalesovo**	**40.31**	**308**	P	**P**	**18 49 55.1**	**-0.4**
	comp=Z,5.6nm,0.8s,mb4.4,baz=24,slow=9.6,SNR=39						
ZAL				LR	LR	19 07 43.8	
	comp=Z,115nm,20.4s,MS3.7,baz=201,slow=38						
WMQ	**Urumqi**	**40.73**	**292**	*e*P	**P**	**18 49 59.6**	**+0.6**
WMQ				AP	pP	18 50 09.4	+2.1
WMQ				XP	sP	18 50 13.4	+2.6
WMQ				PP	PP	18 51 37.3	+1.3
WMQ				PCP	PcP	18 52 01.9	+1.2
WMQ				*e*S	**S**	**18 56 06.8**	**-0.6**
WMQ				SS	SS	18 59 02.4	-1.3
WMQ				SCS	ScS	19 00 00.5	+0.3
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
WMQ				AMB	AMB		
	comp=Z,120nm,5.4s						
WMQ				LR	LR		
	comp=N,350nm,17.0s,MS4.3						
WMQ				LR	LR		
	comp=E,200nm,17.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,300nm,17.2s,MS4.2						
NVS	**Novosibirsk**	**41.09**	**310**	⇑*i*P	**P**	**18 49 59.9**	**-1.9**
NVS				*e*S	**S**	**18 56 07.4**	**-5.2**
NVS				pmax	pmax		
	comp=Z,41nm,2.2s,mb4.7						
NVS				pmax	pmax		
	comp=E,24nm,1.6s						
NVS				smax			
	comp=N,9.0nm,1.9s						
NVS				smax			
	comp=E,14nm,1.9s						
IMA	**Indian Mountai**	**41.18**	**33**	*e*P	**P**	**18 50 03.0**	**+0.6**
IMA				pmax	pmax		
	comp=Z,106nm,0.8s,mb5.5						
IMA	**Indian Mountai**	**41.18**	**33**	*e*P	**P**	**18 50 03.0**	**+0.6**
	comp=Z,106nm,0.8s,mb5.5						
RSO	**Redoubt South**	**41.56**	**42**	*e*P	**P**	**18 50 09.1**	**+3.6**
KDAK	**Kodiak Island**	**41.88**	**46**	*e*P	**P**	**18 50 07.5**	**-0.6**
	comp=Z,26nm,0.9s,mb4.9						
MKAR	**Makanchi Array**	**43.47**	**298**	P	**P**	**18 50 20.9**	**-0.3**
	comp=Z,7.2nm,0.8s,mb4.5,baz=81,slow=9.0,SNR=60						
MKAR				LR	LR	19 07 41.5	
	comp=Z,192nm,18.0s,MS4.0,baz=84,slow=35						
MKAR	**Makanchi Array**	**43.47**	**298**	P	**P**	**18 50 20.9**	**-0.3**
MKAR				LR	LR	19 07 41.5	
NANT	**Nan**	**43.57**	**251**	⇑P	**P**	**18 50 21.0**	**-1.5**
	comp=Z,135nm,0.9s,mb5.7						
KKTK	**Khon Kaen**	**43.78**	**247**	P	**P**	**18 50 25.5**	**+1.4**
ILAR	**Eielson Array**	**44.01**	**35**	P	**P**	**18 50 25.2**	**-0.3**
	comp=Z,14nm,1.2s,mb4.6,baz=259,slow=6.2,SNR=24						
LSA	**Lhasa**	**44.13**	**271**	P	**P**	**18 50 28.6**	**+1.8**
LSA	**Lhasa**	**44.13**	**271**	*e*P	**P**	**18 50 27.2**	**+0.4**
LSA				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.7						
LSA	**Lhasa**	**44.13**	**271**	*e*P	**P**	**18 50 27.2**	**+0.3**
	comp=Z,16nm,1.1s,mb4.7						
CMAR	**Chiang Mai Arr**	**45.04**	**253**	P	**P**	**18 50 34.9**	**+0.6**
	comp=Z,3.6nm,0.8s,mb4.2,baz=48,slow=6.8,SNR=19						
CMAR				LR	LR	19 10 43.0	
	comp=Z,177nm,19.9s,MS4.0,baz=65,slow=38						
SHL	**Shillong**	**45.83**	**266**	*e*P	**P**	**18 50 40.0**	**-0.5**
VOSK	**Vostochnaya**	**48.65**	**309**	P	**P**	**18 51 01.3**	**-0.9**
VOSK				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
INK	**Inuvik**	**48.84**	**29**	*e*P	**P**	**18 51 05.5**	**+2.1**
INK				pmax	pmax		
	comp=Z,20nm,1.0s						
INK	**Inuvik**	**48.84**	**29**	P	**P**	**18 51 03.2**	**-0.2**
	comp=Z,5.3nm,0.5s,mb4.8,baz=319,slow=4.8,SNR=7.1						
INK	**Inuvik**	**48.84**	**29**	*e*P	**P**	**18 51 05.5**	**+2.0**
	comp=Z,20nm,1.0s,mb5.1						
BVA0	**Borovoye Array**	**48.89**	**310**	*i* P	**P**	**18 51 02.7**	**-1.4**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
BVAR	**Borovoye Array**	**48.89**	**310**	P	**P**	**18 51 03.6**	**-0.5**
	comp=Z,4.5nm,0.5s,mb4.8,baz=78,slow=9.1,SNR=26						
GUN	**Gumba**	**48.99**	**273**	*e*P	**P**	**18 51 05.6**	**+0.4**
	comp=Z,46nm,0.6s,mb5.7						
TKM2	**Tokmak 2**	**49.29**	**295**	P	**P**	**18 51 06.9**	**-0.3**
	SNR=16						
KKN	**Kakani**	**49.50**	**273**	*e*P	**P**	**18 51 09.0**	**-0.1**
	comp=Z,19nm,0.7s,mb5.2						
KKN	**Kakani**	**49.50**	**273**	*e*P	**P**	**18 51 09.0**	**-0.1**
KKN				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
PKI	**Pulchoki**	**49.53**	**273**	*e*P	**P**	**18 51 09.3**	**0.0**
	comp=Z,16nm,0.6s,mb5.2						
PKI	**Pulchoki**	**49.53**	**273**	*e*P	**P**	**18 51 09.3**	**0.0**
PKI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
ZRNK	**Zerenda**	**49.71**	**310**	*e*P	**P**	**18 51 09.9**	**-0.4**
ZRNK				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
ZRNK	**Zerenda**	**49.71**	**310**	*e*P	**P**	**18 51 09.8**	**-0.5**
	comp=Z,16nm,0.9s,mb5.1						
DMN	**Daman**	**49.73**	**273**	*e*P	**P**	**18 51 10.0**	**-0.9**
	comp=Z,27nm,0.8s,mb5.3						
KBK	**Karagaybulak**	**49.83**	**295**	P	**P**	**18 51 11.7**	**+0.2**
	SNR=5.9						
GKN	**Gorkha**	**49.86**	**274**	*e*P	**P**	**18 51 11.9**	**0.0**
	comp=Z,25nm,0.8s,mb5.3						
KZA	**Kyzart**	**49.87**	**295**	P	**P**	**18 51 12.9**	**+1.1**
	SNR=8.6						
AAK	**Ala-Archa**	**50.15**	**296**	*i* P	**P**	**18 51 12.9**	**-1.0**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
AAK				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.4						
EKS2	**Erkin-Say**	**50.61**	**296**	P	**P**	**18 51 17.2**	**-0.2**
	SNR=6.4						
KOLN	**Koldanda**	**50.76**	**274**	*e*P	**P**	**18 51 18.3**	**-0.4**
AML	**Almayashu**	**50.90**	**295**	P	**P**	**18 51 20.4**	**+0.8**
	SNR=6.3						
LGTI	**Lohaghat**	**52.33**	**278**	*e*P	**P**	**18 51 35.0**	**+4.4**
SVE	**Sverdlovsk**	**52.86**	**317**	*e*P	**P**	**18 51 32.0**	**-2.2**
SVE				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
DLBC	**Dease Lake**	**53.27**	**41**	P	**P**	**18 51 38.1**	**+0.9**
	comp=Z,1.1nm,0.3s,mb4.2,baz=215,slow=8.8,SNR=3.2						
SMLA	**Simla**	**53.70**	**281**	*i* P	**P**	**18 51 37.4**	**-3.3**
ARU	**Arti**	**54.07**	**317**	⇓*i*P	**P**	**18 51 41.7**	**-1.3**
ARU				*e*		18 52 47.2	
ARU				*e*		18 53 41.5	
ARU				*e*S	**S**	**18 59 13.5**	**-2.4**
ARU				*e*SS	SS	19 02 53.3	-3.7
ARU				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
ARU				MLR	MLR		
	comp=N,200nm,16.0s,MS4.5						
ARU				MLR	MLR		
	comp=E,300nm,16.0s,MS4.5						
ARU				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.5						
ARU	**Arti**	**54.07**	**317**	*e*P	**P**	**18 51 41.3**	**-1.7**
	comp=Z,12nm,0.6s,mb5.0						
KBS	**Kingsbay**	**56.00**	**350**	AMS	AMS	19 18 00.3	
	comp=Z,51nm,19.9s,MS3.6						
AB31	**Akbulak array**	**56.41**	**308**	P	**P**	**18 51 58.9**	**-1.3**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
RES	**Resolute Bay**	**57.09**	**16**	*e*P	**P**	**18 52 03.8**	**-0.9**
RES				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
RES	**Resolute Bay**	**57.09**	**16**	*e*P	**P**	**18 52 03.8**	**-0.9**
	comp=Z,7.6nm,0.7s,mb4.8						
YKA	**Yellowknife Ar**	**58.29**	**32**	P	**P**	**18 52 13.2**	**0.0**
	comp=Z,0.9nm,0.6s,mb4.0,baz=308,slow=7.5,SNR=4.4						
YKA				LR	LR	19 18 55.0	
	comp=Z,87nm,18.8s,MS3.9,baz=265,slow=38						
YKA	**Yellowknife Ar**	**58.29**	**32**	P	**P**	**18 52 13.2**	**0.0**
YKA				LR	LR	19 18 55.0	
KEV	**Kevo**	**59.45**	**339**	*e*p	**P**	**18 52 19.3**	**-2.0**
	comp=Z,13nm,0.8s,mb5.0						
KEV	**Kevo**	**59.45**	**339**	*e*P	**P**	**18 52 19.3**	**-2.0**
KEV				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
ARCES	**ARCESS Array B**	**60.00**	**339**	P	**P**	**18 52 25.7**	**+0.7**
	comp=Z,2.3nm,0.9s,mb4.2,baz=22,slow=6.5,SNR=6.0						
ARCES				LR	LR	19 22 54.8	
	comp=Z,178nm,18.7s,MS4.2,baz=188,slow=41						
TRO	**Tromso**	**61.60**	**341**	*e*P	**P**	**18 52 34.0**	**-1.9**
TRO				AMS	AMS	19 24 43.9	
	comp=Z,137nm,18.4s,MS4.1						
WRA	**Warramunga Arr**	**62.46**	**191**	P	**P**	**18 52 40.0**	**-2.3**
	comp=Z,2.0nm,1.0s,mb4.2,baz=8.6,slow=7.2,SNR=8.9						
MOS	**Moscow**	**64.48**	**323**	*e*P	**P**	**18 52 54.0**	**-0.9**
KAF	**Kangasniemi**	**64.78**	**333**	*e*p	**P**	**18 52 54.8**	**-2.0**
	comp=Z,3.8nm,0.6s,mb4.6,baz=45,slow=6.3						
KAF	**Kangasniemi**	**64.78**	**333**	*e*P	**P**	**18 52 54.8**	**-2.0**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
OBN	**Obninsk**	**65.34**	**323**	⇓*i*P	**P**	**18 52 59.9**	**-0.6**
OBN				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.0						
OBN				MLR	MLR		
	comp=Z,200nm,14.0s,MS4.5						
JMIC	**Jan Mayen**	**65.48**	**351**	AMS	AMS	19 25 16.8	
	comp=Z,43nm,18.1s,MS3.7						
YBH	**Yreka Blue Hor**	**65.53**	**55**	P	**P**	**18 53 02.7**	**+0.7**
YBH				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YBH	**Yreka Blue Hor**	**65.53**	**55**	P	**P**	**18 53 02.7**	**+0.7**
	comp=Z,1.1nm,0.5s,mb4.2,baz=314,slow=4.4,SNR=5.1						
YBH	**Yreka Blue Hor**	**65.53**	**55**	*e*P	**P**	**18 53 01.5**	**-0.5**
	comp=Z,3.3nm,0.9s,mb4.4						
SUMG	**Summit**	**65.56**	**1**	*e*P	**P**	**18 53 01.8**	**+0.1**
	comp=Z,24nm,0.9s,mb5.2						
FFC	**Flin Flon**	**68.23**	**35**	*e*P	**P**	**18 53 18.2**	**-0.6**
FFC				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
FFC	**Flin Flon**	**68.23**	**35**	*e*P	**P**	**18 53 18.2**	**-0.6**
	comp=Z,9.4nm,0.9s,mb4.8						
KIV	**Kislovodsk**	**69.23**	**311**	*i* P	**P**	**18 53 25.6**	**+0.4**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
KIV				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.5						
KIV	**Kislovodsk**	**69.23**	**311**	P	**P**	**18 53 26.2**	**+1.0**
	comp=Z,27nm,0.8s,mb5.2						
NVAR	**Mina Array Bea**	**70.22**	**56**	P	**P**	**18 53 30.3**	**-1.0**
	comp=Z,2.1nm,0.7s,mb4.2,baz=304,slow=5.1,SNR=7.8						
MNV	**Mina**	**70.31**	**56**	P	**P**	**18 53 34.5**	**+2.6**
MNV				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
MNV	**Mina**	**70.31**	**56**	P	**P**	**18 53 34.5**	**+2.7**
	comp=Z,3.7nm,0.9s,mb4.3						
NB2	**NORSAR Subarra**	**70.31**	**338**	P	**P**	**18 53 29.9**	**-1.6**
	comp=Z,3.4nm,1.0s,mb4.2,baz=34,slow=6.2						
NB2	**NORSAR Subarra**	**70.31**	**338**	P	**P**	**18 53 29.9**	**-1.6**
	baz=34,slow=6.5						
NOA	**NORSAR Array B**	**70.31**	**338**	P	**P**	**18 53 30.2**	**-1.3**
	comp=Z,0.6nm,0.4s,mb3.9,baz=46,slow=5.5,SNR=7.8						
NOA				LR	LR	19 28 43.0	
	comp=Z,117nm,18.1s,MS4.2,baz=35,slow=40						
GNI	**Garni**	**70.43**	**307**	*i* P	**P**	**18 53 33.7**	**+1.1**
GNI				pmax	pmax		
	comp=Z,18nm,1.5s						
ELK	**Elko**	**70.61**	**52**	P	**P**	**18 53 32.0**	**-1.7**
	comp=Z,0.3nm,0.3s,mb3.6,baz=165,slow=20,SNR=2.7						
RRI2	**Red Ridge**	**71.19**	**48**	*e*P	**P**	**18 53 39.4**	**+2.3**
	comp=Z,11nm,1.0s,mb4.8						
TPAW	**Teton Pass**	**71.30**	**48**	P	**P**	**18 53 41.0**	**+3.1**
	comp=Z,9.4nm,1.0s,mb4.7						
ANN	**Anapa**	**71.57**	**314**	*e*P	**P**	**18 53 41.6**	**+2.2**
ANN				*i* *PP	pP	18 53 51.6	+3.5
ANN				*e*S	S	19 02 59.8	+4.4
ANN				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.5						
ANN				MLR	MLR		
	comp=Z,287nm,18.0s,MS4.6						
AKASG	**Malin Array Be**	**71.59**	**323**	P	**P**	**18 53 38.0**	**-1.5**
	comp=Z,1.9nm,0.6s,mb4.2,baz=41,slow=6.0,SNR=10						
BER	**Bergen**	**72.44**	**340**	AMS	AMS	19 28 46.1	
	comp=Z,138nm,19.3s,MS4.2						
PDAR	**Pinedale Array**	**72.55**	**48**	P	**P**	**18 53 43.8**	**-1.4**
	comp=Z,0.5nm,0.5s,mb3.7,baz=243,slow=3.3,SNR=5.4						
PDAR				LR	LR	19 24 42.0	
	comp=Z,48nm,20.1s,MS3.8,baz=162,slow=35						
STKA	**Stephens Creek**	**73.71**	**182**	LR	LR	19 26 25.5	
	comp=Z,131nm,19.4s,MS4.2,baz=24,slow=36						
OJC	**Ojcow**	**76.00**	**327**	*e*P	**P**	**18 54 05.1**	**+0.1**
RW3	**Ridgway**	**76.65**	**50**	*e*P	**P**	**18 54 14.5**	**+5.6**
OKC	**Ostrava-Krasne**	**76.96**	**328**	*e*P	**P**	**18 54 08.6**	**-1.7**
OKC				AMS	AMS	19 29 30.0	
	comp=Z,200nm,16.1s						
BRTR	**Keskin Array B**	**77.09**	**312**	P	**P**	**18 54 10.4**	**-0.9**
	comp=Z,0.8nm,1.0s,mb3.6,baz=18,slow=4.6,SNR=3.0						
MORC	**Moravsky Berou**	**77.25**	**328**	*e*P	**P**	**18 54 12.6**	**+0.7**
MORC				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MORC	**Moravsky Berou**	**77.25**	**328**	*e*P	**P**	**18 54 12.6**	**+0.7**
	comp=Z,5.2nm,0.9s,mb4.5						
UPC	**Upice**	**77.26**	**329**	*e*P	**P**	**18 54 14.9**	**+2.9**
DPC	**Dobruska-Polom**	**77.27**	**329**	*e*P	**P**	**18 54 12.8**	**+0.8**
DPC				AMS	AMS	19 29 30.0	
	comp=Z,200nm,20.9s						
CLL	**Collm**	**77.73**	**331**	P	**P**	**18 54 14.0**	**-0.5**
CLL				*e**SP	sP	18 54 32.0	+5.7
BRG	**Berggiesshubel**	**77.74**	**330**	*e*P	pP	18 54 23.7	+0.3
BRG				*e*	sP	18 54 30.7	+4.3
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BRG				MLR	MLR		
	comp=Z,250nm,18.5s,MS4.6						
BRG	**Berggiesshubel**	**77.74**	**330**	*e*P	pP	18 54 23.7	+0.2
	comp=Z,3.2nm,0.9s						
BRG				*e*	sP	18 54 30.7	+4.2
BRG				LR	LR		
	comp=Z,250nm,18.5s,MS4.6						
PVCC	**Panska Ves**	**77.79**	**330**	*e*P	**P**	**18 54 15.4**	**+0.5**
PVCC				AMS	AMS	19 32 50.0	
	comp=Z,300nm,15.3s						
PRU	**Pruhonice**	**78.24**	**330**	*e*P	**P**	**18 54 18.1**	**+0.7**
PRU				AMS	AMS	19 33 00.0	
	comp=Z,300nm,15.8s						
MOX	**Moxa**	**78.77**	**331**	*e*P	**P**	**18 54 20.0**	**-0.3**
MOX				MLR	MLR		
	comp=Z,200nm,22.0s,MS4.4						
NKC	**Novy Kostel**	**78.81**	**331**	AMS	AMS	19 32 10.0	
	comp=Z,200nm,22.7s						
KHC	**Kasperske Hory**	**79.30**	**330**	*e*P	**P**	**18 54 23.9**	**+0.7**
KHC				*e*	pP	18 54 32.0	-0.1
KHC				MLR	MLR		
	comp=Z,300nm,13.9s,MS4.8						
KHC	**Kasperske Hory**	**79.30**	**330**	*e*P	**P**	**18 54 23.9**	**+0.7**
KHC				x	x	18 54 32.0	
KHC				AMS	AMS	19 33 30.0	
	comp=Z,300nm,13.9s						
GERES	**GERESS Array B**	**79.49**	**329**	P	**P**	**18 54 24.2**	**0.0**
	comp=Z,0.7nm,0.5s,mb3.9,baz=27,slow=3.0,SNR=9.7						
GERES				LR	LR	19 32 44.4	
	comp=Z,244nm,19.6s,MS4.5,baz=28,slow=38						
ANMO	**Albuquerque**	**79.64**	**52**	P	**P**	**18 54 25.7**	**+0.4**
	comp=Z,0.8nm,0.4s,mb4.0,baz=357,slow=12,SNR=2.7						
GRA1	**Grafenberg Arr**	**79.70**	**331**	*e*P	**P**	**18 54 25.9**	**+0.5**
	comp=Z,7.0nm,1.1s,mb4.5						
GRF	**Grafenberg Arr**	**79.70**	**331**	*e*P	**P**	**18 54 25.9**	**+0.5**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
GRF	**Grafenberg Arr**	**79.70**	**331**	*e*P	**P**	**18 54 25.9**	**+0.5**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
GRF	**Grafenberg Arr**	**79.70**	**331**	*e*P	**P**	**18 54 25.9**	**+0.5**
	comp=Z,7.0nm,1.1s,mb4.5						
SCHQ	**Schefferville**	**79.81**	**18**	P	**P**	**18 54 25.9**	**+0.1**
	comp=Z,2.2nm,0.7s,mb4.2,baz=354,slow=5.1,SNR=4.1						
SCHQ				LR	LR	19 34 27.1	
	comp=Z,82nm,18.7s,MS4.1,baz=244,slow=39						
ASF	**Jabal al Asfar**	**80.45**	**305**	LR	LR	19 36 13.5	
	comp=Z,84nm,18.6s,MS4.1,baz=271,slow=40						

GIVF	**Givet**	**81.51**	**335**	*e*P	**P**	**18 54 34.8**	**-0.1**
CDF	**Champ du Feu**	**82.17**	**333**	*e*P	**P**	**18 54 38.6**	**+0.2**
DAVOX	**Davos**	**82.64**	**330**	LR	LR	19 33 44.4	
	comp=Z,255nm,19.3s,MS4.6,baz=166,slow=37						
EIL	**Elat**	**83.39**	**304**	LR	LR	19 36 22.8	
	comp=Z,103nm,18.1s,MS4.2,baz=299,slow=39						
FLN	**La Foliniere**	**84.29**	**337**	*e*P	**P**	**18 54 49.2**	**0.0**
FLN				*e*R			
	comp=Z,205nm,22.0s						
LOR	**Lormes**	**84.30**	**334**	*e*P	**P**	**18 54 49.4**	**+0.2**
	comp=Z,11nm,0.9s,mb4.7						
LOR				*e*R			
	comp=Z,261nm,23.0s						
LOR	**Lormes**	**84.30**	**334**	*e*P	**P**	**18 54 49.4**	**+0.2**
LOR				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
LOR				MLR	MLR		
	comp=Z,260nm,23.0s,MS4.5						
LDF	**La Druitiere**	**84.34**	**337**	*e*P	**P**	**18 54 50.0**	**+0.6**
GRR	**Gorron**	**84.74**	**338**	*e*P	**P**	**18 54 52.3**	**+0.9**
	comp=Z,5.0nm,0.6s,mb4.5						
GRR	**Gorron**	**84.74**	**338**	*e*P	**P**	**18 54 52.3**	**+0.9**
GRR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
LPL	**La Plagne**	**84.85**	**332**	*e*P	**P**	**18 54 53.2**	**+1.2**
	comp=Z,12nm,1.0s,mb4.7						
LPL	**La Plagne**	**84.85**	**332**	*e*P	**P**	**18 54 53.2**	**+1.2**
LPL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
SMF	**Signal de Mont**	**84.86**	**334**	*e*P	**P**	**18 54 52.3**	**+0.3**
LPG	**La Plagne**	**84.86**	**332**	*e*P	**P**	**18 54 53.2**	**+1.1**
	comp=Z,18nm,1.0s,mb4.8						
LPG	**La Plagne**	**84.86**	**332**	*e*P	**P**	**18 54 53.2**	**+1.1**
LPG				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
AVF	**Avril sur Loir**	**84.89**	**334**	*e*P	**P**	**18 54 52.6**	**+0.4**
	comp=Z,8.2nm,0.7s,mb4.7						
AVF	**Avril sur Loir**	**84.89**	**334**	*e*P	**P**	**18 54 52.6**	**+0.4**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
PPT	**Papeete**	**85.05**	**119**	LR	LR	19 24 53.2	
	comp=Z,174nm,20.5s,MS4.4,baz=325,slow=30						
SADO	**Sadowa**	**85.15**	**29**	LR	LR	19 37 48.8	
	comp=Z,82nm,18.5s,MS4.2,baz=325,slow=39						
BNI	**Bardonecchia**	**85.27**	**331**	*e*P	**P**	**18 54 55.1**	**+0.9**
BNI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
BNI	**Bardonecchia**	**85.27**	**331**	*e*P	**P**	**18 54 55.0**	**+0.9**
	comp=Z,4.6nm,0.9s,mb4.6						
TXAR	**Lajitas Array**	**85.29**	**54**	P	**P**	**18 54 54.8**	**+0.1**
	comp=Z,1.1nm,0.8s,mb4.1,baz=270,slow=2.5,SNR=7.3						
TXAR				LR	LR	19 28 54.3	
	comp=Z,45nm,19.5s,MS3.9,baz=190,slow=33						
SGMF	**Saint Gilles**	**85.33**	**338**	*e*P	**P**	**18 54 55.2**	**+0.8**
	comp=Z,15nm,1.0s,mb4.8						
SGMF	**Saint Gilles**	**85.33**	**338**	*e*P	**P**	**18 54 55.2**	**+0.8**
SGMF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
ROSF	**Rostrenen**	**85.45**	**339**	*e*P	**P**	**18 54 54.8**	**-0.2**
MBDF	**Montbardon**	**85.52**	**331**	*e*P	**P**	**18 54 55.8**	**+0.4**
	comp=Z,3.6nm,0.5s,mb4.5						
MBDF	**Montbardon**	**85.52**	**331**	*e*P	**P**	**18 54 55.8**	**+0.4**
MBDF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.6						
ORIF	**Oris-en-Rattie**	**85.67**	**332**	*e*P	**P**	**18 54 57.0**	**+0.9**
	comp=Z,4.2nm,0.5s,mb4.6						
ORIF				*e*R			
	comp=Z,258nm,21.0s						
TCF	**Toulx Ste Croi**	**85.70**	**335**	*e*P	**P**	**18 54 57.0**	**+0.8**
QUIF	**Quistinic**	**85.81**	**339**	*e*P	**P**	**18 54 57.1**	**+0.4**
SBF	**Sospel**	**86.03**	**330**	*e*P	**P**	**18 54 57.9**	**0.0**
	comp=Z,17nm,0.8s,mb5.0						
SBF	**Sospel**	**86.03**	**330**	*e*P	**P**	**18 54 57.9**	**0.0**
SBF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
MFF	**Saint Martin d**	**86.14**	**336**	*e*P	**P**	**18 54 59.2**	**+0.8**
	comp=Z,6.1nm,0.7s,mb4.6						
MFF	**Saint Martin d**	**86.14**	**336**	*e*P	**P**	**18 54 59.2**	**+0.8**
MFF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
VIVF	**Saint-Julien-l**	**86.15**	**332**	*e*P	**P**	**18 54 59.3**	**+0.8**
	comp=Z,12nm,0.9s,mb4.8						
VIVF	**Saint-Julien-l**	**86.15**	**332**	*e*P	**P**	**18 54 59.3**	**+0.8**
VIVF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.8						
PGF	**Pioggiola**	**86.56**	**329**	*e*P	**P**	**18 55 00.6**	**0.0**
	comp=Z,4.4nm,0.8s,mb4.4						
PGF	**Pioggiola**	**86.56**	**329**	*e*P	**P**	**18 55 00.6**	**0.0**
PGF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
FRF	**La Foret Royal**	**86.58**	**331**	*e*P	**P**	**18 55 00.6**	**0.0**
	comp=Z,12nm,1.0s,mb4.8						
FRF	**La Foret Royal**	**86.58**	**331**	*e*P	**P**	**18 55 00.6**	**0.0**
FRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.8						
SMRF	**Simiane la Rot**	**86.60**	**331**	*e*P	**P**	**18 55 01.6**	**+0.8**
RJF	**Les Rejaudoux**	**86.80**	**335**	*e*P	**P**	**18 55 02.6**	**+0.9**
	comp=Z,7.8nm,0.8s,mb4.7						
RJF				*e*R			
	comp=Z,247nm,22.2s						
RJF	**Les Rejaudoux**	**86.80**	**335**	*e*P	**P**	**18 55 02.6**	**+0.9**
RJF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
RJF				MLR	MLR		
	comp=Z,250nm,22.3s,MS4.6						
LMR	**La Mourre**	**86.82**	**331**	*e*P	**P**	**18 55 02.0**	**+0.2**
	comp=Z,18nm,1.0s,mb5.0						
LMR	**La Mourre**	**86.82**	**331**	*e*P	**P**	**18 55 02.0**	**+0.2**
LMR				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
CAF	**Calviac**	**86.96**	**334**	*e*P	**P**	**18 55 03.8**	**+1.3**
	comp=Z,23nm,1.1s,mb5.0						
CAF	**Calviac**	**86.96**	**334**	*e*P	**P**	**18 55 03.8**	**+1.3**
CAF				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.0						
LASF	**Ste Croix**	**87.11**	**333**	*e*P	**P**	**18 55 04.3**	**+1.1**
	comp=Z,21nm,1.3s,mb4.9						
LFF	**La Frestale**	**87.37**	**335**	*e*P	**P**	**18 55 05.6**	**+1.2**
MTLF	**Montolieu**	**88.31**	**333**	*e*P	**P**	**18 55 09.3**	**+0.3**
TBI	**Tubuai**	**89.33**	**123**	*e*P	**P**	**18 54 58.7**	**-16**
	comp=Z,78nm,45.5s						
TBI				*e*PP	PP	18 57 41.7	-66
	comp=Z,48nm,45.2s						
TBI				*e*SS	SS	19 11 13.6	-45
	comp=Z,63nm,37.8s						
TBI				*e*LR	LR	19 22 53.1	
	comp=Z,132nm,36.0s						
ETSF	**Etsaut**	**89.61**	**335**	*e*P	**P**	**18 55 16.4**	**+1.2**
	comp=Z,6.1nm,0.9s,mb4.7						
ETSF	**Etsaut**	**89.61**	**335**	*e*P	**P**	**18 55 16.4**	**+1.2**
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
SNAA	**Sanae**	**146.29**	**198**	*e*PKP2	PKPab	19 01 57.1	-1.5
VNA2	**Neumayer--Watz**	**147.85**	**197**	P	PKPdf	19 02 05.1	+3.0
VNA2	**Neumayer--Watz**	**147.85**	**197**		PKPdf	19 02 08.5	+6.4
VNA2	**Neumayer--Watz**	**147.85**	**197**		PKPdf	19 02 13.4	+11
VNA2	**Neumayer--Watz**	**147.85**	**197**		PKPdf	19 02 20.0	+18
VNA3	**Neumayer Olymp**	**148.08**	**196**	P	PKPdf	19 02 03.8	+1.4
VNA3	**Neumayer Olymp**	**148.08**	**196**		PKPdf	19 02 06.5	+4.1
VNA3	**Neumayer Olymp**	**148.08**	**196**		PKPdf	19 02 10.0	+7.6
BDFB	**Brasilia**	**151.54**	**25**	PKPbc	PKPdf	19 02 12.2	+2.8
	comp=Z,1.5nm,0.3s,baz=3.0,slow=18,SNR=3.3						
BDFB				PKPab	PKPab	19 02 20.8	-0.8
	comp=Z,4.0nm,0.7s,baz=271,slow=6.8,SNR=3.0						

IDC 22 18:44:53.2±2.3**, 10.11S**×**113.56E, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.8**/14**, mbtmp3.9**/5**, ML3.8**/1**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.7**/20**, Error ellipse: s-maj=99.5km s-min=24.2km az=46.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.15**	**125**	Pn	P	18 48 12.9	-4.3
	0.4nm,0.3s,baz=165,slow=19,SNR=14						
FITZ				Sn	S	18 50 37.8	-18
	1.0nm,0.3s,baz=342,slow=21,SNR=7.7						
FITZ				LR	LR	18 53 11.3	
	comp=Z,33nm,21.3s,baz=288,slow=35						
WRA	**Warramunga Arr**	**22.30**	**118**	P	P	18 49 52.9	-0.9
	0.5nm,0.4s,baz=292,slow=11,SNR=13						
SONM	**Songino Array**	**58.04**	**354**	P	P	18 54 47.5	-2.8
	1.4nm,0.4s,baz=172,slow=8.8,SNR=20						
MKAR	**Makanchi Array**	**63.16**	**336**	P	P	18 55 23.1	-2.1
	0.6nm,0.4s,baz=148,slow=7.1,SNR=11						
BVAR	**Borovoye Array**	**72.86**	**334**	P	P	18 56 24.3	-1.4
	0.9nm,0.7s,baz=140,slow=7.9,SNR=5.0						

IDC 22 19:02:33.2±3.1**, 4.39N**×**93.67E, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.6**/16**, mbtmp3.6**/4**, ML3.4**/1**, Error ellipse: s-maj=101.8km s-min=29.0km az=63.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.90**	**20**	Pn	P	19 06 06.7	-0.5
	0.1nm,0.3s,baz=213,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**43.37**	**349**	P	P	19 10 37.8	-1.3
	0.2nm,0.4s,baz=165,slow=7.4,SNR=9.2						
SONM	**Songino Array**	**44.64**	**12**	P	P	19 10 46.7	-2.6
	0.5nm,0.7s,baz=192,slow=9.3,SNR=6.0						
WRA	**Warramunga Arr**	**46.71**	**123**	P	P	19 11 04.4	-1.8
	0.8nm,0.6s,baz=299,slow=9.1,SNR=4.8						

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*IDC **22** 19:22:48.6±0.5, 19.91S×68.93W, h103^{km}±4^{km}, mb4.4/22, mb1 4.5/24, mb1mx4.4/28, mbtmp4.8/24, MS3.4/2, Ms1 3.4/2, ms1mx3.0/21, Error ellipse: s-maj=15.6km s-min=10.2km az=54.0, Incorrectly calculated travel-time residual on T phase at H03N*

*NEIC **22** 19:22:54.5±0.3, 19.71S×68.68W, mb4.6/32, Error ellipse: s-maj=8.9km s-min=6.1km az=223.0*

NEIC Felt [III] at Cuya and Esquina; [II] at Iquique; [I] at Arica, Chile.

*BJI **22** 19:22:54.4, 19.70S×68.70W, h150^{km}, mB5.3*

ISC 22 19:22:52.2±0.3**, 19.83S**±0.05×**68.70W**±0.05**, h151**^{km}**, h151**^{km}±.3^{km}**:pP-P, n115,** σ**1§21**/97**, mb4.5**/45**, 8C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.56**	**9**	P	**P**	**19 23 48.8**	**+1.2**
	36nm,0.3s,baz=204,slow=6.5,SNR=254						
LPAZ				S	**S**	**19 24 28.7**	**-1.4**
	6.9nm,0.3s,baz=305,slow=19,SNR=3.8						
LPAZ	**La Paz**	**3.56**	**9**	*e*P	**P**	**19 23 48.5**	**+0.9**
ANCH	**Antofagasta**	**4.15**	**202**	⇑*i*P	**P**	**19 23 49.0**	**-6.3**
ANCH				*e*S	**S**	**19 24 35.9**	**-7.9**
CPN1	**Cerro Paranal**	**5.03**	**198**	⇓*i*P	**P**	**19 24 03.1**	**-3.7**
SIV	**San Ignacio**	**8.21**	**64**	P	**P**	**19 24 48.8**	**-0.6**
	49nm,0.3s,baz=257,slow=11,SNR=1105						
SIV				S	**S**	**19 26 20.8**	**+0.1**
	baz=228,slow=18,SNR=2.5						
SAML	**Samuel**	**12.06**	**27**	*e*P	**P**	**19 25 38.4**	**-1.7**
	8.0nm,0.6s						
CPUP	**Villa Florida**	**12.30**	**124**	P	**P**	**19 25 40.7**	**-2.5**
	5.8nm,0.3s,baz=318,slow=15,SNR=88						
CPUP	**Villa Florida**	**12.30**	**124**	*e*P	**P**	**19 25 40.4**	**-2.8**
	109nm,1.1s						
TRQA	**Tornquist**	**19.08**	**164**	*e*P	**P**	**19 27 01.1**	**-4.4**
	16nm,0.7s						
BDFB	**Brasilia**	**20.14**	**81**	P	**P**	**19 27 17.4**	**+1.0**
	34nm,0.6s,baz=261,slow=10,SNR=33						
BDFB				LR	LR	19 36 32.9	
	comp=Z,138nm,19.4s,baz=4.3,slow=40						
BAO	**Brasilia Array**	**20.16**	**81**	P	**P**	**19 27 18.0**	**+1.3**
PLCA	**Paso Flores**	**20.90**	**184**	P	**P**	**19 27 20.4**	**-3.5**
	8.5nm,0.8s,baz=8.0,slow=12,SNR=10						
PLCA	**Paso Flores**	**20.90**	**184**	*e*P	**P**	**19 27 20.2**	**-3.7**
	10nm,0.9s						
OTAV	**Otavalo**	**22.11**	**333**	*e*P	**P**	**19 27 38.0**	**+2.0**
	18nm,0.8s,mb4.5						
ROSC	**El Rosal**	**25.14**	**347**	P	**P**	**19 28 06.1**	**+1.0**
	9.9nm,0.4s,mb4.7,baz=94,slow=19,SNR=3.7						
ROSC				LR	LR	19 39 43.9	
	comp=Z,66nm,18.1s,baz=192,slow=40						
SDV	**Santo Domingo**	**28.59**	**356**	P	**P**	**19 28 35.3**	**-1.3**
	8.4nm,0.5s,mb4.8,baz=193,slow=9.4,SNR=10.0						
SDV	**Santo Domingo**	**28.59**	**356**	*e*P	**P**	**19 28 35.1**	**-1.5**
	14nm,0.8s,mb4.7						
JTS	**JuntasAbangare**	**33.94**	**330**	P	**P**	**19 29 24.2**	**+1.0**
	7.0nm,0.6s,mb4.5,baz=109,slow=12,SNR=4.6						
JTS	**JuntasAbangare**	**33.94**	**330**	P	**P**	**19 29 21.8**	**-1.4**
SJG	**San Juan**	**37.79**	**4**	P	**P**	**19 29 54.7**	**-0.9**
	18nm,0.4s,mb5.0,baz=312,slow=18,SNR=9.5						
SJG	**San Juan**	**37.79**	**4**	P	**P**	**19 29 54.7**	**-0.9**
NHSC	**New Hope**	**53.77**	**348**	*e*P	**P**	**19 32 01.2**	**0.0**
	104nm,0.9s,mb5.6						
COW	**Cow Castle Cre**	**54.13**	**348**	*e*P	**P**	**19 32 03.7**	**-0.3**
JSC	**Jenkinsville**	**55.12**	**347**	*e*P	**P**	**19 32 10.5**	**-0.6**
LRAL	**Lakeview Retre**	**55.40**	**341**	*e*P	**P**	**19 32 11.3**	**-1.8**
	6.7nm,0.8s,mb4.4						
CPCT	**Cooper Cave**	**56.98**	**345**	*e*P	**P**	**19 32 23.3**	**-1.0**
SWET	**Sewanee**	**57.13**	**343**	*e*P	**P**	**19 32 23.7**	**-1.7**
PLAL	**Pickwick Lake**	**57.53**	**341**	*e*P	**P**	**19 32 26.3**	**-1.9**
	18nm,0.9s,mb4.9						
TZTN	**Tazewell**	**57.79**	**346**	*e*P	**P**	**19 32 25.1**	**-4.9**
BLA	**Blacksburg**	**57.80**	**349**	*e*P	**P**	**19 32 30.3**	**+0.3**
	14nm,0.7s,mb4.9						
WVT	**Waverly**	**58.52**	**342**	*e*P	**P**	**19 32 33.1**	**-2.0**
	25nm,0.8s,mb5.1						
TXAR	**Lajitas Array**	**59.38**	**324**	P	**P**	**19 32 39.4**	**-1.8**
	1.7nm,0.5s,mb4.2,baz=153,slow=8.4,SNR=10						
FVM	**French Village**	**61.02**	**340**	*e*P	**P**	**19 32 50.5**	**-1.6**
	40nm,0.9s,mb5.2						
CCM	**Cathedral Cave**	**61.35**	**340**	*e*P	**P**	**19 32 52.6**	**-1.8**
	16nm,0.9s,mb4.9						
VNA3	**Neumayer Olymp**	**61.59**	**162**	⇑*i*	**P**	**19 32 55.4**	**-0.2**
VNA3	**Neumayer Olymp**	**61.59**	**162**		**P**	**19 33 12.1**	**+17**
VNA3	**Neumayer Olymp**	**61.59**	**162**	⇑*i*	pP	19 33 22.4	-9.0
VNA3	**Neumayer Olymp**	**61.59**	**162**	⇑*i*	PcP	19 33 33.4	-2.0
VNA3	**Neumayer Olymp**	**61.59**	**162**	⇑*i*	sP	19 33 43.8	-4.0
GDL2	**Guadalupe Moun**	**61.99**	**326**	*e*P	**P**	**19 32 58.0**	**-0.8**
ALLY	**Alegheny Colle**	**62.08**	**350**	*e*P	**P**	**19 32 58.9**	**-0.3**
MNTX	**Cornudas Mount**	**62.14**	**325**	*e*P	**P**	**19 32 57.4**	**-2.4**
	6.7nm,1.0s,mb4.4						
VNA2	**Neumayer--Watz**	**62.16**	**161**	⇑*i*	**P**	**19 32 59.3**	**-0.1**
VNA2	**Neumayer--Watz**	**62.16**	**161**	⇑*i*	**P**	**19 33 12.7**	**+13**
VNA2	**Neumayer--Watz**	**62.16**	**161**	⇑*i*	pP	19 33 26.3	-8.9
VNA2	**Neumayer--Watz**	**62.16**	**161**		PcP	19 33 33.8	-3.9
VNA2	**Neumayer--Watz**	**62.16**	**161**		sP	19 33 40.5	-11
SNAA	**Sanae**	**63.79**	**161**	P	**P**	**19 33 09.0**	**-0.9**
	2.0nm,0.6s,mb4.1,baz=274,slow=6.2,SNR=39						
SNAA				pP	pP	19 33 35.3	-11
	2.4nm,0.8s,baz=293,slow=4.4,SNR=7.6						
SNAA				sP	sP	19 33 46.5	-16
	1.0nm,0.7s,baz=259,slow=7.6,SNR=2.9						
SNAA	**Sanae**	**63.79**	**161**	*e*P	**P**	**19 33 08.6**	**-1.3**
	9.1nm,1.1s,mb4.5						
SNAA				*e*		19 33 34.9	
SADO	**Sadowa**	**64.98**	**352**	P	**P**	**19 33 17.0**	**-1.1**
	7.0nm,0.5s,mb4.8,baz=176,slow=6.3,SNR=5.7						
SADO	**Sadowa**	**64.98**	**352**	P	**P**	**19 33 17.0**	**-1.1**
LAZ	**Ladron**	**65.16**	**325**	*e*P	**P**	**19 33 19.5**	**0.0**
ANMO	**Albuquerque**	**65.22**	**326**	P	**P**	**19 33 18.7**	**-1.1**
	1.9nm,0.5s,mb4.2,baz=134,slow=7.9,SNR=5.2						
TUC	**Tucson**	**65.65**	**321**	*e*P	**P**	**19 33 22.2**	**-0.4**
	4.8nm,1.0s,mb4.3						
DBIC	**Dimbokro**	**68.08**	**74**	P	**P**	**19 33 38.9**	**+0.7**
	26nm,0.7s,mb5.1,baz=222,slow=6.3,SNR=58						
DBIC	**Dimbokro**	**68.08**	**74**	*e*P	**P**	**19 33 38.6**	**+0.4**
	36nm,0.8s,mb5.2						
WUAZ	**Wupatki**	**68.30**	**323**	*e*P	**P**	**19 33 39.8**	**+0.6**
	15nm,0.8s,mb4.8						
ISCO	**Idaho Springs**	**68.59**	**330**	*e*P	**P**	**19 33 41.4**	**+0.4**
	3.4nm,0.6s,mb4.2						
SRU	**San Rafael**	**70.49**	**327**	*e*P	**P**	**19 33 52.2**	**-0.2**
MSU	**Marysvale**	**70.92**	**325**	*e*P	**P**	**19 33 55.7**	**+0.7**
MVU	**Marysvale**	**70.93**	**325**	*e*P	**P**	**19 33 55.6**	**+0.6**
	11nm,0.8s,mb4.7						
ARUT	**Antelope Range**	**71.09**	**324**	*e*P	**P**	**19 33 57.6**	**+1.5**
RSSD	**Black Hills**	**71.38**	**334**	*e*P	**P**	**19 33 58.1**	**+0.4**
	7.4nm,0.6s,mb4.6						
DAU	**Daniels Canyon**	**71.83**	**327**	*e*P	**P**	**19 34 01.5**	**+1.1**
TRCR	**Troy Canyon**	**72.69**	**323**	*e*P	**P**	**19 34 06.7**	**+1.3**
PDAR	**Pinedale Array**	**72.77**	**330**	P	**P**	**19 34 05.8**	**-0.1**
	2.1nm,0.7s,mb4.0,baz=135,slow=8.4,SNR=15						
HWUT	**Hardware Ranch**	**72.87**	**328**	*e*P	**P**	**19 34 05.8**	**-0.7**
	8.0nm,0.7s,mb4.6						
MTUM	**Tungsten Hills**	**73.74**	**321**	*e*P	**P**	**19 34 12.5**	**+0.8**
LOHW	**Long Hollow**	**73.91**	**330**	*e*P	**P**	**19 34 13.3**	**+0.8**
	3.4nm,0.7s,mb4.2						
TPAW	**Teton Pass**	**73.98**	**329**	*e*P	**P**	**19 34 13.9**	**+1.0**
	5.9nm,0.8s,mb4.4						
RRI2	**Red Ridge**	**74.05**	**329**	*e*P	**P**	**19 34 13.8**	**+0.5**
	14nm,0.8s,mb4.8						
ELK	**Elko**	**74.17**	**325**	P	**P**	**19 34 14.1**	**+0.1**
	3.4nm,0.8s,mb4.1,baz=112,slow=3.5,SNR=14						
ELK	**Elko**	**74.17**	**325**	*e*P	**P**	**19 34 14.4**	**+0.4**
	5.4nm,1.1s,mb4.2						
OMM	**Old Mammoth Mi**	**74.17**	**321**	*e*P	**P**	**19 34 15.1**	**+0.9**
OMM				*e*pP	pP	19 34 52.0	+0.8
MNV	**Mina**	**74.22**	**322**	*e*P	**P**	**19 34 15.2**	**+0.8**
	5.1nm,1.0s,mb4.2						
NVAR	**Mina Array Bea**	**74.30**	**322**	P	**P**	**19 34 15.7**	**+0.8**
	4.3nm,0.7s,mb4.3,baz=141,slow=7.5,SNR=19						
NVAR				sP	sP	19 34 52.6	-16
	2.6nm,0.7s,baz=158,slow=9.9,SNR=3.3						
SCHQ	**Schefferville**	**74.37**	**1**	P	**P**	**19 34 15.3**	**+0.4**
	8.3nm,0.8s,mb4.5,baz=171,slow=2.1,SNR=8.1						
HLID	**Hailey**	**75.74**	**328**	*e*P	**P**	**19 34 24.2**	**+1.4**
	11nm,0.9s,mb4.5						
PAHR	**Pah Rah Range**	**75.78**	**322**	*e*P	**P**	**19 34 24.3**	**+1.1**
	30nm,0.9s,mb4.9						
HRY	**Holter Researc**	**76.81**	**331**	*e*P	**P**	**19 34 30.1**	**+1.3**
SYO	**Syowa Base**	**77.99**	**160**	⇓P	**P**	**19 34 23.5**	**-11**
BMO	**Blue Mountains**	**78.12**	**327**	*e*P	**P**	**19 34 36.9**	**+0.8**
	9.3nm,1.0s,mb4.4						
BMO				*e*pP	pP	19 35 14.3	+0.8
WDC	**Whiskeytown Da**	**78.19**	**321**	*e*P	**P**	**19 34 35.5**	**-1.0**
	3.1nm,0.8s,mb4.0						
YBH	**Yreka Blue Hor**	**79.02**	**322**	P	**P**	**19 34 40.6**	**-0.4**
	3.2nm,0.8s,mb4.0,baz=88,slow=2.9,SNR=8.6						
YBH	**Yreka Blue Hor**	**79.02**	**322**	*e*P	**P**	**19 34 40.8**	**-0.2**
	1.3nm,0.8s,mb3.6						
HUMO	**Hull Mountain**	**79.71**	**322**	*e*P	**P**	**19 34 44.6**	**-0.1**
	2.3nm,0.8s,mb3.9						
TSUM	**Tsumeb**	**80.34**	**107**	P	**P**	**19 34 50.6**	**+2.1**
	3.5nm,0.6s,mb4.2,baz=235,slow=4.3,SNR=7.4						
BROR	**Big Rock Looko**	**80.48**	**324**	P	**P**	**19 34 49.2**	**+0.5**
OD2	**Odessa Site #2**	**80.58**	**328**	P	**P**	**19 34 50.4**	**+1.1**
WTV	**Waterville**	**81.41**	**328**	P	**P**	**19 34 54.8**	**+1.2**
EDM	**Edmonton**	**82.34**	**335**	*e*P	**P**	**19 34 57.5**	**-0.8**
BOSA	**Boshof**	**84.06**	**118**	P	**P**	**19 35 08.8**	**+1.3**
	4.5nm,0.7s,mb4.3,baz=270,slow=4.6,SNR=8.3						
LBTB	**Lobatse**	**85.54**	**115**	P	**P**	**19 35 16.5**	**+1.6**
	4.0nm,0.8s,mb4.2,baz=269,slow=3.3,SNR=4.9						
LBTB	**Lobatse**	**85.54**	**115**	P	**P**	**19 35 16.5**	**+1.5**
BBB	**Bella Bella**	**88.32**	**328**	P	**P**	**19 35 26.8**	**-0.9**
	28nm,1.1s,mb5.0,baz=175,slow=6.5,SNR=3.3						
MATP	**Matopo**	**89.64**	**111**	P	**P**	**19 35 37.1**	**+2.5**
	1.0nm,0.4s,mb4.1,baz=288,slow=5.3,SNR=7.9						
YKA	**Yellowknife Ar**	**89.68**	**341**	P	**P**	**19 35 34.3**	**+0.4**
	17nm,0.7s,mb5.1,baz=133,slow=4.7,SNR=82						
YKA				pP	pP	19 36 02.2	-10
	2.6nm,0.6s,baz=133,slow=4.9,SNR=3.0						
YKA				sP	sP	19 36 12.5	-16
	8.9nm,0.9s,baz=135,slow=4.7,SNR=5.1						
YKA	**Yellowknife Ar**	**89.68**	**341**	P	**P**	**19 35 34.3**	**+0.5**
YKA				pP	pP	19 36 02.2	-10
YKA				sP	sP	19 36 12.6	-16
YKW3	**Yellowknife Ar**	**89.73**	**341**	*e*P	**P**	**19 35 35.0**	**+0.9**
YKW3				*e*pP	pP	19 36 13.4	+1.0
DLBC	**Dease Lake**	**92.82**	**332**	P	**P**	**19 35 49.8**	**+1.3**
	1.8nm,0.5s,mb4.5,baz=127,slow=9.9,SNR=3.0						
ZRNK	**Zerenda**	**133.62**	**34**	*e*PKPdf	PKPdf	19 41 54.2	+3.4
BVAR	**Borovoye Array**	**134.31**	**34**	PKP	PKPdf	19 41 55.6	+3.6
	0.8nm,0.6s,baz=315,slow=2.1,SNR=8.1						
WRA	**Warramunga Arr**	**134.48**	**211**	PKP	PKPdf	19 41 54.5	+1.2
	1.0nm,0.5s,baz=156,slow=1.7,SNR=21						
WRA				pPKP		19 42 22.7	
	0.5nm,0.6s,baz=157,slow=1.8,SNR=2.5						
ZAL	**Zalesovo**	**140.36**	**24**	PKhKP		19 42 02.0	
	1.1nm,0.5s,baz=181,slow=2.1,SNR=4.4						
ZAL				PKP	PKPdf	19 42 05.0	+1.9
	1.3nm,0.4s,baz=48,slow=1.7,SNR=7.1						
ZAL				SKPbc		19 45 32.1	
	0.5nm,0.6s,baz=299,slow=2.2,SNR=3.9						
ZAL	**Zalesovo**	**140.36**	**24**	PKP	PKPdf	19 42 02.0	-1.1
ZAL				PKP	PKPdf	19 42 05.0	+1.9
ZAL				SKPbc		19 45 32.1	
MKAR	**Makanchi Array**	**144.16**	**35**	PKP	PKPdf	19 42 11.6	+1.7
	1.5nm,0.4s,baz=334,slow=2.7,SNR=47						
MKAR				SKPbc		19 45 43.4	
	0.7nm,0.7s,baz=348,slow=3.0,SNR=4.0						
ASAJ	**Asahikawa**	**144.42**	**320**	PKP	PKPdf	19 42 11.8	+1.4
	8.6nm,0.7s,baz=287,slow=3.2,SNR=8.3						
WMQ	**Urumqi**	**148.99**	**34**	*e*PKP	PKPdf	19 42 17.8	-0.3
WMQ				LR	LR		
	comp=N,360nm,24.0s						
WMQ				LR	LR		
	comp=E,310nm,22.0s						
WMQ				LR	LR		
	comp=Z,370nm,22.8s						
HIA	**Hailar**	**149.86**	**349**	*e*PKPbc	PKPdf	19 42 26.6	+7.4
MAJO	**Matsushiro**	**151.16**	**311**	*e*PKPbc	PKPdf	19 42 29.5	+7.9
MAT	**Matsushiro**	**151.16**	**311**	*e*P	PKPdf	19 42 30.0	+8.5
MAT	**Matsushiro**	**151.16**	**311**	PKP	PKPdf	19 42 29.5	+8.0
SONM	**Songino Array**	**151.78**	**7**	PKP	PKPdf	19 42 25.8	+3.7
	comp=Z,0.9nm,0.8s,baz=299,slow=0.4,SNR=10.0						
SONM				PKPbc	PKPdf	19 42 31.9	+10
	comp=Z,4.8nm,0.5s,baz=299,slow=1.3,SNR=82						
SONM				PKPab	PKPab	19 42 41.0	+0.4
	comp=Z,1.6nm,0.7s,baz=329,slow=3.0,SNR=6.4						
SONM				pPKPbc		19 42 59.7	
	comp=Z,1.5nm,0.5s,baz=286,slow=1.1,SNR=3.6						
ULN	**Ulaanbaatar**	**151.82**	**6**	*e*PKPbc	PKPdf	19 42 32.3	+10
NJ2	**Nanjing**	**166.06**	**332**	*e*PKP	PKPdf	19 42 37.1	-2.1
NJ2				APKP		19 43 19.3	
NJ2				XPKP		19 43 36.5	
NJ2				PKS	PKS	19 46 08.0	-2.8
NJ2				SKS	SKS	19 49 23.0	-3.4
NJ2				PP	PP		
	comp=Z,2μm,10.9s						
NJ2				LR	LR		
	comp=Z,20nm,20.5s						

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*MOS **22** 19:26:32.6±2.0, 36.07N×45.29E, h15^{km}, mb3.9/3, Error ellipse: s-maj=39.6km s-min=11.7km az=93.2*

*THR **22** 19:26:43.5±1.0, 38.04N×46.74E, h14^{km}±15^{km}, ML3.7*

*IDC **22** 19:26:45.3±3.2, 37.95N×46.43E, mb3.8/5, mb1 3.8/7, mb1mx3.6/18, mbtmp3.7/7, ML1.1/1, Error ellipse: s-maj=59.0km s-min=22.3km az=15.0*

*CSEM **22** 19:26:51.6±0.2, 38.12N×47.93E, h10^{km}, ML3.7, Error ellipse: s-maj=11.5km s-min=4.6km az=79.0*

*TEH **22** 19:26:59.7, 37.85N×47.58E, h21^{km}, Mn3.7*

ISC 22 19:26:43.4±0.5**, 38.05N**±0.03×**46.75E**±0.05**, h10**^{km}**, n39,** σ**1§27**/46**, mb3.5**/5**, 2C, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRMI	**Germi**	**1.18**	**49**	*e*PG	**Pg**	**19 27 05.2**	**-1.8**
GRMI				*e*SG	**Sg**	**19 27 21.8**	**-0.9**
GRMI				AML	AML	19 27 29.3	
	comp=N,2μm,0.4s						
GRMI				AML	AML	19 27 31.2	
	comp=E,1μm,0.4s						
GRMI	**Germi**	**1.18**	**49**	*e*Pg	**Pg**	**19 27 05.2**	**-1.8**
	SNR=90						
GRMI				*e*Sg	**Sg**	**19 27 21.8**	**-0.9**
	comp=E,1μm,0.4s,SNR=90						
GNI	**Garni**	**2.62**	**324**	P	**Pn**	**19 27 31.4**	**+4.9**
GNI						19 28 15.0	
GNI				pmax	pmax		
	comp=Z,9.0nm,0.3s						
GNI	**Garni**	**2.62**	**324**	Pn	**Pn**	**19 27 31.4**	**+4.9**
	comp=Z,9.0nm,0.3s,baz=163,slow=2.2,SNR=61						
GNI				Lg		19 28 15.0	
	comp=Z,20nm,0.3s,baz=31,slow=19,SNR=3.3						
GNI	**Garni**	**2.62**	**324**	P	**Pn**	**19 27 31.4**	**+4.9**
	comp=Z,9.0nm,0.3s						
GNI				S		19 28 15.0	
TVAN	**Van**	**2.68**	**281**	*i* P	**Pg**	**19 27 35.6**	**-1.3**
TVAN				*i* S	**Sg**	**19 28 24.8**	**+12**
ILIN	**Laeen**	**3.12**	**177**	Pn	**Pg**	**19 27 45.3**	**-0.5**
MSL	**Mosul**	**3.41**	**240**	*e*Pn	x	19 27 40.5	
MSL				*e*Pb	x	19 27 46.0	
MSL				*e*Sn	x	19 28 28.0	
MSL				*e*Sb	x	19 28 55.5	
DGRG	**David-gareji**	**3.56**	**343**	P	**Pg**	**19 27 50.2**	**-4.4**
DGRG				S	**Sg**	**19 28 42.6**	**+0.6**
IRAZ	**Razeghan**	**3.67**	**135**	Pn	**Pn**	**19 27 46.9**	**+5.4**
THKV	**Tehran--Karaj**	**3.93**	**122**	*e*PN	**Pn**	**19 27 46.4**	**+1.2**
THKV	**Tehran--Karaj**	**3.93**	**122**	*e*Pn	**Pn**	**19 27 46.3**	**+1.1**
	SNR=52						
MTA	**Mtatsminda**	**3.94**	**338**	P	**Pg**	**19 27 57.1**	**-5.1**
MTA				S	**Sg**	**19 28 53.4**	**-1.3**
TI2	**Plekhanov**	**3.99**	**338**	⇑*i*P	**Pg**	**19 27 58.4**	**-4.7**
TI2				*e*S	**Sg**	**19 28 56.2**	**-0.1**
TI2				pmax	pmax		
	comp=Z,40nm,0.6s						
TI2	**Plekhanov**	**3.99**	**338**	⇑*i*P	**Pg**	**19 27 58.4**	**-4.7**

	comp=Z,40nm,0.6s						
TI2				*e*S	**Sg**	**19 28 56.2**	**-0.1**
BEST	**Besiri**	**4.33**	**270**	P	Px	19 28 10.1	
DUS	**Dusheti**	**4.33**	**339**	P	**Pg**	**19 28 04.7**	**-5.3**
ASAO	**Ashtian**	**4.38**	**142**	*e*PN	**Pn**	**19 27 51.6**	**+0.1**
ASAO				*e*SG	**Sg**	**19 28 59.1**	**-10**
GOR	**Gori**	**4.43**	**334**	P	**Pg**	**19 28 06.1**	**-5.8**
GOR				S	**Sg**	**19 29 14.0**	**+3.2**
ERZM	**Erzurum**	**4.59**	**296**	P	**Pg**	**19 28 10.1**	**-5.0**
IDMV	**Damavand**	**4.90**	**119**	Pn	**Pn**	**19 28 02.5**	**+3.5**
MAK	**Makhachkala**	**4.94**	**6**	*e*P	**Pg**	**19 28 18.0**	**-4.1**
MAK				*i*		19 29 37.0	
MAK				pmax	pmax		
	comp=E,700nm,4.0s						
IVRN	**Varamin**	**5.03**	**126**	Pn	**Pn**	**19 28 00.1**	**-0.7**
IVRN	**Varamin**	**5.03**	**126**	Lg		19 29 16.5	
BHD	**Baghdad**	**5.14**	**203**	*e*Pn	x	19 28 10.0	
BHD				*e*Sn	x	19 29 30.0	
ONI	**Oni**	**5.18**	**332**	P	**Pg**	**19 28 17.1**	**-10**
ONI				S	**Sg**	**19 29 30.8**	**-5.2**
ZEI	**Tsey**	**5.20**	**336**	*e*P	**Pg**	**19 28 19.3**	**-7.9**
ZEI				*i* S	**Sg**	**19 29 37.1**	**+0.6**
NASN	**Na'in**	**7.20**	**135**	*e*PN	**Pn**	**19 28 31.0**	**-0.4**
AKASG	**Malin Array Be**	**17.75**	**321**	P	**P**	**19 30 50.7**	**-1.4**
	baz=126,slow=13,SNR=4.1						
ARU	**Arti**	**20.01**	**19**	*e*P	**P**	**19 31 30.3**	**+11**
SVE	**Sverdlovsk**	**20.93**	**22**	*e*P	**P**	**19 31 31.0**	**+2.5**
BVAR	**Borovoye Array**	**22.18**	**40**	P	**P**	**19 31 43.8**	**+2.7**
	comp=E,1.6nm,0.8s,mb3.5,baz=231,slow=9.5,SNR=11						
GERES	**GERESS Array B**	**26.11**	**305**	P	**P**	**19 32 19.5**	**+0.5**
	comp=E,0.8nm,0.6s,mb3.4,baz=106,slow=9.7,SNR=9.2						
MKAR	**Makanchi Array**	**27.46**	**60**	P	**P**	**19 32 36.7**	**+5.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**27.46**	**60**	P	**P**	**19 32 36.7**	**+5.4**
	comp=Z,0.6nm,0.8s,mb3.2,baz=265,slow=8.7,SNR=6.1						
HFS	**Hagfors**	**30.40**	**327**	P	**P**	**19 32 57.3**	**-0.3**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HFS	**Hagfors**	**30.40**	**327**	P	**P**	**19 32 57.3**	**-0.3**
	comp=Z,1.4nm,0.7s,mb3.8,baz=153,slow=9.9,SNR=4.9						
ARCES	**ARCESS Array B**	**33.56**	**347**	P	**P**	**19 33 26.5**	**+1.3**
ARCES				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ARCES	**ARCESS Array B**	**33.56**	**347**	P	**P**	**19 33 26.4**	**+1.3**
	comp=Z,1.0nm,0.9s,mb3.7,baz=146,slow=8.7,SNR=4.8						

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*NEIC **22** 19:41:37.0±0.7, 46.97N×2.20W, h10^{km}±5^{km}, ML4.3(STR), ML4.1(LDG), Error ellipse: s-maj=3.9km s-min=2.5km az=127.0*

*CSEM **22** 19:41:38.0±0.1, 46.93N×2.19W, h12^{km}, ML4.0/56, Error ellipse: s-maj=1.4km s-min=1.2km az=111.0*

*STR **22** 19:41:40.2±0.4, 46.90N×2.03W, h10^{km}±1^{km}, Ml4.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

LDG 22 19:41:38.3±0.1**, 46.95N×2.17W, h4^{km}, Md4.1**/2**, Ml4.1**/46**, Error ellipse: s-maj=1.6km s-min=1.1km az=57.0, Bay of Biscay**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LRYF	**La Roche-sur-Y**	**0.56**	**131**	Pg	Pg	19 41 48.7	-0.9
LRYF				Sg	Sg	19 41 56.9	-0.3
LCHF	**La Chataignera**	**1.02**	**106**	Pg	Pg	19 41 56.9	-1.7
LCHF				Sg	Sg	19 42 09.5	-2.7
OLEF	**Ile d'Oleron**	**1.16**	**150**	Pg	Pg	19 41 59.7	-1.7
OLEF				Sg	Sg	19 42 16.2	-0.6
QUIF	**Quistinic**	**1.18**	**325**	*e*Pn	Pn	19 41 59.9	-1.6
QUIF				*e*Pg	Pg	19 42 00.6	-1.3
QUIF				*e*Sg	Sg	19 42 14.6	-3.0
	768nm,0.2s						
SGMF	**Saint Gilles**	**1.33**	**349**	*e*Pn	Pn	19 42 01.8	-1.9
SGMF				*e*Pg	Pg	19 42 03.1	-1.8
SGMF				*e*Sn	Sn	19 42 18.4	-3.6
SGMF				*e*Sg	Sg	19 42 20.2	-2.4
	1µm,0.2s						
MFF	**Saint Martin d**	**1.43**	**103**	*e*Pn	Pn	19 42 04.0	-1.1
MFF				*e*Pg	Pg	19 42 05.4	-1.5
MFF				*e*Sn	Sn	19 42 21.6	-3.0
	1µm,0.3s						
CHIF	**Chize**	**1.46**	**123**	Pg	Pg	19 42 05.5	-2.0
CHIF				Sg	Sg	19 42 25.3	-1.7
ROSF	**Rostrenen**	**1.57**	**332**	*e*Pn	Pn	19 42 05.2	-2.0
ROSF				*e*Pg	Pg	19 42 07.3	-2.5
ROSF				*e*Sn	Sn	19 42 23.8	-4.4
ROSF				*e*Sg	Sg	19 42 27.2	-3.6
	234nm,0.2s						
GRR	**Gorron**	**1.69**	**31**	*e*Pn	Pn	19 42 07.2	-1.6
GRR				*e*Pg	Pg	19 42 09.5	-2.5
GRR				*e*Sn	Sn	19 42 27.5	-3.6
GRR				*e*Sg	Sg	19 42 30.9	-3.6
	772nm,0.3s						
MATF	**Mathat**	**1.72**	**130**	Pg	Pg	19 42 10.7	-1.9
MATF				Sg	Sg	19 42 32.7	-2.7
FLN	**La Foliniere**	**2.14**	**31**	*e*Pn	Pn	19 42 13.3	-1.9
	baz=218						
FLN				*e*Pg	Pg	19 42 17.3	-3.7
	baz=215						
FLN				*e*Sn	Sn	19 42 38.3	-4.2
FLN				*e*Sg	Sg	19 42 43.8	-5.7
	801nm,0.4s,baz=205						
FLN	**La Foliniere**	**2.14**	**31**	*e*Pg	Pg	19 42 17.3	-3.7
FLN				*e*Sn	Sn	19 42 38.3	-4.2
FLN				*e*Sg	Sg	19 42 43.8	-5.7
	400nm,0.4s						
LDF	**La Druitiere**	**2.14**	**39**	*e*Pn	Pn	19 42 13.5	-1.8
LDF				*e*Pg	Pg	19 42 17.4	-3.7
LDF				*e*Sn	Sn	19 42 38.6	-4.1
LDF				*e*Sg	Sg	19 42 44.9	-4.8
	394nm,0.3s						
LFF	**La Frestale**	**2.86**	**134**	*e*Pn	Pn	19 42 23.6	-1.9
LFF				*e*Pg	Pg	19 42 30.1	-5.2
LFF				*e*Sn	Sn	19 42 55.6	-5.2
LFF				*e*Sg	Sg	19 43 07.7	-5.7
	781nm,0.5s						
RJF	**Les Rejaudoux**	**3.04**	**121**	*e*Pn	Pn	19 42 25.7	-2.5
RJF				*e*Pg	Pg	19 42 34.2	-4.9
RJF				*e*Sn	Sn	19 43 00.3	-5.2
RJF				*e*Sg	Sg	19 43 12.3	-7.4
	367nm,0.3s						
TCF	**Toulx Ste Croi**	**3.09**	**101**	*e*Pn	Pn	19 42 26.8	-2.0
TCF				*e*Pg	Pg	19 42 35.6	-4.3
TCF				*e*Sn	Sn	19 43 01.1	-5.5
TCF				*e*Sg	Sg	19 43 14.4	-6.7
	388nm,0.3s						
HYF	**Humbligny**	**3.30**	**83**	*e*Pn	Pn	19 42 29.9	-1.9
BGF	**Bois d'Agland**	**3.47**	**95**	*e*Pn	Pn	19 42 31.8	-2.4
BGF				*e*Pg	Pg	19 42 42.8	-4.7
BGF				*e*Sn	Sn	19 43 09.6	-6.7
BGF				*e*Sg	Sg	19 43 27.1	-6.6
	706nm,0.4s						
CAF	**Calviac**	**3.58**	**123**	*e*Pn	Pn	19 42 33.4	-2.4
CAF				*e*Pg	Pg	19 42 44.7	-5.1
CAF				*e*Sn	Sn	19 43 12.7	-6.4
CAF				*e*Sg	Sg	19 43 30.1	-7.4
	150nm,0.2s						
FRNF	**Fournols**	**3.64**	**114**	Pn	Pn	19 42 33.6	-3.0
FRNF				Pg	Pg	19 42 45.7	-5.2
OSSF	**Osses**	**3.75**	**170**	Pn	Pn	19 42 34.7	-3.5
EALK	**Alkurruntz**	**3.76**	**173**	Pn	Pn	19 42 35.1	-3.2
EALK				Sn	Sn	19 43 17.6	-6.0
EALK	**Alkurruntz**	**3.76**	**173**	Pn	Pn	19 42 35.1	-3.2
	2.2nm,0.3s,SNR=10						
EALK				Sn	Sn	19 43 17.6	-6.1
	42nm,0.4s,SNR=7.9						
AGO	**Saint Agoulin**	**3.77**	**102**	Pn	Pn	19 42 36.4	-2.0
PYM	**Petit Puy Mans**	**3.78**	**107**	Pn	Pn	19 42 36.8	-1.8
AVF	**Avril sur Loir**	**3.79**	**90**	*e*Pn	Pn	19 42 35.8	-2.9
AVF				*e*Pg	Pg	19 42 48.8	-5.1
AVF				*e*Sn	Sn	19 43 17.0	-7.4
AVF				*e*Sg	Sg	19 43 35.8	-8.6
	94nm,0.3s						
ELIZ	**Elizondo**	**3.81**	**173**	Pn	Pn	19 42 37.0	-2.1
ELIZ				Sn	Sn	19 43 18.0	-7.0
ELIZ	**Elizondo**	**3.81**	**173**	Pn	Pn	19 42 37.0	-2.1
	3.3nm,0.2s,SNR=6.8						
ELIZ				Sn	Sn	19 43 18.0	-7.0
	6.9nm,0.2s,SNR=5.0						
ELAN	**Lanestosa**	**3.83**	**194**	Pn	Pn	19 42 34.9	-4.4
ELAN				Sn	Sn	19 43 18.3	-7.0
ELAN	**Lanestosa**	**3.83**	**194**	Pn	Pn	19 42 34.9	-4.4
	2.2nm,0.2s,SNR=4.9						
ELAN				Sn	Sn	19 43 18.3	-7.0
	14nm,0.2s,SNR=4.7						
SJPF	**Ste Jean**	**3.90**	**170**	*e*Pn	Pn	19 42 36.4	-3.9
SJPF				*e*Pg	Pg	19 42 49.9	-6.2
SJPF				*e*Sn	Sn	19 43 20.0	-7.1
SJPF				*e*Sg	Sg	19 43 39.0	-9.0
	66nm,0.5s						
LARF	**Larrau**	**4.00**	**168**	Pn	Pn	19 42 37.7	-4.1
PLDF	**La Plantade**	**4.12**	**102**	Pn	Pn	19 42 41.5	-1.9
LOR	**Lormes**	**4.13**	**83**	*e*Pn	Pn	19 42 40.3	-3.2
	baz=260						
LOR				*e*Pg	Pg	19 42 55.0	-5.7
	baz=267						
LOR				*e*Sn	Sn	19 43 26.0	-6.9
LOR				*e*Sg	Sg	19 43 44.7	-11
	108nm,0.3s,baz=254						
LOR	**Lormes**	**4.13**	**83**	*e*Pg	Pg	19 42 55.0	-5.7
LOR				*e*Sn	Sn	19 43 26.0	-6.9
LOR				*e*Sg	Sg	19 43 44.7	-11
	54nm,0.3s						
SMF	**Signal de Mont**	**4.14**	**92**	*e*Pn	Pn	19 42 40.5	-3.2
SMF				*e*Pg	Pg	19 42 55.0	-5.9
SMF				*e*Sn	Sn	19 43 26.3	-6.9
SMF				*e*Sg	Sg	19 43 47.7	-8.3
	154nm,0.4s						
LBL	**Lubilhac**	**4.14**	**113**	Pn	Pn	19 42 41.3	-2.4
ETSF	**Etsaut**	**4.21**	**164**	*e*Pn	Pn	19 42 40.1	-4.6
ETSF				*e*Pg	Pg	19 42 55.9	-6.5
ETSF				*e*Sn	Sn	19 43 26.9	-8.2
ETSF				*e*Sg	Sg	19 43 49.2	-9.3
	24nm,0.3s						
EARI	**Arriondas**	**4.24**	**212**	Pn	Pn	19 42 41.5	-3.7
EARI				Sn	Sn	19 43 26.4	-9.3
EARI	**Arriondas**	**4.24**	**212**	Pn	Pn	19 42 41.5	-3.6
	3.2nm,0.2s,SNR=23						
EARI				Sn	Sn	19 43 26.4	-9.4
	13nm,0.5s,SNR=7.9						
EPF	**Esparros**	**4.30**	**155**	*e*Pn	Pn	19 42 42.1	-4.0
EPF				*e*Pg	Pg	19 42 57.9	-6.3
EPF				*e*Sn	Sn	19 43 29.4	-8.0
EPF				*e*Sg	Sg	19 43 53.0	-8.6
	121nm,0.4s						
COLF	**Collangettes**	**4.31**	**107**	Pn	Pn	19 42 42.7	-3.5
COLF				Sg	Sg	19 43 53.3	-8.5
ECRI	**Cripan**	**4.35**	**183**	Pn	Pn	19 42 43.4	-3.3
ECRI				Sn	Sn	19 43 30.8	-7.8
ECRI	**Cripan**	**4.35**	**183**	Pn	Pn	19 42 43.4	-3.3
	1.6nm,0.3s,SNR=4.0						
ECRI				Sn	Sn	19 43 30.8	-7.8
	5.1nm,0.2s,SNR=4.0						
EBIE	**Bielsa**	**4.57**	**158**	Pn	Pn	19 42 47.2	-2.7
EBIE				Sn	Sn	19 43 39.6	-4.6
EBIE	**Bielsa**	**4.57**	**158**	Pn	Pn	19 42 47.2	-2.7
	1.0nm,0.1s,SNR=13						
EBIE				Sn	Sn	19 43 39.6	-4.6
	8.1nm,0.1s,SNR=5.0						
MTLF	**Montolieu**	**4.76**	**138**	*e*Pn	Pn	19 42 49.0	-3.5
MTLF				*e*Pg	Pg	19 43 05.9	-7.4
MTLF				*e*Sn	Sn	19 43 39.3	-10
MTLF				*e*Sg	Sg	19 44 06.6	-10
	50nm,0.3s						
SALF	**Salau**	**4.82**	**149**	Pn	Pn	19 42 49.5	-3.9
SFTF	**Sexfontaines**	**5.03**	**73**	*e*Pn	Pn	19 42 52.5	-3.9
	baz=244						
SFTF				*e*Pg	Pg	19 43 11.3	-7.5
SFTF				*e*Sn	Sn	19 43 46.5	-9.4
SFTF				*e*Sg	Sg	19 44 16.6	-9.3
	76nm,0.4s						
EPON	**Pontenova**	**5.06**	**226**	Pn	Pn	19 42 52.1	-4.7
EPON				Sn	Sn	19 43 46.3	-10
EPON	**Pontenova**	**5.06**	**226**	Pn	Pn	19 42 52.1	-4.6
	5.5nm,0.4s,SNR=5.0						
EPON				Sn	Sn	19 43 46.3	-10
	10.0nm,0.3s,SNR=5.0						
EGRA	**Graus**	**5.08**	**159**	Pn	Pn	19 42 55.0	-2.0
EGRA				Sn	Sn	19 43 50.3	-6.6
EGRA	**Graus**	**5.08**	**159**	Pn	Pn	19 42 55.0	-2.0
	1.2nm,0.3s,SNR=8.9						
EGRA				Sn	Sn	19 43 50.3	-6.6
	24nm,0.6s,SNR=5.3						
MEZF	**Maizieres J'vi**	**5.11**	**70**	*e*Pn	Pn	19 42 52.9	-4.6
	baz=254						
MEZF				*e*Pg	Pg	19 43 13.0	-7.3
	baz=260						
MEZF				*e*Sn	Sn	19 43 48.2	-10
MEZF				*e*Sg	Sg	19 44 19.2	-9.3
	82nm,0.4s,baz=239						
MEZF	**Maizieres J'vi**	**5.11**	**70**	*e*Pg	Pg	19 43 13.0	-7.3
MEZF				*e*Sn	Sn	19 43 48.2	-10
MEZF				*e*Sg	Sg	19 44 19.2	-9.3
	41nm,0.4s						
LASF	**Ste Croix**	**5.12**	**122**	*e*Pn	Pn	19 42 54.1	-3.5
LASF				*e*Pg	Pg	19 43 12.9	-7.5
LASF				*e*Sn	Sn	19 43 49.3	-8.6
LASF				*e*Sg	Sg	19 44 17.8	-11
	203nm,0.6s						
CARF	**Carcanieres**	**5.21**	**143**	Pn	Pn	19 42 56.1	-2.8
VIVF	**Saint-Julien-l**	**5.21**	**111**	*e*Pn	Pn	19 42 56.0	-2.9
VIVF				*e*Pg	Pg	19 43 14.4	-8.0
VIVF				*e*Sn	Sn	19 43 51.7	-8.6
VIVF				*e*Sg	Sg	19 44 20.9	-11
	137nm,0.6s						
BAIF	**Baives**	**5.25**	**51**	*e*Pn	Pn	19 42 56.4	-3.1
BAIF				*e*Pg	Pg	19 43 15.7	-7.5
BAIF				*e*Sn	Sn	19 43 51.1	-10
	17nm,0.3s						
BAIF				*e*Sg	Sg	19 44 23.2	-10
	37nm,0.5s						
ESAC	**San Caprasio**	**5.37**	**166**	Pn	Pn	19 42 58.8	-2.3
ESAC				Sn	Sn	19 43 55.4	-8.9
ESAC	**San Caprasio**	**5.37**	**166**	Pn	Pn	19 42 58.8	-2.3
	9.9nm,0.4s,SNR=7.9						
ESAC				Sn	Sn	19 43 55.4	-8.9
	65nm,0.4s,SNR=7.9						
RFYF	**Reffroy**	**5.42**	**69**	*e*Pn	Pn	19 42 57.8	-4.0
	baz=252						
RFYF				*e*Pg	Pg	19 43 18.4	-8.0
	baz=258						
RFYF				*e*Sn	Sn	19 43 56.2	-9.2
RFYF				*e*Sg	Sg	19 44 28.3	-10
	100nm,0.5s						
RFYF	**Reffroy**	**5.42**	**69**	*e*Pg	Pg	19 43 18.4	-8.0
RFYF				*e*Sn	Sn	19 43 56.2	-9.2
RFYF				*e*Sg	Sg	19 44 28.3	-10
	50nm,0.5s						
GIVF	**Givet**	**5.61**	**53**	*e*Pn	Pn	19 43 01.4	-3.2
GIVF				*e*Pg	Pg	19 43 22.0	-8.3
GIVF				*e*Sn	Sn	19 44 00.7	-10
GIVF				*e*Sg	Sg	19 44 34.5	-11
	43nm,0.5s						
THEF	**They Montfort**	**5.66**	**74**	Pn	Pn	19 43 00.5	-4.8
CABF	**La Chapelle**	**5.68**	**90**	*e*Pn	Pn	19 43 01.4	-4.1
CABF				*e*Pg	Pg	19 43 23.7	-8.0
CABF				*e*Sn	Sn	19 44 01.1	-11
	14nm,0.4s						
CABF				*e*Sg	Sg	19 44 37.0	-10
	106nm,0.8s						
EMIR	**Miracle**	**5.69**	**151**	Pn	Pn	19 43 03.8	-1.8
EMIR				Sn	Sn	19 44 05.8	-6.5
EMIR	**Miracle**	**5.69**	**151**	Pn	Pn	19 43 03.8	-1.8
	9.2nm,0.2s,SNR=9.9						
EMIR				Sn	Sn	19 44 05.8	-6.5
	19nm,0.3s,SNR=5.0						
SJAF	**Saint Jean de**	**5.73**	**139**	Pn	Pn	19 43 02.7	-3.6
EJON	**La Jonquera**	**5.76**	**140**	Pn	Pn	19 43 03.5	-3.2
EJON				Sn	Sn	19 44 07.9	-6.3
EJON	**La Jonquera**	**5.76**	**140**	Pn	Pn	19 43 03.5	-3.2
	2.6nm,0.3s,SNR=7.0						
EJON				Sn	Sn	19 44 07.9	-6.3
	9.3nm,0.4s,SNR=5.0						
HAU	**Haudompre**	**5.87**	**77**	*e*Pn	Pn	19 43 02.9	-5.3
HAU				*e*Pg	Pg	19 43 26.8	-8.6
HAU				*e*Sn	Sn	19 44 04.3	-12
HAU				*e*Sg	Sg	19 44 42.7	-11
	65nm,0.4s						
ORIF	**Oris-en-Rattie**	**5.97**	**107**	*e*Pn	Pn	19 43 05.7	-3.9
ORIF				*e*Pg	Pg	19 43 28.9	-8.5
ORIF				*e*Sg	Sg	19 44 43.7	-13
	40nm,0.5s						
ECAL	**Calabor**	**5.98**	**215**	Pn	Pn	19 43 05.4	-4.4
ECAL				Sn	Sn	19 44 12.2	-7.5
ECAL	**Calabor**	**5.98**	**215**	Pn	Pn	19 43 05.4	-4.4
	2.9nm,0.2s,SNR=11						
ECAL				Sn	Sn	19 44 12.2	-7.5
	23nm,0.4s,SNR=6.5						
EPOB	**Poblet**	**6.06**	**156**	Pn	Pn	19 43 08.5	-2.4
EPOB				Sn	Sn	19 44 13.8	-7.9
EPOB	**Poblet**	**6.06**	**156**	Pn	Pn	19 43 08.5	-2.4
	1.1nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	19 44 13.8	-7.9
	13nm,0.7s,SNR=7.9						
STS	**Santiago**	**6.09**	**230**	Pn	Pn	19 43 06.6	-4.7
STS				Sn	Sn	19 44 10.5	-12
STS	**Santiago**	**6.09**	**230**	Pn	Pn	19 43 06.6	-4.7
	6.7nm,0.2s,SNR=7.9						
WLF	**Walferdange**	**6.18**	**61**	*e*Pn	Pn	19 43 08.3	-4.2
HINF	**Hinteralfeld**	**6.18**	**79**	*e*Pn	Pn	19 43 07.9	-4.8
HINF				*e*Pg	Pg	19 43 32.9	-8.9
HINF				*e*Sn	Sn	19 44 12.6	-12
HINF				*e*Sg	Sg	19 44 50.3	-14
	40nm,0.4s						
SMRF	**Simiane la Rot**	**6.20**	**116**	*e*Pn	Pn	19 43 07.5	-5.4
SMRF				*e*Sn	Sn	19 44 15.6	-10
SMRF				*e*Sg	Sg	19 44 53.3	-12
	62nm,0.7s						
ERTA	**Horta de San J**	**6.26**	**162**	Pn	Pn	19 43 10.6	-3.1
ERTA				Sn	Sn	19 44 17.8	-8.8
ERTA	**Horta de San J**	**6.26**	**162**	Pn	Pn	19 43 10.6	-3.1
	0.9nm,0.2s,SNR=7.9						
ERTA				Sn	Sn	19 44 17.8	-8.8
	3.3nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**6.27**	**233**	Pn	Pn	19 43 08.8	-5.1
EMAZ				Sn	Sn	19 44 15.7	-11
EMAZ	**Mazaricos**	**6.27**	**233**	Pn	Pn	19 43 08.8	-5.1
	6.2nm,0.2s,SNR=12						
EMAZ				Sn	Sn	19 44 15.7	-11
	5.3nm,0.2s,SNR=7.9						
LPL	**La Plagne**	**6.34**	**100**	*e*Pn	Pn	19 43 12.1	-2.7
LPL				*e*Sg	Sg	19 44 55.3	-14
	62nm,0.8s						
LPG	**La Plagne**	**6.36**	**100**	*e*Pn	Pn	19 43 12.1	-3.0
LPG				*e*Sn	Sn	19 44 19.7	-9.3
LPG				*e*Sg	Sg	19 44 57.8	-12
	32nm,0.5s						
MOF	**Molkenrain**	**6.38**	**78**	Pn	Pn	19 43 10.2	-5.2
EBR	**Ebro Roquetas**	**6.42**	**162**	*e*Rs	Sn	19 44 25.0	-5.7
ECH	**Echery**	**6.43**	**75**	Pn	Pn	19 43 10.6	-5.6
CDF	**Champ du Feu**	**6.54**	**74**	*e*Pn	Pn	19 43 11.9	-5.8
CDF				*e*Pg	Pg	19 43 39.3	-10
CDF				*e*Sn	Sn	19 44 22.9	-11
CDF				*e*Sg	Sg	19 45 04.1	-12
	49nm,0.6s						
HGN	**Heimansgroeve**	**6.56**	**51**	*e*Pn	Pn	19 43 12.6	-5.4
	2.2nm,0.1s						
HGN				*e*Sn	Sn	19 44 26.5	-7.7
WLS	**Welschbruch**	**6.59**	**74**	Pn	Pn	19 43 12.7	-5.7
MBDF	**Montbardon**	**6.63**	**106**	*e*Pn	Pn	19 43 13.1	-5.8
MBDF				*e*Sg	Sg	19 45 05.8	-13
	38nm,0.7s						
EMOS	**Mosqueruela**	**6.70**	**169**	Pn	Pn	19 43 15.9	-4.0
EMOS				Sn	Sn	19 44 29.1	-8.5
EMOS	**Mosqueruela**	**6.70**	**169**	Pn	Pn	19 43 15.9	-4.0
	1.6nm,0.3s,SNR=8.0						
EMOS				Sn	Sn	19 44 29.1	-8.5
	1.9nm,0.2s,SNR=7.9						
RUP	**Ruppelstein**	**6.74**	**63**	Pn	Pn	19 43 17.6	-2.9
LANF	**Langenberg**	**7.00**	**69**	Pn	Pn	19 43 18.9	-5.2
FRF	**La Foret Royal**	**7.08**	**115**	*e*Pn	Pn	19 43 21.4	-3.9
FRF				*e*Pg	Pg	19 43 49.8	-10
FRF				*e*Sn	Sn	19 44 36.7	-10
	5.4nm,0.5s						
FRF				*e*Sg	Sg	19 45 20.3	-14
	46nm,1.0s						
FRF	**La Foret Royal**	**7.08**	**115**	*e*Pn	Pn	19 43 21.4	-3.9
FRF				*e*Sn	Sn	19 44 36.7	-10
	2.7nm,0.5s						
FRF				*e*Sg	Sg	19 45 20.3	-14
	23nm,1.0s						
ABH	**Alteburg**	**7.10**	**62**	Pn	Pn	19 43 22.1	-3.4
LMR	**La Mourre**	**7.12**	**117**	*e*Pn	Pn	19 43 21.6	-4.2
LMR				*e*Pg	Pg	19 43 50.5	-10
LMR				*e*Sn	Sn	19 44 37.8	-10
	2.6nm,0.3s						
LMR				*e*Sg	Sg	19 45 20.9	-14
	20nm,0.7s						
LMR	**La Mourre**	**7.12**	**117**	*e*Pn	Pn	19 43 21.6	-4.2
LMR				*e*Sn	Sn	19 44 37.8	-10
	1.3nm,0.3s						
LMR				*e*Sg	Sg	19 45 20.9	-14
	10nm,0.7s						
ESDC	**Sonseca Array**	**7.39**	**191**	Pn	Pn	19 43 25.0	-4.7
ESDC				Sn	Sn	19 44 42.6	-12
ESDC	**Sonseca Array**	**7.39**	**191**	Pn	Pn	19 43 25.0	-4.6
	0.6nm,0.3s,SNR=7.9						
SBF	**Sospel**	**7.43**	**111**	*e*Sg	Sg	19 45 25.9	-20
	50nm,0.8s						
WTSB	**Winterswijk**	**7.70**	**46**	*e*Pn	Pn	19 43 29.1	-4.8
	5.7nm,0.5s						
WTSB				*e*Sn	Sn	19 44 51.0	-12
TNS	**Taunus Mts**	**7.76**	**61**	*e*Pn	Pn	19 43 29.1	-5.7
TNS				*e*Sn	Sn	19 44 51.6	-13
ETOS	**Mallorca**	**8.04**	**151**	Pn	P	19 43 35.5	-3.2
ETOS				Sn	Sn	19 45 00.1	-11
ETOS	**Mallorca**	**8.04**	**151**	Pn	P	19 43 35.5	-3.2
	1.4nm,0.5s,SNR=7.9						
ETOS				Sn	Sn	19 45 00.1	-11
	2.3nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**8.31**	**177**	Pn	P	19 43 38.8	-3.8
ETOB				Sn	Sn	19 45 06.8	-11
ETOB	**Tobarra**	**8.31**	**177**	Pn	P	19 43 38.8	-3.7
	2.1nm,0.5s,SNR=4.0						
ETOB				Sn	Sn	19 45 06.8	-11
	10nm,1.1s,SNR=4.0						
EBAD	**Badajoz**	**8.93**	**205**	Pn	P	19 43 46.4	-4.6
EBAD				Sn	Sn	19 45 18.9	-14
EBAD	**Badajoz**	**8.93**	**205**	Pn	P	19 43 46.4	-4.7
	1.2nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**8.96**	**192**	Pn	P	19 43 46.8	-4.6
EADA				Sn	Sn	19 45 20.1	-14
EADA	**Adamuz**	**8.96**	**192**	Pn	P	19 43 46.8	-4.6
	0.5nm,0.3s,SNR=5.7						
PGF	**Pioggiola**	**9.08**	**115**	*e*Pn	P	19 43 47.8	-5.3
ECAB	**El Cabril**	**9.19**	**196**	Pn	P	19 43 50.7	-3.9
ECAB				Sn	Sn	19 45 24.2	-16
ECAB	**El Cabril**	**9.19**	**196**	Pn	P	19 43 50.7	-3.9
	0.9nm,0.5s,SNR=7.9						
EVO	**Evora**	**9.45**	**209**	*e*Pn	P	19 43 53.2	-5.0
EVO				*e*Sn	Sn	19 45 33.4	-13
	2.6nm,0.3s						
EMIN	**Mina Concepcio**	**9.76**	**202**	Pn	P	19 43 56.8	-5.7
EMIN				Sn	Sn	19 45 38.7	-15
EMIN	**Mina Concepcio**	**9.76**	**202**	Pn	P	19 43 56.8	-5.7
	1.0nm,0.5s,SNR=7.9						
KHC	**Kasperske Hory**	**10.77**	**73**	*e*P	P	19 44 11.0	-5.2
KHC				*e*S	S	19 46 03.7	-15

IDC 22 19:42:25.7±1.3**, 8.64S×130.39E, mb3.9**/3**, mb1 4.0**/5**, mb1mx3.8**/12**, mbtmp3.9**/5**, ML3.9**/2**, Error ellipse: s-maj=62.9km s-min=22.5km az=75.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.48**	**206**	Pn	P	19 44 57.1	-3.3
	2.3nm,0.3s,baz=17,slow=13,SNR=21						
FITZ				Sn	S	19 46 48.2	-12
	3.2nm,0.3s,baz=166,slow=13,SNR=8.2						
WRA	**Warramunga Arr**	**11.87**	**162**	Pn	P	19 45 14.3	-5.1
	0.3nm,0.3s,baz=345,slow=13,SNR=10.0						
WRA				Sn	S	19 47 22.6	-11
	0.6nm,0.3s,baz=332,slow=23,SNR=7.1						
STKA	**Stephens Creek**	**25.36**	**157**	P	P	19 47 55.6	-0.5
	1.5nm,0.6s,baz=331,slow=10,SNR=3.3						
SONM	**Songino Array**	**60.11**	**342**	P	P	19 52 34.8	-2.4
	0.4nm,0.6s,baz=156,slow=5.6,SNR=5.9						
MKAR	**Makanchi Array**	**69.80**	**327**	P	P	19 53 38.1	-1.9
	1.5nm,0.7s,baz=126,slow=7.8,SNR=20						

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*LDG **22** 19:44:24.5±0.1, 46.97N×2.14W, h3^{km}, Md2.6/1, Ml2.8/12, Error ellipse: s-maj=3.2km s-min=1.4km az=53.0*

*NEIC **22** 19:44:24.6, 46.92N×2.13W, h5^{km}, ML2.8(LDG), ML2.2(STR), After STR.*

*STR **22** 19:44:24.6±0.2, 46.92N×2.13W, h5^{km}±1^{km}, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

CSEM 22 19:44:24.3±0.1**, 46.97N×2.15W, h2^{km}, ML2.9**/11**, Error**

ellipse: s-maj=2.5km s-min=1.1km az=52.0,Bay of Biscay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LRYF	**La Roche-sur-Y**	0.56	133	Pg	Pg	19 44 34.6	-1.0
QUIF	**Quistinic**	1.18	324	*e*Pn	Pn	19 44 46.0	-1.7
QUIF				*e*Pg	Pg	19 44 46.7	-1.1
QUIF				*e*Sg	Sg	19 45 00.8	-2.7
	15nm,0.2s						
QUIF	**Quistinic**	1.18	324	*e*Pg	Pg	19 44 46.7	-1.1
QUIF				*e*Sg	Sg	19 45 00.8	-2.7
	7.6nm,0.2s						
SGMF	**Saint Gilles**	1.32	348	*e*Pg	Pg	19 44 49.2	-1.4
SGMF				*e*Sn	Sn	19 45 04.4	-3.7
SGMF				*e*Sg	Sg	19 45 06.3	-1.9
	26nm,0.2s						
MFF	**Saint Martin d**	1.42	104	*e*Pn	Pn	19 44 50.2	-1.0
MFF				*e*Pg	Pg	19 44 51.5	-1.2
MFF				*e*Sn	Sn	19 45 07.8	-2.9
	22nm,0.2s						
CHIF	**Chize**	1.46	124	Pg	Pg	19 44 51.5	-1.9
CHIF				Sg	Sg	19 45 11.3	-1.6
ROSF	**Rostrenen**	1.57	331	*e*Pn	Pn	19 44 51.3	-2.0
ROSF				*e*Pg	Pg	19 44 53.4	-2.2
ROSF				*e*Sn	Sn	19 45 09.9	-4.6
ROSF				*e*Sg	Sg	19 45 13.5	-3.1
	8.1nm,0.2s						
GRR	**Gorron**	1.67	31	*e*Pn	Pn	19 44 53.4	-1.3
GRR				*e*Pg	Pg	19 44 55.8	-1.8
GRR				*e*Sg	Sg	19 45 17.1	-2.8
	15nm,0.3s						
MATF	**Mathat**	1.71	131	Pg	Pg	19 44 56.3	-2.2
FLN	**La Foliniere**	2.12	31	*e*Pn	Pn	19 44 59.4	-1.8
FLN				*e*Pg	Pg	19 45 03.4	-3.2
FLN				*e*Sn	Sn	19 45 24.3	-4.1
FLN				*e*Sg	Sg	19 45 29.8	-5.1
	6.6nm,0.2s						
LDF	**La Druitiere**	2.13	39	*e*Pg	Pg	19 45 03.5	-3.2
LDF				*e*Sn	Sn	19 45 24.7	-3.9
LDF				*e*Sg	Sg	19 45 31.0	-4.1
	11nm,0.3s						
LFF	**La Frestale**	2.86	134	*e*Pg	Pg	19 45 16.2	-5.1
LFF				*e*Sg	Sg	19 45 53.8	-5.6
	13nm,0.4s						
RJF	**Les Rejaudoux**	3.04	122	*e*Pn	Pn	19 45 11.8	-2.5
RJF				*e*Pg	Pg	19 45 20.2	-4.8
RJF				*e*Sn	Sn	19 45 46.3	-5.5
RJF				*e*Sg	Sg	19 45 58.4	-7.1
	5.8nm,0.3s						
TCF	**Toulx Ste Croi**	3.08	101	*e*Pn	Pn	19 45 12.9	-2.0
TCF				*e*Sn	Sn	19 45 47.1	-5.7
TCF				*e*Sg	Sg	19 46 00.3	-6.5
	3.4nm,0.2s						
CAF	**Calviac**	3.58	123	*e*Pn	Pn	19 45 19.5	-2.5
CAF				*e*Pg	Pg	19 45 30.8	-4.9
CAF				*e*Sn	Sn	19 45 58.9	-6.5
CAF				*e*Sg	Sg	19 46 16.1	-7.2
	4.4nm,0.3s						

WEL 22 19:48:18.8±0.2**,38.15S×175.98E,h206^{km}±2^{km},ML3.5**/12**, 1C,Error ellipse: s-maj=3.2km s-min=2.9km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	0.89	97	PN	P	19 48 48.3	-0.4
URZ				SN	S	19 49 11.4	-0.5
NGZ	**Ngauruhoe**	1.07	196	PN	P	19 48 50.0	+0.1
BKZ	**Black Stump Fm**	1.09	159	PN	P	19 48 50.0	-0.1
BKZ				SN	S	19 49 13.6	-0.6
TUVZ	**Tukino**	1.15	193	PN	P	19 48 50.3	-0.2
FWVZ	**Far West T-bar**	1.15	197	PN	P	19 48 50.3	-0.3
WNVZ	**Wahianoa**	1.21	194	PN	P	19 48 50.7	-0.3
MWZ	**Matawai**	1.23	99	PN	P	19 48 51.1	-0.1
MWZ				SN	S	19 49 15.9	-0.3
KNZ	**Kokohu**	1.58	124	SN	S	19 49 20.7	-0.8
PUZ	**Puketiti**	1.79	88	PN	P	19 48 55.6	-0.6
TSZ	**Takapari Road**	1.91	181	PN	P	19 48 56.2	-1.0
TSZ				SN	S	19 49 25.4	-1.4
MRZ	**Mangatainoka R**	2.53	187	PN	P	19 49 01.7	-2.2
MRZ				SN	S	19 49 35.3	-3.4
BFZ	**Birch Farm**	2.53	175	PN	P	19 49 02.1	-1.9
KIW	**Kapiti Island**	2.83	197	PN	P	19 49 04.5	-2.9
MTW	**Mount Morrison**	3.03	187	PN	P	19 49 06.6	-3.0
DUWZ	**D'Urville Isla**	3.09	210	PN	P	19 49 07.3	-3.1
SNZO	**South Karori**	3.31	197	⇑PN	P	19 49 09.5	-3.5
TCW	**Tory Channel**	3.33	203	PN	P	19 49 10.0	-3.3

IDC 22 19:52:42.2±10.0**,2.11N×95.46E,mb3.7**/3**,mb1 3.9**/4**, mb1mx3.6**/17**,mbtmp3.7**/4**,Error ellipse: s-maj=201.6km s-min=110.2km az=149.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	16.60	12	Pn	P	19 56 36.5	-1.5
	0.1nm,0.3s,baz=202,slow=11,SNR=9.3						
MKAR	**Makanchi Array**	45.96	347	P	P	20 01 07.0	-1.8
	0.4nm,0.4s,baz=173,slow=9.0,SNR=1.5						
SONM	**Songino Array**	46.52	10	P	P	20 01 11.4	-1.8
	0.7nm,0.7s,baz=190,slow=8.1,SNR=8.8						
ZAL	**Zalesovo**	52.40	352	P	P	20 01 56.0	-2.3
	1.3nm,0.4s,baz=329,slow=5.0,SNR=6.5						

LDG ***22*** *19:53:37.5±0.1,46.95N×2.17W,h3^{km},Md2.8/2,Ml2.4/19, Error ellipse: s-maj=3.4km s-min=1.6km az=58.0*

STR ***22*** *19:53:37.1±0.8,47.01N×2.12W,h5^{km}±1^{km},Ml2.8,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

CSEM 22 19:53:37.6±0.1**,46.98N×2.14W,h2^{km},ML2.5**/16**,Error ellipse: s-maj=2.0km s-min=0.9km az=51.0,Bay of Biscay**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LRYF	**La Roche-sur-Y**	0.57	134	Pg	Pg	19 53 47.8	-1.2
LRYF				Sg	Sg	19 53 56.7	+0.1
LCHF	**La Chataignera**	1.01	107	Pg	Pg	19 53 56.4	-1.4
LCHF				Sg	Sg	19 54 09.8	-1.4
QUIF	**Quistinic**	1.17	324	*e*Pn	Pn	19 53 59.2	-1.7
QUIF				*e*Sg	Sg	19 54 13.9	-2.6
	7.5nm,0.2s						
SGMF	**Saint Gilles**	1.31	348	*e*Pn	Pn	19 54 01.1	-1.8
SGMF				*e*Pg	Pg	19 54 02.4	-1.3
SGMF				*e*Sn	Sn	19 54 17.6	-3.5
SGMF				*e*Sg	Sg	19 54 19.4	-1.7
	13nm,0.2s						
MFF	**Saint Martin d**	1.42	105	*e*Pn	Pn	19 54 03.4	-1.1
MFF				*e*Pg	Pg	19 54 04.7	-1.3
MFF				*e*Sn	Sn	19 54 20.8	-3.2
	14nm,0.2s						
CHIF	**Chize**	1.46	125	Pg	Pg	19 54 04.9	-1.9
ROSF	**Rostrenen**	1.56	331	*e*Pg	Pg	19 54 06.6	-2.1
ROSF				*e*Sn	Sn	19 54 23.1	-4.4
ROSF				*e*Sg	Sg	19 54 26.5	-3.0
	2.4nm,0.2s						
GRR	**Gorron**	1.66	31	*e*Pg	Pg	19 54 08.9	-1.8
GRR				*e*Sn	Sn	19 54 26.8	-3.2
GRR				*e*Sg	Sg	19 54 30.1	-2.7
	3.6nm,0.1s						
FLN	**La Foliniere**	2.11	31	*e*Pg	Pg	19 54 16.4	-3.3
	baz=218						
FLN				*e*Sn	Sn	19 54 37.4	-4.0
FLN				*e*Sg	Sg	19 54 43.5	-4.2
	6.2nm,0.3s,baz=207						
LDF	**La Druitiere**	2.11	39	*e*Pn	Pn	19 54 12.8	-1.6
LDF				*e*Pg	Pg	19 54 16.7	-3.1
LDF				*e*Sn	Sn	19 54 37.9	-3.7
LDF				*e*Sg	Sg	19 54 44.2	-3.8
	2.6nm,0.2s						
LFF	**La Frestale**	2.86	134	*e*Pn	Pn	19 54 22.9	-2.2
LFF				*e*Pg	Pg	19 54 29.4	-5.3
LFF				*e*Sn	Sn	19 54 54.9	-5.7
LFF				*e*Sg	Sg	19 55 07.0	-5.9
	5.9nm,0.4s						
RJF	**Les Rejaudoux**	3.04	122	*e*Pn	Pn	19 54 24.9	-2.8
RJF				*e*Pg	Pg	19 54 33.4	-5.0
RJF				*e*Sn	Sn	19 54 59.6	-5.6
RJF				*e*Sg	Sg	19 55 11.6	-7.3
	4.1nm,0.3s						
TCF	**Toulx Ste Croi**	3.08	101	*e*Pn	Pn	19 54 26.1	-2.1
TCF				*e*Pg	Pg	19 54 34.9	-4.1
TCF				*e*Sn	Sn	19 55 00.0	-6.0
TCF				*e*Sg	Sg	19 55 13.6	-6.4
	3.5nm,0.3s						
BGF	**Bois d'Agland**	3.45	95	*e*Pn	Pn	19 54 31.4	-2.1
BGF				*e*Sg	Sg	19 55 26.2	-6.4
	5.0nm,0.3s						
CAF	**Calviac**	3.58	123	*e*Pn	Pn	19 54 32.6	-2.7
CAF				*e*Pg	Pg	19 54 44.0	-5.1
CAF				*e*Sn	Sn	19 55 12.1	-6.7
CAF				*e*Sg	Sg	19 55 29.5	-7.3
	2.8nm,0.4s						
AVF	**Avril sur Loir**	3.77	91	*e*Pn	Pn	19 54 35.1	-2.9
AVF				*e*Sg	Sg	19 55 35.2	-8.0
	1.1nm,0.3s						
SJPF	**Ste Jean**	3.92	170	*e*Sn	Sn	19 55 18.7	-8.6
LOR	**Lormes**	4.11	84	*e*Sn	Sn	19 55 25.3	-6.8
LOR				*e*Sg	Sg	19 55 43.9	-10
	1.6nm,0.3s,baz=254						
SMF	**Signal de Mont**	4.12	92	*e*Pn	Pn	19 54 39.6	-3.4
SMF				*e*Sg	Sg	19 55 46.9	-7.9
	0.7nm,0.2s						
ETSF	**Etsaut**	4.23	164	*e*Sn	Sn	19 55 26.2	-9.1
ETSF				*e*Sg	Sg	19 55 48.5	-10
	0.3nm,0.2s						
EPF	**Esparros**	4.32	155	*e*Sn	Sn	19 55 28.7	-8.9
	1.2nm,0.2s						
MTLF	**Montolieu**	4.77	138	*e*Sn	Sn	19 55 38.5	-10
LASF	**Ste Croix**	5.12	122	*e*Sg	Sg	19 56 16.9	-11
	0.4nm,0.2s						
BAIF	**Baives**	5.22	52	*e*Pn	Pn	19 54 55.5	-3.1

IDC 22 19:56:39.0±1.3**,9.02S×129.48E,mb3.9**/3**,mb1 3.9**/4**, mb1mx3.7**/11**,mbtmp3.8**/4**,ML3.6**/1**,Error ellipse: s-maj=89.6km s-min=23.7km az=65.0,Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	11.83	157	Pn	P	19 59 27.6	-4.6
	0.4nm,0.3s,baz=335,slow=14,SNR=34						
WRA				Sn	S	20 01 37.4	-8.7
	1.0nm,0.3s,baz=337,slow=22,SNR=7.0						
STKA	**Stephens Creek**	25.37	155	P	P	20 02 08.7	-0.9
	1.5nm,0.7s,baz=323,slow=13,SNR=4.2						
SONM	**Songino Array**	60.19	342	P	P	20 06 47.9	-3.2
	0.4nm,0.5s,baz=164,slow=7.3,SNR=6.6						
MKAR	**Makanchi Array**	69.63	327	P	P	20 07 51.0	-1.4
	2.0nm,0.7s,baz=132,slow=7.8,SNR=17						

IDC 22 20:00:17.3±2.3**,10.37N×92.06E,mb4.0**/4**,mb1 4.1**/5**, mb1mx3.8**/18**,mbtmp3.9**/5**,ML3.6**/1**,MS3.7**/1**,Ms1 3.7**/1**, ms1mx3.1**/20**,Error ellipse: s-maj=70.4km s-min=22.5km az=68.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	10.44	39	Pn	P	20 02 49.0	-2.4
	0.1nm,0.3s,baz=231,slow=15,SNR=6.0						
MKAR	**Makanchi Array**	37.23	349	P	P	20 07 30.6	-1.8
	0.4nm,0.6s,baz=172,slow=8.7,SNR=6.1						
SONM	**Songino Array**	39.24	15	P	P	20 07 47.3	-2.0
	0.6nm,0.7s,baz=207,slow=8.3,SNR=6.1						
FITZ	**Fitzroy Crossi**	43.58	130	P	P	20 08 23.5	-1.7
	4.3nm,0.5s,baz=343,slow=6.2,SNR=9.8						
CBIJ	**Chichi jima**	49.95	63	LR	LR	20 28 50.9	
	comp=Z,78nm,20.3s,baz=122,slow=34						
WRA	**Warramunga Arr**	51.38	126	P	P	20 09 24.1	-2.1
	2.2nm,0.3s,baz=300,slow=10,SNR=78						

MAN 22 20:03:52.7,15.47N×119.83E,h49^{km},mb4.2,ML3.0, MS2.8,2C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCZP	**Santa Cruz**	0.31	14	*e*P	P	20 04 03.4	+1.5
SCZP				*e*S	S	20 04 11.1	+2.6
BOLP	**Bolinao**	0.91	5	*e*P	P	20 04 10.1	+0.8
BOLP				*e*S	S	20 04 22.6	+0.9
NBP	**Mount Natib**	0.92	142	*e*P	P	20 04 10.9	+1.4
BCPH	**Baguio City Da**	1.16	39	⇑*i*P	P	20 04 14.0	+1.2
BCPH				*i* S	S	20 04 29.6	+1.8
PCPH	**Palayan**	1.22	86	⇑*i*P	P	20 04 13.8	+0.1
PCPH				*i* S	S	20 04 29.4	0.0
NZB	**Bigte**	1.37	116	*e*P	P	20 04 16.9	+0.9
ARP	**Angono**	1.58	126	*e*P	P	20 04 19.6	+0.7
BALP	**Baler**	1.70	81	*e*P	P	20 04 21.2	+0.7
BALP				*e*S	S	20 04 42.6	+1.4
LUBP	**Lubang**	1.77	167	*e*P	P	20 04 22.1	+0.5
LUBP				*e*S	S	20 04 44.2	+1.2
LBPH	**Los Banos**	1.85	135	*e*P	P	20 04 24.9	+2.3
ABRA	**Dolores**	2.32	21	*e*P	P	20 04 29.8	+0.4
ABRA				*e*S	S	20 04 58.8	+2.0
CAUP	**Cauayan**	2.41	52	*e*P	P	20 04 31.8	+1.2
CAUP				*e*S	S	20 05 07.5	+8.6
APYP	**Conner**	2.73	29	*e*P	P	20 04 35.5	+0.3
APYP				*e*S	S	20 05 08.0	+0.7
SJMP	**San Jose**	3.24	157	*e*P	P	20 04 45.4	+3.0
BUSP	**Coron**	3.47	174	*e*P	P	20 04 45.4	-0.2
BUSP				*e*S	S	20 05 21.6	-4.2
ENPP	**El Nido**	4.26	185	*e*P	P	20 04 55.5	-1.3
ENPP				*e*S	S	20 05 40.1	-5.7

MOS ***22*** *20:08:21.9±1.2,7.78S×107.50E,h33^{km},mb5.4/33, MS4.6/12,Error ellipse: s-maj=12.2km s-min=6.3km az=117.6*

ORF ***22*** *20:08:23.1,7.01S×108.58E,h30^{km},mb5.6*

HRVD ***22*** *20:08:23.9±0.2,8.45S×107.55E,h50^{km},MW5.3/65, Centroid moment Tensor Solution. LP body waves: s65,c118;Mantle waves: s65,c124; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.85±.03; $M_{\theta\theta}$-1.09±.02; $M_{\phi\phi}$0.24±.03; $M_{r\theta}$0.46±.02; $M_{\theta\phi}$0.34±.02; $M_{\phi r}$-0.01±.02; Best double couple: $M_0$1.113×10^{17} NP1: ϕ_s293°,δ34°,λ105°. NP2:ϕ_s96°,δ57°,λ80°. Principal axes: T .958, Plg75°, Azm338°; N .311, Plg8°, Azm101°; P -1.269, Plg12°, Azm193°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***22*** *20:08:23.9±1.2,7.85S×107.46E,h38^{km}±10^{km},mb5.1/38 Error ellipse: s-maj=8.0km s-min=5.0km az=52.0*

NEIC Felt [III] at Bandung and [II] at Jakarta and Lembang.

BJI ***22*** *20:08:23.8,7.80S×107.50E,h38^{km},mB5.1,mb4.9,Ms4.9, Msz4.6*

IDC ***22*** *20:08:24.1±1.6,7.88S×107.43E,h38^{km}±12^{km},mb4.7/24, mb1 4.8/24,mb1mx4.8/25,mbtmp4.9/24,MS4.5/16, Ms1 4.5/16,ms1mx4.5/19,Error ellipse: s-maj=15.1km s-min=10.3km az=57.0*

ISC 22 20:08:23.1±0.2**,7.80S**±0.04×**107.56E**±0.04**,h45^{km}, h45^{km}**±3.8^{km}**:pP-P,n312,**σ**1^{s}06**/251**,mb5.0**/90**,MS4.6**/39**, 24C-13D,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSM	**Kuching**	9.61	17	P	**P**	**20 10 42.8**	**+1.0**
KGM	**Kluang**	10.63	336	P	**P**	**20 11 01.3**	**+5.5**
IPM	**Ipoh**	13.92	332	P	**P**	**20 11 41.2**	**+1.4**
KULM	**Kulim**	14.72	332	*e*P	**P**	**20 11 50.1**	**-0.2**
TSM	**Tawau**	15.82	41	P	**P**	**20 12 11.7**	**+7.3**
KKM	**Kota Kinabalu**	16.24	32	*e*P	**P**	**20 12 14.7**	**+4.9**
KKM	**Kota Kinabalu**	16.24	32	P	**P**	**20 12 17.0**	**+7.2**
MBWA	**Marble Bar**	17.74	140	*e*P	**P**	**20 12 22.9**	**-5.6**
	34nm,0.9s						
FITZ	**Fitzroy Crossi**	20.36	122	P	**P**	**20 12 58.4**	**-0.2**
	122nm,0.8s,baz=311,slow=4.4,SNR=105						
FITZ				LR	LR	20 21 17.5	
	comp=Z,1μm,18.3s,MS4.3,baz=288,slow=38						
NST	**Nakhon Sawan**	24.45	343	P	**P**	**20 13 38.0**	**-1.2**
KAKA	**Kakadu**	24.96	103	*e*P	**P**	**20 13 43.8**	**-0.3**
	23nm,0.6s,mb4.9						
KAKA				*e*		20 13 52.7	
KLBR	**Kellerberrin**	25.51	159	*e*P	**P**	**20 14 03.9**	**+15**
	120nm,1.7s,mb5.2						
NWAO	**Narrogin (SRO)**	26.57	162	P	**P**	**20 13 56.5**	**-2.5**
	10nm,0.9s,mb4.4,slow=9.1,SNR=3.5						
NWAO				LR	LR	20 23 17.3	
	comp=Z,2μm,21.9s,MS4.7,baz=346,slow=34						
NWAO	**Narrogin (SRO)**	26.57	162	P	**P**	**20 13 56.5**	**-2.5**
NWAO				LR	LR	20 23 17.3	
QIZ	**Qiongzhong**	26.75	5	*e*P	**P**	**20 14 05.6**	**+4.8**
QIZ				S	**S**	**20 18 39.3**	**+7.8**
QIZ				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.4						
QIZ				LR	LR		
	comp=N,760nm,17.6s,MS4.6						
QIZ				LR	LR		
	comp=E,1μm,16.5s,MS4.6						
QIZ				LR	LR		
	comp=Z,940nm,31.6s						
NANT	**Nan**	27.28	346	P	**P**	**20 14 03.0**	**-2.7**
CMAR	**Chiang Mai Arr**	27.44	342	P	**P**	**20 14 05.8**	**-1.3**
	comp=Z,6.7nm,0.7s,mb4.3,baz=178,slow=8.5,SNR=36						
CMAR				PcP	PcP	20 17 26.0	+0.8
	comp=Z,4.6nm,0.9s,baz=200,slow=2.6,SNR=6.4						
CMAR				ScP		20 21 02.1	
	comp=Z,1.6nm,0.9s,baz=181,slow=4.3,SNR=5.3						
CMAR				LR	LR	20 26 09.3	
	comp=Z,832nm,19.1s,MS4.3,baz=170,slow=39						
WRA	**Warramunga Arr**	28.61	118	P	**P**	**20 14 16.7**	**-0.9**
	comp=Z,5.6nm,0.6s,mb4.5,baz=285,slow=12,SNR=43						
WRA				PcP	PcP	20 17 27.3	-0.7
	comp=Z,4.8nm,0.8s,baz=300,slow=2.1,SNR=6.0						
WRAB	**Tennant Creek**	28.62	118	*i* P	**P**	**20 14 16.7**	**-1.0**
WRAB	**Tennant Creek**	28.62	118	*e*P	**P**	**20 14 16.0**	**-1.7**
	comp=Z,88nm,1.0s,mb5.4						
WB2	**Warramunga Arr**	28.62	118	*e*P	**P**	**20 14 16.9**	**-0.8**
PALK	**Pallekele**	30.68	299	*e*P	**P**	**20 14 36.9**	**+0.9**
	comp=Z,26nm,1.0s,mb5.0						
KMI	**Kunming**	33.06	352	P	**P**	**20 15 00.3**	**+3.5**
KMI				AP	pP	20 15 05.1	-3.8
KMI				PP	PP	20 16 12.5	+4.2
KMI				PCP	PcP	20 17 41.1	+1.5
KMI				S	**S**	**20 20 20.3**	**+9.0**
KMI				XS		20 20 28.6	
KMI				SCP		20 21 23.9	
KMI				PCS		20 21 25.9	
KMI				SCS	ScS	20 25 23.3	+5.5
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
KMI				AMB	AMB		
	comp=Z,90nm,5.9s						
KMI				LR	LR		
	comp=N,1μm,17.1s,MS4.8						
KMI				LR	LR		
	comp=E,610nm,15.6s,MS4.8						
KMI				LR	LR		
	comp=Z,2μm,17.1s,MS4.8						
GYA	**Guiyang**	34.06	359	⇑*i*P	**P**	**20 15 05.8**	**+0.4**
GYA				PP	PP	20 16 22.4	+1.9
GYA				S	**S**	**20 20 30.3**	**+3.4**
GYA				SS	SS	20 22 39.0	+2.3
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,240nm,4.2s						
GYA				LR	LR		
	comp=N,880nm,17.0s,MS4.7						
GYA				LR	LR		
	comp=E,820nm,14.3s,MS4.7						
GYA				LR	LR		
	comp=Z,1μm,16.7s,MS4.7						
MDRS	**Chennai**	34.14	307	*e*x	x	20 25 04.0	
QZH	**Quanzhou**	34.27	18	*e*P	**P**	**20 15 11.1**	**+3.9**
QZH				S	**S**	**20 20 30.6**	**+0.4**
QZH				LR	LR		
	comp=Z,2μm,30.2s,MS4.7						
SHL	**Shillong**	36.50	336	*e*P	**P**	**20 15 24.0**	**-2.2**
SHL				*e*x	x	20 17 49.0	
ENH	**Enshi**	37.90	3	*e*P	**P**	**20 15 37.7**	**-0.1**
	comp=Z,19nm,1.1s,mb4.7						
HYB	**Hyderabad**	38.07	311	*e*P	**P**	**20 15 39.0**	**-0.4**
HYB				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.4						
HYB	**Hyderabad**	38.07	311	*e*P	**P**	**20 15 39.0**	**-0.4**
	comp=Z,80nm,1.0s,mb5.4						
HYB	**Hyderabad**	38.07	311	*i* P	**P**	**20 15 39.0**	**-0.4**
	comp=Z,40nm,1.0s,mb5.1						
CD2	**Chengdu**	38.66	355	P	**P**	**20 15 45.3**	**+1.1**
WHN	**Wuhan**	38.68	9	*e*P	**P**	**20 15 48.0**	**+3.7**
PMG	**Port Moresby**	39.18	95	*e*P	**P**	**20 15 49.0**	**+0.4**
PMG				pmax	pmax		
	comp=Z,24nm,0.8s						
PMG	**Port Moresby**	39.18	95	P	**P**	**20 15 49.9**	**+1.3**
	comp=Z,20nm,0.8s,mb4.9,baz=255,slow=7.3,SNR=7.8						
PMG	**Port Moresby**	39.18	95	*e*P	**P**	**20 15 49.0**	**+0.4**
	comp=Z,24nm,0.8s,mb5.0						
CTA	**Charters Tower**	39.39	112	P	**P**	**20 15 51.4**	**+1.1**
	comp=Z,14nm,0.9s,mb4.7,baz=283,slow=12,SNR=11						
CTA				PcP	PcP	20 17 58.9	+0.3
	comp=Z,12nm,0.7s,baz=256,slow=3.8,SNR=5.7						
CTA	**Charters Tower**	39.39	112	P	**P**	**20 15 51.4**	**+1.1**
CTA				PcP	PcP	20 17 58.9	+0.3
CTAO	**Charters Tower**	39.39	112	*e*P	**P**	**20 15 51.0**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,69nm,1.4s,mb5.2						
CTAO	**Charters Tower**	39.39	112	*e*P	**P**	**20 15 51.0**	**+0.7**
	comp=Z,69nm,1.4s,mb5.2						
STKA	**Stephens Creek**	39.70	132	⇓*i*P	**P**	**20 15 52.7**	**-0.1**
	comp=Z,36nm,0.6s,mb5.3						
STKA	**Stephens Creek**	39.70	132	P	**P**	**20 15 53.0**	**+0.3**
	comp=Z,43nm,0.6s,mb5.3,baz=303,slow=8.1,SNR=133						
STKA				PcP	PcP	20 17 58.7	-0.7
	comp=Z,8.7nm,0.7s,baz=293,slow=8.9,SNR=2.8						
STKA				LR	LR	20 32 57.0	
	comp=Z,989nm,20.9s,MS4.6,baz=297,slow=37						
JOW	**Kunigami**	39.86	30	LR	LR	20 31 57.6	
	comp=Z,577nm,21.9s,MS4.4,baz=169,slow=35						
LSA	**Lhasa**	40.49	338	P	**P**	**20 16 01.8**	**+2.5**
LSA	**Lhasa**	40.49	338	*e*P	**P**	**20 15 58.3**	**-1.0**
LSA				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
LSA	**Lhasa**	40.49	338	*e*P	**P**	**20 15 58.3**	**-1.1**
	comp=Z,11nm,0.7s,mb4.7						
NJ2	**Nanjing**	41.07	15	*e*P	**P**	**20 16 07.6**	**+3.5**
NJ2				AP	pP	20 16 17.4	+1.0
NJ2				XP	sP	20 16 21.4	-0.5
NJ2				PP	PP	20 17 45.9	+3.8
NJ2				S	**S**	**20 22 21.0**	**+7.6**
NJ2				XS		20 22 37.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
NJ2				AMB	AMB		
	comp=Z,530nm,5.5s						
NJ2				LR	LR		
	comp=N,1μm,27.9s						
NJ2				LR	LR		
	comp=E,2μm,21.4s						
NJ2				LR	LR		
	comp=Z,710nm,24.9s,MS4.4						
PKI	**Pulchoki**	41.18	329	*e*P	**P**	**20 16 03.9**	**-1.2**
GUN	**Gumba**	41.23	330	*e*P	**P**	**20 16 04.2**	**-1.2**
	comp=Z,26nm,0.4s,mb5.2						
KAD	**Karad**	41.36	307	*e*P	**P**	**20 16 06.3**	**-0.3**
KAD				AMb	AMB	20 16 08.7	
	comp=Z,78nm,1.9s,mb5.0						
DMN	**Daman**	41.37	329	*e*P	**P**	**20 16 04.9**	**-1.7**
	comp=Z,42nm,0.8s,mb5.1						
KKN	**Kakani**	41.42	329	*e*P	**P**	**20 16 05.4**	**-1.7**
	comp=Z,41nm,0.9s,mb5.1						
KKN	**Kakani**	41.42	329	*e*P	**P**	**20 16 05.4**	**-1.7**
KKN				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.8						
XAN	**Xi'an**	41.63	2	P	**P**	**20 16 08.9**	**+0.2**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
GKN	**Gorkha**	41.92	329	*e*P	**P**	**20 16 09.1**	**-2.2**
KOLN	**Koldanda**	42.28	328	*e*P	**P**	**20 16 12.6**	**-1.6**
	comp=Z,81nm,0.8s,mb5.4						
POO	**Poona**	42.31	309	*e*P	**P**	**20 16 12.6**	**-2.0**
POO				AMb	AMB	20 16 14.1	
	comp=Z,48nm,2.0s,mb4.8						
BHPL	**Bhopal**	42.66	317	*e*P	**P**	**20 16 16.0**	**-1.3**
BHPL				AMb	AMB	20 16 18.3	
	comp=Z,54nm,0.9s,mb5.3						
LZH	**Lanzhou**	43.79	356	P	**P**	**20 16 28.3**	**+1.9**
LZH				PP	PP	20 18 13.0	+2.7
LZH				S	**S**	**20 22 53.3**	**0.0**
LZH				SS	SS	20 26 04.0	+1.8
LZH				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,240nm,4.0s						
LZH				LR	LR		
	comp=N,890nm,13.7s						
LZH				LR	LR		
	comp=Z,1μm,17.1s,MS5.0						

TIA	Tai'an	44.69	11	eP	P	20 16 34.0	+0.4
LGTI	Lohaghat	45.41	326	eP	P	20 16 39.5	0.0
JNU	Nakatsue	46.35	27	P	P	20 16 49.2	+2.4
	comp=Z,7.2nm,1.0s,mb4.5,baz=148,slow=9.5,SNR=3.6						
JNU				LR	LR	20 38 15.5	
	comp=Z,211nm,20.2s,MS4.1,baz=182,slow=38						
SONA	Sohna	46.38	322	eP	P	20 16 45.1	-2.0
SONA				AMb	AMB	20 16 47.3	
	comp=Z,66nm,1.1s,mb5.5						
AYAN	Aya Nagar	46.52	322	eP	P	20 16 46.9	-1.3
AYAN				AMb	AMB	20 16 49.3	
	comp=Z,8.3nm,0.9s,mb4.7						
NDI	New Delhi	46.61	322	eP	P	20 16 48.0	-0.9
NDI				eS	S	20 23 30.0	-3.8
KUDL	Kundal	46.67	321	eP	P	20 16 47.5	-1.9
KUDL				eS	S	20 23 32.8	-1.9
ARMA	Armidale	46.93	125	eP	P	20 16 53.3	+1.9
KHET	Khetri	47.04	321	eP	P	20 16 51.0	-1.3
KHET				AMb	AMB	20 16 53.3	
	comp=Z,64nm,1.1s,mb5.5						
GTA	Gaotai	47.52	352	eP	P	20 16 56.8	+0.9
GTA				AP	pP	20 17 13.8	+5.4
GTA				PP	PP	20 18 48.8	+1.9
GTA				SCP		20 22 11.5	
GTA				PCS		20 22 20.1	
GTA				S	S	20 23 46.8	+0.3
GTA				SCS	ScS	20 26 44.1	+1.2
GTA				SS	SS	20 27 10.6	+2.0
GTA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
GTA				AMB	AMB		
	comp=Z,190nm,7.6s						
GTA				LR	LR		
	comp=N,680nm,20.5s,MS4.7						
GTA				LR	LR		
	comp=E,500nm,17.9s,MS4.7						
GTA				LR	LR		
	comp=Z,580nm,19.8s,MS4.5						
KKR	Kurukshetra	47.77	323	eP	P	20 16 56.6	-1.4
BTO	Baotou	48.22	3	eP	P	20 17 01.8	+0.4
BTO				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
SMLA	Simla	48.42	325	i P	P	20 16 59.8	-3.3
SMLA				i x	x	20 23 52.5	
HHC	Hu-ho-hao-te	48.55	4	eP	P	20 17 03.8	-0.1
HHC				AP	pP	20 17 21.5	+5.1
HHC				PCP	PcP	20 18 25.8	-3.8
HHC				PP	PP	20 18 56.8	+0.1
HHC				SCP		20 22 17.8	
HHC				PCS		20 22 27.3	
HHC				S	S	20 23 57.6	-3.4
HHC				SCS	ScS	20 26 47.8	-1.8
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
HHC				AMB	AMB		
	comp=Z,180nm,8.0s						
HHC				LR	LR		
	comp=N,790nm,28.5s						
HHC				LR	LR		
	comp=E,490nm,16.3s						
HHC				LR	LR		
	comp=Z,580nm,28.9s,MS4.4						
SNY	Shenyang	51.52	15	⇓P	P	20 17 26.0	-0.6
SNY				AMB	AMB		
	comp=Z,20nm,2.0s,mb4.7						
SNY				LR	LR		
	comp=E,450nm,22.8s						
SNY				LR	LR		
	comp=Z,410nm,21.6s,MS4.4						
MAJO	Matsushiro	52.66	31	eP	P	20 17 34.2	-1.0
MAJO				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
MAJO	Matsushiro	52.66	31	eP	P	20 17 34.2	-1.0
	comp=Z,14nm,1.0s,mb4.8						
MAT	Matsushiro	52.66	31	eP	P	20 17 28.0	-7.2
MAT				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
MAT	Matsushiro	52.66	31	eP	P	20 17 28.0	-7.2
	comp=Z,15nm,1.0s,mb4.9						
MAT	Matsushiro	52.66	31	P	P	20 17 33.8	-1.4
CN2	Changchun	53.86	16	eP	P	20 17 43.0	-1.0
CN2				eXP	sP	20 18 01.0	-0.9
CN2				eS	S	20 25 13.0	-1.1
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,18.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,18.0s,MS4.6						
CN2				LR	LR		
	comp=Z,400nm,21.0s,MS4.5						
WMQ	Urumqi	54.44	342	eP	P	20 17 48.3	0.0
WMQ				AP	pP	20 18 05.3	+4.3
WMQ				PCP	PcP	20 18 51.3	0.0
WMQ				PP	PP	20 19 52.5	+0.4
WMQ				S	S	20 25 20.3	-1.6
WMQ				SCS	ScS	20 27 26.8	-3.3
WMQ				SS	SS	20 29 02.3	-1.9
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,140nm,8.0s						
WMQ				LR	LR		
	comp=N,320nm,22.0s,MS4.5						
WMQ				LR	LR		
	comp=E,360nm,20.2s,MS4.5						
WMQ				LR	LR		
	comp=Z,370nm,20.6s,MS4.4						
SONM	Songino Array	55.40	359	P	P	20 17 55.5	+0.3
	comp=Z,17nm,0.9s,mb5.1,baz=172,slow=8.1,SNR=139						
SONM				PcP	PcP	20 18 55.1	+0.1
	comp=Z,17nm,1.0s,baz=174,slow=4.0,SNR=8.4						
SONM				ScP		20 22 50.5	
	comp=Z,1.9nm,0.7s,baz=163,slow=3.8,SNR=4.9						
SONM				LR	LR	20 44 00.1	
	comp=Z,763nm,20.0s,MS4.8,baz=178,slow=38						
ULN	Ulaanbaatar	55.42	360	eP	P	20 17 55.1	-0.2
ULN				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2						
ULN	Ulaanbaatar	55.42	360	eP	P	20 17 55.1	-0.3
	comp=Z,22nm,0.8s,mb5.2						
MDJ	Mudanjiang	55.83	19	P	P	20 18 00.3	+2.0
MDJ				AP	pP	20 18 16.1	+5.0
MDJ				PCP	PcP	20 18 57.4	+0.7
MDJ				PP	PP	20 20 06.1	+1.5
MDJ				PCS		20 22 58.0	
MDJ				S	S	20 25 45.4	+4.9
MDJ				SCS	ScS	20 27 43.3	+3.3
MDJ				SS	SS	20 29 33.0	+6.6
MDJ				AMB	AMB		
	comp=Z,80nm,7.5s						
MDJ				LR	LR		
	comp=N,220nm,21.2s,MS4.4						
MDJ				LR	LR		
	comp=E,240nm,23.5s,MS4.4						
MDJ				LR	LR		
	comp=Z,160nm,18.0s						
WBK	Wadi Bani Khal	56.35	304	⇓P	P	20 18 02.5	+0.2
JMDO	Jabal Madar	56.96	303	P	P	20 18 06.9	+0.2
	SNR=8.8						
SMDO	Samad	57.31	304	⇑P	P	20 18 09.4	+0.2
	SNR=25						
BIDO	Bidbid	57.45	304	⇑P	P	20 18 10.6	+0.4
	SNR=27						
HIA	Hailar	57.82	9	eP	P	20 18 10.6	-1.8
HIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HIA	Hailar	57.82	9	eP	P	20 18 10.6	-1.8
	comp=Z,5.8nm,0.6s,mb4.8						
BSY	Bisya	57.87	303	⇓P	P	20 18 13.4	+0.2
	SNR=9.6						
ZAK	Zakamensk	58.06	357	eP	P	20 18 13.4	-0.6
ZAK				e		20 19 05.8	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
HOQ	Hoqain	58.15	304	⇓P	P	20 18 15.2	+0.2
	SNR=20						
CASY	Casey	58.42	179	eP	P	20 18 13.1	-3.3
AAK	Ala-Archa	58.54	332	i P	P	20 18 16.5	-1.0
ARQ	Araqi	58.69	303	⇑P	P	20 18 19.2	+0.3
	SNR=15						
MKAR	Makanchi Array	58.82	340	P	P	20 18 17.5	-1.9
	comp=Z,6.8nm,0.5s,mb4.9,baz=127,slow=6.1,SNR=34						
MKAR				LR	LR	20 47 03.7	
	comp=Z,470nm,20.7s,MS4.6,baz=168,slow=39						
MKAR	Makanchi Array	58.82	340	P	P	20 18 17.5	-1.9
MKAR				LR	LR	20 47 03.7	
TLY	Talaya	59.34	357	eP	P	20 18 21.5	-1.4
TLY				e		20 19 10.6	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
TLY				MLR	MLR		
	comp=Z,370nm,17.0s,MS4.6						
TLY	Talaya	59.34	357	i P	P	20 18 22.5	-0.4
MOY	Mondy	59.50	355	eP	P	20 18 24.4	+0.4
MOY				pmax	pmax		
	comp=Z,23nm,2.1s,mb4.8						
MIR	Mirnyy	59.51	187	eP	P	20 18 14.0	-10
MIR				pmax	pmax		
	comp=Z,23nm,1.6s,mb5.0						
OPO	Ambohidratompo	59.51	253	P	P	20 18 23.6	-0.9
	comp=Z,6.6nm,1.0s,mb4.6,baz=82,slow=4.7,SNR=9.3						
ASHO	Ashiyiah	59.66	304	⇑P	P	20 18 25.6	+0.1
	SNR=26						
BANOM	Banah	60.01	306	⇓P	P	20 18 28.6	+0.6
	SNR=7.0						
KLR	Kul'dur	60.61	18	eP	P	20 18 27.3	-4.4
KLR				e	pP	20 18 40.3	-4.2
DRV	Dumont d'Urvil	62.82	166	S	S	20 27 04.0	-6.5
YSS	Yuzh-Sakhalins	62.84	26	eP	P	20 18 46.0	-0.7
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
YSS	Yuzh-Sakhalins	62.84	26	eP	P	20 18 46.0	-0.7
	comp=Z,40nm,1.0s,mb5.5						
ZAL	Zalesovo	64.44	345	P	P	20 18 55.6	-1.3
	comp=Z,4.2nm,0.5s,mb4.7,baz=332,slow=3.0,SNR=33						
ZAL				LR	LR	20 50 31.7	
	comp=Z,314nm,20.2s,MS4.5,baz=319,slow=39						
HASS	Wahat al Ahsa'	65.13	302	P	P	20 19 01.7	-0.3
CLNS	Chul'man	65.97	10	eP	P	20 19 01.2	-5.6
CLNS				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.2						
CLNS				pmax	pmax		
	comp=N,14nm,1.1s						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.0s						
CLNS				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.5						
CLNS				MLR	MLR		
	comp=N,100nm,12.0s,MS4.3						
CLNS				MLR	MLR		
	comp=E,100nm,15.0s,MS4.3						
MAW	Mawson	66.77	197	eP	P	20 19 09.5	-2.2
	comp=E,7.2nm,0.6s,mb4.9						
MAW	Mawson	66.77	197	eP	P	20 19 09.5	-2.2
MAW				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MAW	Mawson	66.77	197	P	P	20 19 10.1	-1.5
	comp=Z,9.4nm,0.9s,mb4.8,baz=38,slow=6.8,SNR=12						
VOSK	Vostochnaya	67.85	337	P	P	20 19 18.1	-0.6
VOSK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
KAMS	Al Khamasin	67.91	296	P	P	20 19 19.2	-0.5
DJNS	Zahran al Janu	68.09	293	P	P	20 19 21.7	+0.9
BVA0	Borovoye Array	68.31	337	i P	P	20 19 21.3	-0.3
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
BVAR	Borovoye Array	68.31	337	P	P	20 19 21.4	-0.2
	comp=Z,20nm,0.6s,mb5.3,baz=143,slow=9.0,SNR=150						
MZLS	Mizel	68.54	300	P	P	20 19 23.4	-0.1
TATS	Tathlith	68.67	294	P	P	20 19 24.2	-0.2
ZRNK	Zerenda	68.81	336	P	P	20 19 24.4	-0.2
ZRNK				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.1						
AB31	Akbulak array	70.38	329	P	P	20 19 33.9	-0.4
AB31				pmax	pmax		
	comp=Z,53nm,0.6s,mb5.7						
AFFS	'Afif	70.42	299	P	P	20 19 35.3	+0.3
BLJS	Baljurashi	70.47	294	P	P	20 19 36.5	+1.2
ARSS	Ar Rass	70.83	301	P	P	20 19 37.4	-0.1
YAK	Yakutsk	71.71	11	eP	P	20 19 41.7	-0.4
YAK				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.5						
YAK				pmax	pmax		
	comp=N,18nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				MLR	MLR		
	comp=Z,138nm,14.0s,MS4.4						
YAK				MLR	MLR		
	comp=N,90nm,16.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,109nm,20.0s,MS4.3						
YAK	Yakutsk	71.71	11	eP	P	20 19 41.0	-1.1
	comp=E,92nm,0.8s,mb5.8						
BHD	Baghdad	72.48	308	eP	P	20 19 44.5	-2.7
HILS	Ha'il	72.54	302	P	P	20 19 48.4	+0.7
KBRS	Khaybar	74.21	299	P	P	20 19 58.3	+0.8
PET	Petropavlovsk	74.43	29	eP	P	20 19 58.2	0.0
PET				eS	S	20 29 33.3	+5.1
PET				ePPS	PPS	20 30 21.5	-2.9
PET				eSSS	SSS	20 37 34.5	+4.1
PET				pmax	pmax		
	comp=Z,100nm,29.8s						
PET				smax			
	comp=E,100nm,15.9s						
GNI	Garni	74.90	315	eP	P	20 20 01.3	+0.1
GNI				pmax	pmax		
	comp=Z,19nm,0.9s						
GNI	Garni	74.90	315	P	P	20 20 01.4	+0.1
	comp=Z,8.1nm,0.7s,mb4.8,baz=237,slow=17,SNR=8.1						
GNI	Garni	74.90	315	eP	P	20 20 01.3	+0.1
	comp=Z,19nm,0.9s,mb5.0						
SYO	Syowa Base	74.95	200	⇑P	P	20 19 59.0	-1.9
SYO	Syowa Base	74.95	200	⇓X		20 20 16.0	
SVE	Sverdlovsk	74.96	335	⇑eP	P	20 20 01.9	+0.7
SVE				eS	S	20 29 32.0	-2.1
SVE				ePS	PS	20 30 10.0	-5.9
SVE				eSS	SS	20 34 28.0	+2.7
SVE				pmax	pmax		
	comp=Z,172nm,1.7s,mb5.7						
SVE				MLR	MLR		
	comp=N,300nm,19.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,300nm,19.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.7						
DGRG	David-gareji	75.01	317	P	P	20 20 02.8	+1.0
VNDA	Vanda	75.08	169	eP	P	20 20 00.5	-1.1
VNDA				pmax	pmax		
	comp=Z,14nm,1.1s						
VNDA	Vanda	75.08	169	P	P	20 20 00.7	-0.9
	comp=Z,8.2nm,0.9s,mb4.7,baz=294,slow=6.4,SNR=15						
VNDA				LR	LR	20 51 26.8	
	comp=Z,392nm,19.2s,MS4.7,baz=348,slow=34						
VNDA	Vanda	75.08	169	eP	P	20 20 00.5	-1.1
	comp=Z,14nm,1.1s,mb4.8						
MA2	Magadan	75.43	21	eP	P	20 20 07.2	+3.3
MA2				e		20 30 08.3	
MTA	Mtatsminda	75.50	317	P	P	20 20 04.8	+0.1
ARU	Arti	75.58	334	⇑iP	P	20 20 04.7	0.0
ARU				i	pP	20 20 17.4	-0.5
ARU				i PPP	PPP	20 24 36.0	-6.7
ARU				i S	S	20 29 43.4	+2.5
ARU				eSS	SS	20 34 40.0	+4.9
ARU				pmax	pmax		
	comp=Z,86nm,1.2s,mb5.6						
ARU	Arti	75.58	334	eP	P	20 20 03.5	-1.2
	comp=Z,99nm,1.2s,mb5.6						
DUS	Dusheti	75.73	317	P	P	20 20 06.9	+1.0
UMJS	Umm Lajj	75.75	298	P	P	20 20 07.5	+1.1
SBA	Scott Base	76.16	169	eP	P	20 20 07.1	-0.6
BEST	Besiri	76.54	312	i P	P	20 20 10.7	+0.1
ZEI	Tsey	76.55	317	eP	P	20 20 07.9	-2.7
ZEI				i *PP	pP	20 20 15.4	-8.4
ZEI				i		20 22 56.8	
ZEI				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
MBAR	Mbarara	76.86	271	eP	P	20 20 12.5	-0.4
MBAR				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
MBAR	Mbarara	76.86	271	eP	P	20 20 12.5	-0.4
	comp=Z,16nm,0.9s,mb5.0						
ERZM	Erzurum	77.20	314	i P	P	20 20 15.8	+1.5
LSZ	Lusaka	77.78	256	eP	P	20 20 17.2	-0.7
LSZ				pmax	pmax		
	comp=Z,65nm,1.4s,mb5.4						
LSZ	Lusaka	77.78	256	eP	P	20 20 17.2	-0.7
	comp=Z,65nm,1.4s,mb5.4						
KIV	Kislovodsk	77.84	318	eP	P	20 20 17.9	+0.2
KIV				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.3						
KIV	Kislovodsk	77.84	318	eP	P	20 20 17.9	+0.2
	comp=Z,42nm,1.0s,mb5.3						
GOF	Gofitskoye	78.05	319	i P	P	20 20 17.9	-1.0
GOF				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
ASF	Jabal al Asfar	78.06	305	P	P	20 20 20.5	+1.4
	comp=Z,49nm,0.9s,mb5.4,baz=346,slow=2.8,SNR=50						
SOKR	Solikamsk	78.29	336c	iP	P	20 20 20.0	+0.2
SOKR				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.5						
SOKR				MLR	MLR		
	comp=Z,250nm,20.0s,MS4.5						
SEY	Seymchan	78.37	19	eP	P	20 20 26.3	+6.1
SEY				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
SEY				MLR	MLR		
	comp=Z,430nm,24.0s,MS4.7						
MALT	Malatya	78.79	311	eP	P	20 20 23.2	+0.2
MALT				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.1						
MALT	Malatya	78.79	311	eP	P	20 20 23.2	+0.2
	comp=Z,40nm,1.5s,mb5.1						
EIL	Elat	78.97	302	eP	P	20 20 23.6	-0.6
	comp=Z,44nm,1.2s,mb5.3						
GZT	Gaziantep	79.12	310	i P	P	20 20 25.7	+0.8
LBTB	Lobatse	79.49	246	eP	P	20 20 26.6	-0.5
LBTB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
LBTB	Lobatse	79.49	246	P	P	20 20 27.2	+0.1
	comp=Z,8.4nm,0.7s,mb4.8,baz=121,slow=5.5,SNR=16						
LBTB				LR	LR	20 50 10.0	
	comp=Z,348nm,18.5s,MS4.7,baz=80,slow=32						
LBTB	Lobatse	79.49	246	eP	P	20 20 26.6	-0.5
	comp=Z,6.1nm,0.6s,mb4.7						
BOSA	Boshof	79.58	242	P	P	20 20 27.1	-0.4
	comp=Z,4.8nm,0.8s,mb4.5,baz=127,slow=7.3,SNR=8.8						
BOSA				LR	LR	20 48 05.8	
	comp=Z,203nm,20.3s,MS4.5,baz=49,slow=30						
KAHT	Ahir Dag	79.73	310	i P	P	20 20 29.2	+1.1
COBT	Iskenderun	79.86	309	i P	P	20 20 29.1	+0.2
SVST	Sivas	80.34	312	i P	P	20 20 32.8	+1.3
TIXI	Tiksi	80.53	7	⇑iP	P	20 20 31.0	-0.8
MEST	Erdemli	81.51	309	i P	P	20 20 37.9	+0.3
AVNT	Avonos	81.59	311	i P	P	20 20 38.5	+0.5
CSS	Prodhromos	81.70	307	eP	P	20 20 38.5	-0.2
	comp=Z,105nm,0.9s,mb5.8						
QSPA	South Pole Qui	82.19	180	⇑iP	P	20 20 39.9	-0.4
	comp=Z,8.4nm,0.7s,mb4.8						
CDAG	Cicekdag	82.20	312	i P	P	20 20 41.5	+0.4
BOYT	Boyabat	82.34	314	i P	P	20 20 42.9	+1.1
BRTR	Keskin Array B	82.77	312	P	P	20 20 44.2	+0.2
	comp=Z,29nm,0.9s,mb5.3,baz=134,slow=7.1,SNR=96						
VOR	Voronezh	83.01	324	eP	P	20 20 45.3	+0.3
VOR				e	pP	20 20 58.5	+0.1
VOR				pmax	pmax		
	comp=E,50nm,1.6s						
VOR				pmax	pmax		
	comp=Z,70nm,1.6s,mb5.4						
ELDT	Eldivan	83.14	312	i P	P	20 20 46.6	+0.7
BALT	Daday	83.46	313	i P	P	20 20 48.7	+1.2
KDHN	Kadinhani	83.58	310	i P	P	20 20 48.2	0.0
SIM	Simferopol'	83.94	317	⇑eP	P	20 20 50.8	+0.9
SGKT	Sivrigoynuk	84.17	312	i P	P	20 20 50.3	-0.8
ESKT	Eskisehir	84.79	311	i P	P	20 20 55.0	+0.8
TKTP	Tekketepe	84.83	309	i P	P	20 20 54.8	+0.3
HENT	Hendek	85.08	312	i P	P	20 20 55.9	+0.2
GOLH	Golhisar	85.22	308	i P	P	20 20 56.9	+0.4
MOS	Moscow	85.35	328	eP	P	20 20 57.8	+1.2
MOS				i	pP	20 21 11.2	+1.1
MOS				e		20 24 11.0	
MOS				eS	S	20 31 23.8	+1.4
MOS				pmax	pmax		
	comp=Z,110nm,1.3s,mb5.8						
MOS				pmax	pmax		
	comp=Z,300nm,1.8s,mb6.1						
OBN	Obninsk	85.69	327	⇓iP	P	20 20 59.5	+1.2
OBN				i S	S	20 31 13.4	-12
OBN				pmax	pmax		
	comp=Z,156nm,2.0s,mb5.9						
OBN				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.5						
OBN	Obninsk	85.69	327	eP	P	20 20 58.6	+0.3
	comp=Z,33nm,0.6s,mb5.7						
GDZ	Gediz	85.72	310	i P	P	20 20 59.5	+0.7
BILL	Bilibino	86.06	19	eP	P	20 20 59.9	+0.1
BILL				pmax	pmax		
	comp=Z,15nm,1.3s,mb5.1						
BILL	Bilibino	86.06	19	eP	P	20 20 59.9	+0.1
	comp=Z,15nm,1.3s,mb5.1						
ULDT	Uludag	86.22	311	i P	P	20 21 02.5	+1.2
MANT	Manisa	86.28	309	i P	P	20 21 03.1	+1.4
AYDN	Tasoluk	86.62	309	i P	P	20 21 05.1	+1.8
BTOK	Tokmak	86.96	311	i P	P	20 21 06.0	+1.1
KDAG	Bornova	87.25	309	i P	P	20 21 08.0	+1.6
TSUM	Tsumeb	87.45	251	LR	LR	20 54 08.8	
	comp=Z,444nm,20.6s,MS4.9,baz=107,slow=31						
TSUM	Tsumeb	87.45	251	eP	P	20 21 08.0	+0.3
	comp=Z,77nm,1.6s,mb5.7						
TIRR	Tirgusor	87.73	315	⇓P	P	20 21 09.7	+1.2
URLA	Izmir	87.76	309	i P	P	20 21 10.2	+1.3
KIS	Kishinev	88.04	318	eP	P	20 21 14.0	+4.1
KIS				e	pP	20 21 25.0	+1.5
KIS				eS	S	20 31 46.0	-2.3
KIS				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.7						
AKASG	Malin Array Be	88.66	321	P	P	20 21 11.2	-1.6
	comp=Z,6.9nm,0.8s,mb5.0,baz=87,slow=4.6,SNR=33						
AKASG				PP	PP	20 24 39.5	-4.6
	comp=Z,0.8nm,0.5s,baz=92,slow=6.4,SNR=5.7						
SNAA	Sanae	88.93	197	i P	P	20 21 14.3	+0.7
SNAA	Sanae	88.93	197	eP	P	20 21 13.8	+0.1
	comp=Z,38nm,1.3s,mb5.6						
VRI	Vrincioaia	89.20	316	⇓P	P	20 21 17.2	+1.7
VRI	Vrincioaia	89.20	316	⇓P	P	20 21 17.1	+1.6
MLR	Muntele Rosu	89.66	316	⇑P	P	20 21 19.0	+1.3
VNA2	Neumayer--Watz	90.58	197	⇑iP	P	20 21 22.8	+1.4
VNA2	Neumayer--Watz	90.58	197	⇑i	P	20 21 25.9	+4.5
VNA2	Neumayer--Watz	90.58	197	⇑i	sP	20 21 41.0	+1.4
LVZ	Lovozero	90.83	339	⇓eP	P	20 21 22.7	+0.1
LVZ				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.3						
VNA1	Neumayer--Stat	90.96	197	⇑iP	P	20 21 25.0	+1.8
VNA1	Neumayer--Stat	90.96	197	⇑i	P	20 21 28.1	+4.9
VNA1	Neumayer--Stat	90.96	197	⇑i	sP	20 21 43.0	+1.6
VNA3	Neumayer Olymp	91.09	197	⇑iP	P	20 21 25.2	+1.4
VNA3	Neumayer Olymp	91.09	197	⇑i	P	20 21 28.0	+4.2
VNA3	Neumayer Olymp	91.09	197	⇑i	sP	20 21 43.1	+1.1
APA	Apatity	91.18	338	⇑iP	P	20 21 25.0	+0.7
APA				i	pP	20 21 36.4	-1.5
APA				e		20 31 55.0	
APA				eS	S	20 32 18.0	+1.6
APA				ePS	PS	20 33 28.0	-7.0
APA				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.5						
APA				MLR	MLR		
	comp=Z,500nm,18.0s,MS5.0						
VSU	Vasula	91.81	329	i P	P	20 21 28.0	+0.6
KWP	Kalwaria	92.56	320	eP	P	20 21 31.7	+0.7
BZS	Buzias	92.68	316	⇓P	P	20 21 32.5	+0.8
KAF	Kangasniemi	92.76	332	ep	P	20 21 31.4	-0.2
SUW	Suwalki	92.95	324	eP	P	20 21 32.8	+0.1
ARCES	ARCESS Array B	94.47	340	P	P	20 21 39.9	+0.7
	comp=Z,5.9nm,0.8s,mb5.1,baz=90,slow=4.9,SNR=20						
ARCES				LR	LR	21 09 40.0	
	comp=Z,406nm,20.3s,MS4.9,baz=106,slow=39						
ARCES	ARCESS Array B	94.47	340	P	P	20 21 39.9	+0.7
ARCES				LR	LR	21 09 40.0	
OJC	Ojcow	94.50	320	eP	P	20 21 40.3	+0.5
OKC	Ostrava-Krasne	95.52	319	eP	P	20 21 45.1	+0.6
OKC				AMS	AMS	21 13 00.0	
	comp=Z,100nm,20.1s						
MORC	Moravsky Berou	95.90	319	eP	P	20 21 46.6	+0.4
MORC				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb5.0						
MORC	Moravsky Berou	95.90	319	eP	P	20 21 46.6	+0.4
	comp=Z,7.5nm,1.2s,mb5.0						
PRU	Pruhonice	97.85	319	AMS	AMS	21 12 50.0	
	comp=Z,100nm,19.0s						

PVCC	**Panska Ves**	**97.86**	**320**	AMS	AMS	21 12 20.0	
	comp=Z,200nm,25.3s						
BRG	**Berggiesshubel**	**98.27**	**320**	P	**P**	**20 21 57.4**	**+0.5**
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.8						
BRG				MLR	MLR		
	comp=Z,210nm,17.9s,MS4.7						
BRG	**Berggiesshubel**	**98.27**	**320**	P	**P**	**20 21 57.4**	**+0.5**
	comp=Z,3.1nm,1.0s,mb4.8						
BRG				LR	LR		
	comp=Z,210nm,17.9s,MS4.7						
GERES	**GERESS Array B**	**98.35**	**318**	P	**P**	**20 21 57.5**	**+0.2**
	comp=Z,0.7nm,0.7s,mb4.3,baz=90,slow=4.0,SNR=8.3						
GERES				PP	PP	20 25 56.9	-3.5
	comp=Z,1.0nm,0.9s,baz=104,slow=5.5,SNR=5.6						
GERES				LR	LR	21 15 55.5	
	comp=Z,148nm,19.6s,MS4.5,baz=236,slow=41						
KHC	**Kasperske Hory**	**98.44**	**319**	*i* P	**P**	**20 21 57.9**	**+0.2**
KHC				MLR	MLR		
	comp=Z,200nm,16.8s,MS4.7						
TBI	**Tubuai**	**98.71**	**115**	*e*PP	PP	20 26 45.3	+42
	comp=Z,109nm,36.8s						
TBI				*e*S	S	20 34 29.8	+68
	comp=Z,148nm,28.0s						
TBI				*e*SS	SS	20 40 15.2	+2.7
	comp=Z,138nm,41.8s						
TBI				*e*LR	LR	20 55 13.7	
	comp=Z,479nm,23.8s,baz=240						
NKC	**Novy Kostel**	**99.21**	**320**	AMS	AMS	21 11 40.0	
	comp=Z,200nm,23.5s						
PPT	**Papeete**	**99.79**	**109**	*e*P	Px	20 22 47.6	
	comp=Z,21nm,20.5s						
PPT				*e*S	S	20 33 40.0	+8.9
	comp=Z,313nm,25.5s						
PPT				*e*SS		20 41 44.4	
	comp=Z,447nm,31.0s						
PPT				*e*LR	LR	20 55 48.9	
	comp=Z,274nm,21.8s,baz=223						
NB2	**NORSAR Subarra**	**99.85**	**331**	P	**P**	**20 22 03.3**	**-0.6**
	comp=Z,0.6nm,0.7s,mb4.1,baz=90,slow=4.5						
NOA	**NORSAR Array B**	**99.85**	**331**	P	**P**	**20 22 03.9**	**0.0**
	comp=Z,1.1nm,0.7s,mb4.4,baz=89,slow=4.2,SNR=4.2						
NOA				LR	LR	21 11 53.9	
	comp=Z,159nm,19.5s,MS4.5,baz=90,slow=38						
GRA1	**Grafenberg Arr**	**99.99**	**319**	*e*Pdif	**P**	**20 22 05.3**	**+0.5**
GRF	**Grafenberg Arr**	**99.99**	**319**	*e*P	**P**	**20 22 05.3**	**+0.5**
IMA	**Indian Mountai**	**100.64**	**24**	*e*P	P	20 22 09.1	+1.7
IMA				pmax	pmax		
	comp=Z,40nm,1.3s						
IMA	**Indian Mountai**	**100.64**	**24**	*e*Pdif	P	20 22 09.1	+1.7
	comp=Z,40nm,1.3s						
ILAR	**Eielson Array**	**103.63**	**25**	Pdiff	Pdif	20 22 20.4	-0.3
	comp=Z,0.8nm,1.1s,baz=282,slow=5.6,SNR=5.1						
ILAR				PKKPbc		20 38 12.8	
	comp=Z,0.5nm,0.7s,baz=112,slow=1.5,SNR=5.6						
TAOE	**Nuku Hiva Isla**	**110.54**	**102**	*e*P	Pdif	20 24 00.9	+69
	comp=Z,300nm,30.7s						
TAOE				*e*PP	PP	20 28 32.3	+60
	comp=Z,352nm,35.0s						
TAOE				*e*SS	SS	20 43 49.9	+55
	comp=Z,3µm,31.7s						
TAOE				*e*LR	LR	21 00 50.8	
	comp=Z,755nm,23.5s						
YKA	**Yellowknife Ar**	**117.42**	**21**	PKP	PKPdf	20 27 05.2	+1.6
	comp=Z,1.8nm,0.7s,baz=335,slow=1.9,SNR=7.5						
YBH	**Yreka Blue Hor**	**124.30**	**44**	PKP	PKPdf	20 27 21.3	+3.8
	comp=Z,0.9nm,0.3s,baz=357,slow=2.3,SNR=4.0						
CHMT	**Chamberlain Mo**	**127.76**	**35**	*e*PKPdf	PKPdf	20 27 25.6	+1.5
NVAR	**Mina Array Bea**	**128.71**	**46**	PKP	PKPdf	20 27 29.8	+3.7
	comp=Z,1.1nm,0.7s,baz=300,slow=1.6,SNR=6.0						
NVAR				SKPbc		20 30 45.9	
	comp=Z,0.8nm,0.5s,baz=294,slow=3.5,SNR=4.0						
NVAR	**Mina Array Bea**	**128.71**	**46**	PKP	PKPdf	20 27 29.8	+3.7
NVAR				SKPbc		20 30 45.9	
HLID	**Hailey**	**128.91**	**39**	*e*PKPdf	PKPdf	20 27 30.3	+4.0
ELK	**Elko**	**129.80**	**42**	*e*PKIKP	PKPdf	20 27 31.5	+3.3
LAO	**LASA Array**	**131.66**	**31**	*e*PKPdf	PKPdf	20 27 35.1	+3.5
PLCA	**Paso Flores**	**131.68**	**182**	SKPbc		20 30 54.3	
	comp=Z,2.8nm,1.0s,baz=160,slow=13,SNR=3.0						
HWUT	**Hardware Ranch**	**131.73**	**39**	*e*PKPdf	PKPdf	20 27 34.1	+2.3
PDAR	**Pinedale Array**	**132.31**	**37**	PKP	PKPdf	20 27 34.1	+1.3
	comp=Z,0.9nm,0.6s,baz=63,slow=3.3,SNR=5.7						
PDAR				SKPbc		20 30 57.9	
	comp=Z,2.1nm,1.1s,baz=270,slow=1.5,SNR=4.8						
NEN	**Nelson**	**132.39**	**48**	*e*PKPdf	PKPdf	20 27 37.2	+3.9
NEN				*e*		20 27 55.5	
SCHQ	**Schefferville**	**132.88**	**356**	PKP	PKPdf	20 27 34.5	+0.9
	comp=Z,4.0nm,0.9s,baz=49,slow=1.4,SNR=3.7						
SCHQ	**Schefferville**	**132.88**	**356**	PKP	PKPdf	20 27 34.5	+0.9
RWWY	**Rawlins**	**134.35**	**37**	*e*PKPdf	PKPdf	20 27 40.7	+3.9
RSSD	**Black Hills**	**134.54**	**32**	*e*PKIKP	PKPdf	20 27 39.2	+2.2
ANMO	**Albuquerque**	**138.72**	**44**	PKP	PKPdf	20 27 45.5	+0.6
	comp=Z,1.8nm,0.7s,baz=201,slow=2.1,SNR=3.8						
ANMO				SKPbc		20 31 17.7	
	comp=Z,1.2nm,0.6s,baz=199,slow=1.2,SNR=4.5						
ANMO	**Albuquerque**	**138.72**	**44**	PKP	PKPdf	20 27 45.5	+0.6
ANMO				SKPbc		20 31 17.7	
CLNB	**Carlsbad**	**141.99**	**46**	*e*PKPpre		20 27 49.7	
LTX	**Lajitas**	**143.67**	**50**	*e*PKIKP	PKPdf	20 27 54.2	+0.4
TXAR	**Lajitas Array**	**143.67**	**50**	PKP	PKPdf	20 27 54.1	+0.3
	comp=Z,4.1nm,0.6s,baz=262,slow=1.6,SNR=22						
WMOK	**Wichita Mounta**	**143.88**	**38**	*e*PKIKP	PKPdf	20 27 54.2	+0.2
NCB	**Newcomb**	**143.94**	**2**	*e*PKPdf	PKPdf	20 27 53.6	-0.1
ACCN	**Adirondack Com**	**144.54**	**2**	*e*PKPdf	PKPdf	20 27 55.4	+0.6
GENY	**Geneseo**	**144.85**	**7**	*e*PKPdf	PKPdf	20 27 56.2	+0.8
SLM	**Saint Louis**	**145.36**	**25**	*e*PKIKP	PKPdf	20 27 58.5	+2.0
CCM	**Cathedral Cave**	**145.41**	**27**	*e*PKIKP	PKPdf	20 27 58.6	+2.0
HRV	**Harvard--Oak R**	**145.43**	**359**	*e*PKIKP	PKPdf	20 27 58.2	+1.7
WES	**Weston**	**145.54**	**359**	*e*PKP2	PKPab	20 27 58.7	-0.5
BINY	**Binghamton**	**145.60**	**5**	*e*PKPdf	PKPdf	20 27 58.9	+2.2
ALLY	**Alegheny Colle**	**145.60**	**10**	*e*PKPdf	PKPdf	20 27 58.4	+1.6
QUA2	**Belchertown**	**145.66**	**360**	*e*PKPdf	PKPdf	20 27 58.0	+1.1
FVM	**French Village**	**145.83**	**26**	*e*PKP2	PKPab	20 27 59.4	-1.0
BRYW	**Bryant College**	**146.01**	**359**	*e*PKPbc	PKPbc	20 28 00.5	+2.0
BLO	**Bloomington**	**146.29**	**20**	*e*PKPdf	PKPdf	20 28 01.3	+3.2
BLO				*e*		20 28 16.3	
BAO	**Brasilia Array**	**146.40**	**226**	PKPdf	PKPdf	20 28 00.5	+1.6
BDFB	**Brasilia**	**146.41**	**226**	PKPbc	PKPbc	20 28 01.1	+1.0
	comp=Z,22nm,0.8s,baz=160,slow=2.8,SNR=25						
PAL	**Palisades**	**146.91**	**2**	*e*PKIKP	PKPdf	20 28 00.8	+1.8
JATB	**Jatai**	**147.14**	**219**	*ce*P	PKPdf	20 28 04.4	+4.3
JATB				*e*		20 28 06.8	
JATB				*i*		20 28 08.7	
JATB				*e*		20 28 18.2	
JATB				*e*		20 28 28.8	
WCI	**Wyandotte Cave**	**147.22**	**20**	*e*PKP2	PKPab	20 28 03.9	-1.9
PARMO	**Parma**	**147.22**	**26**	*e*PKPbc	PKPdf	20 28 04.1	+4.5
UALR	**University of**	**147.51**	**31**	*e*PKPbc	PKPdf	20 28 04.8	+4.6
GNAR	**Gosnell**	**147.69**	**27**	*e*PKPbc	PKPdf	20 28 05.5	+5.1
SDMD	**Soldier’s Deli**	**148.28**	**6**	*e*PKPbc	PKPdf	20 28 06.3	+5.0
NATX	**Nacogdoches**	**148.43**	**38**	*e*PKPbc	PKPdf	20 28 08.2	+6.4
WVT	**Waverly**	**148.49**	**24**	*e*PKP2	PKPab	20 28 07.5	-3.5
OXF	**Oxford**	**149.17**	**28**	*e*PKHKP		20 28 04.6	
OXF				*e*		20 28 09.1	
PLAL	**Pickwick Lake**	**149.37**	**26**	*e*PKPbc	PKPdf	20 28 09.1	+5.9
TZTN	**Tazewell**	**149.65**	**18**	*e*PKPbc	PKPdf	20 28 10.3	+6.7
BLA	**Blacksburg**	**149.84**	**13**	*e*PKP2	PKPab	20 28 10.3	-6.1
CPCT	**Cooper Cave**	**150.34**	**20**	*e*PKPbc	PKPdf	20 28 11.6	+6.9
LRAL	**Lakeview Retre**	**151.50**	**26**	*e*PKPbc	PKPdf	20 28 13.4	+6.9
JSC	**Jenkinsville**	**152.42**	**16**	*e*PKIKP	PKPdf	20 28 16.7	+8.9
SIV	**San Ignacio**	**153.82**	**205**	PKP	PKPdf	20 28 12.1	+1.9
	comp=Z,2.4nm,0.9s,baz=159,slow=2.8,SNR=12						
SIV				PKPbc	PKPdf	20 28 20.2	+10
	comp=Z,3.2nm,0.9s,baz=170,slow=8.2,SNR=7.1						
SIV				PKPab	PKPab	20 28 32.6	-1.1
	comp=Z,12nm,0.9s,baz=148,slow=7.0,SNR=4.4						
LPAZ	**La Paz**	**155.69**	**190**	PKP	PKPdf	20 28 15.8	+3.1
	comp=Z,0.5nm,0.3s,baz=337,slow=6.1,SNR=4.3						
LPAZ				PKPab	PKPab	20 28 41.2	-0.4
	comp=Z,2.2nm,0.7s,baz=84,slow=5.6,SNR=6.1						
LPAZ	**La Paz**	**155.69**	**190**	PKP	PKPdf	20 28 15.8	+3.1
LPAZ				PKPab	PKPab	20 28 41.2	-0.4
OTAV	**Otavalo**	**170.39**	**141**	*e*PKPdf	PKPdf	20 28 29.8	+3.0
SDV	**Santo Domingo**	**177.91**	**301**	PKPab	PKPab	20 30 19.2	+0.3
	comp=Z,6.0nm,0.4s,baz=24,slow=4.0,SNR=11						

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*KNET **22** 20:15:14.1±0.8,41.43N×75.66E,h4^{km}±3^{km},ml3.2,Error ellipse: s-maj=4.7km s-min=2.9km az=174.0*

*NNC **22** 20:15:19.1±4.1,41.93N×76.05E,mpv3.4,Error ellipse: s-maj=44.2km s-min=13.5km az=176.0*

ISC 22 20:15:13.8±1.4**,41.33N**±0.07×**75.81E**±0.07**,h10**^{km}**,n13,** σ**1**^{s}**08**/25**,8C-15D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZA	**Kyzart**	**0.86**	**331**	P	**Pb**	**20 15 28.7**	**-1.7**
	211nm,0.2s,SNR=404						
KZA				⇑S	**Sb**	**20 15 40.2**	**-1.5**
	562nm,0.2s						
ULHL	**Ulahol**	**0.97**	**19**	P	**Pb**	**20 15 31.2**	**-1.1**
	252nm,0.2s,SNR=1242						
ULHL				⇓S	**Sb**	**20 15 44.6**	**-0.4**
	362nm,0.1s						
UCH	**Uchtor**	**1.32**	**313**	P	**Pb**	**20 15 36.7**	**-1.6**
	59nm,0.3s,SNR=70						
UCH				⇑S	**Sb**	**20 15 54.3**	**-0.8**
	98nm,0.2s						
KBK	**Karagaybulak**	**1.48**	**334**	⇓P	**Pn**	**20 15 40.1**	**-0.5**
	85nm,0.1s,SNR=116						
KBK				⇓S	**Sb**	**20 15 59.7**	**+0.1**
	741nm,0.2s						
TKM2	**Tokmak 2**	**1.60**	**354**	⇓P	**Pn**	**20 15 42.4**	**0.0**
	102nm,0.2s,SNR=135						
TKM2				⇓S	**Sn**	**20 16 04.5**	**+1.3**
	311nm,0.1s						
AAK	**Ala-Archa**	**1.63**	**323**	⇓P	**Pn**	**20 15 42.6**	**-0.2**
	66nm,0.3s,SNR=38						
AAK				⇓S	**Sn**	**20 16 04.0**	**0.0**
	138nm,0.3s						
AAK	**Ala-Archa**	**1.63**	**323**	⇓P	**Pn**	**20 15 42.6**	**-0.2**
	30nm,0.3s						
AAK				⇓S	**Sn**	**20 16 03.7**	**-0.3**
	98nm,0.5s						
AML	**Almayashu**	**1.78**	**298**	⇓P	**Pn**	**20 15 44.6**	**-0.2**
	27nm,0.2s,SNR=76						
AML				⇑S	**Sn**	**20 16 07.9**	**+0.2**
	225nm,0.4s						
CHMS	**Chumysh**	**1.85**	**335**	⇑P	**Pn**	**20 15 46.5**	**+0.6**
	47nm,0.1s,SNR=96						
CHMS				⇓S	**Sn**	**20 16 10.6**	**+1.1**
	257nm,0.3s						
EKS2	**Erkin-Say**	**2.02**	**312**	⇓P	**Pn**	**20 15 49.8**	**+1.4**
	29nm,0.3s,SNR=97						
EKS2				⇑S	**Sn**	**20 16 17.1**	**+3.3**
	99nm,0.4s						
USP	**Ospenovka**	**2.17**	**334**	⇑P	**Pn**	**20 15 51.9**	**+1.4**
	116nm,0.3s,SNR=220						
USP				⇑S	**Sn**	**20 16 21.3**	**+3.6**
	236nm,0.3s						
KK31	**Karatay Array**	**4.32**	**296**	Pn	**Pn**	**20 16 29.3**	**+8.2**
	2.1nm,0.4s,baz=117,slow=15,SNR=34						
KK31				⇓Lg		20 17 32.2	
	9.0nm,0.5s,baz=106,slow=29,SNR=7.1						
MK31	**Makanchi Array**	**7.18**	**38**	⇑Pn	**Pn**	**20 17 01.8**	**+0.3**
	1.4nm,0.6s						
MK31				⇓Sn	**Sn**	**20 18 18.9**	**-5.1**
	3.6nm,0.7s						
MK31				⇓Lg		20 18 48.7	
	5.5nm,0.7s						

IDC 22 20:22:41.8±4.7**,14.65N**×**90.87W,mb4.0**/1**,mb1 4.0**/2**, mb1mx3.6**/17**,mbtmp3.6**/2**,ML4.3**/1**,MS2.8**/1**,Ms1 2.8**/1**, ms1mx2.5**/21**,Error ellipse: s-maj=188.1km s-min=77.9km az=49.0,Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	**JuntasAbangare**	**7.22**	**126**	LR	LR	20 27 32.2	
	comp=Z,76nm,19.9s,baz=114,slow=40						
TXAR	**Lajitas Array**	**18.80**	**323**	P	P	20 27 02.9	-2.1
	0.2nm,0.3s,baz=138,slow=11,SNR=2.5						
YKA	**Yellowknife Ar**	**50.65**	**346**	P	P	20 31 42.4	-2.2
	1.1nm,0.5s,baz=148,slow=7.7,SNR=7.0						
CMAR	**Chiang Mai Arr**	**145.71**	**343**	PKPbc	PKPbc	20 42 22.7	-1.1
	0.4nm,0.6s,baz=316,slow=2.0,SNR=4.2						

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*IDC **22** 20:27:58.7±0.8,10.56N×42.24W,mb4.1/8,mb1 4.3/8, mb1mx3.9/20,mbtmp4.1/8,MS4.0/3,Ms1 3.9/3, ms1mx3.1/29,Error ellipse: s-maj=32.4km s-min=18.5km az=123.0*

*NEIC **22** 20:28:00.4±0.7,10.65N×42.39W,h10^{km},mb4.4/3,Error ellipse: s-maj=18.4km s-min=14.7km az=113.0*

ISC 22 20:27:58.5±0.6**,10.7N**±0.1×**42.4W**±0.1**,h10**^{km}**,n18,** σ**1**^{s}**22**/15**,mb4.2**/10**,MS4.0**/3**,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**17.60**	**158**	*e*P	**P**	**20 32 07.8**	**+2.1**
	30nm,1.2s						
BDFB	**Brasilia**	**26.74**	**192**	LR	LR	20 43 41.9	
	comp=Z,253nm,18.8s,MS3.8,baz=14,slow=35						
SAML	**Samuel**	**28.46**	**228**	*e*P	**P**	**20 33 54.9**	**-1.1**
	12nm,1.0s,mb4.5						
SIV	**San Ignacio**	**32.33**	**215**	P	**P**	**20 34 30.3**	**0.0**
	2.8nm,0.7s,mb4.2,baz=61,slow=9.2,SNR=11						
LPAZ	**La Paz**	**36.99**	**224**	P	**P**	**20 35 10.8**	**+0.5**
	6.7nm,0.8s,mb4.5,baz=37,slow=7.2,SNR=23						
LPAZ	**La Paz**	**36.99**	**224**	P	**P**	**20 35 10.8**	**+0.5**
DBIC	**Dimbokro**	**37.26**	**93**	P	**P**	**20 35 12.3**	**-0.2**
	10nm,1.0s,mb4.6,baz=274,slow=10,SNR=7.1						
DBIC	**Dimbokro**	**37.26**	**93**	P	**P**	**20 35 12.3**	**-0.2**
OTAV	**Otavalo**	**37.35**	**256**	*e*P	**P**	**20 35 13.4**	**+0.1**
	5.7nm,1.1s,mb4.3						
CPUP	**Villa Florida**	**39.56**	**201**	P	**P**	**20 35 31.6**	**-0.1**
	0.9nm,0.6s,mb3.7,slow=6.1,SNR=2.9						
SCHQ	**Schefferville**	**48.12**	**341**	P	**P**	**20 36 41.7**	**+1.3**
	3.1nm,0.7s,mb4.5,baz=130,slow=12,SNR=5.1						
PLCA	**Paso Flores**	**57.41**	**205**	P	**P**	**20 37 47.0**	**-2.7**
	1.5nm,0.8s,mb4.1,baz=38,slow=6.8,SNR=3.2						
CLL	**Collm**	**60.39**	**36**	P	**P**	**20 38 09.0**	**-1.3**
AKASG	**Malin Array Be**	**70.15**	**40**	P	**P**	**20 39 12.3**	**-0.9**
	0.3nm,0.4s,mb3.5,baz=256,slow=7.6,SNR=4.5						
AKASG	**Malin Array Be**	**70.15**	**40**	P	**P**	**20 39 12.3**	**-0.9**
BOSA	**Boshof**	**76.02**	**123**	LR	LR	21 06 53.6	
	comp=Z,96nm,19.2s,MS4.1,baz=35,slow=31						
DLBC	**Dease Lake**	**79.78**	**328**	LR	LR	21 14 38.2	
	comp=Z,115nm,21.7s,MS4.2,baz=170,slow=35						
ILAR	**Eielson Array**	**86.53**	**335**	P	**P**	**20 40 44.5**	**+1.8**
	0.9nm,0.8s,mb4.1,baz=67,slow=3.6,SNR=6.0						

CASC 22 20:41:03.3±2.5**,12.78N**×**88.62W,h57**^{km}±43^{km}**,MD3.9, ML3.9,2C-10D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSM	**San Miguel**	**0.73**	**28**	⇓*e*P	P	20 41 18.7	+0.9
VSM				*e*S	S	20 41 30.3	+1.8
BLLM	**Bellamira**	**0.76**	**30**	⇓*e*P	P	20 41 18.7	+0.5
BLLM				*e*S	S	20 41 29.4	+0.2
SNVI	**San Vicente**	**0.85**	**346**	*e*P	P	20 41 19.9	+0.5
SNVI				*e*S	S	20 41 31.4	-0.1
CNCH	**Conchagua**	**0.91**	**57**	⇓*e*P	P	20 41 21.0	+0.8
CNCH				*e*S	S	20 41 35.4	+2.6
LCBS	**La Ceiba**	**0.94**	**338**	⇓*i*P	P	20 41 21.1	+0.5
LCBS				*e*S	S	20 41 32.2	-1.2
LFRS	**El Faro**	**0.94**	**333**	⇓*i*P	P	20 41 21.2	+0.6
LFRS				*e*S	S	20 41 32.9	-0.6
LBRS	**Las Brisas**	**1.04**	**337**	⇓*e*P	P	20 41 23.0	+1.0
LBRS				*e*S	S	20 41 36.4	+0.6
CAHU	**Cacacuatique**	**1.06**	**22**	⇑*e*P	P	20 41 22.9	+0.5
CAHU				*e*S	S	20 41 37.1	+0.7
LFU	**La Fuente**	**1.07**	**334**	⇑*e*P	P	20 41 23.1	+0.6
SNET	**Serv Nac Est T**	**1.08**	**327**	*e*P	P	20 41 23.6	+1.1
SNET				*e*S	S	20 41 35.6	-1.2
SNET				*i*		20 41 37.9	
	comp=Z,2µm,0.2s						
BOQS	**Boqueron**	**1.14**	**326**	⇓*e*P	P	20 41 23.6	+0.2
BOQS				*e*S	S	20 41 38.2	-0.2
SBLS	**San Blas**	**1.43**	**317**	*e*P	P	20 41 28.8	+1.2
SBLS				*e*S	S	20 41 46.7	+1.1
SNJE	**San Jose**	**1.44**	**319**	*e*P	P	20 41 28.2	+0.5
SNJE				*e*S	S	20 41 46.8	+1.1
RTR	**El Retiro**	**1.49**	**318**	*e*P	P	20 41 28.4	+0.1
RTR				*e*S	S	20 41 46.7	-0.2
CRIN	**San Cristobal**	**1.54**	**93**	⇓*e*P	P	20 41 29.1	+0.1
CRIN				*e*S	S	20 41 48.6	+0.7
RBDL	**Robledal**	**1.68**	**322**	*e*P	P	20 41 31.3	+0.4
RBDL				⇓*i*P		20 41 31.8	
RBDL				*e*S	S	20 41 51.7	+0.3
LEON	**Leon**	**1.73**	**102**	*e*P	P	20 41 30.7	-0.9
TEL3	**Telica 3**	**1.75**	**97**	*e*P	P	20 41 31.1	-0.8
TELN	**Telica**	**1.75**	**96**	*e*P	P	20 41 31.0	-1.0
MIRN	**Miramar**	**1.90**	**100**	*e*P	P	20 41 33.3	-0.6
CNGN	**Cerro Negro**	**1.90**	**98**	*e*P	P	20 41 33.3	-0.7
SOMN	**Somoto**	**2.06**	**72**	⇓*e*P	P	20 41 35.8	-0.4
MOMJ	**Momotombo**	**2.06**	**100**	*e*P	P	20 41 35.4	-0.9
MOMJ				*e*S	S	20 41 58.7	-2.2
APYN	**Apoyeque**	**2.28**	**104**	*e*P	P	20 41 39.5	+0.1

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*NEIC **22** 20:44:30.0,37.22N×20.92E,h2^{km},MD3.6(ATH),After ATH.*

*CSEM **22** 20:44:30.0,37.22N×20.92E,h2^{km},MD3.6/5,After ATH*

ATH 22 20:44:28.0,37.13N×**20.77E,h3**^{km}±1^{km}**,MD3.6**/5**,1D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITM	**Ithomi**	**0.93**	**87**	⇓*i*Pg	Pg	20 44 45.7	-0.8
ITM				*e*Sg	Sg	20 44 56.8	-2.0
VLS	**Valsamata**	**1.05**	**352**	*e*PG	Pg	20 44 48.3	-0.8
VLS				*e*SG	Sg	20 45 02.9	-0.2
RLS	**Riolos of Patr**	**1.08**	**31**	*e*Pg	Pg	20 44 48.5	-1.0
RLS				*e*Sg	Sg	20 45 00.7	-3.2
VLI	**Veliai**	**1.79**	**103**	*e*Pg	Pg	20 45 01.6	-2.0
VLI				*e*Sb	Sb	20 45 24.1	+0.3
EVR	**Evrytania**	**1.96**	**24**	*e*PG	Pg	20 45 04.8	-2.4
EVR				*e*SN	Sn	20 45 30.9	+2.9
KYTH	**Kithira**	**2.01**	**114**	*e*PN	Pn	20 45 05.0	+1.8
KYTH	**Kithira**	**2.01**	**114**	*e*Pn	Pn	20 45 10.0	+6.8

IDC 22 20:58:58.5±3.2**,36.94S**×**96.13W,mb4.2**/5**,mb1 4.6**/5**, mb1mx4.2**/15**,mbtmp4.2**/5**,MS3.9**/3**,Ms1 3.9**/3**, ms1mx3.1**/24**,Error ellipse: s-maj=94.7km s-min=30.9km az=28.0,West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**20.26**	**109**	P	P	21 03 35.4	-2.8
	3.2nm,0.7s,baz=290,slow=8.6,SNR=6.2						
LPAZ	**La Paz**	**32.20**	**58**	P	P	21 05 29.2	-1.3
	1.2nm,0.6s,baz=234,slow=7.1,SNR=6.1						
CPUP	**Villa Florida**	**34.48**	**83**	LR	LR	21 19 17.3	
	comp=Z,214nm,18.8s,baz=210,slow=35						
PPT	**Papeete**	**50.60**	**277**	LR	LR	21 23 55.4	
	comp=Z,122nm,21.5s,baz=114,slow=30						
TXAR	**Lajitas Array**	**66.30**	**353**	P	P	21 09 48.7	-2.2
	4.9nm,1.1s,baz=172,slow=8.8,SNR=14						
NVAR	**Mina Array Bea**	**77.74**	**342**	P	P	21 10 57.8	-1.0
	3.9nm,0.9s,baz=153,slow=6.1,SNR=9.0						
PDAR	**Pinedale Array**	**80.27**	**350**	P	P	21 11 10.7	-1.7
	3.0nm,0.7s,baz=158,slow=4.9,SNR=19						
DBIC	**Dimbokro**	**94.97**	**85**	LR	LR	21 48 46.5	
	comp=Z,69nm,20.2s,baz=272,slow=32						

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*HLW **22** 21:00:02.1,35.07N×33.88E,h14^{km},Mb3.4*

*CSEM **22** 21:00:03.0±0.1,35.01N×33.84E,h60^{km},Mw2.9,Error ellipse: s-maj=2.8km s-min=1.7km az=31.0*

*ISK **22** 21:00:04.1,35.18N×33.89E,h23^{km},MD3.4*

*NIC **22** 21:00:04.9±0.3,35.00N×33.87E,h51^{km},ML3.5,MW3.0*

*GRAL **22** 21:00:05.4±1.8,35.02N×33.90E,h53^{km}±9^{km},MD3.4*

*GII **22** 21:00:05.7±0.4,34.81N×33.97E,h7^{km}±3^{km},ML2.6/6, Mw2.8/3*

ISC 22 21:00:03.4±0.3**,35.01N**±0.02×**33.89E**±0.03**,h64**^{km}±6^{km}**, n56,** σ**1**^{s}**03**/79**,10C-8D,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHNC	**Paralimni**	**0.12**	**94**	*e*P	**P**	**21 00 13.1**	**+0.1**
PHNC				*e*S	**S**	**21 00 19.4**	**-0.6**
PHNC	**Paralimni**	**0.12**	**94**	⇑*i*P	**P**	**21 00 13.1**	**+0.1**
	48nm,0.2s						
PHNC				S	**S**	**21 00 19.4**	**-0.6**
CSS	**Prodhromos**	**0.46**	**264**	*e*P	**P**	**21 00 15.7**	**+0.3**
CSS				*e*S	**S**	**21 00 23.8**	**-0.5**
CSS	**Prodhromos**	**0.46**	**264**	*i* P	**P**	**21 00 15.6**	**+0.2**
CSS				*i* S	**S**	**21 00 24.3**	**0.0**
CSS	**Prodhromos**	**0.46**	**264**	⇓*i*P	**P**	**21 00 15.7**	**+0.3**
	26nm,0.3s						
CSS				S	**S**	**21 00 23.8**	**-0.5**
MAMC	**Mammari**	**0.57**	**286**	*e*P	**P**	**21 00 17.2**	**+0.6**
MAMC				*e*S	**S**	**21 00 25.8**	**-0.5**
MAMC	**Mammari**	**0.57**	**286**	⇓*i*P	**P**	**21 00 17.2**	**+0.6**
MAMC				S	**S**	**21 00 25.8**	**-0.5**
LEF	**Lefka**	**0.83**	**278**	*i* PG	**P**	**21 00 20.6**	**+1.0**
ALFC	**Alevga**	**1.07**	**278**	*e*P	**P**	**21 00 23.2**	**+0.4**
ALFC				*e*S	**S**	**21 00 37.5**	**+0.4**
ALFC	**Alevga**	**1.07**	**278**	⇓*i*P	**P**	**21 00 23.2**	**+0.4**
	16nm,0.2s						
ALFC				S	**S**	**21 00 37.5**	**+0.4**
IKL	**Isikli**	**1.24**	**352**	PG	**P**	**21 00 24.1**	**-0.9**
IKL				SG	**S**	**21 00 38.9**	**-2.2**
PPCY	**Paphos**	**1.28**	**265**	*e*P	**P**	**21 00 26.7**	**+1.1**
AKMC	**Akamas**	**1.28**	**271**	⇓P	**P**	**21 00 26.3**	**+0.6**
AKMC	**Akamas**	**1.28**	**271**	*e*P	**P**	**21 00 26.3**	**+0.6**
MEST	**Erdemli**	**1.59**	**7**	*i* P	**P**	**21 00 29.3**	**-0.6**
MEST				*i* S	**S**	**21 00 47.6**	**-1.8**
ERMK	**Ermenek**	**1.81**	**334**	*i* P	**P**	**21 00 33.8**	**+0.9**
ERMK				*i* S	**S**	**21 00 55.6**	**+0.8**
BHL	**Bhannes**	**1.83**	**127**	*e*P	**P**	**21 00 32.9**	**-0.3**
BHL				*e*S	**S**	**21 00 53.5**	**-1.7**
HWQ	**Hawqa**	**1.84**	**113**	*e*P	**P**	**21 00 34.0**	**+0.6**
HWQ				*e*S	**S**	**21 00 55.8**	**+0.3**
MATL	**Matirih**	**1.93**	**141**	*e*P	**P**	**21 00 36.7**	**+2.1**
HAWK	**Haweek**	**2.13**	**103**	⇑*i*P	**P**	**21 00 35.3**	**-2.0**
HNTI	**Hanita**	**2.20**	**151**	Pn	**P**	**21 00 39.2**	**+0.9**
HNTI				Sn	**S**	**21 01 04.8**	**+0.4**
HDMB	**Hadim**	**2.26**	**330**	PN	**P**	**21 00 39.1**	**-0.1**
HRI	**Mount Hermon**	**2.32**	**138**	Pn	**P**	**21 00 41.3**	**+1.3**
KSDI	**Kefar Szold**	**2.33**	**141**	Pn	**P**	**21 00 41.1**	**+0.8**
HAF	**Haifa**	**2.42**	**157**	Pn	**P**	**21 00 41.8**	**+0.3**
COBT	**Iskenderun**	**2.44**	**51**	*i* P	**P**	**21 00 41.9**	**+0.1**
COBT				*i* S	**S**	**21 01 09.1**	**-1.4**
QASN	**Qassioun**	**2.46**	**126**	⇓*i*P	**P**	**21 00 44.6**	**+2.5**
KSHT	**Keshet**	**2.58**	**141**	Pn	**P**	**21 00 44.9**	**+1.2**
TOTH	**TOTAH**	**2.67**	**127**	⇑*i*P	**P**	**21 00 46.1**	**+1.1**
MMLI	**Mount Malkishu**	**2.87**	**153**	Pn	**P**	**21 00 48.7**	**+0.9**
SLTI	**Sal’it**	**2.92**	**161**	Pn	**P**	**21 00 48.9**	**+0.3**
AMZI	**Amatzia**	**3.65**	**166**	P	**P**	**21 00 58.4**	**-0.3**
AMZI				S	**S**	**21 01 38.5**	**-2.3**
MKRJ	**Makawir**	**3.75**	**157**	Pn	**P**	**21 01 01.4**	**+1.3**
GZT	**Gaziantep**	**3.78**	**51**	*i* P	**P**	**21 01 00.9**	**+0.3**
GZT				*i* S	**S**	**21 01 40.7**	**-3.5**
RTMM	**Retamin**	**4.00**	**170**	Pn	**P**	**21 01 05.1**	**+1.4**
HRSH	**Kfar Ka’horesh**	**4.04**	**182**	⇑P	**P**	**21 01 03.9**	**-0.4**
HRSH				S	**S**	**21 01 48.9**	**-1.8**
RSH		**4.04**	**182**	P	**P**	**21 01 03.9**	**-0.4**
RSH				S	**S**	**21 01 48.9**	**-1.9**
MASH	**Mash‘abbe Sade**	**4.07**	**169**	Pn	**P**	**21 01 05.7**	**+1.0**
KZIT	**Kziot**	**4.12**	**174**	Pn	**P**	**21 01 06.0**	**+0.6**
KZIT				Sn	**S**	**21 01 51.9**	**-0.7**
FETY	**Fethiye**	**4.23**	**294**	*e*PN	**P**	**21 01 07.5**	**+0.6**
AMAG	**Maghara**	**4.39**	**188**	⇑P	**P**	**21 01 09.2**	**0.0**
ZFRI	**Zfri**	**4.58**	**166**	Pn	**P**	**21 01 12.4**	**+0.7**
PRNI	**Paran**	**4.74**	**168**	Pn	**P**	**21 01 14.1**	**+0.1**
HNKL	**Nakhl**	**5.07**	**179**	⇓P	**P**	**21 01 18.4**	**-0.2**
SUZ		**5.23**	**190**	⇑P	**P**	**21 01 20.5**	**-0.4**
SUZ				S	**S**	**21 02 18.1**	**-2.4**
HHAG	**Hagoal**	**5.27**	**197**	⇑P	**P**	**21 01 21.1**	**-0.2**
MBH	**Mount Berech**	**5.28**	**170**	Pn	**P**	**21 01 22.8**	**+1.4**
AQBJ	**Aqaba**	**5.36**	**169**	Pn	**P**	**21 01 23.1**	**+0.5**
KOT	**Kottamia**	**5.36**	**200**	⇑P	**P**	**21 01 22.2**	**-0.4**
KOT				S	**S**	**21 02 20.8**	**-2.9**
EIL	**Elat**	**5.40**	**170**	Pn	**P**	**21 01 23.9**	**+0.7**
ZNM		**5.68**	**189**	⇑P	**P**	**21 01 26.7**	**-0.4**
GLL	**Jalalah**	**5.72**	**199**	⇓P	**P**	**21 01 26.8**	**-0.8**
NUB		**6.00**	**174**	⇑P	**P**	**21 01 31.1**	**-0.3**
HKAT	**Jabal Katrina**	**6.47**	**179**	⇑P	**P**	**21 01 37.8**	**-0.2**
TR2		**6.61**	**181**	⇑P	**P**	**21 01 39.6**	**-0.5**
HMAT	**Matruh**	**6.91**	**237**	⇓P	**P**	**21 01 43.4**	**-0.9**

IDC 22 21:25:38.8±2.2**,4.20N**×**94.14E,mb3.7**/4**,mb1 3.8**/5**, mb1mx3.5**/18**,mbtmp3.7**/5**,ML3.8**/1**,Error ellipse: s-maj=93.2km s-min=29.1km az=55.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.93**	**18**	Pn	P	21 29 12.2	-0.9
	0.1nm,0.3s,baz=214,slow=10,SNR=7.3						
MKAR	**Makanchi Array**	**43.65**	**348**	P	P	21 33 44.5	-2.4
	0.5nm,0.4s,baz=165,slow=8.3,SNR=15						

WRA	Warramunga Arr	46.22	123	P	P	21 34 05.9	-1.9
	0.2nm,0.6s,baz=302,slow=9.8,SNR=4.5						
BVAR	Borovoye Array	52.45	342	P	P	21 34 53.5	-1.9
	0.8nm,0.6s,baz=141,slow=9.2,SNR=8.5						
ARCES	ARCESS Array B	78.70	340	P	P	21 37 42.9	-1.3
	0.6nm,0.5s,baz=90,slow=4.5,SNR=5.7						

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*NIED **22** 21:30:00, 23.40N×121.30E, h8^{km}, Mw4.4 Best double couple: M$_0$4.86×10^{15} NP1:φ$_s$252°, δ81°, λ-85°. NP2:φ$_s$41°, δ10°, λ-121°.*

JMA 22 21:30:57.8±0.4**, 23.81N×122.57E, h9^{km}, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.76	32	P	Pb	21 31 12.6	-0.2
YOJ				eS	Sb	21 31 22.7	-0.3
HATJ	Hateruma jima	1.16	77	P	Pb	21 31 19.4	-0.1
IRIF	Iriomote-Funau	1.18	64	P	Pb	21 31 19.8	-0.2
JKRS	Kuro-shima	1.38	72	P	Pn	21 31 23.2	-0.2
JKRS				S	Sb	21 31 42.5	+1.5
JIJ	Ishigaki jima	1.54	69	P	Pn	21 31 25.0	-0.6
JIJ				eS	Sb	21 31 46.3	+0.7
JTJ	Tarama	2.12	67	P	Pn	21 31 33.5	-0.3
JTJ				eS	Sn	21 32 01.1	+0.6

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*NIED **22** 21:31:00, 23.80N×122.60E, h14^{km}, Mw4.0 Best double couple: M$_0$1.05×10^{15} NP1:φ$_s$60°, δ81°, λ55°. NP2:φ$_s$318°, δ36°, λ165°.*

*JMA **22** 21:31:10.5±0.5, 23.81N×122.60E, M3.8*

*TAP **22** 21:31:10.0, 23.76N×122.43E, h6^{km}±1^{km}, ML4.2*

*IDC **22** 21:31:10.6±3.8, 23.70N×122.72E, h43^{km}±9^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.6/19, mbtmp4.0/7, ML3.5/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/25, Error ellipse: s-maj=81.9km s-min=31.0km az=178.0*

ISC 22 21:31:08.3±2.1**, 23.8N**±0.1×**122.35E**±0.05**, h17^{km}**±12^{km}**, h40^{km}**±3.1^{km}**:pP-P, n14, σ0^{s}84**/19**, mb3.9**/6**, MS3.2**/2**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.87	44	P	Pb	21 31 25.5	+1.0
YOJ				eS	Sb	21 31 35.4	-0.3
HATJ	Hateruma jima	1.35	80	P	Pn	21 31 31.5	-1.0
HATJ				eS	Sb	21 31 48.4	-1.2
IRIF	Iriomote-Funau	1.36	68	P	Pn	21 31 33.1	+0.5
IRIF				S	Sb	21 31 49.7	-0.1
JKRS	Kuro-shima	1.57	75	P	Pn	21 31 36.8	+1.1
JKRS				eS	Sn	21 31 55.9	+0.2
JIJ	Ishigaki jima	1.72	72	P	Pn	21 31 38.7	+0.9
JIJ				eS	Sn	21 31 58.9	-0.6
JTJ	Tarama	2.29	69	P	Pn	21 31 46.8	+0.8
JTJ				eS	Sn	21 32 14.7	+0.6
JOW	Kunigami	6.14	60	P	Pn	21 32 37.1	-3.4
	2.6nm,0.3s,baz=211,slow=27,SNR=5.3						
CBIJ	Chichi jima	18.20	76	LR	LR	21 40 59.0	
	comp=Z,55nm,18.9s,baz=97,slow=33						
SONM	Songino Array	27.11	336	P	P	21 36 51.9	-0.2
	1.0nm,0.5s,mb3.6,baz=150,slow=10,SNR=11						
SONM				pP	pP	21 37 04.3	+7.2
	2.1nm,0.9s,baz=148,slow=9.1,SNR=7.3						
SONM				LR	LR	21 48 04.9	
	comp=Z,51nm,20.8s,MS3.1,baz=332,slow=37						
MKAR	Makanchi Array	39.33	316	P	P	21 38 37.5	-0.7
	1.5nm,0.4s,mb4.0,baz=101,slow=11,SNR=23						
MKAR				pP	pP	21 38 50.4	+7.0
	1.7nm,0.5s,baz=100,slow=9.9,SNR=9.9						
ZAL	Zalesovo	41.12	327	P	P	21 38 52.4	-0.5
	0.9nm,0.3s,mb3.9,baz=39,slow=14,SNR=4.1						
ZAL				LR	LR	21 57 14.6	
	comp=Z,47nm,19.5s,MS3.4,baz=287,slow=38						
BVAR	Borovoye Array	48.62	321	P	P	21 39 52.8	-0.1
	0.8nm,0.5s,mb4.0,baz=106,slow=8.2,SNR=8.2						
BVAR				pP	pP	21 40 03.0	+4.9
	0.5nm,0.5s,baz=113,slow=10,SNR=3.8						
BRTR	Keskin Array B	74.23	307	P	P	21 42 46.8	+0.6
	1.2nm,0.7s,mb3.9,baz=90,slow=8.6,SNR=4.6						
YKA	Yellowknife Ar	82.88	23	P	P	21 43 29.1	-3.7
	0.9nm,0.6s,mb4.0,baz=307,slow=5.7,SNR=5.1						

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*IDC **22** 21:38:36.2±1.2, 15.80N×61.76W, mb3.8/3, mb1 4.2/3, mb1mx3.7/19, mbtmp3.8/3, Error ellipse: s-maj=19.3km s-min=11.9km az=148.0*

*TRN **22** 21:38:37.1, 15.86N×61.59W, h20^{km}, MD3.7, M3.5(FDF)*

*NEIC **22** 21:38:37.7, 15.84N×61.57W, h27^{km}, MD3.7(TRN), After TRN.*

ISC 22 21:38:39.2±0.4**, 15.89N**±0.03×**61.58W**±0.07**, h20^{km}**±5^{km}**, n24, σ0^{s}99**/35**, mb3.9**/3**, 2C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOG	Dongo Capester	0.14	346	⇑eP	Pb	21 38 42.7	-1.0
SCG	Saint Claude	0.17	325	eP	Pb	21 38 42.8	-1.2
BCG	Bois Riant Cap	0.20	349	⇓eP	Pb	21 38 43.5	-0.9
MGG	Marie-Galante	0.26	84	⇑eP	Pb	21 38 45.5	+0.2
BBL	Barber's Block	0.38	164	eP	Pb	21 38 46.7	-0.4
DWS	Wesley	0.41	141	eP	Pb	21 38 47.3	-0.4
DWS				eS	Sb	21 38 54.3	+0.7
SEG	Port Louis	0.51	8	eP	Pb	21 38 49.4	0.0
MDN	Morne-Daniel	0.60	162	eP	Pb	21 38 51.4	+0.5
MDN				eS	Sb	21 38 58.7	-0.1
DEG	La Desirade	0.65	50	eP	Pb	21 38 51.8	0.0
DBCT	Belle View Cho	0.66	160	eP	Pb	21 38 52.2	+0.4
DBCT				eS	Sb	21 39 01.7	+1.2
DSHT	Scott's Head	0.70	163	eP	Pb	21 38 53.8	+1.1
DSHT				eS	Sb	21 39 02.9	+1.1
BPA	Boggy Peak	1.18	347	eP	Pb	21 39 00.6	-0.2
BPA				eS	Sb	21 39 16.6	+1.1
FDF	Fort de France	1.22	160	eP	Pn	21 39 00.0	-1.3
FDF				eS	Sb	21 39 15.9	-1.0
CRM	Caravelle	1.30	150	eP	Pn	21 39 01.7	-0.8
CRM				eS	Sb	21 39 19.3	+0.2
BIM	Bigot	1.45	160	eP	Pn	21 39 05.0	+0.4
MVM	Montagne Vaucl	1.48	153	eP	Pn	21 39 04.8	-0.3
SKTB	Turtle Beach	1.64	323	eP	Pn	21 39 07.2	-0.1
SKTB				eS	Sn	21 39 28.1	0.0
CPB	Codrington	1.75	352	eP	Pn	21 39 08.6	-0.4
CPB				eS	Sn	21 39 32.5	+1.6
SKI	Saint Kitts	1.81	322	eP	Pn	21 39 09.8	0.0
SKI				eS	Sn	21 39 34.2	+1.9
SKDB	Saint Kitts 2	1.90	322	eP	Pn	21 39 14.2	+3.1
SKDB				eS	Sn	21 39 40.1	+5.4
GRW	Mount Saint Ca	3.71	181	eP	Pn	21 39 41.0	+4.2
PDAR	Pinedale Array	48.82	313	P	P	21 47 24.3	-0.8
	0.4nm,0.4s,mb3.8,baz=104,slow=6.1,SNR=5.4						
YKA	Yellowknife Ar	59.35	334	P	P	21 48 40.1	-2.0
	1.0nm,0.5s,mb4.1,baz=111,slow=7.5,SNR=4.9						
ILAR	Eielson Array	73.76	334	P	P	21 50 10.8	-2.8
	0.4nm,0.4s,mb3.7,baz=87,slow=5.6,SNR=4.6						

MAN 22 21:40:34.9, 9.57N×126.28E, h1^{km}, mb4.2, ML3.0, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.81	285	⇓eP	Pg	21 40 50.4	-0.6
SCPH				eS	Sg	21 41 02.5	+0.7
BUTP	Butuan	0.89	227	eP	Pg	21 40 52.1	-0.5
BUTP				eS	Sg	21 41 06.9	+2.5
MSLP	Maasin	1.51	292	eP	Pn	21 41 02.7	-0.4
MSLP				eS	Sb	21 41 23.0	+0.1
BUKP	Musuan	2.07	216	eP	Pn	21 41 11.5	+0.3
BUKP				eS	Sn	21 41 39.1	+1.1
BESP	Borongan	2.18	338	eP	Pn	21 41 12.9	+0.2
BESP				eS	Sn	21 41 37.5	-3.2
PAGZ	Pagadian	3.34	239	eP	Pn	21 41 29.4	+0.1

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*NEIC **22** 21:55:44.9, 15.87N×61.41W, h30^{km}, MD3.6(TRN), After TRN.*

TRN 22 21:55:43.8, 15.87N×61.55W, h20^{km}, MD3.6, M3.4(FDF)**, Md3.0**(FDF)**, 2C-3D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOG	Dongo Capester	0.17	339	eP	Pb	21 55 49.2	+0.7
SCG	Saint Claude	0.20	322	⇓iP	Pb	21 55 49.2	+0.3
BCG	Bois Riant Cap	0.22	343	⇓eP	Pb	21 55 49.8	+0.5
MGG	Marie-Galante	0.23	78	⇑iP	Pb	21 55 51.9	+2.5
BBL	Barber's Block	0.35	167	⇓eP	Pb	21 55 52.9	+1.7
DWS	Wesley	0.38	142	eP	Pb	21 55 53.9	+2.1
DWS				eS	Sb	21 56 00.1	+2.9
SEG	Port Louis	0.53	5	⇑eP	Pb	21 55 56.0	+1.6
MDN	Morne-Daniel	0.57	164	eP	Pb	21 55 58.8	+3.8
MDN				eS	Sb	21 56 06.6	+4.0
DBCT	Belle View Cho	0.63	161	eP	Pb	21 55 59.8	+3.9
DBCT				eS	Sb	21 56 08.2	+3.9
FDF	Fort de France	1.20	161	eP	Pb	21 56 06.7	+1.1
FDF				eS	Sb	21 56 24.4	+3.8
BPA	Boggy Peak	1.21	346	eP	Pn	21 56 07.7	+1.9
BPA				eS	Sb	21 56 23.0	+2.1
CRM	Caravelle	1.27	151	eP	Pn	21 56 08.2	+1.5
CRM				eS	Sb	21 56 24.2	+1.4
MVM	Montagne Vaucl	1.45	154	eP	Pn	21 56 11.1	+1.8
CPB	Codrington	1.78	352	eP	Pn	21 56 15.6	+1.6
CPB				eS	Sn	21 56 38.9	+2.7
SKI	Saint Kitts	1.85	322	eS	Sn	21 56 41.7	+3.8

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*NEIC **22** 22:27:40.4, 15.79N×61.19W, h17^{km}, MD4.0(TRN), After TRN.*

TRN 22 22:27:40.9, 15.74N×61.35W, h17^{km}, MD4.0, M3.5(FDF)**, 9C-3D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DWS	Wesley	0.17	168	⇑iP	Pb	22 27 48.4	+3.0
DWS				eS	Sb	22 27 49.6	+1.1
MGG	Marie-Galante	0.18	10	⇑iP	Pb	22 27 48.7	+3.1
BBL	Barber's Block	0.24	209	⇑iP	Pb	22 27 47.2	+0.8
DOG	Dongo Capester	0.39	319	⇑eP	Pb	22 27 49.8	+0.8
MDN	Morne-Daniel	0.42	186	⇑iP	Pb	22 27 52.0	+2.5
SCG	Saint Claude	0.43	312	⇑eP	Pb	22 27 50.2	+0.5
BCG	Bois Riant Cap	0.43	323	⇓iP	Pb	22 27 50.5	+0.8
DBCT	Belle View Cho	0.46	180	eP	Pb	22 27 53.0	+2.8
DSHT	Scott's Head	0.52	183	eP	Pb	22 27 53.7	+2.5
DEG	La Desirade	0.64	26	⇑iP	Pb	22 27 55.5	+2.3
SEG	Port Louis	0.68	347	⇑eP	Pb	22 27 55.4	+1.5
CRM	Caravelle	1.06	157	⇓eP	Pb	22 28 02.0	+1.6
BIM	Bigot	1.24	167	⇑eP	Pb	22 28 03.9	+0.4
MVM	Montagne Vaucl	1.25	159	eP	Pb	22 28 05.0	+1.3
BPA	Boggy Peak	1.39	340	⇓eP	Pn	22 28 06.3	+0.6
BPA				eS	Sb	22 28 24.4	+1.1
NVBH	Bath Hotel, Ne	1.83	319	eP	Pn	22 28 13.8	+1.8
NVBH				eS	Sn	22 28 37.9	+2.9
SKTB	Turtle Beach	1.90	320	eP	Pn	22 28 15.9	+2.9
SKTB				eS	Sn	22 28 40.0	+3.3
CPB	Codrington	1.95	346	eP	Pn	22 28 14.0	+0.3
CPB				eS	Sn	22 28 39.7	+1.8
SKI	Saint Kitts	2.07	320	eP	Pn	22 28 18.0	+2.6
SKI				eS	Sn	22 28 45.0	+4.0
SKDB	Saint Kitts 2	2.17	320	eP	Pn	22 28 19.9	+3.1
SKDB				eS	Sn	22 28 46.0	+2.6
SVV	Soufriere Volc	2.41	177	eP	Pn	22 28 21.7	+1.5
SVV				eS	Sn	22 28 48.6	-1.0
SVB	Belmont	2.45	178	eP	Pn	22 28 24.7	+3.8
SVB				eS	Sn	22 28 54.7	+4.1
STMA	St. Maarten, A	2.85	324	eS	Sn	22 29 01.9	+1.2
GRW	Mount Saint Ca	3.57	185	eP	Pn	22 28 37.1	+0.4
GRW				eS	Sn	22 29 21.6	+2.6

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*NEIC **22** 22:35:53.5, 15.71N×61.39W, h24^{km}, MD3.7(TRN), After TRN.*

TRN 22 22:35:53.3, 15.72N×61.43W, h22^{km}, MD3.7, Md2.9(FDF)**, 8C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DWS	Wesley	0.19	144	⇑iP	Pb	22 36 00.5	+2.1
DWS				eS	Sb	22 36 03.9	+2.0
BBL	Barber's Block	0.20	192	⇑iP	Pb	22 35 59.8	+1.2
MGG	Marie-Galante	0.22	29	⇑iP	Pb	22 36 01.2	+2.3
DOG	Dongo Capester	0.36	329	⇑eP	Pb	22 36 02.3	+1.3
SCG	Saint Claude	0.39	321	⇑eP	Pb	22 36 02.7	+1.1
MDN	Morne-Daniel	0.40	175	⇑iP	Pb	22 36 04.5	+2.8
MDN				eS	Sb	22 36 10.2	+2.7
BCG	Bois Riant Cap	0.41	333	⇓eP	Pb	22 36 03.0	+1.3
DBCT	Belle View Cho	0.46	170	eP	Pb	22 36 05.4	+2.8
DBCT				eS	Sb	22 36 11.9	+3.0
DSHT	Scott's Head	0.51	174	eP	Pb	22 36 06.3	+2.8
DSHT				eS	Sb	22 36 12.7	+2.3
SEG	Port Louis	0.68	354	⇑eP	Pb	22 36 07.9	+1.6
FDF	Fort de France	1.02	165	eP	Pb	22 36 13.4	+1.3
CRM	Caravelle	1.08	153	eP	Pb	22 36 14.6	+1.4
CRM				eS	Sb	22 36 29.4	+2.5
BIM	Bigot	1.25	164	eP	Pn	22 36 17.3	+1.7
BIM				eS	Sb	22 36 33.9	+2.3
MVM	Montagne Vaucl	1.27	156	eP	Pn	22 36 17.6	+1.7
BPA	Boggy Peak	1.38	343	⇑iP	Pn	22 36 18.9	+1.4
BPA				eS	Sn	22 36 36.5	+1.3
CPB	Codrington	1.94	349	eP	Pn	22 36 26.6	+0.9
CPB				eS	Sn	22 36 51.6	+2.0
SKI	Saint Kitts	2.04	322	eP	Pn	22 36 28.1	+1.2
SKI				eS	Sn	22 36 54.8	+2.8
SVV	Soufriere Volc	2.40	175	eP	Pn	22 36 34.2	+2.1
SVV				eS	Sn	22 37 03.0	+1.9
SVB	Belmont	2.44	176	eP	Pn	22 36 37.2	+4.4
SVB				eS	Sn	22 37 03.5	+1.3
GRW	Mount Saint Ca	3.55	184	eP	Pn	22 36 50.3	+1.8
GRW				eS	Sn	22 37 33.8	+3.6

IDC 22 22:39:29.6±13.0**, 26.56S×179.49E, h486^{km}**±107^{km}**, mb3.1**/2**, mb1 3.3**/3**, mb1mx3.1**/13**, mbtmp4.1**/3**, Error ellipse: s-maj=145.2km s-min=51.1km az=128.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.70	288	P	P	22 42 17.6	+0.8
	0.2nm,0.3s,baz=106,slow=20,SNR=3.7						
STKA	Stephens Creek	33.38	252	P	P	22 45 25.6	-2.2
	2.0nm,0.7s,baz=113,slow=11,SNR=5.0						
WRA	Warramunga Arr	41.84	269	P	P	22 46 36.3	-1.1
	1.4nm,0.6s,baz=105,slow=7.9,SNR=14						
HFS	Hagfors	145.05	348	PKPbc	PKPbc	22 58 08.6	-2.1
	1.1nm,0.4s,baz=27,slow=3.3,SNR=5.3						
AKASG	Malin Array Be	146.91	325	PKPbc	PKPbc	22 58 16.1	+0.6
	0.7nm,0.6s,baz=42,slow=3.9,SNR=4.7						
BRTR	Keskin Array B	148.73	303	PKPbc	PKPdf	22 58 23.2	+6.6
	1.1nm,0.7s,baz=99,slow=4.1,SNR=5.4						

CASC 22 22:48:22.3±0.9**, 12.97N×89.02W, h32^{km}**±2^{km}**, MD3.6, ML3.4, 6C-7D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LFRS	El Faro	0.65	357	⇓eP	Pb	22 48 35.2	-0.1
LFRS				eS	Sb	22 48 45.1	+1.0
SNVI	San Vicente	0.67	16	eP	Pn	22 48 35.9	+0.5
SNVI				eS	Sb	22 48 45.9	+1.3
LCBS	La Ceiba	0.68	4	⇓eP	Pn	22 48 35.5	-0.2
SNET	Serv Nac Est T	0.74	344	eP	Pn	22 48 36.4	-0.2
SNET				eS	Sb	22 48 47.0	+0.4
SNET				i		22 48 47.8	
	comp=Z,1μm,0.4s						
LBRS	Las Brisas	0.77	359	⇓eP	Pn	22 48 37.1	+0.2
LFU	La Fuente	0.78	354	⇓eP	Pn	22 48 37.2	+0.1
LFU				eS	Sb	22 48 49.0	+1.2
BOQS	Boqueron	0.80	342	⇓eP	Pn	22 48 37.6	+0.2
BOQS				eS	Sn	22 48 50.0	+1.7
VSM	San Miguel	0.86	58	⇓eP	Pn	22 48 38.5	+0.2
VSM				eS	Sn	22 48 51.9	+2.1
BLLM	Bellamira	0.90	58	⇑eP	Pn	22 48 38.8	0.0
BLLM				eS	Sn	22 48 50.9	+0.1
SBLS	San Blas	1.04	326	⇑eP	Pn	22 48 41.3	+0.4
SBLS				eS	Sn	22 48 56.1	+1.7
SNJE	San Jose	1.06	328	⇓eP	Pn	22 48 41.1	+0.1
SNJE				eS	Sn	22 48 55.8	+1.0
RTR	El Retiro	1.10	327	⇑eP	Pn	22 48 42.0	+0.3
RTR				eS	Sn	22 48 56.4	+0.4
CAHU	Cacacuatique	1.12	45	⇑eP	Pn	22 48 42.1	+0.1
CAHU				eS	Sn	22 48 57.7	+1.2
CNCH	Conchagua	1.20	75	⇑eP	Pn	22 48 42.7	-0.4
CNCH				eS	Sn	22 48 58.8	+0.4
RBDL	Robledal	1.31	331	⇑eP	Pn	22 48 44.7	+0.1
RBDL				eS	Sn	22 49 01.9	+0.8

IGQ 22 22:51:31.6, 3.68S×77.23W, h121^{km}±27^{km}**, mb4.5, 9C-7D, Error ellipse: s-maj=14.6km s-min=8.6km az=61.7, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARRY	Arrayan	2.48	330	⇓P	P	22 52 13.5	+1.6
ULBA	Ulba	2.51	332	P	P	22 52 12.5	+0.2
RUN5	Runtun	2.54	332	⇓P	P	22 52 13.0	+0.3
CUSU	Cusua	2.55	331	⇑P	P	22 52 13.3	+0.5
CUSU				S	S	22 52 42.2	-1.7
JUIV	Juive	2.56	331	⇓P	P	22 52 13.2	+0.4
JUIV				S	S	22 52 42.4	-1.7
PISA	Pisayambo	2.85	336	⇑P	P	22 52 17.1	+0.3
TAMB	Tambo	3.17	339	⇑P	P	22 52 21.8	+0.7
VC1	Cotopaxi 1	3.23	339	⇑P	P	22 52 23.0	+1.0
CAMI	Rancho Maria	3.24	337	⇓P	P	22 52 23.6	+1.6
NAS1	Nasa	3.27	338	⇑P	P	22 52 23.8	+1.3
ANTI	Antisana	3.34	344	⇑P	P	22 52 23.1	-0.2
ECOPE	Copete-Rev Vol	3.57	354	P	P	22 52 26.1	-0.4
LAV3	Lava3-Reventad	3.58	354	P	P	22 52 26.4	-0.1
CHAR	Charly	3.59	353	⇑P	P	22 52 26.6	-0.1
CONE	Cono NE Rev Vo	3.61	353	⇓P	P	22 52 27.0	+0.1
JUA2	San Juan 2	3.70	338	P	P	22 52 30.4	+2.1
GGP	Refugio Guagua	3.74	339	⇑P	P	22 52 30.2	+1.6
TERV	Terraza Guagua	3.74	338	P	P	22 52 30.6	+1.9
CAYR	Refugio Cayamb	3.75	348	P	P	22 52 29.3	+0.4
PINO	Pino	3.76	338	⇓P	P	22 52 30.4	+1.5
YANA	Yana	3.78	339	⇓P	P	22 52 30.5	+1.2
CAYA	Cayambe	3.80	348	⇑P	P	22 52 30.2	+0.7
JOR1	San Jorge 1	3.91	339	P	P	22 52 28.8	-2.3
COTA	Cotacachi	4.14	344	P	P	22 52 32.2	-1.8
HOJA	Cerro de Hojas	4.22	308	P	P	22 52 33.3	-1.8
JAMA	Jama	4.51	319	P	P	22 52 37.4	-1.7
ECEN	Cerro Negro	4.53	351	P	P	22 52 40.9	+1.5
LORE	San Lorenzo	5.20	342	P	P	22 52 49.8	+1.4

TAP 22 22:59:04.8, 21.97N×120.45E, h42^{km}, ML3.9, Taiwan region

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*NEIC **22** 23:08:58.0, 15.82N×61.46W, h33^{km}, MD3.6(TRN), After TRN.*

TRN 22 23:08:56.5, 15.85N×61.55W, h19^{km}, MD3.6, 5C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOG	Dongo Capester	0.19	340	⇑eP	Pb	23 09 02.2	+0.7
SCG	Saint Claude	0.22	325	⇑eP	Pb	23 09 02.2	+0.3
MGG	Marie-Galante	0.23	74	⇑iP	Pb	23 09 04.6	+2.5
BCG	Bois Riant Cap	0.24	344	⇓eP	Pb	23 09 03.0	+0.7
BBL	Barber's Block	0.33	166	⇑eP	Pb	23 09 05.3	+1.6
DWS	Wesley	0.36	141	eP	Pb	23 08 49.9	-14
DWS				eS	Sb	23 09 13.2	+3.7
SEG	Port Louis	0.55	5	eP	Pb	23 09 08.8	+1.5
MDN	Morne-Daniel	0.55	164	eP	Pb	23 09 11.2	+3.9
MDN				eS	Sb	23 09 18.8	+4.0
DBCT	Belle View Cho	0.61	161	eP	Pb	23 09 12.4	+4.0
DBCT				eS	Sb	23 09 19.6	+3.1
DEG	La Desirade	0.66	46	eP	Pb	23 09 10.8	+1.5
FDF	Fort de France	1.18	161	⇑eP	Pb	23 09 18.8	+0.8
FDF				eS	Sb	23 09 34.8	+2.0
BPA	Boggy Peak	1.22	346	eP	Pn	23 09 20.6	+1.8
BPA				eS	Sb	23 09 36.8	+2.6
BIM	Bigot	1.41	161	eP	Pn	23 09 23.7	+2.3
MVM	Montagne Vaucl	1.44	154	eP	Pn	23 09 23.4	+1.5
MVM				eS	Sn	23 09 39.5	-0.7
CPB	Codrington	1.80	352	eP	Pn	23 09 28.9	+1.8
CPB				eS	Sn	23 09 52.5	+3.0
SKI	Saint Kitts	1.86	322	eP	Pn	23 09 30.5	+2.6
SKI				eS	Sn	23 09 53.9	+2.8

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*MOS **22** 23:18:19.9±0.9, 4.38S×153.11E, h43^{km}, mb5.1/5, Error ellipse: s-maj=16.4km s-min=15.6km az=157.4*

*BJI **22** 23:18:20.8, 4.51S×153.91E, h79^{km}, mB5.0, mb4.9*

*NEIC **22** 23:18:23.4±2.1, 4.66S×153.16E, h64^{km}±17^{km}, mb4.9/10, Error ellipse: s-maj=14.1km s-min=10.7km az=65.0*

*IDC **22** 23:18:25.1±4.3, 4.68S×153.32E, h86^{km}±39^{km}, mb4.2/10, mb1 4.3/11, mb1mx4.2/17, mbtmp4.5/11, MS3.7/5, Ms1 3.7/5, ms1mx3.4/22, Error ellipse: s-maj=26.6km s-min=19.2km az=64.0*

ISC 22 23:18:19.6±3.6**, 4.61S**±0.10×**153.3E**±0.1**, h47^{km}**±31^{km}**, n95, σ1^{s}11**/56**, mb4.7**/28**, MS3.7**/7**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.74	232	eP	P	23 20 12.4	+0.1
PMG				S	S	23 21 39.3	-0.2
PMG	Port Moresby	7.74	232	P	P	23 20 15.8	+3.5
	1.6nm,0.3s,baz=49,slow=9.3,SNR=3.8						
PMG				S	S	23 21 39.3	-0.2
	9.8nm,0.3s,baz=159,slow=17,SNR=6.9						
DZM	Mont Dzumac	21.53	145	P	P	23 23 07.7	+0.9
	13nm,0.8s,mb4.4,baz=14,slow=8.9,SNR=11						
KAKA	Kakadu	22.12	247	eP	P	23 23 09.9	-2.8
	37nm,0.5s,mb5.1						
WRAB	Tennant Creek	23.93	229	eP	P	23 23 30.7	+0.2
WRAB				pmax	pmax		
	comp=Z,16nm,0.4s,mb4.8						
WRAB	Tennant Creek	23.93	229	eP	P	23 23 30.6	+0.2
	comp=Z,16nm,0.4s,mb4.8						
WB2	Warramunga Arr	23.94	229	eP	P	23 23 30.9	+0.4
WRA	Warramunga Arr	23.95	229	P	P	23 23 31.1	+0.5
	comp=Z,7.0nm,0.3s,mb4.5,baz=53,slow=9.8,SNR=38						
STKA	Stephens Creek	29.27	201	P	P	23 24 18.2	-1.5
	comp=Z,3.2nm,0.8s,mb4.1,baz=14,slow=5.7,SNR=6.2						
STKA				LR	LR	23 35 37.8	
	comp=Z,100nm,20.8s,MS3.4,baz=24,slow=35						
STKA	Stephens Creek	29.27	201	P	P	23 24 18.2	-1.5
STKA				LR	LR	23 35 37.8	
MBWA	Marble Bar	36.50	240	eP	P	23 25 20.0	-2.6
	comp=Z,14nm,0.8s,mb4.9						
JOW	Kunigami	39.54	324	P	P	23 25 49.0	+1.2
	comp=Z,19nm,0.7s,mb4.9,baz=166,slow=11,SNR=5.6						
KLBR	Kellerberrin	42.80	227	eP	P	23 26 17.4	+2.6
	comp=Z,104nm,1.6s,mb5.3						
JNU	Nakatsue	43.13	332	P	P	23 26 16.8	-0.6
	comp=Z,8.0nm,0.4s,mb4.8,baz=116,slow=11,SNR=7.4						
CN2	Changchun	54.33	335	eP	P	23 27 43.9	+0.1
KLR	Kul'dur	56.80	343	eP	P	23 27 57.2	-4.4
PPT	Papeete	57.31	108	eP	P	23 28 13.5	+7.9
	comp=Z,59nm,33.0s						
PPT				ePP	PP	23 30 35.3	+21
	comp=Z,31nm,20.8s						
PPT				eS	S	23 35 12.5	-44
	comp=Z,188nm,28.2s						
PPT				eSS	SS	23 40 46.2	+59
	comp=Z,415nm,29.2s						
PPT				eLQ		23 42 36.2	
	comp=Z,89nm,22.2s						
PPT				eLR	LR	23 45 11.1	
	comp=Z,37nm,21.8s,baz=243						
TBI	Tubuai	58.18	115	eS	S	23 36 17.6	+10
	comp=Z,129nm,37.5s						
TBI				eSS	SS	23 39 57.4	-4.1
	comp=Z,104nm,37.5s						
TBI				eLR	LR	23 45 26.9	
	comp=Z,139nm,38.5s						
CMAR	Chiang Mai Arr	58.25	295	P	P	23 28 11.8	-0.3
	comp=Z,4.7nm,0.8s,mb4.6,baz=117,slow=5.7,SNR=27						
LZH	Lanzhou	61.44	316	eP	P	23 28 34.0	+0.2
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.2						
GTA	Gaotai	65.86	317	eP	P	23 29 03.1	+0.3
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
TAOE	Nuku Hiva Isla	66.16	98	eS	S	23 38 34.9	+46
	comp=Z,541nm,32.4s						
TAOE				eSS		23 43 21.0	
	comp=Z,1μm,33.5s						
TAOE				eLQ		23 46 26.2	
	comp=Z,3μm,39.6s						
SONM	Songino Array	66.43	328	P	P	23 29 06.1	-0.1
	comp=Z,1.6nm,0.6s,mb4.2,baz=144,slow=5.1,SNR=15						
SONM				PcP	PcP	23 29 35.2	-0.4
	comp=Z,1.7nm,0.6s,baz=139,slow=3.2,SNR=7.5						
LSA	Lhasa	68.55	304	P	P	23 29 20.5	+0.7
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						

LSA				MLR	MLR		
	comp=Z,78nm,19.0s,MS4.0						
LSA	**Lhasa**	**68.55**	**304**	P	**P**	**23 29 20.5**	**+0.7**
	comp=Z,3.9nm,0.6s,mb4.5						
LSA				LR	LR		
	comp=Z,78nm,19.0s,MS4.0						
ZAK	**Zakamensk**	**69.59**	**328**	*e*P	**P**	**23 29 15.3**	**-11**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
GUN	**Gumba**	**72.45**	**301**	*e*P	**P**	**23 29 43.3**	**-0.1**
	comp=Z,11nm,0.4s,mb5.1						
KKN	**Kakani**	**72.93**	**301**	*e*P	**P**	**23 29 45.9**	**-0.5**
	comp=Z,7.5nm,0.5s,mb4.9						
KKN	**Kakani**	**72.93**	**301**	*e*P	**P**	**23 29 45.9**	**-0.5**
KKN				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
DMN	**Daman**	**73.04**	**301**	*e*P	**P**	**23 29 46.6**	**-0.4**
	comp=Z,13nm,0.7s,mb5.0						
GKN	**Gorkha**	**73.54**	**301**	*e*P	**P**	**23 29 49.4**	**-0.5**
	comp=Z,5.1nm,0.4s,mb4.8						
KOLN	**Koldanda**	**74.37**	**300**	*e*P	**P**	**23 29 54.2**	**-0.6**
	comp=Z,10nm,0.8s,mb4.8						
MKAR	**Makanchi Array**	**80.51**	**319**	*i* P	**P**	**23 30 28.2**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**80.51**	**319**	P	**P**	**23 30 28.5**	**0.0**
MKAR	**Makanchi Array**	**80.51**	**319**	P	**P**	**23 30 28.5**	**0.0**
	comp=Z,5.3nm,0.6s,mb4.7,baz=99,slow=7.3,SNR=51						
ZAL	**Zalesovo**	**81.28**	**326**	P	**P**	**23 30 31.7**	**-0.7**
	comp=Z,2.0nm,0.5s,mb4.3,baz=349,slow=9.0,SNR=6.7						
ILAR	**Eielson Array**	**81.80**	**22**	P	**P**	**23 30 33.1**	**-1.7**
	comp=Z,0.8nm,0.7s,mb3.8,baz=253,slow=5.2,SNR=8.0						
ILAR				LR	LR	00 09 01.0	
	comp=Z,40nm,18.6s,MS3.8,baz=358,slow=37						
NVS	**Novosibirsk**	**82.45**	**327**	*e*P	**P**	**23 30 37.0**	**-1.4**
KSH	**Kashi**	**83.19**	**311**	*e*P	**P**	**23 30 43.4**	**+0.9**
KSH				AMB	AMB		
	comp=Z,270nm,4.6s						
TKM2	**Tokmak 2**	**84.16**	**314**	P	**P**	**23 30 48.2**	**+0.9**
	SNR=15						
KZA	**Kyzart**	**84.24**	**313**	P	**P**	**23 30 49.8**	**+2.0**
	SNR=29						
KBK	**Karagaybulak**	**84.58**	**313**	P	**P**	**23 30 50.7**	**+1.3**
	SNR=7.4						
CHMS	**Chumysh**	**84.78**	**314**	P	**P**	**23 30 51.1**	**+0.6**
	SNR=19						
UCH	**Uchtor**	**84.81**	**313**	P	**P**	**23 30 52.4**	**+1.7**
	SNR=20						
AAK	**Ala-Archa**	**84.90**	**313**	P	**P**	**23 30 52.2**	**+1.1**
	SNR=11						
AAK	**Ala-Archa**	**84.90**	**313**	*e*P	**P**	**23 30 50.7**	**-0.4**
	comp=Z,17nm,0.7s,mb5.3						
AAK				LR	LR		
	comp=Z,13nm,19.0s,MS3.3						
USP	**Ospenovka**	**85.02**	**314**	P	**P**	**23 30 52.4**	**+0.8**
	SNR=26						
AML	**Almayashu**	**85.39**	**313**	P	**P**	**23 30 55.3**	**+1.8**
	SNR=39						
EKS2	**Erkin-Say**	**85.42**	**313**	P	**P**	**23 30 54.7**	**+1.1**
	SNR=20						
KKAR	**Karatay Array**	**87.86**	**313**	P	**P**	**23 31 05.2**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.5						
YBH	**Yreka Blue Hor**	**88.56**	**48**	LR	LR	00 03 24.8	
	comp=Z,54nm,19.3s,MS4.0,baz=357,slow=30						
VOSK	**Vostochnaya**	**88.99**	**323**	P	**P**	**23 31 09.3**	**-1.3**
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.9						
BVA0	**Borovoye Array**	**89.39**	**323**	P	**P**	**23 31 11.5**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.6						
ZRNK	**Zerenda**	**90.21**	**323**	*e*P	**P**	**23 31 14.8**	**-1.6**
ZRNK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.2						
ZRNK	**Zerenda**	**90.21**	**323**	*e*P	**P**	**23 31 14.8**	**-1.6**
	comp=Z,7.5nm,0.7s,mb5.1						
RPN	**Rapa Nui**	**94.45**	**118**	LR	LR	00 10 22.6	
	comp=Z,33nm,18.2s,MS3.8,baz=267,slow=33						
AB31	**Akbulak array**	**95.66**	**319**	P	**P**	**23 31 39.6**	**-1.8**
PDAR	**Pinedale Array**	**98.35**	**48**	LR	LR	00 17 04.5	
	comp=Z,29nm,18.3s,MS3.8,baz=72,slow=36						
NOA	**NORSAR Array B**	**116.90**	**340**	PKP	PKPdf	23 36 59.2	+0.2
	comp=Z,0.7nm,0.6s,baz=45,slow=1.9,SNR=3.8						
BRG	**Berggiesshubel**	**122.75**	**331**	*i* PKIKP	PKPdf	23 37 11.7	+1.1
CLL	**Collm**	**122.93**	**331**	*i* PKIKP	PKPdf	23 37 12.1	+1.1
	comp=Z,logA/T=0.9						
KHC	**Kasperske Hory**	**124.04**	**329**	*e*PKPDF	PKPdf	23 37 14.0	+0.8
GERES	**GERESS Array B**	**124.15**	**329**	PKP	PKPdf	23 37 14.7	+1.3
	comp=Z,2.2nm,0.6s,baz=74,slow=1.7,SNR=25						
GRA1	**Grafenberg Arr**	**124.85**	**331**	*e*PKP	PKPdf	23 37 16.0	+1.3
GRF	**Grafenberg Arr**	**124.85**	**331**	*e*PKIKP	PKPdf	23 37 16.0	+1.3
CDF	**Champ du Feu**	**127.61**	**332**	*e*PKIKP	PKPdf	23 37 20.8	+0.7
BAIF	**Baives**	**127.76**	**335**	*e*PKIKP	PKPdf	23 37 20.9	+0.6
HINF	**Hinteralfeld**	**128.24**	**332**	*e*PKIKP	PKPdf	23 37 22.4	+1.1
HAU	**Haudompre**	**128.34**	**332**	*e*PKIKP	PKPdf	23 37 22.9	+1.4
	comp=Z,4.4nm,0.5s						
MEZF	**Maizieres J'vi**	**128.56**	**333**	*e*PKIKP	PKPdf	23 37 24.2	+2.3
	comp=Z,5.1nm,0.5s						
CABF	**La Chapelle**	**129.46**	**331**	*e*PKIKP	PKPdf	23 37 24.6	+0.9
LPL	**La Plagne**	**129.92**	**330**	*e*PKIKP	PKPdf	23 37 26.5	+1.9
LPG	**La Plagne**	**129.92**	**330**	*e*PKIKP	PKPdf	23 37 26.1	+1.5
	comp=Z,3.4nm,0.7s						
MBDF	**Montbardon**	**130.45**	**329**	*e*PKIKP	PKPdf	23 37 27.6	+2.0
SMF	**Signal de Mont**	**130.49**	**333**	*e*PKIKP	PKPdf	23 37 28.0	+2.4
LDF	**La Druitiere**	**130.66**	**337**	*e*PKIKP	PKPdf	23 37 27.1	+1.2
FLN	**La Foliniere**	**130.66**	**337**	*e*PKIKP	PKPdf	23 37 27.2	+1.3
	comp=Z,5.4nm,0.5s						
SBF	**Sospel**	**130.69**	**328**	*e*PKIKP	PKPdf	23 37 27.3	+1.2
PGF	**Pioggiola**	**130.69**	**325**	*e*PKIKP	PKPdf	23 37 27.8	+1.7
	comp=Z,10nm,0.8s						
ORIF	**Oris-en-Rattie**	**130.77**	**330**	*e*PKIKP	PKPdf	23 37 27.3	+1.1
	comp=Z,4.3nm,0.7s						
BGF	**Bois d'Agland**	**131.01**	**333**	*e*PKIKP	PKPdf	23 37 28.4	+1.8
	comp=Z,6.2nm,0.7s						
GRR	**Gorron**	**131.11**	**337**	*e*PKIKP	PKPdf	23 37 28.5	+1.8
FRF	**La Foret Royal**	**131.31**	**328**	*e*PKIKP	PKPdf	23 37 28.6	+1.3
	comp=Z,4.4nm,0.8s						
VIVF	**Saint-Julien-l**	**131.41**	**330**	*e*PKIKP	PKPdf	23 37 29.2	+1.8
TCF	**Toulx Ste Croi**	**131.50**	**333**	*e*PKIKP	PKPdf	23 37 29.5	+1.9
	comp=Z,4.6nm,0.6s						
LMR	**La Mourre**	**131.54**	**328**	*e*PKIKP	PKPdf	23 37 29.0	+1.3
	comp=Z,6.0nm,1.0s						
SMRF	**Simiane la Rot**	**131.59**	**329**	*e*PKIKP	PKPdf	23 37 29.3	+1.5
	comp=Z,6.7nm,0.9s						
SGMF	**Saint Gilles**	**131.86**	**338**	*e*PKIKP	PKPdf	23 37 29.1	+0.9
	comp=Z,7.9nm,0.8s						
MFF	**Saint Martin d**	**132.27**	**335**	*e*PKIKP	PKPdf	23 37 29.5	+0.5
	comp=Z,5.0nm,0.8s						
QUIF	**Quistinic**	**132.37**	**339**	*e*PKIKP	PKPdf	23 37 31.6	+2.5
LASF	**Ste Croix**	**132.38**	**330**	*e*PKIKP	PKPdf	23 37 30.4	+1.1
	comp=Z,10nm,1.1s						
CAF	**Calviac**	**132.61**	**332**	*e*PKIKP	PKPdf	23 37 31.9	+2.2
MTLF	**Montolieu**	**133.72**	**331**	*e*PKIKP	PKPdf	23 37 33.2	+1.4
	comp=Z,2.5nm,0.7s						
ETSF	**Etsaut**	**135.38**	**333**	*e*PKIKP	PKPdf	23 37 38.1	+3.2
	comp=Z,5.0nm,0.7s						
SJPF	**Ste Jean**	**135.51**	**333**	*e*PKIKP	PKPdf	23 37 38.6	+3.5
	comp=Z,2.7nm,0.6s						

WEL 22 23:23:12.9±0.1, 38.59S×175.85E, h129^{km}±1^{km}, ML4.2/21, 15C-2D, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHTZ	**Whakaora**	**0.11**	**132**	PN	P	23 23 30.5	-0.1
WATZ	**Wairara**	**0.15**	**218**	PN	P	23 23 30.4	-0.3
WATZ				SN	S	23 23 44.3	+0.2
RATZ	**Rangitukua**	**0.28**	**193**	⇑PN	P	23 23 30.7	-0.2
RATZ				SN	S	23 23 44.8	+0.1
HATZ	**Hinemaiaia**	**0.35**	**148**	PN	P	23 23 31.0	-0.3
HATZ				SN	S	23 23 44.9	-0.3
PATZ	**Paeroa**	**0.38**	**57**	PN	P	23 23 31.5	+0.1
RITZ	**Rihia Road**	**0.39**	**179**	PN	P	23 23 31.4	0.0
KATZ	**Kakaramea**	**0.40**	**197**	PN	P	23 23 31.3	-0.2
KATZ				SN	S	23 23 46.5	+0.9
KRVZ	**Karewarewa**	**0.53**	**198**	PN	P	23 23 32.0	-0.1
WTVZ	**West Tongariro**	**0.56**	**201**	⇑PN	P	23 23 32.3	-0.1
WTVZ				SN	S	23 23 47.1	-0.1
TWVZ	**Taurewa**	**0.58**	**214**	⇑PN	P	23 23 32.3	-0.2
TWVZ				SN	S	23 23 47.2	-0.2
OTVZ	**Oturere**	**0.59**	**194**	PN	P	23 23 32.6	0.0
NGZ	**Ngauruhoe**	**0.61**	**198**	PN	P	23 23 32.5	-0.2
TAZ	**Tarawera**	**0.63**	**55**	⇑PN	P	23 23 32.9	+0.1
CNZ	**Chateau**	**0.65**	**201**	PN	P	23 23 32.4	-0.6
WPVZ	**Whakapapa**	**0.66**	**201**	PN	P	23 23 32.9	-0.1
TUVZ	**Tukino**	**0.69**	**193**	⇑PN	P	23 23 33.4	+0.1
FWVZ	**Far West T-bar**	**0.70**	**199**	PN	P	23 23 33.2	-0.1
DRZ	**Dome Shelter**	**0.72**	**198**	PN	P	23 23 33.7	+0.3
LIRZ	**Lichensteins R**	**0.72**	**36**	PN	P	23 23 33.5	0.0
TRVZ	**Turoa**	**0.74**	**198**	PN	P	23 23 33.9	+0.2
WNVZ	**Wahianoa**	**0.76**	**195**	⇑PN	P	23 23 33.8	0.0
BKZ	**Black Stump Fm**	**0.76**	**139**	⇓PN	P	23 23 33.7	-0.1
BKZ				SN	S	23 23 49.2	-0.5
HIZ	**Hauiti**	**0.78**	**275**	⇓PN	P	23 23 33.3	-0.6
HIZ				SN	S	23 23 48.9	-1.1
PKVZ	**Pokaka**	**0.80**	**209**	⇑PN	P	23 23 34.0	-0.1
PKVZ				SN	S	23 23 50.3	0.0
MOVZ	**Moawhango**	**0.82**	**185**	⇑PN	P	23 23 33.9	-0.3
MOVZ				SN	S	23 23 49.5	-1.0
MTVZ	**Mangateitei**	**0.85**	**200**	PN	P	23 23 34.4	-0.1
MARZ	**Manawahe**	**0.89**	**47**	PN	P	23 23 35.0	+0.1
TOZ	**Tahuroa Road**	**0.90**	**342**	⇑PN	P	23 23 34.8	-0.2
TGRZ	**Tauranga**	**0.92**	**21**	PN	P	23 23 34.9	-0.2
VRZ	**Vera Road**	**1.00**	**238**	⇑PN	P	23 23 35.6	-0.4
VRZ				SN	S	23 23 53.4	-0.1
URZ	**Urewera**	**1.04**	**72**	PN	P	23 23 35.8	-0.6
URZ				SN	S	23 23 53.5	-0.7
RAEZ	**Rainy Point**	**1.33**	**238**	PN	P	23 23 39.1	-0.4
MWZ	**Matawai**	**1.34**	**80**	PN	P	23 23 39.0	-0.6
WAZ	**Wanganui**	**1.34**	**210**	PN	P	23 23 39.3	-0.3
MYRZ	**Mayor Island**	**1.34**	**13**	PN	P	23 23 39.4	-0.2
TSZ	**Takapari Road**	**1.47**	**177**	⇑PN	P	23 23 40.4	-0.6
KNZ	**Kokohu**	**1.49**	**107**	PN	P	23 23 41.3	+0.1
NEZ	**North Egmont**	**1.53**	**243**	PN	P	23 23 41.7	0.0
PKE	**Pukeiti**	**1.57**	**247**	PN	P	23 23 42.2	0.0
PWZ	**Pawanui**	**1.64**	**152**	⇑PN	P	23 23 42.6	-0.3
NRZ	**Ngariki Road**	**1.67**	**243**	PN	P	23 23 42.9	-0.4
PUZ	**Puketiti**	**1.96**	**75**	PN	P	23 23 46.7	-0.1
MRZ	**Mangatainoka R**	**2.08**	**186**	⇑PN	P	23 23 46.6	-1.6
BFZ	**Birch Farm**	**2.11**	**172**	⇑PN	P	23 23 47.3	-1.4
MXZ	**Matakaoa Point**	**2.19**	**63**	PN	P	23 23 49.8	+0.1
KIW	**Kapiti Island**	**2.38**	**197**	PN	P	23 23 49.9	-2.3
MTW	**Mount Morrison**	**2.58**	**186**	⇑PN	P	23 23 52.1	-2.7
CAW	**Cannon Point**	**2.58**	**193**	PN	P	23 23 52.2	-2.6
DUWZ	**D'Urville Isla**	**2.66**	**213**	PN	P	23 23 53.1	-2.8

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*IDC **22** 23:37:34.8±1.7, 1.89N×96.57E, mb3.9/6, mb1 4.2/7, mb1mx3.9/16, mbtmp4.0/7, ML4.5/1, Error ellipse: s-maj=66.0km s-min=26.4km az=57.0*
*NEIC **22** 23:37:39.4±0.7, 1.92N×96.66E, h30^{km}, mb4.4/2, Error ellipse: s-maj=17.3km s-min=11.5km az=62.0*
ISC 22 23:37:37.6±1.0, 1.9N±0.1×96.7E±0.2, h30^{km}, n10, σ0^{s}.74/10, mb4.0/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.18**	**50**	*e*P	**Pn**	**23 38 54.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**16.58**	**8**	Pn	**P**	**23 41 31.1**	**+1.3**
	0.6nm,0.3s,baz=197,slow=11,SNR=17						
MBWA	**Marble Bar**	**32.18**	**137**	P	**P**	**23 44 05.0**	**-0.3**
	26nm,1.4s,mb4.9						
WRA	**Warramunga Arr**	**42.86**	**122**	P	**P**	**23 45 35.8**	**+0.5**
	1.2nm,0.6s,mb3.8,baz=300,slow=9.2,SNR=4.2						
MKAR	**Makanchi Array**	**46.42**	**346**	P	**P**	**23 46 03.1**	**-0.3**
	2.5nm,0.7s,mb4.2,baz=160,slow=7.2,SNR=30						
SONM	**Songino Array**	**46.50**	**9**	P	**P**	**23 46 03.7**	**-0.3**
	1.3nm,0.8s,mb3.9,baz=187,slow=8.9,SNR=11						
ZAL	**Zalesovo**	**52.76**	**351**	P	**P**	**23 46 51.6**	**-0.4**
	1.5nm,0.6s,mb4.1,baz=301,slow=5.4,SNR=9.1						
ZRNK	**Zerenda**	**55.80**	**340**	*e*P	**P**	**23 47 12.8**	**-1.4**
	0.7nm,0.7s,mb3.8						
ARCES	**ARCESS Array B**	**81.68**	**340**	P	**P**	**23 49 54.6**	**+0.4**
	1.2nm,0.8s,mb3.9,baz=76,slow=3.7,SNR=5.3						
GERES	**GERESS Array B**	**83.93**	**319**	P	**P**	**23 50 07.0**	**+0.9**
	0.4nm,0.8s,mb3.6,baz=45,slow=1.9,SNR=3.4						

IDC 22 23:58:54.7±9.8, 1.98N×96.53E, mb3.9/4, mb1 4.0/5, mb1mx3.7/17, mbtmp3.8/5, ML4.3/1, Error ellipse: s-maj=198.7km s-min=97.3km az=146.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.54**	**8**	Pn	P	00 02 48.2	-1.6
	0.4nm,0.3s,baz=185,slow=10.0,SNR=4.0						
MKAR	**Makanchi Array**	**46.33**	**346**	P	P	00 07 22.4	-1.8
	1.2nm,0.7s,baz=162,slow=8.3,SNR=13						
SONM	**Songino Array**	**46.47**	**9**	P	P	00 07 23.5	-1.8
	0.6nm,0.6s,baz=191,slow=9.5,SNR=6.8						
ZAL	**Zalesovo**	**52.68**	**351**	P	P	00 08 10.7	-2.3
	1.2nm,0.3s,baz=283,slow=6.6,SNR=5.2						
BVAR	**Borovoye Array**	**55.30**	**341**	P	P	00 08 29.7	-2.5
	0.3nm,0.3s,baz=157,slow=11,SNR=4.3						

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*IDC **23** 00:00:08.4±4.2, 2.22N×96.12E, mb4.3/4, mb1 4.3/5, mb1mx4.0/16, mbtmp4.2/5, Error ellipse: s-maj=95.0km s-min=83.0km az=102.0*
*NEIC **23** 00:00:14.4±0.6, 2.39N×96.18E, h30^{km}, mb4.5/11, Error ellipse: s-maj=14.9km s-min=10.3km az=64.0*
ISC 23 00:00:12.6±0.8, 2.40N±0.09×96.2E±0.1, h30^{km}, n19, σ0^{s}.95/19, mb4.5/14, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.29**	**57**	*e*Pn	**Pn**	**00 01 31.4**	**-0.4**
CM31	**Chiang Mai Arr**	**16.18**	**9**	P	**P**	**00 04 00.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**16.18**	**9**	Pn	**P**	**00 04 01.5**	**+1.8**
	baz=198,slow=10,SNR=10						
GUN	**Gumba**	**27.21**	**340**	*e*P	**P**	**00 05 56.8**	**+0.8**
KKN	**Kakani**	**27.32**	**339**	*e*P	**P**	**00 05 57.3**	**+0.4**
	23nm,0.9s,mb4.7						
LSA	**Lhasa**	**27.57**	**350**	*e*P	**P**	**00 05 59.2**	**0.0**
	11nm,1.0s,mb4.4						
GKN	**Gorkha**	**27.75**	**338**	*e*P	**P**	**00 06 01.2**	**+0.3**
	26nm,0.9s,mb4.9						
KOLN	**Koldanda**	**27.95**	**336**	*e*P	**P**	**00 06 03.7**	**+1.0**
	16nm,0.8s,mb4.7						
ENH	**Enshi**	**30.45**	**23**	P	**P**	**00 06 22.6**	**-2.4**
	8.5nm,1.4s,mb4.3						
NACB	**Ninganchiao**	**32.73**	**46**	P	**P**	**00 06 46.5**	**+1.4**
NWAO	**Narrogin (SRO)**	**40.38**	**152**	P	**P**	**00 07 49.9**	**+0.2**
	80nm,1.3s,mb5.3						
MKAR	**Makanchi Array**	**45.84**	**347**	P	**P**	**00 08 33.5**	**-0.4**
	4.9nm,0.7s,mb4.5,baz=164,slow=7.7,SNR=35						
SONM	**Songino Array**	**46.11**	**10**	P	**P**	**00 08 35.5**	**-0.5**
	2.7nm,0.8s,mb4.2,baz=190,slow=9.0,SNR=18						
SONM				PcP	PcP	00 10 11.7	-0.6
	0.7nm,0.9s,baz=195,slow=3.0,SNR=3.9						
ULN	**Ulaanbaatar**	**46.25**	**10**	P	**P**	**00 08 36.6**	**-0.4**
	1.4nm,0.7s,mb4.0						
PMG	**Port Moresby**	**52.11**	**104**	P	**P**	**00 09 22.6**	**-0.2**
	12nm,0.9s,mb4.8						
ZAL	**Zalesovo**	**52.22**	**352**	P	**P**	**00 09 22.1**	**-0.9**
	2.4nm,0.6s,mb4.3,baz=312,slow=4.4,SNR=15						
BVAR	**Borovoye Array**	**54.79**	**341**	P	**P**	**00 09 41.0**	**-1.1**
	1.8nm,0.8s,mb4.2,baz=135,slow=8.4,SNR=12						
ZRNK	**Zerenda**	**55.19**	**340**	*e*P	**P**	**00 09 43.4**	**-1.5**
	2.7nm,1.0s,mb4.2						
VNDA	**Vanda**	**87.19**	**169**	P	**P**	**00 12 57.7**	**+0.9**
	1.3nm,0.8s,mb4.2						

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*IDC **23** 00:01:47.2±0.7, 6.73S×129.05E, mb4.1/10, mb1 4.3/13, mb1mx4.3/16, mbtmp4.2/13, ML4.1/3, MS3.9/5, Ms1 3.9/5, ms1mx3.6/16, Error ellipse: s-maj=30.7km s-min=14.3km az=67.0*
*NEIC **23** 00:01:49.4±6.3, 6.68S×129.22E, h16^{km}±40^{km}, mb4.8/12, Error ellipse: s-maj=14.6km s-min=13.0km az=47.0*
*BJI **23** 00:01:49.3, 6.70S×129.20E, h15^{km}, mB5.0, mb4.7, Ms4.4, Msz4.3*
ISC 23 00:01:50.1±2.4, 6.80S±0.07×129.13E±0.10, h38^{km}±24^{km}, n44, σ1^{s}.21/43, mb4.5/20, MS3.8/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.72**	**151**	*e*P	**P**	**00 03 30.7**	**+1.8**
	52nm,0.6s						
KAKA				*e*S	**S**	**00 04 45.9**	**+0.7**
FITZ	**Fitzroy Crossi**	**11.74**	**197**	*e*P	**P**	**00 04 39.2**	**+1.1**
	14nm,0.6s						
FITZ				*e*S	**S**	**00 06 47.5**	**-1.4**
FITZ	**Fitzroy Crossi**	**11.74**	**197**	Pn	**P**	**00 04 37.4**	**-0.7**
	1.6nm,0.3s,baz=7.4,slow=8.3,SNR=16						
FITZ				Sn	**S**	**00 06 43.3**	**-5.7**
	1.9nm,0.3s,baz=56,slow=7.8,SNR=3.7						
WRAB	**Tennant Creek**	**14.01**	**159**	*e*P	**P**	**00 05 05.6**	**-2.8**
	32nm,0.8s						
WRA	**Warramunga Arr**	**14.01**	**159**	Pn	**P**	**00 05 06.9**	**-1.5**
	1.0nm,0.3s,baz=340,slow=13,SNR=20						
WRA				Sn	**S**	**00 07 36.4**	**-7.2**
	1.1nm,0.3s,baz=346,slow=21,SNR=6.1						
WB2	**Warramunga Arr**	**14.02**	**159**	*e*P	**P**	**00 05 07.2**	**-1.3**
WB2				*e*S	**S**	**00 07 31.3**	**-12**
MBWA	**Marble Bar**	**16.93**	**212**	*e*P	**P**	**00 05 49.2**	**+3.4**
	96nm,1.5s						
PMG	**Port Moresby**	**18.04**	**99**	P	**P**	**00 05 59.9**	**+0.1**
	0.7nm,0.3s,baz=324,slow=6.5,SNR=6.7						
PMG	**Port Moresby**	**18.04**	**99**	P	**P**	**00 05 58.7**	**-1.1**
	42nm,1.0s						
CTA	**Charters Tower**	**21.23**	**130**	P	**P**	**00 06 35.9**	**+0.7**
	6.0nm,1.0s,mb3.9,baz=321,slow=13,SNR=2.6						
CTA				LR	LR	00 15 35.6	
	comp=Z,221nm,20.2s,MS3.5,baz=9.3,slow=39						
CTA	**Charters Tower**	**21.23**	**130**	P	**P**	**00 06 35.9**	**+0.7**
CTA				LR	LR	00 15 35.6	
CTAO	**Charters Tower**	**21.23**	**130**	P	**P**	**00 06 36.1**	**+0.9**
	43nm,1.2s,mb4.7						
FORT	**Forrest**	**23.88**	**182**	*e*P	**P**	**00 07 07.1**	**+5.8**
	22nm,0.8s,mb4.6						
GUMO	**Guam**	**25.58**	**38**	P	**P**	**00 07 21.8**	**+4.1**
	246nm,1.4s,mb5.5						
KLBR	**Kellerberrin**	**26.86**	**202**	*e*P	**P**	**00 07 36.6**	**+7.1**
	47nm,1.0s,mb5.0						
STKA	**Stephens Creek**	**27.53**	**157**	*e*P	**P**	**00 07 37.8**	**+2.2**
	14nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**27.53**	**157**	P	**P**	**00 07 36.7**	**+1.1**
	12nm,0.7s,mb4.6,baz=326,slow=12,SNR=11						
STKA				LR	LR	00 19 26.3	
	comp=Z,345nm,18.9s,MS4.0,baz=101,slow=38						
NWAO	**Narrogin (SRO)**	**28.25**	**201**	P	**P**	**00 07 42.7**	**+0.6**
	4.2nm,0.7s,mb4.2,baz=27,slow=9.0,SNR=1.8						
NWAO	**Narrogin (SRO)**	**28.25**	**201**	*e*P	**P**	**00 07 42.0**	**0.0**
	21nm,1.2s,mb4.6						
HNR	**Honiara**	**30.62**	**97**	*e*P	**P**	**00 08 09.2**	**+5.9**
	66nm,0.8s,mb5.5						
JOW	**Kunigami**	**33.44**	**359**	LR	LR	00 19 15.8	
	comp=Z,313nm,21.7s,MS4.0,baz=93,slow=31						
CMAR	**Chiang Mai Arr**	**38.94**	**311**	P	**P**	**00 09 14.4**	**0.0**
	1.2nm,0.7s,mb3.7,baz=129,slow=7.4,SNR=6.0						
ENH	**Enshi**	**41.40**	**334**	P	**P**	**00 09 40.4**	**+5.8**
	8.2nm,0.8s,mb4.4						
MDJ	**Mudanjiang**	**51.18**	**0**	P	**P**	**00 10 51.8**	**0.0**
MDJ				AMB	AMB		
	comp=Z,40nm,5.2s						
GTA	**Gaotai**	**53.38**	**332**	*e*P	**P**	**00 11 09.3**	**+0.9**
GTA				AP	pP	00 11 16.3	-3.1
GTA				XP	sP	00 11 20.1	-3.8
DGAR	**Diego Garcia**	**56.21**	**266**	P	**P**	**00 11 25.5**	**-3.8**
	comp=Z,303nm,1.1s						
ULN	**Ulaanbaatar**	**57.81**	**343**	*e*P	**P**	**00 11 40.0**	**-0.2**
	comp=Z,22nm,1.6s,mb4.9						
SONM	**Songino Array**	**57.98**	**342**	P	**P**	**00 11 41.2**	**-0.2**
	comp=Z,1.9nm,1.1s,mb4.0,baz=170,slow=7.5,SNR=11						
CASY	**Casey**	**60.77**	**188**	*e*P	**P**	**00 12 04.7**	**+4.3**
	comp=Z,7.8nm,1.4s,mb4.7						
WMQ	**Urumqi**	**62.75**	**327**	*e*P	**P**	**00 12 18.0**	**+4.0**
WMQ				AP	pP	00 12 27.0	+1.7
WMQ				XP	sP	00 12 31.0	+1.4
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,110nm,6.0s						
WMQ				LR	LR		
	comp=N,50nm,19.6s,MS3.9						
WMQ				LR	LR		
	comp=E,60nm,22.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,30nm,19.6s,MS3.5						
MKAR	**Makanchi Array**	**67.58**	**327**	P	**P**	**00 12 45.6**	**+0.6**
	comp=Z,3.2nm,0.6s,mb4.5,baz=126,slow=8.0,SNR=34						
YAK	**Yakutsk**	**68.62**	**0**	P	**P**	**00 12 57.1**	**+5.8**
	comp=Z,56nm,1.0s,mb5.5						
ZAL	**Zalesovo**	**71.02**	**334**	P	**P**	**00 13 04.6**	**-1.5**
	comp=Z,1.3nm,0.4s,mb4.2,baz=90,slow=17,SNR=5.3						
ZAL	**Zalesovo**	**71.02**	**334**	P	**P**	**00 13 04.6**	**-1.5**
VNDA	**Vanda**	**72.75**	**173**	P	**P**	**00 13 15.8**	**-0.1**
	comp=Z,0.4nm,0.4s,mb3.7,baz=335,slow=2.5,SNR=3.0						
VNDA				LR	LR	00 40 14.0	
	comp=Z,87nm,21.4s,MS4.0,baz=16,slow=32						
MAW	**Mawson**	**74.82**	**201**	P	**P**	**00 13 28.8**	**+0.7**
	comp=Z,0.3nm,0.3s,mb3.7,baz=106,slow=6.4,SNR=1.3						
BVAR	**Borovoye Array**	**77.43**	**328**	P	**P**	**00 13 43.7**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=108,slow=4.6,SNR=4.0						
ZRNK	**Zerenda**	**78.13**	**328**	*e*P	**P**	**00 13 53.8**	**+6.8**
	comp=Z,6.2nm,1.3s,mb4.4						
ILAR	**Eielson Array**	**93.53**	**25**	P	**P**	**00 15 01.1**	**-2.0**
	comp=Z,0.5nm,0.9s,mb4.0,baz=243,slow=4.0,SNR=3.6						
SNAA	**Sanae**	**95.66**	**194**	LR	LR	00 53 41.2	
	comp=Z,33nm,21.3s,MS3.8,baz=24,slow=32						
CPUP	**Villa Florida**	**146.48**	**169**	PKPbc	PKPbc	00 21 32.2	+4.2
	comp=Z,1.4nm,0.7s,baz=199,slow=5.0,SNR=3.6						
CPUP	**Villa Florida**	**146.48**	**169**	*e*PKPdf	PKPdf	00 21 31.8	+5.0
CPUP				*e*PKPbc	PKPbc	00 21 38.0	+10
LPAZ	**La Paz**	**151.40**	**143**	PKPbc	PKPdf	00 21 46.7	+12
	comp=Z,0.4nm,0.4s,baz=144,slow=8.7,SNR=3.1						
LPAZ	**La Paz**	**151.40**	**143**	*e*PKPbc	PKPdf	00 21 45.3	+11
LPAZ				*e*PKPab	PKPab	00 21 51.8	+0.3

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*TEH **23** 00:51:32.1, 33.67N×45.12E, h6^{km}, Mn3.7*
*CSEM **23** 00:51:35.0±0.1, 33.64N×45.52E, h12^{km}, ML3.7, Error ellipse: s-maj=2.6km s-min=1.7km az=110.0*
*THR **23** 00:51:46.6±0.3, 34.29N×46.38E, h15^{km}, ML3.1*
ISC 23 00:51:36.3±1.6, 33.62N±0.04×45.7E±0.1, h8^{km}±8^{km}, n18, σ0^{s}.94/19, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGHG	**Ghaleghazi**	**0.99**	**44**	Pg	**Pg**	**00 51 56.7**	**+0.6**
BHD	**Baghdad**	**1.18**	**253**	*i* Pb	x	00 51 55.0	
BHD				*i* Sg	x	00 52 11.5	
BHD				*i* Sn	x	00 52 13.0	
IDHR	**Dehrash**	**1.21**	**27**	Pn	**Pn**	**00 51 58.9**	**-0.5**
IVIS	**Veys**	**1.29**	**46**	Pn	**Pn**	**00 52 00.9**	**+0.2**
IKOM	**Komasi**	**1.58**	**69**	Pn	**Pn**	**00 52 07.0**	**+2.2**
ILIN	**Laeen**	**1.65**	**38**	Pn	**Pn**	**00 52 07.2**	**+1.4**
SHGO	**Shushtar**	**2.99**	**119**	*e*PN	**Pg**	**00 52 35.2**	**-0.8**
SHGO				AML	AML	00 53 33.8	
	comp=N,75nm,0.6s						
SHGO	**Shushtar**	**2.99**	**119**	*e*Pn	**Pg**	**00 52 35.2**	**-0.8**
	SNR=52						
MSL	**Mosul**	**3.43**	**322**	*e*Pn	x	00 52 39.5	
MSL				*e*Sn	x	00 52 22.5	
MSL				*i* Lg	x	00 52 35.0	
MSL				*i* Sg	x	00 52 38.5	
ASAO	**Ashtian**	**3.68**	**74**	*e*PN	**Pn**	**00 52 36.2**	**+1.4**
ASAO				AML	AML	00 53 44.9	
	comp=N,50nm,0.8s						
IRAZ	**Razeghan**	**3.90**	**62**	Pn	**Pg**	**00 52 53.9**	**-0.2**
KBD	**Kabd**	**4.74**	**159**	*e*P	**Pn**	**00 52 50.2**	**+0.4**
KBD				*e*S	**Sn**	**00 53 46.4**	**+0.7**
RDF	**Al-Radifah**	**4.93**	**161**	*e*P	**Pn**	**00 52 52.1**	**-0.4**
RDF				*e*S	**Sn**	**00 53 50.0**	**-0.5**
IVRN	**Varamin**	**5.15**	**73**	Pn	**Pn**	**00 52 55.1**	**-0.5**
GRMI	**Germi**	**5.46**	**18**	*e*PN	**Pn**	**00 52 58.8**	**-1.3**
IDMV	**Damavand**	**5.55**	**68**	Pn	**Pn**	**00 53 00.4**	**-0.8**
NASN	**Na'in**	**5.99**	**96**	*e*PN	**Pn**	**00 53 11.4**	**+4.0**
NASN				AML	AML	00 54 18.0	
	comp=N,6.2nm,0.4s						
IFIR	**Firoozkooh**	**6.13**	**69**	Pn	**Pn**	**00 53 08.5**	**-0.9**
IFIR				Sn	**Sn**	**00 54 19.9**	**-0.6**

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*THR **23** 00:55:46.6±0.4, 27.89N×58.16E, h14^{km}±3^{km}, ML2.9*
*CSEM **23** 00:55:46.6, 27.89N×58.16E, h14^{km}, ML2.9, After THR*
*OMAN **23** 00:56:07.0±50.0, 26.80N×57.69E, h30^{km}, Error ellipse: s-maj=16.2km s-min=5.0km az=0.0*
ISC 23 00:55:48.9±0.9, 27.88N±0.05×58.2E±0.1, h14^{km}, n8, σ0^{s}.75/11, 1C-3D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**1.87**	**255**	*e*PG	**Pn**	**00 56 20.1**	**-0.7**
BNDS				AML	AML	00 56 43.0	
	comp=N,122nm,0.2s						
KRBR	**Kerman**	**2.44**	**329**	*e*PG	**Pn**	**00 56 30.5**	**+1.5**
KRBR				SN	**Sn**	**00 56 58.4**	**-0.5**
KRBR				AML	AML	00 57 00.7	
	comp=E,67nm,0.3s						

KRBR	Kerman	2.44	329	ePg	Pn	00 56 30.5	+1.5
	SNR=90						
KRBR				Sn	Sn	00 56 58.4	-0.5
	comp=E,67nm,0.3s,SNR=52						
BANOM	Banah	2.59	222	⇓P	Pn	00 56 30.7	-0.4
	SNR=69						
ZHSF	Zahedan	2.84	52	ePN	Pn	00 56 34.2	-0.5
ASHO	Ashiyiah	3.72	212	P	Pn	00 56 48.0	+0.8
	SNR=30						
BIDO	Bidbid	4.34	181	⇓P	Pn	00 56 56.6	+0.5
HOQ	Hoqain	4.36	191	⇑P	Pn	00 56 55.6	-0.6
HOQ				⇓S	Sn	00 57 33.6	-14

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*IDC **23** 01:19:34.7±0.6, 1.93N×96.77E, mb4.3/17, mb1 4.5/18, mb1mx4.3/23, mbtmp4.4/18, ML4.5/1, MS3.8/6, Ms1 3.8/6, ms1mx3.5/22, Error ellipse: s-maj=21.0km s-min=14.0km az=47.0*

*BJI **23** 01:19:37.5, 1.66N×96.91E, h43^{km}, mB4.7, mb4.9, Ms4.3, Msz4.0*

*MOS **23** 01:19:38.0±1.0, 2.04N×96.92E, h33^{km}, mb4.8/15, Error ellipse: s-maj=20.5km s-min=8.4km az=109.7*

*NEIC **23** 01:19:41.4±1.8, 1.96N×96.86E, h47^{km}±15^{km}, mb4.6/16, Error ellipse: s-maj=12.9km s-min=6.2km az=49.0*

ISC 23 01:19:38.0±0.4, **1.94N**±0.06×**96.83E**±0.07, **h33^{km}, (h31^{km}**±1.9^{km}**:pP-P), n76, σ1^{s}12**/73, **mb4.5**/46, **MS4.1**/10, **1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.05	49	ePn	Pn	01 20 54.8	+1.2
KSM	Kuching	13.48	92	P	P	01 22 55.4	+6.0
CM31	Chiang Mai Arr	16.54	7	eP	P	01 23 31.6	+2.5
	20nm,0.7s						
CMAR	Chiang Mai Arr	16.54	7	Pn	P	01 23 28.0	-1.2
	0.7nm,0.3s,baz=197,slow=11,SNR=42						
CMAR				LR	LR	01 28 47.1	
	comp=Z,127nm,21.5s,baz=195,slow=33						
KKM	Kota Kinabalu	19.76	78	eP	P	01 24 05.6	-2.5
KMI	Kunming	23.74	13	P	P	01 24 50.0	+1.7
KMI				AP		01 24 57.8	
KMI				XP		01 25 00.8	
KMI				PP	PP	01 25 20.3	-1.3
KMI				S	S	01 28 54.5	-3.6
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
KMI				AMB	AMB		
	comp=Z,120nm,4.4s						
KMI				LR	LR		
	comp=N,330nm,12.4s						
KMI				LR	LR		
	comp=E,230nm,9.4s						
KMI				LR	LR		
	comp=Z,350nm,13.9s,MS4.0						
SHL	Shillong	23.96	349	eP	P	01 24 49.0	-1.5
SHL				eS	S	01 29 07.0	+5.0
GYA	Guiyang	26.14	20	⇓iP	P	01 25 12.8	+1.6
GYA				S	S	01 29 34.5	-3.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
GYA				LR	LR		
	comp=N,220nm,15.3s,MS4.0						
GYA				LR	LR		
	comp=E,320nm,15.9s,MS4.0						
GYA				LR	LR		
	comp=Z,240nm,13.8s,MS3.9						
PKI	Pulchoki	27.73	338	eP	P	01 25 26.0	+0.3
	comp=Z,13nm,0.6s,mb4.7						
PKI	Pulchoki	27.73	338	eP	P	01 25 26.0	+0.3
PKI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
GUN	Gumba	27.86	339	eP	P	01 25 27.1	+0.1
	comp=Z,46nm,0.6s,mb5.3						
DMN	Daman	27.88	337	eP	P	01 25 27.9	+0.8
	comp=Z,20nm,0.5s,mb5.0						
KKN	Kakani	27.98	338	eP	P	01 25 28.0	0.0
	comp=Z,17nm,0.7s,mb4.8						
KKN	Kakani	27.98	338	eP	P	01 25 28.0	0.0
KKN				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.5						
LSA	Lhasa	28.13	349	P	P	01 25 30.0	+0.7
LSA	Lhasa	28.13	349	eP	P	01 25 29.8	+0.5
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
LSA	Lhasa	28.13	349	eP	P	01 25 29.8	+0.5
	comp=Z,9.0nm,0.6s,mb4.6						
GKN	Gorkha	28.41	337	eP	P	01 25 32.1	+0.2
	comp=Z,16nm,0.6s,mb4.9						
KOLN	Koldanda	28.63	335	eP	P	01 25 34.3	+0.5
	comp=Z,29nm,0.7s,mb5.1						
ENH	Enshi	30.62	22	eP	P	01 25 50.2	-1.3
	comp=Z,7.1nm,0.6s,mb4.7						
MBWA	Marble Bar	32.09	137	P	P	01 26 07.8	+3.4
	comp=Z,20nm,1.1s,mb4.9						
XAN	Xi'an	33.87	18	P	P	01 26 18.4	-1.4
FITZ	Fitzroy Crossi	34.66	126	P	P	01 26 26.6	-0.1
	comp=Z,5.9nm,0.9s,mb4.5,baz=294,slow=3.9,SNR=2.7						
GTA	Gaotai	37.39	4	eP	P	01 26 50.3	+0.7
GTA				AP	pP	01 26 58.8	-0.6
GTA				XP	sP	01 27 02.8	-0.8
GTA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
HHC	Hu-ho-hao-te	40.96	17	eP	P	01 27 20.6	+1.3
HHC				AP	pP	01 27 30.8	+1.7
HHC				XP	sP	01 27 35.4	+2.1
HHC				PP	PP	01 28 53.8	-2.9
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
HHC				AMB	AMB		
	comp=Z,100nm,7.3s						
HHC				LR	LR		
	comp=N,400nm,14.2s,MS4.9						
HHC				LR	LR		
	comp=E,1μm,17.2s,MS4.9						
HHC				LR	LR		
	comp=Z,380nm,17.1s,MS4.3						
WRA	Warramunga Arr	42.74	122	P	P	01 27 33.8	-0.4
	comp=Z,5.1nm,0.7s,mb4.4,baz=301,slow=9.1,SNR=16						
WRAB	Tennant Creek	42.74	122	eP	P	01 27 35.0	+0.7
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
WRAB	Tennant Creek	42.74	122	eP	P	01 27 35.0	+0.7
	comp=Z,10nm,0.8s,mb4.6						
JNU	Nakatsue	44.50	42	P	P	01 27 48.2	-0.1
	comp=Z,5.5nm,0.6s,mb4.5,baz=69,slow=19,SNR=4.8						
AAK	Ala-Archa	45.17	337	eP	P	01 27 56.5	+2.9
AAK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
AAK	Ala-Archa	45.17	337	eP	P	01 27 56.5	+2.9
	comp=Z,11nm,1.1s,mb4.6						
FRU	Bishkek	45.30	337	P	P	01 27 56.0	+1.5
MKAR	Makanchi Array	46.44	346	i P	P	01 28 03.7	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	46.44	346	P	P	01 28 03.8	+0.3
	comp=Z,4.8nm,0.4s,mb4.8,baz=162,slow=7.7,SNR=57						
MKAR				LR	LR	01 51 22.0	
	comp=Z,78nm,20.3s,MS3.6,baz=167,slow=41						
SONM	Songino Array	46.45	9	P	P	01 28 04.3	+0.6
	comp=Z,3.2nm,0.4s,mb4.6,baz=191,slow=8.7,SNR=53						
SONM				PcP	PcP	01 29 38.5	+0.1
	comp=Z,1.6nm,0.6s,baz=180,slow=4.8,SNR=6.8						
ULN	Ulaanbaatar	46.59	9	eP	P	01 28 05.3	+0.6
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
ULN	Ulaanbaatar	46.59	9	eP	P	01 28 05.3	+0.6
	comp=Z,7.5nm,1.0s,mb4.6						
KKAR	Karatay Array	47.23	334	P	P	01 28 10.5	+0.7
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ZAK	Zakamensk	48.57	6	eP	P	01 28 21.4	+1.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
CN2	Changchun	48.81	27	eP	P	01 28 22.3	+0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,15.0s,MS4.5						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.5						
CN2				LR	LR		
	comp=Z,300nm,16.0s,MS4.4						
CBIJ	Chichi jima	50.10	56	LR	LR	01 46 21.1	
	comp=Z,90nm,20.6s,MS3.8,baz=183,slow=32						
PMG	Port Moresby	51.38	104	eP	P	01 28 42.2	+0.1
PMG				pmax	pmax		
	comp=Z,21nm,0.8s						
PMG	Port Moresby	51.38	104	P	P	01 28 41.7	-0.4
	comp=Z,20nm,0.7s,mb5.2,baz=291,slow=2.2,SNR=9.5						
PMG	Port Moresby	51.38	104	eP	P	01 28 42.2	0.0
	comp=Z,21nm,0.8s,mb5.1						
ZAL	Zalesovo	52.76	351	P	P	01 28 51.7	-0.2
	comp=Z,10nm,0.6s,mb5.0,baz=300,slow=6.8,SNR=49						
OPO	Ambohidratompo	52.90	245	P	P	01 28 53.2	-0.2
	comp=Z,4.6nm,1.0s,mb4.4,baz=133,slow=15,SNR=2.7						
CTA	Charters Tower	53.16	117	P	P	01 28 55.7	+0.3
	comp=Z,7.4nm,0.8s,mb4.7,baz=284,slow=11,SNR=4.9						
CTA	Charters Tower	53.16	117	P	P	01 28 55.7	+0.3
NVS	Novosibirsk	53.88	350	eP	P	01 28 58.2	-2.0
NVS				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
NVS				pmax	pmax		
	comp=N,9.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.8s						
STKA	Stephens Creek	54.12	132	P	P	01 29 02.3	0.0
	comp=E,2.4nm,0.7s,mb4.2,baz=203,slow=23,SNR=3.2						
VOSK	Vostochnaya	54.98	341	P	P	01 29 07.4	-0.9
VOSK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
BVA0	Borovoye Array	55.43	341	P	P	01 29 10.3	-1.2
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.8						
KLR	Kul'dur	55.76	27	eP	P	01 29 11.3	-2.6
KLR				MLR	MLR		
	comp=E,500nm,15.0s						
KLR				MLR	MLR		
	comp=Z,600nm,15.0s,MS4.8						
ZRNK	Zerenda	55.83	340	eP	P	01 29 13.2	-1.2
ZRNK				pmax	pmax		
	comp=Z,98nm,0.8s,mb5.9						
ZRNK	Zerenda	55.83	340	eP	P	01 29 13.2	-1.2
	comp=Z,98nm,0.8s,mb5.9						
AB31	Akbulak array	56.69	332	P	P	01 29 19.8	-0.8
AB31				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
SVE	Sverdlovsk	61.86	338	eP	P	01 29 56.0	-0.3
YAK	Yakutsk	64.81	16	eP	P	01 30 13.4	-2.2
YAK				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
BRTR	Keskin Array B	68.34	312	P	P	01 30 37.6	-0.7
	comp=E,0.8nm,0.7s,mb3.9,baz=129,slow=7.0,SNR=5.4						
CASY	Casey	68.78	174	P	P	01 30 44.2	+3.7
	comp=E,5.8nm,1.0s,mb4.5						
MATP	Matopo	70.46	248	P	P	01 30 51.8	+0.1
	comp=E,4.1nm,1.1s,mb4.3,baz=95,slow=8.8,SNR=3.8						
OBN	Obninsk	71.80	328	eP	P	01 30 58.6	-0.4
OBN				e	pP	01 31 08.7	-0.6
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
OBN				pmax	pmax		
	comp=E,28nm,0.9s						
TIXI	Tiksi	72.52	10	eP	P	01 31 01.5	-1.5
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
MAW	Mawson	73.35	193	LR	LR	01 59 19.1	
	comp=Z,70nm,19.0s,MS4.0,baz=66,slow=32						
LBTB	Lobatse	73.89	243	LR	LR	01 59 11.0	
	comp=Z,87nm,18.1s,MS4.1,baz=271,slow=32						
AKASG	Malin Array Be	74.45	322	P	P	01 31 13.4	-1.2
	comp=Z,0.7nm,0.5s,mb3.9,baz=93,slow=4.7,SNR=5.8						
BOSA	Boshof	74.83	240	LR	LR	02 01 24.9	
	comp=Z,80nm,18.1s,MS4.1,baz=216,slow=34						
FINES	FINESS Array B	79.17	332	P	P	01 31 40.8	-0.2
	comp=Z,1.7nm,0.6s,mb4.1,baz=108,slow=6.0,SNR=13						
FINES	FINESS Array B	79.17	332	P	P	01 31 40.8	-0.2
KAF	Kangasniemi	79.26	333	ep	P	01 31 41.3	-0.1
	comp=Z,2.1nm,0.7s,mb4.2,baz=104,slow=5.1						
KAF	Kangasniemi	79.26	333	eP	P	01 31 41.3	-0.1
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
ARCES	ARCESS Array B	81.72	340	P	P	01 31 55.0	+0.6
	comp=Z,1.5nm,0.7s,mb4.1,baz=108,slow=3.8,SNR=9.7						
GERES	GERESS Array B	84.02	319	P	P	01 32 07.5	+1.0
	comp=Z,0.7nm,0.8s,mb3.9,baz=90,slow=5.3,SNR=8.0						
NOA	NORSAR Array B	86.18	331	P	P	01 32 17.8	+0.9
	comp=Z,0.5nm,0.8s,mb3.8,baz=83,slow=4.5,SNR=2.9						
TXAR	Lajitas Array	143.23	31	PKhKP		01 39 07.6	
	comp=Z,0.8nm,1.0s,baz=333,slow=2.8,SNR=5.1						
CPUP	Villa Florida	145.30	223	PKPbc	PKPbc	01 39 13.6	-0.1
	comp=Z,1.8nm,1.0s,baz=140,slow=7.9,SNR=3.1						

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*NIED **23** 01:28:00, 37.30N×135.10E, h360^{km}, Mw4.1 Best double couple: $M_0$1.5×10^{15} NP1:ϕ_s25°, δ89°, λ-122°. NP2:ϕ_s293°, δ32°, λ-2°.*

*MOS **23** 01:28:54.5±0.6, 37.29N×134.97E, h386^{km}, mb4.2/3, Error ellipse: s-maj=28.2km s-min=16.7km az=111.7*

*JMA **23** 01:28:55.8±0.2, 37.33N×135.07E, h389^{km}, M3.5*

*NEIC **23** 01:28:56.1±0.5, 37.30N×135.08E, h387^{km}±5^{km}, mb4.2/5, Error ellipse: s-maj=11.8km s-min=9.5km az=57.0*

*IDC **23** 01:28:56.4±1.9, 37.33N×135.10E, h388^{km}±20^{km}, mb3.3/9, mb1 3.3/11, mb1mx3.1/25, mbtmp4.0/11, Error ellipse: s-maj=27.6km s-min=14.9km az=78.0*

ISC 23 01:28:55.3±0.3, **37.29N**±0.07×**135.10E**±0.08, **h396^{km}**±5^{km}, **n38, σ0^{s}68**/44, **mb3.8**/13, **Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJH	Hakui	1.39	105	P	P	01 29 47.9	0.0
JSZ	Suzu	1.81	84	P	P	01 29 50.2	0.0
JWT	Wachi	2.02	173	P	P	01 29 51.4	0.0
JWT				eS	S	01 30 34.4	-1.0
JGM	Miyama	2.05	140	P	P	01 29 51.3	-0.3
JGM				eS	S	01 30 36.1	+0.3
MAJO	Matsushiro	2.60	106	eP	P	01 29 54.8	-0.6
MAT	Matsushiro	2.60	106	eP	P	01 29 55.0	-0.4
MAT	Matsushiro	2.60	106	P	P	01 29 55.0	-0.4
MAT				eS	S	01 30 43.4	+0.7
MAT	Matsushiro	2.60	106	P	P	01 29 55.4	0.0
JSD	Sado	2.62	72	P	P	01 29 55.3	-0.3
JWY	Kouya	3.09	172	P	P	01 30 00.0	+0.7
JIE	Ise	3.17	155	P	P	01 30 00.7	+0.7
JRY	Ryogami san	3.31	111	P	P	01 30 02.9	+1.7
JOD2	Odawara 2	3.80	121	P	P	01 30 06.0	+0.3
JOD2				eS	S	01 31 01.8	+0.7
JMK	Ichinoseki	5.10	69	P	P	01 30 18.4	-0.4
JMK				eS	S	01 31 24.7	+0.5
JNU	Nakatsue	5.41	221	P	P	01 30 22.4	+0.4
	0.5nm,0.3s,baz=61,slow=18,SNR=2.8						
BSO1	Boso 1	5.44	117	P	P	01 30 21.5	-0.8
BSO1				S	S	01 31 29.0	-1.6
KS15	Wonju Array Si	5.75	274	P	P	01 30 25.7	0.0
MDJ	Mudanjiang	8.42	332	ePn	P	01 30 55.5	-0.5
	6.2nm,0.6s						
ASAJ	Asahikawa	8.88	37	P	P	01 31 00.5	-0.8
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	Asahikawa	8.88	37	P	P	01 31 00.5	-0.8
	comp=Z,2.1nm,0.3s,baz=252,slow=11,SNR=5.8						
ENH	Enshi	22.37	259	P	P	01 33 21.2	-1.5
	comp=Z,8.3nm,0.6s,mb4.3						
SONM	Songino Array	23.50	306	P	P	01 33 33.6	+0.7
	comp=Z,0.7nm,0.4s,mb3.5,baz=104,slow=10,SNR=5.0						
MKAR	Makanchi Array	39.69	301	P	P	01 35 52.2	+0.2
	comp=Z,0.7nm,0.5s,mb3.2,baz=85,slow=10,SNR=9.7						
BVAR	Borovoye Array	46.64	311	P	P	01 36 47.2	0.0
	comp=Z,0.8nm,0.3s,mb3.5,baz=94,slow=8.4,SNR=6.2						
ZRNK	Zerenda	47.48	311	eP	P	01 36 53.5	-0.1
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.8						
ZRNK	Zerenda	47.48	311	eP	P	01 36 53.5	-0.1
	comp=Z,3.1nm,0.6s,mb3.8						
ARU	Arti	52.79	317	eP	P	01 37 32.7	-0.5
ARU				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.4						
ARU	Arti	52.79	317	eP	P	01 37 32.7	-0.5
	comp=Z,17nm,0.7s,mb4.4						
WRAB	Tennant Creek	56.92	181	eP	P	01 38 03.0	+0.1
WRAB				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.2						
WRAB	Tennant Creek	56.92	181	eP	P	01 38 03.0	+0.2
	comp=Z,15nm,1.3s,mb4.2						
WRA	Warramunga Arr	56.92	181	P	P	01 38 03.0	+0.1
	comp=Z,2.3nm,0.4s,mb3.9,baz=356,slow=7.6,SNR=20						
ARCES	ARCESS Array B	61.93	338	P	P	01 38 36.3	+0.5
	comp=Z,2.3nm,1.0s,mb3.7,baz=56,slow=8.7,SNR=3.8						
FINES	FINESS Array B	66.17	330	P	P	01 39 03.1	+0.3
	comp=Z,0.9nm,0.5s,mb3.6,baz=88,slow=5.8,SNR=16						
FINES				PcP	PcP	01 39 29.3	-0.6
	comp=Z,0.7nm,0.8s,baz=86,slow=4.4,SNR=4.4						
FINES	FINESS Array B	66.17	330	P	P	01 39 03.1	+0.3
FINES				PcP	PcP	01 39 29.3	-0.6
AKASG	Malin Array Be	70.93	320	P	P	01 39 30.9	-1.0
	comp=Z,1.1nm,0.5s,mb3.6,baz=50,slow=6.1,SNR=9.7						
HFS	Hagfors	71.69	333	P	P	01 39 36.9	+0.6
	comp=Z,2.1nm,0.5s,mb3.9,baz=56,slow=5.3,SNR=11						
NB2	NORSAR Subarra	71.91	335	P	P	01 39 38.8	+1.2
	comp=Z,0.1nm,0.6s,baz=46,slow=6.2						
NOA	NORSAR Array B	71.91	335	P	P	01 39 38.4	+0.8
	comp=Z,0.6nm,0.6s,mb3.3,baz=42,slow=6.0,SNR=4.3						

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*IDC **23** 01:35:28.1±2.8, 33.36N×24.89E, mb3.7/5, mb1 3.7/8, mb1mx3.6/22, mbtmp3.5/8, ML3.3/3, Error ellipse: s-maj=52.9km s-min=25.2km az=43.0*

*HLW **23** 01:35:34.2, 33.97N×25.54E, h33^{km}, Mb3.0*

*CSEM **23** 01:35:34.2±0.2, 33.66N×25.59E, h10^{km}, ML3.0, Error ellipse: s-maj=18.8km s-min=4.5km az=75.0*

*ATH **23** 01:35:48.6, 35.22N×25.56E, h10^{km}, MD3.5/3*

*NEIC **23** 01:35:48.6, 35.22N×25.56E, h10^{km}, MD3.5(ATH), After ATH.*

ISC 23 01:35:34.8±0.5, **33.76N**±0.04×**25.55E**±0.08, **h33^{km}, n16, σ1^{s}15**/20, **mb3.5**/5, **3C, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	1.12	6	ePB	Pb	01 35 55.7	+0.2
IDI	Anoyia	1.62	340	Pn	Pn	01 36 03.9	+2.4
	3.1nm,0.3s,baz=171,slow=15,SNR=24						
IDI				Sn	Sn	01 36 28.0	+6.6
	5.5nm,0.3s,baz=32,slow=16,SNR=7.9						
VAM	Vamos	1.98	326	ePB	Pb	01 36 10.0	-0.2
KARP	Karpathos	2.22	36	ePB	Pb	01 36 14.0	-0.2
HMAT	Matruh	2.96	153	⇑P	P	01 36 21.5	+0.9
HMAT				S	S	01 36 56.1	+0.7
SWA1		4.49	178	⇑P	P	01 36 43.0	+0.7
SWA1				S	S	01 37 33.0	-1.0
SWA2		4.50	181	⇑P	P	01 36 43.3	+0.8
HFRF	Wahat Farafira	7.01	159	P	P	01 37 17.4	-0.3
BRTR	Keskin Array B	8.80	45	Pn	P	01 37 45.0	+2.3
	0.1nm,0.3s,baz=221,slow=16,SNR=2.6						
EIL	Elat	8.98	114	Pn	P	01 37 45.2	0.0
	0.2nm,0.3s,baz=349,slow=16,SNR=5.0						
EIL				Sn	Sn	01 39 24.6	-1.9
	0.3nm,0.3s,baz=7.1,slow=27,SNR=3.2						
GERES	GERESS Array B	17.47	333	Pn	P	01 39 37.0	-0.3
	0.1nm,0.3s,baz=143,slow=13,SNR=7.7						
HFS	Hagfors	27.51	347	P	P	01 41 18.5	-1.6
	0.9nm,0.7s,mb3.5,baz=180,slow=7.2,SNR=2.8						
FINES	FINESS Array B	27.70	1	P	P	01 41 20.8	-1.0
	0.2nm,0.3s,mb3.2,baz=165,slow=10,SNR=7.8						
NOA	NORSAR Array B	28.83	346	P	P	01 41 30.3	-1.5
	0.3nm,0.6s,mb3.2,baz=171,slow=15,SNR=2.3						
ARCES	ARCESS Array B	35.83	360	P	P	01 42 32.0	-0.9
	1.6nm,0.8s,mb4.0,baz=173,slow=9.8,SNR=5.9						
MKAR	Makanchi Array	44.29	55	P	P	01 43 44.7	+1.7
	0.4nm,0.6s,mb3.3,baz=264,slow=8.7,SNR=4.1						

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*NEIC **23** 01:40:19.6, 16.93N×102.42W, h10^{km}, MD3.5(MEX), After MEX.*

MEX 23 01:40:19.1±0.9, **16.93N**×**102.50W, h20^{km}**±196^{km}, **MD3.5, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	1.19	56	i P	Pn	01 40 37.0	-3.8
ZIIG				i S	Sb	01 40 52.6	-3.2
ZIIG	Zihuatanejo	1.19	56	i P	Pn	01 40 37.0	-3.8
ZIIG				i S	Sb	01 40 52.1	-3.7
CAIG	El Cayaco	2.13	87	i P	Pn	01 40 51.2	-3.1
CAIG				i S	Sn	01 41 14.8	-5.7
CAIG	El Cayaco	2.13	87	i P	Pn	01 40 51.2	-3.1
CAIG				i S	Sn	01 41 14.8	-5.7
ACX	Acapulco	2.47	91	i P	Pn	01 40 57.0	-2.1
ACX				i S	Sn	01 41 24.0	-5.0
PPM	Popocatepetl	4.25	59	eP	Pn	01 41 21.5	-2.9
PPM				i S	Sn	01 42 06.5	-7.5
PPM	Popocatepetl	4.25	59	eP	Pn	01 41 21.2	-3.3
PPM				i S	Sn	01 42 11.2	-2.9
OXX	Oaxaca	5.52	88	eP	Pn	01 41 41.0	-1.4
OXX				i S	Sn	01 42 26.0	-20

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*MOS **23** 01:53:23.8±1.6, 43.18N×45.28E, h8^{km}, mb4.1/1, Error ellipse: s-maj=12.3km s-min=7.1km az=17.5*

*TIF **23** 01:53:23.5, 43.24N×45.34E, h20^{km}±2^{km}*

*CSEM **23** 01:53:23.8±0.2, 43.18N×45.28E, h8^{km}, mb4.1, Error ellipse: s-maj=6.5km s-min=3.2km az=33.0, After OBN*

*NNC **23** 01:53:30.8±27.0, 42.98N×46.41E, h9^{km}±301^{km}, Error ellipse: s-maj=261.0km s-min=246.6km az=34.0*

ISC 23 01:53:23.2±0.4, **43.28N**±0.03×**45.35E**±0.03, **h8^{km}, n24, σ1^{s}24**/40, **8C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNR	Ardon	0.79	264	⇑iPG	Pg	01 53 39.9	+0.9
ARNR				i S	Sb	01 53 50.7	+1.4
BTLR	Botlikh	0.89	134	⇑iPG	Pg	01 53 39.0	-2.0
BTLR				i S	Sb	01 53 53.5	+1.3
DBC	Dubki	1.11	103	i PG	Pg	01 53 43.8	-1.7
DBC				eS	Sb	01 54 00.0	+1.2
ZEI	Tsey	1.18	245	⇑iPG	Pg	01 53 44.7	-2.1
ZEI				i S	Sb	01 54 00.7	0.0
ZEI	Tsey	1.18	245	i Pg	Pg	01 53 44.7	-2.1
ZEI				i Sg	Sb	01 54 00.7	0.0
UNCR	Uncukul	1.20	118	i Pg	Pg	01 53 45.7	-1.5
UNCR				eSg	Sg	01 54 03.2	0.0
DUS	Dusheti	1.28	202	P	Pb	01 53 46.9	-0.2
BUJR	Buynaksk	1.37	109	ePg	Pg	01 53 52.0	+1.5
BUJR				i Sg	Sg	01 54 13.0	+4.2
KUBR	Kubataba	1.50	291	⇓ePG	Pg	01 53 51.9	-1.4
KUBR				eS	Sg	01 54 12.1	-1.3
KUBR	Kubataba	1.50	291	ePg	Pg	01 53 51.9	-1.4
KUBR				eSg	Sg	01 54 12.1	-1.3
TI2	Plekhanov	1.61	196	i PG	Pg	01 53 52.8	-2.5
TI2				eS	Sg	01 54 15.6	-1.1
TI2				pmax	pmax		
	comp=Z,40nm,0.2s						
TI2	Plekhanov	1.61	196	i Pg	Pg	01 53 52.8	-2.5
	comp=Z,40nm,0.2s						
TI2				eSg	Sg	01 54 15.6	-1.1
MAK	Makhachkala	1.61	101	ePN	Pn	01 53 57.0	+4.9
MAK				i		01 54 20.5	
MAK				pmax	pmax		
	comp=N,185nm,0.3s						
MAK				pmax	pmax		
	comp=Z,407nm,0.3s						
MAK				pmax	pmax		
	comp=E,875nm,0.5s						
MAK				smax			
	comp=N,2μm,0.8s						
MAK				smax			
	comp=E,2μm,0.8s						
MTA	Mtatsminda	1.64	195	P	Pn	01 53 53.2	+0.7
MTA				S	Sn	01 54 14.9	+0.9
KMKR	Kumukh	1.73	131	i PN	Pn	01 53 53.0	-0.8
KMKR				i S	Sn	01 54 17.0	+0.8
DGRG	David-gareji	1.83	179	P	Pn	01 53 57.2	+2.0
DGRG				S	Sn	01 54 22.9	+4.2
PYA	Pyatigorsk	1.83	295	ePN	Pn	01 53 56.4	+1.2
PYA				eS	Sn	01 54 20.1	+1.3
SHAR	Shatzhatmas	2.01	284	ePN	Pn	01 53 57.8	0.0
KIV	Kislovodsk	2.05	290	⇓ePN	Pn	01 53 58.5	+0.1
NAGR	Nagutskaya	2.21	303	⇑ePN	Pn	01 54 01.6	+0.9
NAGR	Nagutskaya	2.21	303	ePn	Pn	01 54 01.6	+0.9
AB31	Akbulak array	11.73	54	⇑P	P	01 56 13.1	-0.7
	comp=E,0.6nm,0.3s,baz=242,slow=12						
AB31				⇑S	S	01 58 19.5	-6.5
	comp=E,1.5nm,0.5s,baz=241,slow=21						
ZRNK	Zerenda	18.44	50	⇑P	P	01 57 39.4	-1.3
	comp=E,1.5nm,0.6s						
VOSK	Vostochnaya	19.49	52	⇑P	P	01 57 54.1	+0.9
	comp=E,2.4nm,0.8s						

*TIF **23** 01:55:10.7,43.15N×45.31E,h20^{km}±1^{km}*
*MOS **23** 01:55:11.5±2.5,43.08N×45.23E,h12^{km},mb3.9/1,Error ellipse: s-maj=15.2km s-min=7.4km az=15.2*
*CSEM **23** 01:55:11.5±0.2,43.08N×45.23E,h12^{km},mb3.9,Error ellipse: s-maj=10.0km s-min=3.4km az=8.0,After OBN*
ISC 23 01:55:11.1±0.6,**43.27N**±0.06×**45.37E**±0.04,**h12**^{km},**n16**, σ**1^{s}25**/26,**4C-2D,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNR	**Ardon**	**0.80**	**265**	⇑*i*PG	**Pg**	**01 55 26.6**	**-0.6**
ARNR				*e*S	**Sb**	**01 55 37.8**	**+0.9**
DBC	**Dubki**	**1.10**	**103**	*e*PG	**Pg**	**01 55 31.0**	**-2.1**
DBC				*i* S	**Sb**	**01 55 47.0**	**+1.4**
UNCR	**Uncukul**	**1.19**	**117**	*e*Pg	**Pg**	**01 55 33.2**	**-1.6**
UNCR				*e*Sg	**Sg**	**01 55 49.7**	**-1.0**
ZEI	**Tsey**	**1.19**	**246**	⇓*i*PG	**Pg**	**01 55 31.4**	**-3.5**
ZEI				*i* S	**Sb**	**01 55 47.1**	**-1.1**
ZEI	**Tsey**	**1.19**	**246**	*i* Pg	**Pg**	**01 55 31.4**	**-3.5**
ZEI				*i* Sg	**Sb**	**01 55 47.1**	**-1.1**
BUJR	**Buynaksk**	**1.35**	**109**	*e*Pg	**Pg**	**01 55 38.8**	**+0.7**
BUJR				*i* Sg	**Sg**	**01 55 59.5**	**+3.3**
KUBR	**Kubataba**	**1.52**	**291**	⇑*i*PG	**Pg**	**01 55 39.0**	**-2.5**
KUBR				*e*S	**Sb**	**01 55 58.7**	**+0.9**
KUBR	**Kubataba**	**1.52**	**291**	*i* Pg	**Pg**	**01 55 39.0**	**-2.5**
KUBR				*e*Sg	**Sb**	**01 55 58.7**	**+0.9**
MAK	**Makhachkala**	**1.60**	**100**	*e*PN	**Pn**	**01 55 48.0**	**+8.7**
MAK				*e*		01 56 09.0	
MAK				smax			
	comp=N,720nm,0.4s						
MAK				smax			
	comp=E,1μm,0.4s						
MTA	**Mtatsminda**	**1.63**	**195**	P	**Pn**	**01 55 40.1**	**+0.3**
MTA				S	**Sn**	**01 56 02.2**	**+1.3**
KMKR	**Kumukh**	**1.71**	**131**	*e*PN	**Pn**	**01 55 36.5**	**-4.5**
KMKR				*e*S	**Sn**	**01 56 03.0**	**+0.1**
PYA	**Pyatigorsk**	**1.84**	**295**	*e*PN	**Pn**	**01 55 43.3**	**+0.4**
SHAR	**Shatzhatmas**	**2.02**	**284**	⇑*e*PN	**Pn**	**01 55 45.7**	**+0.3**
KIV	**Kislovodsk**	**2.06**	**290**	⇓*e*PN	**Pn**	**01 55 47.1**	**+1.1**
NAGR	**Nagutskaya**	**2.22**	**303**	⇑*e*PN	**Pn**	**01 55 48.4**	**+0.1**
NAGR	**Nagutskaya**	**2.22**	**303**	*e*Pn	**Pn**	**01 55 48.4**	**+0.1**

TAP 23 01:57:00.4,22.00N×120.49E,h40^{km},ML3.7,Taiwan

GUC 23 02:15:43.7±0.4,**20.11S×69.33W,h101**^{km}±11^{km},**ML3.7, Northern Chile**

GUC 23 02:42:13.7±0.4,**19.80S×69.37W,h105**^{km}±3^{km},**ML3.7, Northern Chile**

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*ROM **23** 02:55:18.8±0.1,43.92N×11.72E,h16^{km}±3^{km},Md3.0/9, Ml2.4/7,Error ellipse: s-maj=2.3km s-min=1.3km az=31.0*
*CSEM **23** 02:55:18.3±0.1,43.94N×11.74E,h18^{km},ML2.4/7,Error ellipse: s-maj=1.3km s-min=0.9km az=12.0*
*LDG **23** 02:55:19.6±0.1,43.89N×11.73E,h10^{km},Ml2.5/7,Error ellipse: s-maj=4.7km s-min=3.1km az=34.0*
*NEIC **23** 02:55:19.6,43.89N×11.73E,h10^{km},ML2.8(VIE), ML2.5(LDG),ML2.4(ROM),After LDG.*
ISC 23 02:55:18.9±0.3,**43.98N**±0.03×**11.71E**±0.03,**h16**^{km},**n36**, σ**1^{s}13**/57,**2C-3D,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.12**	**127**	Pg	**Pb**	**02 55 22.3**	**-0.3**
SFI				Sg	**Sb**	**02 55 24.9**	**-0.2**
	4μm,0.3s						
VMG	**Vicchio**	**0.12**	**262**	⇑*i*Pg	**Pb**	**02 55 23.0**	**+0.4**
VMG				Sg	**Sb**	**02 55 26.0**	**+0.9**
SEI	**Scarperia**	**0.27**	**286**	Pg	**Pb**	**02 55 25.2**	**+0.3**
SEI				Sg	**Sb**	**02 55 30.0**	**+1.1**
FNVD	**Fontana Vidola**	**0.47**	**294**	Pg	**Pb**	**02 55 28.9**	**+0.6**
	188nm,0.6s						
RSM	**Repubblica di**	**0.54**	**95**	Pg	**Pb**	**02 55 30.2**	**+0.7**
RSM				Sg	**Sb**	**02 55 39.2**	**+2.6**
	40nm,0.4s						
CSNT	**Castellina Chi**	**0.59**	**211**	Pg	**Pb**	**02 55 30.6**	**+0.2**
	119nm,0.4s						
BADI	**Badiali**	**0.61**	**140**	Pg	**Pb**	**02 55 30.6**	**-0.1**
BADI				Sg	**Sb**	**02 55 40.1**	**+1.3**
	200nm,0.4s						
ZCCA	**Zocca**	**0.65**	**305**	Pg	**Pb**	**02 55 33.2**	**+1.8**
	26nm,0.5s						
BDI	**Bagni Di Lucca**	**0.81**	**276**	Pg	**Pb**	**02 55 35.0**	**+0.9**
	10.0nm,0.2s						
FSSB	**Fossombrone**	**0.82**	**110**	Pg	**Pb**	**02 55 34.1**	**-0.3**
	56nm,0.3s						
GSCL	**Gusciola**	**0.89**	**295**	Pg	**Pb**	**02 55 37.5**	**+2.0**
	12nm,0.5s						
PII	**Pisa**	**0.90**	**254**	Pg	**Pb**	**02 55 36.3**	**+0.7**
	34nm,0.2s						
MURB	**Monte Urbino**	**0.93**	**140**	Pg	**Pb**	**02 55 36.2**	**0.0**
	264nm,0.3s						
VLC	**Villacollemand**	**0.97**	**281**	Pg	**Pb**	**02 55 37.9**	**+1.0**
	41nm,0.9s						
ARV	**Arcevia**	**1.01**	**118**	Pg	**Pb**	**02 55 37.4**	**-0.2**
	26nm,0.4s						
ERBM	**Eremo**	**1.03**	**296**	Pg	**Pb**	**02 55 40.6**	**+2.6**
	43nm,0.8s						
SACS	**San Casciano d**	**1.14**	**173**	Pg	**Pb**	**02 55 39.8**	**0.0**
	48nm,0.6s						
ARCI	**Arcidosso**	**1.14**	**189**	Pg	**Pb**	**02 55 39.7**	**-0.1**
	57nm,0.9s						
ASS	**Assisi**	**1.14**	**143**	Pg	**Pb**	**02 55 39.8**	**0.0**
	17nm,0.3s						
AQU	**L'Aquila**	**2.04**	**142**	*e*Pn	**Pn**	**02 55 52.3**	**-0.9**
AQU	**L'Aquila**	**2.04**	**142**	*e*Pn	**Pn**	**02 55 52.3**	**-0.9**
NVLJ	**Novalja**	**2.34**	**74**	*i* Pn	**Pn**	**02 55 57.3**	**-0.2**
NVLJ				*i* Sn	**Sn**	**02 56 26.1**	**-0.1**
PGF	**Pioggiola**	**2.44**	**235**	*e*Pn	**Pn**	**02 55 57.6**	**-1.4**
PGF				*e*Sn	**Sn**	**02 56 25.4**	**-3.3**
	2.6nm,0.3s						
CADS	**Cadrg**	**2.67**	**32**	*i* Pn	**Pn**	**02 56 01.1**	**-1.0**
CADS				*i* Sn	**Sn**	**02 56 33.9**	**-0.5**
SBF	**Sospel**	**3.09**	**269**	*e*Pn	**Pn**	**02 56 06.6**	**-1.6**
SBF				*e*Sn	**Sn**	**02 56 41.7**	**-3.5**
	3.8nm,0.3s						
OBKA	**Obir**	**3.23**	**37**	⇓*i*PN	**Pn**	**02 56 09.1**	**-1.0**
OBKA				*i* PG	**Pn**	**02 56 19.6**	**+9.5**
OBKA				*i* SN	**Sn**	**02 56 47.3**	**-1.3**
OBKA				*i* SG	**Sn**	**02 57 00.3**	**+12**
	6.0nm,0.6s						
SQTA	**Sankt Quirin**	**3.26**	**354**	⇓*i*PN	**Pn**	**02 56 10.9**	**+0.3**
SQTA				*i* SN	**Sn**	**02 56 49.1**	**-0.3**
SQTA				*i* SG	**Sn**	**02 57 04.8**	**+15**
	5.4nm,0.3s						
SQTA	**Sankt Quirin**	**3.26**	**354**	⇓*i*Pn	**Pn**	**02 56 10.9**	**+0.3**
SQTA				*i* Sg	**Sn**	**02 57 04.8**	**+15**
	5.4nm,0.3s						
DAVA	**Damuels**	**3.55**	**339**	⇑*i*PN	**Pn**	**02 56 13.7**	**-1.0**
DAVA				*i* SN	**Sn**	**02 56 56.8**	**+0.1**
FRF	**La Foret Royal**	**3.69**	**265**	*e*Pn	**Pn**	**02 56 14.7**	**-2.0**
FRF				*e*Sn	**Sn**	**02 56 56.0**	**-4.4**
	1.4nm,0.4s						
LMR	**La Mourre**	**3.83**	**262**	*e*Pn	**Pn**	**02 56 16.8**	**-1.9**
LMR				*e*Sn	**Sn**	**02 56 59.2**	**-4.6**
	0.6nm,0.2s						
LPG	**La Plagne**	**3.85**	**295**	*e*P	**Pn**	**02 56 21.4**	**+2.5**
LPL	**La Plagne**	**3.87**	**295**	*e*Pn	**Pn**	**02 56 18.6**	**-0.6**
LPL				*e*Sn	**Sn**	**02 57 01.7**	**-3.1**
	2.6nm,0.4s						
HINF	**Hinteralfeld**	**5.12**	**320**	*e*Pn	**Pn**	**02 56 37.5**	**+0.5**
CDF	**Champ du Feu**	**5.40**	**327**	*e*Pn	**Pn**	**02 56 40.2**	**-0.7**
CDF				*e*Sn	**Sn**	**02 57 38.3**	**-5.1**
	1.2nm,0.3s						
HAU	**Haudompre**	**5.49**	**319**	*e*Pn	**Pn**	**02 56 41.6**	**-0.6**
HAU				*e*Sn	**Sn**	**02 57 40.5**	**-5.3**
	8.0nm,0.5s						

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*IDC **23** 02:57:09.5±4.5,51.50N×178.04E,mb3.8/5,mb1 3.9/5, mb1mx3.6/21,mbtmp3.8/5,Error ellipse: s-maj=142.6km s-min=35.7km az=25.0*
*NEIC **23** 02:57:13.2,51.15N×177.96E,h14^{km},ML3.3(AEIC),After AEIC.*
ISC 23 02:57:08.3±1.4,**50.4N**±0.1×**177.69E**±0.08,**h33**^{km},**n14**, σ**0^{s}97**/17,**mb3.9**/5,**Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	**Shemya**	**3.23**	**318**	P	**P**	**02 57 58.6**	**+0.7**
SMY				S	**S**	**02 58 35.0**	**-0.7**
KIMD	**Kanaga Island**	**3.48**	**65**	P	**P**	**02 58 02.0**	**+0.7**
KIMD				S	**S**	**02 58 41.5**	**-0.5**
KIKV	**Kanaga Island**	**3.56**	**63**	P	**P**	**02 58 02.0**	**-0.6**
KIWB	**Kanaga Island**	**3.56**	**64**	*e*P	**P**	**02 58 03.1**	**+0.5**
KINC	**Kanaga Island**	**3.60**	**63**	P	**P**	**02 58 02.8**	**-0.3**
FX1	**Attu Island--F**	**3.76**	**313**	P	**P**	**02 58 06.5**	**+1.2**
FX1				S	**S**	**02 58 49.8**	**+0.8**
GSMY	**Great Sitkin M**	**4.26**	**65**	P	**P**	**02 58 12.1**	**-0.4**
GSTR	**Great Sitkin T**	**4.28**	**64**	P	**P**	**02 58 13.9**	**+1.1**
ATKA	**Atka Island**	**5.40**	**67**	P	**P**	**02 58 29.0**	**+0.4**
ARCES	**ARCESS Array B**	**58.65**	**349**	P	**P**	**03 07 00.7**	**-3.3**
	1.9nm,0.9s,mb4.1,baz=32,slow=6.9,SNR=6.8						
BVAR	**Borovoye Array**	**60.17**	**318**	P	**P**	**03 07 14.0**	**-0.6**
	0.8nm,0.5s,mb4.0,baz=45,slow=8.4,SNR=5.6						
TXAR	**Lajitas Array**	**61.02**	**78**	P	**P**	**03 07 21.8**	**+1.1**
	0.4nm,0.7s,mb3.7,baz=315,slow=5.3,SNR=4.9						
FINES	**FINESS Array B**	**66.21**	**346**	P	**P**	**03 07 51.8**	**-2.4**
	0.4nm,0.4s,mb3.8,baz=14,slow=7.9,SNR=7.1						
AKASG	**Malin Array Be**	**75.75**	**340**	P	**P**	**03 08 51.0**	**-0.7**
	0.9nm,0.6s,mb3.9,baz=11,slow=4.9,SNR=4.9						

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*IDC **23** 03:04:56.0±0.4,39.41N×73.17E,mb4.9/29,mb1 5.0/30, mb1mx5.0/30,mbtmp4.9/30,ML4.2/2,MS4.0/16,Ms1 4.0/16, ms1mx3.8/23,Error ellipse: s-maj=11.1km s-min=9.8km az=14.0*
*HRVD **23** 03:04:58.4±0.8,39.83N×73.05E,h32^{km}±1^{km},MW4.7/30, Centroid moment Tensor Solution. LP body waves: s4,c4; Mantle waves: s30,c46; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.96±.17; M$_{\theta\theta}$-1.44±.11; M$_{\phi\phi}$0.48±.10; M$_{r\theta}$0.28±.11; M$_{\theta\phi}$-0.18±.06; M$_{\phi r}$0.34±.10; Best double couple: M$_0$1.324×10^{16} NP1:φ$_s$290°,δ44°,λ128°. NP2: φ$_s$62°,δ57°,λ59°. Principal axes: T 1.152, Plg63°, Azm279°; N .349, Plg25°, Azm80°; P -1.497, Plg7°, Azm174°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **23** 03:04:58.4±1.6,39.45N×73.24E,h15^{km}±10^{km},mb5.0/165, MS4.3/5 Error ellipse: s-maj=4.0km s-min=2.4km az=204.0*
*BJI **23** 03:04:58.0,39.66N×73.00E,h26^{km},mB5.0,mb4.9,ML5.0, Ms4.5,Msz4.3*
*MOS **23** 03:04:59.9±1.0,39.54N×73.20E,h34^{km},mb5.1/109,Error ellipse: s-maj=6.6km s-min=3.3km az=132.1*
*CRAAG **23** 03:05:02.4,39.58N×73.20E,Mb5.0*
*NNC **23** 03:05:03.2±3.3,39.80N×73.18E,mpv5.2,Error ellipse: s-maj=29.9km s-min=17.9km az=18.0*
ISC 23 03:04:59.2±0.1,**39.44N**±0.02×**73.19E**±0.02,**h30**^{km}, **h30**^{km}±1.2^{km}**:pP-P,n604**,σ**1^{s}07**/616,**mb4.9**/209,**MS4.1**/45, **102C-26D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.15**	**87**	⇑*i*P	**Pn**	**03 05 38.8**	**+4.9**
KSH				S	**Sn**	**03 06 10.8**	**+11**
KSH				Smax			
	comp=N,8μm,0.6s						
KSH				Smax			
	comp=E,8μm,0.8s						
AML	**Almayashu**	**2.72**	**8**	P	**Pn**	**03 05 44.2**	**+2.3**
	SNR=2300						
UCH	**Uchtor**	**2.96**	**19**	P	**Pn**	**03 05 48.2**	**+2.8**
	SNR=2146						
KZA	**Kyzart**	**3.07**	**30**	P	**Pn**	**03 05 49.4**	**+2.5**
	SNR=299						
EKS2	**Erkin-Say**	**3.25**	**8**	P	**Pn**	**03 05 51.8**	**+2.3**
	SNR=245						
AAK	**Ala-Archa**	**3.34**	**17**	⇓Pn	**Pn**	**03 05 53.7**	**+3.0**
	comp=E,2μm,0.7s						
AAK				⇓Lg		03 06 37.1	
	comp=E,2μm,0.6s						
AAK	**Ala-Archa**	**3.34**	**17**	PN	**Pn**	**03 05 53.7**	**+2.9**
AAK						03 06 34.5	
AAK				pmax	pmax		
	comp=Z,2μm,0.7s						
AAK				smax			
	comp=N,1μm,0.6s						
AAK	**Ala-Archa**	**3.34**	**17**	*e*Pn	**Pn**	**03 05 52.7**	**+1.9**
KBK	**Karagaybulak**	**3.48**	**22**	P	**Pn**	**03 05 55.7**	**+3.0**
	SNR=238						
FRU	**Bishkek**	**3.56**	**17**	⇓*i*PN	**Pn**	**03 05 57.5**	**+3.6**
FRU				*e*		03 06 42.0	
FRU				pmax	pmax		
	comp=Z,2μm,1.8s						
FRU				smax			
	comp=N,6μm,2.8s						
ULHL	**Ulahol**	**3.64**	**39**	P	**Pn**	**03 05 56.8**	**+1.8**
	SNR=276						
CHMS	**Chumysh**	**3.75**	**18**	P	**Pn**	**03 05 59.1**	**+2.6**
	SNR=1091						
TKM2	**Tokmak 2**	**3.93**	**27**	P	**Pn**	**03 06 01.6**	**+2.5**
	SNR=302						
USP	**Ospenovka**	**3.95**	**14**	P	**Pn**	**03 06 01.4**	**+2.0**
	SNR=373						
KK31	**Karatay Array**	**4.18**	**332**	⇓Pn	**Pn**	**03 06 03.7**	**+1.0**
	comp=N,62nm,0.4s,baz=138,slow=12,SNR=3170						
KK31				⇑Pg	**Pn**	**03 06 13.1**	**+10**
	comp=N,164nm,0.3s,baz=144,slow=12,SNR=30						
KK31				⇑Sn	**Sn**	**03 06 51.9**	**+0.7**
	comp=N,398nm,0.4s,baz=157,slow=24,SNR=3.6						
KK31				⇑Lg		03 07 06.3	
	comp=N,1μm,0.5s,baz=157,slow=24,SNR=3.6						
KKAR	**Karatay Array**	**4.18**	**332**	*i* PN	**Pn**	**03 06 03.8**	**+1.1**
KKAR				pmax	pmax		
	comp=Z,523nm,0.3s						
AAA	**Alma-Ata**	**4.76**	**35**	*i* PN	**Pn**	**03 06 25.1**	**+14**
AAA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CEP	**Cherat**	**5.69**	**191**	P	**Pn**	**03 06 29.4**	**+5.4**
CEP				S	**Sn**	**03 07 38.0**	**+8.8**
CHCP	**Chirah Chowk**	**5.76**	**179**	⇓P	**Pn**	**03 06 30.9**	**+5.9**
THN	**Thein Dam**	**7.28**	**163**	*e*P	**Pn**	**03 06 48.9**	**+2.5**
THN				*e*S	**Sn**	**03 08 08.8**	**0.0**
SBDP	**Sheikh Budin**	**7.38**	**196**	P	**Pn**	**03 06 51.6**	**+3.9**
SARP	**Sargodha**	**7.51**	**183**	⇑P	**Pn**	**03 06 51.5**	**+1.9**
PONG	**Pong**	**7.79**	**162**	*e*P	**Pn**	**03 06 55.0**	**+1.5**
PONG				*e*x	x	03 08 24.0	
DRP	**Derazinda**	**8.05**	**198**	⇑P	**P**	**03 06 58.7**	**+1.6**
BHK	**Bhakra**	**8.42**	**161**	*e*x	x	03 07 10.8	
BHK				*e*x	x	03 08 42.8	
SDNR	**Sundarnagar**	**8.49**	**158**	*e*P	**P**	**03 07 02.4**	**-0.9**
SDNR				*e*S	**Sn**	**03 08 34.6**	**-4.5**
KLP	**Kalpa**	**8.90**	**151**	*e*P	**P**	**03 07 10.2**	**+1.3**
KLP				*e*S	**Sn**	**03 08 45.1**	**-3.9**
SMLA	**Simla**	**8.90**	**157**	*i* P	**P**	**03 07 07.6**	**-1.3**
SMLA				*i* S	**Sn**	**03 08 44.0**	**-5.2**
MK31	**Makanchi Array**	**9.91**	**39**	P	**P**	**03 07 23.2**	**+0.4**
	comp=Z,25nm,0.6s,baz=222,slow=14,SNR=44						
MK31				⇓Lg		03 10 06.2	
	comp=Z,130nm,1.0s,baz=226,slow=16,SNR=3.6						
MKAR	**Makanchi Array**	**9.91**	**39**	Pn	**P**	**03 07 22.0**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=224,slow=13,SNR=20						
MKAR				Lg		03 10 03.2	
	comp=Z,1.8nm,0.3s,baz=240,slow=28,SNR=3.0						
MKAR				LR	LR	03 11 40.5	
	comp=Z,460nm,21.7s,baz=206,slow=41						
MKAR	**Makanchi Array**	**9.91**	**39**	Pn	**P**	**03 07 22.0**	**-0.7**
MKAR				Lg		03 10 03.1	
MKAR				LR	LR	03 11 40.5	
DDI	**Dehra Dun**	**9.93**	**155**	*e*P	**P**	**03 07 23.0**	**0.0**
DDI				*e*x	x	03 08 39.0	
NDI	**New Delhi**	**11.23**	**162**	*e*P	**P**	**03 07 41.0**	**+0.1**
NDI				AMb	AMB	03 07 42.8	
	comp=Z,77nm,0.3s						
NDI				*e*S	**S**	**03 09 40.7**	**-5.6**
AYAN	**Aya Nagar**	**11.40**	**162**	*e*P	**P**	**03 07 42.4**	**-0.8**
PTH	**Pithoragarh**	**11.43**	**147**	*e*P	**P**	**03 07 45.0**	**+1.4**
PTH				*e*S	**S**	**03 09 43.6**	**-7.7**
LGTI	**Lohaghat**	**11.53**	**148**	*i* P	**P**	**03 07 45.0**	**0.0**
LGTI				*e*S	**S**	**03 09 47.5**	**-6.2**
LGTI				*e*S	**S**	**03 09 47.5**	**-6.2**
KHET	**Khetri**	**11.54**	**168**	*e*P	**P**	**03 07 43.6**	**-1.4**
KHET				*e*S	**S**	**03 09 46.2**	**-7.6**
SONA	**Sohna**	**11.61**	**163**	*e*P	**P**	**03 07 46.4**	**+0.3**
SONA				AMb	AMB	03 07 49.2	
	comp=Z,68nm,0.3s						
SONA				*e*S	**S**	**03 09 48.7**	**-7.0**
WMQ	**Urumqi**	**11.70**	**63**	P	**P**	**03 07 46.6**	**-0.6**
WMQ				LR	LR		
	comp=N,1μm,6.0s						
JASL	**Jaisalmer**	**12.62**	**189**	*e*P	**P**	**03 07 58.7**	**-0.9**
JASL				AMb	AMB	03 08 02.9	
JASL				*e*x	x	03 10 14.3	
AGRA	**Agra**	**12.80**	**161**	*e*P	**P**	**03 07 59.1**	**-2.8**
AGRA				AMb	AMB	03 07 59.9	
	comp=Z,40nm,0.2s						
AGRA				*e*S	**S**	**03 10 16.0**	**-8.3**
AJM	**Ajmer**	**12.98**	**174**	*i* P	**P**	**03 08 03.0**	**-1.3**
AJM				*i* S	**S**	**03 10 20.0**	**-8.6**
VOSK	**Vostochnaya**	**13.38**	**354**	⇓P	**P**	**03 08 05.5**	**-4.0**
	comp=Z,16nm,0.6s						
VOSK				⇓Lg		03 11 55.7	
	comp=Z,212nm,1.2s						
VOSK	**Vostochnaya**	**13.38**	**354**	P	**P**	**03 08 05.4**	**-4.1**
VOSK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AB31	**Akbulak array**	**13.63**	**320**	⇑P	**P**	**03 08 08.7**	**-4.0**
	comp=Z,16nm,0.5s						
AB31	**Akbulak array**	**13.63**	**320**	P	**P**	**03 08 08.7**	**-4.0**
AB31						03 10 32.5	
AB31				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AB31				smax			
	comp=N,10.0nm,0.4s						
BVA0	**Borovoye Array**	**13.73**	**353**	P	**P**	**03 08 10.6**	**-3.4**
	comp=N,8.5nm,0.8s,baz=167,slow=14,SNR=252						
BVA0				⇑Lg		03 12 08.2	
BVA0	**Borovoye Array**	**13.73**	**353**	*i* P	**P**	**03 08 10.6**	**-3.4**
BVA0				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BVAR	**Borovoye Array**	**13.73**	**353**	Pn	**P**	**03 08 10.8**	**-3.2**
	comp=Z,3.5nm,0.3s,baz=161,slow=12,SNR=45						
BVAR				Sn	**S**	**03 10 38.5**	**-7.8**
	comp=Z,1.5nm,0.3s,baz=168,slow=21,SNR=4.4						
BVAR				Lg		03 12 02.4	
	comp=Z,1.9nm,0.3s,baz=168,slow=29,SNR=3.5						
BVAR	**Borovoye Array**	**13.73**	**353**	Pn	**P**	**03 08 10.8**	**-3.2**
BVAR				Sn	**S**	**03 10 38.5**	**-7.8**
BVAR				Lg		03 12 02.4	
ZRNK	**Zerenda**	**13.82**	**349**	⇑P	**P**	**03 08 11.7**	**-3.6**
	comp=Z,23nm,0.7s						
ZRNK				⇑Lg		03 12 10.3	
	comp=Z,180nm,1.1s						
ZRNK	**Zerenda**	**13.82**	**349**	*e*P	**P**	**03 08 11.9**	**-3.4**
ZRNK				pmax	pmax		
	comp=Z,29nm,0.6s						
ZRNK	**Zerenda**	**13.82**	**349**	*e*P	**P**	**03 08 11.9**	**-3.4**
	comp=Z,28nm,0.6s						
KOLN	**Koldanda**	**14.50**	**140**	*e*P	**P**	**03 08 22.0**	**-2.3**
	comp=Z,93nm,0.5s						
GKN	**Gorkha**	**14.84**	**137**	*e*P	**P**	**03 08 25.9**	**-2.9**
	comp=Z,124nm,0.5s						
KKN	**Kakani**	**15.35**	**136**	*e*P	**P**	**03 08 33.0**	**-2.5**
	comp=Z,110nm,0.5s						
KKN	**Kakani**	**15.35**	**136**	*e*P	**P**	**03 08 33.0**	**-2.5**
KKN				pmax	pmax		
	comp=Z,55nm,0.5s						
DMN	**Daman**	**15.40**	**136**	*e*P	**P**	**03 08 34.6**	**-1.5**
GUN	**Gumba**	**15.59**	**134**	*e*P	**P**	**03 08 36.3**	**-2.2**
	comp=Z,61nm,0.4s						
PKI	**Pulchoki**	**15.60**	**136**	*e*P	**P**	**03 08 38.0**	**-0.6**
	comp=Z,33nm,0.3s						
PKI	**Pulchoki**	**15.60**	**136**	*e*P	**P**	**03 08 38.0**	**-0.6**
PKI				pmax	pmax		
	comp=Z,17nm,0.3s						
BHJ	**Bhuj**	**16.41**	**192**	*e*P	**P**	**03 08 49.8**	**+0.9**
BHJ				AMb	AMB	03 08 52.9	
	comp=Z,104nm,0.3s						
BHJ				*e*x	x	03 11 44.4	
BHPL	**Bhopal**	**16.54**	**166**	*e*P	**P**	**03 08 50.0**	**-0.6**
BHPL				AMb	AMB	03 09 04.1	
	comp=Z,38nm,0.4s						
BHPL				*e*x	x	03 11 44.9	
NVS	**Novosibirsk**	**16.83**	**20**	*e*P	**P**	**03 08 52.6**	**-1.5**
NVS				*e*S	**S**	**03 11 58.3**	**-0.6**
NVS				pmax	pmax		
	comp=Z,180nm,1.3s						
NVS				pmax	pmax		
	comp=N,173nm,1.4s						
NVS				smax			
	comp=N,98nm,1.7s						
LSA	**Lhasa**	**17.67**	**118**	P	**P**	**03 09 07.0**	**+2.3**
LSA	**Lhasa**	**17.67**	**118**	P	**P**	**03 09 06.9**	**+2.2**
LSA				pmax	pmax		
	comp=Z,35nm,0.9s						
LSA	**Lhasa**	**17.67**	**118**	P	**P**	**03 09 06.9**	**+2.2**
	comp=Z,35nm,0.9s						
LSA				*e*PcP	PcP	03 13 44.5	+1.2
BLSP	**Bilaspur**	**18.86**	**154**	*e*x	x	03 12 35.8	
NGP	**Nagpur**	**18.91**	**163**	*e*x	**P**	**03 09 14.8**	**-5.1**
NGP				*e*x	x	03 09 19.3	
NGP				AMb	AMB	03 09 28.9	
	comp=Z,42nm,0.7s						
NGP				*e*x	x	03 12 40.2	
NGP				*i* x	x	03 12 40.8	
AKL	**Akola**	**18.96**	**169**	*e*x	**P**	**03 09 23.9**	**+3.4**
AKL				*e*x	x	03 12 43.1	
SVE	**Sverdlovsk**	**19.26**	**339**	*e*P	**P**	**03 09 22.0**	**-1.9**
SVE				MLR	MLR		
	comp=N,600nm,10.0s						
SVE				MLR	MLR		
	comp=E,500nm,10.0s						
SVE				MLR	MLR		
	comp=Z,1μm,10.0s						
BANOM	**Banah**	**19.54**	**231**	⇑P	**P**	**03 09 27.9**	**+0.6**
ARU	**Arti**	**19.55**	**335**	⇓*i*P	**P**	**03 09 26.1**	**-1.1**
ARU				*e*S	**S**	**03 13 03.5**	**+3.0**
ARU				pmax	pmax		
	comp=Z,33nm,0.7s						
ARU				MLR	MLR		
	comp=Z,800nm,17.0s						
ARU				MLR	MLR		
	comp=N,600nm,18.0s						
ARU				MLR	MLR		
	comp=E,300nm,15.0s						
ARU	**Arti**	**19.55**	**335**	*e*P	**P**	**03 09 25.9**	**-1.4**
	comp=E,32nm,0.6s						
BIDO	**Bidbid**	**20.37**	**223**	⇓P	**P**	**03 09 37.0**	**+0.9**
GTA	**Gaotai**	**20.55**	**82**	⇑*i*P	**P**	**03 09 39.0**	**+1.1**
GTA				AP		03 09 51.9	
GTA				S	**S**	**03 13 28.4**	**+7.3**
GTA				AMB	AMB		
	comp=Z,50nm,0.8s						
GTA				AMB	AMB		
	comp=Z,130nm,6.1s						
GTA				LR	LR		
	comp=N,350nm,16.4s,MS4.0						
GTA				LR	LR		
	comp=E,320nm,14.4s,MS4.0						
GTA				LR	LR		
	comp=Z,350nm,12.9s,MS3.9						
ASHO	**Ashiyiah**	**20.61**	**230**	⇑P	**P**	**03 09 38.4**	**-0.3**
	SNR=23						
HOQ	**Hoqain**	**20.76**	**225**	⇓P	**P**	**03 09 39.8**	**-0.3**
SMDO	**Samad**	**20.79**	**223**	⇓P	**P**	**03 09 41.2**	**+0.8**
	SNR=9.5						
POO	**Poona**	**20.84**	**178**	*e*P	**P**	**03 09 40.6**	**-0.4**
POO				AMb	AMB	03 09 44.5	
	comp=Z,114nm,1.5s						
SHL	**Shillong**	**20.91**	**126**	*e*P	**P**	**03 09 40.2**	**-1.5**
SHL				*e*x	x	03 13 30.0	
LATR	**Latur**	**21.15**	**171**	*e*P	**P**	**03 09 42.5**	**-1.6**
DGRG	**David-gareji**	**21.23**	**284**	P	**P**	**03 09 48.1**	**+3.2**
JMDO	**Jabal Madar**	**21.32**	**221**	⇓P	**P**	**03 09 45.9**	**+0.1**
	SNR=9.0						
BSY	**Bisya**	**21.49**	**224**	⇑P	**P**	**03 09 48.2**	**+0.6**
MTA	**Mtatsminda**	**21.65**	**285**	P	**P**	**03 09 48.6**	**-0.5**
TI2	**Plekhanov**	**21.68**	**285**	*e*P	**P**	**03 09 50.4**	**+1.0**
DUS	**Dusheti**	**21.70**	**286**	P	**P**	**03 09 50.4**	**+0.9**
GNI	**Garni**	**21.84**	**281**	P	**P**	**03 09 51.8**	**+0.9**
GNI	**Garni**	**21.84**	**281**	P	**P**	**03 09 50.4**	**-0.5**
GNI				pmax	pmax		
	comp=Z,38nm,0.5s						
GNI				MLR	MLR		
	comp=Z,166nm,20.3s						
GNI	**Garni**	**21.84**	**281**	P	**P**	**03 09 50.4**	**-0.5**
	comp=Z,38nm,0.5s,mb5.1,baz=356,slow=1.7,SNR=20						
GNI				LR	LR	03 19 45.7	
	comp=Z,166nm,20.3s,MS3.4,baz=248,slow=41						
GNI	**Garni**	**21.84**	**281**	*e*P	**P**	**03 09 51.4**	**+0.4**
	comp=Z,82nm,0.8s,mb5.2						
BWNR	**Bhubaneshwar**	**21.95**	**147**	*e*x		03 10 00.8	

BWNR				AMb	AMB	03 10 02.1	
	comp=Z,38nm,0.4s,mb5.2						
BWNR				*e*S	**S**	**03 13 56.7**	**+9.1**
KAD	**Karad**	**22.06**	**177**	*e*x	**P**	**03 09 56.1**	**+2.8**
KAD				AMb	AMB	03 09 59.6	
	comp=Z,56nm,1.0s,mb5.0						
ZEI	**Tsey**	**22.27**	**288**	*e*P	**P**	**03 09 53.3**	**-1.9**
ZEI				*i* *PP		03 10 07.3	
ZEI				pmax	pmax		
	comp=Z,36nm,0.6s,mb5.0						
HYB	**Hyderabad**	**22.43**	**166**	*e*P	**P**	**03 09 58.0**	**+1.1**
HYB				*e*S	**S**	**03 14 03.0**	**+6.5**
HYB	**Hyderabad**	**22.43**	**166**	*i* P	**P**	**03 09 58.0**	**+1.1**
HYB				*e*S	**S**	**03 13 59.0**	**+2.5**
ONI	**Oni**	**22.61**	**288**	P	**P**	**03 10 00.2**	**+1.7**
CLDR	**Caldiran**	**22.62**	**279**	P	**P**	**03 10 00.8**	**+2.1**
SOKR	**Solikamsk**	**22.67**	**338**	*c* *i*P	**P**	**03 10 00.5**	**+1.6**
SOKR				pmax	pmax		
	comp=Z,90nm,1.2s,mb5.1						
SOKR				MLR	MLR		
	comp=Z,620nm,18.0s,MS4.1						
IMP	**Imphal**	**22.77**	**124**	*e*x	**P**	**03 10 04.0**	**+3.7**
MOY	**Mondy**	**22.84**	**48**	*e*P	**P**	**03 10 03.2**	**+2.5**
GOF	**Gofitskoye**	**22.94**	**294**	⇑*i*P	**P**	**03 10 01.0**	**-0.7**
GOF				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.2						
KIV	**Kislovodsk**	**23.15**	**291**	*e*P	**P**	**03 10 05.2**	**+1.4**
KIV				*e**PP		03 10 19.0	
KIV				*e*S	**S**	**03 14 11.5**	**+2.4**
KIV				*e*SS	SS	03 14 51.2	-4.0
KIV				pmax	pmax		
	comp=N,30nm,1.0s						
KIV				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.7						
KIV				pmax	pmax		
	comp=E,21nm,0.8s						
KIV				MLR	MLR		
	comp=N,138nm,19.0s,MS3.7						
KIV				MLR	MLR		
	comp=E,238nm,19.0s,MS3.7						
KIV				MLR	MLR		
	comp=Z,261nm,19.0s,MS3.7						
VIS	**Vishakhapatnam**	**23.36**	**155**	*i* x	x	03 10 31.7	
ZAK	**Zakamensk**	**23.80**	**53**	*e*P	**P**	**03 10 11.6**	**+1.6**
ZAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
BCA	**Borcka**	**24.05**	**285**	*e*P	**P**	**03 10 15.2**	**+2.7**
TLY	**Talaya**	**24.39**	**50**	*e*P	**P**	**03 10 17.3**	**+1.5**
TLY				*e*S	**S**	**03 14 32.9**	**+2.4**
TLY				*e*SS	SS	03 15 18.5	-6.9
TLY				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
TLY				MLR	MLR		
	comp=Z,289nm,16.0s,MS3.9						
LZH	**Lanzhou**	**24.41**	**88**	P	**P**	**03 10 18.8**	**+2.7**
LZH				AP		03 10 24.3	
LZH				XP		03 10 28.5	
LZH				AMB	AMB		
	comp=Z,50nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,220nm,4.0s						
LZH				LR	LR		
	comp=N,1µm,17.0s						
LZH				LR	LR		
	comp=Z,1µm,17.9s,MS4.4						
EZM	**Erzurum**	**24.44**	**281**	*e*P	**P**	**03 10 19.9**	**+3.5**
IRK	**Irkutsk**	**24.94**	**49**	*e*P	**P**	**03 10 15.3**	**-5.7**
IRK				pmax	pmax		
	comp=Z,59nm,0.7s,mb5.2						
SONM	**Songino Array**	**25.30**	**60**	P	**P**	**03 10 25.1**	**+0.6**
	comp=Z,9.7nm,0.6s,mb4.5,baz=265,slow=8.9,SNR=84						
SONM				LR	LR	03 21 14.0	
	comp=Z,680nm,20.7s,MS4.2,baz=67,slow=39						
ULN	**Ulaanbaatar**	**25.74**	**60**	*e*P	**P**	**03 10 29.3**	**+0.7**
ULN				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**25.74**	**60**	*e*P	**P**	**03 10 29.3**	**+0.7**
	comp=Z,23nm,0.8s,mb4.8						
GUMT	**Gumushane**	**25.78**	**283**	P	**P**	**03 10 31.3**	**+2.3**
PTK	**Pertek**	**26.13**	**280**	*e*P	**P**	**03 10 33.5**	**+1.3**
CD2	**Chengdu**	**26.30**	**99**	P	**P**	**03 10 35.8**	**+1.9**
CD2				PP	PP	03 11 18.8	+2.1
CD2				S	**S**	**03 15 01.8**	**-0.8**
CD2				XS		03 15 22.1	
CD2				SS	SS	03 16 10.1	-1.8
CD2				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb4.7						
CD2				AMB	AMB		
	comp=Z,120nm,2.8s,mb4.9						
CD2				LR	LR		
	comp=E,450nm,13.6s						
CD2				LR	LR		
	comp=Z,490nm,13.7s,MS4.2						
VOR	**Voronezh**	**26.52**	**309**	P	**P**	**03 10 35.0**	**-0.8**
VOR				pmax	pmax		
	comp=Z,50nm,1.5s,mb4.8						
VOR				pmax	pmax		
	comp=E,140nm,1.3s						
MALT	**Malatya**	**26.99**	**279**	*e*P	**P**	**03 10 41.4**	**+1.2**
MALT	**Malatya**	**26.99**	**279**	*e*P	**P**	**03 10 39.3**	**-0.9**
MALT				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
MALT	**Malatya**	**26.99**	**279**	*e*P	**P**	**03 10 39.3**	**-0.9**
	comp=Z,10nm,0.8s,mb4.4						
ARSS	**Ar Rass**	**28.46**	**251**	P	**P**	**03 10 54.4**	**+0.7**
MOS	**Moscow**	**28.59**	**317**	*e*P	**P**	**03 10 51.3**	**-3.2**
MOS				*e*	pP	03 11 01.0	-2.4
MOS				pmax	pmax		
	comp=Z,36nm,0.6s,mb5.3						
MOS				MLR	MLR		
	comp=Z,600nm,16.7s,MS4.3						
KMI	**Kunming**	**28.62**	**111**	P	**P**	**03 10 57.1**	**+2.0**
KMI				AP	pP	03 11 06.8	+2.8
KMI				XP	sP	03 11 10.8	+2.9
KMI				PP	PP	03 11 47.6	0.0
KMI				S	**S**	**03 15 41.4**	**+1.2**
KMI				XS		03 15 58.0	
KMI				SS	SS	03 17 08.0	+1.0
KMI				LR	LR		
	comp=N,210nm,14.9s,MS4.0						
KMI				LR	LR		
	comp=E,190nm,13.8s,MS4.0						
KMI				LR	LR		
	comp=Z,320nm,17.0s,MS4.0						
HILS	**Ha’il**	**28.69**	**255**	P	**P**	**03 10 56.8**	**+1.2**
OBN	**Obninsk**	**28.96**	**315**	α *i*P	**P**	**03 10 56.9**	**-1.0**
OBN				*e*		03 11 03.1	
OBN				*e*		03 11 44.5	
OBN				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.0						
OBN				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.1						
OBN	**Obninsk**	**28.96**	**315**	*e*P	**P**	**03 10 56.7**	**-1.1**
	comp=Z,26nm,0.6s,mb5.1						
XAN	**Xi’an**	**29.01**	**89**	P	**P**	**03 10 59.3**	**+0.8**
XAN				AP	pP	03 11 05.0	-2.4
HHC	**Hu-ho-hao-te**	**29.22**	**75**	*e*P	**P**	**03 11 01.0**	**+0.7**
HHC				AP	pP	03 11 11.9	+2.7
HHC				XP	sP	03 11 15.8	+2.6
HHC				PP	PP	03 11 54.8	-0.5
HHC				S	**S**	**03 15 46.4**	**-3.1**
HHC				SCP		03 17 47.9	
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
HHC				AMB	AMB		
	comp=Z,160nm,7.8s						
HHC				LR	LR		
	comp=N,270nm,15.7s,MS4.1						
HHC				LR	LR		
	comp=E,280nm,17.7s,MS4.1						
HHC				LR	LR		
	comp=Z,300nm,14.7s,MS4.0						
SIM	**Simferopol’**	**29.26**	**294**	*d* *i*P	**P**	**03 11 01.0**	**+0.3**
SIM				*e*S	**S**	**03 15 50.0**	**-0.3**
SIM				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.2						
AFFS	**‘Afif**	**29.81**	**248**	P	**P**	**03 11 06.5**	**+0.7**
ASF	**Jabal al Asfar**	**30.16**	**267**	P	**P**	**03 11 08.6**	**-0.2**
	comp=Z,1.6nm,0.4s,mb4.1,baz=303,slow=2.4,SNR=5.6						
ASF				LR	LR	03 25 35.4	
	comp=Z,118nm,21.4s,MS3.5,baz=293,slow=41						
BR131	**Keskin Array S**	**30.32**	**283**	*e*P	**P**	**03 11 10.4**	**+0.3**
	comp=Z,15nm,0.6s,mb4.9						
BRTR	**Keskin Array B**	**30.32**	**283**	P	**P**	**03 11 10.6**	**+0.5**
	comp=Z,13nm,0.5s,mb5.0,baz=90,slow=7.4,SNR=85						
KAMT	**Kaman**	**30.34**	**283**	*e*P	**P**	**03 11 10.8**	**+0.5**
CIT	**Chita**	**30.45**	**52**	*e*P	**P**	**03 11 09.5**	**-1.7**
CMAR	**Chiang Mai Arr**	**30.55**	**126**	P	**P**	**03 11 12.8**	**+0.4**
	comp=Z,0.8nm,0.3s,mb4.0,baz=316,slow=8.4,SNR=5.1						
CMAR				LR	LR	03 25 57.9	
	comp=Z,194nm,18.6s,MS3.8,baz=295,slow=41						
SAFT	**Safranbolu**	**30.73**	**287**	*e*P	**P**	**03 11 14.0**	**+0.2**
GYA	**Guiyang**	**30.75**	**105**	P	**P**	**03 11 15.4**	**+1.4**
GYA				AP	pP	03 11 25.3	+2.4
GYA				XP	sP	03 11 31.0	+4.1
GYA				PCP	PcP	03 14 11.8	+0.6
GYA				S	**S**	**03 16 12.6**	**-1.3**
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
GYA				AMB	AMB		
	comp=Z,130nm,3.0s						
GYA				LR	LR		
	comp=N,310nm,16.2s,MS4.3						
GYA				LR	LR		
	comp=E,340nm,13.8s,MS4.3						
GYA				LR	LR		
	comp=Z,230nm,11.1s,MS4.1						
ENH	**Enshi**	**30.99**	**96**	*e*P	**P**	**03 11 16.3**	**+0.2**
	comp=Z,13nm,0.8s,mb4.8						
KAMS	**Al Khamasin**	**31.08**	**241**	P	**P**	**03 11 17.3**	**+0.2**
KBRS	**Khaybar**	**31.45**	**255**	P	**P**	**03 11 22.2**	**+2.0**
KIZT	**Kizilcal**	**31.84**	**282**	*e*P	**P**	**03 11 21.8**	**-1.7**
BOD	**Bodaibo**	**31.99**	**41**	*e*P	**P**	**03 11 23.4**	**-1.3**
BOD				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.0						
TATS	**Tathlith**	**32.36**	**241**	P	**P**	**03 11 29.2**	**+0.9**
AKASG	**Malin Array Be**	**32.57**	**305**	P	**P**	**03 11 27.6**	**-2.2**
	comp=Z,11nm,0.5s,mb5.0,baz=80,slow=7.2,SNR=11						
AKASG				PcP	PcP	03 14 13.9	-2.0
	comp=Z,4.0nm,0.3s,baz=74,slow=3.3,SNR=9.9						
EIL	**Elat**	**32.76**	**265**	*e*P	**P**	**03 11 29.8**	**-1.8**
	comp=Z,14nm,1.2s,mb4.8						
KIS	**Kishinev**	**32.85**	**298**	*e*P	**P**	**03 11 31.0**	**-1.2**
KIS				MLR	MLR		
	comp=Z,400nm,12.0s,MS4.3						
BLJS	**Baljurashi**	**33.41**	**244**	P	**P**	**03 11 39.1**	**+1.7**
DJNS	**Zahran al Janu**	**33.61**	**238**	P	**P**	**03 11 41.0**	**+1.9**
MNK	**Minsk**	**33.77**	**312**	*e*P	**P**	**03 11 36.0**	**-4.1**
HIA	**Hailar**	**34.22**	**58**	P	**P**	**03 11 44.3**	**+0.2**
TIA	**Tai’an**	**34.60**	**81**	*e*P	**P**	**03 11 48.0**	**+0.5**
TIA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
WHN	**Wuhan**	**34.62**	**92**	P	**P**	**03 11 49.3**	**+1.6**
MLR	**Muntele Rosu**	**34.97**	**296**	P	**P**	**03 11 50.8**	**+0.2**
	comp=Z,27nm,0.8s,mb5.2,baz=0.3,slow=3.2,SNR=60						
MLR				PP	PP	03 13 11.5	+2.5
	comp=Z,13nm,0.8s,baz=113,slow=12,SNR=3.3						
MLR				PcP	PcP	03 14 21.6	-1.1
	comp=Z,5.2nm,0.6s,baz=168,slow=5.4,SNR=3.6						
VSU	**Vasula**	**35.05**	**318**	*c* *i*P	**P**	**03 11 50.2**	**-0.9**
LVZ	**Lovozero**	**35.43**	**336**	*i* P	**P**	**03 11 53.8**	**-0.4**
LVZ				pmax	pmax		
	comp=N,12nm,0.9s						
LVZ				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.4						
LVZ				pmax	pmax		
	comp=E,17nm,1.0s						
LVZ				MLR	MLR		
	comp=N,259nm,15.0s,MS4.4						
LVZ				MLR	MLR		
	comp=E,430nm,15.0s,MS4.4						
LVZ				MLR	MLR		
	comp=Z,732nm,15.0s,MS4.6						
APA	**Apatity**	**35.65**	**335**	⇑*i*P	**P**	**03 11 55.8**	**-0.3**
APA				*i*	pP	03 12 04.6	-0.6
APA				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
APA				MLR	MLR		
	comp=Z,1µm,13.0s,MS4.8						
ALN	**Alexandroupoli**	**35.72**	**288**	*e*P	**P**	**03 11 56.8**	**-0.1**
LVV	**L’vov**	**35.90**	**303**	*e*P	**P**	**03 11 58.2**	**-0.2**
LVV				*e*	pP	03 12 08.2	+0.8
RDO	**Rodhopi**	**36.03**	**288**	*e*P	**P**	**03 12 00.0**	**+0.4**
FINES	**FINESS Array B**	**36.09**	**323**	P	**P**	**03 11 59.4**	**-0.5**
	comp=Z,15nm,0.5s,mb5.2,baz=107,slow=9.1,SNR=291						
FINES				PP	PP	03 13 18.4	-4.0
	comp=Z,5.5nm,0.6s,baz=117,slow=12,SNR=2.2						
FINES				PcP	PcP	03 14 24.7	-1.1
	comp=Z,5.7nm,0.6s,baz=101,slow=9.7,SNR=4.3						
FINES				LR	LR	03 27 38.3	
	comp=Z,275nm,19.3s,MS4.0,baz=326,slow=38						
KAF	**Kangasniemi**	**36.17**	**324**	*e*p	**P**	**03 11 59.3**	**-1.3**
KARP	**Karpathos**	**36.42**	**279**	*e*P	**P**	**03 12 04.0**	**+1.0**
SUW	**Suwalki**	**36.44**	**310**	P	**P**	**03 12 01.7**	**-1.2**
SUW				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.2						
SUW	**Suwalki**	**36.44**	**310**	P	**P**	**03 12 01.7**	**-1.2**
	comp=Z,42nm,1.4s,mb5.2						
KWP	**Kalwaria**	**36.77**	**303**	*e*P	**P**	**03 12 06.1**	**+0.4**
KOLS	**Kolonicke sedl**	**37.10**	**302**	*i* P	**P**	**03 12 08.6**	**+0.1**
KOLS				*e*		03 13 22.7	
OUR	**Ouranopolis**	**37.38**	**288**	*e*P	**P**	**03 12 10.9**	**0.0**
NJ2	**Nanjing**	**37.47**	**87**	*e*P	**P**	**03 12 13.5**	**+1.7**
NJ2				AP	pP	03 12 23.3	+2.5
NJ2				XP	sP	03 12 27.3	+2.7
NJ2				PP	PP	03 13 41.8	+1.7
NJ2				S	**S**	**03 17 59.0**	**+1.1**
NJ2				XS		03 18 15.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,130nm,5.1s						
NJ2				LR	LR		
	comp=N,460nm,21.5s,MS4.4						
NJ2				LR	LR		
	comp=E,420nm,18.6s,MS4.4						
NJ2				LR	LR		
	comp=Z,280nm,18.5s,MS4.1						
SRS	**Serrai**	**37.47**	**289**	*e*P	**P**	**03 12 12.0**	**+0.3**
CRVS	**Cervenica-Dubn**	**37.64**	**302**	*e*P	**P**	**03 12 12.9**	**-0.1**
CRVS				*e*PP	PP	03 13 25.6	-16
PAIG	**Paliouri**	**37.71**	**287**	*e*P	**P**	**03 12 14.5**	**+0.8**
SOH	**Sokhos**	**37.72**	**289**	*e*P	**P**	**03 12 14.8**	**+1.0**
AOS	**Alonnisos**	**37.77**	**286**	*e*P	**P**	**03 12 14.5**	**+0.3**
SNY	**Shenyang**	**37.87**	**70**	⇓P	**P**	**03 12 15.0**	**-0.1**
SNY				LR	LR		
	comp=N,140nm,16.8s,MS4.2						
SNY				LR	LR		
	comp=E,310nm,15.0s,MS4.2						
SNY				LR	LR		
	comp=Z,310nm,17.8s,MS4.2						
KNT	**Kendrikon**	**37.97**	**289**	*e*P	**P**	**03 12 16.0**	**+0.2**
VAY	**Valandovo**	**38.17**	**290**	⇑*i*P	**P**	**03 12 18.2**	**+0.7**
XOR	**Xorichti**	**38.23**	**286**	*e*P	**P**	**03 12 17.9**	**-0.1**
KECS	**Kecovo**	**38.33**	**301**	*e*P	**P**	**03 12 17.2**	**-1.6**
NIE	**Niedzica**	**38.34**	**303**	⇑*i*P	**P**	**03 12 19.6**	**+0.7**
GRG	**Griva**	**38.38**	**289**	*e*P	**P**	**03 12 20.0**	**+0.7**
LIT	**Litokhoron**	**38.54**	**288**	*e*P	**P**	**03 12 21.1**	**+0.4**
OJC	**Ojcow**	**38.60**	**304**	⇑*i*P	**P**	**03 12 21.0**	**-0.1**
VAM	**Vamos**	**38.74**	**280**	*e*P	**P**	**03 12 22.0**	**-0.4**
KEV	**Kevo**	**38.77**	**336**	*e*p	**P**	**03 12 21.0**	**-1.3**
CN2	**Changchun**	**38.78**	**66**	*e*P	**P**	**03 12 23.6**	**+1.0**
CN2				*e*AP	pP	03 12 34.5	+2.8
CN2				*e*S	**S**	**03 18 17.3**	**-0.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,14.0s,MS4.4						
CN2				LR	LR		
	comp=E,300nm,14.0s,MS4.4						
CN2				LR	LR		
	comp=Z,300nm,14.0s,MS4.3						
PSZ	**Piszkesteto**	**38.79**	**301**	*e*P	**P**	**03 12 21.5**	**-1.2**
PSZ				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
PSZ	**Piszkesteto**	**38.79**	**301**	*e*P	**P**	**03 12 21.5**	**-1.2**
	comp=Z,8.9nm,0.9s,mb4.5						
SKO	**Skopje**	**38.83**	**291**	*i* P	**P**	**03 12 24.0**	**+0.9**
AGG	**Agios Georgios**	**38.97**	**286**	*e*P	**P**	**03 12 24.2**	**-0.1**
GVD	**Gavdhos**	**39.03**	**279**	*e*P	**P**	**03 12 24.3**	**-0.5**
	comp=Z,46nm,0.6s,mb5.4						
ARCES	**ARCESS Array B**	**39.14**	**336**	P	**P**	**03 12 25.3**	**-0.1**
	comp=Z,18nm,0.5s,mb5.1,baz=109,slow=8.5,SNR=212						
ARCES				LR	LR	03 28 41.2	
	comp=Z,171nm,20.8s,MS3.9,baz=82,slow=36						
ARE0	**ARCESS Array S**	**39.14**	**336**	*e*P	**P**	**03 12 24.9**	**-0.5**
FNA	**Florina**	**39.18**	**289**	*e*P	**P**	**03 12 26.5**	**+0.5**
VLI	**Veliai**	**39.24**	**282**	*e*P	**P**	**03 12 25.2**	**-1.4**
KYTH	**Kithira**	**39.32**	**282**	*e*P	**P**	**03 12 26.0**	**-1.2**
DIVS	**Divcibare**	**39.38**	**295**	⇓*i*P	**P**	**03 12 28.4**	**+0.8**
EVR	**Evrytania**	**39.39**	**286**	*e*P	**P**	**03 12 28.0**	**+0.2**
VYHS	**Vyhne**	**39.41**	**302**	*e*P	**P**	**03 12 28.1**	**+0.2**
MEV	**Metsovon**	**39.56**	**288**	*e*P	**P**	**03 12 29.6**	**+0.4**
SSE	**Sheshan**	**39.67**	**87**	P	**P**	**03 12 28.4**	**-1.8**
SSE				S	**S**	**03 18 27.6**	**-3.8**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,60nm,4.8s						
SSE				LR	LR		
	comp=N,70nm,17.4s,MS3.6						
SSE				LR	LR		
	comp=E,20nm,17.4s,MS3.6						
SSE				LR	LR		
	comp=Z,80nm,16.8s,MS3.6						
OKC	**Ostrava-Krasne**	**39.70**	**304**	*e*P	**P**	**03 12 30.4**	**+0.2**
OKC				AMS	AMS	03 32 20.0	
	comp=Z,200nm,16.2s						
BBLS	**Bajina Basta -**	**39.84**	**294**	⇓*i*P	**P**	**03 12 32.2**	**+0.7**
MORC	**Moravsky Berou**	**40.09**	**304**	*e*P	**P**	**03 12 33.9**	**+0.4**
MORC				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
MORC	**Moravsky Berou**	**40.09**	**304**	*e*P	**P**	**03 12 33.9**	**+0.4**
	comp=Z,10nm,0.8s,mb4.6						
IGT	**Igoumenitsa**	**40.30**	**288**	*e*P	**P**	**03 12 34.6**	**-0.7**
LKD	**Levkas**	**40.31**	**286**	*e*P	**P**	**03 12 31.3**	**-4.1**
VLS	**Valsamata**	**40.53**	**286**	*e*P	**P**	**03 12 37.0**	**-0.1**
YAK	**Yakutsk**	**40.58**	**37**	*e*P	**P**	**03 12 35.9**	**-1.4**
YAK				pmax	pmax		
	comp=Z,32nm,1.0s,mb4.9						
YAK				pmax	pmax		
	comp=N,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,8.0nm,0.8s						
YAK	**Yakutsk**	**40.58**	**37**	*e*P	**P**	**03 12 36.5**	**-0.9**
	comp=N,46nm,0.6s,mb5.3						
KSP	**Ksiaz**	**40.77**	**306**	*e*P	**P**	**03 12 39.0**	**0.0**
KSP	**Ksiaz**	**40.77**	**306**	*e*P	**P**	**03 12 39.7**	**+0.7**
VRAC	**Vranov**	**40.77**	**303**	P	**P**	**03 12 37.7**	**-1.3**
	baz=243,slow=2.3						
DPC	**Dobruska-Polom**	**40.80**	**305**	*e*P	**P**	**03 12 39.9**	**+0.6**
DPC				*e*pP	pP	03 12 46.2	-2.2
DPC				AMS	AMS	03 32 10.0	
	comp=N,200nm,17.6s						
UPC	**Upice**	**40.98**	**305**	*e*P	**P**	**03 12 40.9**	**+0.1**
UPC				*e*pP	pP	03 12 47.6	-2.3
BSD	**Bornholm Skovb**	**41.26**	**312**	*e*P	**P**	**03 12 44.7**	**+1.7**
BSD				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.1						
BSD	**Bornholm Skovb**	**41.26**	**312**	*e*P	**P**	**03 12 44.7**	**+1.7**
	comp=Z,29nm,0.6s,mb5.1						
BSD				*e*		03 13 11.7	
BSD	**Bornholm Skovb**	**41.26**	**312**	*i* P	**P**	**03 12 44.7**	**+1.7**
	comp=Z,29nm,0.6s,mb5.1						
BSD				*e*		03 13 11.7	
TRO	**Tromso**	**41.33**	**335**	*e*P	**P**	**03 12 41.7**	**-1.7**
	comp=Z,44nm,1.7s,mb4.8						
TRO	**Tromso**	**41.33**	**335**	*e*P	**P**	**03 12 41.7**	**-1.7**
TRO				AMb	AMB	03 12 43.3	
	comp=Z,44nm,1.7s,mb4.8						
TRO				AMS	AMS	03 30 58.1	
	comp=Z,283nm,19.0s,MS4.2						
INCN	**Inchon**	**41.38**	**75**	*e*P	**P**	**03 12 44.5**	**+0.3**
	comp=Z,27nm,0.7s,mb5.0						
MDJ	**Mudanjiang**	**41.51**	**64**	P	**P**	**03 12 45.1**	**0.0**
MDJ				AP	pP	03 12 53.6	-0.6
MDJ				XP	sP	03 12 57.8	-0.2
MDJ				PCP	PcP	03 14 40.8	-2.1
MDJ				SCP		03 18 28.8	
MDJ				PCS		03 18 32.6	
MDJ				S	**S**	**03 18 58.0**	**-0.4**
MDJ				XS		03 19 16.1	
MDJ				SCS	ScS	03 22 46.0	+1.8
MDJ				AMB	AMB		
	comp=Z,40nm,4.7s						
MDJ				LR	LR		
	comp=N,210nm,22.4s,MS4.0						
MDJ				LR	LR		
	comp=E,80nm,23.9s,MS4.0						
MDJ				LR	LR		
	comp=Z,170nm,17.6s						
MDJ	**Mudanjiang**	**41.51**	**64**	*e*P	**P**	**03 12 45.1**	**+0.1**
ARSA	**Arzberg**	**41.81**	**300**	⇑*i*P	**P**	**03 12 47.7**	**+0.1**
	comp=Z,11nm,1.2s,mb4.4						
HFS	**Hagfors**	**41.89**	**320**	P	**P**	**03 12 47.6**	**-0.4**
	comp=Z,27nm,0.5s,mb5.2,baz=98,slow=10,SNR=227						
PVCC	**Panska Ves**	**41.89**	**305**	*e*P	**P**	**03 12 48.9**	**+0.8**
PVCC				*e*pP	pP	03 12 57.7	+0.4
PVCC				AMS	AMS	03 33 40.0	
	comp=Z,200nm,15.7s						
GROS	**Grobnik**	**41.99**	**299**	*i* P	**P**	**03 12 49.3**	**+0.3**
PRU	**Pruhonice**	**41.99**	**305**	*e*P	**P**	**03 12 49.5**	**+0.6**
PRU				*e*pP	pP	03 12 55.9	-2.2
PRU				AMS	AMS	03 33 30.0	
	comp=Z,300nm,14.9s						
GCIS	**Gornji Cirnik**	**42.03**	**298**	⇑*i*P	**P**	**03 12 49.8**	**+0.5**
GCIS				*e*PP	PP	03 14 44.2	+15
KLR	**Kul’dur**	**42.05**	**57**	*e*P	**P**	**03 12 46.7**	**-2.8**
BRG	**Berggiesshubel**	**42.24**	**306**	*i* P	**P**	**03 12 51.4**	**+0.4**
BRG				*i*	pP	03 13 01.3	+1.2
BRG				*e*		03 14 41.8	
BRG				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.6						
BRG				MLR	MLR		
	comp=Z,400nm,20.6s,MS4.3						
BRG	**Berggiesshubel**	**42.24**	**306**	*i* P	**P**	**03 12 51.4**	**+0.4**
	comp=Z,13nm,0.8s,mb4.6						
BRG				*i*		03 12 57.9	
BRG				*i*	pP	03 13 01.3	+1.2
BRG				*e*		03 14 41.8	
BRG				LR	LR		
	comp=Z,400nm,20.6s,MS4.3						
KS15	**Wonju Array Si**	**42.33**	**75**	*e*P	**P**	**03 12 51.0**	**-0.9**
TIXI	**Tiksi**	**42.41**	**23**	*i* P	**P**	**03 12 51.2**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,12nm,0.5s,mb4.8						
MOA	**Molln**	**42.54**	**301**	⇑*i*P	**P**	**03 12 53.6**	**+0.1**
	comp=Z,25nm,1.6s,mb4.7						
MELSS	**Ber_school_2**	**42.55**	**330**	*e*P	**P**	**03 12 52.8**	**-0.6**
VISS	**Visnje**	**42.58**	**298**	⇑*i*P	**P**	**03 12 54.5**	**+0.6**
VISS				*e*		03 13 01.0	
VISS				*e*	pP	03 13 04.8	+1.9
OBKA	**Obir**	**42.62**	**299**	⇑*i*P	**P**	**03 12 54.9**	**+0.7**
	comp=Z,36nm,1.4s,mb4.9						
GEC2	**GERESS Array S**	**42.72**	**303**	*e*P	**P**	**03 12 55.7**	**+0.7**
GEC2				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.8						
GEC2	**GERESS Array S**	**42.72**	**303**	*e*P	**P**	**03 12 55.7**	**+0.7**
	comp=Z,20nm,1.1s,mb4.8						
GERES	**GERESS Array B**	**42.72**	**303**	P	**P**	**03 12 55.5**	**+0.6**
	comp=Z,6.9nm,0.7s,mb4.5,baz=68,slow=7.2,SNR=73						
GERES				PcP	PcP	03 14 44.7	-2.2
	comp=Z,2.4nm,0.7s,baz=90,slow=5.3,SNR=4.3						
GERES				LR	LR	03 35 03.0	
	comp=Z,207nm,18.3s,MS4.1,baz=299,slow=42						
LJU	**Ljubljana**	**42.74**	**299**	⇑*i*P	**P**	**03 12 55.9**	**+0.8**
LJU				*e*	pP	03 13 05.8	+1.5
LJU				*e*		03 14 46.7	
LJU				pmax	pmax		
	comp=Z,69nm,1.4s,mb5.2						
LJU	**Ljubljana**	**42.74**	**299**	⇑*i*P	**P**	**03 12 55.9**	**+0.8**
	comp=Z,69nm,1.4s,mb5.2						
LJU				*e*	pP	03 13 05.8	+1.5
LJU				*e*PP	PP	03 14 46.7	+10
KHC	**Kasperske Hory**	**42.75**	**303**	*e*P	**P**	**03 12 55.5**	**+0.3**
KHC				*e*pP	pP	03 13 01.2	-3.1
KHC				AMS	AMS	03 34 10.0	
	comp=Z,200nm,18.5s						
CLL	**Collm**	**42.76**	**307**	⇑*i*P	**P**	**03 12 55.1**	**-0.2**
CLL				*i* *PP	pP	03 13 05.3	+0.9
CLL				*e*S	**S**	**03 19 06.0**	**-11**
CLL				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.8						
CLL				MLR	MLR		
	comp=Z,500nm,18.9s,MS4.4						
CLL	**Collm**	**42.76**	**307**	⇑*i*P	**P**	**03 12 55.1**	**-0.2**
	comp=Z,12nm,0.6s,mb4.8						
CLL				*i* pP	pP	03 13 05.3	+0.9
CLL				*e*S	**S**	**03 19 06.0**	**-11**
CLL				LR	LR		
	comp=Z,500nm,18.9s,MS4.4						

CLL	Collm	42.76	307	⇑P	P	03 12 55.1	-0.2
	comp=Z,logA/T=1.3,mb4.8						
CLL				i *PP	pP	03 13 05.3	+0.9
CLL				e*SP	sP	03 13 09.0	+0.8
CLL				ePP	PP	03 14 38.0	+1.0
CLL				e*PPP		03 14 45.0	
CLL				e*SS		03 19 32.0	
CEY	Cerknica	42.88	298	⇑iP	P	03 12 56.9	+0.6
TIP	Timpagrande	43.04	288	P	P	03 12 57.9	+0.2
NB2	NORSAR Subarra	43.13	321	P	P	03 12 57.4	-0.8
	comp=Z,9.8nm,0.5s,mb4.8,baz=92,slow=7.9						
NB2	NORSAR Subarra	43.13	321	P	P	03 12 57.4	-0.8
	baz=92,slow=8.6						
NOA	NORSAR Array B	43.13	321	P	P	03 12 57.5	-0.7
	comp=Z,9.8nm,0.6s,mb4.7,baz=92,slow=7.9,SNR=64						
NOA				LR	LR	03 31 47.3	
	comp=Z,352nm,20.6s,MS4.2,baz=75,slow=37						
NOA	NORSAR Array B	43.13	321	P	P	03 12 57.5	-0.7
NOA				LR	LR	03 31 47.3	
VOY	Vojsko	43.17	299	eP	P	03 12 58.8	+0.1
VOY				e		03 13 05.4	
VOY				e		03 14 47.8	
WET	Wettzell	43.20	304	eP	P	03 12 59.4	+0.6
WET				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.6						
WET	Wettzell	43.20	304	eP	P	03 12 59.4	+0.6
	comp=Z,15nm,1.1s,mb4.6						
NKC	Novy Kostel	43.28	305	eP	P	03 12 59.6	+0.1
NKC				epP	pP	03 13 10.0	+1.4
NKC				AMS	AMS	03 33 10.0	
	comp=Z,300nm,22.6s						
NAO01	NORSAR Array S	43.29	321	eP	P	03 12 58.4	-1.0
	comp=Z,10nm,0.7s,mb4.7						
KBA	Koelnbreinsper	43.30	301	⇑iP	P	03 13 00.0	+0.3
	comp=Z,26nm,1.9s,mb4.6						
KBA	Koelnbreinsper	43.30	301	⇑iP	P	03 13 00.0	+0.3
KBA				pmax	pmax		
	comp=Z,26nm,1.9s,mb4.6						
TRI	Trieste	43.33	298	P	P	03 13 00.3	+0.3
TRI				pmax	pmax		
	comp=Z,103nm,0.8s,mb5.6						
TRI	Trieste	43.33	298	P	P	03 13 00.3	+0.3
	comp=Z,103nm,0.8s,mb5.6						
PTCC	Patocco-Chiusa	43.45	300	P	P	03 13 00.9	0.0
FG5	Orsara di Pugl	43.47	292	P	P	03 13 02.6	+1.5
MRLC	Muro Lucano	43.47	291	P	P	03 13 01.1	0.0
SLCN	Sala Consilina	43.48	290	P	P	03 13 02.5	+1.3
MGR	Morigerati	43.61	290	P	P	03 13 03.2	+0.9
	comp=Z,19nm,0.8s,mb4.9						
SGO	Sicignano	43.66	291	P	P	03 13 03.8	+1.1
SGO				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.8						
SGO	Sicignano	43.66	291	P	P	03 13 03.8	+1.1
	comp=Z,11nm,0.5s,mb4.8						
MOX	Moxa	43.73	306	eP	P	03 13 03.8	+0.6
MOX				e		03 14 49.3	
MOX				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.6						
MOX				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.2						
MOX	Moxa	43.73	306	eP	P	03 13 03.8	+0.6
	comp=Z,14nm,1.2s,mb4.6						
MOX				e		03 14 49.3	
MOX				LR	LR		
	comp=Z,300nm,20.0s,MS4.2						
MOX	Moxa	43.73	306	i P	P	03 13 03.8	+0.6
	comp=Z,logA/T=1.1,mb4.6						
MOX				PP	PP	03 14 49.0	+2.3
MOX				L		03 33 01.0	
CSSN	Cassano Irpino	43.77	291	P	P	03 13 04.9	+1.3
SOI	Samo	43.93	287	P	P	03 13 05.1	+0.2
SOI				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
SOI	Samo	43.93	287	P	P	03 13 05.1	+0.2
	comp=Z,14nm,0.9s,mb4.7						
KONO	Kongsberg	43.95	319	eP	P	03 13 03.8	-1.0
KONO				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.8						
KONO	Kongsberg	43.95	319	eP	P	03 13 03.8	-1.0
	comp=Z,11nm,0.6s,mb4.8						
BSEG	Bad Segeberg	44.03	311	eP	P	03 13 05.9	+0.4
SGG	Gregorio Mates	44.07	292	P	P	03 13 08.5	+2.4
SEST	Monte Rota	44.13	300	P	P	03 13 06.4	-0.1
	comp=Z,19nm,0.9s,mb4.8						
GRA1	Grafenberg Arr	44.16	305	eP	P	03 13 07.7	+1.1
	comp=Z,22nm,0.9s,mb4.9						
GRF	Grafenberg Arr	44.16	305	eP	P	03 13 07.7	+1.1
GRF				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.9						
GRF	Grafenberg Arr	44.16	305	eP	P	03 13 07.7	+1.1
GRF				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.9						
GRF	Grafenberg Arr	44.16	305	eP	P	03 13 07.7	+1.1
	comp=Z,22nm,0.9s,mb4.9						
MTTG	Motta San Giov	44.22	287	P	P	03 13 08.0	+0.7
TERO	Teramo	44.26	294	P	P	03 13 08.1	+0.6
	comp=Z,12nm,0.7s,mb4.8						
CLZ	Clausthal	44.30	308	eP	P	03 13 07.9	+0.1
CLZ				pmax	pmax		
	comp=Z,21nm,1.6s,mb4.6						
CLZ	Clausthal	44.30	308	eP	P	03 13 07.9	+0.1
	comp=Z,21nm,1.6s,mb4.6						
CING	Cingoli	44.33	295	P	P	03 13 08.6	+0.5
	comp=Z,13nm,0.7s,mb4.8						
MUD	Monsted U’grnd	44.39	314	eP	P	03 13 08.8	+0.4
MUD				e		03 14 48.8	
MUD				i		03 23 10.4	
MUD				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
MUD	Monsted U’grnd	44.39	314	eP	P	03 13 08.8	+0.4
	comp=Z,14nm,0.8s,mb4.8						
MUD				e		03 14 48.8	
MUD				i		03 23 10.4	
MUD	Monsted U’grnd	44.39	314	i P	P	03 13 08.8	+0.4
	comp=Z,14nm,0.8s,mb4.8						
MUD				e		03 14 48.8	
MUD				i		03 23 10.4	
WATA	Walderalm	44.42	301	⇓iP	P	03 13 08.6	-0.2
	comp=Z,7.6nm,1.0s,mb4.4						
WATA	Walderalm	44.42	301	⇓iP	P	03 13 08.6	-0.2
WATA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
FUR	Furstenfeldbru	44.44	302	eP	P	03 13 09.6	+0.7
FUR				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.0						
FUR	Furstenfeldbru	44.44	302	eP	P	03 13 09.6	+0.7
	comp=Z,39nm,1.1s,mb5.0						
VVLD	Villa Vallelon	44.47	293	P	P	03 13 09.6	+0.3
	comp=Z,16nm,0.7s,mb4.8						
ARV	Arcevia	44.47	296	P	P	03 13 09.9	+0.6
	comp=Z,16nm,0.7s,mb4.8						
AQU	L’Aquila	44.48	294	P	P	03 13 10.5	+1.2
AQU				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
AQU	L’Aquila	44.48	294	P	P	03 13 10.5	+1.2
	comp=Z,11nm,0.8s,mb4.7						
FSSB	Fossombrone	44.53	296	P	P	03 13 10.4	+0.6
NRCA	Norcia	44.54	295	P	P	03 13 10.7	+0.9
PTQR	Pietraquaria	44.58	293	P	P	03 13 11.6	+1.4
SLNA	Salina	44.66	288	P	P	03 13 11.4	+0.5
SQTA	Sankt Quirin	44.69	301	⇓iP	P	03 13 10.4	-0.6
	comp=Z,7.5nm,1.0s,mb4.5						
SQTA	Sankt Quirin	44.69	301	⇓iP	P	03 13 10.4	-0.6
SQTA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
ASS	Assisi	44.80	295	P	P	03 13 13.4	+1.5
ASS				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.1						
ASS	Assisi	44.80	295	P	P	03 13 13.4	+1.5
	comp=Z,18nm,0.6s,mb5.1						
MURB	Monte Urbino	44.83	295	P	P	03 13 13.8	+1.6
	comp=Z,43nm,1.0s,mb5.2						
AGST	Augusta-Monte	44.84	286	P	P	03 13 12.2	-0.1
CERT	Cerreto	44.90	293	P	P	03 13 12.9	+0.2
	comp=Z,13nm,0.7s,mb4.9						
MNS	Montasola	44.98	294	P	P	03 13 13.5	+0.1
MNS				pmax	pmax		
	comp=Z,26nm,2.1s,mb4.7						
MNS	Montasola	44.98	294	P	P	03 13 13.5	+0.1
	comp=Z,26nm,2.1s,mb4.7						
SFI	Santa Sofia	45.12	296	P	P	03 13 15.7	+1.3
SFI				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.9						
SFI	Santa Sofia	45.12	296	P	P	03 13 15.7	+1.3
	comp=Z,13nm,0.6s,mb4.9						
VMG	Vicchio	45.31	297	P	P	03 13 17.8	+1.8
SEI	Scarperia	45.42	297	P	P	03 13 18.7	+1.9
BRMO	Bormio	45.43	300	P	P	03 13 16.4	-0.5
FUORN	Ofenpass	45.47	301	P	P	03 13 18.2	+1.0
FNVD	Fontana Vidola	45.55	297	P	P	03 13 20.3	+2.5
DAVA	Damuels	45.56	302	⇑iP	P	03 13 17.6	-0.2
	comp=Z,41nm,1.4s,mb5.2						
TOLF	Tolfa	45.56	294	P	P	03 13 18.0	+0.1
	comp=Z,56nm,2.2s,mb5.1						
ZCCA	Zocca	45.59	297	P	P	03 13 19.9	+1.7
CSNT	Castellina Chi	45.63	296	P	P	03 13 18.6	+0.1
STU	Stuttgart	45.65	304	eP	P	03 13 17.5	-1.0
STU				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
STU	Stuttgart	45.65	304	eP	P	03 13 17.5	-1.0
	comp=Z,28nm,1.0s,mb5.1						
DAVOX	Davos	45.68	301	P	P	03 13 18.6	-0.2
TNS	Taunus Mts	45.80	306	eP	P	03 13 19.1	-0.6
GSCL	Gusciola	45.86	297	P	P	03 13 21.7	+1.4
ERBM	Eremo	45.96	298	P	P	03 13 22.7	+1.6
BER	Bergen	46.05	320	AMS	AMS	03 33 50.0	
	comp=Z,335nm,19.0s,MS4.3						
VLC	Villacollemand	46.06	297	P	P	03 13 22.5	+0.7
	comp=Z,42nm,1.5s,mb5.2						
SPAK	Spaichingen	46.07	303	eP	P	03 13 22.4	+0.5
PII	Pisa	46.09	297	P	P	03 13 21.8	-0.3
PII				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.2						
PII	Pisa	46.09	297	P	P	03 13 21.8	-0.3
	comp=Z,19nm,0.6s,mb5.2						
KBS	Kingsbay	46.15	346	eP	P	03 13 22.1	-0.1
KBS				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
KBS	Kingsbay	46.15	346	eP	P	03 13 22.1	-0.1
	comp=Z,25nm,0.8s,mb5.2						
KBS	Kingsbay	46.15	346	eP	P	03 13 22.4	+0.3
KBS				AMS	AMS	03 36 37.9	
	comp=Z,127nm,17.5s,MS3.9						
JNU	Nakatsue	46.26	79	P	P	03 13 22.4	-1.2
	comp=Z,13nm,0.8s,mb5.0,baz=332,slow=2.7,SNR=7.8						
JNU				LR	LR	03 35 38.3	
	comp=Z,68nm,20.0s,MS3.6,baz=180,slow=40						
BFO	Black Forest	46.31	303	eP	P	03 13 23.7	-0.1
BFO				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
BFO	Black Forest	46.31	303	eP	P	03 13 23.7	-0.1
	comp=Z,12nm,1.1s,mb4.7						
ABH	Alteburg	46.45	306	eP	P	03 13 25.3	+0.5
MUGIO	Muggio	46.47	300	P	P	03 13 23.7	-1.4
LANF	Langenberg	46.49	304	eP	P	03 13 25.8	+0.6
FELD	Feldberg	46.64	303	eP	P	03 13 26.3	-0.1
RUP	Ruppelstein	46.79	305	eP	P	03 13 28.3	+0.7
WLS	Welschbruch	46.92	304	eP	P	03 13 28.7	+0.1
CDF	Champ du Feu	46.97	304	⇑iP	P	03 13 28.8	-0.2
	comp=Z,22nm,0.8s,mb4.8						
CDF	Champ du Feu	46.97	304	⇑iP	P	03 13 28.8	-0.2
CDF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
ECH	Echery	47.10	303	eP	P	03 13 30.0	0.0
JOW	Kunigami	47.15	88	P	P	03 13 30.4	-0.3
	comp=Z,21nm,0.4s,mb5.4,baz=356,slow=4.5,SNR=9.6						
WLF	Walferdange	47.38	306	eP	P	03 13 32.3	+0.1
WLF				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
WLF	Walferdange	47.38	306	eP	P	03 13 32.3	+0.1
	comp=Z,22nm,0.9s,mb5.1						
HINF	Hinteralfeld	47.40	303	⇑iP	P	03 13 31.8	-0.6
	comp=Z,13nm,0.6s,mb4.7						
HINF	Hinteralfeld	47.40	303	⇑iP	P	03 13 31.8	-0.6
HINF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
PGF	Pioggiola	47.52	296	⇑iP	P	03 13 33.1	-0.3
	comp=Z,54nm,1.2s,mb5.2						
PGF	Pioggiola	47.52	296	⇑iP	P	03 13 33.1	-0.3
PGF				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
FIN	Finale Ligure	47.54	298	P	P	03 13 32.5	-1.0
HAU	Haudompre	47.68	303	⇑iP	P	03 13 34.0	-0.6
	comp=Z,18nm,0.7s,mb4.9						
HAU				eR			
	comp=Z,221nm,17.6s						
HAU	Haudompre	47.68	303	⇑iP	P	03 13 34.0	-0.6
HAU				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
HAU				MLR	MLR		
	comp=Z,220nm,17.6s,MS4.2						
DGI	Dorgali Grotta	47.84	293	P	P	03 13 35.4	-0.6
	comp=Z,28nm,2.2s,mb4.9						
IMI	Imperia	47.85	298	P	P	03 13 36.3	+0.3
THEF	They Montfort	47.85	304	eP	P	03 13 36.0	0.0
SAOF	Saorge	48.05	298	eP	P	03 13 37.9	+0.3
GIVF	Givet	48.10	306	eP	P	03 13 36.7	-1.1
LPG	La Plagne	48.13	300	⇑iP	P	03 13 38.3	+0.2
	comp=Z,28nm,0.8s,mb5.1						
LPG	La Plagne	48.13	300	⇑iP	P	03 13 38.3	+0.2
LPG				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
AUTN	L’Aution	48.14	298	eP	P	03 13 38.7	+0.5
LPL	La Plagne	48.14	300	⇑iP	P	03 13 38.3	+0.1
	comp=Z,28nm,0.6s,mb5.2						
LPL	La Plagne	48.14	300	⇑iP	P	03 13 38.3	+0.1
LPL				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.2						
SBF	Sospel	48.17	298	⇑iP	P	03 13 38.6	+0.1
	comp=Z,68nm,0.8s,mb5.4						
SBF	Sospel	48.17	298	⇑iP	P	03 13 38.6	+0.1
SBF				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.4						
CABF	La Chapelle	48.24	302	⇑iP	P	03 13 38.6	-0.4
	comp=Z,26nm,0.9s,mb5.0						
CABF	La Chapelle	48.24	302	⇑iP	P	03 13 38.6	-0.4
CABF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
TOUF	Mont Tournerai	48.25	298	eP	P	03 13 39.4	+0.3
REVF	Revere	48.26	298	eP	P	03 13 39.0	-0.2
VSL	Villasalto	48.30	292	eP	P	03 13 37.9	-1.7
	comp=Z,9.3nm,1.0s,mb4.8						
VSL				ePcP	PcP	03 15 05.8	-0.6
BNI	Bardonecchia	48.31	299	P	P	03 13 39.9	+0.3
BNI				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.9						
BNI	Bardonecchia	48.31	299	P	P	03 13 39.9	+0.3
	comp=Z,16nm,1.3s,mb4.9						
MBDF	Montbardon	48.35	299	⇑iP	P	03 13 39.3	-0.6
	comp=Z,39nm,0.7s,mb5.2						
MBDF	Montbardon	48.35	299	⇑iP	P	03 13 39.3	-0.6
MBDF				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.2						
MVIF	Mont Vial	48.36	298	eP	P	03 13 40.2	+0.3
BAIF	Baives	48.49	307	⇑iP	P	03 13 40.9	0.0
	comp=Z,24nm,0.8s,mb5.0						
BAIF	Baives	48.49	307	⇑iP	P	03 13 40.9	0.0
BAIF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
CALN	Calern	48.58	298	eP	P	03 13 41.8	+0.1
FRF	La Foret Royal	48.81	298	⇑iP	P	03 13 43.0	-0.4
	comp=Z,43nm,0.9s,mb5.2						
FRF	La Foret Royal	48.81	298	⇑iP	P	03 13 43.0	-0.4
FRF				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.2						
ORIF	Oris-en-Rattie	48.90	300	⇑iP	P	03 13 44.3	+0.3
	comp=Z,19nm,0.7s,mb5.0						
ORIF				eR			
	comp=Z,232nm,17.8s						
LMR	La Mourre	48.98	297	⇑iP	P	03 13 44.1	-0.6
	comp=Z,20nm,1.0s,mb4.8						
LMR	La Mourre	48.98	297	⇑iP	P	03 13 44.1	-0.6
LMR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
STOF	St-Etienne Org	49.17	298	eP	P	03 13 46.4	+0.2
TAVF	Tavernes	49.20	298	eP	P	03 13 46.4	0.0
VILF	Villemus	49.35	298	eP	P	03 13 47.6	0.0
SMRF	Simiane la Rot	49.41	298	⇑iP	P	03 13 47.8	-0.2
	comp=Z,30nm,1.0s,mb5.0						
PUYF	Puyloubier	49.47	298	eP	P	03 13 48.4	-0.1
LOR	Lormes	49.50	303	⇑iP	P	03 13 47.4	-1.3
	comp=Z,12nm,0.9s,mb4.6						
LOR				eR			
	comp=Z,79nm,17.8s						
LOR	Lormes	49.50	303	⇑iP	P	03 13 47.4	-1.3
LOR				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
LOR				MLR	MLR		
	comp=Z,80nm,17.8s,MS3.8						
BERF	Bertagne	49.55	298	eP	P	03 13 49.6	+0.5
TREF	Trevaresse	49.66	298	eP	P	03 13 49.8	-0.1
SMF	Signal de Mont	49.71	302	⇑iP	P	03 13 49.5	-0.8
	comp=Z,14nm,0.6s,mb4.8						
SMF	Signal de Mont	49.71	302	⇑iP	P	03 13 49.5	-0.8
SMF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
GELF	Grande-Etoile	49.71	298	eP	P	03 13 50.3	0.0
VIVF	Saint-Julien-l	49.73	300	⇑iP	P	03 13 50.2	-0.3
	comp=Z,27nm,0.8s,mb5.0						
VIVF	Saint-Julien-l	49.73	300	⇑iP	P	03 13 50.2	-0.3
VIVF				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
PRAF	Pradon	49.74	298	eP	P	03 13 50.3	-0.3
YSS	Yuzh-Sakhalins	49.75	57	eP	P	03 13 49.0	-1.6
YSS				pmax	pmax		
	comp=Z,62nm,1.3s,mb5.5						
YSS	Yuzh-Sakhalins	49.75	57	eP	P	03 13 49.0	-1.6
	comp=Z,62nm,1.3s,mb5.5						
AVF	Avril sur Loir	49.98	303	⇑iP	P	03 13 51.5	-0.9
	comp=Z,58nm,1.0s,mb5.3						
AVF	Avril sur Loir	49.98	303	⇑iP	P	03 13 51.5	-0.9
AVF				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.3						
MAJO	Matsushiro	50.32	72	eP	P	03 13 54.2	-0.9
MAJO				e		03 14 00.7	
MAJO				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.2						
MAJO	Matsushiro	50.32	72	eP	P	03 13 54.2	-1.0
	comp=Z,14nm,0.6s,mb5.2						
MAJO				e		03 14 00.7	
MAT	Matsushiro	50.32	72	eP	P	03 13 53.0	-2.1
MAT				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
MAT	Matsushiro	50.32	72	eP	P	03 13 53.0	-2.1
	comp=Z,13nm,0.8s,mb5.0						
MAT	Matsushiro	50.32	72	P	P	03 13 53.4	-1.7
AGO	Saint Agoulin	50.36	302	eP	P	03 13 56.1	+0.8
BGF	Bois d’Agland	50.38	302	⇑iP	P	03 13 54.7	-0.7
LASF	Ste Croix	50.54	299	⇑iP	P	03 13 56.7	0.0
	comp=Z,51nm,1.0s,mb5.1						
PYM	Petit Puy Mans	50.54	301	eP	P	03 13 57.6	+0.9
LBL	Lubilhac	50.56	301	eP	P	03 13 58.1	+1.3
ASAJ	Asahikawa	50.58	61	P	P	03 13 56.6	-0.3
ASAJ				pmax	pmax		
	comp=Z,17nm,0.6s						
ASAJ	Asahikawa	50.58	61	P	P	03 13 56.5	-0.4
	comp=Z,17nm,0.6s,mb5.2,baz=265,slow=10,SNR=13						
JMIC	Jan Mayen	50.63	335	AMS	AMS	03 35 46.5	
	comp=Z,94nm,17.7s,MS3.9						
TCF	Toulx Ste Croi	50.89	302	⇑iP	P	03 13 58.8	-0.5
	comp=Z,44nm,1.2s,mb5.0						
TCF	Toulx Ste Croi	50.89	302	⇑iP	P	03 13 58.8	-0.5
TCF				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
MA2	Magadan	51.00	40	eP	P	03 13 58.3	-1.6
MA2				i		03 15 14.8	
MA2				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
MA2	Magadan	51.00	40	eP	P	03 13 58.6	-1.3
	comp=Z,5.9nm,0.6s,mb4.7						
MA2				ePcP	PcP	03 15 14.9	-1.1
CAF	Calviac	51.45	301	⇑iP	P	03 14 03.4	-0.1
	comp=Z,30nm,1.1s,mb4.8						
CAF	Calviac	51.45	301	⇑iP	P	03 14 03.4	-0.1
CAF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
ESK	Eskdalemuir	51.45	315	eP	P	03 14 01.6	-1.8
ESK				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
ESK	Eskdalemuir	51.45	315	eP	P	03 14 01.6	-1.8
	comp=Z,28nm,1.2s,mb5.1						
RJF	Les Rejaudoux	51.68	301	⇑iP	P	03 14 05.3	0.0
	comp=Z,20nm,0.9s,mb4.8						
RJF				eR			
	comp=Z,88nm,18.5s						
RJF	Les Rejaudoux	51.68	301	⇑iP	P	03 14 05.3	0.0
RJF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
RJF				MLR	MLR		
	comp=Z,90nm,18.5s,MS3.8						
EJON	La Jonquera	51.78	298	P	P	03 14 04.1	-2.1
	comp=Z,16nm,1.1s,mb4.9						
FLN	La Foliniere	51.80	306	⇑iP	P	03 14 05.0	-1.2
FLN				eR			
	comp=Z,340nm,21.5s						
MTLF	Montolieu	51.91	299	⇑iP	P	03 14 06.8	-0.3
	comp=Z,17nm,0.8s,mb4.7						
MTLF	Montolieu	51.91	299	⇑iP	P	03 14 06.8	-0.3
MTLF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
GRR	Gorron	52.16	306	⇑iP	P	03 14 07.5	-1.4
	comp=Z,19nm,0.6s,mb4.9						
GRR	Gorron	52.16	306	⇑iP	P	03 14 07.5	-1.4
GRR				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
MFF	Saint Martin d	52.31	303	⇑iP	P	03 14 08.9	-1.2
	comp=Z,20nm,0.9s,mb4.7						
MFF	Saint Martin d	52.31	303	⇑iP	P	03 14 08.9	-1.2
MFF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
LFF	La Frestale	52.32	301	⇑iP	P	03 14 09.8	-0.4
	comp=Z,26nm,0.8s,mb4.9						
LFF	La Frestale	52.32	301	⇑iP	P	03 14 09.8	-0.4
LFF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
DAG	Danmarks Havn	52.42	343	⇓iP	P	03 14 10.0	-0.5
	comp=Z,12nm,0.7s,mb4.9						
ETOS	Mallorca	52.88	294	P	P	03 14 11.3	-3.1
	comp=Z,21nm,0.9s,mb5.1						
EMIR	Miracle	52.92	297	P	P	03 14 12.5	-2.2
	comp=Z,32nm,1.4s,mb5.1						
SGMF	Saint Gilles	53.27	306	⇑iP	P	03 14 16.0	-1.1
	comp=Z,13nm,0.5s,mb4.8						
SGMF	Saint Gilles	53.27	306	⇑iP	P	03 14 16.0	-1.1
SGMF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
EPF	Esparros	53.30	299	⇑iP	P	03 14 16.0	-1.5
EPOB	Poblet	53.45	297	P	P	03 14 17.6	-1.0
	comp=Z,21nm,1.2s,mb4.9						
EBIE	Bielsa	53.57	299	P	P	03 14 19.0	-0.4
	comp=Z,18nm,1.2s,mb4.9						
EGRA	Graus	53.64	298	P	P	03 14 19.5	-0.4
	comp=Z,10nm,0.8s,mb4.8						
ROSF	Rostrenen	53.69	306	⇑iP	P	03 14 19.1	-1.1
	comp=Z,10nm,0.5s,mb4.7						
ROSF	Rostrenen	53.69	306	⇑iP	P	03 14 19.1	-1.1
ROSF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
QUIF	Quistinic	53.77	306	⇑iP	P	03 14 19.5	-1.3
	comp=Z,16nm,0.7s,mb4.8						
QUIF	Quistinic	53.77	306	⇑iP	P	03 14 19.5	-1.3
QUIF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
ETSF	Etsaut	53.96	299	⇑iP	P	03 14 21.9	-0.3
	comp=Z,23nm,0.9s,mb4.8						
ETSF	Etsaut	53.96	299	⇑iP	P	03 14 21.9	-0.3
ETSF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
ERTA	Horta de San J	54.13	297	P	P	03 14 22.7	-0.8
	comp=Z,47nm,1.3s,mb5.2						
EMHD	Djebel Mahouad	54.28	290	P	P	03 14 32.0	+7.3
SJPF	Ste Jean	54.33	300	⇑iP	P	03 14 24.1	-0.8
	comp=Z,11nm,0.8s,mb4.5						
SJPF	Ste Jean	54.33	300	⇑iP	P	03 14 24.1	-0.8
SJPF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
ESAC	San Caprasio	54.37	298	P	P	03 14 24.3	-1.0
	comp=Z,32nm,1.3s,mb5.1						
EALK	Alkurruntz	54.47	300	P	P	03 14 24.0	-2.0
	comp=Z,29nm,1.4s,mb5.0						
ELIZ	Elizondo	54.51	300	P	P	03 14 25.2	-1.1
ELIZ				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
ELIZ	Elizondo	54.51	300	P	P	03 14 25.2	-1.1
	comp=Z,2.8nm,0.5s,mb4.5						
EMOS	Mosqueruela	54.93	296	P	P	03 14 29.0	-0.5
	comp=Z,77nm,1.8s,mb5.4						
BILL	Bilibino	55.21	27α	iP	P	03 14 30.5	-0.6
BILL				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
BILL				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.3						
BILL	Bilibino	55.21	27	eP	P	03 14 30.1	-1.1
	comp=Z,4.4nm,0.6s,mb4.7						
EBNR	Beni Rached	55.27	291	P	P	03 14 33.0	+1.0
ECRI	Cripan	55.39	300	P	P	03 14 32.6	-0.2

ECRI				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
ECRI	**Cripan**	**55.39**	**300**	P	**P**	**03 14 32.6**	**-0.2**
	comp=Z,8.9nm,0.6s,mb5.0						
ECHA	**Ech Chlef**	**55.45**	**291**	P	**P**	**03 14 34.0**	**+0.7**
ECHF	**Ech Chlef**	**55.47**	**291**	P	**P**	**03 14 34.0**	**+0.6**
ECHE	**Chera**	**55.60**	**296**	P	**P**	**03 14 34.3**	**0.0**
ECHE				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
ECHE	**Chera**	**55.60**	**296**	P	**P**	**03 14 34.3**	**0.0**
	comp=Z,7.8nm,0.7s,mb4.8						
MBAR	**Mbarara**	**55.61**	**235**	*e*P	**P**	**03 14 33.1**	**-1.6**
MBAR				*e*	pP	03 14 41.4	-2.7
MBAR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
MBAR	**Mbarara**	**55.61**	**235**	*e*P	**P**	**03 14 33.1**	**-1.6**
	comp=Z,4.5nm,0.7s,mb4.6						
MBAR				*e*	pP	03 14 41.4	-2.7
EANR	**'Ain N'Sour**	**55.74**	**291**	P	**P**	**03 14 35.0**	**-0.3**
ELAN	**Lanestosa**	**55.76**	**301**	P	**P**	**03 14 35.0**	**-0.4**
	comp=Z,31nm,1.5s,mb5.1						
ETRT	**Tiaret**	**55.84**	**290**	P	**P**	**03 14 36.0**	**-0.1**
ETOB	**Tobarra**	**56.42**	**295**	P	**P**	**03 14 39.7**	**-0.5**
	comp=Z,22nm,1.0s,mb5.1						
CART	**Cartagena**	**56.51**	**294**	*e*P	**P**	**03 14 40.0**	**-0.9**
	comp=Z,24nm,0.8s,mb5.3						
EMUR	**La Murta**	**56.56**	**294**	P	**P**	**03 14 40.7**	**-0.5**
	comp=Z,21nm,1.4s,mb5.0						
EARI	**Arriondas**	**56.91**	**301**	P	**P**	**03 14 42.8**	**-0.8**
	comp=Z,35nm,1.8s,mb5.1						
EVIA	**Vianos**	**57.09**	**295**	P	**P**	**03 14 44.8**	**-0.2**
EVIA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
EVIA	**Vianos**	**57.09**	**295**	P	**P**	**03 14 44.8**	**-0.2**
	comp=Z,11nm,0.8s,mb5.0						
ENIJ	**Nijar**	**57.64**	**293**	P	**P**	**03 14 46.9**	**-2.0**
ENIJ				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
ENIJ	**Nijar**	**57.64**	**293**	P	**P**	**03 14 46.9**	**-2.0**
	comp=Z,14nm,0.8s,mb5.0						
ESDC	**Sonseca Array**	**57.64**	**297**	P	**P**	**03 14 47.6**	**-1.2**
	comp=Z,2.6nm,0.4s,mb4.6,baz=56,slow=7.1,SNR=25						
ESDC				PcP	PcP	03 15 40.7	-0.8
	comp=Z,0.7nm,0.4s,baz=48,slow=4.5,SNR=4.6						
ESDC	**Sonseca Array**	**57.64**	**297**	P	**P**	**03 14 47.5**	**-1.3**
	comp=Z,6.2nm,0.4s,mb5.0						
ESLA	**Sonseca Array**	**57.64**	**297**	*e*P	**P**	**03 14 46.4**	**-2.5**
	comp=Z,1.6nm,0.8s,mb4.1						
EQES	**Quesada**	**57.87**	**295**	P	**P**	**03 14 49.5**	**-0.9**
	comp=Z,33nm,1.4s,mb5.2						
EBER	**Berja**	**58.16**	**294**	P	**P**	**03 14 52.9**	**+0.4**
EPON	**Pontenova**	**58.17**	**302**	P	**P**	**03 14 51.5**	**-1.0**
	comp=Z,45nm,1.7s,mb5.2						
EBAN	**Banos Encina**	**58.21**	**295**	P	**P**	**03 14 51.9**	**-0.9**
EBAN				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
EBAN	**Banos Encina**	**58.21**	**295**	P	**P**	**03 14 51.9**	**-0.9**
	comp=Z,11nm,0.8s,mb4.9						
ECAL	**Calabor**	**58.51**	**301**	P	**P**	**03 14 52.8**	**-2.1**
	comp=Z,23nm,1.2s,mb5.1						
ERON	**Agron**	**58.75**	**294**	P	**P**	**03 14 55.2**	**-1.4**
	comp=Z,5.7nm,0.5s,mb4.9						
EADA	**Adamuz**	**58.76**	**296**	P	**P**	**03 14 54.5**	**-2.2**
	comp=Z,11nm,1.1s,mb4.8						
SUMG	**Summit**	**58.86**	**341**	*e*P	**P**	**03 14 56.8**	**-0.1**
	comp=Z,27nm,1.0s,mb5.2						
ELOJ	**Sierra Loja**	**58.94**	**294**	P	**P**	**03 14 56.4**	**-1.5**
ELOJ				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
ELOJ	**Sierra Loja**	**58.94**	**294**	P	**P**	**03 14 56.4**	**-1.6**
	comp=Z,3.7nm,0.7s,mb4.5						
STS	**Santiago**	**59.29**	**302**	P	**P**	**03 14 59.6**	**-0.7**
STS				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.2						
STS	**Santiago**	**59.29**	**302**	P	**P**	**03 14 59.6**	**-0.6**
	comp=Z,31nm,1.4s,mb5.1						
ELOB	**Lobios**	**59.43**	**301**	P	**P**	**03 15 00.5**	**-0.8**
	comp=Z,48nm,1.5s,mb5.3						
PVRL	**Vila Real**	**59.47**	**300**	*e*P	**P**	**03 15 01.0**	**-0.6**
	comp=Z,26nm,1.5s,mb5.0						
PVRL				*e*pP	pP	03 15 11.2	+0.2
EMAZ	**Mazaricos**	**59.54**	**302**	P	**P**	**03 14 59.5**	**-2.5**
	comp=Z,33nm,1.5s,mb5.1						
EMIJ	**Mijas**	**59.65**	**294**	P	**P**	**03 15 00.2**	**-2.7**
	comp=Z,13nm,0.8s,mb5.0						
EZAM	**Zamans**	**59.72**	**302**	P	**P**	**03 15 00.4**	**-2.9**
EZAM				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
EZAM	**Zamans**	**59.72**	**302**	P	**P**	**03 15 00.4**	**-2.9**
	comp=Z,10nm,0.7s,mb5.0						
MTE	**Manteigas**	**59.76**	**299**	*e*P	**P**	**03 15 03.2**	**-0.4**
PVIS	**Viseu**	**59.85**	**300**	*e*P	**P**	**03 15 03.7**	**-0.5**
	comp=Z,20nm,1.1s,mb5.0						
PVIS				*e*pP	pP	03 15 13.8	+0.2
PCBR	**Castelo Branco**	**59.98**	**299**	*e*P	**P**	**03 15 04.5**	**-0.5**
EBAD	**Badajoz**	**60.17**	**297**	P	**P**	**03 15 05.3**	**-1.1**
	comp=Z,32nm,1.3s,mb5.2						
ESPR	**Espera**	**60.27**	**295**	P	**P**	**03 15 05.7**	**-1.4**
	comp=Z,23nm,1.2s,mb5.1						
EMIN	**Mina Concepcio**	**60.41**	**296**	P	**P**	**03 15 07.1**	**-0.9**
	comp=Z,18nm,0.8s,mb5.1						
PTOM	**Tomar**	**60.71**	**299**	*e*P	**P**	**03 15 10.2**	**+0.1**
	comp=Z,32nm,1.1s,mb5.4						
PTOM				*e*pP	pP	03 15 20.0	+0.4
EVO	**Evora**	**60.96**	**298**	*e*P	**P**	**03 15 11.1**	**-0.7**
	comp=Z,3.9nm,0.7s,mb4.3						
EVO				*e*R			
	comp=Z,97nm,21.2s						
PBEJ	**Beja**	**61.11**	**297**	*e*P	**P**	**03 15 12.2**	**-0.6**
PLOU	**Loures**	**61.57**	**298**	*e*P	**P**	**03 15 15.8**	**-0.1**
PTEO	**Sao Teotonio**	**61.94**	**297**	*e*P	**P**	**03 15 16.6**	**-1.8**
OPO	**Ambohidratompo**	**62.61**	**208**	P	**P**	**03 15 23.3**	**+0.2**
	comp=Z,1.8nm,0.7s,mb4.3,baz=39,slow=6.5,SNR=3.9						
FX1	**Attu Island--F**	**65.04**	**41**	*e*P	**P**	**03 15 37.0**	**-1.5**
FX1				*e*		03 16 27.3	
SFJD	**Kangerlussuaq**	**65.65**	**339**	*i* P	**P**	**03 15 41.5**	**-0.6**
SFJD				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.2						
SFJD	**Kangerlussuaq**	**65.65**	**339**	*i* P	**P**	**03 15 41.5**	**-0.6**
	comp=Z,16nm,0.6s,mb5.2						
SFJD				*i*		03 16 28.1	
RES	**Resolute Bay**	**65.89**	**357**	*e*P	**P**	**03 15 42.8**	**-0.8**
RES				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.9						
RES	**Resolute Bay**	**65.89**	**357**	*e*P	**P**	**03 15 42.8**	**-0.8**
	comp=Z,16nm,1.2s,mb4.9						
LSZ	**Lusaka**	**68.72**	**227**	*e*P	**P**	**03 16 02.4**	**0.0**
LSZ				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
LSZ	**Lusaka**	**68.72**	**227**	*e*P	**P**	**03 16 02.4**	**0.0**
	comp=Z,10nm,0.6s,mb4.9						
IMA	**Indian Mountai**	**68.80**	**19**	*e*P	**P**	**03 16 01.6**	**-0.4**
IMA				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
IMA	**Indian Mountai**	**68.80**	**19**	*e*P	**P**	**03 16 01.6**	**-0.4**
	comp=Z,12nm,0.6s,mb5.0						
TTA	**Tatalina**	**70.67**	**22**	*e*P	**P**	**03 16 13.0**	**-0.5**
INK	**Inuvik**	**70.73**	**10**	*e*P	**P**	**03 16 13.5**	**-0.3**
INK				*e*		03 16 20.1	
INK				pmax	pmax		
	comp=Z,43nm,0.5s						
INK	**Inuvik**	**70.73**	**10**	P	**P**	**03 16 13.6**	**-0.2**
	comp=Z,43nm,0.5s,mb5.6,baz=353,slow=5.9,SNR=111						
INK	**Inuvik**	**70.73**	**10**	*e*P	**P**	**03 16 13.5**	**-0.2**
	comp=Z,43nm,0.5s,mb5.6						
INK				*e*		03 16 20.1	
ILAR	**Eielson Array**	**71.48**	**17**	P	**P**	**03 16 17.1**	**-1.3**
	comp=Z,5.7nm,0.7s,mb4.6,baz=330,slow=3.8,SNR=60						
ILAR				LR	LR	03 51 51.4	
	comp=Z,70nm,18.1s,MS4.0,baz=182,slow=39						
PMR	**Palmer**	**73.63**	**20**	*e*P	**P**	**03 16 30.0**	**-1.0**
PMR				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
PMR	**Palmer**	**73.63**	**20**	*e*P	**P**	**03 16 30.0**	**-1.0**
	comp=Z,7.6nm,0.5s,mb4.9						
MBWA	**Marble Bar**	**74.32**	**135**	*e*P	**P**	**03 16 36.2**	**+0.4**
	comp=Z,52nm,1.1s,mb5.4						
MBWA				*e*		03 16 42.7	
FITZ	**Fitzroy Crossi**	**75.31**	**129**	P	**P**	**03 16 41.7**	**+0.2**
	comp=Z,27nm,1.0s,mb5.1,baz=304,slow=1.6,SNR=10.0						
KAKA	**Kakadu**	**75.64**	**120**	*e*P	**P**	**03 16 43.8**	**+0.4**
	comp=Z,8.7nm,0.6s,mb4.9						
DBIC	**Dimbokro**	**76.57**	**268**	*e*P	**P**	**03 16 48.2**	**-0.5**
DBIC				pmax	pmax		
	comp=Z,18nm,0.8s						
DBIC	**Dimbokro**	**76.57**	**268**	P	**P**	**03 16 48.4**	**-0.3**
	comp=Z,13nm,0.7s,mb5.0,baz=41,slow=8.5,SNR=21						
DBIC				LR	LR	03 55 20.5	
	comp=Z,68nm,19.6s,MS4.0,baz=54,slow=40						
DBIC	**Dimbokro**	**76.57**	**268**	*e*P	**P**	**03 16 48.2**	**-0.5**
	comp=Z,18nm,0.8s,mb5.1						
LBTB	**Lobatse**	**78.00**	**223**	*e*P	**P**	**03 16 57.4**	**+1.0**
LBTB				*e*		03 17 04.6	
LBTB				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.3						
LBTB	**Lobatse**	**78.00**	**223**	*e*P	**P**	**03 16 57.4**	**+1.0**
	comp=Z,25nm,0.6s,mb5.3						
LBTB				*e*		03 17 04.6	
TSUM	**Tsumeb**	**78.08**	**233**	*e*P	**P**	**03 16 57.3**	**+0.4**
	comp=Z,8.4nm,1.2s,mb4.5						
YKW3	**Yellowknife Ar**	**78.16**	**4**	*e*P	**P**	**03 16 55.8**	**-0.7**
YKA	**Yellowknife Ar**	**78.23**	**4**	P	**P**	**03 16 56.9**	**+0.1**
	comp=Z,18nm,0.7s,mb5.1,baz=350,slow=5.8,SNR=104						
YKA	**Yellowknife Ar**	**78.23**	**4**	P	**P**	**03 16 56.9**	**+0.1**
SCHQ	**Schefferville**	**80.06**	**338**	P	**P**	**03 17 07.0**	**0.0**
	comp=Z,14nm,0.7s,mb5.0,baz=36,slow=5.2,SNR=23						
SCHQ				LR	LR	03 52 21.5	
	comp=Z,110nm,18.6s,MS4.2,baz=28,slow=36						
SCHQ	**Schefferville**	**80.06**	**338**	P	**P**	**03 17 07.0**	**0.0**
SCHQ				LR	LR	03 52 21.5	
DLBC	**Dease Lake**	**80.58**	**12**	*e*P	**P**	**03 17 09.9**	**+0.2**
BOSA	**Boshof**	**81.09**	**221**	P	**P**	**03 17 12.7**	**-0.3**
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
BOSA	**Boshof**	**81.09**	**221**	P	**P**	**03 17 12.7**	**-0.3**
	comp=Z,4.7nm,0.5s,mb4.6,baz=37,slow=3.4,SNR=18						
BOSA	**Boshof**	**81.09**	**221**	*e*P	**P**	**03 17 13.3**	**+0.2**
	comp=Z,17nm,1.3s,mb4.8						
FCC	**Fort Churchill**	**81.59**	**353**	*e*P	**P**	**03 17 15.3**	**+0.3**
FCC				*e*		03 17 21.7	
FCC				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
FCC	**Fort Churchill**	**81.59**	**353**	*e*P	**P**	**03 17 15.3**	**+0.3**
	comp=Z,27nm,1.3s,mb5.0						
FCC				*e*		03 17 21.7	
WRA	**Warramunga Arr**	**82.12**	**124**	P	**P**	**03 17 18.7**	**+0.2**
	comp=Z,12nm,0.6s,mb5.0,baz=326,slow=5.0,SNR=98						
WRAB	**Tennant Creek**	**82.12**	**124**	*e*P	**P**	**03 17 18.6**	**+0.1**
WRAB				*e*		03 17 25.4	
WRAB				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.3						
WRAB	**Tennant Creek**	**82.12**	**124**	*e*P	**P**	**03 17 18.6**	**+0.1**
	comp=Z,24nm,0.6s,mb5.3						
WRAB				*e*		03 17 25.4	
WB2	**Warramunga Arr**	**82.13**	**124**	⇑*i*P	**P**	**03 17 18.8**	**+0.2**
PMG	**Port Moresby**	**83.78**	**107**	P	**P**	**03 17 28.6**	**+1.4**
PMG				*e*		03 17 34.8	
PMG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PMG	**Port Moresby**	**83.78**	**107**	P	**P**	**03 17 28.6**	**+1.3**
	comp=Z,9.3nm,0.6s,mb5.1						
PMG				*e*		03 17 34.8	
FFC	**Flin Flon**	**86.12**	**357**	*e*P	**P**	**03 17 38.3**	**+0.3**
FFC				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.1						
FFC	**Flin Flon**	**86.12**	**357**	*e*P	**P**	**03 17 38.3**	**+0.3**
	comp=Z,13nm,1.0s,mb5.1						
SUR	**Sutherland**	**86.40**	**222**	*e*P	**P**	**03 17 41.8**	**+1.9**
	comp=Z,16nm,1.0s,mb5.2						
FORT	**Forrest**	**86.48**	**135**	*e*P	**P**	**03 17 41.0**	**+0.7**
	comp=Z,14nm,0.7s,mb5.3						
EDM	**Edmonton**	**87.55**	**4**	*e*P	**P**	**03 17 45.4**	**+0.5**
ULM	**Lac du Bonnet**	**90.18**	**353**	P	**P**	**03 17 57.0**	**-0.4**
	comp=Z,2.9nm,0.8s,mb4.7,baz=349,slow=6.9,SNR=3.4						
ULM				LR	LR	04 01 12.3	
	comp=Z,85nm,20.5s,MS4.2,baz=43,slow=37						
CTA	**Charters Tower**	**90.23**	**116**	P	**P**	**03 17 58.3**	**-0.1**
	comp=Z,3.9nm,0.5s,mb5.0,baz=342,slow=1.6,SNR=4.1						
CTAO	**Charters Tower**	**90.23**	**116**	*e*P	**P**	**03 17 59.0**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.2						
CTAO	**Charters Tower**	**90.23**	**116**	*e*P	**P**	**03 17 59.0**	**+0.5**
	comp=Z,13nm,1.0s,mb5.2						
NEW	**Newport**	**92.20**	**7**	*e*P	**P**	**03 18 07.5**	**+0.7**
NEW				*e*		03 18 14.6	
NEW				pmax	pmax		
	comp=Z,12nm,0.9s						
NEW	**Newport**	**92.20**	**7**	LR	LR	04 03 02.4	
	comp=Z,168nm,21.2s,MS4.5,baz=58,slow=38						
NEW	**Newport**	**92.20**	**7**	*e*P	**P**	**03 18 07.5**	**+0.7**
	comp=Z,12nm,0.9s,mb5.2						
NEW				*e*		03 18 14.6	
CHMT	**Chamberlain Mo**	**93.84**	**4**	*e*P	**P**	**03 18 14.8**	**+0.4**
MSO	**Missoula**	**93.88**	**5**	*e*P	**P**	**03 18 14.6**	**0.0**
	comp=Z,2.4nm,0.8s,mb4.7						
HRY	**Holter Researc**	**94.12**	**3**	*e*P	**P**	**03 18 16.3**	**+0.6**
LAO	**LASA Array**	**94.26**	**360**	*e*P	**P**	**03 18 17.9**	**+1.6**
	comp=Z,8.1nm,0.7s,mb5.3						
STKA	**Stephens Creek**	**95.16**	**127**	P	**P**	**03 18 20.3**	**-0.6**
	comp=Z,1.3nm,0.6s,mb4.6,baz=331,slow=23,SNR=4.5						
RSSD	**Black Hills**	**96.79**	**358**	*e*P	**P**	**03 18 28.7**	**+0.7**
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
RSSD	**Black Hills**	**96.79**	**358**	*e*P	**P**	**03 18 28.7**	**+0.7**
	comp=Z,3.5nm,0.8s,mb4.8						
PDAR	**Pinedale Array**	**98.14**	**2**	P	**P**	**03 18 33.8**	**-0.3**
	comp=Z,0.7nm,0.5s,mb4.4,baz=36,slow=3.6,SNR=6.1						
PDAR				LR	LR	04 07 35.2	
	comp=Z,84nm,19.0s,MS4.2,baz=198,slow=38						
HWUT	**Hardware Ranch**	**99.22**	**4**	*e*P	**P**	**03 18 39.9**	**+0.9**
	comp=Z,1.5nm,0.5s,mb4.8						
TXAR	**Lajitas Array**	**111.52**	**357**	PKiKP		03 23 32.3	
	comp=Z,0.1nm,0.3s,baz=125,slow=1.6,SNR=4.2						
TXAR				PP	PP	03 24 02.8	-13
	comp=Z,0.4nm,0.8s,baz=342,slow=4.0,SNR=3.6						
TXAR				PKKPbc		03 34 26.1	
	comp=Z,0.9nm,0.7s,baz=182,slow=5.7,SNR=11						
SNAA	**Sanae**	**122.75**	**201**	*e*	PKPdf	03 23 59.4	+3.0
SNAA	**Sanae**	**122.75**	**201**	*e*	PKPdf	03 24 09.6	+13
SNAA	**Sanae**	**122.75**	**201**	⇓*i*PKIKP	PKPdf	03 23 52.6	-3.8
SNAA				*e*		03 23 59.4	
SNAA				*e*		03 24 09.6	
VNA2	**Neumayer--Watz**	**123.77**	**203**	*e*	PKPdf	03 24 02.5	+4.0
VNA2	**Neumayer--Watz**	**123.77**	**203**	*e*	PKPdf	03 24 10.8	+12
VNA2	**Neumayer--Watz**	**123.77**	**203**	⇓*i*PKPdf	PKPdf	03 23 55.3	-3.2
VNA2				*e*		03 24 02.5	
VNA2				*e*		03 24 10.8	
VNA1	**Neumayer--Stat**	**123.92**	**203**	⇓*i*P	PKPdf	03 23 57.8	-1.0
VNA3	**Neumayer Olymp**	**124.57**	**203**	*e*	PKPdf	03 24 03.2	+3.3
VNA3	**Neumayer Olymp**	**124.57**	**203**	*e*	PKPdf	03 24 11.0	+11
VNA3	**Neumayer Olymp**	**124.57**	**203**	⇓*i*PKPdf	PKPdf	03 23 56.6	-3.3
VNA3				*e*		03 24 03.2	
VNA3				*e*		03 24 11.0	
VNDA	**Vanda**	**127.85**	**164**	PKP	PKPdf	03 24 01.9	-4.3
	comp=Z,1.3nm,0.8s,baz=275,slow=3.5,SNR=6.6						
QSPA	**South Pole Qui**	**129.22**	**180**	*e*PKPdf	PKPdf	03 24 05.2	-3.4
CPUP	**Villa Florida**	**136.94**	**272**	PKP	PKPdf	03 24 19.9	-4.4
	comp=Z,3.0nm,0.8s,baz=70,slow=2.7,SNR=7.8						
LPAZ	**La Paz**	**139.20**	**293**	PKP	PKPdf	03 24 24.1	-4.6
	comp=Z,1.2nm,0.8s,slow=20,SNR=4.8						
TRQA	**Tornquist**	**145.28**	**258**	*e*PKPdf	PKPdf	03 24 35.1	-3.7
PLCA	**Paso Flores**	**152.35**	**256**	PKPbc	PKPdf	03 24 53.4	+3.4
	comp=Z,6.1nm,0.6s,baz=127,slow=3.1,SNR=18						
PLCA	**Paso Flores**	**152.35**	**256**	*e*PKPbc	PKPdf	03 24 53.9	+3.9

ATH ***23*** *03:08:05.7,39.72N×23.76E,h16^{km}±9^{km},MD2.7/4*
NEIC ***23*** *03:08:05.7,39.72N×23.76E,h16^{km},MD2.7(ATH),After ATH.*
THE ***23*** *03:08:06.8,39.71N×23.69E,h8^{km},ML2.0*
ISC 23 03:08:06.1±0.6,**39.73N**±0.03×**23.74E**±0.06,**h24**^{km}±5^{km}, **n12,**σ1^{s}**13**/19,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.20**	**346**	*e*Pg	**Pb**	**03 08 11.3**	**-0.4**
PAIG				*e*Sg	**Sb**	**03 08 14.7**	**-0.8**
XOR	**Xorichti**	**0.56**	**230**	*e*Pg	**Pb**	**03 08 17.0**	**-0.2**
XOR				*e*Sg	**Sb**	**03 08 24.3**	**-0.5**
AOS	**Alonnisos**	**0.57**	**169**	*e*Pg	**Pb**	**03 08 17.2**	**-0.2**
AOS				*e*Sg	**Sb**	**03 08 25.7**	**+0.6**
NEO	**Neokhori**	**0.58**	**224**	*e*PN	**Pn**	**03 08 17.0**	**-1.7**
NEO				*e*SN	**Sn**	**03 08 25.3**	**-2.2**
OUR	**Ouranopolis**	**0.63**	**17**	*e*Pg	**Pb**	**03 08 19.3**	**+0.9**
PLG	**Polygyros**	**0.68**	**341**	*e*PN	**Pn**	**03 08 19.0**	**-1.2**
PLG				*e*SN	**Sn**	**03 08 28.1**	**-1.9**
LIT	**Litokhoron**	**1.03**	**291**	*e*Pg	**Pb**	**03 08 25.0**	**-0.1**
LIT				*e*Sg	**Sb**	**03 08 39.9**	**+1.6**
LIA	**Limnos Island**	**1.12**	**81**	*e*PN	**Pn**	**03 08 26.8**	**+0.3**
LKR	**Lokris**	**1.22**	**208**	*e*PN	**Pn**	**03 08 28.4**	**+0.5**
AGG	**Agios Georgios**	**1.30**	**238**	*e*Pg	**Pn**	**03 08 29.4**	**+0.3**
AGG				*e*Sg	**Sn**	**03 08 48.0**	**+2.2**
SRS	**Serrai**	**1.39**	**355**	*e*Pg	**Pn**	**03 08 31.6**	**+1.3**
GRG	**Griva**	**1.60**	**321**	*e*Pg	**Pn**	**03 08 34.5**	**+1.2**

NIED ***23*** *03:10:00,25.10N×142.40E,h71^{km},Mw4.8 Best double couple: M$_0$1.6×10^{16} NP1:φ$_s$343°,δ74°,λ106°. NP2:φ$_s$118°, δ22°,λ47°.*
IDC ***23*** *03:10:16.4±0.7,25.12N×140.66E,h26^{km}±3^{km},mb3.8/13, mb1 4.0/14,mb1mx3.9/22,mbtmp3.9/14,MS3.6/10, Ms1 3.6/10,ms1mx3.3/35,Error ellipse: s-maj=21.6km s-min=17.9km az=106.0*
JMA ***23*** *03:10:19.2,25.06N×142.39E,h96^{km},M4.4*
ISC 23 03:10:15.3±0.7,**24.91N**±0.06×**141.4E**±0.2,**h26**^{km}, **h26**^{km}±1.3^{km}**:pP-P,n30,**σ1^{s}**26**/25,**mb3.8**/13,**MS3.8**/7, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**1.85**	**22**	P	**Pn**	**03 10 46.6**	**+0.8**
JHHJ				*e*S	**Sn**	**03 11 07.2**	**-1.3**
CBIJ	**Chichi jima**	**2.29**	**18**	Pn	**Pn**	**03 10 52.3**	**+0.2**
	67nm,0.3s,baz=137,slow=2.8,SNR=66						
CBIJ				Sn	**Sn**	**03 11 18.8**	**-0.9**
	139nm,0.3s,baz=287,slow=23,SNR=13						
CBIJ				LR	LR	03 11 54.0	
	comp=Z,717nm,18.9s,baz=76,slow=41						
CBIJ	**Chichi jima**	**2.29**	**18**	P	**Pn**	**03 10 52.6**	**+0.5**
CBIJ				*e*S	**Sn**	**03 11 17.9**	**-1.8**
BSO1	**Boso 1**	**9.72**	**358**	P	**P**	**03 12 37.4**	**+0.8**
BSO3	**Boso 3**	**9.89**	**356**	P	**P**	**03 12 39.2**	**+0.2**
BSO4	**Boso 4**	**10.09**	**355**	P	**P**	**03 12 42.9**	**+1.2**
JOD2	**Odawara 2**	**10.51**	**350**	P	**P**	**03 12 49.8**	**+2.3**
JRY	**Ryogami san**	**11.28**	**350**	P	**P**	**03 12 58.5**	**+0.5**
JNU	**Nakatsue**	**12.31**	**314**	LR	LR	03 17 22.3	
	comp=Z,114nm,20.3s,baz=357,slow=36						
ASAJ	**Asahikawa**	**19.18**	**3**	LR	LR	03 21 19.8	
	comp=Z,128nm,20.4s,baz=147,slow=35						
SONM	**Songino Array**	**35.84**	**319**	LR	LR	03 32 57.0	
	comp=Z,61nm,18.6s,MS3.4,baz=84,slow=39						
CTA	**Charters Tower**	**44.98**	**174**	LR	LR	03 34 54.2	
	comp=Z,72nm,21.9s,MS3.6,baz=51,slow=33						
WRA	**Warramunga Arr**	**45.11**	**189**	P	**P**	**03 18 31.1**	**-0.4**
	1.0nm,0.5s,mb3.9,baz=9.7,slow=8.9,SNR=2.9						
MKAR	**Makanchi Array**	**51.35**	**311**	P	**P**	**03 19 13.1**	**-6.4**
	0.2nm,0.3s,mb3.5,baz=80,slow=8.8,SNR=2.5						
STKA	**Stephens Creek**	**56.47**	**180**	P	**P**	**03 19 57.3**	**-0.1**
	1.2nm,0.7s,mb4.0,baz=306,slow=8.7,SNR=2.1						
BVAR	**Borovoye Array**	**59.19**	**318**	P	**P**	**03 20 10.6**	**-5.7**
	0.2nm,0.3s,mb3.7,baz=90,slow=8.6,SNR=1.7						
BVAR				pP	pP	03 20 18.7	-5.8
	2.0nm,0.9s,baz=72,slow=4.7,SNR=4.0						
ILAR	**Eielson Array**	**59.96**	**28**	P	**P**	**03 20 21.2**	**-0.2**
	2.0nm,0.7s,mb4.2,baz=258,slow=5.7,SNR=9.8						
ILAR				pP	pP	03 20 29.3	-0.3
	5.2nm,0.8s,baz=261,slow=5.8,SNR=13						
INK	**Inuvik**	**65.30**	**24**	P	**P**	**03 20 56.4**	**-0.4**
	1.4nm,0.7s,mb4.1,baz=282,slow=3.2,SNR=3.1						
YKA	**Yellowknife Ar**	**74.39**	**28**	P	**P**	**03 21 53.0**	**+0.8**
	1.4nm,0.9s,mb3.9,baz=293,slow=5.3,SNR=5.4						
YKA				pP	pP	03 22 01.4	+0.8
	2.8nm,0.7s,baz=293,slow=5.9,SNR=12						
ARCES	**ARCESS Array B**	**75.37**	**341**	P	**P**	**03 21 55.0**	**-2.8**
	2.5nm,1.1s,mb4.1,baz=69,slow=7.7,SNR=3.0						
ARCES				LR	LR	03 59 38.7	
	comp=Z,63nm,18.7s,MS3.9,baz=287,slow=40						
FINES	**FINESS Array B**	**79.59**	**334**	P	**P**	**03 22 19.7**	**-1.6**
	0.3nm,0.4s,mb3.6,baz=72,slow=4.7,SNR=5.6						
FINES				pP	pP	03 22 26.5	-3.2
	0.5nm,0.3s,baz=65,slow=4.7,SNR=2.6						
NVAR	**Mina Array Bea**	**82.42**	**51**	P	**P**	**03 22 38.8**	**+2.1**
	0.3nm,0.3s,mb3.7,baz=248,slow=11,SNR=3.6						
NVAR				pP	pP	03 22 47.6	+2.6
	1.9nm,0.6s,baz=284,slow=4.2,SNR=6.1						
AKASG	**Malin Array Be**	**83.96**	**324**	P	**P**	**03 22 40.4**	**-3.8**
	0.1nm,0.3s,mb3.4,baz=47,slow=4.6,SNR=3.0						
AKASG				pP	pP	03 22 51.0	-1.8
	0.3nm,0.3s,baz=48,slow=4.5,SNR=2.5						
HFS	**Hagfors**	**85.15**	**337**	LR	LR	04 04 48.0	
	comp=Z,37nm,19.5s,MS3.8,baz=113,slow=39						
NB2	**NORSAR Subarra**	**85.37**	**338**	P	**P**	**03 22 50.2**	**-0.9**
	0.4nm,0.6s,mb3.7,baz=45,slow=5.0						
NOA	**NORSAR Array B**	**85.37**	**338**	P	**P**	**03 22 49.1**	**-1.9**
	0.3nm,0.6s,mb3.6,baz=55,slow=4.1,SNR=2.4						
NOA				pP	pP	03 22 56.9	-2.7
	1.1nm,0.7s,baz=47,slow=4.6,SNR=4.4						
PDAR	**Pinedale Array**	**86.25**	**44**	P	**P**	**03 22 57.1**	**+1.2**
	0.3nm,0.5s,mb3.8,baz=270,slow=1.8,SNR=2.3						
MLR	**Muntele Rosu**	**88.68**	**321**	LR	LR	04 05 32.7	
	comp=Z,54nm,20.5s,MS4.0,baz=315,slow=38						
GERES	**GERESS Array B**	**93.00**	**328**	LR	LR	04 06 45.7	
	comp=Z,55nm,18.3s,MS4.0,baz=137,slow=37						
DAVOX	**Davos**	**96.28**	**329**	LR	LR	04 07 50.1	
	comp=Z,35nm,18.7s,MS3.9,baz=179,slow=36						

ATH ***23*** *03:20:33.9,38.58N×26.55E,h26^{km}±2^{km},MD3.0/3*
ISK ***23*** *03:20:33.5,38.54N×26.69E,h24^{km},MD3.1*
CSEM ***23*** *03:20:33.9±0.1,38.60N×26.74E,h21^{km}±1^{km},MD3.1, Error ellipse: s-maj=3.2km s-min=2.0km az=51.0*
ISC 23 03:20:33.7±0.7,**38.64N**±0.03×**26.67E**±0.05,**h11**^{km}±5^{km}, **n22,**σ1^{s}**00**/34,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.29**	**191**	*i* P	**Pg**	**03 20 40.3**	**+0.6**
URLA				*i* S	**Sg**	**03 20 45.5**	**+1.7**
BLCB	**Balcova**	**0.39**	**131**	*i* PG	**Pg**	**03 20 41.3**	**-0.4**
BLCB				SG	**Sg**	**03 20 46.6**	**-0.5**
IZM	**Izmir**	**0.53**	**117**	*i* PG	**Pg**	**03 20 43.7**	**-0.7**
IZM				SG	**Sg**	**03 20 51.2**	**-0.3**
KDAG	**Bornova**	**0.53**	**117**	*i* P	**Pg**	**03 20 43.8**	**-0.6**
KDAG				*i* S	**Sg**	**03 20 51.2**	**-0.4**
AYVA	**Ayvalik**	**0.66**	**2**	*i* P	**Pb**	**03 20 47.4**	**+0.6**
AYVA				*i* S	**Sb**	**03 20 56.5**	**+0.8**
PRK	**Paraskevi**	**0.68**	**333**	*e*PN	**Pn**	**03 20 48.0**	**-0.9**
PRK				*e*SN	**Sn**	**03 20 57.8**	**-1.6**
AKS	**Akhisar**	**0.93**	**75**	*i* PG	**Pg**	**03 20 51.8**	**-0.5**
SMG	**Samos**	**0.94**	**172**	*e*PN	**Pn**	**03 20 51.7**	**-1.0**
SMG				*e*SN	**Sn**	**03 21 03.8**	**-2.4**
EZN	**Ezine**	**1.21**	**347**	PN	**Pn**	**03 20 56.7**	**+0.2**
AYDN	**Tasoluk**	**1.37**	**135**	P	**Pn**	**03 21 02.6**	**+3.8**
AYDN				S	**Sb**	**03 21 17.2**	**+1.1**
BALB	**Balikesir**	**1.37**	**43**	*e*PN	**Pn**	**03 20 58.8**	**0.0**
CANB	**Canakkale**	**1.41**	**12**	PN	**Pn**	**03 21 00.0**	**+0.7**
MANT	**Manisa**	**1.49**	**95**	P	**Pn**	**03 21 01.3**	**+0.8**
MANT				S	**Sb**	**03 21 19.6**	**-0.1**
BTOK	**Tokmak**	**1.54**	**43**	*i* P	**Pn**	**03 21 01.4**	**+0.2**
BTOK				*i* S	**Sb**	**03 21 23.7**	**+2.5**
BDRM	**Kayabasi**	**1.69**	**158**	P	**Pn**	**03 21 07.1**	**+3.7**
BDRM				S	**Sn**	**03 21 30.2**	**+5.0**
LIA	**Limnos Island**	**1.70**	**318**	*e*PN	**Pn**	**03 21 03.6**	**0.0**
DST	**Dursunbey**	**1.80**	**57**	*e*PN	**Pn**	**03 21 04.1**	**-0.9**
BNT	**Bandirma**	**1.97**	**29**	*e*PN	**Pn**	**03 21 06.7**	**-0.6**
KCT	**Karacabey**	**2.08**	**38**	*e*PN	**Pn**	**03 21 08.8**	**-0.2**
DNZL	**Cakiroluk**	**2.10**	**116**	P	**Pn**	**03 21 13.3**	**+4.0**
ORLT	**Orhaneli**	**2.23**	**50**	*e*PN	**Pn**	**03 21 11.0**	**0.0**
ULDT	**Uludag**	**2.43**	**51**	P	**Pn**	**03 21 19.5**	**+5.5**
ULDT				S	**Sn**	**03 21 51.1**	**+7.2**

NEIC ***23*** *03:26:23.5±0.3,1.83N×99.00E,mb4.4/11,Error ellipse: s-maj=11.4km s-min=7.5km az=55.0*
NEIC Felt [II] at Gunungsitoli, Nias.
IDC ***23*** *03:26:23.1±0.6,1.94N×99.07E,h112^{km}±5^{km},mb4.1/14, mb1 4.1/15,mb1mx4.0/19,mbtmp4.4/15,Error ellipse: s-maj=19.4km s-min=11.2km az=54.0*
ISC 23 03:26:21.8±0.4,**1.76N**±0.06×**98.92E**±0.06,**h111**^{km}, **h111**^{km}±2.4^{km}**:pP-P,n38,**σ1^{s}**28**/35,**mb4.3**/21,**1D,** **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**3.50**	**37**	P	**P**	**03 27 17.3**	**+1.7**
KULM	**Kulim**	**3.91**	**26**	*e*Pn	**P**	**03 27 22.3**	**+1.2**
KGM	**Kluang**	**4.41**	**87**	P	**P**	**03 27 30.5**	**+2.6**
KSM	**Kuching**	**11.39**	**91**	*e*P	**P**	**03 29 03.3**	**+1.0**
CM31	**Chiang Mai Arr**	**16.59**	**0**	*e*P	**P**	**03 30 10.1**	**+1.0**
	4.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**16.59**	**0**	P	**P**	**03 30 08.2**	**-0.9**
	0.8nm,0.3s,baz=188,slow=10,SNR=16						

CMAR				pP		03 30 32.2	
	0.3nm,0.3s,baz=193,slow=12,SNR=4.8						
PALK	Pallekele	18.96	287	*e*P	P	03 30 38.8	+1.8
	9.5nm,0.7s						
TSM	Tawau	19.09	82	P	P	03 30 38.8	+0.4
LSA	Lhasa	28.75	346	P	P	03 32 11.8	+0.6
	6.1nm,0.8s,mb4.3						
MBWA	Marble Bar	30.56	139	*e*P	P	03 32 25.9	-1.3
	25nm,1.3s,mb4.8						
FITZ	Fitzroy Crossi	32.89	128	P	P	03 32 45.2	-2.4
	18nm,0.7s,mb5.0,baz=298,slow=1.2,SNR=14						
KLBR	Kellerberrin	37.69	153	*e*P	P	03 33 29.6	+1.5
	111nm,1.8s,mb5.4						
NWAO	Narrogin (SRO)	38.60	155	P	P	03 33 37.2	+1.5
	13nm,1.1s,mb4.7,baz=348,slow=9.3,SNR=3.2						
WRA	Warramunga Arr	40.89	124	P	P	03 33 54.2	-0.6
	47nm,0.4s,baz=302,slow=9.0,SNR=90						
WRAB	Tennant Creek	40.90	124	*e*P	P	03 33 54.3	-0.5
	73nm,0.6s						
WB2	Warramunga Arr	40.90	124	⇓*i*P	P	03 33 54.5	-0.3
WB2				*i*		03 33 57.2	
SONM	Songino Array	46.35	7	P	P	03 34 37.7	-0.7
	1.2nm,0.4s,mb3.9,baz=190,slow=9.7,SNR=16						
SONM				pP	pP	03 35 04.2	-0.3
	1.4nm,0.7s,baz=190,slow=9.0,SNR=4.9						
MKAR	Makanchi Array	47.14	344	P	P	03 34 43.9	-0.8
	3.5nm,0.6s,mb4.3,baz=154,slow=8.0,SNR=35						
MKAR				pP	pP	03 35 07.6	-3.2
	3.3nm,0.8s,baz=150,slow=8.6,SNR=5.1						
CTA	Charters Tower	51.23	118	P	P	03 35 14.4	-2.1
	5.6nm,0.7s,mb4.7,baz=281,slow=12,SNR=4.4						
STKA	Stephens Creek	52.47	133	*e*P	P	03 35 24.9	-0.7
	3.0nm,0.6s,mb4.5						
STKA				*i*		03 35 28.1	
STKA	Stephens Creek	52.47	133	P	P	03 35 24.5	-1.1
	3.2nm,0.5s,mb4.6,baz=304,slow=8.5,SNR=5.8						
OPO	Ambohidratompo	54.72	246	P	P	03 35 43.8	+1.5
	1.6nm,0.6s,mb4.2,baz=90,slow=11,SNR=2.7						
ZRNK	Zerenda	56.73	339	*e*P	P	03 35 54.4	-1.9
	5.5nm,0.8s,mb4.6						
BR131	Keskin Array S	70.01	312	*e*P	P	03 37 22.2	-1.4
	2.2nm,0.5s,mb4.2						
BRTR	Keskin Array B	70.01	312	P	P	03 37 22.2	-1.4
	4.1nm,0.6s,mb4.4,baz=131,slow=6.5,SNR=19						
BRTR				pP	pP	03 37 50.2	-1.5
	1.2nm,0.6s,baz=128,slow=6.6,SNR=3.3						
LBTB	Lobatse	75.67	244	*e*P	P	03 37 59.0	+1.9
	4.5nm,0.7s,mb4.3						
AKASG	Malin Array Be	75.87	322	P	P	03 37 55.5	-2.1
	1.6nm,0.5s,mb4.0,baz=89,slow=4.8,SNR=9.3						
BOSA	Boshof	76.55	240	P	P	03 38 03.2	+1.3
	2.8nm,0.5s,mb4.2,baz=123,slow=3.0,SNR=14						
FINES	FINESS Array B	80.30	332	P	P	03 38 21.0	-0.7
	1.7nm,0.6s,mb4.1,baz=100,slow=6.5,SNR=18						
FINES				pP	pP	03 38 50.0	-0.4
	1.9nm,0.6s,baz=90,slow=5.7,SNR=6.3						
KAF	Kangasniemi	80.36	333	*e*p	P	03 38 21.5	-0.6
	3.0nm,0.5s,mb4.4,baz=100,slow=4.9						
KEV	Kevo	82.15	340	*e*p	P	03 38 32.0	+0.7
	9.0nm,1.0s,mb4.5						
ARCES	ARCESS Array B	82.59	340	P	P	03 38 32.5	-1.0
	0.9nm,0.7s,mb3.7,baz=90,slow=3.6,SNR=11						
ARCES				pP	pP	03 39 01.1	-1.3
	1.3nm,0.5s,baz=90,slow=3.6,SNR=2.2						
GERES	GERESS Array B	85.53	319	P	P	03 38 48.8	+0.1
	0.7nm,0.7s,mb3.7,baz=104,slow=5.5,SNR=10						
NB2	NORSAR Subarra	87.35	331	P	P	03 38 57.4	+0.2
	0.6nm,0.6s,mb3.7,baz=95,slow=4.6						
NOA	NORSAR Array B	87.35	331	P	P	03 38 55.9	-1.3
	0.4nm,0.6s,mb3.5,baz=93,slow=6.6,SNR=4.0						
NOA				pP	pP	03 39 26.9	+0.5
	1.8nm,0.8s,baz=94,slow=5.0,SNR=5.8						
TXAR	Lajitas Array	142.28	33	PKhKP		03 45 39.1	
	0.2nm,0.6s,baz=346,slow=3.7,SNR=2.9						
BDFB	Brasilia	144.60	245	PKP	PKPdf	03 45 48.0	+1.7
	2.6nm,0.5s,baz=159,slow=3.2,SNR=10						
CPUP	Villa Florida	146.56	221	PKPbc	PKPbc	03 45 52.9	+2.1
	2.6nm,0.7s,baz=124,slow=4.6,SNR=8.2						

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*CSEM **23** 03:30:33.8, 37.91N×46.89E, h12^{km}, ML3.5, After TEH*

TEH 23 03:30:33.8, 37.91N×46.89E, h12^{km}, Mn3.5, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHRS	Heris	0.42	17	Pg	Pg	03 30 41.9	-0.7
IHSH	Hashtroud	0.49	37	Pg	Pg	03 30 46.1	+2.2
ITBZ	Tabriz	0.67	299	Pg	Pg	03 30 46.1	-1.2
IAZR	Azarshahr	0.76	252	Pg	Pg	03 30 47.4	-1.6
IRAZ	Razeghan	3.50	135	Pn	Pn	03 31 32.9	+3.7
IQOM	Qom	4.56	131	Pn	Pn	03 32 10.1	+26
IDMV	Damavand	4.74	118	Pn	Pn	03 31 55.9	+9.0
IVRN	Varamin	4.87	125	Pn	Pn	03 31 46.1	-2.5
IFIR	Firoozkooh	5.22	114	Pn	Pn	03 31 57.9	+4.2

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*NEIC **23** 03:45:32.7±3.2, 51.71N×16.40E, h5^{km}, ML2.8(VIE), Error ellipse: s-maj=34.8km s-min=9.3km az=207.0*

*PRU **23** 03:45:36.9, 51.45N×16.23E*

*CSEM **23** 03:45:36.9±0.2, 51.47N×16.24E, h2^{km}, ML2.8, Error ellipse: s-maj=3.8km s-min=1.7km az=26.0*

WAR 23 03:45:38.0, 51.45N×16.17E, h1^{km}, ML2.4, 1C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.61	173	*e*PG	Pg	03 45 49.0	-1.2
KSP				*e*SG	Sg	03 45 57.0	-1.3
UPC	Upice	0.95	186	*e*PG	Pg	03 45 55.4	-1.5
DPC	Dobruska-Polom	1.10	175	*e*PG	Pg	03 45 58.0	-2.0
DPC				*e*SG	Sg	03 46 12.5	-2.2
	19nm,0.4s						
PVCC	Panska Ves	1.37	228	*e*PG	Pg	03 46 03.5	-1.8
BRG	Berggiesshubel	1.52	249	Pg	Pg	03 46 06.3	-2.0
BRG				Sg	Sg	03 46 26.5	-1.9
BRG	Berggiesshubel	1.52	249	Pg	Pg	03 46 06.3	-2.0
BRG				Sg	Sg	03 46 26.5	-1.9
PRU	Pruhonice	1.79	216	*e*PG	Pg	03 46 10.3	-3.4
PRU				*e*SG	Sg	03 46 33.9	-3.7
MORC	Moravsky Berou	1.89	152	*e*Pn	Pn	03 46 08.0	-3.7
MORC				*e*S	Sn	03 46 33.6	-2.9
MORC	Moravsky Berou	1.89	152	*e*Pn	Pn	03 46 08.0	-3.7
MORC				*e*S	Sn	03 46 33.6	-2.9
MORC				*e*Sg	Sg	03 46 36.6	-4.3
CLL	Collm	1.99	267	*i* PG	Pg	03 46 13.9	-3.8
CLL				*e*SG	Sg	03 46 42.0	-2.2
OKC	Ostrava-Krasne	2.05	141	*e*SG	Sg	03 46 40.9	-5.2
VRAC	Vranov	2.16	173	*e*Sg	Sg	03 46 45.4	-4.5
NKC	Novy Kostel	2.65	244	*e*SG	Sg	03 47 02.0	-4.4
KHC	Kasperske Hory	2.85	217	*e*PN	Pn	03 46 21.5	-4.0
KHC				*e*PG	Pg	03 46 29.0	-6.0
KHC				*e*SN	Sn	03 46 58.0	-3.0
KHC				*e*SG	Sg	03 47 07.3	-5.7
MOX	Moxa	2.98	256	*e*Pg	Pg	03 46 33.9	-3.7
MOX				*e*Sg	Sg	03 47 14.0	-3.4
MOA	Molln	3.81	200	⇑*i*PN	Pn	03 46 36.7	-2.4
MOA				*i* SG	Sg	03 47 39.7	-5.1
	3.9nm,0.4s						

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*NEIC **23** 03:51:52.2, 53.73N×163.43W, h14^{km}, ML3.6(AEIC), After AEIC.*

*IDC **23** 03:51:54.4±1.6, 55.12N×164.33W, mb3.8/9, mb1 3.9/10, mb1mx3.8/23, mbtmp3.7/10, ML3.5/1, Error ellipse: s-maj=43.7km s-min=20.9km az=22.0*

ISC 23 03:51:51.8±0.7**, 53.74N**±0.06×**163.40W**±0.06**, h62**^{km}±7^{km}**, n47, σ0§77**/60**, mb3.7**/7**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSLS	Shishaldin Sou	1.04	340	P	P	03 52 10.5	-0.1
WESS	West Dahl Sout	1.08	314	P	P	03 52 10.6	-0.6
WESS				S	S	03 52 24.9	-0.6
WESN	West Dahl Nort	1.08	321	P	P	03 52 11.1	-0.2
WESN				S	S	03 52 24.4	-1.3
SSLW	Shishaldin Wes	1.12	338	P	P	03 52 11.4	-0.3
FALS	False Pass	1.12	360	P	P	03 52 11.5	-0.2
FALS				S	S	03 52 26.8	+0.2
SSLN	Shishaldin Nor	1.13	342	P	P	03 52 12.2	+0.3
WFAR	Faris Peak	1.14	315	P	P	03 52 11.5	-0.4
WPOG	Pogromni	1.17	318	P	P	03 52 12.1	-0.3
WTUG	Tugumak	1.25	333	P	P	03 52 13.6	0.0
WTUG				S	S	03 52 30.4	+0.6
DRIA	Deer Island	1.40	28	P	P	03 52 15.1	-0.6
AKA	Akutan	1.46	287	P	P	03 52 15.9	-0.6
AKA				S	S	03 52 34.7	0.0
AKUT	Akutan	1.46	287	P	P	03 52 15.9	-0.6
AKUT				S	S	03 52 34.9	+0.1
AHB	Akutan Harbor	1.48	286	P	P	03 52 16.3	-0.4
BALA	Baldy Mountain	1.50	14	P	P	03 52 18.1	+1.0
DT1	Dutton Round H	1.52	25	P	P	03 52 16.9	-0.4
DT1				S	S	03 52 36.5	+0.3
DTNA	Dutton South F	1.57	25	P	P	03 52 17.8	-0.2
AKLV	Akutan Long Va	1.57	287	P	P	03 52 17.4	-0.6
AKLV				S	S	03 52 37.5	+0.1
AKGG	Akutan Green G	1.60	288	P	P	03 52 18.1	-0.3
AKGG				S	S	03 52 38.9	+0.9
LVA	Lava Point	1.61	286	P	P	03 52 18.5	-0.1
LVA				S	S	03 52 38.5	+0.1
DOL	Dolgoi Island	1.68	32	P	P	03 52 19.3	-0.1
DOL				S	S	03 52 41.8	+1.9
HAG	Hague Volcano	1.81	28	P	P	03 52 21.8	+0.5
UNV	Unalaska Valle	1.84	275	P	P	03 52 21.2	-0.6
UNV				S	S	03 52 44.8	+0.9
PVV	Pavlof Volcano	1.89	29	P	P	03 52 23.1	+0.8
PN6	Pavlof North-6	1.92	26	P	P	03 52 24.4	+1.5
PS1A	Pavlof South-1	1.94	29	P	P	03 52 24.2	+1.1
MNAT	Makushin Natee	1.95	276	P	P	03 52 23.1	-0.1
MTBL	Makushin Table	1.96	278	P	P	03 52 23.6	+0.3
MTBL				S	S	03 52 47.5	+0.9
MSW	Makushin Switc	2.01	276	P	P	03 52 23.9	-0.2
MSW				S	S	03 52 48.2	+0.2
BLHA	Black Hill	2.12	21	P	P	03 52 25.7	+0.2
SDPT	Sand Point	2.35	45	P	P	03 52 28.8	0.0
SDPT				S	S	03 52 55.4	-1.1
OKFG	Magazine Ridge	2.71	265	P	P	03 52 34.9	+0.9
OKCD	Okmok Cone D	2.83	266	P	P	03 52 36.5	+0.8
NIKO	Nikolski	3.36	259	P	P	03 52 42.5	-0.6
ANPK	Aniakchak Peak	4.33	42	P	P	03 52 56.3	-0.4
SPIA	Saint Paul Isl	5.20	314	P	P	03 53 08.1	-0.7
ILAR	Eielson Array	13.86	31	Pn	P	03 55 04.1	-2.1
	0.0nm,0.3s,baz=229,slow=11,SNR=3.0						
INK	Inuvik	20.24	32	P	P	03 56 21.6	-2.3
	0.1nm,0.3s,baz=222,slow=11,SNR=7.4						
YKA	Yellowknife Ar	26.60	51	P	P	03 57 29.1	+3.5
	0.3nm,0.3s,mb3.2,baz=277,slow=10.0,SNR=3.7						
YKA	Yellowknife Ar	26.60	51	P	P	03 57 29.1	+3.5
NVAR	Mina Array Bea	34.18	98	P	pP	03 58 47.8	-0.6
	1.3nm,0.8s,baz=296,slow=7.2,SNR=6.6						
TXAR	Lajitas Array	49.19	95	P	pP	04 00 49.5	-1.9
	1.0nm,0.7s,baz=302,slow=5.3,SNR=13						
SONM	Songino Array	53.63	303	P	P	04 01 08.1	-0.5
	0.5nm,0.5s,mb3.7,baz=39,slow=7.9,SNR=6.9						
FINES	FINESS Array B	64.92	355	P	P	04 02 26.2	+0.1
	0.3nm,0.4s,mb3.7,baz=14,slow=7.9,SNR=7.5						
MKAR	Makanchi Array	65.39	316	P	P	04 02 29.0	-0.5
	0.3nm,0.4s,mb3.7,baz=34,slow=4.4,SNR=4.7						
NOA	NORSAR Array B	65.49	3	P	P	04 02 30.0	+0.1
	0.9nm,0.8s,mb3.9,baz=359,slow=6.5,SNR=3.4						
HFS	Hagfors	66.46	2	P	P	04 02 36.2	+0.2
	1.0nm,0.3s,mb4.3,baz=26,slow=3.4,SNR=13						
GERES	GERESS Array B	77.76	2	P	P	04 03 45.2	+2.1
	0.2nm,0.4s,mb3.4,baz=320,slow=7.7,SNR=2.9						

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*NEIC **23** 04:01:25.5, 19.44N×98.94W, h1^{km}, MD3.7(MEX), After MEX.*

MEX 23 04:01:25.4±0.9**, 19.44N×98.94W, h1**^{km}±999^{km}**, MD3.8, 1C, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTVM	Pico Tres Padr	0.23	313	*e*P	Pg	04 01 29.6	-0.3
PTVM				*e*S	Sg	04 01 32.9	-0.1
IIO	Organos	0.25	53	*e*P	Pg	04 01 25.4	-5.0
IIO				*i* S	Sg	04 01 28.8	-5.0
IIO	Organos	0.25	53	⇑*i*P	Pg	04 01 25.5	-4.9
IIO				*i* S	Sg	04 01 29.2	-4.6
IIZ	Mezontepec	0.38	229	*e*P	Pg	04 01 34.5	+1.5
IIZ	Mezontepec	0.38	229	*e*P	Pg	04 01 31.2	-1.8
CHVM	Chichinautzin	0.40	210	*e*P	Pg	04 01 34.7	+1.3
CHVM				*i* S	Sg	04 01 37.7	-1.1
IIC	Rita Coyotepec	0.45	317	*e*P	Pg	04 01 34.2	-0.1
IIC				*i* S	Sg	04 01 40.7	+0.5
PPM	Popocatepetl	0.47	142	*i* P	Pg	04 01 33.6	-1.2
PPM				*i* S	Sg	04 01 38.4	-2.7
PPM	Popocatepetl	0.47	142	*i* P	Pg	04 01 33.6	-1.2
PPM				*e*P		04 01 34.0	
PPM				*i* P		04 01 35.4	
PPM				*i* S	Sg	04 01 39.8	-1.4
PPM				*i* S	Sg	04 01 41.2	+0.1
PPM				*i* S	Sg	04 01 49.0	+7.9

IDC 23 04:45:50.7±6.9**, 9.61N×138.86E, mb3.9**/5**, mb1 4.0**/5**, mb1mx3.8**/20**, mbtmp3.9**/5**, Error ellipse: s-maj=191.1km s-min=52.0km az=2.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	46.91	330	P	P	04 54 22.5	-2.3
	0.4nm,0.6s,baz=153,slow=8.3,SNR=3.9						
MKAR	Makanchi Array	60.41	319	P	P	04 56 03.3	-1.0
	1.5nm,0.7s,baz=106,slow=8.5,SNR=16						
BVAR	Borovoye Array	69.47	323	P	P	04 56 60.0	-2.9
	1.5nm,0.5s,baz=100,slow=9.0,SNR=7.5						
ILAR	Eielson Array	74.66	25	P	P	04 57 32.1	-1.4
	0.6nm,0.7s,baz=244,slow=6.1,SNR=8.0						
FINES	FINESS Array B	92.18	334	P	P	04 59 01.6	-1.7
	0.8nm,0.8s,baz=104,slow=5.7,SNR=3.6						

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*IDC **23** 05:30:43.8±0.7, 1.04N×97.15E, mb4.3/14, mb1 4.4/15, mb1mx4.3/21, mbtmp4.3/15, ML4.6/1, MS4.1/7, Ms1 4.1/7, ms1mx3.7/22, Error ellipse: s-maj=23.1km s-min=17.8km az=62.0*

*BJI **23** 05:30:45.4, 0.96N×97.27E, h23^{km}, mB5.0, mb4.9, Ms4.7, Msz4.5*

*MOS **23** 05:30:46.5±1.4, 1.03N×97.33E, h33^{km}, mb4.9/11, Error ellipse: s-maj=20.7km s-min=9.3km az=99.9*

*NEIC **23** 05:30:48.5±0.5, 1.02N×97.35E, h30^{km}, mb4.7/13, Error ellipse: s-maj=12.4km s-min=10.2km az=221.0*

ISC 23 05:30:45.9±0.5**, 0.99N**±0.07×**97.20E**±0.06**, h25**^{km}**, h25**^{km}±1.5^{km}**:pP-P, n82, σ1§28**/75**, mb4.6**/42**, MS4.3**/21**, 1C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	Ipoh	5.22	47	P	Pn	05 32 05.2	+0.7
KULM	Kulim	5.48	39	*e*Pn	Pn	05 32 08.1	-0.1
KGM	Kluang	6.20	81	P	Pn	05 32 20.1	+1.8
KSM	Kuching	13.11	88	P	P	05 33 49.4	-4.0
CMAR	Chiang Mai Arr	17.44	6	P	P	05 34 47.4	-2.0
	0.8nm,0.3s,baz=196,slow=11,SNR=20						
CMAR				LR	LR	05 42 18.4	
	comp=Z,506nm,18.3s,baz=195,slow=40						
KKM	Kota Kinabalu	19.62	75	P	P	05 35 07.3	-8.5
TSM	Tawau	20.91	81	P	P	05 35 29.8	+0.6
QIZ	Qiongzhong	21.79	34	P	P	05 35 35.0	-3.1
KMI	Kunming	24.58	12	P	P	05 36 08.0	+2.6
KMI				AP		05 36 13.3	
KMI				AMB	AMB		
	comp=Z,60nm,1.3s,mb5.0						
KMI				AMB	AMB		
	comp=Z,300nm,4.3s						
KMI				LR	LR		
	comp=N,1µm,16.3s,MS4.6						
KMI				LR	LR		
	comp=E,690nm,13.6s,MS4.6						
KMI				LR	LR		
	comp=Z,1µm,15.7s,MS4.6						
GYA	Guiyang	26.91	19	⇓*i*P	P	05 36 27.6	+0.5
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
GYA				AMB	AMB		
	comp=Z,300nm,8.2s						
GYA				LR	LR		
	comp=N,380nm,17.1s,MS4.4						
GYA				LR	LR		
	comp=E,770nm,15.9s,MS4.4						
GYA				LR	LR		
	comp=Z,750nm,12.6s,MS4.5						
PKI	Pulchoki	28.74	338	*e*P	P	05 36 46.0	+2.2
GUN	Gumba	28.88	339	*e*P	P	05 36 46.2	+1.2
	comp=Z,85nm,1.0s,mb5.4						
DMN	Daman	28.89	337	*e*P	P	05 36 47.2	+2.1
	comp=Z,41nm,1.2s,mb5.0						
KKN	Kakani	28.99	338	*e*P	P	05 36 46.9	+0.9
	comp=Z,44nm,1.1s,mb5.1						
KKN	Kakani	28.99	338	*e*P	P	05 36 46.9	+0.9
KKN				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.8						
LSA	Lhasa	29.12	349	P	P	05 36 49.0	+1.8
LSA	Lhasa	29.12	349	*e*P	P	05 36 48.1	+0.9
LSA				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
LSA	Lhasa	29.12	349	*e*P	P	05 36 48.1	+1.0
	comp=Z,15nm,1.0s,mb4.7						
GKN	Gorkha	29.43	337	*e*P	P	05 36 50.2	+0.2
	comp=Z,25nm,0.8s,mb5.0						
KOLN	Koldanda	29.64	335	*e*P	P	05 36 52.8	+0.9
	comp=Z,24nm,0.7s,mb5.0						
MBWA	Marble Bar	31.15	136	P	P	05 37 09.3	+4.1
	comp=Z,15nm,1.1s,mb4.7						
ENH	Enshi	31.37	21	*e*P	P	05 37 05.5	-1.6
	comp=Z,15nm,0.6s,mb5.0						
WHN	Wuhan	33.59	27	*e*P	P	05 37 26.3	-0.2
XAN	Xi'an	34.66	17	P	P	05 37 34.6	-1.0
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
LZH	Lanzhou	35.46	9	*e*P	P	05 37 42.5	+0.1
LZH				AP	pP	05 37 49.8	0.0
LZH				XP	sP	05 37 53.3	+0.3
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
LZH				AMB	AMB		
	comp=Z,210nm,4.0s						
LZH				LR	LR		
	comp=E,1µm,15.8s						
LZH				LR	LR		
	comp=Z,980nm,21.4s						
NJ2	Nanjing	37.04	31	*e*P	P	05 37 57.6	+1.8
NJ2				AP	pP	05 38 07.3	+4.1
NJ2				XP	sP	05 38 11.4	+5.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,120nm,4.8s						
NJ2				LR	LR		
	comp=N,1µm,15.9s,MS4.8						
NJ2				LR	LR		
	comp=E,940nm,17.5s,MS4.8						
NJ2				LR	LR		
	comp=Z,600nm,17.9s,MS4.4						
SSE	Sheshan	37.58	35	P	P	05 38 03.8	+3.5
SSE				AP	pP	05 38 12.1	+4.3
SSE				XP	sP	05 38 16.6	+5.7
SSE				SCS	ScS	05 48 09.9	0.0
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,160nm,8.1s						
SSE				LR	LR		
	comp=N,150nm,14.8s,MS4.1						
SSE				LR	LR		
	comp=E,140nm,14.7s,MS4.1						
SSE				LR	LR		
	comp=Z,240nm,16.2s,MS4.1						
GTA	Gaotai	38.31	3	*e*P	P	05 38 06.8	+0.4
GTA				AP	pP	05 38 13.8	0.0
GTA				XP	sP	05 38 17.3	+0.3
GTA				PP	PP	05 39 35.4	-2.2
GTA				S	S	05 43 54.8	-3.9
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
GTA				AMB	AMB		
	comp=Z,80nm,7.2s						
GTA				LR	LR		
	comp=N,340nm,18.3s,MS4.4						
GTA				LR	LR		
	comp=E,290nm,14.4s,MS4.4						
GTA				LR	LR		
	comp=Z,390nm,20.2s						
HHC	Hu-ho-hao-te	41.75	16	*e*P	P	05 38 39.4	+4.5
HHC				PCP	PcP	05 40 33.5	+1.9
HHC				SCP		05 44 15.8	
HHC				AMB	AMB		
	comp=Z,110nm,8.4s						
HHC				LR	LR		
	comp=N,570nm,17.3s,MS4.7						
HHC				LR	LR		
	comp=E,550nm,16.7s,MS4.7						
HHC				LR	LR		
	comp=Z,500nm,16.9s,MS4.5						
WRA	Warramunga Arr	41.93	122	P	P	05 38 37.0	+0.5
	comp=Z,3.6nm,0.7s,mb4.1,baz=300,slow=9.2,SNR=12						
WRAB	Tennant Creek	41.93	122	*e*P	P	05 38 34.8	-1.8
WRAB				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.7						
WRAB	Tennant Creek	41.93	122	*e*P	P	05 38 34.8	-1.8
	comp=Z,22nm,1.0s,mb4.8						
WMQ	Urumqi	43.48	350	⇓P	P	05 38 50.0	+1.1
WMQ				AP	pP	05 38 55.0	-1.4
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,110nm,4.4s						
WMQ				LR	LR		
	comp=N,120nm,22.0s						
WMQ				LR	LR		
	comp=Z,130nm,20.0s,MS3.8						
JNU	Nakatsue	44.96	41	P	P	05 38 59.9	-1.2
	comp=Z,6.0nm,0.8s,mb4.5,baz=252,slow=20,SNR=3.2						
KS15	Wonju Array Si	45.99	34	*e*P	P	05 39 09.5	+0.4
AAK	Ala-Archa	46.19	337	*e*P	P	05 39 04.9	-5.7
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
AAK	Ala-Archa	46.19	337	*e*P	P	05 39 04.8	-5.8
	comp=Z,5.6nm,0.9s,mb4.5						
SNY	Shenyang	47.08	27	⇑P	P	05 39 17.8	+0.1
SNY				LR	LR		
	comp=N,300nm,14.4s,MS4.5						
SNY				LR	LR		
	comp=E,290nm,13.8s,MS4.5						
SNY				LR	LR		
	comp=Z,450nm,14.7s,MS4.6						
SONM	Songino Array	47.33	8	P	P	05 39 19.9	+0.2
	comp=Z,5.7nm,0.6s,mb4.7,baz=192,slow=8.8,SNR=34						
SONM				PcP	PcP	05 40 51.0	+0.3
	comp=Z,3.1nm,0.8s,baz=198,slow=4.1,SNR=6.4						
SONM				LR	LR	06 01 56.2	
	comp=Z,656nm,18.5s,MS4.6,baz=182,slow=40						
MKAR	Makanchi Array	47.44	346	P	P	05 39 20.6	+0.1
	comp=Z,7.7nm,0.8s,mb4.7,baz=162,slow=7.7,SNR=46						
MKAR				LR	LR	06 03 13.1	
	comp=Z,118nm,19.9s,MS3.9,baz=170,slow=41						
ULN	Ulaanbaatar	47.46	9	*e*P	P	05 39 21.0	+0.4
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
ULN	Ulaanbaatar	47.46	9	*e*P	P	05 39 20.9	+0.3
	comp=Z,6.3nm,0.8s,mb4.6						
ZAK	Zakamensk	49.48	5	*e*P	P	05 39 32.8	-3.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.8						
CN2	Changchun	49.49	27	*e*P	P	05 39 36.3	-0.1
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,16.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,16.0s,MS4.6						
CN2				LR	LR		
	comp=Z,400nm,14.0s,MS4.6						
TLY	Talaya	50.80	5	*e*P	P	05 39 46.6	+0.4
TLY				*e*		05 41 35.8	
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
TLY				MLR	MLR		
	comp=Z,328nm,18.0s,MS4.4						
HIA	Hailar	51.83	19	P	P	05 39 53.6	-0.5
HIA				*e*P		05 39 53.8	
MJAR	Matsushiro Arr	51.84	42	LR	LR	06 02 02.5	
	comp=Z,171nm,20.8s,MS4.1,baz=215,slow=36						
MDJ	Mudanjiang	52.05	29	P	P	05 39 55.9	+0.1
MDJ				AMB	AMB		
	comp=Z,70nm,5.2s						

CIT	**Chita**	**52.67**	**13**	*e*P	**P**	**05 40 01.1**	**+0.7**
STKA	**Stephens Creek**	**53.22**	**132**	P	**P**	**05 40 05.1**	**+0.4**
	comp=Z,6.3nm,0.7s,mb4.7,baz=310,slow=7.1,SNR=8.7						
STKA	**Stephens Creek**	**53.22**	**132**	*e*P	**P**	**05 40 05.9**	**+1.2**
STKA				*e*pP	pP	05 40 13.1	+0.7
NVS	**Novosibirsk**	**54.88**	**350**	*e*P	**P**	**05 40 14.4**	**-2.2**
NVS				pmax	pmax		
	comp=N,8.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
NVS				pmax	pmax		
	comp=E,5.0nm,0.9s						
KLR	**Kul’dur**	**56.44**	**26**	*e*P	**P**	**05 40 24.8**	**-3.1**
KLR				MLR	MLR		
	comp=E,500nm,13.0s						
KLR				MLR	MLR		
	comp=Z,800nm,13.0s,MS5.0						
BVAR	**Borovoye Array**	**56.44**	**341**	P	**P**	**05 40 26.9**	**-1.0**
	comp=Z,3.7nm,0.8s,mb4.5,baz=149,slow=8.6,SNR=22						
ZRNK	**Zerenda**	**56.84**	**340**	*e*P	**P**	**05 40 29.6**	**-1.2**
ZRNK				*e**PP	pP	05 40 37.3	-1.2
ZRNK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
ZRNK	**Zerenda**	**56.84**	**340**	*e*P	**P**	**05 40 29.6**	**-1.2**
	comp=Z,5.7nm,1.0s,mb4.6						
ZRNK				*e*pP	pP	05 40 37.3	-1.2
BOD	**Bodaibo**	**58.21**	**10**	*e*P	**P**	**05 40 40.1**	**-0.2**
BOD				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
YAK	**Yakutsk**	**65.62**	**16**	*e*P	**P**	**05 41 27.7**	**-2.1**
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
ANN	**Anapa**	**68.25**	**319**	*e*P	**P**	**05 41 41.5**	**-5.4**
ANN				pmax	pmax		
	comp=Z,83nm,1.3s,mb5.6						
BRTR	**Keskin Array B**	**69.25**	**312**	P	**P**	**05 41 51.3**	**-1.8**
	comp=Z,0.7nm,0.4s,mb3.9,baz=135,slow=5.2,SNR=4.8						
MATP	**Matopo**	**70.45**	**248**	P	**P**	**05 42 02.0**	**+1.3**
	comp=Z,2.8nm,0.9s,mb4.2,baz=40,slow=10.0,SNR=3.7						
PET	**Petropavlovsk**	**72.40**	**34**	*e*P	**P**	**05 42 19.0**	**+7.1**
PET				*e*		05 51 55.0	
PET				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
OBN	**Obninsk**	**72.79**	**328**	P	**P**	**05 42 12.0**	**-2.1**
OBN				*e*		05 42 24.2	
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.2						
TIXI	**Tiksi**	**73.39**	**10**	*e*P	**P**	**05 42 14.6**	**-2.7**
TIXI				*e*	pP	05 42 22.8	-2.4
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,281nm,16.0s,MS4.6						
BOSA	**Boshof**	**74.68**	**240**	P	**P**	**05 42 25.0**	**-0.7**
	comp=Z,2.0nm,0.8s,mb4.1,baz=125,slow=7.7,SNR=2.5						
BOSA				LR	LR	06 10 28.5	
	comp=Z,125nm,19.7s,MS4.2,baz=187,slow=32						
BOSA	**Boshof**	**74.68**	**240**	P	**P**	**05 42 25.0**	**-0.7**
BOSA				LR	LR	06 10 28.4	
AKASG	**Malin Array Be**	**75.42**	**322**	P	**P**	**05 42 28.2**	**-1.3**
	comp=Z,0.3nm,0.3s,mb3.7,baz=91,slow=4.8,SNR=5.5						
AKASG	**Malin Array Be**	**75.42**	**322**	P	**P**	**05 42 28.2**	**-1.3**
FINES	**FINESS Array B**	**80.18**	**333**	P	**P**	**05 42 55.7**	**+0.2**
	comp=Z,0.9nm,0.5s,mb3.9,baz=90,slow=3.8,SNR=5.5						
BILL	**Bilibino**	**81.36**	**21**	P	**P**	**05 42 56.0**	**-5.5**
BILL				*e*PS	PS	05 54 13.1	+12
BILL				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.6						
ARCES	**ARCESS Array B**	**82.73**	**340**	P	**P**	**05 43 09.3**	**+0.7**
	comp=Z,2.7nm,0.8s,mb4.3,baz=90,slow=4.9,SNR=9.2						
GERES	**GERESS Array B**	**84.97**	**319**	P	**P**	**05 43 21.7**	**+1.3**
	comp=Z,1.3nm,0.7s,mb4.2,baz=90,slow=4.0,SNR=13						
VNDA	**Vanda**	**85.62**	**169**	LR	LR	06 20 04.0	
	comp=Z,66nm,18.7s,MS4.1,baz=316,slow=35						
NB2	**NORSAR Subarra**	**87.19**	**331**	P	**P**	**05 43 31.8**	**+0.8**
	comp=Z,1.2nm,0.8s,mb4.2,baz=93,slow=5.0						
NOA	**NORSAR Array B**	**87.19**	**331**	P	**P**	**05 43 31.8**	**+0.7**
	comp=Z,1.4nm,0.8s,mb4.2,baz=94,slow=4.9,SNR=5.1						
NOA	**NORSAR Array B**	**87.19**	**331**	P	**P**	**05 43 31.8**	**+0.7**
JMIC	**Jan Mayen**	**94.16**	**342**	LR	LR	06 29 23.6	
	comp=Z,43nm,21.5s,MS3.9,baz=111,slow=37						
NVAR	**Mina Array Bea**	**128.95**	**36**	PKP	PKPdf	05 49 53.5	-3.4
	comp=Z,0.7nm,0.9s,baz=191,slow=1.8,SNR=4.4						
TXAR	**Lajitas Array**	**143.84**	**32**	PKP	PKPdf	05 50 19.5	-4.8
	comp=Z,0.5nm,0.6s,baz=174,slow=0.9,SNR=8.2						
CPUP	**Villa Florida**	**144.85**	**222**	PKP	PKPdf	05 50 23.5	-2.7
	comp=Z,2.4nm,1.0s,baz=135,slow=2.9,SNR=3.6						
NATX	**Nacogdoches**	**145.54**	**18**	*e*PKPdf	PKPdf	05 50 25.5	-1.8
NATX				*e*pPKPdf		05 50 32.8	
LRAL	**Lakeview Retre**	**145.92**	**6**	*e*PKPdf	PKPdf	05 50 25.3	-2.5

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*NEIC **23** 05:31:09.8±1.6,6.45S×146.80E,h62^{km}±15^{km},mb4.7/8, Error ellipse: s-maj=11.7km s-min=10.5km az=216.0*

*IDC **23** 05:31:10.3±3.3,6.41S×146.86E,h64^{km}±30^{km},mb3.9/7, mb1 4.1/10,mb1mx4.0/16,mbtmp4.2/10,ML3.5/3,MS3.6/2, Ms1 3.6/2,ms1mx3.2/21,Error ellipse: s-maj=27.2km s-min=19.5km az=61.0*

ISC 23 05:31:07.8±2.3**,6.38S**±0.10×**146.76E**±0.09**,h57**^{km}±21^{km}**, n28,**σ**1**^{s}**05**/27**,mb4.3**/14**,MS3.6**/1**,1D,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.03**	**173**	P	**P**	**05 31 54.0**	**-0.5**
	11nm,0.3s,baz=359,slow=6.2,SNR=18						
PMG				S	**S**	**05 32 31.7**	**+1.9**
	18nm,0.3s,baz=272,slow=21,SNR=2.6						
CTA	**Charters Tower**	**13.63**	**182**	P	**P**	**05 34 20.3**	**+0.2**
	0.2nm,0.3s,baz=9.9,slow=10,SNR=3.1						
CTA				LR	LR	05 39 15.2	
	comp=Z,225nm,22.0s,baz=44,slow=36						
CTAO	**Charters Tower**	**13.63**	**182**	P	**P**	**05 34 20.3**	**+0.2**
	26nm,1.3s						
KAKA	**Kakadu**	**15.46**	**245**	*e*P	**P**	**05 34 44.6**	**+0.8**
	34nm,0.6s						
WRAB	**Tennant Creek**	**18.08**	**221**	*e*P	**P**	**05 35 15.3**	**-1.4**
	29nm,0.8s						
WB2	**Warramunga Arr**	**18.08**	**221**	⇓*i*P	**P**	**05 35 16.2**	**-0.6**
WRA	**Warramunga Arr**	**18.09**	**221**	P	**P**	**05 35 15.8**	**-1.1**
	0.3nm,0.3s,baz=46,slow=12,SNR=46						
FITZ	**Fitzroy Crossi**	**23.67**	**239**	*e*P	**P**	**05 36 15.9**	**+0.8**
	18nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**23.67**	**239**	P	**P**	**05 36 15.7**	**+0.6**
	25nm,0.8s,mb4.7,baz=52,slow=4.4,SNR=18						
DZM	**Mont Dzumac**	**24.59**	**131**	P	**P**	**05 36 23.5**	**-0.6**
	4.9nm,0.8s,mb4.1,baz=111,slow=18,SNR=5.5						
STKA	**Stephens Creek**	**25.82**	**190**	P	**P**	**05 36 34.5**	**-1.1**
	2.9nm,0.7s,mb3.9,baz=357,slow=11,SNR=5.8						
STKA				LR	LR	05 47 44.4	
	comp=Z,187nm,20.7s,MS3.6,baz=206,slow=38						
KS15	**Wonju Array Si**	**47.02**	**339**	*e*P	**P**	**05 39 28.1**	**-7.4**
KULM	**Kulim**	**47.47**	**283**	P	**P**	**05 39 39.4**	**0.0**
YSS	**Yuzh-Sakhalins**	**53.22**	**357**	P	**P**	**05 40 21.4**	**-1.3**
	23nm,0.9s,mb5.1						
CM31	**Chiang Mai Arr**	**53.22**	**299**	P	**P**	**05 40 22.0**	**-1.1**
	6.9nm,0.7s,mb4.7						
CMAR	**Chiang Mai Arr**	**53.22**	**299**	P	**P**	**05 40 23.1**	**0.0**
	4.2nm,0.3s,mb4.8,baz=116,slow=5.7,SNR=15						
FX1	**Attu Island--F**	**63.15**	**18**	*e*P	**P**	**05 41 32.5**	**+0.5**
SONM	**Songino Array**	**64.62**	**331**	P	**P**	**05 41 42.8**	**+1.1**
	0.2nm,0.4s,mb3.5,baz=124,slow=4.5,SNR=4.2						
VNDA	**Vanda**	**71.55**	**177**	P	**P**	**05 42 24.3**	**0.0**
	1.5nm,0.7s,mb4.0,baz=328,slow=5.7,SNR=10						
VNDA	**Vanda**	**71.55**	**177**	*e*P	**P**	**05 42 23.9**	**-0.4**
	2.3nm,0.9s,mb4.1						
VNDA				P		05 42 24.3	
MKAR	**Makanchi Array**	**77.64**	**321**	P	**P**	**05 43 00.9**	**+1.0**
	0.1nm,0.3s,mb3.2,baz=135,slow=4.1,SNR=2.4						
QSPA	**South Pole Qui**	**83.59**	**180**	*e*P	**P**	**05 43 31.1**	**+0.5**
	3.2nm,0.7s,mb4.6						
ILAR	**Eielson Array**	**85.92**	**23**	P	**P**	**05 43 41.4**	**-1.1**
	2.7nm,0.6s,mb4.7,baz=253,slow=4.9,SNR=63						
BVAR	**Borovoye Array**	**86.94**	**324**	P	**P**	**05 43 50.1**	**+2.3**
	0.7nm,0.8s,mb3.9,baz=101,slow=7.3,SNR=3.4						
BRVK	**Borovoye**	**87.00**	**324**	P	**P**	**05 43 51.2**	**+3.1**
	0.2nm,0.4s,mb3.7						
WVOR	**Wild Horse Val**	**97.66**	**48**	P	**P**	**05 44 37.2**	**-0.5**
	5.8nm,1.4s,mb4.9						
SAML	**Samuel**	**146.49**	**117**	P	PKPdf	05 50 44.3	+2.0
DBIC	**Dimbokro**	**151.80**	**272**	PKPbc	PKPdf	05 51 00.1	+9.3
	2.5nm,0.7s,baz=98,slow=5.1,SNR=4.1						

GUC 23 05:34:27.3±0.4**,19.97S**×**69.29W,h102**^{km}±14^{km}**,ML4.3, Northern Chile**

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*IDC **23** 05:51:39.2±2.2,51.19N×177.97W,mb3.3/3,mb1 3.8/3, mb1mx3.4/22,mbtmp3.4/3,ML2.5/1,Error ellipse: s-maj=73.2km s-min=16.8km az=6.0*

*NEIC **23** 05:51:43.8,51.30N×178.21W,h17^{km},ML3.7(AEIC),After AEIC.*

ISC 23 05:51:40.8±0.9**,51.18N**±0.10×**178.3W**±0.1**,h17**^{km}**,n20,** σ**0**^{s}**80**/29**,mb3.4**/3**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**0.90**	**49**	P	**Pb**	**05 51 58.5**	**+1.0**
KIMD				S	**Sb**	**05 52 09.4**	**+0.4**
KIWB	**Kanaga Island**	**1.00**	**47**	P	**Pb**	**05 51 59.8**	**+0.6**
KIWB				S	**Sb**	**05 52 11.3**	**-0.6**
KIKV	**Kanaga Island**	**1.01**	**46**	P	**Pb**	**05 51 60.0**	**+0.6**
KIKV				S	**Sb**	**05 52 11.6**	**-0.6**
KIRH	**Kanaga Island**	**1.05**	**46**	P	**Pb**	**05 52 00.9**	**+0.7**
KINC	**Kanaga Island**	**1.06**	**44**	P	**Pb**	**05 52 00.8**	**+0.5**
KINC				S	**Sb**	**05 52 13.4**	**-0.4**
ADAG	**Mount Adagdak**	**1.34**	**53**	P	**Pn**	**05 52 05.1**	**+0.1**
GSTD	**Great Sitkin T**	**1.62**	**56**	P	**Pn**	**05 52 09.4**	**+0.5**
GSTD				S	**Sn**	**05 52 29.6**	**+0.1**
GSSP	**Great Sitkin S**	**1.62**	**55**	P	**Pn**	**05 52 09.4**	**+0.4**
GSSP				S	**Sn**	**05 52 29.8**	**+0.2**
GSMY	**Great Sitkin M**	**1.66**	**58**	P	**Pn**	**05 52 09.8**	**+0.3**
GSMY				S	**Sn**	**05 52 30.0**	**-0.5**
GSTR	**Great Sitkin T**	**1.68**	**56**	P	**Pn**	**05 52 10.4**	**+0.5**
ATKA	**Atka Island**	**2.77**	**67**	P	**Pn**	**05 52 26.0**	**+0.6**
ATKA				S	**Sn**	**05 52 57.1**	**-1.6**
FX1	**Attu Island--F**	**5.52**	**291**	Pn	**Pn**	**05 53 04.1**	**-0.3**
	0.5nm,0.3s,baz=68,slow=16,SNR=8.8						
FX1				Sn	**Sn**	**05 54 02.3**	**-5.9**
	0.2nm,0.3s,baz=220,slow=22,SNR=3.8						
NIKO	**Nikolski**	**6.11**	**69**	P	**Pn**	**05 53 13.2**	**+0.5**
OKCE	**Okmok Cone E**	**6.63**	**66**	P	**Pn**	**05 53 20.2**	**+0.2**
MSW	**Makushin Switc**	**7.55**	**64**	P	**Pn**	**05 53 34.1**	**+1.1**
SPIA	**Saint Paul Isl**	**7.65**	**35**	P	**Pn**	**05 53 33.5**	**-0.8**
UNV	**Unalaska Valle**	**7.69**	**65**	P	**Pn**	**05 53 34.5**	**-0.5**
ILAR	**Eielson Array**	**21.21**	**38**	P	**P**	**05 56 24.4**	**-3.4**
	0.4nm,0.5s,mb3.0,baz=238,slow=8.7,SNR=8.8						
PDAR	**Pinedale Array**	**46.09**	**72**	P	**P**	**06 00 03.9**	**-1.5**
	1.0nm,0.5s,mb4.0,baz=324,slow=3.2,SNR=8.1						
TXAR	**Lajitas Array**	**58.39**	**81**	P	**P**	**06 01 34.3**	**-3.3**
	0.1nm,0.5s,mb3.1,baz=309,slow=5.8,SNR=3.4						

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*MOS **23** 05:55:35.2±1.1,85.91N×30.93E,h10^{km},mb4.3/9,Error ellipse: s-maj=99.9km s-min=9.3km az=90.2*

*IDC **23** 05:55:35.6±0.7,85.95N×33.03E,mb3.7/11,mb1 3.9/12, mb1mx3.8/22,mbtmp3.7/12,ML3.7/1,MS3.4/15,Ms1 3.4/15, ms1mx3.2/30,Error ellipse: s-maj=24.9km s-min=14.4km az=75.0*

*NEIC **23** 05:55:37.1±0.4,85.96N×31.08E,h10^{km},mb4.1/11,Error ellipse: s-maj=11.4km s-min=7.3km az=80.0*

ISC 23 05:55:35.3±0.4**,85.91N**±0.04×**30.1E**±1.0**,h10**^{km}**,n48,** σ**1**^{s}**23**/44**,mb3.8**/18**,MS3.4**/14**,North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**7.35**	**208**	*e*P	**Pn**	**05 57 25.0**	**-0.3**
KBS				pmax	pmax		
	comp=Z,66nm,0.6s						
KBS	**Kingsbay**	**7.35**	**208**	*e*Pn	**Pn**	**05 57 25.0**	**-0.3**
	comp=Z,66nm,0.6s						
HOPEN	**Hopen**	**9.49**	**187**	*e*P	**P**	**05 57 55.1**	**+0.1**
HOPEN				*e*S	**Sn**	**05 59 33.5**	**-9.3**
KEV	**Kevo**	**16.26**	**184**	P	**P**	**05 59 27.5**	**+2.6**
SUMG	**Summit**	**16.47**	**262**	*e*P	**P**	**05 59 25.0**	**-2.4**
	comp=Z,34nm,1.6s						
ARCES	**ARCESS Array B**	**16.49**	**186**	Pn	**P**	**05 59 26.9**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=358,slow=10,SNR=7.7						
ARCES				Sn	**S**	**06 02 28.5**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=16,slow=25,SNR=2.5						
ARCES				LR	LR	06 05 39.7	
	comp=Z,105nm,20.0s,baz=287,slow=36						
SCO	**Scoresbysund**	**17.40**	**242**	*i* P	**P**	**05 59 47.6**	**+8.4**
SCO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SCO	**Scoresbysund**	**17.40**	**242**	*i* P	**P**	**05 59 47.6**	**+8.4**
	comp=Z,1.9nm,0.8s						
RES	**Resolute Bay**	**18.08**	**315**	*e*P	**P**	**05 59 47.2**	**-0.5**
RES				pmax	pmax		
	comp=Z,11nm,1.1s						
RES	**Resolute Bay**	**18.08**	**315**	*e*P	**P**	**05 59 47.2**	**-0.5**
	comp=Z,11nm,1.1s						
FINES	**FINESS Array B**	**24.62**	**185**	P	**P**	**06 00 56.0**	**-0.2**
	comp=Z,2.0nm,1.1s,mb3.5,baz=270,slow=17,SNR=3.1						
FINES				LR	LR	06 10 12.4	
	comp=Z,67nm,21.8s,MS3.1,baz=356,slow=36						
BILL	**Bilibino**	**25.22**	**38**	*e*P	**P**	**06 01 01.6**	**-0.3**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.2						
BILL	**Bilibino**	**25.22**	**38**	*e*P	**P**	**06 01 01.2**	**-0.7**
	comp=Z,6.7nm,0.9s,mb4.2						
NB2	**NORSAR Subarra**	**25.26**	**202**	P	**P**	**06 01 05.7**	**+3.3**
	comp=Z,1.7nm,1.1s,mb3.5,baz=6.0,slow=6.2						
NOA	**NORSAR Array B**	**25.26**	**202**	P	**P**	**06 01 04.4**	**+2.0**
	comp=Z,1.2nm,0.8s,mb3.5,baz=2.5,slow=9.1,SNR=3.3						
NOA				LR	LR	06 10 12.4	
	comp=Z,42nm,19.3s,MS3.0,baz=350,slow=35						
INK	**Inuvik**	**25.80**	**346**	*e*P	**P**	**06 01 07.6**	**+0.3**
INK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
INK	**Inuvik**	**25.80**	**346**	P	**P**	**06 01 07.3**	**0.0**
	comp=Z,5.4nm,1.1s,mb4.0,baz=3.6,slow=8.6,SNR=4.5						
INK				LR	LR	06 10 47.3	
	comp=Z,51nm,21.1s,MS3.0,baz=114,slow=35						
INK	**Inuvik**	**25.80**	**346**	*e*P	**P**	**06 01 07.5**	**+0.2**
	comp=Z,8.2nm,1.1s,mb4.2						
HFS	**Hagfors**	**26.11**	**199**	LR	LR	06 10 28.9	
	comp=Z,78nm,21.3s,MS3.2,baz=187,slow=34						
ILAR	**Eielson Array**	**29.49**	**357**	P	**P**	**06 01 39.9**	**-1.0**
	comp=Z,0.6nm,1.0s,mb3.3,baz=357,slow=9.0,SNR=5.4						
ILAR				LR	LR	06 11 33.5	
	comp=Z,62nm,21.4s,MS3.2,baz=6.3,slow=32						
YKW3	**Yellowknife Ar**	**31.04**	**329**	*e*P	**P**	**06 01 53.1**	**-1.6**
YKA	**Yellowknife Ar**	**31.11**	**329**	LR	LR	06 14 40.3	
	comp=Z,92nm,19.7s,MS3.5,baz=70,slow=37						
ZRNK	**Zerenda**	**34.12**	**137**	*e*P	**P**	**06 02 22.5**	**+0.9**
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ZRNK	**Zerenda**	**34.12**	**137**	*e*P	**P**	**06 02 22.5**	**+0.9**
	comp=Z,1.7nm,0.6s,mb4.2						
AKASG	**Malin Array Be**	**35.38**	**181**	P	**P**	**06 02 32.5**	**+0.1**
	comp=Z,0.3nm,0.4s,mb3.6,baz=353,slow=8.4,SNR=3.1						
DLBC	**Dease Lake**	**35.63**	**342**	P	**P**	**06 02 34.5**	**0.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=312,slow=15,SNR=3.4						
DLBC				LR	LR	06 17 30.6	
	comp=Z,67nm,19.6s,MS3.4,baz=265,slow=37						
MORC	**Moravsky Berou**	**36.41**	**194**	*e*P	**P**	**06 02 44.3**	**+3.1**
MORC				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
MORC	**Moravsky Berou**	**36.41**	**194**	*e*P	**P**	**06 02 44.3**	**+3.2**
	comp=Z,1.9nm,0.6s,mb4.2						
GERES	**GERESS Array B**	**37.41**	**198**	LR	LR	06 19 16.5	
	comp=Z,26nm,19.0s,MS3.0,baz=209,slow=38						
MLR	**Muntele Rosu**	**40.60**	**185**	LR	LR	06 20 38.4	
	comp=Z,124nm,18.8s,MS3.8,baz=133,slow=37						
MKAR	**Makanchi Array**	**40.98**	**124**	P	**P**	**06 03 19.3**	**0.0**
	comp=Z,1.8nm,0.7s,mb3.8,baz=6.0,slow=5.7,SNR=16						
MKAR				LR	LR	06 22 48.9	
	comp=Z,86nm,19.4s,MS3.6,baz=348,slow=40						
MKAR	**Makanchi Array**	**40.98**	**124**	P	**P**	**06 03 19.3**	**0.0**
MKAR				LR	LR	06 22 48.9	
SONM	**Songino Array**	**41.54**	**99**	P	**P**	**06 03 22.3**	**-1.4**
	comp=Z,0.3nm,0.5s,mb3.2,baz=337,slow=9.4,SNR=6.1						
ULN	**Ulaanbaatar**	**41.55**	**99**	*e*P	**P**	**06 03 24.9**	**+1.1**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
ULN	**Ulaanbaatar**	**41.55**	**99**	*e*P	**P**	**06 03 24.9**	**+1.1**
	comp=Z,1.9nm,0.8s,mb3.8						
ULM	**Lac du Bonnet**	**42.47**	**310**	LR	LR	06 21 13.0	
	comp=Z,56nm,20.7s,MS3.4,baz=18,slow=36						
AAK	**Ala-Archa**	**44.69**	**133**	*e*P	**P**	**06 03 50.5**	**+1.0**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
AAK	**Ala-Archa**	**44.69**	**133**	*e*P	**P**	**06 03 50.5**	**+1.0**
	comp=Z,4.7nm,1.0s,mb4.3						
YSS	**Yuzh-Sakhalins**	**44.95**	**63**	P	**P**	**06 03 50.6**	**-0.9**
GNI	**Garni**	**46.07**	**164**	LR	LR	06 26 04.3	
	comp=Z,57nm,19.2s,MS3.5,baz=352,slow=40						
RSSD	**Black Hills**	**49.01**	**317**	*e*P	**P**	**06 04 25.3**	**+1.9**
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
RSSD	**Black Hills**	**49.01**	**317**	*e*P	**P**	**06 04 25.3**	**+1.9**
	comp=Z,2.9nm,0.8s,mb4.4						
PDAR	**Pinedale Array**	**50.62**	**322**	P	**P**	**06 04 37.0**	**+1.3**
	comp=Z,1.0nm,0.9s,mb3.7,baz=11,slow=7.6,SNR=5.3						
PDAR				LR	LR	06 24 44.9	
	comp=Z,76nm,19.5s,MS3.7,baz=10,slow=34						
WMOK	**Wichita Mounta**	**58.08**	**311**	P	**P**	**06 05 30.6**	**+0.1**
WMOK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
WMOK	**Wichita Mounta**	**58.08**	**311**	P	**P**	**06 05 30.6**	**+0.1**
	comp=Z,1.2nm,0.8s,mb4.0						
TXAR	**Lajitas Array**	**63.72**	**315**	P	**P**	**06 06 09.9**	**+1.2**
	comp=Z,0.3nm,0.6s,mb3.5,baz=306,slow=4.4,SNR=5.4						
CMAR	**Chiang Mai Arr**	**70.22**	**110**	P	**P**	**06 06 48.5**	**-1.4**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,43nm,21.9s						
CMAR	**Chiang Mai Arr**	**70.22**	**110**	P	**P**	**06 06 48.5**	**-1.5**
	comp=Z,1.9nm,0.8s,mb4.0,baz=351,slow=8.8,SNR=7.3						
CMAR				LR	LR	06 41 24.0	
	comp=Z,43nm,21.9s,MS3.7,baz=190,slow=39						

MAN 23 06:12:43.0,17.98N×**120.25E,h9**^{km}**,mb4.3,ML3.1,MS2.8, 1C,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**0.96**	**97**	*e*P	Pb	06 13 00.6	-0.8
APYP				*e*S	Sb	06 13 14.9	+0.9
CVP	**Callao Caves**	**1.53**	**100**	⇑*e*P	Pn	06 13 10.0	-0.7
CVP				*e*S	Sb	06 13 32.5	+2.0
BOLP	**Bolinao**	**1.62**	**191**	*e*P	Pn	06 13 07.8	-4.2
SGCP	**Mt. Cagua**	**1.73**	**81**	*e*P	Pn	06 13 12.9	-0.6
SGCP				*e*S	Sn	06 13 35.8	-0.2
SCZP	**Santa Cruz**	**2.22**	**188**	*e*P	Pn	06 13 25.2	+4.7
BALP	**Baler**	**2.57**	**150**	*e*P	Pn	06 13 24.8	-0.7

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*HEL **23** 06:19:37.0±0.3,59.54N×22.57E,ML1.6,ML2.2(UPP), ML2.2(NAO),Explosion*

*IDC **23** 06:19:37.3±2.0,59.76N×22.55E,mb1 3.0/4, mb1mx2.9/21,mbtmp2.9/4,ML2.8/4,Error ellipse: s-maj=27.1km s-min=6.6km az=160.0*

*NAO **23** 06:19:38.9±1.8,59.89N×22.55E,ML2.2*

*BER **23** 06:19:39.0±4.1,59.69N×22.73E,ML2.2(NAO)*

ISC 23 06:19:36.5±0.6**,59.63N**±0.05×**22.52E**±0.06**,n38,**σ**0**^{s}**97**/56**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	**Aland**	**1.39**	**294**	*e*P	**Pb**	**06 20 01.9**	**-1.1**
AAL				*e*S	**Sb**	**06 20 20.6**	**-0.5**
PVF	**Pernaja**	**1.91**	**60**	*e*P	**Pn**	**06 20 10.4**	**-0.2**
PVF				*e*S	**Sn**	**06 20 35.8**	**+0.1**
NRTU	**Norrtaelje**	**1.97**	**273**	*e*P	**Pn**	**06 20 11.3**	**-0.2**
NRTU				*e*S	**Sn**	**06 20 39.2**	**+1.9**
GRAU	**Graesoe**	**2.12**	**291**	*e*P	**Pn**	**06 20 13.3**	**-0.3**
FORU	**Forsmark**	**2.31**	**291**	*e*P	**Pn**	**06 20 16.8**	**+0.5**
FLYU	**Flymyra**	**2.39**	**284**	*e*P	**Pn**	**06 20 17.2**	**-0.2**
NYNU	**Nynaeshamn**	**2.40**	**257**	*e*P	**Pn**	**06 20 18.2**	**+0.6**
FIA0	**FINESS Array S**	**2.53**	**43**	*e*P	**Pn**	**06 20 19.8**	**+0.3**
FIA0				*e*S	**Sn**	**06 20 52.2**	**+0.8**
FIA0	**FINESS Array S**	**2.53**	**43**	Pn	**Pn**	**06 20 19.5**	**0.0**
	baz=218,slow=14						
FIA0				Lg		06 20 52.8	
	baz=222,slow=28						
FINES	**FINESS Array B**	**2.53**	**43**	Pn	**Pn**	**06 20 19.4**	**0.0**
	1.2nm,0.3s,baz=232,slow=12,SNR=34						
FINES				Lg		06 20 52.6	
	3.0nm,0.3s,baz=229,slow=27,SNR=29						
VJF	**Virojoki**	**2.68**	**68**	*e*P	**Pn**	**06 20 20.1**	**-1.5**
VJF				*e*S	**Sn**	**06 20 52.7**	**-2.6**
BACU	**Backbrunna**	**2.75**	**277**	*e*P	**Pn**	**06 20 22.9**	**+0.3**
KEF	**Keuruu**	**2.79**	**23**	*e*P	**Pn**	**06 20 24.3**	**+1.1**
KEF				*e*S	**Sn**	**06 21 00.0**	**+2.0**
KEF				*e*SG	**Sg**	**06 21 05.1**	**-4.2**
KEF				MSG		06 21 06.0	
	comp=Z,1.6nm,0.1s						
GOTU	**Gotland**	**2.84**	**228**	*e*P	**Pn**	**06 20 25.3**	**+1.4**
IGGU	**Iggoen**	**2.88**	**298**	*e*P	**Pn**	**06 20 24.4**	**0.0**
KAF	**Kangasniemi**	**3.10**	**35**	*e*P	**Pn**	**06 20 28.0**	**+0.4**
KAF				*e*S	**Sn**	**06 21 06.5**	**+0.6**
KAF				*e*SG	**Sg**	**06 21 13.3**	**-6.5**
KAF				MSG		06 21 15.3	
	comp=Z,0.9nm,0.1s						
ESKU	**Eskilstuna**	**3.15**	**265**	*e*P	**Pn**	**06 20 28.4**	**0.0**
VIKU	**Vikbolandet**	**3.21**	**252**	*e*P	**Pn**	**06 20 30.2**	**+1.1**
ARNU	**Arnoeviken**	**3.27**	**311**	*e*P	**Pn**	**06 20 29.5**	**-0.4**
FALU	**Falun**	**3.46**	**287**	*e*P	**Pn**	**06 20 32.3**	**-0.4**
SUF	**Sumiainen**	**3.56**	**28**	*e*P	**Pn**	**06 20 34.6**	**+0.5**
SUF				*e*S	**Sn**	**06 21 18.4**	**+0.8**
HEMU	**Hemsoen**	**3.75**	**327**	*e*P	**Pn**	**06 20 36.6**	**-0.2**
HASU	**Hassela**	**3.84**	**314**	*e*P	**Pn**	**06 20 37.8**	**-0.3**
ASKU	**Askersund**	**4.02**	**263**	*e*P	**Pn**	**06 20 40.5**	**-0.1**
HFS	**Hagfors**	**4.47**	**280**	Pn	**Pn**	**06 20 46.5**	**-0.6**
	baz=89,slow=10						
HFS				Sn	**Sn**	**06 21 40.2**	**-0.5**
	baz=93,slow=28						
HFS				Lg		06 21 57.6	
	baz=84,slow=37						
HFS	**Hagfors**	**4.47**	**280**	*e*P	**Pn**	**06 20 46.5**	**-0.6**
HFS				*e*S	**Sn**	**06 21 40.2**	**-0.5**
HFS				*e*SG		06 21 57.6	
HFS	**Hagfors**	**4.47**	**280**	Pn	**Pn**	**06 20 45.6**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=85,slow=11,SNR=11						
HFS				Sn	**Sn**	**06 21 37.0**	**-3.7**
	comp=Z,0.1nm,0.3s,baz=102,slow=27,SNR=5.4						
HFS				Lg		06 21 55.2	
	comp=Z,0.3nm,0.3s,baz=90,slow=31,SNR=10.0						
BREU	**Bredtraesk**	**4.67**	**338**	*e*P	**Pn**	**06 20 49.5**	**-0.3**
SVAU	**Svanoeiden**	**5.07**	**345**	*e*P	**Pn**	**06 20 54.9**	**-0.7**
KJN	**Kajaani**	**5.10**	**27**	*e*P	**Pn**	**06 20 55.9**	**-0.1**
KJN				*e*SB	**Sb**	**06 22 12.2**	**+3.3**
NB2	**NORSAR Subarra**	**5.79**	**289**	Pn	**Pn**	**06 21 03.0**	**-2.6**
	baz=97,slow=14						
NB2				Sn	**Sn**	**06 22 13.7**	**-0.1**
NB2				Lg		06 22 38.8	
NB2	**NORSAR Subarra**	**5.79**	**289**	*e*P	**Pn**	**06 21 03.0**	**-2.6**
NB2				*e*S	**Sn**	**06 22 13.7**	**-0.1**
NB2				*e*SG		06 22 38.8	
NOA	**NORSAR Array B**	**5.79**	**289**	Pn	**Pn**	**06 21 00.7**	**-5.0**
	comp=Z,0.4nm,0.3s,baz=137,slow=18,SNR=2.6						
NOA				Sn	**Sn**	**06 22 08.2**	**-5.6**
	comp=Z,0.4nm,0.3s,baz=137,slow=16,SNR=2.6						
NOA				Lg		06 22 36.8	
	comp=Z,0.6nm,0.3s,baz=108,slow=20,SNR=3.8						
APA0	**Apatity Array**	**9.24**	**26**	Pn	**P**	**06 21 50.5**	**-3.6**
	baz=214,slow=18						
APA0	**Apatity Array**	**9.24**	**26**	*e*P	**P**	**06 21 50.5**	**-3.6**
ARA0	**ARCESS Array S**	**10.02**	**6**	Pn	**P**	**06 21 57.6**	**-6.9**
	baz=182,slow=14						
ARA0				Sn	**S**	**06 23 42.1**	**-17**
ARA0	**ARCESS Array S**	**10.02**	**6**	*e*P	**P**	**06 21 57.6**	**-6.9**
ARA0				*e*		06 23 42.1	
ARCES	**ARCESS Array B**	**10.02**	**6**	Pn	**P**	**06 21 58.7**	**-5.9**
	comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=11						

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*IPEC **23** 06:30:15.4±0.3,51.57N×16.15E,ML2.4/4,Error ellipse: s-maj=2.0km s-min=1.5km az=36.0*

*NEIC **23** 06:30:16.2±0.5,51.58N×16.20E,h5^{km},ML3.2(VIE), ML2.9(BRG),Error ellipse: s-maj=8.0km s-min=6.3km az=89.0*

*PRU **23** 06:30:17.7,51.46N×16.09E*

*IDC **23** 06:30:17.7±0.8,51.52N×15.94E,mb1 3.3/7, mb1mx3.2/24,mbtmp3.3/7,ML3.2/7,Error ellipse: s-maj=14.2km s-min=7.7km az=114.0*

*CSEM **23** 06:30:17.5±0.1,51.47N×16.11E,h2^{km},ML3.4/7,Error ellipse: s-maj=1.6km s-min=1.2km az=14.0*

*WAR **23** 06:30:18.0,51.48N×16.08E,h1^{km},ML3.0,Mining Induced*

ISC 23 06:30:15.0±0.6**,51.47N**±0.03×**16.11E**±0.03**,n37,**σ**1**^{s}**40**/72**, 3C-1D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.64	169	⇓*i*Pg	Pg	06 30 29.9	+2.1
KSP				*e*Sg	Sg	06 30 38.5	+2.2
KSP	Ksiaz	0.64	169	*i* PG	Pg	06 30 29.9	+2.1
KSP				*e*SG	Sg	06 30 38.9	+2.6
KSP	Ksiaz	0.64	169	*e*Pg	Pg	06 30 29.9	+2.2
KSP				*e*Sg	Sg	06 30 38.6	+2.3
KSP	Ksiaz	0.64	169	*e*Pg	Pg	06 30 29.7	+1.9
KSP				*e*Sg	Sg	06 30 38.5	+2.2
UPC	Upice	0.97	184	*e*PG	Pg	06 30 35.8	+1.5
DPC	Dobruska-Polom	1.13	173	*e*PG	Pg	06 30 38.6	+1.0
DPC				*e*SG	Sg	06 30 53.1	+0.5
	49nm,0.3s						
DPC	Dobruska-Polom	1.13	173	Pg	Pg	06 30 38.6	+1.0
DPC				*e*Sg	Sg	06 30 53.5	+0.9
PVCC	Panska Ves	1.36	226	*e*Pg	Pg	06 30 42.7	+0.7
PVCC				*e*Sg	Sg	06 31 00.6	+0.5
BRG	Berggiesshubel	1.49	247	Pn	Pn	06 30 44.7	+1.7
BRG				Pg	Pg	06 30 45.9	+1.2
BRG				Sg	Sg	06 31 05.6	+1.0
BRG	Berggiesshubel	1.49	247	Pn	Pn	06 30 44.7	+1.6
BRG	Berggiesshubel	1.49	247	Pg	Pg	06 30 45.9	+1.2
PRU	Pruhonice	1.79	214	*e*PN	Pn	06 30 48.4	+1.1
PRU				*e*PG	Pg	06 30 50.0	-0.7
PRU				*e*SG	Sg	06 31 13.6	-0.9
PRU	Pruhonice	1.79	214	*e*Pg	Pg	06 30 50.0	-0.7
PRU				*e*Sg	Sg	06 31 13.6	-0.9
MORC	Moravsky Berou	1.93	151	*e*Pn	Pn	06 30 50.5	+1.1
MORC				*e*Sn	Sn	06 31 14.6	-0.1
MORC	Moravsky Berou	1.93	151	*e*Pn	Pn	06 30 50.3	+1.0
MORC				*e*Sn	Sn	06 31 14.6	0.0
MORC				*e*Sg	Sg	06 31 18.0	-1.1
	35nm,0.4s						
CLL	Collm	1.95	266	*i* Pn	Pn	06 30 50.1	+0.4
CLL				*e*Pg	Pg	06 30 54.0	+0.1
CLL				*i* Sg	Sg	06 31 19.0	-1.0
CLL	Collm	1.95	266	*i* PN	Pn	06 30 50.1	+0.4
CLL				*e*PG	Pg	06 30 54.0	+0.1
CLL				*i*		06 30 57.4	
CLL				*i* SG	Sg	06 31 19.0	-1.0
OKC	Ostrava-Krasne	2.09	141	*e*PG	Pg	06 30 56.4	-0.3
OKC				*e*SG	Sg	06 31 22.9	-1.6
VRAC	Vranov	2.19	172	*e*Sg	Sg	06 31 27.1	-0.7
	10nm,0.2s						
KRUC	Moravsky	2.42	176	*e*Pn	Pn	06 30 57.9	+1.5
KRUC				*e*Sg	Sg	06 31 34.0	-1.5
	18nm,0.4s						
NKC	Novy Kostel	2.63	243	*e*PN	Pn	06 31 00.6	+1.2
NKC				*e*SG	Sg	06 31 42.1	-0.4
	49nm,0.3s						
OJC	Ojcow	2.65	117	*e*PG	Pg	06 31 07.0	-0.9
OJC				*e*SG	Sg	06 31 43.0	-0.3
KHC	Kasperske Hory	2.85	216	*e*PN	Pn	06 31 03.3	+0.8
KHC				*e*PG	Pg	06 31 09.0	-2.9
KHC				*e*SN	Sn	06 31 37.5	-0.6
KHC				*e*SG	Sg	06 31 47.1	-2.8
MOX	Moxa	2.95	255	*e*Pn	Pn	06 31 04.8	+0.8
MOX				*e*Pg	Pg	06 31 12.5	-1.4
MOX				*e*Sg	Sg	06 31 52.3	-1.0
MOX	Moxa	2.95	255	*i* P	Pn	06 31 04.8	+0.8
MOX				Pg	Pg	06 31 12.0	-1.9
MOX				Sg	Sg	06 31 52.0	-1.3
GERES	GERESS Array B	3.05	211	Pn	Pn	06 31 06.5	+1.1
	1.7nm,0.3s,baz=26,slow=12,SNR=25						
GERES				Pg	Pg	06 31 13.3	-2.6
	4.0nm,0.3s,baz=28,slow=17,SNR=24						
GERES				Lg		06 31 53.7	
	4.8nm,0.3s,baz=27,slow=26,SNR=11						
GERES	GERESS Array B	3.05	211	Pg	Pg	06 31 13.3	-2.6
NIE	Niedzica	3.38	126	*e*P	Pg	06 31 21.5	-1.0
NIE				*e*S	Sg	06 32 09.3	+1.7
MOA	Molln	3.82	199	⇑*i*PN	Pn	06 31 17.2	+0.9
MOA				*i* SG	Sg	06 32 19.8	-2.3
	12nm,0.5s						
ARSA	Arzberg	4.24	185	⇑*i*PN	Pn	06 31 23.0	+0.7
ARSA				*i* SG	Sg	06 32 32.5	-3.7
	17nm,0.6s						
KBA	Koelnbreinsper	4.76	203	⇑*i*PN	Pn	06 31 30.5	+0.9
KBA				*i* SG	Sg	06 32 50.3	-3.0
	7.0nm,0.5s						
DAVOX	Davos	6.22	223	Pn	Pn	06 31 52.4	+2.1
	0.4nm,0.3s,baz=119,slow=20,SNR=2.3						
DAVOX				Lg		06 33 32.1	
	0.2nm,0.3s,baz=180,slow=22,SNR=1.9						
AKASG	Malin Array Be	8.30	90	Pn	P	06 32 16.4	-3.0
	0.8nm,0.3s,baz=277,slow=12,SNR=5.6						
AKASG				Lg		06 34 46.0	
	0.2nm,0.3s,baz=278,slow=28,SNR=2.7						
HFS	Hagfors	8.79	352	Pn	P	06 32 22.9	-3.3
	0.0nm,0.3s,baz=170,slow=16,SNR=4.4						
NOA	NORSAR Array B	9.97	346	Pn	P	06 32 38.6	-3.7
	0.1nm,0.3s,baz=52,slow=17,SNR=2.2						
FINES	FINESS Array B	11.40	25	Pn	P	06 32 56.9	-5.1
	0.2nm,0.3s,baz=211,slow=12,SNR=8.0						
ARCES	ARCESS Array B	18.66	10	Pn	P	06 34 31.6	-4.4
	0.2nm,0.3s,baz=193,slow=12,SNR=7.8						

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*IDC **23** 06:39:36.1±0.8, 13.47N×88.90W, h54^{km}±6^{km}, mb3.6/8, mb1 3.9/10, mb1mx3.7/22, mbtmp3.9/10, Error ellipse: s-maj=40.7km s-min=10.8km az=46.0*

*CASC **23** 06:39:36.5±2.1, 13.12N×89.30W, h46^{km}±25^{km}, MD4.4, ML3.9, mb4.1(NEIC)*

*NEIC **23** 06:39:38.9±1.9, 13.39N×88.87W, h82^{km}±19^{km}, mb4.1/4, MD4.6(SNET), Error ellipse: s-maj=30.0km s-min=10.8km az=49.0*

NEIC Felt [III] at San Salvador.

ISC 23 06:39:36.6±1.0**, 13.3N**±0.1×**89.2W**±0.1**, h79**^{km}±5^{km}**, n45, σ1$\overset{s}{.}$14**/43**, mb3.9**/11**, 1C-10D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.39	348	⇓*e*P	P	06 39 48.4	-1.1
SNET				*e*S	S	06 39 57.7	-1.4
SNVI	San Vicente	0.43	44	⇓*i*P	Px	06 39 56.0	
SNVI				*e*S	Sx	06 40 06.2	
SBLS	San Blas	0.70	319	⇓*e*P	Px	06 39 58.8	
SBLS				*e*S	Sx	06 40 11.9	
SNJE	San Jose	0.72	322	⇓*i*P	Px	06 39 59.0	
SNJE				*e*S	Sx	06 40 11.1	
VSM	San Miguel	0.86	82	⇓*e*P	Px	06 40 01.6	
VSM				*e*S	Sx	06 40 15.6	
BLLM	Bellamira	0.90	81	⇓*e*P	Px	06 40 01.6	
BLLM				*e*S	Sx	06 40 16.2	
RBDL	Robledal	0.96	327	⇑*i*P	Px	06 40 02.5	
RBDL				*e*S	Sx	06 40 18.0	
CNCH	Conchagua	1.28	91	*e*P	Px	06 40 06.6	
CNCH				*e*S	Sx	06 40 25.1	
IXG	Ixpaco	1.54	305	⇓*e*P	Px	06 40 01.7	
IXG				*e*S	Sx	06 40 20.7	
MRL	Marmol	1.83	343	⇓*e*P	P	06 40 08.3	+1.5
CRIN	San Cristobal	2.13	106	⇓*e*P	P	06 40 11.6	+0.7
CRIN				*e*S	S	06 40 40.2	+3.9
TEL3	Telica 3	2.36	108	⇓*e*P	P	06 40 14.0	-0.2
TELN	Telica	2.36	107	*e*P	P	06 40 14.2	0.0
LEON	Leon	2.37	112	*e*P	P	06 40 14.4	+0.1
CNGN	Cerro Negro	2.52	108	*e*P	P	06 40 16.0	-0.4
MIRN	Miramar	2.53	110	*e*P	P	06 40 16.1	-0.4
MOMJ	Momotombo	2.70	109	*e*P	P	06 40 19.4	+0.6
APYN	Apoyeque	2.93	111	*e*P	P	06 40 22.0	-0.1
XAVN	Gruta Xavier	2.98	112	*e*P	P	06 40 24.1	+1.2
XAVN				*e*S	S	06 40 58.5	+0.9
MGAN	Managua	3.06	112	*e*P	P	06 40 24.2	+0.3
MGAN				*e*		06 41 10.0	
	comp=E,354nm,0.7s						
CRUN	El Crucero	3.08	115	*e*P	P	06 40 24.8	+0.7
WILN	Americas 2	3.10	111	*e*P	P	06 40 25.1	+0.5
PYTN	Playitas	3.11	104	*e*P	P	06 40 24.4	-0.3
TICN	Ticuantepe	3.12	114	*e*P	P	06 40 24.4	-0.3
TICN				*e*S	S	06 41 00.1	-0.8
APON	Apoyo	3.31	114	*e*P	P	06 40 28.2	+0.8
CONN	Concepcion	3.85	116	*e*P	P	06 40 36.0	+1.1
JTS	JuntasAbangare	5.08	126	P	P	06 40 50.4	-1.6
	comp=E,1.7nm,0.3s,baz=122,slow=23,SNR=7.0						
JTS				S	S	06 41 45.3	-4.6
	baz=267,slow=14,SNR=1.8						
JTS				Lg		06 42 01.0	
	comp=E,2.5nm,0.3s,baz=130,slow=21,SNR=11						
JTS	JuntasAbangare	5.08	126	P	P	06 40 50.4	-1.5
JTS				*e*Pn	P	06 40 52.9	+0.9
JTS				S	S	06 41 45.3	-4.6
JTS				Lg		06 42 01.0	
SDV	Santo Domingo	18.69	102	P	P	06 43 49.1	-2.2
	comp=E,0.6nm,0.3s,baz=317,slow=10,SNR=8.6						
TXAR	Lajitas Array	20.88	322	P	P	06 44 15.8	+1.4
	comp=E,1.4nm,0.5s,baz=143,slow=9.8,SNR=44						
TXAR				sP		06 44 33.4	
	comp=E,0.9nm,0.6s,baz=145,slow=10,SNR=6.3						
TXAR				PcP	PcP	06 48 20.2	-0.1
	comp=E,0.1nm,0.5s,baz=79,slow=2.9,SNR=3.5						
TXAR	Lajitas Array	20.88	322	P	P	06 44 15.8	+1.4
TXAR				sP		06 44 33.4	
TXAR				PcP	PcP	06 48 20.2	-0.1
CCM	Cathedral Cave	24.72	356	*e*P	P	06 44 52.1	+0.1
	comp=E,3.1nm,0.7s,mb3.9						
SAML	Samuel	33.96	129	*e*P	P	06 46 12.3	-2.6
	comp=E,3.3nm,0.9s,mb4.2						
PDAR	Pinedale Array	34.25	333	P	P	06 46 17.8	+0.8
	comp=E,0.3nm,0.5s,mb3.4,baz=132,slow=11,SNR=3.1						
PDAR				PcP	PcP	06 48 51.3	-0.8
	comp=E,0.3nm,0.4s,baz=153,slow=6.0,SNR=3.2						
SNOW	Snow King Moun	35.34	332	*e*P	P	06 46 27.1	+0.8
	comp=E,4.2nm,0.5s,mb4.5						
NVAR	Mina Array Bea	35.98	319	P	P	06 46 33.8	+2.1
	comp=E,0.2nm,0.5s,mb3.4,baz=143,slow=4.5,SNR=3.6						
NVAR				sP	sP	06 46 51.4	-8.9
	comp=E,0.5nm,0.7s,baz=114,slow=6.8,SNR=3.8						
NVAR				PcP	PcP	06 48 57.7	+0.5
	comp=E,0.6nm,0.7s,baz=148,slow=3.6,SNR=5.2						
NVAR	Mina Array Bea	35.98	319	P	P	06 46 33.8	+2.1
NVAR				sP	sP	06 46 51.4	-8.9
NVAR				PcP	PcP	06 48 57.7	+0.5
LPAZ	La Paz	36.00	144	P	P	06 46 25.6	-6.5
	comp=E,2.0nm,1.1s,mb4.0						
SIV	San Ignacio	40.22	135	P	P	06 47 06.5	-0.8
	comp=E,0.4nm,0.5s,mb3.5,baz=322,slow=12,SNR=5.9						
SIV				pP	pP	06 47 21.4	-5.1
	comp=E,0.4nm,0.5s,baz=307,slow=16,SNR=3.2						
SCHQ	Schefferville	44.97	18	P	P	06 47 43.8	-1.8
	comp=E,1.1nm,0.4s,mb3.9,baz=210,slow=10,SNR=4.0						
YKA	Yellowknife Ar	52.37	345	P	P	06 48 40.9	-1.7
	comp=E,1.1nm,0.5s,mb4.2,baz=143,slow=7.7,SNR=16						
ILAR	Eielson Array	64.58	336	P	P	06 50 05.6	-1.9
	comp=E,0.5nm,0.6s,mb3.5,baz=164,slow=4.1,SNR=8.6						
ILAR	Eielson Array	64.58	336	P	P	06 50 05.6	-1.9
ARCES	ARCESS Array B	85.92	19	P	P	06 52 10.4	+1.8
	comp=E,4.3nm,1.1s,mb4.3,slow=6.1,SNR=3.6						
WRA	Warramunga Arr	137.90	255	PKP	PKPdf	06 58 56.3	+3.3
	comp=E,0.4nm,0.5s,baz=87,slow=2.5,SNR=4.3						
WRA				pPKP		06 59 12.7	
	comp=E,1.2nm,0.8s,baz=102,slow=1.8,SNR=5.0						

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*JMA **23** 06:47:25.9±0.4, 23.96N×122.43E, h41^{km}, M2.5*

TAP 23 06:47:24.3, 23.73N×122.39E, h7^{km}±1^{km}**, ML3.1, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.92	38	P	Pb	06 47 39.9	-2.3
YOJ				*e*S	Sb	06 47 49.9	-4.5
HATJ	Hateruma jima	1.33	76	P	Pb	06 47 47.4	-1.8
IRIF	Iriomote-Funau	1.36	64	P	Pb	06 47 47.7	-2.1
IRIF				*e*S	Sb	06 48 03.5	-3.8
JKRS	Kuro-shima	1.56	71	P	Pn	06 47 51.0	-1.7
JIJ	Ishigaki jima	1.72	68	P	Pn	06 47 53.1	-1.8
JIJ				*e*S	Sn	06 48 12.9	-4.4

GUC 23 06:50:09.7±0.4**, 19.71S×69.39W, h102**^{km}±5^{km}**, ML3.6, Northern Chile**

WEL 23 06:57:08.2±0.7**, 35.39S×177.99E, h33**^{km}**, ML3.5**/3**, Error ellipse: s-maj=10.7km s-min=4.5km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	2.69	176	PN	Pn	06 57 48.8	-1.4
PUZ				SN	Sn	06 58 18.4	-3.5
PUZ				SN	Sn	06 58 18.5	-3.5
URZ	Urewera	2.95	194	P*	Pb	06 57 52.8	-7.2
URZ				S*	Sb	06 58 27.9	-8.0
URZ				S*	Sb	06 58 27.9	-8.0
MWZ	Matawai	2.96	187	P*	Pb	06 57 52.8	-7.4
MWZ				S*	Sb	06 58 26.8	-9.5

IDC 23 07:01:23.2±7.2**, 24.71N×108.31W, mb3.2**/1**, mb1 3.6**/5**, mb1mx3.5**/22**, mbtmp3.2**/5**, ML3.4**/4**, Error ellipse: s-maj=105.6km s-min=45.5km az=178.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	6.20	41	Pn	Pn	07 02 56.5	-1.7
	0.2nm,0.3s,baz=208,slow=13,SNR=10.0						
TXAR				Sn	Sn	07 04 15.1	+4.3
	0.1nm,0.3s,baz=136,slow=34,SNR=2.7						
TXAR				Lg		07 04 52.0	
	0.5nm,0.3s,baz=219,slow=32,SNR=5.1						
NVAR	Mina Array Bea	16.10	331	Pn	P	07 05 13.0	+0.4
	0.1nm,0.3s,baz=153,slow=12,SNR=4.2						
ELK	Elko	17.01	342	P	P	07 05 22.3	-1.8
	0.1nm,0.3s,baz=176,slow=19,SNR=2.1						
PDAR	Pinedale Array	18.05	357	P	P	07 05 36.4	-0.6
	0.1nm,0.3s,baz=172,slow=13,SNR=2.7						
ILAR	Eielson Array	47.13	339	P	P	07 09 57.2	-1.5
	0.3nm,0.6s,baz=149,slow=6.9,SNR=5.9						

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*ISK **23** 07:06:20.5, 38.29N×31.06E, h13^{km}, ML3.6*

ISC 23 07:06:20.1±0.6**, 38.30N**±0.02×**31.08E**±0.03**, h2**^{km}±5^{km}**, n46, σ0$\overset{s}{.}$82**/61**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISP	Isparta	0.65	225	*i* PG	Pg	07 06 32.6	-0.4
ISP				SG	Sg	07 06 42.9	+1.3
TKTP	Tekketepe	0.66	247	*i* P	Pg	07 06 33.8	+0.6
TKTP				*i* S	Sg	07 06 40.4	-1.6
KDHN	Kadinhani	0.84	75	*i* P	Pg	07 06 36.8	0.0
KDHN				*i* S	Sg	07 06 48.5	+0.4
KIZT	Kizilcal	0.85	47	PG	Pg	07 06 37.7	+0.7
ALT	Altintas	1.07	315	*i* PG	Pg	07 06 41.3	-0.1
ALT				SG	Sg	07 06 56.4	+0.7
ESKT	Eskisehir	1.23	352	*i* PN	Pn	07 06 44.0	-0.3
ESKT	Eskisehir	1.23	352	*i* P	Pb	07 06 43.9	+0.2
ESKT				*i* S	Sb	07 06 59.9	0.0
KHL	Karahalli	1.23	271	PN	Pn	07 06 43.4	-0.9
GDZ	Gediz	1.48	303	*i* P	Pn	07 06 49.0	+1.1
GDZ				*i* S	Sb	07 07 17.9	+11
GOLH	Golhisar	1.61	229	*i* P	Pn	07 06 51.1	+1.4
GOLH				*i* S	Sb	07 07 17.9	+7.0
DENT	Denizli	1.71	252	*i* PN	Pn	07 06 50.1	-1.0
DNZL	Cakiroluk	1.72	250	*i* P	Pn	07 06 51.9	+0.6
DNZL				*i* S	Sn	07 07 15.4	+1.3
HDMB	Hadim	1.74	140	PN	Pn	07 06 51.4	-0.2
ELL	Elmali	1.81	211	*e*PN	Pn	07 06 52.0	-0.6
MANT	Manisa	1.99	276	*i* P	Pn	07 06 55.5	+0.3
MANT				*i* S	Sn	07 07 20.9	-0.2
LOD	Lodumlu	2.05	39	*e*PN	Pn	07 06 56.0	-0.1
GPA	Golpazari	2.07	343	*e*PN	Pn	07 06 56.7	+0.4
ERMK	Ermenek	2.21	138	*i* P	Pn	07 06 59.2	+0.9
ERMK				*i* S	Sn	07 07 31.1	+4.6
FETY	Fethiye	2.30	224	*e*PN	Pn	07 06 59.1	-0.5
KAMT	Kaman	2.31	62	*e*PN	Pn	07 07 00.0	+0.2
DST	Dursunbey	2.31	305	*e*PN	Pn	07 07 00.0	+0.2
EYL	Eskiyayla	2.37	343	*e*PN	Pn	07 07 00.2	-0.4
AKAS	Kas	2.38	210	*i* P	Pn	07 07 02.0	+1.3
AKAS				*i* S	Sn	07 07 34.6	+3.7
ULDT	Uludag	2.38	321	*i* P	Pn	07 07 01.1	+0.4
ULDT				*i* S	Sn	07 07 33.7	+2.8
SGKT	Sivrigoynuk	2.39	18	*i* P	Pn	07 07 03.4	+2.6
SGKT				*i* S	Sn	07 07 38.3	+7.2
ORLT	Orhaneli	2.43	316	*e*PN	Pn	07 07 01.1	-0.4
DALT	Dalyan (Mudla)	2.48	233	*e*PN	Pn	07 07 01.8	-0.3
YER	Yerkesik	2.51	243	*e*PN	Pn	07 07 01.6	-1.0
AYDN	Tasoluk	2.61	257	*i* P	Pn	07 07 04.4	+0.3
AYDN				*i* S	Sn	07 07 37.0	+0.2
YLV	Yalova	2.62	330	*e*PN	Pn	07 07 04.1	-0.1
AKS	Akhisar	2.63	284	*e*PN	Pn	07 07 04.1	-0.2
HRT	Hereke	2.74	337	*e*PN	Pn	07 07 05.0	-0.9
NIG	Nigde	2.79	93	*e*PN	Pn	07 07 07.0	+0.5
CDAG	Cicekdag	2.88	62	*i* P	Pn	07 06 56.2	-12
CDAG				*i* S	Sn	07 07 42.9	-0.8
IKL	Isikli	2.92	134	*e*PN	Pn	07 07 08.3	-0.2
IZM	Izmir	3.01	273	*e*PN	Pn	07 07 08.6	-1.1
ISK	Istanbul-Kandi	3.17	331	*e*PN	Pn	07 07 11.2	-0.8
SAFT	Safranbolu	3.18	22	*e*PN	Pn	07 07 12.2	0.0
BNT	Bandirma	3.20	311	*e*PN	Pn	07 07 12.5	+0.1
EDC	Edincik	3.23	310	*e*PN	Pn	07 07 12.0	-0.8
LEF	Lefka	3.49	155	*e*PN	Pn	07 07 15.6	-1.0
MRMT	Marmara Adasi	3.54	311	*e*PN	Pn	07 07 17.2	-0.1
YOZ	Yozgat	3.56	67	*e*PN	Pn	07 07 16.6	-1.0
CANB	Canakkale	3.56	300	*e*PN	Pn	07 07 16.6	-1.0
LPK	Lapseki	3.94	303	*e*PN	Pn	07 07 23.2	+0.3
EZN	Ezine	4.00	294	*e*PN	Pn	07 07 22.8	-1.0

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*NNC **23** 07:26:06.4±2.9, 40.93N×72.66E, mpv3.7, Error ellipse: s-maj=30.5km s-min=15.2km az=177.0*

ISC 23 07:26:05.4±4.8**, 40.8N**±0.4×**72.6E**±0.2**, h10**^{km}**, n12, σ0$\overset{s}{.}$61**/12**, 2C, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	1.54	31	P	Pn	07 26 31.6	-1.5
	SNR=183						
UCH	Uchtor	2.00	44	P	Pn	07 26 39.4	-0.2
	SNR=538						
EKS2	Erkin-Say	2.04	24	P	Pn	07 26 40.2	+0.1
	SNR=50						
AAK	Ala-Archa	2.29	37	P	Pn	07 26 44.4	+0.6
	SNR=107						
AAK	Ala-Archa	2.29	37	Pn	Pn	07 26 44.3	+0.5
	91nm,0.3s						
AAK				⇑Lg		07 27 16.1	
	178nm,0.7s						
KZA	Kyzart	2.34	56	P	Pn	07 26 44.6	+0.1
	SNR=78						
KBK	Karagaybulak	2.53	42	P	Pn	07 26 48.3	+1.1
	SNR=42						
CHMS	Chumysh	2.70	35	P	Pn	07 26 49.8	+0.2
	SNR=28						
KK31	Karatay Array	2.78	326	Pn	Pn	07 26 50.9	+0.1
	2.8nm,0.3s,baz=131,slow=13,SNR=117						
KK31				⇑Lg		07 27 32.6	
	16nm,0.3s,baz=140,slow=28,SNR=4.3						
USP	Ospenovka	2.82	29	P	Pn	07 26 51.2	-0.2
	SNR=36						
TKM2	Tokmak 2	3.06	45	P	Pn	07 26 54.9	+0.2
	SNR=35						
ULHL	Ulahol	3.06	61	P	Pn	07 26 54.2	-0.6
	SNR=7.2						

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*MOS **23** 07:33:12.9±1.1, 37.41N×72.10E, h188^{km}, mb4.0/1, Error ellipse: s-maj=25.6km s-min=14.4km az=95.9*

*IDC **23** 07:33:12.7±17.0, 37.20N×72.36E, h186^{km}±106^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.4/19, mbtmp4.0/7, Error ellipse: s-maj=165.4km s-min=34.1km az=2.0*

*NEIC **23** 07:33:14.1±1.8, 37.45N×72.22E, h181^{km}±18^{km}, mb4.5/8, Error ellipse: s-maj=25.7km s-min=6.8km az=65.0*

*NNC **23** 07:33:20.9±4.2, 37.94N×72.03E, h190^{km}±43^{km}, mpv4.1, Error ellipse: s-maj=41.9km s-min=23.2km az=10.0*

ISC 23 07:33:13.2±0.5**, 37.42N**±0.03×**72.22E**±0.10**, h190**^{km}±7^{km}**, n46, σ1$\overset{s}{.}$03**/51**, mb3.8**/6**, 6C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.60	184	⇓P	P	07 34 12.7	+2.4
CEP				S	S	07 34 54.0	-0.3
CHCP	Chirah Chowk	3.85	167	⇓P	P	07 34 16.1	+2.7
AML	Almayashu	4.84	13	P	P	07 34 26.4	+0.4
	SNR=122						
UCH	Uchtor	5.12	19	P	P	07 34 30.0	+0.4
	SNR=71						
KZA	Kyzart	5.21	26	P	P	07 34 30.7	-0.1
	SNR=18						
EKS2	Erkin-Say	5.37	12	P	P	07 34 33.3	+0.4
	SNR=20						
AAK	Ala-Archa	5.49	18	P	P	07 34 35.2	+0.7
	SNR=24						
AAK	Ala-Archa	5.49	18	⇑P	P	07 34 35.1	+0.7
	24nm,0.4s						
AAK				⇑S	S	07 35 34.9	-2.6
	42nm,0.6s						
AAK	Ala-Archa	5.49	18	*e*PN	P	07 34 33.8	-0.7
AAK				pmax	pmax		
	comp=Z,42nm,0.4s						
AAK	Ala-Archa	5.49	18	*e*Pn	P	07 34 33.8	-0.7
	comp=Z,42nm,0.4s						
AAK				*e*Sn	S	07 35 24.9	-13
KBK	Karagaybulak	5.63	21	P	P	07 34 37.2	+0.9
	SNR=8.5						
ULHL	Ulahol	5.73	31	P	P	07 34 37.5	-0.1
	SNR=5.2						
THN	Thein Dam	5.74	149	*e*S	S	07 35 41.8	-1.6
KK31	Karatay Array	5.83	348	P	P	07 34 39.0	+0.2
	comp=Z,2.9nm,0.2s,baz=159,slow=11,SNR=54						
KK31				S	S	07 35 40.9	-4.4
	comp=Z,26nm,0.3s,baz=179,slow=15,SNR=26						
CHMS	Chumysh	5.90	18	P	P	07 34 40.0	+0.2
	SNR=10						
TKM2	Tokmak 2	6.07	24	P	P	07 34 42.0	0.0
	SNR=15						
USP	Ospenovka	6.09	16	P	P	07 34 42.2	-0.1
	SNR=10						
SDNR	Sundarnagar	7.09	145	*e*P	P	07 34 54.6	-0.7
SDNR				*e*S	S	07 36 11.4	-3.6
SMLA	Simla	7.49	145	*i* P	P	07 34 58.3	-2.3
SMLA				*i* S	S	07 36 18.0	-6.5
NDI	New Delhi	9.67	153	*e*S	S	07 37 12.0	-3.3
MK31	Makanchi Array	11.97	35	⇑P	P	07 36 03.8	+5.1
	comp=Z,0.4nm,0.5s,baz=211,slow=12,SNR=7.0						
MKAR	Makanchi Array	11.97	35	P	P	07 35 58.8	0.0
	comp=Z,0.1nm,0.3s,baz=220,slow=13,SNR=3.4						
KOLN	Koldanda	13.57	132	*e*P	P	07 36 19.4	+0.3
	comp=Z,8.0nm,0.3s						
GKN	Gorkha	14.04	128	*e*P	P	07 36 25.3	+0.4
	comp=Z,22nm,0.4s						
KKN	Kakani	14.59	127	*e*P	P	07 36 32.1	+0.3
	comp=Z,16nm,0.5s						
KKN	Kakani	14.59	127	*e*P	P	07 36 32.1	+0.3
KKN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
DMN	Daman	14.61	128	*e*P	P	07 36 33.4	+1.4
	comp=Z,14nm,0.4s						
AB31	Akbulak array	14.80	327	⇓P	P	07 36 33.5	-0.7
	comp=Z,2.5nm,0.4s,baz=128,slow=12,SNR=86						
PKI	Pulchoki	14.83	128	*e*P	P	07 36 35.9	+1.2
	comp=Z,7.7nm,0.2s						
PKI	Pulchoki	14.83	128	*e*P	P	07 36 35.9	+1.2
PKI				pmax	pmax		
	comp=Z,4.0nm,0.2s						
GUN	Gumba	14.89	126	*e*P	P	07 36 37.2	+1.7
	comp=Z,18nm,0.4s						
VOSK	Vostochnaya	15.33	357	⇑P	P	07 36 39.6	-1.2
	comp=Z,4.9nm,2.1s						
BVA0	Borovoye Array	15.66	356	⇑P	P	07 36 44.5	-0.3
	comp=Z,0.4nm,0.8s,baz=168,slow=13,SNR=11						
BVAR	Borovoye Array	15.66	356	P	P	07 36 44.0	-0.8
	comp=Z,0.6nm,0.3s,baz=167,slow=12,SNR=10						
ZRNK	Zerenda	15.69	353	⇑P	P	07 36 45.1	-0.2
	comp=Z,3.3nm,1.0s						
ZAL	Zalesovo	18.66	24	P	P	07 37 19.2	+0.4
	comp=Z,2.9nm,0.3s,baz=252,slow=7.6,SNR=9.5						
ZAL	Zalesovo	18.66	24	P	P	07 37 19.2	+0.4
SONM	Songino Array	27.01	56	pP	pP	07 39 23.2	+5.8
	comp=Z,0.2nm,0.5s,baz=280,slow=8.8,SNR=2.4						
SANT	Santorini	37.11	283	P	P	07 39 59.3	-7.6
	comp=Z,51nm,1.1s,mb5.1						
FINES	FINESS Array B	37.28	325	P	P	07 40 08.4	+0.4
	comp=Z,0.4nm,0.3s,mb3.5,baz=116,slow=7.8,SNR=6.0						
ARCES	ARCESS Array B	40.68	337	P	P	07 40 36.3	+0.3
	comp=Z,2.6nm,0.6s,mb4.1,baz=108,slow=7.7,SNR=11						
NB2	NORSAR Subarra	44.24	322	P	P	07 41 04.8	0.0
	comp=Z,0.8nm,0.5s,mb3.6,baz=92,slow=7.9						
NOA	NORSAR Array B	44.24	322	P	P	07 41 05.1	+0.3
	comp=Z,0.9nm,0.5s,mb3.7,baz=93,slow=7.7,SNR=4.7						
ILAR	Eielson Array	73.63	16	P	P	07 44 25.2	-1.6
	comp=Z,0.2nm,0.6s,mb3.0,baz=297,slow=5.3,SNR=4.2						
YKA	Yellowknife Ar	80.28	3	P	P	07 45 04.1	+0.5
	comp=Z,0.3nm,0.4s,mb3.3,baz=347,slow=5.6,SNR=5.3						
YKA	Yellowknife Ar	80.28	3	P	P	07 45 04.1	+0.5

*IDC **23** 07:46:22.0±0.8, 23.75S×112.03W, mb3.9/9, mb1 4.2/9, mb1mx4.1/17, mbtmp3.9/9, MS3.6/5, Ms1 3.6/5, ms1mx3.4/15, Error ellipse: s-maj=27.3km s-min=19.9km az=56.0*

*NEIC **23** 07:46:24.7±0.4, 23.63S×111.81W, h10^{km}, mb4.7/13, Error ellipse: s-maj=18.6km s-min=9.4km az=77.0*

ISC 23 07:46:22.6±0.5, **23.65S**±0.08×**111.9W**±0.2, **h10**^{km}, **n45**, σ**1$\overset{s}{.}$11**/29, **mb4.3**/21, **MS3.6**/5, **3C, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAOE	Nuku Hiva Isla	30.76	294	eLR	LR	08 00 20.5	
	1µm,33.4s						
TBI	Tubuai	34.38	263	eLR	LR	08 01 58.7	
	205nm,27.0s,baz=92						
PPT	Papeete	35.71	273	eLR	LR	08 02 22.6	
	71nm,25.8s,baz=112						
PLCA	Paso Flores	38.52	126	P	P	07 53 48.2	+1.3
	2.3nm,1.0s,mb3.9,baz=268,slow=15,SNR=3.4						
PLCA				LR	LR	08 05 49.2	
	comp=Z,79nm,18.5s,MS3.6,baz=175,slow=30						
PLCA	Paso Flores	38.52	126	P	P	07 53 48.2	+1.3
PLCA				LR	LR	08 05 49.2	
LPAZ	La Paz	41.66	88	P	P	07 54 14.7	+1.5
	2.4nm,0.9s,mb3.8,baz=271,slow=5.5,SNR=8.3						
LPAZ				LR	LR	08 07 45.4	
	comp=Z,79nm,18.5s,MS3.6,baz=264,slow=31						
SIV	San Ignacio	48.22	91	P	P	07 55 05.1	-0.6
	3.4nm,1.0s,mb4.3,baz=252,slow=12,SNR=13						
CPUP	Villa Florida	49.23	105	P	P	07 55 12.2	-1.2
	3.8nm,1.1s,mb4.3,baz=289,slow=12,SNR=4.4						
CPUP				LR	LR	08 12 44.5	
	comp=Z,39nm,18.8s,MS3.4,baz=244,slow=32						
TXAR	Lajitas Array	53.27	9	P	P	07 55 44.4	+0.4
	0.2nm,0.9s,mb3.1,baz=202,slow=9.7,SNR=2.4						
BDFB	Brasilia	60.28	95	LR	LR	08 19 48.8	
	comp=Z,71nm,18.9s,MS3.8,baz=38,slow=33						
SDCO	Great Sand Dun	61.36	6	P	P	07 56 37.4	-3.7
	3.5nm,1.2s,mb4.4						
MNV	Mina	62.03	354	eP	P	07 56 46.0	+0.4
	8.2nm,1.3s,mb4.7						
NVAR	Mina Array Bea	62.04	354	P	P	07 56 46.2	+0.5
	1.5nm,0.8s,mb4.2,baz=171,slow=9.7,SNR=9.6						
NVAR	Mina Array Bea	62.04	354	P	P	07 56 46.2	+0.5
HWUT	Hardware Ranch	64.92	0	P	P	07 57 12.6	+8.0
	3.3nm,1.1s,mb4.3						
SBA	Scott Base	65.23	193	eP	P	07 57 06.6	+0.6
	5.7nm,1.2s,mb4.5						
WVOR	Wild Horse Val	66.04	355	eP	P	07 57 12.3	+0.6
	6.3nm,1.1s,mb4.6						
PDAR	Pinedale Array	66.11	2	P	P	07 57 10.2	-2.0
	0.2nm,0.3s,mb3.6,baz=135,slow=8.4,SNR=2.8						
VNDA	Vanda	66.28	194	P	P	07 57 10.1	-2.6
	0.7nm,0.5s,mb3.9,baz=60,slow=8.1,SNR=7.2						
VNDA	Vanda	66.28	194	P	P	07 57 09.9	-2.8
	6.3nm,1.3s,mb4.5						
QSPA	South Pole Qui	66.51	180	eP	P	07 57 14.2	0.0
	7.2nm,1.1s,mb4.6						
TPAW	Teton Pass	66.81	1	eP	P	07 57 15.4	-1.2
	1.6nm,0.4s,mb4.4						
HLID	Hailey	66.91	358	eP	P	07 57 17.2	-0.2
	4.4nm,1.1s,mb4.4						
VNA3	Neumayer Olymp	71.67	161	e	pP	07 57 51.7	+2.5
VNA3	Neumayer Olymp	71.67	161	e	PcP	07 58 03.5	-2.0
VNA3	Neumayer Olymp	71.67	161	⇑iP	P	07 57 45.7	-0.4
VNA3				e		07 57 51.7	
VNA3				e		07 58 03.5	
VNA3				e		07 58 58.4	
NEW	Newport	71.73	356	eP	P	07 57 46.9	+0.1
VNA1	Neumayer--Stat	72.31	160	e	pP	07 57 54.3	+1.3
VNA1	Neumayer--Stat	72.31	160	e	PcP	07 58 06.3	-1.9
VNA1	Neumayer--Stat	72.31	160	⇑iP	P	07 57 49.0	-0.9
VNA1				e		07 57 54.3	
VNA1				e		07 58 06.3	
VNA2	Neumayer--Watz	72.47	161	e	pP	07 57 56.6	+2.6
VNA2	Neumayer--Watz	72.47	161	e	PcP	07 58 08.8	-0.1
VNA2	Neumayer--Watz	72.47	161	⇑iP	P	07 57 50.9	0.0
VNA2				e		07 57 56.6	
VNA2				e		07 58 08.8	
VNA2				e		07 59 03.7	
SNAA	Sanae	73.53	162	P	P	07 57 56.7	-0.2
	6.3nm,1.2s,mb4.4						
FCC	Fort Churchill	83.42	9	P	P	07 58 50.8	-0.5
	8.9nm,1.3s,mb4.6						
CASY	Casey	84.78	196	P	P	07 59 00.4	+2.5
	9.4nm,1.3s,mb4.8						
YKA	Yellowknife Ar	85.87	359	P	P	07 59 03.4	0.0
	0.8nm,0.9s,mb4.0,baz=174,slow=4.2,SNR=7.1						
YKA	Yellowknife Ar	85.87	359	P	P	07 59 03.4	0.0
SCHQ	Schefferville	87.17	24	LR	LR	08 37 59.5	
	comp=Z,37nm,19.9s,MS3.8,baz=104,slow=36						
INK	Inuvik	93.05	352	P	P	07 59 39.5	+2.3
	8.1nm,1.4s,mb5.0						
SONM	Songino Array	141.23	318	PKhKP		08 05 49.9	
	0.2nm,0.5s,baz=90,slow=4.3,SNR=2.7						
BRTR	Keskin Array B	146.82	53	PKPbc	PKPbc	08 06 06.0	+1.0
	2.1nm,0.9s,baz=243,slow=2.8,SNR=8.0						
BVAR	Borovoye Array	150.61	357	PKPbc	PKPdf	08 06 15.3	+3.2
	1.6nm,0.9s,baz=270,slow=1.5,SNR=8.6						
CMAR	Chiang Mai Arr	150.79	266	PKPbc	PKPdf	08 06 17.6	+4.3
	4.0nm,0.8s,baz=29,slow=0.4,SNR=8.1						
MKAR	Makanchi Array	154.24	337	PKP	PKPdf	08 06 16.3	-1.1
	0.1nm,0.4s,baz=45,slow=4.1,SNR=4.3						
MKAR				PKPbc	PKPdf	08 06 23.3	+5.9
	0.7nm,0.8s,baz=45,slow=1.7,SNR=7.4						

GUC 23 08:00:31.1±0.5, **19.97S**×**69.27W**, **h101**^{km}±9^{km}, **ML4.0, Northern Chile**

*IDC **23** 08:02:23.1±3.2, 15.63N×48.95E, mb3.9/10, mb1 4.0/11, mb1mx3.9/20, mbtmp3.9/11, ML3.8/1, MS3.3/5, Ms1 3.3/5, ms1mx3.1/21, Error ellipse: s-maj=71.8km s-min=23.7km az=22.0*

*CSEM **23** 08:02:24.5±0.1, 15.73N×49.11E, h20^{km}, ML4.8, Error ellipse: s-maj=4.0km s-min=2.0km az=155.0*

*NEIC **23** 08:02:25.1±0.6, 15.70N×49.11E, h10^{km}, mb4.4/2, ML4.8(DHMR), Error ellipse: s-maj=13.0km s-min=7.3km az=137.0*

NEIC Felt at Al Mukalla.

*DHMR **23** 08:02:26.0±0.5, 15.71N×48.95E, h12^{km}±64^{km}, ML4.8*

*OMAN **23** 08:02:27.9±215.0, 16.37N×48.90E, h30^{km}, Error ellipse: s-maj=33.6km s-min=15.1km az=283.0*

ISC 23 08:02:24.0±0.4, **15.83N**±0.04×**49.11E**±0.03, **h10**^{km}, **n41**, σ**0$\overset{s}{.}$88**/52, **mb3.9**/11, **MS3.2**/5, **14C-6D, Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUKL	Al Mukalla	1.34	183	⇑eP	Pb	08 02 49.6	+0.8
MUKL				iS	Sb	08 03 05.2	-0.7
MUKL	Al Mukalla	1.34	183	⇑eP	Pb	08 02 48.6	-0.2
MUKL				iS	Sb	08 03 06.0	0.0
MUKL				AML	AML	08 03 09.9	
	comp=N,22µm,0.3s						
BDHA	Al Bayda’	3.89	242	⇓iP	Pn	08 03 25.7	+0.5
BDHA				iS	Sn	08 04 12.5	+1.2
BDHA	Al Bayda’	3.89	242	⇓iP	Pn	08 03 25.7	+0.5
BDHA				iS	Sn	08 04 12.8	+1.4
BDHA				AML	AML	08 04 40.1	
	comp=N,4µm,0.6s						
LBOS		4.21	243	⇑iP	Pn	08 03 30.0	+0.3
LBOS				iS	Sn	08 04 19.8	+0.3
LBOS		4.21	243	⇑iP	Pn	08 03 30.0	+0.3
LBOS				iS	Sn	08 04 20.2	+0.8
ABTO	Aybut	4.29	69	⇑P	Pn	08 03 31.4	+0.4
	SNR=20						
DHBB	Dhamar BB	4.72	255	iP	Pn	08 03 37.3	+0.3
DHBB				iS	Sn	08 04 32.7	+0.2
DHBB	Dhamar BB	4.72	255	iP	Pn	08 03 37.3	+0.3
DHBB				iS	Sn	08 04 32.6	+0.1
SANA	San‘a	4.74	265	⇑iP	Pn	08 03 38.4	+1.1
SANA				iS	Sn	08 04 32.9	-0.2
SANA	San‘a	4.74	265	⇓iP	Pn	08 03 37.8	+0.5
SANA				iS	Sn	08 04 33.5	+0.5
WHFO	Wadi Hawf	4.93	64	⇓P	Pn	08 03 40.2	+0.3
	SNR=6.1						
RBK	Rabkut	5.16	70	⇓P	Pn	08 03 43.6	+0.4
	SNR=6.7						
UDYN	Al ‘Udayn	5.30	250	iP	Pn	08 03 45.1	-0.1
UDYN				iS	Sn	08 04 46.2	-0.9
UDYN	Al ‘Udayn	5.30	250	iP	Pn	08 03 44.5	-0.7
UDYN				iS	Sn	08 04 45.5	-1.6
UDYN				AML	AML	08 05 18.0	
	comp=N,581nm,0.5s						
TRBA	At Turbah	5.48	243	⇑iP	Pn	08 03 47.1	-0.6
TRBA				iS	Sn	08 04 49.9	-1.7
TRBA	At Turbah	5.48	243	⇑iP	Pn	08 03 47.1	-0.6
TRBA				iS	Sn	08 04 50.2	-1.3
SHAO	Shalim	6.61	70	⇑P	Pn	08 04 03.2	-0.4
JMDO	Jabal Madar	10.71	51	⇑P	P	08 04 56.7	-3.8
HOQ	Hoqain	10.91	44	⇑S	S	08 06 58.6	-8.1
SMDO	Samad	11.08	48	⇑P	P	08 05 01.7	-4.0
BIDO	Bidbid	11.43	47	⇑P	P	08 05 06.3	-4.1
WBK	Wadi Bani Khal	11.50	53	⇑P	P	08 05 08.1	-3.2
BANOM	Banah	12.08	33	⇓S	S	08 07 22.6	-12
EIL	Elat	18.95	319	Lg		08 12 20.9	
	comp=N,0.3nm,0.3s,baz=40,slow=32,SNR=4.2						
EIL	Elat	18.95	319	eP	P	08 06 51.1	+3.4
	comp=N,11nm,1.0s						
ASF	Jabal al Asfar	19.70	328	P	P	08 06 56.5	+0.1
	comp=N,0.3nm,0.3s,baz=0.1,slow=10,SNR=4.2						
ASF				Lg		08 12 52.9	
	comp=N,0.3nm,0.3s,baz=134,slow=21,SNR=3.4						
CSS	Prodhromos	23.73	326	P	P	08 07 37.5	+0.3
	comp=N,22nm,1.0s,mb4.5						
CSS	Prodhromos	23.73	326	P	P	08 07 37.5	+0.3
GNI	Garni	24.53	352	LR	LR	08 19 37.9	
	comp=N,199nm,18.0s,MS3.6,baz=0.2,slow=42						
MLR	Muntele Rosu	35.40	331	LR	LR	08 26 12.1	
	comp=N,47nm,18.2s,MS3.3,baz=292,slow=40						
BVAR	Borovoye Array	40.73	20	P	P	08 10 06.5	0.0
	comp=N,0.7nm,0.5s,mb3.5,baz=191,slow=6.0,SNR=6.0						
MKAR	Makanchi Array	41.37	35	P	P	08 10 13.0	+1.2
	comp=N,1.1nm,0.8s,mb3.5,baz=220,slow=9.5,SNR=7.5						
GERES	GERESS Array B	43.80	326	P	P	08 10 31.4	-0.2
	comp=N,0.3nm,0.3s,mb3.5,baz=135,slow=6.9,SNR=4.1						
GERES				LR	LR	08 31 00.3	
	comp=N,15nm,18.6s,MS2.9,baz=152,slow=39						
ZAL	Zalesovo	47.09	28	P	P	08 10 58.7	+0.9
	comp=N,1.6nm,0.3s,mb4.4,baz=193,slow=5.6,SNR=3.5						
CMAR	Chiang Mai Arr	47.58	79	P	P	08 11 02.4	+0.2
	comp=N,1.8nm,0.7s,mb4.2,baz=283,slow=7.8,SNR=6.6						
FINES	FINESS Array B	48.44	345	P	P	08 11 07.9	-0.4
	comp=N,0.9nm,0.5s,mb4.0,baz=149,slow=11,SNR=5.0						
FINES				LR	LR	08 35 42.8	
	comp=N,25nm,18.7s,MS3.2,baz=167,slow=41						
HFS	Hagfors	51.15	338	P	P	08 11 28.3	-0.7
	comp=N,1.3nm,0.4s,mb4.2,baz=149,slow=8.6,SNR=12						
NOA	NORSAR Array B	52.66	338	P	P	08 11 39.6	-0.8
	comp=N,0.3nm,0.4s,mb3.5,baz=117,slow=8.6,SNR=3.1						
NOA				LR	LR	08 37 39.2	
	comp=N,21nm,19.7s,MS3.2,baz=190,slow=40						
ARCES	ARCESS Array B	55.67	350	P	P	08 12 01.7	-0.7
	comp=N,1.3nm,0.9s,mb4.0,baz=165,slow=10,SNR=2.9						
SONM	Songino Array	56.58	43	P	P	08 12 10.0	+0.8
	comp=N,1.0nm,0.7s,mb4.0,baz=239,slow=7.2,SNR=9.1						

*IDC **23** 08:21:50.3±2.9, 42.77S×173.31E, mb4.0/1, mb1 4.4/1, mb1mx3.7/10, mbtmp4.0/1, MS3.8/4, Ms1 3.8/4, ms1mx3.6/11, Error ellipse: s-maj=202.2km s-min=65.6km az=13.0*

*NEIC **23** 08:21:52.5, 42.00S×173.95E, h12^{km}, ML4.8(WEL), After WEL.*

NEIC Felt in parts of Marlborough on the South Island and parts of Wellington on the North Island.

*WEL **23** 08:21:52.6±0.2, 41.98S×173.91E, h14^{km}±1^{km}, ML4.9/49, Error ellipse: s-maj=1.6km s-min=1.3km az=90.0*

WEL Felt from Wellington to Marlborough, maximum reported intensity MM 4.

ISC 23 08:21:51.1±0.5, **42.05S**±0.02×**173.89E**±0.03, **h10**^{km}±3^{km}, **n88**, σ**1$\overset{s}{.}$13**/97, **mb3.9**/1, **MS3.7**/4, **21C-12D, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.33	358	⇑P	Pg	08 21 57.6	-0.4
BSWZ	Blackbirch Sta	0.33	358	⇑PG	Pg	08 21 57.6	-0.4
BSWZ				SG	Sg	08 22 01.6	-0.9
CMWZ	Cape Campbell	0.38	39	⇑P	Pg	08 21 59.6	+0.6
CMWZ	Cape Campbell	0.38	39	⇑PG	Pg	08 21 59.6	+0.6
CMWZ				SG	Sg	08 22 05.7	+1.4
KHZ	Kahutara	0.45	215	⇓P	Pg	08 22 02.4	+2.0
KHZ				S	Sg	08 22 10.0	+3.4
KHZ	Kahutara	0.45	215	⇑P*	Pb	08 22 02.4	+1.7
KHZ				SG	Sg	08 22 10.0	+3.5
TUWZ	Tuamarina	0.61	4	P*	Pb	08 22 02.9	-0.5
TUWZ				SG	Sg	08 22 10.6	-1.2
THZ	Tophouse	0.79	291	P	Pb	08 22 06.7	+0.3
THZ	Tophouse	0.79	291	P*	Pb	08 22 06.9	+0.6
THZ				SG	Sg	08 22 17.6	+0.1
TCW	Tory Channel	0.88	19	⇑P	Pb	08 22 07.6	-0.4
TCW	Tory Channel	0.88	19	⇑P*	Pb	08 22 07.6	-0.3
TCW				SG	Sg	08 22 19.8	-0.8
NNZ	Nelson	0.91	335	⇑P	Pb	08 22 08.2	-0.3
NNZ				S	Sb	08 22 19.8	-0.6
NNZ	Nelson	0.91	335	⇑P*	Pb	08 22 08.2	-0.3
NNZ				S*	Sb	08 22 19.8	-0.6
SNZO	South Karori	0.95	40	⇑P	Pb	08 22 10.0	+0.7
SNZO	South Karori	0.95	40	⇑P*	Pb	08 22 10.0	+0.7
SNZO				SG	Sg	08 22 21.3	-1.7
BHW	Baring Head	0.97	49	⇓P	Pb	08 22 10.6	+1.1
BHW				S	Sb	08 22 24.2	+2.0
BHW	Baring Head	0.97	49	⇓P*	Pb	08 22 10.6	+1.1
BHW				SG	Sg	08 22 23.3	-0.3
WEL	Wellington	1.00	41	P	Pb	08 22 10.9	+0.8
WEL				S	Sb	08 22 25.3	+2.2
WEL	Wellington	1.00	41	P*	Pb	08 22 10.9	+0.8
WEL				SG	Sg	08 22 24.7	+0.1
MRW	Makara Radio	1.02	37	⇑P	Pb	08 22 10.8	+0.5
MRW	Makara Radio	1.02	37	⇑P*	Pb	08 22 10.8	+0.5
MSWZ	Moikau Station	1.20	59	⇓P*	Pb	08 22 13.4	0.0
MSWZ				S*	Sb	08 22 30.6	+1.9
DUWZ	D’Urville Isla	1.24	1	⇑P*	Pb	08 22 13.8	-0.3
DUWZ				S*	Sb	08 22 30.5	+0.6
CAW	Cannon Point	1.29	44	⇓P*	Pb	08 22 15.0	+0.1
CAW				S*	Sb	08 22 31.7	+0.4
PAWZ	Paruwai Farm	1.33	61	⇓P*	Pb	08 22 14.9	-0.7
LTZ	Lake Taylor	1.41	238	⇑P	Pn	08 22 18.7	+1.8
LTZ	Lake Taylor	1.41	238	⇑PN	Pn	08 22 18.7	+1.8
KIW	Kapiti Island	1.41	33	⇑P	Pn	08 22 17.0	+0.1
KIW	Kapiti Island	1.41	33	⇑P*	Pb	08 22 17.0	0.0
TRWZ	Traveller	1.49	65	⇓P*	Pb	08 22 16.9	-1.5
MTW	Mount Morrison	1.50	54	P	Pn	08 22 17.1	-1.1
MTW	Mount Morrison	1.50	54	P*	Pb	08 22 17.1	-1.4
DSZ	Denniston Nort	1.59	280	⇓eP	Pn	08 22 21.6	+2.2
DSZ	Denniston Nort	1.59	280	⇓PN	Pn	08 22 21.6	+2.2
QRZ	Quartz Range	1.59	319	⇓P	Pn	08 22 20.4	+0.9
QRZ	Quartz Range	1.59	319	⇑PN	Pn	08 22 20.4	+0.9
CRLZ	Canterbury Las	1.79	211	P	Pn	08 22 22.1	-0.3
CRLZ	Canterbury Las	1.79	211	PN	Pn	08 22 22.1	-0.3
MRZ	Mangatainoka R	1.88	43	⇓P	Pn	08 22 22.7	-0.9
MRZ	Mangatainoka R	1.88	43	⇓PN	Pn	08 22 22.7	-0.9
MQZ	McQueen’s Vall	1.90	208	⇑P	Pn	08 22 23.3	-0.5
MQZ	McQueen’s Vall	1.90	208	⇑PN	Pn	08 22 23.3	-0.6
BFZ	Birch Farm	2.24	53	eP	Pn	08 22 26.4	-2.3
BFZ	Birch Farm	2.24	53	PN	Pn	08 22 26.4	-2.4
WAZ	Wanganui	2.43	20	eP	Pn	08 22 32.8	+1.3
WAZ	Wanganui	2.43	20	PN	Pn	08 22 32.8	+1.2
TSZ	Takapari Road	2.53	39	P	Pn	08 22 31.3	-1.6
TSZ	Takapari Road	2.53	39	PN	Pn	08 22 31.3	-1.5
WVZ	Waitaha Valley	2.55	245	P	Pn	08 22 34.2	+1.0
RPZ	Rata Peaks	2.67	230	PN	Pn	08 22 34.1	-0.8
NRZ	Ngariki Road	2.71	1	PN	Pn	08 22 36.8	+1.3
NEZ	North Egmont	2.77	3	PN	Pn	08 22 38.4	+2.0
RAEZ	Rainy Point	2.78	8	PN	Pn	08 22 39.0	+2.5
PKE	Pukeiti	2.85	2	PN	Pn	08 22 38.4	+0.9
MTVZ	Mangateitei	2.92	25	PN	Pn	08 22 39.0	+0.6
PKVZ	Pokaka	2.97	22	PN	Pn	08 22 39.4	+0.2
MOVZ	Moawhango	2.99	29	PN	Pn	08 22 38.6	-0.9
VRZ	Vera Road	2.99	13	PN	Pn	08 22 40.2	+0.7
WNVZ	Wahianoa	3.01	26	PN	Pn	08 22 39.8	+0.1
TRVZ	Turoa	3.02	25	PN	Pn	08 22 39.9	+0.1
FWVZ	Far West T-bar	3.06	25	PN	Pn	08 22 40.6	+0.1
TUVZ	Tukino	3.08	26	PN	Pn	08 22 40.7	0.0
CNZ	Chateau	3.11	24	PN	Pn	08 22 41.1	-0.1
NGZ	Ngauruhoe	3.15	25	PN	Pn	08 22 41.5	-0.2
OTVZ	Oturere	3.18	26	PN	Pn	08 22 41.9	-0.2
TWVZ	Taurewa	3.19	22	PN	Pn	08 22 42.2	-0.2
WTVZ	West Tongariro	3.20	24	PN	Pn	08 22 42.3	-0.2
KRVZ	Karewarewa	3.23	25	PN	Pn	08 22 42.7	-0.2
FOZ	Fox Glacier	3.44	242	PN	Pn	08 22 45.2	-0.7
BKZ	Black Stump Fm	3.49	35	PN	Pn	08 22 43.8	-2.8
LBZ	Lake Benmore	3.58	228	PN	Pn	08 22 47.3	-0.5
HIZ	Hauiti	3.60	12	PN	Pn	08 22 48.3	+0.2
ODZ	Otahua Downs	3.82	217	PN	Pn	08 22 49.2	-2.0
JCZ	Jackson Bay	4.27	240	PN	Pn	08 22 56.2	-1.5
EAZ	Earnscleugh	4.61	225	PN	Pn	08 23 00.9	-1.5
MWZ	Matawai	4.63	38	PN	Pn	08 22 57.6	-5.2
TUZ	Tuapeka	4.97	217	PN	Pn	08 23 05.6	-2.0
KUZ	Kuaotunu	5.48	16	PN	Pn	08 23 13.8	-0.9
STKA	Stephens Creek	27.59	281	LR	LR	08 36 56.7	
	comp=Z,142nm,20.2s,MS3.5,baz=94,slow=33						
TBI	Tubuai	35.69	70	eS	S	08 34 21.0	-6.3
	93nm,42.5s						
VNDA	Vanda	35.93	184	LR	LR	08 40 56.1	
	comp=Z,123nm,18.7s,MS3.7,baz=360,slow=33						
PPT	Papeete	39.55	63	eLQ		08 38 58.8	
	130nm,28.0s						
PPT				eLR	LR	08 39 49.3	
	146nm,26.5s,baz=216						
PPT	Papeete	39.55	63	LR	LR	08 41 54.4	
	comp=Z,126nm,20.6s,MS3.7,baz=226,slow=30						
WRA	Warramunga Arr	39.96	291	P	P	08 29 25.3	-2.0
	1.5nm,0.6s,mb3.9,baz=128,slow=8.5,SNR=14						
RKT	Rikitea	46.31	82	eLR	LR	08 44 05.3	
	188nm,27.5s						
FITZ	Fitzroy Crossi	47.33	285	LR	LR	08 48 15.3	
	comp=Z,171nm,21.2s,MS4.0,baz=68,slow=34						
ARCES	ARCESS Array B	147.96	340	PKPbc	PKPdf	08 41 37.2	+1.9
	2.6nm,0.8s,baz=18,slow=3.8,SNR=5.4						
BRTR	Keskin Array B	150.04	279	PKPbc	PKPdf	08 41 41.2	+1.7
	0.9nm,0.7s,baz=135,slow=2.0,SNR=4.2						

*ATH **23** 08:39:14.1, 37.83N×26.70E, h14^{km}±3^{km}, MD3.3/3*

*NEIC **23** 08:39:14.1, 37.83N×26.70E, h14^{km}, MD3.3(ATH), After ATH.*

*ISK **23** 08:39:15.8, 37.84N×26.71E, h28^{km}, MD3.2*

*CSEM **23** 08:39:15.0±0.1, 37.84N×26.78E, h12^{km}, MD3.3, Error ellipse: s-maj=2.5km s-min=1.8km az=100.0*

ISC 23 08:39:15.1±0.6, **37.82N**±0.02×**26.74E**±0.04, **h11**^{km}±4^{km}, **n22**, σ**0$\overset{s}{.}$60**/33, **1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.13	146	⇑iPG	Pg	08 39 18.4	0.0
SMG				eSG	Sg	08 39 20.6	-0.1
URLA	Izmir	0.55	348	iP	Pg	08 39 26.4	+0.1
URLA				iS	Sg	08 39 34.6	+0.8
IZM	Izmir	0.71	35	iPG	Pg	08 39 29.2	-0.2
KDAG	Bornova	0.71	35	iP	Pb	08 39 28.4	-0.6
KDAG				iS	Sb	08 39 38.3	-0.2
BODT	Bodrum	0.88	149	PG	Pg	08 39 32.7	-0.1
AYDN	Tasoluk	0.92	100	iP	Pb	08 39 31.4	-1.0
AYDN				iS	Sb	08 39 44.9	+0.5
BDRM	Kayabasi	0.94	143	iP	Pb	08 39 33.3	+0.4
BDRM				iS	Sb	08 39 45.0	-0.1
MLSB	Milas	0.97	122	PG	Pg	08 39 34.1	-0.5
MLSB				SG	Sg	08 39 48.1	+0.4
APE	Apeiranthos	1.22	232	PN	Pb	08 39 37.4	-0.3
APE	Apeiranthos	1.22	232	ePB	Pb	08 39 37.4	-0.3
APE				eSB	Sb	08 39 53.2	-0.1
AKS	Akhisar	1.35	38	PN	Pn	08 39 39.9	0.0
YER	Yerkesik	1.40	119	PN	Pn	08 39 40.8	+0.1
PRK	Paraskevi	1.47	346	ePB	Pb	08 39 41.5	-0.5
PRK				eSB	Sb	08 40 01.3	+0.8
MANT	Manisa	1.58	64	iP	Pn	08 39 44.2	+1.0
MANT				iS	Sb	08 40 03.3	-0.4
DNZL	Cakiroluk	1.83	93	iP	Pn	08 39 50.2	+3.4
DNZL				iS	Sn	08 40 14.1	+3.9
DALT	Dalyan (Mudla)	1.84	124	PN	Pn	08 39 47.4	+0.5
FETY	Fethiye	2.21	122	PN	Pn	08 39 52.1	-0.2
KARP	Karpathos	2.29	171	ePN	Pn	08 39 53.8	+0.4
DST	Dursunbey	2.31	39	ePN	Pn	08 39 53.2	-0.5
BNT	Bandirma	2.69	20	ePN	Pn	08 39 58.4	-0.7
KCT	Karacabey	2.75	27	ePN	Pn	08 39 59.5	-0.4
ULDT	Uludag	2.98	38	iP	Pn	08 40 11.8	+8.6
ULDT				iS	Sn	08 40 45.4	+6.2

*IDC **23** 08:43:03.1±1.3, 2.11N×96.17E, mb4.4/12, mb1 4.5/13, mb1mx4.3/22, mbtmp4.4/13, ML4.4/1, MS3.9/4, Ms1 3.9/4, ms1mx3.6/14, Error ellipse: s-maj=48.8km s-min=14.8km az=54.0*

*BJI **23** 08:43:04.7, 1.82N×96.52E, h41^{km}, mB4.9, mb4.8, Ms4.3, Msz4.0*

*MOS **23** 08:43:07.4±1.4, 2.28N×96.52E, h33^{km}, mb4.9/9, Error ellipse: s-maj=19.9km s-min=10.2km az=101.3*

*NEIC **23** 08:43:08.8±0.5, 2.21N×96.41E, h30^{km}, mb4.7/19, Error ellipse: s-maj=12.3km s-min=6.4km az=46.0*

ISC 23 08:43:07.2±0.5, **2.26N**±0.06×**96.46E**±0.07, **h33**^{km}, **n60**, σ**1$\overset{s}{.}$14**/61, **mb4.6**/34, **MS4.0**/7, **2C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.16	54	ePn	Pn	08 44 26.2	+1.9
KULM				e		08 44 32.9	
SNG	Songkhla	6.41	40	P	P	08 44 43.0	+1.3
	400nm,0.9s						
KSM	Kuching	13.87	93	eP	P	08 46 22.7	-1.2
KKTK	Khon Kaen	15.33	24	P	P	08 46 48.6	+5.6
	309nm,0.6s						
CM31	Chiang Mai Arr	16.28	8	eP	P	08 46 58.7	+3.6
	14nm,1.0s						
CMAR	Chiang Mai Arr	16.28	8	Pn	P	08 46 55.1	0.0
	0.5nm,0.3s,baz=195,slow=11,SNR=18						
CMAR				LR	LR	08 54 06.6	
	comp=Z,510nm,18.5s,baz=190,slow=40						
PALK	Pallekele	16.46	288	P	P	08 46 58.4	+0.9
	32nm,1.2s						
NANT	Nan	16.95	14	⇑P	P	08 47 03.0	-0.6
	98nm,0.7s						
KKM	Kota Kinabalu	20.06	79	eP	P	08 47 41.4	+0.7
QIZ	Qiongzhong	21.20	37	P	P	08 47 43.5	-8.9
	55nm,1.5s,mb4.7						
KMI	Kunming	23.52	14	P	P	08 48 17.6	+2.2
KMI				AP		08 48 24.9	
KMI				XP		08 48 29.1	
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
KMI				LR	LR		
	comp=N,290nm,14.7s,MS4.0						
KMI				LR	LR		
	comp=E,190nm,13.2s,MS4.0						
KMI				LR	LR		
	comp=Z,320nm,14.7s,MS3.9						
SHL	Shillong	23.59	350	eP	P	08 48 14.5	-1.5
GYA	Guiyang	25.98	21	P	P	08 48 39.3	+0.3
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.2						
PKI	Pulchoki	27.30	338	eP	P	08 48 52.9	+1.8
GUN	Gumba	27.44	339	eP	P	08 48 52.8	+0.5
	comp=Z,34nm,0.6s,mb5.0						
DMN	Daman	27.45	338	eP	P	08 48 53.8	+1.4
	comp=Z,9.2nm,0.5s,mb4.6						
KKN	Kakani	27.54	338	eP	P	08 48 53.5	+0.2
	comp=Z,21nm,0.7s,mb4.9						
KKN	Kakani	27.54	338	eP	P	08 48 53.5	+0.2
KKN				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
LSA	Lhasa	27.75	350	eP	P	08 48 55.4	+0.2
LSA				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.7						
LSA	Lhasa	27.75	350	eP	P	08 48 55.4	+0.2
	comp=Z,22nm,1.1s,mb4.7						
GKN	Gorkha	27.98	337	eP	P	08 48 57.9	+0.7
	comp=Z,35nm,0.7s,mb5.1						
KOLN	Koldanda	28.19	335	eP	P	08 48 58.9	-0.2
	comp=Z,23nm,0.9s,mb4.8						
ENH	Enshi	30.48	23	eP	P	08 49 18.3	-1.2
	comp=Z,13nm,0.8s,mb4.7						
NACB	Ninganchiao	32.63	46	P	P	08 49 35.8	-2.7
XAN	Xi’an	33.69	19	P	P	08 49 46.3	-1.2
XAN				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.6						
FITZ	Fitzroy Crossi	35.15	126	eP	P	08 49 59.6	-0.6
	comp=Z,11nm,0.9s,mb4.8						
FITZ	Fitzroy Crossi	35.15	126	P	P	08 49 59.8	-0.4
	comp=Z,10nm,0.7s,mb4.9,baz=185,slow=7.2,SNR=7.8						
GTA	Gaotai	37.10	4	eP	P	08 50 16.4	-0.1
GTA				AP	pP	08 50 23.8	-2.4
GTA				XP	sP	08 50 28.3	-2.2

GTA				PP	PP	08 51 49.8	+6.2
GTA				S	**S**	**08 56 08.0**	**+8.0**
GTA				XS		08 56 20.9	
GTA				SS	SS	08 58 41.3	+11
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
GTA				AMB	AMB		
	comp=Z,70nm,6.5s						
GTA				LR	LR		
	comp=N,120nm,13.7s,MS3.9						
GTA				LR	LR		
	comp=E,80nm,16.4s,MS3.9						
GTA				LR	LR		
	comp=Z,150nm,17.5s,MS3.8						
KAKA	**Kakadu**	**38.70**	**114**	*e*P	**P**	**08 50 29.6**	**-0.5**
	comp=Z,12nm,0.6s,mb4.8						
HHC	**Hu-ho-hao-te**	**40.77**	**18**	*e*P	**P**	**08 50 48.3**	**+1.3**
HHC				AP	pP	08 50 58.1	+1.3
HHC				XP	sP	08 51 01.9	+0.9
HHC				PP	PP	08 52 24.4	+0.3
HHC				S	**S**	**08 56 59.3**	**+4.0**
HHC				XS		08 57 12.3	
HHC				SS	SS	08 59 55.3	+3.3
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,110nm,6.5s						
HHC				LR	LR		
	comp=N,180nm,16.3s,MS4.2						
HHC				LR	LR		
	comp=E,240nm,18.0s,MS4.2						
HHC				LR	LR		
	comp=Z,200nm,21.1s,MS4.0						
WRA	**Warramunga Arr**	**43.23**	**122**	P	**P**	**08 51 07.7**	**+0.3**
	comp=Z,3.5nm,0.8s,mb4.2,baz=302,slow=9.1,SNR=16						
WRAB	**Tennant Creek**	**43.23**	**122**	*e*P	**P**	**08 51 07.5**	**0.0**
WRAB				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**43.23**	**122**	*e*P	**P**	**08 51 07.5**	**0.0**
	comp=Z,17nm,0.9s,mb4.8						
WB2	**Warramunga Arr**	**43.24**	**122**	*e*P	**P**	**08 51 07.9**	**+0.4**
FORT	**Forrest**	**44.56**	**140**	*e*P	**P**	**08 51 19.8**	**+1.7**
	comp=Z,10nm,0.9s,mb4.7						
FORT				*e*		08 51 27.5	
AAK	**Ala-Archa**	**44.74**	**337**	*e*P	**P**	**08 51 22.8**	**+3.5**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.4						
AAK	**Ala-Archa**	**44.74**	**337**	*e*P	**P**	**08 51 22.8**	**+3.4**
	comp=Z,7.9nm,1.2s,mb4.4						
MKAR	**Makanchi Array**	**46.04**	**346**	P	**P**	**08 51 29.4**	**-0.3**
	comp=Z,14nm,0.8s,mb4.9,baz=162,slow=7.7,SNR=82						
SONM	**Songino Array**	**46.20**	**9**	P	**P**	**08 51 31.5**	**+0.6**
	comp=Z,6.3nm,0.8s,mb4.6,baz=189,slow=9.1,SNR=43						
SONM				PcP	PcP	08 53 05.1	-1.7
	comp=Z,2.0nm,0.8s,baz=201,slow=4.3,SNR=4.5						
ULN	**Ulaanbaatar**	**46.34**	**10**	*e*P	**P**	**08 51 31.8**	**-0.2**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ULN	**Ulaanbaatar**	**46.34**	**10**	*e*P	**P**	**08 51 31.8**	**-0.2**
	comp=Z,5.4nm,0.9s,mb4.5						
ZAK	**Zakamensk**	**48.30**	**6**	⇑*i*P	**P**	**08 51 47.3**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
MJAR	**Matsushiro Arr**	**51.42**	**43**	P	**P**	**08 52 12.3**	**+0.9**
	comp=Z,1.3nm,0.5s,mb4.1,baz=225,slow=6.9,SNR=6.3						
MJAR				LR	LR	09 15 47.1	
	comp=Z,99nm,18.9s,MS3.9,baz=220,slow=38						
CIT	**Chita**	**51.61**	**13**	*e*P	**P**	**08 52 11.8**	**-0.8**
PMG	**Port Moresby**	**51.82**	**104**	P	**P**	**08 52 14.3**	**-0.4**
PMG				pmax	pmax		
	comp=Z,12nm,0.8s						
PMG	**Port Moresby**	**51.82**	**104**	P	**P**	**08 52 15.2**	**+0.5**
	comp=Z,9.9nm,0.7s,mb4.8,baz=316,slow=1.7,SNR=3.9						
PMG	**Port Moresby**	**51.82**	**104**	P	**P**	**08 52 14.3**	**-0.4**
	comp=Z,12nm,0.8s,mb4.9						
ZAL	**Zalesovo**	**52.39**	**351**	P	**P**	**08 52 19.0**	**+0.6**
	comp=Z,10nm,0.4s,mb5.1,baz=312,slow=4.6,SNR=8.6						
CTA	**Charters Tower**	**53.64**	**117**	P	**P**	**08 52 28.8**	**+0.6**
	comp=Z,4.6nm,0.8s,mb4.4,baz=274,slow=14,SNR=3.6						
STKA	**Stephens Creek**	**54.62**	**132**	*e*P	**P**	**08 52 35.7**	**+0.5**
	comp=Z,3.7nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**54.62**	**132**	P	**P**	**08 52 35.0**	**-0.2**
	comp=Z,0.9nm,0.4s,mb4.1,baz=310,slow=12,SNR=4.3						
STKA				LR	LR	09 14 31.6	
	comp=Z,108nm,21.8s,MS3.9,baz=294,slow=34						
BVAR	**Borovoye Array**	**55.01**	**341**	P	**P**	**08 52 36.4**	**-1.4**
	comp=Z,2.4nm,0.7s,mb4.3,baz=144,slow=8.2,SNR=12						
ZRNK	**Zerenda**	**55.41**	**340**	*e*P	**P**	**08 52 38.6**	**-2.0**
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ZRNK	**Zerenda**	**55.41**	**340**	*e*P	**P**	**08 52 38.6**	**-2.0**
	comp=Z,2.8nm,0.8s,mb4.3						
KLR	**Kul'dur**	**55.65**	**27**	*e*P	**P**	**08 52 40.3**	**-2.1**
YAK	**Yakutsk**	**64.62**	**17**	*e*P	**P**	**08 53 41.6**	**-2.0**
YAK				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
TIXI	**Tiksi**	**72.28**	**10**	*e*P	**P**	**08 54 28.4**	**-2.5**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,107nm,16.0s,MS4.2						
FINES	**FINESS Array B**	**78.72**	**333**	P	**P**	**08 55 07.3**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=90,slow=5.7,SNR=5.4						
ARCES	**ARCESS Array B**	**81.29**	**340**	P	**P**	**08 55 21.1**	**-0.3**
	comp=Z,1.3nm,0.5s,mb4.1,baz=72,slow=3.8,SNR=7.6						
ARCES				LR	LR	09 37 38.4	
	comp=Z,62nm,18.3s,MS4.0,baz=93,slow=40						
TXAR	**Lajitas Array**	**143.15**	**30**	PKP	PKPdf	09 02 38.0	-0.6
	comp=Z,0.5nm,0.7s,baz=22,slow=1.1,SNR=8.1						

CASC 23 08:45:04.7±2.4, 14.01N×91.32W, h0^{km}±8^{km}, MD4.1, ML3.7, 5C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.86**	**79**	⇑*e*P	Pg	08 45 22.5	+0.7
IXG				*e*S	Sg	08 45 34.9	+1.7
RBDL	**Robledal**	**1.59**	**86**	⇑*e*P	Pn	08 45 40.7	+6.5
RBDL				*e*S	Sb	08 46 01.9	+6.6
RTR	**El Retiro**	**1.63**	**94**	*e*P	Pn	08 45 41.4	+6.6
RTR				*e*S	Sb	08 46 05.3	+8.8
SBLS	**San Blas**	**1.66**	**96**	⇓*e*P	Pn	08 45 42.0	+6.8
SBLS				*e*S	Sb	08 46 06.1	+8.9
SNJE	**San Jose**	**1.67**	**95**	⇑*e*P	Pn	08 45 42.4	+7.0
SNJE				*e*S	Sb	08 46 06.4	+8.8
MRL	**Marmol**	**1.90**	**56**	⇓*i*P	Pn	08 45 37.3	-1.3
MRL				*e*S	Sn	08 46 05.9	+2.3
BOQS	**Boqueron**	**2.00**	**98**	*e*P	Pn	08 45 46.2	+6.1
BOQS				*e*S	Sn	08 46 14.8	+8.6
SNET	**Serv Nac Est T**	**2.06**	**99**	*i*	Sn	08 46 23.1	+15
	comp=Z,693nm,0.3s						
LFRS	**El Faro**	**2.23**	**100**	*e*P	Pn	08 45 49.8	+6.4
LFRS				*e*S	Sn	08 46 18.9	+6.9
LCBS	**La Ceiba**	**2.30**	**98**	*e*P	Pn	08 45 50.6	+6.2
LCBS				*e*S	Sn	08 46 21.7	+7.8
SNVI	**San Vicente**	**2.44**	**99**	⇑*e*P	Pn	08 45 53.4	+6.9
SNVI				*e*S	Sn	08 46 25.3	+7.8
CNCH	**Conchagua**	**3.47**	**102**	*e*P	Pn	08 46 06.6	+5.5
CNCH				*e*S	Sn	08 46 50.4	+7.0
TEL3	**Telica 3**	**4.59**	**108**	*e*P	Pn	08 46 15.8	-1.1
TELN	**Telica**	**4.59**	**107**	*e*P	Pn	08 46 16.5	-0.4
MIRN	**Miramar**	**4.75**	**109**	⇑*e*P	Pn	08 46 16.5	-2.8
MIRN				*e*S	Sn	08 47 14.6	-1.4
APYN	**Apoyeque**	**5.15**	**109**	*e*P	Pn	08 46 23.8	-1.1

WEL 23 09:21:09.2±0.1, 41.97S×173.90E, h12^{km}, ML3.6/24, 10C-2D, Error ellipse: s-maj=1.4km s-min=1.2km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSWZ	**Blackbirch Sta**	**0.26**	**356**	⇑PG	Pg	09 21 14.1	-0.6
BSWZ				SG	Sg	09 21 18.0	-0.5
CMWZ	**Cape Campbell**	**0.32**	**47**	⇑PG	Pg	09 21 16.1	+0.1
CMWZ				SG	Sg	09 21 22.4	+1.9
KHZ	**Kahutara**	**0.52**	**211**	⇑PG	Pg	09 21 18.8	-0.9
TUWZ	**Tuamarina**	**0.54**	**3**	⇑PG	Pg	09 21 19.6	-0.6
TUWZ				SG	Sg	09 21 27.4	-0.2
THZ	**Tophouse**	**0.77**	**285**	⇓P*	Pb	09 21 23.6	-0.5
THZ				SG	Sg	09 21 33.9	-1.2
TCW	**Tory Channel**	**0.81**	**21**	⇑P*	Pb	09 21 24.1	-0.5
NNZ	**Nelson**	**0.85**	**332**	P*	Pb	09 21 24.7	-0.7
NNZ				S*	Sb	09 21 36.7	+0.3
SNZO	**South Karori**	**0.90**	**43**	⇑P*	Pb	09 21 26.4	+0.3
BHW	**Baring Head**	**0.92**	**53**	P*	Pb	09 21 27.0	+0.5
WEL	**Wellington**	**0.94**	**44**	P*	Pb	09 21 27.3	+0.3
MRW	**Makara Radio**	**0.95**	**39**	⇑P*	Pb	09 21 27.3	+0.1
MSWZ	**Moikau Station**	**1.15**	**62**	P*	Pb	09 21 29.8	-0.7
DUWZ	**D'Urville Isla**	**1.17**	**1**	P*	Pb	09 21 30.3	-0.5
CAW	**Cannon Point**	**1.23**	**46**	P*	Pb	09 21 31.4	-0.5
PAWZ	**Paruwai Farm**	**1.29**	**63**	P*	Pb	09 21 31.5	-1.3
KIW	**Kapiti Island**	**1.34**	**35**	⇑P*	Pb	09 21 33.4	-0.4
MTW	**Mount Morrison**	**1.45**	**56**	P*	Pb	09 21 33.8	-1.9
LTZ	**Lake Taylor**	**1.46**	**236**	⇑PN	Pn	09 21 35.1	-0.4
TRWZ	**Traveller**	**1.46**	**67**	P*	Pb	09 21 33.5	-2.2
QRZ	**Quartz Range**	**1.54**	**317**	⇓PN	Pn	09 21 36.9	+0.3
DSZ	**Denniston Nort**	**1.58**	**277**	PN	Pn	09 21 37.4	+0.2
MRZ	**Mangatainoka R**	**1.82**	**45**	⇑PN	Pn	09 21 39.1	-1.6
CRLZ	**Canterbury Las**	**1.86**	**210**	PN	Pn	09 21 39.3	-1.9
MQZ	**McQueen's Vall**	**1.96**	**207**	PN	Pn	09 21 39.7	-3.0
WAZ	**Wanganui**	**2.36**	**21**	*e*PN	Pn	09 21 47.0	-1.4
TSZ	**Takapari Road**	**2.46**	**40**	PN	Pn	09 21 47.7	-2.2
RPZ	**Rata Peaks**	**2.72**	**229**	PN	Pn	09 21 51.1	-2.5
RPZ				SN	Sn	09 22 24.0	-2.8
PKE	**Pukeiti**	**2.77**	**1**	*e*PN	Pn	09 21 55.4	+1.1
MTVZ	**Mangateitei**	**2.84**	**25**	*e*PN	Pn	09 21 55.8	+0.5
PKVZ	**Pokaka**	**2.90**	**23**	*e*PN	Pn	09 21 55.9	-0.1
VRZ	**Vera Road**	**2.92**	**13**	*e*PN	Pn	09 21 57.2	+0.9
MOVZ	**Moawhango**	**2.92**	**29**	*e*PN	Pn	09 21 59.8	+3.4
WNVZ	**Wahianoa**	**2.94**	**27**	*e*PN	Pn	09 21 56.7	+0.1
FWVZ	**Far West T-bar**	**2.99**	**25**	*e*PN	Pn	09 22 00.2	+2.9
TUVZ	**Tukino**	**3.01**	**27**	*e*PN	Pn	09 21 57.2	-0.5
WPVZ	**Whakapapa**	**3.03**	**25**	*e*PN	Pn	09 21 59.0	+1.0
CNZ	**Chateau**	**3.04**	**25**	*e*PN	Pn	09 21 58.2	+0.1
TWVZ	**Taurewa**	**3.12**	**23**	*e*PN	Pn	09 22 01.9	+2.6
WTVZ	**West Tongariro**	**3.13**	**25**	*e*PN	Pn	09 21 58.8	-0.6
KRVZ	**Karewarewa**	**3.16**	**25**	*e*PN	Pn	09 22 04.6	+4.8
RATZ	**Rangitukua**	**3.41**	**25**	*e*PN	Pn	09 22 08.3	+5.0
LBZ	**Lake Benmore**	**3.63**	**227**	*e*PN	Pn	09 22 04.3	-2.2
ODZ	**Otahua Downs**	**3.88**	**217**	*e*PN	Pn	09 22 06.4	-3.6

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*IDC **23** 10:08:24.9±0.4, 26.62S×176.06W, mb4.9/16, mb1 5.1/17, mb1mx5.1/17, mbtmp4.9/17, MS4.9/18, Ms1 5.0/18, ms1mx4.8/23, Error ellipse: s-maj=17.0km s-min=12.9km az=153.0*

*BJI **23** 10:08:25.6, 26.23S×175.63W, h12^{km}, mB5.8, mb5.4, Ms5.3, Msz4.9*

*HRVD **23** 10:08:26.2±0.1, 26.68S×175.67W, h13^{km}, MW5.4/69, Centroid moment Tensor Solution. LP body waves: s61,c114;Mantle waves: s69,c144; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.35±.02; $M_{\theta\theta}$-0.12±.02; $M_{\phi\phi}$-1.22±.02; $M_{r\theta}$0.31±.04; $M_{\theta\phi}$-0.36±.02; $M_{\phi r}$0.87±.04; Best double couple: $M_0$1.626×10^{17} NP1: ϕ_s195°, δ28°, λ87°. NP2: ϕ_s18°, δ62°, λ92°. Principal axes: T 1.639, Plg73°, Azm292°; N -.021, Plg1°, Azm198°; P -1.613, Plg17°, Azm107°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **23** 10:08:26.2±0.1, 26.70S×176.07W, h10^{km}, mb5.5/68, MS5.2/5 Error ellipse: s-maj=5.7km s-min=3.4km az=144.0*

*CRAAG **23** 10:08:28.0, 26.79S×176.08W, Mb5.5*

*MOS **23** 10:08:29.3±1.1, 26.63S×176.12W, h33^{km}, mb5.7/42, MS5.0/24, Error ellipse: s-maj=11.8km s-min=7.8km az=62.3*

*CSEM **23** 10:08:29.3, 26.62S×176.13W, h33^{km}, mb5.6*

ISC 23 10:08:28.4±0.2, 26.78S±0.05×176.07W±0.05, h33^{km}, (h31^{km}±2.8^{km}:pP-P), n411, $\sigma 0^{s}97$/240, mb5.4/91, MS5.0/41, 22C-10D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.95**	**213**	Pn	**Pn**	**10 09 15.5**	**+1.3**
	558nm,0.3s,baz=116,slow=5.3,SNR=25						
RAO				Sn	**Sn**	**10 09 53.7**	**+4.8**
	795nm,0.3s,baz=70,slow=23,SNR=13						
RAO				LR	LR	10 10 04.5	
	comp=Z,13μm,18.5s,baz=158,slow=32						
RAO	**Raoul Island**	**2.95**	**213**	*e*Pn	**Pn**	**10 09 14.7**	**+0.5**
RAO				*e*Sn	**Sn**	**10 09 52.8**	**+3.9**
PUZ	**Puketiti**	**12.23**	**202**	*e*SN	**S**	**10 13 28.2**	**-11**
MWZ	**Matawai**	**12.72**	**203**	*e*SN	**S**	**10 13 41.9**	**-9.2**
URZ	**Urewera**	**12.80**	**205**	Pn	**P**	**10 11 21.8**	**-9.0**
	0.4nm,0.3s,baz=259,slow=23,SNR=3.5						
URZ				Sn	**S**	**10 13 46.3**	**-6.8**
	4.3nm,0.3s,baz=225,slow=22,SNR=14						
URZ				LR	LR	10 15 52.1	
	comp=Z,6μm,18.2s,baz=232,slow=34						
URZ	**Urewera**	**12.80**	**205**	*e*SN	**S**	**10 13 41.7**	**-11**
AFI	**Afiamalu**	**13.42**	**18**	Pn	**P**	**10 11 29.5**	**-10**
	9.3nm,0.3s,baz=11,slow=1.4,SNR=12						
AFI				Sn	**S**	**10 13 54.2**	**-14**
	9.4nm,0.3s,baz=34,slow=22,SNR=5.7						
AFI	**Afiamalu**	**13.42**	**18**	*e*P	**P**	**10 11 26.5**	**-13**
	148nm,0.7s						
AFI				*e*S	S	10 13 40.5	-28
AFI				Sn	**S**	**10 13 54.2**	**-14**
BFZ	**Birch Farm**	**15.26**	**203**	*e*SN	**S**	**10 14 39.8**	**-12**
RAR	**Rarotonga**	**15.89**	**73**	*e*P	**P**	**10 11 59.9**	**-11**
	217nm,0.9s						
RAR				*e*S	S	10 14 38.2	-28
SNZO	**South Karori**	**16.37**	**205**	P	**P**	**10 12 15.7**	**-1.4**
SNZO				*e*S	**S**	**10 15 04.4**	**-13**
DZM	**Mont Dzumac**	**16.59**	**283**	*e*P	**P**	**10 12 21.6**	**+1.4**
DZM	**Mont Dzumac**	**16.59**	**283**	Pn	**P**	**10 12 23.4**	**+3.2**
	0.6nm,0.3s,baz=94,slow=12,SNR=28						
DZM				LR	LR	10 17 31.6	
	comp=Z,3μm,20.2s,baz=86,slow=33						
DZM	**Mont Dzumac**	**16.59**	**283**	*e*P	**P**	**10 12 21.6**	**+1.4**
NOUC	**Port Laguerre**	**16.71**	**282**	*e*P	**P**	**10 12 21.1**	**-0.5**
THZ	**Tophouse**	**17.48**	**208**	*e*PN	**P**	**10 12 27.6**	**-3.5**
THZ				*e*SN	**S**	**10 15 29.2**	**-13**
KHZ	**Kahutara**	**17.77**	**206**	*e*PN	**P**	**10 12 29.1**	**-5.7**
RPZ	**Rata Peaks**	**19.86**	**208**	P	**P**	**10 12 57.4**	**-2.0**
	23nm,0.7s,baz=296,slow=2.1,SNR=13						
RPZ				S	**S**	**10 16 27.7**	**-8.4**
	8.6nm,0.6s,baz=133,slow=22,SNR=4.5						
RPZ				LR	LR	10 20 30.5	
	comp=Z,3μm,18.7s,baz=25,slow=36						
TBI	**Tubuai**	**24.33**	**88**	*e*P	Px	10 13 17.6	
	620nm,28.5s						
TBI				*e*S	Sx	10 17 21.6	
TBI				*e*LQ		10 18 02.1	
	6μm,26.8s						
TBI				*e*LR	LR	10 18 55.5	
	baz=258						
PPT	**Papeete**	**26.15**	**75**	*e*P	Px	10 13 34.9	
	305nm,26.2s						
PPT				*e*S	Sx	10 17 50.9	
	190nm,20.2s						
PPT				*e*LQ		10 18 37.4	
	8μm,23.5s						
PPT				*e*LR	LR	10 19 41.4	
	9μm,27.0s,baz=243						
PPT	**Papeete**	**26.15**	**75**	P	**P**	**10 14 00.8**	**-0.8**
	20nm,0.9s,mb4.7,baz=253,slow=11,SNR=2.7						
PPT				LR	LR	10 23 01.7	
	comp=Z,3μm,18.5s,MS4.8,baz=249,slow=34						
TAU	**Tasmania Unive**	**33.77**	**232**	*e*P	**P**	**10 15 07.9**	**-1.2**
TAU				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.3						
TAU	**Tasmania Unive**	**33.77**	**232**	*e*P	**P**	**10 15 07.9**	**-1.3**
	comp=Z,49nm,1.2s,mb5.3						
CTA	**Charters Tower**	**35.11**	**273**	*e*P	**P**	**10 15 22.1**	**+1.2**
	comp=Z,23nm,1.3s,mb5.0						
CTA	**Charters Tower**	**35.11**	**273**	P	**P**	**10 15 20.8**	**-0.1**
	comp=Z,9.6nm,0.6s,mb4.9,baz=100,slow=12,SNR=13						
CTA				LR	LR	10 27 33.6	
	comp=Z,2μm,19.9s,MS5.0,baz=110,slow=33						
CTAO	**Charters Tower**	**35.11**	**273**	*e*P	**P**	**10 15 21.0**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,56nm,1.3s,mb5.3						
CTAO	**Charters Tower**	**35.11**	**273**	*e*P	**P**	**10 15 21.0**	**+0.1**
	comp=Z,56nm,1.3s,mb5.3						
STKA	**Stephens Creek**	**37.08**	**252**	*e*P	**P**	**10 15 36.3**	**-1.1**
	comp=Z,7.0nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**37.08**	**252**	P	**P**	**10 15 36.8**	**-0.7**
	comp=Z,5.5nm,0.9s,mb4.4,baz=106,slow=7.4,SNR=6.3						
STKA				LR	LR	10 30 24.9	
	comp=Z,5μm,18.1s,MS5.3,baz=89,slow=36						
RKT	**Rikitea**	**37.33**	**94**	*e*P	Px	10 15 07.9	
	comp=Z,142nm,27.5s						
RKT				*e*S	Sx	10 20 54.8	
	comp=Z,571nm,27.2s						
RKT				*e*LQ		10 23 49.8	
	comp=Z,685nm,24.8s						
RKT				*e*LR	LR	10 24 53.1	
	baz=255						
TAOE	**Nuku Hiva Isla**	**38.38**	**69**	*e*P	P	10 15 22.1	-26
	comp=Z,308nm,26.0s						
TAOE				*e*S	**S**	**10 21 29.9**	**-11**
	comp=Z,1μm,23.9s						
TAOE				*e*LQ		10 23 42.0	
	comp=Z,3μm,20.0s						
TAOE				*e*LR	LR	10 25 19.6	
	baz=239						
PMG	**Port Moresby**	**38.80**	**289**	*e*P	**P**	**10 15 51.1**	**-0.8**
PMG				pmax	pmax		
	comp=Z,27nm,1.1s						
PMG	**Port Moresby**	**38.80**	**289**	P	**P**	**10 15 50.6**	**-1.3**
	comp=Z,13nm,1.0s,mb4.6,baz=91,slow=9.0,SNR=5.2						
PMG				LR	LR	10 29 16.6	
	comp=Z,2μm,18.0s,MS5.0,baz=323,slow=32						
PMG	**Port Moresby**	**38.80**	**289**	*e*P	**P**	**10 15 51.1**	**-0.8**
	comp=Z,27nm,1.1s,mb4.9						
WB2	**Warramunga Arr**	**45.79**	**268**	*e*P	**P**	**10 16 48.2**	**-0.9**
WB2				*e*S	**S**	**10 23 34.6**	**+4.9**
WRAB	**Tennant Creek**	**45.79**	**268**	*e*P	**P**	**10 16 47.2**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.5						
WRAB	**Tennant Creek**	**45.79**	**268**	*e*P	**P**	**10 16 47.2**	**-1.9**
	comp=Z,58nm,1.0s,mb5.5						
WRA	**Warramunga Arr**	**45.80**	**268**	P	**P**	**10 16 47.6**	**-1.5**
	comp=Z,24nm,0.8s,mb5.2,baz=105,slow=7.9,SNR=45						
WRA				S	**S**	**10 23 35.6**	**+5.8**
	comp=Z,3.3nm,1.1s,baz=112,slow=13,SNR=3.9						
DRV	**Dumont d'Urvil**	**48.12**	**202**	P	**P**	**10 17 12.0**	**+5.3**
DRV				S	**S**	**10 24 12.0**	**+10**
DRV				L		10 29 00.0	
FORT	**Forrest**	**48.71**	**251**	*e*P	**P**	**10 17 10.4**	**-1.3**
	comp=Z,21nm,0.7s,mb5.3						
KAKA	**Kakadu**	**50.12**	**276**	*e*P	**P**	**10 17 21.1**	**-1.7**
	comp=Z,15nm,0.5s,mb5.3						
SBA	**Scott Base**	**51.76**	**185**	*e*P	**P**	**10 17 37.0**	**+2.6**
SBA				pmax	pmax		
	comp=Z,90nm,1.4s,mb5.5						
SBA	**Scott Base**	**51.76**	**185**	*e*P	**P**	**10 17 37.0**	**+2.5**
	comp=Z,90nm,1.4s,mb5.5						
VNDA	**Vanda**	**51.86**	**186**	*e*P	**P**	**10 17 36.9**	**+1.8**
VNDA				pmax	pmax		
	comp=Z,37nm,1.3s						
VNDA	**Vanda**	**51.86**	**186**	P	**P**	**10 17 37.0**	**+1.9**
	comp=Z,11nm,1.1s,mb4.7,baz=11,slow=7.4,SNR=32						
VNDA				LR	LR	10 36 33.4	
	comp=Z,784nm,18.8s,MS4.8,baz=28,slow=32						
VNDA	**Vanda**	**51.86**	**186**	*e*P	**P**	**10 17 36.9**	**+1.7**
	comp=Z,37nm,1.3s,mb5.2						
FITZ	**Fitzroy Crossi**	**54.17**	**266**	*e*P	**P**	**10 17 52.3**	**-0.8**
	comp=Z,48nm,1.2s,mb5.3						
FITZ				*e*S	**S**	**10 25 44.8**	**+19**
MBWA	**Marble Bar**	**58.40**	**261**	*e*P	**P**	**10 18 22.1**	**-1.1**
	comp=Z,22nm,1.1s,mb5.1						
CASY	**Casey**	**59.12**	**207**	⇑*i*P	**P**	**10 18 27.5**	**-0.2**
QSPA	**South Pole Qui**	**63.32**	**180**	*e*P	**P**	**10 18 56.8**	**+0.9**
	comp=Z,104nm,1.2s,mb5.8						
MIR	**Mirnyy**	**66.11**	**206**	*d* *i*P	**P**	**10 19 14.4**	**+0.4**
MIR				pmax	pmax		
	comp=Z,110nm,1.4s,mb5.7						
PMSA	**Palmer Station**	**74.86**	**156**	*e*P	**P**	**10 20 07.1**	**+0.1**
PMSA				*e*		10 20 24.9	
KSM	**Kuching**	**76.08**	**279**	*e*P	**P**	**10 20 14.3**	**-0.6**
MAW	**Mawson**	**76.28**	**200**	⇓*i*P	**P**	**10 20 16.9**	**+1.9**
	comp=Z,20nm,0.9s,mb5.0						
MAW	**Mawson**	**76.28**	**200**	P	**P**	**10 20 15.9**	**+0.9**
MAW				pmax	pmax		
	comp=Z,31nm,1.2s						
MAW				MLR	MLR		
	comp=Z,1μm,18.1s						
MAW	**Mawson**	**76.28**	**200**	P	**P**	**10 20 15.9**	**+0.9**
	comp=Z,31nm,1.1s,mb5.1,baz=120,slow=6.1,SNR=20						
MAW				LR	LR	10 53 54.8	
	comp=Z,1μm,18.1s,MS5.3,baz=340,slow=36						
MJAR	**Matsushiro Arr**	**76.29**	**324**	P	**P**	**10 20 14.6**	**-1.1**
	comp=Z,29nm,1.1s,mb5.1,baz=162,slow=5.9,SNR=28						
MJAR				LR	LR	10 50 13.3	
	comp=Z,524nm,20.2s,MS4.8,baz=140,slow=33						
MAJO	**Matsushiro**	**76.29**	**324**	*e*P	**P**	**10 20 15.4**	**-0.3**
MAJO				*e*	pP	10 20 27.1	+1.1
MAJO				pmax	pmax		
	comp=Z,101nm,1.4s,mb5.6						
MAJO	**Matsushiro**	**76.29**	**324**	*e*P	**P**	**10 20 15.4**	**-0.3**
	comp=Z,101nm,1.4s,mb5.6						
MAJO				*e*	pP	10 20 27.1	+1.1
MAT	**Matsushiro**	**76.29**	**324**	*e*P	**P**	**10 20 14.0**	**-1.7**
MAT				*e*S	S	10 30 01.0	+4.2
MAT				pmax	pmax		
	comp=Z,142nm,1.7s,mb5.6						
MAT				MLR	MLR		
	comp=Z,710nm,20.0s,MS5.0						
MAT	**Matsushiro**	**76.29**	**324**	*e*P	**P**	**10 20 14.0**	**-1.7**
	comp=Z,142nm,1.7s,mb5.6						
MAT				*e*S	S	10 30 01.0	+4.2
MAT				LR	LR		
	comp=Z,710nm,20.0s,MS5.0						
MAT	**Matsushiro**	**76.29**	**324**	P	**P**	**10 20 13.6**	**-2.1**
MAT				S	S	10 30 01.0	+4.2
NACB	**Ninganchiao**	**78.66**	**304**	*e*P	**P**	**10 20 28.7**	**-0.5**
YHNB	**Yeheng**	**79.11**	**305**	*e*P	**P**	**10 20 27.8**	**-3.8**
SYO	**Syowa Base**	**81.00**	**192**	⇑P	**P**	**10 20 40.3**	**-0.5**
SYO	**Syowa Base**	**81.00**	**192**	⇓pP	pP	10 20 42.8	-8.4
SYO	**Syowa Base**	**81.00**	**192**	⇑sP	sP	10 20 45.2	-10
QZH	**Quanzhou**	**81.33**	**303**	⇑*i*P	**P**	**10 20 43.3**	**-0.1**
QZH				S	S	10 30 58.0	+7.6
QZH				AMB	AMB		
	comp=Z,220nm,1.2s,mb6.0						
QZH				AMB	AMB		
	comp=Z,870nm,6.7s						
QZH				LR	LR		
	comp=Z,2μm,39.9s,MS5.1						
SNAA	**Sanae**	**81.70**	**178**	*e*P	**P**	**10 20 44.4**	**0.0**
SNAA				pmax	pmax		
	comp=Z,52nm,1.3s						
SNAA	**Sanae**	**81.70**	**178**	*e*P	**P**	**10 20 44.4**	**0.0**
	comp=Z,52nm,1.3s,mb5.3						
VNA3	**Neumayer Olymp**	**81.78**	**176**	*e*	**P**	**10 20 47.6**	**+2.8**
VNA3	**Neumayer Olymp**	**81.78**	**176**	*e*	**P**	**10 20 50.6**	**+5.8**
VNA3	**Neumayer Olymp**	**81.78**	**176**	*e*	**P**	**10 20 55.9**	**+11**
VNA3	**Neumayer Olymp**	**81.78**	**176**	⇑*i*P	**P**	**10 20 45.0**	**+0.2**
VNA3				*e*		10 20 47.6	
VNA3				*e*		10 20 50.6	
VNA3				*e*	pP	10 20 55.9	+0.6
VNA2	**Neumayer--Watz**	**82.24**	**176**	*e*	**P**	**10 20 50.5**	**+3.3**
VNA2	**Neumayer--Watz**	**82.24**	**176**	*e*	**P**	**10 20 52.7**	**+5.5**
VNA2	**Neumayer--Watz**	**82.24**	**176**	*e*	**P**	**10 20 58.1**	**+11**
VNA2	**Neumayer--Watz**	**82.24**	**176**	⇑*i*P	**P**	**10 20 47.7**	**+0.5**
VNA2				*e*		10 20 50.5	
VNA2				*e*		10 20 52.7	
VNA2				*e*	pP	10 20 58.1	+0.5
YSS	**Yuzh-Sakhalins**	**82.27**	**333**	α*e*P	**P**	**10 20 44.0**	**-3.8**
YSS				*e*	pP	10 20 53.0	-5.3
YSS				S	S	10 30 57.0	-2.6
YSS				pmax	pmax		
	comp=Z,120nm,1.6s,mb5.6						
YSS				pmax	pmax		
	comp=Z,500nm,6.0s						
YSS				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.9						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
YSS	**Yuzh-Sakhalins**	**82.27**	**333**	*e*P	**P**	**10 20 43.9**	**-3.9**
	comp=E,44nm,1.0s,mb5.3						
VNA1	**Neumayer--Stat**	**82.46**	**176**	*e*	**P**	**10 20 51.8**	**+3.5**
VNA1	**Neumayer--Stat**	**82.46**	**176**	*e*	**P**	**10 20 54.9**	**+6.6**
VNA1	**Neumayer--Stat**	**82.46**	**176**	*e*	**P**	**10 21 00.7**	**+12**
VNA1	**Neumayer--Stat**	**82.46**	**176**	⇑*i*P	**P**	**10 20 49.3**	**+1.0**
VNA1				*e*		10 20 51.8	
VNA1				*e*		10 20 54.9	
VNA1				*e*	pP	10 21 00.7	+1.9
PET	**Petropavlovsk**	**82.46**	**345**	*e*P	**P**	**10 20 50.8**	**+2.1**
PET				*e*S	S	10 31 03.5	+2.1
PET				*e*SP	SP	10 31 52.7	+1.0
PET				pmax	pmax		
	comp=Z,25nm,1.9s,mb4.8						
PET				pmax	pmax		
	comp=Z,200nm,16.5s						

PET				smax			
	comp=N,400nm,13.7s						
PET				smax			
	comp=E,400nm,13.5s						
PFO	**Pinyon Flat Ob**	82.51	47	*e*P	P	10 20 49.2	-0.1
PFO				pmax	pmax		
	comp=Z,30nm,1.6s,mb5.1						
PFO	**Pinyon Flat Ob**	82.51	47	*e*P	P	10 20 49.2	-0.1
	comp=Z,30nm,1.6s,mb5.1						
MAIT	**Maitri**	82.56	183	*e*P	P	10 20 49.8	+1.0
NVL	**N'lazarevskaya**	82.56	183	⇑*i*P	P	10 20 49.2	+0.3
NVL				*i* *PP	pP	10 20 58.2	-1.1
NVL				*i* *SP	sP	10 21 02.4	-0.5
NVL				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
NVL				MLR	MLR		
	comp=Z,230nm,16.6s,MS4.6						
KS15	**Wonju Array Si**	82.75	318	*e*P	P	10 20 50.4	-0.1
CMB	**Columbia Colle**	82.94	41	*e*P	P	10 20 50.8	-0.6
CMB				pmax	pmax		
	comp=Z,57nm,1.5s,mb5.4						
CMB	**Columbia Colle**	82.94	41	*e*P	P	10 20 50.8	-0.6
	comp=Z,57nm,1.5s,mb5.4						
WDC	**Whiskeytown Da**	83.44	38	*e*P	P	10 20 54.1	+0.2
WDC				pmax	pmax		
	comp=Z,79nm,1.6s,mb5.5						
WDC	**Whiskeytown Da**	83.44	38	*e*P	P	10 20 54.1	+0.2
	comp=Z,79nm,1.6s,mb5.5						
DAC	**Darwin (Calif)**	83.47	44	*e*P	P	10 20 54.0	-0.2
DAC				pmax	pmax		
	comp=Z,27nm,1.5s,mb5.1						
DAC	**Darwin (Calif)**	83.47	44	*e*P	P	10 20 54.0	-0.2
	comp=Z,27nm,1.5s,mb5.0						
OMM	**Old Mammoth Mi**	83.49	42	*e*P	P	10 20 53.9	-0.3
INCN	**Inchon**	83.53	318	*e*P	P	10 20 54.7	+0.2
MTUM	**Tungsten Hills**	83.58	43	*e*P	P	10 20 54.8	+0.1
PLCA	**Paso Flores**	83.71	133	*e*P	P	10 20 55.8	+0.5
PLCA				pmax	pmax		
	comp=Z,37nm,1.4s						
PLCA	**Paso Flores**	83.71	133	P	P	10 20 55.8	+0.5
	comp=Z,12nm,1.1s,mb5.0,baz=238,slow=6.0,SNR=13						
PLCA				LR	LR	10 52 54.6	
	comp=Z,427nm,18.4s,MS4.9,baz=246,slow=32						
PLCA	**Paso Flores**	83.71	133	*e*P	P	10 20 55.8	+0.4
	comp=Z,37nm,1.4s,mb5.3						
YBH	**Yreka Blue Hor**	84.14	37	*e*P	P	10 20 57.5	0.0
YBH				pmax	pmax		
	comp=Z,55nm,1.6s						
YBH	**Yreka Blue Hor**	84.14	37	*e*P	P	10 20 57.5	0.0
	comp=Z,55nm,1.6s,mb5.4						
WCN	**Washoe City**	84.15	40	*e*P	P	10 20 57.8	+0.2
WCN				pmax	pmax		
	comp=Z,68nm,1.6s,mb5.5						
WCN	**Washoe City**	84.15	40	*e*P	P	10 20 57.8	+0.2
	comp=Z,68nm,1.6s,mb5.5						
BEKR	**Beckwourth**	84.18	40	*e*P	P	10 20 57.3	-0.4
	comp=Z,56nm,1.6s,mb5.4						
LDFC	**Landfair**	84.29	46	*e*P	P	10 20 58.8	+0.4
NVAR	**Mina Array Bea**	84.43	42	P	P	10 20 59.3	+0.3
	comp=Z,8.4nm,0.9s,mb4.9,baz=208,slow=5.7,SNR=49						
NVAR				LR	LR	10 53 56.7	
	comp=Z,1µm,18.4s,MS5.4,baz=185,slow=32						
MNV	**Mina**	84.52	42	*e*P	P	10 20 59.0	-0.5
MNV				pmax	pmax		
	comp=Z,75nm,1.5s,mb5.6						
MNV	**Mina**	84.52	42	*e*P	P	10 20 59.0	-0.5
	comp=Z,75nm,1.5s,mb5.6						
HUMO	**Hull Mountain**	84.61	36	*e*P	P	10 20 59.8	0.0
	comp=Z,66nm,1.5s,mb5.5						
HUMO				*e*	pP	10 21 11.0	+0.7
PAHR	**Pah Rah Range**	84.63	40	*e*P	P	10 20 59.6	-0.4
	comp=Z,36nm,1.3s,mb5.3						
NEN	**Nelson**	84.81	46	*e*P	P	10 21 00.9	-0.1
TPH	**Tonopah**	84.85	43	*e*P	P	10 21 01.1	0.0
TPH				pmax	pmax		
	comp=Z,91nm,1.5s,mb5.7						
TPH	**Tonopah**	84.85	43	*e*P	P	10 21 01.1	0.0
	comp=Z,91nm,1.5s,mb5.7						
QIZ	**Qiongzhong**	85.03	294	P	P	10 21 02.1	-0.3
QIZ				S	S	10 31 29.8	+2.1
QIZ				LR	LR		
	comp=Z,510nm,39.6s,MS4.6						
NJ2	**Nanjing**	85.22	309	*e*P	P	10 21 05.0	+1.9
NJ2				AP	pP	10 21 09.8	-3.8
NJ2				XP	sP	10 21 12.1	-5.0
NJ2				SKS	SKS	10 31 26.0	+4.0
NJ2				S	S	10 31 33.0	+3.6
NJ2				SS	SS	10 37 11.0	+3.9
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,640nm,6.8s						
NJ2				LR	LR		
	comp=N,990nm,28.3s,MS5.5						
NJ2				LR	LR		
	comp=E,2µm,27.4s,MS5.5						
NJ2				LR	LR		
	comp=Z,870nm,26.6s,MS5.0						
TUC	**Tucson**	85.52	50	*e*P	P	10 21 05.0	+0.4
TUC				pmax	pmax		
	comp=Z,59nm,1.5s,mb5.6						
TUC	**Tucson**	85.52	50	*e*P	P	10 21 05.0	+0.4
	comp=Z,59nm,1.5s,mb5.6						
MOD	**Modoc**	85.57	38	*e*P	P	10 21 04.4	-0.2
	comp=Z,48nm,1.4s,mb5.5						
TRCR	**Troy Canyon**	86.02	43	*e*P	P	10 21 06.8	0.0
BMN	**Battle Mountai**	86.36	41	*e*P	P	10 21 08.2	-0.3
BMN				pmax	pmax		
	comp=Z,55nm,1.4s,mb5.6						
BMN	**Battle Mountai**	86.36	41	*e*P	P	10 21 08.2	-0.2
	comp=Z,54nm,1.4s,mb5.6						
MDJ	**Mudanjiang**	86.64	324	P	P	10 21 10.5	+0.8
MDJ				AP	pP	10 21 13.8	-6.5
MDJ				XP	sP	10 21 15.1	-8.6
MDJ				PP	PP	10 24 27.6	-6.6
MDJ				S	S	10 31 48.8	+6.0
MDJ				SS	SS	10 37 27.6	+0.2
MDJ				AMB	AMB		
	comp=Z,30nm,1.4s,mb5.3						
MDJ				AMB	AMB		
	comp=Z,350nm,5.4s						
MDJ				LR	LR		
	comp=N,270nm,25.6s,MS4.6						
MDJ				LR	LR		
	comp=E,190nm,23.8s,MS4.6						
MDJ				LR	LR		
	comp=Z,450nm,21.1s,MS4.8						
MDJ	**Mudanjiang**	86.64	324	*e*P	P	10 21 10.0	+0.3
	comp=Z,74nm,1.4s,mb5.7						
WVOR	**Wild Horse Val**	86.85	39	*e*P	P	10 21 10.4	-0.4
WVOR				pmax	pmax		
	comp=Z,51nm,1.6s,mb5.5						
WVOR	**Wild Horse Val**	86.85	39	*e*P	P	10 21 10.4	-0.4
	comp=Z,51nm,1.6s,mb5.5						
WUAZ	**Wupatki**	86.99	48	*e*P	P	10 21 12.1	+0.4
	comp=Z,44nm,1.4s,mb5.5						
ARUT	**Antelope Range**	87.01	45	*e*P	P	10 21 12.1	+0.4
CROR	**Criterion Ridg**	87.28	36	P	P	10 21 13.4	+0.6
DL2	**Dalian**	87.48	316	P	P	10 21 15.0	+1.0
DL2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.4						
DL2				AMB	AMB		
	comp=Z,180nm,2.6s,mb5.8						
DL2				LR	LR		
	comp=N,200nm,16.5s,MS4.7						
DL2				LR	LR		
	comp=E,120nm,14.9s,MS4.7						
DL2				LR	LR		
	comp=Z,310nm,16.1s,MS4.8						
WHN	**Wuhan**	87.56	306	⇓P	P	10 21 16.0	+1.5
WHN				S	S	10 31 47.0	-4.9
WHN				LR	LR		
	comp=N,2µm,30.6s,MS5.5						
WHN				LR	LR		
	comp=E,1µm,25.7s,MS5.5						
WHN				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
ELK	**Elko**	87.73	42	*e*P	P	10 21 14.5	-0.6
ELK				pmax	pmax		
	comp=Z,23nm,1.6s						
ELK	**Elko**	87.73	42	*e*P	P	10 21 14.4	-0.6
	comp=Z,23nm,1.6s,mb5.2						
SNY	**Shenyang**	88.12	319	⇓P	P	10 21 18.3	+1.4
SNY				S	S	10 31 50.0	-6.8
SNY				XS		10 32 11.6	
SNY				LR	LR		
	comp=N,280nm,15.0s						
SNY				LR	LR		
	comp=E,210nm,20.4s						
SNY				LR	LR		
	comp=Z,380nm,24.3s						
MVU	**Marysvale**	88.22	45	*e*P	P	10 21 18.4	+1.0
	comp=Z,17nm,1.3s,mb5.1						
MSU	**Marysvale**	88.24	45	*e*P	P	10 21 18.7	+1.1
CN2	**Changchun**	88.32	322	*e*P	P	10 21 18.1	+0.3
CN2				*e*XP	sP	10 21 28.0	-3.8
CN2				*e*S	S	10 31 59.0	+0.4
CN2				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.4						
CN2				AMB	AMB		
	comp=Z,500nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,14.0s,MS5.0						
CN2				LR	LR		
	comp=E,300nm,14.0s,MS5.0						
CN2				LR	LR		
	comp=Z,400nm,15.0s,MS5.0						
GSM	**Grass Mountain**	88.39	34	P	P	10 21 19.0	+0.9
RMW	**Rattlesnake Mo**	88.56	33	P	P	10 21 19.7	+0.8
PGC	**Sidney**	88.60	32	*e*P	P	10 21 18.1	-1.0
	comp=Z,227nm,1.6s,mb6.2						
TIA	**Tai'an**	88.79	312	*e*P	P	10 21 21.3	+1.0
TIA				AMB	AMB		
	comp=Z,60nm,1.5s,mb5.7						
KLR	**Kul'dur**	88.80	329	*e*P	P	10 21 17.7	-2.3
TWW	**Teanaway**	88.81	34	P	P	10 21 21.4	+1.3
MNTX	**Cornudas Mount**	88.99	54	*e*P	P	10 21 20.9	-0.4
	comp=Z,68nm,1.7s,mb5.7						
LTX	**Lajitas**	89.00	56	*e*P	P	10 21 21.2	-0.2
LTX				pmax	pmax		
	comp=Z,85nm,1.7s,mb5.8						
LTX	**Lajitas**	89.00	56	*e*P	P	10 21 21.2	-0.3
	comp=Z,84nm,1.7s,mb5.8						
TXAR	**Lajitas Array**	89.00	56	P	P	10 21 21.6	+0.1
	comp=Z,8.1nm,1.0s,mb5.0,baz=217,slow=6.3,SNR=61						
TXAR				LR	LR	10 56 48.8	
	comp=Z,638nm,18.2s,MS5.1,baz=155,slow=33						
RSO	**Redoubt South**	89.00	11	*e*P	P	10 21 19.7	-0.9
BMO	**Blue Mountains**	89.16	37	*e*P	P	10 21 21.1	-0.7
	comp=Z,33nm,1.5s,mb5.5						
LENM	**Lemitar**	89.20	51	P	P	10 21 19.2	-3.1
LAZ	**Ladron**	89.22	51	*e*P	P	10 21 23.1	+0.7
TMUT	**Trail Mountain**	89.31	45	*e*P	P	10 21 23.1	+0.4
BNM	**Barren Site**	89.43	51	*e*P	P	10 21 23.7	+0.3
WRD	**Warden**	89.46	35	P	P	10 21 24.4	+1.2
SLKM	**Skilak Lake**	89.51	12	*e*P	P	10 21 23.1	0.0
EPH	**Ephrata**	89.59	35	P	P	10 21 24.2	+0.4
SRU	**San Rafael**	89.64	45	*e*P	P	10 21 24.2	0.0
WTV	**Waterville**	89.64	34	P	P	10 21 24.4	+0.4
NLW	**Nelson Butte**	89.71	34	P	P	10 21 24.8	+0.5
SPUT	**South Promonto**	89.74	42	*e*P	P	10 21 21.5	-3.2
SPU	**Mount Spurr**	89.79	11	P	P	10 21 22.1	-2.4
CTU	**Camp Tracy**	89.80	43	*e*P	P	10 21 24.6	-0.4
HVU	**Hansel Valley**	89.83	42	*e*P	P	10 21 23.7	-1.4
JLU	**Jordanelle**	89.93	43	*e*P	P	10 21 25.4	-0.2
DAU	**Daniels Canyon**	89.94	44	*e*P	P	10 21 25.2	-0.4
HLID	**Hailey**	89.96	40	*e*P	P	10 21 25.6	0.0
	comp=Z,28nm,1.6s,mb5.3						
ANMO	**Albuquerque**	89.99	50	*e*P	P	10 21 25.9	-0.1
ANMO				pmax	pmax		
	comp=Z,38nm,1.5s						
ANMO	**Albuquerque**	89.99	50	*e*P	P	10 21 25.9	0.0
	comp=Z,38nm,1.5s,mb5.5						
GDL2	**Guadalupe Moun**	89.99	54	*e*P	P	10 21 26.5	+0.4
CMIG	**Matias Romero**	90.00	71	*i* P	P	10 21 26.5	+0.1
OD2	**Odessa Site #2**	90.07	35	P	P	10 21 26.7	+0.7
TCUT	**Toone Canyon**	90.26	43	*e*P	P	10 21 26.9	-0.2
MA2	**Magadan**	90.28	344	*e*P	P	10 21 25.2	-1.5
MA2				pmax	pmax		
	comp=Z,28nm,1.7s,mb5.3						
MA2				MLR	MLR		
	comp=Z,400nm,23.0s,MS4.8						
MA2	**Magadan**	90.28	344	*e*P	P	10 21 25.6	-1.1
	comp=Z,54nm,1.5s,mb5.7						
CLNB	**Carlsbad**	90.37	54	*e*P	P	10 21 26.0	-1.9
HWUT	**Hardware Ranch**	90.45	43	*e*P	P	10 21 27.4	-0.5
	comp=Z,32nm,1.6s,mb5.4						
PMR	**Palmer**	90.72	13	*e*P	P	10 21 28.9	+0.2
PMR				pmax	pmax		
	comp=Z,69nm,1.4s,mb5.8						
PMR	**Palmer**	90.72	13	*e*P	P	10 21 28.9	+0.2
	comp=Z,69nm,1.4s,mb5.8						
TRQA	**Tornquist**	90.74	134	*e*P	P	10 21 29.4	0.0
	comp=Z,17nm,1.4s,mb5.2						
CPRX	**Cap Rock**	90.78	53	*e*P	P	10 21 24.2	-5.6
TTA	**Tatalina**	90.82	9	*e*P	P	10 21 29.3	+0.1
PNT	**Penticton**	90.89	33	P	P	10 21 29.8	-0.1
ENH	**Enshi**	90.99	304	*e*P	P	10 21 31.6	+0.8
	comp=Z,205nm,1.4s,mb6.3						
GYA	**Guiyang**	91.26	299	⇑*i*P	P	10 21 33.5	+1.4
GYA				S	S	10 32 38.0	+12
GYA				AMB	AMB		
	comp=Z,20nm,1.6s,mb5.2						
GYA				AMB	AMB		
	comp=Z,310nm,8.0s						
GYA				LR	LR		
	comp=N,390nm,18.6s,MS5.0						
GYA				LR	LR		
	comp=E,410nm,18.4s,MS5.0						
GYA				LR	LR		
	comp=Z,350nm,18.2s,MS4.8						
AHID	**Auburn Hatcher**	91.42	42	*e*P	P	10 21 31.1	-1.4
	comp=Z,79nm,1.6s,mb5.8						
AHID				*e*	pP	10 21 43.5	+0.4
NEW	**Newport**	91.45	35	*e*P	P	10 21 31.1	-1.4
NEW				pmax	pmax		
	comp=Z,22nm,1.4s						
NEW	**Newport**	91.45	35	*e*P	P	10 21 31.1	-1.4
	comp=Z,22nm,1.4s,mb5.3						
NST	**Nakhon Sawan**	91.56	287	P	P	10 21 35.5	+1.8
MCMT	**McKenzie Canyo**	91.62	39	*e*P	P	10 21 33.4	0.0
RRI2	**Red Ridge**	91.63	41	*e*P	P	10 21 33.1	-0.3
	comp=Z,57nm,1.5s,mb5.7						
REDW	**Red Top Meadow**	91.91	41	*e*P	P	10 21 34.4	-0.3
	comp=Z,90nm,1.6s,mb5.8						
TPAW	**Teton Pass**	91.93	41	*e*P	P	10 21 34.8	0.0
	comp=Z,48nm,1.5s,mb5.6						
SNOW	**Snow King Moun**	92.03	41	*e*P	P	10 21 35.7	+0.5
	comp=Z,58nm,1.4s,mb5.7						
SDCO	**Great Sand Dun**	92.15	48	*e*P	P	10 21 35.7	-0.2
	comp=Z,22nm,1.6s,mb5.2						
IMW	**Indian Meadow**	92.17	41	*e*P	P	10 21 35.5	-0.4
	comp=Z,54nm,1.4s,mb5.7						
MOOW	**Moose Ponds**	92.20	41	*e*P	P	10 21 35.8	-0.2
	comp=Z,37nm,1.5s,mb5.5						
LOHW	**Long Hollow**	92.20	41	*e*P	P	10 21 35.8	-0.3
	comp=Z,53nm,1.5s,mb5.7						
MSO	**Missoula**	92.23	37	*e*P	P	10 21 34.8	-1.3
	comp=Z,15nm,1.4s,mb5.1						
PDAR	**Pinedale Array**	92.34	43	P	P	10 21 36.2	-0.4
	comp=Z,3.6nm,0.9s,mb4.7,baz=207,slow=3.3,SNR=24						
PDAR				PP	PP	10 25 15.2	-5.0
	comp=Z,0.7nm,0.8s,baz=270,slow=5.9,SNR=4.6						
PDAR				LR	LR	10 58 09.6	
	comp=Z,648nm,18.3s,MS5.1,baz=243,slow=32						
QLMT	**Earthquake Lak**	92.43	40	*e*P	P	10 21 37.6	+0.6
NANT	**Nan**	92.50	290	⇓P	P	10 21 37.5	-0.5
	comp=Z,144nm,0.7s,mb6.5						
YFT	**Old Faithful**	92.56	41	*e*P	P	10 21 38.8	+1.1
YMR	**Madison River**	92.61	40	*e*P	P	10 21 37.9	0.0
CHMT	**Chamberlain Mo**	92.66	38	*e*P	P	10 21 37.2	-0.9
BOZ	**Bozeman (W)**	92.80	39	*e*P	P	10 21 38.5	-0.2
BOZ				pmax	pmax		
	comp=Z,52nm,1.4s,mb5.8						
BOZ	**Bozeman (W)**	92.80	39	*e*P	P	10 21 38.5	-0.2
	comp=Z,52nm,1.4s,mb5.8						
SEY	**Seymchan**	92.87	346	*e*P	P	10 21 38.9	+0.3
SEY				*e*PPP	PPP	10 27 28.3	+2.6
SEY				*e*		10 32 15.5	
SEY				*e*		10 33 57.8	
SEY				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.2						
SEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
SEY				pmax	pmax		
	comp=E,2.0nm,0.9s						
SEY				smax			
	comp=N,1µm,15.7s						
SEY				smax			
	comp=E,800nm,18.7s						
SEY				MLR	MLR		
	comp=Z,310nm,18.0s,MS4.8						
SEY				MLR	MLR		
	comp=N,380nm,20.0s,MS4.9						
SEY				MLR	MLR		
	comp=E,90nm,17.0s,MS4.9						
LKWY	**Lake**	92.88	41	*e*P	P	10 21 40.4	+1.3
LKWY				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.5						
LKWY	**Lake**	92.88	41	*e*P	P	10 21 40.4	+1.3
	comp=Z,29nm,1.3s,mb5.5						
DLBC	**Dease Lake**	93.14	22	*e*P	P	10 21 40.6	+0.7
DLBC				*e*	pP	10 21 51.0	+0.4
RWWY	**Rawlins**	93.18	44	*e*P	P	10 21 40.4	-0.2
	comp=Z,31nm,1.5s,mb5.5						
AMTX	**Amarillo**	93.29	52	*e*P	P	10 21 40.1	-1.1
	comp=Z,33nm,1.5s,mb5.5						
XAN	**Xi'an**	93.31	307	P	P	10 21 42.3	+1.0
HRY	**Holter Researc**	93.32	38	*e*P	P	10 21 41.4	+0.3
KMI	**Kunming**	93.73	296	P	P	10 21 45.4	+2.0
KMI				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.3						
KMI				LR	LR		
	comp=N,260nm,16.2s,MS4.9						
KMI				LR	LR		
	comp=E,190nm,15.4s,MS4.9						
KMI				LR	LR		
	comp=Z,300nm,18.1s,MS4.8						
CM31	**Chiang Mai Arr**	93.83	289	*e*P	P	10 21 45.9	+1.9
	comp=Z,38nm,1.2s,mb5.7						
CMAR	**Chiang Mai Arr**	93.83	289	P	P	10 21 45.4	+1.3
	comp=Z,9.3nm,1.1s,mb5.1,baz=126,slow=2.7,SNR=23						
CMAR				LR	LR	11 02 39.9	
	comp=Z,223nm,21.1s,MS4.6,baz=305,slow=35						
CHTO	**Chiang Mai**	93.99	289	P	P	10 21 46.6	+1.9
ILAR	**Eielson Array**	94.04	12	P	P	10 21 43.0	-0.8
	comp=Z,4.2nm,0.9s,mb4.9,baz=224,slow=4.8,SNR=26						
ILAR				PP	PP	10 25 37.5	+4.3
	comp=Z,1.4nm,1.0s,baz=210,slow=5.7,SNR=4.6						
ILAR				LR	LR	11 05 05.7	
	comp=Z,441nm,18.3s,MS5.0,baz=333,slow=36						
IMA	**Indian Mountai**	94.13	9	*e*P	P	10 21 43.9	-0.3
IMA				pmax	pmax		
	comp=Z,16nm,1.3s,mb5.3						
IMA	**Indian Mountai**	94.13	9	*e*P	P	10 21 43.9	-0.3
	comp=Z,16nm,1.3s,mb5.3						
HIA	**Hailar**	94.80	324	*e*P	P	10 21 48.5	+0.8
HHC	**Hu-ho-hao-te**	94.96	313	*e*P	P	10 21 49.9	+1.2
HHC				AP	pP	10 21 55.8	-3.5
HHC				XP	sP	10 21 58.0	-4.7
HHC				SKS	SKS	10 32 25.9	+5.6
HHC				XS		10 33 17.3	
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.5						
HHC				AMB	AMB		
	comp=Z,160nm,7.1s						
HHC				LR	LR		
	comp=N,520nm,17.8s,MS5.1						
HHC				LR	LR		
	comp=E,350nm,22.2s,MS5.1						
HHC				LR	LR		
	comp=Z,740nm,22.3s,MS5.1						
BILL	**Bilibino**	95.44	353	⇑*e*P	P	10 21 49.8	-0.4
BILL				*e*	pP	10 22 01.2	+0.4
BILL				*e*		10 22 08.0	
BILL						10 25 46.0	
BILL				*e*		10 33 08.8	
BILL				*e*SS	SS	10 39 30.3	-2.7
BILL				*e*		10 43 16.9	
BILL				pmax	pmax		
	comp=Z,12nm,1.4s,mb5.1						
BILL				MLR	MLR		
	comp=Z,800nm,18.0s,MS5.2						
BILL	**Bilibino**	95.44	353	*e*P	P	10 21 48.5	-1.8
	comp=Z,10nm,1.0s,mb5.2						
CD2	**Chengdu**	95.62	302	P	P	10 21 54.8	+2.9
CD2				AMB	AMB		
	comp=Z,20nm,0.4s,mb5.9						
EDM	**Edmonton**	96.42	33	*e*P	P	10 21 54.1	-0.8
RSSD	**Black Hills**	96.45	44	*e*P	P	10 21 54.7	-0.6
RSSD				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.6						
RSSD	**Black Hills**	96.45	44	*e*P	P	10 21 54.7	-0.6
	comp=Z,34nm,1.3s,mb5.6						
LZH	**Lanzhou**	97.94	306	*e*P	P	10 22 04.1	+1.8
LZH				AP	pP	10 22 08.8	-4.1
LZH				XP	sP	10 22 11.3	-5.0
LZH				SKS	SKS	10 32 43.3	+7.1
LZH				S	S	10 33 26.0	+3.2
LZH				XS		10 33 40.1	
LZH				SS	SS	10 40 08.3	-0.4
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb5.4						
LZH				AMB	AMB		
	comp=Z,230nm,4.6s						
LZH				LR	LR		
	comp=E,2µm,19.4s						
LZH				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
LPAZ	**La Paz**	98.02	113	P	P	10 22 03.6	+0.5
	comp=Z,2.9nm,1.1s,mb4.7,baz=208,slow=2.3,SNR=7.4						
LPAZ				LR	LR	11 01 34.7	
	comp=Z,443nm,18.6s,MS5.0,baz=145,slow=32						
ULN	**Ulaanbaatar**	101.22	318	*e*P	P	10 22 12.8	-4.1
YKA	**Yellowknife Ar**	101.46	25	P	P	10 22 17.2	-0.4
	comp=Z,0.5nm,0.7s,baz=244,slow=4.0,SNR=3.9						
YKA	**Yellowknife Ar**	101.46	25	P	P	10 22 17.2	-0.4
SONM	**Songino Array**	101.60	318	P	P	10 22 18.6	0.0
	comp=Z,0.1nm,0.3s,baz=104,slow=5.1,SNR=3.6						
SONM				PKiKP		10 26 42.3	
	comp=Z,0.8nm,0.8s,baz=90,slow=2.9,SNR=3.1						
SONM				PKKPbc		10 38 27.2	
	comp=Z,0.8nm,0.9s,baz=225,slow=1.7,SNR=5.2						
GTA	**Gaotai**	102.26	308	*e*P	Pdif	10 22 22.8	+1.0
GTA				AP		10 22 27.3	
GTA				XP		10 22 30.4	
GTA				PP	PP	10 26 32.8	-3.8
GTA				SKS	SKS	10 33 00.6	+3.3
GTA				S	S	10 33 58.0	-0.9
GTA				AMB	AMB		
	comp=Z,70nm,6.5s						
GTA				LR	LR		
	comp=N,170nm,20.2s,MS4.8						
GTA				LR	LR		
	comp=E,240nm,17.5s,MS4.8						
GTA				LR	LR		
	comp=Z,410nm,27.0s						
ZAK	**Zakamensk**	104.55	319	*e*P	Pdif	10 22 44.9	+13
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.7s						
TLY	**Talaya**	104.88	321	*e*P	Pdif	10 22 47.4	+14
TLY				*e*PS	PS	10 36 12.0	+5.0
TLY				*e*SS	SS	10 41 55.5	+11
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TLY				MLR	MLR		
	comp=Z,391nm,18.0s,MS5.0						
WMQ	**Urumqi**	112.30	309	*e*PDIF	Pdif	10 23 06.8	+1.0
WMQ				PP	PP	10 27 51.0	+0.2
WMQ				SKS	SKS	10 34 13.0	+32
WMQ				SS	SS	10 43 27.3	+2.7
WMQ				PP	PP		
	comp=Z,130nm,7.0s						
WMQ				LR	LR		
	comp=N,220nm,24.0s,MS4.9						
WMQ				LR	LR		
	comp=E,380nm,28.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,380nm,28.0s,MS4.8						
ZAL	**Zalesovo**	116.44	319	PKP	PKPdf	10 27 10.6	+2.1
	comp=Z,1.6nm,0.7s,baz=253,slow=3.8,SNR=11						
MKAR	**Makanchi Array**	116.71	311	PKP	PKPdf	10 27 09.9	+0.6
	comp=Z,1.6nm,0.5s,baz=90,slow=1.2,SNR=19						
NVS	**Novosibirsk**	117.48	320	*e*PKIKP	PKPdf	10 27 08.8	-1.7
NVS				pmax	pmax		
	comp=N,4.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,11nm,1.4s						
NVS				pmax	pmax		
	comp=Z,17nm,1.4s						
KSH	**Kashi**	119.81	302	*e*PKP	PKPdf	10 27 15.6	+0.1
KSH				*e*XPKP		10 27 26.8	
KSH				*e*PKS	PKS	10 30 46.8	-4.5
KSH				*e*SKS	SKS	10 34 23.6	+15

KSH				PP	PP		
	comp=Z,320nm,4.8s						
KSH				LR	LR		
	comp=E,1µm,24.4s						
BOSA	**Boshof**	**121.24**	**202**	PKP	PKPdf	10 27 21.4	+2.8
	comp=E,11nm,1.1s,baz=163,slow=6.4,SNR=6.0						
FRU	**Bishkek**	**121.40**	**306**	PKIKP	PKPdf	10 27 20.0	+1.5
ZRNK	**Zerenda**	**125.79**	**317**	*e*PKIKP	PKPdf	10 27 26.8	+0.2
ZRNK				*e*		10 27 36.6	
SUMG	**Summit**	**128.78**	**15**	*e*PKPdf	PKPdf	10 27 34.0	+2.1
SUMG				*e*		10 27 44.5	
SVE	**Sverdlovsk**	**130.10**	**323**	*e*PKIKP	PKPdf	10 27 35.9	+1.1
SVE				*e*PPP	PPP	10 32 36.0	-3.8
SVE				pmax	pmax		
	comp=Z,44nm,1.5s						
ARU	**Arti**	**131.31**	**323**	*i* PKIKP	PKPdf	10 27 37.5	+0.4
ARU	**Arti**	**131.31**	**323**	*e*PKPdf	PKPdf	10 27 37.7	+0.6
SOKR	**Solikamsk**	**131.34**	**327**	*c i*PKIKP	PKPdf	10 27 37.0	-0.1
SOKR				pmax	pmax		
	comp=Z,50nm,1.7s						
ARCES	**ARCESS Array B**	**135.39**	**349**	PKP	PKPdf	10 27 47.1	+2.7
	comp=Z,1.9nm,0.7s,baz=333,slow=2.7,SNR=5.1						
APA	**Apatity**	**135.44**	**344**	⇓*i*PKIKP	PKPdf	10 27 48.0	+3.5
APA				*e*SS	SS	10 48 20.0	+3.5
APA				pmax	pmax		
	comp=Z,22nm,1.2s						
MAK	**Makhachkala**	**141.24**	**306**	*e*PKIKP	PKPdf	10 27 56.0	+0.3
KAF	**Kangasniemi**	**141.65**	**343**	*e*pkp	PKPdf	10 27 51.2	-4.6
MOS	**Moscow**	**142.21**	**329**	*e*PKIKP	PKPdf	10 27 57.8	+0.8
MOS				*e*		10 31 12.1	
MOS				*e*		10 35 03.1	
MOS				pmax	pmax		
	comp=Z,66nm,0.6s						
MOS				MLR	MLR		
	comp=Z,2µm,21.9s,MS5.8						
DGRG	**David-gareji**	**143.06**	**304**	P	PKPbc	10 27 57.5	+0.7
OBN	**Obninsk**	**143.06**	**329**	*i* PKIKP	PKPdf	10 27 57.3	-1.1
OBN				*e*		10 28 01.9	
OBN				*e*		10 28 10.8	
OBN				*e*		10 31 16.4	
OBN				pmax	pmax		
	comp=Z,48nm,1.6s						
OBN				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.9						
TI2	**Plekhanov**	**143.47**	**305**	*e*PKHKP		10 27 56.0	
GNI	**Garni**	**143.75**	**302**	⇑*i*PKIKP	PKPdf	10 27 59.4	-0.7
GNI				MLR	MLR		
	comp=Z,200nm,23.0s						
GNI	**Garni**	**143.75**	**302**	*e*PKPdf	PKPdf	10 28 00.3	+0.2
ZEI	**Tsey**	**143.87**	**307**	*e*PKHKP		10 27 55.5	
ZEI				*i*		10 31 16.4	
ONI	**Oni**	**144.24**	**306**	P	PKPbc	10 28 02.0	+1.7
KIV	**Kislovodsk**	**144.43**	**309**	*i* PKIKP	PKPdf	10 28 00.7	-0.5
KIV				pmax	pmax		
	comp=N,8.0nm,1.1s						
KIV				pmax	pmax		
	comp=E,4.0nm,1.1s						
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
CLDR	**Caldiran**	**144.53**	**301**	*e*P	PKPbc	10 28 02.1	+0.9
VSU	**Vasula**	**144.53**	**339**	*c i*PKIKP	PKPdf	10 28 00.0	-0.9
HKR	**Hakkari**	**144.86**	**298**	*e*P	PKPdf	10 28 02.9	+0.7
VANB	**Van**	**145.01**	**300**	*e*P	PKPdf	10 28 03.1	+0.7
NB2	**NORSAR Subarra**	**145.39**	**354**	PKPabc	PKPdf	10 28 03.2	+0.9
	comp=Z,220nm,1.7s,baz=9.0,slow=3.5						
NB2	**NORSAR Subarra**	**145.39**	**354**	PKPa		10 28 03.2	
	baz=8.8,slow=3.6						
NOA	**NORSAR Array B**	**145.39**	**354**	PKPbc	PKPbc	10 28 03.1	+0.3
	comp=Z,38nm,1.1s,baz=9.2,slow=2.4,SNR=30						
NAO01	**NORSAR Array S**	**145.62**	**354**	*e*PKPdf	PKPdf	10 28 03.4	+0.7
BCA	**Borcka**	**145.82**	**305**	*e*P	PKPdf	10 28 06.4	+2.8
SIRT	**Sirnak**	**145.89**	**298**	*e*P	PKPdf	10 28 06.1	+2.2
EZM	**Erzurum**	**146.34**	**302**	*e*P	PKPdf	10 28 08.5	+3.9
SOC	**Sochi**	**146.60**	**309**	*i* PKHKP		10 27 59.4	
SOC				*e*		10 31 37.5	
SOC				*e*		10 44 05.9	
SOC				*e*SSS	SSS	10 55 55.0	-3.8
BEST	**Besiri**	**146.76**	**299**	*i* P	PKPdf	10 28 09.7	+4.3
KONO	**Kongsberg**	**146.91**	**355**	*e*PKIKP	PKPdf	10 28 05.6	+0.7
MNK	**Minsk**	**147.22**	**334**	*e*PKIKP	PKPdf	10 28 07.0	+1.4
GUMT	**Gumushane**	**147.63**	**304**	*e*P	PKPdf	10 28 12.7	+6.0
ANN	**Anapa**	**147.72**	**313**	*i* PKP2	PKPab	10 28 10.0	-3.9
ANN				pmax	pmax		
	comp=Z,130nm,1.6s						
ANN				MLR	MLR		
	comp=N,1µm,24.0s,MS5.6						
ANN				MLR	MLR		
	comp=E,576nm,24.0s,MS5.6						
ANN				MLR	MLR		
	comp=Z,432nm,24.0s,MS5.2						
KELT	**Kelkit**	**147.87**	**304**	*i* P	PKPdf	10 28 13.2	+6.0
PTK	**Pertek**	**148.04**	**301**	*e*P	PKPdf	10 28 11.4	+4.0
URFA	**Urfa**	**148.75**	**299**	*e*P	PKPdf	10 28 14.4	+5.8
MALT	**Malatya**	**148.90**	**300**	*e*P	PKPdf	10 28 13.1	+4.3
MALT	**Malatya**	**148.90**	**300**	*e*PKPdf	PKPdf	10 28 10.7	+1.8
AKASG	**Malin Array Be**	**149.30**	**328**	PKPbc	PKPdf	10 28 13.6	+4.6
	comp=Z,9.9nm,0.9s,baz=34,slow=2.0,SNR=16						
SUW	**Suwalki**	**149.30**	**338**	*e*PKP2	PKPab	10 28 13.9	-6.2
GZT	**Gaziantep**	**149.75**	**299**	*i* P	PKPdf	10 28 12.3	+2.1
SIM	**Simferopol’**	**149.80**	**315**	*i* PKP2	PKPab	10 28 16.4	-6.0
SIM				pmax	pmax		
	comp=Z,39nm,1.3s						
MUD	**Monsted U’grnd**	**150.11**	**354**	⇑*i*P	PKPdf	10 28 16.8	+6.7
	comp=Z,133nm,1.4s						
MUD				*e*		10 28 35.4	
MUD				*e*		10 53 35.4	
	comp=Z,370nm,19.0s						
KAHT	**Ahir Dag**	**150.24**	**300**	*i* P	PKPdf	10 28 18.7	+7.7
COP	**Copenhagen**	**150.47**	**350**	⇑*i*P	PKPdf	10 28 17.3	+6.6
	comp=Z,67nm,1.3s						
	comp=Z,240nm,19.0s						
BSD	**Bornholm Skovb**	**150.58**	**347**	⇓*i*P	PKPdf	10 28 18.0	+7.1
	comp=Z,30nm,1.3s						
BSD				*i*		10 28 28.8	
BOYT	**Boyabat**	**150.67**	**308**	*i* P	PKPdf	10 28 19.6	+8.2
BNN	**Bunyan**	**150.75**	**302**	*e*P	PKPdf	10 28 19.6	+7.9
COBT	**Iskenderun**	**150.93**	**298**	*i* P	PKPdf	10 28 19.1	+7.0
ESK	**Eskdalemuir**	**151.02**	**8**	PKIKP	PKPdf	10 28 12.6	+1.1
ESK				*e*		10 28 18.8	
CEYT	**Ceyhan**	**151.24**	**299**	*e*P	PKPdf	10 28 21.0	+8.5
CORM	**Corum**	**151.27**	**306**	*e*P	PKPdf	10 28 15.0	+2.6
TOS	**Tosya**	**151.43**	**308**	*e*P	PKPdf	10 28 16.0	+3.4
AVNT	**Avonos**	**151.51**	**303**	*i* P	PKPdf	10 28 13.6	+0.8
CDAG	**Cicekdag**	**151.63**	**305**	*i* P	PKPdf	10 28 12.4	-0.6
KIS	**Kishinev**	**151.86**	**322**	*e*PKIKP	PKPdf	10 28 20.0	+6.9
CANT	**Cankiri**	**151.86**	**307**	*e*P	PKPdf	10 28 20.9	+7.6
ELDT	**Eldivan**	**152.04**	**307**	*i* P	PKPdf	10 28 15.3	+1.8
BR131	**Keskin Array S**	**152.14**	**305**	*e*PKPdf	PKPdf	10 28 15.2	+1.5
BR131				*e*PKPbc	PKPdf	10 28 21.4	+7.6
BRTR	**Keskin Array B**	**152.14**	**305**	PKP	PKPdf	10 28 14.8	+1.1
	comp=Z,3.1nm,1.1s,baz=180,slow=2.5,SNR=11						
BRTR				PKPbc	PKPdf	10 28 22.4	+8.7
	comp=Z,11nm,1.1s,baz=153,slow=2.8,SNR=19						
DCN	**Croghan**	**152.19**	**14**	*e*P	PKPdf	10 28 21.7	+8.4
KAMT	**Kaman**	**152.20**	**304**	*e*P	PKPdf	10 28 15.7	+1.9
LVV	**L’vov**	**152.28**	**331**	*e*PKIKP	PKPdf	10 28 22.2	+8.6
SAFT	**Safranbolu**	**152.29**	**309**	*e*P	PKPdf	10 28 21.5	+7.6
DLF	**Lyons Farm**	**152.39**	**14**	*e*P	PKPdf	10 28 22.0	+8.4
EIL	**Elat**	**152.55**	**283**	*e*PKPdf	PKPdf	10 28 17.2	+2.6
EIL				*e*PKPbc	PKPdf	10 28 23.8	+9.2
MEST	**Erdemli**	**152.59**	**298**	*i* P	PKPdf	10 28 23.4	+8.9
ANTO	**Ankara**	**152.71**	**306**	*e*P	PKPdf	10 28 19.6	+5.0
ANTO	**Ankara**	**152.71**	**306**	PKPdf	PKPdf	10 28 15.8	+1.3
KWP	**Kalwaria**	**152.98**	**333**	*e*PKIKP	PKPdf	10 28 24.0	+9.4
KWP				*e*		10 28 33.6	
OJC	**Ojcow**	**153.62**	**337**	*e*PKP	PKPdf	10 28 17.7	+2.3
KDHN	**Kadinhani**	**153.64**	**303**	*i* P	PKPdf	10 28 16.7	+0.8
KOLS	**Kolonicke sedl**	**153.70**	**332**	*e*PKP	PKPdf	10 28 18.2	+2.6
KOLS				*e*		10 28 26.8	
KOLS				*e*		10 28 35.3	
KOLS				*e*		10 28 44.8	
CRVS	**Cervenica-Dubn**	**154.06**	**333**	*e*PKP	PKPdf	10 28 17.4	+1.3
CRVS				*e*		10 28 26.6	
NIE	**Niedzica**	**154.09**	**335**	*e*PKP	PKPdf	10 28 18.8	+2.7
KSP	**Ksiaz**	**154.19**	**342**	*e*PKIKP	PKPdf	10 28 18.0	+1.8
KSP				*e*		10 28 27.3	
KSP				*e*		10 28 36.8	
KSP				*e*SS	SS	10 51 53.0	+2.8
ESKT	**Eskisehir**	**154.23**	**306**	*i* P	PKPdf	10 28 17.9	+1.3
OKC	**Ostrava-Krasne**	**154.51**	**338**	*e*PKPDF	PKPdf	10 28 19.5	+2.8
OKC				⇑*e*PKPB	PKPdf	10 28 27.5	+11
OKC				*e*PKPAB	PKPab	10 28 36.8	-5.2
OKC				AMS	AMS	11 44 40.0	
	comp=Z,400nm,17.8s						
CLL	**Collm**	**154.55**	**347**	⇓*i*PKIKP	PKPdf	10 28 18.6	+1.9
CLL				*i*		10 28 27.2	
CLL				*i*		10 28 38.3	
CLL				MLR	MLR		
	comp=Z,400nm,17.2s,MS5.3						
CLL	**Collm**	**154.55**	**347**	⇓*i*PKIKP	PKPdf	10 28 18.6	+1.9
	comp=Z,logA/T=1.2						
CLL				*i* PKP1	PKPdf	10 28 27.2	+11
CLL				*i* PKP2	PKPab	10 28 38.3	-3.9
CLL				*i*		10 28 57.4	
CLL				*e**SPP		10 32 21.0	
CLL				*e*PPS	PPS	10 45 12.0	-11
CLL				*e*SS	SS	10 51 58.0	+3.8
UPC	**Upice**	**154.56**	**342**	*e*PKPDF	PKPdf	10 28 19.0	+2.3
UPC				⇑*e*PKPB	PKPdf	10 28 27.9	+11
UPC				*e*PKPAB	PKPab	10 28 38.9	-3.3
DPC	**Dobruska-Polom**	**154.62**	**341**	*e*PKIKP	PKPdf	10 28 18.5	+1.7
DPC				*e*		10 28 27.9	
DPC				MLR	MLR		
	comp=Z,300nm,18.8s,MS5.1						
DPC	**Dobruska-Polom**	**154.62**	**341**	*e*PKPDF	PKPdf	10 28 18.5	+1.7
DPC				⇑*e*PKPB	PKPdf	10 28 27.9	+11
DPC				*e*PKPAB	PKPab	10 28 42.9	+0.4
DPC				AMS	AMS	11 49 30.0	
	comp=Z,300nm,18.8s						
MORC	**Moravsky Berou**	**154.75**	**339**	*e*PKIKP	PKPdf	10 28 18.5	+1.5
MORC				*e*		10 28 27.5	
BRG	**Berggiesshubel**	**154.76**	**345**	*i* PKIKP	PKPdf	10 28 19.2	+2.3
BRG				*i*		10 28 27.4	
BRG				*i*		10 28 38.9	
BRG				*i*		10 52 01.0	
BRG	**Berggiesshubel**	**154.76**	**345**	*i* PKP	PKPdf	10 28 19.2	+2.2
BRG				*i*		10 28 27.4	
BRG				*i*		10 28 38.9	
BRG				*i*		10 32 39.0	
BRG				*e*		10 42 45.0	
BRG				*i*		10 52 01.0	
YLV	**Yalova**	**154.86**	**310**	*e*P	PKPdf	10 28 26.6	+9.2
PVCC	**Panska Ves**	**154.93**	**344**	*e*PKPDF	PKPdf	10 28 19.5	+2.3
PVCC				⇑*e*PKPB	PKPdf	10 28 28.4	+11
PVCC				AMS	AMS	11 45 30.0	
	comp=Z,400nm,19.2s						
TKTP	**Tekketepe**	**155.13**	**303**	*i* P	PKPdf	10 28 19.3	+1.5
ULDT	**Uludag**	**155.20**	**309**	*i* P	PKPdf	10 28 19.6	+1.8
GDZ	**Gediz**	**155.38**	**306**	*i* P	PKPdf	10 28 17.3	-0.8
VYHS	**Vyhne**	**155.40**	**336**	*e*PKP	PKPdf	10 28 19.1	+1.2
VYHS				*e*		10 28 28.6	
VYHS				*e*		10 28 43.5	
VYHS				*e*		10 28 50.4	
PRU	**Pruhonice**	**155.43**	**343**	*e*PKPDF	PKPdf	10 28 19.6	+1.8
PRU				⇑*e*PKPB	PKPdf	10 28 29.9	+12
PRU				*e*PKPAB	PKPab	10 28 45.4	-0.5
PRU				AMS	AMS	11 44 10.0	
	comp=Z,400nm,19.0s						
MOX	**Moxa**	**155.46**	**348**	*e*PKIKP	PKPdf	10 28 19.3	+1.4
MOX				MLR	MLR		
	comp=Z,400nm,20.0s,MS5.2						
MOX	**Moxa**	**155.46**	**348**	*i* P	PKPdf	10 28 19.3	+1.4
MOX				LR	LR	11 22 39.0	
MOX				L		11 43 30.0	
PSZ	**Piszkesteto**	**155.47**	**334**	⇑*e*PKP/F	PKPdf	10 28 19.5	+1.5
NKC	**Novy Kostel**	**155.69**	**347**	*e*PKPDF	PKPdf	10 28 20.3	+2.1
NKC				*e*PKPAB	PKPab	10 28 46.1	-0.9
NKC				AMS	AMS	11 50 20.0	
	comp=Z,500nm,15.6s						
ZST	**Bratislava**	**156.27**	**338**	*e*PKP	PKPdf	10 28 21.1	+2.1
ZST				*e*		10 28 32.5	
GRA1	**Grafenberg Arr**	**156.44**	**348**	*e*PKP	PKPdf	10 28 21.1	+1.9
GRF	**Grafenberg Arr**	**156.44**	**348**	*e*PKIKP	PKPdf	10 28 21.1	+1.9
KHC	**Kasperske Hory**	**156.46**	**344**	*e*PKIKP	PKPdf	10 28 21.2	+2.0
KHC				*e*		10 28 31.7	
KHC				*e*		10 28 37.0	
KHC				MLR	MLR		
	comp=Z,600nm,18.4s,MS5.5						
KHC	**Kasperske Hory**	**156.46**	**344**	*e*PKPDF	PKPdf	10 28 21.2	+2.0
KHC				*e*x	x	10 28 31.7	
KHC				x	x	10 28 37.0	
KHC				*e*PKPAB	PKPab	10 28 49.7	-0.7
KHC				AMS	AMS	11 46 10.0	
	comp=Z,600nm,18.4s						
FETY	**Fethiye**	**156.51**	**301**	*e*P	PKPab	10 28 48.0	-3.1
CANB	**Canakkale**	**156.69**	**310**	*e*P	PKPab	10 28 50.7	-1.0
GERES	**GERESS Array B**	**156.70**	**344**	PKP	PKPdf	10 28 21.3	+1.7
	comp=Z,0.2nm,0.3s,SNR=8.4						
GERES				PKPbc	PKPdf	10 28 36.9	+17
	comp=Z,26nm,0.7s,baz=282,slow=37,SNR=85						
GERES				PKPab	PKPab	10 28 50.1	-1.3
	comp=Z,1.6nm,0.8s,baz=63,slow=3.0,SNR=6.3						
GIVF	**Givet**	**156.70**	**359**	*e*PKIKP	PKPdf	10 28 20.9	+1.3
	comp=Z,154nm,1.8s						
WLF	**Walferdange**	**157.09**	**356**	*e*PKPdf	PKPdf	10 28 22.1	+2.0
WLF				*e*PKPbc	PKPdf	10 28 33.6	+14
WLF				*e*PKPab	PKPab	10 28 50.7	-2.3
FLN	**La Foliniere**	**157.79**	**8**	*e*PKIKP	PKPdf	10 28 22.4	+1.3
FLN				*e*R			
	comp=Z,604nm,18.8s						
SGMF	**Saint Gilles**	**157.97**	**12**	*e*PKIKP	PKPdf	10 28 22.3	+1.0
LDF	**La Druitiere**	**158.00**	**7**	*e*PKIKP	PKPdf	10 28 22.5	+1.2
	comp=Z,55nm,1.6s						
GRR	**Gorron**	**158.11**	**9**	*e*PKIKP	PKPdf	10 28 22.8	+1.3
	comp=Z,51nm,1.7s						
QUIF	**Quistinic**	**158.18**	**13**	*e*PKIKP	PKPdf	10 28 22.8	+1.2
	comp=Z,65nm,1.6s						
CDF	**Champ du Feu**	**158.25**	**354**	*e*PKIKP	PKPdf	10 28 22.7	+1.1
PERS	**Pernice**	**158.29**	**339**	*e*PKPdf	PKPdf	10 28 22.4	+0.7
MEZF	**Maizieres J’vi**	**158.30**	**358**	*e*PKIKP	PKPdf	10 28 23.3	+1.6
DBIC	**Dimbokro**	**158.32**	**156**	PKP2	PKPab	10 28 58.9	-0.6
DBIC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DBIC	**Dimbokro**	**158.32**	**156**	PKPab	PKPab	10 28 58.9	-0.6
	comp=Z,10nm,1.1s,baz=174,slow=5.4,SNR=4.5						
HAU	**Haudompre**	**158.73**	**356**	*e*PKIKP	PKPdf	10 28 23.4	+1.2
HAU				*e*R			
	comp=Z,570nm,17.6s						
LEGS	**Legarje**	**158.83**	**338**	*e*PKPdf	PKPdf	10 28 23.5	+1.1
LEGS				*e*PKPab	PKPab	10 28 59.8	-0.9
LEGS				*e*		10 32 49.5	
SISC	**Sisak**	**158.86**	**335**	*i* PKP	PKPdf	10 28 23.6	+1.2
HINF	**Hinteralfeld**	**158.88**	**355**	*e*PKIKP	PKPdf	10 28 23.6	+1.2
VAY	**Valandovo**	**158.88**	**318**	*e*PKP	PKPab	10 29 00.6	-0.4
LJU	**Ljubljana**	**159.00**	**339**	*e*PKPdf	PKPdf	10 28 24.2	+1.6
CADS	**Cadrg**	**159.08**	**341**	*e*PKPdf	PKPdf	10 28 23.4	+0.7
CADS				*e*PKPab	PKPab	10 29 00.3	-1.4
HYF	**Humbligny**	**159.53**	**3**	*e*PKIKP	PKPdf	10 28 24.9	+1.7
LOR	**Lormes**	**159.55**	**0**	*e*PKIKP	PKPdf	10 28 24.7	+1.5
	comp=Z,66nm,1.6s						
LOR				*e*R			
	comp=Z,498nm,19.0s						
MFF	**Saint Martin d**	**159.96**	**8**	*e*PKIKP	PKPdf	10 28 24.9	+1.3
	comp=Z,51nm,1.5s						
AVF	**Avril sur Loir**	**160.02**	**1**	*e*PKIKP	PKPdf	10 28 24.8	+1.1
	comp=Z,29nm,1.4s						
CABF	**La Chapelle**	**160.13**	**356**	*e*PKIKP	PKPdf	10 28 25.8	+2.0
	comp=Z,79nm,1.6s						
SMF	**Signal de Mont**	**160.17**	**0**	*e*PKIKP	PKPdf	10 28 25.1	+1.2
	comp=Z,32nm,1.4s						
BGF	**Bois d’Agland**	**160.24**	**2**	*e*PKIKP	PKPdf	10 28 25.4	+1.4
	comp=Z,64nm,1.6s						
TCF	**Toulx Ste Croi**	**160.48**	**4**	*e*PKIKP	PKPdf	10 28 25.5	+1.3
	comp=Z,43nm,1.6s						
LPL	**La Plagne**	**161.17**	**354**	*e*PKIKP	PKPdf	10 28 27.1	+2.2
LPG	**La Plagne**	**161.19**	**354**	*e*PKIKP	PKPdf	10 28 27.2	+2.3
RJF	**Les Rejaudoux**	**161.41**	**5**	*e*PKIKP	PKPdf	10 28 26.8	+1.6
	comp=Z,26nm,1.2s						
RJF				*e*R			
	comp=Z,679nm,17.0s						
BNI	**Bardonecchia**	**161.63**	**354**	*e*PKIKP	PKPdf	10 28 28.0	+2.6
LFF	**La Frestale**	**161.70**	**7**	*e*PKIKP	PKPdf	10 28 27.2	+1.7
CAF	**Calviac**	**161.83**	**4**	*e*PKIKP	PKPdf	10 28 27.5	+1.9
ORIF	**Oris-en-Rattie**	**161.83**	**356**	*e*PKIKP	PKPdf	10 28 27.5	+1.9
	comp=Z,45nm,1.7s						
ORIF				*e*R			
	comp=Z,597nm,18.2s						
MBDF	**Montbardon**	**161.95**	**353**	*e*PKIKP	PKPdf	10 28 27.5	+1.8
	comp=Z,46nm,1.6s						
VIVF	**Saint-Julien-l**	**161.95**	**358**	*e*PKIKP	PKPdf	10 28 27.6	+1.9
	comp=Z,41nm,1.5s						
SBF	**Sospel**	**162.72**	**351**	*e*PKIKP	PKPdf	10 28 27.7	+1.2
	comp=Z,58nm,1.5s						
LASF	**Ste Croix**	**162.74**	**0**	*e*PKIKP	PKPdf	10 28 28.5	+2.0
	comp=Z,40nm,1.5s						
SMRF	**Simiane la Rot**	**162.79**	**356**	*e*PKIKP	PKPdf	10 28 28.7	+2.1
	comp=Z,57nm,1.6s						
FRF	**La Foret Royal**	**163.11**	**353**	*e*PKIKP	PKPdf	10 28 28.2	+1.3
	comp=Z,49nm,1.5s						
SJPF	**Ste Jean**	**163.17**	**13**	*e*PKIKP	PKPdf	10 28 27.7	+0.7
LMR	**La Mourre**	**163.35**	**353**	*e*PKIKP	PKPdf	10 28 28.5	+1.3
	comp=Z,53nm,1.6s						
MTE	**Manteigas**	**163.41**	**32**	*e*PKPdf	PKPdf	10 28 29.8	+2.5
MTE	**Manteigas**	**163.41**	**32**	*e*PP	PP	10 33 04.1	-2.9
MTLF	**Montolieu**	**163.42**	**4**	*e*PKIKP	PKPdf	10 28 28.9	+1.7
ETSF	**Etsaut**	**163.51**	**12**	*e*PKIKP	PKPdf	10 28 28.0	+0.7
EPF	**Esparros**	**163.53**	**9**	*e*PKIKP	PKPdf	10 28 29.4	+2.1
TIP	**Timpagrande**	**163.63**	**322**	*e*PKPdf	PKPdf	10 28 28.8	+1.2
PGF	**Pioggiola**	**163.73**	**347**	*e*PKIKP	PKPdf	10 28 28.7	+1.1
	comp=Z,55nm,1.5s						
PCBR	**Castelo Branco**	**163.88**	**33**	*e*PKPdf	PKPdf	10 28 30.3	+2.5
EVO	**Evora**	**164.58**	**38**	*e*PKIKP	PKPdf	10 28 30.7	+2.2
	comp=Z,69nm,1.5s						
EVO				*e*R			
	comp=Z,709nm,17.8s						
ESDC	**Sonseca Array**	**165.56**	**25**	PKP	PKPdf	10 28 31.9	+2.4
	comp=Z,0.5nm,0.4s,baz=16,slow=4.1,SNR=7.2						
ESDC				PKPab	PKPab	10 29 29.6	-0.5
	comp=Z,0.5nm,0.3s,baz=323,slow=3.3,SNR=11						
ABA	**Alger-Bouzarea**	**169.98**	**4**	P	PKPdf	10 28 36.0	+3.6
EANR	**’Ain N’Sour**	**170.55**	**14**	P	PKPdf	10 28 36.0	+3.2
EMHD	**Djebel Mahouad**	**170.57**	**5**	P	PKPdf	10 28 38.0	+5.2
ETRT	**Tiaret**	**171.13**	**14**	P	PKPdf	10 28 37.0	+3.9

MAN 23 10:19:39.5, 9.03N×126.05E, h24^{km}, mb4.7, ML3.6, MS3.6, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.43**	**262**	*e*P	Pb	10 19 50.4	+2.0
BUTP				*e*S	Sb	10 20 00.7	+6.3
SCPH	**Surigao**	**0.93**	**324**	⇑*e*P	Pb	10 19 55.8	-1.0
SCPH				*e*S	Sb	10 20 10.6	+1.8
CGP	**Cagayan de Oro**	**1.46**	**247**	⇑*e*P	Pn	10 20 03.3	-1.3
CGP				*e*S	Sn	10 20 23.5	+0.4
BUKP	**Musuan**	**1.50**	**221**	*e*P	Pn	10 20 04.5	-0.7
BUKP				*e*S	Sn	10 20 25.9	+1.7
MSLP	**Maasin**	**1.61**	**313**	*e*P	Pn	10 20 05.6	-1.2
TBP	**Tagbilaran**	**2.26**	**287**	*e*P	Pn	10 20 15.5	-0.6
TBP				*e*S	Sn	10 20 42.9	-0.5
PLP	**Palo**	**2.37**	**334**	*e*P	Pn	10 20 17.1	-0.6
PLP				*e*S	Sn	10 20 46.6	+0.3
BESP	**Borongan**	**2.63**	**347**	*e*P	Pn	10 20 21.4	+0.1
BESP				*e*S	Sn	10 20 53.3	+0.4
SNPH	**Sibulan**	**2.79**	**277**	⇓*e*P	Pn	10 20 23.2	-0.5
SNPH				*e*S	Sn	10 20 57.2	+0.1
CNP	**Catarman**	**3.72**	**339**	*e*P	Pn	10 20 34.5	-2.3
GUIM	**Jordan**	**3.76**	**295**	*e*P	Pn	10 20 30.9	-6.6

JMA 23 10:26:13.8±0.2**, 25.07N×123.17E, h142^{km}±3^{km}, M3.6, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.62**	**193**	P	P	10 26 35.0	-0.4
YOJ				S	S	10 26 51.8	-0.2
IRIF	**Iriomote-Funau**	**0.89**	**145**	P	P	10 26 36.8	-0.4
IRIF				*e*S	S	10 26 54.6	-0.5
JKRS	**Kuro-shima**	**1.13**	**137**	P	P	10 26 39.4	+0.2
JKRS				S	S	10 26 58.8	0.0
JIJ	**Ishigaki jima**	**1.13**	**128**	P	P	10 26 39.0	-0.3
JIJ				S	S	10 26 57.9	-0.9
HATJ	**Hateruma jima**	**1.16**	**150**	P	P	10 26 39.6	0.0
HATJ				*e*S	S	10 26 59.2	-0.2
JTJ	**Tarama**	**1.46**	**107**	P	P	10 26 42.7	0.0
JTJ				*e*S	S	10 27 04.5	-0.3
JMJ	**Miyako jima 2**	**1.94**	**97**	P	P	10 26 48.3	+0.2
JMJ				*e*S	S	10 27 13.4	-1.1
JOGS	**Gusukube**	**2.05**	**98**	P	P	10 26 49.7	+0.2
JOGS				*e*S	S	10 27 16.4	-0.4
JKE	**Kume jima 2**	**3.49**	**68**	P	P	10 27 05.8	-2.3
JKE				*e*S	S	10 27 47.4	-2.2
JAGN	**Aguni-jima**	**3.97**	**67**	P	P	10 27 11.6	-2.7
JJT2	**Tamagusuku 2**	**4.27**	**75**	P	P	10 27 16.7	-1.6
JIH	**Iheya**	**4.74**	**65**	P	P	10 27 21.4	-3.1
JOW	**Kunigami**	**4.92**	**68**	P	P	10 27 23.3	-3.6
JTK	**Tokunoshima**	**5.84**	**61**	P	P	10 27 35.3	-4.0
JAM	**Amami Oshima**	**6.65**	**59**	P	P	10 27 45.1	-5.0
JMZ	**Minamidaito 2**	**7.32**	**82**	P	P	10 27 54.3	-4.8
JMZ				*e*S	S	10 29 10.5	-11

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*NEIC **23** 10:43:16.2, 16.77N×94.87W, h109^{km}, MD3.6(MEX), After MEX.*

MEX 23 10:43:16.4±0.8**, 16.75N×94.87W, h107**^{km}±10^{km}**, MD3.6, 2D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.34**	**357**	⇓*i*P	P	10 43 30.6	-1.5
CMIG				*i* S	S	10 43 41.8	-2.0
HUIG	**Huatulco**	**1.54**	**231**	*i* P	P	10 43 41.7	-2.3
HUIG				*i* S	S	10 44 03.5	-1.1
OXX	**Oaxaca**	**1.81**	**281**	*e*P	P	10 43 46.5	-0.8
OXX				*i* S	S	10 44 08.0	-2.3
VHO	**Vista Hermosa**	**1.81**	**280**	⇓*i*P	P	10 43 46.2	-1.1
VHO				*i* S	S	10 44 08.2	-2.2
CCIG	**Comitan**	**2.66**	**100**	*i* P	P	10 43 57.7	-1.0
CCIG				*i* S	S	10 44 28.6	-1.9

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*NEIC **23** 10:46:36.8±0.8, 10.38S×161.24E, h40^{km}±7^{km}, mb4.8/19, Error ellipse: s-maj=6.8km s-min=5.9km az=71.0*

*IDC **23** 10:46:39.4±2.3, 10.39S×161.33E, h64^{km}±19^{km}, mb4.2/13, mb1 4.4/14, mb1mx4.4/17, mbtmp4.5/14, MS4.3/3, Ms1 4.3/3, ms1mx3.7/27, Error ellipse: s-maj=18.6km s-min=15.2km az=86.0*

ISC 23 10:46:36.8±1.6**, 10.42S**±0.06×**161.25E**±0.08**, h58**^{km}±13^{km}**, n52,** σ0^{s}.86/54**, mb4.7**/29**, MS4.7**/2**, 3C-2D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.62**	**307**	P	**P**	**10 47 04.5**	**+1.0**
	278nm,0.3s,baz=208,slow=0.9,SNR=41						
HNR				S	**S**	**10 47 27.0**	**+3.7**
	969nm,0.3s,baz=357,slow=22,SNR=21						
HNR				LR	LR	10 47 54.5	
	comp=Z,4µm,18.5s,baz=146,slow=45						
HNR	**Honiara**	**1.62**	**307**	*e*Pn	**P**	**10 47 03.8**	**+0.2**
HNR				*e*Sn	**S**	**10 47 28.1**	**+4.7**
DZM	**Mont Dzumac**	**12.61**	**157**	*e*P	**P**	**10 49 34.8**	**-0.8**
DZM	**Mont Dzumac**	**12.61**	**157**	P	**P**	**10 49 32.4**	**-3.2**
	0.7nm,0.3s,baz=313,slow=5.7,SNR=54						
DZM				S	**S**	**10 51 50.2**	**-5.0**
	0.3nm,0.3s,baz=221,slow=19,SNR=5.2						
PMG	**Port Moresby**	**13.92**	**273**	P	**P**	**10 49 49.3**	**-3.6**
	0.3nm,0.3s,baz=90,slow=14,SNR=1.9						
PMG				LR	LR	10 54 00.1	
	comp=Z,316nm,21.2s,baz=128,slow=32						
PMG	**Port Moresby**	**13.92**	**273**	*e*P	**P**	**10 49 49.4**	**-3.4**
	13nm,0.8s						
CTA	**Charters Tower**	**17.36**	**235**	*e*P	**P**	**10 50 41.8**	**+5.1**
	20nm,0.9s						
CTA	**Charters Tower**	**17.36**	**235**	P	**P**	**10 50 39.9**	**+3.2**
	1.1nm,0.3s,baz=63,slow=14,SNR=21						
CTAO	**Charters Tower**	**17.36**	**235**	*e*P	**P**	**10 50 36.5**	**-0.2**
	38nm,0.9s						
AFI	**Afiamalu**	**26.59**	**100**	P	**P**	**10 52 11.3**	**-0.4**
	33nm,0.8s,mb4.9,baz=307,slow=10,SNR=6.0						
WRAB	**Tennant Creek**	**27.59**	**247**	*e*P	**P**	**10 52 20.7**	**-0.3**
	18nm,1.0s,mb4.7						
WB2	**Warramunga Arr**	**27.60**	**247**	⇓*i*P	**P**	**10 52 21.1**	**+0.1**
WRA	**Warramunga Arr**	**27.61**	**247**	P	**P**	**10 52 21.0**	**-0.1**
	4.0nm,0.8s,mb4.1,baz=76,slow=8.9,SNR=29						
WRA				PcP	PcP	10 55 36.9	-0.8
	1.2nm,0.9s,baz=85,slow=2.6,SNR=5.1						
STKA	**Stephens Creek**	**28.05**	**217**	P	**P**	**10 52 25.1**	**+0.1**
	2.0nm,0.6s,mb3.9,baz=19,slow=13,SNR=5.4						
STKA	**Stephens Creek**	**28.05**	**217**	*e*P	**P**	**10 52 24.7**	**-0.3**
KAKA	**Kakadu**	**28.31**	**263**	*e*P	**P**	**10 52 27.1**	**-0.3**
	9.0nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**35.30**	**253**	⇓*i*P	**P**	**10 53 28.4**	**-0.1**
	17nm,0.6s,mb5.2						
MBWA	**Marble Bar**	**41.24**	**250**	*e*P	**P**	**10 54 17.9**	**-0.1**
	8.3nm,0.7s,mb4.5						
NWAO	**Narrogin (SRO)**	**46.20**	**234**	P	**P**	**10 54 58.5**	**+0.5**

	44nm,1.3s,mb5.2						
KKM	Kota Kinabalu	47.73	288	eP	P	10 55 09.9	-0.4
JHJ	Hachijo jima 2	47.89	336	LR	LR	11 11 08.6	
	comp=Z,1μm,21.6s,MS4.9,baz=90,slow=31						
MJAR	Matsushiro Arr	51.50	336	P	P	10 55 37.9	-1.0
	4.3nm,0.7s,mb4.5,baz=171,slow=9.4,SNR=12						
MAJO	Matsushiro	51.50	336	eP	P	10 55 37.4	-1.5
	8.4nm,0.8s,mb4.7						
KS15	Wonju Array Si	56.96	329	P	P	10 56 18.7	-0.2
YSS	Yuzh-Sakhalins	59.46	345	P	P	10 56 36.0	0.0
	52nm,1.3s,mb5.4						
MDJ	Mudanjiang	61.82	335	eP	P	10 56 52.5	+0.3
	8.0nm,0.9s,mb4.8						
KULM	Kulim	62.33	282	P	P	10 56 55.5	-0.5
VNDA	Vanda	67.09	180	P	P	10 57 26.1	+0.2
	4.6nm,0.8s,mb4.6,baz=349,slow=6.4,SNR=30						
VNDA	Vanda	67.09	180	eP	P	10 57 25.9	0.0
	5.3nm,0.9s,mb4.6						
SBA	Scott Base	67.48	179	eP	P	10 57 28.8	+0.5
	12nm,1.1s,mb4.8						
CM31	Chiang Mai Arr	67.83	295	eP	P	10 57 31.6	+0.2
	9.8nm,1.0s,mb4.8						
CMAR	Chiang Mai Arr	67.83	295	P	P	10 57 31.9	+0.5
	2.4nm,0.8s,mb4.3,baz=113,slow=5.3,SNR=11						
HIA	Hailar	69.71	332	eP	P	10 57 41.9	-0.6
	17nm,1.2s,mb4.8						
ULN	Ulaanbaatar	75.25	326	eP	P	10 58 16.0	+0.8
	8.7nm,0.8s,mb4.7						
SONM	Songino Array	75.59	325	P	P	10 58 18.1	+0.9
	5.5nm,0.6s,mb4.6,baz=142,slow=5.7,SNR=54						
YAK	Yakutsk	76.31	345	eP	P	10 58 20.8	-0.2
	22nm,0.6s,mb5.3						
BILL	Bilibino	78.34	2	eP	P	10 58 32.1	-0.1
	6.9nm,0.9s,mb4.6						
QSPA	South Pole Qui	79.58	180	⇑iP	P	10 58 39.6	+0.8
	15nm,0.9s,mb4.9						
PALK	Pallekele	82.09	279	P	P	10 58 49.9	-3.3
	14nm,1.0s,mb4.8						
MAW	Mawson	83.63	202	P	P	10 59 01.3	+1.3
	14nm,0.8s,mb5.1,baz=92,slow=6.1,SNR=18						
MAW				LR	LR	11 31 10.5	
	comp=Z,200nm,18.3s,MS4.5,baz=250,slow=32						
ILAR	Eielson Array	84.37	20	P	P	10 59 04.2	+0.5
	2.3nm,0.9s,mb4.3,baz=236,slow=6.5,SNR=18						
NVAR	Mina Array Bea	89.02	51	P	P	10 59 27.7	+0.7
	1.6nm,0.8s,mb4.4,baz=228,slow=4.5,SNR=10						
MKAR	Makanchi Array	90.06	318	P	P	10 59 31.7	+0.1
	1.3nm,0.6s,mb4.5,baz=98,slow=5.9,SNR=20						
PDAR	Pinedale Array	96.39	48	P	P	11 00 01.7	+1.0
	0.5nm,0.7s,mb4.0,baz=194,slow=3.7,SNR=3.4						
YKA	Yellowknife Ar	96.46	28	P	P	11 00 00.7	+0.1
	1.0nm,0.7s,mb4.3,baz=254,slow=4.8,SNR=6.6						
YKA	Yellowknife Ar	96.46	28	P	P	11 00 00.7	+0.1
VNA3	Neumayer Olymp	98.30	183	e	P	11 00 17.3	+8.5
VNA3	Neumayer Olymp	98.30	183	⇑iP	P	11 00 12.8	+4.0
VNA3				e		11 00 17.3	
VNA3				e		11 00 47.7	
VNA2	Neumayer--Watz	98.48	184	⇑i	P	11 00 01.6	-8.0
VNA2	Neumayer--Watz	98.48	184	e	P	11 00 05.9	-3.7
VNA2	Neumayer--Watz	98.48	184	e	P	11 00 27.9	+18
BRVK	Borovoye	98.82	322	eP	P	11 00 08.7	-2.8

IDC 23 10:49:05.0±1.1**,26.49S**×**176.19W,mb3.8**/3**,mb1 4.3**/4**, mb1mx4.0**/14**,mbtmp4.0**/4**,ML4.9**/1**,Error ellipse: s-maj=53.2km s-min=24.4km az=135.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.15	209	Pn	Pn	10 49 56.2	-0.6
	150nm,0.3s,baz=270,slow=22,SNR=6.4						
RAO				Sn	Sn	10 50 34.6	-1.0
	121nm,0.3s,baz=82,slow=22,SNR=8.3						
URZ	Urewera	13.02	204	Sn	S	10 54 25.1	-16
	0.5nm,0.3s,baz=165,slow=18,SNR=5.1						
TBI	Tubuai	24.43	88	eLQ		10 58 41.0	
	346nm,27.2s						
TBI				eLR	LR	10 59 48.9	
	403nm,30.8s,baz=256						
PPT	Papeete	26.18	76	eLQ		10 59 27.6	
	444nm,23.2s						
PPT				eLR	LR	11 00 39.4	
	279nm,26.5s,baz=211						
RKT	Rikitea	37.45	94	eLQ		11 04 38.0	
	1μm,37.2s						
RKT				eLR	LR	11 05 40.9	
	225nm,28.8s						
TAOE	Nuku Hiva Isla	38.38	69	eS	tx	11 01 04.0	
	297nm,19.9s						
TAOE				eLR	LR	11 07 02.5	
	2μm,33.4s						
WRA	Warramunga Arr	45.71	267	P	P	10 57 27.6	-2.2
	2.0nm,0.7s,baz=105,slow=7.5,SNR=5.4						
NVAR	Mina Array Bea	84.29	42	P	P	11 01 40.3	+0.2
	0.4nm,0.8s,baz=221,slow=8.3,SNR=3.4						
TXAR	Lajitas Array	88.92	56	P	P	11 01 59.9	-3.1
	0.3nm,0.8s,baz=211,slow=5.3,SNR=2.6						
NB2	NORSAR Subarra	145.09	354	PKPabc	PKPdf	11 08 43.4	-2.2
	6.1nm,1.0s,baz=9.0,slow=3.3						
NOA	NORSAR Array B	145.09	354	PKPbc	PKPbc	11 08 43.7	-0.3
	2.2nm,0.8s,baz=9.2,slow=2.4,SNR=5.6						
AKASG	Malin Array Be	149.00	328	PKPbc	PKPdf	11 08 54.0	+1.6
	0.6nm,0.4s,baz=41,slow=2.9,SNR=4.4						

IDC 23 10:51:34.6±6.8**,35.56S**×**79.59E,mb4.1**/4**,mb1 4.3**/4**, mb1mx4.0**/13**,mbtmp4.1**/4**,MS4.5**/8**,Ms1 4.5**/8**, ms1mx4.2**/22**,Error ellipse: s-maj=222.8km s-min=36.6km az=41.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	31.11	96	LR	LR	11 07 45.7	
	comp=Z,781nm,20.9s,baz=240,slow=31						
FITZ	Fitzroy Crossi	44.19	79	LR	LR	11 17 06.8	
	comp=Z,585nm,19.4s,baz=276,slow=35						
BOSA	Boshof	46.07	263	LR	LR	11 14 16.5	
	comp=Z,558nm,18.5s,baz=142,slow=30						
LBTB	Lobatse	47.29	267	LR	LR	11 16 57.2	
	comp=Z,686nm,18.3s,baz=149,slow=32						
WRA	Warramunga Arr	50.28	87	P	P	11 00 32.5	-2.5
	4.7nm,0.9s,baz=240,slow=7.1,SNR=11						
STKA	Stephens Creek	50.96	105	P	P	11 00 38.2	-1.7
	3.5nm,0.9s,baz=278,slow=5.6,SNR=4.8						
CTA	Charters Tower	59.92	94	LR	LR	11 24 46.4	
	comp=Z,670nm,19.9s,baz=238,slow=33						
PMG	Port Moresby	66.36	85	LR	LR	11 28 50.5	
	comp=Z,421nm,18.6s,baz=51,slow=34						
JOW	Kunigami	77.22	43	LR	LR	11 31 52.1	
	comp=Z,196nm,20.1s,baz=289,slow=31						
MKAR	Makanchi Array	82.01	2	P	P	11 03 55.5	-2.2
	1.9nm,0.9s,baz=169,slow=6.2,SNR=10						
MKAR				LR	LR	11 38 20.4	
	comp=Z,201nm,18.4s,baz=181,slow=34						
SONM	Songino Array	86.41	18	P	P	11 04 19.8	0.0
	0.3nm,0.6s,baz=214,slow=5.2,SNR=3.7						

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*JMA **23** 10:55:23.6±0.2,45.45N×142.82E,h295^{km}±2^{km},M2.9*
*SKHL **23** 10:55:23.0±0.5,45.56N×142.64E,h310^{km}±15^{km},mb4.6/1, msh4.7/1*
*IDC **23** 10:55:23.6±1.4,45.42N×142.95E,h302^{km}±26^{km},mb2.9/3, mb1 3.1/4,mb1mx2.8/20,mbtmp3.5/4,Error ellipse: s-maj=49.5km s-min=23.7km az=158.0*
ISC 23 10:55:22.0±0.6**,45.53N**±0.04×**142.9E**±0.1**,h298**^{km}±5^{km}**, n22,**σ**1**^{s}**10**/34**,mb3.1**/3**,1D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	0.61	201	P	P	10 56 01.5	+0.6
JSE				eS	S	10 56 31.3	-0.1
JWK2	Keihoku	0.73	253	P	P	10 56 02.3	+1.0
JWK2				eS	S	10 56 32.1	0.0
YSS	Yuzh-Sakhalins	1.42	356	⇓iP	P	10 56 06.0	+1.2
YSS				AMB	AMB	10 56 06.2	
	60nm,0.2s						
YSS				i S	S	10 56 38.1	-0.1
YSS				A		10 56 39.0	
	90nm,0.9s						
ASAJ	Asahikawa	1.43	188	P	P	10 56 05.8	+1.0
	2.2nm,0.3s,baz=37,slow=5.7,SNR=11						
ASAJ	Asahikawa	1.43	188	P	P	10 56 05.8	+1.0
JMP	Maruseppu	1.56	167	P	P	10 56 06.4	+0.7
JMP				eS	S	10 56 39.8	0.0
JKK2	Kamakawa 2	1.66	184	P	P	10 56 07.4	+1.0
JTKR	Abashiri--Toko	1.72	155	P	P	10 56 07.8	+1.0
JTKR				eS	S	10 56 42.3	+0.5
JRA	Rausu	2.25	134	P	P	10 56 12.5	+1.5
JAR	Ashorobuto	2.32	164	P	P	10 56 12.5	+0.9
JAR				eS	S	10 56 51.8	+1.4
JAK	Akkeshi	2.85	152	P	P	10 56 16.8	+0.3
JAK				eS	S	10 56 57.8	-1.3
JEW	Eniwo	2.88	202	P	P	10 56 17.7	+0.8
JCH	Churui	2.94	173	P	P	10 56 16.3	-1.1
JCH				eS	S	10 56 56.7	-3.9
NEM2	Nemuro 2	2.98	136	P	P	10 56 16.8	-1.0
NEM2				eS	S	10 56 58.3	-3.0
JNBK	Urakawa-nobuka	3.25	182	P	P	10 56 20.3	-0.3
JNBK				eS	S	10 57 05.3	-1.1
JKB	Kayabe	3.88	201	P	P	10 56 26.4	-0.9
JKB				eS	S	10 57 15.5	-2.9
TYV	Tymovskoe	5.33	358	eP	P	10 56 42.0	-1.9
TYV				eS	S	10 57 47.0	-1.1
MJAR	Matsushiro Arr	9.65	203	P	P	10 57 36.5	-0.1
	0.9nm,0.3s,baz=4.1,slow=11,SNR=8.0						
EKMR	Ekimchan	9.94	323	eP	P	10 57 38.0	-2.1
SONM	Songino Array	25.00	289	P	P	11 00 21.3	+0.9
	1.3nm,0.4s,mb3.7,baz=82,slow=8.9,SNR=7.2						
MKAR	Makanchi Array	41.07	294	P	P	11 02 38.6	+0.5
	0.2nm,0.4s,mb2.7,baz=87,slow=11,SNR=3.2						
ILAR	Eielson Array	41.88	37	P	P	11 02 44.9	+0.5
	0.4nm,0.6s,mb2.8,baz=276,slow=9.9,SNR=5.9						

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*IDC **23** 11:06:14.4±1.8,7.98N×93.95E,mb3.7/3,mb1 3.9/4, mb1mx3.6/17,mbtmp3.7/4,ML4.0/1,Error ellipse: s-maj=65.7km s-min=27.0km az=57.0*
*NEIC **23** 11:06:17.3±0.9,7.95N×93.76E,h35^{km},mb4.3/7,Error ellipse: s-maj=24.4km s-min=8.4km az=50.0*
ISC 23 11:06:15.6±1.1**,8.0N**±0.1×**93.9E**±0.2**,h33**^{km}**,n14,** σ**0**^{s}**84**/14**,mb4.3**/10**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	7.25	111	Pn	Pn	11 08 01.8	-0.2
CMAR	Chiang Mai Arr	11.50	25	Pn	P	11 09 00.8	+0.3
	0.3nm,0.3s,baz=214,slow=14,SNR=6.9						
PKI	Pulchoki	21.05	339	eP	P	11 10 58.3	-0.9
	11nm,0.6s,mb4.4						
DMN	Daman	21.19	338	eP	P	11 11 00.2	-0.4
	9.5nm,0.4s,mb4.5						
GUN	Gumba	21.19	340	eP	P	11 10 59.9	-0.7
	16nm,0.6s,mb4.5						
KKN	Kakani	21.29	339	eP	P	11 11 01.7	+0.1
	9.5nm,0.4s,mb4.5						
GKN	Gorkha	21.72	337	eP	P	11 11 05.7	-0.2
	15nm,0.6s,mb4.6						
LSA	Lhasa	21.73	354	P	P	11 11 05.8	-0.3
KOLN	Koldanda	21.93	335	eP	P	11 11 08.5	+0.5
	10nm,0.7s,mb4.4						
MKAR	Makanchi Array	39.90	348	P	P	11 13 49.5	+1.4
	0.4nm,0.7s,mb3.3,baz=170,slow=8.8,SNR=3.2						
WRA	Warramunga Arr	48.55	125	P	P	11 14 59.1	+1.1
	0.9nm,0.4s,mb4.2,baz=303,slow=8.9,SNR=29						
WRAB	Tennant Creek	48.55	125	P	P	11 14 56.9	-1.2
	9.6nm,1.0s,mb4.8						
HFS	Hagfors	78.21	330	P	P	11 18 16.8	+3.5
	0.8nm,0.4s,mb4.0,baz=124,slow=5.2,SNR=5.2						
HFS	Hagfors	78.21	330	P	P	11 18 16.8	+3.5

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*IDC **23** 11:14:42.4±0.8,26.73S×175.93W,mb4.0/8,mb1 4.3/9, mb1mx4.3/14,mbtmp4.1/9,MS3.7/2,Ms1 3.7/2, ms1mx3.4/29,Error ellipse: s-maj=33.1km s-min=19.2km az=130.0*
*NEIC **23** 11:14:46.9±0.5,26.85S×176.08W,h30^{km},mb4.6/4,Error ellipse: s-maj=18.8km s-min=8.7km az=112.0*
ISC 23 11:14:45.9±0.5**,26.59S**±0.09×**176.2W**±0.1**,h30**^{km}**, (h30**^{km}±.8^{km}**:pP-P),n34,**σ**1**^{s}**15**/23**,mb4.2**/13**,MS3.6**/2**,3C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.07	210	Pn	Pn	11 15 33.0	-0.6
	215nm,0.3s,baz=29,slow=19,SNR=9.9						
RAO				Sn	Sn	11 16 11.4	+1.7
	162nm,0.3s,baz=85,slow=22,SNR=16						
RAO	Raoul Island	3.07	210	ePn	Pn	11 15 32.4	-1.2
RAO				Sn	Sn	11 16 11.4	+1.7
AFI	Afiamalu	13.27	19	Pn	P	11 17 47.1	-7.9
	3.2nm,0.3s,baz=333,slow=18,SNR=3.5						
AFI				Sn	S	11 20 07.8	-15
	2.3nm,0.3s,baz=10,slow=17,SNR=3.8						
AFI	Afiamalu	13.27	19	ePn	P	11 17 46.7	-8.3
TBI	Tubuai	24.41	88	eLQ		11 24 28.6	
	143nm,29.0s						
TBI				eLR	LR	11 25 26.4	
	241nm,33.8s,baz=243						
PPT	Papeete	26.18	75	eS	rx	11 24 00.3	
	122nm,24.8s						
PPT				eLQ		11 24 43.3	
	206nm,22.8s						
PPT				eLR	LR	11 26 15.7	
	261nm,30.5s,baz=242						
PPT	Papeete	26.18	75	LR	LR	11 28 46.8	
	comp=Z,70nm,19.8s,MS3.2,baz=10,slow=32						
CTA	Charters Tower	35.02	273	P	P	11 21 39.5	+1.4
	2.5nm,0.5s,mb4.4,baz=99,slow=12,SNR=5.5						
CTA				LR	LR	11 33 12.6	
	comp=Z,236nm,18.3s,MS4.0,baz=58,slow=32						
CTAO	Charters Tower	35.02	273	P	P	11 21 38.2	+0.1
STKA	Stephens Creek	37.06	252	P	P	11 21 56.0	+0.7
	1.4nm,0.8s,mb3.8,baz=85,slow=12,SNR=3.0						
RKT	Rikitea	37.42	94	eP	rx	11 21 22.5	
	172nm,31.0s						
RKT				ePP	PP	11 22 56.1	-30
	162nm,29.8s						
RKT				eLR	LR	11 31 12.7	
	200nm,50.8s						
WRA	Warramunga Arr	45.73	267	P	P	11 23 04.0	-2.5
	3.9nm,0.7s,mb4.4,baz=104,slow=9.7,SNR=14						
SBA	Scott Base	51.94	185	eP	P	11 23 54.5	+0.7
	9.1nm,1.1s,mb4.6						
VNDA	Vanda	52.03	186	P	P	11 23 51.6	-2.9
	0.5nm,0.5s,mb3.7,baz=62,slow=3.8,SNR=2.9						
CASY	Casey	59.25	207	P	P	11 24 45.0	-1.6
	17nm,1.2s,mb5.0						
CASY				e	pP	11 24 54.9	-1.1
QSPA	South Pole Qui	63.51	180	⇑iP	P	11 25 14.5	-0.5
	5.6nm,1.0s,mb4.5						
MJAR	Matsushiro Arr	76.09	324	P	P	11 26 32.9	+0.2
	1.2nm,0.7s,mb4.0,baz=156,slow=6.9,SNR=4.4						
VNA3	Neumayer Olymp	81.97	176	e	pP	11 27 08.3	-5.0
VNA3	Neumayer Olymp	81.97	176	e	sP	11 27 13.1	-3.4
VNA3	Neumayer Olymp	81.97	176	⇑iP	P	11 27 03.2	-0.6
VNA3				e		11 27 08.3	
VNA3				e	pP	11 27 13.1	-0.2
VNA2	Neumayer--Watz	82.43	176	e	pP	11 27 11.9	-3.8
VNA2	Neumayer--Watz	82.43	176	e	sP	11 27 16.1	-2.8
VNA2	Neumayer--Watz	82.43	176	⇑iP	P	11 27 07.0	+0.9
VNA2				e		11 27 11.9	
VNA2				e	pP	11 27 16.1	+0.4
NVAR	Mina Array Bea	84.34	42	P	P	11 27 16.6	0.0
	0.8nm,0.8s,mb3.9,baz=197,slow=5.6,SNR=5.6						
TXAR	Lajitas Array	88.96	56	P	P	11 27 39.4	0.0
	1.2nm,1.0s,mb4.2,baz=217,slow=6.3,SNR=8.5						
ANMO	Albuquerque	89.93	50	eP	P	11 27 44.2	+0.4
	1.2nm,0.8s,mb4.3						
PDAR	Pinedale Array	92.26	43	P	P	11 27 56.3	+2.0
	0.7nm,1.0s,mb4.0,baz=217,slow=4.5,SNR=2.9						
ILAR	Eielson Array	93.87	12	P	P	11 28 01.1	-0.1
	0.3nm,0.7s,mb3.9,baz=225,slow=5.1,SNR=5.3						
MKAR	Makanchi Array	116.53	311	PKP	PKPdf	11 33 27.8	-4.2
	0.4nm,0.6s,baz=90,slow=1.2,SNR=4.9						
BVAR	Borovoye Array	124.75	318	PKP	PKPdf	11 33 44.5	-3.3
	0.4nm,0.4s,baz=90,slow=3.0,SNR=3.8						
NB2	NORSAR Subarra	145.20	354	PKPabc	PKPdf	11 34 20.8	-4.3
	5.7nm,0.9s,baz=16,slow=3.7						
NOA	NORSAR Array B	145.20	354	PKPbc	PKPbc	11 34 20.6	+0.3
	2.6nm,0.8s,baz=13,slow=2.4,SNR=6.1						
HFS	Hagfors	145.79	351	PKPbc	PKPbc	11 34 22.2	+0.4
	1.6nm,0.5s,baz=45,slow=4.2,SNR=8.4						
AKASG	Malin Array Be	149.10	328	PKPbc	PKPdf	11 34 30.4	-1.4
	1.2nm,0.6s,baz=38,slow=3.1,SNR=4.9						

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*IDC **23** 11:16:51.7±6.8,35.59S×179.51W,h39^{km}±51^{km},mb4.3/3, mb1 4.4/5,mb1mx3.9/15,mbtmp4.4/5,ML4.1/2,MS4.0/1, Ms1 4.0/1,ms1mx2.8/24,Error ellipse: s-maj=55.2km s-min=43.5km az=98.0*
ISC 23 11:16:47.9±1.5**,36.3S**±0.1×**179.0W**±0.2**,h10**^{km}**,n55,** σ**1**^{s}**31**/53**,mb4.4**/3**,MS4.0**/1**,East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.53	239	P	Pn	11 17 30.2	+0.5
MXZ	Matakaoa Point	2.53	239	PN	Pn	11 17 30.2	+0.5
MXZ	Matakaoa Point	2.53	239	eSN	Sn	11 18 00.9	+0.1
MXZ	Matakaoa Point	2.53	239	S	Sn	11 18 01.3	+0.5
PUZ	Puketiti	2.84	231	P	Pn	11 17 35.9	+1.7
PUZ	Puketiti	2.84	231	PN	Pn	11 17 35.9	+1.7
PUZ	Puketiti	2.84	231	eSN	Sn	11 18 11.7	+2.9
PUZ	Puketiti	2.84	231	S	Sn	11 18 12.6	+3.8
MWZ	Matawai	3.46	233	eP	Pn	11 17 43.7	+0.7
MWZ	Matawai	3.46	233	PN	Pn	11 17 43.7	+0.8
MWZ	Matawai	3.46	233	SN	Sn	11 18 27.1	+2.7
MWZ	Matawai	3.46	233	S	Sn	11 18 27.4	+3.0
URZ	Urewera	3.69	237	Pn	Pn	11 17 46.7	+0.4
	14nm,0.3s,baz=39,slow=7.1,SNR=66						
URZ				Sn	Sn	11 18 31.5	+1.1
	16nm,0.3s,baz=274,slow=24,SNR=11						
URZ	Urewera	3.69	237	P	Pn	11 17 46.3	0.0
URZ	Urewera	3.69	237	PN	Pn	11 17 46.3	0.0
URZ				SN	Sn	11 18 30.2	-0.2
KNZ	Kokohu	3.81	224	eP	Pn	11 17 49.1	+1.2
KNZ	Kokohu	3.81	224	PN	Pn	11 17 49.1	+1.2
KNZ	Kokohu	3.81	224	SN	Sn	11 18 33.2	-0.1
KUZ	Kuaotunu	4.31	263	PN	Pn	11 17 50.6	-4.5
BKZ	Black Stump Fm	4.60	230	eP	Pn	11 17 59.5	+0.3
BKZ	Black Stump Fm	4.60	230	PN	Pn	11 17 59.5	+0.3
BKZ	Black Stump Fm	4.60	230	SN	Sn	11 18 54.4	+1.0
BKZ	Black Stump Fm	4.60	230	S	Sn	11 18 54.4	+1.0
PWZ	Pawanui	4.97	220	PN	Pn	11 18 04.3	-0.1
PWZ				SN	Sn	11 19 04.0	+1.4
WTVZ	West Tongariro	5.16	235	ePN	Pn	11 18 06.7	-0.3
NGZ	Ngauruhoe	5.18	235	ePN	Pn	11 18 07.0	-0.3
MOVZ	Moawhango	5.21	232	PN	Pn	11 18 07.1	-0.6
TWVZ	Taurewa	5.24	236	ePN	Pn	11 18 07.4	-0.7
FWVZ	Far West T-bar	5.25	234	ePN	Pn	11 18 07.5	-0.9
BFZ	Birch Farm	5.77	219	eSN	Sn	11 19 21.7	-1.0
WAZ	Wanganui	5.89	232	SN	Sn	11 19 25.4	-0.4
MRZ	Mangatainoka R	6.11	223	eSN	Sn	11 19 29.6	-1.6
MTW	Mount Morrison	6.50	220	eSN	Sn	11 19 38.3	-2.7
KIW	Kapiti Island	6.62	225	eSN	Sn	11 19 41.1	-2.8
CAW	Cannon Point	6.70	222	eSN	Sn	11 19 42.7	-3.2
MRW	Makara Radio	6.98	223	eSN	Sn	11 19 49.8	-3.2
SNZO	South Karori	7.03	223	ePn	Pn	11 18 34.0	+0.5
SNZO	South Karori	7.03	223	eSN	Sn	11 19 50.2	-4.2
SNZO	South Karori	7.03	223	eSn	Sn	11 19 46.3	-8.1
TCW	Tory Channel	7.21	225	eSN	Sn	11 19 53.8	-4.9
TUWZ	Tuamarina	7.54	225	eSN	Sn	11 20 01.8	-5.2
NNZ	Nelson	7.74	228	eSN	Sn	11 20 06.4	-5.5
THZ	Tophouse	8.36	227	eSN	Sn	11 20 20.9	-6.5
KHZ	Kahutara	8.43	221	eSN	Sn	11 20 22.5	-6.7
MQZ	McQueen’s Vall	9.80	218	eSN	Sn	11 20 52.7	-10
DZM	Mont Dzumac	19.03	314	P	P	11 21 02.7	-10
	0.7nm,0.3s,baz=128,slow=17,SNR=8.6						
STKA	Stephens Creek	32.81	266	P	P	11 23 18.7	-4.8
	2.5nm,0.8s,mb4.2,baz=104,slow=12,SNR=2.4						
CTA	Charters Tower	34.43	288	P	P	11 23 30.2	-7.5
	5.2nm,1.1s,mb4.4,baz=110,slow=10,SNR=3.5						
WB2	Warramunga Arr	43.85	279	eP	P	11 24 48.7	-7.4
WRA	Warramunga Arr	43.86	279	P	P	11 24 48.6	-7.5
	5.0nm,0.4s,mb4.6,baz=117,slow=7.7,SNR=23						
FITZ	Fitzroy Crossi	51.81	275	LR	LR	11 50 09.6	
	comp=Z,129nm,18.8s,MS4.0,baz=66,slow=39						
KEV	Kevo	143.65	345	epkp	PKPdf	11 36 21.4	-3.5
ARCES	ARCESS Array B	144.13	346	PKP	PKPdf	11 36 21.8	-3.9
	1.8nm,0.7s,baz=53,slow=4.5,SNR=3.6						
KAF	Kangasniemi	149.74	337	epkp	PKPdf	11 36 32.6	-2.7
FINES	FINESS Array B	150.30	336	PKPbc	PKPdf	11 36 34.9	-1.3
	1.7nm,0.6s,baz=45,slow=3.9,SNR=16						

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*IDC **23** 11:17:22.4±0.8,2.22N×121.93E,mb4.1/9,mb1 4.2/9, mb1mx4.1/18,mbtmp4.1/9,Error ellipse: s-maj=49.2km s-min=15.7km az=70.0*
ISC 23 11:17:26.2±1.3**,2.14N**±0.07×**121.72E**±0.08**,h42**^{km}±13^{km}**, n23,**σ**0**^{s}**82**/23**,mb4.1**/8**,2C-2D,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSM	Tawau	4.39	299	P	P	11 18 30.7	-1.6
ZMPH	Zamboanga City	4.80	4	⇓iP	P	11 18 37.9	-0.1
IPIL	Ipil	5.68	9	eP	P	11 18 50.3	+0.1
PAGZ	Pagadian	5.91	16	eP	P	11 18 52.7	-0.8
BUKP	Musuan	6.61	30	eP	P	11 19 02.7	-0.6
KKM	Kota Kinabalu	6.72	305	P	P	11 19 04.3	-0.6
SNPH	Sibulan	7.32	12	⇑eP	P	11 19 14.3	+1.1
BATP	Bataraza	7.68	330	eP	P	11 19 19.7	+1.5
PPR	Puerto Princes	8.15	339	⇓eP	P	11 19 25.6	+0.9
GUIM	Jordan	8.48	6	eP	P	11 19 30.1	+0.8
ENPP	El Nido	9.29	346	eP	P	11 19 39.7	-0.9
KGM	Kluang	18.38	270	P	P	11 21 40.9	+0.9
FITZ	Fitzroy Crossi	20.48	169	⇑iP	P	11 22 02.3	-0.9
	10nm,0.4s						
FITZ	Fitzroy Crossi	20.48	169	P	P	11 22 02.4	-0.9
	12nm,0.5s,baz=359,slow=6.6,SNR=48						
WRA	Warramunga Arr	25.20	151	P	P	11 22 50.2	+0.4
	1.8nm,0.5s,mb3.9,baz=329,slow=11,SNR=32						
WB2	Warramunga Arr	25.21	151	eP	P	11 22 51.4	+1.5
MJAR	Matsushiro Arr	37.47	22	P	P	11 24 37.3	-0.4
	2.2nm,0.7s,mb4.1,baz=192,slow=10,SNR=6.2						
STKA	Stephens Creek	38.73	152	P	P	11 24 47.7	-0.5
	1.0nm,0.4s,mb3.9,baz=342,slow=9.6,SNR=2.6						
SONM	Songino Array	47.41	346	P	P	11 25 57.8	-0.6
	1.6nm,0.8s,mb4.0,baz=167,slow=9.2,SNR=13						
MKAR	Makanchi Array	56.13	328	P	P	11 27 04.5	+0.5
	1.6nm,0.4s,mb4.4,baz=129,slow=8.9,SNR=23						
ZAL	Zalesovo	59.85	336	P	P	11 27 30.1	+0.1
	1.3nm,0.4s,mb4.3,baz=341,slow=9.9,SNR=8.3						
BVAR	Borovoye Array	66.00	329	P	P	11 28 10.6	0.0
	1.3nm,0.7s,mb4.1,baz=135,slow=8.4,SNR=8.3						
ILAR	Eielson Array	88.68	25	P	P	11 30 15.3	-0.8
	0.3nm,0.6s,mb3.8,baz=249,slow=5.4,SNR=6.1						

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*FUNV **23** 11:17:36.3,10.96N×62.22W,h100^{km},MW2.9*
*TRN **23** 11:17:38.3,11.00N×62.19W,h94^{km},MD3.4*
*NEIC **23** 11:17:38.3,11.00N×62.19W,h94^{km},MD3.4(TRN),After TRN.*
ISC 23 11:17:35.1±0.6**,10.90N**±0.04×**62.31W**±0.03**,h106**^{km}±6^{km}**, n20,**σ**1**^{s}**14**/35**,1D,Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	Guiria	0.26	161	eP	P	11 17 50.9	+0.6
GUIV				eS	S	11 18 01.2	-0.5
ITEV	Isla Los Testi	0.93	300	eP	P	11 17 55.9	+0.5
ITEV				eS	S	11 18 10.4	-0.2
TRN	Trinidad (W)	0.93	105	eP	P	11 17 56.6	+1.2
TRN				eS	S	11 18 09.7	-1.0
CRUV	Carupano	0.94	256	⇓iP	P	11 17 56.9	+1.3
CRUV				eS	S	11 18 11.4	+0.6
TPP	Pointe-a-Pierr	1.02	124	eP	P	11 17 59.4	+2.9
TBH	Brigand Hill	1.29	108	eP	P	11 18 01.6	+2.1
GRW	Mount Saint Ca	1.41	27	eP	P	11 18 01.6	+0.7
GRW				eS	S	11 18 19.1	-1.2
GRHS	Sauteurs	1.47	26	eP	P	11 18 01.8	+0.1
GRHS				eS	S	11 18 20.0	-1.7
TPR	Prospect	1.53	79	eP	P	11 18 02.9	+0.4
TPR				eS	S	11 18 21.5	-1.4
BOT	Bacolet	1.59	80	eP	P	11 18 03.2	+0.1
BOT				eS	S	11 18 23.2	-0.9
ORIV	Oritupano	2.11	211	eP	P	11 18 11.5	+1.7
ORIV				eS	S	11 18 36.9	+1.0
SVB	Belmont	2.58	24	eP	P	11 18 16.7	+0.5
SVB				eS	S	11 18 50.0	+2.9
GURV	El Guri	3.21	194	i P	P	11 18 25.3	+0.5
GURV				eS	S	11 19 01.1	-1.3
CUPV	Cœpira	3.52	257	eP	P	11 18 29.8	+0.8
CUPV				eS	S	11 19 08.5	-1.4
MERV	Las Mercedes	4.25	248	eP	P	11 18 39.0	+0.1
LUEV	Luepa	5.09	170	eP	P	11 18 48.9	-1.5
LUEV				eS	S	11 19 43.0	-5.5
CAOV	Caicara del Or	5.32	228	eP	P	11 18 53.6	+0.1
CAOV				eS	S	11 19 49.1	-4.8
TURV	Turiamo	5.45	266	eP	P	11 18 53.8	-1.4
BAUV	El Baul	5.97	252	eP	P	11 19 01.2	-1.1
PAYV	Puerto Ayacuch	7.59	225	eP	P	11 19 23.3	-1.2
PAYV				eS	S	11 20 41.6	-7.9

ISC 23 11:37:51.0±1.4**,38.79N**±0.08×**38.38E**±0.07**,h10**^{km}**,n7,** σ**1**^{s}**11**/12**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYA	Malataya	0.46	176	i PG	Pg	11 37 58.9	-1.5
MALT	Malatya	0.48	175	PG	Pg	11 37 58.8	-1.9
MALT				SG	Sg	11 38 06.0	-1.1
MALT	Malatya	0.48	175	i P	Pg	11 37 59.7	-0.9
MALT				i S	Sg	11 38 06.8	-0.3
ELZG	Elazig	0.56	121	i P	Pg	11 38 02.9	+0.7
ELZG				i S	Sg	11 38 13.0	+3.3
PTK	Pertek	0.80	82	PG	Pg	11 38 06.6	-0.4
GZT	Gaziantep	1.57	204	i P	Pn	11 38 19.5	+0.4
GZT				i S	Sb	11 38 40.4	+1.0
KAHT	Ahir Dag	1.66	226	i P	Pn	11 38 20.0	-0.3
KAHT				i S	Sn	11 38 42.8	+1.0

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*IDC **23** 11:44:20.1±2.3,2.51N×96.08E,mb3.9/5,mb1 4.1/6, mb1mx3.8/18,mbtmp3.9/6,ML4.3/1,Error ellipse: s-maj=89.6km s-min=24.7km az=58.0*

*NEIC **23** 11:44:24.3±1.3,2.47N×96.07E,h30^{km},Error ellipse: s-maj=24.4km s-min=17.2km az=225.0*

ISC 23 11:44:22.3±1.5**,2.5N**±0.2×**96.1E**±0.2**,h30**^{km}**,n7,**σ**0**^{s}**75**/7**, mb4.0**/5**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.36	58	ePn	Pn	11 45 41.8	-0.7
CMAR	Chiang Mai Arr	16.13	10	Pn	P	11 48 10.1	+1.3
	0.4nm,0.3s,baz=194,slow=10,SNR=8.1						
WRA	Warramunga Arr	43.67	122	P	P	11 52 27.1	+0.6
	0.5nm,0.4s,mb3.6,baz=301,slow=9.1,SNR=13						
MKAR	Makanchi Array	45.74	347	P	P	11 52 42.9	+0.1
	1.8nm,0.4s,mb4.4,baz=153,slow=8.7,SNR=32						
SONM	Songino Array	46.06	10	P	P	11 52 44.8	-0.5
	1.5nm,0.7s,mb4.0,baz=191,slow=9.6,SNR=13						
SONM				PcP	PcP	11 54 22.2	+0.4
	0.9nm,0.7s,baz=209,slow=3.5,SNR=5.1						
ZAL	Zalesovo	52.12	352	P	P	11 53 32.4	+0.4
	2.2nm,0.5s,mb4.3,baz=307,slow=5.3,SNR=12						
BVAR	Borovoye Array	54.68	341	P	P	11 53 49.8	-1.1
	0.5nm,0.6s,mb3.8,baz=135,slow=8.4,SNR=4.0						

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*NIED **23** 11:48:00,36.30N×139.80E,h62^{km},Mw3.5 Best double couple: M$_0$1.93×10^{14} NP1:φ$_s$92°,δ83°,λ-135°. NP2: φ$_s$355°,δ45°,λ-9°.*

*JMA **23** 11:48:39.7±0.1,36.24N×139.77E,h59^{km}±1^{km},M3.1*

JMA Felt I J1.

*IDC **23** 11:48:43.0±2.4,35.96N×139.16E,h79^{km}±13^{km},mb3.1/2, mb1 3.4/3,mb1mx3.1/21,mbtmp3.6/3,MS3.2/1,Ms1 3.2/1, ms1mx2.6/10,Error ellipse: s-maj=68.1km s-min=11.1km az=67.0*

ISC 23 11:48:38.8±0.7**,36.24N**±0.04×**139.79E**±0.06**,h66**^{km}±6^{km}**, n14,**σ**0**^{s}**91**/21**,mb3.3**/2**,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.33	92	P	P	11 48 50.1	+0.3
JYT				eS	S	11 48 57.6	-0.4
JAG	Ashikaga	0.33	304	P	P	11 48 49.8	-0.1
JAG				eS	S	11 48 56.9	-1.2
JKT	Katashina	0.69	320	P	P	11 48 53.4	0.0
JKT				eS	S	11 49 03.8	-0.5
JRY	Ryogami san	0.75	253	P	P	11 48 54.4	+0.2
JRY				eS	S	11 49 05.1	-0.6
JOD2	Odawara 2	1.13	211	P	P	11 48 59.8	+0.8
JOD2				eS	S	11 49 14.7	+0.6
JHK	Hiroka	1.19	329	P	P	11 49 00.0	+0.2
JYN	Shimob	1.25	234	P	P	11 49 02.1	+1.3
MJAR	Matsushiro Arr	1.31	284	P	P	11 49 00.9	-0.7
	23nm,0.3s,baz=120,slow=8.6,SNR=217						
MAT	Matsushiro	1.31	284	P	P	11 49 01.8	+0.1
MAT				eS	S	11 49 19.3	+0.6
JFT	Otama	1.35	19	P	P	11 49 02.8	+0.6
JFK	Kawauchi	1.42	37	P	P	11 49 03.6	+0.5
JHJ	Hachijo jima 2	3.11	180	P	P	11 49 28.5	+1.8
	25nm,0.3s,baz=264,slow=21,SNR=5.8						
JHJ				S	S	11 50 00.8	-2.0
	17nm,0.3s,baz=232,slow=22,SNR=4.7						
JHJ				LR	LR	11 50 12.1	
	comp=Z,400nm,19.3s,baz=64,slow=31						
MKAR	Makanchi Array	43.44	303	P	P	11 56 36.3	-0.3
	0.3nm,0.7s,mb3.1,baz=90,slow=8.6,SNR=3.2						
WRA	Warramunga Arr	56.11	186	P	P	11 58 11.2	-2.5
	0.2nm,0.4s,mb3.5,baz=2.1,slow=7.5,SNR=14						

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*IDC **23** 11:50:55.9±0.8,20.15S×67.53E,mb3.9/8,mb1 4.0/8, mb1mx3.9/18,mbtmp3.9/8,MS3.7/3,Ms1 3.7/3, ms1mx3.2/25,Error ellipse: s-maj=36.0km s-min=21.5km az=97.0*

*NEIC **23** 11:50:57.8±0.8,20.20S×67.59E,h10^{km},mb4.8/2,Error ellipse: s-maj=38.0km s-min=19.8km az=98.0*

ISC 23 11:50:56.1±0.8**,20.3S**±0.1×**67.6E**±0.2**,h10**^{km}**,n17,** σ**1**^{s}**33**/15**,mb4.2**/12**,MS3.7**/3**,1D,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	Mawson	47.43	182	P	P	11 59 33.1	+0.7
	1.6nm,0.5s,mb4.2,baz=18,slow=11,SNR=3.6						
MAW				LR	LR	12 15 08.0	
	comp=Z,85nm,20.5s,MS3.7,baz=67,slow=30						
CMAR	Chiang Mai Arr	49.24	41	P	P	11 59 46.0	-1.1
	1.6nm,1.1s,mb4.0,baz=246,slow=11,SNR=3.5						
CMAR				LR	LR	12 18 23.3	
	comp=Z,110nm,19.0s,MS3.9,baz=230,slow=34						
FITZ	Fitzroy Crossi	54.62	98	P	P	12 00 32.0	+4.5
	8.7nm,0.8s,mb4.8,baz=207,slow=7.7,SNR=6.5						
WRA	Warramunga Arr	62.25	102	P	P	12 01 21.5	+0.7
	2.6nm,0.9s,mb4.4,baz=256,slow=6.4,SNR=5.2						
SNAA	Sanae	64.79	199	P	P	12 01 35.4	-1.3
	0.7nm,1.0s,mb3.6,baz=36,slow=9.9,SNR=4.6						
SNAA				LR	LR	12 25 56.4	
	comp=Z,37nm,18.6s,MS3.6,baz=204,slow=32						
MKAR	Makanchi Array	68.04	11	P	P	12 01 54.8	-3.0
	1.8nm,0.8s,mb4.1,baz=191,slow=6.2,SNR=11						
QSPA	South Pole Qui	69.86	180	⇓iP	P	12 02 13.7	+5.2
	15nm,1.0s,mb4.9						
ZRNK	Zerenda	72.90	1	eP	P	12 02 28.4	+1.3
	5.1nm,1.1s,mb4.4						
BVAR	Borovoye Array	73.01	2	P	P	12 02 28.6	+0.8
	2.4nm,0.9s,mb4.1,baz=169,slow=7.6,SNR=11						
ZAL	Zalesovo	75.36	10	P	P	12 02 44.7	+3.4
	1.3nm,0.5s,mb4.1,baz=268,slow=5.0,SNR=9.6						
ZAL	Zalesovo	75.36	10	P	P	12 02 44.7	+3.4
SONM	Songino Array	76.19	26	P	P	12 02 44.9	-1.3
	0.4nm,0.6s,mb3.5,baz=222,slow=4.6,SNR=2.8						
AKASG	Malin Array Be	78.32	336	P	P	12 02 57.7	-0.2
	0.3nm,0.3s,mb3.7,baz=147,slow=4.8,SNR=5.7						
AKASG	Malin Array Be	78.32	336	P	P	12 02 57.7	-0.2
CLL	Collm	85.78	329	P	P	12 03 42.0	+5.2
YKA	Yellowknife Ar	137.77	2	PKP	PKPdf	12 10 25.0	+1.6
	0.3nm,0.8s,baz=315,slow=2.6,SNR=3.4						
TXAR	Lajitas Array	167.98	320	PKP	PKPdf	12 11 05.7	-0.3
	0.1nm,0.5s,baz=82,slow=8.8,SNR=2.7						
TXAR				PKPab	PKPab	12 12 11.2	-1.2
	0.4nm,0.9s,baz=72,slow=4.0,SNR=3.3						

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*IDC **23** 11:51:29.1±0.6,26.78S×176.08W,mb4.3/11,mb1 4.6/12, mb1mx4.5/16,mbtmp4.3/12,ML4.5/1,MS4.0/10,Ms1 4.0/10, ms1mx3.8/22,Error ellipse: s-maj=24.0km s-min=19.7km az=134.0*

*NEIC **23** 11:51:34.7±0.3,26.74S×175.83W,h35^{km},mb4.9/13, Error ellipse: s-maj=11.5km s-min=9.6km az=138.0*

ISC 23 11:51:33.0±0.3**,26.77S**±0.07×**176.02W**±0.10**,h33**^{km}**,n63,** σ**1**^{s}**25**/47**,mb4.6**/22**,MS4.0**/6**,6C-3D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.98	214	Pn	Pn	11 52 16.1	-3.1
	69nm,0.3s,baz=125,slow=22,SNR=3.4						
RAO				LR	LR	11 52 48.7	
	comp=Z,2μm,21.2s,baz=200,slow=27						
RAO				Sn	Sn	11 52 58.7	+4.4
	320nm,0.3s,baz=72,slow=23,SNR=7.5						
RAO	Raoul Island	2.98	214	ePn	Pn	11 52 15.1	-4.2
RAO				eSn	Sn	11 52 49.8	-4.5
URZ	Urewera	12.83	205	Pn	P	11 54 36.6	+0.8
	0.3nm,0.3s,baz=18,slow=16,SNR=3.2						
URZ				Sn	S	11 56 49.6	-8.8
	0.9nm,0.3s,baz=156,slow=23,SNR=9.2						
AFI	Afiamalu	13.40	18	Pn	P	11 54 35.3	-8.1
	3.9nm,0.3s,baz=191,slow=24,SNR=5.9						
AFI				Sn	S	11 56 59.6	-13
	3.8nm,0.3s,baz=84,slow=21,SNR=4.5						
AFI				LR	LR	11 58 35.5	
	comp=Z,238nm,18.2s,baz=184,slow=32						
AFI	Afiamalu	13.40	18	eP	P	11 54 36.4	-7.0
RAR	Rarotonga	15.84	73	eP	P	11 55 05.9	-9.4
	72nm,1.2s						
DZM	Mont Dzumac	16.64	283	Pn	P	11 55 29.3	+3.9
	0.2nm,0.3s,baz=104,slow=20,SNR=5.1						
DZM				LR	LR	12 00 35.7	
	comp=Z,512nm,19.1s,baz=209,slow=33						
DZM	Mont Dzumac	16.64	283	Pn	P	11 55 29.3	+3.9
DZM				LR	LR	12 00 35.7	
NOUC	Port Laguerre	16.75	282	eP	P	11 55 29.7	+2.9
RPZ	Rata Peaks	19.89	208	LR	LR	12 03 01.4	
	comp=Z,191nm,18.2s,baz=194,slow=35						
PPT	Papeete	26.11	75	LR	LR	12 04 29.5	
	comp=Z,436nm,19.4s,MS4.0,baz=250,slow=30						
HNR	Honiara	28.53	303	LR	LR	12 06 57.3	
	comp=Z,250nm,20.8s,MS3.8,baz=154,slow=33						
CTA	Charters Tower	35.15	273	P	P	11 58 25.0	-0.9
	2.5nm,0.6s,mb4.3,baz=111,slow=9.7,SNR=3.0						
CTA				LR	LR	12 09 51.5	
	comp=Z,351nm,21.9s,MS4.1,baz=53,slow=31						
STKA	Stephens Creek	37.13	252	LR	LR	12 12 25.8	
	comp=Z,270nm,21.5s,MS4.0,baz=25,slow=34						
PMG	Port Moresby	38.84	289	LR	LR	12 11 41.6	
	comp=Z,275nm,18.9s,MS4.1,baz=87,slow=31						
WRAB	Tennant Creek	45.84	268	eP	P	11 59 50.5	-3.5
	41nm,1.4s,mb5.2						
WRA	Warramunga Arr	45.85	268	P	P	11 59 51.8	-2.4
	2.8nm,0.7s,mb4.3,baz=104,slow=8.0,SNR=29						
SBA	Scott Base	51.77	185	eP	P	12 00 41.4	+2.3
	26nm,1.3s,mb5.0						
VNDA	Vanda	51.87	186	P	P	12 00 38.7	-1.2
	3.3nm,1.0s,mb4.2,baz=355,slow=7.4,SNR=5.5						
VNDA	Vanda	51.87	186	P	P	12 00 38.7	-1.2
FITZ	Fitzroy Crossi	54.22	266	P	P	12 00 58.2	+0.1
	6.9nm,0.7s,mb4.7,baz=231,slow=2.7,SNR=5.1						
CASY	Casey	59.15	207	eP	P	12 01 32.2	-0.3
	15nm,0.8s,mb5.1						
QSPA	South Pole Qui	63.32	180	eP	P	12 02 00.1	-0.5
	19nm,1.0s,mb5.2						
MJAR	Matsushiro Arr	76.31	324	P	P	12 03 19.6	-0.9
	3.6nm,0.8s,mb4.3,baz=163,slow=5.8,SNR=8.3						
MAJO	Matsushiro	76.31	324	P	P	12 03 21.5	+1.0
	21nm,1.3s,mb4.9						
MAT	Matsushiro	76.31	324	eP	P	12 03 20.0	-0.5
MAT	Matsushiro	76.31	324	P	P	12 03 19.7	-0.8
SYO	Syowa Base	81.02	192	⇓P	P	12 03 44.2	-1.3
SYO	Syowa Base	81.02	192	⇓PcP	PcP	12 03 49.0	-3.2
SYO	Syowa Base	81.02	192	⇓pP	pP	12 03 55.0	-1.0
SNAA	Sanae	81.71	178	P	P	12 03 49.4	+0.3
	2.9nm,1.1s,mb4.1,baz=194,slow=3.3,SNR=9.3						
SNAA	Sanae	81.71	178	eP	P	12 03 48.8	-0.3
	8.3nm,1.2s,mb4.5						
VNA3	Neumayer Olymp	81.78	176	⇑i	P	12 03 49.8	+0.3
VNA3	Neumayer Olymp	81.78	176	⇑i	Px	12 04 07.7	
VNA3	Neumayer Olymp	81.78	176	⇑i	Px	12 04 16.9	
VNA2	Neumayer--Watz	82.24	176	⇑i	P	12 03 52.8	+1.0
VNA2	Neumayer--Watz	82.24	176	⇑i	Px	12 04 11.9	
VNA2	Neumayer--Watz	82.24	176	⇑i	Px	12 04 20.3	
CMB	Columbia Colle	82.90	41	eP	P	12 03 56.6	+0.7
	11nm,1.4s,mb4.7						
PLCA	Paso Flores	83.69	133	P	P	12 04 00.3	+0.6
	2.5nm,0.9s,mb4.3,baz=232,slow=8.0,SNR=3.2						
PLCA	Paso Flores	83.69	133	eP	P	12 04 00.5	+0.7
	12nm,1.3s,mb4.8						
NVAR	Mina Array Bea	84.40	42	P	P	12 04 03.9	+0.4
	1.4nm,0.8s,mb4.2,baz=204,slow=7.1,SNR=13						
NVAR				LR	LR	12 35 34.9	
	comp=Z,112nm,18.3s,MS4.3,baz=130,slow=31						
NEN	Nelson	84.78	46	eP	P	12 04 03.8	-1.7
NEN				e	pP	12 04 15.2	-0.7
TPH	Tonopah	84.82	43	eP	P	12 04 07.1	+1.5
	18nm,1.4s,mb5.0						
TXAR	Lajitas Array	88.95	56	P	P	12 04 26.5	+0.6
	1.1nm,0.7s,mb4.3,baz=211,slow=7.3,SNR=13						
ANMO	Albuquerque	89.95	50	eP	P	12 04 30.5	+0.1
	2.9nm,0.9s,mb4.6						
ENH	Enshi	91.03	304	eP	P	12 04 37.7	+2.1
	37nm,1.4s,mb5.5						
NEW	Newport	91.42	35	P	P	12 04 34.4	-2.6
MCMT	McKenzie Canyo	91.59	39	eP	P	12 04 38.4	+0.5
MCMT				e	pP	12 04 47.5	-0.9
SDCO	Great Sand Dun	92.11	48	eP	P	12 04 39.0	-1.4
	1.3nm,0.9s,mb4.3						
PDAR	Pinedale Array	92.31	43	P	P	12 04 41.5	+0.3
	0.3nm,0.5s,mb3.9,baz=236,slow=5.3,SNR=4.5						
CHMT	Chamberlain Mo	92.62	38	eP	P	12 04 41.8	-0.7
CMAR	Chiang Mai Arr	93.87	289	P	P	12 04 50.9	+2.1
	0.8nm,0.8s,mb4.2,baz=214,slow=26,SNR=4.2						
ILAR	Eielson Array	94.02	12	P	P	12 04 48.1	-0.3
	0.9nm,1.0s,mb4.1,baz=224,slow=4.8,SNR=5.8						
MKAR	Makanchi Array	116.74	311	PKP	PKPdf	12 10 13.9	-0.1
	0.4nm,0.7s,baz=59,slow=2.9,SNR=5.1						
NB2	NORSAR Subarra	145.39	354	PKPabc	PKPdf	12 11 07.7	+0.8
	39nm,1.7s,baz=13,slow=3.6						
NOA	NORSAR Array B	145.39	354	PKPbc	PKPbc	12 11 08.2	+0.7
	6.4nm,0.9s,baz=12,slow=2.4,SNR=9.9						
NAO01	NORSAR Array S	145.62	354	ePKPdf	PKPdf	12 11 08.9	+1.6
HFS	Hagfors	145.99	351	PKPbc	PKPbc	12 11 09.1	+0.1
	2.6nm,0.7s,baz=90,slow=1.5,SNR=5.1						
AKASG	Malin Array Be	149.32	328	PKPbc	PKPdf	12 11 18.5	+4.8
	1.2nm,0.5s,baz=25,slow=1.9,SNR=9.7						
AKASG	Malin Array Be	149.32	328	PKPbc	PKPdf	12 11 18.5	+4.8
BR131	Keskin Array S	152.17	305	eP	PKPdf	12 11 26.5	+8.1
CLL	Collm	154.56	347	ePKP2	PKPab	12 11 48.0	+1.2

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*GRAL **23** 11:53:35.2±2.5,33.59N×35.53E,h7^{km}±999^{km},MD2.9*

*GII **23** 11:53:35.3±1.0,33.50N×35.58E,ML2.1/4*

*CSEM **23** 11:53:35.2,33.59N×35.53E,h7^{km},ML2.9,After GRAL*

ISC 23 11:53:34.5±0.6**,33.60N**±0.02×**35.56E**±0.07**,h3**^{km}±8^{km}**, n10,**σ**0**^{s}**69**/18**,Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATL	Matirih	0.22	242	i Pg	Pg	11 53 39.4	+0.4
BHL	Bhannes	0.32	14	i Pg	Pg	11 53 39.9	-0.9
BHL				i Sg	Sg	11 53 45.4	+0.3
HRI	Mount Hermon	0.36	157	Pg	Pg	11 53 41.5	-0.2
HRI				Sg	Sg	11 53 46.6	+0.1
KSDI	Kefar Szold	0.41	169	Pg	Pg	11 53 42.2	-0.5
KSDI				Sg	Sg	11 53 47.8	-0.4
HNTI	Hanita	0.61	213	Pg	Pg	11 53 46.6	0.0
HNTI				Sg	Sg	11 53 55.6	+0.9
KSHT	Keshet	0.65	161	Pg	Pg	11 53 47.4	0.0
KSHT				Sg	Sg	11 53 57.1	+1.1
HWQ	Hawqa	0.75	25	i Pg	Pg	11 53 48.6	-0.9
HWQ				i Sg	Sg	11 54 00.9	+1.3
MMLI	Mount Malkishu	1.16	186	Pg	Pg	11 53 56.3	-1.4
MMLI				Sg	Sg	11 54 13.1	0.0
SLTI	Sal'it	1.42	198	Pn	Pn	11 54 00.8	-0.4
SLTI				Sn	Sn	11 54 20.6	0.0
MKRJ	Makawir	2.04	178	Pn	Pn	11 54 10.6	+0.6

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*ATH **23** 11:55:38.9,37.81N×26.78E,h24^{km},MD4.0/18,ML3.9*

*ISK **23** 11:55:39.1,37.80N×26.72E,h14^{km},ML4.3*

*CSEM **23** 11:55:39.9±0.0,37.79N×26.81E,h12^{km},ML3.9,Error ellipse: s-maj=1.2km s-min=1.1km az=48.0*

*NEIC **23** 11:55:39.2,37.80N×26.76E,h25^{km},ML3.9(ATH),After ATH.*

*THE **23** 11:55:40.8,37.89N×26.79E,h10^{km},ML4.2*

*IDC **23** 11:55:40.1±0.9,37.78N×26.79E,mb3.6/5,mb1 3.8/9, mb1mx3.7/25,mbtmp3.7/9,ML3.7/4,MS3.5/3,Ms1 3.5/3, ms1mx3.2/29,Error ellipse: s-maj=21.9km s-min=12.6km az=111.0*

*HLW **23** 11:56:00.8,36.34N×27.33E,h33^{km},Mb3.4*

ISC 23 11:55:39.1±0.5**,37.80N**±0.01×**26.77E**±0.02**,h8**^{km}±4^{km}**, n130,**σ**1**^{s}**09**/150**,mb3.5**/5**,MS3.7**/1**,10C-6D,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.11	151	⇑iPB	Pb	11 55 43.3	+0.3
URLA	Izmir	0.57	346	i P	Pg	11 55 51.2	+0.6
URLA	Izmir	0.57	346	i P	Pg	11 55 51.0	+0.4
BLCB	Balcova	0.62	20	i PG	Pg	11 55 52.4	+0.9
IZM	Izmir	0.71	33	i PG	Pg	11 55 53.9	+0.6
KDAG	Bornova	0.71	33	i P	Pb	11 55 54.2	+0.8
BODT	Bodrum	0.85	150	i PG	Pg	11 55 56.4	+0.2
BODT				SG	Sg	11 56 08.9	+1.3
AYDN	Tasoluk	0.89	99	i P	Pb	11 55 57.1	+0.7
BDRM	Kayabasi	0.91	144	i P	Pb	11 55 58.0	+1.2
MLSB	Milas	0.95	122	i PG	Pg	11 55 57.7	-0.3
NISR	Nisiros	1.22	166	ePN	Pn	11 56 03.0	+0.5
APE	Apeiranthos	1.23	234	i PN	Pn	11 56 02.2	-0.4
APE	Apeiranthos	1.23	234	⇓iPN	Pn	11 56 02.3	-0.3
APE				eSN	Sn	11 56 19.7	+0.1
AKS	Akhisar	1.35	37	PN	Pn	11 56 04.4	0.0
YER	Yerkesik	1.38	119	i PN	Pn	11 56 05.3	+0.6
PRK	Paraskevi	1.49	345	ePN	Pn	11 56 06.3	-0.1
PRK				eSN	Sn	11 56 26.1	-0.2
AYVA	Ayvalik	1.50	358	i P	Pn	11 56 08.5	+2.0
MANT	Manisa	1.57	63	i P	Pn	11 56 10.3	+2.9
THR4	Thira Island,	1.73	220	ePb	Pb	11 56 12.2	+1.4
THR4	Thira Island,	1.73	220	ePb	Pb	11 56 12.2	+1.4
THR3	Thira Island,	1.77	219	ePb	Pb	11 56 12.7	+1.2
THR3	Thira Island,	1.77	219	ePb	Pb	11 56 12.6	+1.1
SANT	Santorini	1.77	217	ePn	Pn	11 56 10.5	+0.1
SANT				eSn	Sn	11 56 33.2	-0.2
SANT	Santorini	1.77	217	ePn	Pn	11 56 10.5	+0.1
SANT				eSn	Sn	11 56 33.2	-0.2
THR1	Thera Island	1.77	217	ePb	Pb	11 56 12.7	+1.2
THR1				eSb	Sb	11 56 37.4	+3.5
THR5	Thira Island,	1.79	220	ePb	Pb	11 56 13.1	+1.3
DENT	Denizli	1.79	91	PN	Pn	11 56 11.3	+0.6
DNZL	Cakiroluk	1.81	93	i P	Pn	11 56 11.7	+0.9
DALT	Dalyan (Mudla)	1.81	124	PN	Pn	11 56 11.7	+0.8
THR6	Thira Island,	1.81	218	ePb	Pb	11 56 13.6	+1.4
ARG	Arkhangelos	1.92	145	⇑iPN	Pn	11 56 12.7	+0.2
ARG				eSN	Sn	11 56 36.5	-0.6
BALB	Balikesir	2.03	25	PN	Pn	11 56 14.1	0.0
EZN	Ezine	2.05	350	ePN	Pn	11 56 13.8	-0.6
FETY	Fethiye	2.18	122	PN	Pn	11 56 17.5	+1.2
BTOK	Tokmak	2.19	26	i P	Pn	11 56 19.5	+3.2
CANB	Canakkale	2.22	6	PN	Pn	11 56 16.3	-0.5
KHL	Karahalli	2.23	76	ePN	Pn	11 56 17.2	+0.2
KARP	Karpathos	2.27	172	ePN	Pn	11 56 17.1	-0.4
GOLH	Golhisar	2.29	103	i P	Pn	11 56 19.5	+1.7
PTL	Penteli	2.31	277	⇓iPB	Pb	11 56 18.0	-2.7
DST	Dursunbey	2.31	38	ePN	Pn	11 56 19.0	+0.9
ATH	Athens Observa	2.42	275	⇓iPN	Pn	11 56 19.7	0.0
MPAR	Parnis Oros	2.42	279	ePB	Pb	11 56 19.9	-2.7
LIA	Limnos Island	2.43	330	ePN	Pn	11 56 19.8	0.0
GDZ	Gediz	2.48	58	i P	Sg	11 56 59.4	-2.4
LOS	Limnos	2.50	329	ePn	Pn	11 56 20.5	-0.4
LPK	Lapseki	2.57	360	ePN	Pn	11 56 21.2	-0.6
NAIG	Nisos Aigina	2.60	270	ePN	Pn	11 56 21.5	-0.8
NSAL	Nisos Salamina	2.62	273	ePN	Pn	11 56 22.0	-0.5
AOS	Alonnisos	2.65	302	ePn	Pn	11 56 23.5	+0.6
EDC	Edincik	2.68	18	ePN	Pn	11 56 23.0	-0.4
NPS	Neapolis	2.70	201	ePN	Pn	11 56 22.8	-0.9
NPS				eSN	Sn	11 56 54.9	-2.0
BNT	Bandirma	2.70	19	ePN	Pn	11 56 23.1	-0.6
ELL	Elmali	2.71	112	ePN	Pn	11 56 24.4	+0.5
AKAS	Kas	2.76	124	i P	Pn	11 56 30.1	+5.6
MGER	Gerania Oros	2.78	275	ePN	Pn	11 56 24.5	-0.4
ORLT	Orhaneli	2.79	36	ePN	Pn	11 56 24.9	0.0
KSL	Kastellorizon	2.79	125	ePb	Pb	11 56 27.0	-1.9
TKTP	Tekketepe	2.82	84	i P	Pn	11 56 26.1	+0.7
MRMT	Marmara Adasi	2.87	13	ePN	Pn	11 56 25.5	-0.6
ALT	Altintas	2.91	63	ePN	Pn	11 56 26.1	-0.5
IDI	Anoyia	2.93	212	Pn	Pn	11 56 26.8	-0.2
	5.5nm,0.3s,baz=41,slow=13,SNR=10						
IDI				Pg	Pg	11 56 34.5	-3.1
	12nm,0.3s,baz=39,slow=14,SNR=26						
IDI				Sn	Sn	11 57 03.7	+0.9
	18nm,0.3s,baz=288,slow=15,SNR=4.1						
IDI				Lg		11 57 12.6	
	22nm,0.3s,baz=128,slow=22,SNR=7.3						
IDI				LR	LR	11 57 36.5	
	comp=Z,416nm,20.4s,baz=60,slow=40						
IDI	Anoyia	2.93	212	Pg	Pg	11 56 34.5	-3.1
ISP	Isparta	2.96	88	ePN	Pn	11 56 28.1	+0.7
ISP	Isparta	2.96	88	ePn	Pn	11 56 26.5	-0.9
ULDT	Uludag	2.98	38	i P	Pn	11 56 37.6	+10
MFT	Murefte	3.01	7	ePN	Pn	11 56 27.3	-0.7
XRY	Khrisi	3.05	197	ePN	Pn	11 56 29.0	+0.4
BCK	Bucak	3.05	95	ePN	Pn	11 56 29.7	+1.1
LKR	Lokris	3.09	287	ePN	Pn	11 56 28.9	-0.3
ALN	Alexandroupoli	3.14	350	ePn	Pn	11 56 29.4	-0.5
ALN				eSn	Sn	11 57 07.3	-0.8
NEO	Neokhori	3.16	299	ePN	Pn	11 56 30.0	-0.2
VAM	Vamos	3.16	222	ePN	Pn	11 56 30.8	+0.6
XOR	Xorichti	3.21	300	ePn	Pn	11 56 31.3	+0.3
XOR				eSn	Sn	11 57 10.5	+0.7
PAIG	Paliouri	3.21	312	ePn	Pn	11 56 30.8	-0.2
PAIG				eSn	Sn	11 57 10.3	+0.4
VLI	Veliai	3.25	252	⇓iPN	Pn	11 56 30.2	-1.2
OUR	Ouranopolis	3.33	320	ePn	Pn	11 56 32.6	-0.1
OUR				eSn	Pg	11 56 45.7	0.0
KYTH	Kithira	3.35	244	ePb	Pb	11 56 35.2	-3.3
YLV	Yalova	3.42	35	ePN	Pn	11 56 34.5	+0.6
RDO	Rodhopi	3.47	344	ePN	Pn	11 56 34.4	-0.3
RDO				eSN	Sn	11 57 14.1	-2.4
CTT	Catalca	3.58	20	ePN	Pn	11 56 35.8	-0.3
ESKT	Eskisehir	3.62	61	i P	Pg	11 56 49.1	-2.4
GVD	Gavdhos	3.67	217	ePn	Pn	11 56 38.6	+1.3
GVD	Gavdhos	3.67	217	ePn	Pn	11 56 38.7	+1.3
AGG	Agios Georgios	3.69	291	ePn	Pn	11 56 38.1	+0.3
AGG				eSn	Sn	11 57 23.3	+1.2
HRT	Hereke	3.76	36	ePN	Pn	11 56 38.5	-0.2
ITM	Ithomi	3.90	262	ePN	Pn	11 56 41.5	+0.7
SOH	Sokhos	4.01	320	eSn	Sn	11 57 30.0	-0.2
SOH				eSn	Sn	11 57 31.6	+1.4
EVR	Evrytania	4.06	287	ePN	Pn	11 56 43.6	+0.7
SRS	Serrai	4.12	324	ePn	Pn	11 56 43.9	-0.1
SRS				eSn	Sn	11 57 32.3	-0.7
SRS	Serrai	4.12	324	ePn	Pn	11 56 43.8	-0.1
KIZT	Kizilcal	4.16	73	ePN	Pn	11 56 44.6	+0.2
NVR	Nevrokopi	4.20	329	ePN	Pn	11 56 44.6	-0.3
HENT	Hendek	4.40	45	i P	Pg	11 57 02.6	-4.3
GRG	Griva	4.62	314	ePn	Pn	11 56 51.3	+0.3
MEV	Metsovon	4.76	296	ePn	Pn	11 56 52.6	-0.3
SGKT	Sivrigoynuk	4.95	54	i P	Pg	11 57 14.2	-3.8
FNA	Florina	5.14	307	ePn	Pn	11 56 58.1	-0.1
FNA				eSn	Sn	11 57 58.5	-0.1
IGT	Igoumenitsa	5.33	291	ePn	Pn	11 57 01.1	+0.2
BR131	Keskin Array S	5.70	68	ePn	Pn	11 57 05.8	-0.4
	10nm,0.7s						
BR131	Keskin Array S	5.70	68	ePn	Pn	11 57 05.8	-0.4
	10nm,0.7s						
ELDT	Eldivan	5.83	61	i P	Pg	11 57 30.9	-4.5
BALT	Daday	6.32	52	i P	Pg	11 57 38.4	-6.8
ZAPS	Zavoj/Pirot	6.33	331	⇑iPn	Pn	11 57 05.5	-10
ZAPS				Sn	Sn	11 58 14.0	-15
SLUM		6.42	192	P	Pn	11 57 15.6	-0.8
SLUM				S	Sn	11 58 10.2	-21
HMAT	Matruh	6.70	178	P	Pn	11 57 17.2	-3.0
BOLS	Boljevac	7.04	330	⇓iPn	Pn	11 57 19.6	-5.5
MLR	Muntele Rosu	7.71	356	Pn	Pn	11 57 33.8	-0.7
	0.4nm,0.3s,baz=267,slow=6.9,SNR=7.2						
MLR				Lg		11 59 51.5	
	baz=200,slow=22,SNR=3.3						
MLR				LR	LR	12 00 22.3	
	comp=Z,359nm,19.1s,baz=234,slow=36						
MLR	Muntele Rosu	7.71	356	⇑P	Pn	11 57 34.1	-0.3
TIP	Timpagrande	7.97	283	ePn	Pn	11 57 37.0	-1.1
TIP	Timpagrande	7.97	283	ePn	Pn	11 57 37.0	-1.1
VRI	Vrincioaia	8.06	360	⇑P	P	11 57 42.8	+3.5
SWA1		8.56	186	⇑P	P	11 57 44.0	-2.3
SWA2		8.61	188	⇑P	P	11 57 44.9	-2.0
SWA2				S	Sn	11 59 01.4	-24
AMAG	Maghara	8.91	141	⇑P	P	11 57 48.5	-2.6
SUZ		9.40	146	⇓P	P	11 57 54.7	-3.3
BURAR	Bucovina Array	9.87	354	⇑P	P	11 58 07.4	+3.0
BURAR	Bucovina Array	9.87	354	⇑P	P	11 58 07.4	+3.0
ASF	Jabal al Asfar	10.02	121	Pn	P	11 58 04.2	-2.3
	0.7nm,0.3s,baz=281,slow=5.2,SNR=3.6						
ASF				Sn	S	11 59 59.1	-1.3
	0.5nm,0.3s,baz=162,slow=20,SNR=2.3						
EIL	Elat	10.59	138	Pn	P	11 58 12.4	-1.8
	0.6nm,0.3s,baz=328,slow=19,SNR=4.3						
GERES	GERESS Array B	14.55	324	Pn	P	11 59 15.1	+8.0
	0.2nm,0.3s,baz=135,slow=9.4,SNR=7.1						
MBDF	Montbardon	16.53	301	eP	P	11 59 40.5	+7.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	6.1nm,0.8s						
LPG	La Plagne	16.80	304	*e*P	P	11 59 43.9	+7.7
	6.4nm,0.7s						
LPL	La Plagne	16.82	304	*e*P	P	11 59 44.4	+8.0
FINES	FINESS Array B	23.67	359	P	P	12 00 51.9	+0.3
	2.0nm,0.9s,mb3.5,baz=164,slow=10,SNR=5.7						
HFS	Hagfors	23.85	344	LR	LR	12 11 20.2	
	comp=Z,254nm,18.8s,MS3.7,baz=144,slow=39						
NOA	NORSAR Array B	25.23	342	P	P	12 01 09.1	+2.5
	1.1nm,0.7s,mb3.5,baz=160,slow=11,SNR=4.2						
BVAR	Borovoye Array	33.61	49	P	P	12 02 23.0	+1.1
	0.2nm,0.3s,mb3.5,baz=243,slow=3.2,SNR=3.1						
MKAR	Makanchi Array	41.27	59	P	P	12 03 26.4	+0.1
	1.2nm,0.7s,mb3.6,baz=275,slow=6.9,SNR=7.4						
ILAR	Eielson Array	77.64	357	P	P	12 07 39.2	+2.2
	0.4nm,0.8s,mb3.4,baz=358,slow=4.6,SNR=6.2						

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*IDC **23** 11:56:35.7±3.0, 1.25N×97.44E, mb4.1/4, mb1 4.2/5, mb1mx3.9/17, mbtmp4.0/5, ML4.0/2, MS3.5/1, Ms1 3.5/1, ms1mx2.5/27, Error ellipse: s-maj=110.7km s-min=25.2km az=59.0*

*NEIC **23** 11:56:39.6±0.9, 1.21N×97.30E, h30^{km}, mb4.3/3, Error ellipse: s-maj=23.9km s-min=10.5km az=71.0*

ISC 23 11:56:37.7±1.2, **1.2N**±0.1×**97.3E**±0.2, **h30**^{km}, **n13, σ0^{s}53**/12, **mb4.2**/7, **MS3.5**/1, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.25	40	*e*Pn	Pn	11 57 56.9	+0.6
CMAR	Chiang Mai Arr	17.21	5	P	P	12 00 37.1	-0.6
	0.2nm,0.3s,baz=196,slow=13,SNR=3.7						
ENH	Enshi	31.13	21	P	P	12 02 55.1	-1.0
WRA	Warramunga Arr	41.97	122	P	P	12 04 27.7	-0.3
	1.4nm,0.6s,mb3.8,baz=301,slow=9.1,SNR=12						
WRAB	Tennant Creek	41.97	122	*e*P	P	12 04 27.9	-0.1
	3.9nm,0.6s,mb4.2						
KS15	Wonju Array Si	45.75	34	*e*P	P	12 04 58.6	+0.2
SONM	Songino Array	47.10	8	P	P	12 05 09.1	+0.3
	2.0nm,0.7s,mb4.1,baz=187,slow=8.0,SNR=12						
ULN	Ulaanbaatar	47.23	9	*e*P	P	12 05 09.8	-0.1
	2.8nm,1.0s,mb4.2						
MKAR	Makanchi Array	47.25	346	P	P	12 05 09.9	-0.1
	1.8nm,0.7s,mb4.1,baz=159,slow=8.0,SNR=12						
CBIJ	Chichi jima	50.13	55	LR	LR	12 23 26.0	
	comp=Z,56nm,20.7s,MS3.5,baz=334,slow=32						
STKA	Stephens Creek	53.30	132	P	P	12 05 56.6	+0.2
ZAL	Zalesovo	53.55	351	P	P	12 05 58.6	+0.7
	2.1nm,0.4s,mb4.4,baz=285,slow=5.1,SNR=9.9						
KBS	Kingsbay	87.92	349	P	P	12 09 29.3	+4.0
	3.3nm,0.7s,mb4.7						

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*ATH **23** 12:03:49.7, 37.75N×26.71E, h12^{km}±5^{km}, MD2.9/3*

*ISK **23** 12:03:49.4, 37.80N×26.89E, h26^{km}, MD2.8*

*CSEM **23** 12:03:49.2±0.1, 37.78N×26.89E, h18^{km}, MD2.8, Error ellipse: s-maj=2.1km s-min=1.7km az=98.0*

ISC 23 12:03:49.8±0.6, **37.79N**±0.03×**26.77E**±0.06, **h16**^{km}±7^{km}, **n15, σ0^{s}97**/22, **1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.10	146	⇑*i*PG	Pb	12 03 52.7	-0.5
SMG				*e*SG	Sb	12 03 54.8	-0.7
URLA	Izmir	0.58	347	*i* P	Pb	12 04 00.5	-0.6
URLA				*i* S	Sb	12 04 09.2	+0.3
BLCB	Balcova	0.63	20	*i* PG	Pb	12 04 01.8	-0.1
IZM	Izmir	0.72	33	*i* PG	Pb	12 04 03.4	-0.1
KDAG	Bornova	0.73	33	*i* P	Pb	12 04 04.2	+0.6
KDAG				*i* S	Sb	12 04 12.9	-0.2
BODT	Bodrum	0.85	149	PG	Pb	12 04 05.2	-0.4
BODT				SG	Sb	12 04 17.4	+0.9
AYDN	Tasoluk	0.89	98	*i* P	Pb	12 04 06.6	+0.3
AYDN				*i* S	Sb	12 04 18.8	+1.0
BDRM	Kayabasi	0.90	143	*i* P	Pb	12 04 02.1	-4.5
BDRM				*i* S	Sb	12 04 19.8	+1.6
MLSB	Milas	0.94	121	PG	Pb	12 04 06.2	-1.1
APE	Apeiranthos	1.22	234	*e*PN	Pn	12 04 12.9	+0.6
APE	Apeiranthos	1.22	234	*e*Pb	Pb	12 04 11.6	-0.4
APE	Apeiranthos	1.22	234	*e*Pn	Pn	12 04 12.9	+0.6
AKS	Akhisar	1.36	37	*e*PN	Pn	12 04 12.5	-1.8
YER	Yerkesik	1.37	118	*e*PN	Pn	12 04 13.0	-1.4
PRK	Paraskevi	1.50	345	*e*PB	Pb	12 04 18.7	+1.9
PRK				*e*SB	Sb	12 04 39.4	+3.9

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*NEIC **23** 12:07:27.9±1.1, 24.17S×66.95W, h162^{km}±15^{km}, mb4.1/1, Error ellipse: s-maj=18.9km s-min=9.7km az=104.0*

*IDC **23** 12:07:27.4±3.5, 24.17S×66.94W, h154^{km}±33^{km}, mb4.0/1, mb1 4.0/5, mb1mx3.6/17, mbtmp4.4/5, MS2.9/1, Ms1 3.0/1, ms1mx2.8/20, Error ellipse: s-maj=32.6km s-min=28.3km az=97.0*

ISC 23 12:07:26.9±1.5, **24.19S**±0.08×**66.9W**±0.2, **h163**^{km}±26^{km}, **n11, σ0^{s}67**/13, **mb4.0**/1, **Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	7.94	351	P	P	12 09 21.6	+1.2
	5.7nm,0.3s,baz=161,slow=8.7,SNR=122						
LPAZ				S	S	12 10 48.2	-0.8
	0.1nm,0.3s,baz=329,slow=20,SNR=3.8						
LPAZ				LR	LR	12 12 51.5	
	comp=Z,74nm,18.6s,baz=328,slow=41						
LPAZ	La Paz	7.94	351	*e*Pn	P	12 09 21.0	+0.6
LPAZ				*e*Sn	S	12 10 44.1	-4.9
SIV	San Ignacio	9.81	35	P	P	12 09 45.5	+0.4
	2.0nm,0.3s,baz=227,slow=13,SNR=26						
SIV				S	S	12 11 32.7	-0.6
	0.2nm,0.3s,baz=232,slow=19,SNR=3.7						
TRQA	Tornquist	14.45	164	*e*P	P	12 10 45.3	+0.5
	10nm,1.0s						
PLCA	Paso Flores	16.78	190	P	P	12 11 12.4	-1.2
	0.2nm,0.3s,baz=352,slow=12,SNR=3.1						
PLCA	Paso Flores	16.78	190	P	P	12 11 12.4	-1.2
PLCA				*e*P		12 11 12.9	
BDFB	Brasilia	19.66	68	P	P	12 11 45.5	+0.3
	3.7nm,0.3s,baz=250,slow=10.0,SNR=39						
BAO	Brasilia Array	19.69	68	P	P	12 11 45.0	-0.5
BOSA	Boshof	80.56	117	P	P	12 19 23.2	+0.5
	1.6nm,0.4s,mb4.0,baz=246,slow=5.1,SNR=7.9						
BOSA	Boshof	80.56	117	P	P	12 19 23.2	+0.5
MKAR	Makanchi Array	146.60	40	PKPbc	PKPbc	12 26 50.3	+1.7
	1.6nm,0.6s,baz=302,slow=3.4,SNR=18						

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*IDC **23** 12:15:56.8±1.4, 42.01S×173.83E, mb4.3/3, mb1 4.4/5, mb1mx4.1/14, mbtmp4.4/5, ML4.0/2, MS3.9/6, Ms1 3.9/6, ms1mx3.5/16, Error ellipse: s-maj=39.1km s-min=23.4km az=132.0*

*NEIC **23** 12:15:58.7, 41.99S×173.97E, h12^{km}, mb4.5/3, ML5.0(WEL), After WEL.*

NEIC Felt in Marlborough.

*WEL **23** 12:15:58.6±0.1, 41.98S×173.89E, h16^{km}±1^{km}, ML5.0/52, Error ellipse: s-maj=1.4km s-min=1.1km az=90.0*

WEL Felt from Wellington to Nelson, maximum reported intensity MM 4.

ISC 23 12:15:58.0±0.6, **42.01S**±0.03×**173.88E**±0.04, **h14**^{km}±4^{km}, **n72, σ1^{s}01**/79, **mb4.4**/4, **MS3.9**/5, **16C-8D, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.29	360	⇑P	Pg	12 16 03.6	-0.7
BSWZ				S	Sg	12 16 08.0	-0.6
BSWZ	Blackbirch Sta	0.29	360	⇑P*	Pb	12 16 03.6	-0.8
BSWZ				S*	Sb	12 16 08.0	-0.8
CMWZ	Cape Campbell	0.36	44	⇑P	Pg	12 16 05.7	+0.1
CMWZ				S	Sg	12 16 11.9	+1.2
CMWZ	Cape Campbell	0.36	44	⇑P*	Pb	12 16 05.7	+0.1
CMWZ				S*	Sb	12 16 10.9	+0.2
KHZ	Kahutara	0.48	211	⇓*e*P	Pb	12 16 08.6	+0.9
KHZ				S	Sb	12 16 16.7	+2.5
KHZ	Kahutara	0.48	211	⇑P*	Pb	12 16 08.6	+0.9
KHZ				S*	Sb	12 16 16.5	+2.3
TUWZ	Tuamarina	0.58	5	⇑P*	Pb	12 16 09.1	-0.2
TUWZ				S*	Sb	12 16 17.1	0.0
THZ	Tophouse	0.77	288	⇓P	Pb	12 16 13.1	+0.6
THZ	Tophouse	0.77	288	⇓P*	Pb	12 16 13.1	+0.5
THZ				S*	Sb	12 16 23.3	+0.8
TCW	Tory Channel	0.85	21	⇑P*	Pb	12 16 13.7	-0.3
TCW				*e*S*	Sb	12 16 24.7	-0.2
NNZ	Nelson	0.87	335	⇑P	Pb	12 16 14.1	-0.3
NNZ	Nelson	0.87	335	⇑P*	Pb	12 16 14.2	-0.2
NNZ				S*	Sb	12 16 25.8	+0.1
SNZO	South Karori	0.93	42	P	Pb	12 16 16.1	+0.7
SNZO				*e*Sn	Sn	12 16 30.1	+0.5
SNZO	South Karori	0.93	42	P*	Pb	12 16 16.1	+0.6
SNZO				*e*S*	Sb	12 16 28.8	+1.4
BHW	Baring Head	0.95	52	P	Pb	12 16 16.7	+0.9
BHW	Baring Head	0.95	52	P*	Pb	12 16 16.7	+0.9
WEL	Wellington	0.98	43	P	Pb	12 16 17.1	+0.8
WEL	Wellington	0.98	43	P*	Pb	12 16 17.1	+0.8
WEL				*e*S*	Sb	12 16 30.6	+1.8
MRW	Makara Radio	0.99	39	⇑P	Pb	12 16 16.9	+0.5
MRW	Makara Radio	0.99	39	⇑P*	Pb	12 16 16.9	+0.4
MRW				*e*S*	Sb	12 16 29.3	+0.2
MSWZ	Moikau Station	1.19	61	P	Pb	12 16 19.6	-0.1
MSWZ	Moikau Station	1.19	61	P*	Pb	12 16 19.6	-0.1
DUWZ	D'Urville Isla	1.20	2	⇑P*	Pb	12 16 19.8	-0.2
CAW	Cannon Point	1.27	45	P	Pb	12 16 21.1	0.0
CAW	Cannon Point	1.27	45	P*	Pb	12 16 21.1	0.0
PAWZ	Paruwai Farm	1.32	62	⇓P*	Pb	12 16 21.3	-0.7
KIW	Kapiti Island	1.38	35	P	Pn	12 16 23.1	+0.1
KIW	Kapiti Island	1.38	35	P*	Pb	12 16 23.1	0.0
KIW				S*	Sb	12 16 41.3	+0.8
LTZ	Lake Taylor	1.42	236	⇑P	Pn	12 16 24.7	+1.2
LTZ	Lake Taylor	1.42	236	⇑PN	Pn	12 16 24.7	+1.2
LTZ				SN	Sn	12 16 42.4	+0.4
MTW	Mount Morrison	1.48	56	P	Pn	12 16 23.3	-1.1
MTW	Mount Morrison	1.48	56	P*	Pb	12 16 23.3	-1.5
TRWZ	Traveller	1.49	66	PN	Pn	12 16 23.1	-1.3
QRZ	Quartz Range	1.56	319	P	Pn	12 16 26.4	+1.0
QRZ	Quartz Range	1.56	319	PN	Pn	12 16 26.4	+1.0
DSZ	Denniston Nort	1.57	279	⇓*e*P	Pn	12 16 27.7	+2.1
DSZ	Denniston Nort	1.57	279	⇓PN	Pn	12 16 27.7	+2.1
CRLZ	Canterbury Las	1.82	210	*e*P	Pn	12 16 28.7	-0.5
CRLZ	Canterbury Las	1.82	210	PN	Pn	12 16 28.6	-0.6
MRZ	Mangatainoka R	1.86	44	*e*P	Pn	12 16 28.7	-1.0
MRZ	Mangatainoka R	1.86	44	⇓PN	Pn	12 16 28.8	-1.0
MQZ	McQueen's Vall	1.92	208	P	Pn	12 16 29.5	-1.2
MQZ	McQueen's Vall	1.92	208	PN	Pn	12 16 29.5	-1.2
BFZ	Birch Farm	2.22	54	*e*PN	Pn	12 16 33.5	-1.5
WAZ	Wanganui	2.40	21	P	Pn	12 16 39.3	+1.8
WAZ	Wanganui	2.40	21	PN	Pn	12 16 38.9	+1.3
WVZ	Waitaha Valley	2.56	244	P	Pn	12 16 40.1	+0.4
RPZ	Rata Peaks	2.69	230	Pn	Pn	12 16 41.1	-0.5
	96nm,0.3s,baz=81,slow=1.6,SNR=471						
RPZ				Sn	Sn	12 17 13.7	-0.5
	214nm,0.3s,baz=21,slow=21,SNR=32						
RPZ	Rata Peaks	2.69	230	P	Pn	12 16 40.7	-0.9
RAEZ	Rainy Point	2.75	8	*e*P	Pn	12 16 45.0	+2.6
WNVZ	Wahianoa	2.98	27	P	Pn	12 16 45.7	-0.1
URZ	Urewera	4.49	35	Pn	Pn	12 17 05.5	-1.8
	2.3nm,0.3s,baz=226,slow=6.7,SNR=4.1						
URZ				Sn	Sn	12 18 12.8	+13
	16nm,0.3s,baz=110,slow=18,SNR=4.1						
RAO	Raoul Island	14.36	30	LR	LR	12 25 02.7	
	comp=Z,407nm,18.5s,baz=179,slow=38						
DZM	Mont Dzumac	20.84	340	P	P	12 20 41.1	-0.6
	9.3nm,1.0s,baz=111,slow=18,SNR=3.1						
DZM				LR	LR	12 27 34.7	
	comp=Z,198nm,19.6s,MS3.5,baz=353,slow=34						
STKA	Stephens Creek	27.57	281	LR	LR	12 32 38.6	
	comp=Z,198nm,19.0s,MS3.7,baz=206,slow=36						
CTA	Charters Tower	31.97	305	LR	LR	12 34 27.6	
	comp=Z,241nm,19.4s,MS3.9,baz=326,slow=35						
VNDA	Vanda	35.97	184	LR	LR	12 36 30.2	
	comp=Z,264nm,19.0s,MS4.0,baz=28,slow=34						
WB2	Warramunga Arr	39.92	291	*e*P	P	12 23 31.3	-2.1
WRAB	Tennant Creek	39.93	291	*e*P	P	12 23 31.5	-1.9
	7.7nm,0.8s,mb4.5						
WRA	Warramunga Arr	39.93	291	P	P	12 23 31.7	-1.7
	2.0nm,0.6s,mb4.0,baz=127,slow=7.9,SNR=34						
WRA				ScP		12 29 29.6	
	0.6nm,0.7s,baz=149,slow=3.4,SNR=9.1						
PMG	Port Moresby	40.08	316	P	P	12 23 33.8	-0.9
	9.7nm,0.7s,mb4.6,baz=162,slow=8.1,SNR=3.0						
PMG	Port Moresby	40.08	316	*e*P	P	12 23 34.1	-0.6
	16nm,0.9s,mb4.8						
CASY	Casey	41.84	213	*e*P	P	12 23 49.3	+0.8
	5.8nm,0.6s,mb4.4						
CASY				*e*		12 24 06.4	
MAW	Mawson	59.10	205	LR	LR	12 49 34.4	
	comp=Z,213nm,19.1s,MS4.3,baz=332,slow=34						
SYO	Syowa Base	64.25	197	⇓pP	pP	12 26 35.8	-2.7
VNA3	Neumayer Olymp	67.03	179	⇑*i*	P	12 26 56.3	+4.3
VNA2	Neumayer--Watz	67.38	180	⇑*i*	P	12 26 59.4	+5.2
SONM	Songino Array	107.48	319	PKiKP		12 34 24.6	
	3.2nm,0.8s,baz=104,slow=2.0,SNR=30						
YKA	Yellowknife Ar	118.74	30	PKP	PKPdf	12 34 44.3	-4.2
	0.3nm,0.5s,baz=240,slow=1.7,SNR=4.6						
DBIC	Dimbokro	144.79	182	PKP	PKPdf	12 35 37.3	-1.0
	3.3nm,0.8s,baz=162,slow=12,SNR=3.5						
ARCES	ARCESS Array B	147.92	340	PKPbc	PKPdf	12 35 43.5	+1.6
	2.0nm,0.7s,baz=45,slow=3.4,SNR=8.7						
FINES	FINESS Array B	152.59	326	PKPbc	PKPdf	12 35 52.2	+3.0
	0.6nm,0.6s,baz=90,slow=1.9,SNR=4.0						

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*ATH **23** 12:19:47.4, 37.72N×26.73E, h20^{km}±7^{km}, MD3.0/3*

*CSEM **23** 12:19:47.6±0.1, 37.80N×26.79E, h21^{km}±1^{km}, MD3.0, Error ellipse: s-maj=2.9km s-min=2.1km az=121.0*

*ISK **23** 12:19:48.3, 37.84N×26.75E, h33^{km}, MD2.9*

ISC 23 12:19:47.4±0.7, **37.77N**±0.03×**26.73E**±0.04, **h5**^{km}±7^{km}, **n14, σ0^{s}87**/22, **1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.10	125	⇑*i*PB	Pb	12 19 51.6	+0.2
SMG				*e*SB	Sb	12 19 53.8	-0.2
URLA	Izmir	0.60	350	*i* P	Pg	12 19 59.4	0.0
URLA				*i* S	Sg	12 20 08.2	+0.7
BLCB	Balcova	0.66	21	*i* PG	Pg	12 20 00.5	-0.2
IZM	Izmir	0.76	33	PG	Pg	12 20 02.2	-0.3
IZM				SG	Sg	12 20 12.4	-0.2
KDAG	Bornova	0.76	33	*i* P	Pg	12 20 02.5	-0.2
KDAG				*i* S	Sg	12 20 12.4	-0.4
BODT	Bodrum	0.84	147	PG	Pg	12 20 05.0	+0.8
BDRM	Kayabasi	0.90	141	*i* P	Pb	12 20 07.2	+2.1
BDRM				*i* S	Sg	12 20 18.5	+1.1
AYDN	Tasoluk	0.92	96	*i* P	Pb	12 20 05.4	0.0
AYDN				*i* S	Sg	12 20 17.4	-0.4
MLSB	Milas	0.95	119	*e*PG	Pg	12 20 05.9	-0.5
APE	Apeiranthos	1.18	234	*e*Pb	Pb	12 20 09.5	-0.5
APE	Apeiranthos	1.18	234	*e*Pn	Pn	12 20 09.9	-0.7
APE				*e*Sb	Sb	12 20 24.7	-0.7
YER	Yerkesik	1.39	117	*e*PN	Pn	12 20 12.3	-1.1
AKS	Akhisar	1.40	37	*e*PN	Pn	12 20 11.2	-2.4
PRK	Paraskevi	1.52	346	*e*PN	Pn	12 20 16.2	+0.8
PRK				*e*SN	Sn	12 20 37.3	+1.5

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*ATH **23** 12:25:55.7, 37.64N×27.03E, h23^{km}, MD3.1/3*

*CSEM **23** 12:25:56.9±0.1, 37.81N×26.77E, h21^{km}±1^{km}, MD2.9, Error ellipse: s-maj=3.9km s-min=2.1km az=92.0*

*ISK **23** 12:25:57.1, 37.84N×26.71E, h29^{km}, MD2.9*

ISC 23 12:25:58.5±0.7, **37.79N**±0.03×**26.76E**±0.07, **h20**^{km}±6^{km}, **n15, σ1^{s}02**/24, **1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.10	141	⇑*i*PB	Pb	12 26 00.8	-1.6
SMG				*e*SB	Sb	12 26 04.6	-0.5
URLA	Izmir	0.59	347	*i* P	Pb	12 26 10.5	+0.5
URLA				*i* S	Sb	12 26 19.3	+1.5
BLCB	Balcova	0.64	20	*i* PG	Pb	12 26 09.7	-1.1
BLCB				SG	Sb	12 26 19.0	-0.3
IZM	Izmir	0.73	33	PG	Pb	12 26 11.9	-0.4
IZM				SG	Sb	12 26 22.2	+0.3
KDAG	Bornova	0.73	33	*i* P	Pb	12 26 12.6	+0.2
KDAG				*i* S	Sb	12 26 22.6	+0.5
BODT	Bodrum	0.84	149	PG	Pb	12 26 14.0	-0.3
BODT				SG	Sb	12 26 26.8	+1.6
AYDN	Tasoluk	0.90	98	*i* P	Pb	12 26 14.6	-0.6
AYDN				*i* S	Sb	12 26 27.5	+0.8
BDRM	Kayabasi	0.90	143	*i* P	Pb	12 26 16.5	+1.2
BDRM				*i* S	Sb	12 26 28.3	+1.5
MLSB	Milas	0.95	121	PG	Pb	12 26 15.5	-0.5
APE	Apeiranthos	1.21	234	*e*PN	Pn	12 26 19.2	-1.3
APE	Apeiranthos	1.21	234	*e*PN	Pn	12 26 20.8	+0.3
AKS	Akhisar	1.37	37	*e*PN	Pn	12 26 20.8	-2.0
YER	Yerkesik	1.38	118	PN	Pn	12 26 21.7	-1.1
PRK	Paraskevi	1.51	345	*e*PN	Pn	12 26 26.3	+1.6
PRK				*e*SN	Sn	12 26 48.6	+4.7
DALT	Dalyan (Mudla)	1.81	124	*e*PN	Pn	12 26 28.3	-0.7

IDC 23 12:35:31.8±33.0, **24.45S**×**179.17W**, **h235**^{km}±265^{km}, **mb3.3**/2, **mb1 3.7**/2, **mb1mx3.2**/13, **mbtmp3.8**/2, **Error ellipse: s-maj=256.5km s-min=69.1km az=139.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.13	266	P	P	12 43 09.4	-1.5
	1.1nm,0.6s,baz=105,slow=8.1,SNR=9.4						
ILAR	Eielson Array	92.39	13	P	P	12 48 15.2	-1.1
	0.4nm,0.9s,baz=225,slow=5.3,SNR=4.5						
MKAR	Makanchi Array	113.08	312	PKiKP		12 53 41.4	
	0.2nm,0.5s,baz=90,slow=2.9,SNR=3.4						
BVAR	Borovoye Array	121.35	318	PKP	PKPdf	12 53 57.7	+0.9
	0.6nm,0.6s,baz=90,slow=1.5,SNR=4.5						
NB2	NORSAR Subarra	142.74	352	PKPabc	PKPdf	12 54 35.0	-1.3
	2.4nm,1.1s,baz=16,slow=3.1						
NOA	NORSAR Array B	142.74	352	PKP	PKPdf	12 54 35.5	-0.8
	3.5nm,0.9s,baz=13,slow=2.4,SNR=6.0						
AKASG	Malin Array Be	145.84	327	PKPbc	PKPbc	12 54 41.0	-2.2
	0.2nm,0.3s,baz=45,slow=1.3,SNR=4.3						

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*MOS **23** 12:36:58.0±1.4, 7.51N×94.31E, h33^{km}, mb4.9/14, Error ellipse: s-maj=17.5km s-min=8.2km az=104.5*

*NEIC **23** 12:36:59.2±0.4, 7.49N×94.26E, h30^{km}, mb4.7/18, Error ellipse: s-maj=11.5km s-min=7.4km az=54.0*

*BJI **23** 12:36:59.2, 7.36N×93.93E, h45^{km}, mB5.0, mb4.6, Ms5.0, Msz4.6*

*IDC **23** 12:37:01.8±5.2, 7.52N×94.29E, h54^{km}±46^{km}, mb3.9/17, mb1 4.1/18, mb1mx4.0/21, mbtmp4.2/18, ML4.5/1, MS4.3/8, Ms1 4.4/8, ms1mx4.0/22, Error ellipse: s-maj=26.0km s-min=14.5km az=64.0*

ISC 23 12:36:57.7±0.4, **7.42N**±0.05×**94.36E**±0.05, **h33**^{km}, **n85, σ1^{s}29**/89, **mb4.5**/44, **MS4.5**/14, **3C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.61	108	*e*Pn	Pn	12 38 34.0	-1.2
KULM				*e*Sn	Sn	12 39 47.2	-2.8
IPM	Ipoh	7.21	113	P	P	12 38 42.6	-0.8
KGM	Kluang	10.42	121	P	P	12 39 26.0	-2.0
CM31	Chiang Mai Arr	11.84	22	*e*P	P	12 39 46.9	-0.4
	23nm,0.8s						
CMAR	Chiang Mai Arr	11.84	22	P	P	12 39 47.6	+0.3
	0.9nm,0.3s,baz=212,slow=15,SNR=18						
CMAR				LR	LR	12 44 19.5	
	comp=Z,2µm,18.9s,baz=209,slow=37						
PALK	Pallekele	13.54	270	P	P	12 40 02.9	-7.1
MDRS	Chennai	14.97	293	*e*P	P	12 40 28.0	-0.7
MDRS				*e*x	x	12 44 12.0	
KSM	Kuching	16.96	110	*e*P	P	12 40 58.1	+4.0
SHL	Shillong	18.20	353	*e*P	P	12 41 11.5	+1.9
QIZ	Qiongzhong	18.96	51	P	P	12 41 22.9	+3.9
QIZ				S	S	12 44 58.0	+12
QIZ				LR	LR		
	comp=N,6µm,12.9s						
QIZ				LR	LR		
	comp=E,2µm,13.3s						
QIZ				LR	LR		
	comp=Z,1µm,12.9s						
KMI	Kunming	19.34	24	P	P	12 41 26.0	+2.8
KMI				AP		12 41 36.8	
KMI				S	S	12 45 01.0	+6.8
KMI				AMB	AMB		
	comp=Z,20nm,1.1s						
KMI				LR	LR		
	comp=N,930nm,12.1s						
KMI				LR	LR		
	comp=E,720nm,12.4s						
KMI				LR	LR		
	comp=Z,1µm,15.7s						
KKM	Kota Kinabalu	21.75	92	P	P	12 41 53.2	+4.8
PKI	Pulchoki	21.76	338	*e*P	P	12 41 48.7	+0.3
	comp=Z,47nm,0.7s,mb5.0						
PKI	Pulchoki	21.76	338	*e*P	P	12 41 48.7	+0.3
PKI				pmax	pmax		
	comp=Z,24nm,0.7s,mb4.7						
GUN	Gumba	21.90	340	*e*P	P	12 41 48.6	-1.2
	comp=Z,121nm,1.0s,mb5.3						
DMN	Daman	21.91	338	*e*P	P	12 41 49.0	-0.8
	comp=Z,100nm,0.9s,mb5.3						
KKN	Kakani	22.00	338	*e*P	P	12 41 49.7	-1.1
GYA	Guiyang	22.26	30	⇑*i*P	P	12 41 58.1	+4.7
GYA				S	S	12 46 02.4	+11
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
GYA				LR	LR		
	comp=N,2µm,15.0s,MS4.9						
GYA				LR	LR		
	comp=E,3µm,14.7s,MS4.9						
GYA				LR	LR		
	comp=Z,1µm,13.5s,MS4.5						
LSA	Lhasa	22.36	353	*e*P	P	12 41 54.9	+0.5
LSA				pmax	pmax		
	comp=Z,31nm,0.8s,mb4.8						
LSA	Lhasa	22.36	353	*e*P	P	12 41 54.9	+0.5
	comp=Z,31nm,0.8s,mb4.8						
GKN	Gorkha	22.44	337	*e*P	P	12 41 54.4	-0.7
	comp=Z,78nm,0.8s,mb5.2						
KOLN	Koldanda	22.66	335	*e*P	P	12 41 57.4	0.0
	comp=Z,42nm,0.8s,mb4.9						
CD2	Chengdu	24.97	19	P	P	12 42 21.4	+1.6
CD2				AP		12 42 30.8	
CD2				PP	PP	12 43 01.6	+4.1
CD2				S	S	12 46 40.5	+1.8
CD2				SS	SS	12 47 40.0	+1.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
CD2				AMB	AMB		
	comp=Z,200nm,3.2s						
CD2				LR	LR		
	comp=E,2µm,10.7s						
CD2				LR	LR		
	comp=Z,1µm,13.4s,MS4.5						
LGTI	Lohaghat	25.62	331	*e*P	P	12 42 26.0	0.0
ENH	Enshi	26.80	30	P	P	12 42 32.7	-4.2
	comp=Z,20nm,1.3s,mb4.5						
DDI	Dehra Dun	27.43	328	*e*P	P	12 42 40.7	-2.0
LZH	Lanzhou	29.82	16	*e*P	P	12 43 10.6	+6.6
LZH				AP	pP	12 43 17.9	+4.3
LZH				XP	sP	12 43 21.5	+3.5
LZH				PP	PP	12 44 06.4	+4.9
LZH				*e*S	S	12 48 03.0	+5.8
LZH				XS		12 48 15.3	
LZH				SS	SS	12 49 38.1	+4.5
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,80nm,4.0s						
LZH				LR	LR		
	comp=E,2µm,12.0s						
LZH				LR	LR		
	comp=Z,2µm,14.4s,MS4.8						
GTA	Gaotai	32.22	8	*e*P	P	12 43 25.3	+0.1
FITZ	Fitzroy Crossi	39.96	130	LR	LR	13 02 31.8	
	comp=Z,455nm,20.7s,MS4.3,baz=287,slow=38						
MKAR	Makanchi Array	40.57	347	P	P	12 44 34.8	-0.9
	comp=Z,4.7nm,0.5s,mb4.3,baz=164,slow=7.9,SNR=43						
MKAR				LR	LR	13 05 01.0	
	comp=Z,184nm,19.5s,MS3.9,baz=174,slow=42						
SONM	Songino Array	41.55	12	P	P	12 44 44.3	+0.5
	comp=Z,2.1nm,0.9s,mb3.8,baz=198,slow=7.8,SNR=12						
SONM				PcP	PcP	12 46 42.1	+0.7
	comp=Z,0.4nm,0.3s,baz=211,slow=3.9,SNR=2.8						
SONM				LR	LR	13 03 05.3	
	comp=Z,399nm,19.7s,MS4.3,baz=191,slow=38						
ULN	Ulaanbaatar	41.73	13	*e*P	P	12 44 44.2	-1.0
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
ULN	Ulaanbaatar	41.73	13	*e*P	P	12 44 44.2	-1.0
	comp=Z,3.5nm,0.9s,mb4.0						
ZAK	Zakamensk	43.46	8	*e*P	P	12 44 54.9	-4.5
ZAK				*e*		12 46 47.2	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.5						
ZAL	Zalesovo	47.02	352	P	P	12 45 28.3	+0.7
	comp=Z,4.7nm,0.3s,mb4.8,baz=317,slow=4.3,SNR=16						

ZAL				LR	LR	13 10 25.5	
	comp=Z,436nm,19.2s,MS4.4,baz=289,slow=43						
WRA	**Warramunga Arr**	**47.83**	**125**	P	**P**	**12 45 34.8**	**+0.3**
	comp=Z,0.9nm,0.4s,mb4.2,baz=305,slow=8.5,SNR=27						
WRAB	**Tennant Creek**	**47.83**	**125**	*e*P	**P**	**12 45 34.6**	**+0.1**
NVS	**Novosibirsk**	**48.12**	**351**	*e*P	**P**	**12 45 33.3**	**-3.0**
NVS				pmax	pmax		
	comp=N,9.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
MJAR	**Matsushiro Arr**	**49.31**	**47**	P	**P**	**12 45 45.9**	**+0.2**
	comp=Z,0.4nm,0.3s,mb3.9,baz=108,slow=41,SNR=2.8						
MJAR				LR	LR	13 09 03.1	
	comp=Z,330nm,18.1s,MS4.4,baz=240,slow=39						
BVAR	**Borovoye Array**	**49.48**	**341**	P	**P**	**12 45 45.7**	**-1.1**
	comp=Z,1.7nm,0.5s,mb4.3,baz=141,slow=9.5,SNR=14						
KAMS	**Al Khamasin**	**49.80**	**290**	P	**P**	**12 45 50.2**	**+0.5**
ZRNK	**Zerenda**	**49.87**	**340**	*e*P	**P**	**12 45 48.2**	**-1.6**
ZRNK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
ZRNK	**Zerenda**	**49.87**	**340**	*e*P	**P**	**12 45 48.2**	**-1.6**
	comp=Z,6.4nm,0.8s,mb4.7						
AFFS	**‘Afif**	**51.79**	**295**	P	**P**	**12 46 06.1**	**+1.3**
SVE	**Sverdlovsk**	**55.90**	**338**	*e*P	**P**	**12 46 34.0**	**-0.5**
SVE				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.4						
SVE				MLR	MLR		
	comp=N,200nm,17.0s,MS4.3						
SVE				MLR	MLR		
	comp=E,100nm,17.0s,MS4.3						
SVE				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.5						
ARU	**Arti**	**56.38**	**337**	*e*P	**P**	**12 46 36.8**	**-1.2**
ARU				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
ARU	**Arti**	**56.38**	**337**	*e*P	**P**	**12 46 36.8**	**-1.2**
	comp=Z,21nm,1.1s,mb5.1						
KIV	**Kislovodsk**	**57.79**	**318**	*e*P	**P**	**12 46 53.8**	**+5.6**
KIV				pmax	pmax		
	comp=N,9.0nm,0.9s						
KIV				pmax	pmax		
	comp=E,6.0nm,0.9s						
KIV				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
KIV				MLR	MLR		
	comp=N,118nm,19.0s,MS4.2						
KIV				MLR	MLR		
	comp=E,128nm,19.0s,MS4.2						
KIV				MLR	MLR		
	comp=Z,118nm,19.0s,MS4.0						
SOKR	**Solikamsk**	**59.29**	**339**	*e*P	**P**	**12 46 59.6**	**+1.2**
SOKR				S	**S**	**12 55 03.3**	**+0.6**
SOKR				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.0						
SOKR				MLR	MLR		
	comp=Z,450nm,20.0s,MS4.6						
STKA	**Stephens Creek**	**59.64**	**134**	P	**P**	**12 46 59.5**	**-1.8**
	comp=Z,1.4nm,0.6s,mb4.1,baz=102,slow=16,SNR=2.6						
STKA	**Stephens Creek**	**59.64**	**134**	P	**P**	**12 47 01.0**	**-0.3**
BR131	**Keskin Array S**	**62.88**	**311**	P	**P**	**12 47 18.1**	**-4.9**
	comp=Z,2.8nm,0.8s,mb4.4						
OBN	**Obninsk**	**65.87**	**328**	*e*P	**P**	**12 47 43.6**	**+1.5**
OBN				*e*		12 48 01.7	
OBN				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.1						
OBN	**Obninsk**	**65.87**	**328**	P	**P**	**12 47 42.8**	**+0.6**
	comp=Z,30nm,1.3s,mb5.2						
TIXI	**Tiksi**	**67.63**	**11**⇑	*i*P	**P**	**12 47 51.0**	**-2.0**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
AKASG	**Malin Array Be**	**68.64**	**322**	P	**P**	**12 47 57.0**	**-2.6**
	comp=Z,0.3nm,0.4s,mb3.6,baz=103,slow=4.1,SNR=2.9						
LVV	**L’vov**	**71.69**	**320**	*e*P	**P**	**12 48 29.0**	**+11**
APA	**Apatity**	**72.34**	**339**⇓	*e*P	**P**	**12 48 20.8**	**-0.9**
APA				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
APA				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.8						
FINES	**FINESS Array B**	**73.21**	**332**	P	**P**	**12 48 26.0**	**-1.0**
	comp=Z,1.7nm,0.5s,mb4.2,baz=92,slow=4.2,SNR=18						
KAF	**Kangasniemi**	**73.29**	**333**	*e*p	**P**	**12 48 26.8**	**-0.6**
	comp=Z,1.8nm,0.5s,mb4.3,baz=104,slow=5.6						
KAF	**Kangasniemi**	**73.29**	**333**	*e*P	**P**	**12 48 26.8**	**-0.6**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
LBTB	**Lobatse**	**74.22**	**241**	*e*P	**P**	**12 48 34.6**	**+1.1**
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LBTB	**Lobatse**	**74.22**	**241**	*e*P	**P**	**12 48 34.6**	**+1.1**
	comp=Z,4.6nm,0.8s,mb4.5						
KEV	**Kevo**	**75.33**	**341**	*e*p	**P**	**12 48 40.3**	**+1.2**
BOSA	**Boshof**	**75.53**	**238**	P	**P**	**12 48 42.3**	**+1.3**
	comp=Z,2.7nm,0.6s,mb4.4,baz=64,slow=6.6,SNR=7.9						
ARCES	**ARCESS Array B**	**75.76**	**340**	P	**P**	**12 48 41.6**	**+0.1**
	comp=Z,2.2nm,0.7s,mb4.2,baz=90,slow=4.9,SNR=7.2						
ARCES				LR	LR	13 25 00.9	
	comp=Z,413nm,21.5s,MS4.7,baz=114,slow=38						
BILL	**Bilibino**	**76.42**	**22**	P	**P**	**12 48 48.0**	**+2.7**
BILL				*e*		12 48 54.8	
MAW	**Mawson**	**78.14**	**192**	P	**P**	**12 48 56.5**	**+1.6**
	comp=Z,1.2nm,0.4s,mb4.2,baz=32,slow=14,SNR=4.9						
GERES	**GERESS Array B**	**78.30**	**318**	P	**P**	**12 48 55.2**	**-1.0**
	comp=Z,0.9nm,0.5s,mb3.9,baz=90,slow=5.3,SNR=9.7						
GERES				LR	LR	13 28 14.3	
	comp=Z,144nm,21.9s,MS4.3,baz=249,slow=39						
CLL	**Collm**	**78.84**	**321**	P	**P**	**12 49 01.0**	**+1.9**
HFS	**Hagfors**	**78.95**	**330**	P	**P**	**12 48 58.2**	**-1.2**
	comp=Z,2.4nm,0.5s,mb4.4,baz=104,slow=6.1,SNR=18						
GRA1	**Grafenberg Arr**	**79.94**	**319**	*e*P	**P**	**12 49 06.3**	**+1.2**
	comp=Z,7.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**79.94**	**319**	*e*P	**P**	**12 49 06.3**	**+1.2**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**79.94**	**319**	*e*P	**P**	**12 49 06.3**	**+1.2**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**79.94**	**319**	*e*P	**P**	**12 49 06.3**	**+1.2**
	comp=Z,7.0nm,1.0s,mb4.5						
NB2	**NORSAR Subarra**	**80.22**	**331**	P	**P**	**12 49 04.0**	**-2.3**
	comp=Z,1.1nm,0.7s,mb3.9,baz=93,slow=5.8						
NOA	**NORSAR Array B**	**80.22**	**331**	P	**P**	**12 49 04.2**	**-2.1**
	comp=Z,1.2nm,0.8s,mb3.9,baz=91,slow=5.7,SNR=3.9						
LPG	**La Plagne**	**83.08**	**315**	*e*P	**P**	**12 49 22.6**	**+1.1**
	comp=Z,13nm,0.9s,mb4.7						
LPG	**La Plagne**	**83.08**	**315**	*e*P	**P**	**12 49 22.6**	**+1.1**
LPG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
SYO	**Syowa Base**	**85.04**	**197**	⇑P	**P**	**12 49 32.2**	**+1.4**
EKA	**Eskdalemuir Ar**	**88.21**	**325**	P	**P**	**12 49 46.1**	**-0.4**
	comp=Z,1.3nm,0.7s,mb4.3,baz=98,slow=5.9,SNR=5.1						
IMA	**Indian Mountai**	**91.96**	**22**	*e*P	**P**	**12 50 07.7**	**+3.8**
	comp=Z,15nm,0.8s,mb5.4						
ILAR	**Eielson Array**	**95.08**	**22**	P	**P**	**12 50 19.1**	**+0.9**
	comp=Z,0.4nm,0.7s,mb4.0,baz=297,slow=4.5,SNR=4.6						
PLCA	**Paso Flores**	**144.20**	**200**	PKP	PKPdf	12 56 32.0	+1.5
	comp=Z,2.1nm,0.8s,baz=202,slow=6.1,SNR=5.7						
CPUP	**Villa Florida**	**147.15**	**232**	PKPbc	PKPdf	12 56 40.3	+4.3
	comp=Z,2.3nm,0.7s,baz=130,slow=3.0,SNR=5.5						

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*NEIC **23** 12:40:00.4, 37.63N×27.03E, h24^{km}, MD3.2(ATH), After ATH.*
*ATH **23** 12:40:02.8, 37.69N×26.81E, h19^{km}, MD3.2/3*
*CSEM **23** 12:40:02.9±0.1, 37.83N×26.76E, h20^{km}, MD3.2, Error ellipse: s-maj=3.6km s-min=2.0km az=90.0*
*ISK **23** 12:40:03.4, 37.88N×26.74E, h28^{km}, MD3.2*
ISC 23 12:40:03.0±0.7**, 37.81N**±0.03×**26.73E**±0.06**, h11**^{km}±5^{km}**, n23, σ1^{s}21**/33**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.13**	**139**	*e*PB	**Pb**	**12 40 06.6**	**-0.3**
SMG				*e*SB	**Sb**	**12 40 08.5**	**-0.9**
URLA	**Izmir**	**0.56**	**349**	*i* P	**Pg**	**12 40 14.6**	**+0.2**
URLA				*i* S	**Sg**	**12 40 23.0**	**+0.9**
BLCB	**Balcova**	**0.63**	**23**	*i* PG	**Pg**	**12 40 15.4**	**-0.3**
BLCB				SG	**Sg**	**12 40 24.0**	**-0.2**
IZM	**Izmir**	**0.72**	**35**	PG	**Pg**	**12 40 17.3**	**-0.3**
KDAG	**Bornova**	**0.73**	**35**	*i* P	**Pb**	**12 40 17.6**	**+0.3**
KDAG				*i* S	**Sb**	**12 40 27.9**	**+0.9**
BODT	**Bodrum**	**0.87**	**148**	PG	**Pg**	**12 40 20.5**	**-0.1**
BODT				SG	**Sg**	**12 40 33.5**	**+1.2**
AYDN	**Tasoluk**	**0.92**	**99**	*i* P	**Pb**	**12 40 20.0**	**-0.4**
AYDN				*i* S	**Sb**	**12 40 33.3**	**+0.8**
BDRM	**Kayabasi**	**0.93**	**142**	*i* P	**Pb**	**12 40 21.2**	**+0.6**
BDRM				*i* S	**Sb**	**12 40 34.0**	**+1.2**
MLSB	**Milas**	**0.97**	**121**	PG	**Pg**	**12 40 22.3**	**-0.3**
APE	**Apeiranthos**	**1.21**	**233**	PN	**Pn**	**12 40 25.7**	**-0.1**
APE	**Apeiranthos**	**1.21**	**233**	*e*Pn	**Pn**	**12 40 25.6**	**-0.2**
AKS	**Akhisar**	**1.37**	**38**	PN	**Pn**	**12 40 27.0**	**-1.1**
YER	**Yerkesik**	**1.40**	**118**	PN	**Pn**	**12 40 28.4**	**-0.2**
PRK	**Paraskevi**	**1.48**	**346**	*e*Pn	**Pn**	**12 40 32.3**	**+2.6**
PRK				*e*Sn	**Sn**	**12 40 52.3**	**+3.1**
AYVA	**Ayvalik**	**1.50**	**359**	*i* P	**Pn**	**12 40 31.9**	**+1.9**
AYVA				*i* S	**Sb**	**12 40 53.5**	**+4.2**
MANT	**Manisa**	**1.59**	**64**	*i* P	**Pn**	**12 40 34.3**	**+3.0**
MANT				*i* S	**Sb**	**12 40 52.6**	**+0.6**
DALT	**Dalyan (Mudla)**	**1.84**	**124**	PN	**Pn**	**12 40 33.9**	**-0.9**
ARG	**Arkhangelos**	**1.94**	**144**	*e*Pn	**Pn**	**12 40 30.0**	**-6.3**
BALB	**Balikesir**	**2.04**	**26**	*e*PN	**Pn**	**12 40 35.4**	**-2.3**
FETY	**Fethiye**	**2.21**	**121**	*e*PN	**Pn**	**12 40 39.8**	**-0.4**
CANB	**Canakkale**	**2.22**	**7**	*e*PN	**Pn**	**12 40 38.1**	**-2.2**
DST	**Dursunbey**	**2.33**	**39**	*e*PN	**Pn**	**12 40 40.2**	**-1.7**
BNT	**Bandirma**	**2.71**	**20**	*e*PN	**Pn**	**12 40 44.8**	**-2.5**

IDC 23 12:40:29.2±17.0**, 7.23N×95.03E, h102**^{km}±104^{km}**, mb3.3**/4**, mb1 3.3**/5**, mb1mx3.2**/19**, mbtmp3.6**/5**, ML4.3**/1**, Error ellipse: s-maj=166.8km s-min=79.3km az=173.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.79**	**18**	P	P	12 43 14.0	-1.3
	0.6nm,0.3s,baz=212,slow=14,SNR=8.5						
MKAR	**Makanchi Array**	**40.91**	**347**	P	P	12 48 02.0	-0.9
	0.6nm,0.5s,baz=158,slow=7.1,SNR=4.0						
SONM	**Songino Array**	**41.61**	**12**	P	P	12 48 06.7	-1.9
	0.2nm,0.3s,baz=202,slow=7.8,SNR=2.0						
BVAR	**Borovoye Array**	**49.88**	**341**	P	P	12 49 12.5	-1.6
	0.3nm,0.5s,baz=135,slow=6.1,SNR=2.4						
FINES	**FINESS Array B**	**73.69**	**332**	P	P	12 51 51.2	-2.1
	1.3nm,0.9s,baz=185,slow=21,SNR=2.7						

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*HRVD **23** 12:44:38.9±0.1, 29.35S×112.58W, h12^{km}, MW5.5/68, Centroid moment Tensor Solution. LP body waves: s64,c131;Mantle waves: s68,c163; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.85±.03; $M_{\theta\theta}$0.07±.03; $M_{\phi\phi}$1.78±.03; $M_{r\theta}$-0.07±.07; $M_{\theta\phi}$-0.85±.02; $M_{\phi r}$-0.08±.07; Best double couple: $M_0$1.995×10^{17} NP1: ϕ_s154°, δ44°, λ-95°. NP2: ϕ_s341°, δ46°, λ-85°. Principal axes: T 2.133, Plg1°, Azm68°; N -.272, Plg3°, Azm158°; P -1.856, Plg86°, Azm326°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **23** 12:44:38.9±0.2, 29.26S×112.51W, h10^{km}, mb5.2/61, MS4.9/71, MW5.3 Error ellipse: s-maj=8.2km s-min=5.3km az=85.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.16; $M_{\theta\theta}$0.02; $M_{\phi\phi}$1.14; $M_{r\theta}$0.50; $M_{\theta\phi}$-0.28; $M_{\phi r}$-0.10; Best double couple: $M_0$1.3×10^{17} NP1: ϕ_s185°, δ43°, λ-61°. NP2: ϕ_s328°, δ53°, λ-114°. Principal axes: T 1.22, Plg5°, Azm75°; N .12, Plg19°, Azm343°; P -1.34, Plg70°, Azm180°;*
*BJI **23** 12:44:38.8, 29.30S×112.50W, h10^{km}, mB5.6, Ms5.6, Msz5.2*
*MOS **23** 12:44:39.1±1.1, 28.86S×112.38W, h10^{km}, mb5.3/32, MS4.8/18, Error ellipse: s-maj=19.0km s-min=8.1km az=88.9*
*IDC **23** 12:44:39.3±0.5, 28.92S×112.35W, mb4.5/18, mb1 4.7/19, mb1mx4.7/21, mbtmp4.5/19, ML3.9/1, MS4.9/16, Ms1 4.8/16, ms1mx4.8/16, Error ellipse: s-maj=19.1km s-min=15.8km az=100.0*
ISC 23 12:44:37.9±0.3**, 29.10S**±0.05×**112.46W**±0.08**, h10**^{km}**, n277, σ0^{s}97**/171**, mb5.0**/77**, MS5.0**/97**, 11C-6D, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**3.39**	**55**	Pn	**Pn**	**12 45 30.5**	**-1.4**
	12nm,0.3s,baz=239,slow=12,SNR=2.3						
RPN	**Rapa Nui**	**3.39**	**55**	*e*Pn	**Pn**	**12 45 34.4**	**+2.5**
RKT	**Rikitea**	**21.06**	**281**	*e*LQ		12 53 26.9	
	11μm,25.8s						
RKT				*e*LR	LR	12 54 07.6	
	11μm,27.2s,baz=118						
TAOE	**Nuku Hiva Isla**	**32.88**	**302**	*e*LQ		12 58 37.0	
	5μm,30.3s						
TAOE				*e*LR	LR	13 00 01.0	
	14μm,25.0s,baz=145						
TBI	**Tubuai**	**33.59**	**271**	*e*S	**S**	**12 56 38.5**	**-3.3**
	664nm,25.5s						
TBI				*e*LQ		12 58 55.2	
	4μm,27.8s						
TBI				*e*LR	LR	12 59 49.0	
	12μm,27.2s,baz=104						
PPT	**Papeete**	**35.82**	**280**	*e*P	**P**	**12 51 23.0**	**-17**
	158nm,25.5s						
PPT				*e*PP	PP	12 52 53.3	-7.5
	243nm,25.8s						
PPT				*e*S	**S**	**12 57 08.2**	**-8.2**
	500nm,27.8s						
PPT				*e*LQ		12 59 25.1	
	3μm,30.0s						
PPT				*e*LR	LR	13 00 40.1	
	11μm,27.2s,baz=111						
PPT	**Papeete**	**35.82**	**280**	LR	LR	13 01 05.6	
	comp=Z,699nm,21.7s,MS4.4,baz=107,slow=28						
PLCA	**Paso Flores**	**35.96**	**120**	P	**P**	**12 51 44.2**	**+3.6**
PLCA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PLCA	**Paso Flores**	**35.96**	**120**	P	**P**	**12 51 44.6**	**+4.0**
	comp=Z,1.6nm,0.9s,mb3.9,baz=259,slow=10,SNR=2.4						
PLCA				LR	LR	13 02 37.3	
	comp=Z,2μm,21.1s,MS4.8,baz=276,slow=30						
PLCA	**Paso Flores**	**35.96**	**120**	P	**P**	**12 51 44.2**	**+3.6**
	comp=Z,5.5nm,1.1s,mb4.4						
USHA	**Ushuaia**	**40.65**	**142**	LR	LR	13 05 45.2	
	comp=Z,2μm,18.9s,MS5.0,baz=95,slow=31						
TRQA	**Tornquist**	**42.55**	**116**	*e*P	**P**	**12 52 35.5**	**+0.1**
	comp=Z,14nm,1.1s,mb4.6						
LPAZ	**La Paz**	**42.60**	**82**	*e*P	**P**	**12 52 37.9**	**+1.8**
LPAZ				pmax	pmax		
	comp=Z,20nm,1.4s						
LPAZ				MLR	MLR		
	comp=Z,2μm,20.0s						
LPAZ	**La Paz**	**42.60**	**82**	P	**P**	**12 52 38.0**	**+2.0**
	comp=Z,1.9nm,0.8s,mb3.9,baz=264,slow=8.4,SNR=6.1						
LPAZ	**La Paz**	**42.60**	**82**	*e*P	**P**	**12 52 37.9**	**+1.8**
	comp=Z,20nm,1.4s,mb4.7						
LPAZ				LR	LR		
	comp=Z,2μm,20.0s,MS5.0						
OTAV	**Otavalo**	**43.66**	**54**	*e*P	**P**	**12 52 46.5**	**+1.7**
	comp=Z,25nm,1.4s,mb4.8						
JTS	**JuntasAbangare**	**47.31**	**38**	PFAKE		12 53 30.0	+16
JTS				LR	LR		
	comp=Z,849nm,20.0s,MS4.7						
CPUP	**Villa Florida**	**48.51**	**101**	*e*P	**P**	**12 53 21.8**	**-1.3**
CPUP				pmax	pmax		
	comp=Z,11nm,1.2s						
CPUP	**Villa Florida**	**48.51**	**101**	P	**P**	**12 53 23.7**	**+0.6**
	comp=Z,5.5nm,1.0s,mb4.5,baz=225,slow=8.6,SNR=3.7						
CPUP				LR	LR	13 10 26.4	
	comp=Z,2μm,20.1s,MS5.2,baz=282,slow=32						
CPUP	**Villa Florida**	**48.51**	**101**	*e*P	**P**	**12 53 21.8**	**-1.2**
	comp=Z,11nm,1.2s,mb4.8						
ROSC	**El Rosal**	**49.81**	**54**	P	**P**	**12 53 35.6**	**+2.3**
	comp=Z,7.2nm,0.4s,mb5.0,baz=276,slow=14,SNR=7.9						
ROSC				LR	LR	13 10 56.1	
	comp=Z,2μm,20.5s,MS5.2,baz=3.4,slow=32						
SAML	**Samuel**	**50.29**	**77**	*e*P	**P**	**12 53 35.8**	**-1.1**
	comp=Z,23nm,1.1s,mb5.1						
SDV	**Santo Domingo**	**55.24**	**53**	*e*P	**P**	**12 54 12.5**	**-1.3**
	comp=Z,22nm,1.1s,mb5.1						
AFI	**Afiamalu**	**56.69**	**272**	PFAKE		12 54 40.0	+16
AFI				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
URZ	**Urewera**	**58.05**	**241**	P	**P**	**12 54 38.3**	**+4.8**
	comp=Z,11nm,1.0s,mb4.8,baz=162,slow=6.4,SNR=3.7						
TXAR	**Lajitas Array**	**58.71**	**9**	P	**P**	**12 54 38.6**	**+0.4**
	comp=Z,1.2nm,0.7s,mb4.0,baz=187,slow=10,SNR=10.0						
TXAR				LR	LR	13 16 07.5	
	comp=Z,778nm,18.3s,MS4.9,baz=160,slow=32						
LTX	**Lajitas**	**58.71**	**9**	*e*P	**P**	**12 54 38.4**	**+0.2**
LTX				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.0						
LTX				MLR	MLR		
	comp=Z,673nm,20.0s,MS4.8						
LTX	**Lajitas**	**58.71**	**9**	*e*P	**P**	**12 54 38.4**	**+0.2**
	comp=Z,20nm,1.4s,mb5.0						
LTX				LR	LR		
	comp=Z,673nm,20.0s,MS4.8						
SBA	**Scott Base**	**59.83**	**194**	*e*P	**P**	**12 54 44.3**	**-1.1**
SBA				pmax	pmax		
	comp=Z,51nm,1.5s,mb5.3						
SBA	**Scott Base**	**59.83**	**194**	*e*P	**P**	**12 54 44.3**	**-1.1**
	comp=Z,51nm,1.5s,mb5.3						
BDFB	**Brasilia**	**60.44**	**92**	P	**P**	**12 54 50.5**	**+0.2**
	comp=Z,4.9nm,0.8s,mb4.6,baz=31,slow=6.2,SNR=2.1						
BDFB				LR	LR	13 17 43.6	
	comp=Z,1μm,21.8s,MS5.1,baz=257,slow=33						
MNTX	**Cornudas Mount**	**60.84**	**7**	*e*P	**P**	**12 54 52.3**	**-0.5**
	comp=Z,29nm,1.5s,mb5.2						
MNTX				LR	LR		
	comp=Z,409nm,19.0s,MS4.6						
VNDA	**Vanda**	**60.88**	**194**	*e*P	**P**	**12 54 49.9**	**-2.7**
VNDA				pmax	pmax		
	comp=Z,14nm,1.4s						
VNDA	**Vanda**	**60.88**	**194**	P	**P**	**12 54 54.7**	**+2.1**
	comp=Z,2.5nm,0.9s,mb4.3,baz=81,slow=7.5,SNR=3.9						
VNDA				LR	LR	13 15 01.4	
	comp=Z,1μm,19.7s,MS5.0,baz=89,slow=30						
VNDA	**Vanda**	**60.88**	**194**	*e*P	**P**	**12 54 49.9**	**-2.6**
	comp=Z,14nm,1.4s,mb4.9						
VNDA				LR	LR	13 15 01.4	
QSPA	**South Pole Qui**	**61.08**	**180**	*e*P	**P**	**12 54 53.2**	**-0.6**
	comp=Z,38nm,1.4s,mb5.3						
TUC	**Tucson**	**61.09**	**2**	*e*P	**P**	**12 54 53.0**	**-1.6**
TUC				pmax	pmax		
	comp=Z,31nm,1.5s,mb5.2						
TUC	**Tucson**	**61.09**	**2**	*e*P	**P**	**12 54 53.0**	**-1.5**
	comp=Z,31nm,1.5s,mb5.2						
GDL2	**Guadalupe Moun**	**61.45**	**8**	*e*P	**P**	**12 54 56.3**	**-0.7**
CLNB	**Carlsbad**	**61.57**	**8**	*e*P	**P**	**12 54 57.2**	**-0.5**
BAR	**Barrett**	**61.57**	**356**	*e*P	**P**	**12 54 58.0**	**+0.2**
PFO	**Pinyon Flat Ob**	**62.48**	**356**	*e*P	**P**	**12 55 04.4**	**+0.5**
PFO				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.3						
PFO	**Pinyon Flat Ob**	**62.48**	**356**	*e*P	**P**	**12 55 04.3**	**+0.4**
	comp=Z,38nm,1.5s,mb5.3						
LENM	**Lemitar**	**63.14**	**5**	*e*P	**P**	**12 55 08.6**	**+0.4**
BNM	**Barren Site**	**63.15**	**5**	*e*P	**P**	**12 55 08.4**	**+0.1**
MWC	**Mount Wilson**	**63.20**	**355**	*e*P	**P**	**12 55 09.0**	**+0.4**
LAZ	**Ladron**	**63.36**	**5**	*e*P	**P**	**12 55 09.8**	**+0.1**
LDFC	**Landfair**	**63.88**	**358**	*e*P	**P**	**12 55 14.6**	**+1.4**
ANMO	**Albuquerque**	**63.96**	**5**	*e*P	**P**	**12 55 13.3**	**-0.3**
ANMO				pmax	pmax		
	comp=Z,28nm,1.8s						
ANMO				MLR	MLR		
	comp=Z,1μm,19.0s						
ANMO	**Albuquerque**	**63.96**	**5**	*e*P	**P**	**12 55 13.3**	**-0.3**
	comp=Z,28nm,1.8s,mb5.0						
ANMO				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
DWPF	**Disney**	**64.17**	**30**	PFAKE		12 55 30.0	+15
DWPF				LR	LR		
	comp=Z,464nm,20.0s,MS4.7						
WUAZ	**Wupatki**	**64.28**	**1**	*e*P	**P**	**12 55 16.0**	**+0.3**
	comp=Z,50nm,1.5s,mb5.3						
NEN	**Nelson**	**64.44**	**358**	*e*P	**P**	**12 55 17.1**	**+0.3**
AMTX	**Amarillo**	**64.45**	**10**	PFAKE		12 55 30.0	+13
AMTX				LR	LR		
	comp=Z,347nm,20.0s,MS4.5						
DAC	**Darwin (Calif)**	**65.21**	**355**	*e*P	**P**	**12 55 22.4**	**+0.7**
DAC				pmax	pmax		
	comp=Z,46nm,1.4s,mb5.3						
DAC				MLR	MLR		
	comp=Z,580nm,20.0s,MS4.8						
DAC	**Darwin (Calif)**	**65.21**	**355**	*e*P	**P**	**12 55 22.4**	**+0.7**
	comp=Z,46nm,1.4s,mb5.3						
DAC				LR	LR		
	comp=Z,580nm,20.0s,MS4.8						
SAO	**San Andreas Ge**	**66.06**	**352**	*e*P	**P**	**12 55 23.9**	**-3.2**
SAO				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.1						
SAO	**San Andreas Ge**	**66.06**	**352**	*e*P	**P**	**12 55 23.9**	**-3.3**
	comp=Z,25nm,1.3s,mb5.1						
LRAL	**Lakeview Retre**	**66.34**	**23**	*e*P	**P**	**12 55 28.8**	**-0.2**
	comp=Z,39nm,1.4s,mb5.2						
LRAL				LR	LR		
	comp=Z,610nm,19.0s,MS4.8						
MTUM	**Tungsten Hills**	**66.35**	**355**	*e*P	**P**	**12 55 28.6**	**-0.4**
ARUT	**Antelope Range**	**66.54**	**359**	*e*P	**P**	**12 55 30.9**	**+0.7**
OMM	**Old Mammoth Mi**	**66.65**	**354**	*e*P	**P**	**12 55 31.5**	**+0.6**
VNA3	**Neumayer Olymp**	**66.72**	**160**⇑	*i*	**P**	**12 55 29.3**	**-1.5**
VNA3	**Neumayer Olymp**	**66.72**	**160**⇑	*i*	**P**	**12 55 33.6**	**+2.8**
VNA3	**Neumayer Olymp**	**66.72**	**160**⇑	*i*	**P**	**12 55 34.9**	**+4.1**
VNA3	**Neumayer Olymp**	**66.72**	**160**⇑	*i*	PcP	12 55 57.5	-2.3
SDCO	**Great Sand Dun**	**66.81**	**6**	*e*P	**P**	**12 55 32.2**	**+0.3**
	comp=Z,24nm,1.5s,mb5.0						
TPH	**Tonopah**	**66.97**	**356**	*e*P	**P**	**12 55 33.2**	**+0.2**
TPH				pmax	pmax		
	comp=Z,78nm,1.4s,mb5.5						
TPH	**Tonopah**	**66.97**	**356**	*e*P	**P**	**12 55 33.2**	**+0.3**
	comp=Z,78nm,1.4s,mb5.5						
TRCR	**Troy Canyon**	**67.16**	**357**	*e*P	**P**	**12 55 35.0**	**+0.8**
CMB	**Columbia Colle**	**67.19**	**353**	*e*P	**P**	**12 55 32.7**	**-1.7**
CMB				pmax	pmax		
	comp=Z,47nm,1.5s,mb5.3						
CMB				MLR	MLR		
	comp=Z,599nm,19.0s,MS4.8						
CMB	**Columbia Colle**	**67.19**	**353**	*e*P	**P**	**12 55 32.7**	**-1.7**
	comp=Z,48nm,1.5s,mb5.3						
CMB				LR	LR		
	comp=Z,599nm,19.0s,MS4.8						
MVU	**Marysvale**	**67.25**	**0**	*e*P	**P**	**12 55 34.7**	**0.0**
	comp=Z,19nm,1.5s,mb4.9						
MVU				LR	LR		
	comp=Z,397nm,19.0s,MS4.7						
MSU	**Marysvale**	**67.26**	**0**	*e*P	**P**	**12 55 35.7**	**+0.9**
MNV	**Mina**	**67.39**	**355**	*e*P	**P**	**12 55 36.2**	**+0.6**
MNV				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.4						
MNV				MLR	MLR		
	comp=Z,563nm,20.0s,MS4.8						
MNV	**Mina**	**67.39**	**355**	*e*P	**P**	**12 55 36.2**	**+0.6**
	comp=Z,36nm,1.0s,mb5.4						
MNV				LR	LR		
	comp=Z,563nm,20.0s,MS4.8						
NVAR	**Mina Array Bea**	**67.40**	**355**	P	**P**	**12 55 36.8**	**+1.1**
	comp=Z,19nm,1.0s,mb5.1,baz=164,slow=8.4,SNR=58						
NVAR				LR	LR	13 19 29.9	
	comp=Z,562nm,18.4s,MS4.8,baz=250,slow=31						
VNA2	**Neumayer--Watz**	**67.53**	**160**⇑	*i*	**P**	**12 55 34.6**	**-1.3**
VNA2	**Neumayer--Watz**	**67.53**	**160**⇑	*i*	**P**	**12 55 38.4**	**+2.5**
VNA2	**Neumayer--Watz**	**67.53**	**160**⇑	*i*	pP	12 55 56.6	+18
PLAL	**Pickwick Lake**	**67.77**	**21**	*e*P	**P**	**12 55 36.8**	**-1.2**
	comp=Z,8.8nm,0.9s,mb4.8						
SRU	**San Rafael**	**67.88**	**2**	*e*P	**P**	**12 55 38.1**	**-0.6**
NSHM	**Saint Helena R**	**67.93**	**351**	*e*P	**P**	**12 55 37.6**	**-1.4**
TMUT	**Trail Mountain**	**68.05**	**1**	*e*P	**P**	**12 55 40.0**	**+0.3**
WCN	**Washoe City**	**68.39**	**354**	*e*P	**P**	**12 55 42.2**	**+0.4**
WCN				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.1						
WCN	**Washoe City**	**68.39**	**354**	*e*P	**P**	**12 55 42.2**	**+0.4**
	comp=Z,24nm,1.3s,mb5.1						
HOPS	**Hopland**	**68.46**	**351**	P	**P**	**12 55 43.9**	**+1.6**
	comp=Z,79nm,1.5s,mb5.5						
HOPS				LR	LR		
	comp=Z,676nm,20.0s,MS4.9						
SNAA	**Sanae**	**68.53**	**161**	*e*P	**P**	**12 55 39.9**	**-2.3**
SNAA				pmax	pmax		
	comp=Z,35nm,1.3s						
SNAA	**Sanae**	**68.53**	**161**	P	**P**	**12 55 43.6**	**+1.4**
	comp=Z,4.8nm,1.2s,mb4.3,baz=248,slow=8.1,SNR=7.2						
SNAA	**Sanae**	**68.53**	**161**	*e*P	**P**	**12 55 39.9**	**-2.3**
	comp=Z,35nm,1.3s,mb5.1						
CBKS	**Cedar Bluff**	**68.60**	**11**	PFAKE		12 56 00.0	+17
CBKS				LR	LR		
	comp=Z,911nm,19.0s,MS5.0						
SWET	**Sewanee**	**68.69**	**23**	*e*P	**P**	**12 55 42.5**	**-1.3**
NLU	**North Lily Min**	**68.70**	**0**	*e*P	**P**	**12 55 44.2**	**+0.5**
MPU	**Maple Canyon**	**68.77**	**1**	*e*P	**P**	**12 55 44.6**	**+0.4**
ISCO	**Idaho Springs**	**68.84**	**6**	P	**P**	**12 55 44.6**	**0.0**
ISCO				pmax	pmax		
	comp=Z,21nm,1.5s,mb4.8						
ISCO				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.3						
ISCO	**Idaho Springs**	**68.84**	**6**	P	**P**	**12 55 44.6**	**0.0**
	comp=Z,21nm,1.5s,mb4.8						
ISCO				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						

WVT	Waverly	68.90	21	eP	P	12 55 43.8	-1.2
WVT				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
WVT	Waverly	68.90	21	eP	P	12 55 43.8	-1.2
	comp=Z,8.9nm,1.0s,mb4.7						
BEKR	Beckwourth	69.01	353	eP	P	12 55 45.9	+0.2
	comp=Z,28nm,1.4s,mb5.0						
DAU	Daniels Canyon	69.17	1	eP	P	12 55 47.2	+0.6
BMN	Battle Mountai	69.32	356	eP	P	12 55 48.1	+0.6
BMN				pmax	pmax		
	comp=Z,61nm,1.3s,mb5.4						
BMN				MLR	MLR		
	comp=Z,332nm,19.0s,MS4.6						
BMN	Battle Mountai	69.32	356	eP	P	12 55 48.1	+0.5
	comp=Z,61nm,1.3s,mb5.4						
BMN				LR	LR		
	comp=Z,332nm,19.0s,MS4.6						
JLU	Jordanelle	69.35	1	eP	P	12 55 47.8	0.0
CPCT	Cooper Cave	69.40	24	eP	P	12 55 46.8	-1.3
CTU	Camp Tracy	69.44	1	eP	P	12 55 48.3	0.0
ELK	Elko	69.54	358	eP	P	12 55 49.1	+0.2
ELK				pmax	pmax		
	comp=Z,102nm,2.2s						
ELK				MLR	MLR		
	comp=Z,440nm,21.0s						
ELK	Elko	69.54	358	eP	P	12 55 49.0	+0.2
	comp=Z,102nm,2.2s,mb5.4						
ELK				LR	LR		
	comp=Z,440nm,21.0s,MS4.7						
JSC	Jenkinsville	69.60	27	eP	P	12 55 47.8	-1.6
BGU	Big Grassy Mou	69.67	360	eP	P	12 55 49.7	0.0
CCM	Cathedral Cave	69.69	18	eP	P	12 55 49.2	-0.7
CCM				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
CCM				MLR	MLR		
	comp=Z,616nm,20.0s,MS4.8						
CCM	Cathedral Cave	69.69	18	eP	P	12 55 49.2	-0.7
	comp=Z,9.4nm,0.9s,mb4.7						
CCM				LR	LR		
	comp=Z,616nm,20.0s,MS4.8						
FVM	French Village	69.85	18	eP	P	12 55 50.5	-0.3
FVM				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
FVM	French Village	69.85	18	eP	P	12 55 50.5	-0.3
	comp=Z,6.3nm,0.8s,mb4.6						
WDC	Whiskeytown Da	69.95	352	eP	P	12 55 51.3	-0.1
WDC				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1						
WDC	Whiskeytown Da	69.95	352	eP	P	12 55 51.3	-0.1
	comp=Z,25nm,1.1s,mb5.1						
DRV	Dumont d'Urvil	70.20	204	P	P	12 55 53.0	+0.6
DRV				S	S	13 05 10.0	+7.4
DRV				L		13 14 00.0	
DRV				R		13 18 00.0	
HWUT	Hardware Ranch	70.36	1	P	P	12 55 53.1	-0.7
	comp=Z,5.1nm,1.0s,mb4.4						
HWUT				LR	LR		
	comp=Z,435nm,22.0s,MS4.7						
TZTN	Tazewell	70.72	24	eP	P	12 55 56.0	-0.1
MOD	Modoc	71.02	354	eP	P	12 55 58.5	+0.6
	comp=Z,46nm,1.3s,mb5.2						
YBH	Yreka Blue Hor	71.11	352	eP	P	12 55 55.6	-2.8
YBH				pmax	pmax		
	comp=Z,14nm,1.2s						
YBH	Yreka Blue Hor	71.11	352	P	P	12 55 58.1	-0.4
	comp=Z,11nm,1.1s,mb4.7,baz=127,slow=9.7,SNR=5.6						
YBH	Yreka Blue Hor	71.11	352	eP	P	12 55 55.5	-2.9
	comp=Z,14nm,1.2s,mb4.8						
WVOR	Wild Horse Val	71.41	355	eP	P	12 56 00.8	+0.6
WVOR				pmax	pmax		
	comp=Z,81nm,1.5s,mb5.4						
WVOR	Wild Horse Val	71.41	355	eP	P	12 56 00.8	+0.6
	comp=Z,81nm,1.5s,mb5.4						
AHID	Auburn Hatcher	71.52	1	PFAKE		12 56 10.0	+9.1
AHID				LR	LR		
	comp=Z,546nm,20.0s,MS4.8						
BW06	Boulder Array	71.56	2	PFAKE		12 56 10.0	+8.9
BW06				LR	LR		
	comp=Z,897nm,20.0s,MS5.0						
PDAR	Pinedale Array	71.56	2	P	P	12 56 00.2	-0.9
	comp=Z,5.5nm,1.2s,mb4.4,baz=162,slow=4.7,SNR=16						
PDAR				LR	LR	13 22 37.7	
	comp=Z,713nm,19.9s,MS4.9,baz=191,slow=32						
HUMO	Hull Mountain	72.00	352	eP	P	12 56 04.0	+0.2
	comp=Z,31nm,1.3s,mb5.1						
HUMO				LR	LR		
	comp=Z,430nm,20.0s,MS4.7						
RRI2	Red Ridge	72.10	1	eP	P	12 56 01.7	-2.6
	comp=Z,39nm,1.4s,mb5.2						
REDW	Red Top Meadow	72.12	1	P	P	12 56 03.9	-0.6
	comp=Z,43nm,1.5s,mb5.2						
DZM	Mont Dzumac	72.16	254	P	P	12 56 08.6	+3.6
	comp=Z,7.6nm,1.0s,mb4.6,baz=210,slow=9.0,SNR=2.6						
SNOW	Snow King Moun	72.22	1	eP	P	12 56 04.9	-0.1
	comp=Z,21nm,1.1s,mb5.0						
TPAW	Teton Pass	72.25	1	eP	P	12 56 04.6	-0.5
	comp=Z,31nm,1.3s,mb5.1						
HLID	Hailey	72.33	359	eP	P	12 56 06.3	+0.6
	comp=Z,30nm,1.2s,mb5.1						
HLID				LR	LR		
	comp=Z,550nm,19.0s,MS4.8						
LOHW	Long Hollow	72.38	1	eP	P	12 56 05.2	-0.7
	comp=Z,20nm,1.3s,mb4.9						
BLA	Blacksburg	72.49	26	eP	P	12 56 06.3	-0.4
BLA				pmax	pmax		
	comp=Z,61nm,1.5s,mb5.3						
BLA				MLR	MLR		
	comp=Z,631nm,20.0s,MS4.9						
BLA	Blacksburg	72.49	26	eP	P	12 56 06.2	-0.5
	comp=Z,60nm,1.5s,mb5.3						
BLA				LR	LR		
	comp=Z,631nm,20.0s,MS4.9						
MOOW	Moose Ponds	72.51	1	eP	P	12 56 06.1	-0.7
	comp=Z,13nm,1.2s,mb4.7						
IMW	Indian Meadow	72.65	1	eP	P	12 56 07.2	-0.3
	comp=Z,15nm,1.1s,mb4.8						
NVL	N'lazarevskaya	72.96	163	⇓iP	P	12 56 13.2	+4.4
NVL				i *PP	pP	12 56 21.1	+9.1
NVL				i		12 56 32.6	
NVL				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
NVL				MLR	MLR		
	comp=Z,40nm,15.9s						
RSSD	Black Hills	73.27	6	eP	P	12 56 11.0	-0.2
RSSD				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
RSSD	Black Hills	73.27	6	eP	P	12 56 11.0	-0.2
	comp=Z,24nm,1.4s,mb4.9						
LKWY	Lake	73.33	2	PFAKE		12 56 20.0	+8.5
LKWY				LR	LR		
	comp=Z,743nm,20.0s,MS5.0						
YMR	Madison River	73.42	1	eP	P	12 56 12.4	+0.3
MCMT	McKenzie Canyo	73.57	360	eP	P	12 56 13.4	+0.5
QLMT	Earthquake Lak	73.58	1	eP	P	12 56 14.6	+1.7
BMO	Blue Mountains	73.73	356	eP	P	12 56 14.2	+0.3
	comp=Z,30nm,1.4s,mb5.0						
BMO				LR	LR		
	comp=Z,418nm,21.0s,MS4.7						
COR	Corvallis	74.00	352	P	P	12 56 15.6	+0.2
COR				pmax	pmax		
	comp=Z,52nm,1.1s,mb5.4						
COR				MLR	MLR		
	comp=Z,248nm,21.0s,MS4.5						
COR	Corvallis	74.00	352	P	P	12 56 15.6	+0.2
	comp=Z,52nm,1.1s,mb5.4						
COR				LR	LR		
	comp=Z,248nm,21.0s,MS4.5						
CROR	Criterion Ridg	74.14	354	P	P	12 56 17.2	+1.0
BOZ	Bozeman (W)	74.39	1	eP	P	12 56 17.2	-0.4
BOZ				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.8						
BOZ				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.6						
BOZ	Bozeman (W)	74.39	1	eP	P	12 56 17.2	-0.4
	comp=Z,19nm,1.5s,mb4.8						
BOZ				LR	LR		
	comp=Z,300nm,20.0s,MS4.6						
JFWS	Jewell Farm	74.52	17	PFAKE		12 56 30.0	+12
JFWS				LR	LR		
	comp=Z,341nm,20.0s,MS4.6						
VFP	Flag Point	74.52	353	P	P	12 56 19.2	+0.9
CBN	Corbin	74.56	28	PFAKE		12 56 30.0	+11
CBN				LR	LR		
	comp=Z,998nm,19.0s,MS5.1						
MCWV	Mont Chateau	74.84	26	PFAKE		12 56 30.0	+10
MCWV				LR	LR		
	comp=Z,792nm,21.0s,MS5.0						
ASR	Mount Adams--S	75.35	353	P	P	12 56 24.3	+1.2
HRY	Holter Researc	75.46	0	eP	P	12 56 24.2	+0.5
MSO	Missoula	75.58	359	eP	P	12 56 24.0	-0.5
	comp=Z,6.2nm,1.0s,mb4.5						
MSO				LR	LR		
	comp=Z,264nm,20.0s,MS4.5						
LAO	LASA Array	75.64	4	PFAKE		12 56 40.0	+15
LAO				LR	LR		
	comp=Z,833nm,19.0s,MS5.1						
CHMT	Chamberlain Mo	75.66	359	eP	P	12 56 24.9	0.0
BBSR	BB Station	76.11	40	PFAKE		12 56 40.0	+12
BBSR				LR	LR		
	comp=Z,889nm,21.0s,MS5.0						
NEW	Newport	77.12	357	eP	P	12 56 33.6	+0.5
NEW				pmax	pmax		
	comp=Z,43nm,1.4s						
NEW	Newport	77.12	357	P	P	12 56 33.2	+0.1
	comp=Z,18nm,1.1s,mb4.9,baz=170,slow=5.6,SNR=12						
NEW	Newport	77.12	357	eP	P	12 56 33.6	+0.5
	comp=Z,43nm,1.4s,mb5.2						
DGMT	Dagmar	77.57	6	eP	P	12 56 35.7	+0.1
	comp=Z,77nm,1.5s,mb5.4						
DGMT				LR	LR		
	comp=Z,737nm,21.0s,MS5.0						
PGC	Sidney	78.02	353	eP	P	12 56 37.5	-0.5
	comp=Z,165nm,1.4s,mb5.8						
PNT	Penticton	78.32	355	P	P	12 56 44.0	+4.3
CASY	Casey	79.42	196	eP	P	12 56 42.2	-3.1
	comp=Z,28nm,1.6s,mb4.9						
CASY				LR	LR		
	comp=Z,857nm,20.0s,MS5.1						
SYO	Syowa Base	80.05	170	⇓PcP	PcP	12 56 52.0	-4.5
ULM	Lac du Bonnet	80.36	11	P	P	12 56 50.3	-0.3
	comp=Z,2.3nm,0.6s,mb4.3,baz=202,slow=5.4,SNR=2.9						
ULM				LR	LR	13 28 55.5	
	comp=Z,500nm,20.3s,MS4.8,baz=16,slow=33						
HRV	Harvard--Oak R	80.59	29	PFAKE		12 57 00.0	+7.9
HRV				LR	LR		
	comp=Z,279nm,20.0s,MS4.6						
NCB	Newcomb	80.70	27	eP	P	12 56 52.1	-0.5
	comp=Z,56nm,1.4s,mb5.3						
MIV	Mineville/With	81.06	27	eP	P	12 56 53.0	-1.5
FRNY	Flat Rock	81.67	27	eP	P	12 56 58.3	+0.6
EDM	Edmonton	81.98	359	eP	P	12 56 58.4	-0.7
MIR	Mirnyy	82.69	190c	iP	P	12 57 04.0	+1.5
MIR				pmax	pmax		
	comp=Z,46nm,1.6s,mb5.3						
HNR	Honiara	83.40	263	PFAKE		12 57 20.0	+13
HNR				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
MAW	Mawson	83.53	178	P	P	12 57 10.1	+3.4
	comp=Z,6.7nm,1.0s,mb4.7,baz=196,slow=7.4,SNR=6.1						
MAW				LR	LR	13 31 50.5	
	comp=Z,581nm,18.2s,MS5.0,baz=182,slow=34						
FFC	Flin Flon	83.97	6	eP	P	12 57 08.9	-0.3
FFC				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.2						
FFC				MLR	MLR		
	comp=Z,181nm,20.0s,MS4.5						
FFC	Flin Flon	83.97	6	eP	P	12 57 08.9	-0.4
	comp=Z,26nm,1.4s,mb5.2						
FFC				LR	LR		
	comp=Z,181nm,20.0s,MS4.5						
EMMW	East Machias	84.14	30	PFAKE		12 57 20.0	+10
EMMW				LR	LR		
	comp=Z,4µm,22.0s,MS5.7						
KWAJ	Kwajalein Atol	85.54	283	PFAKE		12 57 30.0	+12
KWAJ				LR	LR		
	comp=Z,406nm,22.0s,MS4.8						
STKA	Stephens Creek	87.15	235	P	P	12 57 28.4	+2.8
	comp=Z,4.6nm,1.1s,mb4.6,baz=51,slow=3.7,SNR=3.9						
STKA				LR	LR	13 28 47.7	
	comp=Z,884nm,21.6s,MS5.1,baz=107,slow=30						
STKA	Stephens Creek	87.15	235	P	P	12 57 25.1	-0.5
STKA				LR	LR	13 28 47.7	
DLBC	Dease Lake	88.43	351	eP	P	12 57 31.3	+0.3
CTA	Charters Tower	89.76	247	P	P	12 57 41.8	+3.5
	comp=Z,4.2nm,0.9s,mb4.8,baz=100,slow=6.7,SNR=3.7						
CTAO	Charters Tower	89.76	247	P	P	12 57 38.6	+0.3
CTAO				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.3						
YKA	Yellowknife Ar	91.29	359	P	P	12 57 44.1	-0.2
	comp=Z,1.3nm,0.8s,mb4.3,baz=169,slow=5.1,SNR=8.9						
YKA				LR	LR	13 35 39.4	
	comp=Z,438nm,18.6s,MS4.9,baz=165,slow=34						
YKA	Yellowknife Ar	91.29	359	P	P	12 57 44.1	-0.2
YKA				LR	LR	13 35 39.4	
SCHQ	Schefferville	92.32	24	P	P	12 57 50.4	+1.1
	comp=Z,3.0nm,0.4s,mb5.0,baz=219,slow=17,SNR=7.5						
SCHQ				LR	LR	13 37 48.4	
	comp=Z,309nm,19.1s,MS4.8,baz=236,slow=35						
SCHQ	Schefferville	92.32	24	P	P	12 57 50.4	+1.1
SCHQ				LR	LR	13 37 48.4	
KDAK	Kodiak Island	92.87	340	PFAKE		12 58 00.0	+8.3
KDAK				LR	LR		
	comp=Z,96nm,20.0s,MS4.2						
RSO	Redoubt South	95.14	341	eP	P	12 58 01.9	-0.1
ILAR	Eielson Array	97.34	346	P	P	12 58 11.7	-0.3
	comp=Z,1.8nm,1.1s,mb4.4,baz=174,slow=3.0,SNR=7.9						
ILAR				LR	LR	13 35 41.7	
	comp=Z,208nm,18.7s,MS4.7,baz=356,slow=32						
COLA	College	97.64	346	PFAKE		12 58 20.0	+6.7
COLA				LR	LR		
	comp=Z,2.0nm,22.0s						
CMLA	Cha da Macela	104.95	55	PFAKE		13 03 10.0	
CMLA				LR	LR		
	comp=Z,165nm,20.0s,MS4.6						
GUMO	Guam	107.44	276	PFAKE		13 03 20.0	
GUMO				LR	LR		
	comp=Z,753nm,20.0s,MS5.2						
DBIC	Dimbokro	108.58	93	PFAKE		13 03 20.0	
DBIC				LR	LR		
	comp=Z,830nm,20.0s,MS5.3						
MBWA	Marble Bar	109.10	231	PFAKE		13 03 20.0	
MBWA				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
BOSA	Boshof	109.80	141	PFAKE		13 03 20.0	
BOSA				LR	LR		
	comp=Z,289nm,20.0s,MS4.8						
LBTB	Lobatse	112.78	139	PFAKE		13 03 30.0	+12
LBTB				LR	LR		
	comp=Z,398nm,20.0s,MS5.0						
BILL	Bilibino	113.47	336	PFAKE		13 03 30.0	+11
BILL				LR	LR		
	comp=Z,332nm,19.0s,MS5.0						
MA2	Magadan	117.97	325	PFAKE		13 03 40.0	+13
MA2				LR	LR		
	comp=Z,283nm,20.0s,MS4.9						
ERM	Erimo	118.99	304	PFAKE		13 03 40.0	+10
ERM				LR	LR		
	comp=Z,4.0nm,20.0s						
MAJO	Matsushiro	121.34	297	PFAKE		13 03 40.0	+5.3
MAJO				LR	LR		
	comp=Z,265nm,19.0s,MS4.9						
ESDC	Sonseca Array	121.46	59	PKP	PKPdf	13 03 36.5	+1.6
	comp=Z,0.1nm,0.3s,baz=292,slow=1.8,SNR=4.0						
ESLA	Sonseca Array	121.46	59	PFAKE		13 03 40.0	+5.2
ESLA				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
LSZ	Lusaka	121.76	134	PFAKE		13 03 50.0	+14
LSZ				LR	LR		
	comp=Z,493nm,19.0s,MS5.2						
ESK	Eskdalemuir	124.19	41	PFAKE		13 03 50.0	+10
ESK				LR	LR		
	comp=Z,56nm,19.0s,MS4.2						
KBS	Kingsbay	124.77	11	PFAKE		13 03 50.0	+10
KBS				LR	LR		
	comp=Z,577nm,20.0s,MS5.2						
TIXI	Tiksi	126.30	340	i PKIKP	PKPdf	13 03 37.6	-5.6
YAK	Yakutsk	128.28	328	i PKIKP	PKPdf	13 03 41.4	-5.9
MDJ	Mudanjiang	129.17	306	PKP	PKPdf	13 03 46.4	-3.1
MDJ				XPKP		13 03 51.1	
MDJ				PP	PP		
	comp=Z,550nm,17.0s						
MDJ				LR	LR		
	comp=N,180nm,30.8s,MS4.9						
MDJ				LR	LR		
	comp=E,300nm,29.2s,MS4.9						
MDJ				LR	LR		
	comp=Z,510nm,23.1s						
MDJ	Mudanjiang	129.17	306	PFAKE		13 04 00.0	+10
MDJ				LR	LR		
	comp=Z,446nm,22.0s,MS5.1						
INCN	Inchon	130.60	296	PFAKE		13 04 00.0	+7.5
INCN				LR	LR		
	comp=Z,520nm,19.0s,MS5.2						
KONO	Kongsberg	130.74	35	PFAKE		13 04 00.0	+7.9
KONO				LR	LR		
	comp=Z,304nm,20.0s,MS5.0						
NAO01	NORSAR Array S	131.10	33	PFAKE		13 04 00.0	+7.3
NAO01				LR	LR		
	comp=Z,517nm,22.0s,MS5.2						
CN2	Changchun	132.10	304	ePKP	PKPdf	13 03 54.3	-0.8
CN2				PP	PP	13 06 20.8	+2.9
CN2				LR	LR		
	comp=N,300nm,20.0s,MS5.3						
CN2				LR	LR		
	comp=E,600nm,20.0s,MS5.3						
CN2				LR	LR		
	comp=Z,700nm,21.0s,MS5.3						
KEV	Kevo	133.24	18	PFAKE		13 04 10.0	+13
KEV				LR	LR		
	comp=Z,415nm,21.0s,MS5.1						
MOX	Moxa	133.26	46	eP	PKPdf	13 03 58.0	+1.0
MOX				L		14 00 46.0	
CLL	Collm	134.05	45	ePKIKP	PKPdf	13 03 57.0	-1.4
CLL				MLR	MLR		
	comp=Z,600nm,20.5s,MS5.3						
CLL	Collm	134.05	45	ePKIKP	PKPdf	13 03 57.0	-1.4
	comp=Z,logA/T=0.9						
CLL				eSS	SS	13 24 51.0	+35
MBAR	Mbarara	134.08	124	PFAKE		13 04 10.0	+10
MBAR				LR	LR		
	comp=Z,172nm,21.0s,MS4.7						
GERES	GERESS Array B	134.78	49	PKP	PKPdf	13 03 58.2	-1.7
	comp=Z,0.6nm,0.6s,baz=270,slow=1.0,SNR=2.4						
HIA	Hailar	135.80	312	PFAKE		13 04 10.0	+8.2
HIA				LR	LR		
	comp=Z,440nm,22.0s,MS5.1						
NJ2	Nanjing	136.06	287	ePKP	PKPdf	13 03 55.9	-6.9
NJ2				XPKP		13 04 10.1	
NJ2				PP	PP	13 06 39.0	-4.0
NJ2				PKS	PKS	13 07 30.0	-4.8
NJ2				PP	PP		
	comp=Z,210nm,7.5s						
NJ2				LR	LR		
	comp=N,580nm,29.2s,MS5.4						
NJ2				LR	LR		
	comp=E,870nm,27.7s,MS5.4						
NJ2				LR	LR		
	comp=Z,470nm,28.2s,MS5.1						
FINES	FINESS Array B	137.68	28	PKP	PKPdf	13 04 06.6	+1.7
	comp=Z,3.7nm,1.0s,baz=342,slow=8.8,SNR=5.5						
KMBO	Kilima Mbogo	138.25	131	PFAKE		13 04 20.0	+13
KMBO				LR	LR		
	comp=Z,511µm,22.0s						
SUW	Suwalki	139.45	39	ePKIKP	PKPdf	13 04 07.3	-1.0
HHC	Hu-ho-hao-te	142.43	300	ePKP	PKPdf	13 04 15.0	+1.0
HHC				PP	PP	13 07 28.4	+6.4
HHC				PKS	PKS	13 07 48.6	+3.2
HHC				SKS	SKS	13 11 21.3	-1.7
HHC				PP	PP		
	comp=Z,150nm,10.2s						
HHC				LR	LR		
	comp=N,530nm,18.1s,MS5.5						
HHC				LR	LR		
	comp=E,740nm,20.1s,MS5.5						
HHC				LR	LR		
	comp=Z,450nm,21.4s,MS5.2						
VOIR		142.93	52	⇓P	PKPdf	13 04 12.7	-2.0
MLR	Muntele Rosu	143.54	52	⇓P	PKPbc	13 04 11.7	+0.4
BTO	Baotou	143.62	300	ePKP	PKPdf	13 04 16.4	+0.4
ENH	Enshi	143.69	282	PFAKE		13 04 30.0	+18
ENH				LR	LR		
	comp=Z,562nm,21.0s,MS5.3						
VRI	Vrincioaia	143.99	51	⇓P	PKPbc	13 04 17.5	+4.9
AKASG	Malin Array Be	144.10	42	PKhKP		13 04 10.6	
	comp=Z,2.3nm,0.8s,baz=270,slow=4.8,SNR=14						
AKASG				PKP	PKPdf	13 04 15.5	-0.9
	comp=Z,3.3nm,0.8s,baz=269,slow=4.9,SNR=17						
AKASG	Malin Array Be	144.10	42	PKP	PKPdf	13 04 10.6	-5.8
AKASG				PKP	PKPdf	13 04 15.5	-1.0
ULN	Ulaanbaatar	144.33	313	PKPdf	PKPdf	13 04 13.3	-3.7
ULN	Ulaanbaatar	144.33	313	⇓iPKIKP	PKPdf	13 04 13.0	-4.0
ULN	Ulaanbaatar	144.33	313	ePKPdf	PKPdf	13 04 13.3	-3.7
IRK	Irkutsk	144.38	321	ePKIKP	PKPdf	13 04 13.5	-3.4
IRK				pmax	pmax		
	comp=Z,82nm,2.1s						
XAN	Xi'an	144.58	289	PKP	PKPdf	13 04 14.4	-3.5
SONM	Songino Array	144.76	313	PKP	PKPdf	13 04 15.3	-2.4
	comp=Z,14nm,0.7s,baz=90,slow=2.5,SNR=43						
TLY	Talaya	144.97	320	i PKIKP	PKPdf	13 04 15.5	-2.5
TLY				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.7						
TLY	Talaya	144.97	320	ePKPdf	PKPdf	13 04 15.7	-2.3
KIS	Kishinev	145.09	48	ePKIKP	PKPdf	13 04 15.0	-3.4
GYA	Guiyang	145.39	275	i PKP	PKPdf	13 04 18.3	-1.2
GYA				SKS	SKS	13 11 22.6	-5.3
GYA				PP	PP		
	comp=Z,390nm,6.3s						
GYA				LR	LR		
	comp=N,510nm,20.8s,MS5.5						
GYA				LR	LR		
	comp=E,680nm,22.1s,MS5.5						
GYA				LR	LR		
	comp=Z,490nm,21.8s,MS5.2						
ZAK	Zakamensk	145.74	318	i PKIKP	PKPdf	13 04 18.0	-1.4
OBN	Obninsk	145.81	32α	iPKIKP	PKPdf	13 04 18.7	-0.6
OBN				i		13 04 23.1	
OBN				e		13 07 42.8	
OBN				pmax	pmax		
	comp=Z,55nm,1.4s						
OBN				MLR	MLR		
	comp=Z,300nm,18.0s,MS5.1						
MOY	Mondy	146.44	322	ePKP2	PKPab	13 04 20.9	-1.0
MOY				pmax	pmax		
	comp=Z,119nm,2.7s						
PECR	Pechory	148.11	25	ePKP2	PKPab	13 04 25.0	-3.2
PECR				pmax	pmax		
	comp=Z,1µm,1.6s						
KMI	Kunming	148.49	271	PKP	PKPdf	13 04 22.9	-1.8
KMI				APKP		13 04 26.9	
KMI				PP	PP	13 07 57.8	-0.5
KMI				SS	SS	13 27 05.3	+1.2
KMI				LR	LR		
	comp=N,150nm,17.2s,MS5.2						
KMI				LR	LR		
	comp=E,320nm,19.9s,MS5.2						
KMI				LR	LR		
	comp=Z,250nm,18.9s,MS5.0						
LZH	Lanzhou	148.76	292	⇑PKP	PKPdf	13 04 27.4	+2.6
LZH				APKP		13 04 31.3	
LZH				PP	PP		
	comp=Z,550nm,6.0s						
LZH				LR	LR		
	comp=E,850nm,21.4s						
LZH				LR	LR		
	comp=Z,1µm,22.4s,MS5.7						
VOR	Voronezh	149.08	35	ePKP2	PKPab	13 04 31.0	-1.4
VOR				pmax	pmax		
	comp=Z,120nm,2.0s						
SIM	Simferopol'	149.24	50	i PKP2	PKPab	13 04 32.6	-0.6
SIM				pmax	pmax		
	comp=Z,17nm,1.4s						
CM31	Chiang Mai Arr	149.46	257	ePKPdf	PKPdf	13 04 25.5	-0.9
CM31				ePKPbc	PKPdf	13 04 28.8	+2.4
CM31				LR	LR		
	comp=Z,799nm,22.0s,MS5.5						
CMAR	Chiang Mai Arr	149.46	257	PKPbc	PKPdf	13 04 29.1	+2.6
	comp=Z,6.6nm,1.1s,baz=117,slow=0.6,SNR=18						
BR131	Keskin Array S	150.25	60	ePKPbc	PKPdf	13 04 29.9	+2.8
BR131				LR	LR		
	comp=Z,299nm,20.0s,MS5.1						
CSS	Prodhromos	150.51	70	PKPdf	PKPdf	13 04 27.2	-0.4
EIL	Elat	151.64	81	ePKPdf	PKPdf	13 04 25.4	-4.0
SVE	Sverdlovsk	151.86	8	ePKIKP	PKPdf	13 04 21.5	-7.4
SVE				e		13 08 19.0	
NVS	Novosibirsk	151.89	341	ePKIKP	PKPdf	13 04 25.3	-3.7
NVS				pmax	pmax		
	comp=Z,56nm,1.7s						
NVS				pmax	pmax		
	comp=N,29nm,1.8s						
NVS				pmax	pmax		
	comp=E,28nm,1.7s						
ARU	Arti	151.95	11	i PKIKP	PKPdf	13 04 30.8	+1.8
ARU	Arti	151.95	11	PKPdf	PKPdf	13 04 26.6	-2.5
ARU				LR	LR		
	comp=Z,95nm,20.0s,MS4.6						
ZAL	Zalesovo	152.17	338	PKP	PKPdf	13 04 27.7	-1.7
	comp=Z,0.9nm,0.7s,baz=102,slow=5.2,SNR=6.2						

ZAL				PKPbc	PKPdf	13 04 36.8	+7.3
	comp=Z,3.5nm,0.9s,baz=77,slow=3.8,SNR=11						
SOC	**Sochi**	153.48	49	*e*PKIKP	PKPdf	13 04 30.9	-0.7
SOC				*e*		13 08 28.3	
SOC				*e*PPP	PPP	13 11 57.5	+0.8
SOC				pmax	pmax		
	comp=Z,81nm,1.1s						
SOC				pmax	pmax		
	comp=N,63nm,1.3s						
SOC				pmax	pmax		
	comp=E,65nm,1.5s						
MALT	**Malatya**	154.18	62	*e*PKIKP	PKPdf	13 04 31.7	-1.0
KIV	**Kislovodsk**	155.25	46	*e*PKIKP	PKPdf	13 04 23.7	-10
KIV				pmax	pmax		
	comp=E,6.0nm,0.8s						
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KIV	**Kislovodsk**	155.25	46	PFAKE		13 04 40.0	+6.1
KIV				LR	LR		
	comp=Z,72nm,22.0s,MS4.5						
BVAR	**Borovoye Array**	156.01	356	PKP	PKPdf	13 04 33.4	-1.3
	comp=Z,1.2nm,0.8s,baz=90,slow=1.5,SNR=7.5						
BVAR				PKPab	PKPab	13 05 01.1	-0.3
	comp=Z,3.7nm,0.8s,slow=1.5,SNR=9.7						
BVAR				PP	PP	13 08 39.4	-0.6
	comp=Z,0.3nm,0.4s,baz=27,slow=6.4,SNR=3.0						
ZRNK	**Zerenda**	156.15	358	*e*PKIKP	PKPdf	13 04 32.8	-2.0
WMQ	**Urumqi**	158.21	318	*e*PKP	PKPdf	13 04 35.3	-2.5
WMQ				PP	PP	13 08 53.3	+1.0
WMQ				SKKS		13 15 40.3	
WMQ				SS	SS	13 28 52.6	+3.3
WMQ				PP	PP		
	comp=Z,240nm,5.2s						
WMQ				LR	LR		
	comp=N,310nm,20.4s,MS5.2						
WMQ				LR	LR		
	comp=E,230nm,20.0s,MS5.2						
WMQ				LR	LR		
	comp=Z,330nm,21.8s,MS5.1						
GNI	**Garni**	158.30	53	PFAKE		13 04 50.0	+12
GNI				LR	LR		
	comp=Z,306nm,22.0s,MS5.1						
MKAR	**Makanchi Array**	158.91	331	PKIKP	PKPdf	13 04 36.8	-1.8
MKAR						13 08 56.3	
MKAR	**Makanchi Array**	158.91	331	PKP	PKPdf	13 04 36.8	-1.8
	comp=Z,2.8nm,1.1s,slow=1.2,SNR=8.5						
MKAR				PKPab	PKPab	13 05 15.7	+1.6
	comp=Z,2.2nm,1.0s,baz=45,slow=5.1,SNR=4.9						
MKAR				PP	PP	13 08 56.3	+0.5
	comp=Z,0.5nm,0.8s,baz=90,slow=7.3,SNR=3.9						
LSA	**Lhasa**	159.43	277	PFAKE		13 04 50.0	+10
LSA				LR	LR		
	comp=Z,375nm,22.0s,MS5.2						

IDC 23 12:48:38.9±2.9**,7.46N**×**92.94E,mb3.6**/2**,mb1 3.7**/3**,
mb1mx3.5**/18**,mbtmp3.5**/3**,ML3.7**/1**,Error ellipse:
s-maj=88.4km s-min=32.8km az=64.0,Nicobar Islands
region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	12.39	28	Pn	P	12 51 37.5	-2.1
	0.1nm,0.3s,baz=220,slow=14,SNR=3.0						
MKAR	**Makanchi Array**	40.24	349	P	P	12 56 17.1	-1.9
	0.6nm,0.5s,baz=156,slow=8.2,SNR=5.0						
WRA	**Warramunga Arr**	49.00	124	P	P	12 57 27.6	-2.0
	0.6nm,0.7s,baz=306,slow=8.9,SNR=5.3						

MAN 23 13:03:57.7,17.50N×**123.09E,h27**^{km}**,mb4.7,ML3.6,
MS3.5,1D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVP	**Callao Caves**	1.23	280	*e*P	Pn	13 04 18.9	-0.4
CVP				*e*S	Sn	13 04 29.0	-6.1
SGCP	**Mt. Cagua**	1.24	307	*e*P	Pn	13 04 18.9	-0.6
CAUP	**Cauayan**	1.33	246	*e*P	Pn	13 04 21.0	+0.2
CAUP				*e*S	Sn	13 04 33.8	-3.9
APYP	**Conner**	1.80	282	*e*P	Pn	13 04 26.9	-0.6
APYP				*e*S	Sn	13 04 49.9	+0.3
BALP	**Baler**	2.27	220	*e*P	Pn	13 04 33.6	-0.7
BALP				*e*S	Sn	13 05 01.3	-0.4
ABRA	**Dolores**	2.27	274	*e*P	Pn	13 04 34.4	+0.1
PCPH	**Palayan**	2.71	225	⇓*e*P	Pn	13 04 40.7	+0.2
PCPH				*e*S	Sn	13 05 12.8	-0.1
POLP	**Polilio Island**	2.97	202	*e*P	Pn	13 04 46.6	+2.4
NBP	**Mount Natib**	3.76	224	*e*P	Pn	13 04 55.5	+0.1
LBPH	**Los Banos**	3.80	209	*i* P	Pn	13 04 55.4	-0.6

MAN 23 13:05:35.5,9.20N×**122.50E,h10**^{km}**,mb4.4,ML3.3,MS3.1,
1D,Negros**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	0.74	79	⇓*i*P	Pb	13 05 49.8	-0.2
SNPH				*i* S	Sb	13 05 59.5	-0.3
IPIL	**Ipil**	1.41	177	*e*P	Pn	13 06 00.2	-1.1
IPIL				*e*S	Sb	13 06 17.7	-1.6
GUIM	**Jordan**	1.42	3	*e*P	Pn	13 06 01.0	-0.5
GUIM				*e*S	Sb	13 06 20.7	+1.1
TBP	**Tagbilaran**	1.43	70	*e*P	Pn	13 06 00.8	-0.8
TBP				*e*S	Sb	13 06 17.7	-2.2
PAGZ	**Pagadian**	1.60	147	*e*P	Pn	13 06 03.9	-0.2
PAGZ				*e*S	Sb	13 06 25.4	+0.4
LLP	**Lapu-Lapu**	1.82	52	*e*P	Pn	13 06 05.4	-1.9
LLP				*i* S	Sn	13 06 26.8	-3.7
CUYO	**Cuyo Island**	2.20	318	*e*P	Pn	13 06 11.7	-0.9
OTRP	**Odiongan**	3.18	351	*e*P	Pn	13 06 27.6	+1.1

IDC 23 13:06:21.6±2.4**,7.78S**×**112.79E,mb3.7**/3**,mb1 3.8**/3**,
mb1mx3.6**/14**,mbtmp3.7**/3**,Error ellipse:
s-maj=143.7km s-min=27.8km az=51.0,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	24.13	122	P	P	13 11 40.1	-0.2
	0.6nm,0.4s,baz=297,slow=11,SNR=10						
STKA	**Stephens Creek**	35.97	136	P	P	13 13 23.6	-2.5
	0.7nm,0.4s,baz=322,slow=9.8,SNR=6.9						
MKAR	**Makanchi Array**	60.73	336	P	P	13 16 34.9	-2.4
	0.4nm,0.3s,baz=157,slow=7.4,SNR=4.2						

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*ISK **23** 13:07:05.8,37.79N×26.69E,h14^{km},ML3.6*
*ATH **23** 13:07:06.2,37.78N×26.81E,h17^{km}±1^{km},MD3.6/5*
*NEIC **23** 13:07:06.2,37.78N×26.81E,h17^{km},MD3.6(ATH),After ATH.*
*CSEM **23** 13:07:06.7±0.1,37.82N×26.81E,h15^{km},MD3.6,Error ellipse: s-maj=1.7km s-min=1.1km az=116.0*
*THE **23** 13:07:09.4,37.91N×26.74E,h7^{km}*
ISC 23 13:07:06.7±0.6**,37.84N**±0.02×**26.80E**±0.03**,h5**^{km}±4^{km}**,
n42,**σ**1**^{s}**01**/65**,1C,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	0.13	168	⇑*i*PB	**Pg**	**13 07 09.7**	**+0.2**
SMG				*e*SB	**Sg**	**13 07 11.7**	**+0.4**
BLCB	**Balcova**	0.58	19	*i* PG	**Pg**	**13 07 18.9**	**+0.6**
IZM	**Izmir**	0.67	33	PG	**Pg**	**13 07 20.3**	**+0.3**
KDAG	**Bornova**	0.67	33	*i* P	**Pg**	**13 07 20.6**	**+0.5**
KDAG				*i* S	**Sg**	**13 07 30.9**	**+1.8**
AYDN	**Tasoluk**	0.87	101	*i* P	**Pb**	**13 07 23.5**	**-0.4**
AYDN				*i* S	**Sg**	**13 07 35.7**	**0.0**
BODT	**Bodrum**	0.87	152	PG	**Pg**	**13 07 23.7**	**-0.4**
BODT				SG	**Sg**	**13 07 36.1**	**+0.3**
BDRM	**Kayabasi**	0.93	146	*i* P	**Pb**	**13 07 24.4**	**-0.5**
BDRM				*i* S	**Sb**	**13 07 37.0**	**-0.2**
MLSB	**Milas**	0.94	125	PG	**Pg**	**13 07 25.0**	**-0.6**
MLSB				SG	**Sg**	**13 07 39.3**	**+1.2**
APE	**Apeiranthos**	1.27	233	PN	**Pn**	**13 07 28.3**	**-2.8**
APE				SN	**Sn**	**13 07 44.8**	**-4.0**
APE	**Apeiranthos**	1.27	233	*e*Pn	**Pn**	**13 07 29.7**	**-1.4**
APE				*e*Sn	**Sn**	**13 07 47.0**	**-1.8**
AKS	**Akhisar**	1.31	37	*e*PN	**Pn**	**13 07 32.1**	**+0.5**
AKS				*e*SN	**Sn**	**13 07 50.6**	**+0.9**
YER	**Yerkesik**	1.37	120	*e*PN	**Pn**	**13 07 32.3**	**-0.2**
PRK	**Paraskevi**	1.47	344	*e*PN	**Pn**	**13 07 34.2**	**+0.3**
PRK				*e*SN	**Sn**	**13 07 55.6**	**+1.9**
AYVA	**Ayvalik**	1.47	357	*i* P	**Pn**	**13 07 35.2**	**+1.2**
AYVA				*i* S	**Sb**	**13 07 57.7**	**+4.6**
MANT	**Manisa**	1.53	64	*i* P	**Pn**	**13 07 36.8**	**+2.0**
MANT				*i* S	**Sb**	**13 07 55.7**	**+0.9**
DENT	**Denizli**	1.77	92	*e*PN	**Pn**	**13 07 37.7**	**-0.5**
THR4	**Thira Island,**	1.78	220	*e*Pb	**Pb**	**13 07 39.7**	**+0.3**
THR4				*e*Sb	**Sb**	**13 08 03.2**	**+1.2**
DNZL	**Cakiroluk**	1.78	94	*i* P	**Pn**	**13 07 38.2**	**-0.3**
DNZL				*i* S	**Sn**	**13 08 05.2**	**+3.5**
DALT	**Dalyan (Mudla)**	1.81	126	*e*PN	**Pn**	**13 07 38.6**	**-0.2**
THR3	**Thira Island,**	1.81	219	*e*Pb	**Pb**	**13 07 40.4**	**+0.4**
THR3				*e*Sb	**Sb**	**13 08 04.4**	**+1.3**
THR5	**Thira Island,**	1.83	220	*e*Pb	**Pb**	**13 07 40.4**	**0.0**
THR5				*e*Sb	**Sb**	**13 08 04.8**	**+1.2**
ARG	**Arkhangelos**	1.93	146	*e*PN	**Pn**	**13 07 40.0**	**-0.6**
BALB	**Balikesir**	1.99	25	*e*PN	**Pn**	**13 07 40.8**	**-0.6**
EZN	**Ezine**	2.02	349	*e*PN	**Pn**	**13 07 41.5**	**-0.3**
FETY	**Fethiye**	2.18	123	*e*PN	**Pn**	**13 07 43.1**	**-1.0**
CANB	**Canakkale**	2.19	5	*e*PN	**Pn**	**13 07 43.9**	**-0.3**
DST	**Dursunbey**	2.27	38	*e*PN	**Pn**	**13 07 45.3**	**-0.1**
GOLH	**Golhisar**	2.27	104	*i* P	**Pn**	**13 07 46.0**	**+0.5**
GOLH				*i* S	**Sg**	**13 08 29.1**	**+6.7**
KARP	**Karpathos**	2.30	173	*e*PB	**Pb**	**13 07 44.0**	**-4.4**
LIA	**Limnos Island**	2.42	329	*e*PB	**Pb**	**13 07 48.7**	**-1.6**
GDZ	**Gediz**	2.44	58	*i* P	**Pn**	**13 07 55.4**	**+7.5**
GDZ				*i* S	**Sn**	**13 08 27.0**	**+8.5**
AOS	**Alonnisos**	2.65	301	*e*Pn	**Pn**	**13 07 50.4**	**-0.4**
BNT	**Bandirma**	2.66	19	*e*PN	**Pn**	**13 07 50.2**	**-0.8**
ELL	**Elmali**	2.70	113	*e*PN	**Pn**	**13 07 50.6**	**-1.0**
ORLT	**Orhaneli**	2.74	36	*e*PN	**Pn**	**13 07 51.8**	**-0.4**
AKAS	**Kas**	2.75	125	*i* P	**Pn**	**13 07 53.9**	**+1.6**
AKAS				*i* S	**Sg**	**13 08 36.2**	**-2.2**
TKTP	**Tekketepe**	2.79	85	*i* P	**Pn**	**13 07 51.2**	**-1.6**
TKTP				*i* S	**Sg**	**13 08 40.4**	**+0.9**
MRMT	**Marmara Adasi**	2.83	12	*e*PN	**Pn**	**13 07 53.4**	**0.0**
ALT	**Altintas**	2.87	64	*e*PN	**Pn**	**13 07 54.2**	**+0.3**
ULDT	**Uludag**	2.93	38	*i* P	**Pn**	**13 08 03.0**	**+8.2**
ULDT				*i* S	**Sn**	**13 08 38.0**	**+7.1**
ALN	**Alexandroupoli**	3.11	349	*e*Pn	**Pn**	**13 07 56.6**	**-0.9**
ALN				*e*Sn	**Sn**	**13 08 33.5**	**-2.0**
ESKT	**Eskisehir**	3.58	61	*i* P	**Pg**	**13 08 14.9**	**-3.4**
ESKT				*i* S	**Sg**	**13 09 04.8**	**-1.2**

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*IDC **23** 13:19:51.4±1.2,29.48S×112.27W,mb4.2/6,mb1 4.5/7,
mb1mx4.2/19,mbtmp4.2/7,ML4.6/1,MS4.3/4,Ms1 4.3/4,
ms1mx3.6/23,Error ellipse: s-maj=44.7km s-min=28.6km
az=134.0*
*NEIC **23** 13:19:54.3±0.5,29.19S×112.17W,h10^{km},mb4.8/22,
Error ellipse: s-maj=15.5km s-min=9.7km az=75.0*
*BJI **23** 13:19:54.2,29.20S×112.20W,h10^{km},mB5.2,Ms5.3,
Msz4.9*
ISC 23 13:19:52.3±0.4**,29.21S**±0.07×**112.2W**±0.1**,h10**^{km}**,n72,**
σ**1**^{s}**15**/54**,mb4.5**/28**,MS4.6**/7**,2C,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	3.29	52	Pn	**Pn**	**13 20 44.7**	**-0.3**
	60nm,0.3s,baz=232,slow=6.8,SNR=5.3						
RPN				Sn	**Sn**	**13 21 30.0**	**+5.4**
	6.8nm,0.3s,baz=36,slow=9.4,SNR=2.1						
RPN	**Rapa Nui**	3.29	52	Pn	**Pn**	**13 20 44.7**	**-0.3**
RPN				Sn	**Sn**	**13 21 30.1**	**+5.4**
PPT	**Papeete**	36.03	280	LR	LR	13 36 43.4	
	comp=Z,630nm,21.2s,MS4.4,baz=290,slow=28						
TRQA	**Tornquist**	42.33	116	*e*P	**P**	**13 27 48.1**	**+0.1**
	23nm,1.5s,mb4.6						
LPAZ	**La Paz**	42.42	82	*e*P	**P**	**13 27 51.3**	**+2.3**
	5.1nm,1.1s,mb4.1						
OTAV	**Otavalo**	43.56	54	*e*P	**P**	**13 27 56.3**	**-2.1**
	6.1nm,1.0s,mb4.3						
PMSA	**Palmer Station**	46.50	154	P	**P**	**13 28 21.6**	**+0.5**
CPUP	**Villa Florida**	48.30	100	LR	LR	13 45 26.3	
	comp=Z,338nm,20.5s,MS4.3,baz=278,slow=32						
SAML	**Samuel**	50.12	76	*e*P	**P**	**13 28 50.2**	**+0.2**
	12nm,1.0s,mb4.9						
SDV	**Santo Domingo**	55.14	53	*e*P	**P**	**13 29 27.9**	**+0.5**
AFI	**Afiamalu**	56.89	272	LR	LR	13 48 25.3	
	comp=Z,197nm,19.4s,MS4.2,baz=132,slow=30						
TXAR	**Lajitas Array**	58.78	9	P	**P**	**13 29 54.4**	**+1.3**
	1.7nm,1.0s,mb4.0,baz=187,slow=10,SNR=8.8						
BDFB	**Brasilia**	60.24	92	LR	LR	13 53 43.8	
	comp=Z,336nm,18.4s,MS4.5,baz=354,slow=34						
VNDA	**Vanda**	60.83	194	P	**P**	**13 30 05.9**	**-0.7**
	3.9nm,1.2s,mb4.4						
MNTX	**Cornudas Mount**	60.92	7	*e*P	**P**	**13 30 06.9**	**-0.8**
	6.2nm,1.1s,mb4.7						
GDL2	**Guadalupe Moun**	61.52	8	*e*P	**P**	**13 30 12.3**	**+0.4**
LAZ	**Ladron**	63.45	5	*e*P	**P**	**13 30 23.3**	**-1.3**
LDFC	**Landfair**	63.99	357	*e*P	**P**	**13 30 30.1**	**+1.9**
ANMO	**Albuquerque**	64.04	5	P	**P**	**13 30 29.3**	**+0.8**
	2.0nm,0.9s,mb4.1,baz=141,slow=6.5,SNR=1.5						
NEN	**Nelson**	64.56	358	*e*P	**P**	**13 30 31.6**	**-0.3**
DAC	**Darwin (Calif)**	65.33	355	*e*P	**P**	**13 30 34.4**	**-2.5**
	6.2nm,1.0s,mb4.6						
LRAL	**Lakeview Retre**	66.36	23	*e*P	**P**	**13 30 44.2**	**+0.7**
	8.2nm,1.2s,mb4.6						
VNA3	**Neumayer Olymp**	66.56	160		**P**	**13 30 43.8**	**-0.3**
TPH	**Tonopah**	67.09	356	P	**P**	**13 30 46.2**	**-1.9**
	13nm,1.1s,mb4.9						
CMB	**Columbia Colle**	67.32	353	P	**P**	**13 30 51.2**	**+1.7**
VNA2	**Neumayer--Watz**	67.37	160	⇑*i*	**P**	**13 30 50.3**	**+1.0**
MNV	**Mina**	67.51	355	*e*P	**P**	**13 30 50.4**	**-0.4**
	14nm,1.0s,mb4.9						
NVAR	**Mina Array Bea**	67.52	355	P	**P**	**13 30 51.1**	**+0.3**
	6.5nm,0.9s,mb4.6,baz=163,slow=7.8,SNR=25						
SRU	**San Rafael**	67.98	1	*e*P	**P**	**13 30 50.8**	**-2.8**
TMUT	**Trail Mountain**	68.16	1	*e*P	**P**	**13 30 51.6**	**-3.1**
SNAA	**Sanae**	68.37	161	*e*P	**P**	**13 30 54.2**	**-1.3**
	12nm,1.3s,mb4.8						
WVT	**Waverly**	68.92	21	*e*P	**P**	**13 30 58.2**	**-1.3**
DAU	**Daniels Canyon**	69.27	1	*e*P	**P**	**13 31 02.3**	**+0.7**
BMN	**Battle Mountai**	69.44	356	*e*P	**P**	**13 31 02.8**	**+0.2**
	17nm,1.1s,mb4.9						
KSU1	**Kansas State U**	69.50	13	*e*P	**P**	**13 31 01.9**	**-1.2**
WDC	**Whiskeytown Da**	70.09	352	*e*P	**P**	**13 31 07.8**	**+1.2**
	9.8nm,1.0s,mb4.7						
PHWY	**Pilot Hill**	70.43	5	*e*P	**P**	**13 31 07.2**	**-1.5**
WVOR	**Wild Horse Val**	71.53	355	*e*P	**P**	**13 31 15.4**	**+0.2**
	12nm,1.1s,mb4.7						
PDAR	**Pinedale Array**	71.66	2	P	**P**	**13 31 16.4**	**+0.3**
	1.8nm,1.0s,mb4.0,baz=162,slow=4.7,SNR=7.8						
HUMO	**Hull Mountain**	72.14	352	*e*P	**P**	**13 31 19.7**	**+0.8**
	9.7nm,1.2s,mb4.6						
TPAW	**Teton Pass**	72.35	1	*e*P	**P**	**13 31 20.5**	**+0.4**
	8.5nm,0.9s,mb4.7						
HLID	**Hailey**	72.44	358	*e*P	**P**	**13 31 20.7**	**0.0**
	11nm,1.1s,mb4.7						
IMW	**Indian Meadow**	72.75	1	*e*P	**P**	**13 31 22.0**	**-0.5**
	5.7nm,0.9s,mb4.5						
MCMT	**McKenzie Canyo**	73.68	360	*e*P	**P**	**13 31 26.4**	**-1.5**
QLMT	**Earthquake Lak**	73.68	1	*e*P	**P**	**13 31 31.1**	**+3.2**
BMO	**Blue Mountains**	73.85	356	*e*P	**P**	**13 31 24.0**	**-4.8**
	5.4nm,1.1s,mb4.4						
BOZ	**Bozeman (W)**	74.50	0	P	**P**	**13 31 33.8**	**+1.1**
	3.1nm,1.2s,mb4.1						
CHMT	**Chamberlain Mo**	75.77	359	*e*P	**P**	**13 31 39.6**	**-0.3**
BBSR	**BB Station**	76.06	40	P	**P**	**13 31 41.3**	**-0.6**
	25nm,1.1s,mb5.0						
NEW	**Newport**	77.24	357	*e*P	**P**	**13 31 50.1**	**+2.1**
	9.1nm,1.1s,mb4.6						
TAU	**Tasmania Unive**	77.71	228	P	**P**	**13 32 00.7**	**+10**
SYO	**Syowa Base**	79.91	170	⇑P	**P**	**13 32 02.0**	**-0.3**
EDM	**Edmonton**	82.08	359	*e*P	**P**	**13 32 13.9**	**-0.1**
CTAO	**Charters Tower**	89.90	247	P	**P**	**13 32 58.0**	**+4.7**
YKA	**Yellowknife Ar**	91.40	359	P	**P**	**13 33 00.5**	**+1.3**
	0.6nm,0.7s,mb4.0,baz=170,slow=4.6,SNR=6.1						
ILAR	**Eielson Array**	97.49	346	P	**P**	**13 33 27.2**	**+0.2**
	0.3nm,0.8s,mb3.8,baz=180,slow=4.5,SNR=2.7						
CN2	**Changchun**	132.32	304	*e*PKP	PKPdf	13 39 10.6	+0.7
CN2				PP	PP	13 41 36.6	+3.0
CN2				LR	LR		
	comp=N,200nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=E,200nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=Z,300nm,21.0s,MS5.0						
NJ2	**Nanjing**	136.28	287	*e*PKP	PKPdf	13 39 12.3	-5.2
NJ2				PP	PP	13 41 57.0	-1.7
NJ2				PKS	PKS	13 42 47.0	-2.6
NJ2				PP	PP		
	comp=Z,70nm,6.5s						
NJ2				LR	LR		
	comp=N,280nm,29.2s,MS5.0						
NJ2				LR	LR		
	comp=E,370nm,28.7s,MS5.0						
NJ2				LR	LR		
	comp=Z,220nm,25.2s,MS4.8						
HHC	**Hu-ho-hao-te**	142.66	300	*e*PKP	PKPdf	13 39 30.0	+1.3
HHC				PP	PP		
	comp=Z,140nm,5.1s						
MLR	**Muntele Rosu**	143.45	52	PKP	PKPdf	13 39 27.0	-2.9
	comp=Z,5.1nm,0.6s,baz=248,slow=1.9,SNR=8.7						
ENH	**Enshi**	143.90	282	PKPdf	PKPdf	13 39 33.4	+2.3
ULN	**Ulaanbaatar**	144.54	313	*e*PKPdf	PKPdf	13 39 27.3	-4.4
SONM	**Songino Array**	144.97	313	PKPbc	PKPbc	13 39 28.4	-1.3
	comp=Z,5.0nm,0.9s,baz=102,slow=2.2,SNR=22						
GYA	**Guiyang**	145.60	275	PKP	PKPdf	13 39 32.3	-1.9
GYA				PP	PP		
	comp=Z,170nm,4.8s						
LZH	**Lanzhou**	148.99	292	*e*PKP	PKPdf	13 39 42.5	+3.0
CMAR	**Chiang Mai Arr**	149.63	256	PKPbc	PKPdf	13 39 43.0	+2.0
	comp=Z,2.6nm,0.9s,baz=159,slow=1.3,SNR=7.8						
BR131	**Keskin Array S**	150.13	60	*e*PKPdf	PKPdf	13 39 45.5	+4.3
BRTR	**Keskin Array B**	150.13	60	PKPbc	PKPdf	13 39 44.8	+3.6
	comp=Z,2.7nm,0.9s,baz=235,slow=1.6,SNR=10						
BRTR				PKPab	PKPab	13 39 50.3	-1.1
	comp=Z,4.2nm,0.9s,baz=240,slow=2.0,SNR=12						
ZAL	**Zalesovo**	152.34	338	PKPbc	PKPdf	13 39 50.1	+6.0
	comp=Z,1.7nm,0.3s,baz=180,slow=1.0,SNR=4.8						
BVAR	**Borovoye Array**	156.12	356	PKPab	PKPab	13 40 15.1	-1.2
	comp=Z,1.9nm,1.0s,baz=18,slow=4.7,SNR=3.7						
WMQ	**Urumqi**	158.41	318	*e*PKP	PKPdf	13 39 51.3	-1.2
WMQ				LR	LR		
	comp=N,120nm,20.2s,MS4.8						
WMQ				LR	LR		
	comp=E,80nm,20.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,110nm,20.3s,MS4.7						
MKAR	**Makanchi Array**	159.10	331	PKP	PKPdf	13 39 51.5	-1.7
	comp=Z,0.2nm,0.5s,slow=1.4,SNR=3.5						
MKAR				PKPab	PKPab	13 40 26.9	-2.4
	comp=Z,0.1nm,0.3s,baz=90,slow=2.9,SNR=2.2						

IDC 23 13:34:38.7±2.4**,29.23S**×**112.14W,mb3.9**/2**,mb1 4.3**/3**,
mb1mx3.9**/18**,mbtmp4.0**/3**,ML4.4**/1**,MS4.1**/2**,Ms1 4.1**/2**,
ms1mx3.0**/22**,Error ellipse: s-maj=74.4km
s-min=36.7km az=152.0,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	3.24	50	Pn	Pn	13 35 29.9	-1.8
	40nm,0.3s,baz=228,slow=10,SNR=4.4						
RPN				Sn	Sn	13 36 10.5	-1.2
	15nm,0.3s,baz=336,slow=10.0,SNR=1.8						
PLCA	**Paso Flores**	35.65	120	LR	LR	13 53 27.4	
	comp=Z,262nm,18.7s,baz=89,slow=32						
PPT	**Papeete**	36.12	280	LR	LR	13 51 25.7	
	comp=Z,305nm,19.2s,baz=311,slow=28						
NVAR	**Mina Array Bea**	67.55	355	P	P	13 45 36.9	-2.0
	1.4nm,0.8s,baz=164,slow=8.3,SNR=8.5						
PDAR	**Pinedale Array**	71.67	2	P	P	13 46 02.6	-1.6
	0.4nm,0.5s,baz=146,slow=5.3,SNR=4.0						
SONM	**Songino Array**	145.05	313	PKPbc	PKPbc	13 54 14.8	-3.0
	0.8nm,0.8s,baz=66,slow=3.6,SNR=5.2						
BRTR	**Keskin Array B**	150.07	60	PKPbc	PKPdf	13 54 31.7	+3.7
	0.6nm,0.6s,baz=297,slow=6.4,SNR=3.0						
BVAR	**Borovoye Array**	156.15	356	PKPab	PKPab	13 55 03.2	-1.2
	0.6nm,0.6s,baz=45,slow=2.1,SNR=4.7						

WEL 23 13:35:25.4±0.2**,41.97S**×**173.92E,h12**^{km}**,ML3.7**/23**,
7C-1D,Error ellipse: s-maj=1.6km s-min=1.4km az=90.0,
South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSWZ	**Blackbirch Sta**	0.26	353	⇑PG	Pg	13 35 30.1	-0.9
BSWZ				SG	Sg	13 35 33.7	-0.9
CMWZ	**Cape Campbell**	0.31	46	⇑PG	Pg	13 35 32.2	+0.2
CMWZ				SG	Sg	13 35 38.4	+2.0
KHZ	**Kahutara**	0.53	212	⇑PG	Pg	13 35 35.3	-0.9
KHZ				SG	Sg	13 35 42.9	-0.5
TUWZ	**Tuamarina**	0.54	2	⇑PG	Pg	13 35 35.6	-0.8
TUWZ				*e*SG	Sg	13 35 42.5	-1.2
THZ	**Tophouse**	0.78	285	⇓P*	Pb	13 35 39.6	-0.9
THZ				SG	Sg	13 35 50.2	-1.5
TCW	**Tory Channel**	0.80	20	⇑P*	Pb	13 35 40.2	-0.6
TCW				SG	Sg	13 35 52.2	-0.1
NNZ	**Nelson**	0.85	332	⇑P*	Pb	13 35 40.7	-1.0
NNZ				S*	Sb	13 35 52.7	0.0
SNZO	**South Karori**	0.88	42	⇑P*	Pb	13 35 42.6	+0.4
SNZO				SG	Sg	13 35 55.4	+0.3
BHW	**Baring Head**	0.91	52	P*	Pb	13 35 43.4	+0.8
WEL	**Wellington**	0.93	43	P*	Pb	13 35 43.7	+0.6
WEL				SG	Sg	13 35 58.0	+1.3
MRW	**Makara Radio**	0.94	39	P*	Pb	13 35 43.4	+0.2
MRW				SG	Sg	13 35 57.2	+0.2
MSWZ	**Moikau Station**	1.14	61	P*	Pb	13 35 46.4	-0.2
DUWZ	**D'Urville Isla**	1.16	0	P*	Pb	13 35 46.3	-0.7
CAW	**Cannon Point**	1.22	46	P*	Pb	13 35 47.8	-0.2
PAWZ	**Paruwai Farm**	1.27	63	P*	Pb	13 35 48.0	-0.8
KIW	**Kapiti Island**	1.33	34	P*	Pb	13 35 49.6	-0.4
KIW				*e*S*	Sb	13 36 08.7	+1.9
MTW	**Mount Morrison**	1.44	56	P*	Pb	13 35 50.2	-1.5
TRWZ	**Traveller**	1.44	67	P*	Pb	13 35 50.6	-1.2
LTZ	**Lake Taylor**	1.47	236	PN	Pn	13 35 51.7	-0.2
LTZ				SN	Sn	13 36 10.6	-0.5
QRZ	**Quartz Range**	1.55	317	PN	Pn	13 35 53.0	0.0
QRZ				SN	Sn	13 36 13.3	+0.3
DSZ	**Denniston Nort**	1.59	277	PN	Pn	13 35 54.3	+0.6
DSZ				SN	Sn	13 36 14.8	+0.5
MRZ	**Mangatainoka R**	1.81	44	PN	Pn	13 35 55.5	-1.3
CRLZ	**Canterbury Las**	1.87	210	*e*PN	Pn	13 35 55.6	-2.0
MQZ	**McQueen's Vall**	1.97	208	PN	Pn	13 35 56.5	-2.5
MQZ				SN	Sn	13 36 20.9	-2.9
WAZ	**Wanganui**	2.35	20	PN	Pn	13 36 05.8	+1.3

IDC 23 13:42:23.5±3.1**,34.47S**×**113.03W,mb3.8**/3**,mb1 4.2**/3**,
mb1mx3.9**/16**,mbtmp3.8**/3**,Error ellipse: s-maj=96.2km
s-min=47.5km az=17.0,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	44.02	77	P	P	13 50 33.8	-0.9
	0.3nm,0.3s,baz=231,slow=9.5,SNR=3.7						
NVAR	**Mina Array Bea**	72.70	356	P	P	13 53 54.6	-0.5
	0.3nm,0.4s,baz=170,slow=5.5,SNR=5.6						
PDAR	**Pinedale Array**	76.93	3	P	P	13 54 16.4	-2.8
	1.1nm,0.9s,baz=162,slow=5.7,SNR=6.3						
SONM	**Songino Array**	147.81	307	PKPbc	PKPdf	14 02 09.4	+0.7
	0.6nm,0.8s,baz=90,slow=2.5,SNR=4.1						

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*IDC **23** 13:52:20.6±0.9,29.76S×112.19W,mb3.9/4,mb1 4.2/5,
mb1mx4.0/18,mbtmp4.0/5,ML4.3/1,MS4.5/14,Ms1 4.5/14,
ms1mx4.4/18,Error ellipse: s-maj=32.5km s-min=25.5km
az=129.0*
*NEIC **23** 13:52:23.5±0.5,29.32S×112.21W,h10^{km},mb4.6/9,Error
ellipse: s-maj=17.0km s-min=14.3km az=97.0*
ISC 23 13:52:22.2±0.7**,29.3S**±0.1×**112.2W**±0.2**,h10**^{km}**,n41,**
σ**0**^{s}**79**/22**,mb4.4**/11**,MS4.5**/14**,2C,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	3.32	50	Pn	**Pn**	**13 53 16.1**	**+0.7**
	24nm,0.3s,baz=238,slow=4.5,SNR=2.7						
RPN				Sn	**Sn**	**13 54 02.9**	**+7.6**
	25nm,0.3s,baz=113,slow=7.7,SNR=2.3						
RKT	**Rikitea**	21.33	281	*e*LR	LR	14 01 50.6	
	2µm,27.8s,baz=126						
TBI	**Tubuai**	33.82	271	*e*LR	LR	14 07 31.7	
	2µm,27.0s,baz=110						
PLCA	**Paso Flores**	35.66	120	LR	LR	14 10 31.0	
	comp=Z,267nm,18.9s,MS4.0,baz=99,slow=31						
PPT	**Papeete**	36.08	280	*e*P	**P**	**13 59 30.6**	**+4.4**
	207nm,27.5s						
PPT				*e*LR	LR	14 08 21.6	
	2µm,27.8s,baz=114						
PPT	**Papeete**	36.08	280	LR	LR	14 09 27.5	
	comp=Z,842nm,20.3s,MS4.5,baz=116,slow=28						
LPAZ	**La Paz**	42.40	82	P	**P**	**14 00 18.5**	**-0.2**
	0.4nm,0.3s,mb3.5,baz=266,slow=7.0,SNR=1.8						
LPAZ				LR	LR	14 14 57.0	
	comp=Z,548nm,18.3s,MS4.5,baz=263,slow=32						
LPAZ	**La Paz**	42.40	82	P	**P**	**14 00 18.1**	**-0.6**
	9.7nm,1.5s,mb4.2						
LPAZ				LR	LR	14 14 57.0	

OTAV	Otavalo	43.59	54	P	P	14 00 28.4	-0.1
CPUP	Villa Florida	48.25	100	LR	LR	14 18 06.6	
	comp=Z,436nm,19.8s,MS4.4,baz=275,slow=32						
ROSC	El Rosal	49.74	53	LR	LR	14 18 47.5	
	comp=Z,557nm,19.5s,MS4.6,baz=191,slow=32						
SAML	Samuel	50.11	76	eP	P	14 01 20.5	+0.6
	6.8nm,1.2s,mb4.5						
SDV	Santo Domingo	55.17	53	P	P	14 01 55.8	-1.8
	8.1nm,1.2s,mb4.6						
AFI	Afiamalu	56.92	272	LR	LR	14 21 15.1	
	comp=Z,312nm,18.6s,MS4.4,baz=112,slow=30						
BDFB	Brasilia	60.20	92	LR	LR	14 26 37.0	
	comp=Z,281nm,21.0s,MS4.4,baz=256,slow=34						
VNDA	Vanda	60.75	194	P	P	14 02 29.7	-6.2
	0.6nm,0.7s,mb3.9,baz=50,slow=7.9,SNR=3.5						
VNDA				LR	LR	14 24 17.4	
	comp=Z,291nm,18.1s,MS4.5,baz=90,slow=32						
VNDA	Vanda	60.75	194	eP	P	14 02 28.9	-7.1
	6.3nm,1.3s,mb4.6						
VNDA				LR	LR	14 24 17.4	
MNTX	Cornudas Mount	61.00	7	P	P	14 02 38.1	-0.1
	3.9nm,1.1s,mb4.5						
VNA3	Neumayer Olymp	66.46	160	⇑i	P	14 03 14.5	+1.1
VNA2	Neumayer--Watz	67.27	160	⇑i	P	14 03 18.8	+0.2
MNV	Mina	67.61	355	eP	P	14 03 20.6	-0.7
	8.0nm,0.9s,mb4.8						
NVAR	Mina Array Bea	67.61	355	P	P	14 03 21.6	+0.3
	2.7nm,0.9s,mb4.3,baz=165,slow=7.4,SNR=14						
NVAR				LR	LR	14 26 42.0	
	comp=Z,512nm,19.3s,MS4.8,baz=200,slow=30						
NVAR	Mina Array Bea	67.61	355	P	P	14 03 21.6	+0.3
NVAR				LR	LR	14 26 42.0	
SRU	San Rafael	68.07	1	eP	P	14 03 23.3	-0.8
SNAA	Sanae	68.27	161	eP	P	14 03 23.9	-1.0
	13nm,1.3s,mb4.8						
BMN	Battle Mountai	69.53	356	eP	P	14 03 33.1	0.0
	7.2nm,0.9s,mb4.6						
PDAR	Pinedale Array	71.75	2	P	P	14 03 47.6	+1.1
	0.4nm,0.4s,mb3.7,baz=236,slow=5.3,SNR=5.1						
PDAR				LR	LR	14 29 26.2	
	comp=Z,190nm,21.9s,MS4.3,baz=201,slow=31						
PDAR	Pinedale Array	71.75	2	P	P	14 03 47.6	+1.1
PDAR				LR	LR	14 29 26.2	
HLID	Hailey	72.53	358	eP	P	14 03 51.8	+0.6
	5.3nm,1.0s,mb4.4						
MAW	Mawson	83.33	178	LR	LR	14 38 38.9	
	comp=Z,265nm,18.6s,MS4.6,baz=38,slow=34						
HNR	Honiara	83.60	263	LR	LR	14 33 41.6	
	comp=Z,371nm,21.3s,MS4.7,baz=152,slow=30						
STKA	Stephens Creek	87.23	235	LR	LR	14 36 16.7	
	comp=Z,368nm,19.7s,MS4.8,baz=295,slow=30						
ILAR	Eielson Array	97.58	346	LR	LR	14 40 15.3	
	comp=Z,121nm,19.1s,MS4.4,baz=1.0,slow=29						
ULN	Ulaanbaatar	144.63	313	eP	PKPbc	14 11 58.1	-0.5
SONM	Songino Array	145.06	313	PKPbc	PKPbc	14 11 59.5	-0.3
	4.1nm,0.8s,baz=88,slow=1.9,SNR=23						
TLY	Talaya	145.27	320	P	PKPbc	14 12 00.8	+0.6
BRTR	Keskin Array B	150.15	60	PKPbc	PKPdf	14 12 13.1	+1.9
	1.2nm,0.8s,baz=180,slow=1.2,SNR=5.0						
BRTR				PKPab	PKPab	14 12 20.9	-0.5
	2.3nm,0.9s,baz=243,slow=2.8,SNR=8.3						
ZAL	Zalesovo	152.44	338	PKPbc	PKPdf	14 12 19.0	+4.9
	0.9nm,0.3s,baz=89,slow=12,SNR=4.1						
ZAL	Zalesovo	152.44	338	PKPbc	PKPdf	14 12 19.0	+4.9
BVAR	Borovoye Array	156.22	356	PKPab	PKPab	14 12 47.8	+1.2
	1.4nm,0.7s,baz=27,slow=3.3,SNR=7.3						
MKAR	Makanchi Array	159.19	331	PKP	PKPdf	14 12 21.9	-1.3
	0.2nm,0.3s,baz=180,slow=1.4,SNR=3.5						
MKAR				PKPab	PKPab	14 12 58.5	-1.1
	0.2nm,0.4s,baz=44,slow=4.9,SNR=2.9						

IDC 23 14:14:46.3±2.7**, 7.31N×93.94E, mb3.5**/2**, mb1 3.6**/3**, mb1mx3.4**/19**, mbtmp3.4**/3**, ML3.8**/1**, Error ellipse: s-maj=89.3km s-min=29.9km az=63.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.11	23	Pn	P	14 17 40.2	-2.9
	0.2nm,0.3s,baz=214,slow=13,SNR=3.8						
MKAR	Makanchi Array	40.59	348	P	P	14 22 27.6	-1.7
	0.9nm,0.7s,baz=170,slow=7.9,SNR=9.8						
WRA	Warramunga Arr	48.10	125	P	P	14 23 28.1	-2.0
	0.2nm,0.5s,baz=304,slow=8.7,SNR=4.0						

NEIC ***23*** *14:32:01.7, 32.00S×71.61W, h35^{km}, ML2.7(GUC), After GUC.*

GUC 23 14:32:01.7±0.8**, 32.00S×71.61W, h35^{km}**±3^{km}**, MD3.9, ML2.7, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	Papudo	0.55	165	i P	P	14 32 13.2	+0.2
PACH				i S	S	14 32 21.5	+0.4
JACH	Jahuel	1.09	128	⇓iP	P	14 32 21.8	+1.1
JACH				i S	S	14 32 36.0	+1.1
PEL	Peldehue	1.38	146	eP	P	14 32 25.6	+0.8
PEL				i S	S	14 32 43.9	+1.8
PEL				AMP		14 32 47.3	
	comp=N,191nm,0.2s						
FCH	Farellones	1.73	140	eP	P	14 32 31.1	+1.3
FCH				i S	S	14 32 54.0	+3.2
FCH				AMP		14 32 56.0	
	comp=N,96nm,0.3s						
TACH	Talagante	1.74	161	eP	P	14 32 30.7	+0.8
CHCH	Chadas Angostu	2.09	158	eP	P	14 32 35.5	+0.5
LMEL	Las Melosas	2.19	148	eP	P	14 32 37.6	+1.3
LMEL				i S	S	14 33 05.1	+2.6
LMEL				AMP		14 33 14.4	
	comp=N,89nm,0.4s						

FUNV ***23*** *14:41:59.1, 6.71N×73.23W, h162^{km}, MW3.6*

IDC ***23*** *14:42:00.8±0.8, 6.75N×72.96W, h161^{km}±14^{km}, mb3.3/1, mb1 3.7/3, mb1mx3.2/22, mbtmp3.9/3, Error ellipse: s-maj=67.5km s-min=7.5km az=132.0*

ISC 23 14:41:59.8±0.7**, 6.87N**±0.06×**72.97W**±0.07**, h172^{km}**±7^{km}**, n20, σ0^{s}.98**/33**, mb3.6**/1**, 7D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.18	33	⇓iP	P	14 42 29.3	+0.9
CAPV				eS	S	14 42 50.4	-0.1
ROSC	El Rosal	2.42	214	P	P	14 42 41.1	-0.5
	31nm,0.3s,baz=281,slow=9.6,SNR=30						
ROSC				S	S	14 43 12.1	-1.5
	41nm,0.3s,baz=74,slow=21,SNR=16						
SOCV	Socops	2.52	56	eP	P	14 42 44.1	+1.4
SOCV				eS	S	14 43 16.3	+0.5
VIGV	El Vigia	2.52	39	⇓iP	P	14 42 43.9	+1.1
VIGV				eS	S	14 43 16.0	+0.1
SDV	Santo Domingo	3.06	49	P	P	14 42 51.1	+1.7
	21nm,0.3s,baz=265,slow=12,SNR=63						
SDV				S	S	14 43 29.1	+1.6
	22nm,0.3s,baz=265,slow=23,SNR=31						
VIRV	Villa del Rosa	3.65	9	⇓iP	P	14 42 56.3	-0.6
VIRV				eS	S	14 43 38.5	-2.5
QARV	Quebrada Arrib	4.10	36	⇓iP	P	14 43 03.9	+1.2
QARV				eS	S	14 43 50.6	-0.6
SANV	Sanarito	4.29	52	eP	P	14 43 06.0	+0.9
SANV				eS	S	14 43 55.6	+0.1
CURV	Curarigua	4.31	43	⇓iP	P	14 43 06.2	+0.8
CURV				eS	S	14 43 55.5	-0.5
DABV	Dabajuro	4.64	30	eP	P	14 43 10.8	+1.1
DABV				eS	S	14 44 01.4	-2.2
TEPV	Terepaima	4.84	50	⇓iP	P	14 43 13.1	+0.9
TEPV				eS	S	14 44 07.1	-1.1
SIQV	Siquisique	4.88	39	⇓iP	P	14 43 13.3	+0.4
SIQV				eS	S	14 44 08.7	-0.6
BAUV	El Baul	5.29	67	eP	P	14 43 17.9	-0.3
BAUV				eS	S	14 44 17.9	-1.1
MONV	Montecano	5.85	30	eP	P	14 43 25.6	+0.1
TURV	Turiamo	6.19	55	eP	P	14 43 29.9	-0.2
TURV				eS	S	14 44 39.2	-1.0
CAOV	Caicara del Or	6.61	86	eP	P	14 43 34.8	-0.8
BIRV	Birongo	7.53	61	eP	P	14 43 46.8	-0.9
CUPV	Cœpira	7.77	65	eP	P	14 43 50.6	-0.4
YKA	Yellowknife Ar	63.27	340	P	P	14 52 12.7	+0.6
	0.5nm,0.5s,mb3.6,baz=133,slow=7.0,SNR=5.1						
WRA	Warramunga Arr	150.50	241	PKPbc	PKPdf	15 01 33.9	+7.7
	0.1nm,0.3s,baz=108,slow=2.6,SNR=14						

IDC ***23*** *15:02:47.5±1.7, 29.22N×100.94E, mb3.7/2, mb1 3.8/3, mb1mx3.5/18, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=78.8km s-min=26.2km az=63.0*

BJI ***23*** *15:02:51.7, 29.44N×101.17E, h17^{km}, ML3.3, Ms3.9, Msz3.7*

ISC 23 15:02:47.4±1.0**, 29.35N**±0.05×**101.31E**±0.09**, h10^{km}, n5, σ1^{s}.08**/9**, mb3.8**/2**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	2.63	53	P	Pn	15 03 34.8	+4.1
CD2				PG	Pg	15 03 37.3	-2.7
CD2				SG	Sg	15 04 15.4	+0.4
CD2				Smax			
	comp=N,140nm,0.6s						
CD2				Smax			
	comp=E,80nm,0.5s						
KMI	Kunming	4.40	163	PG	Pg	15 04 14.5	-0.7
KMI				S	Sn	15 04 55.1	+7.4
KMI				SG	Sg	15 05 14.4	+0.6
KMI				Smax			
	comp=N,30nm,1.6s						
KMI				Smax			
	comp=E,30nm,1.4s						
KMI				LR	LR		
	comp=N,410nm,7.6s						
KMI				LR	LR		
	comp=E,230nm,4.7s						
KMI				LR	LR		
	comp=Z,280nm,5.9s						
SONM	Songino Array	18.87	11	P	P	15 07 11.4	+1.4
	comp=Z,0.1nm,0.3s,baz=197,slow=13,SNR=5.7						
MKAR	Makanchi Array	22.87	325	P	P	15 07 51.6	-0.4
	comp=Z,1.1nm,0.8s,mb3.3,baz=136,slow=13,SNR=10						
WRA	Warramunga Arr	58.45	143	P	P	15 12 45.9	-0.1
	comp=Z,2.3nm,0.9s,mb4.2,baz=334,slow=7.6,SNR=11						

IDC ***23*** *15:03:07.9±1.3, 20.51N×122.25E, mb3.7/5, mb1 3.9/6, mb1mx3.7/19, mbtmp3.8/6, ML3.9/1, MS3.4/3, Ms1 3.4/3, ms1mx2.8/27, Error ellipse: s-maj=34.7km s-min=23.4km az=68.0*

MAN ***23*** *15:03:09.4, 20.65N×121.87E, h9^{km}, mb4.7, ML3.6, MS3.5*

NEIC ***23*** *15:03:09.8±8.1, 20.58N×122.25E, h14^{km}±53^{km}, mb4.3/2, Error ellipse: s-maj=23.5km s-min=19.0km az=56.0*

ISC 23 15:03:08.2±1.5**, 20.71N**±0.04×**122.2E**±0.1**, h10^{km}**±10^{km}**, n19, σ1^{s}.22**/21**, mb3.8**/7**, MS3.9**/1**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	0.36	223	eP	Pg	15 03 15.0	-0.7
SGCP	Mt. Cagua	2.46	184	eP	Pn	15 03 49.0	-0.1
SGCP				eS	Sn	15 04 20.2	+0.8
CVP	Callao Caves	3.01	187	eP	Pn	15 03 57.0	0.0
CVP				eS	Sn	15 04 28.0	-5.5
NACB	Ninganchiao	3.50	350	ePn	Pn	15 04 03.4	-0.4
NACB				eSn	Sn	15 04 40.8	-4.9
CAUP	Cauayan	3.76	186	eP	Pn	15 04 08.4	+0.8
YHNB	Yeheng	4.02	349	ePn	Pn	15 04 12.7	+1.4
YHNB				eSn	Sn	15 04 55.7	-3.2
TATO	Taipei	4.30	351	P	Pn	15 04 17.9	+2.7
BALP	Baler	4.98	187	eP	Pn	15 04 24.6	-0.3
JOW	Kunigami	8.23	41	Pn	P	15 05 10.4	-0.2
	3.1nm,0.3s,baz=167,slow=18,SNR=6.6						
JOW				LR	LR	15 08 33.0	
	comp=Z,219nm,20.2s,baz=306,slow=39						
JNU	Nakatsue	14.56	30	LR	LR	15 12 24.7	
	comp=Z,64nm,20.4s,baz=177,slow=38						
CMAR	Chiang Mai Arr	22.05	268	P	P	15 08 05.0	+0.2
	1.0nm,0.8s,mb3.3,baz=75,slow=10,SNR=5.7						
SONM	Songino Array	29.93	338	P	P	15 09 20.4	+1.8
	0.4nm,0.5s,mb3.4,baz=154,slow=7.9,SNR=3.4						
MKAR	Makanchi Array	41.53	318	P	P	15 10 57.5	+0.2
	0.7nm,0.5s,mb3.5,baz=109,slow=10,SNR=13						
WRA	Warramunga Arr	42.10	163	P	P	15 11 00.2	-2.1
	1.1nm,0.8s,mb3.5,baz=342,slow=8.9,SNR=9.9						
ZAL	Zalesovo	43.69	329	P	P	15 11 15.8	+1.0
	1.3nm,0.4s,mb4.0,baz=21,slow=7.9,SNR=4.2						
ZAL	Zalesovo	43.69	329	P	P	15 11 15.8	+1.0
ZRNK	Zerenda	51.76	322	eP	P	15 12 17.1	-0.7
	1.8nm,0.8s,mb4.0						
ARU	Arti	58.47	324	eP	P	15 13 04.4	-2.1
	2.9nm,0.6s,mb4.5						
HFS	Hagfors	81.06	331	LR	LR	15 58 10.1	
	comp=Z,58nm,19.7s,MS3.9,baz=148,slow=41						

NEIC ***23*** *15:14:47.2, 46.35S×166.43E, h12^{km}, ML4.1(WEL), After WEL.*

WEL 23 15:14:46.9±0.4**, 46.40S×166.54E, h5^{km}, ML3.9**/8**, Error ellipse: s-maj=3.9km s-min=2.9km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	Wether Hill Ro	1.10	63	P	Pb	15 15 07.4	-0.5
WHZ				S	Sb	15 15 21.2	-1.2
WHZ	Wether Hill Ro	1.10	63	P*	Pb	15 15 07.4	-0.5
WHZ				S*	Sb	15 15 21.5	-0.9
WHZ				S*	Sb	15 15 21.6	-0.8
MLZ	Mavora Lakes	1.55	48	P	Pn	15 15 13.7	-1.5
MLZ				S	Sb	15 15 34.0	-1.4
MLZ	Mavora Lakes	1.55	48	PN	Pn	15 15 13.7	-1.5
MLZ				SN	Sn	15 15 34.0	-1.8
MLZ				SN	Sn	15 15 34.1	-1.7
TUZ	Tuapeka	2.19	80	eP	Pn	15 15 23.1	-1.3
TUZ				S	Sn	15 15 52.7	+0.5
TUZ	Tuapeka	2.19	80	PN	Pn	15 15 23.1	-1.3
TUZ				SN	Sn	15 15 50.7	-1.5
EAZ	Earnscleugh	2.26	60	eP	Pn	15 15 24.2	-1.2
EAZ				S	Sn	15 15 52.8	-1.1
EAZ	Earnscleugh	2.26	60	PN	Pn	15 15 24.2	-1.1
EAZ				SN	Sn	15 15 52.8	-1.1
WKZ	Wanaka	2.34	49	eP	Pn	15 15 26.5	0.0
WKZ				S	Sn	15 15 56.6	+0.6
WKZ	Wanaka	2.34	49	PN	Pn	15 15 26.5	0.0
WKZ				SN	Sn	15 15 54.8	-1.2
JCZ	Jackson Bay	2.80	35	eP	Pn	15 15 33.5	+0.4
JCZ	Jackson Bay	2.80	35	PN	Pn	15 15 32.8	-0.3
ODZ	Otahua Downs	3.17	66	eP	Pn	15 15 35.1	-3.3
ODZ	Otahua Downs	3.17	66	PN	Pn	15 15 35.1	-3.4
LBZ	Lake Benmore	3.26	53	eP	Pn	15 15 36.6	-3.0
LBZ	Lake Benmore	3.26	53	PN	Pn	15 15 36.6	-3.0
RPZ	Rata Peaks	4.17	52	ePN	Pn	15 15 47.8	-4.8
DSZ	Denniston Nort	5.99	41	PN	Pn	15 16 15.1	-3.3

NEIC ***23*** *15:15:30.1, 9.53N×84.19W, h8^{km}, MD4.2(CASC), After CASC.*

NEIC Felt at Escazu, Curridabat, Jaco, Parrita, Quepos, Santa Ana, San Pedro and in the Valle Central.

CASC 23 15:15:30.8±2.0**, 9.57N×84.17W, h5^{km}**±6^{km}**, MD4.2, MW4.2, 9C-3D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJS	Escuela Geolog	0.39	17	eP	Pg	15 15 39.3	+0.8
SJS				eS	Sg	15 15 46.2	+2.5
SJS	Escuela Geolog	0.39	17	⇑eP	Pg	15 15 39.3	+0.7
SJS				eS	Sg	15 15 46.2	+2.5
BUS	Buena Vista	0.41	92	⇑iP	Pg	15 15 39.5	+0.5
BUS	Buena Vista	0.41	92	⇑iP	Pg	15 15 39.5	+0.5
PRS1	Puriscal	0.43	341	⇓eP	Pg	15 15 38.3	-1.2
PRS1	Puriscal	0.43	341	⇓iP	Pg	15 15 38.3	-1.2
URSC	Urasca	0.47	56	eP	Pg	15 15 40.8	+0.7
URSC	Urasca	0.47	56	⇑iP	Pg	15 15 40.9	+0.7
VPS2	Volcan Poas 2	0.62	354	eP	Pg	15 15 43.3	0.0
VPS2	Volcan Poas 2	0.62	354	⇑iP	Pg	15 15 43.3	+0.1
FORC	Fortuna	1.02	331	eP	Pb	15 15 49.7	-1.0
FORC	Fortuna	1.02	331	⇑iP	Pb	15 15 50.0	-0.7
FORC				eP		15 15 50.0	
FORC				i S	Sb	15 16 04.3	+0.1
JTS	JuntasAbangare	1.05	313	eP	Pb	15 15 49.1	-2.0
JTS				eS	Sb	15 16 03.5	-1.6
TRTC	Tortuguero	1.10	24	eP	Pb	15 15 51.4	-0.5
TRTC	Tortuguero	1.10	24	⇑iP	Pb	15 15 51.5	-0.4
ACR	Cerro Adams	1.34	133	eP	Pb	15 15 52.9	-3.3
ACR				eS	Sb	15 16 13.0	-0.5
ACR	Cerro Adams	1.34	133	⇑eP	Pb	15 15 55.2	-0.9
SVTC	San Vito de Co	1.43	123	eP	Pn	15 15 55.7	-1.7
VCR	Vista de Mar	1.54	291	eP	Pn	15 15 57.0	-2.2
CNI	Changuinola	1.64	95	eP	Pn	15 16 01.2	+0.7
CNI				eS	Sb	15 16 23.7	+1.7
BRU2	Volcan	1.65	118	eP	Pn	15 15 59.9	-0.8
BRU2				eS	Sb	15 16 23.6	+1.2
BRU	Baru	1.76	115	eP	Pn	15 16 02.8	+0.6
DVD	David	2.04	123	eP	Pn	15 16 05.7	-0.5
PTP1	Petroterminal	2.19	128	⇑eP	Pn	15 16 03.5	-4.9
MIRN	Miramar	3.79	319	eP	Pn	15 16 31.8	+0.6
UPA	Univ. de Panam	4.61	97	⇓iP	Pn	15 16 41.8	-1.1

IDC ***23*** *16:02:15.3±1.9, 31.09S×178.03W, mb4.7/2, mb1 4.6/3, mb1mx4.1/15, mbtmp4.4/3, ML3.3/1, MS3.4/1, Ms1 3.4/1, ms1mx2.9/18, Error ellipse: s-maj=57.6km s-min=25.9km az=121.0*

NEIC ***23*** *16:02:16.1±0.8, 31.01S×178.08W, h10^{km}, mb4.7/5, Error ellipse: s-maj=24.3km s-min=14.4km az=100.0*

ISC 23 16:02:15.7±3.4**, 31.33S**±0.07×**178.4W**±0.2**, h3^{km}**±22^{km}**, n29, σ1^{s}.03**/28**, mb4.6**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.10	11	Pn	Pn	16 02 49.0	-3.2
	117nm,0.3s,baz=263,slow=23,SNR=6.3						
RAO				Sn	Sn	16 03 08.8	-10
	282nm,0.3s,baz=106,slow=22,SNR=9.2						
RAO				LR	LR	16 03 15.9	
	comp=Z,730nm,21.4s,baz=230,slow=33						
RAO	Raoul Island	2.10	11	ePn	Pn	16 02 46.0	-6.2
RAO				eSn	Sn	16 03 06.0	-13
RAO				Sn	Sn	16 03 08.8	-10
RAO				LR	LR	16 03 15.9	
PUZ	Puketiti	7.28	202	ePN	Pn	16 04 05.4	-0.2
PUZ				SN	Sn	16 05 28.9	-0.9
MWZ	Matawai	7.76	205	ePN	Pn	16 04 12.6	+0.2
MWZ				SN	Sn	16 05 42.9	+1.1
URZ	Urewera	7.86	207	Pn	Pn	16 04 14.2	+0.6
	0.4nm,0.3s,baz=272,slow=3.7,SNR=6.9						
URZ	Urewera	7.86	207	ePN	Pn	16 04 13.8	+0.1
TCW	Tory Channel	11.51	209	SN	S	16 07 07.7	-6.5
TUWZ	Tuamarina	11.83	209	SN	S	16 07 15.5	-6.5
NNZ	Nelson	11.90	212	SN	S	16 07 18.2	-5.6
MQZ	McQueen’s Vall	14.26	207	SN	S	16 08 08.3	-12
DZM	Mont Dzumac	16.39	301	LR	LR	16 11 06.2	
	comp=Z,117nm,19.4s,baz=193,slow=32						
TAU	Tasmania Unive	29.51	237	eP	P	16 08 22.2	-1.1
	62nm,1.5s,mb5.1						
CTAO	Charters Tower	33.65	281	eP	P	16 09 00.7	+0.8
	4.2nm,0.6s,mb4.5						
STKA	Stephens Creek	33.98	258	P	P	16 09 04.5	+1.9
	3.2nm,0.4s,mb4.6,baz=90,slow=9.4,SNR=25						
STKA	Stephens Creek	33.98	258	eP	P	16 09 04.3	+1.7
WRAB	Tennant Creek	43.83	273	eP	P	16 10 24.1	-0.7
	12nm,0.6s,mb4.8						
WRA	Warramunga Arr	43.83	273	P	P	16 10 24.7	-0.2
	6.7nm,0.4s,mb4.7,baz=112,slow=8.0,SNR=51						
CASY	Casey	54.18	208	eP	P	16 11 42.8	-1.3
	2.0nm,0.6s,mb4.2						
MAW	Mawson	71.33	201	eP	P	16 13 37.0	-1.2
	4.2nm,0.7s,mb4.5						
SNAA	Sanae	77.24	179	eP	P	16 14 13.1	+0.9
VNA3	Neumayer Olymp	77.41	176		P	16 14 14.3	+1.2
VNA3	Neumayer Olymp	77.41	176		P	16 14 19.3	+6.2
VNA2	Neumayer--Watz	77.83	177		P	16 14 16.6	+1.2
VNA2	Neumayer--Watz	77.83	177		P	16 14 22.2	+6.8
KAF	Kangasniemi	145.31	340	ep	PKPbc	16 21 50.6	-3.9
FINES	FINESS Array B	145.90	339	PKPbc	PKPbc	16 21 53.5	-2.5
	4.1nm,0.6s,baz=43,slow=3.8,SNR=30						
NB2	NORSAR Subarra	149.62	351	PKPabc	PKPdf	16 22 04.0	+0.6
	0.7nm,0.6s,baz=17,slow=2.9						
AKASG	Malin Array Be	151.84	321	PKPbc	PKPdf	16 22 10.9	+3.8
	0.7nm,0.5s,baz=47,slow=2.8,SNR=5.3						
BRTR	Keskin Array B	152.75	297	PKPbc	PKPdf	16 22 16.6	+7.8
	0.7nm,0.5s,baz=124,slow=4.5,SNR=3.8						

NEIC ***23*** *16:20:22.0±0.7, 29.38S×112.30W, h10^{km}, mb4.7/12, Error ellipse: s-maj=20.7km s-min=18.4km az=136.0*

IDC ***23*** *16:20:21.5±1.6, 29.15S×112.39W, mb4.0/4, mb1 4.3/5, mb1mx4.0/19, mbtmp4.1/5, ML4.9/1, MS4.2/15, Ms1 4.2/15, ms1mx4.1/20, Error ellipse: s-maj=51.6km s-min=28.7km az=19.0*

ISC 23 16:20:19.9±0.9**, 29.5S**±0.1×**112.6W**±0.2**, h10^{km}, n39, σ1^{s}.15**/21**, mb4.4**/16**, MS4.3**/15**, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.71	52	Pn	Pn	16 21 13.7	-4.8
	118nm,0.3s,baz=221,slow=11,SNR=10						
PLCA	Paso Flores	35.88	120	LR	LR	16 38 20.5	
	comp=Z,383nm,18.9s,MS4.2,baz=276,slow=30						
USHA	Ushuaia	40.43	142	LR	LR	16 41 08.4	
	comp=Z,1μm,18.2s,MS4.7,baz=201,slow=31						
LPAZ	La Paz	42.77	82	P	P	16 28 19.6	0.0
	0.9nm,0.7s,mb3.6,baz=223,slow=9.2,SNR=5.1						
LPAZ				LR	LR	16 42 00.7	
	comp=Z,164nm,20.0s,MS3.9,baz=242,slow=30						
CPUP	Villa Florida	48.57	100	LR	LR	16 45 13.1	
	comp=Z,133nm,21.1s,MS3.9,baz=100,slow=31						
SIV	San Ignacio	49.02	86	P	P	16 29 09.7	+0.6
	2.8nm,1.0s,mb4.3,baz=248,slow=12,SNR=13						
ROSC	El Rosal	50.13	54	LR	LR	16 46 33.6	
	comp=Z,402nm,19.5s,MS4.4,baz=238,slow=32						
SAML	Samuel	50.50	77	eP	P	16 29 19.8	-0.8
	26nm,1.8s,mb4.9						
TXAR	Lajitas Array	59.10	9	LR	LR	16 51 54.1	
	comp=Z,128nm,19.3s,MS4.1,baz=210,slow=32						
VNDA	Vanda	60.49	194	LR	LR	16 52 27.7	
	comp=Z,255nm,18.4s,MS4.4,baz=90,slow=32						
VNDA	Vanda	60.49	194	P	P	16 30 32.0	0.0
	3.9nm,1.3s,mb4.3						
MNTX	Cornudas Mount	61.22	7	eP	P	16 30 37.1	-0.3
	3.0nm,0.7s,mb4.5						
TUC	Tucson	61.47	2	eP	P	16 30 39.0	-0.1
	6.3nm,1.0s,mb4.7						
LENM	Lemitar	63.52	5	eP	P	16 30 52.5	-0.2
LAZ	Ladron	63.74	5	eP	P	16 30 57.2	+3.0
WMOK	Wichita Mounta	65.19	13	P	P	16 31 00.2	-3.5
	1.0nm,0.5s,mb4.1						
SDCO	Great Sand Dun	67.20	6	P	P	16 31 18.4	+2.0
	4.1nm,1.1s,mb4.4						
TPH	Tonopah	67.34	356	P	P	16 31 15.4	-1.9
	17nm,1.6s,mb4.8						
PV10	Paradox Valley	67.58	3	P	P	16 31 22.1	+3.3
MNV	Mina	67.75	355	eP	P	16 31 21.6	+1.7
	9.0nm,1.1s,mb4.7						
NVAR	Mina Array Bea	67.76	355	P	P	16 31 19.3	-0.7
	1.9nm,0.7s,mb4.2,baz=168,slow=7.6,SNR=12						
NVAR				LR	LR	16 54 37.7	
	comp=Z,399nm,19.1s,MS4.7,baz=200,slow=30						
SNAA	Sanae	68.22	161	P	P	16 31 14.5	-7.8
	14nm,1.4s,mb4.8						
SRU	San Rafael	68.26	2	eP	P	16 31 22.6	-0.5
WVOR	Wild Horse Val	71.77	355	eP	P	16 31 44.5	+0.2
	15nm,1.5s,mb4.7						
PDAR	Pinedale Array	71.94	2	P	P	16 31 45.0	-0.5
	0.5nm,0.6s,mb3.6,baz=243,slow=6.6,SNR=5.5						
PDAR				LR	LR	16 59 48.4	
	comp=Z,73nm,18.4s,MS4.0,baz=14,slow=33						
HLID	Hailey	72.70	359	eP	P	16 31 48.6	-1.3
	7.3nm,1.1s,mb4.5						
RSSD	Black Hills	73.66	6	eP	P	16 31 56.1	+0.7
	12nm,1.7s,mb4.6						
ULM	Lac du Bonnet	80.75	11	LR	LR	17 04 41.1	
	comp=Z,112nm,18.4s,MS4.2,baz=351,slow=33						
MAW	Mawson	83.16	178	LR	LR	17 09 42.7	
	comp=Z,89nm,21.9s,MS4.1,baz=189,slow=36						
CTA	Charters Tower	89.50	247	LR	LR	17 04 01.1	
	comp=Z,167nm,20.4s,MS4.5,baz=58,slow=29						
YKA	Yellowknife Ar	91.66	359	LR	LR	17 09 49.6	
	comp=Z,350nm,18.8s,MS4.8,baz=165,slow=32						
SCHQ	Schefferville	92.71	25	LR	LR	17 11 50.8	
	comp=Z,54nm,19.2s,MS4.0,baz=127,slow=34						
ILAR	Eielson Array	97.67	346	LR	LR	17 08 52.8	
	comp=Z,79nm,18.7s,MS4.2,baz=181,slow=30						
SONM	Songino Array	144.92	312	PKP	PKPdf	16 39 57.9	-2.2
	1.0nm,0.9s,baz=93,slow=1.4,SNR=8.6						
TLY	Talaya	145.18	320	P	PKPbc	16 39 58.5	+0.7
BRTR	Keskin Array B	150.54	61	PKPbc	PKPdf	16 40 13.2	+3.7
	0.3nm,0.4s,baz=326,slow=5.8,SNR=2.1						
BRTR				PKPab	PKPab	16 40 20.9	+0.1
	2.0nm,0.9s,baz=198,slow=3.9,SNR=7.8						
ZAL	Zalesovo	152.47	338	PKPbc	PKPdf	16 40 18.9	+7.0
	0.6nm,0.3s,baz=204,slow=5.2,SNR=2.6						

ZAL	**Zalesovo**	**152.47**	**338**	PKPbc	PKPdf	16 40 18.9	+7.0
BVAR	**Borovoye Array**	**156.37**	**355**	PKPab	PKPab	16 40 45.8	+0.8
	0.7nm,0.8s,baz=14,slow=6.1,SNR=5.1						

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*LDG **23** 16:29:00.6±0.1,46.66N×7.23E,h10^{km},Md2.6/2,Ml2.4/21, Error ellipse: s-maj=1.4km s-min=0.8km az=101.0*

*STR **23** 16:29:00.7±0.3,46.68N×7.23E,h10^{km}±1^{km},Ml2.2,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ZUR 23 16:29:00.2,46.66N×7.26E,h12^{km}±1^{km},ML1.8/12,5C, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORNY	**Torny**	**0.24**	**299**	*i* S	Sg	16 29 09.2	+0.4
TORNY	**Torny**	**0.24**	**299**	*e*P	Pg	16 29 05.3	-0.1
WIMIS	**Wimmis**	**0.25**	**88**	*e*S	Sg	16 29 09.7	+0.5
WIMIS	**Wimmis**	**0.25**	**88**	*e*P	Pg	16 29 05.5	-0.1
SENIN	**Lac Senin**	**0.30**	**175**	*e*P	Pg	16 29 06.2	-0.3
AIGLE	**Aigle**	**0.38**	**214**	*e*S	Sg	16 29 13.4	+0.1
AIGLE	**Aigle**	**0.38**	**214**	⇑*i*P	Pg	16 29 07.6	-0.5
GRYON	**Gryon**	**0.42**	**194**	⇑*i*P	Pg	16 29 08.5	-0.3
GRYON				*e*S	Sg	16 29 15.0	+0.4
OG01	**Vacheresse**	**0.52**	**231**	Pg	Pg	16 29 10.5	-0.2
OG01				Sg	Sg	16 29 18.4	+0.7
SALAN	**Lac Salanfe**	**0.55**	**201**	*e*P	Pb	16 29 10.9	-0.4
BRANT	**Les Verrieres**	**0.61**	**298**	⇑*i*P	Pb	16 29 12.2	-0.1
EMV	**Vieux Emosson**	**0.65**	**203**	*e*P	Pb	16 29 12.6	-0.4
BOURR	**Bourrignon**	**0.74**	**358**	*e*P	Pb	16 29 14.6	+0.1
BALST	**Balsthal**	**0.74**	**23**	⇑*i*P	Pb	16 29 14.7	+0.1
LOMF	**Lomont**	**0.75**	**337**	Pg	Pg	16 29 15.5	+0.1
CABF	**La Chapelle**	**0.81**	**267**	*e*Pg	Pg	16 29 16.1	-0.4
CABF				*e*Sg	Sg	16 29 26.0	-1.4
CABF				*e*Sn	Sn	16 29 27.6	-1.6
	10.0nm,0.2s						
BNALP	**Bannalp**	**0.83**	**75**	*e*P	Pb	16 29 16.8	+0.7
SULZ	**Sulz-Cheisache**	**1.05**	**34**	⇑*i*P	Pb	16 29 20.3	+0.5
RSL	**Roselend**	**1.07**	**205**	Pg	Pg	16 29 20.6	-1.0
HINF	**Hinteralfeld**	**1.19**	**347**	*e*Pg	Pg	16 29 22.9	-1.2
HINF				*e*Sn	Sn	16 29 36.9	-2.0
HINF				*e*Sg	Sg	16 29 38.3	-1.7
	12nm,0.2s						
MOF	**Molkenrain**	**1.20**	**356**	Pg	Pg	16 29 23.2	-1.0
MOF				Sg	Sg	16 29 38.8	-1.4
LPL	**La Plagne**	**1.20**	**198**	*e*Pn	Pn	16 29 22.3	-0.6
LPL				*e*Pg	Pg	16 29 23.6	-0.6
LPL				*e*Sg	Sg	16 29 40.0	-0.3
	3.8nm,0.3s						
LPG	**La Plagne**	**1.21**	**197**	*e*Pg	Pg	16 29 23.9	-0.6
LPG				*e*Sg	Sg	16 29 39.9	-0.8
	5.5nm,0.2s						
FELD	**Feldberg**	**1.32**	**22**	Pg	Pg	16 29 25.3	-1.3
OG05	**Jujurieux**	**1.39**	**244**	Pg	Pg	16 29 27.4	-0.7
OG05				Sg	Sg	16 29 45.9	-0.8
HAU	**Haudompre**	**1.48**	**336**	*e*Pn	Pn	16 29 25.6	-1.3
HAU				*e*Pg	Pg	16 29 27.9	-2.0
HAU				*e*Sn	Sn	16 29 43.5	-2.9
HAU				*e*Sg	Sg	16 29 47.1	-2.6
	11nm,0.2s						
ECH	**Echery**	**1.56**	**357**	Pg	Pg	16 29 29.7	-1.7
ECH				Sg	Sg	16 29 50.0	-2.3
CDF	**Champ du Feu**	**1.75**	**0**	*e*Pn	Pn	16 29 29.2	-1.6
CDF				*e*Pg	Pg	16 29 33.3	-2.0
CDF				*e*Sg	Sg	16 29 55.3	-3.4
	4.5nm,0.3s						
WLS	**Welschbruch**	**1.76**	**2**	Pg	Pg	16 29 33.8	-1.5
MBDF	**Montbardon**	**1.96**	**190**	*e*Pg	Pg	16 29 37.3	-2.1
MBDF				*e*Sg	Sg	16 30 02.6	-3.0
	3.1nm,0.4s						
ORIF	**Oris-en-Rattie**	**1.99**	**210**	*e*Pg	Pg	16 29 37.9	-2.1
ORIF				*e*Sn	Sn	16 29 56.4	-2.8
	5.6nm,0.3s						
ORIF				*e*Sg	Sg	16 30 03.4	-3.1
	5.9nm,0.3s						
SFTF	**Sexfontaines**	**2.16**	**317**	*e*Pn	Pn	16 29 34.8	-1.8
	baz=135						
SFTF				*e*Pg	Pg	16 29 40.6	-2.8
	baz=148						
SFTF				*e*Sg	Sg	16 30 08.0	-4.2
	7.7nm,0.3s						
RFYF	**Reffroy**	**2.31**	**329**	*e*Pn	Pn	16 29 36.9	-1.9
RFYF				*e*Sg	Sg	16 30 12.6	-4.7
	5.6nm,0.3s						
SMF	**Signal de Mont**	**2.36**	**271**	*e*Pg	Pg	16 29 43.0	-4.3
SMF				*e*Sg	Sg	16 30 11.7	-7.0
	6.4nm,0.2s						
MEZF	**Maizieres J'vi**	**2.38**	**322**	*e*Pg	Pg	16 29 44.3	-3.4
	baz=150						
MEZF				*e*Sg	Sg	16 30 14.8	-4.5
	3.9nm,0.3s						
LOR	**Lormes**	**2.41**	**286**	*e*Pn	Pn	16 29 37.7	-2.5
LOR				*e*Pg	Pg	16 29 45.1	-3.2
	baz=102						
LOR				*e*Sg	Sg	16 30 14.9	-5.6
	3.0nm,0.2s						
VIVF	**Saint-Julien-l**	**2.56**	**226**	*e*Pn	Pn	16 29 40.3	-2.0
VIVF				*e*Pg	Pg	16 29 47.8	-3.5
VIVF				*e*Sn	Sn	16 30 09.6	-4.0
VIVF				*e*Sg	Sg	16 30 20.7	-4.6
	3.8nm,0.3s						
AVF	**Avril sur Loir**	**2.69**	**274**	*e*Pg	Pg	16 29 50.1	-3.9
AVF				*e*Sg	Sg	16 30 22.8	-7.1
	1.7nm,0.2s						
SMRF	**Simiane la Rot**	**2.93**	**205**	*e*Pn	Pn	16 29 45.3	-2.4
SMRF				*e*Sn	Sn	16 30 18.5	-4.7
	0.6nm,0.2s						
BGF	**Bois d'Agland**	**3.04**	**270**	*e*Pn	Pn	16 29 47.2	-2.0
BGF				*e*Pg	Pg	16 29 56.4	-4.6
BGF				*e*Sg	Sg	16 30 35.8	-5.8
	6.7nm,0.3s						
FRF	**La Foret Royal**	**3.13**	**188**	*e*Pg	Pg	16 29 58.2	-4.5
FRF				*e*Sn	Sn	16 30 23.7	-4.4
	3.6nm,0.6s						
TCF	**Toulx Ste Croi**	**3.51**	**266**	*e*Pn	Pn	16 29 53.9	-1.9
TCF				*e*Sg	Sg	16 30 50.0	-7.1
	1.5nm,0.4s						

IDC 23 16:44:19.1±13.0**,0.58N×97.31E,mb3.9**/2**,mb1 4.0**/3**, mb1mx3.6**/17**,mbtmp3.8**/3**,ML3.6**/1**,Error ellipse: s-maj=388.2km s-min=116.0km az=116.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.84**	**5**	P	P	16 48 28.4	-2.2
	0.1nm,0.3s,baz=196,slow=11,SNR=7.6						
MKAR	**Makanchi Array**	**47.87**	**346**	P	P	16 52 58.5	-2.3
	0.8nm,0.7s,baz=162,slow=7.7,SNR=9.3						
ZAL	**Zalesovo**	**54.18**	**351**	P	P	16 53 46.6	-1.9
	1.0nm,0.5s,baz=337,slow=1.0,SNR=4.9						

IDC 23 16:50:27.9±3.0**,2.16N×96.30E,mb3.9**/4**,mb1 4.0**/5**, mb1mx3.7**/18**,mbtmp3.8**/5**,ML3.5**/1**,MS3.9**/1**,Ms1 3.9**/1**, ms1mx2.6**/23**,Error ellipse: s-maj=108.4km s-min=28.2km az=59.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.40**	**9**	Pn	P	16 54 21.4	+0.1
	0.1nm,0.3s,baz=202,slow=11,SNR=6.5						
WRA	**Warramunga Arr**	**43.30**	**122**	P	P	16 58 31.8	-1.7
	0.6nm,0.6s,baz=302,slow=9.2,SNR=5.1						
MKAR	**Makanchi Array**	**46.10**	**347**	P	P	16 58 53.3	-2.3
	2.4nm,0.8s,baz=163,slow=7.3,SNR=20						
SONM	**Songino Array**	**46.33**	**9**	P	P	16 58 55.1	-2.3
	0.6nm,0.4s,baz=190,slow=8.7,SNR=10						
MJAR	**Matsushiro Arr**	**51.60**	**43**	LR	LR	17 22 39.1	
	comp=Z,104nm,19.1s,baz=225,slow=37						
ZAL	**Zalesovo**	**52.47**	**351**	P	P	16 59 42.9	-1.8
	1.6nm,0.5s,baz=288,slow=4.2,SNR=8.8						

MAN 23 16:51:27.4,13.44N×120.41E,h38^{km},mb3.8,ML2.5, MS2.0,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.34**	**332**	*e*P	P	16 51 38.5	+2.6
LUBP				*e*S	S	16 51 46.1	+4.3
PGP	**Puerto Galera**	**0.53**	**83**	*e*P	P	16 51 38.2	-0.3
LBPH	**Los Banos**	**1.03**	**46**	*e*P	P	16 51 45.8	+0.3
SJMP	**San Jose**	**1.19**	**144**	*e*P	P	16 51 48.2	+0.5
SJMP				*e*S	S	16 52 03.5	+0.5
NBP	**Mount Natib**	**1.30**	**0**	*i* P	P	16 51 38.6	-11
ARP	**Angono**	**1.31**	**33**	*e*P	P	16 51 49.0	-0.6
BOAC	**Boac**	**1.40**	**89**	*e*P	P	16 51 51.0	+0.2
BOAC				*e*S	S	16 52 09.0	+0.8
BUSP	**Coron**	**1.44**	**188**	*e*P	P	16 51 51.9	+0.5
BUSP				*e*S	S	16 52 09.5	+0.2
ENPP	**El Nido**	**2.42**	**204**	*e*P	P	16 52 05.5	+0.2
ENPP				*e*S	S	16 52 33.6	-0.3

JMA 23 16:55:26.2±0.2**,43.76N×147.95E,M3.6,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.65**	**257**	P	Pn	16 55 56.7	+0.1
NEM2				*e*S	Sb	16 56 18.7	+0.1
JRA	**Rausu**	**2.05**	**276**	P	Pn	16 56 02.6	+0.2
JRA				*e*S	Sn	16 56 29.7	+0.6
JNK	**Nakash**	**2.35**	**267**	P	Pn	16 56 06.8	+0.2
JNK				*e*S	Sn	16 56 36.5	-0.1
JAK	**Akkeshi**	**2.49**	**253**	P	Pn	16 56 08.9	+0.3
JAK				*e*S	Sn	16 56 40.0	-0.2
JTKR	**Abashiri--Toko**	**2.93**	**276**	P	Pn	16 56 15.2	+0.3
JAR	**Ashorobuto**	**3.08**	**263**	P	Pn	16 56 17.4	+0.4
JAR				*e*S	Sn	16 56 55.2	+0.2
JOB	**Onbets**	**3.12**	**255**	P	Pn	16 56 18.1	+0.5
JOB				*e*S	Sn	16 56 56.4	+0.2
JMP	**Maruseppu**	**3.33**	**276**	P	Pn	16 56 21.2	+0.6
JCH	**Churui**	**3.54**	**253**	P	Pn	16 56 23.5	-0.1
JCH				*e*S	Sn	16 57 06.0	-0.9
JNBK	**Urakawa-nobuka**	**4.09**	**251**	P	Pn	16 56 31.3	-0.1
JNBK				*e*S	Sn	16 57 19.6	-1.0

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*IDC **23** 17:11:01.1±0.9,26.51S×176.37W,mb3.8/4,mb1 4.2/4, mb1mx4.0/13,mbtmp3.8/4,MS3.1/3,Ms1 3.1/3, ms1mx2.9/23,Error ellipse: s-maj=45.5km s-min=30.8km az=145.0*

ISC 23 17:11:04.6±0.9**,26.6S**±0.2×**176.4W**±0.2**,h33^{km},n15, $\sigma 0^{s}08$**/5**,mb3.8**/4**,MS3.2**/1**,1D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**12.82**	**203**	LR	LR	17 18 26.7	
	comp=Z,82nm,21.6s,baz=226,slow=34						
AFI	**Afiamalu**	**13.37**	**20**	LR	LR	17 18 28.9	
	comp=Z,46nm,21.0s,baz=131,slow=34						
HNR	**Honiara**	**28.13**	**303**	LR	LR	17 25 34.2	
	comp=Z,67nm,20.5s,MS3.2,baz=150,slow=31						
WRA	**Warramunga Arr**	**45.48**	**268**	P	**P**	**17 19 22.8**	**0.0**
	1.7nm,0.6s,mb4.0,baz=106,slow=7.8,SNR=10						
VNDA	**Vanda**	**51.99**	**186**	P	**P**	**17 20 12.3**	**+0.1**
	0.5nm,0.7s,mb3.5,baz=14,slow=4.2,SNR=3.6						
CASY	**Casey**	**59.12**	**207**	⇓*i*P	**P**	**17 21 03.8**	**-0.1**
NVAR	**Mina Array Bea**	**84.53**	**42**	P	**P**	**17 23 35.6**	**0.0**
	0.2nm,0.3s,mb3.7,baz=225,slow=6.4,SNR=3.4						
TXAR	**Lajitas Array**	**89.18**	**57**	P	**P**	**17 23 58.4**	**0.0**
	0.4nm,0.8s,mb3.8,baz=207,slow=6.0,SNR=3.2						
MKAR	**Makanchi Array**	**116.36**	**311**	PKP	PKPdf	17 29 45.7	+0.9
	0.2nm,0.8s,baz=117,slow=3.2,SNR=3.0						
BVAR	**Borovoye Array**	**124.60**	**318**	PKP	PKPdf	17 30 02.1	+1.6
	0.4nm,0.8s,baz=72,slow=4.6,SNR=3.7						
FINES	**FINESS Array B**	**142.01**	**343**	PKP	PKPdf	17 30 39.0	+6.4
	4.1nm,1.2s,baz=14,slow=7.9,SNR=3.6						
NB2	**NORSAR Subarra**	**145.19**	**353**	PKPabc	PKPbc	17 30 39.1	+0.6
	9.7nm,1.7s,baz=10.0,slow=3.1						
NOA	**NORSAR Array B**	**145.19**	**353**	PKPbc	PKPbc	17 30 38.6	+0.2
	2.8nm,1.0s,baz=9.6,slow=2.4,SNR=3.9						
HFS	**Hagfors**	**145.77**	**351**	PKPbc	PKPbc	17 30 40.5	+0.5
	1.6nm,0.8s,baz=260,slow=9.0,SNR=4.5						
AKASG	**Malin Array Be**	**148.98**	**328**	PKPbc	PKPdf	17 30 50.1	+5.4
	0.1nm,0.3s,baz=35,slow=2.1,SNR=5.3						

GUC 23 17:18:24.3±0.3**,19.95S×69.51W,h107^{km}**±2^{km}**,ML3.7, Northern Chile**

GUC 23 17:29:04.5±0.5**,19.82S×69.24W,h104^{km}**±3^{km}**,ML3.9, Northern Chile**

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*BJI **23** 17:38:18.8,6.80S×113.53E,h589^{km},mB4.5,mb4.5*

*NEIC **23** 17:38:25.6±0.2,6.09S×113.09E,mb4.5/37,Error ellipse: s-maj=6.7km s-min=3.9km az=59.0*

*IDC **23** 17:38:26.0±0.5,6.09S×113.13E,h591^{km}±5^{km},mb3.7/21, mb1 3.8/22,mb1mx3.7/25,mbtmp4.6/22,Error ellipse: s-maj=11.1km s-min=6.1km az=57.0*

ISC 23 17:38:24.2±0.2**,6.11S**±0.04×**113.12E**±0.06**,h587^{km}, h587^{km}**±2.9^{km}**:pP-P,n100,$\sigma 0^{s}98$**/94**,mb4.4**/51**,3C-4D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSM	**Kuching**	**8.04**	**339**	*e*P	**P**	**17 40 25.6**	**+1.6**
KSM				*e*S	**S**	**17 42 04.2**	**+4.6**
TSM	**Tawau**	**11.37**	**25**	P	**P**	**17 40 59.8**	**+3.1**
KKM	**Kota Kinabalu**	**12.46**	**14**	*e*P	**P**	**17 41 08.2**	**+0.6**
KKM	**Kota Kinabalu**	**12.46**	**14**	P	**P**	**17 41 09.5**	**+1.9**
KGM	**Kluang**	**12.69**	**309**	P	**P**	**17 41 12.1**	**+2.3**
IPM	**Ipoh**	**16.08**	**311**	P	**P**	**17 41 44.9**	**+1.9**
MBWA	**Marble Bar**	**16.27**	**157**	*e*P	**P**	**17 41 45.0**	**+0.2**
	52nm,1.3s						
KULM	**Kulim**	**16.83**	**312**	*e*P	**P**	**17 41 50.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**17.07**	**135**	⇓*i*P	**P**	**17 41 53.2**	**+0.8**
	24nm,0.9s						
FITZ				*e*S	**S**	**17 44 39.5**	**-0.4**
FITZ	**Fitzroy Crossi**	**17.07**	**135**	P	**P**	**17 41 53.5**	**+1.1**
	3.8nm,0.3s,baz=347,slow=5.5,SNR=100						
FITZ				S	**S**	**17 44 46.6**	**+6.7**
	0.8nm,0.3s,baz=23,slow=9.0,SNR=10						
KAKA	**Kakadu**	**20.15**	**110**	⇓*i*P	**P**	**17 42 20.7**	**-0.4**
	32nm,0.6s						
WRA	**Warramunga Arr**	**24.78**	**126**	P	**P**	**17 43 02.6**	**-0.2**
	5.2nm,0.3s,mb4.6,baz=315,slow=9.4,SNR=237						
WRA				PcP	PcP	17 46 18.2	-0.8
	2.9nm,0.7s,baz=306,slow=1.6,SNR=10						
WRA				S	**S**	**17 46 42.1**	**-3.6**
	4.7nm,0.9s,baz=293,slow=17,SNR=8.7						
WRA				ScP		17 49 02.2	
	2.0nm,0.6s,baz=318,slow=2.2,SNR=8.9						
WRAB	**Tennant Creek**	**24.78**	**126**	*e*P	**P**	**17 43 02.7**	**-0.2**
	38nm,0.9s,mb5.0						
WB2	**Warramunga Arr**	**24.79**	**126**	⇓*i*P	**P**	**17 43 02.3**	**-0.7**
WB2				*e*		17 46 18.3	
WB2				*e*S	**S**	**17 46 41.5**	**-4.3**
QIZ	**Qiongzhong**	**25.19**	**353**	*e*P	**P**	**17 43 07.4**	**+0.9**
	25nm,0.9s,mb4.8						
NWAO	**Narrogin (SRO)**	**26.95**	**172**	P	**P**	**17 43 21.4**	**-0.4**
	14nm,1.0s,mb4.6,baz=354,slow=9.2,SNR=3.2						
CM31	**Chiang Mai Arr**	**28.13**	**330**	*e*P	**P**	**17 43 33.1**	**+1.0**
	16nm,1.0s,mb4.6						
CMAR	**Chiang Mai Arr**	**28.13**	**330**	P	**P**	**17 43 33.0**	**+0.8**
	9.6nm,1.0s,mb4.4,baz=156,slow=7.5,SNR=27						
CMAR				PcP	PcP	17 46 27.6	+0.6
	1.5nm,0.8s,baz=183,slow=3.1,SNR=5.5						
CMAR				ScP		17 49 13.8	
	1.4nm,0.9s,baz=183,slow=3.9,SNR=5.2						
FORT	**Forrest**	**28.27**	**152**	*e*P	**P**	**17 43 33.3**	**+0.1**
	41nm,0.5s,mb5.3						
NACB	**Ninganchiao**	**31.21**	**15**	*e*P	**P**	**17 43 57.3**	**-1.1**
YHNB	**Yeheng**	**31.63**	**14**	*e*P	**P**	**17 43 59.5**	**-2.4**
KMI	**Kunming**	**32.65**	**342**	P	**P**	**17 44 12.8**	**+2.3**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
GYA	**Guiyang**	**32.98**	**349**	⇑*i*P	**P**	**17 44 14.6**	**+1.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
PMG	**Port Moresby**	**33.88**	**98**	P	**P**	**17 44 21.7**	**+1.0**
	comp=Z,13nm,0.6s,mb4.7,baz=290,slow=4.0,SNR=7.6						
PMG	**Port Moresby**	**33.88**	**98**	*e*P	**P**	**17 44 21.4**	**+0.7**
	comp=Z,35nm,1.1s,mb4.9						
PALK	**Pallekele**	**34.97**	**292**	P	**P**	**17 44 25.9**	**-4.0**
	comp=Z,19nm,1.0s,mb4.7						
CTA	**Charters Tower**	**35.04**	**117**	*e*P	**P**	**17 44 31.0**	**+0.6**
	comp=Z,14nm,0.9s,mb4.6						
CTA				*e*		17 46 46.0	
CTA	**Charters Tower**	**35.04**	**117**	P	**P**	**17 44 31.7**	**+1.3**
	comp=Z,20nm,0.8s,mb4.8,baz=289,slow=8.6,SNR=14						
CTA				PcP	PcP	17 46 46.1	+0.1
	comp=Z,2.2nm,0.4s,baz=291,slow=7.6,SNR=5.8						
CTAO	**Charters Tower**	**35.04**	**117**	*e*P	**P**	**17 44 30.8**	**+0.4**
CTAO				*e*		17 45 13.8	
ENH	**Enshi**	**36.34**	**355**	*e*P	**P**	**17 44 41.0**	**0.0**
	comp=Z,18nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**36.94**	**138**	⇓*i*P	**P**	**17 44 46.4**	**+0.5**
	comp=Z,12nm,0.7s,mb4.5						
STKA				*e*		17 46 50.8	
STKA				*e*S	**S**	**17 49 50.2**	**-1.5**
STKA	**Stephens Creek**	**36.94**	**138**	P	**P**	**17 44 46.5**	**+0.6**
	comp=Z,7.5nm,0.3s,mb4.6,baz=308,slow=8.1,SNR=82						
STKA				PcP	PcP	17 46 51.3	-0.4
	comp=Z,3.7nm,0.4s,baz=346,slow=4.5,SNR=5.2						
STKA				S	**S**	**17 49 50.4**	**-1.3**
	comp=Z,4.3nm,0.7s,baz=101,slow=18,SNR=9.0						
XAN	**Xi'an**	**40.13**	**355**	P	**P**	**17 45 10.8**	**-0.9**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
LSA	**Lhasa**	**41.39**	**331**	*e*P	**P**	**17 45 21.9**	**+0.1**
	comp=Z,14nm,1.0s,mb4.4						
GUN	**Gumba**	**42.85**	**323**	*e*P	**P**	**17 45 33.5**	**+0.1**
	comp=Z,39nm,0.7s,mb5.0						
LZH	**Lanzhou**	**42.87**	**349**	*e*P	**P**	**17 45 34.0**	**+0.5**
LZH				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.7						
PKI	**Pulchoki**	**42.88**	**323**	*e*P	**P**	**17 45 33.3**	**-0.3**
	comp=Z,10nm,0.6s,mb4.5						
TOO	**Toolangi**	**42.98**	**141**	⇑*i*P	**P**	**17 45 35.8**	**+1.5**
	comp=Z,8.9nm,1.3s,mb4.1						
DMN	**Daman**	**43.09**	**322**	*e*P	**P**	**17 45 35.1**	**-0.2**
	comp=Z,12nm,0.4s,mb4.8						
KKN	**Kakani**	**43.12**	**323**	*e*P	**P**	**17 45 34.9**	**-0.6**
	comp=Z,14nm,0.7s,mb4.6						
ARMA	**Armidale**	**43.49**	**129**	*e*P	**P**	**17 45 40.4**	**+2.0**
GKN	**Gorkha**	**43.66**	**322**	*e*P	**P**	**17 45 39.2**	**-0.5**
	comp=Z,19nm,0.3s,mb5.1						
KOLN	**Koldanda**	**44.13**	**321**	*e*P	**P**	**17 45 42.9**	**-0.5**
	comp=Z,13nm,0.5s,mb4.8						
KS15	**Wonju Array Si**	**45.47**	**17**	*e*P	**P**	**17 45 54.0**	**+0.4**
HNR	**Honiara**	**46.49**	**97**	P	**P**	**17 46 02.0**	**+0.4**
	comp=Z,93nm,0.7s,mb5.4,baz=290,slow=1.3,SNR=7.7						
HNR	**Honiara**	**46.49**	**97**	*e*P	**P**	**17 46 01.6**	**0.0**
	comp=Z,106nm,0.9s,mb5.4						
MAJO	**Matsushiro**	**48.50**	**27**	*e*P	**P**	**17 46 15.0**	**-1.5**
	comp=Z,4.0nm,0.6s,mb4.0						
MJAR	**Matsushiro Arr**	**48.50**	**27**	P	**P**	**17 46 15.1**	**-1.5**
	comp=Z,5.3nm,0.8s,mb4.0,baz=205,slow=8.4,SNR=17						
ULN	**Ulaanbaatar**	**54.01**	**355**	*e*P	**P**	**17 46 52.5**	**-3.6**
	comp=Z,4.9nm,0.7s,mb4.0						
SONM	**Songino Array**	**54.04**	**354**	P	**P**	**17 46 56.1**	**-0.2**
	comp=Z,3.1nm,0.3s,mb4.1,baz=173,slow=9.1,SNR=64						
SONM				PcP	PcP	17 47 51.4	-0.5
	comp=Z,1.7nm,0.9s,baz=166,slow=5.1,SNR=5.4						
SONM				pP	pP	17 48 47.9	+0.5
	comp=Z,0.8nm,0.8s,baz=162,slow=7.8,SNR=2.5						
SONM				ScP		17 50 53.0	
	comp=Z,0.8nm,0.9s,baz=166,slow=5.1,SNR=4.3						
YSS	**Yuzh-Sakhalins**	**59.00**	**23**	*e*P	**P**	**17 47 30.0**	**-0.3**
	comp=Z,21nm,1.0s,mb4.2						
MKAR	**Makanchi Array**	**59.35**	**336**	P	**P**	**17 47 32.0**	**-0.6**
	comp=Z,1.1nm,0.3s,mb3.5,baz=146,slow=7.4,SNR=41						
MKAR				PcP	PcP	17 48 11.9	-0.9
	comp=Z,1.0nm,0.7s,baz=144,slow=6.5,SNR=5.0						
MKAR				pP	pP	17 49 26.9	-0.2
	comp=Z,1.6nm,0.8s,baz=135,slow=8.6,SNR=6.8						
MKAR				S	**S**	**17 54 56.4**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=156,slow=12,SNR=4.5						
CASY	**Casey**	**60.09**	**181**	*e*P	**P**	**17 47 36.1**	**-1.1**
ZAL	**Zalesovo**	**64.39**	**342**	P	**P**	**17 48 04.8**	**-0.1**
	comp=Z,1.4nm,0.3s,mb3.7,baz=297,slow=2.0,SNR=3.7						
ZAL				pP	pP	17 50 02.9	+0.3
	comp=Z,3.1nm,0.6s,baz=332,slow=4.7,SNR=5.3						
ZAL				S	**S**	**17 55 56.2**	**-2.1**
	comp=Z,0.7nm,0.4s,baz=72,slow=22,SNR=12						
OPO	**Ambohidratompo**	**65.28**	**252**	P	**P**	**17 48 10.8**	**-0.3**
	comp=Z,3.4nm,0.8s,mb3.8,baz=94,slow=18,SNR=3.8						
BVAR	**Borovoye Array**	**69.09**	**334**	P	**P**	**17 48 33.3**	**-0.3**
	comp=Z,1.0nm,0.5s,mb3.5,baz=142,slow=8.3,SNR=10						
BVAR				pP	pP	17 50 32.7	-0.9
	comp=Z,1.3nm,0.8s,baz=149,slow=8.6,SNR=6.0						
ZRNK	**Zerenda**	**69.65**	**333**	*e*P	**P**	**17 48 36.1**	**-0.8**
	comp=Z,1.9nm,0.6s,mb3.7						
ZRNK				*e*	pP	17 50 35.0	-2.2
MAW	**Mawson**	**70.04**	**198**	P	**P**	**17 48 39.3**	**+0.3**
	comp=Z,7.9nm,0.6s,mb4.3,baz=45,slow=5.5,SNR=10						
MAW	**Mawson**	**70.04**	**198**	*e*P	**P**	**17 48 38.8**	**-0.3**
MA2	**Magadan**	**71.96**	**19**	P	**P**	**17 48 50.2**	**-0.2**
KAMS	**Al Khamasin**	**72.24**	**293**	P	**P**	**17 48 50.5**	**-2.1**
DJNS	**Zahran al Janu**	**72.61**	**291**	P	**P**	**17 48 54.8**	**-0.1**
BLJS	**Baljurashi**	**74.88**	**292**	P	**P**	**17 49 07.2**	**-0.3**
VNDA	**Vanda**	**75.76**	**170**	P	**P**	**17 49 11.5**	**+0.1**
	comp=Z,5.2nm,0.7s,mb4.1,baz=313,slow=5.9,SNR=27						
VNDA	**Vanda**	**75.76**	**170**	*e*P	**P**	**17 49 11.3**	**-0.1**
	comp=Z,6.0nm,0.7s,mb4.1						
ARU	**Arti**	**76.56**	**332**	*e*P	**P**	**17 49 14.4**	**-1.6**
	comp=Z,9.0nm,1.2s,mb4.1						
SBA	**Scott Base**	**76.81**	**170**	*e*P	**P**	**17 49 17.8**	**+0.8**
	comp=Z,7.8nm,0.8s,mb4.2						
SYO	**Syowa Base**	**78.45**	**201**	⇑P	**P**	**17 49 24.3**	**-1.6**
MALT	**Malatya**	**81.88**	**310**	P	**P**	**17 49 44.8**	**+0.6**
	comp=Z,2.0nm,0.8s,mb3.7						
BILL	**Bilibino**	**82.74**	**18**	P	**P**	**17 49 42.4**	**-5.6**
	comp=Z,12nm,1.4s,mb4.2						
MATP	**Matopo**	**82.87**	**250**	P	**P**	**17 49 49.9**	**+0.4**
	comp=Z,6.0nm,0.6s,mb4.3,baz=97,slow=4.8,SNR=18						
LSZ	**Lusaka**	**83.54**	**255**	*e*P	**P**	**17 49 53.1**	**0.0**
	comp=Z,31nm,1.1s,mb4.8						
LBTB	**Lobatse**	**85.21**	**245**	P	**P**	**17 50 01.3**	**+0.3**
	comp=Z,4.3nm,0.9s,mb4.1,baz=62,slow=3.9,SNR=6.2						
LBTB	**Lobatse**	**85.21**	**245**	*e*P	**P**	**17 50 00.9**	**-0.2**
	comp=Z,6.0nm,1.0s,mb4.2						
BOSA	**Boshof**	**85.24**	**242**	P	**P**	**17 50 00.9**	**-0.2**
	comp=Z,5.8nm,0.8s,mb4.3,baz=106,slow=4.3,SNR=9.0						
BOSA	**Boshof**	**85.24**	**242**	*e*P	**P**	**17 50 00.8**	**-0.3**
	comp=Z,8.1nm,1.0s,mb4.3						
BR131	**Keskin Array S**	**85.83**	**311**	*e*P	**P**	**17 50 03.6**	**-0.1**
	comp=Z,3.3nm,0.8s,mb4.0						
BRTR	**Keskin Array B**	**85.83**	**311**	P	**P**	**17 50 03.8**	**+0.1**
	comp=Z,3.3nm,0.8s,mb4.0,baz=127,slow=6.2,SNR=18						
BRTR				pP	pP	17 52 09.3	-1.0
	comp=Z,1.4nm,0.8s,baz=127,slow=6.2,SNR=4.8						
SUR	**Sutherland**	**88.71**	**238**	*e*P	**P**	**17 50 17.9**	**+0.5**
	comp=Z,8.4nm,1.0s,mb4.5						
AKASG	**Malin Array Be**	**90.82**	**321**	P	**P**	**17 50 25.6**	**-1.1**
	comp=Z,0.1nm,0.2s,mb3.3,baz=82,slow=5.0,SNR=4.2						
AKASG				pP	pP	17 52 35.2	+0.5
	comp=Z,0.6nm,0.5s,baz=90,slow=3.7,SNR=2.8						
AKASG	**Malin Array Be**	**90.82**	**321**	P	**P**	**17 50 25.6**	**-1.1**
AKASG				pP	pP	17 52 35.2	+0.5
SNAA	**Sanae**	**92.14**	**197**	P	**P**	**17 50 33.3**	**+1.1**
	comp=Z,1.3nm,0.6s,mb4.1,baz=152,slow=5.0,SNR=20						
SNAA	**Sanae**	**92.14**	**197**	*e*P	**P**	**17 50 32.9**	**+0.7**
	comp=Z,3.0nm,0.8s,mb4.4						
TSUM	**Tsumeb**	**93.22**	**250**	P	**P**	**17 50 38.3**	**0.0**
	comp=Z,3.8nm,1.0s,mb4.4						
FINES	**FINESS Array B**	**93.91**	**331**	P	**P**	**17 50 40.0**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.9,baz=135,slow=14,SNR=4.3						
YKA	**Yellowknife Ar**	**113.84**	**22**	PKiKP		17 55 57.6	
	comp=Z,0.3nm,0.3s,baz=322,slow=1.7,SNR=6.1						
DBIC	**Dimbokro**	**118.40**	**274**	PKP	PKPdf	17 56 07.2	+0.8
	comp=Z,3.4nm,0.7s,baz=71,slow=3.2,SNR=7.6						
NVAR	**Mina Array Bea**	**123.54**	**47**	PKP	PKPdf	17 56 18.8	+3.0
	comp=Z,1.1nm,0.7s,baz=295,slow=1.0,SNR=7.4						
HLID	**Hailey**	**124.10**	**40**	*e*PKPdf	PKPdf	17 56 19.5	+2.8
PDAR	**Pinedale Array**	**127.58**	**39**	PKP	PKPdf	17 56 25.4	+1.9
	comp=Z,0.5nm,0.7s,baz=270,slow=1.5,SNR=4.3						
WCI	**Wyandotte Cave**	**143.49**	**26**	*e*PKPdf	PKPdf	17 56 52.7	-0.1
WVT	**Waverly**	**144.48**	**30**	*e*PKPdf	PKPdf	17 56 55.9	+1.4
PLAL	**Pickwick Lake**	**145.25**	**31**	*e*PKPdf	PKPdf	17 56 57.9	+2.0
CPUP	**Villa Florida**	**146.45**	**196**	PKPbc	PKPbc	17 57 02.7	+2.6
	comp=Z,10nm,0.6s,baz=180,slow=3.5,SNR=27						
CPUP				pPKPbc		17 59 14.8	
	comp=Z,3.0nm,0.9s,baz=146,slow=3.6,SNR=3.8						
CPUP	**Villa Florida**	**146.45**	**196**	*e*PKPbc	PKPbc	17 57 02.2	+2.1
CPCT	**Cooper Cave**	**146.59**	**27**	*e*PKPdf	PKPdf	17 57 00.4	+2.2
BAO	**Brasilia Array**	**151.42**	**221**	PKPdf	PKPdf	17 57 14.8	+8.7
BDFB	**Brasilia**	**151.43**	**221**	PKPbc	PKPdf	17 57 15.1	+9.0
	comp=Z,10nm,0.5s,baz=138,slow=1.2,SNR=15						
BDFB				PKPab	PKPab	17 57 26.7	+0.1
	comp=Z,1.5nm,0.3s,baz=327,slow=0.3,SNR=5.5						
SIV	**San Ignacio**	**157.30**	**195**	PKP	PKPdf	17 57 16.3	+2.3
	comp=Z,1.4nm,0.8s,baz=209,slow=1.8,SNR=8.1						
SIV				PKPab	PKPab	17 57 51.5	+0.1
	comp=Z,2.9nm,0.7s,baz=166,slow=6.5,SNR=12						
LPAZ	**La Paz**	**157.71**	**177**	PKPab	PKPab	17 57 54.0	+0.7
	comp=Z,2.6nm,0.5s,baz=162,slow=3.2,SNR=15						

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*NEIC **23** 17:42:32.8,16.38N×98.44W,h36^{km},MD4.0(MEX),After*

MEX.

MEX 23 17:42:32.8±0.8**, 16.38N**×**98.44W, h36**^{km}±10^{km}**, MD4.0, 1C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.30	87	⇑*i*P	P	17 42 39.4	-1.4
PNIG				*i* S	S	17 42 44.5	-1.9
ACX	Acapulco	1.50	289	*i* P	P	17 42 56.3	-1.3
ACX				*i* S	S	17 43 11.5	-4.7
VHO	Vista Hermosa	1.77	67	*e*P	P	17 42 59.7	-1.8
VHO				*i* S	S	17 43 20.1	-3.1
OXX	Oaxaca	1.79	67	*i* P	P	17 43 00.6	-1.2
OXX				*i* S	S	17 43 19.5	-4.0
CAIG	El Cayaco	1.88	291	*e*P	P	17 43 01.0	-2.0
CAIG				*i* S	S	17 43 21.6	-4.0
PLIG	Platanillo	2.25	333	*i* P	P	17 43 06.6	-1.8
PLIG				*i* S	S	17 43 31.4	-3.7
HUIG	Huatulco	2.32	105	*e*P	P	17 43 06.7	-2.7
HUIG				*i* S	S	17 43 34.1	-2.9
YAIG	Yautepec	2.54	346	*e*P	P	17 43 10.7	-1.9
YAIG				*i* S	S	17 43 39.0	-3.7
PPM	Popocatepetl	2.68	356	*e*P	P	17 43 14.0	-0.5
PPM				*i* S	S	17 43 45.0	-1.1
PPM	Popocatepetl	2.68	356	*e*P	P	17 43 14.0	-0.5
PPM				*i* P		17 43 19.2	
PPM				*i* S	S	17 43 45.0	-1.1
IISM	Ciudad Serdan	2.79	21	*i* P	P	17 43 18.0	+1.9
ZIIG	Zihuatanejo	3.14	293	*e*P	P	17 43 19.8	-1.3
ZIIG				*i* S	S	17 43 54.9	-3.0
CMIG	Matias Romero	3.48	78	*i* P	P	17 43 23.3	-2.6
CMIG				*i* S	S	17 44 01.9	-4.5

GUC 23 17:50:56.9±0.3**, 20.12S**×**69.25W, h101**^{km}±2^{km}**, ML4.2, Northern Chile**

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*BJI **23** 17:53:47.2, 10.10N×93.00E, h30^{km}, mb4.1*

*NEIC **23** 17:53:51.3±0.7, 10.12N×93.02E, h30^{km}, mb4.5/7, Error ellipse: s-maj=18.8km s-min=10.4km az=59.0*

*IDC **23** 17:54:01.6±4.1, 10.67N×93.58E, h112^{km}±36^{km}, mb3.8/14, mb1 3.9/15, mb1mx3.8/23, mbtmp4.2/15, Error ellipse: s-maj=20.4km s-min=12.8km az=60.0*

ISC 23 17:53:51.0±0.5**, 10.28N**±0.06×**93.27E**±0.08**, h33**^{km}**, n42, σ1§55**/43**, mb4.1**/16**, 1C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	1.46	339	*e*P	P	17 54 25.7	+10
PBA				*e*S	S	17 54 42.1	+8.7
CM31	Chiang Mai Arr	9.80	33	*e*Pn	P	17 56 13.7	+0.9
	16nm,0.6s						
CMAR	Chiang Mai Arr	9.80	33	P	P	17 56 14.2	+1.3
	2.1nm,0.3s,baz=220,slow=15,SNR=59						
VIS	Vishakhapatnam	12.15	309	*e*P	P	17 56 51.0	+6.2
VIS				AMb	AMB	17 57 09.2	
	comp=Z,42nm,1.2s						
VIS				*e*S	S	17 58 51.2	-8.9
BWNR	Bhubaneshwar	12.28	325	*e*P	P	17 56 52.3	+5.8
BWNR				AMb	AMB	17 56 57.2	
	comp=Z,42nm,0.4s						
BWNR				*e*S	S	17 58 55.0	-8.3
BWNR				*e*S	S	17 58 55.0	-8.3
SHL	Shillong	15.26	355	*e*x	P	17 57 28.0	+2.3
KMI	Kunming	17.28	30	P	P	17 57 53.0	+1.6
NGP	Nagpur	17.43	310	*e*P	P	17 58 03.3	+10
NGP				AMb	AMB	17 58 20.1	
	comp=Z,14nm,1.0s						
NGP				*e*x	S	18 01 00.9	-3.2
PKI	Pulchoki	18.72	338	*e*P	P	17 58 10.2	+0.8
	comp=Z,24nm,0.6s						
GUN	Gumba	18.86	339	*e*P	P	17 58 11.9	+0.8
	comp=Z,37nm,0.4s						
DMN	Daman	18.87	337	*e*P	P	17 58 11.9	+0.7
	comp=Z,42nm,0.8s						
KKN	Kakani	18.97	338	*e*P	P	17 58 12.6	+0.3
	comp=Z,13nm,0.4s						
KSM	Kuching	19.06	116	*e*P	P	17 58 14.9	+1.5
GKN	Gorkha	19.41	336	*e*P	P	17 58 17.7	+0.5
	comp=Z,62nm,0.4s						
LSA	Lhasa	19.42	354	P	P	17 58 16.0	-1.3
LSA	Lhasa	19.42	354	*e*P	P	17 58 15.7	-1.6
	comp=Z,22nm,0.6s						
LSA				*e*S	S	18 01 58.4	+9.2
KOLN	Koldanda	19.63	334	*e*P	P	17 58 20.5	+0.8
	comp=Z,37nm,0.7s						
GYA	Guiyang	20.47	36	⇑*i*P	P	17 58 26.8	-1.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s						
DDI	Dehra Dun	24.46	327	*e*x	x	17 59 11.0	
MKAR	Makanchi Array	37.56	348	P	P	18 01 02.1	-1.9
	comp=Z,1.4nm,0.7s,mb3.8,baz=170,slow=8.5,SNR=20						
SONM	Songino Array	39.03	14	P	P	18 01 13.4	-2.7
	comp=Z,0.6nm,0.4s,mb3.6,baz=205,slow=8.0,SNR=11						
SONM				PcP	PcP	18 03 24.7	-1.9
	comp=Z,0.5nm,0.4s,baz=217,slow=3.0,SNR=5.1						
FITZ	Fitzroy Crossi	42.62	131	P	P	18 01 46.6	+0.3
	comp=Z,2.4nm,0.4s,mb4.3,baz=3.9,slow=1.4,SNR=8.8						
FITZ				PcP	PcP	18 03 37.4	-1.2
	comp=Z,1.7nm,0.4s,baz=346,slow=5.8,SNR=5.9						
ZAL	Zalesovo	44.06	353	P	P	18 01 56.8	-0.7
	comp=Z,1.9nm,0.4s,mb4.1,baz=306,slow=6.3,SNR=8.4						
WRA	Warramunga Arr	50.36	127	P	P	18 02 46.4	-0.9
	comp=Z,1.6nm,0.4s,mb4.4,baz=302,slow=10,SNR=35						
WRA				PcP	PcP	18 04 04.8	-0.9
	comp=Z,0.5nm,0.7s,baz=323,slow=3.3,SNR=4.8						
WRAB	Tennant Creek	50.37	127	P	P	18 02 45.5	-1.9
	comp=Z,12nm,0.9s,mb4.9						
BRTR	Keskin Array B	60.23	310	P	P	18 03 56.9	-1.5
	comp=Z,0.9nm,0.6s,mb4.0,baz=127,slow=7.1,SNR=5.0						
STKA	Stephens Creek	62.38	134	P	P	18 04 13.6	+0.5
	comp=Z,0.7nm,0.4s,mb4.1,baz=314,slow=11,SNR=4.3						
STKA	Stephens Creek	62.38	134	*e*P	P	18 04 13.2	+0.1
FINES	FINESS Array B	70.19	332	P	P	18 04 59.8	-2.5
	comp=Z,0.4nm,0.5s,mb3.6,baz=108,slow=6.0,SNR=5.7						
MATP	Matopo	70.62	244	P	P	18 05 08.5	+3.0
	comp=Z,0.9nm,0.4s,mb4.1,baz=55,slow=6.4,SNR=6.8						
MATP	Matopo	70.62	244	P	P	18 05 08.5	+3.0
ARCES	ARCESS Array B	72.72	340	P	P	18 05 15.7	-1.5
	comp=Z,2.5nm,0.9s,mb4.1,baz=79,slow=6.2,SNR=6.4						
LBTB	Lobatse	74.66	240	P	P	18 05 32.7	+3.3
	comp=Z,2.8nm,0.6s,mb4.4,baz=348,slow=3.3,SNR=5.9						
LBTB	Lobatse	74.66	240	*e*P	P	18 05 31.9	+2.6
	comp=Z,3.3nm,0.7s,mb4.4						
GERES	GERESS Array B	75.47	318	P	P	18 05 33.2	-0.4
	comp=Z,0.6nm,0.5s,mb3.8,baz=90,slow=6.9,SNR=6.2						
HFS	Hagfors	75.96	330	P	P	18 05 34.4	-1.7
	comp=Z,0.8nm,0.4s,mb4.0,baz=90,slow=1.5,SNR=5.7						
BOSA	Boshof	76.15	237	P	P	18 05 40.8	+2.9
	comp=Z,2.2nm,0.5s,mb4.4,baz=53,slow=7.0,SNR=14						
CASY	Casey	77.41	173	*e*P	P	18 05 40.9	-3.3
	comp=Z,4.0nm,1.1s,mb4.3						
PDAR	Pinedale Array	123.23	20	PKP	PKPdf	18 12 44.8	-0.1
	comp=Z,0.8nm,0.6s,baz=135,slow=2.1,SNR=4.6						
NVAR	Mina Array Bea	123.28	29	PKP	PKPdf	18 12 46.0	+0.9
	comp=Z,0.7nm,0.6s,baz=350,slow=1.5,SNR=6.0						
PLCA	Paso Flores	146.47	203	PKPbc	PKPbc	18 13 31.9	+2.9
	comp=Z,3.8nm,0.8s,baz=190,slow=2.5,SNR=7.2						
CPUP	Villa Florida	147.97	236	PKPbc	PKPdf	18 13 34.3	+3.7
	comp=Z,2.0nm,0.8s,baz=166,slow=4.2,SNR=3.8						

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*NEIC **23** 17:58:20.1, 37.28S×177.33E, h5^{km}, ML4.0(WEL), After WEL.*

WEL 23 17:58:20.2±0.3**, 37.28S**×**177.33E, h5**^{km}**, ML3.9**/8**, 3C, Error ellipse: s-maj=2.6km s-min=2.5km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	White Island	0.27	205	P	Pg	17 58 24.7	-0.9
WIZ				S	Sg	17 58 29.6	+0.4
WIZ	White Island	0.27	205	PG	Pg	17 58 24.6	-0.9
WIZ				SG	Sg	17 58 29.7	+0.5
MXZ	Matakaoa Point	0.83	110	P	Pb	17 58 35.4	-1.2
MXZ	Matakaoa Point	0.83	110	*e*P*	Pb	17 58 35.3	-1.3
MYRZ	Mayor Island	0.87	270	P*	Pb	17 58 36.8	-0.6
MYRZ				S*	Sb	17 58 47.8	-1.2
MARZ	Manawahe	0.87	216	P	Pb	17 58 36.4	-1.0
MARZ	Manawahe	0.87	216	P*	Pb	17 58 36.2	-1.2
EDRZ	Edgecumbe	0.95	210	P	Pb	17 58 37.4	-1.3
EDRZ	Edgecumbe	0.95	210	P*	Pb	17 58 37.4	-1.2
TGRZ	Tauranga	0.96	242	P	Pb	17 58 38.1	-0.8
TGRZ	Tauranga	0.96	242	P*	Pb	17 58 38.1	-0.7
URZ	Urewera	0.99	190	⇑P*	Pb	17 58 37.9	-1.5
URZ				S*	Sb	17 58 49.7	-2.9
LIRZ	Lichensteins R	1.04	226	*e*P*	Pb	17 58 39.5	-0.7
MWZ	Matawai	1.06	172	P	Pb	17 58 39.0	-1.6
MWZ	Matawai	1.06	172	P*	Pb	17 58 39.0	-1.6
MWZ				S*	Sb	17 58 51.6	-3.0
PUZ	Puketiti	1.08	137	*e*P	Pb	17 58 40.8	-0.1
PUZ	Puketiti	1.08	137	P*	Pb	17 58 40.8	-0.1
TAZ	Tarawera	1.15	214	*e*P*	Pb	17 58 42.1	0.0
KUZ	Kuaotunu	1.40	292	⇑P	Pb	17 58 44.6	-1.7
KUZ	Kuaotunu	1.40	292	⇑PN	Pn	17 58 44.6	-1.7
TOZ	Tahuroa Road	1.52	252	*e*P*	Pb	17 58 46.6	-1.9
MKAZ	Moumakai	1.73	275	*e*PN	Pn	17 58 49.9	-1.3
KNZ	Kokohu	1.76	171	*e*PN	Pn	17 58 51.2	-0.3
BKZ	Black Stump Fm	1.99	199	*e*P*	Pb	17 58 52.4	-4.2
HIZ	Hauiti	2.31	237	PN	Pn	17 58 58.0	-1.5
NGZ	Ngauruhoe	2.33	215	P*	Pb	17 59 01.8	-0.5
CNZ	Chateau	2.37	216	P*	Pb	17 59 02.3	-0.7
TUVZ	Tukino	2.38	213	P*	Pb	17 59 02.3	-0.9

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*BJI **23** 18:00:04.0, 47.90N×67.50E, h10^{km}, Ms4.5*

*IDC **23** 18:00:08.0±1.4, 47.82N×67.34E, mb3.7/2, mb1 3.8/5, mb1mx3.5/22, mbtmp3.8/5, ML3.9/1, MS3.5/3, Ms1 3.5/3, ms1mx2.8/31, Error ellipse: s-maj=15.8km s-min=15.0km az=17.0*

*NNC **23** 18:00:09.5±1.4, 48.03N×67.45E, h3^{km}±11^{km}, mpv3.9, Error ellipse: s-maj=8.9km s-min=7.5km az=15.0*

*NEIC **23** 18:00:09.5, 48.03N×67.45E, h3^{km}, mb4.0/4, After NNC.*

*MOS **23** 18:00:11.6±1.8, 48.14N×67.41E, h33^{km}, mb4.2/2, Error ellipse: s-maj=13.9km s-min=11.0km az=86.1*

ISC 23 18:00:07.1±0.5**, 47.95N**±0.05×**67.49E**±0.06**, h3**^{km}**, n39, σ1§33**/44**, mb3.9**/5**, MS3.5**/3**, 9C-7D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZRNK	Zerenda	5.10	10	⇑Pn	Pn	18 01 26.4	+0.1
	31nm,1.3s						
ZRNK				⇓Lg		18 02 48.6	
	236nm,1.4s						
ZRNK	Zerenda	5.10	10	*e*P	Pn	18 01 26.2	-0.1
AB31	Akbulak array	5.17	287	⇑Pn	Pn	18 01 25.7	-1.6
	2.4nm,0.6s,baz=124,slow=8.0,SNR=28						
AB31				⇑Pg	Pg	18 01 42.7	-7.6
	26nm,0.8s,baz=102,slow=15,SNR=20						
AB31				⇓Sn	Sn	18 02 28.1	-0.3
	5.6nm,0.5s,baz=99,slow=28,SNR=2.5						
AB31				⇓Lg		18 02 55.8	
	63nm,1.0s,baz=105,slow=26,SNR=4.3						
AB31	Akbulak array	5.17	287	P	Pn	18 01 25.7	-1.6
AB31						18 02 28.0	
AB31				smax			
	comp=N,1.0nm,0.3s						
AB31	Akbulak array	5.17	287	Pn	Pn	18 01 25.7	-1.6
AB31				Pg	Pg	18 01 42.7	-7.6
AB31				Sn	Sn	18 02 28.1	-0.3
AB31				Lg		18 02 55.8	
VOSK	Vostochnaya	5.28	24	⇑Pn	Pn	18 01 29.1	+0.3
	comp=N,23nm,0.9s						
VOSK				⇑Lg		18 02 54.1	
	comp=N,299nm,1.9s						
KK31	Karatay Array	5.29	155	⇓Pg	Pg	18 01 47.6	-5.1
	comp=N,22nm,1.1s,baz=342,slow=18,SNR=8.4						
KK31				⇓Lg		18 03 00.4	
	comp=N,9.8nm,0.4s,baz=351,slow=26,SNR=4.0						
KK31	Karatay Array	5.29	155	Pg	Pg	18 01 47.6	-5.1
KK31				Lg		18 03 00.4	
BVA0	Borovoye Array	5.41	19	⇓Pn	Pn	18 01 31.0	+0.4
	comp=N,5.6nm,0.9s,baz=193,slow=13,SNR=55						
BVA0				⇑Lg		18 02 57.7	
	comp=N,48nm,1.8s,baz=191,slow=32,SNR=6.7						
BVA0	Borovoye Array	5.41	19	*i* P	Pn	18 01 31.0	+0.4
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVA0	Borovoye Array	5.41	19	Pn	Pn	18 01 31.0	+0.4
BVA0				Lg		18 02 57.7	
BVAR	Borovoye Array	5.41	19	Pn	Pn	18 01 30.3	-0.3
	comp=Z,3.3nm,0.3s,baz=194,slow=11,SNR=71						
BVAR				Sn	Sn	18 02 35.7	+1.4
	comp=Z,2.2nm,0.3s,baz=204,slow=14,SNR=3.3						
BVAR				Lg		18 03 05.5	
	comp=Z,6.9nm,0.3s,baz=195,slow=29,SNR=6.9						
FRU	Bishkek	7.16	133	P	Pn	18 01 55.8	+0.5
FRU				S	Sn	18 03 27.2	+9.0
FRU				pmax	pmax		
	comp=N,350nm,1.8s						
AAK	Ala-Archa	7.25	135	⇓Pn	Pn	18 01 58.3	+1.7
	comp=N,7.3nm,0.6s						
AAK				⇑Lg		18 04 05.7	
	comp=N,85nm,1.1s						
AAK	Ala-Archa	7.25	135	P	Pn	18 02 03.6	+7.0
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AAK	Ala-Archa	7.25	135	Pn	Pn	18 01 58.3	+1.7
AAK				Lg		18 04 05.7	
ARU	Arti	10.10	331	P	P	18 02 32.6	-3.4
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARU	Arti	10.10	331	P	P	18 02 32.6	-3.4
	comp=Z,5.0nm,1.0s						
MK31	Makanchi Array	10.11	91	⇑Pn	P	18 02 33.7	-2.5
	comp=Z,4.5nm,0.7s,baz=275,slow=11,SNR=42						
MK31				⇑Lg		18 05 31.9	
	comp=Z,30nm,0.8s,baz=281,slow=21,SNR=5.8						
MK31	Makanchi Array	10.11	91	Pn	P	18 02 33.7	-2.5
MK31				Lg		18 05 31.9	
MKAR	Makanchi Array	10.11	91	Pn	P	18 02 33.6	-2.6
	comp=Z,0.4nm,0.3s,baz=276,slow=10,SNR=40						
MKAR				Sn	S	18 04 25.9	-5.5
	comp=Z,0.2nm,0.3s,baz=265,slow=17,SNR=2.9						
MKAR				Lg		18 05 26.7	
	comp=Z,0.6nm,0.3s,baz=277,slow=20,SNR=7.1						
MKAR	Makanchi Array	10.11	91	P	P	18 02 33.6	-2.6
MKAR				*e*		18 04 25.9	
KSH	Kashi	10.42	141	*e*P	P	18 02 33.1	-7.3
KSH				*e*AP		18 02 38.3	
KSH				*e*XP		18 02 41.1	
KSH				AMB	AMB		
	comp=Z,80nm,3.4s						
KSH				LR	LR		
	comp=N,2μm,7.6s						
KSH				LR	LR		
	comp=E,2μm,8.7s						
ZAL	Zalesovo	12.44	55	Pn	P	18 03 07.5	-0.3
	comp=E,0.3nm,0.3s,baz=234,slow=8.8,SNR=4.0						
ZAL				Sn	S	18 05 23.6	-4.6
	comp=E,0.5nm,0.3s,baz=96,slow=2.0,SNR=4.1						
ZAL	Zalesovo	12.44	55	P	P	18 03 07.5	-0.4
ZAL				*e*		18 05 23.7	
KIV	Kislovodsk	17.68	266	*e*P	P	18 04 15.0	-0.7
KIV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KIV	Kislovodsk	17.68	266	*e*P	P	18 04 15.0	-0.7
	comp=Z,9.0nm,0.8s						
GNI	Garni	18.07	253	*e*P	P	18 04 23.6	+2.9
GNI				pmax	pmax		
	comp=Z,12nm,0.9s						
GNI	Garni	18.07	253	*e*P	P	18 04 23.6	+2.9
	comp=Z,12nm,0.9s						
MALT	Malatya	23.17	256	*e*P	P	18 05 17.6	+2.1
MALT				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
MALT	Malatya	23.17	256	*e*P	P	18 05 17.6	+2.0
	comp=Z,3.8nm,1.0s,mb3.8						
BRTR	Keskin Array B	25.60	264	P	P	18 05 39.1	+0.2
	comp=Z,1.4nm,0.7s,mb3.6,baz=79,slow=7.3,SNR=6.6						
SONM	Songino Array	25.91	76	P	P	18 05 42.4	+0.7
	comp=Z,0.6nm,0.6s,mb3.3,baz=284,slow=10,SNR=7.1						
ULN	Ulaanbaatar	26.33	75	*e*P	P	18 05 46.7	+1.1
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
ULN	Ulaanbaatar	26.33	75	*e*P	P	18 05 46.7	+1.1
	comp=Z,3.8nm,0.9s,mb3.9						
HFS	Hagfors	32.90	312	LR	LR	18 19 45.8	
	comp=Z,41nm,21.2s,MS3.1,baz=136,slow=36						
NOA	NORSAR Array B	34.07	314	LR	LR	18 20 59.8	
	comp=Z,44nm,19.9s,MS3.2,baz=80,slow=37						
PALK	Pallekele	42.06	160	P	P	18 07 57.7	-4.0
	comp=Z,50nm,1.4s,mb5.0						
MATP	Matopo	76.51	217	LR	LR	18 48 13.2	
	comp=Z,86nm,18.9s,MS4.1,baz=270,slow=38						

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*IDC **23** 18:13:52.2±1.3, 41.30N×125.77W, mb3.6/6, mb1 3.9/10, mb1mx3.7/26, mbtmp3.6/10, ML3.6/2, MS2.9/6, Ms1 2.9/6, ms1mx2.6/27, Error ellipse: s-maj=23.4km s-min=13.6km az=20.0*

*NEIC **23** 18:13:53.4±0.7, 41.40N×125.74W, h10^{km}, mb4.3/2, Error ellipse: s-maj=8.9km s-min=5.9km az=62.0*

ISC 23 18:13:52.0±0.7**, 41.41N**±0.05×**125.73W**±0.07**, h10**^{km}**, n61, σ1§15**/61**, mb3.6**/7**, MS2.6**/2**, 1C, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRMB	Red Mountain	1.37	85	*e*P	Pn	18 14 17.8	+0.5
KBO	Bosley Butte	1.38	54	⇑*i*P	Pn	18 14 17.5	+0.1
KBO				*e*S	Sb	18 14 34.2	-0.7
KHMM	Horse Mountain	1.60	109	*e*P	Pn	18 14 20.6	0.0
KEBM	Edson Butte	1.79	35	P	Pn	18 14 22.4	-0.9
YBH	Yreka Blue Hor	2.29	81	Pn	Pn	18 14 32.0	+1.6
	41nm,0.3s,baz=270,slow=10,SNR=522						
YBH				Sn	Sn	18 15 01.7	+2.8
	15nm,0.3s,baz=137,slow=18,SNR=5.5						
LAMM	Antelope Mount	2.34	84	P	Pn	18 14 32.7	+1.6
HUMO	Hull Mountain	2.39	59	P	Pn	18 14 32.2	+0.4
DBO	Dodson Butte	2.51	46	P	Pn	18 14 32.7	-1.0
WDC	Whiskeytown Da	2.55	108	*e*P	Pn	18 14 34.1	-0.1
WDC				*e*S	Sn	18 14 59.7	-5.9
LHEM	Herd Peak	2.65	84	P	Pn	18 14 37.5	+2.0
BBOR	Butler Butte	2.70	56	P	Pn	18 14 37.1	+0.7
BUOR	Burton Butte	2.74	70	P	Pn	18 14 39.0	+2.1
HSO	Harness Mounta	2.88	42	P	Pn	18 14 38.5	-0.3
HOG	Hogback Mounta	3.12	73	P	Pn	18 14 43.8	+1.6
LASM	Arnica Sink	3.12	85	P	Pn	18 14 43.9	+1.5
LTIM	Timbered Crate	3.20	93	P	Pn	18 14 44.6	+1.2
HBO	Huckleberry Mo	3.50	45	P	Pn	18 14 48.2	+0.5
FRIS	Frissel Point	3.87	42	P	Pn	18 14 53.1	+0.2
WIFE	Three Sisters-	3.91	46	P	Pn	18 14 53.7	+0.2
HUOR	Husband	3.94	45	P	Pn	18 14 54.1	+0.3
NCOR	Newberry Crate	4.09	54	P	Pn	18 14 56.7	+0.6
MOD	Modoc	4.09	81	P	Pn	18 14 56.6	+0.5
BKCOR	Black Crater	4.14	44	P	Pn	18 14 56.8	+0.1
PINOR	Pine Mountain	4.31	55	P	Pn	18 14 59.7	+0.5
BEKR	Beckwourth	4.37	109	*e*P	Pn	18 14 59.7	-0.3
WCN	Washoe City	5.03	113	P	Pn	18 15 08.6	-0.8
CMB	Columbia Colle	5.32	128	*e*P	Pn	18 15 12.1	-1.5
WVOR	Wild Horse Val	5.39	77	*e*P	Pn	18 15 13.6	-0.9
NVAR	Mina Array Bea	6.44	115	Pn	Pn	18 15 29.2	-0.1
	0.4nm,0.3s,baz=297,slow=12,SNR=9.6						
NVAR	Mina Array Bea	6.44	115	Pn	Pn	18 15 29.2	-0.1
MNV	Mina	6.54	115	*e*P	Pn	18 15 29.5	-1.2
BMO	Blue Mountains	7.05	58	*e*P	Pn	18 15 37.8	-0.1
ELK	Elko	7.95	91	Pn	Pn	18 15 51.2	+0.7
	0.1nm,0.3s,baz=286,slow=12,SNR=9.4						
ELK				LR	LR	18 19 34.2	
	comp=Z,91nm,18.4s,baz=189,slow=43						
ELK	Elko	7.95	91	*e*P	Pn	18 15 49.2	-1.3
HLID	Hailey	8.63	72	*e*P	P	18 15 59.2	-0.8
NEW	Newport	9.18	39	LR	LR	18 19 47.2	
	comp=Z,131nm,18.1s,baz=252,slow=38						
MCMT	McKenzie Canyo	10.02	66	*e*P	P	18 16 18.8	-0.2
MSO	Missoula	10.05	53	*e*P	P	18 16 18.2	-1.3
CHMT	Chamberlain Mo	10.51	54	*e*P	P	18 16 24.6	-1.2
HWUT	Hardware Ranch	10.63	84	P	P	18 16 27.4	0.0
MVU	Marysvale	10.78	101	*e*P	P	18 16 31.7	+2.3
RRI2	Red Ridge	10.84	75	P	P	18 16 28.2	-2.1
BBB	Bella Bella	10.90	352	LR	LR	18 19 59.9	
	comp=Z,43nm,18.4s,baz=348,slow=33						
QLMT	Earthquake Lak	11.00	67	P	P	18 16 30.6	-1.8
DAU	Daniels Canyon	11.00	90	P	P	18 16 31.2	-1.3
BOZ	Bozeman (W)	11.07	63	*e*P	P	18 16 32.4	-1.1
TPAW	Teton Pass	11.12	74	P	P	18 16 31.9	-2.2
IMW	Indian Meadow	11.17	72	P	P	18 16 35.2	+0.4
MOOW	Moose Ponds	11.29	73	*e*P	P	18 16 33.8	-2.7
PDAR	Pinedale Array	12.09	78	Pn	P	18 16 50.7	+3.4
	0.1nm,0.3s,baz=270,slow=12,SNR=11						
ANMO	Albuquerque	16.45	107	LR	LR	18 24 14.1	
	comp=Z,46nm,18.2s,baz=77,slow=38						
DLBC	Dease Lake	17.26	352	P	P	18 17 59.0	+4.5
	0.1nm,0.3s,baz=150,slow=17,SNR=3.2						
FFC	Flin Flon	20.59	42	*e*P	P	18 18 31.7	-1.9
	13nm,0.9s						
TXAR	Lajitas Array	21.59	117	P	P	18 18 44.3	+0.4
	0.5nm,0.5s,mb3.2,baz=303,slow=15,SNR=2.5						
TXAR				LR	LR	18 28 00.6	
	comp=Z,19nm,19.8s,MS2.5,baz=165,slow=39						
YKA	Yellowknife Ar	22.13	14	P	P	18 18 50.8	+1.7
	0.9nm,0.8s,mb3.3,baz=200,slow=10,SNR=7.3						
ULM	Lac du Bonnet	22.48	57	P	P	18 18 53.3	+0.7
	2.5nm,0.5s,mb3.9,baz=251,slow=9.2,SNR=4.4						
ULM				LR	LR	18 27 52.4	
	comp=Z,33nm,18.8s,MS2.8,baz=339,slow=37						
ILAR	Eielson Array	26.36	340	P	P	18 19 30.7	+1.0
	0.8nm,1.0s,mb3.2,baz=160,slow=7.1,SNR=5.7						
SUMG	Summit	50.27	23	P	P	18 22 49.5	-0.4
LPAZ	La Paz	78.26	124	P	P	18 25 53.6	-0.3
	0.4nm,0.2s,mb3.9,baz=346,slow=12,SNR=4.0						
SONM	Songino Array	79.88	327	P	P	18 26 03.3	+1.3
	0.4nm,0.7s,mb3.5,baz=38,slow=2.5,SNR=5.2						
ZRNK	Zerenda	85.16	351	*e*P	P	18 26 27.9	-1.2
	2.1nm,0.8s,mb4.3						

OTT 23 18:16:21.9±0.0**, 46.06N**×**75.05W, h18**^{km}**, MN3.0**/24**, 1D, 35km southwest from Labelle, Qc Western Quebec Seismic Zone., Southern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRQ	Mont Tremblant	0.38	64	PG	Pb	18 16 29.3	-0.5
TRQ				SG	Sb	18 16 34.6	-0.5
TRQ				Trac		18 16 34.8	
	comp=Z,592nm,0.1s						
ALFO	Alfred	0.44	165	⇓PG	Pb	18 16 30.5	-0.4
ALFO				SG	Sb	18 16 36.5	-0.5
ALFO				Trac		18 16 40.1	
	comp=Z,57nm,0.1s						
GAC	Glen Almond	0.46	220	PG	Pb	18 16 30.6	-0.6
GAC				SG	Sb	18 16 36.5	-1.1
GAC				Trac		18 16 36.9	
	comp=Z,221nm,0.2s						
MRHQ	Morin Heights	0.61	106	PG	Pb	18 16 32.9	-0.7
MRHQ				SG	Sb	18 16 41.0	-0.7
MRHQ				Trac		18 16 41.7	
	comp=Z,85nm,0.1s						
GRQ	Grand Remous	0.79	315	PG	Pb	18 16 36.2	-0.5
GRQ				SG	Sb	18 16 46.8	-0.1
GRQ				Trac		18 16 47.1	
	comp=Z,36nm,0.1s						
OTT	Ottawa	0.81	215	PG	Pb	18 16 36.5	-0.6
OTT				PG	Pb	18 16 36.6	-0.5
OTT				SG	Sb	18 16 47.2	-0.4
OTT				SG	Sb	18 16 47.7	+0.1
OTT				Trac		18 16 53.0	
	comp=Z,102nm,0.1s						
OTT				Trac		18 16 53.1	
	comp=Z,84nm,0.2s						
MNT	Montreal	1.14	119	PG	Pb	18 16 42.5	-0.2
MNT				SG	Sb	18 16 57.1	-0.1
MNT				Trac		18 17 00.4	
	comp=Z,35nm,0.1s						
MPPO	Murphy’s Point	1.54	214	PN	Pn	18 16 48.6	-0.2
MPPO				SN	Sn	18 17 08.1	-0.4
MPPO				Trac		18 17 12.8	
	comp=Z,71nm,0.1s						
CRLO	Chalk River	1.62	270	PN	Pn	18 16 49.5	-0.4
CRLO				SN	Sn	18 17 10.2	-0.3
CRLO				Trac		18 17 15.4	
	comp=Z,34nm,0.1s						
DPQ	Saint Jean	1.69	68	PN	Pn	18 16 50.4	-0.6
DPQ				SN	Sn	18 17 12.7	+0.4
DPQ				Trac		18 17 14.8	
	comp=Z,30nm,0.1s						
PLVO	Plevna	1.75	235	PN	Pn	18 16 52.1	+0.4
PLVO				SN	Sn	18 17 12.9	-0.8
PLVO				Trac		18 17 23.2	
	comp=Z,12nm,0.0s						
KGNO	Kingston	2.10	210	PN	Pn	18 16 56.0	-0.7
KGNO				SN	Sn	18 17 21.6	-0.9
KGNO				Trac		18 17 32.1	
	comp=Z,39nm,0.2s						
BANO	Bancroft	2.27	244	PN	Pn	18 16 58.9	-0.3
BANO				SN	Sn	18 17 26.1	-0.9
BANO				Trac		18 17 36.0	
	comp=Z,30nm,0.1s						

DELO	**Deloro Mine**	**2.38**	**231**	PN	Pn	18 17 02.0	+1.2
DELO				Trac		18 17 40.5	
	comp=Z,22nm,0.1s						
PECO	**Prince Edward**	**2.53**	**214**	PN	Pn	18 17 03.2	+0.3
PECO				Trac		18 17 42.4	
	comp=Z,17nm,0.1s						
VLDQ	**Val d’Or**	**2.63**	**322**	PN	Pn	18 17 05.8	+1.5
VLDQ				SN	Sn	18 17 39.1	+3.0
VLDQ				Trac		18 17 52.4	
	comp=Z,6.8nm,0.1s						
EEO	**Eldee**	**2.85**	**283**	PN	Pn	18 17 06.0	-1.4
EEO				SN	Sn	18 17 39.5	-2.1
EEO				Trac		18 17 57.8	
	comp=Z,11nm,0.1s						
BUKO	**Buck Lake**	**3.11**	**260**	PN	Pn	18 17 09.8	-1.3
BUKO				SN	Sn	18 17 45.6	-2.6
BUKO				Trac		18 17 59.1	
	comp=Z,15nm,0.1s						
SADO	**Sadowa**	**3.16**	**247**	PN	Pn	18 17 10.2	-1.6
SADO				SN	Sn	18 17 46.7	-2.7
SADO				Trac		18 17 51.3	
	comp=Z,24nm,0.1s						
DAQ	**Lac Daran**	**3.23**	**52**	PN	Pn	18 17 11.5	-1.3
DAQ				SN	Sn	18 17 47.7	-3.6
DAQ				Trac		18 18 10.2	
	comp=Z,6.5nm,0.1s						
RSPO	**Restoule Provi**	**3.28**	**272**	PN	Pn	18 17 12.7	-0.9
RSPO				Trac		18 18 07.5	
	comp=Z,20nm,0.2s						
A54	**Misere**	**3.48**	**65**	PN	Pn	18 17 14.5	-1.9
A54				SN	Sn	18 17 54.2	-3.4
A54				Trac		18 18 14.0	
	comp=Z,8.4nm,0.1s						
PKRO	**Pickering**	**3.54**	**235**	PN	Pn	18 17 09.9	-7.3
PKRO				Trac		18 18 19.3	
	comp=Z,56nm,0.2s						
LMQ	**La Malbaie**	**3.57**	**64**	PN	Pn	18 17 16.5	-1.2
LMQ				SN	Sn	18 17 57.7	-2.2
LMQ				Trac		18 18 17.2	
	comp=Z,14nm,0.1s						
MNQ	**Manicouagan**	**6.13**	**41**	PN	Pn	18 17 50.8	-3.2
MNQ				SN	Sn	18 18 56.4	-8.0
MNQ				Trac		18 19 44.2	
	comp=Z,4.9nm,0.3s						
SMQ	**Clarke City**	**6.97**	**50**	PN	Pn	18 18 05.2	-0.5
SMQ				SN	Sn	18 19 16.0	-9.3
SMQ				Trac		18 20 03.3	
	comp=Z,2.4nm,0.2s						
LG4Q	**La Grande 4**	**7.60**	**4**	PN	Pn	18 18 11.6	-3.0
LG4Q				SN	Sn	18 19 31.0	-10
LG4Q				Trac		18 20 24.3	
	comp=Z,2.3nm,0.3s						
VIMO	**Victor Mine**	**8.82**	**323**	PN	P	18 18 27.4	-4.1
VIMO				SN	Sn	18 20 00.1	-11
VIMO				Trac		18 20 57.4	
	comp=Z,0.6nm,0.3s						
SILO	**Sutton Inlier**	**10.52**	**327**	PN	P	18 18 52.3	-2.6
SILO				SN	S	18 20 41.0	-12
SILO				Trac		18 20 45.4	
	comp=Z,0.3nm,0.2s						

IDC 23 18:25:55.5±2.4**,29.47S**×**112.37W,mb3.9**/3**,mb1 4.3**/3**, mb1mx3.9**/17**,mbtmp3.9**/3**,MS4.2**/1**,Ms1 4.2**/1**, ms1mx3.3**/31**,Error ellipse: s-maj=110.4km s-min=72.7km az=79.0,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**47.55**	**38**	LR	LR	18 48 33.9	
	comp=Z,280nm,21.3s,baz=352,slow=29						
NVAR	**Mina Array Bea**	**67.77**	**355**	P	P	18 36 55.5	-1.8
	2.6nm,1.1s,baz=166,slow=7.1,SNR=11						
PDAR	**Pinedale Array**	**71.92**	**2**	P	P	18 37 20.2	-2.4
	0.2nm,0.4s,baz=194,slow=6.1,SNR=3.6						
YKA	**Yellowknife Ar**	**91.66**	**359**	P	P	18 39 04.4	-0.9
	0.1nm,0.3s,baz=172,slow=4.4,SNR=4.0						
SONM	**Songino Array**	**145.07**	**313**	PKPbc	PKPbc	18 45 33.3	-1.5
	2.3nm,1.0s,baz=90,slow=2.9,SNR=10						
BRTR	**Keskin Array B**	**150.36**	**61**	PKPbc	PKPdf	18 45 48.8	+3.5
	0.9nm,0.9s,baz=270,slow=5.8,SNR=4.3						

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*CSEM **23** 18:29:20.2±0.4,35.00N×2.58W,h10^{km},MD3.3,Error ellipse: s-maj=10.3km s-min=3.9km az=106.0*

*CNRM **23** 18:29:20.1,35.12N×2.49W,h1^{km},MD3.3*

*MDD **23** 18:29:23.0±0.9,34.96N×2.63W,h11^{km}±2^{km},mbLg2.3/2, Error ellipse: s-maj=8.0km s-min=4.6km az=106.0, PRXIMO*

*NEIC **23** 18:29:26.1,35.16N×3.29W,MG2.8(MDD),After MDD.*

ISC 23 18:29:20.8±0.8**,35.00N**±0.03×**2.54W**±0.07**,h10^{km},n23, σ1^{s}20**/37**,Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAI	**Zaio**	**0.17**	**261**	Pg	**Pg**	**18 29 24.5**	**-0.1**
ZAI				Lg		18 29 28.0	
ZAI	**Zaio**	**0.17**	**261**	*i* P	**Pg**	**18 29 24.5**	**-0.1**
EMLI	**Melilla**	**0.45**	**312**	P	**Pg**	**18 29 31.2**	**+1.2**
	72nm,0.1s,SNR=8.6						
EMLI				S	**Sg**	**18 29 37.1**	**+1.0**
	209nm,0.4s,SNR=6.2						
EMEL	**Melilla**	**0.46**	**312**	Pg	**Pg**	**18 29 31.2**	**+1.1**
	72nm,0.1s,SNR=8.6						
EMEL				Lg		18 29 37.1	
	209nm,0.4s,SNR=6.2						
TOU	**Touzarine**	**1.00**	**268**	*e*P	**Pb**	**18 29 40.0**	**+0.3**
TOU				*e*S	**Sb**	**18 29 53.0**	**+0.4**
EALB	**Alboran**	**1.02**	**337**	P	**Pb**	**18 29 40.7**	**+0.5**
EALB				S	**Sb**	**18 29 51.4**	**-2.1**
EALB	**Alboran**	**1.02**	**337**	Pg	**Pg**	**18 29 40.7**	**-0.6**
	2.0nm,0.1s,SNR=8.9						
EALB				Lg		18 29 54.3	
	37nm,0.3s,SNR=6.9						
EALB	**Alboran**	**1.02**	**337**	P	**Pb**	**18 29 40.7**	**+0.5**
	2.0nm,0.1s,SNR=8.9						
EALB				S	**Sb**	**18 29 51.4**	**-2.1**
	37nm,0.3s,SNR=6.9						
TZK	**Tazeka**	**1.63**	**237**	*i* P	**Pn**	**18 29 50.0**	**+0.2**
TZK				*i* S	**Sn**	**18 30 11.0**	**+0.1**
EBER	**Berja**	**1.92**	**352**	Pn	**Pn**	**18 29 56.9**	**+3.0**
	SNR=4.0						
EBER				Sn	**Sn**	**18 30 14.5**	**-3.8**
	7.9nm,0.4s,SNR=4.5						
EBER	**Berja**	**1.92**	**352**	S	**Sn**	**18 30 14.5**	**-3.8**
	7.9nm,0.4s,SNR=4.5						
EMIJ	**Mijas**	**2.40**	**311**	Pn	**Pn**	**18 30 02.6**	**+1.8**
	0.6nm,0.1s,SNR=4.0						
EMIJ				Sn	**Sn**	**18 30 25.2**	**-5.2**
	SNR=4.0						
EMIJ	**Mijas**	**2.40**	**311**	S	**Sn**	**18 30 25.2**	**-5.2**
	SNR=4.0						
EHUE	**Huescar**	**2.81**	**359**	Pn	**Pn**	**18 30 11.0**	**+4.3**
	0.4nm,0.2s,SNR=7.9						
EHUE				Sn	**Sn**	**18 30 41.3**	**+0.2**
	SNR=7.9						
EHUE	**Huescar**	**2.81**	**359**	S	**Sn**	**18 30 41.3**	**+0.3**
EQES	**Quesada**	**2.83**	**351**	Pn	**Pn**	**18 30 08.7**	**+1.7**
	0.7nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**18 30 40.1**	**-1.4**
	4.1nm,0.4s,SNR=5.1						
EQES	**Quesada**	**2.83**	**351**	P	**Pn**	**18 30 08.7**	**+1.7**
	0.7nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**18 30 40.2**	**-1.3**
CZD	**Col de Zad**	**2.85**	**227**	*e*P	**Pn**	**18 30 06.0**	**-1.3**
CZD				*i* S	**Sn**	**18 30 41.5**	**-0.6**
EMUR	**La Murta**	**3.03**	**20**	Pn	**Pn**	**18 30 10.4**	**+0.6**
	SNR=7.9						
ZFT	**Errachidia**	**3.32**	**208**	*e*P	**Pn**	**18 30 13.0**	**-0.9**
ZFT				*i* S	**Sn**	**18 30 54.0**	**+0.2**
EADA	**Adamuz**	**3.56**	**333**	Sn	**Sn**	**18 30 58.3**	**-1.7**
	SNR=4.0						
EMIN	**Mina Concepcio**	**4.33**	**311**	Pn	**Pn**	**18 30 25.6**	**-2.6**
	0.2nm,0.1s,SNR=4.0						
EMIN				Sn	**Sn**	**18 31 13.4**	**-6.1**
	SNR=4.0						
EMIN	**Mina Concepcio**	**4.33**	**311**	P	**Pn**	**18 30 25.6**	**-2.7**
EMIN				S	**Sn**	**18 31 13.4**	**-6.0**

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*BJI **23** 18:29:42.1,5.60S×67.98E,h10^{km},mB5.1,mb4.8,Ms4.7, Msz4.4*

*MOS **23** 18:29:48.2±1.0,5.00S×68.48E,h10^{km},mb5.0/36,Error ellipse: s-maj=9.1km s-min=6.6km az=106.9*

*IDC **23** 18:29:49.8±0.5,4.90S×68.54E,mb4.3/19,mb1 4.4/19, mb1mx4.4/22,mbtmp4.3/19,MS4.3/12,Ms1 4.3/12, ms1mx4.0/22,Error ellipse: s-maj=16.9km s-min=14.6km az=132.0*

*HRVD **23** 18:29:50.3±0.2,4.99S×68.48E,h12^{km},MW5.1/67, Centroid moment Tensor Solution. LP body waves: s38,c55;Mantle waves: s67,c130; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.65±.15; M$_{\theta\theta}$-5.21±.14; M$_{\phi\phi}$6.85±.14; M$_{r\theta}$-0.82±.39; M$_{\theta\phi}$-1.15±.13; M$_{\phi r}$1.13±.37; Best double couple: M$_0$6.29×10^{16} NP1:φ$_s$40°, δ77°,λ-2°. NP2:φ$_s$130°,δ88°,λ-167°. Principal axes: T 7.124, Plg8°, Azm264°; N -1.679, Plg77°, Azm139°; P -5.455, Plg11°, Azm356°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **23** 18:29:50.4±0.2,4.98S×68.51E,h10^{km},mb4.9/43 Error ellipse: s-maj=7.5km s-min=6.9km az=168.0*

ISC 23 18:29:48.4±0.2**,5.02S**±0.04×**68.54E**±0.04**,h10^{km}, (h22^{km}**±2.9^{km}**:pP-P),n183,σ1^{s}17**/174**,mb4.7**/69**,MS4.4**/25**, 3C-2D,Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.56**	**122**	*e*P	**Pn**	**18 30 58.6**	**-0.5**
DGAR				*e*S	**Sn**	**18 31 49.9**	**-2.9**
PALK	**Pallekele**	**17.22**	**45**	*e*P	**P**	**18 33 53.6**	**+2.8**
	75nm,1.4s						
MDRS	**Chennai**	**21.41**	**33**	*e*x	**P**	**18 34 36.0**	**-2.7**
HYB	**Hyderabad**	**24.39**	**24**	*e*P	**P**	**18 35 08.0**	**-0.2**
HYB	**Hyderabad**	**24.39**	**24**	*i* P	**P**	**18 35 09.5**	**+1.3**
KULM	**Kulim**	**33.66**	**73**	*e*P	**P**	**18 36 27.8**	**-4.0**
KOLN	**Koldanda**	**35.70**	**23**	*e*P	**P**	**18 36 49.2**	**+0.1**
	163nm,1.8s,mb5.7						
DMN	**Daman**	**36.17**	**25**	*e*P	**P**	**18 36 53.5**	**+0.3**
	86nm,1.1s,mb5.6						
PKI	**Pulchoki**	**36.27**	**26**	*e*P	**P**	**18 36 53.8**	**-0.2**
	118nm,1.7s,mb5.5						
PKI	**Pulchoki**	**36.27**	**26**	*e*P	**P**	**18 36 53.8**	**-0.2**
PKI				pmax	pmax		
	comp=Z,59nm,1.7s,mb5.2						
DDI	**Dehra Dun**	**36.31**	**14**	*e*x	**P**	**18 36 55.0**	**+0.7**
GKN	**Gorkha**	**36.32**	**24**	*e*P	**P**	**18 36 54.9**	**+0.5**
	comp=Z,361nm,1.9s						
KKN	**Kakani**	**36.40**	**25**	*e*P	**P**	**18 36 55.4**	**+0.3**
	comp=Z,65nm,1.2s,mb5.5						
KKN	**Kakani**	**36.40**	**25**	*e*P	**P**	**18 36 55.4**	**+0.3**
KKN				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1						
GUN	**Gumba**	**36.77**	**26**	*e*P	**P**	**18 36 59.3**	**+1.1**
	comp=Z,151nm,1.4s,mb5.6						
CM31	**Chiang Mai Arr**	**37.98**	**51**	*e*P	**P**	**18 37 08.8**	**+0.3**
	comp=Z,12nm,1.3s,mb4.5						
CM31				*e*		18 37 19.3	
CMAR	**Chiang Mai Arr**	**37.98**	**51**	P	**P**	**18 37 08.7**	**+0.2**
	comp=Z,3.6nm,0.8s,mb4.1,baz=244,slow=8.9,SNR=17						
CMAR				PcP	PcP	18 39 25.5	+0.8
	comp=Z,1.2nm,0.8s,baz=230,slow=3.7,SNR=5.3						
CMAR				LR	LR	18 52 24.5	
	comp=Z,322nm,18.8s,MS4.2,baz=235,slow=36						
MBAR	**Mbarara**	**38.00**	**275**	*e*P	**P**	**18 37 09.7**	**+1.1**
MBAR				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.7						
MBAR	**Mbarara**	**38.00**	**275**	*e*P	**P**	**18 37 09.7**	**+1.0**
	comp=Z,19nm,1.3s,mb4.7						
LSA	**Lhasa**	**40.78**	**31**	P	**P**	**18 37 35.0**	**+3.5**
LSA	**Lhasa**	**40.78**	**31**	*e*P	**P**	**18 37 32.6**	**+1.1**
LSA				pmax	pmax		
	comp=Z,81nm,1.8s,mb5.0						
LSA	**Lhasa**	**40.78**	**31**	*e*P	**P**	**18 37 32.6**	**+1.1**
	comp=Z,81nm,1.8s,mb5.0						
LSZ	**Lusaka**	**40.93**	**253**	*e*P	**P**	**18 37 31.0**	**-1.9**
LSZ				pmax	pmax		
	comp=Z,44nm,2.3s,mb4.7						
LSZ	**Lusaka**	**40.93**	**253**	*e*P	**P**	**18 37 31.0**	**-2.0**
	comp=Z,44nm,2.3s,mb4.7						
MATP	**Matopo**	**41.80**	**245**	P	**P**	**18 37 42.2**	**+2.1**
	comp=Z,13nm,0.9s,mb4.5,baz=67,slow=9.2,SNR=22						
KSM	**Kuching**	**42.22**	**82**	*e*P	**P**	**18 37 45.1**	**+1.4**
KMI	**Kunming**	**44.75**	**46**	P	**P**	**18 38 05.1**	**+1.0**
KMI				AP	pP	18 38 14.3	+7.2
KMI				LR	LR		
	comp=N,240nm,16.4s,MS4.3						
KMI				LR	LR		
	comp=E,210nm,16.1s,MS4.3						
KMI				LR	LR		
	comp=Z,270nm,16.1s,MS4.3						
KSH	**Kashi**	**44.84**	**8**	*e*P	**P**	**18 38 04.6**	**-0.1**
KSH				*e*AP	pP	18 38 14.3	+6.6
KSH				AMB	AMB		
	comp=Z,300nm,2.6s,mb5.7						
LBTB	**Lobatse**	**45.71**	**240**	*e*P	**P**	**18 38 09.9**	**-1.9**
LBTB				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
LBTB	**Lobatse**	**45.71**	**240**	P	**P**	**18 38 13.7**	**+2.0**
	comp=Z,4.5nm,1.1s,mb4.3,baz=97,slow=6.4,SNR=4.2						
LBTB	**Lobatse**	**45.71**	**240**	*e*P	**P**	**18 38 09.9**	**-1.9**
	comp=Z,6.1nm,1.1s,mb4.4						
QIZ	**Qiongzhong**	**47.17**	**58**	*e*P	**P**	**18 38 23.3**	**-0.1**
QIZ				S	**S**	**18 45 13.5**	**-1.6**
QIZ				LR	LR		
	comp=N,410nm,15.8s						
QIZ				LR	LR		
	comp=Z,440nm,17.9s,MS4.5						
BOSA	**Boshof**	**47.23**	**235**	*e*P	**P**	**18 38 23.5**	**-0.2**
BOSA				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
BOSA	**Boshof**	**47.23**	**235**	P	**P**	**18 38 23.9**	**+0.1**
	comp=Z,19nm,1.1s,mb4.9,baz=65,slow=8.1,SNR=14						
BOSA				LR	LR	18 54 54.6	
	comp=Z,610nm,21.5s,MS4.5,baz=76,slow=32						
BOSA	**Boshof**	**47.23**	**235**	*e*P	**P**	**18 38 23.5**	**-0.2**
	comp=Z,14nm,1.0s,mb4.9						
KZA	**Kyzart**	**47.27**	**7**	P	**P**	**18 38 25.4**	**+1.5**
	SNR=27						
UCH	**Uchtor**	**47.34**	**6**	P	**P**	**18 38 26.4**	**+2.1**
	SNR=11						
ASF	**Jabal al Asfar**	**47.69**	**323**	P	**P**	**18 38 29.1**	**+1.8**
	comp=Z,2.3nm,0.5s,mb4.5,baz=295,slow=4.6,SNR=4.7						
EKS2	**Erkin-Say**	**47.70**	**5**	P	**P**	**18 38 28.6**	**+1.4**
	SNR=6.4						
KBK	**Karagaybulak**	**47.81**	**6**	P	**P**	**18 38 29.1**	**+1.1**
	SNR=6.3						
FRU	**Bishkek**	**47.95**	**6**	*e*P	**P**	**18 38 30.0**	**+0.8**
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.3						
TKM2	**Tokmak 2**	**48.15**	**7**	P	**P**	**18 38 31.1**	**+0.5**
	SNR=6.8						
GYA	**Guiyang**	**48.40**	**48**	⇑*i*P	**P**	**18 38 32.1**	**-0.7**
GYA				S	**S**	**18 45 34.3**	**+2.1**
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
GYA				AMB	AMB		
	comp=Z,130nm,4.7s						
GYA				LR	LR		
	comp=N,190nm,16.2s,MS4.4						
GYA				LR	LR		
	comp=E,250nm,15.6s,MS4.4						
GYA				LR	LR		
	comp=Z,210nm,14.9s,MS4.2						
KKM	**Kota Kinabalu**	**48.85**	**78**	P	**P**	**18 38 31.2**	**-5.3**
GNI	**Garni**	**49.99**	**336**	*e*P	**P**	**18 38 45.8**	**+0.8**
GNI				*e*		18 38 53.1	
GNI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GNI	**Garni**	**49.99**	**336**	P	**P**	**18 38 45.6**	**+0.6**
	comp=Z,1.9nm,0.3s,mb4.5,baz=335,slow=19,SNR=5.2						
GNI	**Garni**	**49.99**	**336**	*e*P	**P**	**18 38 45.8**	**+0.8**
	comp=Z,5.2nm,0.8s,mb4.6						
GNI				*e*		18 38 53.1	
MALT	**Malatya**	**51.37**	**330**	*e*P	**P**	**18 38 53.1**	**-2.4**
MALT				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
MALT	**Malatya**	**51.37**	**330**	*e*P	**P**	**18 38 53.1**	**-2.3**
	comp=Z,10nm,1.3s,mb4.6						
TSUM	**Tsumeb**	**51.57**	**250**	*e*P	**P**	**18 38 58.4**	**+1.1**
	comp=Z,15nm,1.4s,mb4.7						
TSUM				*e*		18 39 05.3	
WMQ	**Urumqi**	**51.60**	**18**	P	**P**	**18 38 57.4**	**+0.3**
WMQ				AP	pP	18 39 01.4	+1.2
WMQ				PCP	PcP	18 40 11.3	+0.2
WMQ				PP	PP	18 40 55.6	+0.2
WMQ				S	**S**	**18 46 16.4**	**-0.1**
WMQ				SCS	ScS	18 48 44.1	-0.4
WMQ				SS	SS	18 49 50.5	-0.2
WMQ				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,320nm,5.2s						
WMQ				LR	LR		
	comp=N,430nm,22.8s,MS4.6						
WMQ				LR	LR		
	comp=E,360nm,19.2s,MS4.6						
WMQ				LR	LR		
	comp=Z,410nm,18.4s,MS4.5						
SUR	**Sutherland**	**52.17**	**232**	*e*P	**P**	**18 39 02.2**	**+0.6**
	comp=Z,11nm,1.0s,mb4.7						
LZH	**Lanzhou**	**52.59**	**36**	*e*P	**P**	**18 39 06.3**	**+1.6**
LZH				AP	pP	18 39 11.5	+3.8
LZH				XP	sP	18 39 13.9	+5.0
LZH				PP	PP	18 41 06.3	+1.3
LZH				S	**S**	**18 46 32.3**	**+2.2**
LZH				SS	SS	18 50 10.1	+2.9
LZH				AMB	AMB		
	comp=Z,30nm,1.4s,mb5.0						
LZH				AMB	AMB		
	comp=Z,250nm,4.0s						
LZH				LR	LR		
	comp=E,500nm,15.0s						
LZH				LR	LR		
	comp=Z,520nm,19.2s,MS4.6						
ENH	**Enshi**	**52.60**	**46**	*e*P	**P**	**18 39 03.9**	**-1.0**
	comp=Z,18nm,1.0s,mb5.0						
GTA	**Gaotai**	**52.80**	**30**	*e*P	**P**	**18 39 05.5**	**-0.7**
GTA				PCP	PcP	18 40 11.9	-3.7
GTA				PP	PP	18 41 06.8	-0.2
GTA				S	**S**	**18 46 34.4**	**+1.5**
GTA				SS	SS	18 50 12.8	+2.1
GTA				AMB	AMB		
	comp=Z,70nm,6.5s						
GTA				LR	LR		
	comp=N,240nm,13.3s						
GTA				LR	LR		
	comp=E,150nm,20.2s						
GTA				LR	LR		
	comp=Z,200nm,18.6s						
MKAR	**Makanchi Array**	**53.01**	**12**	P	**P**	**18 39 06.0**	**-1.6**
	comp=Z,3.0nm,0.8s,mb4.3,baz=190,slow=7.5,SNR=25						
MKAR				PcP	PcP	18 40 18.0	+1.7
	comp=Z,0.7nm,0.6s,baz=214,slow=5.2,SNR=2.0						
KIV	**Kislovodsk**	**54.03**	**337**	*e*P	**P**	**18 39 14.9**	**-0.3**
KIV				*e*		18 40 19.8	
KIV				*e*S	**S**	**18 46 47.9**	**-1.7**
KIV				*e*SS	SS	18 50 32.2	+1.6
KIV				*e*SSS	SSS	18 52 29.1	+4.7
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
XAN	**Xi’an**	**54.43**	**41**	P	**P**	**18 39 17.1**	**-1.2**
XAN				AP	pP	18 39 24.5	+3.2
XAN				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.5						
BRTR	**Keskin Array B**	**54.91**	**327**	P	**P**	**18 39 21.8**	**0.0**
	comp=Z,1.1nm,0.8s,mb4.0,baz=153,slow=11,SNR=9.6						
SOC	**Sochi**	**54.93**	**335**	*e*P	**P**	**18 39 18.0**	**-3.8**
SOC				*i* S	**S**	**18 46 55.7**	**-6.0**
SOC				*e*SS	SS	18 50 50.8	+5.8
SOC				MLR	MLR		
	comp=Z,148nm,17.0s,MS4.1						
SOC				MLR	MLR		
	comp=N,111nm,16.0s,MS4.1						
SOC				MLR	MLR		
	comp=E,91nm,21.0s,MS4.1						
WHN	**Wuhan**	**56.28**	**48**	*e*P	**P**	**18 39 31.4**	**-0.4**
ANN	**Anapa**	**56.89**	**334**	*e*P	**P**	**18 39 33.2**	**-2.7**
ANN				*e*S	**S**	**18 47 22.3**	**-5.4**
ANN				*e*SSS	SSS	18 53 36.8	+7.6
ANN				pmax	pmax		
	comp=Z,95nm,2.1s,mb5.5						
ZRNK	**Zerenda**	**57.76**	**0**	*e*P	**P**	**18 39 40.6**	**-1.3**
ZRNK				pmax	pmax		
	comp=Z,68nm,0.6s,mb5.8						
ZRNK	**Zerenda**	**57.76**	**0**	*e*P	**P**	**18 39 40.6**	**-1.3**
	comp=Z,68nm,0.6s,mb5.8						
SIM	**Simferopol’**	**58.51**	**332**	P	**P**	**18 39 49.9**	**+2.6**
SIM				*i* S	**S**	**18 47 53.5**	**+4.5**
SIM				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
ZAL	**Zalesovo**	**60.31**	**11**	P	**P**	**18 39 58.8**	**-0.7**
	comp=Z,2.3nm,0.8s,mb4.2,baz=258,slow=7.4,SNR=12						
NJ2	**Nanjing**	**60.38**	**49**	*e*P	**P**	**18 40 00.8**	**+0.4**
NJ2				AP	pP	18 40 05.4	+1.9
NJ2				PP	PP	18 42 16.3	+0.7
NJ2				S	**S**	**18 48 14.0**	**+0.6**
NJ2				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,60nm,5.8s						
NJ2				LR	LR		
	comp=N,280nm,20.1s,MS4.5						
NJ2				LR	LR		
	comp=E,330nm,24.3s,MS4.5						
NJ2				LR	LR		
	comp=Z,120nm,22.1s,MS4.0						
NVS	**Novosibirsk**	**60.89**	**10**	*e*P	**P**	**18 40 01.1**	**-2.4**
SSE	**Sheshan**	**61.72**	**51**	P	**P**	**18 40 06.8**	**-2.7**
SSE				AP	pP	18 40 16.0	+3.4
SSE				XP	sP	18 40 19.6	+5.9
SSE				PP	PP	18 42 22.8	-4.9
SSE				S	**S**	**18 48 27.6**	**-2.9**
SSE				XS		18 48 43.6	
SSE				SCS	ScS	18 49 56.4	-1.2
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,90nm,4.1s						
SSE				LR	LR		
	comp=N,100nm,19.1s,MS4.4						
SSE				LR	LR		
	comp=E,210nm,19.0s,MS4.4						
SSE				LR	LR		
	comp=Z,250nm,19.2s,MS4.4						
ARU	**Arti**	**61.79**	**354**	⇓*i*P	**P**	**18 40 09.2**	**-0.4**
ARU				*i*		18 40 51.5	
ARU				*e*		18 42 22.2	
ARU				*e*PPP	PPP	18 43 53.9	-2.8
ARU				*e*S	**S**	**18 48 30.4**	**-0.5**
ARU				*e*SS	SS	18 52 26.8	-7.7
ARU				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
ARU	**Arti**	**61.79**	**354**	*e*P	**P**	**18 40 08.7**	**-0.9**
	comp=Z,20nm,1.2s,mb5.1						
SVE	**Sverdlovsk**	**61.98**	**355**	*e*P	**P**	**18 40 11.0**	**+0.1**
SVE				*e*		18 40 49.0	
SVE				*e*		18 42 36.0	
SVE				*e*S	**S**	**18 48 28.0**	**-5.3**
SVE				MLR	MLR		
	comp=N,200nm,14.0s,MS4.6						
SVE				MLR	MLR		
	comp=E,200nm,14.0s,MS4.6						
SVE				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.6						
SONM	**Songino Array**	**62.24**	**28**	P	**P**	**18 40 13.3**	**+0.5**
	comp=Z,6.9nm,0.8s,mb4.9,baz=220,slow=7.0,SNR=76						
SONM				LR	LR	19 06 44.3	
	comp=Z,311nm,21.1s,MS4.5,baz=219,slow=36						
KIS	**Kishinev**	**62.54**	**330**	*e*P	**P**	**18 40 14.0**	**-0.8**
ULN	**Ulaanbaatar**	**62.58**	**28**	*e*P	**P**	**18 40 13.8**	**-1.2**
MAW	**Mawson**	**62.60**	**182**	*e*P	**P**	**18 40 15.5**	**+0.6**
MAW				pmax	pmax		
	comp=Z,15nm,1.4s						
MAW	**Mawson**	**62.60**	**182**	P	**P**	**18 40 16.2**	**+1.3**
	comp=Z,5.3nm,0.8s,mb4.7,baz=16,slow=7.3,SNR=6.5						
MAW				LR	LR	19 01 27.5	
	comp=Z,313nm,19.3s,MS4.5,baz=152,slow=30						
MAW	**Mawson**	**62.60**	**182**	*e*P	**P**	**18 40 15.5**	**+0.6**
	comp=Z,15nm,1.4s,mb4.9						
ZAK	**Zakamensk**	**62.79**	**24**	*e*P	**P**	**18 40 15.9**	**-0.4**
TLY	**Talaya**	**63.94**	**23**	*e*P	**P**	**18 40 24.9**	**+1.0**
TLY				*e*		18 42 51.8	
TLY				*e*S	**S**	**18 49 02.8**	**+4.8**
TLY				*e*SS	SS	18 53 07.0	-1.0
TLY				pmax	pmax		
	comp=Z,17nm,1.8s,mb4.8						
TLY				MLR	MLR		
	comp=Z,221nm,17.0s,MS4.4						
IRK	**Irkutsk**	**64.62**	**23**	*e*P	**P**	**18 40 28.0**	**-0.3**
IRK				pmax	pmax		
	comp=Z,36nm,2.9s,mb4.9						
AKASG	**Malin Array Be**	**64.97**	**334**	P	**P**	**18 40 28.9**	**-1.8**
	comp=Z,1.1nm,0.8s,mb4.0,baz=138,slow=5.1,SNR=5.6						
OBN	**Obninsk**	**65.52**	**340**	P	**P**	**18 40 34.0**	**-0.1**

OBN				*e*		18 40 41.1	
OBN				*e*S	S	18 49 17.5	+0.1
OBN				*e*SS	SS	18 53 30.6	-2.1
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
WRA	**Warramunga Arr**	**65.57**	**110**	P	**P**	**18 40 36.3**	**+1.3**
	comp=Z,4.2nm,0.8s,mb4.5,baz=279,slow=6.6,SNR=22						
WRAB	**Tennant Creek**	**65.58**	**110**	*e*P	**P**	**18 40 34.1**	**-0.9**
WRAB	**Tennant Creek**	**65.58**	**110**	*e*P	**P**	**18 40 33.4**	**-1.6**
	comp=Z,16nm,0.8s,mb5.1						
MOS	**Moscow**	**65.69**	**341**	*e*P	**P**	**18 40 34.7**	**-0.4**
MOS				*e*		18 44 34.2	
SYO	**Syowa Base**	**66.72**	**191**	⇑P	**P**	**18 40 41.0**	**-0.5**
CASY	**Casey**	**67.73**	**163**	*e*P	**P**	**18 40 46.6**	**-1.3**
CIT	**Chita**	**68.48**	**28**	*e*P	**P**	**18 40 52.6**	**-0.3**
CIT				pmax	pmax		
	comp=Z,57nm,2.3s,mb5.2						
HIA	**Hailar**	**69.93**	**33**	*e*P	**P**	**18 41 01.5**	**-0.3**
HIA				pmax	pmax		
	comp=Z,40nm,1.6s						
HIA	**Hailar**	**69.93**	**33**	*e*P	**P**	**18 41 01.4**	**-0.4**
	comp=Z,40nm,1.6s,mb5.1						
CN2	**Changchun**	**70.50**	**40**	*e*P	**P**	**18 41 04.0**	**-1.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
PGF	**Pioggiola**	**71.66**	**318**	*e*P	**P**	**18 41 12.3**	**-0.1**
GERES	**GERESS Array B**	**71.72**	**325**	LR	LR	19 14 07.9	
	comp=Z,74nm,20.0s,MS4.0,baz=301,slow=37						
STKA	**Stephens Creek**	**72.98**	**122**	P	**P**	**18 41 22.4**	**+1.9**
	comp=Z,2.4nm,0.9s,mb4.2,baz=317,slow=8.7,SNR=4.6						
STKA	**Stephens Creek**	**72.98**	**122**	P	**P**	**18 41 19.2**	**-1.3**
SBF	**Sospel**	**73.25**	**319**	*e*P	**P**	**18 41 21.4**	**-0.4**
CLL	**Collm**	**73.37**	**327**	*e*P	**P**	**18 41 24.0**	**+1.6**
CLL				*e*	pP	18 41 29.0	+3.5
CLL	**Collm**	**73.37**	**327**	P	**P**	**18 41 24.0**	**+1.6**
CLL				*e**PP	pP	18 41 29.0	+3.5
MDJ	**Mudanjiang**	**73.53**	**41**	P	**P**	**18 41 23.8**	**+0.4**
MDJ				PCP	PcP	18 41 39.3	-0.5
MDJ				PP	PP	18 44 06.8	-2.5
MDJ				S	S	18 50 54.6	+2.7
MDJ				SS	SS	18 55 38.8	+1.7
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,40nm,4.4s						
MDJ				LR	LR		
	comp=N,100nm,27.7s,MS4.0						
MDJ				LR	LR		
	comp=E,60nm,30.5s,MS4.0						
MDJ				LR	LR		
	comp=Z,130nm,25.8s,MS4.1						
MDJ	**Mudanjiang**	**73.53**	**41**	*e*P	**P**	**18 41 24.1**	**+0.7**
	comp=Z,12nm,0.9s,mb4.8						
GRA1	**Grafenberg Arr**	**73.55**	**325**	*e*P	**P**	**18 41 23.7**	**+0.3**
	comp=Z,9.0nm,1.4s,mb4.5						
GRF	**Grafenberg Arr**	**73.55**	**325**	*e*P	**P**	**18 41 23.7**	**+0.3**
GRF				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
GRF	**Grafenberg Arr**	**73.55**	**325**	*e*P	**P**	**18 41 23.7**	**+0.3**
GRF				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
GRF	**Grafenberg Arr**	**73.55**	**325**	*e*P	**P**	**18 41 23.7**	**+0.3**
	comp=Z,9.0nm,1.4s,mb4.5						
FRF	**La Foret Royal**	**73.65**	**318**	*e*P	**P**	**18 41 23.8**	**-0.4**
	comp=Z,23nm,1.1s,mb4.7						
FRF	**La Foret Royal**	**73.65**	**318**	*e*P	**P**	**18 41 23.8**	**-0.4**
FRF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
LMR	**La Mourre**	**73.65**	**318**	*e*P	**P**	**18 41 23.6**	**-0.6**
FINES	**FINESS Array B**	**73.92**	**340**	P	**P**	**18 41 26.3**	**+0.9**
	comp=Z,2.9nm,1.0s,mb4.2,baz=207,slow=8.5,SNR=6.1						
FINES				LR	LR	19 12 34.0	
	comp=Z,104nm,20.7s,MS4.1,baz=184,slow=35						
FINES	**FINESS Array B**	**73.92**	**340**	P	**P**	**18 41 26.3**	**+0.9**
FINES				LR	LR	19 12 34.0	
MBDF	**Montbardon**	**74.04**	**319**	*e*P	**P**	**18 41 26.9**	**+0.5**
	comp=Z,4.2nm,0.7s,mb4.2						
MBDF	**Montbardon**	**74.04**	**319**	*e*P	**P**	**18 41 26.9**	**+0.5**
MBDF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
DBIC	**Dimbokro**	**74.17**	**278**	*e*P	**P**	**18 41 27.7**	**-0.1**
DBIC				pmax	pmax		
	comp=Z,25nm,1.3s						
DBIC	**Dimbokro**	**74.17**	**278**	P	**P**	**18 41 29.0**	**+1.2**
	comp=Z,6.9nm,0.9s,mb4.6,baz=55,slow=8.7,SNR=5.8						
DBIC	**Dimbokro**	**74.17**	**278**	*e*P	**P**	**18 41 27.6**	**-0.1**
	comp=Z,25nm,1.3s,mb5.0						
KAF	**Kangasniemi**	**74.33**	**341**	*e*p	**P**	**18 41 28.1**	**+0.4**
	baz=136,slow=5.5						
ORIF	**Oris-en-Rattie**	**74.70**	**319**	*e*P	**P**	**18 41 30.7**	**+0.5**
	comp=Z,8.4nm,0.8s,mb4.4						
ORIF	**Oris-en-Rattie**	**74.70**	**319**	*e*P	**P**	**18 41 30.7**	**+0.5**
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**75.27**	**323**	*e*P	**P**	**18 41 31.5**	**-1.9**
	comp=Z,6.2nm,0.7s,mb4.3						
CDF	**Champ du Feu**	**75.27**	**323**	*e*P	**P**	**18 41 31.5**	**-1.9**
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
HINF	**Hinteralfeld**	**75.27**	**322**	*e*P	**P**	**18 41 31.9**	**-1.5**
VIVF	**Saint-Julien-l**	**75.46**	**319**	*e*P	**P**	**18 41 34.0**	**-0.6**
LASF	**Ste Croix**	**75.71**	**318**	*e*P	**P**	**18 41 35.8**	**-0.2**
	comp=Z,20nm,1.2s,mb4.6						
MTLF	**Montolieu**	**76.56**	**317**	*e*P	**P**	**18 41 40.6**	**-0.2**
SMF	**Signal de Mont**	**76.68**	**320**	*e*P	**P**	**18 41 40.8**	**-0.6**
	comp=Z,4.9nm,0.6s,mb4.3						
SMF	**Signal de Mont**	**76.68**	**320**	*e*P	**P**	**18 41 40.8**	**-0.6**
SMF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
CTA	**Charters Tower**	**76.77**	**109**	LR	LR	19 10 46.6	
	comp=Z,355nm,20.3s,MS4.7,baz=275,slow=32						
CTAO	**Charters Tower**	**76.77**	**109**	*e*P	**P**	**18 41 43.8**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
CTAO	**Charters Tower**	**76.77**	**109**	*e*P	**P**	**18 41 43.8**	**+1.4**
	comp=Z,15nm,1.0s,mb4.9						
KLR	**Kul'dur**	**76.78**	**37**	*e*P	**P**	**18 41 36.5**	**-5.4**
MAJO	**Matsushiro**	**76.87**	**51**	*e*P	**P**	**18 41 42.1**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
MAJO	**Matsushiro**	**76.87**	**51**	*e*P	**P**	**18 41 42.1**	**-0.6**
	comp=Z,11nm,1.0s,mb4.7						
MAT	**Matsushiro**	**76.87**	**51**	P	**P**	**18 41 42.0**	**-0.7**
MAT				pmax	pmax		
	comp=Z,36nm,1.8s,mb5.0						
MAT	**Matsushiro**	**76.87**	**51**	P	**P**	**18 41 42.0**	**-0.7**
	comp=Z,36nm,1.8s,mb5.0						
MJAR	**Matsushiro Arr**	**76.87**	**51**	P	**P**	**18 41 42.6**	**-0.1**
	comp=Z,2.7nm,0.8s,mb4.2,baz=245,slow=6.6,SNR=12						
MJAR				LR	LR	19 17 18.2	
	comp=Z,190nm,18.5s,MS4.4,baz=260,slow=37						
LOR	**Lormes**	**76.91**	**321**	*e*P	**P**	**18 41 40.9**	**-1.8**
	comp=Z,9.0nm,0.9s,mb4.4						
LOR	**Lormes**	**76.91**	**321**	*e*P	**P**	**18 41 40.9**	**-1.8**
LOR				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
CAF	**Calviac**	**77.21**	**318**	*e*P	**P**	**18 41 44.3**	**-0.1**
TCF	**Toulx Ste Croi**	**77.60**	**319**	*e*P	**P**	**18 41 45.4**	**-1.1**
RJF	**Les Rejaudoux**	**77.71**	**318**	*e*P	**P**	**18 41 48.6**	**+1.5**
EPF	**Esparros**	**77.75**	**316**	*e*P	**P**	**18 41 46.1**	**-1.3**
BAIF	**Baives**	**77.78**	**324**	*e*P	**P**	**18 41 47.6**	**+0.2**
PMG	**Port Moresby**	**77.99**	**99**	*e*P	**P**	**18 41 48.9**	**-0.4**
PMG	**Port Moresby**	**77.99**	**99**	LR	LR	19 12 59.5	
	comp=Z,281nm,20.6s,MS4.6,baz=246,slow=33						
ETSF	**Etsaut**	**78.33**	**315**	*e*P	**P**	**18 41 48.4**	**-2.2**
	comp=Z,15nm,1.0s,mb4.6						
ETSF	**Etsaut**	**78.33**	**315**	*e*P	**P**	**18 41 48.4**	**-2.2**
ETSF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
TAU	**Tasmania Unive**	**78.38**	**133**	*e*P	**P**	**18 41 51.8**	**+0.9**
TAU				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
TAU	**Tasmania Unive**	**78.38**	**133**	*e*P	**P**	**18 41 51.8**	**+0.9**
	comp=Z,23nm,1.2s,mb5.0						
SJPF	**Ste Jean**	**78.86**	**316**	*e*P	**P**	**18 41 52.3**	**-1.2**
	comp=Z,16nm,0.9s,mb4.6						
SJPF	**Ste Jean**	**78.86**	**316**	*e*P	**P**	**18 41 52.3**	**-1.2**
SJPF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
MFF	**Saint Martin d**	**79.24**	**319**	*e*P	**P**	**18 41 55.3**	**-0.2**
NOA	**NORSAR Array B**	**79.29**	**335**	LR	LR	19 19 30.6	
	comp=Z,71nm,20.6s,MS4.0,baz=270,slow=38						
SNAA	**Sanae**	**79.45**	**198**	*e*P	**P**	**18 41 57.6**	**+1.5**
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SNAA	**Sanae**	**79.45**	**198**	*e*P	**P**	**18 41 57.6**	**+1.5**
	comp=Z,6.1nm,1.1s,mb4.4						
ESLA	**Sonseca Array**	**79.87**	**312**	P	**P**	**18 41 59.2**	**+0.1**
	comp=Z,2.3nm,1.2s,mb4.0						
ESDC	**Sonseca Array**	**79.87**	**312**	P	**P**	**18 41 59.7**	**+0.6**
	comp=Z,0.8nm,0.6s,mb3.9,baz=85,slow=5.6,SNR=6.8						
ARCES	**ARCESS Array B**	**79.94**	**346**	P	**P**	**18 42 00.1**	**+1.3**
	comp=Z,1.9nm,0.8s,mb4.1,baz=130,slow=7.0,SNR=4.6						
ARCES				LR	LR	19 18 17.7	
	comp=Z,157nm,19.8s,MS4.4,baz=211,slow=36						
VNA2	**Neumayer--Watz**	**80.69**	**199**		**P**	**18 42 06.0**	**+3.2**
VNA2	**Neumayer--Watz**	**80.69**	**199**	⇑	**P**	**18 42 10.1**	**+7.3**
YAK	**Yakutsk**	**81.37**	**25**	*e*P	**P**	**18 42 06.4**	**-0.1**
YAK				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.6						
VNA3	**Neumayer Olymp**	**81.48**	**199**	⇓*i*	**P**	**18 42 09.4**	**+2.5**
ASAJ	**Asahikawa**	**82.14**	**44**	LR	LR	19 17 20.5	
	comp=Z,155nm,19.4s,MS4.4,baz=166,slow=35						
BILL	**Bilibino**	**97.53**	**22**	P	**P**	**18 43 26.0**	**+2.4**
BILL				*e*PPS	PPS	18 56 52.0	-3.7
BILL				*e*		19 01 40.6	
BILL				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.8						
YKA	**Yellowknife Ar**	**122.61**	**2**	PKP	PKPdf	18 48 46.4	-0.7
	comp=Z,0.4nm,0.5s,baz=356,slow=2.6,SNR=4.7						
YKA	**Yellowknife Ar**	**122.61**	**2**	PKP	PKPdf	18 48 46.4	-0.7
LPAZ	**La Paz**	**132.20**	**243**	PKP	PKPdf	18 49 07.9	+1.1
	comp=Z,0.7nm,0.3s,baz=47,slow=6.7,SNR=4.6						
PDAR	**Pinedale Array**	**142.38**	**358**	PKP	PKPdf	18 49 26.6	+1.8
	comp=Z,0.4nm,0.5s,baz=72,slow=4.7,SNR=3.7						
HWUT	**Hardware Ranch**	**143.57**	**0**	*e*PKPdf	PKPdf	18 49 25.6	-1.2
UALR	**University of**	**145.51**	**332**	*e*PKPdf	PKPdf	18 49 31.3	+0.9
NVAR	**Mina Array Bea**	**146.17**	**10**	PKPbc	PKPbc	18 49 33.1	+3.6
	comp=Z,5.5nm,0.9s,baz=27,slow=2.8,SNR=21						
MNV	**Mina**	**146.19**	**9**	*e*PKPbc	PKPbc	18 49 33.0	+3.5
MSU	**Marysvale**	**146.66**	**1**	*e*PKPbc	PKPbc	18 49 35.4	+4.8
OTAV	**Otavalo**	**146.69**	**263**	*e*PKPdf	PKPdf	18 49 32.9	-0.1
RW3	**Ridgway**	**146.75**	**355**	*e*PKPbc	PKPbc	18 49 35.3	+4.5
PV01	**Paradox Valley**	**146.94**	**356**	*e*PKPbc	PKPbc	18 49 36.1	+4.8
MTUM	**Tungsten Hills**	**147.17**	**10**	*e*PKPbc	PKPdf	18 49 37.4	+4.3
WMOK	**Wichita Mounta**	**148.18**	**340**	*e*PKPbc	PKPdf	18 49 36.1	+1.2
DAC	**Darwin (Calif)**	**148.39**	**9**	*e*PKPbc	PKPdf	18 49 38.9	+3.8
NEN	**Nelson**	**149.36**	**5**	*e*PKPab	PKPab	18 49 43.5	-1.4
LAZ	**Ladron**	**150.49**	**353**	*e*PKPdf	PKPdf	18 49 38.4	-0.1
MNTX	**Cornudas Mount**	**152.86**	**349**	*e*PKPbc	PKPdf	18 49 49.0	+7.0
TXAR	**Lajitas Array**	**154.72**	**344**	PKPbc	PKPdf	18 49 54.2	+10
	comp=Z,0.6nm,0.7s,SNR=5.4						
TXAR				PKPab	PKPab	18 50 09.1	+1.5
	comp=Z,2.3nm,0.8s,baz=45,slow=1.8,SNR=10						

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*MOS **23** 18:32:20.3±1.2, 29.24S×112.69W, h10^{km}, mb5.1/11, Error ellipse: s-maj=30.6km s-min=11.1km az=87.5*

*IDC **23** 18:32:20.0±0.8, 29.34S×112.60W, mb4.4/7, mb1 4.6/7, mb1mx4.3/18, mbtmp4.3/7, MS4.6/24, Ms1 4.5/24, ms1mx4.4/28, Error ellipse: s-maj=53.0km s-min=25.6km az=98.0*

*HRVD **23** 18:32:21.1±0.2, 29.46S×112.54W, h12^{km}, MW5.2/70, Centroid moment Tensor Solution. LP body waves: s52,c88;Mantle waves: s70,c139; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-7.06±.14; M$_{\theta\theta}$1.03±.15; M$_{\phi\phi}$6.03±.15; M$_{r\theta}$-0.33±.39; M$_{\theta\phi}$-3.00±.12; M$_{\phi r}$1.24±.41; Best double couple: M$_0$7.361×10^{16} NP1: φ$_s$333°, δ40°, λ-93°. NP2:φ$_s$157°, δ50°, λ-88°. Principal axes: T 7.544, Plg5°, Azm245°; N -.368, Plg2°, Azm335°; P -7.177, Plg85°, Azm86°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **23** 18:32:21.1±0.3, 29.40S×112.56W, h10^{km}, mb5.0/26 Error ellipse: s-maj=14.2km s-min=8.5km az=84.0*

*BJI **23** 18:32:21.0, 29.40S×112.60W, h10^{km}, mB5.6, Ms5.5, Msz5.4*

ISC 23 18:32:19.6±0.3**, 29.34S**±0.06×**112.5W**±0.1**, h10^{km}, n121, σ1^{s}01**/71**, mb4.7**/35**, MS4.7**/27**, 5C, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**	**21.06**	**282**	*e*LQ		18 40 54.4	
	3μm,28.0s						
RKT				*e*LR	LR	18 41 45.8	
	4μm,27.8s,baz=119						
TAOE	**Nuku Hiva Isla**	**32.97**	**303**	*e*LR	LR	18 47 28.5	
	6μm,26.7s,baz=142						
TBI	**Tubuai**	**33.55**	**271**	*e*LQ		18 46 35.9	
	926nm,29.5s						
TBI				*e*LR	LR	18 47 32.0	
	4μm,27.0s,baz=106						
PPT	**Papeete**	**35.82**	**281**	*e*P	**P**	**18 39 08.8**	**-13**
	58nm,27.2s						
PPT				*e*LQ		18 47 06.3	
	718nm,29.5s						
PPT				*e*LR	LR	18 48 21.1	
	4μm,27.0s,baz=113						
PPT	**Papeete**	**35.82**	**281**	LR	LR	18 49 36.9	
	comp=Z,1μm,21.2s,MS4.6,baz=107,slow=29						
PLCA	**Paso Flores**	**35.88**	**120**	LR	LR	18 50 13.5	
	comp=Z,794nm,20.8s,MS4.5,baz=276,slow=30						
PLCA	**Paso Flores**	**35.88**	**120**	P	**P**	**18 39 27.8**	**+6.1**
TRQA	**Tornquist**	**42.49**	**116**	P	**P**	**18 40 15.8**	**-0.8**
	7.2nm,1.0s,mb4.3						
LPAZ	**La Paz**	**42.68**	**82**	*e*P	**P**	**18 40 20.9**	**+2.5**
LPAZ				pmax	pmax		
	comp=Z,6.0nm,1.6s						
LPAZ	**La Paz**	**42.68**	**82**	LR	LR	18 53 59.8	
	comp=Z,832nm,20.0s,MS4.6,baz=264,slow=30						
LPAZ	**La Paz**	**42.68**	**82**	*e*P	**P**	**18 40 20.9**	**+2.5**
	comp=Z,6.4nm,1.6s,mb4.1						
OTAV	**Otavalo**	**43.83**	**54**	*e*P	**P**	**18 40 29.3**	**+1.5**
	comp=Z,24nm,1.6s,mb4.7						
PMSA	**Palmer Station**	**46.49**	**154**	P	**P**	**18 40 45.1**	**-3.2**
	comp=Z,22nm,1.1s,mb5.0						
CPUP	**Villa Florida**	**48.51**	**100**	LR	LR	18 58 12.4	
	comp=Z,819nm,18.4s,MS4.8,baz=281,slow=32						
ROSC	**El Rosal**	**49.99**	**54**	LR	LR	18 58 45.9	
	comp=Z,860nm,20.1s,MS4.8,baz=212,slow=32						
SAML	**Samuel**	**50.39**	**77**	*e*P	**P**	**18 41 18.7**	**-0.7**
	comp=Z,4.8nm,1.0s,mb4.5						
SDV	**Santo Domingo**	**55.41**	**53**	*e*P	**P**	**18 41 55.7**	**-1.1**
	comp=Z,4.3nm,0.8s,mb4.5						
RAO	**Raoul Island**	**56.32**	**253**	LR	LR	18 59 51.5	
	comp=Z,913nm,22.0s,MS4.8,baz=160,slow=29						
AFI	**Afiamalu**	**56.65**	**272**	LR	LR	19 01 13.1	
	comp=Z,585nm,19.0s,MS4.7,baz=72,slow=31						
URZ	**Urewera**	**57.90**	**241**	LR	LR	19 01 33.1	
	comp=Z,1μm,19.9s,MS5.1,baz=122,slow=30						
LTX	**Lajitas**	**58.95**	**9**	P	**P**	**18 42 21.6**	**0.0**
TXAR	**Lajitas Array**	**58.95**	**9**	P	**P**	**18 42 22.3**	**+0.7**
	comp=Z,0.8nm,1.0s,mb3.7,baz=198,slow=7.9,SNR=5.4						
TXAR				LR	LR	19 03 57.6	
	comp=Z,230nm,18.6s,MS4.3,baz=110,slow=32						
TXAR	**Lajitas Array**	**58.95**	**9**	P	**P**	**18 42 22.3**	**+0.7**
TXAR				LR	LR	19 03 57.6	
SBA	**Scott Base**	**59.59**	**194**	*e*P	**P**	**18 42 26.3**	**+0.9**
	comp=Z,62nm,2.1s,mb5.3						
BDFB	**Brasilia**	**60.48**	**92**	LR	LR	19 05 31.3	
	comp=Z,437nm,20.5s,MS4.6,baz=291,slow=33						
VNDA	**Vanda**	**60.65**	**194**	P	**P**	**18 42 32.8**	**+0.2**
VNDA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VNDA	**Vanda**	**60.65**	**194**	P	**P**	**18 42 32.8**	**+0.2**
VNDA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VNDA	**Vanda**	**60.65**	**194**	LR	LR	19 02 37.7	
	comp=Z,417nm,19.6s,MS4.6,baz=106,slow=30						
VNDA	**Vanda**	**60.65**	**194**	P	**P**	**18 42 32.8**	**+0.1**
	comp=Z,6.8nm,0.9s,mb4.8						
RPZ	**Rata Peaks**	**61.04**	**234**	LR	LR	19 03 30.0	
	comp=Z,908nm,19.6s,MS4.9,baz=281,slow=31						
MNTX	**Cornudas Mount**	**61.08**	**7**	*e*P	**P**	**18 42 35.5**	**-0.7**
	comp=Z,5.0nm,1.1s,mb4.6						
GDL2	**Guadalupe Moun**	**61.69**	**8**	*e*P	**P**	**18 42 40.1**	**-0.2**
LAZ	**Ladron**	**63.60**	**5**	*e*P	**P**	**18 42 54.5**	**+1.6**
ANMO	**Albuquerque**	**64.19**	**6**	*e*P	**P**	**18 42 57.7**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO	**Albuquerque**	**64.19**	**6**	LR	LR	19 05 50.1	
	comp=Z,428nm,19.9s,MS4.6,baz=72,slow=31						
ANMO	**Albuquerque**	**64.19**	**6**	*e*P	**P**	**18 42 57.7**	**+0.9**
	comp=Z,1.7nm,0.8s,mb4.1						
DWPF	**Disney**	**64.40**	**30**	P	**P**	**18 43 01.6**	**+3.3**
	comp=Z,186nm,1.6s,mb5.9						
WUAZ	**Wupatki**	**64.52**	**1**	*e*P	**P**	**18 42 58.7**	**-0.2**
	comp=Z,40nm,1.8s,mb5.2						
NEN	**Nelson**	**64.67**	**358**	*e*P	**P**	**18 43 00.6**	**+0.6**
VNA3	**Neumayer Olymp**	**66.52**	**160**		**P**	**18 43 11.3**	**+0.1**
SDCO	**Great Sand Dun**	**67.05**	**6**	*e*P	**P**	**18 43 14.8**	**-0.4**
	comp=Z,47nm,2.3s,mb5.1						
TPH	**Tonopah**	**67.20**	**356**	P	**P**	**18 43 16.2**	**+0.1**
TPH				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.0						
TPH	**Tonopah**	**67.20**	**356**	P	**P**	**18 43 16.2**	**+0.1**
	comp=Z,18nm,1.2s,mb5.0						
VNA2	**Neumayer--Watz**	**67.33**	**160**		**P**	**18 43 16.8**	**+0.5**
CMB	**Columbia Colle**	**67.42**	**353**	P	**P**	**18 43 17.1**	**-0.4**
MSU	**Marysvale**	**67.50**	**0**	P	**P**	**18 43 16.2**	**-1.7**
MNV	**Mina**	**67.62**	**355**	*e*P	**P**	**18 43 17.9**	**-0.8**
MNV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
MNV	**Mina**	**67.62**	**355**	*e*P	**P**	**18 43 17.9**	**-0.8**
	comp=Z,8.7nm,0.9s,mb4.8						
NVAR	**Mina Array Bea**	**67.63**	**355**	P	**P**	**18 43 18.9**	**+0.2**
	comp=Z,5.4nm,0.8s,mb4.6,baz=170,slow=8.3,SNR=35						
NVAR				LR	LR	19 07 02.5	
	comp=Z,350nm,18.3s,MS4.6,baz=205,slow=31						
SRU	**San Rafael**	**68.12**	**2**	*e*P	**P**	**18 43 21.6**	**-0.2**
SNAA	**Sanae**	**68.32**	**161**	*e*P	**P**	**18 43 21.7**	**-0.9**
SNAA				pmax	pmax		
	comp=Z,13nm,1.3s						
SNAA	**Sanae**	**68.32**	**161**	*e*P	**P**	**18 43 21.7**	**-0.8**
	comp=Z,13nm,1.3s,mb4.8						
SWET	**Sewanee**	**68.93**	**23**	P	**P**	**18 43 26.5**	**-0.4**
DAU	**Daniels Canyon**	**69.40**	**1**	P	**P**	**18 43 30.2**	**+0.5**
BMN	**Battle Mountai**	**69.55**	**356**	*e*P	**P**	**18 43 32.0**	**+1.4**
BMN				pmax	pmax		
	comp=Z,31nm,1.5s,mb5.0						
BMN	**Battle Mountai**	**69.55**	**356**	*e*P	**P**	**18 43 32.0**	**+1.4**
	comp=Z,31nm,1.5s,mb5.0						
ELK	**Elko**	**69.77**	**358**	LR	LR	19 08 30.4	
	comp=Z,241nm,18.2s,MS4.5,baz=182,slow=31						
WDC	**Whiskeytown Da**	**70.18**	**352**	*e*P	**P**	**18 43 32.2**	**-2.3**
WDC				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
WDC	**Whiskeytown Da**	**70.18**	**352**	*e*P	**P**	**18 43 32.2**	**-2.3**
	comp=Z,24nm,1.4s,mb4.9						
TZTN	**Tazewell**	**70.96**	**24**	P	**P**	**18 43 39.1**	**-0.1**
MOD	**Modoc**	**71.25**	**354**	*e*P	**P**	**18 43 41.6**	**+0.7**
	comp=Z,23nm,1.3s,mb5.0						
YBH	**Yreka Blue Hor**	**71.34**	**352**	LR	LR	19 07 47.8	
	comp=Z,330nm,20.7s,MS4.6,baz=173,slow=30						
WVOR	**Wild Horse Val**	**71.64**	**355**	*e*P	**P**	**18 43 44.1**	**+0.9**
WVOR				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
WVOR	**Wild Horse Val**	**71.64**	**355**	*e*P	**P**	**18 43 44.1**	**+0.8**
	comp=Z,8.6nm,0.8s,mb4.7						
PDAR	**Pinedale Array**	**71.80**	**2**	P	**P**	**18 43 44.1**	**-0.1**
	comp=Z,0.9nm,0.9s,mb3.7,baz=180,slow=5.9,SNR=6.8						
PDAR				LR	LR	19 10 28.9	
	comp=Z,274nm,19.4s,MS4.5,baz=196,slow=32						
PDAR	**Pinedale Array**	**71.80**	**2**	P	**P**	**18 43 44.1**	**-0.1**
PDAR				LR	LR	19 10 28.9	
RRI2	**Red Ridge**	**72.33**	**1**	*e*P	**P**	**18 43 47.4**	**0.0**
	comp=Z,68nm,2.2s,mb5.2						
TPAW	**Teton Pass**	**72.48**	**1**	*e*P	**P**	**18 43 46.7**	**-1.6**
	comp=Z,18nm,1.5s,mb4.8						
HLID	**Hailey**	**72.56**	**359**	*e*P	**P**	**18 43 49.4**	**+0.7**
	comp=Z,21nm,1.6s,mb4.8						
BLA	**Blacksburg**	**72.72**	**26**	*e*P	**P**	**18 43 49.0**	**-0.8**
BLA				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
BLA	**Blacksburg**	**72.72**	**26**	*e*P	**P**	**18 43 49.0**	**-0.8**
	comp=Z,27nm,1.0s,mb5.1						
FWV	**Forest Hill**	**72.89**	**26**	*e*P	**P**	**18 43 42.5**	**-8.3**
RSSD	**Black Hills**	**73.51**	**6**	*e*P	**P**	**18 43 53.3**	**-0.9**
RCBR	**Riachuelo**	**75.50**	**89**	P	**P**	**18 44 12.2**	**+5.9**
BBSR	**BB Station**	**76.32**	**40**	*e*P	**P**	**18 44 12.1**	**+1.4**
	comp=Z,11nm,0.8s,mb4.8						
NEW	**Newport**	**77.35**	**357**	*e*P	**P**	**18 44 16.3**	**+0.3**
NEW				pmax	pmax		
	comp=Z,16nm,1.3s						
NEW	**Newport**	**77.35**	**357**	*e*P	**P**	**18 44 16.3**	**+0.2**
	comp=Z,16nm,1.3s,mb4.8						
CASY	**Casey**	**79.19**	**196**	*e*P	**P**	**18 44 26.7**	**+1.0**
	comp=Z,8.4nm,1.0s,mb4.6						
SADO	**Sadowa**	**79.79**	**23**	LR	LR	19 15 19.8	
	comp=Z,265nm,21.6s,MS4.5,baz=42,slow=32						
SYO	**Syowa Base**	**79.83**	**170**	⇑P	**P**	**18 44 27.0**	**-2.1**
NCB	**Newcomb**	**80.93**	**27**	*e*P	**P**	**18 44 33.6**	**-1.9**
	comp=Z,9.1nm,0.9s,mb4.7						
EDM	**Edmonton**	**82.21**	**359**	*e*P	**P**	**18 44 42.2**	**+0.2**
BBB	**Bella Bella**	**82.31**	**350**	LR	LR	19 13 37.9	
	comp=Z,138nm,19.3s,MS4.3,baz=215,slow=30						
MAW	**Mawson**	**83.30**	**178**	P	**P**	**18 44 48.4**	**+1.1**
	comp=Z,5.7nm,0.8s,mb4.7,baz=184,slow=3.6,SNR=7.8						
MAW				LR	LR	19 19 53.4	
	comp=Z,228nm,18.4s,MS4.6,baz=349,slow=34						
STKA	**Stephens Creek**	**86.98**	**235**	LR	LR	19 15 50.0	
	comp=Z,437nm,21.3s,MS4.8,baz=295,slow=30						
DLBC	**Dease Lake**	**88.66**	**351**	LR	LR	19 17 33.9	
	comp=Z,142nm,21.0s,MS4.4,baz=122,slow=31						
CTA	**Charters Tower**	**89.63**	**247**	P	**P**	**18 45 19.9**	**+0.6**
	comp=Z,8.6nm,0.9s,mb5.1,baz=174,slow=10						
CTAO	**Charters Tower**	**89.63**	**247**	*e*P	**P**	**18 45 19.3**	**0.0**
CTAO				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.4						
CTAO	**Charters Tower**	**89.63**	**247**	*e*P	**P**	**18 45 19.3**	**-0.1**
	comp=Z,24nm,1.3s,mb5.4						
YKA	**Yellowknife Ar**	**91.52**	**359**	P	**P**	**18 45 27.9**	**+0.8**
	comp=Z,1.9nm,0.8s,mb4.5,baz=173,slow=4.7,SNR=17						
SCHQ	**Schefferville**	**92.56**	**24**	LR	LR	19 25 38.4	
	comp=Z,102nm,18.4s,MS4.3,baz=328,slow=34						
RSO	**Redoubt South**	**95.34**	**341**	*e*P	**P**	**18 45 43.6**	**-1.1**
ILAR	**Eielson Array**	**97.56**	**346**	P	**P**	**18 45 55.1**	**+0.5**
	comp=Z,0.7nm,0.9s,mb4.2,baz=186,slow=5.5,SNR=5.5						
INK	**Inuvik**	**98.59**	**352**	LR	LR	19 23 01.9	
	comp=Z,189nm,20.4s,MS4.6,baz=349,slow=31						
GERES	**GERESS Array B**	**134.97**	**49**	PKP	PKPdf	18 51 40.1	-1.9
	comp=Z,0.6nm,0.8s,slow=1.3,SNR=4.7						
HHC	**Hu-ho-hao-te**	**142.51**	**300**	*e*PKP	PKPdf	18 51 57.3	+1.5
HHC				PP	PP		
	comp=Z,100nm,15.2s						
HHC				LR	LR		
	comp=N,120nm,18.1s,MS4.9						
HHC				LR	LR		
	comp=E,170nm,18.6s,MS4.9						
HHC				LR	LR		
	comp=Z,200nm,19.4s,MS4.9						
BTO	**Baotou**	**143.70**	**300**	*e*PKP	PKPdf	18 51 54.8	-3.0
AKASG	**Malin Array Be**	**144.31**	**42**	PKP	PKPdf	18 51 55.4	-3.2
	comp=Z,1.2nm,0.6s,baz=278,slow=4.3,SNR=4.5						
ULN	**Ulaanbaatar**	**144.45**	**312**	*e*PKIKP	PKPdf	18 51 55.3	-3.6
IRK	**Irkutsk**	**144.53**	**321**	*e*PKIKP	PKPdf	18 51 56.9	-2.0
IRK				pmax	pmax		
	comp=Z,56nm,1.6s						
SONM	**Songino Array**	**144.88**	**313**	PKP	PKPdf	18 51 56.8	-2.9
	comp=Z,9.1nm,0.8s,baz=97,slow=2.0,SNR=68						
TLY	**Talaya**	**145.12**	**320**	*e*PKIKP	PKPdf	18 51 57.6	-2.3
TLY				pmax	pmax		
	comp=Z,20nm,1.5s						
TLY	**Talaya**	**145.12**	**320**	*e*PKPdf	PKPdf	18 51 57.4	-2.6
GYA	**Guiyang**	**145.37**	**275**	⇑*i*PKP	PKPdf	18 52 01.0	-0.2
ZAK	**Zakamensk**	**145.88**	**318**	*e*PKP2	PKPab	18 52 00.0	-1.4
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s						
OBN	**Obninsk**	**146.03**	**32**	α*i*PKP2	PKPab	18 52 00.9	-0.9
OBN				pmax	pmax		
	comp=Z,75nm,2.3s						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.6						
OBN	**Obninsk**	**146.03**	**32**	*e*PKPdf	PKPdf	18 52 00.9	-0.5
MOS	**Moscow**	**146.12**	**30**	*e*PKP2	PKPab	18 52 01.7	-0.5
MOS				pmax	pmax		
	comp=Z,46nm,0.9s						
MOY	**Mondy**	**146.59**	**321**	*e*PKP2	PKPab	18 52 03.5	-0.6
MOY				pmax	pmax		
	comp=Z,61nm,2.4s						
KMI	**Kunming**	**148.45**	**271**	PKP	PKPdf	18 52 05.9	-0.4
LZH	**Lanzhou**	**148.81**	**292**	⇑PKP	PKPdf	18 52 09.0	+2.5
LZH				PP	PP		
	comp=Z,250nm,7.0s						
LZH				LR	LR		
	comp=E,740nm,20.0s						
LZH				LR	LR		
	comp=Z,570nm,22.0s,MS5.3						
CMAR	**Chiang Mai Arr**	**149.36**	**256**	PKPbc	PKPdf	18 52 11.4	+3.5
	comp=Z,2.9nm,1.0s,baz=144,slow=1.2,SNR=8.4						
BR131	**Keskin Array S**	**150.41**	**60**	*e*PKPdf	PKPdf	18 52 13.5	+4.6

BRTR	**Keskin Array B**	150.41	60	PKPbc	PKPdf	18 52 13.7	+4.7
	comp=Z,4.8nm,0.9s,baz=225,slow=1.7,SNR=17						
NVS	**Novosibirsk**	152.10	340	ePKIKP	PKPdf	18 52 07.8	-3.2
NVS				pmax	pmax		
	comp=N,7.0nm,2.1s						
NVS				pmax	pmax		
	comp=E,11nm,2.1s						
NVS				pmax	pmax		
	comp=Z,27nm,2.1s						
ARU	**Arti**	152.19	11	ePKIKP	PKPdf	18 52 11.4	+0.3
ARU				e		18 52 16.9	
ARU	**Arti**	152.19	11	ePKPdf	PKPdf	18 52 11.4	+0.3
ARU				ePKPbc	PKPdf	18 52 16.9	+5.9
ASF	**Jabal al Asfar**	153.60	76	PKPbc	PKPdf	18 52 21.4	+7.6
	comp=Z,3.9nm,1.0s,baz=224,slow=2.2,SNR=3.7						
ZRNK	**Zerenda**	156.38	358	ePKPdf	PKPdf	18 52 15.5	-1.3
ZRNK				ePKPab	PKPab	18 52 44.1	-0.6
MKAR	**Makanchi Array**	159.10	331	PKP	PKPdf	18 52 19.5	-1.0
	comp=Z,0.7nm,0.9s,baz=45,slow=3.4,SNR=4.4						
MKAR				PKPab	PKPab	18 52 56.0	-0.6
	comp=Z,1.2nm,0.9s,baz=90,slow=1.2,SNR=5.7						
MKAR	**Makanchi Array**	159.10	331	PKP	PKPdf	18 52 19.5	-1.0
MKAR				PKPab	PKPab	18 52 56.0	-0.6

WEL 23 18:49:41.0±0.4, 38.73S×175.42E, h222^{km}±3^{km}, ML3.8/18, 8C-1D, Error ellipse: s-maj=5.6km s-min=4.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KATZ	**Kakaramea**	0.33	139	PN	P	18 50 10.0	-0.4
TWVZ	**Taurewa**	0.34	177	PN	P	18 50 09.9	-0.6
TWVZ				SN	S	18 50 33.8	+0.4
KRVZ	**Karewarewa**	0.41	154	⇑PN	P	18 50 10.4	-0.3
WTVZ	**West Tongariro**	0.41	161	PN	P	18 50 10.3	-0.4
WTVZ				SN	S	18 50 33.0	-0.7
NGZ	**Ngauruhoe**	0.47	162	PN	P	18 50 10.6	-0.3
OTVZ	**Oturere**	0.48	156	PN	P	18 50 10.8	-0.1
CNZ	**Chateau**	0.48	168	PN	P	18 50 10.6	-0.4
WPVZ	**Whakapapa**	0.49	168	⇑PN	P	18 50 10.8	-0.2
FWVZ	**Far West T-bar**	0.54	169	⇓PN	P	18 50 11.0	-0.1
PKVZ	**Pokaka**	0.56	185	⇑PN	P	18 50 10.8	-0.4
TUVZ	**Tukino**	0.57	161	PN	P	18 50 11.2	0.0
TUVZ				SN	S	18 50 33.9	-0.7
TRVZ	**Turoa**	0.58	170	⇑PN	P	18 50 11.2	0.0
WNVZ	**Wahianoa**	0.62	167	PN	P	18 50 11.2	-0.2
VRZ	**Vera Road**	0.65	232	PN	P	18 50 10.5	-1.0
MTVZ	**Mangateitei**	0.66	176	⇑PN	P	18 50 11.3	-0.2
MTVZ				SN	S	18 50 34.3	-0.9
MOVZ	**Moawhango**	0.73	159	⇑PN	P	18 50 11.4	-0.5
MOVZ				SN	S	18 50 33.9	-1.9
BKZ	**Black Stump Fm**	0.95	118	⇑PN	P	18 50 12.7	-0.2
WAZ	**Wanganui**	1.08	198	⇑PN	P	18 50 13.5	-0.3
TSZ	**Takapari Road**	1.40	163	PN	P	18 50 16.0	-0.2
URZ	**Urewera**	1.41	71	PN	P	18 50 14.8	-1.6
MWZ	**Matawai**	1.70	77	PN	P	18 50 17.5	-1.3
PWZ	**Pawanui**	1.72	140	PN	P	18 50 18.5	-0.4
MRZ	**Mangatainoka R**	1.94	176	PN	P	18 50 19.9	-1.1
BFZ	**Birch Farm**	2.05	162	PN	P	18 50 21.2	-0.9
KIW	**Kapiti Island**	2.17	190	PN	P	18 50 21.8	-1.5
PUZ	**Puketiti**	2.33	75	PN	P	18 50 23.3	-1.6
DUWZ	**D'Urville Isla**	2.37	209	PN	P	18 50 23.1	-2.3
CAW	**Cannon Point**	2.39	186	PN	P	18 50 24.0	-1.6
MTW	**Mount Morrison**	2.43	178	PN	P	18 50 24.2	-1.8
MRW	**Makara Radio**	2.56	192	PN	P	18 50 25.6	-1.8
MXZ	**Matakaoa Point**	2.56	64	PN	P	18 50 25.5	-1.8
TCW	**Tory Channel**	2.63	199	PN	P	18 50 26.3	-1.8
SNZO	**South Karori**	2.64	192	PN	P	18 50 26.2	-2.1
PAWZ	**Paruwai Farm**	2.65	180	PN	P	18 50 26.5	-1.8
TRWZ	**Traveller**	2.68	176	PN	P	18 50 26.9	-1.7
MSWZ	**Moikau Station**	2.69	183	PN	P	18 50 26.7	-2.0
TUWZ	**Tuamarina**	2.93	202	PN	P	18 50 29.1	-2.3
NNZ	**Nelson**	2.94	212	PN	P	18 50 28.7	-2.9
QRZ	**Quartz Range**	3.06	226	PN	P	18 50 29.1	-3.8
BSWZ	**Blackbirch Sta**	3.21	201	PN	P	18 50 32.5	-2.2
THZ	**Tophouse**	3.59	212	ePN	P	18 50 35.6	-3.6
KHZ	**Kahutara**	3.95	201	PN	P	18 50 40.6	-2.9
DSZ	**Denniston Nort**	4.09	221	PN	P	18 50 40.6	-4.7
LTZ	**Lake Taylor**	4.70	210	PN	P	18 50 48.8	-4.1
MQZ	**McQueen's Vall**	5.39	202	PN	P	18 50 56.6	-4.9
RPZ	**Rata Peaks**	5.97	212	PN	P	18 51 03.6	-5.3
FOZ	**Fox Glacier**	6.48	220	PN	P	18 51 08.5	-7.0
ODZ	**Otahua Downs**	7.25	208	PN	P	18 51 20.8	-4.5
JCZ	**Jackson Bay**	7.32	221	ePN	P	18 51 19.6	-6.6

WEL 23 18:52:38.0±0.2, 41.98S×173.89E, h12^{km}, ML3.5/22, 6C-2D, Error ellipse: s-maj=1.5km s-min=1.4km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	**Blackbirch Sta**	0.27	357	⇑PG	Pg	18 52 43.1	-0.6
BSWZ				SG	Sg	18 52 47.0	-0.6
CMWZ	**Cape Campbell**	0.34	46	⇑PG	Pg	18 52 45.4	+0.5
CMWZ				SG	Sg	18 52 51.1	+1.5
KHZ	**Kahutara**	0.51	211	PG	Pg	18 52 48.2	-0.1
TUWZ	**Tuamarina**	0.55	4	⇑PG	Pg	18 52 48.6	-0.5
THZ	**Tophouse**	0.77	286	⇓P*	Pb	18 52 52.5	-0.3
THZ				SG	Sg	18 53 02.7	-1.1
TCW	**Tory Channel**	0.82	21	⇑P*	Pb	18 52 53.3	-0.4
TCW				SG	Sg	18 53 05.1	-0.4
NNZ	**Nelson**	0.85	333	⇑P*	Pb	18 52 53.6	-0.6
SNZO	**South Karori**	0.91	43	P*	Pb	18 52 55.6	+0.5
SNZO				SG	Sg	18 53 08.4	+0.1
BHW	**Baring Head**	0.93	52	P*	Pb	18 52 56.2	+0.6
WEL	**Wellington**	0.96	44	P*	Pb	18 52 56.9	+1.0
MRW	**Makara Radio**	0.97	39	P*	Pb	18 52 56.5	+0.4
MSWZ	**Moikau Station**	1.16	61	P*	Pb	18 52 58.9	-0.6
DUWZ	**D'Urville Isla**	1.18	1	P*	Pb	18 52 59.3	-0.5
CAW	**Cannon Point**	1.24	46	P*	Pb	18 53 00.6	-0.3
PAWZ	**Paruwai Farm**	1.30	63	P*	Pb	18 53 00.8	-1.0
KIW	**Kapiti Island**	1.36	35	P*	Pb	18 53 02.5	-0.3
LTZ	**Lake Taylor**	1.44	236	⇑PN	Pn	18 53 04.2	+0.2
MTW	**Mount Morrison**	1.46	56	P*	Pb	18 53 02.8	-1.8
QRZ	**Quartz Range**	1.54	318	PN	Pn	18 53 05.8	+0.3
DSZ	**Denniston Nort**	1.58	278	PN	Pn	18 53 07.3	+1.4
MRZ	**Mangatainoka R**	1.83	45	⇓PN	Pn	18 53 08.3	-1.2
MQZ	**McQueen's Vall**	1.95	207	PN	Pn	18 53 09.0	-2.3

IDC 23 19:09:17.4±2.8, 48.32N×147.98E, h378^{km}±57^{km}, mb3.0/3, mb1 3.1/5, mb1mx2.8/22, mbtmp3.8/5, Error ellipse: s-maj=72.3km s-min=29.3km az=158.0, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	5.62	224	P	P	19 10 44.9	-0.7
	2.1nm,0.3s,baz=62,slow=9.6,SNR=14						
MJAR	**Matsushiro Arr**	13.79	215	P	P	19 12 17.7	-2.4
	0.3nm,0.3s,baz=19,slow=11,SNR=4.7						
ILAR	**Eielson Array**	37.53	40	P	P	19 15 56.2	-1.2
	0.7nm,0.6s,baz=277,slow=8.2,SNR=9.8						
FINES	**FINESS Array B**	61.08	332	P	P	19 18 53.1	-0.8
	0.7nm,0.7s,baz=63,slow=3.1,SNR=5.7						
NOA	**NORSAR Array B**	65.56	339	P	P	19 19 20.4	-2.2
	0.6nm,0.8s,baz=11,slow=12,SNR=2.5						

GUC 23 19:38:35.0±0.5, 20.14S×69.40W, h101^{km}±3^{km}, ML3.6, Northern Chile

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TIR ***23*** *19:49:42.1, 41.04N×21.19E, h13^{km}, Ml2.4*
ATH ***23*** *19:49:46.9, 40.94N×20.83E, h14^{km}±2^{km}, MD3.3/4*
NEIC ***23*** *19:49:46.9, 40.94N×20.83E, h14^{km}, MD3.3(ATH), MD2.7(PDG), After ATH.*
THE ***23*** *19:49:48.5, 40.91N×20.88E, h4^{km}, ML3.2*
CSEM ***23*** *19:49:48.8±0.1, 40.86N×20.88E, h2^{km}, ML3.2, Error ellipse: s-maj=2.5km s-min=1.6km az=51.0*
PDG ***23*** *19:49:49.7±0.1, 41.00N×20.43E, h10^{km}±1^{km}*
ISC 23 19:49:46.9±0.3, 40.92N±0.02×20.84E±0.03, h4^{km}, n41, σ0^{s}93/71, 2D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	**Ohrid**	0.20	350	⇓iPg	Pg	19 49 49.7	-1.2
OHR				⇓iSg	Sg	19 49 53.2	-0.4
KBN	**Korca**	0.30	188	i Pg	Pg	19 49 52.3	-0.6
KBN				i Sg	Sg	19 49 58.2	+1.3
KBN	**Korca**	0.30	188	ePg	Pg	19 49 52.3	-0.6
KBN				i Sg	Sg	19 49 58.2	+1.3
FNA	**Florina**	0.42	108	ePg	Pg	19 49 56.2	+0.7
FNA				eSg	Sg	19 50 02.3	+1.1
LSK	**Leskovik**	0.79	194	i pg?	Pg	19 50 09.4	+6.7
LSK				i Sg	Sg	19 50 22.8	+10
LSK	**Leskovik**	0.79	194	i Sg	Sg	19 50 12.8	-0.5
TIR	**Tirane**	0.85	300	ePg	Pg	19 50 03.0	-1.0
TIR				i Sg	Sg	19 50 10.5	-4.9
QSH	**Qafa e Shtames**	0.93	311	i Pg	Pg	19 50 03.8	-1.7
QSH				i Sg	Sg	19 50 17.8	-0.1
QSH	**Qafa e Shtames**	0.93	311	ePg	Pg	19 50 03.8	-1.7
QSH				i Sg	Sg	19 50 17.8	-0.1
KZN	**Kozani**	0.93	131	ePB	Pb	19 50 05.2	-0.1
SKO	**Skopje**	1.14	23	ePn	Pn	19 50 07.3	-2.3
SKO				i		19 50 09.5	
SKO				i Sn	Sn	19 50 23.9	-2.0
SKO	**Skopje**	1.14	23	ePn	Pn	19 50 07.3	-2.3
SKO				i Sn	Sn	19 50 23.9	-2.0
MEV	**Metsovon**	1.17	165	ePg	Pg	19 50 09.9	-0.4
GRG	**Griva**	1.18	88	ePg	Pg	19 50 09.9	-0.6
GRG				eSg	Sg	19 50 26.8	+0.5
JAN	**Janina**	1.26	180	ePB	Pb	19 50 11.2	+0.3
PUK	**Puka**	1.33	328	i pg?	Pn	19 50 04.2	-8.1
PUK	**Puka**	1.33	328	i Sn	Sn	19 50 29.4	-1.3
VAY	**Valandovo**	1.36	72	i Pn	Pn	19 50 13.0	+0.2
VAY				i Sn	Sn	19 50 32.6	+1.1
IGT	**Igoumenitsa**	1.44	196	ePg	Pg	19 50 14.7	-1.0
KEK	**Kerkira**	1.45	214	ePB	Pb	19 50 14.3	+0.2
LIT	**Litokhoron**	1.50	123	ePg	Pg	19 50 14.8	-2.1
LIT				eSg	Sg	19 50 35.4	-1.4
ULC	**Ulcinj**	1.59	312	ePg	Pg	19 50 14.0	-4.7
ULC				eSg	Sg	19 50 34.4	-5.5
PVY	**Plav**	1.80	339	ePn	Pn	19 50 19.9	+0.9
PVY				eSn	Sn	19 50 45.5	+3.0
SOH	**Sokhos**	1.91	92	ePb	Pb	19 50 20.8	-1.2
SOH				eSb	Sb	19 50 45.9	-0.2
TTG	**Podgorica**	1.92	322	ePn	Pn	19 50 20.4	-0.4
TTG				eSn	Sn	19 50 46.6	+0.9
BUM	**Brajici-Budva**	2.01	314	ePn	Pn	19 50 21.6	-0.4
BUM				eSn	Sn	19 50 47.6	-0.2
PLG	**Polygyros**	2.05	105	ePN	Pn	19 50 23.0	+0.4
IVA	**Berane**	2.08	340	ePn	Pn	19 50 24.4	+1.4
IVA				eSn	Sn	19 50 51.9	+2.3
SRS	**Serrai**	2.09	84	ePn	Pn	19 50 23.4	+0.2
SRS				eSn	Sn	19 50 50.2	+0.3
EVR	**Evrytania**	2.13	159	ePN	Pn	19 50 24.5	+0.7
AGG	**Agios Georgios**	2.21	148	ePn	Pn	19 50 24.9	0.0
AGG				eSn	Sn	19 50 53.8	+0.7
LKD	**Levkas**	2.21	184	ePn	Pn	19 50 25.4	+0.4
HCY	**Herceg Novi**	2.33	312	ePn	Pn	19 50 26.5	-0.1
HCY				eSn	Sn	19 50 55.5	-0.5
NKY	**Niksic**	2.34	325	ePn	Pn	19 50 27.2	+0.4
NKY				eSn	Sn	19 50 56.9	+0.6
XOR	**Xorichti**	2.38	130	ePn	Pn	19 50 27.3	0.0
XOR				eSn	Sn	19 50 57.5	+0.2
PAIG	**Paliouri**	2.38	114	ePn	Pn	19 50 27.1	-0.2
PAIG				eSn	Sn	19 50 57.6	+0.2
BRY	**Bratogost**	2.62	320	ePn	Pn	19 50 31.2	+0.4
BRY				eSn	Sn	19 51 03.2	-0.2
PLE	**Pljevlja**	2.64	336	ePn	Pn	19 50 32.0	+1.0
PLE				eSn	Sn	19 51 05.0	+1.1
PLE	**Pljevlja**	2.64	336	ePn	Pn	19 50 32.0	+0.9
PLE				eSn	Sn	19 51 05.0	+1.1
UPM	**Unac-Piva**	2.70	328	ePn	Pn	19 50 32.4	+0.5
UPM				eSn	Sn	19 51 05.6	+0.2
UPM	**Unac-Piva**	2.70	328	ePn	Pn	19 50 32.3	+0.4
UPM				eSn	Sn	19 51 05.6	+0.2

BNS ***23*** *19:51:39.9±0.8, 49.35N×6.51E, h1^{km}, ML2.8*
LDG ***23*** *19:51:39.1±0.1, 49.32N×6.82E, h1^{km}, Md3.4/1, Ml3.4/26, Error ellipse: s-maj=1.5km s-min=1.4km az=134.0, Suspected Mining induced.*
NEIC ***23*** *19:51:39.3, 49.32N×6.84E, h1^{km}, ML3.4(LDG), ML3.1(VIE), ML3.0(STR), ML2.8(SZGRF), After STR.*
LEDBW ***23*** *19:51:39.6±0.4, 49.33N×6.85E, h1^{km}, ML2.9, Error ellipse: s-maj=10.0km s-min=6.0km az=97.0*
CSEM ***23*** *19:51:39.2±0.1, 49.32N×6.83E, h2^{km}, ML3.4/25, Error ellipse: s-maj=0.9km s-min=0.8km az=158.0*
STR ***23*** *19:51:39.3±0.2, 49.32N×6.84E, h1^{km}±1^{km}, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
BGR 23 19:51:39.1±0.2, 49.35N×6.82E, h1^{km}, ML2.8/6, 8C-10D, Error ellipse: s-maj=1.1km s-min=1.1km az=98.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	0.39	24	⇓ePg	Pg	19 51 47.2	+0.3
RUP	**Ruppelstein**	0.39	24	Pg	Pg	19 51 47.2	+0.3
RUP				Sg	Sg	19 51 53.3	+1.2
WLF	**Walferdange**	0.54	307	ePg	Pg	19 51 50.0	+0.2
	SNR=50						
WLF				eSg	Sg	19 51 56.0	-1.0
	SNR=5.7						
WLF	**Walferdange**	0.54	307	ePg	Pg	19 51 50.1	+0.3
WLF	**Walferdange**	0.54	307	ePg	Pg	19 51 50.1	+0.3
WLF				Sg	Sg	19 51 56.0	-1.0
	SNR=5.7						
ABH	**Alteburg**	0.72	41	⇓Pg	Pg	19 51 53.0	-0.4
LANF	**Langenberg**	0.75	119	Pg	Pg	19 51 52.9	-1.1
LANF	**Langenberg**	0.75	119	⇑Pg	Pg	19 51 53.0	-1.0
LANF				eSg	Sg	19 52 02.8	-1.2
	SNR=1.5						
LANF	**Langenberg**	0.75	119	Pg	Pg	19 51 53.0	-1.0
LANF				Sg	Sg	19 52 02.8	-1.2
	SNR=1.5						
KTD	**Kalmit**	0.83	91	Pg	Pg	19 51 54.9	-0.8
KTD	**Kalmit**	0.83	91	Pg	Pg	19 51 54.7	-1.0
CDF	**Champ du Feu**	0.98	162	ePg	Pg	19 51 56.9	-1.9
CDF				ePn	Pn	19 51 57.6	-2.3
CDF				eSg	Sg	19 52 09.1	-2.8
	325nm,0.2s						
WLS	**Welschbruch**	1.00	159	Pg	Pg	19 51 58.7	-0.4
WLS				eSg	Sg	19 52 11.1	-1.3
	SNR=5.3						
WLS	**Welschbruch**	1.00	159	P	Pb	19 51 57.5	-1.4
WLS	**Welschbruch**	1.00	159	Pg	Pg	19 51 58.2	-0.9
WLS				Sg	Sg	19 52 10.8	-1.6
RFYF	**Reffroy**	1.14	231	ePg	Pg	19 52 01.2	-0.6
	baz=53						
RFYF				eSg	Sg	19 52 14.9	-2.1
	200nm,0.2s						
ECH	**Echery**	1.16	169	Pg	Pg	19 52 01.1	-1.1
ECH				eSg	Sg	19 52 15.8	-1.7
	SNR=20						
ECH	**Echery**	1.16	169	Pg	Pg	19 52 01.0	-1.2
ECH				Sg	Sg	19 52 15.8	-1.8
	SNR=20						
SWS	**Schriesheim**	1.24	83	⇓ePn	Pn	19 52 01.8	-1.7
SWS				Sg	Sg	19 52 18.4	-1.9
THEF	**They Montfort**	1.25	206	Pg	Pg	19 52 02.0	-2.0
THEF				Sg	Sg	19 52 18.3	-2.4
THEF	**They Montfort**	1.25	206	ePg	Pg	19 52 02.1	-1.9
	SNR=24						
THEF				⇓ePn	Pn	19 52 02.2	-1.5
THEF				eSg	Sg	19 52 18.4	-2.2
	SNR=8.3						
THEF				Sn	Sn	19 52 18.7	-2.6
THEF	**They Montfort**	1.25	206	⇓eP	Pb	19 52 02.2	-1.0
THEF				S	Sb	19 52 18.7	-0.9
THEF	**They Montfort**	1.25	206	Pn	Pn	19 52 02.2	-1.4
THEF				Sg	Sg	19 52 18.4	-2.3
	SNR=8.3						
THEF				Sn	Sn	19 52 18.7	-2.6
STB	**Steinbach**	1.25	1	ePg	Pg	19 52 02.5	-1.5
STB				eSg	Sg	19 52 20.0	-0.7
	164nm,0.9s						
LIBD	**Limburg**	1.31	156	ePg	Pg	19 52 03.9	-1.3
	SNR=8.3						
LIBD				⇑ePn	Pn	19 52 04.2	-0.3
LIBD				eSg	Sg	19 52 21.1	-1.5
	SNR=4.7						
LIBD	**Limburg**	1.31	156	Pg	Pg	19 52 04.0	-1.2
LIBD	**Limburg**	1.31	156	⇑eP	Pb	19 52 04.2	+0.1
LIBD	**Limburg**	1.31	156	Pn	Pn	19 52 04.2	-0.3
LIBD				Sg	Sg	19 52 21.1	-1.5
	SNR=4.7						
TOD	**Tromm**	1.32	78	Pn	Pn	19 52 03.3	-1.4
TOD				ePg	Pg	19 52 03.7	-1.8
	SNR=38						
TOD				Sg	Sg	19 52 22.0	-1.2
TOD	**Tromm**	1.32	78	Pg	Pg	19 52 03.8	-1.7
TOD				Sg	Sg	19 52 21.5	-1.7
KLL	**Kalltalsperre**	1.34	346	ePg	Pg	19 52 03.7	-2.2
KLL				eSg	Sg	19 52 20.5	-3.3
	66nm,0.6s						
MEM	**Membach**	1.37	338	P	Pb	19 52 02.6	-2.6
MEM				S	Sb	19 52 22.6	-0.5
TNS	**Taunus Mts**	1.37	50	⇓ePn	Pn	19 52 03.8	-1.7
TNS				ePg	Pg	19 52 04.9	-1.6
	SNR=25						
TNS				Sg	Sg	19 52 23.9	-1.0
TNS	**Taunus Mts**	1.37	50	ePn	Pn	19 52 03.8	-1.6
TNS				eSg	Sg	19 52 23.7	-1.1
TNS	**Taunus Mts**	1.37	50	⇓eP	Pb	19 52 03.8	-1.5
TNS				S	Sb	19 52 23.9	+0.6
TNS	**Taunus Mts**	1.37	50	Pg	Pg	19 52 04.9	-1.6
	SNR=25						
TNS				eSg	Sg	19 52 23.7	-1.1
HAU	**Haudompre**	1.38	193	ePn	Pn	19 52 03.7	-1.8
HAU				ePg	Pg	19 52 04.8	-1.8
HAU				eSn	Sn	19 52 20.9	-3.7
	228nm,0.3s						
BFO	**Black Forest**	1.43	135	⇓ePn	Pn	19 52 04.7	-1.6
BFO				ePg	Pg	19 52 06.1	-1.5
	SNR=37						
BFO				Sn	Sn	19 52 23.1	-2.8
BFO				eSg	Sg	19 52 24.7	-1.9
	SNR=8.8						
BFO	**Black Forest**	1.43	135	ePn	Pn	19 52 04.2	-2.0
BFO				eSg	Sg	19 52 24.5	-2.1
BFO	**Black Forest**	1.43	135	⇓eP	Pn	19 52 04.7	-1.6
BFO				S	Sb	19 52 23.1	-1.7
BFO	**Black Forest**	1.43	135	Pg	Pg	19 52 06.1	-1.5
	SNR=37						
BFO				Sn	Sn	19 52 23.1	-2.8
BFO				eSg	Sg	19 52 24.5	-2.1
MEZF	**Maizieres J'vi**	1.44	235	ePn	Pn	19 52 03.3	-3.1
	baz=48						
MEZF				ePg	Pg	19 52 05.1	-2.7
	baz=51						
MEZF				eSn	Sn	19 52 22.7	-3.4
	59nm,0.3s						
MEZF	**Maizieres J'vi**	1.44	235	ePg	Pg	19 52 05.1	-2.7
MEZF				eSn	Sn	19 52 22.7	-3.4
	30nm,0.3s						
LBG	**Lerchenberg**	1.47	117	Pn	Pn	19 52 05.4	-1.5
LBG				Pg	Pg	19 52 06.8	-1.6
LBG				Sn	Sn	19 52 23.3	-3.6
LBG				Sg	Sg	19 52 25.8	-2.2
LBG	**Lerchenberg**	1.47	117	P	Pn	19 52 05.4	-1.5
LBG				P		19 52 06.8	
LBG				S	Sb	19 52 25.8	-0.2
LBG	**Lerchenberg**	1.47	117	PG	Pg	19 52 06.8	-1.7
LBG				SG	Sg	19 52 25.8	-2.3
LBG	**Lerchenberg**	1.47	117	Pg	Pg	19 52 06.8	-1.7
LBG				Sn	Sn	19 52 23.3	-3.7
GIVF	**Givet**	1.50	301	ePn	Pn	19 52 06.3	-0.9
GIVF				eSn	Sn	19 52 25.9	-1.8
	65nm,0.3s						
MOF	**Molkenrain**	1.51	172	Pg	Pg	19 52 07.6	-1.7
MOF				Sg	Sg	19 52 27.4	-2.0
MOF	**Molkenrain**	1.51	172	ePn	Pn	19 52 06.0	-1.4
	SNR=2.0						
MOF				Pg	Pg	19 52 07.7	-1.6
MOF				Sg	Sg	19 52 27.6	-1.8
MOF	**Molkenrain**	1.51	172	P	Pn	19 52 07.7	+0.3
MOF				S	Sb	19 52 27.6	+0.4
HGN	**Heimansgroeve**	1.53	338	ePn	Pn	19 52 06.7	-1.0
	baz=150						
HGN				⇑iPg	Pg	19 52 08.6	-1.0
	29nm,0.6s						
HGN				eSg	Sg	19 52 27.6	-2.4
HGN	**Heimansgroeve**	1.53	338	ePn	Pn	19 52 06.8	-0.9
	SNR=4.0						
HGN				ePg	Pg	19 52 08.2	-1.4
	SNR=14						
HGN				eSg	Sg	19 52 27.8	-2.2
	SNR=3.7						
HGN	**Heimansgroeve**	1.53	338	⇑iPg	Pg	19 52 08.6	-1.0
	29nm,0.6s						
HGN				eSg	Sg	19 52 27.6	-2.4
HINF	**Hinteralfeld**	1.53	179	ePn	Pn	19 52 05.0	-2.7
HINF				ePg	Pg	19 52 07.3	-2.4
HINF				eSn	Sn	19 52 24.6	-3.9
HINF				eSg	Sg	19 52 26.5	-3.6
	268nm,0.3s						
KIZ	**Kirchzarten**	1.57	152	⇓ePn	Pn	19 52 06.0	-2.3
KIZ				Pg	Pg	19 52 08.4	-2.1
KIZ				Sg	Sg	19 52 28.3	-3.1
KIZ	**Kirchzarten**	1.57	152	PG	Pg	19 52 08.4	-2.1
KIZ				SG	Sg	19 52 28.3	-3.2
BNS	**Bensberg**	1.64	8	ePg	Pg	19 52 09.5	-2.2
BNS				eSg	Sg	19 52 28.9	-4.7
	186nm,0.6s						
SFTF	**Sexfontaines**	1.64	226	ePg	Pg	19 52 07.8	-4.0
	baz=44						
SFTF				eSg	Sg	19 52 30.4	-3.3
	92nm,0.3s						
STU	**Stuttgart**	1.67	109	ePg	Pg	19 52 10.5	-1.9
	SNR=1.9						
STU				eSn	Sn	19 52 29.9	-2.1
	SNR=2.1						
STU				eSg	Sg	19 52 32.2	-2.5
	SNR=2.3						
STU	**Stuttgart**	1.67	109	ePn	Pn	19 52 10.1	+0.5
STU				eSn	Sn	19 52 34.3	+2.3
STU	**Stuttgart**	1.67	109	ePn	Pn	19 52 10.1	+0.5
FELD	**Feldberg**	1.67	151	Pg	Pg	19 52 10.2	-2.3
FELD				Sg	Sg	19 52 31.7	-3.0
FELD	**Feldberg**	1.67	151	Pn	Pn	19 52 08.1	-1.6
FELD				ePg	Pg	19 52 09.9	-2.5
	SNR=16						
FELD				Sg	Sg	19 52 31.6	-3.1
FELD	**Feldberg**	1.67	151	P	Pn	19 52 08.1	-1.6
FELD				S	Sb	19 52 31.6	-0.2
TUBL	**Tuebingen Lnz**	1.71	118	Pg	Pg	19 52 11.9	-1.3
TUBL				Sg	Sg	19 52 33.2	-2.8
SPAK	**Spaichingen**	1.81	133	Pn	Pn	19 52 12.3	+0.7
SPAK				ePg	Pg	19 52 13.1	-2.0
	SNR=4.6						
SPAK	**Spaichingen**	1.81	133	Pg	Pg	19 52 13.0	-2.1
SIND	**Sindeldorf**	1.82	89	Pn	Pn	19 52 09.7	-2.2
SIND				Sn	Sn	19 52 32.5	-3.4
BAIF	**Baives**	1.84	294	ePn	Pn	19 52 11.1	-1.0
BAIF				ePg	Pg	19 52 14.0	-1.8
BAIF				eSg	Sg	19 52 37.9	-2.4
	46nm,0.4s						
BUCH	**Bad Urach**	1.90	117	Pn	Pn	19 52 12.1	-0.8
BUCH				Sg	Sg	19 52 39.2	-3.2
BBS	**Basel-Blauen**	1.94	166	Pn	Pn	19 52 12.4	-1.1
GUT	**Gutenstein**	1.99	129	Pn	Pn	19 52 12.6	-1.7
GUT				Pg	Pg	19 52 16.5	-2.3
GUT				Sg	Sg	19 52 41.5	-3.8
GUT	**Gutenstein**	1.99	129	PG	Pg	19 52 16.5	-2.3
GUT				SG	Sg	19 52 41.6	-3.7
LOMF	**Lomont**	2.00	180	Pn	Pn	19 52 12.4	-2.0
LOMF				Pg	Pg	19 52 16.6	-2.4
LOMF	**Lomont**	2.00	180	Pn	Pn	19 52 12.6	-1.7
LOMF				Pg	Pg	19 52 16.4	-2.6
LOMF				Sg	Sg	19 52 42.2	-3.4
SISB	**Singen-Sch Ber**	2.19	139	Pn	Pn	19 52 17.4	+0.2
SISB				S*	Sb	19 52 48.9	+1.9
HDH	**Heidenheim**	2.36	108	Pg	Pg	19 52 23.0	-3.3
HDH				Sg	Sg	19 52 53.9	-3.8
HDH	**Heidenheim**	2.36	108	S	Sn	19 52 53.9	+4.3
WTSB	**Winterswijk**	2.62	360	eSg	Sg	19 53 00.2	-6.3
UBR	**Uberruh**	2.75	126	Pn	Pn	19 52 25.0	-0.1
UBR				S*	Sb	19 53 06.7	+3.4
UBR	**Uberruh**	2.75	126	SG	Sg	19 53 06.7	-4.0
CABF	**La Chapelle**	2.78	190	ePn	Pn	19 52 21.4	-4.2
CABF				ePg	Pg	19 52 30.6	-4.0
CABF				eSg	Sg	19 53 05.6	-6.1
	56nm,0.6s						
LOR	**Lormes**	2.87	225	ePn	Pn	19 52 23.9	-2.9
	baz=43						
LOR				eSn	Sn	19 52 57.1	-5.3
LOR				eSg	Sg	19 53 08.7	-5.9
	52nm,0.4s						
GRA1	**Grafenberg Arr**	2.89	81	ePn	Pn	19 52 26.2	-1.0
GRF	**Grafenberg Arr**	2.89	81	ePn	Pn	19 52 26.2	-1.0
DAVA	**Damuels**	2.90	134	⇑iPN	Pn	19 52 26.6	-0.7

DAVA				i SN	Sn	19 53 00.0	-3.4
DAVA				i SG	Sg	19 53 11.8	-4.0
	30nm,0.6s						
FUR	Furstenfeldbru	3.18	110	eSg	Sg	19 53 20.4	-4.6
	SNR=1.7						
SSF	Saint Saulge	3.18	225	ePn	Pn	19 52 28.1	-3.2
SSF				eSn	Sn	19 53 04.9	-5.5
SSF				eSg	Sg	19 53 19.4	-5.7
	16nm,0.4s						
MOX	Moxa	3.36	65	ePn	Pn	19 52 33.1	-0.7
MOX				ePg	Pg	19 52 41.5	-4.6
	SNR=1.8						
MOX				eSn	Sn	19 53 12.7	-2.2
MOX				eSg	Sg	19 53 27.1	-3.8
MOX	Moxa	3.36	65	ePn	Pn	19 52 33.1	-0.7
MOX				ePg	Pg	19 52 41.5	-4.7
MOX				eSn	Sn	19 53 12.7	-2.2
MOX				eSg	Sg	19 53 27.1	-3.8
MOX	Moxa	3.36	65	i P	Pn	19 52 33.1	-0.7
MOX				Pg	Pg	19 52 42.0	-4.2
MOX				S	Sn	19 53 12.0	-2.9
MOX				Sg	Sg	19 53 27.0	-3.9
SMF	Signal de Mont	3.36	218	ePn	Pn	19 52 29.9	-3.9
SMF				eSn	Sn	19 53 07.5	-7.4
SMF				eSg	Sg	19 53 23.4	-7.6
	24nm,0.4s						
CLZ	Clausthal	3.37	41	ePn	Pn	19 52 31.0	-3.0
CLZ				eSg	Sg	19 53 25.1	-6.3
	SNR=1.6						
AVF	Avril sur Loir	3.45	224	ePn	Pn	19 52 31.4	-3.7
AVF				ePg	Pg	19 52 42.7	-5.4
AVF				eSn	Sn	19 53 10.8	-6.5
	12nm,0.4s						
HYF	Humbligny	3.48	235	ePn	Pn	19 52 33.1	-2.4
HYF				eSg	Sg	19 53 26.9	-8.0
SQTA	Sankt Quirin	3.62	124	⇑iPN	Pn	19 52 36.8	-0.8
SQTA				i SN	Sn	19 53 17.2	-4.4
SQTA				i SG	Sg	19 53 33.4	-6.4
	11nm,0.3s						
GUNZ	Gunzen	3.71	72	ePn	Pn	19 52 35.6	-3.2
	SNR=2.3						
GUNZ				ePg	Pg	19 52 48.9	-4.3
	SNR=2.6						
GUNZ				eSg	Sg	19 53 36.9	-5.8
	SNR=2.9						
WERD	Werda	3.72	71	ePn	Pn	19 52 36.4	-2.4
	SNR=2.4						
WERD				ePg	Pg	19 52 48.6	-4.7
	SNR=2.6						
WERD				eSg	Sg	19 53 37.2	-5.7
	SNR=3.0						
NKC	Novy Kostel	3.76	74	ePN	Pn	19 52 38.8	-0.6
NKC				eSG	Sg	19 53 37.3	-6.9
	18nm,0.4s						
TANN	Tannenbergstha	3.81	72	ePg	Pg	19 52 50.1	-4.9
	SNR=4.1						
TANN				eSg	Sg	19 53 39.4	-6.4
	SNR=4.0						
LPL	La Plagne	3.83	181	ePn	Pn	19 52 38.0	-2.5
LPG	La Plagne	3.85	181	ePn	Pn	19 52 38.3	-2.5
LPG				eSg	Sg	19 53 39.3	-8.0
	8.9nm,0.5s						
BGF	Bois d’Agland	3.86	225	ePn	Pn	19 52 36.9	-4.0
BGF				eSg	Sg	19 53 39.1	-8.5
	75nm,0.5s						
WET	Wettzell	3.98	91	ePn	Pn	19 52 40.6	-1.9
	SNR=6.8						
WET				eSn	Sn	19 53 24.1	-6.4
	SNR=1.6						
WET				eSg	Sg	19 53 44.7	-6.8
	SNR=2.0						
WET	Wettzell	3.98	91	ePn	Pn	19 52 40.8	-1.8
TCF	Toulx Ste Croi	4.36	227	ePn	Pn	19 52 45.0	-3.0
TCF				eSn	Sn	19 53 32.6	-7.6
TCF				eSg	Sg	19 53 55.7	-8.5
	7.6nm,0.3s						
CLL	Collm	4.42	61	ePn	Pn	19 52 46.0	-2.9
	SNR=0.9						
CLL				i Pg	Pg	19 53 04.0	-3.4
CLL				i Sg	Sg	19 54 00.8	-5.6
KHC	Kasperske Hory	4.44	90	ePN	Pn	19 52 47.0	-2.1
KHC				ex	x	19 53 05.6	
KHC				eSN	Sn	19 53 35.9	-6.3
KHC				eSG	Sg	19 53 59.8	-7.0
KHC	Kasperske Hory	4.44	90	ePn	Pn	19 52 47.0	-2.1
KHC				eSn	Sn	19 53 35.9	-6.3
KHC				eSg	Sg	19 53 59.8	-7.0
ORIF	Oris-en-Rattie	4.48	189	ePn	Pn	19 52 46.0	-3.7
ORIF				ePg	Pg	19 53 01.5	-7.0
ORIF				eSg	Sg	19 53 59.4	-8.7
	9.5nm,0.4s						
GEC2	GERESS Array S	4.55	94	ePn	Pn	19 52 48.9	-1.9
	SNR=12						
GEC2				eSn	Sn	19 53 37.7	-7.5
	SNR=3.5						
GEC2				eSg	Sg	19 54 03.4	-7.3
	SNR=2.1						
GEC2	GERESS Array S	4.55	94	ePn	Pn	19 52 48.7	-2.1
LDF	La Druitiere	4.63	263	ePn	Pn	19 52 49.0	-2.9
LDF				ePg	Pg	19 53 06.0	-5.6
LDF				eSn	Sn	19 53 37.6	-10
LDF				eSg	Sg	19 54 05.1	-8.2
	17nm,0.5s						
VIVF	Saint-Julien-l	4.72	199	ePn	Pn	19 52 48.8	-4.4
VIVF				ePg	Pg	19 53 06.0	-7.4
VIVF				eSn	Sn	19 53 40.8	-8.7
VIVF				eSg	Sg	19 54 06.4	-10
	8.9nm,0.5s						
FLN	La Foliniere	4.83	266	ePn	Pn	19 52 51.9	-2.8
	baz=81						
FLN				eSn	Sn	19 53 43.1	-9.1
FLN				eSg	Sg	19 54 11.1	-8.9
	19nm,0.5s						
BRG	Berggiesshubel	4.83	69	Pn	Pn	19 52 53.8	-0.9
BRG				Pg	Pg	19 53 08.7	-6.9
BRG				Sg	Sg	19 54 11.2	-8.8
BRG	Berggiesshubel	4.83	69	Pn	Pn	19 52 53.8	-1.0
BRG	Berggiesshubel	4.83	69	Pg	Pg	19 53 08.7	-6.9
KBA	Koelnbreinsper	4.92	115	⇑iPN	Pn	19 52 54.1	-1.9
KBA				i SN	Sn	19 53 48.4	-6.0
KBA				i SG	Sg	19 54 16.9	-6.0
	3.5nm,0.5s						
PRU	Pruhonice	5.06	80	eSG	Sg	19 54 19.0	-8.5
GRR	Gorron	5.15	262	ePg	Pg	19 53 14.6	-7.4
GRR				eSn	Sn	19 53 52.2	-8.1
RJF	Les Rejaudoux	5.42	224	eSg	Sg	19 54 28.3	-11
	8.7nm,0.4s						
MFF	Saint Martin d	5.42	242	ePn	Pn	19 52 59.0	-4.0
MFF				eSn	Sn	19 53 58.7	-8.3
	4.8nm,0.4s						
CAF	Calviac	5.48	218	ePn	Pn	19 52 59.1	-4.8
CAF				ePg	Pg	19 53 23.1	-5.5
LASF	Ste Croix	5.65	202	ePn	Pn	19 53 01.7	-4.6
LASF				eSg	Sg	19 54 34.9	-12
	9.4nm,0.5s						
FRF	La Foret Royal	5.79	181	ePn	Pn	19 53 04.6	-3.6
FRF				eSn	Sn	19 54 06.1	-10
	1.7nm,0.3s						
DPC	Dobruska-Polom	6.23	77	eSG	Sg	19 54 57.0	-10
SGMF	Saint Gilles	6.29	264	ePn	Pn	19 53 11.2	-4.1
ROSF	Rostrenen	6.74	265	ePn	Pn	19 53 16.6	-5.0
MTLF	Montolieu	6.80	210	ePg	Pg	19 53 44.6	-10

GUC 23 19:58:39.2±0.5**, 20.14S**×**69.27W, h101**^{km}±3^{km}**, ML3.8, Northern Chile**

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*IDC **23** 20:21:50.0±2.7, 21.96S×179.63W, h622^{km}±31^{km}, mb3.3/7, mb1 3.5/8, mb1mx3.3/17, mbtmp4.4/8, Error ellipse: s-maj=21.9km s-min=18.6km az=36.0*

*NEIC **23** 20:21:53.5±3.0, 22.09S×179.74W, h678^{km}±34^{km}, mb4.3/7, Error ellipse: s-maj=33.3km s-min=16.2km az=81.0*

ISC 23 20:21:50.0±2.6**, 22.1S**±0.2×**179.6W**±0.2**, h658**^{km}±30^{km}**, n23, σ0^{s}90**/20**, mb4.0**/12**, 3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.99	268	P	P	20 24 39.1	+1.0
	0.6nm,0.3s,baz=89,slow=18,SNR=7.2						
CTA	Charters Tower	31.93	267	P	P	20 27 26.7	-0.1
	6.6nm,0.4s,mb4.5,baz=93,slow=10,SNR=18						
CTAO	Charters Tower	31.93	267	⇓iP	P	20 27 26.6	-0.2
	9.1nm,0.6s,mb4.5						
PMG	Port Moresby	34.35	286	P	P	20 27 46.8	-0.1
	15nm,0.8s,mb4.6,baz=105,slow=0.9,SNR=5.5						
PMG	Port Moresby	34.35	286	⇓iP	P	20 27 46.5	-0.4
	18nm,0.8s,mb4.6						
STKA	Stephens Creek	35.81	246	P	P	20 27 59.3	+0.6
	2.0nm,0.5s,mb3.9,baz=234,slow=18,SNR=11						
WB2	Warramunga Arr	42.96	264	⇓iP	P	20 28 55.2	-0.9
WRAB	Tennant Creek	42.97	264	eP	P	20 28 55.1	-0.9
	12nm,0.8s,mb4.4						
WRA	Warramunga Arr	42.98	264	P	P	20 28 55.4	-0.8
	2.5nm,0.3s,mb4.1,baz=96,slow=7.8,SNR=133						
WRA				S	S	20 34 38.7	+1.5
	0.3nm,0.7s,baz=100,slow=13,SNR=2.9						
GUMO	Guam	49.76	312	P	P	20 29 47.2	-0.1
	322nm,1.5s						
FITZ	Fitzroy Crossi	51.41	264	eP	P	20 29 59.3	+0.2
	11nm,1.6s,mb3.9						
MBWA	Marble Bar	56.11	259	eP	P	20 30 31.2	-0.6
	7.1nm,0.7s,mb3.9						
VNDA	Vanda	56.20	185	P	P	20 30 33.3	+1.6
	0.7nm,0.4s,mb3.1,baz=356,slow=7.2,SNR=16						
VNDA	Vanda	56.20	185	eP	P	20 30 32.7	+1.0
	1.5nm,0.8s,mb3.2						
CASY	Casey	61.90	206	eP	P	20 31 08.2	-1.3
	6.0nm,1.1s,mb3.7						
MJAR	Matsushiro Arr	70.66	325	P	P	20 32 03.9	+0.4
	1.9nm,0.7s,mb3.7,baz=163,slow=7.4,SNR=5.4						
MA2	Magadan	84.95	345	eP	P	20 33 18.6	-0.2
	13nm,0.9s,mb4.6						
CMAR	Chiang Mai Arr	89.30	290	P	P	20 33 43.2	+3.1
	1.1nm,0.8s,mb3.6,baz=121,slow=3.6,SNR=5.2						
CMAR	Chiang Mai Arr	89.30	290	P	P	20 33 43.2	+3.1
HFS	Hagfors	140.87	350	PKhKP		20 40 03.8	
	1.3nm,0.6s,baz=63,slow=3.2,SNR=6.0						
AKASG	Malin Array Be	143.68	329	PKhKP		20 40 11.3	
	1.1nm,0.4s,baz=40,slow=4.2,SNR=11						
AKASG				PKP	PKPdf	20 40 14.3	+2.6
	0.9nm,0.3s,baz=40,slow=3.9,SNR=11						
AKASG	Malin Array Be	143.68	329	PKP	PKPdf	20 40 11.3	-0.3
AKASG				PKP	PKPdf	20 40 14.2	+2.6
GERES	GERESS Array B	151.31	342	PKPbc	PKPdf	20 40 33.4	+10
	0.1nm,0.3s,baz=76,slow=1.6,SNR=2.6						
GERES				PKPab	PKPab	20 40 45.0	+0.2
	0.4nm,0.6s,baz=90,slow=1.0,SNR=3.9						

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*IDC **23** 20:22:43.6±0.9, 29.22S×112.33W, mb4.0/6, mb1 4.3/7, mb1mx4.1/18, mbtmp4.0/7, ML4.4/1, MS4.1/21, Ms1 4.1/21, ms1mx4.0/27, Error ellipse: s-maj=34.5km s-min=25.5km az=117.0*

*NEIC **23** 20:22:45.1±0.5, 29.16S×112.26W, h10^{km}, mb4.8/16, Error ellipse: s-maj=13.9km s-min=11.8km az=88.0*

ISC 23 20:22:43.3±0.5**, 29.16S**±0.09×**112.3W**±0.1**, h10**^{km}**, n52, σ1^{s}12**/25**, mb4.5**/21**, MS4.2**/21**, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.31	53	Pn	Pn	20 23 35.7	-0.5
	42nm,0.3s,baz=219,slow=8.5,SNR=8.1						
RKT	Rikitea	21.22	281	eLR	LR	20 31 37.7	
	307nm,27.0s						
TAOE	Nuku Hiva Isla	33.03	302	eLR	LR	20 37 38.7	
	812nm,25.8s						
TBI	Tubuai	33.74	271	eLR	LR	20 37 48.8	
	572nm,26.8s,baz=104						
PLCA	Paso Flores	35.80	120	LR	LR	20 40 38.7	
	comp=Z,197nm,19.1s,MS3.9,baz=276,slow=30						
PPT	Papeete	35.97	280	eLR	LR	20 37 46.1	
	354nm,27.2s,baz=103						
PPT	Papeete	35.97	280	LR	LR	20 39 08.8	
	comp=Z,174nm,21.1s,MS3.8,baz=160,slow=27						
TRQA	Tornquist	42.40	116	P	P	20 30 40.8	+1.2
	9.2nm,1.3s,mb4.2						
LPAZ	La Paz	42.46	82	P	P	20 30 42.6	+2.2
	1.1nm,0.6s,mb3.7,baz=254,slow=9.1,SNR=7.3						
LPAZ				LR	LR	20 44 19.8	
	comp=Z,180nm,19.1s,MS4.0,baz=104,slow=30						
LPAZ	La Paz	42.46	82	P	P	20 30 42.6	+2.2
LPAZ				eP		20 30 42.8	
LPAZ				LR	LR	20 44 19.8	
OTAV	Otavalo	43.58	54	eP	P	20 30 50.9	+1.4
	12nm,1.3s,mb4.5						
OTAV				e		20 30 59.3	
CPUP	Villa Florida	48.36	100	LR	LR	20 48 13.5	
	comp=Z,82nm,21.7s,MS3.7,baz=266,slow=32						
CPUP	Villa Florida	48.36	100	P	P	20 31 26.2	-1.0
	14nm,1.5s,mb4.8						
ROSC	El Rosal	49.73	53	LR	LR	20 49 07.6	
	comp=Z,290nm,21.0s,MS4.3,baz=242,slow=32						
SAML	Samuel	50.16	77	eP	P	20 31 40.1	-1.2
	28nm,1.7s,mb5.0						
SDV	Santo Domingo	55.16	53	eP	P	20 32 16.6	-1.9
	22nm,1.3s,mb5.0						
TXAR	Lajitas Array	58.75	9	P	P	20 32 43.2	-0.7
	0.2nm,0.4s,mb3.5,baz=191,slow=4.6,SNR=3.3						
SBA	Scott Base	59.81	194	P	P	20 32 50.0	-0.6
	11nm,1.2s,mb4.8						
BDFB	Brasilia	60.29	92	LR	LR	20 55 42.9	
	comp=Z,104nm,19.2s,MS4.0,baz=36,slow=33						
VNDA	Vanda	60.86	194	P	P	20 32 57.0	-0.9
	2.2nm,1.1s,mb4.2,baz=107,slow=3.9,SNR=4.8						
LAZ	Ladron	63.41	5	eP	P	20 33 14.5	-0.9
ANMO	Albuquerque	64.00	5	LR	LR	20 56 46.1	
	comp=Z,105nm,18.2s,MS4.1,slow=32						
SDCO	Great Sand Dun	66.86	6	eP	P	20 33 37.2	-0.4
	6.6nm,1.3s,mb4.5						
MNV	Mina	67.46	355	eP	P	20 33 41.3	-0.1
	17nm,1.2s,mb5.0						
NVAR	Mina Array Bea	67.47	355	P	P	20 33 41.8	+0.3
	2.8nm,1.0s,mb4.2,baz=171,slow=7.4,SNR=10						
NVAR				LR	LR	20 57 03.8	
	comp=Z,264nm,19.4s,MS4.5,baz=160,slow=30						
SNAA	Sanae	68.43	161	eP	P	20 33 47.2	+0.3
	13nm,1.5s,mb4.7						
BMN	Battle Mountai	69.39	356	eP	P	20 33 52.2	-1.2
	9.3nm,1.1s,mb4.6						
BMN				e		20 34 04.1	
ELK	Elko	69.60	358	LR	LR	20 58 39.5	
	comp=Z,173nm,19.1s,MS4.3,baz=10,slow=31						
MOD	Modoc	71.09	354	P	P	20 34 02.6	-1.1
	18nm,1.3s,mb4.8						
WVOR	Wild Horse Val	71.48	355	eP	P	20 34 06.7	+0.7
	32nm,1.6s,mb5.0						
PDAR	Pinedale Array	71.61	2	LR	LR	20 59 58.1	
	comp=Z,56nm,19.4s,MS3.8,baz=14,slow=31						
DZM	Mont Dzumac	72.28	254	LR	LR	20 57 57.1	
	comp=Z,221nm,21.3s,MS4.4,baz=21,slow=29						
HLID	Hailey	72.39	358	eP	P	20 34 12.0	+0.6
	8.6nm,1.2s,mb4.6						
BMO	Blue Mountains	73.80	356	eP	P	20 34 19.8	+0.2
	5.7nm,1.3s,mb4.3						
NEW	Newport	77.19	357	P	P	20 34 39.1	+0.3
	15nm,1.3s,mb4.8						
SADO	Sadowa	79.55	23	LR	LR	21 06 04.0	
	comp=Z,119nm,21.2s,MS4.2,baz=317,slow=33						
BBB	Bella Bella	82.17	350	LR	LR	21 03 48.4	
	comp=Z,80nm,18.3s,MS4.1,baz=142,slow=30						
STKA	Stephens Creek	87.23	235	LR	LR	21 05 36.7	
	comp=Z,161nm,20.2s,MS4.4,baz=295,slow=30						
DLBC	Dease Lake	88.51	351	LR	LR	21 07 53.3	
	comp=Z,90nm,18.1s,MS4.2,baz=119,slow=31						
CTA	Charters Tower	89.87	247	LR	LR	21 09 24.7	
	comp=Z,157nm,21.4s,MS4.4,baz=200,slow=31						
YKA	Yellowknife Ar	91.35	359	P	P	20 35 52.2	+2.2
	0.2nm,0.3s,mb3.9,baz=162,slow=5.3,SNR=3.7						
YKA				LR	LR	21 12 24.6	
	comp=Z,211nm,18.4s,MS4.6,baz=175,slow=33						
YKA	Yellowknife Ar	91.35	359	P	P	20 35 52.2	+2.2
YKA				LR	LR	21 12 24.6	
SCHQ	Schefferville	92.32	24	LR	LR	21 15 20.7	
	comp=Z,56nm,19.4s,MS4.0,baz=118,slow=34						
PMG	Port Moresby	94.55	257	LR	LR	21 07 43.7	
	comp=Z,99nm,20.1s,MS4.3,baz=246,slow=29						
ILAR	Eielson Array	97.43	346	P	P	20 36 20.3	+2.5
	0.4nm,0.9s,mb3.8,baz=194,slow=3.7,SNR=3.4						
ILAR				LR	LR	21 09 47.4	
	comp=Z,77nm,19.1s,MS4.2,baz=180,slow=29						
INK	Inuvik	98.45	352	LR	LR	21 13 34.7	
	comp=Z,95nm,21.0s,MS4.3,baz=333,slow=31						
AKASG	Malin Array Be	144.05	42	PKP	PKPdf	20 42 21.9	+0.1
	0.3nm,0.4s,baz=273,slow=4.4,SNR=5.7						
ULN	Ulaanbaatar	144.47	313	ePKPdf	PKPdf	20 42 19.5	-3.1
SONM	Songino Array	144.91	313	PKP	PKPdf	20 42 19.9	-3.5
	3.4nm,0.9s,baz=90,slow=2.4,SNR=16						
TLY	Talaya	145.11	320	ePKPdf	PKPdf	20 42 19.6	-4.1
CMAR	Chiang Mai Arr	149.59	256	PKPbc	PKPdf	20 42 34.9	+2.9
	0.5nm,0.8s,baz=166,slow=3.7,SNR=2.5						
BRTR	Keskin Array B	150.15	60	PKPbc	PKPdf	20 42 35.0	+2.8
	0.8nm,0.8s,baz=207,slow=2.8,SNR=4.7						

GUC 23 20:31:47.3±0.6**, 20.02S**×**69.36W, h104**^{km}±4^{km}**, ML4.0, Northern Chile**

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*BJI **23** 20:34:55.7, 7.52S×125.75E, h512^{km}, mB4.3, mb4.6*

*MOS **23** 20:35:02.8±1.0, 6.87S×125.39E, h537^{km}, mb4.4/16, Error ellipse: s-maj=16.6km s-min=8.7km az=115.1*

*NEIC **23** 20:35:02.3±0.2, 6.91S×125.32E, mb4.5/31, Error ellipse: s-maj=7.8km s-min=3.9km az=64.0*

*IDC **23** 20:35:03.0±0.7, 6.92S×125.32E, h518^{km}±8^{km}, mb3.8/14, mb1 3.9/16, mb1mx3.8/22, mbtmp4.8/16, Error ellipse: s-maj=16.7km s-min=8.0km az=69.0*

ISC 23 20:35:01.7±0.8**, 6.89S**±0.05×**125.33E**±0.06**, h519**^{km}±12^{km}**, h513**^{km}±5.7^{km}**:pP-P, n87, σ0^{s}89**/89**, mb4.4**/46**, 8C-6D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	9.09	130	⇑iP	P	20 37 10.5	-0.2
	76nm,0.7s						
KAKA				eS	S	20 38 52.5	-1.0
FITZ	Fitzroy Crossi	11.15	178	⇑iP	P	20 37 31.9	-0.3
	49nm,0.3s						
FITZ				eS	S	20 39 32.2	-0.7
FITZ	Fitzroy Crossi	11.15	178	P	P	20 37 32.0	-0.3
	20nm,0.3s,baz=8.5,slow=8.8,SNR=378						
FITZ				S	S	20 39 32.4	-0.5
	11nm,0.3s,baz=181,slow=23,SNR=21						
MBWA	Marble Bar	15.19	200	⇓eP	P	20 38 13.1	-0.4
	9.0nm,0.6s						
WRAB	Tennant Creek	15.65	147	⇑iP	P	20 38 18.5	+0.5
WRAB	Tennant Creek	15.65	147	⇑eP	P	20 38 17.8	-0.3
	79nm,0.9s						
WRA	Warramunga Arr	15.65	147	P	P	20 38 18.1	0.0
	8.5nm,0.3s,baz=337,slow=9.4,SNR=400						
WRA				S	S	20 40 58.6	+1.9
	0.5nm,0.3s,baz=319,slow=19,SNR=7.3						
WB2	Warramunga Arr	15.66	147	⇑iP	P	20 38 18.3	+0.2
WB2				eS	S	20 40 58.7	+1.9
KKM	Kota Kinabalu	15.74	324	eP	P	20 38 20.5	+1.5
KSM	Kuching	17.14	298	eP	P	20 38 33.3	+0.6
PMG	Port Moresby	21.75	98	P	P	20 39 16.9	+0.6
	9.9nm,0.6s,mb4.6,baz=185,slow=6.5,SNR=3.9						
FORT	Forrest	23.91	174	eP	P	20 39 35.4	-0.4
	18nm,0.7s,mb4.8						
CTA	Charters Tower	24.17	125	P	P	20 39 38.5	+0.3
	14nm,0.7s,mb4.7,baz=305,slow=12,SNR=14						
CTAO	Charters Tower	24.17	125	eP	P	20 39 38.4	+0.1
CTAO				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.6						
CTAO	Charters Tower	24.17	125	eP	P	20 39 38.4	+0.1
	comp=Z,15nm,0.9s,mb4.6						
NWAO	Narrogin (SRO)	26.98	195	P	P	20 40 02.0	-1.1
	comp=Z,8.7nm,0.9s,mb4.4,baz=89,slow=6.0,SNR=6.5						
KULM	Kulim	27.44	296	eP	P	20 40 06.7	-0.6
STKA	Stephens Creek	29.13	151	⇑iP	P	20 40 21.8	0.0
	comp=Z,25nm,0.8s,mb4.9						
STKA	Stephens Creek	29.13	151	P	P	20 40 21.8	0.0
	comp=Z,29nm,0.6s,mb5.1,baz=321,slow=9.0,SNR=84						
NACB	Ninganchiao	31.08	353	P	P	20 40 37.2	-1.4
YHNB	Yeheng	31.60	353	eP	P	20 40 41.7	-1.3
HNR	Honiara	34.35	97	P	P	20 41 03.7	-2.5
	comp=Z,33nm,0.4s,mb5.2,slow=20,SNR=6.5						
TOO	Toolangi	35.62	152	⇑iP	P	20 41 18.1	+1.5
	comp=Z,12nm,0.6s,mb4.6						
TOO	Toolangi	35.62	152	⇑iP	P	20 41 18.1	+1.5
TOO				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.6						
CMAR	Chiang Mai Arr	36.22	314	P	P	20 41 22.9	+1.2
	comp=Z,1.7nm,0.7s,mb3.7,baz=140,slow=6.4,SNR=10						
CMAR				ScP		20 46 31.2	
	comp=Z,1.0nm,0.8s,baz=142,slow=1.5,SNR=4.8						
CBIJ	Chichi jima	37.52	25	P	P	20 41 33.0	+0.8
	comp=Z,57nm,0.5s,mb5.4,baz=250,slow=15,SNR=3.8						
GYA	Guiyang	37.77	332	P	P	20 41 35.3	+1.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
KMI	Kunming	38.68	326	P	P	20 41 43.8	+2.2
WHN	Wuhan	38.68	345	P	P	20 41 43.3	+1.7
ENH	Enshi	39.95	338	⇓iP	P	20 41 52.2	+0.2
	comp=Z,27nm,0.7s,mb4.9						
JNU	Nakatsue	40.13	7	P	P	20 41 54.0	+0.6
	comp=Z,8.5nm,0.8s,mb4.3,baz=205,slow=14,SNR=5.7						
TAU	Tasmania Unive	40.78	155	eP	P	20 41 58.5	0.0
TAU				pmax	pmax		
	comp=Z,29nm,1.0s,mb4.8						
TAU	Tasmania Unive	40.78	155	eP	P	20 41 58.5	0.0
	comp=Z,29nm,1.0s,mb4.8						
DZM	Mont Dzumac	42.41	115	P	P	20 42 12.3	+0.5
	comp=Z,5.4nm,0.7s,mb4.2,baz=298,slow=15,SNR=4.6						
XAN	Xi’an	43.57	340	P	P	20 42 20.1	-0.7
XAN				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.9						
KS15	Wonju Array Si	44.16	3	eP	P	20 42 25.9	+0.6
MJAR	Matsushiro Arr	44.85	15	P	P	20 42 30.3	-0.5
	comp=Z,9.5nm,0.8s,mb4.4,baz=194,slow=9.3,SNR=22						
MAJO	Matsushiro	44.85	15	eP	P	20 42 30.1	-0.7
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
MAJO	Matsushiro	44.85	15	eP	P	20 42 30.1	-0.7
	comp=Z,7.8nm,0.8s,mb4.3						
MAT	Matsushiro	44.85	15	eP	P	20 42 30.0	-0.8
MAT				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
MAT	Matsushiro	44.85	15	eP	P	20 42 30.0	-0.8
	comp=Z,8.4nm,0.9s,mb4.3						
MAT	Matsushiro	44.85	15	P	P	20 42 30.0	-0.8
LZH	Lanzhou	47.27	336	⇓P	P	20 42 50.0	+0.7
LZH				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.0						
LSA	Lhasa	49.01	320	P	P	20 43 04.0	+1.5
LSA	Lhasa	49.01	320	⇓iP	P	20 43 03.5	+1.0
LSA				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.7						
LSA	Lhasa	49.01	320	⇓iP	P	20 43 03.5	+1.0
	comp=Z,16nm,0.6s,mb4.7						
MDJ	Mudanjiang	51.41	4	eP	P	20 43 20.1	+0.1
	comp=Z,26nm,1.0s,mb4.5						
GUN	Gumba	51.46	314	eP	P	20 43 20.8	+0.2
	comp=Z,39nm,0.7s,mb4.8						
PKI	Pulchoki	51.60	313	eP	P	20 43 21.2	-0.4
	comp=Z,17nm,0.6s,mb4.5						
PKI	Pulchoki	51.60	313	eP	P	20 43 21.2	-0.4
PKI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.2						
GTA	Gaotai	51.77	335	eP	P	20 43 23.0	+0.3
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
KKN	Kakani	51.82	314	eP	P	20 43 22.9	-0.4
	comp=Z,19nm,0.8s,mb4.5						
KKN	Kakani	51.82	314	eP	P	20 43 22.9	-0.4
KKN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
DMN	Daman	51.84	313	eP	P	20 43 23.4	0.0
	comp=Z,34nm,1.0s,mb4.6						
GKN	Gorkha	52.41	313	eP	P	20 43 27.2	-0.3
	comp=Z,18nm,0.4s,mb4.8						
KOLN	Koldanda	53.03	312	eP	P	20 43 31.3	-0.6
	comp=Z,93nm,1.3s,mb4.9						
RPZ	Rata Peaks	54.22	140	P	P	20 43 40.2	0.0
	comp=Z,35nm,0.6s,mb4.8,baz=299,slow=3.2,SNR=15						
YSS	Yuzh-Sakhalins	55.79	14	eP	P	20 43 50.8	-0.2
YSS				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.3						
YSS	Yuzh-Sakhalins	55.79	14	eP	P	20 43 50.8	-0.2
	comp=Z,19nm,1.0s,mb4.3						
HIA	Hailar	56.13	356	eP	P	20 43 48.4	-4.9
HIA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HIA	Hailar	56.13	356	eP	P	20 43 48.4	-4.9
	comp=Z,6.1nm,0.5s,mb4.1						
ULN	Ulaanbaatar	56.85	345	eP	P	20 43 58.4	+0.1
ULN				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.2						
ULN	Ulaanbaatar	56.85	345	eP	P	20 43 58.4	+0.1
	comp=Z,13nm,0.9s,mb4.2						
SONM	Songino Array	56.99	345	P	P	20 43 59.6	+0.3
	comp=Z,4.8nm,0.7s,mb3.8,baz=161,slow=8.6,SNR=18						
SONM				pP	pP	20 45 40.6	-1.9
	comp=Z,1.2nm,1.0s,baz=158,slow=7.8,SNR=4.6						

SONM				ScP		20 47 56.5	
	comp=Z,0.4nm,0.7s,baz=169,slow=2.5,SNR=3.9						
ZAK	Zakamensk	60.15	344	eP	P	20 44 19.9	-0.5
ZAK				e		20 44 58.9	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.4						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.1						
CASY	Casey	60.18	187	eP	P	20 44 19.1	-1.4
	comp=Z,4.4nm,0.8s,mb3.8						
TLY	Talaya	61.23	345	eP	P	20 44 27.6	+0.1
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.8						
TLY	Talaya	61.23	345	eP	P	20 44 27.6	+0.1
	comp=Z,4.6nm,0.9s,mb3.8						
MKAR	Makanchi Array	65.67	329	P	P	20 44 56.1	+0.2
	comp=Z,5.1nm,0.7s,mb4.2,baz=123,slow=7.4,SNR=39						
MKAR				pP	pP	20 46 42.2	-1.4
	comp=Z,0.7nm,0.9s,baz=135,slow=12,SNR=2.5						
YAK	Yakutsk	68.79	2	⇓iP	P	20 45 14.9	+0.1
YAK	Yakutsk	68.79	2	eP	P	20 45 14.8	0.0
	comp=Z,17nm,0.8s,mb4.6						
MA2	Magadan	69.28	14	P	P	20 45 18.2	+0.5
MA2				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.6						
MA2	Magadan	69.28	14	P	P	20 45 18.2	+0.5
	comp=Z,21nm,1.0s,mb4.6						
NVS	Novosibirsk	70.79	336	eP	P	20 45 24.7	-2.0
NVS				e		20 47 22.1	
NVS				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.3						
NVS				pmax	pmax		
	comp=N,11nm,1.4s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.2s						
VNDA	Vanda	73.15	172	P	P	20 45 39.5	-0.5
VNDA				*PP	pP	20 47 30.7	0.0
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VNDA	Vanda	73.15	172	P	P	20 45 39.5	-0.5
	comp=Z,1.8nm,0.7s,mb3.6,baz=314,slow=6.7,SNR=20						
VNDA				pP	pP	20 47 30.7	0.0
	comp=Z,0.6nm,0.7s,baz=342,slow=5.8,SNR=2.7						
SBA	Scott Base	74.09	172	eP	P	20 45 45.8	+0.5
SBA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.9						
SBA	Scott Base	74.09	172	eP	P	20 45 45.8	+0.5
	comp=Z,4.0nm,0.9s,mb3.9						
ZRNK	Zerenda	76.21	329	eP	P	20 45 57.4	0.0
ZRNK				pmax	pmax		
	comp=Z,133nm,1.1s,mb5.3						
ZRNK	Zerenda	76.21	329	eP	P	20 45 57.4	0.0
	comp=Z,133nm,1.1s,mb5.3						
TIXI	Tiksi	78.41	1	eP	P	20 46 06.4	-2.5
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.2						
ARU	Arti	83.19	329	eP	P	20 46 33.7	-0.1
ARU				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.4						
ARU	Arti	83.19	329	eP	P	20 46 33.7	-0.1
	comp=Z,20nm,1.6s,mb4.4						
ILAR	Eielson Array	95.23	25	P	P	20 47 29.3	-0.6
	comp=Z,0.2nm,0.7s,mb3.4,baz=243,slow=5.7,SNR=4.3						
CPUP	Villa Florida	146.88	176	PKPbc	PKPbc	20 53 47.3	+2.0
	comp=Z,3.2nm,0.8s,baz=256,slow=4.2,SNR=6.3						
LPAZ	La Paz	153.40	150	PKPbc	PKPdf	20 54 04.1	+11
	comp=Z,0.3nm,0.3s,baz=230,slow=6.3,SNR=2.7						
LPAZ				PKPab	PKPab	20 54 19.0	+0.6
	comp=Z,2.5nm,0.7s,baz=212,slow=2.7,SNR=13						
LPAZ	La Paz	153.40	150	PKPbc	PKPdf	20 54 04.1	+11
LPAZ				PKPab	PKPab	20 54 19.0	+0.6

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*IDC **23** 20:47:58.8±1.3,6.66S×129.28E,mb3.8/3,mb1 4.1/5, mb1mx3.9/13,mbtmp3.9/5,ML3.9/2,Error ellipse: s-maj=68.2km s-min=22.3km az=73.0*

*NEIC **23** 20:48:00.8±1.0,6.78S×129.22E,h15^{km},mb3.8/1,Error ellipse: s-maj=27.3km s-min=13.2km az=73.0*

ISC 23 20:48:04.8±3.0,6.98S±0.09×129.3E±0.1,h79^{km}±32^{km},n9, σ1^{s}00/14,mb3.5/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.62	197	eP	P	20 50 49.8	+0.4
	7.1nm,0.9s						
FITZ				eS	S	20 52 58.4	+0.5
FITZ	Fitzroy Crossi	11.62	197	Pn	P	20 50 49.2	-0.2
	1.2nm,0.3s,baz=3.9,slow=11,SNR=6.9						
FITZ				Sn	S	20 52 57.4	-0.5
	2.5nm,0.3s,baz=127,slow=11,SNR=8.2						
WRAB	Tennant Creek	13.79	160	eP	P	20 51 17.4	-0.7
WRAB				eS	S	20 53 47.8	-1.9
WRA	Warramunga Arr	13.79	160	Pn	P	20 51 17.8	-0.4
	0.4nm,0.3s,baz=340,slow=14,SNR=12						
WRA				Sn	S	20 53 52.1	+2.3
	0.7nm,0.3s,baz=323,slow=24,SNR=7.7						
WB2	Warramunga Arr	13.80	160	eP	P	20 51 19.4	+1.2
WB2				eS	S	20 53 49.5	-0.4
MBWA	Marble Bar	16.86	212	P	P	20 51 57.1	-0.1
	7.8nm,0.9s						
STKA	Stephens Creek	27.31	157	P	P	20 53 48.8	+4.5
	2.1nm,0.7s,mb3.8,baz=341,slow=10,SNR=6.3						
SONM	Songino Array	58.20	342	P	P	20 57 52.7	-0.4
	0.1nm,0.4s,mb3.2,baz=143,slow=7.2,SNR=3.0						
MKAR	Makanchi Array	67.82	327	P	P	20 58 57.0	+0.4
	0.5nm,0.6s,mb3.5,baz=129,slow=8.1,SNR=3.4						

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*NEIC **23** 20:58:38.9,9.52N×84.18W,h13^{km},MD4.1(CASC),After CASC.*

NEIC Felt at Escazu, Quepos and San Jose.

CASC 23 20:58:39.2±1.5,9.56N×84.19W,h6^{km}±5^{km},MD3.9, MW3.8,7C-3D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJS	Escuela Geolog	0.39	19	⇑iP	Pg	20 58 47.7	+0.5
SJS				eS	Sg	20 58 54.5	+2.0
SJS	Escuela Geolog	0.39	19	⇑iP	Pg	20 58 47.7	+0.6
SJS				eS	Sg	20 58 54.4	+1.9
BUS	Buena Vista	0.42	91	⇑iP	Pg	20 58 47.9	+0.2
PRS1	Puriscal	0.43	343	⇓iP	Pg	20 58 46.7	-1.2
PRS1				eS	Sg	20 58 53.7	-0.1
URSC	Urasca	0.48	56	i P	Pg	20 58 49.3	+0.4
VPS2	Volcan Poas 2	0.62	355	⇑iP	Pg	20 58 51.7	-0.1
VPS2	Volcan Poas 2	0.62	355	⇑iP	Pg	20 58 51.7	0.0
FORC	Fortuna	1.02	332	⇓iP	Pb	20 58 58.2	-0.6
FORC	Fortuna	1.02	332	i P	Pb	20 58 58.0	-0.8
FORC				⇓iP		20 58 58.2	
FORC				i S	Sb	20 59 12.5	+0.2
JTS	JuntasAbangare	1.05	314	ePg	Pg	20 58 57.3	-2.8
TRTC	Tortuguero	1.11	25	⇑iP	Pb	20 58 59.8	-0.5
LIO	Limon	1.22	69	eP	Pb	20 58 59.8	-2.4
ACR	Cerro Adams	1.35	132	eP	Pb	20 59 01.2	-3.4
ACR				eS	Sb	20 59 20.5	-1.5
ACR	Cerro Adams	1.35	132	eP	Pb	20 59 02.7	-1.8
SVTC	San Vito de Co	1.44	122	eP	Pn	20 59 04.2	-1.7
VCR	Vista de Mar	1.53	292	eP	Pn	20 59 06.3	-0.9
CNI	Changuinola	1.65	95	eP	Pn	20 59 09.6	+0.6
CNI				eS	Sb	20 59 31.4	+0.8
BRU	Baru	1.77	115	⇑eP	Pn	20 59 10.9	+0.3
BRU				eS	Sn	20 59 34.8	+1.1
DVD	David	2.05	123	eP	Pn	20 59 13.8	-0.8
PTP1	Petroterminal	2.20	128	eP	Pn	20 59 12.1	-4.7
PTP1				eS	Sn	20 59 36.2	-8.4
UPA	Univ. de Panam	4.63	97	eP	Pn	20 59 50.1	-1.2

IDC 23 21:07:59.0±1.3,21.42S×179.93W,mb4.1/4,mb1 4.5/5, mb1mx4.1/15,mbtmp4.2/5,ML4.7/1,Error ellipse: s-maj=58.2km s-min=26.5km az=151.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	16.98	188	Pn	P	21 11 56.4	-3.1
	2.6nm,0.3s,baz=307,slow=5.1,SNR=12						
STKA	Stephens Creek	35.77	245	P	P	21 14 59.8	-2.0
	1.8nm,0.9s,baz=113,slow=13,SNR=3.6						
WRA	Warramunga Arr	42.70	263	P	P	21 15 58.2	-1.5
	1.9nm,0.4s,baz=91,slow=8.5,SNR=62						
NVAR	Mina Array Bea	82.93	44	P	P	21 20 26.9	-0.4
	0.4nm,0.6s,baz=210,slow=7.3,SNR=3.7						
TXAR	Lajitas Array	89.07	58	P	P	21 20 56.1	-1.7
	0.5nm,0.5s,baz=221,slow=6.1,SNR=8.1						

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*JMA **23** 21:11:14.9±0.2,32.36N×138.14E,h406^{km},M3.7*

*MOS **23** 21:11:15.7±1.1,32.26N×138.11E,h380^{km},mb3.8/4,Error ellipse: s-maj=22.1km s-min=11.3km az=110.7*

*NEIC **23** 21:11:16.7±0.9,32.25N×138.07E,h374^{km}±7^{km},mb3.9/9, Error ellipse: s-maj=17.7km s-min=12.1km az=111.0*

*IDC **23** 21:11:16.2±0.9,32.27N×138.21E,h363^{km}±11^{km},mb3.2/8, mb1 3.3/11,mb1mx3.2/22,mbtmp4.0/11,Error ellipse: s-maj=23.9km s-min=10.6km az=71.0*

ISC 23 21:11:15.6±0.4,32.29N±0.05×138.23E±0.07,h381^{km}±3^{km}, n54,σ0^{s}98/65,mb3.7/18,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.55	57	P	P	21 12 08.8	+1.2
	62nm,0.3s,baz=29,slow=22,SNR=18						
JHJ				S	S	21 12 46.5	-1.7
	34nm,0.3s,baz=223,slow=22,SNR=6.0						
JHJ2	Mitsune	1.57	58	P	P	21 12 09.3	+1.7
TK01	Tokai 1	1.57	340	P	P	21 12 08.6	+1.0
TK02	Tokai 2	1.70	347	P	P	21 12 09.7	+1.3
TK04	Tokai 4	2.12	352	P	P	21 12 12.5	+1.5
JWZ	Kozaga	2.45	301	P	P	21 12 13.2	-0.2
JIE	Ise	2.46	329	P	P	21 12 14.1	+0.7
JWY	Kouya	2.93	312	P	P	21 12 17.6	+0.5
JOD2	Odawara 2	3.05	13	P	P	21 12 19.1	+0.9
JOD2				eS	S	21 13 07.0	-0.4
JYN	Shimob	3.21	5	P	P	21 12 21.5	+1.9
BSO1	Boso 1	3.29	43	P	P	21 12 20.2	-0.1
BSO1				eS	S	21 13 10.3	-0.9
JAI	Aioi	3.51	296	P	P	21 12 22.0	-0.3
JGM	Miyama	3.63	340	P	P	21 12 24.0	+0.6
JRY	Ryogami san	3.76	8	P	P	21 12 25.7	+1.0
JRY				eS	S	21 13 18.6	-0.3
JWT	Wachi	3.81	323	P	P	21 12 25.2	+0.1
JWT				eS	S	21 13 18.6	-1.1
JMN	Monobe	3.93	293	P	P	21 12 26.0	-0.3
MJAR	Matsushiro Arr	4.25	360	P	P	21 12 29.5	0.0
	3.0nm,0.3s,baz=180,slow=11,SNR=25						
MJAR				S	S	21 13 27.4	+0.1
	1.7nm,0.3s,baz=194,slow=21,SNR=6.1						
MAJO	Matsushiro	4.25	360	eP	P	21 12 29.7	+0.2
MAT	Matsushiro	4.25	360	eP	P	21 12 30.0	+0.5
MAT				S	S	21 13 25.0	-2.4
MAT	Matsushiro	4.25	360	P	P	21 12 29.5	0.0
MAT				eS	S	21 13 25.2	-2.2
MAT	Matsushiro	4.25	360	P	P	21 12 29.7	+0.2
MAT				eS	S	21 13 25.4	-2.0
JAG	Ashikaga	4.25	13	P	P	21 12 29.0	-0.5
JAG				eS	S	21 13 24.5	-3.0
JTO	Tosashimizu	4.62	279	P	P	21 12 32.7	-0.6
JHS	Saijyo	5.05	304	P	P	21 12 37.5	-0.3
CBIJ	Chichi jima	6.21	145	P	P	21 12 51.0	+0.5
	12nm,0.3s,baz=284,slow=21,SNR=7.6						
CBIJ				S	S	21 14 03.2	-1.9
	62nm,0.3s,baz=295,slow=22,SNR=24						
JNU	Nakatsue	6.25	280	P	P	21 12 50.7	-0.3
	1.3nm,0.3s,baz=83,slow=18,SNR=8.7						
YHNB	Yeheng	16.64	247	P	P	21 14 44.3	-3.7
HIA	Hailar	21.90	326	P	P	21 15 39.6	0.0
SONM	Songino Array	28.64	312	P	P	21 16 40.5	+0.2
	0.7nm,0.4s,mb3.2,baz=122,slow=8.0,SNR=11						
ZAK	Zakamensk	31.48	315	eP	P	21 17 05.6	+0.8
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb2.9						
CMAR	Chiang Mai Arr	37.86	258	P	P	21 17 59.1	+0.3
	comp=Z,1.4nm,0.8s,mb3.2,baz=46,slow=8.2,SNR=7.5						
MKAR	Makanchi Array	44.59	306	P	P	21 18 53.0	+0.1
	comp=Z,1.7nm,0.5s,mb3.4,baz=87,slow=9.7,SNR=27						
GUN	Gumba	45.14	279	eP	P	21 18 57.7	+0.2
	comp=Z,17nm,0.4s,mb4.5						
PKI	Pulchoki	45.65	278	eP	P	21 19 00.8	-0.6
	comp=Z,9.1nm,0.8s,mb4.0						
PKI	Pulchoki	45.65	278	eP	P	21 19 00.8	-0.6
PKI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.7						
KKN	Kakani	45.68	279	eP	P	21 19 01.5	-0.2
	comp=Z,14nm,0.8s,mb4.2						
KKN	Kakani	45.68	279	eP	P	21 19 01.5	-0.2
KKN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb3.8						
DMN	Daman	45.89	279	eP	P	21 19 02.9	-0.4
	comp=Z,4.4nm,0.5s,mb3.8						
GKN	Gorkha	46.15	279	eP	P	21 19 05.2	-0.1
	comp=Z,12nm,0.8s,mb4.1						
KOLN	Koldanda	47.09	279	eP	P	21 19 12.3	-0.3
	comp=Z,2.3nm,0.3s,mb3.9						
WRAB	Tennant Creek	52.05	185	P	P	21 19 49.0	-0.9
WRAB				pmax	pmax		
	comp=Z,25nm,1.4s,mb4.3						
WRAB	Tennant Creek	52.05	185	P	P	21 19 49.0	-0.9
	comp=Z,25nm,1.4s,mb4.4						
WRA	Warramunga Arr	52.06	185	P	P	21 19 50.7	+0.7
	comp=Z,1.0nm,0.4s,mb3.5,baz=0.1,slow=7.6,SNR=30						
ZRNK	Zerenda	52.77	315	P	P	21 19 53.5	-1.2
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.2						
ZRNK	Zerenda	52.77	315	P	P	21 19 53.5	-1.2
	comp=Z,1.5nm,0.8s,mb3.4						
ARU	Arti	58.24	320	eP	P	21 20 32.5	-0.6
ARU				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.9						
ARU	Arti	58.24	320	eP	P	21 20 32.5	-0.6
	comp=Z,3.2nm,0.5s,mb3.9						
ARCES	ARCESS Array B	67.51	339	P	P	21 21 34.1	+1.2
	comp=Z,1.4nm,0.8s,mb3.7,baz=69,slow=10,SNR=5.6						
KAF	Kangasniemi	71.31	333	ep	P	21 21 54.3	-1.6
FINES	FINESS Array B	71.78	332	P	P	21 21 59.5	+0.8
	comp=Z,0.6nm,0.4s,mb3.7,baz=65,slow=3.8,SNR=18						
KIV	Kislovodsk	72.03	311	P	P	21 21 58.1	-2.3
KIV	Kislovodsk	72.03	311	P	P	21 21 58.0	-2.4
AKASG	Malin Array Be	76.42	322	P	P	21 22 26.0	+0.8
	comp=Z,0.4nm,0.3s,mb3.6,baz=52,slow=5.0,SNR=4.7						
BRTR	Keskin Array B	79.99	311	P	P	21 22 46.5	+1.8
	comp=Z,0.7nm,0.5s,mb3.7,baz=77,slow=7.0,SNR=3.6						

GUC 23 21:25:34.1±0.5,20.03S×69.26W,h101^{km}±3^{km},ML3.8, Northern Chile

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IDC 23 21:37:02.3±2.1,23.77S×176.46W,mb3.9/4,mb1 4.3/4, mb1mx3.9/15,mbtmp3.9/4,MS3.3/3,Ms1 3.3/3, ms1mx3.0/24,Error ellipse: s-maj=125.5km s-min=28.7km az=154.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.84	273	LR	LR	21 44 55.3	
	comp=Z,26nm,20.2s,baz=352,slow=30						
RPZ	Rata Peaks	22.39	204	LR	LR	21 49 47.1	
	comp=Z,173nm,18.8s,baz=21,slow=34						
TBI	Tubuai	24.74	95	eLR	LR	21 48 07.7	
	167nm,31.2s						
PPT	Papeete	25.88	81	eP	P	21 42 33.5	-4.1
	27nm,23.8s						
PPT				eLQ		21 47 36.1	
	571nm,36.5s						
PPT				eLR	LR	21 48 45.0	
	94nm,23.5s						
STKA	Stephens Creek	37.78	248	P	P	21 44 21.1	-0.9
	0.7nm,0.4s,baz=177,slow=16,SNR=3.6						
WRA	Warramunga Arr	45.65	265	P	P	21 45 24.3	-2.4
	0.9nm,0.8s,baz=98,slow=8.4,SNR=23						
TXAR	Lajitas Array	87.63	57	P	P	21 49 52.7	-1.5
	0.4nm,0.4s,baz=214,slow=9.0,SNR=8.2						
PDAR	Pinedale Array	90.37	43	LR	LR	22 21 19.4	
	comp=Z,26nm,19.6s,baz=62,slow=29						
ILAR	Eielson Array	91.18	12	P	P	21 50 09.5	-0.5
	0.2nm,0.4s,baz=227,slow=5.7,SNR=4.7						
ARCES	ARCESS Array B	132.38	350	PKP	PKPdf	21 56 16.9	-3.1
	1.6nm,0.9s,slow=2.4,SNR=4.7						
AKASG	Malin Array Be	146.55	330	PKPbc	PKPbc	21 56 44.5	-0.8
	0.5nm,0.5s,baz=36,slow=3.4,SNR=4.1						

MAN 23 21:38:02.4,13.59N×120.30E,h44^{km},mb3.5,ML2.2, MS1.6,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.64	98	eP	P	21 38 16.6	+1.4
LBPH	Los Banos	1.02	57	i P	P	21 38 22.0	+1.5
NBP	Mount Natib	1.15	5	eP	P	21 38 22.8	+0.5
ARP	Angono	1.25	41	i P	P	21 38 23.5	-0.3
SJMP	San Jose	1.38	145	eP	P	21 38 27.0	+1.4
SJMP				eS	S	21 38 43.7	+0.9
BOAC	Boac	1.50	95	eP	P	21 38 27.7	+0.3
BOAC				eS	S	21 38 46.3	+0.3
BUSP	Coron	1.58	184	eP	P	21 38 29.4	+0.9
BUSP				eS	S	21 38 48.1	+0.2
ENPP	El Nido	2.52	200	eP	P	21 38 42.2	+0.3
ENPP				eS	S	21 39 11.0	-0.5

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*NEIC **23** 22:08:58.6±2.5,51.62N×16.04E,h5^{km},ML2.9(VIE),Error ellipse: s-maj=28.6km s-min=8.3km az=206.0*

*IPEC **23** 22:08:58.4±0.3,51.61N×16.08E,ML2.0/4,Error ellipse: s-maj=1.9km s-min=1.5km az=42.0*

*CSEM **23** 22:08:59.9±0.2,51.54N×16.05E,h1^{km},ML3.2/7,Error ellipse: s-maj=4.1km s-min=1.7km az=9.0*

*PRU **23** 22:09:00.4,51.51N×16.04E*

WAR 23 22:09:00.6,51.54N×16.02E,h1^{km},ML2.9,2C-2D,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.72	166	⇓iPg	Pg	22 09 13.7	-1.3
KSP				e		22 09 15.8	
KSP				eSg	Sg	22 09 23.3	-1.2
KSP				e		22 09 27.1	
KSP	Ksiaz	0.72	166	i PG	Pg	22 09 13.7	-1.3
KSP				eSG	Sg	22 09 23.7	-0.8
KSP	Ksiaz	0.72	166	ePg	Pg	22 09 13.7	-1.2
KSP				eSg	Sg	22 09 23.4	-1.2
KSP	Ksiaz	0.72	166	⇓iPg	Pg	22 09 13.7	-1.3
KSP				eSg	Sg	22 09 23.3	-1.2
UPC	Upice	1.03	180	ePG	Pg	22 09 19.3	-1.9
DPC	Dobruska-Polom	1.21	171	ePG	Pg	22 09 22.5	-2.2
DPC				eSG	Sg	22 09 37.9	-2.9
	24nm,0.3s						
DPC	Dobruska-Polom	1.21	171	Pg	Pg	22 09 22.5	-2.2
DPC				eSg	Sg	22 09 38.0	-2.8
PVCC	Panska Ves	1.36	223	ePG	Pg	22 09 25.9	-2.0
PVCC				eSG	Sg	22 09 44.0	-2.0
PVCC	Panska Ves	1.36	223	ePn	Pn	22 09 26.0	-0.8
PVCC				eSg	Sg	22 09 43.7	-2.3
BRG	Berggiesshubel	1.47	244	Pg	Pg	22 09 27.6	-2.2
BRG				Sg	Sg	22 09 47.4	-2.0
BRG	Berggiesshubel	1.47	244	Pg	Pg	22 09 27.6	-2.3
BRG				Sg	Sg	22 09 47.4	-2.0
PRU	Pruhonice	1.81	212	ePN	Pn	22 09 31.2	-2.0
PRU				ePG	Pg	22 09 33.3	-3.5
PRU				eSG	Sg	22 09 57.0	-4.0
	36nm,0.4s						
CLL	Collm	1.90	264	ePN	Pn	22 09 32.0	-2.5
CLL				ePG	Pg	22 09 35.0	-3.6
CLL				i SG	Sg	22 10 00.1	-3.8
MORC	Moravsky Berou	2.01	151	ePn	Pn	22 09 34.2	-1.9
MORC				eSn	Sn	22 10 03.0	+0.8
MORC	Moravsky Berou	2.01	151	ePn	Pn	22 09 34.2	-1.9
MORC				eSg	Sg	22 10 02.9	-4.8
	9.8nm,0.2s						
OKC	Ostrava-Krasne	2.18	141	ePG	Pg	22 09 40.0	-4.1
OKC				eSG	Sg	22 10 08.0	-5.1
	19nm,0.4s						
VRAC	Vranov	2.27	170	ePn	Pn	22 09 38.1	-1.6
VRAC				eSg	Sg	22 10 11.3	-4.7
	5.6nm,0.2s						
KRUC	Moravsky	2.49	174	ePn	Pn	22 09 41.5	-1.4
KRUC				eSg	Sg	22 10 19.0	-4.6
	6.8nm,0.3s						
NKC	Novy Kostel	2.61	241	ePN	Pn	22 09 42.7	-2.0
NKC				ePG	Pg	22 09 49.8	-3.0
NKC				eSG	Sg	22 10 23.8	-3.8
	46nm,0.6s						
OJC	Ojcow	2.73	117	ePG	Pg	22 09 51.0	-4.2
OJC				eSG	Sg	22 10 27.0	-4.7
KHC	Kasperske Hory	2.87	214	ePN	Pn	22 09 46.7	-1.7
KHC				ePG	Pg	22 09 53.4	-4.6
KHC				eSN	Sn	22 10 21.1	-3.0
KHC				eSG	Sg	22 10 31.7	-4.6
	6.9nm,0.3s						
MOX	Moxa	2.92	254	ePg	Pg	22 09 55.1	-3.7
MOX				eSg	Sg	22 10 34.0	-3.7
SMOL	Smolenice	3.16	163	ePG	Pg	22 09 59.8	-3.9
SMOL				eSG	Sg	22 10 41.5	-4.4
NIE	Niedzica	3.47	126	eP	Pg	22 10 05.2	-4.7
NIE				eS	Sg	22 10 50.1	-6.0
MOA	Molln	3.87	198	⇑iPN	Pn	22 10 00.5	-2.0
MOA				i SG	Sg	22 11 03.6	-5.7
	8.2nm,0.5s						
ARSA	Arzberg	4.31	184	⇑iPN	Pn	22 10 05.6	-3.1
ARSA				i SG	Sg	22 11 14.0	-10
	6.9nm,0.7s						

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*NEIC **23** 22:23:52.5,17.48N×61.90W,h21^{km},MD3.8(TRN),After TRN.*

TRN 23 22:23:51.1,17.49N×61.72W,h31^{km},MD3.8,M3.4(FDF), 2C-3D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPB	Codrington	0.18	325	⇓iP	Pb	22 23 59.1	+1.8
CPB				eS	Sn	22 24 02.7	+1.3
BPA	Boggy Peak	0.46	196	⇑iP	Pb	22 24 03.4	+2.4
BPA				eS	Sb	22 24 10.8	+3.0
SKTB	Turtle Beach	0.90	252	⇓iP	Pn	22 24 09.5	+1.8
NVBH	Bath Hotel, Ne	0.94	247	⇓iP	Pn	22 24 10.2	+2.0
SKI	Saint Kitts	0.99	261	eP	Pn	22 24 10.5	+1.6
SKI				eS	Sn	22 24 22.7	+0.8
SKDB	Saint Kitts 2	1.04	265	⇑iP	Pn	22 24 11.4	+1.7
SEG	Port Louis	1.10	169	eP	Pn	22 24 12.0	+1.4
STAT	Sint Eustatius	1.20	270	eP	Pn	22 24 13.5	+1.5
STAT				eS	Sn	22 24 29.8	+2.4
DEG	La Desirade	1.33	152	eP	Pn	22 24 14.4	+0.5
DEG				eS	Sn	22 24 31.6	+0.9
BCG	Bois Riant Cap	1.40	176	eP	Pn	22 24 16.2	+1.3
STMA	St. Maarten, A	1.43	293	eP	Pn	22 24 16.6	+1.3
STMA				eS	Sn	22 24 31.9	-1.3
DOG	Dongo Capester	1.46	176	eP	Pn	22 24 17.2	+1.6
SCG	Saint Claude	1.46	179	eP	Pn	22 24 17.4	+1.7
MGG	Marie-Galante	1.61	166	eP	Pn	22 24 19.4	+1.5

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*PRU **23** 22:33:07.3,49.46N×6.86E*

*BGR **23** 22:33:08.6±0.2,49.38N×6.89E,h1^{km},ML3.3/7,Error ellipse: s-maj=1.1km s-min=1.1km az=90.0*

*LDG **23** 22:33:08.4±0.1,49.37N×6.92E,h2^{km},Md3.8/1,Ml3.8/38, Error ellipse: s-maj=1.6km s-min=1.4km az=145.0*

*STR **23** 22:33:08.5±0.1,49.35N×6.90E,h1^{km}±1^{km},Ml3.4,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **23** 22:33:08.7±0.0,49.37N×6.89E,h2^{km},ML3.9/38,Error ellipse: s-maj=0.9km s-min=0.7km az=160.0*

*LEDBW **23** 22:33:08.6±0.2,49.38N×6.90E,h1^{km},ML3.3,Error ellipse: s-maj=6.0km s-min=2.0km az=97.0*

*NEIC **23** 22:33:08.5,49.35N×6.90E,h1^{km},ML3.8(LDG), ML3.5(SZGRF),ML3.4(STR),ML3.4(VIE),After STR.*

*BNS **23** 22:33:09.6±0.8,49.42N×6.85E,h1^{km},ML3.7*

ISC 23 22:33:05.8±0.1,49.373N±0.009×6.84E±0.02,n185, σ1^{s}36/370,8C-26D,Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.36	24	⇓ePg	Pg	22 33 15.5	+2.5
RUP	Ruppelstein	0.36	24	Pg	Pg	22 33 15.3	+2.3
WLF	Walferdange	0.53	303	ePg	Pg	22 33 19.7	+3.3
	SNR=200						
WLF				eSg	Sg	22 33 26.1	+2.6
	SNR=5.5						
WLF	Walferdange	0.53	303	ePg	Pg	22 33 19.6	+3.2
ABH	Alteburg	0.69	42	⇓iPg	Pg	22 33 20.9	+1.3
ABH				eSg	Sg	22 33 29.8	+1.1
	SNR=14						
ABH	Alteburg	0.69	42	Pg	Pg	22 33 20.8	+1.2
LANF	Langenberg	0.75	121	Pg	Pg	22 33 21.8	+1.0
LANF	Langenberg	0.75	121	⇓ePg	Pg	22 33 22.0	+1.3
KTD	Kalmit	0.82	93	Pg	Pg	22 33 23.0	+0.9
STR	Strasbourg	1.00	142	ePg	Pg	22 33 27.9	+2.1
	SNR=8.2						
CDF	Champ du Feu	1.00	163	ePg	Pg	22 33 27.0	+1.1

CDF				*e*Pn	Pn	22 33 27.9	+0.9
CDF				*e*Sg	Sg	22 33 39.0	-0.3
	179nm,0.2s						
CDF				*e*Sn	Sn	22 33 41.1	-0.9
CDF	**Champ du Feu**	1.00	163	*e*Pn	Pn	22 33 27.9	+0.9
CDF				*e*Sg	Sg	22 33 39.0	-0.3
	89nm,0.2s						
CDF				*e*Sn	Sn	22 33 41.1	-0.9
WLS	**Welschbruch**	1.02	160	Pg	Pg	22 33 28.4	+2.2
WLS	**Welschbruch**	1.02	160	⇓*i*P	Pb	22 33 27.4	+1.4
WLS				P		22 33 28.4	
WLS	**Welschbruch**	1.02	160	Pg	Pg	22 33 27.3	+1.1
RFYF	**Reffroy**	1.17	231	*e*Pg	Pg	22 33 31.6	+2.5
	baz=46						
RFYF				*e*Sg	Sg	22 33 48.9	+4.3
	661nm,0.3s						
ECH	**Echery**	1.18	169	Pg	Pg	22 33 30.1	+0.8
ECH				Sg	Sg	22 33 46.0	+1.0
ECH	**Echery**	1.18	169	*e*Pg	Pg	22 33 30.2	+0.9
	SNR=69						
ECH				⇓*i*Pn	Pn	22 33 30.4	+0.9
ECH				*e*Sg	Sg	22 33 45.9	+0.8
	SNR=7.2						
ECH	**Echery**	1.18	169	⇓*i*P	Pn	22 33 30.4	+0.9
ECH	**Echery**	1.18	169	Pn	Pn	22 33 30.4	+0.9
ECH				Sg	Sg	22 33 45.9	+0.9
	SNR=7.2						
STB	**Steinbach**	1.22	0	*e*Pg	Pg	22 33 31.1	+0.8
STB				*e*Sg	Sg	22 33 47.3	+0.8
	640nm,0.9s						
SWS	**Schriesheim**	1.22	84	⇓*e*Pn	Pn	22 33 30.2	+0.1
SWS				Sg	Sg	22 33 47.1	+0.6
THEF	**They Montfort**	1.28	206	Pg	Pg	22 33 32.5	+1.2
THEF				Sg	Sg	22 33 49.6	+1.2
THEF	**They Montfort**	1.28	206	⇓*e*Pn	Pn	22 33 32.4	+1.5
THEF				*e*Pg	Pg	22 33 32.6	+1.3
	SNR=137						
THEF				*e*Sg	Sg	22 33 49.5	+1.1
	SNR=3.9						
THEF	**They Montfort**	1.28	206	⇓*e*P	Pn	22 33 32.4	+1.5
THEF	**They Montfort**	1.28	206	Pg	Pg	22 33 32.6	+1.3
	SNR=137						
THEF				Sg	Sg	22 33 49.6	+1.2
TOD	**Tromm**	1.30	79	⇓*i*Pn	Pn	22 33 31.4	+0.2
TOD				Pg	Pg	22 33 32.4	+0.5
TOD				Sg	Sg	22 33 49.5	+0.2
TOD	**Tromm**	1.30	79	Pn	Pn	22 33 31.2	-0.1
TOD	**Tromm**	1.30	79	PG	Pg	22 33 32.4	+0.5
TOD	**Tromm**	1.30	79	Pg	Pg	22 33 32.4	+0.5
TOD				Sg	Sg	22 33 49.5	+0.3
KLL	**Kalltalsperre**	1.32	345	*e*Pg	Pg	22 33 32.5	+0.4
KLL				*e*Sg	Sg	22 33 50.9	+1.2
KLL	**Kalltalsperre**	1.32	345	Pg	Pg	22 33 32.5	+0.3
KLL				Sg	Sg	22 33 50.9	+1.2
LIBD	**Limburg**	1.32	157	*e*Pg	Pg	22 33 33.5	+1.2
	SNR=28						
LIBD				⇓*i*Pn	Pn	22 33 33.6	+2.1
LIBD	**Limburg**	1.32	157	⇓*i*P	Pn	22 33 33.7	+2.1
LIBD	**Limburg**	1.32	157	Pn	Pn	22 33 33.7	+2.1
TNS	**Taunus Mts**	1.35	50	⇓*e*Pn	Pn	22 33 32.2	+0.3
TNS				*e*Pg	Pg	22 33 33.7	+1.0
	SNR=13						
TNS				Sg	Sg	22 33 51.3	+0.7
TNS	**Taunus Mts**	1.35	50	*e*Pn	Pn	22 33 31.9	0.0
TNS				*e*Sg	Sg	22 33 51.7	+1.0
TNS	**Taunus Mts**	1.35	50	⇓*e*P	Pn	22 33 32.2	+0.3
TNS				S	Sg	22 33 51.3	+0.7
TNS	**Taunus Mts**	1.35	50	Pg	Pg	22 33 33.7	+1.0
	SNR=13						
TNS				Sg	Sg	22 33 51.3	+0.6
MEM	**Membach**	1.35	337	P	Pb	22 33 32.6	+0.9
MEM				S	Sb	22 33 51.4	+2.0
HAU	**Haudompre**	1.41	193	*e*Pn	Pn	22 33 33.8	+1.1
HAU				*e*Pg	Pg	22 33 35.0	+1.1
HAU				*e*Sg	Sg	22 33 52.3	-0.3
	302nm,0.3s						
BFO	**Black Forest**	1.44	136	⇓*e*Pn	Pn	22 33 33.6	+0.4
BFO				*e*Pg	Pg	22 33 35.4	+0.9
	SNR=14						
BFO				Sg	Sg	22 33 53.9	+0.2
BFO	**Black Forest**	1.44	136	*e*Pn	Pn	22 33 33.3	+0.1
BFO				*e*Sg	Sg	22 33 53.8	+0.2
BFO	**Black Forest**	1.44	136	⇓*e*P	Pn	22 33 33.6	+0.4
BFO				S	Sg	22 33 53.9	+0.2
BFO	**Black Forest**	1.44	136	Pg	Pg	22 33 35.4	+0.9
	SNR=14						
BFO				*e*Sg	Sg	22 33 53.8	+0.2
MEZF	**Maizieres J'vi**	1.46	234	*e*Pn	Pn	22 33 35.1	+1.5
	baz=58						
MEZF				*e*Pg	Pg	22 33 36.2	+1.1
	baz=57						
MEZF				*e*Sn	Sn	22 33 51.8	-1.9
MEZF				*e*Sg	Sg	22 33 55.8	+1.2
	288nm,0.4s						
MEZF	**Maizieres J'vi**	1.46	234	*e*Pg	Pg	22 33 36.2	+1.1
MEZF				*e*Sn	Sn	22 33 51.8	-1.9
MEZF				*e*Sg	Sg	22 33 55.8	+1.2
	144nm,0.4s						
LBG	**Lerchenberg**	1.47	118	⇓*e*Pn	Pn	22 33 34.0	+0.3
LBG				Sg	Sg	22 33 54.8	0.0
GIVF	**Givet**	1.50	300	*e*Pn	Pn	22 33 36.1	+2.1
GIVF				*e*Sn	Sn	22 33 54.3	-0.2
	878nm,0.5s						
HGN	**Heimansgroeve**	1.51	338	*e*Pn	Pn	22 33 35.7	+1.5
	SNR=31						
HGN				*e*Pg	Pg	22 33 37.9	+2.0
	SNR=3.8						
HGN				*e*Sg	Sg	22 33 56.5	+0.4
	SNR=4.7						
FBB	**Freiburg**	1.53	153	P*	Pb	22 33 37.3	+2.5
MOF	**Molkenrain**	1.54	173	Pg	Pg	22 33 36.9	+0.4
MOF				Sg	Sg	22 33 57.6	+0.7
MOF	**Molkenrain**	1.54	173	*e*Pn	Pn	22 33 36.3	+1.7
	SNR=4.1						
MOF				Pg	Pg	22 33 37.5	+1.0
MOF				Sg	Sg	22 33 57.6	+0.7
MOF	**Molkenrain**	1.54	173	P	Pg	22 33 37.5	+1.0
MOF				S	Sg	22 33 57.6	+0.7
HINF	**Hinteralfeld**	1.56	180	*e*Pn	Pn	22 33 35.7	+0.8
HINF				*e*Pg	Pg	22 33 37.7	+0.8
HINF				*e*Sg	Sg	22 33 57.8	+0.1
	361nm,0.3s						
JUE	**Julich**	1.56	350	*e*Sg	Sg	22 33 58.0	+0.1
KIZ	**Kirchzarten**	1.59	153	⇓Pn	Pn	22 33 35.4	+0.1
KIZ				Pg	Pg	22 33 38.1	+0.6
KIZ				Sg	Sg	22 33 58.4	-0.3
KIZ	**Kirchzarten**	1.59	153	PG	Pg	22 33 38.1	+0.5
KIZ				SG	Sg	22 33 58.4	-0.3
BNS	**Bensberg**	1.61	8	*e*Pg	Pg	22 33 38.4	+0.5
BNS				*e*Sg	Sg	22 33 56.4	-2.9
	2µm,0.6s						
DOU	**Dourbes**	1.62	297	P	Pn	22 33 36.9	+1.1
DOU				S	Sb	22 33 58.8	+1.4
STU	**Stuttgart**	1.66	110	*e*Pn	Pn	22 33 36.8	+0.4
	SNR=4.0						
STU				*e*Pg	Pg	22 33 39.7	+0.7
	SNR=5.6						
STU				*e*Sn	Sn	22 33 58.7	-0.1
	SNR=1.8						
STU				*e*Sg	Sg	22 34 01.2	0.0
	SNR=3.5						
STU	**Stuttgart**	1.66	110	*e*Pn	Pn	22 33 36.4	0.0
STU	**Stuttgart**	1.66	110	*e*Pn	Pn	22 33 36.4	0.0
SFTF	**Sexfontaines**	1.67	226	*e*Pn	Pn	22 33 37.9	+1.4
	baz=41						
SFTF				*e*Sg	Sg	22 34 05.7	+4.4
	156nm,0.3s						
FELD	**Feldberg**	1.69	152	⇓Pn	Pn	22 33 37.1	+0.4
FELD				*e*Pg	Pg	22 33 40.1	+0.6
	SNR=46						
FELD				Sg	Sg	22 34 01.6	-0.4
FELD	**Feldberg**	1.69	152	⇓P	Pn	22 33 37.1	+0.4
FELD				S	Sg	22 34 01.6	-0.4
FELD	**Feldberg**	1.69	152	SG	Sg	22 34 01.6	-0.4
FELD	**Feldberg**	1.69	152	Pn	Pn	22 33 37.7	+1.0
FELD				Sg	Sg	22 34 01.6	-0.4
TUBL	**Tuebingen Lnz**	1.71	119	Pn	Pn	22 33 37.8	+0.7
SIND	**Sindeldorf**	1.81	90	⇓*i*Pn	Pn	22 33 38.5	-0.1
SIND				Sg	Sg	22 34 04.9	-1.2
SPAK	**Spaichingen**	1.81	134	Pn	Pn	22 33 39.1	+0.6
SPAK				⇓*i*Pg	Pg	22 33 42.3	+0.3
SPAK				*e*Sg	Sg	22 34 05.7	-0.5
	SNR=2.0						
SPAK	**Spaichingen**	1.81	134	⇓*i*PG	Pg	22 33 42.3	+0.3
BAIF	**Baives**	1.84	293	*e*Pn	Pn	22 33 40.9	+2.0
BAIF				*e*Pg	Pg	22 33 43.7	+1.2
BAIF				*e*Sn	Sn	22 34 03.3	+0.1
BAIF				*e*Sg	Sg	22 34 07.2	+0.2
	291nm,0.6s						
BUCH	**Bad Urach**	1.90	118	⇓*e*Pn	Pn	22 33 40.5	+0.7
BBS	**Basel-Blauen**	1.96	167	⇑*e*Pn	Pn	22 33 41.6	+0.9
BBS				*e*Pg	Pg	22 33 45.6	+0.6
	SNR=10						
BBS	**Basel-Blauen**	1.96	167	Pn	Pn	22 33 41.8	+1.1
GUT	**Gutenstein**	1.99	130	⇓*e*Pn	Pn	22 33 41.5	+0.4
LOMF	**Lomont**	2.02	180	Pn	Pn	22 33 42.6	+1.0
LOMF				*e*Pg	Pg	22 33 46.7	+0.5
	SNR=6.9						
LOMF				Sg	Sg	22 34 13.2	0.0
LOMF	**Lomont**	2.02	180	P	Pn	22 33 42.6	+1.0
LOMF				S	Sg	22 34 13.2	0.0
LOMF	**Lomont**	2.02	180	Pn	Pn	22 33 42.5	+0.9
BUG	**Bochum--Univer**	2.09	7	*e*Pn	Pn	22 33 43.5	+1.0
	SNR=1.4						
BUG				*e*Pg	Pg	22 33 47.7	+0.1
	SNR=3.1						
BUG				*e*Sg	Sg	22 34 14.3	-1.0
	SNR=2.2						
SISB	**Singen-Sch Ber**	2.20	139	Pn	Pn	22 33 44.6	+0.5
SISB				S*	Sb	22 34 19.6	+5.5
HDH	**Heidenheim**	2.36	108	Pn	Pn	22 33 46.5	+0.2
WTSB	**Winterswijk**	2.60	359	*e*Pn	Pn	22 33 51.0	+1.3
	SNR=3.9						
WTSB				*e*Pg	Pg	22 33 57.3	-0.3
	SNR=5.5						
WTSB				*e*Sg	Sg	22 34 30.5	-1.8
	SNR=3.8						
UBR	**Uberruh**	2.76	127	Pn	Pn	22 33 53.0	+0.9
CABF	**La Chapelle**	2.81	191	*e*Pn	Pn	22 33 53.5	+0.7
CABF				*e*Sn	Sn	22 34 22.4	-5.5
CABF				*e*Sg	Sg	22 34 36.4	-2.9
	190nm,0.7s						
GRFO	**Grafenberg**	2.87	82	*e*Pn	Pn	22 33 54.8	+1.1
GRA1	**Grafenberg Arr**	2.88	82	*e*Pn	Pn	22 33 54.2	+0.5
GRA1				*e*Sg	Sg	22 34 38.9	-2.6
GRF	**Grafenberg Arr**	2.88	82	*e*Pn	Pn	22 33 54.2	+0.5
GRF				*e*Sg	Sg	22 34 38.9	-2.6
LOR	**Lormes**	2.90	224	*e*Pn	Pn	22 33 54.2	+0.2
	baz=51						
LOR				*e*Sn	Sn	22 34 28.7	-1.4
LOR				*e*Sg	Sg	22 34 40.1	-2.1
	76nm,0.3s						
DAVA	**Damuels**	2.91	135	⇑*i*PN	Pn	22 33 55.7	+1.4
DAVA				*i* SN	Sn	22 34 28.8	-1.7
DAVA				*i* SG	Sg	22 34 41.7	-1.1
	71nm,0.6s						
IBBN	**Ibbenburen**	3.00	11	*e*Pg	Pg	22 34 04.4	-1.2
	SNR=1.8						
IBBN				*e*Sg	Sg	22 34 42.8	-2.7
	SNR=3.2						
OG01	**Vacheresse**	3.05	182	Pn	Pn	22 33 56.4	+0.2
FUR	**Furstenfeldbru**	3.18	111	*e*Pn	Pn	22 33 59.0	+1.0
	SNR=4.4						
FUR				*e*Pg	Pg	22 34 08.2	-1.0
	SNR=3.3						
FUR				*e*Sg	Sg	22 34 49.2	-2.3
	SNR=2.4						
FUR	**Furstenfeldbru**	3.18	111	*e*Pn	Pn	22 33 58.7	+0.7
SSF	**Saint Saulge**	3.21	225	*e*Pn	Pn	22 33 58.4	-0.1
SSF				*e*Sn	Sn	22 34 36.1	-1.9
SSF				*e*Sg	Sg	22 34 48.5	-4.2
	49nm,0.5s						
DAVOX	**Davos**	3.30	141	Pn	Pn	22 34 02.2	+2.4
DAVOX				Sn	Sg	22 34 56.1	+0.4
DIX	**Grande Dixence**	3.32	173	Pn	Pn	22 34 02.4	+2.4
DIX				Sn	Sg	22 34 58.3	+2.0
MOX	**Moxa**	3.34	66	*e*Pn	Pn	22 34 00.8	+0.5
	SNR=5.0						
MOX				*e*Pg	Pg	22 34 09.2	-3.3
	SNR=7.3						
MOX				*e*(Sn)	Sn	22 34 39.0	-2.2
	SNR=2.2						
MOX				*e*Sg	Sg	22 34 53.7	-3.1
	SNR=2.3						
MOX	**Moxa**	3.34	66	*e*Pn	Pn	22 34 01.0	+0.7
MOX				*e*Pg	Pg	22 34 09.1	-3.3
MOX				*e*Sn	Sn	22 34 39.0	-2.2
MOX				*e*Sg	Sg	22 34 52.7	-4.2
MOX	**Moxa**	3.34	66	*i* P	Pn	22 34 01.0	+0.7
MOX				Pg	Pg	22 34 09.0	-3.4
MOX				S	Sn	22 34 39.0	-2.2
MOX				Sg	Sg	22 34 53.0	-3.9
CLZ	**Clausthal**	3.34	41	*e*Pn	Pn	22 34 00.7	+0.3
	SNR=5.7						
CLZ				*e*Pg	Pg	22 34 11.4	-1.1
	SNR=3.7						
SMF	**Signal de Mont**	3.39	217	*e*Pn	Pn	22 34 00.5	-0.6
SMF				*e*Sn	Sn	22 34 38.4	-4.2
SMF				*e*Sg	Sg	22 34 55.3	-3.4
	54nm,0.3s						
MMK	**Mattmark**	3.41	167	Pn	Pn	22 34 03.5	+2.2
MMK				Sn	Sg	22 35 04.4	+5.1
WIT	**Witteveen**	3.45	358	*e*Sg	Sg	22 34 57.8	-2.8
	SNR=2.2						
NOTT	**Nottersdorf**	3.47	81	*e*Pn	Pn	22 34 01.7	-0.5
AVF	**Avril sur Loir**	3.48	223	*e*Pn	Pn	22 34 01.8	-0.6
AVF				*e*Sg	Sg	22 35 00.0	-1.8
	65nm,0.6s						
HYF	**Humbligny**	3.50	235	*e*Pn	Pn	22 34 01.8	-0.9
HYF				*e*Sg	Sg	22 34 59.2	-3.3
MCGN	**Macugnaga**	3.50	167	Pn	Pn	22 34 04.8	+2.1
MCGN				Sn	Sg	22 35 01.9	-0.6
FUORN	**Ofenpass**	3.59	139	Pn	Pn	22 34 06.5	+2.6
SQTA	**Sankt Quirin**	3.63	125	⇓*i*PN	Pn	22 34 05.3	+0.9
SQTA				*i* SN	Sn	22 34 46.5	-2.1
SQTA				*i* SG	Sg	22 35 04.0	-2.6
	22nm,0.4s						
NEUB	**Neuenburg**	3.66	58	*e*Sg	Sg	22 35 04.0	-3.7
	SNR=2.8						
GUNZ	**Gunzen**	3.69	72	*e*Pn	Pn	22 34 05.2	-0.1
	SNR=5.9						
GUNZ				*e*Pg	Pg	22 34 16.9	-2.6
	SNR=6.1						
GUNZ				*e*Sg	Sg	22 35 04.6	-4.1
	SNR=3.6						
WERD	**Werda**	3.70	71	*e*Pn	Pn	22 34 05.3	-0.1
	SNR=15						
WERD				*e*Sg	Sg	22 35 04.8	-4.1
	SNR=4.1						
NKC	**Novy Kostel**	3.74	75	*e*PN	Pn	22 34 05.2	-0.8
NKC				*e*PG	Pg	22 34 15.6	-4.8
NKC				*e*SG	Sg	22 35 04.3	-5.9
	196nm,1.1s						
BRMO	**Bormio**	3.75	139	Pn	Pn	22 34 08.5	+2.3
BRMO				Sn	Sg	22 35 08.1	-2.5
MUGIO	**Muggio**	3.76	156	Pn	Pn	22 34 07.9	+1.6
TANN	**Tannenbergstha**	3.78	72	*e*Pg	Pg	22 34 19.2	-2.2
	SNR=3.4						
TANN				*e*Sg	Sg	22 35 06.7	-5.1
	SNR=2.6						
ORO	**Oropa**	3.83	168	Pn	Pn	22 34 09.0	+1.7
BGF	**Bois d'Agland**	3.89	225	*e*Pn	Pn	22 34 07.5	-0.6
BGF				*e*Sg	Sg	22 35 11.2	-4.1
	252nm,0.4s						
PLDF	**La Plantade**	4.04	214	Pn	Pn	22 34 10.1	-0.2
APPI	**Appiano**	4.14	133	Pn	Pn	22 34 14.6	+2.9
MABI	**Malga Bissina**	4.15	142	Pn	Pn	22 34 14.6	+2.8
AGO	**Saint Agoulin**	4.16	218	Pn	Pn	22 34 11.1	-0.9
BNI	**Bardonecchia**	4.32	181	*e*Pn	Pn	22 34 13.9	-0.5
BNI	**Bardonecchia**	4.32	181	*e*Pn	Pn	22 34 13.9	-0.4
TCF	**Toulx Ste Croi**	4.38	227	*e*Pn	Pn	22 34 14.5	-0.7
TCF				*e*Sg	Sg	22 35 26.1	-5.7
	51nm,0.6s						
CLL	**Collm**	4.40	62	*i* Pn	Pn	22 34 14.5	-0.9
CLL				*e*Sg	Sg	22 35 27.1	-5.1
	SNR=3.3						
CLL	**Collm**	4.40	62	*i* Pg	Pn	22 34 14.5	-0.9
CLL				*e*Sg	Sg	22 35 27.0	-5.3
CLL	**Collm**	4.40	62	*i* PN	Pn	22 34 14.5	-0.9
CLL				*i* PG	Pg	22 34 27.6	-6.0
CLL				*e*SG	Sg	22 35 27.0	-5.3
KHC	**Kasperske Hory**	4.42	91	*e*PN	Pn	22 34 15.8	+0.1
KHC				*e*x	x	22 34 37.5	
KHC				*e*SN	Sn	22 35 04.7	-4.1
KHC				*e*x	x	22 35 19.5	
KHC				*e*SG	Sg	22 35 25.8	-7.3
	50nm,0.9s						
KHC	**Kasperske Hory**	4.42	91	*e*Pn	Pn	22 34 15.8	+0.1
KHC				*e*Sn	Sn	22 35 04.7	-4.1
KHC				Sg	Sg	22 35 25.8	-7.3
	50nm,0.9s						
PYM	**Petit Puy Mans**	4.46	217	Pn	Pn	22 34 15.0	-1.2
ORIF	**Oris-en-Rattie**	4.50	189	*e*Pn	Pn	22 34 15.9	-1.0
ORIF				*e*Sg	Sg	22 35 31.1	-4.7
	51nm,0.8s						
GEC2	**GERESS Array S**	4.54	94	*e*Pn	Pn	22 34 17.4	0.0
	SNR=64						
GEC2				*e*(Sn)	Sn	22 35 08.0	-3.8
	SNR=2.1						
GEC2	**GERESS Array S**	4.54	94	*e*Pn	Pn	22 34 17.2	-0.2
LDF	**La Druitiere**	4.65	263	*e*Pn	Pn	22 34 18.7	-0.2
LDF				*e*Pg	Pg	22 34 36.4	-2.2
LDF				*e*Sg	Sg	22 35 36.6	-4.0
	64nm,0.7s						
MBDF	**Montbardon**	4.65	181	*e*Pn	Pn	22 34 18.0	-0.9
MBDF				*e*Sg	Sg	22 35 34.9	-5.7
	38nm,0.8s						
CTI	**Castel Tesino**	4.65	134	Pn	Pn	22 34 23.7	+4.7
VIVF	**Saint-Julien-l**	4.75	199	*e*Pn	Pn	22 34 19.7	-0.7
VIVF				*e*Sn	Sn	22 35 11.5	-5.6
VIVF				*e*Sg	Sg	22 35 37.1	-7.0
	17nm,0.4s						
LBL	**Lubilhac**	4.81	212	Pn	Pn	22 34 20.8	-0.4
BRG	**Berggiesshubel**	4.81	69	*e*Pn	Pn	22 34 21.3	0.0
	SNR=1.5						
BRG				*e*Pg	Pg	22 34 36.3	-5.6
	SNR=3.6						
BRG				*e*Sg	Sg	22 35 37.9	-8.2
	SNR=2.4						
BRG	**Berggiesshubel**	4.81	69	Pn	Pn	22 34 21.6	+0.3
BRG				Pg	Pg	22 34 36.5	-5.4
BRG				Sg	Sg	22 35 37.8	-8.3
BRG	**Berggiesshubel**	4.81	69	Pn	Pn	22 34 21.6	+0.3
FLN	**La Foliniere**	4.85	266	*e*Pn	Pn	22 34 21.7	-0.1
	baz=84						
FLN				*e*Pg	Pg	22 34 38.9	-3.7
	baz=82						
FLN				*e*Sn	Sn	22 35 14.6	-4.9
FLN				*e*Sg	Sg	22 35 42.3	-5.0
	60nm,0.5s						
FLN	**La Foliniere**	4.85	266	*e*Pg	Pg	22 34 38.9	-3.7
FLN				*e*Sn	Sn	22 35 14.6	-4.9
FLN				*e*Sg	Sg	22 35 42.3	-5.0
	30nm,0.5s						
FVI	**Forni Avoltri**	4.86	123	Pn	Pn	22 34 24.5	+2.5
KBA	**Koelnbreinsper**	4.92	115	⇑*i*PN	Pn	22 34 22.9	+0.1
KBA				*i* SN	Sn	22 35 17.6	-3.7
KBA				*i* SG	Sg	22 35 46.1	-3.5
	12nm,0.6s						
PRU	**Pruhonice**	5.04	80	*e*PN	Pn	22 34 23.3	-1.2
PRU				*e*PG	Pg	22 34 41.9	-4.6
PRU				*e*SG	Sg	22 35 47.0	-6.7
	117nm,1.8s						
PRU	**Pruhonice**	5.04	80	*e*Pn	Pn	22 34 23.3	-1.2
PRU				Sg	Sg	22 35 47.0	-6.7
	117nm,1.8s						
PVCC	**Panska Ves**	5.12	74	*e*PN	Pn	22 34 24.2	-1.5
MOA	**Molln**	5.16	104	⇑*i*PN	Pn	22 34 26.1	-0.1
MOA				*i* SN	Sn	22 35 23.1	-4.2
MOA				*i* SG	Sg	22 35 54.1	-3.5
	13nm,0.7s						
MOA	**Molln**	5.16	104	⇑*i*Pn	Pn	22 34 26.1	-0.1
	13nm,0.7s						
MOA				*i* Sn	Sn	22 35 23.1	-4.2
MOA				*i* Sg	Sg	22 35 54.1	-3.5
GRR	**Gorron**	5.17	262	*e*Pn	Pn	22 34 26.4	+0.1
GRR				*e*Sn	Sn	22 35 21.6	-6.0
GRR				*e*Sg	Sg	22 35 52.7	-5.3
	49nm,0.7s						
PTCC	**Patocco-Chiusa**	5.29	122	Pn	Pn	22 34 30.4	+2.3
RJF	**Les Rejaudoux**	5.44	224	*e*Pn	Pn	22 34 28.3	-1.9
RJF				*e*Sg	Sg	22 35 58.7	-8.3
	78nm,0.9s						
MFF	**Saint Martin d**	5.45	242	*e*Pn	Pn	22 34 29.4	-0.8
MFF				*e*Sg	Sg	22 36 00.4	-6.7
	58nm,0.8s						
SMRF	**Simiane la Rot**	5.47	190	*e*Pn	Pn	22 34 29.0	-1.5
SMRF				*e*Sg	Sg	22 36 00.4	-7.5
	31nm,1.0s						
CAF	**Calviac**	5.51	218	*e*Pn	Pn	22 34 29.7	-1.4
CAF				*e*Sn	Sn	22 35 30.1	-6.1
CAF				*e*Sg	Sg	22 36 02.2	-7.1
	38nm,0.7s						
CADS	**Cadrg**	5.61	121	*e*Pn	Pn	22 34 34.1	+1.5
LASF	**Ste Croix**	5.68	202	*e*Pn	Pn	22 34 32.7	-0.8
LASF				*e*Sg	Sg	22 36 07.1	-7.8
	26nm,0.7s						
FRF	**La Foret Royal**	5.82	181	*e*Pn	Pn	22 34 34.4	-1.0
FRF				*e*Sg	Sg	22 36 10.0	-9.4
	31nm,1.0s						
LFF	**La Frestale**	6.08	225	*e*Pn	Pn	22 34 37.7	-1.4
LFF				*e*Sg	Sg	22 36 18.1	-10
	73nm,0.7s						
ARSA	**Arzberg**	6.17	107	⇑*i*PN	Pn	22 34 40.3	-0.2
ARSA				*i* SN	Sn	22 35 48.0	-4.7
ARSA				*i* SG	Sg	22 36 27.3	-4.0
	6.5nm,0.5s						
ARSA	**Arzberg**	6.17	107	⇑*i*Pn	Pn	22 34 40.3	-0.2
	6.5nm,0.5s						
ARSA				*i* Sn	Sn	22 35 48.0	-4.7
ARSA				*i* Sg	Sg	22 36 27.3	-4.0
ARSA	**Arzberg**	6.17	107	⇑*i*Pn	Pn	22 34 40.3	-0.2
	6.5nm,0.5s						
ARSA				*i* Sg	Sg	22 36 27.3	-4.0
	6.5nm,0.5s						
DPC	**Dobruska-Polom**	6.21	77	*e*PN	Pn	22 34 40.2	-0.8
DPC				*e*PG	Pg	22 34 59.2	-11
DPC				*e*SG	Sg	22 36 23.5	-9.1
	73nm,1.7s						
DPC	**Dobruska-Polom**	6.21	77	*e*Pn	Pn	22 34 40.2	-0.8
DPC				Sg	Sg	22 36 23.5	-9.1
	73nm,1.7s						
KSP	**Ksiaz**	6.26	73	*e*Pg	Pg	22 35 06.6	-4.2
KSP				*e*Sg	Sg	22 36 28.4	-5.8
SGMF	**Saint Gilles**	6.30	263	*e*Pn	Pn	22 34 41.3	-1.0
SGMF				*e*Sg	Sg	22 36 27.8	-7.9
	37nm,0.6s						
VRAC	**Vranov**	6.38	87	*e*Pn	Pn	22 34 42.2	-1.2
ROSF	**Rostrenen**	6.75	265	*e*Pn	Pn	22 34 46.0	-2.6
ROSF				*e*Pg	Pg	22 35 15.1	-5.5
ROSF				*e*Sn	Sn	22 35 59.7	-7.5
ROSF				*e*Sg	Sg	22 36 41.4	-9.2
	40nm,0.7s						
QUIF	**Quistinic**	6.79	261	*e*Pn	Pn	22 34 47.5	-1.6
QUIF				*e*Sn	Sn	22 35 59.2	-8.9
	8.6nm,0.4s						
QUIF				*e*Sg	Sg	22 36 42.9	-8.8
	63nm,1.0s						
MTLF	**Montolieu**	6.83	210	*e*Pn	Pn	22 34 46.8	-2.9
MTLF				*e*Pg	Pg	22 35 15.3	-6.8
MTLF				*e*Sg	Sg	22 36 43.0	-10
	33nm,0.9s						
ZST	**Bratislava**	6.89	96	*e*PN	Pn	22 34 49.6	-0.9
ZST				*e*		22 36 48.0	
MORC	**Moravsky Berou**	6.98	83	*e*Pn	Pn	22 34 49.3	-2.5
	4.3nm,0.7s						
OKC	**Ostrava-Krasne**	7.37	82	*e*SG	Sg	22 36 59.7	-11
	44nm,1.2s						
EPF	**Esparros**	7.78	218	*e*Pn	Pn	22 35 00.6	-2.4
EPF				*e*Sg	Sg	22 37 13.1	-12
	29nm,1.0s						
VYHS	**Vyhne**	7.95	92	*e*PN	Pn	22 35 04.3	-1.2
VYHS				*e*		22 35 12.0	
ETSF	**Etsaut**	8.26	221	*e*Pn	P	22 35 06.5	-3.3
ETSF				*e*Sg	Sg	22 37 27.2	-14
	25nm,1.0s						
SJPF	**Ste Jean**	8.39	225	*e*Pn	P	22 35 09.4	-2.1
SJPF				*e*Sg	Sg	22 37 32.1	-13
	31nm,1.0s						
ESK	**Eskdalemuir**	8.55	318	*e*Pn	P	22 35 11.8	-2.0
ESK	**Eskdalemuir**	8.55	318	*e*Pn	P	22 35 11.8	-2.0
PSZ	**Piszkesteto**	8.77	95	*e*Pn	P	22 35 14.5	-2.3
	5.7nm,0.6s						
KECS	**Kecovo**	9.03	90	*e*PN	P	22 35 16.7	-3.8

HLW ***23*** *22:44:15.4,37.89N×26.73E,h33*^{km}*,Mb4.1*

ATH ***23*** *22:44:16.7,37.76N×26.68E,h18*^{km}*±1*^{km}*,MD4.3/22,*
ML4.1

ZUR_RM ***23*** *22:44:16,37.76N×26.70E,h15*^{km}*,Mw4.6/30,Moment*

Tensor Solution. s30 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.21; $M_{\theta\theta}$0.98; $M_{\phi\phi}$-0.77; $M_{r\theta}$-0.08; $M_{\theta\phi}$-0.14; $M_{\phi r}$0.19; Best double couple: M_0.919×10^{16} NP1:ϕ_s138°,δ82°,λ-15°. NP2:ϕ_s231°,δ75°,λ-172°. Principal axes: T 1.0029, Plg5°, Azm185°; N -.1684, Plg73°, Azm290°; P -.8344, Plg16°, Azm94°;

NEIC ***23*** *22:44:16.7,37.76N×26.70E,h19^{km},mb4.2/40,MS3.7/1, ML4.3(THE),ML4.1(ATH),After ATH.*

NEIC Felt at Kokkarion.

BJI ***23*** *22:44:16.7,37.80N×26.70E,h19^{km},mB4.7,mb4.6,Ms4.2, Msz4.0*

MOS ***23*** *22:44:17.4±0.9,37.79N×26.70E,h15^{km},mb4.4/21, MS3.6/10,Error ellipse: s-maj=5.2km s-min=3.3km az=125.0*

ISK ***23*** *22:44:17.2,37.82N×26.75E,h19^{km},ML4.4*

CSEM ***23*** *22:44:17.9±0.0,37.80N×26.79E,h25^{km},mb4.3/17,Ms3.5, Mw3.6,Error ellipse: s-maj=1.3km s-min=0.9km az=16.0*

IDC ***23*** *22:44:20.8±2.6,37.62N×26.84E,h21^{km}±18^{km},mb4.0/16, mb1 4.1/23,mb1mx4.1/28,mbtmp4.1/23,ML3.6/7,MS3.7/16, Ms1 3.7/16,ms1mx3.6/33,Error ellipse: s-maj=12.8km s-min=11.7km az=142.0*

THE ***23*** *22:44:21.3,37.84N×26.75E,h20^{km},ML4.4*

ISC 23 22:44:16.9±0.3**,37.76N**±0.01×**26.74E**±0.01**,h15**^{km}±3^{km}**, n386,**σ1^{s}**24**/434**,mb4.3**/41**,MS3.7**/17**,23C-10D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.09	121	ePB	Pb	22 44 20.7	-0.6
URLA	Izmir	0.61	350	i P	Pb	22 44 28.8	+0.1
URLA				i S	Sb	22 44 37.5	+0.6
BLCB	Balcova	0.67	21	i PG	Pb	22 44 29.7	-0.1
IZM	Izmir	0.76	33	i PG	Pb	22 44 31.4	+0.1
KDAG	Bornova	0.77	33	i P	Pb	22 44 31.7	+0.3
KDAG				i S	Sb	22 44 41.7	+0.4
BODT	Bodrum	0.83	146	i PG	Pb	22 44 34.8	+2.4
BODT				SG	Sb	22 44 47.4	+4.3
BDRM	Kayabasi	0.89	141	i P	Pb	22 44 35.8	+2.3
BDRM				i S	Sb	22 44 47.7	+2.8
AYDN	Tasoluk	0.91	96	i P	Pb	22 44 34.6	+0.8
AYDN				i S	Sb	22 44 46.6	+1.2
MLSB	Milas	0.95	119	i PG	Pb	22 44 36.2	+1.8
MLSB				SG	Sb	22 44 49.5	+3.0
APE	Apeiranthos	1.18	235	PN	Pn	22 44 39.2	+0.4
APE				SN	Sn	22 44 57.4	+2.8
APE	Apeiranthos	1.18	235	ePN	Pn	22 44 39.4	+0.6
APE				eSN	Sn	22 44 54.8	+0.2
APE	Apeiranthos	1.18	235	ePn	Pn	22 44 39.6	+0.8
APE				eSn	Sn	22 44 54.8	+0.2
NISR	Nisiros	1.18	165	ePN	Pn	22 44 40.0	+1.1
NISR	Nisiros	1.18	165	ePn	Pn	22 44 40.5	+1.6
YER	Yerkesik	1.38	116	PN	Pn	22 44 43.1	+1.4
AKS	Akhisar	1.41	37	PN	Pn	22 44 41.9	-0.2
PRK	Paraskevi	1.53	346	ePB	Pb	22 44 44.0	-0.4
PRK				eSN	Sn	22 45 06.3	+2.7
AYVA	Ayvalik	1.55	359	i P	Pn	22 44 45.6	+1.5
MANT	Manisa	1.61	62	i P	Pn	22 44 45.0	0.0
THR4	Thira Island,	1.68	220	ePb	Pb	22 44 48.5	+1.6
THR3	Thira Island,	1.72	219	ePb	Pb	22 44 49.4	+1.8
SANT	Santorini	1.72	217	ePn	Pn	22 44 46.3	-0.2
SANT	Santorini	1.72	217	ePn	Pn	22 44 46.3	-0.2
THR1	Thera Island	1.72	217	ePb	Pb	22 44 49.1	+1.5
THR5	Thira Island,	1.74	220	ePb	Pb	22 44 49.5	+1.6
DALT	Dalyan (Mudla)	1.81	122	PN	Pn	22 44 49.0	+1.2
DENT	Denizli	1.82	89	PN	Pn	22 44 48.7	+0.7
DNZL	Cakiroluk	1.83	91	i P	Pn	22 44 49.2	+1.0
ARG	Arkhangelos	1.90	144	⇑iPb	Pb	22 44 50.1	-0.5
ARG				eSn	Sn	22 45 14.4	+1.6
ARG	Arkhangelos	1.90	144	i Pb	Pb	22 44 50.1	-0.5
ARG				eSn	Sn	22 45 14.4	+1.6
BALB	Balikesir	2.08	25	PN	Pn	22 44 51.1	-0.7
EZN	Ezine	2.09	351	PN	Pn	22 44 51.2	-0.7
FETY	Fethiye	2.18	120	ePN	Pn	22 44 53.8	+0.6
KARP	Karpathos	2.23	171	⇑iPB	Pb	22 44 54.5	-1.8
CANB	Canakkale	2.27	6	ePN	Pn	22 44 54.0	-0.5
KHL	Karahalli	2.27	75	ePN	Pn	22 44 54.9	+0.4
PTL	Penteli	2.29	278	ePB	Pb	22 44 55.0	-2.4
DST	Dursunbey	2.37	38	ePN	Pn	22 44 55.9	+0.1
ATH	Athens Observa	2.40	276	⇓iPB	Pb	22 44 57.0	-2.2
ATH				eSN	Sn	22 45 26.4	+0.8
MPAR	Parnis Oros	2.41	280	⇑iPB	Pb	22 44 57.0	-2.3
LIA	Limnos Island	2.46	331	ePN	Pn	22 44 57.2	+0.1
LIA				eSN	Sn	22 45 28.4	+1.3
LOS	Limnos	2.53	330	ePn	Pn	22 44 59.1	+0.9
GDZ	Gediz	2.53	57	i P	Pn	22 45 02.4	+4.2
GDZ				i S	Sn	22 45 33.6	+4.6
NAIG	Nisos Aigina	2.57	271	ePN	Pn	22 44 58.5	-0.3
NSAL	Nisos Salamina	2.60	274	ePN	Pn	22 44 59.0	-0.1
LPK	Lapseki	2.61	0	ePN	Pn	22 44 58.2	-1.1
NPS	Neapolis	2.65	200	ePN	Pn	22 45 00.2	+0.4
NPS				eSN	Sn	22 45 31.5	-0.4
AOS	Alonnisos	2.65	303	ePn	Pn	22 45 00.6	+0.8
AOS				eSn	Sn	22 45 31.2	-0.8
ELL	Elmali	2.72	111	ePN	Pn	22 45 01.6	+0.7
EDC	Edincik	2.73	18	ePN	Pn	22 45 00.4	-0.6
AKAS	Kas	2.75	123	i P	Pn	22 45 03.2	+1.8
AKAS				i S	Sn	22 45 43.2	+8.6
BNT	Bandirma	2.75	19	ePN	Pn	22 45 01.4	0.0
MGER	Gerania Oros	2.76	276	⇑iPN	Pn	22 45 02.0	+0.5
KSL	Kastellorizon	2.79	124	ePB	Pb	22 45 04.0	-1.8
KCT	Karacabey	2.81	26	ePN	Pn	22 45 01.0	-1.1
ORLT	Orhaneli	2.84	36	ePN	Pn	22 45 02.1	-0.5
TKTP	Tekketepe	2.85	83	i P	Pn	22 45 03.3	+0.6
TKTP				i S	Sn	22 45 49.6	+13
IDI	Anoyia	2.88	212	Pn	Pn	22 45 03.8	+0.7
	6.1nm,0.3s,baz=30,slow=11,SNR=78						
IDI				Pg	Pn	22 45 12.0	+8.9
	24nm,0.3s,baz=34,slow=13,SNR=39						
IDI				LR	LR	22 45 42.1	
	comp=Z,208nm,20.3s,baz=35,slow=29						
IDI				Lg		22 45 51.6	
	80nm,0.3s,baz=133,slow=20,SNR=6.7						
IDI	Anoyia	2.88	212	Pg	Pn	22 45 12.0	+8.9
ALT	Altintas	2.95	63	ePN	Pn	22 45 04.0	-0.2
ISP	Isparta	2.99	87	ePN	Pn	22 45 04.9	+0.2
ISP	Isparta	2.99	87	ePn	Pn	22 45 05.2	+0.5
XRY	Khrisi	3.00	197	ePN	Pn	22 45 06.0	+1.2
ULDT	Uludag	3.03	37	i P	Pn	22 45 11.0	+5.7
ULDT				i S	Sn	22 45 41.1	-0.5
MFT	Murefte	3.06	8	ePN	Pn	22 45 05.0	-0.6
BCK	Bucak	3.07	94	ePN	Pn	22 45 05.8	-0.1
LKR	Lokris	3.08	288	⇓iPN	Pn	22 45 06.2	+0.3
VAM	Vamos	3.11	222	ePN	Pn	22 45 06.6	+0.2
VAM				eSN	Sn	22 45 44.5	+0.9
NEO	Neokhori	3.16	300	⇓iPn	Pn	22 45 07.3	+0.2
NEO				eSn	Sn	22 45 46.4	+1.5
ALN	Alexandroupoli	3.18	351	ePn	Pn	22 45 07.2	-0.3
ALN				eSn	Sn	22 45 43.5	-2.0
VLI	Veliai	3.20	252	⇓iPN	Pn	22 45 07.5	-0.3
VLI				eSN	Sn	22 45 45.5	-0.5
XOR	Xorichti	3.21	301	ePn	Pn	22 45 08.4	+0.5
PAIG	Paliouri	3.23	313	ePn	Pn	22 45 08.6	+0.5
PAIG				eSn	Sn	22 45 45.6	-0.9
ANTB	Antalya	3.24	104	ePN	Pn	22 45 08.9	+0.7
KYTH	Kithira	3.31	245	ePN	Pn	22 45 09.5	+0.3
OUR	Ouranopolis	3.35	321	ePn	Pn	22 45 10.1	+0.2
YLV	Yalova	3.48	35	ePN	Pn	22 45 11.3	-0.3
RDO	Rodhopi	3.51	345	⇑iPn	Pn	22 45 11.7	-0.4
RDO				eSn	Sn	22 45 52.0	-1.7
RDO	Rodhopi	3.51	345	⇑iPN	Pn	22 45 12.0	-0.1
RDO	Rodhopi	3.51	345	i Pn	Pn	22 45 11.7	-0.4
RDO				eSn	Sn	22 45 52.0	-1.7
GVD	Gavdhos	3.61	217	ePn	Pn	22 45 17.2	+3.7
CTT	Catalca	3.63	21	ePN	Pn	22 45 13.0	-0.8
PLG	Polygyros	3.66	317	ePn	Pn	22 45 14.6	+0.4
PLG				eS	Sn	22 45 57.9	+0.4
ESKT	Eskisehir	3.67	60	i P	Pn	22 45 14.1	-0.3
ESKT				i S	Sn	22 46 15.6	+18
ESKT	Eskisehir	3.67	60	ePn	Pn	22 45 14.2	-0.2
AGG	Agios Georgios	3.69	291	ePn	Pn	22 45 15.8	+1.2
AGG				eSn	Sn	22 45 57.4	-0.8
GPA	Golpazari	3.76	47	ePN	Pn	22 45 15.6	0.0
ISK	Istanbul-Kandi	3.76	28	ePN	Pn	22 45 15.0	-0.7
HRT	Hereke	3.81	36	ePN	Pn	22 45 16.0	-0.4
EYL	Eskiyayla	3.87	42	ePN	Pn	22 45 17.4	+0.3
ITM	Ithomi	3.87	263	ePn	Pn	22 45 18.5	+1.3
ITM				eSn	Sn	22 46 03.2	+0.4
SOH	Sokhos	4.03	320	ePn	Pn	22 45 20.0	+0.5
SOH				eSn	Sn	22 46 05.7	-1.3
EVR	Evrytania	4.04	288	ePN	Pn	22 45 20.9	+1.2
LIT	Litokhoron	4.06	307	ePn	Pn	22 45 20.2	+0.4
LIT				eSn	Sn	22 46 06.6	-1.0
EDRB	Edirne	4.09	0	ePN	Pn	22 45 19.5	-0.8
THE	Thessaloniki	4.10	316	ePn	Pn	22 45 20.7	+0.2
THE				eSn	Sn	22 46 07.3	-1.5
SRS	Serrai	4.15	325	ePn	Pn	22 45 21.1	-0.1
SRS				eSn	Sn	22 46 08.4	-1.4
SRS	Serrai	4.15	325	ePn	Pn	22 45 21.0	-0.1
SRS				S	Sn	22 46 08.4	-1.5
RLS	Riolos of Patr	4.18	276	ePN	Pn	22 45 22.5	+0.9
KIZT	Kizilcal	4.20	73	ePN	Pn	22 45 22.0	+0.1
NVR	Nevrokopi	4.22	329	ePN	Pn	22 45 22.0	-0.2
NVR				eSN	Sn	22 46 11.5	-0.3
KDHN	Kadinhani	4.31	78	i P	Pn	22 45 23.6	+0.2
HENT	Hendek	4.45	45	i P	Pn	22 45 37.8	+12
HENT				i S	Sn	22 46 34.2	+17
KZN	Kozani	4.63	305	ePN	Pn	22 45 29.5	+1.5
MEV	Metsovon	4.76	297	ePn	Pn	22 45 30.8	+1.0
VAY	Valandovo	4.80	319	i Pn	Pn	22 45 50.3	+20
VAY				i	rx	22 45 56.5	
VAY				i Sn	Sn	22 46 40.4	+14
VLS	Valsamata	4.88	277	ePN	Pn	22 45 33.2	+1.7
LKD	Levkas	4.88	283	ePn	Pn	22 45 32.6	+1.0
SGKT	Sivrigoynuk	5.00	54	i P	Pn	22 45 48.6	+15
SGKT				i S	Sn	22 46 55.1	+24
ERMK	Ermenek	5.05	101	i P	Pn	22 45 36.4	+2.4
FNA	Florina	5.14	308	ePn	Pn	22 45 35.8	+0.5
IGT	Igoumenitsa	5.32	291	ePn	Pn	22 45 38.8	+1.0
KAMT	Kaman	5.70	71	ePN	Pn	22 45 43.4	+0.3
BR131	Keskin Array S	5.74	68	ePn	Pn	22 45 43.5	-0.2
	22nm,0.6s						
BR131	Keskin Array S	5.74	68	ePn	Pn	22 45 43.5	-0.2
	22nm,0.6s						
BRTR	Keskin Array B	5.74	68	Pn	Pn	22 45 43.7	0.0
	1.5nm,0.3s,baz=251,slow=13,SNR=47						
BRTR				Pg	Pn	22 46 06.0	+22
	1.3nm,0.3s,baz=239,slow=17,SNR=15						
BRTR				Lg		22 47 24.8	
	baz=254,slow=27,SNR=2.4						
BRTR	Keskin Array B	5.74	68	Pg	Px	22 46 05.9	
KEK	Kerkira	5.77	292	Pn	Pn	22 45 45.9	+1.9
KEK				Sn	Sn	22 46 49.4	-1.2
KEK	Kerkira	5.77	292	ePN	Pn	22 45 45.5	+1.5
SKO	Skopje	5.86	318	i Pn	Pn	22 45 45.7	+0.4
ELDT	Eldivan	5.87	60	i P	Pn	22 45 48.2	+2.6
CSS	Prodhromos	6.01	116	ePn	Pn	22 45 45.4	-2.0
	44nm,0.7s						
CSS	Prodhromos	6.01	116	ePn	Pn	22 45 45.4	-2.0
	44nm,0.7s						
MEST	Erdemli	6.03	99	i P	Pn	22 45 48.0	+0.3
CDAG	Cicekdag	6.26	70	i P	Pn	22 45 50.7	-0.3
CDAG				i S	Sn	22 47 32.6	+30
ZAPS	Zavoj/Pirot	6.36	332	⇓iPn	Pn	22 45 52.3	-0.2
ZAPS				Sn	Sn	22 47 02.9	-2.6
BALT	Daday	6.37	52	i P	Px	22 46 14.8	
SLUM		6.37	192	⇑P	Pn	22 45 49.3	-3.3
TIR	Tirane	6.41	306	P	Pn	22 45 57.1	+4.0
AVNT	Avonos	6.47	78	i P	Pn	22 45 53.8	-0.1
HMAT	Matruh	6.65	177	P	Pn	22 45 52.4	-4.2
TIRR	Tirgusor	6.81	10	⇓P	Pn	22 45 57.8	-1.0
BOLS	Boljevac	7.07	331	⇓iPn	Pn	22 46 01.9	-0.4
LCI	Lecce	7.19	294	P	Pn	22 46 04.1	0.0
LCI				pmax	pmax		
	comp=Z,29nm,0.8s						
LCI	Lecce	7.19	294	P	Pn	22 46 04.1	0.0
	comp=Z,29nm,0.8s						
BOYT	Boyabat	7.29	57	i P	Pn	22 46 09.8	+4.2
HBRG	Burj al ‘Arab	7.61	159	P	Pn	22 46 06.4	-3.5
COBT	Iskenderun	7.70	96	i P	Pn	22 46 08.8	-2.4
MLR	Muntele Rosu	7.75	356	Pn	Pn	22 46 11.1	-0.9
	comp=Z,0.4nm,0.3s,baz=192,slow=8.5,SNR=10						
MLR				Lg		22 48 19.4	
	comp=Z,0.3nm,0.3s,baz=207,slow=7.9,SNR=3.0						
MLR				LR	LR	22 49 40.0	
	comp=Z,877nm,18.6s,baz=286,slow=40						
MLR	Muntele Rosu	7.75	356	⇑P	Pn	22 46 10.6	-1.3
TIP	Timpagrande	7.96	283	Pn	Pn	22 46 14.5	-0.3
	comp=Z,30nm,1.0s						
VRI	Vrincioaia	8.10	360	⇓P	P	22 46 18.2	+1.3
LTRZ	Laterza	8.21	293	Pn	P	22 46 17.6	-0.7
HNTI	Hanita	8.31	122	Pn	P	22 46 18.6	-1.2
HNTI				Sn	Sn	22 47 47.0	-7.3
BAI	Bari	8.33	297	ePn	P	22 46 19.2	-0.8
ORI	Oriolo Calabro	8.35	289	P	P	22 46 19.9	-0.3
ORI				pmax	pmax		
	comp=Z,20nm,0.4s						
ORI	Oriolo Calabro	8.35	289	P	P	22 46 19.9	-0.3
	comp=Z,20nm,0.4s						
SG1	Sgolgore (BA)	8.38	295	ePn	P	22 46 19.6	-1.2
AANS		8.39	151	⇑P	P	22 46 17.4	-3.4
HAF	Haifa	8.40	124	Pn	P	22 46 19.4	-1.6
SOI	Samo	8.45	275	Pn	P	22 46 18.0	-3.7
SWA1		8.51	186	⇑P	P	22 46 19.2	-3.4
SWA1				S	Sn	22 47 49.8	-10
SWA2		8.56	188	⇑P	P	22 46 20.8	-2.3
SEV	Sevastopol’	8.56	35	eP	P	22 46 27.3	+4.1
KSDI	Kefar Szold	8.58	119	Pn	P	22 46 21.4	-2.1
SCLL	Scilla	8.72	277	Pn	P	22 46 22.1	-3.3
BZS	Buzias	8.74	336	⇑P	P	22 46 24.5	-1.1
MTTG	Motta San Giov	8.74	275	Pn	P	22 46 24.4	-1.3
YAL	Yalta	8.75	37	eP	P	22 46 33.7	+7.9
CDT	Castel del Mon	8.75	296	ePn	P	22 46 24.6	-1.3
SLTI	Sal’it	8.75	126	Pn	P	22 46 24.7	-1.2
SLTI				Sn	Sn	22 47 57.0	-8.3
KSHT	Keshet	8.81	120	Pn	P	22 46 24.6	-2.0
MMLI	Mount Malkishu	8.87	124	Pn	P	22 46 25.8	-1.8
MMLI				Sn	Sn	22 48 00.7	-7.5
KOT	Kottamia	8.88	150	⇑P	P	22 46 23.1	-4.6
KOT				S	Sn	22 47 58.1	-10
AMAG	Maghara	8.89	141	⇑P	P	22 46 24.0	-3.8
HRSH	Kfar Ka’horesh	8.90	138	⇓P	P	22 46 25.0	-2.9
HHAG	Hagoal	8.97	149	⇑P	P	22 46 25.7	-3.2
ALU	Alushta	9.01	37	eP	P	22 46 32.7	+3.3
ALU				eS	Sn	22 48 05.5	-6.1
ALU				smax			
	comp=N,30nm,0.8s						
ALU				smax			
	comp=E,10.0nm,0.5s						
SLCN	Sala Consilina	9.03	290	Pn	P	22 46 29.8	+0.1
MGR	Morigerati	9.03	289	Pn	P	22 46 29.6	-0.1
	comp=E,17nm,0.6s						
HSAF	As Saff	9.05	152	⇑P	P	22 46 26.1	-3.9
SIM	Simferopol’	9.07	35	eP	P	22 46 28.9	-1.4
SIM				eS	Sn	22 48 12.8	-0.4
SIM				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SIM				MLR	MLR		
	comp=Z,220nm,14.6s						
SIM	Simferopol’	9.07	35	eP	P	22 46 28.9	-1.4
	comp=Z,10.0nm,0.7s						
SIM				eS	Sn	22 48 12.8	-0.4
	comp=Z,220nm,14.6s						
GLL	Jalalah	9.15	152	P	P	22 46 28.2	-3.2
MS1	Monte Sant’Ang	9.20	299	ePn	P	22 46 30.2	-1.9
MRLC	Muro Lucano	9.22	292	Pn	P	22 46 32.2	-0.2
MALT	Malatya	9.24	83	eP	P	22 46 34.3	+1.7
MALT				pmax	pmax		
	comp=Z,20nm,1.5s						
MALT	Malatya	9.24	83	ePn	P	22 46 34.3	+1.6
	comp=Z,20nm,1.5s						
MALT	Malatya	9.24	83	ePn	P	22 46 34.3	+1.7
	comp=Z,20nm,1.5s						
SGO	Sicignano	9.31	291	P	P	22 46 33.0	-0.6
SGO				pmax	pmax		
	comp=Z,51nm,1.1s						
SGO	Sicignano	9.31	291	Pn	P	22 46 33.0	-0.6
	comp=Z,51nm,1.1s						
KZIT	Kziot	9.31	135	Pn	P	22 46 30.6	-3.0
KIS	Kishinev	9.36	9	eP	P	22 46 33.0	-1.3
KIS				eS	Sn	22 48 20.0	-0.3
SUZ		9.38	146	P	P	22 46 30.6	-4.0
SLNA	Salina	9.41	279	Pn	P	22 46 33.6	-1.4
RGNG	Rignano Grg	9.44	298	P	P	22 46 33.4	-2.0
SUDU	Sudak	9.45	38	eP	P	22 46 41.0	+5.5
SUDU				eS	Sn	22 48 18.0	-4.5
SUDU				smax			
	comp=N,50nm,0.9s						
SUDU				smax			
	comp=E,60nm,1.0s						
DRGR		9.51	343	⇑P	P	22 46 37.9	+1.6
FG5	Orsara di Pugl	9.54	295	P	P	22 46 36.7	0.0
MZDA	Masada	9.59	130	Sn	Sn	22 48 16.6	-9.3
CSSN	Cassano Irpino	9.59	292	Pn	P	22 46 37.9	+0.4
MRB1	Monte Rocchett	9.70	294	Pn	P	22 46 38.2	-0.8
VAE	Valguarnera	9.78	272	Pn	P	22 46 40.1	0.0
	comp=E,0.5nm,0.3s,baz=42,slow=3.3,SNR=11						
VAE				LR	LR	22 51 13.1	
	comp=E,46nm,19.3s,baz=308,slow=42						
HNKL	Nakhl	9.86	140	⇑P	P	22 46 37.7	-3.4
ZFRI	Zfri	10.02	133	Pn	P	22 46 41.2	-2.2
ASF	Jabal al Asfar	10.02	121	Pn	P	22 46 40.9	-2.5
	comp=E,0.9nm,0.3s,baz=178,slow=7.7,SNR=11						
ASF				Sn	S	22 48 33.2	-3.4
	comp=E,0.6nm,0.3s,baz=173,slow=20,SNR=3.3						
ASF				LR	LR	22 51 24.5	
	comp=E,406nm,19.6s,baz=60,slow=43						
PRNI	Paran	10.07	135	Pn	P	22 46 41.3	-2.8
PRNI				Sn	S	22 48 28.0	-10
CII	Carovilli	10.36	296	eP	P	22 46 44.2	-3.8
	comp=E,14nm,0.6s						
MBH	Mount Berech	10.46	137	Pn	P	22 46 47.1	-2.2
EIL	Elat	10.57	137	Pn	P	22 46 47.6	-3.3
	comp=E,0.6nm,0.3s,baz=333,slow=32,SNR=7.4						
EIL				Sn	S	22 48 43.9	-6.1
	comp=E,2.0nm,0.3s,baz=43,slow=31,SNR=6.6						
EIL	Elat	10.57	137	eP	P	22 46 47.2	-3.7
	comp=E,16nm,0.8s						
EIL				eS	S	22 48 37.4	-13
EIL	Elat	10.57	137	Pn	P	22 46 48.1	-2.8
HFRF	Wahat Farafira	10.66	172	P	P	22 46 49.1	-3.1
NUB		10.93	141	⇑P	P	22 46 52.0	-3.8
HKAT	Jabal Katrina	11.03	144	⇓P	P	22 46 53.9	-3.3
HAQS	Haql	11.05	139	P	P	22 46 54.2	-3.3
JMOS	Jabal al Moall	11.05	138	P	P	22 46 54.0	-3.5
AQU	L’Aquila	11.20	298	P	P	22 46 58.8	-0.7
AQU				pmax	pmax		
	comp=Z,16nm,1.0s						
AQU	L’Aquila	11.20	298	P	P	22 46 58.8	-0.7
	comp=Z,16nm,1.0s						
AQU	L’Aquila	11.20	298	P	P	22 46 58.8	-0.7
	comp=Z,16nm,1.0s						
TAYS	Tayyib Ism	11.43	141	P	P	22 47 00.8	-1.8
BDAS	Al Bad‘	11.64	141	P	P	22 47 01.7	-3.8
KECS	Kecovo	11.65	339	eP	P	22 47 08.7	+3.2
JMQS	Jabal Moqyreh	11.68	137	P	P	22 47 03.4	-2.7
CRVS	Cervenica-Dubn	11.78	343	e	P	22 47 08.4	+1.1
VYHS	Vyhne	12.18	334	ePN	P	22 47 13.9	+1.2
KWP	Kalwaria	12.22	348	eP	P	22 47 11.1	-2.2
GTR	Jabal at Tayr	12.63	164	⇑P	P	22 47 15.5	-3.4
VOY	Vojsko	12.63	315	ePn	P	22 47 18.4	-0.4
AKASG	Malin Array Be	13.06	7	Pn	P	22 47 30.7	+6.2
	comp=Z,0.4nm,0.3s,baz=204,slow=12,SNR=4.2						
KIV	Kislovodsk	13.56	58	eP	P	22 47 32.1	+1.1
KIV				MLR	MLR		
	comp=Z,400nm,13.0s						
KIV	Kislovodsk	13.56	58	P	P	22 47 35.4	+4.3
	comp=Z,20nm,1.3s						
KIV	Kislovodsk	13.56	58	eP	P	22 47 32.1	+1.1
	comp=Z,400nm,13.0s						
VSL	Villasalto	13.69	283	eP	P	22 47 31.5	-1.2
	comp=Z,11nm,0.9s						
VSL	Villasalto	13.69	283	eP	P	22 47 31.5	-1.2
	comp=Z,11nm,0.9s						
ZEI	Tsey	14.02	64	eP	P	22 47 34.5	-2.6
GNI	Garni	14.22	75	⇑iP	P	22 47 41.3	+1.6
GNI				pmax	pmax		
	comp=Z,33nm,1.6s						
GNI				MLR	MLR		
	comp=Z,200nm,9.0s						
GNI	Garni	14.22	75	i P	P	22 47 41.3	+1.6
	comp=Z,200nm,9.0s						
PGF	Pioggiola	14.38	295	eP	P	22 47 41.8	0.0
	comp=Z,23nm,0.9s						
PGF	Pioggiola	14.38	295	eP	P	22 47 41.8	0.0
PGF				pmax	pmax		
	comp=Z,12nm,0.9s						
GERES	GERESS Array B	14.57	324	Pn	P	22 47 50.1	+5.9
	comp=Z,0.1nm,0.3s,baz=146,slow=11,SNR=8.3						
GERES				LR	LR	22 54 07.3	
	comp=Z,169nm,18.4s,baz=306,slow=40						
DPC	Dobruska-Polom	14.63	333	eP	P	22 47 50.4	+5.4
DPC				AMS	AMS	22 53 40.0	
	comp=Z,500nm,14.6s						
KHC	Kasperske Hory	14.83	324	⇑iP	P	22 47 52.2	+4.6
KHC	Kasperske Hory	14.83	324	eP	P	22 47 54.9	+7.3
KHC				x	x	22 48 20.0	
KHC				AMS	AMS	22 53 20.0	
	comp=Z,600nm,14.1s						
UPC	Upice	14.87	332	eP	P	22 47 57.6	+9.4
PRU	Pruhonice	15.04	328	eP	P	22 47 59.1	+8.8
PRU				AMS	AMS	22 53 40.0	
	comp=Z,500nm,11.6s						
DAVOX	Davos	15.37	311	Pn	P	22 47 59.2	+4.4
	comp=Z,0.1nm,0.3s,baz=118,slow=16,SNR=4.5						
DAVOX				LR	LR	22 53 55.2	
	comp=Z,329nm,20.1s,baz=115,slow=37						
DAVOX	Davos	15.37	311	Pn	P	22 47 59.2	+4.4
DAVOX				LR	LR	22 53 55.2	
PVCC	Panska Ves	15.44	330	eP	P	22 48 02.7	+7.1
PVCC				AMS	AMS	22 54 00.0	
	comp=Z,500nm,12.5s						
SBF	Sospel	15.82	299	eP	P	22 48 00.8	+0.2
	comp=Z,40nm,1.0s						
SBF	Sospel	15.82	299	eP	P	22 48 00.8	+0.2
SBF				pmax	pmax		
	comp=Z,20nm,1.0s						
BRG	Berggiesshubel	15.96	329	eP	P	22 48 08.3	+6.0
BRG				pmax	pmax		
	comp=Z,14nm,1.6s						
BRG	Berggiesshubel	15.96	329	eP	P	22 48 08.3	+6.0
	comp=Z,14nm,1.6s						
BRG				e		22 48 14.6	
BRG				e		22 51 19.0	
NKC	Novy Kostel	16.13	325	eP	P	22 48 10.4	+5.9
NKC				AMS	AMS	22 54 10.0	
	comp=Z,500nm,14.3s						
FRF	La Foret Royal	16.30	297	eP	P	22 48 06.0	-0.7
	comp=Z,29nm,1.1s						
FRF	La Foret Royal	16.30	297	eP	P	22 48 06.0	-0.7
FRF				pmax	pmax		
	comp=Z,15nm,1.1s						
LMR	La Mourre	16.34	296	eP	P	22 48 07.1	-0.1
SUW	Suwalki	16.44	353	eP	P	22 48 05.7	-2.7
SUW				pmax	pmax		
	comp=Z,15nm,0.4s						
SUW	Suwalki	16.44	353	eP	P	22 48 05.7	-2.7
	comp=Z,15nm,0.4s						
MBDF	Montbardon	16.53	301	eP	P	22 48 10.0	+0.4
	comp=Z,20nm,1.0s						
CLL	Collm	16.68	329	e*SP		22 48 14.0	
CLL				eSS	SS	22 51 30.0	-6.1
BNI	Bardonecchia	16.70	302	eP	P	22 48 14.2	+2.5
BNI				pmax	pmax		
	comp=Z,18nm,1.4s						
BNI	Bardonecchia	16.70	302	eP	P	22 48 14.2	+2.4
	comp=Z,18nm,1.4s						
BNI	Bardonecchia	16.70	302	eP	P	22 48 14.2	+2.5
	comp=Z,18nm,1.4s						
MOX	Moxa	16.80	325	eP	P	22 48 18.7	+5.8
MOX				pmax	pmax		
	comp=Z,23nm,1.8s						
MOX	Moxa	16.80	325	eP	P	22 48 18.7	+5.8
	comp=Z,23nm,1.8s						
MOX	Moxa	16.80	325	i P	P	22 48 18.7	+5.8
	comp=Z,logA/T=1.1						
MOX				L		22 54 11.0	
LPG	La Plagne	16.80	304	eP	P	22 48 13.5	+0.5
	comp=Z,38nm,1.2s						
LPG	La Plagne	16.80	304	eP	P	22 48 13.5	+0.5
LPG				pmax	pmax		
	comp=Z,19nm,1.2s						
LPL	La Plagne	16.82	304	eP	P	22 48 14.0	+0.8
	comp=Z,14nm,0.8s						
LPL	La Plagne	16.82	304	eP	P	22 48 14.0	+0.8
LPL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SMRF	Simiane la Rot	17.15	298	eP	P	22 48 17.8	+0.4
ORIF	Oris-en-Rattie	17.19	301	eP	P	22 48 18.4	+0.4
ORIF				eR			
	comp=Z,390nm,21.8s						
CABF	La Chapelle	17.64	307	eP	P	22 48 23.6	+0.1
	comp=Z,20nm,1.1s						
CABF	La Chapelle	17.64	307	eP	P	22 48 23.6	+0.1
CABF				pmax	pmax		
	comp=Z,10.0nm,1.1s						

HINF	Hinteralfeld	17.68	311	eP	P	22 48 24.5	+0.5
CDF	Champ du Feu	17.71	313	eP	P	22 48 24.4	0.0
VIVF	Saint-Julien-l	18.00	300	eP	P	22 48 27.7	-0.3
HAU	Haudompre	18.06	311	eP	P	22 48 29.0	+0.2
	comp=Z,10nm,0.8s						
HAU				eR			
	comp=Z,220nm,18.2s						
LASF	Ste Croix	18.38	297	eP	P	22 48 32.8	0.0
OBN	Obninsk	18.60	18	P	P	22 48 35.0	-0.5
OBN				MLR	MLR		
	comp=Z,100nm,13.0s						
OBN	Obninsk	18.60	18	eP	P	22 48 33.4	-2.0
OBN	Obninsk	18.60	18	P	P	22 48 35.0	-0.5
	comp=Z,100nm,13.0s						
WLF	Walferdange	18.98	315	eP	P	22 48 37.5	-2.5
WLF				pmax	pmax		
	comp=Z,26nm,1.5s						
WLF	Walferdange	18.98	315	eP	P	22 48 37.5	-2.5
	comp=Z,26nm,1.5s						
MEZF	Maizieres J'vi	19.06	311	eP	P	22 48 41.6	+0.6
	comp=Z,18nm,0.9s						
SMF	Signal de Mont	19.09	305	eP	P	22 48 41.5	+0.1
	comp=Z,22nm,0.9s						
SMF	Signal de Mont	19.09	305	eP	P	22 48 41.5	+0.1
SMF				pmax	pmax		
	comp=Z,11nm,0.9s						
LOR	Lormes	19.30	307	eP	P	22 48 43.8	0.0
	comp=Z,14nm,1.0s						
LOR				eR			
	comp=Z,188nm,17.0s						
MTLF	Montolieu	19.42	294	eP	P	22 48 45.4	+0.2
	comp=Z,9.7nm,0.9s						
MTLF	Montolieu	19.42	294	eP	P	22 48 45.4	+0.2
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MOS	Moscow	19.43	19	eP	P	22 48 50.4	+5.2
MOS				pmax	pmax		
	comp=Z,30nm,1.0s						
SSF	Saint Saulge	19.45	306	eP	P	22 48 45.8	+0.3
SSF				pmax	pmax		
	comp=Z,12nm,0.8s						
SSF	Saint Saulge	19.45	306	eP	P	22 48 45.8	+0.3
	comp=Z,12nm,0.8s						
AVF	Avril sur Loir	19.46	305	eP	P	22 48 45.1	-0.5
	comp=Z,19nm,0.9s						
AVF	Avril sur Loir	19.46	305	eP	P	22 48 45.1	-0.5
AVF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BGF	Bois d'Agland	19.72	304	eP	P	22 48 48.2	-0.3
	comp=Z,26nm,0.8s						
BGF	Bois d'Agland	19.72	304	eP	P	22 48 48.2	-0.3
BGF				pmax	pmax		
	comp=Z,13nm,0.8s						
CAF	Calviac	19.82	299	eP	P	22 48 49.9	+0.3
GIVF	Givet	19.95	315	eP	P	22 48 50.9	-0.2
TCF	Toulx Ste Croi	20.06	303	eP	P	22 48 52.7	+0.5
	comp=Z,13nm,1.0s						
TCF	Toulx Ste Croi	20.06	303	eP	P	22 48 52.7	+0.5
TCF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HYF	Humbligny	20.08	306	eP	P	22 48 52.3	-0.1
BAIF	Baives	20.27	315	eP	P	22 48 54.5	+0.1
RJF	Les Rejaudoux	20.28	300	eP	P	22 48 54.9	+0.4
	comp=Z,20nm,1.0s						
RJF				eR			
	comp=Z,197nm,17.2s						
RJF	Les Rejaudoux	20.28	300	eP	P	22 48 54.9	+0.4
RJF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RJF				MLR	MLR		
	comp=Z,200nm,17.3s,MS3.5						
VSU	Vasula	20.72	360	⇑iP	P	22 48 59.4	+0.4
VSU	Vasula	20.72	360	i P	P	22 48 59.4	+0.4
LFF	La Frestale	20.74	298	eP	P	22 48 59.6	+0.3
	comp=Z,12nm,0.8s						
LFF	La Frestale	20.74	298	eP	P	22 48 59.6	+0.3
LFF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EPF	Esparros	20.74	293	eP	P	22 48 59.0	-0.4
ETSF	Etsaut	21.39	292	eP	P	22 49 05.9	-0.1
	comp=Z,9.7nm,0.8s,mb3.9						
ETSF	Etsaut	21.39	292	eP	P	22 49 05.9	-0.1
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.9						
MFF	Saint Martin d	21.71	303	eP	P	22 49 09.0	-0.2
	comp=Z,19nm,0.9s,mb4.2						
MFF	Saint Martin d	21.71	303	eP	P	22 49 09.0	-0.2
MFF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
SJPF	Ste Jean	21.89	293	eP	P	22 49 11.6	+0.6
	comp=Z,39nm,1.4s,mb4.3						
SJPF	Ste Jean	21.89	293	eP	P	22 49 11.6	+0.6
SJPF				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.3						
LDF	La Druitiere	22.27	308	eP	P	22 49 15.1	+0.4
	comp=Z,21nm,0.9s,mb4.2						
LDF	La Druitiere	22.27	308	eP	P	22 49 15.1	+0.4
LDF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
FLN	La Foliniere	22.55	308	eP	P	22 49 17.3	-0.2
	comp=Z,26nm,0.8s,mb4.4						
FLN				eR			
	comp=Z,252nm,19.2s						
FLN	La Foliniere	22.55	308	eP	P	22 49 17.3	-0.2
FLN				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.4						
FLN				MLR	MLR		
	comp=Z,250nm,19.3s,MS3.7						
GRR	Gorron	22.67	307	eP	P	22 49 19.1	+0.5
	comp=Z,31nm,0.8s,mb4.5						
GRR	Gorron	22.67	307	eP	P	22 49 19.1	+0.5
GRR				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
FINES	FINESS Array B	23.72	359	P	P	22 49 32.1	+3.4
	comp=Z,8.6nm,0.9s,mb4.2,baz=158,slow=10,SNR=14						
FINES				LR	LR	22 59 16.2	
	comp=Z,193nm,18.6s,MS3.6,baz=172,slow=38						
SGMF	Saint Gilles	23.72	306	eP	P	22 49 29.1	+0.3
	comp=Z,30nm,1.0s,mb4.4						
SGMF	Saint Gilles	23.72	306	eP	P	22 49 29.1	+0.3
SGMF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.4						
HFS	Hagfors	23.89	344	P	P	22 49 33.2	+2.8
	comp=Z,3.8nm,0.6s,mb4.0,baz=162,slow=9.4,SNR=11						
HFS				LR	LR	22 59 59.0	
	comp=Z,294nm,18.9s,MS3.8,baz=162,slow=39						
ESDC	Sonseca Array	23.98	284	P	P	22 49 32.9	+1.4
	comp=Z,1.3nm,0.7s,mb3.5,baz=76,slow=9.9,SNR=5.5						
ESLA	Sonseca Array	23.98	284	P	P	22 49 29.3	-2.2
ESLA	Sonseca Array	23.98	284	P	P	22 49 29.3	-2.2
QUIF	Quistinic	24.03	305	eP	P	22 49 32.3	+0.4
	comp=Z,31nm,1.1s,mb4.3						
QUIF	Quistinic	24.03	305	eP	P	22 49 32.3	+0.4
QUIF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.3						
ROSF	Rostrenen	24.20	306	eP	P	22 49 33.6	0.0
	comp=Z,13nm,0.7s,mb4.2						
ROSF	Rostrenen	24.20	306	eP	P	22 49 33.6	0.0
ROSF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
KAF	Kangasniemi	24.39	360	ep	P	22 49 35.5	+0.3
	comp=Z,5.1nm,1.0s,mb3.9,baz=181,slow=9.6						
KAF	Kangasniemi	24.39	360	eP	P	22 49 35.5	+0.3
KAF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.9						
KONO	Kongsberg	24.51	339	eP	P	22 49 32.0	-4.4
KONO	Kongsberg	24.51	339	P	P	22 49 32.8	-3.6
KONO				pmax	pmax		
	comp=Z,28nm,1.2s,mb4.7						
KONO	Kongsberg	24.51	339	P	P	22 49 32.8	-3.6
	comp=Z,28nm,1.2s,mb4.7						
NAO01	NORSAR Array S	25.18	342	eP	P	22 49 44.7	+1.8
	comp=Z,6.5nm,0.8s,mb4.2						
NAO01	NORSAR Array S	25.18	342	eP	P	22 49 44.7	+1.9
	comp=Z,6.5nm,0.8s,mb4.2						
NB2	NORSAR Subarra	25.27	342	P	P	22 49 47.3	+3.6
	comp=Z,3.2nm,0.7s,mb4.0,baz=157,slow=9.3						
NB2	NORSAR Subarra	25.27	342	P	P	22 49 47.3	+3.6
	baz=157,slow=10						
NOA	NORSAR Array B	25.27	342	P	P	22 49 45.0	+1.4
	comp=Z,1.7nm,0.6s,mb3.7,baz=161,slow=11,SNR=10						
NOA				LR	LR	23 00 50.1	
	comp=Z,206nm,18.1s,MS3.7,baz=150,slow=39						
BER	Bergen	26.40	336	eScP		22 56 59.8	
BER				AMS	AMS	23 01 59.3	
	comp=Z,124nm,16.5s,MS3.5						
EKA	Eskdalemuir Ar	26.75	321	P	P	22 50 00.6	+3.1
	comp=Z,1.5nm,0.8s,mb3.6,baz=127,slow=8.3,SNR=5.4						
ESK	Eskdalemuir	26.76	321	P	P	22 49 50.6	-7.0
EVO	Evora	27.25	282	eP	P	22 50 02.4	+0.2
	comp=Z,11nm,1.0s,mb4.1						
EVO				eR			
	comp=Z,211nm,19.8s						
ARU	Arti	28.22	38	eP	P	22 50 10.3	-0.6
ARU				ePPP	PPP	22 51 06.4	-7.5
ARU				e		22 53 19.9	
ARU				eS	S	22 54 57.2	+2.7
ARU				eSS	SS	22 56 18.6	+0.6
ARU				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.5						
ARU				MLR	MLR		
	comp=N,60nm,17.0s,MS3.5						
ARU				MLR	MLR		
	comp=E,100nm,17.0s,MS3.5						
ARU	Arti	28.22	38	eP	P	22 50 11.0	+0.2
	comp=E,5.3nm,1.0s,mb4.1						
ARU	Arti	28.22	38	ePcP	PcP	22 53 19.9	-4.7
SVE	Sverdlovsk	29.43	39	eP	P	22 50 23.3	+1.6
SVE				MLR	MLR		
	comp=N,100nm,14.0s,MS3.7						
SVE				MLR	MLR		
	comp=E,100nm,14.0s,MS3.7						
SVE				MLR	MLR		
	comp=Z,200nm,14.0s,MS3.9						
ARCES	ARCESS Array B	31.85	359	P	P	22 50 44.6	+1.6
	comp=Z,7.0nm,0.9s,mb4.5,baz=190,slow=7.4,SNR=16						
ARCES				LR	LR	23 04 07.4	
	comp=Z,201nm,18.6s,MS3.8,baz=172,slow=37						
KEV	Kevo	32.06	0	ep	P	22 50 45.6	+0.8
	comp=Z,10nm,1.1s,mb4.6						
KEV	Kevo	32.06	0	eP	P	22 50 45.6	+0.8
KEV				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
TRO	Tromso	32.22	355	eS	S	22 56 00.6	+3.1
TRO				AMS	AMS	23 05 13.8	
	comp=Z,93nm,16.0s,MS3.6						
ZRNK	Zerenda	32.82	49	eP	P	22 50 52.8	+1.2
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ZRNK	Zerenda	32.82	49	eP	P	22 50 52.8	+1.1
	comp=Z,4.0nm,0.9s,mb4.3						
ZRNK	Zerenda	32.82	49	eP	P	22 50 52.8	+1.2
	comp=Z,4.0nm,0.9s,mb4.3						
FRU	Bishkek	36.48	67	P	P	22 51 25.0	+1.9
JMIC	Jan Mayen	37.98	342	LR	LR	23 08 14.8	
	comp=Z,88nm,19.0s,MS3.6,baz=61,slow=38						
JMIC	Jan Mayen	37.98	342	AMS	AMS	23 08 48.6	
	comp=Z,75nm,18.8s,MS3.5						
MBAR	Mbarara	38.35	174	P	P	22 51 34.8	-4.3
MKAR	Makanchi Array	41.32	59	P	P	22 52 04.7	+1.4
	comp=Z,2.3nm,0.7s,mb3.9,baz=280,slow=7.4,SNR=15						
NVS	Novosibirsk	41.37	47	eP	P	22 52 02.8	-0.9
NVS				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.2						
NVS				pmax	pmax		
	comp=N,6.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.9s						
NVS	Novosibirsk	41.37	47	eP	P	22 52 02.8	-0.9
	comp=E,6.0nm,1.6s,mb4.0						
KBS	Kingsbay	41.72	356	AMS	AMS	23 09 42.8	
	comp=Z,39nm,21.9s,MS3.2						
DBIC	Dimbokro	42.19	231	P	P	22 52 11.6	+0.8
	comp=Z,5.9nm,0.7s,mb4.3,baz=351,slow=7.3,SNR=9.5						
DBIC	Dimbokro	42.19	231	eP	P	22 52 11.1	+0.2
DBIC	Dimbokro	42.19	231	eP	P	22 52 11.1	+0.3
WMQ	Urumqi	45.64	62	eP	P	22 52 37.3	-1.0
WMQ				AP	pP	22 52 49.8	+7.0
WMQ				XP	sP	22 52 54.3	+10
KOLN	Koldanda	48.20	84	eP	P	22 52 59.3	+0.6
	comp=Z,16nm,0.9s,mb5.0						
GKN	Gorkha	48.91	84	eP	P	22 53 00.7	-3.5
	comp=Z,22nm,1.1s,mb5.1						
DMN	Daman	49.46	84	eP	P	22 53 09.4	+1.0
	comp=Z,11nm,0.6s,mb5.1						
KKN	Kakani	49.52	84	eP	P	22 53 08.9	0.0
	comp=Z,7.1nm,0.5s,mb4.9						
PKI	Pulchoki	49.72	84	eP	P	22 53 12.1	+1.7
	comp=Z,24nm,1.1s,mb5.1						
PKI	Pulchoki	49.72	84	eP	P	22 53 12.1	+1.7
PKI				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
ZAK	Zakamensk	54.09	50	eP	P	22 53 44.5	+1.6
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
ZAK	Zakamensk	54.09	50	eP	P	22 53 44.5	+1.6
	comp=Z,2.0nm,1.1s,mb4.0						
GTA	Gaotai	55.65	64	eP	P	22 53 58.3	+3.8
GTA				AP	pP	22 54 07.6	+8.5
SONM	Songino Array	56.88	52	P	P	22 54 03.4	+0.2
	comp=Z,1.6nm,0.9s,mb4.1,baz=285,slow=6.5,SNR=12						
SONM				LR	LR	23 22 20.7	
	comp=Z,96nm,18.4s,MS3.9,baz=96,slow=40						
ULN	Ulaanbaatar	57.28	52	P	P	22 54 04.9	-1.1
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ULN	Ulaanbaatar	57.28	52	P	P	22 54 04.9	-1.1
	comp=Z,1.6nm,0.8s,mb4.1						
ULN	Ulaanbaatar	57.28	52	P	P	22 54 04.9	-1.1
	comp=Z,1.6nm,0.8s,mb4.1						
SCHQ	Schefferville	62.05	319	P	P	22 54 41.6	+2.8
	comp=Z,3.2nm,0.7s,mb4.6,baz=77,slow=4.7,SNR=5.6						
CMAR	Chiang Mai Arr	65.05	85	P	P	22 54 59.5	+0.6
	comp=Z,1.2nm,0.7s,mb4.0,baz=303,slow=8.6,SNR=5.8						
CMAR	Chiang Mai Arr	65.05	85	P	P	22 54 59.5	+0.5
BOSA	Boshof	66.03	181	P	P	22 55 05.7	+0.6
	comp=Z,1.5nm,0.7s,mb4.1,baz=24,slow=8.7,SNR=4.2						
BOSA				LR	LR	23 27 29.2	
	comp=Z,96nm,18.6s,MS4.0,baz=188,slow=39						
MDJ	Mudanjiang	72.49	47	P	P	22 55 40.3	-4.3
MDJ				AMB	AMB		
	comp=Z,50nm,4.3s						
NJ2	Nanjing	72.71	63	eP	P	22 55 47.1	+0.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
YKA	Yellowknife Ar	75.37	343	P	P	22 56 03.2	+2.4
	comp=Z,0.4nm,0.5s,mb3.6,baz=26,slow=6.4,SNR=5.1						
YKA	Yellowknife Ar	75.37	343	P	P	22 56 03.2	+2.4
ILAR	Eielson Array	77.69	357	P	P	22 56 17.9	+4.0
	comp=Z,1.7nm,1.0s,mb3.9,baz=353,slow=5.0,SNR=11						
BDFB	Brasilia	87.85	248	P	P	22 57 09.6	+2.4
	comp=Z,2.1nm,0.7s,mb4.5,baz=65,slow=8.0,SNR=3.3						
BDFB				LR	LR	23 36 55.9	
	comp=Z,74nm,18.9s,MS4.1,baz=202,slow=36						
PDAR	Pinedale Array	90.54	329	P	P	22 57 22.6	+3.3
	comp=Z,0.7nm,0.8s,mb4.0,baz=45,slow=2.1,SNR=4.2						
PDAR				LR	LR	23 35 50.2	
	comp=Z,51nm,19.9s,MS4.0,baz=232,slow=34						
CBIJ	Chichi jima	91.57	54	LR	LR	23 42 38.9	
	comp=Z,50nm,19.1s,MS4.0,baz=161,slow=38						

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*CSEM **23** 22:51:57.9±0.1, 37.83N×26.73E, h20^{km}, MD3.3, Error ellipse: s-maj=2.5km s-min=1.7km az=92.0*

*ATH **23** 22:51:58.3, 37.72N×26.70E, h19^{km}±1^{km}, MD3.3/3*

*ISK **23** 22:51:58.6, 37.86N×26.74E, h28^{km}, MD3.4*

*NEIC **23** 22:51:58.3, 37.72N×26.70E, h19^{km}, MD3.3(ATH), After ATH.*

ISC 23 22:51:58.9±0.6, **37.82N**±0.03×**26.73E**±0.06, **h26**^{km}±6^{km}, **n18**, σ**0^{s}78**/27, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.14	141	i PB	Pb	22 52 02.1	-1.9
URLA	Izmir	0.55	349	i P	Pb	22 52 10.6	+0.7
URLA				i S	Sb	22 52 18.2	+0.7
BLCB	Balcova	0.62	24	i PG	Pb	22 52 10.8	-0.3
BLCB				SG	Sb	22 52 19.8	+0.4
IZM	Izmir	0.72	36	i PG	Pb	22 52 12.4	-0.3
IZM				SG	Sb	22 52 22.5	+0.4
BODT	Bodrum	0.89	148	PG	Pb	22 52 15.7	+0.1
BODT				SG	Sb	22 52 28.4	+1.4
AYDN	Tasoluk	0.93	99	i P	Pb	22 52 16.0	-0.3
AYDN				i S	Sb	22 52 27.7	-0.5
BDRM	Kayabasi	0.94	143	i P	Pb	22 52 16.0	-0.6
BDRM				i S	Sb	22 52 29.0	+0.4
MLSB	Milas	0.98	122	PG	Pn	22 52 17.3	+0.1
APE	Apeiranthos	1.21	232	ePN	Pn	22 52 21.0	+0.6
APE				eSN	Sn	22 52 35.5	-0.6
APE	Apeiranthos	1.21	232	ePn	Pn	22 52 20.4	0.0
APE				eSn	Sn	22 52 35.5	-0.6
AKS	Akhisar	1.36	39	ePN	Pn	22 52 21.3	-1.2
YER	Yerkesik	1.41	118	ePN	Pn	22 52 23.3	0.0
PRK	Paraskevi	1.47	346	ePN	Pn	22 52 27.3	+3.2
PRK				eSN	Sn	22 52 48.0	+5.3
DENT	Denizli	1.83	91	ePN	Pn	22 52 29.2	0.0
ARG	Arkhangelos	1.95	145	ePN	Pn	22 52 31.8	+0.8
EZN	Ezine	2.03	351	ePN	Pn	22 52 31.6	-0.5
CANB	Canakkale	2.21	7	ePN	Pn	22 52 34.1	-0.6
FETY	Fethiye	2.22	121	ePN	Pn	22 52 35.0	+0.1

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*BJI **23** 23:23:58.9, 4.90S×68.70E, h10^{km}, mB4.9, mb4.7, Ms4.1, Msz3.8*

*IDC **23** 23:23:58.9±1.3, 4.87S×68.61E, mb4.1/8, mb1 4.2/8, mb1mx3.9/19, mbtmp4.1/8, MS3.5/1, Ms1 3.5/1, ms1mx2.4/13, Error ellipse: s-maj=38.3km s-min=27.7km az=32.0*

*NEIC **23** 23:23:60.0±0.7, 4.93S×68.69E, h10^{km}, mb4.6/5, Error ellipse: s-maj=21.3km s-min=11.1km az=47.0*

ISC 23 23:23:57.0±1.2, **5.1S**±0.2×**68.6E**±0.2, **h10**^{km}, **n22**, σ**1^{s}02**/18, **mb4.2**/13, **MS3.7**/2, **Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	Diego Garcia	4.45	121	ePn	Pn	23 25 07.4	+1.3
DGAR				eSn	Sn	23 25 57.2	-1.4
CMAR	Chiang Mai Arr	37.98	51	P	P	23 31 16.9	-0.1
	1.0nm,0.8s,mb3.6,baz=241,slow=9.9,SNR=5.9						
LSA	Lhasa	40.81	31	eP	P	23 31 40.2	-0.2
KSH	Kashi	44.92	8	eP	P	23 32 14.4	+0.5
KSH				eAP	pP	23 32 20.3	+3.4
KSH				eXP	sP	23 32 24.4	+6.3
KSH				AMB	AMB		
	comp=Z,60nm,3.3s						
MALT	Malatya	51.48	330	eP	P	23 33 04.9	0.0
	comp=Z,3.9nm,1.3s,mb4.2						
MALT				e		23 33 11.3	
WMQ	Urumqi	51.66	18	eP	P	23 33 07.3	+1.1
WMQ				AP	pP	23 33 16.3	+7.1
WMQ				XP	sP	23 33 20.3	+10
WMQ				AMB	AMB		
	comp=Z,90nm,5.0s						
WMQ				LR	LR		
	comp=N,100nm,21.2s,MS4.0						
WMQ				LR	LR		
	comp=E,80nm,18.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,100nm,22.0s,MS3.8						
MKAR	Makanchi Array	53.08	12	P	P	23 33 15.9	-0.9
	comp=Z,0.5nm,0.4s,mb3.8,baz=195,slow=7.3,SNR=12						
BRTR	Keskin Array B	55.03	327	P	P	23 33 29.9	-1.2
	comp=Z,1.7nm,1.1s,mb4.0,baz=162,slow=12,SNR=5.5						
ZRNK	Zerenda	57.84	0	eP	P	23 33 50.3	-0.8
	comp=Z,6.2nm,1.1s,mb4.5						
ZRNK				e		23 33 56.2	
BVAR	Borovoye Array	57.93	1	P	P	23 33 51.6	-0.1
	comp=Z,1.2nm,0.9s,mb3.9,baz=191,slow=7.6,SNR=7.8						
ARU	Arti	61.88	354	eP	P	23 34 16.8	-2.0
	comp=Z,7.8nm,1.2s,mb4.7						
SONM	Songino Array	62.29	28	P	P	23 34 22.9	+1.3
	comp=Z,5.1nm,1.1s,mb4.6,baz=217,slow=6.2,SNR=29						
ULN	Ulaanbaatar	62.62	28	eP	P	23 34 24.1	+0.3
	comp=Z,6.0nm,1.5s,mb4.5						
WRA	Warramunga Arr	65.47	109	P	P	23 34 45.0	+2.0
	comp=Z,3.5nm,1.1s,mb4.3,baz=282,slow=5.6,SNR=5.7						
WRAB	Tennant Creek	65.48	109	P	P	23 34 42.1	-0.9
	comp=Z,5.8nm,0.9s,mb4.6						
FINES	FINESS Array B	74.03	340	LR	LR	00 07 46.3	
	comp=Z,27nm,18.4s,MS3.6,baz=176,slow=36						
MJAR	Matsushiro Arr	76.87	51	P	P	23 35 51.5	+0.3
	comp=Z,1.1nm,0.3s,mb4.2,baz=247,slow=9.5,SNR=6.6						
HFS	Hagfors	77.88	335	P	P	23 35 57.3	+1.0
	comp=Z,3.5nm,1.0s,mb4.2,baz=163,slow=15,SNR=2.4						
LPAZ	La Paz	132.22	243	PKP	PKPdf	23 43 17.2	+1.7
	comp=Z,0.9nm,1.0s,baz=62,slow=2.6,SNR=4.3						
DAU	Daniels Canyon	144.85	360	ePKPdf	PKPdf	23 43 38.3	+0.6
DAU				e		23 43 44.0	
NVAR	Mina Array Bea	146.24	10	PKPbc	PKPbc	23 43 41.3	+3.1
	comp=Z,2.0nm,0.9s,baz=43,slow=3.7,SNR=8.8						
TXAR	Lajitas Array	154.82	344	PKPbc	PKPdf	23 44 02.2	+8.9
	comp=Z,0.1nm,0.3s,slow=1.3,SNR=3.1						
TXAR				PKPab	PKPab	23 44 17.0	+0.4
	comp=Z,0.6nm,0.7s,baz=90,slow=1.3,SNR=6.5						

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*IDC **23** 23:24:50.2±1.2, 4.98S×68.45E, mb4.0/9, mb1 4.1/9, mb1mx3.9/18, mbtmp4.0/9, Error ellipse: s-maj=37.6km s-min=26.4km az=4.0*

ISC 23 23:24:50.1±1.2, **4.9S**±0.2×**68.5E**±0.2, **h10**^{km}, **n11**, σ**0^{s}80**/9, **mb4.0**/9, **Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	37.98	52	P	P	23 32 11.1	+0.9
	0.7nm,0.4s,mb3.7,baz=257,slow=8.9,SNR=4.5						
MKAR	Makanchi Array	52.92	12	P	P	23 34 07.9	-0.8
	1.0nm,0.7s,mb3.9,baz=195,slow=8.2,SNR=4.6						
BVAR	Borovoye Array	57.74	1	P	P	23 34 43.6	+0.1
	1.3nm,0.9s,mb4.0,baz=180,slow=4.3,SNR=3.7						
SONM	Songino Array	62.18	28	P	P	23 35 15.0	+0.8
	3.2nm,0.8s,mb4.5,baz=222,slow=6.6,SNR=10						
AKASG	Malin Array Be	64.84	334	P	P	23 35 30.0	-1.5
	0.2nm,0.3s,mb3.6,baz=135,slow=5.4,SNR=4.6						
WRA	Warramunga Arr	65.68	110	P	P	23 35 36.8	-0.6
	1.0nm,0.8s,mb3.9,baz=278,slow=6.0,SNR=4.7						
DBIC	Dimbokro	74.07	278	P	P	23 36 29.4	+0.5
	12nm,1.3s,mb4.7,baz=49,slow=8.9,SNR=4.0						
MJAR	Matsushiro Arr	76.86	51	P	P	23 36 44.1	-0.3
	1.0nm,0.4s,mb4.1,baz=248,slow=6.7,SNR=4.7						
ESDC	Sonseca Array	79.73	312	P	P	23 37 00.9	+0.9
	0.5nm,0.6s,mb3.6,baz=112,slow=4.9,SNR=4.2						
NVAR	Mina Array Bea	146.07	10	PKPbc	PKPbc	23 44 31.6	+0.7
	0.5nm,0.4s,SNR=4.0						
TXAR	Lajitas Array	154.59	344	PKPbc	PKPdf	23 44 54.4	+8.2
	0.2nm,0.3s,baz=27,slow=2.0,SNR=2.8						
TXAR				PKPab	PKPab	23 45 08.9	+0.2
	0.5nm,0.7s,baz=68,slow=4.9,SNR=2.8						

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*ATH **23** 23:25:06.8, 37.77N×26.75E, h20^{km}, MD3.9/15, ML3.8*

*NEIC **23** 23:25:06.8, 37.77N×26.75E, h20^{km}, ML3.8(ATH), After ATH.*

*ISK **23** 23:25:07.2, 37.82N×26.70E, h18^{km}, ML3.7*

*CSEM **23** 23:25:08.4±0.1, 37.81N×26.87E, h15^{km}, ML3.8, Error ellipse: s-maj=1.6km s-min=1.0km az=37.0*

*THE **23** 23:25:13.6, 37.93N×26.60E, h26^{km}, ML3.9*

ISC 23 23:25:08.0±0.3, **37.82N**±0.02×**26.72E**±0.02, **h18**^{km}±4^{km}, **n96**, σ**1^{s}07**/122, **3C-4D**, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.14	140	⇑iPB	Pb	23 25 11.3	-0.9
SMG				eSB	Sb	23 25 13.4	-1.6
URLA	Izmir	0.55	350	i P	Pb	23 25 19.2	+0.4
URLA				i S	Sb	23 25 28.0	+1.8
BLCB	Balcova	0.62	24	i PG	Pb	23 25 20.2	+0.2
IZM	Izmir	0.72	36	i PG	Pb	23 25 21.7	0.0
KDAG	Bornova	0.72	36	i P	Pb	23 25 21.8	0.0
KDAG				i S	Sb	23 25 31.2	-0.1
BODT	Bodrum	0.89	148	i PG	Pb	23 25 24.6	0.0
BODT				SG	Sb	23 25 38.0	+2.0
AYDN	Tasoluk	0.93	99	i P	Pb	23 25 24.9	-0.4
AYDN				i S	Sb	23 25 36.9	-0.4
BDRM	Kayabasi	0.95	142	i P	Pb	23 25 25.8	+0.2
BDRM				i S	Sb	23 25 38.4	+0.6
MLSB	Milas	0.99	122	i PG	Pb	23 25 26.1	-0.2
APE	Apeiranthos	1.21	232	i PN	Pn	23 25 29.7	-0.5
APE	Apeiranthos	1.21	232	⇑iPn	Pn	23 25 30.5	+0.3
APE				eSn	Sn	23 25 45.7	-0.5
APE	Apeiranthos	1.21	232	⇑iPN	Pn	23 25 30.0	-0.2
APE				eSN	Sn	23 25 46.0	-0.2
APE	Apeiranthos	1.21	232	i Pn	Pn	23 25 30.5	+0.3
NISR	Nisiros	1.25	165	ePN	Pn	23 25 29.5	-1.3
NISR	Nisiros	1.25	165	ePb	Pb	23 25 28.2	-2.5
AKS	Akhisar	1.36	39	i PN	Pn	23 25 32.7	+0.3
YER	Yerkesik	1.42	118	i PN	Pn	23 25 33.4	+0.2
PRK	Paraskevi	1.47	346	ePN	Pn	23 25 34.5	+0.6
PRK				eSN	Sn	23 25 55.6	+2.8
AYVA	Ayvalik	1.49	359	i P	Pn	23 25 37.1	+2.9
AYVA				i S	Sb	23 25 57.9	+4.6
MANT	Manisa	1.60	65	i P	Pn	23 25 38.5	+2.7
MANT				i S	Sn	23 25 56.6	+0.5

THR4	**Thira Island,**	**1.72**	**218**	*e*Pb	**Pb**	**23 25 41.0**	**+2.2**
THR3	**Thira Island,**	**1.76**	**217**	*e*Pb	**Pb**	**23 25 41.9**	**+2.4**
SANT	**Santorini**	**1.76**	**215**	*e*Pn	**Pn**	**23 25 37.9**	**-0.2**
SANT	**Santorini**	**1.76**	**215**	*e*Pn	**Pn**	**23 25 37.9**	**-0.2**
THR1	**Thera Island**	**1.76**	**215**	*e*Pb	**Pb**	**23 25 41.8**	**+2.3**
THR1				*e*Sb	**Sb**	**23 26 04.5**	**+3.2**
THR5	**Thira Island,**	**1.78**	**219**	*e*Pb	**Pb**	**23 25 42.1**	**+2.4**
DENT	**Denizli**	**1.83**	**91**	PN	**Pn**	**23 25 39.1**	**0.0**
DNZL	**Cakiroluk**	**1.85**	**93**	*i* P	**Pn**	**23 25 39.3**	**-0.1**
DNZL				*i* S	**Sn**	**23 26 08.6**	**+6.1**
DALT	**Dalyan (Mudla)**	**1.85**	**124**	PN	**Pn**	**23 25 39.5**	**+0.1**
ARG	**Arkhangelos**	**1.96**	**144**	*e*PN	**Pn**	**23 25 40.6**	**-0.3**
EZN	**Ezine**	**2.03**	**351**	PN	**Pn**	**23 25 41.8**	**-0.1**
BALB	**Balikesir**	**2.03**	**26**	PN	**Pn**	**23 25 41.3**	**-0.7**
BTOK	**Tokmak**	**2.19**	**27**	*i* P	**Pn**	**23 25 44.1**	**-0.2**
CANB	**Canakkale**	**2.21**	**7**	PN	**Pn**	**23 25 44.4**	**-0.2**
FETY	**Fethiye**	**2.23**	**121**	PN	**Pn**	**23 25 44.4**	**-0.4**
KHL	**Karahalli**	**2.27**	**76**	PN	**Pn**	**23 25 45.8**	**+0.4**
PTL	**Penteli**	**2.27**	**277**	⇓*i*PB	**Pb**	**23 25 46.0**	**-2.2**
KARP	**Karpathos**	**2.29**	**171**	*e*PB	**Pb**	**23 25 45.2**	**-3.4**
DST	**Dursunbey**	**2.33**	**39**	*e*PN	**Pn**	**23 25 46.5**	**+0.3**
GOLH	**Golhisar**	**2.33**	**104**	*i* P	**Pn**	**23 25 46.4**	**+0.1**
GOLH				*i* S	**Sn**	**23 26 23.4**	**+8.6**
ATH	**Athens Observa**	**2.38**	**275**	⇓*i*PB	**Pb**	**23 25 47.8**	**-2.3**
MPAR	**Parnis Oros**	**2.38**	**279**	*e*PB	**Pb**	**23 25 48.0**	**-2.1**
LIA	**Limnos Island**	**2.40**	**330**	⇓*i*PN	**Pn**	**23 25 47.8**	**+0.6**
LOS	**Limnos**	**2.47**	**329**	*e*Pn	**Pn**	**23 25 49.4**	**+1.2**
LOS				*e*Sn	**Sn**	**23 26 17.2**	**-1.0**
GDZ	**Gediz**	**2.51**	**59**	*i* P	**Pn**	**23 25 56.0**	**+7.1**
NAIG	**Nisos Aigina**	**2.56**	**270**	*e*PN	**Pn**	**23 25 49.6**	**0.0**
NSAL	**Nisos Salamina**	**2.58**	**273**	*e*PN	**Pn**	**23 25 50.5**	**+0.7**
AOS	**Alonnisos**	**2.60**	**302**	*e*Pn	**Pn**	**23 25 51.1**	**+1.0**
AOS				*e*Sn	**Sn**	**23 26 20.4**	**-1.2**
EDC	**Edincik**	**2.68**	**19**	PN	**Pn**	**23 25 50.0**	**-1.2**
BNT	**Bandirma**	**2.70**	**20**	PN	**Pn**	**23 25 50.7**	**-0.8**
NPS	**Neapolis**	**2.70**	**200**	*e*PN	**Pn**	**23 25 51.0**	**-0.6**
NPS				*e*SN	**Sn**	**23 26 22.5**	**-1.7**
MGER	**Gerania Oros**	**2.74**	**275**	*e*PN	**Pn**	**23 25 52.9**	**+0.8**
KCT	**Karacabey**	**2.75**	**27**	PN	**Pn**	**23 25 51.3**	**-1.0**
ELL	**Elmali**	**2.76**	**112**	*e*PN	**Pn**	**23 25 52.1**	**-0.3**
ORLT	**Orhaneli**	**2.80**	**37**	*e*PN	**Pn**	**23 25 52.8**	**-0.1**
AKAS	**Kas**	**2.80**	**124**	*i* P	**Pn**	**23 25 55.8**	**+2.8**
AKAS				*i* S	**Sn**	**23 26 32.1**	**+5.5**
TKTP	**Tekketepe**	**2.85**	**84**	*i* P	**Pn**	**23 25 54.4**	**+0.7**
MRMT	**Marmara Adasi**	**2.86**	**13**	PN	**Pn**	**23 25 53.0**	**-0.9**
ULDT	**Uludag**	**2.99**	**38**	*i* P	**Pn**	**23 26 04.1**	**+8.4**
ULDT				*i* S	**Sn**	**23 26 38.8**	**+7.5**
MFT	**Murefte**	**3.00**	**8**	*e*PN	**Pn**	**23 25 54.8**	**-1.0**
ISP	**Isparta**	**3.00**	**88**	*e*PN	**Pn**	**23 25 55.6**	**-0.2**
LKR	**Lokris**	**3.04**	**287**	*e*PN	**Pn**	**23 25 56.9**	**+0.4**
XRY	**Khrisi**	**3.05**	**196**	*e*PN	**Pn**	**23 25 56.7**	**+0.1**
NEO	**Neokhori**	**3.12**	**300**	*e*PN	**Pn**	**23 25 57.7**	**+0.2**
ALN	**Alexandroupoli**	**3.12**	**351**	*e*Pn	**Pn**	**23 25 58.3**	**+0.8**
ALN				*e*Sn	**Sn**	**23 26 33.5**	**-1.2**
VAM	**Vamos**	**3.15**	**221**	*e*PN	**Pn**	**23 25 57.2**	**-0.7**
XOR	**Xorichti**	**3.17**	**300**	*e*Pn	**Pn**	**23 25 58.9**	**+0.7**
XOR				*e*Sn	**Sn**	**23 26 34.8**	**-1.1**
PAIG	**Paliouri**	**3.17**	**313**	*e*Pn	**Pn**	**23 25 59.1**	**+0.9**
PAIG				*e*Sn	**Sn**	**23 26 34.5**	**-1.6**
VLI	**Veliai**	**3.21**	**251**	*e*PN	**Pn**	**23 25 58.3**	**-0.5**
OUR	**Ouranopolis**	**3.29**	**321**	*e*Pn	**Pn**	**23 26 00.6**	**+0.6**
OUR				*e*Sn	**Sn**	**23 26 37.8**	**-1.3**
KYTH	**Kithira**	**3.32**	**244**	*e*Pb	**Pb**	**23 26 04.0**	**-2.1**
RDO	**Rodhopi**	**3.45**	**345**	*e*PN	**Pn**	**23 26 02.5**	**+0.4**
CTT	**Catalca**	**3.58**	**21**	*e*PN	**Pn**	**23 26 03.9**	**-0.1**
PLG	**Polygyros**	**3.60**	**316**	*e*PN	**Pn**	**23 26 05.4**	**+1.0**
AGG	**Agios Georgios**	**3.65**	**291**	*e*Pn	**Pn**	**23 26 06.2**	**+1.2**
AGG				*e*Sn	**Sn**	**23 26 46.9**	**-1.3**
ESKT	**Eskisehir**	**3.65**	**61**	*e*PN	**Pn**	**23 26 04.2**	**-0.9**
ISK	**Istanbul-Kandi**	**3.71**	**28**	*e*PN	**Pn**	**23 26 05.7**	**-0.2**
ITM	**Ithomi**	**3.87**	**262**	*e*PN	**Pn**	**23 26 08.8**	**+0.7**
SOH	**Sokhos**	**3.98**	**320**	*e*Pn	**Pn**	**23 26 10.4**	**+0.8**
SOH				*e*Sn	**Sn**	**23 26 54.6**	**-1.7**
LIT	**Litokhoron**	**4.01**	**306**	*e*Pn	**Pn**	**23 26 10.9**	**+0.8**
EVR	**Evrytania**	**4.01**	**287**	⇓*i*PN	**Pn**	**23 26 11.7**	**+1.5**
SRS	**Serrai**	**4.09**	**325**	*e*Pn	**Pn**	**23 26 11.8**	**+0.6**
NVR	**Nevrokopi**	**4.16**	**329**	*e*PN	**Pn**	**23 26 12.5**	**+0.2**
RLS	**Riolos of Patr**	**4.16**	**275**	*e*PN	**Pn**	**23 26 12.9**	**+0.6**
KIZT	**Kizilcal**	**4.19**	**74**	*e*PN	**Pn**	**23 26 12.6**	**-0.2**
HENT	**Hendek**	**4.42**	**46**	*i* P	**Pn**	**23 26 30.4**	**+14**
HENT				*i* S	**Sn**	**23 27 27.8**	**+20**
KONT	**Konya--Tatoy**	**4.46**	**87**	*e*PN	**Pn**	**23 26 15.7**	**-0.9**
SGKT	**Sivrigoynuk**	**4.97**	**55**	*i* P	**Pn**	**23 26 43.3**	**+19**
FNA	**Florina**	**5.09**	**307**	*e*Pn	**Pn**	**23 26 26.7**	**+1.2**
IGT	**Igoumenitsa**	**5.28**	**291**	*e*Pn	**Pn**	**23 26 28.9**	**+0.7**
BR131	**Keskin Array S**	**5.73**	**68**	*e*Pn	**Pn**	**23 26 33.7**	**-0.8**
	1.3nm,0.4s						
BR131	**Keskin Array S**	**5.73**	**68**	*e*Pn	**Pn**	**23 26 33.7**	**-0.8**
	1.3nm,0.4s						
TIP	**Timpagrande**	**7.93**	**283**	*e*Pn	**Pn**	**23 27 05.2**	**-0.2**
TIP	**Timpagrande**	**7.93**	**283**	*e*Pn	**Pn**	**23 27 05.2**	**-0.2**
SLCN	**Sala Consilina**	**8.99**	**290**	P	**P**	**23 27 20.6**	**+0.4**
SGO	**Sicignano**	**9.27**	**291**	P	**P**	**23 27 23.9**	**-0.1**
	6.7nm,0.9s						

IDC 23 23:36:20.1±2.4**, 30.86N**×**138.63E, h408**^{km}±29^{km}**, mb2.9**/5**, mb1 3.0**/6**, mb1mx2.8**/20**, mbtmp3.7**/6**, Error ellipse: s-maj=62.8km s-min=18.6km az=73.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**5.68**	**357**	P	P	23 37 49.2	-1.0
	0.9nm,0.3s,baz=167,slow=11,SNR=3.9						
SONM	**Songino Array**	**29.86**	**314**	P	P	23 41 52.3	-1.2
	0.2nm,0.4s,baz=121,slow=8.4,SNR=3.9						
MKAR	**Makanchi Array**	**45.71**	**307**	P	P	23 44 02.2	-1.8
	0.3nm,0.3s,baz=79,slow=11,SNR=8.4						
WRA	**Warramunga Arr**	**50.67**	**185**	P	P	23 44 40.1	-2.0
	0.7nm,0.5s,baz=0.4,slow=7.6,SNR=8.2						
FINES	**FINESS Array B**	**73.20**	**332**	P	P	23 47 07.7	-1.1
	0.6nm,0.5s,baz=72,slow=6.0,SNR=10						
AKASG	**Malin Array Be**	**77.75**	**322**	P	P	23 47 33.1	-1.3
	0.1nm,0.3s,baz=51,slow=5.6,SNR=4.0						

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*IDC **23** 23:45:12.7±0.7, 29.34S×112.27W, mb4.0/6, mb1 4.2/7, mb1mx4.1/17, mbtmp4.0/7, ML4.3/1, MS3.9/7, Ms1 3.9/7, ms1mx3.7/16, Error ellipse: s-maj=28.4km s-min=22.7km az=110.0*

*NEIC **23** 23:45:20.3±0.8, 29.39S×111.35W, h10^{km}, mb4.7/9, Error ellipse: s-maj=23.2km s-min=13.9km az=111.0*

ISC 23 23:45:12.9±0.8**, 29.3S**±0.1×**112.3W**±0.2**, h10**^{km}**, n28,** σ**1**$\overset{s}{.}$**52**/19**, mb4.3**/15**, MS3.9**/6**, 2C, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**3.38**	**52**	Pn	**Pn**	**23 46 06.4**	**-0.5**
	31nm,0.3s,baz=230,slow=6.8,SNR=9.3						
RPN				LR	LR	23 47 14.4	
	comp=Z,3µm,20.2s,baz=138,slow=36						
RPN	**Rapa Nui**	**3.38**	**52**	*e*P	**Pn**	**23 46 05.8**	**-1.1**
PPT	**Papeete**	**35.98**	**281**	LR	LR	00 02 14.9	
	comp=Z,212nm,21.5s,MS3.9,baz=142,slow=28						
TRQA	**Tornquist**	**42.36**	**116**	P	**P**	**23 53 08.7**	**-0.2**
	4.8nm,0.9s,mb4.1						
LPAZ	**La Paz**	**42.49**	**82**	P	**P**	**23 53 11.9**	**+1.7**
	1.0nm,0.9s,mb3.5,baz=249,slow=9.2,SNR=5.9						
LPAZ				LR	LR	00 06 51.0	
	comp=Z,139nm,18.2s,MS3.9,baz=233,slow=31						
LPAZ	**La Paz**	**42.49**	**82**	P	**P**	**23 53 11.3**	**+1.1**
OTAV	**Otavalo**	**43.65**	**54**	*e*P	**P**	**23 53 22.1**	**+2.4**
	17nm,1.7s,mb4.5						
ROSC	**El Rosal**	**49.81**	**53**	LR	LR	00 11 39.8	
	comp=Z,213nm,21.5s,MS4.1,baz=232,slow=32						
SAML	**Samuel**	**50.20**	**76**	*e*P	**P**	**23 54 10.3**	**-0.9**
	24nm,1.9s,mb4.9						
SDV	**Santo Domingo**	**55.23**	**53**	*e*P	**P**	**23 54 45.2**	**-3.6**
	9.1nm,1.1s,mb4.7						
TXAR	**Lajitas Array**	**58.86**	**9**	LR	LR	00 15 42.3	
	comp=Z,45nm,20.9s,MS3.6,baz=290,slow=31						
SBA	**Scott Base**	**59.70**	**194**	*e*P	**P**	**23 55 24.8**	**+5.4**
	9.2nm,1.2s,mb4.7						
BDFB	**Brasilia**	**60.30**	**92**	P	**P**	**23 55 21.6**	**-2.8**
	3.2nm,0.8s,mb4.4,baz=214,slow=8.8,SNR=4.0						
VNDA	**Vanda**	**60.75**	**194**	P	**P**	**23 55 25.4**	**-1.3**
	1.3nm,0.9s,mb4.0,baz=90,slow=5.1,SNR=6.2						
VNDA				LR	LR	00 15 39.5	
	comp=Z,94nm,21.1s,MS3.9,baz=91,slow=30						
QSPA	**South Pole Qui**	**60.91**	**180**	*e*P	**P**	**23 55 32.7**	**+5.0**
	11nm,1.1s,mb4.9						
CMB	**Columbia Colle**	**67.38**	**353**	*e*P	**P**	**23 56 17.8**	**+7.3**
	4.3nm,1.0s,mb4.4						
NVAR	**Mina Array Bea**	**67.58**	**355**	P	**P**	**23 56 12.4**	**+0.7**
	1.8nm,0.8s,mb4.1,baz=158,slow=7.9,SNR=9.4						
NVAR				LR	LR	00 19 34.9	
	comp=Z,97nm,18.5s,MS4.1,baz=260,slow=30						
SNAA	**Sanae**	**68.33**	**161**	P	**P**	**23 56 19.1**	**+3.2**
	9.0nm,1.3s,mb4.6						
PDAR	**Pinedale Array**	**71.73**	**2**	P	**P**	**23 56 36.5**	**-0.6**
	0.2nm,0.3s,mb3.5,baz=174,slow=9.1,SNR=2.5						
HLID	**Hailey**	**72.50**	**358**	*e*P	**P**	**23 56 47.2**	**+5.5**
	2.6nm,0.9s,mb4.2						
SYO	**Syowa Base**	**79.86**	**170**	⇑X	**P**	**23 57 22.0**	**-0.6**
SYO	**Syowa Base**	**79.86**	**170**	⇑pP	pP	23 57 26.5	+0.7
MAW	**Mawson**	**83.36**	**178**	P	**P**	**23 57 40.7**	**-0.2**
	1.9nm,0.8s,mb4.2,baz=229,slow=9.3,SNR=2.4						
AKASG	**Malin Array Be**	**144.14**	**42**	PKP	PKPdf	00 04 49.4	-2.1
	0.2nm,0.4s,baz=281,slow=4.7,SNR=4.6						
SONM	**Songino Array**	**144.97**	**313**	PKPbc	PKPbc	00 04 50.2	-0.1
	3.5nm,0.8s,baz=87,slow=2.6,SNR=34						
CMAR	**Chiang Mai Arr**	**149.55**	**256**	PKPbc	PKPdf	00 05 04.7	+3.1
	0.4nm,0.5s,baz=180,slow=0.9,SNR=3.4						
BRTR	**Keskin Array B**	**150.22**	**60**	PKPbc	PKPdf	00 05 06.2	+4.2
	2.1nm,1.0s,baz=207,slow=2.8,SNR=7.2						
MKAR	**Makanchi Array**	**159.13**	**331**	PKPab	PKPab	00 05 48.4	-1.6
	0.4nm,0.7s,baz=72,slow=4.6,SNR=4.2						

GUC 23 23:46:22.3±0.5**, 20.11S**×**69.20W, h101**^{km}±2^{km}**, ML4.3, Northern Chile**

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*ATH **23** 23:49:16.1, 38.91N×26.15E, h22^{km}±1^{km}, MD3.3/3*

*ISK **23** 23:49:16.1, 38.92N×25.85E, h29^{km}, MD3.3*

*NEIC **23** 23:49:16.1, 38.91N×26.15E, h22^{km}, MD3.3(ATH), After ATH.*

*CSEM **23** 23:49:16.8±0.1, 38.97N×26.19E, h8^{km}, MD3.3, Error ellipse: s-maj=3.1km s-min=2.0km az=15.0*

*THE **23** 23:49:20.5, 38.94N×26.04E, h20^{km}, ML3.4*

ISC 23 23:49:16.4±0.7**, 38.96N**±0.03×**26.07E**±0.03**, h9**^{km}±5^{km}**, n30,** σ**0**$\overset{s}{.}$**69**/40**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.33**	**28**	⇑*i*PB	**Pb**	**23 49 23.8**	**-0.1**
PRK				*e*SB	**Sb**	**23 49 29.1**	**+0.1**
EZN	**Ezine**	**0.89**	**13**	*i* PG	**Pg**	**23 49 34.1**	**0.0**
BLCB	**Balcova**	**0.95**	**127**	*i* PG	**Pg**	**23 49 35.3**	**-0.1**
BLCB				SG	**Sg**	**23 49 48.8**	**+0.7**
IZM	**Izmir**	**1.09**	**121**	*i* PN	**Pn**	**23 49 37.8**	**+0.1**
IZM				SN	**Sn**	**23 49 53.7**	**+0.7**
LIA	**Limnos Island**	**1.16**	**324**	*e*PN	**Pn**	**23 49 39.8**	**+1.0**
LIA				*e*SN	**Sn**	**23 49 56.7**	**+1.8**
LOS	**Limnos**	**1.24**	**322**	*e*Pg	**Pg**	**23 49 41.3**	**+0.2**
LOS				*e*Sg	**Sg**	**23 49 57.4**	**-0.3**
CANB	**Canakkale**	**1.30**	**36**	PN	**Pn**	**23 49 41.0**	**+0.2**
AKS	**Akhisar**	**1.36**	**93**	PN	**Pn**	**23 49 42.2**	**+0.6**
LPK	**Lapseki**	**1.51**	**20**	PN	**Pn**	**23 49 43.5**	**-0.3**
BALB	**Balikesir**	**1.56**	**64**	*e*PN	**Pn**	**23 49 44.7**	**+0.2**
AOS	**Alonnisos**	**1.72**	**278**	*e*Pb	**Pb**	**23 49 47.7**	**-0.1**
AOS				*e*Sb	**Sb**	**23 50 08.6**	**-0.8**
APE	**Apeiranthos**	**1.94**	**193**	*e*PN	**Pn**	**23 49 46.8**	**-3.1**
APE	**Apeiranthos**	**1.94**	**193**	*e*Pn	**Pn**	**23 49 49.5**	**-0.4**
ALN	**Alexandroupoli**	**1.94**	**359**	*e*Pb	**Pb**	**23 49 50.8**	**-0.6**
ALN				*e*Sb	**Sb**	**23 50 14.7**	**-1.0**
BNT	**Bandirma**	**2.00**	**45**	PN	**Pn**	**23 49 50.4**	**-0.3**
MRMT	**Marmara Adasi**	**2.02**	**35**	PN	**Pn**	**23 49 50.6**	**-0.5**
PAIG	**Paliouri**	**2.09**	**298**	*e*Pn	**Pn**	**23 49 52.6**	**+0.5**
PAIG				*e*Sn	**Sn**	**23 50 18.1**	**-0.3**
OUR	**Ouranopolis**	**2.12**	**311**	*e*Pn	**Pn**	**23 49 53.2**	**+0.7**
OUR				*e*Sn	**Sn**	**23 50 18.6**	**-0.6**
BODT	**Bodrum**	**2.13**	**152**	*e*PN	**Pn**	**23 49 51.4**	**-1.3**
MLSB	**Milas**	**2.14**	**141**	*e*PN	**Pn**	**23 49 51.9**	**-0.9**
RDO	**Rodhopi**	**2.22**	**350**	*e*PB	**Pb**	**23 49 55.0**	**-1.4**
XOR	**Xorichti**	**2.28**	**281**	*e*Pn	**Pn**	**23 49 55.6**	**+0.8**
ORLT	**Orhaneli**	**2.44**	**63**	*e*PN	**Pn**	**23 49 57.6**	**+0.5**
PLG	**Polygyros**	**2.47**	**306**	*e*PN	**Pn**	**23 49 58.1**	**+0.6**
YER	**Yerkesik**	**2.52**	**136**	*e*PN	**Pn**	**23 49 57.6**	**-0.7**
SOH	**Sokhos**	**2.80**	**313**	*e*Pn	**Pn**	**23 50 02.9**	**+0.6**
SOH				*e*Sn	**Sn**	**23 50 35.9**	**-0.6**
SRS	**Serrai**	**2.88**	**319**	*e*Pn	**Pn**	**23 50 04.0**	**+0.7**
AGG	**Agios Georgios**	**2.92**	**272**	*e*Pn	**Pn**	**23 50 04.0**	**+0.1**
LIT	**Litokhoron**	**3.00**	**293**	*e*Pn	**Pn**	**23 50 05.8**	**+0.7**
YLV	**Yalova**	**3.01**	**57**	*e*PN	**Pn**	**23 50 05.2**	**0.0**

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*ISK **23** 23:52:05.9, 39.44N×41.00E, h30^{km}, MD3.5*

*CSEM **23** 23:52:05.8±0.1, 39.43N×40.99E, h30^{km}, MD3.5, Error ellipse: s-maj=2.4km s-min=1.8km az=117.0*

ISC 23 23:52:06.4±0.9**, 39.42N**±0.05×**41.01E**±0.07**, h29**^{km}±12^{km}**, n16,** σ**0**$\overset{s}{.}$**89**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZM	**Erzurum**	**0.56**	**29**	*i* PG	**Pb**	**23 52 17.3**	**-0.4**
ERZM	**Erzurum**	**0.56**	**30**	*i* P	**Pb**	**23 52 17.3**	**-0.4**
ERZM				*i* S	**Sb**	**23 52 27.2**	**+1.8**
BTMT	**Batman**	**1.28**	**163**	*i* PN	**Pn**	**23 52 28.8**	**+0.2**
BTMT				SN	**Sn**	**23 52 46.0**	**+1.1**
PTK	**Pertek**	**1.36**	**248**	*i* PN	**Pn**	**23 52 28.9**	**-0.9**
KELT	**Kelkit**	**1.53**	**299**	*i* P	**Pn**	**23 52 32.2**	**-0.1**
KELT				*i* S	**Sn**	**23 52 53.6**	**+2.2**
BEST	**Besiri**	**1.54**	**172**	*i* P	**Pn**	**23 52 32.4**	**+0.1**
BEST				*i* S	**Sn**	**23 52 54.6**	**+3.2**
GUMT	**Gumushane**	**1.57**	**312**	PN	**Pn**	**23 52 32.4**	**-0.4**
DIY	**Diyarbakir**	**1.64**	**202**	*i* PN	**Pn**	**23 52 34.0**	**+0.3**
ELZG	**Elazig**	**1.82**	**240**	*i* P	**Pn**	**23 52 36.3**	**-0.1**
KARS	**Kars**	**2.00**	**53**	*e*PN	**Pn**	**23 52 38.4**	**-0.5**
BCA	**Borcka**	**2.08**	**13**	PN	**Pn**	**23 52 39.6**	**-0.5**
VANT	**Van**	**2.10**	**117**	*e*PN	**Pn**	**23 52 39.5**	**-0.8**
SIRT	**Sirnak**	**2.22**	**149**	PN	**Pn**	**23 52 41.3**	**-0.8**
MYA	**Malataya**	**2.29**	**242**	*e*PN	**Pn**	**23 52 42.5**	**-0.6**
MALT	**Malatya**	**2.29**	**242**	*e*PN	**Pn**	**23 52 42.8**	**-0.4**
URFA	**Urfa**	**2.62**	**222**	*e*PN	**Pn**	**23 52 47.2**	**-0.5**

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*IDC **24** 00:08:06.8±2.3, 29.75S×111.90W, mb3.6/2, mb1 4.1/2, mb1mx3.7/16, mbtmp3.6/2, MS3.8/3, Ms1 3.8/3, ms1mx3.4/13, Error ellipse: s-maj=101.0km s-min=69.6km az=86.0*

*NEIC **24** 00:08:09.2±1.3, 29.53S×112.20W, h10^{km}, mb4.3/4, Error ellipse: s-maj=34.9km s-min=22.0km az=168.0*

ISC 24 00:08:08.9±2.4**, 29.3S**±0.4×**112.3W**±0.2**, h10**^{km}**, n12,** σ**0**$\overset{s}{.}$**23**/7**, mb4.1**/6**, MS3.8**/3**, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**3.36**	**51**	*e*Pn	**Pn**	**00 09 02.5**	**0.0**
LPAZ	**La Paz**	**42.44**	**82**	LR	LR	00 30 43.6	
	comp=Z,56nm,20.2s,MS3.5,baz=247,slow=32						
SAML	**Samuel**	**50.16**	**76**	*e*P	**P**	**00 17 06.9**	**0.0**
	3.3nm,1.0s,mb4.3						
TXAR	**Lajitas Array**	**58.87**	**9**	P	**P**	**00 18 10.4**	**0.0**
	0.2nm,0.7s,mb3.3,baz=190,slow=5.5,SNR=2.6						
VNDA	**Vanda**	**60.74**	**194**	LR	LR	00 38 35.2	
	comp=Z,96nm,18.9s,MS4.0,baz=180,slow=30						
MNV	**Mina**	**67.60**	**355**	*e*P	**P**	**00 19 07.9**	**0.0**
	5.1nm,0.9s,mb4.5						
NVAR	**Mina Array Bea**	**67.61**	**355**	P	**P**	**00 19 08.4**	**+0.4**
	1.9nm,0.9s,mb4.1,baz=168,slow=8.7,SNR=7.9						
WVOR	**Wild Horse Val**	**71.62**	**355**	P	**P**	**00 19 32.0**	**-0.4**
	2.9nm,0.9s,mb4.2						
HLID	**Hailey**	**72.53**	**358**	*e*P	**P**	**00 19 37.8**	**0.0**
	1.5nm,0.8s,mb4.0						
YKA	**Yellowknife Ar**	**91.49**	**359**	LR	LR	00 57 04.0	
	comp=Z,53nm,18.6s,MS4.0,baz=245,slow=32						
SONM	**Songino Array**	**145.03**	**313**	PKPbc	PKPbc	00 27 46.3	-0.1
	1.6nm,0.8s,baz=77,slow=1.9,SNR=11						
BRTR	**Keskin Array B**	**150.19**	**60**	PKPbc	PKPdf	00 27 59.4	+1.5
	0.4nm,0.5s,baz=188,slow=2.9,SNR=5.1						

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*TAP **24** 00:13:55.9, 24.40N×121.91E, h16^{km}, ML2.6*

JMA 24 00:14:33.6±0.1**, 24.17N**×**123.87E, h16**^{km}±2^{km}**, M1.6, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.13**	**208**	P	Pb	00 14 37.1	-0.3
HATJ				*e*S	Sb	00 14 39.9	0.0
JKRS	**Kuro-shima**	**0.14**	**62**	P	Pb	00 14 37.6	0.0
JKRS				*e*S	Sb	00 14 40.7	+0.4
IRIF	**Iriomote-Funau**	**0.21**	**322**	P	Pb	00 14 38.4	-0.2
IRIF				*e*S	Sb	00 14 41.5	-0.4
JIJ	**Ishigaki jima**	**0.32**	**52**	P	Pb	00 14 40.1	-0.3
JIJ				*e*S	Sb	00 14 44.5	-0.5
YOJ	**Yonaguni jima**	**0.84**	**291**	P	Pb	00 14 49.6	+0.3
YOJ				*e*S	Sb	00 15 01.3	+1.3
JTJ	**Tarama**	**0.89**	**58**	P	Pb	00 14 50.8	+0.6
JTJ				*e*S	Sb	00 15 03.0	+1.4

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*ATH **24** 00:21:33.2, 37.37N×26.86E, h19^{km}±2^{km}, MD3.4/4*

*ISK **24** 00:21:33.4, 37.39N×26.77E, h12^{km}, MD3.4*

*NEIC **24** 00:21:33.0, 37.36N×26.87E, h22^{km}, MD3.4(ATH), After ATH.*

*CSEM **24** 00:21:34.0±0.1, 37.34N×26.81E, h12^{km}, MD3.4, Error ellipse: s-maj=2.3km s-min=1.6km az=24.0*

ISC 24 00:21:33.4±0.7**, 37.37N**±0.03×**26.76E**±0.04**, h8**^{km}±5^{km}**, n24,** σ**0**$\overset{s}{.}$**77**/34**, 1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.34**	**10**	⇑*i*PB	**Pb**	**00 21 40.9**	**-0.4**
SMG				*e*SB	**Sb**	**00 21 46.0**	**-0.5**
BODT	**Bodrum**	**0.53**	**125**	*i* PG	**Pg**	**00 21 44.5**	**+0.3**
BDRM	**Kayabasi**	**0.62**	**119**	*i* P	**Pg**	**00 21 45.6**	**-0.3**
BDRM				*i* S	**Sg**	**00 21 56.0**	**+1.7**
MLSB	**Milas**	**0.81**	**95**	PG	**Pg**	**00 21 49.1**	**-0.6**
MLSB				SG	**Sg**	**00 22 01.2**	**+0.7**
NISR	**Nisiros**	**0.81**	**159**	*e*PB	**Pb**	**00 21 48.0**	**-1.3**
AYDN	**Tasoluk**	**0.93**	**72**	*i* P	**Pb**	**00 21 51.0**	**-0.4**
AYDN				*i* S	**Sb**	**00 22 03.5**	**-0.2**
URLA	**Izmir**	**1.00**	**352**	*i* P	**Pb**	**00 21 53.2**	**+0.7**
URLA				*i* S	**Sb**	**00 22 09.2**	**+3.6**
APE	**Apeiranthos**	**1.03**	**253**	PG	**Pg**	**00 21 53.7**	**-0.3**
APE	**Apeiranthos**	**1.03**	**253**	*e*PN	**Pn**	**00 21 54.4**	**+0.4**
APE				*e*SN	**Sn**	**00 22 10.0**	**+1.4**
APE	**Apeiranthos**	**1.03**	**253**	*e*Pn	**Pn**	**00 21 54.4**	**+0.4**
APE				*e*Sn	**Sn**	**00 22 10.0**	**+1.4**
BLCB	**Balcova**	**1.04**	**12**	PG	**Pg**	**00 21 53.4**	**-0.8**
IZM	**Izmir**	**1.10**	**21**	PN	**Pn**	**00 21 54.4**	**-0.6**
KDAG	**Bornova**	**1.10**	**21**	*i* P	**Pb**	**00 21 54.4**	**0.0**
KDAG				*i* S	**Sb**	**00 22 10.2**	**+1.6**
YER	**Yerkesik**	**1.23**	**101**	PN	**Pn**	**00 21 57.1**	**+0.2**
ARG	**Arkhangelos**	**1.59**	**136**	*e*Pn	**Pn**	**00 22 02.4**	**+0.4**
ARG				*e*Sn	**Sn**	**00 22 21.4**	**-1.4**
DALT	**Dalyan (Mudla)**	**1.61**	**111**	*e*PN	**Pn**	**00 22 02.4**	**0.0**
AKS	**Akhisar**	**1.72**	**28**	PN	**Pn**	**00 22 03.8**	**-0.1**
DNZL	**Cakiroluk**	**1.84**	**79**	*i* P	**Pn**	**00 22 05.7**	**+0.1**
DENT	**Denizli**	**1.84**	**77**	*e*PN	**Pn**	**00 22 05.6**	**0.0**
PRK	**Paraskevi**	**1.91**	**348**	*e*PB	**Pb**	**00 22 06.5**	**-1.6**
PRK				*e*SN	**Sn**	**00 22 31.3**	**+0.2**
FETY	**Fethiye**	**2.00**	**111**	*e*PN	**Pn**	**00 22 08.1**	**+0.3**
ELL	**Elmali**	**2.59**	**103**	*e*PN	**Pn**	**00 22 16.6**	**+0.3**
LIA	**Limnos Island**	**2.81**	**334**	*e*PN	**Pn**	**00 22 19.7**	**+0.2**
RDO	**Rodhopi**	**3.89**	**346**	*e*PN	**Pn**	**00 22 34.5**	**-0.3**

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*IDC **24** 00:33:01.1±6.1, 39.45N×78.40E, mb3.6/2, mb1 3.6/4, mb1mx3.3/21, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=100.1km s-min=42.8km az=140.0*

*BJI **24** 00:33:05.3, 40.13N×77.56E, h16^{km}, ML3.5*

*NNC **24** 00:33:15.0±4.3, 40.86N×78.11E, mpv3.2, Error ellipse: s-maj=57.6km s-min=19.0km az=166.0*

ISC 24 00:33:01.6±2.5**, 39.6N**±0.2×**77.9E**±0.1**, h10**^{km}**, n16,** σ**1**$\overset{s}{.}$**36**/17**, mb3.5**/2**, 5C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.50**	**269**	PG	**Pg**	**00 33 30.1**	**-1.5**
KSH				SG	**Sg**	**00 33 49.3**	**-2.3**
KSH				Smax			
	comp=N,880nm,0.3s						
KSH				Smax			
	comp=E,720nm,0.3s						
ULHL	**Ulahol**	**2.96**	**335**	P	**Pn**	**00 33 50.6**	**+1.1**
	SNR=17						
KZA	**Kyzart**	**3.22**	**322**	P	**Pn**	**00 33 53.5**	**+0.3**
	SNR=55						
UCH	**Uchtor**	**3.70**	**317**	P	**Pn**	**00 34 00.2**	**+0.2**
	SNR=8.9						
TKM2	**Tokmak 2**	**3.77**	**333**	P	**Pn**	**00 34 01.0**	**-0.2**
	SNR=18						
KBK	**Karagaybulak**	**3.81**	**325**	P	**Pn**	**00 34 07.8**	**+6.2**
	SNR=16						
AAK	**Ala-Archa**	**4.00**	**321**	⇑Pn	**Pn**	**00 34 09.0**	**+4.6**
	comp=E,12nm,0.6s						
AAK				⇑Lg		00 34 56.9	
	comp=E,79nm,1.1s						
AML	**Almayashu**	**4.09**	**310**	P	**Pn**	**00 34 06.0**	**+0.3**
	SNR=45						
EKS2	**Erkin-Say**	**4.39**	**316**	P	**Pn**	**00 34 10.5**	**+0.5**
	SNR=14						
USP	**Ospenovka**	**4.50**	**326**	P	**Pn**	**00 34 16.9**	**+5.5**
	SNR=14						
KK31	**Karatay Array**	**6.59**	**305**	⇓Pn	**Pn**	**00 34 48.3**	**+7.3**
	comp=E,1.6nm,0.6s,baz=112,slow=14,SNR=5.6						
KK31				⇑Lg		00 36 22.6	
	comp=E,3.1nm,0.6s,baz=116,slow=27,SNR=4.3						
MK31	**Makanchi Array**	**7.89**	**22**	⇑Pn	**Pn**	**00 34 56.4**	**-2.9**
	comp=E,0.3nm,0.4s,baz=202,slow=14,SNR=11						
MK31				⇑Lg		00 36 46.0	
	comp=E,1.1nm,0.6s						
MKAR	**Makanchi Array**	**7.89**	**22**	Pn	**Pn**	**00 34 57.9**	**-1.4**
	comp=E,0.2nm,0.3s,baz=204,slow=15,SNR=8.3						
BVAR	**Borovoye Array**	**14.41**	**341**	Pn	**P**	**00 36 26.7**	**-0.8**
	comp=E,0.1nm,0.3s,baz=150,slow=12,SNR=4.0						
ARCES	**ARCESS Array B**	**40.55**	**335**	P	**P**	**00 40 44.3**	**+2.0**
	comp=E,2.2nm,1.1s,mb3.7,baz=108,slow=7.7,SNR=7.4						
GERES	**GERESS Array B**	**45.70**	**304**	P	**P**	**00 41 26.3**	**+2.1**
	comp=E,0.2nm,0.6s,mb3.2,baz=60,slow=7.9,SNR=3.9						

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*BJI **24** 01:46:18.0, 26.44N×93.11E, h59^{km}, mB4.6, mb4.9, ML4.3, Ms3.7, Msz3.6*

*NEIC **24** 01:46:20.2±0.6, 26.48N×93.14E, h54^{km}±5^{km}, mb4.3/22, Error ellipse: s-maj=7.3km s-min=5.3km az=189.0*

*IDC **24** 01:46:20.1±0.6, 26.52N×93.20E, h50^{km}±4^{km}, mb3.8/16, mb1 4.0/17, mb1mx3.9/23, mbtmp4.1/17, Error ellipse: s-maj=19.9km s-min=13.1km az=45.0*

ISC 24 01:46:17.8±0.5**, 26.57N**±0.03×**93.08E**±0.03**, h45**^{km}±5^{km}**, h50**^{km}±1.1^{km}**: pP-P, n88,** σ**1**$\overset{s}{.}$**05**/105**, mb4.2**/37**, 1D, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**1.46**	**227**	*e*P	**P**	**01 46 46.5**	**+4.2**
SHL				*e*x	**S**	**01 47 01.0**	**+0.6**
IMP	**Imphal**	**1.94**	**156**	*i* x	**P**	**01 46 51.0**	**+2.1**
IMP				*i* x	x	01 47 05.0	
IMP				*i* x	**S**	**01 47 13.0**	**+0.9**
IMP				*i* SN	x	01 47 27.0	
LKP	**Lekhapani**	**2.78**	**73**	*e*P	**P**	**01 47 01.0**	**+0.1**
LKP				*e*S	**S**	**01 47 33.0**	**-0.4**
AGT	**Agartala**	**3.14**	**212**	*i* x	**P**	**01 47 07.0**	**+0.9**
AGT				*i* x	x	01 48 16.0	
LSA	**Lhasa**	**3.55**	**332**	P	**P**	**01 47 17.3**	**+5.4**
LSA				Smax			
	comp=N,100nm,0.6s						
LSA				Smax			
	comp=E,170nm,0.6s						
LSA	**Lhasa**	**3.55**	**332**	*e*Pn	**P**	**01 47 17.1**	**+5.2**
LSA				*e*Sn	**S**	**01 47 54.5**	**+1.4**
CAL	**Calcutta**	**5.89**	**228**	*e*x	**S**	**01 48 39.9**	**-12**
GUN	**Gumba**	**6.54**	**283**	*e*Pn	**P**	**01 47 55.7**	**+1.7**
GUN				*e*Sn	**S**	**01 49 08.8**	**+0.7**
	comp=E,367nm,0.4s						
GUN	**Gumba**	**6.54**	**283**	*e*Pn	**P**	**01 47 55.7**	**+1.7**
	comp=E,184nm,0.4s						
GUN				*e*Sn	**S**	**01 49 08.8**	**+0.7**
PKI	**Pulchoki**	**6.91**	**280**	*e*Pn	**P**	**01 47 59.6**	**+0.5**
PKI				*e*Sn	**S**	**01 49 14.4**	**-2.8**
	comp=E,180nm,0.5s						
PKI	**Pulchoki**	**6.91**	**280**	*e*Pn	**P**	**01 47 59.6**	**+0.5**
	comp=E,90nm,0.4s						
PKI				*e*Sn	**S**	**01 49 14.4**	**-2.8**
KKN	**Kakani**	**7.05**	**282**	*e*Pn	**P**	**01 48 01.8**	**+0.8**
KKN				*e*Sn	**S**	**01 49 19.2**	**-1.5**
	comp=E,214nm,0.4s						
KKN	**Kakani**	**7.05**	**282**	*e*Pn	**P**	**01 48 01.8**	**+0.8**
	comp=E,107nm,0.4s						
KKN				*e*Sn	**S**	**01 49 19.2**	**-1.5**
BOK	**Bokaro**	**7.07**	**249**	*e*P	**P**	**01 48 01.5**	**+0.1**

BOK				*e*S	S	01 49 18.1	-3.2
BOK				AML	AML	01 49 21.1	
	comp=N,105nm,0.3s						
DMN	Daman	7.18	280	*e*Pn	P	01 48 03.4	+0.6
DMN				*e*Sn	S	01 49 20.2	-3.7
	comp=N,183nm,0.5s						
DMN	Daman	7.18	280	*e*Pn	P	01 48 03.4	+0.6
	comp=N,92nm,0.5s						
DMN				*e*Sn	S	01 49 20.2	-3.7
GKN	Gorkha	7.64	283	*e*Pn	P	01 48 10.0	+0.7
GKN				*e*Sn	S	01 49 32.4	-3.1
	comp=N,210nm,0.3s						
GKN	Gorkha	7.64	283	*e*Pn	P	01 48 10.0	+0.7
	comp=N,105nm,0.3s						
GKN				*e*Sn	S	01 49 32.4	-3.1
KOLN	Koldanda	8.53	280	*e*Pn	P	01 48 21.0	-0.4
KMI	Kunming	8.82	97	P	P	01 48 25.5	-0.1
KMI				AMB	AMB		
	comp=Z,20nm,0.7s						
BWNR	Bhubaneshwar	9.14	228	*e*S	S	01 50 11.1	-1.5
BWNR				AML	AML	01 50 14.3	
	comp=N,141nm,0.2s						
BWNR				AML	AML	01 50 14.7	
	comp=E,73nm,0.3s						
CMAR	Chiang Mai Arr	9.72	145	P	P	01 48 36.2	-1.8
	comp=E,0.4nm,0.3s,baz=317,slow=14,SNR=6.2						
CD2	Chengdu	10.32	63	P	P	01 48 46.1	-0.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.4s						
LGTI	Lohaghat	11.70	287	*i* x	P	01 49 06.0	+1.2
LGTI				*e*x	S	01 51 12.0	-2.9
GYA	Guiyang	12.17	87	P	P	01 49 09.9	-1.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.5s						
VIS	Vishakhapatnam	12.61	228	*e*P	P	01 49 17.4	+0.3
LZH	Lanzhou	13.21	41	⇓P	P	01 49 23.5	-1.5
LZH				AP		01 49 38.5	
LZH				XP		01 49 45.0	
LZH				AMB	AMB		
	comp=Z,40nm,1.0s						
DDI	Dehra Dun	13.73	289	*e*x	S	01 51 55.2	-8.7
NGP	Nagpur	13.92	250	*e*P	P	01 49 33.0	-1.4
NGP				*e*S	S	01 52 00.7	-7.6
NDI	New Delhi	14.22	282	*e*x	x	01 49 50.0	
NDI				*e*S	S	01 52 01.0	-14
BHPL	Bhopal	14.58	260	*e*P	P	01 49 40.9	-2.2
BHPL				*e*S	S	01 52 10.8	-13
ENH	Enshi	14.90	72	*e*Pn	P	01 49 46.4	-0.8
	comp=Z,34nm,0.5s						
XAN	Xi'an	15.57	58	P	P	01 49 54.4	-1.4
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s						
HYB	Hyderabad	16.25	239	*e*P	P	01 50 04.5	0.0
HYB				*e*		01 52 52.5	
HYB	Hyderabad	16.25	239	*i* P	P	01 50 06.0	+1.5
HYB				*e*S	S	01 53 04.0	+1.2
MKAR	Makanchi Array	21.92	340	P	P	01 51 09.9	+1.1
	comp=Z,23nm,0.8s,mb4.7,baz=151,slow=12,SNR=35						
SONM	Songino Array	23.66	23	P	P	01 51 27.4	+1.5
	comp=Z,1.6nm,0.6s,mb3.6,baz=206,slow=8.9,SNR=15						
ULN	Ulaanbaatar	23.92	24	*e*P	P	01 51 29.9	+1.6
	comp=Z,3.5nm,0.8s,mb3.8						
BVAR	Borovoye Array	31.39	333	P	P	01 52 37.1	+0.5
	comp=Z,0.8nm,0.5s,mb3.8,baz=136,slow=11,SNR=11						
ZRNK	Zerenda	31.90	332	*e*P	P	01 52 41.2	+0.1
	comp=Z,2.7nm,0.7s,mb4.2						
ARU	Arti	38.75	330	*e*P	P	01 53 39.9	+0.6
	comp=Z,2.5nm,0.6s,mb4.1						
MAJO	Matsushiro	39.42	64	*e*P	P	01 53 45.0	0.0
	comp=Z,5.9nm,0.7s,mb4.4						
MJAR	Matsushiro Arr	39.42	64	P	P	01 53 44.2	-0.9
	comp=Z,1.5nm,0.3s,mb4.2,baz=271,slow=11,SNR=7.8						
MJAR	Matsushiro Arr	39.42	64	P	P	01 53 44.2	-0.9
ASF	Jabal al Asfar	48.82	291	P	P	01 55 02.7	+2.0
	comp=Z,1.7nm,0.7s,mb4.2,baz=334,slow=2.9,SNR=4.4						
BRTR	Keskin Array B	50.63	301	P	P	01 55 15.3	+0.9
	comp=Z,0.8nm,0.7s,mb3.8,baz=101,slow=6.3,SNR=5.3						
AKASG	Malin Array Be	53.54	315	P	P	01 55 35.4	-0.7
	comp=Z,1.9nm,0.7s,mb4.2,baz=83,slow=6.2,SNR=9.3						
KAF	Kangasniemi	56.03	329	*e*p	P	01 55 54.2	+0.1
	comp=Z,0.8nm,0.5s,mb4.0,baz=92,slow=6.5						
FINES	FINESS Array B	56.06	328	P	P	01 55 54.6	+0.2
	comp=Z,1.6nm,0.5s,mb4.3,baz=100,slow=7.5,SNR=25						
KEV	Kevo	57.08	338	*e*p	P	01 55 58.2	-3.3
	comp=Z,4.0nm,0.9s,mb4.5						
ARCES	ARCESS Array B	57.55	337	P	P	01 56 05.2	+0.4
	comp=Z,3.0nm,0.8s,mb4.4,baz=94,slow=6.9,SNR=18						
ARCES	ARCESS Array B	57.55	337	P	P	01 56 05.2	+0.4
BILL	Bilibino	59.37	25	*e*P	P	01 56 16.9	-0.6
	comp=Z,7.2nm,0.5s,mb5.0						
MORC	Moravsky Berou	61.07	314	*e*P	P	01 56 29.5	+0.1
	comp=Z,1.9nm,0.9s,mb4.2						
WRA	Warramunga Arr	61.15	135	P	P	01 56 29.3	-1.1
	comp=Z,0.6nm,0.8s,mb3.8,baz=323,slow=7.3,SNR=2.7						
WRA				pP	pP	01 56 42.8	-0.3
	comp=Z,3.2nm,0.7s,baz=324,slow=7.1,SNR=15						
WRA				sP	sP	01 56 48.9	+0.7
	comp=Z,4.3nm,0.8s,baz=324,slow=7.3,SNR=11						
NB2	NORSAR Subarra	63.24	327	P	P	01 56 43.0	-0.7
	comp=Z,1.8nm,0.7s,mb4.3,baz=84,slow=6.2						
NOA	NORSAR Array B	63.24	327	P	P	01 56 42.9	-0.8
	comp=Z,1.6nm,0.7s,mb4.3,baz=85,slow=6.6,SNR=7.9						
NOA	NORSAR Array B	63.24	327	P	P	01 56 42.9	-0.8
GERES	GERESS Array B	63.70	314	P	P	01 56 46.9	0.0
	comp=Z,0.3nm,0.4s,mb3.6,baz=72,slow=6.2,SNR=7.8						
GERES				pP	pP	01 57 01.5	+1.8
	comp=Z,0.9nm,0.6s,baz=68,slow=5.3,SNR=5.3						
GERES				sP	sP	01 57 07.4	+2.6
	comp=Z,0.7nm,0.4s,baz=76,slow=5.5,SNR=4.5						
CDF	Champ du Feu	67.95	314	*e*P	P	01 57 14.0	0.0
	comp=Z,5.7nm,0.9s,mb4.3						
LPG	La Plagne	69.11	311	*e*P	P	01 57 21.9	+0.7
	comp=Z,4.6nm,0.8s,mb4.2						
LPL	La Plagne	69.12	311	*e*P	P	01 57 21.8	+0.5
	comp=Z,3.5nm,0.6s,mb4.2						
MBDF	Montbardon	69.32	311	*e*P	P	01 57 23.5	+1.0
FRF	La Foret Royal	69.76	309	*e*P	P	01 57 26.1	+0.9
LMR	La Mourre	69.92	309	*e*P	P	01 57 27.1	+0.9
	comp=Z,9.8nm,1.2s,mb4.3						
SMF	Signal de Mont	70.69	313	*e*P	P	01 57 30.6	-0.2
	comp=Z,5.9nm,0.7s,mb4.3						
SSF	Saint Saulge	70.78	314	*e*P	P	01 57 31.4	+0.1
	comp=Z,7.4nm,0.9s,mb4.3						
AVF	Avril sur Loir	70.96	313	*e*P	P	01 57 32.4	-0.1
	comp=Z,10nm,1.1s,mb4.4						
HYF	Humbligny	71.27	314	*e*P	P	01 57 34.9	+0.6
LASF	Ste Croix	71.51	311	*e*P	P	01 57 36.2	+0.4
	comp=Z,12nm,1.3s,mb4.4						
TCF	Toulx Ste Croi	71.87	313	*e*P	P	01 57 38.4	+0.5
	comp=Z,8.8nm,1.0s,mb4.3						
EKA	Eskdalemuir Ar	71.97	323	P	P	01 57 38.4	+0.1
	comp=Z,1.3nm,0.6s,mb4.0,baz=69,slow=6.2,SNR=9.0						
CAF	Calviac	72.43	312	*e*P	P	01 57 41.1	-0.1
	comp=Z,2.2nm,0.6s,mb4.0						
RJF	Les Rejaudoux	72.67	312	*e*P	P	01 57 42.8	+0.2
GRR	Gorron	73.10	316	*e*P	P	01 57 44.0	-1.1
MFF	Saint Martin d	73.29	314	*e*P	P	01 57 45.2	-1.1
LFF	La Frestale	73.31	312	*e*P	P	01 57 45.6	-0.8
SGMF	Saint Gilles	74.21	316	*e*P	P	01 57 50.8	-0.8
	comp=Z,19nm,1.1s,mb4.6						
EPF	Esparros	74.27	310	*e*P	P	01 57 50.8	-1.2
ETSF	Etsaut	74.93	311	*e*P	P	01 57 54.6	-1.3
	comp=Z,2.1nm,0.6s,mb3.9						
LSZ	Lusaka	75.50	245	*e*P	P	01 58 00.3	+0.7
	comp=Z,3.9nm,0.7s,mb4.5						
ILAR	Eielson Array	77.89	22	P	P	01 58 12.4	+0.3
	comp=Z,1.1nm,0.9s,mb3.8,baz=306,slow=5.9,SNR=14						
ILAR				PP	PP	02 01 08.0	-2.2
	comp=Z,0.5nm,0.9s,baz=295,slow=6.2,SNR=4.4						
LBTB	Lobatse	82.87	238	P	P	01 58 39.8	+0.5
	comp=Z,2.0nm,0.5s,mb4.4,baz=81,slow=8.7,SNR=5.5						
LBTB				pP	pP	01 58 54.2	+1.6
	comp=Z,1.9nm,0.5s,baz=351,slow=1.6,SNR=3.3						
LBTB	Lobatse	82.87	238	*e*P	P	01 58 40.5	+1.2
	comp=Z,2.2nm,0.6s,mb4.4						
BOSA	Boshof	85.10	235	P	P	01 58 51.0	+0.4
	comp=Z,2.0nm,1.0s,mb4.2,baz=163,slow=12,SNR=4.2						
BOSA	Boshof	85.10	235	*e*P	P	01 58 51.4	+0.8
	comp=Z,1.0nm,0.6s,mb4.1						
TXAR	Lajitas Array	122.15	17	PKP	PKPdf	02 05 09.8	+1.6
	comp=Z,0.1nm,0.5s,baz=33,slow=3.3,SNR=4.8						
TXAR	Lajitas Array	122.15	17	PKP	PKPdf	02 05 09.8	+1.6

WEL 24 01:57:55.4±0.3**,44.85S×167.35E,h54^{km}±8^{km},ML3.8**/7**, 2C-3D,Error ellipse: s-maj=3.7km s-min=2.5km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLZ	Mavora Lakes	0.77	131	⇓PN	P	01 58 09.7	-0.5
MLZ				SN	S	01 58 20.7	-0.5
WHZ	Wether Hill Ro	1.12	158	PN	P	01 58 14.6	-0.5
WHZ				SN	S	01 58 29.3	-0.5
WKZ	Wanaka	1.19	89	PN	P	01 58 15.7	-0.3
WKZ				SN	S	01 58 30.4	-1.0
JCZ	Jackson Bay	1.27	53	⇑PN	P	01 58 15.7	-1.6
EAZ	Earnscleugh	1.44	106	⇓PN	P	01 58 19.2	-0.5
EAZ				SN	S	01 58 36.3	-1.5
TUZ	Tuapeka	1.95	125	PN	P	01 58 25.7	-1.1
TUZ				SN	S	01 58 48.9	-1.2
LBZ	Lake Benmore	2.08	78	⇑PN	P	01 58 26.9	-1.7
LBZ				SN	S	01 58 50.0	-3.3
FOZ	Fox Glacier	2.12	53	PN	P	01 58 27.7	-1.5
ODZ	Otahua Downs	2.35	96	⇓PN	P	01 58 30.6	-1.9
ODZ				SN	S	01 58 55.3	-4.8
RPZ	Rata Peaks	2.89	68	PN	P	01 58 37.2	-3.1
RPZ				SN	S	01 59 09.7	-4.2
MQZ	McQueen's Vall	3.98	75	PN	P	01 58 51.3	-4.1
MQZ				SN	S	01 59 32.3	-9.0
LTZ	Lake Taylor	4.12	62	PN	P	01 58 52.8	-4.7
LTZ				SN	S	01 59 38.5	-6.3
DSZ	Denniston Nort	4.50	48	PN	P	01 58 58.2	-4.6
THZ	Tophouse	5.10	55	PN	P	01 59 06.3	-4.8
QRZ	Quartz Range	5.54	45	PN	P	01 59 12.7	-4.6
NNZ	Nelson	5.72	53	PN	P	01 59 15.5	-4.3
TUWZ	Tuamarina	5.91	57	PN	P	01 59 19.4	-3.1

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*CSEM **24** 01:58:24.0±0.7,38.78N×28.97W,ML1.4,Error ellipse: s-maj=18.9km s-min=8.2km az=128.0,After PDA*

*PDA **24** 01:58:24.0±0.6,38.78N×28.97W,MD3.0,ML1.4,Error ellipse: s-maj=7.2km s-min=4.3km az=70.0*

SVSA 24 01:58:24.0±0.6**,38.78N×28.97W,MD3.0,ML1.4,Error ellipse: s-maj=7.2km s-min=4.3km az=70.0,Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	Caldeira	0.29	133	*e*P	Pg	01 58 29.3	-0.5
CALA				*e*S	Sg	01 58 33.9	+0.3
HOR	Horta	0.37	134	*e*P	Pg	01 58 30.8	-0.5
PICO	Pico	0.51	123	*i* P	Pg	01 58 33.6	-0.6
PICO				*e*S	Sg	01 58 40.4	-0.6
PMAN	Manadas	0.70	102	*e*P	Pg	01 58 36.4	-1.7
PMAN				*e*S	Sg	01 58 45.3	-2.2
	21nm,0.2s						

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*CSEM **24** 02:15:55.9±0.4,36.73N×24.31W,h5^{km},ML2.1,Error ellipse: s-maj=10.1km s-min=8.0km az=86.0,After PDA*

*PDA **24** 02:15:55.9±0.3,36.73N×24.31W,h5^{km},MD3.2,ML2.1, Error ellipse: s-maj=10.2km s-min=1.9km az=52.0*

SVSA 24 02:15:55.9±0.3**,36.73N×24.31W,h5^{km},MD3.2,ML2.1, Error ellipse: s-maj=10.2km s-min=1.9km az=52.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.67	294	*e*P	Pg	02 16 08.9	-0.3
PSMN				*e*S	Sg	02 16 17.1	-1.0
MIRA	Miradouro	1.31	324	*e*P	Pb	02 16 16.6	-4.0
MIRA				*e*S	Sb	02 16 31.7	-5.8
FRA1	Furnas	1.31	321	*e*P	Pb	02 16 15.9	-4.8
FRA1				*e*S	Sb	02 16 31.2	-6.5
PCNG	Congro	1.35	320	*e*P	Pb	02 16 16.6	-4.7
PCNG				*e*S	Sb	02 16 32.2	-6.6
	17nm,0.1s						
VIF	Vila Franca	1.36	319	*e*P	Pb	02 16 16.7	-4.7
VIF				*e*S	Sb	02 16 32.2	-6.7
	7.1nm,0.2s						
PRCH	Ribeira Ch	1.37	317	*e*S	Sb	02 16 32.4	-6.8
	16nm,0.1s						
MESC	Monte Escuro	1.40	320	*e*P	Pb	02 16 17.2	-4.9
MESC				*e*S	Sb	02 16 33.3	-6.8
LFA	Lagoa do Fogo	1.40	318	*e*P	Pn	02 16 17.4	-4.8
PMAT	Coroa da Mata	1.43	320	*e*S	Sb	02 16 33.8	-7.2
	7.8nm,0.2s						

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*IDC **24** 02:22:42.0±3.0,25.08N×109.59W,mb4.2/5,mb1 4.4/10, mb1mx4.0/23,mbtmp4.0/10,ML4.2/5,MS3.9/21,Ms1 3.9/21, ms1mx3.7/32,Error ellipse: s-maj=48.5km s-min=29.2km az=3.0*

*NEIC **24** 02:22:46.7±0.8,25.25N×109.70W,h10^{km},mb4.2/30, Error ellipse: s-maj=11.3km s-min=5.9km az=210.0*

*MEX **24** 02:22:48.1±0.4,23.12N×109.65W,h20^{km}±801^{km},MD4.3*

ISC 24 02:22:43.4±0.4**,25.12N**±0.04×**109.68W**±0.05**,h10^{km},n94, σ1§11**/85**,mb4.2**/12**,MS4.0**/16**,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	1.17	210	*i* P	Pb	02 23 05.8	+0.6
LPIG				*i* S	Sb	02 23 19.5	-0.8
MAIG	Mazatlaan	3.54	122	*e*P	Pn	02 23 31.2	-8.5
MAIG				*i* S	Sn	02 24 06.2	-16
LTX	Lajitas	6.80	51	P	Pn	02 24 24.6	-1.2
TXAR	Lajitas Array	6.80	51	Pn	Pn	02 24 23.3	-2.4
	0.5nm,0.3s,baz=236,slow=14,SNR=24						
TXAR				Sn	Sn	02 25 40.1	-3.9
	1.1nm,0.3s,baz=228,slow=24,SNR=4.5						
TXAR				Lg		02 26 22.3	
	1.6nm,0.3s,baz=228,slow=30,SNR=4.7						
ZAIG	Zacatecas	6.92	108	*e*P	Pn	02 24 22.6	-4.8
ZAIG				*i* S	Sn	02 25 36.3	-11
TUC	Tucson	7.22	353	*e*P	Pn	02 24 27.7	-4.0
MNTX	Cornudas Mount	7.56	29	*e*P	Pn	02 24 34.1	-2.3
GDL2	Guadalupe Moun	8.45	32	*e*P	P	02 24 47.9	-1.0
CLNB	Carlsbad	8.75	34	*e*P	P	02 24 54.2	+1.2
BNM	Barren Site	9.38	16	*e*P	P	02 24 59.8	-1.9
ANMO	Albuquerque	10.18	15	Pn	P	02 25 13.2	+0.4
	baz=202,slow=12,SNR=14						
ANMO				Lg		02 28 07.3	
	baz=326,slow=17,SNR=6.1						
ANMO				LR	LR	02 29 22.8	
	comp=Z,763nm,18.2s,slow=39						
ANMO	Albuquerque	10.18	15	*e*P	P	02 25 12.8	0.0
NEN	Nelson	11.40	338	*e*P	P	02 25 28.9	-0.5
DAC	Darwin (Calif)	13.03	330	*e*P	P	02 25 51.9	+0.6
WMOK	Wichita Mounta	13.45	42	*e*P	P	02 25 57.1	+0.2
MVU	Marysvale	13.51	351	*e*P	P	02 25 57.4	-0.3
MSU	Marysvale	13.52	352	*e*P	P	02 25 57.6	-0.2
SRU	San Rafael	13.96	357	*e*P	P	02 26 01.5	-2.1
TMUT	Trail Mountain	14.19	355	*e*P	P	02 26 06.8	+0.2
MTUM	Tungsten Hills	14.36	330	*e*P	P	02 26 08.2	-0.6
TPH	Tonopah	14.41	335	P	P	02 26 08.3	-1.2
	11nm,1.0s						
OMM	Old Mammoth Mi	14.77	330	*e*P	P	02 26 13.8	-0.4
NLU	North Lily Min	14.93	353	P	P	02 26 16.3	0.0
ISCO	Idaho Springs	15.03	12	*e*P	P	02 26 19.2	+1.6
	15nm,1.2s						
MNV	Mina	15.09	334	*e*P	P	02 26 19.9	+1.5
	166nm,1.0s						
NVAR	Mina Array Bea	15.15	333	Pn	P	02 26 20.4	+1.2
	0.9nm,0.3s,baz=165,slow=14,SNR=80						
NVAR				LR	LR	02 31 53.0	
	comp=Z,352nm,18.5s,baz=115,slow=36						
DUG	Dugway	15.26	351	*e*P	P	02 26 21.9	+1.3
	93nm,1.9s						
DAU	Daniels Canyon	15.30	355	*e*P	P	02 26 22.4	+1.2
JLU	Jordanelle	15.51	355	*e*P	P	02 26 24.3	+0.4
CTU	Camp Tracy	15.62	354	*e*P	P	02 26 25.8	+0.4
CMB	Columbia Colle	15.76	327	*e*P	P	02 26 25.9	-1.3
	8.3nm,1.1s						
TCUT	Toone Canyon	16.02	355	*e*P	P	02 26 31.5	+1.1
ELK	Elko	16.25	345	Pn	P	02 26 34.5	+1.0
	0.1nm,0.3s,baz=180,slow=9.9,SNR=13						
ELK				LR	LR	02 33 50.1	
	comp=Z,376nm,20.0s,baz=163,slow=41						
ELK	Elko	16.25	345	*e*P	P	02 26 34.0	+0.5
	62nm,1.8s						
SPUT	South Promonto	16.30	353	P	P	02 26 32.8	-1.3
WCN	Washoe City	16.49	331	*e*P	P	02 26 37.5	+1.0
	107nm,1.7s						
HWUT	Hardware Ranch	16.51	355	*e*P	P	02 26 37.5	+0.7
	15nm,1.1s						
BMN	Battle Mountai	16.52	339	*e*P	P	02 26 37.9	+1.1
	18nm,1.1s						
RWWY	Rawlins	16.65	6	*e*P	P	02 26 39.4	+1.0
	56nm,1.8s						
HVU	Hansel Valley	16.81	352	*e*P	P	02 26 41.6	+1.1
BEKR	Beckwourth	17.22	331	*e*P	P	02 26 45.6	-0.1
	42nm,1.6s						
BW06	Boulder Array	17.60	0	*e*P	P	02 26 50.5	+0.1
	10nm,0.8s						
PDAR	Pinedale Array	17.60	0	P	P	02 26 50.1	-0.2
	0.3nm,0.3s,baz=166,slow=9.9,SNR=35						
PDAR				Lg		02 32 02.2	
	0.1nm,0.3s,baz=270,slow=1.5,SNR=2.4						
PDAR				LR	LR	02 33 44.6	
	comp=Z,446nm,19.6s,baz=181,slow=38						
UALR	University of	17.82	53	P	P	02 26 55.9	+2.7
	8.1nm,0.8s						
REDW	Red Top Meadow	18.22	357	*e*P	P	02 26 58.6	+0.5
	26nm,1.6s						
RRI2	Red Ridge	18.23	356	*e*P	P	02 26 58.7	+0.4
	64nm,1.8s						
TPAW	Teton Pass	18.35	357	*e*P	P	02 26 59.4	-0.4
	7.9nm,1.0s						
LOHW	Long Hollow	18.46	358	*e*P	P	02 27 00.5	-0.6
	3.3nm,0.6s						
MOOW	Moose Ponds	18.60	358	*e*P	P	02 27 03.0	+0.2
	18nm,1.5s						
IMW	Indian Meadow	18.76	357	*e*P	P	02 27 05.1	+0.4
	8.4nm,0.8s						
WVOR	Wild Horse Val	18.78	339	*e*P	P	02 27 05.1	+0.1
	97nm,1.9s						
HLID	Hailey	18.80	349	*e*P	P	02 27 05.6	+0.4
	4.6nm,0.9s						
MOD	Modoc	18.91	335	*e*P	P	02 27 06.5	0.0
	81nm,1.8s						
QLMT	Earthquake Lak	19.71	356	P	P	02 27 17.8	+1.9
YBH	Yreka Blue Hor	19.78	330	P	P	02 27 14.2	-2.4
	0.1nm,0.3s,baz=166,slow=4.2,SNR=3.5						
YBH				LR	LR	02 34 12.8	
	comp=Z,110nm,21.8s,baz=328,slow=35						
MCMT	McKenzie Canyo	19.83	353	*e*P	P	02 27 17.2	+0.1
CCM	Cathedral Cave	20.27	46	*e*P	P	02 27 24.0	+2.1
	34nm,1.6s						
BOZ	Bozeman (W)	20.54	356	*e*P	P	02 27 23.9	-0.7
	28nm,1.8s						
BMO	Blue Mountains	20.63	344	*e*P	P	02 27 24.3	-1.3
	6.3nm,0.8s						
PLAL	Pickwick Lake	21.09	57	*e*P	P	02 27 30.6	+0.2
	7.6nm,0.9s,mb4.0						
SLM	Saint Louis	21.25	46	P	P	02 27 34.7	+2.7
LRAL	Lakeview Retre	21.30	63	*e*P	P	02 27 32.2	-0.4
	7.4nm,0.9s,mb4.0						
HRY	Holter Researc	21.61	356	*e*P	P	02 27 36.0	+0.5
WVT	Waverly	21.72	55	*e*P	P	02 27 37.6	+0.9
	77nm,1.8s,mb4.8						
MSO	Missoula	21.93	352	*e*P	P	02 27 38.0	-0.7
	7.6nm,1.0s,mb4.1						
CHMT	Chamberlain Mo	21.93	353	*e*P	P	02 27 38.2	-0.5
SWET	Sewanee	22.81	58	P	P	02 27 46.8	-0.8
NEW	Newport	23.83	348	P	P	02 27 57.7	+0.3
	11nm,0.8s,mb4.4,baz=164,slow=11,SNR=24						
NEW				LR	LR	02 38 49.8	
	comp=Z,263nm,19.8s,MS3.7,baz=171,slow=40						
NEW	Newport	23.83	348	*e*P	P	02 27 57.0	-0.4
	30nm,1.3s,mb4.6						
CPCT	Cooper Cave	23.98	59	*e*P	P	02 28 00.8	+1.9
ULM	Lac du Bonnet	27.27	20	LR	LR	02 38 28.8	
	comp=Z,156nm,19.7s,MS3.6,baz=225,slow=35						
JTS	JuntasAbangare	27.72	118	LR	LR	02 38 30.9	
	comp=Z,166nm,21.5s,MS3.6,baz=313,slow=34						
SADO	Sadowa	31.52	44	LR	LR	02 42 10.4	
	comp=Z,458nm,18.8s,MS4.2,baz=252,slow=37						
FCC	Fort Churchill	35.37	14	P	P	02 29 40.1	-1.0
DLBC	Dease Lake	36.28	342	LR	LR	02 45 17.6	
	comp=Z,221nm,20.3s,MS3.9,baz=147,slow=37						
DLBC	Dease Lake	36.28	342	P	P	02 29 49.1	+0.4
YKA	Yellowknife Ar	37.51	356	P	P	02 29 57.6	-1.4
	1.6nm,0.8s,mb3.8,baz=182,slow=7.5,SNR=7.1						
YKA				LR	LR	02 45 58.1	
	comp=Z,401nm,18.7s,MS4.2,baz=155,slow=37						
ROSC	El Rosal	39.44	115	LR	LR	02 49 59.5	
	comp=Z,118nm,19.2s,MS3.7,baz=225,slow=42						
SDV	Santo Domingo	40.49	107	P	P	02 30 28.2	+3.9
SJG	San Juan	40.93	91	LR	LR	02 48 18.5	
	comp=Z,91nm,18.4s,MS3.7,baz=272,slow=38						
SCHQ	Schefferville	43.20	35	LR	LR	02 49 24.2	
	comp=Z,298nm,19.1s,MS4.2,baz=63,slow=37						
INK	Inuvik	45.55	348	P	P	02 31 03.1	-1.7
	3.4nm,0.9s,mb4.3,baz=186,slow=7.2,SNR=3.0						
ILAR	Eielson Array	46.30	339	P	P	02 31 10.6	-0.2
	3.6nm,0.7s,mb4.4,baz=152,slow=6.7,SNR=46						
ILAR				LR	LR	02 51 57.4	
	comp=Z,105nm,18.0s,MS3.8,baz=356,slow=38						
SAML	Samuel	56.54	121	*e*P	P	02 32 30.9	+2.2
	1.6nm,0.7s,mb4.2						
PPT	Papeete	57.54	226	LR	LR	02 49 51.7	
	comp=Z,206nm,19.9s,MS4.2,baz=32,slow=28						
LPAZ	La Paz	57.73	131	P	P	02 32 40.7	+3.5
	2.3nm,1.3s,mb4.0						
SUMG	Summit	60.63	19	P	P	02 32 55.9	-0.6
	2.9nm,0.7s,mb4.5						
BDFB	Brasilia	72.46	117	LR	LR	03 04 19.7	
	comp=Z,69nm,21.6s,MS3.9,baz=43,slow=34						
ARCES	ARCESS Array B	80.27	15	P	P	02 34 54.2	-1.2
	1.8nm,0.9s,mb4.0,baz=326,slow=6.5,SNR=3.5						
ARCES				LR	LR	03 12 32.4	
	comp=Z,71nm,19.8s,MS4.0,baz=211,slow=37						
ARCES	ARCESS Array B	80.27	15	P	P	02 34 54.2	-1.2
ARCES				LR	LR	03 12 32.4	
NOA	NORSAR Array B	81.82	25	LR	LR	03 11 39.1	
	comp=Z,72nm,18.4s,MS4.1,baz=295,slow=36						
GERES	GERESS Array B	90.72	33	LR	LR	03 15 12.1	
	comp=Z,122nm,18.9s,MS4.4,baz=174,slow=35						
MJAR	Matsushiro Arr	91.40	312	LR	LR	03 11 35.2	
	comp=Z,85nm,18.7s,MS4.2,baz=105,slow=32						
BOSA	Boshof	139.82	105	PKP	PKPdf	02 42 10.8	-4.6
	5.5nm,0.7s,baz=349,slow=1.9,SNR=22						

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*KRSC **24** 02:23:43.0±0.8,55.87N×163.60E,h16^{km}±2^{km},ML4.2*

*MOS **24** 02:23:44.1±0.9,55.90N×163.60E,h33^{km},mb4.0/1,Error ellipse: s-maj=18.5km s-min=11.8km az=71.3*

*IDC **24** 02:23:45.4±6.1,55.86N×163.41E,h30^{km}±49^{km},mb3.5/6, mb1 3.7/7,mb1mx3.5/23,mbtmp3.7/7,ML3.3/1,Error ellipse: s-maj=41.9km s-min=14.3km az=21.0*

*NEIC **24** 02:23:47.5±0.9,55.86N×163.35E,h50^{km},mb3.9/1,Error ellipse: s-maj=24.8km s-min=14.2km az=146.0*

ISC 24 02:23:43.4±0.9**,55.85N**±0.03×**163.73E**±0.04**,h28^{km}**±8^{km}**, n48,σ1§18**/75**,mb3.7**/7**,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.62	305	P	Pb	02 23 53.8	-1.9
KBTR				S	Sb	02 24 00.9	-3.2
KBTR	Krutoberegovo	0.62	305	*i* P	Pb	02 23 53.8	-1.9
KBTR				*i* S	Sb	02 24 01.7	-2.4
BKI	Bering	1.43	116	*i* P	Pn	02 24 08.6	+0.7
BKI				*i* S	Sn	02 24 27.2	+1.3
BKI				Smax			
	300nm,0.2s						
ZLN	Zelenaya	1.65	277	*i* P	Pn	02 24 12.0	+1.0
ZLN				*i* S	Sn	02 24 32.5	+1.0
CIRR	Tsirk	1.70	280	*i* P	Pn	02 24 12.2	+0.6
CIRR				*e*S	Sn	02 24 33.4	+0.8
LGNR	Loginova	1.72	279	*i* P	Pn	02 24 12.9	+0.9
MKZ	Mys Kozlova	1.73	222	P	Pn	02 24 11.8	-0.4
MKZ				S	Sn	02 24 31.7	-1.8
MKZ	Mys Kozlova	1.73	222	*e*P	Pn	02 24 12.1	-0.1
MKZ				*e*S	Sn	02 24 33.4	-0.1
KLY	Klyuchi	1.79	286	P	Pn	02 24 11.6	-1.3
KLY				S	Sn	02 24 32.9	-1.9
KLY	Klyuchi	1.79	286	*i* P	Pn	02 24 11.6	-1.3
KLY				*i* S	Sn	02 24 32.2	-2.6
KRSR	Krestovskiy	1.81	283	*i* P	Pn	02 24 13.5	+0.2
KRSR				*e*S	Sn	02 24 35.8	+0.3
KMNR	Kamenistaya	1.97	269	*i* P	Pn	02 24 16.4	+0.8
KPT	Kopyto	1.98	275	*i* P	Pn	02 24 16.3	+0.6
KPT				*e*S	Sn	02 24 40.6	+0.9
TUMR	Tumrok	2.11	256	*i* P	Pn	02 24 18.5	+0.9
TUMR				*e*S	Sn	02 24 43.7	+0.5
KOZR	Kozyr	2.17	277	PN	Pn	02 24 20.0	+1.6
KOZR				S	Sn	02 24 46.6	+2.1
KOZ	Kozyrevsk	2.18	277	P	Pn	02 24 20.0	+1.5
KOZ				S	Sn	02 24 46.6	+1.8
KOZ	Kozyrevsk	2.18	277	*i* P	Pn	02 24 19.9	+1.4

KOZ				iS	Sn	02 24 45.8	+0.9
SRDR	Sredinnyy	2.30	283	iP	Pn	02 24 21.3	+1.1
SRDR				eS	Sn	02 24 48.9	+1.1
ESO	Esso	2.83	274	eP	Pn	02 24 27.4	-0.5
ESO				eS	Sn	02 24 59.7	-1.8
ESO				Smax			
	160nm,1.0s						
OSSR	Ossora	3.42	354	iP	Pn	02 24 34.9	-1.4
SPN	Mys Shipunski	3.51	220	P	Pn	02 24 36.2	-1.3
SPN				S	Sn	02 25 13.8	-4.7
SPN	Mys Shipunski	3.51	220	eP	Pn	02 24 36.7	-0.8
SPN				iS	Sn	02 25 16.1	-2.4
NLC	Nalytchevo	3.71	225	P	Pn	02 24 40.3	0.0
NLC				S	Sn	02 25 21.4	-2.2
NLC	Nalytchevo	3.71	225	eP	Pn	02 24 40.4	+0.1
NLC				eS	Sn	02 25 22.0	-1.6
SDLR	Sedlovina	3.82	230	eP	Pn	02 24 42.2	+0.3
SMAR	Somma	3.87	230	eP	Pn	02 24 42.8	+0.2
AVH	Avacha	3.90	230	eP	Pn	02 24 43.7	+0.7
AVH				eS	Sn	02 25 27.6	-0.7
UGLR	Uglovaya	3.90	229	iP	Pn	02 24 43.3	+0.3
KOK	Koryaka	3.92	231	eP	Pn	02 24 43.9	+0.6
GNL	Ganaly	3.99	240	eP	Pn	02 24 45.1	+0.8
PET	Petropavlovsk	4.10	228	P	Pn	02 24 45.7	-0.2
PET	Petropavlovsk	4.10	228	ePn	Pn	02 24 45.3	-0.6
PET	Petropavlovsk	4.10	228	eP	Pn	02 24 45.5	-0.4
RUS	Russkaya	4.60	224	P	Pn	02 24 52.6	-0.4
RUS				S	Sn	02 25 42.7	-3.4
RUS	Russkaya	4.60	224	iP	Pn	02 24 52.9	-0.1
RUS				iS	Sn	02 25 44.8	-1.3
GRL	Gorelyy	4.69	227	iP	Pn	02 24 55.4	+1.2
APC	Apacha	4.83	235	eP	Pn	02 24 56.2	-0.1
APC				eS	Sn	02 25 49.0	-3.0
FX1	Attu Island--F	6.27	114	PN	Pn	02 25 17.2	+0.7
FX1				pmax	pmax		
	comp=Z,2.0nm,0.3s						
FX1	Attu Island--F	6.27	114	Pn	Pn	02 25 17.2	+0.7
	comp=Z,2.4nm,0.3s,baz=277,slow=19,SNR=11						
FX1				Sn	Sn	02 26 26.9	-1.0
	baz=184,slow=23,SNR=2.0						
KAMR	Kamenskoye	6.74	10	iP	Pn	02 25 23.7	+0.5
KAMR				iS	Sn	02 26 37.7	-2.1
ILAR	Eielson Array	25.38	49	P	P	02 29 09.9	+0.6
	comp=Z,0.8nm,0.8s,mb3.3,baz=258,slow=8.2,SNR=9.3						
SONM	Songino Array	35.38	282	P	P	02 30 37.1	-1.2
	comp=Z,0.3nm,0.4s,mb3.6,baz=66,slow=7.4,SNR=5.2						
MKAR	Makanchi Array	48.87	296	P	P	02 32 24.9	-3.2
	comp=Z,0.4nm,0.4s,mb3.8,baz=51,slow=7.8,SNR=4.0						
ZRNK	Zerenda	50.99	309	P	P	02 32 42.3	-1.9
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
ZRNK	Zerenda	50.99	309	P	P	02 32 42.3	-1.9
	comp=Z,0.7nm,0.6s,mb3.8						
FINES	FINESS Array B	58.40	338	P	P	02 33 37.1	-0.9
	comp=Z,0.6nm,0.6s,mb3.8,baz=18,slow=12,SNR=5.7						
AKASG	Malin Array Be	67.30	331	P	P	02 34 36.6	-0.5
	comp=Z,1.5nm,0.6s,mb4.2,baz=27,slow=5.8,SNR=4.1						
TXAR	Lajitas Array	67.66	71	P	P	02 34 41.3	+1.6
	comp=Z,0.3nm,0.8s,mb3.4,baz=312,slow=4.6,SNR=4.0						

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*ATH **24** 02:25:08.3,37.70N×26.82E,h20^{km},MD3.1/3*
*ISK **24** 02:25:08.4,37.81N×26.78E,h27^{km},MD3.2*
*CSEM **24** 02:25:08.4±0.2,37.79N×26.82E,h20^{km},MD3.2,Error ellipse: s-maj=5.9km s-min=2.0km az=83.0*
ISC 24 02:25:09.1±0.6,**37.74N**±0.03×**26.73E**±0.05,**h10**^{km}**,n17,** σ**1**^{s}**32**/27,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.09	112	iPB	Pb	02 25 12.0	-0.6
SMG				eSB	Sb	02 25 14.2	-0.6
BLCB	Balcova	0.69	21	iPG	Pg	02 25 21.2	-1.8
IZM	Izmir	0.78	33	iPG	Pg	02 25 22.9	-1.9
KDAG	Bornova	0.78	33	iP	Pb	02 25 23.0	-1.4
KDAG				iS	Sb	02 25 34.0	-0.8
BODT	Bodrum	0.82	145	PG	Pg	02 25 25.2	-0.5
BODT				SG	Sg	02 25 37.2	+0.5
BDRM	Kayabasi	0.89	140	iP	Pb	02 25 27.7	+1.5
BDRM				iS	Sb	02 25 39.1	+1.3
AYDN	Tasoluk	0.92	95	iP	Pb	02 25 25.9	-0.8
AYDN				iS	Sb	02 25 38.9	+0.2
MLSB	Milas	0.95	118	ePG	Pg	02 25 26.2	-1.9
APE	Apeiranthos	1.17	235	ePN	Pn	02 25 30.6	-0.9
APE	Apeiranthos	1.17	235	ePb	Pb	02 25 31.2	+0.2
YER	Yerkesik	1.38	116	ePN	Pn	02 25 32.9	-1.6
AKS	Akhisar	1.42	37	ePN	Pn	02 25 31.9	-3.2
PRK	Paraskevi	1.54	347	ePb	Pb	02 25 37.7	+0.3
PRK				eSb	Sb	02 25 58.3	+1.4
AYVA	Ayvalik	1.56	359	iP	Pn	02 25 38.0	+0.8
AYVA				iS	Sb	02 25 58.2	+0.7
MANT	Manisa	1.63	62	iP	Pn	02 25 39.5	+1.4
MANT				iS	Sn	02 25 59.9	+0.7
DNZL	Cakiroluk	1.84	91	iP	Pn	02 25 43.5	+2.3
DNZL				iS	Sn	02 26 07.7	+3.1
BTOK	Tokmak	2.26	26	iP	Pn	02 25 54.5	+7.4
BTOK				iS	Sn	02 26 18.6	+3.4

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*HLW **24** 02:43:33.2,38.25N×23.75E,h25^{km},Mb3.2*
*ATH **24** 02:43:34.6,37.89N×22.54E,h22^{km}±1^{km},MD3.4/14, ML3.3*
*NEIC **24** 02:43:34.7,37.89N×22.55E,h21^{km},ML3.3(ATH),After ATH.*
*CSEM **24** 02:43:37.1±0.3,37.88N×22.73E,h54^{km}±3^{km},ML3.3, Error ellipse: s-maj=3.6km s-min=2.6km az=168.0*
*THE **24** 02:43:38.5,37.92N×22.72E,h20^{km},ML3.5*
ISC 24 02:43:35.8±0.8,**37.89N**±0.03×**22.63E**±0.05,**h20**^{km}±10^{km}, **n37,**σ**0**^{s}**89**/51,**2C-1D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGER	Gerania Oros	0.51	79	ePN	Pn	02 43 46.1	-1.5
MGER				eSN	Sn	02 43 55.0	-0.7
NSAL	Nisos Salamina	0.66	89	ePN	Pn	02 43 49.0	-0.8
NAIG	Nisos Aigina	0.69	101	ePN	Pn	02 43 49.5	-0.8
NAIG	Nisos Aigina	0.69	101	ePn	Pn	02 43 50.5	+0.2
ATH	Athens Observa	0.86	84	ePN	Pn	02 43 53.0	+0.3
ITM	Ithomi	0.91	218	ePB	Pb	02 43 50.8	-1.9
MPAR	Parnis Oros	0.91	73	ePN	Pn	02 43 53.5	+0.1
MPAR				eSN	Sn	02 44 06.8	+0.9
PTL	Penteli	0.99	81	ePN	Pn	02 43 55.0	+0.5
PTL				eSN	Sn	02 44 09.0	+1.1
PTL	Penteli	0.99	81	ePn	Pn	02 43 55.5	+1.0
PTL				eSn	Sn	02 44 09.0	+1.1
AGG	Agios Georgios	1.15	348	ePg	Pb	02 43 57.6	+0.8
AGG				eSg	Sb	02 44 13.0	+1.6
VLI	Veliai	1.20	168	ePN	Pn	02 43 57.5	0.0
EVR	Evrytania	1.21	328	ePN	Pn	02 43 57.0	-0.7
NEO	Neokhori	1.49	18	ePN	Pn	02 44 02.0	+0.3
XOR	Xorichti	1.54	16	ePg	Pn	02 44 02.8	+0.4
XOR				eSg	Sn	02 44 21.9	+0.1
AOS	Alonnisos	1.61	37	ePg	Pn	02 44 03.6	+0.2
AOS				eSg	Sn	02 44 23.1	-0.6
VLS	Valsamata	1.64	281	ePN	Pn	02 44 04.0	+0.2
VLS	Valsamata	1.64	281	ePn	Pn	02 44 05.5	+1.7
KYTH	Kithira	1.64	169	ePN	Pn	02 44 05.0	+1.1
LKD	Levkas	1.76	298	ePb	Pb	02 44 07.3	+0.1
PAIG	Paliouri	2.19	22	ePn	Pn	02 44 11.7	0.0
PAIG				eSn	Sn	02 44 37.6	-0.8
LIT	Litokhoron	2.21	357	ePn	Pn	02 44 12.6	+0.6
LIT				eSn	Sn	02 44 39.2	+0.2
JAN	Janina	2.25	322	ePB	Pb	02 44 13.0	-2.5
IGT	Igoumenitsa	2.43	313	ePn	Pn	02 44 16.7	+1.4
PLG	Polygyros	2.56	14	ePN	Pn	02 44 16.5	-0.5
OUR	Ouranopolis	2.65	23	ePn	Pn	02 44 18.3	-0.1
OUR				eSn	Sn	02 44 49.5	-0.8
VAM	Vamos	2.78	153	ePN	Pn	02 44 20.5	+0.3
VAM	Vamos	2.78	153	ePn	Pn	02 44 19.8	-0.4
SOH	Sokhos	2.98	11	ePn	Pn	02 44 23.2	+0.2
SOH				eSn	Sn	02 44 58.1	-0.4
FNA	Florina	3.05	342	ePn	Pn	02 44 24.5	+0.6
FNA				eSn	Sn	02 44 60.0	-0.3
SRS	Serrai	3.30	13	ePn	Pn	02 44 27.4	-0.2
SRS				eSn	Sn	02 45 05.9	-0.8
XRY	Khrisi	3.90	140	ePN	Pn	02 44 36.0	0.0
KARP	Karpathos	4.33	121	ePn	Pn	02 44 44.5	+2.4
KARP	Karpathos	4.33	121	ePN	Pn	02 44 43.0	+0.9
SLUM		6.73	161	⇓P	Pn	02 45 11.5	-4.6
SWA2		8.94	164	⇑P	P	02 45 43.1	-3.8
SWA2				S	Sn	02 47 17.4	-11
SWA1		8.98	163	⇑P	P	02 45 43.1	-4.4
HFRF	Wahat Farafira	11.73	154	P	P	02 46 19.2	-5.9

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*IDC **24** 03:14:13.0±1.0,53.46S×25.20E,mb4.0/6,mb1 4.1/6, mb1mx3.9/14,mbtmp4.0/6,MS3.5/3,Ms1 3.5/3, ms1mx3.1/16,Error ellipse: s-maj=32.2km s-min=22.7km az=91.0*
*NEIC **24** 03:14:15.1±0.7,53.42S×25.35E,h10^{km},mb4.3/4,Error ellipse: s-maj=23.5km s-min=12.6km az=98.0*
ISC 24 03:14:13.6±0.7,**53.41S**±0.08×**25.2E**±0.2,**h10**^{km}**,n21,** σ**1**^{s}**34**/14,**mb4.1**/9,**MS3.4**/3,**4C,South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	21.26	350	eP	P	03 19 04.1	+2.1
	17nm,1.1s,mb4.3						
SNAA	Sanae	22.03	203	⇑i	P	03 19 09.3	-0.3
SNAA	Sanae	22.03	203	e		03 19 17.8	
SNAA	Sanae	22.03	203	P	P	03 19 08.7	-0.9
	3.5nm,0.8s,mb3.8,baz=63,slow=5.5,SNR=24						
SNAA	Sanae	22.03	203	eP	P	03 19 09.2	-0.4
	10nm,0.8s,mb4.3						
VNA2	Neumayer--Watz	22.74	207	e		03 19 25.7	
VNA2	Neumayer--Watz	22.74	207	⇑iP	P	03 19 18.2	+1.7
VNA2				e		03 19 25.7	
VNA2				e		03 19 47.6	
VNA1	Neumayer--Stat	22.84	208	e		03 19 27.0	
VNA1	Neumayer--Stat	22.84	208	⇑iP	P	03 19 19.4	+2.0
VNA1				e		03 19 27.0	
VNA1				e		03 19 49.3	
MAW	Mawson	22.85	143	P	P	03 19 17.1	-0.5
	2.5nm,0.7s,mb3.8,baz=278,slow=17,SNR=4.6						
MAW				LR	LR	03 26 30.1	
	comp=Z,100nm,20.7s,MS3.2,baz=324,slow=32						
VNA3	Neumayer Olymp	23.54	208	e		03 19 35.2	
VNA3	Neumayer Olymp	23.54	208	⇑iP	P	03 19 27.9	+3.6
VNA3				e		03 19 35.2	
VNA3				e		03 19 54.9	
BOSA	Boshof	24.77	0	P	P	03 19 36.6	0.0
	3.3nm,1.1s,mb3.8,baz=177,slow=8.4,SNR=3.1						
LBTB	Lobatse	28.36	1	LR	LR	03 29 38.8	
	comp=Z,82nm,20.9s,MS3.3,baz=17,slow=33						
MATP	Matopo	33.02	6	P	P	03 20 50.9	-0.1
	2.0nm,0.8s,mb4.1,baz=184,slow=7.9,SNR=5.2						
VNDA	Vanda	46.60	168	LR	LR	03 42 06.0	
	comp=Z,64nm,19.1s,MS3.6,baz=39,slow=36						
TRQA	Tornquist	59.02	247	eP	P	03 24 13.7	-2.0
	5.0nm,0.9s,mb4.5						
CPUP	Villa Florida	64.98	259	P	P	03 24 54.0	-1.7
	3.0nm,0.9s,mb4.3,baz=148,slow=9.5,SNR=5.2						
SAML	Samuel	81.94	266	eP	P	03 26 34.2	-0.7
	1.9nm,0.9s,mb4.0						
WRA	Warramunga Arr	85.00	117	P	P	03 26 49.9	-0.5
	2.1nm,1.1s,mb4.2,baz=215,slow=4.4,SNR=4.9						
NVAR	Mina Array Bea	150.92	254	PKPbc	PKPdf	03 34 07.2	+4.1
	0.2nm,0.3s,baz=135,slow=2.6,SNR=3.6						

GUC 24 03:44:04.6±0.4,**19.97S**×**69.24W,h100**^{km}±2^{km}**,MD3.5, ML3.6,Northern Chile**

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*ATH **24** 03:46:57.8,38.40N×24.03E,h20^{km}±1^{km},MD3.8/17, ML3.5*
*NEIC **24** 03:46:57.8,38.40N×24.03E,h19^{km},ML3.5(ATH),After ATH.*
*CSEM **24** 03:46:58.2±0.1,38.39N×24.06E,h2^{km},ML3.5,Error ellipse: s-maj=1.7km s-min=1.4km az=102.0*
*THE **24** 03:47:02.5,38.48N×24.09E,h20^{km},ML3.7*
ISC 24 03:46:57.7±0.7,**38.41N**±0.02×**23.98E**±0.03,**h8**^{km}±5^{km}, **n56,**σ**1**^{s}**17**/72,**4C-6D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAR	Parnis Oros	0.32	217	⇓iPB	Pb	03 47 05.1	-0.1
PTL	Penteli	0.37	194	⇑iPB	Pb	03 47 06.0	0.0
ATH	Athens Observa	0.48	206	⇑iPB	Pb	03 47 08.0	0.0
ATH				eSB	Sb	03 47 14.1	-0.7
NSAL	Nisos Salamina	0.64	219	⇓iPN	Pn	03 47 11.0	-1.8
MGER	Gerania Oros	0.70	234	⇓iPN	Pn	03 47 11.8	-1.9
NAIG	Nisos Aigina	0.75	211	⇓iPN	Pn	03 47 12.8	-1.6
AOS	Alonnisos	0.77	354	eSg	Sg	03 47 25.5	+2.1
LKR	Lokris	0.81	288	⇓iPB	Pb	03 47 13.5	-0.1
LKR				eSN	Sn	03 47 25.5	-1.8
NEO	Neokhori	1.08	327	ePN	Pn	03 47 19.9	+0.9
NEO				eSN	Sn	03 47 33.8	-0.4
AGG	Agios Georgios	1.43	296	ePg	Pg	03 47 26.4	0.0
AGG				eSg	Sg	03 47 45.2	-0.2
PAIG	Paliouri	1.54	351	ePg	Pg	03 47 26.4	-2.0
PAIG				eSg	Sg	03 47 44.9	-4.0
LOS	Limnos	1.75	29	ePb	Pb	03 47 29.1	-0.6
LOS				eSb	Sb	03 47 49.0	-2.7
LIA	Limnos Island	1.76	32	ePN	Pn	03 47 29.3	+0.5
EVR	Evrytania	1.77	287	ePn	Pn	03 47 30.4	+1.4
EVR				eSb	Sb	03 47 55.5	+3.0
APE	Apeiranthos	1.81	137	⇓iPN	Pn	03 47 29.9	+0.3
APE				eSN	Sn	03 47 53.2	+0.3
VLI	Veliai	1.88	207	⇑iPB	Pb	03 47 30.0	-1.9
OUR	Ouranopolis	1.93	0	ePb	Pb	03 47 31.9	-0.8
PRK	Paraskevi	1.98	64	ePN	Pn	03 47 31.7	-0.2
PLG	Polygyros	2.01	348	⇑iPN	Pn	03 47 32.8	+0.4
RLS	Riolos of Patr	2.01	261	ePN	Pn	03 47 34.0	+1.7
RLS				eSN	Sn	03 47 59.4	+1.5
ITM	Ithomi	2.04	234	ePN	Pn	03 47 34.2	+1.5
ITM				eSN	Sn	03 47 59.4	+0.9
LIT	Litokhoron	2.05	326	ePn	Pn	03 47 33.8	+0.8
LIT				eSn	Sn	03 47 59.2	+0.3
LIT	Litokhoron	2.05	326	ePn	Pn	03 47 33.8	+0.9
LIT				eSn	Sn	03 47 59.2	+0.3
KYTH	Kithira	2.25	200	ePB	Pb	03 47 35.8	-2.4
THR3	Thira Island,	2.29	150	ePn	Pn	03 47 37.9	+1.5
AYVA	Ayvalik	2.30	66	iP	Pn	03 47 37.7	+1.2
THR1	Thera Island	2.35	149	ePn	Pn	03 47 38.6	+1.4
THE	Thessaloniki	2.36	341	ePn	Pn	03 47 38.4	+1.0
SOH	Sokhos	2.46	349	ePn	Pn	03 47 39.6	+0.8
SOH				eSn	Sn	03 48 08.3	-1.0
MEV	Metsovon	2.54	304	ePn	Pn	03 47 42.0	+2.0
MEV	Metsovon	2.54	304	ePn	Pn	03 47 42.0	+2.0
KZN	Kozani	2.56	319	ePB	Pb	03 47 41.7	-1.8
LKD	Levkas	2.63	278	ePn	Pn	03 47 43.6	+2.4
VLS	Valsamata	2.68	266	ePB	Pb	03 47 43.8	-1.7
SRS	Serrai	2.73	354	ePn	Pn	03 47 43.0	+0.4
SRS				eSn	Sn	03 48 14.5	-1.6
GRG	Griva	2.82	335	eSn	Sn	03 48 17.8	-0.8
GRG				eSn	Sn	03 48 19.0	+0.4
NVR	Nevrokopi	2.94	358	ePN	Pn	03 47 46.1	+0.4
RDO	Rodhopi	2.99	23	ePN	Pn	03 47 46.2	-0.2
VAM	Vamos	3.00	177	ePb	Pb	03 47 48.0	-3.0
VAM	Vamos	3.00	177	ePN	Pn	03 47 47.0	+0.5
BDRM	Kayabasi	3.06	115	iP	Pn	03 47 47.9	+0.6
FNA	Florina	3.11	321	ePn	Pn	03 47 49.2	+1.1
FNA				eSn	Sn	03 48 25.8	-0.1
AYDN	Tasoluk	3.17	102	iP	Pn	03 47 50.0	+1.1
MMB	Musomiste	3.19	357	iP	Pn	03 47 48.5	-0.7
RZN	Rozhen	3.33	10	iP	Pn	03 47 51.0	-0.2
NPS	Neapolis	3.40	157	ePN	Pn	03 47 51.8	-0.4
KDZ	Kurdzhali	3.42	18	iP	Pn	03 47 51.0	-1.5
BTOK	Tokmak	3.43	65	iP	Pn	03 47 59.0	+6.4
KKB	Krupnik	3.52	349	iP	Pn	03 47 54.0	0.0
MANT	Manisa	3.60	87	iP	Pn	03 48 02.4	+7.5
XRY	Khrisi	3.78	158	ePN	Pn	03 47 57.0	-0.6
KARP	Karpathos	3.82	137	ePN	Pn	03 47 58.6	+0.4
DNZL	Cakiroluk	4.06	99	iP	Pn	03 48 02.0	+0.4
VTS	Vitosha	4.22	352	iP	Pn	03 48 04.0	+0.1
TIP	Timpagrande	5.69	280	ePn	Pn	03 48 24.4	-0.3
TIP	Timpagrande	5.69	280	ePn	Pn	03 48 24.4	-0.3

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*MOS **24** 04:25:37.2±1.7,66.38N×13.81E,h10^{km},mb3.8/1,Error ellipse: s-maj=31.2km s-min=9.1km az=85.7*
*HEL **24** 04:25:38.6±0.2,66.47N×13.30E,h10^{km}±1^{km},ML3.6, ML3.1(UPP),ML3.2(BER)*
*NEIC **24** 04:25:38.1±1.0,66.49N×13.38E,h3^{km}±8^{km},ML3.3(BER), Error ellipse: s-maj=7.1km s-min=4.1km az=124.0*
NEIC Felt at Nesna.
*IDC **24** 04:25:38.7±0.9,66.43N×13.45E,mb3.5/2,mb1 3.7/9, mb1mx3.6/25,mbtmp3.6/9,ML3.8/8,MS2.5/1,Ms1 2.5/1, ms1mx2.1/24,Error ellipse: s-maj=13.1km s-min=6.7km az=114.0*
*CSEM **24** 04:25:38.1±0.2,66.38N×13.34E,h15^{km},ML3.6,Error ellipse: s-maj=5.6km s-min=2.5km az=135.0*
*NAO **24** 04:25:39.8±1.1,66.38N×13.68E,ML3.5*
*BER **24** 04:25:40.4±4.8,66.48N×13.42E,h5^{km},MD3.3,ML3.2, MW3.4,ML3.5(NAO)*
*UPP **24** 04:25:41.5,66.37N×13.83E,h10^{km},ML3.0*
ISC 24 04:25:36.8±0.2,**66.41N**±0.02×**13.67E**±0.05,**h10**^{km}**,n107,** σ**1**^{s}**48**/192,**mb3.5**/2,**6C,Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STOK1	Konsvik	0.24	291	⇑iP	Pg	04 25 41.7	-0.2
STOK1	Konsvik	0.24	291	eS	Sg	04 25 43.6	-1.7
STOK	Stokkvaagen	0.28	253	⇑iP	Pg	04 25 41.9	-0.7
STOK				iS	Sg	04 25 44.2	-2.3
STOK				AML	AML	04 25 44.6	
	comp=Z,5µm,0.3s						
STOK	Stokkvaagen	0.28	253	eP	Pg	04 25 41.9	-0.7
STOK				eS	Sg	04 25 44.2	-2.3
STOK	Stokkvaagen	0.28	253	iS	Sg	04 25 44.2	-2.3
STOK				AML	AML	04 25 44.6	
	comp=Z,45µm,0.3s						
MOR8	Moi Rana	0.40	128	⇑iP	Pg	04 25 49.0	+4.1
MOR8				iS	Sg	04 25 57.6	+7.3
MOR8				AML	AML	04 26 01.1	
	comp=Z,1µm,0.4s						
MOR8	Moi Rana	0.40	128	⇑iP	Pg	04 25 49.0	+4.1
MOR8				eS	Sg	04 25 57.6	+7.3
MOR8				AML	AML	04 26 01.1	
	comp=Z,1µm,0.4s						
MELSS	Ber_school_2	0.45	3	eP	Pg	04 25 48.0	+2.0
MELSS				eS	Sg	04 25 53.0	+0.9
LOF	Lofoten	1.73	358	eP	Pn	04 26 07.4	+0.3
LOF				eS	Sn	04 26 28.9	-0.5
LOF				AML	AML	04 26 34.2	
	comp=Z,297nm,0.4s						
LOF	Lofoten	1.73	358	eP	Pn	04 26 07.4	+0.3
LOF				eS	Sn	04 26 26.5	-2.9
RORSS	Ber_school_1	1.85	214	eP	Pn	04 26 10.1	+1.1
RORSS				eS	Sn	04 26 33.8	+1.2
NSS	Namsos	2.02	201	eP	Pn	04 26 12.8	+1.4
NSS				eS	Sn	04 26 38.2	+1.3
NSS				AML	AML	04 26 42.0	
	comp=Z,531nm,0.4s						
NIKU	Nikkaluokta	2.55	53	eP	Pn	04 26 22.3	+3.3
NIKU				eS	Sn	04 26 55.5	+5.0
DUNU	Dundret	2.83	72	eP	Pn	04 26 26.4	+3.5
KUA	Kurravaara	3.02	56	eP	Pn	04 26 28.8	+3.1
NOD	Norderasen	3.03	170	eP	Pn	04 26 28.5	+2.8
SVAU	Svanoeiden	3.13	125	⇑eP	Pn	04 26 29.2	+2.0
BREU	Bredtraesk	3.27	138	eP	Pn	04 26 31.4	+2.2
TRON	Trondheim	3.28	206	eP	Pn	04 26 31.9	+2.6
TRON				eSB	Sb	04 27 11.4	-3.4
TRON	Trondheim	3.28	206	P	Pn	04 26 31.8	+2.5
ERTU	Ertsjaerv	3.42	84	eP	Pn	04 26 33.8	+2.5
MASU	Masugnsbyn	3.44	68	eP	Pn	04 26 34.7	+3.1
LANU	Lannavaara	3.63	59	eP	Pn	04 26 37.3	+3.0
BURU	Burvik	3.70	116	eP	Pn	04 26 37.4	+2.1
KIF	Kilpisjarvi	3.76	43	eP	Pn	04 26 39.1	+3.0
KIF				eS	Sn	04 27 19.9	-1.1
KIF				eSG	Sg	04 27 36.1	-5.9
KIF	Kilpisjarvi	3.76	43	P	Pn	04 26 39.1	+2.9
KIF				S	Sn	04 27 19.8	-1.2
KIF				Sg	Sg	04 27 36.1	-5.9
TRO	Tromso	3.79	29	eP	Pn	04 26 37.9	+1.3
TRO				eS	Sn	04 27 18.2	-3.5
TRO				AML	AML	04 27 47.7	
	comp=Z,70nm,0.4s						
TRO	Tromso	3.79	29	P	Pn	04 26 37.8	+1.2
TRO				S	Sn	04 27 18.2	-3.5
	comp=Z,70nm,0.4s						
PAJU	Pajala	3.80	76	eP	Pn	04 26 39.3	+2.6
UMAU	Umeaa	3.90	127	eP	Pn	04 26 40.0	+1.8
HASU	Hassela	4.47	162	eP	Pn	04 26 47.7	+1.5
MOL	Molde	4.68	217	eP	Pn	04 26 48.7	-0.5
MOL				eS	Sn	04 27 41.8	-2.5
MOL				AML	AML	04 28 06.5	
	comp=Z,158nm,0.5s						
MOL	Molde	4.68	217	P	Pn	04 26 48.7	-0.5
MOL				S	Sn	04 27 41.8	-2.5
	comp=Z,158nm,0.5s						
DOMB	Dombas	4.83	207	eP	Pn	04 26 51.7	+0.4
DOMB				AML	AML	04 28 13.0	
	comp=Z,92nm,0.5s						
DOMB	Dombas	4.83	207	P	Pn	04 26 51.7	+0.4
	comp=Z,92nm,0.5s						
ARNU	Arnoeviken	5.01	159	eP	Pn	04 26 54.9	+1.0
ROTU	Roteberg	5.10	168	eP	Pn	04 26 56.4	+1.2
SGF	Sodankyl	5.16	73	eP	Pn	04 26 57.3	+1.3
SGF				eS	Sn	04 27 56.9	+0.5
SGF				eSG	Sg	04 28 21.9	-6.8
SGF				MSG		04 28 28.4	
	comp=Z,108nm,0.4s						
SGF	Sodankyl	5.16	73	P	Pn	04 26 57.3	+1.3
SGF				S	Sn	04 27 56.8	+0.4
SGF				Sg	Sg	04 28 21.8	-6.8
	comp=Z,108nm,0.4s						
OUL	Oulu	5.21	99	eP	Pn	04 26 57.5	+0.7
OUL				eS	Sn	04 27 57.4	-0.3
OUL				eSG	Sg	04 28 25.5	-4.9
OUL				MSG		04 28 27.4	
	comp=Z,98nm,0.5s						
OUL	Oulu	5.21	99	P	Pn	04 26 57.4	+0.6
OUL				S	Sn	04 27 57.4	-0.3
OUL				Sg	Sg	04 28 25.5	-4.9
	comp=Z,98nm,0.5s						
ARE0	ARCESS Array S	5.44	50	ePn	Pn	04 27 00.2	+0.2
ARE0				eSn	Sn	04 28 01.3	-2.1
ARE0				eSg	Sg	04 28 29.3	-8.7
ARA0	ARCESS Array S	5.44	50	Pn	Pn	04 27 00.5	+0.5
	baz=238,slow=14						
ARA0				Sn	Sn	04 28 03.2	-0.2
	baz=237,slow=22						
ARA0				Lg		04 28 29.4	
	baz=231,slow=37						
ARA0	ARCESS Array S	5.44	50	eP	Pn	04 27 00.5	+0.5
ARA0				eS	Sn	04 28 03.2	-0.2
ARA0				eSG	Sg	04 28 29.4	-8.6
ARCES	ARCESS Array B	5.44	50	P	Pn	04 27 00.7	+0.7
ARCES						04 28 02.4	
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ARCES				smax			
	comp=N,25nm,0.3s						
ARCES	ARCESS Array B	5.44	50	Pn	Pn	04 27 00.7	+0.7
	comp=N,1.6nm,0.3s,baz=236,slow=14,SNR=71						
ARCES				Sn	Sn	04 28 02.4	-1.0
	comp=N,25nm,0.3s,baz=236,slow=21,SNR=16						
ARCES				Lg		04 28 29.2	
	comp=N,22nm,0.3s,baz=232,slow=28,SNR=19						
NB2	NORSAR Subarra	5.50	193	Pn	Pn	04 27 01.5	+0.6
	baz=9.6,slow=14						
NB2				Sn	Sn	04 28 08.0	+3.0
	baz=16,slow=28						
NB2				Lg		04 28 31.6	
	baz=18,slow=37						
NB2	NORSAR Subarra	5.50	193	eP	Pn	04 27 01.5	+0.6
NB2				e		04 28 08.0	
NB2				eSG	Sg	04 28 31.6	-8.6
NB2	NORSAR Subarra	5.50	193	P	Pn	04 27 01.5	+0.6
NB2				Sg	Sg	04 28 31.5	-8.6
NOA	NORSAR Array B	5.50	193	P	Pn	04 27 01.7	+0.8
NOA						04 28 03.7	
NOA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
NOA				smax			
	comp=N,9.0nm,0.3s						
NOA	NORSAR Array B	5.50	193	Pn	Pn	04 27 01.7	+0.8
	comp=N,2.3nm,0.3s,baz=4.5,slow=13,SNR=9.8						
NOA				Sn	Sn	04 28 03.7	-1.3
	comp=N,8.9nm,0.3s,baz=137,slow=11,SNR=5.5						
NOA				Lg		04 28 29.0	
	comp=N,27nm,0.3s,baz=320,slow=17,SNR=7.0						
NAO01	NORSAR Array S	5.73	194	ePn	Pn	04 27 05.4	+1.3
	comp=N,6.2nm,0.3s						
NAO01				eSg	Sg	04 28 35.8	-12
IGGU	Iggoen	5.79	162	eP	Pn	04 27 06.1	+1.2
KEV	Kevo	6.01	50	eP	Pn	04 27 08.4	+0.5
KEV				eS	Sn	04 28 14.9	-2.7
KEV				eSG	Sg	04 28 46.2	-11
KEV				MSG		04 28 51.0	

	comp=Z,156nm,0.5s						
KEV	Kevo	6.01	50	ePn	Pn	04 27 08.0	0.0
	comp=Z,16nm,0.5s						
KEV				eSg	Sg	04 28 48.4	-8.4
KEV	Kevo	6.01	50	P	Pn	04 27 08.4	+0.4
KEV				S	Sn	04 28 14.9	-2.7
KEV				Sg	Sg	04 28 46.2	-11
	comp=Z,156nm,0.5s						
FALU	Falun	6.02	170	eP	Pn	04 27 08.6	+0.4
FOO	Floro	6.14	222	eP	Pn	04 27 08.8	-1.1
FOO				eS	Sn	04 28 14.1	-6.8
FOO				AML	AML	04 28 54.7	
	comp=Z,46nm,0.6s						
FOO	Floro	6.14	222	P	Pn	04 27 08.7	-1.2
FOO				S	Sn	04 28 14.1	-6.9
	comp=Z,46nm,0.6s						
HYA	Hoyanger	6.22	216	eP	Pn	04 27 12.2	+1.2
HYA				eS	Sn	04 28 16.7	-6.3
HYA				AML	AML	04 28 53.6	
	comp=Z,53nm,0.5s						
HYA	Hoyanger	6.22	216	eP	Pn	04 27 10.8	-0.2
HYA				eS	Sn	04 28 24.4	+1.5
HYA	Hoyanger	6.22	216	P	Pn	04 27 12.1	+1.1
HYA				S	Sn	04 28 16.7	-6.3
	comp=Z,53nm,0.5s						
HFS	Hagfors	6.31	180	Pn	Pn	04 27 12.0	-0.2
	baz=356,slow=14						
HFS				Sn	Sn	04 28 24.3	-0.8
	baz=352,slow=16						
HFS				Sn	Sn	04 28 28.1	+3.0
	baz=21,slow=22						
HFS				Lg		04 28 55.5	
	baz=346,slow=56						
HFS	Hagfors	6.31	180	eP	Pn	04 27 12.0	-0.2
HFS				eS	Sn	04 28 24.3	-0.8
HFS				eSG	Sg	04 28 55.5	-11
HFS	Hagfors	6.31	180	Pn	Pn	04 27 12.7	+0.5
	comp=Z,0.4nm,0.3s,baz=352,slow=10,SNR=29						
HFS				Sn	Sn	04 28 21.7	-3.3
	comp=Z,0.7nm,0.3s,baz=355,slow=18,SNR=4.5						
HFS				Lg		04 28 55.2	
	comp=Z,3.2nm,0.3s,baz=352,slow=32,SNR=11						
HFS	Hagfors	6.31	180	Pn	Pn	04 27 12.0	-0.2
	baz=356,slow=14						
HFS				Sn	Sn	04 28 24.3	-0.8
	baz=352,slow=16						
HFS				Lg		04 28 55.5	
	baz=346,slow=56						
HFS	Hagfors	6.31	180	P	Pn	04 27 12.0	-0.2
HFS				S	Sn	04 28 24.3	-0.8
HFS				Sg	Sg	04 28 55.4	-11
KJN	Kajaani	6.34	105	eP	Pn	04 27 12.5	-0.1
KJN				eS	Sn	04 28 23.5	-2.4
KJN				eSG	Sg	04 29 00.2	-7.7
KJN				MSG		04 29 01.1	
	comp=Z,60nm,0.4s						
KJN	Kajaani	6.34	105	P	Pn	04 27 12.5	-0.2
KJN				S	Sn	04 28 23.4	-2.5
KJN				Sg	Sg	04 29 00.1	-7.8
	comp=Z,60nm,0.4s						
FORU	Forsmark	6.38	159	eP	Pn	04 27 13.4	+0.2
KU4	Liikasenvaara	6.39	83	eP	Pn	04 27 12.7	-0.7
KU4				eS	Sn	04 28 24.5	-2.7
KU4				eSG	Sg	04 29 00.6	-9.0
KEF	Keuruu	6.47	126	eP	Pn	04 27 14.4	0.0
KEF				eS	Sn	04 28 27.8	-1.3
KEF				eSG	Sg	04 29 02.9	-9.2
KEF				MSG		04 29 06.5	
	comp=Z,71nm,0.4s						
KEF	Keuruu	6.47	126	P	Pn	04 27 14.4	-0.1
KEF				S	Sn	04 28 27.8	-1.3
KEF				Sg	Sg	04 29 02.9	-9.3
	comp=Z,71nm,0.4s						
SUF	Sumiainen	6.52	119	eP	Pn	04 27 15.3	+0.1
SUF				eS	Sn	04 28 28.5	-2.1
SUF				eSG	Sg	04 29 04.3	-10
SUF				MSG		04 29 13.9	
	comp=Z,44nm,0.4s						
SUF	Sumiainen	6.52	119	P	Pn	04 27 15.3	0.0
SUF				S	Sn	04 28 28.4	-2.1
SUF				Sg	Sg	04 29 04.2	-10
	comp=Z,44nm,0.4s						
SUE	Sulen	6.67	220	eS	Sn	04 28 27.6	-6.5
SUE				AML	AML	04 29 10.1	
	comp=Z,22nm,0.6s						
SUE	Sulen	6.67	220	S	Sn	04 28 27.6	-6.6
	comp=Z,22nm,0.6s						
KAF	Kangasniemi	6.99	122	eP	Pn	04 27 21.6	-0.1
KAF				eS	Sn	04 28 41.2	-0.9
KAF				eSG	Sg	04 29 17.3	-12
KAF				MSG		04 29 27.7	
	comp=Z,63nm,0.5s						
KONO	Kongsberg	7.04	197	eP	Pn	04 27 26.1	+3.6
ASK	Askoy	7.06	216	eP	Pn	04 27 18.4	-4.3
ASK				AML	AML	04 29 19.6	
	comp=Z,38nm,0.6s						
ASK	Askoy	7.06	216	P	Pn	04 27 18.4	-4.4
	comp=Z,38nm,0.6s						
BER	Bergen	7.11	216	eP	Pn	04 27 18.7	-4.9
BER				eS	Sn	04 28 38.1	-7.1
BER				AML	AML	04 29 25.5	
	comp=Z,30nm,0.8s						
BER	Bergen	7.11	216	P	Pn	04 27 18.6	-4.9
BER				S	Sn	04 28 38.1	-7.1
	comp=Z,30nm,0.8s						
EGD	Espegrend	7.24	216	eP	Pn	04 27 19.8	-5.5
EGD				eS	Sn	04 28 37.7	-11
EGD				AML	AML	04 29 19.9	
	comp=Z,32nm,0.6s						
EGD	Espegrend	7.24	216	i P	Pn	04 27 30.2	+4.9
FIA0	FINESS Array S	7.39	127	eP	Pn	04 27 27.2	-0.2
FIA0				eS	Sn	04 28 50.5	-1.7
FIA0				eSG	Sg	04 29 30.6	-12
FIA0				MSG		04 29 36.6	
	comp=Z,83nm,0.5s						
FIA0	FINESS Array S	7.39	127	Pn	Pn	04 27 27.4	-0.1
	baz=317,slow=14						
FIA0				Sn	Sn	04 28 50.5	-1.7
	baz=326,slow=28						
FIA0				Lg		04 29 30.2	
	baz=315,slow=37						
FINES	FINESS Array B	7.39	127	P	Pn	04 27 27.2	-0.2
FINES						04 28 49.6	
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES				smax			
	comp=N,4.0nm,0.3s						
FINES	FINESS Array B	7.39	127	Pn	Pn	04 27 27.2	-0.2
	comp=N,1.4nm,0.3s,baz=322,slow=12,SNR=67						
FINES				Sn	Sn	04 28 49.6	-2.6
	comp=N,4.1nm,0.3s,baz=318,slow=22,SNR=6.4						
FINES				Lg		04 29 31.4	
	comp=N,10.0nm,0.3s,baz=318,slow=26,SNR=10						
BLS5	Blasjo	7.75	208	ePn	Pn	04 27 33.2	+0.8
BLS5				eSn	Sn	04 29 00.7	-0.4
BLS5	Blasjo	7.75	208	ePn	Pn	04 27 33.2	+0.8
BLS5				eSn	Sn	04 28 59.9	-1.2
APA	Apatity	7.81	72	⇑iP	Pn	04 27 33.3	0.0
APA				i		04 28 58.7	
APA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PVF	Pernaja	8.02	132	eP	P	04 27 35.9	-0.3
PVF				eS	Sn	04 29 04.3	-3.5
PVF				eSG	Sg	04 29 49.5	-14
PVF				MSG		04 29 57.4	
	comp=Z,61nm,0.4s						
KMY	Karmoy	8.19	212	eP	P	04 27 36.8	-1.8
KMY				eS	Sn	04 29 05.6	-6.4
KMY				AML	AML	04 30 24.2	
	comp=Z,13nm,0.6s						
VJF	Virojoki	8.55	127	eP	P	04 27 43.7	+0.1
VJF				eSG	Sg	04 30 07.6	-14
JMIC	Jan Mayen	9.24	310	Pn	P	04 27 50.5	-2.7
	comp=Z,5.9nm,0.3s,baz=308,slow=1.7,SNR=12						
JMIC				Sn	Sn	04 29 26.4	-12
	comp=Z,7.4nm,0.3s,baz=144,slow=16,SNR=7.7						
VSU	Vasula	9.99	137	eP	P	04 28 02.6	-0.7
SPA0	Spitsbergen Ar	11.85	3	Pn	P	04 28 28.5	-0.2
	baz=167,slow=14						
SPA0	Spitsbergen Ar	11.85	3	eP	P	04 28 28.5	-0.2
EKA	Eskdalemuir Ar	13.74	224	Pn	P	04 28 52.8	-0.9
	comp=Z,0.1nm,0.3s,baz=22,slow=12,SNR=4.2						
EKA				Sn	S	04 31 22.1	-5.3
	comp=Z,0.2nm,0.3s,baz=33,slow=24,SNR=3.5						
DPC	Dobruska-Polom	16.17	174	AMS	AMS	04 35 40.0	
	comp=Z,100nm,18.8s						
PRU	Pruhonice	16.48	178	AMS	AMS	04 36 30.0	
	comp=Z,100nm,9.6s						
GERES	GERESS Array B	17.62	180	P	P	04 29 46.9	+3.3
	comp=Z,0.2nm,0.3s,slow=12,SNR=15						
GERES				Lg		04 34 56.5	
	comp=Z,0.1nm,0.3s,baz=3.6,slow=32,SNR=3.2						
GERES				LR	LR	04 35 56.4	
	comp=Z,16nm,21.4s,baz=215,slow=35						
AKASG	Malin Array Be	17.63	146	Pn	P	04 29 40.3	-3.5
	comp=Z,1.1nm,0.3s,baz=336,slow=12,SNR=5.3						
AKASG				Lg		04 34 51.8	
	comp=Z,0.7nm,0.3s,baz=341,slow=29,SNR=6.7						
ARU	Arti	23.14	94	eP	P	04 30 50.9	+7.4
ARU				e		04 31 15.6	
ARU				eSS	SS	04 35 44.7	+9.0
BVAR	Borovoye Array	30.35	88	P	P	04 31 54.1	+3.7
	comp=Z,0.4nm,0.6s,mb3.3,baz=337,slow=11,SNR=3.5						
ILAR	Eielson Array	48.36	349	P	P	04 34 20.0	+0.3
	comp=Z,0.4nm,0.6s,mb3.6,baz=6.2,slow=5.4,SNR=5.6						

*ISK **24** 04:27:06.4, 37.81N×26.70E, h18^{km}, MD3.6, ML3.7*
*CSEM **24** 04:27:06.7±0.1, 37.80N×26.77E, h15^{km}, MD3.6, Error ellipse: s-maj=1.6km s-min=1.3km az=29.0*
*ATH **24** 04:27:08.6, 37.76N×26.72E, h44^{km}±3^{km}, MD3.8/14, ML3.8*
*NEIC **24** 04:27:08.6, 37.76N×26.72E, h45^{km}, MD3.8(ATH), After ATH.*
*THE **24** 04:27:14.4, 38.01N×26.48E, h20^{km}, ML3.9*
ISC 24 04:27:06.7±0.7, **37.80N**±0.02×**26.74E**±0.03, **h11**^{km}±5^{km}, **n55, σ0^{s}90**/75, **2D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.63	22	i PG	Pg	04 27 19.6	+0.1
IZM	Izmir	0.73	35	i PG	Pg	04 27 21.1	-0.3
BODT	Bodrum	0.86	148	i PG	Pg	04 27 23.8	-0.3
AYDN	Tasoluk	0.92	98	i P	Pb	04 27 24.4	+0.2
AYDN				i S	Sb	04 27 36.6	+0.5
BDRM	Kayabasi	0.92	142	i P	Pb	04 27 25.5	+1.2
BDRM				i S	Sb	04 27 36.6	+0.2
MLSB	Milas	0.97	121	PG	Pg	04 27 25.8	-0.3
APE	Apeiranthos	1.21	233	PN	Pn	04 27 28.7	-0.9
APE	Apeiranthos	1.21	233	⇓iP	Pb	04 27 29.4	+0.2
APE				eS	Sb	04 27 45.2	+0.6
APE	Apeiranthos	1.21	233	⇓iP	Pb	04 27 29.4	+0.2
APE				eS	Sb	04 27 45.2	+0.6
AKS	Akhisar	1.37	38	PN	Pn	04 27 31.5	-0.4
AKS				SN	Sn	04 27 49.7	-0.5
YER	Yerkesik	1.40	118	PN	Pn	04 27 32.4	+0.1
YER				SN	Sn	04 27 51.2	+0.3
PRK	Paraskevi	1.49	346	eP	Pn	04 27 35.2	+1.5
PRK				eS	Sb	04 27 53.6	+0.7
AYVA	Ayvalik	1.51	359	i P	Pn	04 27 35.8	+1.9
AYVA				i S	Sb	04 27 56.6	+3.3
MANT	Manisa	1.59	64	i P	Pn	04 27 37.1	+2.0
MANT				i S	Sn	04 27 58.2	+2.4
THR3	Thira Island,	1.75	218	ePb	Pb	04 27 42.8	+4.3
THR3				eSb	Sb	04 28 05.0	+4.6
SANT	Santorini	1.75	216	ePn	Pn	04 27 37.8	+0.3
SANT				eSn	Sn	04 28 06.6	+6.6
SANT	Santorini	1.75	216	ePn	Pn	04 27 37.8	+0.4
THR5	Thira Island,	1.77	219	ePb	Pb	04 27 43.0	+4.2
THR5				eSb	Sb	04 28 05.4	+4.4
DENT	Denizli	1.82	91	ePN	Pn	04 27 37.8	-0.6
DALT	Dalyan (Mudla)	1.83	124	ePN	Pn	04 27 38.5	0.0
DNZL	Cakiroluk	1.83	93	i P	Pn	04 27 39.1	+0.5
DNZL				i S	Sn	04 28 07.0	+5.0
ARG	Arkhangelos	1.93	144	eP	Pn	04 27 39.9	-0.1
ARG				eS	Sn	04 28 03.1	-1.3
BALB	Balikesir	2.04	26	ePN	Pn	04 27 40.7	-0.9
EZN	Ezine	2.05	351	ePN	Pn	04 27 41.0	-0.7
FETY	Fethiye	2.20	121	PN	Pn	04 27 43.5	-0.4
BTOK	Tokmak	2.21	27	i P	Pn	04 27 46.9	+3.0
BTOK				i S	Sn	04 28 18.8	+7.4
CANB	Canakkale	2.23	6	ePN	Pn	04 27 43.6	-0.6
KARP	Karpathos	2.27	171	eP	Pn	04 27 44.2	-0.7
PTL	Penteli	2.29	277	eP	Pn	04 27 45.0	0.0
DST	Dursunbey	2.33	39	ePN	Pn	04 27 44.1	-1.6
ATH	Athens Observa	2.40	275	eP	Pn	04 27 46.5	-0.1
MPAR	Parnis Oros	2.40	279	eP	Pn	04 27 47.0	+0.4
LIA	Limnos Island	2.42	330	eP	Pn	04 27 47.3	+0.3
LIA				eS	Sn	04 28 15.7	-1.2
LPK	Lapseki	2.57	0	ePN	Pn	04 27 48.2	-0.9
NAIG	Nisos Aigina	2.57	270	eP	Pn	04 27 49.0	-0.2
NSAL	Nisos Salamina	2.59	273	eP	Pn	04 27 49.5	+0.1
AOS	Alonnisos	2.63	302	ePn	Pn	04 27 50.1	+0.2
NPS	Neapolis	2.69	200	eP	Pn	04 27 50.4	-0.4
BNT	Bandirma	2.71	19	ePN	Pn	04 27 50.5	-0.7
ELL	Elmali	2.74	112	ePN	Pn	04 27 51.4	-0.1
MGER	Gerania Oros	2.76	275	eP	Pn	04 27 52.0	+0.2
MRMT	Marmara Adasi	2.88	13	ePN	Pn	04 27 52.0	-1.5
ISP	Isparta	2.99	88	ePN	Pn	04 27 54.0	-1.1
XRY	Khrisi	3.04	196	eP	Pn	04 27 56.0	+0.2
ALN	Alexandroupoli	3.14	350	ePn	Pn	04 27 58.2	+0.9
ALN				eSn	Sn	04 28 31.4	-3.7
VAM	Vamos	3.14	221	eP	Pn	04 27 58.0	+0.8
XOR	Xorichti	3.19	300	ePn	Pn	04 27 58.0	+0.1
PAIG	Paliouri	3.20	313	ePn	Pn	04 27 57.9	-0.1
PAIG				eSn	Sn	04 28 32.1	-4.5
VLI	Veliai	3.22	252	eP	Pn	04 27 57.8	-0.5
OUR	Ouranopolis	3.32	321	ePn	Pn	04 27 59.9	+0.1
OUR				eSn	Sn	04 28 34.7	-4.9
AGG	Agios Georgios	3.67	291	ePn	Pn	04 28 05.2	+0.4
AGG				eSn	Sn	04 28 44.8	-3.8
LIT	Litokhoron	4.03	306	ePn	Pn	04 28 10.1	+0.2
EVR	Evrytania	4.03	288	eP	Pn	04 28 11.0	+1.1
TIP	Timpagrande	7.95	283	ePn	Pn	04 29 03.7	-1.4
TIP	Timpagrande	7.95	283	ePn	Pn	04 29 03.7	-1.4

*IDC **24** 04:28:01.2±1.8, 22.09N×142.83E, h232^{km}±15^{km}, mb3.7/14, mb1 3.9/17, mb1mx3.8/24, mbtmp4.4/17, Error ellipse: s-maj=19.3km s-min=12.8km az=93.0*
*NEIC **24** 04:28:04.3±1.7, 22.07N×142.75E, h264^{km}±17^{km}, mb4.2/11, Error ellipse: s-maj=10.8km s-min=6.9km az=94.0*
ISC 24 04:28:00.6±1.3, **22.05N**±0.07×**142.8E**±0.1, **h240**^{km}±11^{km}, **n35, σ0^{s}87**/36, **mb4.1**/23, **1C, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	5.05	354	P	P	04 29 17.8	+0.6
	55nm,0.3s,baz=130,slow=10,SNR=33						
CBIJ				S	S	04 30 15.5	-1.5
	59nm,0.3s,baz=252,slow=23,SNR=11						
JHJ	Hachijo jima 2	11.34	347	P	P	04 30 36.1	-1.0
	14nm,0.3s,baz=72,slow=20,SNR=3.6						
MJAR	Matsushiro Arr	14.97	346	P	P	04 31 22.8	+0.7
	4.1nm,0.3s,baz=120,slow=17,SNR=11						
MAJO	Matsushiro	14.97	346	eP	P	04 31 22.9	+0.7
	14nm,0.4s						
MAT	Matsushiro	14.97	346	eP	P	04 31 23.0	+0.8
	11nm,0.4s						
MAT	Matsushiro	14.97	346	P	P	04 31 22.7	+0.5
YHNB	Yeheng	19.82	282	eP	P	04 32 15.6	+1.1
ASAJ	Asahikawa	22.00	360	P	P	04 32 38.2	+2.3
	8.6nm,0.6s,mb4.5,baz=216,slow=8.4,SNR=5.0						
ULN	Ulaanbaatar	38.45	321	eP	P	04 35 00.7	-0.2
	3.5nm,0.8s,mb3.9						
SONM	Songino Array	38.82	320	P	P	04 35 04.3	+0.4
	2.1nm,0.5s,mb4.0,baz=134,slow=7.6,SNR=33						
CMAR	Chiang Mai Arr	41.17	273	P	P	04 35 23.6	+0.2
	1.1nm,0.5s,mb3.5,baz=80,slow=6.5,SNR=5.7						
WRAB	Tennant Creek	42.53	192	eP	P	04 35 34.4	-0.2
	7.8nm,0.6s,mb4.3						
WB2	Warramunga Arr	42.54	192	⇑iP	P	04 35 34.6	0.0
WRA	Warramunga Arr	42.54	192	P	P	04 35 34.7	+0.1
	4.5nm,0.5s,mb4.1,baz=8.1,slow=8.4,SNR=90						
KULM	Kulim	44.00	254	eP	P	04 35 46.8	+0.5
MBWA	Marble Bar	48.48	209	eP	P	04 36 20.8	-0.4
	7.1nm,0.8s,mb4.0						
GUN	Gumba	51.52	289	eP	P	04 36 44.7	+0.8
PKI	Pulchoki	51.98	288	eP	P	04 36 46.8	-0.5
	8.9nm,0.7s,mb4.3						
KKN	Kakani	52.06	289	eP	P	04 36 47.9	0.0
	4.7nm,0.2s,mb4.5						
DMN	Daman	52.24	288	eP	P	04 36 49.2	0.0
	8.9nm,0.5s,mb4.5						
GKN	Gorkha	52.60	289	eP	P	04 36 51.4	-0.5
	18nm,0.7s,mb4.6						
KOLN	Koldanda	53.54	289	eP	P	04 36 57.3	-1.5
	8.5nm,0.4s,mb4.6						
STKA	Stephens Creek	53.63	181	P	P	04 36 59.1	-0.3
	0.5nm,0.3s,mb3.5,baz=37,slow=13,SNR=3.7						
MKAR	Makanchi Array	54.18	312	P	P	04 37 03.0	-0.1
	1.1nm,0.4s,mb3.8,baz=93,slow=9.3,SNR=13						
MKAR				PcP	PcP	04 38 03.0	-1.6
	0.6nm,0.6s,baz=74,slow=8.8,SNR=3.6						
ILAR	Eielson Array	61.90	27	P	P	04 37 55.1	-1.3
	2.0nm,0.7s,mb3.9,baz=261,slow=5.4,SNR=16						
BVAR	Borovoye Array	62.16	319	P	P	04 37 57.8	-0.5
	11nm,0.3s,mb4.9,baz=96,slow=7.6,SNR=62						
ZRNK	Zerenda	62.99	319	eP	P	04 38 01.4	-2.3
	3.0nm,0.4s,mb4.3						
YKA	Yellowknife Ar	76.32	28	P	P	04 39 24.2	-0.1
	0.7nm,0.5s,mb3.5,baz=294,slow=5.6,SNR=4.9						
ARCES	ARCESS Array B	78.47	341	P	P	04 39 36.2	+0.3
	2.0nm,0.5s,mb4.0,baz=69,slow=7.8,SNR=16						
KAF	Kangasniemi	82.24	335	ep	P	04 39 56.9	+1.0
FINES	FINESS Array B	82.70	334	P	P	04 39 57.5	-0.7
	2.1nm,0.4s,mb4.2,baz=71,slow=4.7,SNR=37						
NVAR	Mina Array Bea	83.22	51	P	P	04 40 01.9	+0.5
	0.3nm,0.5s,mb3.3,baz=312,slow=4.5,SNR=4.1						
NVAR				pP	pP	04 41 01.7	+2.4
	0.5nm,0.6s,baz=270,slow=5.3,SNR=3.3						
NVAR	Mina Array Bea	83.22	51	P	P	04 40 01.9	+0.5
NVAR				pP	pP	04 41 01.7	+2.4
AKASG	Malin Array Be	87.00	324	P	P	04 40 21.6	+1.8
	0.8nm,0.3s,mb3.9,baz=53,slow=4.8,SNR=5.2						
BRTR	Keskin Array B	89.82	313	P	P	04 40 32.8	-0.5
	1.1nm,0.8s,mb3.7,baz=56,slow=4.5,SNR=4.5						

MAN 24 04:54:04.2, 11.31N×124.64E, h120^{km}, mb3.9, ML2.7, MS2.3, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	Palo	0.36	114	eP	P	04 54 23.7	+2.1
PLP				i S	S	04 54 42.7	+8.1
BESP	Borongan	0.83	70	eP	P	04 54 25.5	+0.6
MSLP	Maasin	1.19	170	i P	P	04 54 27.8	-0.8
MSLP	Maasin	1.19	170	eP	P	04 54 29.3	+0.7
SCPH	Surigao	1.73	151	⇑eP	P	04 54 32.4	-2.5
RCP	Roxas	1.88	278	⇓eP	P	04 54 37.7	+1.1
GUIM	Jordan	2.13	252	eP	P	04 54 40.3	+0.5

*IDC **24** 05:02:58.5±2.6, 12.60N×48.24E, mb3.8/6, mb1 3.9/6, mb1mx3.7/18, mbtmp3.8/6, Error ellipse: s-maj=67.0km s-min=31.1km az=42.0*
*DHMR **24** 05:03:02.2±1.6, 13.41N×47.84E, h13^{km}±21^{km}, ML3.4*
*CSEM **24** 05:03:02.2±0.7, 13.41N×47.84E, h12^{km}±11^{km}, ML3.4, Error ellipse: s-maj=36.1km s-min=11.8km az=175.0, After DHMR*
ISC 24 05:03:01.1±3.0, **13.0N**±0.1×**48.04E**±0.05, **h27**^{km}±23^{km}, **n11, σ0^{s}92**/15, **mb3.8**/6, **1C-2D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUKL	Al Mukalla	1.77	33	⇑iP	Pn	05 03 29.7	-0.7
MUKL				i S	Sn	05 03 52.3	0.0
MUKL				AML	AML	05 03 55.2	
	comp=E,299nm,0.8s						
BDHA	Al Bayda'	2.60	293	⇓iP	Pn	05 03 42.8	+0.5
BDHA				i S	Sn	05 04 13.0	-0.4
BDHA				AML	AML	05 04 15.6	
	comp=N,597nm,0.5s						
LBOS		2.86	288	⇓iP	Pn	05 03 46.2	+0.2
LBOS				i S	Sn	05 04 20.0	0.0
LBOS				AML	AML	05 04 22.4	
	comp=E,198nm,0.6s						
TRBA	At Turbah	3.83	274	i P	Pn	05 04 01.2	+1.3
DHBB	Dhamar BB	3.88	294	i P	Pn	05 03 59.4	-1.2
DHBB				i S	Sn	05 04 45.2	-0.7
BRTR	Keskin Array B	29.51	337	P	P	05 09 09.8	+4.2
	comp=E,0.5nm,0.6s,mb3.4,baz=156,slow=12,SNR=3.8						
MKAR	Makanchi Array	44.29	34	P	P	05 11 11.6	+1.2
	comp=E,0.6nm,0.8s,mb3.4,baz=229,slow=11,SNR=4.1						
CMAR	Chiang Mai Arr	49.17	77	P	P	05 11 47.8	-1.4
	comp=E,1.3nm,0.6s,mb4.2,baz=278,slow=9.7,SNR=5.2						
FINES	FINESS Array B	50.94	347	P	P	05 12 03.5	+1.4
	comp=E,0.8nm,0.7s,mb3.8,baz=168,slow=13,SNR=3.5						
SONM	Songino Array	59.37	42	P	P	05 13 04.1	+0.7
	comp=E,0.2nm,0.4s,mb3.5,baz=248,slow=7.8,SNR=3.7						
WRA	Warramunga Arr	90.94	110	P	P	05 16 03.6	-1.0
	comp=E,1.3nm,0.8s,mb4.3,baz=294,slow=3.7,SNR=8.6						

*MAN **24** 05:31:28.9, 11.20N×126.40E, h1^{km}, mb5.4, ML4.4, MS4.7*
*MOS **24** 05:31:32.6±0.8, 11.11N×125.83E, h33^{km}, mb4.9/12, Error ellipse: s-maj=46.6km s-min=11.3km az=124.8*
*BJI **24** 05:31:32.3, 11.07N×126.22E, h43^{km}, mB4.8, mb4.8, Ms4.3, Msz4.5*
*NEIC **24** 05:31:33.9±0.4, 11.10N×126.11E, mb4.8/14, Error ellipse: s-maj=17.0km s-min=6.1km az=65.0*
*IDC **24** 05:31:34.9±8.5, 11.00N×125.96E, h44^{km}±81^{km}, mb4.1/11, mb1 4.2/11, mb1mx4.1/18, mbtmp4.4/11, MS3.8/7, Ms1 3.8/7, ms1mx3.4/26, Error ellipse: s-maj=55.2km s-min=15.2km az=65.0*
ISC 24 05:31:31.7±1.0, **11.20N**±0.04×**126.43E**±0.06, **h42**^{km}±8^{km}, **h39**^{km}±1.2^{km}**:pP-P, n65, σ1^{s}10**/69, **mb4.6**/35, **MS3.8**/10, **5C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	1.05	292	eP	P	05 31 48.8	-1.3
BESP				eS	S	05 32 04.3	+0.5
PLP	Palo	1.42	269	⇑iP	P	05 31 54.3	-1.3
PLP				i S	S	05 32 15.2	+2.0
SCPH	Surigao	1.69	213	⇑eP	P	05 31 58.1	-1.1
MSLP	Maasin	1.87	236	eP	P	05 32 01.9	0.0
MSLP				eS	S	05 32 24.1	-0.3
CNP	Catarman	2.16	307	eP	P	05 32 05.2	-0.8
BUTP	Butuan	2.36	200	eP	P	05 32 10.8	+2.0
LLP	Lapu-Lapu	2.57	250	⇓eP	P	05 32 12.2	+0.3
LLP				eS	S	05 32 43.4	+1.2
TBP	Tagbilaran	2.94	239	⇑eP	P	05 32 17.3	+0.2
TBP				eS	S	05 32 53.6	+2.2
MMPH	Masbate	2.98	293	eP	P	05 32 18.0	+0.4
MMPH				i S	S	05 32 58.9	+6.5
PVCP	Virac	3.25	317	eP	P	05 32 18.9	-2.6
BUKP	Musuan	3.57	202	eP	P	05 32 26.4	+0.3
RCP	Roxas	3.63	276	⇓eP	P	05 32 27.3	+0.4
SNPH	Sibulan	3.64	240	⇑eP	P	05 32 27.0	-0.1
GUIM	Jordan	3.81	262	eP	P	05 32 29.5	0.0
DCPH	Dipolog City	3.99	230	⇑iP	P	05 32 32.2	+0.1
DCPH				i S	S	05 33 15.9	-2.3
AUQP	San Andres	4.23	300	eP	P	05 32 35.7	+0.3
CBIJ	Chichi jima	21.67	41	LR	LR	05 44 29.4	
	comp=Z,305nm,18.4s,MS3.7,baz=126,slow=35						
JNU	Nakatsue	22.20	10	LR	LR	05 45 06.4	
	comp=Z,188nm,18.1s,MS3.5,baz=182,slow=36						
KAKA	Kakadu	24.50	166	eP	P	05 36 50.5	+2.0
	32nm,0.9s,mb4.8						
KULM	Kulim	26.17	259	eP	P	05 37 03.2	-1.1
MJAR	Matsushiro Arr	27.38	21	LR	LR	05 47 37.5	
	comp=Z,339nm,18.4s,MS4.0,baz=215,slow=35						
CMAR	Chiang Mai Arr	27.50	288	P	P	05 37 14.4	-2.1
	6.0nm,1.0s,mb4.2,baz=97,slow=7.8,SNR=16						
CMAR				LR	LR	05 48 48.4	
	comp=Z,115nm,18.1s,MS3.5,baz=311,slow=38						
XAN	Xi'an	27.80	328	P	P	05 37 18.9	-0.2
XAN				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.3						
FITZ	Fitzroy Crossi	29.13	182	P	P	05 37 29.7	-1.4
	comp=Z,3.0nm,0.6s,mb4.2,baz=356,slow=8.0,SNR=5.7						
FITZ				LR	LR	05 50 02.4	
	comp=Z,83nm,19.7s,MS3.4,baz=192,slow=38						
WRAB	Tennant Creek	31.91	166	eP	P	05 37 55.4	-0.3
	comp=Z,3.6nm,0.6s,mb4.4						
WRA	Warramunga Arr	31.91	166	P	P	05 37 54.9	-0.8
	comp=Z,2.1nm,0.5s,mb4.2,baz=348,slow=9.0,SNR=28						
WB2	Warramunga Arr	31.92	166	eP	P	05 37 54.4	-1.4
LZH	Lanzhou	32.11	324	eP	P	05 37 58.8	+1.5
LZH				AP	pP	05 38 09.0	+0.2
LZH				XP	sP	05 38 11.8	-2.4
LZH				AMB	AMB		
	comp=Z,90nm,1.6s,mb5.3						
LZH				AMB	AMB		
	comp=Z,80nm,4.0s						

LZH				LR	LR		
	comp=E,480nm,13.0s						
LZH				LR	LR		
	comp=Z,720nm,13.3s,MS4.5						
MBWA	Marble Bar	32.83	192	*e*P	P	05 38 02.7	-1.0
	comp=Z,5.1nm,0.4s,mb4.8						
GTA	Gaotai	36.71	325	*e*P	P	05 38 38.0	+1.3
GTA				AP	pP	05 38 48.8	+0.5
GTA				XP	sP	05 38 54.0	+0.3
GTA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
GTA				AMB	AMB		
	comp=Z,70nm,6.5s						
GTA				LR	LR		
	comp=N,120nm,17.1s,MS4.1						
GTA				LR	LR		
	comp=E,200nm,14.1s,MS4.1						
GTA				LR	LR		
	comp=Z,170nm,14.8s,MS4.0						
ULN	Ulaanbaatar	40.01	340	*e*P	P	05 39 04.2	+0.2
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
ULN	Ulaanbaatar	40.01	340	*e*P	P	05 39 04.2	+0.2
	comp=Z,3.4nm,0.8s,mb4.1						
SONM	Songino Array	40.21	339	P	P	05 39 07.3	+1.6
	comp=Z,2.4nm,0.9s,mb3.9,baz=153,slow=8.3,SNR=16						
SONM				LR	LR	05 57 36.0	
	comp=Z,146nm,18.1s,MS3.9,baz=116,slow=39						
GUN	Gumba	41.44	300	*e*P	P	05 39 15.8	-0.3
	comp=Z,79nm,0.9s,mb5.3						
PKI	Pulchoki	41.75	299	*e*P	P	05 39 17.5	-1.2
	comp=Z,17nm,0.8s,mb4.8						
PKI	Pulchoki	41.75	299	*e*P	P	05 39 17.5	-1.2
PKI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
KKN	Kakani	41.92	299	*e*P	P	05 39 19.1	-1.0
	comp=Z,39nm,1.0s,mb5.0						
KKN	Kakani	41.92	299	*e*P	P	05 39 19.1	-1.0
KKN				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.7						
DMN	Daman	42.02	299	*e*P	P	05 39 19.8	-1.1
	comp=Z,30nm,1.0s,mb4.9						
GKN	Gorkha	42.52	299	*e*P	P	05 39 23.7	-1.4
	comp=Z,55nm,1.2s,mb5.2						
KLBR	Kellerberrin	43.35	191	*e*P	P	05 39 31.8	0.0
	comp=Z,68nm,1.4s,mb5.2						
KOLN	Koldanda	43.35	299	*e*P	P	05 39 30.9	-1.0
	comp=Z,45nm,1.0s,mb5.1						
ZAK	Zakamensk	43.46	339	*e*P	P	05 39 33.1	+0.7
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
TLY	Talaya	44.41	340	*e*P	P	05 39 42.1	+2.0
TLY				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
TLY				MLR	MLR		
	comp=Z,106nm,17.0s,MS3.8						
STKA	Stephens Creek	45.23	162	*e*P	P	05 39 48.1	+1.2
	comp=Z,10nm,1.5s,mb4.4						
STKA	Stephens Creek	45.23	162	P	P	05 39 47.6	+0.7
	comp=Z,3.8nm,0.5s,mb4.5,baz=303,slow=7.5,SNR=9.0						
MKAR	Makanchi Array	51.38	322	*e*P	P	05 40 35.1	+0.7
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MKAR	Makanchi Array	51.38	322	P	P	05 40 34.8	+0.4
	comp=Z,8.2nm,0.7s,mb4.8,baz=113,slow=8.4,SNR=55						
MKAR				LR	LR	06 04 44.4	
	comp=Z,84nm,18.1s,MS3.8,baz=269,slow=39						
NVS	Novosibirsk	55.16	331	*e*P	P	05 41 01.3	-0.9
NVS				pmax	pmax		
	comp=N,9.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
KKAR	Karatay Array	57.71	314	*i* P	P	05 41 20.3	-0.3
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
VOSK	Vostochnaya	60.55	325	P	P	05 41 39.8	-0.3
VOSK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.8						
BVA0	Borovoye Array	60.99	325	*i* P	P	05 41 43.0	-0.1
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.4						
ZRNK	Zerenda	61.75	325	*e*P	P	05 41 48.1	-0.1
ZRNK				*e**PP	pP	05 41 59.7	-0.7
ZRNK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
ZRNK	Zerenda	61.75	325	*e*P	P	05 41 48.1	-0.1
	comp=Z,7.5nm,0.8s,mb4.9						
ZRNK				*e*pP	pP	05 41 59.7	-0.8
AB31	Akbulak array	66.28	319	*i* P	P	05 42 17.7	-0.1
AB31				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
SVE	Sverdlovsk	67.52	327	*e*P	P	05 42 25.0	-0.4
SVE				*e*	pP	05 42 37.7	-0.2
SVE				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.2						
ARU	Arti	68.54	326	*e*P	P	05 42 31.4	-0.4
ARU				*e**PP	pP	05 42 42.8	-1.5
ARU				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
ARU	Arti	68.54	326	*e*P	P	05 42 31.4	-0.4
	comp=Z,2.4nm,0.4s,mb4.5						
ARU				*e*pP	pP	05 42 42.8	-1.5
ARCES	ARCESS Array B	83.38	340	P	P	05 43 58.1	+2.7
	comp=Z,1.4nm,0.6s,mb4.2,baz=80,slow=5.5,SNR=14						
KAF	Kangasniemi	84.88	332	*e*p	P	05 44 04.3	+1.2
BRTR	Keskin Array B	85.06	309	P	P	05 44 04.4	-0.1
	comp=Z,1.3nm,0.9s,mb4.0,baz=90,slow=3.7,SNR=4.7						
FINES	FINESS Array B	85.15	332	P	P	05 44 05.1	+0.7
	comp=Z,1.2nm,0.5s,mb4.3,baz=66,slow=4.9,SNR=23						
FINES	FINESS Array B	85.15	332	P	P	05 44 05.1	+0.7
AKASG	Malin Array Be	85.94	321	P	P	05 44 09.1	+0.5
	comp=Z,1.0nm,0.4s,mb4.4,baz=66,slow=4.1,SNR=12						
VNDA	Vanda	90.83	173	P	P	05 44 33.6	+2.2
	comp=Z,1.3nm,0.9s,mb4.3,baz=317,slow=4.3,SNR=6.2						

ISC 24 06:07:00.2±0.6**,39.72N**±0.04×**29.44E**±0.06**,h10^{km},n7, $\sigma 1\overset{s}{.}04$**/11**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULDT	Uludag	0.49	331	*i* P	Pg	06 07 09.6	-0.5
ULDT				*i* S	Sg	06 07 17.2	+0.5
GDZ	Gediz	0.63	177	*i* P	Pb	06 07 11.8	-1.0
GDZ				*i* S	Sg	06 07 20.6	-0.7
YLV	Yalova	0.85	357	PG	Pg	06 07 17.9	+0.6
KCT	Karacabey	1.00	304	*e*PG	Pg	06 07 19.4	-0.8
ESKT	Eskisehir	1.11	100	*e*PN	Pn	06 07 20.4	-1.3
ESKT	Eskisehir	1.11	100	*i* P	Pb	06 07 20.8	-0.3
ESKT				*i* S	Sb	06 07 37.0	+1.6
MANT	Manisa	1.40	210	*i* P	Pn	06 07 26.2	+0.2
MANT				*i* S	Sb	06 07 46.2	+2.3

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*NEIC **24** 06:20:36.0±0.6, 0.99N×99.80E, h30^{km}, Error ellipse: s-maj=21.6km s-min=12.6km az=91.0*

*IDC **24** 06:20:37.3±8.6, 1.06N×99.79E, h37^{km}±69^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.7/18, mbtmp4.0/8, Error ellipse: s-maj=35.7km s-min=21.8km az=58.0*

ISC 24 06:20:35.2±4.1**,1.0N**±0.2×**99.8E**±0.2**,h37^{km}**±34^{km}**,n15, $\sigma 0\overset{s}{.}79$**/11**,mb4.0**/7**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	4.33	11	*e*Pn	P	06 21 39.7	-0.7
CMAR	Chiang Mai Arr	17.36	357	P	P	06 24 37.9	+1.4
	baz=192,slow=10,SNR=7.9						
WRA	Warramunga Arr	39.74	123	P	P	06 28 06.1	0.0
	0.5nm,0.6s,mb3.4,baz=301,slow=9.1,SNR=7.2						
WRA				PcP	PcP	06 30 12.5	-0.2
	0.7nm,0.7s,baz=314,slow=2.4,SNR=8.2						
SONM	Songino Array	46.99	6	P	P	06 29 04.9	+0.3
	0.6nm,0.5s,mb3.8,baz=191,slow=10.0,SNR=7.0						
SONM				PcP	PcP	06 30 36.4	-0.5
	0.7nm,0.5s,baz=188,slow=2.7,SNR=5.6						
MKAR	Makanchi Array	48.10	344	P	P	06 29 13.0	-0.3
	3.7nm,0.6s,mb4.6,baz=154,slow=7.6,SNR=21						
MKAR	Makanchi Array	48.10	344	P	P	06 29 13.0	-0.3
BRTR	Keskin Array B	71.17	312	P	P	06 31 50.8	-1.5
	1.3nm,0.7s,mb4.0,baz=121,slow=7.2,SNR=5.1						
MATP	Matopo	72.87	248	P	P	06 32 03.6	+0.8
	1.2nm,0.8s,mb3.9,baz=63,slow=4.5,SNR=3.7						
FINES	FINESS Array B	81.38	332	P	P	06 32 49.1	-0.3
	0.9nm,0.6s,mb3.9,baz=90,slow=5.7,SNR=9.1						
ARCES	ARCESS Array B	83.60	340	P	P	06 33 00.8	+0.2
	1.1nm,0.5s,mb4.3,baz=96,slow=4.6,SNR=22						
ARCES	ARCESS Array B	83.60	340	P	P	06 33 00.8	+0.2
NVAR	Mina Array Bea	127.38	38	PKP	PKPdf	06 39 39.6	+2.9
	0.6nm,0.8s,baz=336,slow=0.5,SNR=5.2						
TXAR	Lajitas Array	142.40	35	PKP	PKPdf	06 40 05.5	+0.8
	0.4nm,0.7s,baz=255,slow=1.2,SNR=6.3						
BDFB	Brasilia	145.09	244	PKPbc	PKPbc	06 40 11.7	+1.6
	2.6nm,0.7s,baz=116,slow=3.5,SNR=6.1						
CPUP	Villa Florida	146.56	219	PKPbc	PKPbc	06 40 15.5	+2.1
	3.0nm,0.9s,baz=164,slow=2.8,SNR=5.7						

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*IDC **24** 06:29:56.2±2.3, 42.78N×126.53W, mb3.0/3, mb1 3.5/8, mb1mx3.4/25, mbtmp3.2/8, ML3.2/4, MS3.4/12, Ms1 3.4/12, ms1mx3.4/12, Error ellipse: s-maj=47.2km s-min=16.0km az=41.0*

*NEIC **24** 06:29:57.4±1.3, 42.88N×126.19W, h10^{km}, mb3.7/2, Error ellipse: s-maj=16.7km s-min=9.0km az=64.0*

ISC 24 06:29:58.2±1.3**,43.02N**±0.07×**126.0W**±0.1**,h10^{km},n33, $\sigma 1\overset{s}{.}44$**/28**,mb3.1**/3**,MS3.2**/6**,Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	1.24	96	*e*P	Pb	06 30 21.2	-0.1
KBO	Bosley Butte	1.54	121	*e*P	Pn	06 30 25.4	-0.6
HUMO	Hull Mountain	2.29	99	*e*P	Pn	06 30 36.2	-0.4
COR	Corvallis	2.51	50	*e*P	Pn	06 30 40.7	+0.9
YBH	Yreka Blue Hor	2.76	117	Pn	Pn	06 30 44.1	+0.7
	0.8nm,0.3s,baz=281,slow=10,SNR=11						
YBH				Sn	Sn	06 31 23.3	+6.1
	0.8nm,0.3s,baz=17,slow=17,SNR=3.7						
YBH				LR	LR	06 32 06.9	
	comp=Z,2µm,19.2s,baz=351,slow=43						
HBO	Huckleberry Mo	2.81	72	P	Pn	06 30 45.7	+1.6
BROR	Big Rock Looko	2.87	63	P	Pn	06 30 45.8	+0.9
IRO	Indian Ridge	2.91	69	P	Pn	06 30 46.7	+1.2
NLO	Nicolai Mounta	3.57	30	P	Pn	06 30 54.1	-0.8
TDH	Tom, Dick, Har	3.79	52	P	Pn	06 30 59.5	+1.5
MOD	Modoc	4.37	103	*e*Pn	Pn	06 31 04.5	-1.7
BEKR	Beckwourth	5.29	125	*e*P	Pn	06 31 16.9	-2.3
BMO	Blue Mountains	6.55	71	*e*P	Pn	06 31 34.4	-2.6
NVAR	Mina Array Bea	7.43	125	Pn	Pn	06 31 51.3	+1.9
	0.0nm,0.3s,baz=298,slow=13,SNR=2.7						
NVAR				LR	LR	06 34 57.1	
	comp=Z,742nm,18.9s,baz=300,slow=40						
NEW	Newport	8.14	47	LR	LR	06 35 16.3	
	comp=Z,344nm,21.3s,baz=230,slow=37						
ELK	Elko	8.35	102	Pn	P	06 32 06.2	+4.0
	0.1nm,0.3s,baz=335,slow=14,SNR=4.0						
ELK				LR	LR	06 35 32.9	
	comp=Z,536nm,20.6s,baz=279,slow=39						
BBB	Bella Bella	9.28	352	LR	LR	06 34 54.9	
	comp=Z,112nm,21.2s,baz=48,slow=32						
CHMT	Chamberlain Mo	9.85	62	P	P	06 32 21.4	-1.4
BOZ	Bozeman (W)	10.63	71	*e*P	P	06 32 31.8	-1.8
TPAW	Teton Pass	11.00	82	P	P	06 32 36.9	-1.8
PDAR	Pinedale Array	12.08	86	Pn	P	06 32 59.5	+6.2
	0.1nm,0.3s,baz=284,slow=12,SNR=3.9						
DLBC	Dease Lake	15.64	352	LR	LR	06 38 35.5	
	comp=Z,91nm,20.4s,baz=138,slow=33						
ANMO	Albuquerque	17.18	111	P	P	06 34 02.9	+3.1
	baz=313,slow=13,SNR=4.2						
ANMO	Albuquerque	17.18	111	P	P	06 34 02.9	+3.1
FFC	Flin Flon	19.56	45	*e*P	P	06 34 28.8	+0.1
	3.6nm,0.8s						
YKA	Yellowknife Ar	20.63	15	P	P	06 34 41.9	+1.8
	0.8nm,0.8s,baz=204,slow=11,SNR=3.0						
YKA				LR	LR	06 43 32.6	
	comp=Z,40nm,18.1s,MS2.8,baz=255,slow=39						
ULM	Lac du Bonnet	21.81	60	LR	LR	06 43 54.1	
	comp=Z,143nm,19.2s,MS3.4,baz=260,slow=38						
TXAR	Lajitas Array	22.54	120	P	P	06 35 01.0	+1.4
	0.4nm,0.8s,mb2.9,baz=304,slow=9.8,SNR=3.6						
TXAR				LR	LR	06 45 31.6	
	comp=Z,58nm,20.9s,MS3.0,baz=265,slow=41						
WMOK	Wichita Mounta	22.68	102	P	P	06 35 00.2	-0.7
	1.5nm,0.7s,mb3.5						
ILAR	Eielson Array	24.79	339	P	P	06 35 19.6	-1.5
	0.3nm,0.8s,mb2.9,baz=156,slow=8.2,SNR=5.3						
ILAR				LR	LR	06 43 31.0	
	comp=Z,61nm,19.2s,MS3.1,baz=180,slow=33						
ILAR	Eielson Array	24.79	339	P	P	06 35 19.6	-1.5
ILAR				LR	LR	06 43 31.0	
INK	Inuvik	25.66	354	LR	LR	06 45 12.5	
	comp=Z,118nm,19.6s,MS3.4,baz=172,slow=35						
SCHQ	Schefferville	39.48	51	LR	LR	06 54 05.3	
	comp=Z,61nm,18.3s,MS3.5,baz=37,slow=36						

NEIC 24 06:34:52.6,51.59N×176.44E,h10^{km},ML3.7(AEIC)**,After AEIC.,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.83	309	P	Pn	06 35 22.6	-2.0
SMY				S	Sn	06 35 45.2	-2.8
FX1	Attu Island--F	2.39	304	*e*P	Pn	06 35 30.3	-2.2
KIMD	Kanaga Island	3.94	85	P	Pn	06 35 51.8	-2.8
KIWB	Kanaga Island	4.00	84	*e*P	Pn	06 35 52.4	-2.9
KINC	Kanaga Island	4.01	83	P	Pn	06 35 52.4	-3.2
GSMY	Great Sitkin M	4.68	82	P	Pn	06 36 02.2	-2.9
ATKA	Atka Island	5.83	80	P	Pn	06 36 16.8	-4.5

IDC 24 06:45:22.2±1.7**,2.86N×128.50E,mb4.0**/4**,mb1 4.2**/4**, mb1mx3.8**/16**,mbtmp4.0**/4**,MS3.9**/2**,Ms1 4.0**/2**, ms1mx3.2**/17**,Error ellipse: s-maj=91.4km s-min=22.9km az=69.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.02	188	P	P	06 50 09.1	-1.0
	3.6nm,0.6s,baz=4.9,slow=12,SNR=8.3						
WRA	Warramunga Arr	23.38	166	P	P	06 50 32.4	-1.3
	2.3nm,0.5s,baz=344,slow=10,SNR=38						
WB2	Warramunga Arr	23.38	166	*e*P	P	06 50 33.1	-0.6
STKA	Stephens Creek	36.72	161	P	P	06 52 30.4	-2.8
	1.3nm,0.4s,baz=341,slow=9.8,SNR=12						
MKAR	Makanchi Array	59.27	325	P	P	06 55 26.1	-1.9
	0.5nm,0.4s,baz=114,slow=8.3,SNR=9.0						
MKAR				LR	LR	07 24 44.0	
	comp=Z,41nm,18.0s,baz=6.4,slow=40						
VNDA	Vanda	82.36	173	LR	LR	07 32 02.3	
	comp=Z,160nm,19.8s,baz=158,slow=34						

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*NEIC **24** 07:24:27.2, 38.54S×175.93E, h203^{km}, MG3.9(WEL), After WEL.*

WEL 24 07:24:30.6±0.2**,38.43S×176.09E,h149^{km}**±2^{km}**,ML4.0**/20**, 2C-1D,Error ellipse: s-maj=1.7km s-min=1.2km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RITZ	Rihia Road	0.58	198	P	P	07 24 52.8	0.0
RITZ	Rihia Road	0.58	198	PN	P	07 24 52.8	0.0
BKZ	Black Stump Fm	0.80	157	⇓P	P	07 24 54.0	-0.1
BKZ				S	S	07 25 11.2	-0.9
BKZ	Black Stump Fm	0.80	157	⇑PN	P	07 24 54.0	0.0
BKZ				SN	S	07 25 11.2	-0.9
OTVZ	Oturere	0.81	204	PN	P	07 24 54.1	0.0
URZ	Urewera	0.82	79	⇑P	P	07 24 53.7	-0.4
URZ	Urewera	0.82	79	PN	P	07 24 53.6	-0.5
URZ				SN	S	07 25 11.0	-1.3
NGZ	Ngauruhoe	0.84	207	P	P	07 24 54.0	-0.3
NGZ	Ngauruhoe	0.84	207	PN	P	07 24 54.3	0.0
CNZ	Chateau	0.88	209	P	P	07 24 54.3	-0.3
CNZ	Chateau	0.88	209	PN	P	07 24 54.4	-0.2
WPVZ	Whakapapa	0.89	209	P	P	07 24 54.6	0.0
WPVZ	Whakapapa	0.89	209	PN	P	07 24 54.5	-0.1
TUVZ	Tukino	0.91	202	PN	P	07 24 54.8	0.0
FWVZ	Far West T-bar	0.93	207	P	P	07 24 54.9	0.0
FWVZ	Far West T-bar	0.93	207	PN	P	07 24 54.6	-0.3
DRZ	Dome Shelter	0.94	206	PN	P	07 24 55.2	+0.1
TRVZ	Turoa	0.97	206	PN	P	07 24 55.3	+0.1
HIZ	Hauiti	0.98	264	*e*P	P	07 24 54.9	-0.4
HIZ				S	S	07 25 13.9	-0.3
HIZ	Hauiti	0.98	264	PN	P	07 24 54.9	-0.4
HIZ				SN	S	07 25 13.9	-0.4
WNVZ	Wahianoa	0.98	203	P	P	07 24 55.3	0.0
WNVZ	Wahianoa	0.98	203	PN	P	07 24 55.2	-0.1
MOVZ	Moawhango	1.02	195	P	P	07 24 55.2	-0.4
MOVZ	Moawhango	1.02	195	PN	P	07 24 55.2	-0.4
MOVZ				SN	S	07 25 14.1	-0.7
PKVZ	Pokaka	1.04	214	PN	P	07 24 55.5	-0.4
PKVZ				SN	S	07 25 14.7	-0.6
MTVZ	Mangateitei	1.08	207	PN	P	07 24 55.8	-0.4
MWZ	Matawai	1.13	86	P	P	07 24 56.6	-0.1
MWZ				S	S	07 25 16.1	-0.7
MWZ	Matawai	1.13	86	PN	P	07 24 56.6	-0.1
MWZ				SN	S	07 25 16.1	-0.7
VRZ	Vera Road	1.26	236	P	P	07 24 57.5	-0.5
VRZ				S	S	07 25 19.3	+0.3
VRZ	Vera Road	1.26	236	PN	P	07 24 57.5	-0.5
VRZ				SN	S	07 25 19.3	+0.2
KNZ	Kokohu	1.37	116	*e*P	P	07 24 59.3	+0.2
KNZ	Kokohu	1.37	116	PN	P	07 24 59.3	+0.1
KNZ				SN	S	07 25 19.7	-1.4
RAEZ	Rainy Point	1.58	236	P	P	07 25 01.2	-0.1
RAEZ	Rainy Point	1.58	236	PN	P	07 25 01.1	-0.2
TSZ	Takapari Road	1.64	184	P	P	07 25 01.1	-0.8
TSZ	Takapari Road	1.64	184	PN	P	07 25 01.0	-0.9
TSZ				SN	S	07 25 25.1	-0.9
PWZ	Pawanui	1.71	160	P	P	07 25 02.4	-0.3
PWZ	Pawanui	1.71	160	PN	P	07 25 02.4	-0.3
PWZ				SN	S	07 25 26.1	-1.3
PUZ	Puketiti	1.74	79	*e*P	P	07 25 02.9	-0.1
PUZ				S	S	07 25 26.4	-1.6
PUZ	Puketiti	1.74	79	PN	P	07 25 02.9	-0.2
PUZ				SN	S	07 25 26.1	-1.9
NEZ	North Egmont	1.77	241	P	P	07 25 03.2	-0.2
NEZ	North Egmont	1.77	241	PN	P	07 25 03.1	-0.4
PKE	Pukeiti	1.82	244	P	P	07 25 03.2	-0.7
PKE	Pukeiti	1.82	244	PN	P	07 25 03.1	-0.8
PKE				SN	S	07 25 28.6	-1.0
MXZ	Matakaoa Point	1.95	64	PN	P	07 25 05.8	+0.4
BFZ	Birch Farm	2.26	177	PN	P	07 25 07.5	-1.7
MRZ	Mangatainoka R	2.27	190	PN	P	07 25 07.3	-2.1
KIW	Kapiti Island	2.60	200	P	P	07 25 10.7	-2.8
KIW	Kapiti Island	2.60	200	PN	P	07 25 10.7	-2.9
MTW	Mount Morrison	2.77	189	P	P	07 25 12.6	-3.1
CAW	Cannon Point	2.79	196	P	P	07 25 13.1	-2.9
MRW	Makara Radio	3.00	201	P	P	07 25 15.2	-3.5
WEL	Wellington	3.03	199	P	P	07 25 15.8	-3.3
MSWZ	Moikau Station	3.06	192	P	P	07 25 15.9	-3.5
SNZO	South Karori	3.07	200	P	P	07 25 16.0	-3.6
TCW	Tory Channel	3.12	206	P	P	07 25 16.6	-3.6
BHW	Baring Head	3.12	197	P	P	07 25 16.6	-3.7
NNZ	Nelson	3.49	216	*e*P	P	07 25 20.7	-4.3
BSWZ	Blackbirch Sta	3.70	207	P	P	07 25 23.7	-4.1
THZ	Tophouse	4.14	215	*e*P	P	07 25 29.0	-4.5
KHZ	Kahutara	4.44	205	P	P	07 25 32.8	-4.7
DSZ	Denniston Nort	4.67	223	*e*P	P	07 25 34.6	-6.0
LTZ	Lake Taylor	5.24	213	*e*P	P	07 25 42.5	-5.5
MQZ	McQueen’s Vall	5.88	205	*e*P	P	07 25 50.0	-6.6

ISC 24 07:25:24.3±0.7**,39.72N**±0.04×**29.51E**±0.08**,h10^{km},n6, $\sigma 0\overset{s}{.}66$**/10**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULDT	Uludag	0.51	326	*i* P	Pg	07 25 34.0	-0.8
ULDT				*i* S	Sg	07 25 42.3	+0.6
YLV	Yalova	0.86	353	*e*PG	Pg	07 25 41.0	-0.5
YLV				*e*SG	Sg	07 25 56.8	+3.8
EYL	Eskiyayla	0.98	30	*e*PN	Pn	07 25 43.9	-0.2
ESKT	Eskisehir	1.05	100	*e*PN	Pn	07 25 45.7	+0.6
ESKT	Eskisehir	1.05	100	*i* P	Pb	07 25 44.1	-0.1
ESKT				*i* S	Sb	07 26 04.6	+6.8
MANT	Manisa	1.43	212	*i* P	Pn	07 25 50.1	-0.3
MANT				*i* S	Sb	07 26 09.2	+0.3

GUC 24 07:32:15.2±0.4**,20.17S×69.26W,h103^{km}**±2^{km}**,ML4.2, Northern Chile**

IGQ 24 07:46:44.7,2.02S×80.11W,h9^{km}±3^{km}**,mb4.0,6C-10D, Error ellipse: s-maj=5.3km s-min=2.0km az=114.8,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	1.06	336	⇑P	Pb	07 47 05.4	+0.5
HOJA				S	Sb	07 47 19.8	+1.1
IGUA	Igualata	1.56	70	⇓P	Pn	07 47 14.6	+1.8
IGUA				S	Sb	07 47 35.6	+2.5
CUSU	Cusua	1.73	70	P	Pn	07 47 17.0	+1.8
ARRY	Arrayan	1.73	73	⇑P	Pn	07 47 16.8	+1.5
JUIV	Juive	1.75	70	P	Pn	07 47 16.6	+1.1
JAMA	Jama	1.75	357	P	Pn	07 47 16.3	+0.7
RUN5	Runtun	1.79	70	P	Pn	07 47 17.9	+1.9
RUN5				S	Sn	07 47 41.6	+2.6
ULBA	Ulba	1.79	71	⇓P	Pn	07 47 18.4	+2.3
ULBA				S	Sn	07 47 42.0	+2.9
PISA	Pisayambo	1.97	61	⇓P	Pn	07 47 21.8	+3.1
PISA				S	Sn	07 47 48.1	+4.4
CAMI	Rancho Maria	2.09	50	⇓P	Pn	07 47 23.2	+2.8
NAS1	Nasa	2.13	50	⇓P	Pn	07 47 24.2	+3.2
TAMB	Tambo	2.18	53	⇓P	Pn	07 47 24.6	+2.9
VC1	Cotopaxi 1	2.19	51	⇑P	Pn	07 47 24.8	+3.0
JUA2	San Juan 2	2.34	40	⇑P	Pn	07 47 25.5	+1.4
JUA2				S	Sn	07 47 55.3	+2.1
TERV	Terraza Guagua	2.37	39	⇓P	Pn	07 47 26.1	+1.6
TERV				S	Sn	07 47 56.6	+2.6
GGP	Refugio Guagua	2.38	39	⇑P	Pn	07 47 25.9	+1.4
PINO	Pino	2.38	39	⇓P	Pn	07 47 26.0	+1.4
YANA	Yana	2.44	39	⇓P	Pn	07 47 26.6	+1.2
YANA				S	Sn	07 47 56.7	+1.1
ANTI	Antisana	2.50	51	⇓P	Pn	07 47 29.3	+3.1
ANTI				S	Sn	07 48 03.2	+6.1
CAYR	Refugio Cayamb	2.92	46	P	Pn	07 47 36.0	+3.8
COTA	Cotacachi	2.94	37	⇑P	Pn	07 47 34.1	+1.6
CAYA	Cayambe	2.97	45	P	Pn	07 47 37.3	+4.4

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*NEIC **24** 07:50:03.3, 38.03S×176.25E, h298^{km}, MG4.0(WEL), After WEL.*

WEL 24 07:50:02.9±0.3**,37.62S×176.17E,h276^{km}**±3^{km}**,ML4.0**/18**, Error ellipse: s-maj=6.2km s-min=5.9km az=0.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.98	131	P	P	07 50 40.6	-0.2
URZ	Urewera	0.98	131	PN	P	07 50 40.6	-0.2
URZ				SN	S	07 51 09.6	-0.8
MWZ	Matawai	1.29	124	PN	P	07 50 42.5	-0.1
MWZ				SN	S	07 51 13.4	-0.2
RITZ	Rihia Road	1.38	190	P	P	07 50 43.6	+0.4
RITZ	Rihia Road	1.38	190	PN	P	07 50 43.5	+0.3
BKZ	Black Stump Fm	1.57	171	P	P	07 50 44.2	-0.3
BKZ				S	S	07 51 16.2	-0.6
BKZ	Black Stump Fm	1.57	171	PN	P	07 50 44.2	-0.3
BKZ				SN	S	07 51 15.9	-1.0
OTVZ	Oturere	1.60	194	PN	P	07 50 44.8	+0.2
NGZ	Ngauruhoe	1.62	196	P	P	07 50 44.9	0.0
NGZ	Ngauruhoe	1.62	196	PN	P	07 50 45.2	+0.3
CNZ	Chateau	1.66	197	PN	P	07 50 45.0	-0.1
WPVZ	Whakapapa	1.66	197	PN	P	07 50 44.9	-0.2
MXZ	Matakaoa Point	1.69	89	*e*P	P	07 50 45.5	+0.1
MXZ				S	S	07 51 18.4	-0.1
MXZ	Matakaoa Point	1.69	89	PN	P	07 50 44.7	-0.7
MXZ				SN	S	07 51 18.4	-0.1
TUVZ	Tukino	1.70	194	P	P	07 50 45.4	0.0
TUVZ	Tukino	1.70	194	PN	P	07 50 45.4	-0.1
FWVZ	Far West T-bar	1.71	196	*e*P	P	07 50 45.5	0.0
FWVZ	Far West T-bar	1.71	196	PN	P	07 50 45.5	0.0
PUZ	Puketiti	1.71	106	*e*P	P	07 50 45.4	-0.1
PUZ				S	S	07 51 18.4	-0.3
PUZ	Puketiti	1.71	106	PN	P	07 50 45.4	-0.1
PUZ				SN	S	07 51 18.3	-0.4
TRVZ	Turoa	1.75	196	PN	P	07 50 45.8	0.0
WNVZ	Wahianoa	1.77	195	P	P	07 50 45.9	0.0
WNVZ	Wahianoa	1.77	195	PN	P	07 50 45.8	-0.1
PKVZ	Pokaka	1.79	201	PN	P	07 50 45.9	-0.3
PKVZ				SN	S	07 51 20.8	+1.0
MOVZ	Moawhango	1.82	190	P	P	07 50 45.8	-0.5
MOVZ	Moawhango	1.82	190	PN	P	07 50 45.7	-0.6
MTVZ	Mangateitei	1.85	197	PN	P	07 50 46.4	-0.2

WAZ	Wanganui	2.33	203	eP	P	07 50 50.1	-0.7
WAZ	Wanganui	2.33	203	PN	P	07 50 50.1	-0.7
TSZ	Takapari Road	2.44	184	P	P	07 50 50.6	-1.3
TSZ	Takapari Road	2.44	184	PN	P	07 50 50.6	-1.3
TSZ				SN	S	07 51 28.4	-1.7
PWZ	Pawanui	2.47	168	P	P	07 50 51.2	-0.9
PWZ	Pawanui	2.47	168	PN	P	07 50 51.1	-1.1
BFZ	Birch Farm	3.06	179	P	P	07 50 56.4	-1.7
BFZ	Birch Farm	3.06	179	PN	P	07 50 56.4	-1.7
BFZ				SN	S	07 51 38.6	-2.4
MRZ	Mangatainoka R	3.08	188	P	P	07 50 56.0	-2.2
MRZ	Mangatainoka R	3.08	188	PN	P	07 50 56.0	-2.3
MRZ				SN	S	07 51 39.0	-2.2
KIW	Kapiti Island	3.39	196	P	P	07 50 59.1	-2.5
KIW	Kapiti Island	3.39	196	PN	P	07 50 59.1	-2.5
KIW				SN	S	07 51 43.6	-3.7
MTW	Mount Morrison	3.58	188	P	P	07 51 00.8	-2.9
MTW	Mount Morrison	3.58	188	PN	P	07 51 00.8	-2.9
CAW	Cannon Point	3.59	193	P	P	07 51 01.1	-2.7
CAW	Cannon Point	3.59	193	PN	P	07 51 01.0	-2.8
DUWZ	D'Urville Isla	3.63	208	PN	P	07 51 01.6	-2.7
MRW	Makara Radio	3.78	197	P	P	07 51 03.1	-2.9
MRW	Makara Radio	3.78	197	PN	P	07 51 03.1	-2.9
TRWZ	Traveller	3.80	186	PN	P	07 51 03.3	-2.8
PAWZ	Paruwai Farm	3.80	189	PN	P	07 51 03.2	-3.0
SNZO	South Karori	3.86	197	P	P	07 51 03.8	-3.0
SNZO	South Karori	3.86	197	PN	P	07 51 03.8	-3.0
MSWZ	Moikau Station	3.86	190	PN	P	07 51 03.8	-3.0
TCW	Tory Channel	3.88	202	PN	P	07 51 04.2	-2.9
TUWZ	Tuamarina	4.18	204	PN	P	07 51 07.4	-3.1
NNZ	Nelson	4.20	210	P	P	07 51 07.2	-3.5
NNZ	Nelson	4.20	210	PN	P	07 51 07.2	-3.5
BSWZ	Blackbirch Sta	4.46	203	P	P	07 51 10.7	-3.0
THZ	Tophouse	4.85	210	eP	P	07 51 14.7	-3.6
KHZ	Kahutara	5.20	202	eP	P	07 51 19.1	-3.4
DSZ	Denniston Nort	5.33	218	eP	P	07 51 19.3	-4.7
LTZ	Lake Taylor	5.96	209	eP	P	07 51 27.1	-4.6
MQZ	McQueen's Vall	6.65	203	eP	P	07 51 35.2	-5.0
RPZ	Rata Peaks	7.23	211	eP	P	07 51 42.5	-4.9
FOZ	Fox Glacier	7.72	218	eP	P	07 51 47.0	-6.6
ODZ	Otahua Downs	8.51	208	eP	P	07 51 59.2	-4.2
JCZ	Jackson Bay	8.55	219	eP	P	07 51 59.0	-5.0

IDC 24 07:54:15.2±1.9**, 35.98N**×**76.00E, mb3.5**/4**, mb1 3.6**/6**, mb1mx3.5**/20**, mbtmp3.5**/6**, ML3.5**/2**, Error ellipse: s-maj=43.3km s-min=29.3km az=47.0, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	11.78	22	Pn	P	07 57 04.8	-2.6
	0.2nm,0.3s,baz=194,slow=12,SNR=8.3						
BVAR	Borovoye Array	17.49	349	P	P	07 58 22.0	+0.1
	0.3nm,0.3s,baz=162,slow=9.4,SNR=8.0						
SONM	Songino Array	25.36	53	P	P	07 59 44.6	-0.7
	0.4nm,0.7s,baz=256,slow=10,SNR=4.2						
FINES	FINESS Array B	40.19	325	P	P	08 01 52.4	-2.2
	2.4nm,1.1s,baz=125,slow=9.1,SNR=7.4						
ARCES	ARCESS Array B	43.19	337	P	P	08 02 17.6	-1.3
	0.8nm,0.8s,baz=112,slow=9.7,SNR=3.7						
WRA	Warramunga Arr	78.33	125	P	P	08 06 17.3	-1.7
	0.4nm,1.0s,baz=314,slow=7.3,SNR=3.1						

IDC 24 08:00:30.7±3.6**, 52.34N**×**35.39E, mb1 3.7**/2**, mb1mx3.4**/18**, mbtmp3.6**/2**, ML3.3**/3**, Error ellipse: s-maj=40.2km s-min=13.8km az=119.0, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	Malin Array Be	4.19	249	Pn	Pn	08 01 34.7	-2.5
	0.7nm,0.3s,baz=55,slow=11,SNR=4.0						
AKASG				Sn	Sn	08 02 23.5	-4.2
	2.0nm,0.3s,baz=46,slow=33,SNR=5.3						
AKASG				Lg		08 02 41.3	
	2.8nm,0.3s,baz=67,slow=31,SNR=5.3						
FINES	FINESS Array B	10.44	335	Pn	P	08 02 56.9	-7.6
	0.1nm,0.3s,baz=146,slow=15,SNR=9.7						
FINES				Sn	S	08 04 48.9	-15
	0.1nm,0.3s,baz=156,slow=24,SNR=3.0						
ARCES	ARCESS Array B	17.86	349	P	P	08 04 38.5	-3.3
	0.3nm,0.3s,baz=167,slow=12,SNR=12						

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*IDC **24** 08:15:56.1±1.1, 13.90N×124.34E, mb3.9/6, mb1 4.0/6, mb1mx3.8/17, mbtmp3.9/6, MS3.3/4, Ms1 3.4/4, ms1mx3.1/23, Error ellipse: s-maj=168.8km s-min=18.8km az=68.0*

*MAN **24** 08:15:57.5, 14.16N×124.27E, h6^{km}, mb4.7, ML3.6, MS3.6*

MAN VIRAC CATANDUANES - INTENSITY III LEGASPI CITY - INTENSITY II.

ISC 24 08:15:59.3±1.3**, 14.03N**±0.05×**124.25E**±0.07**, h24**^{km}±9^{km}**, n28, σ1^{s}22**/30**, mb3.9**/6**, MS3.3**/3**, 4C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	Virac	0.45	192	eP	Pb	08 16 08.8	+0.2
PVCP				eS	Sb	08 16 14.3	-0.5
CNP	Catarman	1.57	165	eP	Pn	08 16 27.3	+1.2
AUQP	San Andres	1.68	245	eP	Pn	08 16 28.6	+0.8
MMPH	Masbate	1.77	200	⇓eP	Pn	08 16 30.0	+1.0
MMPH				i S	Sn	08 16 50.5	-0.5
POLP	Polilio Island	2.34	287	eP	Pn	08 16 39.1	+1.9
POLP				eS	Sn	08 17 07.5	+2.0
BOAC	Boac	2.40	257	eP	Pn	08 16 39.1	+1.1
BESP	Borongan	2.68	154	eP	Pn	08 16 43.5	+1.5
OTRP	Odiongan	2.73	233	eP	Pn	08 16 40.8	-1.9
RCP	Roxas	2.86	211	⇑eP	Pn	08 16 43.0	-1.7
PLP	Palo	2.94	166	⇑eP	Pn	08 16 46.7	+1.0
PLP				eS	Sn	08 17 21.6	+0.9
LBPH	Los Banos	2.98	273	eP	Pn	08 16 45.0	-1.3
ARP	Angono	3.04	280	eP	Pn	08 16 46.4	-0.8
BALP	Baler	3.09	304	eP	Pn	08 16 46.7	-1.1
NZB	Bigte	3.16	286	eP	Pn	08 16 49.4	+0.7
PCPH	Palayan	3.41	297	⇑eP	Pn	08 16 52.0	-0.3
GUIM	Jordan	3.75	206	eP	Pn	08 17 00.7	+3.5
NBP	Mount Natib	3.78	281	eP	Pn	08 16 57.2	-0.4
TBP	Tagbilaran	4.33	185	eP	Pn	08 17 02.4	-3.1
TBP				eS	Sn	08 17 49.2	-6.7
SCPH	Surigao	4.40	164	⇑eP	Pn	08 17 02.1	-4.3
JOW	Kunigami	13.28	16	LR	LR	08 24 28.2	
	comp=Z,108nm,18.6s,baz=276,slow=38						
CMAR	Chiang Mai Arr	24.68	284	LR	LR	08 30 18.9	
	comp=Z,45nm,20.4s,MS3.0,baz=337,slow=35						
WRA	Warramunga Arr	35.19	163	P	P	08 22 50.3	-3.6
	1.0nm,0.6s,mb4.0,baz=343,slow=8.8,SNR=18						
WRA				PcP	PcP	08 25 22.7	-2.3
	0.4nm,0.5s,baz=341,slow=2.9,SNR=5.3						
SONM	Songino Array	36.82	340	P	P	08 23 07.3	-0.1
	0.4nm,0.4s,mb3.6,baz=154,slow=9.5,SNR=5.5						
SONM				LR	LR	08 38 46.6	
	comp=Z,46nm,18.7s,MS3.3,baz=81,slow=37						
MKAR	Makanchi Array	47.86	322	P	P	08 24 37.1	-0.2
	0.8nm,0.7s,mb3.8,baz=162,slow=9.1,SNR=2.8						
STKA	Stephens Creek	48.59	160	P	P	08 24 40.9	-2.2
	1.0nm,0.5s,mb4.1,baz=343,slow=8.4,SNR=2.9						
ARCES	ARCESS Array B	80.00	339	P	P	08 28 07.9	0.0
	1.0nm,0.5s,mb4.0,baz=80,slow=5.0,SNR=7.8						
FINES	FINESS Array B	81.66	331	P	P	08 28 16.6	-0.2
	2.2nm,1.1s,mb4.0,baz=45,slow=2.7,SNR=4.7						
NOA	NORSAR Array B	88.53	333	LR	LR	09 09 15.0	
	comp=Z,26nm,18.3s,MS3.7,baz=35,slow=36						

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*MOS **24** 08:19:01.5±1.0, 36.35N×70.66E, h192^{km}, mb4.1/1, Error ellipse: s-maj=20.7km s-min=10.2km az=98.5*

*NEIC **24** 08:19:03.7±1.7, 36.30N×70.73E, h199^{km}±17^{km}, mb4.5/7, Error ellipse: s-maj=19.3km s-min=7.0km az=59.0*

*IDC **24** 08:19:06.2±6.2, 36.35N×70.78E, h223^{km}±55^{km}, mb3.4/7, mb1 3.5/9, mb1mx3.3/20, mbtmp4.0/9, Error ellipse: s-maj=37.5km s-min=18.7km az=33.0*

*NNC **24** 08:19:09.0±5.7, 36.93N×70.55E, h217^{km}±52^{km}, mpv4.6, Error ellipse: s-maj=51.9km s-min=33.8km az=26.0*

ISC 24 08:19:02.6±0.5**, 36.41N**±0.03×**70.86E**±0.07**, h200**^{km}±6^{km}**, n59, σ1^{s}00**/73**, mb3.5**/7**, 11C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.71	161	⇓P	P	08 19 51.6	+2.2
CHCP	Chirah Chowk	3.38	144	P	P	08 19 59.8	+2.5
SBDP	Sheikh Budin	4.10	181	⇑P	P	08 20 06.9	+0.7
DRP	Derazinda	4.68	187	P	P	08 20 14.5	+0.8
SARP	Sargodha	4.72	161	P	P	08 20 15.0	+0.9
SARP				S	S	08 21 08.0	-1.5
THN	Thein Dam	5.64	133	eP	P	08 20 26.6	+0.7
THN				eS	S	08 21 30.0	-0.7
PONG	Pong	6.12	135	ex	S	08 21 41.0	-0.9
AML	Almayashu	6.12	20	P	P	08 20 32.6	+0.4
	SNR=194						
UCH	Uchtor	6.46	25	P	P	08 20 37.2	+0.6
	SNR=102						
KZA	Kyzart	6.61	30	P	P	08 20 38.5	-0.1
	SNR=15						
EKS2	Erkin-Say	6.64	19	P	P	08 20 39.2	+0.2
	SNR=39						
KK31	Karatay Array	6.70	358	⇑P	P	08 20 38.8	-0.9
	42nm,0.5s,baz=184,slow=16,SNR=311						
KK31				⇓S	S	08 21 50.4	-4.9
	34nm,0.4s,baz=153,slow=13,SNR=14						
KKAR	Karatay Array	6.70	358	i PN	P	08 20 38.7	-1.0
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
AAK	Ala-Archa	6.82	23	P	P	08 20 42.0	+0.6
	SNR=15						
AAK	Ala-Archa	6.82	23	⇑P	P	08 20 41.7	+0.4
	comp=Z,15nm,0.3s						
AAK				⇑S	S	08 21 57.6	-0.7
	comp=Z,29nm,0.6s						
KBK	Karagaybulak	6.99	26	P	P	08 20 44.3	+0.7
	SNR=21						
SDNR	Sundarnagar	7.05	132	eP	P	08 20 44.0	-0.2
SDNR				eS	S	08 22 00.2	-3.3
ULHL	Ulahol	7.17	34	P	P	08 20 46.1	+0.3
	SNR=7.2						
CHMS	Chumysh	7.23	23	P	P	08 20 46.6	-0.1
	SNR=22						
USP	Ospenovka	7.40	21	P	P	08 20 48.1	-0.7
	SNR=20						
SMLA	Simla	7.43	133	i P	P	08 20 47.2	-2.1
SMLA				i S	S	08 22 09.1	-3.5
TKM2	Tokmak 2	7.46	28	P	P	08 20 50.1	+0.5
	SNR=69						
KLP	Kalpa	7.83	126	eP	P	08 20 55.0	+0.6
KLP				eS	S	08 22 21.1	-0.7
KLP				AML	AML	08 22 23.2	
	comp=N,235nm,0.8s						
KLP				AML	AML	08 22 23.7	
	comp=E,204nm,0.8s						
DDI	Dehra Dun	8.54	133	ex	S	08 22 39.0	+0.6
KHET	Khetri	9.30	152	eP	P	08 21 13.1	-0.5
KHET				eS	S	08 22 51.1	-5.0
KHET				AML	AML	08 22 55.1	
	comp=E,49nm,0.3s						
KHET				AML	AML	08 22 55.3	
	comp=N,64nm,0.3s						
NDI	New Delhi	9.38	143	eP	P	08 21 14.0	-0.6
NDI				eS	S	08 22 52.0	-5.9
AYAN	Aya Nagar	9.51	144	eP	P	08 21 15.9	-0.4
AYAN				eS	S	08 22 57.2	-3.6
SONA	Sohna	9.68	145	eS	S	08 23 00.3	-4.7
SONA				AML	AML	08 23 03.9	
	comp=E,30nm,0.8s						
SONA				AML	AML	08 23 04.2	
	comp=N,19nm,0.3s						
AJM	Ajmer	10.41	161	eP	P	08 21 27.6	-0.3
AJM				AMb	AMB	08 21 31.0	
	comp=Z,9.9nm,0.5s						
AJM				eS	S	08 23 12.6	-9.2
MK31	Makanchi Array	13.43	36	⇑P	P	08 22 05.6	-0.7
	comp=Z,6.4nm,0.8s,baz=214,slow=9.8,SNR=13						
MKAR	Makanchi Array	13.43	36	i P	P	08 22 06.9	+0.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	13.43	36	P	P	08 22 08.0	+1.7
	comp=Z,0.6nm,0.3s,baz=220,slow=10,SNR=10						
KOLN	Koldanda	13.80	125	eP	P	08 22 11.4	+0.4
	comp=Z,6.7nm,0.3s						
BHPL	Bhopal	14.29	155	eP	P	08 22 22.0	+4.8
BHPL				AMb	AMB	08 22 25.8	
	comp=Z,12nm,0.7s						
BHPL				ex	x	08 24 49.1	
GKN	Gorkha	14.35	122	eP	P	08 22 18.5	+0.7
	comp=Z,25nm,0.4s						
DMN	Daman	14.92	122	eP	P	08 22 25.9	+1.0
	comp=Z,10nm,0.4s						
KKN	Kakani	14.92	121	eP	P	08 22 25.2	+0.3
	comp=Z,28nm,0.5s						
KKN	Kakani	14.92	121	eP	P	08 22 25.2	+0.3
KKN				pmax	pmax		
	comp=Z,14nm,0.5s						
AB31	Akbulak array	15.11	332	⇑P	P	08 22 25.5	-1.7
	comp=Z,5.9nm,0.6s						
AB31				⇑S	S	08 25 02.7	-6.5
	comp=Z,1.2nm,0.5s,baz=155,slow=20,SNR=4.4						
AB31	Akbulak array	15.11	332	P	P	08 22 25.4	-1.8
AB31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PKI	Pulchoki	15.15	121	eP	P	08 22 28.7	+1.0
	comp=Z,32nm,0.6s						
PKI	Pulchoki	15.15	121	eP	P	08 22 28.7	+1.0
PKI				pmax	pmax		
	comp=Z,16nm,0.6s						
GUN	Gumba	15.27	119	eP	P	08 22 31.0	+1.8
	comp=Z,8.9nm,0.3s						
VOSK	Vostochnaya	16.32	0	⇑P	P	08 22 41.3	-0.5
	comp=Z,2.5nm,0.8s						
ZRNK	Zerenda	16.59	356	⇑P	P	08 22 44.8	-0.4
	comp=Z,3.6nm,0.6s						
ZRNK	Zerenda	16.59	356	eP	P	08 22 44.7	-0.5
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZRNK	Zerenda	16.59	356	eP	P	08 22 44.7	-0.5
	comp=Z,3.4nm,0.4s						
BVA0	Borovoye Array	16.62	359	⇑P	P	08 22 42.4	-3.1
	comp=Z,0.5nm,0.8s,baz=160,slow=10,SNR=20						
BVA0				⇑S	S	08 25 43.7	+0.9
	comp=Z,1.0nm,1.2s,baz=178,slow=22,SNR=5.2						
BVAR	Borovoye Array	16.62	359	P	P	08 22 45.2	-0.3
	comp=Z,0.9nm,0.3s,baz=161,slow=9.6,SNR=13						
BVAR				S	S	08 25 47.4	+4.5
	comp=Z,0.2nm,0.3s,baz=160,slow=22,SNR=3.8						
NVS	Novosibirsk	20.31	21	eP	P	08 23 23.4	-0.9
NVS				pmax	pmax		
	comp=N,4.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SONM	Songino Array	28.48	55	P	P	08 24 42.5	+1.4
	comp=Z,0.9nm,0.7s,mb3.5,baz=263,slow=10.0,SNR=6.4						
FINES	FINESS Array B	37.50	326	P	P	08 25 58.5	+0.2
	comp=Z,1.4nm,0.5s,mb3.7,baz=117,slow=9.6,SNR=14						
KAF	Kangasniemi	37.65	327	ep	P	08 25 59.6	0.0
ARCES	ARCESS Array B	41.19	338	P	P	08 26 29.2	+0.5
	comp=Z,1.9nm,0.7s,mb3.6,baz=101,slow=6.2,SNR=9.3						
NB2	NORSAR Subarra	44.39	323	P	P	08 26 53.7	-0.8
	comp=Z,0.9nm,0.5s,mb3.4,baz=98,slow=7.9						
NOA	NORSAR Array B	44.39	323	P	P	08 26 53.8	-0.7
	comp=Z,1.4nm,0.7s,mb3.4,baz=97,slow=7.7,SNR=5.0						
ILAR	Eielson Array	74.90	16	P	P	08 30 21.8	-0.7
	comp=Z,0.3nm,0.5s,mb3.2,baz=323,slow=7.1,SNR=5.4						
YKA	Yellowknife Ar	81.35	3	P	P	08 30 58.4	+0.9
	comp=Z,0.6nm,0.4s,mb3.6,baz=350,slow=5.6,SNR=4.2						
WRA	Warramunga Arr	82.03	122	P	P	08 31 01.6	-0.3
	comp=Z,0.4nm,0.6s,mb3.2,baz=325,slow=5.0,SNR=12						

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*TAP **24** 08:21:51.3, 23.94N×122.46E, h9^{km}±1^{km}, ML2.9*

JMA 24 08:21:52.7±0.3**, 24.07N**×**122.49E, h25**^{km}**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.61	51	P	Pb	08 22 04.6	-0.2
YOJ				S	Sb	08 22 13.2	+0.2
IRIF	Iriomote-Funau	1.16	77	P	Pn	08 22 13.5	-0.1
IRIF				S	Sb	08 22 28.4	-0.3
HATJ	Hateruma jima	1.20	90	S	Sn	08 22 29.8	0.0
JIJ	Ishigaki jima	1.54	79	P	Pn	08 22 18.8	-0.1
JIJ				S	Sn	08 22 37.0	-1.3

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*IDC **24** 08:59:36.0±3.1, 64.71N×32.32E, mb1 3.1/3, mb1mx3.0/20, mbtmp2.9/3, ML2.7/3, Error ellipse: s-maj=42.6km s-min=10.7km az=100.0*

*NAO **24** 08:59:38.5±1.5, 64.67N×31.40E, ML2.3*

*HEL **24** 08:59:39.5±0.3, 64.76N×30.82E, ML2.2, ML2.3(NAO), Explosion*

*BER **24** 08:59:41.8±10.0, 64.83N×30.77E, ML2.3(NAO), Suspected explosion*

ISC 24 08:59:37.6±0.9**, 64.81N**±0.04×**30.8E**±0.2**, n21, σ1^{s}36**/39**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KJN	Kajaani	1.50	243	eP	Pn	09 00 05.7	-0.2
KJN				eS	Sb	09 00 25.7	+0.1
KJN				MSG		09 00 29.3	
	comp=Z,23nm,0.1s						
KU4	Liikasenvaara	1.64	343	eP	Pn	09 00 09.8	+1.9
KU4				eS	Sb	09 00 31.8	+2.2
OUL	Oulu	2.09	280	eP	Pn	09 00 16.1	+1.9
OUL				eS	Sn	09 00 42.9	+1.6
OUL				MSG		09 00 45.6	
	comp=Z,21nm,0.2s						
SUF	Sumiainen	2.93	226	eP	Pn	09 00 27.4	+1.1
SUF				eS	Sn	09 01 02.3	-0.3
APA0	Apatity Array	2.96	17	Pn	Pn	09 00 28.5	+1.9
	baz=193,slow=14						
APA0				Sn	Sn	09 01 03.6	+0.3
	baz=192,slow=22						
APA0				Lg		09 01 11.2	
	baz=208,slow=37						
APA0	Apatity Array	2.96	17	eP	Pn	09 00 28.5	+1.9
APA0				eS	Sn	09 01 03.6	+0.3
APA0				eSG	Sg	09 01 11.2	-4.7
SGF	Sodankyl	3.16	329	eP	Pn	09 00 30.2	+0.7
FIA0	FINESS Array S	3.99	214	Pn	Pn	09 00 41.2	-0.1
	baz=31,slow=14						
FIA0				Sn	Sn	09 01 29.4	-0.1
	baz=14,slow=18						
FIA0				Lg		09 01 41.5	
	baz=288,slow=56						
FIA0	FINESS Array S	3.99	214	eP	Pn	09 00 41.2	-0.1
FIA0				eS	Sn	09 01 29.4	-0.1
FIA0				eSG	Sg	09 01 41.5	-8.8
FINES	FINESS Array B	3.99	214	Pn	Pn	09 00 41.1	-0.1
	comp=Z,0.1nm,0.3s,baz=39,slow=14,SNR=32						
FINES				Sn	Sn	09 01 34.9	+5.4
	comp=Z,0.3nm,0.3s,baz=31,slow=25,SNR=5.3						
ARA0	ARCESS Array S	5.17	339	Pn	Pn	09 00 57.5	-0.5
	baz=156,slow=14						
ARA0				Sn	Sn	09 01 57.5	-1.8
	baz=161,slow=28						
ARA0				Lg		09 02 18.3	
	baz=157,slow=28						
ARA0	ARCESS Array S	5.17	339	eP	Pn	09 00 57.5	-0.5
ARA0				eS	Sn	09 01 57.5	-1.8
ARA0				eSG	Sg	09 02 18.3	-11
ARCES	ARCESS Array B	5.17	339	Pn	Pn	09 00 57.8	-0.2
	comp=Z,0.4nm,0.3s,baz=156,slow=14,SNR=156						
ARCES				Sn	Sn	09 01 57.2	-2.1
	comp=Z,0.4nm,0.3s,baz=149,slow=28,SNR=12						
KEV	Kevo	5.18	345	eP	Pn	09 00 57.9	-0.3
HFS	Hagfors	9.17	247	Pn	P	09 01 51.3	-2.8
	baz=45,slow=14						
HFS				Sn	Sn	09 03 31.8	-7.5
	baz=60,slow=16						
HFS	Hagfors	9.17	247	eP	P	09 01 51.3	-2.8
HFS				eS	Sn	09 03 31.8	-7.5
NB2	NORSAR Subarra	9.66	256	Pn	P	09 01 58.4	-2.3
	baz=57,slow=16						
NB2				Sn	Sn	09 03 51.2	+0.1
NB2	NORSAR Subarra	9.66	256	eP	P	09 01 58.4	-2.3
NB2				e		09 03 51.2	
NOA	NORSAR Array B	9.66	256	Pn	P	09 02 00.3	-0.3
	comp=Z,0.1nm,0.3s,baz=165,slow=9.5,SNR=2.3						
SPA0	Spitsbergen Ar	14.11	348	Pn	P	09 02 57.9	-2.5
	baz=165,slow=12						
SPA0	Spitsbergen Ar	14.11	348	eP	P	09 02 57.9	-2.5

CASC 24 09:10:37.8±2.1**, 11.69N**×**86.57W, h114**^{km}±11^{km}**, MD3.7, ML2.9, 4C-3D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUN	El Crucero	0.39	42	eP	P	09 10 55.7	+1.1
CRUN				eS	S	09 11 08.0	+0.8
TICN	Ticuantepe	0.47	44	eP	P	09 10 55.5	+0.5
TICN				eS	S	09 11 08.6	+0.5
XAVN	Gruta Xavier	0.52	27	⇓eP	P	09 10 55.6	+0.3
XAVN				eS	S	09 11 08.2	-0.3
APON	Apoyo	0.54	65	eP	P	09 10 55.6	+0.1
APON				eS	S	09 11 08.6	-0.3
MGAN	Managua	0.55	34	⇓eP	P	09 10 55.6	+0.1
MGAN				i		09 11 09.2	
	comp=E,240nm,0.5s						
MGAN				eS	S	09 11 10.3	+1.3
APYN	Apoyeque	0.58	21	eP	P	09 10 55.8	+0.1
APYN				eS	S	09 11 10.4	+1.1
WILN	Americas 2	0.60	38	eP	P	09 10 55.0	-0.9
WILN				eS	S	09 11 09.0	-0.6
MIRN	Miramar	0.76	349	⇑eP	P	09 10 57.7	+0.5
MIRN				eS	S	09 11 11.5	-0.3
LEON	Leon	0.79	336	eP	P	09 10 58.1	+0.6
LEON				eS	S	09 11 12.1	-0.2
CNGN	Cerro Negro	0.82	351	⇑eP	P	09 10 58.2	+0.4
CNGN				eS	S	09 11 12.9	+0.1
TEL3	Telica 3	0.92	343	⇓eP	P	09 10 59.5	+0.7
TEL3				eS	S	09 11 15.5	+1.0
CONN	Concepcion	0.93	98	⇑eP	P	09 10 59.1	+0.2
TELN	Telica	0.95	344	eP	P	09 10 58.3	-0.7
PYTN	Playitas	0.98	30	eP	P	09 10 58.5	-0.9
CRIN	San Cristobal	1.11	335	⇑eP	P	09 10 58.2	-2.6
CRIN				eS	S	09 11 19.6	+1.5

MAN 24 09:20:28.1, 18.90N×**120.84E, h35**^{km}**, mb4.5, ML3.4, MS3.3, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	1.10	160	eP	P	09 20 47.3	+0.2
APYP				eS	S	09 21 01.4	0.0
ABRA	Dolores	1.25	186	eP	P	09 20 49.6	+0.3
SGCP	Mt. Cagua	1.32	119	eP	P	09 20 50.0	-0.3
CVP	Callao Caves	1.51	142	⇑eP	P	09 20 54.3	+1.2
CVP				i S	S	09 21 12.0	+0.2
CAUP	Cauayan	2.16	154	eP	P	09 21 05.5	+3.2
BOLP	Bolinao	2.65	200	eP	P	09 21 09.0	-0.4
BALP	Baler	3.22	167	eP	P	09 21 21.2	+3.8

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*IDC **24** 09:33:19.8±0.6, 42.97N×77.35E, mb4.2/17, mb1 4.4/19, mb1mx4.3/23, mbtmp4.2/19, ML4.3/2, MS3.6/8, Ms1 3.6/8, ms1mx3.3/28, Error ellipse: s-maj=11.8km s-min=10.8km az=159.0*

*MOS **24** 09:33:20.1±1.0, 42.95N×77.24E, h9^{km}, mb4.8/12, Error ellipse: s-maj=10.8km s-min=7.8km az=121.0*

*BJI **24** 09:33:21.7, 43.14N×77.33E, h15^{km}, mB4.6, mb4.6, ML4.7, Ms4.3, Msz4.0*

*NEIC **24** 09:33:22.7±0.2, 43.02N×77.23E, mb4.6/18, Error ellipse: s-maj=6.8km s-min=4.3km az=48.0*

NEIC Felt [IV] at Almaty.

*KNET **24** 09:33:23.4±0.5, 42.94N×77.01E, h9^{km}±2^{km}, ml4.5, Error ellipse: s-maj=2.9km s-min=2.5km az=83.0*

*NNC **24** 09:33:23.6±1.9, 43.51N×76.91E, h8^{km}±10^{km}, mpv4.7, Error ellipse: s-maj=40.5km s-min=10.2km az=150.0*

ISC 24 09:33:21.6±0.2**, 43.01N**±0.03×**77.33E**±0.03**, h18**^{km}**, h18**^{km}±1.0^{km}**:pP-P, n119, σ1^{s}15**/125**, mb4.4**/33**, MS3.6**/17**, 24C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAA	Alma-Ata	0.38	313	i PG	Pb	09 33 28.5	-1.0
AAA				i S	Sb	09 33 33.5	-1.4
AAA	Alma-Ata	0.38	313	i P	Pb	09 33 29.0	-0.5
ULHL	Ulahol	1.11	227	P	Pb	09 33 40.5	-1.3
	4μm,0.2s,SNR=4812						
ULHL				⇓S	Sb	09 33 54.0	-1.9
	12μm,0.2s						
TKM2	Tokmak 2	1.27	267	⇑P	Pn	09 33 43.4	-1.3
	529nm,0.2s,SNR=749						
TKM2				⇓S	Sb	09 33 59.6	-1.1
	6μm,0.1s						
KBK	Karagaybulak	1.79	259	P	Pn	09 33 52.7	+0.7
	955nm,0.2s,SNR=590						
KBK				⇑S	Sn	09 34 15.1	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	10µm,0.2s						
KZA	Kyzart	1.80	239	P	Pn	09 33 53.0	+0.8
	337nm,0.2s,SNR=464						
KZA				⇑S	Sn	09 34 15.9	+1.2
	5µm,0.4s						
CHMS	Chumysh	1.89	270	P	Pn	09 33 54.0	+0.5
	372nm,0.2s,SNR=430						
CHMS				⇑S	Sn	09 34 17.7	+0.7
	5µm,0.2s						
USP	Ospenovka	2.08	278	⇑P	Pn	09 33 57.1	+0.8
	1µm,0.2s,SNR=1963						
USP				⇑S	Sn	09 34 23.6	+1.6
	6µm,0.2s						
AAK	Ala-Archa	2.12	261	⇑P	Pn	09 33 58.2	+1.4
	656nm,0.2s,SNR=296						
AAK				⇑S	Sn	09 34 25.0	+2.1
	3µm,0.4s						
AAK	Ala-Archa	2.12	261	⇑Pn	Pn	09 33 58.1	+1.3
	418nm,0.5s						
AAK				⇑Lg		09 34 25.2	
	4µm,0.7s						
AAK				⇓Rg		09 34 36.9	
	1µm,9.3s						
AAK	Ala-Archa	2.12	261	*i* P	Pn	09 33 58.1	+1.3
UCH	Uchtor	2.22	250	⇑P	Pn	09 33 60.0	+1.7
	556nm,0.3s,SNR=499						
UCH				⇑S	Sn	09 34 28.9	+3.5
	2µm,0.3s						
EKS2	Erkin-Say	2.63	264	P	Pn	09 34 05.8	+1.7
	283nm,0.2s,SNR=257						
AML	Almayashu	2.82	253	⇑P	Pn	09 34 09.0	+2.2
	1µm,0.3s,SNR=112						
KSH	Kashi	3.64	197	*e*P	Pn	09 34 22.0	+3.6
KSH				S	Sn	09 35 12.8	+11
KSH				Smax			
	comp=N,1µm,0.9s						
KSH				Smax			
	comp=E,1µm,0.6s						
KK31	Karatay Array	5.00	273	Pn	Pn	09 34 36.8	-0.9
	comp=E,52nm,0.5s,baz=84,slow=13,SNR=512						
KK31				⇑Lg		09 35 52.9	
	comp=E,313nm,0.4s						
KK31				⇑Rg		09 36 24.1	
	comp=E,376nm,9.2s						
KKAR	Karatay Array	5.00	273	*e*PN	Pn	09 34 36.8	-0.9
KKAR				pmax	pmax		
	comp=Z,12nm,0.3s						
MK31	Makanchi Array	5.17	41	⇑Pn	Pn	09 34 41.6	+1.5
	comp=Z,74nm,0.6s						
MK31				⇑Lg		09 36 03.9	
	comp=Z,233nm,0.8s						
MK31				⇓Rg		09 36 38.6	
	comp=Z,541nm,9.0s						
MKAR	Makanchi Array	5.17	41	Pn	Pn	09 34 41.7	+1.6
	comp=Z,6.6nm,0.3s,baz=217,slow=15,SNR=80						
MKAR				Sn	Sn	09 35 39.9	-0.1
	comp=Z,38nm,0.3s,baz=218,slow=24,SNR=11						
MKAR				Lg		09 36 03.5	
	comp=Z,34nm,0.3s,baz=225,slow=24,SNR=4.8						
WMQ	Urumqi	7.59	80	P	Pn	09 35 15.4	+1.2
WMQ				S	Sn	09 36 39.3	-1.4
WMQ				Smax			
	comp=N,120nm,1.0s						
WMQ				Smax			
	comp=E,130nm,0.9s						
CHCP	Chirah Chowk	9.87	200	P	P	09 35 46.6	+0.9
CEP	Cherat	10.11	207	P	P	09 35 57.8	+8.8
BVAR	Borovoye Array	11.04	338	Pn	P	09 35 57.7	-4.0
	comp=E,3.0nm,0.3s,baz=149,slow=14,SNR=44						
BVAR				Sn	S	09 37 58.8	-6.9
	comp=E,3.6nm,0.3s,baz=124,slow=27,SNR=5.6						
BVAR				Lg		09 39 06.4	
	comp=E,8.1nm,0.3s,baz=153,slow=26,SNR=5.1						
ZRNK	Zerenda	11.39	334	*e*P	P	09 36 02.1	-4.4
SMLA	Simla	11.86	181	*i* P	P	09 36 08.6	-4.3
SMLA				*i* S	S	09 38 25.2	-0.6
SBDP	Sheikh Budin	11.87	208	P	P	09 36 11.7	-1.4
NVS	Novosibirsk	12.45	16	*e*P	P	09 36 25.4	+4.6
DRP	Derazinda	12.59	209	P	P	09 36 21.9	-0.8
DDI	Dehra Dun	12.68	177	*e*x	x	09 36 30.0	
DDI				*e*x	x	09 38 25.0	
AB31	Akbulak array	13.56	303	P	P	09 36 31.0	-4.4
	comp=E,6.3nm,0.7s,baz=110,slow=13,SNR=72						
AB31				⇑S	S	09 38 55.1	-12
	comp=E,5.1nm,0.5s,baz=109,slow=24,SNR=4.4						
AB31	Akbulak array	13.56	303	*e*P	P	09 36 31.0	-4.5
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NDI	New Delhi	14.30	180	*e*x	P	09 36 42.0	-3.3
KOLN	Koldanda	16.04	159	*e*P	P	09 37 06.7	-1.2
	comp=Z,27nm,0.9s						
GKN	Gorkha	16.10	156	*e*P	P	09 37 09.0	+0.3
	comp=Z,43nm,0.7s						
KKN	Kakani	16.50	154	*e*P	P	09 37 14.6	+0.8
	comp=Z,72nm,0.8s						
KKN	Kakani	16.50	154	*e*P	P	09 37 14.6	+0.8
KKN				pmax	pmax		
	comp=Z,36nm,0.8s						
GUN	Gumba	16.58	153	*e*P	P	09 37 16.3	+1.5
	comp=Z,100nm,0.8s						
DMN	Daman	16.61	155	*e*P	P	09 37 15.6	+0.4
	comp=Z,48nm,0.9s						
PKI	Pulchoki	16.74	154	*e*P	P	09 37 17.4	+0.5
	comp=Z,74nm,0.9s						
PKI	Pulchoki	16.74	154	*e*P	P	09 37 17.4	+0.5
PKI				pmax	pmax		
	comp=Z,37nm,0.9s						
GTA	Gaotai	17.29	94	*e*P	P	09 37 22.6	-1.0
GTA				AP		09 37 27.6	
GTA				XP		09 37 30.0	
GTA				S	S	09 40 38.6	+4.7
GTA				LR	LR		
	comp=N,130nm,13.3s						
GTA				LR	LR		
	comp=E,230nm,12.9s						
GTA				LR	LR		
	comp=Z,270nm,13.3s						
ARU	Arti	18.01	325	*e*P	P	09 37 32.3	-0.3
ARU				*e*S	S	09 40 47.4	-2.9
ARU				MLR	MLR		
	comp=Z,200nm,16.0s						
ARU				MLR	MLR		
	comp=N,100nm,15.0s						
ARU				MLR	MLR		
	comp=E,200nm,16.0s						
ARU	Arti	18.01	325	*e*Pn	P	09 37 29.1	-3.5
	comp=E,8.4nm,0.7s						
ARU				*e*S	S	09 40 54.0	+3.7
ZAK	Zakamensk	19.20	58	*e*P	P	09 37 48.3	+1.3
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TLY	Talaya	19.74	55	*e*P	P	09 37 59.3	+6.1
TLY				*e*		09 41 32.8	
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TLY				MLR	MLR		
	comp=Z,120nm,20.0s						
SOKR	Solikamsk	20.82	330	*e*P	P	09 38 06.7	+2.3
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SOKR				MLR	MLR		
	comp=Z,270nm,15.0s,MS3.7						
SONM	Songino Array	20.90	67	P	P	09 38 06.2	+0.9
	comp=Z,13nm,1.1s,baz=265,slow=11,SNR=32						
SONM				LR	LR	09 46 34.8	
	comp=Z,116nm,19.5s,MS3.3,baz=263,slow=38						
ULN	Ulaanbaatar	21.34	67	*e*P	P	09 38 10.5	+0.7
ULN				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
ULN	Ulaanbaatar	21.34	67	*e*P	P	09 38 10.5	+0.6
	comp=Z,9.9nm,0.8s,mb4.2						
ZEI	Tsey	24.41	281	*e*P	P	09 38 39.1	-0.9
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.0						
GNI	Garni	24.46	274	P	P	09 38 38.7	-1.8
GNI				pmax	pmax		
	comp=Z,12nm,0.8s						
GNI	Garni	24.46	274	P	P	09 38 42.4	+1.9
	comp=Z,2.5nm,0.3s,mb4.1,baz=22,slow=12,SNR=3.2						
GNI	Garni	24.46	274	P	P	09 38 38.7	-1.8
	comp=Z,12nm,0.8s,mb4.4						
GNI				*e*		09 38 47.2	
GOF	Gofitskoye	24.63	287	⇓*i*P	P	09 38 42.1	0.0
GOF				pmax	pmax		
	comp=Z,30nm,1.3s,mb4.7						
HHC	Hu-ho-hao-te	25.46	83	*e*P	P	09 38 50.8	+0.8
HHC				AP	pP	09 38 56.6	+1.4
HHC				XP	sP	09 38 59.5	+2.0
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
HHC				AMB	AMB		
	comp=Z,80nm,7.8s						
HHC				LR	LR		
	comp=N,320nm,13.7s,MS4.3						
HHC				LR	LR		
	comp=E,490nm,13.2s,MS4.3						
HHC				LR	LR		
	comp=Z,550nm,14.7s,MS4.2						
CIT	Chita	25.84	57	*e*P	P	09 38 54.8	+1.4
CIT				*e*		09 44 42.4	
CIT				pmax	pmax		
	comp=Z,37nm,1.3s,mb4.8						
SOC	Sochi	27.23	284	*e*P	P	09 39 11.9	+5.6
SOC				*e*S	S	09 43 51.8	+9.1
SOC				MLR	MLR		
	comp=Z,234nm,24.0s,MS3.7						
SOC				MLR	MLR		
	comp=N,607nm,30.0s						
SOC				MLR	MLR		
	comp=E,313nm,24.0s						
BOD	Bodaibo	27.25	44	*e*P	P	09 39 05.6	-0.8
BOD				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.3						
KMI	Kunming	27.43	122	P	P	09 39 09.0	+0.7
GYA	Guiyang	29.02	115	⇑*i*P	P	09 39 22.8	+0.1
GYA				AP	pP	09 39 29.3	+1.4
GYA				XP	sP	09 39 31.6	+1.4
GYA				PP	PP	09 40 16.6	-0.2
GYA				S	S	09 44 11.5	-0.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
GYA				LR	LR		
	comp=N,290nm,16.2s,MS4.1						
GYA				LR	LR		
	comp=E,310nm,16.7s,MS4.1						
GYA				LR	LR		
	comp=Z,360nm,15.8s,MS4.1						
CMAR	Chiang Mai Arr	30.55	137	P	P	09 39 35.0	-1.4
	comp=Z,0.5nm,0.4s,mb3.7,baz=311,slow=8.3,SNR=3.3						
BR131	Keskin Array S	32.68	279	*e*P	P	09 39 53.6	-1.2
	comp=Z,2.9nm,0.8s,mb4.3						
BRTR	Keskin Array B	32.68	279	P	P	09 39 54.0	-0.8
	comp=Z,2.3nm,0.7s,mb4.2,baz=90,slow=8.6,SNR=11						
AKASG	Malin Array Be	33.28	300	*i* P	P	09 39 59.4	-0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	33.28	300	P	P	09 39 59.1	-0.8
	comp=Z,1.4nm,0.5s,mb4.2,baz=74,slow=8.5,SNR=6.5						
NJ2	Nanjing	34.38	95	*e*P	P	09 40 12.5	+2.8
CN2	Changchun	34.58	72	*e*P	P	09 40 12.5	+1.2
KAF	Kangasniemi	35.23	321	*e*p	P	09 40 15.8	-0.9
FINES	FINESS Array B	35.25	320	P	P	09 40 16.2	-0.6
	comp=Z,2.2nm,0.6s,mb4.3,baz=96,slow=10,SNR=15						
YAK	Yakutsk	35.84	40	⇑*e*P	P	09 40 22.9	+1.1
YAK				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.2						
YAK				MLR	MLR		
	comp=Z,100nm,13.0s,MS3.8						
YAK	Yakutsk	35.84	40	*e*P	P	09 40 22.3	+0.4
	comp=Z,26nm,0.8s,mb5.2						
SSE	Sheshan	36.58	94	P	P	09 40 28.3	-0.1
SSE				AP	pP	09 40 34.1	+0.5
SSE				XP	sP	09 40 36.8	+0.9
SSE				S	S	09 46 11.1	+1.5
SSE				XS		09 46 21.8	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,50nm,5.2s						
SSE				LR	LR		
	comp=N,30nm,20.1s,MS3.1						
SSE				LR	LR		
	comp=E,10.0nm,20.1s,MS3.1						
SSE				LR	LR		
	comp=Z,30nm,18.8s,MS3.1						
KEV	Kevo	36.85	333	*e*p	P	09 40 29.5	-0.7
MDJ	Mudanjiang	37.22	69	P	P	09 40 33.4	-0.2
MDJ				AP	pP	09 40 36.5	-2.3
MDJ				PP	PP	09 41 58.3	-2.6
MDJ				PCP	PcP	09 42 52.9	-0.8
MDJ				S	S	09 46 20.9	+1.8
MDJ				XS		09 46 26.5	
MDJ				SCP		09 46 40.1	
MDJ				PCS		09 46 41.4	
MDJ				AMB	AMB		
	comp=Z,50nm,4.1s						
MDJ				LR	LR		
	comp=N,40nm,20.6s						
MDJ				LR	LR		
	comp=Z,40nm,17.6s,MS3.3						
ARCES	ARCESS Array B	37.28	333	P	P	09 40 34.2	+0.4
	comp=Z,3.6nm,0.6s,mb4.4,baz=101,slow=8.8,SNR=26						
ARCES				LR	LR	09 56 35.1	
	comp=Z,119nm,18.2s,MS3.7,baz=312,slow=37						
TIXI	Tiksi	37.89	24	*e*P	P	09 40 34.9	-4.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,240nm,14.0s,MS4.2						
HFS	Hagfors	41.28	317	LR	LR	09 58 41.1	
	comp=Z,142nm,19.1s,MS3.9,baz=142,slow=37						
NB2	NORSAR Subarra	42.41	319	P	P	09 41 16.9	+0.6
	comp=Z,1.3nm,0.6s,mb3.7,baz=86,slow=7.9						
NOA	NORSAR Array B	42.41	319	P	P	09 41 16.4	0.0
	comp=Z,0.9nm,0.5s,mb3.7,baz=87,slow=8.0,SNR=6.6						
JNU	Nakatsue	42.66	85	LR	LR	09 59 41.0	
	comp=Z,64nm,21.7s,MS3.5,baz=345,slow=37						
CLL	Collm	43.23	304	⇑*i*P	P	09 41 23.3	+0.2
CLL				*e**PP	pP	09 41 28.0	-0.4
CLL				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
CLL	Collm	43.23	304	⇑*i*P	P	09 41 23.3	+0.2
	comp=Z,6.0nm,0.6s,mb4.5						
CLL				*e*pP	pP	09 41 28.0	-0.4
CLL	Collm	43.23	304	⇑P	P	09 41 23.3	+0.2
	comp=Z,logA/T=1.0,mb4.5						
CLL				*e**PP	pP	09 41 28.0	-0.4
CLL				*e*SS	SS	09 51 00.0	+4.5
GERES	GERESS Array B	43.49	301	P	P	09 41 25.7	+0.5
	comp=Z,1.1nm,0.5s,mb3.9,baz=63,slow=9.0,SNR=8.3						
GERES				PcP	PcP	09 43 12.1	-1.7
	comp=Z,0.7nm,0.6s,baz=90,slow=1.3,SNR=3.9						
GERES				LR	LR	10 03 13.4	
	comp=Z,81nm,18.3s,MS3.7,baz=30,slow=41						
MJAR	Matsushiro Arr	46.34	77	P	P	09 41 47.5	-0.7
	comp=Z,2.1nm,0.9s,mb4.1,baz=282,slow=8.3,SNR=6.1						
MJAR				LR	LR	10 00 25.3	
	comp=Z,51nm,19.1s,MS3.5,baz=245,slow=35						
DAVOX	Davos	46.60	299	LR	LR	10 04 42.7	
	comp=Z,70nm,18.1s,MS3.7,baz=84,slow=40						
BNI	Bardonecchia	49.33	298	*e*P	P	09 42 10.9	-0.6
BNI				*e**PP	pP	09 42 15.9	-1.0
BNI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
BNI	Bardonecchia	49.33	298	*e*P	P	09 42 10.9	-0.6
	comp=Z,7.7nm,0.8s,mb4.8						
BNI				*e*pP	pP	09 42 15.9	-0.9
ESDC	Sonseca Array	58.81	297	P	P	09 43 19.0	-2.1
	comp=Z,2.0nm,0.7s,mb4.3,baz=48,slow=8.4,SNR=5.1						
FX1	Attu Island--F	60.30	44	LR	LR	10 10 45.3	
	comp=Z,2.5nm,21.8s,MS2.3,baz=110,slow=37						
FX1	Attu Island--F	60.30	44	*e*P	P	09 43 30.0	-1.2
ILAR	Eielson Array	67.12	19	P	P	09 44 14.7	-1.0
	comp=Z,0.6nm,0.7s,mb3.8,baz=318,slow=5.5,SNR=7.8						
ILAR				LR	LR	10 18 42.0	
	comp=Z,29nm,18.2s,MS3.5,baz=179,slow=40						
YKA	Yellowknife Ar	74.41	6	*i* P	P	09 44 59.3	-0.3
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA	Yellowknife Ar	74.41	6	P	P	09 44 59.3	-0.2
	comp=Z,2.0nm,0.5s,mb4.3,baz=347,slow=6.0,SNR=18						
MBWA	Marble Bar	74.83	139	*e*P	P	09 45 01.3	-1.6
	comp=Z,6.7nm,0.9s,mb4.6						
KAKA	Kakadu	74.88	124	*e*P	P	09 45 02.4	-0.9
	comp=Z,5.9nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	75.28	133	*e*P	P	09 45 04.5	-1.0
	comp=Z,7.3nm,0.7s,mb4.7						
FITZ				*i* pP	pP	09 45 09.8	-1.3
FITZ	Fitzroy Crossi	75.28	133	P	P	09 45 04.0	-1.5
	comp=Z,9.2nm,0.7s,mb4.8,baz=338,slow=6.3,SNR=11						
SCHQ	Schefferville	77.86	340	P	P	09 45 18.8	-0.4
	comp=Z,1.0nm,0.7s,mb3.9,baz=51,slow=14,SNR=3.2						
DBIC	Dimbokro	79.78	270	P	P	09 45 29.0	-1.5
	comp=Z,7.9nm,0.8s,mb4.7,baz=66,slow=2.9,SNR=9.4						
WRAB	Tennant Creek	81.65	127	*e*P	P	09 45 39.6	-0.6
WRAB				*e**PP	pP	09 45 45.3	-0.5
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
WRAB	Tennant Creek	81.65	127	*e*P	P	09 45 39.6	-0.6
	comp=Z,7.0nm,0.6s,mb4.8						
WRAB				*e*pP	pP	09 45 45.3	-0.6
WRA	Warramunga Arr	81.65	127	P	P	09 45 39.5	-0.7
	comp=Z,4.9nm,0.7s,mb4.5,baz=326,slow=5.1,SNR=36						
WRA				PKKPbc		10 04 11.5	
	comp=Z,0.3nm,0.6s,baz=145,slow=2.3,SNR=5.2						
WB2	Warramunga Arr	81.65	127	⇑*i*P	P	09 45 39.4	-0.8
WB2				*i* pP	pP	09 45 45.5	-0.4
EDM	Edmonton	83.71	6	*e*P	P	09 45 50.1	0.0
EDM				*e*pP	pP	09 45 56.0	+0.2
EDM				*e*sP	sP	09 45 59.5	+1.9
CTAO	Charters Tower	89.09	119	*e*P	P	09 46 17.2	-0.1
CTAO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.6						
CTAO	Charters Tower	89.09	119	*e*P	P	09 46 17.2	-0.1
	comp=Z,2.2nm,0.6s,mb4.7						
PDAR	Pinedale Array	94.38	5	P	P	09 46 41.6	+0.4
	comp=Z,0.5nm,0.5s,mb4.2,baz=34,slow=5.3,SNR=4.5						
VNA2	Neumayer--Watz	128.29	205	*e*	PKPdf	09 52 32.0	+1.9
VNA2	Neumayer--Watz	128.29	205	*e*	PKPdf	09 52 35.0	+4.9
VNA2	Neumayer--Watz	128.29	205	⇓*i*PKPdf	PKPdf	09 52 26.6	-3.5
VNA2				*e*		09 52 32.0	
VNA2				*e*		09 52 35.0	
VNA1	Neumayer--Stat	128.46	205	*e*	PKPdf	09 52 33.4	+3.0
VNA1	Neumayer--Stat	128.46	205	*e*	PKPdf	09 52 37.0	+6.6
VNA1	Neumayer--Stat	128.46	205	⇓*i*PKPdf	PKPdf	09 52 28.0	-2.4
VNA1				*e*		09 52 33.4	
VNA1				*e*		09 52 37.0	
VNA3	Neumayer Olymp	129.10	205	*e*	PKPdf	09 52 33.1	+1.5
VNA3	Neumayer Olymp	129.10	205	*e*	PKPdf	09 52 36.6	+5.0
VNA3	Neumayer Olymp	129.10	205	⇓*i*PKPdf	PKPdf	09 52 27.9	-3.7
VNA3				*e*		09 52 33.1	
VNA3				*e*		09 52 36.6	
QSPA	South Pole Qui	132.79	180	*e*PKPdf	PKPdf	09 52 34.9	-3.6
TRQA	Tornquist	148.90	265	*e*PKPbc	PKPdf	09 53 08.4	+0.6
TRQA				*e*pPKPdf		09 53 14.8	

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*ATH **24** 09:42:24.0, 37.70N×26.80E, h21^{km}, MD2.7/3*
*ISK **24** 09:42:24.5, 37.87N×26.68E, h28^{km}, MD3.1*
*CSEM **24** 09:42:24.6±0.1, 37.83N×26.77E, h20^{km}, MD3.1, Error ellipse: s-maj=2.9km s-min=2.1km az=96.0*
ISC 24 09:42:24.9±1.0, **37.83N**±0.05×**26.70E**±0.10, **h16**^{km}±14^{km}, **n14, σ1^{s}03**/12, **1D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	Samos	0.16	139	⇓*i*PB	Pb	09 42 27.6	-1.5
URLA	Izmir	0.54	351	*i* P	Px	09 42 43.9	
URLA				*i* S	Sx	09 42 59.4	
BLCB	Balcova	0.62	26	*i* PG	Pb	09 42 37.0	+0.2
IZM	Izmir	0.72	38	PG	Pb	09 42 38.7	+0.2
BODT	Bodrum	0.91	148	*e*PG	Pb	09 42 42.4	+0.7
BODT				*e*SG	Sb	09 42 54.5	+1.2
AYDN	Tasoluk	0.95	100	*i* P	Px	09 42 54.9	
AYDN				*i* S	Sx	09 43 09.6	
BDRM	Kayabasi	0.96	142	*i* P	Px	09 42 54.4	
BDRM				*i* S	Sx	09 43 09.7	
MLSB	Milas	1.00	122	*e*PG	Pb	09 42 43.8	+0.4
APE	Apeiranthos	1.20	231	*e*PN	Pn	09 42 46.0	-1.1
APE	Apeiranthos	1.20	231	*e*PN	Pn	09 42 47.3	+0.2
APE				*e*SN	Sn	09 43 03.0	-0.2
AKS	Akhisar	1.36	39	*e*PN	Pn	09 42 48.0	-1.4
YER	Yerkesik	1.44	118	*e*PN	Pn	09 42 49.7	-0.7
PRK	Paraskevi	1.45	347	*e*PN	Pn	09 42 53.2	+2.5
MANT	Manisa	1.60	65	*i* P	Px	09 43 13.1	
MANT				*i* S	Sx	09 43 29.3	

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*NIED **24** 09:46:00, 43.40N×147.10E, h35^{km}, Mw3.6 Best double couple: $M_0$2.59×10^{14} NP1:ϕ_s233°, δ87°, λ-169°. NP2: ϕ_s142°, δ79°, λ-3°.*
*JMA **24** 09:46:42.8±0.4, 43.39N×147.07E, h33^{km}±4^{km}, M3.6*
*IDC **24** 09:46:51.6±10.0, 43.76N×146.63E, h92^{km}±56^{km}, mb3.3/3, mb1 3.5/4, mb1mx3.2/21, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=323.1km s-min=42.3km az=172.0*
ISC 24 09:46:44.0±2.2, **43.5N**±0.2×**147.0E**±0.2, **h52**^{km}±17^{km}, **n13, σ0^{s}85**/16, **mb3.6**/3, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.94	266	P	P	09 47 00.3	-0.8
NEM2				*e*S	S	09 47 13.0	-0.9
JRA	Rausu	1.47	290	P	P	09 47 08.3	-0.3
JNK	Nakash	1.69	276	P	P	09 47 10.9	-0.7
JAK	Akkeshi	1.77	256	P	P	09 47 12.6	-0.1
JTKR	Abashiri--Toko	2.33	284	P	P	09 47 21.0	+0.4
JAR	Ashorobuto	2.38	268	P	P	09 47 21.4	-0.1
JOB	Onbets	2.40	258	P	P	09 47 21.6	-0.1
JOB				*e*S	S	09 47 50.7	+0.7
JMP	Maruseppu	2.72	283	P	P	09 47 26.8	+0.5
JCH	Churui	2.82	254	P	P	09 47 27.9	+0.3
JCH				*e*S	S	09 48 00.7	+0.2
ASAJ	Asahikawa	3.28	283	P	P	09 47 36.2	+2.1
	3.0nm,0.3s,baz=113,slow=10,SNR=10						
ILAR	Eielson Array	41.78	36	P	P	09 54 30.8	+1.4
	0.2nm,0.6s,mb2.9,baz=262,slow=5.8,SNR=6.3						
FINES	FINESS Array B	65.11	333	P	P	09 57 19.3	-1.6
	1.1nm,0.5s,mb4.1,baz=45,slow=8.1,SNR=12						
NOA	NORSAR Array B	69.86	339	P	P	09 57 49.9	-0.7
	0.4nm,0.4s,mb3.7,baz=41,slow=5.7,SNR=3.0						

ISC 24 10:07:11.9±1.2, **39.61N**±0.04×**29.2E**±0.1, **h10**^{km}, **n6, σ1^{s}22**/10, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULDT	Uludag	0.53	356	*i* P	Pg	10 07 22.4	-0.2
ULDT				*i* S	Sg	10 07 30.9	+1.2
GDZ	Gediz	0.57	156	*i* P	Pg	10 07 23.1	-0.4
GDZ				*i* S	Sg	10 07 32.5	+1.4
YLV	Yalova	0.96	9	PG	Pg	10 07 29.8	-1.4
YLV				SG	Sg	10 07 44.7	+0.6
HRT	Hereke	1.26	17	*e*PG	Pg	10 07 30.9	-6.2
ESKT	Eskisehir	1.29	94	*e*PG	Pg	10 07 33.5	-4.2
ESKT	Eskisehir	1.29	94	*i* P	Pb	10 07 33.0	-2.8
ESKT				*i* S	Sb	10 07 52.9	+0.6

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*BER **24** 10:17:37.7±4.2, 61.09N×29.89E, ML2.4(NAO), Suspected explosion*
*NAO **24** 10:17:39.5±2.2, 61.19N×29.63E, ML2.4*
HEL 24 10:17:37.8±0.6, **61.04N×29.79E, ML2.2**(FIA0), **ML2.4**(NAO), **Explosion, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FIA0	FINESS Array S	1.84	284	*e*P	Pn	10 18 10.0	-0.9
FIA0				*e*S	Sn	10 18 27.7	-7.6
FIA0				*e*SG	Sg	10 18 34.1	-5.0
FIA0				*e*RG		10 18 43.4	
FIA0	FINESS Array S	1.84	284	Pg	Pg	10 18 10.3	-4.3
	baz=107,slow=16						
FIA0				Lg		10 18 34.4	
	baz=96,slow=28						
FIA0				Rg		10 18 44.2	
	baz=101,slow=28						
HFS	Hagfors	7.98	271	Pn	Pn	10 19 33.6	-4.1
	baz=80,slow=12						
HFS				Sn	Sn	10 21 01.0	-8.8
	baz=91,slow=22						
HFS				Lg		10 21 45.4	
	baz=70,slow=28						
HFS	Hagfors	7.98	271	*e*P	Pn	10 19 33.6	-4.1
HFS				*e*S	Sn	10 21 01.0	-8.8
HFS				*e*SG	Sg	10 21 45.4	-18
ARA0	ARCESS Array S	8.72	350	Pn	P	10 19 42.8	-5.3
	baz=169,slow=12						
ARA0				Sn	Sn	10 21 14.8	-13
	baz=167,slow=22						
ARA0				Lg		10 22 06.1	
	baz=154,slow=22						
NB2	NORSAR Subarra	9.01	278	*e*P	P	10 19 47.5	-4.7
NB2				*e*		10 22 21.4	

NB2	NORSAR Subarra	9.01	278	Pn	P	10 19 47.5	-4.7
NB2				Lg		10 22 21.4	
	baz=66,slow=37						

NNC ***24*** *10:21:11.4±5.1, 42.19N×77.10E, mpv2.9, Error ellipse: s-maj=40.5km s-min=28.0km az=103.0*

KNET ***24*** *10:21:12.8±0.5, 42.94N×77.03E, h9^{km}±2^{km}, ml2.4, Error ellipse: s-maj=3.5km s-min=2.3km az=91.0*

ISC 24 10:21:12.3±1.9**, 42.93N**±0.08×**77.2E**±0.1**, h9^{km}, n9, σ1^{s}05**/16**, 14C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	1.00	227	P	Pb	10 21 30.2	-1.3
	51nm,0.2s,SNR=167						
ULHL				⇑S	Sb	10 21 43.7	-0.9
	69nm,0.1s						
TKM2	Tokmak 2	1.21	270	⇑P	Pb	10 21 33.1	-1.8
	6.9nm,0.1s,SNR=8.0						
TKM2				⇑S	Sb	10 21 49.1	-1.3
	92nm,0.1s						
KZA	Kyzart	1.70	241	P	Pn	10 21 42.6	+0.1
	9.7nm,0.2s,SNR=5.9						
KZA				⇑S	Sn	10 22 05.5	+1.0
	18nm,0.2s						
KBK	Karagaybulak	1.71	262	⇓P	Pn	10 21 42.5	-0.1
	9.8nm,0.1s,SNR=6.2						
KBK				⇑S	Sn	10 22 05.3	+0.6
	36nm,0.1s						
CHMS	Chumysh	1.83	273	⇑P	Pn	10 21 43.8	-0.4
	8.5nm,0.1s,SNR=13						
CHMS				⇑S	Sn	10 22 07.6	-0.1
	28nm,0.2s						
USP	Ospenovka	2.03	281	⇑P	Pn	10 21 47.1	-0.1
	15nm,0.2s,SNR=13						
USP				⇑S	Sn	10 22 13.3	+0.3
	26nm,0.2s						
AAK	Ala-Archa	2.04	263	⇓Pg	Pg	10 21 47.7	-5.4
	3.3nm,0.3s,baz=98,slow=21						
AAK				⇑Lg		10 22 14.6	
	25nm,0.6s,baz=106,slow=21						
UCH	Uchtor	2.13	252	⇑P	Pn	10 21 50.2	+1.6
	2.5nm,0.2s,SNR=8.2						
UCH				⇑S	Sn	10 22 18.3	+2.8
	12nm,0.2s						
KK31	Karatay Array	4.94	274	⇑Pn	Pn	10 22 29.5	+1.0
	1.9nm,0.8s,baz=90,slow=15,SNR=5.9						
KK31				⇑Lg		10 23 43.4	
	1.9nm,0.5s,baz=351,slow=21,SNR=8.2						

THR ***24*** *10:31:25.2±0.7, 30.89N×50.16E, h15^{km}, ML3.4*

CSEM ***24*** *10:31:26.3±0.1, 31.07N×50.16E, h10^{km}, ML3.4, Error ellipse: s-maj=2.5km s-min=2.3km az=178.0*

TEH ***24*** *10:31:28.6, 31.06N×50.18E, h10^{km}, Mn3.4*

ISC 24 10:31:25.9±1.6**, 31.07N**±0.05×**50.14E**±0.05**, h2^{km}**±12^{km}**, n20, σ0^{s}94**/22**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGO	Shushtar	1.54	313	ePG	Pg	10 31 56.0	-0.7
SHGO				eSG	Sg	10 32 18.4	+1.1
SHGO				AML	AML	10 32 21.8	
	comp=N,790nm,0.5s						
IGAR	Garneh	2.11	56	Pn	Pn	10 32 02.8	+0.1
SHI	Shiraz	2.50	124	Pn	Pn	10 32 09.1	+1.0
IKLH	Kalahroud	2.56	28	Pn	Pn	10 32 09.3	+0.3
IZEF	Zefreh	2.61	45	Pn	Pn	10 32 09.7	0.0
IPAR	Pars	2.79	115	Pn	Pn	10 32 12.9	+0.5
KBD	Kabd	2.83	229	eP	Pn	10 32 13.9	+0.9
KBD				eS	Sn	10 32 48.6	+0.4
NASN	Na'in	2.85	52	ePN	Pn	10 32 14.2	+0.9
IMOK	Mook	3.01	131	Pn	Pn	10 32 15.2	-0.2
RDF	Al-Radifah	3.10	227	eP	Pn	10 32 16.6	-0.1
RDF				eS	Sn	10 32 53.7	-1.1
ASAO	Ashtian	3.48	358	ePN	Pn	10 32 23.5	+1.4
ASAO				AML	AML	10 33 28.3	
	comp=N,46nm,0.6s						
GHIR	Ghir-Karzin	3.72	137	ePN	Pn	10 32 22.2	-3.3
GHIR				AML	AML	10 33 37.9	
	comp=N,70nm,0.5s						
IKOM	Komasi	3.81	325	Pn	Pn	10 32 26.9	0.0
IQOM	Qom	3.85	12	Pn	Pn	10 32 25.2	-2.2
IVRN	Varamin	4.14	18	Lg		10 33 37.7	
IVRN	Varamin	4.14	18	Pn	Pn	10 32 31.5	-0.1
IRAZ	Razeghan	4.33	358	Pn	Pg	10 32 49.0	-3.3
IDMV	Damavand	4.77	19	Pn	Pn	10 32 40.0	-0.5
DAMV	Damavand	4.80	18	ePN	Pn	10 32 40.9	-0.1
IDHR	Dehrash	4.80	320	Pn	Pn	10 32 40.8	-0.2

IDC ***24*** *10:31:27.3±1.2, 26.00N×96.68E, mb3.8/10, mb1 3.9/10, mb1mx3.8/22, mbtmp3.8/10, Error ellipse: s-maj=53.9km s-min=22.8km az=55.0*

NEIC ***24*** *10:31:38.1±2.0, 25.75N×96.26E, h87^{km}±17^{km}, Error ellipse: s-maj=26.6km s-min=14.4km az=62.0*

BJI ***24*** *10:31:39.3, 26.45N×96.02E, h61^{km}, ML3.7, Ms3.7, Msz3.2*

ISC 24 10:31:40.5±0.8**, 25.9N**±0.2×**96.07E**±0.06**, h118^{km}**±13^{km}**, n20, σ0^{s}98**/21**, mb3.8**/10**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	3.79	266	eP	P	10 32 40.0	+1.8
SHL				eS	S	10 33 33.0	+11
LSA	Lhasa	5.80	312	ePn	P	10 33 04.8	-0.6
	19nm,0.5s						
KMI	Kunming	6.07	95	P	P	10 33 11.6	+2.5
KMI				S	S	10 34 16.3	-1.5
KMI				Smax			
	comp=N,50nm,1.3s						
KMI				Smax			
	comp=E,30nm,0.9s						
KMI				LR	LR		
	comp=N,670nm,10.0s						
KMI				LR	LR		
	comp=E,200nm,8.4s						
KMI				LR	LR		
	comp=Z,190nm,10.0s						
CMAR	Chiang Mai Arr	7.83	160	Lg		10 35 42.9	
	comp=Z,0.1nm,0.3s,baz=343,slow=30,SNR=7.6						
GUN	Gumba	9.32	285	eP	P	10 33 53.3	+0.2
	comp=Z,26nm,0.3s						
PKI	Pulchoki	9.68	282	eP	P	10 33 57.3	-0.6
KKN	Kakani	9.83	284	eP	P	10 33 59.6	-0.3
	comp=Z,18nm,0.3s						
DMN	Daman	9.96	283	eP	P	10 34 01.4	-0.2
	comp=Z,10nm,0.3s						
GKN	Gorkha	10.42	284	eP	P	10 34 06.9	-0.9
	comp=Z,13nm,0.3s						
KOLN	Koldanda	11.30	282	eP	P	10 34 18.7	-0.7
	comp=Z,11nm,0.7s						
SONM	Songino Array	23.40	18	P	P	10 36 33.3	-6.0
	comp=Z,0.5nm,0.5s,mb3.1,baz=196,slow=10,SNR=2.9						
MKAR	Makanchi Array	23.59	336	P	P	10 36 42.2	+1.1
	comp=Z,6.1nm,0.7s,mb4.0,baz=147,slow=9.8,SNR=37						
BVAR	Borovoye Array	33.26	331	P	P	10 38 07.9	-0.5
	comp=Z,1.0nm,0.5s,mb3.9,baz=133,slow=8.1,SNR=5.6						
AKASG	Malin Array Be	55.94	315	P	P	10 41 08.1	-0.5
	comp=Z,1.6nm,0.4s,mb4.4,baz=75,slow=6.6,SNR=6.4						
FINES	FINESS Array B	58.09	328	P	P	10 41 24.6	+1.1
	comp=Z,1.1nm,0.9s,mb3.9,baz=112,slow=10,SNR=4.7						
WRA	Warramunga Arr	58.77	137	P	P	10 41 26.0	-2.9
	comp=Z,0.3nm,0.5s,mb3.6,baz=328,slow=7.5,SNR=8.8						
ARCES	ARCESS Array B	59.23	337	P	P	10 41 30.9	-0.4
	comp=Z,0.6nm,0.6s,mb3.8,baz=90,slow=7.3,SNR=5.2						
HFS	Hagfors	64.19	327	P	P	10 42 05.1	+0.6
	comp=Z,0.7nm,0.5s,mb3.7,baz=104,slow=6.1,SNR=6.0						
GERES	GERESS Array B	66.13	314	P	P	10 42 17.3	+0.1
	comp=Z,0.4nm,0.5s,mb3.5,baz=56,slow=7.1,SNR=4.4						
EKA	Eskdalemuir Ar	74.13	324	P	P	10 43 05.7	+0.2
	comp=Z,0.8nm,0.6s,mb3.6,baz=68,slow=4.5,SNR=3.7						

NNC ***24*** *10:37:49.9±1.0, 47.06N×83.09E, h3^{km}±6^{km}, mpv3.5, Error ellipse: s-maj=8.4km s-min=6.1km az=155.0*

IDC ***24*** *10:37:49.8±0.9, 47.07N×83.15E, mb3.7/4, mb1 3.9/6, mb1mx3.6/22, mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=10.0km s-min=7.2km az=119.0*

MOS ***24*** *10:37:51.4±1.9, 46.98N×82.86E, h33^{km}, mb3.9/2, Error ellipse: s-maj=51.1km s-min=31.0km az=67.3*

BJI ***24*** *10:37:52.7, 47.02N×83.10E, h8^{km}, ML3.7*

ISC 24 10:37:50.3±1.2**, 47.20N**±0.04×**82.94E**±0.08**, h12^{km}**±8^{km}**, n24, σ0^{s}59**/38**, mb3.5**/4**, 4C-1D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK05	Makanchi Array	0.60	227	P	Pb	10 38 02.3	+0.1
MK05				S	Sb	10 38 10.4	+0.1
MK31	Makanchi Array	0.60	227	⇑P	Pb	10 38 02.3	+0.1
	38nm,0.2s,baz=64,slow=18,SNR=5735						
MK31				⇑S	Sb	10 38 10.5	+0.2
	128nm,0.3s,baz=280,slow=22,SNR=43						
MK31				⇓Rg		10 38 14.0	
	50nm,4.0s						
MKAR	Makanchi Array	0.60	227	PG	Pg	10 38 02.3	-0.2
MKAR				S	Sb	10 38 10.5	+0.2
MKAR				pmax	pmax		
	comp=Z,35nm,0.3s						
MKAR	Makanchi Array	0.60	227	Pg	Pg	10 38 02.2	-0.3
	comp=Z,58nm,0.3s,baz=63,slow=20,SNR=528						
MKAR				Lg		10 38 10.5	
	comp=Z,228nm,0.3s,baz=62,slow=33,SNR=91						
MK06	Makanchi Array	0.60	225	P	Pb	10 38 02.3	+0.1
MK06				S	Sb	10 38 10.5	+0.1
MK02	Makanchi Array	0.61	225	P	Pb	10 38 02.3	0.0
MK02				S	Sb	10 38 10.6	+0.1
MK01	Makanchi Array	0.61	225	P	Pb	10 38 02.4	0.0
MK01				S	Sb	10 38 10.7	+0.1
MK04	Makanchi Array	0.61	226	P	Pb	10 38 02.5	+0.1
MK04				S	Sb	10 38 10.6	0.0
MK03	Makanchi Array	0.62	225	P	Pb	10 38 02.4	0.0
MK03				S	Sb	10 38 10.8	0.0
MK07	Makanchi Array	0.62	224	P	Pb	10 38 02.3	-0.1
MK07				S	Sb	10 38 10.8	+0.1
MK09	Makanchi Array	0.62	227	P	Pb	10 38 02.6	+0.1
MK09				S	Sb	10 38 11.0	+0.2
MK08	Makanchi Array	0.63	225	P	Pb	10 38 02.7	+0.1
MK08				S	Sb	10 38 11.1	0.0
WMQ	Urumqi	4.76	134	eP	Pn	10 39 03.0	-0.5
WMQ				SG	Sb	10 40 14.6	+3.7
WMQ				Smax			
	comp=N,30nm,0.6s						
WMQ				Smax			
	comp=E,60nm,0.5s						
ZAL	Zalesovo	6.85	9	PN	Pn	10 39 34.0	+1.0
ZAL						10 41 28.3	
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL	Zalesovo	6.85	9	Pn	Pn	10 39 34.0	+1.0
	comp=Z,2.3nm,0.3s,baz=272,slow=11,SNR=15						
ZAL				Sn	Sn	10 40 50.9	-0.6
	comp=Z,2.4nm,0.3s,baz=67,slow=14,SNR=4.0						
ZAL				Lg		10 41 28.3	
	comp=Z,1.3nm,0.3s,baz=8.9,slow=22,SNR=5.0						
KK31	Karatay Array	9.69	249	⇑Pn	P	10 40 11.0	-1.4
	comp=Z,0.4nm,0.2s,baz=84,slow=125,SNR=29						
KK31				⇑Lg		10 42 55.7	
	comp=Z,4.1nm,0.5s,baz=63,slow=13,SNR=2.8						
KKAR	Karatay Array	9.69	249	P	P	10 40 10.9	-1.5
BVAR	Borovoye Array	9.94	311	Pn	P	10 40 16.9	+1.0
	comp=Z,0.5nm,0.3s,baz=118,slow=14,SNR=6.1						
BVAR				Sn	Sn	10 42 08.3	-0.1
	comp=Z,1.4nm,0.3s,baz=115,slow=24,SNR=6.8						
BVAR				Lg		10 43 05.5	
	comp=Z,1.0nm,0.3s,baz=119,slow=26,SNR=3.5						
ARCES	ARCESS Array B	35.53	329	P	P	10 44 49.8	+1.3
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	35.53	329	P	P	10 44 49.8	+1.3
	comp=Z,0.6nm,0.7s,mb3.6,baz=95,slow=10.0,SNR=2.6						
HFS	Hagfors	41.04	315	P	P	10 45 34.3	-0.3
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HFS	Hagfors	41.04	315	P	P	10 45 34.3	-0.3
	comp=Z,0.6nm,0.4s,mb3.6,baz=75,slow=12,SNR=4.8						
ILAR	Eielson Array	61.81	22	P	P	10 48 10.6	-0.2
	comp=Z,0.4nm,0.8s,mb3.6,baz=320,slow=4.9,SNR=6.5						
WRA	Warramunga Arr	81.25	132	P	P	10 50 06.6	-0.9
	comp=Z,0.2nm,0.6s,mb3.2,baz=338,slow=5.3,SNR=5.3						

GUC 24 10:40:43.3±0.5**, 20.12S**×**69.23W, h99^{km}**±2^{km}**, MD3.5, ML3.4, Northern Chile**

NEIC ***24*** *10:49:36.3±0.2, 51.88N×173.52W, mb4.4/28, ML4.6(AEIC), Error ellipse: s-maj=7.3km s-min=2.9km az=170.0*

IDC ***24*** *10:49:38.4±2.0, 52.18N×173.57W, h53^{km}±17^{km}, mb4.0/15, mb1 4.3/17, mb1mx4.1/27, mbtmp4.3/17, ML4.6/2, MS3.5/12, Ms1 3.5/12, ms1mx3.2/40, Error ellipse: s-maj=18.7km s-min=10.4km az=156.0*

ISC 24 10:49:36.4±0.5**, 52.06N**±0.07×**173.54W**±0.05**, h50^{km}**±4^{km}**, h33^{km}**±1.4^{km}**:pP-P, n110, σ0^{s}96**/106**, mb4.3**/42**, MS3.5**/11**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.42	289	P	P	10 49 46.6	-0.3
ATKA				S	S	10 49 54.2	-0.2
GSMY	Great Sitkin M	1.55	270	P	P	10 50 02.2	0.0
GSTR	Great Sitkin T	1.55	272	P	P	10 50 02.8	+0.6
GSTD	Great Sitkin T	1.61	271	P	P	10 50 03.2	+0.2
GSCK	Great Sitkin C	1.62	269	P	P	10 50 03.7	+0.6
GSCK				S	S	10 50 24.3	+1.4
ADAG	Mount Adagdak	1.89	269	P	P	10 50 07.5	+0.5
KIWB	Kanaga Island	2.24	266	P	P	10 50 12.6	+0.7
KIKV	Kanaga Island	2.25	267	P	P	10 50 12.7	+0.6
KIMD	Kanaga Island	2.31	264	P	P	10 50 12.9	+0.1
NIKO	Nikolski	3.01	70	P	P	10 50 21.8	-1.0
OKFG	Magazine Ridge	3.68	66	P	P	10 50 32.6	+0.2
MNAT	Makushin Natee	4.53	64	P	P	10 50 44.2	-0.1
MTBL	Makushin Table	4.56	63	P	P	10 50 45.3	+0.5
UNV	Unalaska Valle	4.62	64	P	P	10 50 45.0	-0.5
AKGG	Akutan Green G	5.03	62	P	P	10 50 50.9	-0.3
AKLV	Akutan Long Va	5.03	62	P	P	10 50 50.9	-0.5
AKUT	Akutan	5.12	63	P	P	10 50 52.6	0.0
SPIA	Saint Paul Isl	5.47	19	P	P	10 50 58.5	+1.1
WPOG	Pogromni	5.85	61	P	P	10 51 02.3	-0.4
WTUG	Tugumak	6.14	59	P	P	10 51 06.2	-0.6
DRIA	Deer Island	7.33	62	P	P	10 51 22.5	-0.9
DTNA	Dutton South F	7.39	61	P	P	10 51 23.2	-1.2
SMY	Shemya	7.59	280	P	P	10 51 25.4	-1.7
DOL	Dolgoi Island	7.60	61	P	P	10 51 26.3	-0.9
FX1	Attu Island--F	8.16	281	P	P	10 51 32.8	-2.1
	8.4nm,0.3s,baz=301,slow=1.0,SNR=55						
FX1				S	S	10 53 00.4	-6.3
	2.0nm,0.3s,baz=234,slow=19,SNR=1.5						
FX1	Attu Island--F	8.16	281	P	P	10 51 33.4	-1.5
SDPT	Sand Point	8.42	62	P	P	10 51 36.9	-1.6
KDAK	Kodiak Island	13.32	56	eP	P	10 52 42.0	-2.6
SVW2	Sparrevohn	13.37	40	eP	P	10 52 46.2	+0.9
RSO	Redoubt South	14.23	46	eP	P	10 52 59.0	+2.6
SPU	Mount Spurr	14.87	44	P	P	10 53 05.9	+1.2
SLKM	Skilak Lake	15.39	48	ePn	P	10 53 10.9	-0.6
SLKM				e		10 53 13.6	
PMR	Palmer	16.32	45	eP	P	10 53 25.0	+1.8
	1.8nm,0.3s						
IMA	Indian Mountai	17.23	28	eP	P	10 53 37.9	+3.2
	3.3nm,1.1s						
ILAR	Eielson Array	18.70	37	P	P	10 53 50.0	-2.8
	4.0nm,0.3s,baz=236,slow=9.8,SNR=138						
ILAR				S	S	10 57 19.6	+3.5
	0.0nm,0.3s,baz=358,slow=31,SNR=3.4						
ILAR				PcP	PcP	10 58 16.9	-2.4
	0.1nm,0.3s,baz=278,slow=3.0,SNR=6.8						
ILAR				pPcP		10 58 28.1	
	0.1nm,0.3s,baz=277,slow=3.2,SNR=6.2						
ILAR				LR	LR	11 01 39.8	
	comp=Z,103nm,19.1s,baz=356,slow=39						
ILAR				ScP		11 01 47.5	
	0.0nm,0.3s,baz=270,slow=2.7,SNR=4.4						
BILL	Bilibino	18.76	336	eP	P	10 53 55.4	+1.8
	8.0nm,0.8s						
INK	Inuvik	25.04	34	P	P	10 54 56.4	-0.5
	4.4nm,0.5s,mb4.3,baz=238,slow=7.4,SNR=58						
INK				PcP	PcP	10 58 28.9	-2.6
	1.5nm,0.5s,baz=124,slow=3.8,SNR=4.4						
INK				LR	LR	11 05 56.3	
	comp=Z,110nm,19.0s,MS3.4,baz=260,slow=39						
INK	Inuvik	25.04	34	eP	P	10 54 55.9	-0.9
	6.3nm,0.6s,mb4.3						
DLBC	Dease Lake	25.24	58	P	P	10 55 00.0	+1.2
	2.6nm,0.5s,mb4.0,baz=239,slow=7.2,SNR=16						
DLBC				LR	LR	11 05 18.9	
	comp=Z,65nm,20.8s,MS3.1,baz=286,slow=37						
DLBC	Dease Lake	25.24	58	eP	P	10 54 59.2	+0.4
BBB	Bella Bella	27.55	72	LR	LR	11 03 31.9	
	comp=Z,77nm,21.3s,MS3.2,baz=231,slow=30						
ASAJ	Asahikawa	29.96	272	LR	LR	11 07 07.6	
	comp=Z,66nm,19.3s,MS3.3,baz=149,slow=35						
VDB	Vedder Mountai	32.27	75	P	P	10 56 02.4	+0.3
YKA	Yellowknife Ar	32.37	48	P	P	10 56 01.2	-1.7
	1.6nm,0.3s,mb4.3,baz=274,slow=9.2,SNR=11						
YKA				PcP	PcP	10 58 47.5	-2.3
	0.5nm,0.4s,baz=276,slow=2.6,SNR=4.4						
YKA				pPcP		10 59 00.6	
	0.7nm,0.4s,baz=287,slow=2.9,SNR=4.7						
YKA				LR	LR	11 10 36.7	
	comp=Z,161nm,18.3s,MS3.8,baz=280,slow=39						
YKA	Yellowknife Ar	32.37	48	P	P	10 56 01.2	-1.7
YKA				PcP	PcP	10 58 47.5	-2.3
YKA				pPcP		10 59 00.6	
YKA				LR	LR	11 10 36.7	
MBW	Mount Baker	32.50	75	P	P	10 56 04.8	+0.6
PNT	Penticton	33.62	73	P	P	10 56 14.2	+0.3
EBG	Ellensburg	34.15	77	P	P	10 56 19.4	+0.9
EPH	Ephrata	34.52	76	P	P	10 56 21.9	+0.2
H2OWA	Water	35.09	77	P	P	10 56 27.1	+0.6
NEW	Newport	35.57	73	eP	P	10 56 30.3	-0.2
	16nm,0.8s,mb5.0						
EDM	Edmonton	35.60	64	eP	P	10 56 30.2	-0.5
MJAR	Matsushiro Arr	37.11	265	P	P	10 56 44.2	+0.6
	1.6nm,0.5s,mb4.1,baz=38,slow=8.2,SNR=6.4						
MAT	Matsushiro	37.11	265	eP	P	10 56 44.0	+0.3
	10.0nm,1.0s,mb4.6						
MAT	Matsushiro	37.11	265	P	P	10 56 42.4	-1.3
BMO	Blue Mountains	37.16	78	eP	P	10 56 44.1	+0.2
	1.2nm,0.6s,mb3.9						
WVOR	Wild Horse Val	37.66	82	eP	P	10 56 49.3	+1.1
	6.5nm,0.9s,mb4.4						
CHMT	Chamberlain Mo	38.51	73	eP	P	10 56 54.7	-0.5
HRY	Holter Researc	39.45	72	eP	P	10 57 03.4	+0.3
HLID	Hailey	39.60	78	eP	P	10 57 04.6	+0.2
	3.3nm,0.9s,mb4.1						
MCMT	McKenzie Canyo	39.85	76	eP	P	10 57 06.6	+0.3
MCMT				epP	pP	10 57 16.2	-3.4
BOZ	Bozeman (W)	40.13	74	eP	P	10 57 08.7	-0.1
	7.9nm,0.6s,mb4.6						
BOZ				epP	pP	10 57 18.4	-3.6
NVAR	Mina Array Bea	40.24	87	P	P	10 57 10.5	+0.8
	2.4nm,0.8s,mb4.0,baz=286,slow=11,SNR=14						
NVAR				pP	pP	10 57 21.4	-1.5
	1.8nm,0.7s,baz=290,slow=9.0,SNR=7.7						
NVAR				PcP	PcP	10 59 13.6	+0.1
	1.5nm,0.6s,baz=291,slow=3.5,SNR=6.9						
NVAR				pPcP		10 59 24.7	
	1.2nm,0.7s,baz=274,slow=4.2,SNR=5.7						
MNV	Mina	40.33	87	eP	P	10 57 10.9	+0.5
	2.1nm,1.2s,mb3.7						
ELK	Elko	40.72	82	eP	P	10 57 14.1	+0.5
	2.2nm,0.8s,mb3.8						
MTUM	Tungsten Hills	40.75	89	eP	P	10 57 14.7	+0.8
YMR	Madison River	41.06	75	eP	P	10 57 17.2	+0.8
IMW	Indian Meadow	41.51	76	eP	P	10 57 20.6	+0.7
	10nm,1.0s,mb4.4						
RRI2	Red Ridge	41.59	77	eP	P	10 57 21.9	+1.2
	8.4nm,0.8s,mb4.4						
HVU	Hansel Valley	41.61	79	eP	P	10 57 20.5	-0.3
MOOW	Moose Ponds	41.70	76	P	P	10 57 21.3	-0.3
	1.7nm,0.8s,mb3.7						
TPAW	Teton Pass	41.73	76	eP	P	10 57 22.4	+0.7
	6.3nm,1.1s,mb4.2						
LOHW	Long Hollow	41.87	76	eP	P	10 57 23.7	+0.8
	3.3nm,0.9s,mb4.0						
HWUT	Hardware Ranch	42.45	79	eP	P	10 57 28.2	+0.5
	4.4nm,0.9s,mb4.1						
LAO	LASA Array	42.74	69	eP	P	10 57 30.8	+0.8
	2.8nm,0.5s,mb4.2						
BW06	Boulder Array	42.98	76	eP	P	10 57 32.0	-0.1
	13nm,0.9s,mb4.7						
BW06				epP	pP	10 57 41.0	-4.3
PDAR	Pinedale Array	42.98	76	P	P	10 57 32.5	+0.4
	8.5nm,0.5s,mb4.7,baz=309,slow=4.3,SNR=43						
PDAR				pP	pP	10 57 42.1	-3.2
	5.3nm,0.6s,baz=304,slow=5.3,SNR=8.8						
JNU	Nakatsue	43.89	267	P	P	10 57 40.6	+1.1
	4.4nm,0.5s,mb4.5,baz=100,slow=14,SNR=4.0						
MSU	Marysvale	43.95	83	eP	P	10 57 40.8	+0.8
TMUT	Trail Mountain	44.06	81	eP	P	10 57 42.0	+1.1
NEN	Nelson	44.14	88	eP	P	10 57 42.0	+0.5
SRU	San Rafael	44.59	81	eP	P	10 57 46.2	+1.1
RSSD	Black Hills	45.46	71	eP	P	10 57 51.6	-0.4
	2.2nm,0.5s,mb4.2						
ULM	Lac du Bonnet	46.54	60	P	P	10 57 59.3	-1.1
	2.0nm,0.3s,mb4.5,baz=312,slow=8.1,SNR=3.9						
SDCO	Great Sand Dun	48.51	79	eP	P	10 58 16.6	+0.6
	3.5nm,0.8s,mb4.4						
TUC	Tucson	48.87	88	eP	P	10 58 18.6	-0.2
	3.5nm,0.8s,mb4.4						
SONM	Songino Array	49.22	299	P	P	10 58 20.9	-0.5
	0.3nm,0.5s,mb3.6,baz=90,slow=7.2,SNR=3.3						
SONM				ScP		11 03 33.4	
	0.8nm,0.6s,baz=48,slow=2.7,SNR=5.6						
SONM				LR	LR	11 19 33.5	
	comp=Z,111nm,20.2s,MS3.9,baz=256,slow=36						
MNTX	Cornudas Mount	52.62	85	eP	P	10 58 46.8	-0.5
	5.8nm,1.0s,mb4.5						
WMOK	Wichita Mounta	54.56	77	eP	P	10 59 01.5	-0.1
	4.7nm,0.8s,mb4.6						
LTX	Lajitas	55.33	85	eP	P	10 59 06.6	-0.6
	5.9nm,0.8s,mb4.7						
TXAR	Lajitas Array	55.33	85	P	P	10 59 06.3	-0.9
	4.9nm,0.8s,mb4.6,baz=299,slow=4.7,SNR=38						
TXAR				ScP		11 04 01.2	
	0.3nm,0.7s,baz=259,slow=2.8,SNR=4.0						
ZAL	Zalesovo	55.90	316	LR	LR	11 23 59.2	
	comp=Z,58nm,20.7s,MS3.6,baz=266,slow=37						
ARCES	ARCESS Array B	57.92	352	P	P	10 59 24.1	-1.0
	1.7nm,0.8s,mb4.1,baz=22,slow=6.5,SNR=6.9						
ARCES				LR	LR	11 23 40.0	
	comp=Z,40nm,19.7s,MS3.5,baz=258,slow=35						
OXF	Oxford	60.28	71	eP	P	10 59 39.8	-2.2
	30nm,0.9s,mb5.3						
PLAL	Pickwick Lake	60.72	70	eP	P	10 59 43.2	-1.8
	7.0nm,0.6s,mb5.0						
MKAR	Makanchi Array	62.11	311	P	P	10 59 52.3	-1.8
	0.4nm,0.4s,mb3.9,baz=53,slow=6.9,SNR=4.2						
MKAR				LR	LR	11 26 54.1	
	comp=Z,44nm,19.7s,MS3.6,baz=262,slow=36						
BVAR	Borovoye Array	62.41	322	P	P	10 59 54.6	-1.5
	1.1nm,0.4s,mb4.3,baz=104,slow=6.1,SNR=6.9						
NOA	NORSAR Array B	67.18	357	P	P	11 00 25.6	-1.0
	0.6nm,0.8s,mb3.7,baz=34,slow=13,SNR=3.1						
GERES	GERESS Array B	79.28	355	LR	LR	11 41 07.4	
	comp=Z,23nm,19.9s,MS3.5,baz=358,slow=39						
CTA	Charters Tower	79.94	218	eP	P	11 01 41.0	-0.7
	3.0nm,0.4s,mb4.6						
GNI	Garni	82.31	331	LR	LR	11 43 39.5	
	comp=Z,31nm,18.0s,MS3.7,baz=357,slow=39						
WRAB	Tennant Creek	84.83	228	eP	P	11 02 05.3	-1.5
WB2	Warramunga Arr	84.83	228	eP	P	11 02 06.1	-0.7
WRA	Warramunga Arr	84.84	228	P	P	11 02 06.2	-0.7
	2.0nm,0.5s,mb4.5,baz=33,slow=5.7,SNR=47						
FITZ	Fitzroy Crossi	87.51	236	eP	P	11 02 20.2	+0.2
	7.3nm,1.0s,mb4.9						
STKA	Stephens Creek	92.36	217	P	P	11 02 42.7	+0.3
	3.1nm,0.7s,mb4.8,baz=351,slow=9.5,SNR=8.6						
STKA	Stephens Creek	92.36	217	P	P	11 02 42.7	+0.3
MAW	Mawson	149.04	218	PKPbc	PKPdf	11 09 18.8	+5.6
	4.2nm,0.5s,baz=104,slow=2.8,SNR=15						
LBTB	Lobatse	149.31	324	PKP	PKPdf	11 09 17.3	+2.3
BOSA	Boshof	152.70	322	PKPbc	PKPdf	11 09 28.4	+8.4
	1.5nm,0.4s,baz=23,slow=1.8,SNR=5.7						

IDC 24 10:58:15.4±2.0**, 14.31N**×**91.88E, mb3.7**/3**, mb1 3.8**/4**, mb1mx3.5**/19**, mbtmp3.6**/4**, Error ellipse: s-maj=58.2km s-min=26.7km az=71.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.93	58	Pn	Pn	11 00 13.7	-1.0
	baz=245,slow=17,SNR=3.0						
MKAR	Makanchi Array	33.36	348	P	P	11 04 56.0	-1.4
	1.1nm,0.8s,baz=172,slow=8.6,SNR=4.4						
SONM	Songino Array	35.53	17	P	P	11 05 13.1	-2.9
	0.2nm,0.4s,baz=190,slow=8.8,SNR=2.7						
WRA	Warramunga Arr	53.88	128	P	P	11 07 40.2	-2.8
	0.8nm,0.6s,baz=311,slow=7.6,SNR=16						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
WRA				PcP	PcP	11 08 47.3	-1.2
	0.7nm,1.1s,baz=322,slow=3.4,SNR=4.6						

ISC 24 11:05:17.4±1.0**,38.86N**±0.07×**36.37E**±0.06**,h10^{km},n6, σ0^{s}94**/10**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNN	Bunyan	0.41	269	PG	Pg	11 05 23.9	-1.9
BNN				SG	Sg	11 05 30.8	-0.6
SVST	Sivas	1.02	26	*i* P	Pb	11 05 35.9	-0.8
SVST				*i* S	Sb	11 05 50.7	+0.7
YOZ	Yozgat	1.13	314	PN	Pn	11 05 38.8	-0.5
AVNT	Avonos	1.19	267	*i* P	Pb	11 05 40.7	+1.1
AVNT				*i* S	Sb	11 05 56.1	+1.3
KAHT	Ahir Dag	1.29	162	*i* P	Pb	11 05 41.5	+0.2
KAHT				*i* S	Sb	11 06 03.6	+5.9
CORM	Corum	1.89	315	PN	Pn	11 05 50.5	+0.4

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*IDC **24** 11:49:05.4±1.7,35.58N×70.73E,mb3.9/5,mb1 3.9/6, mb1mx3.6/22,mbtmp3.8/6,ML3.5/1,Error ellipse: s-maj=72.9km s-min=27.9km az=47.0*
*NNC **24** 11:49:25.8±5.7,36.81N×69.66E,mpv3.6,Error ellipse: s-maj=55.2km s-min=39.8km az=115.0*
ISC 24 11:49:11.5±6.8**,35.7N**±0.4×**70.7E**±0.4**,h55^{km}**±51^{km}**,n8, σ0^{s}76**/8**,mb3.7**/5**,2C,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	7.45	359	P	P	11 50 60.0	0.0
	1.6nm,0.3s,baz=188,slow=13,SNR=53						
KK31				⇑S	Sx	11 52 14.3	
	3.7nm,0.5s,baz=190,slow=24,SNR=4.0						
AB31	Akbulak array	15.71	333	P	P	11 52 50.4	-0.1
	1.0nm,0.3s,baz=152,slow=12,SNR=75						
AB31				⇑S	Sx	11 55 30.2	
	0.4nm,0.3s,baz=156,slow=25,SNR=5.3						
BVAR	Borovoye Array	17.37	359	P	P	11 53 11.5	+0.1
	0.2nm,0.3s,baz=188,slow=10,SNR=2.9						
FINES	FINESS Array B	38.04	327	P	P	11 56 24.6	-1.3
	0.7nm,0.4s,mb3.7,baz=127,slow=9.5,SNR=8.9						
HFS	Hagfors	43.57	322	P	P	11 57 12.0	+0.7
	1.1nm,0.5s,mb3.9,baz=100,slow=9.0,SNR=6.6						
NOA	NORSAR Array B	44.90	324	P	P	11 57 22.5	+0.5
	0.5nm,0.6s,mb3.5,baz=94,slow=8.4,SNR=3.2						
INK	Inuvik	74.79	9	P	P	12 00 46.8	0.0
	0.7nm,0.5s,mb3.9,baz=317,slow=4.5,SNR=6.4						
WRA	Warramunga Arr	81.77	122	P	P	12 01 26.0	0.0
	0.4nm,0.9s,mb3.3,baz=325,slow=5.0,SNR=6.3						

ISC 24 11:53:25.7±0.8**,40.92N**±0.05×**31.62E**±0.04**,h10^{km},n6, σ1^{s}20**/12**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGKT	Sivrigoynuk	0.48	136	*i* P	Pg	11 53 34.5	-0.8
SGKT				*i* S	Sg	11 53 40.5	-1.3
HENT	Hendek	0.55	261	*i* P	Pg	11 53 35.7	-1.2
HENT				*i* S	Sg	11 53 44.0	-0.4
SAFT	Safranbolu	0.87	68	PG	Pg	11 53 41.6	-1.6
SAFT				SG	Sg	11 53 47.2	-7.6
ELDT	Eldivan	1.44	107	*i* P	Pn	11 53 52.0	+0.1
ELDT				*i* S	Sb	11 54 10.8	+0.4
BALT	Daday	1.47	65	*i* P	Pn	11 53 53.1	+0.7
BALT				*i* S	Sb	11 54 12.7	+1.4
ESKT	Eskisehir	1.51	203	*i* P	Pn	11 53 56.0	+3.0
ESKT				*i* S	Sb	11 54 14.1	+1.5

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*NEIC **24** 11:55:34.4,16.71N×94.82W,h106^{km},MD4.1(MEX),After MEX.*
MEX 24 11:55:34.7±1.2**,16.71N**×**94.83W,h105^{km}**±12^{km}**,MD4.1, 2D,Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.38	353	⇓*i*P	P	11 55 49.0	-1.4
CMIG				*i* S	S	11 56 00.2	-2.0
HUIG	Huatulco	1.54	233	⇓*i*P	P	11 55 59.7	-2.5
HUIG				*i* S	S	11 56 21.2	-1.5
OXX	Oaxaca	1.85	282	*i* P	P	11 56 04.9	-1.1
OXX				*i* S	S	11 56 26.5	-2.8
VHO	Vista Hermosa	1.85	281	*i* P	P	11 56 04.8	-1.3
VHO				*i* S	S	11 56 27.4	-2.0
CCIG	Comitan	2.62	99	*e*P	P	11 56 15.9	-0.5
CCIG				*i* S	S	11 56 44.0	-3.8
IISM	Ciudad Serdan	3.32	313	*i* P	P	11 56 27.0	+1.1
PPM	Popocatepetl	4.30	304	*i* P	P	11 56 37.9	-1.5
PPM				*i* S	S	11 57 25.1	-3.7
PPM	Popocatepetl	4.30	304	*i* P	P	11 56 37.9	-1.5
PPM				*i* P		11 56 39.2	
PPM				*i* S	S	11 57 25.1	-3.7

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*IDC **24** 12:35:29.6±0.4,6.89S×106.16E,mb4.7/22,mb1 4.7/22, mb1mx4.7/24,mbtmp4.7/22,MS4.0/14,Ms1 4.0/14, ms1mx3.8/24,Error ellipse: s-maj=17.5km s-min=11.9km az=46.0*
*MOS **24** 12:35:33.2±0.9,6.68S×106.30E,h33^{km},mb5.3/11,Error ellipse: s-maj=25.4km s-min=10.6km az=121.4*
*HRVD **24** 12:35:35.3±0.6,7.45S×106.02E,h69^{km}±2^{km},MW4.9/40, Centroid moment Tensor Solution. LP body waves: s26,c38;Mantle waves: s40,c66; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.56±.17; $M_{\theta\theta}$-2.78±.14; $M_{\phi\phi}$1.22±.21; $M_{r\theta}$0.98±.08; $M_{\theta\phi}$1.57±.10; $M_{\phi r}$0.60±.12; Best double couple: $M_0$3.017×10^{16} NP1:ϕ_s327°,δ54°, λ152°. NP2:ϕ_s74°,δ68°,λ39°. Principal axes: T 2.601, Plg43°, Azm296°; N .833, Plg46°, Azm99°; P -3.434, Plg9°, Azm198°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **24** 12:35:35.3±1.1,6.87S×106.24E,h41^{km}±9^{km},mb4.9/24 Error ellipse: s-maj=7.8km s-min=4.7km az=52.0*
NEIC Felt [III] at Bogor and [II] at Bandung, Depok and Tangerang.
*BJI **24** 12:35:35.3,6.90S×106.20E,h41^{km},mB5.0,mb4.8,Ms4.7, Msz4.6*
ISC 24 12:35:32.6±0.3**,6.86S**±0.05×**106.26E**±0.06**,h33^{km},n143, σ1^{s}00**/104**,mb4.7**/53**,MS4.1**/17**,10C-9D,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSM	Kuching	9.21	26	*e*Pn	P	12 37 54.1	+7.9
KULM	Kulim	13.31	335	*e*Pn	P	12 38 42.1	+0.3
KKM	Kota Kinabalu	16.22	38	*e*P	P	12 39 21.8	+2.0
MBWA	Marble Bar	19.28	139	*e*P	P	12 39 56.0	-1.5
	11nm,0.6s						
FITZ	Fitzroy Crossi	21.94	122	P	P	12 40 25.6	+0.4
	17nm,0.8s,mb4.5,baz=310,slow=3.8,SNR=22						
CMAR	Chiang Mai Arr	26.18	344	*i* P	P	12 41 06.2	0.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CMAR	Chiang Mai Arr	26.18	344	P	P	12 41 06.2	0.0
	comp=Z,1.6nm,0.4s,mb3.9,baz=182,slow=9.2,SNR=11						
CMAR				PcP	PcP	12 44 33.8	+0.5
	comp=Z,0.6nm,0.4s,baz=205,slow=2.5,SNR=4.2						
CMAR				LR	LR	12 52 45.2	
	comp=Z,200nm,20.8s,MS3.6,baz=175,slow=40						
KAKA	Kakadu	26.43	105	*e*P	P	12 41 08.1	-0.5
	comp=Z,18nm,0.4s,mb5.0						
NWAO	Narrogin (SRO)	27.86	160	P	P	12 41 20.6	-1.0
	comp=Z,6.8nm,0.8s,mb4.3,baz=329,slow=12,SNR=2.6						
NWAO				LR	LR	12 50 52.6	
	comp=Z,519nm,21.3s,MS4.1,baz=325,slow=33						
WRA	Warramunga Arr	30.18	118	*i* P	P	12 41 42.2	-0.1
WRA				pmax	pmax		
	comp=Z,12nm,0.5s						
WRA	Warramunga Arr	30.18	118	P	P	12 41 42.2	-0.1
	comp=Z,12nm,0.5s,mb4.9,baz=303,slow=9.6,SNR=195						
WRA				PcP	PcP	12 44 42.5	-0.6
	comp=Z,2.6nm,0.5s,baz=307,slow=2.0,SNR=10						
WRAB	Tennant Creek	30.19	118	*i* P	P	12 41 42.8	+0.4
WRAB	Tennant Creek	30.19	118	*e*P	P	12 41 41.9	-0.4
	comp=Z,22nm,0.4s,mb5.2						
WRAB				*e*PcP	PcP	12 44 42.2	-0.8
WB2	Warramunga Arr	30.19	118	⇑*i*P	P	12 41 42.1	-0.3
HYB	Hyderabad	36.49	312	*e*P	P	12 42 37.5	+0.5
HYB	Hyderabad	36.49	312	*i* P	P	12 42 38.0	+1.0
LSA	Lhasa	39.15	339	P	P	12 43 01.0	+1.9
LSA	Lhasa	39.15	339	*e*P	P	12 43 00.4	+1.4
	comp=Z,9.5nm,0.4s,mb4.9						
JOW	Kunigami	39.71	32	LR	LR	12 59 07.0	
	comp=Z,123nm,21.5s,MS3.7,baz=13,slow=36						
PKI	Pulchoki	39.73	330	*e*P	P	12 43 02.9	-1.0
GUN	Gumba	39.79	331	*e*P	P	12 43 04.1	-0.3
	comp=Z,27nm,0.3s,mb5.4						
DMN	Daman	39.91	330	*e*P	P	12 43 04.9	-0.5
	comp=Z,8.5nm,0.3s,mb5.0						
KKN	Kakani	39.98	330	*e*P	P	12 43 05.5	-0.5
	comp=Z,10nm,0.4s,mb5.0						
SSE	Sheshan	40.36	20	P	P	12 43 08.0	-1.1
SSE				S	S	12 49 13.8	-0.8
SSE				SS	SS	12 52 12.9	+4.3
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,60nm,7.7s						
SSE				LR	LR		
	comp=N,100nm,21.7s,MS3.7						
SSE				LR	LR		
	comp=E,80nm,21.5s,MS3.7						
SSE				LR	LR		
	comp=Z,160nm,20.3s,MS3.9						
GKN	Gorkha	40.47	330	*e*P	P	12 43 09.6	-0.5
	comp=Z,70nm,0.3s						
NJ2	Nanjing	40.52	17	*e*P	P	12 43 08.6	-1.8
NJ2				S	S	12 49 13.0	-4.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,400nm,4.6s						
NJ2				LR	LR		
	comp=N,400nm,24.2s						
NJ2				LR	LR		
	comp=E,1μm,16.7s						
NJ2				LR	LR		
	comp=Z,8μm,21.8s,MS5.5						
PMG	Port Moresby	40.55	96	*i* P	P	12 43 12.9	+2.1
PMG	Port Moresby	40.55	96	P	P	12 43 12.9	+2.1
	comp=Z,22nm,0.5s,mb5.0,baz=248,slow=5.4,SNR=15						
PMG	Port Moresby	40.55	96	*e*P	P	12 43 12.4	+1.6
	comp=Z,22nm,0.6s,mb5.0						
POO	Poona	40.73	309	*e*x	x	12 43 46.0	
POO				*e*x	x	12 50 54.0	
XAN	Xi’an	40.76	3	P	P	12 43 12.5	+0.1
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
KOLN	Koldanda	40.81	329	*e*P	P	12 43 12.5	-0.4
	comp=Z,19nm,0.3s,mb5.2						
CTA	Charters Tower	40.93	113	P	P	12 43 15.2	+1.3
	comp=Z,3.4nm,0.6s,mb4.2,baz=282,slow=9.3,SNR=4.5						
STKA	Stephens Creek	41.27	132	*e*P	P	12 43 14.0	-2.6
	comp=Z,7.2nm,0.4s,mb4.7						
STKA	Stephens Creek	41.27	132	P	P	12 43 17.5	+0.9
	comp=Z,5.7nm,0.3s,mb4.6,baz=320,slow=8.9,SNR=46						
STKA				PcP	PcP	12 45 15.1	-0.5
	comp=Z,3.9nm,0.5s,baz=301,slow=3.9,SNR=4.2						
STKA				LR	LR	12 59 57.2	
	comp=Z,247nm,21.5s,MS4.0,baz=114,slow=36						
STKA	Stephens Creek	41.27	132	*e*P	P	12 43 17.0	+0.4
NDI	New Delhi	45.09	323	*e*P	P	12 43 45.0	-2.7
GTA	Gaotai	46.43	353	*e*P	P	12 43 59.4	+1.2
GTA				AP	pP	12 44 08.5	+0.4
GTA				XP	sP	12 44 13.3	+1.1
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
MJAR	Matsushiro Arr	52.54	32	P	P	12 44 44.7	-0.5
	comp=Z,1.7nm,0.4s,mb4.4,baz=198,slow=9.0,SNR=9.9						
MJAR				PcP	PcP	12 45 55.5	+0.1
	comp=Z,1.0nm,0.4s,baz=207,slow=6.1,SNR=5.2						
MJAR	Matsushiro Arr	52.54	32	P	P	12 44 44.7	-0.5
MJAR				PcP	PcP	12 45 55.5	+0.1
SONM	Songino Array	54.46	0	P	P	12 44 59.6	+0.4
	comp=Z,2.9nm,0.3s,mb4.6,baz=182,slow=10,SNR=23						
SONM				PcP	PcP	12 46 02.4	0.0
	comp=Z,7.5nm,0.4s,baz=182,slow=4.1,SNR=23						
SONM				ScP		12 50 01.5	
	comp=Z,0.5nm,0.3s,baz=146,slow=4.5,SNR=3.6						
SONM				LR	LR	13 10 24.5	
	comp=Z,356nm,20.4s,MS4.4,baz=338,slow=38						
ULN	Ulaanbaatar	54.49	1	*c i*P	P	12 44 59.6	+0.1
ULN	Ulaanbaatar	54.49	1	*e*P	P	12 44 58.9	-0.6
	comp=Z,2.7nm,0.4s,mb4.5						
ZAK	Zakamensk	57.07	358	*e*P	P	12 45 17.6	-0.4
ZAK				*e*		12 46 11.8	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
MKAR	Makanchi Array	57.51	341	P	P	12 45 19.7	-1.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR	Makanchi Array	57.51	341	P	P	12 45 20.0	-1.1
	comp=Z,8.3nm,0.4s,mb5.1,baz=151,slow=8.4,SNR=66						
MKAR				LR	LR	13 14 09.6	
	comp=Z,72nm,19.8s,MS3.8,baz=90,slow=40						
MKAR	Makanchi Array	57.51	341	P	P	12 45 20.0	-1.2
MKAR				LR	LR	13 14 09.6	
OPO	Ambohidratompo	58.56	253	P	P	12 45 28.7	-0.1
	comp=Z,2.4nm,0.7s,mb4.4,baz=139,slow=9.3,SNR=3.5						
KKAR	Karatay Array	59.38	330	P	P	12 45 32.9	-1.3
CASY	Casey	59.39	178	*e*P	P	12 45 31.9	-2.1
	comp=Z,1.4nm,0.4s,mb4.3						
VOSK	Vostochnaya	66.50	337	P	P	12 46 20.1	-1.0
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
VOSK	Vostochnaya	66.50	337	*i* P	P	12 46 20.1	-1.0
BVAR	Borovoye Array	66.96	337	P	P	12 46 23.2	-0.8
	comp=Z,6.1nm,0.3s,mb5.0,baz=149,slow=8.6,SNR=55						
MAW	Mawson	67.28	197	P	P	12 46 24.9	-0.9
	comp=Z,1.3nm,0.3s,mb4.4,baz=72,slow=6.4,SNR=7.4						
MAW				LR	LR	13 08 37.9	
	comp=Z,140nm,20.5s,MS4.2,baz=62,slow=30						
ZRNK	Zerenda	67.44	337	P	P	12 46 26.1	-0.9
ZRNK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
ZRNK	Zerenda	67.44	337	*e*P	P	12 46 26.2	-0.9
	comp=Z,13nm,0.8s,mb5.0						
AB31	Akbulak array	68.92	329	*e*P	P	12 46 35.9	-0.5
AB31				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.0						
YAK	Yakutsk	71.04	11	⇓*e*P	P	12 46 48.6	-0.5
YAK				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
YAK	Yakutsk	71.04	11	*e*P	P	12 46 48.3	-0.8
	comp=Z,19nm,0.6s,mb5.2						
GNI	Garni	73.34	315	LR	LR	13 20 09.9	
	comp=Z,68nm,22.0s,MS3.9,baz=351,slow=37						
ARU	Arti	74.19	335	⇑*i*P	P	12 47 07.9	+0.2
ARU				*e*		12 47 22.7	
ARU				*e*		12 49 57.0	
ARU				*e*PPP	PPP	12 51 39.7	-0.6
ARU				*e*S	S	12 56 40.7	+3.2
ARU				*e*SS	SS	13 01 27.8	+2.4
ARU				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
ARU	Arti	74.19	335	*e*P	P	12 47 07.9	+0.2
	comp=Z,53nm,1.2s,mb5.3						
ZEI	Tsey	75.00	318	*e*P	P	12 47 11.9	-0.8
ZEI				*i* *PP	pP	12 47 19.9	-3.1
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
SYO	Syowa Base	75.38	200	⇑P	P	12 47 13.5	-0.8
MBAR	Mbarara	75.56	271	*e*P	P	12 47 15.6	-0.8
	comp=Z,4.8nm,0.9s,mb4.4						
VNDA	Vanda	76.23	169	LR	LR	13 16 27.8	
	comp=Z,111nm,18.1s,MS4.2,baz=124,slow=32						
KIV	Kislovodsk	76.29	318	⇓*e*P	P	12 47 21.0	+1.0
KIV				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
KIV	Kislovodsk	76.29	318	*e*P	P	12 47 20.9	+0.8
	comp=Z,8.0nm,0.4s,mb5.0						
ASF	Jabal al Asfar	76.48	305	P	P	12 47 22.6	+1.3
	comp=Z,2.4nm,0.4s,mb4.5,baz=324,slow=0.5,SNR=7.5						
ASF				LR	LR	13 20 03.0	
	comp=Z,117nm,20.3s,MS4.2,baz=332,slow=35						
GOF	Gofitskoye	76.51	319	⇑*i*P	P	12 47 20.4	-0.9
GOF				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
LSZ	Lusaka	76.76	256	*e*P	P	12 47 23.0	-0.2
	comp=Z,3.3nm,0.5s,mb4.5						
SOKR	Solikamsk	76.92	337	*c i*P	P	12 47 23.8	+0.5
SOKR				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
EIL	Elat	77.38	302	P	P	12 47 27.3	+0.8
	comp=Z,10.0nm,0.6s,mb5.0,baz=43,slow=4.4,SNR=16						
EIL	Elat	77.38	302	*e*P	P	12 47 27.0	+0.5
	comp=Z,45nm,1.3s,mb5.2						
SOC	Sochi	78.14	317	*e*P	P	12 47 29.3	-1.0
SOC				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
SOC				pmax	pmax		
	comp=N,20nm,1.2s						
SOC				pmax	pmax		
	comp=E,17nm,0.9s						
LBTB	Lobatse	78.70	246	P	P	12 47 34.0	+0.2
	comp=E,2.6nm,0.6s,mb4.3,baz=89,slow=5.9,SNR=5.8						
LBTB				LR	LR	13 19 03.5	
	comp=E,116nm,18.5s,MS4.2,baz=347,slow=33						
LBTB	Lobatse	78.70	246	*e*P	P	12 47 33.6	-0.2
	comp=E,2.1nm,0.5s,mb4.3						
BOSA	Boshof	78.87	242	P	P	12 47 34.1	-0.6
	comp=E,1.8nm,0.5s,mb4.2,baz=96,slow=4.2,SNR=7.6						
BOSA				LR	LR	13 18 23.4	
	comp=E,62nm,18.9s,MS4.0,baz=198,slow=33						
BOSA	Boshof	78.87	242	*e*P	P	12 47 34.1	-0.6
	comp=E,2.1nm,0.5s,mb4.3						
TIXI	Tiksi	79.76	7	⇓*e*P	P	12 47 37.7	-1.0
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.1						
TIXI	Tiksi	79.76	7	⇓*e*P	P	12 47 37.8	-0.9
BR131	Keskin Array S	81.19	312	*e*P	P	12 47 46.8	-0.1
	comp=Z,5.6nm,0.6s,mb4.7						
BRTR	Keskin Array B	81.19	312	P	P	12 47 47.0	+0.1
	comp=Z,7.3nm,0.6s,mb4.8,baz=131,slow=7.2,SNR=32						
VOR	Voronezh	81.51	325	*e*P	P	12 47 49.0	+0.7
VOR				pmax	pmax		
	comp=Z,60nm,1.7s,mb5.2						
SUR	Sutherland	82.54	238	*e*P	P	12 47 54.7	+0.8
	comp=Z,3.3nm,0.6s,mb4.5						
MOS	Moscow	83.88	328	*e*P	P	12 48 01.7	+1.4
OBN	Obninsk	84.22	327	*e*P	P	12 48 02.9	+0.9
OBN				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb5.1						
OBN	Obninsk	84.22	327	⇓*e*P	P	12 48 02.9	+0.9
IDI	Anoyia	86.93	306	P	P	12 48 17.2	+1.3
	comp=Z,6.1nm,0.6s,mb5.0,baz=57,slow=4.4,SNR=6.0						
AKASG	Malin Array Be	87.14	322	*i* P	P	12 48 16.6	+0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	87.14	322	PP	PP	12 51 41.1	-1.7
	comp=Z,0.9nm,0.5s,baz=94,slow=6.2,SNR=7.6						
VRI	Vrincioaia	87.65	317	⇑P	P	12 48 20.6	+1.6
VRI	Vrincioaia	87.65	317	⇑P	P	12 48 20.6	+1.5
MLR	Muntele Rosu	88.11	316	⇓P	P	12 48 22.2	+1.0
MLR	Muntele Rosu	88.11	316	⇓P	P	12 48 22.2	+0.9
VOIR		88.71	316	⇑P	P	12 48 25.6	+1.4
VOIR		88.71	316	⇑P	P	12 48 25.6	+1.4
SNAA	Sanae	89.44	197	*i* P	P	12 48 29.1	+2.1
SNAA	Sanae	89.44	197	*e*P	P	12 48 27.5	+0.4
	comp=Z,1.9nm,0.7s,mb4.5						
VNA2	Neumayer--Watz	91.08	198	P	P	12 48 37.9	+3.1
FINES	FINESS Array B	91.31	332	P	P	12 48 36.5	+0.5
	comp=Z,1.8nm,0.5s,mb4.7,baz=110,slow=4.8,SNR=18						
FINES				LR	LR	13 33 55.7	
	comp=Z,55nm,19.3s,MS4.0,baz=114,slow=38						
KAF	Kangasniemi	91.34	332	*e*p	P	12 48 36.6	+0.5
VNA1	Neumayer--Stat	91.46	198	⇓*i*P	P	12 48 40.1	+3.6
VNA3	Neumayer Olymp	91.61	197	⇓*i*P	P	12 48 38.4	+1.2
KEV	Kevo	92.69	340	*e*p	P	12 48 41.9	-0.3
ARCES	ARCESS Array B	93.16	340	P	P	12 48 45.0	+0.6
	comp=Z,3.4nm,0.4s,mb5.1,baz=97,slow=6.1,SNR=67						
ARCES				LR	LR	13 37 24.0	
	comp=Z,76nm,20.7s,MS4.1,baz=253,slow=40						
GERES	GERESS Array B	96.80	318	PP	PP	12 52 58.1	-1.1
	comp=Z,0.2nm,0.2s,baz=90,slow=4.9,SNR=4.0						
HFS	Hagfors	97.18	330	P	P	12 49 03.4	+0.6
	comp=Z,0.8nm,0.3s,mb4.6,baz=153,slow=3.3,SNR=8.9						
YKA	Yellowknife Ar	116.99	20	PKP	PKPdf	12 54 14.8	+0.9
	comp=Z,0.4nm,0.4s,baz=319,slow=2.8,SNR=11						
HLID	Hailey	128.97	38	*e*PKPdf	PKPdf	12 54 40.7	+3.1
NVAR	Mina Array Bea	128.98	45	PKP	PKPdf	12 54 41.0	+3.3
	comp=Z,0.5nm,0.5s,baz=298,slow=3.1,SNR=7.2						
ELK	Elko	129.96	41	*e*PKPdf	PKPdf	12 54 42.2	+2.6
RRI2	Red Ridge	130.94	36	*e*PKPdf	PKPdf	12 54 44.5	+3.1
TPAW	Teton Pass	131.06	36	*e*PKPdf	PKPdf	12 54 45.1	+3.5
LOHW	Long Hollow	131.19	35	*e*PKPdf	PKPdf	12 54 44.8	+3.0
HWUT	Hardware Ranch	131.81	38	*e*PKPdf	PKPdf	12 54 44.3	+1.2
SCHQ	Schefferville	131.85	355	PKP	PKPdf	12 54 45.0	+2.2
	comp=Z,1.2nm,0.4s,baz=22,slow=1.6,SNR=13						
BW06	Boulder Array	132.31	36	*e*PKPdf	PKPdf	12 54 45.8	+1.8
PDAR	Pinedale Array	132.31	36	PKP	PKPdf	12 54 46.5	+2.5
	comp=Z,0.8nm,0.4s,baz=28,slow=0.5,SNR=8.4						
RSSD	Black Hills	134.41	31	*e*PKPdf	PKPdf	12 54 49.6	+1.7
SDCO	Great Sand Dun	137.87	38	*e*PKPdf	PKPdf	12 54 56.5	+2.1
ANMO	Albuquerque	138.93	43	*e*PKPdf	PKPdf	12 54 58.8	+2.4
WMOK	Wichita Mounta	143.92	36	*e*PKPdf	PKPdf	12 55 04.6	-0.5
LTX	Lajitas	144.02	48	*e*PKPdf	PKPdf	12 55 06.0	+0.5
TXAR	Lajitas Array	144.02	48	PKP	PKPdf	12 55 06.5	+1.0
	comp=Z,4.0nm,0.4s,baz=276,slow=0.6,SNR=26						
QUA2	Belchertown	144.71	358	*e*PKPdf	PKPdf	12 55 06.7	+0.3
BINY	Binghamton	144.75	3	*e*PKPdf	PKPdf	12 55 06.7	+0.3
ALLY	Alegheny Colle	144.90	8	*e*PKPdf	PKPdf	12 55 06.8	+0.1
CCM	Cathedral Cave	145.12	25	*e*PKPdf	PKPdf	12 55 08.1	+0.9
FVM	French Village	145.52	24	*e*PKPdf	PKPdf	12 55 09.0	+1.1
BLO	Bloomington	145.83	18	*e*PKPdf	PKPdf	12 55 10.4	+2.1
BAO	Brasilia Array	146.09	229	PKPdf	PKPdf	12 55 12.0	+2.6
BDFB	Brasilia	146.10	229	PKPbc	PKPbc	12 55 12.3	+1.8
	comp=Z,8.6nm,0.4s,baz=140,slow=1.9,SNR=15						
WCI	Wyandotte Cave	146.77	18	*e*PKPbc	PKPbc	12 55 13.1	+1.7
MCWV	Mont Chateau	146.89	9	*e*PKPbc	PKPbc	12 55 13.5	+1.8
MCWV				*e*PKPab	PKPab	12 55 15.2	-0.3
WVT	Waverly	148.14	22	*e*PKPbc	PKPdf	12 55 16.9	+4.7
FWV	Forest Hill	148.75	11	*e*PKPbc	PKPdf	12 55 19.0	+5.8
FWV				*e*PKPab	PKPab	12 55 21.9	-1.0
PLAL	Pickwick Lake	149.06	23	*e*PKPbc	PKPdf	12 55 18.8	+5.0
ELN	Prospectdale	149.11	11	*e*PKPbc	PKPdf	12 55 20.0	+6.2
ELN				*e*PKPab	PKPab	12 55 23.4	-1.0
TZTN	Tazewell	149.13	16	*e*PKPbc	PKPdf	12 55 19.6	+5.7
TZTN				*e*PKPab	PKPab	12 55 24.0	-0.6
SWET	Sewanee	149.63	20	*e*PKPbc	PKPdf	12 55 20.1	+5.3
CPCT	Cooper Cave	149.87	18	*e*PKPbc	PKPdf	12 55 21.6	+6.5
LRAL	Lakeview Retre	151.19	24	*e*PKPbc	PKPdf	12 55 24.4	+7.3

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*THR **24** 12:42:22.7±0.3,35.02N×52.06E,h18^{km}±13^{km},ML2.4*
*CSEM **24** 12:42:23.0±0.1,35.03N×52.04E,h18^{km},ML3.3/1,Error ellipse: s-maj=2.9km s-min=2.2km az=148.0*
*TEH **24** 12:42:25.2,35.10N×52.06E,h10^{km},Mn3.0*
ISC 24 12:42:24.2±0.6**,35.05N**±0.05×**52.08E**±0.05**,h18^{km},n17, σ0^{s}87**/21**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVRN	Varamin	0.29	259	Pg	Pb	12 42 30.7	0.0
IDMV	Damavand	0.52	356	Pg	Pb	12 42 34.1	-0.4
DAMV	Damavand	0.58	351	*e*PG	Pb	12 42 34.9	-0.6
DAMV				*e*SG	Sb	12 42 43.6	+0.3
DAMV				AML	AML	12 42 44.5	
	comp=N,281nm,0.1s						
DAMV	Damavand	0.58	351	*e*Pg	Pb	12 42 34.9	-0.6
	SNR=97						
DAMV				*e*Sg	Sb	12 42 43.6	+0.3
	comp=N,281nm,0.1s,SNR=97						
ILAS	Lasjerd	0.79	65	Pg	Pb	12 42 39.4	+0.3
IFIR	Firoozkooh	0.80	43	Pg	Pb	12 42 39.1	-0.2
IQOM	Qom	0.86	256	Pg	Pb	12 42 37.8	-2.4
IPRN	Paran-Amol	1.19	6	Pg	Pb	12 42 45.8	-0.1
ISHM	Shahmirzad	1.24	52	Pg	Pb	12 42 47.1	+0.3
IMHD	Mahdasht	1.31	299	Pg	Pn	12 42 46.9	-0.9
IANJ	Anjiloo	1.56	74	Pn	Pn	12 42 50.6	-0.7
IGLO	Galoogah	1.70	42	Pn	Pn	12 42 59.9	+6.6
IKIA	Kiasar	1.74	48	Pn	Pn	12 42 55.4	+1.5
ASAO	Ashtian	1.77	254	*e*PG	Pn	12 42 54.6	+0.4
ASAO				*e*SG	Sn	12 43 18.0	+1.6
ASAO				AML	AML	12 43 20.7	
	comp=E,23nm,0.3s						
ASAO	Ashtian	1.77	254	*e*Pg	Pn	12 42 54.6	+0.3
	SNR=91						
ASAO				*e*Sg	Sn	12 43 18.0	+1.6
	comp=E,23nm,0.3s,SNR=91						
IRAZ	Razeghan	1.80	282	Pn	Pn	12 42 55.5	+0.8
NASN	Na’in	2.33	165	*e*PN	Pn	12 43 02.0	-0.3

NEIC 24 13:01:33.0,37.51N×**112.53W,h6^{km},ML3.6**(SLC)**,After**

SLC.,Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARUT	**Antelope Range**	**0.77**	**291**	*e*Pg	Pg	13 01 47.4	-1.1
MVU	**Marysvale**	**1.02**	**14**	*e*Pg	Pg	13 01 52.4	-1.1
MSU	**Marysvale**	**1.04**	**16**	*e*Pg	Pg	13 01 52.4	-1.3
TMUT	**Trail Mountain**	**2.06**	**30**	*e*Pn	Pn	13 02 09.1	+0.5
SRU	**San Rafael**	**2.25**	**44**	*e*Pn	Pn	13 02 12.6	+1.3
NLU	**North Lily Min**	**2.47**	**8**	*e*Pn	Pn	13 02 13.8	-0.6
TRCR	**Troy Canyon**	**2.55**	**290**	*e*Pn	Pn	13 02 14.8	-0.8
TRCR				*e*		13 02 18.6	
TRCR				*e*Pg	Pg	13 02 20.1	-3.9
MPU	**Maple Canyon**	**2.60**	**15**	*e*Pn	Pn	13 02 18.0	+1.8
NEN	**Nelson**	**2.63**	**226**	*e*Pn	Pn	13 02 16.4	-0.2
DAU	**Daniels Canyon**	**3.06**	**19**	*e*Pn	Pn	13 02 18.4	-4.5
NOQ	**North Oquirrh**	**3.15**	**6**	*e*P	Pn	13 02 25.0	+0.8
LDFC	**Landfair**	**3.20**	**221**	*e*Pn	Pn	13 02 24.9	+0.2
JLU	**Jordanelle**	**3.20**	**15**	*e*Pn	Pn	13 02 24.4	-0.4
CTU	**Camp Tracy**	**3.23**	**11**	*e*Pn	Pn	13 02 26.2	+0.9
BGU	**Big Grassy Mou**	**3.43**	**354**	*e*P	Pn	13 02 29.7	+1.6
TCUT	**Toone Canyon**	**3.71**	**13**	*e*Pn	Pn	13 02 33.6	+1.6
TPH	**Tonopah**	**3.76**	**280**	*e*Pn	Pn	13 02 31.1	-1.6
SPUT	**South Promonto**	**3.79**	**1**	*e*Pn	Pn	13 02 32.8	-0.4
ELK	**Elko**	**3.85**	**328**	*e*Pn	Pn	13 02 32.5	-1.6
RW3	**Ridgway**	**3.91**	**78**	*e*Pn	Pn	13 02 35.7	+0.9
HWUT	**Hardware Ranch**	**4.16**	**10**	*e*Pn	Pn	13 02 39.2	+0.8
DAC	**Darwin (Calif)**	**4.24**	**255**	*e*Pn	Pn	13 02 40.0	+0.5
HVU	**Hansel Valley**	**4.27**	**358**	*e*Pn	Pn	13 02 38.5	-1.4
MNV	**Mina**	**4.54**	**283**	*e*Pn	Pn	13 02 41.9	-1.9
BMN	**Battle Mountai**	**4.67**	**310**	*e*Pn	Pn	13 02 44.5	-1.2
MTUM	**Tungsten Hills**	**4.80**	**270**	*e*Pn	Pn	13 02 46.7	-0.9
PFO	**Pinyon Flat Ob**	**5.04**	**221**	P	Pn	13 02 58.0	+7.1
OMM	**Old Mammoth Mi**	**5.13**	**273**	P	Pn	13 02 50.8	-1.4
LAZ	**Ladron**	**5.36**	**124**	*e*P	Pn	13 02 55.3	-0.2
TUC	**Tucson**	**5.38**	**164**	Pn	Pn	13 02 55.9	+0.1
	41nm,1.3s						
ANMO	**Albuquerque**	**5.53**	**116**	*e*P	Pn	13 02 57.2	-0.7
LENM	**Lemitar**	**5.62**	**125**	P	Pn	13 02 59.1	+0.1
PAHR	**Pah Rah Range**	**5.79**	**294**	P	Pn	13 03 06.7	+5.1
BNM	**Barren Site**	**5.85**	**123**	*e*Pn	Pn	13 03 02.1	-0.3
ISCO	**Idaho Springs**	**5.88**	**65**	*e*Pn	Pn	13 03 03.7	+1.0
RRI2	**Red Ridge**	**5.90**	**9**	P	Pn	13 03 04.8	+1.7
WCN	**Washoe City**	**5.95**	**290**	*e*Pn	Pn	13 03 04.2	+0.5
REDW	**Red Top Meadow**	**5.98**	**12**	P	Pn	13 03 15.3	+11
TPAW	**Teton Pass**	**6.09**	**11**	Pn	Pn	13 03 03.8	-2.0
	7.1nm,0.8s						
HLID	**Hailey**	**6.21**	**347**	*e*Pn	Pn	13 03 06.4	-1.1
CMB	**Columbia Colle**	**6.24**	**277**	*e*Pn	Pn	13 03 05.8	-2.1
LOHW	**Long Hollow**	**6.27**	**13**	Pn	Pn	13 03 08.0	-0.3
MOOW	**Moose Ponds**	**6.38**	**12**	P	Pn	13 03 13.2	+3.4
IMW	**Indian Meadow**	**6.49**	**10**	*e*Pn	Pn	13 03 11.5	+0.1
BEKR	**Beckwourth**	**6.56**	**293**	*e*Pn	Pn	13 03 09.7	-2.6
WVOR	**Wild Horse Val**	**6.79**	**318**	Pn	Pn	13 03 15.0	-0.6
MOD	**Modoc**	**7.42**	**309**	*e*Pn	Pn	13 03 22.4	-2.1
RSSD	**Black Hills**	**9.22**	**42**	*e*Pn	P	13 03 43.8	-5.7

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*NIED **24** 13:08:00,36.50N×141.10E,h38^{km},Mw4.5 Best double couple: M$_0$5.77×10^{15} NP1:ϕ$_s$33°,δ71°,λ89°. NP2:ϕ$_s$216°, δ19°,λ93°.*

*BJI **24** 13:08:24.6,36.44N×141.14E,h40^{km},mB4.9,mb4.8, Ms3.9,Msz3.7*

*MOS **24** 13:08:27.5±0.8,36.83N×140.95E,h39^{km},mb4.9/24,Error ellipse: s-maj=10.4km s-min=7.0km az=103.6*

*JMA **24** 13:08:27.1±0.1,36.44N×141.05E,h46^{km}±1^{km},M4.5 Broadband fault plane solution: P waves. NP1:ϕ$_s$213°, δ29°,λ104°. NP2:ϕ$_s$16°,δ62°,λ82°. Principal axes: T Plg72°, Azm268°; N Plg7°, Azm20°; P Plg17°, Azm112°;*

JMA Felt III J1.

*NEIC **24** 13:08:27.3±1.0,36.46N×141.02E,h40^{km}±8^{km},mb4.8/30, MW4.4(NIED) Error ellipse: s-maj=8.1km s-min=5.6km az=133.0*

NEIC Felt at Misawa. Recorded [3 JMA] in Ibaraki; [2 JMA] in Chiba and Tochigi; [1 JMA] in Fukushima, Gumma, Saitama and Tokyo Prefectures.

*IDC **24** 13:08:30.3±1.5,36.37N×140.87E,h66^{km}±14^{km},mb4.1/22, mb1 4.3/24,mb1mx4.3/27,mbtmp4.4/24,MS3.7/5, Ms1 3.8/5,ms1mx3.4/26,Error ellipse: s-maj=13.2km s-min=10.2km az=123.0*

ISC 24 13:08:26.8±0.5**,36.45N**±0.03×**141.03E**±0.04**,h49**^{km}±3^{km}**,
h47**^{km}±2.7^{km}**:pP-P,n150,**σ**1**^{s}**04**/161**,mb4.6**/65**,MS3.8**/13**,
8C-12D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.40**	**294**	⇓P	**P**	**13 08 37.1**	**+0.2**
JHO				S	**S**	**13 08 44.0**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.68**	**344**	⇓P	**P**	**13 08 40.1**	**-0.1**
ONAJ				S	**S**	**13 08 49.2**	**-0.9**
JYT	**Yasato**	**0.71**	**252**	⇓P	**P**	**13 08 41.0**	**+0.4**
JYT				S	**S**	**13 08 50.8**	**0.0**
JFK	**Kawauchi**	**0.93**	**353**	⇓P	**P**	**13 08 43.3**	**-0.3**
JFK				S	**S**	**13 08 54.9**	**-1.2**
JFT	**Otama**	**1.20**	**333**	⇓P	**P**	**13 08 48.8**	**+1.3**
JFT				S	**S**	**13 09 04.0**	**+1.1**
JAG	**Ashikaga**	**1.27**	**269**	⇓P	**P**	**13 08 49.1**	**+0.6**
JFY	**Yanaizu**	**1.43**	**313**	⇓P	**P**	**13 08 51.8**	**+1.0**
JMM	**Marumori**	**1.43**	**353**	⇓P	**P**	**13 08 50.7**	**-0.1**
JMM				S	**S**	**13 09 08.2**	**-0.4**
JKT	**Katashina**	**1.46**	**283**	⇓P	**P**	**13 08 52.6**	**+1.3**
MJAR	**Matsushiro Arr**	**2.27**	**273**	P	**P**	**13 09 03.3**	**+0.6**
	339nm,0.3s,baz=96,slow=11,SNR=2394						
MAT	**Matsushiro**	**2.27**	**273**	*e*P	**P**	**13 09 04.0**	**+1.3**
MAT				*e*S	**S**	**13 09 32.0**	**+2.4**
MAT	**Matsushiro**	**2.27**	**273**	P	**P**	**13 09 04.0**	**+1.3**
MAT				S	**S**	**13 09 32.3**	**+2.7**
JHJ	**Hachijo jima 2**	**3.48**	**197**	P	**P**	**13 09 20.1**	**+0.3**
	143nm,0.3s,baz=92,slow=21,SNR=53						
JHJ				S	**S**	**13 09 59.0**	**-1.1**
	425nm,0.3s,baz=71,slow=20,SNR=12						
ASAJ	**Asahikawa**	**7.75**	**8**	P	**P**	**13 10 15.1**	**-4.6**
ASAJ				S	**S**	**13 11 42.2**	**-4.8**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ	**Asahikawa**	**7.75**	**8**	P	**P**	**13 10 15.1**	**-4.6**
	comp=N,2.5nm,0.3s,baz=197,slow=6.9,SNR=17						
ASAJ				S	**S**	**13 11 42.2**	**-4.8**
	comp=N,1.6nm,0.3s,baz=288,slow=33,SNR=3.5						
YUK	**Yuzh-Kuril'sk**	**8.43**	**25**	*e*P	**P**	**13 10 22.9**	**-6.1**
YUK				*e*S	**S**	**13 11 52.2**	**-12**
YUK				pmax	pmax		
	comp=Z,170nm,0.4s						
YUK				smax			
	comp=E,2µm,0.7s						
YUK				smax			
	comp=N,350nm,0.4s						
YUK				smax			
	comp=E,390nm,0.5s						
JNU	**Nakatsue**	**8.98**	**251**	P	**P**	**13 10 38.0**	**+1.4**
	comp=E,1.4nm,0.3s,baz=63,slow=13,SNR=13						
JNU				LR	LR	13 14 27.0	
	comp=E,580nm,18.1s,baz=162,slow=40						
JNU	**Nakatsue**	**8.98**	**251**	P	**P**	**13 10 38.0**	**+1.4**
JNU				LR	LR	13 14 27.0	
CBIJ	**Chichi jima**	**9.38**	**174**	P	**P**	**13 10 37.5**	**-4.5**
	comp=E,23nm,0.3s,baz=99,slow=9.3,SNR=17						
CBIJ				S	**S**	**13 12 17.2**	**-10**
	comp=E,36nm,0.3s,baz=279,slow=21,SNR=6.5						
YSS	**Yuzh-Sakhalins**	**10.58**	**6**	⇑*e*P	**P**	**13 10 55.2**	**-3.2**
YSS	**Yuzh-Sakhalins**	**10.58**	**6**	*e*Pn	**P**	**13 10 54.5**	**-4.0**
MDJ	**Mudanjiang**	**11.92**	**317**	P	**P**	**13 11 14.6**	**-1.9**
MDJ				S	**S**	**13 13 27.8**	**-1.1**
MDJ				PCP	PcP	13 17 00.8	+0.4
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,60nm,6.9s						
MDJ				LR	LR		
	comp=N,170nm,17.6s						
MDJ				LR	LR		
	comp=E,150nm,20.1s						
MDJ				LR	LR		
	comp=Z,290nm,21.0s						
MDJ	**Mudanjiang**	**11.92**	**317**	*e*Pn	**P**	**13 11 12.4**	**-4.1**
	comp=Z,12nm,0.7s						
CN2	**Changchun**	**13.99**	**306**	*e*P	**P**	**13 11 41.8**	**-2.1**
CN2				*e*S	**S**	**13 14 16.8**	**-1.6**
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,15.0s						
CN2				LR	LR		
	comp=E,200nm,15.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
KLR	**Kul'dur**	**14.46**	**335**	*e*P	**P**	**13 11 55.7**	**+5.7**
SNY	**Shenyang**	**14.56**	**297**	⇓P	**P**	**13 11 52.5**	**+1.1**
SNY				AMB	AMB		
	comp=Z,10.0nm,1.0s						
SNY				LR	LR		
	comp=E,340nm,19.2s						
SNY				LR	LR		
	comp=Z,310nm,20.4s						
SSE	**Sheshan**	**17.33**	**258**	P	**P**	**13 12 24.6**	**-2.1**
SSE				S	**S**	**13 15 36.0**	**0.0**
SSE				XS		13 15 50.8	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s						
SSE				AMB	AMB		
	comp=Z,60nm,7.5s						
SSE				LR	LR		
	comp=N,100nm,22.5s						
SSE				LR	LR		
	comp=E,90nm,22.5s						
SSE				LR	LR		
	comp=Z,130nm,19.2s						
NJ2	**Nanjing**	**18.84**	**263**	*e*P	**P**	**13 12 44.4**	**-0.8**
NJ2				AP		13 12 52.1	
NJ2				XP		13 12 56.9	
NJ2				PP	PP	13 12 59.0	-2.8
NJ2				S	**S**	**13 16 09.0**	**-1.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,200nm,3.6s						
NJ2				LR	LR		
	comp=N,1µm,16.5s						
NJ2				LR	LR		
	comp=E,440nm,17.1s						
HIA	**Hailar**	**20.10**	**316**	P	**P**	**13 12 56.5**	**-2.4**
HIA				pmax	pmax		
	comp=Z,12nm,1.0s						
HIA	**Hailar**	**20.10**	**316**	P	**P**	**13 12 56.5**	**-2.4**
	comp=Z,12nm,1.0s						
YHNB	**Yeheng**	**20.55**	**241**	*e*P	**P**	**13 13 03.1**	**-0.6**
PET	**Petropavlovsk**	**20.68**	**31**	*e*P	**P**	**13 12 59.8**	**-5.1**
PET				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.3						
MA2	**Magadan**	**23.99**	**12**	*e*P	**P**	**13 13 37.6**	**+0.2**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.3						
MA2	**Magadan**	**23.99**	**12**	*e*P	**P**	**13 13 37.6**	**+0.2**
	comp=Z,8.6nm,0.7s,mb4.3						
YAK	**Yakutsk**	**26.57**	**348**	*e*P	**P**	**13 14 00.0**	**-1.9**
YAK				pmax	pmax		
	comp=Z,30nm,0.5s,mb5.1						
YAK	**Yakutsk**	**26.57**	**348**	*e*P	**P**	**13 13 60.0**	**-1.9**
	comp=Z,30nm,0.5s,mb5.1						
ENH	**Enshi**	**26.98**	**266**	*e*P	**P**	**13 14 04.5**	**-1.5**
	comp=Z,27nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**27.43**	**305**	*e*P	**P**	**13 14 08.9**	**-1.0**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
ULN	**Ulaanbaatar**	**27.43**	**305**	*e*P	**P**	**13 14 08.9**	**-1.0**
	comp=Z,4.3nm,0.6s,mb4.2						
SONM	**Songino Array**	**27.86**	**305**	P	**P**	**13 14 13.2**	**-0.5**
	comp=Z,7.0nm,0.7s,mb4.4,baz=107,slow=9.0,SNR=41						
SONM				LR	LR	13 25 36.5	
	comp=Z,132nm,19.7s,MS3.5,baz=71,slow=37						
BOD	**Bodaibo**	**27.86**	**329**	*e*P	**P**	**13 14 09.3**	**-4.4**
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4						
LZH	**Lanzhou**	**29.86**	**281**	*e*P	**P**	**13 14 34.5**	**+2.8**
LZH				AP	pP	13 14 39.0	-5.4
LZH				XP	sP	13 14 44.0	-6.4
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
LZH				LR	LR		
	comp=E,420nm,13.4s						
LZH				LR	LR		
	comp=Z,550nm,17.4s,MS4.2						
ZAK	**Zakamensk**	**30.39**	**309**	⇓*i*P	**P**	**13 14 34.7**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
TLY	**Talaya**	**30.48**	**312**	*e*P	**P**	**13 14 36.6**	**-0.5**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
TLY				MLR	MLR		
	comp=Z,95nm,17.0s,MS3.5						
GYA	**Guiyang**	**30.82**	**261**	P	**P**	**13 14 38.9**	**-1.4**
GYA				PP	PP	13 15 39.0	-3.7
GYA				S	**S**	**13 19 40.3**	**+1.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
GYA				AMB	AMB		
	comp=Z,90nm,3.0s						
GYA				LR	LR		
	comp=N,410nm,16.4s,MS4.3						
GYA				LR	LR		
	comp=E,380nm,16.0s,MS4.3						
GYA				LR	LR		
	comp=Z,290nm,15.8s,MS4.0						
CD2	**Chengdu**	**31.37**	**271**	⇑*i*P	**P**	**13 14 44.9**	**-0.2**
CD2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
GTA	**Gaotai**	**32.44**	**288**	*e*P	**P**	**13 14 54.3**	**-0.1**
GTA				PP	PP	13 16 05.9	+2.4
GTA				S	**S**	**13 20 11.9**	**+7.4**
GTA				AMB	AMB		
	comp=Z,50nm,8.4s						
GTA				LR	LR		
	comp=N,80nm,20.9s,MS3.6						
GTA				LR	LR		
	comp=E,100nm,22.1s,MS3.6						
GTA				LR	LR		
	comp=Z,120nm,20.2s,MS3.6						
KMI	**Kunming**	**34.57**	**262**	P	**P**	**13 15 11.8**	**-1.1**
KMI				PP	PP	13 16 27.3	-3.0
KMI				S	**S**	**13 20 37.8**	**+0.2**
KMI				PCS		13 21 33.5	
KMI				SS	SS	13 22 47.1	-4.3
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
KMI				LR	LR		
	comp=N,160nm,15.5s,MS4.0						
KMI				LR	LR		
	comp=E,150nm,15.5s,MS4.0						
KMI				LR	LR		
	comp=Z,180nm,16.0s,MS3.9						
TIXI	**Tiksi**	**35.83**	**353**	⇓*e*P	**P**	**13 15 22.4**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
TIXI				MLR	MLR		
	comp=Z,100nm,22.0s,MS3.5						
WMQ	**Urumqi**	**40.83**	**297**	⇑P	**P**	**13 16 06.0**	**+0.9**
WMQ				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,100nm,4.0s						
WMQ				LR	LR		
	comp=N,110nm,21.0s						
WMQ				LR	LR		
	comp=Z,90nm,19.2s,MS3.6						
CMAR	**Chiang Mai Arr**	**41.05**	**256**	P	**P**	**13 16 07.5**	**+0.4**
	comp=Z,2.4nm,0.9s,mb3.9,baz=44,slow=7.6,SNR=8.7						
CMAR				S	**S**	**13 22 12.8**	**-3.3**
	comp=Z,0.9nm,0.4s,baz=6.2,slow=14,SNR=8.2						
CMAR				LR	LR	13 35 37.8	
	comp=Z,74nm,19.2s,MS3.6,baz=40,slow=40						
LSA	**Lhasa**	**41.95**	**276**	P	**P**	**13 16 16.4**	**+1.9**
NVS	**Novosibirsk**	**43.02**	**314**	*i* P	**P**	**13 16 22.0**	**-0.9**
MKAR	**Makanchi Array**	**44.17**	**303**	P	**P**	**13 16 32.5**	**+0.2**
	comp=Z,3.5nm,0.7s,mb4.2,baz=84,slow=10,SNR=19						
MKAR				LR	LR	13 35 33.1	
	comp=Z,86nm,21.1s,MS3.6,baz=89,slow=37						
GUN	**Gumba**	**46.91**	**276**	*e*P	**P**	**13 16 55.3**	**+1.0**
	comp=Z,64nm,0.9s,mb5.6						
PKI	**Pulchoki**	**47.43**	**276**	*e*P	**P**	**13 16 58.3**	**-0.1**
	comp=Z,32nm,0.9s,mb5.3						
PKI	**Pulchoki**	**47.43**	**276**	*e*P	**P**	**13 16 58.3**	**-0.1**
PKI				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
KKN	**Kakani**	**47.44**	**276**	*e*P	**P**	**13 16 58.1**	**-0.4**
	comp=Z,52nm,0.9s,mb5.5						
KKN	**Kakani**	**47.44**	**276**	*e*P	**P**	**13 16 58.1**	**-0.4**
KKN				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
DMN	**Daman**	**47.65**	**276**	*e*P	**P**	**13 17 00.1**	**-0.1**
	comp=Z,22nm,0.8s,mb5.2						
KDAK	**Kodiak Island**	**47.74**	**42**	*e*P	**P**	**13 17 00.2**	**-0.3**
	comp=Z,7.7nm,0.7s,mb4.8						
GKN	**Gorkha**	**47.86**	**277**	*e*P	**P**	**13 17 01.9**	**+0.1**
	comp=Z,101nm,0.9s,mb5.8						
KOLN	**Koldanda**	**48.79**	**277**	*e*P	**P**	**13 17 08.7**	**-0.3**
	comp=Z,40nm,1.1s,mb5.4						
TKM2	**Tokmak 2**	**49.64**	**299**	P	**P**	**13 17 16.5**	**+1.2**
	SNR=14						
KZA	**Kyzart**	**50.12**	**298**	P	**P**	**13 17 20.8**	**+1.8**
	SNR=7.8						
ILAR	**Eielson Array**	**50.16**	**32**	P	**P**	**13 17 18.9**	**-0.1**
	comp=Z,6.1nm,0.7s,mb4.7,baz=280,slow=7.4,SNR=62						
KBK	**Karagaybulak**	**50.17**	**299**	P	**P**	**13 17 20.3**	**+0.9**
	SNR=11						
USP	**Ospenovka**	**50.31**	**299**	P	**P**	**13 17 20.9**	**+0.3**
	SNR=12						
VOSK	**Vostochnaya**	**50.44**	**312**	P	**P**	**13 17 20.8**	**-0.5**
VOSK				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
BVAR	**Borovoye Array**	**50.74**	**313**	P	**P**	**13 17 23.3**	**-0.3**
	comp=Z,8.8nm,0.8s,mb4.7,baz=76,slow=6.1,SNR=28						
BVAR				PcP	PcP	13 18 39.9	-0.4
	comp=Z,2.0nm,0.7s,baz=90,slow=1.5,SNR=4.2						
AML	**Almayashu**	**51.21**	**298**	P	**P**	**13 17 28.5**	**+1.2**
	SNR=15						
ZRNK	**Zerenda**	**51.57**	**313**	*e*P	**P**	**13 17 29.4**	**-0.5**
ZRNK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
ZRNK	**Zerenda**	**51.57**	**313**	*e*P	**P**	**13 17 29.4**	**-0.5**
	comp=Z,16nm,0.8s,mb5.0						
KKAR	**Karatay Array**	**53.15**	**300**	P	**P**	**13 17 41.5**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
INK	**Inuvik**	**55.05**	**27**	P	**P**	**13 17 55.6**	**+0.2**
INK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
INK	**Inuvik**	**55.05**	**27**	P	**P**	**13 17 55.6**	**+0.2**
	comp=Z,6.0nm,0.6s,mb4.8,baz=296,slow=6.7,SNR=20						
INK	**Inuvik**	**55.05**	**27**	*e*P	**P**	**13 17 55.0**	**-0.4**
WRAB	**Tennant Creek**	**56.43**	**188**	*e*P	**P**	**13 18 04.2**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
WRAB	**Tennant Creek**	**56.43**	**188**	*e*P	**P**	**13 18 04.2**	**-1.8**
	comp=Z,12nm,0.9s,mb4.9						
WB2	**Warramunga Arr**	**56.44**	**188**	⇑*i*P	**P**	**13 18 04.4**	**-1.6**
WRA	**Warramunga Arr**	**56.44**	**188**	P	**P**	**13 18 04.4**	**-1.7**
	comp=Z,3.8nm,0.6s,mb4.6,baz=4.1,slow=7.4,SNR=66						
ARU	**Arti**	**56.59**	**319**	⇑*i*P	**P**	**13 18 05.7**	**-1.0**
ARU				*e*		13 19 01.3	
ARU				*e*		13 20 12.7	
ARU				*e*S	**S**	**13 25 56.1**	**+2.9**
ARU				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
ARU	**Arti**	**56.59**	**319**	*e*P	**P**	**13 18 05.4**	**-1.2**
	comp=Z,20nm,0.9s,mb5.2						
AB31	**Akbulak array**	**58.08**	**310**	*e*P	**P**	**13 18 16.4**	**-0.8**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
DLBC	**Dease Lake**	**59.28**	**38**	P	**P**	**13 18 27.1**	**+1.6**
	comp=Z,1.9nm,0.9s,mb4.1,baz=251,slow=11,SNR=4.4						
MBWA	**Marble Bar**	**60.73**	**203**	*e*P	**P**	**13 18 34.9**	**-1.0**
	comp=Z,5.8nm,0.6s,mb4.9						
PALK	**Pallekele**	**61.94**	**258**	*e*P	**P**	**13 18 43.8**	**-0.3**
	comp=Z,14nm,0.9s,mb5.1						
RES	**Resolute Bay**	**63.24**	**14**	*e*P	**P**	**13 18 50.8**	**-1.3**
RES				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
RES	**Resolute Bay**	**63.24**	**14**	*e*P	**P**	**13 18 50.8**	**-1.2**
	comp=Z,7.7nm,1.0s,mb4.8						
KEV	**Kevo**	**63.88**	**339**	*e*p	**P**	**13 18 55.2**	**-0.9**
	comp=Z,3.7nm,0.6s,mb4.6						
KEV	**Kevo**	**63.88**	**339**	*e*P	**P**	**13 18 55.2**	**-0.9**
KEV				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
ARCES	**ARCESS Array B**	**64.44**	**339**	P	**P**	**13 18 59.1**	**-0.6**
	comp=Z,3.4nm,0.7s,mb4.5,baz=55,slow=7.9,SNR=28						
YKA	**Yellowknife Ar**	**64.47**	**30**	P	**P**	**13 18 59.8**	**-0.2**
	comp=Z,1.6nm,0.7s,mb4.2,baz=303,slow=6.6,SNR=7.4						
YKA	**Yellowknife Ar**	**64.47**	**30**	P	**P**	**13 18 59.8**	**-0.2**
STKA	**Stephens Creek**	**67.97**	**179**	P	**P**	**13 19 22.5**	**-0.3**
	comp=Z,1.1nm,0.3s,mb4.3,baz=286,slow=3.4,SNR=3.6						
STKA	**Stephens Creek**	**67.97**	**179**	P	**P**	**13 19 22.5**	**-0.3**
FORT	**Forrest**	**67.97**	**192**	*e*P	**P**	**13 19 22.3**	**-0.5**
	comp=Z,11nm,0.6s,mb5.0						
OBN	**Obninsk**	**68.38**	**323**	*e*P	**P**	**13 19 23.8**	**-1.1**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
KAF	**Kangasniemi**	**68.69**	**333**	*e*p	**P**	**13 19 25.6**	**-1.1**
	comp=Z,5.6nm,0.5s,mb4.8,baz=50,slow=5.9						
KAF	**Kangasniemi**	**68.69**	**333**	*e*P	**P**	**13 19 25.6**	**-1.1**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
FINES	**FINESS Array B**	**69.19**	**332**	P	**P**	**13 19 29.6**	**-0.2**
	comp=Z,5.9nm,0.8s,mb4.6,baz=63,slow=8.5,SNR=19						
KIV	**Kislovodsk**	**71.06**	**311**	*i* P	**P**	**13 19 42.3**	**+0.8**
KIV				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
SUMG	**Summit**	**71.27**	**360**	*e*P	**P**	**13 19 42.9**	**+0.6**
	comp=Z,5.4nm,0.6s,mb4.7						
HFS	**Hagfors**	**74.49**	**336**	P	**P**	**13 20 01.6**	**+0.3**
	comp=Z,1.9nm,0.7s,mb4.2,baz=72,slow=9.4,SNR=8.2						
AKASG	**Malin Array Be**	**74.57**	**322**	P	**P**	**13 20 01.7**	**-0.3**
	comp=Z,1.0nm,0.3s,mb4.2,baz=46,slow=5.8,SNR=17						
HRY	**Holter Researc**	**74.59**	**43**	P	**P**	**13 20 02.3**	**+0.1**
NB2	**NORSAR Subarra**	**74.61**	**337**	P	**P**	**13 20 02.0**	**+0.1**
	comp=Z,4.7nm,0.7s,mb4.5,baz=41,slow=5.8						
NOA	**NORSAR Array B**	**74.61**	**337**	P	**P**	**13 20 02.1**	**+0.2**
	comp=Z,5.4nm,0.8s,mb4.5,baz=39,slow=5.8,SNR=15						
NOA				LR	LR	13 56 08.1	
	comp=Z,69nm,18.6s,MS4.0,baz=265,slow=38						
HLID	**Hailey**	**75.00**	**47**	P	**P**	**13 20 03.4**	**-1.2**
	comp=Z,0.8nm,0.6s,mb3.8						
HLID				*e*	pP	13 20 18.3	-0.3
BMN	**Battle Mountai**	**75.12**	**51**	P	**P**	**13 20 05.6**	**+0.2**
BMN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BMN	**Battle Mountai**	**75.12**	**51**	P	**P**	**13 20 05.6**	**+0.2**
	comp=Z,2.2nm,0.6s,mb4.3						
BOZ	**Bozeman (W)**	**75.35**	**44**	*e*P	**P**	**13 20 07.7**	**+1.2**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
BOZ	**Bozeman (W)**	**75.35**	**44**	*e*P	**P**	**13 20 07.7**	**+1.2**
	comp=Z,2.7nm,0.7s,mb4.3						
NVAR	**Mina Array Bea**	**75.59**	**53**	P	**P**	**13 20 09.7**	**+1.6**
	comp=Z,1.8nm,0.7s,mb4.1,baz=291,slow=6.1,SNR=18						
ELK	**Elko**	**76.17**	**49**	*e*P	**P**	**13 20 12.4**	**+1.1**
ELK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ELK	**Elko**	**76.17**	**49**	*e*P	**P**	**13 20 12.4**	**+1.1**
	comp=Z,1.5nm,0.6s,mb4.1						
IMW	**Indian Meadow**	**76.81**	**45**	*e*P	**P**	**13 20 16.2**	**+1.3**
	comp=Z,2.4nm,0.8s,mb4.2						
MOOW	**Moose Ponds**	**77.01**	**45**	*e*P	**P**	**13 20 15.1**	**-1.0**
	comp=Z,1.0nm,0.6s,mb3.9						
MOOW				*e*	pP	13 20 27.6	-2.4
BW06	**Boulder Array**	**78.30**	**45**	*e*P	**P**	**13 20 23.2**	**+0.1**
	comp=Z,1.0nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	**78.30**	**45**	P	**P**	**13 20 23.9**	**+0.8**
	comp=Z,1.5nm,0.6s,mb4.1,baz=284,slow=2.0,SNR=14						
KWP	**Kalwaria**	**78.42**	**324**	*e*P	**P**	**13 20 25.1**	**+1.5**
BRTR	**Keskin Array B**	**79.01**	**311**	P	**P**	**13 20 27.6**	**+0.5**
	comp=Z,1.9nm,0.8s,mb4.1,baz=92,slow=4.2,SNR=7.7						
KSP	**Ksiaz**	**80.44**	**328**	*e*P	**P**	**13 20 35.8**	**+1.3**
DPC	**Dobruska-Polom**	**80.79**	**328**	*e*P	**P**	**13 20 37.5**	**+1.1**
PVCC	**Panska Ves**	**81.40**	**329**	*e*P	**P**	**13 20 40.4**	**+0.8**
CLL	**Collm**	**81.45**	**330**	*i* P	**P**	**13 20 39.0**	**-0.8**
CLL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
CLL	**Collm**	**81.45**	**330**	*i* P	**P**	**13 20 39.0**	**-0.8**
	comp=Z,9.0nm,0.9s,mb4.7						
CLL	**Collm**	**81.45**	**330**	P	**P**	**13 20 39.0**	**-0.8**
	comp=Z,logA/T=1.0,mb4.7						
CLL				*e**PP	pP	13 20 53.0	-1.0
CLL				*e*SS	SS	13 36 00.0	-6.2
PRU	**Pruhonice**	**81.82**	**328**	*e*P	**P**	**13 20 42.8**	**+1.0**
RW3	**Ridgway**	**82.29**	**48**	*e*P	**P**	**13 20 44.5**	**0.0**
KHC	**Kasperske Hory**	**82.88**	**328**	*e*P	**P**	**13 20 47.6**	**+0.4**
GERES	**GERESS Array B**	**83.04**	**328**	P	**P**	**13 20 48.5**	**+0.4**
	comp=Z,1.3nm,0.5s,mb4.2,baz=34,slow=4.8,SNR=15						

```
EKA  Eskdalemuir Ar   83.58 340  P       P       13 20 50.0  -0.5
     comp=Z,1.1nm,0.7s,mb4.1,baz=20,slow=4.8,SNR=5.1
JMQS Jabal Moqyreh    84.29 302  P       P       13 20 55.9  +1.1
TATS Tathlith         84.45 290  P       P       13 20 57.1  +1.3
DJNS Zahran al Janu   85.48 289  P       P       13 21 02.8  +1.9
BLJS Baljurashi       85.66 291  P       P       13 21 03.5  +1.7
SCHQ Schefferville    85.99  16  P       P       13 21 03.1  +0.6
     comp=Z,3.2nm,0.8s,mb4.6,baz=318,slow=4.1,SNR=6.2
TXAR Lajitas Array    90.73  52  P       P       13 21 27.1  +1.2
     comp=Z,0.6nm,0.7s,mb4.0,baz=304,slow=4.5,SNR=3.4
VNA2 Neumayer--Watz  141.67 196  e       PKPdf   13 27 56.8  +5.1
VNA2 Neumayer--Watz  141.67 196  e       PKPdf   13 28 01.0  +9.3
VNA2 Neumayer--Watz  141.67 196⇑iPKPdf   PKPdf   13 27 50.7  -1.0
VNA2                             e               13 27 56.8
VNA2                             e               13 28 01.0
VNA3 Neumayer Olymp  141.92 195  e       PKPdf   13 27 58.6  +6.4
VNA3 Neumayer Olymp  141.92 195  e       PKPdf   13 28 02.4   +10
VNA3 Neumayer Olymp  141.92 195⇑iPKPdf   PKPdf   13 27 52.7  +0.5
VNA3                             e               13 27 58.6
VNA3                             e               13 28 02.4
VNA1 Neumayer--Stat  142.07 196  e       PKPdf   13 27 58.4  +6.0
VNA1 Neumayer--Stat  142.07 196  e       PKPdf   13 28 02.3   +10
VNA1 Neumayer--Stat  142.07 196⇑iPKPdf   PKPdf   13 27 52.4   0.0
VNA1                             e               13 27 58.4
VNA1                             e               13 28 02.3
LPAZ La Paz          147.26  60  PKPbc   PKPdf   13 28 07.8  +4.9
     comp=Z,1.9nm,0.7s,baz=320,slow=5.4,SNR=6.8
LPAZ La Paz          147.26  60  PKPbc   PKPdf   13 28 07.8  +4.9
```

HEL ***24*** *13:09:53.2±0.5, 60.91N×29.15E, ML1.6, ML2.4(NAO), Explosion*

NAO ***24*** *13:09:54.2±2.5, 60.82N×28.83E, ML2.4*

BER ***24*** *13:09:55.7±3.2, 60.97N×28.95E, ML2.4(NAO), Suspected explosion*

ISC 24 13:09:50.9±1.7**, 60.92N**±0.06×**29.2E**±0.2**, n14,** σ0^{s}**85**/18,
Baltic States - Belarus - Northwestern Russia

```
Code Station Name      Δ°  AZ°   Phase ID          Time      Res
                                 Op      ISC      h  m  s    ISC
VJF  Virojoki          0.90 246  eP      Pg      13 10 08.8   0.0
VJF                              eS      Sg      13 10 20.7  -0.1
FIA0 FINESS Array S    1.61 291  eP      Pn      13 10 20.8  +0.2
FIA0                             eS      Sb      13 10 41.5  -0.4
FIA0                              MSG            13 10 44.3
     comp=Z,5.7nm,0.1s
FIA0 FINESS Array S    1.61 291   Pg     Pg      13 10 20.7  -2.3
     baz=112,slow=16
FIA0                              Lg             13 10 41.3
     baz=107,slow=37
FIA0                              Rg             13 10 48.0
     baz=117,slow=37
PVF  Pernaja           1.69 259  eP      Pn      13 10 22.0  +0.2
PVF                              eS      Sb      13 10 44.8  +0.6
KAF  Kangasniemi       1.84 312  eP      Pn      13 10 25.5  +1.6
KAF                              eS      Sn      13 10 47.9  -0.4
SUF  Sumiainen         2.32 323  ePB     Pb      13 10 33.6  +0.3
SUF                              eSB     Sb      13 11 03.4  +0.7
SUF                               MSG            13 11 05.9
     comp=Z,2.2nm,0.2s
HFS  Hagfors           7.70 271   Lg             13 13 48.4
     baz=68,slow=28
HFS  Hagfors           7.70 271  eSG     Sg      13 13 48.4   -19
HFS  Hagfors           7.70 271   Lg             13 13 48.4
     baz=68,slow=28
NB2  NORSAR Subarra    8.75 279   Lg             13 14 25.0
     baz=84,slow=28
NB2  NORSAR Subarra    8.75 279  eSG     Sg      13 14 25.0   -17
NB2  NORSAR Subarra    8.75 279   Lg             13 14 25.0
     baz=84,slow=28
ARA0 ARCESS Array S    8.79 351   Pn     P       13 12 01.4  -0.8
     baz=172,slow=12
ARA0                              Sn     Sn      13 13 35.0  -8.2
     baz=175,slow=37
ARA0                              Lg             13 14 24.2
     baz=166,slow=28
ARA0 ARCESS Array S    8.79 351  eP      P       13 12 01.4  -0.8
ARA0                             eS      Sn      13 13 35.0  -8.2
ARA0                             eSG     Sg      13 14 24.2   -19
```

IDC ***24*** *13:11:44.4±0.6, 5.82S×81.09W, mb4.6/18, mb1 4.8/20, mb1mx4.8/22, mbtmp4.6/20, ML4.2/2, MS4.6/13, Ms1 4.6/13, ms1mx4.4/25, Error ellipse: s-maj=24.1km s-min=12.7km az=54.0*

MOS ***24*** *13:11:47.9±0.8, 5.82S×81.06W, h33^{km}, mb5.1/20, Error ellipse: s-maj=17.2km s-min=6.7km az=115.6*

HRVD ***24*** *13:11:48.2±0.2, 6.10S×81.26W, h14^{km}, MW5.3/61, Centroid moment Tensor Solution. LP body waves: s59,c89;Mantle waves: s61,c108; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.55±.02; M$_{\theta\theta}$-0.01±.01; M$_{\phi\phi}$-0.54±.02; M$_{r\theta}$0.05±.03; M$_{\theta\phi}$0.05±.01; M$_{\phi r}$-0.79±.06; Best double couple: M$_{0}$.962×10^{17} NP1: φ$_{s}$353°, δ17°, λ87°. NP2: φ$_{s}$176°, δ73°, λ91°. Principal axes: T .964, Plg62°, Azm88°; N -.003, Plg1°, Azm356°; P -.961, Plg28°, Azm265°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***24*** *13:11:48.2±0.2, 5.89S×81.03W, mb5.0/50, MS4.5/10 Error ellipse: s-maj=7.4km s-min=3.5km az=57.0*

BJI ***24*** *13:11:48.1, 5.90S×81.00W, h25^{km}, mB4.9, Ms5.2, Msz4.8*

ISC 24 13:11:46.5±0.3**, 5.85S**±0.05×**81.05W**±0.06**, h25**^{km}**,**
h25^{km}±.6^{km}**:pP-P, n171,** σ0^{s}**81**/146**, mb4.8**/63**, MS4.6**/26**,**
4C-4D, Near coast of northern Peru

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Code Station Name      Δ°  AZ°   Phase ID          Time      Res
                                 Op      ISC      h  m  s    ISC
OTAV Otavalo          6.58  23  ePn     Pn      13 13 24.3  +0.1
ARE  Arequipa        14.11 139  eP      P       13 15 08.0  +0.8
LPAZ La Paz          16.38 130  eP      P       13 15 38.1  +1.5
LPAZ                             pmax   pmax
     comp=Z,2.0nm,0.6s
LPAZ La Paz          16.38 130   Pn     P       13 15 38.5  +2.0
     comp=Z,0.4nm,0.3s,baz=324,slow=13,SNR=27
LPAZ                             LR     LR      13 21 58.1
     comp=Z,1µm,20.0s,baz=296,slow=37
LPAZ La Paz          16.38 130  eP      P       13 15 38.0  +1.5
     comp=Z,1.7nm,0.6s
JTS  JuntasAbangare  16.49 346  eP      P       13 15 41.1  +3.0
JTS                              pmax   pmax
     comp=Z,73nm,1.3s
JTS  JuntasAbangare  16.49 346   Pn     P       13 15 41.8  +3.7
     comp=Z,0.7nm,0.3s,baz=309,slow=24,SNR=9.6
JTS                              LR     LR      13 21 32.3
     comp=Z,1µm,18.0s,baz=172,slow=36
JTS  JuntasAbangare  16.49 346  eP      P       13 15 41.1  +3.0
     comp=Z,73nm,1.3s
SDV  Santo Domingo   17.95  35   P      P       13 15 55.5  -0.8
     comp=Z,0.8nm,0.3s,baz=260,slow=11,SNR=9.6
SDV  Santo Domingo   17.95  35  eP      P       13 15 55.7  -0.6
     comp=Z,27nm,0.9s
SAML Samuel          17.99 101  eP      P       13 15 55.9  -0.9
     comp=Z,9.2nm,1.0s
SIV  San Ignacio     22.04 119   P      P       13 16 40.9  -0.2
     comp=Z,51nm,1.0s,mb4.9,baz=298,slow=11,SNR=69
SJG  San Juan        27.98  31  eP      P       13 17 38.3  +0.7
SJG                              pmax   pmax
     comp=Z,129nm,0.9s
SJG  San Juan        27.98  31   P      P       13 17 38.1  +0.5
     comp=Z,130nm,0.9s,mb5.6,baz=266,slow=2.7,SNR=25
SJG  San Juan        27.98  31  eP      P       13 17 38.3  +0.7
     comp=Z,129nm,0.9s,mb5.6
CPUP Villa Florida   30.46 135   P      P       13 17 59.2  -0.5
     comp=Z,14nm,1.0s,mb4.7,baz=340,slow=10,SNR=19
CPUP                             LR     LR      13 31 50.2
     comp=Z,1µm,18.4s,MS4.5,baz=160,slow=40
CPUP Villa Florida   30.46 135   P      P       13 17 59.2  -0.5
CPUP                             LR     LR      13 31 50.2
BDFB Brasilia        33.84 109   P      P       13 18 28.9  -0.4
     comp=Z,13nm,0.8s,mb4.9,baz=267,slow=8.9,SNR=14
BDFB                             LR     LR      13 33 10.1
     comp=Z,5µm,18.0s,MS5.3,baz=283,slow=38
BAO  Brasilia Array  33.86 109   P      P       13 18 21.5  -8.0
RPN  Rapa Nui        34.24 229   LR     LR      13 28 28.1
     comp=Z,1µm,20.5s,MS4.7,baz=67,slow=29
PLCA Paso Flores     35.99 166  eP      P       13 18 47.4  -0.1
PLCA                             pmax   pmax
     comp=Z,23nm,1.0s
PLCA Paso Flores     35.99 166   P      P       13 18 47.6  +0.1
     comp=Z,16nm,0.9s,mb5.0,baz=336,slow=9.9,SNR=23
PLCA                             PcP    PcP     13 21 14.8  +0.7
     comp=Z,4.5nm,0.9s,baz=324,slow=5.2,SNR=4.6
PLCA                             LR     LR      13 30 57.5
     comp=Z,499nm,18.5s,MS4.3,baz=357,slow=32
PLCA Paso Flores     35.99 166  eP      P       13 18 47.4  -0.1
     comp=Z,23nm,1.0s,mb5.1
TRQA Tornquist       36.45 154  eP      P       13 18 50.3  -1.1
     comp=Z,16nm,0.9s,mb5.0
LRAL Lakeview Retre  39.08 352  eP      P       13 19 13.1  -0.4
     comp=Z,8.2nm,0.9s,mb4.5
SWET Sewanee         41.10 354  eP      P       13 19 29.4  -0.7
SWET                            epP     pP      13 19 36.5  -1.1
TXAR Lajitas Array   41.18 329   P      P       13 19 31.0  +0.1
     comp=Z,1.5nm,1.0s,baz=146,slow=9.0,SNR=5.6
TXAR                             LR     LR      13 34 51.4
     comp=Z,543nm,19.5s,MS4.4,baz=130,slow=34
CPCT Cooper Cave     41.20 356  eP      P       13 19 30.8  -0.2
TZTN Tazewell        42.23 357  eP      P       13 19 38.8  -0.6
WVT  Waverly         42.23 352  eP      P       13 19 38.0  -1.5
WVT                             e*PP    pP      13 19 45.3  -1.7
WVT                              pmax   pmax
     comp=Z,4.0nm,0.8s,mb4.1
WVT  Waverly         42.23 352  eP      P       13 19 38.0  -1.5
     comp=Z,3.8nm,0.8s,mb4.1
WVT                             epP     pP      13 19 45.3  -1.7
WMOK Wichita Mounta  43.69 339  eP      P       13 19 51.6  +0.2
WMOK                             pmax   pmax
     comp=Z,26nm,1.1s,mb4.9
WMOK                             MLR    MLR
     comp=Z,268nm,20.0s,MS4.2
WMOK Wichita Mounta  43.69 339  eP      P       13 19 51.6  +0.2
     comp=Z,26nm,1.1s,mb4.9
WMOK                             LR     LR
     comp=Z,268nm,20.0s,MS4.2
GDL2 Guadalupe Moun  43.87 331  eP      P       13 19 53.5  +0.7
MNTX Cornudas Mount  43.96 330  eP      P       13 19 53.7  +0.1
     comp=Z,17nm,1.3s,mb4.6
MNTX                             LR     LR
     comp=Z,544nm,20.0s,MS4.5
WCI  Wyandotte Cave  44.12 354  eP      P       13 19 53.6  -1.2
WCI                              pmax   pmax
     comp=Z,11nm,0.8s,mb4.6
WCI  Wyandotte Cave  44.12 354  eP      P       13 19 53.6  -1.2
     comp=Z,11nm,0.8s,mb4.6
FVM  French Village  44.47 349  eP      P       13 19 57.3  -0.3
FVM                             e*PP    pP      13 20 05.6  +0.4
FVM                              pmax   pmax
     comp=Z,6.0nm,0.7s,mb4.4
FVM  French Village  44.47 349  eP      P       13 19 57.2  -0.4
     comp=Z,5.9nm,0.7s,mb4.4
FVM                             epP     pP      13 20 05.6  +0.4
CCM  Cathedral Cave  44.69 349  eP      P       13 19 59.5   0.0
CCM                             e*PP    pP      13 20 06.0  -1.0
CCM                              pmax   pmax
     comp=Z,20nm,0.8s,mb5.0
CCM  Cathedral Cave  44.69 349  eP      P       13 19 59.5   0.0
     comp=Z,20nm,0.8s,mb5.0
CCM                             epP     pP      13 20 06.0  -1.0
AMTX Amarillo        44.94 336  eP      P       13 20 02.4  +0.9
     comp=Z,10nm,0.8s,mb4.7
AMTX                            epP     pP      13 20 10.7  +1.7
AMTX                             LR     LR
     comp=Z,320nm,19.0s,MS4.3
BNM  Barren Site     46.55 330  eP      P       13 20 15.0  +0.8
BNM                             epP     pP      13 20 23.4  +1.6
KSU1 Kansas State U  46.98 343  eP      P       13 20 17.1  -0.4
KSU1                            epP     pP      13 20 24.8  -0.3
ANMO Albuquerque     47.12 331  eP      P       13 20 19.5  +0.8
ANMO                            e*PP    pP      13 20 26.9  +0.6
ANMO                             pmax   pmax
     comp=Z,10.0nm,0.9s
ANMO                             MLR    MLR
     comp=Z,409nm,21.0s
ANMO Albuquerque     47.12 331  eP      P       13 20 19.5  +0.8
     comp=Z,9.7nm,0.9s,mb4.7
ANMO                            epP     pP      13 20 26.9  +0.6
ANMO                             LR     LR
     comp=Z,409nm,21.0s,MS4.4
TUC  Tucson          47.33 325  eP      P       13 20 20.5  +0.1
TUC                              pmax   pmax
     comp=Z,4.0nm,0.9s,mb4.3
TUC  Tucson          47.33 325  eP      P       13 20 20.5  +0.1
     comp=Z,3.7nm,0.9s,mb4.3
CBKS Cedar Bluff     47.69 340  eP      P       13 20 23.4  +0.2
CBKS                             pmax   pmax
     comp=Z,31nm,0.9s,mb5.3
CBKS Cedar Bluff     47.69 340  eP      P       13 20 23.4  +0.2
     comp=Z,31nm,0.9s,mb5.3
BINY Binghamton      48.04   5  eP      P       13 20 25.0  -0.8
     comp=Z,17nm,0.8s,mb5.1
SDCO Great Sand Dun  48.98 334  eP      P       13 20 34.1  +1.0
     comp=Z,10nm,0.9s,mb4.9
SADO Sadowa          50.41   2   PcP    PcP     13 22 02.6  +0.2
     comp=Z,5.8nm,0.7s,baz=180,slow=4.0,SNR=4.7
ISCO Idaho Springs   50.76 336  eP      P       13 20 46.7   0.0
ISCO                             pmax   pmax
     comp=Z,21nm,1.3s,mb4.9
ISCO                             MLR    MLR
     comp=Z,424nm,19.0s,MS4.5
ISCO Idaho Springs   50.76 336  eP      P       13 20 46.7   0.0
     comp=Z,21nm,1.3s,mb4.9
ISCO                             LR     LR
     comp=Z,424nm,19.0s,MS4.5
NEN  Nelson          52.07 325  eP      P       13 20 56.6  -0.1
SRU  San Rafael      52.39 331   P      P       13 20 59.3  +0.2
MSU  Marysvale       52.74 329  eP      P       13 21 02.8  +1.1
MSU                             e*PP    pP      13 21 10.0  +0.6
MVU  Marysvale       52.75 329  eP      P       13 21 03.0  +1.2
     comp=Z,7.1nm,1.0s,mb4.5
MVU                             epP     pP      13 21 10.8  +1.3
ARUT Antelope Range  52.85 328  eP      P       13 21 03.5  +1.0
RWWY Rawlins         53.00 336  eP      P       13 21 04.4  +0.8
     comp=Z,42nm,1.4s,mb5.2
DAU  Daniels Canyon  53.76 332  eP      P       13 21 10.4  +1.2
DAU                             e*PP    pP      13 21 17.3  +0.5
NLU  North Lily Min  53.80 331  eP      P       13 21 09.8  +0.4
RSSD Black Hills     53.88 340  eP      P       13 21 10.6  +0.6
RSSD                            e*PP    pP      13 21 17.6   0.0
RSSD                             pmax   pmax
     comp=Z,13nm,1.1s,mb4.8
RSSD Black Hills     53.88 340  eP      P       13 21 10.6  +0.6
     comp=Z,13nm,1.1s,mb4.8
RSSD                            epP     pP      13 21 17.6   0.0
JLU  Jordanelle      54.00 332  eP      P       13 21 11.5  +0.6
RKT  Rikitea         54.63 246  eP      P       13 21 02.2   -14
     comp=Z,117nm,31.0s
RKT                             eS      S       13 28 45.9  -6.4
     comp=Z,519nm,27.0s
RKT                             eSS     SS      13 32 43.9  +9.0
     comp=Z,116nm,33.5s
RKT                             eLQ             13 34 35.8
     comp=Z,258nm,32.2s
RKT                             eLR     LR      13 37 03.7
     comp=Z,966nm,27.0s,baz=81
HWUT Hardware Ranch  54.84 332  eP      P       13 21 16.7  -0.4
     comp=Z,23nm,0.9s,mb5.2
HWUT                            epP     pP      13 21 25.8  +1.0
HWUT                             LR     LR
     comp=Z,1µm,21.0s,MS4.9
BW06 Boulder Array   54.87 335  eP      P       13 21 16.7  -0.7
     comp=Z,4.0nm,1.1s,mb4.4
BW06                            epP     pP      13 21 24.2  -0.8
BW06                             LR     LR
     comp=Z,360nm,20.0s,MS4.4
PDAR Pinedale Array  54.87 335   P      P       13 21 16.8  -0.6
     comp=Z,3.1nm,0.8s,mb4.4,baz=135,slow=6.3,SNR=12
PDAR                             LR     LR      13 44 40.7
     comp=Z,878nm,18.2s,MS4.9,baz=134,slow=36
MTUM Tungsten Hills  55.41 324  eP      P       13 21 21.4  +0.1
OMM  Old Mammoth Mi  55.84 324  eP      P       13 21 24.5  +0.1
MNV  Mina            55.91 325  eP      P       13 21 25.2  +0.4
MNV                              pmax   pmax
     comp=Z,4.0nm,0.7s,mb4.6
MNV  Mina            55.91 325  eP      P       13 21 25.2  +0.4
     comp=Z,4.1nm,0.7s,mb4.6
REDW Red Top Meadow  55.91 334  eP      P       13 21 25.4  +0.6
     comp=Z,55nm,1.4s,mb5.4
REDW                            epP     pP      13 21 32.6  +0.1
ELK  Elko            55.98 329  eP      P       13 21 26.0  +0.7
ELK                             e*PP    pP      13 21 33.3  +0.3
ELK                              pmax   pmax
     comp=Z,14nm,1.1s
ELK                              MLR    MLR
     comp=Z,1µm,19.0s
ELK  Elko            55.98 329  eP      P       13 21 26.0  +0.7
     comp=Z,14nm,1.1s,mb4.9
ELK                             epP     pP      13 21 33.3  +0.3
ELK                              LR     LR
     comp=Z,1µm,19.0s,MS5.1
NVAR Mina Array Bea  55.99 325   P      P       13 21 25.6  +0.1
     comp=Z,3.6nm,0.9s,mb4.4,baz=165,slow=6.3,SNR=13
NVAR                             PcP    PcP     13 22 23.8  +0.3
     comp=Z,2.5nm,0.8s,baz=176,slow=4.5,SNR=4.4
NVAR                             LR     LR      13 44 43.0
     comp=Z,345nm,18.9s,MS4.5,baz=90,slow=35
LOHW Long Hollow     56.01 334  eP      P       13 21 25.7  +0.2
     comp=Z,18nm,1.4s,mb4.9
TPAW Teton Pass      56.06 334  eP      P       13 21 26.2  +0.3
     comp=Z,14nm,1.0s,mb5.0
RRI2 Red Ridge       56.11 334  eP      P       13 21 25.9  -0.4
     comp=Z,66nm,1.5s,mb5.5
RRI2                            epP     pP      13 21 33.8  -0.1
MOOW Moose Ponds     56.18 334  eP      P       13 21 26.1  -0.6
     comp=Z,3.5nm,0.9s,mb4.4
IMW  Indian Meadow   56.38 334  eP      P       13 21 28.3  +0.1
     comp=Z,24nm,1.4s,mb5.0
ULM  Lac du Bonnet   57.33 349   P      P       13 21 33.2  -1.6
     comp=Z,11nm,0.8s,mb5.0,baz=172,slow=6.9,SNR=9.9
ULM  Lac du Bonnet   57.33 349   P      P       13 21 33.2  -1.7
QLMT Earthquake Lak  57.34 335  eP      P       13 21 35.9  +0.9
GCMT Greycliff       57.40 337  eP      P       13 21 35.3  -0.1
WCN  Washoe City     57.41 325  eP      P       13 21 35.3  -0.3
WCN                              pmax   pmax
     comp=Z,8.0nm,1.0s,mb4.7
WCN  Washoe City     57.41 325  eP      P       13 21 35.3  -0.3
     comp=Z,8.1nm,1.0s,mb4.7
HLID Hailey          57.69 332  eP      P       13 21 37.5   0.0
     comp=Z,11nm,0.9s,mb4.9
HLID                             LR     LR
     comp=Z,385nm,20.0s,MS4.5
MCMT McKenzie Canyo  57.95 334  eP      P       13 21 39.5  +0.3
BOZ  Bozeman (W)     58.08 335  eP      P       13 21 39.8  -0.3
BOZ                              pmax   pmax
     comp=Z,38nm,1.4s,mb5.2
BOZ  Bozeman (W)     58.08 335  eP      P       13 21 39.8  -0.3
     comp=Z,38nm,1.4s,mb5.2
BEKR Beckwourth      58.14 325  eP      P       13 21 40.4  -0.3
     comp=Z,6.8nm,1.3s,mb4.5
BEKR                            epP     pP      13 21 49.0  +0.6
TAOE Nuku Hiva Isla  58.64 263  eP      P       13 21 42.0  -2.5
     comp=Z,121nm,23.0s
TAOE                            ePP     PP      13 24 10.0   +14
     comp=Z,403nm,41.4s
TAOE                            eS      S       13 29 29.9   -16
     comp=Z,2µm,24.7s
TAOE                            eLQ             13 36 04.0
     comp=Z,559nm,27.7s
TAOE                            eLR     LR      13 38 35.3
     comp=Z,2µm,25.9s,baz=92
WVOR Wild Horse Val  58.96 328  eP      P       13 21 45.6  -0.8
WVOR                             pmax   pmax
     comp=Z,8.0nm,1.3s,mb4.6
WVOR                             MLR    MLR
     comp=Z,824nm,20.0s,MS4.8
WVOR Wild Horse Val  58.96 328  eP      P       13 21 45.5  -0.8
     comp=Z,8.4nm,1.3s,mb4.6
WVOR                             LR     LR
     comp=Z,824nm,20.0s,MS4.8
HRY  Holter Researc  59.02 336  eP      P       13 21 46.4  -0.3
MOD  Modoc           59.48 327  eP      P       13 21 49.9  -0.1
     comp=Z,19nm,0.9s,mb5.1
MSO  Missoula        59.99 334  eP      P       13 21 53.4   0.0
     comp=Z,30nm,1.4s,mb5.1
MSO                             epP     pP      13 22 00.6  -0.6
SCHQ Schefferville   61.61   9   P      P       13 22 02.9  -1.4
     comp=Z,9.7nm,0.8s,mb5.0,baz=173,slow=4.3,SNR=14
SCHQ                             LR     LR      13 49 30.4
     comp=Z,230nm,21.0s,MS4.3,baz=247,slow=37
SCHQ Schefferville   61.61   9  eP      P       13 22 02.5  -1.8
     comp=Z,16nm,1.0s,mb5.1
NEW  Newport         62.48 334  eP      P       13 22 08.4  -1.8
NEW                              pmax   pmax
     comp=Z,28nm,1.6s
NEW  Newport         62.48 334  eP      P       13 22 08.4  -1.8
     comp=Z,28nm,1.6s,mb5.1
EDM  Edmonton        64.86 339  eP      P       13 22 24.7  -1.0
EDM                             e*PP    pP      13 22 31.8  -1.7
FCC  Fort Churchill  65.24 353  eP      P       13 22 26.9  -1.2
FCC                             e*PP    pP      13 22 36.3  +0.4
FCC                              pmax   pmax
     comp=Z,20nm,0.8s,mb5.2
FCC  Fort Churchill  65.24 353  eP      P       13 22 26.9  -1.2
     comp=Z,20nm,0.8s,mb5.2
FCC                             epP     pP      13 22 36.3  +0.4
PPT  Papeete         67.80 253  eP      P       13 22 31.6   -13
     comp=Z,61nm,26.5s
PPT                             eS      S       13 31 32.0  -8.0
     comp=Z,1µm,30.5s
PPT                             eSS     SS      13 35 30.5   -33
     comp=Z,61nm,21.2s
PPT                             eLQ             13 39 01.0
     comp=Z,560nm,33.0s
PPT                             eLR     LR      13 42 47.0
     comp=Z,800nm,24.0s,baz=92
PPT  Papeete         67.80 253   LR     LR      13 44 37.7
     comp=Z,440nm,21.8s,MS4.7,baz=147,slow=29
TBI  Tubuai          67.89 247  eS      S       13 31 39.4  -1.6
     comp=Z,600nm,30.0s
TBI                             eLR     LR      13 43 00.2
     comp=Z,484nm,25.8s,baz=82
YKA  Yellowknife Ar  72.82 344   P      P       13 23 14.0  -0.7
     comp=Z,2.8nm,0.8s,mb4.2,baz=138,slow=5.5,SNR=18
YKA                              LR     LR      13 56 39.2
     comp=Z,268nm,20.2s,MS4.5,baz=175,slow=37
YKW3 Yellowknife Ar  72.88 344  eP      P       13 23 14.1  -1.0
DLBC Dease Lake      75.08 336   P      P       13 23 29.0  +1.0
     comp=Z,9.8nm,0.8s,mb4.8,baz=130,slow=5.4,SNR=20
DLBC Dease Lake      75.08 336  eP      P       13 23 28.4  +0.5
DBIC Dimbokro        77.05  82   P      P       13 23 40.8  +0.9
     comp=Z,16nm,0.9s,mb5.0,baz=235,slow=6.3,SNR=12
VNA3 Neumayer Olymp  78.55 162  e       P       13 23 54.5  +7.4
VNA3 Neumayer Olymp  78.55 162  e       P       13 23 59.3   +12
VNA3 Neumayer Olymp  78.55 162⇓iPdif    P       13 23 46.8  -0.3
VNA3                            e       pP      13 23 54.5  -0.5
VNA3                            e               13 23 59.3
VNA3                            e               13 26 44.9
VNA1 Neumayer--Stat  78.84 161  e       P       13 23 55.8  +7.1
VNA1 Neumayer--Stat  78.84 161  e       P       13 24 01.3   +13
VNA1 Neumayer--Stat  78.84 161⇓iPdif    P       13 23 48.7   0.0
VNA1                            e       pP      13 23 55.8  -0.8
VNA1                            e               13 24 01.3
VNA2 Neumayer--Watz  79.19 161  e       P       13 23 57.1  +6.5
VNA2 Neumayer--Watz  79.19 161  e       P       13 24 00.7   +10
VNA2 Neumayer--Watz  79.19 161⇓iPdif    P       13 23 50.1  -0.5
VNA2                            e       pP      13 23 57.1  -1.4
VNA2                            e               13 24 00.7
VNA2                            e               13 26 46.2
SNAA Sanae           80.78 162  eP      P       13 23 57.6  -1.4
SNAA                             pmax   pmax
     comp=Z,19nm,0.9s
SNAA Sanae           80.78 162  eP      P       13 23 57.6  -1.4
     comp=Z,19nm,0.9s,mb5.0
INK  Inuvik          82.45 343  eP      P       13 24 08.1  +0.3
INK                              pmax   pmax
     comp=Z,17nm,1.2s
INK  Inuvik          82.45 343   P      P       13 24 08.6  +0.8
     comp=Z,6.7nm,0.9s,mb4.6,baz=89,slow=8.6,SNR=8.9
INK  Inuvik          82.45 343  eP      P       13 24 08.1  +0.3
     comp=Z,17nm,1.2s,mb4.9
SUMG Summit          82.87  12  eP      P       13 24 10.2  +0.3
     comp=Z,32nm,1.4s,mb5.2
ESDC Sonseca Array   83.85  49   P      P       13 24 17.0  +1.4
     comp=Z,0.9nm,0.4s,mb4.2,baz=274,slow=4.6,SNR=15
ESLA Sonseca Array   83.85  49  eP      P       13 24 16.9  +1.3
     comp=Z,8.8nm,1.7s,mb4.6
ESLA                            epP     pP      13 24 25.6  +1.9
QSPA South Pole Qui  84.24 180  eP      P       13 24 17.4  +0.7
     comp=Z,35nm,1.1s,mb5.4
ILAR Eielson Array   85.23 337   P      P       13 24 21.7  -0.2
     comp=Z,1.2nm,0.8s,mb4.0,baz=144,slow=3.3,SNR=15
ILAR                             LR     LR      14 03 40.7
     comp=Z,248nm,18.4s,MS4.6,baz=2.1,slow=37
ILAR Eielson Array   85.23 337   P      P       13 24 21.7  -0.2
ILAR                             LR     LR      14 03 40.7
ESK  Eskdalemuir     87.90  34  eP      P       13 24 35.5  +0.3
ESK                             e*PP    pP      13 24 44.5  +1.3
ESK                              pmax   pmax
     comp=Z,14nm,0.9s,mb5.2
ESK  Eskdalemuir     87.90  34  eP      P       13 24 35.5  +0.3
     comp=Z,14nm,0.9s,mb5.2
ESK                             epP     pP      13 24 44.5  +1.2
EKA  Eskdalemuir Ar  87.93  34   P      P       13 24 35.2  -0.1
     comp=Z,14nm,0.9s,mb5.2,baz=252,slow=5.0,SNR=36
IMA  Indian Mountai  88.35 337  eP      P       13 24 37.6  +0.5
IMA                              pmax   pmax
```

	comp=Z,138nm,1.8s,mb5.9						
IMA	Indian Mountai	88.35	337	*e*P	P	13 24 37.6	+0.5
	comp=Z,138nm,1.8s,mb5.9						
DAG	Danmarks Havn	89.56	12	⇑*e*P	P	13 24 41.0	-1.7
DAG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb5.0						
DAG	Danmarks Havn	89.56	12	⇑*e*P	P	13 24 41.0	-1.7
	comp=Z,5.3nm,0.6s,mb5.0						
DAG	Danmarks Havn	89.56	12	⇑*i*P	P	13 24 41.0	-1.7
	comp=Z,5.3nm,0.6s,mb5.0						
SYO	Syowa Base	95.07	162	⇑PcP	PcP	13 25 07.4	-1.3
SYO	Syowa Base	95.07	162	⇓sP	sP	13 25 18.0	-0.8
NB2	NORSAR Subarra	96.17	29	P	P	13 25 13.7	+0.3
	comp=Z,0.7nm,0.7s,mb4.2,baz=267,slow=4.5						
NOA	NORSAR Array B	96.17	29	P	P	13 25 13.3	-0.1
	comp=Z,1.5nm,0.8s,mb4.5,baz=268,slow=4.4,SNR=4.4						
NOA	NORSAR Array B	96.17	29	P	P	13 25 13.3	-0.1
TSUM	Tsumeb	96.21	110	*e*P	P	13 25 15.3	+0.7
	comp=Z,10nm,0.9s,mb5.2						
GERES	GERESS Array B	97.50	42	P	P	13 25 21.4	+1.7
	comp=Z,0.3nm,0.2s,mb4.3,baz=243,slow=3.0,SNR=4.2						
FINES	FINESS Array B	103.27	28	*i* P	Pdif	13 25 45.0	-0.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZRNK	Zerenda	127.03	22	*e*PKIKP	PKPdf	13 30 49.6	-3.6
BVAR	Borovoye Array	127.48	21	PKP	PKPdf	13 30 50.9	-3.3
	comp=Z,1.5nm,0.6s,baz=297,slow=3.3,SNR=9.3						
MJAR	Matsushiro Arr	132.87	316	PKP	PKPdf	13 31 01.1	-3.9
	comp=Z,0.8nm,0.6s,baz=180,slow=1.3,SNR=4.0						
MDJ	Mudanjiang	133.01	330	PKP	PKPdf	13 31 01.1	-3.9
MKAR	Makanchi Array	136.75	17	PKP	PKPdf	13 31 07.8	-3.9
	comp=Z,2.0nm,0.8s,baz=270,slow=1.2,SNR=7.1						
WB2	Warramunga Arr	136.77	233	*e*P	PKPdf	13 31 08.9	-3.5
WRAB	Tennant Creek	136.77	233	*e*PKIKP	PKPdf	13 31 08.7	-3.8
WRA	Warramunga Arr	136.78	233	PKP	PKPdf	13 31 08.4	-4.1
	comp=Z,3.6nm,0.9s,baz=119,slow=1.7,SNR=30						
ULN	Ulaanbaatar	137.56	352	*e*PKIKP	PKPdf	13 31 09.7	-3.5
SONM	Songino Array	137.68	353	PKP	PKPdf	13 31 10.2	-3.2
	comp=Z,0.5nm,0.3s,slow=1.2,SNR=5.7						
WMQ	Urumqi	140.90	13	*e*PKP	PKPdf	13 31 15.9	-3.5
WMQ				PP	PP	13 34 20.6	+1.1
WMQ				SKKS		13 41 06.5	
WMQ				PP	PP		
	comp=Z,80nm,4.8s						
WMQ				LR	LR		
	comp=N,250nm,22.0s,MS5.1						
WMQ				LR	LR		
	comp=E,290nm,24.0s,MS5.1						
WMQ				LR	LR		
	comp=Z,200nm,24.0s,MS4.8						
HHC	Hu-ho-hao-te	143.36	344	*e*PKP	PKPdf	13 31 22.4	-1.3
HHC				PP	PP		
	comp=Z,90nm,14.3s						
HHC				LR	LR		
	comp=N,180nm,16.7s,MS5.1						
HHC				LR	LR		
	comp=E,180nm,15.7s,MS5.1						
HHC				LR	LR		
	comp=Z,210nm,20.1s,MS4.9						
FITZ	Fitzroy Crossi	144.50	227	PKP	PKPdf	13 31 22.2	-4.2
	comp=Z,25nm,0.9s,baz=185,slow=3.0,SNR=17						
MBWA	Marble Bar	146.29	217	*e*PKPdf	PKPdf	13 31 25.6	-3.7
GTA	Gaotai	146.58	359	PKP	PKPdf	13 31 27.6	-1.8
GTA				APKP		13 31 32.3	
GTA				XPKP		13 31 35.0	
GTA				PP	PP	13 34 59.8	+6.2
GTA				SKS	SKS	13 38 34.1	-2.8
GTA				PP	PP		
	comp=Z,50nm,8.4s						
GTA				LR	LR		
	comp=N,50nm,14.4s,MS4.5						
GTA				LR	LR		
	comp=E,50nm,16.7s,MS4.5						
GTA				LR	LR		
	comp=Z,70nm,19.4s,MS4.5						
SSE	Sheshan	147.34	323	PKP	PKPdf	13 31 25.8	-5.1
SSE				PP	PP	13 34 58.3	-0.2
SSE				PP	PP		
	comp=Z,10.0nm,10.5s						
SSE				LR	LR		
	comp=N,110nm,21.0s,MS4.8						
SSE				LR	LR		
	comp=E,120nm,21.2s,MS4.8						
SSE				LR	LR		
	comp=Z,180nm,24.4s,MS4.8						
NJ2	Nanjing	147.97	327	*e*PKP	PKPdf	13 31 27.3	-4.5
NJ2				PKP2	PKPab	13 31 35.8	+0.7
NJ2				APKP		13 31 37.8	
NJ2				XPKP		13 31 41.6	
NJ2				PKS	PKS	13 35 02.0	+0.7
LZH	Lanzhou	149.57	352	*e*PKP	PKPdf	13 31 36.5	+2.2
LZH				APKP		13 31 42.5	
LZH				XPKP		13 31 45.5	
LZH				LR	LR		
	comp=E,380nm,16.2s						
LZH				LR	LR		
	comp=Z,370nm,21.0s,MS5.2						
XAN	Xi’an	150.46	343	PKP	PKPdf	13 31 37.8	+2.1
CMAR	Chiang Mai Arr	167.47	0	PKP	PKPdf	13 31 52.7	-3.0
	comp=Z,2.0nm,0.8s,baz=294,slow=1.5,SNR=8.1						
CMAR				PKPab	PKPab	13 32 57.2	-1.4
	comp=Z,3.6nm,0.9s,baz=345,slow=5.6,SNR=10						

NEIC ***24*** *13:32:54.4±1.9, 7.40S×128.12E, h132^{km}±17^{km}, mb4.7/10, Error ellipse: s-maj=20.4km s-min=8.7km az=58.0*

IDC ***24*** *13:32:54.6±4.2, 7.41S×128.04E, h128^{km}±37^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.9/14, mbtmp4.3/8, Error ellipse: s-maj=40.6km s-min=14.2km az=69.0*

ISC 24 13:32:53.2±2.6**, 7.4S**±0.1×**128.1E**±0.2**, h136**^{km}±25^{km}**, n24, σ0^{s}79**/23**, mb4.3**/15**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.92	192	P	P	13 35 26.0	-0.6
	21nm,0.3s,baz=15,slow=9.2,SNR=123						
FITZ				S	S	13 37 21.6	-5.1
	12nm,0.3s,baz=359,slow=7.0,SNR=3.7						
WRAB	Tennant Creek	13.88	155	*e*Pn	P	13 36 04.7	-0.5
	53nm,0.6s						
WRAB				*e*Sn	S	13 38 28.6	-7.5
WRA	Warramunga Arr	13.88	155	P	P	13 36 05.7	+0.5
	1.1nm,0.3s,baz=326,slow=13,SNR=89						
WRA				S	S	13 38 30.6	-5.6
	15nm,0.3s,baz=329,slow=23,SNR=13						
MBWA	Marble Bar	15.90	210	*e*Pn	P	13 36 30.5	-0.1
	8.0nm,0.6s						
KSM	Kuching	19.80	296	*e*P	P	13 37 17.8	+2.6
NWAO	Narrogin (SRO)	27.34	200	P	P	13 38 27.3	-0.2
	6.8nm,0.8s,mb4.3,baz=61,slow=10,SNR=3.4						
STKA	Stephens Creek	27.43	154	P	P	13 38 28.8	+0.4
	1.2nm,0.5s,mb3.8,baz=336,slow=11,SNR=3.9						
CMAR	Chiang Mai Arr	38.55	312	P	P	13 40 05.5	+1.2
	2.1nm,0.6s,mb3.9,baz=140,slow=6.6,SNR=12						
GUN	Gumba	53.79	313	*e*P	P	13 42 03.5	-0.6
	13nm,0.6s,mb4.8						
PKI	Pulchoki	53.95	312	*e*P	P	13 42 04.5	-0.7
	8.4nm,0.5s,mb4.7						
KKN	Kakani	54.16	312	*e*P	P	13 42 06.6	-0.2
	18nm,0.9s,mb4.8						
DMN	Daman	54.19	312	*e*P	P	13 42 05.6	-1.4
	12nm,0.6s,mb4.8						
GKN	Gorkha	54.76	312	*e*P	P	13 42 10.8	-0.3
	23nm,0.5s,mb5.2						
KOLN	Koldanda	55.40	311	*e*P	P	13 42 15.4	-0.4
	38nm,0.9s,mb5.1						
SONM	Songino Array	58.22	343	P	P	13 42 36.0	+0.6
	0.9nm,0.5s,mb3.8,baz=157,slow=7.7,SNR=6.8						
MKAR	Makanchi Array	67.52	328	P	P	13 43 36.8	-0.1
	1.6nm,0.4s,mb4.1,baz=121,slow=8.3,SNR=21						
MKAR				PcP	PcP	13 44 02.3	-0.6
	1.3nm,0.6s,baz=130,slow=4.7,SNR=5.8						
MAW	Mawson	73.91	201	P	P	13 44 15.1	+0.5
	1.5nm,0.7s,mb3.9,baz=45,slow=4.3,SNR=5.5						
BVAR	Borovoye Array	77.38	328	P	P	13 44 34.9	+0.3
	0.9nm,0.4s,mb3.7,baz=146,slow=5.3,SNR=9.6						
ZRNK	Zerenda	78.07	328	*e*P	P	13 44 37.6	-0.7
	3.2nm,0.9s,mb4.0						
SNAA	Sanae	94.85	194	*e*P	P	13 46 00.9	+0.7
	1.3nm,0.7s,mb4.3						
DBIC	Dimbokro	133.31	272	PKP	PKPdf	13 51 56.3	+2.1
	3.7nm,0.8s,baz=53,slow=4.1,SNR=4.5						
CPUP	Villa Florida	146.08	171	PKPbc	PKPbc	13 52 19.5	+1.6
	1.7nm,0.4s,baz=205,slow=3.9,SNR=7.8						
CPUP	Villa Florida	146.08	171	PKPbc	PKPbc	13 52 19.5	+1.6
LPAZ	La Paz	151.53	146	PKPbc	PKPdf	13 52 34.8	+9.2
	0.8nm,0.4s,baz=90,slow=1.0,SNR=5.4						
LPAZ				PKPab	PKPab	13 52 44.3	+1.0
	2.3nm,0.7s,baz=312,slow=3.1,SNR=8.8						

NEIC ***24*** *13:44:07.5±1.0, 24.25S×66.96W, h172^{km}±9^{km}, mb4.2/20, Error ellipse: s-maj=10.3km s-min=5.1km az=64.0*

IDC ***24*** *13:44:08.3±2.2, 24.19S×66.96W, h178^{km}±19^{km}, mb3.8/12, mb1 3.9/17, mb1mx3.8/21, mbtmp4.3/17, Error ellipse: s-maj=20.5km s-min=11.2km az=60.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 24 13:44:07.0±1.2**, 24.28S**±0.05×**66.99W**±0.09**, h182**^{km}±11^{km}**, n65, σ0^{s}91**/63**, mb4.1**/27**, 3C-2D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	8.02	352	P	P	13 46 02.0	+0.5
	1.4nm,0.3s,baz=148,slow=10,SNR=28						
LPAZ				S	S	13 47 31.1	+0.3
	0.5nm,0.3s,baz=274,slow=14,SNR=3.8						
LPAZ	La Paz	8.02	352	*e*Pn	P	13 46 01.5	+0.1
	3.4nm,0.4s						
CPUP	Villa Florida	8.98	105	P	P	13 46 14.1	+0.1
	0.6nm,0.3s,baz=294,slow=14,SNR=9.6						
SIV	San Ignacio	9.94	35	P	P	13 46 25.2	-1.4
	2.9nm,0.3s,baz=217,slow=14,SNR=74						
SIV				S	S	13 48 17.7	+1.8
	0.2nm,0.3s,baz=196,slow=21,SNR=3.5						
TRQA	Tornquist	14.38	164	*e*P	P	13 47 22.6	-0.8
	12nm,0.6s						
PLCA	Paso Flores	16.68	189	P	P	13 47 52.2	+0.6
	0.1nm,0.3s,baz=7.1,slow=14,SNR=2.7						
PLCA	Paso Flores	16.68	189	*e*P	P	13 47 57.8	+6.2
	5.3nm,0.6s						
BDFB	Brasilia	19.78	68	P	P	13 48 25.3	+0.2
	4.1nm,0.3s,baz=250,slow=10,SNR=27						
BAO	Brasilia Array	19.80	68	P	P	13 48 25.0	-0.3
SDV	Santo Domingo	33.15	353	P	P	13 50 26.2	-2.2
	1.5nm,0.3s,mb4.2,baz=240,slow=8.1,SNR=4.3						
SDV	Santo Domingo	33.15	353	P	P	13 50 24.1	-4.2
VNA3	Neumayer Olymp	56.89	161	*e*	P	13 53 40.7	+6.0
VNA3	Neumayer Olymp	56.89	161	⇑*i*P	P	13 53 34.9	+0.2
VNA3				*e*		13 53 40.7	
VNA3				*e*		13 58 24.7	
VNA1	Neumayer--Stat	57.09	160	*e*	P	13 53 39.3	+3.3
VNA1	Neumayer--Stat	57.09	160	⇑*i*P	P	13 53 33.3	-2.7
VNA1				*e*		13 53 39.3	
VNA2	Neumayer--Watz	57.45	160	*e*	P	13 53 45.3	+6.7
VNA2	Neumayer--Watz	57.45	160	⇑*i*P	P	13 53 39.0	+0.4
VNA2				*e*		13 53 45.3	
VNA2				*e*		13 58 43.6	
SNAA	Sanae	59.09	161	P	P	13 53 49.7	-0.3
	0.7nm,0.6s,mb3.7,baz=292,slow=8.7,SNR=19						
SNAA	Sanae	59.09	161	*e*P	P	13 53 49.4	-0.5
	1.8nm,0.6s,mb4.1						
JSC	Jenkinsville	59.79	346	*e*P	P	13 53 54.1	-1.2
SWET	Sewanee	61.83	342	*e*P	P	13 54 07.0	-2.0
ELN	Prospectdale	62.53	348	P	P	13 54 12.5	-1.1
TXAR	Lajitas Array	63.91	324	P	P	13 54 21.8	-1.0
	0.7nm,0.6s,mb3.7,baz=153,slow=8.4,SNR=8.2						
WCI	Wyandotte Cave	64.76	343	*e*P	P	13 54 25.7	-2.5
QSPA	South Pole Qui	65.93	180	⇓*i*P	P	13 54 35.6	+0.6
	5.1nm,0.5s,mb4.6						
GDL2	Guadalupe Moun	66.55	326	P	P	13 54 39.8	+0.1
MNTX	Cornudas Mount	66.68	325	*e*P	P	13 54 38.7	-1.8
	2.4nm,0.8s,mb4.1						
DBIC	Dimbokro	67.88	71	P	P	13 54 47.4	-0.9
	3.2nm,0.7s,mb4.1,baz=214,slow=8.9,SNR=5.0						
ANMO	Albuquerque	69.78	326	*e*P	P	13 54 59.1	-0.4
	4.6nm,0.9s,mb4.2						
SDCO	Great Sand Dun	71.53	329	*e*P	P	13 55 10.6	+0.6
	3.0nm,0.7s,mb4.1						
SYO	Syowa Base	73.29	159	⇓P	P	13 55 19.0	-0.7
NEN	Nelson	74.84	321	*e*P	P	13 55 29.5	+0.2
SRU	San Rafael	75.06	326	*e*P	P	13 55 31.1	+0.6
MSU	Marysvale	75.46	325	*e*P	P	13 55 33.7	+1.0
RSSD	Black Hills	76.06	333	*e*P	P	13 55 35.3	-0.7
	1.7nm,0.6s,mb3.9						
PDAR	Pinedale Array	77.39	329	P	P	13 55 43.2	-0.1
	0.9nm,0.6s,mb3.6,baz=138,slow=7.0,SNR=8.0						
BW06	Boulder Array	77.39	329	*e*P	P	13 55 43.2	-0.2
	1.5nm,0.7s,mb3.7						
HWUT	Hardware Ranch	77.47	327	*e*P	P	13 55 43.5	-0.3
	3.3nm,0.6s,mb4.1						
ULM	Lac du Bonnet	78.49	342	P	P	13 55 48.6	-0.7
	3.6nm,0.5s,mb4.2,baz=134,slow=8.1,SNR=3.1						
LOHW	Long Hollow	78.53	329	*e*P	P	13 55 50.2	+0.6
	3.0nm,0.6s,mb4.1						
TPAW	Teton Pass	78.60	329	*e*P	P	13 55 50.6	+0.6
	2.8nm,0.7s,mb4.0						
OMM	Old Mammoth Mi	78.60	320	*e*P	P	13 55 50.9	+0.8
RRI2	Red Ridge	78.66	329	*e*P	P	13 55 51.1	+0.8
	8.1nm,1.1s,mb4.3						
MOOW	Moose Ponds	78.70	329	*e*P	P	13 55 50.9	+0.4
	1.6nm,0.7s,mb3.8						
ELK	Elko	78.70	325	*e*P	P	13 55 50.9	+0.3
NVAR	Mina Array Bea	78.76	321	P	P	13 55 51.9	+1.0
	1.0nm,0.7s,mb3.6,baz=158,slow=5.5,SNR=9.6						
SCHQ	Schefferville	78.78	0	P	P	13 55 50.2	-0.5
	2.0nm,0.7s,mb3.9,baz=114,slow=3.2,SNR=5.6						
SCHQ	Schefferville	78.78	0	P	P	13 55 50.2	-0.5
IMW	Indian Meadow	78.90	329	*e*P	P	13 55 52.3	+0.7
	7.1nm,1.0s,mb4.2						
GCMT	Greycliff	79.79	331	*e*P	P	13 55 56.7	+0.4
HLID	Hailey	80.33	327	*e*P	P	13 56 00.5	+1.3
	10nm,1.0s,mb4.4						
MCMT	McKenzie Canyo	80.50	329	*e*P	P	13 56 01.2	+1.1
BOSA	Boshof	80.60	117	P	P	13 56 01.8	+0.8
	1.6nm,0.4s,mb4.0,baz=242,slow=2.1,SNR=9.6						
BOSA	Boshof	80.60	117	*e*P	P	13 56 01.0	0.0
	1.9nm,0.5s,mb4.0						
MAW	Mawson	81.17	163	P	P	13 56 04.3	+1.1
	1.9nm,0.6s,mb3.9,baz=180,slow=5.1,SNR=6.8						
LBTB	Lobatse	82.27	114	P	P	13 56 10.6	+0.9
	1.6nm,0.4s,mb4.0,baz=250,slow=9.8,SNR=5.8						
BMO	Blue Mountains	82.70	327	*e*P	P	13 56 12.1	+0.6
	7.1nm,1.5s,mb4.2						
FCC	Fort Churchill	85.73	346	*e*P	P	13 56 26.1	-0.2
	9.3nm,0.6s,mb4.7						
YKA	Yellowknife Ar	94.39	340	P	P	13 57 06.8	+0.2
	1.2nm,0.5s,mb4.3,baz=134,slow=4.1,SNR=9.0						
YKA	Yellowknife Ar	94.39	340	P	P	13 57 06.8	+0.2
YKW3	Yellowknife Ar	94.44	340	*e*P	P	13 57 06.7	-0.2
WRA	Warramunga Arr	131.38	207	PKP	PKPdf	14 03 00.0	+1.5
	1.1nm,0.5s,baz=158,slow=1.8,SNR=35						
MKAR	Makanchi Array	146.73	40	PKPbc	PKPbc	14 03 27.4	+0.6
	5.1nm,0.6s,baz=324,slow=1.6,SNR=26						
MJAR	Matsushiro Arr	155.15	305	PKPab	PKPab	14 04 06.0	-0.3
	2.1nm,0.7s,baz=95,slow=2.1,SNR=6.4						
SONM	Songino Array	155.91	11	PKPab	PKPab	14 04 09.2	+0.1
	0.8nm,0.6s,baz=316,slow=4.0,SNR=5.2						

MOS ***24*** *13:54:34.3±0.9, 0.92S×13.38W, h10^{km}, mb5.3/20, MS4.8/13, Error ellipse: s-maj=38.4km s-min=7.2km az=64.1*

IDC ***24*** *13:54:34.6±0.4, 1.04S×13.32W, mb4.6/28, mb1 4.7/28, mb1mx4.7/31, mbtmp4.6/28, MS4.6/29, Ms1 4.5/29, ms1mx4.5/31, Error ellipse: s-maj=13.8km s-min=11.5km az=135.0*

HRVD ***24*** *13:54:36.1±0.2, 0.81S×13.41W, h12^{km}, MW5.2/69, Centroid moment Tensor Solution. LP body waves: s44,c71;Mantle waves: s69,c145; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-6.86±.14; M$_{\theta\theta}$1.25±.13; M$_{\phi\phi}$5.61±.14; M$_{r\theta}$1.19±.40; M$_{\theta\phi}$-3.55±.12; M$_{\phi r}$-1.17±.41; Best double couple: M$_0$7.421×10^{16} NP1: φ$_s$155°, δ39°, λ-83°. NP2:φ$_s$327°, δ51°, λ-95°. Principal axes: T 7.772, Plg6°, Azm60°; N -.702, Plg4°, Azm330°; P -7.069, Plg82°, Azm207°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***24*** *13:54:36.1±0.2, 1.07S×13.42W, h10^{km}, mb4.9/92, MS4.8/8 Error ellipse: s-maj=6.3km s-min=4.2km az=121.0*

BJI ***24*** *13:54:36.0, 1.10S×13.40W, h10^{km}, mB5.6, Ms5.3, Msz4.8*

CRAAG ***24*** *13:54:37.5, 1.12S×13.34W, Mb5.1*

ISC 24 13:54:33.5±1.4**, 1.03S**±0.04×**13.40W**±0.05**, h4**^{km}±8^{km}**, n310, σ0^{s}99**/292**, mb4.9**/134**, MS4.6**/38**, 11C-5D, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	Dimbokro	11.45	48	Pn	P	13 57 14.7	-6.4
	0.9nm,0.3s,baz=225,slow=12,SNR=20						
DBIC				Sn	S	13 59 15.6	-15
	2.0nm,0.3s,baz=140,slow=18,SNR=4.5						
DBIC				LR	LR	14 00 45.5	
	comp=Z,8µm,21.5s,baz=200,slow=32						
DBIC				T		14 06 19.9	
	1.0nm,0.3s,baz=327,slow=23,SNR=4.3						
DBIC	Dimbokro	11.45	48	Pn	P	13 57 14.7	-6.4
DBIC				Sn	S	13 59 15.6	-15
DBIC				LR	LR	14 00 45.5	
RCBR	Riachuelo	22.96	257	P	P	13 59 40.8	+0.5
	63nm,1.4s,mb4.8						
TSUM	Tsumeb	35.32	123	P	P	14 01 31.9	-0.2
	4.6nm,1.0s,mb4.4,baz=251,slow=8.5,SNR=7.3						
TSUM	Tsumeb	35.32	123	*e*P	P	14 01 31.7	-0.3
	9.6nm,1.1s,mb4.6						
BAO	Brasilia Array	37.09	245	P	P	14 01 42.5	-4.5
BDFB	Brasilia	37.11	245	P	P	14 01 48.9	+1.7
	13nm,1.1s,mb4.7,baz=61,slow=8.4,SNR=7.6						
BDFB				LR	LR	14 13 55.4	
	comp=Z,890nm,21.7s,MS4.5,baz=261,slow=31						
ESPR	Espera	38.35	10	P	P	14 01 56.8	-0.6
	133nm,1.9s,mb5.3						
PTEO	Sao Teotonio	38.62	6	*e*P	P	14 02 00.1	+0.4
	83nm,1.5s,mb5.2						
ELOJ	Sierra Loja	38.94	12	P	P	14 02 03.8	+1.5
	2.4nm,0.3s,mb4.4						
EMIN	Mina Concepcio	39.10	8	P	P	14 02 04.3	+0.6
	147nm,2.6s,mb5.2						
PBEJ	Beja	39.20	7	*e*P	P	14 02 05.0	+0.5
	18nm,1.1s,mb4.7						
PBEJ	Beja	39.20	7	*e*PP	PP	14 03 33.3	-5.0
ENIJ	Nijar	39.21	14	P	P	14 02 06.1	+1.5
	12nm,0.5s,mb4.9						
ELUQ	Luque	39.31	11	P	P	14 02 06.2	+0.8
	9.7nm,0.7s,mb4.6						
ECAB	El Cabril	39.60	10	P	P	14 02 08.9	+1.0
	117nm,1.9s,mb5.3						
EVO	Evora	39.68	7	*e*P	P	14 02 06.8	-1.7
	15nm,0.9s,mb4.4						
EVO				*e*R			
	659nm,20.5s						
EQES	Quesada	39.80	13	P	P	14 02 08.5	-1.0
	204nm,2.6s,mb5.4						
EADA	Adamuz	39.84	11	P	P	14 02 08.9	-0.9
	202nm,2.9s,mb5.3						
EBAN	Banos Encina	39.99	12	P	P	14 02 11.0	-0.1
	9.4nm,0.5s,mb4.8						
CKHR	Kef el Ahmar	40.85	24	P	P	14 02 20.0	+1.9
ETOB	Tobarra	40.96	14	P	P	14 02 18.1	-0.9
	10nm,0.7s,mb4.6						
PCBR	Castelo Branco	41.03	7	*e*P	P	14 02 20.4	+0.8
	11nm,1.3s,mb4.3						
PCBR	Castelo Branco	41.03	7	*e*PP	PP	14 03 53.9	-3.5
CTEI	Djebel Teioual	41.26	25	P	P	14 02 23.0	+1.5
ESDC	Sonseca Array	41.42	11	P	P	14 02 23.6	+0.8
	1.9nm,0.8s,mb3.8,baz=198,slow=8.4,SNR=8.2						
ESDC				PP	PP	14 04 00.5	-1.2
	1.9nm,0.8s,baz=190,slow=11,SNR=5.7						
ESDC	Sonseca Array	41.42	11	P	P	14 02 21.8	-1.0
	1.9nm,0.8s,mb3.8						
DFRA	Djebel Bou Aff	41.45	24	P	P	14 02 25.0	+1.9
CASM	Ain Smara	41.46	25	P	P	14 02 25.0	+1.9
MTE	Manteigas	41.58	7	*e*P	P	14 02 24.7	+0.6
	30nm,1.3s,mb4.8						
CKFL	Kef-Lekhel	41.67	25	P	P	14 02 26.5	+1.5
PVIS	Viseu	41.85	6	*e*P	P	14 02 26.2	-0.1
	19nm,1.5s,mb4.5						
PVIS	Viseu	41.85	6	*e*PP	PP	14 04 02.7	-3.7
ABSA	Djebel Ababsia	41.89	26	P	P	14 02 27.5	+0.8
ECHE	Chera	42.00	14	P	P	14 02 28.9	+1.3
	12nm,0.7s,mb4.6						
CAEH	’Ain El Ouahch	42.05	25	P	P	14 02 33.0	+4.9
CMAH	Djebel Manchou	42.16	25	P	P	14 02 32.0	+3.0
PVRL	Vila Real	42.42	6	*e*P	P	14 02 31.0	0.0
	37nm,1.6s,mb4.8						
PVRL	Vila Real	42.42	6	*e*PP	PP	14 04 08.9	-3.4
EMOS	Mosqueruela	42.85	15	P	P	14 02 35.4	+0.8
	4.7nm,0.3s,mb4.7						
ELOB	Lobios	42.97	6	P	P	14 02 33.5	-2.0
	13nm,1.3s,mb4.5						
ECAL	Calabor	43.19	7	P	P	14 02 36.9	-0.4
	2.1nm,0.3s,mb4.3						
LSZ	Lusaka	43.41	111	*e*P	P	14 02 39.3	-0.1
	18nm,0.9s,mb4.8						
ERTA	Horta de San J	43.62	15	P	P	14 02 42.1	+1.4
	8.3nm,0.8s,mb4.5						
MBAR	Mbarara	44.13	90	*e*P	P	14 02 45.2	-0.1
	93nm,1.9s,mb5.2						
ESAC	San Caprasio	44.13	14	P	P	14 02 44.1	-0.9
	66nm,0.7s,mb5.5						
EPOB	Poblet	44.18	16	P	P	14 02 44.7	-0.7
	8.6nm,0.8s,mb4.5						
LBTB	Lobatse	44.56	126	P	P	14 02 47.9	-0.7
	6.2nm,0.7s,mb4.6,baz=283,slow=6.1,SNR=11						
LBTB				LR	LR	14 17 23.8	
	comp=Z,693nm,21.6s,MS4.5,baz=302,slow=31						
LBTB	Lobatse	44.56	126	*e*P	P	14 02 48.0	-0.6
	24nm,1.1s,mb4.9						
EARI	Arriondas	44.74	8	P	P	14 02 50.9	+1.1
	7.3nm,0.8s,mb4.6						
EGRA	Graus	44.77	14	P	P	14 02 50.3	+0.2
	12nm,0.7s,mb4.8						
EMIR	Miracle	44.83	16	P	P	14 02 50.1	-0.4
	16nm,0.5s,mb5.1						
SUR	Sutherland	44.83	138	*e*P	P	14 02 50.7	-0.1
	16nm,1.0s,mb4.8						
ELAN	Lanestosa	44.96	10	P	P	14 02 51.4	-0.3
	62nm,1.0s,mb5.4						
EBIE	Bielsa	45.19	14	P	P	14 02 52.9	-0.5
	6.1nm,0.7s,mb4.5						
ETSF	Etsaut	45.23	13	*e*P	P	14 02 53.8	+0.1
	32nm,0.8s,mb4.9						
MATP	Matopo	45.23	118	P	P	14 02 53.0	-1.1
	15nm,1.1s,mb4.7,baz=287,slow=8.8,SNR=14						
ELIZ	Elizondo	45.27	12	P	P	14 02 54.9	+0.8
	4.6nm,0.6s,mb4.5						
SJPF	Ste Jean	45.28	13	*e*P	P	14 02 54.2	0.0
	26nm,0.7s,mb4.8						
VSL	Villasalto	45.41	25	*e*P	P	14 02 55.7	+0.5
	12nm,0.9s,mb4.7						
VALF	Valcebollere	45.41	16	*e*P	P	14 02 55.9	+0.7
LABF	Labassere	45.52	14	*e*P	P	14 02 56.6	+0.6
MELF	Melles	45.52	15	*e*P	P	14 02 57.9	+1.8
SALF	Salau	45.53	15	*e*P	P	14 02 56.8	+0.7
EPF	Esparros	45.57	14	*e*P	P	14 02 56.5	+0.1
	32nm,1.1s,mb4.8						
MMGO	Monte Magaggia	45.57	30	P	P	14 02 58.6	+2.1
EJON	La Jonquera	45.70	17	P	P	14 02 58.6	+1.1
	4.3nm,0.8s,mb4.4						
BOSA	Boshof	45.97	130	P	P	14 02 58.9	-0.9
	12nm,0.8s,mb4.8,baz=304,slow=6.9,SNR=20						
BOSA				LR	LR	14 17 54.0	
	comp=Z,505nm,19.6s,MS4.5,baz=312,slow=30						
BOSA	Boshof	45.97	130	*e*P	P	14 02 58.8	-1.0
	17nm,1.0s,mb4.9						
VAE	Valguarnera	46.15	31	LR	LR	14 23 03.7	
	comp=Z,636nm,19.0s,MS4.6,baz=273,slow=37						
CSLB	Castelbuono	46.32	30	P	P	14 03 04.5	+2.1
MTLF	Montolieu	46.34	16	*e*P	P	14 03 01.9	-0.6
	14nm,1.0s,mb4.5						
GIB	Gibilmanna	46.34	30	P	P	14 03 04.4	+1.8
USI	Ustica	46.49	29	P	P	14 03 04.9	+1.2
GELF	Grande-Etoile	47.33	19	*e*P	P	14 03 13.2	+2.8
BERF	Bertagne	47.35	19	*e*P	P	14 03 11.6	+1.1
LFF	La Frestale	47.46	14	*e*P	P	14 03 11.0	-0.4
LASF	Ste Croix	47.48	17	*e*P	P	14 03 11.2	-0.3
	27nm,1.0s,mb4.8						
TREF	Trevaresse	47.53	18	*e*P	P	14 03 13.2	+1.2
PUYF	Puyloubier	47.55	19	*e*P	P	14 03 12.6	+0.5
PRAF	Pradon	47.63	18	*e*P	P	14 03 13.3	+0.6
LMR	La Mourre	47.64	20	*e*P	P	14 03 12.4	-0.4
	24nm,0.9s,mb4.9						
TAVF	Tavernes	47.74	19	*e*P	P	14 03 14.9	+1.3
CAF	Calviac	47.77	15	*e*P	P	14 03 13.2	-0.7
	33nm,0.9s,mb5.1						
PGF	Pioggiola	47.85	22	*e*P	P	14 03 13.9	-0.5
FRF	La Foret Royal	47.89	20	*e*P	P	14 03 14.2	-0.6
SMRF	Simiane la Rot	47.91	18	*e*P	P	14 03 14.4	-0.5
RJF	Les Rejaudoux	47.99	14	*e*P	P	14 03 14.8	-0.7
	28nm,1.1s,mb4.9						
RJF				*e*R			
	800nm,21.0s						
CALN	Calern	48.14	20	*e*P	P	14 03 17.2	+0.5
LBL	Lubilhac	48.37	16	*e*P	P	14 03 19.6	+1.1

SBF	Sospel	48.42	20	*e*P	P	14 03 18.5	-0.4
VIVF	Saint-Julien-l	48.43	17	*e*P	P	14 03 18.7	-0.2
TOUF	Mont Tournerai	48.49	20	*e*P	P	14 03 19.6	+0.2
AUTN	L'Aution	48.54	20	*e*P	P	14 03 20.1	+0.3
SAOF	Saorge	48.57	20	*e*P	P	14 03 20.1	+0.1
TIP	Timpagrande	48.64	31	*e*P	P	14 03 20.7	+0.1
TOLF	Tolfa	48.65	25	P	P	14 03 21.4	+0.8
MGR	Morigerati	48.75	30	P	P	14 03 22.3	+0.8
MFF	Saint Martin d	48.84	12	*e*P	P	14 03 21.5	-0.6
	23nm,0.9s,mb4.9						
ORIF	Oris-en-Rattie	48.85	18	*e*P	P	14 03 22.5	+0.3
ORIF				*e*R			
	2µm,18.5s						
DOI	San Damiano	48.92	20	P	P	14 03 24.3	+1.6
	1.8nm,0.2s,mb4.8						
MBDF	Montbardon	48.97	19	*e*P	P	14 03 23.7	+0.7
	24nm,1.0s,mb4.9						
TCF	Toulx Ste Croi	49.08	14	*e*P	P	14 03 23.8	-0.1
	37nm,0.9s,mb5.1						
PLDF	La Plantade	49.15	16	*e*P	P	14 03 25.7	+1.2
CPUP	Villa Florida	49.15	235	P	P	14 03 25.8	+1.0
	3.6nm,0.8s,mb4.4,baz=97,slow=10,SNR=7.0						
CPUP				LR	LR	14 21 26.9	
	comp=Z,1µm,20.5s,MS4.8,baz=91,slow=33						
SGG	Gregorio Mates	49.16	28	P	P	14 03 26.1	+1.5
MRLC	Muro Lucano	49.20	29	P	P	14 03 25.7	+0.8
VVLD	Villa Vallelon	49.20	27	P	P	14 03 27.2	+2.3
MNS	Montasola	49.20	25	P	P	14 03 24.9	0.0
PTQR	Pietraquaria	49.22	26	P	P	14 03 27.6	+2.5
BNI	Bardonecchia	49.22	19	P	P	14 03 26.9	+1.9
	78nm,2.6s,mb5.3						
PSB1	Pescosannita	49.23	28	P	P	14 03 26.7	+1.5
SIV	San Ignacio	49.28	250	P	P	14 03 26.3	+0.4
	3.1nm,0.9s,mb4.3,baz=88,slow=8.5,SNR=11						
SIV				PcP	PcP	14 04 48.0	-1.0
	3.7nm,1.0s,baz=94,slow=6.3,SNR=6.4						
FIAM	Fiamignano	49.30	26	P	P	14 03 26.9	+1.3
	9.6nm,0.9s,mb4.8						
MIDA	Miranda	49.30	27	P	P	14 03 27.0	+1.3
	78nm,2.1s,mb5.4						
RNI2	Rionero Sannit	49.31	27	P	P	14 03 27.4	+1.7
	31nm,0.2s						
BGF	Bois d'Agland	49.49	15	*e*P	P	14 03 26.9	-0.2
CSNT	Castellina Chi	49.52	24	P	P	14 03 28.4	+1.0
QUIF	Quistinic	49.56	9	*e*P	P	14 03 27.2	-0.4
LPG	La Plagne	49.65	19	*e*P	P	14 03 28.9	+0.6
LPL	La Plagne	49.66	19	*e*P	P	14 03 28.9	+0.5
ASS	Assisi	49.74	25	P	P	14 03 29.3	+0.2
	264nm,2.9s,mb5.8						
VLC	Villacollemand	49.75	22	P	P	14 03 29.7	+0.6
	52nm,1.7s,mb5.3						
NRCA	Norcia	49.75	25	P	P	14 03 29.7	+0.6
TERO	Teramo	49.80	26	P	P	14 03 30.3	+0.8
	87nm,1.8s,mb5.5						
SMF	Signal de Mont	49.84	15	*e*P	P	14 03 29.0	-0.7
MURB	Monte Urbino	49.85	25	P	P	14 03 30.4	+0.5
	49nm,1.3s,mb5.4						
CRE	Caprese Michel	49.91	24	P	P	14 03 29.6	-0.7
	4.0nm,0.4s,mb4.8						
BOB	Bobbio (Coli)	49.92	21	P	P	14 03 32.0	+1.6
	169nm,2.2s,mb5.7						
ROSF	Rostrenen	49.95	9	*e*P	P	14 03 30.4	-0.2
	13nm,0.9s,mb4.7						
SGMF	Saint Gilles	49.98	9	*e*P	P	14 03 30.1	-0.7
PGD	Poggio Sodo	50.03	24	P	P	14 03 31.1	-0.2
	13nm,1.1s,mb4.9						
SFI	Santa Sofia	50.10	24	P	P	14 03 32.1	+0.3
	7.8nm,0.7s,mb4.8						
ZCCA	Zocca	50.14	23	P	P	14 03 33.3	+1.2
SAML	Samuel	50.17	259	*e*P	P	14 03 31.1	-1.6
	13nm,1.1s,mb4.9						
ARV	Arcevia	50.22	25	P	P	14 03 32.2	-0.5
	10.0nm,0.9s,mb4.8						
DIX	Grande Dixence	50.37	19	P	P	14 03 33.9	+0.1
GRR	Gorron	50.41	11	*e*P	P	14 03 33.4	-0.7
	42nm,0.8s,mb5.2						
LOR	Lormes	50.41	15	*e*P	P	14 03 33.5	-0.6
	22nm,0.8s,mb4.9						
LOR				*e*R			
	795nm,20.8s						
CABF	La Chapelle	50.44	17	*e*P	P	14 03 33.6	-0.7
IDI	Anoyia	50.82	41	P	P	14 03 37.4	0.0
	12nm,0.8s,mb4.9,baz=246,slow=9.0,SNR=6.4						
IDI				LR	LR	14 27 51.3	
	comp=Z,307nm,19.3s,MS4.3,baz=266,slow=39						
FLN	La Foliniere	50.84	11	*e*P	P	14 03 36.4	-0.9
	22nm,0.9s,mb4.8						
FLN				*e*R			
	1µm,20.8s						
BBS	Basel-Blauen	51.64	18	*e*P	P	14 03 42.6	-0.8
HINF	Hinteralfeld	51.75	17	*e*P	P	14 03 42.9	-1.4
HAU	Haudompre	51.77	17	*e*P	P	14 03 43.5	-0.9
	43nm,1.1s,mb5.0						
HAU				*e*R			
	756nm,19.0s						
DAVOX	Davos	51.81	20	LR	LR	14 26 25.0	
	comp=Z,1µm,18.2s,MS4.9,baz=260,slow=37						
DAVOX	Davos	51.81	20	P	P	14 03 44.9	+0.2
CTI	Castel Tesino	51.82	22	P	P	14 03 44.8	0.0
MEZF	Maizieres J'vi	51.87	16	*e*P	P	14 03 44.5	-0.6
MOF	Molkenrain	51.87	17	*e*P	P	14 03 44.1	-1.1
THEF	They Montfort	51.87	16	*e*P	P	14 03 44.5	-0.7
FELD	Feldberg	52.16	18	*e*P	P	14 03 46.4	-0.9
ECH	Echery	52.20	17	*e*P	P	14 03 46.4	-1.3
TRI	Trieste	52.37	24	P	P	14 03 48.8	-0.1
CDF	Champ du Feu	52.41	17	*e*P	P	14 03 48.1	-1.2
	37nm,1.0s,mb5.0						
WLS	Welschbruch	52.44	17	*e*P	P	14 03 48.5	-0.9
JAVS	Javornik	52.64	24	*e*P	P	14 03 50.5	-0.5
VOY	Vojsko	52.68	24	*e*P	P	14 03 51.2	-0.1
VOY				*e*		14 04 32.3	
ROBS	Robic	52.70	23	*e*P	P	14 03 50.5	-1.0
FVI	Forni Avoltri	52.71	22	P	P	14 03 51.9	+0.4
PTCC	Patocco-Chiusa	52.77	23	P	P	14 03 51.6	-0.4
BOJS	Bojanci	52.81	25	*e*P	P	14 03 51.9	-0.4
VISS	Visnje	52.88	25	*e*P	P	14 03 52.1	-0.7
LJU	Ljubljana	52.95	24	*e*P	P	14 03 52.8	-0.5
BAIF	Baives	53.09	14	*e*P	P	14 03 53.0	-1.3
	42nm,1.1s,mb5.0						
SKO	Skopje	53.12	32	*e*P	P	14 03 54.5	-0.1
GIVF	Givet	53.28	15	*e*P	P	14 03 54.4	-1.3
HGN	Heimansgroeve	54.17	15	⇓*e*P	P	14 04 00.9	-1.2
	46nm,2.4s,mb5.0						
DCN	Croghan	54.42	5	*e*P	P	14 04 03.4	-0.6
DLF	Lyons Farm	54.44	5	*e*P	P	14 04 03.2	-0.9
ZAPS	Zavoj/Pirot	54.67	32	⇓*i*P	P	14 04 05.8	-0.2
TAYS	Tayyib Ism	54.76	53	P	P	14 04 07.2	+0.4
GRA1	Grafenberg Arr	54.78	19	*e*P	P	14 04 04.9	-1.8
	59nm,1.9s,mb5.3						
GRA1				*e*S	S	14 11 46.7	+0.4
GRA1				LR	LR		
	comp=Z,800nm,20.7s,MS4.8						
GRF	Grafenberg Arr	54.78	19	P	P	14 04 04.9	-1.8
GRF				pmax	pmax		
	comp=Z,59nm,1.9s,mb5.3						
GRF	Grafenberg Arr	54.78	19	*e*P	P	14 04 04.9	-1.8
	comp=Z,59nm,1.9s,mb5.3						
GRF				*e*S	S	14 11 46.7	+0.4
GRF				LR	LR		
	comp=Z,800nm,20.7s,MS4.8						
BDAS	Al Bad'	54.89	54	P	P	14 04 08.3	+0.4
GERES	GERESS Array B	54.93	22	P	P	14 04 06.4	-1.4
	comp=Z,12nm,0.8s,mb4.9,baz=194,slow=5.5,SNR=58						
GERES				LR	LR	14 28 37.4	
	comp=Z,771nm,18.0s,MS4.8,baz=220,slow=37						
KHC	Kasperske Hory	55.12	21	*e*P	P	14 04 08.1	-1.1
KHC				*e*PP	PP	14 06 09.4	-4.6
KHC				*e*S	S	14 11 49.2	-1.6
KHC				AMS	AMS	14 28 00.0	
	comp=Z,1µm,17.7s						
EIL	Elat	55.28	52	LR	LR	14 28 43.0	
	comp=Z,2µm,18.9s,MS5.2,baz=308,slow=37						
WTSB	Winterswijk	55.49	15	⇓*e*P	P	14 04 11.0	-0.9
	comp=Z,47nm,2.3s,mb5.1						
UMJS	Umm Lajj	55.53	58	P	P	14 04 13.8	+1.3
NKC	Novy Kostel	55.65	20	*e*P	P	14 04 11.6	-1.4
NKC				*e*PP	PP	14 06 13.3	-5.5
NKC				AMS	AMS	14 27 30.0	
	comp=Z,500nm,18.2s						
ZST	Bratislava	55.73	24	*e*P	P	14 04 12.7	-0.9
ZST				*e*		14 09 33.4	
ZST				*e*		14 19 27.3	
MOX	Moxa	55.73	19	*e*P	P	14 04 12.6	-1.0
MOX				pmax	pmax		
	comp=Z,71nm,2.0s,mb5.3						
MOX	Moxa	55.73	19	*e*P	P	14 04 12.6	-1.0
	comp=Z,71nm,2.0s,mb5.3						
MOX	Moxa	55.73	19	*i* P	P	14 04 12.6	-1.0
	comp=Z,logA/T=1.6,mb5.4						
TBKS	Tabuk	55.99	55	P	P	14 04 16.7	+1.0
LPAZ	La Paz	55.99	251	P	P	14 04 15.3	-0.5
	comp=Z,1.8nm,0.9s,mb4.1,baz=47,slow=3.4,SNR=8.4						
LPAZ				PcP	PcP	14 05 15.1	+0.9
	comp=Z,3.7nm,0.9s,baz=353,slow=18,SNR=6.2						
LPAZ				LR	LR	14 26 16.4	
	comp=Z,1µm,21.6s,MS5.0,baz=85,slow=34						
LPAZ	La Paz	55.99	251	*e*P	P	14 04 15.3	-0.6
	comp=Z,14nm,1.6s,mb4.7						
PRU	Pruhonice	56.18	21	*e*P	P	14 04 15.5	-1.3
PRU				*e*S	S	14 12 05.3	+0.3
PRU				AMS	AMS	14 29 20.0	
	comp=Z,900nm,18.3s						
VRAC	Vranov	56.41	23	P	P	14 04 17.6	-0.8
	comp=Z,6.2nm,0.8s,mb4.7,baz=154,slow=7.4,SNR=7.6						
KOLL	Kolacno	56.56	25	*e*P	P	14 04 18.6	-1.0
PVCC	Panska Ves	56.64	21	*e*P	P	14 04 18.1	-2.0
PVCC				AMS	AMS	14 29 10.0	
	comp=Z,1µm,16.3s						
VYHS	Vyhne	56.68	25	*e*P	P	14 04 19.8	-0.7
PSZ	Piszkesteto	56.70	26	*e*P	P	14 04 19.1	-1.5
	comp=Z,12nm,0.9s,mb4.9						
PSZ	Piszkesteto	56.70	26	⇑*e*	P	14 04 20.2	-0.4
BRG	Berggiesshubel	56.70	20	*i* P	P	14 04 20.2	-0.4
BRG				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
BRG	Berggiesshubel	56.70	20	*i* P	P	14 04 20.2	-0.4
	comp=Z,9.2nm,1.1s,mb4.7						
BRG				*e*		14 04 30.7	
CLL	Collm	56.75	19	⇑*i*P	P	14 04 20.0	-0.9
CLL				*e*S	S	14 12 17.0	+4.5
CLL				pmax	pmax		
	comp=Z,70nm,2.2s,mb5.3						
CLL	Collm	56.75	19	⇑*i*P	P	14 04 20.0	-0.9
	comp=Z,70nm,2.2s,mb5.3						
CLL				*e*S	S	14 12 17.0	+4.5
CLL	Collm	56.75	19	⇑P	P	14 04 20.0	-0.9
	comp=Z,logA/T=1.5,mb5.3						
CLL				*e*S	S	14 12 17.0	+4.5
DPC	Dobruska-Polom	57.14	22	*e*P	P	14 04 22.4	-1.3
DPC				*e*S	S	14 12 20.8	+3.2
DPC				AMS	AMS	14 27 30.0	
	comp=Z,600nm,16.4s						
UPC	Upice	57.15	22	*e*P	P	14 04 22.2	-1.6
MORC	Moravsky Berou	57.15	23	*e*P	P	14 04 22.4	-1.4
	comp=Z,6.4nm,0.9s,mb4.7						
KECS	Kecovo	57.39	26	*e*P	P	14 04 26.0	+0.5
KECS				*e*		14 04 33.3	
OKC	Ostrava-Krasne	57.44	24	*e*P	P	14 04 24.9	-0.9
OKC				AMS	AMS	14 27 20.0	
	comp=Z,400nm,16.5s						
KSP	Ksiaz	57.53	22	⇑*e*P	P	14 04 25.4	-1.0
KSP				*e*S	S	14 12 25.0	+2.2
KSP				MLR	MLR		
	comp=Z,2µm,18.1s,MS5.3						
TRQA	Tornquist	57.79	224	*e*P	P	14 04 27.0	-1.4
	comp=Z,4.8nm,0.9s,mb4.5						
ASF	Jabal al Asfar	57.84	50	P	P	14 04 29.7	+0.8
	comp=Z,5.6nm,0.9s,mb4.6,baz=98,slow=4.5,SNR=8.6						
ASF				LR	LR	14 33 03.5	
	comp=Z,680nm,18.1s,MS4.8,baz=303,slow=40						
SDV	Santo Domingo	57.87	281	P	P	14 04 29.9	+0.6
	comp=Z,5.7nm,0.7s,mb4.7,baz=143,slow=4.6,SNR=7.4						
SDV	Santo Domingo	57.87	281	*e*P	P	14 04 28.1	-1.2
	comp=Z,8.5nm,0.9s,mb4.8						
MLR	Muntele Rosu	57.91	32	P	P	14 04 28.1	-1.1
	comp=Z,8.0nm,0.8s,mb4.8,baz=169,slow=3.4,SNR=8.2						
MLR				LR	LR	14 31 16.3	
	comp=Z,1µm,19.5s,MS5.1,baz=229,slow=38						
NIE	Niedzica	58.02	25	*e*P	P	14 04 29.5	-0.3
CRVS	Cervenica-Dubn	58.13	26	*e*P	P	14 04 31.9	+1.3
OJC	Ojcow	58.41	24	*e*P	P	14 04 31.4	-1.2
OJC				*e*S	S	14 12 39.1	+4.7
OJC				MLR	MLR	14 31 33.8	
	comp=Z,800nm,18.1s,MS4.9						
KOLS	Kolonicke sedl	58.52	27	*e*P	P	14 04 32.9	-0.4
KOLS				*e*sP	sP	14 04 39.0	+3.8
BR131	Keskin Array S	59.05	41	*e*P	P	14 04 36.9	-0.3
	comp=Z,8.8nm,0.8s,mb4.8						
BRTR	Keskin Array B	59.05	41	P	P	14 04 36.8	-0.5
	comp=Z,11nm,0.9s,mb4.9,baz=223,slow=6.6,SNR=33						
KIS	Kishinev	60.40	32	*c* *i*P	P	14 04 42.0	-4.4
KIS				*e*		14 08 30.0	
KIS				*e*S	S	14 12 50.0	-10
KIS				*e*		14 13 06.0	
KIS				pmax	pmax		
	comp=Z,500nm,2.0s						
KIS				MLR	MLR		
	comp=E,400nm,15.0s						
KIS				MLR	MLR		
	comp=Z,5µm,15.0s						
ROSC	El Rosal	61.15	276	P	P	14 04 52.9	+0.9
	comp=Z,14nm,0.6s,mb5.2,baz=105,slow=20,SNR=7.2						
ROSC				LR	LR	14 27 50.0	
	comp=Z,861nm,21.8s,MS4.9,baz=199,slow=33						
MALT	Malatya	61.63	45	*e*P	P	14 04 54.8	-0.1
	comp=Z,18nm,0.9s,mb5.2						
AKASG	Malin Array Be	62.99	29	P	P	14 05 00.8	-3.0
	comp=Z,4.1nm,0.8s,mb4.6,baz=227,slow=5.5,SNR=24						
KONO	Kongsberg	63.12	13	*i* P	P	14 05 04.1	-0.4
ANN	Anapa	64.08	38	*e*P	P	14 05 08.4	-2.7
ANN				*e*S	S	14 13 47.4	+0.7
ANN				pmax	pmax		
	comp=Z,63nm,1.0s,mb5.6						
HFS	Hagfors	64.53	15	LR	LR	14 34 01.5	
	comp=Z,522nm,18.6s,MS4.8,baz=206,slow=37						
NB2	NORSAR Subarra	64.73	13	P	P	14 05 13.7	-1.3
	comp=Z,1.4nm,0.8s,mb4.0,baz=202,slow=7.0						
NOA	NORSAR Array B	64.73	13	P	P	14 05 14.0	-1.0
	comp=Z,11nm,0.8s,mb4.9,baz=208,slow=6.7,SNR=27						
NOA				LR	LR	14 33 55.4	
	comp=Z,242nm,18.0s,MS4.4,baz=205,slow=36						
NOA	NORSAR Array B	64.73	13	P	P	14 05 14.0	-1.0
NOA				LR	LR	14 33 55.4	
SOC	Sochi	64.92	40	*e*P	P	14 05 15.9	-0.6
SOC				*e*		14 05 50.8	
SOC				*e*PPP	PPP	14 09 07.1	-8.1
SOC				*e*S	S	14 13 55.6	-1.5
SOC				pmax	pmax		
	comp=N,15nm,0.9s						
SOC				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.2						
SOC				pmax	pmax		
	comp=E,30nm,1.3s						
SOC				MLR	MLR		
	comp=Z,247nm,20.0s,MS4.4						
SOC				MLR	MLR		
	comp=N,129nm,17.0s,MS4.4						
SOC				MLR	MLR		
	comp=E,179nm,21.0s,MS4.4						
PLCA	Paso Flores	64.93	225	LR	LR	14 28 31.5	
	comp=E,565nm,21.6s,MS4.7,baz=61,slow=31						
OTAV	Otavalo	65.06	271	*e*P	P	14 05 16.5	-1.5
	comp=E,9.2nm,1.3s,mb4.7						
GNI	Garni	66.85	45	*i* P	P	14 05 30.0	+1.0
GNI				pmax	pmax		
	comp=Z,17nm,1.0s						
GNI	Garni	66.85	45	P	P	14 05 30.0	+1.0
	comp=Z,8.5nm,0.5s,mb5.1,baz=327,slow=7.7,SNR=3.4						
GNI				LR	LR	14 35 31.1	
	comp=Z,219nm,20.4s,MS4.4,baz=66,slow=37						
GNI	Garni	66.85	45	*e*P	P	14 05 28.2	-0.8
	comp=Z,13nm,0.7s,mb5.1						
KIV	Kislovodsk	67.01	41	*d* *i*P	P	14 05 29.2	-0.7
KIV				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
KIV				MLR	MLR		
	comp=Z,100nm,12.0s,MS4.2						
ZEI	Tsey	67.31	42	*e*P	P	14 05 30.3	-1.5
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
GOF	Gofitskoye	67.71	40	⇓*i*P	P	14 05 30.8	-3.5
GOF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
VOR	Voronezh	68.67	32	*e*P	P	14 05 40.0	-0.1
VOR				pmax	pmax		
	comp=Z,100nm,2.3s,mb5.3						
FINES	FINESS Array B	69.19	19	*e*P	P	14 05 42.0	-1.2
FINES	FINESS Array B	69.19	19	P	P	14 05 42.1	-1.1
	comp=Z,15nm,0.8s,mb4.9,baz=207,slow=4.3,SNR=32						
FINES				LR	LR	14 38 08.8	
	comp=Z,374nm,19.8s,MS4.6,baz=344,slow=38						
OBN	Obninsk	69.21	28	*e*P	P	14 05 42.3	-1.1
OBN				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
OBN				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.8						
KAF	Kangasniemi	69.76	19	*e*p	P	14 05 44.8	-1.9
	comp=Z,8.6nm,0.8s,mb4.7,baz=221,slow=6.0						
KAF	Kangasniemi	69.76	19	*e*P	P	14 05 44.8	-1.9
KAF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
MAK	Makhachkala	69.83	43	*e*P	P	14 05 48.0	+0.6
MAK				*e*		14 06 14.5	
MAK				*e*		14 08 22.0	
MAK				*e*S	S	14 14 57.0	+0.9
MAK				*e*PS	PS	14 15 20.0	-3.0
MAK				*e*		14 15 37.0	
MAK				pmax	pmax		
	comp=Z,500nm,4.0s						
VNA2	Neumayer--Watz	69.89	178	P	P	14 05 48.0	+0.7
VNA2	Neumayer--Watz	69.89	178	⇑*i*	PcP	14 06 03.1	-6.9
MOS	Moscow	70.06	28	*e*P	P	14 05 46.5	-2.1
MOS				*e*		14 06 08.6	
MOS				*e*		14 08 21.2	
MOS				*e*PPP	PPP	14 10 02.8	-2.7
MOS				*e*S	S	14 14 56.0	-2.6
MOS				*e*SS	SS	14 19 28.6	-0.9
MOS				pmax	pmax		
	comp=Z,69nm,0.7s,mb5.7						
MOS				MLR	MLR		
	comp=Z,800nm,21.9s,MS4.9						
VNA3	Neumayer Olymp	70.14	179	⇑*i*P	P	14 05 50.5	+1.6
VNA3	Neumayer Olymp	70.14	179	⇑*i*	PcP	14 06 04.1	-6.9
SCHQ	Schefferville	70.73	331	P	P	14 05 52.6	-0.1
	comp=Z,3.3nm,0.9s,mb4.3,baz=133,slow=6.0,SNR=5.1						
SCHQ				LR	LR	14 32 06.7	
	comp=Z,80nm,20.3s,MS4.0,baz=72,slow=32						
SNAA	Sanae	70.86	176	*i* P	P	14 05 52.4	-0.8
SNAA	Sanae	70.86	176	P	P	14 05 52.5	-0.8
	comp=Z,2.1nm,0.9s,mb4.1,baz=337,slow=6.4,SNR=17						
SNAA	Sanae	70.86	176	*e*P	P	14 05 51.9	-1.3
	comp=Z,9.0nm,1.0s,mb4.7						
JMIC	Jan Mayen	71.96	2	LR	LR	14 34 28.7	
	comp=Z,132nm,19.6s,MS4.2,baz=120,slow=33						
ELN	Prospectdale	72.75	310	P	P	14 06 05.9	+0.7
FWV	Forest Hill	72.89	310	*e*P	P	14 06 06.3	+0.4
ARCES	ARCESS Array B	75.11	13	P	P	14 06 17.3	-0.9
	comp=Z,12nm,0.7s,mb4.9,baz=225,slow=5.1,SNR=41						
ARCES				LR	LR	14 41 20.0	
	comp=Z,368nm,19.1s,MS4.7,baz=11,slow=37						
SUMG	Summit	75.17	352	*e*P	P	14 06 18.2	-0.3
	comp=Z,23nm,1.1s,mb5.0						
CPCT	Cooper Cave	75.30	307	*e*P	P	14 06 19.8	-0.2
KEV	Kevo	75.62	13	*e*p	P	14 06 19.8	-1.3
	comp=Z,21nm,0.9s,mb5.1						
KEV	Kevo	75.62	13	*e*P	P	14 06 19.8	-1.3
KEV				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
SWET	Sewanee	76.38	307	*e*P	P	14 06 25.9	-0.2
SYO	Syowa Base	76.50	163	⇑PcP	PcP	14 06 35.0	-3.1
LRAL	Lakeview Retre	76.86	304	*e*P	P	14 06 28.6	-0.2
	comp=Z,16nm,1.2s,mb4.8						
PLAL	Pickwick Lake	78.07	306	*e*P	P	14 06 35.1	-0.3
	comp=Z,29nm,1.5s,mb5.0						
WVT	Waverly	78.07	307	*e*P	P	14 06 35.2	-0.2
	comp=Z,3.1nm,0.5s,mb4.5						
AB31	Akbulak array	79.96	40	*i* P	P	14 06 44.7	-0.7
AB31				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
ARU	Arti	80.95	32	*e*P	P	14 06 50.2	-0.4
ARU				*e*		14 09 55.5	
ARU				*e*PPP	PPP	14 11 44.4	-4.0
ARU				*e*S	S	14 16 58.5	-0.2
ARU				*e*SS	SS	14 22 11.9	-3.9
ARU				MLR	MLR		
	comp=N,40nm,17.0s,MS4.7						
ARU				MLR	MLR		
	comp=E,300nm,17.0s,MS4.7						
ARU				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.8						
ARU	Arti	80.95	32	*e*P	P	14 06 50.1	-0.5
	comp=Z,32nm,0.8s,mb5.3						
SOKR	Solikamsk	80.96	29	*c* *i*P	P	14 06 51.2	+0.7
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
SOKR				MLR	MLR		
	comp=Z,310nm,19.0s,MS4.7						
CCM	Cathedral Cave	81.07	309	*e*P	P	14 06 50.8	-0.8
	comp=Z,7.2nm,1.0s,mb4.6						
MAW	Mawson	83.83	158	P	P	14 07 05.9	+0.7
	comp=Z,4.5nm,0.9s,mb4.6,baz=285,slow=11,SNR=6.4						
MAW				LR	LR	14 35 40.2	
	comp=Z,161nm,18.4s,MS4.4,baz=247,slow=29						
MAW	Mawson	83.83	158	*e*P	P	14 07 05.9	+0.7
	comp=Z,12nm,1.2s,mb4.9						
ULM	Lac du Bonnet	85.97	320	LR	LR	14 41 34.7	
	comp=Z,105nm,19.5s,MS4.2,baz=352,slow=33						
ZRNK	Zerenda	86.23	37	P	P	14 07 17.1	-0.4
ZRNK				pmax	pmax		
	comp=Z,82nm,2.9s,mb5.5						
ZRNK	Zerenda	86.23	37	*e*P	P	14 07 17.6	+0.1
	comp=Z,5.6nm,0.9s,mb4.8						
KKAR	Karatay Array	86.24	47	P	P	14 07 18.3	+0.5
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
WMOK	Wichita Mounta	86.78	305	*e*P	P	14 07 20.2	-0.4
	comp=Z,15nm,1.1s,mb5.1						
BVAR	Borovoye Array	87.07	37	P	P	14 07 21.8	+0.2
	comp=Z,7.9nm,0.8s,mb5.0,baz=252,slow=4.7,SNR=54						
VOSK	Vostochnaya	87.39	37	P	P	14 07 23.2	0.0
VOSK				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.6						
QSPA	South Pole Qui	89.05	180	*e*P	P	14 07 32.3	+1.8
	comp=Z,27nm,1.1s,mb5.5						
FRU	Bishkek	89.23	47	*e*P	P	14 07 33.0	+0.8
FRU				*e*		14 07 41.0	
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.6						
TXAR	Lajitas Array	90.74	299	P	P	14 07 40.6	+1.1
	comp=Z,0.6nm,0.6s,mb4.1,baz=121,slow=7.3,SNR=6.0						
TXAR				LR	LR	14 43 57.3	
	comp=Z,94nm,18.9s,MS4.2,baz=150,slow=33						
GDL2	Guadalupe Moun	91.36	302	*e*P	P	14 07 43.7	+1.3
SDCO	Great Sand Dun	92.29	308	*e*P	P	14 07 47.6	+1.1
	comp=Z,34nm,1.9s,mb5.3						
ANMO	Albuquerque	93.10	305	*e*P	P	14 07 51.1	+0.8
	comp=Z,1.7nm,0.7s,mb4.6						
BNM	Barren Site	93.25	304	P	P	14 07 52.2	+1.2
MKAR	Makanchi Array	94.65	43	P	P	14 07 57.9	+0.8
	comp=Z,1.8nm,0.8s,mb4.6,baz=256,slow=5.0,SNR=7.8						
MKAR				LR	LR	14 56 51.0	
	comp=Z,256nm,19.0s,MS4.7,baz=351,slow=40						
PDAR	Pinedale Array	95.23	313	LR	LR	14 45 43.0	
	comp=Z,166nm,22.0s,MS4.5,baz=97,slow=32						
YKA	Yellowknife Ar	96.09	333	*i* P	P	14 08 04.8	+1.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	96.09	333	P	P	14 08 03.9	+0.6
	comp=Z,1.1nm,0.8s,mb4.3,baz=76,slow=5.2,SNR=5.6						
WMQ	Urumqi	98.71	46	*e*P	P	14 08 15.5	-0.1
WMQ				AP	pP	14 08 19.5	+2.5
WMQ				AMB	AMB		
	comp=Z,40nm,4.2s						
WMQ				LR	LR		
	comp=N,250nm,26.0s,MS4.7						
WMQ				LR	LR		
	comp=E,240nm,28.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,190nm,24.0s,MS4.5						
ELK	Elko	99.64	311	LR	LR	14 48 35.0	
	comp=Z,112nm,18.2s,MS4.4,baz=88,slow=32						
NEW	Newport	99.89	319	LR	LR	14 49 07.7	
	comp=Z,159nm,20.6s,MS4.5,baz=55,slow=33						
SONM	Songino Array	110.36	39	PKiKP		14 13 08.6	
	comp=Z,1.2nm,0.8s,baz=264,slow=1.0,SNR=7.3						
CMAR	Chiang Mai Arr	111.49	71	PKiKP		14 13 11.3	
	comp=Z,1.2nm,0.8s,baz=282,slow=4.5,SNR=5.4						
RKT	Rikitea	118.36	243	*e*SS	SS	14 31 05.0	+8.0
	comp=Z,208nm,35.0s						
RKT				*e*LR	LR	14 51 17.1	
	comp=Z,335nm,27.5s						
NJ2	Nanjing	125.47	51	*e*PKP	PKPdf	14 13 35.0	-4.1
NJ2				PP	PP	14 15 32.0	+0.2
NJ2				PKS	PKS	14 17 11.0	-1.1
NJ2				SKS	SKS	14 20 42.0	-2.0

NJ2				PP	PP		
	comp=Z,680nm,8.4s						
NJ2				LR	LR		
	comp=N,640nm,25.1s						
NJ2				LR	LR		
	comp=E,210nm,19.4s						
MDJ	Mudanjiang	125.64	32	PKP	PKPdf	14 13 38.5	-0.6
TAOE	Nuku Hiva Isla	126.05	258	ePP	PP	14 14 57.7	-39
	comp=E,1µm,34.5s						
TAOE				eSS	SS	14 32 41.3	+6.0
	comp=E,719nm,24.5s						
TAOE				eLQ		14 48 20.1	
	comp=E,662nm,29.4s						
TAOE				eLR	LR	14 56 49.3	
	comp=E,749nm,22.2s						
SSE	Sheshan	127.68	51	PKP	PKPdf	14 13 42.4	-1.0
TBI	Tubuai	130.90	238	eS	SKS	14 21 11.9	+13
	comp=E,63nm,42.8s						
TBI				eSS	SS	14 33 55.9	+21
	comp=E,309nm,30.5s						
TBI				eLR	LR	14 56 44.6	
	comp=E,451nm,32.8s						
PPT	Papeete	133.07	245	eS	SKS	14 20 33.7	-31
	comp=E,50nm,21.0s						
PPT				eSS	SS	14 34 21.1	+19
	comp=E,138nm,27.0s						
PPT				eLR	LR	14 57 41.1	
	comp=E,350nm,23.0s						
MJAR	Matsushiro Arr	135.96	33	PKP	PKPdf	14 13 57.7	-1.1
	comp=E,2.2nm,1.0s,baz=293,slow=2.4,SNR=5.6						
STKA	Stephens Creek	139.60	146	PKP	PKPdf	14 14 03.4	-2.2
	comp=E,3.3nm,0.8s,baz=220,slow=1.5,SNR=4.3						
WRA	Warramunga Arr	142.12	125	PKhKP		14 14 03.1	
	comp=E,2.9nm,0.9s,baz=245,slow=2.7,SNR=16						
WB2	Warramunga Arr	142.13	125	ePKP	PKPdf	14 14 04.2	-6.2
KAKA	Kakadu	143.45	113	ePKP	PKPdf	14 14 09.6	-3.2
	comp=E,15nm,0.9s						
CTA	Charters Tower	151.05	138	ePKP	PKPdf	14 14 29.9	+4.7
	comp=E,14nm,1.0s						
CTA	Charters Tower	151.05	138	PKPbc	PKPdf	14 14 30.5	+5.3
	baz=178,slow=3.7						

GUC 24 14:03:35.5±0.6**, 20.00S**×**69.32W, h104**^{km}±3^{km}**, ML3.8, Northern Chile**

GUC 24 14:13:04.1±0.5**, 19.99S**×**69.23W, h99**^{km}±2^{km}**, MD3.6, ML4.1, Northern Chile**

ATH ***24*** *14:20:10.8, 38.42N×24.03E, h14*^{km}*±1*^{km}*, MD3.8/23, ML3.8*
NEIC ***24*** *14:20:10.7, 38.42N×24.04E, h13*^{km}*, ML3.8(ATH), ML3.7(THE), After ATH.*
IDC ***24*** *14:20:11.5±0.9, 38.26N×24.12E, mb3.8/7, mb1 3.9/10, mb1mx3.7/25, mbtmp3.8/10, ML3.6/3, Error ellipse: s-maj=22.3km s-min=16.8km az=103.0*
CSEM ***24*** *14:20:11.5±0.1, 38.41N×23.99E, h2*^{km}*, ML3.8, Error ellipse: s-maj=1.4km s-min=1.1km az=91.0*
HLW ***24*** *14:20:12.3, 38.66N×24.48E, h33*^{km}*, Mb3.3*
THE ***24*** *14:20:14.8, 38.42N×24.01E, h20*^{km}*, ML3.9*
ISC 24 14:20:11.5±0.6**, 38.42N**±0.02×**23.98E**±0.03**, h12**^{km}±4^{km}**, n76,** σ**1**^{s}**03**/93**, mb3.8**/7**, 13C-8D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAR	Parnis Oros	0.33	216	⇓iPB	Pb	14 20 18.0	-0.7
PTL	Penteli	0.38	194	ePB	Pb	14 20 18.5	-1.1
ATH	Athens Observa	0.49	205	⇑iPB	Pb	14 20 21.2	-0.3
NSAL	Nisos Salamina	0.65	219	ePB	Pb	14 20 24.0	-0.3
MGER	Gerania Oros	0.71	233	⇓iPG	Pg	14 20 25.0	-0.8
AOS	Alonnisos	0.76	354	ePg	Pg	14 20 28.2	+1.5
AOS				eSg	Sg	14 20 39.2	+2.3
AOS	Alonnisos	0.76	354	ePg	Pg	14 20 28.2	+1.5
AOS				eSg	Sg	14 20 39.2	+2.3
NAIG	Nisos Aigina	0.76	211	⇓iPB	Pb	14 20 26.0	-0.2
LKR	Lokris	0.80	287	⇓iPB	Pb	14 20 26.7	-0.2
XOR	Xorichti	1.13	327	ePg	Pg	14 20 34.1	-0.1
XOR				eSg	Sg	14 20 49.3	+0.1
AGG	Agios Georgios	1.43	296	ePg	Pg	14 20 38.2	-1.8
AGG				eSg	Sg	14 20 56.5	-2.6
LOS	Limnos	1.74	29	ePb	Pb	14 20 42.3	-0.6
LIA	Limnos Island	1.75	32	⇑iPN	Pn	14 20 42.5	+0.6
EVR	Evrytania	1.77	287	ePn	Pn	14 20 43.7	+1.4
EVR				eSn	Sn	14 21 09.1	+4.3
APE	Apeiranthos	1.82	137	⇓iPN	Pn	14 20 43.2	+0.2
APE				eSN	Sn	14 21 08.0	+1.9
OUR	Ouranopolis	1.92	0	ePb	Pb	14 20 45.1	-0.8
OUR				eSb	Sb	14 21 08.2	-1.6
OUR	Ouranopolis	1.92	0	ePb	Pb	14 20 45.1	-0.8
OUR				S	Sn	14 21 08.1	-0.4
PRK	Paraskevi	1.97	64	ePN	Pn	14 20 45.6	+0.5
PLG	Polygyros	2.00	348	⇑iPN	Pn	14 20 46.1	+0.6
RLS	Riolos of Patr	2.01	261	ePN	Pn	14 20 47.6	+1.9
LIT	Litokhoron	2.04	326	ePn	Pn	14 20 46.6	+0.5
LIT				eSn	Sn	14 21 11.7	0.0
ITM	Ithomi	2.04	233	ePN	Pn	14 20 46.9	+0.8
KYTH	Kithira	2.26	200	ePN	Pn	14 20 50.0	+0.7
THR5	Thira Island,	2.27	151	ePn	Pn	14 20 49.6	+0.2
THR3	Thira Island,	2.30	150	ePn	Pn	14 20 50.2	+0.4
THE	Thessaloniki	2.35	341	ePn	Pn	14 20 50.8	+0.3
SANT	Santorini	2.36	150	ePn	Pn	14 20 50.2	-0.4
SANT				eSn	Sn	14 21 20.9	+1.1
SANT	Santorini	2.36	150	ePn	Pn	14 20 50.2	-0.4
SANT				eSn	Sn	14 21 20.9	+1.2
THR1	Thera Island	2.36	150	ePn	Pn	14 20 51.2	+0.6
SMG	Samos	2.36	107	⇓iPN	Pn	14 20 51.1	+0.4
SOH	Sokhos	2.45	349	ePn	Pn	14 20 52.4	+0.4
SOH				eSn	Sn	14 21 21.7	-0.4
MEV	Metsovon	2.54	303	ePn	Pn	14 20 53.6	+0.4
KZN	Kozani	2.55	318	ePN	Pn	14 20 54.9	+1.5
LKD	Levkas	2.63	277	ePn	Pn	14 20 54.9	+0.4
VLS	Valsamata	2.68	266	ePN	Pn	14 20 56.9	+1.7
GRG	Griva	2.81	335	ePn	Pn	14 20 57.8	+0.6
GRG				eSn	Sn	14 21 30.4	-0.9
NVR	Nevrokopi	2.93	358	⇑iPN	Pn	14 20 59.0	+0.2
ALN	Alexandroupoli	2.95	32	ePn	Pn	14 20 59.0	0.0
ALN				eSn	Sn	14 21 32.9	-1.7
RDO	Rodhopi	2.98	23	⇑iPN	Pn	14 20 59.4	-0.1
VAM	Vamos	3.01	177	ePN	Pn	14 21 01.0	+1.1
FNA	Florina	3.10	320	ePn	Pn	14 21 01.4	+0.1
FNA				eSn	Sn	14 21 38.1	-0.6
MMB	Musomiste	3.17	357	i P	Pn	14 21 01.5	-0.8
IDI	Anoyia	3.21	167	Pn	Pn	14 21 00.8	-2.0
	2.1nm,0.3s,baz=356,slow=13,SNR=28						
IDI				Lg		14 21 52.1	
	17nm,0.3s,baz=250,slow=18,SNR=8.6						
RZN	Rozhen	3.32	10	i P	Pn	14 21 04.0	-0.3
NPS	Neapolis	3.41	157	ePN	Pn	14 21 05.1	-0.5
KDZ	Kurdzhali	3.41	18	i P	Pn	14 21 05.0	-0.7
KKB	Krupnik	3.51	349	i P	Pn	14 21 07.0	-0.1
GVD	Gavdhos	3.57	179	ePn	Pn	14 21 08.6	+0.7
GVD	Gavdhos	3.57	179	ePn	Pn	14 21 08.6	+0.7
XRY	Khrisi	3.79	158	ePN	Pn	14 21 11.0	-0.1
KARP	Karpathos	3.83	137	ePN	Pn	14 21 11.5	-0.1
SKO	Skopje	4.05	332	ePn	Pn	14 21 25.5	+11
VTS	Vitosha	4.21	352	i P	Pn	14 21 17.5	+0.5
TIP	Timpagrande	5.69	280	ePn	Pn	14 21 36.9	-1.0
TIP	Timpagrande	5.69	280	ePn	Pn	14 21 36.9	-1.1
SLUM		6.98	171	⇑P	Pn	14 21 54.2	-1.9
SLUM		6.98	171	P	Pn	14 21 54.2	-1.9
VOIR		7.06	6	⇑P	Pn	14 21 56.5	-0.7
VOIR		7.06	6	⇑P	Pn	14 21 56.5	-0.7
MLR	Muntele Rosu	7.22	11	Pn	Pn	14 21 59.6	+0.1
	1.2nm,0.3s,baz=253,slow=4.0,SNR=10						
MLR	Muntele Rosu	7.22	11	⇑P	Pn	14 21 59.2	-0.2
MLR	Muntele Rosu	7.22	11	⇑P	Pn	14 21 59.2	-0.3
BRTR	Keskin Array B	7.63	77	Pn	Pn	14 22 03.8	-1.4
	0.1nm,0.3s,baz=260,slow=15,SNR=3.3						
VRI	Vrincioaia	7.72	14	⇓P	Pn	14 22 07.3	+0.9
VRI	Vrincioaia	7.72	14	⇓P	Pn	14 22 07.3	+0.8
HMAT	Matruh	7.74	160	⇑P	Pn	14 22 03.0	-3.8
HMAT				S	Sn	14 23 25.3	-10
SWA2		9.23	172	⇑P	P	14 22 24.3	-3.1
SWA1		9.24	171	⇑P	P	14 22 24.1	-3.5
SWA1				S	Sn	14 24 02.6	-10
ESDC	Sonseca Array	21.71	282	P	P	14 25 06.0	+1.8
	0.7nm,0.5s,mb3.3,baz=98,slow=10,SNR=3.0						
HFS	Hagfors	22.70	347	P	P	14 25 16.2	+2.4
	2.7nm,0.8s,mb3.7,baz=135,slow=12,SNR=4.5						
EKA	Eskdalemuir Ar	24.87	322	P	P	14 25 38.7	+3.7
	2.8nm,0.8s,mb3.8,baz=114,slow=10,SNR=9.6						
DBIC	Dimbokro	40.98	227	P	P	14 27 54.9	-1.1
	2.5nm,0.6s,mb4.0,baz=18,slow=9.0,SNR=5.7						
MKAR	Makanchi Array	42.85	59	P	P	14 28 11.7	+0.8
	1.4nm,0.7s,mb3.8,baz=292,slow=6.5,SNR=6.7						
SONM	Songino Array	58.19	52	P	P	14 30 07.3	-0.2
	0.4nm,0.7s,mb3.6,baz=280,slow=8.8,SNR=3.1						
BOSA	Boshof	66.69	179	P	P	14 31 03.4	-1.1
	1.6nm,0.7s,mb4.2,baz=6.9,slow=6.9,SNR=4.8						
BOSA	Boshof	66.69	179	P	P	14 31 03.3	-1.1

NEIC ***24*** *14:28:39.1±1.7, 5.14S×145.50E, h39*^{km}*±17*^{km}*, mb4.1/4, Error ellipse: s-maj=12.9km s-min=11.0km az=129.0*
IDC ***24*** *14:28:40.1±3.7, 5.25S×145.62E, h53*^{km}*±37*^{km}*, mb3.8/8, mb1 4.1/11, mb1mx4.0/16, mbtmp4.2/11, ML3.9/3, MS3.9/3, Ms1 3.9/3, ms1mx3.3/22, Error ellipse: s-maj=28.9km s-min=21.5km az=83.0*
ISC 24 14:28:38.8±2.9**, 5.2S**±0.1×**145.6E**±0.1**, h57**^{km}±30^{km}**, n25,** σ**0**^{s}**68**/23**, mb4.0**/10**, MS4.3**/2**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.42	159	P	P	14 29 45.8	+0.7
	19nm,0.3s,baz=36,slow=5.7,SNR=55						
PMG				S	S	14 30 34.9	-1.0
	34nm,0.3s,baz=8.5,slow=18,SNR=3.8						
PMG	Port Moresby	4.42	159	ePn	P	14 29 45.4	+0.3
CTA	Charters Tower	14.77	177	eP	P	14 32 06.7	+0.7
	5.3nm,1.2s						
CTA	Charters Tower	14.77	177	P	P	14 32 07.1	+1.2
	0.7nm,0.3s,baz=348,slow=13,SNR=10						
CTA				LR	LR	14 37 30.6	
	comp=Z,110nm,18.6s,baz=156,slow=36						
CTAO	Charters Tower	14.77	177	eP	P	14 32 06.9	+1.0
	5.8nm,0.6s						
KAKA	Kakadu	14.94	239	eP	P	14 32 07.8	-0.3
	16nm,0.5s						
WRAB	Tennant Creek	18.23	216	eP	P	14 32 50.1	+0.5
	9.7nm,0.6s						
WB2	Warramunga Arr	18.24	216	eP	P	14 32 50.0	+0.3
WRA	Warramunga Arr	18.25	216	P	P	14 32 48.9	-0.8
	0.4nm,0.3s,baz=40,slow=12,SNR=15						
WRA				PcP	PcP	14 37 21.1	+0.6
	0.2nm,0.3s,baz=22,slow=1.8,SNR=5.8						
FITZ	Fitzroy Crossi	23.29	235	P	P	14 33 43.4	+0.9
	14nm,0.6s,mb4.6,baz=40,slow=5.5,SNR=29						
STKA	Stephens Creek	26.75	188	eP	P	14 34 17.4	+2.1
	4.1nm,0.9s,mb4.0						
STKA	Stephens Creek	26.75	188	P	P	14 34 14.5	-0.8
	3.3nm,0.8s,mb3.9,baz=342,slow=7.3,SNR=7.9						
MBWA	Marble Bar	29.64	235	eP	P	14 34 40.3	-1.0
	1.1nm,0.4s,mb3.9						
MJAR	Matsushiro Arr	42.13	351	P	P	14 36 27.2	-0.1
	0.9nm,0.4s,mb3.7,baz=185,slow=4.8,SNR=4.9						
KULM	Kulim	46.06	282	eP	P	14 36 58.5	-0.8
CMAR	Chiang Mai Arr	51.64	298	P	P	14 37 42.5	+0.2
	2.3nm,0.6s,mb4.3,baz=122,slow=5.6,SNR=10.0						
SONM	Songino Array	63.06	331	P	P	14 39 02.4	-0.2
	0.3nm,0.5s,mb3.7,baz=158,slow=7.8,SNR=3.3						
PPT	Papeete	64.47	107	LR	LR	15 03 02.9	
	comp=Z,283nm,19.1s,MS4.5,baz=171,slow=32						
MKAR	Makanchi Array	76.02	321	P	P	14 40 22.0	+0.2
	0.3nm,0.3s,mb3.6,baz=91,slow=8.4,SNR=3.7						
MKAR	Makanchi Array	76.02	321	P	P	14 40 22.0	+0.2
BVAR	Borovoye Array	85.33	324	P	P	14 41 11.0	+0.1
	0.7nm,0.7s,mb3.9,baz=124,slow=5.3,SNR=6.1						
ILAR	Eielson Array	85.35	23	P	P	14 41 10.5	-0.3
	1.5nm,0.8s,mb4.2,baz=259,slow=5.3,SNR=9.2						
ZRNK	Zerenda	86.12	324	eP	P	14 41 14.9	+0.2
	0.9nm,0.6s,mb4.2						
BBB	Bella Bella	91.84	38	LR	LR	15 15 04.2	
	comp=Z,71nm,20.8s,MS4.1,baz=46,slow=30						
DBIC	Dimbokro	150.56	274	PKPbc	PKPdf	14 48 27.6	+7.7
	3.8nm,0.6s,baz=17,slow=3.4,SNR=8.1						

MOS ***24*** *14:38:24.3±0.6, 18.98N×144.77E, h33*^{km}*, mb4.7/9, Error ellipse: s-maj=31.1km s-min=11.4km az=109.0*
NEIC ***24*** *14:38:24.9±0.4, 18.90N×144.76E, mb4.5/7, Error ellipse: s-maj=14.5km s-min=7.4km az=89.0*
IDC ***24*** *14:38:25.1±0.8, 18.93N×144.87E, h25*^{km}*±4*^{km}*, mb4.1/10, mb1 4.2/11, mb1mx4.0/22, mbtmp4.2/11, ML3.7/1, MS3.6/11, Ms1 3.7/11, ms1mx3.5/31, Error ellipse: s-maj=24.6km s-min=17.3km az=92.0*
BJI ***24*** *14:38:29.5, 19.76N×144.45E, h25*^{km}*, mB5.3, mb4.6, Ms5.2, Msz5.0*
ISC 24 14:38:23.2±0.5**, 18.93N**±0.07×**144.7E**±0.1**, h27**^{km}**, h27**^{km}±1.7^{km}**:pP-P, n44,** σ**0**^{s}**71**/34**, mb4.3**/22**, MS4.0**/11**, 1C-2D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	8.46	344	LR	LR	14 42 47.7	
	comp=Z,98nm,19.6s,baz=161,slow=31						
MJAR	Matsushiro Arr	18.46	343	P	P	14 42 38.9	-0.2
	0.2nm,0.3s,baz=156,slow=10,SNR=6.2						
MAT	Matsushiro	18.47	343	eP	P	14 42 39.0	-0.1
MAT	Matsushiro	18.47	343	P	P	14 42 38.7	-0.4
JNU	Nakatsue	18.81	321	LR	LR	14 49 19.7	
	comp=Z,74nm,19.2s,baz=358,slow=35						
NJ2	Nanjing	26.69	304	eP	P	14 44 01.4	-0.8
NJ2				AP	pP	14 44 10.8	+0.8
NJ2				XP	sP	14 44 14.8	+1.3
NJ2				PP	PP	14 44 45.8	-1.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,680nm,4.4s						
NJ2				LR	LR		
	comp=N,8µm,21.8s,MS5.5						
NJ2				LR	LR		
	comp=E,11µm,21.5s,MS5.5						
NJ2				LR	LR		
	comp=Z,11µm,22.0s,MS5.4						
HNR	Honiara	31.92	151	LR	LR	14 55 51.5	
	comp=Z,100nm,20.6s,MS3.5,baz=345,slow=33						
KLR	Kul'dur	31.99	344	eP	P	14 44 45.8	-3.6
CTA	Charters Tower	38.80	178	LR	LR	14 58 03.4	
	comp=Z,116nm,21.9s,MS3.7,baz=267,slow=30						
WRAB	Tennant Creek	39.94	195	eP	P	14 45 56.6	-0.6
	comp=Z,8.0nm,0.8s,mb4.5						
WB2	Warramunga Arr	39.95	195	eP	P	14 45 57.2	-0.1
WRA	Warramunga Arr	39.95	195	P	P	14 45 57.0	-0.3
	comp=Z,2.9nm,0.7s,mb4.1,baz=18,slow=9.4,SNR=15						
WRA				PcP	PcP	14 48 03.3	+0.3
	comp=Z,1.5nm,0.8s,baz=5.4,slow=3.4,SNR=10						
ULN	Ulaanbaatar	42.03	322	i P	P	14 46 13.9	-0.2
ULN	Ulaanbaatar	42.03	322	eP	P	14 46 14.4	+0.3
	comp=Z,1.9nm,0.9s,mb3.7						
SONM	Songino Array	42.40	322	P	P	14 46 17.8	+0.7
	comp=Z,1.5nm,1.0s,mb3.6,baz=129,slow=7.9,SNR=8.0						
CMAR	Chiang Mai Arr	43.29	277	LR	LR	15 02 58.7	
	comp=Z,114nm,18.4s,MS3.8,baz=300,slow=34						
YAK	Yakutsk	44.33	350	⇑eP	P	14 46 32.2	-0.4
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
YAK				MLR	MLR		
	comp=Z,300nm,19.0s,MS4.2						
YAK	Yakutsk	44.33	350	eP	P	14 46 31.9	-0.7
	comp=Z,15nm,0.8s,mb4.8						
ZAK	Zakamensk	45.42	323	eP	P	14 46 41.8	+0.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
LSA	Lhasa	49.62	293	P	P	14 47 15.8	+1.2
	comp=Z,3.4nm,0.6s,mb4.5						
STKA	Stephens Creek	50.60	183	eP	P	14 47 21.5	-0.6
	comp=Z,3.8nm,0.8s,mb4.4						
STKA	Stephens Creek	50.60	183	P	P	14 47 22.3	+0.2
	comp=Z,4.4nm,0.8s,mb4.5,baz=344,slow=7.6,SNR=7.1						
BILL	Bilibino	50.95	10	i P	P	14 47 24.5	+0.3
BILL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
BILL	Bilibino	50.95	10	eP	P	14 47 24.6	+0.4
	comp=Z,6.3nm,0.9s,mb4.5						
TIXI	Tiksi	53.54	354	⇓eP	P	14 47 42.4	-1.2
MKAR	Makanchi Array	57.65	314	i P	P	14 48 14.0	+0.4
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR	Makanchi Array	57.65	314	P	P	14 48 14.4	+0.8
	comp=Z,3.6nm,0.7s,mb4.5,baz=89,slow=9.2,SNR=22						
MKAR				pP	pP	14 48 22.6	+0.8
	comp=Z,1.6nm,0.7s,baz=88,slow=9.0,SNR=5.8						
ILAR	Eielson Array	63.84	26	P	P	14 48 54.2	-1.1
	comp=Z,1.6nm,0.8s,mb4.1,baz=258,slow=5.3,SNR=19						
ILAR				pP	pP	14 49 02.2	-1.4
	comp=Z,1.8nm,0.8s,baz=258,slow=4.7,SNR=10						
VOSK	Vostochnaya	65.36	320	P	P	14 49 04.9	-0.4
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
BVAR	Borovoye Array	65.72	320	P	P	14 49 08.0	+0.4
	comp=Z,13nm,0.7s,mb5.1,baz=90,slow=7.4,SNR=89						
KKAR	Karatay Array	65.92	309	i P	P	14 49 10.1	+1.0
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ZRNK	Zerenda	66.56	320	P	P	14 49 13.1	+0.1
ZRNK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
ZRNK	Zerenda	66.56	320	eP	P	14 49 12.6	-0.4
	comp=Z,10nm,1.0s,mb4.8						
INK	Inuvik	69.52	23	P	P	14 49 31.6	+0.4
	comp=Z,2.4nm,1.0s,mb4.1,baz=303,slow=2.7,SNR=3.2						
ARU	Arti	72.35	324	⇓iP	P	14 49 48.2	-0.3
ARU				e		14 52 29.9	
ARU				ePPP	PPP	14 54 11.9	-1.7
ARU				eS	S	14 59 09.7	+0.9
ARU				eSS	SS	15 03 46.8	-2.4
ARU				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.3						
AB31	Akbulak array	72.55	317	i P	P	14 49 49.7	-0.1
AB31				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
PPT	Papeete	74.03	115	LR	LR	15 16 47.5	
	comp=Z,114nm,21.9s,MS4.1,baz=320,slow=31						
YKA	Yellowknife Ar	78.21	28	P	P	14 50 22.1	+0.4
	comp=Z,0.8nm,0.6s,mb3.8,baz=290,slow=5.3,SNR=4.3						
YKA				pP	pP	14 50 29.5	-0.6
	comp=Z,1.2nm,0.7s,baz=295,slow=5.9,SNR=4.6						
NVAR	Mina Array Bea	83.71	52	P	P	14 50 53.1	+1.8
	comp=Z,1.2nm,0.5s,mb4.3,baz=263,slow=6.1,SNR=5.9						
FINES	FINESS Array B	86.30	335	P	P	14 51 03.4	-0.3
	comp=Z,1.1nm,0.7s,mb4.2,baz=72,slow=6.0,SNR=5.6						
FINES				LR	LR	15 30 20.1	
	comp=Z,42nm,18.6s,MS3.9,baz=207,slow=36						
PDAR	Pinedale Array	88.31	45	LR	LR	15 29 48.4	
	comp=Z,51nm,18.1s,MS4.0,baz=250,slow=35						
NOA	NORSAR Array B	92.04	339	LR	LR	15 34 53.6	
	comp=Z,20nm,21.9s,MS3.5,baz=115,slow=37						
TXAR	Lajitas Array	98.46	55	LR	LR	15 28 44.5	
	comp=Z,44nm,20.8s,MS3.9,slow=31						
GERES	GERESS Array B	99.70	330	LR	LR	15 39 19.8	
	comp=Z,48nm,20.9s,MS4.0,baz=169,slow=37						

JMA ***24*** *14:42:29.0±0.5, 32.16N×137.87E, h387*^{km}*, M3.0*
NEIC ***24*** *14:42:30.8±1.1, 32.34N×137.55E, h381*^{km}*±17*^{km}*, Error ellipse: s-maj=55.3km s-min=18.7km az=75.0*
IDC ***24*** *14:42:31.5±1.4, 32.33N×137.43E, h385*^{km}*±26*^{km}*, mb2.9/5, mb1 3.0/7, mb1mx2.8/23, mbtmp3.6/7, Error ellipse: s-maj=62.1km s-min=19.4km az=73.0*
ISC 24 14:42:30.4±0.8**, 32.46N**±0.09×**137.8E**±0.1**, h400**^{km}±7^{km}**, n21,** σ**1**^{s}**10**/27**, mb3.1**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.82	68	P	P	14 43 27.6	+1.9
	6.0nm,0.3s,baz=70,slow=22,SNR=3.7						
JHJ				S	S	14 44 12.4	+3.4
	7.0nm,0.3s,baz=77,slow=23,SNR=4.3						
JWZ	Kozaga	2.03	302	P	P	14 43 25.8	-1.1
JOD2	Odawara 2	3.01	21	eS	S	14 44 25.3	+1.2
JYN	Shimob	3.10	12	P	P	14 43 36.0	+1.2
JGM	Miyama	3.35	345	P	P	14 43 38.3	+1.3
JWT	Wachi	3.44	326	P	P	14 43 37.3	-0.4
BSO1	Boso 1	3.46	50	P	P	14 43 36.9	-1.1
BSO1				eS	S	14 44 30.0	-1.1
JRY	Ryogami san	3.67	15	P	P	14 43 40.6	+0.7
JRY				eS	S	14 44 34.5	0.0
MAJO	Matsushiro	4.09	5	ePn	P	14 43 43.8	-0.1
MAT	Matsushiro	4.09	5	eP	P	14 43 44.0	+0.1
MAT	Matsushiro	4.09	5	P	P	14 43 44.0	+0.1
MAT				S	S	14 44 42.8	+1.3
MAT	Matsushiro	4.09	5	P	P	14 43 44.1	+0.2
MAT				eS	S	14 44 42.7	+1.2
MJAR	Matsushiro Arr	4.09	5	P	P	14 43 43.9	+0.1
	0.9nm,0.3s,baz=188,slow=11,SNR=9.5						
JAG	Ashikaga	4.20	19	P	P	14 43 44.1	-0.8
JAG				eS	S	14 44 41.1	-2.3
JTO	Tosashimizu	4.21	277	P	P	14 43 43.5	-1.5
JMK	Ichinoseki	7.06	22	eS	S	14 45 36.9	-1.6
MKAR	Makanchi Array	44.17	306	P	P	14 50 02.6	-0.2
	0.4nm,0.4s,mb3.1,baz=88,slow=8.4,SNR=4.0						
BVAR	Borovoye Array	51.53	315	P	P	14 50 59.0	+0.2
	0.3nm,0.5s,mb2.8,baz=90,slow=7.2,SNR=2.4						
WRA	Warramunga Arr	52.20	184	P	P	14 51 03.4	-0.9
	0.3nm,0.8s,mb2.6,baz=0.1,slow=7.6,SNR=7.1						
ARCES	ARCESS Array B	67.21	339	P	P	14 52 45.2	+1.1
	0.9nm,0.7s,mb3.5,baz=49,slow=8.3,SNR=3.6						
FINES	FINESS Array B	71.44	332	P	P	14 53 10.3	+0.6
	0.9nm,0.5s,mb3.5,baz=56,slow=5.0,SNR=5.3						

ATH ***24*** *14:46:35.0, 38.38N×23.95E, h27*^{km}*±2*^{km}*, MD3.2/10, ML2.9*
NEIC ***24*** *14:46:35.0, 38.38N×23.95E, h28*^{km}*, ML2.9(ATH), After ATH.*
CSEM ***24*** *14:46:35.7±0.1, 38.38N×23.97E, h12*^{km}*, ML2.9, Error ellipse: s-maj=3.6km s-min=1.7km az=97.0*
THE ***24*** *14:46:38.6, 38.51N×24.10E, h20*^{km}*, ML3.1*
ISC 24 14:46:35.4±0.7**, 38.34N**±0.03×**23.97E**±0.09**, h20**^{km}±7^{km}**, n19,** σ**1**^{s}**06**/26**, 3C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAR	Parnis Oros	0.27	224	ePB	Pb	14 46 41.8	+0.2
PTL	Penteli	0.31	196	ePB	Pb	14 46 42.5	+0.3
ATH	Athens Observa	0.42	209	⇑iPB	Pb	14 46 44.5	+0.4
ATH				eSB	Sb	14 46 50.8	+0.8
ATH	Athens Observa	0.42	209	⇑iPb	Pb	14 46 44.5	+0.4
ATH				eSb	Sb	14 46 50.6	+0.6
NSAL	Nisos Salamina	0.59	223	ePN	Pn	14 46 47.5	-1.0
MGER	Gerania Oros	0.67	238	ePN	Pn	14 46 48.5	-1.1
NAIG	Nisos Aigina	0.70	213	ePN	Pn	14 46 49.5	-0.6
LKR	Lokris	0.82	292	ePN	Pn	14 46 50.3	-1.5
AOS	Alonnisos	0.83	355	ePg	Pb	14 46 51.2	+0.2
AOS				eSg	Sb	14 47 01.9	+0.3
NEO	Neokhori	1.12	329	⇑iPN	Pn	14 46 56.4	+0.3
NEO				eSN	Sn	14 47 10.8	-0.3
XOR	Xorichti	1.19	329	ePg	Pn	14 46 57.4	+0.3
XOR				eSg	Sb	14 47 12.2	+0.1
XOR	Xorichti	1.19	329	ePg	Pn	14 46 57.3	+0.2
XOR				eSg	Sb	14 47 12.2	+0.1
AGG	Agios Georgios	1.45	298	ePg	Pn	14 47 03.1	+2.3
AGG				eSg	Sn	14 47 22.2	+2.7
PAIG	Paliouri	1.60	352	ePg	Pn	14 47 02.8	-0.1
LIA	Limnos Island	1.81	31	ePN	Pn	14 47 06.2	+0.2
VLI	Veliai	1.82	207	ePB	Pb	14 47 06.7	-1.2
OUR	Ouranopolis	1.99	0	ePb	Pb	14 47 08.3	-2.4
LIT	Litokhoron	2.10	327	ePn	Pn	14 47 09.9	-0.2
THR5	Thira Island,	2.21	150	ePn	Pn	14 47 14.5	+2.8

IDC 24 15:13:25.2±5.6**, 39.11N**×**110.57E, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.3**/19**, mbtmp3.4**/3**, ML2.9**/1**, Error ellipse: s-maj=117.1km s-min=25.3km az=85.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	9.23	342	Pn	P	15 15 39.9	-2.7
	0.1nm,0.3s,baz=161,slow=12,SNR=6.4						
SONM				Lg		15 18 16.8	
	0.2nm,0.3s,baz=163,slow=30,SNR=7.9						
MKAR	Makanchi Array	21.99	300	P	P	15 18 21.3	-1.2
	0.9nm,0.8s,baz=96,slow=12,SNR=6.4						
CMAR	Chiang Mai Arr	22.92	209	P	P	15 18 30.4	-1.4
	2.1nm,0.8s,baz=13,slow=9.4,SNR=8.6						

TRN 24 15:38:03.3, 13.88N×**59.08W, h22**^{km}**, MD3.7, M3.5**(FDF)**, M4.0**(FDF)**, 2D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIM	Bigot	2.03	289	⇓iP	Pn	15 38 37.3	+0.4
BIM				i S	Sn	15 39 02.6	+0.8

FDF	Fort de France	2.18	293	⇓eP	Pn	15 38 39.6	+0.7
FDF				eS	Sn	15 39 06.4	+0.8
BBL	Barber's Block	2.83	306	eP	Pn	15 38 44.6	-3.8
MGG	Marie-Galante	2.96	314	eP	Pn	15 38 50.9	+0.7
GRW	Mount Saint Ca	3.04	236	eP	Pn	15 38 51.5	+0.3
GRW				eS	Sn	15 39 27.0	-0.3
DEG	La Desirade	3.08	322	eP	Pn	15 38 51.6	-0.3
DEG				eS	Sn	15 39 27.8	-0.7
SCG	Saint Claude	3.30	311	eP	Pn	15 38 55.8	+0.8
SEG	Port Louis	3.43	317	eP	Pn	15 38 57.9	+1.1

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*CSEM **24** 15:41:48.6±0.1, 36.59N×5.40E, h5^{km}, ML3.8, Error ellipse: s-maj=3.9km s-min=2.8km az=29.0*
*CRAAG **24** 15:41:49.7, 36.46N×5.42E, Ml3.8*
*NEIC **24** 15:41:50.2±0.3, 36.54N×5.39E, h10^{km}, ML3.8(ALG), Error ellipse: s-maj=5.5km s-min=3.5km az=199.0*
*MDD **24** 15:41:50.6±0.4, 36.55N×5.38E, mb3.1/5, Error ellipse: s-maj=5.9km s-min=4.0km az=12.0, PRXIMO*
ISC 24 15:41:49.6±1.1**, 36.63N**±0.06×**5.37E**±0.05**, h12**^{km}±11^{km}**, n25, σ1^{s}11**/32**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.42	102	P	Pg	15 41 57.7	-0.6
SET	Setif	0.43	176	P	Pg	15 41 57.0	-1.5
CKHR	Kef el Ahmar	0.62	169	P	Pb	15 42 00.3	-1.7
AKF	Akfadou	0.64	270	P	Pb	15 42 03.1	+0.8
CASM	Ain Smara	0.98	112	P	Pb	15 42 08.0	0.0
CTEI	Djebel Teioual	1.01	124	P	Pb	15 42 08.0	-0.6
ATAF	Djebel Tarf	1.16	230	P	Pb	15 42 11.7	+0.6
CAEH	'Ain El Ouahch	1.20	82	P	Pb	15 42 13.3	+1.5
AKET	Djebel Ketaf	1.33	244	P	Pb	15 42 16.4	+2.3
ADJB	Djebel Djouab	1.63	254	P	Pn	15 42 18.7	+0.4
CMAH	Djebel Manchou	1.65	90	P	Pn	15 42 19.6	+0.9
ABA	Alger-Bouzarea	1.88	276	P	Pn	15 42 21.5	-0.4
ETOS	Mallorca	3.72	328	P	Pn	15 42 48.4	+0.2
ETOS				S	Sn	15 43 29.2	-3.2
ETOS	Mallorca	3.72	328	Pn	Pn	15 42 48.4	+0.2
	0.3nm,0.1s,SNR=14						
ETOS				Sn	Sn	15 43 29.9	-2.5
	3.2nm,0.3s,SNR=7.9						
ETOS	Mallorca	3.72	328	P	Pn	15 42 48.4	+0.2
	13nm,0.5s,SNR=14						
ETOS				S	Sn	15 43 29.2	-3.2
	3.2nm,0.3s,SNR=7.9						
EIBI	Ibiza	3.98	308	Pn	Pn	15 42 52.6	+0.8
	0.1nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	15 43 36.3	-2.7
	5.2nm,0.4s,SNR=7.9						
EIBI	Ibiza	3.98	308	P	Pn	15 42 52.7	+0.8
EIBI				S	Sn	15 43 36.3	-2.7
	5.2nm,0.4s,SNR=7.9						
EBEN	Beniarda	4.89	297	Pn	Pn	15 43 04.8	-0.1
	0.4nm,0.3s,SNR=7.9						
EPOB	Poblet	5.78	326	Pn	Pn	15 43 17.2	-0.1
	0.2nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	15 44 19.1	-5.2
	0.7nm,0.1s,SNR=7.9						
EPOB	Poblet	5.78	326	P	Pn	15 43 17.2	-0.1
	0.4nm,0.1s,SNR=7.9						
ETOB	Tobarra	5.84	292	Pn	Pn	15 43 18.2	0.0
	0.0nm,0.2s,SNR=7.9						
ETOB	Tobarra	5.84	292	P	Pn	15 43 18.2	0.0
	1.6nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	5.90	311	Pn	Pn	15 43 19.6	+0.5
	1.1nm,0.2s,SNR=7.9						
EMIR	Miracle	6.06	332	Pn	Pn	15 43 21.9	+0.6
	0.9nm,0.1s,SNR=7.9						
EMIR				Sn	Sn	15 44 26.7	-4.6
	2.6nm,0.3s,SNR=7.9						
EMIR	Miracle	6.06	332	P	Pn	15 43 21.9	+0.6
	0.9nm,0.1s,SNR=7.9						

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*ROM **24** 16:20:57.1±0.1, 46.62N×10.16E, h10^{km}±1^{km}, Md2.7/7, Ml2.4/3, Error ellipse: s-maj=2.9km s-min=0.9km az=42.0*
*NEIC **24** 16:20:57.5, 46.60N×10.10E, h8^{km}, ML2.9(VIE), ML2.9(SZGRF), ML2.7(LDG), ML2.5(ZUR), ML2.4(ROM), After ZUR.*
*ZUR **24** 16:20:57.5, 46.62N×10.14E, h8^{km}, ML2.5/9*
*CSEM **24** 16:20:57.4±0.1, 46.59N×10.15E, h12^{km}, ML2.9/14, Error ellipse: s-maj=1.1km s-min=0.9km az=178.0*
*LDG **24** 16:20:59.9±0.3, 46.60N×10.23E, h10^{km}, Ml2.7/12, Error ellipse: s-maj=6.8km s-min=4.8km az=82.0*
ISC 24 16:20:56.9±0.2**, 46.62N**±0.02×**10.15E**±0.02**, h11**^{km}±2^{km}**, n49, σ1^{s}25**/90**, 9C-3D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUORN	Ofenpass	0.08	90	⇑iPg	Pg	16 21 00.2	+0.8
FUORN				i Sg	Sg	16 21 01.5	+0.5
BRMO	Bormio	0.21	133	Pg	Pg	16 21 02.2	+0.7
BRMO				Sg	Sg	16 21 05.7	+1.1
	359nm,0.1s						
BERNI	Berninapass	0.23	203	⇑iPg	Pg	16 21 02.7	+0.9
BERNI				i Sg	Sg	16 21 06.0	+0.9
DAVOX	Davos	0.25	311	⇓ePg	Pg	16 21 02.8	+0.6
DAVOX				Sg	Sg	16 21 06.9	+1.2
DAVOX	Davos	0.25	311	⇓iPg	Pg	16 21 02.7	+0.5
VDL	Val di Lei	0.49	254	⇑iPg	Pg	16 21 07.3	+0.4
VDL				eSg	Sg	16 21 14.4	+0.9
PLONS	Plons	0.68	309	ePg	Pg	16 21 10.9	+0.2
DAVA	Damuels	0.69	345	⇑iPG	Pg	16 21 11.4	+0.5
DAVA				i SG	Sg	16 21 21.0	+0.8
	88nm,0.3s						
APPI	Appiano	0.76	100	Pg	Pg	16 21 12.5	+0.3
APPI				Sg	Sg	16 21 23.3	+1.0
	216nm,0.2s						
LIENZ	Alp Oberkamor	0.81	327	ePg	Pg	16 21 14.1	+0.8
LLS	Linth-Limmern	0.82	287	ePg	Pg	16 21 13.0	-0.4
MDI	Monti di Nese	0.90	200	Pg	Pg	16 21 15.2	+0.3
MDI				Sg	Sg	16 21 28.1	+1.1
	97nm,0.2s						
SQTA	Sankt Quirin	0.94	50	⇑iPG	Pg	16 21 15.5	-0.3
SQTA				i SG	Sg	16 21 28.5	+0.1
	40nm,0.2s						
MUGIO	Muggio	1.04	228	ePg	Pg	16 21 17.2	-0.6
FUSIO	Fusio	1.04	261	ePg	Pg	16 21 17.1	-0.7
SCE	Schlegeis	1.15	68	⇑iPg	Pg	16 21 20.1	+0.1
SCE				eSg	Sg	16 21 34.0	-1.3
CTI	Castel Tesino	1.19	118	Pg	Pg	16 21 20.8	+0.1
CTI				Sg	Sg	16 21 37.0	+0.5
	25nm,0.2s						
WATA	Walderalm	1.21	53	⇓iPG	Pg	16 21 20.7	-0.5
WATA				i SG	Sg	16 21 37.6	+0.3
	27nm,0.3s						
VAI	Varese	1.22	232	Pg	Pg	16 21 20.9	-0.5
	33nm,0.3s						
FAU	Forcella Aurin	1.32	106	⇑ePg	Pg	16 21 22.9	-0.5
FAU				eSg	Sg	16 21 39.9	-1.2
HASLI	Hasliberg	1.38	276	eP*	Pb	16 21 23.6	+1.2
MMK	Mattmark	1.62	250	Pg	Pg	16 21 27.2	-2.1
FUR	Furstenfeldbru	1.73	26	ePn	Pn	16 21 31.1	+3.9
FUR				eSg	Sg	16 21 54.8	+0.4
CSMI	Casera Mimoias	1.73	93	ePg	Pg	16 21 30.1	-1.4
CSMI				eSg	Sg	16 21 53.1	-1.5
ORO	Oropa	1.81	237	Pg	Pg	16 21 31.3	-1.8
	22nm,0.2s						
BFO	Black Forest	2.11	325	ePn	Pn	16 21 35.2	+2.5
BFO				eSg	Sg	16 22 00.7	-6.6
KBA	Koelnbreinsper	2.24	77	⇑iPG	Pg	16 21 40.1	-1.6
KBA				i SG	Sg	16 22 10.3	-1.2
	11nm,0.3s						
HINF	Hinteralfeld	2.55	299	ePn	Pn	16 21 40.8	+1.8
HINF				eSn	Sn	16 22 10.2	-0.1
HINF				eSg	Sg	16 22 19.5	-2.3
	7.7nm,0.3s						
LPG	La Plagne	2.62	246	ePn	Pn	16 21 42.0	+2.0
LPG				eSn	Sn	16 22 11.3	-0.9
	6.7nm,0.4s						
LPL	La Plagne	2.62	246	ePn	Pn	16 21 41.7	+1.6
LPL				eSn	Sn	16 22 10.5	-1.8
	7.8nm,0.4s						
CDF	Champ du Feu	2.65	314	ePn	Pn	16 21 42.1	+1.7
CDF				eSn	Sn	16 22 12.6	-0.3
CDF				eSg	Sg	16 22 24.6	-0.6
	13nm,0.4s						
VOY	Vojsko	2.66	101	ePn	Pn	16 21 43.5	+2.9
VOY				eSn	Sn	16 22 21.5	+8.4
CABF	La Chapelle	2.80	271	ePn	Pn	16 21 44.8	+2.2
CABF				eSn	Sn	16 22 15.1	-1.7
CABF				eSg	Sg	16 22 27.4	-2.9
	11nm,0.5s						
HAU	Haudompre	2.94	300	ePn	Pn	16 21 46.6	+2.1
HAU				eSg	Sg	16 22 32.9	-1.8
	8.4nm,0.3s						
MBDF	Montbardon	3.03	233	ePn	Pn	16 21 46.2	+0.3
MBDF				eSn	Sn	16 22 20.6	-2.0
	9.1nm,0.5s						
MOA	Molln	3.06	65	⇑iPG	Pg	16 21 55.9	-2.2
MOA				i SG	Sg	16 22 37.9	-1.0
	4.2nm,0.3s						
WET	Wettzell	3.12	35	ePn	Pn	16 21 48.6	+1.4
WET				eSn	Sn	16 22 25.6	+0.7
GRA1	Grafenberg Arr	3.16	13	ePn	Pn	16 21 49.3	+1.6
GRA1				eSg	Sg	16 22 38.8	-3.3
GRF	Grafenberg Arr	3.16	13	ePn	Pn	16 21 49.3	+1.6
GRF				eSg	Sg	16 22 38.8	-3.3
SBF	Sospel	3.36	216	ePn	Pn	16 21 51.5	+1.0
SBF				eSn	Sn	16 22 28.0	-2.9
	4.0nm,0.2s						
KHC	Kasperske Hory	3.41	41	ePN	Pn	16 21 52.0	+0.7
KHC				ePG	Pg	16 22 03.0	-2.0
KHC				eSN	Sn	16 22 33.3	+1.1
KHC				eSG	Sg	16 22 45.8	-4.7
ORIF	Oris-en-Rattie	3.44	242	ePn	Pn	16 21 52.3	+0.6
ORIF				eSn	Sn	16 22 30.9	-2.0
	5.8nm,0.5s						
NKC	Novy Kostel	3.92	22	ePG	Pg	16 22 14.2	-1.1
NKC				eSN	Sn	16 22 44.3	-0.9
NKC				eSG	Sg	16 23 03.0	-4.7
FRF	La Foret Royal	3.94	220	ePn	Pn	16 21 59.5	+0.7
FRF				eSn	Sn	16 22 41.9	-3.7
	2.5nm,0.3s						
PGF	Pioggiola	4.15	192	ePn	Pn	16 22 01.9	+0.1
PGF				eSn	Sn	16 22 47.5	-3.5
	0.5nm,0.2s						
LMR	La Mourre	4.18	219	ePn	Pn	16 22 02.2	0.0
VIVF	Saint-Julien-l	4.22	247	ePn	Pn	16 22 03.0	+0.2
LOR	Lormes	4.36	281	ePn	Pn	16 22 06.0	+1.2
DPC	Dobruska-Polom	5.54	45	eSG	Sg	16 23 55.7	-5.9

GUC 24 16:27:04.7±0.5**, 19.93S×69.25W, h103**^{km}±2^{km}**, MD3.3, ML3.8, Northern Chile**

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*IDC **24** 16:28:02.0±3.2, 22.03S×178.70W, mb4.3/2, mb1 4.5/2, mb1mx3.9/14, mbtmp4.3/2, MS4.2/1, Ms1 4.2/1, ms1mx2.9/26, Error ellipse: s-maj=172.1km s-min=49.3km az=151.0*
NEIC 24 16:29:03.8±1.4**, 23.75S×180.00W, h550**^{km}**, mb4.6**/5**, 3D, Error ellipse: s-maj=76.0km s-min=23.0km az=162.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	31.48	270	⇓iP	P	16 34 41.8	-0.4
	7.7nm,0.4s						
CTAO	Charters Tower	31.48	270	eP	P	16 34 41.4	-0.8
	9.3nm,0.5s						
PMG	Port Moresby	34.45	289	LR	LR	16 45 44.7	
	comp=Z,354nm,19.0s,baz=219,slow=30						
STKA	Stephens Creek	34.78	248	P	P	16 35 08.7	-1.1
	0.7nm,0.3s,baz=100,slow=11,SNR=7.0						
WB2	Warramunga Arr	42.41	266	⇓iP	P	16 36 10.2	-1.6
WRAB	Tennant Creek	42.41	266	eP	P	16 36 10.0	-1.8
	5.3nm,0.3s						
WRA	Warramunga Arr	42.42	266	P	P	16 36 10.3	-1.6
	4.7nm,0.3s,baz=96,slow=8.3,SNR=318						
KAKA	Kakadu	46.30	275	⇓iP	P	16 36 40.4	-1.6
	3.3nm,0.2s						
FITZ	Fitzroy Crossi	50.84	265	eP	P	16 37 15.3	-0.7
	4.6nm,0.7s						
ARCES	ARCESS Array B	131.74	348	PKP	PKPdf	16 47 13.4	-0.2
	1.9nm,0.9s,baz=34,slow=3.3,SNR=4.0						
AKASG	Malin Array Be	144.85	327	PKP	PKPdf	16 47 38.5	+0.8
	0.8nm,0.5s,baz=47,slow=3.7,SNR=4.4						

GUC 24 16:31:10.9±0.3**, 20.16S×69.21W, h102**^{km}±1^{km}**, ML4.2, Northern Chile**

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*IDC **24** 16:46:47.9±0.5, 57.63S×25.35W, mb4.4/14, mb1 4.4/15, mb1mx4.4/18, mbtmp4.4/15, ML4.2/1, MS4.0/16, Ms1 4.0/16, ms1mx4.0/17, Error ellipse: s-maj=18.9km s-min=13.8km az=20.0*
*NEIC **24** 16:46:53.3±1.2, 57.61S×25.28W, h37^{km}±11^{km}, mb4.7/13, MS4.2/8, Error ellipse: s-maj=8.5km s-min=6.0km az=207.0*
*BJI **24** 16:46:53.2, 57.60S×25.30W, h36^{km}, mB4.6, Ms5.1, Msz4.8*
ISC 24 16:46:51.6±3.1**, 57.60S**±0.09×**25.3W**±0.1**, h38**^{km}±30^{km}**, n78, σ0^{s}95**/35**, mb4.5**/20**, MS4.1**/20**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	14.97	158	P	P	16 50 23.1	+1.4
VNA3	Neumayer Olymp	15.18	161	P	P	16 50 24.2	-0.3
VNA2	Neumayer--Watz	15.36	158	P	P	16 50 26.7	-0.1
SNAA	Sanae	16.90	155	Pn	P	16 50 46.3	0.0
	0.9nm,0.3s,baz=324,slow=14,SNR=89						
SNAA				LR	LR	16 55 40.7	
	comp=Z,166nm,21.4s,baz=231,slow=32						
SNAA	Sanae	16.90	155	eP	P	16 50 45.7	-0.6
	12nm,0.6s						
PMSA	Palmer Station	19.73	233	eP	P	16 51 19.8	-0.6
	27nm,0.8s						
USHA	Ushuaia	23.85	258	P	P	16 52 02.8	+1.1
	15nm,0.7s,mb4.5,baz=82,slow=9.5,SNR=14						
USHA				LR	LR	16 59 08.6	
	comp=Z,924nm,21.0s,MS4.2,baz=48,slow=31						
TRQA	Tornquist	30.89	293	eP	P	16 53 05.1	-1.3
	3.0nm,0.7s,mb4.2						
TRQA				LR	LR		
	comp=Z,236nm,19.0s,MS3.9						
QSPA	South Pole Qui	32.65	180	eP	P	16 53 21.3	-0.2
	comp=Z,19nm,1.0s,mb5.0						
PLCA	Paso Flores	33.30	281	P	P	16 53 26.4	-1.1
	comp=Z,4.4nm,0.8s,mb4.5,baz=137,slow=8.7,SNR=9.9						
PLCA				PcP	PcP	16 56 08.6	-0.5
	comp=Z,0.7nm,0.5s,baz=288,slow=0.8,SNR=3.2						
PLCA				LR	LR	17 07 18.9	
	comp=Z,252nm,18.9s,MS4.0,baz=128,slow=37						
PLCA	Paso Flores	33.30	281	eP	P	16 53 26.5	-1.0
	comp=Z,11nm,1.3s,mb4.6						
PLCA				LR	LR		
	comp=Z,308nm,21.0s,MS4.0						
MAW	Mawson	38.29	142	P	P	16 54 08.6	-0.8
	comp=Z,2.0nm,0.8s,mb3.9,baz=235,slow=10,SNR=5.3						
MAW				LR	LR	17 07 45.9	
	comp=Z,168nm,21.1s,MS3.8,baz=110,slow=33						
CPUP	Villa Florida	38.61	310	P	P	16 54 13.0	+0.5
	comp=Z,4.7nm,0.5s,mb4.5,baz=179,slow=9.5,SNR=24						
CPUP				PcP	PcP	16 56 24.8	-0.2
	comp=Z,3.1nm,0.6s,baz=146,slow=3.2,SNR=6.2						
CPUP				LR	LR	17 08 58.5	
	comp=Z,86nm,20.5s,MS3.6,baz=1.1,slow=34						
CPUP	Villa Florida	38.61	310	eP	P	16 54 12.6	0.0
	comp=Z,5.3nm,0.5s,mb4.5						
CPUP				ePcP	PcP	16 56 24.7	-0.3
CPUP				LR	LR		
	comp=Z,107nm,20.0s,MS3.7						
CFAA	Coronel Fontan	39.12	293	P	P	16 54 14.8	-1.9
	comp=Z,0.5nm,0.5s,mb3.5,baz=136,slow=7.1,SNR=8.7						
CFAA				PcP	PcP	16 56 26.6	0.0
	comp=Z,0.8nm,0.6s,baz=152,slow=1.8,SNR=7.7						
CFAA	Coronel Fontan	39.12	293	P	P	16 54 14.8	-2.0
CFAA				PcP	PcP	16 56 26.6	0.0
VNDA	Vanda	45.07	182	P	P	16 55 05.5	+0.7
	comp=Z,10nm,0.8s,mb4.7,baz=180,slow=6.5,SNR=31						
VNDA				LR	LR	17 10 59.3	
	comp=Z,140nm,21.8s,MS3.9,baz=187,slow=32						
VNDA	Vanda	45.07	182	eP	P	16 55 05.2	+0.4
	comp=Z,8.9nm,0.8s,mb4.7						
BAO	Brasilia Array	45.23	328	P	P	16 55 09.5	+2.7
BDFB	Brasilia	45.23	328	P	P	16 55 07.1	+0.3
	comp=Z,8.5nm,0.8s,mb4.6,baz=134,slow=6.3,SNR=9.4						
BDFB				LR	LR	17 11 28.4	
	comp=Z,187nm,20.9s,MS4.0,baz=190,slow=33						
BOSA	Boshof	45.39	72	P	P	16 55 09.4	+1.4
	comp=Z,3.2nm,0.9s,mb4.2,baz=192,slow=5.1,SNR=5.9						
BOSA				LR	LR	17 10 24.7	
	comp=Z,285nm,18.5s,MS4.2,baz=207,slow=31						
BOSA	Boshof	45.39	72	eP	P	16 55 08.6	+0.7
	comp=Z,9.5nm,1.3s,mb4.5						
BOSA				LR	LR		
	comp=Z,480nm,19.0s,MS4.5						
LBTB	Lobatse	48.51	70	P	P	16 55 32.2	-0.3
	comp=Z,3.5nm,0.9s,mb4.4,baz=213,slow=11,SNR=5.1						
LBTB				LR	LR	17 12 32.7	
	comp=Z,348nm,18.9s,MS4.4,baz=277,slow=32						
LBTB	Lobatse	48.51	70	eP	P	16 55 31.5	-1.0
LBTB				LR	LR		
	comp=Z,466nm,19.0s,MS4.5						
TSUM	Tsumeb	49.58	58	P	P	16 55 40.9	+0.1
	comp=Z,0.8nm,0.6s,mb3.9,baz=182,slow=12,SNR=3.7						
LPAZ	La Paz	52.11	304	P	P	16 56 00.6	+0.6
	comp=Z,5.6nm,0.5s,mb4.8,baz=3.6,slow=25,SNR=41						
LPAZ				PcP	PcP	16 57 13.1	+1.4
	comp=Z,2.8nm,0.5s,baz=127,slow=5.1,SNR=2.1						
LPAZ				LR	LR	17 18 27.7	
	comp=Z,59nm,20.4s,MS3.6,baz=78,slow=36						
LPAZ	La Paz	52.11	304	eP	P	16 56 00.5	+0.5
	comp=Z,4.9nm,0.5s,mb4.7						
LPAZ				ePcP	PcP	16 57 12.6	+0.9
MATP	Matopo	53.80	70	P	P	16 56 12.4	-0.1
	comp=Z,2.2nm,0.8s,mb4.1,baz=196,slow=9.4,SNR=3.5						
MATP				LR	LR	17 15 25.9	
	comp=Z,304nm,18.4s,MS4.4,baz=182,slow=32						
SAML	Samuel	56.63	313	eP	P	16 56 32.7	-0.4
	comp=Z,46nm,0.8s,mb5.5						
LSZ	Lusaka	58.01	66	eP	P	16 56 40.9	-1.8
	comp=Z,5.7nm,0.9s,mb4.6						
LSZ				LR	LR		
	comp=Z,408nm,20.0s,MS4.5						
DBIC	Dimbokro	66.17	22	P	P	16 57 37.5	+0.2
	comp=Z,4.8nm,0.7s,mb4.7,baz=166,slow=8.4,SNR=5.9						
DBIC				LR	LR	17 19 58.1	
	comp=Z,45nm,21.2s,MS3.6,baz=166,slow=30						
OTAV	Otavalo	71.37	302	eP	P	16 58 10.9	+1.4
	comp=Z,9.1nm,0.9s,mb4.7						
OTAV				LR	LR		
	comp=Z,75nm,19.0s,MS4.0						
ROSC	El Rosal	73.69	308	LR	LR	17 29 17.9	
	comp=Z,72nm,19.7s,MS4.0,baz=312,slow=35						
SDV	Santo Domingo	75.83	314	LR	LR	17 30 17.9	
	comp=Z,67nm,20.2s,MS3.9,baz=194,slow=34						
SDV	Santo Domingo	75.83	314	eP	P	16 58 35.7	+0.2
	comp=Z,22nm,0.9s,mb5.1						
SDV				LR	LR		
	comp=Z,122nm,20.0s,MS4.2						
STKA	Stephens Creek	90.19	169	P	P	16 59 49.2	+0.4
	comp=Z,4.8nm,1.0s,mb4.8,baz=121,slow=13,SNR=3.0						
STKA				LR	LR	17 39 07.6	
	comp=Z,144nm,19.4s,MS4.4,baz=206,slow=35						
STKA	Stephens Creek	90.19	169	P	P	16 59 49.2	+0.4
STKA				LR	LR	17 39 07.6	
PPT	Papeete	92.09	232	LR	LR	17 33 22.1	
	comp=Z,212nm,18.4s,MS4.6,baz=168,slow=30						
WRA	Warramunga Arr	100.91	161	P	P	17 00 36.6	-1.3
	comp=Z,0.2nm,0.5s,baz=193,slow=4.5,SNR=5.2						
MVU	Marysvale	119.98	295	ePKPdf	PKPdf	17 05 40.3	+2.6
RSSD	Black Hills	120.59	305	ePKPdf	PKPdf	17 05 39.7	+1.0
PDAR	Pinedale Array	122.03	300	PKP	PKPdf	17 05 42.5	+1.0
	comp=Z,0.9nm,0.6s,baz=180,slow=3.0,SNR=5.8						
BW06	Boulder Array	122.03	300	ePKPdf	PKPdf	17 05 42.4	+0.9
ULM	Lac du Bonnet	122.08	314	ePKPdf	PKPdf	17 05 42.0	+0.6
NVAR	Mina Array Bea	122.94	291	PKP	PKPdf	17 05 45.2	+1.9
	comp=Z,1.0nm,0.7s,baz=127,slow=3.6,SNR=7.2						
NVAR	Mina Array Bea	122.94	291	PKP	PKPdf	17 05 45.2	+1.9
LOHW	Long Hollow	123.17	300	ePKPdf	PKPdf	17 05 45.6	+1.9
ELK	Elko	123.19	295	PKP	PKPdf	17 05 46.1	+2.3
	comp=Z,1.4nm,0.9s,baz=115,slow=4.3,SNR=5.3						
ELK	Elko	123.19	295	ePKPdf	PKPdf	17 05 46.1	+2.3
TPAW	Teton Pass	123.24	300	ePKPdf	PKPdf	17 05 46.0	+2.2
RRI2	Red Ridge	123.31	299	ePKPdf	PKPdf	17 05 46.2	+2.3
MOOW	Moose Ponds	123.34	300	ePKPdf	PKPdf	17 05 45.4	+1.3
CMAR	Chiang Mai Arr	123.56	110	PKP	PKPdf	17 05 46.5	+1.5
	comp=Z,2.4nm,0.7s,baz=222,slow=4.3,SNR=16						
FINES	FINESS Array B	125.27	27	PKP	PKPdf	17 05 48.6	+1.5
	comp=Z,2.9nm,0.6s,baz=174,slow=2.0,SNR=21						
HRY	Holter Researc	126.09	302	ePKPdf	PKPdf	17 05 51.2	+2.2
WVOR	Wild Horse Val	126.14	294	ePKPdf	PKPdf	17 05 51.8	+2.6
MOD	Modoc	126.56	292	ePKPdf	PKPdf	17 05 52.2	+2.1
CHMT	Chamberlain Mo	126.89	301	ePKPdf	PKPdf	17 05 52.7	+2.0
BMO	Blue Mountains	127.28	297	ePKPdf	PKPdf	17 05 53.3	+1.9
FCC	Fort Churchill	128.14	322	ePKPdf	PKPdf	17 05 53.5	+0.8
NEW	Newport	129.67	300	ePKPdf	PKPdf	17 05 56.3	+0.4
ARCES	ARCESS Array B	132.00	22	PKP	PKPdf	17 06 01.3	+1.5
	comp=Z,2.1nm,0.7s,baz=199,slow=1.9,SNR=16						
MKAR	Makanchi Array	136.39	72	PKP	PKPdf	17 06 09.0	+0.5
	comp=Z,0.8nm,0.7s,baz=217,slow=6.1,SNR=5.7						
WMQ	Urumqi	137.19	79	ePKP	PKPdf	17 06 12.3	+2.2
WMQ				LR	LR		
	comp=Z,30nm,20.0s,MS4.0						
YKA	Yellowknife Ar	138.01	316	PKP	PKPdf	17 06 12.5	+1.5
	comp=Z,3.6nm,0.7s,baz=129,slow=2.1,SNR=16						
YKA	Yellowknife Ar	138.01	316	PKP	PKPdf	17 06 12.5	+1.5
YKW3	Yellowknife Ar	138.06	316	ePKPdf	PKPdf	17 06 12.8	+1.6
DLBC	Dease Lake	142.06	304	PKhKP		17 06 15.4	
	comp=Z,1.5nm,0.7s,baz=97,slow=8.4,SNR=4.4						
NJ2	Nanjing	144.65	121	ePKP	PKPdf	17 06 22.3	-1.2
NJ2				PKP2	PKPab	17 06 23.3	-0.9
NJ2				APKP		17 06 32.9	
NJ2				PP	PP	17 09 43.0	-1.2
NJ2				PKS	PKS	17 09 56.0	-2.1
NJ2				SKS	SKS	17 13 26.0	-1.0
INK	Inuvik	147.66	319	PKPbc	PKPdf	17 06 32.4	+5.0
	comp=Z,11nm,0.5s,baz=92,slow=3.0,SNR=36						
INK	Inuvik	147.66	319	ePKPbc	PKPdf	17 06 32.1	+4.7
HHC	Hu-ho-hao-te	147.90	103	PKP	PKPdf	17 06 36.1	+7.4
HHC				LR	LR		
	comp=N,80nm,12.9s,MS4.8						
HHC				LR	LR		
	comp=E,70nm,12.4s,MS4.8						
HHC				LR	LR		
	comp=Z,70nm,9.4s						
SONM	Songino Array	149.77	88	PKP	PKPdf	17 06 33.0	+1.6
	comp=Z,1.1nm,1.1s,baz=315,slow=1.7,SNR=3.9						
SONM				PKPbc	PKPdf	17 06 38.2	+6.7
	comp=Z,8.5nm,0.7s,baz=220,slow=3.7,SNR=67						
ULN	Ulaanbaatar	150.14	88	ePKPbc	PKPdf	17 06 38.8	+6.8
TLY	Talaya	150.47	79	ePKPbc	PKPdf	17 06 40.0	+7.6
ILAR	Eielson Array	151.91	309	PKPbc	PKPdf	17 06 42.9	+8.7
	comp=Z,14nm,0.8s,baz=136,slow=4.9,SNR=66						
KDAK	Kodiak Island	152.41	293	ePKPbc	PKPdf	17 06 44.2	+9.1
MDJ	Mudanjiang	159.72	119	PKP	PKPdf	17 06 46.8	+1.8

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*NEIC **24** 16:56:04.9, 28.06N×16.22W, h23^{km}, MN2.7(MDD), After MDD.*
*CSEM **24** 16:56:04.9±0.3, 28.06N×16.22W, h23^{km}, mb3.7/9, After MDD*
MDD 24 16:56:04.9±0.2**, 28.06N×16.22W, h23**^{km}±8^{km}**, mb3.7**/9**, mbLg2.7**/10**, Error ellipse: s-maj=5.7km s-min=1.1km az=3.0, PRXIMO TT-MODEL: CANARY, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCAN	Las Canadas	0.38	296	P	Pb	16 56 12.3	-0.7
	23nm,0.1s,SNR=41						
CCAN				S	Sb	16 56 18.1	-0.5
	187nm,0.2s,SNR=7.9						
CRAJ	Montana Rajada	0.40	302	P	Pb	16 56 12.7	-0.5
	40nm,0.1s,SNR=7.9						
CRAJ				S	Sb	16 56 18.6	-0.3
	478nm,0.2s,SNR=7.9						
CRAJ	Montana Rajada	0.40	302	P	Pb	16 56 12.7	-0.5
	40nm,0.1s,SNR=7.9						
CRAJ				S	Sb	16 56 18.6	-0.3
	478nm,0.2s,SNR=7.9						
CICO	Icod de los Vi	0.54	303	P	Pb	16 56 14.8	-0.8
	2.2nm,0.2s,SNR=14						
CICO				S	Sb	16 56 21.0	-1.8
	16nm,0.1s,SNR=4.7						
CHIO	Chio	0.56	289	P	Pb	16 56 15.0	-1.0
	16nm,0.1s,SNR=13						
CHIO				S	Sb	16 56 21.4	-2.2
	123nm,0.1s,SNR=5.7						
EOSO	Osorio	0.59	88	P	Pb	16 56 15.1	-1.3
	23nm,0.2s,SNR=23						
EOSO				S	Sb	16 56 22.1	-2.2
	215nm,0.2s						
EOSO	Osorio	0.59	88	P	Pb	16 56 15.1	-1.3
	23nm,0.2s,SNR=23						

EOSO				S	Sb	16 56 22.1	-2.2
	215nm,0.2s						
EGOM	**La Gomera**	**0.88**	**277**	P	Pb	16 56 19.2	-2.2
	4.9nm,0.1s,SNR=20						
EGOM				S	Sb	16 56 29.0	-3.7
	131nm,0.1s						
EGOM	**La Gomera**	**0.88**	**277**	P	Pb	16 56 19.2	-2.2
	4.9nm,0.1s,SNR=20						
EGOM				S	Sb	16 56 29.0	-3.7
	131nm,0.1s						
CHIE	**El Hierro**	**1.58**	**258**	S	Sn	16 56 45.8	-5.9
	14nm,0.1s,SNR=7.9						
CFTV	**Fuerteventura**	**1.92**	**79**	P	Pn	16 56 33.8	-2.9
	0.6nm,0.1s,SNR=7.9						
CFTV				S	Sn	16 56 54.6	-5.7
	6.9nm,0.2s,SNR=7.9						
CFUE	**Fuerteventura**	**2.10**	**73**	P	Pn	16 56 36.0	-3.3
	3.2nm,0.1s,SNR=4.0						
CFUE				S	Sn	16 56 59.1	-5.8
	26nm,0.1s,SNR=7.9						
EFAM	**Famara**	**2.59**	**65**	P	Pn	16 56 42.5	-3.9
	3.2nm,0.2s,SNR=7.9						
EFAM				S	Sn	16 57 10.5	-7.1
	2.3nm,0.1s,SNR=7.9						
EFAM	**Famara**	**2.59**	**65**	P	Pn	16 56 42.5	-3.9
	3.2nm,0.2s,SNR=7.9						
EFAM				S	Sn	16 57 10.5	-7.0
	2.3nm,0.1s,SNR=7.9						

GUC 24 17:10:20.8±0.4**,19.81S**×**69.33W,h103**^{km}±2^{km}**,ML4.0, Northern Chile**

GUC 24 17:28:38.9±0.3**,19.80S**×**69.33W,h103**^{km}±1^{km}**,ML4.5, Northern Chile**

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*IDC **24** 17:37:00.0±1.6,29.34N×81.47E,mb3.7/5,mb1 3.8/6, mb1mx3.6/19,mbtmp3.7/6,ML3.9/1,Error ellipse: s-maj=51.5km s-min=24.5km az=56.0*
*NDI **24** 17:37:02.4±3.0,29.50N×81.72E,h2^{km}±10^{km},ML3.2*
*NEIC **24** 17:37:05.3±1.1,29.37N×81.41E,h35^{km},mb3.9/1,Error ellipse: s-maj=23.1km s-min=11.5km az=215.0*
ISC 24 17:37:06.7±1.0**,29.42N**±0.08×**81.58E**±0.07**,h68**^{km}±12^{km}**, n15,**σ**1^{s}19**/20**,mb3.6**/6**,Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGTI	**Lohaghat**	**1.17**	**272**	*e*P	**P**	**17 37 30.3**	**+2.8**
LGTI				*e*S	**S**	**17 37 50.0**	**+7.0**
PTH	**Pithoragarh**	**1.20**	**276**	*e*P	**P**	**17 37 27.0**	**-0.9**
PTH				*e*S	**S**	**17 37 46.0**	**+2.3**
KLP	**Kalpa**	**3.56**	**307**	*e*P	**P**	**17 38 00.5**	**-0.4**
KLP				*e*S	**S**	**17 38 41.6**	**-0.4**
KLP				AML	AML	17 39 10.9	
	comp=N,54nm,1.0s						
KLP				AML	AML	17 39 12.7	
	comp=E,104nm,0.8s						
SONA	**Sohna**	**4.12**	**255**	*e*P	**P**	**17 38 06.5**	**-2.1**
SONA				*e*S	**S**	**17 38 57.5**	**+1.6**
SONA				AML	AML	17 39 17.4	
	comp=N,36nm,0.7s						
SONA				AML	AML	17 39 17.5	
	comp=E,51nm,0.4s						
SMLA	**Simla**	**4.18**	**295**	*i* P	**P**	**17 38 05.5**	**-4.0**
SMLA				*i* S	**S**	**17 38 52.7**	**-4.8**
KUDL	**Kundal**	**4.65**	**255**	*e*P	**P**	**17 38 15.9**	**-0.2**
KHET	**Khetri**	**5.25**	**257**	*e*S	**S**	**17 39 22.1**	**-2.0**
KHET				AML	AML	17 39 23.5	
	comp=E,18nm,0.2s						
KHET				AML	AML	17 39 24.8	
	comp=N,14nm,0.2s						
LSA	**Lhasa**	**8.34**	**86**	*e*Pn	**P**	**17 39 06.4**	**-0.7**
MKAR	**Makanchi Array**	**17.35**	**2**	P	**P**	**17 41 05.0**	**-0.6**
	comp=N,0.4nm,0.3s,baz=180,slow=11,SNR=20						
BVAR	**Borovoye Array**	**24.98**	**344**	P	**P**	**17 42 25.3**	**0.0**
	comp=N,0.7nm,0.4s,mb3.4,baz=146,slow=9.0,SNR=5.4						
ZRNK	**Zerenda**	**25.27**	**342**	*e*P	**P**	**17 42 28.1**	**+0.1**
	comp=N,1.8nm,0.5s,mb3.8						
SONM	**Songino Array**	**26.53**	**39**	P	**P**	**17 42 41.0**	**+1.3**
	comp=N,0.4nm,0.5s,mb3.2,baz=227,slow=10,SNR=6.0						
FINES	**FINESS Array B**	**48.24**	**328**	P	**P**	**17 45 42.8**	**+0.5**
	comp=N,2.0nm,0.6s,mb4.1,baz=104,slow=7.9,SNR=12						
ARCES	**ARCESS Array B**	**51.04**	**338**	P	**P**	**17 46 03.3**	**-0.3**
	comp=N,0.7nm,0.6s,mb3.8,baz=104,slow=5.0,SNR=3.8						
WRA	**Warramunga Arr**	**70.67**	**127**	P	**P**	**17 48 17.9**	**+0.6**
	comp=N,0.2nm,0.4s,mb3.3,baz=322,slow=6.1,SNR=10						

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*LDG **24** 17:38:14.2±0.0,46.28N×2.13E,h3^{km},Md2.7/3,Ml2.6/15, Error ellipse: s-maj=0.8km s-min=0.7km az=135.0*
*NEIC **24** 17:38:14.2,46.28N×2.13E,h3^{km},ML2.7(STR), ML2.6(LDG),After LDG.*
*CSEM **24** 17:38:14.4±0.1,46.28N×2.13E,h8^{km},ML2.7/15,Error ellipse: s-maj=1.8km s-min=1.4km az=127.0*
*STR **24** 17:38:17.0±0.8,46.24N×2.19E,h10^{km}±1^{km},Ml2.7,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 24 17:38:12.2±0.3**,46.30N**±0.02×**2.08E**±0.03**,h9**^{km}±3^{km}**,n24,** σ**1^{s}31**/53**,France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCF	**Toulx Ste Croi**	**0.09**	**97**	*e*Pg	**Pg**	**17 38 15.9**	**+1.4**
TCF				*e*Sg	**Sg**	**17 38 17.0**	**+0.9**
	173nm,0.2s						
BGF	**Bois d'Agland**	**0.59**	**64**	*e*Pg	**Pg**	**17 38 24.9**	**+0.9**
BGF				*e*Sg	**Sg**	**17 38 31.8**	**-0.2**
	41nm,0.2s						
BGF				*e*Sn	**Sn**	**17 38 36.4**	**+0.2**
AGO	**Saint Agoulin**	**0.77**	**108**	Pg	**Pg**	**17 38 29.5**	**+1.9**
PYM	**Petit Puy Mans**	**0.85**	**130**	Pg	**Pg**	**17 38 32.0**	**+2.8**
FRNF	**Fournols**	**0.97**	**160**	Pg	**Pg**	**17 38 34.0**	**+2.3**
FRNF				Sg	**Sg**	**17 38 46.3**	**+1.6**
HYF	**Humbligny**	**1.04**	**21**	*e*Pg	**Pg**	**17 38 34.0**	**+1.0**
HYF				*e*Sg	**Sg**	**17 38 47.1**	**+0.1**
RJF	**Les Rejaudoux**	**1.07**	**202**	*e*Pg	**Pg**	**17 38 34.4**	**+0.8**
RJF				*e*Pn	**Pn**	**17 38 34.7**	**+1.4**
RJF				*e*Sg	**Sg**	**17 38 48.2**	**+0.3**
	64nm,0.3s						
RJF	**Les Rejaudoux**	**1.07**	**202**	*e*Pn	**Pn**	**17 38 34.7**	**+1.4**
RJF				*e*Sg	**Sg**	**17 38 48.2**	**+0.3**
	32nm,0.3s						
PLDF	**La Plantade**	**1.12**	**107**	Pg	**Pg**	**17 38 36.6**	**+2.0**
PLDF				Sg	**Sg**	**17 38 51.1**	**+1.5**
SMF	**Signal de Mont**	**1.27**	**74**	*e*Pn	**Pn**	**17 38 36.9**	**+0.8**
SMF				*e*Pg	**Pg**	**17 38 37.5**	**0.0**
SMF				*e*Sn	**Sn**	**17 38 52.5**	**-0.8**
	18nm,0.3s						
CAF	**Calviac**	**1.37**	**180**	*e*Pg	**Pg**	**17 38 39.3**	**-0.3**
CAF				*e*Sn	**Sn**	**17 38 55.8**	**-0.3**
CAF				*e*Sg	**Sg**	**17 38 57.2**	**-0.8**
	17nm,0.2s						
LOR	**Lormes**	**1.56**	**51**	*e*Pn	**Pn**	**17 38 41.1**	**+0.8**
	baz=234						
LOR				*e*Pg	**Pg**	**17 38 42.7**	**-0.6**
	baz=233						
LOR				*e*Sn	**Sn**	**17 39 00.3**	**-0.5**
LOR				*e*Sg	**Sg**	**17 39 02.3**	**-1.9**
	12nm,0.2s						
MFF	**Saint Martin d**	**1.57**	**282**	*e*Pn	**Pn**	**17 38 41.8**	**+1.4**
MFF				*e*Pg	**Pg**	**17 38 43.9**	**+0.4**
MFF				*e*Sn	**Sn**	**17 39 01.0**	**0.0**
MFF				*e*Sg	**Sg**	**17 39 04.7**	**+0.3**
	17nm,0.2s						
LFF	**La Frestale**	**1.65**	**215**	*e*Pn	**Pn**	**17 38 42.5**	**+0.9**
LFF				*e*Pg	**Pg**	**17 38 44.9**	**-0.3**
LFF				*e*Sg	**Sg**	**17 39 06.1**	**-1.2**
	14nm,0.3s						
VIVF	**Saint-Julien-l**	**2.32**	**127**	*e*Pn	**Pn**	**17 38 51.1**	**-0.1**
VIVF				*e*Pg	**Pg**	**17 38 56.7**	**-1.9**
VIVF				*e*Sg	**Sg**	**17 39 26.7**	**-2.9**
	5.1nm,0.4s						
LASF	**Ste Croix**	**2.55**	**150**	*e*Pn	**Pn**	**17 38 54.4**	**-0.1**
LASF				*e*Pg	**Pg**	**17 39 01.1**	**-2.1**
LASF				*e*Sg	**Sg**	**17 39 33.8**	**-3.4**
	7.1nm,0.4s						
CABF	**La Chapelle**	**2.79**	**82**	*e*Pg	**Pg**	**17 39 05.3**	**-2.5**
CABF				*e*Sg	**Sg**	**17 39 41.0**	**-4.0**
	6.4nm,0.5s						
GRR	**Gorron**	**2.89**	**317**	*e*Pn	**Pn**	**17 39 00.0**	**+0.7**
GRR				*e*Sg	**Sg**	**17 39 46.3**	**-2.1**
	2.2nm,0.2s						
MTLF	**Montolieu**	**2.96**	**178**	*e*Pg	**Pg**	**17 39 08.6**	**-2.7**
MTLF				*e*Sg	**Sg**	**17 39 46.3**	**-4.4**
	7.9nm,0.4s						
FLN	**La Foliniere**	**3.01**	**326**	*e*Pn	**Pn**	**17 39 01.5**	**+0.4**
FLN				*e*Sg	**Sg**	**17 39 49.9**	**-2.6**
	3.0nm,0.3s						
EPF	**Esparros**	**3.50**	**201**	*e*Pn	**Pn**	**17 39 07.6**	**-0.3**
HINF	**Hinteralfeld**	**3.60**	**63**	*e*Sg	**Sg**	**17 40 06.3**	**-5.7**
	2.6nm,0.3s						
ETSF	**Etsaut**	**3.89**	**210**	*e*Sg	**Sg**	**17 40 16.4**	**-5.2**
	1.8nm,0.3s						
SJPF	**Ste Jean**	**3.96**	**218**	*e*Sg	**Sg**	**17 40 18.7**	**-5.4**
	1.5nm,0.3s						

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*NIED **24** 18:11:00,43.70N×147.50E,h20^{km},Mw3.6 Best double couple: M$_0$2.57×10^{14} NP1:ϕ_s28°,δ80°,λ73°. NP2:ϕ_s268°, δ20°,λ148°.*
JMA 24 18:11:26.2±0.2**,43.65N**×**147.53E,M4.0,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.33**	**258**	P	Pb	18 11 51.8	+0.1
NEM2				*e*S	Sb	18 12 09.3	+0.1
JRA	**Rausu**	**1.77**	**280**	P	Pn	18 11 58.2	-0.1
JRA				*e*S	Sn	18 12 22.3	+0.5
JNK	**Nakash**	**2.04**	**269**	P	Pn	18 12 02.0	-0.2
JNK				*e*S	Sn	18 12 28.4	-0.4
JAK	**Akkeshi**	**2.17**	**253**	P	Pn	18 12 03.9	-0.1
JTKR	**Abashiri--Toko**	**2.64**	**278**	P	Pn	18 12 11.3	+0.5
JTKR				*e*S	Sn	18 12 44.8	+0.8
JAR	**Ashorobuto**	**2.76**	**264**	P	Pn	18 12 13.0	+0.5
JOB	**Onbets**	**2.80**	**256**	P	Pn	18 12 13.3	+0.3
JOB				*e*S	Sn	18 12 47.4	-0.6
JMP	**Maruseppu**	**3.04**	**278**	P	Pn	18 12 16.9	+0.4
JCH	**Churui**	**3.22**	**253**	P	Pn	18 12 21.7	+2.7
JCH				*e*S	Sn	18 12 59.0	+0.3
JKK2	**Kamakawa 2**	**3.47**	**275**	P	Pn	18 12 24.8	+2.2
JEM	**Erimo**	**3.61**	**245**	P	Pn	18 12 26.8	+2.3
JFR	**Furan**	**3.63**	**264**	P	Pn	18 12 25.9	+1.1
JNBK	**Urakawa-nobuka**	**3.76**	**250**	P	Pn	18 12 27.7	+1.0
JSE	**Soyaes**	**3.78**	**292**	P	Pn	18 12 27.4	+0.4

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*TAP **24** 18:41:03.5,24.01N×122.23E,h14^{km}±1^{km},ML3.5*
JMA 24 18:41:04.0±0.2**,24.60N**×**122.15E,h54**^{km}±2^{km}**,M3.2, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.80**	**100**	P	P	18 41 19.3	+0.1
YOJ				S	S	18 41 30.3	-0.2
IRIF	**Iriomote-Funau**	**1.46**	**100**	P	P	18 41 28.4	-0.2
IRIF				S	S	18 41 46.6	-0.2
HATJ	**Hateruma jima**	**1.60**	**109**	P	P	18 41 30.5	0.0
HATJ				*e*S	S	18 41 50.8	+0.6
JKRS	**Kuro-shima**	**1.73**	**102**	P	P	18 41 32.1	-0.2
JKRS				*e*S	S	18 41 53.8	+0.5
JIJ	**Ishigaki jima**	**1.83**	**97**	P	P	18 41 33.6	-0.1
JIJ				S	S	18 41 55.2	-0.5

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*NNC **24** 19:00:23.8±15.0,36.92N×70.20E,h72^{km}±511^{km},mpv3.6, Error ellipse: s-maj=296.0km s-min=116.6km az=89.0*
ISC 24 19:00:24.5±3.9**,37.1N**±0.3×**71.3E**±0.4**,h200**^{km}±54^{km}**,n10,** σ**0^{s}55**/12**,2C-1D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.38**	**19**	P	**P**	**19 01 43.9**	**-0.5**
	SNR=9.3						
UCH	**Uchtor**	**5.72**	**25**	P	**P**	**19 01 48.7**	**-0.1**
	SNR=7.2						
KZA	**Kyzart**	**5.86**	**30**	P	**P**	**19 01 50.1**	**-0.5**
	SNR=7.8						
EKS2	**Erkin-Say**	**5.90**	**18**	P	**P**	**19 01 51.2**	**+0.1**
	SNR=6.1						
KK31	**Karatay Array**	**6.05**	**355**	⇑P	**P**	**19 01 52.2**	**-0.9**
	1.6nm,0.2s,baz=173,slow=12,SNR=188						
KK31				⇑S	**S**	**19 03 02.7**	**+0.6**
	1.4nm,0.3s,baz=183,slow=24,SNR=6.4						
AAK	**Ala-Archa**	**6.07**	**23**	P	**P**	**19 01 53.8**	**+0.4**
	SNR=5.5						
CHMS	**Chumysh**	**6.49**	**23**	P	**P**	**19 01 58.9**	**+0.2**
	SNR=9.1						
USP	**Ospenovka**	**6.66**	**21**	P	**P**	**19 02 01.2**	**+0.2**
	SNR=6.7						
TKM2	**Tokmak 2**	**6.71**	**28**	P	**P**	**19 02 01.7**	**0.0**
	SNR=6.4						
AB31	**Akbulak array**	**14.70**	**329**	P	**P**	**19 03 45.0**	**+1.1**
	0.1nm,0.3s,baz=173,slow=10,SNR=9.2						
AB31				⇓S	**S**	**19 06 21.0**	**-0.7**
	0.9nm,0.6s,baz=147,slow=23,SNR=5.1						

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*CSEM **24** 19:19:54.0±1.1,38.74N×29.03W,ML1.9,Error ellipse: s-maj=28.1km s-min=20.4km az=166.0,After PDA*
*PDA **24** 19:19:54.0±0.5,38.74N×29.03W,MD3.2,ML1.9,Error ellipse: s-maj=6.9km s-min=4.0km az=50.0*
SVSA 24 19:19:54.0±0.5**,38.74N**×**29.03W,MD3.2,ML1.9,Error ellipse: s-maj=6.9km s-min=4.0km az=50.0,Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.30**	**122**	*e*P	Pg	19 19 59.9	-0.1
CALA				*e*S	Sg	19 20 04.0	0.0
HOR	**Horta**	**0.38**	**124**	*e*P	Pg	19 20 01.1	-0.4
HOR				*e*S	Sg	19 20 06.1	-0.5
PICO	**Pico**	**0.53**	**117**	*e*P	Pg	19 20 03.4	-1.2
PICO				*e*S	Sg	19 20 11.0	-0.6
PMAN	**Manadas**	**0.74**	**98**	*e*S	Sg	19 20 16.3	-2.4
	21nm,0.1s						

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*NEIC **24** 19:30:50.8±0.7,63.64S×149.09E,h10^{km},mb4.6/4,Error ellipse: s-maj=33.1km s-min=10.2km az=80.0*
*IDC **24** 19:30:50.9±1.7,63.49S×148.14E,mb4.1/4,mb1 4.2/4, mb1mx4.1/10,mbtmp4.1/4,MS3.7/7,Ms1 3.7/7, ms1mx3.5/18,Error ellipse: s-maj=81.4km s-min=25.4km az=103.0*
ISC 24 19:30:47.6±0.7**,63.48S**±0.09×**150.6E**±0.5**,h10**^{km}**,n23,** σ**1^{s}18**/15**,mb4.3**/6**,MS3.8**/6**,1C,Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	**14.55**	**170**	Pn	**P**	**19 34 15.2**	**+0.2**
	5.4nm,0.3s,baz=333,slow=12,SNR=94						
VNDA				Sn	**S**	**19 36 49.2**	**-8.1**
	1.0nm,0.3s,baz=164,slow=5.2,SNR=3.9						
VNDA				LR	LR	19 40 17.9	
	comp=Z,156nm,20.1s,baz=356,slow=38						
VNDA	**Vanda**	**14.55**	**170**	*e*Pn	**P**	**19 34 14.6**	**-0.4**
VNDA				Sn	**S**	**19 36 49.2**	**-8.1**
VNDA				LR	LR	19 40 17.9	
SBA	**Scott Base**	**15.29**	**167**	*e*Pn	**P**	**19 34 25.9**	**+1.2**
	13nm,0.6s						
QSPA	**South Pole Qui**	**26.61**	**180**	⇑*i*P	**P**	**19 36 30.3**	**+3.2**
	14nm,0.7s,mb4.6						
URZ	**Urewera**	**29.86**	**45**	LR	LR	19 46 41.9	
	comp=Z,87nm,19.9s,MS3.4,baz=270,slow=31						
STKA	**Stephens Creek**	**32.12**	**346**	P	**P**	**19 37 17.4**	**+0.5**
	2.8nm,1.0s,mb4.1,baz=174,slow=9.2,SNR=2.3						
STKA				PcP	PcP	19 40 07.8	+1.6
	3.1nm,1.0s,baz=93,slow=11,SNR=2.9						
MAW	**Mawson**	**33.67**	**224**	P	**P**	**19 37 26.1**	**-3.9**
	1.4nm,0.7s,mb4.0,baz=122,slow=15,SNR=5.4						
MAW				LR	LR	19 51 15.4	
	comp=Z,140nm,19.1s,MS3.7,baz=57,slow=37						
NWAO	**Narrogin (SRO)**	**36.98**	**310**	LR	LR	19 49 46.5	
	comp=Z,90nm,21.6s,MS3.5,baz=165,slow=31						
WB2	**Warramunga Arr**	**44.88**	**338**	*e*P	**P**	**19 39 04.1**	**+0.3**
WB2				*i*		19 39 11.6	
WRA	**Warramunga Arr**	**44.88**	**338**	P	**P**	**19 39 04.1**	**+0.4**
	2.9nm,0.5s,mb4.3,baz=165,slow=6.9,SNR=63						
WRA				PcP	PcP	19 40 47.0	+1.2
	0.6nm,0.6s,baz=170,slow=3.3,SNR=5.5						
WRAB	**Tennant Creek**	**44.89**	**338**	*e*P	**P**	**19 39 03.9**	**0.0**
	8.0nm,0.6s,mb4.7						
WRAB				*e*		19 39 12.1	
FITZ	**Fitzroy Crossi**	**48.45**	**328**	LR	LR	19 57 15.5	
	comp=Z,168nm,19.4s,MS4.0,baz=97,slow=33						
TBI	**Tubuai**	**56.04**	**74**	*e*SS	SS	19 52 00.1	-1.5
	109nm,31.2s						
TBI				*e*LR	LR	19 56 13.8	
	78nm,38.0s						
PPT	**Papeete**	**61.11**	**70**	*e*S	**S**	**19 49 18.9**	**-2.5**
	164nm,28.5s						
PPT				*e*SS	SS	19 53 08.8	-14
	191nm,28.8s						
PPT				*e*LQ		19 55 13.1	
	736nm,40.5s						
PPT				*e*LR	LR	19 59 25.9	
	61nm,26.5s						
PPT	**Papeete**	**61.11**	**70**	LR	LR	20 04 12.4	
	comp=Z,94nm,18.6s,MS4.0,baz=295,slow=32						
RKT	**Rikitea**	**62.64**	**87**	*e*PP	PP	19 44 03.0	+29
RKT				*e*S	**S**	**19 49 23.3**	**-17**
	35nm,28.5s						
RKT				*e*SS	SS	19 52 53.6	-54
	116nm,34.5s						
RKT				*e*LQ		19 56 54.7	
	92nm,34.8s						
RKT				*e*LR	LR	19 59 55.7	
	182nm,34.2s						
TAOE	**Nuku Hiva Isla**	**72.93**	**75**	*e*S	S	19 51 10.8	-33
	9µm,30.7s						
TAOE				*e*SS	SS	19 56 22.6	-4.2
	24µm,35.0s						
TAOE				*e*LQ		20 00 45.2	
	7µm,34.9s						
TAOE				*e*LR	LR	20 03 26.9	
	38µm,35.5s						
BOSA	**Boshof**	**78.61**	**227**	P	**P**	**19 42 50.0**	**-0.6**
	1.5nm,0.7s,mb4.0,baz=161,slow=6.7,SNR=5.1						
BOSA	**Boshof**	**78.61**	**227**	P	**P**	**19 42 49.8**	**-0.8**
	1.3nm,0.6s,mb4.0						
LBTB	**Lobatse**	**81.82**	**229**	LR	LR	20 17 06.7	
	comp=Z,78nm,18.8s,MS4.1,baz=281,slow=34						
YKA	**Yellowknife Ar**	**143.99**	**52**	PKP	PKPdf	19 50 27.6	+3.1
	0.9nm,0.6s,baz=241,slow=3.3,SNR=5.1						
ESDC	**Sonseca Array**	**151.77**	**225**	PKPbc	PKPdf	19 50 44.7	+6.8
	0.8nm,0.5s,baz=149,slow=2.7,SNR=5.5						
GERES	**GERESS Array B**	**152.53**	**258**	PKPbc	PKPdf	19 50 44.6	+5.9
	0.9nm,0.6s,baz=143,slow=3.1,SNR=12						

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*NIED **24** 19:52:00,29.80N×130.00E,h65^{km},Mw4.0 Best double couple: M$_0$9.78×10^{14} NP1:ϕ_s39°,δ62°,λ124°. NP2:ϕ_s163°, δ43°,λ43°.*
*JMA **24** 19:52:32.2,29.82N×130.04E,h68^{km}±1^{km},M3.9*
JMA Felt I J1.
*NEIC **24** 19:52:33.5±0.9,29.82N×130.04E,h93^{km}±9^{km},mb4.0/3, Error ellipse: s-maj=12.6km s-min=8.8km az=104.0*
*IDC **24** 19:52:33.1±1.0,29.84N×129.97E,h91^{km}±10^{km},mb3.6/10, mb1 3.8/16,mb1mx3.7/26,mbtmp4.1/16,MS2.8/1, Ms1 2.8/1,ms1mx2.5/25,Error ellipse: s-maj=18.2km s-min=8.0km az=109.0*
ISC 24 19:52:31.2±0.4**,29.81N**±0.04×**130.05E**±0.06**,h84**^{km}±3^{km}**, n28,**σ**1^{s}01**/36**,mb3.8**/12**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.16**	**282**	P	**P**	**19 52 42.3**	**-0.9**
JNN				S	**S**	**19 52 50.2**	**-2.1**
JKC	**Kuchinoerabu**	**0.66**	**11**	P	**P**	**19 52 46.6**	**-0.4**
JKC				S	**S**	**19 52 57.1**	**-1.6**
JTN	**Tanegashima 3**	**1.17**	**43**	P	**P**	**19 52 52.9**	**+0.2**
JTN				S	**S**	**19 53 09.0**	**+0.1**
JAM	**Amami Oshima**	**1.45**	**196**	P	**P**	**19 52 56.5**	**+0.1**
JZK	**Kikaishima**	**1.49**	**183**	P	**P**	**19 52 58.3**	**+1.3**
JTSR	**Tashiro 2**	**1.55**	**29**	P	**P**	**19 52 58.0**	**+0.3**
JTSR				S	**S**	**19 53 17.1**	**-0.3**
JSU	**Suzuyama**	**1.73**	**12**	P	**P**	**19 53 00.4**	**+0.3**
JSU				S	**S**	**19 53 22.4**	**+1.0**
JSJ	**Shimokoshiki**	**1.89**	**351**	P	**P**	**19 53 02.6**	**+0.4**
JSJ				S	**S**	**19 53 25.8**	**+0.8**
JOW	**Kunigami**	**3.35**	**208**	P	**P**	**19 53 23.2**	**+0.6**
	9.8nm,0.3s,baz=69,slow=9.7,SNR=36						
JOW				S	**S**	**19 54 02.5**	**+1.2**
	21nm,0.3s,baz=91,slow=26,SNR=8.1						
JNU	**Nakatsue**	**3.38**	**12**	P	**P**	**19 53 24.7**	**+1.8**
	9.5nm,0.3s,baz=140,slow=7.9,SNR=64						
JNU				S	**S**	**19 54 03.5**	**+1.4**
	6.8nm,0.3s,baz=317,slow=32,SNR=7.7						
JHJ	**Hachijo jima 2**	**8.94**	**66**	P	**P**	**19 54 40.4**	**+0.9**
	21nm,0.3s,baz=261,slow=22,SNR=9.4						
MJAR	**Matsushiro Arr**	**9.58**	**43**	P	**P**	**19 54 48.1**	**0.0**
	0.6nm,0.3s,baz=236,slow=14,SNR=7.4						
CBIJ	**Chichi jima**	**11.01**	**101**	P	**P**	**19 55 07.4**	**-0.1**
	11nm,0.3s,baz=271,slow=17,SNR=5.9						
CBIJ				LR	LR	19 58 24.4	
	comp=Z,48nm,21.9s,baz=94,slow=32						
ASAJ	**Asahikawa**	**17.42**	**32**	P	**P**	**19 56 28.2**	**-1.8**
	0.7nm,0.3s,baz=235,slow=17,SNR=7.7						
ENH	**Enshi**	**17.81**	**277**	*e*P	**P**	**19 56 36.7**	**+1.7**
	5.6nm,0.7s						
ULN	**Ulaanbaatar**	**25.26**	**322**	*e*P	**P**	**19 57 50.5**	**-0.4**
	1.9nm,0.6s,mb3.7						
SONM	**Songino Array**	**25.60**	**321**	P	**P**	**19 57 52.7**	**-1.3**
	1.1nm,0.4s,mb3.7,baz=139,slow=10,SNR=9.7						
MKAR	**Makanchi Array**	**40.47**	**308**	P	**P**	**20 00 03.0**	**+0.1**
	0.3nm,0.5s,mb3.4,baz=96,slow=8.7,SNR=3.1						
BVAR	**Borovoye Array**	**48.75**	**316**	P	**P**	**20 01 08.4**	**-0.7**
	0.8nm,0.5s,mb3.9,baz=95,slow=10,SNR=2.8						
WRAB	**Tennant Creek**	**49.62**	**175**	*e*P	**P**	**20 01 15.6**	**-0.7**
	6.6nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	**49.63**	**175**	P	**P**	**20 01 15.8**	**-0.6**
	1.2nm,0.5s,mb4.0,baz=353,slow=7.9,SNR=5.5						
ILAR	**Eielson Array**	**60.54**	**29**	P	**P**	**20 02 33.5**	**-1.1**
	0.5nm,0.5s,mb3.8,baz=296,slow=6.8,SNR=5.5						
STKA	**Stephens Creek**	**62.32**	**169**	P	**P**	**20 02 46.6**	**-0.3**
	1.1nm,0.7s,mb4.0,baz=311,slow=8.9,SNR=3.6						
FINES	**FINESS Array B**	**70.56**	**330**	P	**P**	**20 03 36.6**	**-2.0**
	3.2nm,1.0s,mb4.1,baz=66,slow=6.1,SNR=11						
YKA	**Yellowknife Ar**	**74.61**	**26**	P	**P**	**20 04 02.1**	**-0.3**
	1.0nm,0.8s,mb3.6,baz=310,slow=6.4,SNR=4.7						
YKA	**Yellowknife Ar**	**74.61**	**26**	P	**P**	**20 04 02.1**	**-0.3**
GERES	**GERESS Array B**	**83.31**	**323**	P	**P**	**20 04 50.0**	**+0.2**
	0.3nm,0.5s,mb3.4,baz=45,slow=4.2,SNR=2.9						
PDAR	**Pinedale Array**	**89.38**	**39**	P	**P**	**20 05 21.2**	**+1.7**
	0.6nm,0.6s,mb3.8,SNR=5.3						

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*NEIC **24** 20:06:31.4,42.78S×175.86E,h33^{km},ML3.9(WEL),After WEL.*
WEL 24 20:06:31.6±0.3**,42.78S**×**175.81E,h33**^{km}**,ML3.9**/30**, Error ellipse: s-maj=3.3km s-min=2.1km az=90.0,Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRWZ	**Traveller**	**1.38**	**356**	PN	Pn	20 06 54.1	-0.8
TRWZ				S*	Sb	20 07 10.9	-3.2
TRWZ				S*	Sb	20 07 10.9	-3.2
MSWZ	**Moikau Station**	**1.42**	**343**	P	P	20 06 54.3	-1.0
MSWZ				S	S	20 07 11.6	-1.5
MSWZ	**Moikau Station**	**1.42**	**343**	PN	Pn	20 06 54.3	-1.2
MSWZ				S*	Sb	20 07 12.1	-3.1
PAWZ	**Paruwai Farm**	**1.42**	**348**	PN	Pn	20 06 54.6	-0.9
PAWZ				S*	Sb	20 07 11.9	-3.4
PAWZ				S*	Sb	20 07 12.0	-3.3
BHW	**Baring Head**	**1.54**	**333**	P	P	20 06 56.2	-0.7
BHW	**Baring Head**	**1.54**	**333**	PN	Pn	20 06 56.2	-0.9
BHW				S*	Sb	20 07 14.0	-4.5
BHW				S*	Sb	20 07 14.7	-3.8
CMWZ	**Cape Campbell**	**1.57**	**310**	P	P	20 06 57.1	-0.3
CMWZ	**Cape Campbell**	**1.57**	**310**	PN	Pn	20 06 57.1	-0.4
CMWZ				S*	Sb	20 07 14.2	-5.2
MTW	**Mount Morrison**	**1.63**	**352**	P	P	20 06 57.1	-1.3
MTW	**Mount Morrison**	**1.63**	**352**	PN	Pn	20 06 57.1	-1.4
MTW				S*	Sb	20 07 15.3	-6.0
WEL	**Wellington**	**1.68**	**332**	P	P	20 06 58.5	-0.5
WEL	**Wellington**	**1.68**	**332**	PN	Pn	20 06 58.3	-0.9
WEL				S*	Sb	20 07 18.3	-4.4
SNZO	**South Karori**	**1.68**	**330**	P	P	20 06 58.4	-0.6
SNZO	**South Karori**	**1.68**	**330**	PN	Pn	20 06 58.4	-0.8
SNZO				S*	Sb	20 07 18.3	-4.4
KHZ	**Kahutara**	**1.71**	**281**	*e*P	P	20 06 58.1	-1.4
KHZ	**Kahutara**	**1.71**	**281**	PN	Pn	20 06 57.8	-1.8
MRW	**Makara Radio**	**1.75**	**332**	P	P	20 06 59.5	-0.6
MRW	**Makara Radio**	**1.75**	**332**	PN	Pn	20 06 59.5	-0.7
CAW	**Cannon Point**	**1.76**	**341**	P	P	20 06 59.3	-0.8
CAW	**Cannon Point**	**1.76**	**341**	PN	Pn	20 06 59.3	-1.0
BSWZ	**Blackbirch Sta**	**1.78**	**306**	P	P	20 06 59.7	-0.8
BSWZ	**Blackbirch Sta**	**1.78**	**306**	PN	Pn	20 06 59.7	-1.0

TUWZ	Tuamarina	1.93	314	PN	Pn	20 07 01.9	-0.9
TCW	Tory Channel	1.94	323	P	P	20 07 02.2	-0.5
TCW	Tory Channel	1.94	323	PN	Pn	20 07 02.0	-0.9
KIW	Kapiti Island	2.03	340	P	P	20 07 03.4	-0.6
KIW	Kapiti Island	2.03	340	PN	Pn	20 07 03.4	-0.8
BFZ	Birch Farm	2.12	9	P	P	20 07 03.9	-1.4
BFZ	Birch Farm	2.12	9	PN	Pn	20 07 03.9	-1.6
BFZ				S*	Sb	20 07 26.5	-8.8
MRZ	Mangatainoka R	2.12	355	eP	P	20 07 04.0	-1.3
MRZ	Mangatainoka R	2.12	355	PN	Pn	20 07 04.0	-1.5
THZ	Tophouse	2.38	294	eP	P	20 07 08.0	-1.0
THZ	Tophouse	2.38	294	PN	Pn	20 07 08.0	-1.2
NNZ	Nelson	2.39	310	eP	P	20 07 08.2	-0.9
NNZ	Nelson	2.39	310	PN	Pn	20 07 08.2	-1.1
DUWZ	D'Urville Isla	2.42	324	PN	Pn	20 07 09.5	-0.4
CRLZ	Canterbury Las	2.46	250	P	P	20 07 07.9	-2.3
CRLZ	Canterbury Las	2.46	250	PN	Pn	20 07 07.9	-2.5
MQZ	McQueen's Vall	2.48	247	P	P	20 07 07.9	-2.6
MQZ	McQueen's Vall	2.48	247	PN	Pn	20 07 07.9	-2.8
MQZ				SN	Sn	20 07 34.8	-5.5
MQZ				SN	Sn	20 07 35.2	-5.0
LTZ	Lake Taylor	2.60	269	P	P	20 07 11.0	-1.2
LTZ	Lake Taylor	2.60	269	PN	Pn	20 07 11.0	-1.4
LTZ				SN	Sn	20 07 39.9	-3.3
TSZ	Takapari Road	2.72	3	P	P	20 07 12.6	-1.3
TSZ	Takapari Road	2.72	3	PN	Pn	20 07 12.6	-1.4
TSZ				S*	Sb	20 07 41.7	-11
PWZ	Pawanui	2.86	16	P	P	20 07 13.3	-2.6
PWZ	Pawanui	2.86	16	PN	Pn	20 07 13.3	-2.7
WAZ	Wanganui	3.08	348	P	P	20 07 19.8	+0.7
WAZ	Wanganui	3.08	348	PN	Pn	20 07 19.8	+0.7
QRZ	Quartz Range	3.13	307	eP	P	20 07 19.1	-0.7
QRZ	Quartz Range	3.13	307	PN	Pn	20 07 19.1	-0.8
DSZ	Denniston Nort	3.15	288	P	P	20 07 19.1	-0.9
DSZ	Denniston Nort	3.15	288	PN	Pn	20 07 19.1	-1.0
MOVZ	Moawhango	3.37	359	P	P	20 07 22.3	-0.8
MOVZ	Moawhango	3.37	359	PN	Pn	20 07 21.9	-1.3
MTVZ	Mangateitei	3.40	356	PN	Pn	20 07 23.5	-0.2
WNVZ	Wahianoa	3.45	357	P	P	20 07 24.0	-0.3
WNVZ	Wahianoa	3.45	357	PN	Pn	20 07 24.0	-0.4
TRVZ	Turoa	3.48	357	PN	Pn	20 07 24.8	-0.1
TUVZ	Tukino	3.51	358	P	P	20 07 24.9	-0.2
TUVZ	Tukino	3.51	358	PN	Pn	20 07 24.4	-0.9
FWVZ	Far West T-bar	3.52	357	P	P	20 07 25.1	-0.2
FWVZ	Far West T-bar	3.52	357	PN	Pn	20 07 24.9	-0.6
WPVZ	Whakapapa	3.57	357	P	P	20 07 25.9	-0.2
WPVZ	Whakapapa	3.57	357	PN	Pn	20 07 26.0	-0.2
CNZ	Chateau	3.58	357	PN	Pn	20 07 26.1	-0.1
RPZ	Rata Peaks	3.60	253	P	P	20 07 24.2	-2.2
RPZ	Rata Peaks	3.60	253	PN	Pn	20 07 23.8	-2.7
BKZ	Black Stump Fm	3.64	8	eP	P	20 07 24.9	-2.1
RAEZ	Rainy Point	3.65	342	P	P	20 07 28.2	+1.1
NRZ	Ngariki Road	3.72	337	P	P	20 07 29.2	+1.1
NEZ	North Egmont	3.73	339	P	P	20 07 29.4	+1.1
VRZ	Vera Road	3.73	347	eP	P	20 07 28.3	0.0
VRZ	Vera Road	3.73	347	PN	Pn	20 07 27.9	-0.5
WVZ	Waitaha Valley	3.73	264	P	P	20 07 26.7	-1.6
PKE	Pukeiti	3.83	338	P	P	20 07 30.3	+0.5
PKE	Pukeiti	3.83	338	ePN	Pn	20 07 30.3	+0.4
HIZ	Hauiti	4.32	350	eP	P	20 07 35.8	-0.9
ODZ	Otahua Downs	4.36	237	P	P	20 07 33.9	-3.4
ODZ	Otahua Downs	4.36	237	PN	Pn	20 07 33.9	-3.5
LBZ	Lake Benmore	4.39	247	eP	P	20 07 35.1	-2.6
LBZ	Lake Benmore	4.39	247	PN	Pn	20 07 35.0	-2.8
FOZ	Fox Glacier	4.54	258	P	P	20 07 37.4	-2.4
URZ	Urewera	4.62	13	eP	P	20 07 36.9	-4.0
MWZ	Matawai	4.63	17	eP	P	20 07 36.9	-4.1
EAZ	Earnscleugh	5.29	240	P	P	20 07 47.2	-3.1
JCZ	Jackson Bay	5.29	253	eP	P	20 07 47.8	-2.6
WKZ	Wanaka	5.32	245	eP	P	20 07 47.7	-3.1
TUZ	Tuapeka	5.45	232	P	P	20 07 49.1	-3.5
MLZ	Mavora Lakes	6.07	242	eP	P	20 07 58.4	-2.9

GUC 24 20:12:13.5±0.3**, 20.96S**×**68.95W, h108**^{km}±3^{km}**, ML4.1, Chile-Bolivia border region**

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*IDC **24** 20:24:24.1±1.1, 26.63S×176.28W, mb4.2/4, mb1 4.6/5, mb1mx4.2/15, mbtmp4.3/5, MS3.6/4, Ms1 3.6/4, ms1mx3.3/23, Error ellipse: s-maj=47.6km s-min=22.6km az=140.0*

*NEIC **24** 20:24:27.2±5.0, 26.64S×176.29W, h20^{km}±33^{km}, mb4.6/4, Error ellipse: s-maj=15.3km s-min=12.1km az=49.0*

ISC 24 20:24:27.5±0.6**, 26.59S**±0.09×**176.4W**±0.1**, h33**^{km}**, n31,** σ**0**^{s}**.59**/21**, mb4.3**/8**, MS3.6**/2**, 1C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.97	206	Pn	Pn	20 25 13.4	-0.2
	73nm,0.3s,baz=103,slow=15,SNR=7.8						
RAO				Sn	Sn	20 25 49.3	+0.7
	192nm,0.3s,baz=80,slow=23,SNR=6.0						
DZM	Mont Dzumac	16.26	282	LR	LR	20 33 01.9	
	comp=Z,86nm,21.4s,baz=35,slow=32						
RPZ	Rata Peaks	19.89	208	LR	LR	20 35 57.3	
	comp=Z,181nm,21.8s,baz=201,slow=35						
TBI	Tubuai	24.62	88	eP	P	20 29 37.0	-9.3
	68nm,32.2s						
TBI				eS	S	20 34 04.2	+1.5
	107nm,38.2s						
TBI				eLQ		20 34 51.7	
	102nm,31.8s						
TBI				eLR	LR	20 35 22.6	
	147nm,28.2s						
PPT	Papeete	26.39	76	eP	P	20 29 52.6	-10
	11nm,21.2s						
PPT				eLQ		20 35 17.3	
	91nm,20.8s						
PPT				eLR	LR	20 36 10.0	
	87nm,21.8s						
PPT	Papeete	26.39	76	LR	LR	20 38 06.8	
	comp=Z,153nm,20.2s,MS3.5,baz=190,slow=31						
CTA	Charters Tower	34.80	273	LR	LR	20 43 59.1	
	comp=Z,139nm,18.8s,MS3.7,baz=227,slow=34						
RKT	Rikitea	37.64	94	eP	x	20 31 19.7	
	52nm,30.2s						
RKT				eS	S	20 37 39.1	+11
	68nm,34.2s						
RKT				eLR	LR	20 42 07.0	
	79nm,31.8s						
WB2	Warramunga Arr	45.50	268	eP	P	20 32 46.5	+0.6
WRAB	Tennant Creek	45.50	268	eP	P	20 32 46.1	+0.2
	7.1nm,0.7s,mb4.7						
WRA	Warramunga Arr	45.51	268	P	P	20 32 46.0	0.0
	4.5nm,0.7s,mb4.5,baz=107,slow=7.6,SNR=30						
FITZ	Fitzroy Crossi	53.89	266	P	P	20 33 50.4	+0.2
	3.6nm,0.7s,mb4.4,baz=156,slow=11,SNR=7.2						
CASY	Casey	59.16	207	eP	P	20 34 26.2	-0.9
QSPA	South Pole Qui	63.51	180	⇑iP	P	20 34 55.7	-0.5
	4.5nm,0.9s,mb4.5						
MAW	Mawson	76.36	200	P	P	20 36 14.3	-0.3
	5.6nm,1.1s,mb4.4						
SNAA	Sanae	81.91	178	eP	P	20 36 43.6	-1.0
	2.4nm,1.0s,mb4.1						
VNA3	Neumayer Olymp	82.00	176		P	20 36 45.2	+0.1
VNA3	Neumayer Olymp	82.00	176		P	20 36 52.0	+6.9
VNA3	Neumayer Olymp	82.00	176		Px	20 37 04.4	
VNA2	Neumayer--Watz	82.45	176		P	20 36 48.1	+0.7
VNA2	Neumayer--Watz	82.45	176		P	20 36 54.6	+7.2
VNA2	Neumayer--Watz	82.45	176		Px	20 37 08.5	
NVAR	Mina Array Bea	84.48	42	P	P	20 36 58.2	-0.2
	0.8nm,0.7s,mb4.0,baz=206,slow=5.9,SNR=6.4						
NVAR	Mina Array Bea	84.48	42	P	P	20 36 58.2	-0.2
TXAR	Lajitas Array	89.14	57	P	P	20 37 21.5	+0.3
	0.8nm,0.9s,mb4.0,baz=225,slow=5.3,SNR=6.5						
MKAR	Makanchi Array	116.36	311	PKP	PKPdf	20 43 09.1	+1.3
	0.5nm,0.8s,baz=53,slow=6.1,SNR=3.7						
MKAR	Makanchi Array	116.36	311	PKP	PKPdf	20 43 09.1	+1.3
ZRNK	Zerenda	125.44	318	ePKPdf	PKPdf	20 43 26.9	+1.8
NB2	NORSAR Subarra	145.17	354	PKPabc	PKPbc	20 44 03.5	+2.1
	6.4nm,0.9s,baz=7.0,slow=3.6						
NOA	NORSAR Array B	145.17	354	PKPbc	PKPbc	20 44 02.9	+1.5
	4.0nm,0.9s,baz=8.7,slow=2.4,SNR=8.3						
AKASG	Malin Array Be	148.98	328	PKPbc	PKPdf	20 44 13.8	+6.1
	0.5nm,0.3s,baz=38,slow=3.3,SNR=7.8						

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*IDC **24** 20:29:45.7±2.0, 24.22S×67.02W, h161^{km}±22^{km}, mb1 3.4/4, mb1mx3.2/17, mbtmp3.8/4, Error ellipse: s-maj=35.1km s-min=18.2km az=100.0*

*NEIC **24** 20:29:46.0±0.9, 24.27S×66.97W, h167^{km}±11^{km}, mb3.5/1, Error ellipse: s-maj=18.0km s-min=8.0km az=105.0*

ISC 24 20:29:45.1±1.1**, 24.26S**±0.06×**67.0W**±0.2**, h175**^{km}±24^{km}**, n10,** σ**0**^{s}**.58**/10**, mb3.5**/1**, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	7.41	188	P	P	20 31 31.1	-0.3
	0.1nm,0.3s,baz=31,slow=18,SNR=2.7						
CFAA				S	S	20 32 49.5	-4.8
	0.1nm,0.3s,baz=124,slow=19,SNR=4.2						
LPAZ	La Paz	8.00	352	P	P	20 31 40.5	+1.2
	1.0nm,0.3s,baz=157,slow=7.8,SNR=17						
LPAZ				S	S	20 33 07.6	-0.8
	0.1nm,0.3s,baz=344,slow=22,SNR=3.6						
SIV	San Ignacio	9.92	35	P	P	20 32 04.2	-0.3
	0.5nm,0.3s,baz=219,slow=11,SNR=12						
TRQA	Tornquist	14.40	164	ePn	P	20 33 01.6	-0.3
PLCA	Paso Flores	16.70	189	P	P	20 33 30.9	+0.6
	0.1nm,0.3s,baz=267,slow=6.4,SNR=2.5						
BDFB	Brasilia	19.77	68	P	P	20 34 03.8	+0.2
	0.9nm,0.3s,baz=241,slow=6.3,SNR=7.4						
BAO	Brasilia Array	19.79	68	P	P	20 34 04.0	+0.2
SNAA	Sanae	59.10	161	P	P	20 39 28.5	-0.4
	0.5nm,0.6s,mb3.5						
WRA	Warramunga Arr	131.41	207	PKP	PKPdf	20 48 38.6	+1.2
	0.7nm,1.1s,baz=156,slow=1.7,SNR=8.0						
MKAR	Makanchi Array	146.71	40	PKPbc	PKPbc	20 49 08.1	+2.4
	0.3nm,0.6s,baz=333,slow=3.2,SNR=4.2						

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*IDC **24** 20:31:33.5±1.2, 1.87N×97.71E, mb4.2/8, mb1 4.3/9, mb1mx4.0/18, mbtmp4.1/9, ML4.2/1, MS3.1/1, Ms1 3.3/1, ms1mx2.8/26, Error ellipse: s-maj=52.1km s-min=21.7km az=54.0*

*NEIC **24** 20:31:37.8±0.6, 1.79N×97.73E, h30^{km}, mb4.4/7, Error ellipse: s-maj=15.1km s-min=9.7km az=48.0*

ISC 24 20:31:35.9±0.8**, 1.8N**±0.1×**97.71E**±0.08**, h30**^{km}**, n20,** σ**0**^{s}**.73**/20**, mb4.3**/15**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	4.32	50	P	Pn	20 32 42.1	+0.8
KULM	Kulim	4.55	40	ePn	Pn	20 32 45.2	+0.6
KGM	Kluang	5.61	88	P	Pn	20 32 58.8	-0.8
CMAR	Chiang Mai Arr	16.62	4	Pn	P	20 35 27.9	-0.7
	0.3nm,0.3s,baz=194,slow=11,SNR=15						
CMAR				LR	LR	20 42 45.7	
	comp=Z,67nm,19.1s,baz=145,slow=41						
PKI	Pulchoki	28.22	336	eP	P	20 37 29.4	+1.0
GUN	Gumba	28.34	338	eP	P	20 37 29.9	+0.4
	12nm,0.5s,mb4.8						
DMN	Daman	28.38	336	eP	P	20 37 31.2	+1.4
	6.8nm,0.7s,mb4.4						
KKN	Kakani	28.47	336	eP	P	20 37 31.0	+0.3
	9.2nm,0.8s,mb4.5						
GKN	Gorkha	28.92	336	eP	P	20 37 33.9	-0.8
	6.6nm,0.3s,mb4.8						
KOLN	Koldanda	29.16	334	eP	P	20 37 37.4	+0.5
	6.9nm,0.5s,mb4.7						
WRA	Warramunga Arr	41.91	123	P	P	20 39 26.3	+0.5
	1.1nm,0.5s,mb3.8,baz=303,slow=9.1,SNR=30						
WRA				PcP	PcP	20 41 22.4	+0.7
	0.4nm,0.4s,baz=314,slow=2.7,SNR=6.7						
WRAB	Tennant Creek	41.92	123	eP	P	20 39 25.9	0.0
	6.7nm,0.9s,mb4.3						
SONM	Songino Array	46.49	8	P	P	20 40 01.3	-1.0
	1.2nm,0.3s,mb4.2,baz=186,slow=12,SNR=8.5						
MKAR	Makanchi Array	46.81	345	P	P	20 40 04.7	-0.1
	3.4nm,0.4s,mb4.6,baz=152,slow=7.1,SNR=54						
ZAL	Zalesovo	53.06	350	P	P	20 40 51.3	-1.3
	6.7nm,0.4s,mb4.9,baz=308,slow=4.5,SNR=34						
ZRNK	Zerenda	56.29	340	eP	P	20 41 14.8	-1.3
	2.5nm,0.4s,mb4.6						
BRTR	Keskin Array B	69.10	312	P	P	20 42 41.5	-0.1
	0.4nm,0.7s,mb3.5,baz=149,slow=7.2,SNR=3.5						
AKASG	Malin Array Be	75.11	322	P	P	20 43 16.8	-0.2
	0.6nm,0.4s,mb3.9,baz=89,slow=5.1,SNR=4.2						
FINES	FINESS Array B	79.72	332	P	P	20 43 42.5	+0.2
	1.9nm,0.8s,mb4.1,baz=109,slow=6.0,SNR=11						
ARCES	ARCESS Array B	82.17	340	P	P	20 43 55.4	+0.4
	0.7nm,0.4s,mb3.9,baz=108,slow=3.8,SNR=9.8						

GUC 24 20:47:18.1±0.3**, 20.02S**×**69.26W, h102**^{km}±1^{km}**, ML4.4, Northern Chile**

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*IDC **24** 20:53:15.2±1.4, 5.37N×126.55E, mb3.9/6, mb1 4.0/6, mb1mx3.8/19, mbtmp3.9/6, Error ellipse: s-maj=102.8km s-min=19.2km az=69.0*

*NEIC **24** 20:53:19.8±0.9, 5.41N×126.70E, h35^{km}, mb4.0/2, Error ellipse: s-maj=77.7km s-min=12.1km az=70.0*

ISC 24 20:53:23.7±1.5**, 5.4N**±0.1×**126.6E**±0.3**, h86**^{km}±15^{km}**, n12,** σ**1**^{s}**.04**/13**, mb3.8**/8**, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	2.22	318	⇓iP	P	20 53 59.1	-0.3
KCP				i S	S	20 54 26.4	+0.7
BUKP	Musuan	2.93	329	eP	P	20 54 07.6	-1.7
BUTP	Butuan	3.71	345	eP	P	20 54 21.3	+1.2
FITZ	Fitzroy Crossi	23.34	182	P	P	20 58 25.8	+0.7
	5.4nm,0.9s,mb3.9,baz=167,slow=20,SNR=6.7						
WRAB	Tennant Creek	26.27	163	P	P	20 58 51.6	-1.4
	6.3nm,1.1s,mb4.0						
WRA	Warramunga Arr	26.28	163	P	P	20 58 52.6	-0.5
	1.3nm,0.5s,mb3.6,baz=342,slow=10,SNR=23						
WB2	Warramunga Arr	26.28	163	eP	P	20 58 54.7	+1.6
STKA	Stephens Creek	39.70	160	P	P	21 00 49.1	0.0
	1.0nm,0.5s,mb3.9,baz=343,slow=11,SNR=3.0						
MKAR	Makanchi Array	56.15	325	P	P	21 02 55.6	-1.2
	0.4nm,0.5s,mb3.7,baz=123,slow=7.9,SNR=6.5						
BVAR	Borovoye Array	65.89	327	P	P	21 04 03.9	+1.4
	0.3nm,0.5s,mb3.4,baz=130,slow=11,SNR=3.0						
ZRNK	Zerenda	66.62	326	eP	P	21 04 06.1	-1.0
	0.5nm,0.5s,mb3.6						
FINES	FINESS Array B	90.34	332	P	P	21 06 16.6	+0.5
	1.5nm,0.9s,mb4.1,baz=63,slow=3.1,SNR=4.2						

MAN 24 20:54:47.1, 9.75N×**123.67E, h24**^{km}**, mb4.0, ML2.7, MS2.4, 3D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.20	109	⇓iP	Pb	20 54 54.0	+1.4
TBP				i S	Sb	20 54 58.0	+1.7
SNPH	Sibulan	0.59	227	eP	Pb	20 54 58.7	-0.1
LLP	Lapu-Lapu	0.63	27	⇓eP	Pb	20 55 00.6	+1.2
LLP				i S	Sb	20 55 09.9	+2.2
DCPH	Dipolog City	1.21	195	⇓eP	Pn	20 55 07.9	-0.7
DCPH				i S	Sb	20 55 23.9	-0.5
MSLP	Maasin	1.23	72	eP	Pn	20 55 12.4	+3.4
GUIM	Jordan	1.38	309	eP	Pn	20 55 11.1	0.0
GUIM				eS	Sn	20 55 29.1	+0.5

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*IDC **24** 21:15:27.7±2.2, 5.59S×154.34E, h222^{km}±22^{km}, mb3.8/8, mb1 3.9/10, mb1mx3.7/18, mbtmp4.4/10, Error ellipse: s-maj=17.8km s-min=13.5km az=59.0*

*NEIC **24** 21:15:28.3±2.4, 5.58S×154.29E, h227^{km}±20^{km}, mb4.2/10, Error ellipse: s-maj=18.9km s-min=11.8km az=47.0*

ISC 24 21:15:25.6±2.4**, 5.6S**±0.1×**154.4E**±0.1**, h217**^{km}±20^{km}**, n22,** σ**0**^{s}**.96**/25**, mb4.2**/13**, 1C-4D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.09	241	P	P	21 17 22.1	+1.4
	1.8nm,0.3s,baz=19,slow=8.1,SNR=8.9						
PMG				S	S	21 19 01.5	+11
	0.6nm,0.3s,baz=170,slow=19,SNR=3.6						
CTA	Charters Tower	16.45	208	⇓iP	P	21 19 06.3	+0.4
	3.9nm,0.6s						
CTA	Charters Tower	16.45	208	P	P	21 19 06.1	+0.2
	0.7nm,0.3s,baz=26,slow=14,SNR=7.1						
CTAO	Charters Tower	16.45	208	eP	P	21 19 05.9	0.0
	6.2nm,0.7s						
DZM	Mont Dzumac	20.17	146	eP	P	21 19 44.8	-0.1
DZM	Mont Dzumac	20.17	146	P	P	21 19 44.7	-0.1
	14nm,0.6s,baz=44,slow=23,SNR=33						
KAKA	Kakadu	22.75	250	⇓iP	P	21 20 09.7	-0.6
	22nm,0.5s,mb4.9						
WRAB	Tennant Creek	24.14	232	eP	P	21 20 23.0	-0.3
	15nm,0.6s,mb4.8						
WB2	Warramunga Arr	24.14	232	⇓iP	P	21 20 23.2	-0.1
WB2				eS	S	21 24 28.3	+5.5
WRA	Warramunga Arr	24.15	232	P	P	21 20 23.5	0.0
	9.6nm,0.6s,mb4.6,baz=55,slow=10.0,SNR=155						
WRA				S	S	21 24 25.4	+2.5
	0.7nm,0.8s,baz=61,slow=14,SNR=3.9						
STKA	Stephens Creek	28.78	203	eP	P	21 21 04.3	-1.2
	6.5nm,1.5s,mb4.0						
STKA	Stephens Creek	28.78	203	P	P	21 21 04.1	-1.5
	1.5nm,0.5s,mb3.9,baz=16,slow=14,SNR=3.9						
FITZ	Fitzroy Crossi	30.68	244	⇓iP	P	21 21 20.5	-1.8
	13nm,0.9s,mb4.6						
MBWA	Marble Bar	36.95	242	eP	P	21 22 14.3	-1.5
	4.1nm,0.6s,mb4.1						
RPZ	Rata Peaks	40.76	161	P	P	21 22 47.1	+0.1
	21nm,0.8s,mb4.6,baz=39,slow=18,SNR=9.5						
CMAR	Chiang Mai Arr	59.59	295	P	P	21 25 09.3	+0.4
	3.2nm,0.8s,mb4.0,baz=126,slow=5.8,SNR=16						
SONM	Songino Array	67.78	327	P	P	21 26 01.1	-0.8
	1.0nm,0.6s,mb3.6,baz=135,slow=5.2,SNR=4.7						
LSA	Lhasa	69.93	304	eP	P	21 26 16.5	+1.1
	1.5nm,0.6s,mb3.8						
VNDA	Vanda	72.03	178	P	P	21 26 27.6	+0.4
	2.2nm,0.7s,mb3.9,baz=320,slow=6.3,SNR=12						
VNDA	Vanda	72.03	178	eP	P	21 26 27.8	+0.6
	2.0nm,0.7s,mb3.9						
MKAR	Makanchi Array	81.90	319	P	P	21 27 22.6	+0.5
	0.4nm,0.4s,mb3.4,baz=93,slow=8.0,SNR=10						
QSPA	South Pole Qui	84.42	180	⇑iP	P	21 27 35.5	+1.3
	4.4nm,0.7s,mb4.3						

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*NEIC **24** 21:31:14.4±0.3, 3.95N×93.43E, mb4.7/14, Error ellipse: s-maj=7.7km s-min=5.8km az=221.0*

*BJI **24** 21:31:14.3, 4.00N×93.40E, h24^{km}, mB4.6, mb4.6, Ms4.1, Msz3.9*

*IDC **24** 21:31:14.1±0.5, 3.92N×93.44E, h23^{km}±3^{km}, mb4.1/15, mb1 4.2/16, mb1mx4.1/25, mbtmp4.2/16, ML3.7/1, MS3.3/1, Ms1 3.5/1, ms1mx3.1/24, Error ellipse: s-maj=17.1km s-min=13.3km az=61.0*

ISC 24 21:31:12.5±0.5**, 3.93N**±0.06×**93.45E**±0.06**, h24**^{km}**, h24**^{km}±.6^{km}**:pP-P, n44,** σ**0**^{s}**.81**/44**, mb4.5**/31**, MS3.9**/2**, 1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	7.30	79	ePn	Pn	21 33 00.0	-0.5
CM31	Chiang Mai Arr	15.40	20	eP	P	21 34 49.8	-0.4
	37nm,0.8s						
CM31				epP		21 34 58.3	
CMAR	Chiang Mai Arr	15.40	20	Pn	P	21 34 49.4	-0.9
	0.1nm,0.3s,baz=215,slow=14,SNR=16						
CMAR				LR	LR	21 41 34.3	
	comp=Z,95nm,18.4s,baz=205,slow=40						
VIS	Vishakhapatnam	16.91	325	i P	P	21 35 09.6	+0.2
VIS				i S	S	21 38 04.2	-11
KSM	Kuching	17.02	98	P	P	21 35 12.0	+1.2
KSM				pP		21 35 20.4	
KKM	Kota Kinabalu	22.78	84	eP	P	21 36 16.4	+1.6
KMI	Kunming	22.89	22	P	P	21 36 16.8	+1.1
KMI				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
KMI				LR	LR		
	comp=N,190nm,11.1s,MS3.9						
KMI				LR	LR		
	comp=E,210nm,12.5s,MS3.9						
KMI				LR	LR		
	comp=Z,220nm,10.2s,MS3.9						
PKI	Pulchoki	24.73	343	eP	P	21 36 33.9	+0.3
	comp=Z,46nm,1.3s,mb4.8						
DMN	Daman	24.85	342	eP	P	21 36 35.2	+0.4
	comp=Z,26nm,0.9s,mb4.7						
GUN	Gumba	24.91	344	eP	P	21 36 36.2	+0.9
	comp=Z,46nm,0.9s,mb5.0						
KKN	Kakani	24.97	343	eP	P	21 36 36.3	+0.4
	comp=Z,80nm,1.2s,mb5.1						
GKN	Gorkha	25.37	342	eP	P	21 36 40.1	+0.5
	comp=Z,38nm,0.6s,mb5.1						
KOLN	Koldanda	25.50	339	eP	P	21 36 40.9	+0.1
	comp=Z,43nm,1.1s,mb4.9						
LSA	Lhasa	25.72	355	P	P	21 36 46.3	+3.4
LSA	Lhasa	25.72	355	eP	P	21 36 44.9	+2.0
	comp=Z,32nm,0.7s,mb5.0						
LSA				epP	pP	21 36 52.9	+3.0
GYA	Guiyang	25.73	28	⇓iP	P	21 36 43.9	+0.9
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
CD2	Chengdu	28.54	19	P	P	21 37 07.9	-0.7
CD2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
ENH	Enshi	30.27	28	eP	P	21 37 22.4	-1.7
	comp=Z,8.3nm,0.8s,mb4.5						
XAN	Xi'an	33.24	24	P	P	21 37 49.0	-1.1
XAN				AP	pP	21 37 56.8	-0.4
XAN				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GTA	Gaotai	35.78	8	eP	P	21 38 12.4	+0.5
GTA				AP	pP	21 38 17.9	-1.2
GTA				XP	sP	21 38 20.4	-1.7
GTA				AMB	AMB		
	comp=Z,90nm,6.5s						
GTA				LR	LR		
	comp=N,80nm,13.7s						
GTA				LR	LR		
	comp=E,90nm,9.9s						
GTA				LR	LR		
	comp=Z,150nm,16.0s,MS3.9						
FITZ	Fitzroy Crossi	38.56	126	P	P	21 38 34.3	-1.1
	comp=Z,6.6nm,0.8s,mb4.4,baz=212,slow=0.9,SNR=5.1						
MKAR	Makanchi Array	43.78	349	P	P	21 39 18.4	+0.3
	comp=Z,6.1nm,0.7s,mb4.5,baz=168,slow=8.6,SNR=60						
MKAR				pP	pP	21 39 26.0	+0.7
	comp=Z,2.8nm,0.5s,baz=163,slow=8.1,SNR=12						
SONM	Songino Array	45.13	12	P	P	21 39 29.0	+0.1
	comp=Z,1.6nm,0.7s,mb4.0,baz=194,slow=8.4,SNR=11						
ULN	Ulaanbaatar	45.31	13	eP	P	21 39 30.2	-0.1
	comp=Z,4.5nm,1.1s,mb4.2						
WRA	Warramunga Arr	46.65	122	P	P	21 39 40.9	-0.4
	comp=Z,5.6nm,0.8s,mb4.6,baz=300,slow=8.8,SNR=26						
WRA				pP	pP	21 39 48.3	-0.3
	comp=Z,4.4nm,0.7s,baz=300,slow=9.1,SNR=15						
WRAB	Tennant Creek	46.66	122	eP	P	21 39 41.7	+0.3
	comp=Z,8.4nm,0.8s,mb4.7						
WRAB				epP	pP	21 39 48.9	+0.2
ZAL	Zalesovo	50.35	353	P	P	21 40 09.7	+0.2
	comp=Z,3.3nm,0.5s,mb4.7,baz=295,slow=4.8,SNR=17						
HIA	Hailar	50.40	22	eP	P	21 40 10.2	+0.2
	comp=Z,3.5nm,0.5s,mb4.7						
BVAR	Borovoye Array	52.50	343	P	P	21 40 24.6	-1.2
	comp=Z,2.4nm,0.7s,mb4.2,baz=149,slow=8.6,SNR=15						
ZRNK	Zerenda	52.86	342	eP	P	21 40 27.0	-1.5
	comp=Z,91nm,0.8s						
ZRNK				epP	pP	21 40 34.5	-1.4
STKA	Stephens Creek	57.96	132	P	P	21 41 05.4	-0.2
	comp=Z,2.1nm,1.0s,mb4.1,baz=329,slow=7.0,SNR=4.1						
ASAJ	Asahikawa	58.85	40	P	P	21 41 11.2	-0.4
	comp=Z,3.9nm,0.7s,mb4.5,baz=5.1,slow=14,SNR=3.9						
MALT	Malatya	60.53	312	eP	P	21 41 23.7	+0.3
	comp=Z,3.1nm,0.9s,mb4.4						
BR131	Keskin Array S	64.51	312	eP	P	21 41 48.5	-1.4
	comp=Z,1.7nm,0.8s,mb4.1						
BR131				epP	pP	21 41 56.3	-1.1
BRTR	Keskin Array B	64.51	312	P	P	21 41 48.1	-1.7
	comp=Z,1.1nm,0.7s,mb4.0,baz=144,slow=7.4,SNR=7.5						
BRTR				pP	pP	21 41 55.8	-1.6
	comp=Z,1.8nm,0.8s,baz=129,slow=7.9,SNR=8.3						
MATP	Matopo	68.13	246	P	P	21 42 14.4	+1.2
	comp=Z,0.8nm,0.6s,mb4.0,baz=90,slow=11,SNR=2.6						
MATP				pP	pP	21 42 20.9	+0.1
	comp=Z,3.1nm,0.9s,baz=55,slow=12,SNR=4.5						
MLR	Muntele Rosu	71.52	317	P	P	21 42 33.5	0.0
	comp=Z,2.7nm,0.7s,mb4.3,baz=185,slow=5.1,SNR=4.9						
MLR				pP	pP	21 42 41.4	+0.3
	comp=Z,3.5nm,0.8s,baz=198,slow=7.2,SNR=3.6						
LBTB	Lobatse	71.78	242	P	P	21 42 35.2	-0.3
	comp=Z,1.4nm,0.8s,mb4.0,baz=67,slow=8.0,SNR=3.7						
LBTB				pP	pP	21 42 43.2	+0.2
	comp=Z,3.0nm,0.9s,baz=81,slow=15,SNR=4.2						
LBTB	Lobatse	71.78	242	P	P	21 42 35.2	-0.3
LBTB				pP	pP	21 42 43.2	+0.2
BOSA	Boshof	72.94	239	P	P	21 42 42.0	-0.3
	comp=Z,1.4nm,0.8s,mb4.0,baz=57,slow=11,SNR=4.2						
BOSA				pP	pP	21 42 49.4	-0.5
	comp=Z,3.0nm,0.8s,baz=76,slow=6.4,SNR=4.1						

BOSA	**Boshof**	**72.94**	**239**	P	**P**	**21 42 42.0**	**-0.3**
BOSA				pP	pP	21 42 49.4	-0.5
ARCES	**ARCESS Array B**	**78.72**	**341**	P	**P**	**21 43 14.2**	**0.0**
	comp=Z,2.3nm,0.8s,mb4.2,baz=90,slow=3.6,SNR=5.1						
GERES	**GERESS Array B**	**80.30**	**319**	P	**P**	**21 43 23.2**	**+0.1**
	comp=Z,1.5nm,0.7s,mb4.0,baz=104,slow=5.5,SNR=17						
GERES				pP	pP	21 43 30.8	0.0
	comp=Z,1.7nm,0.8s,baz=104,slow=5.5,SNR=7.4						
TXAR	**Lajitas Array**	**143.07**	**25**	PKhKP		21 50 44.0	
	comp=Z,0.3nm,0.7s,baz=300,slow=1.2,SNR=4.1						

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*NEIC **24** 21:32:11.0±0.3, 52.09N×174.05W, h82^{km}±3^{km}, mb4.2/6, Error ellipse: s-maj=11.8km s-min=3.2km az=164.0*

*IDC **24** 21:32:12.5±2.5, 52.21N×174.17W, h99^{km}±22^{km}, mb3.7/9, mb1 4.0/11, mb1mx3.7/27, mbtmp4.1/11, MS2.9/3, Ms1 3.0/3, ms1mx2.5/34, Error ellipse: s-maj=28.9km s-min=12.5km az=173.0*

ISC 24 21:32:10.0±0.4**, 52.23N**±0.10×**174.05W**±0.06**, h85**^{km}±4^{km}**, n51, σ0^{s}86**/53**, mb4.0**/14**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.10**	**251**	P	**P**	**21 32 21.2**	**-0.9**
ATKA				S	**S**	**21 32 29.7**	**-1.4**
GSTR	**Great Sitkin T**	**1.25**	**264**	P	**P**	**21 32 33.3**	**+0.6**
GSMY	**Great Sitkin M**	**1.25**	**262**	P	**P**	**21 32 33.0**	**+0.3**
GSTD	**Great Sitkin T**	**1.30**	**263**	P	**P**	**21 32 33.7**	**+0.3**
GSCK	**Great Sitkin C**	**1.32**	**261**	P	**P**	**21 32 34.2**	**+0.5**
GSCK				S	**S**	**21 32 51.5**	**+0.2**
ADAG	**Mount Adagdak**	**1.59**	**262**	P	**P**	**21 32 37.5**	**+0.2**
KIWB	**Kanaga Island**	**1.95**	**260**	P	**P**	**21 32 42.9**	**+0.9**
KIKV	**Kanaga Island**	**1.96**	**261**	P	**P**	**21 32 42.5**	**+0.5**
KIMD	**Kanaga Island**	**2.02**	**258**	P	**P**	**21 32 43.4**	**+0.4**
KIMD				S	**S**	**21 33 07.8**	**+0.6**
NIKO	**Nikolski**	**3.25**	**75**	P	**P**	**21 33 00.4**	**+0.4**
MNAT	**Makushin Natee**	**4.74**	**67**	P	**P**	**21 33 21.0**	**+0.4**
MTBL	**Makushin Table**	**4.77**	**66**	P	**P**	**21 33 21.6**	**+0.7**
UNV	**Unalaska Valle**	**4.83**	**67**	P	**P**	**21 33 21.7**	**-0.2**
AKGG	**Akutan Green G**	**5.23**	**65**	P	**P**	**21 33 27.6**	**+0.4**
AKUT	**Akutan**	**5.33**	**66**	P	**P**	**21 33 28.8**	**+0.2**
SPIA	**Saint Paul Isl**	**5.42**	**22**	P	**P**	**21 33 32.1**	**+2.2**
WTUG	**Tugumak**	**6.33**	**62**	P	**P**	**21 33 42.8**	**+0.3**
SMY	**Shemya**	**7.26**	**279**	P	**P**	**21 33 54.4**	**-0.9**
DRIA	**Deer Island**	**7.53**	**64**	P	**P**	**21 33 58.3**	**-0.7**
DTNA	**Dutton South F**	**7.59**	**63**	P	**P**	**21 33 58.8**	**-1.0**
DOL	**Dolgoi Island**	**7.80**	**63**	P	**P**	**21 34 01.9**	**-0.9**
FX1	**Attu Island--F**	**7.82**	**280**	P	**P**	**21 34 02.7**	**-0.3**
	4.4nm,0.3s,baz=209,slow=2.5,SNR=20						
FX1				S	**S**	**21 35 30.6**	**-0.1**
	3.9nm,0.3s,baz=279,slow=21,SNR=3.1						
FX1	**Attu Island--F**	**7.82**	**280**	*e*P	**P**	**21 34 02.8**	**-0.2**
HAG	**Hague Volcano**	**7.83**	**62**	P	**P**	**21 34 01.6**	**-1.5**
SDPT	**Sand Point**	**8.62**	**63**	P	**P**	**21 34 12.4**	**-1.4**
SVW2	**Sparrevohn**	**13.44**	**41**	*e*P	**P**	**21 35 21.4**	**+3.2**
SPU	**Mount Spurr**	**14.97**	**45**	P	**P**	**21 35 41.2**	**+3.4**
SLKM	**Skilak Lake**	**15.51**	**48**	*e*P	**P**	**21 35 45.4**	**+0.7**
ILAR	**Eielson Array**	**18.75**	**37**	P	**P**	**21 36 23.4**	**-0.9**
	4.6nm,0.3s,baz=237,slow=7.1,SNR=93						
ILAR				LR	LR	21 43 56.2	
	comp=Z,20nm,18.1s,baz=359,slow=37						
ILAR				ScP		21 44 13.2	
	0.1nm,0.3s,baz=288,slow=3.7,SNR=4.7						
INK	**Inuvik**	**25.07**	**35**	P	**P**	**21 37 27.4**	**-0.1**
	2.5nm,0.4s,mb4.0,baz=247,slow=11,SNR=12						
INK	**Inuvik**	**25.07**	**35**	P	**P**	**21 37 27.4**	**0.0**
	3.8nm,0.7s,mb3.9						
DLBC	**Dease Lake**	**25.41**	**58**	LR	LR	21 46 21.6	
	comp=Z,36nm,21.5s,baz=228,slow=33						
YKA	**Yellowknife Ar**	**32.48**	**48**	LR	LR	21 52 06.1	
	comp=Z,35nm,18.4s,baz=220,slow=37						
EDM	**Edmonton**	**35.80**	**64**	*e*P	**P**	**21 39 02.5**	**-0.1**
NEW	**Newport**	**35.82**	**73**	P	**P**	**21 39 03.4**	**+0.7**
	2.9nm,0.6s,mb4.4,baz=280,slow=6.7,SNR=3.9						
NEW	**Newport**	**35.82**	**73**	*e*P	**P**	**21 39 02.9**	**+0.2**
MJAR	**Matsushiro Arr**	**36.82**	**264**	P	**P**	**21 39 09.9**	**-1.4**
	2.1nm,0.8s,mb4.1,baz=51,slow=6.7,SNR=8.6						
WVOR	**Wild Horse Val**	**37.95**	**82**	*e*P	**P**	**21 39 21.0**	**+0.4**
	2.4nm,0.7s,mb4.1						
HLID	**Hailey**	**39.87**	**78**	*e*P	**P**	**21 39 37.1**	**+0.6**
	3.7nm,1.1s,mb4.1						
NVAR	**Mina Array Bea**	**40.54**	**87**	P	**P**	**21 39 42.8**	**+0.7**
	0.6nm,0.5s,mb3.7,baz=312,slow=6.2,SNR=4.7						
ELK	**Elko**	**41.01**	**82**	*e*P	**P**	**21 39 46.8**	**+0.9**
	1.4nm,0.7s,mb3.9						
BW06	**Boulder Array**	**43.24**	**76**	*e*P	**P**	**21 40 04.6**	**+0.5**
	7.0nm,1.2s,mb4.3						
PDAR	**Pinedale Array**	**43.24**	**76**	P	**P**	**21 40 04.6**	**+0.5**
	4.5nm,0.7s,mb4.3,baz=312,slow=4.4,SNR=35						
SRU	**San Rafael**	**44.87**	**81**	*e*P	**P**	**21 40 17.9**	**+0.6**
SDCO	**Great Sand Dun**	**48.78**	**79**	*e*P	**P**	**21 40 48.4**	**+0.4**
	2.5nm,0.8s,mb4.2						
MNTX	**Cornudas Mount**	**52.91**	**84**	*e*P	**P**	**21 41 19.2**	**-0.2**
WMOK	**Wichita Mounta**	**54.83**	**77**	P	**P**	**21 41 33.1**	**-0.2**
TXAR	**Lajitas Array**	**55.62**	**85**	P	**P**	**21 41 38.6**	**-0.6**
	1.0nm,0.5s,mb4.1,baz=304,slow=5.4,SNR=16						
MKAR	**Makanchi Array**	**61.76**	**311**	P	**P**	**21 42 19.4**	**-2.1**
	0.1nm,0.3s,mb3.4,baz=47,slow=6.5,SNR=6.7						
BVAR	**Borovoye Array**	**62.09**	**322**	P	**P**	**21 42 22.8**	**-0.8**
	0.4nm,0.5s,mb3.7,baz=54,slow=5.5,SNR=2.9						
WRA	**Warramunga Arr**	**84.72**	**228**	P	**P**	**21 44 34.5**	**-1.2**
	0.6nm,0.4s,mb3.8,baz=34,slow=5.8,SNR=14						

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*BJI **24** 21:45:08.7, 4.57N×95.04E, h61^{km}, mB5.3, mb5.4, Ms5.0, Msz4.7*

*MOS **24** 21:45:09.0±0.9, 4.94N×95.18E, h38^{km}, mb5.6/99, MS4.5/29, Error ellipse: s-maj=8.5km s-min=3.7km az=123.8*

*HRVD **24** 21:45:11.7±0.2, 4.37N×95.12E, h51^{km}, MW5.3/64, Centroid moment Tensor Solution. LP body waves: s64,c118;Mantle waves: s62,c120; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.83±.02; $M_{\theta\theta}$-0.53±.02; $M_{\phi\phi}$-0.30±.02; $M_{r\theta}$0.39±.01; $M_{\theta\phi}$0.60±.01; $M_{\phi r}$-0.47±.02; Best double couple: $M_0$1.111×10^{17} NP1: ϕ_s300°, δ29°, λ76°. NP2: ϕ_s137°, δ62°, λ98°. Principal axes: T 1.023, Plg72°, Azm65°; N .176, Plg7°, Azm313°; P -1.199, Plg16°, Azm221°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **24** 21:45:11.5±0.6, 4.81N×95.17E, h52^{km}±4^{km}, mb4.8/26, mb1 4.9/26, mb1mx4.9/27, mbtmp5.1/26, MS4.5/20, Ms1 4.5/20, ms1mx4.4/27 Error ellipse: s-maj=13.2km s-min=10.9km az=66.0*

*NEIC **24** 21:45:11.7±0.8, 4.81N×95.15E, h53^{km}±6^{km}, mb5.3/140, MS4.7/12, Error ellipse: s-maj=4.6km s-min=3.0km az=207.0*

*CRAAG **24** 21:45:13.3, 5.28N×95.09E, Mb5.3*

ISC 24 21:45:10.6±0.2**, 4.77N**±0.03×**95.16E**±0.02**, h57**^{km}**, h57**^{km}±1.5^{km}**:pP-P, n643, σ0^{s}95**/605**, mb5.3**/200**, MS4.6**/75**, 148C-18D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.50**	**84**	*e*Pn	**P**	**21 46 32.3**	**+0.5**
KULM				*e*Sn	**S**	**21 47 34.2**	**-0.2**
IPM	**Ipoh**	**5.85**	**92**	P	**P**	**21 46 37.5**	**+0.8**
SNG	**Songkhla**	**5.93**	**66**	P	**P**	**21 46 39.0**	**+1.2**
	414nm,0.9s						
KGM	**Kluang**	**8.59**	**108**	P	**P**	**21 47 15.1**	**+0.3**
NNT	**Nongplab**	**8.99**	**30**	P	**P**	**21 47 23.1**	**+2.9**
NST	**Nakhon Sawan**	**11.88**	**24**	P	**P**	**21 48 03.0**	**+3.3**
	83nm,0.8s						
KKTK	**Khon Kaen**	**13.74**	**33**	P	**P**	**21 48 28.0**	**+3.7**
	802nm,0.7s						
CM31	**Chiang Mai Arr**	**14.10**	**15**	*e*P	**P**	**21 48 33.2**	**+4.3**
	171nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.10**	**15**	P	**P**	**21 48 32.5**	**+3.6**
	0.1nm,0.3s,baz=98,slow=13,SNR=20						
CMAR				LR	LR	21 53 57.1	
	comp=Z,2µm,20.6s,baz=195,slow=37						
CMAR				ScP		21 57 16.1	
	0.1nm,0.3s,baz=217,slow=3.1,SNR=5.5						
UBT	**Ubonrachathani**	**14.22**	**42**	P	**P**	**21 48 36.8**	**+6.1**
PALK	**Pallekele**	**14.59**	**281**	*e*Pn	**P**	**21 48 34.0**	**-1.5**
	30nm,0.8s						
PALK				*e*Sn	**S**	**21 50 59.6**	**-16**
KSM	**Kuching**	**15.48**	**102**	*e*P	**P**	**21 48 50.4**	**+3.5**
VIS	**Vishakhapatnam**	**17.31**	**319**	*e*P	**P**	**21 49 10.2**	**+0.2**
VIS				AMb	AMB	21 49 16.2	
	comp=Z,92nm,1.4s						
VIS				*e*S	**S**	**21 52 10.8**	**-8.0**
VIS				AML	AML	21 52 12.6	
	comp=N,32nm,0.7s						
VIS				AML	AML	21 52 12.6	
	comp=E,54nm,0.7s						
TRD	**Trivandrum**	**18.45**	**283**	*e*x	x	21 49 31.5	
TRD				*i* x	x	21 53 01.5	
QIZ	**Qiongzhong**	**20.15**	**44**	P	**P**	**21 49 44.0**	**+1.2**
QIZ				AP		21 49 57.3	
QIZ				S	**S**	**21 53 25.1**	**+4.1**
QIZ				AMB	AMB		
	comp=Z,40nm,1.0s						
QIZ				LR	LR		
	comp=N,1µm,18.6s,MS4.5						
QIZ				LR	LR		
	comp=E,2µm,18.2s,MS4.5						
QIZ				LR	LR		
	comp=Z,2µm,18.6s,MS4.5						
QIZ	**Qiongzhong**	**20.15**	**44**	*e*P	**P**	**21 49 42.7**	**-0.1**
	comp=Z,349nm,1.7s						
HYB	**Hyderabad**	**20.55**	**309**	*e*P	**P**	**21 49 46.0**	**-1.0**
HYB				*e*S	**S**	**21 53 30.0**	**+1.4**
HYB	**Hyderabad**	**20.55**	**309**	*i* P	**P**	**21 49 47.5**	**+0.5**
HYB				*e*S	**S**	**21 53 30.0**	**+1.4**
SHL	**Shillong**	**20.91**	**352**	*e*P	**P**	**21 49 49.0**	**-1.6**
SHL				*e*S	**S**	**21 53 45.0**	**+10**
BOK	**Bokaro**	**20.92**	**336**	*e*P	**P**	**21 49 49.5**	**-1.2**
BOK				*i* P		21 49 50.1	
BOK				AMb	AMB	21 49 53.7	
	comp=Z,140nm,0.9s						
BOK				*i* x	x	21 53 26.1	
BOK				*e*x	x	21 53 47.2	
KKM	**Kota Kinabalu**	**21.00**	**86**	*e*P	**P**	**21 49 52.7**	**+1.1**
KKM	**Kota Kinabalu**	**21.00**	**86**	P	**P**	**21 49 53.4**	**+1.8**
BLSP	**Bilaspur**	**21.37**	**325**	*e*P	**P**	**21 49 54.8**	**-0.5**
BLSP				AML	AML	21 49 57.9	
	comp=Z,221nm,0.7s						
BLSP				AMb	AMB	21 49 57.9	
	comp=Z,229nm,0.7s,mb5.6						
BLSP				*e*x	x	21 54 15.7	
KMI	**Kunming**	**21.50**	**19**	P	**P**	**21 49 58.5**	**+1.9**
KMI				AP		21 50 09.8	
KMI				XP		21 50 14.8	
KMI				PP	PP	21 50 24.3	+2.1
KMI				S	**S**	**21 53 49.5**	**+3.0**
KMI				PCP	PcP	21 53 58.8	+0.6
KMI				XS		21 54 08.1	
KMI				SS	SS	21 54 26.9	+1.8
KMI				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.2						
KMI				AMB	AMB		
	comp=Z,550nm,6.2s						
KMI				LR	LR		
	comp=N,2µm,21.0s,MS4.5						
KMI				LR	LR		
	comp=E,1µm,20.5s,MS4.5						
KMI				LR	LR		
	comp=Z,3µm,23.7s,MS4.6						
NGP	**Nagpur**	**22.57**	**318**	*e*P	**P**	**21 50 09.0**	**+1.7**
NGP				*e*x	x	21 54 18.8	
TSM	**Tawau**	**22.65**	**90**	P	**P**	**21 50 08.1**	**0.0**
LATR	**Latur**	**22.67**	**308**	*e*P	**P**	**21 50 11.0**	**+2.7**
KAD	**Karad**	**24.02**	**303**	*e*P	**P**	**21 50 23.6**	**+2.2**
KAD				AMb	AMB	21 50 26.1	
	comp=Z,47nm,2.0s,mb4.6						
KAD				*e*x	x	21 54 48.0	
GYA	**Guiyang**	**24.21**	**26**	⇑*i*P	**P**	**21 50 24.4**	**+1.3**
GYA				AP		21 50 38.9	
GYA				XP		21 50 46.3	
GYA				AMB	AMB		
	comp=Z,40nm,1.1s,mb4.8						
GYA				AMB	AMB		
	comp=Z,510nm,8.4s						
GYA				LR	LR		
	comp=N,2µm,22.2s,MS4.7						
GYA				LR	LR		
	comp=E,2µm,18.6s,MS4.7						
GYA				LR	LR		
	comp=Z,2µm,20.4s,MS4.6						
PKI	**Pulchoki**	**24.50**	**339**	*e*P	**P**	**21 50 25.1**	**-0.9**
	comp=Z,40nm,0.6s,mb5.1						
PKI	**Pulchoki**	**24.50**	**339**	*e*P	**P**	**21 50 25.1**	**-0.9**
PKI				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.8						
DMN	**Daman**	**24.65**	**338**	*e*P	**P**	**21 50 26.5**	**-0.9**
	comp=Z,105nm,1.0s,mb5.3						
GUN	**Gumba**	**24.65**	**340**	*e*P	**P**	**21 50 27.6**	**+0.2**
	comp=Z,138nm,0.6s,mb5.6						
KKN	**Kakani**	**24.75**	**339**	*e*P	**P**	**21 50 27.4**	**-0.9**
	comp=Z,133nm,1.0s,mb5.4						
KKN	**Kakani**	**24.75**	**339**	*e*P	**P**	**21 50 27.4**	**-0.9**
KKN				pmax	pmax		
	comp=Z,66nm,1.0s,mb5.1						
LSA	**Lhasa**	**25.08**	**352**	P	**P**	**21 50 32.4**	**+0.9**
LSA	**Lhasa**	**25.08**	**352**	*e*P	**P**	**21 50 31.9**	**+0.4**
LSA				*e*S	**S**	**21 54 52.8**	**+3.6**
LSA				pmax	pmax		
	comp=Z,100nm,0.8s,mb5.4						
LSA	**Lhasa**	**25.08**	**352**	*e*P	**P**	**21 50 31.9**	**+0.4**
	comp=Z,100nm,0.8s,mb5.4						
LSA				*e*S	**S**	**21 54 52.8**	**+3.6**
LSA				*e*ScP		21 57 41.3	
BHPL	**Bhopal**	**25.10**	**319**	*e*P	**P**	**21 50 32.5**	**+0.7**
BHPL				AMb	AMB	21 50 36.4	
	comp=Z,82nm,1.2s,mb5.1						
BHPL				*e*x	x	21 55 15.0	
GKN	**Gorkha**	**25.18**	**338**	*e*P	**P**	**21 50 32.2**	**-0.2**
	comp=Z,114nm,0.6s,mb5.6						
KOLN	**Koldanda**	**25.38**	**336**	*e*P	**P**	**21 50 34.3**	**0.0**
	comp=Z,229nm,0.7s,mb5.8						
BOM	**Bombay**	**25.93**	**305**	*e*x	x	21 51 34.3	
BOM				*e*x	x	21 55 00.8	
LUBP	**Lubang**	**26.29**	**68**	*e*P	**P**	**21 50 43.3**	**+0.4**
CD2	**Chengdu**	**27.23**	**16**	P	**P**	**21 50 50.4**	**-1.0**
CD2				AP	pP	21 51 04.8	-0.7
CD2				XP	sP	21 51 12.8	+0.4
CD2				S	**S**	**21 55 25.5**	**+1.0**
CD2				XS		21 55 49.8	
CD2				SS	SS	21 56 49.4	+5.7
CD2				AMB	AMB		
	comp=Z,20nm,0.4s,mb5.0						
CD2				LR	LR		
	comp=E,2µm,14.9s						
CD2				LR	LR		
	comp=Z,2µm,21.6s						
BCPH	**Baguio City Da**	**27.48**	**63**	⇓*i*P	**P**	**21 50 54.4**	**+0.6**
BALP	**Baler**	**28.15**	**65**	*e*P	**P**	**21 51 00.4**	**+0.6**
LGTI	**Lohaghat**	**28.31**	**332**	*e*P	**P**	**21 51 01.3**	**+0.1**
ENH	**Enshi**	**28.74**	**26**	⇑*i*P	**P**	**21 51 03.9**	**-1.1**
	comp=Z,61nm,0.9s,mb5.3						
CAUP	**Cauayan**	**28.80**	**63**	*e*P	**P**	**21 51 06.2**	**+0.6**
AJM	**Ajmer**	**29.16**	**320**	*i* P	**P**	**21 51 09.0**	**+0.2**
NDI	**New Delhi**	**29.25**	**326**	*e*x	x	21 52 08.0	
DDI	**Dehra Dun**	**30.10**	**330**	*e*x	**P**	**21 51 11.5**	**-5.6**
QZH	**Quanzhou**	**30.15**	**46**	⇑*i*P	**P**	**21 51 18.6**	**+1.1**
QZH				S	**S**	**21 56 18.0**	**+6.9**
QZH				AMB	AMB		
	comp=Z,200nm,1.2s,mb5.7						
QZH				LR	LR		
	comp=N,2µm,14.2s,MS4.9						
QZH				LR	LR		
	comp=E,810nm,10.7s,MS4.9						
QZH				LR	LR		
	comp=Z,3µm,23.8s						
WHN	**Wuhan**	**31.37**	**33**	⇓P	**P**	**21 51 28.5**	**+0.2**
WHN				S	**S**	**21 56 35.0**	**+4.6**
WHN				LR	LR		
	comp=N,3µm,20.6s,MS5.0						
WHN				LR	LR		
	comp=E,2µm,20.6s,MS5.0						
WHN				LR	LR		
	comp=Z,4µm,26.4s						
SDNR	**Sundarnagar**	**31.60**	**329**	*e*P	**P**	**21 51 30.0**	**-0.3**
XAN	**Xi'an**	**31.81**	**22**	P	**P**	**21 51 30.6**	**-1.5**
XAN				AMB	AMB		
	comp=Z,290nm,0.8s,mb6.2						
XAN				AMB	AMB		
	comp=Z,130nm,6.1s						
XAN				LR	LR		
	comp=N,910nm,17.6s,MS4.7						
XAN				LR	LR		
	comp=E,1µm,16.6s,MS4.7						
XAN				LR	LR		
	comp=Z,2µm,15.5s,MS5.0						
NACB	**Ninganchiao**	**31.93**	**50**	*e*P	**P**	**21 51 32.8**	**-0.5**
YHNB	**Yeheng**	**32.04**	**49**	*e*P	**P**	**21 51 34.4**	**+0.2**
LZH	**Lanzhou**	**32.17**	**13**	P	**P**	**21 51 34.0**	**-1.2**
LZH				AP	pP	21 51 49.0	-0.7
LZH				XP	sP	21 51 58.5	+1.7
LZH				PP	PP	21 52 41.3	-2.2
LZH				PCP	PcP	21 54 23.8	+0.7
LZH				*e*S	**S**	**21 56 39.8**	**-3.0**
LZH				XS		21 57 10.5	
LZH				SCP		21 57 59.0	
LZH				PCS		21 58 07.0	
LZH				SS	SS	21 58 36.0	-3.5
LZH				SCS	ScS	22 01 59.0	+1.0
LZH				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.5						
LZH				AMB	AMB		
	comp=Z,330nm,5.1s						
LZH				LR	LR		
	comp=N,1µm,12.4s						
LZH				LR	LR		
	comp=Z,3µm,16.4s,MS5.0						
GTA	**Gaotai**	**34.74**	**6**	⇑*i*P	**P**	**21 51 56.6**	**-0.7**
GTA				AP	pP	21 52 11.3	-0.6
GTA				XP	sP	21 52 18.5	-0.6
GTA				PP	PP	21 53 16.8	+1.0
GTA				PCP	PcP	21 54 30.3	0.0
GTA				S	**S**	**21 57 23.5**	**+1.0**
GTA				XS		21 57 47.9	
GTA				SCP		21 58 11.3	
GTA				SS	SS	21 59 41.3	+3.0
GTA				SCS	ScS	22 02 11.3	0.0
GTA				AMB	AMB		
	comp=Z,80nm,0.8s,mb5.7						
GTA				AMB	AMB		
	comp=Z,190nm,6.5s						
GTA				LR	LR		
	comp=N,550nm,19.4s,MS4.4						
GTA				LR	LR		
	comp=E,560nm,22.8s,MS4.4						
GTA				LR	LR		
	comp=Z,820nm,27.4s,MS4.3						
NJ2	**Nanjing**	**35.06**	**36**	*e*P	**P**	**21 52 00.3**	**+0.1**
NJ2				AP	pP	21 52 12.5	-2.3
NJ2				XP	sP	21 52 17.8	-4.1
NJ2				PP	PP	21 53 22.3	+2.3
NJ2				S	**S**	**21 57 28.0**	**+0.4**
NJ2				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,280nm,4.2s						
MBWA	**Marble Bar**	**35.28**	**138**	*e*P	**P**	**21 52 00.8**	**-1.4**
SSE	**Sheshan**	**35.84**	**40**	P	**P**	**21 52 07.6**	**+0.8**
SSE				AP	pP	21 52 21.8	+0.4
SSE				XP	sP	21 52 29.8	+1.3
SSE				PP	PP	21 53 29.4	0.0
SSE				S	**S**	**21 57 42.1**	**+2.5**
SSE				XS		21 58 08.4	
SSE				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.3						
SSE				AMB	AMB		
	comp=Z,140nm,8.5s						
SSE				LR	LR		
	comp=N,710nm,20.4s,MS4.5						
SSE				LR	LR		
	comp=E,350nm,20.4s,MS4.5						
SSE				LR	LR		
	comp=Z,820nm,20.7s,MS4.5						
TIY	**Taiyuan**	**36.38**	**23**	PR	**P**	**21 52 07.0**	**-4.3**
TIY				S	**S**	**21 57 45.0**	**-2.9**
TIY				LR	LR		
	comp=N,2µm,15.0s						
TIY				LR	LR		
	comp=Z,380nm,14.0s,MS4.3						
TIA	**Tai'an**	**37.24**	**30**	⇑P	**P**	**21 52 18.8**	**+0.2**
TIA				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.3						
FITZ	**Fitzroy Crossi**	**37.69**	**128**	⇑*i*P	**P**	**21 52 21.0**	**-1.4**
	comp=Z,46nm,1.1s,mb5.1						
FITZ	**Fitzroy Crossi**	**37.69**	**128**	P	**P**	**21 52 20.6**	**-1.8**
	comp=Z,84nm,1.0s,mb5.4,baz=328,slow=4.4,SNR=49						
FITZ				PcP	PcP	21 54 39.3	0.0
	comp=Z,24nm,0.8s,baz=332,slow=5.5,SNR=5.2						
BTO	**Baotou**	**38.10**	**18**	*e*P	**P**	**21 52 25.1**	**-0.5**
BTO				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
JOW	**Kunigami**	**38.47**	**52**	P	**P**	**21 52 28.7**	**-0.1**
	comp=Z,87nm,0.6s,mb5.7,baz=253,slow=8.3						
JOW				LR	LR	22 08 24.9	
	comp=Z,949nm,21.0s,MS4.6,baz=293,slow=36						
KSH	**Kashi**	**38.70**	**336**	⇑*i*P	**P**	**21 52 31.0**	**+0.4**
KSH				AP	pP	21 52 44.6	-0.7
KSH				XP	sP	21 52 53.8	+1.6
KSH				PP	PP	21 54 04.6	+1.0
KSH				PCP	PcP	21 54 41.6	-0.6
KSH				S	**S**	**21 58 23.5**	**+0.4**
KSH				PCS		21 58 31.4	
KSH				XS		21 58 49.5	
KSH				SS	SS	22 01 06.4	-0.9
KSH				SCS	ScS	22 02 35.5	+2.2
KSH				AMB	AMB		
	comp=Z,840nm,2.8s,mb6.0						
KSH				LR	LR		
	comp=N,540nm,14.4s,MS4.9						
KSH				LR	LR		
	comp=E,1µm,17.2s,MS4.9						
HHC	**Hu-ho-hao-te**	**38.82**	**20**	*e*P	**P**	**21 52 32.6**	**+1.0**
HHC				AP	pP	21 52 48.4	+2.0
HHC				XP	sP	21 52 55.5	+2.2
HHC				PP	PP	21 54 04.4	-0.7
HHC				S	**S**	**21 58 20.5**	**-4.5**
HHC				SCP		21 58 26.4	
HHC				XS		21 58 49.0	
HHC				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.3						
HHC				AMB	AMB		
	comp=Z,210nm,4.5s						
HHC				LR	LR		
	comp=N,2µm,17.2s,MS5.1						
HHC				LR	LR		
	comp=E,1µm,18.1s,MS5.1						
HHC				LR	LR		
	comp=Z,2µm,21.6s,MS4.9						
WMQ	**Urumqi**	**39.44**	**351**	⇑*i*P	**P**	**21 52 37.0**	**+0.2**
WMQ				AP	pP	21 52 50.8	-0.7
WMQ				XP	sP	21 52 57.3	-1.1
WMQ				PP	PP	21 54 12.4	+0.6
WMQ				PCP	PcP	21 54 44.1	-0.4
WMQ				S	**S**	**21 58 34.6**	**+0.3**
WMQ				SS	SS	22 01 23.1	-0.4
WMQ				SCS	ScS	22 02 37.6	0.0
WMQ				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,350nm,4.6s						
WMQ				LR	LR		
	comp=N,350nm,21.4s,MS4.4						
WMQ				LR	LR		
	comp=E,550nm,22.4s,MS4.4						
WMQ				LR	LR		
	comp=Z,360nm,20.4s,MS4.2						
KAKA	**Kakadu**	**40.91**	**116**	⇓*i*P	**P**	**21 52 47.9**	**-1.3**
	comp=Z,45nm,0.8s,mb5.2						
ULHL	**Ulahol**	**40.94**	**338**	P	**P**	**21 52 51.0**	**+1.8**
	SNR=21						
KZA	**Kyzart**	**41.17**	**337**	P	**P**	**21 52 53.5**	**+2.5**
	SNR=5.6						
UCH	**Uchtor**	**41.58**	**337**	P	**P**	**21 52 56.9**	**+2.4**
	SNR=11						
AAA	**Alma-Ata**	**41.59**	**340**	*i* P	**P**	**21 52 55.0**	**+0.5**
AAA				*e*S	**S**	**21 59 08.0**	**+1.7**
AAA				pmax	pmax		
	comp=Z,900nm,4.0s						
AAA				smax			
	comp=N,500nm,6.0s						
AAA				smax			
	comp=E,900nm,6.0s						
DL2	**Dalian**	**41.60**	**32**	P	**P**	**21 52 55.8**	**+1.1**
DL2				S	**S**	**21 59 10.3**	**+3.7**
DL2				XS		21 59 32.8	
DL2				AMB	AMB		
	comp=Z,140nm,0.8s,mb5.6						
DL2				AMB	AMB		
	comp=Z,310nm,3.9s						
DL2				LR	LR		
	comp=N,540nm,15.1s,MS4.6						

DL2				LR	LR		
	comp=E,340nm,14.3s,MS4.6						
DL2				LR	LR		
	comp=Z,670nm,20.4s						
TKM2	**Tokmak 2**	**41.76**	**338**	P	**P**	**21 52 57.1**	**+1.1**
	SNR=72						
KBK	**Karagaybulak**	**41.78**	**338**	P	**P**	**21 52 57.9**	**+1.8**
	SNR=122						
AML	**Almayashu**	**41.83**	**336**	P	**P**	**21 52 58.6**	**+2.1**
	SNR=12						
AAK	**Ala-Archa**	**41.93**	**337**	P	**P**	**21 52 59.2**	**+1.8**
	SNR=37						
AAK	**Ala-Archa**	**41.93**	**337**	*i* P	**P**	**21 52 58.9**	**+1.5**
FRU	**Bishkek**	**42.06**	**337**	*i* P	**P**	**21 52 59.0**	**+0.6**
FRU				*e*		21 59 16.0	
FRU				pmax	pmax		
	comp=Z,440nm,2.0s,mb5.7						
FRU				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.5						
CHMS	**Chumysh**	**42.15**	**338**	P	**P**	**21 52 59.8**	**+0.7**
	SNR=54						
EKS2	**Erkin-Say**	**42.24**	**336**	P	**P**	**21 53 01.5**	**+1.6**
	SNR=48						
NWAO	**Narrogin (SRO)**	**42.95**	**152**	P	**P**	**21 53 06.0**	**+0.1**
	comp=Z,14nm,1.0s,mb4.7,baz=328,slow=8.0,SNR=3.0						
MK02	**Makanchi Array**	**43.29**	**347**	P	**P**	**21 53 08.0**	**-0.4**
MK02				pmax	pmax		
	comp=Z,69nm,0.9s,mb5.4						
MKAR	**Makanchi Array**	**43.32**	**347**	P	**P**	**21 53 08.2**	**-0.5**
	comp=Z,30nm,0.5s,mb5.3,baz=164,slow=6.6,SNR=264						
MKAR				PcP	PcP	21 54 57.1	0.0
	comp=Z,11nm,0.8s,baz=135,slow=4.1,SNR=2.7						
INCN	**Inchon**	**43.43**	**37**	*e*P	**P**	**21 53 09.3**	**-0.3**
	comp=Z,68nm,0.9s,mb5.4						
JNU	**Nakatsue**	**43.62**	**45**	P	**P**	**21 53 11.0**	**-0.3**
	comp=Z,55nm,0.9s,mb5.3,baz=258,slow=2.8,SNR=37						
JNU				LR	LR	22 11 38.4	
	comp=Z,1µm,21.8s,MS4.7,baz=184,slow=36						
KKAR	**Karatay Array**	**43.97**	**334**	*i* P	**P**	**21 53 13.9**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,78nm,1.0s,mb5.4						
SONM	**Songino Array**	**43.97**	**11**	P	**P**	**21 53 13.1**	**-0.8**
	comp=Z,12nm,0.9s,mb4.6,baz=196,slow=9.0,SNR=51						
SONM				PcP	PcP	21 54 59.3	-0.1
	comp=Z,20nm,0.8s,baz=194,slow=3.7,SNR=14						
SONM				ScP		21 58 46.6	
	comp=Z,1.4nm,0.7s,baz=194,slow=5.1,SNR=5.1						
SONM				LR	LR	22 13 25.5	
	comp=Z,962nm,22.0s,MS4.7,baz=351,slow=39						
ULN	**Ulaanbaatar**	**44.13**	**11**	*e*P	**P**	**21 53 14.5**	**-0.7**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**44.13**	**11**	*e*P	**P**	**21 53 14.5**	**-0.7**
	comp=Z,8.7nm,0.8s,mb4.5						
KS15	**Wonju Array Si**	**44.16**	**38**	*e*P	**P**	**21 53 15.4**	**-0.2**
SNY	**Shenyang**	**44.77**	**30**	⇑P	**P**	**21 53 20.3**	**-0.1**
SNY				AP	pP	21 53 35.6	+0.3
SNY				XP	sP	21 53 42.3	+0.3
SNY				PP	PP	21 55 08.8	+2.3
SNY				S	**S**	**21 59 43.3**	**-9.3**
SNY				AMB	AMB		
	comp=Z,130nm,0.8s,mb5.8						
SNY				LR	LR		
	comp=N,650nm,20.1s,MS4.8						
SNY				LR	LR		
	comp=E,830nm,19.9s,MS4.8						
SNY				LR	LR		
	comp=Z,990nm,19.6s,MS4.7						
WRA	**Warramunga Arr**	**45.67**	**124**	P	**P**	**21 53 27.1**	**-0.8**
	comp=Z,199nm,0.9s,mb6.0,baz=302,slow=9.2,SNR=691						
WRA				S	**S**	**22 00 01.3**	**-4.6**
	comp=Z,3.2nm,1.0s,baz=295,slow=16,SNR=4.6						
WRAB	**Tennant Creek**	**45.68**	**124**	⇑*i*P	**P**	**21 53 27.4**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,277nm,0.8s,mb6.2						
WRAB				MLR	MLR		
	comp=Z,395nm,22.0s,MS4.3						
WRAB	**Tennant Creek**	**45.68**	**124**	⇑*i*P	**P**	**21 53 27.4**	**-0.6**
	comp=Z,277nm,0.8s,mb6.2						
WRAB				LR	LR		
	comp=Z,395nm,22.0s,MS4.3						
WB2	**Warramunga Arr**	**45.69**	**124**	⇑*i*P	**P**	**21 53 27.4**	**-0.6**
ZAK	**Zakamensk**	**45.96**	**7**	⇑*i*P	**P**	**21 53 29.0**	**-0.8**
ZAK				*e*		21 55 06.0	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
CN2	**Changchun**	**47.15**	**30**	⇑P	**P**	**21 53 38.9**	**-0.3**
CN2				*e*XP	sP	21 53 58.6	-2.2
CN2				*e*S	**S**	**22 00 26.9**	**+0.4**
CN2				AMB	AMB		
	comp=Z,90nm,0.7s,mb5.8						
CN2				AMB	AMB		
	comp=Z,300nm,7.0s						
CN2				LR	LR		
	comp=N,600nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=E,800nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=Z,1µm,18.0s,MS4.8						
TLY	**Talaya**	**47.28**	**7**	*e*P	**P**	**21 53 39.3**	**-0.8**
TLY				*e*		21 55 36.2	
TLY				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
TLY				MLR	MLR		
	comp=Z,1µm,24.0s,MS4.8						
TLY	**Talaya**	**47.28**	**7**	*e*P	**P**	**21 53 39.5**	**-0.6**
	comp=Z,12nm,0.8s,mb4.9						
TLY				*e*PcP	PcP	21 55 09.6	-1.2
FORT	**Forrest**	**47.31**	**141**	*e*P	**P**	**21 53 40.3**	**-0.3**
	comp=Z,53nm,0.6s,mb5.6						
IRK	**Irkutsk**	**47.91**	**8**	*e*P	**P**	**21 53 43.6**	**-1.5**
IRK				pmax	pmax		
	comp=Z,33nm,2.0s,mb5.0						
HIA	**Hailar**	**49.00**	**21**	⇑*i*P	**P**	**21 53 53.3**	**-0.2**
HIA				*e*		21 55 15.6	
HIA				pmax	pmax		
	comp=Z,29nm,0.6s						
HIA				MLR	MLR		
	comp=Z,2µm,20.0s						
HIA	**Hailar**	**49.00**	**21**	⇑*i*P	**P**	**21 53 53.2**	**-0.2**
	comp=Z,29nm,0.6s,mb5.5						
HIA				*e*PcP	PcP	21 55 15.6	-1.5
HIA				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
CIT	**Chita**	**49.51**	**15**	*e*P	**P**	**21 53 56.0**	**-1.4**
CIT				*e*		21 55 11.5	
ZAL	**Zalesovo**	**49.74**	**352**	P	**P**	**21 53 58.3**	**-0.8**
	comp=Z,22nm,0.6s,mb5.4,baz=300,slow=6.1,SNR=127						
ZAL				PcP	PcP	21 55 18.3	-1.4
	comp=Z,7.0nm,0.6s,baz=289,slow=4.7,SNR=3.2						
MDJ	**Mudanjiang**	**49.84**	**32**	P	**P**	**21 54 00.3**	**+0.2**
MDJ				AP	pP	21 54 13.9	-1.2
MDJ				XP	sP	21 54 19.8	-1.9
MDJ				PCP	PcP	21 55 18.6	-1.6
MDJ				PP	PP	21 55 55.4	-0.5
MDJ				SCP		21 59 11.0	
MDJ				PCS		21 59 16.5	
MDJ				S	**S**	**22 01 07.4**	**+3.2**
MDJ				XS		22 01 30.8	
MDJ				SCS	ScS	22 03 45.9	+2.8
MDJ				AMB	AMB		
	comp=Z,70nm,1.4s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,160nm,6.2s						
MDJ				LR	LR		
	comp=N,490nm,24.1s,MS4.7						
MDJ				LR	LR		
	comp=E,640nm,22.3s,MS4.7						
MDJ				LR	LR		
	comp=Z,890nm,23.7s,MS4.7						
MDJ	**Mudanjiang**	**49.84**	**32**	⇑*i*P	**P**	**21 54 00.5**	**+0.4**
	comp=Z,64nm,0.9s,mb5.7						
MAJO	**Matsushiro**	**50.54**	**45**	⇑*i*P	**P**	**21 54 04.8**	**-0.7**
MAJO				*e*		21 55 22.4	
MAJO				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
MAJO	**Matsushiro**	**50.54**	**45**	⇑*i*P	**P**	**21 54 04.8**	**-0.7**
	comp=Z,21nm,0.9s,mb5.1						
MAJO				*e*PcP	PcP	21 55 22.4	-0.5
MAT	**Matsushiro**	**50.54**	**45**	*e*P	**P**	**21 54 05.0**	**-0.5**
MAT				*e*S	**S**	**22 01 10.0**	**-4.0**
MAT				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
MAT				MLR	MLR		
	comp=Z,720nm,21.0s,MS4.7						
MAT	**Matsushiro**	**50.54**	**45**	*e*P	**P**	**21 54 05.0**	**-0.5**
	comp=Z,18nm,0.9s,mb5.0						
MAT				*e*S	**S**	**22 01 10.0**	**-4.0**
MAT				LR	LR		
	comp=Z,720nm,21.0s,MS4.7						
MAT	**Matsushiro**	**50.54**	**45**	P	**P**	**21 54 04.6**	**-0.9**
MAT				S	**S**	**22 01 20.0**	**+6.0**
MJAR	**Matsushiro Arr**	**50.55**	**45**	P	**P**	**21 54 04.6**	**-1.0**
	comp=Z,18nm,0.9s,mb5.0,baz=243,slow=9.4,SNR=46						
MJAR				PcP	PcP	21 55 22.5	-0.4
	comp=Z,13nm,0.9s,baz=236,slow=5.4,SNR=10						
MJAR				LR	LR	22 16 43.7	
	comp=Z,675nm,21.6s,MS4.6,baz=245,slow=37						
MJAR	**Matsushiro Arr**	**50.55**	**45**	P	**P**	**21 54 04.6**	**-1.0**
MJAR				PcP	PcP	21 55 22.5	-0.4
MJAR				LR	LR	22 16 43.7	
NVS	**Novosibirsk**	**50.84**	**351**	*i* P	**P**	**21 54 04.6**	**-2.9**
NVS				*e*	pP	21 54 16.6	-6.0
NVS				*e*S	**S**	**22 01 12.2**	**-5.7**
NVS				pmax	pmax		
	comp=N,77nm,1.2s						
NVS				pmax	pmax		
	comp=E,24nm,1.2s						
NVS				pmax	pmax		
	comp=Z,54nm,1.2s,mb5.3						
NVS				smax			
	comp=N,49nm,1.8s						
NVS				smax			
	comp=E,16nm,1.3s						
KAMS	**Al Khamasin**	**51.50**	**292**	P	**P**	**21 54 12.9**	**-0.1**
MZLS	**Mizel**	**51.70**	**297**	P	**P**	**21 54 15.4**	**+1.1**
DJNS	**Zahran al Janu**	**52.06**	**289**	P	**P**	**21 54 18.5**	**+1.4**
BVAR	**Borovoye Array**	**52.23**	**341**	P	**P**	**21 54 16.8**	**-1.2**
	comp=E,110nm,0.7s,mb5.9,baz=149,slow=8.6,SNR=511						
ZRNK	**Zerenda**	**52.62**	**340**	⇑*i*P	**P**	**21 54 20.0**	**-0.9**
ZRNK				pmax	pmax		
	comp=Z,102nm,0.9s,mb5.8						
ZRNK	**Zerenda**	**52.62**	**340**	⇑*i*P	**P**	**21 54 20.0**	**-0.9**
	comp=Z,102nm,0.9s,mb5.8						
AB31	**Akbulak array**	**53.42**	**332**	P	**P**	**21 54 26.3**	**-0.6**
AB31				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.7						
PMG	**Port Moresby**	**53.70**	**105**	*e*P	**P**	**21 54 30.3**	**+0.8**
KLR	**Kul'dur**	**54.06**	**29**	*d i*P	**P**	**21 54 28.8**	**-2.8**
KLR				*e*S	**S**	**22 02 18.5**	**+17**
KLR				pmax	pmax		
	comp=N,30nm,1.2s						
KLR				pmax	pmax		
	comp=E,50nm,1.2s						
KLR				pmax	pmax		
	comp=Z,73nm,1.2s,mb5.5						
KLR				MLR	MLR		
	comp=E,600nm,13.0s						
KLR				MLR	MLR		
	comp=Z,1µm,13.0s,MS5.1						
BLJS	**Baljurashi**	**54.19**	**291**	P	**P**	**21 54 34.2**	**+1.2**
BOD	**Bodaibo**	**54.93**	**12**	*e*P	**P**	**21 54 34.5**	**-3.3**
BOD				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
HILS	**Ha'il**	**55.49**	**300**	P	**P**	**21 54 43.1**	**+0.9**
CTA	**Charters Tower**	**55.94**	**118**	⇓*i*P	**P**	**21 54 44.9**	**-0.7**
	comp=Z,32nm,1.0s,mb5.3						
CTA	**Charters Tower**	**55.94**	**118**	⇓*i*P	**P**	**21 54 44.9**	**-0.7**
CTA				pmax	pmax		
	comp=Z,32nm,1.0s						
CTA	**Charters Tower**	**55.94**	**118**	LR	LR	22 19 57.0	
	comp=Z,794nm,21.2s,MS4.8,baz=289,slow=37						
CTAO	**Charters Tower**	**55.94**	**118**	⇑*i*P	**P**	**21 54 44.3**	**-1.3**
CTAO				*e**PP	pP	21 54 56.5	-4.5
CTAO				*e*		21 55 43.3	
CTAO				pmax	pmax		
	comp=Z,71nm,1.1s,mb5.6						
CTAO				MLR	MLR		
	comp=Z,1µm,22.0s,MS4.9						
CTAO	**Charters Tower**	**55.94**	**118**	⇑*i*P	**P**	**21 54 44.3**	**-1.3**
	comp=Z,71nm,1.1s,mb5.6						
CTAO				*e*pP	pP	21 54 56.5	-4.5
CTAO				*e*PcP	PcP	21 55 43.3	-0.1
CTAO				LR	LR		
	comp=Z,1µm,22.0s,MS4.9						
CLNS	**Chul'man**	**57.00**	**19**	*e*P	**P**	**21 54 49.7**	**-3.0**
CLNS				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.8s						
ASAJ	**Asahikawa**	**57.12**	**39**	P	**P**	**21 54 52.5**	**-1.3**
	comp=E,19nm,0.7s,mb5.2,baz=274,slow=8.5,SNR=17						
ASAJ				LR	LR	22 21 21.8	
	comp=E,413nm,19.4s,MS4.5,baz=76,slow=38						
STKA	**Stephens Creek**	**57.26**	**133**	⇓*i*P	**P**	**21 54 53.8**	**-1.1**
	comp=E,10nm,0.9s,mb4.9						
STKA	**Stephens Creek**	**57.26**	**133**	P	**P**	**21 54 53.5**	**-1.3**
	comp=E,12nm,0.8s,mb5.0,baz=288,slow=6.3,SNR=16						
STKA				LR	LR	22 22 20.2	
	comp=E,440nm,19.6s,MS4.6,baz=136,slow=39						
GNI	**Garni**	**57.33**	**315**	*e*P	**P**	**21 54 53.0**	**-2.3**
GNI	**Garni**	**57.33**	**315**	⇑*i*P	**P**	**21 54 54.5**	**-0.8**
GNI				pmax	pmax		
	comp=Z,51nm,1.0s						
GNI				MLR	MLR		
	comp=Z,221nm,22.0s						
GNI	**Garni**	**57.33**	**315**	⇑*i*P	**P**	**21 54 54.5**	**-0.8**
	comp=Z,51nm,1.0s,mb5.5						
GNI				LR	LR		
	comp=Z,221nm,22.0s,MS4.2						
KBRS	**Khaybar**	**57.35**	**298**	P	**P**	**21 54 56.8**	**+1.2**
DGRG	**David-gareji**	**57.44**	**317**	P	**P**	**21 54 55.9**	**-0.1**
CLDR	**Caldiran**	**57.51**	**314**	*e*P	**P**	**21 54 56.0**	**-0.6**
YSS	**Yuzh-Sakhalins**	**58.63**	**36**	α*e*P	**P**	**21 55 03.8**	**-0.4**
YSS				*e*	pP	21 55 19.7	0.0
YSS				pmax	pmax		
	comp=N,40nm,1.0s						
YSS				pmax	pmax		
	comp=E,50nm,1.0s						
YSS				pmax	pmax		
	comp=Z,150nm,1.0s,mb6.0						
YSS				MLR	MLR		
	comp=N,500nm,16.0s,MS4.8						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.6						
YSS				MLR	MLR		
	comp=E,300nm,14.0s,MS4.8						
YSS	**Yuzh-Sakhalins**	**58.63**	**36**	⇑*i*P	**P**	**21 55 04.0**	**-0.2**
	comp=E,117nm,0.9s,mb5.9						
YSS				pP	pP	21 55 14.8	-4.9
SVE	**Sverdlovsk**	**58.64**	**339**	⇑*e*P	**P**	**21 55 03.0**	**-1.1**
SVE				*e*	pP	21 55 20.0	+0.4
SVE				*e*		21 57 20.0	
SVE				*e*S	**S**	**22 03 04.0**	**+1.7**
SVE				*e*PS	PS	22 03 30.0	+5.2
SVE				*e*		22 04 49.0	
SVE				MLR	MLR		
	comp=N,300nm,16.0s,MS4.5						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.5						
SVE				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.5						
KARS	**Kars**	**58.67**	**315**	*e*P	**P**	**21 55 05.3**	**+0.7**
BTMT	**Batman**	**58.93**	**312**	*e*P	**P**	**21 55 05.5**	**-1.0**
UMJS	**Umm Lajj**	**58.98**	**297**	P	**P**	**21 55 08.4**	**+1.5**
ZEI	**Tsey**	**58.99**	**318**	*e*P	**P**	**21 55 05.3**	**-1.5**
ZEI				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
ARU	**Arti**	**59.12**	**337**	⇑*i*P	**P**	**21 55 06.2**	**-1.3**
ARU				*i*	pP	21 55 18.9	-4.1
ARU				*i* SP	sP	21 55 25.2	-4.4
ARU				*i*		21 55 53.6	
ARU				*i*		21 57 17.2	
ARU				*e*PPP	PPP	21 58 39.0	-6.3
ARU				*e*S	**S**	**22 03 10.9**	**+2.3**
ARU				*e*SS		22 03 32.9	
ARU				*e*		22 04 46.8	
ARU				*e*SS	SS	22 07 06.6	+1.4
ARU				pmax	pmax		
	comp=Z,69nm,1.1s,mb5.6						
ARU				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.4						
ARU				MLR	MLR		
	comp=N,100nm,17.0s,MS4.3						
ARU				MLR	MLR		
	comp=E,200nm,20.5s,MS4.3						
ARU	**Arti**	**59.12**	**337**	⇑*i*P	**P**	**21 55 06.0**	**-1.4**
	comp=E,81nm,1.1s,mb5.7						
ARU				*e*pP	pP	21 55 17.3	-5.6
ARU				*e*sP	sP	21 55 21.0	-8.6
ONI	**Oni**	**59.21**	**318**	P	**P**	**21 55 08.0**	**-0.4**
ERZM	**Erzurum**	**59.62**	**314**	*i* P	**P**	**21 55 11.6**	**+0.4**
EZM	**Erzurum**	**59.63**	**314**	*e*P	**P**	**21 55 11.5**	**+0.3**
BCA	**Borcka**	**60.01**	**316**	*e*P	**P**	**21 55 13.1**	**-0.8**
TBKS	**Tabuk**	**60.20**	**300**	P	**P**	**21 55 16.8**	**+1.4**
QURS	**Qurayyt al Mil**	**60.23**	**303**	P	**P**	**21 55 16.3**	**+0.9**
KIV	**Kislovodsk**	**60.29**	**319**	⇑*i*P	**P**	**21 55 14.6**	**-1.1**
KIV				pmax	pmax		
	comp=Z,89nm,1.1s,mb5.7						
KIV	**Kislovodsk**	**60.29**	**319**	⇑*i*P	**P**	**21 55 14.6**	**-1.2**
	comp=Z,89nm,1.1s,mb5.7						
GOF	**Gofitskoye**	**60.53**	**320**	⇓*i*P	**P**	**21 55 14.4**	**-2.9**
GOF				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.4						
PTK	**Pertek**	**60.71**	**312**	*e*P	**P**	**21 55 17.9**	**-0.8**
JMQS	**Jabal Moqyreh**	**60.91**	**300**	P	**P**	**21 55 21.1**	**+0.9**
GUMT	**Gumushane**	**61.17**	**314**	*e*P	**P**	**21 55 21.6**	**-0.2**
KELT	**Kelkit**	**61.23**	**314**	*i* P	**P**	**21 55 22.7**	**+0.6**
MALT	**Malatya**	**61.24**	**311**	*e*P	**P**	**21 55 20.6**	**-1.6**
MALT	**Malatya**	**61.24**	**311**	⇑*i*P	**P**	**21 55 21.8**	**-0.5**
MALT				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.3						
MALT	**Malatya**	**61.24**	**311**	⇑*i*P	**P**	**21 55 21.8**	**-0.5**
	comp=Z,24nm,1.0s,mb5.3						
GZT	**Gaziantep**	**61.61**	**310**	*i* P	**P**	**21 55 24.7**	**0.0**
GAZ	**Gaziantep**	**61.82**	**310**	*e*P	**P**	**21 55 26.4**	**+0.3**
EIL	**Elat**	**61.86**	**301**	⇑*i*P	**P**	**21 55 26.7**	**+0.2**
	comp=Z,11nm,0.8s,mb5.0						
SOKR	**Solikamsk**	**62.04**	**339**	*c i*P	**P**	**21 55 26.3**	**-1.0**
SOKR				pmax	pmax		
	comp=Z,80nm,0.9s,mb5.8						
SOKR				MLR	MLR		
	comp=Z,220nm,18.0s,MS4.4						
SOC	**Sochi**	**62.12**	**317**	*i* P	**P**	**21 55 25.0**	**-3.1**
SOC				*e**SP	sP	21 55 39.3	-11
SOC				*e*PPP	PPP	21 59 22.2	+5.2
SOC				*e*S	**S**	**22 03 52.0**	**+4.8**
SOC				pmax	pmax		
	comp=Z,43nm,0.7s,mb5.7						
SOC				pmax	pmax		
	comp=N,29nm,0.9s						
SOC				pmax	pmax		
	comp=E,26nm,0.8s						
SOC				MLR	MLR		
	comp=Z,307nm,21.0s,MS4.4						
SOC				MLR	MLR		
	comp=N,883nm,25.0s,MS4.9						
SOC				MLR	MLR		
	comp=E,298nm,21.0s,MS4.9						
KAHT	**Ahir Dag**	**62.21**	**310**	*i* P	**P**	**21 55 28.9**	**+0.1**
COBT	**Iskenderun**	**62.38**	**309**	*i* P	**P**	**21 55 30.3**	**+0.4**
YAK	**Yakutsk**	**62.61**	**18**	*c i*P	**P**	**21 55 29.3**	**-1.8**
YAK				*i* *PP	pP	21 55 37.9	-8.8
YAK				*i*		21 56 05.0	
YAK				*i*		21 57 45.9	
YAK				*e*S	**S**	**22 03 51.4**	**-1.7**
YAK				*i* *SS		22 04 15.6	
YAK				*i*		22 05 09.2	
YAK				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.6						
YAK				pmax	pmax		
	comp=N,17nm,1.1s						
YAK				pmax	pmax		
	comp=E,11nm,1.1s						
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
YAK				smax			
	comp=N,5.0nm,1.2s						
YAK				smax			
	comp=E,6.0nm,1.2s						
YAK				MLR	MLR		
	comp=N,484nm,17.0s,MS5.0						
YAK				MLR	MLR		
	comp=Z,948nm,17.0s,MS5.0						
YAK				MLR	MLR		
	comp=E,678nm,18.0s,MS5.0						
YAK	**Yakutsk**	**62.61**	**18**	⇑*i*P	**P**	**21 55 29.2**	**-1.9**
	comp=E,88nm,0.9s,mb5.9						
MEST	**Erdemli**	**64.04**	**308**	*i* P	**P**	**21 55 40.3**	**-0.6**
AVNT	**Avonos**	**64.06**	**311**	*i* P	**P**	**21 55 40.0**	**-1.0**
ANN	**Anapa**	**64.09**	**318**	*e*P	**P**	**21 55 37.7**	**-3.4**
ANN				*e**PP	pP	21 55 51.7	-5.1
ANN				*e*S	**S**	**22 04 08.3**	**-3.5**
ANN				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
CSS	**Prodhromos**	**64.30**	**307**	⇑*i*P	**P**	**21 55 42.1**	**-0.5**
	comp=Z,20nm,0.8s,mb5.2						
MBAR	**Mbarara**	**64.57**	**267**	*i* P	**P**	**21 55 45.5**	**+0.8**
MBAR	**Mbarara**	**64.57**	**267**	*e*P	**P**	**21 55 44.6**	**-0.1**
	comp=Z,20nm,1.1s,mb5.1						
CTKT	**Corum**	**64.62**	**313**	*i* P	**P**	**21 55 42.5**	**-2.1**
CDAG	**Cicekdag**	**64.65**	**312**	*i* P	**P**	**21 55 43.7**	**-1.1**
BOYT	**Boyabat**	**64.76**	**314**	*i* P	**P**	**21 55 44.7**	**-0.8**
ERMK	**Ermenek**	**65.02**	**308**	*i* P	**P**	**21 55 47.0**	**-0.2**
BR131	**Keskin Array S**	**65.22**	**312**	⇑*i*P	**P**	**21 55 47.0**	**-1.5**
	comp=Z,18nm,0.6s,mb5.3						
BRTR	**Keskin Array B**	**65.22**	**312**	P	**P**	**21 55 46.6**	**-1.9**
	comp=Z,24nm,0.7s,mb5.3,baz=126,slow=7.3,SNR=122						
PECR	**Pechory**	**65.32**	**332**	*i* P	**P**	**21 55 47.4**	**-1.4**
PECR				*e*	pP	21 56 01.0	-3.6
PECR				*e*S	S	22 04 24.0	-2.7
PECR				*e*		22 04 47.0	
PECR				pmax	pmax		
	comp=Z,900nm,1.0s						
PECR				smax			
	comp=N,300nm,7.0s						
PECR				MLR	MLR		
	comp=Z,400nm,20.0s,MS4.6						
ELDT	**Eldivan**	**65.58**	**312**	*i* P	**P**	**21 55 50.1**	**-0.6**
VOR	**Voronezh**	**65.69**	**326**	*e*P	**P**	**21 55 50.0**	**-1.3**
VOR				*e*	pP	21 56 05.0	-2.0
VOR				pmax	pmax		
	comp=E,70nm,0.8s						
VOR				pmax	pmax		
	comp=Z,130nm,0.8s,mb6.0						
BALT	**Daday**	**65.89**	**314**	*i* P	**P**	**21 55 52.3**	**-0.4**
HNR	**Honiara**	**66.08**	**102**	*e*P	**P**	**21 55 57.1**	**+2.7**
HNR				*e**PP	pP	21 56 07.4	-2.8
HNR				*e**SP	sP	21 56 14.4	-2.1
HNR				pmax	pmax		
	comp=Z,68nm,1.0s,mb5.6						
HNR	**Honiara**	**66.08**	**102**	*e*P	**P**	**21 55 57.1**	**+2.7**
	comp=Z,68nm,1.0s,mb5.6						
HNR				*e*pP	pP	21 56 07.4	-2.8
HNR				*e*sP	sP	21 56 14.4	-2.1
SIM	**Simferopol'**	**66.37**	**317**	*c i*P	**P**	**21 55 54.7**	**-1.0**
SIM				*e*S	S	22 04 40.3	+0.7
SIM				*e*PS	PS	22 05 04.0	-5.9
SIM				pmax	pmax		
	comp=Z,53nm,0.6s,mb5.8						
SGKT	**Sivrigoynuk**	**66.61**	**312**	*i* P	**P**	**21 55 56.4**	**-1.0**
ESKT	**Eskisehir**	**67.26**	**311**	*i* P	**P**	**21 56 00.4**	**-1.0**
TKTP	**Tekketepe**	**67.34**	**309**	*i* P	**P**	**21 56 00.7**	**-1.2**
HENT	**Hendek**	**67.52**	**312**	*i* P	**P**	**21 56 01.2**	**-1.8**
GOLH	**Golhisar**	**67.77**	**308**	*i* P	**P**	**21 56 03.7**	**-0.9**
GDZ	**Gediz**	**68.20**	**310**	*i* P	**P**	**21 56 06.0**	**-1.3**
MOS	**Moscow**	**68.24**	**329**	⇑*i*P	**P**	**21 56 06.0**	**-1.2**
MOS				*e**PP	pP	21 56 19.8	-3.3
MOS				*e*		21 56 32.7	
MOS				*e*		21 58 34.6	
MOS				*e*PPP	PPP	22 00 11.8	-5.9
MOS				*e*S	S	22 04 57.6	-4.3
MOS				pmax	pmax		
	comp=Z,121nm,0.8s,mb6.0						
OBN	**Obninsk**	**68.53**	**328**	*c i*P	**P**	**21 56 07.9**	**-1.1**
OBN				*e*	pP	21 56 24.0	-0.9
OBN				*e*S	S	22 05 01.1	-4.3
OBN				pmax	pmax		
	comp=Z,42nm,0.5s,mb5.6						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
OBN	**Obninsk**	**68.53**	**328**	⇑*i*P	**P**	**21 56 07.6**	**-1.4**
	comp=Z,60nm,0.9s,mb5.5						
OBN				*e*pP	pP	21 56 18.4	-6.5
ULDT	**Uludag**	**68.68**	**311**	*i* P	**P**	**21 56 09.4**	**-0.9**
MANT	**Manisa**	**68.79**	**309**	*i* P	**P**	**21 56 10.3**	**-0.6**
MA2	**Magadan**	**69.05**	**27**	*c i*P	**P**	**21 56 11.5**	**-0.7**
MA2				pmax	pmax		
	comp=Z,61nm,1.1s,mb5.4						
MA2				MLR	MLR		
	comp=Z,500nm,24.0s,MS4.7						

MA2	**Magadan**	**69.05**	**27**	⇑*i*P	**P**	**21 56 11.4**	**-0.7**
	comp=Z,111nm,1.4s,mb5.6						
LSZ	**Lusaka**	**69.23**	**252**	*e*P	**P**	**21 56 14.1**	**+0.1**
LSZ				*e**PP	pP	21 56 24.1	-5.8
LSZ				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
LSZ				MLR	MLR		
	comp=Z,940nm,20.0s,MS5.0						
LSZ	**Lusaka**	**69.23**	**252**	*e*P	**P**	**21 56 14.1**	**+0.1**
	comp=Z,18nm,1.4s,mb4.8						
LSZ				*e*pP	pP	21 56 24.1	-5.7
LSZ				LR	LR		
	comp=Z,940nm,20.0s,MS5.0						
KARP	**Karpathos**	**69.37**	**306**	*e*P	**P**	**21 56 14.0**	**-0.6**
BTOK	**Tokmak**	**69.44**	**311**	*i* P	**P**	**21 56 14.5**	**-0.4**
KDAG	**Bornova**	**69.77**	**309**	*i* P	**P**	**21 56 16.9**	**-0.1**
TIXI	**Tiksi**	**70.06**	**11**	*e*P	**P**	**21 56 12.3**	**-5.9**
TIXI				*e*S	S	22 05 27.9	+4.7
TIXI				*e*SS	SS	22 09 52.8	-2.3
TIXI				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.6						
TIXI				MLR	MLR		
	comp=Z,861nm,17.0s,MS5.1						
TIXI	**Tiksi**	**70.06**	**11**	⇑*i*P	**P**	**21 56 16.5**	**-1.7**
PSN	**Preselentsi**	**70.14**	**315**	*i* P	**P**	**21 56 19.0**	**-0.1**
TIRR	**Tirgusor**	**70.16**	**316**	⇑P	**P**	**21 56 18.8**	**-0.4**
PET	**Petropavlovsk**	**70.46**	**35**	⇓*i*P	**P**	**21 56 20.3**	**-0.6**
PET				*e*		21 56 42.7	
PET				*e*S	S	22 05 28.7	+0.6
PET				*e*		22 06 19.7	
PET				pmax	pmax		
	comp=Z,56nm,0.7s,mb5.6						
PET				pmax	pmax		
	comp=Z,100nm,10.7s						
PET				pmax	pmax		
	comp=Z,100nm,26.4s						
PET				pmax	pmax		
	comp=Z,100nm,15.2s						
PET				smax			
	comp=E,100nm,22.3s						
PET				MLR	MLR		
	comp=Z,600nm,21.0s,MS4.8						
PET	**Petropavlovsk**	**70.46**	**35**	*e*P	**P**	**21 56 20.0**	**-0.8**
	comp=Z,51nm,1.2s,mb5.3						
XRY	**Khrisi**	**70.46**	**305**	*e*P	**P**	**21 56 21.0**	**-0.2**
KIS	**Kishinev**	**70.49**	**318**	⇑*i*P	**P**	**21 56 19.0**	**-2.2**
KIS				*e**PP	pP	21 56 34.0	-3.1
KIS				*e*		22 00 45.0	
KIS				*e*S	S	22 05 22.0	-6.6
KIS				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.0						
KIS				MLR	MLR		
	comp=Z,300nm,15.0s,MS4.7						
NPS	**Neapolis**	**70.58**	**306**	*e*P	**P**	**21 56 18.0**	**-3.9**
PRD	**Provadia**	**70.60**	**314**	*i* P	**P**	**21 56 21.0**	**-0.9**
JMB	**Yambol**	**71.04**	**313**	*i* P	**P**	**21 56 24.0**	**-0.6**
AKASG	**Malin Array Be**	**71.20**	**322**	P	**P**	**21 56 23.4**	**-2.0**
	comp=Z,32nm,0.6s,mb5.4,baz=89,slow=5.5,SNR=143						
VRI	**Vrincioaia**	**71.63**	**317**	⇓P	**P**	**21 56 28.4**	**+0.4**
DIM	**Dimitrovgrad**	**71.72**	**313**	*i* P	**P**	**21 56 28.0**	**-0.7**
KDZ	**Kurdzhali**	**71.74**	**312**	*i* P	**P**	**21 56 28.0**	**-0.8**
VAM	**Vamos**	**71.74**	**306**	*e*P	**P**	**21 56 27.0**	**-1.9**
CASY	**Casey**	**71.75**	**174**	*e*P	**P**	**21 56 28.4**	**0.0**
	comp=Z,77nm,1.7s,mb5.4						
CASY				*e*pP	pP	21 56 39.5	-4.9
PVL	**Pavlikeni**	**72.08**	**314**	*i* P	**P**	**21 56 31.0**	**+0.2**
MLR	**Muntele Rosu**	**72.09**	**316**	P	**P**	**21 56 30.6**	**-0.1**
	comp=Z,53nm,0.8s,mb5.5,baz=88,slow=2.1,SNR=74						
MLR				LR	LR	22 32 35.2	
	comp=Z,131nm,21.5s,MS4.2,baz=245,slow=40						
MLR	**Muntele Rosu**	**72.09**	**316**	⇓P	**P**	**21 56 31.0**	**+0.3**
MLR	**Muntele Rosu**	**72.09**	**316**	⇓P	**P**	**21 56 31.0**	**+0.2**
RZN	**Rozhen**	**72.26**	**312**	*i* P	**P**	**21 56 31.0**	**-0.9**
VLI	**Veliai**	**72.92**	**307**	*e*P	**P**	**21 56 36.5**	**+0.6**
MMB	**Musomiste**	**72.98**	**312**	*i* P	**P**	**21 56 35.0**	**-1.1**
MNK	**Minsk**	**73.07**	**326**	⇓*e*P	**P**	**21 56 34.0**	**-2.4**
PUL	**Pulkovo**	**73.40**	**331**	*i* P	**P**	**21 56 38.3**	**+0.1**
PUL				pmax	pmax		
	comp=Z,80nm,0.6s,mb5.8						
PUL				pmax	pmax		
	comp=N,92nm,0.9s						
PUL				pmax	pmax		
	comp=E,130nm,1.0s						
PUL				MLR	MLR		
	comp=Z,334nm,21.0s,MS4.6						
PUL	**Pulkovo**	**73.40**	**331**	⇓*e*P	**P**	**21 56 38.5**	**+0.3**
KKB	**Krupnik**	**73.50**	**312**	*i* P	**P**	**21 56 37.0**	**-2.2**
VTS	**Vitosha**	**73.52**	**313**	*i* P	**P**	**21 56 38.0**	**-1.2**
LBTB	**Lobatse**	**73.68**	**242**	*e*P	**P**	**21 56 40.8**	**+0.2**
LBTB				*e*	pP	21 56 55.9	-0.7
LBTB				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
LBTB	**Lobatse**	**73.68**	**242**	P	**P**	**21 56 40.4**	**-0.2**
	comp=Z,8.6nm,1.0s,mb4.6,baz=112,slow=4.6,SNR=9.5						
LBTB				LR	LR	22 24 11.8	
	comp=Z,1µm,21.5s,MS5.1,baz=74,slow=32						
LBTB	**Lobatse**	**73.68**	**242**	*e*P	**P**	**21 56 40.8**	**+0.3**
	comp=Z,26nm,0.8s,mb5.2						
LBTB				*e*	pP	21 56 55.9	-0.6
ITM	**Ithomi**	**73.78**	**307**	*e*P	**P**	**21 56 40.0**	**-0.9**
EVR	**Evrytania**	**74.07**	**309**	*e*P	**P**	**21 56 41.5**	**-1.1**
LVV	**L'vov**	**74.23**	**320**	*e*P	**P**	**21 56 42.1**	**-1.2**
DRGR		**74.54**	**317**	⇓P	**P**	**21 56 45.2**	**+0.1**
DZM	**Mont Dzumac**	**74.59**	**114**	LR	LR	22 29 35.8	
	comp=Z,296nm,21.9s,MS4.5,baz=69,slow=36						
BOLS	**Boljevac**	**74.60**	**314**	⇓*i*P	**P**	**21 56 44.5**	**-1.1**
SKO	**Skopje**	**74.73**	**312**	*e*P	**P**	**21 56 44.6**	**-1.7**
VSU	**Vasula**	**74.75**	**330**	⇑*i*P	**P**	**21 56 45.6**	**-0.5**
LVZ	**Lovozero**	**74.80**	**340**	*i* P	**P**	**21 56 45.1**	**-1.1**
LVZ				*i* PPP	PPP	22 01 25.2	+4.0
LVZ				*i* S	S	22 06 15.6	-1.4
LVZ				*i*		22 06 51.4	
LVZ				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.5						
LVZ				pmax	pmax		
	comp=N,3.0nm,0.6s						
LVZ				pmax	pmax		
	comp=E,16nm,0.8s						
LVZ				smax			
	comp=N,49nm,8.6s						
LVZ				smax			
	comp=Z,27nm,11.0s						
LVZ				MLR	MLR		
	comp=Z,355nm,22.0s,MS4.6						
LVZ				MLR	MLR		
	comp=N,269nm,24.0s,MS4.7						
LVZ				MLR	MLR		
	comp=E,359nm,23.0s,MS4.7						
BOSA	**Boshof**	**74.83**	**239**	*e*P	**P**	**21 56 47.3**	**+0.2**
BOSA				*e*	pP	21 57 01.1	-2.1
BOSA				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.2						
BOSA				MLR	MLR		
	comp=Z,508nm,20.0s,MS4.8						
BOSA	**Boshof**	**74.83**	**239**	P	**P**	**21 56 46.8**	**-0.4**
	comp=Z,5.2nm,0.7s,mb4.5,baz=86,slow=6.5,SNR=15						
BOSA				LR	LR	22 24 32.4	
	comp=Z,467nm,20.8s,MS4.8,baz=66,slow=32						
BOSA	**Boshof**	**74.83**	**239**	*e*P	**P**	**21 56 47.3**	**+0.1**
	comp=Z,42nm,1.4s,mb5.2						
BOSA				*e*	pP	21 57 01.1	-2.0
BOSA				LR	LR		
	comp=Z,508nm,20.0s,MS4.8						
VLS	**Valsamata**	**74.94**	**308**	*e*P	**P**	**21 56 46.5**	**-1.1**
KWP	**Kalwaria**	**75.04**	**320**	⇑*i*P	**P**	**21 56 48.3**	**+0.4**
	comp=Z,200nm,1.1s,mb6.0						
KWP				*e*pP	pP	21 57 03.2	-0.7
KWP				*e*S	S	22 06 21.4	+1.3
KWP				MLR	MLR	22 25 05.8	
	comp=Z,200nm,30.6s,MS4.2						
APA	**Apatity**	**75.09**	**340**	⇓*i*P	**P**	**21 56 47.0**	**-0.8**
APA				*i*	pP	21 57 05.0	+1.1
APA				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.7						
APA				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.9						
KOLS	**Kolonicke sedl**	**75.19**	**319**	*i* P	**P**	**21 56 49.5**	**+0.7**
SUW	**Suwalki**	**75.60**	**325**	⇑*i*P	**P**	**21 56 50.0**	**-1.0**
SUW				*e*	PcP	21 57 02.4	-1.6
SUW				*e*	pP	21 57 05.0	-2.0
SUW				*e*S	S	22 06 27.6	+1.4
SUW	**Suwalki**	**75.60**	**325**	⇑*i*P	**P**	**21 56 50.0**	**-1.0**
	comp=Z,200nm,0.8s,mb6.1						
SUW				*e*PcP	PcP	21 57 02.4	-1.7
SUW				*e*pP	pP	21 57 05.0	-2.0
SUW				*e*S	S	22 06 27.6	+1.5
SUW				MLR	MLR	22 28 59.4	
	comp=Z,200nm,32.5s,MS4.2						
CRVS	**Cervenica-Dubn**	**75.72**	**319**	*e*P	**P**	**21 56 52.7**	**+0.9**
CRVS				*e*	pP	21 57 04.2	-3.6
CRVS				*e*PP	PP	21 59 36.6	-7.3
MAW	**Mawson**	**75.73**	**192**	P	**P**	**21 56 51.9**	**+0.4**
	comp=Z,2.8nm,0.7s,mb4.3,baz=20,slow=6.2,SNR=5.4						
MAW				LR	LR	22 23 54.8	
	comp=Z,350nm,20.1s,MS4.7,baz=41,slow=31						
FINES	**FINESS Array B**	**75.91**	**332**	P	**P**	**21 56 51.8**	**-0.8**
	comp=Z,12nm,0.3s,mb5.3,baz=108,slow=5.5,SNR=253						
FINES				LR	LR	22 35 19.6	
	comp=Z,182nm,21.5s,MS4.3,baz=290,slow=40						
KAF	**Kangasniemi**	**76.00**	**333**	*e*p	**P**	**21 56 52.0**	**-1.1**
	comp=Z,42nm,0.8s,mb5.4,baz=104,slow=5.3						
KAF	**Kangasniemi**	**76.00**	**333**	*e*P	**P**	**21 56 52.0**	**-1.1**
KAF				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.4						
KECS	**Kecovo**	**76.29**	**319**	*i* P	**P**	**21 56 55.5**	**+0.4**
KECS				*e*	pP	21 57 07.8	-3.3
BBLS	**Bajina Basta -**	**76.44**	**314**	⇑*i*P	**P**	**21 56 55.8**	**-0.2**
NIE	**Niedzica**	**76.54**	**320**	⇑*e*P	**P**	**21 56 56.8**	**+0.3**
WAR	**Warsaw**	**76.54**	**323**	*e*P	**P**	**21 56 56.7**	**+0.3**
WAR				*e*pP	pP	21 57 12.4	-0.1
PSZ	**Piszkesteto**	**76.60**	**318**	⇑*i*P	**P**	**21 56 56.8**	**0.0**
PSZ				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.3						
PSZ	**Piszkesteto**	**76.60**	**318**	⇑*i*P	**P**	**21 56 56.8**	**-0.1**
	comp=Z,35nm,0.8s,mb5.3						
OJC	**Ojcow**	**76.99**	**320**	⇑*i*P	**P**	**21 56 59.0**	**0.0**
OJC				*e*PcP	PcP	21 57 07.4	-2.7
OJC				*e*S	S	22 06 39.9	-1.5
OJC				MLR	MLR	22 34 29.0	
	comp=Z,100nm,23.8s,MS4.0						
VYHS	**Vyhne**	**77.38**	**319**	*i* P	**P**	**21 57 01.4**	**+0.2**
VYHS				*e*pP	pP	21 57 16.6	-0.7
SRO	**Srobarova**	**77.65**	**318**	*e*P	**P**	**21 57 03.6**	**+0.9**
SRO				*e*pP	pP	21 57 18.8	+0.1
SRO1	**Iza**	**77.69**	**318**	*e*P	**P**	**21 57 03.3**	**+0.4**
SRO1				*e*	pP	21 57 22.8	+3.8
OKC	**Ostrava-Krasne**	**77.99**	**320**	⇑*i*P	**P**	**21 57 04.8**	**+0.3**
OKC				*e*pP	pP	21 57 19.9	-0.7
OKC				*e*S	S	22 06 51.5	-0.7
OKC				*e*SKS	SKS	22 07 09.1	+0.7
RAC	**Raciborz**	**77.99**	**320**	*e*P	**P**	**21 57 05.5**	**+1.0**
TIP	**Timpagrande**	**78.01**	**309**	⇑*i*P	**P**	**21 57 04.8**	**0.0**
LTRZ	**Laterza**	**78.06**	**310**	P	**P**	**21 57 04.8**	**-0.3**
KEV	**Kevo**	**78.08**	**341**	*e*p	**P**	**21 57 03.7**	**-0.9**
	comp=Z,37nm,0.7s,mb5.4						
KEV	**Kevo**	**78.08**	**341**	*e*P	**P**	**21 57 03.7**	**-0.9**
KEV				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.4						
DRV	**Dumont d'Urvil**	**78.13**	**163**	S	S	22 06 57.0	+3.6
ORI	**Oriolo Calabro**	**78.30**	**310**	P	**P**	**21 57 07.4**	**+1.0**
ORI				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4						
ORI	**Oriolo Calabro**	**78.30**	**310**	P	**P**	**21 57 07.4**	**+1.0**
	comp=Z,40nm,0.8s,mb5.4						
SMOL	**Smolenice**	**78.31**	**318**	*e*P	**P**	**21 57 07.1**	**+0.8**
SMOL				*e*	pP	21 57 25.9	+3.5
MORC	**Moravsky Berou**	**78.38**	**320**	⇑*i*P	**P**	**21 57 06.8**	**+0.2**
MORC				*e**SP	sP	21 57 21.5	-7.5
MORC				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
MORC	**Moravsky Berou**	**78.38**	**320**	⇑*i*P	**P**	**21 57 06.8**	**+0.2**
	comp=Z,39nm,1.0s,mb5.3						
MORC				*e*sP	sP	21 57 21.5	-7.5
SOI	**Samo**	**78.50**	**308**	P	**P**	**21 57 08.2**	**+0.7**
SOI				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
SOI	**Samo**	**78.50**	**308**	P	**P**	**21 57 08.2**	**+0.7**
	comp=Z,16nm,0.9s,mb4.9						
ZST	**Bratislava**	**78.50**	**318**	*e*P	**P**	**21 57 07.7**	**+0.4**
ZST				*e*pP	pP	21 57 23.0	-0.4
ZST				*e*	pP	21 57 26.8	+3.4
ZST				*e*PP	PP	22 00 00.6	-6.5
ARCES	**ARCESS Array B**	**78.51**	**340**	P	**P**	**21 57 07.0**	**0.0**
	comp=Z,19nm,0.5s,mb5.3,baz=92,slow=5.6,SNR=207						
ARCES				PP	PP	22 00 01.0	-5.7
	comp=Z,3.0nm,0.7s,baz=124,slow=13,SNR=3.1						
ARCES				LR	LR	22 35 19.5	
	comp=Z,253nm,21.3s,MS4.5,baz=86,slow=38						
ARCES	**ARCESS Array B**	**78.51**	**340**	P	**P**	**21 57 07.0**	**0.0**
ARCES				PP	PP	22 00 01.0	-5.7
ARCES				LR	LR	22 35 19.4	
ARE0	**ARCESS Array S**	**78.51**	**340**	⇑*i*P	**P**	**21 57 06.9**	**-0.1**
BILL	**Bilibino**	**78.58**	**21**	⇑*i*P	**P**	**21 57 06.4**	**-1.0**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
BILL				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.1						
BILL	**Bilibino**	**78.58**	**21**	⇑*i*P	**P**	**21 57 06.4**	**-1.0**
	comp=Z,5.5nm,0.6s,mb4.7						
BILL				LR	LR		
	comp=Z,1µm,21.0s,MS5.1						
SCLL	**Scilla**	**78.77**	**308**	P	**P**	**21 57 09.7**	**+0.6**
MTTG	**Motta San Giov**	**78.78**	**308**	P	**P**	**21 57 10.0**	**+0.9**
KOGS	**Kog**	**78.91**	**316**	*e*P	**P**	**21 57 09.9**	**+0.2**
KOGS				*e*	pP	21 57 24.5	-1.3
KOGS				*i*	pP	21 57 29.2	+3.4
MGR	**Morigerati**	**78.99**	**310**	P	**P**	**21 57 09.8**	**-0.4**
	comp=Z,12nm,0.6s,mb5.0						
VKA	**Vienna**	**79.03**	**318**	⇑*i*P	**P**	**21 57 09.9**	**-0.3**
	comp=Z,201nm,1.5s,mb5.8						
VKA	**Vienna**	**79.03**	**318**	⇑*i*P	**P**	**21 57 09.9**	**-0.3**
VKA				pmax	pmax		
	comp=Z,201nm,1.5s,mb5.8						
MRLC	**Muro Lucano**	**79.08**	**310**	P	**P**	**21 57 11.6**	**+0.9**
SGO	**Sicignano**	**79.20**	**310**	P	**P**	**21 57 11.6**	**+0.2**
SGO				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
SGO	**Sicignano**	**79.20**	**310**	P	**P**	**21 57 11.6**	**+0.2**
	comp=Z,14nm,1.0s,mb4.8						
DPC	**Dobruska-Polom**	**79.22**	**320**	⇑*i*P	**P**	**21 57 11.7**	**+0.5**
DPC				*e*pP	pP	21 57 26.2	-1.1
DPC				*e*S	S	22 07 04.4	-0.8
DPC				*e*x	x	22 07 30.9	
DPC				AMS	AMS	22 39 10.0	
	comp=Z,100nm,18.6s						
FG5	**Orsara di Pugl**	**79.27**	**311**	P	**P**	**21 57 12.3**	**+0.6**
KSP	**Ksiaz**	**79.28**	**321**	⇑*e*P	**P**	**21 57 11.8**	**+0.2**
KSP				*e*	pP	21 57 27.0	-0.7
KSP				*e*S	S	22 07 05.0	-0.9
KSP	**Ksiaz**	**79.28**	**321**	⇑*i*P	**P**	**21 57 12.0**	**+0.4**
	comp=Z,300nm,2.3s,mb5.8						
KSP				*e*pP	pP	21 57 27.1	-0.7
KSP				*e*S	S	22 07 06.7	+0.8
KSP				MLR	MLR	22 27 57.8	
	comp=Z,300nm,31.3s,MS4.4						
GCIS	**Gornji Cirnik**	**79.30**	**316**	*e*P	**P**	**21 57 11.6**	**-0.1**
SUR	**Sutherland**	**79.43**	**236**	*e*P	**P**	**21 57 13.8**	**+1.0**
	comp=Z,24nm,1.0s,mb5.1						
SUR				LR	LR		
	comp=Z,244nm,19.0s,MS4.6						
UPC	**Upice**	**79.43**	**320**	⇑*i*P	**P**	**21 57 12.8**	**+0.4**
UPC				*e*pP	pP	21 57 27.0	-1.5
CSSN	**Cassano Irpino**	**79.43**	**311**	P	**P**	**21 57 12.6**	**0.0**
ARSA	**Arzberg**	**79.47**	**317**	⇑*i*P	**P**	**21 57 13.1**	**+0.4**
	comp=Z,192nm,2.6s,mb5.6						
SLNA	**Salina**	**79.48**	**308**	P	**P**	**21 57 12.6**	**-0.3**
SMY	**Shemya**	**79.52**	**37**	*e*P	**P**	**21 57 12.9**	**+0.1**
SMY				pmax	pmax		
	comp=Z,250nm,1.0s,mb6.1						
SMY	**Shemya**	**79.52**	**37**	*e*P	**P**	**21 57 12.9**	**+0.1**
	comp=Z,250nm,1.0s,mb6.1						
BOJS	**Bojanci**	**79.54**	**315**	*e*P	**P**	**21 57 13.1**	**0.0**
BOJS				*e*	pP	21 57 27.7	-1.5
BOJS				*e*	pP	21 57 32.5	+3.3
PERS	**Pernice**	**79.71**	**316**	*e*P	**P**	**21 57 14.2**	**+0.3**
TSUM	**Tsumeb**	**79.88**	**250**	P	**P**	**21 57 16.6**	**+1.2**
	comp=Z,1.3nm,1.0s,baz=117,slow=4.8,SNR=3.9						
TSUM				pP	pP	21 57 31.7	+0.1
	comp=Z,10nm,0.9s,baz=72,slow=4.8,SNR=12						
TSUM	**Tsumeb**	**79.88**	**250**	*e*P	**P**	**21 57 16.7**	**+1.2**
	comp=Z,12nm,1.0s,mb4.8						
CII	**Carovilli**	**80.02**	**311**	*e*P	**P**	**21 57 15.6**	**-0.1**
	comp=Z,15nm,0.8s,mb5.0						
OBKA	**Obir**	**80.09**	**316**	⇑*i*P	**P**	**21 57 16.4**	**+0.4**
	comp=Z,232nm,3.0s						
GIB	**Gibilmanna**	**80.09**	**308**	P	**P**	**21 57 15.5**	**-0.7**
GIB				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.3						
GIB	**Gibilmanna**	**80.09**	**308**	P	**P**	**21 57 15.5**	**-0.7**
	comp=Z,30nm,0.7s,mb5.3						
CEY	**Cerknica**	**80.13**	**315**	*e*P	**P**	**21 57 15.4**	**-0.8**
CEY				*i*	pP	21 57 35.4	+3.0
KNDS	**Knezji Dol**	**80.15**	**315**	*i* P	**P**	**21 57 16.0**	**-0.3**
KNDS				*e*	pP	21 57 35.2	+2.7
PRU	**Pruhonice**	**80.33**	**320**	⇑*i*P	**P**	**21 57 17.2**	**0.0**
PRU				*e**PP	pP	21 57 32.1	-1.3
PRU				*e*S	S	22 07 17.9	+1.0
PRU				MLR	MLR		
	comp=Z,100nm,17.9s,MS4.2						
PRU	**Pruhonice**	**80.33**	**320**	⇑*i*P	**P**	**21 57 17.2**	**0.0**
PRU				*e*pP	pP	21 57 32.1	-1.3
PRU				*e*S	S	22 07 17.9	+1.0
PRU				*e*x	x	22 07 40.2	
PRU				AMS	AMS	22 38 20.0	
	comp=Z,100nm,17.9s						
PVCC	**Panska Ves**	**80.35**	**320**	⇑*i*P	**P**	**21 57 17.7**	**+0.4**
PVCC				AMS	AMS	22 38 50.0	
	comp=Z,200nm,22.0s						
MOA	**Molln**	**80.37**	**318**	⇑*i*P	**P**	**21 57 17.2**	**-0.2**
	comp=Z,80nm,2.5s,mb5.2						
VOY	**Vojsko**	**80.52**	**316**	*e*P	**P**	**21 57 18.3**	**0.0**
VOY				*e*	pP	21 57 33.9	-0.6
VOY				*e*	pP	21 57 37.7	+3.2
BSD	**Bornholm Skovb**	**80.52**	**325**	*i* P	**P**	**21 57 17.4**	**-0.7**
BSD				*i*	pP	21 57 32.9	-1.4
BSD				pmax	pmax		
	comp=Z,48nm,0.7s,mb5.5						
BSD	**Bornholm Skovb**	**80.52**	**325**	*i* P	**P**	**21 57 17.4**	**-0.7**
	comp=Z,48nm,0.7s,mb5.5						
BSD				*i*	pP	21 57 32.9	-1.4
TERO	**Teramo**	**80.57**	**312**	P	**P**	**21 57 18.5**	**-0.2**
	comp=Z,9.4nm,0.6s,mb4.9						
PTQR	**Pietraquaria**	**80.70**	**312**	P	**P**	**21 57 19.7**	**+0.3**
AQU	**L'Aquila**	**80.71**	**312**	P	**P**	**21 57 19.9**	**+0.5**
AQU				pmax	pmax		
	comp=Z,54nm,0.8s,mb5.5						
AQU	**L'Aquila**	**80.71**	**312**	P	**P**	**21 57 19.9**	**+0.5**
	comp=Z,54nm,0.8s,mb5.5						
TRO	**Tromso**	**80.77**	**340**	*e*P	**P**	**21 57 17.6**	**-1.5**
TRO				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.4						
TRO				MLR	MLR		
	comp=Z,192µm,19.8s						
TRO	**Tromso**	**80.77**	**340**	*e*P	**P**	**21 57 17.6**	**-1.6**
	comp=Z,50nm,1.1s,mb5.4						
TRO				LR	LR		
	comp=Z,192µm,19.8s						
TRO	**Tromso**	**80.77**	**340**	*e*P	**P**	**21 57 17.6**	**-1.6**
TRO				AMb	AMB	21 57 19.7	
	comp=Z,50nm,1.1s,mb5.3						
TRO				*e*S	S	22 07 22.1	+1.1
TRO				AMS	AMS	22 36 38.4	
	comp=Z,192nm,19.8s,MS4.5						
BRG	**Berggiesshubel**	**80.77**	**321**	⇑*i*P	**P**	**21 57 20.1**	**+0.6**
BRG				*i* *PP	pP	21 57 35.0	-0.7
BRG				S	S	22 07 24.0	+2.5
BRG				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.1						
BRG	**Berggiesshubel**	**80.77**	**321**	⇑*i*P	**P**	**21 57 20.1**	**+0.5**
	comp=Z,28nm,1.1s,mb5.1						
BRG				*i* pP	pP	21 57 35.0	-0.7
BRG				*e*		21 57 50.2	
BRG				S	S	22 07 24.0	+2.5
USI	**Ustica**	**80.78**	**308**	P	**P**	**21 57 19.9**	**+0.1**
	comp=Z,48nm,0.6s,mb5.6						
GEC2	**GERESS Array S**	**80.80**	**319**	*e*P	**P**	**21 57 20.1**	**+0.4**
GEC2				*e**SP	sP	21 57 39.9	-2.3
GEC2				pmax	pmax		
	comp=Z,49nm,0.9s,mb5.4						
GEC2	**GERESS Array S**	**80.80**	**319**	*e*P	**P**	**21 57 20.1**	**+0.4**
	comp=Z,49nm,0.9s,mb5.4						
GEC2				*e*sP	sP	21 57 39.9	-2.3
GERES	**GERESS Array B**	**80.80**	**319**	P	**P**	**21 57 19.8**	**+0.1**
	comp=Z,29nm,0.9s,mb5.2,baz=90,slow=5.3,SNR=240						
GERES				pP	pP	21 57 35.2	-0.7
	comp=Z,24nm,0.8s,baz=90,slow=5.3,SNR=5.7						
KHC	**Kasperske Hory**	**80.90**	**319**	*c* *i*P	**P**	**21 57 20.4**	**+0.2**
KHC	**Kasperske Hory**	**80.90**	**319**	⇑*i*P	**P**	**21 57 20.5**	**+0.3**
KHC	**Kasperske Hory**	**80.90**	**319**	⇑*i*P	**P**	**21 57 20.5**	**+0.3**
KHC	**Kasperske Hory**	**80.90**	**319**	⇑*i*P	**P**	**21 57 20.2**	**0.0**
KHC				*e*pP	pP	21 57 34.4	-2.0
KHC				*e*S	S	22 07 23.3	+0.5
KHC				*e*x	x	22 07 45.7	
KHC				AMS	AMS	22 36 10.0	
	comp=Z,100nm,27.2s						
CING	**Cingoli**	**80.90**	**313**	P	**P**	**21 57 20.7**	**+0.3**
	comp=Z,21nm,0.8s,mb5.1						
PTCC	**Patocco-Chiusa**	**80.91**	**316**	P	**P**	**21 57 20.5**	**+0.1**
FIAM	**Fiamignano**	**80.92**	**312**	P	**P**	**21 57 20.8**	**+0.3**
	comp=Z,44nm,0.7s,mb5.5						
NRCA	**Norcia**	**80.94**	**312**	P	**P**	**21 57 20.6**	**0.0**
KBA	**Koelnbreinsper**	**80.95**	**317**	⇑*i*P	**P**	**21 57 20.4**	**-0.1**
	comp=Z,25nm,1.3s,mb5.0						
KBA	**Koelnbreinsper**	**80.95**	**317**	⇑*i*P	**P**	**21 57 20.4**	**-0.1**
KBA				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.0						
RUE	**Ruedersdorf**	**80.98**	**322**	⇑*i*P	**P**	**21 57 20.8**	**+0.2**
	comp=Z,54nm,0.8s,mb5.5						
RUE				*e*sP	sP	21 57 35.2	-7.9
GMNA	**Gemona**	**80.99**	**316**	P	**P**	**21 57 21.4**	**+0.6**
CERT	**Cerreto**	**81.01**	**312**	P	**P**	**21 57 20.4**	**-0.6**
	comp=Z,24nm,0.7s,mb5.2						
ARV	**Arcevia**	**81.09**	**313**	P	**P**	**21 57 22.0**	**+0.6**
ARV				pmax	pmax		
	comp=Z,80nm,0.8s,mb5.7						
ARV	**Arcevia**	**81.09**	**313**	P	**P**	**21 57 22.0**	**+0.6**
	comp=Z,80nm,0.8s,mb5.7						
MTCE	**Montecelio**	**81.19**	**312**	P	**P**	**21 57 21.2**	**-0.7**
	comp=Z,26nm,0.7s,mb5.3						
FSSB	**Fossombrone**	**81.21**	**313**	P	**P**	**21 57 22.8**	**+0.8**
MNS	**Montasola**	**81.25**	**312**	P	**P**	**21 57 21.6**	**-0.6**
ASS	**Assisi**	**81.29**	**313**	P	**P**	**21 57 22.1**	**-0.3**
ASS				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
ASS	**Assisi**	**81.29**	**313**	P	**P**	**21 57 22.1**	**-0.3**
	comp=Z,10nm,0.7s,mb4.9						
FVI	**Forni Avoltri**	**81.31**	**316**	P	**P**	**21 57 22.5**	**0.0**
FVI				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.2						
FVI	**Forni Avoltri**	**81.31**	**316**	P	**P**	**21 57 22.5**	**0.0**
	comp=Z,19nm,0.6s,mb5.2						
WET	**Wettzell**	**81.36**	**319**	*e*P	**P**	**21 57 22.9**	**+0.3**
WET				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
WET	**Wettzell**	**81.36**	**319**	*e*P	**P**	**21 57 22.9**	**+0.3**
	comp=Z,24nm,0.9s,mb5.1						
MURB	**Monte Urbino**	**81.39**	**313**	P	**P**	**21 57 23.0**	**+0.1**
	comp=Z,35nm,0.8s,mb5.3						
CLL	**Collm**	**81.39**	**321**	⇑*i*P	**P**	**21 57 22.6**	**-0.2**
CLL				*i* *PP	pP	21 57 37.7	-1.2
CLL				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
CLL				MLR	MLR		
	comp=Z,200nm,18.5s,MS4.5						
CLL	**Collm**	**81.39**	**321**	⇑*i*P	**P**	**21 57 22.6**	**-0.2**
	comp=Z,23nm,1.2s,mb5.0						
CLL				*i* pP	pP	21 57 37.7	-1.2
CLL				LR	LR		
	comp=Z,200nm,18.5s,MS4.5						
CLL	**Collm**	**81.39**	**321**	⇑P	**P**	**21 57 22.6**	**-0.2**
	comp=Z,logA/T=1.3,mb5.0						
CLL				*i*		21 57 31.5	
CLL				*i* *PP	pP	21 57 37.7	-1.2
CLL				*e*S	S	22 07 24.0	-3.8
RSM	**Repubblica di**	**81.46**	**314**	P	**P**	**21 57 24.5**	**+1.2**
RSM				pmax	pmax		
	comp=Z,52nm,0.9s,mb5.5						
RSM	**Repubblica di**	**81.46**	**314**	P	**P**	**21 57 24.5**	**+1.2**
	comp=Z,52nm,0.9s,mb5.5						
NKC	**Novy Kostel**	**81.69**	**320**	⇑*i*P	**P**	**21 57 24.6**	**+0.3**
NKC				*e**PP	pP	21 57 39.8	-0.7
NKC				MLR	MLR		
	comp=E,400nm,27.1s						
TOLF	**Tolfa**	**81.75**	**312**	P	**P**	**21 57 24.6**	**-0.2**
	comp=E,31nm,0.7s,mb5.3						
CRE	**Caprese Michel**	**81.81**	**313**	P	**P**	**21 57 25.3**	**+0.2**
CRE				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.3						
CRE	**Caprese Michel**	**81.81**	**313**	P	**P**	**21 57 25.3**	**+0.2**
	comp=Z,24nm,0.6s,mb5.3						
SFI	**Santa Sofia**	**81.89**	**314**	P	**P**	**21 57 27.1**	**+1.6**
SFI				pmax	pmax		
	comp=Z,83nm,0.8s,mb5.7						

SFI	Santa Sofia	81.89	314	P	P	21 57 27.1	+1.6
	comp=Z,83nm,0.8s,mb5.7						
COP	Copenhagen	81.98	325	⇑iP	P	21 57 25.7	0.0
COP				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
COP	Copenhagen	81.98	325	⇑iP	P	21 57 25.7	0.0
	comp=Z,16nm,0.7s,mb5.0						
PGD	Poggio Sodo	81.98	313	P	P	21 57 27.5	+1.5
PGD				pmax	pmax		
	comp=Z,67nm,0.9s,mb5.6						
PGD	Poggio Sodo	81.98	313	P	P	21 57 27.5	+1.5
	comp=Z,66nm,0.9s,mb5.6						
CTI	Castel Tesino	82.08	316	P	P	21 57 27.1	+0.7
CTI				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.5						
CTI	Castel Tesino	82.08	316	P	P	21 57 27.1	+0.7
	comp=Z,52nm,0.8s,mb5.5						
VMG	Vicchio	82.11	314	P	P	21 57 28.0	+1.3
WATA	Walderalm	82.16	317	⇑iP	P	21 57 26.4	-0.4
	comp=Z,31nm,1.3s,mb5.1						
WATA	Walderalm	82.16	317	⇑iP	P	21 57 26.4	-0.4
WATA				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.1						
MOX	Moxa	82.24	320	eP	P	21 57 27.3	+0.2
MOX				e	pP	21 57 42.7	-0.7
MOX				pmax	pmax		
	comp=Z,37nm,1.6s,mb5.1						
MOX				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.2						
MOX	Moxa	82.24	320	eP	P	21 57 27.3	+0.2
	comp=Z,37nm,1.6s,mb5.1						
MOX				e	pP	21 57 42.7	-0.7
MOX				e		21 58 03.8	
MOX				LR	LR		
	comp=Z,100nm,21.0s,MS4.2						
MOX	Moxa	82.24	320	i P	P	21 57 27.3	+0.2
	comp=Z,logA/T=1.4,mb5.1						
MOX				pP	pP	21 57 43.0	-0.4
MOX				e		21 58 04.0	
MOX				LQ		22 24 34.0	
MOX				L		22 40 42.0	
SEI	Scarperia	82.25	314	P	P	21 57 23.7	-3.7
APPI	Appiano	82.38	316	P	P	21 57 27.8	-0.2
	comp=Z,12nm,0.6s,mb5.0						
FUR	Furstenfeldbru	82.39	318	eP	P	21 57 27.8	-0.2
FUR				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
FUR	Furstenfeldbru	82.39	318	eP	P	21 57 27.8	-0.2
	comp=Z,26nm,0.9s,mb5.2						
SQTA	Sankt Quirin	82.41	317	⇑iP	P	21 57 27.9	-0.2
	comp=Z,12nm,0.8s,mb4.9						
SQTA	Sankt Quirin	82.41	317	⇑iP	P	21 57 27.9	-0.2
SQTA				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
FNVD	Fontana Vidola	82.42	314	P	P	21 57 29.6	+1.4
	comp=Z,60nm,1.3s,mb5.4						
GRA1	Grafenberg Arr	82.46	319	eP	P	21 57 29.0	+0.7
	comp=Z,34nm,1.0s,mb5.2						
GRA1				epP	pP	21 57 44.0	-0.5
GRF	Grafenberg Arr	82.46	319	eP	P	21 57 29.0	+0.7
GRF				e*PP	pP	21 57 44.0	-0.5
GRF				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
GRF	Grafenberg Arr	82.46	319	eP	P	21 57 29.0	+0.7
GRF				e*PP	pP	21 57 44.0	-0.5
GRF				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
GRF	Grafenberg Arr	82.46	319	eP	P	21 57 29.0	+0.7
	comp=Z,34nm,1.0s,mb5.2						
GRF				epP	pP	21 57 44.0	-0.5
LOF	Lofoten	82.47	338	eP	P	21 57 27.7	-0.3
	comp=Z,66nm,1.5s,mb5.3						
LOF	Lofoten	82.47	338	eP	P	21 57 27.7	-0.3
LOF				AMb	AMB	21 57 30.0	
	comp=Z,66nm,1.5s,mb5.3						
GRFL	Gerfalco	82.52	313	P	P	21 57 28.5	-0.2
	comp=Z,18nm,0.8s,mb5.2						
ZCCA	Zocca	82.53	314	P	P	21 57 30.5	+1.7
SYO	Syowa Base	82.76	197	⇑P	P	21 57 30.0	+0.5
SYO	Syowa Base	82.76	197	⇑SP	sP	21 57 45.0	-7.0
GSCL	Gusciola	82.81	314	P	P	21 57 31.5	+1.3
MABI	Malga Bissina	82.87	316	P	P	21 57 31.0	+0.5
	comp=Z,15nm,0.9s,mb5.0						
MAIM		82.87	314	P	P	21 57 28.9	-1.6
NB2	NORSAR Subarra	82.91	331	P	P	21 57 30.1	-0.3
	comp=Z,43nm,1.2s,mb5.4,baz=97,slow=5.0						
NB2	NORSAR Subarra	82.91	331	P	P	21 57 30.1	-0.3
	baz=96,slow=5.1						
NOA	NORSAR Array B	82.91	331	P	P	21 57 29.8	-0.6
	comp=Z,17nm,1.0s,mb5.0,baz=94,slow=5.5,SNR=21						
NOA				pP	pP	21 57 44.7	-1.9
	comp=Z,2.0nm,0.7s,baz=117,slow=3.9,SNR=4.3						
NOA				PP	PP	22 00 40.6	-2.5
	comp=Z,1.1nm,0.8s,baz=69,slow=9.6,SNR=3.4						
NOA				LR	LR	22 40 15.1	
	comp=Z,131nm,18.8s,MS4.3,baz=90,slow=40						
NOA	NORSAR Array B	82.91	331	P	P	21 57 29.8	-0.6
NOA				pP	pP	21 57 44.7	-1.9
NOA				PP	PP	22 00 40.6	-2.5
NOA				LR	LR	22 40 15.1	
ERBM	Eremo	82.93	314	P	P	21 57 32.1	+1.3
SARO	Sassorosso	82.94	314	P	P	21 57 29.6	-1.3
BRMO	Bormio	82.97	316	P	P	21 57 31.7	+0.7
CLZ	Clausthal	83.05	322	eP	P	21 57 31.5	+0.2
CLZ				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.3						
CLZ	Clausthal	83.05	322	eP	P	21 57 31.5	+0.2
	comp=Z,27nm,0.9s,mb5.3						
FUORN	Ofenpass	83.05	316	P	P	21 57 32.4	+1.0
VALM		83.05	314	P	P	21 57 30.3	-1.1
NAO01	NORSAR Array S	83.06	331	eP	P	21 57 30.8	-0.3
VINC	Vinca	83.12	314	P	P	21 57 30.6	-1.2
BSEG	Bad Segeberg	83.13	324	eP	P	21 57 32.0	+0.4
BSEG				e*SP	sP	21 57 51.6	-2.5
RPZ	Rata Peaks	83.16	135	LR	LR	22 34 01.8	
	comp=Z,328nm,22.0s,MS4.7,baz=186,slow=35						
GRAM		83.18	314	P	P	21 57 31.6	-0.5
DAVOX	Davos	83.31	316	P	P	21 57 33.7	+1.0
DAVA	Damuels	83.32	317	⇓iP	P	21 57 33.0	+0.3
	comp=Z,65nm,1.5s,mb5.4						
CODM		83.33	314	P	P	21 57 31.2	-1.7
BOB	Bobbio (Coli)	83.62	314	P	P	21 57 35.2	+0.9
BOB				pmax	pmax		
	comp=Z,17nm,0.5s,mb5.4						
BOB	Bobbio (Coli)	83.62	314	P	P	21 57 35.2	+0.9
	comp=Z,17nm,0.5s,mb5.4						
KONO	Kongsberg	83.66	329	⇑iP	P	21 57 34.1	-0.1
KONO				e*SP	sP	21 57 48.9	-7.8
KONO				pmax	pmax		
	comp=Z,70nm,1.4s,mb5.6						
KONO	Kongsberg	83.66	329	⇑iP	P	21 57 34.1	-0.1
	comp=Z,70nm,1.4s,mb5.6						
KONO				esP	sP	21 57 48.9	-7.7
VSL	Villasalto	83.74	309	⇑iP	P	21 57 34.9	-0.2
	comp=Z,20nm,1.0s,mb5.2						
VSL				esP	sP	21 57 49.6	-7.9
MUD	Monsted U'grnd	83.83	326	⇑iP	P	21 57 36.1	+1.0
MUD				i	pP	21 57 50.6	-0.8
MUD				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.3						
MUD	Monsted U'grnd	83.83	326	⇑iP	P	21 57 36.1	+1.0
	comp=Z,22nm,0.9s,mb5.3						
MUD				i	pP	21 57 50.6	-0.8
MUGIO	Muggio	83.90	316	P	P	21 57 35.3	-0.4
PGF	Pioggiola	83.97	312	⇑iP	P	21 57 36.5	+0.3
	comp=Z,25nm,1.0s,mb5.0						
PGF				epP	pP	21 57 55.9	+3.5
PGF	Pioggiola	83.97	312	⇑iP	P	21 57 36.5	+0.3
PGF				e*PP	pP	21 57 55.9	+3.5
PGF				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
KBS	Kingsbay	84.04	349	eP	P	21 57 36.0	+0.3
KBS				AMS	AMS	22 44 17.1	
	comp=Z,177nm,19.6s,MS4.5						
SPAK	Spaichingen	84.05	318	eP	P	21 57 37.0	+0.6
TNS	Taunus Mts	84.26	320	eP	P	21 57 37.9	+0.5
TNS				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
TNS	Taunus Mts	84.26	320	eP	P	21 57 37.9	+0.5
	comp=Z,20nm,0.9s,mb5.2						
PCP	Pian Castagno	84.27	314	P	P	21 57 36.9	-0.7
BFO	Black Forest	84.36	318	eP	P	21 57 37.7	-0.2
BFO				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
BFO	Black Forest	84.36	318	eP	P	21 57 37.7	-0.2
	comp=Z,16nm,0.9s,mb5.2						
FIN	Finale Ligure	84.52	314	P	P	21 57 37.8	-1.0
ORX	Oropa	84.64	315	P	P	21 57 38.4	-1.1
LANF	Langenberg	84.69	319	eP	P	21 57 39.8	+0.2
IMI	Imperia	84.75	314	P	P	21 57 38.9	-1.2
ROB	Roburent	84.76	314	P	P	21 57 38.9	-1.1
MONE	Monesi	84.85	314	P	P	21 57 39.1	-1.3
NEGI	Negi	84.89	313	P	P	21 57 38.8	-1.9
BBS	Basel-Blauen	84.92	317	eP	P	21 57 40.7	-0.1
SAOF	Saorge	84.99	314	eP	P	21 57 41.7	+0.5
WLS	Welschbruch	85.00	318	eP	P	21 57 41.2	0.0
CDF	Champ du Feu	85.06	318	⇑iP	P	21 57 41.4	0.0
	comp=Z,16nm,0.8s,mb4.9						
CDF				epP	pP	21 58 00.6	+2.8
CDF	Champ du Feu	85.06	318	⇑iP	P	21 57 41.4	0.0
CDF				e*PP	pP	21 58 00.6	+2.8
CDF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
ENR	Entracque	85.08	314	P	P	21 57 41.6	-0.1
SBF	Sospel	85.08	313	⇑iP	P	21 57 42.0	+0.3
	comp=Z,71nm,0.8s,mb5.5						
SBF	Sospel	85.08	313	⇑iP	P	21 57 42.0	+0.3
SBF				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.5						
AUTN	L'Aution	85.08	314	eP	P	21 57 42.3	+0.6
REVF	Revere	85.14	313	eP	P	21 57 42.3	+0.4
RUP	Ruppelstein	85.16	319	eP	P	21 57 42.3	+0.4
MOF	Molkenrain	85.17	318	eP	P	21 57 42.1	+0.1
RSP	Reno Superiore	85.17	315	P	P	21 57 40.6	-1.5
BHB	Bricherasio	85.17	314	P	P	21 57 40.2	-1.9
TOUF	Mont Tournerai	85.21	314	eP	P	21 57 43.1	+0.8
LSD	Ceresole Reale	85.23	315	P	P	21 57 41.5	-0.9
MVIF	Mont Vial	85.29	314	eP	P	21 57 43.5	+0.8
ABSA	Djebel Ababsia	85.34	306	P	P	21 57 45.0	+1.9
HINF	Hinteralfeld	85.36	317	eP	P	21 57 42.6	-0.3
CMAH	Djebel Manchou	85.37	306	P	P	21 57 44.0	+0.7
LOMF	Lomont	85.39	317	eP	P	21 57 42.1	-1.0
CALN	Calern	85.48	313	eP	P	21 57 44.5	+0.9
RRL	Cesana Torines	85.51	315	P	P	21 57 43.2	-0.6
LPG	La Plagne	85.51	315	eP	P	21 57 44.5	+0.7
	comp=Z,46nm,0.9s,mb5.4						
LPG	La Plagne	85.51	315	eP	P	21 57 44.5	+0.7
LPG				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.4						
LPL	La Plagne	85.53	315	⇑iP	P	21 57 44.5	+0.7
	comp=Z,49nm,0.8s,mb5.5						
LPL				epP	pP	21 58 03.8	+3.6
LPL	La Plagne	85.53	315	⇑iP	P	21 57 44.5	+0.7
LPL				e*PP	pP	21 58 03.8	+3.6
LPL				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.5						
MBDF	Montbardon	85.53	314	eP	P	21 57 43.7	-0.2
	comp=Z,14nm,0.8s,mb4.9						
MBDF				epP	pP	21 58 03.0	+2.8
MBDF	Montbardon	85.53	314	eP	P	21 57 43.7	-0.2
MBDF				e*PP	pP	21 58 03.0	+2.8
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
OG01	Vacheresse	85.53	316	eP	P	21 57 44.5	+0.7
BNI	Bardonecchia	85.58	315	⇑iP	P	21 57 44.0	-0.1
BNI				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.3						
BNI	Bardonecchia	85.58	315	⇑iP	P	21 57 44.0	-0.2
	comp=Z,18nm,0.8s,mb5.3						
FRF	La Foret Royal	85.67	313	⇑iP	P	21 57 45.1	+0.5
	comp=Z,36nm,0.8s,mb5.3						
FRF				epP	pP	21 58 04.4	+3.5
FRF	La Foret Royal	85.67	313	⇑iP	P	21 57 45.1	+0.5
FRF				e*PP	pP	21 58 04.4	+3.5
FRF				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.3						
HAU	Haudompre	85.69	318	⇑iP	P	21 57 44.6	0.0
	comp=Z,41nm,0.8s,mb5.4						
HAU				epP	pP	21 58 03.8	+2.9
HAU				eR			
	comp=Z,134nm,22.5s						
HAU	Haudompre	85.69	318	⇑iP	P	21 57 44.6	0.0
HAU				e*PP	pP	21 58 03.8	+2.9
HAU				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.4						
HAU				MLR	MLR		
	comp=Z,130nm,22.5s,MS4.3						
WLF	Walferdange	85.75	319	⇑iP	P	21 57 45.5	+0.7
WLF				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.3						
WLF	Walferdange	85.75	319	⇑iP	P	21 57 45.5	+0.7
	comp=Z,24nm,1.3s,mb5.3						
LMR	La Mourre	85.78	313	⇑iP	P	21 57 45.5	+0.4
	comp=Z,38nm,1.0s,mb5.3						
LMR	La Mourre	85.78	313	⇑iP	P	21 57 45.5	+0.4
LMR				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.3						
BER	Bergen	85.80	330	eP	P	21 57 45.4	+0.6
BER				AMS	AMS	22 41 46.3	
	comp=Z,184nm,19.8s,MS4.5						
THEF	They Montfort	85.92	318	eP	P	21 57 45.4	-0.3
CABF	La Chapelle	85.93	316	⇑iP	P	21 57 46.4	+0.7
	comp=Z,37nm,0.9s,mb5.3						
CABF	La Chapelle	85.93	316	⇑iP	P	21 57 46.4	+0.7
CABF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.3						
CKFL	Kef-Lekhel	85.94	306	P	P	21 57 47.0	+0.9
OG25	Le Caire	86.04	314	eP	P	21 57 47.8	+1.4
TAVF	Tavernes	86.09	313	eP	P	21 57 47.3	+0.7
CASM	Ain Smara	86.14	306	P	P	21 57 49.0	+2.0
ORIF	Oris-en-Rattie	86.15	315	⇑iP	P	21 57 47.7	+0.8
	comp=Z,20nm,0.8s,mb5.1						
ORIF				eR			
	comp=Z,186nm,21.0s						
CTEI	Djebel Teioual	86.21	306	P	P	21 57 45.0	-2.4
OG05	Jujurieux	86.39	316	eP	P	21 57 48.7	+0.7
SMRF	Simiane la Rot	86.42	314	⇑iP	P	21 57 49.3	+1.1
	comp=Z,20nm,0.9s,mb5.0						
MEZF	Maizieres J'vi	86.53	318	⇑iP	P	21 57 49.1	+0.4
GIVF	Givet	86.59	320	eP	P	21 57 49.4	+0.5
DFRA	Djebel Bou Aff	86.61	306	P	P	21 57 52.0	+2.6
BAIF	Baives	86.99	320	⇑iP	P	21 57 51.7	+0.8
	comp=Z,36nm,0.9s,mb5.3						
BAIF				epP	pP	21 58 10.8	+3.5
BAIF	Baives	86.99	320	⇑iP	P	21 57 51.7	+0.8
BAIF				e*PP	pP	21 58 10.8	+3.5
BAIF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.3						
VIVF	Saint-Julien-l	87.01	315	⇑iP	P	21 57 51.6	+0.5
	comp=Z,18nm,0.8s,mb5.0						
VIVF	Saint-Julien-l	87.01	315	⇑iP	P	21 57 51.6	+0.5
VIVF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
LOR	Lormes	87.41	317	⇑iP	P	21 57 53.3	+0.3
	comp=Z,32nm,0.8s,mb5.3						
LOR				epP	pP	21 58 12.5	+3.1
LOR				eR			
	comp=Z,116nm,22.5s						
LOR	Lormes	87.41	317	⇑iP	P	21 57 53.3	+0.3
LOR				e*PP	pP	21 58 12.5	+3.1
LOR				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.3						
LOR				MLR	MLR		
	comp=Z,120nm,22.5s,MS4.2						
SMF	Signal de Mont	87.47	316	⇑iP	P	21 57 53.5	+0.2
	comp=Z,30nm,0.7s,mb5.3						
SMF				epP	pP	21 58 12.7	+3.0
SMF	Signal de Mont	87.47	316	⇑iP	P	21 57 53.5	+0.2
SMF				e*PP	pP	21 58 12.7	+3.0
SMF				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.3						
LASF	Ste Croix	87.65	314	eP	P	21 57 54.9	+0.7
LASF				epP	pP	21 58 14.3	+3.7
BGF	Bois d'Agland	88.16	316	⇑iP	P	21 57 57.3	+0.7
	comp=Z,24nm,0.8s,mb5.2						
BGF				epP	pP	21 58 16.5	+3.5
BGF	Bois d'Agland	88.16	316	⇑iP	P	21 57 57.3	+0.7
BGF				e*PP	pP	21 58 16.5	+3.5
BGF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.2						
HYF	Humbligny	88.24	317	eP	P	21 57 57.9	+1.0
TCF	Toulx Ste Croi	88.62	316	⇑iP	P	21 57 59.5	+0.7
CAF	Calviac	88.86	315	⇑iP	P	21 58 00.9	+1.0
	comp=Z,12nm,0.9s,mb4.9						
CAF				epP	pP	21 58 20.1	+3.7
CAF	Calviac	88.86	315	⇑iP	P	21 58 00.9	+1.0
CAF				e*PP	pP	21 58 20.1	+3.7
CAF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
MTLF	Montolieu	88.90	313	eP	P	21 58 00.9	+0.7
	comp=Z,14nm,0.8s,mb5.0						
MTLF				epP	pP	21 58 20.2	+3.6
MTLF	Montolieu	88.90	313	eP	P	21 58 00.9	+0.7
MTLF				e*PP	pP	21 58 20.2	+3.6
MTLF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.0						
RJF	Les Rejaudoux	89.20	315	⇑iP	P	21 58 02.6	+1.0
RJF				eR			
	comp=Z,126nm,22.2s						
VNDA	Vanda	89.71	168	eP	P	21 58 05.1	+1.8
VNDA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
VNDA				MLR	MLR		
	comp=Z,494nm,19.0s						
VNDA	Vanda	89.71	168	P	P	21 58 03.7	+0.4
	comp=Z,3.9nm,1.2s,mb4.6,baz=327,slow=4.5,SNR=4.2						
VNDA				LR	LR	22 36 54.3	
	comp=Z,454nm,18.6s,MS4.9,baz=303,slow=35						
VNDA	Vanda	89.71	168	eP	P	21 58 05.1	+1.8
	comp=Z,3.4nm,1.3s,mb4.5						
VNDA				LR	LR		
	comp=Z,494nm,19.0s,MS5.0						
LFF	La Frestale	89.79	315	⇑iP	P	21 58 05.4	+1.1
	comp=Z,36nm,1.1s,mb5.3						
LFF	La Frestale	89.79	315	⇑iP	P	21 58 05.4	+1.1
LFF				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.3						
LDF	La Druitiere	89.95	319	⇑iP	P	21 58 05.6	+0.6
	comp=Z,40nm,0.9s,mb5.4						
LDF	La Druitiere	89.95	319	⇑iP	P	21 58 05.6	+0.6
LDF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.5						
JMIC	Jan Mayen	89.95	341	AMS	AMS	22 46 19.1	
	comp=Z,150nm,21.5s,MS4.4						
FLN	La Foliniere	90.16	319	⇑iP	P	21 58 06.6	+0.6
	comp=Z,30nm,0.7s,mb5.4						
FLN				epP	pP	21 58 25.8	+3.3
FLN				eR			
	comp=Z,216nm,22.2s						
FLN	La Foliniere	90.16	319	⇑iP	P	21 58 06.6	+0.6
FLN				e*PP	pP	21 58 25.8	+3.3
FLN				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.4						
FLN				MLR	MLR		
	comp=Z,220nm,22.3s,MS4.5						
MFF	Saint Martin d	90.21	317	eP	P	21 58 06.9	+0.7
	comp=Z,27nm,1.0s,mb5.2						
MFF	Saint Martin d	90.21	317	eP	P	21 58 06.9	+0.7
MFF				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.2						
EPF	Esparros	90.30	313	eP	P	21 58 07.4	+0.6
EBR	Ebro Roquetas	90.44	311	ePCP	PcP	21 58 09.2	+0.4
GRR	Gorron	90.46	318	eP	P	21 58 08.1	+0.7
	comp=Z,23nm,0.9s,mb5.2						
GRR	Gorron	90.46	318	eP	P	21 58 08.1	+0.7
GRR				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.2						
ETSF	Etsaut	90.97	313	eP	P	21 58 11.0	+1.1
	comp=Z,17nm,1.0s,mb5.0						
ETSF				epP	pP	21 58 30.5	+4.1
ETSF	Etsaut	90.97	313	eP	P	21 58 11.0	+1.1
ETSF				e*PP	pP	21 58 30.5	+4.1
ETSF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
SJPF	Ste Jean	91.42	313	eP	P	21 58 13.3	+1.3
	comp=Z,18nm,1.0s,mb5.0						
SJPF	Ste Jean	91.42	313	eP	P	21 58 13.3	+1.3
SJPF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
SGMF	Saint Gilles	91.60	319	eP	P	21 58 13.3	+0.6
QUIF	Quistinic	92.06	318	⇑iP	P	21 58 15.1	+0.3
	comp=Z,10nm,0.7s,mb5.0						
QUIF				epP	pP	21 58 34.4	+3.1
QUIF	Quistinic	92.06	318	⇑iP	P	21 58 15.1	+0.3
QUIF				e*PP	pP	21 58 34.4	+3.1
QUIF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb5.0						
ROSF	Rostrenen	92.06	319	eP	P	21 58 15.4	+0.6
	comp=Z,83nm,1.3s,mb5.6						
ROSF	Rostrenen	92.06	319	eP	P	21 58 15.4	+0.6
ROSF				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.6						
ESDC	Sonseca Array	93.98	310	P	P	21 58 24.7	+0.9
	comp=Z,1.7nm,0.6s,mb4.6,baz=63,slow=4.5,SNR=10						
ESDC				sP	sP	21 58 44.3	-1.8
	comp=Z,3.5nm,0.7s,baz=62,slow=4.0,SNR=8.2						
ESLA	Sonseca Array	93.98	310	eP	P	21 58 24.0	+0.2
	comp=Z,0.9nm,0.9s						
IMA	Indian Mountai	94.09	22	eP	P	21 58 25.3	+1.7
IMA				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.6						
IMA	Indian Mountai	94.09	22	eP	P	21 58 25.3	+1.7
	comp=Z,19nm,0.8s,mb5.6						
AFI	Afiamalu	94.10	104	LR	LR	22 34 30.3	
	comp=Z,61nm,21.8s,MS4.0,baz=89,slow=31						
TTA	Tatalina	94.22	26	eP	P	21 58 25.6	+1.3
SVW2	Sparrevohn	95.02	27	eP	P	21 58 28.8	+0.8
SPU	Mount Spurr	96.59	27	eP	P	21 58 34.7	-0.4
ILAR	Eielson Array	97.21	22	P	P	21 58 37.7	-0.2
	comp=Z,2.1nm,0.8s,mb4.6,baz=287,slow=3.8,SNR=18						
PWA	Palmer West	97.36	26	eP	P	21 58 39.0	+0.4
PWA				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb5.3						
PWA	Palmer West	97.36	26	eP	P	21 58 39.0	+0.4
	comp=Z,6.4nm,0.5s,mb5.3						
SUMG	Summit	97.37	347	eP	P	21 58 39.0	+0.6
	comp=Z,14nm,1.3s,mb5.2						
DBIC	Dimbokro	99.36	278	LR	LR	22 43 29.4	
	comp=Z,231nm,19.0s,MS4.7,baz=64,slow=35						
INK	Inuvik	99.67	16	eP	P	21 58 48.7	-0.2
INK				pmax	pmax		
	comp=Z,12nm,1.3s						
INK	Inuvik	99.67	16	P	P	21 58 49.6	+0.7
	comp=Z,4.0nm,0.9s,mb4.9,baz=304,slow=3.6,SNR=5.9						
INK	Inuvik	99.67	16	ePdif	P	21 58 48.7	-0.2
	comp=Z,12nm,1.3s,mb5.2						
RES	Resolute Bay	100.43	3	eP	P	21 58 52.3	0.0
FCC	Fort Churchill	116.24	5	ePKIKP	PKPdf	22 03 48.6	+1.1
SCHQ	Schefferville	118.75	348	PKP	PKPdf	22 03 54.1	+1.7
	comp=Z,3.4nm,0.6s,baz=49,slow=2.1,SNR=8.9						
FFC	Flin Flon	119.02	11	ePKIKP	PKPdf	22 03 53.8	+0.9
NEW	Newport	120.10	24	ePKIKP	PKPdf	22 03 56.9	+1.7
MSO	Missoula	122.54	23	ePKPdf	PKPdf	22 04 00.6	+0.6
MSO				epPKPdf		22 04 15.8	
CHMT	Chamberlain Mo	122.73	23	ePKPdf	PKPdf	22 04 01.1	+0.8
CHMT				epPKPdf		22 04 16.3	
MOD	Modoc	123.43	31	ePKPdf	PKPdf	22 04 03.9	+2.1
WVOR	Wild Horse Val	123.89	30	ePKIKP	PKPdf	22 04 04.7	+2.0
ULM	Lac du Bonnet	124.38	9	PKP	PKPdf	22 04 04.5	+1.1
	comp=Z,4.5nm,0.5s,baz=21,slow=1.5,SNR=6.2						
ULM	Lac du Bonnet	124.38	9	ePKPdf	PKPdf	22 04 04.3	+0.8
BOZ	Bozeman (W)	124.41	23	ePKIKP	PKPdf	22 04 04.9	+1.3
BOZ				e		22 04 17.3	
MCMT	McKenzie Canyo	124.61	24	ePKPdf	PKPdf	22 04 05.5	+1.4
HLID	Hailey	124.98	26	ePKPdf	PKPdf	22 04 07.2	+2.5
LAO	LASA Array	125.37	18	ePKPdf	PKPdf	22 04 07.7	+2.3
MOOW	Moose Ponds	126.35	23	ePKPdf	PKPdf	22 04 09.1	+1.7
RRI2	Red Ridge	126.46	24	ePKPdf	PKPdf	22 04 09.8	+2.2
TPAW	Teton Pass	126.49	23	ePKPdf	PKPdf	22 04 10.1	+2.4
LOHW	Long Hollow	126.52	23	ePKPdf	PKPdf	22 04 09.8	+2.0
SNOW	Snow King Moun	126.59	23	ePKPdf	PKPdf	22 04 10.4	+2.6
ELK	Elko	126.83	29	ePKIKP	PKPdf	22 04 10.5	+2.1
ELK				e		22 04 22.6	
NVAR	Mina Array Bea	127.00	33	PKP	PKPdf	22 04 11.0	+2.2
	comp=Z,7.1nm,1.0s,baz=269,slow=2.3,SNR=16						
NVAR	Mina Array Bea	127.00	33	PKP	PKPdf	22 04 11.0	+2.2
MNV	Mina	127.08	33	ePKIKP	PKPdf	22 04 10.5	+1.5
BW06	Boulder Array	127.64	23	ePKPdf	PKPdf	22 04 11.1	+1.1
PDAR	Pinedale Array	127.64	23	PKP	PKPdf	22 04 11.0	+1.0
	comp=Z,5.9nm,0.9s,slow=1.5,SNR=36						
HWUT	Hardware Ranch	127.80	25	ePKPdf	PKPdf	22 04 12.3	+2.0
RSSD	Black Hills	128.35	18	ePKIKP	PKPdf	22 04 12.9	+1.6
TRCR	Troy Canyon	128.49	31	ePKPdf	PKPdf	22 04 14.2	+2.4
TRCR				epPKPdf		22 04 26.3	
DAU	Daniels Canyon	128.91	26	ePKIKP	PKPdf	22 04 14.5	+2.0
MVU	Marysvale	130.03	28	ePKPdf	PKPdf	22 04 16.3	+1.7
MVU				eSKPdf		22 07 50.7	
SRU	San Rafael	130.30	26	ePKIKP	PKPdf	22 04 17.5	+2.4
PHWY	Pilot Hill	130.43	20	ePKPdf	PKPdf	22 04 16.6	+1.3
PHWY				epPKPdf		22 04 29.8	
PHWY				eSKPbc		22 07 36.5	
PV10	Paradox Valley	131.56	26	ePKPdf	PKPdf	22 04 20.1	+2.5
ISCO	Idaho Springs	131.70	21	ePKIKP	PKPdf	22 04 15.1	-2.7

PV01	**Paradox Valley**	**131.96**	**25**	*e*PKPdf	PKPdf	22 04 20.9	+2.6
PV01				*e*SKP		22 07 41.9	
SDCO	**Great Sand Dun**	**133.54**	**23**	*e*PKPdf	PKPdf	22 04 22.8	+1.5
ANMO	**Albuquerque**	**135.56**	**26**	*e*PKIKP	PKPdf	22 04 27.7	+2.6
ANMO				*e*		22 04 43.8	
TUC	**Tucson**	**135.63**	**32**	*e*PKIKP	PKPdf	22 04 27.7	+2.4
LAZ	**Ladron**	**135.72**	**27**	*e*PKPdf	PKPdf	22 04 28.0	+2.6
LAZ				*e*pPKPdf		22 04 43.2	
BNM	**Barren Site**	**136.16**	**26**	*e*PKPdf	PKPdf	22 04 28.3	+2.1
BNM				*e*SKP		22 07 56.0	
CCM	**Cathedral Cave**	**136.98**	**7**	*e*PKIKP	PKPdf	22 04 30.1	+2.5
WCI	**Wyandotte Cave**	**137.20**	**2**	*e*PKIKP	PKPdf	22 04 29.8	+1.8
ELN	**Prospectdale**	**138.04**	**355**	*e*PKPdf	PKPdf	22 04 32.0	+2.4
MNTX	**Cornudas Mount**	**138.79**	**27**	*e*PKPpre		22 04 28.7	
MNTX				*e*PKPdf	PKPdf	22 04 33.2	+2.1
GDL2	**Guadalupe Moun**	**138.81**	**25**	*e*PKPdf	PKPdf	22 04 33.0	+1.9
WVT	**Waverly**	**139.22**	**4**	*e*PKIKP	PKPdf	22 04 33.4	+1.7
PLAL	**Pickwick Lake**	**140.34**	**4**	*e*PKPdf	PKPdf	22 04 34.7	+0.9
LTX	**Lajitas**	**141.57**	**27**	*e*PKIKP	PKPdf	22 04 36.4	+0.2
TXAR	**Lajitas Array**	**141.57**	**27**	PKhKP		22 04 32.0	
	comp=Z,2.4nm,0.9s,baz=246,slow=0.5,SNR=12						
TXAR				PP	PP	22 07 41.9	-1.8
	comp=Z,1.3nm,0.9s,baz=333,slow=5.6,SNR=5.5						
TXAR				SKPbc		22 08 10.6	
	comp=Z,4.1nm,1.1s,baz=296,slow=2.3,SNR=5.8						
TXAR	**Lajitas Array**	**141.57**	**27**	PKP	PKPdf	22 04 32.0	-4.2
TXAR				PP	PP	22 07 41.9	-1.8
TXAR				SKPbc		22 08 10.6	
PLCA	**Paso Flores**	**141.96**	**198**	PKhKP		22 04 32.9	
	comp=Z,2.7nm,0.9s,baz=262,slow=2.5,SNR=5.2						
BAO	**Brasilia Array**	**142.23**	**251**	PKPdf	PKPdf	22 04 40.5	+2.9
BDFB	**Brasilia**	**142.25**	**251**	PKP	PKPdf	22 04 40.0	+2.3
	comp=Z,5.0nm,0.8s,baz=105,slow=5.0,SNR=6.4						
CPUP	**Villa Florida**	**146.06**	**228**	PKPbc	PKPbc	22 04 46.2	+1.1
	comp=Z,17nm,0.9s,baz=116,slow=4.5,SNR=31						
CPUP	**Villa Florida**	**146.06**	**228**	*e*PKPbc	PKPbc	22 04 46.2	+1.1
SJG	**San Juan**	**150.72**	**321**	*e*PKIKP	PKPdf	22 04 58.8	+7.1
SAML	**Samuel**	**158.10**	**258**	*e*PKPdf	PKPdf	22 05 03.9	+2.0
LPAZ	**La Paz**	**160.00**	**234**	PKP	PKPdf	22 05 06.9	+2.9
	comp=Z,3.4nm,0.9s,baz=38,slow=2.5,SNR=17						
LPAZ	**La Paz**	**160.00**	**234**	*e*PKPdf	PKPdf	22 05 06.7	+2.7
LPAZ				*e*pPKPdf		22 05 22.9	
SDV	**Santo Domingo**	**160.38**	**314**	*e*PKPdf	PKPdf	22 05 06.1	+1.6
ROSC	**El Rosal**	**165.80**	**312**	PKP	PKPdf	22 05 12.1	+2.3
	comp=Z,11nm,0.8s,baz=112,slow=5.4,SNR=7.8						
OTAV	**Otavalo**	**171.91**	**308**	*e*PKPdf	PKPdf	22 05 16.4	+2.7
OTAV				*e*pPKPdf		22 05 32.3	

BJI ***24*** *22:13:24.6, 2.11S×128.55E, h35*^{km}*, mB5.0, mb4.9, Ms5.0, Msz4.4*

NEIC ***24*** *22:13:34.4±0.4, 1.38S×127.67E, h35*^{km}*, mb4.8/16, Error ellipse: s-maj=15.5km s-min=6.6km az=61.0*

IDC ***24*** *22:13:36.7±9.0, 1.31S×127.87E, h63*^{km}*±92*^{km}*, mb3.8/7, mb1 4.1/9, mb1mx3.9/16, mbtmp4.2/9, ML4.3/2, Error ellipse: s-maj=47.0km s-min=24.9km az=66.0*

ISC 24 22:13:31.8±0.4**, 1.43S**±0.06×**127.8E**±0.1**, h33**^{km}**, n38, σ1**^{s}**15**/41**, mb4.7**/23**, 1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**12.13**	**158**	*e*P	**P**	**22 16 25.1**	**-0.2**
	33nm,0.6s						
KAKA				*e*S	**S**	**22 18 38.0**	**-2.3**
KKM	**Kota Kinabalu**	**13.72**	**303**	*e*Pn	**P**	**22 16 43.5**	**-3.1**
FITZ	**Fitzroy Crossi**	**16.70**	**187**	*e*P	**P**	**22 17 29.1**	**+4.1**
	11nm,1.3s						
FITZ	**Fitzroy Crossi**	**16.70**	**187**	P	**P**	**22 17 27.9**	**+2.9**
	0.4nm,0.3s,baz=19,slow=15,SNR=5.2						
KSM	**Kuching**	**17.70**	**279**	*e*P	**P**	**22 17 34.8**	**-2.8**
WRAB	**Tennant Creek**	**19.48**	**161**	*e*P	**P**	**22 17 58.0**	**-0.9**
	41nm,0.8s						
WRA	**Warramunga Arr**	**19.49**	**161**	P	**P**	**22 17 58.6**	**-0.4**
	1.6nm,0.3s,baz=342,slow=13,SNR=88						
WRA				S	**S**	**22 21 32.3**	**+0.6**
	0.3nm,0.3s,baz=340,slow=16,SNR=3.6						
WB2	**Warramunga Arr**	**19.49**	**161**	*e*P	**P**	**22 17 58.2**	**-0.9**
WB2				*e*S	**S**	**22 21 28.4**	**-3.4**
MBWA	**Marble Bar**	**21.12**	**201**	P	**P**	**22 18 17.9**	**+1.7**
	12nm,0.9s,mb4.2						
CTAO	**Charters Tower**	**25.89**	**137**	*e*P	**P**	**22 19 04.4**	**+1.7**
	10nm,0.8s,mb4.4						
YHNB	**Yeheng**	**26.67**	**347**	*e*P	**P**	**22 19 11.0**	**+1.1**
KULM	**Kulim**	**27.90**	**284**	*e*P	**P**	**22 19 20.7**	**-0.6**
STKA	**Stephens Creek**	**32.98**	**158**	*e*P	**P**	**22 20 08.8**	**+2.8**
	5.0nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**32.98**	**158**	P	**P**	**22 20 07.3**	**+1.4**
	1.4nm,0.4s,mb4.3,baz=334,slow=10,SNR=7.1						
CMAR	**Chiang Mai Arr**	**34.56**	**306**	P	**P**	**22 20 20.4**	**+0.7**
	0.8nm,0.6s,mb3.8,baz=143,slow=7.7,SNR=4.1						
ENH	**Enshi**	**36.02**	**333**	*e*P	**P**	**22 20 31.2**	**-0.8**
	18nm,0.9s,mb5.0						
MJAR	**Matsushiro Arr**	**39.01**	**13**	P	**P**	**22 20 56.1**	**-0.9**
	1.3nm,0.4s,mb4.0,baz=193,slow=9.0,SNR=4.7						
LZH	**Lanzhou**	**43.48**	**331**	⇓P	**P**	**22 21 35.0**	**+1.1**
LZH				AP	pP	22 21 40.5	-3.2
LZH				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
SHL	**Shillong**	**43.87**	**310**	*e*P	**P**	**22 21 38.0**	**+0.8**
HHC	**Hu-ho-hao-te**	**44.59**	**342**	*e*P	**P**	**22 21 43.3**	**+0.5**
HHC				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.4						
HHC				AMB	AMB		
	comp=Z,90nm,4.6s						
LSA	**Lhasa**	**46.70**	**315**	P	**P**	**22 22 02.0**	**+2.4**
LSA	**Lhasa**	**46.70**	**315**	*e*P	**P**	**22 22 01.5**	**+1.9**
	comp=Z,12nm,0.6s,mb5.0						
GTA	**Gaotai**	**48.05**	**331**	*e*P	**P**	**22 22 10.5**	**+0.3**
GTA				AP	pP	22 22 16.8	-3.2
GUN	**Gumba**	**49.68**	**309**	*e*P	**P**	**22 22 23.1**	**+0.2**
	comp=Z,32nm,0.5s,mb5.6						
PKI	**Pulchoki**	**49.88**	**309**	*e*P	**P**	**22 22 24.6**	**+0.2**
	comp=Z,12nm,0.6s,mb5.1						
KKN	**Kakani**	**50.09**	**309**	*e*P	**P**	**22 22 26.0**	**0.0**
DMN	**Daman**	**50.14**	**308**	*e*P	**P**	**22 22 26.7**	**+0.3**
	comp=Z,36nm,1.0s,mb5.4						
GKN	**Gorkha**	**50.69**	**309**	*e*P	**P**	**22 22 30.4**	**-0.2**
	comp=Z,10nm,0.3s,mb5.2						
KOLN	**Koldanda**	**51.40**	**308**	*e*P	**P**	**22 22 36.4**	**+0.5**
	comp=Z,34nm,0.7s,mb5.4						
ULN	**Ulaanbaatar**	**52.31**	**342**	*e*P	**P**	**22 22 42.4**	**-0.1**
	comp=Z,11nm,1.3s,mb4.6						
SONM	**Songino Array**	**52.49**	**342**	P	**P**	**22 22 43.1**	**-0.6**
	comp=Z,2.4nm,0.6s,mb4.3,baz=152,slow=7.3,SNR=9.5						
WMQ	**Urumqi**	**57.55**	**326**	*e*P	**P**	**22 23 20.6**	**0.0**
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,100nm,4.6s						
MKAR	**Makanchi Array**	**62.38**	**326**	P	**P**	**22 23 53.0**	**-0.7**
	comp=Z,3.0nm,0.6s,mb4.6,baz=113,slow=7.7,SNR=49						
YAK	**Yakutsk**	**63.31**	**1**	*e*P	**P**	**22 23 59.6**	**-0.1**
	comp=Z,22nm,0.6s,mb5.5						
ZAL	**Zalesovo**	**65.64**	**334**	P	**P**	**22 24 13.2**	**-1.6**
	comp=Z,1.0nm,0.6s,mb4.0,baz=52,slow=2.6,SNR=7.6						
BVAR	**Borovoye Array**	**72.20**	**328**	P	**P**	**22 24 53.9**	**-1.3**
	comp=Z,1.0nm,0.6s,mb3.9,baz=135,slow=6.3,SNR=9.1						
ZRNK	**Zerenda**	**72.91**	**327**	*e*P	**P**	**22 24 58.4**	**-1.1**
	comp=Z,3.5nm,0.8s,mb4.3						
VNDA	**Vanda**	**78.21**	**173**	P	**P**	**22 25 31.1**	**+1.8**
	comp=Z,1.4nm,0.8s,mb3.9						

MOS ***24*** *22:45:33.3±1.4, 36.08N×71.31E, h77*^{km}*, mb4.2/1, Error ellipse: s-maj=19.2km s-min=9.0km az=97.3*

NEIC ***24*** *22:45:33.7±2.0, 36.07N×71.40E, h64*^{km}*±22*^{km}*, mb3.9/2, Error ellipse: s-maj=21.6km s-min=6.5km az=68.0*

IDC ***24*** *22:45:37.3±8.8, 36.20N×71.43E, h96*^{km}*±84*^{km}*, mb3.7/7, mb1 3.9/8, mb1mx3.5/21, mbtmp4.1/8, ML3.4/2, Error ellipse: s-maj=38.9km s-min=26.1km az=47.0*

NNC ***24*** *22:45:46.2±8.5, 36.90N×71.20E, h240*^{km}*±115*^{km}*, mpv4.5, Error ellipse: s-maj=91.9km s-min=63.5km az=41.0*

ISC 24 22:45:34.5±1.4**, 36.04N**±0.06×**71.4E**±0.1**, h93**^{km}±15^{km}**, n42, σ1**^{s}**22**/48**, mb3.7**/7**, 3C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.05**	**134**	*e*S	**S**	**22 47 52.6**	**+5.6**
AML	**Almayashu**	**6.33**	**15**	P	**P**	**22 47 07.6**	**+0.6**
	SNR=46						
SDNR	**Sundarnagar**	**6.46**	**133**	*e*P	**P**	**22 47 11.0**	**+2.3**
SDNR				*e*S	**S**	**22 48 22.0**	**+0.4**
UCH	**Uchtor**	**6.63**	**20**	P	**P**	**22 47 12.0**	**+1.0**
	SNR=14						
KZA	**Kyzart**	**6.72**	**25**	P	**P**	**22 47 14.1**	**+1.8**
	SNR=7.0						
SMLA	**Simla**	**6.85**	**134**	*i* P	**P**	**22 47 13.4**	**-0.7**
SMLA				*i* S	**S**	**22 48 29.3**	**-1.7**
EKS2	**Erkin-Say**	**6.86**	**15**	P	**P**	**22 47 14.5**	**+0.3**
	SNR=13						
AAK	**Ala-Archa**	**7.00**	**19**	P	**P**	**22 47 17.1**	**+0.9**
	SNR=8.5						
AAK	**Ala-Archa**	**7.00**	**19**	P	**P**	**22 47 16.8**	**+0.6**
	14nm,0.6s						
AAK				⇓S	**S**	**22 48 31.1**	**-3.7**
	18nm,1.1s						
KK31	**Karatay Array**	**7.09**	**355**	⇓P	**P**	**22 47 16.2**	**-1.3**
	15nm,0.2s,baz=178,slow=12,SNR=615						
KK31				⇑S	**S**	**22 48 30.4**	**-6.7**
	30nm,0.6s,baz=186,slow=24,SNR=12						
KKAR	**Karatay Array**	**7.09**	**355**	*e*PN	**P**	**22 47 16.1**	**-1.3**
KKAR				pmax	pmax		
	comp=Z,11nm,0.2s						
ULHL	**Ulahol**	**7.24**	**30**	P	**P**	**22 47 21.2**	**+1.8**
	SNR=6.0						
CHMS	**Chumysh**	**7.41**	**19**	P	**P**	**22 47 22.4**	**+0.7**
	SNR=6.2						
TKM2	**Tokmak 2**	**7.59**	**24**	P	**P**	**22 47 25.2**	**+1.0**
	SNR=8.0						
USP	**Ospenovka**	**7.60**	**17**	P	**P**	**22 47 24.9**	**+0.6**
	SNR=14						
LGTI	**Lohaghat**	**9.91**	**129**	*e*P	**P**	**22 47 56.3**	**+0.7**
LGTI				*e*S	**S**	**22 49 43.5**	**-2.2**
KOLN	**Koldanda**	**13.21**	**125**	*e*P	**P**	**22 48 39.5**	**0.0**
	comp=Z,9.8nm,0.2s						
MKAR	**Makanchi Array**	**13.47**	**34**	P	**P**	**22 48 43.2**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=214,slow=13,SNR=2.8						
GKN	**Gorkha**	**13.76**	**122**	*e*P	**P**	**22 48 45.9**	**-0.8**
	comp=Z,19nm,0.3s						
DMN	**Daman**	**14.33**	**122**	*e*P	**P**	**22 48 54.0**	**-0.1**
	comp=Z,20nm,0.4s						
KKN	**Kakani**	**14.34**	**121**	*e*P	**P**	**22 48 54.0**	**-0.2**
	comp=Z,23nm,0.4s						
KKN	**Kakani**	**14.34**	**121**	*e*P	**P**	**22 48 54.0**	**-0.2**
KKN				pmax	pmax		
	comp=Z,12nm,0.4s						
PKI	**Pulchoki**	**14.57**	**121**	*e*P	**P**	**22 48 57.3**	**+0.2**
	comp=Z,14nm,0.4s						
PKI	**Pulchoki**	**14.57**	**121**	*e*P	**P**	**22 48 57.3**	**+0.2**
PKI				pmax	pmax		
	comp=Z,7.0nm,0.4s						
GUN	**Gumba**	**14.69**	**119**	*e*P	**P**	**22 48 58.0**	**-0.6**
	comp=Z,23nm,0.4s						
AB31	**Akbulak array**	**15.65**	**331**	⇑P	**P**	**22 49 08.1**	**-2.7**
	comp=Z,1.0nm,0.4s						
AB31				⇑S	**S**	**22 51 44.9**	**-17**
	comp=Z,2.3nm,0.4s						
AB31	**Akbulak array**	**15.65**	**331**	P	**P**	**22 49 08.0**	**-2.8**
VOSK	**Vostochnaya**	**16.68**	**359**	P	**P**	**22 49 20.9**	**-2.7**
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZRNK	**Zerenda**	**17.00**	**355**	*e*P	**P**	**22 49 26.4**	**-1.0**
ZRNK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZRNK	**Zerenda**	**17.00**	**355**	*e*P	**P**	**22 49 26.4**	**-1.0**
	comp=Z,3.1nm,0.6s						
BVAR	**Borovoye Array**	**17.00**	**358**	P	**P**	**22 49 25.9**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=155,slow=12,SNR=17						
ZAL	**Zalesovo**	**20.18**	**23**	P	**P**	**22 50 02.6**	**-1.0**
	comp=Z,7.4nm,0.3s,baz=260,slow=5.7,SNR=28						
ARU	**Arti**	**22.18**	**341**	*e*P	**P**	**22 50 24.4**	**+0.8**
ARU				*e**PP		22 50 37.6	
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.0						
ARU	**Arti**	**22.18**	**341**	*e*P	**P**	**22 50 24.4**	**+0.8**
	comp=Z,5.5nm,0.8s,mb3.9						
ARU				*e*pP		22 50 37.6	
FINES	**FINESS Array B**	**38.06**	**326**	P	**P**	**22 52 44.0**	**-1.2**
	comp=Z,1.0nm,0.8s,mb3.7,baz=124,slow=7.9,SNR=5.8						
FINES	**FINESS Array B**	**38.06**	**326**	P	**P**	**22 52 44.0**	**-1.2**
ARCES	**ARCESS Array B**	**41.70**	**338**	P	**P**	**22 53 15.6**	**+0.6**
	comp=Z,0.7nm,0.4s,mb3.8,baz=115,slow=8.7,SNR=9.8						
NB2	**NORSAR Subarra**	**44.96**	**323**	P	**P**	**22 53 40.9**	**-0.6**
	comp=Z,1.0nm,0.7s,mb3.6,baz=97,slow=7.4						
NOA	**NORSAR Array B**	**44.96**	**323**	P	**P**	**22 53 41.2**	**-0.3**
	comp=Z,0.2nm,0.4s,mb3.2,baz=104,slow=7.3,SNR=4.5						
LBTB	**Lobatse**	**74.57**	**222**	P	**P**	**22 57 07.2**	**+2.0**
	comp=Z,1.3nm,0.4s,mb4.0,baz=47,slow=4.3,SNR=6.7						
BOSA	**Boshof**	**77.62**	**220**	P	**P**	**22 57 23.8**	**+1.6**
	comp=Z,1.4nm,0.5s,mb4.0,baz=351,slow=2.0,SNR=5.4						
WRA	**Warramunga Arr**	**81.45**	**122**	P	**P**	**22 57 44.1**	**+1.1**
	comp=Z,0.2nm,0.5s,mb3.2,baz=324,slow=4.9,SNR=6.1						

GUC 24 22:59:35.1±0.4**, 19.80S×69.43W, h100**^{km}±1^{km}**, ML4.8, Northern Chile**

WEL 24 23:16:07.3±0.3**, 37.12S×177.80E, h84**^{km}±2^{km}**, ML3.5**/8**, Error ellipse: s-maj=2.1km s-min=1.9km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.60**	**137**	P*	P	23 16 21.9	-0.6
MXZ				S*	S	23 16 33.8	+0.1
MXZ				S*	S	23 16 34.0	+0.3
WIZ	**White Island**	**0.63**	**230**	P*	P	23 16 22.4	-0.4
PUZ	**Puketiti**	**1.02**	**159**	PN	P	23 16 26.6	-0.4
PUZ				SN	S	23 16 41.1	-0.8
MWZ	**Matawai**	**1.23**	**190**	P*	P	23 16 29.5	-0.1
MWZ				S*	S	23 16 45.6	-0.8
MARZ	**Manawahe**	**1.24**	**226**	P*	P	23 16 29.7	-0.1
URZ	**Urewera**	**1.26**	**205**	P*	P	23 16 29.8	-0.3
URZ				S*	S	23 16 46.4	-0.7
BKZ	**Black Stump Fm**	**2.28**	**206**	PN	P	23 16 43.4	-0.4
NGZ	**Ngauruhoe**	**2.68**	**219**	PN	P	23 16 49.9	+0.6
TUVZ	**Tukino**	**2.73**	**218**	PN	P	23 16 49.6	-0.4
FWVZ	**Far West T-bar**	**2.77**	**219**	PN	P	23 16 51.2	+0.6
MOVZ	**Moawhango**	**2.79**	**215**	PN	P	23 16 50.0	-0.9
WNVZ	**Wahianoa**	**2.80**	**217**	PN	P	23 16 50.9	-0.1
MTVZ	**Mangateitei**	**2.91**	**218**	PN	P	23 16 52.2	-0.3

WEL 24 23:26:18.9±0.2**, 41.31S×172.55E, h201**^{km}±1^{km}**, ML3.6**/12**, 1C, Error ellipse: s-maj=1.9km s-min=1.7km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	**Tophouse**	**0.53**	**150**	PN	P	23 26 46.2	-0.3
THZ				SN	S	23 27 06.4	-1.4
NNZ	**Nelson**	**0.63**	**82**	PN	P	23 26 46.4	-0.5
NNZ				SN	S	23 27 07.1	-1.5
DSZ	**Denniston Nort**	**0.71**	**232**	⇑PN	P	23 26 46.5	-0.8
TUWZ	**Tuamarina**	**1.05**	**97**	PN	P	23 26 49.1	-0.2
TUWZ				SN	S	23 27 11.5	-1.3
BSWZ	**Blackbirch Sta**	**1.07**	**113**	PN	P	23 26 49.2	-0.2
BSWZ				SN	S	23 27 12.3	-0.8
DUWZ	**D’Urville Isla**	**1.15**	**64**	PN	P	23 26 49.8	-0.2
DUWZ				SN	S	23 27 13.2	-1.0
TCW	**Tory Channel**	**1.30**	**86**	PN	P	23 26 51.0	-0.4
TCW				SN	S	23 27 14.8	-1.5
KHZ	**Kahutara**	**1.33**	**147**	PN	P	23 26 51.2	-0.4
KHZ				SN	S	23 27 15.4	-1.4
LTZ	**Lake Taylor**	**1.49**	**188**	PN	P	23 26 52.4	-0.5
MRW	**Makara Radio**	**1.62**	**88**	PN	P	23 26 53.5	-0.7
SNZO	**South Karori**	**1.62**	**91**	PN	P	23 26 53.4	-0.8
BHW	**Baring Head**	**1.75**	**94**	PN	P	23 26 54.6	-0.7
KIW	**Kapiti Island**	**1.84**	**77**	PN	P	23 26 55.6	-0.6
CAW	**Cannon Point**	**1.91**	**85**	PN	P	23 26 56.2	-0.7
MSWZ	**Moikau Station**	**2.03**	**94**	PN	P	23 26 57.5	-0.6
PAWZ	**Paruwai Farm**	**2.17**	**93**	PN	P	23 26 58.9	-0.7
MTW	**Mount Morrison**	**2.23**	**87**	PN	P	23 26 59.6	-0.7
TRWZ	**Traveller**	**2.36**	**93**	PN	P	23 27 01.4	-0.4
MRZ	**Mangatainoka R**	**2.38**	**75**	PN	P	23 27 01.0	-1.0
MQZ	**McQueen’s Vall**	**2.40**	**178**	PN	P	23 27 00.6	-1.6
WAZ	**Wanganui**	**2.42**	**51**	PN	P	23 27 01.6	-0.8

IDC ***24*** *23:27:32.8±0.8, 5.45N×94.20E, mb4.4/13, mb1 4.6/13, mb1mx4.4/20, mbtmp4.4/13, MS3.6/2, Ms1 3.7/2, ms1mx3.2/23, Error ellipse: s-maj=32.2km s-min=18.9km az=54.0*

NEIC ***24*** *23:27:37.7±0.3, 5.49N×94.21E, h30*^{km}*, mb4.6/21, Error ellipse: s-maj=11.7km s-min=6.2km az=221.0*

BJI ***24*** *23:27:37.7, 5.50N×94.20E, h30*^{km}*, mB4.6, mb4.7, Ms4.4, Msz4.1*

MOS ***24*** *23:27:39.3±0.7, 5.85N×93.98E, h33*^{km}*, mb4.9/10, Error ellipse: s-maj=32.2km s-min=9.6km az=115.1*

ISC 24 23:27:36.5±0.4**, 5.50N**±0.08×**94.31E**±0.07**, h33**^{km}**, n79, σ0**^{s}**87**/77**, mb4.4**/38**, MS4.1**/1**, 2C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.31**	**92**	*e*Pn	**Pn**	**23 29 12.1**	**+2.2**
PALK	**Pallekele**	**13.64**	**278**	Pn	**P**	**23 30 51.4**	**+1.3**
CMAR	**Chiang Mai Arr**	**13.65**	**19**	Pn	**P**	**23 30 54.9**	**+4.6**
	1.0nm,0.3s,baz=210,slow=14,SNR=17						
CMAR				LR	LR	23 36 04.8	
	comp=Z,78nm,18.4s,baz=6.1,slow=37						
PKI	**Pulchoki**	**23.53**	**340**	*e*P	**P**	**23 32 45.2**	**+0.5**
	15nm,0.7s,mb4.5						
DMN	**Daman**	**23.67**	**339**	*e*P	**P**	**23 32 46.0**	**-0.1**
GUN	**Gumba**	**23.68**	**341**	*e*P	**P**	**23 32 46.3**	**+0.1**
GYA	**Guiyang**	**23.95**	**28**	⇑*i*P	**P**	**23 32 51.3**	**+2.5**
GYA				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.8						
GKN	**Gorkha**	**24.19**	**339**	*e*P	**P**	**23 32 52.1**	**+0.9**
	comp=Z,41nm,0.7s,mb5.0						
LSA	**Lhasa**	**24.25**	**353**	P	**P**	**23 32 54.0**	**+2.2**
LSA	**Lhasa**	**24.25**	**353**	*e*P	**P**	**23 32 53.3**	**+1.5**
	comp=Z,11nm,0.6s,mb4.5						
KOLN	**Koldanda**	**24.38**	**336**	*e*P	**P**	**23 32 53.8**	**+0.8**
	comp=Z,57nm,1.1s,mb4.9						
XAN	**Xi’an**	**31.47**	**24**	P	**P**	**23 33 56.3**	**-1.2**
FITZ	**Fitzroy Crossi**	**38.80**	**128**	P	**P**	**23 34 59.9**	**-0.2**
	comp=Z,3.6nm,0.7s,mb4.2,baz=345,slow=14,SNR=3.2						
MK02	**Makanchi Array**	**42.40**	**348**	P	**P**	**23 35 29.9**	**+0.3**
MK02				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
MKAR	**Makanchi Array**	**42.43**	**348**	P	**P**	**23 35 30.4**	**+0.6**
	comp=Z,8.8nm,0.6s,mb4.6,baz=167,slow=8.0,SNR=120						
KKAR	**Karatay Array**	**42.95**	**334**	P	**P**	**23 35 34.3**	**+0.1**
SONM	**Songino Array**	**43.43**	**12**	P	**P**	**23 35 38.0**	**-0.1**
	comp=Z,4.2nm,0.9s,mb4.2,baz=196,slow=9.0,SNR=18						
ULN	**Ulaanbaatar**	**43.60**	**12**	*e*P	**P**	**23 35 38.4**	**-1.0**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
ULN	**Ulaanbaatar**	**43.60**	**12**	*e*P	**P**	**23 35 38.4**	**-1.0**
	comp=Z,1.6nm,0.8s,mb3.8						
ZAK	**Zakamensk**	**45.36**	**8**	*e*P	**P**	**23 35 53.1**	**-0.4**
ZAK				*e*		23 37 40.4	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s,mb3.4						
WRA	**Warramunga Arr**	**46.78**	**124**	P	**P**	**23 36 04.6**	**-0.4**
	comp=Z,2.7nm,0.7s,mb4.3,baz=302,slow=9.5,SNR=14						
WRAB	**Tennant Creek**	**46.78**	**124**	*e*P	**P**	**23 36 04.6**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
WRAB	**Tennant Creek**	**46.78**	**124**	*e*P	**P**	**23 36 04.6**	**-0.5**
	comp=Z,16nm,0.9s,mb5.0						
WB2	**Warramunga Arr**	**46.79**	**124**	*e*P	**P**	**23 36 05.1**	**0.0**
ZAL	**Zalesovo**	**48.91**	**353**	P	**P**	**23 36 21.4**	**+0.1**
	comp=Z,6.8nm,0.3s,mb5.1,baz=300,slow=5.8,SNR=22						
NVS	**Novosibirsk**	**50.00**	**352**	*i* P	**P**	**23 36 28.2**	**-1.4**
VOSK	**Vostochnaya**	**50.84**	**342**	P	**P**	**23 36 35.5**	**-0.5**
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
ZRNK	**Zerenda**	**51.66**	**341**	P	**P**	**23 36 41.7**	**-0.5**
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
ZRNK	**Zerenda**	**51.66**	**341**	*e*P	**P**	**23 36 41.4**	**-0.8**
	comp=Z,5.2nm,0.9s,mb4.5						
AB31	**Akbulak array**	**52.39**	**332**	P	**P**	**23 36 47.2**	**-0.5**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
ARU	**Arti**	**58.13**	**338**	*e*P	**P**	**23 37 28.0**	**-1.2**
ARU	**Arti**	**58.13**	**338**	*e*P	**P**	**23 37 27.9**	**-1.3**
	comp=Z,4.2nm,1.0s,mb4.4						
EIL	**Elat**	**60.76**	**301**	*e*P	**P**	**23 37 46.5**	**-1.3**
	comp=Z,2.4nm,0.6s,mb4.5						
BR131	**Keskin Array S**	**64.11**	**312**	*e*P	**P**	**23 38 08.0**	**-1.9**
	comp=Z,2.9nm,0.8s,mb4.4						
BRTR	**Keskin Array B**	**64.11**	**312**	P	**P**	**23 38 08.0**	**-2.0**
	comp=Z,1.8nm,0.6s,mb4.3,baz=132,slow=8.1,SNR=5.4						
TIXI	**Tiksi**	**69.51**	**11**	⇑*i*P	**P**	**23 38 40.9**	**-2.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
AKASG	**Malin Array Be**	**70.11**	**322**	P	**P**	**23 38 45.2**	**-2.2**
	comp=Z,1.7nm,0.6s,mb4.2,baz=88,slow=5.7,SNR=4.5						
MLR	**Muntele Rosu**	**70.98**	**316**	P	**P**	**23 38 53.2**	**+0.3**
	comp=Z,4.6nm,0.9s,mb4.4,baz=36,slow=4.0,SNR=6.0						
MLR	**Muntele Rosu**	**70.98**	**316**	P	**P**	**23 38 53.2**	**+0.3**
LBTB	**Lobatse**	**73.27**	**242**	LR	LR	00 10 56.8	
	comp=Z,99nm,18.4s,MS4.1,baz=88,slow=36						
BOSA	**Boshof**	**74.48**	**238**	P	**P**	**23 39 14.2**	**+0.4**
	comp=Z,0.8nm,0.7s,mb3.8,baz=60,slow=4.1,SNR=4.1						
FINES	**FINESS Array B**	**74.88**	**332**	P	**P**	**23 39 15.0**	**-0.5**
	comp=Z,3.9nm,0.7s,mb4.4,baz=101,slow=4.9,SNR=20						
KAF	**Kangasniemi**	**74.97**	**333**	*e*p	**P**	**23 39 15.2**	**-0.8**
OJC	**Ojcow**	**75.89**	**320**	*e*P	**P**	**23 39 21.6**	**+0.1**
OKC	**Ostrava-Krasne**	**76.90**	**320**	*e*P	**P**	**23 39 27.7**	**+0.5**
MORC	**Moravsky Berou**	**77.28**	**320**	*e*P	**P**	**23 39 29.1**	**-0.3**
	comp=Z,4.2nm,1.0s,mb4.3						
ZST	**Bratislava**	**77.39**	**318**	*e*P	**P**	**23 39 29.9**	**-0.1**
ARCES	**ARCESS Array B**	**77.54**	**340**	P	**P**	**23 39 30.1**	**-0.4**
	comp=Z,2.3nm,0.8s,mb4.2,baz=90,slow=7.3,SNR=3.6						
DPC	**Dobruska-Polom**	**78.12**	**320**	*e*P	**P**	**23 39 34.3**	**+0.3**
UPC	**Upice**	**78.33**	**320**	*e*P	**P**	**23 39 36.0**	**+0.9**
PRU	**Pruhonice**	**79.23**	**320**	*e*P	**P**	**23 39 40.4**	**+0.3**
BRG	**Berggiesshubel**	**79.68**	**321**	*i* P	**P**	**23 39 43.0**	**+0.5**
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BRG	**Berggiesshubel**	**79.68**	**321**	*i* P	**P**	**23 39 43.0**	**+0.5**
	comp=Z,3.5nm,0.8s,mb4.3						
GEC2	**GERESS Array S**	**79.70**	**319**	P	**P**	**23 39 43.3**	**+0.7**
GEC2				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
GEC2	**GERESS Array S**	**79.70**	**319**	*e*P	**P**	**23 39 43.3**	**+0.7**
	comp=Z,9.0nm,0.9s,mb4.7						
GERES	**GERESS Array B**	**79.70**	**319**	P	**P**	**23 39 42.6**	**0.0**
	comp=Z,4.7nm,0.7s,mb4.5,baz=90,slow=5.3,SNR=62						
KHC	**Kasperske Hory**	**79.80**	**319**	*e*P	**P**	**23 39 43.3**	**+0.1**
WET	**Wettzell**	**80.26**	**319**	P	**P**	**23 39 46.1**	**+0.5**
WET				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
WET	**Wettzell**	**80.26**	**319**	*e*P	**P**	**23 39 46.1**	**+0.5**
	comp=Z,6.0nm,1.0s,mb4.5						
CLL	**Collm**	**80.30**	**321**	⇓*e*P	**P**	**23 39 46.0**	**+0.2**
CLL	**Collm**	**80.30**	**321**	⇓P	**P**	**23 39 46.0**	**+0.2**
MOX	**Moxa**	**81.14**	**320**	*e*P	**P**	**23 39 50.5**	**+0.3**
MOX	**Moxa**	**81.14**	**320**	*i* P	**P**	**23 39 50.5**	**+0.3**
GRA1	**Grafenberg Arr**	**81.36**	**319**	*e*P	**P**	**23 39 52.1**	**+0.7**
	comp=Z,9.0nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**81.36**	**319**	P	**P**	**23 39 52.1**	**+0.7**
GRF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
GRF	**Grafenberg Arr**	**81.36**	**319**	*e*P	**P**	**23 39 52.1**	**+0.7**
	comp=Z,9.0nm,1.0s,mb4.7						
NB2	**NORSAR Subarra**	**81.87**	**331**	P	**P**	**23 39 52.7**	**-1.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=96,slow=5.0						
NOA	**NORSAR Array B**	**81.87**	**331**	P	**P**	**23 39 53.1**	**-0.7**
	comp=Z,1.7nm,0.9s,mb4.0,baz=94,slow=5.2,SNR=4.0						
CLZ	**Clausthal**	**81.96**	**321**	P	**P**	**23 39 54.7**	**+0.2**
CLZ				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
CLZ	**Clausthal**	**81.96**	**321**	*e*P	**P**	**23 39 54.7**	**+0.2**
	comp=Z,6.0nm,0.9s,mb4.5						
BSEG	**Bad Segeberg**	**82.05**	**324**	P	**P**	**23 39 55.6**	**+0.7**
BSEG				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
BSEG	**Bad Segeberg**	**82.05**	**324**	*e*P	**P**	**23 39 55.6**	**+0.7**
TNS	**Taunus Mts**	**83.16**	**320**	P	**P**	**23 40 01.4**	**+0.8**
TNS				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
TNS	**Taunus Mts**	**83.16**	**320**	*e*P	**P**	**23 40 01.4**	**+0.8**
	comp=Z,7.0nm,1.0s,mb4.7						
BFO	**Black Forest**	**83.25**	**318**	P	**P**	**23 40 01.3**	**+0.2**
BFO				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
BFO	**Black Forest**	**83.25**	**318**	*e*P	**P**	**23 40 01.3**	**+0.2**
	comp=Z,5.0nm,1.2s,mb4.4						
LPG	**La Plagne**	**84.41**	**315**	*e*P	**P**	**23 40 07.7**	**+0.6**
	comp=Z,5.6nm,0.6s,mb4.5						
BNI	**Bardonecchia**	**84.47**	**315**	*e*P	**P**	**23 40 07.2**	**-0.3**
	comp=Z,2.2nm,0.7s,mb4.4						
TXAR	**Lajitas Array**	**141.29**	**26**	PKP	PKPdf	23 47 06.9	+2.1
	comp=Z,0.3nm,0.5s,baz=151,slow=1.3,SNR=5.2						

WEL 24 23:29:01.7±0.3**,38.09S**×**176.44E,h150**^{km}±2^{km}**,ML3.5**/15**, Error ellipse: s-maj=3.2km s-min=2.9km az=0.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAZ	**Tarawera**	**0.15**	**160**	PN	P	23 29 22.1	-0.1
MARZ	**Manawahe**	**0.21**	**61**	PN	P	23 29 22.2	-0.2
UTU	**Utuhina**	**0.22**	**246**	PN	P	23 29 21.2	-1.2
PATZ	**Paeroa**	**0.33**	**207**	PN	P	23 29 22.7	0.0
URZ	**Urewera**	**0.55**	**108**	PN	P	23 29 22.9	-0.8
URZ				SN	S	23 29 39.3	-1.4
MWZ	**Matawai**	**0.89**	**106**	PN	P	23 29 25.7	-0.1
MWZ				SN	S	23 29 43.9	-0.4
BKZ	**Black Stump Fm**	**1.08**	**178**	PN	P	23 29 27.2	-0.1
NGZ	**Ngauruhoe**	**1.27**	**211**	PN	P	23 29 29.5	+0.3
CNZ	**Chateau**	**1.31**	**212**	PN	P	23 29 29.6	0.0
TUVZ	**Tukino**	**1.33**	**207**	PN	P	23 29 29.8	0.0
KNZ	**Kokohu**	**1.34**	**134**	PN	P	23 29 30.0	0.0
FWVZ	**Far West T-bar**	**1.36**	**211**	PN	P	23 29 30.1	0.0
WNVZ	**Wahianoa**	**1.40**	**208**	PN	P	23 29 30.4	-0.1
MOVZ	**Moawhango**	**1.42**	**202**	PN	P	23 29 30.1	-0.7
PUZ	**Puketiti**	**1.43**	**90**	PN	P	23 29 30.2	-0.7
PKVZ	**Pokaka**	**1.48**	**215**	PN	P	23 29 31.1	-0.2
MTVZ	**Mangateitei**	**1.50**	**210**	PN	P	23 29 31.4	-0.2
MXZ	**Matakaoa Point**	**1.57**	**71**	PN	P	23 29 32.0	-0.3
TSZ	**Takapari Road**	**2.00**	**191**	PN	P	23 29 36.4	-0.7
MRZ	**Mangatainoka R**	**2.66**	**194**	PN	P	23 29 43.2	-2.1
KIW	**Kapiti Island**	**3.01**	**203**	PN	P	23 29 46.9	-3.0

*CSEM **24** 23:33:23.6±0.1,40.64N×34.92E,h10^{km},MD3.5,Error ellipse: s-maj=2.3km s-min=1.8km az=24.0*
*ISK **24** 23:33:24.0,40.63N×34.91E,h10^{km},MD3.5*
ISC 24 23:33:23.9±0.6**,40.64N**±0.03×**34.93E**±0.04**,h2**^{km}±5^{km}**, n25,**σ**0**^{s}**.82**/36**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.11**	**264**	*i* P	**Pg**	**23 33 27.3**	**+1.2**
CTKT				*i* S	**Sg**	**23 33 32.0**	**+4.4**
CORM	**Corum**	**0.51**	**207**	*i* PG	**Pg**	**23 33 34.5**	**+0.4**
BOYT	**Boyabat**	**0.79**	**358**	*i* P	**Pg**	**23 33 39.8**	**+0.2**
BOYT				*i* S	**Sg**	**23 33 48.9**	**-1.1**
TOS	**Tosya**	**0.80**	**300**	*i* PG	**Pg**	**23 33 39.3**	**-0.5**
BYBT	**Boyabat**	**0.84**	**351**	PG	**Pg**	**23 33 40.4**	**-0.3**
CANT	**Cankiri**	**1.00**	**269**	PG	**Pg**	**23 33 43.0**	**-0.8**
CANT				SG	**Sg**	**23 33 57.2**	**0.0**
YOZ	**Yozgat**	**1.04**	**163**	PG	**Pg**	**23 33 44.5**	**-0.1**
CDAG	**Cicekdag**	**1.10**	**203**	*i* P	**Pb**	**23 33 45.3**	**+0.1**
CDAG				*i* S	**Sb**	**23 34 00.3**	**+0.5**
ELDT	**Eldivan**	**1.16**	**263**	*i* P	**Pb**	**23 33 45.6**	**-0.7**
ELDT				*i* S	**Sb**	**23 34 02.3**	**+0.7**
TOKT	**Tokat**	**1.27**	**104**	PN	**Pn**	**23 33 49.3**	**+0.7**
TOKT				SN	**Sn**	**23 34 06.6**	**+0.2**
BALT	**Daday**	**1.48**	**308**	*i* P	**Pn**	**23 33 51.7**	**+0.1**
BALT				*i* S	**Sb**	**23 34 11.7**	**+0.9**
BZK	**Bozkurt**	**1.50**	**332**	PN	**Pn**	**23 33 52.2**	**+0.3**
KAMT	**Kaman**	**1.57**	**217**	PN	**Pn**	**23 33 52.6**	**-0.4**
SVST	**Sivas**	**1.77**	**118**	*i* P	**Pn**	**23 33 58.4**	**+2.6**
SVST				*i* S	**Sn**	**23 34 23.9**	**+4.8**
SAFT	**Safranbolu**	**1.81**	**290**	PN	**Pn**	**23 33 56.3**	**0.0**
ANTO	**Ankara**	**1.81**	**246**	PN	**Pn**	**23 33 55.5**	**-0.8**
LOD	**Lodumlu**	**1.82**	**247**	PN	**Pn**	**23 33 56.1**	**-0.4**
AVNT	**Avonos**	**1.85**	**182**	*i* P	**Pn**	**23 33 58.6**	**+1.6**
AVNT				*i* S	**Sn**	**23 34 20.5**	**-0.8**
BNN	**Bunyan**	**1.92**	**158**	PN	**Pn**	**23 33 57.1**	**-0.7**
SGKT	**Sivrigoynuk**	**2.19**	**269**	*i* P	**Pn**	**23 34 02.4**	**+0.6**
SGKT				*i* S	**Sn**	**23 34 30.4**	**+0.6**
NIG	**Nigde**	**2.53**	**186**	*e*PN	**Pn**	**23 34 05.9**	**-0.8**
KDHN	**Kadinhani**	**3.03**	**227**	*i* P	**Pn**	**23 34 14.5**	**+0.7**
KDHN				*i* S	**Sn**	**23 34 48.6**	**-2.6**
ESKT	**Eskisehir**	**3.32**	**252**	*e*PN	**Pn**	**23 34 17.4**	**-0.6**
GUMT	**Gumushane**	**3.47**	**91**	*e*PN	**Pn**	**23 34 19.5**	**-0.5**
PTK	**Pertek**	**3.85**	**115**	*e*PN	**Pn**	**23 34 24.9**	**-0.6**

MAN 25 00:01:37.7,6.73N×126.07E,h12^{km}**,mb3.9,ML2.6,MS2.2, 1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**0.28**	**41**	*e*P	Pg	00 01 44.4	+0.7
KCP	**Kidapawan**	**1.01**	**286**⇓	*e*P	Pb	00 01 56.9	+0.1
KCP				*i* S	Sb	00 02 15.0	+5.2
BUKP	**Musuan**	**1.52**	**319**	*e*P	Pn	00 02 05.1	+0.2
PAGZ	**Pagadian**	**2.89**	**293**	*e*P	Pn	00 02 23.6	-1.0

*FUNV **25** 00:42:59.8,10.32N×62.24W,h0^{km},MW2.8*
*TRN **25** 00:43:00.7,10.38N×62.18W,h3^{km},MD3.8*
*NEIC **25** 00:43:00.7,10.38N×62.18W,h3^{km},MD3.8(TRN),After TRN.*
ISC 25 00:42:59.4±0.8**,10.29N**±0.03×**62.27W**±0.03**,h8**^{km}±5^{km}**, n21,**σ**1**^{s}**.14**/34**,Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.35**	**7**	*e*P	**Pg**	**00 43 06.5**	**-0.2**
GUIV				*e*S	**Sg**	**00 43 10.9**	**-0.6**
ALNG	**Atlantic LNG**	**0.58**	**101**	*e*P	**Pg**	**00 43 21.8**	**+11**
GUNV	**Guanoco**	**0.68**	**259**	*e*P	**Pb**	**00 43 13.5**	**+0.5**
GUNV				*e*S	**Sg**	**00 43 24.1**	**+1.9**
TPP	**Pointe-a-Pierr**	**0.80**	**88**	*e*P	**Pb**	**00 43 15.5**	**+0.4**
TPP				*e*S	**Sb**	**00 43 31.4**	**+5.6**
TRN	**Trinidad (W)**	**0.92**	**67**	*e*P	**Pb**	**00 43 15.8**	**-1.3**
TRN				*e*S	**Sb**	**00 43 28.2**	**-1.0**
CRUV	**Carupano**	**1.03**	**292**	*e*P	**Pb**	**00 43 18.5**	**-0.5**
CRUV				*e*S	**Sb**	**00 43 32.0**	**-0.4**
TBH	**Brigand Hill**	**1.19**	**81**	*e*P	**Pb**	**00 43 22.4**	**+0.6**
ITEV	**Isla Los Testi**	**1.36**	**321**	*e*P	**Pb**	**00 43 24.5**	**-0.1**
ITEV				*e*S	**Sb**	**00 43 43.3**	**+1.3**
ORIV	**Oritupano**	**1.66**	**223**	*e*P	**Pn**	**00 43 30.4**	**+1.4**
ORIV				*e*S	**Sn**	**00 43 53.2**	**+2.7**
TPR	**Prospect**	**1.71**	**59**	*e*P	**Pn**	**00 43 29.5**	**-0.2**
TPR				*e*S	**Sn**	**00 43 53.9**	**+2.0**
BOT	**Bacolet**	**1.75**	**60**	*e*P	**Pn**	**00 43 30.8**	**+0.6**
GRW	**Mount Saint Ca**	**1.95**	**18**	*e*P	**Pn**	**00 43 33.2**	**+0.1**
GRW				*e*S	**Sn**	**00 43 56.2**	**-1.7**
GRHS	**Sauteurs**	**2.02**	**18**	*e*P	**Pn**	**00 43 34.4**	**+0.4**
GRHS				*e*S	**Sn**	**00 43 59.6**	**0.0**
GRSS	**Sisters**	**2.09**	**18**	*e*P	**Pn**	**00 43 36.5**	**+1.3**
GRSS				*e*S	**Sn**	**00 44 02.8**	**+1.2**
GURV	**El Guri**	**2.64**	**198**	*e*P	**Pn**	**00 43 42.9**	**-0.1**
GURV				*e*S	**Sn**	**00 44 15.0**	**-0.6**
IBAV	**Isla La Blanqu**	**2.73**	**304**	*e*S	**Sn**	**00 44 17.3**	**-0.5**
CUPV	**Cœpira**	**3.48**	**266**	*e*P	**Pn**	**00 43 54.9**	**+0.1**
MERV	**Las Mercedes**	**4.11**	**256**	*e*P	**Pn**	**00 44 02.6**	**-1.2**
CAOV	**Caicara del Or**	**4.98**	**234**	*e*P	**Pn**	**00 44 14.4**	**-1.8**
BAUV	**El Baul**	**5.85**	**257**	*e*P	**Pn**	**00 44 26.1**	**-2.4**
BAUV				*e*S	**Sn**	**00 45 30.3**	**-6.3**
SDV	**Santo Domingo**	**8.37**	**261**	*e*P	**P**	**00 45 00.8**	**-3.0**

GUC 25 00:46:14.8±0.3**,19.97S**×**69.36W,h106**^{km}±1^{km}**,ML4.2, Northern Chile**

*NIED **25** 00:46:00,44.40N×149.70E,h17^{km},Mw3.7 Best double couple: $M_0$4.33×10^{14} NP1:ϕ_s332°,δ90°,λ4°. NP2:ϕ_s242°, δ86°,λ180°.*
*MOS **25** 00:46:34.2±1.6,45.35N×148.05E,h33^{km},mb4.8/2,Error ellipse: s-maj=29.0km s-min=18.8km az=93.7*
*NEIC **25** 00:46:54.2±2.4,48.01N×146.97E,mb4.4/2,Error ellipse: s-maj=65.4km s-min=20.9km az=169.0*
*IDC **25** 00:46:54.9±3.0,48.09N×146.97E,h43^{km}±8^{km},mb3.7/7, mb1 3.9/7,mb1mx3.6/21,mbtmp4.0/7,MS2.7/1,Ms1 2.7/1, ms1mx2.1/25,Error ellipse: s-maj=75.5km s-min=23.7km az=173.0*
ISC 25 00:46:28.4±4.3**,44.5N**±0.6×**149.2E**±0.5**,h43**^{km}**, h43**^{km}±.5^{km}**:pP-P,n18,**σ**1**^{s}**.20**/17**,mb4.0**/8**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**2.43**	**260**	*e*PN	**P**	**00 47 05.4**	**-1.2**
YUK				*e*S	**S**	**00 47 35.3**	**0.0**
YUK				pmax	pmax		
	comp=Z,180nm,0.4s						
YUK				pmax	pmax		
	comp=N,110nm,0.4s						
YUK				smax			
	comp=N,490nm,0.4s						
YUK				smax			
	comp=E,280nm,0.4s						
YUK				smax			
	comp=N,1µm,0.4s						
ASAJ	**Asahikawa**	**4.74**	**268**	LR	LR	00 50 10.9	
	comp=N,76nm,19.0s,baz=181,slow=39						
ULN	**Ulaanbaatar**	**29.09**	**292**	*e*P	**P**	**00 52 27.3**	**+0.4**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
ULN	**Ulaanbaatar**	**29.09**	**292**	*e*P	**P**	**00 52 27.3**	**+0.5**
	comp=Z,6.4nm,1.0s,mb4.3						
SONM	**Songino Array**	**29.54**	**292**	P	**P**	**00 52 31.6**	**+0.8**
	comp=Z,1.4nm,0.5s,mb4.0,baz=83,slow=8.3,SNR=11						
ILAR	**Eielson Array**	**40.01**	**37**	P	**P**	**00 54 07.5**	**+7.2**
	comp=Z,0.2nm,0.5s,mb3.1,baz=68,slow=18,SNR=4.6						
MKAR	**Makanchi Array**	**45.53**	**298**	P	**P**	**00 54 46.3**	**+1.0**
	comp=Z,2.9nm,0.8s,mb4.3,baz=72,slow=7.7,SNR=18						
KEV	**Kevo**	**58.52**	**340**	*e*p	**P**	**00 56 20.1**	**-2.0**
	comp=Z,8.8nm,1.0s,mb4.7						
KEV	**Kevo**	**58.52**	**340**	*e*P	**P**	**00 56 20.1**	**-2.0**
KEV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
KAF	**Kangasniemi**	**64.28**	**334**	*e*p	**P**	**00 56 58.6**	**-2.3**
	baz=40,slow=6.2						
FINES	**FINESS Array B**	**64.86**	**334**	P	**P**	**00 57 04.3**	**-0.3**
	comp=Z,2.3nm,0.7s,mb4.3,baz=34,slow=6.9,SNR=16						
FINES				pP	pP	00 57 16.9	-0.3
	comp=Z,2.3nm,0.9s,baz=18,slow=6.0,SNR=2.3						
FINES	**FINESS Array B**	**64.86**	**334**	P	**P**	**00 57 04.3**	**-0.3**
FINES				pP	pP	00 57 16.9	-0.3
NB2	**NORSAR Subarra**	**69.41**	**340**	P	**P**	**00 57 33.2**	**-0.1**
	comp=Z,1.0nm,0.6s,mb3.9,baz=30,slow=6.2						
NOA	**NORSAR Array B**	**69.41**	**340**	P	**P**	**00 57 33.5**	**+0.2**
	comp=Z,1.9nm,0.7s,mb4.1,baz=32,slow=6.1,SNR=6.4						
NOA				pP	pP	00 57 45.9	0.0
	comp=Z,1.9nm,0.9s,baz=32,slow=5.9,SNR=4.7						
NOA	**NORSAR Array B**	**69.41**	**340**	P	**P**	**00 57 33.5**	**+0.2**
NOA				pP	pP	00 57 45.9	0.0
MORC	**Moravsky Berou**	**77.07**	**330**	P	**P**	**00 58 19.2**	**+0.9**
GERES	**GERESS Array B**	**79.20**	**332**	P	**P**	**00 58 32.0**	**+2.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=37,slow=6.7,SNR=5.5						
GERES				pP	pP	00 58 44.9	+2.1
	comp=Z,0.4nm,0.7s,baz=18,slow=4.2,SNR=3.2						
TXAR	**Lajitas Array**	**81.01**	**58**	P	sP	00 59 02.8	+5.1
	comp=Z,0.4nm,0.6s,baz=288,slow=5.7,SNR=2.7						

*ATH **25** 00:47:41.7,37.79N×26.72E,h22^{km}±3^{km},MD3.3/5*
*NEIC **25** 00:47:41.7,37.79N×26.72E,h22^{km},MD3.3(ATH),After ATH.*
*ISK **25** 00:47:42.5,37.83N×26.77E,h25^{km},MD3.4*
*CSEM **25** 00:47:42.2±0.1,37.82N×26.77E,h20^{km},MD3.3,Error ellipse: s-maj=1.8km s-min=1.3km az=94.0*
ISC 25 00:47:41.4±0.7**,37.81N**±0.02×**26.71E**±0.04**,h7**^{km}±4^{km}**, n34,**σ**1**^{s}**.08**/52**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	**Samos**	**0.14**	**133**	*e*PB	**Pb**	**00 47 46.0**	**0.0**
URLA	**Izmir**	**0.56**	**351**	*i* P	**Pg**	**00 47 54.0**	**+1.3**
URLA				*i* S	**Sg**	**00 48 02.5**	**+2.3**
BLCB	**Balcova**	**0.64**	**24**	*i* PG	**Pg**	**00 47 54.9**	**+0.7**
BLCB				*i* SG	**Sg**	**00 48 03.6**	**+0.9**
IZM	**Izmir**	**0.74**	**36**	*i* PG	**Pg**	**00 47 56.8**	**+0.6**
KDAG	**Bornova**	**0.74**	**36**	*i* P	**Pb**	**00 47 57.2**	**+1.0**
KDAG				*i* S	**Sg**	**00 48 07.2**	**+1.0**
BODT	**Bodrum**	**0.88**	**147**	*i* PG	**Pg**	**00 47 59.7**	**+0.6**
BODT				SG	**Sg**	**00 48 11.6**	**+0.7**
AYDN	**Tasoluk**	**0.94**	**98**	*i* P	**Pb**	**00 47 59.7**	**+0.1**
AYDN				*i* S	**Sb**	**00 48 13.5**	**+1.4**
BDRM	**Kayabasi**	**0.94**	**141**	*i* P	**Pb**	**00 48 00.7**	**+1.0**
BDRM				*i* S	**Sb**	**00 48 12.9**	**+0.7**
MLSB	**Milas**	**0.99**	**121**	PG	**Pg**	**00 48 00.2**	**-1.0**
MLSB				SG	**Sg**	**00 48 13.8**	**-0.7**
APE	**Apeiranthos**	**1.19**	**232**	PN	**Pn**	**00 48 04.7**	**+0.2**
APE				SN	**Sn**	**00 48 21.0**	**0.0**
APE	**Apeiranthos**	**1.19**	**232**	*e*PN	**Pn**	**00 48 05.1**	**+0.6**
APE				*e*SN	**Sn**	**00 48 20.5**	**-0.5**
AKS	**Akhisar**	**1.38**	**39**	PN	**Pn**	**00 48 06.5**	**-0.7**
YER	**Yerkesik**	**1.42**	**118**	PN	**Pn**	**00 48 07.6**	**-0.1**
PRK	**Paraskevi**	**1.48**	**347**	*e*PN	**Pn**	**00 48 09.8**	**+1.2**
PRK				*e*SN	**Sn**	**00 48 28.7**	**+0.4**
AYVA	**Ayvalik**	**1.50**	**359**	*i* P	**Pn**	**00 48 11.6**	**+2.7**
AYVA				*i* S	**Sb**	**00 48 32.2**	**+3.8**
MANT	**Manisa**	**1.61**	**64**	*i* P	**Pn**	**00 48 12.6**	**+2.2**
MANT				*i* S	**Sb**	**00 48 31.5**	**0.0**
DENT	**Denizli**	**1.84**	**91**	PN	**Pn**	**00 48 13.1**	**-0.7**
DALT	**Dalyan (Mudla)**	**1.85**	**123**	*e*PN	**Pn**	**00 48 13.6**	**-0.3**
DNZL	**Cakiroluk**	**1.86**	**93**	*i* P	**Pn**	**00 48 14.5**	**+0.5**
DNZL				*i* S	**Sn**	**00 48 43.0**	**+5.1**
ARG	**Arkhangelos**	**1.95**	**144**	*e*PN	**Pn**	**00 48 15.5**	**+0.2**
EZN	**Ezine**	**2.04**	**352**	PN	**Pn**	**00 48 16.2**	**-0.4**
BALB	**Balikesir**	**2.05**	**26**	*e*PN	**Pn**	**00 48 15.4**	**-1.3**
BTOK	**Tokmak**	**2.21**	**27**	*i* P	**Pg**	**00 48 24.1**	**-1.5**
BTOK				*i* S	**Sg**	**00 48 53.1**	**-2.0**
CANB	**Canakkale**	**2.23**	**7**	*e*PN	**Pn**	**00 48 18.7**	**-0.6**
FETY	**Fethiye**	**2.23**	**121**	*e*PN	**Pn**	**00 48 18.4**	**-0.9**
GOLH	**Golhisar**	**2.34**	**103**	*i* P	**Pn**	**00 48 21.9**	**+1.0**
GOLH				*i* S	**Sn**	**00 48 58.6**	**+8.4**
DST	**Dursunbey**	**2.34**	**39**	*e*PN	**Pn**	**00 48 19.3**	**-1.7**
LIA	**Limnos Island**	**2.41**	**331**	*e*PB	**Pb**	**00 48 23.0**	**-1.7**
BNT	**Bandirma**	**2.72**	**20**	*e*PN	**Pn**	**00 48 25.5**	**-0.8**
ELL	**Elmali**	**2.76**	**111**	*e*PN	**Pn**	**00 48 26.0**	**-0.9**
KCT	**Karacabey**	**2.77**	**27**	*e*PN	**Pn**	**00 48 26.2**	**-0.9**
ULDT	**Uludag**	**3.00**	**38**	*i* P	**Pg**	**00 48 39.7**	**-1.8**
ULDT				*i* S	**Sg**	**00 49 12.2**	**-9.3**
ESKT	**Eskisehir**	**3.67**	**61**	*i* P	**Pg**	**00 48 52.9**	**-1.8**
ESKT				*i* S	**Sg**	**00 49 43.8**	**+0.3**
SGKT	**Sivrigoynuk**	**4.99**	**55**	*i* P	**Pg**	**00 49 20.0**	**-1.0**
SGKT				*i* S	**Sg**	**00 50 28.6**	**+1.0**

*IDC **25** 00:52:09.3±0.8,3.62S×131.48E,mb4.1/10,mb1 4.2/11, mb1mx4.2/16,mbtmp4.1/11,ML3.6/1,MS3.3/4,Ms1 3.4/4, ms1mx3.1/20,Error ellipse: s-maj=38.3km s-min=15.4km az=66.0*
*NEIC **25** 00:52:14.7±0.6,3.69S×131.48E,h40^{km},mb4.4/3,Error ellipse: s-maj=20.2km s-min=9.5km az=58.0*
ISC 25 00:52:12.0±2.2**,4.00S**±0.07×**131.3E**±0.1**,h39**^{km}±23^{km}**, n24,**σ**1**^{s}**.41**/25**,mb4.1**/11**,MS3.4**/4**,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.74**	**172**	*e*P	**P**	**00 54 20.2**	**+1.4**
	12nm,0.3s						
KAKA				*e*S	**S**	**00 55 57.6**	**+0.5**
FITZ	**Fitzroy Crossi**	**15.06**	**201**	*e*P	**P**	**00 55 43.1**	**-0.8**
	24nm,0.8s						
FITZ				*e*S	**S**	**00 58 25.9**	**-4.1**
FITZ	**Fitzroy Crossi**	**15.06**	**201**	Pn	**P**	**00 55 43.5**	**-0.4**
	2.7nm,0.3s,baz=18,slow=11,SNR=25						
FITZ				Sn	**S**	**00 58 26.8**	**-3.2**
	0.9nm,0.3s,baz=14,slow=20,SNR=3.9						
WRAB	**Tennant Creek**	**16.12**	**169**	*e*P	**P**	**00 55 57.8**	**+0.2**
	14nm,0.6s						
WRA	**Warramunga Arr**	**16.13**	**170**	Pn	**P**	**00 55 57.2**	**-0.4**
	0.6nm,0.3s,baz=354,slow=12,SNR=13						
WRA				Sn	**S**	**00 58 53.1**	**-1.8**
	1.0nm,0.3s,baz=328,slow=24,SNR=6.5						
WB2	**Warramunga Arr**	**16.13**	**169**	*e*P	**P**	**00 55 57.7**	**+0.1**
WB2				*e*S	**S**	**00 58 52.0**	**-3.0**
PMG	**Port Moresby**	**16.68**	**110**	Pn	**P**	**00 56 02.9**	**-1.7**
	0.8nm,0.3s,baz=270,slow=11,SNR=2.8						
KKM	**Kota Kinabalu**	**18.03**	**304**	*e*P	**P**	**00 56 20.9**	**-0.5**
CTA	**Charters Tower**	**21.67**	**139**	P	**P**	**00 57 04.2**	**+3.0**
	5.2nm,0.6s,mb4.2,baz=319,slow=12,SNR=12						
STKA	**Stephens Creek**	**29.38**	**162**	P	**P**	**00 58 16.5**	**+2.7**
	2.6nm,0.6s,mb4.1,baz=327,slow=5.7,SNR=4.7						
STKA	**Stephens Creek**	**29.38**	**162**	P	**P**	**00 58 16.5**	**+2.7**
NWAO	**Narrogin (SRO)**	**31.63**	**203**	P	**P**	**00 58 37.4**	**+3.6**
	14nm,1.0s,mb4.7,baz=333,slow=4.5,SNR=3.8						
CBIJ	**Chichi jima**	**32.66**	**18**	LR	LR	01 08 24.7	
	comp=Z,176nm,21.6s,MS3.7,baz=88,slow=30						
CMAR	**Chiang Mai Arr**	**38.88**	**306**	P	**P**	**00 59 37.0**	**+1.5**
	3.6nm,1.1s,mb4.0,baz=130,slow=7.3,SNR=7.5						
MJAR	**Matsushiro Arr**	**40.85**	**9**	LR	LR	01 15 42.4	
	comp=Z,79nm,19.2s,MS3.6,baz=240,slow=35						
ULN	**Ulaanbaatar**	**55.84**	**341**	*e*P	**P**	**01 01 47.2**	**-0.7**
	8.3nm,1.5s,mb4.5						
SONM	**Songino Array**	**56.04**	**340**	P	**P**	**01 01 48.1**	**-1.2**
	1.5nm,1.1s,mb3.9,baz=153,slow=5.5,SNR=7.3						
MKAR	**Makanchi Array**	**66.44**	**326**	P	**P**	**01 02 59.9**	**+0.3**
	0.4nm,0.4s,mb3.8,baz=106,slow=8.8,SNR=6.8						
FX1	**Attu Island--F**	**66.74**	**26**	LR	LR	01 28 03.9	
	comp=Z,1.9nm,21.5s,MS2.3,baz=91,slow=32						
ZAL	**Zalesovo**	**69.48**	**333**	P	**P**	**01 03 17.4**	**-1.0**
	0.7nm,0.5s,mb3.8,baz=22,slow=5.1,SNR=7.1						
VNDA	**Vanda**	**75.26**	**173**	P	**P**	**01 03 55.7**	**+3.5**
	1.6nm,0.6s,mb4.1,baz=326,slow=5.5,SNR=12						
BVAR	**Borovoye Array**	**76.22**	**327**	P	**P**	**01 03 58.1**	**0.0**
	0.7nm,0.7s,mb3.7,baz=143,slow=7.4,SNR=6.7						
MAW	**Mawson**	**78.18**	**201**	P	**P**	**01 04 13.2**	**+4.4**
	1.1nm,0.5s,mb4.0,baz=55,slow=4.0,SNR=5.9						
ARCES	**ARCESS Array B**	**99.21**	**340**	LR	LR	01 56 31.7	
	comp=Z,33nm,18.8s,MS3.9,baz=122,slow=39						

GUC 25 01:07:40.9±0.3**,20.18S**×**69.32W,h100**^{km}±1^{km}**,ML4.0, Northern Chile**

JMA 25 01:20:43.8±0.6**,44.33N**×**148.03E,h102**^{km}**,M3.6,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.92**	**241**	P	P	01 21 15.8	0.0
NEM2				*e*S	S	01 21 40.3	+0.7
JNK	**Nakash**	**2.50**	**254**	P	P	01 21 24.2	+0.4
JAK	**Akkeshi**	**2.76**	**242**	P	P	01 21 26.8	-0.6
JAK				*e*S	S	01 21 59.7	-0.3
JAR	**Ashorobuto**	**3.25**	**253**	P	P	01 21 34.0	0.0
JCH	**Churui**	**3.81**	**245**	P	P	01 21 40.9	-0.7
JCH				*e*S	S	01 22 23.7	-1.9
JKB	**Kayabe**	**5.67**	**247**	*e*S	S	01 23 05.7	-5.7
JOT	**Ohata**	**5.92**	**243**	*e*S	S	01 23 11.7	-5.7

*IDC **25** 01:28:36.3±2.0,55.17S×29.02W,mb3.7/4,mb1 3.9/4, mb1mx3.7/14,mbtmp3.7/4,MS3.5/2,Ms1 3.5/2, ms1mx3.0/15,Error ellipse: s-maj=147.4km s-min=35.6km az=28.0*
*NEIC **25** 01:28:37.5±0.7,55.15S×28.92W,h10^{km},mb3.9/2,Error ellipse: s-maj=39.6km s-min=8.6km az=58.0*
ISC 25 01:28:36.0±1.7**,55.1S**±0.3×**29.0W**±0.9**,h10**^{km}**,n24,** σ**0**^{s}**.98**/19**,mb3.7**/5**,MS3.5**/2**,4C,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**18.05**	**158**	*e*	**P**	**01 32 55.3**	**+7.1**
VNA1	**Neumayer--Stat**	**18.05**	**158**	*e*	**P**	**01 32 59.9**	**+12**
VNA1	**Neumayer--Stat**	**18.05**	**158**⇑	*i*P	**P**	**01 32 54.3**	**+6.1**
VNA1				*e*		01 32 55.3	
VNA1				*e*		01 32 59.9	
VNA3	**Neumayer Olymp**	**18.22**	**160**	*e*	**P**	**01 32 51.8**	**+1.5**
VNA3	**Neumayer Olymp**	**18.22**	**160**	*e*	**P**	**01 32 56.0**	**+5.7**
VNA3	**Neumayer Olymp**	**18.22**	**160**⇑	*i*P	**P**	**01 32 50.7**	**+0.4**
VNA3				*e*		01 32 51.8	
VNA3				*e*		01 32 56.0	
VNA2	**Neumayer--Watz**	**18.45**	**158**	*e*	**P**	**01 32 53.1**	**0.0**
VNA2	**Neumayer--Watz**	**18.45**	**158**	*e*	**P**	**01 32 57.8**	**+4.7**
VNA2	**Neumayer--Watz**	**18.45**	**158**⇑	*i*P	**P**	**01 32 51.9**	**-1.2**
VNA2				*e*		01 32 53.1	
VNA2				*e*		01 32 57.8	
SNAA	**Sanae**	**20.02**	**156**⇑	*i*	**P**	**01 33 08.2**	**-3.2**
SNAA	**Sanae**	**20.02**	**156**	*e*	**P**	**01 33 09.1**	**-2.3**
SNAA	**Sanae**	**20.02**	**156**	*e*	**P**	**01 33 13.7**	**+2.3**
SNAA	**Sanae**	**20.02**	**156**	*e*P	**P**	**01 33 08.1**	**-3.3**
	7.6nm,0.9s						
PLCA	**Paso Flores**	**30.83**	**280**	LR	LR	01 45 42.5	
	comp=Z,69nm,18.6s,MS3.3,baz=301,slow=33						
QSPA	**South Pole Qui**	**35.14**	**180**	*e*P	**P**	**01 35 30.8**	**-0.3**
CPUP	**Villa Florida**	**35.42**	**313**	P	**P**	**01 35 33.6**	**-0.5**
	2.7nm,1.1s,mb4.1,baz=186,slow=11,SNR=4.6						
CFAA	**Coronel Fontan**	**36.25**	**294**	P	**P**	**01 35 40.6**	**-0.3**
	0.1nm,0.6s,mb2.9,baz=200,slow=4.5,SNR=2.8						
SIV	**San Ignacio**	**46.19**	**315**	P	**P**	**01 37 02.7**	**0.0**
	0.5nm,0.5s,mb3.7,baz=179,slow=10.0,SNR=4.0						
BOSA	**Boshof**	**46.75**	**78**	LR	LR	01 52 43.0	
	comp=Z,72nm,21.0s,MS3.6,baz=37,slow=31						
LPAZ	**La Paz**	**49.00**	**307**	P	**P**	**01 37 26.2**	**+1.6**
	2.0nm,0.8s,mb4.2,baz=165,slow=8.8,SNR=11						
SAML	**Samuel**	**53.42**	**316**	*e*P	**P**	**01 37 57.6**	**-0.6**
	0.8nm,0.7s,mb3.8						
FINES	**FINESS Array B**	**124.03**	**28**	PKP	PKPdf	01 47 39.0	+2.4
	0.9nm,0.8s,baz=117,slow=3.1,SNR=5.0						
ILAR	**Eielson Array**	**148.73**	**313**	PKPbc	PKPdf	01 48 23.6	+2.6
	1.9nm,0.7s,baz=123,slow=1.5,SNR=16						
SONM	**Songino Array**	**151.68**	**86**	PKPbc	PKPdf	01 48 31.5	+5.4
	0.6nm,0.6s,baz=225,slow=3.5,SNR=5.3						

*NIED **25** 02:39:00,46.40N×152.00E,h44^{km},Mw4.0 Best double couple: $M_0$1.01×10^{15} NP1:ϕ_s129°,δ83°,λ-19°. NP2: ϕ_s222°,δ71°,λ-172°.*
*MOS **25** 02:39:04.2±1.7,46.22N×151.81E,h66^{km},mb4.1/8,Error ellipse: s-maj=19.0km s-min=14.9km az=143.9*
*IDC **25** 02:39:08.9±4.8,46.38N×151.79E,h84^{km}±44^{km},mb3.5/11, mb1 3.7/12,mb1mx3.5/24,mbtmp3.9/12,MS2.7/2, Ms1 2.7/2,ms1mx2.6/22,Error ellipse: s-maj=29.3km s-min=25.5km az=53.0*
ISC 25 02:39:04.0±2.4**,46.2N**±0.1×**151.9E**±0.2**,h61**^{km}±21^{km}**,n27,** σ**1**^{s}**.15**/29**,mb3.8**/11**,1D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.96**	**252**⇓	*i*PN	**P**	**02 39 48.0**	**-1.7**
KUR				*i* S	**S**	**02 40 24.8**	**+0.7**
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax			
	comp=N,260nm,0.6s						
KUR				smax			
	comp=E,180nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.76**	**245**	*e*PN	**P**	**02 40 15.0**	**0.0**
YUK				*e*S	**S**	**02 41 09.2**	**-0.3**
YUK				pmax	pmax		
	comp=Z,180nm,0.3s						
YUK				pmax	pmax		
	comp=N,120nm,0.4s						
YUK				pmax	pmax		
	comp=E,110nm,0.4s						
YUK				smax			
	comp=N,1µm,0.6s						
YUK				smax			
	comp=E,1µm,0.8s						
YUK				smax			
	comp=N,270nm,0.5s						
YUK				smax			
	comp=E,210nm,0.4s						
YSS	**Yuzh-Sakhalins**	**6.32**	**280**	*e*PN	**P**	**02 40 37.5**	**+0.9**
ASAJ	**Asahikawa**	**6.87**	**256**	PN	**P**	**02 40 47.1**	**+2.8**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,66nm,21.8s						
ASAJ	**Asahikawa**	**6.87**	**256**	P	**P**	**02 40 47.0**	**+2.7**
	comp=Z,2.1nm,0.3s,baz=115,slow=11,SNR=8.1						
ASAJ				LR	LR	02 43 21.1	
	comp=Z,66nm,21.8s,baz=84,slow=37						
MJAR	**Matsushiro Arr**	**14.06**	**231**	P	**P**	**02 42 19.0**	**-2.3**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,35nm,19.0s						
MJAR	**Matsushiro Arr**	**14.06**	**231**	P	**P**	**02 42 18.9**	**-2.4**
	comp=Z,0.5nm,0.3s,baz=29,slow=13,SNR=4.1						
MJAR				LR	LR	02 48 05.6	
	comp=Z,35nm,19.0s,baz=290,slow=38						
MKAR	**Makanchi Array**	**46.42**	**297**	P	**P**	**02 47 25.6**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**46.42**	**297**	P	**P**	**02 47 25.6**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.6,baz=90,slow=4.9,SNR=4.1						
FINES	**FINESS Array B**	**64.16**	**334**	P	**P**	**02 49 32.3**	**-1.3**
	comp=Z,0.4nm,0.4s,mb3.8,baz=34,slow=6.9,SNR=12						
PDAR	**Pinedale Array**	**65.77**	**53**	P	**P**	**02 49 44.9**	**+0.6**
	comp=Z,0.6nm,0.8s,mb3.7,baz=315,slow=8.4,SNR=4.3						
WRA	**Warramunga Arr**	**67.72**	**198**	P	**P**	**02 49 57.8**	**+0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**67.72**	**198**	P	**P**	**02 49 57.8**	**+0.8**

	comp=Z,0.5nm,0.7s,mb3.7,baz=13,slow=6.1,SNR=5.5						
NB2	**NORSAR Subarra**	**68.46**	**341**	P	**P**	**02 50 00.8**	**-0.1**
	comp=Z,0.4nm,0.4s,mb3.8,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**68.46**	**341**	P	**P**	**02 50 00.0**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**68.46**	**341**	P	**P**	**02 50 00.0**	**-0.9**
	comp=Z,0.8nm,0.8s,mb3.8,baz=215,slow=5.4,SNR=3.3						
HFS	**Hagfors**	**68.66**	**339**	P	**P**	**02 50 01.7**	**-0.4**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HFS	**Hagfors**	**68.66**	**339**	P	**P**	**02 50 01.7**	**-0.4**
	comp=Z,1.5nm,0.7s,mb4.1,baz=56,slow=4.8,SNR=8.2						
AKASG	**Malin Array Be**	**71.51**	**326**	P	**P**	**02 50 19.4**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**71.51**	**326**	P	**P**	**02 50 19.4**	**-0.2**
	comp=Z,0.8nm,0.4s,mb4.0,baz=36,slow=6.4,SNR=5.6						
EKA	**Eskdalemuir Ar**	**76.66**	**346**	P	**P**	**02 50 47.5**	**-1.7**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**76.66**	**346**	P	**P**	**02 50 47.5**	**-1.8**
	comp=Z,0.5nm,0.5s,mb3.7,baz=24,slow=4.1,SNR=4.7						
BRTR	**Keskin Array B**	**78.18**	**316**	P	**P**	**02 50 59.6**	**+1.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**78.18**	**316**	P	**P**	**02 50 59.6**	**+1.6**
	comp=Z,1.0nm,0.8s,mb3.8,baz=90,slow=3.7,SNR=4.8						
TXAR	**Lajitas Array**	**78.52**	**60**	P	**P**	**02 51 00.9**	**+0.9**
	comp=Z,0.3nm,0.5s,mb3.5,baz=301,slow=4.4,SNR=6.4						
GERES	**GERESS Array B**	**78.56**	**333**	P	**P**	**02 51 00.7**	**+0.8**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**78.56**	**333**	P	**P**	**02 51 00.7**	**+0.8**
	comp=Z,0.6nm,0.6s,mb3.7,baz=34,slow=4.8,SNR=8.6						

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*BJI **25** 03:13:52.9, 47.61N×130.60E, h30^{km}, ML3.2*

SKHL 25 03:13:47.6±0.3**, 47.65N×130.59E, h10^{km}, mb3.7**/1**,**
Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLR	**Kul'dur**	**1.76**	**26**	*e*Pg	Pg	03 14 19.8	-3.0
KLR				*e*Sg	Sg	03 14 43.1	-3.2
MDJ	**Mudanjiang**	**3.11**	**193**	P	Pn	03 14 42.9	+5.1
MDJ				PG	Pg	03 14 49.3	-0.5
MDJ				SG	Sg	03 15 27.1	-4.2
MDJ				Smax			
	comp=N,30nm,0.6s						
MDJ				Smax			
	comp=E,60nm,0.7s						
GRNR	**Gornyy**	**4.94**	**49**	*e*Sg	Sg	03 16 22.0	-10
GRNR				A		03 16 25.9	
	comp=E,39nm,0.5s						
EKMR	**Ekimchan**	**5.63**	**15**	*e*Pg	Pg	03 15 29.0	-11
EKMR				AMB	AMB	03 15 35.4	
	comp=E,3.0nm,0.3s						
EKMR				*e*Sg	Sg	03 16 43.2	-12
EKMR				A		03 16 54.4	
	comp=E,13nm,0.8s						
EKMR				A		03 16 54.4	
	comp=E,20nm,0.8s						
YASR	**Yasnyy**	**5.89**	**345**	*e*Pn	Pn	03 15 14.2	-2.9
YASR				*e*Sg	Sg	03 16 51.8	-12
YASR				A		03 16 59.0	
	comp=E,3.0nm,0.7s						
YASR				A		03 16 59.0	
	comp=E,8.0nm,0.7s						
ZEA	**Zeya**	**6.45**	**342**	*e*Sg	Sg	03 17 10.0	-12
ZEA				A		03 17 17.1	
	comp=E,20nm,0.7s						
BMKR	**Bomnak**	**7.16**	**352**	*e*rx	rx	03 15 42.6	
BMKR				*e*Sg	Sg	03 17 31.1	-15
BMKR				A		03 17 36.4	
	comp=E,16nm,0.8s						

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*IDC **25** 03:25:52.7±1.1, 38.02S×50.06E, mb4.1/5, mb1 4.2/6, mb1mx3.8/20, mbtmp4.1/6, MS4.0/12, Ms1 4.0/12, ms1mx4.0/14, Error ellipse: s-maj=59.2km s-min=20.5km az=30.0*

*NEIC **25** 03:25:54.5±0.5, 37.97S×50.08E, h10^{km}, mb4.4/2, Error ellipse: s-maj=17.4km s-min=13.3km az=46.0*

ISC 25 03:25:53.1±0.6**, 38.0S**±0.1×**50.1E**±0.1**, h10^{km}, n27,**
σ**0^{s}73**/13**, mb4.1**/7**, MS4.1**/12**, 2C, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**19.49**	**352**	P	**P**	**03 30 23.3**	**+0.2**
	0.5nm,0.3s,baz=192,slow=12,SNR=3.4						
BOSA	**Boshof**	**22.74**	**287**	P	**P**	**03 30 55.9**	**-0.7**
	2.5nm,1.0s,mb3.6,baz=122,slow=12,SNR=3.0						
BOSA				LR	LR	03 38 03.9	
	comp=Z,304nm,18.1s,MS3.8,baz=307,slow=32						
BOSA	**Boshof**	**22.74**	**287**	P	**P**	**03 30 55.9**	**-0.7**
BOSA				LR	LR	03 38 03.9	
LBTB	**Lobatse**	**24.50**	**295**	LR	LR	03 39 15.4	
	comp=Z,149nm,18.4s,MS3.5,baz=142,slow=33						
MATP	**Matopo**	**25.63**	**307**	P	**P**	**03 31 24.8**	**+0.3**
	1.9nm,0.7s,mb3.7,baz=147,slow=7.5,SNR=6.4						
MATP				LR	LR	03 39 58.7	
	comp=Z,299nm,19.7s,MS3.8,baz=141,slow=33						
MAW	**Mawson**	**30.55**	**170**	LR	LR	03 41 27.9	
	comp=Z,779nm,21.1s,MS4.3,baz=254,slow=31						
VNA2	**Neumayer--Watz**	**44.12**	**203**	*e*	**P**	**03 34 06.9**	**+4.1**
VNA2	**Neumayer--Watz**	**44.12**	**203**⇑	*i*P	**P**	**03 34 03.3**	**+0.5**
VNA2				*e*	pP	03 34 06.9	+1.1
VNA3	**Neumayer Olymp**	**44.92**	**203**	*e*	**P**	**03 34 12.6**	**+3.3**
VNA3	**Neumayer Olymp**	**44.92**	**203**⇑	*i*P	**P**	**03 34 09.2**	**-0.1**
VNA3				*e*	pP	03 34 12.6	+0.3
QSPA	**South Pole Qui**	**52.24**	**180**	P	**P**	**03 35 05.4**	**-0.6**
	2.6nm,0.8s,mb4.2						
NWAO	**Narrogin (SRO)**	**53.83**	**106**	P	**P**	**03 35 17.3**	**-1.0**
	2.0nm,0.2s,mb4.6,baz=254,slow=12,SNR=8.1						
VNDA	**Vanda**	**57.71**	**166**	LR	LR	03 58 25.9	
	comp=Z,370nm,18.1s,MS4.5,baz=231,slow=34						
DBIC	**Dimbokro**	**67.69**	**298**	LR	LR	04 04 32.5	
	comp=Z,101nm,20.9s,MS4.0,baz=133,slow=34						
STKA	**Stephens Creek**	**72.25**	**117**	P	**P**	**03 37 21.5**	**+1.0**
	1.9nm,0.7s,mb4.1,baz=208,slow=4.2,SNR=4.9						
CMAR	**Chiang Mai Arr**	**72.45**	**49**	LR	LR	04 05 09.9	
	comp=Z,98nm,19.9s,MS4.1,baz=230,slow=32						
WRA	**Warramunga Arr**	**73.57**	**103**	P	**P**	**03 37 28.3**	**-0.2**
	1.6nm,0.9s,mb4.0,baz=232,slow=4.9,SNR=7.3						
WRAB	**Tennant Creek**	**73.58**	**103**	*e*P	**P**	**03 37 28.8**	**+0.3**
	7.1nm,1.0s,mb4.5						
PLCA	**Paso Flores**	**84.75**	**221**	LR	LR	04 09 05.8	
	comp=Z,76nm,19.8s,MS4.1,baz=175,slow=31						
CPUP	**Villa Florida**	**86.72**	**239**	LR	LR	04 09 00.7	
	comp=Z,88nm,21.1s,MS4.1,baz=192,slow=30						
BDFB	**Brasilia**	**86.79**	**253**	LR	LR	04 10 28.6	
	comp=Z,75nm,19.4s,MS4.1,baz=309,slow=31						
GERES	**GERESS Array B**	**92.28**	**337**	LR	LR	04 25 56.2	
	comp=Z,42nm,18.4s,MS3.9,baz=166,slow=39						
SONM	**Songino Array**	**99.02**	**35**	LR	LR	04 21 08.7	
	comp=Z,104nm,19.5s,MS4.3,baz=127,slow=34						
CCM	**Cathedral Cave**	**149.72**	**282**	PKPbc	PKPdf	03 45 42.7	+1.5
ILAR	**Eielson Array**	**151.32**	**15**	PKPbc	PKPdf	03 45 45.4	+2.6
	1.5nm,1.0s,baz=318,slow=4.3,SNR=9.2						
TXAR	**Lajitas Array**	**156.62**	**256**	PKP	PKPdf	03 45 49.2	-2.0
	0.9nm,1.1s,baz=180,slow=0.9,SNR=3.2						
TXAR	**Lajitas Array**	**156.62**	**256**	PKP	PKPdf	03 45 49.2	-2.0

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*NIED **25** 03:31:00, 44.50N×149.40E, h14^{km}, Mw3.7 Best double couple: $M_0$4.15×10^{14} NP1:ϕ_s53°, δ68°, λ133°. NP2:ϕ_s165°, δ47°, λ31°.*

*IDC **25** 03:31:26.9±4.8, 43.95N×149.44E, h83^{km}±44^{km}, mb3.5/6, mb1 3.6/7, mb1mx3.4/22, mbtmp3.8/7, ML3.1/1, Error ellipse: s-maj=92.9km s-min=27.5km az=175.0*

ISC 25 03:31:23.2±1.4**, 43.47N**±0.09×**149.4E**±0.1**, h86^{km}**±12^{km}**,**
n25, σ**1^{s}08**/35**, mb3.7**/6**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**2.64**	**269**	P	**P**	**03 32 04.0**	**-0.7**
NEM2				*e*S	**S**	**03 32 35.5**	**-0.3**
JNK	**Nakash**	**3.38**	**274**	P	**P**	**03 32 13.6**	**-1.4**
JNK				*e*S	**S**	**03 32 54.4**	**+0.3**
JAK	**Akkeshi**	**3.44**	**264**	P	**P**	**03 32 15.6**	**-0.3**
JAK				*e*S	**S**	**03 32 56.9**	**+1.2**
JTKR	**Abashiri--Toko**	**3.99**	**279**	P	**P**	**03 32 21.9**	**-1.5**
JAR	**Ashorobuto**	**4.08**	**270**	P	**P**	**03 32 24.1**	**-0.6**
JAR				*e*S	**S**	**03 33 11.1**	**-0.4**
JCH	**Churui**	**4.48**	**261**	P	**P**	**03 32 30.9**	**+0.7**
JCH				*e*S	**S**	**03 33 23.7**	**+2.2**
JEM	**Erimo**	**4.80**	**254**	P	**P**	**03 32 36.7**	**+2.2**
JEM				*e*S	**S**	**03 33 34.9**	**+5.6**
ASAJ	**Asahikawa**	**4.94**	**280**	P	**P**	**03 32 38.0**	**+1.5**
	0.7nm,0.3s,baz=84,slow=9.7,SNR=5.6						
JNBK	**Urakawa-nobuka**	**5.00**	**259**	P	**P**	**03 32 39.3**	**+1.9**
JBT2	**Biratori 2**	**5.17**	**265**	P	**P**	**03 32 39.1**	**-0.5**
JBT2				*e*S	**S**	**03 33 37.5**	**-1.1**
JNB	**Noboribetsu**	**6.19**	**264**	P	**P**	**03 32 53.7**	**0.0**
JNB				*e*S	**S**	**03 34 04.2**	**+0.5**
JKB	**Kayabe**	**6.34**	**258**	P	**P**	**03 32 56.0**	**+0.2**
JKB				*e*S	**S**	**03 34 06.8**	**-0.6**
JANG	**Nango**	**6.62**	**245**	*e*S	**S**	**03 34 12.9**	**-1.4**
JTH	**Tanohata**	**6.63**	**240**	P	**P**	**03 32 59.4**	**-0.4**
JTH				*e*S	**S**	**03 34 12.0**	**-2.5**
JTM	**Tenmabayashi**	**6.72**	**249**	*e*S	**S**	**03 34 16.8**	**0.0**
OFUJ	**Ofunato**	**7.27**	**235**	*e*S	**S**	**03 34 30.4**	**+0.2**
JRG	**Rokugo**	**7.72**	**241**	*e*S	**S**	**03 34 42.0**	**+0.7**
SONM	**Songino Array**	**30.06**	**294**	P	**P**	**03 37 27.2**	**+1.1**
	0.9nm,0.5s,mb3.7,baz=80,slow=8.2,SNR=9.0						
ILAR	**Eielson Array**	**40.77**	**36**	P	**P**	**03 38 56.5**	**-0.3**
	0.3nm,0.6s,mb3.3,baz=264,slow=13,SNR=4.3						
MKAR	**Makanchi Array**	**46.14**	**299**	P	**P**	**03 39 41.8**	**+1.4**
	2.1nm,0.8s,mb4.0,baz=67,slow=9.2,SNR=12						
KAF	**Kangasniemi**	**65.28**	**334**	*e*p	**P**	**03 41 55.7**	**-1.7**
FINES	**FINESS Array B**	**65.85**	**334**	P	**P**	**03 41 60.0**	**-1.1**
	1.7nm,0.6s,mb4.0,baz=36,slow=7.8,SNR=13						
NB2	**NORSAR Subarra**	**70.43**	**340**	P	**P**	**03 42 29.4**	**-0.1**
	0.8nm,0.5s,mb3.8,baz=30,slow=6.2						
NOA	**NORSAR Array B**	**70.43**	**340**	P	**P**	**03 42 28.9**	**-0.6**
	1.1nm,0.6s,mb3.9,baz=31,slow=6.1,SNR=5.6						
TXAR	**Lajitas Array**	**81.45**	**58**	P	**P**	**03 43 33.2**	**+1.0**
	0.2nm,0.5s,mb3.2,baz=311,slow=4.3,SNR=3.5						
TXAR				pP	pP	03 44 01.4	+6.3
	0.3nm,0.6s,baz=293,slow=3.0,SNR=3.7						

IDC 25 03:33:18.5±3.4**, 4.63N×93.27E, mb3.4**/2**, mb1 3.7**/3**,**
mb1mx3.4/19**, mbtmp3.5**/3**, ML3.6**/1**, Error ellipse:**
s-maj=113.8km s-min=32.8km az=62.0, Off west coast
of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.82**	**22**	Pn	P	03 36 49.6	-1.7
	0.1nm,0.3s,baz=216,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**43.06**	**349**	P	P	03 41 20.0	-1.9
	0.7nm,0.6s,baz=180,slow=7.3,SNR=4.0						
WRA	**Warramunga Arr**	**47.17**	**123**	P	P	03 41 53.2	-1.9
	0.3nm,0.5s,baz=300,slow=9.9,SNR=3.9						

NEIC 25 03:47:02.5, 38.48N×24.09E, h31^{km}, ML3.7(THE)**, After**
THE., Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGG	**Agios Georgios**	**1.48**	**292**	P	Pn	03 47 26.4	-1.0
AGG				S	Sn	03 47 45.2	-0.6
PAIG	**Paliouri**	**1.48**	**348**	P	Pn	03 47 26.4	-1.0
PAIG				S	Sn	03 47 44.9	-1.0
LOS	**Limnos**	**1.65**	**28**	P	Pn	03 47 29.1	-0.6
LOS				S	Sn	03 47 49.0	-1.0
OUR	**Ouranopolis**	**1.86**	**357**	P	Pn	03 47 31.9	-0.9
LIT	**Litokhoron**	**2.04**	**323**	P	Pn	03 47 33.8	-1.7
LIT				S	Sn	03 47 59.2	-0.9
THR3	**Thira Island,**	**2.31**	**153**	P	Pn	03 47 37.9	-1.4
THE	**Thessaloniki**	**2.32**	**338**	P	Pn	03 47 38.4	-1.1
SOH	**Sokhos**	**2.41**	**347**	P	Pn	03 47 39.6	-1.1
SOH				S	Sn	03 48 08.3	-1.1
MEV	**Metsovon**	**2.58**	**301**	P	Pn	03 47 42.0	-1.1
SRS	**Serrai**	**2.67**	**352**	P	Pn	03 47 43.0	-1.3
SRS				S	Sn	03 48 14.5	-1.4
LKD	**Levkas**	**2.71**	**276**	P	Pn	03 47 43.6	-1.3
FNA	**Florina**	**3.12**	**319**	P	Pn	03 47 49.2	-1.5
FNA				S	Sn	03 48 25.8	-1.4

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*NEIC **25** 04:23:33.8±0.7, 6.76N×72.99W, h168^{km}±9^{km}, mb3.6/2, Error ellipse: s-maj=14.7km s-min=11.4km az=101.0*

*IDC **25** 04:23:33.0±0.8, 6.77N×72.98W, h158^{km}±14^{km}, mb3.5/5, mb1 3.7/7, mb1mx3.4/22, mbtmp4.0/7, Error ellipse: s-maj=41.6km s-min=7.9km az=132.0*

ISC 25 04:23:32.4±0.7**, 6.75N**±0.10×**73.0W**±0.1**, h172^{km}**±9^{km}**, n14,**
σ**0^{s}79**/15**, mb3.7**/6**, 1C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**2.33**	**216**	P	**P**	**04 24 14.3**	**+1.2**
	52nm,0.3s,baz=87,slow=18,SNR=230						
ROSC				S	**S**	**04 24 43.7**	**-0.8**
	43nm,0.3s,baz=86,slow=13,SNR=7.4						
SDV	**Santo Domingo**	**3.12**	**47**	P	**P**	**04 24 23.9**	**+1.1**
	50nm,0.3s,baz=228,slow=2.4,SNR=240						
SDV				S	**S**	**04 25 00.9**	**-0.8**
	25nm,0.3s,baz=78,slow=22,SNR=15						
SDV	**Santo Domingo**	**3.12**	**47**⇑	*i*P	**P**	**04 24 23.8**	**+1.0**
SAML	**Samuel**	**18.38**	**148**	*e*P	**P**	**04 27 36.5**	**-0.3**
	1.6nm,0.7s						
TXAR	**Lajitas Array**	**36.64**	**312**	P	**P**	**04 30 24.2**	**+0.2**
	0.4nm,0.4s,mb3.4,baz=130,slow=8.7,SNR=9.5						
WMOK	**Wichita Mounta**	**36.64**	**323**	*e*P	**P**	**04 30 23.0**	**-1.0**
	0.7nm,0.4s,mb3.6						
SRU	**San Rafael**	**46.71**	**319**	*e*P	**P**	**04 31 46.1**	**+0.4**
ULM	**Lac du Bonnet**	**47.41**	**340**	P	**P**	**04 31 49.7**	**-1.4**
	2.9nm,0.6s,mb4.1,baz=111,slow=4.3,SNR=3.0						
SCHQ	**Schefferville**	**48.20**	**5**	P	**P**	**04 31 58.1**	**+1.0**
	1.0nm,0.5s,mb3.7,baz=208,slow=9.2,SNR=5.3						
PDAR	**Pinedale Array**	**48.24**	**324**	P	**P**	**04 31 57.8**	**+0.2**
	0.3nm,0.4s,mb3.3,baz=117,slow=10,SNR=3.5						
HLID	**Hailey**	**51.60**	**322**	*e*P	**P**	**04 32 23.4**	**+0.3**
YKA	**Yellowknife Ar**	**63.39**	**340**	P	**P**	**04 33 45.3**	**-0.1**
	1.0nm,0.5s,mb3.9,baz=134,slow=6.6,SNR=8.6						
YKA	**Yellowknife Ar**	**63.39**	**340**	P	**P**	**04 33 45.3**	**-0.1**
WRA	**Warramunga Arr**	**150.45**	**241**	PKPbc	PKPdf	04 43 06.0	+7.3
	0.5nm,0.6s,baz=104,slow=2.6,SNR=4.7						

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*MEX **25** 04:27:50.7±0.7, 14.75N×93.22W, h34^{km}±33^{km}, MD4.1*

*NEIC **25** 04:27:50.5, 14.74N×93.21W, h37^{km}, MD4.1(MEX), After MEX.*

*IDC **25** 04:27:55.6±6.6, 15.32N×93.01W, h83^{km}±85^{km}, mb3.1/3, mb1 3.6/5, mb1mx3.3/22, mbtmp3.5/5, ML3.5/2, Error ellipse: s-maj=187.3km s-min=51.2km az=44.0*

ISC 25 04:27:49.3±2.0**, 14.8N**±0.1×**93.23W**±0.06**, h61^{km}**±15^{km}**,**
n10, σ**0^{s}69**/15**, mb3.3**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**1.79**	**36**	*i* P	**P**	**04 28 18.2**	**-0.4**
CCIG				*e*S	**S**	**04 28 39.5**	**-0.7**
SCX	**San Cristobal**	**1.99**	**17**	*i* P	**P**	**04 28 22.0**	**+0.7**
SCX				*e*S	**S**	**04 28 46.0**	**+1.1**
CMIG	**Matias Romero**	**2.76**	**325**	*i* P	**P**	**04 28 31.1**	**-1.1**
CMIG				*e*S	**S**	**04 29 03.9**	**-0.6**
OXX	**Oaxaca**	**4.04**	**304**	*i* P	**P**	**04 28 50.0**	**-0.3**
OXX				*i* S	**S**	**04 29 37.0**	**+0.2**
VHO	**Vista Hermosa**	**4.04**	**304**	*e*P	**P**	**04 28 50.9**	**+0.6**
VHO				*e*S	**S**	**04 29 37.2**	**+0.4**
JTS	**JuntasAbangare**	**9.25**	**118**	P	**P**	**04 30 07.1**	**+4.7**
	0.7nm,0.3s,baz=306,slow=10,SNR=4.4						
TXAR	**Lajitas Array**	**17.36**	**328**	P	**P**	**04 31 49.3**	**+0.2**
	0.0nm,0.3s,baz=149,slow=14,SNR=12						
ANMO	**Albuquerque**	**23.31**	**332**	P	**P**	**04 32 52.8**	**+0.1**
	0.4nm,0.5s,mb3.1,baz=129,slow=8.3,SNR=4.1						
PDAR	**Pinedale Array**	**31.19**	**336**	P	**P**	**04 34 04.2**	**-0.7**
	0.2nm,0.5s,mb3.2,baz=132,slow=11,SNR=2.8						
NVAR	**Mina Array Bea**	**32.29**	**321**	P	**P**	**04 34 14.8**	**+0.3**
	0.4nm,0.5s,mb3.5,baz=126,slow=7.8,SNR=4.3						

MAN 25 04:31:59.3, 12.01N×125.46E, h31^{km}, mb4.7, ML3.6,
MS3.6, 2C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.41**	**183**	*e*P	Pb	04 32 09.8	+1.4
BESP				*e*S	Sb	04 32 17.1	+2.5
CNP	**Catarman**	**0.93**	**302**	*e*P	Pn	04 32 16.0	-0.2
PLP	**Palo**	**0.97**	**209**⇓	*e*P	Pn	04 32 16.1	-0.7
PLP				*i* S	Sn	04 32 27.8	-1.8
MMPH	**Masbate**	**1.83**	**281**	*e*P	Pn	04 32 31.0	+1.8
MSLP	**Maasin**	**1.96**	**198**	*e*P	Pn	04 32 32.1	+1.1
PVCP	**Virac**	**2.03**	**321**	*e*P	Pn	04 32 31.3	-0.7
SCPH	**Surigao**	**2.22**	**179**	*e*P	Pn	04 32 34.3	-0.5
SCPH				*e*S	Sn	04 32 47.1	-14
LLP	**Lapu-Lapu**	**2.24**	**221**	*i* P	Pn	04 32 34.5	-0.6
LLP				*e*S	Sn	04 33 01.5	-0.4
RCP	**Roxas**	**2.70**	**261**⇑	*e*P	Pn	04 32 41.5	-0.1
TBP	**Tagbilaran**	**2.79**	**214**	*e*P	Pn	04 32 42.9	0.0
GUIM	**Jordan**	**3.14**	**244**	*e*P	Pn	04 32 47.2	-0.6
OTRP	**Odiongan**	**3.38**	**276**	*e*P	Pn	04 32 52.2	+0.9
SNPH	**Sibulan**	**3.44**	**220**⇑	*e*P	Pn	04 32 52.0	-0.2

MAN 25 05:45:23.0, 12.68N×123.14E, h20^{km}, mb4.6, ML3.4,
MS3.3, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	**Masbate**	**0.57**	**124**	*e*P	Pb	05 45 34.0	-0.2
MMPH				*i* S	Sb	05 45 42.0	+0.2
AUQP	**San Andres**	**0.78**	**324**	*e*P	Pb	05 45 38.3	+0.5
OTRP	**Odiongan**	**1.14**	**254**	*e*P	Pb	05 45 43.3	-0.5
RCP	**Roxas**	**1.18**	**199**⇓	*e*P	Pb	05 45 44.0	-0.5
PVCP	**Virac**	**1.34**	**47**	*e*P	Pn	05 45 46.5	-0.4
GQP	**Guinayangan**	**1.39**	**331**⇓	*i*P	Pn	05 45 47.0	-0.6
GQP				*e*S	Sn	05 46 05.5	0.0
BOAC	**Boac**	**1.48**	**302**	*e*P	Pn	05 45 47.9	-1.0
BOAC				*e*S	Sn	05 46 10.6	+2.8
CNP	**Catarman**	**1.50**	**96**	*e*P	Pn	05 45 48.7	-0.3
POLP	**Polilio Island**	**2.34**	**330**	*e*P	Pn	05 46 01.3	0.0
LBPH	**Los Banos**	**2.41**	**308**	*e*P	Pn	05 46 02.1	0.0
BUSP	**Coron**	**2.95**	**257**	*e*P	Pn	05 46 09.3	-0.6
NBP	**Mount Natib**	**3.35**	**308**	*e*P	Pn	05 46 17.4	+1.9
BALP	**Baler**	**3.40**	**334**	*e*P	Pn	05 46 15.5	-0.7

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*IDC **25** 05:47:46.5±0.7, 6.81N×72.99W, h155^{km}±8^{km}, mb3.7/6, mb1 3.9/10, mb1mx3.6/24, mbtmp4.3/10, Error ellipse: s-maj=19.8km s-min=7.4km az=133.0*

*NEIC **25** 05:47:47.3±0.5, 6.81N×73.01W, h164^{km}±6^{km}, mb4.1/3, Error ellipse: s-maj=10.5km s-min=6.9km az=124.0*

ISC 25 05:47:46.6±0.5**, 6.74N**±0.05×**72.95W**±0.06**, h171^{km}**±7^{km}**,**
n19, σ**0^{s}88**/22**, mb4.0**/7**, 1C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**2.32**	**216**	P	**P**	**05 48 27.9**	**+0.7**
	218nm,0.3s,baz=314,slow=3.7,SNR=570						
ROSC				S	**S**	**05 48 57.6**	**-0.9**
	139nm,0.3s,baz=102,slow=22,SNR=7.5						
SDV	**Santo Domingo**	**3.13**	**47**	P	**P**	**05 48 37.2**	**0.0**
	56nm,0.3s,baz=228,slow=4.5,SNR=272						
SDV				S	**S**	**05 49 13.6**	**-2.4**
	162nm,0.3s,baz=69,slow=21,SNR=46						
OTAV	**Otavalo**	**8.47**	**221**	*e*P	**P**	**05 49 47.4**	**+0.3**
	4.1nm,0.6s						
PCRV	**Puerto La Cruz**	**8.90**	**67**	P	**P**	**05 49 53.5**	**+0.7**
	1.8nm,0.3s,baz=138,slow=9.8,SNR=13						
PCRV				S	**S**	**05 51 32.5**	**+1.1**
	1.7nm,0.3s,baz=114,slow=19,SNR=4.0						
YHJ	**Yallahs**	**11.61**	**343**⇓	*e*P	**P**	**05 50 28.8**	**+0.7**
PCJ	**Portland Cotta**	**11.68**	**340**⇓	*e*P	**P**	**05 50 29.2**	**+0.2**
GWJ	**Greenwich**	**11.85**	**342**⇓	*e*P	**P**	**05 50 31.5**	**+0.2**
STH	**Stony Hill**	**11.88**	**342**⇑	*e*P	**P**	**05 50 32.0**	**+0.4**
STH				*e*S	**S**	**05 52 30.0**	**-11**
BBJ	**Bamboo Saint A**	**12.31**	**340**⇓	*e*P	**P**	**05 50 38.9**	**+1.7**
SJG	**San Juan**	**13.11**	**30**	P	**P**	**05 50 46.1**	**-1.2**
	2.5nm,0.3s,baz=202,slow=11,SNR=5.3						
SAML	**Samuel**	**18.38**	**148**	*e*P	**P**	**05 51 50.8**	**-0.3**
	1.8nm,0.6s						
BDFB	**Brasilia**	**33.23**	**132**	P	**P**	**05 54 10.3**	**+0.6**
	1.1nm,0.5s,mb3.8,baz=276,slow=10,SNR=3.7						
TXAR	**Lajitas Array**	**36.64**	**312**	P	**P**	**05 54 37.9**	**-0.5**
	0.3nm,0.4s,mb3.3,baz=124,slow=8.9,SNR=11						
ULM	**Lac du Bonnet**	**47.42**	**340**	P	**P**	**05 56 04.3**	**-1.1**
	2.3nm,0.5s,mb4.1,baz=142,slow=6.6,SNR=3.3						
SCHQ	**Schefferville**	**48.21**	**5**	P	**P**	**05 56 11.7**	**+0.2**
	5.5nm,0.6s,mb4.4,baz=184,slow=8.6,SNR=21						
YKA	**Yellowknife Ar**	**63.40**	**340**	P	**P**	**05 57 58.4**	**-1.4**
	1.2nm,0.5s,mb4.0,baz=131,slow=6.6,SNR=15						
SUMG	**Summit**	**69.04**	**11**	*e*P	**P**	**05 58 35.2**	**-0.1**
	6.6nm,0.6s,mb4.5						
ARCES	**ARCESS Array B**	**86.69**	**20**	P	**P**	**06 00 11.8**	**+0.1**
	1.1nm,0.9s,mb3.7,baz=270,slow=3.6,SNR=4.0						
WRA	**Warramunga Arr**	**150.44**	**241**	PKPbc	PKPdf	06 07 19.9	+6.9
	0.6nm,0.5s,baz=107,slow=2.7,SNR=23						

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*NEIC **25** 05:51:45.3, 46.96N×2.11W, h5^{km}, ML3.0(LDG), ML2.1(STR), After STR.*

*STR **25** 05:51:45.3±0.4, 46.96N×2.11W, h5^{km}±1^{km}, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **25** 05:51:45.2±0.1, 46.96N×2.16W, h2^{km}, ML3.0/20, Error ellipse: s-maj=2.7km s-min=1.6km az=55.0*

LDG 25 05:51:45.2±0.1**, 46.95N×2.17W, h4^{km}, Md3.1**/2**, Ml3.0**/23**,**
Error ellipse: s-maj=2.5km s-min=1.5km az=60.0, Bay
of Biscay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LRYF	**La Roche-sur-Y**	**0.56**	**131**	Pg	Pg	05 51 55.6	-0.9
LCHF	**La Chataignera**	**1.02**	**105**	Pg	Pg	05 52 04.1	-1.5
LCHF				Sg	Sg	05 52 17.6	-1.6
OLEF	**Ile d'Oleron**	**1.15**	**150**	Pg	Pg	05 52 06.7	-1.5
OLEF				Sg	Sg	05 52 23.3	-0.3
QUIF	**Quistinic**	**1.18**	**325**	*e*Pn	Pn	05 52 06.9	-1.6
QUIF				*e*Pg	Pg	05 52 07.5	-1.3
QUIF				*e*Sg	Sg	05 52 21.5	-3.1
	53nm,0.2s						
SGMF	**Saint Gilles**	**1.33**	**349**	*e*Pn	Pn	05 52 08.8	-1.8
SGMF				*e*Pg	Pg	05 52 10.0	-1.8
SGMF				*e*Sn	Sn	05 52 25.2	-3.8
SGMF				*e*Sg	Sg	05 52 27.0	-2.6
	54nm,0.2s						
MFF	**Saint Martin d**	**1.43**	**103**	*e*Pn	Pn	05 52 10.5	-1.5
MFF				*e*Pg	Pg	05 52 12.2	-1.6
MFF				*e*Sn	Sn	05 52 28.8	-2.7
	59nm,0.2s						
CHIF	**Chize**	**1.46**	**123**	Pg	Pg	05 52 12.7	-1.7
CHIF				Sg	Sg	05 52 32.2	-1.7
ROSF	**Rostrenen**	**1.58**	**332**	*e*Pn	Pn	05 52 12.1	-2.0
ROSF				*e*Pg	Pg	05 52 14.2	-2.5
ROSF				*e*Sg	Sg	05 52 33.9	-3.8
	14nm,0.2s						
GRR	**Gorron**	**1.69**	**31**	*e*Pn	Pn	05 52 14.2	-1.6
GRR				*e*Pg	Pg	05 52 16.4	-2.6
GRR				*e*Sn	Sn	05 52 34.4	-3.7
GRR				*e*Sg	Sg	05 52 37.9	-3.7
	18nm,0.2s						
FLN	**La Foliniere**	**2.14**	**31**	*e*Pn	Pn	05 52 20.2	-2.0
	baz=214						
FLN				*e*Pg	Pg	05 52 24.2	-3.8
	baz=210						
FLN				*e*Sg	Sg	05 52 50.9	-5.6
	14nm,0.2s						
LFF	**La Frestale**	**2.85**	**134**	*e*Pn	Pn	05 52 30.7	-1.7
LFF				*e*Pg	Pg	05 52 36.6	-5.6
LFF				*e*Sg	Sg	05 53 14.8	-5.5
	21nm,0.3s						
RJF	**Les Rejaudoux**	**3.04**	**121**	*e*Pn	Pn	05 52 32.9	-2.2
RJF				*e*Pg	Pg	05 52 40.9	-5.1
RJF				*e*Sn	Sn	05 53 06.7	-5.7
RJF				*e*Sg	Sg	05 53 19.3	-7.3
	15nm,0.2s						
TCF	**Toulx Ste Croi**	**3.09**	**101**	*e*Pn	Pn	05 52 33.9	-1.8
TCF				*e*Pg	Pg	05 52 42.0	-4.9
TCF				*e*Sn	Sn	05 53 07.9	-5.7
TCF				*e*Sg	Sg	05 53 21.2	-6.9
	21nm,0.4s						
HYF	**Humbligny**	**3.30**	**83**	*e*Pn	Pn	05 52 36.9	-1.8
HYF				*e*Sg	Sg	05 53 28.9	-6.2
BGF	**Bois d'Agland**	**3.47**	**95**	*e*Pn	Pn	05 52 39.1	-2.0
BGF				*e*Pg	Pg	05 52 49.6	-4.9
BGF				*e*Sn	Sn	05 53 16.3	-6.9
BGF				*e*Sg	Sg	05 53 33.8	-6.9
	33nm,0.4s						
CAF	**Calviac**	**3.58**	**123**	*e*Pn	Pn	05 52 40.5	-2.2
CAF				*e*Pg	Pg	05 52 51.1	-5.6
CAF				*e*Sn	Sn	05 53 20.0	-6.0
CAF				*e*Sg	Sg	05 53 37.0	-7.4
	6.5nm,0.2s						
EALK	**Alkurruntz**	**3.76**	**173**	Sn	Sn	05 53 26.2	-4.3
	0.7nm,0.1s,SNR=7.9						
ELIZ	**Elizondo**	**3.81**	**173**	Sn	Sn	05 53 27.1	-4.7

	1.1nm,0.2s,SNR=7.9						
ELAN	Lanestosa	3.82	194	Pn	Pn	05 52 46.1	0.0
ELAN				Sn	Sn	05 53 23.6	-8.5
ELAN	Lanestosa	3.82	194	Pn	Pn	05 52 46.1	0.0
	SNR=7.9						
ELAN				Sn	Sn	05 53 23.6	-8.5
	0.1nm,0.1s,SNR=7.9						
SSF	Saint Saulge	3.88	86	*e*Pn	Pn	05 52 44.9	-2.1
SSF				*e*Pg	Pg	05 52 55.7	-7.1
SSF				*e*Sn	Sn	05 53 26.4	-7.3
SSF				*e*Sg	Sg	05 53 45.2	-9.4
	7.1nm,0.3s						
SJPF	Ste Jean	3.89	170	*e*Pn	Pn	05 52 43.5	-3.6
SJPF				*e*Pg	Pg	05 52 56.7	-6.2
SJPF				*e*Sn	Sn	05 53 26.5	-7.4
SJPF				*e*Sg	Sg	05 53 45.9	-8.9
	2.1nm,0.2s						
LOR	Lormes	4.13	83	*e*Pn	Pn	05 52 47.5	-3.0
	baz=262						
LOR				*e*Pg	Pg	05 53 01.4	-6.2
	baz=258						
LOR				*e*Sn	Sn	05 53 32.1	-7.8
LOR				*e*Sg	Sg	05 53 51.8	-11
	5.0nm,0.3s						
SMF	Signal de Mont	4.14	92	*e*Pn	Pn	05 52 47.2	-3.4
SMF				*e*Pg	Pg	05 53 01.8	-6.0
SMF				*e*Sn	Sn	05 53 33.1	-7.1
SMF				*e*Sg	Sg	05 53 54.6	-8.4
	3.6nm,0.2s						
ETSF	Etsaut	4.21	164	*e*Pn	Pn	05 52 47.1	-4.5
ETSF				*e*Pg	Pg	05 53 02.6	-6.6
ETSF				*e*Sg	Sg	05 53 56.1	-9.2
	1.7nm,0.3s						
EARI	Arriondas	4.23	212	Pn	Pn	05 52 50.2	-1.8
EARI				Sn	Sn	05 53 33.6	-8.9
EARI	Arriondas	4.23	212	Pn	Pn	05 52 50.2	-1.8
	SNR=7.9						
EARI				Sn	Sn	05 53 33.7	-8.8
	0.1nm,0.1s,SNR=5.6						
EPF	Esparros	4.30	155	*e*Pn	Pn	05 52 49.0	-3.9
EPF				*e*Pg	Pg	05 53 04.9	-6.2
EPF				*e*Sn	Sn	05 53 36.6	-7.7
	4.0nm,0.2s						
MTLF	Montolieu	4.76	138	*e*Pn	Pn	05 52 56.4	-3.0
MTLF				*e*Pg	Pg	05 53 12.5	-7.7
MTLF				*e*Sg	Sg	05 54 13.6	-10
	2.4nm,0.4s						
EPON	Pontenova	5.05	226	Pn	Pn	05 52 59.4	-4.2
EPON				Sn	Sn	05 53 53.0	-10
EPON	Pontenova	5.05	226	Pn	Pn	05 52 59.4	-4.2
	SNR=7.9						
EPON				Sn	Sn	05 53 53.0	-10
	0.2nm,0.1s,SNR=7.9						
EGRA	Graus	5.07	159	Sn	Sn	05 53 59.9	-3.8
	0.4nm,0.2s,SNR=7.9						
LASF	Ste Croix	5.12	122	*e*Pn	Pn	05 53 01.2	-3.3
LASF				*e*Pg	Pg	05 53 19.0	-8.3
LASF				*e*Sg	Sg	05 54 25.1	-10
	5.7nm,0.4s						
VIVF	Saint-Julien-l	5.21	111	*e*Pn	Pn	05 53 03.1	-2.8
VIVF				*e*Pg	Pg	05 53 21.5	-7.8
VIVF				*e*Sg	Sg	05 54 27.7	-11
	2.8nm,0.3s						
BAIF	Baives	5.26	51	*e*Pn	Pn	05 53 03.3	-3.2
GIVF	Givet	5.62	53	*e*Pn	Pn	05 53 08.0	-3.5
GIVF				*e*Sn	Sn	05 54 07.7	-10
	2.7nm,0.2s						
HINF	Hinteralfeld	6.19	79	*e*Sn	Sn	05 54 19.3	-12
	1.6nm,0.4s						

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*SKHL **25** 06:27:51.8±1.2, 44.02N×147.98E, h55km±15km, mb4.4/2*
*JMA **25** 06:27:53.7±0.3, 43.99N×147.65E, h93km, M3.6*
ISC 25 06:27:51.2±1.4**, 44.1N**±0.1×**147.8E**±0.2**, h82**km±27km**, n12, σ0.89**/21**, 2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.14	2	⇓*i*P	P	06 28 11.8	-0.5
KUR				AMB	AMB	06 28 12.0	
	60nm,0.5s						
KUR				*i* S	S	06 28 27.7	-0.5
YUK	Yuzh-Kuril'sk	1.40	268	⇓*i*P	P	06 28 15.9	+0.2
YUK				AMB	AMB	06 28 16.1	
	270nm,0.2s						
YUK				*i* S	S	06 28 33.1	-0.8
YUK				A		06 28 35.2	
	3μm,0.3s						
YUK				A		06 28 35.2	
	1μm,0.3s						
YUK				A		06 28 36.0	
	2μm,0.3s						
YUK				A		06 28 36.0	
	470nm,0.3s						
NEM2	Nemuro 2	1.66	245	P	P	06 28 20.2	+1.1
NEM2				*e*S	S	06 28 39.8	+0.1
JRA	Rausu	1.94	266	P	P	06 28 24.1	+1.3
JRA				*e*S	S	06 28 47.2	+1.1
JNK	Nakash	2.28	258	P	P	06 28 28.4	+0.7
JAK	Akkeshi	2.51	245	P	P	06 28 31.1	+0.3
JAK				*e*S	S	06 28 58.8	-1.5
JTKR	Abashiri--Toko	2.81	269	P	P	06 28 35.3	+0.3
JAR	Ashorobuto	3.03	256	P	P	06 28 38.9	+0.9
JAR				*e*S	S	06 29 13.4	+0.1
JCH	Churui	3.56	247	P	P	06 28 45.8	+0.5
JCH				*e*S	S	06 29 22.8	-3.6
JNBK	Urakawa-nobuka	4.11	246	P	P	06 28 52.1	-0.9
JNBK				*e*S	S	06 29 36.3	-3.9
JKB	Kayabe	5.43	248	P	P	06 29 10.2	-1.0
JKB				*e*S	S	06 30 07.4	-5.5
JOT	Ohata	5.66	244	P	P	06 29 13.6	-0.7

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*IDC **25** 06:48:01.2±1.6, 2.23N×97.04E, mb4.1/8, mb1 4.2/8, mb1mx3.9/18, mbtmp4.1/8, MS3.3/1, Ms1 3.3/1, ms1mx2.8/14, Error ellipse: s-maj=67.7km s-min=24.5km az=51.0*
*NEIC **25** 06:48:07.6±6.7, 2.29N×97.05E, h43km±53km, mb4.0/1, Error ellipse: s-maj=66.9km s-min=13.7km az=55.0*
ISC 25 06:48:04.6±0.9**, 2.3N**±0.1×**97.0E**±0.1**, h33**km**, n11, σ0.65**/11**, mb4.0**/9**, MS3.3**/1**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	4.72	51	*e*P	P	06 49 15.6	+0.1
WRA	Warramunga Arr	42.79	123	P	P	06 56 00.4	-0.8
	0.8nm,0.5s,mb3.7,baz=302,slow=9.2,SNR=13						
WRAB	Tennant Creek	42.79	123	*e*P	P	06 56 02.0	+0.7
	2.0nm,0.6s,mb4.0						
SONM	Songino Array	46.11	9	P	P	06 56 27.2	-0.3
	1.3nm,0.4s,mb4.2,baz=191,slow=10,SNR=13						
SONM				LR	LR	07 15 26.4	
	comp=Z,29nm,18.4s,MS3.3,baz=233,slow=36						
MKAR	Makanchi Array	46.15	346	P	P	06 56 28.5	+0.5
	1.4nm,0.5s,mb4.1,baz=155,slow=8.1,SNR=10						
ZAL	Zalesovo	52.46	351	P	P	06 57 16.1	-0.2
	1.9nm,0.4s,mb4.4,baz=310,slow=4.1,SNR=8.4						
BVAR	Borovoye Array	55.17	341	P	P	06 57 35.5	-0.8
	1.8nm,0.6s,mb4.3,baz=143,slow=9.8,SNR=11						
AKASG	Malin Array Be	74.28	322	P	P	06 59 40.7	+0.4
	0.3nm,0.3s,mb3.7,baz=90,slow=5.4,SNR=5.0						
FINES	FINESS Array B	78.95	332	P	P	07 00 06.8	+0.4
	0.8nm,0.5s,mb3.9,baz=108,slow=7.1,SNR=15						
KAF	Kangasniemi	79.03	333	*e*p	P	07 00 05.8	-1.0
ARCES	ARCESS Array B	81.46	340	P	P	07 00 20.6	+1.0
	1.4nm,0.5s,mb4.2,baz=102,slow=6.0,SNR=14						

IDC 25 07:44:30.6±6.6**, 2.48N×128.64E, h172**km±65km**, mb3.5**/9**, mb1 3.7**/9**, mb1mx3.6**/18**, mbtmp4.0**/9**, Error ellipse: s-maj=40.2km s-min=14.0km az=77.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.66	188	P	P	07 48 56.2	-2.2
	3.9nm,0.5s,baz=15,slow=7.6,SNR=6.8						
WRA	Warramunga Arr	22.98	166	P	P	07 49 20.8	-0.3
	5.7nm,0.3s,baz=343,slow=10,SNR=12						
WB2	Warramunga Arr	22.98	166	*e*P	P	07 49 20.6	-0.5
MJAR	Matsushiro Arr	35.03	13	P	P	07 51 06.2	-2.5
	1.7nm,0.7s,baz=195,slow=11,SNR=5.6						
STKA	Stephens Creek	36.32	161	*e*P	P	07 51 18.4	-1.2
	2.0nm,0.4s						
STKA	Stephens Creek	36.32	161	P	P	07 51 18.1	-1.5
	2.8nm,0.4s,baz=337,slow=7.8,SNR=18						
SONM	Songino Array	49.09	340	P	P	07 53 01.6	-0.8
	0.4nm,0.6s,baz=143,slow=7.2,SNR=3.3						
MKAR	Makanchi Array	59.66	325	P	P	07 54 17.2	-1.8
	1.5nm,0.4s,baz=117,slow=8.4,SNR=38						
BVAR	Borovoye Array	69.40	327	P	P	07 55 19.0	-2.7
	1.4nm,0.8s,baz=127,slow=7.4,SNR=7.9						
VNDA	Vanda	81.96	173	P	P	07 56 30.5	-1.5
	0.5nm,0.9s,baz=312,slow=8.2,SNR=2.9						
ILAR	Eielson Array	85.41	25	P	P	07 56 48.2	-1.3
	0.1nm,0.4s,baz=263,slow=5.4,SNR=5.0						

MAN 25 07:55:19.9, 9.39N×122.59E, h33km**, mb3.5, ML2.2, MS1.6, 1C, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	Dipolog City	1.10	136	⇑*e*P	P	07 55 39.1	0.0
DCPH				*i* S	S	07 55 52.8	-0.4
GUIM	Jordan	1.23	0	*e*P	P	07 55 40.7	-0.1
GUIM				*e*S	S	07 55 56.7	+0.1
IPIL	Ipil	1.59	181	*e*P	P	07 55 46.3	+0.3
IPIL				*e*S	S	07 56 05.3	-0.3
PAGZ	Pagadian	1.72	153	*e*P	P	07 55 48.8	+0.9
CUYO	Cuyo Island	2.12	313	*e*P	P	07 55 53.5	-0.2

WEL 25 08:14:09.3±0.3**, 39.64S×174.19E, h240**km±2km**, ML3.5**/12**, 6C, Error ellipse: s-maj=4.1km s-min=2.4km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	Wanganui	0.63	101	⇑PN	P	08 14 41.9	+0.2
WAZ				SN	S	08 15 06.6	-0.3
MTVZ	Mangateitei	1.03	76	PN	P	08 14 43.1	-0.5
MTVZ				SN	S	08 15 09.0	-1.3
FWVZ	Far West T-bar	1.13	70	PN	P	08 14 43.8	-0.4
FWVZ				SN	S	08 15 09.2	-2.2
WNVZ	Wahianoa	1.14	74	⇑PN	P	08 14 43.8	-0.5
WPVZ	Whakapapa	1.14	68	PN	P	08 14 43.9	-0.4
DUWZ	D'Urville Isla	1.18	190	PN	P	08 14 44.6	0.0
DUWZ				SN	S	08 15 11.1	-1.0
KIW	Kapiti Island	1.34	156	PN	P	08 14 45.5	-0.2
KIW				SN	S	08 15 12.6	-1.5
MRZ	Mangatainoka R	1.48	134	PN	P	08 14 46.4	-0.5
MRZ				SN	S	08 15 14.4	-1.5
TCW	Tory Channel	1.57	178	PN	P	08 14 47.4	-0.2
TCW				SN	S	08 15 16.5	-0.7
CAW	Cannon Point	1.61	156	⇑PN	P	08 14 47.6	-0.3
CAW				SN	S	08 15 17.6	-0.1
MRW	Makara Radio	1.63	166	PN	P	08 14 47.7	-0.4
NNZ	Nelson	1.69	201	⇑PN	P	08 14 48.2	-0.4
NNZ				SN	S	08 15 17.2	-1.7
SNZO	South Karori	1.71	167	PN	P	08 14 48.2	-0.5
SNZO				SN	S	08 15 18.0	-1.2
QRZ	Quartz Range	1.73	226	⇑PN	P	08 14 47.9	-1.0
QRZ				SN	S	08 15 17.1	-2.5
TUWZ	Tuamarina	1.80	186	PN	P	08 14 48.9	-0.5
MTW	Mount Morrison	1.82	147	⇑PN	P	08 14 49.2	-0.5
BKZ	Black Stump Fm	1.85	76	PN	P	08 14 48.6	-1.3
BKZ				SN	S	08 15 18.0	-3.3
BFZ	Birch Farm	1.89	124	PN	P	08 14 49.9	-0.4
BFZ				SN	S	08 15 20.2	-1.7
MSWZ	Moikau Station	1.95	156	PN	P	08 14 50.3	-0.5
BSWZ	Blackbirch Sta	2.08	186	PN	P	08 14 51.7	-0.4
THZ	Tophouse	2.33	204	PN	P	08 14 54.1	-0.5
KHZ	Kahutara	2.81	190	PN	P	08 14 58.7	-0.9
LTZ	Lake Taylor	3.45	204	PN	P	08 15 05.1	-1.7
MQZ	McQueen's Vall	4.22	195	*e*PN	P	08 15 13.0	-2.8

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*CSEM **25** 08:18:55.5±0.2, 31.25N×56.29E, h12km, ML3.0, Error ellipse: s-maj=8.4km s-min=3.4km az=44.0*
*THR **25** 08:18:56.6±0.4, 31.32N×56.45E, h14km±12km, ML2.7*
*TEH **25** 08:18:59.3, 31.24N×56.06E, h10km, Mn3.0*
ISC 25 08:18:55.3±1.6**, 31.25N**±0.09×**56.3E**±0.1**, h1**km±14km**, n9, σ1.03**/10**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBAF	Bafgh	0.70	299	Pg	Pg	08 19 09.1	-0.1
KRBR	Kerman	1.33	162	*e*PG	Pg	08 19 21.7	-0.1
KRBR				*e*SG	Sg	08 19 40.4	+0.9
KRBR				AML	AML	08 19 44.1	
	comp=N,143nm,0.2s						
IMEH	Mehriz	1.44	276	Pg	Pg	08 19 23.2	-0.7
ICHK	Chekchek	1.88	302	Pn	Pn	08 19 29.9	+1.0
IPAR	Pars	3.12	244	Pn	Pn	08 19 45.0	-1.6
NASN	Na'in	3.33	299	*e*PN	Pn	08 19 51.9	+2.3
NASN				AML	AML	08 20 47.3	
	comp=N,19nm,0.6s						
ZHSF	Zahedan	4.21	112	*e*PN	Pn	08 20 01.1	-0.9
ZHSF				AML	AML	08 21 15.6	
	comp=N,7.2nm,0.5s						
IVRN	Varamin	5.34	316	Pn	Pn	08 20 18.5	+0.4
IDMV	Damavand	5.59	322	Pn	Pn	08 20 21.0	-0.6

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*IDC **25** 08:25:23.0±0.5, 11.75N×86.94W, mb4.8/23, mb1 5.0/24, mb1mx4.9/27, mbtmp4.9/24, ML4.0/2, MS4.3/19, Ms1 4.3/19, ms1mx4.2/28, Error ellipse: s-maj=20.2km s-min=9.6km az=53.0*
*MOS **25** 08:25:26.4±1.1, 11.82N×86.77W, h33km, mb5.1/34, MS4.4/17, Error ellipse: s-maj=10.7km s-min=5.2km az=113.8*
*CASC **25** 08:25:26.1±2.5, 11.39N×87.26W, h3km±6km, MD4.9, mb5.1(NEIC)*
*HRVD **25** 08:25:27.8±0.3, 11.19N×87.52W, h20km, MW5.0/63, Centroid moment Tensor Solution. LP body waves: s34,c50;Mantle waves: s63,c107; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.22±.11; $M_{\theta\theta}$-2.16±.08; $M_{\phi\phi}$-1.06±.10; $M_{r\theta}$2.59±.17; $M_{\theta\phi}$1.35±.07; $M_{\phi r}$-1.73±.21; Best double couple: $M_0$4.425×10^{16} NP1: ϕ_s304°, δ23°, λ90°. NP2:ϕ_s124°, δ67°, λ90°. Principal axes: T 4.502, Plg68°, Azm34°; N -.152, Plg0°, Azm124°; P -4.349, Plg22°, Azm214°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **25** 08:25:27.8±0.2, 11.61N×87.03W, mb5.1/77, MD5.3(CASC) Error ellipse: s-maj=7.8km s-min=3.7km az=46.0*
*BJI **25** 08:25:27.7, 11.60N×87.00W, h33km, mB5.3, Ms5.0, Msz4.6*
ISC 25 08:25:31.4±0.3**, 11.60N**±0.04×**86.89W**±0.03**, h87**km±2km**, h32**km±1.3km**:pP-P, n352, σ1.02**/309**, mb5.0**/96**, 36C-14D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUN	El Crucero	0.69	57	⇓*i*P	P	08 25 47.6	-0.1
TICN	Ticuantepe	0.77	56	⇑*i*P	P	08 25 48.8	+0.1
XAVN	Gruta Xavier	0.77	45	⇑*e*P	P	08 25 48.5	-0.1
LEON	Leon	0.81	360	⇑*e*P	P	08 25 46.9	-2.2
MASN	Masaya	0.81	62	⇑*e*P	P	08 25 49.1	+0.1
APYN	Apoyeque	0.82	40	*e*P	P	08 25 48.9	-0.2
MGAN	Managua	0.83	49	⇓*e*P	P	08 25 49.1	-0.1
MIRN	Miramar	0.85	12	⇓*e*P	P	08 25 48.1	-1.3
APON	Apoyo	0.86	69	⇑*e*P	P	08 25 49.5	-0.1
MOMJ	Momotombo	0.87	23	⇑*e*P	P	08 25 49.2	-0.4
WILN	Americas 2	0.88	51	⇑*i*P	P	08 25 50.0	+0.3
CNGN	Cerro Negro	0.91	12	⇑*e*P	P	08 25 49.1	-0.9
TEL3	Telica 3	0.96	2	⇑*e*P	P	08 25 49.1	-1.6
TELN	Telica	0.99	3	⇑*e*P	P	08 25 49.8	-1.3
CRIN	San Cristobal	1.10	352	⇑*e*P	P	08 25 50.3	-2.1
PYTN	Playitas	1.23	41	⇑*e*P	P	08 25 54.7	+0.7
PYTN				*e*S	S	08 26 19.3	+8.3
CONN	Concepcion	1.24	92	⇑*e*P	P	08 25 53.9	-0.2
SOMN	Somoto	1.82	8	⇑*e*P	P	08 26 03.6	+1.9
CNCH	Conchagua	1.90	331	⇑*e*P	P	08 26 04.1	+1.4
CNCH				*e*S	S	08 26 31.3	+5.5
BLLM	Bellamira	2.25	324	⇑*e*P	P	08 26 07.9	+0.4
BLLM				*e*S	S	08 26 36.7	+2.3
VSM	San Miguel	2.26	323	*e*P	P	08 26 08.4	+0.7
VSM				*e*S	S	08 26 40.3	+5.7
JTS	JuntasAbangare	2.31	124	Pn	P	08 26 05.5	-2.7
	14nm,0.3s,baz=321,slow=13,SNR=47						
JTS				Sn	S	08 26 37.3	+1.6
	209nm,0.3s,baz=44,slow=13,SNR=9.9						
JTS				LR	LR	08 27 19.5	
	comp=Z,6μm,19.6s,baz=131,slow=48						
JTS	JuntasAbangare	2.31	124	*e*Pn	P	08 26 05.8	-2.5
FORC	Fortuna	2.45	117	*e*P	P	08 26 08.9	-1.4
FORC	Fortuna	2.45	117	*e*P	P	08 26 08.8	-1.5
SNVI	San Vicente	2.76	317	⇓*e*P	P	08 26 14.2	-0.3
SNVI				*e*S	S	08 26 48.0	+1.0
LCBS	La Ceiba	2.88	315	⇑*e*P	P	08 26 15.6	-0.7
LCBS				*e*S	S	08 26 50.8	+0.8
LFRS	El Faro	2.92	314	⇑*e*P	P	08 26 15.8	-1.0
LFRS				*e*S	S	08 26 51.7	+0.7
LBRS	Las Brisas	2.99	315	⇓*e*P	P	08 26 17.7	-0.1
LBRS				*e*S	S	08 26 54.7	+2.1
PRS1	Puriscal	3.00	122	*e*P	P	08 26 17.2	-0.7
PRS1	Puriscal	3.00	122	*e*P	P	08 26 17.3	-0.6
LFU	La Fuente	3.04	315	*e*P	P	08 26 18.1	-0.5
LFU				*e*S	S	08 26 55.6	+1.6
BOQS	Boqueron	3.15	312	⇓*e*P	P	08 26 19.6	-0.5
BOQS				*e*S	S	08 26 59.3	+2.6
SJS	Escuela Geolog	3.24	120	*e*P	P	08 26 22.4	+1.2
SJS				*e*S	S	08 26 59.8	+1.0
SJS	Escuela Geolog	3.24	120	*e*P	P	08 26 22.2	+1.0
SJS				⇓*e*P		08 26 22.9	
TRTC	Tortuguero	3.28	108	*e*P	P	08 26 20.2	-1.6
TRTC	Tortuguero	3.28	108	⇓*e*P	P	08 26 20.1	-1.7
SBLS	San Blas	3.47	310	*e*P	P	08 26 23.5	-0.9
SBLS				*e*S	S	08 27 05.2	+0.6
SNJE	San Jose	3.48	311	⇓*e*P	P	08 26 23.7	-0.8
SNJE				*e*S	S	08 27 03.8	-0.9
URSC	Urasca	3.52	120	*e*P	P	08 26 26.2	+1.0
URSC	Urasca	3.52	120	⇓*e*P	P	08 26 25.9	+0.8
RTR	El Retiro	3.53	311	*e*P	P	08 26 24.6	-0.6
RTR				*e*S	S	08 27 07.6	+1.6
MTO2	Montecristo 2	3.68	319	*e*P	P	08 26 36.7	+9.4
MTO2				*e*S	S	08 27 20.0	+10
BUS	Buena Vista	3.69	123	*e*P	P	08 26 27.1	-0.3
BUS	Buena Vista	3.69	123	⇑*e*P	P	08 26 27.4	0.0
RBDL	Robledal	3.70	313	⇓*e*P	P	08 26 26.8	-0.7
RBDL				*e*S	S	08 27 11.2	+1.0
LIO	Limon	4.10	112	*e*P	P	08 26 32.7	-0.4
ACR	Cerro Adams	4.69	128	*e*P	P	08 26 39.6	-1.7
SVTC	San Vito de Co	4.77	126	⇑*e*P	P	08 26 42.0	-0.3
BRU	Baru	5.08	123	*e*P	P	08 26 47.4	+0.8
DVD	David	5.38	125	*e*P	P	08 26 51.5	+0.8
DVD	David	5.38	125	⇓*e*P	P	08 26 51.7	+1.0
DVD				*e*S	S	08 27 56.9	+4.9
PTP1	Petroterminal	5.54	127	*e*P	P	08 26 48.3	-4.6
PTP1	Petroterminal	5.54	127	*e*P	P	08 26 47.7	-5.2
PTP1				*e*S	S	08 27 48.8	-7.0
UPA	Univ. de Panam	7.69	109	*e*P	P	08 27 23.5	+1.0
UPA	Univ. de Panam	7.69	109	⇑*e*P	P	08 27 24.5	+2.0
OTAV	Otavalo	14.06	143	*e*Pn	P	08 28 47.5	-0.3
	23nm,1.1s						
OTAV				*e*		08 28 56.1	
ROSC	El Rosal	14.12	117	Pn	P	08 28 51.1	+2.6
	0.4nm,0.3s,baz=44,slow=2.0,SNR=7.0						
SDV	Santo Domingo	16.22	98	Pn	P	08 29 14.9	-0.5
	1.5nm,0.3s,baz=291,slow=5.5,SNR=39						
SDV				PcP	PcP	08 34 08.7	+2.6
	0.3nm,0.3s,baz=274,slow=1.2,SNR=5.4						
SJG	San Juan	21.05	70	*e*P	P	08 30 10.7	+0.5
SJG				pmax	pmax		
	comp=Z,51nm,1.0s						
SJG	San Juan	21.05	70	P	P	08 30 10.5	+0.3
	comp=Z,36nm,0.9s,mb4.7,baz=311,slow=9.3,SNR=2.5						
SJG				PcP	PcP	08 34 16.1	+1.8
	comp=Z,25nm,0.8s,baz=353,slow=18,SNR=7.3						
SJG	San Juan	21.05	70	*e*P	P	08 30 10.7	+0.5
	comp=Z,51nm,1.0s,mb4.8						
NATX	Nacogdoches	21.30	342	⇑*e*P	P	08 30 12.6	0.0
	comp=Z,255nm,0.8s,mb5.6						
LRAL	Lakeview Retre	21.33	360	⇑*i*P	P	08 30 14.4	+1.5
	comp=Z,153nm,0.8s,mb5.4						
LRAL				LR	LR		
	comp=Z,367nm,20.0s						
PCRV	Puerto La Cruz	21.89	92	P	P	08 30 20.9	+2.3
	comp=Z,108nm,0.8s,mb5.2,baz=252,slow=4.8,SNR=46						
COW	Cow Castle Cre	22.41	14	*e*P	P	08 30 26.4	+3.0
OXF	Oxford	22.92	355	*e*P	P	08 30 28.8	+0.3
OXF				pmax	pmax		
	comp=Z,331nm,0.9s,mb5.7						
OXF	Oxford	22.92	355	*e*P	P	08 30 28.8	+0.4
	comp=Z,330nm,0.9s,mb5.7						
JSC	Jenkinsville	23.15	12	*e*P	P	08 30 33.0	+2.3
JSC				*e*		08 34 19.8	
PLAL	Pickwick Lake	23.30	358	*e*P	P	08 30 32.5	+0.4
	comp=Z,74nm,0.8s,mb5.1						
SWET	Sewanee	23.52	2	*e*P	P	08 30 35.6	+1.4
LTX	Lajitas	23.57	321	⇑*e*P	P	08 30 34.4	-0.4
LTX				*e*		08 34 23.1	
LTX				pmax	pmax		
	comp=Z,35nm,0.6s,mb4.9						
LTX				MLR	MLR		
	comp=Z,388nm,22.0s						
LTX	Lajitas	23.57	321	⇑*e*P	P	08 30 34.4	-0.4
	comp=Z,36nm,0.6s,mb4.9						
LTX				*e*PcP	PcP	08 34 23.1	+3.7
LTX				LR	LR		
	comp=Z,388nm,22.0s						
TXAR	Lajitas Array	23.57	321	P	P	08 30 34.5	-0.3
	comp=Z,38nm,0.7s,mb4.8,baz=134,slow=10,SNR=433						
TXAR				PcP	PcP	08 34 21.2	+1.9
	comp=Z,7.5nm,0.9s,baz=162,slow=4.0,SNR=8.1						
TXAR				ScP		08 38 01.8	
	comp=Z,1.3nm,0.9s,baz=135,slow=3.5,SNR=4.8						
TXAR	Lajitas Array	23.57	321	P	P	08 30 34.5	-0.3
TXAR				PcP	PcP	08 34 21.2	+1.9
TXAR				ScP		08 38 01.8	
MET	Memphis--Engin	23.57	354	*e*P	P	08 30 35.1	+0.4
UALR	University of	23.59	349	*e*P	P	08 30 35.3	+0.3
	comp=Z,166nm,1.0s,mb5.3						
CPCT	Cooper Cave	23.84	5	*e*P	P	08 30 39.0	+1.8
HBAR	Harrisburg	24.09	352	*e*P	P	08 30 40.3	+0.5
GNAR	Gosnell	24.42	354	*e*P	P	08 30 43.4	+0.4
WVT	Waverly	24.43	358	*e*P	P	08 30 42.4	-0.7
WVT				pmax	pmax		
	comp=Z,28nm,0.7s,mb4.7						
WVT	Waverly	24.43	358	*e*P	P	08 30 42.4	-0.7
	comp=Z,28nm,0.7s,mb4.7						
GLAT	Glass	24.65	355	*e*P	P	08 30 45.1	-0.1
UTMT	University of	24.69	356	*e*P	P	08 30 45.6	-0.1
	comp=Z,162nm,1.0s,mb5.4						
TZTN	Tazewell	25.01	6	*e*P	P	08 30 50.1	+1.4
PARMO	Parma	25.08	355	*e*P	P	08 30 49.4	0.0
WMOK	Wichita Mounta	25.45	337	⇑*e*P	P	08 30 51.2	-1.6
WMOK				*e**PP	pP	08 31 01.4	-11
WMOK				pmax	pmax		
	comp=Z,197nm,1.3s,mb5.4						
WMOK	Wichita Mounta	25.45	337	⇑*e*P	P	08 30 51.2	-1.6
	comp=Z,197nm,1.3s,mb5.4						
WMOK				*e*pP	pP	08 31 01.4	-11
ELN	Prospectdale	26.10	11	*e*P	P	08 31 00.2	+1.4
BLA	Blacksburg	26.15	12	*e*P	P	08 31 00.9	+1.6
BLA				pmax	pmax		
	comp=Z,99nm,1.2s,mb5.1						
BLA				MLR	MLR		
	comp=Z,483nm,20.0s						
BLA	Blacksburg	26.15	12	*e*P	P	08 31 00.9	+1.6
	comp=Z,99nm,1.2s,mb5.1						
BLA				LR	LR		
	comp=Z,483nm,20.0s						
MNTX	Cornudas Mount	26.29	322	*e*P	P	08 30 58.8	-1.8
	comp=Z,24nm,0.9s,mb4.6						
FWV	Forest Hill	26.43	11	*e*P	P	08 31 03.0	+1.1
FVM	French Village	26.46	354	*e*P	P	08 31 00.5	-1.6
FVM				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.6						
FVM	French Village	26.46	354	*e*P	P	08 31 00.5	-1.6
	comp=Z,17nm,0.7s,mb4.6						
CCM	Cathedral Cave	26.63	352	*e*P	P	08 31 02.4	-1.2
CCM				pmax	pmax		
	comp=Z,119nm,1.0s,mb5.4						
CCM				MLR	MLR		
	comp=Z,314nm,22.0s						
CCM	Cathedral Cave	26.63	352	*e*P	P	08 31 02.4	-1.3
	comp=Z,119nm,1.0s,mb5.4						
CCM				LR	LR		
	comp=Z,314nm,22.0s						
AMTX	Amarillo	26.80	332	*e*P	P	08 31 03.9	-1.3
	comp=Z,148nm,1.3s,mb5.4						
AMTX				*e*PcP	PcP	08 34 28.2	+1.8
AMTX				LR	LR		
	comp=Z,337nm,20.0s						
SLM	Saint Louis	27.09	354	*e*P	P	08 31 06.7	-1.1

SLM				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.0						
SLM	**Saint Louis**	**27.09**	**354**	*e*P	**P**	**08 31 06.7**	**-1.1**
	comp=Z,39nm,0.8s,mb5.0						
BLO	**Bloomington**	**27.46**	**1**	*e*P	**P**	**08 31 10.4**	**-0.8**
BLO				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.0						
BLO	**Bloomington**	**27.46**	**1**	*e*P	**P**	**08 31 10.4**	**-0.8**
	comp=Z,42nm,0.8s,mb5.0						
CBN	**Corbin**	**27.82**	**16**	*e*P	**P**	**08 31 15.8**	**+1.2**
	comp=Z,156nm,0.8s,mb5.6						
CBN				LR	LR		
	comp=Z,1µm,19.0s						
MCWV	**Mont Chateau**	**28.63**	**11**	*e*P	**P**	**08 31 22.6**	**+0.8**
	comp=Z,57nm,0.9s,mb5.2						
KSU1	**Kansas State U**	**28.72**	**344**	*e*P	**P**	**08 31 20.9**	**-1.7**
BBSR	**BB Station**	**29.05**	**41**	PFAKE		08 31 40.0	+14
BBSR				LR	LR		
	comp=Z,899nm,21.0s						
SDMD	**Soldier's Deli**	**29.09**	**16**	*e*P	**P**	**08 31 27.5**	**+1.6**
ANMO	**Albuquerque**	**29.27**	**326**	*e*P	**P**	**08 31 26.6**	**-0.9**
ANMO				pmax	pmax		
	comp=Z,13nm,1.0s						
ANMO	**Albuquerque**	**29.27**	**326**	P	**P**	**08 31 26.9**	**-0.6**
	comp=Z,6.4nm,0.8s,mb4.3,baz=159,slow=8.3,SNR=34						
ANMO				PcP	PcP	08 34 34.5	+2.1
	comp=Z,5.5nm,1.0s,baz=192,slow=7.1,SNR=3.7						
ANMO	**Albuquerque**	**29.27**	**326**	*e*P	**P**	**08 31 26.6**	**-0.9**
	comp=Z,13nm,1.0s,mb4.5						
CBKS	**Cedar Bluff**	**29.42**	**339**	*e*P	**P**	**08 31 28.0**	**-0.8**
CBKS				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.9						
CBKS				MLR	MLR		
	comp=Z,434nm,20.0s						
CBKS	**Cedar Bluff**	**29.42**	**339**	*e*P	**P**	**08 31 28.0**	**-0.8**
	comp=Z,20nm,0.6s,mb4.9						
CBKS				LR	LR		
	comp=Z,434nm,20.0s						
TUC	**Tucson**	**30.13**	**317**	*e*P	**P**	**08 31 33.8**	**-1.4**
TUC				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.6						
TUC	**Tucson**	**30.13**	**317**	*e*P	**P**	**08 31 33.8**	**-1.4**
	comp=Z,16nm,1.1s,mb4.5						
ALLY	**Alegheny Colle**	**30.51**	**10**	*e*P	**P**	**08 31 38.4**	**0.0**
SAML	**Samuel**	**31.18**	**130**⇑	*e*P	**P**	**08 31 44.8**	**+0.1**
	comp=Z,54nm,0.9s,mb5.3						
SAML				*e*pP	pP	08 31 53.8	-11
SAML				*e*PcP	PcP	08 34 39.7	+2.1
BINY	**Binghamton**	**31.93**	**15**	*e*P	**P**	**08 31 51.7**	**+0.9**
	comp=Z,130nm,0.9s,mb5.7						
GENY	**Geneseo**	**32.03**	**13**	*e*P	**P**	**08 31 52.7**	**+1.0**
ISCO	**Idaho Springs**	**32.61**	**333**	*e*P	**P**	**08 31 56.3**	**-0.5**
ISCO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
ISCO				MLR	MLR		
	comp=Z,515nm,19.0s						
ISCO	**Idaho Springs**	**32.61**	**333**	*e*P	**P**	**08 31 56.3**	**-0.5**
	comp=Z,8.9nm,0.8s,mb4.7						
ISCO				LR	LR		
	comp=Z,515nm,19.0s						
PV01	**Paradox Valley**	**32.77**	**327**	*e*P	**P**	**08 31 57.9**	**-0.3**
BRYW	**Bryant College**	**33.05**	**21**	*e*P	**P**	**08 32 01.6**	**+1.1**
	comp=Z,31nm,0.9s,mb5.1						
QUA2	**Belchertown**	**33.09**	**20**	*e*P	**P**	**08 32 01.6**	**+0.7**
	comp=Z,69nm,1.2s,mb5.4						
PV10	**Paradox Valley**	**33.19**	**327**	*e*P	**P**	**08 32 00.8**	**-1.0**
LPAZ	**La Paz**	**33.35**	**146**	*e*P	**P**	**08 32 04.4**	**+1.0**
LPAZ				pmax	pmax		
	comp=Z,2.0nm,1.3s						
LPAZ				MLR	MLR		
	comp=Z,498nm,20.0s						
LPAZ	**La Paz**	**33.35**	**146**	P	**P**	**08 32 05.0**	**+1.6**
	comp=Z,2.6nm,0.9s,mb4.0,baz=341,slow=8.2,SNR=5.1						
LPAZ				LR	LR	08 46 31.8	
	comp=Z,468nm,20.1s,baz=330,slow=38						
LPAZ	**La Paz**	**33.35**	**146**	*e*P	**P**	**08 32 04.4**	**+1.0**
	comp=Z,2.1nm,1.3s						
LPAZ				LR	LR		
	comp=Z,498nm,20.0s						
HRV	**Harvard--Oak R**	**33.56**	**21**	PFAKE		08 32 20.0	+15
HRV				LR	LR		
	comp=Z,965nm,20.0s						
SADO	**Sadowa**	**33.71**	**10**	P	**P**	**08 32 05.8**	**-0.4**
	comp=Z,63nm,0.7s,mb5.5,baz=212,slow=8.8,SNR=94						
SADO				LR	LR	08 46 53.3	
	comp=Z,349nm,18.9s,baz=43,slow=38						
PHWY	**Pilot Hill**	**33.78**	**334**	*e*P	**P**	**08 32 06.3**	**-0.6**
NCB	**Newcomb**	**34.05**	**16**	*e*P	**P**	**08 32 09.7**	**+0.5**
	comp=Z,20nm,0.7s,mb5.1						
MIV	**Mineville/With**	**34.34**	**17**	*e*P	**P**	**08 32 11.4**	**-0.2**
FFD	**Franklin Falls**	**34.38**	**20**	*e*P	**P**	**08 32 08.6**	**-3.3**
	comp=Z,147nm,1.4s,mb5.6						
FFD				*e*pP	pP	08 32 18.6	-14
SRU	**San Rafael**	**34.52**	**327**	*e*P	**P**	**08 32 12.9**	**-0.3**
PFO	**Pinyon Flat Ob**	**34.78**	**314**	*e*P	**P**	**08 32 16.0**	**+0.5**
PFO				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.8						
PFO				MLR	MLR		
	comp=Z,165nm,21.0s						
PFO	**Pinyon Flat Ob**	**34.78**	**314**	*e*P	**P**	**08 32 16.0**	**+0.5**
	comp=Z,21nm,1.2s,mb4.8						
PFO				LR	LR		
	comp=Z,165nm,21.0s						
NEN	**Nelson**	**34.83**	**318**	*e*P	**P**	**08 32 15.7**	**-0.2**
MSNY	**Massena**	**34.84**	**15**	*e*P	**P**	**08 32 16.8**	**+1.0**
RWWY	**Rawlins**	**34.85**	**333**	*e*P	**P**	**08 32 16.0**	**0.0**
	comp=Z,38nm,0.8s,mb5.3						
MSU	**Marysvale**	**35.02**	**324**	*e*P	**P**	**08 32 17.7**	**+0.2**
FRNY	**Flat Rock**	**35.02**	**17**	*e*P	**P**	**08 32 17.9**	**+0.4**
TMUT	**Trail Mountain**	**35.03**	**326**	*e*P	**P**	**08 32 17.4**	**-0.2**
MVU	**Marysvale**	**35.03**	**324**	*e*P	**P**	**08 32 17.5**	**-0.1**
	comp=Z,18nm,1.2s,mb4.8						
ARUT	**Antelope Range**	**35.28**	**322**	*e*P	**P**	**08 32 20.3**	**+0.6**
RSSD	**Black Hills**	**35.61**	**339**⇑	*e*P	**P**	**08 32 22.3**	**-0.2**
RSSD				*e*		08 34 50.7	
RSSD				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
RSSD	**Black Hills**	**35.61**	**339**⇑	*e*P	**P**	**08 32 22.3**	**-0.2**
	comp=Z,22nm,0.8s,mb5.1						
RSSD				*e*PcP	PcP	08 34 50.6	+0.9
MPU	**Maple Canyon**	**35.77**	**327**	*e*P	**P**	**08 32 23.6**	**-0.2**
DAU	**Daniels Canyon**	**35.85**	**327**	*e*P	**P**	**08 32 25.0**	**+0.5**
WVL	**Waterville**	**36.03**	**21**	*e*P	**P**	**08 32 28.2**	**+2.2**
	comp=Z,346nm,1.4s						
WVL				*e*pP	pP	08 32 37.8	-8.9
JLU	**Jordanelle**	**36.09**	**327**	*e*P	**P**	**08 32 26.6**	**+0.1**
CTU	**Camp Tracy**	**36.31**	**327**	*e*P	**P**	**08 32 28.3**	**-0.2**
NOQ	**North Oquirrh**	**36.48**	**327**	*e*P	**P**	**08 32 30.1**	**+0.3**
BW06	**Boulder Array**	**36.77**	**332**	PFAKE		08 32 40.0	+7.7
BW06				LR	LR		
	comp=Z,342nm,19.0s						
PDAR	**Pinedale Array**	**36.77**	**332**	P	**P**	**08 32 31.4**	**-0.8**
	comp=Z,13nm,0.6s,mb5.0,baz=127,slow=10,SNR=114						
PDAR				PcP	PcP	08 34 54.1	+0.9
	comp=Z,4.5nm,0.9s,baz=117,slow=3.3,SNR=5.6						
PDAR				ScP		08 38 44.6	
	comp=Z,1.2nm,0.9s,baz=127,slow=7.4,SNR=4.5						
PDAR				LR	LR	08 51 12.2	
	comp=Z,255nm,20.9s,baz=140,slow=42						
HWUT	**Hardware Ranch**	**36.88**	**329**	*e*P	**P**	**08 32 33.0**	**-0.2**
	comp=Z,63nm,0.6s,mb5.7						
HWUT				LR	LR		
	comp=Z,602nm,20.0s						
EMMW	**East Machias**	**36.97**	**23**	PFAKE		08 32 50.0	+16
EMMW				LR	LR		
	comp=Z,4µm,19.0s						
DAC	**Darwin (Calif)**	**37.02**	**317**	PFAKE		08 32 50.0	+16
DAC				LR	LR		
	comp=Z,1µm,19.0s						
SPUT	**South Promonto**	**37.12**	**327**	*e*P	**P**	**08 32 35.7**	**+0.5**
BGU	**Big Grassy Mou**	**37.16**	**326**	*e*P	**P**	**08 32 35.5**	**0.0**
SIV	**San Ignacio**	**37.47**	**136**	P	**P**	**08 32 39.7**	**+1.3**
	comp=Z,66nm,0.7s,mb5.7,baz=316,slow=8.9,SNR=207						
AHID	**Auburn Hatcher**	**37.51**	**330**	*e*P	**P**	**08 32 38.1**	**-0.3**
	comp=Z,52nm,0.6s,mb5.5						
AHID				LR	LR		
	comp=Z,499nm,19.0s						
HVU	**Hansel Valley**	**37.63**	**328**	*e*P	**P**	**08 32 39.2**	**-0.2**
TPH	**Tonopah**	**37.80**	**319**	*e*P	**P**	**08 32 42.2**	**+1.3**
REDW	**Red Top Meadow**	**37.84**	**331**	*e*P	**P**	**08 32 41.3**	**+0.2**
	comp=Z,93nm,0.5s,mb5.9						
SNOW	**Snow King Moun**	**37.87**	**331**	*e*P	**P**	**08 32 41.4**	**0.0**
	comp=Z,89nm,0.6s,mb5.8						
LOHW	**Long Hollow**	**37.91**	**332**	*e*P	**P**	**08 32 41.8**	**+0.1**
	comp=Z,21nm,0.6s,mb5.2						
TPAW	**Teton Pass**	**37.98**	**331**	*e*P	**P**	**08 32 42.2**	**-0.1**
	comp=Z,56nm,0.7s,mb5.5						
RRI2	**Red Ridge**	**38.05**	**331**	*e*P	**P**	**08 32 43.1**	**+0.3**
	comp=Z,50nm,0.6s,mb5.5						
MOOW	**Moose Ponds**	**38.08**	**332**	*e*P	**P**	**08 32 42.9**	**-0.2**
	comp=Z,24nm,0.8s,mb5.1						
ELK	**Elko**	**38.27**	**324**	*e*P	**P**	**08 32 45.2**	**+0.5**
ELK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ELK				MLR	MLR		
	comp=Z,997nm,19.0s						
ELK	**Elko**	**38.27**	**324**	*e*P	**P**	**08 32 45.2**	**+0.5**
	comp=Z,9.0nm,0.7s,mb4.7						
ELK				LR	LR		
	comp=Z,997nm,19.0s						
IMW	**Indian Meadow**	**38.29**	**332**	*e*P	**P**	**08 32 44.8**	**0.0**
	comp=Z,29nm,0.7s,mb5.2						
LKWY	**Lake**	**38.56**	**333**	*e*P	**P**	**08 32 49.4**	**+2.3**
LKWY				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
LKWY				MLR	MLR		
	comp=Z,893nm,20.0s						
LKWY	**Lake**	**38.56**	**333**	*e*P	**P**	**08 32 49.4**	**+2.3**
	comp=Z,14nm,0.8s,mb4.8						
LKWY				LR	LR		
	comp=Z,893nm,20.0s						
MNV	**Mina**	**38.60**	**319**	*e*P	**P**	**08 32 48.3**	**+0.8**
MNV				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.8						
MNV	**Mina**	**38.60**	**319**	*e*P	**P**	**08 32 48.3**	**+0.8**
	comp=Z,16nm,1.0s,mb4.8						
LAO	**LASA Array**	**38.61**	**339**	*e*P	**P**	**08 32 46.9**	**-0.6**
	comp=Z,16nm,0.6s,mb5.0						
LAO				LR	LR		
	comp=Z,432nm,20.0s						
YFT	**Old Faithful**	**38.66**	**332**	*e*P	**P**	**08 32 49.3**	**+1.3**
OMM	**Old Mammoth Mi**	**38.69**	**318**	*e*P	**P**	**08 32 48.9**	**+0.6**
NVAR	**Mina Array Bea**	**38.70**	**319**	P	**P**	**08 32 49.3**	**+1.0**
	comp=Z,7.5nm,0.8s,mb4.6,baz=118,slow=8.4,SNR=48						
NVAR				PcP	PcP	08 35 00.8	+1.7
	comp=Z,9.4nm,0.8s,baz=118,slow=4.9,SNR=15						
NVAR				ScP		08 38 53.2	
	comp=Z,0.8nm,0.6s,baz=123,slow=5.3,SNR=5.0						
NVAR				LR	LR	08 52 36.3	
	comp=Z,523nm,18.5s,baz=100,slow=42						
YMR	**Madison River**	**38.89**	**332**	*e*P	**P**	**08 32 50.5**	**+0.6**
GCMT	**Greycliff**	**39.21**	**335**	*e*P	**P**	**08 32 51.9**	**-0.6**
BMN	**Battle Mountai**	**39.23**	**322**	*e*P	**P**	**08 32 53.1**	**+0.4**
BMN				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.1						
BMN				MLR	MLR		
	comp=Z,440nm,20.0s						
BMN	**Battle Mountai**	**39.23**	**322**	*e*P	**P**	**08 32 53.1**	**+0.4**
	comp=Z,44nm,1.3s,mb5.1						
BMN				LR	LR		
	comp=Z,440nm,20.0s						
QLMT	**Earthquake Lak**	**39.23**	**332**	*e*P	**P**	**08 32 53.7**	**+1.1**
ULM	**Lac du Bonnet**	**39.24**	**351**	P	**P**	**08 32 51.0**	**-1.7**
	comp=Z,76nm,0.9s,mb5.5,baz=168,slow=8.3,SNR=56						
ULM				LR	LR	08 51 54.7	
	comp=Z,193nm,20.0s,baz=119,slow=41						
ULM	**Lac du Bonnet**	**39.24**	**351**	*e*P	**P**	**08 32 50.5**	**-2.2**
	comp=Z,111nm,1.0s,mb5.7						
DGMT	**Dagmar**	**39.49**	**342**	*e*P	**P**	**08 32 54.6**	**-0.2**
	comp=Z,67nm,0.6s,mb5.7						
DGMT				LR	LR		
	comp=Z,399nm,21.0s						
HLID	**Hailey**	**39.75**	**328**	*e*P	**P**	**08 32 56.8**	**-0.2**
	comp=Z,17nm,0.8s,mb4.9						
HLID				LR	LR		
	comp=Z,744nm,19.0s						
CMB	**Columbia Colle**	**39.84**	**317**	*e*P	**P**	**08 32 58.3**	**+0.5**
CMB				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6						
CMB	**Columbia Colle**	**39.84**	**317**	*e*P	**P**	**08 32 58.3**	**+0.5**
	comp=Z,10nm,1.1s,mb4.6						
MCMT	**McKenzie Canyo**	**39.89**	**331**	*e*P	**P**	**08 32 59.0**	**+0.9**
BOZ	**Bozeman (W)**	**39.95**	**333**	*e*P	**P**	**08 32 58.4**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.2						
BOZ				MLR	MLR		
	comp=Z,638nm,20.0s						
BOZ	**Bozeman (W)**	**39.95**	**333**	*e*P	**P**	**08 32 58.4**	**-0.1**
	comp=Z,22nm,0.6s,mb5.2						
BOZ				LR	LR		
	comp=Z,638nm,20.0s						
WCN	**Washoe City**	**40.13**	**319**	*e*P	**P**	**08 33 01.0**	**+0.9**
WCN				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.7						
WCN	**Washoe City**	**40.13**	**319**	*e*P	**P**	**08 33 01.0**	**+0.8**
	comp=Z,16nm,1.3s,mb4.7						
BEKR	**Beckwourth**	**40.83**	**320**	*e*P	**P**	**08 33 06.4**	**+0.5**
	comp=Z,12nm,1.0s,mb4.7						
HRY	**Holter Researc**	**40.86**	**334**	*e*P	**P**	**08 33 06.1**	**0.0**
WVOR	**Wild Horse Val**	**41.31**	**324**	*e*P	**P**	**08 33 07.8**	**-2.0**
WVOR				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.0						
WVOR	**Wild Horse Val**	**41.31**	**324**	*e*P	**P**	**08 33 07.8**	**-2.0**
	comp=Z,18nm,0.7s,mb5.0						
CHMT	**Chamberlain Mo**	**41.64**	**333**	*e*P	**P**	**08 33 11.8**	**-0.7**
MSO	**Missoula**	**41.89**	**332**	*e*P	**P**	**08 33 14.0**	**-0.5**
	comp=Z,20nm,1.2s,mb4.7						
MOD	**Modoc**	**41.97**	**322**	*e*P	**P**	**08 33 14.9**	**-0.3**
	comp=Z,11nm,1.0s,mb4.5						
BMO	**Blue Mountains**	**42.14**	**328**	*e*P	**P**	**08 33 14.9**	**-1.7**
	comp=Z,11nm,0.7s,mb4.7						
BMO				LR	LR		
	comp=Z,628nm,19.0s						
YBH	**Yreka Blue Hor**	**43.35**	**320**	P	**P**	**08 33 24.9**	**-1.7**
	comp=Z,3.0nm,0.8s,mb4.1,baz=141,slow=1.9,SNR=4.7						
YBH				LR	LR	08 55 42.6	
	comp=Z,543nm,18.4s,baz=138,slow=42						
HBO	**Huckleberry Mo**	**44.31**	**323**	P	**P**	**08 33 33.7**	**-0.6**
NEW	**Newport**	**44.41**	**331**	*e*P	**P**	**08 33 33.7**	**-1.3**
NEW				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NEW	**Newport**	**44.41**	**331**	*e*P	**P**	**08 33 33.7**	**-1.3**
	comp=Z,9.8nm,0.7s,mb4.7						
OD2	**Odessa Site #2**	**44.58**	**329**	P	**P**	**08 33 36.0**	**-0.3**
FFC	**Flin Flon**	**44.64**	**348**	*e*P	**P**	**08 33 35.7**	**-1.0**
FFC				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.9						
FFC				MLR	MLR		
	comp=Z,104nm,19.0s						
FFC	**Flin Flon**	**44.64**	**348**	*e*P	**P**	**08 33 35.7**	**-1.0**
	comp=Z,23nm,0.9s,mb4.9						
FFC				LR	LR		
	comp=Z,104nm,19.0s						
EBG	**Ellensburg**	**45.21**	**328**	P	**P**	**08 33 41.6**	**+0.1**
ASR	**Mount Adams--S**	**45.28**	**326**	P	**P**	**08 33 42.6**	**+0.6**
SCHQ	**Schefferville**	**45.93**	**16**	P	**P**	**08 33 46.4**	**-0.6**
	comp=Z,20nm,0.7s,mb5.0,baz=215,slow=6.1,SNR=65						
SCHQ				LR	LR	08 54 36.9	
	comp=Z,498nm,18.1s,baz=205,slow=38						
SCHQ	**Schefferville**	**45.93**	**16**	*e*P	**P**	**08 33 46.4**	**-0.6**
	comp=Z,18nm,0.6s,mb5.0						
WRW	**Wenatchee Ridg**	**45.99**	**328**	P	**P**	**08 33 47.6**	**+0.1**
PNT	**Penticton**	**46.33**	**331**	P	**P**	**08 33 49.8**	**-0.4**
CFAA	**Coronel Fontan**	**46.53**	**158**	P	**P**	**08 33 52.8**	**+0.7**
	comp=Z,0.8nm,1.0s,baz=338,slow=7.8,SNR=3.7						
EDM	**Edmonton**	**46.60**	**338**	*e*P	**P**	**08 33 50.6**	**-1.7**
RPW	**Rockport**	**46.69**	**329**	P	**P**	**08 33 52.3**	**-0.9**
HDW	**Hoodsport**	**46.99**	**327**	P	**P**	**08 33 54.6**	**-0.9**
BDFB	**Brasilia**	**47.05**	**124**	P	**P**	**08 33 57.8**	**+1.5**
	comp=Z,46nm,0.7s,mb5.3,baz=293,slow=8.7,SNR=78						
BDFB				PcP	PcP	08 35 28.9	+1.5
	comp=Z,5.0nm,0.5s,baz=309,slow=7.7,SNR=5.9						
BDFB				LR	LR	08 54 31.7	
	comp=Z,1µm,20.2s,baz=310,slow=37						
BAO	**Brasilia Array**	**47.06**	**124**	P	**P**	**08 33 58.0**	**+1.6**
FCC	**Fort Churchill**	**47.38**	**355**	*e*P	**P**	**08 33 56.9**	**-1.4**
FCC				*i*		08 35 27.9	
FCC				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.0						
FCC	**Fort Churchill**	**47.38**	**355**	*e*P	**P**	**08 33 56.9**	**-1.4**
	comp=Z,28nm,0.8s,mb5.0						
FCC				*i* PcP	PcP	08 35 27.9	-0.2
CPUP	**Villa Florida**	**47.41**	**143**	*e*P	**P**	**08 33 58.9**	**-0.2**
CPUP				pmax	pmax		
	comp=Z,49nm,1.8s						
CPUP				MLR	MLR		
	comp=Z,301nm,19.0s						
CPUP	**Villa Florida**	**47.41**	**143**	P	**P**	**08 33 59.4**	**+0.3**
	comp=Z,4.2nm,0.8s,mb4.2,baz=346,slow=9.1,SNR=11						
CPUP				LR	LR	08 55 25.6	
	comp=Z,324nm,18.9s,baz=257,slow=38						
CPUP	**Villa Florida**	**47.41**	**143**	*e*P	**P**	**08 33 58.9**	**-0.2**
	comp=Z,48nm,1.8s,mb4.9						
CPUP				LR	LR		
	comp=Z,301nm,19.0s						
PGC	**Sidney**	**47.82**	**328**	*e*P	**P**	**08 34 01.6**	**-0.4**
	comp=Z,23nm,0.7s,mb5.1						
PLCA	**Paso Flores**	**54.22**	**165**	*e*P	**P**	**08 34 50.9**	**+0.5**
PLCA				pmax	pmax		
	comp=Z,17nm,1.2s						
PLCA	**Paso Flores**	**54.22**	**165**	P	**P**	**08 34 50.8**	**+0.3**
	comp=Z,12nm,1.1s,mb4.8,baz=346,slow=8.2,SNR=11						
PLCA				LR	LR	08 54 32.3	
	comp=Z,182nm,18.4s,baz=145,slow=32						
PLCA	**Paso Flores**	**54.22**	**165**	*e*P	**P**	**08 34 50.9**	**+0.5**
	comp=Z,17nm,1.2s,mb5.0						
YKA	**Yellowknife Ar**	**54.57**	**345**	P	**P**	**08 34 50.6**	**-2.0**
	comp=Z,18nm,0.7s,mb5.2,baz=140,slow=7.5,SNR=144						
YKA				PcP	PcP	08 35 54.6	0.0
	comp=Z,4.2nm,0.8s,baz=143,slow=4.0,SNR=7.3						
YKW3	**Yellowknife Ar**	**54.63**	**345**	*e*P	**P**	**08 34 51.1**	**-2.0**
TAOE	**Nuku Hiva Isla**	**56.73**	**251**	*e*PP	PP	08 37 12.9	-4.4
	comp=Z,256nm,42.8s						
TAOE				*e*S	**S**	**08 42 57.6**	**+4.8**
	comp=Z,1µm,26.0s						
TAOE				*e*SS	SS	08 47 14.9	+32
	comp=Z,9µm,34.9s						
TAOE				*e*LQ		08 49 24.9	
	comp=Z,281nm,25.3s						
TAOE				*e*LR	LR	08 51 13.3	
	comp=Z,825nm,26.0s,baz=66						
DLBC	**Dease Lake**	**56.90**	**335**	*e*P	**P**	**08 35 09.3**	**-0.2**
RKT	**Rikitea**	**58.36**	**234**	*e*P	**P**	**08 35 13.1**	**-7.0**
	comp=Z,187nm,35.0s						
RKT				*e*PP	PP	08 37 11.3	-21
	comp=Z,99nm,39.2s						
RKT				*e*S	**S**	**08 43 16.0**	**+1.9**
	comp=Z,246nm,34.5s						
RKT				*e*SS	SS	08 46 18.4	-51
	comp=Z,2µm,40.8s						
RKT				*e*LQ		08 49 44.1	
	comp=Z,2µm,33.8s						
RKT				*e*LR	LR	08 52 20.1	
	comp=Z,301nm,26.8s						
RES	**Resolute Bay**	**63.22**	**358**	*e*P	**P**	**08 35 50.7**	**-1.7**
RES				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
RES	**Resolute Bay**	**63.22**	**358**	*e*P	**P**	**08 35 50.7**	**-1.7**
	comp=Z,8.6nm,0.7s,mb4.8						
INK	**Inuvik**	**64.17**	**343**⇑	*e*P	**P**	**08 35 57.0**	**-1.6**
INK				pmax	pmax		
	comp=Z,24nm,1.0s						
INK	**Inuvik**	**64.17**	**343**⇑	*e*P	**P**	**08 35 57.0**	**-1.6**
	comp=Z,24nm,1.0s,mb5.0						
SLKM	**Skilak Lake**	**66.97**	**331**	*e*P	**P**	**08 36 16.3**	**-0.3**
SLKM				*e**PP	pP	08 36 26.6	-13
ILAR	**Eielson Array**	**67.01**	**336**	P	**P**	**08 36 15.8**	**-1.1**
	comp=Z,7.4nm,0.6s,mb4.7,baz=136,slow=4.1,SNR=117						
ILAR				LR	LR	09 11 04.1	
	comp=Z,238nm,18.1s,baz=153,slow=41						
SUMG	**Summit**	**67.27**	**14**	*e*P	**P**	**08 36 17.5**	**-0.8**
	comp=Z,10.0nm,0.8s,mb4.7						
KDAK	**Kodiak Island**	**67.37**	**328**	*e*P	**P**	**08 36 18.8**	**-0.3**
	comp=Z,13nm,0.7s,mb4.9						
KDAK				LR	LR		
	comp=Z,93nm,21.0s						
USHA	**Ushuaia**	**67.99**	**169**	LR	LR	09 00 26.5	
	comp=Z,262nm,18.9s,baz=2.7,slow=31						
SPU	**Mount Spurr**	**68.03**	**332**	*e*P	**P**	**08 36 23.2**	**+0.1**
PPT	**Papeete**	**68.35**	**246**	*e*PP	PP	08 38 48.7	-11
	comp=Z,28nm,28.5s						
PPT				*e*S	S	08 45 18.8	+0.1
	comp=Z,119nm,23.5s						
PPT				*e*SS	SS	08 50 06.6	+21
	comp=Z,106nm,21.8s						
PPT				*e*LQ		08 53 21.9	
	comp=Z,302nm,25.5s						
PPT				*e*LR	LR	08 56 41.3	
	comp=Z,236nm,22.0s,baz=60						
PPT	**Papeete**	**68.35**	**246**	LR	LR	09 00 02.1	
	comp=Z,277nm,19.2s,baz=96,slow=30						
SVW2	**Sparrevohn**	**69.66**	**331**	*e*P	**P**	**08 36 31.9**	**-1.3**
EVO	**Evora**	**74.20**	**53**	*e*P	**P**	**08 36 58.1**	**-2.5**
	comp=Z,5.8nm,0.8s,mb4.1						
EVO				*e*R			
	comp=Z,252nm,17.2s						
JMIC	**Jan Mayen**	**75.31**	**19**	*e*P	**P**	**08 37 01.8**	**-4.6**
JMIC				AMS	AMS	09 14 41.9	
	comp=Z,100nm,16.8s						
ESK	**Eskdalemuir**	**76.96**	**36**	PFAKE		08 37 30.0	+14
ESK				LR	LR		
	comp=Z,53nm,19.0s						
ROSF	**Rostrenen**	**77.20**	**43**	*e*P	**P**	**08 37 16.6**	**-0.8**
ESDC	**Sonseca Array**	**77.28**	**52**	P	**P**	**08 37 18.3**	**+0.3**
	comp=Z,2.0nm,0.6s,mb4.0,baz=285,slow=5.8,SNR=11						
ESLA	**Sonseca Array**	**77.28**	**52**	PFAKE		08 37 30.0	+12
ESLA				LR	LR		
	comp=Z,1µm,19.0s						
QUIF	**Quistinic**	**77.29**	**43**	*e*P	**P**	**08 37 17.7**	**-0.2**
GRR	**Gorron**	**78.80**	**43**	*e*P	**P**	**08 37 25.4**	**-0.8**
FLN	**La Foliniere**	**79.02**	**42**	*e*P	**P**	**08 37 26.7**	**-0.7**
	comp=Z,14nm,0.9s,mb4.5						
FLN				*e*R			
	comp=Z,422nm,21.8s						
FLN	**La Foliniere**	**79.02**	**42**	*e*P	**P**	**08 37 26.7**	**-0.7**
FLN				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
FLN				MLR	MLR		
	comp=Z,420nm,21.8s						
SJPF	**Ste Jean**	**79.03**	**48**	*e*P	**P**	**08 37 26.9**	**-0.6**
	comp=Z,21nm,1.1s,mb4.6						
SJPF	**Ste Jean**	**79.03**	**48**	*e*P	**P**	**08 37 26.9**	**-0.6**
SJPF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
MFF	**Saint Martin d**	**79.45**	**44**	*e*P	**P**	**08 37 28.9**	**-0.8**
	comp=Z,6.6nm,0.8s,mb4.2						
MFF	**Saint Martin d**	**79.45**	**44**	*e*P	**P**	**08 37 28.9**	**-0.8**
MFF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
ETSF	**Etsaut**	**79.53**	**48**	*e*P	**P**	**08 37 30.1**	**-0.2**
	comp=Z,11nm,1.0s,mb4.3						
ETSF	**Etsaut**	**79.53**	**48**	*e*P	**P**	**08 37 30.1**	**-0.2**
ETSF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
EPF	**Esparros**	**80.17**	**48**	*e*P	**P**	**08 37 33.1**	**-0.6**
KBS	**Kingsbay**	**80.39**	**11**	PFAKE		08 37 50.0	+16
KBS				LR	LR		
	comp=Z,448nm,20.0s						
KBS	**Kingsbay**	**80.39**	**11**	*e*P	**P**	**08 37 37.3**	**+3.1**
KBS				AMS	AMS	09 16 42.0	
	comp=Z,220nm,20.2s						
RJF	**Les Rejaudoux**	**80.74**	**46**	*e*P	**P**	**08 37 37.0**	**+0.3**
RJF				*e*R			
	comp=Z,401nm,18.8s						
DBIC	**Dimbokro**	**80.91**	**85**	LR	LR	09 09 06.6	
	comp=Z,94nm,20.0s,baz=244,slow=32						
BER	**Bergen**	**81.11**	**30**	AMS	AMS	09 12 08.7	
	comp=Z,151nm,19.2s						
CAF	**Calviac**	**81.18**	**46**	*e*P	**P**	**08 37 38.0**	**-1.0**
MTLF	**Montolieu**	**81.50**	**48**	*e*P	**P**	**08 37 40.0**	**-0.7**
	comp=Z,16nm,1.3s,mb4.4						
SSF	**Saint Saulge**	**81.88**	**44**	*e*P	**P**	**08 37 42.2**	**-0.4**
LOR	**Lormes**	**82.09**	**43**	*e*P	**P**	**08 37 42.7**	**-1.0**
LOR				*e*R			
	comp=Z,395nm,18.5s						
LASF	**Ste Croix**	**82.57**	**47**	*e*P	**P**	**08 37 46.0**	**-0.2**
	comp=Z,20nm,1.2s,mb4.5						
NB2	**NORSAR Subarra**	**83.84**	**29**	P	**P**	**08 37 52.8**	**+0.6**
	comp=Z,2.4nm,0.8s,mb4.1,baz=283,slow=5.0						
NB2	**NORSAR Subarra**	**83.84**	**29**	P	**P**	**08 37 52.8**	**+0.6**
	baz=283,slow=5.3						
NOA	**NORSAR Array B**	**83.84**	**29**	P	**P**	**08 37 52.9**	**+0.7**
	comp=Z,1.9nm,0.9s,mb3.9,baz=285,slow=5.1,SNR=3.5						
NOA				LR	LR	09 15 09.2	
	comp=Z,192nm,18.6s,baz=275,slow=36						
LPG	**La Plagne**	**84.36**	**45**	*e*P	**P**	**08 37 54.8**	**-0.4**
TRO	**Tromso**	**84.62**	**20**	AMS	AMS	09 16 12.9	
	comp=Z,165nm,18.4s						
BILL	**Bilibino**	**85.50**	**339**⇑	*e*P	**P**	**08 38 01.0**	**+0.7**
BILL				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
BILL	**Bilibino**	**85.50**	**339**	*e*P	**P**	**08 38 01.4**	**+1.0**
	comp=Z,30nm,0.9s,mb5.2						
MOX	**Moxa**	**86.45**	**39**	*e*P	**P**	**08 38 04.0**	**-1.4**
MOX				MLR	MLR		
	comp=Z,300nm,20.0s						
PGF	**Pioggiola**	**86.54**	**47**	*e*P	**P**	**08 38 05.6**	**-0.4**
	comp=Z,6.5nm,0.7s,mb4.4						
PGF	**Pioggiola**	**86.54**	**47**	*e*P	**P**	**08 38 05.6**	**-0.4**
PGF				pmax	pmax		

	comp=Z,3.0nm,0.7s,mb4.3						
FX1	Attu Island--F	86.77	323	P	P	08 38 08.6	+1.7
	comp=Z,30nm,0.8s,mb5.3,baz=160,slow=2.2,SNR=9.9						
FX1	Attu Island--F	86.77	323	eP	P	08 38 08.9	+2.0
ARCES	ARCESS Array B	86.80	19	P	P	08 38 08.2	+1.6
	comp=Z,3.6nm,0.9s,mb4.3,baz=288,slow=3.8,SNR=5.5						
ARCES				LR	LR	09 18 05.4	
	comp=Z,200nm,18.8s,baz=296,slow=36						
CLL	Collm	87.14	38	eP	P	08 38 13.0	+4.3
CLL				MLR	MLR		
	comp=Z,300nm,21.1s						
CLL	Collm	87.14	38	P	P	08 38 13.0	+4.3
CLL				ePS	PS	08 49 54.0	+0.8
GERES	GERESS Array B	88.22	41	P	P	08 38 14.6	+0.6
	comp=Z,0.9nm,0.9s,baz=243,slow=3.0,SNR=6.8						
GERES				LR	LR	09 18 15.3	
	comp=Z,348nm,18.0s,baz=308,slow=36						
FINES	FINESS Array B	90.48	26	P	P	08 38 24.1	-0.2
	comp=Z,1.8nm,0.9s,mb4.2,baz=270,slow=3.8,SNR=4.9						
FINES				LR	LR	09 17 57.1	
	comp=Z,123nm,19.0s,baz=326,slow=35						
TIXI	Tiksi	93.57	349	i P	P	08 38 38.8	+0.5
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb5.0						
PET	Petropavlovsk	94.92	327	eP	P	08 38 50.8	+6.0
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
VNA3	Neumayer Olymp	96.83	161	e	P	08 38 59.8	+6.7
VNA3	Neumayer Olymp	96.83	161	e	P	08 39 04.7	+12
VNA3	Neumayer Olymp	96.83	161	⇑iP	P	08 38 54.2	+1.1
VNA3				e		08 38 59.8	
VNA3				e		08 39 04.7	
VNA2	Neumayer--Watz	97.47	161	e	P	08 39 06.7	+11
VNA2	Neumayer--Watz	97.47	161	e	P	08 39 11.9	+16
VNA2	Neumayer--Watz	97.47	161	⇑iP	P	08 38 59.2	+3.2
VNA2				e		08 39 06.7	
VNA2				e		08 39 11.9	
OBN	Obninsk	98.44	29	⇓eP	P	08 39 02.1	+1.3
OBN				eSS	SS	08 57 24.0	+16
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.6						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s						
OBN	Obninsk	98.44	29	PFAKE		08 39 10.0	+9.2
OBN				LR	LR		
	comp=Z,48nm,20.0s						
ARU	Arti	106.39	19	PFAKE		08 44 00.0	
ARU				LR	LR		
	comp=Z,59nm,19.0s						
KIV	Kislovodsk	108.22	36	PFAKE		08 44 00.0	
KIV				LR	LR		
	comp=Z,29nm,20.0s						
ERM	Erimo	109.61	323	PFAKE		08 44 10.0	
ERM				LR	LR		
	comp=Z,5.0nm,19.0s						
GNI	Garni	111.75	38	PFAKE		08 44 10.0	+14
GNI				LR	LR		
	comp=Z,143nm,20.0s						
ZAL	Zalesovo	114.33	5	PKP	PKPdf	08 44 03.4	+2.6
	comp=Z,1.6nm,0.6s,baz=12,slow=4.0,SNR=6.7						
BOSA	Boshof	114.83	116	PKP	PKPdf	08 44 06.3	+3.9
	comp=Z,5.5nm,0.7s,baz=279,slow=1.1,SNR=15						
BOSA	Boshof	114.83	116	PKP	PKPdf	08 44 06.3	+3.9
HIA	Hailar	115.01	341	PFAKE		08 44 20.0	+18
HIA				LR	LR		
	comp=Z,186nm,20.0s						
MDJ	Mudanjiang	115.01	332	PDIF	Pdif	08 40 15.5	+1.2
MDJ				PP	PP	08 45 04.5	-3.1
MDJ				S		08 52 45.0	
MDJ				SS	SS	09 01 02.5	+10
MDJ				PP	PP		
	comp=Z,60nm,4.8s						
MDJ				LR	LR		
	comp=N,60nm,22.1s						
MDJ				LR	LR		
	comp=E,20nm,19.9s						
MDJ				LR	LR		
	comp=Z,50nm,21.0s						
LBTB	Lobatse	115.09	112	PFAKE		08 44 20.0	+17
LBTB				LR	LR		
	comp=Z,230nm,21.0s						
CN2	Changchun	117.49	334	ePKP	PKPdf	08 44 10.0	+2.9
ULN	Ulaanbaatar	119.51	349	ePKIKP	PKPdf	08 44 14.4	+3.4
SONM	Songino Array	119.66	350	PKP	PKPdf	08 44 14.4	+3.1
	comp=Z,5.0nm,0.8s,baz=335,slow=1.3,SNR=26						
MAW	Mawson	120.59	167	PKP	PKPdf	08 44 16.4	+3.8
	comp=Z,3.2nm,0.7s,baz=186,slow=1.5,SNR=8.9						
MKAR	Makanchi Array	121.07	9	PKP	PKPdf	08 44 16.4	+2.4
	comp=Z,2.1nm,0.7s,baz=333,slow=2.7,SNR=11						
MKAR	Makanchi Array	121.07	9	PKP	PKPdf	08 44 16.4	+2.4
KS15	Wonju Array Si	121.31	328	ePKPdf	PKPdf	08 44 17.1	+2.4
INCN	Inchon	121.92	329	PFAKE		08 44 30.0	+14
INCN				LR	LR		
	comp=Z,164nm,19.0s						
WMQ	Urumqi	124.62	5	ePKP	PKPdf	08 44 24.5	+3.5
WMQ				PP	PP	08 46 16.3	+3.0
WMQ				SKKS		08 53 04.0	
WMQ				SS	SS	09 03 05.0	+8.5
WMQ				PP	PP		
	comp=Z,40nm,6.0s						
WMQ				LR	LR		
	comp=N,130nm,22.6s						
WMQ				LR	LR		
	comp=E,140nm,20.6s						
WMQ				LR	LR		
	comp=Z,140nm,20.6s						
HHC	Hu-ho-hao-te	125.09	343	ePKP	PKPdf	08 44 24.5	+2.5
HHC				PKS	PKS	08 47 59.5	+1.8
HHC				SKS	SKS	08 51 30.0	+14
HHC				SKKS		08 53 05.0	
HHC				PP	PP		
	comp=Z,100nm,7.6s						
HHC				LR	LR		
	comp=N,190nm,21.1s						
HHC				LR	LR		
	comp=E,240nm,15.2s						
HHC				LR	LR		
	comp=Z,200nm,23.5s						
TOO	Toolangi	126.63	232	eP	PKPdf	08 44 32.5	+7.5
	comp=Z,3.6nm,0.7s						
GTA	Gaotai	128.87	353	ePKP	PKPdf	08 44 33.3	+4.0
SSE	Sheshan	129.71	328	PKP	PKPdf	08 44 33.5	+2.4
SSE				PP	PP	08 46 48.0	+0.8
SSE				SS	SS	09 04 05.0	+4.6
SSE				PP	PP		
	comp=Z,10.0nm,15.6s						
SSE				LR	LR		
	comp=N,30nm,22.3s						
SSE				LR	LR		
	comp=E,50nm,22.2s						
SSE				LR	LR		
	comp=Z,30nm,20.2s						
NJ2	Nanjing	130.09	331	ePKP	PKPdf	08 44 34.5	+2.7
NJ2				XPKP		08 44 48.8	
NJ2				PP	PP	08 46 49.0	-0.5
NJ2				PKS	PKS	08 48 11.0	+3.8
NJ2				SKS	SKS	08 51 41.0	+10
NJ2				PP	PP		
	comp=Z,90nm,5.3s						
NJ2				LR	LR		
	comp=N,130nm,25.7s						
NJ2				LR	LR		
	comp=E,110nm,25.1s						
NJ2				LR	LR		
	comp=Z,120nm,22.0s						
STKA	Stephens Creek	131.12	238	eP	PKPdf	08 44 41.3	+7.5
	comp=Z,4.4nm,0.6s						
STKA	Stephens Creek	131.12	238	PKP	PKPdf	08 44 39.6	+5.8
	comp=Z,5.2nm,0.6s,baz=101,slow=10,SNR=3.6						
LZH	Lanzhou	131.50	348	⇓PKP	PKPdf	08 44 39.5	+5.1
LZH				XPKP		08 44 54.0	
LZH				LR	LR		
	comp=E,380nm,16.2s						
LZH				LR	LR		
	comp=Z,420nm,18.8s						
ENH	Enshi	135.48	340	PKPdf	PKPdf	08 44 43.0	+1.0
ENH				LR	LR		
	comp=Z,178nm,20.0s						
LSA	Lhasa	138.89	3	ePKIKP	PKPdf	08 44 53.2	+5.0
LSA				MLR	MLR		
	comp=Z,172nm,21.0s						
WB2	Warramunga Arr	139.55	253	eP	PKPdf	08 44 52.4	+2.8
WRAB	Tennant Creek	139.55	253	ePKIKP	PKPdf	08 44 50.9	+1.3
WRA	Warramunga Arr	139.56	253	PKhKP		08 44 43.7	
	comp=Z,1.2nm,1.0s,baz=96,slow=3.0,SNR=7.9						
WRA				PKP	PKPdf	08 44 52.4	+2.8
	comp=Z,5.7nm,1.0s,baz=87,slow=1.9,SNR=21						
GKN	Gorkha	139.78	12	eP	PKPdf	08 44 53.7	+3.8
	comp=Z,60nm,1.0s						
KOLN	Koldanda	139.79	13	eP	PKPdf	08 44 53.4	+3.5
	comp=Z,30nm,1.1s						
GUN	Gumba	140.10	10	eP	PKPdf	08 44 51.4	+0.9
	comp=Z,38nm,0.8s						
KKN	Kakani	140.11	11	eP	PKPdf	08 44 52.3	+1.8
	comp=Z,30nm,0.8s						
PKI	Pulchoki	140.35	11	eP	PKPdf	08 44 50.8	-0.1
	comp=Z,24nm,0.9s						
KMI	Kunming	142.31	346	PKP	PKPdf	08 44 57.0	+2.5
KMI				PP	PP	08 48 08.8	+3.6
KMI				PP	PP		
	comp=Z,10.0nm,21.4s						
KMI				LR	LR		
	comp=Z,70nm,22.1s						
FORT	Forrest	142.47	234	eP	PKPdf	08 45 00.4	+5.8
	comp=Z,14nm,0.7s						
QIZ	Qiongzhong	145.38	331	⇑iPKP	PKPdf	08 45 04.3	+4.4
HYB	Hyderabad	147.78	27	eP	PKPdf	08 45 08.0	+4.0
HYB	Hyderabad	147.78	27	i PKP	PKPdf	08 45 06.0	+2.0
HYB				e		08 45 30.0	
FITZ	Fitzroy Crossi	147.94	254	eP	PKPdf	08 45 08.2	+4.0
	comp=Z,27nm,0.9s						
CM31	Chiang Mai Arr	149.58	349	ePKPbc	PKPdf	08 45 15.5	+8.7
CMAR	Chiang Mai Arr	149.58	349	PKP	PKPdf	08 45 11.0	+4.2
	comp=Z,26nm,0.7s,baz=342,slow=3.0,SNR=27						
CMAR				PKPbc	PKPdf	08 45 15.2	+8.4
	comp=Z,26nm,0.7s,baz=347,slow=3.4,SNR=52						
KLBR	Kellerberrin	149.79	225	eP	PKPdf	08 45 19.2	+12
	comp=Z,14nm,0.7s						
MUN	Mundaring	150.61	223	eP	PKPdf	08 45 16.0	+7.9
	comp=Z,25nm,0.7s						
KKM	Kota Kinabalu	151.09	306	ePKPbc	PKPdf	08 45 16.0	+6.7

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*IDC **25** 08:39:42.5±1.1, 11.81N×86.94W, mb3.9/8, mb1 4.1/8, mb1mx3.9/21, mbtmp3.9/8, ML3.3/1, Error ellipse: s-maj=51.1km s-min=14.8km az=52.0*

*NEIC **25** 08:39:46.6±6.1, 11.60N×87.14W, h30^{km}±44^{km}, mb4.1/8, Error ellipse: s-maj=28.7km s-min=9.8km az=54.0*

*CASC **25** 08:39:50.0±2.6, 11.53N×87.05W, h45^{km}±142^{km}, MD4.3, ML3.5, mb4.1(NEIC)*

ISC 25 08:39:49.5±0.5**, 11.59N**±0.05×**87.01W**±0.04**, h78**^{km}±4^{km}**, n60, σ1^{s}08**/72**, mb3.9**/16**, 8C-7D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUN	El Crucero	0.80	60	⇓eP	P	08 40 06.1	-0.2
LEON	Leon	0.83	8	⇑iP	P	08 40 05.6	-1.1
XAVN	Gruta Xavier	0.87	50	⇑eP	P	08 40 07.0	-0.1
TICN	Ticuantepe	0.88	60	eP	P	08 40 07.2	0.0
MIRN	Miramar	0.90	19	⇓iP	P	08 40 06.8	-0.6
APYN	Apoyeque	0.91	45	eP	P	08 40 07.6	+0.1
MGAN	Managua	0.93	53	⇑eP	P	08 40 07.7	-0.1
MGAN				i		08 40 33.4	
	comp=E,1µm,0.5s						
MOMJ	Momotombo	0.94	29	⇑eP	P	08 40 07.5	-0.4
MOMJ				eS	S	08 40 22.9	+1.2
CNGN	Cerro Negro	0.96	18	⇓eP	P	08 40 07.0	-1.1
APON	Apoyo	0.98	70	⇑eP	P	08 40 08.2	-0.2
WILN	Americas 2	0.98	54	⇓eP	P	08 40 08.4	0.0
TEL3	Telica 3	0.99	9	eP	P	08 40 07.7	-0.9
TELN	Telica	1.03	10	eP	P	08 40 07.7	-1.3
CRIN	San Cristobal	1.11	358	eP	P	08 40 10.3	+0.3
PYTN	Playitas	1.32	44	⇑eP	P	08 40 12.8	-0.2
CONN	Concepcion	1.35	91	⇑eP	P	08 40 12.2	-1.1
SOMN	Somoto	1.86	12	eP	P	08 40 21.9	+1.8
CNCH	Conchagua	1.86	334	⇑eP	P	08 40 22.6	+2.5
CNCH				eS	S	08 40 45.3	+2.7
BLLM	Bellamira	2.20	327	eP	P	08 40 29.7	+5.0
BLLM				eS	S	08 40 56.0	+5.1
VSM	San Miguel	2.21	326	eP	P	08 40 30.8	+5.9
JTS	JuntasAbangare	2.39	122	Pn	P	08 40 24.6	-2.8
	comp=E,7.3nm,0.3s,baz=308,slow=14,SNR=9.8						
JTS				Sn	S	08 40 55.0	-0.7
	comp=E,18nm,0.3s,baz=304,slow=16,SNR=6.8						
JTS	JuntasAbangare	2.39	122	ePn	P	08 40 24.0	-3.5
SNVI	San Vicente	2.69	319	eP	P	08 40 30.5	-1.1
LCBS	La Ceiba	2.82	317	⇓eP	P	08 40 34.3	+0.9
LCBS				eS	S	08 41 06.2	-0.1
LFRS	El Faro	2.85	315	⇓eP	P	08 40 34.7	+0.8
LFRS				eS	S	08 41 06.1	-1.0
LFU	La Fuente	2.98	316	eP	P	08 40 37.2	+1.6
BOQS	Boqueron	3.08	314	eP	P	08 40 38.0	+1.0
BOQS				eS	S	08 41 12.6	-0.3
PRS1	Puriscal	3.09	121	eP	P	08 40 38.2	+1.0
PRS1				eS	S	08 41 16.1	+3.0
SJS	Escuela Geolog	3.33	119	eS	S	08 41 21.4	+2.3
TRTC	Tortuguero	3.38	107	eP	P	08 40 38.9	-2.4
SBLS	San Blas	3.40	312	eP	P	08 40 42.1	+0.7
SBLS				eS	S	08 41 20.5	-0.3
SNJE	San Jose	3.40	312	eP	P	08 40 42.6	+1.0
SNJE				eS	S	08 41 19.9	-1.0
RTR	El Retiro	3.45	312	eP	P	08 40 43.2	+0.9
RTR				eS	S	08 41 21.0	-1.1
URSC	Urasca	3.62	118	⇓eP	P	08 40 44.8	+0.2
URSC				eS	S	08 41 25.1	-1.2
RBDL	Robledal	3.62	314	eP	P	08 40 45.2	+0.6
RBDL				eS	S	08 41 26.1	-0.4
BUS	Buena Vista	3.78	122	eP	P	08 40 45.8	-0.9
BUS				eS	S	08 41 31.1	+0.9
SVTC	San Vito de Co	4.86	125	eP	P	08 41 00.8	-1.0
SDV	Santo Domingo	16.33	98	Pn	P	08 43 38.0	+2.5
	comp=E,0.2nm,0.3s,baz=320,slow=2.8,SNR=4.9						
LRAL	Lakeview Retre	21.35	0	eP	P	08 44 33.2	+1.2
	comp=E,5.1nm,0.8s,mb3.9						
TXAR	Lajitas Array	23.52	321	P	P	08 44 53.4	+0.2
	comp=E,1.0nm,0.5s,mb3.4,baz=139,slow=9.6,SNR=19						
TXAR	Lajitas Array	23.52	321	P	P	08 44 53.4	+0.2
CPCT	Cooper Cave	23.86	5	eP	P	08 44 57.9	+1.3
TZTN	Tazewell	25.05	7	eP	P	08 45 08.7	+0.7
WMOK	Wichita Mounta	25.42	337	eP	P	08 45 11.9	+0.3
	comp=E,6.3nm,1.2s,mb3.9						
MNTX	Cornudas Mount	26.23	323	P	P	08 45 18.6	-0.5
	comp=E,0.7nm,0.7s,mb3.2						
CCM	Cathedral Cave	26.63	353	eP	P	08 45 22.1	-0.6
	comp=E,2.7nm,0.6s,mb4.0						
SAML	Samuel	31.26	130	eP	P	08 46 03.7	-0.7
	comp=E,1.5nm,0.7s,mb3.8						
SADO	Sadowa	33.75	10	P	P	08 46 24.7	-1.0
	comp=E,1.5nm,0.5s,mb4.1,baz=196,slow=6.7,SNR=5.1						
PDAR	Pinedale Array	36.73	332	P	P	08 46 50.9	-0.2
	comp=E,0.5nm,0.5s,mb3.7,baz=124,slow=12,SNR=6.3						
HWUT	Hardware Ranch	36.83	329	eP	P	08 46 51.7	-0.1
	comp=E,2.4nm,0.6s,mb4.3						
AHID	Auburn Hatcher	37.47	330	P	P	08 46 56.2	-0.9
	comp=E,3.1nm,0.6s,mb4.4						
SIV	San Ignacio	37.54	136	P	P	08 47 00.2	+2.2
	comp=E,2.7nm,0.5s,mb4.3,baz=309,slow=8.3,SNR=30						
TPAW	Teton Pass	37.94	331	P	P	08 46 59.8	-1.3
	comp=E,1.9nm,0.5s,mb4.2						
MCMT	McKenzie Canyo	39.85	331	eP	P	08 47 17.9	+1.0
SCHQ	Schefferville	45.98	16	P	P	08 48 05.5	-1.1
	comp=E,1.7nm,0.9s,mb3.8,baz=244,slow=10,SNR=4.1						
BDFB	Brasilia	47.13	124	P	P	08 48 16.5	+0.4
	comp=E,2.0nm,0.5s,mb4.1,baz=248,slow=3.1,SNR=5.8						
YKA	Yellowknife Ar	54.55	345	P	P	08 49 10.1	-1.5
	comp=E,0.9nm,0.7s,mb3.9,baz=139,slow=7.5,SNR=8.5						
ILAR	Eielson Array	66.98	336	P	P	08 50 35.3	-0.5
	comp=E,0.3nm,0.5s,mb3.4,baz=147,slow=4.5,SNR=7.5						
WRA	Warramunga Arr	139.44	253	PKP	PKPdf	08 59 14.5	+5.7
	comp=E,0.3nm,0.6s,baz=91,slow=2.4,SNR=6.8						
CMAR	Chiang Mai Arr	149.58	349	PKP	PKPdf	08 59 29.6	+3.5
	comp=E,0.8nm,0.5s,baz=342,slow=2.9,SNR=2.7						
CMAR				PKPbc	PKPdf	08 59 33.6	+7.5
	comp=E,0.9nm,0.5s,baz=7.2,slow=4.1,SNR=4.3						

CASC 25 08:56:24.6±2.1**, 9.14N**×**83.71W, h27**^{km}±5^{km}**, MD3.7, MW3.8, 3C-4D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUS	Buena Vista	0.42	354	⇓iP	Pb	08 56 34.5	+0.9
BUS				eS	Sb	08 56 43.3	+3.6
URSC	Urasca	0.70	355	⇓iP	Pb	08 56 37.9	-0.2
ACR	Cerro Adams	0.72	132	eP	Pb	08 56 37.5	-1.0
ACR				eS	Sb	08 56 49.4	+1.4
SVTC	San Vito de Co	0.82	115	⇑eP	Pb	08 56 39.6	-0.6
SJS	Escuela Geolog	0.87	337	⇓eP	Pb	08 56 40.1	-0.8
SJS				eS	Sb	08 56 53.1	+0.9
PRS1	Puriscal	1.03	325	⇑eP	Pn	08 56 41.4	-2.0
BRU2	Volcan	1.06	108	eP	Pn	08 56 44.0	+0.1
BRU2				eS	Sb	08 56 58.2	+0.4
BRU	Baru	1.18	106	eP	Pn	08 56 45.5	-0.1
BRU				eS	Sn	08 57 04.2	+3.4
DVD	David	1.43	119	eP	Pn	08 56 48.9	-0.2
DVD				eS	Sn	08 57 07.3	+0.2
TRTC	Tortuguero	1.43	360	⇑eP	Pn	08 56 48.3	-0.9
PTP1	Petroterminal	1.57	126	eP	Pn	08 56 46.6	-4.6
PTP1				eS	Sn	08 57 04.9	-5.8
FORC	Fortuna	1.63	325	i P	Pn	08 56 51.0	-0.9
FORC				⇓eP		08 56 51.3	
FORC				i S	Sn	08 57 12.8	+0.6
FORC				eS	Sn	08 57 13.1	+0.9

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*IDC **25** 08:58:45.4±1.5, 1.90S×139.25E, mb4.0/5, mb1 4.3/6, mb1mx4.1/14, mbtmp4.1/6, ML4.5/1, MS3.8/2, Ms1 3.8/2, ms1mx3.2/17, Error ellipse: s-maj=63.6km s-min=21.5km az=82.0*

*NEIC **25** 08:58:52.5±1.0, 2.04S×139.00E, h45^{km}, mb4.4/2, Error ellipse: s-maj=32.5km s-min=12.0km az=92.0*

ISC 25 08:58:48.9±3.6**, 2.06S**±0.08×**139.0E**±0.2**, h29**^{km}±27^{km}**, n15, σ1^{s}04**/18**, mb4.0**/5**, MS4.0**/1**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	12.39	211	eP	P	09 01 45.5	-0.9
	11nm,0.6s						
KAKA				eS	S	09 04 03.5	-1.0
WRAB	Tennant Creek	18.32	194	eP	P	09 03 02.7	-0.2
	19nm,0.8s						
WB2	Warramunga Arr	18.33	194	eP	P	09 03 03.6	+0.5
WRA	Warramunga Arr	18.33	194	P	P	09 03 03.8	+0.7
	1.5nm,0.3s,baz=19,slow=12,SNR=46						
WRA				S	S	09 06 22.8	-0.7
	0.1nm,0.3s,baz=12,slow=22,SNR=4.3						
CTA	Charters Tower	19.29	159	LR	LR	09 11 50.2	
	comp=Z,193nm,18.0s,baz=226,slow=41						
FITZ	Fitzroy Crossi	20.61	218	eP	P	09 03 32.4	+3.8
	6.1nm,0.5s						
FITZ	Fitzroy Crossi	20.61	218	P	P	09 03 29.4	+0.8
	5.1nm,0.5s,baz=18,slow=12,SNR=5.6						
FITZ				S	S	09 07 16.1	+3.6
	21nm,0.9s,baz=181,slow=14,SNR=7.3						
FITZ	Fitzroy Crossi	20.61	218	P	P	09 03 29.4	+0.8
FITZ				eP		09 03 32.4	
FITZ				S	S	09 07 16.1	+3.6
MBWA	Marble Bar	26.66	223	P	P	09 04 29.2	+1.7
STKA	Stephens Creek	29.76	175	P	P	09 04 55.0	-0.4
	1.3nm,0.5s,mb3.9,baz=336,slow=8.0,SNR=5.6						
STKA	Stephens Creek	29.76	175	P	P	09 04 55.0	-0.4
SONM	Songino Array	57.24	334	P	P	09 08 33.9	-2.2
	0.2nm,0.4s,mb3.5,baz=135,slow=6.1,SNR=2.4						
MKAR	Makanchi Array	69.42	322	P	P	09 09 56.5	0.0
	0.7nm,0.5s,mb3.9,baz=135,slow=6.1,SNR=4.4						
VNDA	Vanda	76.40	175	P	P	09 10 37.3	+0.3
	1.4nm,0.7s,mb4.0,baz=318,slow=6.1,SNR=7.2						
VNDA				LR	LR	09 45 22.2	
	comp=Z,67nm,18.0s,MS4.0,baz=11,slow=36						
ZRNK	Zerenda	79.69	325	eP	P	09 10 56.0	+0.5
	8.7nm,1.5s,mb4.5						

CASC 25 09:08:32.6±2.2**, 11.62N**×**87.27W, h84**^{km}±59^{km}**, MD4.1, ML3.1, 10C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	Leon	0.87	25	⇑eP	P	09 08 50.8	+0.1
MIRN	Miramar	0.98	34	⇑eP	P	09 08 52.0	+0.1
CRUN	El Crucero	1.02	69	⇑eP	P	09 08 51.9	-0.5
CNGN	Cerro Negro	1.04	33	eP	P	09 08 52.6	0.0
MOMJ	Momotombo	1.06	43	⇑eP	P	09 08 52.8	-0.1
XAVN	Gruta Xavier	1.06	60	eP	P	09 08 54.5	+1.6
APYN	Apoyeque	1.09	56	⇑eP	P	09 08 52.9	-0.3
CRIN	San Cristobal	1.09	11	eP	P	09 08 53.9	+0.6
TICN	Ticuantepe	1.10	68	⇑eP	P	09 08 52.5	-0.8
MGAN	Managua	1.13	62	⇑eP	P	09 08 53.1	-0.7
MGAN				i		09 09 16.4	
	comp=E,330nm,0.3s						
APON	Apoyo	1.22	76	⇑eP	P	09 08 53.7	-1.2
PYTN	Playitas	1.50	52	eP	P	09 08 58.4	-0.2
CONN	Concepcion	1.61	92	⇑eP	P	09 08 57.8	-2.2
PRS1	Puriscal	3.33	119	eP	P	09 09 23.5	-0.2
URSC	Urasca	3.87	117	⇑eP	P	09 09 31.4	+0.2
URSC				eS	S	09 10 17.2	+1.7
BUS	Buena Vista	4.02	120	eP	P	09 09 32.5	-0.8
BUS				eS	S	09 10 21.1	+1.7

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*IDC **25** 09:13:05.3±1.6, 11.92N×86.80W, mb3.7/5, mb1 4.0/5, mb1mx3.7/19, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=59.9km s-min=18.2km az=49.0*

*CASC **25** 09:13:08.0±3.9, 11.45N×87.27W, h20^{km}±16^{km}, MD4.2, ML3.5*

*NEIC **25** 09:13:09.3±3.1, 11.51N×87.22W, h39^{km}±33^{km}, Error ellipse: s-maj=53.9km s-min=19.4km az=218.0*

ISC 25 09:13:09.1±0.6**, 11.39N**±0.04×**87.21W**±0.04**, h33**^{km}**, n36, σ1^{s}23**/48**, mb3.7**/5**, 10C-6D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	Leon	1.06	17	⇑eP	P	09 13 27.4	-0.3
CRUN	El Crucero	1.06	56	⇓eP	P	09 13 27.9	+0.1
CRUN				eS	S	09 13 42.9	+1.4
XAVN	Gruta Xavier	1.14	49	eP	P	09 13 28.9	+0.1
TICN	Ticuantepe	1.15	56	⇑eP	P	09 13 28.8	0.0
MIRN	Miramar	1.15	25	⇓eP	P	09 13 28.5	-0.4
MIRN				eS	S	09 13 42.6	-1.1
APYN	Apoyeque	1.18	45	⇓eP	P	09 13 29.2	-0.2
MGAN	Managua	1.20	51	⇑eP	P	09 13 29.4	-0.2
MGAN				eS	S	09 13 46.3	+1.2
MGAN				i		09 13 54.8	
	comp=N,940nm,0.4s						
MOMJ	Momotombo	1.20	33	⇑eP	P	09 13 29.3	-0.4
CNGN	Cerro Negro	1.21	24	⇑eP	P	09 13 29.2	-0.5
TEL3	Telica 3	1.22	17	⇑eP	P	09 13 29.4	-0.5
APON	Apoyo	1.23	65	⇑eP	P	09 13 29.9	-0.1
WILN	Americas 2	1.25	52	eP	P	09 13 30.1	-0.3
TELN	Telica	1.26	17	⇑eP	P	09 13 29.5	-0.9
CRIN	San Cristobal	1.31	7	⇑eP	P	09 13 30.6	-0.6
CONN	Concepcion	1.56	84	⇑eP	P	09 13 34.0	-0.8
PYTN	Playitas	1.60	44	⇓eP	P	09 13 34.9	-0.5
CNCH	Conchagua	1.97	342	eP	P	09 13 45.6	+4.9
CNCH				eS	S	09 14 15.9	+11
BLLM	Bellamira	2.27	334	eP	P	09 13 50.1	+5.1
BLLM				eS	S	09 14 19.2	+7.1
JTS	JuntasAbangare	2.47	116	Pn	Pn	09 13 47.1	-0.9
	comp=N,7.8nm,0.3s,baz=318,slow=20,SNR=19						
JTS				Sn	Sn	09 14 17.8	+0.4
	comp=N,19nm,0.3s,baz=292,slow=18,SNR=7.1						
JTS	JuntasAbangare	2.47	116	eP	P	09 13 46.9	-1.0
JTS				Sn	Sn	09 14 17.8	+0.4
LCBS	La Ceiba	2.84	323	eP	P	09 13 57.3	+4.2
LCBS				eS	S	09 14 29.1	+2.6
LFRS	El Faro	2.86	321	eP	P	09 13 57.6	+4.1
LFRS				eS	S	09 14 29.4	+2.2
PRS1	Puriscal	3.17	116	eP	P	09 13 59.3	+1.5
PRS1				eS	S	09 14 36.2	+1.2
SBLS	San Blas	3.39	316	eP	P	09 14 04.8	+3.8
SBLS				eS	S	09 14 43.3	+2.8
URSC	Urasca	3.71	114	⇓eP	P	09 14 07.0	+1.6
URSC				eS	S	09 14 52.6	+4.0
BUS	Buena Vista	3.85	118	⇓eP	P	09 14 08.2	+0.7
SDV	Santo Domingo	16.50	97	Pn	P	09 17 00.9	+1.1
	comp=N,0.3nm,0.3s,baz=238,slow=9.7,SNR=4.6						
TXAR	Lajitas Array	23.54	322	P	P	09 18 15.8	-1.6
	comp=N,0.6nm,0.5s,mb3.3,baz=137,slow=9.4,SNR=17						
TXAR	Lajitas Array	23.54	322	P	P	09 18 15.8	-1.6
PV10	Paradox Valley	33.20	328	eP	P	09 19 42.0	-3.1
PDAR	Pinedale Array	36.81	332	P	P	09 20 12.8	-3.0
	comp=N,0.3nm,0.5s,mb3.4,baz=130,slow=12,SNR=4.2						
MCMT	McKenzie Canyo	39.92	331	eP	P	09 20 40.1	-1.7
SCHQ	Schefferville	46.22	16	P	P	09 21 27.6	-5.2
	comp=N,2.0nm,1.0s,mb4.0,baz=220,slow=14,SNR=3.5						
BDFB	Brasilia	47.19	124	P	P	09 21 39.0	-1.9
	comp=N,1.5nm,0.5s,mb4.2,baz=313,slow=9.9,SNR=3.4						
YKA	Yellowknife Ar	54.69	345	P	P	09 22 33.0	-4.1
	comp=N,0.4nm,0.6s,mb3.7,baz=145,slow=7.0,SNR=3.9						
YKA	Yellowknife Ar	54.69	345	P	P	09 22 33.0	-4.1

JMA 25 09:17:49.9±0.3**,26.17N×124.56E,h164^{km},M3.5, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMJ	Miyako jima 2	1.50	154	P	P	09 18 21.0	+0.1
JMJ				eS	S	09 18 43.9	-1.0
JTJ	Tarama	1.53	175	P	P	09 18 21.3	+0.1
JTJ				eS	S	09 18 44.2	-1.1
JOGS	Gusukube	1.60	151	P	P	09 18 22.2	+0.3
JOGS				eS	S	09 18 45.9	-0.7
JIJ	Ishigaki jima	1.84	192	P	P	09 18 23.6	-0.8
JIJ				eS	S	09 18 48.7	-2.4
IRIF	Iriomote-Funau	1.98	203	P	P	09 18 25.3	-0.6
IRIF				eS	S	09 18 52.9	-0.8
JKRS	Kuro-shima	1.99	195	P	P	09 18 25.4	-0.7
JKRS				eS	S	09 18 52.2	-1.8
JKE	Kume jima 2	2.00	85	P	P	09 18 25.9	-0.3
YOJ	Yonaguni jima	2.20	220	P	P	09 18 29.1	+0.4
HATJ	Hateruma jima	2.21	198	P	P	09 18 28.0	-0.8
HATJ				eS	S	09 18 56.8	-1.9
JAGN	Aguni-jima	2.44	80	P	P	09 18 30.5	-1.0
JJT2	Tamagusuku 2	2.87	90	P	P	09 18 35.8	-1.0
JJT2				eS	S	09 19 10.6	-2.2
JIH	Iheya	3.17	73	eS	S	09 19 16.1	-3.5
JOW	Kunigami	3.39	78	P	P	09 18 41.4	-2.1

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*IDC **25** 09:22:50.0±1.4, 11.74N×87.02W, mb3.9/10, mb1 4.1/11, mb1mx3.9/22, mbtmp3.8/11, ML3.1/1, Error ellipse: s-maj=49.2km s-min=17.2km az=45.0*

*CASC **25** 09:22:51.2±1.8, 11.96N×87.36W, h34^{km}±16^{km}, MD4.4, mb4.1(NEIC)*

*NEIC **25** 09:22:55.1±5.8, 11.73N×87.07W, h33^{km}±43^{km}, mb4.1/3, Error ellipse: s-maj=27.6km s-min=11.8km az=52.0*

ISC 25 09:22:57.0±0.7**,11.7N**±0.1×**87.0W**±0.1**,h72**^{km}±7^{km}**,n35,** σ**1^{s}34**/43**,mb3.9**/13**,3C,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	JuntasAbangare	2.45	124	Pn	P	09 23 33.0	-2.7
	3.9nm,0.3s,baz=321,slow=18,SNR=3.7						
JTS				Sn	S	09 24 03.6	-0.9
	31nm,0.3s,baz=265,slow=20,SNR=8.2						
JTS	JuntasAbangare	2.45	124	eP	P	09 23 32.7	-2.9
JTS				Sn	S	09 24 03.6	-0.9
LCBS	La Ceiba	2.74	316	⇑eP	P	09 23 42.6	+2.9
LCBS				eS	S	09 24 10.5	-1.2
LFRS	El Faro	2.78	314	eP	P	09 23 43.3	+3.0
LFRS				eS	S	09 24 12.3	-0.4
BOQS	Boqueron	3.01	313	eP	P	09 23 47.2	+3.8
BOQS				eS	S	09 24 18.4	-0.1
PRS1	Puriscal	3.15	122	eP	P	09 23 45.8	+0.3
PRS1				eS	S	09 24 27.1	+5.2
RTR	El Retiro	3.38	311	eP	P	09 23 52.6	+3.9
RTR				eS	S	09 24 27.1	-0.7
SJS	Escuela Geolog	3.39	120	eS	S	09 24 32.9	+5.0
TRTC	Tortuguero	3.42	108	⇑eP	P	09 23 48.3	-1.0
URSC	Urasca	3.67	120	eP	P	09 23 53.0	+0.3
URSC				eS	S	09 24 38.6	+3.5
BUS	Buena Vista	3.84	123	⇑eP	P	09 23 54.4	-0.6
BUS				eS	S	09 24 46.1	+6.9
SVTC	San Vito de Co	4.92	125	eP	P	09 24 08.7	-1.4
SDV	Santo Domingo	16.36	98	Pn	P	09 26 45.8	+2.3
	0.3nm,0.3s,baz=278,slow=6.3,SNR=5.1						
LRAL	Lakeview Retre	21.25	0	eP	P	09 27 36.5	-2.6
	6.7nm,0.8s,mb4.0						
OXF	Oxford	22.83	355	eP	P	09 27 55.1	+0.4
TXAR	Lajitas Array	23.43	321	P	P	09 28 01.6	+1.1
	1.1nm,0.6s,mb3.4,baz=137,slow=9.9,SNR=16						
CPCT	Cooper Cave	23.77	5	eP	P	09 28 06.0	+2.3
WMOK	Wichita Mounta	25.33	337	eP	P	09 28 19.6	+0.9
	6.4nm,1.2s,mb3.9						
CCM	Cathedral Cave	26.54	353	eP	P	09 28 27.4	-2.5
	5.1nm,0.9s,mb4.0						
PV10	Paradox Valley	33.06	327	eP	P	09 29 27.4	-0.4
SADO	Sadowa	33.66	10	P	P	09 29 33.0	0.0
	4.3nm,0.8s,mb4.4,baz=210,slow=10,SNR=5.8						
SADO	Sadowa	33.66	10	P	P	09 29 33.0	0.0
PDAR	Pinedale Array	36.65	332	P	P	09 29 58.6	+0.2
	0.7nm,0.6s,mb3.8,baz=118,slow=8.9,SNR=7.3						
NVAR	Mina Array Bea	38.56	319	P	P	09 30 14.5	+0.2
	0.2nm,0.3s,mb3.4,baz=143,slow=4.5,SNR=3.7						
ULM	Lac du Bonnet	39.14	351	P	P	09 30 18.0	-1.0
	5.1nm,1.0s,mb4.3,baz=152,slow=4.8,SNR=3.5						
MCMT	McKenzie Canyo	39.76	331	eP	P	09 30 26.0	+1.7
NEW	Newport	44.28	331	P	P	09 31 00.8	-0.4
	0.7nm,0.5s,mb3.7,baz=98,slow=7.1,SNR=2.1						
SCHQ	Schefferville	45.89	16	P	P	09 31 13.3	-0.6
	1.4nm,0.7s,mb3.8,baz=228,slow=15,SNR=3.0						
SCHQ	Schefferville	45.89	16	P	P	09 31 13.3	-0.6
BDFB	Brasilia	47.20	124	P	P	09 31 24.5	-0.2
	1.7nm,0.4s,mb4.1,baz=0.5,slow=3.1,SNR=3.3						
YKA	Yellowknife Ar	54.46	345	P	P	09 32 18.2	-0.9
	0.8nm,0.7s,mb3.9,baz=140,slow=7.4,SNR=7.5						
YKA	Yellowknife Ar	54.46	345	P	P	09 32 18.2	-0.9
RES	Resolute Bay	63.14	358	eP	P	09 33 19.8	+0.5
ILAR	Eielson Array	66.89	336	P	P	09 33 42.5	-0.9
	0.5nm,0.6s,mb3.5,baz=145,slow=4.5,SNR=9.6						
WRA	Warramunga Arr	139.46	253	PKP	PKPdf	09 42 21.3	+4.2
	0.4nm,0.7s,baz=88,slow=2.0,SNR=8.4						

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*CSEM **25** 09:25:30.2±0.3, 61.74N×25.30W, h2^{km}, ML3.6, Error ellipse: s-maj=9.1km s-min=5.4km az=131.0*

ISC 25 09:25:33.1±1.2**,62.12N**±0.05×**25.7W**±0.3**,h2**^{km}**,n31,** σ**1^{s}13**/37**,mb4.1**/7**,Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVOG	Vogar	2.38	37	P	Pn	09 26 13.9	+0.2
IKRI	Krysuvik	2.41	41	P	Pn	09 26 13.8	-0.3
IKRI				S	Sn	09 26 46.2	+1.7
IVOS	Vogsosar	2.51	44	P	Pn	09 26 14.9	-0.6
ISAN	Sandskeio	2.69	42	P	Pn	09 26 18.1	0.0
ISAN				S	Sn	09 26 53.7	+2.0
IBJA	Bjarnastaoir	2.70	45	P	Pn	09 26 17.7	-0.6
IKUD	Kuludalsa	2.80	36	P	Pn	09 26 20.3	+0.7
ISOL	Solvholt	2.81	48	P	Pn	09 26 19.1	-0.8
IKRO	Krokur	2.86	44	P	Pn	09 26 20.2	-0.4
IHEI	Heioarbar	2.90	42	P	Pn	09 26 20.7	-0.4
ISAU	Saurbar	3.04	49	P	Pn	09 26 22.1	-1.0
ISAU				S	Sn	09 27 01.1	+0.6
IMID	Miomork	3.06	57	P	Pn	09 26 22.0	-1.4
IESK	Eystri-Skogar	3.18	61	P	Pn	09 26 23.4	-1.7
IESK				S	Sn	09 27 02.9	-1.2
IHAU	Haukadalur	3.19	52	P	Pn	09 26 24.1	-1.1
IHAU				S	Sn	09 27 04.5	+0.2
IASB	\`sbjarnarst	3.28	34	P	Pn	09 26 27.4	+0.9
IASB				S	Sn	09 27 10.7	+4.0
IGYG	Gygjarholskot	3.29	46	P	Pn	09 26 26.3	-0.3
BAIF	Baives	20.35	113	eP	P	09 30 09.0	-4.1
	19nm,1.0s						
GIVF	Givet	20.58	112	eP	P	09 30 10.6	-5.0
MFF	Saint Martin d	21.28	125	eP	P	09 30 20.8	-1.9
	38nm,1.2s,mb4.3						
LOR	Lormes	22.34	118	eP	P	09 30 32.5	-0.9
TCF	Toulx Ste Croi	22.46	122	eP	P	09 30 34.9	+0.3
	13nm,1.0s,mb4.0						
BGF	Bois d'Agland	22.50	121	eP	P	09 30 34.8	-0.1
HAU	Haudompre	22.82	113	eP	P	09 30 39.7	+1.7
SMF	Signal de Mont	22.83	119	eP	P	09 30 38.4	+0.3
	17nm,1.0s,mb4.1						
CDF	Champ du Feu	22.91	112	eP	P	09 30 38.5	-0.4
	8.7nm,0.9s,mb3.9						
HINF	Hinteralfeld	23.18	113	eP	P	09 30 46.3	+4.8
CAF	Calviac	23.53	124	eP	P	09 30 47.9	+3.0
	16nm,1.0s,mb4.1						
CABF	La Chapelle	23.80	116	eP	P	09 30 51.2	+3.7
	43nm,1.4s,mb4.4						
SJPF	Ste Jean	23.86	132	eP	P	09 30 47.5	-0.7
	29nm,1.3s,mb4.2						
EPF	Esparros	24.50	129	eP	P	09 30 54.6	+0.3
LASF	Ste Croix	24.95	123	eP	P	09 31 00.7	+2.0
LPG	La Plagne	24.96	117	eP	P	09 31 01.4	+2.6

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*MOS **25** 10:23:21.4±1.1, 27.29N×139.98E, h525^{km}, mb4.1/4, Error ellipse: s-maj=21.9km s-min=11.6km az=112.5*

*NEIC **25** 10:23:22.8±0.7, 27.27N×139.87E, h523^{km}±8^{km}, mb4.4/7, Error ellipse: s-maj=12.2km s-min=8.3km az=86.0*

*IDC **25** 10:23:22.4±0.5, 27.25N×139.85E, h515^{km}±7^{km}, mb3.4/15, mb1 3.4/20, mb1mx3.4/27, mbtmp4.2/20, Error ellipse: s-maj=16.6km s-min=9.4km az=73.0*

*JMA **25** 10:23:23.7±0.1, 27.36N×140.10E, h532^{km}, M4.0*

ISC 25 10:23:22.3±0.4**,27.23N**±0.05×**139.91E**±0.09**,h533**^{km}±5^{km}**, n56,** σ**0^{s}89**/63**,mb3.9**/23**,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.03	93	P	P	10 24 31.1	+0.1
	42nm,0.3s,baz=296,slow=3.0,SNR=57						
CBIJ				S	S	10 25 23.3	-2.2
	70nm,0.3s,baz=276,slow=22,SNR=13						
CBIJ	Chichi jima	2.03	93	P	P	10 24 31.3	+0.3
JHHJ	Haha-jima-NKT	2.11	106	P	P	10 24 32.5	+1.1
JHHJ				eS	S	10 25 26.3	+0.1
JHJ	Hachijo jima 2	5.88	359	S	S	10 26 16.1	-0.9
	18nm,0.3s,baz=47,slow=19,SNR=4.1						
JWZ	Kozaga	7.25	331	P	P	10 25 14.3	+1.3
BSO1	Boso 1	7.46	7	P	P	10 25 15.6	+0.6
BSO1				eS	S	10 26 44.2	-0.5
JIE	Ise	7.66	340	P	P	10 25 18.6	+1.6
JWY	Kouya	7.90	333	P	P	10 25 21.1	+1.7
JAI	Aioi	8.06	326	P	P	10 25 22.3	+1.2
JYN	Shimob	8.33	352	P	P	10 25 24.0	+0.2
JTO	Tosashimizu	8.33	314	P	P	10 25 24.9	+1.1
JRY	Ryogami san	8.81	355	P	P	10 25 28.3	-0.3
JRY				S	S	10 27 08.6	-0.7
MJAR	Matsushiro Arr	9.40	352	P	P	10 25 33.7	-1.0
	2.2nm,0.3s,baz=165,slow=12,SNR=26						
MAJO	Matsushiro	9.40	352	eP	P	10 25 31.0	-3.7
MAJO				pmax	pmax		
	comp=Z,17nm,0.4s						
MAJO	Matsushiro	9.40	352	eP	P	10 25 31.0	-3.7
	comp=Z,17nm,0.4s						
MAT	Matsushiro	9.40	352	eP	P	10 25 34.0	-0.7
MAT				S	S	10 27 19.0	-1.4
MAT				pmax	pmax		
	comp=Z,18nm,0.8s						
MAT	Matsushiro	9.40	352	eP	P	10 25 34.0	-0.7
	comp=Z,18nm,0.8s						
MAT				S	S	10 27 19.0	-1.4
MAT	Matsushiro	9.40	352	P	P	10 25 33.6	-1.1
MAT				eS	S	10 27 18.6	-1.8
MAT	Matsushiro	9.40	352	P	P	10 25 34.6	-0.1
JHS	Saijyo	9.69	325	P	P	10 25 39.1	+1.4
JNU	Nakatsue	9.78	309	P	P	10 25 38.5	-0.1
	comp=Z,0.5nm,0.3s,baz=225,slow=20,SNR=5.9						
JOW	Kunigami	10.38	270	P	P	10 25 44.4	-0.5
	comp=Z,1.0nm,0.3s,baz=125,slow=19,SNR=3.0						
KS15	Wonju Array Si	14.38	318	eP	P	10 26 29.9	+4.4
ASAJ	Asahikawa	16.99	7	P	P	10 26 54.0	+2.9
	comp=Z,0.5nm,0.3s,baz=229,slow=16,SNR=3.3						
ENH	Enshi	26.81	284	eP	P	10 28 20.1	-1.3
SONM	Songino Array	33.23	317	P	P	10 29 16.4	+0.2
	comp=Z,1.1nm,0.3s,mb3.8,baz=125,slow=7.6,SNR=14						
ZAK	Zakamensk	36.19	320	eP	P	10 29 41.2	+0.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.6						
CMAR	Chiang Mai Arr	38.61	266	P	P	10 30 00.9	+0.1
	comp=Z,1.9nm,0.8s,mb3.6,baz=48,slow=11,SNR=5.5						
FITZ	Fitzroy Crossi	47.13	199	P	P	10 31 07.9	-0.2
	comp=Z,1.6nm,0.4s,mb3.9,baz=6.0,slow=13,SNR=4.2						
WB2	Warramunga Arr	47.20	187	eP	P	10 31 07.8	-0.7
WRA	Warramunga Arr	47.20	187	P	P	10 31 08.0	-0.5
	comp=Z,2.3nm,0.3s,mb4.1,baz=4.5,slow=7.7,SNR=81						
GUN	Gumba	47.56	284	eP	P	10 31 11.5	+0.3
	comp=Z,28nm,0.7s,mb4.9						
PKI	Pulchoki	48.05	284	eP	P	10 31 14.6	-0.3
	comp=Z,5.1nm,0.4s,mb4.4						
ZAL	Zalesovo	48.08	319	P	P	10 31 13.8	-0.9
	comp=Z,2.4nm,0.3s,mb4.1,baz=334,slow=11,SNR=3.8						
KKN	Kakani	48.11	284	eP	P	10 31 14.6	-0.7
	comp=Z,8.7nm,0.5s,mb4.6						
KKN	Kakani	48.11	284	eP	P	10 31 14.6	-0.7
KKN				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.2						
GKN	Gorkha	48.62	284	eP	P	10 31 18.8	-0.4
	comp=Z,31nm,1.1s,mb4.7						
MKAR	Makanchi Array	48.83	310	P	P	10 31 20.1	-0.4
	comp=Z,1.6nm,0.5s,mb3.8,baz=87,slow=9.4,SNR=10						
KOLN	Koldanda	49.56	284	eP	P	10 31 25.4	-0.8
	comp=Z,4.2nm,0.4s,mb4.2						
DZM	Mont Dzumac	55.32	150	P	P	10 32 09.3	+1.7
	comp=Z,2.0nm,0.5s,mb3.6,baz=246,slow=7.7,SNR=3.3						
ZRNK	Zerenda	57.41	317	eP	P	10 32 21.1	-0.4
ILAR	Eielson Array	58.57	29	P	P	10 32 29.5	+0.3
	comp=Z,0.6nm,0.7s,mb2.9,baz=246,slow=5.7,SNR=10						
STKA	Stephens Creek	58.80	178	P	P	10 32 30.5	-0.6
	comp=Z,1.3nm,0.4s,mb3.5,baz=325,slow=14,SNR=6.1						
STKA	Stephens Creek	58.80	178	P	P	10 32 30.5	-0.6
KEV	Kevo	72.18	340	ep	P	10 33 53.6	-0.3
	comp=Z,13nm,1.0s,mb4.3						
KEV	Kevo	72.18	340	eP	P	10 33 53.6	-0.3
KEV				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.3						
ARCES	ARCESS Array B	72.75	340	P	P	10 33 57.9	+0.8
	comp=Z,1.6nm,0.4s,mb3.8,baz=82,slow=8.7,SNR=30						
KAF	Kangasniemi	76.47	334	ep	P	10 34 17.8	-0.1
	comp=Z,2.7nm,0.4s,mb4.0,baz=56,slow=5.2						
KAF	Kangasniemi	76.47	334	eP	P	10 34 17.8	-0.1
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.1						
FINES	FINESS Array B	76.93	333	P	P	10 34 20.5	+0.2
	comp=Z,4.3nm,0.4s,mb4.2,baz=73,slow=4.9,SNR=112						
FINES	FINESS Array B	76.93	333	P	P	10 34 20.5	+0.2
AKASG	Malin Array Be	81.31	323	P	P	10 34 43.6	0.0
	comp=Z,1.5nm,0.4s,mb3.8,baz=52,slow=5.5,SNR=10						
NB2	NORSAR Subarra	82.73	337	P	P	10 34 50.4	-0.1
	comp=Z,1.9nm,0.5s,mb3.9,baz=45,slow=5.0						
NOA	NORSAR Array B	82.73	337	P	P	10 34 50.6	0.0
	comp=Z,1.5nm,0.5s,mb3.8,baz=46,slow=4.8,SNR=5.4						
BRTR	Keskin Array B	84.42	312	P	P	10 34 59.6	+0.2
	comp=Z,0.6nm,0.5s,mb3.4,baz=45,slow=4.1,SNR=3.6						
GERES	GERESS Array B	90.34	328	P	P	10 35 27.2	+0.2
	comp=Z,0.2nm,0.2s,mb3.5,slow=2.7,SNR=3.7						

IDC 25 10:33:20.8±3.8**,20.01S**×**68.64W,h93**^{km}±72^{km}**,mb3.3**/2**, mb1 3.6**/4**,mb1mx3.3**/18**,mbtmp3.9**/4**,ML3.5**/1**,Error ellipse: s-maj=46.8km s-min=32.8km az=128.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.73	7	P	P	10 34 16.6	-0.9
	2.4nm,0.3s,baz=186,slow=8.2,SNR=109						
LPAZ				S	S	10 35 00.9	+0.4
	0.2nm,0.3s,baz=270,slow=20,SNR=1.8						
SIV	San Ignacio	8.23	62	P	P	10 35 17.4	-1.8
	4.2nm,0.3s,baz=256,slow=15,SNR=128						
BDFB	Brasilia	20.10	81	P	P	10 37 47.3	-2.2
	1.5nm,0.5s,baz=234,slow=13,SNR=2.5						
PLCA	Paso Flores	20.72	184	P	P	10 37 54.0	-1.7
	2.0nm,0.8s,baz=360,slow=10.0,SNR=4.9						

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*KNET **25** 11:03:21.5±0.6, 41.17N×74.14E, h1^{km}±3^{km}, ml1.9, Error ellipse: s-maj=3.4km s-min=2.1km az=17.0*

*NNC **25** 11:03:25.4±0.6, 41.25N×73.98E, mpv2.6, Error ellipse: s-maj=5.3km s-min=3.0km az=137.0*

ISC 25 11:03:21.1±1.8**,41.07N**±0.08×**74.13E**±0.10**,h1**^{km}**,n8,** σ**1^{s}18**/14**,10C-4D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	1.11	343	⇓P	Pb	11 03 41.1	-1.8
	12nm,0.2s,SNR=16						
AML				⇑S	Sb	11 03 56.5	-1.2
	25nm,0.2s						
UCH	Uchtor	1.20	14	⇑P	Pb	11 03 42.9	-1.4
	10.0nm,0.1s,SNR=16						
UCH				⇓S	Sb	11 03 60.0	-0.2
	13nm,0.2s						
KZA	Kyzart	1.32	39	⇑P	Pb	11 03 44.8	-1.5
	5.7nm,0.2s,SNR=14						
KZA				⇓S	Sb	11 04 03.5	-0.1
	9.0nm,0.2s						
AAK	Ala-Archa	1.59	10	⇓P	Pn	11 03 51.9	+1.4
	3.0nm,0.3s						
AAK				⇑S	Sb	11 04 11.7	+0.1
	4.6nm,0.3s						
EKS2	Erkin-Say	1.62	351	⇑P	Pn	11 03 50.3	-0.6
	4.7nm,0.2s						
EKS2				⇑S	Sb	11 04 13.4	+1.1
	4.2nm,0.1s						
KBK	Karagaybulak	1.70	21	⇑P	Pn	11 03 52.7	+0.6
	7.8nm,0.2s						
KBK				⇑S	Sb	11 04 15.8	+0.9
	39nm,0.3s						
USP	Ospenovka	2.22	7	⇑P	Pn	11 04 00.9	+1.4
	9.2nm,0.2s,SNR=12						
KK31	Karatay Array	3.38	308	⇑Pn	Pn	11 04 19.7	+3.6
	0.5nm,0.5s,baz=122,slow=16,SNR=6.5						
KK31				Lg		11 05 04.9	
	0.7nm,0.3s,baz=131,slow=24,SNR=8.2						

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*NEIC **25** 11:08:25.9±0.8, 17.31S×178.69W, h501^{km}±11^{km}, mb4.4/9, Error ellipse: s-maj=21.9km s-min=6.3km az=151.0*

*IDC **25** 11:08:26.7±1.8, 17.27S×178.69W, h506^{km}±20^{km}, mb3.4/10, mb1 3.7/11, mb1mx3.5/19, mbtmp4.3/11, Error ellipse: s-maj=38.6km s-min=12.5km az=155.0*

ISC 25 11:08:25.0±1.4**,17.3S**±0.2×**178.8W**±0.1**,h500**^{km}±18^{km}**, n31,** σ**0^{s}73**/28**,mb4.1**/18**,2C,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.52	64	P	P	11 10 17.6	0.0
	6.2nm,0.3s,baz=315,slow=7.1,SNR=13						
AFI	Afiamalu	7.52	64	eP	P	11 10 16.7	-0.9
ARMA	Armidale	29.97	239	eP	P	11 13 54.4	+0.9
CTA	Charters Tower	33.22	260	eP	P	11 14 22.0	+0.8
	7.5nm,0.8s,mb4.2						
CTAO	Charters Tower	33.22	260	eP	P	11 14 21.6	+0.4
CNB	Canberra Magne	33.54	231	eP	P	11 14 24.1	+0.3
	20nm,0.7s,mb4.7						
PMG	Port Moresby	34.02	279	P	P	11 14 29.9	+1.9
	25nm,0.9s,mb4.7,baz=135,slow=5.8,SNR=5.6						
TOO	Toolangi	37.30	230	eP	P	11 14 55.2	+0.2
	7.4nm,0.8s,mb4.2						
STKA	Stephens Creek	38.63	240	eP	P	11 15 06.8	+0.9
	5.8nm,0.5s,mb4.3						
STKA	Stephens Creek	38.63	240	P	P	11 15 06.9	+1.0
	7.2nm,0.5s,mb4.3,baz=90,slow=9.9,SNR=39						
WB2	Warramunga Arr	44.40	259	eP	P	11 15 51.4	-0.8
WRAB	Tennant Creek	44.40	259	eP	P	11 15 51.6	-0.5
WRA	Warramunga Arr	44.41	259	P	P	11 15 51.6	-0.7
	3.6nm,0.6s,mb4.0,baz=93,slow=7.0,SNR=90						
WRA				ScP		11 20 28.7	
	1.1nm,0.8s,baz=79,slow=4.0,SNR=6.5						
KAKA	Kakadu	47.26	269	eP	P	11 16 14.2	0.0
	26nm,0.5s,mb4.9						
FORT	Forrest	49.97	244	⇑iP	P	11 16 33.5	-0.9
	20nm,0.7s,mb4.5						
FITZ	Fitzroy Crossi	52.80	260	eP	P	11 16 55.0	-0.2
	7.0nm,0.4s,mb4.3						
MBWA	Marble Bar	57.90	256	eP	P	11 17 30.1	-0.6
KLBR	Kellerberrin	58.80	243	eP	P	11 17 35.4	-1.2
	18nm,0.8s,mb4.4						
MJAR	Matsushiro Arr	67.20	323	P	P	11 18 30.5	0.0
	1.6nm,0.7s,mb3.8,baz=169,slow=7.6,SNR=5.1						
MJAR	Matsushiro Arr	67.20	323	P	P	11 18 30.5	0.0
NVAR	Mina Array Bea	79.21	44	P	P	11 19 38.9	0.0
	1.8nm,0.8s,mb3.6,baz=229,slow=9.9,SNR=15						
WVOR	Wild Horse Val	81.16	41	eP	P	11 19 49.2	+0.3
	2.1nm,1.0s,mb3.6						
ELK	Elko	82.44	43	P	P	11 19 55.6	+0.3
	1.0nm,0.5s,mb3.6,baz=225,slow=6.1,SNR=6.8						
ELK	Elko	82.44	43	P	P	11 19 55.6	+0.3
ELK				eP		11 19 55.8	
ILAR	Eielson Array	85.36	13	P	P	11 20 08.3	-1.0
	0.5nm,0.4s,mb3.5,baz=224,slow=5.2,SNR=17						
TXAR	Lajitas Array	85.95	58	P	P	11 20 14.2	+1.2
	1.6nm,0.8s,mb3.7,baz=219,slow=5.9,SNR=18						
ANMO	Albuquerque	85.98	52	P	P	11 20 12.7	-0.2
	0.4nm,0.5s,mb3.3,baz=263,slow=5.2,SNR=4.9						
PDAR	Pinedale Array	87.14	44	P	P	11 20 18.4	+0.2
	0.7nm,0.5s,mb3.6,baz=213,slow=0.7,SNR=6.7						
CLL	Collm	144.78	347	⇑iPKIKP	PKPdf	11 27 05.3	+1.3
	logA/T=0.7						
GERES	GERESS Array B	146.93	345	PKPbc	PKPbc	11 27 11.7	+1.9
	0.5nm,0.5s,baz=45,slow=1.9,SNR=5.6						
DAVOX	Davos	149.73	348	PKPbc	PKPdf	11 27 19.0	+6.8
	2.6nm,0.4s,baz=328,slow=9.5,SNR=5.3						

IDC 25 12:05:01.3±1.7**,5.13N**×**94.60E,mb3.8**/5**,mb1 4.0**/5**, mb1mx3.7**/18**,mbtmp3.8**/5**,Error ellipse: s-maj=72.2km s-min=25.4km az=54.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	13.90	17	Pn	P	12 08 29.0	+6.9
	0.2nm,0.3s,baz=216,slow=11,SNR=8.5						
MKAR	Makanchi Array	42.84	348	P	P	12 13 01.5	-1.3
	1.7nm,0.7s,baz=170,slow=8.1,SNR=9.3						
SONM	Songino Array	43.73	11	P	P	12 13 07.9	-2.0
	0.6nm,0.6s,baz=187,slow=8.6,SNR=5.4						
SONM				PcP	PcP	12 14 55.0	-2.5
	0.3nm,0.4s,baz=180,slow=5.8,SNR=2.7						
WRA	Warramunga Arr	46.34	124	P	P	12 13 29.5	-1.7
	1.4nm,0.5s,baz=300,slow=9.6,SNR=25						
WB2	Warramunga Arr	46.35	124	eP	P	12 13 29.2	-2.1
BVAR	Borovoye Array	51.72	342	P	P	12 14 10.0	-2.3
	0.3nm,0.4s,baz=104,slow=5.9,SNR=2.5						
GERES	GERESS Array B	80.17	319	P	P	12 17 13.5	-1.4
	0.6nm,0.5s,baz=127,slow=6.7,SNR=5.4						

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*ATH **25** 12:17:06.9, 37.74N×26.84E, h21^{km}±2^{km}, MD3.4/3*

*ISK **25** 12:17:07.5, 37.85N×26.75E, h22^{km}, MD3.3*

*CSEM **25** 12:17:07.4±0.1, 37.84N×26.78E, h15^{km}, MD3.4, Error ellipse: s-maj=2.7km s-min=1.7km az=98.0*

ISC 25 12:17:07.5±0.7**,37.81N**±0.02×**26.75E**±0.04**,h9**^{km}±5^{km}**, n28,** σ**1^{s}00**/42**,1D,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.12	146	⇓iPB	Pb	12 17 11.1	-0.3
SMG				eSB	Sb	12 17 13.3	-0.7
URLA	Izmir	0.57	347	i P	Pg	12 17 19.0	+0.1
URLA				i S	Sg	12 17 27.6	+1.1
BLCB	Balcova	0.62	21	i PG	Pg	12 17 20.0	0.0
BLCB				i SG	Sg	12 17 28.7	+0.4
IZM	Izmir	0.71	34	i PG	Pg	12 17 21.2	-0.6
KDAG	Bornova	0.72	34	i P	Pb	12 17 21.5	-0.3
KDAG				i S	Sg	12 17 32.1	+0.5
BODT	Bodrum	0.86	149	PG	Pg	12 17 24.6	-0.2
AYDN	Tasoluk	0.90	99	i P	Pb	12 17 24.8	-0.1
AYDN				i S	Sb	12 17 37.1	+0.3
BDRM	Kayabasi	0.92	143	i P	Pb	12 17 25.4	+0.2
BDRM				i S	Sb	12 17 38.7	+1.4
MLSB	Milas	0.96	122	PG	Pg	12 17 26.3	-0.4
MLSB				SG	Sg	12 17 40.4	+0.8
APE	Apeiranthos	1.22	233	PN	Pn	12 17 30.3	-0.4
APE	Apeiranthos	1.22	233	ePN	Pn	12 17 30.5	-0.2
APE				eSN	Sn	12 17 48.0	+0.6
AKS	Akhisar	1.36	38	PN	Pn	12 17 31.7	-1.0
YER	Yerkesik	1.39	118	PN	Pn	12 17 33.4	+0.3
PRK	Paraskevi	1.49	345	ePN	Pn	12 17 35.6	+1.1
PRK				eSN	Sn	12 17 56.5	+2.3
AYVA	Ayvalik	1.50	358	i P	Pn	12 17 35.6	+0.9
AYVA				i S	Sb	12 17 58.3	+4.2
MANT	Manisa	1.58	64	i P	Pn	12 17 37.7	+1.8
MANT				i S	Sb	12 17 56.3	-0.1
DENT	Denizli	1.81	91	ePN	Pn	12 17 39.3	+0.2
DNZL	Cakiroluk	1.82	93	i P	Pn	12 17 39.3	0.0
DNZL				i S	Sn	12 18 08.2	+5.6
DALT	Dalyan (Mudla)	1.82	124	ePN	Pn	12 17 39.1	-0.2
BALB	Balikesir	2.03	25	ePN	Pn	12 17 40.8	-1.5
BTOK	Tokmak	2.19	27	i P	Pn	12 17 53.3	+8.7
BTOK				i S	Sn	12 18 19.2	+7.1
CANB	Canakkale	2.22	6	ePN	Pn	12 17 43.7	-1.3
DST	Dursunbey	2.32	39	ePN	Pn	12 17 45.3	-1.1
LPK	Lapseki	2.56	0	ePN	Pn	12 17 48.2	-1.7
BNT	Bandirma	2.70	19	ePN	Pn	12 17 50.4	-1.5
ULDT	Uludag	2.98	38	i P	Pn	12 17 58.5	+2.7
ULDT				i S	Sn	12 18 42.0	+10
MFT	Murefte	3.00	8	ePN	Pn	12 17 54.5	-1.7
YLV	Yalova	3.43	36	ePN	Pn	12 18 01.6	-0.6

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*NNC **25** 12:20:40.8±16.0, 34.60N×70.13E, mpv3.4, Error ellipse: s-maj=166.4km s-min=136.2km az=119.0*

*NDI **25** 12:21:10.6±9.1, 32.90N×75.87E, h10^{km}, ML2.2*

ISC 25 12:20:29.5±0.7**,34.23N**±0.04×**72.25E**±0.09**,h10**^{km}**,n14,** σ**1^{s}01**/16**,2C-2D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	0.49	215	⇓P	Pg	12 20 39.4	-0.1
CHCP	Chirah Chowk	1.01	124	⇑P	Pb	12 20 56.1	+7.4
THW	Thamme Wali	1.49	197	⇓P	Pn	12 20 57.0	+0.5
SBDP	Sheikh Budin	2.27	213	P	Pn	12 21 07.0	-0.6
SARP	Sargodha	2.33	171	P	Pn	12 21 09.9	+1.5
SARP				S	Sn	12 21 37.0	-0.3
DRP	Derazinda	3.01	215	P	Pn	12 21 18.0	-0.3
THN	Thein Dam	3.41	121	*e*P	Pn	12 21 16.1	-7.8
THN				*e*S	Pg	12 21 29.0	-8.6
	106nm,0.2s						
SDNR	Sundarnagar	4.81	123	*e*S	Pg	12 22 00.0	-5.6
SMLA	Simla	5.17	125	*i* P	Pn	12 21 49.8	+1.0
SMLA				*i* x	x	12 22 42.6	
KKR	Kurukshetra	5.75	136	*e*x	x	12 24 19.5	
KKR				*e*x	x	12 24 41.5	
NDI	New Delhi	6.96	141	*e*x	Sg	12 24 09.0	-12
AYAN	Aya Nagar	7.08	143	*e*x	Sg	12 24 24.1	-1.2
KK31	Karatay Array	8.97	352	P	P	12 22 44.3	+2.2
	0.7nm,0.4s,baz=180,slow=13,SNR=18						
KK31				⇑S	Sn	12 24 23.0	-1.2
	0.6nm,0.3s,baz=184,slow=24						
AB31	Akbulak array	17.57	332	P	P	12 24 35.2	-0.7
	0.3nm,0.4s,baz=135,slow=10,SNR=7.0						

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*NEIC **25** 12:35:46.5, 36.77S×178.17E, h33^{km}, ML3.9(WEL), After WEL.*

WEL 25 12:35:46.1±0.6**, 36.79S×178.22E, h33^{km}, ML3.9**/7**, 3D, Error ellipse: s-maj=4.3km s-min=3.9km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.78	175	*e*P	P	12 35 59.4	-1.3
MXZ				S	S	12 36 13.1	+1.8
MXZ	Matakaoa Point	0.78	175	P*	Pb	12 35 59.6	-1.6
MXZ				S*	Sb	12 36 10.0	-1.6
PUZ	Puketiti	1.29	179	*e*P	P	12 36 08.0	+0.2
PUZ	Puketiti	1.29	179	PN	Pn	12 36 08.0	-0.1
PUZ				*e*SN	Sn	12 36 24.4	+0.1
MWZ	Matawai	1.65	199	*e*P	P	12 36 12.7	-0.3
MWZ	Matawai	1.65	199	P*	Pb	12 36 12.7	-3.0
URZ	Urewera	1.72	211	*e*P	P	12 36 13.1	-1.0
URZ	Urewera	1.72	211	P*	Pb	12 36 13.1	-3.9
URZ				S*	Sb	12 36 33.7	-4.6
TGRZ	Tauranga	1.83	238	P	P	12 36 15.1	-0.6
TGRZ	Tauranga	1.83	238	⇓P*	Pb	12 36 15.1	-3.7
KUZ	Kuaotunu	2.01	270	⇓P	P	12 36 16.9	-1.4
KUZ				S	S	12 36 40.6	-1.9
KUZ	Kuaotunu	2.01	270	⇓PN	Pn	12 36 16.9	-1.6
KUZ				SN	Sn	12 36 40.6	-2.1
KNZ	Kokohu	2.27	191	*e*P	P	12 36 20.2	-1.9
KNZ	Kokohu	2.27	191	PN	Pn	12 36 20.3	-2.0
BKZ	Black Stump Fm	2.75	209	*e*P	P	12 36 27.5	-1.3
BKZ	Black Stump Fm	2.75	209	P*	Pb	12 36 27.7	-6.7
TUVZ	Tukino	3.21	219	P*	Pb	12 36 35.1	-7.1
CNZ	Chateau	3.21	220	*e*P*	Pb	12 36 35.6	-6.6
MOVZ	Moawhango	3.27	216	*e*P*	Pb	12 36 34.6	-8.6
WNVZ	Wahianoa	3.28	218	P*	Pb	12 36 36.1	-7.4
BFZ	Birch Farm	4.19	201	*e*SN	Sn	12 37 33.4	-4.5
CAW	Cannon Point	4.97	209	*e*P	P	12 36 55.2	-5.2
CAW	Cannon Point	4.97	209	*e*PN	Pn	12 36 55.3	-5.2
QRZ	Quartz Range	6.01	226	*e*PN	Pn	12 37 11.2	-4.0

MOS 25 13:16:14.4±1.8**, 44.15N×42.65E, h9^{km}, mb3.5**/1**, 2C-4D, Error ellipse: s-maj=24.1km s-min=9.3km az=112.3, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIV	Kislovodsk	0.20	172	⇓*i*PG	Pg	13 16 18.3	-0.3
NAGR	Nagutskaya	0.31	15	⇓*i*PG	Pg	13 16 20.6	-0.2
NAGR				*e*S	Sg	13 16 26.1	+1.1
PYA	Pyatigorsk	0.32	111	⇑*e*PG	Pg	13 16 20.4	-0.5
PYA				*e*S	Sg	13 16 25.1	-0.2
SHAR	Shatzhatmas	0.41	178	⇓*i*PG	Pg	13 16 22.1	-0.6
SHAR				*i* S	Sg	13 16 27.9	-0.3
KUBR	Kubataba	0.65	122	⇑*i*PG	Pg	13 16 27.0	-0.5
KUBR				*i* S	Sg	13 16 36.9	+0.7
ARNR	Ardon	1.52	129	*i* PG	Pg	13 16 38.4	-6.4
ARNR				*i* S	Sb	13 17 03.0	+1.3
ZEI	Tsey	1.65	146	⇓*e*PN	Pn	13 16 57.6	+14
ZEI				*e*S	Sn	13 17 05.6	+0.3

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*IDC **25** 13:35:51.4±1.1, 3.34N×126.20E, mb4.1/7, mb1 4.2/7, mb1mx3.9/17, mbtmp4.1/7, Error ellipse: s-maj=94.6km s-min=17.1km az=70.0*

*NEIC **25** 13:35:55.1±0.8, 3.48N×126.54E, h30^{km}, mb4.2/5, Error ellipse: s-maj=71.2km s-min=10.5km az=69.0*

ISC 25 13:35:53.4±0.8**, 3.5N**±0.2×**126.4E**±0.5**, h30^{km}, n13, σ1^{s}05**/13**, mb4.1**/9**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	17.14	160	*e*P	P	13 39 52.0	-0.6
	4.8nm,0.4s						
FITZ	Fitzroy Crossi	21.43	182	*e*P	P	13 40 41.1	-0.2
	4.4nm,0.5s,mb4.0						
FITZ	Fitzroy Crossi	21.43	182	P	P	13 40 41.2	-0.1
	7.1nm,0.6s,mb4.2,baz=10,slow=8.3,SNR=16						
WRAB	Tennant Creek	24.51	162	*e*P	P	13 41 11.9	+0.1
	13nm,0.7s,mb4.6						
WRA	Warramunga Arr	24.52	162	P	P	13 41 12.0	+0.2
	4.5nm,0.5s,mb4.3,baz=336,slow=11,SNR=49						
WB2	Warramunga Arr	24.52	162	*e*P	P	13 41 12.0	+0.2
STKA	Stephens Creek	37.99	159	*e*P	P	13 43 10.7	+0.1
	2.7nm,0.8s,mb4.0						
STKA	Stephens Creek	37.99	159	P	P	13 43 10.6	0.0
	1.5nm,0.3s,mb4.2,baz=335,slow=5.3,SNR=12						
SONM	Songino Array	47.46	342	P	P	13 44 26.4	-1.0
	0.3nm,0.5s,mb3.5,baz=169,slow=6.3,SNR=3.6						
MKAR	Makanchi Array	57.60	325	P	P	13 45 42.7	-0.3
	1.1nm,0.4s,mb4.2,baz=118,slow=7.6,SNR=16						
BVAR	Borovoye Array	67.38	327	P	P	13 46 49.8	+1.7
	0.7nm,0.6s,mb3.9,baz=157,slow=11,SNR=5.2						
ZRNK	Zerenda	68.10	327	*e*P	P	13 46 50.2	-2.3
	1.8nm,0.7s,mb4.2						
FINES	FINESS Array B	91.92	332	P	P	13 49 02.0	+1.9
	1.2nm,0.9s,mb4.2,baz=90,slow=9.7,SNR=3.3						

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*NIED **25** 13:52:00, 41.40N×139.30E, h5^{km}, Mw3.8 Best double couple: M$_0$4.79×10^{14} NP1:φ$_s$39°, δ66°, λ96°. NP2:φ$_s$204°, δ25°, λ76°.*

*IDC **25** 13:52:31.0±0.9, 41.40N×139.13E, mb4.0/6, mb1 4.2/7, mb1mx3.7/23, mbtmp3.9/7, ML2.8/2, MS3.4/5, Ms1 3.4/5, ms1mx2.8/31, Error ellipse: s-maj=40.1km s-min=19.5km az=106.0*

*JMA **25** 13:52:32.4, 41.40N×139.30E, h15^{km}, M4.2*

JMA Felt I J1.

*NEIC **25** 13:52:35.4±4.0, 41.38N×139.23E, h30^{km}±30^{km}, mb4.5/2, MW3.7(NIED), Error ellipse: s-maj=26.1km s-min=12.3km az=102.0*

ISC 25 13:52:32.3±0.8**, 41.40N**±0.03×**139.27E**±0.05**, h22^{km}**±5^{km}**, n28, σ0^{s}58**/33**, mb4.1**/7**, MS3.6**/3**, 3C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSM	Okushiri--Mats	0.70	12	⇑P	Pb	13 52 45.7	0.0
JOSM				*e*S	Sb	13 52 54.8	-0.2
JSR	Shiriuchi	0.87	81	⇓P	Pb	13 52 48.2	-0.4
JSR				*e*S	Sb	13 52 59.5	-0.3
JSI2	Shiura 2	0.92	111	⇓P	Pb	13 52 49.2	-0.3
JSI2				*e*S	Sb	13 53 01.2	-0.1
JIW	Iwasaki	0.97	145	⇓P	Pb	13 52 50.3	0.0
JIW				*e*S	Sb	13 53 03.6	+0.8
JYM2	Yakumo 2	1.09	48	⇑P	Pb	13 52 52.0	-0.3
JYM2				*e*S	Sb	13 53 06.4	+0.2
JOT	Ohata	1.33	90	P	Pn	13 52 55.9	0.0
JOT				*e*S	Sn	13 53 12.8	-0.3
JSH	Shimam	1.37	24	P	Pn	13 52 56.0	-0.4
JSH				*e*S	Sn	13 53 13.5	-0.6
JKB	Kayabe	1.41	69	⇑P	Pn	13 52 57.0	+0.1
JKB				*e*S	Sn	13 53 15.0	+0.1
JTM	Tenmabayashi	1.49	114	P	Pn	13 52 58.1	+0.1
JTM				*e*S	Sn	13 53 16.7	-0.2
ASAJ	Asahikawa	3.66	41	Pn	Pn	13 53 31.1	+2.1
	0.4nm,0.3s,baz=228,slow=14,SNR=3.5						
MAJO	Matsushiro	4.92	190	*e*P	Pn	13 53 46.7	-0.2
MAT	Matsushiro	4.92	190	*e*P	Pn	13 53 47.0	+0.1
MAT				S	Sn	13 54 40.0	-3.8
MAT	Matsushiro	4.92	190	P	Pn	13 53 46.6	-0.3
MAT				*e*S	Sn	13 54 39.6	-4.2
MJAR	Matsushiro Arr	4.92	190	Pn	Pn	13 53 47.4	+0.5
	0.7nm,0.3s,baz=10.0,slow=14,SNR=19						
JHJ	Hachijo jima 2	8.27	177	LR	LR	13 57 17.9	
	comp=Z,265nm,20.4s,baz=84,slow=35						
JNU	Nakatsue	10.62	222	LR	LR	13 58 44.9	
	comp=Z,27nm,18.6s,baz=151,slow=35						
SONM	Songino Array	24.15	297	LR	LR	14 07 10.2	
	comp=Z,35nm,19.6s,MS2.9,baz=324,slow=37						
ZAL	Zalesovo	37.84	308	LR	LR	14 17 37.0	
	comp=Z,235nm,19.5s,MS4.0,baz=239,slow=40						
ILAR	Eielson Array	46.77	34	P	P	14 01 01.6	+0.3
	1.0nm,0.8s,mb3.8,baz=283,slow=5.6,SNR=11						
PMG	Port Moresby	51.07	170	LR	LR	14 19 19.1	
	comp=Z,166nm,19.8s,MS4.1,baz=315,slow=32						
INK	Inuvik	51.31	28	P	P	14 01 36.5	+0.2
	3.1nm,0.5s,mb4.5,baz=319,slow=5.0,SNR=11						
INK	Inuvik	51.31	28	*e*P	P	14 01 36.4	0.0
	2.7nm,0.5s,mb4.4						
WRAB	Tennant Creek	61.18	185	*e*P	P	14 02 46.9	-0.9
	2.2nm,0.5s,mb4.5						
WRA	Warramunga Arr	61.19	185	P	P	14 02 47.1	-0.7
	2.0nm,0.5s,mb4.5,slow=6.7,SNR=46						
FINES	FINESS Array B	64.19	331	P	P	14 03 06.6	-0.4
	1.1nm,0.7s,mb4.0,baz=45,slow=11,SNR=5.8						
NOA	NORSAR Array B	69.53	336	P	P	14 03 41.2	+0.4
	0.8nm,0.8s,mb3.7,baz=40,slow=6.0,SNR=3.4						
PDAR	Pinedale Array	75.78	45	P	P	14 04 19.1	+1.2
	0.5nm,0.7s,mb3.6,baz=297,slow=3.3,SNR=4.5						
SIV	San Ignacio	149.19	41	PKPbc	PKPdf	14 12 21.6	+2.2
	1.0nm,0.6s,baz=307,slow=5.6,SNR=6.6						

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*NEIC **25** 13:52:33.2, 32.15S×68.48W, h180^{km}, MD3.6(GUC), After GUC.*

GUC 25 13:52:33.2±0.6**, 32.15S×68.48W, h180^{km}**±14^{km}**, MD3.6, ML4.3, 8C-2D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	0.62	344	⇑*i*P	P	13 52 54.0	-4.8
ZON				*e*S	S	13 53 09.0	-10
MDZ	Mendoza	0.80	203	*e*P	P	13 52 56.0	-3.7
MDZ				*i* S	S	13 53 11.2	-9.0
JACH	Jahuel	1.86	253	⇑*i*P	P	13 53 09.7	+0.6
JACH				*i* S	S	13 53 37.3	+0.5
FCH	Farellones	1.93	232	⇑*i*P	P	13 53 10.3	+0.5
FCH				*i* S	S	13 53 38.9	+0.9
PCH	Pirque	2.25	229	⇑*i*P	P	13 53 13.9	+0.4
PCH				*i* S	S	13 53 44.7	+0.2
ROCH	El Roble	2.29	248	⇓*i*P	P	13 53 14.5	+0.6
ROCH				*i* S	S	13 53 45.6	+0.4
CMCH	Combarbala	2.35	294	*e*P	P	13 53 15.1	+0.4
CMCH				*i* S	S	13 53 46.7	+0.1
CMCH				AMP		13 53 47.9	
	comp=N,933nm,0.6s						
PACH	Papudo	2.53	260	⇑*i*P	P	13 53 16.2	-0.5
CHCH	Chadas Angostu	2.55	225	*e*P	P	13 53 17.5	+0.6
CHCH				*i* S	S	13 53 50.7	+0.1
TACH	Talagante	2.55	233	⇓*i*P	P	13 53 17.4	+0.4
TACH				*i* S	S	13 53 50.7	-0.1
CACH	El Canelo	2.65	222	*e*P	P	13 53 19.0	+0.9
CICH	Cipreses	2.71	216	⇑*i*P	P	13 53 20.2	+1.3
LCCH	Las Cruces	2.92	242	⇑*i*P	P	13 53 21.2	-0.2
SFDO	San Fernando	3.25	220	⇑*i*P	P	13 53 25.6	+0.2
SFDO				*i* S	S	13 54 05.9	+0.2

MAN 25 14:04:06.1, 9.65N×126.02E, h24^{km}, mb4.1, ML2.9, MS2.6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.54	284	⇓*i*P	Pb	14 04 18.2	+1.4
SCPH				*e*S	Sb	14 04 27.2	+3.0
BUTP	Butuan	0.78	210	*e*P	Pb	14 04 20.5	-0.5
MSLP	Maasin	1.24	293	*e*P	Pn	14 04 29.6	+1.4
BUKP	Musuan	2.00	208	*e*P	Pn	14 04 38.7	-0.3
BESP	Borongan	2.02	344	*e*P	Pn	14 04 38.7	-0.6
BESP				*e*S	Sn	14 05 08.6	+4.5
CNP	Catarman	3.14	335	*e*P	Pn	14 04 52.6	-2.7
PAGZ	Pagadian	3.16	236	*e*P	Pn	14 04 55.7	+0.1
GUIM	Jordan	3.51	286	*e*P	Pn	14 05 01.0	+0.4

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*IDC **25** 14:09:16.3±1.1, 11.45S×163.84E, mb4.0/5, mb1 4.3/7, mb1mx4.0/17, mbtmp4.1/7, ML4.3/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/27, Error ellipse: s-maj=29.8km s-min=24.6km az=147.0*

*NEIC **25** 14:09:20.4±5.1, 11.53S×163.81E, h29^{km}±37^{km}, mb4.3/2, Error ellipse: s-maj=19.5km s-min=16.4km az=223.0*

ISC 25 14:09:19.1±0.8**, 11.71S**±0.08×**163.76E**±0.09**, h33^{km}, n13, σ0^{s}79**/13**, mb4.0**/7**, MS3.6**/1**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.38	301	Pn	Pn	14 10 24.9	-0.3
	39nm,0.3s,baz=157,slow=5.2,SNR=13						
HNR				Sn	Sn	14 11 15.5	-0.2
	1.4nm,0.3s,baz=196,slow=19,SNR=1.8						
DZM	Mont Dzumac	10.62	166	Pn	P	14 11 52.4	+0.4
	1.1nm,0.3s,baz=357,slow=17,SNR=38						
DZM				Sn	S	14 13 50.1	-0.7
	0.4nm,0.3s,baz=339,slow=17,SNR=5.0						
CTA	Charters Tower	18.77	241	LR	LR	14 19 17.9	
	comp=Z,62nm,18.1s,baz=226,slow=32						
STKA	Stephens Creek	28.63	222	P	P	14 15 18.4	+3.6
	1.4nm,0.7s,mb3.8,baz=70,slow=6.3,SNR=3.0						
STKA	Stephens Creek	28.63	222	P	P	14 15 18.4	+3.6
WB2	Warramunga Arr	29.41	250	*e*P	P	14 15 21.9	0.0
WRAB	Tennant Creek	29.41	250	*e*P	P	14 15 22.1	+0.2
	2.8nm,0.8s,mb4.0						
WRA	Warramunga Arr	29.43	250	P	P	14 15 22.2	+0.1
	2.2nm,0.8s,mb4.0,baz=80,slow=9.0,SNR=14						
FITZ	Fitzroy Crossi	37.33	256	*e*P	P	14 16 30.6	+0.2
	4.9nm,0.6s,mb4.5						
ILAR	Eielson Array	84.77	19	P	P	14 21 50.2	-0.7
	0.4nm,0.8s,mb3.6,baz=257,slow=5.3,SNR=5.3						
NVAR	Mina Array Bea	87.94	50	P	P	14 22 08.8	+1.7
	0.5nm,0.5s,mb4.0,baz=206,slow=4.5,SNR=5.5						
INK	Inuvik	91.17	19	LR	LR	14 56 13.6	
	comp=Z,25nm,20.6s,MS3.6,baz=107,slow=31						
YKA	Yellowknife Ar	96.46	28	P	P	14 22 44.9	-1.0
	0.1nm,0.3s,mb3.8,baz=255,slow=4.2,SNR=3.9						

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*NIED **25** 14:14:00, 41.40N×139.30E, h11^{km}, Mw3.3 Best double couple: M$_0$1.11×10^{14} NP1:φ$_s$293°, δ82°, λ10°. NP2:φ$_s$201°, δ80°, λ172°.*

*JMA **25** 14:14:07.0, 41.40N×139.30E, h14^{km}, M3.5*

ISC 25 14:14:06.3±2.5**, 41.40N**±0.03×**139.29E**±0.08**, h12^{km}**±23^{km}**, n10, σ0^{s}32**/19**, 2C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSM	Okushiri--Mats	0.70	12	⇑P	Pb	14 14 20.2	+0.2
JOSM				*e*S	Sb	14 14 29.6	+0.3
JSR	Shiriuchi	0.86	81	⇓P	Pb	14 14 22.8	+0.1
JSR				*e*S	Sb	14 14 33.8	-0.1
JSI2	Shiura 2	0.91	111	⇓P	Pb	14 14 23.8	+0.2
JSI2				*e*S	Sb	14 14 35.8	+0.3
JIW	Iwasaki	0.97	146	⇑P	Pb	14 14 24.8	+0.2
JIW				*e*S	Sb	14 14 37.7	+0.6
JYM2	Yakumo 2	1.08	48	⇓P	Pb	14 14 26.7	+0.2
JYM2				*e*S	Sb	14 14 40.9	+0.4
JOT	Ohata	1.33	90	P	Pb	14 14 30.5	-0.2
JOT				*e*S	Sb	14 14 47.4	0.0
JSH	Shimam	1.37	24	P	Pn	14 14 30.9	-0.4
JSH				*e*S	Sb	14 14 48.5	-0.2
JKB	Kayabe	1.40	69	P	Pn	14 14 31.6	-0.2
JKB				*e*S	Sb	14 14 49.3	-0.2
JTM	Tenmabayashi	1.48	114	P	Pn	14 14 32.7	-0.2
JTM				*e*S	Sb	14 14 51.2	-0.6
MAT	Matsushiro	4.92	190	P	Pn	14 15 21.5	-0.4

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*NEIC **25** 14:36:32.0, 31.78S×71.88W, h32^{km}, ML3.7(GUC), After GUC.*

GUC 25 14:36:32.0±0.7**, 31.78S×71.88W, h32^{km}**±2^{km}**, MD4.1, ML3.7, 8C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILCH	Illapel	0.62	77	⇑*i*P	Pb	14 36 44.3	-0.1
ILCH				*i* S	Sb	14 36 53.4	+0.4
ILCH				AMP		14 36 53.9	
	comp=N,3μm,0.5s						
PACH	Papudo	0.85	154	⇓*i*P	Pn	14 36 47.3	-0.5
PACH				*i* S	Sn	14 36 59.6	+0.4
CMCH	Combarbala	0.96	52	⇑*i*P	Pn	14 36 49.4	0.0
CMCH				*i* S	Sn	14 37 02.6	+0.6
CMCH				AMP		14 37 04.4	
	comp=E,17μm,0.7s						
IHA	Instituto Hidr	1.26	171	⇑*i*P	Pn	14 36 53.9	+0.1
IHA				*i* S	Sn	14 37 09.1	-0.6
ROCH	El Roble	1.40	149	⇑*i*P	Pn	14 36 56.7	+1.0
ROCH				*i* S	Sn	14 37 15.3	+2.1
JACH	Jahuel	1.42	130	⇓*i*P	Pn	14 36 56.9	+1.0
JACH				*i* S	Sn	14 37 15.8	+2.2
PEL	Peldehue	1.70	144	*e*P	Pn	14 37 01.0	+1.1
LCCH	Las Cruces	1.71	171	⇓*i*P	Pn	14 37 00.1	-0.1
DSCH	Colegio Aleman	1.96	146	*e*P	Pn	14 37 04.7	+0.9
DSCH				*i* S	Sn	14 37 29.1	+1.7
DSCH				AMP		14 37 37.0	
	comp=E,1μm,0.5s						
CLCH	Cerro Calan	1.97	145	⇑*i*P	Pn	14 37 04.8	+0.9
CLCH				*i* S	Sn	14 37 29.1	+1.3
CLCH				AMP		14 37 38.2	
	comp=E,1μm,0.7s						
TACH	Talagante	2.03	157	⇑*i*P	Pn	14 37 05.4	+0.6
TACH				*e*S	Sn	14 37 31.1	+1.7
FCH	Farellones	2.05	140	⇑*i*P	Pn	14 37 06.2	+1.2
FCH				*i* S	Sn	14 37 33.2	+3.5
ANTU	Antumapu	2.08	150	AMP		14 37 42.2	
	comp=E,585nm,0.4s						
PCH	Pirque	2.17	148	*e*P	Pn	14 37 07.9	+1.1
CHCH	Chadas Angostu	2.39	155	*e*P	Pn	14 37 10.5	+0.6
LMEL	Las Melosas	2.50	146	⇑*i*P	Pn	14 37 12.6	+1.2
LMEL				*i* S	Sn	14 37 42.8	+1.5
LMEL				AMP		14 37 56.0	
	comp=N,378nm,0.6s						
CACH	El Canelo	2.57	156	*e*P	Pn	14 37 13.8	+1.3
SFDO	San Fernando	2.92	166	*e*P	Pn	14 37 17.6	+0.2

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*IDC **25** 14:40:52.1±1.3, 0.18N×97.21E, mb3.7/7, mb1 3.9/8, mb1mx3.8/16, mbtmp3.8/8, ML4.0/1, MS3.1/1, Ms1 3.3/1, ms1mx2.8/15, Error ellipse: s-maj=48.2km s-min=27.9km az=48.0*

*NEIC **25** 14:40:56.9±0.8, 0.26N×97.31E, h30^{km}, mb4.2/1, Error ellipse: s-maj=27.3km s-min=16.9km az=59.0*

ISC 25 14:40:55.2±1.1**, 0.3N**±0.2×**97.3E**±0.2**, h30^{km}, n12, σ0^{s}82**/12**, mb3.9**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	18.14	5	P	P	14 45 06.7	-0.2
	0.2nm,0.3s,baz=195,slow=11,SNR=7.4						
CMAR				LR	LR	14 52 24.8	
	comp=Z,57nm,19.2s,baz=150,slow=38						
SHL	Shillong	25.68	349	*e*P	P	14 46 25.5	+0.9
WRA	Warramunga Arr	41.46	121	P	P	14 48 41.2	-0.1
	0.2nm,0.5s,mb3.0,baz=306,slow=8.6,SNR=4.6						
SONM	Songino Array	48.03	8	P	P	14 49 33.7	0.0
	1.2nm,0.5s,mb4.2,baz=189,slow=9.6,SNR=12						
SONM				PcP	PcP	14 51 01.3	-0.4
	0.3nm,0.5s,baz=187,slow=4.9,SNR=2.7						
MKAR	Makanchi Array	48.16	346	P	P	14 49 35.0	+0.2
	1.9nm,0.8s,mb4.2,baz=158,slow=8.1,SNR=11						
ZRNK	Zerenda	57.55	340	*e*P	P	14 50 43.1	-1.3
	2.2nm,1.0s,mb4.1						
BRTR	Keskin Array B	69.81	313	P	P	14 52 04.6	-0.6
	1.0nm,0.7s,mb3.9,baz=123,slow=8.4,SNR=5.2						
AKASG	Malin Array Be	76.05	323	P	P	14 52 40.7	-1.0
	0.7nm,0.5s,mb3.9,baz=91,slow=5.2,SNR=6.7						
FINES	FINESS Array B	80.87	333	P	P	14 53 08.1	+0.4
	1.4nm,1.0s,mb3.9,baz=104,slow=7.9,SNR=7.2						
FINES	FINESS Array B	80.87	333	P	P	14 53 08.1	+0.4
GERES	GERESS Array B	85.58	319	P	P	14 53 33.8	+1.7
	0.4nm,0.8s,mb3.7,baz=59,slow=5.7,SNR=4.2						
GERES	GERESS Array B	85.58	319	P	P	14 53 33.8	+1.7

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*IDC **25** 14:53:17.6±0.9, 48.77N×125.56W, mb3.4/1, mb1 3.6/9, mb1mx3.5/26, mbtmp3.3/9, ML3.5/8, MS2.7/1, Ms1 2.7/1, ms1mx1.9/25, Error ellipse: s-maj=17.1km s-min=7.6km az=58.0*

*PGC **25** 14:53:19.0, 48.69N×125.63W, h37^{km}±7^{km}, ML3.2/28*

PGC Near Barkley Sound, British Columbia Felt (I-II) at Ucluelet.

*NEIC **25** 14:53:19.0, 48.69N×125.63W, h37^{km}, ML3.1(PGC), After PGC.*

NEIC Felt at Ucluelet.

ISC 25 14:53:18.6±0.3**, 48.69N**±0.02×**125.68W**±0.03**, h37^{km}, n81, σ0^{s}89**/115**, mb3.2**/1**, 9C-9D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZB	Mount Ozzard	0.30	25	⇓P	P	14 53 26.5	-0.1
OZB				S	S	14 53 31.8	-0.4
OZB	Mount Ozzard	0.30	25	⇓P	P	14 53 26.5	-0.1
OZB				S	S	14 53 31.7	-0.5
OZB				Trac		14 53 31.9	
	comp=Z,13μm,0.2s						
MGB	Mount Grey	0.72	64	⇓P	P	14 53 32.2	-0.1
MGB				S	S	14 53 41.7	-0.7
MGB				Trac		14 53 43.0	
	comp=Z,988nm,0.2s						
BTB	Buttle Lake	0.79	8	⇓P	P	14 53 33.6	+0.4
BTB				S	S	14 53 43.9	-0.1
BTB				Trac		14 53 44.5	
	comp=Z,2μm,0.2s						
ALB	Alberni	0.81	44	⇑P	P	14 53 33.6	+0.1
ALB				S	S	14 53 44.0	-0.5
ALB				Trac		14 53 44.7	
	comp=Z,642nm,0.3s						
PFB	Port Renfrew	0.83	98	⇑P	P	14 53 33.2	-0.6
PFB	Port Renfrew	0.83	98	⇑P	P	14 53 33.2	-0.6
PFB				S	S	14 53 43.5	-1.6
PFB				Trac		14 53 44.2	
	comp=Z,460nm,0.3s						
ETB	Estevan Point	0.89	321	P	P	14 53 35.1	+0.5
OTR	Olympics--Tyee	1.08	124	⇑P	P	14 53 37.5	+0.2
GDR	Gold River	1.12	348	P	P	14 53 38.5	+0.6
GDR				S	S	14 53 52.3	0.0
GDR				Trac		14 53 55.1	
	comp=Z,744nm,0.4s						
LZB	Mount Lazard	1.23	93	⇑P	P	14 53 39.2	-0.4
LZB				S	S	14 53 54.1	-1.2
LZB				Trac		14 53 55.5	
	comp=Z,112nm,0.2s						
NLLB	Nanaimo Lost L	1.24	64	P	P	14 53 40.0	+0.3
NLLB				S	S	14 53 55.5	0.0
NLLB				Trac		14 53 56.9	
	comp=Z,605nm,0.1s						
OBC	Olympics--Boni	1.25	121	⇑P	P	14 53 39.9	0.0
TXB	Texada	1.30	39	⇓P	P	14 53 41.3	+0.8
TXB				Trac		14 53 58.4	
	comp=Z,308nm,0.2s						
CBB	Campbell River	1.36	9	⇓P	P	14 53 42.3	+0.8
CBB				S	S	14 53 59.3	+0.7
CBB				Trac		14 54 00.7	
	comp=Z,166nm,0.2s						
OCWA	Octopus Mounta	1.38	133	*e*P	P	14 53 41.3	-0.4
OCWA	Octopus Mounta	1.38	133	⇑P	P	14 53 41.4	-0.3
OOW	Octopus West	1.38	133	⇑P	P	14 53 41.6	-0.2
STW	Striped Peak	1.45	111	⇑P	P	14 53 42.2	-0.4
GOBB	Galiano Island	1.46	79	P	P	14 53 43.3	+0.4
GOBB				S	S	14 54 00.8	-0.2
GOBB				Trac		14 54 02.8	
	comp=Z,262nm,0.2s						
PGC	Sidney	1.48	91	*e*P	P	14 53 42.5	-0.7
PGC	Sidney	1.48	91	⇑P	P	14 53 42.8	-0.3
PGC				S	S	14 54 00.5	-1.0
PGC				Trac		14 54 05.2	
	comp=Z,130nm,0.2s						
SHB	Sechelt	1.50	52	P	P	14 53 44.4	+1.0
SHB				S	S	14 54 03.4	+1.5
SHB				Trac		14 54 06.5	

	comp=Z,584nm,0.2s						
EDB	Eliza Dome	1.51	322	⇑P	P	14 53 43.4	-0.2
EDB				Trac		14 54 09.4	
	comp=Z,66nm,0.2s						
WOSB	Woss	1.58	339	⇑P	P	14 53 45.3	+0.7
WOSB				S	S	14 54 04.3	+0.3
WOSB				Trac		14 54 05.6	
	comp=Z,86nm,0.2s						
OSD	Olympics--Snow	1.58	123	P	P	14 53 44.5	-0.1
VGZ	Gonzales	1.59	99	P	P	14 53 43.8	-1.0
VGZ				S	S	14 54 02.5	-1.7
VGZ				Trac		14 54 03.0	
	comp=Z,287nm,0.2s						
OSR	Olympics--Salm	1.65	135	⇑P	P	14 53 45.1	-0.5
SNB	Saturna Island	1.67	86	P	P	14 53 46.1	+0.3
SNB				S	S	14 54 06.9	+0.7
SNB				Trac		14 54 10.2	
	comp=Z,178nm,0.3s						
BIB	Bowen Island	1.72	64	⇓P	P	14 53 47.2	+0.6
BIB				S	S	14 54 08.3	+0.8
BIB				Trac		14 54 08.6	
	comp=Z,226nm,0.2s						
NCRB	Newcastle Ridg	1.73	352	⇓P	P	14 53 48.0	+1.2
NCRB				S	S	14 54 08.3	+0.5
NCRB				Trac		14 54 10.1	
	comp=Z,94nm,0.1s						
MCW	Mount Constitu	1.89	89	⇑P	P	14 53 49.2	+0.3
WPB	Watts Point	1.89	58	P	P	14 53 49.7	+0.7
WPB				S	S	14 54 12.6	+0.8
WPB				Trac		14 54 20.8	
	comp=Z,178nm,0.4s						
BLN	Blyn Mountain	1.93	110	P	P	14 53 49.4	-0.2
MAYB	Maynard	1.97	331	P	P	14 53 50.8	+0.6
MAYB				S	S	14 54 14.1	+0.3
MAYB				Trac		14 54 17.1	
	comp=Z,44nm,0.3s						
BPBC	Brooks Peninsu	2.00	318	P	P	14 53 50.3	-0.3
WISH	Wishkah	2.03	140	P	P	14 53 50.8	-0.3
HDW	Hoodsport	2.04	120	⇑P	P	14 53 50.9	-0.3
HNB	Haney	2.13	73	P	P	14 53 52.6	+0.3
HNB				S	S	14 54 17.6	-0.3
HNB				Trac		14 54 19.1	
	comp=Z,118nm,0.1s						
WSLR	Whistler	2.31	50	P	P	14 53 56.1	+1.2
WSLR				S	S	14 54 23.4	+1.0
WSLR				Trac		14 54 29.8	
	comp=Z,98nm,0.3s						
PHC	Port Hardy	2.32	331	P	P	14 53 55.6	+0.5
PHC				S	S	14 54 21.2	-1.4
PHC				Trac		14 54 39.6	
	comp=Z,48nm,0.5s						
VDB	Vedder Mountai	2.39	81	P	P	14 53 56.3	+0.2
VDB				S	S	14 54 23.8	-0.7
VDB				Trac		14 54 25.6	
	comp=Z,39nm,0.2s						
CPW	Capitol Peak	2.43	134	P	P	14 53 56.0	-0.7
MBW	Mount Baker	2.51	86	P	P	14 53 58.8	+1.0
HOLB	Holberg	2.52	322	P	P	14 53 57.9	-0.1
JCW	Jim Creek	2.55	100	P	P	14 53 58.6	+0.2
HTW	Haystack Looko	2.76	107	P	P	14 54 01.3	-0.1
RPW	Rockport	2.78	93	⇓P	P	14 54 02.4	+0.7
LCW	Lucas Creek	2.85	134	P	P	14 54 02.6	-0.1
RMW	Rattlesnake Mo	2.88	114	P	P	14 54 03.4	+0.3
HOPB	Hope	2.89	74	P	P	14 54 03.5	+0.2
HOPB				S	S	14 54 36.6	-0.6
HOPB				Trac		14 54 50.5	
	comp=Z,106nm,0.4s						
RVC	Mount Rainier-	3.05	124	P	P	14 54 05.7	+0.2
LLLB	Lillooet	3.13	51	P	P	14 54 07.4	+0.7
LLLB				S	S	14 54 44.3	+1.0
LLLB				Trac		14 54 47.1	
	comp=Z,35nm,0.5s						
RVW	Rose Valley	3.23	141	P	P	14 54 07.8	-0.3
FL2	Flat Top 2	3.37	137	P	P	14 54 10.0	0.0
ASR	Mount Adams--S	3.76	131	P	P	14 54 16.0	+0.3
BBB	Bella Bella	3.83	337	Pn	P	14 54 16.1	-0.5
	1.0nm,0.3s,baz=122,slow=9.2,SNR=60						
BBB				Sn	S	14 54 58.9	-2.1
	3.4nm,0.3s,baz=12,slow=18,SNR=8.2						
BBB				Lg		14 55 17.6	
	3.1nm,0.3s,baz=45,slow=16,SNR=6.0						
BBB	Bella Bella	3.83	337	Pn	P	14 54 16.1	-0.5
BBB				Sn	S	14 54 58.9	-2.1
BBB				Lg		14 55 17.6	
BBB	Bella Bella	3.83	337	P	P	14 54 16.4	-0.3
BBB				S	S	14 54 59.4	-1.7
BBB				Trac		14 55 02.7	
	comp=Z,12nm,0.2s						
PNT	Penticton	4.04	79	P	P	14 54 19.6	0.0
PNT				S	S	14 55 06.5	0.0
PNT				Trac		14 55 32.5	
	comp=Z,37nm,0.6s						
DOWB	Downie Slide	5.41	56	P	P	14 54 38.2	-0.8
SLEB	Sale Mountain	5.47	60	P	P	14 54 39.9	+0.1
SLEB				S	S	14 55 40.9	-1.5
SLEB				Trac		14 56 16.4	
	comp=Z,18nm,0.7s						
BNB	Barry Inlet	5.48	318	P	P	14 54 38.7	-1.2
NEW	Newport	5.71	91	Pn	P	14 54 41.6	-1.5
	0.8nm,0.3s,baz=278,slow=15,SNR=3.6						
NEW				Lg		14 56 13.7	
	0.5nm,0.3s,baz=161,slow=5.3,SNR=6.0						
NEW	Newport	5.71	91	*e*Pn	P	14 54 40.9	-2.2
MNB	Mounoet Dainar	5.84	50	P	P	14 54 45.7	+0.8
MNB				S	S	14 55 51.0	-0.6
MOBC	Moresby Island	5.98	321	P	P	14 54 45.6	-1.3
VIB	Van Inlet	6.29	319	P	P	14 54 49.5	-1.9
BMO	Blue Mountains	6.91	121	P	P	14 55 00.1	0.0
NDB	Naden	6.96	322	P	P	14 54 59.0	-1.7
YBH	Yreka Blue Hor	7.27	162	Pn	P	14 55 07.8	+2.8
	0.5nm,0.3s,baz=354,slow=9.1,SNR=7.8						
YBH				LR	LR	14 58 10.7	
	comp=Z,56nm,21.2s,baz=254,slow=40						
WALA	Waterton Lakes	7.77	83	P	P	14 55 11.8	-0.3
WALA				S	S	14 56 31.1	-8.7
WVOR	Wild Horse Val	7.97	139	P	P	14 55 16.7	+1.9
ELK	Elko	10.87	133	Pn	P	14 55 57.4	+2.8
	0.1nm,0.3s,baz=310,slow=11,SNR=13						
ELK	Elko	10.87	133	P	P	14 55 51.1	-3.6
ELK				Pn	P	14 55 57.4	+2.8
NVAR	Mina Array Bea	11.56	150	Pn	P	14 56 07.8	+3.7
	0.1nm,0.3s,baz=340,slow=12,SNR=6.8						
PDAR	Pinedale Array	12.72	112	Pn	P	14 56 22.9	+3.4
	0.1nm,0.3s,baz=310,slow=12,SNR=5.5						
YKA	Yellowknife Ar	15.15	20	Pn	P	14 56 48.6	-2.6
	0.1nm,0.3s,baz=211,slow=12,SNR=5.5						
FFC	Flin Flon	15.84	59	*e*P	P	14 56 59.9	-0.4
ILAR	Eielson Array	19.71	333	P	P	14 57 48.6	+1.3
	0.0nm,0.3s,baz=153,slow=10,SNR=4.1						
TXAR	Lajitas Array	25.65	131	P	P	14 58 49.1	+2.6
	0.5nm,0.6s,mb3.2,baz=333,slow=8.4,SNR=6.4						

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*NNC **25** 14:55:39.7±18.0,36.57N×69.99E,h106^{km}±444^{km},mpv3.9,*
Error ellipse: s-maj=198.1km s-min=142.5km az=151.0
ISC 25 14:55:36.9±2.8**,36.4N**±0.1×**70.2E**±0.3**,h150**^{km}±56^{km}**,n9,**
σ**0^{s}96**/12**,3C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.31	24	P	P	14 57 09.3	+0.6
	SNR=27						
KK31	Karatay Array	6.68	2	⇑P	P	14 57 14.2	+0.6
	2.3nm,0.3s,baz=176,slow=12,SNR=79						
KK31				S	S	14 58 28.1	-0.6
	1.4nm,0.3s,baz=187,slow=17,SNR=5.6						
UCH	Uchtor	6.69	29	P	P	14 57 14.2	+0.4
	SNR=9.4						
KZA	Kyzart	6.87	33	P	P	14 57 15.1	-1.1
	SNR=5.2						
AAK	Ala-Archa	7.03	27	P	P	14 57 17.4	-0.9
	SNR=5.2						
AAK	Ala-Archa	7.03	27	⇓P	P	14 57 17.4	-1.0
	4.2nm,0.3s						
AAK				⇑S	S	14 58 38.6	+1.3
	4.8nm,0.6s						
CHMS	Chumysh	7.44	27	P	P	14 57 23.6	-0.3
	SNR=5.3						
USP	Ospenovka	7.59	24	P	P	14 57 25.3	-0.6
	SNR=7.7						
AB31	Akbulak array	14.85	333	P	P	14 59 03.3	+3.0
	1.0nm,0.5s,baz=142,slow=12,SNR=33						
AB31				⇑S	S	15 01 40.3	-0.6
	0.7nm,0.7s,baz=153,slow=23,SNR=3.6						

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*MEX **25** 15:12:20.2±1.0,13.81N×91.94W,h9^{km}±999^{km},MD4.3*
*IDC **25** 15:12:25.3±3.9,14.84N×90.59W,h97^{km}±46^{km},mb3.4/2,*
mb1 3.7/4,mb1mx3.3/20,mbtmp3.6/4,Error ellipse:
s-maj=204.2km s-min=33.1km az=42.0
ISC 25 15:12:17.2±1.4**,13.70N**±0.09×**91.87W**±0.08**,h56**^{km}±18^{km}**,**
n10,σ**1^{s}26**/14**,mb3.9**/2**,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	Comitan	2.58	354	*i* P	P	15 12 57.5	-0.1
CCIG				*i* S	S	15 13 27.1	-0.8
SCX	San Cristobal	3.11	346	*e*P	P	15 13 07.5	+2.4
SCX				*i* S	S	15 13 42.0	+0.7
CMIG	Matias Romero	4.46	320	*i* P	P	15 13 23.7	-0.3
CMIG				*i* S	S	15 14 13.1	-2.1
OXX	Oaxaca	5.77	306	*e*P	P	15 13 42.0	-0.2
OXX				*i* S	S	15 14 50.0	+2.0
VHO	Vista Hermosa	5.77	306	*e*P	P	15 13 41.6	-0.6
VHO				*i* S	S	15 14 47.4	-0.6
JTS	JuntasAbangare	7.56	116	P	P	15 14 07.0	-0.3
	0.7nm,0.3s,baz=318,slow=18,SNR=3.4						
TXAR	Lajitas Array	19.02	327	P	P	15 16 37.6	+0.4
	0.1nm,0.3s,baz=153,slow=12,SNR=12						
NVAR	Mina Array Bea	33.99	321	P	P	15 18 59.4	+1.7
	1.2nm,0.7s,mb3.9,baz=131,slow=8.3,SNR=9.4						
ILAR	Eielson Array	63.17	337	P	P	15 22 38.9	-2.6
	0.6nm,0.7s,mb3.8,baz=147,slow=3.5,SNR=5.6						
CMAR	Chiang Mai Arr	146.32	341	PKPbc	PKPbc	15 31 53.0	+0.4
	1.7nm,1.0s,baz=349,slow=4.5,SNR=5.9						

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*TIF **25** 15:23:08.4,40.58N×42.58E,h10^{km}±5^{km}*
*ISK **25** 15:23:09.8,40.73N×42.67E,h3^{km},ML2.7*
ISC 25 15:23:10.6±0.9**,40.64N**±0.06×**42.59E**±0.06**,h3**^{km}**,n8,**
σ**0^{s}89**/13**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARS	Kars	0.38	94	*i* PG	Pg	15 23 16.8	-1.4
BCA	Borcka	1.09	318	*i* PG	Pg	15 23 31.3	-1.0
BCA				SG	Sg	15 23 46.5	-0.4
EZM	Erzurum	1.19	233	PN	Pn	15 23 35.6	+1.5
GNI	Garni	1.71	106	PN	Pn	15 23 40.2	-1.3
GNI				SN	Sn	15 24 04.3	+0.1
TBLG	Delisi	1.95	55	P	Pn	15 23 45.1	+0.2
TBLG				S	Sn	15 24 10.2	-0.1
MTA	Mtatsminda	1.97	57	P	Pn	15 23 45.9	+0.7
MTA				S	Sn	15 24 11.9	+1.2
ONI	Oni	2.04	18	P	Pn	15 23 46.9	+0.7
ONI				S	Sn	15 24 12.5	-0.1
DUS	Dusheti	2.15	47	P	Pn	15 23 41.1	-6.7

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*IDC **25** 15:31:11.7±1.5,5.30N×94.14E,mb4.0/8,mb1 4.2/8,*
mb1mx3.9/19,mbtmp4.0/8,Error ellipse: s-maj=65.0km
s-min=24.6km az=53.0
*NEIC **25** 15:31:15.8±0.8,5.16N×94.09E,h30^{km},mb4.6/1,Error*
ellipse: s-maj=18.3km s-min=11.1km az=54.0
ISC 25 15:31:14.2±0.9**,5.2N**±0.1×**94.2E**±0.1**,h30**^{km}**,n16,**
σ**1^{s}00**/17**,mb4.0**/9**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.47	89	*e*Pn	Pn	15 32 48.4	-1.6
KULM				*e*Sn	Sn	15 33 55.4	-8.3
CM31	Chiang Mai Arr	14.00	19	*e*P	P	15 34 33.8	+0.8
	1.5nm,0.3s						
CMAR	Chiang Mai Arr	14.00	19	Pn	P	15 34 34.2	+1.3
	0.6nm,0.3s,baz=209,slow=15,SNR=23						
SHL	Shillong	20.39	354	*e*P	P	15 35 54.5	+3.1
MKAR	Makanchi Array	42.70	348	P	P	15 39 09.9	-0.3
	2.8nm,0.6s,mb4.2,baz=169,slow=7.5,SNR=30						
SONM	Songino Array	43.78	12	P	P	15 39 17.1	-1.8
	0.2nm,0.3s,mb3.4,baz=207,slow=5.5,SNR=5.2						
WRA	Warramunga Arr	46.74	124	P	P	15 39 43.7	+0.8
	0.7nm,0.3s,mb4.0,baz=303,slow=9.5,SNR=26						
WRAB	Tennant Creek	46.74	124	*e*P	P	15 39 43.5	+0.6
	4.9nm,0.8s,mb4.5						
WB2	Warramunga Arr	46.75	124	*e*P	P	15 39 43.6	+0.6
ZAL	Zalesovo	49.20	353	P	P	15 40 01.1	-0.5
	1.6nm,0.3s,mb4.6,baz=302,slow=5.7,SNR=3.2						
BVAR	Borovoye Array	51.53	342	P	P	15 40 18.8	-0.6
	1.0nm,0.5s,mb4.0,baz=151,slow=9.4,SNR=5.5						
CASY	Casey	72.27	173	*e*P	P	15 42 45.8	+7.3
FINES	FINESS Array B	75.08	333	P	P	15 42 54.4	-0.5
	1.2nm,0.9s,mb3.8,baz=93,slow=4.3,SNR=5.1						
ARCES	ARCESS Array B	77.79	340	P	P	15 43 10.1	+0.2
	2.9nm,0.9s,mb4.2,baz=97,slow=6.5,SNR=6.4						
ARCES	ARCESS Array B	77.79	340	P	P	15 43 10.1	+0.2
GERES	GERESS Array B	79.83	319	P	P	15 43 21.3	-0.1
	0.7nm,0.6s,mb3.7,baz=101,slow=6.8,SNR=6.5						

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*NEIC **25** 15:33:38.6±0.6,34.21N×89.78E,h10^{km},mb3.7/2,Error*
ellipse: s-maj=13.0km s-min=8.8km az=107.0
*IDC **25** 15:33:42.2±4.9,34.10N×89.69E,h49^{km}±56^{km},mb3.4/2,*
mb1 3.6/5,mb1mx3.3/20,mbtmp3.6/5,ML3.0/3,MS3.3/5,
Ms1 3.3/5,ms1mx3.1/19,Error ellipse: s-maj=75.3km
s-min=28.4km az=74.0
ISC 25 15:33:40.2±1.5**,34.19N**±0.07×**89.6E**±0.1**,h51**^{km}±20^{km}**,**
n20,σ**0^{s}91**/16**,mb3.7**/3**,MS3.3**/3**,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	4.67	163	*e*P	P	15 34 51.5	+1.6
GUN	Gumba	7.04	208	*e*P	P	15 35 23.6	+0.5
	38nm,0.6s						
KKN	Kakani	7.39	211	*e*P	P	15 35 27.9	-0.1
	23nm,0.5s						
GKN	Gorkha	7.50	216	*e*P	P	15 35 28.9	-0.7
	14nm,0.5s						
PKI	Pulchoki	7.53	210	*e*P	P	15 35 30.5	+0.6
	28nm,0.6s						
DMN	Daman	7.62	212	*e*P	P	15 35 31.4	+0.2
	23nm,0.5s						
KOLN	Koldanda	8.23	221	*e*P	P	15 35 38.3	-1.2
	15nm,0.9s						
MKAR	Makanchi Array	13.76	338	P	P	15 36 52.4	-1.7
	0.0nm,0.3s,baz=158,slow=13,SNR=3.8						
ENH	Enshi	17.25	98	P	P	15 37 38.2	-0.8
	11nm,1.2s						
CMAR	Chiang Mai Arr	17.74	150	P	P	15 37 44.7	-0.5
	0.0nm,0.3s,baz=337,slow=12,SNR=5.6						
CMAR				LR	LR	15 45 01.1	
	comp=Z,54nm,20.2s,baz=305,slow=38						
SONM	Songino Array	18.54	38	P	P	15 37 55.5	+0.6
	0.1nm,0.3s,baz=221,slow=13,SNR=13						
SONM				LR	LR	15 45 52.2	
	comp=Z,69nm,19.2s,baz=253,slow=39						
ZAL	Zalesovo	20.03	352	P	P	15 38 12.2	+0.8
	2.1nm,0.8s,baz=309,slow=9.4,SNR=8.4						
ZAL				LR	LR	15 46 46.1	
	comp=Z,105nm,18.3s,MS3.2,baz=301,slow=39						
BVAR	Borovoye Array	23.28	330	P		15 38 50.9	
	0.5nm,0.5s,baz=135,slow=10,SNR=3.8						
BVAR	Borovoye Array	23.28	330	P		15 38 50.9	
ZRNK	Zerenda	23.82	328	*e*P	P	15 38 54.2	+5.2
	1.4nm,0.7s,mb3.5						
JOW	Kunigami	33.95	92	LR	LR	15 54 41.5	
	comp=Z,80nm,21.4s,MS3.4,baz=170,slow=37						
NB2	NORSAR Subarra	55.27	325	P	P	15 43 11.7	+1.5
	0.5nm,0.5s,mb3.8,baz=82,slow=7.0						
GERES	GERESS Array B	56.41	310	LR	LR	16 10 23.7	
	comp=Z,22nm,21.4s,MS3.2,baz=135,slow=39						
WRAB	Tennant Creek	68.63	135	*e*P	P	15 44 39.8	-0.4
WRA	Warramunga Arr	68.63	135	P	P	15 44 39.6	-0.6
	0.7nm,0.5s,mb3.8,baz=328,slow=6.5,SNR=12						

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*NEIC **25** 15:39:54.7,37.87S×176.30E,h192^{km},MG3.9(WEL),*
After WEL.
WEL 25 15:39:54.9±0.3**,37.83S**×**176.26E,h186**^{km}±3^{km}**,ML3.8**/17**,**
2C-1D,Error ellipse: s-maj=3.6km s-min=3.2km az=0.0,
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.80	123	P	P	15 40 22.0	-0.2
URZ	Urewera	0.80	123	PN	P	15 40 22.0	-0.2
URZ				SN	S	15 40 43.0	-0.3
MWZ	Matawai	1.12	117	P	P	15 40 24.3	-0.2
MWZ				S	S	15 40 47.7	+0.4
MWZ	Matawai	1.12	117	PN	P	15 40 24.2	-0.2
MWZ				SN	S	15 40 46.7	-0.6
BKZ	Black Stump Fm	1.35	172	P	P	15 40 26.2	-0.2
BKZ				S	S	15 40 50.0	-0.8
BKZ	Black Stump Fm	1.35	172	⇑PN	P	15 40 26.2	-0.2
BKZ				SN	S	15 40 50.0	-0.8
WNVZ	Wahianoa	1.58	199	P	P	15 40 28.6	0.0
WNVZ	Wahianoa	1.58	199	⇑PN	P	15 40 28.6	0.0
PUZ	Puketiti	1.60	99	*e*P	P	15 40 27.7	-1.1
PUZ				S	S	15 40 53.2	-1.7
PUZ	Puketiti	1.60	99	PN	P	15 40 27.7	-1.0
PUZ				SN	S	15 40 53.3	-1.5
MOVZ	Moawhango	1.63	194	P	P	15 40 28.4	-0.6
MOVZ	Moawhango	1.63	194	PN	P	15 40 28.4	-0.7
KNZ	Kokohu	1.63	137	PN	P	15 40 29.1	+0.1
KNZ				SN	S	15 40 54.8	-0.5
MXZ	Matakaoa Point	1.65	81	*e*P	P	15 40 29.4	+0.2
MXZ	Matakaoa Point	1.65	81	PN	P	15 40 29.1	-0.2
MTVZ	Mangateitei	1.67	201	PN	P	15 40 29.0	-0.4
VRZ	Vera Road	1.75	222	*e*P	P	15 40 30.5	+0.3
VRZ	Vera Road	1.75	222	PN	P	15 40 30.5	+0.3
WAZ	Wanganui	2.17	207	*e*P	P	15 40 33.8	-0.9
WAZ	Wanganui	2.17	207	PN	P	15 40 33.7	-1.0
TSZ	Takapari Road	2.24	186	P	P	15 40 34.3	-1.2
TSZ	Takapari Road	2.24	186	PN	P	15 40 34.3	-1.2
PWZ	Pawanui	2.25	168	*e*P	P	15 40 34.8	-0.8
PWZ	Pawanui	2.25	168	PN	P	15 40 34.8	-0.8
BFZ	Birch Farm	2.85	180	*e*P	P	15 40 40.6	-2.0
BFZ	Birch Farm	2.85	180	*e*PN	P	15 40 40.6	-2.0
MRZ	Mangatainoka R	2.88	190	P	P	15 40 40.6	-2.4
MRZ	Mangatainoka R	2.88	190	PN	P	15 40 40.6	-2.4
MRZ				SN	S	15 41 17.3	-2.8
KIW	Kapiti Island	3.21	199	P	P	15 40 44.0	-3.0
KIW	Kapiti Island	3.21	199	PN	P	15 40 44.1	-2.9
MTW	Mount Morrison	3.38	190	PN	P	15 40 45.8	-3.3
CAW	Cannon Point	3.40	195	PN	P	15 40 46.3	-3.1
DUWZ	D’Urville Isla	3.48	211	PN	P	15 40 47.4	-2.9
TRWZ	Traveller	3.59	187	PN	P	15 40 48.7	-3.1
MRW	Makara Radio	3.60	199	P	P	15 40 48.6	-3.3
MRW	Makara Radio	3.60	199	PN	P	15 40 48.6	-3.4
PAWZ	Paruwai Farm	3.61	190	PN	P	15 40 48.5	-3.4
MSWZ	Moikau Station	3.67	192	P	P	15 40 49.1	-3.6
MSWZ	Moikau Station	3.67	192	PN	P	15 40 49.1	-3.6
TCW	Tory Channel	3.71	204	P	P	15 40 50.0	-3.3
TCW	Tory Channel	3.71	204	PN	P	15 40 49.9	-3.4
TUWZ	Tuamarina	4.02	206	PN	P	15 40 53.5	-3.7
NNZ	Nelson	4.05	212	*e*P	P	15 40 53.6	-4.0
NNZ	Nelson	4.05	212	PN	P	15 40 53.6	-4.0
BSWZ	Blackbirch Sta	4.29	205	P	P	15 40 57.0	-3.7
BSWZ	Blackbirch Sta	4.29	205	*e*PN	P	15 40 57.0	-3.6
THZ	Tophouse	4.70	212	*e*P	P	15 41 02.1	-3.8
THZ	Tophouse	4.70	212	PN	P	15 41 02.0	-4.0
KHZ	Kahutara	5.04	204	*e*P	P	15 41 06.1	-4.1
KHZ	Kahutara	5.04	204	⇓PN	P	15 41 06.2	-4.0
LTZ	Lake Taylor	5.81	210	*e*P	P	15 41 15.2	-5.1
LTZ	Lake Taylor	5.81	210	PN	P	15 41 15.2	-5.1
LTZ				SN	S	15 42 18.8	-7.8
MQZ	McQueen’s Vall	6.48	204	SN	S	15 42 32.4	-10
ODZ	Otahua Downs	8.35	209	*e*PN	P	15 41 48.2	-5.4

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*ISK **25** 15:41:09.9,37.75N×44.16E,h5^{km},ML3.7*
ISC 25 15:41:11.3±1.4**,37.77N**±0.06×**44.2E**±0.1**,h5**^{km}**,n17,**
σ**1^{s}11**/19**,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HKR	Hakkari	0.40	242	*i* PG	Pg	15 41 18.2	-1.1
VANT	Van	0.92	318	PG	Pg	15 41 30.3	+0.5
TVAN	Van	0.97	322	*i* P	Pb	15 41 28.5	-1.9
TVAN				*i* S	Sb	15 41 39.5	-3.8
VANB	Van	1.04	323	PG	Pg	15 41 30.1	-1.9
VANB				SG	Sg	15 41 46.5	+0.6
CLDR	Caldiran	1.39	352	PN	Pn	15 41 37.2	-0.3
MSL	Mosul	1.71	211	*e*Pn	x	15 41 40.5	
MSL				*i* Pg	x	15 41 42.5	
MSL				*i* Sn	x	15 42 02.0	
MSL				*i* Sg	x	15 42 03.5	
BTMT	Batman	2.17	282	PN	Pn	15 41 50.8	+2.2
BEST	Besiri	2.31	274	*i* P	Pn	15 41 50.9	+0.3
BEST				*i* S	Sn	15 42 25.1	+5.4
GNI	Garni	2.42	10	PN	Pn	15 41 52.9	+0.7
MARD	Mardin	2.74	262	*i* P	Pn	15 42 01.0	+4.2
MARD				*i* S	Sn	15 42 38.4	+7.7
EZM	Erzurum	3.07	315	*e*PN	Pn	15 42 01.9	+0.5
DIY	Diyarbakir	3.13	274	*e*PN	Pn	15 42 02.7	+0.3
PTK	Pertek	3.93	288	*e*PN	Pn	15 42 13.9	+0.2
URFA	Urfa	4.27	267	*e*PN	Pn	15 42 17.9	-0.6
BHD	Baghdad	4.49	178	*e*	x	15 43 34.0	
MALT	Malatya	4.57	279	*e*PN	Pn	15 42 22.8	0.0
GZT	Gaziantep	5.27	268	*i* P	Pn	15 42 43.7	+11

WEL 25 15:53:12.9±0.1**,41.03S**×**175.41E,h27**^{km}**,ML3.6**/21**,**
3C-6D,Error ellipse: s-maj=0.7km s-min=0.5km az=90.0,
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTW	Mount Morrison	0.14	152	⇑P*	Pb	15 53 18.0	-0.1
MTW				S*	Sb	15 53 21.8	+0.1
CAW	Cannon Point	0.27	254	⇓P*	Pb	15 53 19.7	+0.1
CAW				S*	Sb	15 53 25.1	+0.8
PAWZ	Paruwai Farm	0.35	178	⇑P*	Pb	15 53 20.8	0.0
PAWZ				S*	Sb	15 53 27.2	+1.1
MRZ	Mangatainoka R	0.39	19	⇓P*	Pb	15 53 21.1	-0.2
MRZ				S*	Sb	15 53 27.4	+0.1
MSWZ	Moikau Station	0.40	198	⇑P*	Pb	15 53 21.6	0.0
MSWZ				S*	Sb	15 53 28.2	+0.7
KIW	Kapiti Island	0.42	294	⇓P*	Pb	15 53 22.0	+0.2
KIW				S*	Sb	15 53 28.8	+0.9
TRWZ	Traveller	0.42	151	⇓P*	Pb	15 53 21.9	+0.1
TRWZ				S*	Sb	15 53 29.4	+1.4
WEL	Wellington	0.55	242	P*	Pb	15 53 23.9	0.0
WEL				S*	Sb	15 53 32.0	+0.6
BHW	Baring Head	0.56	227	⇓P*	Pb	15 53 24.0	-0.1
BHW				S*	Sb	15 53 31.9	+0.3
MRW	Makara Radio	0.57	250	⇓P*	Pb	15 53 24.3	0.0
MRW				S*	Sb	15 53 32.1	0.0
SNZO	South Karori	0.60	242	P*	Pb	15 53 24.6	-0.1
SNZO				S*	Sb	15 53 33.4	+0.5
BFZ	Birch Farm	0.72	61	P*	Pb	15 53 26.0	-0.8
BFZ				S*	Sb	15 53 37.1	+0.8
TCW	Tory Channel	0.88	258	P*	Pb	15 53 29.0	-0.4
TCW				S*	Sb	15 53 40.8	0.0
TSZ	Takapari Road	1.06	23	P*	Pb	15 53 31.2	-1.2
TSZ				S*	Sb	15 53 45.3	-0.6
DUWZ	D’Urville Isla	1.15	281	P*	Pb	15 53 33.4	-0.6
TUWZ	Tuamarina	1.18	250	P*	Pb	15 53 32.6	-1.9
TUWZ				S*	Sb	15 53 48.1	-1.3
WAZ	Wanganui	1.32	345	PN	Pn	15 53 36.4	+0.6
BSWZ	Blackbirch Sta	1.34	239	P*	Pb	15 53 35.0	-2.2
MOVZ	Moawhango	1.64	9	PN	Pn	15 53 39.7	-0.8
MTVZ	Mangateitei	1.65	2	*e*PN	Pn	15 53 40.8	+0.3
WNVZ	Wahianoa	1.71	5	PN	Pn	15 53 41.2	-0.2

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*ISK **25** 16:04:49.1,40.80N×42.76E,h15^{km},ML3.5*
*TIF **25** 16:04:50.0,40.48N×42.81E,h32^{km}±4^{km}*
ISC 25 16:04:50.6±0.5**,40.65N**±0.04×**42.57E**±0.04**,h10**^{km}**,n19,**
σ**1^{s}31**/26**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARS	Kars	0.40	95	*i* PG	Pg	16 04 55.7	-3.1
BCA	Borcka	1.07	318	*i* PG	Pg	16 05 10.2	-1.8
BCA				SG	Sg	16 05 25.5	-0.8
ERZM	Erzurum	1.18	231	*i* P	Pb	16 05 14.3	+1.7
EZM	Erzurum	1.18	231	*i* PN	Pn	16 05 14.4	+1.3
GNI	Garni	1.74	106	PN	Pn	16 05 18.1	-3.0
GOR	Gori	1.77	41	P	Pn	16 05 20.5	-1.1
GOR				S	Sn	16 05 44.6	+0.3
CLDR	Caldiran	1.83	145	PN	Pn	16 05 21.7	-0.7
TBLG	Delisi	1.96	56	P	Pn	16 05 23.6	-0.7
TBLG				S	Sn	16 05 48.6	-0.7
MTA	Mtatsminda	1.98	57	P	Pn	16 05 24.0	-0.5
MTA				S	Sn	16 05 50.7	+1.1
ONI	Oni	2.04	19	P	Pn	16 05 25.4	0.0
ONI				S	Sn	16 05 52.9	+1.7
VANB	Van	2.15	162	*e*PN	Pn	16 05 27.3	+0.3
DUS	Dusheti	2.16	47	P	Pn	16 05 26.7	-0.4

DUS				S	Sn	16 05 55.6	+1.5
TVAN	Van	2.21	163	*i* P	Pg	16 05 31.3	-3.5
DGRG	David-gareji	2.27	68	P	Pn	16 05 28.9	+0.2
DGRG				S	Sn	16 05 58.1	+1.1
GUMT	Gumushane	2.36	266	*e*PN	Pn	16 05 31.3	+1.3
KELT	Kelkit	2.58	260	*i* P	Pg	16 05 40.0	-2.1
BTMT	Batman	2.59	199	*e*PN	Pn	16 05 36.8	+3.5
PTK	Pertek	3.01	235	*e*PN	Pn	16 05 40.6	+1.3
MARD	Mardin	3.61	203	*i* P	Pg	16 05 57.3	-5.3

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*JMA **25** 16:08:57.2±0.3,22.78N×121.46E,h111^{km},M2.5*

TAP 25 16:08:57.3,22.80N×121.36E,h83^{km},ML3.6,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	2.24	42	P	P	16 09 33.3	+0.1
YOJ				*e*S	S	16 10 00.8	+1.0
HATJ	Hateruma jima	2.57	60	P	P	16 09 37.1	-0.7
HATJ				*e*S	S	16 10 07.8	-0.2
IRIF	Iriomote-Funau	2.66	54	P	P	16 09 38.4	-0.6
IRIF				*e*S	S	16 10 09.8	-0.4
JKRS	Kuro-shima	2.82	59	P	P	16 09 41.0	-0.3
JKRS				*e*S	S	16 10 14.3	0.0
JIJ	Ishigaki jima	2.99	58	P	P	16 09 42.9	-0.7
JIJ				*e*S	S	16 10 16.8	-1.7

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*NIED **25** 16:25:00,37.40N×139.70E,h20^{km},Mw3.7 Best double couple: M$_0$4.02×10^{14} NP1:φ$_s$161°,δ90°,λ-2°. NP2:φ$_s$251°, δ88°,λ-180°.*

*JMA **25** 16:25:31.5,37.43N×139.70E,h4^{km}±1^{km},M3.3 Broadband fault plane solution: P waves. NP1:φ$_s$320°, δ47°,λ-54°. NP2:φ$_s$93°,δ54°,λ-122°. Principal axes: T Plg4°, Azm205°; N Plg26°, Azm113°; P Plg64°, Azm304°;*

JMA Felt III J1.

ISC 25 16:25:31.3±0.7**,37.44N**±0.04×**139.70E**±0.05**,h5**^{km}±6^{km}**, n5,σ0^{s}14**/10**,2C-1D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFY	Yanaizu	0.04	179	P	Pg	16 25 32.3	-0.2
JFY				S	Sg	16 25 33.2	0.0
JNS	Sasagawa	0.48	321	⇓P	Pg	16 25 41.0	0.0
JNS				S	Sg	16 25 47.7	+0.2
JSB	Shiboa	0.50	160	⇑P	Pg	16 25 41.4	0.0
JSB				S	Sg	16 25 48.4	+0.3
JFT	Otama	0.51	81	⇑P	Pg	16 25 41.5	0.0
JFT				S	Sg	16 25 48.2	-0.1
MAT	Matsushiro	1.50	234	P	Pn	16 25 58.9	0.0
MAT				S	Sb	16 26 18.2	-0.2

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*IDC **25** 16:30:07.0±0.8,3.56N×128.74E,mb4.0/11,mb1 4.2/11, mb1mx4.1/19,mbtmp4.0/11,MS3.3/5,Ms1 3.4/5, ms1mx2.9/29,Error ellipse: s-maj=38.4km s-min=14.9km az=74.0*

*NEIC **25** 16:30:08.5±0.4,3.57N×128.76E,h10^{km},mb4.7/17,Error ellipse: s-maj=12.3km s-min=7.0km az=76.0*

*BJI **25** 16:30:08.6,3.84N×128.83E,h10^{km},mB4.7,mb4.5,Ms3.7, Msz3.4*

*MOS **25** 16:30:10.0±1.0,3.67N×128.75E,h33^{km},mb4.8/9,Error ellipse: s-maj=21.7km s-min=10.7km az=106.7*

ISC 25 16:30:14.4±1.3**,3.61N**±0.06×**128.75E**±0.10**,h73**^{km}±11^{km}**, h20**^{km}±5.8^{km}**:pP-P,n62,σ0^{s}99**/61**,mb4.3**/32**,1D,North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	4.14	323	*e*P	P	16 31 18.0	+1.3
KCP	Kidapawan	4.97	313	⇓*e*P	P	16 31 27.8	-0.3
KCP				*i* S	S	16 32 29.6	+4.8
BUKP	Musuan	5.61	319	*e*P	P	16 31 37.0	+0.1
PAGZ	Pagadian	6.80	309	*e*P	P	16 31 53.2	-0.4
KSM	Kuching	18.54	264	*e*P	P	16 34 25.5	-2.2
FITZ	Fitzroy Crossi	21.79	188	*e*P	P	16 34 57.9	-3.9
	8.0nm,0.9s,mb4.0						
FITZ	Fitzroy Crossi	21.79	188	P	P	16 34 58.2	-3.7
	7.2nm,1.0s,mb3.9,baz=9.0,slow=15,SNR=3.9						
PMG	Port Moresby	22.45	125	LR	LR	16 44 34.7	
	comp=Z,74nm,18.7s,baz=314,slow=39						
WRAB	Tennant Creek	24.03	167	*e*P	P	16 35 24.0	+0.3
WRAB				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.5						
WRAB	Tennant Creek	24.03	167	*e*P	P	16 35 24.0	+0.3
	comp=Z,26nm,1.0s,mb4.5						
WRA	Warramunga Arr	24.04	167	P	P	16 35 23.3	-0.5
	comp=Z,2.8nm,0.9s,mb3.6,baz=348,slow=10,SNR=13						
WB2	Warramunga Arr	24.04	167	*e*P	P	16 35 23.3	-0.5
SSE	Sheshan	28.25	346	P	P	16 36 00.8	-2.1
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,30nm,3.5s						
CTA	Charters Tower	29.16	145	LR	LR	16 45 45.7	
	comp=Z,70nm,21.6s,baz=48,slow=32						
NJ2	Nanjing	29.78	343	*e*P	P	16 36 15.3	-1.2
NJ2				AP	pP	16 36 25.3	-8.6
NJ2				XP	sP	16 36 30.3	-12
NJ2				PP	PP	16 37 12.0	-3.9
NJ2				S	S	16 41 07.0	+0.7
NJ2				AMB	AMB		
	comp=Z,130nm,5.4s						
NJ2				LR	LR		
	comp=N,60nm,14.0s						
NJ2				LR	LR		
	comp=E,100nm,18.0s						
NJ2				LR	LR		
	comp=Z,80nm,17.0s						
CM31	Chiang Mai Arr	32.68	299	*e*P	P	16 36 42.4	+0.4
	comp=Z,3.2nm,0.5s,mb4.4						
CMAR	Chiang Mai Arr	32.68	299	P	P	16 36 42.0	-0.1
	comp=Z,1.6nm,0.8s,mb3.9,baz=112,slow=7.0,SNR=9.0						
CMAR				LR	LR	16 50 21.7	
	comp=Z,62nm,19.9s,baz=209,slow=37						
HNR	Honiara	33.68	113	LR	LR	16 49 26.1	
	comp=Z,39nm,18.7s,baz=180,slow=34						
MJAR	Matsushiro Arr	33.91	14	P	P	16 36 52.4	-0.1
	comp=Z,2.1nm,0.9s,mb4.0,baz=186,slow=10.0,SNR=5.9						
MAJO	Matsushiro	33.91	14	P	P	16 36 53.8	+1.3
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
MAJO	Matsushiro	33.91	14	P	P	16 36 53.8	+1.3
	comp=Z,6.1nm,0.8s,mb4.5						
MAT	Matsushiro	33.91	14	*e*P	P	16 36 51.0	-1.5
MAT	Matsushiro	33.91	14	P	P	16 36 51.3	-1.2
XAN	Xi’an	35.46	331	P	P	16 37 06.3	+0.5
XAN				AP	pP	16 37 12.8	-11
STKA	Stephens Creek	37.34	162	P	P	16 37 22.9	+1.2
	comp=Z,2.7nm,0.8s,mb4.2,baz=313,slow=7.5,SNR=2.8						
STKA	Stephens Creek	37.34	162	*e*P	P	16 37 22.7	+1.1
NWAO	Narrogin (SRO)	37.94	196	P	P	16 37 27.4	+0.8
NWAO				pmax	pmax		
	comp=Z,60nm,1.5s						
NWAO	Narrogin (SRO)	37.94	196	P	P	16 37 27.4	+0.9
	comp=Z,60nm,1.5s,mb5.2						
LZH	Lanzhou	39.65	328	*e*P	P	16 37 42.5	+1.7
LZH				AP	pP	16 37 50.0	-8.8
LZH				XP	sP	16 37 55.0	-12
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
MDJ	Mudanjiang	40.85	1	P	P	16 37 51.0	+0.5
MDJ				AMB	AMB		
	comp=Z,20nm,3.3s						
MDJ	Mudanjiang	40.85	1	P	P	16 37 50.9	+0.3
	comp=Z,10.0nm,1.2s,mb4.5						
LSA	Lhasa	44.04	310	P	P	16 38 17.3	+0.4
LSA	Lhasa	44.04	310	*e*P	P	16 38 18.8	+1.9
LSA				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
LSA	Lhasa	44.04	310	*e*P	P	16 38 18.8	+1.9
	comp=Z,7.5nm,1.0s,mb4.4						
GTA	Gaotai	44.26	328	*e*P	P	16 38 20.3	+1.8
GTA				AP	pP	16 38 25.8	-11
GTA				XP	sP	16 38 29.0	-16
GUN	Gumba	47.43	305	*e*P	P	16 38 44.2	+0.4
	comp=Z,24nm,0.8s,mb5.0						
PKI	Pulchoki	47.69	305	*e*P	P	16 38 45.6	-0.2
	comp=Z,5.4nm,0.6s,mb4.6						
PKI	Pulchoki	47.69	305	*e*P	P	16 38 45.6	-0.2
PKI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
KKN	Kakani	47.88	305	*e*P	P	16 38 47.2	0.0
	comp=Z,13nm,0.9s,mb4.8						
KKN	Kakani	47.88	305	*e*P	P	16 38 47.2	0.0
KKN				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
ULN	Ulaanbaatar	47.88	340	*e*P	P	16 38 47.7	+0.7
ULN				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.4						
ULN	Ulaanbaatar	47.88	340	*e*P	P	16 38 47.7	+0.7
	comp=Z,7.7nm,1.3s,mb4.4						
DMN	Daman	47.95	304	*e*P	P	16 38 47.8	0.0
	comp=Z,32nm,1.3s,mb5.0						
SONM	Songino Array	48.08	340	P	P	16 38 49.5	+0.9
	comp=Z,1.0nm,0.9s,mb3.6,baz=153,slow=5.9,SNR=5.9						
SONM				LR	LR	16 58 18.2	
	comp=Z,38nm,19.7s,baz=253,slow=35						
GKN	Gorkha	48.48	305	*e*P	P	16 38 52.0	+0.1
	comp=Z,7.7nm,0.7s,mb4.6						
KOLN	Koldanda	49.25	304	*e*P	P	16 38 58.5	+0.6
	comp=Z,27nm,0.9s,mb5.2						
TLY	Talaya	52.29	340	P	P	16 39 19.1	-1.5
YAK	Yakutsk	58.29	1	*e*P	P	16 40 02.5	-1.2
YAK				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
YAK	Yakutsk	58.29	1	*e*P	P	16 40 02.5	-1.2
	comp=Z,20nm,0.8s,mb5.2						
MKAR	Makanchi Array	58.81	324	P	P	16 40 07.9	+0.3
	comp=Z,2.8nm,0.7s,mb4.4,baz=120,slow=8.2,SNR=26						
ZAL	Zalesovo	61.62	332	P	P	16 40 26.0	-0.6
	comp=Z,0.8nm,0.5s,mb4.0,baz=360,slow=7.8,SNR=6.7						
TIXI	Tiksi	67.95	0	*e*P	P	16 41 06.8	-0.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
BVAR	Borovoye Array	68.53	326	P	P	16 41 11.5	+0.5
	comp=Z,3.9nm,0.9s,mb4.2,baz=117,slow=6.6,SNR=15						
BRVK	Borovoye	68.60	326	*e*P	P	16 41 07.8	-3.7
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.5						
BRVK	Borovoye	68.60	326	*e*P	P	16 41 07.8	-3.7
	comp=Z,0.6nm,1.2s,mb3.3						
ZRNK	Zerenda	69.26	326	*e*P	P	16 41 14.9	-0.7
ZRNK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
ZRNK	Zerenda	69.26	326	*e*P	P	16 41 14.9	-0.8
	comp=Z,7.1nm,0.8s,mb4.5						
ARU	Arti	76.12	327	*e*P	P	16 41 55.0	-0.9
ARU	Arti	76.12	327	P	P	16 41 53.6	-2.3
	comp=Z,3.9nm,0.9s,mb4.1						
VNDA	Vanda	83.06	173	P	P	16 42 33.5	+0.7
	comp=Z,0.3nm,0.5s,mb3.4,baz=345,slow=4.6,SNR=3.2						
ILAR	Eielson Array	84.35	25	P	P	16 42 40.0	+0.5
	comp=Z,0.4nm,0.7s,mb3.4,baz=251,slow=6.2,SNR=4.3						
SOC	Sochi	86.83	313	*e*P	P	16 42 51.2	-1.0
SOC				*e*PPP	PPP	16 48 06.5	-8.9
SOC				*e*S	S	16 53 15.0	-7.4
SOC				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
SOC				pmax	pmax		
	comp=N,14nm,1.0s						
SOC				pmax	pmax		
	comp=E,14nm,1.0s						

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*NEIC **25** 16:34:19.9±1.0,23.05S×179.99E,h617^{km}±12^{km}, mb4.3/15,Error ellipse: s-maj=14.2km s-min=8.5km az=153.0*

*IDC **25** 16:34:21.1±4.8,23.07S×179.94E,h625^{km}±60^{km},mb3.7/9, mb1 3.8/10,mb1mx3.5/19,mbtmp4.6/10,Error ellipse: s-maj=28.9km s-min=25.7km az=95.0*

ISC 25 16:34:20.2±1.4**,23.0S**±0.1×**179.9E**±0.1**,h641**^{km}±20^{km}**, n34,σ0^{s}92**/33**,mb4.2**/22**,5D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	12.03	42	P	P	16 36 58.1	-1.1
DZM	Mont Dzumac	12.48	272	P	P	16 37 05.3	+1.8
	0.7nm,0.3s,baz=77,slow=19,SNR=9.3						
CNB	Canberra Magne	29.22	238	*e*P	P	16 39 35.2	+0.5
	9.9nm,0.6s,mb4.5						
CTA	Charters Tower	31.40	269	⇓*i*P	P	16 39 53.9	+0.6
	36nm,0.3s,mb5.4						
CTA	Charters Tower	31.40	269	P	P	16 39 53.9	+0.6
	41nm,0.4s,mb5.3,baz=95,slow=11,SNR=193						
CTAO	Charters Tower	31.40	269	*e*P	P	16 39 53.8	+0.5
	45nm,0.4s,mb5.3						
TOO	Toolangi	32.85	236	*e*P	P	16 40 05.6	+0.3
	6.0nm,0.7s,mb4.2						
TAU	Tasmania Unive	33.46	226	P	P	16 40 08.9	-1.5
	12nm,0.9s,mb4.4						
PMG	Port Moresby	34.14	288	P	P	16 40 16.9	+0.6
	28nm,0.8s,mb4.9,baz=104,slow=6.0,SNR=12						
STKA	Stephens Creek	34.97	247	⇓*i*P	P	16 40 23.3	+0.4
	4.2nm,0.6s,mb4.2						
STKA	Stephens Creek	34.97	247	P	P	16 40 23.4	+0.5
	5.5nm,0.6s,mb4.3,baz=86,slow=9.4,SNR=18						
WB2	Warramunga Arr	42.38	265	⇓*i*P	P	16 41 22.3	-0.4
WRAB	Tennant Creek	42.38	265	⇓*e*P	P	16 41 21.9	-0.7
	23nm,1.0s,mb4.6						
WRA	Warramunga Arr	42.39	265	P	P	16 41 22.3	-0.5
	3.9nm,0.3s,mb4.3,baz=91,slow=6.0,SNR=228						
KAKA	Kakadu	46.15	274	⇓*i*P	P	16 41 51.3	-0.5
	13nm,0.3s,mb4.7						
FORT	Forrest	46.53	249	*e*P	P	16 41 53.8	-0.7
	26nm,0.5s,mb4.8						
FITZ	Fitzroy Crossi	50.81	265	*e*P	P	16 42 26.6	+0.4
	10nm,0.4s,mb4.4						
FITZ	Fitzroy Crossi	50.81	265	P	P	16 42 27.0	+0.8
	14nm,0.4s,mb4.5,baz=76,slow=3.2,SNR=37						
VNDA	Vanda	55.22	185	P	P	16 42 56.2	-0.2
	1.3nm,0.8s,mb3.2,baz=339,slow=5.8,SNR=5.2						
VNDA	Vanda	55.22	185	*e*P	P	16 42 55.5	-1.0
	1.4nm,0.8s,mb3.2						
SBA	Scott Base	55.22	183	P	P	16 42 56.7	+0.2
	3.6nm,0.9s,mb3.6						
KLBR	Kellerberrin	55.24	247	*e*P	P	16 42 56.9	-0.3
	6.1nm,0.5s,mb4.1						
MBWA	Marble Bar	55.44	260	*e*P	P	16 42 58.2	-0.5
	7.5nm,0.5s,mb4.2						
NWAO	Narrogin (SRO)	55.52	245	P	P	16 42 58.9	-0.1
	5.4nm,0.6s,mb3.9,baz=187,slow=12,SNR=8.6						
NWAO	Narrogin (SRO)	55.52	245	*e*P	P	16 42 58.8	-0.2
MUN	Mundaring	56.50	246	*e*P	P	16 43 06.0	+0.3
	12nm,1.6s,mb3.8						
KS15	Wonju Array Si	77.55	320	P	P	16 45 10.9	-2.4
MAW	Mawson	78.52	200	P	P	16 45 19.9	+2.0
	3.1nm,0.9s,mb3.8						
CMB	Columbia Colle	82.64	43	*e*P	P	16 45 40.0	+0.4
	3.1nm,1.1s,mb3.8						
SNAA	Sanae	85.52	179	*e*P	P	16 45 51.9	-1.0
	0.9nm,0.7s,mb3.5						
TXAR	Lajitas Array	90.05	58	P	P	16 46 16.0	+1.0
	0.6nm,0.8s,mb3.5,baz=212,slow=6.8,SNR=8.3						
MCMT	McKenzie Canyo	91.14	41	P	P	16 46 11.4	-8.2
PDAR	Pinedale Array	92.14	44	P	P	16 46 25.4	+1.2
	0.4nm,0.8s,mb3.4,baz=117,slow=3.3,SNR=3.9						
AKASG	Malin Array Be	144.21	328	PKP	PKPdf	16 52 46.4	+2.0
	0.3nm,0.3s,baz=47,slow=4.2,SNR=4.7						

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*NEIC **25** 16:52:29.8±2.0,6.98S×129.52E,h128^{km}±22^{km},mb4.5/10, Error ellipse: s-maj=24.6km s-min=11.2km az=52.0*

*IDC **25** 16:52:29.2±8.4,7.02S×129.35E,h111^{km}±83^{km},mb3.9/5, mb1 4.3/7,mb1mx4.0/14,mbtmp4.5/7,ML4.8/2,Error ellipse: s-maj=70.3km s-min=23.2km az=53.0*

ISC 25 16:52:31.6±1.7**,7.23S**±0.07×**129.34E**±0.09**,h165**^{km}±19^{km}**, n27,σ1^{s}12**/33**,mb4.1**/13**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	6.25	151	*e*P	P	16 54 03.6	+1.0
	104nm,0.3s						
KAKA				*i* S	S	16 55 12.6	-0.7
FITZ	Fitzroy Crossi	11.39	198	*e*P	P	16 55 12.5	+2.1
	30nm,0.3s						
FITZ				*e*S	S	16 57 14.2	-0.8
FITZ	Fitzroy Crossi	11.39	198	P	P	16 55 12.6	+2.2
	9.5nm,0.3s,baz=19,slow=9.0,SNR=119						
FITZ				S	S	16 57 15.6	+0.5
	17nm,0.3s,baz=161,slow=22,SNR=6.7						
WRAB	Tennant Creek	13.54	159	*e*P	P	16 55 37.5	-0.6
	36nm,0.4s						
WRAB				*e*S	S	16 57 59.1	-5.8
WRA	Warramunga Arr	13.54	159	P	P	16 55 37.9	-0.2
	3.2nm,0.3s,baz=347,slow=13,SNR=95						
WRA				S	S	16 58 01.8	-3.2
	10nm,0.3s,baz=334,slow=22,SNR=11						
WB2	Warramunga Arr	13.54	159	*e*P	P	16 55 37.7	-0.5
WB2				*e*S	S	16 58 03.4	-1.7
PMG	Port Moresby	17.77	98	P	P	16 56 30.8	+0.8
KKM	Kota Kinabalu	18.58	315	P	P	16 56 38.2	-0.4
KKM				*e*		16 56 46.6	
CTAO	Charters Tower	20.80	130	*e*P	P	16 57 01.3	0.0
KSM	Kuching	20.86	294	*e*P	P	16 57 01.1	-0.8
FORT	Forrest	23.46	183	*e*P	P	16 57 33.0	+5.8
	18nm,0.5s,mb4.8						
STKA	Stephens Creek	27.06	157	*e*P	P	16 58 03.4	+2.7
	2.3nm,0.6s,mb4.0						
STKA	Stephens Creek	27.06	157	P	P	16 58 03.7	+3.0
	2.2nm,0.5s,mb4.0,baz=313,slow=8.5,SNR=9.4						
STKA	Stephens Creek	27.06	157	*e*P	P	16 58 03.3	+2.6
CM31	Chiang Mai Arr	39.38	311	P	P	16 59 43.2	-3.6
	2.8nm,0.6s,mb4.1						
CMAR	Chiang Mai Arr	39.38	311	P	P	16 59 47.9	+1.0
	2.6nm,0.6s,mb4.0,baz=134,slow=6.9,SNR=24						
ENH	Enshi	41.87	334	*e*P	P	17 00 06.2	-1.0
	11nm,0.4s,mb4.8						
MAJO	Matsushiro	44.33	10	*e*P	P	17 00 23.0	-3.9
	15nm,1.3s,mb4.5						
KS15	Wonju Array Si	44.45	358	*e*P	P	17 00 20.4	-7.6
LSA	Lhasa	51.91	317	P	P	17 01 24.9	-0.7
ULN	Ulaanbaatar	58.28	343	*e*P	P	17 02 10.4	-0.7
	1.3nm,0.7s,mb3.9						
SONM	Songino Array	58.45	342	P	P	17 02 12.2	-0.1
	0.6nm,0.6s,mb3.6,baz=158,slow=7.2,SNR=5.0						
MKAR	Makanchi Array	68.05	327	P	P	17 03 15.7	+0.3
	3.0nm,0.6s,mb4.2,baz=114,slow=8.4,SNR=40						
ZAL	Zalesovo	71.50	334	P	P	17 03 36.0	0.0
	1.4nm,0.2s,mb4.3,baz=7.4,slow=4.2,SNR=5.8						
VNDA	Vanda	72.31	173	P	P	17 03 43.4	+2.9
	1.6nm,1.1s,mb3.7						
ZRNK	Zerenda	78.60	328	*e*P	P	17 04 16.4	0.0
	1.3nm,0.6s,mb3.7						
ARU	Arti	85.55	328	*e*P	P	17 04 52.6	+0.5
	3.7nm,0.8s,mb4.2						

IDC 25 17:12:53.0±6.8**,8.29S**×**119.80E,h64**^{km}±72^{km}**,mb3.7**/2**, mb1 3.9**/4**,mb1mx3.4**/16**,mbtmp4.0**/4**,ML3.5**/1**,1D,Error ellipse: s-maj=187.4km s-min=30.2km az=54.0,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.29	150	P	P	17 15 31.3	-2.6
	0.2nm,0.3s,baz=177,slow=15,SNR=3.6						
FITZ				S	S	17 17 37.7	-1.5
	0.5nm,0.3s,baz=170,slow=19,SNR=6.2						
WRA	Warramunga Arr	18.24	131	P	P	17 17 01.6	-1.8
	0.7nm,0.3s,baz=305,slow=12,SNR=63						
WB2	Warramunga Arr	18.25	131	⇓*i*P	P	17 17 01.7	-1.8
STKA	Stephens Creek	31.02	142	P	P	17 19 04.6	-2.3
	2.1nm,0.5s,baz=321,slow=7.6,SNR=11						
MKAR	Makanchi Array	64.19	332	P	P	17 23 21.0	-2.3
	0.7nm,0.7s,baz=151,slow=7.3,SNR=5.6						

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*NEIC **25** 17:14:43.6±0.7,24.06S×66.84W,h203^{km}±12^{km},mb3.8/4, Error ellipse: s-maj=14.2km s-min=9.6km az=109.0*

*IDC **25** 17:14:43.3±1.5,24.14S×66.74W,h162^{km}±41^{km}, mb1 3.6/6,mb1mx3.4/19,mbtmp4.0/6,Error ellipse: s-maj=31.1km s-min=13.6km az=96.0*

*GUC **25** 17:14:45.0±0.6,24.25S×67.08W,h210^{km},ML4.8*

ISC 25 17:14:43.0±0.6**,24.19S**±0.04×**66.80W**±0.09**, h197**^{km}±14^{km}**,n18,σ1^{s}00**/26**,mb3.9**/2**,4C,Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPN1	Cerro Paranal	3.32	262	⇑*i*P	P	17 15 38.3	+1.4
CPN1				*i* S	S	17 16 18.4	-0.1
CPN1				AMP		17 16 21.3	
	comp=E,1μm,0.3s						
ANCH	Antofagasta	3.35	278	⇑*i*P	P	17 15 38.4	+1.2
ANCH				*i* S	S	17 16 18.5	-0.6
ANCH				AMP		17 16 20.7	
	comp=N,1μm,0.1s						
CRCH	Chaqaral	4.07	237	⇑*i*P	P	17 15 47.3	+1.1
CRCH				*i* S	S	17 16 34.6	-0.5
CPCH	Copiapo	4.50	225	⇑*i*P	P	17 15 51.0	-0.5
CPCH				*i* S	S	17 16 43.4	-1.3
CFAA	Coronel Fontan	7.49	189	P	P	17 16 32.1	+1.7
	comp=N,0.5nm,0.3s,baz=356,slow=13,SNR=32						
CFAA				S	S	17 17 52.8	-1.5
	comp=N,1.1nm,0.3s,baz=235,slow=14,SNR=22						
LPAZ	La Paz	7.96	351	P	P	17 16 37.2	+0.6
	comp=N,1.7nm,0.3s,baz=155,slow=6.5,SNR=22						
LPAZ				S	S	17 18 05.5	+0.2
	comp=N,0.7nm,0.3s,baz=271,slow=23,SNR=7.7						
LPAZ	La Paz	7.96	351	*e*Pn	P	17 16 36.3	-0.3
LPAZ				*e*Sn	S	17 18 04.1	-1.2
LPAZ				S	S	17 18 05.5	+0.2
CPUP	Villa Florida	8.83	106	P	P	17 16 48.4	+0.5
	comp=N,0.1nm,0.3s,baz=303,slow=15,SNR=9.2						
CPUP	Villa Florida	8.83	106	*e*P	P	17 16 47.9	0.0
	comp=N,6.6nm,1.0s						
SIV	San Ignacio	9.77	34	P	P	17 16 58.1	-2.0
	comp=N,1.5nm,0.3s,baz=216,slow=14,SNR=37						
TRQA	Tornquist	14.42	165	*e*P	P	17 17 59.8	+0.6
SAML	Samuel	15.55	13	*e*P	P	17 18 08.4	-4.9
	comp=N,2.8nm,0.8s						
PLCA	Paso Flores	16.79	190	P	P	17 18 30.2	+2.0
	comp=N,0.2nm,0.3s,baz=353,slow=15,SNR=7.3						
PLCA	Paso Flores	16.79	190	*e*P	P	17 18 27.9	-0.2
BDFB	Brasilia	19.58	68	P	P	17 18 57.8	-0.1
	comp=N,1.2nm,0.3s,baz=242,slow=11,SNR=26						
BAO	Brasilia Array	19.61	68	P	P	17 18 58.5	+0.4
TSUM	Tsumeb	77.42	106	*e*P	P	17 26 18.4	0.0
	comp=N,0.9nm,0.8s,mb3.5						
LBTB	Lobatse	82.14	114	P	P	17 26 42.4	-0.9
	comp=N,10nm,1.3s,mb4.3						

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*NIED **25** 17:17:00,46.10N×142.40E,h5^{km},Mw3.8 Best double couple: M$_0$4.83×10^{14} NP1:φ$_s$347°,δ48°,λ76°. NP2:φ$_s$187°, δ44°,λ105°.*

*JMA **25** 17:17:31.7±0.3,46.13N×142.38E,M4.1*

*MOS **25** 17:17:32.1±1.1,46.12N×141.95E,h10^{km},mb4.6/4,Error ellipse: s-maj=24.6km s-min=11.1km az=83.9*

MOS Felt (III) at Kril’on.

*IDC **25** 17:17:32.7±0.8,46.06N×141.96E,mb3.7/10,mb1 4.0/10, mb1mx3.8/22,mbtmp3.7/10,MS3.0/1,Ms1 3.0/1, ms1mx2.2/36,Error ellipse: s-maj=20.5km s-min=17.9km az=82.0*

*SKHL **25** 17:17:32.4±0.3,46.07N×142.12E,h10^{km},mb3.9/4, Ms3.2/1,msh4.4/1*

SKHL Felt (III) at m.Krilion.

*NEIC **25** 17:17:35.7±8.6,46.21N×141.98E,h17^{km}±56^{km},mb4.5/5, Error ellipse: s-maj=15.8km s-min=13.0km az=165.0*

NEIC Felt [III] at Kril’on.

ISC 25 17:17:33.4±0.7**,46.09N**±0.02×**142.18E**±0.05**,h15**^{km}±5^{km}**, n38,σ1^{s}24**/56**,mb3.9**/17**,MS2.8**/1**,2C,Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWK2	Keihoku	0.80	194	P	Pb	17 17 49.2	+0.7
JWK2				*e*S	Sb	17 18 00.5	+1.6
YSS	Yuzh-Sakhalins	0.95	25	⇑*i*PN	Pn	17 17 52.0	-0.1
YSS				*i* S	Sb	17 18 07.0	+3.8
YSS				pmax	pmax		
	comp=N,170nm,0.7s						
YSS				pmax	pmax		
	comp=Z,210nm,0.7s						
YSS				smax			
	comp=N,2μm,1.0s						
YSS				smax			
	comp=E,2μm,1.0s						
YSS				smax			
	comp=N,3μm,0.7s						
YSS				smax			
	comp=E,2μm,0.7s						
YSS	Yuzh-Sakhalins	0.95	25	⇑*i*Pg	Pn	17 17 52.0	-0.1
YSS				AMB	AMB	17 17 53.5	
	comp=E,170nm,0.7s						
YSS				AMB	AMB	17 17 53.5	
	comp=E,210nm,0.7s						
YSS				*e*Sg	Sg	17 18 05.9	+0.6
YSS				A		17 18 08.5	
	comp=E,1μm,0.4s						
YSS				A		17 18 08.5	

	comp=E,3µm,0.4s						
YSS				A		17 18 10.0	
	comp=E,2µm,1.0s						
YSS				A		17 18 10.0	
	comp=E,2µm,1.0s						
YSS				AMS	AMS	17 18 31.0	
	comp=E,1µm,5.0s						
YSS				AMS	AMS	17 18 31.0	
	comp=E,600nm,5.0s						
JRR	**Rishiri**	1.13	213	P	Pb	17 17 54.5	+0.3
JRR				*e*S	Sb	17 18 10.6	+2.1
JSE	**Soyaes**	1.17	166	P	Pb	17 17 54.4	-0.4
JSE				*e*S	Sb	17 18 11.0	+1.4
JSS	**Shosan**	1.71	188	P	Pn	17 18 03.7	+0.7
JSS				*e*S	Sn	17 18 28.4	+3.8
JYG	**Yagishiri**	1.75	198	P	Pn	17 18 03.0	-0.5
JYG				*e*S	Sn	17 18 25.5	-0.1
ASAJ	**Asahikawa**	2.00	171	PN	Pn	17 18 07.2	+0.1
ASAJ						17 18 36.0	
ASAJ				pmax	pmax		
	comp=Z,32nm,0.3s						
ASAJ				smax			
	comp=N,81nm,0.3s						
ASAJ	**Asahikawa**	2.00	171	Pn	Pn	17 18 07.2	+0.1
	comp=N,32nm,0.3s,baz=53,slow=12,SNR=160						
ASAJ				Sn	Sn	17 18 36.0	+4.0
	comp=N,81nm,0.3s,baz=288,slow=32,SNR=19						
UGL	**Uglegorsk**	2.99	359	*e*Pb	Pb	17 18 25.2	-0.7
UGL				*e*Pg	Pg	17 18 32.5	-0.6
UGL				AMB	AMB	17 18 35.2	
	comp=N,39nm,0.5s						
UGL				AMB	AMB	17 18 35.2	
	comp=N,40nm,0.5s						
UGL				AMB	AMB	17 18 35.2	
	comp=N,36nm,0.5s						
UGL				*e*Sg	Sg	17 19 14.0	+1.0
UGL				A		17 19 20.0	
	comp=N,400nm,2.8s						
UGL				A		17 19 20.0	
	comp=N,600nm,2.8s						
UGL				A		17 19 21.5	
	comp=N,250nm,1.0s						
UGL				A		17 19 21.5	
	comp=N,110nm,0.7s						
UGL				AMS	AMS	17 20 00.0	
	comp=N,600nm,10.0s						
UGL				AMS	AMS	17 20 00.0	
	comp=N,500nm,10.0s						
UGL				AMS	AMS	17 20 00.0	
	comp=N,400nm,10.0s						
YUK	**Yuzh-Kuril'sk**	3.32	127	*e*P	Pn	17 18 24.8	-1.2
YUK				*e*S	Sn	17 19 03.5	-2.1
YUK				A		17 19 04.0	
	comp=N,2µm,0.8s						
YUK				A		17 19 04.4	
	comp=N,330nm,0.5s						
YUK				A		17 19 04.4	
	comp=N,540nm,0.5s						
TEY	**Ternei**	4.06	257	*e*Pg	Pg	17 18 52.8	-1.6
TEY				AMB	AMB	17 18 55.1	
	comp=N,14nm,0.7s						
TEY				*e*Sg	Sg	17 19 48.4	-0.1
TEY				A		17 19 50.5	
	comp=N,15nm,0.4s						
TYV	**Tymovskoe**	4.79	4	*e*Pn	Pn	17 18 46.0	-0.8
TYV				AMB	AMB	17 19 04.8	
	comp=N,9.0nm,0.8s						
TYV				*e*Pg	Pg	17 19 08.1	-0.9
TYV				AMB	AMB	17 19 12.0	
	comp=N,11nm,0.8s						
TYV				*e*Sn	Sn	17 19 45.0	+2.4
TYV				A		17 20 10.7	
	comp=N,13nm,0.9s						
TYV				A		17 20 10.7	
	comp=N,20nm,0.9s						
TYV				*e*Sg	Sg	17 20 15.0	+2.2
TYV				A		17 20 22.0	
	comp=N,13nm,0.9s						
TYV				A		17 20 22.0	
	comp=N,11nm,0.9s						
GRNR	**Gornyy**	6.05	323	*e*Pn	Pn	17 19 02.8	-1.8
GRNR				AMB	AMB	17 19 03.4	
	comp=N,23nm,0.7s						
GRNR				AMB	AMB	17 19 03.4	
	comp=N,7.0nm,0.7s						
GRNR				AMB	AMB	17 19 03.4	
	comp=N,25nm,0.7s						
GRNR				*e*Pg	Pg	17 19 32.6	-1.6
GRNR				AMB	AMB	17 19 35.0	
	comp=N,19nm,0.9s						
GRNR				*e*Sg	Sg	17 20 56.5	+1.7
GRNR				A		17 21 12.0	
	comp=N,37nm,1.0s						
GRNR				A		17 21 12.0	
	comp=N,23nm,1.0s						
EKMR	**Ekimchan**	9.20	323	*e*P	P	17 19 51.0	+2.4
EKMR				*e*S	Sn	17 21 39.0	+6.2
MJAR	**Matsushiro Arr**	10.00	199	Pn	P	17 19 59.8	+0.3
	comp=N,0.1nm,0.3s,baz=9.0,slow=13,SNR=4.9						
SONM	**Songino Array**	24.35	287	P	P	17 22 51.4	-0.2
	comp=N,0.4nm,0.6s,mb3.0,baz=79,slow=7.3,SNR=3.8						
SONM				LR	LR	17 32 47.2	
	comp=N,31nm,18.5s,MS2.8,baz=254,slow=38						
BILL	**Bilibino**	25.27	21	P	P	17 22 58.3	-1.7
BILL				pmax	pmax		
	comp=Z,19nm,1.7s,mb4.3						
BILL	**Bilibino**	25.27	21	P	P	17 22 58.3	-1.7
	comp=Z,19nm,1.7s,mb4.3						
ZAK	**Zakamensk**	26.05	294	*e*P	P	17 23 07.2	-0.4
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.2						
IMA	**Indian Mountai**	38.79	36	*e*P	P	17 24 58.7	0.0
IMA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
IMA	**Indian Mountai**	38.79	36	*e*P	P	17 24 58.7	0.0
	comp=Z,13nm,1.0s,mb4.6						
MKAR	**Makanchi Array**	40.39	293	P	P	17 25 09.8	-2.4
	comp=Z,0.5nm,0.7s,mb3.4,baz=90,slow=9.7,SNR=4.7						
MKAR	**Makanchi Array**	40.39	293	P	P	17 25 09.8	-2.4
ILAR	**Eielson Array**	41.73	37	P	P	17 25 23.8	+0.9
	comp=Z,0.8nm,0.7s,mb3.5,baz=279,slow=8.3,SNR=9.6						
BVAR	**Borovoye Array**	45.28	306	P	P	17 25 52.1	+0.3
	comp=Z,0.3nm,0.4s,mb3.5,baz=82,slow=10,SNR=4.2						
ZRNK	**Zerenda**	46.08	306	*e*P	P	17 25 56.9	-1.2
ZRNK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
ZRNK	**Zerenda**	46.08	306	*e*P	P	17 25 56.9	-1.2
	comp=Z,3.0nm,1.0s,mb4.2						
INK	**Inuvik**	46.19	31	P	P	17 25 58.8	0.0
	comp=Z,1.0nm,0.6s,mb3.9,baz=272,slow=8.8,SNR=4.3						
ARU	**Arti**	50.20	314	*e*P	P	17 26 28.8	-1.3
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
ARU	**Arti**	50.20	314	*e*P	P	17 26 28.8	-1.4
	comp=Z,6.3nm,1.1s,mb4.6						
FINES	**FINESS Array B**	61.14	330	P	P	17 27 48.0	-1.0
	comp=Z,1.0nm,0.5s,mb4.2,baz=58,slow=7.6,SNR=16						
NB2	**NORSAR Subarra**	66.09	336	P	P	17 28 20.2	-1.1
	comp=Z,0.8nm,0.7s,mb3.9,baz=37,slow=6.5						
WRA	**Warramunga Arr**	66.10	188	P	P	17 28 21.0	-1.1
	comp=Z,0.3nm,0.5s,mb3.6,baz=6.5,slow=6.7,SNR=7.6						
NVAR	**Mina Array Bea**	69.26	56	P	P	17 28 43.2	+1.6
	comp=Z,0.8nm,0.7s,mb3.8,baz=306,slow=5.6,SNR=6.4						
MBWA	**Marble Bar**	69.96	202	P	P	17 28 39.8	-6.3
	comp=Z,14nm,1.1s,mb4.8						
PDAR	**Pinedale Array**	71.02	48	P	P	17 28 53.2	+0.9
	comp=Z,0.5nm,0.6s,mb3.6,baz=27,slow=2.0,SNR=3.6						
TXAR	**Lajitas Array**	84.18	53	P	P	17 30 06.8	+1.5
	comp=Z,0.6nm,0.7s,mb3.9,baz=285,slow=2.1,SNR=6.4						

NIED ***25*** *17:19:00, 47.00N×147.30E, h460^{km}, Mw4.6 Best double couple: M$_0$9.19×10^{15} NP1:ϕ_s188°, δ78°, λ92°. NP2:ϕ_s1°, δ12°, λ83°.*

SKHL ***25*** *17:19:50.0±7.5, 47.61N×147.24E, h440^{km}±40^{km}, mb5.3/3, mbh5.5/1, msh5.1/5*

MOS ***25*** *17:19:51.5±0.8, 47.73N×146.87E, h413^{km}, mb4.5/42, Error ellipse: s-maj=8.3km s-min=5.2km az=81.6*

JMA ***25*** *17:19:52.4±0.3, 47.05N×147.33E, h472^{km}, M4.4*

BJI ***25*** *17:19:52.8, 47.63N×146.67E, h415^{km}, mB4.8, mb4.9*

IDC ***25*** *17:19:54.0±0.8, 47.72N×146.83E, h428^{km}±8^{km}, mb3.9/28, mb1 4.0/32, mb1mx4.0/34, mbtmp4.7/32, Error ellipse: s-maj=9.8km s-min=6.8km az=147.0*

NEIC ***25*** *17:19:54.4±0.4, 47.76N×146.80E, h433^{km}±5^{km}, mb4.5/79, Error ellipse: s-maj=4.6km s-min=2.7km az=161.0*

ISC 25 17:19:51.7±0.2**, 47.65N**±0.03×**146.91E**±0.03**, h417**^{km}±2^{km}**, n336,** σ**0**^{s}**98**/367**, mb4.5**/122**, 6C-9D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	2.51	164	*e*PN	P	17 20 51.8	-1.1
KUR				*e*S	S	17 21 40.0	-1.1
KUR				pmax	pmax		
	comp=Z,70nm,0.7s						
KUR				smax			
	comp=N,250nm,1.0s						
KUR				smax			
	comp=E,380nm,1.0s						
KUR	**Kuril'sk**	2.51	164	*e*P	P	17 20 51.8	-1.1
KUR				AMB	AMB	17 20 52.3	
	comp=E,70nm,0.7s						
KUR				*e*S	S	17 21 40.0	-1.1
KUR				A		17 21 41.7	
	comp=E,250nm,1.0s						
KUR				A		17 21 41.7	
	comp=E,380nm,1.0s						
YSS	**Yuzh-Sakhalins**	2.91	258	⇑*i*PN	P	17 20 59.5	+3.6
YSS				*i* S	S	17 21 51.0	+4.5
YSS				pmax	pmax		
	comp=Z,270nm,0.9s						
YSS				smax			
	comp=N,330nm,1.3s						
YSS				smax			
	comp=E,330nm,1.3s						
YSS				smax			
	comp=E,1µm,6.0s						
YSS	**Yuzh-Sakhalins**	2.91	258	*i* P	P	17 20 59.5	+3.6
YSS				AMB	AMB	17 21 02.2	
	comp=E,270nm,0.9s						
YSS				*i* S	S	17 21 51.0	+4.5
YSS				A		17 21 53.0	
	comp=E,330nm,1.3s						
YSS				A		17 21 56.0	
	comp=E,1µm,6.0s						
UGL	**Uglegorsk**	3.53	296	*i* P	P	17 21 04.2	+3.1
UGL				*e*P		17 21 04.2	
UGL				AMB	AMB	17 21 06.0	
	comp=E,800nm,3.0s						
UGL				*i* S	S	17 22 00.5	+4.8
UGL				*e*S	S	17 22 00.5	+4.8
UGL				A		17 22 02.0	
	comp=E,250nm,1.0s						
UGL				A		17 22 02.0	
	comp=E,450nm,1.0s						
UGL				A		17 22 04.0	
	comp=E,1µm,6.0s						
UGL				A		17 22 04.0	
	comp=E,2µm,6.0s						
YUK	**Yuzh-Kuril'sk**	3.69	192	*e*PN	P	17 21 02.0	-0.5
YUK				*i* S	S	17 21 58.2	0.0
YUK				pmax	pmax		
	comp=Z,2µm,1.1s						
YUK				pmax	pmax		
	comp=Z,340nm,0.2s						
YUK				pmax	pmax		
	comp=N,110nm,0.4s						
YUK				smax			
	comp=N,5µm,1.6s						
YUK				smax			
	comp=E,6.0nm,2.4s						
YUK				smax			
	comp=N,890nm,0.5s						
YUK				smax			
	comp=E,500nm,0.5s						
YUK	**Yuzh-Kuril'sk**	3.69	192	*e*P	P	17 21 02.0	-0.5
YUK				AMB	AMB	17 21 02.8	
	comp=E,2µm,1.1s						
YUK				AMB	AMB	17 21 04.0	
	comp=E,110nm,0.3s						
YUK				AMB	AMB	17 21 04.0	
	comp=E,340nm,0.3s						
YUK				*i* S	S	17 21 58.2	0.0
YUK				A		17 22 03.0	
	comp=E,5µm,1.6s						
YUK				A		17 22 03.0	
	comp=E,6µm,2.4s						
YUK				A		17 22 04.5	
	comp=E,890nm,0.5s						
YUK				A		17 22 04.5	
	comp=E,500nm,0.5s						
JRA	**Rausu**	3.92	199	P	P	17 21 05.3	+0.7
JRA				*e*S	S	17 22 02.9	+1.0
JSE	**Soyaes**	4.03	230	P	P	17 21 08.5	+2.9
JSE				*e*S	S	17 22 08.8	+5.1
JWK2	**Keihoku**	4.18	238	P	P	17 21 10.8	+3.8
JWK2				*e*S	S	17 22 13.5	+7.3
JTKR	**Abashiri--Toko**	4.24	211	P	P	17 21 09.1	+1.5
JTKR				*e*S	S	17 22 09.6	+2.4
TYV	**Tymovskoe**	4.25	321	*e*P	P	17 21 08.0	+0.3
TYV				AMB	AMB	17 21 08.5	
	comp=E,31nm,0.8s						
TYV				AMB	AMB	17 21 11.0	
	comp=E,700nm,3.0s						
TYV				AMB	AMB	17 21 11.0	
	comp=E,800nm,3.0s						
TYV				AMB	AMB	17 21 11.0	
	comp=E,700nm,3.0s						
TYV				⇑*i*S	S	17 22 09.7	+2.2
TYV				A		17 22 11.0	
	comp=E,184nm,1.0s						
TYV				A		17 22 11.0	
	comp=E,185nm,1.0s						
NEM2	**Nemuro 2**	4.37	191	P	P	17 21 07.1	-1.7
NEM2				*e*S	S	17 22 06.6	-2.8
ASAJ	**Asahikawa**	4.64	222	PN	P	17 21 13.6	+2.0
ASAJ				S	S	17 22 18.9	+4.6
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ	**Asahikawa**	4.64	222	P	P	17 21 13.6	+2.0
	comp=Z,7.3nm,0.3s,baz=56,slow=3.8,SNR=6.1						
ASAJ				S	S	17 22 18.9	+4.6
	baz=236,slow=29,SNR=4.4						
JKK2	**Kamakawa 2**	4.77	219	P	P	17 21 14.5	+1.6
JAR	**Ashorobuto**	4.88	208	P	P	17 21 14.6	+0.6
JAR				*e*S	S	17 22 19.7	+1.2
JAK	**Akkeshi**	4.91	199	P	P	17 21 12.8	-1.5
JAK				*e*S	S	17 22 16.1	-2.9
JYG	**Yagishiri**	5.00	232	P	P	17 21 17.1	+2.0
JYG				*e*S	S	17 22 24.2	+3.6
JHR	**Hokuryu**	5.33	225	P	P	17 21 20.6	+2.0
JFR	**Furan**	5.42	216	P	P	17 21 20.6	+1.2
JCH	**Churui**	5.63	208	P	P	17 21 20.3	-1.3
JCH				*e*S	S	17 22 28.8	-3.4
JNBK	**Urakawa-nobuka**	6.13	210	P	P	17 21 25.5	-1.4
JNBK				*e*S	S	17 22 38.8	-3.1
JEW	**Eniwo**	6.16	221	P	P	17 21 27.7	+0.4
JEW				*e*S	S	17 22 42.0	-0.6
JSK	**Shakotan**	6.24	229	P	P	17 21 29.6	+1.5
JSK				*e*S	S	17 22 44.4	+0.3
SKR	**Severo-Kuril's**	6.76	60	*e*PN	P	17 21 31.5	-2.4
SKR				*e*S	S	17 22 52.8	-1.7
SKR				smax			
	comp=N,540nm,1.0s						
SKR				smax			
	comp=E,260nm,0.9s						
SKR	**Severo-Kuril's**	6.76	60	*e*P	P	17 21 31.5	-2.4
SKR				AMB	AMB	17 21 32.0	
	comp=E,120nm,0.8s						
SKR				AMB	AMB	17 21 32.0	
	comp=E,310nm,0.8s						
SKR				*e*S	S	17 22 52.8	-1.7
SKR				A		17 22 54.9	
	comp=E,540nm,0.9s						
JKB	**Kayabe**	7.12	218	P	P	17 21 36.7	-1.2
JKB				*e*S	S	17 22 57.7	-4.0
JOT	**Ohata**	7.54	216	P	P	17 21 40.7	-1.9
JOT				*e*S	S	17 23 05.1	-5.0
GRNR	**Gornyy**	7.54	298	*e*P	P	17 21 41.2	-1.5
GRNR				AMB	AMB	17 21 42.0	
	comp=E,130nm,1.0s						
TEY	**Ternei**	7.60	254	*e*P	P	17 21 44.0	+0.7
TEY				*e*S	S	17 23 12.0	+0.7
TEY				A		17 23 14.0	
	comp=E,390nm,1.5s						
TEY				A		17 23 16.0	
	comp=E,1µm,4.0s						
JOSM	**Okushiri--Mats**	7.67	226	P	P	17 21 43.4	-0.7
JOSM				*e*S	S	17 23 11.3	-1.6
JANG	**Nango**	8.25	210	P	P	17 21 48.9	-1.7
JANG				*e*S	S	17 23 20.3	-4.3
JOM	**Ohasama**	9.13	209	P	P	17 21 59.0	-1.7
PET	**Petropavlovsk**	9.23	50	*e*PN	P	17 22 01.1	-0.7
PET				*e*S	S	17 23 42.8	-2.0
PET				smax			
	comp=E,73nm,0.8s						
PET				MLR	MLR		
	comp=Z,100nm,14.0s						
KLR	**Kul'dur**	10.20	285	*e*P	P	17 22 12.2	-0.7
KLR				*e*S	S	17 24 09.0	+4.2
KLR				A		17 24 10.8	
	comp=Z,42nm,1.8s						
KLR				A		17 24 10.8	
	comp=Z,70nm,1.8s						
MA2	**Magadan**	12.16	9	*e*PN	P	17 22 34.4	-0.6
MA2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MA2	**Magadan**	12.16	9	*e*P	P	17 22 35.1	+0.1
	comp=Z,18nm,0.6s						
MDJ	**Mudanjiang**	12.39	262	P	P	17 22 37.5	-0.1
MDJ				S	S	17 24 49.3	-0.9
MDJ				SCP		17 30 35.0	
MDJ				PCS		17 31 14.5	
MDJ				SCS	ScS	17 34 08.0	-1.5
MDJ				AMB	AMB		
	comp=Z,140nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,30nm,3.1s						
MDJ	**Mudanjiang**	12.39	262	*e*P	P	17 22 37.7	+0.1
MAJO	**Matsushiro**	12.83	213	*e*PN	P	17 22 42.4	-0.2
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s						
MAJO	**Matsushiro**	12.83	213	*e*P	P	17 22 42.4	-0.2
	comp=Z,16nm,0.8s						
MAT	**Matsushiro**	12.83	213	*e*PN	P	17 22 43.0	+0.4
MAT				*e*S	S	17 24 59.0	-0.1
MAT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MAT	**Matsushiro**	12.83	213	*e*P	P	17 22 43.0	+0.4
	comp=Z,5.5nm,0.7s						
MAT				*e*S	S	17 24 59.0	-0.1
MAT	**Matsushiro**	12.83	213	P	P	17 22 42.6	0.0
MAT				S	S	17 24 58.6	-0.5
MJAR	**Matsushiro Arr**	12.83	213	P	P	17 22 42.8	+0.2
	comp=Z,2.1nm,0.3s,baz=13,slow=11,SNR=45						
MJAR				S	S	17 25 03.3	+4.2
	baz=13,slow=17,SNR=4.7						
YASR	**Yasnyy**	13.29	302	*i* P	P	17 22 44.7	-2.8
YASR				AMB	AMB	17 22 45.9	
	comp=Z,8.0nm,0.7s						
YASR				AMB	AMB	17 22 45.9	
	comp=Z,60nm,0.7s						
YASR				AMB	AMB	17 22 45.9	
	comp=Z,120nm,0.7s						
BMKR	**Bomnak**	13.33	309	*i* P	P	17 22 45.3	-2.6
BMKR				AMB	AMB	17 22 46.3	
	comp=Z,52nm,0.5s						
BMKR				AMB	AMB	17 22 46.3	
	comp=Z,46nm,0.5s						
BMKR				AMB	AMB	17 22 46.3	
	comp=Z,105nm,0.5s						
ZEA	**Zeya**	13.85	303	*e*P	P	17 22 50.0	-3.3
ZEA				AMB	AMB	17 22 51.1	
	comp=Z,58nm,1.1s						
ZEA				AMB	AMB	17 22 51.1	
	comp=Z,35nm,1.1s						
ZEA				AMB	AMB	17 22 51.1	
	comp=Z,71nm,1.1s						
CN2	**Changchun**	15.46	263	⇓P	P	17 23 09.0	-1.0
CN2				*e*XP		17 24 50.0	
CN2				*e*S	S	17 25 48.8	-1.3
CN2				AMB	AMB		
	comp=Z,40nm,0.7s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
SEY	**Seymchan**	15.62	9	*i* P	P	17 23 12.5	+1.0
SEY				*e*		17 25 55.5	
SEY				pmax	pmax		
	comp=N,10.0nm,0.6s						
SEY				pmax	pmax		
	comp=E,3.0nm,0.6s						
SEY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CLNS	**Chul'man**	16.25	313	*e*P	P	17 23 18.9	+1.0
CLNS				*e*S	S	17 26 07.7	+2.9
CLNS				pmax	pmax		
	comp=N,47nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,131nm,0.8s						
CLNS				pmax	pmax		
	comp=E,55nm,0.9s						
CLNS				smax			
	comp=E,25nm,0.9s						
CLNS				smax			
	comp=Z,11nm,0.9s						
CLNS				smax			
	comp=N,69nm,1.7s						
KS15	**Wonju Array Si**	17.30	241	*e*P	P	17 23 30.5	+1.9
YAK	**Yakutsk**	17.40	332	*e*P	P	17 23 29.3	-0.2
YAK				*e*S	S	17 26 27.3	+1.3
YAK				pmax	pmax		
	comp=Z,82nm,0.7s						
YAK	**Yakutsk**	17.40	332	*e*P	P	17 23 29.3	-0.2
	comp=Z,82nm,0.7s						
YAK				*e*S	S	17 26 27.3	+1.3
FX1	**Attu Island--F**	17.53	63	P	P	17 23 33.0	+2.1
FX1				pmax	pmax		
	comp=Z,24nm,0.3s						
FX1	**Attu Island--F**	17.53	63	P	P	17 23 33.0	+2.1
	comp=Z,24nm,0.3s,baz=258,slow=1.1,SNR=57						
FX1	**Attu Island--F**	17.53	63	*e*P	P	17 23 33.1	+2.3
SNY	**Shenyang**	17.54	259	⇓P	P	17 23 32.0	+1.0
SNY				AMB	AMB		
	comp=Z,50nm,0.6s						
INCN	**Inchon**	18.01	243	P	P	17 23 33.9	-1.9
	comp=Z,21nm,0.8s						
HIA	**Hailar**	18.06	285	*e*P	P	17 23 35.5	-0.7
HIA				pmax	pmax		
	comp=Z,27nm,0.6s						
HIA	**Hailar**	18.06	285	*e*P	P	17 23 35.5	-0.7
	comp=Z,27nm,0.6s						
JNU	**Nakatsue**	18.91	226	P	P	17 23 46.6	+1.9
	comp=Z,2.3nm,0.3s,baz=41,slow=9.3,SNR=22						
CIT	**Chita**	21.83	294	⇓*i*P	P	17 24 12.8	+0.2
CIT				*e*		17 27 53.4	
CIT				pmax	pmax		
	comp=Z,71nm,0.9s,mb5.1						
BOD	**Bodaibo**	22.15	310	*e*P	P	17 24 13.0	-2.5
BOD				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.4						
BILL	**Bilibino**	22.69	19*c*	*i*P	P	17 24 19.1	-1.0
BILL				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.5						
BILL	**Bilibino**	22.69	19	*e*P	P	17 24 18.1	-2.0
	comp=Z,18nm,0.8s,mb4.5						
JOW	**Kunigami**	25.41	222	P	P	17 24 45.4	+0.2
	comp=Z,12nm,0.4s,mb4.7,baz=63,slow=6.9,SNR=6.1						
SSE	**Sheshan**	25.69	239	P	P	17 24 45.0	-2.6
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
SSE				AMB	AMB		
	comp=Z,30nm,3.5s						
HHC	**Hu-ho-hao-te**	26.05	268	*e*P	P	17 24 51.8	+1.0
HHC				XP	sP	17 26 54.3	+1.9
HHC				PCP	PcP	17 28 06.8	+0.6
HHC				S	S	17 28 49.8	-1.3
HHC				SCP		17 31 07.5	
HHC				PCS		17 31 46.0	
HHC				AMB	AMB		
	comp=Z,50nm,0.9s,mb4.9						
HHC				AMB	AMB		
	comp=Z,110nm,4.9s						
NJ2	**Nanjing**	26.39	244	*e*P	P	17 24 52.5	-1.4
NJ2				XP	sP	17 26 52.8	-3.0
NJ2				PCP	PcP	17 28 05.3	-1.8
NJ2				S	S	17 28 55.0	-1.6
NJ2				AMB	AMB		
	comp=Z,210nm,1.0s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,830nm,6.4s						
ULN	**Ulaanbaatar**	26.59	285	*e*P	P	17 24 55.4	-0.1
ULN				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.0						
ULN	**Ulaanbaatar**	26.59	285	*e*P	P	17 24 55.4	-0.2

	comp=Z,58nm,0.9s,mb5.0						
ULN				*e*ScP		17 31 04.2	
SONM	**Songino Array**	27.03	286	P	P	17 24 59.8	+0.4
	comp=Z,6.2nm,0.8s,mb4.1,baz=70,slow=8.3,SNR=44						
SONM				ScP		17 31 05.6	
	comp=Z,2.6nm,0.8s,baz=96,slow=2.0,SNR=11						
TLY	**Talaya**	27.98	295	⇓*i*P	P	17 25 07.7	0.0
TLY				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.6						
TLY	**Talaya**	27.98	295	*e*P	P	17 25 07.9	+0.2
	comp=Z,19nm,0.8s,mb4.5						
ZAK	**Zakamensk**	28.44	292	⇑*i*P	P	17 25 11.7	-0.1
ZAK				*e*		17 26 27.3	
ZAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb3.5						
TNA	**Tin City**	29.73	37	*e*P	P	17 25 22.2	-0.6
	comp=Z,9.8nm,1.0s,mb4.1						
YHNB	**Yeheng**	30.59	230	P	P	17 25 29.8	-0.8
XAN	**Xi'an**	31.46	258	P	P	17 25 38.0	-0.1
XAN				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
ENH	**Enshi**	33.48	252	*e*P	P	17 25 55.0	-0.3
	comp=Z,9.0nm,0.4s,mb4.5						
LZH	**Lanzhou**	33.68	266	*e*P	P	17 25 58.0	+1.1
LZH				AMB	AMB		
	comp=Z,50nm,1.0s,mb4.8						
TTA	**Tatalina**	34.59	43	*e*P	P	17 26 04.2	-0.1
GTA	**Gaotai**	34.67	274	*e*P	P	17 26 06.5	+1.3
GTA				SCP		17 31 32.0	
GTA				SCS	ScS	17 35 35.5	-1.1
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.1						
SVW2	**Sparrevohn**	34.87	46	*e*P	P	17 26 07.3	+0.6
IMA	**Indian Mountai**	35.60	37	*e*P	P	17 26 13.2	+0.4
IMA				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.5						
IMA	**Indian Mountai**	35.60	37	*e*P	P	17 26 13.2	+0.4
	comp=Z,24nm,1.0s,mb4.5						
RSO	**Redoubt South**	36.31	47	*e*P	P	17 26 19.7	+0.9
SPU	**Mount Spurr**	36.57	45	*e*P	P	17 26 21.4	+0.5
CD2	**Chengdu**	36.82	259	⇓*i*P	P	17 26 24.0	+0.7
CD2				AMB	AMB		
	comp=Z,50nm,0.8s,mb4.9						
KDAK	**Kodiak Island**	36.83	51	*e*P	P	17 26 22.8	-0.3
SLKM	**Skilak Lake**	37.55	46	*e*P	P	17 26 28.3	-0.7
GYA	**Guiyang**	37.90	251	⇓*i*P	P	17 26 33.0	+0.8
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.7						
PMR	**Palmer**	37.91	44	*e*P	P	17 26 32.2	+0.3
PMR				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.3						
PMR	**Palmer**	37.91	44	*e*P	P	17 26 32.2	+0.3
	comp=Z,8.5nm,0.6s,mb4.2						
SML	**Sawmill**	38.25	44	*e*P	P	17 26 34.6	-0.1
ILAR	**Eielson Array**	38.50	39	P	P	17 26 35.9	-0.9
	comp=Z,12nm,0.5s,mb4.4,baz=255,slow=5.9,SNR=81						
ILAR				PcP	PcP	17 28 37.7	-2.7
	comp=Z,1.4nm,0.6s,baz=288,slow=4.0,SNR=7.2						
ZAL	**Zalesovo**	38.63	303	P	P	17 26 37.7	-0.2
	comp=Z,5.7nm,0.7s,mb4.0						
ZAL				ScP		17 31 45.4	
	comp=Z,1.6nm,0.7s,baz=68,slow=5.1,SNR=8.1						
ZAL	**Zalesovo**	38.63	303	P	P	17 26 37.7	-0.2
ZAL				ScP		17 31 45.4	
NVS	**Novosibirsk**	39.24	305	*i* P	P	17 26 42.1	-0.9
NVS				*e*	pP	17 28 05.2	+2.5
NVS				pmax	pmax		
	comp=E,13nm,0.9s						
DIV	**Divide**	39.58	45	*e*P	P	17 26 45.8	+0.1
	comp=E,37nm,0.5s,mb5.0						
EYAK	**Cordova Ski Ar**	39.71	46	*e*P	P	17 26 47.1	+0.3
MENT	**Mentasta**	40.17	42	*e*P	P	17 26 50.7	+0.3
WMQ	**Urumqi**	40.64	287	⇓P	P	17 26 55.5	+1.1
WMQ				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,160nm,4.2s						
KMI	**Kunming**	41.35	253	P	P	17 27 01.0	+0.6
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
QIZ	**Qiongzhong**	41.48	239	P	P	17 27 02.6	+1.2
	comp=Z,53nm,1.4s,mb4.7						
MKAR	**Makanchi Array**	42.74	294	P	P	17 27 11.4	+0.2
	comp=Z,21nm,0.7s,mb4.6,baz=68,slow=7.9,SNR=171						
MKAR				ScP		17 32 01.4	
	comp=Z,1.2nm,0.4s,baz=58,slow=4.6,SNR=6.7						
INK	**Inuvik**	43.16	32	P	P	17 27 13.6	-0.6
INK						17 28 54.2	
INK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
INK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
INK	**Inuvik**	43.16	32	P	P	17 27 13.6	-0.6
	comp=Z,9.6nm,0.4s,mb4.5,baz=281,slow=5.6,SNR=66						
INK				PcP	PcP	17 28 54.2	-1.3
	comp=Z,3.8nm,0.6s,baz=289,slow=4.7,SNR=6.0						
INK	**Inuvik**	43.16	32	*e*P	P	17 27 13.3	-0.9
	comp=Z,11nm,0.4s,mb4.5						
INK				*e*PcP	PcP	17 28 53.4	-2.2
LSA	**Lhasa**	46.04	268	P	P	17 27 39.5	+2.1
LSA	**Lhasa**	46.04	268	*e*P	P	17 27 39.1	+1.7
LSA				pmax	pmax		
	comp=Z,26nm,0.6s,mb4.7						
LSA	**Lhasa**	46.04	268	*e*P	P	17 27 39.1	+1.8
	comp=Z,26nm,0.6s,mb4.7						
BVAR	**Borovoye Array**	46.97	307	P	P	17 27 43.6	-0.6
	comp=Z,9.4nm,0.5s,mb4.4,baz=58,slow=8.2,SNR=86						
BVAR				ScP		17 32 19.7	
	comp=Z,0.8nm,0.5s,baz=53,slow=3.7,SNR=4.9						
ZRNK	**Zerenda**	47.75	307	*e*P	P	17 27 49.4	-0.8
ZRNK				pmax	pmax		
	comp=Z,47nm,1.0s,mb4.8						
ZRNK	**Zerenda**	47.75	307	*e*P	P	17 27 49.4	-0.8
	comp=Z,47nm,1.0s,mb4.8						
DLBC	**Dease Lake**	47.97	45	P	P	17 27 53.0	+1.2
	comp=Z,7.4nm,0.6s,mb4.2,baz=295,slow=9.0,SNR=32						
DLBC	**Dease Lake**	47.97	45	*e*P	P	17 27 52.5	+0.7
SHL	**Shillong**	48.22	263	⇓*i*P	P	17 27 54.0	-0.1
CM31	**Chiang Mai Arr**	48.58	250	*e*P	P	17 27 57.1	+0.2
CMAR	**Chiang Mai Arr**	48.58	250	P	P	17 27 57.4	+0.4
	comp=Z,3.6nm,0.6s,mb3.9,baz=28,slow=7.4,SNR=28						
CMAR				ScP		17 32 28.4	
	comp=Z,2.8nm,0.8s,baz=19,slow=3.6,SNR=11						
ULHL	**Ulahol**	48.72	291	P	P	17 27 58.4	+0.7
	SNR=8.3						
TKM2	**Tokmak 2**	48.77	292	P	P	17 27 58.7	+0.7
	SNR=8.4						
USP	**Ospenovka**	49.27	293	P	P	17 28 02.1	+0.2
	SNR=34						
KBK	**Karagaybulak**	49.32	292	P	P	17 28 02.8	+0.6
	SNR=7.5						
FRU	**Bishkek**	49.43	293	*i* P	P	17 28 03.8	+0.8
KZA	**Kyzart**	49.44	292	P	P	17 28 04.7	+1.6
	SNR=15						
AAK	**Ala-Archa**	49.61	293	P	P	17 28 04.8	+0.4
	SNR=5.3						
EKS2	**Erkin-Say**	50.04	293	P	P	17 28 08.0	+0.3
	SNR=21						
KSH	**Kashi**	50.37	288	*e*P	P	17 28 10.5	+0.4
KSH				AMB	AMB		
	comp=Z,170nm,3.4s						
AML	**Almayashu**	50.38	292	P	P	17 28 11.0	+0.9
	SNR=5.1						
GUN	**Gumba**	50.74	270	*e*P	P	17 28 13.2	+0.2
	comp=Z,31nm,0.5s,mb4.8						
KBS	**Kingsbay**	50.91	350	*e*P	P	17 28 11.7	-1.9
KBS				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.3						
KBS	**Kingsbay**	50.91	350	*e*P	P	17 28 11.7	-2.0
	comp=Z,11nm,0.6s,mb4.3						
KKN	**Kakani**	51.22	270	*e*P	P	17 28 16.8	+0.3
	comp=Z,68nm,1.1s,mb4.8						
PKI	**Pulchoki**	51.27	270	*e*P	P	17 28 17.1	+0.2
	comp=Z,23nm,0.6s,mb4.6						
RES	**Resolute Bay**	51.29	17	*e*P	P	17 28 14.6	-1.8
RES				pmax	pmax		
	comp=Z,67nm,0.8s,mb4.9						
RES	**Resolute Bay**	51.29	17	*e*P	P	17 28 14.6	-1.8
	comp=Z,67nm,0.8s,mb4.9						
ARU	**Arti**	51.43	315	⇓*i*P	P	17 28 16.6	-1.1
ARU				*e*		17 29 24.9	
ARU				*e*		17 30 14.8	
ARU				*e*S	S	17 35 03.3	-1.1
ARU				*e*SS	SS	17 38 44.0	-3.2
ARU				pmax	pmax		
	comp=Z,38nm,0.7s,mb4.7						
ARU	**Arti**	51.43	315	*e*P	P	17 28 16.4	-1.2
	comp=Z,39nm,0.6s,mb4.8						
DMN	**Daman**	51.45	270	*e*P	P	17 28 18.6	+0.3
	comp=Z,65nm,0.8s,mb4.9						
GKN	**Gorkha**	51.52	271	*e*P	P	17 28 18.6	-0.1
	comp=Z,121nm,1.0s,mb5.1						
BBB	**Bella Bella**	51.90	51	P	P	17 28 21.5	+0.3
	comp=Z,17nm,0.9s,mb4.3,baz=296,slow=4.9,SNR=8.3						
BBB	**Bella Bella**	51.90	51	P	P	17 28 21.5	+0.3
KOLN	**Koldanda**	52.37	271	*e*P	P	17 28 25.1	+0.1
	comp=Z,61nm,0.9s,mb4.8						
YKW3	**Yellowknife Ar**	52.64	35	*e*P	P	17 28 24.7	-1.8
YKW3				*e*PcP	PcP	17 29 28.5	-1.4
YKA	**Yellowknife Ar**	52.68	35	P	P	17 28 25.3	-1.4
	comp=Z,6.7nm,0.6s,mb4.1,baz=302,slow=7.0,SNR=35						
YKA				PcP	PcP	17 29 29.1	-1.0
	comp=Z,3.2nm,0.7s,baz=308,slow=3.5,SNR=12						
YKA	**Yellowknife Ar**	52.68	35	P	P	17 28 25.3	-1.5
YKA				PcP	PcP	17 29 29.1	-1.0
KEV	**Kevo**	55.01	338	*e*p	P	17 28 39.0	-4.4
ARCES	**ARCESS Array B**	55.54	339	P	P	17 28 45.7	-1.4
	comp=Z,1.8nm,0.4s,mb3.7,baz=46,slow=8.4,SNR=13						
ARCES	**ARCESS Array B**	55.54	339	P	P	17 28 45.7	-1.4
NDI	**New Delhi**	56.08	277	*e*P	P	17 28 49.5	-2.0
OSR	**Olympics--Salm**	56.73	54	P	P	17 28 56.1	+0.5
MBW	**Mount Baker**	57.09	52	P	P	17 28 58.0	-0.1
BMW	**Boistfort Moun**	57.75	55	P	P	17 29 03.0	+0.4
PNT	**Penticton**	57.97	50	P	P	17 29 03.8	-0.3
EDM	**Edmonton**	58.67	44	*e*P	P	17 29 07.8	-0.9
COR	**Corvallis**	58.85	57	*e*P	P	17 29 11.0	+0.9
COR				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.5						
COR	**Corvallis**	58.85	57	*e*P	P	17 29 11.0	+0.9
	comp=Z,16nm,0.6s,mb4.5						
VLMM	**Larch Mountain**	58.98	55	P	P	17 29 11.6	+0.8
GL2	**New Goldendale**	59.39	54	P	P	17 29 14.4	+0.8
OD2	**Odessa Site #2**	59.63	52	P	P	17 29 15.0	-0.3
NEW	**Newport**	59.92	50	P	P	17 29 17.0	-0.2
NEW				pmax	pmax		
	comp=Z,15nm,0.7s						
NEW	**Newport**	59.92	50	P	P	17 29 17.0	-0.2
	comp=Z,15nm,0.7s,mb4.5,baz=312,slow=5.3,SNR=16						
NEW	**Newport**	59.92	50	*e*P	P	17 29 16.6	-0.5
	comp=Z,15nm,0.8s,mb4.5						
SUMG	**Summit**	60.02	2	*e*P	P	17 29 17.1	-0.4
	comp=Z,31nm,1.1s,mb4.7						
HUMO	**Hull Mountain**	60.28	58	*e*P	P	17 29 20.1	+0.5
	comp=Z,11nm,0.9s,mb4.3						
KAF	**Kangasniemi**	60.76	332	*e*p	P	17 29 18.0	-4.5
BUOR	**Burton Butte**	60.89	58	P	P	17 29 24.5	+0.8
YBH	**Yreka Blue Hor**	60.97	59	P	P	17 29 25.1	+0.9
YBH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
YBH	**Yreka Blue Hor**	60.97	59	P	P	17 29 25.1	+0.9
	comp=Z,7.5nm,0.6s,mb4.3,baz=352,slow=4.0,SNR=18						
YBH	**Yreka Blue Hor**	60.97	59	*e*P	P	17 29 25.0	+0.8
	comp=Z,10.0nm,0.8s,mb4.3						
FINES	**FINESS Array B**	61.34	332	P	P	17 29 25.0	-1.3
	comp=Z,2.9nm,0.6s,mb3.9,baz=40,slow=7.4,SNR=22						
WDC	**Whiskeytown Da**	61.80	60	*e*P	P	17 29 29.3	-0.4
WDC				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
WDC	**Whiskeytown Da**	61.80	60	*e*P	P	17 29 29.3	-0.4
	comp=Z,9.0nm,1.0s,mb4.2						
BMO	**Blue Mountains**	62.00	53	*e*P	P	17 29 30.9	0.0
	comp=Z,16nm,1.0s,mb4.5						
OBN	**Obninsk**	62.09	322	*e*P	P	17 29 30.9	-0.5
OBN				*e*		17 31 41.8	
OBN				*e*S	S	17 37 16.2	-6.3
OBN				*e*SSS	SSS	17 44 30.7	+0.1
OBN				pmax	pmax		
	comp=Z,8µm,0.5s						
MOD	**Modoc**	62.24	57	*e*P	P	17 29 32.8	+0.2
	comp=Z,5.2nm,0.6s,mb4.2						
MSO	**Missoula**	62.49	50	*e*P	P	17 29 34.0	-0.1
	comp=Z,19nm,1.2s,mb4.5						
FCC	**Fort Churchill**	62.74	31	*e*P	P	17 29 33.9	-1.7
FCC				pmax	pmax		
	comp=Z,18nm,0.5s,mb4.9						
FCC	**Fort Churchill**	62.74	31	*e*P	P	17 29 33.9	-1.7
	comp=Z,18nm,0.5s,mb4.9						
CHMT	**Chamberlain Mo**	62.79	49	*e*P	P	17 29 35.8	-0.2
WVOR	**Wild Horse Val**	62.84	56	*e*P	P	17 29 36.9	+0.4
WVOR				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.7						
WVOR	**Wild Horse Val**	62.84	56	*e*P	P	17 29 36.9	+0.4
	comp=Z,24nm,1.0s,mb4.7						
VOR	**Voronezh**	63.32	318	P	P	17 29 37.0	-2.4
VOR				pmax	pmax		
	comp=Z,40nm,2.0s,mb4.6						
BEKR	**Beckwourth**	63.54	59	*e*P	P	17 29 40.8	-0.1
	comp=Z,14nm,0.9s,mb4.5						
HRY	**Holter Researc**	63.66	49	*e*P	P	17 29 41.8	+0.2
WCN	**Washoe City**	64.26	59	*e*P	P	17 29 45.6	+0.1
WCN				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.4						
WCN	**Washoe City**	64.26	59	*e*P	P	17 29 45.6	+0.1
	comp=Z,5.5nm,0.4s,mb4.4						
MCMT	**McKenzie Canyo**	64.40	51	*e*P	P	17 29 46.0	-0.3
HLID	**Hailey**	64.42	53	*e*P	P	17 29 46.9	+0.4
	comp=Z,3.8nm,0.6s,mb4.1						
HLID				*e*PcP	PcP	17 30 17.2	+0.2
BOZ	**Bozeman (W)**	64.48	50	*e*P	P	17 29 47.5	+0.7
BOZ				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.0						
BOZ	**Bozeman (W)**	64.48	50	*e*P	P	17 29 47.5	+0.7
	comp=Z,27nm,0.6s,mb5.0						
CMB	**Columbia Colle**	64.73	61	*e*P	P	17 29 48.5	-0.1
BMN	**Battle Mountai**	64.96	57	*e*P	P	17 29 50.6	+0.6
BMN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.5						
BMN	**Battle Mountai**	64.96	57	*e*P	P	17 29 50.6	+0.6
	comp=Z,7.6nm,0.6s,mb4.5						
QLMT	**Earthquake Lak**	65.14	50	*e*P	P	17 29 51.2	+0.2
GCMT	**Greycliff**	65.38	48	*e*P	P	17 29 53.1	+0.6
NVAR	**Mina Array Bea**	65.69	59	P	P	17 29 55.2	+0.6
	comp=Z,10nm,0.8s,mb4.5,baz=305,slow=4.0,SNR=63						
NVAR	**Mina Array Bea**	65.69	59	P	P	17 29 55.2	+0.6
YFT	**Old Faithful**	65.71	50	*e*P	P	17 29 56.4	+1.8
MNV	**Mina**	65.77	59	*e*P	P	17 29 55.2	+0.1
MNV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
MNV	**Mina**	65.77	59	*e*P	P	17 29 55.2	+0.1
	comp=Z,6.0nm,0.8s,mb4.3						
ELK	**Elko**	65.87	56	*e*P	P	17 29 55.9	+0.2
ELK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ELK	**Elko**	65.87	56	*e*P	P	17 29 55.9	+0.2
	comp=Z,9.5nm,0.7s,mb4.5						
NB2	**NORSAR Subarra**	65.91	338	P	P	17 29 54.5	-1.1
	comp=Z,5.5nm,0.6s,mb4.4,baz=30,slow=6.5						
NOA	**NORSAR Array B**	65.91	338	P	P	17 29 54.6	-1.0
	comp=Z,7.7nm,0.5s,mb4.6,baz=31,slow=6.3,SNR=20						
IMW	**Indian Meadow**	66.03	51	*e*P	P	17 29 57.5	+0.8
	comp=Z,21nm,1.1s,mb4.7						
HFS	**Hagfors**	66.03	336	P	P	17 29 55.0	-1.4
	comp=Z,5.2nm,0.6s,mb4.4,baz=45,slow=4.2,SNR=24						
RRI2	**Red Ridge**	66.21	51	*e*P	P	17 29 58.8	+1.0
	comp=Z,56nm,0.7s,mb5.3						
MOOW	**Moose Ponds**	66.24	51	*e*P	P	17 29 58.1	+0.1
	comp=Z,30nm,1.2s,mb4.8						
TPAW	**Teton Pass**	66.31	51	*e*P	P	17 29 59.6	+1.2
	comp=Z,35nm,1.1s,mb4.9						
LOHW	**Long Hollow**	66.41	51	*e*P	P	17 29 59.8	+0.8
	comp=Z,22nm,1.2s,mb4.7						
SNOW	**Snow King Moun**	66.43	51	*e*P	P	17 30 00.1	+1.0
	comp=Z,9.5nm,0.5s,mb4.7						
REDW	**Red Top Meadow**	66.45	51	*e*P	P	17 29 59.9	+0.6
	comp=Z,11nm,0.7s,mb4.6						
HVU	**Hansel Valley**	66.52	53	*e*P	P	17 30 00.3	+0.6
TPH	**Tonopah**	66.55	59	*e*P	P	17 30 00.1	+0.1
TPH				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.4						
TPH	**Tonopah**	66.55	59	*e*P	P	17 30 00.1	+0.1
	comp=Z,5.3nm,0.5s,mb4.4						
BGU	**Big Grassy Mou**	66.96	54	*e*P	P	17 30 02.7	+0.2
KIV	**Kislovodsk**	67.07	311	*c i*P	P	17 30 04.3	+1.2
KIV				*i* *PP	pP	17 31 33.3	-0.3
KIV				*e*S	S	17 38 43.1	+20
KIV				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.5						
KIV	**Kislovodsk**	67.07	311	*e*P	P	17 30 04.2	+1.1
	comp=Z,12nm,0.9s,mb4.5						
HWUT	**Hardware Ranch**	67.29	53	*e*P	P	17 30 04.6	+0.1
	comp=Z,18nm,0.9s,mb4.7						
TRCR	**Troy Canyon**	67.31	58	*e*P	P	17 30 04.8	+0.2
BW06	**Boulder Array**	67.54	51	*e*P	P	17 30 05.8	-0.2
	comp=Z,29nm,0.8s,mb5.0						
PDAR	**Pinedale Array**	67.54	51	P	P	17 30 06.2	+0.2
	comp=Z,23nm,0.5s,mb5.0,baz=303,slow=1.0,SNR=178						
NOQ	**North Oquirrh**	67.65	54	*e*P	P	17 30 07.2	+0.4
CTU	**Camp Tracy**	67.83	54	*e*P	P	17 30 08.2	+0.4
JLU	**Jordanelle**	68.05	54	*e*P	P	17 30 09.9	+0.8
NLU	**North Lily Min**	68.16	54	*e*P	P	17 30 10.3	+0.4
WRAB	**Tennant Creek**	68.21	193	P	P	17 30 09.6	-0.9
WRA	**Warramunga Arr**	68.22	193	P	P	17 30 09.9	-0.7
	comp=Z,1.6nm,0.7s,mb3.8,baz=7.6,slow=6.5,SNR=26						
DAU	**Daniels Canyon**	68.29	54	*e*P	P	17 30 11.2	+0.6
AKASG	**Malin Array Be**	68.35	323	P	P	17 30 09.2	-1.6
	comp=Z,0.8nm,0.4s,mb3.7,baz=38,slow=6.2,SNR=6.1						
MPU	**Maple Canyon**	68.36	54	*e*P	P	17 30 11.6	+0.6
ULM	**Lac du Bonnet**	68.51	38	P	P	17 30 10.7	-1.1
	comp=Z,9.5nm,0.7s,mb4.5,baz=318,slow=7.1,SNR=10						
ULM	**Lac du Bonnet**	68.51	38	*e*P	P	17 30 10.1	-1.7
	comp=Z,8.1nm,0.7s,mb4.5						
ARUT	**Antelope Range**	68.91	57	*e*P	P	17 30 14.4	-0.1
TMUT	**Trail Mountain**	69.10	54	*e*P	P	17 30 16.1	+0.5
MVU	**Marysvale**	69.10	56	*e*P	P	17 30 16.6	+1.0
	comp=Z,8.0nm,0.8s,mb4.4						
MSU	**Marysvale**	69.12	56	*e*P	P	17 30 16.3	+0.6
RSSD	**Black Hills**	69.38	47	*e*P	P	17 30 16.9	-0.2
RSSD				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.8						
RSSD	**Black Hills**	69.38	47	*e*P	P	17 30 16.9	-0.2
	comp=Z,14nm,0.6s,mb4.8						
SRU	**San Rafael**	69.61	54	*e*P	P	17 30 18.8	+0.2
PV10	**Paradox Valley**	70.94	54	*e*P	P	17 30 27.4	+0.8
PV01	**Paradox Valley**	71.37	54	*e*P	P	17 30 29.2	+0.2
PV01				*e*		17 30 44.9	
ISCO	**Idaho Springs**	71.74	51	*e*P	P	17 30 31.5	+0.3
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
ISCO	**Idaho Springs**	71.74	51	*e*P	P	17 30 31.5	+0.3
	comp=Z,10.0nm,1.0s,mb4.3						
RW3	**Ridgway**	71.77	53	*e*P	P	17 30 31.6	+0.2
SDCO	**Great Sand Dun**	73.31	52	*e*P	P	17 30 40.2	-0.1
	comp=Z,8.8nm,0.8s,mb4.3						
CLL	**Collm**	73.78	332	⇑P	P	17 30 41.9	-0.8
	comp=Z,logA/T=0.9,mb4.3						
SCHQ	**Schefferville**	74.00	20	P	P	17 30 43.1	-0.7
	comp=Z,2.9nm,0.5s,mb4.2,baz=335,slow=7.0,SNR=7.9						
SCHQ	**Schefferville**	74.00	20	*e*P	P	17 30 42.7	-1.1
TUC	**Tucson**	74.34	59	*e*P	P	17 30 46.2	-0.1
TUC				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
TUC	**Tucson**	74.34	59	*e*P	P	17 30 46.2	-0.1
	comp=Z,6.2nm,1.0s,mb4.2						
EKA	**Eskdalemuir Ar**	74.34	343	P	P	17 30 45.2	-0.5
	comp=Z,2.0nm,0.7s,mb3.9,baz=26,slow=4.9,SNR=10						
BRTR	**Keskin Array B**	74.75	313	P	P	17 30 49.1	+0.8
	comp=Z,0.6nm,0.4s,mb3.6,baz=90,slow=3.7,SNR=3.8						
BRTR				PP	PP	17 33 41.6	-1.7
	comp=Z,0.3nm,0.3s,baz=72,slow=3.9,SNR=4.4						
ANMO	**Albuquerque**	74.86	55	*e*P	P	17 30 49.0	-0.1
ANMO				pmax	pmax		
	comp=Z,13nm,1.3s						
ANMO	**Albuquerque**	74.86	55	*e*P	P	17 30 49.0	-0.1
	comp=Z,13nm,1.3s,mb4.4						
GERES	**GERESS Array B**	75.68	330	P	P	17 30 53.4	+0.1
	comp=Z,1.0nm,0.6s,mb3.7,baz=34,slow=5.7,SNR=11						
BAIF	**Baives**	77.48	336	*e*P	P	17 31 02.6	-0.7
AMTX	**Amarillo**	77.49	52	*e*P	P	17 31 03.7	0.0
	comp=Z,18nm,0.8s,mb4.8						
MNTX	**Cornudas Mount**	77.88	56	*e*P	P	17 31 06.2	+0.4
	comp=Z,12nm,1.0s,mb4.5						
CDF	**Champ du Feu**	78.10	334	*e*P	P	17 31 06.2	-0.4
	comp=Z,3.5nm,0.6s,mb3.9						
CDF	**Champ du Feu**	78.10	334	*e*P	P	17 31 06.2	-0.4
CDF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
MEZF	**Maizieres J'vi**	78.66	335	*e*P	P	17 31 09.4	-0.2
HAU	**Haudompre**	78.74	334	*e*P	P	17 31 09.9	-0.1
DAVOX	**Davos**	78.74	331	P	P	17 31 10.4	+0.4
	comp=Z,1.0nm,0.5s,mb3.8,baz=177,slow=23,SNR=3.7						
WMOK	**Wichita Mounta**	79.12	50	*e*P	P	17 31 12.1	-0.2
WMOK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.3						
WMOK	**Wichita Mounta**	79.12	50	*e*P	P	17 31 12.1	-0.2
	comp=Z,8.4nm,0.9s,mb4.4						
STKA	**Stephens Creek**	79.31	185	P	P	17 31 14.1	+0.8
	comp=Z,0.7nm,0.4s,mb3.7,baz=11,slow=6.9,SNR=3.1						
FLN	**La Foliniere**	79.89	339	*e*P	P	17 31 15.5	-0.6
	comp=Z,5.4nm,0.5s,mb4.1						
FLN	**La Foliniere**	79.89	339	*e*P	P	17 31 15.5	-0.6
FLN				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
LDF	**La Druitiere**	79.95	338	*e*P	P	17 31 15.8	-0.6
	comp=Z,7.7nm,0.6s,mb4.2						
LDF	**La Druitiere**	79.95	338	*e*P	P	17 31 15.8	-0.6
LDF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
CABF	**La Chapelle**	80.07	334	*e*P	P	17 31 17.5	+0.4
	comp=Z,11nm,1.0s,mb4.2						
CABF	**La Chapelle**	80.07	334	*e*P	P	17 31 17.5	+0.4
CABF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
LOR	**Lormes**	80.12	335	*e*P	P	17 31 16.8	-0.5
	comp=Z,3.2nm,0.4s,mb4.0						
CCM	**Cathedral Cave**	80.17	43	*e*P	P	17 31 16.9	-0.9
CCM				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.8						
CCM	**Cathedral Cave**	80.17	43	*e*P	P	17 31 16.9	-0.9
	comp=Z,19nm,0.8s,mb4.8						
GRR	**Gorron**	80.33	339	*e*P	P	17 31 18.0	-0.4
	comp=Z,5.5nm,0.5s,mb4.1						
GRR	**Gorron**	80.33	339	*e*P	P	17 31 18.0	-0.4
GRR				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
LTX	**Lajitas**	80.63	57	*e*P	P	17 31 20.9	+0.5
LTX				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.8						
LTX	**Lajitas**	80.63	57	*e*P	P	17 31 20.9	+0.5
	comp=Z,19nm,0.9s,mb4.8						
TXAR	**Lajitas Array**	80.63	57	P	P	17 31 21.1	+0.7
	comp=Z,11nm,0.5s,mb4.8,baz=292,slow=3.9,SNR=140						
SMF	**Signal de Mont**	80.69	335	*e*P	P	17 31 20.0	-0.3
	comp=Z,5.9nm,0.6s,mb4.2						
SMF	**Signal de Mont**	80.69	335	*e*P	P	17 31 20.0	-0.3
SMF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
SGMF	**Saint Gilles**	80.86	340	*e*P	P	17 31 21.0	-0.1
	comp=Z,5.8nm,0.5s,mb4.2						
SGMF	**Saint Gilles**	80.86	340	*e*P	P	17 31 21.0	-0.1
SGMF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
LPL	**La Plagne**	80.86	333	*e*P	P	17 31 20.9	-0.3
LPG	**La Plagne**	80.87	333	*e*P	P	17 31 21.1	-0.2
ROSF	**Rostrenen**	80.94	340	*e*P	P	17 31 21.2	-0.4
BGF	**Bois d'Agland**	81.05	336	*e*P	P	17 31 22.6	+0.4
QUIF	**Quistinic**	81.31	340	*e*P	P	17 31 23.3	-0.2
TCF	**Toulx Ste Croi**	81.48	336	*e*P	P	17 31 23.6	-0.8
MBDF	**Montbardon**	81.56	332	*e*P	P	17 31 24.7	-0.1
ORIF	**Oris-en-Rattie**	81.66	333	*e*P	P	17 31 25.6	+0.3
MFF	**Saint Martin d**	81.81	338	*e*P	P	17 31 26.1	0.0
	comp=Z,4.0nm,0.6s,mb4.0						
MFF	**Saint Martin d**	81.81	338	*e*P	P	17 31 26.1	0.0
MFF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
VIVF	**Saint-Julien-l**	82.08	334	*e*P	P	17 31 27.2	-0.3
	comp=Z,2.8nm,0.7s,mb3.8						
VIVF	**Saint-Julien-l**	82.08	334	*e*P	P	17 31 27.2	-0.3
VIVF				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
HBAR	**Harrisburg**	82.48	44	*e*P	P	17 31 30.1	+0.4
RJF	**Les Rejaudoux**	82.57	336	*e*P	P	17 31 29.2	-0.8
CAF	**Calviac**	82.77	336	*e*P	P	17 31 31.5	+0.5
	comp=Z,4.4nm,0.7s,mb4.0						
CAF	**Calviac**	82.77	336	*e*P	P	17 31 31.5	+0.5
CAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
LMR	**La Mourre**	82.89	332	*e*P	P	17 31 31.9	+0.3
	comp=Z,7.9nm,0.8s,mb4.2						
LMR	**La Mourre**	82.89	332	*e*P	P	17 31 31.9	+0.3
LMR				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
LASF	**Ste Croix**	83.03	334	*e*P	P	17 31 32.2	-0.1
LFF	**La Frestale**	83.12	337	*e*P	P	17 31 32.2	-0.5
	comp=Z,4.7nm,0.4s,mb4.3						
WVT	**Waverly**	83.31	42	*e*P	P	17 31 33.6	-0.3
WVT				pmax	pmax		

	comp=Z,8.0nm,0.6s,mb4.6						
WVT	**Waverly**	83.31	42	*e*P	P	17 31 33.6	-0.3
	comp=Z,8.1nm,0.6s,mb4.6						
WVT				*e*		17 31 47.8	
NATX	**Nacogdoches**	83.58	49	*e*P	P	17 31 36.1	+0.7
	comp=Z,47nm,0.7s,mb5.3						
OXF	**Oxford**	83.92	44	*e*P	P	17 31 36.7	-0.2
OXF				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.1						
OXF	**Oxford**	83.92	44	*e*P	P	17 31 36.7	-0.2
	comp=Z,40nm,1.1s,mb5.1						
PLAL	**Pickwick Lake**	84.15	43	*e*P	P	17 31 37.6	-0.5
	comp=Z,40nm,1.5s,mb4.9						
MTLF	**Montolieu**	84.18	335	*e*P	P	17 31 37.9	-0.1
	comp=Z,5.0nm,1.0s,mb3.9						
MTLF	**Montolieu**	84.18	335	*e*P	P	17 31 37.9	-0.1
MTLF				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
SWET	**Sewanee**	84.92	41	*e*P	P	17 31 41.4	-0.5
EPF	**Esparros**	85.00	336	*e*P	P	17 31 42.2	+0.2
SJPF	**Ste Jean**	85.34	337	*e*P	P	17 31 44.3	+0.7
ETSF	**Etsaut**	85.36	337	*e*P	P	17 31 44.8	+1.0
	comp=Z,3.5nm,0.6s,mb3.9						
ETSF	**Etsaut**	85.36	337	*e*P	P	17 31 44.8	+1.0
ETSF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
EVO	**Evora**	91.33	341	*e*P	P	17 32 11.2	-0.7
	comp=Z,5.1nm,0.7s,mb4.2						
VNDA	**Vanda**	125.24	176	PKIKP	PKPdf	17 38 03.2	+1.0
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	125.24	176	PKP	PKPdf	17 38 03.1	+0.9
	comp=Z,0.9nm,0.6s,baz=330,slow=4.1,SNR=10						
MAW	**Mawson**	130.82	210	PKIKP	PKPdf	17 38 14.4	+1.3
MAW				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MAW				pmax	pmax		
	comp=N,2.0nm,0.7s						
MAW	**Mawson**	130.82	210	PKP	PKPdf	17 38 14.4	+1.3
	comp=N,1.4nm,0.7s,baz=282,slow=14,SNR=4.4						
MAW				SKPbc		17 40 57.0	
	comp=N,2.2nm,0.7s,baz=170,slow=3.2,SNR=3.5						
BOSA	**Boshof**	131.53	271	SKPbc		17 41 00.4	
	comp=N,6.4nm,0.6s,baz=59,slow=3.1,SNR=21						
LPAZ	**La Paz**	137.48	55	*e*PKIKP	PKPdf	17 38 28.5	+1.8
BDFB	**Brasilia**	145.77	26	PKP2	PKPab	17 38 44.1	-2.4
BDFB				pmax	pmax		
	comp=Z,11nm,0.5s						
BDFB	**Brasilia**	145.77	26	PKPbc	PKPbc	17 38 44.1	+1.6
	comp=Z,11nm,0.5s,baz=313,slow=3.5,SNR=18						
CPUP	**Villa Florida**	151.44	50	PKPbc	PKPdf	17 38 57.6	+7.6
	comp=Z,4.5nm,0.8s,baz=337,slow=2.7,SNR=13						
CPUP	**Villa Florida**	151.44	50	*e*PKPbc	PKPdf	17 38 57.1	+7.1
CPUP				*e*PKPab	PKPab	17 39 07.6	-1.6
SNAA	**Sanae**	152.10	200	PKIKP	PKPdf	17 38 57.1	+7.6
SNAA						17 39 09.3	
SNAA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SNAA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SNAA	**Sanae**	152.10	200	PKPbc	PKPdf	17 38 57.1	+7.5
	comp=Z,0.5nm,0.5s,baz=177,slow=0.9,SNR=15						
SNAA				PKPab	PKPab	17 39 09.3	-1.2
	comp=Z,0.5nm,0.7s,baz=54,slow=1.8,SNR=5.7						
PLCA	**Paso Flores**	152.47	89	PKIKP	PKPdf	17 38 59.8	+8.8
PLCA						17 39 12.8	
PLCA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PLCA	**Paso Flores**	152.47	89	PKPbc	PKPdf	17 38 59.8	+8.8
	comp=Z,7.1nm,0.6s,baz=256,slow=1.8,SNR=23						
PLCA				PKPab	PKPab	17 39 12.8	-0.2
	comp=Z,4.0nm,0.7s,baz=287,slow=5.0,SNR=6.1						

IDC 25 17:28:13.9±2.9, 30.44S×177.55W, mb4.0/2, mb1 4.2/2, mb1mx3.7/14, mbtmp4.0/2, Error ellipse: s-maj=60.3km s-min=16.6km az=92.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	1.23	345	Pg	Pg	17 28 38.7	+0.4
	67nm,0.3s,baz=89,slow=23,SNR=4.6						
RAO				Lg		17 28 52.9	
	277nm,0.3s,baz=172,slow=23,SNR=8.1						
STKA	**Stephens Creek**	34.85	257	P	P	17 35 07.6	-1.1
	1.5nm,0.7s,baz=103,slow=13,SNR=6.3						
WRA	**Warramunga Arr**	44.49	272	P	P	17 36 26.2	-2.7
	0.8nm,0.4s,baz=111,slow=8.1,SNR=8.9						
FINES	**FINESS Array B**	145.31	340	PKPbc	PKPbc	17 47 51.4	-1.9
	0.7nm,0.8s,baz=63,slow=3.1,SNR=5.4						

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*CSEM **25** 17:28:17.7±0.1, 38.52N×42.46E, h40^{km}, MD3.6, Error ellipse: s-maj=4.5km s-min=1.8km az=169.0*

ISK 25 17:28:18.4, 38.51N×42.42E, h29^{km}, MD3.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	0.76	83	PG	Pb	17 28 32.8	-0.2
VANB				SG	Sb	17 28 44.1	+1.0
TVAN	**Van**	0.77	88	*i* P	Pb	17 28 32.4	-0.8
TVAN				*i* S	Sb	17 28 43.0	-0.3
BTMT	**Batman**	0.80	247	PG	Pb	17 28 35.4	+1.7
BEST	**Besiri**	1.10	236	*i* P	Pn	17 28 40.4	+2.4
BEST				*i* S	Sn	17 28 56.9	+4.6
CLDR	**Caldiran**	1.33	61	PN	Pn	17 28 41.2	-0.1
HKR	**Hakkari**	1.39	131	PN	Pn	17 28 43.2	+1.0
ERZM	**Erzurum**	1.62	330	*i* P	Pn	17 28 46.8	+1.3
ERZM				*i* S	Sn	17 29 04.6	-1.0
EZM	**Erzurum**	1.62	330	PN	Pn	17 28 46.2	+0.7
MARD	**Mardin**	1.76	228	*i* P	Pn	17 28 49.1	+1.5
MARD				*i* S	Sn	17 29 09.9	+0.7
DIY	**Diyarbakir**	1.83	251	PN	Pn	17 28 48.9	+0.3
PTK	**Pertek**	2.40	280	*e*PN	Pn	17 28 56.9	+0.2
GNI	**Garni**	2.44	47	*e*PN	Pn	17 28 57.3	+0.1
URFA	**Urfa**	3.04	251	*e*PN	Pn	17 29 05.6	-0.1

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*NEIC **25** 17:39:30.6±2.9, 33.92S×178.54E, h262^{km}±18^{km}, mb3.7/1, Error ellipse: s-maj=41.9km s-min=17.1km az=48.0*

ISC 25 17:39:22.9±1.4, 33.41S±0.09×179.0E±0.2, h227^{km}±13^{km}, n38, σ1^{s}34/43, mb3.8/1, 1C-2D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MWZ	**Matawai**	5.07	194	*e*P	P	17 40 40.9	+1.5
MWZ	**Matawai**	5.07	194	*e*PN	P	17 40 40.9	+1.4
URZ	**Urewera**	5.09	197	*e*P	P	17 40 39.8	+0.1
URZ	**Urewera**	5.09	197	*e*PN	P	17 40 41.0	+1.3
URZ				SN	S	17 41 45.0	+5.5
BKZ	**Black Stump Fm**	6.11	199	*e*P	P	17 40 52.9	+0.3
BKZ				S	S	17 42 09.1	+6.6
BKZ	**Black Stump Fm**	6.11	199	PN	P	17 40 53.2	+0.7
WNVZ	**Wahianoa**	6.53	204	*e*P	P	17 40 59.2	+1.2
WNVZ	**Wahianoa**	6.53	204	*e*PN	P	17 40 60.0	+2.0
MOVZ	**Moawhango**	6.55	203	*e*PN	P	17 41 00.1	+1.9
TSZ	**Takapari Road**	7.08	200	*e*P	P	17 41 05.7	+0.6
TSZ	**Takapari Road**	7.08	200	PN	P	17 41 05.8	+0.7
MRZ	**Mangatainoka R**	7.75	200	SN	S	17 42 41.5	+1.1
KIW	**Kapiti Island**	8.14	203	*e*P	P	17 41 17.7	-0.9
KIW	**Kapiti Island**	8.14	203	PN	P	17 41 17.7	-0.9
MTW	**Mount Morrison**	8.23	199	*e*PN	P	17 41 17.6	-2.3
CAW	**Cannon Point**	8.31	201	*e*P	P	17 41 18.9	-2.0
CAW	**Cannon Point**	8.31	201	*e*PN	P	17 41 19.2	-1.7
CAW				*e*SN	S	17 42 54.9	+1.6
TCW	**Tory Channel**	8.66	205	*e*P	P	17 41 23.1	-2.3
TCW	**Tory Channel**	8.66	205	*e*PN	P	17 41 23.5	-1.9
TCW				SN	S	17 43 02.9	+1.5
TUWZ	**Tuamarina**	8.97	205	*e*PN	P	17 41 27.2	-2.2
TUWZ				*e*SN	S	17 43 08.2	-0.2
NNZ	**Nelson**	9.00	208	*e*P	P	17 41 29.0	-0.8
NNZ	**Nelson**	9.00	208	*e*PN	P	17 41 29.2	-0.6
QRZ	**Quartz Range**	9.05	213	*e*PN	P	17 41 31.4	+1.1
THZ	**Tophouse**	9.65	208	*e*P	P	17 41 37.6	-0.5
THZ	**Tophouse**	9.65	208	*e*PN	P	17 41 37.6	-0.5
KHZ	**Kahutara**	9.99	204	*e*PN	P	17 41 40.3	-2.1
LTZ	**Lake Taylor**	10.77	208	*e*P	P	17 41 50.4	-1.9
LTZ	**Lake Taylor**	10.77	208	*e*PN	P	17 41 50.6	-1.7
MQZ	**McQueen's Vall**	11.43	204	*e*SN	S	17 44 03.3	-1.6
CTAO	**Charters Tower**	32.00	286	*e*P	P	17 45 30.8	+0.8
WB2	**Warramunga Arr**	41.82	277	⇓*i*P	P	17 46 52.4	+0.3
WRAB	**Tennant Creek**	41.82	277	*e*P	P	17 46 52.1	0.0
	2.3nm,0.6s,mb3.8						
VNA3	**Neumayer Olymp**	75.46	177	⇓*i*	P	17 50 42.7	-0.2
VNA3	**Neumayer Olymp**	75.46	177	⇑*i*	P	17 50 43.0	+0.1
VNA3	**Neumayer Olymp**	75.46	177		P	17 50 44.2	+1.3
VNA2	**Neumayer--Watz**	75.86	178		P	17 50 45.3	+0.2
VNA2	**Neumayer--Watz**	75.86	178		P	17 50 45.6	+0.5
VNA2	**Neumayer--Watz**	75.86	178		P	17 50 47.0	+1.9

KRSC 25 17:40:18.7±0.8, 53.37N×163.12E, h20^{km}±8^{km}, ML4.2, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	1.45	326	*e*P	Pn	17 40 44.0	0.0
MKZ				*e*S	Sn	17 41 02.9	+0.4
SPN	**Mys Shipunski**	1.88	263	*i* P	Pn	17 40 50.2	-0.1
SPN				*i* S	Sn	17 41 13.4	-0.2
NLC	**Nalytchevo**	2.28	266	*i* P	Pn	17 40 55.9	0.0
NLC				*i* S	Sn	17 41 23.5	-0.2
BKI	**Bering**	2.48	41	*e*P	Pn	17 40 57.8	-1.1
BKI				*e*S	Sn	17 41 26.4	-2.6
SDLR	**Sedlovina**	2.54	270	*i* P	Pn	17 41 00.2	+0.4
UGLR	**Uglovaya**	2.58	268	*i* P	Pn	17 41 01.0	+0.7
TUMR	**Tumrok**	2.59	319	*i* P	Pn	17 41 01.2	+0.8
TUMR				*i* S	Sn	17 41 32.4	+0.8
SMAR	**Somma**	2.59	269	*i* P	Pn	17 41 00.8	+0.3
AVH	**Avacha**	2.63	269	*i* P	Pn	17 41 01.6	+0.6
AVH				*i* S	Sn	17 41 32.7	0.0
KOK	**Koryaka**	2.69	270	*i* P	Pn	17 41 02.3	+0.4
PET	**Petropavlovsk**	2.71	264	*e*P	Pn	17 41 02.1	0.0
PET				*e*S	Sn	17 41 33.9	-0.8
KBTR	**Krutoberegovo**	2.85	357	*e*P	Pn	17 41 02.9	-1.2
KBTR				*e*S	Sn	17 41 36.9	-1.3
KMNR	**Kamenistaya**	2.92	326	*e*P	Pn	17 41 05.7	+0.5
KMNR				*e*S	Sn	17 41 39.9	-0.1
RUS	**Russkaya**	2.94	253	*e*P	Pn	17 41 04.9	-0.6
RUS				*e*S	Sn	17 41 38.9	-1.7
KPT	**Kopyto**	3.10	328	*e*P	Pn	17 41 08.3	+0.6
KPT				*e*S	Sn	17 41 44.4	-0.1
GNL	**Ganaly**	3.11	278	*e*P	Pn	17 41 08.7	+0.9
GNL				*e*S	Sn	17 41 45.0	+0.2
GRL	**Gorelyy**	3.16	257	*e*P	Pn	17 41 08.6	+0.1
GRL				*e*S	Sn	17 41 44.8	-1.3
KRSR	**Krestovskiy**	3.21	334	*e*P	Pn	17 41 09.7	+0.4
KRSR				*e*S	Sn	17 41 46.9	-0.5
KLY	**Klyuchi**	3.28	335	*e*P	Pn	17 41 09.6	-0.6
KLY				*e*S	Sn	17 41 46.8	-2.2
KOZ	**Kozyrevsk**	3.29	326	*e*P	Pn	17 41 10.5	+0.2
KOZ				*e*S	Sn	17 41 48.3	-1.0
SRDR	**Sredinnyy**	3.55	328	*i* P	Pn	17 41 14.0	-0.1
SRDR				*i* S	Sn	17 41 54.7	-1.2
APC	**Apacha**	3.62	265	*i* P	Pn	17 41 16.3	+1.3
APC				*i* S	Sn	17 41 57.0	-0.7
APC				Smax			
	130nm,1.1s						
ESO	**Esso**	3.63	317	*i* P	Pn	17 41 15.2	+0.1
ESO				*i* S	Sn	17 41 56.3	-1.6
ESO				Smax			
	30nm,0.7s						
MIPR	**Malaya Ipel'ka**	4.01	257	P	Pn	17 41 21.8	+1.2
KAMR	**Kamenskoye**	9.26	9	*e*P	P	17 42 34.8	+0.6

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*CASC **25** 17:40:35.3±1.3, 11.25N×87.49W, h20^{km}±25^{km}, MD4.6, ML3.5, mb4.3(NEIC)*

*IDC **25** 17:40:37.2±1.5, 12.14N×86.60W, mb3.8/6, mb1 4.1/7, mb1mx3.8/20, mbtmp3.8/7, ML3.0/1, Error ellipse: s-maj=100.7km s-min=17.2km az=52.0*

*NEIC **25** 17:40:40.8±4.6, 12.28N×86.30W, h23^{km}±34^{km}, mb4.3/8, Error ellipse: s-maj=25.6km s-min=9.3km az=57.0*

ISC 25 17:40:37.4±0.6, 11.31N±0.05×87.44W±0.05, h33^{km}, n44, σ0^{s}93/47, mb4.0/13, 10C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEON	**Leon**	1.22	26	⇑*e*P	P	17 40 58.3	+0.2
CRUN	**El Crucero**	1.30	59	*e*P	P	17 40 59.4	+0.1
MIRN	**Miramar**	1.32	32	*e*P	P	17 40 59.8	0.0
XAVN	**Gruta Xavier**	1.37	53	⇓*e*P	P	17 41 00.5	+0.2
TEL3	**Telica 3**	1.38	25	⇑*e*P	P	17 41 00.4	-0.1
TICN	**Ticuantepe**	1.38	59	*e*P	P	17 41 00.3	-0.3
CNGN	**Cerro Negro**	1.38	31	⇑*e*P	P	17 41 00.1	-0.5
MOMJ	**Momotombo**	1.40	39	⇑*e*P	P	17 41 00.4	-0.4
APYN	**Apoyeque**	1.40	49	*e*P	P	17 41 00.8	-0.1
TELN	**Telica**	1.41	25	⇑*e*P	P	17 41 00.4	-0.6
MGAN	**Managua**	1.43	54	*e*P	P	17 41 00.6	-0.6
MGAN				*e*S	S	17 41 21.8	+2.8
MGAN				*i*		17 41 28.9	
	comp=E,732nm,0.3s						
CRIN	**San Cristobal**	1.43	15	⇑*e*P	P	17 41 01.5	+0.2
APON	**Apoyo**	1.47	66	⇑*e*P	P	17 41 01.7	-0.2
WILN	**Americas 2**	1.48	55	*e*P	P	17 41 01.9	-0.1
CONN	**Concepcion**	1.79	82	⇑*e*P	P	17 41 05.7	-0.7
PYTN	**Playitas**	1.82	48	⇓*e*P	P	17 41 06.3	-0.4
SOMN	**Somoto**	2.24	21	⇑*e*P	P	17 41 14.5	+1.6
JTS	**JuntasAbangare**	2.64	112	Pn	Pn	17 41 19.9	+1.1
	comp=E,3.3nm,0.3s,baz=317,slow=16,SNR=11						
JTS				Sn	Sn	17 41 49.9	-0.2
	comp=E,16nm,0.3s,baz=288,slow=21,SNR=6.4						
JTS	**JuntasAbangare**	2.64	112	*e*Pn	Pn	17 41 18.7	-0.1
JTS				Sn	Sn	17 41 49.9	-0.2
PRS1	**Puriscal**	3.34	113	*e*P	P	17 41 31.8	+3.2
PRS1				*e*S	S	17 42 07.1	-0.6
URSC	**Urasca**	3.88	112	⇑*i*P	P	17 41 39.7	+3.4
BUS	**Buena Vista**	4.02	115	*e*P	P	17 41 38.7	+0.5
BUS				*e*S	S	17 42 24.5	-0.2
SDV	**Santo Domingo**	16.72	97	Pn	P	17 44 31.0	+0.2
	comp=E,0.3nm,0.3s,baz=280,slow=11,SNR=3.3						
SDV	**Santo Domingo**	16.72	97	P	P	17 44 20.9	-10
	comp=E,10nm,1.6s						
LRAL	**Lakeview Retre**	21.62	1	P	P	17 45 20.7	-6.0
	comp=E,9.1nm,0.6s,mb4.4						
OXF	**Oxford**	23.16	356	P	P	17 45 40.9	-1.1
	comp=E,32nm,1.1s,mb4.7						
OXF				*e*		17 46 06.5	
LTX	**Lajitas**	23.47	322	P	P	17 45 44.9	-0.1
	comp=E,3.0nm,0.8s,mb3.8						
TXAR	**Lajitas Array**	23.47	322	P	P	17 45 47.1	+2.2
	comp=E,1.0nm,0.6s,mb3.4,baz=135,slow=10,SNR=20						
TZTN	**Tazewell**	25.36	7	*e*P	P	17 45 55.7	-7.6
WMOK	**Wichita Mounta**	25.51	338	*e*P	P	17 46 05.6	+1.0
	comp=E,5.9nm,1.2s,mb4.0						
SAML	**Samuel**	31.42	129	P	P	17 46 57.1	-0.9
PV10	**Paradox Valley**	33.15	328	*e*P	P	17 47 12.9	-0.1
LPAZ	**La Paz**	33.42	145	P	P	17 47 21.9	+6.4
	comp=E,6.3nm,1.6s,mb4.3						
PDAR	**Pinedale Array**	36.78	332	P	P	17 47 44.0	+0.2
	comp=E,0.6nm,0.6s,mb3.6,baz=129,slow=9.5,SNR=6.4						
HWUT	**Hardware Ranch**	36.85	329	*e*P	P	17 47 45.1	+0.6
	comp=E,3.3nm,0.7s,mb4.3						
ULM	**Lac du Bonnet**	39.44	351	P	P	17 48 03.7	-2.3
	comp=E,1.4nm,0.4s,mb4.0,baz=186,slow=5.1,SNR=3.1						
ULM	**Lac du Bonnet**	39.44	351	P	P	17 48 03.7	-2.3
BDFB	**Brasilia**	47.33	124	P	P	17 49 10.8	+0.4
	comp=E,1.5nm,0.5s,mb4.2,baz=277,slow=6.8,SNR=5.4						
YKA	**Yellowknife Ar**	54.71	345	P	P	17 50 03.7	-1.9
	comp=E,0.9nm,0.7s,mb3.9,baz=140,slow=7.2,SNR=6.0						
YKA	**Yellowknife Ar**	54.71	345	P	P	17 50 03.7	-1.9
ILAR	**Eielson Array**	67.06	336	P	P	17 51 29.4	+0.2
	comp=E,0.3nm,0.6s,mb3.5,baz=144,slow=5.2,SNR=4.1						
SUMG	**Summit**	67.68	14	*e*P	P	17 51 27.5	-5.5
	comp=E,8.9nm,1.3s,mb4.6						
WRA	**Warramunga Arr**	138.96	253	PKP	PKPdf	18 00 08.9	+7.4
	comp=E,0.5nm,0.7s,baz=88,slow=2.1,SNR=7.5						
CMAR	**Chiang Mai Arr**	149.76	348	PKPbc	PKPdf	18 00 27.8	+7.7
	comp=E,1.3nm,0.7s,baz=328,slow=4.0,SNR=6.0						

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*NEIC **25** 17:48:23.8, 31.89S×71.04W, h84^{km}, MD3.7(GUC), After GUC.*

GUC 25 17:48:23.8±0.7, 31.89S×71.04W, h84^{km}±3^{km}, MD3.7, ML3.9, 15C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILCH	**Illapel**	0.28	336	⇑*i*P	P	17 48 37.0	+0.5
ILCH				*i* S	S	17 48 46.6	+0.5
ILCH				AMP		17 48 47.3	
	comp=N,7μm,0.1s						
CMCH	**Combarbala**	0.71	2	⇑*i*P	P	17 48 40.1	-0.1
CMCH				*i* S	S	17 48 52.6	+0.3
CMCH				AMP		17 48 54.9	
	comp=E,15μm,0.8s						
PACH	**Papudo**	0.73	208	⇓*i*P	P	17 48 41.1	+0.7
PACH				*i* S	S	17 48 54.0	+1.4
JACH	**Jahuel**	0.88	155	⇑*i*P	P	17 48 42.1	+0.2
JACH				*i* S	S	17 48 56.0	+0.5
ROCH	**El Roble**	1.08	179	⇑*i*P	P	17 48 44.4	+0.1
ROCH				*i* S	S	17 49 00.6	+0.8
IHA	**Instituto Hidr**	1.24	204	⇓*i*P	P	17 48 46.2	-0.2
IHA				*i* S	S	17 49 03.0	-0.4
PEL	**Peldehue**	1.29	167	⇑*i*P	P	17 48 47.2	+0.2
PEL				*i* S	S	17 49 04.7	+0.4
DSCH	**Colegio Aleman**	1.56	165	⇑*i*P	P	17 48 50.8	+0.3
DSCH				*i* S	S	17 49 10.7	+0.5
DSCH				AMP		17 49 12.2	
	comp=N,4μm,0.8s						
CLCH	**Cerro Calan**	1.56	164	⇓*i*P	P	17 48 50.7	+0.1
CLCH				*i* S	S	17 49 11.1	+0.7
CLCH				AMP		17 49 13.9	
	comp=E,3μm,0.8s						
CLCH				AMP		17 49 15.5	
	comp=E,2μm,0.6s						
FCH	**Farellones**	1.57	156	⇓*i*P	P	17 48 51.4	+0.7
FCH				*i* S	S	17 49 11.9	+1.5
STL	**Santa Lucia**	1.58	168	⇑*i*P	P	17 48 50.2	-0.5
STL				AMP		17 49 11.6	
	comp=N,569nm,0.3s						
SAN	**Santiago**	1.59	169	⇑*i*P	P	17 48 51.3	+0.3
SAN				*i* S	S	17 49 11.3	+0.3
SAN				AMP		17 49 13.2	
	comp=N,1μm,0.3s						
FSR	**Penalolen**	1.64	165	*i* P	P	17 48 51.5	-0.1
FSR				*i* S	S	17 49 13.1	+1.0
FSR				AMP		17 49 16.4	
	comp=E,2μm,0.2s						
LCCH	**Las Cruces**	1.64	196	⇑*i*P	P	17 48 51.4	-0.3
LCCH				*i* S	S	17 49 12.3	+0.2
ANTU	**Antumapu**	1.71	169	⇑*i*P	P	17 48 52.6	+0.1
ANTU				*i* S	S	17 49 13.9	+0.3
ANTU				AMP		17 49 16.0	
	comp=E,2μm,0.3s						
TACH	**Talagante**	1.76	177	⇑*i*P	P	17 48 53.1	-0.1
TACH				*i* S	S	17 49 15.2	+0.3
PCH	**Pirque**	1.78	166	⇑*i*P	P	17 48 53.3	-0.1
PCH				*i* S	S	17 49 15.8	+0.5
SJCH	**San Jose de Ma**	1.84	162	*e*P	P	17 48 54.2	0.0
SJCH				*i* S	S	17 49 17.2	+0.6
SJCH				AMP		17 49 19.3	
	comp=N,762nm,0.2s						
ZON	**Zonda**	2.04	81	⇓*i*P	P	17 48 57.5	+0.6
ZON				*e*S	S	17 49 21.5	+0.2
CHCH	**Chadas Angostu**	2.06	171	⇑*i*P	P	17 48 57.0	-0.2
CHCH				*i* S	S	17 49 22.8	+0.8
LMEL	**Las Melosas**	2.08	160	*i* P	P	17 48 57.9	+0.5
LMEL				*i* S	S	17 49 23.4	+1.2
LMEL				AMP		17 49 26.3	
	comp=N,1μm,0.1s						
LNV	**Longovilo**	2.08	189	*i* S	S	17 49 23.2	+0.7
CACH	**El Canelo**	2.25	171	⇑*i*P	P	17 48 59.9	0.0
CACH				*i* S	S	17 49 27.7	+1.0
CICH	**Cipreses**	2.48	168	⇓*i*P	P	17 49 03.1	+0.1
CICH				*i* S	S	17 49 32.4	+0.1
SFDO	**San Fernando**	2.72	180	⇑*i*P	P	17 49 05.7	-0.8
SFDO				*i* S	S	17 49 38.2	-0.1

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*IDC **25** 18:06:09.6±1.3, 11.76N×86.99W, mb4.1/7, mb1 4.2/8, mb1mx3.9/22, mbtmp4.0/8, ML2.8/1, MS3.4/5, Ms1 3.4/5, ms1mx3.0/24, Error ellipse: s-maj=56.0km s-min=16.6km az=54.0*

*NEIC **25** 18:06:14.0±0.6, 11.72N×86.95W, h35^{km}, mb4.3/9, Error ellipse: s-maj=22.7km s-min=6.9km az=47.0*

*CASC **25** 18:06:16.0±2.5, 11.55N×87.12W, h39^{km}±999^{km}, MD4.6, ML3.5, mb4.3(NEIC)*

ISC 25 18:06:16.2±1.2, 11.64N±0.10×87.0W±0.1, h76^{km}±8^{km}, n46, σ0^{s}98/47, mb4.1/14, 2C-6D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUN	**El Crucero**	0.78	64	*e*P	P	18 06 32.6	-0.1
LEON	**Leon**	0.78	9	⇓*e*P	P	18 06 31.6	-1.1
XAVN	**Gruta Xavier**	0.85	53	*e*P	P	18 06 33.6	+0.3
MIRN	**Miramar**	0.85	21	⇓*e*P	P	18 06 33.4	0.0
TICN	**Ticuantepe**	0.86	63	*e*P	P	18 06 33.7	+0.1
APYN	**Apoyeque**	0.88	48	*e*P	P	18 06 33.9	+0.1
MOMJ	**Momotombo**	0.90	31	⇑*e*P	P	18 06 33.7	-0.3
MGAN	**Managua**	0.91	56	*e*P	P	18 06 34.3	+0.3
MGAN				*i*		18 06 59.9	
	comp=N,1μm,0.5s						
CNGN	**Cerro Negro**	0.91	20	*e*P	P	18 06 35.5	+1.4
MASN	**Masaya**	0.92	68	*e*P	P	18 06 34.2	0.0
TEL3	**Telica 3**	0.94	10	⇓*e*P	P	18 06 34.1	-0.4
WILN	**Americas 2**	0.96	57	⇓*e*P	P	18 06 34.9	+0.1
APON	**Apoyo**	0.97	73	*e*P	P	18 06 34.2	-0.6
TELN	**Telica**	0.98	11	*e*P	P	18 06 34.8	-0.2
CRIN	**San Cristobal**	1.06	358	*e*P	P	18 06 35.3	-0.6
PYTN	**Playitas**	1.30	46	⇓*e*P	P	18 06 39.7	+0.6
CONN	**Concepcion**	1.37	93	*e*P	P	18 06 38.5	-1.7
SOMN	**Somoto**	1.81	13	*e*P	P	18 06 48.5	+2.4
JTS	**JuntasAbangare**	2.43	123	Pn	P	18 06 53.0	-1.6
	comp=N,2.1nm,0.3s,baz=323,slow=14,SNR=8.0						
JTS				Pg	P	18 06 57.7	+3.1
	comp=N,11nm,0.3s,baz=318,slow=9.0,SNR=29						
JTS				LR	LR	18 08 13.2	
	comp=N,702nm,18.2s,baz=283,slow=50						
JTS	**JuntasAbangare**	2.43	123	*e*Pn	P	18 06 50.7	-3.9
JTS				Pg	P	18 06 57.7	+3.1
JTS				LR	LR	18 08 13.2	
LCBS	**La Ceiba**	2.77	317	*e*P	Px	18 07 05.3	
LCBS				*e*S	Sx	18 07 38.4	
LFRS	**El Faro**	2.81	315	⇑*e*P	Px	18 07 05.6	
LFRS				*e*S	Sx	18 07 37.9	
PRS1	**Puriscal**	3.13	121	⇓*e*P	P	18 07 05.3	+1.0
PRS1				*e*S	S	18 07 39.6	-1.1
URSC	**Urasca**	3.65	119	*e*P	P	18 07 11.9	+0.2
URSC				*e*S	S	18 07 55.5	+1.7
BUS	**Buena Vista**	3.81	123	*e*P	P	18 07 13.1	-0.8
BUS				*e*S	S	18 07 57.9	0.0
SDV	**Santo Domingo**	16.35	98	Pn	P	18 10 05.7	+3.2
	comp=N,0.3nm,0.3s,baz=292,slow=6.8,SNR=6.4						
SDV	**Santo Domingo**	16.35	98	P	P	18 10 00.4	-2.1
	comp=N,9.0nm,1.1s						
SJG	**San Juan**	21.16	70	P	P	18 11 02.2	+5.1
	comp=N,29nm,1.1s,mb4.5						
OXF	**Oxford**	22.87	355	*e*P	P	18 11 14.7	+0.8
	comp=N,24nm,1.1s,mb4.4						
LTX	**Lajitas**	23.47	321	P	P	18 11 20.8	+1.1
	comp=N,3.0nm,0.8s,mb3.7						
TXAR	**Lajitas Array**	23.47	321	P	P	18 11 21.1	+1.4
	comp=N,1.3nm,0.5s,mb3.5,baz=136,slow=9.8,SNR=24						
WMOK	**Wichita Mounta**	25.37	337	P	P	18 11 36.4	-1.5
	comp=N,16nm,1.5s,mb4.2						
SAML	**Samuel**	31.30	130	*e*P	P	18 12 30.4	-1.2
	comp=N,2.1nm,0.7s,mb4.0						
SADO	**Sadowa**	33.70	10	P	P	18 12 51.5	-0.6
	comp=N,3.6nm,0.5s,mb4.4,baz=217,slow=9.2,SNR=4.4						
SADO				LR	LR	18 26 59.5	
	comp=N,40nm,19.7s,baz=87,slow=37						
PDAR	**Pinedale Array**	36.68	332	P	P	18 13 17.6	+0.1
	comp=N,0.7nm,0.5s,mb3.8,baz=127,slow=10,SNR=8.2						
HWUT	**Hardware Ranch**	36.78	329	*e*P	P	18 13 19.3	+0.9
	comp=N,3.1nm,0.6s,mb4.4						
SIV	**San Ignacio**	37.59	136	P	P	18 13 26.8	+1.5
	comp=N,3.1nm,0.5s,mb4.4,baz=312,slow=9.2,SNR=21						
REDW	**Red Top Meadow**	37.75	331	*e*P	P	18 13 24.9	-1.5
	comp=N,5.8nm,0.6s,mb4.6						
HLID	**Hailey**	39.65	328	*e*P	P	18 13 41.6	-0.5
SCHQ	**Schefferville**	45.93	16	P	P	18 14 33.2	+0.1
	comp=N,0.9nm,0.5s,mb3.7,baz=231,slow=13,SNR=4.0						
SCHQ				LR	LR	18 33 30.4	
	comp=N,35nm,19.8s,baz=97,slow=36						
SCHQ	**Schefferville**	45.93	16	P	P	18 14 32.3	-0.8
	comp=N,2.2nm,0.6s,mb4.1						
SCHQ				LR	LR	18 33 30.4	
BDFB	**Brasilia**	47.17	124	P	P	18 14 43.5	+0.2
	comp=N,1.6nm,0.5s,mb4.0,baz=286,slow=7.2,SNR=3.5						
BDFB				LR	LR	18 35 05.8	
	comp=N,79nm,19.9s,baz=344,slow=37						
YKA	**Yellowknife Ar**	54.50	345	P	P	18 15 37.5	-0.7
	comp=N,0.8nm,0.7s,mb3.9,baz=137,slow=8.0,SNR=7.9						
YKA	**Yellowknife Ar**	54.50	345	P	P	18 15 37.5	-0.7
GERES	**GERESS Array B**	88.28	40	LR	LR	18 57 21.7	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=N,24nm,19.1s,baz=55,slow=35						
CMAR	**Chiang Mai Arr**	149.52	349	PKPbc	PKPdf	18 26 01.1	+8.1
	comp=N,1.0nm,0.7s,baz=348,slow=4.4,SNR=6.8						

IDC 25 18:07:56.6±10.0,24.75S×176.77W,h48^{km}±85^{km}, mb3.7/4,mb1 3.9/5,mb1mx3.7/16,mbtmp4.1/5,ML4.2/1, MS3.4/5,Ms1 3.4/5,ms1mx3.2/23,Error ellipse: s-maj=72.8km s-min=34.9km az=48.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	14.44	200	P	P	18 11 19.2	-0.6
	1.1nm,0.3s,baz=305,slow=20,SNR=6.0						
DZM	**Mont Dzumac**	15.64	276	LR	LR	18 16 00.6	
	comp=Z,76nm,18.9s,baz=31,slow=31						
HNR	**Honiara**	26.90	300	LR	LR	18 22 21.2	
	comp=Z,92nm,20.4s,baz=204,slow=32						
CTA	**Charters Tower**	34.43	270	LR	LR	18 26 19.0	
	comp=Z,99nm,18.2s,baz=230,slow=32						
STKA	**Stephens Creek**	37.16	249	P	P	18 15 03.1	-1.7
	1.5nm,0.5s,baz=112,slow=11,SNR=12						
PMG	**Port Moresby**	37.56	288	LR	LR	18 26 06.9	
	comp=Z,38nm,20.1s,baz=70,slow=29						
WRA	**Warramunga Arr**	45.29	266	P	P	18 16 09.4	-2.3
	0.7nm,0.5s,baz=104,slow=7.9,SNR=15						
VNDA	**Vanda**	53.81	186	P	P	18 17 11.9	-4.3
	0.9nm,0.9s,baz=9.5,slow=6.1,SNR=4.5						
MAW	**Mawson**	77.97	200	P	P	18 19 50.5	-0.4
	1.6nm,0.5s,baz=162,slow=5.7,SNR=9.7						
TXAR	**Lajitas Array**	88.40	57	LR	LR	18 53 58.7	
	comp=Z,32nm,19.8s,baz=290,slow=31						
AKASG	**Malin Array Be**	147.24	329	PKPbc	PKPdf	18 27 33.9	+1.8
	0.5nm,0.5s,baz=46,slow=4.3,SNR=5.5						

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*NIED **25** 18:10:00,46.20N×142.30E,h5^{km},Mw3.6 Best double couple: $M_0$2.64×10^{14} NP1:ϕ_s342°,δ58°,λ67°. NP2:ϕ_s200°, δ38°,λ122°.*

*SKHL **25** 18:10:17.1±0.1,46.04N×142.01E,h15^{km},mb4.0/5, Ms3.0/1*

SKHL Felt (II) at m.Krilion.

JMA 25 18:10:17.6±0.3,46.16N×142.34E,h6^{km}±3^{km},M3.8, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWK2	**Keihoku**	0.90	200	P	Pb	18 10 34.8	-0.4
JWK2				*e*S	Sb	18 10 46.5	-0.7
JSE	**Soyaes**	1.21	172	P	Pb	18 10 40.3	-0.3
JSE				*e*S	Sb	18 10 56.7	+0.4
JRR	**Rishiri**	1.25	216	P	Pb	18 10 40.1	-1.1
JRR				*e*S	Sb	18 10 56.8	-0.6
JSS	**Shosan**	1.79	191	P	Pn	18 10 48.7	-0.7
JYG	**Yagishiri**	1.85	201	P	Pn	18 10 48.6	-1.6
JYG				*e*S	Sn	18 11 12.0	-2.1

NNC 25 18:14:10.9±6.1,50.14N×87.26E,h17^{km}±54^{km},mpv3.9, 4C-5D,Error ellipse: s-maj=73.1km s-min=34.7km az=76.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	4.71	226	⇑Pn	Pn	18 15 24.2	+1.3
	11nm,0.5s,baz=51,slow=13,SNR=297						
MK31				⇓Sn	Sn	18 16 23.5	+5.7
	5.7nm,0.4s,baz=76,slow=34						
MK31				⇓Lg		18 16 43.7	
	12nm,0.5s,baz=44,slow=34						
VOSK	**Vostochnaya**	10.49	291	⇑Sn	S	18 18 39.2	-2.4
	2.4nm,0.7s						
BVA0	**Borovoye Array**	10.88	292	⇓Pn	P	18 16 51.3	+2.3
	0.4nm,1.1s,baz=106,slow=14,SNR=5.2						
BVA0				⇓Sn	S	18 18 49.5	-1.8
	0.4nm,0.6s,baz=97,slow=24,SNR=5.8						
ZRNK	**Zerenda**	11.70	291	⇑Pn	P	18 17 00.5	+0.4
	2.5nm,1.6s						
ZRNK				⇑Sn	S	18 19 08.7	-2.7
	4.0nm,1.0s						
KK31	**Karatay Array**	13.47	245	Pn	P	18 17 22.1	-1.7
	0.9nm,0.8s,baz=52,slow=13,SNR=7.5						
KK31				⇓Sn	S	18 19 54.3	+0.2
	1.2nm,0.7s						

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*IDC **25** 18:15:23.6±2.2,23.77S×179.99W,h510^{km}±31^{km},mb3.1/2, mb1 3.7/5,mb1mx3.2/16,mbtmp4.5/5,Error ellipse: s-maj=40.4km s-min=25.6km az=148.0*

ISC 25 18:15:22.0±1.5,23.7S±0.1×179.9E±0.2,h503^{km}±23^{km},n9, σ1^{s}24/9,mb3.6/2,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	5.86	161	P	**P**	**18 16 58.4**	**+0.4**
	53nm,0.3s,baz=89,slow=23,SNR=3.6						
AFI	**Afiamalu**	12.54	40	P	**P**	**18 18 07.4**	**+0.2**
	2.8nm,0.3s,baz=94,slow=23,SNR=4.3						
URZ	**Urewera**	14.69	189	P	**P**	**18 18 29.2**	**0.0**
	2.5nm,0.3s,baz=18,slow=21,SNR=13						
URZ				S	**S**	**18 21 02.0**	**+1.7**
	0.8nm,0.3s,baz=272,slow=20,SNR=8.9						
QRZ	**Quartz Range**	18.15	198	*e*PN	**P**	**18 19 03.4**	**0.0**
NNZ	**Nelson**	18.29	196	*e*PN	**P**	**18 19 02.2**	**-2.5**
LTZ	**Lake Taylor**	20.04	197	*e*PN	**P**	**18 19 18.7**	**-2.6**
WRA	**Warramunga Arr**	42.30	266	P	**P**	**18 22 33.4**	**+1.0**
	0.9nm,0.3s,mb3.7,baz=96,slow=8.4,SNR=6.5						
TXAR	**Lajitas Array**	90.43	58	P	**P**	**18 27 30.6**	**+0.1**
	0.5nm,0.8s,mb3.4,baz=225,slow=5.3,SNR=5.8						
AKASG	**Malin Array Be**	144.75	327	PKP	PKPdf	18 34 01.0	+0.5
	0.3nm,0.3s,baz=43,slow=4.4,SNR=5.0						

MAN 25 18:15:47.7,8.11N×123.52E,h29^{km},mb3.9,ML2.7,MS2.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	0.29	207	*i* P	Pb	18 15 56.3	+1.3
PAGZ				*e*S	Sb	18 16 01.2	+1.4
DCPH	**Dipolog City**	0.50	341	*e*P	Pb	18 15 58.9	+0.8
IPIL	**Ipil**	0.99	251	*e*P	Pn	18 16 06.7	+1.0
IPIL				*e*S	Sn	18 16 19.2	+0.4

MAN 25 18:42:44.2,6.99N×125.78E,h4^{km},mb4.3,ML3.2,MS3.0, 2C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	0.48	95	⇑*e*P	Pg	18 42 54.2	+0.3
KCP	**Kidapawan**	0.68	272	⇓*e*P	Pg	18 42 58.1	+0.3
BUKP	**Musuan**	1.13	321	⇑*e*P	Pb	18 43 05.6	-0.4

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*NEIC **25** 18:44:37.2,31.27S×68.42W,h5^{km},ML4.0(GUC),After GUC.*

GUC 25 18:44:37.2±0.7,31.27S×68.42W,h5^{km},ML4.0,6C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	**Zonda**	0.35	218	⇑*i*P	Pg	18 44 43.0	-1.3
ZON				*e*S	Sg	18 44 47.0	-2.1
CMCH	**Combarbala**	2.21	272	*e*P	Pn	18 45 15.5	+0.5
CMCH				*i* S	Sn	18 45 44.0	+0.9
CMCH				AMP		18 45 48.2	
	comp=E,4μm,0.5s						
JACH	**Jahuel**	2.32	232	*e*P	Pn	18 45 17.4	+0.7
JACH				*i* S	Sn	18 45 46.8	+0.9
ILCH	**Illapel**	2.38	260	⇑*i*P	Pn	18 45 18.4	+1.0
ILCH				*i* S	Sn	18 45 48.8	+1.5
ILCH				AMP		18 45 50.6	
	comp=N,604nm,0.2s						
FCH	**Farellones**	2.59	217	⇑*i*P	Pn	18 45 21.8	+1.3
CLCH	**Cerro Calan**	2.78	220	*e*P	Pn	18 45 23.6	+0.4
CLCH				*i* S	Sn	18 45 58.9	+1.4
CLCH				AMP		18 46 07.4	
	comp=E,356nm,0.4s						
ROCH	**El Roble**	2.78	232	⇓*i*P	Pn	18 45 23.7	+0.6
ROCH				*i* S	Sn	18 45 59.8	+2.3
PACH	**Papudo**	2.86	243	*e*P	Pn	18 45 24.6	+0.3
PACH				*i* S	Sn	18 46 01.0	+1.5
PCH	**Pirque**	2.94	216	*e*P	Pn	18 45 25.8	+0.3
PCH				*i* S	Sn	18 46 03.1	+1.6
TACH	**Talagante**	3.19	221	⇑*i*P	Pn	18 45 28.5	-0.6
CHCH	**Chadas Angostu**	3.26	215	⇑*i*P	Pn	18 45 29.9	0.0
CHCH				*e*S	Sn	18 46 09.8	+0.2
CACH	**El Canelo**	3.38	212	*i* P	Pn	18 45 31.5	-0.3
CICH	**Cipreses**	3.48	208	⇑*i*P	Pn	18 45 33.4	+0.3

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*MOS **25** 18:54:12.8±1.2,44.15N×42.64E,h8^{km},mb3.5/1,Error ellipse: s-maj=21.7km s-min=8.5km az=112.7*

*CSEM **25** 18:54:12.8±0.3,44.15N×42.64E,h8^{km},mb3.5,Error ellipse: s-maj=8.6km s-min=3.8km az=92.0,After OBN*

ISC 25 18:54:12.7±1.1,44.12N±0.04×42.65E±0.09,h11^{km}±11^{km}, n8,σ0^{s}81/15,2C-3D,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIV	**Kislovodsk**	0.17	171	⇓*i*PG	**Pg**	**18 54 16.9**	**+0.2**
PYA	**Pyatigorsk**	0.31	107	⇓*e*PG	**Pg**	**18 54 18.5**	**-0.7**
PYA				*e*S	**Sg**	**18 54 23.7**	**+0.1**
NAGR	**Nagutskaya**	0.33	14	⇑*i*PG	**Pg**	**18 54 19.1**	**-0.6**
NAGR				*i* S	**Sg**	**18 54 24.7**	**+0.3**
NAGR	**Nagutskaya**	0.33	14	*i* Pg	**Pg**	**18 54 19.1**	**-0.6**
NAGR				*i* Sg	**Sg**	**18 54 24.7**	**+0.3**
SHAR	**Shatzhatmas**	0.38	178	⇓*i*PG	**Pg**	**18 54 20.7**	**+0.1**
SHAR				*i* S	**Sg**	**18 54 26.4**	**+0.6**
KUBR	**Kubataba**	0.64	120	⇑*i*PG	**Pg**	**18 54 25.6**	**0.0**
KUBR				*i* S	**Sg**	**18 54 35.5**	**+1.3**
KUBR	**Kubataba**	0.64	120	*i* Pg	**Pg**	**18 54 25.6**	**0.0**
KUBR				*i* Sg	**Sg**	**18 54 35.5**	**+1.3**
ZEI	**Tsey**	1.63	146	*e*Pn	**Pn**	**18 54 42.1**	**+0.5**
ZEI				*e*Sg	**Sg**	**18 55 04.9**	**-2.2**

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*NEIC **25** 18:59:40.6±1.8,8.19S×119.63E,h174^{km}±24^{km},mb3.5/3, Error ellipse: s-maj=31.4km s-min=8.3km az=51.0*

*IDC **25** 18:59:40.7±4.5,8.09S×119.75E,h173^{km}±52^{km},mb3.3/3, mb1 3.5/5,mb1mx3.3/16,mbtmp3.9/5,Error ellipse: s-maj=98.7km s-min=13.2km az=51.0*

ISC 25 18:59:40.7±1.9,8.6S±0.1×119.1E±0.2,h209^{km}±24^{km},n12, σ1^{s}07/16,mb3.4/4,1D,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	11.36	147	P	**P**	**19 02 19.1**	**+1.0**
	0.7nm,0.3s,baz=339,slow=8.3,SNR=18						
FITZ				S	**S**	**19 04 17.8**	**-3.9**
	2.1nm,0.3s,baz=3.7,slow=24,SNR=12						
MBWA	**Marble Bar**	12.46	177	*e*Pn	**P**	**19 02 37.7**	**+5.7**
	0.5nm,0.3s						
MBWA				*e*S	**S**	**19 04 46.7**	**-0.4**
KSM	**Kuching**	13.33	319	P	**P**	**19 02 43.7**	**+0.8**
WRA	**Warramunga Arr**	18.54	129	P	**P**	**19 03 43.0**	**-1.1**
	0.7nm,0.3s,baz=302,slow=12,SNR=68						
WRA				S	**S**	**19 07 04.4**	**+4.6**
	0.2nm,0.3s,baz=313,slow=25,SNR=5.7						
WRAB	**Tennant Creek**	18.55	129	*e*P	**P**	**19 03 42.7**	**-1.4**
	3.8nm,0.3s						
WRAB				*e*S	**S**	**19 07 01.2**	**+1.3**
WB2	**Warramunga Arr**	18.55	129	⇓*i*P	**P**	**19 03 43.1**	**-1.0**
STKA	**Stephens Creek**	31.17	141	P	**P**	**19 05 44.1**	**+1.8**
	2.4nm,0.7s,mb3.9,baz=317,slow=7.3,SNR=6.2						
STKA	**Stephens Creek**	31.17	141	*e*P	**P**	**19 05 43.9**	**+1.6**
SONM	**Songino Array**	57.34	350	P	**P**	**19 09 08.6**	**-0.5**
	0.6nm,0.7s,mb3.4,baz=165,slow=12,SNR=4.9						
MKAR	**Makanchi Array**	64.18	333	P	**P**	**19 09 55.0**	**-0.2**
	0.3nm,0.4s,mb3.2,baz=158,slow=7.2,SNR=7.0						
MKAR	**Makanchi Array**	64.18	333	P	**P**	**19 09 55.0**	**-0.2**
BRVK	**Borovoye**	74.09	332	P	**P**	**19 10 49.9**	**-5.7**
	0.4nm,0.9s,mb3.0						

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*ISK **25** 19:14:36.4,39.67N×29.16E,h10^{km},MD3.3*

*CSEM **25** 19:14:36.1±0.1,39.68N×29.16E,h8^{km},MD3.3*

*SOF **25** 19:14:54.0,39.86N×28.26E,h2^{km},MD2.8*

ISC 25 19:14:37.2±0.3,39.71N±0.03×29.12E±0.03,h8^{km},n35, σ0^{s}95/42,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DST	**Dursunbey**	0.39	255	PG	**Pg**	**19 14 45.0**	**-0.1**
DST				SG	**Sg**	**19 14 51.6**	**+1.2**
ULDT	**Uludag**	0.44	2	*i* P	**Pg**	**19 14 45.1**	**-1.0**
ULDT				*i* S	**Sg**	**19 14 52.3**	**+0.3**
KCT	**Karacabey**	0.81	314	PG	**Pg**	**19 14 53.2**	**-0.2**
YLV	**Yalova**	0.88	13	PG	**Pg**	**19 14 54.1**	**-0.8**
BALB	**Balikesir**	0.96	267	PG	**Pg**	**19 14 55.2**	**-1.2**
ALT	**Altintas**	1.01	130	PG	**Pg**	**19 14 55.1**	**-2.2**
BNT	**Bandirma**	1.13	306	PN	**Pn**	**19 14 59.9**	**+0.7**
BNT				SN	**Sn**	**19 15 16.6**	**+1.6**
BADT	**Buyukada**	1.15	360	PN	**Pn**	**19 14 59.0**	**-0.5**
EDC	**Edincik**	1.16	304	PN	**Pn**	**19 14 59.5**	**-0.2**
EYL	**Eskiyayla**	1.17	42	PN	**Pn**	**19 14 59.2**	**-0.7**
HRT	**Hereke**	1.19	21	PN	**Pn**	**19 15 00.1**	**-0.1**
MANT	**Manisa**	1.29	200	*i* P	**Pb**	**19 15 01.6**	**+0.3**
MANT				*i* S	**Sb**	**19 15 17.9**	**+0.1**
AKS	**Akhisar**	1.31	231	PN	**Pn**	**19 15 01.5**	**-0.3**
ESKT	**Eskisehir**	1.35	97	PN	**Pn**	**19 15 01.9**	**-0.5**
ESKT	**Eskisehir**	1.35	97	*i* P	**Pb**	**19 15 02.5**	**+0.1**
ESKT				*i* S	**Sb**	**19 15 21.4**	**+1.8**
ISK	**Istanbul-Kandi**	1.36	358	PN	**Pn**	**19 15 02.7**	**+0.1**
MRMT	**Marmara Adasi**	1.47	308	PN	**Pn**	**19 15 04.6**	**+0.4**
CTT	**Catalca**	1.53	340	PN	**Pn**	**19 15 05.0**	**0.0**
CANB	**Canakkale**	1.61	282	PN	**Pn**	**19 15 06.4**	**+0.2**
HENT	**Hendek**	1.76	50	*i* P	**Pn**	**19 15 09.4**	**+1.1**
HENT				*i* S	**Sn**	**19 15 34.6**	**+3.4**
MFT	**Murefte**	1.77	308	*e*PN	**Pn**	**19 15 07.9**	**-0.6**
TKTP	**Tekketepe**	1.91	150	*i* P	**Pn**	**19 15 09.4**	**-1.0**
TKTP				*i* S	**Sn**	**19 15 36.7**	**+1.9**
LPK	**Lapseki**	1.93	291	*e*PN	**Pn**	**19 15 11.2**	**+0.5**
KDAG	**Bornova**	1.94	229	*i* P	**Pn**	**19 15 14.2**	**+3.3**
IZM	**Izmir**	1.95	228	*e*PN	**Pn**	**19 15 10.3**	**-0.6**
BLCB	**Balcova**	2.08	231	*e*PN	**Pn**	**19 15 12.5**	**-0.4**
EZN	**Ezine**	2.16	274	*e*PN	**Pn**	**19 15 13.1**	**-0.8**
KIZT	**Kizilcal**	2.30	110	*e*PN	**Pn**	**19 15 14.8**	**-1.2**
SGKT	**Sivrigoynuk**	2.41	68	*i* P	**Pn**	**19 15 19.4**	**+1.8**
EDRB	**Edirne**	2.80	321	*e*PN	**Pn**	**19 15 22.7**	**-0.4**
ANTO	**Ankara**	2.84	86	*e*PN	**Pn**	**19 15 22.9**	**-0.8**
RZN	**Rozhen**	3.89	302	*i* P	**Pn**	**19 15 49.0**	**+10**
MMB	**Musomiste**	4.51	296	*i* P	**Pn**	**19 15 54.0**	**+6.5**
KKB	**Krupnik**	5.06	297	*i* P	**Pn**	**19 16 15.0**	**+20**
VTS	**Vitosha**	5.31	305	*i* P	**Pn**	**19 16 14.0**	**+15**

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*IDC **25** 19:15:36.5±0.6,13.74N×124.06E,mb4.1/15,mb1 4.3/15, mb1mx4.1/23,mbtmp4.1/15,MS3.5/7,Ms1 3.6/7, ms1mx3.3/27,Error ellipse: s-maj=33.4km s-min=14.5km az=67.0*

*BJI **25** 19:15:39.2,13.50N×124.18E,h49^{km},mB5.0,mb4.4, Ms3.8,Msz3.6*

*MAN **25** 19:15:40.8,13.91N×124.04E,h18^{km},mb5.0,ML3.9, MS4.1*

*NEIC **25** 19:15:41.1±0.3,13.70N×123.98E,h35^{km},mb4.6/13,Error ellipse: s-maj=12.2km s-min=5.8km az=64.0*

ISC 25 19:15:42.0±0.7,13.93N±0.05×124.04E±0.05,h50^{km}±7^{km}, n76,σ1^{s}18/78,mb4.3/29,MS3.5/8,4C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	**Virac**	0.35	162	*e*P	**P**	**19 15 48.4**	**-3.2**
AUQP	**San Andres**	1.46	246	*e*P	**P**	**19 16 07.4**	**+0.9**
CNP	**Catarman**	1.54	157	*e*P	**P**	**19 16 06.9**	**-0.6**
CNP				*e*S	**S**	**19 16 26.9**	**+0.4**
GQP	**Guinayangan**	1.55	269	⇑*i*P	**P**	**19 16 07.5**	**-0.2**
GQP				*e*S	**S**	**19 16 27.9**	**+1.1**
MMPH	**Masbate**	1.62	195	*e*P	**P**	**19 16 10.0**	**+1.4**
MMPH				*i* S	**S**	**19 16 31.0**	**+2.6**
POLP	**Polilio Island**	2.19	291	*e*P	**P**	**19 16 18.3**	**+1.6**
POLP				*e*S	**S**	**19 16 47.7**	**+5.2**
BOAC	**Boac**	2.19	258	*e*P	**P**	**19 16 16.9**	**+0.2**
OTRP	**Odiongan**	2.51	232	*e*P	**P**	**19 16 20.5**	**-0.8**
RCP	**Roxas**	2.68	208	⇑*e*P	**P**	**19 16 23.3**	**-0.4**
BESP	**Borongan**	2.69	149	*e*P	**P**	**19 16 23.7**	**-0.2**
LBPH	**Los Banos**	2.79	275	*e*P	**P**	**19 16 25.2**	**0.0**
KALP	**Kalibo**	2.79	217	*e*P	**P**	**19 16 34.9**	**+10**
ARP	**Angono**	2.87	282	*i* P	**P**	**19 16 26.8**	**+0.5**
PLP	**Palo**	2.90	162	⇑*e*P	**P**	**19 16 26.1**	**-0.7**
PLP				*e*S	**S**	**19 17 01.9**	**+1.2**
BALP	**Baler**	2.98	307	*e*P	**P**	**19 16 26.3**	**-1.8**
NZB	**Bigte**	3.00	288	*e*P	**P**	**19 16 29.0**	**+0.9**
TGY	**Tagaytay City**	3.02	274	⇑*e*P	**P**	**19 16 29.3**	**+0.8**
SJMP	**San Jose**	3.20	243	*e*P	**P**	**19 16 31.0**	**-0.1**
PCPH	**Palayan**	3.28	300	⇓*i*P	**P**	**19 16 31.0**	**-1.1**
PCPH				*i* S	**S**	**19 17 21.5**	**+11**
GUIM	**Jordan**	3.58	204	*e*P	**P**	**19 16 38.9**	**+2.5**
LLP	**Lapu-Lapu**	3.60	181	*i* P	**P**	**19 16 34.8**	**-1.9**
LLP				*e*S	**S**	**19 17 16.6**	**-1.7**
NBP	**Mount Natib**	3.60	283	*e*P	**P**	**19 16 33.7**	**-3.1**
LUBP	**Lubang**	3.69	267	*e*P	**P**	**19 16 37.4**	**-0.6**
MSLP	**Maasin**	3.86	168	*e*P	**P**	**19 16 41.2**	**+0.8**
BUSP	**Coron**	4.21	243	*e*P	**P**	**19 16 44.5**	**-0.8**
CUYO	**Cuyo Island**	4.26	224	*e*P	**P**	**19 16 44.7**	**-1.3**
SCPH	**Surigao**	4.36	161	*e*P	**P**	**19 16 47.3**	**-0.2**
SCPH				*e*S	**S**	**19 17 46.0**	**+8.4**
SCZP	**Santa Cruz**	4.39	295	*e*P	**P**	**19 16 45.3**	**-2.6**
BOLP	**Bolinao**	4.67	302	*e*P	**P**	**19 16 46.4**	**-5.4**
BUTP	**Butuan**	5.17	162	*e*P	**P**	**19 16 59.3**	**+0.6**
BUKP	**Musuan**	6.10	170	*e*P	**P**	**19 17 13.4**	**+1.6**
MATI	**Mati**	7.28	162	*e*P	**P**	**19 17 29.1**	**+0.9**
YHNB	**Yeheng**	10.97	347	P	**P**	**19 18 19.0**	**-0.1**
JNU	**Nakatsue**	20.09	17	LR	LR	19 27 18.5	
	comp=Z,85nm,20.7s,MS3.1,baz=354,slow=35						
ENH	**Enshi**	21.09	323	*e*P	**P**	**19 20 24.8**	**+0.4**
	12nm,0.6s,mb4.4						
CBIJ	**Chichi jima**	21.41	49	LR	LR	19 27 22.4	
	comp=Z,100nm,18.1s,MS3.2,baz=113,slow=33						
KMI	**Kunming**	22.92	302	P	**P**	**19 20 44.5**	**+1.8**
KMI				AP		19 20 52.8	
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
KMI				LR	LR		
	comp=N,130nm,14.0s,MS3.6						
KMI				LR	LR		
	comp=E,80nm,11.6s,MS3.6						
KMI				LR	LR		
	comp=Z,240nm,21.0s						
XAN	**Xi’an**	24.26	328	P	**P**	**19 20 56.3**	**+0.7**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
CM31	**Chiang Mai Arr**	24.51	284	*e*P	**P**	**19 20 56.3**	**-1.9**
	comp=Z,6.5nm,0.6s,mb4.3						
CMAR	**Chiang Mai Arr**	24.51	284	P	**P**	**19 20 57.6**	**-0.5**
	comp=Z,2.9nm,0.6s,mb4.0,baz=98,slow=7.6,SNR=24						
CMAR				LR	LR	19 30 29.0	
	comp=Z,101nm,20.1s,MS3.3,baz=105,slow=36						
FITZ	**Fitzroy Crossi**	31.87	177	P	**P**	**19 22 01.0**	**-3.9**
	comp=Z,3.1nm,0.7s,mb4.3,baz=5.4,slow=15,SNR=3.9						
SHL	**Shillong**	32.31	296	*e*P	**P**	**19 22 07.5**	**-1.2**
LSA	**Lhasa**	34.18	303	P	**P**	**19 22 26.0**	**+1.3**
WRAB	**Tennant Creek**	35.15	163	*e*P	**P**	**19 22 29.9**	**-3.3**
	comp=Z,8.9nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	35.16	163	P	**P**	**19 22 30.1**	**-3.1**
	comp=Z,3.9nm,0.6s,mb4.5,baz=338,slow=9.4,SNR=43						
WRA				PcP	PcP	19 25 02.8	-1.1
	comp=Z,1.1nm,0.6s,baz=342,slow=3.1,SNR=6.1						
WB2	**Warramunga Arr**	35.16	163	*e*P	**P**	**19 22 30.1**	**-3.1**
ULN	**Ulaanbaatar**	36.66	341	P	**P**	**19 22 45.6**	**0.0**
	comp=Z,2.9nm,0.6s,mb4.3						
ULN				*e*	pP	19 22 59.5	+0.7
SONM	**Songino Array**	36.85	340	P	**P**	**19 22 48.0**	**+0.8**
	comp=Z,1.5nm,0.6s,mb4.0,baz=157,slow=10,SNR=11						
SONM				LR	LR	19 38 26.3	
	comp=Z,98nm,20.6s,MS3.6,baz=78,slow=37						
GUN	**Gumba**	38.09	298	*e*P	**P**	**19 22 58.1**	**+0.3**
	comp=Z,90nm,1.1s,mb5.4						
PKI	**Pulchoki**	38.42	297	*e*P	**P**	**19 22 59.9**	**-0.7**
	comp=Z,14nm,0.6s,mb4.8						
KKN	**Kakani**	38.58	297	*e*P	**P**	**19 23 01.6**	**-0.3**
	comp=Z,24nm,0.9s,mb4.9						
DMN	**Daman**	38.69	297	*e*P	**P**	**19 23 02.3**	**-0.5**
	comp=Z,54nm,1.3s,mb5.1						
GKN	**Gorkha**	39.18	297	*e*P	**P**	**19 23 06.3**	**-0.6**
	comp=Z,18nm,0.8s,mb4.9						
KOLN	**Koldanda**	40.03	297	*e*P	**P**	**19 23 13.8**	**-0.1**
	comp=Z,26nm,1.1s,mb4.9						
HNR	**Honiara**	42.52	121	LR	LR	19 38 56.2	
	comp=Z,95nm,20.2s,MS3.7,baz=277,slow=33						
MKAR	**Makanchi Array**	47.81	322	P	**P**	**19 24 17.0**	**+0.5**
	comp=Z,1.0nm,0.7s,mb3.9,baz=119,slow=8.7,SNR=8.0						
STKA	**Stephens Creek**	48.56	160	*e*P	**P**	**19 24 20.9**	**-1.6**
	comp=Z,2.4nm,0.7s,mb4.3						
STKA	**Stephens Creek**	48.56	160	P	**P**	**19 24 21.0**	**-1.5**
	comp=Z,5.0nm,0.9s,mb4.5,baz=21,slow=5.8,SNR=8.2						
STKA	**Stephens Creek**	48.56	160	*e*P	**P**	**19 24 20.2**	**-2.2**
ZAL	**Zalesovo**	50.39	331	P	**P**	**19 24 37.2**	**+0.9**
	comp=Z,0.5nm,0.6s,mb3.8,baz=178,slow=8.2,SNR=3.6						
ZAL	**Zalesovo**	50.39	331	P	**P**	**19 24 37.2**	**+0.9**
BVAR	**Borovoye Array**	57.43	325	P	**P**	**19 25 28.0**	**+0.1**
	comp=Z,0.9nm,0.5s,mb4.0,baz=108,slow=6.4,SNR=7.7						
ZRNK	**Zerenda**	58.19	324	*e*P	**P**	**19 25 32.6**	**-0.6**
	comp=Z,3.3nm,0.7s,mb4.5						
ARU	**Arti**	64.99	326	P	**P**	**19 26 17.2**	**-1.6**
	comp=Z,2.1nm,0.6s,mb4.3						
KIV	**Kislovodsk**	74.28	312	*e*P	**P**	**19 27 16.7**	**+0.8**
ILAR	**Eielson Array**	77.12	26	P	**P**	**19 27 31.9**	**+0.3**
	comp=Z,0.5nm,0.8s,mb3.5,baz=252,slow=6.4,SNR=4.8						
ARCES	**ARCESS Array B**	80.02	339	P	**P**	**19 27 48.0**	**+0.7**
	comp=Z,2.3nm,0.7s,mb4.2,baz=76,slow=5.0,SNR=7.5						
ARCES				LR	LR	20 10 02.2	
	comp=Z,21nm,18.2s,MS3.5,baz=67,slow=41						
BRTR	**Keskin Array B**	81.54	309	P	**P**	**19 27 57.1**	**+1.1**
	comp=Z,0.3nm,0.6s,mb3.4,baz=133,slow=53,SNR=2.6						
FINES	**FINESS Array B**	81.65	331	P	**P**	**19 27 56.5**	**+0.3**
	comp=Z,1.0nm,0.6s,mb3.9,baz=72,slow=6.0,SNR=6.6						
INK	**Inuvik**	81.70	22	P	**P**	**19 27 56.8**	**+0.6**
	comp=Z,1.5nm,0.7s,mb4.0,baz=257,slow=8.1,SNR=3.3						
INK	**Inuvik**	81.70	22	P	**P**	**19 27 55.7**	**-0.5**
	comp=Z,3.2nm,1.0s,mb4.2						
MLR	**Muntele Rosu**	85.76	316	P	**P**	**19 28 20.6**	**+3.4**
	comp=Z,1.9nm,0.7s,mb4.4,baz=132,slow=14,SNR=5.8						
HFS	**Hagfors**	87.81	332	P	**P**	**19 28 29.4**	**+2.6**
	comp=Z,1.1nm,0.6s,mb4.3,baz=288,slow=4.7,SNR=4.1						
NOA	**NORSAR Array B**	88.53	333	LR	LR	20 11 09.9	
	comp=Z,42nm,21.2s,MS3.8,baz=60,slow=38						
TXAR	**Lajitas Array**	116.99	46	PKP	PKPdf	19 34 24.7	+2.8
	comp=Z,0.3nm,0.8s,baz=180,slow=1.3,SNR=4.6						
PLCA	**Paso Flores**	150.41	157	PKPbc	PKPdf	19 35 30.1	+7.2
	comp=Z,3.1nm,0.8s,baz=178,slow=6.5,SNR=7.5						

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*NIED **25** 19:50:00,24.00N×122.50E,h50^{km},Mw4.3 Best double couple: $M_0$3.42×10^{15} NP1:ϕ_s329°,δ84°,λ173°. NP2:ϕ_s60°, δ83°,λ6°.*

*MOS **25** 19:50:24.6±0.9,24.17N×122.77E,h33^{km},mb5.1/15,Error ellipse: s-maj=22.0km s-min=9.6km az=117.7*

*BJI **25** 19:50:25.7,24.18N×122.64E,h34^{km},mB4.8,mb4.3, ML4.0,Ms4.0,Msz4.0*

*TAP **25** 19:50:25.6,23.89N×122.53E,h15^{km}±1^{km},ML4.7*

*JMA **25** 19:50:26.5±0.3,24.00N×122.51E,h26^{km},M4.5*

*NEIC **25** 19:50:27.6±0.8,24.11N×122.58E,h43^{km}±6^{km},mb4.8/18, Error ellipse: s-maj=7.9km s-min=7.3km az=177.0*

*IDC **25** 19:50:28.8±2.8,24.12N×122.64E,h50^{km}±28^{km},mb3.9/14, mb1 4.1/15,mb1mx4.0/21,mbtmp4.2/15,MS3.7/10, Ms1 3.7/10,ms1mx3.4/23,Error ellipse: s-maj=18.1km s-min=16.5km az=65.0*

ISC 25 19:50:27.2±0.5,24.09N±0.05×122.51E±0.03,h51^{km}±4^{km}, n89,σ1^{s}12/97,mb4.5/33,MS3.8/11,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	0.59	51	P	**P**	**19 50 39.0**	**-0.6**
YOJ				*e*S	**S**	**19 50 47.5**	**-1.2**
NACB	**Ninganchiao**	0.84	276	*e*Pg	**P**	**19 50 41.9**	**-1.0**
IRIF	**Iriomote-Funau**	1.14	78	P	**P**	**19 50 47.3**	**+0.2**
IRIF				*e*S	**S**	**19 51 03.7**	**+1.7**
YHNB	**Yeheng**	1.18	299	*e*P	**P**	**19 50 48.5**	**+0.9**
HATJ	**Hateruma jima**	1.19	92	P	**P**	**19 50 47.4**	**-0.3**
HATJ				*e*S	**S**	**19 51 02.5**	**-0.6**
TATO	**Taipei**	1.28	314	*e*P	**P**	**19 50 50.4**	**+1.3**
TATO				*e*		19 50 57.5	
JKRS	**Kuro-shima**	1.38	84	P	**P**	**19 50 50.9**	**+0.3**
JKRS				*e*S	**S**	**19 51 09.3**	**+1.3**
JIJ	**Ishigaki jima**	1.52	79	P	**P**	**19 50 52.1**	**-0.4**
JIJ				*e*S	**S**	**19 51 11.4**	**+0.1**
JTJ	**Tarama**	2.08	74	P	**P**	**19 51 00.5**	**+0.2**
JTJ				*e*S	**S**	**19 51 26.7**	**+1.7**
JMJ	**Miyako jima 2**	2.64	74	*e*S	**S**	**19 51 41.7**	**+2.4**
JOGS	**Gusukube**	2.73	75	P	**P**	**19 51 10.9**	**+1.3**
QZH	**Quanzhou**	3.66	284	⇑*i*P	**P**	**19 51 21.8**	**-1.0**
QZH				S	**S**	**19 52 01.5**	**-3.7**
QZH				Smax			
	comp=N,480nm,0.8s						
QZH				Smax			

	comp=E,340nm,0.7s						
QZH				LR	LR		
	comp=N,2µm,13.9s						
QZH				LR	LR		
	comp=E,1µm,11.6s						
QZH				LR	LR		
	comp=Z,2µm,14.4s						
JKE	**Kume jima 2**	4.47	59	P	P	19 51 33.1	-1.1
JKE				*e*S	S	19 52 26.9	+1.4
JAGN	**Aguni-jima**	4.95	59	P	P	19 51 40.6	-0.4
JOW	**Kunigami**	5.88	61	P	P	19 51 51.5	-2.4
JOW				S	S	19 52 58.7	-2.2
	comp=Z,2.4nm,0.3s,baz=112,slow=25,SNR=2.6						
JOW	**Kunigami**	5.88	61	P	P	19 51 51.9	-2.0
JTK	**Tokunoshima**	6.87	56	P	P	19 52 04.5	-3.2
JAM	**Amami Oshima**	7.69	54	P	P	19 52 15.2	-3.9
JNU	**Nakatsue**	11.61	37	LR	LR	19 57 50.4	
	comp=Z,187nm,19.7s,baz=191,slow=38						
ENH	**Enshi**	13.12	301	*e*P	P	19 53 26.1	-6.7
	comp=Z,7.3nm,0.4s						
KS15	**Wonju Array Si**	14.08	18	*e*P	P	19 53 44.6	-0.9
CD2	**Chengdu**	17.95	296	P	P	19 54 35.3	+0.5
CBIJ	**Chichi jima**	18.00	76	LR	LR	20 00 59.0	
	comp=Z,109nm,18.7s,baz=232,slow=35						
HHC	**Hu-ho-hao-te**	19.06	334	*e*P	P	19 54 44.8	-3.2
HHC				S	S	19 58 15.5	+0.4
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s						
HHC				AMB	AMB		
	comp=Z,80nm,7.5s						
HHC				LR	LR		
	comp=N,410nm,14.7s						
HHC				LR	LR		
	comp=E,760nm,14.1s						
HHC				LR	LR		
	comp=Z,470nm,14.7s						
LZH	**Lanzhou**	20.05	311	P	P	19 55 00.5	+1.8
LZH				AP		19 55 06.5	
LZH				AMB	AMB		
	comp=Z,30nm,1.2s						
LZH				LR	LR		
	comp=N,980nm,14.0s						
LZH				LR	LR		
	comp=Z,690nm,15.0s,MS4.1						
CM31	**Chiang Mai Arr**	22.65	260	P	P	19 55 26.4	+1.3
CMAR	**Chiang Mai Arr**	22.65	260	P	P	19 55 27.2	+2.1
	comp=Z,2.0nm,1.1s,mb3.5,baz=70,slow=7.3,SNR=5.9						
CMAR				LR	LR	20 05 52.2	
	comp=Z,68nm,20.1s,MS3.1,baz=90,slow=40						
GTA	**Gaotai**	24.51	314	*e*P	P	19 55 44.5	+1.5
GTA				AP		19 55 55.5	
GTA				XP		19 56 00.5	
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
ASAJ	**Asahikawa**	25.87	35	P	P	19 55 54.1	-1.7
	comp=Z,3.4nm,0.5s,mb4.1,baz=248,slow=9.9,SNR=8.3						
ASAJ				LR	LR	20 05 57.0	
	comp=Z,105nm,21.5s,MS3.3,baz=350,slow=36						
ULN	**Ulaanbaatar**	26.71	336	*e*P	P	19 56 02.6	-1.0
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						
ULN	**Ulaanbaatar**	26.71	336	*e*P	P	19 56 02.6	-1.0
	comp=Z,4.0nm,1.0s,mb3.9						
SONM	**Songino Array**	26.93	336	P	P	19 56 05.3	-0.3
	comp=Z,2.3nm,0.7s,mb3.8,baz=151,slow=9.3,SNR=15						
SONM				LR	LR	20 08 00.3	
	comp=Z,246nm,19.3s,MS3.8,baz=73,slow=39						
YAK	**Yakutsk**	38.23	5	*e*P	P	19 57 40.7	-3.0
MKAR	**Makanchi Array**	39.24	315	P	P	19 57 52.8	+0.6
	comp=Z,3.3nm,0.5s,mb4.3,baz=100,slow=10.0,SNR=74						
MKAR				PcP	PcP	20 00 00.5	-0.6
	comp=Z,1.0nm,0.8s,baz=79,slow=6.2,SNR=3.8						
MKAR				LR	LR	20 15 56.4	
	comp=Z,63nm,18.4s,MS3.5,baz=115,slow=39						
MKAR	**Makanchi Array**	39.24	315	P	P	19 57 52.8	+0.6
MKAR				PcP	PcP	20 00 00.5	-0.6
MKAR				LR	LR	20 15 56.4	
ZAL	**Zalesovo**	40.98	327	P	P	19 58 06.8	+0.2
	comp=Z,2.5nm,0.5s,mb4.1,baz=359,slow=8.8,SNR=15						
ZAL				LR	LR	20 17 09.8	
	comp=Z,205nm,18.2s,MS4.0,baz=172,slow=39						
WRAB	**Tennant Creek**	45.26	164	*e*P	P	19 58 40.8	-0.9
WRAB				pmax	pmax		
	comp=Z,27nm,1.4s,mb4.9						
WRAB	**Tennant Creek**	45.26	164	*e*P	P	19 58 40.8	-0.9
	comp=Z,27nm,1.4s,mb4.9						
WRA	**Warramunga Arr**	45.26	164	P	P	19 58 40.8	-1.0
	comp=Z,4.6nm,0.6s,mb4.5,baz=345,slow=8.8,SNR=41						
WB2	**Warramunga Arr**	45.27	164	*e*P	P	19 58 40.6	-1.2
ZRNK	**Zerenda**	49.30	320	*e*P	P	19 59 11.8	-1.1
ZRNK				*e*		20 00 34.1	
ZRNK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
ZRNK	**Zerenda**	49.30	320	*e*P	P	19 59 11.8	-1.1
	comp=Z,12nm,1.2s,mb4.8						
ZRNK				*e*PcP	PcP	20 00 34.1	-1.3
ARU	**Arti**	55.91	323	*e*P	P	20 00 00.9	-1.1
ARU				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
ARU	**Arti**	55.91	323	*e*P	P	20 00 00.9	-1.1
	comp=Z,3.3nm,0.4s,mb4.7						
STKA	**Stephens Creek**	58.57	161	P	P	20 00 20.7	-0.5
	comp=Z,1.8nm,0.8s,mb4.1,baz=354,slow=7.6,SNR=4.6						
STKA	**Stephens Creek**	58.57	161	*e*P	P	20 00 20.4	-0.9
STKA				*e*	pP	20 00 33.5	-1.8
KIV	**Kislovodsk**	66.58	309	*e*P	P	20 01 14.8	+0.6
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
KIV	**Kislovodsk**	66.58	309	*e*P	P	20 01 14.8	+0.6
	comp=Z,5.9nm,0.7s,mb4.7						
ILAR	**Eielson Array**	68.74	27	P	P	20 01 26.2	-1.1
	comp=Z,0.3nm,0.4s,mb3.5,baz=278,slow=5.6,SNR=6.6						
ARCES	**ARCESS Array B**	70.07	338	P	P	20 01 34.4	-1.0
	comp=Z,2.9nm,0.8s,mb4.2,baz=53,slow=6.1,SNR=5.4						
MALT	**Malatya**	71.05	304	*e*P	P	20 01 42.6	+0.8
MALT				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
MALT	**Malatya**	71.05	304	*e*P	P	20 01 42.6	+0.8
	comp=Z,12nm,1.1s,mb4.7						
FINES	**FINESS Array B**	72.13	330	P	P	20 01 48.4	+0.5
	comp=Z,1.2nm,0.4s,mb4.2,baz=52,slow=5.4,SNR=35						
FINES				LR	LR	20 36 51.1	
	comp=Z,117nm,18.5s,MS4.2,baz=162,slow=39						
INK	**Inuvik**	72.86	22	*e*P	P	20 01 50.1	-1.9
INK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
INK	**Inuvik**	72.86	22	*e*P	P	20 01 50.1	-1.9
	comp=Z,6.8nm,1.2s,mb4.5						
BR131	**Keskin Array S**	74.20	307	*e*P	P	20 02 00.4	0.0
	comp=Z,4.3nm,0.9s,mb4.4						
BRTR	**Keskin Array B**	74.20	307	P	P	20 02 01.5	+1.1
	comp=Z,2.3nm,0.6s,mb4.3,baz=104,slow=5.1,SNR=14						
DLBC	**Dease Lake**	78.41	31	*e*P	P	20 02 24.6	+0.8
NB2	**NORSAR Subarra**	78.87	332	P	P	20 02 26.1	-0.1
	comp=Z,1.1nm,0.7s,mb3.9,baz=61,slow=5.8						
NOA	**NORSAR Array B**	78.87	332	P	P	20 02 26.6	+0.3
	comp=Z,1.4nm,0.7s,mb4.0,baz=59,slow=5.6,SNR=5.8						
NOA				LR	LR	20 40 55.9	
	comp=Z,63nm,18.7s,MS4.0,baz=65,slow=38						
YKA	**Yellowknife Ar**	82.58	23	P	P	20 02 46.2	+0.4
	comp=Z,2.0nm,0.7s,mb4.3,baz=317,slow=5.2,SNR=14						
YKA	**Yellowknife Ar**	82.58	23	P	P	20 02 46.2	+0.4
SUMG	**Summit**	82.72	354	*e*P	P	20 02 47.5	+1.2
	comp=Z,3.6nm,0.8s,mb4.5						
KHC	**Kasperske Hory**	83.61	321	*e*P	P	20 02 53.0	+1.7
GERES	**GERESS Array B**	83.68	321	P	P	20 02 53.3	+1.7
	comp=Z,1.5nm,0.8s,mb4.2,baz=45,slow=3.8,SNR=14						
GERES				LR	LR	20 44 20.7	
	comp=Z,52nm,18.1s,MS4.0,baz=78,slow=39						
CDF	**Champ du Feu**	87.53	323	*e*P	P	20 03 10.8	+0.2
LPG	**La Plagne**	89.47	321	*e*P	P	20 03 20.2	+0.3
	comp=Z,10nm,0.9s,mb4.8						
LPG	**La Plagne**	89.47	321	*e*P	P	20 03 20.2	+0.3
LPG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.8						
LPL	**La Plagne**	89.47	321	*e*P	P	20 03 20.2	+0.3
	comp=Z,8.1nm,1.0s,mb4.7						
LPL	**La Plagne**	89.47	321	*e*P	P	20 03 20.2	+0.3
LPL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.7						
PGF	**Pioggiola**	89.76	317	*e*P	P	20 03 21.4	0.0
	comp=Z,6.0nm,0.9s,mb4.6						
PGF	**Pioggiola**	89.76	317	*e*P	P	20 03 21.4	0.0
PGF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
MBDF	**Montbardon**	89.89	320	*e*P	P	20 03 22.0	+0.1
LOR	**Lormes**	90.06	323	*e*P	P	20 03 22.9	+0.2
	comp=Z,10nm,1.1s,mb4.8						
LOR				*e*R			
	comp=Z,53nm,17.5s						
LOR	**Lormes**	90.06	323	*e*P	P	20 03 22.9	+0.2
LOR				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.8						
LOR				MLR	MLR		
	comp=Z,50nm,17.5s,MS4.0						
ORIF	**Oris-en-Rattie**	90.31	321	*e*P	P	20 03 24.0	+0.1
ORIF				*e*R			
	comp=Z,56nm,19.8s						
NEW	**Newport**	90.39	35	*e*P	P	20 03 25.8	+1.6
NEW				pmax	pmax		
	comp=Z,8.0nm,1.2s						
NEW	**Newport**	90.39	35	*e*P	P	20 03 25.8	+1.6
	comp=Z,8.3nm,1.2s,mb4.9						
SMF	**Signal de Mont**	90.45	323	*e*P	P	20 03 24.4	-0.1
	comp=Z,24nm,1.2s,mb5.1						
SMF	**Signal de Mont**	90.45	323	*e*P	P	20 03 24.4	-0.1
SMF				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.1						
VIVF	**Saint-Julien-l**	91.04	321	*e*P	P	20 03 27.1	-0.2
FLN	**La Foliniere**	91.43	326	*e*P	P	20 03 28.7	-0.3
FLN				*e*R			
	comp=Z,78nm,17.5s						
LASF	**Ste Croix**	91.97	321	*e*P	P	20 03 31.5	-0.1
	comp=Z,28nm,1.5s,mb5.1						
FCC	**Fort Churchill**	92.06	18	P	P	20 03 31.0	-0.7
FCC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7						
FCC	**Fort Churchill**	92.06	18	P	P	20 03 31.0	-0.6
	comp=Z,3.4nm,0.8s,mb4.7						
CAF	**Calviac**	92.48	322	*e*P	P	20 03 33.6	-0.3
	comp=Z,21nm,1.3s,mb5.0						
CAF	**Calviac**	92.48	322	*e*P	P	20 03 33.6	-0.3
CAF				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb5.0						
RJF	**Les Rejaudoux**	92.55	323	*e*P	P	20 03 32.9	-1.3
	comp=Z,16nm,1.0s,mb5.1						
RJF				*e*R			
	comp=Z,50nm,17.5s						
RJF	**Les Rejaudoux**	92.55	323	*e*P	P	20 03 32.9	-1.3
RJF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.1						
RJF				MLR	MLR		
	comp=Z,50nm,17.5s,MS4.0						

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*IDC **25** 19:53:03.0±2.2, 22.46N×143.27E, h164^{km}±19^{km}, mb3.5/9, mb1 3.7/11, mb1mx3.5/23, mbtmp4.0/11, Error ellipse: s-maj=32.7km s-min=12.9km az=91.0*

*NEIC **25** 19:53:04.9±2.2, 22.42N×143.25E, h183^{km}±21^{km}, mb4.1/3, Error ellipse: s-maj=25.4km s-min=9.1km az=89.0*

ISC 25 19:53:02.1±1.7, **22.42N**±0.08×**143.3E**±0.2, **h172**^{km}±15^{km}, **n19,** $\sigma 0\overset{s}{.}70$/20, **mb3.8**/11, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	4.76	348	P	P	19 54 13.8	+0.2
	23nm,0.3s,baz=286,slow=21,SNR=30						
CBIJ				S	S	19 55 07.8	-1.0
	27nm,0.3s,baz=286,slow=23,SNR=7.4						
MJAR	**Matsushiro Arr**	14.74	344	P	P	19 56 23.2	-0.1
	0.7nm,0.3s,baz=160,slow=11,SNR=11						
MAJO	**Matsushiro**	14.75	344	*e*P	P	19 56 25.8	+2.5
SONM	**Songino Array**	38.84	320	P	P	20 00 12.5	+0.6
	0.5nm,0.4s,mb3.5,baz=125,slow=7.2,SNR=4.3						
WRAB	**Tennant Creek**	42.99	192	*e*P	P	20 00 45.7	-0.5
	4.0nm,0.5s,mb4.3						
WB2	**Warramunga Arr**	43.00	192	*e*P	P	20 00 46.1	-0.1
WRA	**Warramunga Arr**	43.00	192	P	P	20 00 46.1	-0.2
	1.3nm,0.3s,mb4.0,baz=17,slow=9.3,SNR=25						
FITZ	**Fitzroy Crossi**	43.81	205	*e*P	P	20 00 53.3	+0.5
	2.3nm,0.4s,mb4.2						
FITZ	**Fitzroy Crossi**	43.81	205	P	P	20 00 53.0	+0.3
	2.2nm,0.3s,mb4.2,baz=148,slow=11,SNR=9.9						
STKA	**Stephens Creek**	54.01	182	P	P	20 02 10.7	0.0
	1.9nm,0.5s,mb4.1,baz=330,slow=7.9,SNR=5.3						
STKA	**Stephens Creek**	54.01	182	*e*P	P	20 02 10.8	+0.2
MKAR	**Makanchi Array**	54.28	312	P	P	20 02 12.2	-0.2
	0.3nm,0.4s,mb3.4,baz=82,slow=9.6,SNR=7.2						
ILAR	**Eielson Array**	61.36	27	P	P	20 03 01.1	-0.5
	0.4nm,0.6s,mb3.4,baz=270,slow=7.1,SNR=4.5						
ZRNK	**Zerenda**	63.02	319	P	P	20 03 12.0	-0.8
	0.7nm,0.5s,mb3.8						
YKA	**Yellowknife Ar**	75.78	28	P	P	20 04 30.7	+0.5
	1.1nm,0.6s,mb3.7,baz=293,slow=5.0,SNR=4.6						
YKA	**Yellowknife Ar**	75.78	28	P	P	20 04 30.7	+0.5
ARCES	**ARCESS Array B**	78.27	341	P	P	20 04 44.2	+0.4
	3.7nm,1.0s,mb4.0,baz=68,slow=6.5,SNR=5.4						
ARCES	**ARCESS Array B**	78.27	341	P	P	20 04 44.2	+0.4
FINES	**FINESS Array B**	82.57	334	P	P	20 05 06.2	-0.5
	0.4nm,0.3s,mb3.6,baz=60,slow=3.2,SNR=9.8						

MEX 25 20:12:34.0±0.9, **15.50N**×**93.20W, h91**^{km}±99^{km}, **MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	1.29	53	*e*P	P	20 12 56.2	-1.4
CCIG				*i* S	S	20 13 13.0	-2.3
SCX	**San Cristobal**	1.35	24	*i* P	P	20 12 57.5	-0.8
SCX				*i* S	S	20 13 14.5	-1.9
CMIG	**Matias Romero**	2.26	315	*i* P	P	20 13 07.2	-3.2
CMIG				*i* S	S	20 13 36.5	-0.9
OXX	**Oaxaca**	3.73	295	*e*P	P	20 13 40.0	+9.4
OXX				*e*S	S	20 14 13.0	-0.6

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*BJI **25** 20:45:42.5, 9.70S×161.30E, h61^{km}, mB4.8, mb4.6, Ms4.5, Msz3.9*

*NEIC **25** 20:45:44.5±0.3, 9.73S×161.28E, mb4.7/13, Error ellipse: s-maj=10.6km s-min=8.6km az=107.0*

*IDC **25** 20:45:44.2±0.8, 9.80S×161.46E, h64^{km}±5^{km}, mb4.2/14, mb1 4.3/14, mb1mx4.2/19, mbtmp4.5/14, MS3.5/9, Ms1 3.5/9, ms1mx3.3/25, Error ellipse: s-maj=15.5km s-min=8.5km az=6.0*

*MOS **25** 20:45:49.4±1.3, 9.53S×160.96E, h104^{km}, mb4.5/8, Error ellipse: s-maj=16.7km s-min=12.4km az=136.4*

ISC 25 20:45:42.9±0.5, **9.73S**±0.07×**161.2E**±0.1, **h61**^{km}, **h61**^{km}±2.6^{km}**:pP-P, n99,** $\sigma 0\overset{s}{.}85$/57, **mb4.6**/23, **3D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	1.26	283	P	P	20 46 09.7	+4.8
	1µm,0.3s,baz=143,slow=4.0,SNR=329						
HNR				S	S	20 46 28.6	+7.6
	2µm,0.3s,baz=82,slow=21,SNR=16						
HNR				LR	LR	20 46 57.9	
	comp=Z,831nm,18.6s,baz=58,slow=48						
HNR	**Honiara**	1.26	283	*e*Pn	P	20 46 09.6	+4.8
HNR				*e*Sn	S	20 46 29.6	+8.5
DZM	**Mont Dzumac**	13.27	158	P	P	20 48 51.7	+1.5
	0.3nm,0.3s,baz=342,slow=19,SNR=5.4						
DZM				LR	LR	20 52 27.2	
	comp=Z,120nm,21.4s,baz=19,slow=31						
PMG	**Port Moresby**	13.84	270	LR	LR	20 54 15.6	
	comp=Z,167nm,19.6s,baz=101,slow=36						
CTA	**Charters Tower**	17.72	233	⇓*i*P	P	20 49 51.7	+4.6
	23nm,0.9s						
CTA	**Charters Tower**	17.72	233	⇓*i*P	P	20 49 51.7	+4.6
CTA				pmax	pmax		
	comp=Z,23nm,0.9s						
CTA	**Charters Tower**	17.72	233	P	P	20 49 51.3	+4.2
	comp=Z,1.0nm,0.3s,baz=53,slow=12,SNR=15						
CTA				LR	LR	20 55 29.6	
	comp=Z,204nm,21.0s,baz=46,slow=33						
CTAO	**Charters Tower**	17.72	233	*e*P	P	20 49 51.3	+4.2
CTAO				pmax	pmax		
	comp=Z,43nm,0.9s						
CTAO	**Charters Tower**	17.72	233	*e*P	P	20 49 51.3	+4.2
	comp=Z,43nm,0.9s						
CTAO				*e*		20 50 03.2	
AFI	**Afiamalu**	26.77	102	LR	LR	20 59 45.2	
	comp=Z,38nm,21.3s,baz=18,slow=32						
WRAB	**Tennant Creek**	27.82	246	*e*P	P	20 51 28.5	-0.3
WRAB				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
WRAB	**Tennant Creek**	27.82	246	*e*P	P	20 51 28.5	-0.3
	comp=Z,11nm,0.9s,mb4.5						
WB2	**Warramunga Arr**	27.82	246	*e*P	P	20 51 28.8	0.0
WRA	**Warramunga Arr**	27.83	246	P	P	20 51 28.9	0.0
	comp=Z,9.7nm,0.7s,mb4.6,baz=75,slow=9.2,SNR=95						
WRA				pP	pP	20 51 46.6	+2.8
	comp=Z,9.4nm,1.1s,baz=69,slow=8.6,SNR=7.4						
STKA	**Stephens Creek**	28.56	217	*e*P	P	20 51 35.5	+0.2
	comp=Z,2.7nm,0.6s,mb4.2						
STKA	**Stephens Creek**	28.56	217	P	P	20 51 35.4	+0.1
	comp=Z,4.0nm,0.7s,mb4.3,baz=40,slow=12,SNR=14						
STKA	**Stephens Creek**	28.56	217	*e*P	P	20 51 35.3	0.0
FITZ	**Fitzroy Crossi**	35.45	252	*e*P	P	20 52 35.5	0.0
	comp=Z,9.3nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	35.45	252	P	P	20 52 35.5	0.0
	comp=Z,8.9nm,0.4s,mb5.0,baz=42,slow=5.7,SNR=25						
MBWA	**Marble Bar**	41.43	249	*e*P	P	20 53 25.5	+0.2
	comp=Z,7.1nm,0.5s,mb4.5						
KLBR	**Kellerberrin**	45.71	235	*e*P	P	20 54 00.6	+0.7
	comp=Z,27nm,1.4s,mb5.0						
NWAO	**Narrogin (SRO)**	46.56	234	*e*P	P	20 54 06.5	-0.1
NWAO				pmax	pmax		
	comp=Z,20nm,1.1s						
NWAO	**Narrogin (SRO)**	46.56	234	P	P	20 54 06.5	-0.1
	comp=Z,4.8nm,0.5s,mb4.7,baz=91,slow=11,SNR=5.3						
NWAO				LR	LR	21 12 20.5	
	comp=Z,106nm,21.6s,baz=176,slow=34						
NWAO	**Narrogin (SRO)**	46.56	234	*e*P	P	20 54 06.5	-0.1
	comp=Z,20nm,1.1s,mb5.0						
KKM	**Kota Kinabalu**	47.47	287	*e*P	P	20 54 13.8	-0.2
PPT	**Papeete**	48.36	105	*e*P	P	20 54 10.9	-10
PPT				*e*S	S	21 01 28.2	+13
PPT				*e*SS	SS	21 04 40.3	-0.5
PPT				*e*LQ		21 06 58.4	
	comp=Z,554nm,39.5s						
PPT				*e*LR	LR	21 08 04.8	
	comp=Z,97nm,30.8s,baz=289						
PPT	**Papeete**	48.36	105	LR	LR	21 11 12.6	
	comp=Z,39nm,18.9s,baz=60,slow=32						
TBI	**Tubuai**	48.97	112	*e*S	S	21 01 41.2	+17
	comp=Z,115nm,44.2s						
TBI				*e*SS	SS	21 04 33.6	-17
	comp=Z,85nm,40.2s						
TBI				*e*LQ		21 06 14.2	
	comp=Z,64nm,34.2s						
TBI				*e*LR	LR	21 08 29.1	
	comp=Z,193nm,34.8s,baz=286						
MJAR	**Matsushiro Arr**	50.85	336	P	P	20 54 38.9	-0.8
	comp=Z,1.3nm,0.6s,mb4.0,baz=166,slow=9.0,SNR=6.6						
MJAR				PcP	PcP	20 55 55.5	-0.4
	comp=Z,0.4nm,0.5s,baz=148,slow=4.5,SNR=4.2						
MJAR	**Matsushiro Arr**	50.85	336	P	P	20 54 38.9	-0.8
MJAR				PcP	PcP	20 55 55.5	-0.4
NACB	**Ninganchiao**	51.29	312	P	P	20 54 44.1	+1.0
MDJ	**Mudanjiang**	61.17	335	P	P	20 55 52.5	-1.1
MDJ				AMB	AMB		
	comp=Z,50nm,3.7s						
CASY	**Casey**	66.03	200	*e*P	P	20 56 23.4	-1.6
	comp=Z,8.1nm,0.9s,mb4.8						
CM31	**Chiang Mai Arr**	67.49	295	P	P	20 56 33.6	-1.4
CMAR	**Chiang Mai Arr**	67.49	295	P	P	20 56 35.4	+0.3
	comp=Z,1.4nm,0.8s,mb4.1,baz=127,slow=5.0,SNR=7.9						
CMAR				pP	pP	20 56 52.8	+1.1
	comp=Z,0.9nm,0.7s,baz=123,slow=5.3,SNR=3.4						
VNDA	**Vanda**	67.78	180	*e*P	P	20 56 34.2	-1.7
VNDA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VNDA	**Vanda**	67.78	180	P	P	20 56 34.8	-1.1
	comp=Z,1.4nm,0.9s,mb4.0,baz=329,slow=6.7,SNR=4.9						
VNDA				LR	LR	21 21 34.4	
	comp=Z,36nm,19.0s,baz=154,slow=32						
VNDA	**Vanda**	67.78	180	*e*P	P	20 56 34.2	-1.7
	comp=Z,2.5nm,1.0s,mb4.2						
MA2	**Magadan**	69.57	354	P	P	20 56 45.5	-1.8
ULN	**Ulaanbaatar**	74.64	326	*e*P	P	20 57 18.3	+0.8
ULN				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
ULN	**Ulaanbaatar**	74.64	326	*e*P	P	20 57 18.3	+0.7
	comp=Z,13nm,0.9s,mb4.9						
GTA	**Gaotai**	74.95	315	*e*P	P	20 57 20.5	+1.0
GTA				AP	pP	20 57 32.0	-4.4
GTA				XP	sP	20 57 38.3	-4.7
SONM	**Songino Array**	75.00	325	P	P	20 57 20.8	+1.2
	comp=Z,9.6nm,0.7s,mb4.9,baz=137,slow=5.5,SNR=73						
SONM				pP	pP	20 57 37.4	+0.9
	comp=Z,3.4nm,0.7s,baz=136,slow=6.0,SNR=6.2						
SONM				LR	LR	21 26 54.6	
	comp=Z,52nm,18.9s,baz=85,slow=33						
YAK	**Yakutsk**	75.63	345	*e*P	P	20 57 22.9	0.0
YAK				*e*	pP	20 57 39.1	-0.7
YAK				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
YAK	**Yakutsk**	75.63	345	*e*P	P	20 57 22.9	0.0
	comp=Z,18nm,0.8s,mb5.1						
YAK				*e*	pP	20 57 39.1	-0.7
BILL	**Bilibino**	77.65	2	*d* *i*P	P	20 57 34.7	+0.6
BILL				*i*	pP	20 57 51.3	+0.2
BILL				*i* *PP	sP	20 58 16.1	+18
BILL				*e*		21 00 34.3	
BILL				*e*S	ScS	21 07 45.3	+1.3
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
BILL	**Bilibino**	77.65	2	P	P	20 57 34.5	+0.3
	comp=Z,15nm,1.5s,mb4.7						
BILL				*e*	pP	20 57 50.6	-0.5
ZAK	**Zakamensk**	78.09	326	*e*P	P	20 57 37.2	+0.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
TLY	**Talaya**	78.58	328	*e*P	P	20 57 39.9	+0.4
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
TLY	**Talaya**	78.58	328	*e*P	P	20 57 39.9	+0.4
	comp=Z,5.9nm,0.8s,mb4.6						
ILAR	**Eielson Array**	83.75	20	P	P	20 58 06.2	-0.2
	comp=Z,1.9nm,0.5s,mb4.5,baz=261,slow=4.4,SNR=16						
ILAR				pP	pP	20 58 23.1	-0.4
	comp=Z,3.0nm,1.1s,baz=248,slow=5.7,SNR=5.5						
MAW	**Mawson**	84.24	202	P	P	20 58 08.7	0.0
	comp=Z,1.5nm,0.6s,mb4.3,baz=45,slow=1.4,SNR=3.8						
MKAR	**Makanchi Array**	89.52	318	P	P	20 58 35.0	+0.1
	comp=Z,3.6nm,0.9s,mb4.7,baz=100,slow=5.7,SNR=24						
MKAR				pP	pP	20 58 52.7	+0.4
	comp=Z,1.7nm,0.8s,baz=100,slow=5.8,SNR=5.9						
MKAR	**Makanchi Array**	89.52	318	P	P	20 58 35.0	+0.1
MKAR				pP	pP	20 58 52.7	+0.4
ZAL	**Zalesovo**	89.90	325	P	P	20 58 36.9	+0.5
	comp=Z,1.1nm,0.3s,mb4.7,baz=352,slow=2.4,SNR=5.9						
NEW	**Newport**	91.69	41	P	P	20 58 45.7	+0.7
	comp=Z,0.9nm,0.4s,mb4.5,baz=236,slow=3.6,SNR=3.8						
YKA	**Yellowknife Ar**	95.88	28	LR	LR	21 35 15.5	
	comp=Z,22nm,20.1s,baz=100,slow=31						
BVAR	**Borovoye Array**	98.17	322	P	P	20 59 13.4	-0.9
	comp=Z,1.4nm,0.8s,mb4.5,baz=124,slow=5.3,SNR=9.7						
ARCES	**ARCESS Array B**	113.90	344	PKiKP		21 04 15.3	
	comp=Z,0.8nm,0.6s,baz=90,slow=1.2,SNR=6.4						
ARCES	**ARCESS Array B**	113.90	344	PKPdf	PKPdf	21 04 15.3	+0.8
FINES	**FINESS Array B**	118.87	337	PKP	PKPdf	21 04 24.7	+0.4
	comp=Z,1.1nm,0.8s,baz=180,slow=1.9,SNR=3.6						
AKASG	**Malin Array Be**	123.28	326	PKP	PKPdf	21 04 33.5	+0.4
	comp=Z,0.3nm,0.3s,baz=59,slow=2.4,SNR=5.3						
GERES	**GERESS Array B**	132.47	331	PKP	PKPdf	21 04 52.1	+1.3
	comp=Z,0.8nm,0.6s,baz=108,slow=3.1,SNR=6.6						
EGRA	**Graus**	143.56	336	PKP	PKPdf	21 05 11.0	0.0
ELAN	**Lanestosa**	144.03	341	PKP	PKPdf	21 05 12.2	+0.5
ESAC	**San Caprasio**	144.27	336	PKP	PKPdf	21 05 13.3	+1.0
EARI	**Arriondas**	144.51	343	PKP	PKPdf	21 05 13.5	+0.9
ERTA	**Horta de San J**	144.58	335	PKP	PKPdf	21 05 13.8	+0.9
EPON	**Pontenova**	145.01	345	PKP	PKPdf	21 05 15.2	+1.7
EMOS	**Mosqueruela**	145.41	335	PKP	PKPdf	21 05 16.6	+2.4
EIBI	**Ibiza**	145.70	332	PKP	PKPdf	21 05 17.5	+2.7
STS	**Santiago**	145.77	347	PKP2	PKPab	21 05 16.9	-1.0
ECAL	**Calabor**	146.20	344	PKP	PKPdf	21 05 18.7	+3.2
ECHE	**Chera**	146.27	335	PKP2	PKPab	21 05 19.0	-0.9
EZAM	**Zamans**	146.50	346	PKP2	PKPab	21 05 19.4	-1.4
EBEN	**Beniarda**	146.68	333	PKP	PKPdf	21 05 19.1	+2.6
PVRL	**Vila Real**	147.08	345	*e*PKPbc	PKPdf	21 05 21.6	+4.5
ETOB	**Tobarra**	147.31	335	PKP	PKPdf	21 05 21.7	+4.2
ESDC	**Sonseca Array**	147.37	338	PKPbc	PKPdf	21 05 22.1	+4.5
	comp=Z,0.7nm,0.5s,baz=10,slow=4.2,SNR=6.7						
ESDC	**Sonseca Array**	147.37	338	PKP	PKPdf	21 05 21.1	+3.5
PVIS	**Viseu**	147.66	344	*e*PKPbc	PKPdf	21 05 23.0	+5.0
EVIA	**Vianos**	147.71	336	PKP2	PKPab	21 05 23.6	-2.0
EMUR	**La Murta**	147.84	333	PKP	PKPdf	21 05 22.7	+4.3
MTE	**Manteigas**	147.85	344	*e*PKPdf	PKPdf	21 05 19.3	+1.0
MTE	**Manteigas**	147.85	344	*e*PKPbc	PKPdf	21 05 23.9	+5.6
PCBR	**Castelo Branco**	148.36	343	*e*PKPbc	PKPdf	21 05 24.4	+5.2
EHUE	**Huescar**	148.45	335	PKP2	PKPab	21 05 26.6	-2.0
EBAN	**Banos Encina**	148.63	337	PKP2	PKPab	21 05 25.5	-3.8

EQES	**Quesada**	**148.66**	**336**	PKP	PKPdf	21 05 24.8	+5.1
PTOM	**Tomar**	**148.82**	**344**	*e*PKPbc	PKPdf	21 05 24.9	+5.0
EADA	**Adamuz**	**148.92**	**338**	PKP	PKPdf	21 05 25.8	+5.7
ENIJ	**Nijar**	**148.99**	**334**	PKP2	PKPab	21 05 26.2	-4.7
EBAD	**Badajoz**	**149.22**	**342**	PKP	PKPdf	21 05 25.8	+5.2
ELUQ	**Luque**	**149.34**	**337**	PKP2	PKPab	21 05 27.4	-4.9
ERON	**Agron**	**149.63**	**336**	PKP	PKPdf	21 05 27.3	+6.0
ELOJ	**Sierra Loja**	**149.65**	**336**	PKP2	PKPab	21 05 27.5	-6.1
EMIN	**Mina Concepcio**	**150.01**	**341**	PKP	PKPdf	21 05 28.3	+6.4
PBEJ	**Beja**	**150.15**	**342**	*e*PKPbc	PKPdf	21 05 29.1	+7.0
ESPR	**Espera**	**150.54**	**339**	PKP	PKPdf	21 05 30.8	+8.1

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*NDI **25** 20:56:58.4±3.1, 33.99N×81.79E, h15^{km}, ML3.4*
*BJI **25** 20:57:02.6, 33.92N×80.78E, h7^{km}, mb4.1, ML3.7*
*IDC **25** 20:57:02.7±1.2, 33.93N×80.93E, mb3.9/9, mb1 4.1/10, mb1mx3.9/21, mbtmp3.9/10, ML3.5/1, Error ellipse: s-maj=54.1km s-min=16.5km az=59.0*
*NEIC **25** 20:57:03.9±0.6, 33.87N×80.81E, h10^{km}, mb4.0/6, Error ellipse: s-maj=17.4km s-min=10.4km az=67.0*
*MOS **25** 20:57:05.8±1.6, 33.98N×80.68E, h33^{km}, mb4.2/5, Error ellipse: s-maj=28.3km s-min=14.0km az=93.8*
ISC 25 20:57:02.4±0.5**, 33.93N**±0.05×**80.86E**±0.07**, h10**^{km}**, n34, σ1§21**/34**, mb3.9**/13**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDNR	**Sundarnagar**	**4.07**	**235**	*e*P	**Pn**	**20 58 11.0**	**+4.8**
SMLA	**Simla**	**4.18**	**229**	*i* P	**Pn**	**20 58 09.1**	**+1.4**
SMLA				*i* x	**Sn**	**20 58 56.5**	**-0.8**
DDI	**Dehra Dun**	**4.31**	**214**	*e*x	x	20 58 25.0	
BHK	**Bhakra**	**4.50**	**237**	*e*S	**Sn**	**20 59 11.8**	**+6.4**
KKR	**Kurukshetra**	**5.23**	**222**	*e*S	**Sn**	**20 59 25.9**	**+2.1**
KKR				AML	AML	20 59 51.4	
	comp=Z,263nm,0.7s						
KHET	**Khetri**	**7.27**	**218**	*e*S	**Sn**	**21 00 13.7**	**-0.9**
KHET				AML	AML	21 00 32.6	
	comp=N,9.0nm,0.3s						
KHET				AML	AML	21 00 33.8	
	comp=E,14nm,0.3s						
WMQ	**Urumqi**	**11.22**	**26**	*e*P	**P**	**20 59 50.0**	**+4.2**
WMQ				AP		20 59 55.0	
MKAR	**Makanchi Array**	**12.90**	**4**	Pn	**P**	**21 00 05.5**	**-3.0**
	comp=E,0.3nm,0.3s,baz=188,slow=13,SNR=13						
MKAR	**Makanchi Array**	**12.90**	**4**	Pn	**P**	**21 00 05.5**	**-3.0**
GTA	**Gaotai**	**16.16**	**65**	*e*P	**P**	**21 00 57.5**	**+6.4**
GTA				AP		21 01 00.5	
GTA				XP		21 01 03.0	
ZAL	**Zalesovo**	**20.20**	**7**	P	**P**	**21 01 39.4**	**-0.5**
	comp=E,0.8nm,0.3s,baz=277,slow=12						
ZAL	**Zalesovo**	**20.20**	**7**	P	**P**	**21 01 39.4**	**-0.5**
BVAR	**Borovoye Array**	**20.50**	**342**	P	**P**	**21 01 42.6**	**-0.5**
	comp=E,2.2nm,0.6s,baz=157,slow=11,SNR=12						
ZRNK	**Zerenda**	**20.82**	**340**	*e*P	**P**	**21 01 45.6**	**-0.8**
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZRNK	**Zerenda**	**20.82**	**340**	*e*P	**P**	**21 01 45.6**	**-0.7**
	comp=Z,1.0nm,0.6s						
KMI	**Kunming**	**20.93**	**109**	P	**P**	**21 01 48.0**	**+0.3**
CM31	**Chiang Mai Arr**	**22.32**	**129**	P	**P**	**21 01 59.9**	**-1.8**
	comp=Z,4.3nm,0.8s,mb3.9						
CMAR	**Chiang Mai Arr**	**22.32**	**129**	P	**P**	**21 02 02.4**	**+0.6**
	comp=Z,1.8nm,0.6s,mb3.7,baz=293,slow=12,SNR=12						
SONM	**Songino Array**	**23.65**	**46**	P	**P**	**21 02 18.0**	**+3.5**
	comp=Z,0.9nm,0.7s,mb3.3,baz=236,slow=11,SNR=6.9						
ULN	**Ulaanbaatar**	**24.06**	**47**	*e*P	**P**	**21 02 20.9**	**+2.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
ULN	**Ulaanbaatar**	**24.06**	**47**	*e*P	**P**	**21 02 20.9**	**+2.4**
	comp=Z,2.1nm,0.8s,mb3.6						
FINES	**FINESS Array B**	**44.14**	**326**	P	**P**	**21 05 12.1**	**-0.4**
	comp=Z,1.1nm,0.6s,mb3.8,baz=117,slow=8.5,SNR=7.6						
NB2	**NORSAR Subarra**	**51.24**	**324**	P	**P**	**21 06 09.1**	**+1.2**
	comp=Z,1.0nm,0.6s,mb3.9,baz=88,slow=7.4						
NOA	**NORSAR Array B**	**51.24**	**324**	P	**P**	**21 06 09.4**	**+1.5**
	comp=Z,1.3nm,0.8s,mb3.9,baz=87,slow=7.4,SNR=4.0						
FITZ	**Fitzroy Crossi**	**67.06**	**133**	P	**P**	**21 07 57.4**	**-0.8**
	comp=Z,6.2nm,0.8s,mb4.7,baz=353,slow=8.5,SNR=4.9						
LSZ	**Lusaka**	**70.05**	**235**	P	**P**	**21 08 16.4**	**-0.4**
LSZ				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
LSZ	**Lusaka**	**70.05**	**235**	P	**P**	**21 08 16.4**	**-0.4**
	comp=Z,2.2nm,1.0s,mb4.0						
RES	**Resolute Bay**	**71.63**	**359**	*e*P	**P**	**21 08 18.6**	**-6.8**
RES				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
RES	**Resolute Bay**	**71.63**	**359**	*e*P	**P**	**21 08 18.6**	**-6.8**
	comp=Z,6.6nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	**73.91**	**128**	P	**P**	**21 08 39.2**	**-0.5**
	comp=Z,1.6nm,0.7s,mb4.1,baz=323,slow=5.6,SNR=20						
ILAR	**Eielson Array**	**74.79**	**19**	P	**P**	**21 08 45.2**	**+1.3**
	comp=Z,0.6nm,0.9s,mb3.5,baz=313,slow=4.2,SNR=5.1						
BOSA	**Boshof**	**81.47**	**227**	P	**P**	**21 09 20.7**	**-0.6**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BOSA	**Boshof**	**81.47**	**227**	P	**P**	**21 09 20.7**	**-0.6**
	comp=Z,1.6nm,0.9s,mb4.0						
YKA	**Yellowknife Ar**	**83.11**	**7**	P	**P**	**21 09 28.8**	**-0.3**
	comp=Z,0.9nm,0.6s,mb4.0,baz=344,slow=5.2,SNR=5.7						

IDC 25 21:39:34.2±11.0**, 5.30N×94.88E, h193**^{km}±99^{km}**, mb3.3**/5**, mb1 3.5**/6**, mb1mx3.2**/19**, mbtmp3.8**/6**, Error ellipse: s-maj=79.4km s-min=18.0km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**13.67**	**17**	P	P	21 42 41.1	-0.2
	0.2nm,0.3s,baz=216,slow=12,SNR=9.0						
MKAR	**Makanchi Array**	**42.74**	**347**	P	P	21 47 11.4	-2.6
	1.5nm,0.8s,baz=162,slow=7.9,SNR=12						
SONM	**Songino Array**	**43.51**	**11**	P	P	21 47 18.9	-1.3
	0.3nm,0.4s,baz=195,slow=8.3,SNR=6.3						
WRA	**Warramunga Arr**	**46.20**	**124**	P	P	21 47 40.0	-1.8
	1.6nm,0.6s,baz=300,slow=9.6,SNR=21						
WB2	**Warramunga Arr**	**46.21**	**124**	*e*P	P	21 47 40.0	-1.9
ZAL	**Zalesovo**	**49.18**	**352**	P	P	21 48 03.0	-1.4
	0.8nm,0.3s,baz=154,slow=12,SNR=3.2						
GERES	**GERESS Array B**	**80.23**	**319**	P	P	21 51 24.0	-0.7
	0.4nm,0.5s,baz=90,slow=5.3,SNR=6.2						

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*NEIC **25** 21:50:21.8, 47.26N×0.37W, h3^{km}, ML2.5(LDG), After LDG.*
*CSEM **25** 21:50:22.1±0.1, 47.26N×0.37W, h8^{km}, ML2.6/20, Error ellipse: s-maj=1.2km s-min=1.0km az=55.0*
*STR **25** 21:50:23.2±0.5, 47.19N×0.46W, h5^{km}±1^{km}, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LDG 25 21:50:21.8±0.0**, 47.26N×0.37W, h3**^{km}**, Md3.1**/1**, Ml2.5**/24**, Error ellipse: s-maj=0.7km s-min=0.6km az=49.0, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCHF	**La Chataignera**	**0.65**	**203**	Pg	Pg	21 50 34.3	-0.4
LCHF				Sg	Sg	21 50 42.0	-1.3
MFF	**Saint Martin d**	**0.68**	**167**	*e*Pg	Pg	21 50 34.3	-1.1
MFF				*e*Sg	Sg	21 50 43.6	-0.8
MFF				*e*Sn	Sn	21 50 47.0	-2.2
	9.4nm,0.2s						
LRYF	**La Roche-sur-Y**	**1.06**	**230**	Pg	Pg	21 50 41.0	-1.9
LRYF				Sg	Sg	21 50 55.1	-1.9
CHIF	**Chize**	**1.13**	**181**	Pg	Pg	21 50 43.4	-1.0
CHIF				Sg	Sg	21 50 57.6	-1.9
GRR	**Gorron**	**1.17**	**344**	*e*Pg	Pg	21 50 43.8	-1.4
GRR				*e*Sg	Sg	21 50 58.8	-2.1
	13nm,0.2s						
LDF	**La Druitiere**	**1.34**	**7**	*e*Pn	Pn	21 50 45.6	-1.9
LDF				*e*Pg	Pg	21 50 46.8	-1.8
LDF				*e*Sn	Sn	21 51 02.9	-3.1
LDF				*e*Sg	Sg	21 51 04.2	-2.3
	12nm,0.2s						
OLEF	**Ile d’Oleron**	**1.48**	**207**	Pg	Pg	21 50 49.3	-2.1
OLEF				Sg	Sg	21 51 08.4	-2.7
FLN	**La Foliniere**	**1.50**	**357**	*e*Pn	Pn	21 50 47.8	-1.9
FLN				*e*Pg	Pg	21 50 49.8	-2.0
	baz=174						
FLN				*e*Sn	Sn	21 51 06.9	-3.2
FLN				*e*Sg	Sg	21 51 09.1	-2.7
	7.8nm,0.2s						
FLN	**La Foliniere**	**1.50**	**357**	*e*Pg	Pg	21 50 49.8	-2.0
FLN				*e*Sn	Sn	21 51 06.9	-3.2
FLN				*e*Sg	Sg	21 51 09.1	-2.7
	3.9nm,0.2s						
SGMF	**Saint Gilles**	**1.78**	**305**	*e*Pn	Pn	21 50 51.7	-2.0
SGMF				*e*PKP2	Pn	21 50 53.8	+0.1
SGMF				*e*Sn	Sn	21 51 13.3	-3.7
SGMF				*e*Sg	Sg	21 51 17.7	-3.3
	5.8nm,0.3s						
SGMF	**Saint Gilles**	**1.78**	**305**	*e*Pn	Pn	21 50 51.7	-2.0
SGMF				*e*Sn	Sn	21 51 13.3	-3.7
SGMF				*e*Sg	Sg	21 51 17.7	-3.3
	2.9nm,0.3s						
QUIF	**Quistinic**	**2.00**	**290**	*e*Pn	Pn	21 50 54.8	-2.1
QUIF				*e*Pg	Pg	21 50 58.6	-3.1
QUIF				*e*Sn	Sn	21 51 18.7	-4.0
	7.3nm,0.2s						
QUIF	**Quistinic**	**2.00**	**290**	*e*Pn	Pn	21 50 54.8	-2.1
QUIF				*e*Sn	Sn	21 51 18.7	-4.0
	3.7nm,0.2s						
TCF	**Toulx Ste Croi**	**2.02**	**118**	*e*Pn	Pn	21 50 55.0	-2.2
TCF				*e*PKP2	Pn	21 50 57.4	+0.2
TCF				*e*Pg	Pg	21 50 59.9	-2.3
TCF				*e*Sg	Sg	21 51 25.9	-3.3
	6.1nm,0.2s						
HYF	**Humbligny**	**2.05**	**89**	*e*Pn	Pn	21 50 55.5	-2.1
HYF				*e*Pg	Pg	21 50 59.9	-2.9
HYF				*e*Sn	Sn	21 51 19.9	-4.1
HYF				*e*Sg	Sg	21 51 26.3	-3.8
ROSF	**Rostrenen**	**2.23**	**300**	*e*Pn	Pn	21 50 57.9	-2.3
ROSF				*e*Pg	Pg	21 51 02.3	-4.0
ROSF				*e*Sn	Sn	21 51 24.1	-4.5
ROSF				*e*Sg	Sg	21 51 30.3	-5.8
	4.4nm,0.3s						
ROSF	**Rostrenen**	**2.23**	**300**	*e*Pn	Pn	21 50 57.9	-2.3
ROSF				*e*Sn	Sn	21 51 24.1	-4.5
ROSF				*e*Sg	Sg	21 51 30.3	-5.8
	2.2nm,0.3s						
BGF	**Bois d’Agland**	**2.32**	**107**	*e*Pn	Pn	21 50 59.0	-2.4
BGF				*e*Pg	Pg	21 51 04.7	-3.3
BGF				*e*Sn	Sn	21 51 25.0	-5.8
BGF				*e*Sg	Sg	21 51 34.4	-4.5
	13nm,0.3s						
RJF	**Les Rejaudoux**	**2.36**	**146**	*e*Pn	Pn	21 50 59.7	-2.3
RJF				*e*PKP2	Pn	21 51 02.1	+0.1
RJF				*e*Pg	Pg	21 51 05.5	-3.3
RJF				*e*Sn	Sn	21 51 27.2	-4.6
RJF				*e*Sg	Sg	21 51 35.3	-5.0
	12nm,0.3s						
LFF	**La Frestale**	**2.45**	**161**	*e*Pn	Pn	21 51 00.9	-2.4
LFF				*e*Pg	Pg	21 51 07.4	-3.3
LFF				*e*Sn	Sn	21 51 29.2	-4.9
LFF				*e*Sg	Sg	21 51 38.2	-5.2
	12nm,0.4s						
SSF	**Saint Saulge**	**2.65**	**93**	*e*Pn	Pn	21 51 03.8	-2.4
SSF				*e*Pg	Pg	21 51 10.6	-4.2
SSF				*e*Sn	Sn	21 51 34.2	-5.1
SSF				*e*Sg	Sg	21 51 44.6	-5.6
	1.9nm,0.2s						
SSF	**Saint Saulge**	**2.65**	**93**	*e*Pg	Pg	21 51 10.6	-4.2
SSF				*e*Sn	Sn	21 51 34.2	-5.1
SSF				*e*Sg	Sg	21 51 44.6	-5.6
	0.9nm,0.2s						
LOR	**Lormes**	**2.88**	**88**	*e*Pn	Pn	21 51 06.6	-2.9
LOR				*e*Pg	Pg	21 51 15.5	-3.8
	baz=271						
LOR				*e*Sn	Sn	21 51 40.0	-5.1
LOR				*e*Sg	Sg	21 51 52.1	-5.6
	2.1nm,0.2s						
LOR	**Lormes**	**2.88**	**88**	*e*Pg	Pg	21 51 15.5	-3.8
LOR				*e*Sn	Sn	21 51 40.0	-5.1
LOR				*e*Sg	Sg	21 51 52.1	-5.6
	1.0nm,0.2s						
CAF	**Calviac**	**2.89**	**143**	*e*Pn	Pn	21 51 06.1	-3.5
CAF				*e*Pg	Pg	21 51 15.3	-4.1
CAF				*e*Sn	Sn	21 51 40.2	-5.1
CAF				*e*Sg	Sg	21 51 52.6	-5.3
	14nm,0.5s						
SMF	**Signal de Mont**	**2.95**	**101**	*e*Pn	Pn	21 51 07.7	-2.8
SMF				*e*Pg	Pg	21 51 17.0	-3.7
SMF				*e*Sn	Sn	21 51 41.6	-5.3
SMF				*e*Sg	Sg	21 51 53.8	-6.3
	1.5nm,0.2s						
MEZF	**Maizieres J’vi**	**3.85**	**69**	*e*Pn	Pn	21 51 19.7	-3.6
MEZF				*e*Sg	Sg	21 52 22.6	-7.5
	2.6nm,0.4s						
BAIF	**Baives**	**4.13**	**46**	*e*Pn	Pn	21 51 24.9	-2.3
SJPF	**Ste Jean**	**4.19**	**189**	*e*Pn	Pn	21 51 24.9	-3.2
SJPF				*e*Sg	Sg	21 52 33.3	-8.1
	0.6nm,0.2s						
VIVF	**Saint-Julien-l**	**4.26**	**123**	*e*Pn	Pn	21 51 25.4	-3.6
VIVF				*e*Sg	Sg	21 52 35.3	-8.2
	2.4nm,0.6s						
EPF	**Esparros**	**4.26**	**173**	*e*Pn	Pn	21 51 25.8	-3.3
EPF				*e*Sg	Sg	21 52 34.8	-8.9
	1.7nm,0.2s						
MTLF	**Montolieu**	**4.33**	**154**	*e*Pn	Pn	21 51 26.4	-3.6
MTLF				*e*Sn	Sn	21 52 10.7	-11
MTLF				*e*Sg	Sg	21 52 37.8	-8.0
	1.6nm,0.4s						
LASF	**Ste Croix**	**4.35**	**136**	*e*Pn	Pn	21 51 26.8	-3.6
LASF				*e*Sg	Sg	21 52 38.5	-8.2
	1.8nm,0.3s						
ETSF	**Etsaut**	**4.37**	**182**	*e*Pn	Pn	21 51 27.0	-3.6
ETSF				*e*Sg	Sg	21 52 38.5	-8.7
	1.5nm,0.4s						
CABF	**La Chapelle**	**4.47**	**96**	*e*Sg	Sg	21 52 40.9	-10
	6.6nm,1.1s						
HAU	**Haudompre**	**4.60**	**78**	*e*Pn	Pn	21 51 30.3	-3.6
HINF	**Hinteralfeld**	**4.92**	**81**	*e*Sg	Sg	21 52 56.4	-9.4
	1.8nm,0.4s						

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*LDG **25** 22:03:03.7±0.7, 20.75S×169.65E, h10^{km}, Mb5.0/1, Ms4.0/6, Error ellipse: s-maj=82.3km s-min=3.7km az=147.0*
*IDC **25** 22:03:03.5±0.6, 20.58S×169.43E, mb4.4/14, mb1 4.5/15, mb1mx4.5/19, mbtmp4.4/15, ML4.1/1, MS3.8/16, Ms1 3.8/16, ms1mx3.7/27, Error ellipse: s-maj=23.8km s-min=16.1km az=141.0*
*MOS **25** 22:03:13.3±3.1, 20.60S×169.28E, h65^{km}, mb5.0/15, Error ellipse: s-maj=12.6km s-min=11.1km az=12.3*
*NEIC **25** 22:03:13.2±1.9, 20.61S×169.33E, h74^{km}±16^{km}, mb4.8/19, Error ellipse: s-maj=8.0km s-min=7.1km az=171.0*
*BJI **25** 22:03:15.7, 19.89S×168.97E, h74^{km}, mB5.0, mb4.7, Ms5.3, Msz4.6*
ISC 25 22:03:07.1±1.7**, 20.66S**±0.06×**169.32E**±0.06**, h34**^{km}±15^{km}**, n206, σ1§03**/83**, mb4.7**/32**, MS3.9**/14**, 30C-2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.03**	**242**	*e*P	**P**	**22 03 53.3**	**-0.5**
DZM				*e*S	**S**	**22 04 28.4**	**-1.0**
DZM	**Mont Dzumac**	**3.03**	**242**	Pn	**P**	**22 03 53.5**	**-0.3**
	20nm,0.3s,baz=66,slow=19,SNR=1485						
DZM				Sn	**S**	**22 04 29.6**	**+0.3**
	91nm,0.3s,baz=340,slow=23,SNR=15						
DZM				LR	LR	22 04 45.8	
	comp=Z,782nm,20.9s,baz=10,slow=32						
DZM	**Mont Dzumac**	**3.03**	**242**	*e*P	**P**	**22 03 53.3**	**-0.5**
DZM				*e*S	**S**	**22 04 28.4**	**-1.0**
HNR	**Honiara**	**14.36**	**320**	P	**P**	**22 06 40.5**	**+10**
HNR				pmax	pmax		
	comp=Z,45nm,0.8s						
HNR	**Honiara**	**14.36**	**320**	LR	LR	22 11 00.4	
	comp=Z,218nm,20.7s,baz=331,slow=33						
HNR	**Honiara**	**14.36**	**320**	P	**P**	**22 06 40.5**	**+10**
	comp=Z,45nm,0.8s						
URZ	**Urewera**	**18.80**	**161**	P	**P**	**22 07 27.7**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=340,slow=7.7,SNR=5.7						
URZ				LR	LR	22 13 23.6	
	comp=Z,390nm,18.7s,baz=35,slow=33						
AFI	**Afiamalu**	**19.25**	**73**	*e*P	**P**	**22 07 30.3**	**-1.2**
AFI				pmax	pmax		
	comp=Z,79nm,1.0s						
AFI	**Afiamalu**	**19.25**	**73**	*e*P	**P**	**22 07 30.3**	**-1.2**
	comp=Z,79nm,1.0s						
CTA	**Charters Tower**	**21.63**	**267**	*e*P	**P**	**22 08 04.0**	**+7.6**
	comp=Z,5.8nm,0.6s,mb4.2						
CTA	**Charters Tower**	**21.63**	**267**	P	**P**	**22 07 58.5**	**+2.1**
	comp=Z,6.0nm,1.0s,mb4.0,baz=115,slow=16,SNR=3.0						
CTA				LR	LR	22 15 32.6	
	comp=Z,363nm,21.3s,MS3.8,baz=88,slow=34						
CTAO	**Charters Tower**	**21.63**	**267**	*e*P	**P**	**22 07 59.1**	**+2.7**
CTAO				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.5						
CTAO	**Charters Tower**	**21.63**	**267**	*e*P	**P**	**22 07 59.0**	**+2.6**
	comp=Z,21nm,1.1s,mb4.5						
RPZ	**Rata Peaks**	**23.04**	**177**	LR	LR	22 15 50.3	
	comp=Z,425nm,20.8s,MS3.9,baz=104,slow=33						
PMG	**Port Moresby**	**24.11**	**294**	P	**P**	**22 08 22.6**	**+1.6**
PMG				pmax	pmax		
	comp=Z,27nm,1.0s						
PMG	**Port Moresby**	**24.11**	**294**	P	**P**	**22 08 22.4**	**+1.5**
	comp=Z,11nm,0.8s,mb4.3,baz=148,slow=15,SNR=3.3						
PMG				LR	LR	22 16 51.0	
	comp=Z,186nm,18.9s,MS3.6,baz=238,slow=34						
PMG	**Port Moresby**	**24.11**	**294**	P	**P**	**22 08 22.6**	**+1.6**
	comp=Z,27nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**27.18**	**240**	*e*P	**P**	**22 08 50.0**	**+0.3**
	comp=Z,6.0nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**27.18**	**240**	P	**P**	**22 08 50.8**	**+1.2**
	comp=Z,2.1nm,0.5s,mb3.9,baz=96,slow=10.0,SNR=12						
STKA				PcP	PcP	22 12 09.6	-0.2
	comp=Z,2.7nm,0.8s,baz=48,slow=11,SNR=3.6						
STKA				LR	LR	22 19 11.9	
	comp=Z,356nm,20.1s,MS3.9,baz=287,slow=36						
RAR	**Rarotonga**	**28.85**	**97**	*e*P	**P**	**22 09 05.9**	**+1.1**
RAR				pmax	pmax		
	comp=Z,43nm,1.2s						
RAR	**Rarotonga**	**28.85**	**97**	*e*P	**P**	**22 09 05.9**	**+1.1**
	comp=Z,43nm,1.2s,mb5.0						
WB2	**Warramunga Arr**	**32.77**	**265**	*e*P	**P**	**22 09 39.0**	**-0.4**
WRAB	**Tennant Creek**	**32.77**	**265**	*e*P	**P**	**22 09 39.0**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,46nm,1.5s,mb5.2						
WRAB	**Tennant Creek**	**32.77**	**265**	*e*P	**P**	**22 09 39.0**	**-0.4**
	comp=Z,46nm,1.5s,mb5.2						
WRA	**Warramunga Arr**	**32.78**	**265**	P	**P**	**22 09 38.6**	**-0.9**
	comp=Z,1.1nm,0.4s,mb4.1,baz=92,slow=8.5,SNR=53						
WRA				PcP	PcP	22 12 23.7	-0.6
	comp=Z,1.4nm,0.7s,baz=96,slow=3.2,SNR=5.9						
WRA				ScP		22 16 11.4	
	comp=Z,0.3nm,0.8s,baz=101,slow=3.0,SNR=4.5						
PPT	**Papeete**	**38.89**	**93**	LR	LR	22 21 31.7	
	comp=Z,100nm,20.1s,MS3.6,baz=235,slow=29						
MBWA	**Marble Bar**	**46.17**	**260**	*e*P	**P**	**22 11 30.9**	**+0.2**
KLBR	**Kellerberrin**	**47.19**	**246**	*e*P	**P**	**22 11 37.7**	**-0.9**
	comp=Z,23nm,0.9s,mb5.1						
NWAO	**Narrogin (SRO)**	**47.65**	**244**	*e*P	**P**	**22 11 42.0**	**-0.2**
RKT	**Rikitea**	**51.49**	**104**	*e*P	Px	22 11 42.0	
	comp=Z,600nm,37.8s						
RKT				*e*S	**S**	**22 19 26.3**	**-1.8**
	comp=Z,6μm,37.8s						
RKT				*e*LR	LR	22 26 26.1	
	comp=Z,248nm,35.5s						
VNDA	**Vanda**	**57.03**	**182**	*e*P	**P**	**22 12 50.5**	**-1.1**
VNDA				pmax	pmax		
	comp=Z,11nm,1.6s						
VNDA	**Vanda**	**57.03**	**182**	P	**P**	**22 12 50.6**	**-1.0**
	comp=Z,0.7nm,0.5s,mb3.9,baz=5.2,slow=6.5,SNR=4.5						
VNDA				LR	LR	22 34 23.2	
	comp=Z,71nm,18.0s,MS3.8,baz=27,slow=33						
VNDA	**Vanda**	**57.03**	**182**	*e*P	**P**	**22 12 50.5**	**-1.2**
	comp=Z,11nm,1.6s,mb4.6						
VNDA				*e*	pP	22 13 01.1	-0.8
SBA	**Scott Base**	**57.26**	**181**	*e*P	**P**	**22 12 53.1**	**-0.2**
SBA				*e*		22 13 06.5	
SBA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
SBA	**Scott Base**	**57.26**	**181**	*e*P	**P**	**22 12 53.0**	**-0.2**
	comp=Z,20nm,1.0s,mb5.1						
SBA				*e*		22 13 06.5	
CASY	**Casey**	**58.87**	**204**	*e*P	**P**	**22 13 03.0**	**-1.7**
MJAR	**Matsushiro Arr**	**64.03**	**332**	P	**P**	**22 13 38.8**	**-1.1**
	comp=Z,7.2nm,0.8s,mb4.7,baz=169,slow=8.8,SNR=24						
MAJO	**Matsushiro**	**64.03**	**332**	*e*P	**P**	**22 13 38.7**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
MAJO	**Matsushiro**	**64.03**	**332**	*e*P	**P**	**22 13 38.7**	**-1.2**
	comp=Z,9.6nm,0.8s,mb4.9						
MAT	**Matsushiro**	**64.03**	**332**	*e*P	**P**	**22 13 39.0**	**-0.8**
MAT				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
MAT	**Matsushiro**	**64.03**	**332**	*e*P	**P**	**22 13 39.0**	**-0.8**
	comp=Z,8.2nm,0.8s,mb4.8						
MAT	**Matsushiro**	**64.03**	**332**	P	**P**	**22 13 38.6**	**-1.2**
QSPA	**South Pole Qui**	**69.41**	**180**	⇑*i*P	**P**	**22 14 13.3**	**+0.2**
	comp=Z,36nm,0.9s,mb5.3						
KS15	**Wonju Array Si**	**69.72**	**326**	P	**P**	**22 14 17.3**	**+1.5**
YSS	**Yuzh-Sakhalins**	**71.44**	**341**	⇑*e*P	**P**	**22 14 26.2**	**+0.3**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
YSS	**Yuzh-Sakhalins**	**71.44**	**341**	*e*P	**P**	**22 14 26.5**	**+0.5**
	comp=Z,16nm,0.8s,mb5.0						
FX1	**Attu Island--F**	**73.30**	**2**	P	**P**	**22 14 36.2**	**-0.6**
	comp=Z,22nm,0.5s,mb5.4,baz=207,slow=4.5,SNR=5.5						
MDJ	**Mudanjiang**	**74.40**	**332**	P	**P**	**22 14 43.8**	**+0.4**
MDJ				PCP	PcP	22 14 53.3	-5.0
MDJ				AP	pP	22 15 04.0	+10
MDJ				XP	sP	22 15 12.0	+14
MDJ				PP	PP	22 17 31.5	-0.2
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,50nm,4.5s						
MDJ				LR	LR		
	comp=Z,30nm,20.8s,MS3.6						
MDJ	**Mudanjiang**	**74.40**	**332**	*e*P	**P**	**22 14 43.6**	**+0.2**
MDJ				*e*	pP	22 14 53.1	-0.7
CN2	**Changchun**	**75.70**	**329**	⇑P	**P**	**22 14 51.3**	**+0.4**
CN2				*e*AP	pP	22 15 12.0	+11
CN2				*e*S	S	22 24 27.0	-1.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
NIKO	**Nikolski**	**75.73**	**13**	*e*P	**P**	**22 14 48.3**	**-2.5**
NIKO				*e*		22 15 28.1	
MAW	**Mawson**	**77.16**	**202**	P	**P**	**22 14 59.5**	**+0.8**
	comp=Z,3.1nm,0.9s,mb4.2,baz=127,slow=8.0,SNR=11						
MAW				LR	LR	22 44 55.3	
	comp=Z,94nm,21.2s,MS4.1,baz=251,slow=32						
KMI	**Kunming**	**79.08**	**302**	P	**P**	**22 15 11.0**	**+0.9**
XAN	**Xi’an**	**79.12**	**313**	P	**P**	**22 15 10.8**	**+0.6**
SYO	**Syowa Base**	**83.60**	**196**	⇑P	**P**	**22 15 31.5**	**-1.3**
SYO	**Syowa Base**	**83.60**	**196**	⇓PcP	PcP	22 15 36.5	-0.9
CLNS	**Chul’man**	**85.72**	**337**	*e*P	**P**	**22 15 37.9**	**-5.7**
CLNS				pmax	pmax		
	comp=N,15nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.6						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.7s						
SNAA	**Sanae**	**87.76**	**182**	*e*P	**P**	**22 15 52.9**	**-0.3**
SNAA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SNAA	**Sanae**	**87.76**	**182**	LR	LR	22 55 16.6	
	comp=Z,45nm,20.7s,MS3.9,baz=24,slow=36						
SNAA	**Sanae**	**87.76**	**182**	*e*P	**P**	**22 15 52.9**	**-0.3**
	comp=Z,7.8nm,0.9s,mb4.9						
CMB	**Columbia Colle**	**88.04**	**48**	*e*P	**P**	**22 15 55.5**	**+0.2**
CMB				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
CMB	**Columbia Colle**	**88.04**	**48**	*e*P	**P**	**22 15 55.5**	**+0.1**
	comp=Z,2.4nm,0.8s,mb4.5						
GTA	**Gaotai**	**88.15**	**313**	*e*P	**P**	**22 15 57.3**	**+1.5**
YBH	**Yreka Blue Hor**	**88.26**	**44**	*e*P	**P**	**22 15 54.8**	**-1.5**
YBH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YBH	**Yreka Blue Hor**	**88.26**	**44**	P	**P**	**22 15 57.1**	**+0.8**
	comp=Z,2.4nm,0.5s,mb4.7,baz=115,slow=2.7,SNR=8.2						
YBH	**Yreka Blue Hor**	**88.26**	**44**	*e*P	**P**	**22 15 54.8**	**-1.5**
	comp=Z,2.5nm,0.7s,mb4.5						
VNA3	**Neumayer Olymp**	**88.34**	**180**	⇑*i*	**P**	**22 15 56.9**	**+0.9**
VNA3	**Neumayer Olymp**	**88.34**	**180**	⇑*i*	**P**	**22 16 02.8**	**+6.8**
VNA3	**Neumayer Olymp**	**88.34**	**180**	⇑*i*	**P**	**22 16 10.0**	**+14**
SONM	**Songino Array**	**88.39**	**323**	P	**P**	**22 15 57.1**	**+0.3**
	comp=Z,3.8nm,0.9s,mb4.6,baz=142,slow=5.3,SNR=23						
BILL	**Bilibino**	**88.46**	**359**	*e*P	**P**	**22 15 55.7**	**-0.9**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
BILL	**Bilibino**	**88.46**	**359**	*e*P	**P**	**22 15 55.7**	**-1.0**
	comp=Z,3.7nm,0.7s,mb4.7						
HUMO	**Hull Mountain**	**88.53**	**43**	*e*P	**P**	**22 15 57.9**	**+0.3**
	comp=Z,4.9nm,0.8s,mb4.9						
VNA2	**Neumayer--Watz**	**88.64**	**181**	⇑*i*	**P**	**22 15 58.6**	**+1.2**
VNA2	**Neumayer--Watz**	**88.64**	**181**	⇑*i*	**P**	**22 16 03.0**	**+5.6**
VNA2	**Neumayer--Watz**	**88.64**	**181**	⇑*i*	**P**	**22 16 11.7**	**+14**
VNA1	**Neumayer--Stat**	**88.93**	**181**		**P**	**22 15 59.9**	**+1.1**

NVAR	**Mina Array Bea**	**89.68**	**48**	P	**P**	**22 16 03.4**	**+0.2**
	comp=Z,2.6nm,0.7s,mb4.7,baz=220,slow=7.1,SNR=12						
NVAR				LR	LR	22 47 51.1	
	comp=Z,36nm,18.9s,MS3.8,baz=180,slow=30						
MNV	**Mina**	**89.78**	**49**	*e*P	**P**	**22 16 04.0**	**+0.4**
MNV				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.9						
MNV	**Mina**	**89.78**	**49**	*e*P	**P**	**22 16 04.0**	**+0.4**
	comp=Z,4.8nm,0.8s,mb4.9						
USHA	**Ushuaia**	**90.18**	**151**	LR	LR	22 46 25.9	
	comp=Z,76nm,19.3s,MS4.1,baz=223,slow=29						
BBB	**Bella Bella**	**90.61**	**33**	LR	LR	22 48 36.6	
	comp=Z,66nm,19.4s,MS4.1,baz=326,slow=30						
ZAK	**Zakamensk**	**91.48**	**324**	*e*P	**P**	**22 16 11.3**	**0.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.5						
ILAR	**Eielson Array**	**91.55**	**17**	P	**P**	**22 16 09.3**	**-1.9**
	comp=Z,1.1nm,0.7s,mb4.3,baz=239,slow=5.3,SNR=8.9						
ELK	**Elko**	**92.81**	**47**	P	**P**	**22 16 19.1**	**+1.5**
	comp=Z,1.1nm,0.8s,mb4.3,baz=243,slow=5.2,SNR=4.2						
DLBC	**Dease Lake**	**93.26**	**27**	P	**P**	**22 16 19.2**	**+0.1**
	comp=Z,3.1nm,1.0s,mb4.7,baz=226,slow=13,SNR=4.1						
NEW	**Newport**	**94.81**	**40**	LR	LR	22 53 34.4	
	comp=Z,47nm,20.1s,MS4.0,baz=221,slow=32						
TXAR	**Lajitas Array**	**97.37**	**62**	P	**P**	**22 16 40.2**	**+1.6**
	comp=Z,0.4nm,0.7s,mb3.9,baz=243,slow=2.8,SNR=6.5						
TXAR				LR	LR	22 54 22.5	
	comp=Z,63nm,21.6s,MS4.1,baz=345,slow=32						
MKAR	**Makanchi Array**	**102.79**	**315**	P	Pdif	22 17 03.1	+0.5
	comp=Z,0.5nm,0.8s,baz=117,slow=6.4,SNR=3.5						
ARCES	**ARCESS Array B**	**126.45**	**345**	PKP	PKPdf	22 22 06.3	+0.1
	comp=Z,4.5nm,0.7s,baz=63,slow=1.9,SNR=19						
KAF	**Kangasniemi**	**131.39**	**338**	*e*p	PKPdf	22 22 15.2	-0.6
FINES	**FINESS Array B**	**131.92**	**337**	PKhKP		22 22 13.5	
	comp=Z,0.7nm,0.5s,baz=90,slow=1.9,SNR=8.6						
FINES				PKP	PKPdf	22 22 17.5	+0.7
	comp=Z,0.9nm,0.5s,baz=334,slow=2.6,SNR=9.6						
FINES				SKPbc		22 25 39.6	
	comp=Z,1.9nm,0.7s,baz=63,slow=3.1,SNR=6.4						
FINES	**FINESS Array B**	**131.92**	**337**	PKP	PKPdf	22 22 13.5	-3.4
FINES				PKP	PKPdf	22 22 17.5	+0.7
FINES				SKPbc		22 25 39.6	
AKASG	**Malin Array Be**	**136.68**	**324**	PKP	PKPdf	22 22 26.9	+0.9
	comp=Z,0.7nm,0.6s,baz=48,slow=2.9,SNR=4.9						
NB2	**NORSAR Subarra**	**136.82**	**345**	PKPdf	PKPdf	22 22 27.6	+1.6
	comp=Z,0.9nm,0.8s,baz=27,slow=1.8						
NOA	**NORSAR Array B**	**136.82**	**345**	PKP	PKPdf	22 22 26.1	+0.1
	comp=Z,0.9nm,0.7s,baz=55,slow=2.6,SNR=4.6						
KSP	**Ksiaz**	**143.16**	**331**	*e*PKHKP		22 22 35.5	
DPC	**Dobruska-Polom**	**143.50**	**331**	*e*PKP	PKPdf	22 22 36.4	-1.6
UPC	**Upice**	**143.53**	**331**	*e*PKP	PKPdf	22 22 36.6	-1.5
UPC				*e*x	x	22 22 46.3	
PVCC	**Panska Ves**	**144.15**	**332**	*e*PKP	PKPdf	22 22 38.4	-0.8
PVCC				*e*x	x	22 22 48.4	
BRG	**Berggiesshubel**	**144.16**	**333**	*i* PKHKP		22 22 38.7	
BRG				pmax	pmax		
	comp=Z,30nm,0.8s						
BRG				pmax	pmax		
	comp=Z,16nm,0.9s						
SRO	**Srobarova**	**144.21**	**326**	*e*PKP	PKPdf	22 22 39.5	+0.1
CLL	**Collm**	**144.22**	**334**	⇑*i*PKHKP		22 22 38.4	
CLL				pmax	pmax		
	comp=Z,28nm,0.7s						
CLL	**Collm**	**144.22**	**334**	⇑*i*PKIKP	PKPdf	22 22 38.4	-0.9
	comp=Z,logA/T=1.6						
CLL				*e*		22 22 49.0	
CLL				*e**PPKP		22 23 04.0	
SRO1	**Iza**	**144.28**	**326**	*e*PKP	PKPdf	22 22 40.0	+0.5
PRU	**Pruhonice**	**144.56**	**332**	*e*PKP	PKPdf	22 22 39.4	-0.5
PRU				*e*x	x	22 22 49.7	
ZST	**Bratislava**	**144.58**	**327**	*e*PKP	PKPdf	22 22 41.3	+1.3
CLZ	**Clausthal**	**144.81**	**337**	PKIKP	PKPdf	22 22 41.0	+0.7
ESK	**Eskdalemuir**	**144.94**	**353**	*e*PKHKP		22 22 39.8	
NKC	**Novy Kostel**	**145.27**	**334**	*e*PKP	PKPdf	22 22 42.4	+1.2
NKC				*e*x	x	22 22 51.2	
MOX	**Moxa**	**145.29**	**335**	*e*P	PKPdf	22 22 42.1	+0.9
MOX				*e*		22 22 51.9	
SKO	**Skopje**	**145.60**	**315**	*i* PKP	PKPdf	22 22 43.3	+1.3
KHC	**Kasperske Hory**	**145.61**	**331**	*e*PKP	PKPdf	22 22 43.2	+1.4
KHC				*e*x	x	22 22 53.7	
GEC2	**GERESS Array S**	**145.76**	**331**	PKIKP	PKPdf	22 22 44.2	+2.1
GERES	**GERESS Array B**	**145.76**	**331**	PKPbc	PKPbc	22 22 43.7	+0.9
	comp=Z,12nm,0.7s,baz=27,slow=2.2,SNR=81						
WET	**Wettzell**	**145.91**	**332**	*e*PKIKP	PKPdf	22 22 44.6	+2.3
BBLS	**Bajina Basta -**	**145.92**	**320**	⇓*i*P	PKPdf	22 22 44.8	+2.3
GRA1	**Grafenberg Arr**	**146.20**	**334**	*e*PKPbc	PKPbc	22 22 45.5	+1.6
GRF	**Grafenberg Arr**	**146.20**	**334**	*e*PKIKP	PKPdf	22 22 45.5	+2.7
MOA	**Molln**	**146.22**	**329**	⇑*i*P	PKPdf	22 22 45.1	+2.2
	comp=Z,85nm,2.8s						
PERS	**Pernice**	**146.63**	**327**	*e*PKPbc	PKPbc	22 22 46.1	+1.1
TOD	**Tromm**	**147.21**	**336**	PKIKP	PKPdf	22 22 48.3	+3.8
BOJS	**Bojanci**	**147.31**	**325**	*e*PKPbc	PKPdf	22 22 48.5	+3.8
VISS	**Visnje**	**147.33**	**326**	*e*PKPbc	PKPdf	22 22 48.5	+3.7
LJU	**Ljubljana**	**147.33**	**327**	*e*PKPbc	PKPdf	22 22 48.3	+3.5
CEY	**Cerknica**	**147.59**	**326**	*i* PKPbc	PKPdf	22 22 48.8	+3.6
STU	**Stuttgart**	**147.74**	**335**	*e*PKIKP	PKPdf	22 22 49.3	+4.0
RUP	**Ruppelstein**	**147.76**	**338**	PKP2	PKPab	22 22 50.3	-2.4
FVI	**Forni Avoltri**	**147.82**	**329**	PKP2	PKPab	22 22 54.1	+1.1
WATA	**Walderalm**	**147.84**	**331**	⇑*i*P	PKPdf	22 22 49.4	+3.8
	comp=Z,6.4nm,1.0s						
SQTA	**Sankt Quirin**	**148.09**	**331**	⇑*i*P	PKPdf	22 22 50.3	+4.3
	comp=Z,8.2nm,0.8s						
LANF	**Langenberg**	**148.10**	**337**	PKP	PKPdf	22 22 50.8	+4.9
WLF	**Walferdange**	**148.10**	**339**	*e*PKIKP	PKPdf	22 22 50.2	+4.3
GIVF	**Givet**	**148.15**	**341**	*e*PKP1	PKPdf	22 22 50.3	+4.3
BAIF	**Baives**	**148.37**	**342**	*e*PKP1	PKPdf	22 22 51.0	+4.7
	comp=Z,13nm,0.8s						
DAVA	**Damuels**	**148.63**	**333**	⇑*i*P	PKPdf	22 22 51.5	+4.7
	comp=Z,38nm,2.3s						
WLS	**Welschbruch**	**148.74**	**337**	PKP	PKPdf	22 22 52.3	+5.3
CDF	**Champ du Feu**	**148.77**	**337**	*e*PKP1	PKPdf	22 22 51.9	+4.9
	comp=Z,15nm,0.8s						
FELD	**Feldberg**	**148.93**	**335**	PKP	PKPdf	22 22 52.7	+5.4
FUORN	**Ofenpass**	**148.97**	**331**	PKP	PKPdf	22 22 53.0	+5.6
ECH	**Echery**	**148.97**	**337**	PKP	PKPdf	22 22 52.7	+5.4
DAVOX	**Davos**	**149.02**	**332**	PKP	PKPdf	22 22 53.1	+5.6
BRMO	**Bormio**	**149.03**	**331**	PKP	PKPdf	22 22 53.2	+5.7
MOF	**Molkenrain**	**149.28**	**336**	PKP	PKPdf	22 22 53.5	+5.6
THEF	**They Montfort**	**149.39**	**338**	PKP	PKPdf	22 22 52.7	+4.7
HINF	**Hinteralfeld**	**149.42**	**336**	*e*PKP1	PKPdf	22 22 53.4	+5.3
HAU	**Haudompre**	**149.45**	**337**	*e*PKP1	PKPdf	22 22 53.7	+5.6
	comp=Z,18nm,0.7s						
HAU				*e*R			
	comp=Z,43nm,21.2s						
BBS	**Basel-Blauen**	**149.46**	**335**	PKHKP		22 22 53.7	
MEZF	**Maizieres J’vi**	**149.47**	**339**	*e*PKP1	PKPdf	22 22 54.2	+6.1
	comp=Z,63nm,1.0s						
RGNG	**Rignano Grg**	**149.48**	**319**	PKP	PKPdf	22 22 53.8	+5.4
CING	**Cingoli**	**149.81**	**324**	PKP	PKPdf	22 22 55.2	+6.3
LOMF	**Lomont**	**149.82**	**336**	PKP	PKPdf	22 22 55.2	+6.5
ARV	**Arcevia**	**149.87**	**324**	PKP2	PKPab	22 22 55.7	-5.8
MUGIO	**Muggio**	**150.05**	**332**	PKP	PKPdf	22 22 54.3	+5.2
TIP	**Timpagrande**	**150.07**	**314**	*e*PKPbc	PKPdf	22 22 55.8	+6.4
SFI	**Santa Sofia**	**150.18**	**326**	PKIKP	PKPdf	22 22 56.6	+7.2
NRCA	**Norcia**	**150.21**	**323**	PKP	PKPdf	22 22 56.0	+6.5
CII	**Carovilli**	**150.22**	**320**	*e*PKPbc	PKPdf	22 22 56.3	+6.8
MURB	**Monte Urbino**	**150.26**	**325**	PKP	PKPdf	22 22 57.5	+8.0
SGO	**Sicignano**	**150.28**	**318**	PKIKP	PKPdf	22 22 55.5	+5.8
CSSN	**Cassano Irpino**	**150.29**	**318**	PKP	PKPdf	22 22 55.6	+5.9
ZCCA	**Zocca**	**150.31**	**328**	PKP	PKPdf	22 22 57.3	+7.7
ASS	**Assisi**	**150.32**	**324**	PKIKP	PKPdf	22 22 55.5	+5.9
SEI	**Scarperia**	**150.33**	**327**	PKP	PKPdf	22 22 57.5	+7.9
MGR	**Morigerati**	**150.36**	**317**	PKP	PKPdf	22 22 55.2	+5.4
FNVD	**Fontana Vidola**	**150.37**	**327**	PKP	PKPdf	22 22 56.7	+7.0
GRI	**Girifalco**	**150.48**	**314**	PKIKP	PKPdf	22 22 57.3	+7.3
MCGN	**Macugnaga**	**150.48**	**333**	PKP	PKPdf	22 22 56.8	+7.0
PTQR	**Pietraquaria**	**150.57**	**322**	PKP	PKPdf	22 22 56.8	+6.7
CABF	**La Chapelle**	**150.71**	**336**	⇑*i*PKP1	PKPdf	22 22 57.0	+6.9
	comp=Z,20nm,0.7s						
ORO	**Oropa**	**150.74**	**333**	PKIKP	PKPdf	22 22 56.5	+6.3
BOB	**Bobbio (Coli)**	**150.75**	**330**	PKIKP	PKPdf	22 22 57.1	+6.9
FLN	**La Foliniere**	**150.79**	**346**	⇑*i*PKP1	PKPdf	22 22 56.4	+6.2
	comp=Z,31nm,0.6s						
FLN				*e*R			
	comp=Z,55nm,21.8s						
LDF	**La Druitiere**	**150.86**	**346**	*e*PKP1	PKPdf	22 22 56.5	+6.2
	comp=Z,19nm,0.6s						
LOR	**Lormes**	**150.94**	**339**	⇑*i*PKP1	PKPdf	22 22 57.1	+6.7
	comp=Z,21nm,0.8s						
LOR				*e*R			
	comp=Z,48nm,22.8s						
SOI	**Samo**	**151.10**	**313**	PKIKP	PKPdf	22 22 58.0	+7.0
GRR	**Gorron**	**151.22**	**346**	⇑*i*PKP1	PKPdf	22 22 57.5	+6.7
	comp=Z,21nm,0.5s						
SSF	**Saint Saulge**	**151.24**	**340**	⇑*i*PKP1	PKPdf	22 22 57.7	+6.8
	comp=Z,22nm,0.9s						
HYF	**Humbligny**	**151.33**	**341**	*e*PKP1	PKPdf	22 22 58.4	+7.4
LPL	**La Plagne**	**151.36**	**334**	*e*PKP1	PKPdf	22 22 58.7	+7.6
	comp=Z,13nm,0.8s						
LPG	**La Plagne**	**151.37**	**334**	⇑*i*PKP1	PKPdf	22 22 58.8	+7.7
	comp=Z,13nm,0.6s						
SMF	**Signal de Mont**	**151.49**	**339**	*e*PKP1	PKPdf	22 22 58.1	+6.8
SGMF	**Saint Gilles**	**151.70**	**349**	*e*PKP1	PKPdf	22 22 58.4	+6.9
	comp=Z,22nm,0.6s						
ROSF	**Rostrenen**	**151.75**	**350**	⇑*i*PKP1	PKPdf	22 22 58.4	+6.8
	comp=Z,15nm,0.6s						
BNI	**Bardonecchia**	**151.76**	**333**	*e*PKPdf	PKPdf	22 22 54.2	+2.4
BNI				*e*PKPbc	PKPdf	22 22 59.3	+7.6
BGF	**Bois d’Agland**	**151.90**	**340**	*e*PKP1	PKPdf	22 22 59.3	+7.4
	comp=Z,15nm,0.7s						
MBDF	**Montbardon**	**151.98**	**333**	⇑*i*PKP1	PKPdf	22 22 59.5	+7.4
	comp=Z,6.6nm,0.8s						
QUIF	**Quistinic**	**152.13**	**349**	*e*PKP1	PKPdf	22 22 59.2	+7.0
	comp=Z,5.6nm,0.5s						
PLDF	**La Plantade**	**152.16**	**338**	PKP	PKPdf	22 23 01.7	+9.4
ORIF	**Oris-en-Rattie**	**152.19**	**334**	*e*PKP1	PKPdf	22 23 00.1	+7.7
	comp=Z,16nm,0.7s						
ORIF				*e*R			
	comp=Z,36nm,22.5s						
SAOF	**Saorge**	**152.22**	**331**	PKP	PKPdf	22 23 00.3	+7.9
AUTN	**L’Aution**	**152.27**	**331**	PKP	PKPdf	22 23 01.3	+8.8
TOUF	**Mont Tournerai**	**152.34**	**331**	PKP	PKPdf	22 23 00.5	+7.9
TCF	**Toulx Ste Croi**	**152.34**	**341**	⇑*i*PKP1	PKPdf	22 22 59.9	+7.4
	comp=Z,30nm,1.2s						
SBF	**Sospel**	**152.37**	**331**	⇑*i*PKP1	PKPdf	22 23 00.0	+7.3
	comp=Z,34nm,1.0s						
PYM	**Petit Puy Mans**	**152.56**	**339**	PKP	PKPdf	22 23 02.9	+10
PGF	**Pioggiola**	**152.61**	**327**	⇑*i*PKP1	PKPdf	22 23 00.9	+7.9
	comp=Z,22nm,0.8s						
CALN	**Calern**	**152.70**	**332**	PKP	PKPdf	22 23 01.3	+8.2
MFF	**Saint Martin d**	**152.72**	**344**	⇑*i*PKP1	PKPdf	22 23 00.9	+7.8
	comp=Z,8.1nm,0.7s						
VIVF	**Saint-Julien-l**	**152.72**	**336**	*e*PKP1	PKPdf	22 23 01.3	+8.2
	comp=Z,12nm,0.9s						
FRF	**La Foret Royal**	**152.96**	**332**	⇑*i*PKP1	PKPdf	22 23 01.3	+7.8
	comp=Z,7.4nm,0.8s						
SMRF	**Simiane la Rot**	**153.09**	**333**	*e*PKP1	PKPdf	22 23 02.4	+8.7
	comp=Z,5.9nm,0.8s						
LMR	**La Mourre**	**153.20**	**331**	⇑*i*PKP1	PKPdf	22 23 02.0	+8.2
	comp=Z,7.5nm,0.8s						
RJF	**Les Rejaudoux**	**153.44**	**341**	*e*PKP1	PKPdf	22 23 02.7	+8.6
	comp=Z,8.8nm,0.9s						
RJF				*e*R			
	comp=Z,40nm,19.2s						
LASF	**Ste Croix**	**153.70**	**336**	*e*PKP1	PKPdf	22 23 02.6	+8.1
	comp=Z,7.1nm,0.8s						
LFF	**La Frestale**	**154.00**	**341**	*e*PKP1	PKPdf	22 23 03.9	+9.0

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*THE **25** 22:03:21.1, 38.98N×20.45E, h10^{km}, ML3.3*
*ATH **25** 22:03:22.5, 39.12N×20.66E, h10^{km}±3^{km}, MD3.4/8*
*NEIC **25** 22:03:22.5, 39.12N×20.63E, h19^{km}, MD3.4(ATH), After ATH.*
*CSEM **25** 22:03:22.4±0.2, 39.03N×20.54E, h2^{km}, ML3.3, Error ellipse: s-maj=5.0km s-min=3.0km az=43.0*

ISC 25 22:03:21.4±0.6**, 39.01N**±0.03×**20.53E**±0.04**, h4**^{km}±6^{km}**, n18, σ1§23**/30**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
LKD	**Levkas**	**0.31**	**163**	*e*Pg	**Pg**	**22 03 27.1**	**-0.5**
LKD				*e*Sg	**Sg**	**22 03 32.0**	**+0.1**
IGT	**Igoumenitsa**	**0.55**	**344**	*e*Pg	**Pg**	**22 03 31.7**	**-0.6**
JAN	**Janina**	**0.69**	**21**	*e*Pn	**Pn**	**22 03 32.8**	**-4.9**
JAN				*e*Sn	**Sn**	**22 03 42.0**	**-7.0**
VLS	**Valsamata**	**0.83**	**177**	*e*PG	**Pg**	**22 03 40.5**	**+2.6**
VLS				*e*SB	**Sb**	**22 03 54.4**	**+5.1**
KEK	**Kerkira**	**0.91**	**321**	*e*PG	**Pg**	**22 03 38.9**	**-0.6**
KEK				*e*SB	**Sb**	**22 03 52.1**	**+0.6**
MEV	**Metsovon**	**0.95**	**35**	*e*Pg	**Pg**	**22 03 40.0**	**-0.3**
MEV				*e*Sg	**Sg**	**22 03 54.8**	**+2.0**
SRN	**Sarande**	**0.96**	**335**	*e*Pg	**Pg**	**22 03 39.1**	**-1.5**
SRN				*i* Sg	**Sg**	**22 03 55.0**	**+1.5**
EVR	**Evrytania**	**1.00**	**95**	*e*Pn	**Pn**	**22 03 40.3**	**-1.7**
EVR				*e*Sn	**Sn**	**22 03 53.9**	**-2.8**
RLS	**Riolos of Patr**	**1.20**	**142**	*e*PN	**Pn**	**22 03 45.1**	**+0.2**
AGG	**Agios Georgios**	**1.40**	**89**	*e*Pg	**Pg**	**22 03 47.7**	**-1.6**
AGG				*e*Sg	**Sg**	**22 04 09.0**	**+1.0**
KZN	**Kozani**	**1.61**	**36**	*e*PB	**Pb**	**22 03 50.1**	**-1.3**
KZN				*e*SB	**Sb**	**22 04 10.4**	**-1.6**
LIT	**Litokhoron**	**1.87**	**54**	*e*Pb	**Pb**	**22 03 54.8**	**-0.9**
LIT				*e*Sb	**Sb**	**22 04 20.6**	**+1.2**
FNA	**Florina**	**1.89**	**20**	*e*Pb	**Pb**	**22 03 55.0**	**-1.1**
FNA				*e*Sb	**Sb**	**22 04 21.1**	**+1.1**
LKR	**Lokris**	**1.96**	**100**	*e*PN	**Pn**	**22 03 57.0**	**+1.2**
XOR	**Xorichti**	**2.10**	**79**	*e*Pn	**Pn**	**22 03 57.6**	**-0.1**
XOR				*e*Sn	**Sn**	**22 04 26.4**	**+1.8**
NEO	**Neokhori**	**2.11**	**81**	*e*PN	**Pn**	**22 03 58.3**	**+0.3**
TIP	**Timpagrande**	**2.94**	**275**	*e*Pn	**Pn**	**22 04 10.4**	**+0.6**
TIP	**Timpagrande**	**2.94**	**275**	*e*Pn	**Pn**	**22 04 10.4**	**+0.6**

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*CSEM **25** 22:30:22.4±0.6, 38.05N×20.07E, h5^{km}, MD3.5, Error ellipse: s-maj=17.6km s-min=8.6km az=14.0*
*ATH **25** 22:30:23.6, 38.12N×20.12E, h4^{km}, MD3.5/6*
*NEIC **25** 22:30:24.1, 38.15N×20.18E, h10^{km}, MD3.5(ATH), After ATH.*

ISC 25 22:30:23.5±1.6**, 38.1N**±0.1×**20.16E**±0.08**, h13**^{km}±9^{km}**, n12, σ1§30**/16**, 2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.36**	**72**	⇓*i*Pg	**Pg**	**22 30 30.3**	**-0.7**
VLS				*e*Sb	**Sb**	**22 30 35.0**	**-1.2**
VLS	**Valsamata**	**0.36**	**72**	⇓*i*PG	**Pg**	**22 30 30.3**	**-0.7**
VLS				*e*SG	**Sg**	**22 30 36.0**	**0.0**
RLS	**Riolos of Patr**	**1.03**	**90**	*e*PG	**Pg**	**22 30 44.3**	**+0.1**
EVR	**Evrytania**	**1.55**	**56**	*e*PB	**Pb**	**22 30 53.6**	**+2.1**
ITM	**Ithomi**	**1.66**	**122**	*e*PB	**Pb**	**22 30 56.2**	**+2.8**
KEK	**Kerkira**	**1.67**	**350**	*e*PN	**Pn**	**22 30 53.0**	**+0.4**
JAN	**Janina**	**1.68**	**19**	*e*PB	**Pb**	**22 30 55.0**	**+1.4**
SRN	**Sarande**	**1.81**	**356**	*i* Sn	**Sn**	**22 31 23.8**	**+6.2**
NEO	**Neokhori**	**2.70**	**62**	*e*Pb	**Pb**	**22 31 08.9**	**-2.2**
TIP	**Timpagrande**	**2.88**	**294**	*e*Pn	**Pn**	**22 31 08.9**	**-1.1**
TIP				*e*Sn	**Sn**	**22 31 40.6**	**-4.3**
TIP	**Timpagrande**	**2.88**	**294**	*e*Pn	**Pn**	**22 31 08.9**	**-1.1**
TIP				*e*Sn	**Sn**	**22 31 40.6**	**-4.2**
PLG	**Polygyros**	**3.44**	**47**	*e*Pn	**Pn**	**22 31 18.2**	**+0.4**

ECX 25 22:32:05.9±0.5**, 30.32N**×**114.07W, h7**^{km}**, ML3.6, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
SPX	**San Pedro Mart**	**1.40**	**301**	*e*PN	Pn	22 32 32.0	+0.1
SPX				*e*S	Sb	22 32 49.0	-0.8
ECBX	**El Chinero**	**1.42**	**324**	*e*PN	Pn	22 32 31.2	-1.0
ECBX				*e*S	Sb	22 32 49.5	-1.0
EMX	**El Mayor**	**1.94**	**329**	*e*PN	Pn	22 32 39.1	-0.5
RDX	**Rancho Dowling**	**2.27**	**315**	*e*PN	Pn	22 32 44.1	-0.3
ENX	**Ensenada**	**2.71**	**306**	*e*PN	Pn	22 32 49.9	-0.8
CBX	**Cerro Bola**	**2.98**	**313**	*e*PN	Pn	22 32 53.8	-0.7
CBX				*e*S	Sn	22 33 30.8	0.0

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*NEIC **25** 22:54:45.9, 17.20N×94.54W, h150^{km}, MD3.9(MEX), After MEX.*

MEX 25 22:54:45.8±0.8**, 17.20N**×**94.54W, h150**^{km}±9^{km}**, MD3.9, 1C, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.34**	**251**	⇑*i*P	P	22 55 05.4	-1.6
CMIG				*i* S	S	22 55 19.9	-3.3
HUIG	**Huatulco**	**2.07**	**227**	*i* P	P	22 55 19.3	-2.8
HUIG				*i* S	S	22 55 48.0	-2.1
OXX	**Oaxaca**	**2.09**	**267**	*i* P	P	22 55 22.0	-0.3
OXX				*e*S	S	22 55 49.0	-1.4
OXX	**Oaxaca**	**2.09**	**267**	*i* P	P	22 55 21.5	-0.8
OXX				*e*S	S	22 55 48.0	-2.4
VHO	**Vista Hermosa**	**2.10**	**267**	*i* P	P	22 55 21.1	-1.4
VHO				*i* S	S	22 55 48.3	-2.4
PPM	**Popocatepetl**	**4.30**	**296**	*i* P	P	22 55 50.5	-0.4
PPM				*i* S	S	22 56 38.6	-2.3

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*NEIC **25** 23:12:15.2, 31.79S×71.92W, h19^{km}, ML3.5(GUC), After GUC.*

GUC 25 23:12:15.2±0.8**, 31.79S**×**71.92W, h19**^{km}±5^{km}**, MD4.0, ML3.5, 4C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
ILCH	**Illapel**	**0.65**	**77**	⇑*i*P	Pb	23 12 27.7	0.0
ILCH				*i* S	Sb	23 12 36.9	+0.6
ILCH				AMP		23 12 37.2	
	comp=N,4µm,0.2s						
PACH	**Papudo**	**0.85**	**152**	*e*P	Pb	23 12 30.8	-0.3
PACH				*i* S	Sb	23 12 42.0	-0.1
CMCH	**Combarbala**	**0.99**	**52**	⇑*i*P	Pb	23 12 33.0	-0.6
CMCH				*i* S	Sb	23 12 46.4	+0.2
CMCH				AMP		23 12 48.0	
	comp=E,7µm,0.8s						
ROCH	**El Roble**	**1.41**	**147**	*e*P	Pn	23 12 40.1	0.0
ROCH				*i* S	Sb	23 12 58.2	0.0
JACH	**Jahuel**	**1.43**	**129**	⇓*i*P	Pn	23 12 40.4	-0.1
PEL	**Peldehue**	**1.71**	**143**	*e*P	Pn	23 12 44.6	+0.3
PEL				*i* S	Sn	23 13 07.0	+1.1
PEL				AMP		23 13 10.8	
	comp=N,781nm,0.9s						
LCCH	**Las Cruces**	**1.71**	**170**	*e*P	Pn	23 12 43.8	-0.6
CLCH	**Cerro Calan**	**1.98**	**144**	*e*P	Pn	23 12 48.4	+0.1
CLCH				*i* S	Sn	23 13 14.1	+1.2
CLCH				AMP		23 13 21.5	
	comp=E,474nm,0.7s						
TACH	**Talagante**	**2.04**	**156**	⇑*i*P	Pn	23 12 49.3	+0.2
FCH	**Farellones**	**2.06**	**139**	⇓*i*P	Pn	23 12 50.0	+0.6
PCH	**Pirque**	**2.18**	**148**	*e*P	Pn	23 12 53.0	+1.9
PCH				*i* S	Sn	23 13 19.4	+1.6
LMEL	**Las Melosas**	**2.51**	**145**	⇑*i*P	Pn	23 12 56.1	+0.2
LMEL				*i* S	Sn	23 13 28.1	+1.8
LMEL				AMP		23 13 39.4	
	comp=N,162nm,0.2s						
ZON	**Zonda**	**2.77**	**86**	*e*P	Pn	23 13 03.0	+3.4
ZON				*e*S	Sn	23 13 41.0	+8.1
CICH	**Cipreses**	**2.82**	**154**	*i* P	Pn	23 13 02.7	+2.4
SFDO	**San Fernando**	**2.92**	**165**	*e*P	Pn	23 13 02.8	+1.1
TRQA	**Tornquist**	**10.27**	**130**	P	P	23 14 44.2	-0.7
	comp=N,8.7nm,1.0s						

MAN 25 23:46:39.5, 8.55N×**122.39E, h33**^{km}**, mb4.1, ML2.9, MS2.6, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
IPIL	**Ipil**	**0.78**	**166**	*e*P	P	23 46 54.7	+0.8
IPIL				*e*S	S	23 47 05.3	+0.7
DCPH	**Dipolog City**	**0.96**	**88**	⇑*e*P	P	23 46 56.4	-0.2
DCPH				*i* S	S	23 47 09.5	+0.4
PAGZ	**Pagadian**	**1.21**	**125**	*e*P	P	23 47 00.3	+0.2

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*NEIC **26** 00:04:02.5±1.7, 21.52S×179.20W, h599^{km}±17^{km}, mb4.5/6, Error ellipse: s-maj=24.8km s-min=13.9km az=221.0*
*IDC **26** 00:04:02.5±2.2, 21.56S×179.15W, h602^{km}±23^{km}, mb3.7/8, mb1 3.8/10, mb1mx3.5/19, mbtmp4.7/10, Error ellipse: s-maj=26.0km s-min=18.7km az=48.0*

ISC 26 00:04:03.2±2.0**, 21.8S**±0.2×**179.4W**±0.2**, h611**^{km}±20^{km}**, n33, σ1§01**/29**, mb4.3**/13**, 1C-5D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**7.59**	**170**	P	**P**	**00 05 59.5**	**+0.2**
	84nm,0.3s,baz=89,slow=23,SNR=2.3						
RAO	**Raoul Island**	**7.59**	**170**	*e*P	**P**	**00 05 59.6**	**+0.2**
RAO				*e*		00 06 04.0	
DZM	**Mont Dzumac**	**13.17**	**266**	P	**P**	**00 06 55.5**	**+2.2**
	2.4nm,0.3s,baz=84,slow=21,SNR=16						
URZ	**Urewera**	**16.73**	**190**	P	**P**	**00 07 26.3**	**-1.1**
	2.6nm,0.3s,baz=8.3,slow=5.4,SNR=7.3						
QRZ	**Quartz Range**	**20.22**	**198**	*e*PN	**P**	**00 07 59.6**	**-0.2**
NNZ	**Nelson**	**20.36**	**196**	*e*PN	**P**	**00 08 00.1**	**-0.9**
THZ	**Tophouse**	**20.99**	**196**	*e*PN	**P**	**00 08 05.6**	**-1.2**
ARMA	**Armidale**	**27.38**	**246**	⇓*i*P	**P**	**00 09 04.8**	**+1.4**
CTA	**Charters Tower**	**32.11**	**267**	⇓*i*P	**P**	**00 09 44.3**	**+0.6**
	15nm,0.4s,mb5.0						
CTA	**Charters Tower**	**32.11**	**267**	P	**P**	**00 09 44.4**	**+0.7**
	20nm,0.4s,mb5.1,baz=94,slow=10,SNR=38						
CTAO	**Charters Tower**	**32.11**	**267**	*e*P	**P**	**00 09 44.4**	**+0.7**
	18nm,0.5s,mb5.0						
PMG	**Port Moresby**	**34.40**	**286**	P	**P**	**00 10 02.8**	**-0.1**
	22nm,0.8s,mb4.8,baz=170,slow=1.8,SNR=6.8						
PMG	**Port Moresby**	**34.40**	**286**	*e*P	**P**	**00 10 02.6**	**-0.3**
	22nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**36.10**	**245**	⇓*i*P	**P**	**00 10 17.7**	**+1.1**
	4.2nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**36.10**	**245**	P	**P**	**00 10 17.7**	**+1.1**
	6.7nm,0.8s,mb4.2,baz=93,slow=10,SNR=15						
STKA				ScP		00 15 15.3	
	1.8nm,0.9s,baz=321,slow=7.8,SNR=3.0						
WB2	**Warramunga Arr**	**43.16**	**264**	⇓*i*P	**P**	**00 11 12.7**	**-0.7**
WRAB	**Tennant Creek**	**43.16**	**264**	*e*P	**P**	**00 11 12.5**	**-1.0**
	34nm,0.9s,mb4.9						
WRA	**Warramunga Arr**	**43.17**	**264**	P	**P**	**00 11 12.9**	**-0.6**
	6.6nm,0.3s,mb4.7,baz=97,slow=7.8,SNR=68						
KAKA	**Kakadu**	**46.73**	**273**	⇓*i*P	**P**	**00 11 39.9**	**-1.0**
	12nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.60**	**264**	*e*P	**P**	**00 12 16.4**	**-0.3**
	4.8nm,0.3s,mb4.3						
FITZ	**Fitzroy Crossi**	**51.60**	**264**	P	**P**	**00 12 16.2**	**-0.5**
	6.2nm,0.3s,mb4.4,baz=185,slow=4.3,SNR=23						
MBWA	**Marble Bar**	**56.34**	**258**	*e*P	**P**	**00 12 48.8**	**-1.0**
	13nm,0.5s,mb4.4						
SBA	**Scott Base**	**56.55**	**183**	*e*P	**P**	**00 12 52.2**	**+1.6**
	3.5nm,0.8s,mb3.6						
VNDA	**Vanda**	**56.56**	**185**	P	**P**	**00 12 50.9**	**+0.3**
	1.3nm,0.7s,mb3.2,baz=6.1,slow=7.0,SNR=6.6						
VNDA	**Vanda**	**56.56**	**185**	*e*P	**P**	**00 12 51.3**	**+0.7**
	1.1nm,0.6s,mb3.3						
QSPA	**South Pole Qui**	**68.33**	**180**	⇑*i*P	**P**	**00 14 06.6**	**+0.8**
	9.1nm,0.9s,mb4.2						
MJAR	**Matsushiro Arr**	**70.46**	**325**	P	**P**	**00 14 18.2**	**-0.9**
	1.8nm,0.7s,mb3.6,baz=158,slow=7.3,SNR=8.5						
MJAR	**Matsushiro Arr**	**70.46**	**325**	P	**P**	**00 14 18.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**89.33**	**290**	P	**P**	**00 15 58.8**	**+1.4**
	1.8nm,0.8s,mb4.0,baz=148,slow=3.1,SNR=6.3						
AKASG	**Malin Array Be**	**143.45**	**329**	PKP	PKPdf	00 22 27.3	-1.5
	0.6nm,0.4s,baz=41,slow=4.3,SNR=21						
MALT	**Malatya**	**143.63**	**306**	*e*PKP	PKPdf	00 22 30.3	+0.8
BRTR	**Keskin Array B**	**146.69**	**310**	PKPbc	PKPbc	00 22 36.8	-0.1
	1.1nm,0.8s,baz=113,slow=3.5,SNR=7.1						
GERES	**GERESS Array B**	**151.02**	**342**	PKPbc	PKPdf	00 22 47.3	+6.1
	0.2nm,0.4s,baz=45,slow=1.9,SNR=4.6						

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*NEIC **26** 00:13:53.5, 31.74S×67.79W, ML4.1(GUC), After GUC.*

GUC 26 00:13:53.5±0.7**, 31.74S**×**67.79W, MD3.9, ML4.1, 3C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**0.78**	**284**	⇑*i*P	Pg	00 14 06.8	-2.3
ZON				*e*S	Sg	00 14 17.8	-1.7
MDZ	**Mendoza**	**1.45**	**218**	*e*P	Pn	00 14 18.0	-3.1
MDZ				*i* S	Sb	00 14 35.0	-5.1
JACH	**Jahuel**	**2.56**	**248**	⇑*i*P	Pn	00 14 37.4	+0.6
JACH				*i* S	Sn	00 15 10.9	+1.8
FCH	**Farellones**	**2.64**	**232**	*i* P	Pn	00 14 39.3	+1.2
FCH				*i* S	Sn	00 15 13.7	+2.4
CMCH	**Combarbala**	**2.80**	**281**	*i* P	Pn	00 14 40.6	+0.3
CMCH				*i* S	Sn	00 15 17.1	+1.8
CMCH				AMP		00 15 23.0	
	comp=N,3µm,0.7s						
PEL	**Peldehue**	**2.82**	**239**	*e*P	Pn	00 14 41.2	+0.6
PEL				*i* S	Sn	00 15 17.0	+1.2
PEL				AMP		00 15 25.4	
	comp=N,405nm,0.5s						
CLCH	**Cerro Calan**	**2.85**	**234**	*i* P	Pn	00 14 41.3	+0.3
CLCH				*i* S	Sn	00 15 17.9	+1.4
CLCH				AMP		00 15 22.2	
	comp=N,704nm,0.5s						
ILCH	**Illapel**	**2.88**	**271**	AMP		00 15 23.8	
	comp=E,423nm,0.3s						
LMEL	**Las Melosas**	**2.92**	**223**	*i* P	Pn	00 14 43.0	+0.9
LMEL				*i* S	Sn	00 15 20.1	+1.5
LMEL				AMP		00 15 24.3	
	comp=N,305nm,0.1s						
ROCH	**El Roble**	**2.99**	**245**	⇑*i*P	Pn	00 14 43.7	+0.6
ROCH				*i* S	Sn	00 15 22.2	+2.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCH	Chadas Angostu	3.26	227	iP	Pn	00 14 47.3	+0.5
CHCH				iS	Sn	00 15 28.1	+1.3
CACH	El Canelo	3.35	224	⇓iP	Pn	00 14 48.6	+0.5
CACH				iS	Sn	00 15 30.7	+1.5
TRQA	Tornquist	7.91	144	eP	Pn	00 15 46.3	-6.2
	comp=N,2.7nm,0.6s						

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*IDC **26** 00:26:20.0±1.1, 1.46N×127.01E, mb4.2/8, mb1 4.4/9, mb1mx4.1/18, mbtmp4.3/9, ML4.6/1, Error ellipse: s-maj=69.7km s-min=16.6km az=74.0*

*NEIC **26** 00:26:24.8±5.9, 1.46N×126.97E, h33^{km}±42^{km}, mb4.4/4, Error ellipse: s-maj=28.8km s-min=10.0km az=75.0*

ISC 26 00:26:23.0±0.8**, 1.5N**±0.1×**126.9E**±0.3**, h33**^{km}**, n19, σ0^{s}44**/18**, mb4.3**/11**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.49	184	P	P	00 30 50.2	0.0
	1.3nm,0.3s,baz=2.9,slow=5.4,SNR=3.7						
WRAB	Tennant Creek	22.48	161	eP	P	00 31 21.2	+0.3
	17nm,0.8s,mb4.5						
WRA	Warramunga Arr	22.49	162	P	P	00 31 21.3	+0.4
	8.9nm,0.7s,mb4.3,baz=341,slow=11,SNR=28						
WB2	Warramunga Arr	22.49	161	eP	P	00 31 21.3	+0.3
MBWA	Marble Bar	23.57	197	P	P	00 31 32.0	+0.4
FORT	Forrest	32.09	178	eP	P	00 32 48.7	-0.7
	19nm,0.7s,mb5.0						
NWAO	Narrogin (SRO)	35.42	194	P	P	00 33 17.7	-0.4
	6.7nm,0.8s,mb4.6,baz=21,slow=8.6,SNR=3.8						
NWAO	Narrogin (SRO)	35.42	194	P	P	00 33 17.7	-0.4
STKA	Stephens Creek	35.96	158	P	P	00 33 22.1	-0.6
	1.6nm,0.3s,mb4.4,baz=338,slow=9.1,SNR=7.5						
SONM	Songino Array	49.49	342	P	P	00 35 12.5	+0.3
	0.8nm,0.7s,mb3.9,baz=155,slow=9.7,SNR=5.7						
MKAR	Makanchi Array	59.52	326	P	P	00 36 25.8	+0.3
	1.8nm,0.7s,mb4.2,baz=116,slow=7.0,SNR=11						
MKAR	Makanchi Array	59.52	326	P	P	00 36 25.8	+0.3
CASY	Casey	68.61	187	eP	P	00 37 24.6	+0.1
BVAR	Borovoye Array	69.31	327	P	P	00 37 29.4	+0.4
	0.8nm,0.8s,mb3.7,baz=104,slow=5.9,SNR=4.1						
ZRNK	Zerenda	70.03	327	eP	P	00 37 32.4	-1.0
	2.4nm,0.9s,mb4.1						
VNDA	Vanda	81.17	173	P	P	00 38 36.2	-0.2
	2.2nm,0.8s,mb4.1,baz=303,slow=5.4,SNR=14						
VNDA	Vanda	81.17	173	eP	P	00 38 36.1	-0.3
	2.6nm,0.9s,mb4.2						
MAW	Mawson	81.72	200	P	P	00 38 39.8	+0.5
	1.3nm,0.8s,mb3.9,baz=66,slow=9.1,SNR=6.7						
BDFB	Brasilia	165.06	199	PKP	PKPdf	00 46 27.8	+3.2
	4.8nm,0.8s,baz=136,slow=11,SNR=7.9						

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*NIED **26** 00:44:00, 44.10N×148.10E, h44^{km}, Mw3.7 Best double couple: $M_0$3.66×10^{14} NP1:ϕ_s16°, δ73°, λ87°. NP2:ϕ_s207°, δ17°, λ101°.*

*JMA **26** 00:44:03.9±0.3, 44.06N×148.09E, M4.4*

*IDC **26** 00:44:04.7±5.1, 44.57N×148.04E, h58^{km}±49^{km}, mb3.4/6, mb1 3.7/7, mb1mx3.4/23, mbtmp3.7/7, ML3.7/1, MS3.6/2, Ms1 3.6/2, ms1mx2.6/18, Error ellipse: s-maj=32.9km s-min=22.7km az=120.0*

*NEIC **26** 00:44:05.2±2.0, 44.41N×148.14E, h67^{km}±21^{km}, Error ellipse: s-maj=25.1km s-min=13.5km az=100.0*

ISC 26 00:44:05.6±1.3**, 44.23N**±0.09×**148.2E**±0.1**, h98**^{km}±12^{km}**, n28, σ1^{s}02**/35**, mb3.5**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.96	245	P	P	00 44 36.9	-1.1
NEM2				eS	S	00 45 01.2	-0.8
JRA	Rausu	2.22	264	P	P	00 44 41.6	+0.1
JRA				eS	S	00 45 09.5	+1.3
JNK	Nakash	2.58	257	P	P	00 44 46.5	0.0
JNK				eS	S	00 45 17.8	+0.7
JAK	Akkeshi	2.81	245	P	P	00 44 49.2	-0.5
JAK				eS	S	00 45 22.5	-0.2
JTKR	Abashiri--Toko	3.08	267	P	P	00 44 53.1	-0.3
JAR	Ashorobuto	3.32	255	P	P	00 44 57.3	+0.6
JAR				eS	S	00 45 37.5	+2.1
JCH	Churui	3.86	247	P	P	00 45 03.8	-0.2
JCH				eS	S	00 45 48.8	+0.3
ASAJ	Asahikawa	4.01	270	P	P	00 45 06.5	+0.3
	2.7nm,0.3s,baz=87,slow=21,SNR=17						
ASAJ				S	S	00 45 59.4	+7.0
	0.3nm,0.3s,baz=62,slow=9.4,SNR=3.3						
JSE	Soyaes	4.06	282	P	P	00 45 05.8	-1.0
JFR	Furan	4.18	257	P	P	00 45 10.5	+2.0
JNBK	Urakawa-nobuka	4.41	246	P	P	00 45 11.6	0.0
JWK2	Keihoku	4.60	286	P	P	00 45 14.7	+0.5
YSS	Yuzh-Sakhalins	4.68	308	eP	P	00 45 12.5	-2.8
JKB	Kayabe	5.73	248	P	P	00 45 30.2	+0.6
JKB				eS	S	00 46 33.6	-1.0
JOT	Ohata	5.96	244	P	P	00 45 32.8	+0.1
JOT				eS	S	00 46 38.7	-1.6
MAJO	Matsushiro	10.80	228	eP	P	00 46 37.5	-0.8
MAT	Matsushiro	10.80	228	eP	P	00 46 38.0	-0.4
MAT	Matsushiro	10.80	228	P	P	00 46 38.4	0.0
MAT				eS	rx	00 47 02.4	
MJAR	Matsushiro Arr	10.80	228	P	P	00 46 38.2	-0.2
	0.6nm,0.3s,baz=85,slow=13,SNR=7.3						
MJAR	Matsushiro Arr	10.80	228	P	P	00 46 38.2	-0.2
JHJ	Hachijo jima 2	12.88	213	LR	LR	00 51 19.0	
	comp=Z,861nm,21.0s,baz=44,slow=33						
ILAR	Eielson Array	40.66	37	P	P	00 51 36.6	-0.5
	0.2nm,0.6s,mb3.1,baz=231,slow=9.2,SNR=4.1						
MKAR	Makanchi Array	45.02	298	P	P	00 52 13.2	+0.5
	0.3nm,0.5s,mb3.3,baz=79,slow=6.2,SNR=4.6						
INK	Inuvik	45.62	31	P	P	00 52 17.4	+0.2
	0.7nm,0.6s,mb3.5,baz=291,slow=13,SNR=7.4						
FINES	FINESS Array B	64.78	333	P	P	00 54 33.5	-1.8
	1.8nm,0.9s,mb3.9,baz=53,slow=9.5,SNR=7.3						
WRA	Warramunga Arr	65.10	194	P	P	00 54 41.2	+3.2
	0.6nm,0.7s,mb3.6,baz=12,slow=6.7,SNR=2.7						
NOA	NORSAR Array B	69.42	339	LR	LR	01 28 50.2	
	comp=Z,14nm,20.3s,baz=50,slow=39						
TXAR	Lajitas Array	81.77	57	P	P	00 56 16.7	+1.8
	0.4nm,0.5s,mb3.5,baz=298,slow=3.9,SNR=7.7						

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*CRAAG **26** 00:58:14.0, 35.63N×1.06E, Ml2.5*

*CSEM **26** 00:58:14.4±0.4, 35.62N×1.13E, h20^{km}, mb3.6/3, Error ellipse: s-maj=9.1km s-min=7.7km az=25.0*

*NEIC **26** 00:58:15.7±0.9, 35.64N×1.14E, h14^{km}±11^{km}, ML2.5(ALG), Error ellipse: s-maj=18.3km s-min=9.6km az=92.0*

*MDD **26** 00:58:15.7±0.6, 35.61N×1.03E, mb2.9/9, Error ellipse: s-maj=8.2km s-min=5.0km az=61.0, PRXIMO*

ISC 26 00:58:15.3±0.8**, 35.64N**±0.06×**1.14E**±0.06**, h29**^{km}±7^{km}**, n23, σ0^{s}79**/31**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETRT	Tiaret	0.28	152	P	Pb	00 58 21.5	-0.9
EANR	'Ain N'Sour	0.31	355	P	Pb	00 58 22.0	-0.8
ECHF	Ech Chlef	0.54	18	P	Pb	00 58 27.0	+0.7
ECHA	Ech Chlef	0.54	20	P	Pb	00 58 27.0	+0.7
EBNR	Beni Rached	0.72	26	P	Pb	00 58 29.0	-0.3
EMHD	Djebel Mahouad	1.58	69	P	Sn	00 59 01.0	-0.4
EMUR	La Murta	2.91	320	Pn	Pn	00 59 01.1	+0.2
	0.7nm,0.4s,SNR=4.0						
EMUR	La Murta	2.91	320	P	Pn	00 59 01.1	+0.2
	0.7nm,0.4s,SNR=4.0						
ENIJ	Nijar	3.01	297	Pn	Pn	00 59 01.0	-1.2
	0.3nm,0.5s,SNR=7.9						
EBEN	Beniarda	3.25	341	Pn	Pn	00 59 06.0	+0.4
	1.3nm,0.4s,SNR=4.0						
EBEN	Beniarda	3.25	341	P	Pn	00 59 06.0	+0.4
	1.3nm,0.4s,SNR=4.0						
EIBI	Ibiza	3.38	3	Pn	Pn	00 59 08.3	+0.7
	0.9nm,0.4s,SNR=7.9						
EIBI				Sn	Sn	00 59 46.5	-0.7
	0.7nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.38	3	P	Pn	00 59 08.3	+0.7
	0.9nm,0.4s,SNR=7.9						
EIBI				S	Sn	00 59 46.5	-0.7
	0.7nm,0.2s,SNR=7.9						
EBER	Berja	3.49	292	Pn	Pn	00 59 08.8	-0.2
	2.5nm,0.2s,SNR=4.7						
EBER				Sn	Sn	00 59 49.1	-0.7
	3.8nm,0.4s,SNR=7.9						
EBER	Berja	3.49	292	P	Pn	00 59 08.8	-0.2
	2.5nm,0.2s,SNR=4.7						
EBER				S	Sn	00 59 49.1	-0.7
	3.8nm,0.4s,SNR=7.9						
ETOB	Tobarra	3.69	325	Pn	Pn	00 59 12.5	+0.7
	0.5nm,0.1s,SNR=8.2						
ETOB				Sn	Sn	00 59 54.2	-0.7
	3.7nm,0.5s,SNR=4.7						
ETOB	Tobarra	3.69	325	P	Pn	00 59 12.5	+0.6
	0.5nm,0.1s,SNR=8.2						
ETOB				S	Sn	00 59 54.2	-0.7
	3.7nm,0.5s,SNR=4.7						
EQES	Quesada	4.01	304	Pn	Pn	00 59 17.6	+1.1
	0.1nm,0.1s,SNR=30						
EQES				Sn	Sn	01 00 02.3	-0.8
	2.3nm,0.4s,SNR=7.9						
EQES	Quesada	4.01	304	P	Pn	00 59 17.6	+1.1
	3.2nm,0.2s,SNR=30						
EQES				S	Sn	01 00 02.3	-0.8
	2.3nm,0.4s,SNR=7.9						
EBAN	Banos Encina	4.68	304	Pn	Pn	00 59 27.1	+1.1
	0.2nm,0.1s,SNR=7.9						
EMIJ	Mijas	4.87	283	P	Pn	00 59 30.4	+1.7
EMIJ	Mijas	4.87	283	Pn	Pn	00 59 29.0	+0.3
	0.1nm,0.1s,SNR=7.9						
EMIJ	Mijas	4.87	283	P	Pn	00 59 30.4	+1.7

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*NEIC **26** 01:25:02.7, 29.73S×70.99W, h32^{km}, ML4.1(GUC), After GUC.*

GUC 26 01:25:02.7±0.9**, 29.73S×70.99W, h32**^{km}±3^{km}**, MD4.2, ML4.1, 6C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OVCH	Ovalle	0.89	192	iP	Pn	01 25 18.8	-0.3
OVCH				iS	Sn	01 25 30.9	-0.1
OVCH				AMP		01 25 32.1	
	comp=E,6μm,0.2s						
VACH	Vallenar	1.17	10	⇓iP	Pn	01 25 23.8	+0.8
VACH				iS	Sn	01 25 39.2	+1.2
CMCH	Combarbala	1.44	180	⇑iP	Pn	01 25 27.1	+0.2
CMCH				iS	Sn	01 25 46.6	+1.8
CMCH				AMP		01 25 47.3	
	comp=E,9μm,0.6s						
ILCH	Illapel	1.91	185	iS	Sn	01 25 58.3	+1.6
ILCH				AMP		01 26 04.7	
	comp=E,3μm,0.2s						
CPCH	Copiapo	2.43	13	⇑iP	Pn	01 25 41.2	+0.1
CPCH				iS	Sn	01 26 10.6	+0.6
ZON	Zonda	2.69	133	eP	Pn	01 25 51.0	+6.2
ZON				eS	Sn	01 26 29.0	+12
PACH	Papudo	2.82	188	⇑iP	Pn	01 25 46.6	-0.1
PACH				iS	Sn	01 26 21.0	+1.0
JACH	Jahuel	2.96	174	⇑eP	Pn	01 25 49.1	+0.5
JACH				iS	Sn	01 26 24.1	+0.6
ROCH	El Roble	3.23	180	iP	Pn	01 25 52.8	+0.3
ROCH				iS	Sn	01 26 31.5	+1.2
FCH	Farellones	3.63	171	iS	Sn	01 26 41.2	+0.7
MDZ	Mendoza	3.64	150	eP	Pn	01 26 05.4	+7.2
PCH	Pirque	3.90	174	iS	Sn	01 26 47.1	-0.1
TACH	Talagante	3.91	179	⇓eP	Pn	01 26 02.3	+0.2
TACH				iS	Sn	01 26 47.1	-0.4
CHCH	Chadas Angostu	4.20	176	⇑iP	Pn	01 26 06.5	+0.2
CHCH				iS	Sn	01 26 54.2	-0.7
LNV	Longovilo	4.23	185	iS	Sn	01 26 54.5	-1.0
SFDO	San Fernando	4.87	180	⇑iP	Pn	01 26 15.2	-0.6
SFDO				iS	Sn	01 27 10.2	-1.5
TRQA	Tornquist	11.17	140	eP	P	01 27 41.7	-1.7
	comp=E,14nm,0.8s						

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*THR **26** 01:33:50.2±0.3, 33.10N×58.25E, h14^{km}±9^{km}, ML3.6*

*CSEM **26** 01:33:51.2±0.1, 33.03N×58.20E, h16^{km}, ML3.4, Error ellipse: s-maj=3.8km s-min=3.4km az=22.0*

*TEH **26** 01:33:53.9, 33.09N×58.02E, h10^{km}, Mn3.4*

ISC 26 01:33:51.0±0.8**, 33.05N**±0.06×**58.13E**±0.08**, h10**^{km}**, n21, σ0^{s}93**/22**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ICHK	Chekchek	3.24	257	Pn	Pn	01 34 42.8	-0.2
KRBR	Kerman	3.27	201	ePN	Pn	01 34 44.6	+1.1
KRBR				AML	AML	01 35 44.3	
	comp=N,171nm,0.6s						
IMEH	Mehriz	3.41	242	Pn	Pn	01 34 46.1	+0.7
IPAY	Payeh	3.46	12	Pn	Pn	01 34 45.3	-0.9
IMYA	Miamay	3.66	26	Pn	Pn	01 34 49.3	+0.3
ISFR	Esferayen	3.98	359	Pn	Pn	01 34 54.7	+1.1
ZHSF	Zahedan	4.11	146	ePN	Pn	01 34 54.5	-0.9
NASN	Na'in	4.48	268	ePN	Pn	01 35 01.6	+1.0
NASN				eSG	Sg	01 36 12.5	-7.8
NASN				AML	AML	01 36 18.4	
	comp=N,36nm,0.6s						
IKIA	Kiasar	4.83	312	Pn	Pg	01 35 18.9	-8.6
ISHM	Shahmirzad	4.85	306	Pn	Pn	01 35 06.5	+0.6
ILAS	Lasjerd	4.87	300	Pn	Pn	01 35 14.6	+8.4
IZEF	Zefreh	4.88	270	Pn	Pn	01 35 03.9	-2.3
IGLO	Galoogah	5.01	312	Pn	Pn	01 35 09.1	+0.9
IFIR	Firoozkooh	5.14	302	Pn	Pn	01 35 09.4	-0.6
IPAR	Pars	5.39	235	Pn	Pg	01 35 33.1	-5.6
IKLH	Kalahroud	5.50	275	Pn	Pn	01 35 08.6	-6.4
IDMV	Damavand	5.64	298	Pn	Pn	01 35 16.6	-0.4
IVRN	Varamin	5.66	292	Pn	Pn	01 35 16.4	-0.9
IPRN	Paran-Amol	5.80	305	Pn	Pn	01 35 13.1	-6.2
ASAO	Ashtian	6.91	285	ePN	Pn	01 35 34.7	-0.2
IRAZ	Razeghan	7.18	291	Pn	Pn	01 35 43.1	+4.3

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*NEIC **26** 02:06:52.8±3.1, 21.66N×142.95E, h305^{km}±32^{km}, mb3.8/2, Error ellipse: s-maj=37.2km s-min=12.4km az=95.0*

*IDC **26** 02:06:53.3±2.2, 21.72N×142.88E, h306^{km}±20^{km}, mb3.3/5, mb1 3.5/7, mb1mx3.2/22, mbtmp4.0/7, Error ellipse: s-maj=37.1km s-min=19.7km az=91.0*

ISC 26 02:06:52.7±1.2**, 21.68N**±0.08×**143.0E**±0.3**, h321**^{km}±11^{km}**, n25, σ0^{s}82**/25**, mb3.5**/6**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	4.98	352	P	P	02 08 11.3	0.0
JHHJ				eS	S	02 09 13.3	+0.4
CBIJ	Chichi jima	5.44	353	P	P	02 08 16.5	0.0
	9.9nm,0.3s,baz=96,slow=21,SNR=10						
CBIJ				S	S	02 09 21.9	-0.5
	12nm,0.3s,baz=258,slow=22,SNR=8.9						
CBIJ	Chichi jima	5.44	353	P	P	02 08 16.5	0.0
CBIJ				eS	S	02 09 23.3	+0.9
BSO3	Boso 3	13.25	351	P	P	02 09 50.5	-0.6
JWZ	Kozaga	13.44	333	P	P	02 09 55.2	+1.9
BSO4	Boso 4	13.46	351	P	P	02 09 53.7	+0.1
JOD2	Odawara 2	13.95	347	P	P	02 09 59.4	-0.1
JNY	Yasuok	14.34	343	P	P	02 10 04.7	+0.8
JRY	Ryogami san	14.72	347	P	P	02 10 07.8	-0.3
JAG	Ashikaga	15.01	349	P	P	02 10 10.3	-0.9
JAG				eS	S	02 12 50.5	+0.5
JHO	Hitachi	15.02	353	P	P	02 10 11.1	-0.3
MJAR	Matsushiro Arr	15.38	345	P	P	02 10 14.1	-1.3
	0.5nm,0.3s,baz=166,slow=11,SNR=3.9						
MAJO	Matsushiro	15.38	345	P	P	02 10 13.9	-1.4
	2.2nm,0.4s						
MAT	Matsushiro	15.38	345	P	P	02 10 14.6	-0.7
WRAB	Tennant Creek	42.21	192	eP	P	02 14 16.4	-0.3
	2.4nm,0.6s,mb3.5						
WRA	Warramunga Arr	42.22	192	P	P	02 14 16.6	-0.1
	0.6nm,0.4s,mb3.1,baz=17,slow=9.0,SNR=5.0						
ILAR	Eielson Array	62.14	27	P	P	02 16 41.2	-0.7
	0.5nm,0.7s,mb3.2,baz=256,slow=5.4,SNR=5.6						
ARCES	ARCESS Array B	78.87	341	P	P	02 18 23.0	+1.4
	2.4nm,0.8s,mb4.0,baz=68,slow=7.4,SNR=8.3						
FINES	FINESS Array B	83.11	334	P	P	02 18 43.8	+0.1
	1.0nm,0.6s,mb3.8,baz=71,slow=3.6,SNR=12						
NVAR	Mina Array Bea	83.31	51	P	P	02 18 46.7	+1.5
	0.5nm,0.5s,mb3.6,baz=290,slow=3.6,SNR=5.2						
NVAR	Mina Array Bea	83.31	51	P	P	02 18 46.7	+1.5
PLCA	Paso Flores	145.89	132	PKPbc	PKPbc	02 25 57.2	+2.6
	1.6nm,0.6s,baz=239,slow=4.5,SNR=5.3						
PLCA	Paso Flores	145.89	132	ePKPbc	PKPbc	02 25 57.2	+2.5
LPAZ	La Paz	150.14	85	PKPbc	PKPdf	02 26 10.2	+9.4
	0.6nm,0.5s,baz=206,slow=24,SNR=7.7						
LPAZ				PKPab	PKPab	02 26 17.0	+1.2
	0.7nm,0.5s,baz=339,slow=9.3,SNR=6.2						
LPAZ	La Paz	150.14	85	ePKPbc	PKPdf	02 26 09.8	+8.9
LPAZ				ePKPab	PKPab	02 26 16.7	+0.9

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*FUNV **26** 02:25:34.8, 6.75N×73.20W, h165^{km}, MW3.3*

*NEIC **26** 02:25:35.5±0.8, 6.70N×72.94W, h166^{km}±13^{km}, Error ellipse: s-maj=37.2km s-min=11.9km az=128.0*

*IDC **26** 02:25:35.1±0.8, 6.75N×72.99W, h155^{km}±15^{km}, mb3.1/3, mb1 3.6/5, mb1mx3.2/22, mbtmp3.7/5, Error ellipse: s-maj=43.7km s-min=7.9km az=132.0*

ISC 26 02:25:34.6±0.6**, 6.85N**±0.07×**73.00W**±0.07**, h167**^{km}±7^{km}**, n19, σ1^{s}11**/30**, mb3.4**/3**, 1C-5D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.22	34	⇓iP	P	02 26 04.4	+1.3
CAPV				eS	S	02 26 26.0	+0.9
ROSC	El Rosal	2.38	214	P	P	02 26 16.4	+0.7
	28nm,0.3s,baz=89,slow=23,SNR=239						
ROSC				S	S	02 26 45.1	-2.2
	60nm,0.3s,baz=95,slow=20,SNR=13						
VIGV	El Vigia	2.56	39	⇓iP	P	02 26 19.0	+1.2
VIGV				eS	S	02 26 51.0	0.0
SOCV	Socops	2.56	56	⇓iP	P	02 26 19.3	+1.5
SOCV				eS	S	02 26 51.5	+0.5
SDV	Santo Domingo	3.10	49	P	P	02 26 26.0	+1.5
	40nm,0.3s,baz=220,slow=2.2,SNR=139						
SDV				S	S	02 27 03.3	+0.5
	16nm,0.3s,baz=92,slow=23,SNR=9.8						
SDV	Santo Domingo	3.10	49	eP	P	02 26 25.4	+0.9
SDV				eS	S	02 27 02.9	0.0
VIRV	Villa del Rosa	3.67	9	eP	P	02 26 31.3	-0.6
VIRV				eS	S	02 27 13.9	-2.1
QARV	Quebrada Arrib	4.14	36	⇓iP	P	02 26 39.0	+1.1
QARV				eS	S	02 27 25.3	-1.3
SANV	Sanarito	4.32	52	⇑iP	P	02 26 41.0	+0.7
SANV				eS	S	02 27 30.3	-0.6
CURV	Curarigua	4.35	44	eP	P	02 26 41.2	+0.6
DABV	Dabajuro	4.67	30	eP	P	02 26 45.5	+0.7
DABV				eS	S	02 27 36.9	-2.1
TEPV	Terepaima	4.87	50	eP	P	02 26 48.1	+0.6
TEPV				eS	S	02 27 42.5	-1.2
BAUV	El Baul	5.33	67	⇓iP	P	02 26 52.8	-0.7
BAUV				eS	S	02 27 53.1	-1.5
OTAV	Otavalo	8.53	220	eP	P	02 27 34.4	-1.4
TXAR	Lajitas Array	36.53	312	P	P	02 32 26.4	+0.6
	0.2nm,0.4s,mb3.1,baz=122,slow=9.0,SNR=5.4						
PDAR	Pinedale Array	48.12	324	P	P	02 34 00.5	+0.9
	0.3nm,0.4s,mb3.3,baz=128,slow=10,SNR=2.9						
YKA	Yellowknife Ar	63.27	340	P	P	02 35 47.2	-0.3
	0.8nm,0.6s,mb3.8,baz=134,slow=6.7,SNR=5.4						
YKA	Yellowknife Ar	63.27	340	P	P	02 35 47.2	-0.3
WRA	Warramunga Arr	150.46	241	PKPbc	PKPdf	02 45 08.7	+7.1
	0.3nm,0.4s,baz=104,slow=2.3,SNR=4.9						

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*NEIC **26** 03:34:37.5±0.4, 51.57N×16.17E, h5^{km}, ML3.5(SZGRF), ML3.1(VIE), ML2.7(BRG), Error ellipse: s-maj=5.3km s-min=4.7km az=80.0*

*BGR **26** 03:34:38.2±0.7, 51.52N×16.11E, h1^{km}, ML3.1/6, Error ellipse: s-maj=16.7km s-min=6.7km az=161.0*

*WAR **26** 03:34:39.1, 51.48N×16.10E, h1^{km}, ML3.0, Mining Induced*

*CSEM **26** 03:34:39.0±0.1, 51.45N×16.11E, ML3.3/7, Error ellipse: s-maj=2.7km s-min=1.3km az=11.0*

*IPEC **26** 03:34:39.3±0.2, 51.46N×16.11E, h8^{km}±1^{km}, ML2.3/4, Error ellipse: s-maj=1.3km s-min=0.6km az=30.0*

*IDC **26** 03:34:39.0±0.8, 51.47N×16.01E, mb1 3.4/5, mb1mx3.2/21, mbtmp3.2/5, ML2.5/4, Error ellipse: s-maj=16.5km s-min=7.3km az=100.0*

*PRU **26** 03:34:39.0, 51.45N×16.10E, Felt In Harrachov*

ISC 26 03:34:35.9±0.4**, 51.48N**±0.02×**16.12E**±0.03**, n58, σ1^{s}41**/107**, 2C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.65	170	iPG	Pg	03 34 51.0	+2.2
KSP				eSG	Sg	03 34 59.0	+1.5
KSP	Ksiaz	0.65	170	ePg	Pg	03 34 51.0	+2.1
KSP				eSg	Sg	03 34 59.6	+2.2
KSP	Ksiaz	0.65	170	⇓iPg	Pg	03 34 51.0	+2.2
KSP				eSg	Sg	03 34 59.4	+1.9
UPC	Upice	0.97	184	ePG	Pg	03 34 56.9	+1.5
UPC	Upice	0.97	184	ePg	Pg	03 34 57.0	+1.6
DPC	Dobruska-Polom	1.14	173	ePG	Pg	03 34 59.7	+1.1
DPC				eSG	Sg	03 35 14.2	+0.4
	32nm,0.3s						
DPC	Dobruska-Polom	1.14	173	ePg	Pg	03 34 59.8	+1.2
DPC				Sg	Sg	03 35 14.2	+0.4
	32nm,0.3s						
PVCC	Panska Ves	1.37	226	ePG	Pg	03 35 04.4	+1.2
PVCC	Panska Ves	1.37	226	eSg	Sg	03 35 22.7	+1.3
BRG	Berggiesshubel	1.50	247	ePg	Pg	03 35 06.5	+0.7
BRG				eSg	Sg	03 35 26.7	+0.9
BRG	Berggiesshubel	1.50	247	Pn	Pn	03 35 06.5	+2.3
BRG				Pg	Pg	03 35 07.1	+1.2
BRG				Sg	Sg	03 35 26.9	+1.1
BRG	Berggiesshubel	1.50	247	ePn	Pn	03 35 06.4	+2.2
BRG	Berggiesshubel	1.50	247	Pg	Pg	03 35 07.1	+1.3
BRG				eSg	Sg	03 35 25.9	+0.1
RUE	Ruedersdorf	1.76	306	eSg	Sg	03 35 34.4	-0.1
PRU	Pruhonice	1.80	214	ePN	Pn	03 35 10.5	+2.1
PRU				ePG	Pg	03 35 11.6	-0.2
PRU				eSG	Sg	03 35 34.9	-0.9
PRU	Pruhonice	1.80	214	ePg	Pg	03 35 11.6	-0.2
PRU				Sg	Sg	03 35 34.9	-0.9
FBE	Freiberg	1.83	253	Pg	Pg	03 35 12.1	-0.3
FBE				Sg	Sg	03 35 36.2	-0.6
RAC	Raciborz	1.92	136	ePN	Pn	03 35 10.0	-0.2
RAC				ePN	Pn	03 35 14.0	+3.8
RAC				eS	Sn	03 35 40.0	+4.6
RAC	Raciborz	1.92	136	ePg	Pg	03 35 13.8	-0.5
RAC				eSg	Sg	03 35 39.9	0.0
MORC	Moravsky Berou	1.93	151	ePn	Pn	03 35 11.4	+1.1
MORC				eSn	Sn	03 35 38.4	+2.7
MORC	Moravsky Berou	1.93	151	ePn	Pn	03 35 11.4	+1.1
MORC				eSg	Sg	03 35 38.9	-1.3
	27nm,0.3s						
CLL	Collm	1.96	266	ePn	Pn	03 35 11.4	+0.6
CLL	Collm	1.96	266	ePG	Pg	03 35 14.0	-1.1
CLL				eSN	Sn	03 35 36.0	-0.4
CLL				iSG	Sg	03 35 40.6	-0.6
CLL				i		03 35 49.8	
CLL	Collm	1.96	266	ePg	Pg	03 35 14.0	-1.1
CLL				iSg	Sg	03 35 40.6	-0.6
OKC	Ostrava-Krasne	2.09	141	ePG	Pg	03 35 18.1	+0.4
OKC				eSG	Sg	03 35 44.0	-1.5
OKC	Ostrava-Krasne	2.09	141	Pg	Pg	03 35 18.1	+0.4
OKC				eSg	Sg	03 35 44.4	-1.1
VRAC	Vranov	2.19	172	Pn	Pn	03 35 15.9	+1.8
	0.7nm,0.3s,baz=338,slow=16,SNR=4.0						
VRAC				Pg	Pg	03 35 20.3	+0.5
	1.3nm,0.3s,baz=346,slow=18,SNR=8.6						
VRAC				Lg		03 35 47.5	
	6.0nm,0.3s,baz=92,slow=20,SNR=11						
VRAC	Vranov	2.19	172	Pg	Pg	03 35 20.3	+0.6
VRAC				eSg	Sg	03 35 47.5	-1.5
	15nm,0.3s						
KRUC	Moravsky	2.43	176	ePg	Pg	03 35 23.2	-1.2
KRUC				eSg	Sg	03 35 55.3	-1.4
	13nm,0.4s						
TANN	Tannenbergstha	2.55	247	ePn	Pn	03 35 20.6	+1.4
TANN				eSg	Sg	03 35 58.8	-1.9
NKC	Novy Kostel	2.64	243	ePN	Pn	03 35 22.1	+1.6
NKC				ePG	Pg	03 35 28.9	+0.3
NKC				eSG	Sg	03 36 02.8	-1.0
	57nm,0.2s						
OJC	Ojcow	2.65	117	ePG	Pg	03 35 28.0	-0.9
OJC				eSG	Sg	03 36 03.0	-1.2
JAVC	Velka Javorina	2.81	159	eSg	Sg	03 36 07.6	-1.8
	9.0nm,0.5s						
KHC	Kasperske Hory	2.86	216	ePN	Pn	03 35 24.8	+1.2
KHC				ePG	Pg	03 35 30.1	-2.9
KHC				eSN	Sn	03 35 59.1	-0.2
KHC				eSG	Sg	03 36 07.5	-3.6
	9.4nm,0.2s						
MOX	Moxa	2.96	255	ePn	Pn	03 35 26.1	+1.0
MOX				eSg	Sg	03 36 12.7	-1.9
MOX	Moxa	2.96	255	ePn	Pn	03 35 25.9	+0.8
MOX				ePg	Pg	03 35 33.6	-1.5
MOX				eSg	Sg	03 36 13.1	-1.4
MOX	Moxa	2.96	255	iP	Pn	03 35 25.9	+0.8
MOX				Pg	Pg	03 35 34.0	-1.1
MOX				Sg	Sg	03 36 13.0	-1.5
MOX	Moxa	2.96	255	ePg	Pg	03 35 33.6	-1.5

MOX				Sg	**Sg**	**03 36 12.7**	**-1.8**
NOTT	**Nottersdorf**	**3.04**	**238**	*e*Pn	**Pn**	**03 35 27.3**	**+1.0**
NOTT				*e*Sg	**Sg**	**03 36 14.1**	**-3.1**
GEC2	**GERESS Array S**	**3.06**	**211**	*e*Pn	**Pn**	**03 35 28.6**	**+2.1**
GEC2	**GERESS Array S**	**3.06**	**211**	*e*Pn	**Pn**	**03 35 28.6**	**+2.1**
GERES	**GERESS Array B**	**3.06**	**211**	Pn	**Pn**	**03 35 28.1**	**+1.6**
	0.5nm,0.3s,baz=26,slow=12,SNR=20						
GERES				Pg	**Pg**	**03 35 35.1**	**-1.9**
	1.5nm,0.3s,baz=29,slow=17,SNR=25						
GERES				Sn	**Sn**	**03 36 04.6**	**+0.2**
	2.1nm,0.3s,baz=40,slow=22,SNR=7.9						
GERES				Lg		03 36 15.4	
	4.9nm,0.3s,baz=34,slow=30,SNR=10						
GERES	**GERESS Array B**	**3.06**	**211**	Pg	**Pg**	**03 35 35.1**	**-1.9**
WET	**Wettzell**	**3.13**	**223**	*e*Pn	**Pn**	**03 35 28.6**	**+1.2**
WET	**Wettzell**	**3.13**	**223**	*e*Pn	**Pn**	**03 35 28.6**	**+1.2**
ZST	**Bratislava**	**3.35**	**169**	*e*SG	**Sg**	**03 36 23.9**	**-3.5**
NIE	**Niedzica**	**3.38**	**126**	*e*P	**Pn**	**03 35 47.0**	**+16**
NIE				*e*S	**Sn**	**03 36 27.0**	**+14**
CLZ	**Clausthal**	**3.60**	**278**	*e*Pn	**Pn**	**03 35 35.9**	**+1.8**
GRA1	**Grafenberg Arr**	**3.60**	**242**	*e*Pn	**Pn**	**03 35 34.7**	**+0.6**
GRA1				*e*Sg	**Sg**	**03 36 33.7**	**-2.0**
GRA1	**Grafenberg Arr**	**3.60**	**242**	Pn	**Pn**	**03 35 34.7**	**+0.6**
GRA1				Sg	**Sg**	**03 36 33.7**	**-2.0**
GRF	**Grafenberg Arr**	**3.60**	**242**	*e*Pn	**Pn**	**03 35 34.7**	**+0.6**
GRF				*e*Sg	**Sg**	**03 36 33.7**	**-2.0**
BSD	**Bornholm Skovb**	**3.71**	**349**	*i* P	**Pn**	**03 35 35.0**	**-0.8**
BSD				*e*S	**Sn**	**03 36 17.1**	**-3.8**
BSD				*i*		03 36 36.4	
MOA	**Molln**	**3.83**	**199**	⇑*i*PN	**Pn**	**03 35 38.8**	**+1.4**
MOA				*i* SG	**Sg**	**03 36 42.3**	**-1.1**
	12nm,0.6s						
ARSA	**Arzberg**	**4.25**	**185**	⇑*i*PN	**Pn**	**03 35 45.3**	**+1.9**
ARSA				*i* SG	**Sg**	**03 36 53.8**	**-3.6**
	10nm,0.5s						
CRVS	**Cervenica-Dubn**	**4.29**	**125**	*e*PG	**Pg**	**03 35 58.7**	**-2.9**
HFS	**Hagfors**	**8.78**	**352**	Pn	**P**	**03 36 43.4**	**-3.7**
	0.0nm,0.3s,baz=163,slow=15,SNR=4.2						
FINES	**FINESS Array B**	**11.39**	**25**	Pn	**P**	**03 37 19.9**	**-2.9**
	0.1nm,0.3s,baz=215,slow=11,SNR=6.9						
ARCES	**ARCESS Array B**	**18.65**	**10**	Pn	**P**	**03 38 54.5**	**-2.4**
	0.2nm,0.3s,baz=204,slow=12,SNR=5.0						

IDC 26 03:50:32.3±9.4**, 22.21S**×**178.44W, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/14**, mbtmp3.9**/3**, Error ellipse: s-maj=217.1km s-min=45.5km az=38.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.70**	**246**	P	P	03 57 41.4	-1.6
	1.0nm,0.5s,baz=81,slow=12,SNR=3.3						
WRA	**Warramunga Arr**	**43.99**	**264**	P	P	03 58 41.4	-2.0
	2.3nm,0.6s,baz=102,slow=8.0,SNR=11						
VNDA	**Vanda**	**56.18**	**185**	P	P	04 00 13.4	-2.4
	0.4nm,0.7s,baz=4.3,slow=7.2,SNR=6.2						

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*MOS **26** 04:02:28.6±1.3, 55.31N×112.45E, h15^{km}, mb4.3/1, Error ellipse: s-maj=17.0km s-min=10.5km az=83.3*

BYKL 26 04:02:29.0±0.2**, 55.33N**×**112.44E, h16**^{km}±20^{km}**, 9C-9D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UKT	**Uakit**	**0.69**	**76**	*e*PG	Pb	04 02 41.5	-0.8
UKT				*e*		04 02 50.9	
UKT				pmax	pmax		
	comp=Z,121nm,0.1s						
UKT				smax			
	comp=N,909nm,0.2s						
UKT	**Uakit**	**0.69**	**76**	⇓*i*Pg	Pb	04 02 41.5	-0.8
	comp=N,17nm,0.3s						
UKT				⇓*i*Pg	Pb	04 02 41.5	-0.8
	comp=N,113nm,0.3s						
UKT				⇓*i*Pg	Pb	04 02 41.5	-0.8
	comp=N,64nm,0.3s						
UKT				*i* Sg	Sb	04 02 51.0	-0.3
UKT				Pmax			
	comp=N,132nm,0.2s						
UKT				Smax			
	comp=N,851nm,0.4s						
YLYR	**Ulyunkhan**	**0.86**	**239**	*e*PG	Pb	04 02 44.6	-0.5
YLYR				*e*		04 02 56.5	
YLYR				pmax	pmax		
	comp=Z,116nm,0.1s						
YLYR				smax			
	comp=E,908nm,0.1s						
YLYR	**Ulyunkhan**	**0.86**	**239**	⇑*i*Pg	Pb	04 02 44.6	-0.5
	comp=E,46nm,0.3s						
YLYR				⇑*i*Pg	Pb	04 02 44.6	-0.5
	comp=E,52nm,0.3s						
YLYR				⇓*i*Pg	Pb	04 02 44.6	-0.5
	comp=E,62nm,0.3s						
YLYR				*e*Pb	Pb	04 02 45.2	+0.1
YLYR				*e*Sg	Sb	04 02 56.9	+0.6
YLYR				max			
	comp=E,58nm,0.2s						
YLYR				Smax			
	comp=E,895nm,0.1s						
KMO	**Kumora**	**0.90**	**309**	⇑*i*PG	Pb	04 02 44.8	-0.9
KMO				*e*		04 02 56.5	
KMO				pmax	pmax		
	comp=Z,422nm,0.3s						
KMO				smax			
	comp=N,1μm,0.8s						
KMO	**Kumora**	**0.90**	**309**	⇑*i*Pg	Pb	04 02 44.9	-0.8
	comp=N,47nm,0.5s						
KMO				⇑*i*Pg	Pb	04 02 44.9	-0.8
	comp=N,48nm,0.5s						
KMO				⇑*i*Pg	Pb	04 02 44.9	-0.8
	comp=N,377nm,0.5s						
KMO				*e*Sg	Sb	04 02 56.7	-0.5
KMO				Pmax			
	comp=N,422nm,0.4s						
KMO				Smax			
	comp=N,1μm,1.0s						
YOA	**Uoyan**	**0.90**	**334**	⇓*i*PG	Pb	04 02 45.1	-0.7
YOA				*i*		04 02 57.9	
YOA				pmax	pmax		
	comp=Z,556nm,0.4s						
YOA				smax			
	comp=N,1μm,0.4s						
YOA	**Uoyan**	**0.90**	**334**	⇑*i*Pg	Pb	04 02 45.3	-0.5
YOA				*e*Pb	Pb	04 02 46.9	+1.1
YOA				*e*Sg	Sb	04 02 58.3	+1.0
YOA				max			
	comp=N,826nm,0.2s						
YOA				Smax			
	comp=N,3μm,0.5s						
NIZ	**Nizh Angarsk**	**1.71**	**286**	*e*PN	Pn	04 02 59.0	+0.6
NIZ				*e*		04 02 59.5	
NIZ				*e*		04 03 21.9	
NIZ				pmax	pmax		
	comp=Z,75nm,0.7s						
NIZ				smax			
	comp=N,464nm,0.6s						
NIZ	**Nizh Angarsk**	**1.71**	**286**	⇑*i*Pg	Pn	04 02 59.0	+0.6
NIZ				*e*Sg	Sn	04 03 22.0	+2.0
NIZ				Pmax			
	comp=N,91nm,0.4s						
NIZ				Smax			
	comp=N,585nm,0.4s						
NLYR	**Nelyaty**	**2.17**	**56**	*e*PN	Pn	04 03 04.7	-0.4
NLYR				*e*		04 03 07.0	
NLYR				*e*		04 03 36.3	
NLYR				pmax	pmax		
	comp=Z,54nm,0.2s						
NLYR				smax			
	comp=E,420nm,1.0s						
NLYR	**Nelyaty**	**2.17**	**56**	⇓*i*Pn	Pn	04 03 04.9	-0.2
NLYR				⇓*i*Pg	Pn	04 03 07.3	+2.2
NLYR				*e*		04 03 13.0	
NLYR				*e*Sg	Sn	04 03 36.6	+4.7
NLYR				max			
	comp=E,73nm,0.6s						
NLYR				Smax			
	comp=E,423nm,1.0s						
SYVR	**Suvo**	**2.20**	**221**	*e*PN	Pn	04 03 05.5	0.0
SYVR				*e*		04 03 07.8	
SYVR				*e*		04 03 34.6	
SYVR				pmax	pmax		
	comp=Z,45nm,0.2s						
SYVR				smax			
	comp=E,225nm,0.3s						
SYVR	**Suvo**	**2.20**	**221**	*e*Pn	Pn	04 03 05.5	0.0
SYVR				*e*Pg	Pn	04 03 08.1	+2.6
SYVR				*e*		04 03 12.8	
SYVR				*e*Sg	Sn	04 03 37.4	+4.9
SYVR				max			
	comp=E,60nm,0.3s						
SYVR				Smax			
	comp=E,346nm,1.0s						
BOD	**Bodaibo**	**2.64**	**18**	*e*PN	Pn	04 03 14.5	+2.7
BOD				*e*S	Sn	04 03 42.3	-1.5
BOD	**Bodaibo**	**2.64**	**18**	⇓*i*Pn	Pn	04 03 10.9	-0.9
BOD				*e*Pg	Pn	04 03 15.7	+3.9
BOD				*e*Sn	Sn	04 03 43.2	-0.6
BOD				*e*Sg	Sn	04 03 49.1	+5.3
BOD				Pmax			
	comp=E,37nm,0.3s						
BOD				Smax			
	comp=E,410nm,0.7s						
MXMB	**Maximikha**	**3.00**	**228**	*e*Pg	Pn	04 03 23.0	+6.1
MXMB				*e*Sg	Sn	04 04 02.0	+9.2
MXMB				Pmax			
	comp=E,22nm,0.1s						
MXMB				Smax			
	comp=E,432nm,0.6s						
OGRR	**Ongureny**	**3.29**	**241**	*e*Pn	Pn	04 03 20.7	-0.4
OGRR				*e*Pg	Pn	04 03 27.9	+6.8
OGRR				*e*		04 03 33.9	
OGRR				*e*Sn	Sn	04 04 00.2	-0.1
OGRR				*e*Sg	Sn	04 04 10.9	+11
OGRR				max			
	comp=E,19nm,0.6s						
OGRR				Smax			
	comp=E,63nm,0.9s						
CIT	**Chita**	**3.38**	**168**	*e*PN	Pn	04 03 28.9	+6.6
CIT				*e*		04 04 13.0	
CIT				pmax	pmax		
	comp=Z,74nm,0.3s						
CIT				smax			
	comp=E,203nm,0.6s						
CIT	**Chita**	**3.38**	**168**	*e*Pg	Pn	04 03 29.0	+6.7
CIT				*e*Sg	Sn	04 04 13.0	+11
CIT				Pmax			
	comp=E,66nm,0.3s						
CIT				Smax			
	comp=E,177nm,0.4s						
CRS	**Chara**	**3.62**	**62**	*e*PN	Pn	04 03 25.3	-0.5
CRS				*e*		04 03 33.6	
CRS				*e*		04 04 20.9	
CRS				pmax	pmax		
	comp=Z,26nm,0.2s						
CRS				smax			
	comp=E,107nm,0.5s						
CRS	**Chara**	**3.62**	**62**	*e*Pn	Pn	04 03 25.0	-0.8
CRS				⇑*i*Pg	Pn	04 03 33.5	+7.7
CRS				*e*Sg	Sn	04 04 21.0	+12
CRS				Pmax			
	comp=E,34nm,0.9s						
CRS				Smax			
	comp=E,109nm,0.9s						
ZRHB	**Zarechye**	**4.18**	**230**	*e*Sg	Sn	04 04 38.6	+16
TRG	**Tyrgan**	**4.42**	**237**	*e*Pg	Pn	04 03 47.9	+11
TRG				*e*		04 03 51.6	
TRG				*e*Sn	Sn	04 04 27.7	-1.0
TRG				*e*Sg	Sn	04 04 45.5	+17
TRG				max			
	comp=E,8.0nm,0.3s						
TRG				Smax			
	comp=E,45nm,1.0s						
TUP	**Tupik**	**4.43**	**99**	*e*PN	Pn	04 03 35.6	-1.7
TUP				*e*		04 03 48.0	
TUP				*e*S	Sn	04 04 24.9	-4.2
TUP				*e*		04 04 46.3	
TUP				pmax	pmax		
	comp=Z,24nm,0.6s						
TUP				smax			
	comp=N,224nm,1.0s						
TUP	**Tupik**	**4.43**	**99**	⇓*i*Pn	Pn	04 03 35.7	-1.6
TUP				*e*		04 03 43.8	
TUP				*e*Pg	Pn	04 03 48.1	+11
TUP				*e*		04 03 53.6	
TUP				*e*Sn	Sn	04 04 23.8	-5.3
TUP				*e*Sg	Sn	04 04 46.3	+17
TUP				max			
	comp=N,28nm,0.7s						
TUP				Smax			
	comp=N,238nm,1.0s						
FFNB	**Fofonovo**	**4.71**	**228**	*e*Pg	Pn	04 03 55.5	+14
FFNB				*e*Sg	Sn	04 04 55.9	+20
FFNB				Smax			
	comp=N,131nm,0.6s						
KPC	**Khapcheranga**	**5.64**	**180**	*e*PN	Pn	04 03 51.6	-2.7
KPC				*e*		04 04 08.3	
KPC				*e*		04 05 23.1	
KPC				pmax	pmax		
	comp=Z,8.0nm,0.2s						
KPC				smax			
	comp=E,78nm,0.6s						
KPC	**Khapcheranga**	**5.64**	**180**	*e*Pn	Pn	04 03 51.6	-2.7
KPC				*e*		04 03 58.3	
KPC				*e*Pg	Pn	04 04 11.1	+17
KPC				*e*Sg	Sn	04 05 22.4	+23
KPC				Pmax			
	comp=E,8.0nm,0.3s						
KPC				Smax			
	comp=E,80nm,1.0s						
LSTR	**Listvyanka**	**5.70**	**236**	*e*Pn	Pn	04 03 56.0	+0.8
LSTR				*e*Pg	Pn	04 04 12.3	+17
LSTR				*e*Sg	Sn	04 05 26.8	+26
LSTR				Pmax			
	comp=E,1.0nm,0.1s						
LSTR				Smax			
	comp=E,31nm,1.6s						
ARS	**Arshan**	**6.87**	**244**	*e*Sg	Sn	04 06 00.2	+30
ARS				Smax			
	comp=E,68nm,0.9s						
TNDR	**Tynda**	**7.03**	**86**	*e*Sg	Sn	04 06 07.9	+34
ORL	**Orlik**	**7.96**	**255**	*e*	Pn	04 03 52.0	-35
ORL				*e*Sn	Sn	04 05 49.7	-7.8
ORL				*e*Sg	Sn	04 06 34.5	+37
ORL				Smax			
	comp=E,27nm,1.4s						

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*NEIC **26** 04:15:33.9, 17.26N×100.23W, h46^{km}, MD3.6(MEX), After MEX.*

MEX 26 04:15:33.6±0.8**, 17.25N**×**100.24W, h48**^{km}±12^{km}**, MD3.6, 1D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.21**	**187**	⇓*i*P	P	04 15 40.3	-1.5
CAIG				*i* S	S	04 15 46.0	-1.6
ACX	**Acapulco**	**0.49**	**141**	*i* P	P	04 15 43.0	-1.7
ACX				*e*S	S	04 15 51.0	-1.6
PLIG	**Platanillo**	**1.33**	**32**	*i* P	P	04 15 55.5	-0.8
PLIG				*i* S	S	04 16 11.0	-2.2
PPM	**Popocatepetl**	**2.37**	**40**	*i* P	P	04 16 11.3	+0.4
PPM				*e*S	S	04 16 41.2	+2.3
PPM	**Popocatepetl**	**2.37**	**40**	*i* P	P	04 16 10.7	-0.2
PPM				*e*S	S	04 16 37.6	-1.2

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*BJI **26** 04:29:14.6, 3.96N×93.16E, h31^{km}, mB5.2, mb4.9, Ms5.3, Msz5.1*

*IDC **26** 04:29:14.2±0.4, 4.25N×93.30E, mb4.6/23, mb1 4.7/24, mb1mx4.7/25, mbtmp4.5/24, ML3.6/1, MS4.6/21, Ms1 4.6/21, ms1mx4.5/28, Error ellipse: s-maj=18.7km s-min=12.3km az=55.0*

*MOS **26** 04:29:15.5±0.9, 4.27N×93.29E, h20^{km}, mb5.3/61, MS4.6/24, Error ellipse: s-maj=9.8km s-min=4.4km az=121.0*

*NEIC **26** 04:29:18.0±0.1, 4.18N×93.27E, mb5.1/77, MS4.5/7, Error ellipse: s-maj=4.9km s-min=3.5km az=26.0*

*HRVD **26** 04:29:18.0±0.2, 4.12N×93.18E, h12^{km}, MW5.1/67, Centroid moment Tensor Solution. LP body waves: s48,c71;Mantle waves: s67,c127; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.58±.12; M$_{\theta\theta}$-0.75±.11; M$_{\phi\phi}$-4.84±.13; M$_{r\theta}$-0.85±.33; M$_{\theta\phi}$2.63±.10; M$_{\phi r}$-0.60±.33; Best double couple: M$_0$5.956×10^{16} NP1: φ$_s$323°, δ45°, λ74°. NP2:φ$_s$165°, δ47°, λ105°. Principal axes: T 5.784, Plg79°, Azm150°; N .337, Plg11°, Azm334°; P -6.129, Plg1°, Azm244°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 26 04:29:16.0±0.2**, 4.17N**±0.04×**93.29E**±0.03**, h24**^{km}**, h24**^{km}±2.1^{km}**:pP-P, n338, σ0**^{s}**.97**/353**, mb4.9**/124**, MS4.7**/57**, 41C-10D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**7.42**	**81**	*e*P	**Pn**	**04 31 04.1**	**-1.5**
IPM	**Ipoh**	**7.72**	**87**	P	**Pn**	**04 31 09.1**	**-0.7**
SNG	**Songkhla**	**7.88**	**67**	P	**Pn**	**04 31 11.0**	**-1.0**
	94nm,0.8s						
KGM	**Kluang**	**10.24**	**102**	P	**P**	**04 31 44.4**	**-0.3**
PALK	**Pallekele**	**12.90**	**284**	*e*P	**P**	**04 32 17.1**	**-3.7**
	30nm,0.8s						
PALK				*e*S	**S**	**04 34 28.1**	**-16**
NST	**Nakhon Sawan**	**13.26**	**30**	P	**P**	**04 32 25.4**	**-0.1**
CM31	**Chiang Mai Arr**	**15.24**	**21**	*e*P	**P**	**04 32 52.5**	**+1.0**
	37nm,0.6s						
CMAR	**Chiang Mai Arr**	**15.24**	**21**	Pn	**P**	**04 32 51.1**	**-0.4**
	0.1nm,0.3s,baz=217,slow=13,SNR=22						
CMAR				LR	LR	04 39 01.9	
	comp=Z,1μm,20.0s,baz=215,slow=39						
KKTK	**Khon Kaen**	**15.29**	**37**	PG	**P**	**04 32 58.0**	**+5.8**
KKTK				SG	rx	04 33 03.0	
MDRS	**Chennai**	**15.63**	**305**	*e*x	x	04 36 50.0	
VIS	**Vishakhapatnam**	**16.63**	**325**	*e*P	**P**	**04 33 07.4**	**-2.0**
VIS				AMb	AMB	04 33 11.8	
	comp=Z,67nm,1.5s						
VIS				*e*x	x	04 36 40.1	
VIS				*e*x	x	04 41 05.1	
VIS				*i* x	x	04 47 41.6	
KSM	**Kuching**	**17.20**	**98**	*e*P	**P**	**04 33 17.6**	**+1.0**
CAL	**Calcutta**	**18.88**	**346**	*e*x	**P**	**04 33 40.0**	**+2.7**
CAL				*e*x	x	04 37 22.6	
HYB	**Hyderabad**	**19.54**	**313**	*e*P	**P**	**04 33 42.0**	**-3.0**
HYB				*e*S	**S**	**04 37 28.0**	**+10**
HYB	**Hyderabad**	**19.54**	**313**	*i* P	**P**	**04 33 42.0**	**-3.0**
HYB				*e*S	**S**	**04 37 19.0**	**+0.5**
HYB				LR	LR	04 47 00.0	
	comp=Z,3.4nm,18.0s						
MNGI	**Mangalore**	**20.22**	**297**	*i* x	**P**	**04 33 44.9**	**-7.4**
MNGI				*i* x	x	04 37 48.9	
BLSP	**Bilaspur**	**20.88**	**330**	*e*P	**P**	**04 33 57.4**	**-1.7**
BLSP				AMb	AMB	04 34 04.4	
	comp=Z,107nm,1.5s						
SHL	**Shillong**	**21.32**	**356**	*e*P	**P**	**04 34 01.0**	**-2.5**
SHL				*e*S	**S**	**04 37 59.0**	**+5.0**
QIZ	**Qiongzhong**	**21.89**	**46**	P	**P**	**04 34 10.3**	**+1.0**
QIZ				XP		04 34 19.8	
QIZ				PP	PP	04 34 32.5	-2.4
QIZ				S	**S**	**04 38 07.3**	**+2.5**
QIZ				AMB	AMB		
	comp=Z,40nm,1.7s,mb4.6						
QIZ				AMB	AMB		
	comp=Z,400nm,5.5s						
QIZ				LR	LR		
	comp=N,8μm,15.8s						
QIZ				LR	LR		
	comp=Z,6μm,15.4s,MS5.1						
QIZ	**Qiongzhong**	**21.89**	**46**	P	**P**	**04 34 09.1**	**-0.2**
	comp=Z,40nm,1.1s,mb4.8						
KMI	**Kunming**	**22.73**	**23**	⇑P	**P**	**04 34 19.0**	**+1.4**
KMI				AP		04 34 28.5	
KMI				XP		04 34 32.8	
KMI				S	**S**	**04 38 27.5**	**+7.4**
KMI				XS		04 38 43.0	
KMI				AMB	AMB		
	comp=Z,20nm,1.8s,mb4.2						
KMI				AMB	AMB		
	comp=Z,540nm,5.3s						
KMI				LR	LR		
	comp=N,6μm,9.4s						
KMI				LR	LR		
	comp=E,4μm,15.6s						
KMI				LR	LR		
	comp=Z,5μm,9.5s						
KMI	**Kunming**	**22.73**	**23**	⇑P	**P**	**04 34 19.1**	**+1.5**
KMI				*PP		04 34 28.6	
KMI						04 34 53.8	
KMI				S	**S**	**04 38 27.6**	**+7.5**
KMI				SS	SS	04 39 18.1	+15
KMI				pmax	pmax		
	comp=Z,22nm,1.8s,mb4.3						
KMI	**Kunming**	**22.73**	**23**	⇑P	**P**	**04 34 19.1**	**+1.5**
	comp=Z,22nm,1.8s,mb4.3						
KMI				pP		04 34 28.6	
KMI				sP		04 34 32.7	
KMI				PP	PP	04 34 53.8	+7.3
KMI				S	**S**	**04 38 27.6**	**+7.5**
KMI				sS		04 38 43.0	
KMI				SS	SS	04 39 18.1	+15
KAD	**Karad**	**22.83**	**306**	*e*S	**S**	**04 38 31.5**	**+9.5**
KKM	**Kota Kinabalu**	**22.91**	**84**	*e*P	**P**	**04 34 21.2**	**+1.7**
KKM	**Kota Kinabalu**	**22.91**	**84**	P	**P**	**04 34 21.3**	**+1.8**
POO	**Poona**	**23.77**	**308**	*e*x	x	04 38 14.5	
BHPL	**Bhopal**	**24.39**	**322**	*e*P	**P**	**04 34 32.2**	**-1.6**
BHPL				AMb	AMB	04 34 40.0	
	comp=Z,20nm,0.9s,mb4.5						
BHPL				*e*x	x	04 38 57.8	
BHPL				*i* x	x	04 45 45.0	
PKI	**Pulchoki**	**24.45**	**343**	*e*P	**P**	**04 34 35.6**	**+1.2**
	comp=Z,175nm,1.0s,mb5.5						
PKI	**Pulchoki**	**24.45**	**343**	*e*P	**P**	**04 34 35.6**	**+1.2**
PKI				pmax	pmax		
	comp=Z,88nm,1.0s,mb5.1						
TSM	**Tawau**	**24.51**	**89**	P	**P**	**04 34 36.8**	**+1.7**
DMN	**Daman**	**24.58**	**342**	*e*P	**P**	**04 34 36.6**	**+1.0**
	comp=Z,78nm,0.6s,mb5.4						
GUN	**Gumba**	**24.64**	**344**	*e*P	**P**	**04 34 37.1**	**+0.9**
	comp=Z,111nm,0.7s,mb5.5						
KKN	**Kakani**	**24.70**	**343**	*e*P	**P**	**04 34 37.2**	**+0.4**
	comp=Z,75nm,0.9s,mb5.2						
KKN	**Kakani**	**24.70**	**343**	*e*P	**P**	**04 34 37.2**	**+0.4**
KKN				pmax	pmax		
	comp=Z,37nm,0.9s,mb4.9						
GKN	**Gorkha**	**25.09**	**342**	*e*P	**P**	**04 34 40.9**	**+0.4**
	comp=Z,119nm,0.7s,mb5.5						
KOLN	**Koldanda**	**25.22**	**340**	*e*P	**P**	**04 34 42.1**	**+0.4**
	comp=Z,118nm,1.0s,mb5.4						
LSA	**Lhasa**	**25.47**	**356**	P	**P**	**04 34 45.8**	**+1.7**
LSA				AP	pP	04 34 56.3	+5.1
LSA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
LSA				AMB	AMB		
	comp=Z,490nm,5.6s						
LSA				LR	LR		
	comp=N,790nm,14.0s,MS4.8						
LSA				LR	LR		
	comp=E,2μm,14.0s,MS4.8						
LSA				LR	LR		
	comp=Z,1μm,15.0s,MS4.6						
LSA	**Lhasa**	**25.47**	**356**	*e*P	**P**	**04 34 46.1**	**+2.0**
LSA				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.0						
LSA				MLR	MLR		
	comp=Z,752nm,19.0s,MS4.2						
LSA	**Lhasa**	**25.47**	**356**	*e*P	**P**	**04 34 46.1**	**+2.1**
	comp=Z,44nm,0.8s,mb5.0						
LSA				LR	LR		
	comp=Z,752nm,19.0s,MS4.2						
GYA	**Guiyang**	**25.59**	**29**	⇑*i*P	**P**	**04 34 45.5**	**+0.3**
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.5						
GYA				AMB	AMB		
	comp=Z,390nm,6.3s						
GYA				LR	LR		
	comp=N,3μm,13.5s,MS5.1						
GYA				LR	LR		
	comp=E,3μm,14.4s,MS5.1						
GYA				LR	LR		
	comp=Z,2μm,13.8s,MS4.8						
CD2	**Chengdu**	**28.37**	**19**	⇑*i*P	**P**	**04 35 09.5**	**-1.1**
CD2				PP	PP	04 36 05.8	+3.7
CD2				PPP	PPP	04 36 16.5	+2.1
CD2				S	**S**	**04 39 59.5**	**+5.1**
CD2				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.0						
CD2				AMB	AMB		
	comp=Z,360nm,8.4s						
CD2				LR	LR		
	comp=E,4μm,12.0s						
CD2				LR	LR		
	comp=Z,4μm,10.2s,MS5.3						

NDI	**New Delhi**	28.77	330	*e*P	P	04 35 13.0	-1.2
NDI				*e*x	x	05 08 50.0	
ENH	**Enshi**	30.13	29	*e*P	P	04 35 25.3	-1.1
	comp=Z,20nm,0.8s,mb4.9						
ENH				LR	LR		
	comp=Z,2µm,21.0s,MS4.7						
QZH	**Quanzhou**	31.91	47	P	P	04 35 43.5	+1.4
QZH				S	S	04 40 52.0	+1.6
WHN	**Wuhan**	32.91	35	*e*P	P	04 35 51.3	+0.6
WHN				S	S	04 41 11.3	+5.4
XAN	**Xi'an**	33.09	24	P	P	04 35 50.5	-1.7
XAN				XP	sP	04 36 03.0	+0.4
XAN				PP	PP	04 37 02.5	-0.8
XAN				S	S	04 41 13.8	+5.1
XAN				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
XAN				LR	LR		
	comp=N,1µm,12.0s,MS5.1						
XAN				LR	LR		
	comp=E,2µm,10.8s,MS5.1						
XAN				LR	LR		
	comp=Z,3µm,11.2s,MS5.3						
LZH	**Lanzhou**	33.22	16	*e*P	P	04 35 53.3	-0.1
LZH				AP	pP	04 36 00.0	-0.6
LZH				XP	sP	04 36 04.0	+0.3
LZH				PP	PP	04 37 05.5	+0.7
LZH				*e*S	S	04 41 12.3	+1.6
LZH				XS		04 41 23.0	
LZH				SS	SS	04 43 17.0	+4.3
LZH				AMB	AMB		
	comp=Z,50nm,1.7s,mb5.2						
LZH				AMB	AMB		
	comp=Z,180nm,4.0s						
LZH				LR	LR		
	comp=E,3µm,11.5s						
LZH				LR	LR		
	comp=Z,3µm,13.6s,MS5.2						
LZH	**Lanzhou**	33.22	16	*e*P	P	04 35 53.3	-0.1
LZH				*PP	pP	04 36 00.0	-0.6
LZH				*SP	sP	04 36 03.9	+0.2
LZH						04 37 05.6	
LZH				*e*S	S	04 41 12.2	+1.5
LZH				*SS		04 41 23.0	
LZH				SS	SS	04 43 17.0	+4.3
LZH				pmax	pmax		
	comp=Z,50nm,1.7s,mb5.2						
LZH				MLR	MLR		
	comp=Z,3µm,13.6s,MS5.2						
LZH	**Lanzhou**	33.22	16	*e*P	P	04 35 53.3	-0.1
	comp=Z,50nm,1.7s,mb5.2						
LZH				pP	pP	04 36 00.0	-0.6
LZH				sP	sP	04 36 03.9	+0.2
LZH				PP	PP	04 37 05.6	+0.8
LZH				*e*S	S	04 41 12.2	+1.5
LZH				sS		04 41 23.0	
LZH				SS	SS	04 43 17.0	+4.3
LZH				LR	LR		
	comp=Z,3µm,13.6s,MS5.2						
GTA	**Gaotai**	35.57	9	*e*P	P	04 36 13.5	-0.1
GTA				AP	pP	04 36 20.0	-0.9
GTA				XP	sP	04 36 22.5	-1.5
GTA				PP	PP	04 37 36.3	+2.2
GTA				S	S	04 41 50.5	+3.3
GTA				XS		04 42 01.3	
GTA				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
GTA				AMB	AMB		
	comp=Z,320nm,4.9s						
GTA				LR	LR		
	comp=N,710nm,17.9s,MS4.8						
GTA				LR	LR		
	comp=E,1µm,14.1s,MS4.8						
GTA				LR	LR		
	comp=Z,890nm,17.9s,MS4.6						
MBWA	**Marble Bar**	36.13	135	*e*P	P	04 36 18.0	-0.5
	comp=Z,19nm,1.0s,mb5.0						
NJ2	**Nanjing**	36.66	38	*e*P	P	04 36 24.0	+1.2
NJ2				AP	pP	04 36 33.8	+3.7
NJ2				XP	sP	04 36 37.8	+4.6
NJ2				PP	PP	04 37 50.0	+2.2
NJ2				S	S	04 42 02.0	-1.9
NJ2				XS		04 42 20.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,2µm,5.7s						
SSE	**Sheshan**	37.50	41	*e*P	P	04 36 31.0	+1.1
SSE				AP	pP	04 36 37.3	+0.1
SSE				XP	sP	04 36 39.3	-1.0
SSE				PP	PP	04 37 58.0	-0.3
SSE				S	S	04 42 21.3	+4.4
SSE				XS		04 42 32.5	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,150nm,3.8s						
SSE				LR	LR		
	comp=N,3µm,17.1s,MS5.2						
SSE				LR	LR		
	comp=E,1µm,17.1s,MS5.2						
SSE				LR	LR		
	comp=Z,3µm,10.5s						
SSE	**Sheshan**	37.50	41	*e*P	P	04 36 31.1	+1.2
	comp=Z,33nm,0.7s,mb5.2						
SSE				pP	pP	04 36 37.2	0.0
SSE				sP	sP	04 36 39.3	-1.0
SSE				PP	PP	04 37 57.9	-0.4
SSE				S	S	04 42 21.3	+4.4
SSE				sS		04 42 32.4	
SSE				SS	SS	04 45 09.4	+19
SSE				ScS	ScS	04 46 43.6	+3.9
SSE				LR	LR		
	comp=Z,3µm,10.5s,MS5.4						
TIY	**Taiyuan**	37.70	25	⇑P	P	04 36 34.0	+2.6
TIY				LR	LR		
	comp=N,2µm,11.0s						
TIY				LR	LR		
	comp=Z,860nm,10.0s,MS4.8						
TIA	**Tai'an**	38.71	32	*e*P	P	04 36 39.3	-0.7
FITZ	**Fitzroy Crossi**	38.82	126	P	P	04 36 40.4	-0.6
	comp=Z,21nm,0.8s,mb4.9,baz=319,slow=5.5,SNR=9.8						
BTO	**Baotou**	39.28	20	*e*P	P	04 36 45.0	+0.3
BTO				S	S	04 42 47.5	+3.9
BTO				AMB	AMB		
	comp=Z,10.0nm,1.9s,mb4.2						
WMQ	**Urumqi**	39.79	354	P	P	04 36 50.0	+1.1
WMQ				AP	pP	04 36 54.5	-1.8
WMQ				XP	sP	04 36 57.0	-2.3
WMQ				PP	PP	04 38 25.8	+1.6
WMQ				PCP	PcP	04 38 56.5	+1.1
WMQ				*e*S	S	04 42 53.5	+2.1
WMQ				SS	SS	04 45 42.8	+1.7
WMQ				SCS	ScS	04 46 55.0	+2.2
WMQ				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,490nm,4.0s						
WMQ				LR	LR		
	comp=N,440nm,24.0s,MS4.5						
WMQ				LR	LR		
	comp=E,760nm,24.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,480nm,24.0s,MS4.3						
HHC	**Hu-ho-hao-te**	40.04	22	*e*P	P	04 36 51.8	+0.8
HHC				AP	pP	04 36 58.3	0.0
HHC				XP	sP	04 37 01.0	-0.4
HHC				PP	PP	04 38 32.3	+5.4
HHC				SCP		04 42 37.3	
HHC				S	S	04 43 03.8	+8.7
HHC				XS		04 43 15.0	
HHC				SCS	ScS	04 46 53.0	-1.3
HHC				AMB	AMB		
	comp=Z,30nm,1.6s,mb4.8						
HHC				AMB	AMB		
	comp=Z,330nm,8.6s						
HHC				LR	LR		
	comp=N,2µm,14.9s,MS5.3						
HHC				LR	LR		
	comp=E,2µm,14.7s,MS5.3						
HHC				LR	LR		
	comp=Z,2µm,16.1s,MS5.0						
AAA	**Alma-Ata**	41.55	342	*e*P	P	04 37 03.0	-0.4
AAA				*e*S	S	04 43 26.0	+8.5
AAA				pmax	pmax		
	comp=Z,400nm,2.6s,mb5.6						
AAA				smax			
	comp=E,500nm,3.0s						
AAK	**Ala-Archa**	41.80	339	*i* P	P	04 37 06.2	+0.8
FRU	**Bishkek**	41.93	339	*e*P	P	04 37 07.5	+1.0
FRU				*e*		04 39 00.0	
FRU				*e*		04 43 27.0	
FRU				pmax	pmax		
	comp=Z,90nm,2.1s,mb5.0						
FRU				MLR	MLR		
	comp=Z,2µm,18.0s,MS4.9						
KAKA	**Kakadu**	42.35	114	*e*P	P	04 37 08.8	-1.5
	comp=Z,9.8nm,0.8s,mb4.5						
MKAR	**Makanchi Array**	43.52	349	P	P	04 37 19.8	+0.4
	comp=Z,9.7nm,0.6s,mb4.7,baz=166,slow=8.4,SNR=46						
MKAR				PcP	PcP	04 39 07.6	-0.1
	comp=Z,3.5nm,0.8s,baz=168,slow=6.2,SNR=2.6						
MKAR				LR	LR	04 58 16.0	
	comp=Z,404nm,19.8s,MS4.3,baz=164,slow=40						
MKAR	**Makanchi Array**	43.52	349	P	P	04 37 19.8	+0.4
MKAR				PcP	PcP	04 39 07.6	-0.1
MKAR				LR	LR	04 58 16.0	
KKAR	**Karatay Array**	43.72	336	*i* P	P	04 37 20.3	-0.8
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
SONM	**Songino Array**	44.94	12	P	P	04 37 30.4	-0.5
	comp=Z,2.7nm,0.7s,mb4.2,baz=193,slow=9.4,SNR=10						
SONM				PcP	PcP	04 39 12.7	+0.3
	comp=Z,4.4nm,0.7s,baz=202,slow=4.0,SNR=5.5						
SONM				LR	LR	04 57 47.9	
	comp=Z,968nm,19.5s,MS4.7,baz=324,slow=38						
ULN	**Ulaanbaatar**	45.11	13	*e*P	P	04 37 32.4	+0.2
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
ULN				MLR	MLR		
	comp=Z,802nm,21.0s,MS4.6						
ULN	**Ulaanbaatar**	45.11	13	*e*P	P	04 37 32.4	+0.2
	comp=Z,2.4nm,0.6s,mb4.2						
ULN				LR	LR		
	comp=Z,802nm,21.0s,MS4.6						
SNY	**Shenyang**	46.23	31	⇑P	P	04 37 40.5	-0.7
SNY				PP	PP	04 39 28.3	-1.5
SNY				S	S	04 44 24.3	-1.2
SNY				XS		04 44 45.8	
SNY				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.4						
SNY				AMB	AMB		
	comp=Z,290nm,8.3s						
SNY				LR	LR		
	comp=E,2µm,13.1s						
SNY				LR	LR		
	comp=Z,1µm,10.8s,MS5.2						
ZAK	**Zakamensk**	46.81	9	*e*P	P	04 37 45.7	0.0
ZAK				*e*		04 39 19.9	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.8s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
WRA	**Warramunga Arr**	46.91	122	P	P	04 37 46.2	-0.6
	comp=Z,21nm,0.9s,mb5.1,baz=300,slow=8.9,SNR=70						
WRAB	**Tennant Creek**	46.91	122	*i* P	P	04 37 47.4	+0.6
WRAB	**Tennant Creek**	46.91	122	*e*P	P	04 37 46.5	-0.3
	comp=Z,52nm,1.0s,mb5.4						
WRAB				LR	LR		
	comp=Z,208nm,21.0s,MS4.1						
WB2	**Warramunga Arr**	46.92	122	*e*P	P	04 37 45.9	-1.0
FORT	**Forrest**	48.06	139	⇓*i*P	P	04 37 56.0	+0.3
	comp=Z,14nm,0.9s,mb5.0						
TLY	**Talaya**	48.13	9	*e*P	P	04 37 57.1	+1.1
TLY				*e*		04 39 40.6	
TLY				*e*S	S	04 44 54.5	+2.2
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
TLY				MLR	MLR		
	comp=Z,444nm,13.0s,MS4.6						
TLY	**Talaya**	48.13	9	⇑*i*P	P	04 37 55.2	-0.8
CN2	**Changchun**	48.61	31	*e*P	P	04 37 59.0	-0.8
CN2				*e*XP	sP	04 38 08.0	-2.1
CN2				*e*S	S	04 45 00.3	+1.2
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,1µm,12.0s,MS5.2						
CN2				LR	LR		
	comp=E,800nm,12.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1µm,11.0s,MS5.2						
HIA	**Hailar**	50.24	22	*e*P	P	04 38 12.3	0.0
HIA				pmax	pmax		
	comp=Z,13nm,0.7s						
HIA	**Hailar**	50.24	22	*e*P	P	04 38 12.3	0.0
	comp=Z,13nm,0.7s,mb5.1						
CIT	**Chita**	50.58	16	*e*P	P	04 38 14.7	-0.1
CIT				pmax	pmax		
	comp=Z,75nm,2.6s,mb5.2						
NVS	**Novosibirsk**	51.17	353	*i* P	P	04 38 18.0	-1.2
NVS				*e**PP	pP	04 38 29.9	+3.2
NVS				*e*S	S	04 45 34.6	+0.1
NVS				pmax	pmax		
	comp=Z,52nm,1.7s,mb5.2						
NVS				pmax	pmax		
	comp=N,47nm,1.6s						
NVS				pmax	pmax		
	comp=E,14nm,1.4s						
NVS				pmax	pmax		
	comp=Z,37nm,2.3s,mb4.9						
NVS				pmax	pmax		
	comp=N,20nm,1.9s						
NVS				pmax	pmax		
	comp=E,12nm,1.6s						
NVS				smax			
	comp=N,11nm,2.0s						
NVS				smax			
	comp=E,52nm,2.4s						
MDJ	**Mudanjiang**	51.34	33	P	P	04 38 20.5	-0.2
MDJ				AP	pP	04 38 27.0	-1.2
MDJ				XP	sP	04 38 29.5	-1.6
MDJ				PP	PP	04 40 19.0	+0.5
MDJ				SCP		04 43 25.3	
MDJ				S	S	04 45 44.8	+7.8
MDJ				XS		04 45 55.8	
MDJ				SCS	ScS	04 48 09.3	+2.9
MDJ				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,170nm,5.7s						
MDJ				LR	LR		
	comp=N,1µm,12.9s,MS5.3						
MDJ				LR	LR		
	comp=E,2µm,13.6s,MS5.3						
MDJ				LR	LR		
	comp=Z,2µm,14.3s,MS5.3						
MDJ	**Mudanjiang**	51.34	33	*e*P	P	04 38 20.6	-0.1
	comp=Z,24nm,1.1s,mb5.0						
VOSK	**Vostochnaya**	51.79	343	*i* P	P	04 38 22.3	-1.6
BVA0	**Borovoye Array**	52.23	343	*i* P	P	04 38 25.8	-1.4
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
BVAR	**Borovoye Array**	52.23	343	P	P	04 38 26.5	-0.7
	comp=Z,7.9nm,0.6s,mb4.8,baz=142,slow=8.8,SNR=45						
MAT	**Matsushiro**	52.29	46	P	P	04 38 26.9	-1.1
MAT				S	S	04 46 13.0	+23
MJAR	**Matsushiro Arr**	52.29	46	P	P	04 38 27.7	-0.3
	comp=Z,1.2nm,0.7s,mb4.0,baz=207,slow=8.4,SNR=6.2						
MJAR				PcP	PcP	04 39 38.9	-0.3
	comp=Z,4.3nm,0.9s,baz=243,slow=4.7,SNR=8.2						
MJAR				LR	LR	05 03 05.3	
	comp=Z,1µm,18.5s,MS5.0,baz=250,slow=39						
ZRNK	**Zerenda**	52.58	342	*e*P	P	04 38 27.8	-2.1
AB31	**Akbulak array**	53.10	333	*i* P	P	04 38 32.7	-1.1
AB31				pmax	pmax		
	comp=Z,78nm,1.4s,mb5.5						
KLR	**Kul'dur**	55.49	30	*e*P	P	04 38 47.8	-3.5
KLR				*e*S	S	04 46 35.0	+1.9
KLR				*e*		04 50 17.0	
KLR				pmax	pmax		
	comp=E,40nm,1.8s						
KLR				pmax	pmax		
	comp=Z,56nm,1.8s,mb5.3						
BOD	**Bodaibo**	55.92	13	*e*P	P	04 38 53.6	-0.7
BOD				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
GNI	**Garni**	56.46	316	LR	LR	05 03 05.7	
	comp=Z,194nm,20.9s,MS4.2,baz=98,slow=36						
TI2	**Plekhanov**	57.17	318	*e*P	P	04 38 59.6	-3.9
CTA	**Charters Tower**	57.31	117	P	P	04 39 04.3	-0.5
	comp=Z,7.9nm,0.4s,mb5.1,baz=319,slow=4.8,SNR=9.7						
CTAO	**Charters Tower**	57.31	117	*e*P	P	04 39 04.3	-0.5
CTAO				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CTAO				MLR	MLR		
	comp=Z,603nm,20.0s,MS4.7						
CTAO	**Charters Tower**	57.31	117	*e*P	P	04 39 04.3	-0.5
	comp=Z,10nm,0.6s,mb5.0						
CTAO				LR	LR		
	comp=Z,603nm,20.0s,MS4.7						
CLNS	**Chul'man**	58.18	20	*e*P	P	04 39 09.0	-1.3
CLNS				*e**PP	pP	04 39 15.3	-2.6
CLNS				*e*		04 39 54.3	
CLNS				*e*		04 41 20.9	
CLNS				*e*PPP	PPP	04 42 39.3	-4.6
CLNS				*e*S	S	04 47 03.7	-4.9
CLNS				*e*SS	SS	04 50 56.7	-5.2
CLNS				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
CLNS				pmax	pmax		
	comp=N,15nm,0.9s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.8s						
CLNS				smax			
	comp=E,4.0nm,0.7s						
CLNS				smax			
	comp=Z,5.0nm,0.7s						
CLNS				smax			
	comp=N,9.0nm,0.9s						
STKA	**Stephens Creek**	58.23	132	*e*P	P	04 39 09.8	-1.2
	comp=N,6.4nm,1.1s,mb4.6						
STKA	**Stephens Creek**	58.23	132	P	P	04 39 10.8	-0.2
	comp=N,5.7nm,0.9s,mb4.6,baz=284,slow=6.3,SNR=7.4						
ARU	**Arti**	58.97	338	⇑*i*P	P	04 39 14.2	-1.7
ARU				*e*		04 40 01.6	
ARU				*e*		04 41 25.6	
ARU				*e*PPP	PPP	04 42 47.3	-5.0
ARU				*e*S	S	04 47 20.0	+1.0
ARU				*e*		04 48 59.6	
ARU				*e*SS	SS	04 51 18.6	+4.0
ARU				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
ARU				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.7						
ARU				MLR	MLR		
	comp=N,300nm,18.0s,MS4.6						
ARU				MLR	MLR		
	comp=E,300nm,17.0s,MS4.6						
ARU	**Arti**	58.97	338	*e*P	P	04 39 13.5	-2.3
	comp=E,27nm,1.2s,mb5.2						
KIV	**Kislovodsk**	59.53	320	⇑*i*P	P	04 39 18.4	-1.5
ASF	**Jabal al Asfar**	59.58	305	LR	LR	05 04 09.9	
	comp=E,378nm,18.2s,MS4.6,baz=180,slow=35						
YSS	**Yuzh-Sakhalins**	60.22	37	*e*P	P	04 39 23.3	-1.3
YSS				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
YSS	**Yuzh-Sakhalins**	60.22	37	*e*P	P	04 39 23.3	-1.2
	comp=Z,4.8nm,0.6s,mb4.7						
EIL	**Elat**	60.58	302	LR	LR	05 05 27.4	
	comp=Z,544nm,18.1s,MS4.7,baz=112,slow=36						
EIL	**Elat**	60.58	302	*e*P	P	04 39 26.4	-0.9
	comp=Z,14nm,1.1s,mb5.0						
SOC	**Sochi**	61.32	318	*e*P	P	04 39 19.6	-12
SOC				*e*		04 40 17.9	
SOC				*e*		04 41 49.9	
SOC				*e*PPP	PPP	04 43 11.1	-6.5
SOC				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.3						
SOC				pmax	pmax		
	comp=N,14nm,0.7s						
SOC				pmax	pmax		
	comp=E,16nm,0.7s						
SOKR	**Solikamsk**	61.95	340	⇑*i*P	P	04 39 35.3	-0.8
SOKR				S	S	04 48 05.0	+8.1
SOKR				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.1						
SOKR				MLR	MLR		
	comp=Z,760nm,18.0s,MS4.9						
ANN	**Anapa**	63.30	319	*e*P	P	04 39 41.0	-4.3
ANN				*e*S	S	04 48 16.5	+2.2
ANN				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.1						
ANN				pmax	pmax		
	comp=Z,140nm,6.2s						
YAK	**Yakutsk**	63.75	18	*e*P	P	04 39 46.7	-1.3
YAK				*e**PP	pP	04 39 56.1	+0.5
YAK				*e*		04 40 21.2	
YAK				*e*		04 42 02.3	
YAK				*e*S	S	04 48 25.2	+5.6
YAK				*e*SS	SS	04 52 25.3	-3.9
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=E,7.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				smax			
	comp=E,3.0nm,1.1s						
YAK				smax			
	comp=N,4.0nm,1.4s						
YAK				MLR	MLR		
	comp=Z,451nm,14.0s,MS4.8						
YAK				MLR	MLR		
	comp=N,357nm,15.0s,MS4.9						
YAK				MLR	MLR		
	comp=E,367nm,13.0s,MS4.9						
YAK	**Yakutsk**	63.75	18	*e*P	P	04 39 47.1	-0.9
	comp=E,17nm,0.6s,mb5.2						
BR131	**Keskin Array S**	64.24	312	*e*P	P	04 39 50.2	-1.3
	comp=E,8.1nm,0.9s,mb4.8						
BRTR	**Keskin Array B**	64.24	312	P	P	04 39 50.4	-1.2
	comp=E,4.9nm,0.8s,mb4.6,baz=128,slow=6.8,SNR=24						
VOR	**Voronezh**	65.14	326	P	P	04 39 55.0	-2.2
VOR				pmax	pmax		
	comp=Z,40nm,1.7s,mb5.2						
SIM	**Simferopol'**	65.56	318	*de*P	P	04 40 00.0	0.0
SIM						04 42 31.0	
SIM				*e*S	S	04 48 47.0	+4.9
SIM				*e*		04 49 51.0	
SIM				pmax	pmax		
	comp=Z,13nm,0.5s,mb5.2						
SIM				MLR	MLR		
	comp=Z,300nm,25.6s,MS4.4						
MOS	**Moscow**	67.81	330	*e*P	P	04 40 11.3	-2.8
OBN	**Obninsk**	68.07	329	⇓*i*P	P	04 40 14.4	-1.3
OBN				*e*S	S	04 49 17.3	+5.1
OBN				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
OBN				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.7						
OBN	**Obninsk**	68.07	329	*i* P	P	04 40 14.5	-1.2
TIRR	**Tirgusor**	69.29	316	⇑P	P	04 40 22.4	-1.1
KIS	**Kishinev**	69.71	319	*e*P	P	04 40 23.0	-2.9
KIS				*e*S	S	04 49 34.0	+2.2
KIS				*e*		04 49 58.0	
IDI	**Anoyia**	70.01	306	LR	LR	05 13 56.7	
	comp=Z,207nm,18.7s,MS4.4,baz=265,slow=38						
MA2	**Magadan**	70.42	27	*e*P	P	04 40 45.0	+15
AKASG	**Malin Array Be**	70.54	323	P	P	04 40 30.1	-0.8
	comp=Z,0.5nm,0.4s,mb3.8,baz=93,slow=4.8,SNR=16						
KDZ	**Kurdzhali**	70.77	313	*e*P	P	04 40 33.0	+0.5
VRI	**Vrincioaia**	70.80	317	⇓P	P	04 40 32.7	+0.1
TIXI	**Tiksi**	71.00	11	⇑*i*P	P	04 40 32.1	-1.4
MLR	**Muntele Rosu**	71.24	317	P	P	04 40 35.8	+0.4
	comp=Z,18nm,1.0s,mb5.0,baz=140,slow=3.6,SNR=31						
MLR	**Muntele Rosu**	71.24	317	⇑P	P	04 40 35.3	0.0
MLR	**Muntele Rosu**	71.24	317	⇑P	P	04 40 35.3	0.0
RZN	**Rozhen**	71.29	313	*i* P	P	04 40 36.0	+0.3
LBTB	**Lobatse**	71.76	242	P	P	04 40 39.4	+0.6
	comp=Z,6.3nm,1.0s,mb4.5,baz=110,slow=6.4,SNR=5.9						
LBTB				LR	LR	05 07 21.9	
	comp=Z,1µm,20.5s,MS5.2,baz=72,slow=32						
MMB	**Musomiste**	72.00	312	*e*P	P	04 40 39.0	-0.9

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PET   Petropavlovsk    72.02  35  eP      P       04 40 52.4 +13
PET                               eS      S       04 50 36.1 +38
PET                                pmax   pmax
      comp=Z,200nm,11.0s
PET                                MLR    MLR
      comp=Z,600nm,19.0s,MS4.9
KKB   Krupnik          72.53 313  i P     P       04 40 43.0 -0.1
VTS   Vitosha          72.57 313  i P     P       04 40 43.0 -0.3
VAY   Valandovo        72.81 312  i P     P       04 40 44.0 -0.8
BOSA  Boshof           72.93 239   P      P       04 40 46.5 +0.8
      comp=Z,3.9nm,0.8s,mb4.4,baz=83,slow=6.8,SNR=5.4
BOSA                               LR     LR      05 07 52.1
      comp=Z,467nm,19.0s,MS4.8,baz=67,slow=32
BOSA  Boshof           72.93 239   P      P       04 40 46.5 +0.7
BOSA                               LR     LR      05 07 52.1
LVV   L'vov            73.51 321  eP      P       04 40 48.7  0.0
LVV                               e               04 41 04.7
LVV                               ePPP    PPP     04 45 12.3 -6.2
LVV                                MLR    MLR
      comp=Z,200nm,18.0s,MS4.4
DRGR                   73.72 318 ⇓P       P       04 40 49.7 -0.2
LVZ   Lovozero         74.73 340  eP      P       04 40 48.6 -6.8
LVZ                               eS      S       04 50 23.8 -5.0
LVZ                                MLR    MLR
      comp=Z,557nm,17.0s,MS4.9
LVZ                                MLR    MLR
      comp=N,148nm,16.0s,MS4.7
LVZ                                MLR    MLR
      comp=E,261nm,17.0s,MS4.7
MAW   Mawson           74.76 192  eP      P       04 40 57.1 +1.6
      comp=E,5.0nm,0.9s,mb4.4
MAW   Mawson           74.76 192  eP      P       04 40 57.1 +1.6
MAW                                pmax   pmax
      comp=Z,5.0nm,0.9s
MAW   Mawson           74.76 192   P      P       04 40 57.2 +1.6
      comp=Z,4.9nm,0.8s,mb4.5,baz=16,slow=5.9,SNR=7.1
MAW                                LR     LR      05 08 43.5
      comp=Z,215nm,19.1s,MS4.5,baz=52,slow=32
CRVS  Cervenica-Dubn   74.96 320  eP      P       04 40 57.4 +0.3
APA   Apatity          75.00 340⇑iP       P       04 41 04.4 +7.5
APA                               eS      S       04 51 04.0 +32
APA                                pmax   pmax
      comp=Z,18nm,1.0s,mb5.0
SUW   Suwalki          75.02 325  eP      P       04 40 55.2 -2.1
SUW                                pmax   pmax
      comp=Z,20nm,0.8s,mb5.1
SUW   Suwalki          75.02 325  eP      P       04 40 55.1 -2.1
      comp=Z,20nm,0.8s,mb5.1
KECS  Kecovo           75.52 319  eP      P       04 40 59.8 -0.5
FINES FINESS Array B   75.58 333   P      P       04 40 59.5 -0.9
      comp=Z,4.0nm,0.8s,mb4.4,baz=120,slow=3.7,SNR=13
FINES                              LR     LR      05 19 39.8
      comp=Z,249nm,18.6s,MS4.5,baz=117,slow=40
KAF   Kangasniemi      75.69 333  ep      P       04 40 55.5 -5.5
      comp=Z,7.5nm,1.0s,mb4.6
KAF   Kangasniemi      75.69 333  eP      P       04 40 55.5 -5.5
KAF                                pmax   pmax
      comp=Z,8.0nm,1.0s,mb4.6
NIE   Niedzica         75.80 320  eP      P       04 41 02.2 +0.4
PSZ   Piszkesteto      75.81 318  eP      P       04 41 00.4 -1.5
PSZ                                pmax   pmax
      comp=Z,51nm,1.9s,mb5.1
PSZ   Piszkesteto      75.81 318  eP      P       04 41 00.4 -1.6
      comp=Z,51nm,1.9s,mb5.1
PSZ   Piszkesteto      75.81 318  eP      P       04 41 00.8 -1.1
OJC   Ojcow            76.27 321  eP      P       04 41 04.1 -0.4
OJC                               eS      S       04 50 45.3 -0.8
OJC                                MLR    MLR     05 20 47.7
      comp=Z,200nm,16.6s,MS4.5
VYHS  Vyhne            76.60 319  i P     P       04 41 06.1 -0.3
TIP   Timpagrande      76.94 309  eP      P       04 41 08.6 +0.1
OKC   Ostrava-Krasne   77.25 320  eP      P       04 41 09.9 -0.1
OKC                                AMS    AMS     05 20 20.0
      comp=Z,200nm,14.9s
SOI   Samo             77.39 308   P      P       04 41 11.9 +0.9
SOI                                pmax   pmax
      comp=Z,246nm,5.4s
SOI   Samo             77.39 308   P      P       04 41 11.9 +0.9
      comp=Z,246nm,5.4s
MORC  Moravsky Berou   77.63 320  eP      P       04 41 11.5 -0.6
MORC                               pmax   pmax
      comp=Z,42nm,1.8s,mb5.1
MORC  Moravsky Berou   77.63 320  eP      P       04 41 11.5 -0.6
      comp=Z,42nm,1.8s,mb5.1
ZST   Bratislava       77.70 318  eP      P       04 41 12.4 -0.1
ZST                               epP     pP      04 41 19.2 -1.0
KOGS  Kog              78.06 316  eP      P       04 41 13.8 -0.7
SGO   Sicignano        78.17 310   P      P       04 41 15.5 +0.3
SGO                                pmax   pmax
      comp=Z,16nm,1.6s,mb4.7
SGO   Sicignano        78.17 310   P      P       04 41 15.5 +0.3
      comp=Z,16nm,1.6s,mb4.7
ARCES ARCESS Array B   78.45 341   P      P       04 41 16.2  0.0
      comp=Z,6.0nm,0.8s,mb4.5,baz=90,slow=4.9,SNR=8.8
ARCES                              LR     LR      05 20 23.8
      comp=Z,579nm,18.1s,MS5.0,baz=64,slow=39
ARCES ARCESS Array B   78.45 341   P      P       04 41 16.2  0.0
ARCES                              LR     LR      05 20 23.8
DPC   Dobruska-Polom   78.49 320  eP      P       04 41 17.0 +0.3
DPC                                AMS    AMS     05 21 50.0
      comp=Z,300nm,16.4s
KSP   Ksiaz            78.57 321⇑eP       P       04 41 17.3 +0.1
KSP                               eS      S       04 51 11.0  0.0
KSP   Ksiaz            78.57 321  eP      P       04 41 17.8 +0.6
ARSA  Arzberg          78.65 317⇑iP       P       04 41 17.8 +0.1
      comp=Z,162nm,2.4s,mb5.5
BOJS  Bojanci          78.66 315  eP      P       04 41 17.3 -0.5
UPC   Upice            78.71 321  eP      P       04 41 16.8 -1.1
PERS  Pernice          78.86 317  i P     P       04 41 18.8 -0.1
VISS  Visnje           78.97 316  eP      P       04 41 19.2 -0.3
LJU   Ljubljana        79.21 316  eP      P       04 41 20.7 -0.1
MOA   Molln            79.56 318⇓iP       P       04 41 22.3 -0.3
      comp=Z,128nm,3.9s
PRU   Pruhonice        79.59 320  eP      P       04 41 23.2 +0.5
PRU                                AMS    AMS     05 22 20.0
      comp=Z,200nm,18.2s
PVCC  Panska Ves       79.62 320  eP      P       04 41 21.9 -1.0
PVCC                               AMS    AMS     05 22 30.0
      comp=Z,200nm,16.5s
PTQR  Pietraquaria     79.71 312   P      P       04 41 23.3 -0.3
AQU   L'Aquila         79.73 312   P      P       04 41 24.1 +0.4
AQU                                pmax   pmax
      comp=Z,8.0nm,0.7s,mb4.8
AQU   L'Aquila         79.73 312   P      P       04 41 24.1 +0.4
      comp=Z,7.6nm,0.7s,mb4.7
BILL  Bilibino         79.82  21⇑iP       P       04 41 23.1 -0.5
NRCA  Norcia           79.97 313   P      P       04 41 25.3 +0.3
GEC2  GERESS Array S   80.02 319  eP      P       04 41 25.2 +0.1
GEC2                               pmax   pmax
      comp=Z,51nm,1.4s,mb5.3
GEC2  GERESS Array S   80.02 319  eP      P       04 41 25.2 +0.1
      comp=Z,51nm,1.4s,mb5.3
GERES GERESS Array B   80.02 319   P      P       04 41 25.3 +0.2
      comp=Z,9.1nm,1.0s,mb4.7,baz=96,slow=4.8,SNR=54
GERES                              LR     LR      05 23 19.9
      comp=Z,181nm,20.7s,MS4.4,baz=240,slow=41
PTCC  Patocco-Chiusa   80.05 316   P      P       04 41 25.6 +0.3
BRG   Berggiesshubel   80.06 321  i P     P       04 41 25.5 +0.3
BRG                                S      S       04 51 31.0 +4.4
BRG                                pmax   pmax
      comp=Z,27nm,1.5s,mb5.0
BRG                                MLR    MLR
      comp=Z,300nm,15.8s,MS4.7
BRG   Berggiesshubel   80.06 321  i P     P       04 41 25.4 +0.2
      comp=Z,27nm,1.5s,mb5.0
BRG                                S      S       04 51 31.0 +4.4
BRG                                SS     SS      04 57 06.0 +26
BRG                                LR     LR
      comp=Z,300nm,15.8s,MS4.7
KBA   Koelnbreinsper   80.11 317⇑iP       P       04 41 25.2 -0.4
      comp=Z,52nm,2.1s,mb5.1
KBA   Koelnbreinsper   80.11 317⇑iP       P       04 41 25.2 -0.4
KBA                                pmax   pmax
      comp=Z,52nm,2.1s,mb5.1
KHC   Kasperske Hory   80.13 319  i P     P       04 41 25.6  0.0
KHC   Kasperske Hory   80.13 319  eP      P       04 41 25.0 -0.6
KHC                                AMS    AMS     05 27 40.0
      comp=Z,200nm,16.8s
ARV   Arcevia          80.14 313   P      P       04 41 26.4 +0.6
ARV                                pmax   pmax
      comp=Z,29nm,1.2s,mb5.1
ARV   Arcevia          80.14 313   P      P       04 41 26.4 +0.6
      comp=Z,29nm,1.2s,mb5.1
MTCE  Montecelio       80.20 312   P      P       04 41 26.2  0.0
      comp=Z,21nm,1.5s,mb4.8
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FSSB  Fossombrone      80.27 313   P      P       04 41 27.6 +1.1
FVI   Forni Avoltri    80.46 316   P      P       04 41 27.8 +0.3
FVI                                pmax   pmax
      comp=Z,29nm,1.2s,mb5.1
FVI   Forni Avoltri    80.46 316   P      P       04 41 27.8 +0.3
      comp=Z,29nm,1.2s,mb5.1
WET   Wettzell         80.59 319  eP      P       04 41 27.9 -0.2
WET                                pmax   pmax
      comp=Z,34nm,1.6s,mb5.0
WET   Wettzell         80.59 319  eP      P       04 41 27.9 -0.2
      comp=Z,34nm,1.6s,mb5.0
CLL   Collm            80.69 321  eP      P       04 41 28.0 -0.6
CLL                                pmax   pmax
      comp=Z,15nm,1.5s,mb4.7
CLL   Collm            80.69 321  eP      P       04 41 28.0 -0.6
      comp=Z,15nm,1.5s,mb4.7
CLL                               e               04 41 43.0
CLL   Collm            80.69 321   P      P       04 41 28.0 -0.6
      comp=Z,logA/T=1.0,mb4.7
CLL                               e               04 41 43.0
TRO   Tromso           80.69 340  eP      P       04 41 21.7 -6.6
TRO                                AMS    AMS     05 21 23.0
      comp=Z,355nm,18.5s,MS4.8
SEST  Monte Rota       80.86 317   P      P       04 41 30.1 +0.5
      comp=Z,35nm,1.5s,mb5.1
CRE   Caprese Michel   80.87 313   P      P       04 41 30.2 +0.5
CRE                                pmax   pmax
      comp=Z,7.0nm,0.6s,mb4.8
CRE   Caprese Michel   80.87 313   P      P       04 41 30.2 +0.5
      comp=Z,6.6nm,0.6s,mb4.7
NKC   Novy Kostel      80.95 320  eP      P       04 41 28.1 -1.9
SFI   Santa Sofia      80.96 314   P      P       04 41 31.1 +0.9
SFI                                pmax   pmax
      comp=Z,64nm,1.1s,mb5.5
SFI   Santa Sofia      80.96 314   P      P       04 41 31.1 +0.9
      comp=Z,64nm,1.1s,mb5.5
PGD   Poggio Sodo      81.05 314   P      P       04 41 33.0 +2.4
PGD                                pmax   pmax
      comp=Z,91nm,1.5s,mb5.5
PGD   Poggio Sodo      81.05 314   P      P       04 41 33.0 +2.4
      comp=Z,91nm,1.5s,mb5.5
VMG   Vicchio          81.18 314   P      P       04 41 33.0 +1.7
CTI   Castel Tesino    81.21 316   P      P       04 41 32.1 +0.7
CTI                                pmax   pmax
      comp=Z,39nm,1.2s,mb5.2
CTI   Castel Tesino    81.21 316   P      P       04 41 32.1 +0.7
      comp=Z,39nm,1.2s,mb5.2
HFS   Hagfors          81.22 330   P      P       04 41 30.9 -0.2
      comp=Z,2.9nm,0.8s,mb4.3,baz=146,slow=5.3,SNR=8.0
HFS                                LR     LR      05 23 31.7
      comp=Z,367nm,18.7s,MS4.8,baz=192,slow=40
SEI   Scarperia        81.32 314   P      P       04 41 34.4 +2.4
WATA  Walderalm        81.33 317⇓iP       P       04 41 31.2 -0.8
      comp=Z,8.7nm,1.1s,mb4.6
WATA  Walderalm        81.33 317⇓iP       P       04 41 31.2 -0.8
WATA                               pmax   pmax
      comp=Z,9.0nm,1.1s,mb4.6
FNVD  Fontana Vidola   81.49 314   P      P       04 41 34.1 +1.2
      comp=Z,116nm,2.1s,mb5.4
MOX   Moxa             81.51 320  eP      P       04 41 32.8 -0.1
MOX                                pmax   pmax
      comp=Z,41nm,1.9s,mb5.0
MOX                                MLR    MLR
      comp=Z,200nm,20.0s,MS4.5
MOX   Moxa             81.51 320  eP      P       04 41 32.8 -0.1
      comp=Z,41nm,1.9s,mb5.0
MOX                                LR     LR
      comp=Z,200nm,20.0s,MS4.5
MOX   Moxa             81.51 320  i P     P       04 41 32.8 -0.1
      comp=Z,logA/T=1.3,mb5.0
MOX                                L              05 28 21.0
RAVA  Ravarino         81.52 314   P      P       04 41 34.3 +1.2
GRFL  Gerfalco         81.56 313   P      P       04 41 34.0 +0.7
      comp=Z,9.5nm,0.9s,mb4.7
SQTA  Sankt Quirin     81.58 317⇓iP       P       04 41 33.0 -0.3
      comp=Z,10.0nm,1.0s,mb4.7
SQTA  Sankt Quirin     81.58 317⇓iP       P       04 41 33.0 -0.3
SQTA                               pmax   pmax
      comp=Z,10.0nm,1.0s,mb4.7
FUR   Furstenfeldbru   81.58 318  eP      P       04 41 33.3  0.0
ZCCA  Zocca            81.61 314   P      P       04 41 36.1 +2.6
SYO   Syowa Base       81.64 197 ⇑P       P       04 41 33.6 +0.4
GRA1  Grafenberg Arr   81.70 319  eP      P       04 41 34.8 +0.9
      comp=Z,23nm,1.2s,mb5.0
GRF   Grafenberg Arr   81.70 319  eP      P       04 41 34.8 +0.9
GRF                                pmax   pmax
      comp=Z,23nm,1.2s,mb5.0
GRF   Grafenberg Arr   81.70 319  eP      P       04 41 34.8 +0.9
GRF                                pmax   pmax
      comp=Z,23nm,1.2s,mb5.0
GRF   Grafenberg Arr   81.70 319  eP      P       04 41 34.8 +0.9
      comp=Z,23nm,1.2s,mb5.0
GSCL  Gusciola         81.88 314   P      P       04 41 36.2 +1.2
MABI  Malga Bissina    82.00 316   P      P       04 41 36.1 +0.6
ERBM  Eremo            82.01 314   P      P       04 41 36.9 +1.3
BRMO  Bormio           82.12 316   P      P       04 41 36.6 +0.5
FUORN Ofenpass         82.20 316   P      P       04 41 37.2 +0.7
CLZ   Clausthal        82.36 322  eP      P       04 41 37.1 -0.2
CLZ                                pmax   pmax
      comp=Z,48nm,2.0s,mb5.1
CLZ   Clausthal        82.36 322  eP      P       04 41 37.1 -0.2
      comp=Z,48nm,2.0s,mb5.1
DAVOX Davos            82.47 316   P      P       04 41 38.5 +0.6
      comp=Z,16nm,0.7s,mb5.0,baz=132,slow=6.0,SNR=29
DAVOX Davos            82.47 316   P      P       04 41 38.6 +0.7
DAVA  Damuels          82.48 317⇑iP       P       04 41 38.2 +0.2
      comp=Z,109nm,2.2s,mb5.4
BSEG  Bad Segeberg     82.51 324  eP      P       04 41 38.0  0.0
NB2   NORSAR Subarra   82.53 331   P      P       04 41 37.8 -0.2
      comp=Z,8.8nm,1.2s,mb4.7,baz=97,slow=5.0
NB2   NORSAR Subarra   82.53 331   P      P       04 41 37.8 -0.2
      baz=97,slow=5.1
NOA   NORSAR Array B   82.53 331   P      P       04 41 37.0 -1.0
      comp=Z,2.1nm,0.9s,mb4.2,baz=95,slow=5.4,SNR=4.6
NOA                                LR     LR      05 25 02.5
      comp=Z,205nm,18.4s,MS4.5,baz=60,slow=41
PGF   Pioggiola        83.00 312  eP      P       04 41 40.9 +0.1
      comp=Z,38nm,1.4s,mb4.9
PGF   Pioggiola        83.00 312  eP      P       04 41 40.9 +0.1
PGF                                pmax   pmax
      comp=Z,19nm,1.4s,mb4.9
MUGIO Muggio           83.02 316   P      P       04 41 41.0 +0.2
TNS   Taunus Mts       83.52 320  eP      P       04 41 43.5 +0.2
BFO   Black Forest     83.56 318  eP      P       04 41 43.1 -0.4
BFO                                pmax   pmax
      comp=Z,38nm,2.0s,mb5.2
BFO   Black Forest     83.56 318  eP      P       04 41 43.1 -0.4
      comp=Z,38nm,2.0s,mb5.2
FIN   Finale Ligure    83.59 314   P      P       04 41 44.1 +0.3
SBF   Sospel           84.15 314⇑iP       P       04 41 46.7 +0.1
      comp=Z,39nm,1.0s,mb5.2
SBF   Sospel           84.15 314⇑iP       P       04 41 46.7 +0.1
SBF                                pmax   pmax
      comp=Z,20nm,1.0s,mb5.2
DIX   Grande Dixence   84.16 316   P      P       04 41 47.6 +0.9
CDF   Champ du Feu     84.26 318  eP      P       04 41 46.7 -0.4
KBS   Kingsbay         84.27 349  eP      P       04 41 49.2 +2.6
KBS                                AMS    AMS     05 23 47.3
      comp=Z,188nm,19.6s,MS4.5
HINF  Hinteralfeld     84.54 317  eP      P       04 41 48.3 -0.2
MBDF  Montbardon       84.62 314  eP      P       04 41 48.5 -0.5
LPG   La Plagne        84.62 315⇑iP       P       04 41 49.4 +0.4
      comp=Z,33nm,1.1s,mb5.1
LPG   La Plagne        84.62 315⇑iP       P       04 41 49.4 +0.4
LPG                                pmax   pmax
      comp=Z,16nm,1.1s,mb5.1
LPL   La Plagne        84.64 315⇑iP       P       04 41 49.4 +0.3
      comp=Z,29nm,1.1s,mb5.0
LPL   La Plagne        84.64 315⇑iP       P       04 41 49.4 +0.3
LPL                                pmax   pmax
      comp=Z,15nm,1.1s,mb5.0
BNI   Bardonecchia     84.68 315  eP      P       04 41 49.0 -0.3
BNI                                pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.8
BNI   Bardonecchia     84.68 315  eP      P       04 41 49.0 -0.3
      comp=Z,7.5nm,0.8s,mb4.9
FRF   La Foret Royal   84.72 313⇑iP       P       04 41 49.8 +0.3
      comp=Z,30nm,1.0s,mb5.1
FRF   La Foret Royal   84.72 313⇑iP       P       04 41 49.8 +0.3
FRF                                pmax   pmax
      comp=Z,15nm,1.0s,mb5.1
LMR   La Mourre        84.82 313⇑iP       P       04 41 50.0  0.0
      comp=Z,24nm,1.3s,mb4.9
LMR   La Mourre        84.82 313⇑iP       P       04 41 50.0  0.0
LMR                                pmax   pmax
      comp=Z,12nm,1.3s,mb4.9
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HAU   Haudompre        84.88 318  eP      P       04 41 49.8 -0.4
      comp=Z,38nm,1.3s,mb5.1
HAU                               eR
      comp=Z,177nm,17.5s
HAU   Haudompre        84.88 318  eP      P       04 41 49.8 -0.4
HAU                                pmax   pmax
      comp=Z,19nm,1.3s,mb5.1
HAU                                MLR    MLR
      comp=Z,180nm,17.5s,MS4.5
CABF  La Chapelle      85.08 316  eP      P       04 41 51.5 +0.3
      comp=Z,38nm,1.3s,mb5.1
CABF  La Chapelle      85.08 316  eP      P       04 41 51.5 +0.3
CABF                               pmax   pmax
      comp=Z,19nm,1.3s,mb5.1
ORIF  Oris-en-Rattie   85.25 315  eP      P       04 41 52.6 +0.5
ORIF                              eR
      comp=Z,199nm,20.8s
BER   Bergen           85.39 330  eP      P       04 41 50.6 -1.8
BER                                AMS    AMS     05 28 00.2
      comp=Z,348nm,18.0s,MS4.8
SMRF  Simiane la Rot   85.49 314  eP      P       04 41 54.2 +0.9
      comp=Z,36nm,1.4s,mb5.0
MEZF  Maizieres J'vi   85.74 318  eP      P       04 41 54.4 -0.1
VIVF  Saint-Julien-l   86.11 315⇑iP       P       04 41 56.6 +0.2
      comp=Z,27nm,1.2s,mb5.0
VIVF  Saint-Julien-l   86.11 315⇑iP       P       04 41 56.6 +0.2
VIVF                               pmax   pmax
      comp=Z,14nm,1.3s,mb5.0
BAIF  Baives           86.25 320  eP      P       04 41 57.0 +0.1
      comp=Z,15nm,0.9s,mb4.9
BAIF  Baives           86.25 320  eP      P       04 41 57.0 +0.1
BAIF                               pmax   pmax
      comp=Z,8.0nm,0.9s,mb5.0
LOR   Lormes           86.58 317⇑iP       P       04 41 58.5 -0.2
      comp=Z,17nm,1.1s,mb4.9
LOR                               eR
      comp=Z,150nm,17.2s
LOR   Lormes           86.58 317⇑iP       P       04 41 58.5 -0.2
LOR                                pmax   pmax
      comp=Z,9.0nm,1.1s,mb4.9
LOR                                MLR    MLR
      comp=Z,150nm,17.3s,MS4.5
SMF   Signal de Mont   86.62 316⇑iP       P       04 41 58.6 -0.3
      comp=Z,19nm,1.1s,mb4.9
SMF   Signal de Mont   86.62 316⇑iP       P       04 41 58.6 -0.3
SMF                                pmax   pmax
      comp=Z,9.0nm,1.1s,mb4.9
LASF  Ste Croix        86.72 314  eP      P       04 41 59.8 +0.4
SSF   Saint Saulge     86.83 317  eP      P       04 42 00.2 +0.3
BGF   Bois d'Agland    87.31 316  eP      P       04 42 02.5 +0.3
URZ   Urewera          87.71 128   LR     LR      05 22 44.8
      comp=Z,455nm,18.7s,MS4.9,baz=356,slow=37
TCF   Toulx Ste Croi   87.77 316  eP      P       04 42 04.5 +0.1
MTLF  Montolieu        87.95 313⇑iP       P       04 42 05.9 +0.5
      comp=Z,22nm,1.3s,mb4.9
MTLF  Montolieu        87.95 313⇑iP       P       04 42 05.9 +0.5
MTLF                               pmax   pmax
      comp=Z,11nm,1.3s,mb4.9
CAF   Calviac          87.96 315  eP      P       04 42 05.8 +0.5
RJF   Les Rejaudoux    88.32 315⇑iP       P       04 42 07.6 +0.5
RJF                               eR
      comp=Z,196nm,21.0s
LFF   La Frestale      88.89 315  eP      P       04 42 10.4 +0.6
EPF   Esparros         89.34 313  eP      P       04 42 13.3 +1.3
      comp=Z,8.3nm,1.1s,mb4.7
EPF   Esparros         89.34 313  eP      P       04 42 13.3 +1.3
EPF                                pmax   pmax
      comp=Z,4.0nm,1.1s,mb4.7
MFF   Saint Martin d   89.37 317  eP      P       04 42 11.9 -0.1
FLN   La Foliniere     89.39 319  eP      P       04 42 12.1  0.0
      comp=Z,24nm,1.0s,mb5.2
FLN                               eR
      comp=Z,199nm,22.8s
FLN   La Foliniere     89.39 319  eP      P       04 42 12.1  0.0
FLN                                pmax   pmax
      comp=Z,12nm,1.0s,mb5.2
FLN                                MLR    MLR
      comp=Z,200nm,22.8s,MS4.5
VNDA  Vanda            89.50 168   P      P       04 42 13.4 +1.4
      comp=Z,1.8nm,1.0s,mb4.4,baz=296,slow=4.6,SNR=8.0
VNDA                               LR     LR      05 17 05.9
      comp=Z,185nm,21.3s,MS4.5,baz=289,slow=32
GRR   Gorron           89.67 318  eP      P       04 42 13.6 +0.2
JMIC  Jan Mayen        89.92 341   LR     LR      05 25 49.7
      comp=Z,132nm,19.0s,MS4.4,baz=239,slow=38
JMIC  Jan Mayen        89.92 341  eP      P       04 42 09.0 -5.0
JMIC                              eSKSa           04 52 42.2
JMIC                               AMS    AMS     05 31 41.4
      comp=Z,156nm,17.6s,MS4.5
ETSF  Etsaut           90.01 313  eP      P       04 42 16.1 +0.9
      comp=Z,13nm,1.0s,mb4.9
ETSF  Etsaut           90.01 313  eP      P       04 42 16.1 +0.9
ETSF                               pmax   pmax
      comp=Z,6.0nm,1.0s,mb4.9
EKA   Eskdalemuir Ar   90.27 325   P      P       04 42 16.4 +0.4
      comp=Z,1.9nm,0.8s,mb4.5,baz=97,slow=5.4,SNR=7.9
SJPF  Ste Jean         90.48 313  eP      P       04 42 18.2 +0.9
SGMF  Saint Gilles     90.81 318  eP      P       04 42 18.8 +0.1
ROSF  Rostrenen        91.28 318  eP      P       04 42 20.8  0.0
      comp=Z,83nm,1.4s,mb5.6
ROSF  Rostrenen        91.28 318  eP      P       04 42 20.8  0.0
ROSF                               pmax   pmax
      comp=Z,41nm,1.4s,mb5.6
ESDC  Sonseca Array    92.94 310   P      P       04 42 29.5 +0.8
      comp=Z,1.5nm,0.8s,mb4.5,baz=37,slow=7.1,SNR=4.9
DBIC  Dimbokro         97.59 277   LR     LR      05 24 09.6
      comp=Z,449nm,20.2s,MS5.0,baz=74,slow=34
ILAR  Eielson Array    98.47  22   P      P       04 42 53.8 +0.5
      comp=Z,0.4nm,0.8s,mb4.0,baz=225,slow=4.0,SNR=4.5
ILAR                               LR     LR      05 31 47.3
      comp=Z,352nm,19.7s,MS4.9,baz=153,slow=38
MSO   Missoula        123.81  22  ePKPdf  PKPdf   04 48 13.5 -3.3
NVAR  Mina Array Bea  128.50  32   PKP    PKPdf   04 48 24.5 -1.7
      comp=Z,0.8nm,0.6s,baz=262,slow=1.0,SNR=7.8
PDAR  Pinedale Array  128.90  22   PKP    PKPdf   04 48 24.6 -2.1
      comp=Z,1.4nm,0.9s,baz=45,slow=2.1,SNR=12
ANMO  Albuquerque     136.88  24  ePKIKP  PKPdf   04 48 40.4 -1.4
BDFB  Brasilia        140.30 251   PKP    PKPdf   04 48 46.8 -1.8
      comp=Z,1.9nm,0.7s,baz=208,slow=2.3,SNR=4.0
TXAR  Lajitas Array   142.92  25   PKP    PKPdf   04 48 49.8 -3.1
      comp=Z,0.8nm,0.7s,baz=182,slow=2.0,SNR=9.9
NATX  Nacogdoches     143.47  11  ePKPpre         04 48 48.7
CPUP  Villa Florida   144.28 229   PKP    PKPdf   04 48 51.0 -4.4
      comp=Z,9.7nm,0.9s,baz=133,slow=4.2,SNR=15
CPUP  Villa Florida   144.28 229  ePKP    PKPdf   04 48 50.6 -4.8
LPAZ  La Paz          158.14 235   PKP    PKPdf   04 49 15.8 -0.6
      comp=Z,2.2nm,0.9s,baz=143,slow=1.0,SNR=9.6
LPAZ                               PKPab  PKPab   04 49 49.0 +1.1
      comp=Z,1.3nm,0.8s,baz=77,slow=6.3,SNR=6.2
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*NEIC **26** 04:41:50.2,30.80S×71.44W,h31^{km},ML3.2(GUC),After GUC.*

GUC 26 04:41:50.2±0.8**,30.80S×71.44W,h31^{km}**±5^{km}**,MD3.6, ML3.2,2C,Near coast of central Chile**

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Code  Station Name      Δ°   AZ°    Phase ID         Time      Res
                                   Op      ISC     h  m  s     ISC
CMCH  Combarbala       0.53 135⇑iP      Pb      04 42 00.9 -0.3
CMCH                            i S     Sb      04 42 09.5 +0.7
CMCH                             AMP            04 42 09.8
      comp=N,5µm,0.2s
ILCH  Illapel          0.87 164⇑iP      Pn      04 42 05.9 -0.5
ILCH                            i S     Sn      04 42 18.1 +0.1
ILCH                             AMP            04 42 19.0
      comp=N,711nm,0.5s
JACH  Jahuel           2.02 159 eP      Pn      04 42 23.1 +0.4
ROCH  El Roble         2.20 170 eP      Pn      04 42 26.9 +1.5
PEL   Peldehue         2.43 165  AMP            04 43 13.0
      comp=N,168nm,0.7s
ZON   Zonda            2.48 108 eP      Pn      04 42 31.0 +1.5
ZON                             eS      Sn      04 43 19.0  +20
CLCH  Cerro Calan      2.70 164  AMP            04 43 17.6
      comp=E,122nm,0.4s
TACH  Talagante        2.88 172 i P     Pn      04 42 35.6 +0.5
TACH                            i S     Sn      04 43 09.4 +0.3
PCH   Pirque           2.92 165 i P     Pn      04 42 36.1 +0.3
PCH                             i S     Sn      04 43 11.1 +0.8
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*IDC **26** 05:03:37.1±3.4,11.84N×95.02E,mb4.0/7,mb1 4.2/8, mb1mx3.9/20,mbtmp3.9/8,Error ellipse: s-maj=80.4km s-min=40.0km az=157.0*

ISC 26 05:03:39.8±1.4**,11.9N**±0.2×**95.3E**±0.1**,h33^{km},n19,** $\sigma 0\overset{s}{.}$**92**/18**,mb4.1**/8**,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NST	Nakhon Sawan	5.98	51	P	P	05 05 07.0	-1.2
	58nm,0.5s						
CMAR	Chiang Mai Arr	7.37	28	Pn	Pn	05 05 28.4	+0.4
	baz=220,slow=14,SNR=7.7						
LSA	Lhasa	18.09	348	*e*P	P	05 07 50.0	-0.4
PKI	Pulchoki	18.11	331	*e*P	P	05 07 50.7	0.0
	91nm,1.5s						
GUN	Gumba	18.18	332	*e*P	P	05 07 53.1	+1.6
	39nm,0.8s						
DMN	Daman	18.29	330	*e*P	P	05 07 52.2	-0.7
	40nm,1.0s						
GKN	Gorkha	18.85	330	*e*P	P	05 08 00.1	+0.4
	23nm,0.7s						
KOLN	Koldanda	19.20	327	*e*P	P	05 08 02.6	-1.1
	29nm,0.7s						
MKAR	Makanchi Array	36.44	345	P	P	05 10 44.4	+1.0
	3.4nm,1.1s,mb4.2,baz=158,slow=11,SNR=3.1						
ZRNK	Zerenda	46.02	338	*e*P	P	05 12 01.7	-0.2
	75nm,0.6s						
BRTR	Keskin Array B	60.73	309	P	P	05 13 49.4	-1.2
	1.5nm,0.7s,mb4.2,baz=128,slow=6.9,SNR=8.8						
AKASG	Malin Array Be	65.74	320	P	P	05 14 22.5	-1.0
	0.3nm,0.3s,mb3.8,baz=88,slow=5.8,SNR=3.6						
AKASG	Malin Array Be	65.74	320	P	P	05 14 22.5	-1.0
MLR	Muntele Rosu	67.13	314	P	P	05 14 31.7	-0.6
	1.5nm,0.8s,mb4.1,baz=96,slow=1.3,SNR=3.3						
FINES	FINESS Array B	69.70	331	P	P	05 14 48.4	+0.4
	1.3nm,0.9s,mb3.9,baz=90,slow=5.6,SNR=3.2						
GERES	GERESS Array B	75.60	318	P	P	05 15 24.1	+0.9
	2.6nm,0.8s,mb4.2,baz=87,slow=5.9,SNR=28						
NB2	NORSAR Subarra	76.79	330	P	pP	05 15 41.2	+1.2
	1.5nm,0.7s,baz=89,slow=5.8						
LPG	La Plagne	80.59	315	*e*P	P	05 15 50.9	+0.2
	8.5nm,0.8s,mb4.5						
ILAR	Eielson Array	90.57	22	P	P	05 16 41.6	+2.0
	0.4nm,0.7s,mb3.9,baz=312,slow=4.1,SNR=6.5						

*IDC **26** 05:03:40.3±1.7, 11.36N×95.60E, mb4.3/13, mb1 4.4/14, mb1mx4.2/23, mbtmp4.2/14, ML4.2/1, Error ellipse: s-maj=50.1km s-min=21.5km az=117.0*

*NEIC **26** 05:03:43.0±0.7, 11.99N×95.01E, h30^{km}, mb4.3/10, Error ellipse: s-maj=21.5km s-min=10.2km az=55.0*

*BJI **26** 05:03:48.9, 12.27N×94.62E, h38^{km}, mB4.7, mb4.6, Ms4.4, Msz4.1*

ISC 26 05:03:47.0±0.7, **11.81N**±0.09×**95.49E**±0.10, **h37**^{km}, **h37**^{km}±4.9^{km}**:pP-P, n24,** σ1§**15**/24, **mb4.2**/17, **MS3.8**/1, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNT	Nongplab	4.22	79	P	P	05 04 49.5	-1.1
CMAR	Chiang Mai Arr	7.40	26	Pn	P	05 05 35.0	-0.3
	0.9nm,0.3s,baz=221,slow=14,SNR=14						
KULM	Kulim	8.24	141	*e*P	P	05 05 47.5	+0.6
GYA	Guiyang	17.98	34	P	P	05 07 59.3	+3.5
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s						
LSA	Lhasa	18.26	348	*e*P	P	05 07 54.0	-5.4
	comp=Z,19nm,0.8s						
LZH	Lanzhou	25.32	16	*e*P	P	05 09 13.3	+1.2
LZH				AP	pP	05 09 25.0	+2.9
LZH				XP	sP	05 09 31.5	+5.1
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
LZH	Lanzhou	25.32	16	*e*P	P	05 09 13.2	+1.1
	comp=Z,28nm,1.0s,mb4.8						
LZH				*e*P		05 09 15.6	
LZH				pP	pP	05 09 25.1	+3.0
LZH				sP	sP	05 09 31.5	+5.1
GTA	Gaotai	27.76	7	*e*P	P	05 09 36.3	+1.8
GTA				AP	pP	05 09 45.5	+0.8
GTA				XP	sP	05 09 49.3	0.0
GTA				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.3						
WMQ	Urumqi	32.60	349	*e*P	P	05 10 13.0	-4.3
WMQ				AP	pP	05 10 22.8	-5.0
WMQ				XP	sP	05 10 26.8	-5.7
WMQ				AMB	AMB		
	comp=Z,60nm,5.6s						
WMQ				LR	LR		
	comp=Z,220nm,21.0s,MS3.8						
MKAR	Makanchi Array	36.62	345	P	P	05 10 50.4	-1.2
	comp=Z,7.1nm,1.1s,mb4.4,baz=153,slow=8.1,SNR=8.1						
SONM	Songino Array	37.06	12	P	P	05 10 54.9	-0.4
	comp=Z,4.5nm,1.1s,mb4.2,baz=196,slow=10,SNR=17						
ULN	Ulaanbaatar	37.23	13	P	P	05 10 55.1	-1.6
	comp=Z,0.9nm,0.6s,mb3.8						
ZAL	Zalesovo	42.88	351	P	P	05 11 42.0	-1.5
	comp=Z,2.6nm,0.8s,mb4.0,baz=301,slow=9.9,SNR=13						
BVAR	Borovoye Array	45.77	339	P	P	05 12 06.9	+0.2
	comp=Z,3.4nm,1.0s,mb4.2,baz=141,slow=9.5,SNR=7.7						
WRAB	Tennant Creek	49.58	129	*e*P	P	05 12 36.5	-0.3
	comp=Z,3.2nm,0.6s,mb4.5						
BRTR	Keskin Array B	60.95	309	P	P	05 13 57.9	-1.0
	comp=Z,1.8nm,0.7s,mb4.3,baz=128,slow=7.4,SNR=8.0						
MLR	Muntele Rosu	67.35	314	P	P	05 14 40.8	+0.3
	comp=Z,2.0nm,0.7s,mb4.2,baz=144,slow=8.7,SNR=4.6						
FINES	FINESS Array B	69.90	331	P	P	05 14 56.3	+0.3
	comp=Z,1.4nm,0.7s,mb4.0,baz=121,slow=7.2,SNR=10						
HFS	Hagfors	75.77	329	P	P	05 15 30.1	-0.4
	comp=Z,2.8nm,0.7s,mb4.3,baz=108,slow=4.7,SNR=7.3						
GERES	GERESS Array B	75.82	318	P	P	05 15 32.5	+1.4
	comp=Z,1.8nm,0.6s,mb4.2,baz=91,slow=6.0,SNR=16						
NOA	NORSAR Array B	76.99	330	P	P	05 15 38.5	+1.0
	comp=Z,1.1nm,0.7s,mb3.9,baz=89,slow=5.7,SNR=5.8						
LBTB	Lobatse	77.30	241	P	P	05 15 36.1	-3.8
	comp=Z,3.9nm,0.8s,mb4.4,baz=97,slow=3.0,SNR=5.3						
BOSA	Boshof	78.80	238	P	P	05 15 43.7	-4.4
	comp=Z,4.2nm,0.7s,mb4.5,baz=42,slow=6.9,SNR=7.9						
ILAR	Eielson Array	90.62	22	P	P	05 16 47.6	+1.0
	comp=Z,0.7nm,0.8s,mb4.1,baz=326,slow=5.2,SNR=7.0						

JMA 26 05:22:24.6±0.3, **26.55N**×**125.80E, h140**^{km}±4^{km}**, M3.6, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.91	104	P	P	05 22 48.0	+0.1
JKE				*e*S	S	05 23 05.3	-0.5
JAGN	Aguni-jima	1.29	88	P	P	05 22 51.4	-0.2
JAGN				S	S	05 23 10.7	-1.6
NAH1	Naha	1.73	101	P	P	05 22 56.3	0.0
NAH1				*e*S	S	05 23 18.5	-2.2
JMJ	Miyako jima 2	1.79	195	P	P	05 22 57.2	+0.2
JMJ				*e*S	S	05 23 20.5	-1.3
JJT2	Tamagusuku 2	1.80	103	P	P	05 22 57.3	+0.2
JJT2				*e*S	S	05 23 21.7	-0.3
JOGS	Gusukube	1.82	191	P	P	05 22 57.5	+0.2
JOGS				*e*S	S	05 23 21.7	-0.7
JIH	Iheya	2.00	76	P	P	05 22 59.5	+0.1
JIH				S	S	05 23 24.1	-2.0
JTJ	Tarama	2.14	208	P	P	05 23 01.1	-0.2
JTJ				*e*S	S	05 23 27.3	-2.1
JOW	Kunigami	2.23	82	P	P	05 23 01.9	-0.5
JOW				S	S	05 23 28.6	-2.7
JIJ	Ishigaki jima	2.64	215	P	P	05 23 06.4	-1.3
JIJ				*e*S	S	05 23 37.1	-3.5
JKRS	Kuro-shima	2.81	216	P	P	05 23 09.0	-0.9
JKRS				*e*S	S	05 23 42.4	-2.1
IRIF	Iriomote-Funau	2.89	221	P	P	05 23 09.8	-1.1
IRIF				*e*S	S	05 23 45.0	-1.3
JTK	Tokunoshima	3.06	66	P	P	05 23 11.6	-1.6
JTK				*e*S	S	05 23 46.6	-3.7
HATJ	Hateruma jima	3.07	216	*e*S	S	05 23 48.6	-1.8
YOJ	Yonaguni jima	3.27	231	P	P	05 23 15.8	-0.1
YOJ				*e*S	S	05 23 55.5	+0.5
JAM	Amami Oshima	3.85	60	P	P	05 23 21.4	-2.2
JAM				*e*S	S	05 24 03.9	-5.0
JZK	Kikaishima	4.10	64	P	P	05 23 25.7	-1.2
JZK				*e*S	S	05 24 11.2	-3.5
JMZ	Minamidaito 2	4.92	97	P	P	05 23 35.6	-2.2
JMZ				*e*S	S	05 24 25.8	-8.5

*ATH **26** 05:27:34.8, 40.45N×28.99E, h10^{km}, MD3.5/3*

*ISK **26** 05:27:48.3, 40.36N×27.66E, h16^{km}, MD3.1*

*CSEM **26** 05:27:48.2±0.1, 40.37N×27.71E, h10^{km}, MD3.1, Error ellipse: s-maj=2.0km s-min=1.7km az=19.0*

ISC 26 05:27:48.7±0.4, **40.37N**±0.02×**27.68E**±0.03, **h7**^{km}±4^{km}**, n34,** σ0§**82**/41**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNT	Bandirma	0.18	94	*i* PG	Pg	05 27 53.2	+0.6
MRMT	Marmara Adasi	0.24	345	*i* PG	Pg	05 27 53.9	+0.2
MRMT				SG	Sg	05 27 58.3	+1.2
RKY	Sarkoy-Tekirda	0.50	310	*i* PG	Pg	05 27 59.0	+0.3
MFT	Murefte	0.52	324	*i* PG	Pg	05 27 58.8	-0.3
KCT	Karacabey	0.53	101	*i* PG	Pg	05 27 59.0	-0.3
CANB	Canakkale	0.59	234	*i* PG	Pg	05 27 59.9	-0.6
TKR	Tekirdag	0.63	350	PG	Pg	05 28 02.1	+0.7
BTOK	Tokmak	0.66	156	*i* P	Pg	05 28 02.2	+0.2
BTOK				*i* S	Sg	05 28 11.0	+0.1
LPK	Lapseki	0.70	271	PG	Pg	05 28 02.4	-0.4
BALB	Balikesir	0.74	168	PG	Pg	05 28 02.8	-0.8
SLVT	Silivri	0.95	25	PG	Pg	05 28 08.0	+0.3
CTT	Catalca	0.96	36	PG	Pg	05 28 07.7	-0.3
DST	Dursunbey	1.05	136	PG	Pg	05 28 09.0	-0.8
ULDT	Uludag	1.14	101	*i* P	Pb	05 28 11.1	+0.7
ULDT				*i* S	Sb	05 28 26.8	+1.7
EZN	Ezine	1.17	243	PN	Pn	05 28 10.5	-1.0
BADT	Buyukada	1.20	66	PN	Pn	05 28 11.7	-0.2
ISK	Istanbul-Kandi	1.26	56	PN	Pn	05 28 11.7	-1.0
AYVA	Ayvalik	1.30	216	*i* P	Pb	05 28 13.3	+0.1
AYVA				*i* S	Sb	05 28 30.5	+0.6
YLV	Yalova	1.31	81	PN	Pn	05 28 12.5	-0.9
KLYT	Kilyos	1.36	49	*e*PN	Pn	05 28 13.6	-0.6
AKS	Akhisar	1.49	176	*e*PN	Pn	05 28 15.3	-0.8
PRK	Paraskevi	1.56	224	*e*P	Pn	05 28 16.7	-0.3
PRK				*e*S	Sb	05 28 37.7	+0.3
HRT	Hereke	1.58	73	*e*PN	Pn	05 28 16.7	-0.6
EDRB	Edirne	1.64	335	*e*PN	Pn	05 28 17.4	-0.8
SILT	Sile	1.69	62	*e*PN	Pn	05 28 18.2	-0.6
RDO	Rodhopi	1.80	296	*e*PN	Pn	05 28 20.9	+0.4
GDZ	Gediz	1.89	132	*i* P	Pn	05 28 23.9	+2.2
GDZ				*i* S	Sn	05 28 49.8	+3.8
EYL	Eskiyayla	1.90	83	*e*PN	Pn	05 28 21.1	-0.8
LIA	Limnos Island	1.97	257	*e*PN	Pn	05 28 24.5	+1.6
KDZ	Kurdzhali	2.14	308	*i* P	Pn	05 28 25.5	+0.2
ESKT	Eskisehir	2.58	108	*e*PN	Pn	05 28 30.9	-0.8
ESKT	Eskisehir	2.58	108	*i* P	Pn	05 28 34.0	+2.3
ESKT				*i* S	Sn	05 29 12.1	+8.4
RZN	Rozhen	2.60	301	*i* P	Pn	05 28 31.5	-0.4
MMB	Musomiste	3.23	293	*e*P	Pn	05 28 46.0	+5.1

*IDC **26** 05:28:44.0±5.5, 23.51S×111.88W, mb3.9/4, mb1 4.2/4, mb1mx3.9/16, mbtmp3.9/4, MS4.1/4, Ms1 4.1/4, ms1mx3.7/16, Error ellipse: s-maj=173.1km s-min=37.4km az=38.0*

*NEIC **26** 05:28:44.9±2.2, 23.61S×111.79W, h10^{km}, mb4.4/3, Error ellipse: s-maj=71.7km s-min=21.6km az=215.0*

ISC 26 05:28:36.1±1.1, **24.8S**±0.2×**112.7W**±0.3, **h10**^{km}**, n18,** σ1§**34**/13, **mb4.1**/6, **MS4.2**/4, **1C, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	42.46	87	P	P	05 36 35.2	+2.0
	2.8nm,1.1s,mb3.8,baz=294,slow=5.2,SNR=5.7						
LPAZ	La Paz	42.46	87	*e*P	P	05 36 34.8	+1.6
	4.9nm,1.1s,mb4.0						
SAML	Samuel	49.68	80	*e*P	P	05 37 28.7	-1.8
	5.8nm,1.1s,mb4.5						
NVAR	Mina Array Bea	63.09	355	P	P	05 39 06.8	+0.8
	1.3nm,0.8s,mb4.1,baz=192,slow=9.9,SNR=8.4						
NVAR				LR	LR	06 00 52.7	
	comp=Z,142nm,19.2s,MS4.2,slow=31						
VNDA	Vanda	65.01	194	LR	LR	06 02 34.9	
	comp=Z,111nm,19.1s,MS4.1,baz=163,slow=31						
PDAR	Pinedale Array	67.26	3	P	P	05 39 31.0	-2.0
	0.3nm,0.6s,mb3.5,baz=180,slow=7.2,SNR=3.1						
HLID	Hailey	68.01	359	*e*P	P	05 39 37.8	0.0
	2.8nm,1.0s,mb4.2						
MCMT	McKenzie Canyo	69.26	360	*e*P	P	05 39 44.7	-0.7
VNA3	Neumayer Olymp	70.86	161	⇑*i*	P	05 39 54.3	-0.4
VNA3	Neumayer Olymp	70.86	161	*e*	P	05 40 00.4	+5.7
VNA3	Neumayer Olymp	70.86	161	*e*	P	05 40 08.4	+14
VNA2	Neumayer--Watz	71.67	160	*e*	P	05 39 59.4	-0.2
YKA	Yellowknife Ar	86.97	359	P	P	05 41 24.3	+2.0
	1.6nm,1.0s,mb4.2,baz=169,slow=5.0,SNR=8.1						
YKA	Yellowknife Ar	86.97	359	P	P	05 41 24.3	+2.0
MAW	Mawson	87.85	178	LR	LR	06 20 33.5	
	comp=Z,132nm,19.8s,MS4.3,baz=64,slow=35						
INK	Inuvik	94.06	352	LR	LR	06 17 16.3	
	comp=Z,60nm,20.0s,MS4.1,baz=132,slow=31						
BRTR	Keskin Array B	148.10	54	PKPbc	PKPdf	05 48 26.9	+4.9
	0.6nm,0.8s,baz=288,slow=4.6,SNR=3.6						
ZRNK	Zerenda	151.83	358	*e*PKPbc	PKPdf	05 48 37.2	+10

*NEIC **26** 06:00:01.6, 36.17S×178.52E, h140^{km}, MG4.4(WEL), After WEL.*

WEL 26 06:00:04.7±0.5, **36.13S**×**178.43E, h33**^{km}**, ML4.0**/5**, 1C, Error ellipse: s-maj=5.2km s-min=3.3km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.44	184	*e*P	P	06 00 28.9	+0.3
MXZ	Matakaoa Point	1.44	184	*e*P*	Pb	06 00 28.3	-2.4
MXZ				*e*S*	Sb	06 00 45.3	-3.5
MXZ				*e*S*	Sb	06 00 45.5	-3.2
PUZ	Puketiti	1.95	184	⇑P	P	06 00 35.2	-0.7
PUZ	Puketiti	1.95	184	PN	Pn	06 00 35.2	-0.9
PUZ				*e*SN	Sn	06 00 58.4	-1.3
PUZ				*e*SN	Sn	06 00 58.7	-1.0
KUZ	Kuaotunu	2.27	253	*e*P	P	06 00 39.9	-0.7
KUZ	Kuaotunu	2.27	253	PN	Pn	06 00 39.6	-1.2
MWZ	Matawai	2.32	198	P	P	06 00 40.7	-0.6
MWZ	Matawai	2.32	198	P*	Pb	06 00 40.2	-5.5
MWZ				S*	Sb	06 01 08.0	-6.2
URZ	Urewera	2.38	206	P	P	06 00 40.6	-1.5
URZ	Urewera	2.38	206	P*	Pb	06 00 40.2	-6.5
URZ				*e*S*	Sb	06 01 09.8	-6.0
URZ				S*	Sb	06 01 09.8	-6.0
KNZ	Kokohu	2.95	192	*e*P	P	06 00 47.0	-3.3
KNZ	Kokohu	2.95	192	PN	Pn	06 00 46.9	-3.6
BKZ	Black Stump Fm	3.40	206	*e*P	P	06 00 53.3	-3.4
BKZ	Black Stump Fm	3.40	206	*e*P*	Pb	06 00 52.8	-11
BKZ				S*	Sb	06 01 32.8	-13
FWVZ	Far West T-bar	3.87	215	*e*P	P	06 01 00.5	-2.8
FWVZ	Far West T-bar	3.87	215	*e*P*	Pb	06 01 00.4	-12
MOVZ	Moawhango	3.90	212	P	P	06 00 59.4	-4.4
MOVZ	Moawhango	3.90	212	*e*P*	Pb	06 00 59.0	-14
WNVZ	Wahianoa	3.91	214	P	P	06 01 00.7	-3.2
WNVZ	Wahianoa	3.91	214	*e*P*	Pb	06 00 59.1	-14
MTVZ	Mangateitei	4.01	215	*e*P*	Pb	06 01 01.2	-13
TSZ	Takapari Road	4.38	206	P	P	06 01 04.3	-6.4
TSZ	Takapari Road	4.38	206	*e*PN	Pn	06 01 04.1	-6.7
TSZ				SN	Sn	06 01 54.9	-6.5
BFZ	Birch Farm	4.86	200	*e*P	P	06 01 10.5	-6.9
BFZ				S	S	06 02 04.1	-9.2
BFZ	Birch Farm	4.86	200	*e*PN	Pn	06 01 10.2	-7.3
BFZ				SN	Sn	06 02 04.1	-9.3
MRZ	Mangatainoka R	5.05	205	*e*P	P	06 01 12.1	-8.0
MRZ	Mangatainoka R	5.05	205	*e*PN	Pn	06 01 11.7	-8.5
MRZ				SN	Sn	06 02 07.5	-11
KIW	Kapiti Island	5.47	209	P	P	06 01 17.8	-8.2
KIW	Kapiti Island	5.47	209	*e*PN	Pn	06 01 17.6	-8.6
KIW				SN	Sn	06 02 17.9	-11
MTW	Mount Morrison	5.52	204	P	P	06 01 17.9	-8.8
MTW	Mount Morrison	5.52	204	*e*PN	Pn	06 01 17.5	-9.4
CAW	Cannon Point	5.63	207	P	P	06 01 19.3	-8.9
CAW	Cannon Point	5.63	207	*e*PN	Pn	06 01 19.2	-9.2
CAW				SN	Sn	06 02 21.3	-11
TRWZ	Traveller	5.68	201	*e*PN	Pn	06 01 19.9	-9.2
PAWZ	Paruwai Farm	5.75	203	*e*PN	Pn	06 01 20.3	-10
PAWZ				SN	Sn	06 02 23.6	-12
DUWZ	D’Urville Isla	5.86	216	*e*PN	Pn	06 01 24.0	-7.6
MRW	Makara Radio	5.87	209	SN	Sn	06 02 27.6	-11
TCW	Tory Channel	6.03	211	P	P	06 01 25.0	-8.8
TCW	Tory Channel	6.03	211	*e*PN	Pn	06 01 24.4	-10
TCW				SN	Sn	06 02 30.7	-12
TUWZ	Tuamarina	6.35	212	*e*PN	Pn	06 01 28.2	-10
NNZ	Nelson	6.44	216	*e*P	P	06 01 31.3	-8.3
NNZ	Nelson	6.44	216	*e*PN	Pn	06 01 30.0	-10
QRZ	Quartz Range	6.59	223	*e*P	P	06 01 33.2	-8.6
QRZ	Quartz Range	6.59	223	*e*PN	Pn	06 01 33.1	-8.8
QRZ				SN	Sn	06 02 46.1	-11
BSWZ	Blackbirch Sta	6.61	211	P	P	06 01 32.8	-9.3
BSWZ	Blackbirch Sta	6.61	211	*e*PN	Pn	06 01 32.8	-9.4
THZ	Tophouse	7.08	216	*e*P	P	06 01 39.1	-10
THZ	Tophouse	7.08	216	*e*PN	Pn	06 01 38.4	-10
KHZ	Kahutara	7.34	210	*e*PN	Pn	06 01 41.5	-11
DSZ	Denniston Nort	7.62	221	SN	Sn	06 03 07.8	-15
LTZ	Lake Taylor	8.18	214	*e*PN	P	06 01 52.1	-12
MQZ	McQueen’s Vall	8.77	209	SN	Sn	06 03 30.9	-20

*NEIC **26** 06:01:58.3, 19.16N×68.79W, h120^{km}, MD4.1(RSPR), After RSPR.*

RSPR 26 06:01:58.3, 19.16N×**68.78W, h119**^{km}±9^{km}**, MD4.1**/13**, MD4.1**/13**, 7C-7D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STDO	Santo Domingo	1.29	237	⇓*e*P	P	06 02 23.5	-0.3
STDO				*e*S	S	06 02 42.1	-0.7
MPR	Mayaguez	1.82	121	⇑*e*P	P	06 02 30.1	+0.1
MPR				*e*S	S	06 02 52.8	-1.2
LSP	Las Mesas	1.88	121	⇑*e*P	P	06 02 29.2	-1.5
LSP				*e*S	S	06 02 55.4	+0.2
CRPR	Cabo Rojo, PR	1.96	126	⇓*e*P	P	06 02 30.3	-1.4
CRPR				*e*S	S	06 02 56.0	-0.8
MGP	Maguayo	1.97	125	⇓*e*P	P	06 02 30.8	-1.1
MGP				*e*S	S	06 02 56.9	-0.2
LRS	Lares	2.03	115	⇑*e*P	P	06 02 31.9	-0.7
LRS				*e*S	S	06 02 57.5	-1.0
PORP	Portuguez	2.31	118	⇑*e*P	P	06 02 35.8	-0.6
PORP				*e*S	S	06 03 05.2	+0.2
ICM	Isla Caja Muer	2.49	120	⇑*e*P	P	06 02 38.4	-0.3
ICM				*e*S	S	06 03 08.7	-0.5
SJG	San Juan	2.71	112	⇓*e*P	P	06 02 40.4	-1.2
SJG				*e*S	S	06 03 14.6	+0.3
CBYP	Canovanas	2.91	107	⇑*e*P	P	06 02 43.2	-1.2
CPD	Cerro la Pandu	2.94	112	⇓*e*P	P	06 02 43.9	-0.8
CPD				*e*S	S	06 03 19.7	-0.2
HUMP	Col San Antoni	2.96	109	⇓*e*P	P	06 02 44.0	-1.0
MTP	Monte Pirata	3.24	109	⇓*e*P	P	06 02 47.6	-1.1
MTP				*e*S	S	06 03 26.8	-0.1
STVI	Saint Thomas	3.71	102	⇑*e*P	P	06 02 54.5	-0.5
SDV	Santo Domingo	10.37	190	P	P	06 04 25.6	+0.7

IDC 26 06:29:09.7±3.3**, 4.39N**×**93.05E, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.6**/19**, mbtmp3.8**/4**, ML4.2**/1**, Error ellipse: s-maj=104.9km s-min=29.4km az=64.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.12	22	Pn	P	06 32 46.4	-0.1
	0.4nm,0.3s,baz=216,slow=12,SNR=10						
MKAR	Makanchi Array	43.26	349	P	P	06 37 13.7	-0.9
	0.6nm,0.5s,baz=174,slow=9.6,SNR=6.8						
SONM	Songino Array	44.78	13	P	P	06 37 23.9	-3.0
	1.7nm,0.7s,baz=190,slow=9.0,SNR=8.4						
SONM				pP	pP	06 37 32.4	+5.5
	1.0nm,0.7s,baz=194,slow=10,SNR=3.4						
WRA	Warramunga Arr	47.23	122	P	P	06 37 44.9	-1.8
	0.6nm,0.6s,baz=294,slow=9.4,SNR=7.9						

*INMG **26** 06:37:34.9±1.4, 41.79N×8.63W, h16^{km}±5^{km}, ML2.0, Error ellipse: s-maj=5.7km s-min=2.6km az=78.0*

*CSEM **26** 06:37:34.7±0.1, 41.77N×8.62W, h10^{km}, ML2.7/4, Error ellipse: s-maj=1.9km s-min=1.3km az=80.0*

MDD 26 06:37:34.5±0.4**, 41.77N**×**8.64W, h11**^{km}**, mbLg2.1**/15**, 3C, Error ellipse: s-maj=4.2km s-min=2.4km az=54.0, PRXIMO, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZAM	Zamans	0.38	354	⇑Pg	Pg	06 37 41.7	-0.7
	36nm,0.3s,SNR=18						
EZAM				Lg		06 37 46.7	
	42nm,0.2s,SNR=7.9						
ELOB	Lobios	0.45	77	⇑Pg	Pg	06 37 42.8	-0.8
	3.3nm,0.0s,SNR=18						
ELOB				Lg		06 37 48.9	
	62nm,0.1s,SNR=7.9						
ELOB	Lobios	0.45	77	Pg	Pg	06 37 42.8	-0.8
	3.3nm,0.0s,SNR=18						
PVRL	Vila Real	0.85	125	*e*Pg	Pg	06 37 50.4	-1.2
PVRL				*e*Sg	Sg	06 38 01.9	-1.1
	27nm,0.1s						
PVRL	Vila Real	0.85	125	*e*Pg	Pg	06 37 50.4	-1.2
PVRL				*e*Sg	Sg	06 38 01.9	-1.1
	27nm,0.1s						
STS	Santiago	1.12	3	Pg	Pg	06 37 55.1	-1.8
	6.6nm,0.1s,SNR=7.9						
STS				Lg		06 38 09.6	
	11nm,0.1s,SNR=7.9						
PVIS	Viseu	1.19	152	*e*P	Pb	06 37 56.3	-0.3
PVIS				*e*S	Sb	06 38 11.7	-0.2
	23nm,0.1s						
PVIS	Viseu	1.19	152	*e*P	Pb	06 37 56.3	-0.3
PVIS				*e*S	Sb	06 38 11.7	-0.2
	23nm,0.1s						
ERUA	La Rua	1.28	60	⇑Pg	Pg	06 37 58.1	-1.9
	8.9nm,0.2s,SNR=18						
ERUA				Lg		06 38 14.0	
	9.4nm,0.2s,SNR=7.9						
ECAL	Calabor	1.43	82	Pn	Pn	06 37 58.7	-1.8
	1.2nm,0.2s,SNR=7.9						
ECAL				Pg	Pg	06 38 00.8	-2.4
	1.8nm,0.1s,SNR=17						
ECAL				Lg		06 38 19.3	
	15nm,0.2s,SNR=7.9						
ECAL	Calabor	1.43	82	Pn	Pn	06 37 58.7	-1.8
	1.2nm,0.2s,SNR=7.9						
ECAL	Calabor	1.43	82	Pg	Pg	06 38 00.8	-2.4
	1.8nm,0.1s,SNR=17						
MTE	Manteigas	1.60	148	*e*Pn	Pn	06 38 01.3	-1.6
MTE	Manteigas	1.60	148	*e*Pg	Pg	06 38 03.1	-3.4
MTE				*e*Sn	Sn	06 38 21.4	-2.3
MTE				*e*Sg	Sg	06 38 24.6	-3.2
	18nm,0.5s						
MTE	Manteigas	1.60	148	Pn	Pn	06 38 01.3	-1.6
MTE				Pg	Pg	06 38 03.1	-3.4
MTE				Sn	Sn	06 38 21.4	-2.3
MTE				Lg		06 38 24.6	
	9.1nm,0.5s						
MTE	Manteigas	1.60	148	*e*Pg	Pg	06 38 03.1	-3.4
MTE				*e*Sn	Sn	06 38 21.4	-2.3
MTE				*e*Sg	Sg	06 38 24.6	-3.2
	18nm,0.5s						
EPON	Pontenova	1.91	35	Pn	Pn	06 38 05.2	-2.1
	0.5nm,0.2s,SNR=7.9						
EPON				Pg	Pg	06 38 09.8	-2.9
	0.1nm,0.1s,SNR=7.9						
EPON				Lg		06 38 34.2	
	3.2nm,0.2s,SNR=7.9						
EPON	Pontenova	1.91	35	Pn	Pn	06 38 05.2	-2.1
	0.5nm,0.2s,SNR=7.9						
EPON	Pontenova	1.91	35	Pg	Pg	06 38 09.8	-2.8
	0.1nm,0.1s,SNR=7.9						
PCBR	Castelo Branco	2.12	155	*e*Pg	Pg	06 38 13.1	-3.7
PCBR				*e*Sn	Sn	06 38 35.2	-1.7
PCBR				*e*Sg	Sg	06 38 40.7	-4.4
	6.6nm,0.2s						
PCBR	Castelo Branco	2.12	155	Pg	Pg	06 38 13.1	-3.7
PCBR				Sn	Sn	06 38 35.2	-1.7
PCBR				Lg		06 38 40.7	
	3.3nm,0.2s						
PTOM	Tomar	2.16	175	*e*Pg	Pg	06 38 11.7	-5.8
PTOM				*e*Sg	Sg	06 38 41.5	-4.8
	10nm,0.4s						
PTOM	Tomar	2.16	175	Pg	Pg	06 38 11.7	-5.8
PTOM				Lg		06 38 41.5	
	5.2nm,0.4s						
EARI	Arriondas	2.96	58	Pn	Pn	06 38 21.7	-0.7
	0.6nm,0.2s,SNR=6.6						
EARI				Lg		06 39 07.4	
	1.8nm,0.3s,SNR=7.9						
EARI	Arriondas	2.96	58	Pn	Pn	06 38 21.7	-0.7
	0.6nm,0.2s,SNR=6.6						
EBAD	Badajoz	3.26	157	Pn	Pn	06 38 25.0	-1.6
	0.4nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	06 39 00.9	-4.9
	0.5nm,0.2s,SNR=7.9						
EBAD				Lg		06 39 16.3	
	1.3nm,0.1s,SNR=7.9						
EBAD	Badajoz	3.26	157	Pn	Pn	06 38 25.0	-1.6

	0.4nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	06 39 00.9	-4.8
	0.5nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	4.28	159	Pn	Pn	06 38 38.7	-2.3
	0.6nm,0.2s,SNR=7.9						
EMIN				Lg		06 39 50.1	
	1.9nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	4.28	159	Pn	Pn	06 38 38.7	-2.3
	0.6nm,0.2s,SNR=7.9						
ECAB	El Cabril	4.44	145	Sn	Sn	06 39 29.6	-6.2
	0.3nm,0.2s,SNR=7.9						
ECAB				Lg		06 39 54.9	
	1.1nm,0.3s,SNR=7.9						
ECAB	El Cabril	4.44	145	Sn	Sn	06 39 29.6	-6.2
	0.3nm,0.2s,SNR=7.9						

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*NEIC **26** 06:41:57.4, 15.96N×95.04W, h15^{km}, MD4.0(MEX), After MEX.*

MEX 26 06:41:57.5±1.2**, 15.93N×95.03W, h17^{km}**±16^{km}**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.05	261	*i* P	Pb	06 42 13.4	-3.5
HUIG				*i* S	Sb	06 42 26.1	-4.1
CMIG	Matias Romero	1.16	7	*i* P	Pb	06 42 14.4	-4.2
CMIG				*i* S	Sb	06 42 28.9	-4.4
OXX	Oaxaca	1.99	305	*e*P	Pn	06 42 28.5	-2.3
OXX				*i* S	Sn	06 42 51.0	-4.5
VHO	Vista Hermosa	1.99	305	*i* P	Pn	06 42 28.4	-2.5
VHO				*i* S	Sn	06 42 51.2	-4.4
CCIG	Comitan	2.80	83	*e*P	Pn	06 42 40.0	-2.4
CCIG				*i* S	Sn	06 43 11.0	-5.1

MAN 26 06:48:55.1, 7.91N×125.48E, h17^{km}, mb4.2, ML3.1, MS2.8, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.41	266	*e*P	Pb	06 49 04.9	+1.3
BUKP				*e*S	Sb	06 49 14.6	+5.3
CGP	Cagayan de Oro	0.94	305	⇑*e*P	Pb	06 49 12.2	-0.5
KCP	Kidapawan	0.97	203	⇓*e*P	Pb	06 49 13.5	+0.3
KCP				*i* S	Sb	06 49 32.1	+6.5
BUTP	Butuan	1.06	8	*e*P	Pb	06 49 14.2	-0.4
BUTP				*e*S	Sb	06 49 35.3	+7.3
MATI	Mati	1.23	141	*e*P	Pb	06 49 16.1	-1.5
PAGZ	Pagadian	2.08	268	*e*P	Pn	06 49 33.1	+3.4
TBP	Tagbilaran	2.38	318	*e*P	Pn	06 49 34.0	-0.2
TBP				*e*S	Sn	06 50 06.6	+3.4

WEL 26 07:05:11.6±0.1**, 39.55S×176.36E, h42^{km}**±2^{km}**, ML3.6**/12**, 7C-7D, Error ellipse: s-maj=0.7km s-min=0.5km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	Black Stump Fm	0.40	15	⇓PN	P	07 05 20.6	-0.5
BKZ				SN	S	07 05 27.6	-0.2
BKZ				SN	S	07 05 27.7	-0.1
MOVZ	Moawhango	0.49	287	⇓PN	P	07 05 21.8	-0.6
MOVZ				SN	S	07 05 29.6	-0.4
TSZ	Takapari Road	0.60	211	⇑PN	P	07 05 23.3	-0.4
TSZ				SN	S	07 05 32.8	+0.3
PWZ	Pawanui	0.61	141	PN	P	07 05 24.3	+0.3
TUVZ	Tukino	0.62	297	⇓PN	P	07 05 24.0	0.0
TUVZ				SN	S	07 05 32.8	-0.1
WNVZ	Wahianoa	0.63	290	⇓PN	P	07 05 24.2	0.0
WNVZ				SN	S	07 05 33.0	-0.3
OTVZ	Oturere	0.66	305	PN	P	07 05 24.4	-0.2
OTVZ				SN	S	07 05 34.2	0.0
DRZ	Dome Shelter	0.68	294	PN	P	07 05 24.7	-0.1
TRVZ	Turoa	0.68	291	⇓PN	P	07 05 24.8	-0.1
TRVZ				SN	S	07 05 34.0	-0.4
HATZ	Hinemaiaia	0.69	342	⇑PN	P	07 05 24.6	-0.4
HATZ				SN	S	07 05 34.6	-0.2
RITZ	Rihia Road	0.69	325	⇑PN	P	07 05 25.0	0.0
FWVZ	Far West T-bar	0.69	295	⇑PN	P	07 05 24.8	-0.2
FWVZ				SN	S	07 05 33.8	-1.1
NGZ	Ngauruhoe	0.70	302	PN	P	07 05 24.9	-0.2
NGZ				SN	S	07 05 35.0	0.0
MTVZ	Mangateitei	0.71	283	⇓PN	P	07 05 25.1	-0.2
KRVZ	Karewarewa	0.72	309	PN	P	07 05 25.2	-0.2
KRVZ				SN	S	07 05 35.4	-0.1
WPVZ	Whakapapa	0.72	298	PN	P	07 05 25.1	-0.3
WPVZ				SN	S	07 05 35.4	-0.1
CNZ	Chateau	0.72	299	⇑PN	P	07 05 25.2	-0.2
WTVZ	West Tongariro	0.74	306	PN	P	07 05 25.2	-0.4
WTVZ				SN	S	07 05 35.5	-0.5
KATZ	Kakaramea	0.77	318	⇑PN	P	07 05 25.9	-0.2
RATZ	Rangitukua	0.82	326	PN	P	07 05 26.2	-0.6
PKVZ	Pokaka	0.83	288	⇓PN	P	07 05 26.5	-0.4
PKVZ				SN	S	07 05 37.5	-0.7
TWVZ	Taurewa	0.86	303	PN	P	07 05 26.7	-0.7
TWVZ				SN	S	07 05 38.2	-0.8
WHTZ	Whakaora	0.94	340	*e*PN	P	07 05 28.0	-0.5
WATZ	Wairara	0.97	330	*e*PN	P	07 05 28.0	-1.0
WAZ	Wanganui	1.08	259	PN	P	07 05 31.0	+0.5
BFZ	Birch Farm	1.13	184	PN	P	07 05 30.5	-0.7
KNZ	Kokohu	1.15	63	PN	P	07 05 30.9	-0.5
PATZ	Paeroa	1.17	356	PN	P	07 05 31.3	-0.5
MRZ	Mangatainoka R	1.26	208	⇑PN	P	07 05 32.2	-0.9
MRZ				SN	S	07 05 46.9	-2.3
VRZ	Vera Road	1.31	288	PN	P	07 05 33.0	-1.0
VRZ				SN	S	07 05 49.7	-0.8
TAZ	Tarawera	1.32	5	PN	P	07 05 33.4	-0.6
URZ	Urewera	1.41	25	PN	P	07 05 34.5	-0.9
EDRZ	Edgecumbe	1.47	12	PN	P	07 05 35.5	-0.7
MWZ	Matawai	1.52	37	PN	P	07 05 35.9	-0.9
LIRZ	Lichensteins R	1.54	1	PN	P	07 05 36.6	-0.5
RAEZ	Rainy Point	1.55	279	PN	P	07 05 36.7	-0.5
HIZ	Hauiti	1.56	311	PN	P	07 05 36.2	-1.2
MARZ	Manawahe	1.58	9	*e*PN	P	07 05 36.7	-1.0
KIW	Kapiti Island	1.72	220	*e*PN	P	07 05 38.2	-1.5
MTW	Mount Morrison	1.74	202	PN	P	07 05 37.6	-2.3
NEZ	North Egmont	1.78	278	PN	P	07 05 40.2	-0.3
CAW	Cannon Point	1.84	212	PN	P	07 05 39.2	-2.2
PKE	Pukeiti	1.88	280	PN	P	07 05 41.7	-0.2
NRZ	Ngariki Road	1.89	276	PN	P	07 05 42.0	-0.1
TRWZ	Traveller	1.92	195	PN	P	07 05 40.2	-2.2
TRWZ				SN	S	07 06 03.0	-2.5
PAWZ	Paruwai Farm	1.96	201	PN	P	07 05 40.2	-3.0
MSWZ	Moikau Station	2.05	204	*e*PN	P	07 05 41.6	-2.7
MRW	Makara Radio	2.10	217	*e*PN	P	07 05 42.8	-2.3
DUWZ	D’Urville Isla	2.25	235	*e*PN	P	07 05 45.0	-2.2
TCW	Tory Channel	2.30	223	*e*PN	P	07 05 45.0	-2.9
TUWZ	Tuamarina	2.63	224	*e*PN	P	07 05 49.7	-3.0
NNZ	Nelson	2.82	233	*e*PN	P	07 05 52.0	-3.4
QRZ	Quartz Range	3.20	245	PN	P	07 05 57.1	-3.7
THZ	Tophouse	3.44	229	PN	P	07 06 00.1	-4.0
LTZ	Lake Taylor	4.47	222	*e*PN	P	07 06 13.2	-5.5

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*IDC **26** 07:19:01.6±1.1, 20.91N×145.85E, mb4.0/7, mb1 4.2/8, mb1mx3.9/23, mbtmp4.0/8, ML3.7/1, Error ellipse: s-maj=36.6km s-min=27.7km az=92.0*

ISC 26 07:19:04.9±1.0**, 20.9N**±0.2×**145.6E**±0.2**, h33^{km}, n8, σ1^{s}10**/8**, mb4.0**/7**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	16.84	339	Pn	P	07 22 58.1	-1.5
	0.3nm,0.3s,baz=165,slow=9.9,SNR=3.6						
STKA	Stephens Creek	52.66	184	P	P	07 28 17.2	-1.0
	1.3nm,0.4s,mb4.2,baz=360,slow=7.3,SNR=6.3						
ILAR	Eielson Array	61.68	27	P	P	07 29 20.3	-1.4
	1.0nm,0.8s,mb4.0,baz=264,slow=5.9,SNR=14						
BVAR	Borovoye Array	64.71	320	P	P	07 29 43.1	+1.3
	1.4nm,0.5s,mb4.3,baz=90,slow=5.9,SNR=11						
YKA	Yellowknife Ar	76.06	28	P	P	07 30 51.0	+0.6
	0.8nm,0.6s,mb3.8,baz=288,slow=5.9,SNR=7.3						
NVAR	Mina Array Bea	81.83	52	P	P	07 31 22.2	-0.1
	0.7nm,0.7s,mb3.7,baz=259,slow=7.5,SNR=6.9						
FINES	FINESS Array B	84.83	335	P	P	07 31 38.1	+1.1
	1.6nm,0.8s,mb4.2,baz=80,slow=8.5,SNR=6.1						
PDAR	Pinedale Array	86.32	46	P	P	07 31 45.8	+1.0
	0.5nm,0.6s,mb3.9,baz=194,slow=6.1,SNR=4.7						

CASC 26 07:25:36.6±2.0**, 7.24N×80.95W, h20^{km}**±41^{km}**, MD3.8, 2C-1D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AZU2	Pedas	0.97	72	⇑*e*P	Pb	07 25 53.8	-0.7
AZU2				*e*S	Sb	07 26 07.3	+0.5
DVD	David	1.90	309	⇓*e*P	Pn	07 26 07.0	-1.5
DVD				*e*S	Sn	07 26 31.7	-0.3
UPA	Univ. de Panam	2.23	39	⇑*e*P	Pn	07 26 12.8	-0.4
UPA				*e*S	Sn	07 26 39.6	-0.9
SVTC	San Vito de Co	2.51	308	*e*S	Sn	07 26 48.4	+0.8
BUS	Buena Vista	3.61	310	*e*P	Pn	07 26 32.0	-0.8
BUS				*e*S	Sn	07 27 16.4	+1.2
URSC	Urasca	3.80	313	*e*P	Pn	07 26 34.7	-0.9
TRTC	Tortuguero	4.29	321	*e*P	Pn	07 26 42.9	+0.3
PRS1	Puriscal	4.30	310	*e*P	Pn	07 26 39.8	-2.8

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*NEIC **26** 07:54:23.4, 32.99S×71.95W, h31^{km}, ML3.7(GUC), After GUC.*

GUC 26 07:54:23.4±0.8**, 32.99S×71.95W, h31^{km}**±2^{km}**, MD3.9, ML3.7, 15C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.26	97	⇓*i*P	Pb	07 54 30.1	-0.4
IHA				*i* S	Sb	07 54 35.7	+0.4
LCCH	Las Cruces	0.57	147	⇑*i*P	Pb	07 54 34.6	-0.5
LCCH				*i* S	Sb	07 54 43.0	-0.1
PACH	Papudo	0.63	44	*i* P	Pb	07 54 35.9	0.0
PACH				*i* S	Sb	07 54 44.9	+0.4
ROCH	El Roble	0.79	89	⇑*i*P	Pn	07 54 38.0	-0.4
ROCH				*i* S	Sb	07 54 49.6	+0.7
LNV	Longovilo	1.06	155	⇓*i*P	Pn	07 54 42.1	-0.2
LNV				*i* S	Sn	07 54 55.8	-0.2
PEL	Peldehue	1.07	98	*i* P	Pn	07 54 42.9	+0.5
PEL				*i* S	Sn	07 54 56.8	+0.5
PEL				AMP		07 54 57.6	
	comp=N,6µm,0.3s						
TACH	Talagante	1.07	128	⇑*i*P	Pn	07 54 42.5	0.0
TACH				*i* S	Sn	07 54 56.8	+0.5
PUEX	Pudahuel	1.09	114	⇑*i*P	Pn	07 54 43.9	+1.2
PUEX				*i* S	Sn	07 54 58.9	+2.0
PUEX				AMP		07 55 06.1	
	comp=N,3µm,0.4s						
SAN	Santiago	1.17	113	⇑*i*P	Pn	07 54 44.4	+0.5
SAN				*i* S	Sn	07 54 59.7	+0.9
STL	Santa Lucia	1.18	112	⇓*i*P	Pn	07 54 43.4	-0.6
STL				*i* S	Sn	07 54 59.1	0.0
STL				AMP		07 54 59.6	
	comp=N,790nm,0.2s						
JACH	Jahuel	1.18	75	⇑*i*P	Pn	07 54 44.2	+0.1
JACH				*i* S	Sn	07 55 00.3	+1.1
DSCH	Colegio Aleman	1.23	110	⇑*i*P	Pn	07 54 45.3	+0.7
DSCH				*i* S	Sn	07 55 00.9	+0.7
DSCH				AMP		07 55 03.6	
	comp=N,4µm,0.3s						
ANTU	Antumapu	1.24	118	⇑*i*P	Pn	07 54 45.3	+0.5
ANTU				*i* S	Sn	07 55 01.3	+0.6
ANTU				AMP		07 55 07.2	
	comp=E,2µm,0.6s						
CLCH	Cerro Calan	1.25	109	⇓*i*P	Pn	07 54 45.7	+0.7
CLCH				*i* S	Sn	07 55 02.1	+1.2
CLCH				AMP		07 55 06.9	
	comp=E,3µm,0.5s						
FSR	Penalolen	1.28	112	⇓*i*P	Pn	07 54 46.2	+0.7
FSR				*i* S	Sn	07 55 03.2	+1.5
FSR				AMP		07 55 07.3	
	comp=N,2µm,0.3s						
PCH	Pirque	1.35	118	⇑*i*P	Pn	07 54 47.1	+0.7
PCH				*i* S	Sn	07 55 05.3	+1.8
FCH	Farellones	1.43	104	*i* P	Pn	07 54 48.7	+1.1
FCH				*i* S	Sn	07 55 07.7	+2.2
CHCH	Chadas Angostu	1.43	131	⇑*i*P	Pn	07 54 48.4	+0.8
CHCH				*i* S	Sn	07 55 06.9	+1.4
SJCH	San Jose de Ma	1.48	116	⇑*i*P	Pn	07 54 48.8	+0.5
SJCH				*i* S	Sn	07 55 08.3	+1.5
SJCH				AMP		07 55 09.9	
	comp=N,963nm,0.4s						
ILCH	Illapel	1.51	26	⇓*i*P	Pn	07 54 49.5	+0.9
ILCH				*i* S	Sn	07 55 09.2	+1.9
ILCH				AMP		07 55 13.1	
	comp=E,2µm,0.1s						
CACH	El Canelo	1.59	135	⇑*i*P	Pn	07 54 51.4	+1.6
CACH				*i* S	Sn	07 55 12.9	+3.4
LMEL	Las Melosas	1.69	121	⇓*i*P	Pn	07 54 52.6	+1.3
LMEL				*i* S	Sn	07 55 15.0	+3.0
LMEL				AMP		07 55 18.2	
	comp=N,3µm,0.2s						
SFDO	San Fernando	1.79	155	⇑*i*P	Pn	07 54 53.6	+0.8
SFDO				*i* S	Sn	07 55 16.6	+2.0
CICH	Cipreses	1.84	136	⇑*i*P	Pn	07 54 54.6	+1.2
CICH				*i* S	Sn	07 55 18.4	+2.6
CMCH	Combarbala	1.98	24	⇑*i*P	Pn	07 54 56.0	+0.5
CMCH				*i* S	Sn	07 55 21.2	+1.7
CMCH				AMP		07 55 28.4	
	comp=N,4µm,0.4s						
TALC	Talca	2.41	174	*i* S	Sn	07 55 31.3	+0.9
TALC				AMP		07 55 41.6	
	comp=E,789nm,0.4s						
MDZ	Mendoza	2.61	88	*e*P	Pn	07 55 09.3	+4.9
MDZ				*i* S	Sn	07 55 48.1	+13
ZON	Zonda	3.12	63	*e*P	Pn	07 55 16.0	+4.3
ZON				*e*S	Sn	07 55 58.0	+10

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*DHMR **26** 08:22:54.1±3.0, 1.81N×125.86E, h10^{km}, mb6.0*

*MOS **26** 08:22:56.6±0.9, 1.85N×125.70E, h38^{km}, mb6.0/51, MS4.9/28, Error ellipse: s-maj=8.5km s-min=4.4km az=118.0*

*CSEM **26** 08:23:01.1, 1.79N×126.10E, h80^{km}, mb6.0*

*BJI **26** 08:23:01.7, 1.64N×125.92E, h103^{km}, mB5.7, mb5.7*

*HRVD **26** 08:23:03.9±0.1, 1.86N×125.90E, h88^{km}±1^{km}, MW5.7/77, Centroid moment Tensor Solution. LP body waves: s73,c156;Mantle waves: s77,c233; Half duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}2.30±.06; $M_{\theta\theta}$-4.86±.05; $M_{\phi\phi}$2.55±.07; $M_{r\theta}$0.95±.05; $M_{\theta\phi}$0.28±.06; $M_{\phi r}$1.79±.05; Best double couple: $M_0$4.642×10^{17} NP1: ϕ_s309°, δ55°, λ151°. NP2:ϕ_s57°, δ67°, λ39°. Principal axes: T 4.299, Plg44°, Azm277°; N .676, Plg46°, Azm83°; P -4.985, Plg7°, Azm180°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **26** 08:23:03.9±0.1, 1.77N×125.83E, mb6.0/105, ME5.7, MW5.7 Error ellipse: s-maj=4.4km s-min=3.1km az=60.0 Broadband fault plane solution: P waves. NP1:ϕ_s55°, δ65°, λ90°. NP2:ϕ_s235°, δ25°, λ90°. Principal axes: T Plg70°, Azm325°; N Plg0°, Azm0°; P Plg20°, Azm145°; Moment Tensor Solution. s24 Moment tensor: Scale 10^{17} Nm; M_{rr}2.97; $M_{\theta\theta}$-3.76; $M_{\phi\phi}$0.79; $M_{r\theta}$1.33; $M_{\theta\phi}$0.53; $M_{\phi r}$1.90; Best double couple: $M_0$4.2×10^{17} NP1:ϕ_s303°, δ43°, λ135°. NP2:ϕ_s69°, δ61°, λ56°. Principal axes: T 4.32, Plg59°, Azm290°; N -.3, Plg29°, Azm86°; P -4.02, Plg10°, Azm182°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Bitung and Manado; [III] at Tondano, Sulawesi. Felt [II] on Ternate, Indonesia.

*IDC **26** 08:23:03.6±0.5, 1.80N×125.79E, h89^{km}±3^{km}, mb5.3/25, mb1 5.3/26, mb1mx5.2/27, mbtmp5.6/26, MS4.7/11, Ms1 4.7/11, ms1mx4.5/19 Error ellipse: s-maj=12.2km s-min=7.0km az=82.0*

ISC 26 08:23:02.0±0.1**, 1.75N**±0.02×**125.87E**±0.03**, h92^{km}, h92^{km}**±3.4^{km}**:pP-P, n798, σ1^{s}10**/551**, mb5.8**/131**, 128C-38D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	5.18	4	*e*P	P	08 24 15.9	-2.7
KCP	Kidapawan	5.28	352	⇓*e*P	P	08 24 21.2	+1.2
DAV	Davao City (W)	5.30	357	*e*P	P	08 24 21.0	+0.8
BUKP	Musuan	6.14	353	*e*P	P	08 24 31.9	+0.1
ZMPH	Zamboanga City	6.41	324	⇓*i*P	P	08 24 37.1	+1.5
ZMPH				*i* S	S	08 25 46.9	-1.0
PAGZ	Pagadian	6.55	338	*e*P	P	08 24 37.9	+0.4
CGP	Cagayan de Oro	6.76	350	⇓*e*P	P	08 24 41.0	+0.6
BUTP	Butuan	7.18	358	*e*P	P	08 24 46.5	+0.3
DCPH	Dipolog City	7.24	340	⇑*e*P	P	08 24 49.0	+2.0
SNPH	Sibulan	7.99	341	⇑*e*P	P	08 25 00.5	+3.4
TBP	Tagbilaran	8.14	346	*e*P	P	08 24 57.3	-1.9
TSM	Tawau	8.37	288	P	P	08 25 05.8	+3.4
MSLP	Maasin	8.39	353	*e*P	P	08 25 02.8	+0.1
LLP	Lapu-Lapu	8.72	348	⇓*e*P	P	08 25 07.1	0.0
LLP				*e*S	S	08 26 40.0	-4.5
PLP	Palo	9.40	355	⇓*e*P	P	08 25 16.2	0.0
PLP				*e*S	S	08 26 47.4	-14
GUIM	Jordan	9.40	340	*e*P	P	08 25 18.2	+1.9
BESP	Borongan	9.80	358	*e*P	P	08 25 22.4	+0.6
RCP	Roxas	10.23	343	⇓*e*P	P	08 25 29.5	+1.9
CUYO	Cuyo Island	10.24	332	*e*P	P	08 25 30.3	+2.5
KALP	Kalibo	10.47	341	*i* P	P	08 25 38.5	+7.7
KKM	Kota Kinabalu	10.53	294	⇑*i*P	P	08 25 34.6	+2.9
KKM				*e*S	S	08 27 28.2	-0.1
KKM	Kota Kinabalu	10.53	294	P	P	08 25 36.7	+5.0
BATP	Bataraza	10.65	311	*e*P	P	08 25 36.0	+2.7
PPR	Puerto Princes	10.68	319	*e*P	P	08 25 35.7	+2.2
CNP	Catarman	10.76	354	*e*P	P	08 25 34.4	-0.4
ENPP	El Nido	11.37	326	*e*P	P	08 25 46.1	+3.3
SJMP	San Jose	11.64	336	*e*P	P	08 25 47.9	+1.5
PVCP	Virac	11.89	352	*e*P	P	08 25 48.8	-1.0
AUQP	San Andres	11.93	345	*e*P	P	08 25 53.1	+2.8
BOAC	Boac	12.30	341	*e*P	P	08 25 56.1	+0.9
GQP	Guinayangan	12.54	345	⇑*e*P	P	08 26 00.0	+1.5
LBPH	Los Banos	13.17	340	*e*P	P	08 26 12.7	+6.1
POLP	Polilio Island	13.47	343	*e*P	P	08 26 13.2	+2.7
NZB	Bigte	13.86	340	*e*P	P	08 26 18.7	+3.1
NBP	Mount Natib	13.99	338	*e*P	P	08 26 19.5	+2.1
BALP	Baler	14.53	343	*e*P	P	08 26 25.6	+1.1
KSM	Kuching	15.55	269	⇑*e*P	P	08 26 39.9	+2.4
KSM				S	S	08 29 42.0	+15
KSM				*e*PcP	PcP	08 31 36.8	+1.5
CAUP	Cauayan	15.62	345	*e*P	P	08 26 39.4	+1.1
BOLP	Bolinao	15.68	338	*e*P	P	08 26 37.9	-1.1
KAKA	Kakadu	15.78	156	⇓*i*P	P	08 26 37.0	-3.3
	596nm,0.6s						
KAKA				*e*pP		08 26 43.0	
KAKA				*e*S	S	08 29 40.5	+8.3
CVP	Callao Caves	16.35	346	*e*P	P	08 26 48.0	+0.7
ABRA	Dolores	16.59	343	*e*P	P	08 26 51.6	+1.1
APYP	Conner	16.65	344	*e*P	P	08 26 50.8	-0.2
FITZ	Fitzroy Crossi	19.72	181	P	P	08 27 25.9	-1.0
	143nm,0.3s,baz=8.3,slow=8.6,SNR=1099						
FITZ				S	S	08 30 58.4	-0.7
	1.8nm,0.3s,baz=195,slow=17,SNR=5.8						
GUMO	Guam	22.18	57	*e*P	P	08 27 53.7	+2.1
GUMO				pmax	pmax		
	comp=Z,217nm,0.8s,mb5.5						
GUMO	Guam	22.18	57	*e*P	P	08 27 53.7	+2.1
	comp=Z,217nm,0.8s,mb5.5						
KGM	Kluang	22.54	271	P	P	08 27 59.1	+3.8
NACB	Ninganchiao	22.68	350	*e*P	P	08 27 53.8	-2.7
WRAB	Tennant Creek	23.10	159	⇓*i*P	P	08 28 00.4	-0.2
WRAB				*e*S	S	08 32 01.2	+0.1
WRAB				pmax	pmax		
	comp=Z,3µm,1.0s,mb6.5						
WRAB	Tennant Creek	23.10	159	⇓*i*P	P	08 28 00.3	-0.3
	comp=Z,3µm,1.0s,mb6.5						
WRAB				*e*S	S	08 32 01.2	+0.1
WRA	Warramunga Arr	23.10	159	P	P	08 28 00.5	-0.2
	comp=Z,725nm,0.6s,mb6.2,baz=333,slow=11,SNR=729						
WRA				S	S	08 32 01.6	+0.4
	comp=Z,91nm,1.0s,baz=327,slow=15,SNR=8.8						
WB2	Warramunga Arr	23.11	159	⇓*i*P	P	08 28 00.5	-0.2
WB2				*e*S	S	08 32 02.7	+1.4
WB2				*e*SCS	ScS	08 39 02.2	+0.7
YHNB	Yeheng	23.20	350	*e*P	P	08 27 58.9	-2.7
QIZ	Qiongzhong	23.27	319	P	P	08 28 02.5	+0.2
QIZ				AP		08 28 23.3	
QIZ				XP		08 28 33.5	
QIZ				S	S	08 32 03.8	-0.3
QIZ				XS		08 32 41.8	
QIZ				AMB	AMB		
	comp=Z,110nm,1.7s,mb4.9						
QIZ				AMB	AMB		
	comp=Z,1µm,5.9s						
QIZ	Qiongzhong	23.27	319	*e*P	P	08 28 02.8	+0.5
	comp=Z,526nm,1.4s,mb5.7						
HKC	Hong Kong	23.38	332	⇑*i*P	P	08 28 04.0	+0.6
TATO	Taipei	23.48	350	*e*P	P	08 28 05.6	+1.4
MBWA	Marble Bar	23.54	194	⇓*i*P	P	08 28 06.0	+1.1
	comp=Z,302nm,0.9s,mb5.6						
MBWA				*e*PcP	PcP	08 31 50.2	+0.7
PMG	Port Moresby	23.93	118	P	P	08 28 08.6	-0.1
PMG				S	S	08 32 14.9	-0.6
PMG				pmax	pmax		
	comp=Z,67nm,0.8s						
PMG				smax			
	comp=E,9.0nm,0.7s						
PMG				pmax	pmax		
	comp=E,7.0nm,0.7s						
PMG	Port Moresby	23.93	118	P	P	08 28 08.6	-0.1
	comp=E,67nm,0.8s,mb5.0,baz=321,slow=6.7,SNR=19						
PMG				S	S	08 32 14.9	-0.6
	comp=E,9.2nm,0.7s,baz=17,slow=20,SNR=2.0						
PMG				ScP		08 35 21.2	
	comp=E,6.9nm,0.7s,baz=39,slow=15,SNR=4.0						
PMG	Port Moresby	23.93	118	⇓*e*P	P	08 28 07.1	-1.6
	comp=E,74nm,0.8s,mb5.1						
QZH	Quanzhou	24.11	344	⇑*i*P	P	08 28 10.3	0.0
QZH				AP		08 28 31.0	
QZH				S	S	08 32 16.5	-1.9
QZH				XS		08 33 01.8	
QZH				AMB	AMB		
	comp=Z,190nm,0.9s,mb5.4						
QZH				LR	LR		
	comp=N,1µm,8.8s						
QZH				LR	LR		
	comp=E,3µm,18.0s						
QZH				LR	LR		
	comp=Z,6µm,28.2s						
IPM	Ipoh	24.96	277	P	P	08 28 20.5	+1.8
JOW	Kunigami	25.05	5	P	P	08 28 19.9	+0.5
	comp=Z,64nm,0.4s,mb5.4,baz=200,slow=10,SNR=22						
JOW				S	S	08 32 31.7	-2.5
	comp=Z,38nm,1.1s,baz=300,slow=4.6,SNR=4.3						
JOW				LR	LR	08 38 07.9	
	comp=Z,2µm,20.8s,baz=293,slow=36						
KULM	Kulim	25.41	279	⇑*e*P	P	08 28 22.9	0.0
SNG	Songkhla	25.73	283	P	P	08 28 28.0	+2.1
	comp=Z,240nm,0.9s,mb5.6						
KKTK	Khon Kaen	26.93	304	PG	P	08 28 36.5	-0.4
KKTK				SG	Px	08 28 42.5	
NNT	Nongplab	28.04	294	P	P	08 28 47.5	+0.5
NST	Nakhon Sawan	28.90	300	P	P	08 28 53.3	-1.3
	comp=Z,100nm,0.9s,mb5.5						
CTA	Charters Tower	29.51	138	*e*P	P	08 28 59.4	-0.7
	comp=Z,57nm,1.3s,mb5.0						
CTA				*e*pP	pP	08 29 05.7	-15
CTA				*e*S	S	08 33 46.6	+0.1
CTA	Charters Tower	29.51	138	*e*P	P	08 28 59.4	-0.7
CTA				*e**PP	pP	08 29 05.7	-15
CTA				*e*S	S	08 33 46.6	+0.1
CTA				pmax	pmax		
	comp=Z,57nm,1.3s						
CTA	Charters Tower	29.51	138	P	P	08 28 59.7	-0.4
	comp=Z,76nm,1.1s,mb5.2,baz=320,slow=11,SNR=19						
CTA				S	S	08 33 45.1	-1.4
	comp=Z,9.2nm,0.8s,baz=180,slow=21,SNR=2.0						
CTAO	Charters Tower	29.51	138	⇓*e*P	P	08 28 59.3	-0.8
CTAO				pmax	pmax		
	comp=Z,220nm,1.4s,mb5.6						
CTAO	Charters Tower	29.51	138	⇓*e*P	P	08 28 59.2	-0.8
	comp=Z,220nm,1.4s,mb5.6						
SSE	Sheshan	29.52	352	*e*P	P	08 29 01.3	+1.2
SSE				AP	pP	08 29 22.3	+1.3
SSE				XP	sP	08 29 34.5	+2.8
SSE				S	S	08 33 47.0	+0.3
SSE				XS		08 34 21.8	
SSE				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.1						
SSE				AMB	AMB		
	comp=Z,190nm,6.7s						
SSE				LR	LR		
	comp=N,2µm,24.7s						
SSE				LR	LR		
	comp=E,220nm,24.8s						
SSE				LR	LR		
	comp=Z,2µm,22.2s						
SSE	Sheshan	29.52	352	*e*P	P	08 29 01.2	+1.1
	comp=Z,30nm,0.6s,mb5.1						
SSE				pP	pP	08 29 22.2	+1.2

SSE				sP	sP	08 29 34.4	+2.7
SSE				S	**S**	**08 33 47.0**	**+0.3**
SSE				sS		08 34 21.7	
SSE				SS	SS	08 35 51.2	+25
SSE				ScS	ScS	08 39 34.0	+5.2
SSE				LR	LR		
	comp=Z,2µm,22.2s						
CBIJ	**Chichi jima**	**29.67**	**30**	P	**P**	**08 28 59.6**	**-1.8**
	comp=Z,81nm,0.4s,mb5.8,baz=223,slow=2.2,SNR=30						
CBIJ				S	**S**	**08 33 39.2**	**-10**
	comp=Z,19nm,0.7s,baz=284,slow=18,SNR=1.7						
CBIJ				LR	LR	08 39 49.1	
	comp=Z,1µm,18.6s,baz=52,slow=34						
WHN	**Wuhan**	**30.65**	**340**	P	**P**	**08 29 10.0**	**-0.1**
WHN				AP	pP	08 29 31.5	+0.4
WHN				S	**S**	**08 34 02.5**	**-1.9**
WHN				LR	LR		
	comp=N,2µm,13.2s						
WHN				LR	LR		
	comp=E,4µm,12.2s						
WHN				LR	LR		
	comp=Z,4µm,21.6s						
GYA	**Guiyang**	**30.73**	**325**	⇑*i*P	**P**	**08 29 10.8**	**0.0**
GYA				XP	sP	08 29 44.0	+1.4
GYA				PP	PP	08 30 17.0	+2.3
GYA				PCP	PcP	08 32 07.8	+1.4
GYA				S	**S**	**08 34 03.5**	**-2.1**
GYA				AMB	AMB		
	comp=Z,140nm,1.4s,mb5.5						
GYA				AMB	AMB		
	comp=Z,480nm,7.8s						
GYA				LR	LR		
	comp=N,1µm,17.7s						
GYA				LR	LR		
	comp=E,2µm,16.2s						
GYA				LR	LR		
	comp=Z,2µm,16.8s						
NJ2	**Nanjing**	**30.86**	**348**	*e*P	**P**	**08 29 12.5**	**+0.6**
NJ2				AP	pP	08 29 34.5	+1.5
NJ2				XP	sP	08 29 46.3	+2.5
NJ2				PP	PP	08 30 18.3	+2.0
NJ2				S	**S**	**08 34 08.0**	**+0.3**
NJ2				XS		08 34 50.0	
NJ2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,2µm,5.8s						
NJ2				LR	LR		
	comp=N,8µm,19.1s						
NJ2				LR	LR		
	comp=E,7µm,21.5s						
NJ2				LR	LR		
	comp=Z,3µm,22.4s						
CM31	**Chiang Mai Arr**	**31.19**	**304**	*e*P	**P**	**08 29 15.1**	**+0.2**
	comp=Z,16nm,0.4s,mb5.1						
CMAR	**Chiang Mai Arr**	**31.19**	**304**	P	**P**	**08 29 14.5**	**-0.4**
	comp=Z,9.2nm,0.7s,baz=138,slow=8.8,SNR=33						
CMAR				PcP	PcP	08 32 08.8	+1.0
	comp=Z,11nm,0.9s,baz=199,slow=1.5,SNR=6.1						
CMAR				PKiKP		08 39 37.9	
	comp=Z,3.0nm,0.6s,baz=276,slow=1.1,SNR=8.4						
CMAR				LR	LR	08 40 40.8	
	comp=Z,2µm,21.9s,baz=110,slow=34						
CHTO	**Chiang Mai**	**31.36**	**305**	P	**P**	**08 29 16.3**	**-0.1**
KMI	**Kunming**	**32.22**	**318**	⇑P	**P**	**08 29 24.8**	**+1.0**
KMI				AP	pP	08 29 41.8	-3.2
KMI				PP	PP	08 30 35.3	+1.9
KMI				PCP	PcP	08 32 11.8	+1.4
KMI				S	**S**	**08 34 29.0**	**0.0**
KMI				AMB	AMB		
	comp=Z,190nm,1.7s,mb5.5						
KMI				AMB	AMB		
	comp=Z,870nm,3.1s						
KMI				LR	LR		
	comp=N,5µm,19.7s						
KMI				LR	LR		
	comp=E,4µm,20.9s						
KMI				LR	LR		
	comp=Z,4µm,24.3s						
KMI	**Kunming**	**32.22**	**318**	⇑P	**P**	**08 29 24.7**	**+0.9**
KMI				*PP	pP	08 29 41.7	-3.3
KMI						08 30 35.3	
KMI				PPP	PPP	08 30 48.4	-1.0
KMI						08 32 11.8	
KMI				S	**S**	**08 34 29.1**	**+0.1**
KMI				SS	SS	08 36 23.2	-5.5
KMI				pmax	pmax		
	comp=Z,196nm,1.7s,mb5.6						
KMI				MLR	MLR		
	comp=Z,4µm,24.3s						
KMI	**Kunming**	**32.22**	**318**	⇑P	**P**	**08 29 24.7**	**+0.9**
	comp=Z,196nm,1.7s,mb5.6						
KMI				pP	pP	08 29 41.7	-3.3
KMI				sP	sP	08 29 47.3	-8.7
KMI				PP	PP	08 30 35.3	+1.9
KMI				PPP	PPP	08 30 48.4	-1.0
KMI				PcP	PcP	08 32 11.8	+1.4
KMI				S	**S**	**08 34 29.1**	**+0.1**
KMI				sS		08 34 56.4	
KMI				PcS		08 35 59.3	
KMI				SS	SS	08 36 23.2	-5.5
KMI				LR	LR		
	comp=Z,4µm,24.3s						
ENH	**Enshi**	**32.35**	**333**	*e*P	**P**	**08 29 23.8**	**-1.1**
	comp=Z,321nm,1.0s,mb6.0						
ENH				*e*PcP	PcP	08 32 11.0	+0.2
FORT	**Forrest**	**32.41**	**176**	⇓*i*P	**P**	**08 29 25.1**	**-0.3**
	comp=Z,136nm,0.6s,mb5.8						
FORT				*e*S	**S**	**08 34 31.0**	**-1.0**
JHJ	**Hachijo jima 2**	**33.83**	**21**	P	**P**	**08 29 38.6**	**+0.9**
	comp=Z,32nm,0.4s,mb5.5,baz=52,slow=22,SNR=3.0						
KLBR	**Kellerberrin**	**34.04**	**192**	⇓*i*P	**P**	**08 29 39.9**	**+0.4**
	comp=Z,447nm,1.2s,mb6.2						
KLBR				*e*		08 32 16.4	
MUN	**Mundaring**	**34.77**	**194**	⇓*i*P	**P**	**08 29 46.4**	**+0.7**
	comp=Z,52nm,0.5s,mb5.6						
MUN				*e*		08 32 19.4	
MUN				*i* S	**S**	**08 35 10.8**	**+2.4**
MUN	**Mundaring**	**34.77**	**194**	⇓*i*P	**P**	**08 29 46.4**	**+0.7**
MUN				*e*		08 32 19.4	
MUN				*i* S	**S**	**08 35 10.8**	**+2.4**
MUN				pmax	pmax		
	comp=Z,52nm,0.5s,mb5.6						
NWAO	**Narrogin (SRO)**	**35.44**	**193**	*e*P	**P**	**08 29 51.9**	**+0.5**
NWAO				pmax	pmax		
	comp=Z,172nm,1.2s						
NWAO	**Narrogin (SRO)**	**35.44**	**193**	*e*P	**P**	**08 29 51.9**	**+0.6**
	comp=Z,172nm,1.2s,mb5.8						
INCN	**Inchon**	**35.57**	**1**	*e*P	**P**	**08 29 53.6**	**+1.2**
	comp=Z,28nm,0.8s,mb5.2						
KS15	**Wonju Array Si**	**35.57**	**3**	*e*P	**P**	**08 29 52.7**	**+0.3**
HNR	**Honiara**	**35.72**	**109**	*e*P	**P**	**08 29 52.7**	**-1.2**
HNR				pmax	pmax		
	comp=Z,156nm,0.7s,mb6.0						
HNR	**Honiara**	**35.72**	**109**	*e*P	**P**	**08 29 52.6**	**-1.3**
	comp=Z,156nm,0.7s,mb6.0						
CD2	**Chengdu**	**35.77**	**326**	⇑*i*P	**P**	**08 29 53.5**	**-0.7**
CD2				S	**S**	**08 35 19.5**	**-4.3**
CD2				SS	SS	08 37 52.8	+3.3
CD2				AMB	AMB		
	comp=Z,520nm,1.2s,mb6.3						
CD2				AMB	AMB		
	comp=Z,320nm,2.8s,mb5.8						
CD2				LR	LR		
	comp=E,4µm,20.4s						
CD2				LR	LR		
	comp=Z,2µm,19.2s						
XAN	**Xi'an**	**35.82**	**336**	P	**P**	**08 29 53.5**	**-1.1**
XAN				S	**S**	**08 35 17.3**	**-7.3**
XAN				AMB	AMB		
	comp=Z,200nm,1.3s,mb5.9						
XAN				LR	LR		
	comp=N,2µm,21.5s						
XAN				LR	LR		
	comp=E,2µm,21.5s						
XAN				LR	LR		
	comp=Z,2µm,25.1s						
MJAR	**Matsushiro Arr**	**36.46**	**17**	P	**P**	**08 29 59.0**	**-1.0**
	comp=Z,22nm,0.9s,mb5.1,baz=196,slow=9.9,SNR=45						
MJAR				PP	PP	08 31 25.0	-1.1
	comp=Z,3.9nm,0.6s,baz=190,slow=9.5,SNR=1.7						
MJAR				PcP	PcP	08 32 23.7	+1.2
	comp=Z,20nm,0.9s,baz=204,slow=2.3,SNR=5.6						
MJAR				S	**S**	**08 35 29.9**	**-4.4**
	comp=Z,1.2nm,0.8s,baz=243,slow=5.6,SNR=2.4						
MJAR				ScP		08 36 01.0	
	comp=Z,6.0nm,1.0s,baz=186,slow=4.4,SNR=4.8						
MAJO	**Matsushiro**	**36.46**	**17**	*e*P	**P**	**08 29 57.8**	**-2.1**
MAJO				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.6						
MAJO	**Matsushiro**	**36.46**	**17**	*e*P	**P**	**08 29 57.8**	**-2.2**
	comp=Z,66nm,0.8s,mb5.6						
MAT	**Matsushiro**	**36.46**	**17**	*e*P	**P**	**08 29 59.0**	**-0.9**
MAT				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.3						
MAT	**Matsushiro**	**36.46**	**17**	*e*P	**P**	**08 29 59.0**	**-0.9**
	comp=Z,37nm,1.0s,mb5.3						
MAT				*e*S	**S**	**08 35 23.0**	**-11**
MAT	**Matsushiro**	**36.46**	**17**	P	**P**	**08 29 59.0**	**-0.9**
MAT				S	**S**	**08 35 22.0**	**-12**
STKA	**Stephens Creek**	**36.62**	**157**	⇓*i*P	**P**	**08 30 01.3**	**0.0**
	comp=Z,345nm,0.7s,mb6.4						
STKA				*e*S	**S**	**08 35 35.5**	**-1.3**
STKA	**Stephens Creek**	**36.62**	**157**	P	**P**	**08 30 01.1**	**-0.2**
	comp=Z,486nm,0.9s,mb6.5,baz=332,slow=8.3,SNR=540						
STKA				S	**S**	**08 35 34.5**	**-2.3**
	comp=Z,58nm,1.1s,baz=216,slow=22,SNR=8.5						
TIY	**Taiyuan**	**37.86**	**343**	*e*P	**P**	**08 30 11.0**	**-0.7**
TIY				S	**S**	**08 35 51.0**	**-4.7**
TIY				LR	LR		
	comp=N,1µm,15.0s						
TIY				LR	LR		
	comp=Z,310nm,10.0s						
IMP	**Imphal**	**38.40**	**309**	*i* P	**P**	**08 30 15.0**	**-1.2**
IMP				*e*x	x	08 32 28.0	
LZH	**Lanzhou**	**39.80**	**332**	⇑*i*P	**P**	**08 30 28.5**	**+0.8**
LZH				AP	pP	08 30 50.8	+1.3
LZH				XP	sP	08 31 00.5	+0.2
LZH				PP	PP	08 32 05.0	+0.6
LZH				PCP	PcP	08 32 34.0	+1.1
LZH				SCP		08 36 11.8	
LZH				PCS		08 36 21.8	
LZH				S	**S**	**08 36 24.0**	**-0.8**
LZH				XS		08 37 02.0	
LZH				SS	SS	08 39 13.5	-4.9
LZH				AMB	AMB		
	comp=Z,770nm,1.5s,mb6.3						
LZH				AMB	AMB		
	comp=Z,2µm,4.0s						
LZH	**Lanzhou**	**39.80**	**332**	⇑*i*P	**P**	**08 30 28.5**	**+0.8**
LZH						08 32 05.1	
LZH						08 32 34.0	
LZH				S	**S**	**08 36 24.0**	**-0.8**
LZH				SS	SS	08 39 13.5	-4.9
LZH				pmax	pmax		
	comp=Z,778nm,1.5s,mb6.3						
LZH	**Lanzhou**	**39.80**	**332**	⇑*i*P	**P**	**08 30 28.5**	**+0.8**
	comp=Z,778nm,1.5s,mb6.3						
LZH				pP	pP	08 30 50.7	+1.2
LZH				sP	sP	08 31 00.4	+0.1
LZH				PP	PP	08 32 05.1	+0.7
LZH				PcP	PcP	08 32 34.0	+1.1
LZH				ScP		08 36 11.8	
LZH				PcS		08 36 21.7	
LZH				S	**S**	**08 36 24.0**	**-0.8**
LZH				sS		08 37 02.0	
LZH				SS	SS	08 39 13.5	-4.9
SNY	**Shenyang**	**39.95**	**357**	⇑P	**P**	**08 30 29.5**	**+0.5**
SNY				AMB	AMB		
	comp=Z,260nm,1.2s,mb5.9						
SNY				AMB	AMB		
	comp=Z,550nm,7.6s						
SNY				LR	LR		
	comp=N,750nm,16.3s						
SNY				LR	LR		
	comp=Z,890nm,16.1s						
AGT	**Agartala**	**40.08**	**306**	*i* P	**P**	**08 30 31.0**	**+0.8**
AGT				*i* x	x	08 31 32.0	
ARMA	**Armidale**	**40.33**	**145**	*e*P	**P**	**08 30 32.9**	**+0.7**
SHL	**Shillong**	**40.39**	**309**	*e*P	**P**	**08 30 34.0**	**+1.3**
SHL				*e*x	x	08 36 24.0	
HHC	**Hu-ho-hao-te**	**41.02**	**343**	*e*P	**P**	**08 30 37.5**	**-0.2**
HHC				XP	sP	08 31 11.0	+0.7
HHC				PCS		08 36 28.0	
HHC				S	**S**	**08 36 37.5**	**-5.4**
HHC				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.1						
HHC				AMB	AMB		
	comp=Z,510nm,8.0s						
HHC				LR	LR		
	comp=N,2µm,20.2s						
HHC				LR	LR		
	comp=E,2µm,26.2s						
HHC				LR	LR		
	comp=Z,3µm,26.9s						
BTO	**Baotou**	**41.26**	**342**	*e*P	**P**	**08 30 37.8**	**-1.9**
BTO				S	**S**	**08 36 42.5**	**-4.0**
CN2	**Changchun**	**41.88**	**360**	*e*P	**P**	**08 30 44.5**	**-0.2**
CN2				*e*S	**S**	**08 36 56.0**	**+0.4**
CN2				AMB	AMB		
	comp=Z,40nm,1.8s,mb4.8						
CN2				AMB	AMB		
	comp=Z,400nm,6.0s						
CN2				LR	LR		
	comp=N,800nm,22.0s						
CN2				LR	LR		
	comp=E,600nm,22.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
RIV	**Riverview**	**42.65**	**148**	*e*P	**P**	**08 30 53.2**	**+2.0**
RIV				*e*PP	PP	08 32 32.5	-1.7
MDJ	**Mudanjiang**	**42.82**	**4**	P	**P**	**08 30 52.8**	**+0.3**
MDJ				AP	pP	08 31 14.0	-0.3
MDJ				XP	sP	08 31 24.3	-0.7
MDJ				PP	PP	08 32 32.8	-2.9
MDJ				S	**S**	**08 37 06.5**	**-2.8**
MDJ				SS	SS	08 40 20.3	+4.0
MDJ				AMB	AMB		
	comp=Z,100nm,0.7s,mb5.7						
MDJ				AMB	AMB		
	comp=Z,350nm,6.9s						
MDJ				LR	LR		
	comp=N,780nm,22.4s						
MDJ				LR	LR		
	comp=E,1µm,23.1s						
MDJ				LR	LR		
	comp=Z,1µm,34.7s						
MDJ	**Mudanjiang**	**42.82**	**4**	⇑*e*P	**P**	**08 30 52.6**	**+0.2**
	comp=Z,75nm,0.7s,mb5.5						
MDJ				*e*pP	pP	08 31 14.2	-0.2
CNB	**Canberra Magne**	**42.93**	**151**	⇓*i*P	**P**	**08 30 54.3**	**+0.8**
	comp=Z,128nm,0.9s,mb5.7						
CNB				*e*PP	PP	08 32 34.2	-2.7
CNB				*e*S	**S**	**08 37 12.9**	**+1.8**
LSA	**Lhasa**	**43.13**	**314**	P	**P**	**08 30 56.8**	**+1.6**
LSA				S	**S**	**08 37 12.3**	**-1.9**
LSA				AMB	AMB		
	comp=Z,390nm,1.4s,mb5.9						
LSA				LR	LR		
	comp=N,1µm,21.1s						
LSA				LR	LR		
	comp=E,2µm,30.2s						
LSA				LR	LR		
	comp=Z,2µm,36.2s						
LSA	**Lhasa**	**43.13**	**314**	⇑*i*P	**P**	**08 30 56.5**	**+1.3**
TOO	**Toolangi**	**43.14**	**157**	⇓*i*P	**P**	**08 30 56.7**	**+1.5**
	comp=Z,129nm,1.1s,mb5.6						
TOO				*e*PP	PP	08 32 36.5	-2.5
TOO				*e*S	**S**	**08 37 17.6**	**+3.5**
TOO	**Toolangi**	**43.14**	**157**	⇓*i*P	**P**	**08 30 56.7**	**+1.5**
TOO				*e*		08 32 36.5	
TOO				*e*S	**S**	**08 37 17.6**	**+3.5**
TOO				pmax	pmax		
	comp=Z,129nm,1.1s,mb5.6						
GTA	**Gaotai**	**44.37**	**331**	⇑P	**P**	**08 31 05.3**	**+0.2**
GTA				AP	pP	08 31 29.5	+2.4
GTA				XP	sP	08 31 39.5	+1.8
GTA				PCP	PcP	08 32 49.0	+1.0
GTA				PP	PP	08 32 50.3	-1.0
GTA				PCS		08 36 40.8	
GTA				S	**S**	**08 37 30.5**	**-1.5**
GTA				SS	SS	08 40 44.0	-0.3
GTA				SCS	ScS	08 40 53.8	+2.5
GTA				AMB	AMB		
	comp=Z,90nm,1.6s,mb5.2						
GTA				AMB	AMB		
	comp=Z,510nm,6.8s						
GTA				LR	LR		
	comp=N,2µm,18.3s						
GTA				LR	LR		
	comp=E,2µm,23.2s						
GTA				LR	LR		
	comp=Z,2µm,27.0s						
VIS	**Vishakhapatnam**	**44.67**	**294**	*i* P	**P**	**08 31 06.4**	**-1.4**
ASAJ	**Asahikawa**	**44.73**	**17**	P	**P**	**08 31 08.5**	**+0.6**
ASAJ				S	**S**	**08 37 37.1**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,45nm,0.8s						
ASAJ				smax			
	comp=E,3.0nm,0.7s						
ASAJ	**Asahikawa**	**44.73**	**17**	P	**P**	**08 31 08.5**	**+0.6**
	comp=E,44nm,0.8s,mb5.3,baz=237,slow=9.5,SNR=47						
ASAJ				S	**S**	**08 37 37.1**	**+0.1**
	comp=E,2.5nm,0.7s,baz=22,slow=23,SNR=7.1						
PALK	**Pallekele**	**45.33**	**278**	*e*P	**P**	**08 31 12.2**	**-0.9**
	comp=E,515nm,1.3s,mb6.1						
YUK	**Yuzh-Kuril'sk**	**45.70**	**20**	*e*P	**P**	**08 31 14.1**	**-1.5**
YUK				*e*S	**S**	**08 37 50.8**	**-0.1**
YUK				pmax	pmax		
	comp=Z,2µm,1.0s						
YUK				pmax	pmax		
	comp=N,2µm,2.0s						
YUK				pmax	pmax		
	comp=E,2µm,3.0s						
YUK				smax			
	comp=N,2µm,3.0s						
YUK				smax			
	comp=E,2µm,2.0s						
NOUC	**Port Laguerre**	**46.04**	**123**	*e*P	**P**	**08 31 18.2**	**-0.3**
NOUC	**Port Laguerre**	**46.04**	**123**	*e*P	**P**	**08 31 18.2**	**-0.4**
DZM	**Mont Dzumac**	**46.14**	**123**	*e*P	**P**	**08 31 19.4**	**+0.1**
DZM	**Mont Dzumac**	**46.14**	**123**	*e*P	**P**	**08 31 19.4**	**+0.1**
GUN	**Gumba**	**46.22**	**308**	*e*P	**P**	**08 31 20.0**	**0.0**
	comp=E,832nm,0.7s,mb6.6						
PKI	**Pulchoki**	**46.44**	**307**	*e*P	**P**	**08 31 21.2**	**-0.5**
	comp=E,1µm,1.5s,mb6.4						
PKI	**Pulchoki**	**46.44**	**307**	*e*P	**P**	**08 31 21.2**	**-0.5**
PKI				pmax	pmax		
	comp=Z,592nm,1.5s,mb6.1						
MDRS	**Chennai**	**46.52**	**286**	*e*x	x	08 41 55.0	
KKN	**Kakani**	**46.64**	**308**	*e*P	**P**	**08 31 22.8**	**-0.5**
	comp=Z,790nm,1.1s,mb6.4						
KKN	**Kakani**	**46.64**	**308**	*e*P	**P**	**08 31 22.8**	**-0.5**
KKN				pmax	pmax		
	comp=Z,395nm,1.1s,mb6.1						
DMN	**Daman**	**46.70**	**307**	*e*P	**P**	**08 31 23.5**	**-0.2**
	comp=Z,1µm,1.4s,mb6.4						
BLSP	**Bilaspur**	**47.08**	**299**	*e*P	**P**	**08 31 26.2**	**-0.6**
BLSP				*e*P		08 31 26.4	
BLSP				AMb	AMB	08 31 30.6	
	comp=Z,716nm,2.0s,mb6.1						
GKN	**Gorkha**	**47.25**	**307**	*e*P	**P**	**08 31 27.4**	**-0.6**
	comp=Z,821nm,1.1s,mb6.4						
YSS	**Yuzh-Sakhalins**	**47.37**	**16**	α*i*P	**P**	**08 31 28.2**	**-0.5**
YSS				*i* S	**S**	**08 38 14.0**	**-0.6**
YSS				*e*		08 38 34.0	
YSS				*e*SS	SS	08 41 12.0	-25
YSS				pmax	pmax		
	comp=N,70nm,1.3s						
YSS				pmax	pmax		
	comp=Z,150nm,1.3s,mb5.6						
YSS				MLR	MLR		
	comp=N,500nm,19.0s						
YSS				MLR	MLR		
	comp=E,400nm,19.0s						
YSS				MLR	MLR		
	comp=Z,500nm,19.0s						
YSS	**Yuzh-Sakhalins**	**47.37**	**16**	⇑*i*P	**P**	**08 31 28.3**	**-0.4**
	comp=Z,49nm,0.6s,mb5.4						
KLR	**Kul'dur**	**47.57**	**5**	*e*P	**P**	**08 31 26.8**	**-3.5**
KLR				*e*		08 32 55.7	
KLR				*e*		08 41 13.5	
KLR				pmax	pmax		
	comp=N,45nm,2.0s						
KLR				pmax	pmax		
	comp=E,54nm,2.0s						
KLR				pmax	pmax		
	comp=Z,90nm,2.0s,mb5.2						
HIA	**Hailar**	**47.63**	**355**	P	**P**	**08 31 31.0**	**+0.3**
HIA				PcP	PcP	08 33 00.7	+1.4
HIA				S	**S**	**08 38 17.2**	**-1.0**
HIA				ScS	ScS	08 41 15.2	+3.0
HIA	**Hailar**	**47.63**	**355**	⇑*i*P	**P**	**08 31 30.8**	**+0.1**
HIA				pmax	pmax		
	comp=Z,416nm,1.3s						
HIA	**Hailar**	**47.63**	**355**	⇑*i*P	**P**	**08 31 30.8**	**+0.1**
	comp=Z,416nm,1.3s,mb6.1						
KOLN	**Koldanda**	**47.97**	**307**	*e*P	**P**	**08 31 33.6**	**-0.1**
	comp=Z,2µm,1.2s,mb6.8						
ULN	**Ulaanbaatar**	**48.74**	**343**	⇑*i*P	**P**	**08 31 38.8**	**-0.5**
ULN				*e*		08 33 04.1	
ULN				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.6						
ULN	**Ulaanbaatar**	**48.74**	**343**	⇑*i*P	**P**	**08 31 38.8**	**-0.5**
	comp=Z,72nm,1.0s,mb5.6						
ULN				*e*PcP	PcP	08 33 04.1	+0.7
ULN				*e*ScP		08 36 50.8	
SONM	**Songino Array**	**48.91**	**343**	P	**P**	**08 31 40.1**	**-0.5**
	comp=Z,52nm,1.0s,mb5.4,baz=162,slow=7.8,SNR=117						
SONM				pP	pP	08 32 01.0	-1.9
	comp=Z,12nm,0.7s,baz=165,slow=7.9,SNR=2.8						
SONM				PcP	PcP	08 33 04.5	+0.5
	comp=Z,26nm,0.8s,baz=152,slow=4.2,SNR=5.6						
SONM				ScP		08 36 50.5	
	comp=Z,5.4nm,0.9s,baz=162,slow=5.1,SNR=3.6						
SONM				S	**S**	**08 38 34.7**	**-1.4**
	comp=Z,4.0nm,1.2s,baz=162,slow=3.9,SNR=4.2						
SONM				LR	LR	08 55 14.4	
	comp=Z,953nm,21.8s,baz=152,slow=40						
SONM				PKPPKP		09 02 34.8	
	comp=Z,0.6nm,0.6s,baz=45,slow=2.0,SNR=5.5						
HYB	**Hyderabad**	**49.00**	**292**	⇑*e*P	**P**	**08 31 41.0**	**-0.7**
HYB				*e*	pP	08 32 00.0	-4.0
HYB				pmax	pmax		
	comp=Z,1µm,1.4s,mb6.6						
HYB	**Hyderabad**	**49.00**	**292**	⇑*e*P	**P**	**08 31 41.0**	**-0.7**
	comp=Z,1µm,1.4s,mb6.6						
HYB				*e*	pP	08 32 00.0	-4.0
HYB	**Hyderabad**	**49.00**	**292**	⇑*i*P	**P**	**08 31 41.0**	**-0.7**
	comp=Z,525nm,1.4s,mb6.3						
HYB				*e*PP	pP	08 32 00.0	-4.0
HYB				*e*S	**S**	**08 38 38.5**	**+0.7**
LATR	**Latur**	**51.08**	**292**	*e*P	**P**	**08 31 56.7**	**-0.9**
CIT	**Chita**	**51.15**	**350**	*e*P	**P**	**08 31 58.1**	**+0.4**
CIT				*e*		08 33 13.7	
CIT				*e*		08 39 05.0	
CIT				*e*		08 41 39.0	
CIT				pmax	pmax		
	comp=Z,821nm,1.6s,mb6.5						
AKL	**Akola**	**51.21**	**295**	*i* P	**P**	**08 32 00.5**	**+1.9**
AKL				*i* x	x	08 32 18.7	
	comp=Z,2µm,1.4s						
LGTI	**Lohaghat**	**51.35**	**307**	*i* P	**P**	**08 32 00.0**	**+0.5**
LGTI				*e*x	x	08 33 14.3	
BHPL	**Bhopal**	**51.55**	**298**	*e*P	**P**	**08 32 00.7**	**-0.4**
BHPL				AMb	AMB	08 32 02.8	
	comp=Z,734nm,1.1s,mb6.6						
ZAK	**Zakamensk**	**52.11**	**342**	⇓*i*P	**P**	**08 32 03.8**	**-1.1**
ZAK				*e*		08 33 15.8	
ZAK				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
ZAK				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.3						
AGRA	**Agra**	**52.40**	**303**	*e*P	**P**	**08 32 06.0**	**-1.4**
AGRA				AMb	AMB	08 32 08.1	
	comp=Z,377nm,0.9s,mb6.4						
KAD	**Karad**	**53.06**	**290**	*e*P	**P**	**08 32 10.2**	**-2.2**
KAD				AMb	AMB	08 32 14.7	
	comp=Z,433nm,1.2s,mb6.3						
TLY	**Talaya**	**53.14**	**343**	*e*P	**P**	**08 32 12.2**	**-0.4**
TLY				*e*		08 34 07.4	
TLY				*e*S	**S**	**08 39 32.2**	**-2.1**
TLY				*e*PS	PS	08 39 43.4	-16
TLY				*e*		08 41 51.2	
TLY				*e*SS	SS	08 43 16.9	+2.7
TLY				pmax	pmax		
	comp=Z,57nm,1.4s,mb5.4						
TLY				MLR	MLR		
	comp=Z,813nm,17.0s						
TLY	**Talaya**	**53.14**	**343**	⇑*i*P	**P**	**08 32 12.0**	**-0.6**
	comp=Z,25nm,0.8s,mb5.3						
DDI	**Dehra Dun**	**53.44**	**307**	*e*P	**P**	**08 32 13.3**	**-1.8**
DDI				*e*x	x	08 39 37.0	
IRK	**Irkutsk**	**53.46**	**344**	*e*P	**P**	**08 32 14.0**	**-1.0**

IRK				*e*		08 39 43.6	
IRK				pmax	pmax		
	comp=Z,136nm,2.9s,mb5.5						
NDI	**New Delhi**	**53.51**	**305**	*e*P	**P**	**08 32 12.0**	**-3.6**
NDI				*e*x	x	08 39 34.0	
AYAN	**Aya Nagar**	**53.51**	**305**	*e*P	**P**	**08 32 14.2**	**-1.4**
WMQ	**Urumqi**	**53.87**	**326**	⇑P	**P**	**08 32 17.5**	**-0.5**
WMQ				AP	pP	08 32 40.5	-0.2
WMQ				XP	sP	08 32 52.0	+1.1
WMQ				PCP	PcP	08 33 21.5	-0.8
WMQ				PP	PP	08 34 21.5	+0.1
WMQ				PPP	PPP	08 35 32.5	-0.2
WMQ				S	**S**	**08 39 43.5**	**-0.6**
WMQ				SCS	ScS	08 41 53.8	-0.9
WMQ				SS	SS	08 43 25.5	-0.3
WMQ				AMB	AMB		
	comp=Z,240nm,0.9s,mb6.2						
WMQ				AMB	AMB		
	comp=Z,1µm,3.6s						
WMQ				LR	LR		
	comp=N,930nm,21.6s						
WMQ				LR	LR		
	comp=E,1µm,24.0s						
WMQ				LR	LR		
	comp=Z,1µm,23.2s						
KUDL	**Kundal**	**53.92**	**304**	*e*P	**P**	**08 32 16.8**	**-1.8**
KUDL				AMb	AMB	08 32 19.2	
	comp=Z,695nm,1.1s,mb6.6						
MOY	**Mondy**	**53.95**	**341**	*e*P	**P**	**08 32 18.3**	**-0.2**
MOY				pmax	pmax		
	comp=Z,174nm,2.4s,mb5.7						
DGAR	**Diego Garcia**	**54.06**	**260**	P	**P**	**08 32 19.6**	**-0.2**
DGAR				pmax	pmax		
	comp=Z,911nm,1.5s,mb6.6						
DGAR	**Diego Garcia**	**54.06**	**260**	P	**P**	**08 32 19.6**	**-0.2**
	comp=Z,911nm,1.5s,mb6.6						
SMLA	**Simla**	**54.46**	**308**	*i* P	**P**	**08 32 18.9**	**-3.6**
SMLA				*i* x	x	08 39 50.5	
SDNR	**Sundarnagar**	**54.76**	**308**	*e*P	**P**	**08 32 24.0**	**-0.7**
SDNR				*e*S	**S**	**08 39 57.0**	**+0.7**
CLNS	**Chul’man**	**54.93**	**359**	*e*P	**P**	**08 32 24.8**	**-0.8**
CLNS				*e**PP	pP	08 32 31.6	-17
CLNS				*e*		08 33 25.4	
CLNS				*e*S	**S**	**08 39 53.4**	**-4.8**
CLNS				pmax	pmax		
	comp=Z,126nm,1.3s,mb5.8						
CLNS				pmax	pmax		
	comp=N,43nm,0.7s						
CLNS				pmax	pmax		
	comp=E,15nm,0.6s						
CLNS				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
CLNS				pmax	pmax		
	comp=N,23nm,0.8s						
CLNS				pmax	pmax		
	comp=E,13nm,0.9s						
CLNS				smax			
	comp=N,960nm,12.9s						
CLNS				smax			
	comp=Z,419nm,11.0s						
CLNS				smax			
	comp=E,111nm,12.7s						
CLNS				MLR	MLR		
	comp=Z,400nm,16.0s						
CLNS				MLR	MLR		
	comp=N,400nm,15.0s						
CLNS				MLR	MLR		
	comp=E,100nm,13.0s						
AJM	**Ajmer**	**54.93**	**301**	*i* P	**P**	**08 32 24.0**	**-2.0**
BHK	**Bhakra**	**55.16**	**308**	*e*x	**P**	**08 32 30.6**	**+3.0**
BHK				*e*x	**S**	**08 40 05.0**	**+3.3**
PONG	**Pong**	**55.73**	**308**	*e*P	**P**	**08 32 30.0**	**-1.7**
THN	**Thein Dam**	**56.10**	**309**	*e*P	**P**	**08 32 32.8**	**-1.5**
THN				*e*S	**S**	**08 40 13.1**	**-1.0**
PET	**Petropavlovsk**	**57.88**	**23**	*e*P	**P**	**08 32 46.2**	**-0.4**
PET				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
PET	**Petropavlovsk**	**57.88**	**23**	*e*P	**P**	**08 32 46.2**	**-0.4**
	comp=Z,50nm,1.0s,mb5.5						
JASL	**Jaisalmer**	**58.27**	**301**	*e*P	**P**	**08 32 48.4**	**-1.2**
MKAR	**Makanchi Array**	**58.70**	**326**	P	**P**	**08 32 51.4**	**-1.0**
MKAR						08 33 41.4	
MKAR				S	**S**	**08 40 47.4**	**-0.6**
MKAR						08 42 29.9	
MKAR	**Makanchi Array**	**58.70**	**326**	P	**P**	**08 32 51.4**	**-1.0**
	comp=Z,107nm,0.6s,mb6.1,baz=122,slow=8.5,SNR=298						
MKAR				PcP	PcP	08 33 41.4	+0.4
	comp=Z,31nm,0.7s,baz=117,slow=8.1,SNR=4.9						
MKAR				ScP		08 37 33.3	
	comp=Z,4.9nm,0.9s,baz=117,slow=6.4,SNR=3.0						
MKAR				S	**S**	**08 40 47.4**	**-0.6**
	comp=Z,9.8nm,1.0s,baz=132,slow=15,SNR=14						
MKAR				ScS	ScS	08 42 29.9	+0.3
	comp=Z,0.3nm,0.4s,baz=238,slow=47,SNR=2.5						
MKAR				LR	LR	08 58 38.7	
	comp=Z,1µm,18.9s,baz=143,slow=36						
MKAR	**Makanchi Array**	**58.70**	**326**	P	**P**	**08 32 51.4**	**-1.0**
MKAR				PcP	PcP	08 33 41.4	+0.4
MKAR				ScP		08 37 33.3	
MKAR				S	**S**	**08 40 47.4**	**-0.6**
MKAR				ScS	ScS	08 42 29.9	+0.3
MKAR				LR	LR	08 58 38.7	
KSH	**Kashi**	**58.85**	**316**	⇑*i*P	**P**	**08 32 53.0**	**-0.5**
KSH				*e*AP	pP	08 33 16.0	-0.6
KSH				*e*XP	sP	08 33 27.3	+0.4
KSH				*e*PCP	PcP	08 33 40.0	-1.7
KSH				*e*PP	PP	08 35 04.0	-2.3
KSH				*e*SCP		08 37 30.0	
KSH				*e*PCS		08 37 41.0	
KSH				*e*S	**S**	**08 40 46.0**	**-4.1**
KSH				*e*PS	PS	08 41 15.3	-3.2
KSH				SCS	ScS	08 42 28.3	-2.4
KSH				*e*SS	SS	08 44 42.0	-4.6
KSH				AMB	AMB		
	comp=Z,2µm,3.1s						
KSH				LR	LR		
	comp=N,3µm,19.2s						
KSH				LR	LR		
	comp=E,540nm,8.6s						
ULHL	**Ulahol**	**59.93**	**319**	P	**P**	**08 33 01.3**	**+0.4**
	SNR=11						
AAA	**Alma-Ata**	**59.97**	**321**	*e*P	**P**	**08 32 59.0**	**-2.2**
AAA				*e*S	**S**	**08 41 06.0**	**+1.5**
AAA				pmax	pmax		
	comp=Z,500nm,1.8s,mb6.2						
AAA				smax			
	comp=E,400nm,1.6s						
AAA				MLR	MLR		
	comp=Z,500nm,10.0s						
YAK	**Yakutsk**	**60.20**	**2***c*	*i*P	**P**	**08 33 01.8**	**-0.7**
YAK				*e*		08 33 44.4	
YAK				*e*		08 35 15.4	
YAK				*i* S	**S**	**08 41 06.7**	**-0.5**
YAK				*i*		08 42 41.6	
YAK				*e*SS	SS	08 45 05.0	-2.0
YAK				pmax	pmax		
	comp=Z,130nm,0.9s,mb6.0						
YAK				pmax	pmax		
	comp=N,65nm,1.2s						
YAK				pmax	pmax		
	comp=E,13nm,1.2s						
YAK				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=N,19nm,1.2s						
YAK				pmax	pmax		
	comp=E,20nm,1.1s						
YAK				smax			
	comp=N,74nm,1.3s						
YAK				smax			
	comp=Z,23nm,1.0s						
YAK				smax			
	comp=E,78nm,1.3s						
YAK	**Yakutsk**	**60.20**	**2**	*e*P	**P**	**08 33 01.2**	**-1.4**
	comp=E,168nm,0.6s,mb6.2						
YAK				*e*S	**S**	**08 41 01.2**	**-6.0**
HIZ	**Hauiti**	**60.28**	**137**	PN	**P**	**08 33 03.6**	**+0.2**
KZA	**Kyzart**	**60.50**	**319**	P	**P**	**08 33 05.3**	**+0.4**
	SNR=116						
LBZ	**Lake Benmore**	**60.55**	**145**	PN	**P**	**08 33 04.9**	**-0.3**
RPZ	**Rata Peaks**	**60.66**	**144**	P	**P**	**08 33 05.7**	**-0.2**
	comp=E,84nm,0.8s,mb5.8,baz=245,slow=1.3,SNR=29						
RPZ	**Rata Peaks**	**60.66**	**144**	PN	**P**	**08 33 05.7**	**-0.2**
TKM2	**Tokmak 2**	**60.67**	**320**	P	**P**	**08 33 05.8**	**-0.1**
	SNR=5.7						
THZ	**Tophouse**	**60.69**	**141**	PN	**P**	**08 33 05.1**	**-1.0**
NNZ	**Nelson**	**60.70**	**140**	*e*PN	**P**	**08 33 04.2**	**-2.0**
MA2	**Magadan**	**60.83**	**14***c*	*i*P	**P**	**08 33 07.1**	**+0.3**
MA2				*i* S	**S**	**08 41 15.8**	**+0.6**
MA2				pmax	pmax		
	comp=Z,200nm,1.2s,mb6.0						
MA2				pmax	pmax		
	comp=E,40nm,1.7s						
MA2				pmax	pmax		
	comp=N,70nm,1.4s						
MA2	**Magadan**	**60.83**	**14**	⇑*e*P	**P**	**08 33 06.8**	**0.0**
	comp=N,144nm,0.8s,mb6.0						
KBK	**Karagaybulak**	**60.97**	**319**	P	**P**	**08 33 08.5**	**+0.5**
	SNR=32						
UCH	**Uchtor**	**61.06**	**318**	P	**P**	**08 33 08.9**	**+0.3**
	SNR=314						
ODZ	**Otahua Downs**	**61.21**	**145**	PN	**P**	**08 33 09.0**	**-0.6**
CHMS	**Chumysh**	**61.25**	**319**	P	**P**	**08 33 09.5**	**-0.4**
	SNR=41						
AAK	**Ala-Archa**	**61.26**	**319**	P	**P**	**08 33 10.3**	**+0.4**
	SNR=32						
AAK	**Ala-Archa**	**61.26**	**319**	*i* P	**P**	**08 33 09.5**	**-0.4**
FRU	**Bishkek**	**61.27**	**319**	*e*P	**P**	**08 33 09.5**	**-0.5**
FRU				*i*	pP	08 33 29.0	-4.2
FRU				*e*		08 41 22.0	
FRU				pmax	pmax		
	comp=Z,390nm,2.2s,mb6.0						
FRU				MLR	MLR		
	comp=Z,2µm,25.0s						
USP	**Ospenovka**	**61.54**	**320**	P	**P**	**08 33 11.1**	**-0.7**
	SNR=299						
AML	**Almayashu**	**61.56**	**318**	P	**P**	**08 33 12.3**	**+0.3**
	SNR=42						
SNZO	**South Karori**	**61.59**	**140**	*e*P	**P**	**08 33 10.2**	**-2.0**
	comp=Z,247nm,1.3s,mb6.1						
URZ	**Urewera**	**61.71**	**136**	P	**P**	**08 33 11.9**	**-1.2**
	comp=Z,30nm,0.4s,mb5.6,baz=341,slow=1.3,SNR=26						
BKZ	**Black Stump Fm**	**61.71**	**137**	PN	**P**	**08 33 12.1**	**-0.9**
EKS2	**Erkin-Say**	**61.74**	**319**	P	**P**	**08 33 13.0**	**-0.2**
	SNR=131						
NVS	**Novosibirsk**	**63.25**	**334**	⇑*i*P	**P**	**08 33 21.0**	**-2.1**
NVS				*e*		08 33 53.1	
NVS				*i* S	**S**	**08 41 41.7**	**-4.2**
NVS				pmax	pmax		
	comp=N,142nm,1.6s						
NVS				pmax	pmax		
	comp=E,136nm,1.6s						
NVS				pmax	pmax		
	comp=Z,234nm,1.6s,mb5.9						
NVS				smax			
	comp=N,305nm,2.1s						
NVS				smax			
	comp=E,366nm,2.1s						
KKAR	**Karatay Array**	**64.10**	**318**	*i* P	**P**	**08 33 27.4**	**-1.4**
KKAR				pmax	pmax		
	comp=Z,268nm,1.1s,mb6.0						
SEY	**Seymchan**	**64.15**	**13**	*i* P	**P**	**08 33 29.4**	**+0.6**
SEY						08 34 01.7	
SEY						08 35 48.1	
SEY				*e*PPP	PPP	08 37 28.6	+3.1
SEY				*e*S	**S**	**08 41 56.9**	**+0.1**
SEY				*SS		08 42 42.2	
SEY						08 43 11.8	
SEY				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
SEY				smax			
	comp=N,3µm,11.7s						
SEY				smax			
	comp=E,700nm,8.9s						
SEY				MLR	MLR		
	comp=Z,1µm,27.0s						
SEY				MLR	MLR		
	comp=N,700nm,22.0s						
SEY				MLR	MLR		
	comp=E,200nm,18.0s						
FX1	**Attu Island--F**	**64.22**	**30**	P	**P**	**08 33 30.1**	**+0.7**
FX1				*SP	sP	08 33 58.2	-4.8
FX1				S	**S**	**08 42 02.1**	**+4.2**
FX1				pmax	pmax		
	comp=Z,70nm,0.7s						
FX1				pmax	pmax		
	comp=Z,62nm,0.6s						
FX1				smax			
	comp=E,9.0nm,0.7s						
FX1	**Attu Island--F**	**64.22**	**30**	P	**P**	**08 33 30.1**	**+0.7**
	comp=E,70nm,0.7s,mb5.6,baz=40,slow=24,SNR=6.6						
FX1				sP	sP	08 33 58.2	-4.7
	comp=E,62nm,0.6s,baz=265,slow=8.9,SNR=4.1						
FX1				S	**S**	**08 42 02.1**	**+4.2**
	comp=E,9.2nm,0.7s,baz=92,slow=20,SNR=2.1						
FX1	**Attu Island--F**	**64.22**	**30**	*e*P	**P**	**08 33 30.0**	**+0.6**
WBK	**Wadi Bani Khal**	**68.04**	**294**	⇑P	**P**	**08 33 53.1**	**-1.1**
	SNR=18						
VOSK	**Vostochnaya**	**68.05**	**328**	*i* P	**P**	**08 33 52.2**	**-1.5**
BVA0	**Borovoye Array**	**68.51**	**328**	*i* P	**P**	**08 33 55.5**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.9						
BVAR	**Borovoye Array**	**68.51**	**328**	S	S	08 42 45.1	-4.8
	comp=Z,2.7nm,0.9s,baz=135,slow=8.4,SNR=3.9						
BVAR				ScS	ScS	08 43 40.5	-3.5
	comp=Z,3.0nm,1.1s,baz=102,slow=14,SNR=2.3						
BVAR				PKPPKP		09 02 02.8	
	comp=Z,0.4nm,0.7s,baz=305,slow=31,SNR=1.8						
CASY	**Casey**	**68.76**	**187**	⇑*i*P	**P**	**08 33 58.6**	**+0.7**
JMDO	**Jabal Madar**	**68.80**	**293**	⇑P	**P**	**08 33 57.5**	**-1.3**
	SNR=38						
BIDO	**Bidbid**	**68.93**	**294**	⇑P	**P**	**08 33 58.5**	**-1.2**
	SNR=53						
SMDO	**Samad**	**68.94**	**294**	⇑P	**P**	**08 33 58.5**	**-1.2**
	SNR=16						
DRV	**Dumont d’Urvil**	**69.00**	**174**	P	pP	08 34 23.0	-0.1
DRV				S	S	08 43 02.0	+6.5
ZRNK	**Zerenda**	**69.22**	**327**	*i* P	**P**	**08 34 00.1**	**-0.8**
GSTR	**Great Sitkin T**	**69.52**	**34**	*e*P	**P**	**08 34 03.4**	**+0.6**
BSY	**Bisya**	**69.68**	**294**	⇓P	**P**	**08 34 03.4**	**-0.8**
	SNR=23						
HOQ	**Hoqain**	**69.68**	**294**	⇓P	**P**	**08 34 03.3**	**-0.9**
	SNR=15						
TIXI	**Tiksi**	**69.83**	**1**	*e*P	**P**	**08 33 57.1**	**-7.2**
TIXI				*e**PP	pP	08 34 23.2	-4.9
TIXI				*e*SS	SS	08 47 35.0	-1.9
TIXI				*e*SSS	SSS	08 50 40.3	-2.1
TIXI				pmax	pmax		
	comp=Z,77nm,0.9s,mb5.5						
TIXI	**Tiksi**	**69.83**	**1**	⇑*i*P	**P**	**08 34 03.2**	**-1.1**
ARQ	**Araqi**	**70.36**	**294**	⇓P	**P**	**08 34 07.7**	**-0.7**
	SNR=28						
SHAO	**Shalim**	**70.68**	**288**	⇓P	**P**	**08 34 10.9**	**+0.6**
BANOM	**Banah**	**70.89**	**297**	⇑P	**P**	**08 34 10.5**	**-1.0**
	SNR=8.3						
ASHO	**Ashiyiah**	**70.95**	**295**	⇑P	**P**	**08 34 10.6**	**-1.2**
	SNR=8.1						
VAN	**Vannovskaya**	**71.48**	**309**	*e*P	**P**	**08 34 14.7**	**-0.1**
BILL	**Bilibino**	**71.68**	**15**	*e*P	**P**	**08 34 15.0**	**-0.5**
BILL				pmax	pmax		
	comp=Z,116nm,1.6s,mb5.5						
BILL	**Bilibino**	**71.68**	**15**	*e*P	**P**	**08 34 15.0**	**-0.5**
	comp=Z,116nm,1.6s,mb5.5						
RBK	**Rabkut**	**71.99**	**288**	⇑P	**P**	**08 34 17.1**	**-1.1**
	SNR=7.4						
MIR	**Mirnyy**	**72.04**	**193***c*	*i*P	**P**	**08 34 18.8**	**+1.1**
MIR				pmax	pmax		
	comp=Z,226nm,1.4s,mb5.8						
WHFO	**Wadi Hawf**	**72.43**	**288**	⇑P	**P**	**08 34 20.7**	**-0.1**
	SNR=28						
ABTO	**Aybut**	**72.85**	**288**	⇑P	**P**	**08 34 24.0**	**+0.6**
	SNR=11						
AB31	**Akbulak array**	**73.14**	**321**	P	**P**	**08 34 23.8**	**-0.6**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.8						
SVE	**Sverdlovsk**	**75.19**	**329**	⇑*i*P	**P**	**08 34 35.3**	**-0.8**
SVE				*e*		08 37 26.0	
SVE				*e*		08 39 12.0	
SVE				*e*		08 45 12.0	
SVE				pmax	pmax		
	comp=Z,880nm,1.6s,mb6.2						
SVE				MLR	MLR		
	comp=N,400nm,17.0s						
SVE				MLR	MLR		
	comp=E,400nm,17.0s						
SVE				MLR	MLR		
	comp=Z,500nm,17.0s						
ARU	**Arti**	**76.15**	**328**	⇑*i*P	**P**	**08 34 40.8**	**-0.8**
ARU				*e*		08 34 51.8	
ARU				*i*		08 37 34.4	
ARU				*e*PPP	PPP	08 39 22.9	+0.1
ARU				*i* S	S	08 44 15.4	-1.0
ARU				*e*		08 44 41.7	
ARU				*e*SS	SS	08 49 20.1	+5.7
ARU				*e*SSS	SSS	08 52 37.4	+6.9
ARU				pmax	pmax		
	comp=Z,269nm,0.9s,mb6.0						
ARU	**Arti**	**76.15**	**328**	⇑*i*P	**P**	**08 34 40.7**	**-0.9**
	comp=Z,567nm,1.3s,mb6.1						
MUKL	**Al Mukalla**	**76.81**	**284**	*e*P	**P**	**08 34 46.2**	**+0.1**
MUKL				AMb	AMB	08 34 47.0	
	comp=Z,286nm,2.2s,mb5.6						
SOKR	**Solikamsk**	**78.01**	**331***c*	*i*P	**P**	**08 34 51.3**	**-0.5**
SOKR				*i* S	S	08 44 34.3	-2.1
SOKR				pmax	pmax		
	comp=Z,390nm,1.1s,mb6.0						
SOKR				MLR	MLR		
	comp=Z,820nm,21.0s						
SDPT	**Sand Point**	**79.31**	**34**	*e*P	**P**	**08 34 59.9**	**+0.9**
	comp=Z,624nm,1.8s,mb6.1						
OPO	**Ambohidratompo**	**79.83**	**251**	S	S	08 44 59.5	+2.9
	comp=Z,2.9nm,1.1s,baz=170,slow=21,SNR=3.0						
MAK	**Makhachkala**	**80.29**	**313***d*	*i*P	**P**	**08 35 05.0**	**+0.4**
MAK				*i*		08 35 12.0	
MAK				*e*S	S	08 44 57.0	-4.0
MAK				pmax	pmax		
	comp=Z,2µm,4.0s						
MAK				smax			
	comp=N,1µm,7.0s						
MAK				smax			
	comp=E,800nm,7.0s						
LBOS		**80.47**	**284**	*e*P	**P**	**08 35 06.7**	**+0.6**
LBOS				AMb	AMB	08 35 07.8	
	comp=Z,315nm,1.3s,mb6.0						
DHBB	**Dhamar BB**	**81.31**	**284**	⇓*e*P	**P**	**08 35 11.2**	**+0.7**
VNDA	**Vanda**	**81.58**	**173**	P	**P**	**08 35 11.7**	**+0.9**
	comp=Z,12nm,0.6s,mb4.9,baz=318,slow=6.5,SNR=198						
VNDA				S	S	08 45 13.6	-0.1
	comp=Z,0.4nm,0.6s,baz=207,slow=23,SNR=3.8						
VNDA				PKKPbc		08 53 45.5	
	comp=Z,4.3nm,1.1s,baz=223,slow=1.2,SNR=14						
VNDA				PKPPKP		09 01 42.2	
	comp=Z,0.5nm,0.5s,baz=266,slow=7.3,SNR=4.1						
VNDA				LR	LR	09 08 17.0	
	comp=Z,547nm,20.3s,baz=335,slow=33						
VNDA	**Vanda**	**81.58**	**173**	⇑*i*P	**P**	**08 35 11.6**	**+0.8**
	comp=Z,26nm,0.9s,mb5.1						
MAW	**Mawson**	**81.61**	**200**	*e*S	S	08 45 16.0	+1.9
MAW	**Mawson**	**81.61**	**200**	⇑*i*P	**P**	**08 35 12.5**	**+1.5**
MAW				*e*S	S	08 45 16.0	+1.9
MAW				pmax	pmax		
	comp=Z,71nm,1.0s						
MAW	**Mawson**	**81.61**	**200**	P	**P**	**08 35 12.7**	**+1.7**
	comp=Z,93nm,1.0s,mb5.6,baz=64,slow=6.5,SNR=87						
MAW				S	S	08 45 14.9	+0.9
	comp=Z,1.6nm,0.9s,baz=357,slow=24,SNR=2.1						
MAW				LR	LR	09 06 21.7	
	comp=Z,253nm,21.0s,baz=56,slow=32						
MAW	**Mawson**	**81.61**	**200**	⇑*i*P	**P**	**08 35 12.5**	**+1.5**
	comp=Z,70nm,1.0s,mb5.5						
MAW				*e*S	S	08 45 16.0	+1.9
DGRG	**David-gareji**	**81.72**	**311**	P	**P**	**08 35 13.3**	**+1.2**
BHD	**Baghdad**	**81.92**	**303**	*i* P	**P**	**08 35 11.0**	**-2.3**
BHD				*e*SKS	SKS	08 45 11.0	-9.5
BHD				*e*S	S	08 45 24.0	+6.0
GNI	**Garni**	**82.09**	**310**	*i* P	**P**	**08 35 14.6**	**+0.6**
GNI	**Garni**	**82.09**	**310**	⇑*i*P	**P**	**08 35 15.0**	**+1.0**
GNI				pmax	pmax		
	comp=Z,109nm,0.9s						
GNI	**Garni**	**82.09**	**310**	⇑*i*P	**P**	**08 35 15.0**	**+1.0**
	comp=Z,109nm,0.9s,mb5.7						
MTA	**Mtatsminda**	**82.17**	**312**	P	**P**	**08 35 16.9**	**+2.5**
TI2	**Plekhanov**	**82.21**	**312**	*i* P	**P**	**08 35 12.2**	**-2.4**
TI2				*i* S	S	08 45 21.2	+0.6
TI2				pmax	pmax		
	comp=Z,4µm,0.8s						
TBLG	**Delisi**	**82.21**	**312**	P	**P**	**08 35 15.5**	**+0.9**
SBA	**Scott Base**	**82.50**	**172**	*e*P	**P**	**08 35 16.9**	**+1.4**
SBA				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.1						
SBA	**Scott Base**	**82.50**	**172**	*e*P	**P**	**08 35 16.9**	**+1.4**
	comp=Z,28nm,0.9s,mb5.1						
CLDR	**Caldiran**	**82.65**	**309**	*i* P	**P**	**08 35 18.3**	**+1.3**
HKR	**Hakkari**	**82.69**	**307**	*i* P	**P**	**08 35 18.4**	**+1.2**
ZEI	**Tsey**	**82.92**	**313**	*e*P	**P**	**08 35 17.8**	**-0.4**
ZEI				*i* *PP	pP	08 35 26.2	-16
ZEI				*i*		08 38 29.2	
ZEI				pmax	pmax		
	comp=Z,144nm,0.8s,mb5.9						
SVW2	**Sparrevohn**	**82.94**	**29**	*e*P	**P**	**08 35 19.9**	**+1.9**
VANB	**Van**	**83.03**	**308**	*i* P	**P**	**08 35 19.7**	**+0.8**
TTA	**Tatalina**	**83.05**	**27**	*e*P	**P**	**08 35 20.2**	**+1.8**
MSL	**Mosul**	**83.14**	**306**	*i* P	**P**	**08 35 20.5**	**+1.0**
MSL				*e*pP	pP	08 35 47.0	+3.1
MSL				*e*SKS	SKS	08 45 29.0	+0.2
MSL				*e*S	S	08 45 45.5	+15
ONI	**Oni**	**83.23**	**312**	P	**P**	**08 35 21.1**	**+1.3**
KARS	**Kars**	**83.38**	**311**	*i* P	**P**	**08 35 22.5**	**+1.9**
GOF	**Gofitskoye**	**83.70**	**315**	⇑*i*P	**P**	**08 35 20.0**	**-2.1**
GOF				*i*		08 38 39.7	
GOF				*i* S	S	08 45 35.7	+0.1
GOF				pmax	pmax		
	comp=Z,300nm,1.7s,mb5.8						
GOF				smax			
	comp=N,320nm,2.5s						
GOF				smax			
	comp=E,270nm,2.5s						
KIV	**Kislovodsk**	**83.88**	**314***c*	*i*P	**P**	**08 35 23.5**	**+0.5**
KIV				*e*		08 38 37.0	
KIV				*i* S	S	08 45 36.7	-0.7
KIV				pmax	pmax		
	comp=E,71nm,1.2s						
KIV				pmax	pmax		
	comp=Z,161nm,1.2s,mb5.7						
KIV				smax			
	comp=N,366nm,4.0s						
KIV				smax			
	comp=E,372nm,4.0s						
KIV				MLR	MLR		
	comp=N,61nm,15.0s						
KIV				MLR	MLR		
	comp=E,207nm,15.0s						
KIV				MLR	MLR		
	comp=Z,318nm,15.0s						
KIV	**Kislovodsk**	**83.88**	**314**	⇑*e*P	**P**	**08 35 23.1**	**+0.1**
	comp=Z,391nm,1.5s,mb6.0						
PECR	**Pechory**	**83.99**	**326**	⇑*i*P	**P**	**08 35 23.6**	**+0.3**
PECR				*e*		08 35 42.0	
PECR				*e*S	S	08 45 34.4	-3.8
PECR				pmax	pmax		
	comp=Z,3µm,2.6s,mb6.7						
PECR				pmax	pmax		
	comp=N,800nm,3.0s						
PECR				pmax	pmax		
	comp=E,800nm,4.0s						
PECR				smax			
	comp=N,1µm,4.0s						
PECR				smax			
	comp=E,1µm,4.0s						
KDAK	**Kodiak Island**	**84.02**	**32**	*e*P	**P**	**08 35 25.7**	**+2.3**
RSO	**Redoubt South**	**84.23**	**29**	*e*P	**P**	**08 35 25.6**	**+1.2**
BTMT	**Batman**	**84.50**	**308**	*i* P	**P**	**08 35 27.9**	**+1.5**
BCA	**Borcka**	**84.53**	**311**	*i* P	**P**	**08 35 27.2**	**+0.8**
IMA	**Indian Mountai**	**84.53**	**24**	*e*P	**P**	**08 35 28.4**	**+2.6**
IMA				pmax	pmax		
	comp=Z,84nm,0.9s,mb5.7						
IMA	**Indian Mountai**	**84.53**	**24**	*e*P	**P**	**08 35 28.4**	**+2.6**
	comp=Z,84nm,0.9s,mb5.7						
SPU	**Mount Spurr**	**84.65**	**29**	*e*P	**P**	**08 35 26.4**	**-0.1**
EZM	**Erzurum**	**84.66**	**310**	*i* P	**P**	**08 35 28.9**	**+1.8**
PPT	**Papeete**	**85.33**	**108**	*e*P	**P**	**08 35 24.2**	**-6.7**
	comp=Z,255nm,27.2s						
PPT				*e*PP	PP	08 38 20.7	-30
	comp=Z,64nm,25.5s						
PPT				*e*S	S	08 45 34.5	-18
	comp=Z,326nm,26.2s						
PPT				*e*SS	SS	08 50 58.9	-33
	comp=Z,461nm,26.5s						
PPT				*e*LQ		08 57 59.9	
	comp=Z,605nm,33.2s						
PPT				*e*LR	LR	09 02 16.8	
	comp=Z,1µm,33.0s,baz=280						
PPT	**Papeete**	**85.33**	**108**	LR	LR	09 13 43.0	
	comp=Z,263nm,18.3s,baz=273,slow=36						
SLKM	**Skilak Lake**	**85.48**	**30**	*e*P	**P**	**08 35 31.0**	**+0.4**
PWA	**Palmer West**	**85.74**	**28**	*e*P	**P**	**08 35 33.3**	**+1.5**

PWA				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.4						
PWA	**Palmer West**	**85.74**	**28**	*e*P	**P**	**08 35 33.3**	**+1.5**
	comp=Z,51nm,1.0s,mb5.4						
TBI	**Tubuai**	**85.79**	**113**	*e*P	**P**	**08 35 16.1**	**-17**
	comp=Z,170nm,27.5s						
TBI				*e*S	S	08 45 46.1	-11
	comp=Z,798nm,29.2s						
TBI				*e*SS	SS	08 50 50.6	-48
	comp=Z,273nm,34.0s						
TBI				*e*LQ		08 57 25.5	
	comp=Z,164nm,31.2s						
TBI				*e*LR	LR	09 02 29.9	
	comp=Z,1µm,39.8s,baz=293						
EZC	**Erzincan**	**85.85**	**310**	*i* P	**P**	**08 35 36.6**	**+3.7**
SOC	**Sochi**	**86.01**	**313**	*c i*P	**P**	**08 35 33.5**	**-0.1**
SOC				*e*		08 38 52.2	
SOC				*e*PPP	PPP	08 40 48.8	-5.1
SOC				*e*S	S	08 45 48.1	-10
SOC				*e*SSS	SSS	08 55 13.9	+2.6
SOC				pmax	pmax		
	comp=N,43nm,0.7s						
SOC				pmax	pmax		
	comp=Z,423nm,0.7s,mb6.5						
SOC				pmax	pmax		
	comp=E,53nm,0.8s						
SOC				MLR	MLR		
	comp=N,505nm,21.0s						
SOC				MLR	MLR		
	comp=E,564nm,21.0s						
SOC				MLR	MLR		
	comp=Z,646nm,21.0s						
PMR	**Palmer**	**86.09**	**29**	*e*P	**P**	**08 35 34.4**	**+0.9**
PMR				pmax	pmax		
	comp=Z,121nm,1.4s,mb5.6						
PMR	**Palmer**	**86.09**	**29**	*e*P	**P**	**08 35 34.4**	**+0.9**
	comp=Z,121nm,1.4s,mb5.6						
GUMT	**Gumushane**	**86.12**	**310**	*i* P	**P**	**08 35 35.8**	**+1.5**
PTK	**Pertek**	**86.16**	**309**	*i* P	**P**	**08 35 36.2**	**+1.7**
VOR	**Voronezh**	**86.57**	**322**	⇑*i*P	**P**	**08 35 36.0**	**-0.1**
VOR				*e*		08 35 54.5	
VOR						08 39 00.0	
VOR						08 45 50.0	
VOR				S	S	08 46 03.0	-0.4
VOR				pmax	pmax		
	comp=Z,2µm,1.3s						
VOR				pmax	pmax		
	comp=N,140nm,1.1s						
VOR				pmax	pmax		
	comp=E,1µm,1.3s						
VOR				pmax	pmax		
	comp=Z,90nm,1.6s,mb5.5						
VOR				smax			
	comp=N,220nm,1.6s						
VOR				smax			
	comp=E,200nm,1.7s						
VOR				smax			
	comp=Z,70nm,1.7s						
URFA	**Urfa**	**86.60**	**307**	*i* P	**P**	**08 35 37.7**	**+1.0**
MALT	**Malatya**	**86.91**	**308**	*i* P	**P**	**08 35 39.4**	**+1.2**
MALT	**Malatya**	**86.91**	**308**	⇑*i*P	**P**	**08 35 39.6**	**+1.4**
MALT				pmax	pmax		
	comp=Z,639nm,1.4s,mb6.4						
MALT	**Malatya**	**86.91**	**308**	⇑*i*P	**P**	**08 35 39.6**	**+1.4**
	comp=Z,639nm,1.4s,mb6.4						
MYA	**Malataya**	**86.92**	**308**	*i* P	**P**	**08 35 39.6**	**+1.4**
ILAR	**Eielson Array**	**87.25**	**25**	P	**P**	**08 35 38.4**	**-0.8**
	comp=Z,6.5nm,0.7s,mb4.7,baz=252,slow=4.7,SNR=79						
ILAR				S	S	08 45 54.6	-15
	comp=Z,0.3nm,0.5s,baz=232,slow=29,SNR=3.5						
ILAR				ScS	ScS	08 46 10.2	-5.1
	comp=Z,2.0nm,1.2s,baz=288,slow=7.6,SNR=7.4						
ILAR				PKKPbc		08 53 32.2	
	comp=Z,5.7nm,1.1s,baz=106,slow=1.9,SNR=14						
ILAR				PKPPKP		09 01 32.6	
	comp=Z,1.0nm,1.0s,baz=117,slow=1.5,SNR=7.7						
ILAR				LR	LR	09 14 02.3	
	comp=Z,162nm,21.1s,baz=279,slow=35						
MOS	**Moscow**	**87.57**	**326**	α *i*P	**P**	**08 35 40.9**	**0.0**
MOS				*e**PP	pP	08 35 58.7	-6.9
MOS				*e*		08 39 10.3	
MOS				*e*		08 45 58.9	
MOS				*i* S	S	08 46 12.0	-0.8
MOS				pmax	pmax		
	comp=Z,468nm,0.7s,mb6.6						
MOS				pmax	pmax		
	comp=Z,2µm,2.0s,mb6.8						
MOS				smax			
	comp=N,3µm,3.2s						
ANN	**Anapa**	**87.67**	**315**	*e*P	**P**	**08 35 41.5**	**-0.1**
GAZ	**Gaziantep**	**87.88**	**307**	*i* P	**P**	**08 35 44.3**	**+1.4**
OBN	**Obninsk**	**88.18**	**325**	*c i*P	**P**	**08 35 43.6**	**-0.2**
OBN				*i*		08 46 02.5	
OBN				*i* S	S	08 46 17.1	-1.3
OBN				pmax	pmax		
	comp=Z,224nm,0.6s,mb6.4						
OBN				MLR	MLR		
	comp=Z,600nm,20.0s						
OBN	**Obninsk**	**88.18**	**325**	⇑*e*P	**P**	**08 35 43.6**	**-0.2**
	comp=Z,491nm,1.0s,mb6.5						
TOKT	**Tokat**	**88.36**	**310**	P	**P**	**08 35 46.6**	**+1.6**
MENT	**Mentasta**	**88.65**	**27**	*e*P	**P**	**08 35 47.6**	**+1.8**
HTY	**Hatay**	**88.76**	**306**	P	**P**	**08 35 48.4**	**+1.3**
LVZ	**Lovozero**	**88.85**	**338**	*e*P	**P**	**08 35 42.7**	**-4.0**
LVZ				*e*S	S	08 46 09.0	-15
LVZ				pmax	pmax		
	comp=Z,73nm,1.2s,mb5.6						
LVZ				MLR	MLR		
	comp=Z,740nm,23.0s						
LVZ				MLR	MLR		
	comp=N,279nm,21.0s						
LVZ				MLR	MLR		
	comp=E,417nm,21.0s						
BNN	**Bunyan**	**88.93**	**309**	P	**P**	**08 35 49.0**	**+1.2**
CEYT	**Ceyhan**	**89.05**	**307**	P	**P**	**08 35 50.0**	**+1.6**
BHL	**Bhannes**	**89.21**	**304**	*e*P	**P**	**08 35 50.4**	**+1.1**
APA	**Apatity**	**89.34**	**337**	⇑*i*P	**P**	**08 35 48.0**	**-1.0**
APA				*i*		08 35 59.3	
APA				*e*		08 46 25.0	
APA				pmax	pmax		
	comp=Z,60nm,1.3s,mb5.5						
CORM	**Corum**	**89.83**	**310**	P	**P**	**08 35 52.7**	**+0.7**
NIG	**Nigde**	**89.92**	**308**	P	**P**	**08 35 53.8**	**+1.3**
EIL	**Elat**	**89.94**	**300**	⇑*i*P	**P**	**08 35 53.6**	**+0.9**
	comp=Z,333nm,1.3s,mb6.3						
SIM	**Simferopol'**	**90.02**	**315**	*c i*P	**P**	**08 35 53.0**	**+0.3**
SIM				PPP	PPP	08 41 32.0	+3.1
SIM				*i*		08 46 16.0	
SIM				*i* S	S	08 46 35.0	-0.6
SIM				*e*PS	PS	08 47 57.0	+0.1
SIM				*e*SSS	SSS	08 56 11.0	-4.4
SIM				pmax	pmax		
	comp=Z,212nm,0.8s,mb6.3						
SIM				MLR	MLR		
	comp=Z,1µm,24.0s						
BZK	**Bozkurt**	**90.23**	**312**	P	**P**	**08 35 54.5**	**+0.7**
TOS	**Tosya**	**90.26**	**311**	P	**P**	**08 35 54.5**	**+0.6**
SYO	**Syowa Base**	**90.28**	**201**	⇓P	**P**	**08 35 53.7**	**+0.3**
SYO	**Syowa Base**	**90.28**	**201**	⇑PcP	PcP	08 35 54.5	-0.2
KAMT	**Kaman**	**90.57**	**309**	P	**P**	**08 35 55.4**	**-0.1**
CANT	**Cankiri**	**90.58**	**310**	P	**P**	**08 35 56.1**	**+0.6**
BR131	**Keskin Array S**	**90.61**	**310**	*e*P	**P**	**08 35 55.3**	**-0.4**
	comp=Z,49nm,0.8s,mb5.7						
BRTR	**Keskin Array B**	**90.61**	**310**	P	**P**	**08 35 55.5**	**-0.1**
	comp=Z,55nm,0.8s,mb5.7,baz=123,slow=4.7,SNR=160						
BRTR				PP	PP	08 39 34.6	+0.8
	comp=Z,10nm,1.1s,baz=112,slow=6.7,SNR=6.4						
BRTR				S	S	08 46 19.6	-22
	comp=Z,0.3nm,0.3s,baz=45,slow=5.2,SNR=3.0						
BRTR				ScS	ScS	08 46 47.5	+3.8
	comp=Z,0.4nm,0.6s,baz=37,slow=25,SNR=3.3						
BRTR	**Keskin Array B**	**90.61**	**310**	P	**P**	**08 35 55.5**	**-0.1**
BRTR				PP	PP	08 39 34.6	+0.8
BRTR				S	S	08 46 19.6	-22
BRTR				ScS	ScS	08 46 47.5	+3.8
IKL	**Isikli**	**90.74**	**306**	P	**P**	**08 35 56.6**	**+0.2**
CSS	**Prodhromos**	**91.09**	**305**	⇑P	**P**	**08 35 58.4**	**+0.4**
	comp=Z,2.8nm,1.1s						
CSS	**Prodhromos**	**91.09**	**305**	⇑*e*P	**P**	**08 35 58.4**	**+0.4**
ANTO	**Ankara**	**91.25**	**310**	P	**P**	**08 35 57.6**	**-1.0**
SAFT	**Safranbolu**	**91.26**	**311**	*e*P	**P**	**08 35 58.6**	**0.0**
LOD	**Lodumlu**	**91.28**	**310**	*e*P	**P**	**08 35 58.8**	**0.0**
PUL	**Pulkovo**	**91.31**	**330**	*e*P	**P**	**08 35 57.7**	**-0.7**
KEV	**Kevo**	**91.44**	**340**	*e*P	**P**	**08 35 58.0**	**-0.8**
KEV				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.4						
KEV	**Kevo**	**91.44**	**340**	*e*P	**P**	**08 35 58.0**	**-0.8**
	comp=Z,35nm,1.1s,mb5.4						
LEF	**Lefka**	**91.44**	**305**	*e*P	**P**	**08 35 59.8**	**+0.2**
HDMB	**Hadim**	**91.67**	**307**	*e*P	**P**	**08 36 00.8**	**+0.2**
QSPA	**South Pole Qui**	**91.67**	**180**	*e*P	**P**	**08 36 01.9**	**+2.2**
	comp=Z,105nm,1.6s,mb5.8						
ALFC	**Alevga**	**91.68**	**305**	⇑P	**P**	**08 36 00.4**	**-0.3**
	comp=Z,2.8nm,0.7s						
ALFC	**Alevga**	**91.68**	**305**	⇑*e*P	**P**	**08 36 00.4**	**-0.3**
PPCY	**Paphos**	**91.90**	**305**	⇑P	**P**	**08 36 01.5**	**-0.3**
PPCY	**Paphos**	**91.90**	**305**	⇑*e*P	**P**	**08 36 01.5**	**-0.3**
ARCES	**ARCESS Array B**	**92.00**	**340**	P	**P**	**08 36 01.1**	**-0.2**
	comp=Z,26nm,0.8s,mb5.5,baz=76,slow=5.0,SNR=38						
ARCES				sP	sP	08 36 34.2	-1.6
	comp=Z,21nm,0.7s,baz=79,slow=6.2,SNR=4.9						
ARCES				PKiKP		08 40 51.4	
	comp=Z,15nm,1.2s,baz=76,slow=3.7,SNR=5.5						
ARCES				ScS	ScS	08 46 52.5	-1.9
	comp=Z,5.7nm,1.0s,baz=24,slow=15,SNR=2.6						
ARCES				LR	LR	09 24 43.5	
	comp=Z,421nm,21.2s,baz=66,slow=40						
ARE0	**ARCESS Array S**	**92.00**	**340**	*e*P	**P**	**08 36 01.5**	**+0.1**
KIZT	**Kizilcal**	**92.02**	**309**	*e*P	**P**	**08 36 02.2**	**+0.1**
INK	**Inuvik**	**92.31**	**21**	P	**P**	**08 36 03.3**	**+0.5**
INK				S	S	08 46 27.2	-28
INK						08 46 54.5	
INK						08 53 18.4	
INK				pmax	pmax		
	comp=Z,39nm,1.0s						
INK				smax			
	comp=E,1.0nm,0.7s						
INK				pmax	pmax		
	comp=E,2.0nm,0.8s						
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK	**Inuvik**	**92.31**	**21**	P	**P**	**08 36 03.3**	**+0.5**
	comp=Z,39nm,1.0s,mb5.6,baz=288,slow=4.1,SNR=54						
INK				S	S	08 46 27.1	-28
	comp=Z,0.9nm,0.7s,baz=98,slow=29,SNR=7.4						
INK				ScS	ScS	08 46 54.5	-2.5
	comp=Z,1.9nm,0.8s,baz=271,slow=30,SNR=2.7						
INK				PKKPbc		08 53 18.4	
	comp=Z,3.4nm,0.5s,baz=100,slow=2.9,SNR=12						
INK	**Inuvik**	**92.31**	**21**	*e*P	**P**	**08 36 03.1**	**+0.3**
	comp=Z,125nm,1.4s,mb6.0						
ESKT	**Eskisehir**	**92.78**	**310**	*e*P	**P**	**08 36 05.1**	**-0.5**
KBS	**Kingsbay**	**92.79**	**350**	*e*P	**P**	**08 36 02.4**	**-2.4**
KBS				AMS	AMS	09 17 52.5	
	comp=Z,301nm,21.0s						
AKASG	**Malin Array Be**	**92.88**	**321**	P	**P**	**08 36 04.9**	**-0.9**
	comp=Z,21nm,0.5s,mb5.7,baz=72,slow=4.4,SNR=155						
AKASG				PP	PP	08 39 48.7	-2.9
	comp=Z,0.8nm,0.4s,baz=63,slow=11,SNR=4.5						
AKASG				S	S	08 46 29.8	-31
	comp=Z,0.3nm,0.4s,baz=222,slow=9.6,SNR=2.9						
AKASG				ScS	ScS	08 46 58.3	-3.8
	comp=Z,1.5nm,0.8s,baz=76,slow=9.4,SNR=5.0						
KAF	**Kangasniemi**	**92.94**	**332**	*e*p	**P**	**08 36 03.2**	**-2.6**
	comp=Z,34nm,0.6s,mb5.8						
KAF	**Kangasniemi**	**92.94**	**332**	*e*P	**P**	**08 36 03.2**	**-2.6**
KAF				pmax	pmax		
	comp=Z,34nm,0.6s,mb5.8						
FINES	**FINESS Array B**	**93.16**	**332**	P	**P**	**08 36 06.0**	**-0.8**
FINES				S	S	08 46 30.0	-33
FINES						08 47 01.6	
FINES	**FINESS Array B**	**93.16**	**332**	P	**P**	**08 36 06.0**	**-0.9**
	comp=Z,14nm,0.7s,mb5.4,baz=60,slow=4.0,SNR=46						
FINES				pP	pP	08 36 31.8	0.0
	comp=Z,15nm,0.8s,baz=72,slow=6.0,SNR=4.4						
FINES				sP	sP	08 36 39.1	-2.2
	comp=Z,35nm,0.9s,baz=90,slow=7.6,SNR=5.9						
FINES				S	S	08 46 30.0	-33
	comp=Z,1.4nm,0.9s,baz=333,slow=38,SNR=2.0						
FINES				ScS	ScS	08 47 01.6	-2.6
	comp=Z,3.7nm,1.0s,baz=135,slow=5.4,SNR=3.4						
FINES				LR	LR	09 20 37.9	
	comp=Z,306nm,19.6s,baz=298,slow=37						
FINES	**FINESS Array B**	**93.16**	**332**	P	**P**	**08 36 06.0**	**-0.9**
FINES				pP	pP	08 36 31.8	0.0
FINES				sP	sP	08 36 39.1	-2.2
FINES				S	S	08 46 30.0	-33
FINES				ScS	ScS	08 47 01.6	-2.6
FINES				LR	LR	09 20 37.9	
ISP	**Isparta**	**93.17**	**308**	*e*P	**P**	**08 36 06.1**	**-1.4**
ISP	**Isparta**	**93.17**	**308**	P	**P**	**08 36 07.0**	**-0.5**
ISP	**Isparta**	**93.17**	**308**	*e*P	**P**	**08 36 06.6**	**-0.9**
EYL	**Eskiyayla**	**93.22**	**311**	*e*P	**P**	**08 36 07.9**	**+0.3**
MNK	**Minsk**	**93.26**	**325**	⇓*e*P	**P**	**08 36 06.0**	**-1.5**
VSU	**Vasula**	**93.30**	**329**	⇑*i*P	**P**	**08 36 06.8**	**-0.8**
SIT	**Sitka**	**93.34**	**33**	*e*P	**P**	**08 36 09.6**	**+1.8**
SIT				pmax	pmax		
	comp=Z,79nm,1.6s,mb5.8						
SIT	**Sitka**	**93.34**	**33**	*e*P	**P**	**08 36 09.6**	**+1.8**
	comp=Z,79nm,1.6s,mb5.8						
KIS	**Kishinev**	**93.55**	**317**	α *i*P	**P**	**08 36 07.0**	**-2.0**
KIS				*e*		08 39 50.0	
KIS				*e*		08 41 52.0	
KIS				*e*		08 46 36.0	
KIS				*e*S	S	08 47 06.0	-0.5
KIS				*e*		08 49 04.0	
KIS				pmax	pmax		
	comp=Z,400nm,1.2s,mb6.6						
KIS				pmax	pmax		
	comp=Z,500nm,1.2s,mb6.7						
HRT	**Hereke**	**93.56**	**311**	*e*P	**P**	**08 36 08.9**	**-0.3**
YLV	**Yalova**	**93.81**	**311**	*e*P	**P**	**08 36 09.5**	**-0.8**
ISK	**Istanbul-Kandi**	**94.00**	**311**	*e*P	**P**	**08 36 10.8**	**-0.3**
TIRR	**Tirgusor**	**94.11**	**315**	P	**P**	**08 36 11.6**	**0.0**
TIRR	**Tirgusor**	**94.11**	**315**	⇑P	**P**	**08 36 11.4**	**-0.2**
TIRR	**Tirgusor**	**94.11**	**315**	⇑P	**P**	**08 36 11.4**	**-0.2**
TAOE	**Nuku Hiva Isla**	**94.20**	**99**	*e*P	**P**	**08 36 16.8**	**+4.1**
	comp=Z,389nm,40.4s						
TAOE				*e*S	S	08 46 36.3	-37
	comp=Z,242nm,27.4s						
TAOE				*e*LQ		09 02 05.8	
	comp=Z,606nm,27.3s						
TAOE				*e*LR	LR	09 06 08.2	
	comp=Z,1µm,29.6s,baz=286						
TRO	**Tromso**	**94.22**	**340**	*e*P	**P**	**08 36 06.4**	**-5.1**
TRO				*e*		08 39 49.9	
TRO				*e*SKS	SKS	08 47 11.7	+35
TRO				*e*SS	SS	08 53 43.7	+5.1
TRO				AMS	AMS	09 27 47.6	
	comp=Z,311nm,19.3s						
DENT	**Denizli**	**94.35**	**308**	*e*P	**P**	**08 36 13.3**	**+0.5**
PSN	**Preselentsi**	**94.36**	**314**	*e*P	**P**	**08 36 14.0**	**+1.3**
IAS	**Iasi**	**94.38**	**317**	P	**P**	**08 36 13.2**	**+0.5**
FETY	**Fethiye**	**94.41**	**307**	*e*P	**P**	**08 36 12.1**	**-1.0**
DALT	**Dalyan (Mudla)**	**94.76**	**307**	*e*P	**P**	**08 36 14.4**	**-0.4**
BNT	**Bandirma**	**94.94**	**311**	*e*P	**P**	**08 36 15.6**	**+0.1**
PRD	**Provadia**	**94.99**	**313**	*i* P	**P**	**08 36 16.0**	**+0.4**
YER	**Yerkesik**	**95.00**	**307**	*e*P	**P**	**08 36 15.8**	**-0.1**
BALB	**Balikesir**	**95.05**	**310**	*e*P	**P**	**08 36 15.5**	**-0.5**
VRI	**Vrincioaia**	**95.12**	**316**	P	**P**	**08 36 17.0**	**+0.8**
VRI	**Vrincioaia**	**95.12**	**316**	⇑P	**P**	**08 36 16.9**	**+0.7**
VRI	**Vrincioaia**	**95.12**	**316**	⇑P	**P**	**08 36 16.9**	**+0.7**
MBAR	**Mbarara**	**95.14**	**270**	*e*P	**P**	**08 36 17.1**	**+0.1**
MBAR				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.6						
MBAR	**Mbarara**	**95.14**	**270**	*e*P	**P**	**08 36 17.1**	**+0.1**
	comp=Z,27nm,1.0s,mb5.6						
AKS	**Akhisar**	**95.19**	**309**	*e*P	**P**	**08 36 16.6**	**0.0**
ARG	**Arkhangelos**	**95.22**	**306**	*e*P	**P**	**08 36 17.5**	**+0.6**
MFT	**Murefte**	**95.37**	**311**	*e*P	**P**	**08 36 16.9**	**-0.5**
CANB	**Canakkale**	**95.63**	**310**	*e*P	**P**	**08 36 18.2**	**-0.4**
EDRB	**Edirne**	**95.64**	**312**	*e*P	**P**	**08 36 18.4**	**-0.2**
IZM	**Izmir**	**95.67**	**309**	*e*P	**P**	**08 36 18.6**	**-0.3**
JMB	**Yambol**	**95.68**	**313**	*i* P	**P**	**08 36 19.0**	**+0.2**
MLR	**Muntele Rosu**	**95.72**	**316**	P	**P**	**08 36 19.4**	**+0.5**
MLR	**Muntele Rosu**	**95.72**	**316**	⇑P	**P**	**08 36 19.3**	**+0.4**
MLR	**Muntele Rosu**	**95.72**	**316**	⇑P	**P**	**08 36 19.3**	**+0.4**
BUC1	**Bucharest**	**95.82**	**315**	P	**P**	**08 36 20.4**	**+1.0**
DLBC	**Dease Lake**	**95.88**	**31**	P	**P**	**08 36 21.1**	**+1.9**
	comp=Z,7.7nm,1.1s,mb5.0,baz=266,slow=3.9,SNR=21						
DLBC				PKiKP		08 40 56.6	
	comp=Z,1.2nm,0.6s,baz=315,slow=4.3,SNR=3.0						
DLBC				S	S	08 46 49.4	-37
	comp=Z,1.0nm,0.9s,baz=103,slow=20,SNR=3.9						
DLBC				PKKPbc		08 53 10.8	
	comp=Z,2.8nm,0.7s,baz=88,slow=3.3,SNR=8.4						
DLBC	**Dease Lake**	**95.88**	**31**	*e*P	**P**	**08 36 21.4**	**+2.2**
BURAR	**Bucovina Array**	**95.89**	**318**	P	**P**	**08 36 20.9**	**+1.3**
SUW	**Suwalki**	**96.03**	**325**	⇑*e*P	**P**	**08 36 19.9**	**-0.1**
SUW				*e*		08 46 49.1	
SUW				*e*S	S	08 47 26.9	-0.6
SUW	**Suwalki**	**96.03**	**325**	⇑*e*P	**P**	**08 36 19.9**	**-0.1**
SUW				*e*PcP	PcP	08 36 23.6	+3.1
SUW				*e*SKS	SKS	08 46 49.1	+2.5
SUW				*e*S	S	08 47 26.9	-0.6
SUW	**Suwalki**	**96.03**	**325**	⇑*e*P	**P**	**08 36 19.9**	**-0.2**
	comp=Z,300nm,1.2s,mb6.6						
SUW				*e*PcP	PcP	08 36 23.6	+3.2
SUW				*e*SKS	SKS	08 46 49.1	+2.4
SUW				*e*S	S	08 47 26.9	-0.6
SUW				MLR	MLR	09 14 15.4	
	comp=Z,900nm,33.6s						
SZH	**Strazhica**	**96.04**	**314**	*i* P	**P**	**08 36 21.0**	**+0.6**
SMG	**Samos**	**96.08**	**308**	*e*P	**P**	**08 36 15.0**	**-5.7**
ALN	**Alexandroupoli**	**96.29**	**311**	*e*P	**P**	**08 36 21.0**	**-0.5**
LVV	**L'vov**	**96.30**	**320**	*c i*P	**P**	**08 36 21.5**	**+0.1**
LVV				*e*		08 40 15.5	
LVV				*e*PPP	PPP	08 42 17.7	-6.6
LVV				*i*		08 46 54.7	
LVV				*e*S	S	08 47 33.5	+3.6
LVV				*e*PS	PS	08 49 09.9	+2.3
LVV				*e*SS	SS	08 54 14.5	+6.3
LVV				MLR	MLR		
	comp=N,540nm,20.0s						
LVV				MLR	MLR		
	comp=Z,310nm,20.0s						
LVV				MLR	MLR		
	comp=E,290nm,19.0s						
PRK	**Paraskevi**	**96.33**	**310**	*e*P	**P**	**08 36 22.0**	**+0.2**
PVL	**Pavlikeni**	**96.48**	**314**	*i* P	**P**	**08 36 24.0**	**+1.6**
RDO	**Rodhopi**	**96.63**	**312**	*e*P	**P**	**08 36 23.5**	**+0.4**
KDZ	**Kurdzhali**	**96.65**	**312**	*i* P	**P**	**08 36 23.0**	**-0.2**
PLD	**Plovdiv**	**97.11**	**313**	*e*P	**P**	**08 36 25.0**	**-0.3**
RZN	**Rozhen**	**97.16**	**312**	*i* P	**P**	**08 36 25.0**	**-0.6**
KWP	**Kalwaria**	**97.18**	**320**	*e*P	**P**	**08 36 26.8**	**+1.4**
KWP				MLR	MLR	09 15 57.2	
	comp=E,1µm,33.9s						
PGB	**Panagyurishte**	**97.43**	**313**	*i* P	**P**	**08 36 27.0**	**+0.2**
MATP	**Matopo**	**97.51**	**250**	P	**P**	**08 36 28.3**	**+0.7**
	comp=E,18nm,0.7s,mb5.7						
MATP				PP	PP	08 40 21.9	-6.6
	comp=E,16nm,1.0s,baz=95,slow=9.5,SNR=6.2						
KOLS	**Kolonicke sedl**	**97.59**	**320**	*e*P	**P**	**08 36 27.9**	**+0.6**
UZH	**Uzhgorod**	**97.64**	**319**	*c i*P	**P**	**08 36 27.0**	**-0.5**
UZH				*e*S	S	08 47 36.0	-5.3
WAR	**Warsaw**	**97.68**	**323**	*e*P	**P**	**08 36 29.2**	**+1.6**
WAR				*e*SKS	SKS	08 46 58.8	+3.5
WAR				*e*S	S	08 47 36.0	-5.5
WAR	**Warsaw**	**97.68**	**323**	*e*P	**P**	**08 36 29.2**	**+1.6**
WAR				*e*SKS	SKS	08 46 58.8	+3.5
WAR				*e*S	S	08 47 36.0	-5.5
DRGR		**97.72**	**318**	⇓P	**P**	**08 36 28.5**	**+0.6**
LSZ	**Lusaka**	**97.86**	**255**	*e*P	**P**	**08 36 29.5**	**+0.2**
LSZ				pmax	pmax		
	comp=Z,57nm,1.3s,mb5.9						
LSZ	**Lusaka**	**97.86**	**255**	*e*P	**P**	**08 36 29.5**	**+0.2**
	comp=Z,57nm,1.3s,mb5.9						
MMB	**Musomiste**	**97.91**	**312**	*i* P	**P**	**08 36 28.0**	**-0.9**
OUR	**Ouranopolis**	**97.92**	**311**	*e*P	**P**	**08 36 28.2**	**-0.8**
CRVS	**Cervenica-Dubn**	**98.12**	**320**	*e*P	**P**	**08 36 32.7**	**+3.0**
CRVS				*e*S	S	08 47 47.5	+2.2
VTS	**Vitosha**	**98.12**	**313**	*i* P	**P**	**08 36 30.0**	**+0.1**
AOS	**Alonnisos**	**98.18**	**310**	*e*P	**P**	**08 36 28.1**	**-2.1**
PAIG	**Paliouri**	**98.22**	**311**	*e*P	**P**	**08 36 30.1**	**-0.3**
SOH	**Sokhos**	**98.31**	**312**	*e*P	**P**	**08 36 29.1**	**-1.7**
PLG	**Polygyros**	**98.32**	**311**	*e*P	**P**	**08 36 30.0**	**-0.8**
KKB	**Krupnik**	**98.34**	**313**	*e*P	**P**	**08 36 30.0**	**-0.9**
BBB	**Bella Bella**	**98.39**	**37**	S	tx	08 47 06.0	
	comp=Z,4.1nm,1.1s,baz=331,slow=24,SNR=2.3						
ZAPS	**Zavoj/Pirot**	**98.43**	**314**	⇑*i*P	**P**	**08 36 31.2**	**-0.1**
MPAR	**Parnis Oros**	**98.45**	**309**	*e*P	**P**	**08 36 31.0**	**-0.5**
ATH	**Athens Observa**	**98.49**	**309**	*e*P	**P**	**08 36 30.5**	**-1.2**
THE	**Thessaloniki**	**98.64**	**311**	*e*P	**P**	**08 36 30.9**	**-1.4**
XOR	**Xorichti**	**98.68**	**310**	*e*P	**P**	**08 36 31.4**	**-1.1**
NSAL	**Nisos Salamina**	**98.70**	**309**	*e*P	**P**	**08 36 31.7**	**-0.9**
NAIG	**Nisos Aigina**	**98.70**	**308**	*e*P	**P**	**08 36 31.5**	**-1.2**
NIE	**Niedzica**	**98.75**	**320**	*e*P	**P**	**08 36 34.1**	**+1.6**
BOLS	**Boljevac**	**98.80**	**315**	⇑*i*P	**P**	**08 36 32.6**	**-0.3**
VAY	**Valandovo**	**98.81**	**312**	⇑*i*P	**P**	**08 36 32.2**	**-0.9**
KECS	**Kecovo**	**98.85**	**320**	*i* P	**P**	**08 36 33.0**	**0.0**
KECS				*e*PP	PP	08 40 33.5	-4.1
MGER	**Gerania Oros**	**98.85**	**309**	*e*P	**P**	**08 36 32.0**	**-1.3**
OJC	**Ojcow**	**98.89**	**321**	*e*P	**P**	**08 36 33.3**	**+0.1**
OJC				*e*PP	PP	08 40 33.0	-4.9
OJC				*e*S	S	08 47 51.1	-0.6
OJC				MLR	MLR	09 23 34.3	
	comp=Z,500nm,19.9s						
GRG	**Griva**	**99.00**	**312**	*e*P	**P**	**08 36 34.3**	**+0.3**
BARS	**Barje**	**99.09**	**314**	⇑*i*PP	tx	08 41 38.5	
LIT	**Litokhoron**	**99.09**	**311**	*e*P	**P**	**08 36 32.4**	**-2.0**
DAG	**Danmarks Havn**	**99.09**	**352**	⇓*i*P	**P**	**08 36 33.6**	**0.0**
DAG				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.7						
DAG	**Danmarks Havn**	**99.09**	**352**	⇓*i*P	**P**	**08 36 33.6**	**0.0**
	comp=Z,18nm,0.8s,mb5.7						
DAG				*e*		08 39 38.3	
RKT	**Rikitea**	**99.11**	**113**	*e*S	tx	08 46 13.3	
	comp=Z,3µm,41.5s						
RKT				*e*SS	tx	08 53 41.1	
	comp=Z,707nm,34.2s						
RKT				*e*LQ		09 02 31.1	
	comp=Z,2µm,37.5s						
RKT				*e*LR	LR	09 08 40.1	
	comp=Z,1µm,37.5s,baz=299						
KYTH	**Kithira**	**99.29**	**307**	*e*P	**P**	**08 36 35.0**	**-0.4**
VLI	**Veliai**	**99.30**	**307**	*e*P	**P**	**08 36 34.5**	**-0.9**
PSZ	**Piszkesteto**	**99.36**	**319**	*e*P	**P**	**08 36 35.0**	**-0.4**
PSZ				pmax	pmax		
	comp=Z,122nm,1.4s,mb6.2						
PSZ	**Piszkesteto**	**99.36**	**319**	*e*P	**P**	**08 36 35.0**	**-0.4**
	comp=Z,122nm,1.4s,mb6.2						
PSZ	**Piszkesteto**	**99.36**	**319**	⇑*i*P	**P**	**08 36 35.6**	**+0.2**
AGG	**Agios Georgios**	**99.39**	**310**	*e*P	**P**	**08 36 34.0**	**-1.8**
SKO	**Skopje**	**99.53**	**313**	⇑*i*P	**P**	**08 36 35.8**	**-0.5**
SKO				*i*		08 40 43.5	
SKO				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.9						
SKO	**Skopje**	**99.53**	**313**	⇑*i*P	**P**	**08 36 35.8**	**-0.5**
	comp=Z,0.0nm,1.1s						
SKO				*i* PP	PP	08 40 43.5	+0.4
FNA	**Florina**	**99.80**	**312**	*e*P	**P**	**08 36 36.3**	**-1.3**
RES	**Resolute Bay**	**99.90**	**10**	*e*P	**P**	**08 36 37.0**	**-0.3**
RES				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.9						
RES	**Resolute Bay**	**99.90**	**10**	*e*Pdif	**P**	**08 36 37.0**	**-0.2**
	comp=Z,27nm,0.9s,mb5.9						
VYHS	**Vyhne**	**99.91**	**320**	*i* P	**P**	**08 36 37.9**	**+0.1**
VYHS				*e*		08 36 49.4	
VYHS				*e*PP	PP	08 40 45.6	-0.4
RAC	**Raciborz**	**99.92**	**321**	*e*P	**P**	**08 36 39.1**	**+1.2**
RAC				MLR	MLR	09 24 10.9	
	comp=Z,600nm,21.4s						
OKC	**Ostrava-Krasne**	**100.01**	**321**	*e*PDIF	P	08 36 38.9	+0.6
OKC				AMS	AMS	09 20 00.0	
	comp=Z,400nm,19.2s						
ITM	**Ithomi**	**100.03**	**308**	*e*P	P	08 36 38.0	-0.7
BUD	**Budapest**	**100.03**	**319**	*e*P	P	08 36 39.9	+1.5
LBTB	**Lobatse**	**100.04**	**245**	P	P	08 36 40.4	+1.4
LBTB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LBTB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LBTB	**Lobatse**	**100.04**	**245**	P	P	08 36 40.4	+1.4
	comp=Z,6.9nm,0.8s,baz=105,slow=7.3,SNR=7.0						
LBTB				PP	PP	08 40 36.8	-11
	comp=Z,10nm,1.1s,baz=114,slow=11,SNR=5.0						
LBTB	**Lobatse**	**100.04**	**245**	*e*Pdif	P	08 36 40.1	+1.1
	comp=Z,8.4nm,0.9s						
MEV	**Metsovon**	**100.10**	**311**	*e*P	P	08 36 38.3	-0.6
DIVS	**Divcibare**	**100.14**	**315**	⇑*i*P	P	08 36 38.6	-0.3
DIVS	**Divcibare**	**100.14**	**315**	⇓*i*PP	PP	08 40 24.6	-23
BOSA	**Boshof**	**100.15**	**241**	P	P	08 36 40.5	+1.1
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOSA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BOSA	**Boshof**	**100.15**	**241**	P	P	08 36 40.5	+1.1
	comp=Z,3.3nm,0.8s,baz=122,slow=11,SNR=6.2						
BOSA				PP	PP	08 40 37.5	-11
	comp=Z,3.7nm,1.0s,baz=58,slow=16,SNR=3.9						

BOSA				PKiKP		08 41 08.1	
	comp=Z,2.3nm,0.6s,baz=102,slow=2.4,SNR=4.3						
BOSA	**Boshof**	**100.15**	**241**	*e*Pdif	P	08 36 40.9	+1.5
NB2	**NORSAR Subarra**	**100.16**	**333**	P	P	08 36 37.4	-1.3
	comp=Z,105nm,2.0s,baz=70,slow=4.5						
NB2	**NORSAR Subarra**	**100.16**	**333**	P	P	08 36 37.4	-1.3
NB2				pmax	pmax		
	comp=Z,105nm,2.0s						
NB2	**NORSAR Subarra**	**100.16**	**333**	P	P	08 36 37.4	-1.3
	baz=70,slow=4.4						
NOA	**NORSAR Array B**	**100.16**	**333**	P	P	08 36 37.1	-1.5
	comp=Z,4.7nm,0.7s,baz=72,slow=4.2,SNR=22						
NOA				pP		08 37 00.8	
	comp=Z,4.4nm,0.7s,baz=72,slow=4.2,SNR=4.0						
NOA				sP		08 37 10.7	
	comp=Z,8.0nm,0.7s,baz=71,slow=4.5,SNR=5.4						
NAO01	**NORSAR Array S**	**100.39**	**333**	*e*Pdif	P	08 36 39.4	-0.3
	comp=Z,5.6nm,0.6s						
MORC	**Moravsky Berou**	**100.41**	**321**	*e*P	P	08 36 40.3	+0.3
MORC				pmax	pmax		
	comp=Z,28nm,1.0s						
MORC	**Moravsky Berou**	**100.41**	**321**	*e*Pdif	P	08 36 40.3	+0.2
	comp=Z,28nm,1.0s						
SRO	**Srobarova**	**100.42**	**319**	*e*P	P	08 36 41.5	+1.4
IVA	**Berane**	**100.46**	**314**	⇑*i*P	P	08 36 39.7	-0.7
PVY	**Plav**	**100.47**	**314**	⇑*i*P	P	08 36 40.0	-0.5
SRO1	**Iza**	**100.48**	**319**	*e*P	P	08 36 41.4	+1.0
BBLS	**Bajina Basta -**	**100.60**	**315**	⇑*i*P	P	08 36 41.1	+0.1
PLE	**Pljevlja**	**100.73**	**315**	⇑*i*P	P	08 36 41.8	+0.1
LKD	**Levkas**	**100.74**	**310**	*e*P	P	08 36 41.6	-0.2
TIR	**Tirane**	**100.81**	**313**	P	P	08 36 41.4	-0.7
IGT	**Igoumenitsa**	**100.83**	**311**	*e*P	P	08 36 41.3	-0.9
KSP	**Ksiaz**	**100.89**	**323**	⇑*e*P	P	08 36 42.6	+0.4
KSP				*e*S	S	08 48 09.0	+0.5
KSP				*e*SP	SP	08 49 37.0	-6.8
KSP	**Ksiaz**	**100.89**	**323**	⇑*e*P	P	08 36 42.8	+0.7
	comp=Z,300nm,2.0s						
KSP				*e*SKS	SKS	08 47 16.8	+5.5
KSP				*e*S	S	08 48 05.1	-3.3
KSP				MLR	MLR	09 16 50.7	
	comp=Z,1µm,41.4s						
DPC	**Dobruska-Polom**	**101.01**	**322**	*e*P	P	08 36 44.1	+1.4
DPC				MLR	MLR		
	comp=Z,400nm,19.5s						
DPC	**Dobruska-Polom**	**101.01**	**322**	*e*PDIF	P	08 36 44.1	+1.4
DPC				*e*pP		08 37 09.9	
DPC				AMS	AMS	09 24 00.0	
	comp=Z,400nm,19.5s						
TTG	**Podgorica**	**101.02**	**314**	⇑*i*P	P	08 36 42.3	-0.7
UPM	**Unac-Piva**	**101.10**	**315**	*e*P	P	08 36 43.0	-0.3
ZST	**Bratislava**	**101.11**	**320**	*e*P	P	08 36 43.3	+0.1
ZST				*e*		08 47 17.0	
ZST	**Bratislava**	**101.11**	**320**	*e*P	P	08 36 43.3	+0.1
ZST				*e*		08 36 57.7	
ZST				*e*PP	PP	08 41 05.8	+10
ZST				*e*		08 47 17.0	
NKY	**Niksic**	**101.12**	**314**	⇑*i*P	P	08 36 42.8	-0.6
ULC	**Ulcinj**	**101.13**	**313**	⇑*i*P	P	08 36 42.7	-0.8
UPC	**Upice**	**101.16**	**322**	*e*PDIF	P	08 36 43.8	+0.4
UPC				*e*pP		08 37 16.6	
KEK	**Kerkira**	**101.19**	**311**	P	P	08 36 42.8	-1.0
BUM	**Brajici-Budva**	**101.31**	**314**	⇑*i*P	P	08 36 43.7	-0.6
BRY	**Bratogost**	**101.43**	**314**	⇑*i*P	P	08 36 44.4	-0.4
HCY	**Herceg Novi**	**101.56**	**314**	⇑*i*P	P	08 36 44.9	-0.5
JMIC	**Jan Mayen**	**101.57**	**346**	*e*P	P	08 36 46.1	+1.4
JMIC				*e*SS	SS	08 55 19.0	-2.5
JMIC				AMS	AMS	09 27 41.7	
	comp=Z,301nm,19.1s						
YKW3	**Yellowknife Ar**	**101.61**	**24**	*e*Pdif	P	08 36 45.4	+0.2
YKA	**Yellowknife Ar**	**101.65**	**24**	P	P	08 36 45.8	+0.5
	comp=Z,4.6nm,0.9s,baz=299,slow=4.5,SNR=27						
YKA				pP		08 37 09.6	
	comp=Z,1.5nm,0.6s,baz=299,slow=4.3,SNR=3.2						
YKA				PKiKP		08 41 08.6	
	comp=Z,1.4nm,0.8s,baz=302,slow=2.9,SNR=5.7						
YKA				S		08 47 16.8	
	comp=Z,0.4nm,0.6s,baz=277,slow=34,SNR=2.2						
YKA				PKKPbc		08 52 52.9	
	comp=Z,2.9nm,0.8s,baz=117,slow=2.7,SNR=16						
YKA	**Yellowknife Ar**	**101.65**	**24**	P	P	08 36 45.8	+0.5
YKA				pP		08 37 09.6	
RUE	**Ruedersdorf**	**101.88**	**325**	*e*Pdif	P	08 36 47.0	+0.5
	comp=Z,82nm,0.9s						
PVCC	**Panska Ves**	**102.03**	**323**	*e*P	Pdif	08 36 47.3	+0.1
PVCC				MLR	MLR		
	comp=Z,400nm,19.1s						
PVCC	**Panska Ves**	**102.03**	**323**	*e*PDIF	Pdif	08 36 47.3	+0.1
PVCC				*e*pP		08 37 21.0	
PVCC				AMS	AMS	09 24 50.0	
	comp=Z,400nm,19.1s						
KOGS	**Kog**	**102.13**	**318**	*i* P	Pdif	08 36 47.9	+0.1
PRU	**Pruhonice**	**102.21**	**322**	*e*P	Pdif	08 36 48.9	+0.9
PRU				MLR	MLR		
	comp=Z,400nm,19.9s						
PRU	**Pruhonice**	**102.21**	**322**	*e*PDIF	Pdif	08 36 48.9	+0.9
PRU				*e*pP		08 37 21.3	
PRU				AMS	AMS	09 24 50.0	
	comp=Z,400nm,19.9s						
BRG	**Berggiesshubel**	**102.30**	**323**	*i* P	Pdif	08 36 49.2	+0.8
BRG						08 41 05.1	
BRG				S	S	08 48 25.0	+4.8
BRG				SS	SS	08 55 30.0	-2.2
BRG				pmax	pmax		
	comp=Z,157nm,2.2s						
BRG				MLR	MLR		
	comp=Z,630nm,23.0s						
BRG	**Berggiesshubel**	**102.30**	**323**	*i* Pdif	Pdif	08 36 49.2	+0.8
	comp=Z,157nm,2.2s						
BRG				*i*		08 37 21.9	
BRG				PP	PP	08 41 05.0	+1.0
BRG				*e*		08 47 50.0	
BRG				Sdif		08 48 25.0	
BRG				PS	PS	08 49 54.0	-16
BRG				SS	SS	08 55 30.0	-2.2
BRG				LR	LR		
	comp=Z,630nm,23.0s						
LCI	**Lecce**	**102.33**	**312**	P	Pdif	08 36 48.0	-0.8
LCI				pmax	pmax		
	comp=Z,35nm,1.0s						
LCI	**Lecce**	**102.33**	**312**	P	Pdif	08 36 48.0	-0.8
	comp=Z,35nm,1.0s						
ARSA	**Arzberg**	**102.39**	**319**	⇑*i*P	Pdif	08 36 48.7	-0.2
	comp=Z,134nm,2.1s						
CLL	**Collm**	**102.72**	**324**	⇑*i*P	Pdif	08 36 49.8	-0.5
CLL				*e*S	S	08 48 26.0	+2.3
CLL				pmax	pmax		
	comp=Z,90nm,2.1s						
CLL	**Collm**	**102.72**	**324**	⇑*i*P	Pdif	08 36 49.8	-0.5
	comp=Z,90nm,2.1s						
CLL				*i* sP		08 37 23.7	
CLL				*e*S	S	08 48 26.0	+2.3
CLL	**Collm**	**102.72**	**324**	⇑*i*PDIF	Pdif	08 36 49.8	-0.5
CLL				*i*		08 37 23.7	
CLL				*e*		08 39 25.0	
CLL				*e*		08 40 14.0	
CLL				*e*PP	PP	08 40 57.0	-10
CLL				*e**PPP		08 41 26.0	
CLL				*e*		08 43 48.0	
CLL				*e*S	S	08 48 26.0	+2.3
CLL				*e*SP	SP	08 49 55.0	-8.0
CLL				*e*		08 50 30.0	
CLL				*e*PPS	PPS	08 51 00.0	-7.5
CLL				*e*		08 51 27.0	
CLL				*e*SS	SS	08 55 36.0	-2.1
PERS	**Pernice**	**102.83**	**319**	*e*P	Pdif	08 36 51.0	+0.1
MOA	**Molln**	**103.03**	**320**	⇑*i*P	Pdif	08 36 52.5	+0.8
	comp=Z,130nm,1.8s						
BER	**Bergen**	**103.06**	**334**	*e*P	Pdif	08 36 48.1	-3.4
BER				AMS	AMS	09 26 16.0	
	comp=Z,362nm,20.4s						
BOJS	**Bojanci**	**103.06**	**317**	*e*P	Pdif	08 36 52.1	+0.3
BOJS				*i*		08 36 57.2	
BOJS				*i*		08 37 09.6	
KHC	**Kasperske Hory**	**103.07**	**321**	*e*P	Pdif	08 36 52.6	+0.7
KHC				MLR	MLR		
	comp=Z,500nm,21.3s						
KHC	**Kasperske Hory**	**103.07**	**321**	*e*PDIF	Pdif	08 36 52.6	+0.7
KHC				*e*pP		08 37 23.4	
KHC				AMS	AMS	09 21 40.0	
	comp=Z,500nm,21.3s						
GEC2	**GERESS Array S**	**103.08**	**321**	*e*P	Pdif	08 36 52.5	+0.6
GEC2				pmax	pmax		
	comp=Z,50nm,1.5s						
GEC2	**GERESS Array S**	**103.08**	**321**	*e*P	Pdif	08 36 52.5	+0.6
	comp=Z,50nm,1.5s						
GERES	**GERESS Array B**	**103.08**	**321**	Pdiff	Pdif	08 36 52.4	+0.5
	comp=Z,8.9nm,0.9s,baz=72,slow=4.2,SNR=52						
GERES				PP	PP	08 41 09.0	-1.3
	comp=Z,2.0nm,0.7s,baz=63,slow=6.6,SNR=4.2						
GERES				PKKPbc		08 52 50.0	
	comp=Z,0.4nm,0.6s,baz=207,slow=4.4,SNR=3.9						
SNAA	**Sanae**	**103.09**	**195**	*e*P	Pdif	08 36 53.0	+1.6
SNAA				pmax	pmax		
	comp=Z,14nm,1.4s						
SNAA	**Sanae**	**103.09**	**195**	PKKPbc		08 52 48.5	
	comp=Z,2.4nm,0.9s,baz=324,slow=3.0,SNR=16						
SNAA	**Sanae**	**103.09**	**195**	*e*Pdif	Pdif	08 36 53.0	+1.6
	comp=Z,14nm,1.4s						
OBKA	**Obir**	**103.24**	**319**	⇑*i*P	Pdif	08 36 53.0	+0.3
	comp=Z,75nm,1.8s						
BSEG	**Bad Segeberg**	**103.33**	**327**	*e*P	Pdif	08 36 53.4	+0.6
BSEG				*e*pP		08 37 26.4	
LJU	**Ljubljana**	**103.39**	**318**	*e*P	Pdif	08 36 53.7	+0.4
NKC	**Novy Kostel**	**103.41**	**323**	*e*P	Pdif	08 36 53.5	+0.2
NKC				MLR	MLR		
	comp=Z,500nm,17.0s						
NKC	**Novy Kostel**	**103.41**	**323**	*e*PDIF	Pdif	08 36 53.5	+0.2
NKC				*e*pP		08 37 26.7	
NKC				AMS	AMS	09 27 50.0	
	comp=Z,500nm,17.0s						
WET	**Wettzell**	**103.50**	**322**	*e*P	Pdif	08 36 54.1	+0.3
WET				pmax	pmax		
	comp=Z,51nm,1.6s						
WET	**Wettzell**	**103.50**	**322**	*e*P	Pdif	08 36 54.1	+0.3
	comp=Z,51nm,1.6s						
TIP	**Timpagrande**	**103.61**	**311**	P	Pdif	08 36 54.9	+0.4
ORI	**Oriolo Calabro**	**103.63**	**312**	P	Pdif	08 36 55.4	+0.9
SUR	**Sutherland**	**103.64**	**237**	PP	PP	08 41 06.5	-8.1
	comp=Z,31nm,1.2s,baz=166,slow=10,SNR=3.3						
MOX	**Moxa**	**103.77**	**323**	*e*P	Pdif	08 36 55.8	+0.9
MOX				pmax	pmax		
	comp=Z,72nm,2.0s						
MOX				MLR	MLR		
	comp=Z,400nm,19.0s						
MOX	**Moxa**	**103.77**	**323**	*e*P	Pdif	08 36 55.8	+0.9
	comp=Z,72nm,2.0s						
MOX				LR	LR		
	comp=Z,400nm,19.0s						
MOX	**Moxa**	**103.77**	**323**	*i* P	Pdif	08 36 55.8	+0.9
	comp=Z,logA/T=1.6						
MOX				*e*		08 39 44.0	
MOX				*e*		08 41 12.0	
MOX				PS		08 48 36.0	
MOX				L		09 30 04.0	
KBA	**Koelnbreinsper**	**103.86**	**319**	⇓*i*P	Pdif	08 36 55.0	-0.4
	comp=Z,68nm,1.9s						
KBA	**Koelnbreinsper**	**103.86**	**319**	⇓*i*P	Pdif	08 36 55.0	-0.4
KBA				pmax	pmax		
	comp=Z,68nm,1.9s						
ROBS	**Robic**	**104.01**	**319**	*e*P	Pdif	08 36 55.6	-0.5
PTCC	**Patocco-Chiusa**	**104.06**	**319**	P	Pdif	08 36 56.1	-0.2
CLZ	**Clausthal**	**104.07**	**325**	*e*P	Pdif	08 36 57.1	+0.9
CLZ				pmax	pmax		
	comp=Z,32nm,1.4s						
CLZ	**Clausthal**	**104.07**	**325**	*e*P	Pdif	08 36 57.1	+0.9
	comp=Z,32nm,1.4s						
SLCN	**Sala Consilina**	**104.15**	**312**	P	Pdif	08 36 57.5	+0.7
MRLC	**Muro Lucano**	**104.16**	**313**	P	Pdif	08 36 56.6	-0.3
MGR	**Morigerati**	**104.27**	**312**	P	Pdif	08 36 56.5	-0.9
GRA1	**Grafenberg Arr**	**104.34**	**322**	*e*P	Pdif	08 36 58.6	+1.2
	comp=Z,89nm,1.9s						
GRA1				LR	LR		
	comp=Z,600nm,20.5s						
GRF	**Grafenberg Arr**	**104.34**	**322**	*e*P	Pdif	08 36 58.6	+1.2
GRF				pmax	pmax		
	comp=Z,89nm,1.9s						
GRF				MLR	MLR		
	comp=Z,600nm,20.5s						
GRF	**Grafenberg Arr**	**104.34**	**322**	*e*P	Pdif	08 36 58.6	+1.2
GRF				pmax	pmax		
	comp=Z,89nm,1.9s						
GRF				MLR	MLR		
	comp=Z,600nm,20.5s						
GRF	**Grafenberg Arr**	**104.34**	**322**	*e*P	Pdif	08 36 58.6	+1.2
	comp=Z,89nm,1.9s						
GRF				LR	LR		
	comp=Z,600nm,20.5s						
SGO	**Sicignano**	**104.35**	**313**	P	Pdif	08 36 57.5	-0.2
FVI	**Forni Avoltri**	**104.38**	**319**	P	Pdif	08 36 58.0	+0.3
SOI	**Samo**	**104.41**	**310**	P	Pdif	08 36 58.2	+0.2
CSSN	**Cassano Irpino**	**104.48**	**313**	P	Pdif	08 36 58.3	0.0
SCLL	**Scilla**	**104.62**	**310**	P	Pdif	08 36 59.3	+0.3
YBH	**Yreka Blue Hor**	**104.67**	**46**	PKKPbc		08 52 44.4	
	comp=Z,0.6nm,0.2s,baz=162,slow=3.2,SNR=9.5						
MTTG	**Motta San Giov**	**104.70**	**310**	P	Pdif	08 37 00.2	+0.9
SEST	**Monte Rota**	**104.70**	**319**	P	Pdif	08 36 59.5	+0.4
	comp=Z,2µm,0.9s						
VNA2	**Neumayer--Watz**	**104.70**	**194**	*e*	Pdif	08 37 10.3	+12
VNA2	**Neumayer--Watz**	**104.70**	**194**	*e*	Pdif	08 37 30.1	+32
VNA2	**Neumayer--Watz**	**104.70**	**194**	*e*	PP	08 41 15.1	-6.7
VNA2	**Neumayer--Watz**	**104.70**	**194**	*e*	Px	08 41 42.3	
VNA2	**Neumayer--Watz**	**104.70**	**194**	*e*	PKKP	08 52 43.7	+4.5
VNA2	**Neumayer--Watz**	**104.70**	**194**	Pdif	Pdif	08 37 01.3	+2.8
VNA2				*e*		08 37 10.3	
VNA2				*e*		08 37 30.1	
VNA2				*e*		08 41 15.1	
VNA2				*e*		08 41 42.3	
VNA2				*e*		08 52 43.7	
VNA2				*e*		08 53 02.6	
CII	**Carovilli**	**104.77**	**314**	*e*Pdif	Pdif	08 36 59.9	+0.4
	comp=Z,10nm,0.8s						
FUR	**Furstenfeldbru**	**104.83**	**321**	*e*P	Pdif	08 37 00.3	+0.7
FUR				pmax	pmax		
	comp=Z,92nm,1.9s						
FUR	**Furstenfeldbru**	**104.83**	**321**	*e*P	Pdif	08 37 00.3	+0.7
	comp=Z,92nm,1.9s						
RNI2	**Rionero Sannit**	**104.88**	**314**	P	Pdif	08 37 00.3	+0.3
	comp=Z,38nm,1.3s						
WATA	**Walderalm**	**104.92**	**320**	⇑*i*P	Pdif	08 37 00.2	+0.2
	comp=Z,38nm,1.5s						
WATA	**Walderalm**	**104.92**	**320**	⇑*i*P	Pdif	08 37 00.2	+0.2
WATA				pmax	pmax		
	comp=Z,38nm,1.5s						
VNA3	**Neumayer Olymp**	**105.04**	**194**	*e*	Pdif	08 37 11.8	+12
VNA3	**Neumayer Olymp**	**105.04**	**194**	*e*	Pdif	08 37 32.1	+32
VNA3	**Neumayer Olymp**	**105.04**	**194**	*e*	PP	08 41 15.8	-8.6
VNA3	**Neumayer Olymp**	**105.04**	**194**	*e*	Px	08 41 43.6	
VNA3	**Neumayer Olymp**	**105.04**	**194**	*e*	PKKP	08 52 42.3	+3.7
VNA3	**Neumayer Olymp**	**105.04**	**194**	Pdif	Pdif	08 37 02.7	+2.7
VNA3				*e*		08 37 11.8	
VNA3				*e*		08 37 32.1	
VNA3				*e*		08 41 15.8	
VNA3				*e*		08 41 43.6	
VNA3				*e*		08 52 42.3	
VNA3				*e*		08 53 00.2	
CING	**Cingoli**	**105.08**	**316**	P	Pdif	08 37 01.8	+1.0
VNA1	**Neumayer--Stat**	**105.10**	**194**	⇑*i*P	Pdif	08 37 13.2	+13
VNA1	**Neumayer--Stat**	**105.10**	**194**	*e*	Pdif	08 37 22.8	+22
VNA1	**Neumayer--Stat**	**105.10**	**194**	*e*	PP	08 41 16.3	-8.6
VNA1	**Neumayer--Stat**	**105.10**	**194**	*e*	PKKP	08 52 43.3	+4.8
SUMG	**Summit**	**105.13**	**355**	*e*Pdif	Pdif	08 37 01.9	+1.5
	comp=Z,6.2nm,1.0s						
SQTA	**Sankt Quirin**	**105.19**	**320**	⇑*i*P	Pdif	08 37 01.6	+0.4
	comp=Z,41nm,1.5s						
SQTA	**Sankt Quirin**	**105.19**	**320**	⇑*i*P	Pdif	08 37 01.6	+0.4
SQTA				pmax	pmax		
	comp=Z,41nm,1.5s						
ARV	**Arcevia**	**105.22**	**316**	P	Pdif	08 37 02.2	+0.7
AQU	**L’Aquila**	**105.23**	**315**	*e*P	Pdif	08 37 02.5	+0.9
AQU				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AQU	**L’Aquila**	**105.23**	**315**	*e*Pdif	Pdif	08 37 02.5	+1.0
	comp=Z,6.4nm,0.4s						
CTI	**Castel Tesino**	**105.30**	**319**	P	Pdif	08 37 02.6	+0.9
CTI				pmax	pmax		
	comp=Z,31nm,1.4s						
CTI	**Castel Tesino**	**105.30**	**319**	P	Pdif	08 37 02.6	+0.9
	comp=Z,31nm,1.4s						
NRCA	**Norcia**	**105.30**	**315**	P	Pdif	08 37 02.9	+1.1
PTQR	**Pietraquaria**	**105.33**	**314**	P	Pdif	08 37 02.3	+0.3
TNS	**Taunus Mts**	**105.81**	**324**	*e*P	Pdif	08 37 04.6	+0.7
TNS				pmax	pmax		
	comp=Z,47nm,1.8s						
TNS	**Taunus Mts**	**105.81**	**324**	*e*P	Pdif	08 37 04.6	+0.7
	comp=Z,47nm,1.8s						
SFI	**Santa Sofia**	**105.85**	**317**	P	Pdif	08 37 05.9	+1.7
STU	**Stuttgart**	**105.91**	**322**	*e*P	Pdif	08 37 03.1	-1.2
STU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
STU	**Stuttgart**	**105.91**	**322**	*e*Pdif	Pdif	08 37 03.1	-1.2
	comp=Z,7.0nm,0.6s						
PGD	**Poggio Sodo**	**105.95**	**317**	P	Pdif	08 37 06.1	+1.5
BRMO	**Bormio**	**105.99**	**320**	P	Pdif	08 37 05.8	+1.0
FUORN	**Ofenpass**	**106.01**	**320**	P	Pdif	08 37 05.4	+0.6
DAVA	**Damuels**	**106.02**	**320**	⇑*i*P	Pdif	08 37 05.6	+0.7
	comp=Z,64nm,2.0s						
VMG	**Vicchio**	**106.04**	**317**	P	Pdif	08 37 07.0	+1.9
DAVOX	**Davos**	**106.20**	**320**	P	Pdif	08 37 06.5	+0.8
FNVD	**Fontana Vidola**	**106.26**	**317**	P	Pdif	08 37 07.9	+1.9
NEW	**Newport**	**106.31**	**38**	Pdiff	Pdif	08 37 07.9	+1.8
	comp=Z,0.5nm,0.3s,baz=313,slow=6.8,SNR=4.0						
NEW				PKKPbc		08 52 40.1	
	comp=Z,0.6nm,0.4s,baz=116,slow=6.4,SNR=2.8						
NEW				PKKPab		08 52 54.9	
	comp=Z,1.0nm,0.4s,baz=172,slow=2.7,SNR=4.4						
NEW	**Newport**	**106.31**	**38**	Pdif	Pdif	08 37 07.9	+1.8
NEW				PKKPbc		08 52 40.1	
NEW				PKKPab		08 52 54.9	
EDM	**Edmonton**	**106.47**	**33**	*e*PKiKP		08 41 18.7	
GSCL	**Gusciola**	**106.57**	**317**	P	Pdif	08 37 08.7	+1.3
BFO	**Black Forest**	**106.61**	**322**	*e*P	Pdif	08 37 08.0	+0.6
BFO				pmax	pmax		
	comp=Z,22nm,1.6s						
BFO	**Black Forest**	**106.61**	**322**	*e*P	Pdif	08 37 08.0	+0.6
	comp=Z,22nm,1.6s						
CDF	**Champ du Feu**	**107.22**	**322**	*e*P	Pdif	08 37 11.1	+1.0
	comp=Z,67nm,1.5s						
CDF	**Champ du Feu**	**107.22**	**322**	*e*P	Pdif	08 37 11.1	+1.0
CDF				pmax	pmax		
	comp=Z,33nm,1.5s						
MMK	**Mattmark**	**107.70**	**320**	P	Pdif	08 37 13.7	+1.4
HINF	**Hinteralfeld**	**107.72**	**322**	*e*P	Pdif	08 37 12.9	+0.6
	comp=Z,16nm,1.1s						
HINF	**Hinteralfeld**	**107.72**	**322**	*e*P	Pdif	08 37 12.9	+0.6
HINF				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TSUM	**Tsumeb**	**107.83**	**250**	PKiKP		08 41 22.1	
	comp=Z,1.9nm,0.7s,baz=100,slow=8.8,SNR=3.5						
HAU	**Haudompre**	**107.96**	**322**	*e*P	Pdif	08 37 14.3	+0.9
DIX	**Grande Dixence**	**108.05**	**320**	P	Pdif	08 37 15.3	+1.5
FIN	**Finale Ligure**	**108.22**	**318**	P	Pdif	08 37 15.2	+0.6
PGF	**Pioggiola**	**108.26**	**316**	*e*P	Pdif	08 37 15.7	+0.8
	comp=Z,34nm,1.3s						
PGF	**Pioggiola**	**108.26**	**316**	*e*P	Pdif	08 37 15.7	+0.8
PGF				pmax	pmax		
	comp=Z,17nm,1.3s						
BAIF	**Baives**	**108.36**	**325**	*e*P	Pdif	08 37 17.2	+2.1
MEZF	**Maizieres J’vi**	**108.54**	**323**	*e*P	Pdif	08 37 17.4	+1.5
CABF	**La Chapelle**	**108.68**	**321**	*e*P	Pdif	08 37 17.7	+1.1
	comp=Z,117nm,1.8s						
CABF	**La Chapelle**	**108.68**	**321**	*e*P	Pdif	08 37 17.7	+1.1
CABF				pmax	pmax		
	comp=Z,59nm,1.8s						
MSO	**Missoula**	**108.85**	**39**	*e*PKiKP		08 41 23.2	
SBF	**Sospel**	**108.86**	**318**	*e*P	Pdif	08 37 17.8	+0.3
	comp=Z,39nm,1.3s						
SBF	**Sospel**	**108.86**	**318**	*e*P	Pdif	08 37 17.8	+0.3
SBF				pmax	pmax		
	comp=Z,19nm,1.3s						
NVAR	**Mina Array Bea**	**108.86**	**48**	Pdiff	Pdif	08 37 20.9	+3.3
	comp=Z,0.1nm,0.3s,baz=240,slow=3.5,SNR=2.7						
NVAR				PKiKP		08 41 24.0	
	comp=Z,0.9nm,0.8s,baz=342,slow=0.6,SNR=6.6						
NVAR				PKKPbc		08 52 33.8	
	comp=Z,1.7nm,0.7s,baz=126,slow=4.6,SNR=10						
NVAR				PKKPab		08 52 45.4	
	comp=Z,4.7nm,0.8s,baz=125,slow=5.3,SNR=17						
NVAR				PKPPKP		09 00 55.4	
	comp=Z,0.2nm,0.3s,baz=144,slow=36,SNR=3.8						
NVAR	**Mina Array Bea**	**108.86**	**48**	Pdif	Pdif	08 37 20.9	+3.3
NVAR				PKPdf		08 41 24.0	
NVAR				PKKPbc		08 52 33.8	
NVAR				PKKPab		08 52 45.4	
NVAR				P’P’		09 00 55.4	
BNI	**Bardonecchia**	**108.92**	**319**	*e*P	Pdif	08 37 18.3	+0.6
BNI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BNI	**Bardonecchia**	**108.92**	**319**	*e*Pdif	Pdif	08 37 18.3	+0.7
	comp=Z,9.1nm,1.1s						
CHMT	**Chamberlain Mo**	**109.25**	**39**	*e*PKiKP		08 41 24.6	
ORIF	**Oris-en-Rattie**	**109.49**	**319**	*e*P	Pdif	08 37 21.3	+1.1
	comp=Z,31nm,1.3s						
FRF	**La Foret Royal**	**109.51**	**318**	*e*P	Pdif	08 37 21.0	+0.7
	comp=Z,52nm,1.5s						
LMR	**La Mourre**	**109.69**	**318**	*e*P	Pdif	08 37 21.8	+0.7
	comp=Z,38nm,1.3s						
LOR	**Lormes**	**109.79**	**322**	*e*P	Pdif	08 37 22.4	+0.9
	comp=Z,60nm,1.7s						
HLID	**Hailey**	**109.84**	**42**	*e*PKiKP		08 41 24.0	
HLID				*e*PKKPbc		08 52 29.9	
HLID				*e*PKKPab		08 52 40.6	
SMRF	**Simiane la Rot**	**110.06**	**318**	*e*P	Pdif	08 37 24.0	+1.3
SMF	**Signal de Mont**	**110.07**	**322**	*e*P	Pdif	08 37 23.6	+0.9
SSF	**Saint Saulge**	**110.10**	**322**	*e*P	Pdif	08 37 24.0	+1.2
	comp=Z,55nm,1.9s						
HRY	**Holter Researc**	**110.22**	**38**	*e*PKKPab		08 52 39.0	
VIVF	**Saint-Julien-l**	**110.30**	**320**	*e*P	Pdif	08 37 24.7	+0.9
	comp=Z,10nm,0.9s						
ELK	**Elko**	**110.32**	**45**	*i* PKIKP	PKPdf	08 41 26.9	+3.5
ELK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ELK	**Elko**	**110.32**	**45**	PKiKP		08 41 26.9	
	comp=Z,4.8nm,1.1s,baz=283,slow=0.7,SNR=9.7						
ELK	**Elko**	**110.32**	**45**	*e*PKiKP		08 41 27.2	
ELK				*e*PKKPbc		08 52 27.4	
ELK				*e*PKKPab		08 52 37.3	
MCMT	**McKenzie Canyo**	**110.37**	**40**	*e*PKiKP		08 41 26.2	
MCMT				*e*PKKPab		08 52 37.9	
BGF	**Bois d’Agland**	**110.73**	**322**	*e*P	Pdif	08 37 26.7	+1.1
BOZ	**Bozeman (W)**	**110.81**	**39**	*e*PKIKP	PKPdf	08 41 27.8	+3.5
BOZ				*e*		08 52 35.6	
LASF	**Ste Croix**	**111.15**	**319**	*e*P	Pdif	08 37 28.7	+1.2
	comp=Z,25nm,1.5s						
FFC	**Flin Flon**	**111.38**	**28**	*e*PKIKP	PKPdf	08 41 27.7	+2.6
LDF	**La Druitiere**	**111.55**	**325**	*e*P	Pdif	08 37 30.3	+1.1
	comp=Z,77nm,1.5s						
FLN	**La Foliniere**	**111.67**	**325**	*e*P	Pdif	08 37 30.9	+1.2
	comp=Z,46nm,1.2s						
IMW	**Indian Meadow**	**112.01**	**41**	PKKPbc		08 52 22.3	
IMW				*e*PKKPab		08 52 30.8	
LKWY	**Lake**	**112.06**	**40**	PKKPab		08 52 30.0	
GRR	**Gorron**	**112.08**	**325**	*e*P	Pdif	08 37 33.0	+1.5
TPAW	**Teton Pass**	**112.17**	**41**	*e*PKiKP		08 41 30.8	
TPAW				*e*PKKPab		08 52 30.4	
MOOW	**Moose Ponds**	**112.20**	**41**	PKiKP		08 41 27.8	
MOOW				PKKPbc		08 52 21.2	
MOOW				*e*PKKPab		08 52 29.3	
REDW	**Red Top Meadow**	**112.29**	**41**	*e*PKiKP		08 41 29.6	
SNOW	**Snow King Moun**	**112.31**	**41**	*e*PKiKP		08 41 30.2	
SNOW				*e*PKKPab		08 52 29.0	
LOHW	**Long Hollow**	**112.35**	**41**	*e*PKiKP		08 41 30.9	
LOHW				*e*PKKPab		08 52 29.0	
NEN	**Nelson**	**112.38**	**50**	*e*PKiKP		08 41 29.5	
AHID	**Auburn Hatcher**	**112.38**	**42**	*e*PKKPbc		08 52 20.9	
AHID				*e*PKKPab		08 52 28.6	
MFF	**Saint Martin d**	**112.54**	**323**	*e*P	Pdif	08 37 35.2	+1.6
	comp=Z,114nm,1.9s						
MTLF	**Montolieu**	**112.54**	**319**	*e*P	Pdif	08 37 34.7	+1.0
	comp=Z,22nm,1.4s						
HWUT	**Hardware Ranch**	**112.55**	**43**	*e*PKiKP		08 41 31.1	
HWUT				*e*PKKPbc		08 52 20.1	
HWUT				*e*PKKPab		08 52 27.8	
ARUT	**Antelope Range**	**112.69**	**48**	*e*PKKPab		08 52 29.3	
CTU	**Camp Tracy**	**112.79**	**44**	*e*PKKPbc		08 52 20.5	
CTU				*e*PKKPab		08 52 27.6	
TCUT	**Toone Canyon**	**112.86**	**44**	*e*PKKPab		08 52 26.8	
JLU	**Jordanelle**	**113.04**	**44**	*e*PKKPbc		08 52 19.8	
JLU				*e*PKKPab		08 52 26.6	
MVU	**Marysvale**	**113.32**	**46**	*e*PKiKP		08 41 32.6	
MVU				*e*PKKPbc		08 52 18.3	
MVU				*e*PKKPab		08 52 25.2	
MSU	**Marysvale**	**113.34**	**46**	*e*PKiKP		08 41 32.8	
MSU				*e*PKKPbc		08 52 18.2	
MSU				*e*PKKPab		08 52 25.6	
PDAR	**Pinedale Array**	**113.41**	**41**	PKiKP		08 41 32.6	
	comp=Z,2.6nm,1.1s,SNR=14						
PDAR				PKKPbc		08 52 16.1	
	comp=Z,3.4nm,0.5s,baz=120,slow=5.1,SNR=20						
PDAR				PKKPab		08 52 24.9	
	comp=Z,7.5nm,0.8s,baz=122,slow=5.9,SNR=24						
PDAR				PKKP	PKKP	08 52 38.9	+15

	comp=Z,2.6nm,0.9s,baz=100,slow=5.5,SNR=4.4						
LAO	**LASA Array**	113.63	36	*e*PKiKP		08 41 33.4	
QUIF	**Quistinic**	113.64	325	*e*P	Pdif	08 37 39.6	+1.2
	comp=Z,54nm,1.4s						
TMUT	**Trail Mountain**	113.73	45	*e*PKKPbc		08 52 16.2	
TMUT				*e*PKKPab		08 52 23.6	
SRU	**San Rafael**	114.30	45	*e*PKKPbc		08 52 14.8	
SRU				*e*PKKPab		08 52 20.7	
ETSF	**Etsaut**	114.56	319	*e*P	Pdif	08 37 42.0	-0.6
SJPF	**Ste Jean**	114.89	320	*e*P	Pdif	08 37 41.0	-3.0
RSSD	**Black Hills**	116.28	38	*e*PKIKP	PKPdf	08 41 36.7	+1.7
ULM	**Lac du Bonnet**	117.10	29	PKP	PKPdf	08 41 38.2	+1.8
	comp=Z,10nm,0.8s,baz=206,slow=0.8,SNR=8.7						
ULM				PKKPbc		08 52 04.3	
	comp=Z,4.7nm,0.7s,baz=179,slow=3.6,SNR=4.6						
ULM				PKKPab		08 52 07.5	
	comp=Z,4.7nm,0.7s,baz=135,slow=1.7,SNR=4.8						
ULM	**Lac du Bonnet**	117.10	29	*e*PKPdf	PKPdf	08 41 38.1	+1.7
ISCO	**Idaho Springs**	117.41	43	*e*PKPdf	PKPdf	08 41 40.4	+3.2
ISCO				*e*SKP		08 45 07.9	
ESDC	**Sonseca Array**	118.35	318	PKP	PKPdf	08 41 41.7	+2.6
	comp=Z,2.0nm,0.6s,baz=38,slow=1.8,SNR=12						
ESDC				PP	PP	08 42 58.5	-2.9
	comp=Z,14nm,1.1s,baz=55,slow=6.7,SNR=4.4						
ANMO	**Albuquerque**	118.98	48	PKP	PKPdf	08 41 44.0	+3.6
	comp=Z,5.8nm,1.0s,baz=240,slow=2.3,SNR=19						
ANMO				PKKPab		08 52 01.2	
	comp=Z,5.2nm,1.2s,baz=138,slow=6.5,SNR=7.8						
ANMO	**Albuquerque**	118.98	48	*e*PKPdf	PKPdf	08 41 44.0	+3.5
ANMO				*e*SKP		08 45 08.7	
PVRL	**Vila Real**	119.97	321	*e*PKPdf	PKPdf	08 41 45.0	+2.8
MTE	**Manteigas**	120.33	320	*e*PKPdf	PKPdf	08 41 45.9	+2.9
MTE	**Manteigas**	120.33	320	*e*PP	PP	08 43 12.1	-2.2
MTE	**Manteigas**	120.33	320	*e*LQ		09 13 03.7	
MTE	**Manteigas**	120.33	320	*e*PKPdf	PKPdf	08 41 45.7	+2.7
PVIS	**Viseu**	120.39	320	*e*PKPdf	PKPdf	08 41 45.7	+2.6
PCBR	**Castelo Branco**	120.59	319	*e*PKPdf	PKPdf	08 41 46.3	+2.8
MNTX	**Cornudas Mount**	121.16	51	*e*PKPdf	PKPdf	08 41 46.7	+1.9
MNTX				*e*SKPdf		08 45 15.5	
PTOM	**Tomar**	121.32	320	*e*PKPdf	PKPdf	08 41 48.0	+3.1
EVO	**Evora**	121.64	318	⇑*i*PKIKP	PKPdf	08 41 48.4	+2.9
	comp=Z,61nm,0.9s						
PBEJ	**Beja**	121.81	318	*e*PKPdf	PKPdf	08 41 48.7	+2.8
PLOU	**Loures**	122.20	319	*e*PKPdf	PKPdf	08 41 50.0	+3.4
AMTX	**Amarillo**	122.51	46	*e*PKPdf	PKPdf	08 41 50.5	+3.2
SCHQ	**Schefferville**	122.65	9	PKP	PKPdf	08 41 49.4	+2.3
	comp=Z,23nm,0.6s,baz=17,slow=3.2,SNR=86						
SCHQ				PKKPbc		08 51 43.0	
	comp=Z,2.9nm,0.8s,baz=194,slow=9.0,SNR=4.8						
SCHQ	**Schefferville**	122.65	9	*e*PKPdf	PKPdf	08 41 49.3	+2.2
LTX	**Lajitas**	123.48	53	*e*PKIKP	PKPdf	08 41 52.5	+3.2
TXAR	**Lajitas Array**	123.48	53	PKP	PKPdf	08 41 52.0	+2.7
	comp=Z,4.4nm,1.1s,baz=297,slow=2.8,SNR=24						
TXAR				PKKPbc		08 51 41.9	
	comp=Z,1.8nm,0.8s,baz=113,slow=5.0,SNR=12						
KSU1	**Kansas State U**	123.69	39	*e*PKPdf	PKPdf	08 41 51.6	+2.1
KSU1				*e*		08 41 58.1	
WMOK	**Wichita Mounta**	124.64	45	*e*PKIKP	PKPdf	08 41 52.8	+1.3
WMOK				*e*		08 42 00.2	
USHA	**Ushuaia**	125.81	170	PKP	PKPdf	08 41 55.8	+2.7
	comp=Z,26nm,0.9s,baz=171,slow=1.5,SNR=31						
CCM	**Cathedral Cave**	127.64	37	*e*PKIKP	PKPdf	08 41 58.6	+1.4
CCM				*e*		08 42 06.5	
FVM	**French Village**	128.18	37	*e*PKIKP	PKPdf	08 42 00.3	+2.1
SADO	**Sadowa**	128.61	23	PKP	PKPdf	08 42 00.6	+1.8
	comp=Z,35nm,1.2s,baz=345,slow=3.6,SNR=17						
UALR	**University of**	129.00	41	*e*PKPdf	PKPdf	08 42 02.2	+2.3
NATX	**Nacogdoches**	129.15	46	PKPdf	PKPdf	08 42 03.2	+3.0
PARMO	**Parma**	129.45	37	*e*PKPdf	PKPdf	08 42 03.7	+3.0
BLO	**Bloomington**	129.57	33	*e*PKIKP	PKPdf	08 42 03.4	+2.5
BLO				*e*		08 42 10.2	
GNAR	**Gosnell**	129.74	38	*e*PKPdf	PKPdf	08 42 04.2	+3.0
DBIC	**Dimbokro**	130.11	280	PKP	PKPdf	08 42 05.2	+2.7
	comp=Z,32nm,0.6s,baz=57,slow=2.4,SNR=34						
DBIC	**Dimbokro**	130.11	280	PKP	PKPdf	08 42 05.2	+2.7
FRNY	**Flat Rock**	130.49	18	*e*PKPdf	PKPdf	08 42 04.1	+1.7
ACSO	**Alum Creek Sta**	130.60	29	*e*PKPdf	PKPdf	08 42 04.8	+2.0
GENY	**Geneseo**	130.81	23	*e*PKPdf	PKPdf	08 42 05.0	+1.9
WVT	**Waverly**	130.96	36	*e*PKPdf	PKPdf	08 42 05.7	+2.1
WVT				*e*SKP		08 45 21.9	
OXF	**Oxford**	131.06	39	*e*PKPdf	PKPdf	08 42 05.0	+1.2
OXF				*e*SKP		08 45 21.8	
NCB	**Newcomb**	131.06	19	*e*PKPdf	PKPdf	08 42 05.5	+1.9
MIV	**Mineville/With**	131.19	19	*e*PKPdf	PKPdf	08 42 06.1	+2.3
PLAL	**Pickwick Lake**	131.58	38	*e*PKPdf	PKPdf	08 42 06.3	+1.5
PLAL				*e*		08 42 13.8	
PLAL				*e*SKP		08 45 23.7	
WVL	**Waterville**	131.86	15	*e*PKPdf	PKPdf	08 42 07.3	+2.3
HNH	**Hanover**	131.91	18	*e*PKPdf	PKPdf	08 42 08.4	+3.3
BINY	**Binghamton**	132.00	22	*e*PKPdf	PKPdf	08 42 06.6	+1.3
MCWV	**Mont Chateau**	132.53	27	*e*SKPbc		08 45 27.8	
SWET	**Sewanee**	132.71	36	*e*PKPdf	PKPdf	08 42 08.6	+1.6
TZTN	**Tazewell**	133.10	33	*e*PKPdf	PKPdf	08 42 08.8	+1.2
CPCT	**Cooper Cave**	133.35	35	*e*PKPdf	PKPdf	08 42 10.3	+2.2
LRAL	**Lakeview Retre**	133.54	39	*e*PKPpre		08 41 56.7	
LRAL				*e*PKPdf	PKPdf	08 42 11.2	+2.7
LRAL				*e*SKP		08 45 31.2	
FWV	**Forest Hill**	133.72	30	*e*PKPdf	PKPdf	08 42 10.8	+2.0
PAL	**Palisades**	133.80	21	*e*PKIKP	PKPdf	08 42 11.2	+2.5
ELN	**Prospectdale**	134.03	30	*e*SKPbc		08 45 32.2	
CBN	**Corbin**	134.82	26	*e*PKPdf	PKPdf	08 42 13.2	+2.4
PLCA	**Paso Flores**	138.44	161	PKP	PKPdf	08 42 20.7	+3.4
	comp=Z,14nm,1.0s,baz=227,slow=4.7,SNR=9.2						
TRQA	**Tornquist**	143.15	170	*e*PKPpre		08 42 25.0	
BBSR	**BB Station**	144.62	16	*e*PKPdf	PKPdf	08 42 30.1	+1.6
CLCH	**Cerro Calan**	144.96	156	⇑*i*P	PKPdf	08 42 31.3	+2.2
JTS	**JuntasAbangare**	147.08	68	*e*PKIKP	PKPdf	08 42 34.9	+1.7
JTS	**JuntasAbangare**	147.08	68	PKPbc	PKPdf	08 42 35.4	+2.3
	comp=Z,9.7nm,0.6s,baz=317,slow=1.5,SNR=4.3						
CFAA	**Coronel Fontan**	147.45	157	PKPbc	PKPdf	08 42 35.9	+2.6
	comp=Z,4.1nm,0.6s,baz=210,slow=3.1,SNR=65						
CPUP	**Villa Florida**	155.37	173	PKPdf	PKPdf	08 42 48.9	+3.8
CPUP				PKPdf	PKPdf	08 42 58.2	+13
CPUP	**Villa Florida**	155.37	173	PKP	PKPdf	08 42 48.5	+3.4
	comp=Z,14nm,1.0s,baz=185,slow=0.8,SNR=18						
CPUP				PKPbc	PKPdf	08 42 58.0	+13
	comp=Z,20nm,1.0s,baz=187,slow=1.0,SNR=15						
CPUP				PKPab	PKPab	08 43 14.5	+1.1
	comp=Z,9.7nm,0.7s,baz=205,slow=5.7,SNR=4.9						
CPUP	**Villa Florida**	155.37	173	*e*PKPdf	PKPdf	08 42 48.3	+3.2
CPUP				*e*PKPbc	PKPdf	08 42 56.9	+12
OTAV	**Otavalo**	155.61	86	*e*PKPdf	PKPdf	08 42 49.7	+3.9
CAM4	**Nova Friburgo**	156.63	208	⇓*i*P	PKPdf	08 42 51.4	+4.6
CAM4				*i*		08 42 58.3	
CAM4				*i*		08 43 02.1	
CAM4				*i*		08 43 21.5	
CAM4				*i*		08 43 32.7	
SJG	**San Juan**	156.99	30	*e*PKIKP	PKPdf	08 42 49.8	+2.4
SJG	**San Juan**	156.99	30	PKP	PKPdf	08 42 50.3	+2.9
	comp=Z,7.9nm,0.7s,baz=54,slow=6.2,SNR=5.7						
SJG				PKPab	PKPab	08 43 20.2	-0.3
	comp=Z,9.4nm,0.7s,baz=321,slow=7.4,SNR=5.8						
ROSC	**El Rosal**	158.78	72	PKP	PKPdf	08 42 53.3	+3.5
	comp=Z,19nm,1.0s,baz=119,slow=1.2,SNR=27						
ROSC				PKPab	PKPab	08 43 29.7	+1.3
	comp=Z,56nm,1.4s,baz=126,slow=18,SNR=6.2						
LPAZ	**La Paz**	160.03	137	PKP	PKPdf	08 42 55.6	+4.6
	comp=Z,15nm,1.0s,baz=13,slow=1.3,SNR=47						
LPAZ	**La Paz**	160.03	137	*e*PKPdf	PKPdf	08 42 55.1	+4.0
SDV	**Santo Domingo**	160.46	57	PKP	PKPdf	08 42 54.1	+2.5
	comp=Z,31nm,0.9s,baz=300,slow=1.4,SNR=34						
SDV	**Santo Domingo**	160.46	57	*e*PKPdf	PKPdf	08 42 53.7	+2.1
SEG	**Port Louis**	160.55	22	*e*P	PKPdf	08 42 54.6	+3.0
DEG	**La Desirade**	160.80	21	*e*P	PKPdf	08 42 54.5	+2.7
MGG	**Marie-Galante**	161.07	22	*e*P	PKPdf	08 42 54.6	+2.5
BBL	**Barber’s Block**	161.37	23	*e*P	PKPdf	08 42 54.9	+2.5
FDF	**Fort de France**	162.21	23	⇑*i*P	PKPdf	08 42 56.4	+3.1
JATB	**Jatai**	163.75	189	*c* *i*P	PKPdf	08 42 58.4	+3.7
JATB				*i*		08 43 20.6	
JATB				*e*		08 43 28.7	
JATB				*i*		08 43 51.4	
SIV	**San Ignacio**	164.28	155	PKP	PKPdf	08 42 58.7	+3.3
	comp=Z,26nm,1.1s,baz=189,slow=1.2,SNR=59						
BAO	**Brasilia Array**	164.93	203	PKPdf	PKPdf	08 43 00.0	+4.0
BDFB	**Brasilia**	164.93	203	PKP	PKPdf	08 42 59.1	+3.1
	comp=Z,24nm,1.0s,baz=73,slow=1.1,SNR=26						
BDFB				PKPab	PKPab	08 43 55.7	+0.7
	comp=Z,13nm,0.6s,baz=140,slow=2.0,SNR=11						
SAML	**Samuel**	168.50	129	*e*PKPdf	PKPdf	08 43 01.3	+2.7

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*TRN **26** 08:39:03.4, 10.52N×62.36W, MD3.2*

*NEIC **26** 08:39:03.4, 10.52N×62.36W, h5^{km}, MD3.2(TRN), After TRN.*

*FUNV **26** 08:39:03.4, 10.46N×62.36W, h12^{km}, MW2.8*

ISC 26 08:39:01.3±1.0**, 10.36N**±0.04×**62.45W**±0.03**, h3**^{km}±7^{km}**, n14, σ1^{s}07**/25**, 1C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	0.36	37	⇑*i*P	**Pg**	**08 39 08.5**	**0.0**
GUIV				*e*S	**Sg**	**08 39 11.8**	**-1.7**
CRUV	**Carupano**	0.84	292	*e*P	**Pg**	**08 39 18.2**	**+0.2**
CRUV				*e*S	**Sg**	**08 39 30.3**	**+1.1**
TPP	**Pointe-a-Pierr**	0.98	92	*e*P	**Pb**	**08 39 20.6**	**+0.1**
TPP				*e*S	**Sb**	**08 39 34.7**	**+0.9**
TRN	**Trinidad (W)**	1.07	74	*e*P	**Pb**	**08 39 20.7**	**-1.3**
TRN				*e*S	**Sb**	**08 39 35.3**	**-0.9**
ITEV	**Isla Los Testi**	1.20	326	*e*P	**Pb**	**08 39 24.9**	**+0.6**
ITEV				*e*S	**Sb**	**08 39 40.0**	**-0.1**
TBH	**Brigand Hill**	1.36	84	*e*P	**Pb**	**08 39 29.2**	**+2.1**
ORIV	**Oritupano**	1.59	217	⇓*i*P	**Pn**	**08 39 32.7**	**+2.2**
ORIV				*e*S	**Sb**	**08 39 55.3**	**+3.9**
TPR	**Prospect**	1.84	63	*e*P	**Pn**	**08 39 34.4**	**+0.4**
TPR				*e*S	**Sn**	**08 39 58.8**	**+0.8**
GRW	**Mount Saint Ca**	1.95	23	*e*P	**Pn**	**08 39 35.9**	**+0.2**
PCRV	**Puerto La Cruz**	2.16	265	*e*P	**Pn**	**08 39 39.4**	**+0.8**
PCRV				*e*S	**Sn**	**08 40 05.8**	**-0.5**
GURV	**El Guri**	2.65	194	*e*S	**Sn**	**08 40 18.5**	**-0.3**
CAOV	**Caicara del Or**	4.87	232	*e*P	**Pn**	**08 40 16.0**	**-1.2**
CAOV				*e*S	**Sn**	**08 41 11.0**	**-3.9**
BAUV	**El Baul**	5.69	256	*e*P	**Pn**	**08 40 27.6**	**-1.2**
BAUV				*e*S	**Sn**	**08 41 29.9**	**-5.6**
PAYV	**Puerto Ayacuch**	7.12	227	*e*P	**Pn**	**08 40 47.4**	**-1.4**
PAYV				*e*S	**Sn**	**08 42 02.8**	**-8.3**

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*JMA **26** 08:46:24.2±0.4, 24.08N×121.79E, h75^{km}*

TAP 26 08:46:23.4, 23.93N×121.74E, h51^{km}**, ML3.0, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	1.27	65	P	P	08 46 45.4	+0.2
YOJ				*e*S	S	08 47 01.4	-0.1
IRIF	**Iriomote-Funau**	1.86	77	P	P	08 46 54.1	+0.6
IRIF				*e*S	S	08 47 15.1	-0.7
HATJ	**Hateruma jima**	1.89	86	P	P	08 46 54.3	+0.4
HATJ				*e*S	S	08 47 16.6	0.0
JKRS	**Kuro-shima**	2.10	81	P	P	08 46 57.1	+0.3
JKRS				*e*S	S	08 47 22.0	+0.3
JIJ	**Ishigaki jima**	2.24	78	P	P	08 46 58.2	-0.6
JIJ				S	S	08 47 23.6	-1.7
JTJ	**Tarama**	2.79	75	*e*S	S	08 47 38.7	-0.7

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*IDC **26** 08:49:50.4±0.6, 2.93N×31.23W, mb3.9/18, mb1 4.1/18, mb1mx4.0/26, mbtmp3.9/18, MS4.2/3, Ms1 4.1/3, ms1mx3.7/23, Error ellipse: s-maj=19.2km s-min=15.7km az=159.0*

*NEIC **26** 08:49:51.8±0.4, 2.98N×31.28W, h10^{km}, mb4.5/7, Error ellipse: s-maj=12.4km s-min=9.8km az=167.0*

ISC 26 08:49:50.0±0.5**, 3.0N**±0.1×**31.23W**±0.08**, h10**^{km}**, n30, σ0^{s}91**/29**, mb4.0**/24**, MS4.1**/3**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	26.53	81	LR	LR	09 03 37.3	
	comp=Z,286nm,20.8s,MS3.8,baz=325,slow=31						
SAML	**Samuel**	33.99	249	*e*P	**P**	**08 56 35.5**	**-0.8**
	7.0nm,1.3s,mb4.4						
SIV	**San Ignacio**	35.02	237	P	**P**	**08 56 44.0**	**-1.1**
	1.0nm,1.1s,mb3.7,baz=46,slow=7.1,SNR=3.3						
SDV	**Santo Domingo**	39.61	280	P	**P**	**08 57 24.6**	**+0.8**
	1.4nm,0.5s,mb4.0,baz=134,slow=7.2,SNR=3.4						
LPAZ	**La Paz**	41.19	241	P	**P**	**08 57 37.6**	**+0.9**
	0.9nm,0.8s,mb3.4,baz=181,slow=25,SNR=3.5						
LPAZ	**La Paz**	41.19	241	P	**P**	**08 57 38.2**	**+1.5**
	11nm,1.6s,mb4.2						
ROSC	**El Rosal**	43.04	274	P	**P**	**08 57 53.2**	**+1.1**
	1.0nm,0.4s,mb3.9,baz=106,slow=23,SNR=3.8						
ROSC				LR	LR	09 16 20.3	
	comp=Z,218nm,21.3s,MS4.0,baz=334,slow=37						
ESDC	**Sonseca Array**	44.12	31	P	**P**	**08 58 01.8**	**+1.4**
	2.0nm,0.9s,mb3.8,baz=225,slow=8.6,SNR=8.8						
SCHQ	**Schefferville**	59.21	337	P	**P**	**08 59 53.1**	**-0.6**
	3.8nm,0.8s,mb4.5,baz=152,slow=8.2,SNR=5.0						
GERES	**GERESS Array B**	59.62	33	P	**P**	**08 59 57.2**	**+0.7**
	0.1nm,0.3s,mb3.4,baz=243,slow=4.4,SNR=3.1						
GERES				LR	LR	09 27 44.0	
	comp=Z,344nm,18.0s,MS4.5,baz=76,slow=38						
LSZ	**Lusaka**	61.52	109	*e*P	**P**	**09 00 10.3**	**+0.3**
	5.2nm,1.2s,mb4.5						
LBTB	**Lobatse**	61.70	120	P	**P**	**09 00 10.9**	**-0.2**
	3.9nm,0.9s,mb4.5,baz=270,slow=6.0,SNR=3.1						
BOSA	**Boshof**	62.59	124	P	**P**	**09 00 16.5**	**-0.6**
	8.3nm,1.3s,mb4.7,baz=296,slow=14,SNR=3.5						
NB2	**NORSAR Subarra**	66.19	21	P	**P**	**09 00 39.5**	**-0.4**
	2.7nm,1.0s,mb4.2,baz=229,slow=6.5						
NOA	**NORSAR Array B**	66.19	21	P	**P**	**09 00 40.9**	**+0.9**
	0.8nm,0.9s,mb3.8,baz=293,slow=16,SNR=3.1						
BRTR	**Keskin Array B**	68.90	48	P	**P**	**09 00 57.0**	**-0.4**
	0.3nm,0.4s,mb3.6,baz=243,slow=3.2,SNR=3.0						
BRTR	**Keskin Array B**	68.90	48	P	**P**	**09 00 57.0**	**-0.4**
AKASG	**Malin Array Be**	69.33	36	P	**P**	**09 00 59.2**	**-0.6**
	0.3nm,0.4s,mb3.6,baz=249,slow=6.7,SNR=6.9						
AKASG	**Malin Array Be**	69.33	36	P	**P**	**09 00 59.2**	**-0.6**
TXAR	**Lajitas Array**	73.25	300	P	**P**	**09 01 23.9**	**+0.1**
	0.8nm,0.8s,mb3.7,baz=121,slow=7.6,SNR=9.0						
FCC	**Fort Churchill**	73.65	331	*e*P	**P**	**09 01 24.1**	**-1.4**
	9.7nm,0.9s,mb4.7						
FCC				*e*		09 01 30.3	
MNTX	**Cornudas Mount**	74.97	302	*e*P	**P**	**09 01 32.4**	**-1.3**
	0.9nm,0.7s,mb3.8						
DGMT	**Dagmar**	76.52	319	*e*P	**P**	**09 01 48.7**	**+6.6**
	9.8nm,0.9s,mb4.7						
SNAA	**Sanae**	76.76	171	P	**P**	**09 01 43.7**	**+0.6**
	1.1nm,1.1s,mb3.7,baz=324,slow=4.5,SNR=3.5						
PDAR	**Pinedale Array**	79.42	313	P	**P**	**09 02 00.0**	**+1.8**
	0.2nm,0.4s,mb3.4,baz=82,slow=6.4,SNR=2.7						
EDM	**Edmonton**	82.91	323	P	**P**	**09 02 15.6**	**-0.7**
YKA	**Yellowknife Ar**	84.31	332	P	**P**	**09 02 23.3**	**0.0**
	0.4nm,0.7s,mb3.7,baz=90,slow=5.6,SNR=4.9						
BMO	**Blue Mountains**	85.13	315	*e*P	**P**	**09 02 27.0**	**-0.8**
	5.5nm,1.4s,mb4.5						
BMO				*e*		09 02 34.4	
NVAR	**Mina Array Bea**	85.88	308	P	**P**	**09 02 33.0**	**+1.4**
	0.3nm,0.6s,mb3.7,baz=80,slow=5.5,SNR=2.7						
ILAR	**Eielson Array**	97.97	337	P	**P**	**09 03 26.4**	**-0.9**
	0.3nm,0.8s,mb3.9,baz=45,slow=2.6,SNR=3.3						

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*NEIC **26** 09:16:27.9±2.4, 40.59N×126.90W, h10^{km}, mb3.4/3, Error ellipse: s-maj=29.3km s-min=6.1km az=85.0*

*IDC **26** 09:16:32.2±2.1, 40.68N×126.47W, mb3.1/2, mb1 3.5/6, mb1mx3.4/25, mbtmp3.2/6, ML3.5/4, MS3.0/2, Ms1 3.0/2, ms1mx2.7/13, Error ellipse: s-maj=28.3km s-min=21.5km az=15.0*

ISC 26 09:16:29.7±1.1**, 40.61N**±0.05×**126.6W**±0.1**, h10**^{km}**, n36, σ0^{s}94**/36**, mb3.2**/3**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHMM	**Horse Mountain**	2.17	82	*e*P	**Pn**	**09 17 05.8**	**-0.6**
KBO	**Bosley Butte**	2.38	47	*e*P	**Pn**	**09 17 08.4**	**-1.0**
WDC	**Whiskeytown Da**	3.06	89	*e*P	**Pn**	**09 17 19.1**	**-0.1**
YBH	**Yreka Blue Hor**	3.12	68	Pn	**Pn**	**09 17 21.4**	**+1.5**
	4.8nm,0.3s,baz=258,slow=15,SNR=153						
YBH				Sn	**Sn**	**09 17 58.0**	**+0.4**
	8.5nm,0.3s,baz=115,slow=8.3,SNR=8.1						
YBH				LR	LR	09 18 25.6	
	comp=Z,201nm,20.7s,baz=271,slow=38						
HOPS	**Hopland**	3.14	120	*e*P	**Pn**	**09 17 19.7**	**-0.5**
HUMO	**Hull Mountain**	3.36	52	P	**Pn**	**09 17 23.1**	**-0.3**
DBO	**Dodson Butte**	3.52	44	P	**Pn**	**09 17 25.1**	**-0.7**
BUOR	**Burton Butte**	3.65	61	P	**Pn**	**09 17 27.4**	**-0.1**
BBOR	**Butler Butte**	3.69	51	P	**Pn**	**09 17 28.2**	**+0.1**
NSHM	**Saint Helena R**	3.70	123	*e*P	**Pn**	**09 17 28.8**	**+0.5**
HSO	**Harness Mounta**	3.89	40	P	**Pn**	**09 17 30.1**	**-0.8**
LASM	**Arnica Sink**	3.89	74	P	**Pn**	**09 17 31.9**	**+1.0**
LBCM	**Butte Creek Ri**	3.97	85	P	**Pn**	**09 17 33.4**	**+1.3**
SAC	**San Andreas**	4.42	132	*e*P	**Pn**	**09 17 37.4**	**-1.1**
HBO	**Huckleberry Mo**	4.51	43	P	**Pn**	**09 17 39.8**	**+0.1**
IRO	**Indian Ridge**	4.66	42	P	**Pn**	**09 17 41.6**	**-0.2**
BEKR	**Beckwourth**	4.81	97	*e*P	**Pn**	**09 17 44.1**	**+0.1**
FRIS	**Frissel Point**	4.88	41	P	**Pn**	**09 17 44.9**	**-0.2**
MOD	**Modoc**	4.89	73	P	**Pn**	**09 17 45.0**	**-0.1**
HUOR	**Husband**	4.95	43	P	**Pn**	**09 17 45.9**	**-0.1**
WCN	**Washoe City**	5.39	102	*e*P	**Pn**	**09 17 52.8**	**+0.6**
CMB	**Columbia Colle**	5.44	116	*e*P	**Pn**	**09 17 53.0**	**+0.1**
SAO	**San Andreas Ge**	5.55	132	*e*P	**Pn**	**09 17 51.9**	**-2.6**
LRV	**Little Rabbit**	6.03	132	*e*P	**Pn**	**09 17 59.5**	**-1.7**
WVOR	**Wild Horse Val**	6.22	70	*e*P	**Pn**	**09 18 02.5**	**-1.4**
OMM	**Old Mammoth Mi**	6.60	115	P	**Pn**	**09 18 10.4**	**+1.1**
NVAR	**Mina Array Bea**	6.75	106	Pn	**Pn**	**09 18 11.7**	**+0.3**
	0.2nm,0.3s,baz=288,slow=14,SNR=4.7						
BMO	**Blue Mountains**	8.02	55	*e*P	**P**	**09 18 28.3**	**-0.9**
ELK	**Elko**	8.61	85	LR	LR	09 21 48.0	
	comp=Z,131nm,21.8s,baz=184,slow=37						
PDAR	**Pinedale Array**	12.89	75	Pn	**P**	**09 19 42.0**	**+6.2**
	0.1nm,0.3s,baz=270,slow=7.4,SNR=2.1						
LAO	**LASA Array**	15.91	61	P	**P**	**09 20 15.2**	**0.0**
	8.2nm,0.9s						
SDCO	**Great Sand Dun**	16.58	93	P	**P**	**09 20 24.8**	**+1.0**
	0.7nm,0.8s						
ANMO	**Albuquerque**	16.86	103	Pn	**P**	**09 20 30.9**	**+3.6**
	baz=286,slow=9.6,SNR=2.8						
FFC	**Flin Flon**	21.60	41	P	**P**	**09 21 21.3**	**-0.4**
	1.2nm,0.6s,mb3.5						
TXAR	**Lajitas Array**	21.81	114	P	**P**	**09 21 26.3**	**+2.4**
	0.8nm,0.9s,mb3.2,baz=304,slow=9.0,SNR=9.8						
ILAR	**Eielson Array**	26.90	341	P	**P**	**09 22 13.8**	**+1.5**
	0.3nm,0.7s,mb2.9,baz=164,slow=7.7,SNR=4.9						

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*IDC **26** 09:22:51.3±0.7, 2.88N×31.24W, mb3.9/15, mb1 4.1/15, mb1mx4.0/25, mbtmp3.9/15, Error ellipse: s-maj=21.9km s-min=17.3km az=149.0*

*NEIC **26** 09:22:53.3±0.4, 2.94N×31.24W, h10^{km}, mb4.5/2, Error ellipse: s-maj=12.2km s-min=10.8km az=126.0*

ISC 26 09:22:51.3±0.5**, 2.91N**±0.10×**31.20W**±0.10**, h10**^{km}**, n27, σ0^{s}97**/27**, mb3.9**/17**, 2C, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAML	**Samuel**	33.99	249	*e*P	**P**	**09 29 36.8**	**-0.8**
	17nm,1.6s,mb4.7						
SAML				*e*		09 29 43.1	
SIV	**San Ignacio**	35.00	237	P	**P**	**09 29 45.3**	**-1.0**
	0.9nm,0.8s,mb3.7,baz=61,slow=9.7,SNR=4.6						
CPUP	**Villa Florida**	38.52	219	P	**P**	**09 30 15.7**	**-0.1**
	4.2nm,1.2s,mb4.0,baz=74,slow=8.9,SNR=4.0						
SDV	**Santo Domingo**	39.65	280	P	**P**	**09 30 26.8**	**+1.3**
	1.3nm,0.4s,mb4.0,baz=343,slow=9.9,SNR=3.9						
LPAZ	**La Paz**	41.18	241	P	**P**	**09 30 36.8**	**-1.1**
	0.4nm,0.6s,mb3.2,baz=360,slow=25,SNR=2.8						
LPAZ	**La Paz**	41.18	241	P	**P**	**09 30 37.9**	**0.0**
	8.3nm,1.3s,mb4.2						
ESDC	**Sonseca Array**	44.16	30	P	**P**	**09 31 03.2**	**+1.1**
	2.0nm,0.9s,mb3.9,baz=227,slow=8.3,SNR=10						
TSUM	**Tsumeb**	52.74	117	P	**P**	**09 32 08.5**	**-0.4**
	1.0nm,0.8s,mb3.8,baz=211,slow=18,SNR=3.8						
TSUM	**Tsumeb**	52.74	117	P	**P**	**09 32 08.5**	**-0.4**
SCHQ	**Schefferville**	59.29	337	P	**P**	**09 32 53.8**	**-1.8**
	3.9nm,0.8s,mb4.5,baz=170,slow=5.6,SNR=6.0						
GERES	**GERESS Array B**	59.66	33	P	**P**	**09 32 57.5**	**-0.7**
	0.4nm,0.6s,mb3.6,baz=219,slow=6.3,SNR=3.7						
BOSA	**Boshof**	62.53	124	P	**P**	**09 33 17.7**	**-0.2**
	9.5nm,1.0s,mb4.9,baz=289,slow=6.9,SNR=6.8						
NB2	**NORSAR Subarra**	66.24	21	P	**P**	**09 33 41.4**	**-0.2**
	2.3nm,0.9s,mb4.2,baz=228,slow=6.2						
NOA	**NORSAR Array B**	66.24	21	P	**P**	**09 33 41.5**	**0.0**
	0.7nm,0.8s,mb3.7,baz=222,slow=7.1,SNR=3.6						
AKASG	**Malin Array Be**	69.37	36	P	**P**	**09 34 00.9**	**-0.5**
	0.3nm,0.3s,mb3.6,baz=247,slow=7.3,SNR=6.4						
TXAR	**Lajitas Array**	73.31	300	P	**P**	**09 34 25.5**	**0.0**
	0.9nm,0.8s,mb3.7,baz=125,slow=6.5,SNR=12						
VNA1	**Neumayer--Stat**	74.98	172	*e*	**P**	**09 34 41.7**	**+7.4**
VNA1	**Neumayer--Stat**	74.98	172	P	**P**	**09 34 35.6**	**+1.3**
VNA1				*e*		09 34 41.7	
VNA3	**Neumayer Olymp**	75.35	173	*e*	**P**	**09 34 43.3**	**+6.9**
VNA3	**Neumayer Olymp**	75.35	173	⇑*i*P	**P**	**09 34 37.7**	**+1.3**
VNA3				*e*		09 34 43.3	
VNA2	**Neumayer--Watz**	75.35	172	*e*	**P**	**09 34 43.4**	**+7.0**
VNA2	**Neumayer--Watz**	75.35	172	⇑*i*P	**P**	**09 34 37.6**	**+1.2**
VNA2				*e*		09 34 43.4	
ANMO	**Albuquerque**	76.27	305	P	**P**	**09 34 43.2**	**+0.9**
	0.2nm,0.3s,mb3.5,baz=107,slow=10,SNR=2.6						
PDAR	**Pinedale Array**	79.49	313	P	**P**	**09 35 02.7**	**+2.8**
	0.2nm,0.4s,mb3.4,baz=66,slow=40,SNR=3.7						
EDM	**Edmonton**	82.98	323	*e*P	**P**	**09 35 17.8**	**-0.2**
EDM				*e*		09 35 23.6	
YKA	**Yellowknife Ar**	84.39	332	P	**P**	**09 35 24.0**	**-0.9**
	0.5nm,0.6s,mb3.8,baz=101,slow=5.4,SNR=3.6						
NVAR	**Mina Array Bea**	85.94	308	P	**P**	**09 35 33.9**	**+0.6**
	0.3nm,0.7s,mb3.7,baz=151,slow=2.5,SNR=2.7						

PGC 26 09:25:34.8, 52.69N×116.12W, h1^{km}**, MN2.9**/32**, North of Nordegg, Alberta., Alberta**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNB	**Mounoet Dainar**	1.47	251	Pn	Pn	09 26 01.3	-1.2
MNB				Sn	Sn	09 26 23.2	+0.5
EDM	**Edmonton**	1.76	71	Pn	Pn	09 26 05.8	-0.8
EDM				Sg	Sg	09 26 29.7	-3.6
EDM				Trac		09 26 31.7	
	comp=Z,249nm,0.3s						
EDM				Trac		09 26 31.7	
	comp=Z,249nm,0.3s						
DOWB	**Downie Slide**	1.89	232	Pn	Pn	09 26 08.2	-0.3
DOWB				Sg	Sg	09 26 33.8	-3.9
SLEB	**Sale Mountain**	1.97	220	Pn	Pn	09 26 09.1	-0.6
SLEB				Pg	Pg	09 26 10.2	-4.0
SLEB				Sg	Sg	09 26 36.3	-4.1
SLEB				Trac		09 26 38.9	
	comp=Z,84nm,0.2s						
SLEB				Trac		09 26 38.9	
	comp=Z,84nm,0.2s						
WALA	**Waterton Lakes**	3.90	158	Pn	Pn	09 26 36.2	-1.0
WALA				Pg	Pg	09 26 45.8	-6.8
WALA				Sn	Sn	09 27 22.9	-1.3
WALA				Sg	Sg	09 27 35.7	-8.8
WALA				Trac		09 27 40.2	
	comp=Z,12nm,0.2s						
WALA				Trac		09 27 40.2	
	comp=Z,12nm,0.2s						
PNT	**Penticton**	4.04	215	Pn	Pn	09 26 36.7	-2.4
PNT				Pg	Pg	09 26 48.8	-6.6
PNT				Sg	Sg	09 27 40.2	-9.0
PNT				Trac		09 27 47.1	
	comp=Z,27nm,0.3s						
LLLB	**Lillooet**	4.15	242	Pg	Pg	09 26 49.1	-8.6
LLLB				Sg	Sg	09 27 44.4	-8.6
LLLB				Trac		09 27 50.1	
	comp=Z,104nm,1.1s						
HOPB	**Hope**	4.71	227	Pn	Pn	09 26 45.4	-3.2
HOPB				Pg	Pg	09 26 59.4	-9.3
HOPB				Sg	Sg	09 28 00.2	-11
HOPB				Trac		09 28 05.5	
	comp=Z,42nm,0.4s						
BMBC	**Bull Mountain**	4.86	316	Pn	Pn	09 26 46.7	-4.2
BMBC				Pg	Pg	09 27 02.3	-10
BMBC				Sn	Sn	09 27 39.9	-8.8
BMBC				Sg	Sg	09 27 59.9	-17
BMBC				Trac		09 28 10.5	
	comp=Z,83nm,0.6s						
BMBC				Trac		09 28 10.5	
	comp=Z,83nm,0.6s						
WSLR	**Whistler**	4.97	242	Pg	Pg	09 27 03.9	-10
WSLR				Sg	Sg	09 28 07.7	-13
WSLR				Trac		09 28 13.8	
	comp=Z,9.0nm,0.2s						
VDB	**Vedder Mountai**	5.28	228	Pg	Pg	09 27 11.0	-9.1
VDB				Sg	Sg	09 28 17.8	-13
VDB				Trac		09 28 34.9	
	comp=Z,10nm,0.6s						
HNB	**Haney**	5.33	233	Pg	Pg	09 27 09.8	-11
HNB				Sg	Sg	09 28 19.1	-13
HNB				Trac		09 28 26.8	
	comp=Z,10.0nm,0.3s						
WPB	**Watts Point**	5.40	239	Pg	Pg	09 27 11.4	-11
WPB				Sg	Sg	09 28 20.1	-14
WPB				Trac		09 28 25.4	
	comp=Z,11nm,0.5s						
BIB	**Bowen Island**	5.60	237	Pg	Pg	09 27 15.3	-11
BIB				Sg	Sg	09 28 26.7	-15
BIB				Trac		09 28 28.4	
	comp=Z,5.0nm,0.5s						
SHB	**Sechelt**	5.78	241	Pg	Pg	09 27 18.2	-12

SHB				Sg	Sg	09 28 31.1	-16
SHB				Trac		09 28 45.5	
	comp=Z,22nm,0.9s						
SNB	**Saturna Island**	**5.95**	**232**	Sg	Sg	09 28 38.4	-15
GOBB	**Galiano Island**	**6.00**	**234**	Pg	Pg	09 27 22.1	-12
GOBB				Sg	Sg	09 28 39.8	-15
TXB	**Texada**	**6.03**	**243**	Pg	Pg	09 27 22.8	-12
TXB				Sg	Sg	09 28 40.1	-15
TXB				Trac		09 28 47.9	
	comp=Z,11nm,0.5s						
NLLB	**Nanaimo Lost L**	**6.06**	**238**	Pg	Pg	09 27 23.2	-13
NLLB				Sg	Sg	09 28 39.9	-17
NLLB				Trac		09 28 49.3	
	comp=Z,3.0nm,0.4s						
CBB	**Campbell River**	**6.37**	**249**	Sg	Sg	09 28 54.7	-12
MGB	**Mount Grey**	**6.57**	**239**	Sg	Sg	09 28 58.0	-15
MGB				Trac		09 29 03.1	
	comp=Z,5.0nm,0.7s						
NCRB	**Newcastle Ridg**	**6.61**	**254**	Sg	Sg	09 28 56.6	-18
NCRB				Trac		09 29 00.5	
	comp=Z,3.0nm,0.5s						
BTB	**Buttle Lake**	**6.75**	**245**	Pg	Pg	09 27 34.6	-15
BTB				Sg	Sg	09 29 05.5	-14
BTB				Trac		09 29 06.5	
	comp=Z,14nm,0.8s						
GDR	**Gold River**	**6.87**	**249**	Pg	Pg	09 27 36.9	-15
GDR				Sg	Sg	09 29 03.5	-20
GDR				Trac		09 29 06.7	
	comp=Z,5.0nm,0.6s						
WOSB	**Woss**	**7.01**	**253**	Pg	Pg	09 27 40.0	-15
WOSB				Sg	Sg	09 29 10.7	-17
WOSB				Trac		09 29 14.9	
	comp=Z,3.0nm,0.5s						
FNBB	**Fort Nelson**	**7.32**	**331**	Pn	Pn	09 27 19.3	-6.2
FNBB				Pg	Pg	09 27 47.0	-14
FNBB				Sn	Sn	09 28 38.5	-12
FNBB				Sg	Sg	09 29 19.9	-19
FNBB				Trac		09 29 36.9	
	comp=Z,12nm,0.7s						
FNBB				Trac		09 29 36.9	
	comp=Z,12nm,0.7s						
BBB	**Bella Bella**	**7.35**	**271**	Sg	Sg	09 29 20.6	-19
RUBB	**Prince Rupert**	**8.59**	**287**	Sg	Sg	09 29 56.9	-24
YKW3	**Yellowknife Ar**	**9.93**	**4**	P	P	09 27 53.5	-8.1
YKW3				Sn	Sn	09 29 33.5	-21
YKW3				Sn	Sn	09 29 33.5	-21
YKW3				Sg	Sg	09 30 36.2	-29
YKW3				Sg	Sg	09 30 36.6	-29
FCC	**Fort Churchill**	**13.78**	**55**	P	P	09 28 43.0	-10
FCC				Trac		09 33 01.5	
	comp=Z,4.0nm,0.7s						
FCC				Trac		09 33 01.5	
	comp=Z,4.0nm,0.7s						

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*IDC **26** 09:30:29.2±0.8, 5.15N×94.24E, mb4.1/11, mb1 4.2/11, mb1mx4.0/19, mbtmp4.1/11, MS2.8/1, Ms1 3.0/1, ms1mx2.8/16, Error ellipse: s-maj=28.7km s-min=18.9km az=53.0*

*NEIC **26** 09:30:34.0±0.5, 5.05N×94.15E, h30^{km}, mb4.3/4, Error ellipse: s-maj=13.2km s-min=8.4km az=49.0*

ISC 26 09:30:32.3±0.5**, 5.02N**±0.09×**94.19E**±0.09**, h30**^{km}**, n24,** σ**0**^{s}**97**/24**, mb4.1**/16**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.44**	**87**	*e*P	**Pn**	**09 32 08.1**	**+0.5**
KULM				S	**Sn**	**09 33 15.4**	**-5.5**
CMAR	**Chiang Mai Arr**	**14.14**	**19**	Pn	**P**	**09 33 53.3**	**+0.3**
	0.3nm,0.3s,baz=197,slow=15,SNR=4.7						
CMAR				LR	LR	09 38 49.0	
	comp=Z,44nm,21.6s,baz=205,slow=36						
PKI	**Pulchoki**	**23.94**	**340**	*e*P	**P**	**09 35 46.6**	**+1.6**
DMN	**Daman**	**24.08**	**340**	*e*P	**P**	**09 35 48.0**	**+1.7**
GUN	**Gumba**	**24.10**	**342**	*e*P	**P**	**09 35 46.5**	**-0.1**
	20nm,0.8s,mb4.6						
KKN	**Kakani**	**24.18**	**340**	*e*P	**P**	**09 35 48.5**	**+1.1**
	5.2nm,0.2s,mb4.5						
GKN	**Gorkha**	**24.60**	**339**	*e*P	**P**	**09 35 51.3**	**-0.1**
	14nm,0.7s,mb4.6						
KOLN	**Koldanda**	**24.77**	**337**	*e*P	**P**	**09 35 52.9**	**-0.1**
	9.9nm,0.7s,mb4.5						
FITZ	**Fitzroy Crossi**	**38.60**	**127**	P	**P**	**09 37 53.7**	**-1.0**
	5.9nm,0.8s,mb4.3,baz=331,slow=5.1,SNR=6.8						
MKAR	**Makanchi Array**	**42.87**	**348**	P	**P**	**09 38 29.3**	**-0.4**
	1.0nm,0.5s,mb3.8,baz=177,slow=8.3,SNR=7.2						
SONM	**Songino Array**	**43.93**	**12**	P	**P**	**09 38 36.6**	**-1.6**
	0.4nm,0.4s,mb3.5,baz=203,slow=9.4,SNR=5.5						
WRA	**Warramunga Arr**	**46.61**	**123**	P	**P**	**09 39 00.5**	**+0.5**
	2.8nm,0.6s,mb4.3,baz=302,slow=9.3,SNR=29						
WRAB	**Tennant Creek**	**46.62**	**123**	*e*P	**P**	**09 38 59.9**	**-0.1**
WB2	**Warramunga Arr**	**46.62**	**123**	*e*P	**P**	**09 39 00.6**	**+0.6**
ZRNK	**Zerenda**	**52.08**	**341**	*e*P	**P**	**09 39 40.4**	**-1.2**
	1.2nm,0.4s,mb4.2						
BRTR	**Keskin Array B**	**64.34**	**312**	P	**P**	**09 41 06.8**	**-1.0**
	1.1nm,0.6s,mb4.0,baz=118,slow=7.8,SNR=6.4						
MATP	**Matopo**	**69.24**	**246**	P	**P**	**09 41 38.5**	**-0.6**
	2.5nm,0.9s,mb4.2,baz=108,slow=3.2,SNR=4.9						
BOSA	**Boshof**	**74.13**	**239**	P	**P**	**09 42 09.9**	**+1.8**
	1.5nm,0.6s,mb4.1,baz=111,slow=5.6,SNR=4.6						
FINES	**FINESS Array B**	**75.25**	**333**	P	**P**	**09 42 13.0**	**-0.9**
	0.6nm,0.6s,mb3.7,baz=108,slow=6.0,SNR=7.7						
FINES	**FINESS Array B**	**75.25**	**333**	P	**P**	**09 42 13.0**	**-0.9**
ARCES	**ARCESS Array B**	**77.96**	**340**	P	**P**	**09 42 28.3**	**-0.6**
	3.3nm,0.9s,mb4.3,baz=131,slow=8.3,SNR=2.4						
GERES	**GERESS Array B**	**79.98**	**319**	P	**P**	**09 42 41.3**	**+1.0**
	0.8nm,0.7s,mb3.7,baz=90,slow=5.3,SNR=8.6						
KHC	**Kasperske Hory**	**80.08**	**319**	*e*P	pP	09 42 55.0	+4.6
NOA	**NORSAR Array B**	**82.23**	**331**	P	**P**	**09 42 50.5**	**-1.3**
	0.4nm,0.8s,mb3.4,baz=55,slow=9.6,SNR=2.9						

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*ATH **26** 09:58:43.5, 37.94N×26.78E, h4^{km}, MD3.2/3*

*ISK **26** 09:58:45.3, 37.81N×26.79E, h23^{km}, MD3.3, ML3.3*

*CSEM **26** 09:58:45.0±0.1, 37.81N×26.80E, h20^{km}, MD3.3, Error ellipse: s-maj=2.1km s-min=1.5km az=78.0*

ISC 26 09:58:45.2±0.6**, 37.81N**±0.02×**26.75E**±0.04**, h13**^{km}±4^{km}**, n22,** σ**1**^{s}**00**/32**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.13**	**145**	*e*PG	**Pg**	**09 58 49.1**	**+0.5**
SMG				*e*SG	**Sg**	**09 58 51.2**	**+0.3**
URLA	**Izmir**	**0.56**	**348**	*i* P	**Pb**	**09 58 57.3**	**+0.9**
URLA				*i* S	**Sg**	**09 59 05.3**	**+1.1**
BLCB	**Balcova**	**0.62**	**22**	*i* PG	**Pg**	**09 58 58.0**	**+0.3**
IZM	**Izmir**	**0.71**	**35**	PG	**Pg**	**09 58 59.4**	**-0.2**
KDAG	**Bornova**	**0.72**	**35**	*i* P	**Pb**	**09 59 00.1**	**+1.0**
KDAG				*i* S	**Sb**	**09 59 09.6**	**+1.0**
BODT	**Bodrum**	**0.88**	**149**	PG	**Pg**	**09 59 02.2**	**-0.6**
BODT				SG	**Sg**	**09 59 14.7**	**+0.1**
AYDN	**Tasoluk**	**0.91**	**99**	*i* P	**Pb**	**09 59 03.2**	**+0.8**
AYDN				*i* S	**Sb**	**09 59 14.7**	**+0.4**
BDRM	**Kayabasi**	**0.93**	**143**	*i* P	**Pb**	**09 59 04.5**	**+1.7**
BDRM				*i* S	**Sb**	**09 59 16.7**	**+1.9**
MLSB	**Milas**	**0.97**	**122**	*e*PG	**Pg**	**09 59 03.4**	**-1.3**
MLSB				*e*SG	**Sg**	**09 59 17.0**	**-0.7**
APE	**Apeiranthos**	**1.22**	**233**	*e*PN	**Pn**	**09 59 07.6**	**-0.4**
APE				*e*SN	**Sn**	**09 59 24.6**	**+0.2**
APE	**Apeiranthos**	**1.22**	**233**	*e*Pb	**Pb**	**09 59 08.6**	**+0.9**
APE				*e*Sn	**Sn**	**09 59 24.6**	**+0.2**
AKS	**Akhisar**	**1.36**	**38**	*e*PN	**Pn**	**09 59 09.3**	**-0.7**
YER	**Yerkesik**	**1.40**	**118**	*e*PN	**Pn**	**09 59 09.9**	**-0.7**
PRK	**Paraskevi**	**1.48**	**346**	*e*PB	**Pb**	**09 59 09.1**	**-3.0**
MANT	**Manisa**	**1.58**	**64**	*i* P	**Pn**	**09 59 16.7**	**+3.5**
MANT				*i* S	**Sb**	**09 59 34.3**	**+0.6**
DENT	**Denizli**	**1.81**	**91**	*e*PN	**Pn**	**09 59 15.1**	**-1.4**
DALT	**Dalyan (Mudla)**	**1.83**	**124**	*e*PN	**Pn**	**09 59 15.8**	**-1.0**
BALB	**Balikesir**	**2.03**	**26**	*e*PN	**Pn**	**09 59 19.2**	**-0.4**
EZN	**Ezine**	**2.04**	**351**	*e*PN	**Pn**	**09 59 19.1**	**-0.6**
FETY	**Fethiye**	**2.21**	**121**	*e*PN	**Pn**	**09 59 21.0**	**-1.2**
CANB	**Canakkale**	**2.21**	**6**	*e*PN	**Pn**	**09 59 22.0**	**-0.3**
YLV	**Yalova**	**3.42**	**36**	*e*PN	**Pn**	**09 59 38.1**	**-1.4**

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*GUC **26** 10:02:36.1±0.6, 20.00S×69.25W, h101^{km}±3^{km}, ML4.5*

*NEIC **26** 10:02:37.4±1.6, 20.11S×68.89W, h111^{km}±14^{km}, mb4.4/1, Error ellipse: s-maj=26.8km s-min=12.8km az=222.0*

*IDC **26** 10:02:39.6±4.1, 19.99S×68.70W, h130^{km}±33^{km}, mb3.7/1, mb1 3.7/4, mb1mx3.3/19, mbtmp3.9/4, Error ellipse: s-maj=44.3km s-min=21.6km az=52.0*

ISC 26 10:02:37.5±1.7**, 20.1S**±0.1×**68.78W**±0.10**, h128**^{km}±19^{km}**, n10,** σ**1**^{s}**00**/10**, mb4.2**/2**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.79**	**9**	P	**P**	**10 03 36.2**	**+0.8**
	2.0nm,0.3s,baz=190,slow=6.3,SNR=53						
LPAZ				S	**S**	**10 04 20.8**	**+1.0**
	0.4nm,0.3s,baz=11,slow=16,SNR=2.4						
ARE	**Arequipa**	**4.41**	**324**	*e*P	**P**	**10 03 42.0**	**-1.7**
ARE				*e*S	**S**	**10 04 25.0**	**-9.5**
SIV	**San Ignacio**	**8.37**	**62**	P	**P**	**10 04 36.6**	**-0.5**
	2.2nm,0.3s,baz=257,slow=12,SNR=86						
SIV				S	**S**	**10 06 09.3**	**-1.1**
	baz=334,slow=20,SNR=2.2						
CPUP	**Villa Florida**	**12.24**	**123**	P	**P**	**10 05 29.3**	**+0.9**
	0.1nm,0.3s,baz=317,slow=14,SNR=3.6						
SDV	**Santo Domingo**	**28.82**	**356**	P	**P**	**10 08 30.1**	**+4.2**
	2.9nm,0.3s,mb4.4,baz=274,slow=4.7,SNR=6.5						
SDV	**Santo Domingo**	**28.82**	**356**	P	**P**	**10 08 27.1**	**+1.2**
	3.4nm,0.4s,mb4.3						
YKA	**Yellowknife Ar**	**89.87**	**341**	P	**P**	**10 15 22.4**	**-0.2**
	0.8nm,0.7s,mb4.0,baz=132,slow=4.5,SNR=6.1						
WRA	**Warramunga Arr**	**134.25**	**211**	PKP	PKPdf	10 21 42.6	+1.6
	0.5nm,1.1s,baz=152,slow=1.7,SNR=3.4						
MKAR	**Makanchi Array**	**144.39**	**35**	pPKP		10 22 36.5	
	0.3nm,0.3s,baz=66,slow=2.0,SNR=2.5						
SONM	**Songino Array**	**152.01**	**7**	PKPbc	PKPdf	10 22 19.8	+9.3
	0.2nm,0.4s,baz=287,slow=1.9,SNR=4.4						

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*NEIC **26** 10:14:06.0, 31.91S×71.54W, h54^{km}, MD3.5(GUC), After GUC.*

GUC 26 10:14:06.0±0.7**, 31.91S**×**71.54W, h54**^{km}±5^{km}**, MD3.5, ML3.1, 5C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILCH	**Illapel**	**0.42**	**49**	⇑*i*P	P	10 14 17.2	+0.4
ILCH				*i* S	S	10 14 25.6	+1.1
ILCH				AMP		10 14 26.2	
	comp=E,2μm,0.1s						
PACH	**Papudo**	**0.63**	**172**	*i* P	P	10 14 19.4	+0.3
PACH				*i* S	S	10 14 29.5	+0.8
CMCH	**Combarbala**	**0.87**	**32**	⇓*i*P	P	10 14 22.5	+0.3
CMCH				*i* S	S	10 14 35.1	+0.8
CMCH				AMP		10 14 36.5	
	comp=N,1μm,0.6s						
JACH	**Jahuel**	**1.11**	**134**	⇑*i*P	P	10 14 25.9	+0.3
JACH				*i* S	S	10 14 41.0	+0.9
ROCH	**El Roble**	**1.15**	**157**	⇓*i*P	P	10 14 26.4	+0.3
ROCH				*i* S	S	10 14 42.0	+1.0
LCCH	**Las Cruces**	**1.56**	**181**	⇑*i*P	P	10 14 31.6	-0.4
LCCH				*i* S	S	10 14 51.3	+0.2
DSCH	**Colegio Aleman**	**1.69**	**151**	*i* P	P	10 14 34.0	+0.2
DSCH				*i* S	S	10 14 54.7	+0.3
DSCH				AMP		10 14 56.2	
	comp=N,348nm,0.5s						
STL	**Santa Lucia**	**1.70**	**154**	*i* P	P	10 14 33.5	-0.4
STL				*i* S	S	10 14 55.0	+0.5
CLCH	**Cerro Calan**	**1.71**	**150**	⇓*i*P	P	10 14 34.1	+0.2
CLCH				*i* S	S	10 14 54.8	+0.2
CLCH				AMP		10 14 56.8	
	comp=E,184nm,0.3s						
FCH	**Farellones**	**1.76**	**144**	*i* P	P	10 14 35.5	+0.7
FCH				*i* S	S	10 14 57.9	+1.9
TACH	**Talagante**	**1.81**	**164**	*i* P	P	10 14 35.5	+0.1
TACH				*i* S	S	10 14 57.6	+0.5
ANTU	**Antumapu**	**1.82**	**155**	*i* S	S	10 14 58.2	+0.7
ANTU				AMP		10 14 59.4	
	comp=N,138nm,0.4s						
PCH	**Pirque**	**1.91**	**153**	⇑*i*P	P	10 14 37.0	+0.2
PCH				*i* S	S	10 15 00.3	+0.6
LNV	**Longovilo**	**2.04**	**177**	*i* P	P	10 14 38.0	-0.7
LNV				*i* S	S	10 15 03.4	+0.5
CHCH	**Chadas Angostu**	**2.15**	**160**	*i* P	P	10 14 40.2	0.0
CHCH				*i* S	S	10 15 05.9	+0.2
LMEL	**Las Melosas**	**2.23**	**150**	⇓*i*P	P	10 14 41.4	-0.1
LMEL				*i* S	S	10 15 08.7	+0.9
LMEL				AMP		10 15 11.4	
	comp=N,168nm,0.2s						
CACH	**El Canelo**	**2.34**	**160**	*i* S	S	10 15 12.0	+1.5
CICH	**Cipreses**	**2.58**	**159**	*i* S	S	10 15 16.7	+0.2
SFDO	**San Fernando**	**2.73**	**171**	⇑*i*P	P	10 14 48.5	0.0
SFDO				*i* S	S	10 15 19.9	-0.5

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*NEIC **26** 10:21:38.5, 15.76N×99.06W, h14^{km}, MD4.2(MEX), After MEX.*

MEX 26 10:21:38.5±1.3**, 15.76N**×**99.06W, h14**^{km}±31^{km}**, MD4.2, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**1.10**	**55**	*i* P	Pb	10 21 55.4	-3.4
PNIG				*e*S	Sb	10 22 09.4	-3.3
ACX	**Acapulco**	**1.37**	**323**	*i* P	Pn	10 21 59.3	-4.1
ACX				*e*S	Sb	10 22 14.7	-6.0
CAIG	**El Cayaco**	**1.72**	**318**	*e*P	Pn	10 22 05.6	-2.8
CAIG				*e*S	Sn	10 22 26.1	-4.2
VHO	**Vista Hermosa**	**2.59**	**59**	*i* P	Pn	10 22 17.8	-3.0
VHO				*e*S	Sn	10 22 47.7	-4.6
OXX	**Oaxaca**	**2.60**	**59**	*i* P	Pn	10 22 18.3	-2.6
OXX				*i* S	Sn	10 22 47.0	-5.6
PLIG	**Platanillo**	**2.65**	**351**	*e*P	Pn	10 22 18.7	-3.0
PLIG				*e*S	Sn	10 22 49.3	-4.5
HUIG	**Huatulco**	**2.84**	**89**	*e*S	Sn	10 22 56.7	-2.1
ZIIG	**Zihuatanejo**	**2.94**	**309**	*e*S	Sn	10 22 58.3	-3.0
YAIG	**Yautepec**	**3.08**	**360**	*e*P	Pn	10 22 24.8	-3.0
YAIG				*e*S	Sn	10 23 00.6	-4.2
PPM	**Popocatepetl**	**3.31**	**7**	*e*P	Pn	10 22 34.0	+2.9
PPM				*e*S	Sn	10 23 07.0	-3.6
UNM	**Universidad Na**	**3.55**	**358**	*e*P	Pn	10 22 32.9	-1.5
UNM				*e*S	Sn	10 23 10.5	-6.1
UNM				*e*S	Sn	10 23 23.0	+6.4
UNM	**Universidad Na**	**3.55**	**358**	*e*P	Pn	10 22 32.9	-1.5
UNM				*e*P		10 22 38.0	
UNM				*e*S	Sn	10 23 10.5	-6.1
UNM				*e*S	Sn	10 23 23.0	+6.4
IISM	**Ciudad Serdan**	**3.59**	**26**	*e*P	Pn	10 22 40.0	+5.0
IISM				*e*S	Sn	10 23 13.0	-4.6
CMIG	**Matias Romero**	**4.22**	**71**	*e*P	Pn	10 22 40.4	-3.6
CMIG				*e*S	Sn	10 23 28.7	-5.0

IDC 26 10:24:37.9±11.0**, 0.93N**×**127.25E, h144**^{km}±116^{km}**, mb3.5**/6**, mb1 3.7**/7**, mb1mx3.5**/17**, mbtmp4.0**/7**, ML4.1**/1**, 1D, Error ellipse: s-maj=58.4km s-min=25.0km az=77.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.98**	**185**	P	P	10 28 48.6	-2.1
	0.4nm,0.3s,baz=1.3,slow=8.5,SNR=16						
WRA	**Warramunga Arr**	**21.88**	**162**	P	P	10 29 18.6	-1.3
	3.4nm,0.4s,baz=339,slow=11,SNR=77						
WB2	**Warramunga Arr**	**21.88**	**162**	⇓*i*P	P	10 29 19.2	-0.8
NWAO	**Narrogin (SRO)**	**34.98**	**195**	P	P	10 31 16.6	-1.6
	6.4nm,0.8s,baz=158,slow=13,SNR=3.0						
STKA	**Stephens Creek**	**35.35**	**159**	P	P	10 31 19.7	-1.7
	0.8nm,0.3s,baz=336,slow=10.0,SNR=5.4						
SONM	**Songino Array**	**50.10**	**342**	P	P	10 33 18.7	-1.5
	0.2nm,0.3s,baz=153,slow=9.7,SNR=2.6						
MKAR	**Makanchi Array**	**60.14**	**326**	P	P	10 34 30.6	-1.9
	0.4nm,0.3s,baz=121,slow=7.1,SNR=3.6						
BVAR	**Borovoye Array**	**69.94**	**327**	P	P	10 35 32.3	-3.1
	0.3nm,0.4s,baz=135,slow=8.2,SNR=3.7						

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*FUNV **26** 10:25:56.4, 6.73N×73.20W, h169^{km}, MW3.1*

*NEIC **26** 10:25:57.7±0.8, 6.73N×72.93W, h174^{km}±9^{km}, mb3.6/3, Error ellipse: s-maj=14.7km s-min=10.9km az=78.0*

*IDC **26** 10:25:57.3±1.1, 6.64N×72.90W, h172^{km}±11^{km}, mb3.2/6, mb1 3.5/8, mb1mx3.3/23, mbtmp3.6/8, Error ellipse: s-maj=21.0km s-min=14.9km az=116.0*

ISC 26 10:25:56.4±0.5**, 6.77N**±0.05×**72.89W**±0.05**, h178**^{km}±5^{km}**, n23,** σ**0**^{s}**98**/34**, mb3.4**/8**, 2C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.23**	**28**	⇑*i*P	**P**	**10 26 26.4**	**+0.4**
CAPV				*e*S	**S**	**10 26 48.5**	**-0.3**
ROSC	**El Rosal**	**2.38**	**217**	P	**P**	**10 26 38.5**	**+0.5**
	37nm,0.3s,baz=278,slow=23,SNR=107						
ROSC				S	**S**	**10 27 08.7**	**-1.4**
	85nm,0.3s,baz=110,slow=16,SNR=11						
SOCV	**Socops**	**2.52**	**53**	*e*P	**P**	**10 26 41.3**	**+1.6**
SOCV				*e*S	**S**	**10 27 13.6**	**+0.7**
SDV	**Santo Domingo**	**3.07**	**47**	P	**P**	**10 26 47.9**	**+1.6**
	4.2nm,0.3s,baz=250,slow=6.6,SNR=18						
SDV				S	**S**	**10 27 25.4**	**+0.6**
	17nm,0.3s,baz=69,slow=21,SNR=26						
SDV	**Santo Domingo**	**3.07**	**47**	*e*Pn	**P**	**10 26 47.6**	**+1.3**
SDV				*e*Sn	**S**	**10 27 25.2**	**+0.4**
VIRV	**Villa del Rosa**	**3.74**	**7**	⇑*i*P	**P**	**10 26 53.2**	**-1.6**
VIRV				*e*S	**S**	**10 27 35.4**	**-4.4**
QARV	**Quebrada Arrib**	**4.14**	**34**	*e*P	**P**	**10 27 00.6**	**+0.7**
QARV				*e*S	**S**	**10 27 47.8**	**-1.2**
SANV	**Sanarito**	**4.29**	**51**	*e*P	**P**	**10 27 03.5**	**+1.7**
SANV				*e*S	**S**	**10 27 51.9**	**-0.4**
DABV	**Dabajuro**	**4.69**	**28**	*e*P	**P**	**10 27 07.4**	**+0.4**
DABV				*e*S	**S**	**10 27 59.8**	**-1.9**
TEPV	**Terepaima**	**4.84**	**49**	*e*P	**P**	**10 27 10.2**	**+1.1**
TEPV				*e*S	**S**	**10 28 04.3**	**-0.9**
BAUV	**El Baul**	**5.27**	**65**	*e*P	**P**	**10 27 14.9**	**+0.4**
BAUV				*e*S	**S**	**10 28 14.6**	**-0.5**
CAOV	**Caicara del Or**	**6.54**	**85**	*e*P	**P**	**10 27 32.1**	**+0.8**
CAOV				*e*S	**S**	**10 28 43.7**	**-1.5**
SAML	**Samuel**	**18.37**	**148**	*e*P	**P**	**10 30 00.8**	**+0.5**
	1.7nm,0.4s						
SIV	**San Ignacio**	**25.46**	**153**	P	**P**	**10 31 08.0**	**-1.9**
	0.4nm,0.4s,mb3.3,baz=323,slow=3.7,SNR=4.4						
WMOK	**Wichita Mounta**	**36.66**	**323**	P	**P**	**10 32 46.8**	**-0.9**
	0.6nm,0.6s,mb3.4						
TXAR	**Lajitas Array**	**36.67**	**312**	P	**P**	**10 32 47.9**	**+0.1**
	0.5nm,0.6s,mb3.3,baz=128,slow=9.2,SNR=7.7						
MNTX	**Cornudas Mount**	**39.17**	**314**	*e*P	**P**	**10 33 08.9**	**+0.3**
	0.7nm,0.5s,mb3.5						
SCHQ	**Schefferville**	**48.17**	**5**	P	**P**	**10 34 20.7**	**+0.3**
	1.8nm,0.9s,mb3.7,baz=191,slow=5.2,SNR=4.4						
PDAR	**Pinedale Array**	**48.25**	**324**	P	**P**	**10 34 21.5**	**+0.3**
	0.3nm,0.5s,mb3.1,baz=124,slow=9.8,SNR=2.7						
NVAR	**Mina Array Bea**	**51.68**	**315**	P	**P**	**10 34 47.6**	**+0.4**
	0.4nm,0.8s,mb3.1,baz=126,slow=7.8,SNR=2.9						
YKA	**Yellowknife Ar**	**63.39**	**340**	P	**P**	**10 36 08.7**	**-0.1**
	0.8nm,0.6s,mb3.8,baz=128,slow=6.8,SNR=7.8						
YKA	**Yellowknife Ar**	**63.39**	**340**	P	**P**	**10 36 08.7**	**-0.2**
WRA	**Warramunga Arr**	**150.51**	**241**	PKPbc	PKPdf	10 45 29.7	+7.6
	0.3nm,0.6s,baz=107,slow=2.7,SNR=10.0						

IGQ 26 10:45:22.5, 3.04S×**81.09W, h5**^{km}±27^{km}**, mb4.4, 8C-1D, Error ellipse: s-maj=29.9km s-min=6.6km az=128.4, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	**2.05**	**15**	P	Pn	10 45 59.0	+0.9
HOJA				S	Sn	10 46 25.6	+1.2
IGUA	**Igualata**	**2.89**	**58**	P	Pn	10 46 10.6	+0.4
IGUA				S	Sn	10 46 47.3	+1.6
ARRY	**Arrayan**	**3.04**	**60**	⇑P	Pn	10 46 12.3	+0.1
ULBA	**Ulba**	**3.11**	**59**	P	Pn	10 46 14.6	+1.4
PISA	**Pisayambo**	**3.34**	**54**	P	Pn	10 46 18.7	+2.2
CAMI	**Rancho Maria**	**3.49**	**48**	⇓P	Pn	10 46 20.8	+2.2
NAS1	**Nasa**	**3.54**	**48**	⇑P	Pn	10 46 22.2	+2.9
TAMB	**Tambo**	**3.58**	**49**	P	Pn	10 46 21.7	+1.8
VC1	**Cotopaxi 1**	**3.59**	**48**	⇑P	Pn	10 46 22.7	+2.7
JUA2	**San Juan 2**	**3.75**	**41**	P	Pn	10 46 24.0	+1.7
TERV	**Terraza Guagua**	**3.78**	**41**	P	Pn	10 46 24.6	+1.9
GGP	**Refugio Guagua**	**3.79**	**41**	⇑P	Pn	10 46 24.4	+1.6
PINO	**Pino**	**3.79**	**41**	⇑P	Pn	10 46 24.1	+1.3
YANA	**Yana**	**3.84**	**41**	⇑P	Pn	10 46 24.8	+1.2
ANTI	**Antisana**	**3.90**	**49**	⇑P	Pn	10 46 26.3	+1.9
COTA	**Cotacachi**	**4.34**	**39**	⇑P	Pn	10 46 32.5	+1.9
ECEN	**Cerro Negro**	**4.95**	**39**	P	Pn	10 46 41.7	+2.5

MEX 26 10:59:25.7±0.7**, 15.86N**×**99.12W, h13**^{km}±34^{km}**, MD3.8, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**1.26**	**323**	*e*P	Pb	10 59 45.0	-3.8
ACX				*i* S	Sb	11 00 01.0	-3.8
VHO	**Vista Hermosa**	**2.59**	**62**	*e*P	Pn	11 00 04.2	-4.0
VHO				*i* S	Sn	11 00 35.0	-4.8
OXX	**Oaxaca**	**2.60**	**62**	*e*P	Pn	11 00 05.0	-3.3
PPM	**Popocatepetl**	**3.23**	**8**	*e*P	Pn	11 00 14.0	-3.2
PPM				*i* S	Sn	11 00 57.0	+1.2

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*LDG **26** 10:59:41.3±0.8, 19.72S×170.70E, h10^{km}, Error ellipse: s-maj=113.6km s-min=30.7km az=123.0*

*NEIC **26** 11:00:00.9±1.1, 19.22S×169.04E, h142^{km}±10^{km}, mb4.5/15, Error ellipse: s-maj=10.0km s-min=8.8km az=173.0*

*IDC **26** 11:00:00.5±2.4, 19.26S×169.03E, h137^{km}±20^{km}, mb4.1/14, mb1 4.2/15, mb1mx4.1/19, mbtmp4.5/15, MS2.9/1, Ms1 2.9/1, ms1mx2.4/26, Error ellipse: s-maj=20.0km s-min=15.6km az=88.0*

*BJI **26** 11:00:08.4, 18.29S×168.30E, h162^{km}, mB4.5, mb4.7*

ISC 26 11:00:00.4±1.4**, 19.29S**±0.08×**168.98E**±0.09**, h149**^{km}±13^{km}**, n115,** σ**0**^{s}**89**/43**, mb4.3**/26**, 35C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.65**	**220**	*e*P	**P**	**11 00 57.0**	**+0.2**
DZM				*e*S	**S**	**11 01 39.4**	**-0.7**
DZM	**Mont Dzumac**	**3.65**	**220**	P	**P**	**11 00 57.1**	**+0.3**
	30nm,0.3s,baz=37,slow=19,SNR=300						
DZM				S	**S**	**11 01 39.6**	**-0.5**
	90nm,0.3s,baz=302,slow=23,SNR=22						
DZM				LR	LR	11 02 18.4	
	comp=Z,190nm,20.9s,baz=4.0,slow=37						
NOUC	**Port Laguerre**	**3.75**	**221**	*e*P	**P**	**11 00 58.6**	**+0.3**
NOUC	**Port Laguerre**	**3.75**	**221**	*e*P	**P**	**11 00 58.5**	**+0.3**
URZ	**Urewera**	**20.18**	**161**	P	**P**	**11 04 25.5**	**+0.4**
	10nm,0.8s,baz=346,slow=20,SNR=4.6						
CTA	**Charters Tower**	**21.41**	**264**	P	**P**	**11 04 39.6**	**+2.2**
	5.2nm,0.4s,mb4.2,baz=90,slow=15,SNR=13						
CTAO	**Charters Tower**	**21.41**	**264**	*e*P	**P**	**11 04 39.6**	**+2.1**
	4.9nm,0.5s,mb4.1						
CNB	**Canberra Magne**	**23.57**	**223**	*e*P	**P**	**11 05 00.2**	**+1.9**
	13nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**27.61**	**238**	*e*P	**P**	**11 05 36.2**	**+0.2**
	8.2nm,0.7s,mb4.6						
STKA	**Stephens Creek**	**27.61**	**238**	P	**P**	**11 05 36.2**	**+0.2**
	7.0nm,0.6s,mb4.6,baz=66,slow=8.2,SNR=51						
STKA				PcP	PcP	11 08 49.4	-0.4
	2.2nm,0.5s,baz=83,slow=4.4,SNR=6.7						
WB2	**Warramunga Arr**	**32.59**	**263**	⇑*i*P	**P**	**11 06 18.9**	**-1.1**
WRAB	**Tennant Creek**	**32.59**	**263**	*e*P	**P**	**11 06 18.6**	**-1.4**
	3.1nm,0.5s,mb4.3						
WRA	**Warramunga Arr**	**32.60**	**263**	P	**P**	**11 06 19.0**	**-1.1**
	2.7nm,0.8s,mb4.0,baz=84,slow=7.9,SNR=29						
WRA				PcP	PcP	11 09 02.3	-0.6
	1.2nm,0.5s,baz=93,slow=3.2,SNR=8.7						
FITZ	**Fitzroy Crossi**	**40.99**	**264**	⇑*i*P	**P**	**11 07 31.4**	**+1.0**
	15nm,0.6s,mb4.8						
VNDA	**Vanda**	**58.37**	**182**	P	**P**	**11 09 40.8**	**-1.2**
	0.7nm,0.5s,mb3.8,baz=355,slow=6.9,SNR=9.2						
VNDA	**Vanda**	**58.37**	**182**	*e*P	**P**	**11 09 40.6**	**-1.3**
	0.9nm,0.6s,mb3.8						
SBA	**Scott Base**	**58.61**	**181**	*e*P	**P**	**11 09 43.1**	**-0.4**
	6.3nm,0.9s,mb4.5						
MJAR	**Matsushiro Arr**	**62.68**	**332**	P	**P**	**11 10 10.1**	**-1.6**
	1.8nm,0.5s,mb4.2,baz=171,slow=8.5,SNR=8.8						
JNU	**Nakatsue**	**63.57**	**325**	P	**P**	**11 10 16.6**	**-1.0**
	6.4nm,0.8s,mb4.5,baz=256,slow=39,SNR=2.6						
ASAJ	**Asahikawa**	**67.56**	**340**	P	**P**	**11 10 42.9**	**0.0**
	7.0nm,0.6s,mb4.6,baz=215,slow=11,SNR=9.0						
QSPA	**South Pole Qui**	**70.76**	**180**	⇑*i*P	**P**	**11 11 01.6**	**-0.2**
	15nm,0.8s,mb4.8						
FX1	**Attu Island--F**	**71.96**	**3**	P	**P**	**11 11 08.8**	**-0.4**
	13nm,0.5s,mb4.9,baz=40,slow=4.2,SNR=5.8						
CN2	**Changchun**	**74.38**	**329**	*e*P	**P**	**11 11 23.8**	**+0.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
MAW	**Mawson**	**78.29**	**202**	P	**P**	**11 11 45.9**	**+1.0**
	comp=Z,3.0nm,0.7s,mb4.0,baz=84,slow=4.7,SNR=7.2						
KDAK	**Kodiak Island**	**83.16**	**20**	*e*P	**P**	**11 12 10.6**	**-0.1**
	comp=Z,6.0nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**86.76**	**323**	*e*P	**P**	**11 12 29.4**	**+0.7**
	comp=Z,3.0nm,0.8s,mb4.2						
SONM	**Songino Array**	**87.11**	**323**	P	**P**	**11 12 31.2**	**+0.8**
	comp=Z,2.5nm,0.7s,mb4.2,baz=148,slow=5.5,SNR=22						

SONM				pP	pP	11 13 05.6	-2.6
	comp=Z,0.5nm,0.4s,baz=135,slow=5.2,SNR=3.6						
CMB	Columbia Colle	87.37	48	eP	P	11 12 31.8	-0.1
	comp=Z,4.9nm,0.9s,mb4.3						
NVAR	Mina Array Bea	89.02	49	P	P	11 12 40.4	+0.6
	comp=Z,2.4nm,0.8s,mb4.2,baz=219,slow=6.4,SNR=14						
MOD	Modoc	89.18	45	eP	P	11 12 40.5	+0.1
	comp=Z,11nm,1.2s,mb4.7						
VNA3	Neumayer Olymp	89.70	180	⇑i	P	11 12 41.5	-0.6
VNA3	Neumayer Olymp	89.70	180	e	pP	11 13 15.5	-4.7
VNA2	Neumayer--Watz	89.99	181	⇑i	P	11 12 43.2	-0.3
VNA2	Neumayer--Watz	89.99	181	e	pP	11 13 17.1	-4.4
VNA1	Neumayer--Stat	90.28	181	⇑i	P	11 12 44.4	-0.5
VNA1	Neumayer--Stat	90.28	181	e	pP	11 13 17.3	-5.6
ILAR	Eielson Array	90.35	17	P	P	11 12 43.6	-1.7
	comp=Z,1.2nm,0.7s,mb4.0,baz=250,slow=4.7,SNR=11						
NEN	Nelson	90.39	52	eP	P	11 12 46.3	+0.1
WVOR	Wild Horse Val	90.52	45	eP	P	11 12 46.7	0.0
	comp=Z,7.4nm,1.1s,mb4.6						
DLBC	Dease Lake	92.20	27	eP	P	11 12 54.2	+0.1
TUC	Tucson	92.24	57	eP	P	11 12 55.1	+0.2
	comp=Z,2.5nm,0.9s,mb4.2						
HLID	Hailey	93.81	45	eP	P	11 13 02.2	+0.5
	comp=Z,1.5nm,0.9s,mb4.1						
TXAR	Lajitas Array	97.00	62	P	P	11 13 17.1	+0.5
	comp=Z,0.4nm,0.7s,mb3.9,baz=211,slow=7.3,SNR=6.9						
WMQ	Urumqi	97.07	314	eP	P	11 13 19.0	+2.4
WMQ				AP	pP	11 13 59.8	+5.1
WMQ				XP	sP	11 14 16.8	+5.8
YKA	Yellowknife Ar	100.83	27	P	P	11 13 33.7	+0.6
	comp=Z,0.8nm,0.6s,baz=250,slow=5.1,SNR=6.7						
YKA	Yellowknife Ar	100.83	27	P	P	11 13 33.7	+0.6
BVAR	Borovoye Array	110.30	320	PKiKP		11 18 14.7	
	comp=Z,0.2nm,0.3s,baz=90,slow=2.9,SNR=3.5						
ARCES	ARCESS Array B	125.06	345	PKP	PKPdf	11 18 42.9	+0.4
	comp=Z,1.8nm,0.3s,baz=74,slow=2.3,SNR=22						
FINES	FINESS Array B	130.54	338	PKP	PKPdf	11 18 53.5	+0.3
	comp=Z,1.9nm,0.9s,baz=124,slow=5.0,SNR=5.4						
AKASG	Malin Array Be	135.39	324	PKP	PKPdf	11 19 03.0	+0.5
	comp=Z,0.3nm,0.3s,baz=53,slow=2.1,SNR=4.6						
CLL	Collm	142.86	335	i	PKPdf	11 19 13.3	-2.6
CLL				ePKIKP	PKPdf	11 19 20.0	+4.1
PRU	Pruhonice	143.21	332	ePKP	PKPdf	11 19 16.6	+0.1
NKC	Novy Kostel	143.92	334	ePKP	PKPdf	11 19 17.5	-0.2
MOX	Moxa	143.93	335	eP	PKPbc	11 19 17.0	0.0
MOX	Moxa	143.93	335	i P	PKPbc	11 19 17.0	0.0
	comp=Z,logA/T=1.0						
MOX				L		12 17 50.0	
KHC	Kasperske Hory	144.27	332	ePKP	PKPdf	11 19 18.4	0.0
GERES	GERESS Array B	144.42	332	PKP	PKPdf	11 19 18.9	+0.2
	comp=Z,6.1nm,0.6s,baz=32,slow=3.6,SNR=80						
ARSA	Arzberg	144.69	328	⇑iP	PKPbc	11 19 20.2	+1.0
GRF	Grafenberg Arr	144.84	335	ePKP	PKPdf	11 19 20.5	+1.1
MOA	Molln	144.88	330	⇑iP	PKPdf	11 19 20.8	+1.3
PERS	Pernice	145.31	328	ePKPbc	PKPbc	11 19 21.4	+0.6
OBKA	Obir	145.69	328	⇑iP	PKPdf	11 19 23.9	+2.9
KBA	Koelnbreinsper	145.87	330	⇑iP	PKPdf	11 19 23.2	+1.9
BOJS	Bojanci	146.01	326	ePKPdf	PKPdf	11 19 18.1	-3.4
BOJS				ePKPbc	PKPbc	11 19 24.1	+1.5
LJU	Ljubljana	146.02	327	ePKPbc	PKPbc	11 19 24.1	+1.5
WATA	Walderalm	146.50	332	⇑iP	PKPdf	11 19 25.0	+2.7
WLF	Walferdange	146.72	340	ePKPbc	PKPbc	11 19 26.1	+1.9
SQTA	Sankt Quirin	146.75	332	⇑iP	PKPdf	11 19 26.1	+3.4
GIVF	Givet	146.76	341	ePKP1	PKPbc	11 19 25.7	+1.5
	comp=Z,36nm,1.0s						
BAIF	Baives	146.98	342	⇑iPKP1	PKPbc	11 19 26.6	+1.9
	comp=Z,13nm,0.6s						
DAVA	Damuels	147.28	333	⇑iP	PKPdf	11 19 27.5	+3.9
CDF	Champ du Feu	147.39	337	⇑iPKP1	PKPdf	11 19 27.7	+4.0
	comp=Z,24nm,0.8s						
HINF	Hinteralfeld	148.05	337	⇑iPKP1	PKPdf	11 19 29.2	+4.4
	comp=Z,5.0nm,0.5s						
HAU	Haudompre	148.07	338	⇑iPKP1	PKPdf	11 19 29.5	+4.6
	comp=Z,18nm,0.7s						
MEZF	Maizieres J'vi	148.09	340	⇑iPKP1	PKPdf	11 19 29.9	+5.0
	comp=Z,25nm,0.7s						
GRAM		149.33	330	P	PKPdf	11 19 32.8	+5.8
CABF	La Chapelle	149.34	337	⇑iPKP1	PKPdf	11 19 33.3	+6.4
	comp=Z,23nm,0.6s						
VALM		149.35	329	P	PKPdf	11 19 32.6	+5.6
ORX	Oropa	149.39	333	P	PKPdf	11 19 32.0	+5.0
FLN	La Foliniere	149.39	346	⇑iPKP1	PKPdf	11 19 32.4	+5.5
	comp=Z,9.8nm,0.5s						
VINC	Vinca	149.55	329	P	PKPdf	11 19 31.9	+4.6
MAIM		149.55	328	P	PKPdf	11 19 32.0	+4.7
LOR	Lormes	149.56	340	⇑iPKP1	PKPdf	11 19 33.3	+6.1
	comp=Z,17nm,0.6s						
GRR	Gorron	149.83	346	ePKP1	PKPdf	11 19 33.5	+5.9
LSD	Ceresole Reale	149.87	334	P	PKPdf	11 19 34.6	+6.9
HYF	Humbligny	149.94	341	ePKP1	PKPdf	11 19 34.5	+6.7
LPL	La Plagne	150.00	335	⇑iPKP1	PKPdf	11 19 35.0	+7.1
	comp=Z,15nm,0.7s						
LPG	La Plagne	150.01	335	⇑iPKP1	PKPdf	11 19 35.1	+7.2
	comp=Z,24nm,0.8s						
RSP	Reno Superiore	150.08	334	P	PKPdf	11 19 33.8	+5.7
SMF	Signal de Mont	150.11	339	ePKP1	PKPdf	11 19 34.4	+6.3
	comp=Z,17nm,0.9s						
FENE	Fenestrelle	150.26	334	P	PKPdf	11 19 34.8	+6.5
SGMF	Saint Gilles	150.31	349	ePKP1	PKPdf	11 19 34.4	+6.1
	comp=Z,36nm,1.0s						
BHB	Bricherasio	150.32	333	P	PKPdf	11 19 33.5	+5.0
BNI	Bardonecchia	150.40	334	ePKPbc	PKPdf	11 19 35.5	+6.9
RRL	Cesana Torines	150.46	334	P	PKPdf	11 19 35.7	+7.0
ROB	Roburent	150.49	332	P	PKPdf	11 19 34.4	+5.7
BGF	Bois d'Agland	150.51	340	⇑iPKP1	PKPdf	11 19 35.4	+6.7
	comp=Z,16nm,0.7s						
MBDF	Montbardon	150.62	334	ePKP1	PKPdf	11 19 35.8	+6.9
	comp=Z,12nm,0.7s						
MONE	Monesi	150.71	332	P	PKPdf	11 19 35.5	+6.5
ENR	Entracque	150.75	332	P	PKPdf	11 19 34.5	+5.4
IMI	Imperia	150.78	331	P	PKPdf	11 19 35.5	+6.4
ORIF	Oris-en-Rattie	150.83	335	⇑iPKP1	PKPdf	11 19 36.5	+7.3
	comp=Z,24nm,0.7s						
TCF	Toulx Ste Croi	150.95	341	⇑iPKP1	PKPdf	11 19 36.5	+7.2
	comp=Z,8.5nm,0.5s						
SBF	Sospel	151.03	332	⇑iPKP1	PKPdf	11 19 36.4	+6.9
PGF	Pioggiola	151.29	328	⇑iPKP1	PKPdf	11 19 37.5	+7.5
	comp=Z,46nm,0.7s						
MFF	Saint Martin d	151.33	344	⇑iPKP1	PKPdf	11 19 37.1	+7.2
	comp=Z,11nm,0.7s						
VIVF	Saint-Julien-l	151.36	336	⇑iPKP1	PKPdf	11 19 37.6	+7.6
	comp=Z,12nm,0.8s						
FRF	La Foret Royal	151.61	332	⇑iPKP1	PKPdf	11 19 37.9	+7.5
	comp=Z,9.7nm,0.5s						
SMRF	Simiane la Rot	151.73	334	⇑iPKP1	PKPdf	11 19 38.8	+8.2
	comp=Z,18nm,0.9s						
LMR	La Mourre	151.86	332	⇑iPKP1	PKPdf	11 19 38.4	+7.6
	comp=Z,18nm,0.8s						
RJF	Les Rejaudoux	152.05	341	⇑iPKP1	PKPdf	11 19 38.9	+7.9
	comp=Z,4.6nm,0.7s						
CAF	Calviac	152.22	340	ePKP1	PKPdf	11 19 39.5	+8.2
LASF	Ste Croix	152.33	337	⇑iPKP1	PKPdf	11 19 39.9	+8.4
	comp=Z,8.8nm,0.7s						
LFF	La Frestale	152.62	342	ePKP1	PKPdf	11 19 40.3	+8.5
MTLF	Montolieu	153.56	338	ePKP1	PKPdf	11 19 42.3	+9.1

NIED **26** *11:09:00, 33.40N×139.40E, h200^{km}, Mw4.2 Best double couple: M$_0$2.55×10^{15} NP1:φ$_s$109°, δ88°, λ122°. NP2: φ$_s$203°, δ32°, λ4°.*
BJI **26** *11:09:27.5, 33.20N×139.30E, h172^{km}, mB4.5, mb4.4*
MOS **26** *11:09:29.3±1.2, 33.20N×139.21E, h175^{km}, mb4.3/6, Error ellipse: s-maj=23.7km s-min=8.7km az=88.9*
NEIC **26** *11:09:31.4±0.9, 33.23N×139.27E, h172^{km}±8^{km}, mb4.3/13, Error ellipse: s-maj=11.3km s-min=7.7km az=116.0*
JMA **26** *11:09:32.1±0.2, 33.37N×139.42E, h192^{km}±3^{km}, M4.3*
IDC **26** *11:09:32.3±0.6, 33.24N×139.24E, h182^{km}±5^{km}, mb3.6/17, mb1 3.9/19, mb1mx3.8/25, mbtmp4.1/19, Error ellipse: s-maj=14.2km s-min=9.1km az=76.0*
ISC 26 11:09:31.7±0.4**, 33.28N**±0.05×**139.30E**±0.05**, h189**^{km}±2^{km}**, n78,** σ1^{s}**12**/91**, mb4.0**/27**, 3C-12D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	0.44	111	P	P	11 09 58.0	+0.4
	105nm,0.3s,baz=72,slow=16,SNR=39						
JHJ				S	S	11 10 20.6	+2.9
	200nm,0.3s,baz=66,slow=23,SNR=9.9						
JHJ2	Mitsune	0.47	111	⇑P	P	11 09 58.0	+0.3
JMY	Miyakejima3	0.81	13	⇓P	P	11 09 59.5	+0.2
JKO	Kozu shima	0.92	352	⇓P	P	11 10 00.2	+0.3
NJJJ	Nii jima 2	1.12	359	⇓P	P	11 10 01.8	+0.4
JIM2	Oshima 3	1.44	4	⇓P	P	11 10 04.1	-0.1
TK02	Tokai 2	1.45	298	⇑P	P	11 10 05.0	+0.7
TK02				S	S	11 10 30.7	+1.2
JIZS	Izushimoda	1.48	346	⇓P	P	11 10 04.7	+0.1
TK01	Tokai 1	1.51	289	P	P	11 10 05.0	+0.1
TK04	Tokai 4	1.62	313	⇓P	P	11 10 06.7	+0.8
TK04				S	S	11 10 33.5	+1.2
BSO3	Boso 3	1.82	33	⇓P	P	11 10 06.8	-1.1
BSO1	Boso 1	1.96	45	P	P	11 10 07.9	-1.4
BSO1				S	S	11 10 36.7	-1.5
JOD2	Odawara 2	1.99	355	⇓P	P	11 10 09.5	-0.1
SHZ3	Shizuoka 3	2.00	333	⇓P	P	11 10 10.4	+0.7
SHZ3				S	S	11 10 39.6	+0.6
JYN	Shimob	2.30	344	⇓P	P	11 10 13.5	+0.4
JIE	Ise	2.43	298	⇑P	P	11 10 15.1	+0.5
JIE				S	S	11 10 47.3	-0.3
JRY	Ryogami san	2.75	353	⇓P	P	11 10 18.2	-0.1
MJAR	Matsushiro Arr	3.38	345	P	P	11 10 24.1	-1.9
	29nm,0.3s,baz=154,slow=11,SNR=251						
MJAR				S	S	11 11 06.5	-1.2
	7.4nm,0.3s,baz=176,slow=16,SNR=4.4						
MAJO	Matsushiro	3.38	345	⇓iP	P	11 10 25.3	-0.7
MAT	Matsushiro	3.38	345	eP	P	11 10 25.0	-0.9
MAT				eS	S	11 11 07.0	-0.8
MAT	Matsushiro	3.38	345	P	P	11 10 25.3	-0.7
MAT				S	S	11 11 07.4	-0.4
CBIJ	Chichi jima	6.65	157	P	P	11 11 04.7	-3.4
	51nm,0.3s,baz=343,slow=3.6,SNR=33						
CBIJ				S	S	11 12 13.2	-10
	72nm,0.3s,baz=277,slow=23,SNR=11						
JNU	Nakatsue	7.06	271	P	P	11 11 13.8	+0.3
ASAJ	Asahikawa	11.12	12	P	P	11 12 01.9	-4.5
ASAJ				S	S	11 14 00.1	-7.7
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	Asahikawa	11.12	12	P	P	11 12 01.9	-4.5
	comp=N,7.2nm,0.3s,baz=240,slow=9.2,SNR=44						
ASAJ				S	S	11 14 00.1	-7.7
	comp=N,1.0nm,0.3s,baz=230,slow=33,SNR=5.1						
YUK	Yuzh-Kuril'sk	11.89	24	eP	P	11 12 13.6	-2.7
YUK				eS	S	11 14 18.0	-7.7
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				smax			
	comp=N,210nm,0.5s						
YUK				smax			
	comp=E,250nm,0.6s						
YUK				smax			
	comp=N,3μm,1.0s						
YSS	Yuzh-Sakhalins	13.91	10	eP	P	11 12 39.0	-2.7
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				pmax	pmax		
	comp=N,40μm,0.7s						
YSS	Yuzh-Sakhalins	13.91	10	ePn	P	11 12 38.9	-2.8
	comp=N,32nm,0.6s						
PET	Petropavlovsk	24.12	29	eP	P	11 14 31.3	+0.1
PET				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
PET	Petropavlovsk	24.12	29	eP	P	11 14 31.3	+0.1
	comp=Z,4.4nm,0.6s,mb4.2						
SONM	Songino Array	28.67	310	P	P	11 15 12.8	+0.1
	comp=Z,0.2nm,0.3s,mb3.3,baz=134,slow=6.8,SNR=3.1						
WMQ	Urumqi	41.11	300	eP	P	11 16 57.3	-1.2
WMQ				AP	pP	11 17 37.8	-1.5
MKAR	Makanchi Array	44.75	305	P	P	11 17 27.8	+0.1
	comp=Z,0.8nm,0.6s,mb3.6,baz=96,slow=8.7,SNR=6.4						
KDAK	Kodiak Island	51.07	40	eP	P	11 18 15.9	-0.4
	comp=Z,14nm,0.8s,mb4.6						
BVAR	Borovoye Array	51.88	314	P	P	11 18 22.8	+0.4
	comp=Z,0.3nm,0.4s,mb3.3,baz=90,slow=10,SNR=3.3						
BVAR	Borovoye Array	51.88	314	P	P	11 18 22.8	+0.4
WRAB	Tennant Creek	53.12	186	eP	P	11 18 29.9	-2.1
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.6						
WRAB	Tennant Creek	53.12	186	eP	P	11 18 29.9	-2.1
	comp=Z,5.0nm,0.4s,mb4.6						
WB2	Warramunga Arr	53.13	186	eP	P	11 18 30.1	-2.0
WRA	Warramunga Arr	53.13	186	P	P	11 18 29.9	-2.2
	comp=Z,2.7nm,0.4s,mb4.3,baz=0.7,slow=7.6,SNR=70						
CTA	Charters Tower	53.48	172	P	P	11 18 32.9	-1.7
	comp=Z,4.2nm,0.8s,mb4.2,baz=342,slow=6.4,SNR=3.5						
CTA	Charters Tower	53.48	172	P	P	11 18 32.9	-1.8
ILAR	Eielson Array	53.59	31	P	P	11 18 34.2	-0.7
	comp=Z,0.9nm,0.5s,mb3.8,baz=271,slow=6.7,SNR=18						
INK	Inuvik	58.51	26	eP	P	11 19 09.4	-0.4
INK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
INK	Inuvik	58.51	26	P	P	11 19 09.7	-0.2
	comp=Z,3.7nm,0.5s,mb4.5,baz=304,slow=6.1,SNR=20						
INK	Inuvik	58.51	26	eP	P	11 19 09.4	-0.5
	comp=Z,2.8nm,0.6s,mb4.3						
FORT	Forrest	64.59	191	eP	P	11 19 50.1	-0.8
	comp=Z,12nm,0.5s,mb5.0						
STKA	Stephens Creek	64.84	178	eP	P	11 19 51.7	-0.8
	comp=Z,4.6nm,0.6s,mb4.5						
STKA	Stephens Creek	64.84	178	P	P	11 19 51.8	-0.7
	comp=Z,5.6nm,0.6s,mb4.6,baz=340,slow=6.7,SNR=20						
RES	Resolute Bay	66.65	14	eP	P	11 20 02.8	-0.6
RES				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.5						
RES	Resolute Bay	66.65	14	eP	P	11 20 02.8	-0.6
	comp=Z,3.6nm,0.5s,mb4.5						
ARCES	ARCESS Array B	66.90	340	P	P	11 20 04.3	-0.6
	comp=Z,3.2nm,0.8s,mb4.2,baz=58,slow=8.5,SNR=2.8						
YKA	Yellowknife Ar	67.92	29	P	P	11 20 11.0	-0.4
	comp=Z,0.7nm,0.5s,mb3.7,baz=299,slow=6.3,SNR=5.9						
YKA	Yellowknife Ar	67.92	29	P	P	11 20 11.0	-0.4
KAF	Kangasniemi	70.84	333	ep	P	11 20 27.0	-2.2
	comp=Z,0.6nm,0.3s,mb3.8						
KAF	Kangasniemi	70.84	333	eP	P	11 20 27.0	-2.2
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
CMW	Cultus Mountai	71.09	44	P	P	11 20 32.7	+1.8
JCW	Jim Creek	71.31	44	P	P	11 20 33.9	+1.6
FINES	FINESS Array B	71.32	332	P	P	11 20 31.3	-0.7
	comp=Z,0.9nm,0.3s,mb3.9,baz=63,slow=5.7,SNR=20						
LTIM	Timbered Crate	75.11	50	P	P	11 20 56.0	+1.5
LBCM	Butte Creek Ri	75.38	51	P	P	11 20 57.3	+1.4
BMO	Blue Mountains	75.77	46	eP	P	11 20 58.9	+0.9
	comp=Z,1.0nm,0.6s,mb3.6						
NB2	NORSAR Subarra	76.96	337	P	P	11 21 03.9	-0.4
	comp=Z,0.7nm,0.5s,mb3.5,baz=43,slow=5.6						
NOA	NORSAR Array B	76.96	337	P	P	11 21 04.0	-0.3
	comp=Z,1.0nm,0.6s,mb3.6,baz=42,slow=5.4,SNR=4.4						
HLID	Hailey	78.21	45	eP	P	11 21 12.8	+1.2
	comp=Z,0.9nm,0.7s,mb3.5						
LCCM	Lewis and Clar	78.37	42	P	P	11 21 13.6	+1.2
BOZ	Bozeman (W)	78.62	43	eP	P	11 21 14.5	+0.7
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
BOZ	Bozeman (W)	78.62	43	eP	P	11 21 14.5	+0.7
	comp=Z,1.9nm,0.6s,mb3.9						
NVAR	Mina Array Bea	78.65	51	P	P	11 21 15.6	+1.5
	comp=Z,1.9nm,0.6s,mb3.9,baz=301,slow=4.0,SNR=15						
NVAR	Mina Array Bea	78.65	51	P	P	11 21 15.6	+1.5
BRTR	Keskin Array B	80.02	311	P	P	11 21 22.4	+1.1
	comp=Z,0.5nm,0.5s,mb3.4,baz=63,slow=2.8,SNR=3.5						
BW06	Boulder Array	81.55	44	P	P	11 21 29.9	+0.5
	comp=Z,0.9nm,0.6s,mb3.6						
PDAR	Pinedale Array	81.55	44	P	P	11 21 30.4	+1.0
	comp=Z,1.2nm,0.7s,mb3.7,baz=269,slow=2.3,SNR=8.9						
NEN	Nelson	82.50	52	eP	P	11 21 35.1	+0.7
MSU	Marysvale	82.54	49	eP	P	11 21 36.4	+1.9
SRU	San Rafael	83.20	47	eP	P	11 21 39.3	+1.4
GERES	GERESS Array B	84.96	327	P	P	11 21 46.3	-0.1
	comp=Z,0.4nm,0.4s,mb3.5,baz=34,slow=4.8,SNR=3.8						
TXAR	Lajitas Array	93.80	51	P	P	11 22 30.2	+1.7
	comp=Z,1.9nm,0.7s,mb4.3,baz=291,slow=3.1,SNR=33						

NIED **26** *11:22:00, 41.80N×140.70E, h119^{km}, Mw4.5 Best double couple: M$_0$7.3×10^{15} NP1:φ$_s$211°, δ70°, λ67°. NP2:φ$_s$82°, δ30°, λ136°.*
BJI **26** *11:22:11.0, 41.68N×141.40E, h110^{km}, mB5.0, mb4.9*
MOS **26** *11:22:18.1±0.9, 41.94N×140.55E, h118^{km}, mb4.6/32, Error ellipse: s-maj=8.0km s-min=5.5km az=93.6*
JMA **26** *11:22:19.5±0.1, 41.78N×140.72E, h122^{km}±1^{km}, M4.2 Broadband fault plane solution: P waves. NP1:φ$_s$95°, δ41°, λ139°. NP2:φ$_s$218°, δ64°, λ56°. Principal axes: T Plg57°, Azm82°; N Plg30°, Azm234°; P Plg13°, Azm332°;*
JMA Felt I J1.
NEIC **26** *11:22:19.8±0.1, 41.82N×140.62E, mb4.6/41, MW4.5(NIED) Error ellipse: s-maj=4.9km s-min=3.3km az=137.0*
NEIC Recorded [1 JMA] in the Obihiro area.
IDC **26** *11:22:19.4±0.5, 41.85N×140.60E, h122^{km}±4^{km}, mb4.2/22, mb1 4.3/26, mb1mx4.3/28, mbtmp4.5/26, MS3.1/3, Ms1 3.1/3, ms1mx2.7/32, Error ellipse: s-maj=11.7km s-min=7.0km az=124.0*
ISC 26 11:22:18.4±0.2**, 41.79N**±0.02×**140.69E**±0.03**, h127**^{km}±1^{km}**, h128**^{km}±4.4^{km}**:pP-P, n235,** σ1^{s}**01**/238**, mb4.5**/69**, 16C-12D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKB	Kayabe	0.27	70	⇑P	P	11 22 36.6	+0.4
JKB				eS	S	11 22 49.6	-0.2
JSR	Shiriuchi	0.33	218	⇑P	P	11 22 36.9	+0.4
JSR				eS	S	11 22 49.9	-0.3
JYM2	Yakumo 2	0.40	324	⇑P	P	11 22 37.4	+0.6
JOT	Ohata	0.49	147	⇑P	P	11 22 37.6	+0.3
JOT				eS	S	11 22 51.3	-0.3
JNB	Noboribetsu	0.72	21	⇑P	P	11 22 39.2	+0.4
JNB				S	S	11 22 54.4	0.0
JOSM	Okushiri--Mats	0.95	288	⇑P	P	11 22 41.3	+0.4
JOSM				eS	S	11 22 57.6	-0.3
JSH	Shimam	0.97	331	⇑P	P	11 22 42.0	+0.9
JSH				eS	S	11 22 58.7	+0.4
JTM	Tenmabayashi	1.04	164	⇓P	P	11 22 42.1	+0.3
JTM				eS	S	11 22 59.2	-0.3
JEW	Eniwo	1.19	28	⇓P	P	11 22 44.3	+1.0
JANG	Nango	1.55	156	⇓P	P	11 22 46.8	-0.5
JANG				eS	S	11 23 07.7	-1.6
JSK	Shakotan	1.57	354	⇓P	P	11 22 48.5	+1.0
JSK				eS	S	11 23 10.9	+1.2
JNBK	Urakawa-nobuka	1.61	72	⇓P	P	11 22 48.0	-0.1
JNBK				eS	S	11 23 09.4	-1.2
ERM	Erimo	1.85	82	d iP	P	11 22 52.5	+1.6
ERM	Erimo	1.85	82	ePn	P	11 22 52.4	+1.5
JFR	Furan	1.96	45	P	P	11 22 52.0	-0.2
JFR				eS	S	11 23 17.6	-0.3
ASAJ	Asahikawa	2.71	30	P	P	11 23 02.7	+0.7
ASAJ				S	S	11 23 33.0	-2.1
ASAJ				pmax	pmax		
	comp=Z,40nm,0.3s						
ASAJ				smax			
	comp=N,25nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,196nm,19.3s						
ASAJ	Asahikawa	2.71	30	P	P	11 23 02.7	+0.7
	comp=Z,40nm,0.3s,baz=233,slow=12,SNR=598						
ASAJ				S	S	11 23 33.0	-2.1
	comp=Z,25nm,0.3s,baz=261,slow=31,SNR=7.8						
ASAJ				LR	LR	11 24 26.8	
	comp=Z,196nm,19.3s,baz=16,slow=47						
YUK	Yuzh-Kuril'sk	4.41	58	eP	P	11 23 23.1	-1.5
YUK				i S	S	11 24 10.6	-4.9
YUK				pmax	pmax		
	comp=Z,1μm,0.4s						
YUK				pmax	pmax		
	comp=N,250nm,0.5s						
YUK				pmax	pmax		
	comp=E,190nm,0.5s						
YUK				smax			
	comp=N,7μm,1.0s						
YUK				smax			
	comp=E,7μm,0.8s						
YUK				smax			
	comp=N,4μm,0.5s						
YUK				smax			
	comp=E,8μm,0.6s						
YSS	Yuzh-Sakhalins	5.37	15	⇓iP	P	11 23 38.0	+0.5
YSS				eS	S	11 24 38.0	-0.6
YSS				pmax	pmax		
	comp=Z,160nm,0.5s						
YSS				pmax	pmax		
	comp=N,150μm,0.5s						
YSS				smax			
	comp=N,120μm,0.8s						
YSS				smax			
	comp=E,60μm,0.7s						
YSS				MLR	MLR		
	comp=N,400nm,11.0s						
YSS				MLR	MLR		
	comp=Z,400nm,11.0s						
YSS	Yuzh-Sakhalins	5.37	15	⇓ePn	P	11 23 38.1	+0.6
	comp=Z,162nm,0.5s						
MAJO	Matsushiro	5.59	201	eP	P	11 23 40.9	+0.5
MAJO				pmax	pmax		
	comp=Z,66nm,0.5s						
MAJO	Matsushiro	5.59	201	ePn	P	11 23 40.9	+0.5
	comp=Z,66nm,0.5s						
MAT	Matsushiro	5.59	201	eP	P	11 23 41.0	+0.6
MAT				eS	S	11 24 46.0	+2.1
MAT				pmax	pmax		
	comp=Z,19nm,0.8s						
MAT	Matsushiro	5.59	201	eP	P	11 23 41.0	+0.6
	comp=Z,19nm,0.8s						
MAT				eS	S	11 24 46.0	+2.1
MAT	Matsushiro	5.59	201	P	P	11 23 41.1	+0.7
MAT				S	S	11 24 46.4	+2.5
MJAR	Matsushiro Arr	5.59	201	P	P	11 23 41.4	+1.0
	comp=Z,11nm,0.3s,baz=7.5,slow=13,SNR=79						
MJAR				S	S	11 24 43.9	-0.1
	baz=348,slow=21,SNR=1.6						
KUR	Kuril'sk	6.25	54	⇑iP	P	11 23 48.2	-1.2
KUR				pmax	pmax		
	comp=Z,170nm,0.8s						
MDJ	Mudanjiang	8.58	293	P	P	11 24 22.3	+1.4
MDJ				S	S	11 25 58.8	+2.3
MDJ				PCP	PcP	11 30 37.8	-1.1
MDJ				PCS		11 34 11.0	
MDJ				SCS	ScS	11 37 32.5	+2.2
MDJ				AMB	AMB		
	comp=Z,100nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,110nm,5.1s						
MDJ				LR	LR		
	comp=N,190nm,13.5s						
MDJ				LR	LR		
	comp=E,50nm,5.6s						
MDJ				LR	LR		
	comp=Z,140nm,12.4s						
MDJ	Mudanjiang	8.58	293	⇓ePn	P	11 24 22.0	+1.1
	comp=Z,82nm,0.9s						
JHJ	Hachijo jima 2	8.69	185	P	P	11 24 17.5	-4.8
	comp=Z,74nm,0.3s,baz=66,slow=24,SNR=22						
JHJ				S	S	11 25 49.6	-9.4
	comp=Z,16nm,0.3s,baz=66,slow=23,SNR=3.5						
KLR	Kul'dur	9.72	323	eP	P	11 24 33.2	-2.8
CN2	Changchun	11.38	285	eP	P	11 24 58.5	+0.5
CN2				eXP		11 25 33.5	
CN2				eS	S	11 27 02.8	-0.3
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
JNU	Nakatsue	11.64	225	P	P	11 25 03.6	+2.1
	comp=Z,0.4nm,0.3s,baz=241,slow=33,SNR=3.2						
CBIJ	Chichi jima	14.71	175	P	P	11 25 36.1	-5.0
	comp=Z,11nm,0.3s,baz=94,slow=11,SNR=9.1						
CBIJ				S	S	11 28 09.2	-12
	comp=Z,4.8nm,0.3s,baz=1.0,slow=23,SNR=3.2						
HIA	Hailar	16.44	304	eP	P	11 26 01.1	-1.5
HIA				pmax	pmax		
	comp=Z,11nm,0.6s						
HIA	Hailar	16.44	304	ePn	P	11 26 01.1	-1.5
	comp=Z,11nm,0.6s						
PET	Petropavlovsk	16.50	41	eP	P	11 26 08.6	+5.2
PET				eS	S	11 29 08.6	+7.0
PET				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
PET	Petropavlovsk	16.50	41	P	P	11 26 03.1	-0.3
	comp=Z,5.7nm,0.6s						
JOW	Kunigami	18.08	218	P	P	11 26 20.9	-1.7
	comp=Z,1.4nm,0.3s,baz=310,slow=30,SNR=4.3						
JOW				S	S	11 29 29.8	-7.1
	comp=Z,0.4nm,0.3s,baz=128,slow=27,SNR=3.3						
MA2	Magadan	18.87	16	eP	P	11 26 27.6	-3.4
MA2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
MA2	Magadan	18.87	16	eP	P	11 26 27.2	-3.8
SSE	Sheshan	18.94	242	eP	P	11 26 30.0	-1.8

SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s						
SSE				AMB	AMB		
	comp=Z,70nm,3.5s						
SSE	Sheshan	18.94	242	eP	P	11 26 30.1	-1.7
	comp=Z,18nm,0.8s						
NJ2	Nanjing	19.94	248	eP	P	11 26 44.0	+1.7
NJ2				PP	PP	11 27 10.8	+5.7
NJ2				S	S	11 30 15.0	+0.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,2µm,5.6s						
NJ2				LR	LR		
	comp=N,160nm,13.9s						
NJ2				LR	LR		
	comp=E,180nm,13.8s						
NJ2				LR	LR		
	comp=Z,80nm,15.1s						
CIT	Chita	21.06	308	eP	P	11 26 50.3	-3.2
CIT				e		11 30 42.9	
YAK	Yakutsk	21.32	346	eP	P	11 26 52.6	-3.4
YAK				eS	S	11 30 40.0	+0.1
YAK				e		11 30 54.8	
YAK				e		11 38 04.4	
YAK				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.5						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
YAK				smax			
	comp=N,15nm,1.1s						
YAK				smax			
	comp=Z,6.0nm,0.9s						
YAK				smax			
	comp=E,10.0nm,1.2s						
YAK	Yakutsk	21.32	346	eP	P	11 26 52.3	-3.7
	comp=E,39nm,0.6s,mb4.9						
BOD	Bodaibo	23.30	323	eP	P	11 27 13.6	-1.6
BOD				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
FX1	Attu Island--F	24.43	52	P	P	11 27 27.8	+1.7
FX1				pmax	pmax		
	comp=Z,45nm,0.6s						
FX1	Attu Island--F	24.43	52	P	P	11 27 27.8	+1.7
	comp=Z,45nm,0.6s,mb5.0,baz=8.7,slow=1.1,SNR=14						
FX1	Attu Island--F	24.43	52	eP	P	11 27 27.8	+1.6
ULN	Ulaanbaatar	24.48	296	⇑iP	P	11 27 25.5	-1.2
ULN	Ulaanbaatar	24.48	296	eP	P	11 27 25.2	-1.5
	comp=Z,9.5nm,0.7s,mb4.2						
SONM	Songino Array	24.93	296	P	P	11 27 29.3	-1.5
	comp=Z,3.3nm,0.5s,mb4.0,baz=94,slow=7.9,SNR=26						
SONM				ScP		11 34 29.0	
	comp=Z,1.2nm,0.9s,baz=90,slow=3.7,SNR=5.0						
SONM				LR	LR	11 38 06.5	
	comp=Z,36nm,18.7s,baz=257,slow=38						
XAN	Xi’an	26.12	263	P	P	11 27 41.8	-0.3
IRK	Irkutsk	26.67	306	eP	P	11 27 44.8	-2.2
IRK				e		11 28 42.1	
IRK				pmax	pmax		
	comp=Z,41nm,1.2s,mb4.8						
TLY	Talaya	26.98	304	eP	P	11 27 49.1	-0.7
TLY				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
ZAK	Zakamensk	27.09	301	eP	P	11 27 48.6	-2.2
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb3.9						
MOY	Mondy	28.62	304	eP	P	11 28 03.0	-1.6
LZH	Lanzhou	29.07	271	eP	P	11 28 09.0	+0.3
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
LZH	Lanzhou	29.07	271	eP	P	11 28 09.1	+0.4
LZH				*PP	pP	11 28 33.0	-3.1
LZH				*SP	sP	11 28 52.0	+1.1
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
LZH	Lanzhou	29.07	271	eP	P	11 28 09.1	+0.4
	comp=Z,13nm,1.0s,mb4.5						
LZH				pP	pP	11 28 33.0	-3.1
LZH				sP	sP	11 28 52.0	+1.1
BILL	Bilibino	29.67	19	eP	P	11 28 10.6	-3.2
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.1						
TIXI	Tiksi	30.50	353	⇑iP	P	11 28 17.7	-3.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
TIXI				MLR	MLR		
	comp=Z,100nm,21.0s						
GTA	Gaotai	30.92	279	eP	P	11 28 23.8	-1.4
GTA				AP	pP	11 28 54.3	+1.4
GTA				XP	sP	11 29 07.8	+0.1
KMI	Kunming	35.43	254	P	P	11 29 03.8	-0.2
KMI	Kunming	35.43	254	P	P	11 29 03.7	-0.3
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
KMI	Kunming	35.43	254	P	P	11 29 03.7	-0.3
	comp=Z,7.0nm,1.0s,mb4.5						
WMQ	Urumqi	38.38	291	eP	P	11 29 28.5	-0.1
WMQ				AP	pP	11 29 56.8	-0.4
WMQ				XP	sP	11 30 11.3	-1.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,120nm,4.6s						
WMQ				LR	LR		
	comp=N,220nm,22.0s						
WMQ				LR	LR		
	comp=Z,80nm,21.4s						
NVS	Novosibirsk	39.26	310	⇓iP	P	11 29 34.4	-1.3
NVS				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
NVS				pmax	pmax		
	comp=E,9.0nm,0.8s						
MKAR	Makanchi Array	41.27	297	P	P	11 29 52.0	-0.3
	comp=E,9.2nm,0.5s,mb4.9,baz=85,slow=9.6,SNR=106						
MKAR				PcP	PcP	11 31 48.6	-0.7
	comp=E,1.3nm,0.9s,baz=76,slow=5.9,SNR=2.8						
MKAR				ScP		11 35 25.3	
	comp=E,1.3nm,0.7s,baz=68,slow=6.0,SNR=8.4						
TTA	Tatalina	41.92	38	eP	P	11 29 58.2	+0.9
SVW2	Sparrevohn	42.17	40	eP	P	11 30 00.5	+1.1
CMAR	Chiang Mai Arr	42.40	250	i P	P	11 30 03.0	+1.2
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CMAR	Chiang Mai Arr	42.40	250	P	P	11 30 02.6	+0.7
	comp=Z,1.8nm,0.7s,mb3.9,baz=42,slow=7.5,SNR=8.5						
IMA	Indian Mountai	42.94	33	eP	P	11 30 06.3	+0.7
IMA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
IMA	Indian Mountai	42.94	33	eP	P	11 30 06.3	+0.7
	comp=Z,9.8nm,0.6s,mb4.7						
RSO	Redoubt South	43.60	41	P	P	11 30 10.8	-0.3
KDAK	Kodiak Island	44.03	45	eP	P	11 30 14.6	+0.1
PMR	Palmer	45.22	39	eP	P	11 30 24.0	0.0
PMR				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.9						
PMR	Palmer	45.22	39	eP	P	11 30 24.0	0.0
	comp=Z,14nm,0.6s,mb4.9						
COLA	College	45.42	35	i P	P	11 30 23.2	-2.3
ILAR	Eielson Array	45.84	35	P	P	11 30 29.0	+0.2
	comp=Z,121nm,0.5s,baz=278,slow=6.5,SNR=6.1						
JIRN	Jiri	46.23	270	eP	P	11 30 33.3	+0.9
	comp=Z,4.6nm,0.4s,mb4.6						
GUN	Gumba	46.33	271	eP	P	11 30 33.3	+0.1
	comp=Z,124nm,0.4s						
VOSK	Vostochnaya	46.79	308	P	P	11 30 35.6	-0.8
VOSK				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.6						
KKN	Kakani	46.84	271	eP	P	11 30 37.3	+0.1
	comp=Z,45nm,0.7s,mb5.3						
KKN	Kakani	46.84	271	eP	P	11 30 37.3	+0.1
KKN				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.0						
PKI	Pulchoki	46.86	271	eP	P	11 30 37.4	0.0
	comp=Z,18nm,0.4s,mb5.1						
TKM2	Tokmak 2	47.01	294	P	P	11 30 39.0	+0.6
	SNR=35						
BVA0	Borovoye Array	47.05	309	i P	P	11 30 38.1	-0.4
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
DMN	Daman	47.07	271	eP	P	11 30 38.8	-0.2
	comp=Z,24nm,0.5s,mb5.2						
GKN	Gorkha	47.21	272	eP	P	11 30 39.9	-0.2
	comp=Z,42nm,0.5s,mb5.4						
MENT	Mentasta	47.50	37	eP	P	11 30 43.0	+1.1
KBK	Karagaybulak	47.55	294	P	P	11 30 43.0	+0.5
	SNR=19						
KZA	Kyzart	47.57	293	P	P	11 30 44.0	+1.3
	SNR=8.3						
USP	Ospenovka	47.63	295	P	P	11 30 43.0	-0.1
	SNR=9.1						
AAK	Ala-Archa	47.87	294	P	P	11 30 44.4	-0.7
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
ZRNK	Zerenda	47.87	309	eP	P	11 30 44.4	-0.5
UCH	Uchtor	48.02	294	P	P	11 30 47.0	+0.8
	SNR=6.6						
KOLN	Koldanda	48.11	272	eP	P	11 30 47.0	-0.1
	comp=Z,14nm,0.4s,mb5.1						
EKS2	Erkin-Say	48.35	295	P	P	11 30 48.6	-0.2
	SNR=8.2						
KSM	Kuching	48.56	222	eP	P	11 30 51.1	+0.4
KKAR	Karatay Array	50.38	297	i P	P	11 31 03.1	-1.1
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
INK	Inuvik	50.45	29	⇑iP	P	11 31 04.2	-0.3
INK				pmax	pmax		
	comp=Z,18nm,0.8s						
INK	Inuvik	50.45	29	P	P	11 31 04.5	+0.1
	comp=Z,17nm,0.7s,mb5.1,baz=296,slow=7.1,SNR=5.0						
INK	Inuvik	50.45	29	⇑iP	P	11 31 04.2	-0.3
	comp=Z,18nm,0.8s,mb5.0						
KULM	Kulim	50.88	236	eP	P	11 31 07.5	-1.0
SVE	Sverdlovsk	51.27	316	eP	P	11 31 10.0	-0.9
ARU	Arti	52.49	316	⇓iP	P	11 31 19.0	-0.9
ARU				i SP	sP	11 32 04.8	+0.9
ARU				e		11 32 27.3	
ARU				e		11 33 17.4	
ARU				eS	S	11 38 37.4	+2.7
ARU				e		11 40 51.0	
ARU				eSS	SS	11 42 18.3	+5.0
ARU				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
ARU	Arti	52.49	316	eP	P	11 31 18.9	-1.1
	comp=Z,22nm,1.1s,mb5.1						
AB31	Akbulak array	54.52	307	i P	P	11 31 34.0	-1.0
AB31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
DLBC	Dease Lake	55.28	40	eP	P	11 31 40.7	+0.3
RES	Resolute Bay	58.15	15	eP	P	11 31 58.8	-1.6
ARCES	ARCESS Array B	59.36	338	P	P	11 32 07.5	-1.5
	comp=Z,1.3nm,0.5s,mb4.2,baz=45,slow=8.6,SNR=9.3						
YKA	Yellowknife Ar	60.01	31	P	P	11 32 12.6	-0.8
	comp=Z,1.8nm,0.5s,mb4.3,baz=303,slow=6.9,SNR=23						
YKA				PcP	PcP	11 32 57.5	-0.3
	comp=Z,1.5nm,0.7s,baz=306,slow=3.7,SNR=7.1						
YKA	Yellowknife Ar	60.01	31	P	P	11 32 12.6	-0.8
YKA				PcP	PcP	11 32 57.5	-0.3
FITZ	Fitzroy Crossi	61.20	196	eP	P	11 32 21.0	-1.1
	comp=Z,11nm,0.9s,mb4.9						
WRAB	Tennant Creek	61.69	187	c iP	P	11 32 23.5	-1.9
WB2	Warramunga Arr	61.70	187	eP	P	11 32 23.3	-2.1
WRA	Warramunga Arr	61.70	187	P	P	11 32 23.4	-2.1
	comp=Z,9.9nm,0.7s,mb5.0,baz=4.3,slow=7.1,SNR=186						
WRA				pP	pP	11 32 53.9	-2.4
	comp=Z,2.5nm,0.6s,baz=4.6,slow=7.0,SNR=4.1						
KAF	Kangasniemi	63.84	332	ep	P	11 32 35.4	-3.5
	comp=Z,3.2nm,0.5s,mb4.4,baz=48,slow=6.2						
KAF	Kangasniemi	63.84	332	eP	P	11 32 35.4	-3.5
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
FINES	FINESS Array B	64.37	331	P	P	11 32 41.0	-1.3
	comp=Z,5.4nm,0.5s,mb4.6,baz=44,slow=8.4,SNR=49						
FINES				pP	pP	11 33 12.7	-0.7
	comp=Z,1.5nm,0.6s,baz=45,slow=8.1,SNR=1.6						
MBWA	Marble Bar	65.57	202	eP	P	11 32 49.0	-1.8
	comp=Z,4.2nm,0.5s,mb4.5						
SUMG	Summit	65.93	360	eP	P	11 32 52.4	+0.2
	comp=Z,3.2nm,0.5s,mb4.4						
EDM	Edmonton	65.99	39	eP	P	11 32 51.6	-1.3
NEW	Newport	67.14	45	P	P	11 32 59.8	-0.4
NEW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NEW	Newport	67.14	45	P	P	11 32 59.8	-0.4
	comp=Z,2.9nm,0.7s,mb4.2,baz=315,slow=5.2,SNR=10						
KIV	Kislovodsk	67.42	309	eP	P	11 33 02.4	+0.4
KIV				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
KIV	Kislovodsk	67.42	309	eP	P	11 33 02.4	+0.4
	comp=Z,11nm,0.6s,mb4.9						
YBH	Yreka Blue Hor	67.92	53	P	P	11 33 05.8	+0.7
	comp=Z,6.1nm,0.8s,mb4.5,baz=316,slow=6.9,SNR=10						
HFS	Hagfors	69.54	335	LR	LR	12 04 19.4	
	comp=Z,29nm,19.3s,baz=188,slow=36						
NB2	NORSAR Subarra	69.60	336	P	P	11 33 14.1	-1.0
	comp=Z,2.3nm,0.7s,mb4.1,baz=39,slow=6.2						
NOA	NORSAR Array B	69.60	336	P	P	11 33 14.4	-0.7
	comp=Z,2.6nm,0.7s,mb4.2,baz=38,slow=6.1,SNR=13						
NOA				pP	pP	11 33 45.2	-1.4
	comp=Z,1.5nm,0.7s,baz=39,slow=6.2,SNR=2.5						
ANN	Anapa	69.87	312	eP	P	11 33 16.9	-0.1
FFC	Flin Flon	70.02	33	eP	P	11 33 17.4	-0.4
FFC				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
FFC	Flin Flon	70.02	33	eP	P	11 33 17.4	-0.4
	comp=Z,9.6nm,0.8s,mb4.7						
AKASG	Malin Array Be	70.22	321	P	P	11 33 18.0	-1.1
	comp=Z,2.8nm,0.6s,mb4.3,baz=43,slow=5.9,SNR=19						
AKASG				pP	pP	11 33 48.7	-1.9
	comp=Z,0.4nm,0.4s,baz=41,slow=7.0,SNR=1.7						
AKASG	Malin Array Be	70.22	321	P	P	11 33 18.0	-1.1
AKASG				pP	pP	11 33 48.7	-1.9
HLID	Hailey	71.57	48	eP	P	11 33 26.8	-0.4
	comp=Z,7.5nm,0.9s,mb4.5						
BOZ	Bozeman (W)	71.71	45	eP	P	11 33 28.5	+0.5
BOZ				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
BOZ	Bozeman (W)	71.71	45	eP	P	11 33 28.5	+0.5
	comp=Z,7.3nm,0.6s,mb4.7						
NVAR	Mina Array Bea	72.61	54	P	P	11 33 34.4	+1.0
	comp=Z,7.3nm,0.7s,mb4.6,baz=284,slow=7.1,SNR=24						
NVAR	Mina Array Bea	72.61	54	P	P	11 33 34.4	+1.0
GCMT	Greycliff	72.63	44	eP	P	11 33 34.5	+1.1
ELK	Elko	72.93	50	P	P	11 33 36.4	+1.1
	comp=Z,3.5nm,0.6s,mb4.4,baz=299,slow=6.2,SNR=12						
FORT	Forrest	73.14	191	eP	P	11 33 36.5	-0.2
	comp=Z,9.0nm,0.7s,mb4.7						
STKA	Stephens Creek	73.31	179	⇓iP	P	11 33 37.5	-0.1
	comp=Z,3.4nm,0.8s,mb4.2						
STKA	Stephens Creek	73.31	179	P	P	11 33 37.6	0.0
	comp=Z,4.1nm,0.8s,mb4.3,baz=340,slow=5.1,SNR=9.6						
TPH	Tonopah	73.49	54	eP	P	11 33 38.5	-0.1
TPH				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
TPH	Tonopah	73.49	54	eP	P	11 33 38.5	-0.1
	comp=Z,15nm,1.1s,mb4.7						
TRCR	Troy Canyon	74.29	53	eP	P	11 33 43.6	+0.3
HWUT	Hardware Ranch	74.44	48	eP	P	11 33 44.8	+0.9
	comp=Z,18nm,1.4s,mb4.6						
PDAR	Pinedale Array	74.75	46	P	P	11 33 46.1	+0.4
	comp=Z,9.2nm,0.7s,mb4.6,baz=241,slow=1.0,SNR=27						
OJC	Ojcow	74.80	325	eP	P	11 33 46.1	+0.3
TCUT	Toone Canyon	74.85	48	eP	P	11 33 47.5	+1.1
BRTR	Keskin Array B	75.31	310	P	P	11 33 49.2	+0.2
	comp=Z,0.8nm,0.5s,mb3.7,baz=72,slow=3.9,SNR=4.6						
MPU	Maple Canyon	75.47	49	eP	P	11 33 50.7	+0.9
MWC	Mount Wilson	75.47	57	eP	P	11 33 50.4	+0.4
ULM	Lac du Bonnet	75.84	34	P	P	11 33 51.3	-0.4
	comp=Z,7.7nm,1.0s,mb4.4,baz=298,slow=5.2,SNR=6.7						
ULM	Lac du Bonnet	75.84	34	eP	P	11 33 50.9	-0.8
	comp=Z,7.6nm,0.9s,mb4.4						
DPC	Dobruska-Polom	76.15	327	eP	P	11 33 55.3	+1.8
DPC				ePCP	PcP	11 34 02.1	-3.3
UPC	Upice	76.16	327	eP	P	11 33 54.2	+0.7
MVU	Marysvale	76.16	51	eP	P	11 33 54.7	+0.9
MSU	Marysvale	76.18	51	eP	P	11 33 55.2	+1.3
CLL	Collm	76.71	329	i P	P	11 33 56.7	+0.1
CLL				i		11 34 04.1	
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
CLL	Collm	76.71	329	i P	P	11 33 56.7	+0.1
	comp=Z,4.0nm,0.9s,mb4.2						
CLL				i		11 34 04.1	
CLL	Collm	76.71	329	P	P	11 33 56.7	+0.1
	comp=Z,logA/T=0.6,mb4.1						
CLL				i		11 34 04.1	
CLL				e	pP	11 34 33.0	+4.3
SRU	San Rafael	76.72	49	eP	P	11 33 57.5	+0.6
PVCC	Panska Ves	76.72	328	eP	P	11 33 57.4	+0.8
PVCC				ePCP	PcP	11 34 05.1	-2.7
PFO	Pinyon Flat Ob	76.88	57	eP	P	11 33 58.2	+0.3
PFO				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
PFO	Pinyon Flat Ob	76.88	57	eP	P	11 33 58.2	+0.2
	comp=Z,5.4nm,1.1s,mb4.2						
PRU	Pruhonice	77.15	328	eP	P	11 33 59.7	+0.6
PHWY	Pilot Hill	77.95	45	eP	P	11 34 04.2	+0.6
KHC	Kasperske Hory	78.21	328	eP	P	11 34 05.5	+0.6
KHC				ePCP	PcP	11 34 13.8	-0.5
GERES	GERESS Array B	78.39	327	P	P	11 34 06.3	+0.4
	comp=Z,0.4nm,0.5s,mb3.5,baz=36,slow=4.9,SNR=7.8						
ISCO	Idaho Springs	78.94	46	eP	P	11 34 10.1	+1.0
ISCO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
ISCO	Idaho Springs	78.94	46	eP	P	11 34 10.1	+1.0
	comp=Z,2.1nm,0.7s,mb4.1						
SDCO	Great Sand Dun	80.48	47	eP	P	11 34 18.1	+0.7
GIVF	Givet	80.66	333	eP	P	11 34 17.6	-0.5
BAIF	Baives	80.90	333	eP	P	11 34 18.8	-0.6
SCHQ	Schefferville	80.92	16	P	P	11 34 19.7	+0.4
	comp=Z,3.4nm,1.0s,mb4.1,baz=350,slow=6.1,SNR=3.1						
HAU	Haudompre	81.90	331	eP	P	11 34 25.4	+0.8
MEZF	Maizieres J’vi	81.94	332	eP	P	11 34 26.0	+1.2
ANMO	Albuquerque	81.95	50	i P	P	11 34 23.3	-1.9
LOR	Lormes	83.41	332	eP	P	11 34 32.0	-0.3
	comp=Z,4.5nm,0.7s,mb4.1						
LOR	Lormes	83.41	332	eP	P	11 34 32.0	-0.3
LOR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
LPL	La Plagne	83.85	329	eP	P	11 34 35.4	+0.9
LPG	La Plagne	83.86	329	eP	P	11 34 35.3	+0.8
	comp=Z,4.7nm,0.7s,mb4.1						
LPG	La Plagne	83.86	329	eP	P	11 34 35.3	+0.8
LPG				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
SMF	Signal de Mont	83.95	332	eP	P	11 34 35.0	0.0
GRR	Gorron	84.00	335	eP	P	11 34 35.9	+0.8
KSU1	Kansas State U	84.11	41	eP	P	11 34 35.6	-0.3
MBDF	Montbardon	84.50	329	eP	P	11 34 37.7	0.0
	comp=Z,5.3nm,0.7s,mb4.2						
MBDF	Montbardon	84.50	329	eP	P	11 34 37.7	0.0
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
ORIF	Oris-en-Rattie	84.68	330	eP	P	11 34 39.0	+0.4
	comp=Z,6.5nm,0.8s,mb4.3						
ORIF	Oris-en-Rattie	84.68	330	eP	P	11 34 39.0	+0.4
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
VIVF	Saint-Julien-l	85.18	330	eP	P	11 34 41.5	+0.4
	comp=Z,4.3nm,0.6s,mb4.2						
VIVF	Saint-Julien-l	85.18	330	eP	P	11 34 41.5	+0.4
VIVF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
MFF	Saint Martin d	85.35	334	eP	P	11 34 42.5	+0.6
CAF	Calviac	86.06	332	eP	P	11 34 46.5	+1.1
	comp=Z,10nm,0.8s,mb4.5						
CAF	Calviac	86.06	332	eP	P	11 34 46.5	+1.1
CAF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LASF	Ste Croix	86.15	330	eP	P	11 34 46.5	+0.6
MTLF	Montolieu	87.39	331	eP	P	11 34 53.6	+1.7
CCM	Cathedral Cave	87.50	38	eP	P	11 34 52.9	+0.3
CCM				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0						
CCM	Cathedral Cave	87.50	38	eP	P	11 34 52.9	+0.3
	comp=Z,21nm,1.2s,mb5.0						
TXAR	Lajitas Array	87.65	52	P	P	11 34 54.5	+1.0
	comp=Z,2.1nm,0.6s,mb4.4,baz=295,slow=3.0,SNR=6.7						
TXAR	Lajitas Array	87.65	52	P	P	11 34 54.5	+1.0
EPF	Esparros	88.33	332	eP	P	11 34 57.5	+1.1
ETSF	Etsaut	88.75	333	eP	P	11 35 00.0	+1.6
VNDA	Vanda	119.76	175	PKP	PKPdf	11 40 53.7	+1.3
	comp=Z,0.4nm,0.7s,baz=152,slow=5.0,SNR=3.2						
VNDA	Vanda	119.76	175	PKP	PKPdf	11 40 53.7	+1.3
SDV	Santo Domingo	121.96	37	PKP	PKPdf	11 40 59.4	+1.4
	comp=Z,3.0nm,0.4s,baz=347,slow=6.5,SNR=5.5						
DBIC	Dimbokro	122.40	318	PKP	PKPdf	11 40 59.5	+0.6
	comp=Z,4.8nm,1.0s,baz=221,slow=6.4,SNR=4.4						
MAW	Mawson	123.56	207	PKP	PKPdf	11 41 00.6	+0.7
	comp=Z,1.3nm,0.7s,baz=359,slow=3.2,SNR=3.6						
LPAZ	La Paz	144.51	53	PKIKP	PKPdf	11 41 40.2	+0.4
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
LPAZ	La Paz	144.51	53	PKP	PKPdf	11 41 40.2	+0.4
	comp=Z,1.8nm,0.5s,baz=0.7,slow=4.3,SNR=7.1						
LPAZ	La Paz	144.51	53	ePKP	PKPdf	11 41 40.1	+0.3
SNAA	Sanae	145.09	199	PKP2	PKPab	11 41 39.9	-1.4
SNAA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SNAA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SNAA	Sanae	145.09	199	PKPbc	PKPbc	11 41 39.9	+0.2
	comp=Z,2.3nm,0.4s,baz=200,slow=5.6,SNR=178						
SNAA				pPKPbc		11 42 12.0	
	comp=Z,1.9nm,0.9s,baz=139,slow=4.1,SNR=4.0						
SNAA	Sanae	145.09	199	ePKP	PKPdf	11 41 40.0	+0.7
VNA2	Neumayer--Watz	146.69	198	⇑iP	PKPdf	11 41 45.2	+3.3
VNA2	Neumayer--Watz	146.69	198	e	PKPdf	11 41 47.7	+5.8
VNA3	Neumayer Olymp	146.98	197	⇑iP	PKPdf	11 41 45.4	+3.0
VNA3	Neumayer Olymp	146.98	197	e	PKPdf	11 41 48.0	+5.6
VNA1	Neumayer--Stat	147.09	198	⇑iP	PKPdf	11 41 46.3	+3.7
VNA1	Neumayer--Stat	147.09	198	e	PKPdf	11 41 49.0	+6.4
SIV	San Ignacio	148.18	43	PKP	PKPdf	11 41 47.8	+1.8
	comp=Z,9.0nm,0.6s,baz=292,slow=2.1,SNR=25						
SIV				PKPbc	PKPdf	11 41 51.0	+5.0
	comp=Z,12nm,0.6s,baz=308,slow=3.6,SNR=22						
BDFB	Brasilia	152.88	19	PKPbc	PKPdf	11 42 02.2	+9.1
	comp=Z,5.8nm,0.6s,baz=215,slow=3.6,SNR=6.5						
BDFB				PKPab	PKPab	11 42 13.4	-1.1
	comp=Z,2.0nm,0.5s,baz=199,slow=7.1,SNR=3.2						
CFAA	Coronel Fontan	154.78	76	PKPbc	PKPdf	11 42 05.5	+10
	comp=Z,0.2nm,0.6s,baz=280,slow=4.8,SNR=3.7						
CFAA				PKPab	PKPab	11 42 22.0	0.0
	comp=Z,0.4nm,0.6s,baz=290,slow=5.9,SNR=3.9						
CFAA	Coronel Fontan	154.78	76	PKPbc	PKPdf	11 42 05.5	+10
CFAA				PKPab	PKPab	11 42 22.0	0.0
PLCA	Paso Flores	156.55	98	PKPab	PKPab	11 42 30.2	+0.9
	comp=Z,3.3nm,0.7s,baz=277,slow=7.0,SNR=8.5						
CPUP	Villa Florida	158.60	50	PKPab	PKPab	11 42 37.7	-0.9
	comp=Z,1.4nm,0.7s,baz=352,slow=5.9,SNR=4.1						
CPUP	Villa Florida	158.60	50	PKPab	PKPab	11 42 37.7	-0.9

NEIC ***26*** *11:24:42.0±0.7,24.79S×68.86W,h77^{km}±13^{km}, MD4.1(GUC),Error ellipse: s-maj=18.4km s-min=8.3km az=106.0*

IDC ***26*** *11:24:42.0±2.5,24.83S×68.69W,h73^{km}±22^{km},mb3.9/3, mb1 3.8/7,mb1mx3.5/19,mbtmp4.0/7,Error ellipse: s-maj=47.2km s-min=14.4km az=105.0*

GUC ***26*** *11:24:42.8±0.8,24.83S×69.01W,h40^{km}±4^{km},MD4.1, ML4.4*

ISC 26 11:24:40.2±1.0,**24.86S**±0.04×**68.8W**±0.1,**h73**^{km}±19^{km}, **n14,**σ**0**^{s}**98**/20,**mb3.9**/3,**3C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPN1	Cerro Paranal	1.48	279	⇑iP	P	11 25 05.9	+0.4
CPN1				i S	S	11 25 23.7	-0.4
ANCH	Antofagasta	1.88	308	⇑iP	P	11 25 11.3	+0.4
ANCH				i S	S	11 25 32.7	-0.8
ANCH				AMP		11 25 33.1	
	comp=E,3µm,0.4s						
CRCH	Chaqaral	2.21	228	⇑iP	P	11 25 16.7	+1.1
CRCH				i S	S	11 25 41.5	-0.2
CRCH				AMP		11 25 47.0	
	comp=E,3µm,0.4s						
CPCH	Copiapo	2.85	209	eP	P	11 25 24.9	+0.3
CPCH				i S	S	11 25 58.2	+0.3
CPCH				AMP		11 26 09.1	
	comp=N,4µm,0.1s						
LCO	Las Campanas	4.47	202	eP	P	11 25 46.8	-0.3
LCO				i S	S	11 26 37.2	-1.1
CFAA	Coronel Fontan	6.74	176	P	P	11 26 20.2	+1.6
	comp=N,1.1nm,0.3s,baz=353,slow=13,SNR=82						
CFAA				S	S	11 27 32.8	-1.7
	comp=N,0.1nm,0.3s,baz=245,slow=17,SNR=2.1						
LPAZ	La Paz	8.55	4	P	P	11 26 43.7	+0.3
	comp=N,0.3nm,0.3s,baz=184,slow=13,SNR=6.7						
LPAZ	La Paz	8.55	4	eP	P	11 26 44.0	+0.6
SIV	San Ignacio	11.41	41	P	P	11 27 20.5	-1.7
	comp=N,0.4nm,0.3s,baz=234,slow=15,SNR=8.7						
SIV				S	S	11 29 22.6	-6.1
	comp=N,0.2nm,0.3s,baz=160,slow=23,SNR=2.5						

PLCA	Paso Flores	15.90	185	P	P	11 28 23.7	+3.0
	comp=N,0.1nm,0.3s,baz=346,slow=12,SNR=3.7						
BDFB	Brasilia	21.53	69	P	P	11 29 25.7	+0.7
	comp=N,1.8nm,0.6s,mb3.6,baz=244,slow=9.8,SNR=3.8						
USHA	Ushuaia	29.94	180	P	P	11 30 42.9	-0.5
	comp=N,2.5nm,1.0s,mb3.8,baz=8.1,slow=7.1,SNR=6.8						
DBIC	Dimbokro	69.63	72	P	P	11 35 44.0	-0.1
	comp=N,5.8nm,0.9s,mb4.4,baz=241,slow=6.2,SNR=4.0						
MKAR	Makanchi Array	148.23	39	PKPbc	PKPdf	11 44 18.0	+3.8
	comp=N,0.8nm,0.7s,baz=312,slow=3.8,SNR=5.3						

BJI ***26*** *11:27:38.5, 23.90N×108.71W, h10^{km}, mB5.2, mb5.1, Ms4.5, Msz4.2*

IDC ***26*** *11:27:38.7±1.0, 23.95N×108.57W, mb4.1/9, mb1 4.3/13, mb1mx4.2/26, mbtmp4.1/13, ML3.6/5, MS4.1/22, Ms1 4.1/22, ms1mx4.1/28, Error ellipse: s-maj=20.3km s-min=18.7km az=57.0*

NEIC ***26*** *11:27:42.0±0.7, 23.95N×108.69W, h10^{km}, mb4.7/49, MS4.1/3, Error ellipse: s-maj=11.4km s-min=5.7km az=212.0*

MEX ***26*** *11:27:43.2±0.5, 23.90N×109.09W, h16^{km}±16^{km}, MD4.7*

ISC 26 11:27:42.1±0.5**, 24.16N**±0.05×**108.56W**±0.04**, h10**^{km}**, n143, σ1^{s}42**/130**, mb4.5**/26**, MS4.1**/24**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	1.59	268	*e*S	Pn	11 28 13.9	+3.3
MAIG	Mazatlaan	2.19	116	*i* P	Pn	11 28 21.9	+2.9
MAIG				*i* S	Sn	11 28 48.7	+2.4
SFJM	Santa Fe	6.28	124	*e*P	Pn	11 29 18.0	+0.9
SFJM				*e*S	Sn	11 30 26.0	-3.8
SFJM	Santa Fe	6.28	124	*e*P	Pn	11 29 17.5	+0.4
SFJM				*e*S	Sn	11 30 31.0	+1.2
LTX	Lajitas	6.76	39	*e*P	Pn	11 29 19.4	-4.4
	232nm,1.4s						
TXAR	Lajitas Array	6.76	39	Pn	Pn	11 29 22.0	-1.9
	0.6nm,0.3s,baz=212,slow=14,SNR=44						
TXAR				Sn	Sn	11 30 41.2	-0.5
	1.1nm,0.3s,baz=210,slow=25,SNR=3.9						
TXAR				Lg		11 31 14.2	
	4.1nm,0.3s,baz=218,slow=30,SNR=6.3						
MNTX	Cornudas Mount	8.02	20	*e*P	P	11 29 38.9	-2.6
	48nm,1.2s						
TUC	Tucson	8.35	347	*e*P	P	11 29 40.1	-6.0
	8.4nm,0.9s						
TUC				S	Sb	11 31 49.9	+2.3
PPM	Popocatepetl	10.54	117	*e*P	P	11 30 20.0	+3.6
ANMO	Albuquerque	10.91	9	Pn	P	11 30 21.0	-0.4
	baz=232,slow=13,SNR=2.8						
ANMO				Lg		11 33 25.4	
	baz=85,slow=20,SNR=3.5						
ANMO	Albuquerque	10.91	9	*e*P	P	11 30 22.5	+1.1
	34nm,1.8s						
PFO	Pinyon Flat Ob	11.68	326	*e*P	P	11 30 29.3	-2.6
	47nm,1.5s						
AMTX	Amarillo	12.25	28	*e*P	P	11 30 41.9	+2.3
	11nm,0.9s						
LDFC	Landfair	12.28	334	*e*P	P	11 30 40.8	+0.9
NEN	Nelson	12.68	336	*e*P	P	11 30 44.6	-0.7
MWC	Mount Wilson	13.01	323	P	P	11 30 49.8	+0.1
WMOK	Wichita Mounta	13.55	37	*e*P	P	11 30 55.3	-1.6
	15nm,1.1s						
SDCO	Great Sand Dun	13.79	10	*e*P	P	11 31 01.4	+1.2
	42nm,1.4s						
ARUT	Antelope Range	14.21	344	*e*P	P	11 31 07.5	+1.9
DAC	Darwin (Calif)	14.37	329	*e*P	P	11 31 06.9	-0.7
	37nm,1.0s						
NATX	Nacogdoches	14.42	55	*e*P	P	11 31 08.0	-0.4
	54nm,1.2s						
MVU	Marysvale	14.63	349	*e*P	P	11 31 10.9	-0.2
	42nm,1.4s						
MSU	Marysvale	14.64	349	*e*P	P	11 31 14.1	+2.9
SRU	San Rafael	15.00	354	*e*P	P	11 31 17.1	+1.2
TMUT	Trail Mountain	15.26	352	*e*P	P	11 31 22.5	+3.3
TRCR	Troy Canyon	15.36	339	*e*P	P	11 31 20.8	+0.2
MTUM	Tungsten Hills	15.70	329	*e*P	P	11 31 26.0	+1.0
TPH	Tonopah	15.72	334	*e*P	P	11 31 26.0	+0.8
	154nm,1.4s						
ISCO	Idaho Springs	15.79	8	*e*P	P	11 31 29.6	+3.4
	56nm,1.5s						
MPU	Maple Canyon	16.02	351	P	P	11 31 32.1	+3.0
OMM	Old Mammoth Mi	16.11	329	*e*P	P	11 31 30.8	+0.5
LRV	Little Rabbit	16.26	322	*e*P	P	11 31 33.8	+1.5
DAU	Daniels Canyon	16.36	353	*e*P	P	11 31 34.8	+1.3
MNV	Mina	16.41	332	*e*P	P	11 31 33.8	-0.2
	100nm,1.2s						
NVAR	Mina Array Bea	16.47	332	Pn	P	11 31 34.3	-0.5
	0.1nm,0.3s,baz=165,slow=11,SNR=31						
JLU	Jordanelle	16.57	352	*e*P	P	11 31 38.1	+2.0
CTU	Camp Tracy	16.70	352	*e*P	P	11 31 39.2	+1.4
SAO	San Andreas Ge	16.75	322	P	P	11 31 39.7	+1.3
	36nm,1.4s						
TCUT	Toone Canyon	17.08	353	*e*P	P	11 31 39.4	-3.2
CMB	Columbia Colle	17.12	327	*e*P	P	11 31 42.5	-0.5
	50nm,1.5s						
BGU	Big Grassy Mou	17.13	348	*e*P	P	11 31 40.0	-3.2
PHWY	Pilot Hill	17.29	8	*e*P	P	11 31 47.8	+2.6
ELK	Elko	17.46	343	Pn	P	11 31 48.8	+1.4
	0.1nm,0.3s,baz=177,slow=8.4,SNR=16						
ELK				LR	LR	11 38 51.6	
	comp=Z,815nm,18.1s,baz=165,slow=38						
ELK	Elko	17.46	343	*e*P	P	11 31 48.7	+1.4
	48nm,1.4s						
RWWY	Rawlins	17.52	3	P	P	11 31 50.1	+2.1
	51nm,1.4s						
HWUT	Hardware Ranch	17.58	353	*e*P	P	11 31 49.6	+0.8
	25nm,1.3s						
BMN	Battle Mountai	17.78	338	P	P	11 31 48.8	-2.5
	40nm,1.3s						
WCN	Washoe City	17.82	331	*e*P	P	11 31 51.1	-0.8
	43nm,1.2s						
KSU1	Kansas State U	18.02	31	*e*P	P	11 31 54.2	-0.1
BEKR	Beckwourth	18.55	330	*e*P	P	11 32 00.4	-0.6
	40nm,1.1s						
PDAR	Pinedale Array	18.58	358	P	P	11 32 00.6	-0.6
	0.1nm,0.3s,baz=159,slow=13,SNR=21						
PDAR				LR	LR	11 39 24.8	
	comp=Z,663nm,19.6s,baz=185,slow=38						
PDAR	Pinedale Array	18.58	358	P	P	11 32 00.6	-0.6
PDAR				LR	LR	11 39 24.8	
AHID	Auburn Hatcher	18.68	354	*e*P	P	11 32 02.4	0.0
	59nm,1.5s						
REDW	Red Top Meadow	19.25	355	*e*P	P	11 32 10.6	+1.4
	89nm,1.6s						
RRI2	Red Ridge	19.27	354	*e*P	P	11 32 08.3	-1.2
	106nm,1.5s						
SNOW	Snow King Moun	19.34	355	*e*P	P	11 32 09.5	-0.8
	32nm,1.1s						
TPAW	Teton Pass	19.38	355	*e*P	P	11 32 11.1	+0.4
	58nm,1.4s						
LOHW	Long Hollow	19.48	356	*e*P	P	11 32 11.1	-0.8
	40nm,1.4s						
OXF	Oxford	19.60	54	P	P	11 32 12.7	-0.6
	41nm,1.3s						
MOOW	Moose Ponds	19.62	355	*e*P	P	11 32 13.8	+0.3
	46nm,1.4s						
IMW	Indian Meadow	19.79	355	*e*P	P	11 32 14.4	-0.9
	99nm,1.4s						
GNAR	Gosnell	19.86	49	*e*P	P	11 32 16.0	-0.2
HLID	Hailey	19.95	347	*e*P	P	11 32 15.9	-1.2
	39nm,1.3s						
WVOR	Wild Horse Val	20.05	338	*e*P	P	11 32 16.9	-1.3
	104nm,1.3s						
WDC	Whiskeytown Da	20.14	328	*e*P	P	11 32 15.9	-3.3
	32nm,1.2s						
MOD	Modoc	20.21	334	*e*P	P	11 32 18.2	-1.7
	34nm,1.1s						
RSSD	Black Hills	20.26	9	*e*P	P	11 32 17.1	-3.3
	20nm,1.4s						
YFT	Old Faithful	20.33	355	P	P	11 32 21.9	+0.8
LKWY	Lake	20.41	356	*e*P	P	11 32 21.9	-0.1
	94nm,1.3s						
PARMO	Parma	20.41	48	*e*P	P	11 32 22.5	+0.5
YMR	Madison River	20.55	355	P	P	11 32 25.5	+2.0
YNR	Norris Junctio	20.58	356	P	P	11 32 21.1	-2.6
QLMT	Earthquake Lak	20.75	354	*e*P	P	11 32 27.1	+1.6
PLAL	Pickwick Lake	20.79	54	*e*P	P	11 32 22.9	-3.1
	9.3nm,0.6s						
UTMT	University of	20.86	50	P	P	11 32 27.5	+0.9
	139nm,1.1s						
LRAL	Lakeview Retre	20.87	60	*e*P	P	11 32 25.0	-1.8
	28nm,1.4s						
MCMT	McKenzie Canyo	20.91	351	*e*P	P	11 32 26.9	-0.2
KHMM	Horse Mountain	20.96	326	*e*P	P	11 32 27.8	+0.2
YBH	Yreka Blue Hor	21.12	329	P	P	11 32 26.3	-3.0
	6.4nm,0.9s,mb3.9,baz=198,slow=7.4,SNR=3.0						
YBH	Yreka Blue Hor	21.12	329	*e*P	P	11 32 26.5	-2.8
	9.0nm,1.1s,mb4.0						
SLM	Saint Louis	21.23	43	*e*P	P	11 32 29.9	-0.5
WVT	Waverly	21.49	51	*e*P	P	11 32 33.0	0.0
	49nm,1.4s,mb4.6						
BOZ	Bozeman (W)	21.58	354	*e*P	P	11 32 33.5	-0.4
	68nm,1.5s,mb4.9						
BOZ				LR	LR		
	comp=Z,818nm,19.0s,MS4.2						
GCMT	Greycliff	21.60	358	*e*P	P	11 32 33.9	-0.2
BMO	Blue Mountains	21.84	343	*e*P	P	11 32 34.5	-2.0
	comp=Z,19nm,1.0s,mb4.5						
BMO				LR	LR		
	comp=Z,542nm,19.0s,MS4.0						
HUMO	Hull Mountain	21.92	331	P	P	11 32 36.9	-0.4
	comp=Z,28nm,1.9s,mb4.4						
SWET	Sewanee	22.49	55	*e*P	P	11 32 44.9	+1.9
LAO	LASA Array	22.56	4	*e*P	P	11 32 43.6	0.0
	comp=Z,112nm,1.5s,mb5.1						
HRY	Holter Researc	22.66	354	*e*P	P	11 32 45.5	+0.9
KEBM	Edson Butte	22.76	329	P	P	11 32 47.9	+2.2
CHMT	Chamberlain Mo	23.02	352	*e*P	P	11 32 48.7	+0.5
MSO	Missoula	23.03	351	*e*P	P	11 32 48.6	+0.3
	comp=Z,53nm,1.4s,mb4.8						
WCI	Wyandotte Cave	23.58	48	*e*P	P	11 32 51.9	-1.8
	comp=Z,53nm,1.4s,mb4.8						
WCI				LR	LR		
	comp=Z,598nm,20.0s,MS4.0						
CPCT	Cooper Cave	23.64	56	*e*P	P	11 32 55.0	+0.7
CPCT				*e*		11 33 01.0	
COR	Corvallis	23.66	333	*e*P	P	11 32 53.2	-1.3
	comp=Z,45nm,0.9s,mb4.9						
BLO	Bloomington	23.91	46	*e*P	P	11 32 57.4	+0.5
	comp=Z,6.4nm,0.6s,mb4.2						
TZTN	Tazewell	24.79	54	*e*P	P	11 33 04.6	-0.8
NEW	Newport	25.00	346	P	P	11 33 05.9	-1.4
	comp=Z,4.2nm,0.8s,mb4.0,baz=192,slow=5.8,SNR=6.4						
NEW				LR	LR	11 43 50.4	
	comp=Z,418nm,21.4s,MS3.9,baz=169,slow=39						
NEW	Newport	25.00	346	P	P	11 33 05.9	-1.4
	comp=Z,0.7nm,1.1s,mb3.1						
NEW				LR	LR	11 43 50.4	
JTS	JuntasAbangare	26.37	117	LR	LR	11 43 57.8	
	comp=Z,448nm,21.5s,MS4.0,baz=316,slow=37						
ELN	Prospectdale	27.12	55	*e*P	P	11 33 27.4	+0.3
FWV	Forest Hill	27.20	54	*e*P	P	11 33 27.9	0.0
ULM	Lac du Bonnet	27.86	18	P	P	11 33 32.6	-1.1
	comp=Z,2.5nm,0.7s,mb4.0,baz=208,slow=4.7,SNR=2.8						
ULM				LR	LR	11 44 35.5	
	comp=Z,403nm,20.3s,MS4.0,baz=229,slow=36						
ULM	Lac du Bonnet	27.86	18	*e*P	P	11 33 32.6	-1.1
	comp=Z,39nm,1.5s,mb4.8						
EDM	Edmonton	29.25	354	P	P	11 33 44.9	-1.3
FFC	Flin Flon	30.92	7	*e*P	P	11 33 58.8	-2.3
	comp=Z,11nm,1.4s,mb4.5						
BINY	Binghamton	32.40	48	*e*P	P	11 34 13.1	-1.0
	comp=Z,9.3nm,0.9s,mb4.6						
BINY				*e*		11 34 18.6	
FCC	Fort Churchill	36.07	13	*e*P	P	11 34 47.5	+1.9
	comp=Z,41nm,1.3s,mb5.2						
DLBC	Dease Lake	37.51	342	*e*P	P	11 34 56.4	-1.3
DLBC				*e*		11 35 02.6	
OTAV	Otavalo	37.64	125	*e*P	P	11 35 00.2	+1.0
	comp=Z,23nm,1.6s,mb4.7						
ROSC	El Rosal	38.12	115	LR	LR	11 52 19.4	
	comp=Z,216nm,20.3s,MS4.0,baz=22,slow=39						
YKA	Yellowknife Ar	38.54	356	P	P	11 35 03.6	-2.7
	comp=Z,1.0nm,0.9s,mb3.5,baz=169,slow=7.8,SNR=5.4						
YKA				LR	LR	11 51 19.3	
	comp=Z,505nm,21.2s,MS4.3,baz=150,slow=37						
YKW3	Yellowknife Ar	38.60	356	*e*P	P	11 35 08.4	+1.5
SDV	Santo Domingo	39.25	106	P	P	11 35 08.4	-4.3
	comp=Z,1.1nm,0.3s,mb4.0,baz=2.6,slow=13,SNR=1.9						
SDV				LR	LR	11 53 53.6	
	comp=Z,276nm,19.9s,MS4.1,baz=350,slow=40						
SDV	Santo Domingo	39.25	106	*e*P	P	11 35 13.2	+0.4
	comp=Z,9.7nm,1.1s,mb4.5						
SDV				LR	LR	11 53 53.6	
SJG	San Juan	39.90	90	P	P	11 35 15.4	-2.7
	comp=Z,1.8nm,0.3s,mb4.3,baz=331,slow=15,SNR=3.3						
SCHQ	Schefferville	43.42	34	LR	LR	11 54 23.9	
	comp=Z,221nm,19.1s,MS4.1,baz=328,slow=37						
TAOE	Nuku Hiva Isla	45.03	227	*e*PP	tx	11 36 55.7	
	comp=Z,8µm,41.2s						
TAOE				*e*S	tx	11 42 15.1	
	comp=Z,7µm,36.0s						
TAOE				*e*LQ		11 46 10.9	
	comp=Z,858nm,24.7s						
TAOE				*e*LR	LR	11 47 11.1	
	comp=Z,8µm,34.1s,baz=28						
INK	Inuvik	46.71	348	P	P	11 36 11.3	-1.3
	comp=Z,15nm,1.1s,mb4.8						
PWA	Palmer West	46.76	334	*e*P	P	11 36 16.5	+3.4
	comp=Z,13nm,1.0s,mb4.8						
ILAR	Eielson Array	47.56	339	P	P	11 36 18.6	-0.8
	comp=Z,3.8nm,0.8s,mb4.5,baz=135,slow=8.9,SNR=15						
ILAR				LR	LR	11 56 00.1	
	comp=Z,124nm,19.8s,MS3.9,baz=349,slow=36						
SVW2	Sparrevohn	48.83	332	*e*P	P	11 36 31.8	+2.5
TTA	Tatalina	49.87	334	*e*P	P	11 36 39.9	+2.6
IMA	Indian Mountai	50.62	338	P	P	11 36 44.4	+1.5
	comp=Z,49nm,1.7s,mb5.2						
RKT	Rikitea	53.54	211	*e*P	P	11 36 53.1	-12
	comp=Z,128nm,40.2s						
RKT				*e*S	tx	11 43 45.0	
	comp=Z,112nm,32.5s						
RKT				*e*SS	tx	11 47 14.9	
	comp=Z,90nm,42.5s						
RKT				*e*LR	LR	11 52 06.9	
	comp=Z,256nm,32.8s						
PPT	Papeete	57.63	228	LR	LR	11 55 54.8	
	comp=Z,180nm,18.3s,MS4.2,baz=304,slow=30						
TBI	Tubuai	61.69	223	*e*PP	tx	11 39 45.4	
	comp=Z,52nm,32.5s						
TBI				*e*SS	tx	11 49 21.1	
	comp=Z,113nm,36.2s						
TBI				*e*LQ		11 53 17.3	
	comp=Z,164nm,35.8s						
TBI				*e*LR	LR	11 55 54.3	
	comp=Z,215nm,29.2s,baz=40						
FX1	Attu Island--F	64.14	319	LR	LR	12 03 07.4	
	comp=Z,2.6nm,20.9s,MS2.4,baz=294,slow=33						
CPUP	Villa Florida	70.50	132	LR	LR	12 08 41.5	
	comp=Z,60nm,21.5s,MS3.8,baz=204,slow=35						
JMIC	Jan Mayen	70.59	20	LR	LR	12 08 41.6	
	comp=Z,145nm,19.0s,MS4.2,baz=150,slow=35						
BDFB	Brasilia	71.11	118	LR	LR	12 09 23.8	
	comp=Z,148nm,21.1s,MS4.2,baz=17,slow=35						
ARCES	ARCESS Array B	80.94	15	LR	LR	12 16 13.9	
	comp=Z,138nm,19.0s,MS4.3,baz=18,slow=36						
NOA	NORSAR Array B	82.26	25	P	P	11 40 03.1	-1.5
	comp=Z,0.8nm,0.8s,mb3.7,baz=185,slow=19,SNR=2.5						
NOA				LR	LR	12 15 11.4	
	comp=Z,84nm,20.4s,MS4.1,baz=295,slow=35						
YAK	Yakutsk	82.40	336	P	P	11 40 05.7	+0.3
	comp=Z,16nm,0.9s,mb5.0						
FINES	FINESS Array B	87.22	20	LR	LR	12 18 49.3	
	comp=Z,116nm,20.1s,MS4.3,baz=171,slow=35						
GERES	GERESS Array B	90.95	34	LR	LR	12 21 27.7	
	comp=Z,123nm,19.7s,MS4.3,baz=306,slow=35						
MJAR	Matsushiro Arr	92.80	312	P	P	11 40 53.6	-2.6
	comp=Z,0.3nm,0.4s,mb4.1,baz=74,slow=3.7,SNR=3.4						
MJAR				LR	LR	12 17 39.3	
	comp=Z,108nm,19.9s,MS4.3,baz=60,slow=32						
URZ	Urewera	93.25	229	LR	LR	12 12 20.3	
	comp=Z,166nm,21.9s,MS4.5,baz=217,slow=29						
CN2	Changchun	96.20	324	*e*P	P	11 41 10.3	-1.3
DBIC	Dimbokro	99.67	78	LR	LR	12 28 13.1	
	comp=Z,100nm,19.7s,MS4.3,baz=322,slow=36						
RPZ	Rata Peaks	99.77	227	LR	LR	12 16 24.1	
	comp=Z,170nm,21.3s,MS4.5,baz=9.8,slow=29						
WRA	Warramunga Arr	121.97	261	PKP	PKPdf	11 46 34.7	-5.8
	comp=Z,0.2nm,0.6s,baz=67,slow=2.3,SNR=4.6						
CMAR	Chiang Mai Arr	129.86	325	PKP	PKPdf	11 46 50.6	-5.2
	comp=Z,0.7nm,0.9s,baz=350,slow=32,SNR=2.9						

BJI ***26*** *11:32:02.0, 20.40S×68.29W, h103^{km}, mB4.2*

GUC ***26*** *11:32:03.1±0.7, 19.99S×69.29W, h105^{km}±3^{km}, ML4.8*

NEIC ***26*** *11:32:04.3±0.3, 19.86S×68.93W, mb4.5/17, Error ellipse: s-maj=8.8km s-min=5.8km az=61.0*

IDC ***26*** *11:32:04.1±0.5, 19.84S×68.97W, h102^{km}±4^{km}, mb4.0/19, mb1 4.2/21, mb1mx4.2/23, mbtmp4.4/21, MS3.4/1, Ms1 3.3/1, ms1mx2.5/26, Error ellipse: s-maj=14.9km s-min=11.7km az=71.0*

ISC 26 11:32:02.6±0.3**, 19.84S**±0.04×**68.95W**±0.05**, h104**^{km}**, h104**^{km}±1.6^{km}**:pP-P, n84, σ1^{s}10**/70**, mb4.3**/27**, 1C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.61	13	P	P	11 33 03.2	+5.5
	18nm,0.3s,baz=197,slow=7.2,SNR=236						
LPAZ				S	S	11 33 40.2	+0.6
	3.3nm,0.3s,baz=49,slow=9.6,SNR=4.1						
LPAZ	La Paz	3.61	13	⇓*i*Pn	P	11 33 03.1	+5.4
ANCH	Antofagasta	4.06	199	*e*P	P	11 33 01.1	-2.8
ANCH				*i* S	S	11 33 44.6	-6.0
ARE	Arequipa	4.14	324	*e*P	P	11 33 04.0	-0.9
ARE				*e*		11 33 09.0	
ARE				*e*S	S	11 33 51.0	-1.5
SIV	San Ignacio	8.41	64	P	P	11 34 03.8	+0.6
	15nm,0.3s,baz=258,slow=11,SNR=414						
SIV				S	S	11 35 36.0	-1.2
	0.3nm,0.3s,baz=331,slow=20,SNR=5.8						
CFAA	Coronel Fontan	11.74	177	P	P	11 34 44.2	-3.5
	0.1nm,0.3s,baz=352,slow=14,SNR=4.1						
CFAA				S	S	11 36 59.3	+2.3
	0.1nm,0.3s,baz=178,slow=23,SNR=2.4						
SAML	Samuel	12.18	28	*e*Pn	P	11 34 53.6	0.0
	4.5nm,0.6s						
CPUP	Villa Florida	12.49	123	P	P	11 34 57.7	0.0
	1.0nm,0.3s,baz=321,slow=12,SNR=47						
CPUP	Villa Florida	12.49	123	⇑*e*Pn	P	11 34 57.4	-0.3
	30nm,0.8s						
TRQA	Tornquist	19.14	163	*e*P	P	11 36 17.5	-2.5
	5.3nm,0.8s						
BDFB	Brasilia	20.37	82	P	P	11 36 33.4	+0.4
	8.7nm,0.6s,baz=248,slow=13,SNR=15						
BDFB				LR	LR	11 45 46.6	
	comp=Z,92nm,18.3s,baz=8.8,slow=40						
PLCA	Paso Flores	20.87	183	P	P	11 36 36.6	-1.3
	7.1nm,0.7s,baz=2.2,slow=11,SNR=18						
PLCA	Paso Flores	20.87	183	*e*P	P	11 36 36.5	-1.5
	7.8nm,0.7s						
OTAV	Otavalo	22.02	334	*e*P	P	11 36 52.5	+3.1
	7.2nm,0.9s,mb4.0						
SDV	Santo Domingo	28.59	357	P	P	11 37 50.1	-1.1
	4.7nm,0.5s,mb4.4,baz=338,slow=14,SNR=3.9						
SDV	Santo Domingo	28.59	357	*e*P	P	11 37 50.4	-0.8
	5.3nm,0.5s,mb4.4						
PCRV	Puerto La Cruz	30.12	8	P	P	11 38 04.6	-0.3
	3.9nm,0.3s,mb4.5,baz=329,slow=2.6,SNR=12						
RCBR	Riachuelo	35.01	71	P	P	11 38 47.9	+0.8
SJG	San Juan	37.81	4	P	P	11 39 09.2	-1.4
	15nm,0.6s,mb5.0,baz=130,slow=2.9,SNR=8.3						
SJG	San Juan	37.81	4	*e*P	P	11 39 09.0	-1.6
	10nm,0.6s,mb4.8						
PMSA	Palmer Station	45.03	177	P	P	11 40 10.7	+1.5
	10nm,0.6s,mb4.7						
RGRS	Roger Stewart	53.54	348	*e*P	P	11 41 14.6	-0.2
WVT	Waverly	58.46	342	*e*P	P	11 41 47.8	-2.2
	10nm,0.8s,mb4.9						
TXAR	Lajitas Array	59.25	325	P	P	11 41 54.9	-0.7
	0.8nm,0.8s,mb3.8,baz=148,slow=7.8,SNR=8.3						
MCWV	Mont Chateau	60.05	350	*e*P	P	11 42 00.6	-0.3
	18nm,0.8s,mb5.2						
FVM	French Village	60.95	341	*e*P	P	11 42 05.9	-1.2
	20nm,1.0s,mb5.1						
CCM	Cathedral Cave	61.28	340	*e*P	P	11 42 07.9	-1.4
VNA3	Neumayer Olymp	61.66	162	*e*	P	11 42 11.0	-0.3
VNA3	Neumayer Olymp	61.66	162	*e*	P	11 42 17.6	+6.3
VNA3	Neumayer Olymp	61.66	162	*e*	Px	11 42 30.7	
VNA3	Neumayer Olymp	61.66	162	*e*	pP	11 42 35.9	-1.3
VNA1	Neumayer--Stat	61.86	161	*e*	P	11 42 12.1	-0.6
VNA1	Neumayer--Stat	61.86	161	*e*	P	11 42 18.7	+6.0
VNA1	Neumayer--Stat	61.86	161	*e*	Px	11 42 32.4	
VNA1	Neumayer--Stat	61.86	161	*e*	pP	11 42 38.3	-0.3
ALLY	Alegheny Colle	62.05	351	*e*P	P	11 42 13.8	-0.5
VNA2	Neumayer--Watz	62.23	161	*e*	P	11 42 14.4	-0.7
VNA2	Neumayer--Watz	62.23	161	*e*	P	11 42 20.1	+5.0
VNA2	Neumayer--Watz	62.23	161	*e*	Px	11 42 32.2	
VNA2	Neumayer--Watz	62.23	161	*e*	pP	11 42 39.4	-1.7
SNAA	Sanae	63.86	161	P	P	11 42 25.4	-0.4
	2.7nm,0.7s,mb4.2,baz=251,slow=7.6,SNR=7.8						
SNAA				pP	pP	11 42 51.1	-0.7
	1.8nm,0.9s,baz=291,slow=4.4,SNR=2.9						
SNAA	Sanae	63.86	161	*e*P	P	11 42 24.8	-1.0
	9.4nm,0.9s,mb4.6						
MSNY	Massena	64.74	355	*e*P	P	11 42 32.6	+0.6
SDCO	Great Sand Dun	66.81	329	*e*P	P	11 42 45.5	+0.2
	8.1nm,1.3s,mb4.4						
DBIC	Dimbokro	68.31	74	P	P	11 42 54.5	-0.5
	8.8nm,0.8s,mb4.6,baz=217,slow=3.6,SNR=8.7						
DBIC				pP	pP	11 43 22.4	+1.1
	6.3nm,0.5s,baz=214,slow=8.7,SNR=4.0						
NEN	Nelson	70.25	322	*e*P	P	11 43 07.6	+1.0
MSU	Marysvale	70.80	325	*e*P	P	11 43 11.0	+1.2
ARUT	Antelope Range	70.96	324	P	P	11 43 13.1	+2.3
PDAR	Pinedale Array	72.66	330	P	P	11 43 20.5	-0.2
	0.7nm,0.8s,mb3.5,baz=141,slow=5.8,SNR=4.4						
ULM	Lac du Bonnet	73.73	342	P	P	11 43 26.2	-0.6
	6.4nm,0.7s,mb4.5,baz=151,slow=6.7,SNR=6.2						
OMM	Old Mammoth Mi	74.04	321	*e*P	P	11 43 30.0	+1.1
ELK	Elko	74.04	325	P	P	11 43 29.9	+1.0
	0.3nm,0.4s,mb3.4,baz=115,slow=5.2,SNR=5.1						
MNV	Mina	74.08	322	*e*P	P	11 43 29.7	+0.5
	5.2nm,1.5s,mb4.0						
NVAR	Mina Array Bea	74.17	322	P	P	11 43 30.7	+1.1
	1.4nm,0.7s,mb3.8,baz=143,slow=7.0,SNR=13						
IMW	Indian Meadow	74.17	330	*e*P	P	11 43 30.1	+0.5
	3.6nm,0.9s,mb4.1						
SCHQ	Schefferville	74.39	1	P	P	11 43 30.3	-0.3
	3.3nm,0.5s,mb4.3,baz=196,slow=1.5,SNR=5.8						
SCHQ	Schefferville	74.39	1	P	P	11 43 30.3	-0.3
HLID	Hailey	75.62	328	*e*P	P	11 43 39.1	+1.3
	6.8nm,1.3s,mb4.2						
MCMT	McKenzie Canyo	75.78	329	*e*P	P	11 43 40.4	+1.7
BOZ	Bozeman (W)	75.81	331	*e*P	P	11 43 39.1	+0.3
	8.6nm,1.7s,mb4.2						
SYO	Syowa Base	78.06	160	⇓pP	pP	11 44 16.6	-1.3
VNDA	Vanda	78.47	190	P	P	11 43 53.4	+0.4
	0.6nm,0.8s,mb3.4,baz=141,slow=6.5,SNR=3.9						
VNDA	Vanda	78.47	190	P	P	11 43 53.4	+0.4
YBH	Yreka Blue Hor	78.88	322	P	P	11 43 55.6	-0.4
	2.1nm,0.9s,mb4.0,baz=214,slow=7.7,SNR=3.7						
FFC	Flin Flon	79.45	341	P	P	11 43 58.7	-0.1
EDM	Edmonton	82.25	335	*e*P	P	11 44 12.9	-0.6
BOSA	Boshof	84.26	118	P	P	11 44 24.8	+0.6
	4.7nm,1.0s,mb4.3,baz=290,slow=5.7,SNR=4.2						
BOSA				pP	pP	11 44 52.4	+0.8
	5.1nm,0.9s,baz=251,slow=2.2,SNR=4.3						
ESDC	Sonseca Array	84.68	45	P	P	11 44 27.3	+1.3
	0.2nm,0.4s,mb3.4,baz=251,slow=6.0,SNR=4.6						
MAW	Mawson	85.93	163	P	P	11 44 32.4	+0.8
	1.2nm,0.5s,mb4.1,baz=120,slow=15,SNR=5.3						
MAW				pP	pP	11 44 59.1	+0.1
	1.5nm,0.8s,baz=316,slow=2.2,SNR=1.8						
YKA	Yellowknife Ar	89.61	341	P	P	11 44 49.9	+0.6
	8.7nm,0.7s,mb5.0,baz=133,slow=4.6,SNR=86						
YKA				pP	pP	11 45 16.8	-0.1
	2.1nm,0.7s,baz=136,slow=4.6,SNR=3.8						
YKA	Yellowknife Ar	89.61	341	P	P	11 44 49.9	+0.6
YKA				pP	pP	11 45 16.8	-0.1
YKW3	Yellowknife Ar	89.67	341	*e*P	P	11 44 49.9	+0.3
YKW3				*e*pP	pP	11 45 17.6	+0.4
NOA	NORSAR Array B	102.50	29	P	Pdif	11 45 50.2	+2.3
	0.7nm,0.7s,baz=205,slow=7.4,SNR=3.4						
ZRNK	Zerenda	133.75	34	*e*PKPdf	PKPdf	11 51 09.5	+2.4
WRA	Warramunga Arr	134.36	211	PKP	PKPdf	11 51 10.1	+0.9
	1.1nm,0.6s,baz=160,slow=1.8,SNR=17						
WRA				pPKP		11 51 37.4	
	0.9nm,0.7s,baz=158,slow=1.7,SNR=3.8						
MKAR	Makanchi Array	144.30	35	PKP	PKPdf	11 51 27.1	+0.9
	1.4nm,0.6s,baz=297,slow=2.7,SNR=9.1						
MKAR				pPKP		11 51 54.6	
	0.8nm,0.6s,baz=291,slow=2.2,SNR=2.5						
MKAR				sPKP		11 52 08.0	
	1.1nm,0.7s,baz=45,slow=3.4,SNR=3.6						
MKAR	Makanchi Array	144.30	35	PKP	PKPdf	11 51 27.1	+0.9
MKAR				pPKP		11 51 54.6	
MKAR				sPKP		11 52 08.0	
WMQ	Urumqi	149.13	34	*e*PKP	PKPdf	11 51 34.5	+0.2
WMQ				LR	LR		
	comp=N,40nm,23.0s						
WMQ				LR	LR		
	comp=Z,30nm,22.0s						
MJAR	Matsushiro Arr	150.99	311	PKPbc	PKPdf	11 51 45.4	+7.9
	comp=Z,3.3nm,0.8s,baz=94,slow=1.3,SNR=15						
MJAR				pPKPbc		11 52 12.8	

	comp=Z,1.9nm,0.7s,baz=121,slow=1.2,SNR=4.4						
MAT	**Matsushiro**	150.99	311	eP	PKPdf	11 51 45.0	+7.6
MAT	**Matsushiro**	150.99	311	PKP	PKPdf	11 51 45.3	+7.9
SONM	**Songino Array**	151.82	7	PKP	PKPdf	11 51 41.3	+3.0
	comp=Z,1.2nm,0.9s,baz=216,slow=0.2,SNR=7.6						
SONM				PKPbc	PKPdf	11 51 47.4	+9.1
	comp=Z,3.6nm,0.5s,baz=310,slow=1.4,SNR=30						
SONM				PKPab	PKPab	11 51 56.6	0.0
	comp=Z,0.9nm,0.5s,baz=327,slow=2.9,SNR=4.5						
SONM				pPKPbc		11 52 14.7	
	comp=Z,1.2nm,0.5s,baz=285,slow=1.8,SNR=3.2						
ULN	**Ulaanbaatar**	151.85	6	ePKPbc	PKPdf	11 51 47.2	+8.9
ULN				ePKPab	PKPab	11 51 57.2	+0.4
SSE	**Sheshan**	165.54	323	ePKP	PKPdf	11 51 57.8	+2.9

MAN 26 11:52:51.9, 8.61N×124.66E, h7^{km}, mb4.3, ML3.1, MS2.9, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	0.15	167	⇑iP	Pg	11 52 56.2	+1.1
CGP				eS	Sg	11 52 59.2	+1.8
BUKP	**Musuan**	0.82	151	eP	Pb	11 53 07.8	-0.3
BUKP				eS	Sb	11 53 20.7	+1.5
BUTP	**Butuan**	1.02	69	eP	Pb	11 53 11.7	+0.3
DCPH	**Dipolog City**	1.29	269	⇑eP	Pb	11 53 15.3	-0.8
DCPH				eS	Sb	11 53 34.8	+2.0
TBP	**Tagbilaran**	1.34	324	eP	Pb	11 53 15.0	-1.9
TBP				eS	Sb	11 53 32.1	-1.9
PAGZ	**Pagadian**	1.47	239	eP	Pn	11 53 18.3	-0.6
MSLP	**Maasin**	1.53	7	eP	Pn	11 53 19.1	-0.6
LLP	**Lapu-Lapu**	1.83	338	⇓eP	Pn	11 53 22.4	-1.7
LLP				eS	Sn	11 53 46.0	-1.8
IPIL	**Ipil**	2.22	249	eP	Pn	11 53 30.9	+1.3

IDC 26 11:56:04.6±5.1, 23.78N×108.49W, mb2.9/1, mb1 3.5/5, mb1mx3.4/22, mbtmp3.1/5, ML3.5/4, Error ellipse: s-maj=75.1km s-min=27.0km az=151.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	7.01	37	Pn	Pn	11 57 50.0	-1.1
	0.2nm,0.3s,baz=214,slow=13,SNR=12						
TXAR				Sn	Sn	11 59 09.4	-3.1
	0.0nm,0.3s,baz=259,slow=13,SNR=2.4						
TXAR				Lg		11 59 44.9	
	0.2nm,0.3s,baz=214,slow=33,SNR=3.5						
NVAR	**Mina Array Bea**	16.83	332	Pn	P	12 00 04.8	+1.6
	0.1nm,0.3s,baz=153,slow=8.1,SNR=5.9						
ELK	**Elko**	17.84	343	P	P	12 00 13.3	-2.5
	0.1nm,0.3s,baz=203,slow=9.7,SNR=2.1						
PDAR	**Pinedale Array**	18.95	358	P	P	12 00 28.5	-1.1
	0.0nm,0.3s,baz=172,slow=14,SNR=3.4						
ILAR	**Eielson Array**	47.93	339	P	P	12 04 44.1	-2.2
	0.2nm,0.9s,baz=149,slow=5.3,SNR=3.4						

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*NEIC **26** 11:57:07.8±3.0, 51.56N×16.17E, h5^{km}, ML2.8(VIE), Error ellipse: s-maj=34.6km s-min=8.2km az=26.0*
*WAR **26** 11:57:10.3, 51.45N×16.13E, h1^{km}, ML2.6, Mining Induced*
*PRU **26** 11:57:10.2, 51.40N×16.14E*
ISC 26 11:57:07.7±0.8**, 51.40N**±0.05×**16.11E**±0.04**, n15, σ1^{s}25**/31**, 1C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.57	169	⇓iPg	**Pg**	**11 57 21.5**	**+2.3**
KSP				eSg	**Sg**	**11 57 28.8**	**+2.0**
KSP	**Ksiaz**	0.57	169	i PG	**Pg**	**11 57 21.5**	**+2.3**
KSP				eSG	**Sg**	**11 57 29.5**	**+2.7**
KSP	**Ksiaz**	0.57	169	ePg	**Pg**	**11 57 21.5**	**+2.3**
KSP				eSg	**Sg**	**11 57 29.2**	**+2.4**
DPC	**Dobruska-Polom**	1.06	173	ePG	**Pg**	**11 57 30.2**	**+1.2**
DPC				eSG	**Sg**	**11 57 44.2**	**+1.0**
	11nm,0.2s						
PVCC	**Panska Ves**	1.31	229	ePG	**Pg**	**11 57 34.9**	**+1.0**
BRG	**Berggiesshubel**	1.47	250	Pg	**Pg**	**11 57 37.8**	**+0.8**
BRG				Sg	**Sg**	**11 57 58.2**	**+1.6**
PRU	**Pruhonice**	1.73	216	ePG	**Pg**	**11 57 42.3**	**-0.1**
PRU				eSG	**Sg**	**11 58 05.5**	**0.0**
MORC	**Moravsky Berou**	1.87	150	eP	**Pn**	**11 57 42.1**	**+0.9**
MORC				eS	**Sn**	**11 58 09.6**	**+3.8**
CLL	**Collm**	1.95	268	ePG	**Pg**	**11 57 46.0**	**-0.7**
CLL				eSG	**Sg**	**11 58 13.0**	**+0.2**
OKC	**Ostrava-Krasne**	2.03	140	ePG	**Pg**	**11 57 47.8**	**-0.6**
OKC				eSG	**Sg**	**11 58 13.5**	**-2.0**
NKC	**Novy Kostel**	2.60	245	ePN	**Pn**	**11 57 53.1**	**+1.3**
NKC				eSG	**Sg**	**11 58 33.1**	**-1.3**
	13nm,0.3s						
OJC	**Ojcow**	2.62	115	ePG	**Pg**	**11 57 59.0**	**-1.1**
OJC				eSG	**Sg**	**11 58 34.0**	**-1.0**
KHC	**Kasperske Hory**	2.80	217	ePN	**Pn**	**11 57 55.7**	**+1.1**
KHC				ePG	**Pg**	**11 58 01.8**	**-1.8**
KHC				eSN	**Sn**	**11 58 29.0**	**-0.5**
KHC				eSG	**Sg**	**11 58 38.5**	**-2.4**
MOX	**Moxa**	2.94	257	ePg	**Pg**	**11 58 05.3**	**-1.1**
MOX				eSg	**Sg**	**11 58 45.1**	**-0.5**
MOA	**Molln**	3.75	199	⇑iPN	**Pn**	**11 58 08.4**	**+0.2**
MOA				i SG	**Sg**	**11 59 11.3**	**-1.5**
	1.9nm,0.3s						

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*JMA **26** 11:58:03.3±0.5, 24.01N×122.49E, M2.6*
TAP 26 11:58:03.2, 24.76N×122.30E, h6^{km}, ML3.1, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	0.71	115	P	Pg	11 58 16.6	-0.9
YOJ				S	Sg	11 58 25.9	-1.1
IRIF	**Iriomote-Funau**	1.37	108	P	Pb	11 58 25.5	-3.3
IRIF				eS	Sb	11 58 41.7	-4.7
HATJ	**Hateruma jima**	1.54	117	eS	Sb	11 58 47.8	-3.6
JKRS	**Kuro-shima**	1.64	108	P	Pn	11 58 30.3	-2.5
JKRS				S	Sb	11 58 49.6	-4.7
JIJ	**Ishigaki jima**	1.72	103	P	Pn	11 58 31.9	-2.1
JIJ				S	Sn	11 58 50.5	-6.0

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*IDC **26** 12:01:52.6±4.6, 23.76N×108.47W, mb3.4/3, mb1 3.7/7, mb1mx3.6/23, mbtmp3.4/7, ML3.5/4, Error ellipse: s-maj=74.8km s-min=28.5km az=149.0*
*NEIC **26** 12:01:54.8±4.1, 23.88N×108.43W, h10^{km}, mb3.5/4, Error ellipse: s-maj=58.5km s-min=24.2km az=171.0*
ISC 26 12:01:50.7±1.8**, 23.7N**±0.2×**108.2W**±0.1**, h10^{km}, n15, σ1^{s}31**/16**, mb3.5**/4**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAIG	**Mazatlaan**	1.70	106	i P	**Pn**	**12 02 29.0**	**+8.4**
MAIG				i S	**Sn**	**12 02 42.5**	**0.0**
TXAR	**Lajitas Array**	6.95	35	Pn	**Pn**	**12 03 37.0**	**+1.9**
	0.2nm,0.3s,baz=215,slow=14,SNR=9.2						
TXAR				Lg		12 05 33.7	
	0.4nm,0.3s,baz=214,slow=24,SNR=3.3						
MNTX	**Cornudas Mount**	8.38	17	ePn	**P**	**12 03 54.0**	**-1.2**
	2.4nm,0.7s						
MNV	**Mina**	17.00	332	eP	**P**	**12 05 50.9**	**+0.8**
	5.5nm,1.1s						
NVAR	**Mina Array Bea**	17.06	332	Pn	**P**	**12 05 52.8**	**+1.9**
	0.0nm,0.3s,baz=150,slow=11,SNR=8.0						
ELK	**Elko**	18.03	342	P	**P**	**12 06 03.4**	**+0.4**
	0.1nm,0.3s,baz=175,slow=11,SNR=2.6						
ELK	**Elko**	18.03	342	P	**P**	**12 06 02.8**	**-0.3**
	3.0nm,1.0s						
PDAR	**Pinedale Array**	19.09	357	P	**P**	**12 06 15.3**	**-0.5**
	0.1nm,0.3s,baz=180,slow=10,SNR=5.7						
HLID	**Hailey**	20.50	347	eP	**P**	**12 06 29.5**	**-2.0**
	2.2nm,1.1s						
BOZ	**Bozeman (W)**	22.11	354	P	**P**	**12 06 46.2**	**-1.6**
	3.8nm,1.3s,mb3.7						
DLBC	**Dease Lake**	38.08	342	P	**P**	**12 09 10.6**	**-0.5**
	0.7nm,0.7s,mb3.5,baz=187,slow=17,SNR=2.5						
DLBC	**Dease Lake**	38.08	342	P	**P**	**12 09 10.6**	**-0.5**
YKA	**Yellowknife Ar**	39.05	355	P	**P**	**12 09 21.6**	**+2.4**
	0.8nm,1.0s,mb3.4,baz=168,slow=7.0,SNR=3.7						
YKA	**Yellowknife Ar**	39.05	355	P	**P**	**12 09 21.6**	**+2.4**
ILAR	**Eielson Array**	48.14	339	P	**P**	**12 10 32.0**	**-0.5**
	0.5nm,0.8s,mb3.6,baz=172,slow=5.2,SNR=5.0						

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*NEIC **26** 12:02:19.1, 33.39S×72.41W, h0^{km}, ML3.3(GUC), After GUC.*
GUC 26 12:02:19.1±0.5**, 33.39S×72.41W, h0^{km}**±1^{km}**, MD3.6, ML3.3, 7C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCCH	**Las Cruces**	0.71	97	⇑iP	Pg	12 02 33.5	+0.2
LCCH				i S	Sg	12 02 44.2	+1.6
LNV	**Longovilo**	1.01	124	⇑iP	Pb	12 02 38.2	-0.8
LNV				i S	Sg	12 02 53.1	+0.6
PACH	**Papudo**	1.18	44	i P	Pb	12 02 41.6	-0.4
PACH				i S	Sb	12 02 58.0	+0.4
ROCH	**El Roble**	1.24	71	⇑iP	Pb	12 02 42.9	-0.2
ROCH				i S	Sb	12 03 00.7	+1.2
TACH	**Talagante**	1.26	103	⇑iP	Pb	12 02 42.2	-1.1
TACH				i S	Sb	12 03 00.3	+0.4
SAN	**Santiago**	1.46	93	AMP		12 03 12.4	
	comp=E,807nm,0.6s						
ANTU	**Antumapu**	1.50	97	i S	Sb	12 03 07.1	+0.2
ANTU				AMP		12 03 11.3	
	comp=E,602nm,0.5s						
DSCH	**Colegio Aleman**	1.54	91	i P	Pn	12 02 47.3	-0.5
DSCH				i S	Sb	12 03 08.5	+0.3
DSCH				AMP		12 03 14.9	
	comp=N,950nm,0.5s						
CHCH	**Chadas Angostu**	1.56	111	⇑iP	Pn	12 02 47.3	-0.9
CHCH				i S	Sb	12 03 09.1	+0.2
CLCH	**Cerro Calan**	1.57	91	⇑iP	Pn	12 02 47.6	-0.7
CLCH				i S	Sb	12 03 09.0	+0.1
CLCH				AMP		12 03 15.7	
	comp=E,695nm,0.5s						
PCH	**Pirque**	1.60	99	⇓iP	Pn	12 02 48.2	-0.6
PCH				i S	Sb	12 03 10.3	+0.3
JACH	**Jahuel**	1.68	66	⇑iP	Pn	12 02 49.2	-0.7
JACH				i S	Sb	12 03 12.7	+0.4
SFDO	**San Fernando**	1.68	137	i P	Pn	12 02 49.6	-0.4
SFDO				i S	Sb	12 03 12.4	+0.1
FCH	**Farellones**	1.77	89	i P	Pn	12 02 51.3	+0.1
FCH				i S	Sn	12 03 16.1	+1.3
LMEL	**Las Melosas**	1.90	105	i P	Pn	12 02 52.1	-0.9
LMEL				i S	Sn	12 03 18.1	+0.2
LMEL				AMP		12 03 22.1	
	comp=N,346nm,0.6s						

IDC 26 12:07:48.2±1.6**, 7.48S×154.89E, mb4.1**/5**, mb1 4.3**/6**, mb1mx4.0**/14**, mbtmp4.1**/6**, ML3.2**/1**, Error ellipse: s-maj=53.9km s-min=23.0km az=146.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	7.88	255	Pn	Pn	12 09 46.4	-0.5
	1.7nm,0.3s,baz=24,slow=8.4,SNR=9.4						
PMG				Sn	Sn	12 11 17.2	-0.8
	0.6nm,0.3s,baz=131,slow=20,SNR=2.5						
WRA	**Warramunga Arr**	23.46	236	P	P	12 12 58.2	-2.2
	2.5nm,0.8s,baz=61,slow=9.8,SNR=19						
SONM	**Songino Array**	69.68	327	P	P	12 19 00.1	-1.7
	0.7nm,0.5s,baz=144,slow=6.6,SNR=7.4						
MKAR	**Makanchi Array**	83.69	319	P	P	12 20 18.9	-1.4
	1.4nm,0.7s,baz=101,slow=6.2,SNR=10.0						
ILAR	**Eielson Array**	83.86	21	P	P	12 20 18.8	-2.0
	1.0nm,0.5s,baz=253,slow=4.8,SNR=19						
NVAR	**Mina Array Bea**	92.10	52	P	P	12 21 01.6	+0.6
	2.1nm,1.1s,baz=240,slow=4.9,SNR=7.2						

IDC 26 13:43:16.7±4.3**, 16.10S×178.02W, mb4.1**/2**, mb1 4.3**/2**, mb1mx3.7**/14**, mbtmp4.1**/2**, 1C-2D, Error ellipse: s-maj=175.2km s-min=49.9km az=136.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	39.84	239	⇓iP	P	13 50 52.1	-1.6
	2.0nm,0.6s						
STKA	**Stephens Creek**	39.84	239	P	P	13 50 52.1	-1.6
	1.6nm,0.3s,baz=88,slow=10,SNR=16						
WB2	**Warramunga Arr**	45.34	258	⇑iP	P	13 51 36.9	-1.8
WRA	**Warramunga Arr**	45.35	258	P	P	13 51 36.9	-1.9
	0.6nm,0.3s,baz=94,slow=7.8,SNR=47						
KAKA	**Kakadu**	48.01	267	⇓iP	P	13 51 59.7	-0.2
	2.5nm,0.2s						
GERES	**GERESS Array B**	145.97	346	PKPbc	PKPbc	14 02 57.5	-0.9
	0.2nm,0.6s,baz=27,slow=4.4,SNR=3.8						

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*BUC **26** 13:59:46.7±0.3, 45.57N×26.48E, h137^{km}, MD4.1/5, Error ellipse: s-maj=5.5km s-min=5.1km az=94.0*
*NEIC **26** 13:59:46.8±1.5, 45.55N×26.45E, h141^{km}±16^{km}, Error ellipse: s-maj=12.0km s-min=8.6km az=194.0*
*SOF **26** 13:59:47.0, 45.61N×26.38E, h32^{km}, MD3.0*
*CSEM **26** 13:59:47.0±0.1, 45.59N×26.44E, h124^{km}±1^{km}, MD4.1/5, Error ellipse: s-maj=2.4km s-min=2.0km az=131.0*
ISC 26 13:59:46.9±0.6**, 45.56N**±0.03×**26.52E**±0.05**, h132^{km}**±5^{km}**, n41, σ0^{s}92**/66**, 21C-6D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	**Plostina**	0.31	17	⇓eP	**P**	**14 00 02.1**	**-3.3**
PLOR				S	**S**	**14 00 19.3**	**-0.3**
VRI	**Vrincioaia**	0.34	25	⇑iP	**P**	**14 00 06.3**	**+0.7**
VRI				i S	**S**	**14 00 20.0**	**+0.2**
VRI	**Vrincioaia**	0.34	25	⇑iP	**P**	**14 00 06.3**	**+0.7**
VRI				i S	**S**	**14 00 20.0**	**+0.2**
BRD	**Bordesti**	0.36	90	⇑iP	**P**	**14 00 07.5**	**+1.9**
BRD	**Bordesti**	0.36	90	⇑iP	**P**	**14 00 07.5**	**+1.9**
MLR	**Muntele Rosu**	0.41	261	⇑iP	**P**	**14 00 06.3**	**+0.4**
MLR				i S	**S**	**14 00 20.3**	**0.0**
MLR	**Muntele Rosu**	0.41	261	⇑iP	**P**	**14 00 06.3**	**+0.4**
MLR				i S	**S**	**14 00 20.3**	**0.0**
ISR	**Istrita**	0.44	178	⇑iP	**P**	**14 00 06.8**	**+0.8**
ISR	**Istrita**	0.44	178	⇑iP	**P**	**14 00 06.8**	**+0.8**
SULR		0.90	192	⇑iP	**P**	**14 00 09.9**	**+0.7**
SULR				i S	**S**	**14 00 27.0**	**+0.7**
VOIR		1.04	264	⇑iP	**P**	**14 00 10.5**	**-0.2**
VOIR				i S	**S**	**14 00 26.7**	**-1.9**
VOIR		1.04	264	⇑iP	**P**	**14 00 10.5**	**-0.1**
VOIR				i S	**S**	**14 00 26.7**	**-1.9**
AMRR		1.11	148	⇑iP	**P**	**14 00 12.0**	**+0.7**
AMRR				i S	**S**	**14 00 29.9**	**+0.1**
BUC	**Bucharest**	1.18	195	i S	**S**	**14 00 31.9**	**+0.8**
CFR	**Carcaliu**	1.20	108	⇑iP	**P**	**14 00 12.7**	**+0.4**
CFR				i S	**S**	**14 00 30.5**	**-1.0**
CFR	**Carcaliu**	1.20	108	⇑iP	**P**	**14 00 12.7**	**+0.5**
CFR				i S	**S**	**14 00 30.5**	**-1.0**
BUC1	**Bucharest**	1.26	196	⇑iP	**P**	**14 00 13.1**	**+0.2**
BUC1				i S	**S**	**14 00 31.9**	**-0.7**
BUC1	**Bucharest**	1.26	196	⇑iP	**P**	**14 00 13.1**	**+0.2**
BUC1				i S	**S**	**14 00 31.9**	**-0.7**
HARR	**Harsova**	1.32	130	⇓iP	**P**	**14 00 14.1**	**+0.5**
HARR				i S	**S**	**14 00 32.6**	**-1.4**
HARR	**Harsova**	1.32	130	⇓iP	**P**	**14 00 14.1**	**+0.5**
HARR				i S	**S**	**14 00 32.6**	**-1.4**
TLCR		1.66	102	⇑iP	**P**	**14 00 17.8**	**+0.5**
TLCR				i S	**S**	**14 00 40.4**	**-0.2**
TLCR		1.66	102	⇑iP	**P**	**14 00 17.8**	**+0.4**
TLCR				i S	**S**	**14 00 40.4**	**-0.2**
TIRR	**Tirgusor**	1.73	129	eS	**P**	**14 00 19.3**	**+1.1**
IAS	**Iasi**	1.79	23	⇓iP	**P**	**14 00 19.1**	**+0.2**
IAS				i S	**S**	**14 00 42.3**	**-1.0**
IAS	**Iasi**	1.79	23	⇓iP	**P**	**14 00 19.1**	**+0.2**
IAS				i S	**S**	**14 00 42.3**	**-1.0**
KIS	**Kishinev**	2.15	47	⇓iP	**P**	**14 00 22.0**	**-1.3**
	840nm,0.5s						
KIS				i S	**S**	**14 00 48.0**	**-3.1**
	640nm,0.5s						
PSN	**Preselentsi**	2.22	147	eP	**P**	**14 00 25.0**	**+0.8**
BURAR	**Bucovina Array**	2.25	337	⇑iP	**P**	**14 00 26.0**	**+1.4**
BURAR				S	**S**	**14 00 55.0**	**+1.8**
SZH	**Strazhica**	2.33	191	i P	**P**	**14 00 25.0**	**-0.6**
PRD	**Provadia**	2.44	165	i P	**P**	**14 00 27.5**	**+0.4**
PVL	**Pavlikeni**	2.49	200	i P	**P**	**14 00 28.0**	**+0.3**
DRGR		2.92	296	⇑iP	**P**	**14 00 32.4**	**-0.9**
DRGR				i S	**S**	**14 01 08.8**	**+0.2**
DRGR		2.92	296	⇑iP	**P**	**14 00 32.4**	**-1.0**
DRGR				i S	**S**	**14 01 08.9**	**+0.2**
PGB	**Panagyurishte**	3.45	210	i P	**P**	**14 00 40.5**	**+0.1**
ZAPS	**Zavoj/Pirot**	3.59	232	ePn	**P**	**14 00 40.5**	**-1.8**
ZAPS				Sn	**S**	**14 01 18.7**	**-5.9**
BOLS	**Boljevac**	3.68	244	e	**P**	**14 00 43.4**	**0.0**
BOLS				Sn	**S**	**14 01 16.0**	**-11**
VTS	**Vitosha**	3.80	220	i P	**P**	**14 00 44.0**	**-1.1**
KDZ	**Kurdzhali**	3.98	192	i P	**P**	**14 00 47.0**	**-0.5**
RZN	**Rozhen**	4.08	199	i P	**P**	**14 00 48.5**	**-0.3**
KKB	**Krupnik**	4.45	215	i P	**P**	**14 00 54.0**	**+0.3**
MMB	**Musomiste**	4.45	208	eP	**P**	**14 00 53.5**	**-0.2**

ISC 26 14:54:54.2±1.2**, 39.66N**±0.06×**29.4E**±0.1**, h3^{km}**±21^{km}**, n7, σ0^{s}66**/8**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULDT	**Uludag**	0.53	335	i P	**Pg**	**14 55 04.9**	**+0.1**
GDZ	**Gediz**	0.57	176	i P	**Pg**	**14 55 05.7**	**+0.1**
YLV	**Yalova**	0.91	357	PG	**Pg**	**14 55 11.7**	**-0.6**
YLV				SG	**Sg**	**14 55 24.9**	**+0.5**
KCT	**Karacabey**	1.02	307	PG	**Pg**	**14 55 14.4**	**-0.2**
ESKT	**Eskisehir**	1.11	97	PN	**Pn**	**14 55 15.8**	**-0.8**
ESKT	**Eskisehir**	1.11	97	i P	**Pb**	**14 55 16.3**	**+0.6**
MANT	**Manisa**	1.35	210	i P	**Pb**	**14 55 20.1**	**+0.3**

IDC 26 15:45:32.2±12.0**, 6.29S×129.95E, h105^{km}**±117^{km}**, mb3.6**/2**, mb1 3.5**/3**, mb1mx3.2**/12**, mbtmp3.8**/3**, ML3.5**/1**, Error ellipse: s-maj=154.6km s-min=39.6km az=61.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	14.22	163	P	P	15 48 48.9	-1.0
	0.3nm,0.3s,baz=346,slow=12,SNR=20						
WRA				S	S	15 51 21.1	-4.2
	0.6nm,0.3s,baz=333,slow=23,SNR=6.2						
STKA	**Stephens Creek**	27.68	158	P	P	15 51 10.4	-2.1
	0.7nm,0.4s,baz=334,slow=10,SNR=6.7						
MKAR	**Makanchi Array**	67.61	327	P	P	15 56 17.8	-2.0
	0.8nm,0.6s,baz=121,slow=7.9,SNR=4.1						

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*NIED **26** 15:46:00, 40.40N×142.30E, h53^{km}, Mw4.2 Best double couple: M$_0$2.44×10^{15} NP1:φ$_s$320°, δ82°, λ74°. NP2:φ$_s$205°, δ18°, λ154°.*
*MOS **26** 15:46:34.2±1.2, 40.50N×142.21E, h49^{km}, mb4.5/5, Error ellipse: s-maj=15.2km s-min=7.2km az=75.7*
*BJI **26** 15:46:34.8, 40.39N×142.45E, h78^{km}, mB4.6, mb4.5*
*JMA **26** 15:46:35.5±0.1, 40.38N×142.26E, h41^{km}±1^{km}, M4.1*
JMA Felt II J1.
*NEIC **26** 15:46:36.8±0.4, 40.48N×142.16E, mb4.4/13, Error ellipse: s-maj=10.2km s-min=6.1km az=133.0*
NEIC Felt at Misawa. Recorded [2 JMA] in Aomori and [1 JMA] in Iwate Prefectures.
*IDC **26** 15:46:36.3±0.6, 40.29N×142.06E, h55^{km}±4^{km}, mb3.7/15, mb1 4.0/18, mb1mx3.9/24, mbtmp4.1/18, MS3.2/5, Ms1 3.3/5, ms1mx3.0/20, Error ellipse: s-maj=15.8km s-min=11.6km az=103.0*
ISC 26 15:46:34.6±0.6**, 40.43N**±0.04×**142.23E**±0.07**, h53^{km}**±5^{km}**, h54^{km}**±1.2^{km}**:pP-P, n78, σ0^{s}97**/80**, mb4.2**/27**, MS3.3**/4**, 1C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JANG	**Nango**	0.55	265	⇓P	**P**	**15 46 47.1**	**+0.4**
JANG				S	**S**	**15 46 55.0**	**-0.5**
JTH	**Tanohata**	0.56	210	⇓P	**P**	**15 46 46.6**	**-0.3**
JTH				S	**S**	**15 46 54.6**	**-1.2**
JKZ	**Kuzumaki**	0.82	238	⇓P	**P**	**15 46 50.8**	**+0.6**
JKZ				S	**S**	**15 47 01.5**	**-0.2**
JTM	**Tenmabayashi**	0.95	293	⇓P	**P**	**15 46 52.6**	**+0.6**
JTM				S	**S**	**15 47 05.2**	**+0.3**
JOM	**Ohasama**	1.19	217	⇓P	**P**	**15 46 55.8**	**+0.5**
JOM				eS	**S**	**15 47 11.1**	**+0.3**
JAH	**Hinai**	1.24	259	⇓P	**P**	**15 46 56.8**	**+0.7**
JAH				S	**S**	**15 47 11.8**	**-0.2**
ASAJ	**Asahikawa**	3.70	4	P	**P**	**15 47 31.7**	**+0.9**
ASAJ				S	**S**	**15 48 18.4**	**+4.9**
ASAJ				pmax	pmax		
	comp=Z,15nm,0.3s						
ASAJ				smax			
	comp=N,18nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,222nm,20.5s						
ASAJ	**Asahikawa**	3.70	4	P	**P**	**15 47 31.6**	**+0.9**
	comp=Z,15nm,0.3s,baz=238,slow=8.2,SNR=65						
ASAJ				S	**S**	**15 48 18.4**	**+4.9**
	comp=Z,18nm,0.3s,baz=348,slow=30,SNR=6.2						
ASAJ				LR	LR	15 49 37.0	
	comp=Z,222nm,20.5s,baz=168,slow=47						
YUK	**Yuzh-Kuril'sk**	4.50	36	eP	**P**	**15 47 38.5**	**-3.6**
YUK				i S	**S**	**15 48 28.1**	**-5.6**
YUK				pmax	pmax		
	comp=N,150nm,0.5s						
YUK				pmax	pmax		
	comp=E,120nm,0.5s						
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				smax			
	comp=N,760nm,0.5s						
YUK				smax			
	comp=E,420nm,0.5s						
YUK				smax			
	comp=N,2μm,2.0s						
YUK				smax			
	comp=E,2μm,2.0s						
MAJO	**Matsushiro**	5.00	220	eP	**P**	**15 47 49.4**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,91nm,0.5s						
MAJO	**Matsushiro**	5.00	220	ePn	**P**	**15 47 49.4**	**+0.3**
	comp=Z,92nm,0.5s						
MAT	**Matsushiro**	5.00	220	eP	**P**	**15 47 50.0**	**+1.0**
MAT				pmax	pmax		
	comp=Z,105nm,0.9s						
MAT	**Matsushiro**	5.00	220	eP	**P**	**15 47 50.0**	**+1.0**
	comp=Z,105nm,0.9s						
MAT				S	**S**	**15 49 04.0**	**+18**
MAT	**Matsushiro**	5.00	220	P	**P**	**15 47 50.0**	**+1.0**
MAT				eS	**S**	**15 48 41.7**	**-4.5**
MJAR	**Matsushiro Arr**	5.00	220	P	**P**	**15 47 50.1**	**+1.1**
	comp=Z,9.9nm,0.3s,baz=31,slow=12,SNR=316						
KUR	**Kuril'sk**	6.34	39	⇑iP	**P**	**15 48 04.0**	**-3.8**
KUR				S	**S**	**15 49 13.0**	**-6.7**
KUR				pmax	pmax		
	comp=N,30nm,0.7s						
KUR				pmax	pmax		
	comp=E,30nm,0.7s						
KUR				pmax	pmax		
	comp=Z,90nm,0.7s						
KUR				smax			
	comp=N,60nm,0.6s						
KUR				smax			
	comp=E,80nm,0.6s						
YSS	**Yuzh-Sakhalins**	6.54	3	eP	**P**	**15 48 10.2**	**-0.3**
YSS				pmax	pmax		
	comp=Z,33nm,0.9s						
YSS	**Yuzh-Sakhalins**	6.54	3	ePn	**P**	**15 48 10.2**	**-0.3**
	comp=Z,33nm,0.9s						
JHJ	**Hachijo jima 2**	7.55	196	P	**P**	**15 48 21.3**	**-3.3**
	comp=Z,31nm,0.3s,baz=40,slow=18,SNR=8.4						
MDJ	**Mudanjiang**	10.22	298	P	**P**	**15 49 04.8**	**+3.5**
MDJ				AMB	AMB		
	comp=Z,40nm,5.2s						
MDJ	**Mudanjiang**	10.22	298	Pn	**P**	**15 49 01.9**	**+0.6**
KS15	**Wonju Array Si**	11.56	260	Pn	**P**	**15 49 19.3**	**-0.1**
JNU	**Nakatsue**	11.65	235	LR	LR	15 53 33.3	
	comp=Z,101nm,21.3s,baz=355,slow=36						
CBIJ	**Chichi jima**	13.30	180	P	**P**	**15 49 38.4**	**-4.1**
	comp=Z,6.7nm,0.3s,baz=288,slow=17,SNR=3.9						
MA2	**Magadan**	19.91	13	eP	**P**	**15 51 04.5**	**+0.3**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MA2	**Magadan**	19.91	13	eP	**P**	**15 51 04.5**	**+0.3**
	comp=Z,6.4nm,0.6s						
YAK	**Yakutsk**	22.93	345	eP	**P**	**15 51 32.6**	**-1.9**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.4						
YAK	**Yakutsk**	22.93	345	eP	**P**	**15 51 32.6**	**-1.9**
	comp=Z,8.8nm,0.6s,mb4.4						
SEY	**Seymchan**	23.34	12	eP	**P**	**15 51 29.1**	**-9.4**
ULN	**Ulaanbaatar**	26.14	298	eP	**P**	**15 52 04.9**	**-0.5**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						

ULN	Ulaanbaatar	26.14	298	*e*P	P	15 52 04.9	-0.5
	comp=Z,0.9nm,0.7s,mb3.4						
SONM	Songino Array	26.58	298	P	P	15 52 09.2	-0.2
	comp=Z,0.5nm,0.5s,mb3.4,baz=89,slow=7.6,SNR=7.5						
SONM				LR	LR	16 03 14.2	
	comp=Z,52nm,19.3s,MS3.1,baz=64,slow=38						
SONM	Songino Array	26.58	298	P	P	15 52 09.2	-0.2
SONM				LR	LR	16 03 14.2	
ZAK	Zakamensk	28.80	303	*e*P	P	15 52 29.0	-0.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.5						
BILL	Bilibino	30.60	18	*e*P	P	15 52 46.7	+1.4
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.5						
BILL	Bilibino	30.60	18	*e*P	P	15 52 45.5	+0.2
	comp=Z,1.7nm,0.6s,mb4.0						
WMQ	Urumqi	39.98	293	*e*P	P	15 54 06.5	+1.1
WMQ				AP	pP	15 54 22.0	+2.6
WMQ				XP	sP	15 54 29.0	+3.2
MKAR	Makanchi Array	42.94	299	P	P	15 54 29.3	-0.4
	comp=Z,1.8nm,0.6s,mb4.0,baz=84,slow=11,SNR=18						
MKAR	Makanchi Array	42.94	299	P	P	15 54 29.3	-0.4
CMAR	Chiang Mai Arr	43.05	252	P	P	15 54 30.4	-0.6
	comp=Z,0.7nm,0.6s,mb3.6,baz=51,slow=6.4,SNR=5.3						
CMAR				LR	LR	16 15 43.8	
	comp=Z,54nm,18.4s,MS3.5,baz=86,slow=41						
KDAK	Kodiak Island	44.19	44	*e*P	P	15 54 40.0	+0.4
	comp=Z,5.0nm,0.8s,mb4.3						
GUN	Gumba	47.54	273	*e*P	P	15 55 07.2	+0.6
	comp=Z,32nm,0.6s,mb5.5						
KKN	Kakani	48.05	273	*e*P	P	15 55 10.7	+0.1
	comp=Z,25nm,0.8s,mb5.3						
KKN	Kakani	48.05	273	*e*P	P	15 55 10.7	+0.1
KKN				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
DMN	Daman	48.28	273	*e*P	P	15 55 11.2	-1.1
	comp=Z,14nm,0.8s,mb5.1						
GKN	Gorkha	48.44	274	*e*P	P	15 55 13.8	+0.2
	comp=Z,8.1nm,0.5s,mb5.0						
BVAR	Borovoye Array	48.81	310	P	P	15 55 15.9	-0.2
	comp=Z,1.2nm,0.4s,mb4.3,baz=76,slow=9.1,SNR=9.1						
KOLN	Koldanda	49.34	274	*e*P	P	15 55 20.6	0.0
	comp=Z,14nm,0.9s,mb5.0						
ZRNK	Zerenda	49.64	311	*e*P	P	15 55 22.1	-0.4
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ZRNK	Zerenda	49.64	311	*e*P	P	15 55 22.1	-0.4
	comp=Z,1.9nm,0.6s,mb4.3						
INK	Inuvik	51.09	28	*e*P	P	15 55 33.6	+0.3
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
INK	Inuvik	51.09	28	P	P	15 55 34.1	+0.7
	comp=Z,2.1nm,0.7s,mb4.2,baz=269,slow=6.4,SNR=4.9						
INK	Inuvik	51.09	28	*e*P	P	15 55 33.6	+0.3
	comp=Z,2.5nm,0.8s,mb4.2						
WRA	Warramunga Arr	60.50	189	P	P	15 56 39.8	-1.9
	comp=Z,2.3nm,0.7s,mb4.5,baz=8.0,slow=7.0,SNR=15						
YKA	Yellowknife Ar	60.57	31	P	P	15 56 40.7	-0.8
	comp=Z,0.5nm,0.6s,mb3.8,baz=310,slow=5.5,SNR=4.4						
YKA	Yellowknife Ar	60.57	31	P	P	15 56 40.7	-0.8
ARCES	ARCESS Array B	61.06	339	P	P	15 56 43.5	-1.2
	comp=Z,2.7nm,1.0s,mb4.3,baz=45,slow=7.7,SNR=3.1						
FINES	FINESS Array B	66.12	332	P	P	15 57 17.4	-0.5
	comp=Z,1.3nm,0.7s,mb4.1,baz=46,slow=7.9,SNR=7.7						
FINES				pP	pP	15 57 32.4	-0.4
	comp=Z,1.7nm,0.4s,baz=45,slow=8.2,SNR=3.2						
YBH	Yreka Blue Hor	67.79	54	P	P	15 57 30.1	+1.3
	comp=Z,1.2nm,0.6s,mb4.1,baz=344,slow=7.4,SNR=4.0						
NB2	NORSAR Subarra	71.31	337	P	P	15 57 49.8	-0.1
	comp=Z,0.1nm,0.6s,mb2.9,baz=43,slow=6.2						
NOA	NORSAR Array B	71.31	337	P	P	15 57 49.9	0.0
	comp=Z,0.7nm,0.6s,mb3.8,baz=38,slow=6.1,SNR=3.5						
NOA				sP	sP	15 58 13.0	+2.3
	comp=Z,0.9nm,0.6s,baz=37,slow=6.0,SNR=2.4						
NOA				LR	LR	16 35 58.6	
	comp=Z,13nm,18.5s,MS3.2,baz=270,slow=42						
BOZ	Bozeman (W)	71.85	45	*e*P	P	15 57 53.2	-0.2
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BOZ	Bozeman (W)	71.85	45	*e*P	P	15 57 53.2	-0.2
	comp=Z,2.5nm,0.6s,mb4.3						
AKASG	Malin Array Be	72.01	322	P	P	15 57 54.0	-0.3
	comp=Z,0.5nm,0.5s,mb3.7,baz=46,slow=6.4,SNR=4.8						
AKASG				pP	pP	15 58 09.1	-0.3
	comp=Z,0.6nm,0.4s,baz=44,slow=6.2,SNR=4.6						
AKASG	Malin Array Be	72.01	322	P	P	15 57 54.0	-0.3
AKASG				pP	pP	15 58 09.1	-0.3
NVAR	Mina Array Bea	72.47	54	P	P	15 57 59.5	+2.3
	comp=Z,1.1nm,0.9s,mb3.8,baz=305,slow=5.5,SNR=7.0						
NVAR				pP	pP	15 58 14.2	+1.9
	comp=Z,1.3nm,0.9s,baz=307,slow=5.6,SNR=5.8						
NVAR	Mina Array Bea	72.47	54	P	P	15 57 59.5	+2.3
NVAR				pP	pP	15 58 14.2	+1.9
PDAR	Pinedale Array	74.85	46	P	P	15 58 11.7	+0.7
	comp=Z,0.7nm,0.6s,mb3.8,slow=1.5,SNR=5.0						
PDAR				pP	pP	15 58 26.6	+0.5
	comp=Z,0.6nm,0.6s,SNR=4.0						
CLL	Collm	78.47	330	*e**PP	pP	15 58 47.0	+0.7
GERES	GERESS Array B	80.17	328	pP	pP	15 58 56.4	+0.7
	comp=Z,0.5nm,0.8s,baz=8.1,slow=6.9,SNR=3.4						
TXAR	Lajitas Array	87.56	53	P	P	15 59 20.4	+2.4
	comp=Z,0.4nm,0.8s,mb3.7,baz=323,slow=6.3,SNR=5.2						
TXAR				pP	pP	15 59 35.9	+2.3
	comp=Z,0.3nm,0.6s,baz=252,slow=4.0,SNR=4.2						
TBI	Tubuai	89.73	121	*e*LR	LR	15 59 12.3	
	comp=Z,133nm,28.0s,baz=231						
VNA2	Neumayer--Watz	145.75	197		PKPdf	16 06 08.3	+2.4
VNA2	Neumayer--Watz	145.75	197		PKPdf	16 06 27.3	+21
VNA3	Neumayer Olymp	146.00	196		PKPdf	16 06 08.7	+2.4
VNA3	Neumayer Olymp	146.00	196		PKPdf	16 06 27.6	+21
VNA1	Neumayer--Stat	146.15	197		PKPdf	16 06 09.5	+2.9
VNA1	Neumayer--Stat	146.15	197		PKPdf	16 06 29.2	+23

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*THR **26** 15:51:33.7±0.9, 30.00N×51.95E, h14^{km}±9^{km}, ML3.4*
*CSEM **26** 15:51:34.5±0.1, 29.92N×51.70E, h30^{km}, ML4.3/1, Error ellipse: s-maj=2.9km s-min=2.3km az=15.0*
*TEH **26** 15:51:35.0, 29.89N×51.64E, h10^{km}, Mn3.2*
ISC 26 15:51:32.9±1.4, **29.82N**±0.06×**51.70E**±0.07, **h14**^{km}±14^{km}, **n22, σ1^{s}39**/25, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHI	Shiraz	0.73	104	Pg	Pg	15 51 49.7	+2.0
IMOK	Mook	1.18	131	Pg	Pg	15 51 57.6	+1.1
IPAR	Pars	1.18	88	Pg	Pg	15 51 56.4	-0.1
GHIR	Ghir-Karzin	1.90	143	*e*PG	Pg	15 52 08.5	-2.4
GHIR				*e*SG	Sg	15 52 34.9	-1.4
GHIR				AML	AML	15 52 49.4	
	comp=N,339nm,0.5s						
GHIR	Ghir-Karzin	1.90	143	*e*Pg	Pg	15 52 08.5	-2.4
	SNR=90						
GHIR				*e*Sg	Sg	15 52 34.9	-1.4
	comp=N,339nm,0.5s,SNR=90						
IGAR	Garneh	2.46	10	Pn	Pn	15 52 14.2	+1.0
ISAD	Sadrabad	2.70	39	Pn	Pn	15 52 18.0	+1.3
IMEH	Mehriz	2.96	57	Pn	Pn	15 52 22.1	+1.6
IZEF	Zefreh	3.12	10	Pn	Pn	15 52 21.6	-1.0
NASN	Na’in	3.12	17	*e*PN	Pn	15 52 21.8	-0.9
NASN				*e*SG	Sn	15 53 04.0	+3.9
ICHK	Chekchek	3.36	43	Pn	Pn	15 52 27.0	+1.0
SHGO	Shushtar	3.38	313	*e*PN	Pn	15 52 28.8	+2.5
SHGO				AML	AML	15 53 34.1	
	comp=N,87nm,0.5s						
IKLH	Kalahroud	3.49	358	Pn	Pn	15 52 25.4	-2.6
KBD	Kabd	3.55	261	*e*P	Pn	15 52 29.7	+1.0
KBD				*e*S	Sn	15 53 10.7	-0.2
RDF	Al-Radifah	3.73	257	*e*P	Pn	15 52 31.9	+0.6
IBAF	Bafgh	3.77	61	Pn	Pn	15 52 33.1	+1.1
KRBR	Kerman	4.40	87	*e*PN	Pn	15 52 39.8	-1.1
KRBR				AML	AML	15 53 44.2	
	comp=N,33nm,0.6s						
IVRN	Varamin	5.16	0	Pn	Pn	15 52 50.6	-1.1
IDMV	Damavand	5.75	3	Pn	Pn	15 52 58.6	-1.3
IRAZ	Razeghan	5.77	345	Pn	Pn	15 53 04.2	+4.0
IFIR	Firoozkooh	5.88	8	Pn	Pn	15 53 00.0	-1.7
IFIR	Firoozkooh	5.88	8	Lg		15 54 35.8	

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*IDC **26** 15:53:45.1±1.4, 61.59N×150.48W, mb3.7/6, mb1 3.9/10, mb1mx3.8/21, mbtmp3.8/10, ML3.8/4, MS2.8/2, Ms1 2.8/2, ms1mx2.4/20, Error ellipse: s-maj=25.5km s-min=18.6km az=11.0*
*NEIC **26** 15:53:49.5, 61.83N×150.11W, h14^{km}, ML4.0(PMR), ML3.8(AEIC), After AEIC.*
NEIC Felt [IV] at Willow; [III] at Anchorage and Wasilla; [II] at Chugiak, Eagle River, Hatcher Pass and Palmer.
ISC 26 15:53:49.1±0.4, **61.85N**±0.02×**150.15W**±0.05, **h24**^{km}±4^{km}, **n61, σ0^{s}82**/75, **mb3.7**/6, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PWA	Palmer West	0.23	146	P	Pb	15 53 54.2	-0.9
PMR	Palmer	0.55	117	P	Pb	15 53 59.6	-0.4
PMR				S	Sb	15 54 06.8	-0.7
CUT	Chulitna	0.56	354	P	Pb	15 54 00.3	0.0
GHO	Glory Hole Cre	0.59	97	P	Pb	15 54 00.2	-0.4
GHO				S	Sb	15 54 08.9	+0.3
FIB	Fire Island	0.68	181	P	Pb	15 54 02.3	0.0
FIB				S	Sb	15 54 12.0	+0.8
RC01	Rabbit Creek A	0.78	165	P	Pb	15 54 02.7	-1.2
RC01				S	Sb	15 54 12.9	-1.2
VOGL	Vogel Lake	0.86	189	P	Pb	15 54 05.7	+0.4
VOGL				S	Sb	15 54 18.5	+2.0
SML	Sawmill	0.86	92	P	Pb	15 54 04.9	-0.4
KNK	Knik Glacier	0.92	117	P	Pb	15 54 06.2	-0.1
CRP	Crater Peak	1.12	240	P	Pn	15 54 08.9	-0.5
CRP				S	Sb	15 54 23.5	-0.4
SPU	Mount Spurr	1.13	235	P	Pn	15 54 08.9	-0.7
CKN	Chakachatna No	1.15	238	P	Pn	15 54 09.9	0.0
HUR	Hurricane	1.16	12	P	Pn	15 54 10.4	+0.4
HUR				S	Sb	15 54 26.5	+1.4
CKL	Chakachamna La	1.23	239	P	Pn	15 54 10.6	-0.4
SCM	Sheep Creek Mo	1.34	89	P	Pn	15 54 12.4	-0.1
SLKM	Skilak Lake	1.34	181	P	Pn	15 54 11.8	-0.8
SLKM				S	Sn	15 54 28.8	-1.0
MPA	Moose Pass	1.41	164	P	Pn	15 54 13.1	-0.6
MPA				S	Sn	15 54 31.3	-0.3
RDT	Redoubt	1.68	222	P	Pn	15 54 17.3	-0.1
RDT				S	Sn	15 54 38.3	-0.1
RND	Reindeer	1.68	20	P	Pn	15 54 18.2	+0.8
KTH	Kantishna Hill	1.75	349	P	Pn	15 54 19.2	+0.7
SEW	Seward	1.78	169	P	Pn	15 54 19.5	+0.6
SEW				S	Sn	15 54 41.2	+0.3
RSO	Redoubt South	1.88	223	P	Pn	15 54 20.6	+0.4
VLZ	Valdez	1.97	110	P	Pn	15 54 22.1	+0.6
MCK	McKinley	1.98	16	P	Pn	15 54 22.8	+1.1
BRLK	Bradley Lake	2.12	190	P	Pn	15 54 24.3	+0.6
BRLK				S	Sn	15 54 50.5	+1.0
DIV	Divide	2.22	107	*e*P	Pn	15 54 26.1	+1.0
ILIM	Iliamna	2.24	219	P	Pn	15 54 26.7	+1.2
ILIM				S	Sn	15 54 54.5	+1.9
INE	Iliamna NE	2.29	220	P	Pn	15 54 26.9	+0.8
EYAK	Cordova Ski Ar	2.50	119	*e*P	Pn	15 54 29.8	+0.7
THY	Trims Highway	2.57	50	*e*P	Pn	15 54 30.4	+0.2
SVW2	Sparrevohn	2.71	256	P	Pn	15 54 32.3	+0.1
NEA	Nenana	2.79	10	P	Pn	15 54 33.1	-0.2
WRH	Wood River Hil	2.80	19	P	Pn	15 54 33.6	+0.2
TT01	Tatalina	2.93	294	P	Pn	15 54 35.0	-0.3
TTA	Tatalina	2.94	294	P	Pn	15 54 34.9	-0.5
HDA	Harding Lake	2.95	28	P	Pn	15 54 36.2	+0.6
CCB	Clear Creek Bu	3.01	20	P	Pn	15 54 36.5	+0.1
MID	Middleton Isla	3.07	141	*e*P	Pn	15 54 38.5	+1.3
MLY	Manley	3.21	356	P	Pn	15 54 39.0	-0.2
COLA	College	3.21	18	P	Pn	15 54 39.8	+0.4
MDM	Murphy Dome	3.24	15	P	Pn	15 54 40.0	+0.2
IL1	Eielson Array	3.29	25	P	Pn	15 54 40.2	-0.2
ILAR	Eielson Array	3.29	25	Pn	Pn	15 54 40.2	-0.2
	18nm,0.3s,baz=208,slow=14,SNR=592						
ILAR				Lg		15 55 31.1	
	42nm,0.3s,baz=211,slow=28,SNR=22						
MCNL	McNeil River	3.38	220	P	Pn	15 54 41.8	+0.2
KDAK	Kodiak Island	4.26	198	P	Pn	15 54 53.8	-0.4
IM3	Indian Mountai	4.45	341	P	Pn	15 54 56.2	-0.6
IMA	Indian Mountai	4.52	341	*e*P	Pn	15 54 57.1	-0.7
INK	Inuvik	9.53	40	Pn	P	15 56 07.4	-0.4
	0.7nm,0.3s,baz=248,slow=16,SNR=8.9						
INK				Sn	Sn	15 57 56.6	+1.6
	0.3nm,0.3s,baz=360,slow=9.3,SNR=3.0						
INK				Lg		15 58 49.4	
	0.1nm,0.3s,baz=261,slow=14,SNR=4.1						
INK				LR	LR	16 00 17.4	
	comp=Z,63nm,18.0s,baz=28,slow=40						
INK	Inuvik	9.53	40	*e*P	P	15 56 06.3	-1.4
DLBC	Dease Lake	10.58	100	Pn	P	15 56 21.1	-1.2
	0.2nm,0.3s,baz=297,slow=16,SNR=6.9						
DLBC				Lg		15 59 21.3	
	0.1nm,0.3s,baz=159,slow=23,SNR=3.5						
DLBC				LR	LR	16 01 09.2	
	comp=Z,40nm,18.1s,baz=302,slow=42						
DLBC	Dease Lake	10.58	100	*e*P	P	15 56 19.8	-2.4
YKA	Yellowknife Ar	16.49	72	Pn	P	15 57 41.2	+1.2
	0.2nm,0.3s,baz=281,slow=11,SNR=4.8						
YKA	Yellowknife Ar	16.49	72	Pn	P	15 57 41.2	+1.2
SONM	Songino Array	54.82	307	P	P	16 03 18.7	-0.2
	0.3nm,0.5s,mb3.6,baz=45,slow=6.1,SNR=3.4						
NB2	NORSAR Subarra	56.61	11	P	P	16 03 29.6	-2.1
	1.0nm,0.8s,mb3.9,baz=350,slow=7.0						
NOA	NORSAR Array B	56.61	11	P	P	16 03 29.7	-2.0
	0.8nm,0.8s,mb3.8,baz=350,slow=10.0,SNR=3.5						
FINES	FINESS Array B	57.00	2	P	P	16 03 32.5	-1.9
	0.4nm,0.4s,mb3.8,baz=338,slow=10,SNR=5.7						
EKA	Eskdalemuir Ar	60.32	21	P	P	16 03 56.4	-1.2
	baz=334,slow=5.5						
AKASG	Malin Array Be	67.80	0	P	P	16 04 45.2	-1.2
	1.1nm,0.4s,mb4.2,baz=356,slow=6.2,SNR=9.2						
GERES	GERESS Array B	68.91	11	P	P	16 04 52.8	-0.5
	0.4nm,0.7s,mb3.5,slow=5.3,SNR=5.0						
ESDC	Sonseca Array	75.19	26	P	P	16 05 31.0	+0.3
	0.3nm,0.5s,mb3.5,baz=352,slow=7.1,SNR=4.1						

IDC 26 16:20:52.2±1.7, **6.76N**×**91.97E, mb3.5**/4, **mb1 3.8**/5, **mb1mx3.6**/18, **mbtmp3.6**/5, **ML3.7**/1, **Error ellipse: s-maj=51.9km s-min=29.5km az=58.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.47	30	Pn	P	16 24 06.5	-0.7
	0.1nm,0.3s,baz=229,slow=13,SNR=13						
MKAR	Makanchi Array	40.75	350	P	P	16 28 35.9	-0.6
	0.3nm,0.6s,baz=153,slow=9.7,SNR=2.7						
SONM	Songino Array	42.74	14	P	P	16 28 49.9	-2.9
	0.2nm,0.4s,baz=207,slow=6.4,SNR=2.5						
WRA	Warramunga Arr	49.41	123	P	P	16 29 44.4	-1.8
	0.7nm,0.7s,baz=304,slow=8.9,SNR=6.3						
GERES	GERESS Array B	77.22	318	P	P	16 32 48.1	-1.7
	0.4nm,0.6s,baz=124,slow=4.8,SNR=6.1						

MEX 26 16:21:01.4±1.0, **18.36N**×**102.98W, h10**^{km}±30^{km}, **MD4.0, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFJM	Santa Fe	2.12	358	*i* P	Pn	16 21 33.2	-4.1
SFJM				*i* S	Sn	16 21 59.5	-4.4
MOIG	Morelia	2.14	52	*e*P	Pn	16 21 35.3	-2.4
MOIG				*i* S	Sn	16 21 58.5	-6.0
CJM	Chamela	2.26	300	*i* P	Pn	16 21 36.4	-3.0
CJM				*i* S	Sn	16 22 02.4	-5.1

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*NEIC **26** 16:44:25.9±1.2, 35.18S×179.40W, h40^{km}, mb4.5/1, Error ellipse: s-maj=25.5km s-min=21.2km az=75.0*
*IDC **26** 16:44:25.3±1.2, 35.07S×179.36W, h38^{km}±7^{km}, mb3.9/2, mb1 4.1/3, mb1mx3.7/13, mbtmp4.1/3, ML4.0/1, MS3.6/4, Ms1 3.6/4, ms1mx3.3/20, Error ellipse: s-maj=37.7km s-min=28.8km az=154.0*
ISC 26 16:44:21.6±2.9, **35.19S**±0.10×**179.4W**±0.2, **h17**^{km}±25^{km}, **n22, σ0^{s}80**/19, **mb4.0**/4, **MS3.6**/4, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.99	217	PN	Pn	16 45 10.0	+0.8
MXZ				SN	Sn	16 45 45.8	+0.7
MWZ	Matawai	3.98	217	PN	Pn	16 45 23.2	0.0
MWZ				SN	Sn	16 46 10.1	+0.1
URZ	Urewera	4.14	221	Pn	Pn	16 45 26.1	+0.6
	7.6nm,0.3s,baz=36,slow=4.0,SNR=37						
URZ				Sn	Sn	16 46 15.5	+1.5
	18nm,0.3s,baz=328,slow=23,SNR=15						
URZ	Urewera	4.14	221	*e*PN	Pn	16 45 25.2	-0.3
URZ				SN	Sn	16 46 12.9	-1.1
KNZ	Kokohu	4.47	210	*e*PN	Pn	16 45 29.1	-1.1
BKZ	Black Stump Fm	5.13	218	*e*PN	Pn	16 45 39.3	-0.3
BKZ				SN	Sn	16 46 38.1	-1.0
NGZ	Ngauruhoe	5.62	223	*e*PN	Pn	16 45 47.2	+0.7
MRZ	Mangatainoka R	6.74	214	PN	Pn	16 45 58.5	-3.7
MRZ				SN	Sn	16 47 12.8	-6.5
PPT	Papeete	31.82	64	LR	LR	16 59 52.4	
	comp=Z,102nm,20.1s,MS3.5,baz=157,slow=29						
STKA	Stephens Creek	32.52	265	P	P	16 50 53.8	+0.1
	2.0nm,0.8s,mb4.1,baz=135,slow=16,SNR=3.8						
STKA				LR	LR	17 03 40.2	
	comp=Z,75nm,21.0s,MS3.4,baz=206,slow=35						
CTAO	Charters Tower	33.72	287	*e*P	P	16 51 05.2	+1.0
PMG	Port Moresby	39.84	302	LR	LR	17 05 38.5	
	comp=Z,74nm,20.4s,MS3.5,baz=87,slow=32						
VNDA	Vanda	43.22	186	*e*P	P	16 52 23.3	+0.4
	0.2nm,0.4s,mb3.2						
WRAB	Tennant Creek	43.31	278	*e*P	P	16 52 23.6	-0.8
	6.2nm,0.6s,mb4.5						
WRA	Warramunga Arr	43.32	278	P	P	16 52 23.7	-0.7
	1.4nm,0.4s,mb4.0,baz=119,slow=7.7,SNR=29						
WRA				pP	pP	16 52 35.2	+5.6
	1.6nm,0.4s,baz=119,slow=7.7,SNR=7.7						
FITZ	Fitzroy Crossi	51.33	274	LR	LR	17 14 59.6	
	comp=Z,154nm,19.4s,MS4.0,baz=91,slow=36						
KAF	Kangasniemi	148.56	337	*e*p	PKPdf	17 04 07.5	+0.8
FINES	FINESS Array B	149.13	336	PKPbc	PKPdf	17 04 07.7	0.0
	2.6nm,0.8s,baz=45,slow=2.7,SNR=9.0						
FINES				pPKPbc		17 04 19.8	
	3.6nm,0.7s,baz=32,slow=3.4,SNR=5.6						
DBIC	Dimbokro	151.18	169	PKPbc	PKPdf	17 04 15.4	+3.1
	4.4nm,0.8s,baz=189,slow=6.8,SNR=3.8						
DBIC				pPKPbc		17 04 27.4	
	2.0nm,0.5s,baz=179,slow=5.8,SNR=1.9						
DBIC	Dimbokro	151.18	169	*e*PKPbc	PKPdf	17 04 15.9	+3.6
DBIC				pPKPbc		17 04 27.4	
NB2	NORSAR Subarra	153.25	348	PKPabc	PKPdf	17 04 29.7	+16
	1.2nm,0.8s,baz=16,slow=2.4						
NOA	NORSAR Array B	153.25	348	pPKPbc		17 04 29.7	
	1.3nm,0.8s,baz=17,slow=2.8,SNR=3.5						

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*IDC **26** 16:58:20.7±1.0, 41.12S×85.73W, mb4.1/8, mb1 4.2/11, mb1mx4.1/18, mbtmp4.0/11, ML3.3/2, MS3.9/14, Ms1 3.9/14, ms1mx3.9/17, Error ellipse: s-maj=25.2km s-min=23.3km az=159.0*
*NEIC **26** 16:58:21.4±0.6, 41.27S×85.78W, h10^{km}, mb4.4/8, Error ellipse: s-maj=14.8km s-min=11.8km az=76.0*
ISC 26 16:58:20.1±0.6, **41.25S**±0.08×**85.7W**±0.1, **h10**^{km}, **n35, σ1^{s}22**/30, **mb4.2**/14, **MS4.0**/11, **West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	11.48	92	Pn	P	17 01 07.4	+0.4
	0.1nm,0.3s,baz=231,slow=15,SNR=2.0						
PLCA				LR	LR	17 04 39.4	
	comp=Z,687nm,21.9s,baz=73,slow=33						
CFAA	Coronel Fontan	17.02	61	Pn	P	17 02 20.2	+0.4
	0.1nm,0.3s,baz=222,slow=12,SNR=13						
CFAA				LR	LR	17 07 39.2	
	comp=Z,101nm,19.2s,baz=242,slow=33						
CFAA	Coronel Fontan	17.02	61	Pn	P	17 02 20.2	+0.4
CFAA				LR	LR	17 07 39.2	
USHA	Ushuaia	17.77	146	P	P	17 02 29.2	+0.3
	0.1nm,0.3s,baz=291,slow=8.6,SNR=3.2						
USHA				LR	LR	17 07 58.1	
	comp=Z,443nm,19.5s,baz=289,slow=32						
TRQA	Tornquist	18.54	88	*e*P	P	17 02 40.9	+2.2
	12nm,1.1s						
CPUP	Villa Florida	27.74	66	P	P	17 04 10.4	-0.3
	1.9nm,0.8s,mb3.8,baz=221,slow=11,SNR=3.5						
CPUP				LR	LR	17 14 43.0	
	comp=Z,541nm,18.7s,MS4.2,baz=238,slow=36						
LPAZ	La Paz	29.15	37	P	P	17 04 23.6	0.0
	2.1nm,0.7s,mb4.0,baz=188,slow=9.9,SNR=12						
LPAZ				LR	LR	17 13 42.2	
	comp=Z,184nm,20.4s,MS3.7,baz=174,slow=32						
LPAZ	La Paz	29.15	37	*e*P	P	17 04 23.4	-0.2
	2.4nm,0.7s,mb4.0						
LPAZ				LR	LR	17 13 42.2	
SIV	San Ignacio	32.97	47	P	P	17 04 56.6	-0.6
	2.6nm,0.8s,mb4.2,baz=228,slow=11,SNR=15						
SAML	Samuel	37.85	38	*e*P	P	17 05 37.8	-1.0
BDFB	Brasilia	41.34	63	P	P	17 06 07.8	0.0
	1.5nm,0.6s,mb3.8,baz=235,slow=11,SNR=3.3						
BDFB				LR	LR	17 23 01.4	
	comp=Z,371nm,18.7s,MS4.3,baz=229,slow=36						
ROSC	El Rosal	47.05	16	LR	LR	17 24 05.3	
	comp=Z,292nm,20.8s,MS4.2,baz=355,slow=33						
VNA3	Neumayer Olymp	47.13	155		P	17 06 52.0	-1.7
VNA3	Neumayer Olymp	47.13	155		P	17 06 59.5	+5.8
VNA3	Neumayer Olymp	47.13	155		P	17 07 09.5	+16
VNA1	Neumayer--Stat	47.63	154		P	17 06 56.1	-1.6
VNA1	Neumayer--Stat	47.63	154		P	17 07 03.8	+6.1
VNA2	Neumayer--Watz	47.89	154		P	17 06 58.0	-1.7
VNA2	Neumayer--Watz	47.89	154		P	17 07 05.8	+6.1
VNA2	Neumayer--Watz	47.89	154		P	17 07 14.7	+15
SNAA	Sanae	49.25	156	*e*P	P	17 07 07.8	-2.4
	3.4nm,0.8s,mb4.4						
SDV	Santo Domingo	51.78	19	P	P	17 07 27.3	-3.0
	7.8nm,1.3s,mb4.5						
VNDA	Vanda	54.65	194	P	P	17 07 51.9	+1.2
	0.3nm,0.5s,mb3.6,baz=122,slow=7.9,SNR=4.2						
VNDA				LR	LR	17 27 02.3	
	comp=Z,169nm,19.1s,MS4.1,baz=121,slow=31						
VNDA	Vanda	54.65	194	*e*P	P	17 07 52.1	+1.4
VNDA				LR	LR	17 27 02.4	
PPT	Papeete	59.07	273	LR	LR	17 25 56.9	
	comp=Z,153nm,18.2s,MS4.2,baz=125,slow=28						
MAW	Mawson	68.89	168	LR	LR	17 36 02.1	
	comp=Z,126nm,18.7s,MS4.2,baz=59,slow=33						
TXAR	Lajitas Array	72.17	344	P	P	17 09 45.8	-1.2
	1.5nm,0.7s,mb4.0,baz=162,slow=7.9,SNR=18						
TXAR				LR	LR	17 36 10.2	
	comp=Z,66nm,20.1s,MS3.9,baz=165,slow=32						
ANMO	Albuquerque	78.19	343	*e*P	P	17 10 22.2	+1.0
	3.7nm,0.8s,mb4.4						
CCM	Cathedral Cave	79.09	356	*e*P	P	17 10 24.9	-1.1
	4.5nm,0.8s,mb4.5						
NVAR	Mina Array Bea	84.70	335	P	P	17 10 57.4	+2.2
	1.3nm,0.8s,mb4.1,baz=145,slow=6.7,SNR=9.1						
NVAR				LR	LR	17 43 59.0	
	comp=Z,24nm,18.1s,MS3.6,baz=145,slow=32						
BOSA	Boshof	85.66	125	LR	LR	17 43 15.5	
	comp=Z,77nm,20.3s,MS4.1,baz=69,slow=31						
ELK	Elko	85.90	338	*e*P	P	17 11 02.6	+1.4
	3.8nm,1.1s,mb4.5						
PDAR	Pinedale Array	86.36	343	P	P	17 11 03.2	-0.1
	1.7nm,0.8s,mb4.3,baz=146,slow=5.3,SNR=13						
HLID	Hailey	88.30	340	*e*P	P	17 11 13.1	+0.4
	2.4nm,1.0s,mb4.4						
SCHQ	Schefferville	97.06	11	LR	LR	17 51 13.5	
	comp=Z,38nm,20.1s,MS3.9,baz=300,slow=33						

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*NNC **26** 17:07:57.4±17.0, 37.93N×70.71E, h70^{km}±940^{km}, mpv3.5, Error ellipse: s-maj=526.0km s-min=134.8km az=85.0*
ISC 26 17:07:54.2±3.0, **38.0N**±0.2×**72.0E**±0.2, **h100**^{km}, **n7, σ0^{s}23**/9, **2C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.31	17	P	P	17 08 58.9	+0.1
	SNR=24						
UCH	Uchtor	4.62	24	P	P	17 09 03.1	0.0
	SNR=7.1						
EKS2	Erkin-Say	4.83	16	P	P	17 09 06.2	+0.2
	SNR=20						
KK31	Karatay Array	5.21	348	P	P	17 09 11.3	+0.3
	1.6nm,0.2s,baz=166,slow=11,SNR=137						
KK31				⇑S	S	17 10 10.3	-0.1
	2.7nm,0.3s,baz=177,slow=25,SNR=5.2						
CHMS	Chumysh	5.40	22	P	P	17 09 13.1	-0.5
	SNR=6.6						
TKM2	Tokmak 2	5.61	28	P	P	17 09 16.6	+0.1
	SNR=5.6						
AB31	Akbulak array	14.21	326	⇓P	P	17 11 11.4	-0.2
	0.1nm,0.2s						
AB31				⇑S	S	17 13 38.5	-8.5
	1.1nm,0.6s						

OTT 26 17:12:27.9±0.2, **63.99N**×**85.64W, h18**^{km}, **MN2.9**/1, **120km west from Coral Harbour, Nu Boothia Ungava Seismic Zone., Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QILN	**Qililugaq Expl**	**2.69**	**354**	PN	Pn	17 13 10.3	-1.0
QILN				PG	Pn	17 13 15.8	+4.5
QILN				SN	Sn	17 13 40.5	-3.3
QILN				SG	Sn	17 13 49.4	+5.7
QILN				Trac		17 13 55.7	
	comp=Z,31nm,0.1s						
YRTN	**Rankin Inlet**	**3.14**	**251**	PN	Pn	17 13 16.7	-0.9
YRTN				PG	Pn	17 13 23.3	+5.7
YRTN				SN	Sn	17 13 52.0	-3.1
YRTN				SG	Sn	17 14 01.5	+6.5
YRTN				Trac		17 14 07.2	
	comp=Z,22nm,0.2s						
FCC	**Fort Churchill**	**6.62**	**222**	PN	Pn	17 14 03.7	-3.2
FCC				SN	Sn	17 15 15.5	-7.3
FCC				LG		17 15 51.4	
FCC				Trac		17 16 00.5	
	comp=Z,6.0nm,0.3s						
PINU	**Pond Inlet**	**9.19**	**14**	PN	P	17 14 36.6	-6.0
PINU				SN	Sn	17 16 13.4	-13
PINU				LG		17 17 08.1	
SILO	**Sutton Inlier**	**9.55**	**177**	PN	P	17 14 43.7	-3.7
SILO				SN	Sn	17 16 25.2	-10
ACKN	**Achilles Lake**	**10.90**	**287**	PN	P	17 15 01.5	-4.4
ACKN				SN	S	17 16 53.1	-15
ACKN				LG		17 18 03.5	
RES	**Resolute Bay**	**11.21**	**347**	PN	P	17 15 04.8	-5.3
RES				SN	S	17 17 01.6	-14
RES				LG		17 18 11.6	
RES				Trac		17 18 28.7	
	comp=Z,4.4nm,1.6s						
VIMO	**Victor Mine**	**11.25**	**174**	PN	P	17 15 06.9	-3.9
VIMO				SN	S	17 17 03.4	-14
WEMQ	**Wemindji, Queb**	**11.66**	**157**	PN	P	17 15 11.2	-5.1
WEMQ				SN	S	17 17 14.8	-12
LG4Q	**La Grande 4**	**11.96**	**145**	PN	P	17 15 16.9	-3.5
LG4Q				SN	S	17 17 19.0	-15
YKW3	**Yellowknife Ar**	**13.06**	**277**	PN	P	17 15 31.0	-4.1
YKW3				SN	S	17 17 43.3	-18
YKW3				LG		17 19 06.0	
MALO	**McAlpine Lake**	**14.35**	**165**	PN	P	17 15 45.4	-6.5

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*NIED **26** 17:16:00,31.60N×132.00E,h38^{km},Mw4.0 Best double couple: M₀1.22×10^{15} NP1:ϕ_s316°,δ74°,λ161°. NP2:ϕ_s51°, δ71°,λ17°.*

*JMA **26** 17:16:48.4±0.1,31.64N×132.05E,h43^{km}±2^{km},M4.0*

JMA Felt I J1.

*NEIC **26** 17:16:49.1±0.7,31.59N×131.90E,mb3.7/1,Error ellipse: s-maj=14.6km s-min=12.1km az=88.0*

NEIC Recorded [1 JMA] in Kagoshima and Miyazaki Prefectures.

*IDC **26** 17:16:50.8±1.1,31.36N×131.36E,h34^{km}±8^{km},mb3.7/5, mb1 3.8/7,mb1mx3.6/19,mbtmp3.8/7,ML2.9/2,MS3.1/6, Ms1 3.2/6,ms1mx2.9/31,Error ellipse: s-maj=28.3km s-min=16.8km az=85.0*

ISC 26 17:16:48.2±0.7**,31.65N**±0.05×**132.07E**±0.07**,h46**^{km}±8^{km}**, h35**^{km}±7.3^{km}**:pP-P,n24,**σ**0**^{s}**74**/28**,mb3.8**/6**,MS3.2**/3**,4C-1D, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNAR	**Kushima--Naru**	**0.69**	**260**	⇑P	**P**	**17 17 01.7**	**+0.1**
JNAR				S	**S**	**17 17 11.1**	**-0.4**
JTSN	**Tsuno**	**0.76**	**321**	⇑P	**P**	**17 17 02.8**	**+0.2**
JTSN				S	**S**	**17 17 13.0**	**-0.2**
JTZ	**Takazaki**	**0.87**	**287**	⇑P	**P**	**17 17 04.0**	**-0.1**
JTZ				S	**S**	**17 17 16.1**	**+0.2**
JTO	**Tosashimizu**	**1.35**	**27**	⇑P	**P**	**17 17 11.1**	**0.0**
JTO				S	**S**	**17 17 26.9**	**-1.3**
JTN	**Tanegashima 3**	**1.36**	**223**	⇓P	**P**	**17 17 11.1**	**-0.2**
JTN				S	**S**	**17 17 28.2**	**-0.2**
JNU	**Nakatsue**	**1.77**	**326**	Pn	**P**	**17 17 19.3**	**+2.3**
	19nm,0.3s,baz=207,slow=9.5,SNR=35						
JOW	**Kunigami**	**5.83**	**216**	Pn	**P**	**17 18 06.8**	**-7.5**
	0.3nm,0.3s,baz=103,slow=18,SNR=5.2						
JOW				Sn	**S**	**17 19 08.0**	**-13**
	1.7nm,0.3s,baz=65,slow=14,SNR=2.4						
MAJO	**Matsushiro**	**7.05**	**45**	*e*P	**P**	**17 18 31.8**	**+0.5**
	7.1nm,0.4s						
MAT	**Matsushiro**	**7.05**	**45**	*e*P	**P**	**17 18 32.0**	**+0.6**
MAT				S	**S**	**17 19 47.0**	**-4.0**
MAT	**Matsushiro**	**7.05**	**45**	P	**P**	**17 18 31.9**	**+0.5**
MAT				*e*S	**S**	**17 19 47.1**	**-3.9**
MJAR	**Matsushiro Arr**	**7.05**	**45**	Pn	**P**	**17 18 40.5**	**+9.1**
	1.2nm,0.3s,baz=226,slow=14,SNR=7.2						
MJAR				Sn	**S**	**17 20 07.6**	**+17**
	0.0nm,0.3s,baz=215,slow=25,SNR=2.8						
MJAR				LR	LR	17 21 47.6	
	comp=Z,131nm,21.3s,baz=230,slow=38						
CBIJ	**Chichi jima**	**9.93**	**115**	LR	LR	17 22 21.2	
	comp=Z,56nm,18.8s,baz=296,slow=32						
ASAJ	**Asahikawa**	**14.95**	**31**	LR	LR	17 26 20.6	
	comp=Z,62nm,18.5s,baz=180,slow=37						
ULN	**Ulaanbaatar**	**24.98**	**318**	*e*P	**P**	**17 22 09.1**	**+0.3**
	1.3nm,0.6s,mb3.6						
SONM	**Songino Array**	**25.34**	**317**	P	**P**	**17 22 11.5**	**-0.8**
	0.5nm,0.7s,mb3.2,baz=130,slow=9.6,SNR=5.2						
SONM				pP	pP	17 22 22.8	-1.2
	1.5nm,0.7s,baz=135,slow=9.5,SNR=11						
SONM				LR	LR	17 33 47.7	
	comp=Z,47nm,19.0s,MS3.0,baz=66,slow=40						
CMAR	**Chiang Mai Arr**	**32.62**	**254**	LR	LR	17 38 14.1	
	comp=Z,42nm,18.5s,MS3.2,baz=240,slow=40						
MKAR	**Makanchi Array**	**40.73**	**306**	P	**P**	**17 24 25.1**	**-0.8**
	0.9nm,0.9s,mb3.4,baz=59,slow=7.1,SNR=4.4						
MKAR				pP	pP	17 24 36.3	-2.2
	0.4nm,0.5s,baz=93,slow=9.9,SNR=3.4						
WRAB	**Tennant Creek**	**51.34**	**177**	*e*P	**P**	**17 25 51.0**	**+0.7**
WRA	**Warramunga Arr**	**51.35**	**177**	P	**P**	**17 25 50.4**	**0.0**
	1.9nm,0.8s,mb4.1,baz=352,slow=8.1,SNR=12						
STKA	**Stephens Creek**	**63.83**	**171**	P	**P**	**17 27 17.7**	**-0.4**
	1.6nm,0.5s,mb4.3,baz=348,slow=7.9,SNR=8.8						
FINES	**FINESS Array B**	**69.81**	**331**	P	**P**	**17 27 59.2**	**+3.8**
	3.3nm,1.1s,mb4.2,baz=72,slow=4.4,SNR=2.8						
FINES				pP	pP	17 28 07.1	-1.6
	1.2nm,0.7s,baz=63,slow=4.3,SNR=2.1						
FINES	**FINESS Array B**	**69.81**	**331**	P	**P**	**17 27 59.2**	**+3.8**
FINES				pP	pP	17 28 07.1	-1.6
YKA	**Yellowknife Ar**	**72.20**	**27**	pP	pP	17 28 24.0	+1.0
	0.7nm,0.7s,baz=321,slow=4.3,SNR=2.6						
NOA	**NORSAR Array B**	**75.92**	**334**	LR	LR	18 08 08.2	
	comp=Z,14nm,19.0s,MS3.3,baz=260,slow=40						

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*LDG **26** 17:29:20.6±0.0,42.54N×0.99E,h6^{km},Md2.7/3,Ml2.5/12, Error ellipse: s-maj=0.9km s-min=0.8km az=63.0*

*NEIC **26** 17:29:20.6,42.54N×0.99E,h6^{km},ML2.5(LDG), MN1.7(MDD),After LDG.*

*STR **26** 17:29:20.4±0.2,42.54N×0.96E,h5^{km}±1^{km},Ml2.3,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **26** 17:29:21.0±0.1,42.56N×0.98E,h10^{km},ML2.5/8,Error ellipse: s-maj=1.5km s-min=0.9km az=174.0*

MDD 26 17:29:21.1±0.2**,42.55N**×**0.98E,h10**^{km}**,mbLg1.9**/5**,Error ellipse: s-maj=2.1km s-min=1.5km az=1.0,PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALF	**Salau**	**0.26**	**36**	Pg	Pg	17 29 26.3	-0.4
SALF				Sg	Sg	17 29 30.1	-0.4
SALF	**Salau**	**0.26**	**36**	Pg	Pg	17 29 26.3	-0.4
SALF				Lg		17 29 30.2	
MELF	**Melles**	**0.36**	**334**	Pg	Pg	17 29 28.1	-0.5
MELF				Sg	Sg	17 29 33.2	-0.4
MELF	**Melles**	**0.36**	**334**	Pg	Pg	17 29 28.2	-0.4
MELF				Lg		17 29 33.1	
MLS	**Moulis**	**0.42**	**12**	Pg	Pg	17 29 29.1	-0.6
MLS				Lg		17 29 35.0	
PAND	**Andorre**	**0.42**	**93**	Pg	Pg	17 29 28.7	-1.1
PAND				Lg		17 29 35.1	
GRBF	**Gourbit**	**0.51**	**54**	Pg	Pg	17 29 30.7	-0.7
GRBF				Lg		17 29 37.7	
RESF	**Ens**	**0.54**	**299**	Pg	Pg	17 29 31.0	-1.0
RESF				Sg	Sg	17 29 37.8	-1.5
RESF	**Ens**	**0.54**	**299**	Pg	Pg	17 29 31.0	-1.0
RESF				Lg		17 29 38.0	
EGRA	**Graus**	**0.60**	**234**	Pg	Pg	17 29 32.0	-1.3
	0.4nm,0.1s,SNR=9.3						
EGRA				Lg		17 29 41.0	
	6.2nm,0.2s,SNR=15						
EPF	**Esparros**	**0.67**	**316**	*e*Pg	Pg	17 29 33.5	-1.2
EPF				*e*Sg	Sg	17 29 42.4	-1.4
	30nm,0.2s						
EMIR	**Miracle**	**0.75**	**147**	Pg	Pg	17 29 34.8	-1.5
	8.1nm,0.2s,SNR=15						
EMIR				Lg		17 29 44.7	
	10nm,0.3s,SNR=9.1						
EMIR	**Miracle**	**0.75**	**147**	Pg	Pg	17 29 34.8	-1.5
	8.1nm,0.2s,SNR=15						
VIEF	**Viey**	**0.78**	**296**	Pg	Pg	17 29 35.1	-1.7
VIEF				Sg	Sg	17 29 45.3	-1.9
VIEF	**Viey**	**0.78**	**296**	Pg	Pg	17 29 35.1	-1.7
VIEF				Lg		17 29 45.9	
VALF	**Valcebollere**	**0.78**	**100**	Pg	Pg	17 29 35.1	-1.8
VALF	**Valcebollere**	**0.78**	**100**	Pg	Pg	17 29 35.2	-1.7
VALF				Lg		17 29 46.6	
LPEF	**Le Peyrat**	**0.80**	**59**	Pg	Pg	17 29 36.4	-0.7
LPEF				Sg	Sg	17 29 47.3	-0.5
LPEF	**Le Peyrat**	**0.80**	**59**	Pg	Pg	17 29 35.7	-1.4
LPEF				Lg		17 29 46.7	
LABF	**Labassere**	**0.83**	**307**	Pg	Pg	17 29 36.6	-1.2
LABF				Sg	Sg	17 29 47.1	-1.9
LABF	**Labassere**	**0.83**	**307**	Pg	Pg	17 29 36.8	-1.1
LABF				Lg		17 29 47.5	
CARF	**Carcanieres**	**0.85**	**78**	Pg	Pg	17 29 37.3	-0.9
CARF				Sg	Sg	17 29 48.2	-1.4
CARF	**Carcanieres**	**0.85**	**78**	Pg	Pg	17 29 37.0	-1.2
CARF				Lg		17 29 48.2	
FILF	**Fillols**	**1.17**	**89**	Pg	Pg	17 29 40.6	-4.0
FILF				Sg	Sg	17 29 55.6	-4.6
FILF	**Fillols**	**1.17**	**89**	Pg	Pg	17 29 40.6	-4.0
FILF				Lg		17 29 55.2	
ETSF	**Etsaut**	**1.18**	**288**	*e*Pn	Pn	17 29 42.5	-1.2
ETSF				*e*Pg	Pg	17 29 43.3	-1.6
ETSF				*e*Sg	Sg	17 29 58.6	-2.1
	11nm,0.3s						
MTLF	**Montolieu**	**1.21**	**49**	*e*Pn	Pn	17 29 42.2	-1.8
MTLF				*e*Pg	Pg	17 29 43.3	-2.0
MTLF				*e*P		17 29 44.0	
MTLF				*e*Sg	Sg	17 29 59.2	-2.3
	11nm,0.2s						
MTLF	**Montolieu**	**1.21**	**49**	Pn	Pn	17 29 42.2	-1.8
MTLF				Pg	Pg	17 29 43.3	-2.0
MTLF				Lg		17 29 59.2	
	5.5nm,0.2s						
LRDF	**Laroque-de-Fa**	**1.22**	**71**	Lg		17 30 00.2	
ATE	**Arette**	**1.35**	**294**	Lg		17 30 03.7	
ESAC	**San Caprasio**	**1.35**	**233**	Pg	Pg	17 29 46.3	-1.9
	11nm,0.3s,SNR=6.8						
ESAC				Lg		17 30 04.7	
	33nm,0.3s,SNR=24						
ESAC	**San Caprasio**	**1.35**	**233**	Pg	Pg	17 29 46.3	-2.0
	11nm,0.3s,SNR=6.8						
SJAF	**Saint Jean de**	**1.41**	**92**	Lg		17 30 05.6	
EJON	**La Jonquera**	**1.42**	**93**	Pg	Pg	17 29 47.2	-2.3
	3.5nm,0.1s,SNR=20						
EJON				Lg		17 30 06.7	
	6.1nm,0.1s,SNR=8.6						
EJON	**La Jonquera**	**1.42**	**93**	Pg	Pg	17 29 47.2	-2.3
	3.5nm,0.1s,SNR=20						
LARF	**Larrau**	**1.53**	**289**	Lg		17 30 10.4	
SJPF	**Ste Jean**	**1.71**	**290**	*e*Pn	Pn	17 29 49.6	-1.7
SJPF				*e*Pg	Pg	17 29 52.9	-2.5
SJPF				*e*Sg	Sg	17 30 15.0	-3.3
	5.8nm,0.3s						
EALK	**Alkurruntz**	**1.94**	**291**	Pg	Pg	17 29 57.3	-2.7
	0.3nm,0.1s,SNR=7.9						
EALK				Lg		17 30 23.0	
	4.3nm,0.3s,SNR=9.3						
LFF	**La Frestale**	**2.40**	**356**	*e*Pn	Pn	17 29 59.3	-1.8
LFF				*e*Pg	Pg	17 30 05.2	-3.8
LFF				*e*Sg	Sg	17 30 35.1	-5.9
	7.7nm,0.4s						
CAF	**Calviac**	**2.50**	**18**	*e*Pn	Pn	17 30 00.3	-2.3
CAF				*e*Pg	Pg	17 30 07.5	-3.7
CAF				*e*Sg	Sg	17 30 39.0	-5.6
	3.6nm,0.2s						
LASF	**Ste Croix**	**2.60**	**53**	*e*Pn	Pn	17 30 01.1	-2.8
LASF				*e*P		17 30 04.0	
LASF				*e*Pg	Pg	17 30 09.1	-4.0
LASF				*e*Sg	Sg	17 30 42.2	-5.5
	5.2nm,0.3s						
LASF	**Ste Croix**	**2.60**	**53**	Pn	Pn	17 30 01.1	-2.8
LASF				Pg	Pg	17 30 09.1	-4.0
LASF				Lg		17 30 42.2	
	2.6nm,0.3s						
RJF	**Les Rejaudoux**	**2.78**	**8**	*e*Pn	Pn	17 30 04.1	-2.5
RJF				*e*Pg	Pg	17 30 12.4	-4.3
RJF				*e*Sn	Sn	17 30 36.4	-4.1
RJF				*e*Sg	Sg	17 30 47.6	-6.3
	4.7nm,0.2s						
VIVF	**Saint-Julien-l**	**3.54**	**48**	*e*Pn	Pn	17 30 14.1	-3.2
VIVF				*e*Pg	Pg	17 30 26.1	-5.7
VIVF				*e*Sg	Sg	17 31 11.8	-7.1
	3.4nm,0.4s						
TCF	**Toulx Ste Croi**	**3.84**	**13**	*e*Sg	Sg	17 31 21.4	-7.7
	0.9nm,0.3s						
MFF	**Saint Martin d**	**4.13**	**349**	*e*Pn	Pn	17 30 22.5	-3.2
MFF				*e*Pg	Pg	17 30 37.1	-6.6
MFF				*e*Sg	Sg	17 31 29.7	-9.1
	1.2nm,0.4s						
BGF	**Bois d'Agland**	**4.23**	**18**	*e*Pg	Pg	17 30 38.9	-6.6
BGF				*e*Sg	Sg	17 31 32.5	-9.4
	3.9nm,0.4s						
GRR	**Gorron**	**5.98**	**348**	*e*Pn	Pn	17 30 47.1	-4.8

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*IDC **26** 18:03:52.9±0.8,52.80N×116.04W,mb3.6/1,mb1 3.6/8, mb1mx3.5/25,mbtmp3.4/8,ML3.6/6,Error ellipse: s-maj=14.2km s-min=6.8km az=88.0*

*NEIC **26** 18:03:55.0,52.82N×116.27W,h1^{km},ML3.5(PGC),After PGC.*

PGC 26 18:03:54.7,52.82N×**116.27W,h1**^{km}**,MN3.5**/7**,1D,North of Nordegg, Alberta.,Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNB	**Mounoet Dainar**	**1.43**	**245**	Pn	Pn	18 04 20.7	-1.1
MNB				Sn	Sn	18 04 41.5	-0.1
EDM	**Edmonton**	**1.81**	**76**	*e*Pn	Pn	18 04 25.7	-1.5
EDM				Pg	Pg	18 04 29.0	-1.8
EDM				*e*Sn	Sn	18 04 50.0	-1.1
EDM				*e*Sg	Sg	18 04 52.4	-2.5
EDM	**Edmonton**	**1.81**	**76**	⇓Pn	Pn	18 04 26.8	-0.5
EDM				Sn	Sn	18 04 49.5	-1.6
EDM				Trac		18 04 52.8	
	comp=Z,341nm,0.2s						
EDM				Trac		18 04 52.8	
	comp=Z,341nm,0.2s						
DOWB	**Downie Slide**	**1.90**	**228**	Pn	Pn	18 04 28.9	+0.4
SLEB	**Sale Mountain**	**2.02**	**216**	Pn	Pn	18 04 29.9	-0.2
SLEB				Pg	Pg	18 04 31.2	-3.7
SLEB				Sg	Sg	18 04 57.3	-4.5
SLEB				Trac		18 05 03.9	
	comp=Z,223nm,0.2s						
WALA	**Waterton Lakes**	**4.05**	**157**	Pn	Pn	18 04 57.2	-1.9
WALA				Pg	Pg	18 05 06.7	-8.7
WALA				Sn	Sn	18 05 43.3	-4.6
WALA				Sg	Sg	18 05 58.9	-10
WALA				Trac		18 06 01.3	
	comp=Z,32nm,0.2s						
WALA				Trac		18 06 01.3	
	comp=Z,32nm,0.2s						
PNT	**Penticton**	**4.09**	**212**	Pn	Pn	18 04 57.5	-2.2
PNT				Sg	Sg	18 06 01.9	-8.9
PNT				Trac		18 06 08.8	
	comp=Z,115nm,0.7s						
LLLB	**Lillooet**	**4.13**	**240**	Pn	Pn	18 04 58.3	-2.0
LLLB				Pg	Pg	18 05 09.3	-7.8
LLLB				Sg	Sg	18 06 02.5	-10
LLLB				Trac		18 06 10.9	
	comp=Z,89nm,0.6s						
NEW	**Newport**	**4.59**	**187**	Pn	Pn	18 05 04.1	-2.8
	1.2nm,0.3s,baz=2.2,slow=11,SNR=12						
NEW				Pg	Pg	18 05 17.6	-8.7
	5.2nm,0.3s,baz=8.1,slow=14,SNR=16						
NEW				Lg		18 06 15.1	
	9.9nm,0.3s,baz=261,slow=23,SNR=9.2						
NEW	**Newport**	**4.59**	**187**	*e*Pn	Pn	18 05 04.2	-2.7
NEW				*e*Pg	Pg	18 05 17.7	-8.6
NEW				*e*Sg	Sg	18 06 15.1	-12
NEW				Lg		18 06 15.1	
BMBC	**Bull Mountain**	**4.71**	**316**	Pn	Pn	18 05 07.3	-1.3
BMBC				Sn	Sn	18 06 00.1	-4.6
BMBC				Sg	Sg	18 06 20.8	-11
BMBC				Trac		18 06 31.4	
	comp=Z,306nm,0.8s						
BMBC				Trac		18 06 31.4	
	comp=Z,306nm,0.8s						
HOPB	**Hope**	**4.72**	**225**	Pn	Pn	18 05 06.0	-2.7
HOPB				Pg	Pg	18 05 20.0	-9.0
HOPB				Sg	Sg	18 06 21.9	-10
HOPB				Trac		18 06 27.4	
	comp=Z,100nm,0.4s						
WSLR	**Whistler**	**4.96**	**240**	Pg	Pg	18 05 24.9	-8.7
WSLR				Sg	Sg	18 06 27.8	-12
WSLR				Trac		18 06 29.5	
	comp=Z,23nm,0.3s						
BSMT	**Bassoo Peak**	**5.06**	**169**	P	Pn	18 05 10.0	-3.5
VDB	**Vedder Mountai**	**5.29**	**227**	Pn	Pn	18 05 13.8	-3.0
VDB				Pg	Pg	18 05 30.9	-9.5
VDB				Sg	Sg	18 06 38.5	-12
VDB				Trac		18 06 47.4	
	comp=Z,19nm,0.5s						
HNB	**Haney**	**5.33**	**231**	Pg	Pg	18 05 31.5	-10
HNB				Sg	Sg	18 06 39.2	-13
HNB				Trac		18 06 40.7	
	comp=Z,23nm,0.4s						
WPB	**Watts Point**	**5.39**	**237**	Pg	Pg	18 05 32.5	-10
WPB				Sg	Sg	18 06 41.2	-13
WPB				Trac		18 06 44.6	
	comp=Z,25nm,0.6s						
BIB	**Bowen Island**	**5.59**	**235**	Pg	Pg	18 05 35.8	-11
BIB				Sg	Sg	18 06 48.9	-12
BIB				Trac		18 06 57.7	
	comp=Z,10.0nm,0.4s						
SHB	**Sechelt**	**5.77**	**239**	Pg	Pg	18 05 39.3	-10
SHB				Sg	Sg	18 06 53.5	-13
SHB				Trac		18 07 03.9	
	comp=Z,17nm,0.5s						
SNB	**Saturna Island**	**5.96**	**230**	Trac		18 07 01.9	
	comp=Z,14nm,0.5s						
SNB	**Saturna Island**	**5.96**	**230**	Sg	Sg	18 06 57.9	-15
TXB	**Texada**	**6.00**	**242**	Pg	Pg	18 05 43.2	-11
TXB				Trac		18 07 11.1	
	comp=Z,29nm,0.8s						
NLLB	**Nanaimo Lost L**	**6.05**	**237**	Pg	Pg	18 05 44.3	-11
NLLB				Sg	Sg	18 07 01.2	-15
NLLB				Trac		18 07 03.0	
	comp=Z,6.0nm,0.3s						
MSO	**Missoula**	**6.18**	**165**	*e*Pn	Pn	18 05 25.2	-4.1
	6.9nm,0.4s						
MSO				*e*Pg	Pg	18 05 44.9	-13
PGC	**Sidney**	**6.18**	**230**	*e*Pn	Pn	18 05 27.5	-1.8
PGC	**Sidney**	**6.18**	**230**	Trac		18 07 13.8	
	comp=Z,18nm,0.8s						
CHMT	**Chamberlain Mo**	**6.22**	**161**	*e*Pn	Pn	18 05 26.0	-3.9
CHMT				Pg	Pg	18 05 44.5	-14
CHMT				*e*Sg	Sg	18 06 58.3	-23
CBB	**Campbell River**	**6.34**	**248**	Trac		18 07 20.8	
	comp=Z,6.0nm,0.6s						
CBB	**Campbell River**	**6.34**	**248**	Sg	Sg	18 07 12.8	-13
LZB	**Mount Lazard**	**6.38**	**232**	Trac		18 07 25.0	
	comp=Z,5.0nm,0.7s						
ALB	**Alberni**	**6.46**	**240**	Pg	Pg	18 05 51.3	-12
MGB	**Mount Grey**	**6.55**	**238**	Pn	Pn	18 05 35.2	+0.6
MGB				Pg	Pg	18 05 53.3	-12
MGB				Sg	Sg	18 07 17.0	-16
MGB				Trac		18 07 34.5	
	comp=Z,26nm,1.1s						
NCRB	**Newcastle Ridg**	**6.56**	**252**	Pg	Pg	18 05 52.8	-13
NCRB				Sg	Sg	18 07 18.6	-14
NCRB				Trac		18 07 38.9	
	comp=Z,11nm,0.8s						
PFB	**Port Renfrew**	**6.71**	**234**	Pg	Pg	18 05 56.5	-12
PFB				Sg	Sg	18 07 19.6	-18
PFB				Trac		18 07 27.4	
	comp=Z,4.0nm,0.5s						
BTB	**Buttle Lake**	**6.72**	**244**	Pn	Pn	18 05 35.6	-1.3
BTB				Pg	Pg	18 05 55.4	-13
BTB				Trac		18 07 35.0	
	comp=Z,47nm,1.0s						
HRY	**Holter Researc**	**6.75**	**153**	*e*Pn	Pn	18 05 33.2	-4.1
HRY				*e*Sg	Sg	18 07 23.8	-16
GDR	**Gold River**	**6.83**	**247**	Pg	Pg	18 05 57.8	-13
GDR				Sg	Sg	18 07 26.0	-16
GDR				Trac		18 07 30.4	
	comp=Z,5.0nm,0.4s						
WOSB	**Woss**	**6.96**	**252**	Pg	Pg	18 05 59.3	-14
WOSB				Sg	Sg	18 07 27.7	-19
WOSB				Trac		18 07 40.3	
	comp=Z,18nm,0.9s						
FNBB	**Fort Nelson**	**7.17**	**331**	Pn	Pn	18 05 40.0	-3.2
FNBB				Sn	Sn	18 06 56.1	-10
FNBB				Sg	Sg	18 07 37.2	-16
FNBB				Trac		18 07 58.4	
	comp=Z,26nm,0.7s						
FNBB				Trac		18 07 58.4	
	comp=Z,26nm,0.7s						
MAYB	**Maynard**	**7.21**	**255**	Pg	Pg	18 06 04.5	-14
MAYB				Sg	Sg	18 07 40.4	-14
MAYB				Trac		18 07 52.6	
	comp=Z,25nm,1.2s						
PHC	**Port Hardy**	**7.25**	**258**	Trac		18 07 45.2	
	comp=Z,6.0nm,0.7s						
BBB	**Bella Bella**	**7.26**	**270**	Pn	Pn	18 05 41.5	-3.1
	0.2nm,0.3s,baz=66,slow=10.0,SNR=3.1						
BBB				Lg		18 07 41.4	
	0.6nm,0.3s,baz=352,slow=15,SNR=5.3						
BBB	**Bella Bella**	**7.26**	**270**	Pn	Pn	18 05 41.5	-3.1
BBB				Lg		18 07 41.4	
BBB	**Bella Bella**	**7.26**	**270**	Trac		18 07 50.7	
	comp=Z,13nm,0.7s						
BBB	**Bella Bella**	**7.26**	**270**	Sg	Sg	18 07 41.4	-15
HOLB	**Holberg**	**7.69**	**258**	Sg	Sg	18 07 54.4	-16
HOLB				Trac		18 07 59.0	
	comp=Z,9.0nm,0.7s						
BOZ	**Bozeman (W)**	**7.79**	**155**	*e*Pn	Pn	18 05 50.4	-1.6
	2.6nm,0.5s						
BOZ				*e*Pg	Pg	18 06 13.8	-16
MCMT	**McKenzie Canyo**	**8.30**	**163**	*e*Pn	P	18 05 54.4	-4.7
RUBB	**Prince Rupert**	**8.46**	**286**	Trac		18 08 30.1	
	comp=Z,17nm,0.7s						
RUBB	**Prince Rupert**	**8.46**	**286**	Sg	Sg	18 08 16.3	-20
FFC	**Flin Flon**	**8.68**	**72**	*e*Pn	P	18 05 56.6	-7.7
	13nm,0.4s						
FFC				Sg	Sg	18 08 21.6	-22
DLBC	**Dease Lake**	**9.60**	**311**	Pn	P	18 06 11.0	-5.9
	0.1nm,0.3s,baz=139,slow=20,SNR=1.9						
YKA	**Yellowknife Ar**	**9.75**	**5**	Pn	P	18 06 12.6	-6.3
	1.0nm,0.3s,baz=187,slow=13,SNR=38						
YKA				Pg	P	18 06 49.4	+30
	0.4nm,0.3s,baz=182,slow=16,SNR=4.0						
YKA				Sn	Sn	18 07 55.9	-14
	0.9nm,0.3s,baz=182,slow=22,SNR=9.0						
YKA				Lg		18 08 53.0	
	0.9nm,0.3s,baz=184,slow=30,SNR=8.8						
YKW3	**Yellowknife Ar**	**9.81**	**4**	*e*Pn	P	18 06 13.8	-6.0
YKW3				*e*Sn	Sn	18 07 57.5	-14
YKW3	**Yellowknife Ar**	**9.81**	**4**	Pn	P	18 06 13.3	-6.5
YKW3				Pn	P	18 06 13.7	-6.2
YKW3				Sn	Sn	18 07 56.5	-15
YKW3				Sn	Sn	18 07 57.9	-14
YKW3				Sg	Sg	18 08 57.4	-24
YKW3				Sg	Sg	18 08 57.7	-23
YKW3				Trac		18 09 07.8	
	comp=Z,24nm,0.7s						
YKW3				Trac		18 09 07.8	
	comp=Z,24nm,0.7s						
YKW3				Trac		18 09 08.1	
	comp=Z,19nm,0.6s						
YKW3				Trac		18 09 08.1	
	comp=Z,19nm,0.6s						
VIB	**Van Inlet**	**9.82**	**279**	Trac		18 09 20.8	
	comp=Z,4.0nm,0.8s						
PDAR	**Pinedale Array**	**11.01**	**153**	Pn	P	18 06 30.2	-6.2
	0.1nm,0.3s,baz=342,slow=11,SNR=3.0						
FCC	**Fort Churchill**	**13.79**	**56**	*e*Pn	P	18 07 03.3	-10
FCC	**Fort Churchill**	**13.79**	**56**	Pn	P	18 07 03.5	-10
FCC				Sn	S	18 09 29.8	-18
FCC				Sg		18 10 59.8	
FCC				Trac		18 11 22.5	
	comp=Z,10.0nm,0.8s						
FCC				Trac		18 11 22.5	
	comp=Z,10.0nm,0.8s						
INK	**Inuvik**	**17.59**	**339**	P	P	18 07 58.8	-3.5

	0.2nm,0.3s,baz=146,slow=9.9,SNR=3.8						
INK	**Inuvik**	**17.59**	**339**	*e*P	P	18 07 59.0	-3.3
ILAR	**Eielson Array**	**19.63**	**319**	P	P	18 08 24.9	-2.2
	baz=103,slow=8.2,SNR=7.6						
MKAR	**Makanchi Array**	**79.51**	**347**	P	P	18 16 02.1	-1.9
	0.5nm,0.8s,baz=6.4,slow=5.8,SNR=4.5						

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*CSEM **26** 18:30:44.7±1.0,38.62N×29.10W,h3^{km},MD2.9,Error ellipse: s-maj=29.2km s-min=8.8km az=78.0,After PDA*

*PDA **26** 18:30:44.7±0.5,38.62N×29.10W,h3^{km}±4^{km},MD2.9,Error ellipse: s-maj=19.6km s-min=4.6km az=13.0*

SVSA 26 18:30:44.7±0.5,38.62N×29.10W,h3^{km}±4^{km},MD2.9, Error ellipse: s-maj=19.6km s-min=4.6km az=13.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**0.32**	**96**	*e*P	Pg	18 30 50.4	-0.6
CALA				*e*S	Sg	18 30 54.9	-0.4
HOR	**Horta**	**0.38**	**103**	*e*P	Pg	18 30 51.4	-0.9
HOR				*e*S	Sg	18 30 56.8	-0.6
PICO	**Pico**	**0.54**	**102**	*e*P	Pg	18 30 54.4	-1.2
PICO				*e*S	Sg	18 31 01.2	-1.6

IDC 26 18:43:46.1±1.9,1.51N×126.09E,mb3.7/3,mb1 3.9/3, mb1mx3.6/14,mbtmp3.8/3,Error ellipse: s-maj=189.6km s-min=25.5km az=63.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.80**	**160**	P	P	18 48 50.3	-1.6
	1.4nm,0.5s,baz=338,slow=10,SNR=14						
STKA	**Stephens Creek**	**36.31**	**157**	P	P	18 50 51.8	-1.8
	1.1nm,0.7s,baz=345,slow=12,SNR=4.3						
MKAR	**Makanchi Array**	**59.02**	**326**	P	P	18 53 47.9	-2.2
	0.4nm,0.4s,baz=120,slow=7.2,SNR=6.7						

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*MOS **26** 18:45:56.1±2.2,39.29N×120.11W,h10^{km},mb4.7/8,Error ellipse: s-maj=14.7km s-min=9.6km az=107.1*

*IDC **26** 18:45:56.1±0.6,39.34N×120.05W,mb4.0/11,mb1 4.2/18, mb1mx4.2/27,mbtmp4.0/18,ML3.9/6,MS4.0/25,Ms1 4.0/25, ms1mx3.9/33,Error ellipse: s-maj=10.9km s-min=4.3km az=39.0*

*NEIC **26** 18:45:57.8,39.31N×120.09W,h0^{km},mb4.6/21,MS4.5/1, MW4.8(BRK),After NCEDC.*

NEIC Felt [V] at Downieville, Kings Beach, Tahoe Vista and Truckee; [IV] at Alta, Calpine, Carnelian Bay, Clio, El Dorado, Georgetown, Kyburz, Loyalton, Norden, Olympic Valley, Pollock Pines, Portola, Soda Springs, Tahoe City and Volcano. Also felt [IV] at Carson City, Incline Village, Reno, Silver Springs, Sparks, Sun Valley and Yerington, Nevada. Felt [II-III] in a large area of northern California including Sacramento and San Francisco and as far east as Fallon, Nevada.

*BJI **26** 18:45:58.7,39.61N×120.39W,h11^{km},mB5.2,mb4.9, Ms4.7,Msz4.2*

ISC 26 18:45:56.4±0.8,39.34N±0.02×120.00W±0.03,h11^{km}±5^{km}, h12^{km}±2.1^{km}:pP-P,n173,σ1§09/156,mb4.3/31,MS4.0/25, 5C-2D,Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WCN	**Washoe City**	**0.19**	**102**	*e*P	**Pg**	**18 46 01.5**	**+0.8**
BEKR	**Beckwourth**	**0.59**	**332**	*e*P	**Pb**	**18 46 08.0**	**-0.4**
PAHR	**Pah Rah Range**	**0.60**	**52**	*e*P	**Pb**	**18 46 09.2**	**+0.8**
CMB	**Columbia Colle**	**1.34**	**193**	*e*P	**Pb**	**18 46 20.0**	**-1.1**
NVAR	**Mina Array Bea**	**1.60**	**124**	Pn	**Pn**	**18 46 25.3**	**+0.4**
	442nm,0.3s,baz=345,slow=11,SNR=3127						
NVAR				Pg	**Pg**	**18 46 26.8**	**-1.7**
	442nm,0.3s,baz=292,slow=17,SNR=3050						
NVAR				Lg		18 46 48.1	
	2µm,0.3s,baz=334,slow=24,SNR=41						
NVAR				LR	LR	18 46 48.2	
	comp=Z,3µm,18.7s,baz=180,slow=32						
NVAR	**Mina Array Bea**	**1.60**	**124**	Pn	**Pn**	**18 46 25.3**	**+0.4**
NVAR				Pg	**Pg**	**18 46 26.8**	**-1.7**
NVAR				Lg		18 46 48.1	
MNV	**Mina**	**1.70**	**122**	*e*P	**Pn**	**18 46 26.3**	**0.0**
OMM	**Old Mammoth Mi**	**1.89**	**155**	*e*P	**Pn**	**18 46 30.4**	**+1.3**
NSHM	**Saint Helena R**	**2.19**	**249**	*e*Pn	**Pn**	**18 46 33.2**	**-0.1**
MTUM	**Tungsten Hills**	**2.28**	**150**	*e*Pn	**Pn**	**18 46 35.6**	**+1.0**
WDC	**Whiskeytown Da**	**2.31**	**303**	⇑*e*Pn	**Pn**	**18 46 34.9**	**-0.2**
BMN	**Battle Mountai**	**2.40**	**62**	*e*Pn	**Pn**	**18 46 35.9**	**-0.3**
HOPS	**Hopland**	**2.42**	**263**	⇑*e*Pn	**Pn**	**18 46 36.6**	**+0.1**
TPH	**Tonopah**	**2.51**	**119**	*e*Pn	**Pn**	**18 46 38.3**	**+0.4**
MOD	**Modoc**	**2.57**	**355**	*e*Pn	**Pn**	**18 46 39.4**	**+0.7**
SAC	**San Andreas**	**2.59**	**228**	*e*Pn	**Pn**	**18 46 38.5**	**-0.5**
SAO	**San Andreas Ge**	**2.82**	**204**	*e*Pn	**Pn**	**18 46 42.0**	**-0.2**
LRV	**Little Rabbit**	**3.02**	**196**	*e*Pn	**Pn**	**18 46 43.8**	**-1.4**
YBH	**Yreka Blue Hor**	**3.16**	**320**	Pn	**Pn**	**18 46 47.3**	**+0.2**
	14nm,0.3s,baz=146,slow=7.4,SNR=64						
YBH				Pg	**Pg**	**18 46 51.2**	**-8.4**
	55nm,0.3s,baz=150,slow=7.7,SNR=165						
YBH				Lg		18 47 34.1	
	68nm,0.3s,baz=268,slow=23,SNR=8.4						
YBH				LR	LR	18 48 14.5	
	comp=Z,4µm,19.5s,baz=146,slow=44						
YBH	**Yreka Blue Hor**	**3.16**	**320**	*e*Pn	**Pn**	**18 46 47.8**	**+0.7**
KHMM	**Horse Mountain**	**3.25**	**299**	*e*Pn	**Pn**	**18 46 48.5**	**+0.2**
WVOR	**Wild Horse Val**	**3.26**	**18**	*e*P	**Pn**	**18 46 48.5**	**0.0**
TRCR	**Troy Canyon**	**3.58**	**105**	Pn	**Pn**	**18 46 53.0**	**-0.1**
DAC	**Darwin (Calif)**	**3.60**	**147**	*e*Pn	**Pn**	**18 46 53.6**	**+0.2**
KRMB	**Red Mountain**	**3.70**	**307**	*e*Pn	**Pn**	**18 46 54.3**	**-0.4**
ELK	**Elko**	**3.91**	**67**	Pn	**Pn**	**18 46 56.8**	**-1.0**
	29nm,0.3s,baz=262,slow=13,SNR=732						
ELK				Lg		18 48 00.8	
	210nm,0.3s,baz=158,slow=22,SNR=13						
ELK				LR	LR	18 48 34.1	
	comp=Z,2µm,18.2s,baz=243,slow=40						
ELK	**Elko**	**3.91**	**67**	*e*Pn	**Pn**	**18 46 57.4**	**-0.4**
HUMO	**Hull Mountain**	**3.96**	**326**	*e*Pn	**Pn**	**18 46 59.8**	**+1.4**
KBO	**Bosley Butte**	**4.30**	**313**	Pn	**Pn**	**18 47 02.1**	**-1.2**
KEBM	**Edson Butte**	**4.81**	**319**	*e*Pn	**Pn**	**18 47 12.1**	**+1.5**
MWC	**Mount Wilson**	**5.34**	**162**	*e*Pn	**Pn**	**18 47 17.5**	**-0.5**
ARUT	**Antelope Range**	**5.37**	**105**	*e*P	**Pn**	**18 47 18.1**	**-0.3**
NEN	**Nelson**	**5.51**	**130**	Pn	**Pn**	**18 47 19.9**	**-0.5**
BGU	**Big Grassy Mou**	**5.57**	**71**	*e*Pn	**Pn**	**18 47 20.8**	**-0.5**
LDFC	**Landfair**	**5.77**	**136**	Pn	**Pn**	**18 47 25.1**	**+0.9**
COR	**Corvallis**	**5.79**	**336**	*e*Pn	**Pn**	**18 47 25.6**	**+1.2**
BMO	**Blue Mountains**	**5.86**	**19**	*e*Pn	**Pn**	**18 47 24.9**	**-0.5**
HLID	**Hailey**	**5.95**	**43**	Pn	**Pn**	**18 47 28.1**	**+1.5**
HVU	**Hansel Valley**	**6.01**	**64**	*e*Pn	**Pn**	**18 47 26.6**	**-1.0**
SPUT	**South Promonto**	**6.09**	**69**	*e*Pn	**Pn**	**18 47 28.4**	**-0.3**
MVU	**Marysvale**	**6.13**	**95**	*e*Pn	**Pn**	**18 47 29.9**	**+0.7**
MSU	**Marysvale**	**6.15**	**95**	*e*Pn	**Pn**	**18 47 29.5**	**0.0**
NOQ	**North Oquirrh**	**6.19**	**75**	*e*Pn	**Pn**	**18 47 29.0**	**-1.0**
PFO	**Pinyon Flat Ob**	**6.39**	**152**	*e*Pn	**Pn**	**18 47 32.5**	**-0.4**
CTU	**Camp Tracy**	**6.47**	**75**	*e*Pn	**Pn**	**18 47 34.6**	**+0.6**
MPU	**Maple Canyon**	**6.49**	**81**	*e*Pn	**Pn**	**18 47 33.5**	**-0.7**
JLU	**Jordanelle**	**6.69**	**76**	*e*Pn	**Pn**	**18 47 36.1**	**-0.9**
DAU	**Daniels Canyon**	**6.81**	**78**	*e*Pn	**Pn**	**18 47 40.1**	**+1.4**
HWUT	**Hardware Ranch**	**6.81**	**68**	*e*Pn	**Pn**	**18 47 38.8**	**0.0**
TMUT	**Trail Mountain**	**6.81**	**88**	*e*Pn	**Pn**	**18 47 40.1**	**+1.3**
BAR	**Barrett**	**7.17**	**157**	*e*Pn	**Pn**	**18 47 43.8**	**0.0**
SRU	**San Rafael**	**7.36**	**89**	*e*Pn	**Pn**	**18 47 48.3**	**+1.9**
MCMT	**McKenzie Canyo**	**7.63**	**42**	Pn	**Pn**	**18 47 50.8**	**+0.5**
RRI2	**Red Ridge**	**7.66**	**56**	*e*Pn	**Pn**	**18 47 50.9**	**+0.3**
TPAW	**Teton Pass**	**7.96**	**56**	*e*Pn	**Pn**	**18 47 54.7**	**-0.2**
REDW	**Red Top Meadow**	**7.96**	**57**	*e*Pn	**Pn**	**18 47 52.8**	**-2.1**
SNOW	**Snow King Moun**	**8.07**	**56**	Pn	**P**	**18 47 55.2**	**-1.2**
IMW	**Indian Meadow**	**8.17**	**53**	Pn	**P**	**18 47 55.1**	**-2.6**
MOOW	**Moose Ponds**	**8.21**	**55**	Pn	**P**	**18 47 57.6**	**-0.8**
LOHW	**Long Hollow**	**8.24**	**56**	Pn	**P**	**18 47 57.8**	**-1.0**
QLMT	**Earthquake Lak**	**8.40**	**46**	*e*Pn	**P**	**18 47 59.5**	**-1.5**
YFT	**Old Faithful**	**8.53**	**50**	Pn	**P**	**18 48 07.3**	**+4.6**
PDAR	**Pinedale Array**	**8.60**	**63**	Pn	**P**	**18 48 04.5**	**+0.8**
	0.3nm,0.3s,baz=244,slow=11,SNR=51						
PDAR				Sn	**Sn**	**18 49 40.2**	**-1.5**
	0.3nm,0.3s,baz=248,slow=16,SNR=3.5						
PDAR				Lg		18 50 28.9	
	0.9nm,0.3s,baz=238,slow=23,SNR=6.2						
PDAR	**Pinedale Array**	**8.60**	**63**	Pn	**P**	**18 48 04.5**	**+0.8**
PDAR				Sn	**Sn**	**18 49 40.2**	**-1.5**
PDAR				Lg		18 50 28.9	
MSO	**Missoula**	**8.69**	**29**	*e*Pn	**P**	**18 48 05.5**	**+0.5**
BOZ	**Bozeman (W)**	**8.82**	**42**	*e*Pn	**P**	**18 48 05.1**	**-1.8**
LKWY	**Lake**	**8.85**	**51**	Pn	**P**	**18 48 12.4**	**+5.2**
OCWA	**Octopus Mounta**	**8.93**	**342**	Pn	**P**	**18 48 07.0**	**-1.4**
CHMT	**Chamberlain Mo**	**9.03**	**31**	*e*Pn	**P**	**18 48 09.8**	**+0.1**
NEW	**Newport**	**9.16**	**12**	Pn	**P**	**18 48 13.3**	**+1.9**
	0.7nm,0.3s,baz=190,slow=14,SNR=24						
NEW				Lg		18 50 49.9	
	0.6nm,0.3s,baz=124,slow=7.4,SNR=5.2						
NEW				LR	LR	18 52 08.5	
	comp=Z,1µm,18.3s,baz=193,slow=41						
NEW	**Newport**	**9.16**	**12**	*e*Pn	**P**	**18 48 11.7**	**+0.2**
HRY	**Holter Researc**	**9.48**	**36**	Pn	**P**	**18 48 17.2**	**+1.2**
RW3	**Ridgway**	**9.67**	**93**	*e*Pn	**P**	**18 48 19.4**	**+0.8**
GCMT	**Greycliff**	**9.97**	**46**	Pn	**P**	**18 48 25.2**	**+2.5**
RWWY	**Rawlins**	**10.02**	**72**	*e*Pn	**P**	**18 48 24.2**	**+1.0**
TUC	**Tucson**	**10.25**	**130**	Pn	**P**	**18 48 26.8**	**+0.3**
ISCO	**Idaho Springs**	**11.12**	**83**	Pn	**P**	**18 48 38.9**	**+0.6**
ANMO	**Albuquerque**	**11.65**	**108**	⇓*i*P	**P**	**18 48 48.0**	**+2.3**
ANMO	**Albuquerque**	**11.65**	**108**	Pn	**P**	**18 48 45.9**	**+0.2**
	baz=281,slow=18,SNR=3.2						
ANMO				Lg		18 51 59.5	
	baz=278,slow=7.8,SNR=2.0						
ANMO				LR	LR	18 53 17.0	
	comp=Z,662nm,20.9s,slow=38						
ANMO	**Albuquerque**	**11.65**	**108**	*e*Pn	**P**	**18 48 44.8**	**-1.0**
RSSD	**Black Hills**	**12.84**	**63**	*e*Pn	**P**	**18 48 59.5**	**-2.0**
BBB	**Bella Bella**	**14.03**	**339**	Pn	**P**	**18 49 20.9**	**+3.8**
	0.1nm,0.3s,baz=133,slow=9.9,SNR=3.9						
BBB				LR	LR	18 54 19.1	
	comp=Z,272nm,19.7s,baz=161,slow=36						
MNTX	**Cornudas Mount**	**14.12**	**118**	*e*Pn	**P**	**18 49 15.3**	**-3.2**
	6.9nm,1.1s						
DGMT	**Dagmar**	**14.57**	**46**	*e*Pn	**P**	**18 49 25.8**	**+1.5**
	32nm,1.1s						
EDM	**Edmonton**	**14.61**	**16**	*e*Pn	**P**	**18 49 25.0**	**+0.2**
AMTX	**Amarillo**	**15.27**	**101**	*e*P	**P**	**18 49 31.6**	**-2.0**
	95nm,1.6s						
CBKS	**Cedar Bluff**	**15.74**	**85**	P	**P**	**18 49 39.6**	**0.0**
	129nm,1.3s						
LTX	**Lajitas**	**16.75**	**122**	*e*P	**P**	**18 49 55.6**	**+3.0**
	58nm,1.8s						
TXAR	**Lajitas Array**	**16.75**	**122**	Pn	**P**	**18 49 56.0**	**+3.4**
	0.0nm,0.3s,baz=310,slow=9.8,SNR=24						
TXAR				Lg		18 54 44.6	
	0.0nm,0.3s,baz=304,slow=20,SNR=2.5						
TXAR				LR	LR	18 57 00.6	
	comp=Z,787nm,21.4s,baz=45,slow=40						
TXAR	**Lajitas Array**	**16.75**	**122**	Pn	**P**	**18 49 56.0**	**+3.4**
TXAR				Lg		18 54 44.6	
TXAR				LR	LR	18 57 00.7	
WMOK	**Wichita Mounta**	**17.54**	**99**	*e*P	**P**	**18 50 03.3**	**+0.9**
	13nm,1.1s						
KSU1	**Kansas State U**	**18.12**	**83**	*e*P	**P**	**18 50 08.3**	**-1.3**
FFC	**Flin Flon**	**19.60**	**32**	*e*P	**P**	**18 50 25.9**	**-1.4**
	17nm,0.8s						
DLBC	**Dease Lake**	**20.18**	**345**	P	**P**	**18 50 34.9**	**+1.4**
	13nm,0.9s,baz=171,slow=10,SNR=12						
DLBC				LR	LR	18 58 15.8	
	comp=Z,539nm,20.3s,MS3.9,baz=160,slow=37						
DLBC	**Dease Lake**	**20.18**	**345**	P	**P**	**18 50 31.7**	**-1.8**
DLBC				P		18 50 34.9	
DLBC				LR	LR	18 58 15.8	
CCM	**Cathedral Cave**	**22.44**	**84**	*e*P	**P**	**18 50 57.3**	**+0.7**
	26nm,1.3s,mb4.5						
UALR	**University of**	**22.49**	**93**	*e*P	**P**	**18 50 58.0**	**+0.8**
FVM	**French Village**	**23.09**	**84**	*e*P	**P**	**18 51 03.8**	**+0.8**
	14nm,0.9s,mb4.4						
YKA	**Yellowknife Ar**	**23.41**	**6**	P	**P**	**18 51 07.5**	**+1.7**
	3.0nm,0.7s,mb3.8,baz=189,slow=10.0,SNR=22						
YKW3	**Yellowknife Ar**	**23.48**	**6**	*e*P	**P**	**18 51 07.5**	**+1.0**
FCC	**Fort Churchill**	**25.53**	**32**	*e*P	**P**	**18 51 25.4**	**-0.8**
	13nm,0.8s,mb4.5						
PLAL	**Pickwick Lake**	**25.73**	**90**	P	**P**	**18 51 28.1**	**-0.3**
	6.0nm,0.8s,mb4.2						
DIV	**Divide**	**27.01**	**332**	*e*P	**P**	**18 51 40.4**	**+0.5**
	38nm,1.1s,mb4.8						
SLKM	**Skilak Lake**	**28.33**	**328**	P	**P**	**18 51 50.4**	**-1.5**
SML	**Sawmill**	**28.38**	**332**	*e*P	**P**	**18 51 51.4**	**-0.9**
RSO	**Redoubt South**	**29.36**	**327**	*e*P	**P**	**18 52 01.5**	**+0.3**
SPU	**Mount Spurr**	**29.45**	**328**	P	**P**	**18 52 01.4**	**-0.6**
ILAR	**Eielson Array**	**29.90**	**337**	P	**P**	**18 52 06.3**	**+0.3**
	6.5nm,1.0s,mb4.3,baz=153,slow=7.2,SNR=31						
ILAR				PcP	PcP	18 55 08.1	-0.8
	0.7nm,0.8s,baz=178,slow=2.8,SNR=3.6						
ILAR				LR	LR	19 03 35.8	
	comp=Z,184nm,19.1s,MS3.7,baz=344,slow=36						
INK	**Inuvik**	**29.95**	**350**	P	**P**	**18 52 07.2**	**+0.7**
	6.8nm,0.9s,mb4.4,baz=163,slow=10,SNR=10						
INK				LR	LR	19 04 26.6	
	comp=Z,493nm,19.1s,MS4.2,baz=347,slow=37						
INK	**Inuvik**	**29.95**	**350**	*e*P	**P**	**18 52 03.0**	**-3.4**
	14nm,1.1s,mb4.6						
INK				P	pP	18 52 07.2	-2.5
INK				LR	LR	19 04 26.6	
COLA	**College**	**30.27**	**337**	*i* P	**P**	**18 52 06.1**	**-3.1**
SADO	**Sadowa**	**30.58**	**66**	LR	LR	19 06 16.0	
	comp=Z,94nm,20.4s,MS3.4,baz=87,slow=40						
ELN	**Prospectdale**	**30.72**	**81**	P	**P**	**18 52 14.2**	**+0.8**
GENY	**Geneseo**	**31.75**	**70**	*e*P	**P**	**18 52 21.5**	**-1.0**
RES	**Resolute Bay**	**37.32**	**11**	*e*P	**P**	**18 53 10.2**	**+0.3**
SCHQ	**Schefferville**	**38.38**	**48**	P	**P**	**18 53 18.8**	**-0.2**
	1.8nm,0.7s,mb3.9,baz=236,slow=18,SNR=3.2						
SCHQ				LR	LR	19 07 18.2	
	comp=Z,125nm,21.3s,MS3.7,baz=307,slow=33						
SCHQ	**Schefferville**	**38.38**	**48**	P	**P**	**18 53 18.8**	**-0.2**
SCHQ				LR	LR	19 07 18.2	
JTS	**JuntasAbangare**	**42.53**	**123**	LR	LR	19 11 57.7	
	comp=Z,397nm,21.6s,MS4.3,baz=80,slow=37						
BILL	**Bilibino**	**48.19**	**331**	⇓*i*P	**P**	**18 54 41.9**	**+3.7**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
BILL				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.1						
BILL	**Bilibino**	**48.19**	**331**	*e*P	**P**	**18 54 36.0**	**-2.2**
	comp=Z,8.3nm,1.0s,mb4.7						
SUMG	**Summit**	**50.48**	**23**	P	**P**	**18 54 56.9**	**+1.2**
	comp=Z,7.7nm,0.8s,mb4.8						
SJG	**San Juan**	**50.94**	**98**	LR	LR	19 18 51.8	
	comp=Z,136nm,21.0s,MS3.9,baz=287,slow=39						
SDV	**Santo Domingo**	**53.42**	**111**	LR	LR	19 21 34.5	
	comp=Z,208nm,18.9s,MS4.2,baz=318,slow=40						
SDV	**Santo Domingo**	**53.42**	**111**	P	**P**	**18 55 18.6**	**-0.1**
	comp=Z,13nm,1.1s,mb4.8						
ROSC	**El Rosal**	**53.62**	**118**	LR	LR	19 20 08.7	
	comp=Z,101nm,19.9s,MS3.9,baz=346,slow=38						
TIXI	**Tiksi**	**59.32**	**340**	*e*P	**P**	**18 55 58.0**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
PPT	**Papeete**	**63.00**	**212**	*e*S	Sx	19 04 05.0	
	comp=Z,562nm,42.5s						
PPT				*e*SS	SS	19 08 22.9	-39
	comp=Z,71nm,22.0s						
PPT				*e*LR	LR	19 14 08.5	
	comp=Z,82nm,25.8s,baz=43						
PPT	**Papeete**	**63.00**	**212**	LR	LR	19 18 45.2	
	comp=Z,75nm,18.5s,MS3.9,baz=69,slow=31						
RKT	**Rikitea**	**63.69**	**195**	*e*S	Sx	19 04 15.4	
	comp=Z,198nm,39.2s						
RKT				*e*SS	SS	19 09 02.0	-10
	comp=Z,1µm,41.2s						
RKT				*e*LQ		19 11 53.3	
	comp=Z,2µm,38.0s						
RKT				*e*LR	LR	19 15 06.6	
	comp=Z,361nm,36.5s						
YAK	**Yakutsk**	**64.54**	**331**	*e*P	**P**	**18 56 33.6**	**-1.5**
YAK				pmax	pmax		
	comp=Z,200nm,21.0s						
TBI	**Tubuai**	**68.18**	**209**	*e*S	S	19 05 26.0	-31
	comp=Z,109nm,34.5s						
TBI				*e*SS	SS	19 09 29.7	-52
	comp=Z,114nm,41.2s						
TBI				*e*LQ		19 13 43.6	
	comp=Z,180nm,35.0s						
TBI				*e*LR	LR	19 16 36.8	
	comp=Z,155nm,39.0s,baz=36						
ARCES	**ARCESS Array B**	**68.52**	**12**	LR	LR	19 28 52.4	
	comp=Z,116nm,18.6s,MS4.1,baz=328,slow=38						
ASAJ	**Asahikawa**	**68.53**	**310**	LR	LR	19 22 41.1	
	comp=Z,41nm,18.8s,MS3.7,baz=16,slow=32						
NOA	**NORSAR Array B**	**72.37**	**23**	LR	LR	19 29 09.4	
	comp=Z,90nm,20.1s,MS4.0,baz=325,slow=36						
LPAZ	**La Paz**	**73.51**	**128**	LR	LR	19 27 41.1	
	comp=Z,56nm,21.7s,MS3.8,baz=198,slow=34						
MJAR	**Matsushiro Arr**	**75.72**	**306**	P	**P**	**18 57 42.8**	**-0.8**
	comp=Z,1.7nm,0.9s,mb4.0,baz=31,slow=7.1,SNR=3.9						
MAJO	**Matsushiro**	**75.72**	**306**	*e*P	**P**	**18 57 42.4**	**-1.2**
	comp=Z,8.6nm,0.9s,mb4.7						
FINES	**FINESS Array B**	**75.85**	**16**	*i* P	**P**	**18 57 47.7**	**+3.9**
FINES				pmax	pmax		
	comp=Z,4.0nm,1.2s						
FINES	**FINESS Array B**	**75.85**	**16**	P	**P**	**18 57 44.1**	**+0.4**
	comp=Z,3.6nm,1.2s,mb4.2,slow=5.7,SNR=5.7						
FINES				LR	LR	19 30 37.2	
	comp=Z,126nm,20.6s,MS4.2,baz=252,slow=35						
CN2	**Changchun**	**78.34**	**318**	*e*P	**P**	**18 58 00.3**	**+2.3**
CLL	**Collm**	**80.82**	**28**	*e*P	**P**	**18 58 21.0**	**+10**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
CLL	**Collm**	**80.82**	**28**	*e*	**P**	**18 58 21.0**	**+10**
CLL				*e*PP	PP	19 01 30.0	+12
BRG	**Berggiesshubel**	**81.52**	**27**	*e*P	**P**	**18 58 22.6**	**+7.8**
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
BRG				MLR	MLR		
	comp=N,241nm,21.8s,MS4.7						
BRG				MLR	MLR		
	comp=E,281nm,21.8s,MS4.7						
BRG				MLR	MLR		
	comp=Z,198nm,19.7s,MS4.5						
BRG	**Berggiesshubel**	**81.52**	**27**	P	**P**	**18 58 22.6**	**+7.8**
	comp=Z,2.9nm,1.0s,mb4.2						
BRG				LR	LR		
	comp=Z,200nm,19.7s,MS4.5						
TLY	**Talaya**	**81.68**	**334**	*e*P	**P**	**18 58 17.2**	**+1.5**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
TLY				MLR	MLR		
	comp=Z,53nm,17.0s,MS4.0						
TLY	**Talaya**	**81.68**	**334**	*e*P	**P**	**18 58 16.1**	**+0.4**
	comp=Z,3.2nm,1.1s,mb4.2						
ESDC	**Sonseca Array**	**82.02**	**44**	P	**P**	**18 58 16.7**	**-1.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=303,slow=6.1,SNR=6.2						
DPC	**Dobruska-Polom**	**82.79**	**26**	*e*P	**P**	**18 58 25.9**	**+4.4**
ZAK	**Zakamensk**	**82.90**	**334**	*e*P	**P**	**18 58 22.9**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.7						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.7s,mb3.6						
GERES	**GERESS Array B**	**83.10**	**29**	P	**P**	**18 58 23.8**	**+0.6**
	comp=Z,0.1nm,0.3s,mb3.4,baz=346,slow=4.0,SNR=2.5						
ULN	**Ulaanbaatar**	**83.63**	**330**	⇑*i*P	**P**	**18 58 24.5**	**-1.3**
ULN	**Ulaanbaatar**	**83.63**	**330**	*e*P	**P**	**18 58 25.5**	**-0.2**
	comp=Z,1.4nm,0.8s,mb4.1						
OBN	**Obninsk**	**83.80**	**13**	*e*P	**P**	**18 58 32.5**	**+6.0**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
SONM	**Songino Array**	**83.90**	**331**	P	**P**	**18 58 27.8**	**+0.7**
	comp=Z,0.6nm,0.7s,mb3.8,baz=18,slow=4.6,SNR=2.9						
SONM				LR	LR	19 35 54.3	
	comp=Z,103nm,21.3s,MS4.2,baz=240,slow=36						
NVS	**Novosibirsk**	**84.10**	**347**	⇑*i*P	**P**	**18 58 31.3**	**+3.3**
NVS				pmax	pmax		
	comp=E,4.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.7						
ARU	**Arti**	**84.59**	**1**	⇑*i*P	**P**	**18 58 28.7**	**-1.7**
ARU				*e*		19 01 43.6	
ARU				*e*S	S	19 08 52.0	-3.8
ARU				*e*SS	SS	19 14 25.1	-4.8
ARU				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.6						
ARU	**Arti**	**84.59**	**1**	*e*P	**P**	**18 58 29.1**	**-1.3**
	comp=Z,4.7nm,0.9s,mb4.6						
AKASG	**Malin Array Be**	**86.35**	**19**	P	**P**	**18 58 39.6**	**+0.3**
	comp=Z,0.1nm,0.3s,mb3.5,baz=338,slow=5.0,SNR=3.0						
BDFB	**Brasilia**	**86.45**	**113**	LR	LR	19 38 22.0	
	comp=Z,137nm,20.2s,MS4.3,baz=113,slow=36						
CPUP	**Villa Florida**	**87.65**	**127**	LR	LR	19 38 54.3	
	comp=Z,72nm,20.4s,MS4.1,baz=0.1,slow=36						
ZRNK	**Zerenda**	**87.75**	**355**	*e*P	**P**	**18 58 46.0**	**0.0**
	comp=Z,72nm,0.6s						
SSE	**Sheshan**	**89.78**	**311**	*e*P	**P**	**18 58 56.3**	**+0.1**
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.5						
SSE				AMB	AMB		
	comp=Z,30nm,3.5s						
SSE	**Sheshan**	**89.78**	**311**	*e*P	**P**	**18 58 56.2**	**0.0**
	comp=Z,26nm,0.8s						
NJ2	**Nanjing**	**90.41**	**313**	*e*P	**P**	**18 59 01.0**	**+1.8**
NJ2				AP	pP	18 59 06.0	+3.3
NJ2				XP	sP	18 59 08.0	+4.1
NJ2				PP	PP	19 02 37.8	+1.8
NJ2				SKS	SKS	19 09 30.0	-3.7
NJ2				S	S	19 09 53.0	+1.6
NJ2				XS		19 10 01.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,180nm,4.6s						
NJ2				LR	LR		
	comp=N,410nm,26.3s,MS4.8						
NJ2				LR	LR		
	comp=E,170nm,27.2s,MS4.8						
NJ2				LR	LR		
	comp=Z,90nm,25.0s,MS4.1						
MKAR	**Makanchi Array**	**91.96**	**345**	P	**P**	**18 59 05.4**	**-0.5**
	comp=Z,0.7nm,1.0s,mb4.0,baz=40,slow=4.9,SNR=2.9						
MKAR				LR	LR	19 43 44.3	
	comp=Z,98nm,19.4s,MS4.3,baz=88,slow=38						
WMQ	**Urumqi**	**93.52**	**340**	*e*P	**P**	**18 59 14.8**	**+1.7**
WMQ				AP	pP	18 59 17.3	+0.6
WMQ				PP	PP	19 03 02.0	+1.4
WMQ				PPP	PPP	19 05 04.5	+1.4
WMQ				*e*S	S	19 10 19.8	+1.4
WMQ				SS	SS	19 16 40.8	+1.1
WMQ				AMB	AMB		
	comp=Z,40nm,4.6s						
WMQ				LR	LR		
	comp=N,110nm,24.0s,MS4.4						
WMQ				LR	LR		
	comp=E,120nm,24.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,90nm,24.0s,MS4.2						
KMI	**Kunming**	**104.46**	**321**	P	Pdif	19 00 03.8	+0.8
	comp=Z,4.0nm,0.9s						
KMI				S	S	19 11 51.4	+0.5
KMI				LR	LR		
	comp=Z,50nm,32.1s,MS3.8						
VNA3	**Neumayer Olymp**	**133.20**	**155**		PKPdf	19 05 21.0	+6.4
VNA3	**Neumayer Olymp**	**133.20**	**155**		PKPdf	19 05 23.0	+8.4
VNA3	**Neumayer Olymp**	**133.20**	**155**	PKPdf	PKPdf	19 05 13.8	-0.8
VNA3				P		19 05 21.0	
VNA3				P		19 05 23.0	
VNA2	**Neumayer--Watz**	**133.97**	**155**	P	PKPdf	19 05 23.7	+7.7
VNA2	**Neumayer--Watz**	**133.97**	**155**	*i* PKPdf	PKPdf	19 05 23.7	+7.7
BOSA	**Boshof**	**149.43**	**80**	PKPbc	PKPdf	19 05 47.8	+3.5
	comp=Z,2.1nm,0.8s,baz=301,slow=5.9,SNR=3.1						

WEL 26 18:56:46.8±0.1,39.33S×176.30E,h62^{km}±1^{km},ML3.7/16, 9C-11D,Error ellipse: s-maj=0.9km s-min=0.8km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKZ	**Black Stump Fm**	**0.22**	**43**	⇓PN	P	18 56 56.6	+0.1
BKZ				SN	S	18 57 04.1	+0.5
MOVZ	**Moawhango**	**0.44**	**259**	⇓PN	P	18 56 57.9	-0.5
MOVZ				SN	S	18 57 05.9	-0.9
HATZ	**Hinemaiaia**	**0.46**	**339**	⇑PN	P	18 56 58.2	-0.4
HATZ				SN	S	18 57 06.2	-1.1
RITZ	**Rihia Road**	**0.49**	**315**	⇑PN	P	18 56 58.8	0.0
TUVZ	**Tukino**	**0.51**	**276**	⇓PN	P	18 56 58.9	-0.1
TUVZ				SN	S	18 57 07.5	-0.5
OTVZ	**Oturere**	**0.52**	**288**	⇓PN	P	18 56 59.1	-0.1
OTVZ				SN	S	18 57 08.1	-0.2
WNVZ	**Wahianoa**	**0.55**	**270**	⇓PN	P	18 56 59.2	-0.3
WNVZ				SN	S	18 57 08.3	-0.5
KRVZ	**Karewarewa**	**0.56**	**294**	PN	P	18 56 59.4	-0.2
KRVZ				SN	S	18 57 08.4	-0.7
NGZ	**Ngauruhoe**	**0.57**	**285**	⇓PN	P	18 56 59.5	-0.2
NGZ				SN	S	18 57 08.8	-0.4
DRZ	**Dome Shelter**	**0.58**	**275**	⇑PN	P	18 56 59.8	-0.1
DRZ				SN	S	18 57 09.0	-0.4
TRVZ	**Turoa**	**0.59**	**272**	PN	P	18 56 59.7	-0.2
TRVZ				SN	S	18 57 08.9	-0.7
FWVZ	**Far West T-bar**	**0.59**	**277**	⇑PN	P	18 56 59.7	-0.3
KATZ	**Kakaramea**	**0.59**	**306**	PN	P	18 56 59.9	-0.1
WTVZ	**West Tongariro**	**0.59**	**290**	⇓PN	P	18 56 59.9	-0.1
CNZ	**Chateau**	**0.60**	**282**	⇑PN	P	18 56 59.9	-0.2
WPVZ	**Whakapapa**	**0.60**	**281**	⇓PN	P	18 56 59.9	-0.2
WPVZ				SN	S	18 57 09.3	-0.6

RATZ	**Rangitukua**	**0.62**	**318**	PN	P	18 56 59.6	-0.7
MTVZ	**Mangateitei**	**0.65**	**264**	⇓PN	P	18 57 00.3	-0.3
WHTZ	**Whakaora**	**0.71**	**338**	⇑PN	P	18 57 01.4	0.0
TWVZ	**Taurewa**	**0.72**	**290**	PN	P	18 57 00.8	-0.7
PKVZ	**Pokaka**	**0.74**	**272**	PN	P	18 57 01.4	-0.4
WATZ	**Wairara**	**0.76**	**324**	⇑PN	P	18 57 01.4	-0.6
TSZ	**Takapari Road**	**0.78**	**200**	PN	P	18 57 02.0	-0.3
TSZ				SN	S	18 57 13.3	-0.3
PWZ	**Pawanui**	**0.82**	**149**	PN	P	18 57 02.9	+0.1
PATZ	**Paeroa**	**0.94**	**358**	PN	P	18 57 04.3	-0.1
TAZ	**Tarawera**	**1.10**	**8**	PN	P	18 57 06.5	-0.1
KNZ	**Kokohu**	**1.11**	**74**	PN	P	18 57 06.1	-0.5
WAZ	**Wanganui**	**1.11**	**247**	PN	P	18 57 06.8	+0.2
UTU	**Utuhina**	**1.15**	**356**	PN	P	18 57 06.6	-0.5
VRZ	**Vera Road**	**1.22**	**279**	⇓PN	P	18 57 07.5	-0.6
URZ	**Urewera**	**1.24**	**31**	PN	P	18 57 07.4	-0.9
EDRZ	**Edgecumbe**	**1.26**	**16**	PN	P	18 57 08.1	-0.6
BFZ	**Birch Farm**	**1.35**	**182**	PN	P	18 57 08.8	-1.3
MARZ	**Manawahe**	**1.37**	**12**	PN	P	18 57 09.5	-0.8
MWZ	**Matawai**	**1.38**	**44**	PN	P	18 57 09.6	-0.8
MWZ				SN	S	18 57 28.0	+0.1
HIZ	**Hauiti**	**1.39**	**305**	⇑PN	P	18 57 09.8	-0.8
HIZ				SN	S	18 57 26.4	-1.8
MRZ	**Mangatainoka R**	**1.45**	**202**	PN	P	18 57 09.8	-1.6
RAEZ	**Rainy Point**	**1.48**	**271**	⇓PN	P	18 57 11.7	-0.1
DFE	**Dawson Falls**	**1.71**	**269**	PN	P	18 57 15.3	+0.4
TOZ	**Tahuroa Road**	**1.71**	**338**	PN	P	18 57 14.1	-0.9
NEZ	**North Egmont**	**1.71**	**271**	⇑PN	P	18 57 15.2	+0.2
PKE	**Pukeiti**	**1.80**	**273**	PN	P	18 57 16.2	0.0
NRZ	**Ngariki Road**	**1.84**	**269**	PN	P	18 57 17.0	+0.2
KIW	**Kapiti Island**	**1.87**	**214**	PN	P	18 57 15.3	-1.8
KIW				SN	S	18 57 38.1	-1.5
MTW	**Mount Morrison**	**1.93**	**198**	PN	P	18 57 15.4	-2.6
CAW	**Cannon Point**	**2.02**	**208**	*e*PN	P	18 57 16.6	-2.6
TRWZ	**Traveller**	**2.12**	**193**	PN	P	18 57 17.9	-2.8
PAWZ	**Paruwai Farm**	**2.16**	**198**	PN	P	18 57 18.2	-3.1
MSWZ	**Moikau Station**	**2.24**	**201**	PN	P	18 57 19.1	-3.2
MRW	**Makara Radio**	**2.26**	**212**	*e*PN	P	18 57 19.8	-2.9
WEL	**Wellington**	**2.28**	**210**	*e*PN	P	18 57 19.9	-3.1
SNZO	**South Karori**	**2.33**	**211**	*e*PN	P	18 57 20.5	-3.1
DUWZ	**D'Urville Isla**	**2.35**	**230**	PN	P	18 57 21.2	-2.7
MXZ	**Matakaoa Point**	**2.36**	**42**	PN	P	18 57 22.8	-1.3
TCW	**Tory Channel**	**2.44**	**219**	PN	P	18 57 22.0	-3.2
TUWZ	**Tuamarina**	**2.77**	**220**	PN	P	18 57 26.3	-3.6
NNZ	**Nelson**	**2.93**	**229**	PN	P	18 57 28.4	-3.7
QRZ	**Quartz Range**	**3.26**	**241**	PN	P	18 57 33.0	-3.8
THZ	**Tophouse**	**3.56**	**226**	PN	P	18 57 36.9	-4.0
KHZ	**Kahutara**	**3.73**	**213**	*e*PN	P	18 57 38.1	-5.3
DSZ	**Denniston Nort**	**4.20**	**233**	*e*PN	P	18 57 44.7	-5.2
LTZ	**Lake Taylor**	**4.61**	**220**	*e*PN	P	18 57 49.9	-5.8
MQZ	**McQueen's Vall**	**5.16**	**211**	*e*PN	P	18 57 55.9	-7.5
ODZ	**Otahua Downs**	**7.09**	**214**	*e*PN	P	18 58 21.8	-8.4

IDC 26 19:02:25.0±5.1**,24.38N×108.53W,mb3.5**/1**,mb1 3.6**/4**, mb1mx3.5**/20**,mbtmp3.2**/4**,ML3.1**/2**,Error ellipse: s-maj=73.2km s-min=27.5km az=155.0,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**6.58**	**40**	Pn	Pn	19 04 01.9	-3.5
	0.1nm,0.3s,baz=218,slow=16,SNR=4.6						
TXAR				Lg		19 05 53.9	
	0.1nm,0.3s,baz=220,slow=28,SNR=2.9						
NVAR	**Mina Array Bea**	**16.29**	**332**	Pn	P	19 06 17.2	+0.5
	baz=153,slow=12,SNR=3.2						
ELK	**Elko**	**17.26**	**343**	Pn	P	19 06 29.6	+0.6
	0.1nm,0.3s,baz=188,slow=9.5,SNR=3.8						
ILAR	**Eielson Array**	**47.37**	**339**	P	P	19 11 01.4	-0.9
	0.5nm,0.9s,baz=146,slow=5.2,SNR=6.1						

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*NIED **26** 19:16:00,36.50N×141.10E,h38^{km},Mw4.1 Best double couple: $M_0$1.59×10^{15} NP1:ϕ_s247°,δ73°,λ89°. NP2:ϕ_s70°, δ17°,λ93°.*
*BJI **26** 19:16:20.5,36.33N×141.16E,h62^{km},mB4.0,mb4.4*
*JMA **26** 19:16:21.1±0.1,36.48N×141.03E,h45^{km}±1^{km},M4.2*
JMA Felt II J1.
*NEIC **26** 19:16:22.1±0.4,36.43N×141.05E,mb4.1/5,Error ellipse: s-maj=10.4km s-min=8.3km az=178.0*
NEIC Recorded [2 JMA] in Ibaraki and Tochigi; [1 JMA] in Chiba and Fukushima Prefectures.
*IDC **26** 19:16:22.1±0.6,36.42N×141.07E,h44^{km}±5^{km},mb3.7/11, mb1 4.0/15,mb1mx3.8/22,mbtmp4.0/15,ML4.0/4,MS3.2/2, Ms1 3.3/2,ms1mx2.7/19,Error ellipse: s-maj=9.9km s-min=8.2km az=142.0*
ISC 26 19:16:19.4±0.7**,36.45N**±0.03×**141.18E**±0.06**,h38**^{km}±7^{km}**, h46**^{km}±3.4^{km}**:pP-P,n37,**σ**1^{s}10**/50**,mb4.0**/16**,MS3.6**/1**, 2C-2D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.52**	**289**	⇑P	**P**	**19 16 30.8**	**+0.5**
JHO				S	**S**	**19 16 37.2**	**-0.9**
ONAJ	**Iwakimizuishiy**	**0.72**	**335**	P	**P**	**19 16 33.6**	**+0.4**
ONAJ				S	**S**	**19 16 42.4**	**-0.8**
JYT	**Yasato**	**0.82**	**255**	⇑P	**P**	**19 16 35.0**	**+0.4**
JYT				*e*S	**S**	**19 16 44.5**	**-1.2**
JFK	**Kawauchi**	**0.95**	**345**	P	**P**	**19 16 36.8**	**+0.4**
JFK				*e*S	**S**	**19 16 47.9**	**-1.1**
JFT	**Otama**	**1.27**	**328**	⇓P	**P**	**19 16 42.2**	**+1.3**
JFT				*e*S	**S**	**19 16 57.2**	**+0.2**
JAG	**Ashikaga**	**1.39**	**270**	P	**P**	**19 16 42.9**	**+0.1**
JMM	**Marumori**	**1.45**	**348**	P	**P**	**19 16 43.6**	**0.0**
JMM				*e*S	**S**	**19 17 01.4**	**-0.2**
JFY	**Yanaizu**	**1.52**	**310**	⇓P	**P**	**19 16 45.3**	**+0.7**
JFY				*e*S	**S**	**19 17 04.1**	**+0.7**
JKT	**Katashina**	**1.58**	**282**	P	**P**	**19 16 46.2**	**+0.7**
JKT				*e*S	**S**	**19 17 04.3**	**-0.7**
MJAR	**Matsushiro Arr**	**2.39**	**273**	P	**P**	**19 16 57.2**	**+0.1**
	21nm,0.3s,baz=90,slow=9.5,SNR=208						
MJAR				S	**S**	**19 17 25.2**	**-0.2**
	58nm,0.3s,baz=42,slow=33,SNR=12						
MJAR				LR	LR	19 18 02.8	
	comp=Z,290nm,19.9s,baz=105,slow=44						
MAJO	**Matsushiro**	**2.40**	**273**	*e*Pn	**P**	**19 16 58.2**	**+1.2**
MAT	**Matsushiro**	**2.40**	**273**	*e*P	**P**	**19 16 58.0**	**+0.9**
MAT				*e*S	**S**	**19 17 28.0**	**+2.5**
MAT	**Matsushiro**	**2.40**	**273**	P	**P**	**19 16 57.8**	**+0.7**
MAT				S	**S**	**19 17 27.5**	**+2.0**
JHJ	**Hachijo jima 2**	**3.51**	**199**	P	**P**	**19 17 14.8**	**+1.9**
	35nm,0.3s,baz=91,slow=9.9,SNR=10						
JHJ				S	**S**	**19 17 52.8**	**-1.1**
	107nm,0.3s,baz=52,slow=22,SNR=9.4						
ASAJ	**Asahikawa**	**7.74**	**8**	P	**P**	**19 18 10.7**	**-1.7**
	1.5nm,0.3s,baz=228,slow=12,SNR=13						
ASAJ				S	**S**	**19 19 38.2**	**-1.5**
	0.8nm,0.3s,baz=80,slow=25,SNR=2.6						
CBIJ	**Chichi jima**	**9.36**	**174**	P	**P**	**19 18 32.5**	**-2.3**
	12nm,0.3s,baz=101,slow=20,SNR=7.8						
CBIJ				S	**S**	**19 20 09.6**	**-10**
	8.1nm,0.3s,baz=275,slow=22,SNR=4.2						
YAK	**Yakutsk**	**26.60**	**348**	*e*P	**P**	**19 21 54.6**	**-1.2**
	5.6nm,0.7s,mb4.2						
ULN	**Ulaanbaatar**	**27.53**	**305**	*e*P	**P**	**19 22 03.7**	**-0.7**
	7.9nm,1.1s,mb4.3						
SONM	**Songino Array**	**27.96**	**305**	P	**P**	**19 22 06.8**	**-1.5**
	3.8nm,0.8s,mb4.1,baz=106,slow=9.0,SNR=26						
WMQ	**Urumqi**	**40.94**	**297**	*e*P	**P**	**19 24 00.0**	**+0.2**
WMQ				AP	pP	19 24 15.0	+4.4
WMQ				XP	sP	19 24 22.3	+6.9
MKAR	**Makanchi Array**	**44.27**	**303**	P	**P**	**19 24 26.4**	**-0.5**
	0.7nm,0.5s,mb3.7,baz=80,slow=11,SNR=19						
ILAR	**Eielson Array**	**50.09**	**32**	P	**P**	**19 25 12.3**	**0.0**
	1.1nm,0.7s,mb4.0,baz=274,slow=6.4,SNR=17						
ILAR				pP	pP	19 25 25.1	+1.8
	2.4nm,0.9s,baz=271,slow=6.3,SNR=13						
ZRNK	**Zerenda**	**51.66**	**313**	*e*P	**P**	**19 25 23.5**	**-0.8**
	1.2nm,0.5s,mb4.1						
WRAB	**Tennant Creek**	**56.44**	**188**	*e*P	**P**	**19 25 58.5**	**-1.3**
WB2	**Warramunga Arr**	**56.45**	**188**	*e*P	**P**	**19 25 58.9**	**-1.0**
WRA	**Warramunga Arr**	**56.45**	**188**	P	**P**	**19 25 59.0**	**-0.9**
	3.3nm,0.7s,mb4.5,baz=4.4,slow=7.5,SNR=45						
YKA	**Yellowknife Ar**	**64.41**	**30**	pP	pP	19 27 05.6	+0.8
	0.7nm,0.8s,baz=296,slow=7.0,SNR=2.4						
STKA	**Stephens Creek**	**67.97**	**180**	P	**P**	**19 27 16.4**	**-0.2**
	1.8nm,0.7s,mb4.2,baz=308,slow=11,SNR=4.7						
FINES	**FINESS Array B**	**69.25**	**332**	P	**P**	**19 27 24.8**	**+0.8**
	0.5nm,0.6s,mb3.6,baz=51,slow=8.9,SNR=3.2						
AKASG	**Malin Array Be**	**74.65**	**322**	P	**P**	**19 27 54.7**	**-1.5**
	0.3nm,0.4s,mb3.6,baz=46,slow=5.9,SNR=4.4						
NOA	**NORSAR Array B**	**74.66**	**337**	P	**P**	**19 27 57.9**	**+1.9**
	0.8nm,0.7s,mb3.7,baz=54,slow=10,SNR=3.2						
NOA				LR	LR	20 03 29.5	
	comp=Z,30nm,19.4s,MS3.6,baz=40,slow=38						
BOZ	**Bozeman (W)**	**75.27**	**44**	*e*P	**P**	**19 28 01.9**	**+2.0**
	1.0nm,0.6s,mb3.9						
NVAR	**Mina Array Bea**	**75.49**	**53**	P	**P**	**19 28 03.5**	**+2.1**
	1.0nm,0.7s,mb3.9,baz=299,slow=4.8,SNR=6.2						
NVAR				pP	pP	19 28 16.6	+3.8
	1.0nm,0.8s,baz=291,slow=4.7,SNR=4.8						
BW06	**Boulder Array**	**78.22**	**45**	*e*P	**P**	**19 28 17.1**	**+0.5**
	0.8nm,0.5s,mb3.9						
PDAR	**Pinedale Array**	**78.22**	**45**	P	**P**	**19 28 17.7**	**+1.2**
	0.6nm,0.5s,mb3.8,baz=306,slow=2.8,SNR=5.9						
PDAR				pP	pP	19 28 31.1	+3.1
	0.6nm,0.8s,baz=307,slow=7.4,SNR=3.8						
TXAR	**Lajitas Array**	**90.63**	**52**	P	**P**	**19 29 21.1**	**+1.8**
	0.5nm,0.8s,mb3.9,baz=282,slow=3.7,SNR=6.8						
TXAR				pP	pP	19 29 32.9	+1.8
	0.5nm,0.7s,baz=288,slow=3.2,SNR=5.8						
TXAR	**Lajitas Array**	**90.63**	**52**	P	**P**	**19 29 21.1**	**+1.8**
TXAR				pP	pP	19 29 32.9	+1.8

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*NEIC **26** 19:25:34.7,31.37S×71.82W,h18^{km},ML3.5(GUC),After GUC.*
GUC 26 19:25:34.7±0.7**,31.37S×71.82W,h18**^{km}±2^{km}**,MD3.6, ML3.5,7C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILCH	**Illapel**	**0.61**	**116**	⇑*i*P	Pb	19 25 46.5	0.0
ILCH				*i* S	Sb	19 25 55.4	+0.7
CMCH	**Combarbala**	**0.73**	**74**	⇑*i*P	Pb	19 25 48.3	-0.2
CMCH				*i* S	Sb	19 25 58.1	+0.1
CMCH				AMP		19 26 00.9	
	comp=N,3μm,0.4s						
PACH	**Papudo**	**1.21**	**165**	⇑*i*P	Pb	19 25 55.5	-1.1
PACH				*i* S	Sb	19 26 11.7	-0.1
JACH	**Jahuel**	**1.67**	**142**	⇓*i*P	Pn	19 26 03.9	+0.5
JACH				*i* S	Sn	19 26 25.1	+0.7
ROCH	**El Roble**	**1.73**	**157**	*i* P	Pn	19 26 04.3	0.0
ROCH				*i* S	Sn	19 26 27.0	+0.8
PEL	**Peldehue**	**2.01**	**152**	AMP		19 26 41.8	
	comp=N,623nm,0.2s						
LCCH	**Las Cruces**	**2.11**	**174**	⇑*i*P	Pn	19 26 09.9	+0.3
LCCH				*i* S	Sn	19 26 36.5	+0.9
RCDM	**Rinconada Maip**	**2.28**	**158**	*i* P	Pn	19 26 12.5	+0.4
RCDM				*i* S	Sn	19 26 41.4	+1.5
RCDM				AMP		19 26 51.6	
	comp=E,264nm,0.2s						
DSCH	**Colegio Aleman**	**2.28**	**153**	*i* P	Pn	19 26 12.3	+0.2
DSCH				*i* S	Sn	19 26 41.3	+1.3
DSCH				AMP		19 26 47.1	
	comp=E,552nm,0.5s						
CLCH	**Cerro Calan**	**2.29**	**152**	*i* P	Pn	19 26 13.0	+0.7
CLCH				*i* S	Sn	19 26 41.5	+1.2
CLCH				AMP		19 26 52.4	
	comp=E,442nm,0.3s						
FCH	**Farellones**	**2.34**	**147**	⇑*i*P	Pn	19 26 13.7	+0.8
FCH				*i* S	Sn	19 26 43.9	+2.4
FCH				AMP		19 26 48.8	
	comp=E,259nm,0.3s						
TACH	**Talagante**	**2.39**	**162**	*i* P	Pn	19 26 14.2	+0.4
TACH				*i* S	Sn	19 26 44.1	+1.3
ANTU	**Antumapu**	**2.41**	**156**	*i* S	Sn	19 26 44.0	+0.8
ANTU				AMP		19 26 56.6	
	comp=N,259nm,0.5s						
PCH	**Pirque**	**2.50**	**154**	⇓*i*P	Pn	19 26 15.6	+0.4
PCH				*i* S	Sn	19 26 46.8	+1.2
LNV	**Longovilo**	**2.60**	**173**	*i* P	Pn	19 26 16.6	-0.2
LNV				*i* S	Sn	19 26 48.7	+0.6
ZON	**Zonda**	**2.69**	**94**	*e*P	Pn	19 26 21.0	+3.0
ZON				*e*S	Sn	19 26 59.0	+8.7
CHCH	**Chadas Angostu**	**2.73**	**159**	*i* P	Pn	19 26 19.0	+0.3
CHCH				*i* S	Sn	19 26 52.1	+0.5
LMEL	**Las Melosas**	**2.82**	**152**	⇑*i*P	Pn	19 26 20.0	+0.2
LMEL				*i* S	Sn	19 26 55.3	+1.6
LMEL				AMP		19 27 03.8	
	comp=N,260nm,0.2s						
CACH	**El Canelo**	**2.92**	**160**	*i* P	Pn	19 26 22.7	+1.4
CACH				*i* S	Sn	19 26 58.1	+1.8
CICH	**Cipreses**	**3.17**	**159**	*i* P	Pn	19 26 25.1	+0.3
CICH				*i* S	Sn	19 27 03.1	+0.7
SFDO	**San Fernando**	**3.30**	**168**	⇑*i*P	Pn	19 26 26.6	-0.1
SFDO				*i* S	Sn	19 27 06.1	+0.2

MAN 26 19:53:24.2,17.90N×123.17E,h2^{km}**,mb4.3,ML3.1,MS2.9, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	**Mt. Cagua**	**1.13**	**288**	*e*P	Pb	19 53 45.5	-0.5
CVP	**Callao Caves**	**1.30**	**262**	*i* P	Pb	19 53 50.0	+0.9
CVP				*e*S	Sb	19 54 07.0	+0.9
CAUP	**Cauayan**	**1.60**	**234**	*e*P	Pn	19 53 54.5	+0.9
APYP	**Conner**	**1.84**	**269**	*e*P	Pn	19 53 56.8	-0.3
APYP				*e*S	Sn	19 54 21.1	-0.1
ABRA	**Dolores**	**2.36**	**264**	*e*P	Pn	19 54 04.7	+0.2
ABRA				*e*S	Sn	19 54 34.6	+0.2
BALP	**Baler**	**2.63**	**216**	*e*P	Pn	19 54 07.5	-0.9

IDC 26 19:54:41.6±2.2**,10.27N×90.59E,mb3.5**/4**,mb1 3.6**/5**, mb1mx3.4**/18**,mbtmp3.4**/5**,ML3.4**/1**,Error ellipse: s-maj=68.1km s-min=24.0km az=72.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.48**	**44**	Pn	P	19 57 26.6	-3.3
	0.1nm,0.3s,baz=240,slow=14,SNR=3.6						
MKAR	**Makanchi Array**	**37.08**	**351**	P	P	20 01 53.8	-1.6
	0.5nm,0.7s,baz=172,slow=8.6,SNR=4.6						
SONM	**Songino Array**	**39.75**	**17**	P	P	20 02 16.1	-1.5
	0.3nm,0.8s,baz=198,slow=9.3,SNR=2.4						
WRA	**Warramunga Arr**	**52.50**	**125**	P	P	20 03 56.2	-2.8
	0.5nm,0.6s,baz=306,slow=8.3,SNR=7.6						
STKA	**Stephens Creek**	**64.29**	**133**	P	P	20 05 19.3	-2.0
	0.8nm,0.7s,baz=316,slow=8.3,SNR=2.2						

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*NIED **26** 20:02:00,36.50N×141.10E,h32^{km},Mw3.9 Best double couple: $M_0$7.87×10^{14} NP1:ϕ_s242°,δ65°,λ111°. NP2:ϕ_s20°, δ32°,λ52°.*
*IDC **26** 20:02:31.1±0.7,36.41N×141.16E,mb3.9/9,mb1 4.1/13, mb1mx4.0/24,mbtmp4.1/13,ML4.0/4,Error ellipse: s-maj=19.4km s-min=15.2km az=102.0*
*JMA **26** 20:02:35.7±0.1,36.48N×141.03E,h45^{km}±1^{km},M4.1 Broadband fault plane solution: P waves. NP1:ϕ_s319°, δ13°,λ-12°. NP2:ϕ_s61°,δ87°,λ-102°. Principal axes: T Plg41°, Azm162°; N Plg12°, Azm61°; P Plg46°, Azm318°;*
JMA Felt II J1.
*NEIC **26** 20:02:36.4±1.7,36.36N×141.12E,h37^{km}±15^{km},mb4.0/5 Error ellipse: s-maj=15.2km s-min=10.5km az=88.0*
NEIC Recorded [1 JMA] in Fukushima, Ibaraki and Tochigi Prefectures.
ISC 26 20:02:33.3±0.9**,36.42N**±0.03×**141.21E**±0.06**,h28**^{km}±6^{km}**, n32,**σ**0^{s}95**/43**,mb4.0**/13**,5C-3D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.55**	**290**	⇑P	**Pb**	**20 02 45.4**	**+1.0**
JHO				S	**Sb**	**20 02 52.0**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.76**	**334**	⇑P	**Pb**	**20 02 48.2**	**+0.4**
ONAJ				S	**Sb**	**20 02 57.1**	**-0.7**
JYT	**Yasato**	**0.84**	**257**	⇑P	**Pb**	**20 02 49.6**	**+0.3**
JYT				S	**Sb**	**20 02 58.9**	**-1.4**
JFK	**Kawauchi**	**0.98**	**344**	⇓P	**Pn**	**20 02 51.4**	**+0.1**
JFT	**Otama**	**1.30**	**328**	⇑P	**Pn**	**20 02 56.9**	**+1.0**
JFT				S	**Sn**	**20 03 11.9**	**-0.5**
JAG	**Ashikaga**	**1.42**	**271**	⇑P	**Pn**	**20 02 57.5**	**-0.1**
JMM	**Marumori**	**1.48**	**347**	P	**Pn**	**20 02 59.0**	**+0.5**
JMM				S	**Sn**	**20 03 15.8**	**-1.2**
JFY	**Yanaizu**	**1.56**	**310**	⇓P	**Pn**	**20 03 00.0**	**+0.4**
JKT	**Katashina**	**1.62**	**283**	⇓P	**Pn**	**20 03 00.9**	**+0.5**
MJAR	**Matsushiro Arr**	**2.42**	**274**	Pn	**Pn**	**20 03 11.9**	**-0.1**
	47nm,0.3s,baz=94,slow=9.5,SNR=519						
MJAR				Sn	**Sn**	**20 03 40.9**	**-0.1**
	41nm,0.3s,baz=99,slow=13,SNR=9.9						
MAJO	**Matsushiro**	**2.42**	**274**	*e*Pn	**Pn**	**20 03 12.7**	**+0.7**
MAT	**Matsushiro**	**2.42**	**274**	*e*P	**Pn**	**20 03 13.0**	**+1.0**
MAT				*e*S	**Sn**	**20 03 41.0**	**0.0**
MAT	**Matsushiro**	**2.42**	**274**	P	**Pn**	**20 03 12.6**	**+0.6**
MAT				S	**Sn**	**20 03 41.1**	**+0.1**
JHJ	**Hachijo jima 2**	**3.50**	**200**	Pn	**Pn**	**20 03 28.2**	**+1.0**
	42nm,0.3s,baz=340,slow=22,SNR=15						
JHJ				Sn	**Sn**	**20 04 09.2**	**+1.0**
	71nm,0.3s,baz=75,slow=22,SNR=8.4						
ASAJ	**Asahikawa**	**7.76**	**7**	Pn	**Pn**	**20 04 25.9**	**-1.4**
	1.4nm,0.3s,baz=241,slow=10,SNR=9.7						
ASAJ				Sn	**Sn**	**20 05 50.2**	**-4.9**
	0.5nm,0.3s,baz=139,slow=19,SNR=2.4						
CBIJ	**Chichi jima**	**9.34**	**175**	Pn	**P**	**20 04 46.9**	**-2.3**
	8.9nm,0.3s,baz=286,slow=19,SNR=9.8						
CBIJ				Sn	**Sn**	**20 06 25.3**	**-9.0**
	9.2nm,0.3s,baz=294,slow=19,SNR=4.9						
ULN	**Ulaanbaatar**	**27.57**	**305**	*e*P	**P**	**20 08 20.5**	**+0.7**
	3.3nm,0.8s,mb4.0						
SONM	**Songino Array**	**28.00**	**305**	P	**P**	**20 08 24.2**	**+0.6**
	3.2nm,0.7s,mb4.0,baz=107,slow=9.1,SNR=20						
MKAR	**Makanchi Array**	**44.31**	**303**	P	**P**	**20 10 42.8**	**+0.5**
	0.4nm,0.6s,mb3.4,baz=83,slow=9.7,SNR=4.9						
ILAR	**Eielson Array**	**50.10**	**32**	P	**P**	**20 11 27.9**	**+0.5**
	0.7nm,0.8s,mb3.8,baz=271,slow=7.0,SNR=7.9						
ZRNK	**Zerenda**	**51.70**	**313**	*e*P	**P**	**20 11 38.8**	**-1.0**
	0.9nm,0.5s,mb4.0						
INK	**Inuvik**	**55.01**	**27**	P	**P**	**20 12 04.2**	**+0.2**
	0.6nm,0.5s,mb3.9,baz=278,slow=7.1,SNR=3.1						
INK	**Inuvik**	**55.01**	**27**	*e*P	**P**	**20 12 03.8**	**-0.2**
	1.2nm,0.7s,mb4.0						
WRAB	**Tennant Creek**	**56.42**	**188**	*e*P	**P**	**20 12 13.4**	**-1.5**
	3.7nm,0.6s,mb4.6						
WB2	**Warramunga Arr**	**56.43**	**188**	*e*P	**P**	**20 12 13.7**	**-1.3**
WRA	**Warramunga Arr**	**56.43**	**188**	P	**P**	**20 12 13.6**	**-1.4**
	2.7nm,0.5s,mb4.5,baz=3.4,slow=7.4,SNR=64						
STKA	**Stephens Creek**	**67.94**	**180**	P	**P**	**20 13 31.5**	**-0.3**
	1.5nm,0.6s,mb4.2,baz=5.9,slow=8.9,SNR=6.0						
FINES	**FINESS Array B**	**69.28**	**332**	P	**P**	**20 13 37.9**	**-1.6**
	1.0nm,0.7s,mb3.9,baz=59,slow=8.1,SNR=3.6						
BOZ	**Bozeman (W)**	**75.26**	**44**	*e*P	**P**	**20 14 15.9**	**+0.7**
	0.8nm,0.5s,mb3.9						
NVAR	**Mina Array Bea**	**75.48**	**53**	P	**P**	**20 14 18.5**	**+1.9**
	0.8nm,0.7s,mb3.8,baz=289,slow=7.7,SNR=5.3						
NVAR	**Mina Array Bea**	**75.48**	**53**	P	**P**	**20 14 18.5**	**+1.9**
TXAR	**Lajitas Array**	**90.62**	**52**	P	**P**	**20 15 36.2**	**+1.6**
	0.2nm,0.7s,mb3.6,baz=292,slow=4.9,SNR=4.0						

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*ATH **26** 20:07:26.7,37.77N×26.77E,h18^{km}±1^{km},MD3.5/9,ML3.8*
*ISK **26** 20:07:26.3,37.81N×26.71E,h14^{km},MD3.6*
*NEIC **26** 20:07:26.7,37.77N×26.77E,h18^{km},ML3.8(ATH),After ATH.*
*CSEM **26** 20:07:27.2±0.1,37.82N×26.82E,h15^{km},ML3.8,Error ellipse: s-maj=1.6km s-min=1.3km az=78.0*
ISC 26 20:07:26.6±0.6**,37.78N**±0.02×**26.76E**±0.04**,h5**^{km}±5^{km}**, n36,**σ**1^{s}07**/47**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.10**	**140**	*e*PB	**Pb**	**20 07 30.5**	**0.0**
SMG				*e*SB	**Sb**	**20 07 32.9**	**-0.1**
URLA	**Izmir**	**0.59**	**347**	*i* P	**Pg**	**20 07 38.4**	**0.0**
URLA				*i* S	**Sg**	**20 07 47.1**	**+0.8**
BLCB	**Balcova**	**0.64**	**20**	*i* PG	**Pg**	**20 07 39.4**	**0.0**
BLCB				*i* SG	**Sg**	**20 07 48.3**	**+0.3**
IZM	**Izmir**	**0.73**	**33**	*i* PG	**Pg**	**20 07 41.0**	**-0.2**
KDAG	**Bornova**	**0.74**	**33**	*i* P	**Pg**	**20 07 41.2**	**-0.2**
KDAG				*i* S	**Sg**	**20 07 50.8**	**-0.4**
BODT	**Bodrum**	**0.84**	**148**	*i* PG	**Pg**	**20 07 43.9**	**+0.5**
BODT				*i* SG	**Sg**	**20 07 56.5**	**+1.9**
AYDN	**Tasoluk**	**0.90**	**97**	*i* P	**Pb**	**20 07 44.2**	**0.0**
AYDN				*i* S	**Sb**	**20 07 56.3**	**+0.1**
BDRM	**Kayabasi**	**0.90**	**142**	*i* P	**Pb**	**20 07 45.9**	**+1.6**
BDRM				*i* S	**Sb**	**20 07 57.4**	**+1.1**
MLSB	**Milas**	**0.94**	**121**	*i* PG	**Pg**	**20 07 45.1**	**-0.3**
APE	**Apeiranthos**	**1.21**	**234**	*i* PN	**Pn**	**20 07 48.6**	**-1.5**
APE				*i* SN	**Sn**	**20 08 06.2**	**-0.8**
APE	**Apeiranthos**	**1.21**	**234**	*e*Pn	**Pn**	**20 07 49.5**	**-0.6**
APE				*e*Sn	**Sn**	**20 08 07.3**	**+0.3**
AKS	**Akhisar**	**1.37**	**37**	PN	**Pn**	**20 07 51.5**	**-0.9**
YER	**Yerkesik**	**1.37**	**118**	*i* PN	**Pn**	**20 07 52.4**	**0.0**
PRK	**Paraskevi**	**1.51**	**345**	*e*PN	**Pn**	**20 07 54.6**	**+0.2**
PRK				*e*SN	**Sn**	**20 08 16.3**	**+1.6**
AYVA	**Ayvalik**	**1.52**	**358**	*i* P	**Pn**	**20 07 56.0**	**+1.3**
AYVA				*i* S	**Sb**	**20 08 16.5**	**+2.0**
DENT	**Denizli**	**1.80**	**90**	PN	**Pn**	**20 07 58.3**	**-0.3**
DALT	**Dalyan (Mudla)**	**1.81**	**123**	PN	**Pn**	**20 07 58.7**	**+0.1**
ARG	**Arkhangelos**	**1.91**	**145**	*e*PN	**Pn**	**20 08 01.0**	**+0.9**
BALB	**Balikesir**	**2.05**	**25**	PN	**Pn**	**20 08 01.7**	**-0.5**
EZN	**Ezine**	**2.07**	**351**	PN	**Pn**	**20 08 01.4**	**-1.0**
FETY	**Fethiye**	**2.18**	**121**	PN	**Pn**	**20 08 04.1**	**+0.1**
KARP	**Karpathos**	**2.25**	**172**	*e*PB	**Pb**	**20 08 05.0**	**-2.4**
DST	**Dursunbey**	**2.34**	**38**	*e*PN	**Pn**	**20 08 05.1**	**-1.1**
ATH	**Athens Observa**	**2.42**	**275**	*e*PN	**Pn**	**20 08 07.0**	**-0.3**
LIA	**Limnos Island**	**2.45**	**330**	*e*PB	**Pb**	**20 08 09.1**	**-1.6**
LPK	**Lapseki**	**2.59**	**0**	*e*PN	**Pn**	**20 08 09.2**	**-0.6**
NSAL	**Nisos Salamina**	**2.61**	**274**	*e*PN	**Pn**	**20 08 10.0**	**-0.2**
KCT	**Karacabey**	**2.77**	**26**	*e*PN	**Pn**	**20 08 10.8**	**-1.7**
MGER	**Gerania Oros**	**2.78**	**275**	*e*PN	**Pn**	**20 08 12.0**	**-0.5**
ISP	**Isparta**	**2.97**	**88**	*e*P	**Pn**	**20 08 13.3**	**-1.9**
YLV	**Yalova**	**3.44**	**35**	*e*PN	**Pn**	**20 08 20.4**	**-1.6**
KDZ	**Kurdzhali**	**4.00**	**345**	*e*P	**Pn**	**20 08 32.0**	**+2.1**
RZN	**Rozhen**	**4.21**	**339**	*e*P	**Pn**	**20 08 34.0**	**+1.2**
MMB	**Musomiste**	**4.46**	**329**	*e*P	**Pn**	**20 08 43.0**	**+6.5**
KKB	**Krupnik**	**4.96**	**326**	*e*P	**Pg**	**20 09 02.0**	**-3.7**
VTS	**Vitosha**	**5.52**	**332**	*e*P	**Pn**	**20 08 54.0**	**+2.6**

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*ATH **26** 20:11:24.3,37.71N×26.98E,h21^{km}±2^{km},MD3.0/4*
*NEIC **26** 20:11:24.3,37.71N×26.98E,h21^{km},MD3.0(ATH),After ATH.*
*ISK **26** 20:11:26.0,37.86N×26.81E,h27^{km},MD3.0*
*CSEM **26** 20:11:26.2±0.1,37.81N×26.90E,h10^{km},MD3.0,Error ellipse: s-maj=4.8km s-min=1.5km az=103.0*
ISC 26 20:11:26.1±0.6**,37.79N**±0.03×**26.79E**±0.06**,h10**^{km}**,n14,** σ**0^{s}93**/21**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.09**	**155**	*e*PB	**Pb**	**20 11 28.9**	**-0.6**
SMG				*e*SB	**Sb**	**20 11 31.2**	**-0.4**
URLA	**Izmir**	**0.59**	**345**	*i* P	**Pg**	**20 11 36.8**	**-1.3**
URLA				*i* S	**Sg**	**20 11 46.7**	**+0.6**
BLCB	**Balcova**	**0.63**	**18**	PG	**Pg**	**20 11 37.9**	**-0.9**
IZM	**Izmir**	**0.71**	**31**	PG	**Pg**	**20 11 39.7**	**-0.8**
IZM				SG	**Sg**	**20 11 49.6**	**-0.5**
KDAG	**Bornova**	**0.72**	**31**	*i* P	**Pb**	**20 11 40.7**	**+0.4**
KDAG				*i* S	**Sb**	**20 11 49.7**	**-0.3**
BODT	**Bodrum**	**0.83**	**150**	PG	**Pg**	**20 11 42.3**	**-0.6**
AYDN	**Tasoluk**	**0.87**	**98**	*i* P	**Pb**	**20 11 42.8**	**-0.1**
AYDN				*i* S	**Sb**	**20 11 55.7**	**+1.2**
BDRM	**Kayabasi**	**0.89**	**144**	*i* P	**Pb**	**20 11 44.2**	**+1.0**
BDRM				*i* S	**Sb**	**20 11 56.6**	**+1.7**
MLSB	**Milas**	**0.93**	**122**	*e*PG	**Pg**	**20 11 44.4**	**-0.3**
APE	**Apeiranthos**	**1.23**	**235**	*e*PN	**Pn**	**20 11 49.1**	**-0.4**
APE	**Apeiranthos**	**1.23**	**235**	*e*Pn	**Pn**	**20 11 49.5**	**0.0**
YER	**Yerkesik**	**1.35**	**118**	*e*PN	**Pn**	**20 11 50.5**	**-0.7**
PRK	**Paraskevi**	**1.51**	**345**	*e*PN	**Pn**	**20 11 54.6**	**+1.2**
PRK				*e*SN	**Sn**	**20 12 14.9**	**+1.6**
ARG	**Arkhangelos**	**1.90**	**145**	*e*PN	**Pn**	**20 11 55.5**	**-3.5**

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*CSEM **26** 20:41:00.3,35.21N×3.96W,h11^{km},MD3.2,After CNRM*
*CNRM **26** 20:41:00.3,35.21N×3.96W,h11^{km},MD3.2*
*MDD **26** 20:41:01.7±1.5,35.35N×4.14W,mbLg1.9/7,Error ellipse: s-maj=15.6km s-min=6.2km az=23.0,PRXIMO*
ISC 26 20:40:58.3±0.9**,35.20N**±0.02×**4.17W**±0.04**,h4**^{km}±6^{km}**,n17,** σ**1^{s}20**/32**,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPAL	**Palemas**	**0.19**	**81**	*i* P	**Pg**	**20 41 01.0**	**-1.1**
MPAL				*i* S	**Sg**	**20 41 04.5**	**-0.2**
TOU	**Touzarine**	**0.41**	**124**	*i* P	**Pg**	**20 41 05.5**	**-1.1**
TOU				*i* S	**Sg**	**20 41 11.0**	**-1.1**
EMEL	**Melilla**	**1.00**	**84**	P	**Pb**	**20 41 19.3**	**+1.6**
	42nm,0.5s,SNR=7.9						
EMEL				S	**Sb**	**20 41 32.7**	**+1.7**
	41nm,0.1s,SNR=5.8						
DKH	**Dar Kharkhour**	**1.02**	**287**	*i* P	**Pb**	**20 41 21.0**	**+3.0**

DKH				*i* S	Sb	20 41 36.5	+5.0
TZK	Tazeka	1.10	181	*i* P	Pb	20 41 20.0	+0.5
TZK				*i* S	Sb	20 41 35.5	+1.4
EALB	Alboran	1.19	51	P	Pb	20 41 20.9	0.0
	12nm,0.3s,SNR=12						
EALB				S	Sb	20 41 35.7	-0.8
	20nm,0.2s,SNR=5.8						
EMIJ	Mijas	1.45	340	P	Pn	20 41 25.1	-0.2
	2.7nm,0.5s,SNR=7.5						
EMIJ				S	Sb	20 41 42.6	-1.5
	6.3nm,0.2s,SNR=6.9						
ELOJ	Sierra Loja	1.95	0	P	Pn	20 41 33.4	+1.0
	10nm,2.2s,SNR=7.9						
ELOJ				S	Sn	20 41 56.3	-1.2
	1.0nm,0.2s,SNR=4.6						
MIF	Mishlifen	1.99	206	*e*P	Pn	20 41 33.0	0.0
MIF				*i* S	Sn	20 41 56.5	-2.1
EBER	Berja	1.99	31	P	Pn	20 41 33.1	0.0
	0.1nm,0.2s,SNR=7.9						
EBER				S	Sn	20 41 57.8	-0.9
	41nm,0.9s,SNR=7.9						
ESPR	Espera	2.16	321	S	Sn	20 42 04.4	+1.5
	1.4nm,0.4s,SNR=7.9						
CZD	Col de Zad	2.28	199	*i* P	Pn	20 41 38.5	+1.4
CZD				*i* S	Sn	20 42 06.0	0.0
EQES	Quesada	2.75	18	P	Pn	20 41 45.7	+1.8
	1.3nm,0.3s,SNR=9.6						
EQES				S	Sn	20 42 17.8	-0.1
	3.3nm,0.4s,SNR=4.9						
ZFT	Errachidia	3.16	183	*e*P	Pn	20 41 49.0	-0.7
ZFT				*e*S	Sn	20 42 27.0	-1.3
EMIN	Mina Concepcio	3.26	323	P	Pn	20 41 50.9	-0.3
	0.8nm,0.6s,SNR=7.9						
EMIN				S	Sn	20 42 28.2	-2.8
	0.3nm,0.2s,SNR=7.9						
ETOB	Tobarra	4.03	31	P	Pn	20 42 03.7	+1.6
	1.8nm,1.1s,SNR=7.9						
EBAD	Badajoz	4.22	328	P	Pn	20 42 05.2	+0.4
	0.1nm,0.7s,SNR=4.0						
EBAD				S	Sn	20 42 51.2	-4.0
	0.3nm,0.3s,SNR=7.9						

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*BJI **26** 20:41:30.5, 31.46N×69.44E, h5^{km}, mb4.4, Ms4.2*

*IDC **26** 20:41:30.3±1.1, 30.90N×69.76E, mb3.7/10, mb1 3.9/11, mb1mx3.8/20, mbtmp3.7/11, ML3.7/1, MS3.5/5, Ms1 3.5/5, ms1mx3.2/26, Error ellipse: s-maj=32.1km s-min=18.1km az=30.0*

*MOS **26** 20:41:32.8±2.0, 30.99N×70.05E, h33^{km}, mb4.1/3, Error ellipse: s-maj=15.5km s-min=10.5km az=107.1*

*NEIC **26** 20:41:32.4±0.9, 31.03N×69.74E, h10^{km}, mb4.0/4, Error ellipse: s-maj=22.9km s-min=12.3km az=208.0*

ISC 26 20:41:29.6±0.4**, 30.86N**±0.03×**69.94E**±0.04**, h10^{km}, n59, σ1^{s}60**/74**, mb3.8**/14**, MS3.4**/5**, 2C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRP	Derazinda	0.92	14	⇑P	Pb	20 41 49.8	+2.7
THW	Thamme Wali	2.47	38	P	Pn	20 42 13.1	+2.5
CEP	Cherat	3.40	29	⇑P	Pn	20 42 25.6	+1.8
CEP				S	Sn	20 43 05.0	+0.4
CHCP	Chirah Chowk	3.97	44	P	Pn	20 42 33.5	+1.6
JASL	Jaisalmer	4.01	168	*e*P	Pn	20 42 33.4	+1.0
JASL				*e*x	Sg	20 43 41.2	-1.8
JMU	Jammu	4.61	65	*e*x	Sg	20 44 00.0	-3.2
THN	Thein Dam	5.17	71	*e*P	Pn	20 42 50.8	+1.8
THN				*e*x	Sg	20 44 16.4	-5.4
BHK	Bhakra	5.58	83	*e*x	Sn	20 44 06.2	+6.5
BHK				*e*x	Sg	20 44 46.8	+11
KHET	Khetri	5.82	117	*e*P	Pn	20 42 58.5	+0.5
AJM	Ajmer	6.01	135	*e*P	Pn	20 43 03.2	+2.4
AJM				*e*x	Pg	20 43 26.1	-3.4
AJM				*e*x	Sg	20 44 42.4	-7.2
AJM				AML	AML	20 44 56.5	
	comp=N,152nm,0.5s						
AJM				AML	AML	20 44 57.2	
	comp=E,153nm,0.5s						
SDNR	Sundarnagar	6.06	82	*e*P	Pn	20 43 03.0	+1.5
SDNR				*e*x	x	20 44 47.0	
SMLA	Simla	6.21	86	*i* P	Pn	20 43 02.7	-1.0
SMLA				*i* x	x	20 44 48.0	
KUDL	Kundal	6.32	114	*e*P	Pn	20 43 05.6	+0.5
KUDL				*e*x	x	20 43 34.3	
AYAN	Aya Nagar	6.69	109	*e*P	Pn	20 43 12.4	+2.1
AYAN				*e*S	Sn	20 44 23.9	-3.5
NDI	New Delhi	6.69	107	*e*PN	Pn	20 43 10.0	-0.3
NDI				*e*x	Sg	20 45 13.0	+0.8
SONA	Sohna	6.74	111	*e*PN	Pn	20 43 11.4	+0.3
SONA				*e*x	Pg	20 43 41.9	-2.3
SONA				AML	AML	20 44 34.6	
	comp=E,78nm,0.3s						
SONA				AML	AML	20 44 34.8	
	comp=N,36nm,0.5s						
SONA				*i* x	Sg	20 45 12.8	-1.4
DDI	Dehra Dun	7.02	92	*e*P	Pn	20 43 17.0	+2.0
DDI				*e*SG	Sg	20 45 28.7	+5.4
AGRA	Agra	7.88	115	*e*P	Pn	20 43 28.3	+1.2
PTH	Pithoragarh	8.99	96	*e*S	Sn	20 45 13.8	-11
LGTI	Lohaghat	9.03	96	*e*P	P	20 43 44.0	+0.9
LGTI				*e*x	Sg	20 46 28.7	-1.7
KSH	Kashi	9.95	28	*e*P	P	20 43 55.0	-0.7
KSH				*e*AP		20 43 58.8	
KSH				*e*XP		20 44 01.5	
KSH				*e*S	Sn	20 45 47.0	-1.5
KSH				LR	LR		
	comp=N,910nm,8.1s						
KSH				LR	LR		
	comp=E,810nm,8.5s						
BHPL	Bhopal	10.10	137	*e*P	P	20 43 58.3	+0.5
BHPL				*e*S	S	20 45 43.7	-8.5
BHPL				AML	AML	20 45 49.1	
	comp=E,20nm,0.5s						
BHPL				AML	AML	20 45 49.6	
	comp=N,20nm,0.5s						
KKAR	Karatay Array	12.23	2	*e*P	P	20 44 23.8	-3.0
KKAR				S	S	20 46 40.1	-4.2
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KOLN	Koldanda	12.31	101	*e*P	P	20 44 25.5	-2.4
	comp=Z,28nm,0.5s						
KOLN				*e*S	S	20 46 40.2	-6.1
GKN	Gorkha	13.12	99	*e*P	P	20 44 35.1	-3.6
	comp=Z,20nm,0.4s						
DMN	Daman	13.63	100	*e*P	P	20 44 42.2	-3.3
	comp=Z,31nm,0.8s						
KKN	Kakani	13.73	99	*e*P	P	20 44 43.2	-3.6
	comp=Z,37nm,0.6s						
KKN	Kakani	13.73	99	*e*P	P	20 44 43.2	-3.6
KKN				pmax	pmax		
	comp=Z,18nm,0.6s						
PKI	Pulchoki	13.90	100	*e*P	P	20 44 46.6	-2.5
GUN	Gumba	14.21	98	*e*P	P	20 44 49.0	-4.0
	comp=Z,123nm,0.5s						
LSA	Lhasa	18.36	88	*e*P	P	20 45 56.5	+10
LSA	Lhasa	18.36	88	*e*P	P	20 45 51.0	+4.9
LSA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LSA	Lhasa	18.36	88	*e*P	P	20 45 51.0	+4.9
	comp=Z,5.4nm,0.9s						
MKAR	Makanchi Array	18.56	27	P	P	20 45 47.2	-1.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	18.56	27	P	P	20 45 47.9	-0.5
	comp=Z,0.3nm,0.3s,baz=206,slow=12,SNR=12						
MKAR	Makanchi Array	18.56	27	P	P	20 45 47.9	-0.5
AB31	Akbulak array	19.88	340	P	P	20 46 01.4	-2.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZRNK	Zerenda	22.09	358	*e*P	P	20 46 23.7	-2.8
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
ZRNK	Zerenda	22.09	358	*e*P	P	20 46 23.7	-2.7
	comp=Z,3.9nm,0.6s,mb4.0						
BVAR	Borovoye Array	22.16	1	P	P	20 46 26.2	-0.9
	comp=Z,1.7nm,0.5s,mb3.7,baz=186,slow=10,SNR=22						
NVS	Novosibirsk	25.79	18	*e*P	P	20 47 01.9	-0.3
GTA	Gaotai	25.79	62	*e*P	P	20 47 02.8	+0.4
GTA				AP	pP	20 47 08.3	+3.0
GTA				XP	sP	20 47 11.0	+4.4
ARU	Arti	26.79	346	*e*P	P	20 47 11.3	-0.1
ARU				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
ARU	Arti	26.79	346	*e*P	P	20 47 11.2	-0.1
	comp=Z,2.1nm,0.7s,mb3.8						
CMAR	Chiang Mai Arr	29.01	108	P	P	20 47 33.7	+1.8
	comp=Z,0.5nm,0.6s,mb3.5,baz=297,slow=9.8,SNR=3.8						
CMAR				LR	LR	21 01 13.6	
	comp=Z,124nm,18.4s,MS3.6,baz=201,slow=41						
BRTR	Keskin Array B	30.75	297	P	P	20 47 44.7	-2.5
	comp=Z,0.3nm,0.5s,mb3.4,baz=97,slow=12,SNR=2.6						
ZAK	Zakamensk	31.57	42	*e*P	P	20 47 54.6	+0.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.6						
SONM	Songino Array	32.53	48	P	P	20 48 04.2	+1.5
	comp=Z,1.4nm,0.8s,mb3.9,baz=245,slow=8.5,SNR=9.7						
SONM				LR	LR	21 03 34.9	
	comp=Z,110nm,18.1s,MS3.6,baz=66,slow=41						
ENH	Enshi	33.94	81	*e*P	P	20 48 17.4	+2.2
	comp=Z,7.5nm,1.0s,mb4.6						
AKASG	Malin Array Be	36.06	315	P	P	20 48 33.4	+0.3
	comp=Z,0.7nm,0.6s,mb3.8,baz=97,slow=7.2,SNR=5.5						
FINES	FINESS Array B	41.80	330	P	P	20 49 20.9	+0.3
	comp=Z,1.0nm,0.8s,mb3.5,baz=101,slow=9.7,SNR=4.6						
FINES	FINESS Array B	41.80	330	P	P	20 49 20.9	+0.3
GERES	GERESS Array B	45.67	310	P	P	20 49 52.1	0.0
	comp=Z,0.3nm,0.7s,mb3.4,baz=97,slow=7.9,SNR=2.8						
GERES				LR	LR	21 11 51.1	
	comp=Z,22nm,18.9s,MS3.1,baz=346,slow=40						
ARCES	ARCESS Array B	46.08	340	P	P	20 49 53.2	-1.8
	comp=Z,1.0nm,0.6s,mb3.9,baz=135,slow=5.1,SNR=6.6						
ARCES				LR	LR	21 10 56.2	
	comp=Z,29nm,19.4s,MS3.2,baz=111,slow=38						
ARCES	ARCESS Array B	46.08	340	P	P	20 49 53.2	-1.8
ARCES				LR	LR	21 10 56.2	
DBIC	Dimbokro	73.56	268	LR	LR	21 28 35.8	
	comp=Z,34nm,19.1s,MS3.6,baz=46,slow=38						
WRA	Warramunga Arr	79.83	120	P	P	20 53 41.2	+1.1
	comp=Z,0.7nm,0.8s,mb3.7,baz=322,slow=5.3,SNR=8.4						
YKA	Yellowknife Ar	86.91	2	P	P	20 54 18.2	+2.9
	comp=Z,0.4nm,0.5s,mb3.9,baz=348,slow=4.0,SNR=3.9						
YKA	Yellowknife Ar	86.91	2	P	P	20 54 18.2	+2.9

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*IDC **26** 20:50:21.4±1.5, 2.22N×96.05E, mb4.0/7, mb1 4.1/8, mb1mx3.8/18, mbtmp4.0/8, ML3.6/1, Error ellipse: s-maj=59.6km s-min=26.2km az=54.0*

*BJI **26** 20:50:25.0, 2.30N×96.20E, h30^{km}, mb4.5*

*NEIC **26** 20:50:26.3±0.7, 2.26N×96.22E, h30^{km}, mb4.4/5, Error ellipse: s-maj=14.9km s-min=10.6km az=210.0*

ISC 26 20:50:24.7±1.1**, 2.3N**±0.1×**96.3E**±0.1**, h30^{km}, n19, σ0^{s}75**/19**, mb4.2**/12**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.29	56	*e*P	Pn	20 51 43.8	0.0
CMAR	Chiang Mai Arr	16.27	9	Pn	P	20 54 13.8	+1.0
	0.1nm,0.3s,baz=197,slow=10,SNR=7.5						
PKI	Pulchoki	27.18	339	*e*P	P	20 56 08.1	+0.3
GUN	Gumba	27.33	340	*e*P	P	20 56 09.0	-0.1
	21nm,0.9s,mb4.7						
DMN	Daman	27.33	338	*e*P	P	20 56 09.0	-0.2
KKN	Kakani	27.43	339	*e*P	P	20 56 10.6	+0.5
LSA	Lhasa	27.67	350	*e*P	P	20 56 12.7	+0.4
	4.0nm,0.9s,mb4.0						
GKN	Gorkha	27.86	338	*e*P	P	20 56 14.5	+0.5
	25nm,1.0s,mb4.8						
KOLN	Koldanda	28.07	336	*e*P	P	20 56 16.6	+0.8
	26nm,1.1s,mb4.8						
XAN	Xi'an	33.71	19	P	P	20 57 03.8	-1.8
XAN				AP	pP	20 57 10.3	-4.2
GTA	Gaotai	37.07	5	*e*P	P	20 57 34.5	+0.4
GTA				AP	pP	20 57 40.5	-2.6
GTA				XP	sP	20 57 43.5	-3.4
WRA	Warramunga Arr	43.41	122	P	P	20 58 27.3	+0.5
	0.5nm,0.7s,mb3.3,baz=304,slow=8.9,SNR=3.7						
MKAR	Makanchi Array	45.95	347	P	P	20 58 46.4	-0.4
	4.6nm,0.8s,mb4.5,baz=160,slow=7.9,SNR=22						
SONM	Songino Array	46.19	9	P	P	20 58 49.0	+0.3
	1.0nm,0.4s,mb4.1,baz=191,slow=9.3,SNR=12						
BVAR	Borovoye Array	54.91	341	P	P	20 59 53.4	-1.6
	1.5nm,0.7s,mb4.2,baz=146,slow=7.6,SNR=13						
ZRNK	Zerenda	55.30	340	*e*P	P	20 59 56.4	-1.4
	0.7nm,0.5s,mb4.0						
ARCES	ARCESS Array B	81.19	340	P	P	21 02 38.5	-0.2
	1.6nm,0.8s,mb4.0,baz=90,slow=4.9,SNR=4.9						
GERES	GERESS Array B	83.37	319	P	P	21 02 50.9	+0.5
	0.3nm,0.7s,mb3.5,baz=104,slow=5.5,SNR=4.2						
NOA	NORSAR Array B	85.59	331	P	P	21 03 01.6	+0.3
	0.8nm,0.8s,mb4.0,baz=106,slow=1.6,SNR=3.7						

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*IDC **26** 20:51:01.8±7.1, 11.90N×142.50E, h92^{km}±65^{km}, mb4.0/13, mb1 4.1/14, mb1mx4.0/21, mbtmp4.3/14, ML4.4/1, MS3.3/5, Ms1 3.3/5, ms1mx3.0/30, Error ellipse: s-maj=27.9km s-min=17.4km az=83.0*

*NEIC **26** 20:51:02.8±5.0, 11.89N×142.43E, h100^{km}±45^{km}, mb4.2/6, Error ellipse: s-maj=21.2km s-min=12.6km az=81.0*

*BJI **26** 20:51:05.2, 12.40N×141.85E, h100^{km}, mB4.9, mb4.5*

ISC 26 20:51:00.0±6.5**, 11.9N**±0.1×**142.4E**±0.2**, h87**^{km}±58^{km}**, n23, σ0^{s}96**/21**, mb4.1**/19**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	Kunigami	19.94	320	P	P	20 55 28.0	+0.5
	1.5nm,0.3s,baz=153,slow=13,SNR=7.2						
JNU	Nakatsue	23.63	335	P	P	20 56 04.5	+0.4
	24nm,0.8s,mb4.6,baz=78,slow=7.5,SNR=8.2						
JNU				LR	LR	21 03 40.3	
	comp=Z,36nm,20.1s,baz=14,slow=32						
MJAR	Matsushiro Arr	24.85	352	P	P	20 56 14.8	-1.0
	1.6nm,0.6s,mb3.6,baz=175,slow=8.6,SNR=5.6						
MJAR				LR	LR	21 04 08.5	
	comp=Z,35nm,18.9s,baz=140,slow=32						
CTA	Charters Tower	31.99	173	LR	LR	21 09 04.7	
	comp=Z,44nm,20.2s,baz=147,slow=34						
WRA	Warramunga Arr	32.60	194	P	P	20 57 23.4	-2.2
	0.5nm,0.6s,mb3.5,baz=16,slow=9.6,SNR=6.9						
ENH	Enshi	35.56	306	*e*P	P	20 57 51.1	+0.3
	5.8nm,0.8s,mb4.6						
CMAR	Chiang Mai Arr	42.37	284	P	P	20 58 48.4	+0.9
	1.1nm,1.0s,mb3.5,baz=76,slow=7.4,SNR=3.7						
STKA	Stephens Creek	43.51	181	P	P	20 58 57.7	+1.0
	1.8nm,0.9s,mb3.8,baz=128,slow=2.4,SNR=3.1						
ULN	Ulaanbaatar	46.46	327	*e*P	P	20 59 20.2	+0.1
	0.7nm,0.4s,mb3.7						
GTA	Gaotai	46.55	314	*e*P	P	20 59 21.5	+0.6
SONM	Songino Array	46.79	327	P	P	20 59 23.0	+0.4
	0.9nm,0.5s,mb3.8,baz=146,slow=7.0,SNR=6.1						
SONM				LR	LR	21 20 25.6	
	comp=Z,45nm,18.8s,baz=68,slow=38						
MKAR	Makanchi Array	61.07	317	P	P	21 01 06.6	-0.5
	2.1nm,0.6s,mb4.3,baz=99,slow=8.5,SNR=12						
BVAR	Borovoye Array	69.78	322	P	P	21 02 02.4	-0.4
	3.3nm,0.5s,mb4.4,baz=107,slow=7.5,SNR=27						
ZRNK	Zerenda	70.60	322	*e*P	P	21 02 07.0	-0.8
	3.5nm,0.8s,mb4.2						
ILAR	Eielson Array	71.14	25	P	P	21 02 08.7	-2.1
	6.1nm,0.6s,mb4.6,baz=252,slow=6.0,SNR=135						
INK	Inuvik	76.86	22	*e*P	P	21 02 43.1	-0.8
	3.1nm,1.0s,mb4.0						
YKA	Yellowknife Ar	85.48	27	P	P	21 03 29.5	+0.4
	4.0nm,0.6s,mb4.5,baz=289,slow=5.4,SNR=25						
ARCES	ARCESS Array B	87.95	342	P	P	21 03 40.7	-0.2
	2.8nm,0.8s,mb4.3,baz=68,slow=6.5,SNR=6.8						
ARCES				LR	LR	21 46 47.3	
	comp=Z,28nm,19.6s,baz=128,slow=38						
NEW	Newport	88.10	41	P	P	21 03 43.3	+1.2
	1.4nm,0.5s,mb4.2						
NVAR	Mina Array Bea	89.87	51	P	P	21 03 52.4	+1.7
	1.7nm,0.7s,mb4.3,baz=262,slow=7.7,SNR=12						
HLID	Hailey	91.26	45	*e*P	P	21 03 57.8	+0.7
	0.9nm,0.6s,mb4.1						
FINES	FINESS Array B	91.67	334	P	P	21 03 57.3	-1.2
	1.9nm,0.7s,mb4.4,baz=65,slow=3.7,SNR=14						
DBIC	Dimbokro	142.58	298	*e*PKPpre		21 10 22.0	

IDC 26 21:13:47.1±1.5**, 5.83N**×**127.14E, mb4.0**/6**, mb1 4.2**/6**, mb1mx3.8**/18**, mbtmp4.0**/6**, Error ellipse: s-maj=108.9km s-min=19.6km az=70.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.83	184	P	P	21 19 01.8	-1.2
	14nm,1.2s,baz=6.9,slow=13,SNR=6.0						
WRA	Warramunga Arr	26.57	165	P	P	21 19 28.6	-0.4
	1.5nm,0.5s,baz=344,slow=8.8,SNR=15						
STKA	Stephens Creek	39.95	161	P	P	21 21 21.3	-3.8
	1.8nm,0.8s,baz=343,slow=9.0,SNR=3.3						
MKAR	Makanchi Array	56.09	324	P	P	21 23 28.2	-2.2
	0.3nm,0.4s,baz=115,slow=7.8,SNR=5.0						
BVAR	Borovoye Array	65.80	326	P	P	21 24 34.6	-1.7
	0.5nm,0.6s,baz=127,slow=7.2,SNR=5.7						
FINES	FINESS Array B	90.19	332	P	P	21 26 48.8	-1.8
	1.9nm,1.1s,baz=90,slow=4.2,SNR=4.2						

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*CASC **26** 21:31:57.5±2.6, 15.04N×91.62W, h84^{km}±20^{km}, MD4.4, ML4.0, mb4.1(NEIC)*

*NEIC **26** 21:32:00.3±0.8, 14.09N×91.90W, mb4.1/4, MD4.4(MEX), Error ellipse: s-maj=22.3km s-min=8.3km az=224.0*

*MEX **26** 21:32:01.9±0.7, 14.18N×92.06W, h16^{km}±46^{km}, MD4.5*

*IDC **26** 21:32:02.7±6.5, 13.94N×92.03W, h97^{km}±46^{km}, mb3.3/2, mb1 3.7/5, mb1mx3.4/20, mbtmp3.8/5, MS3.2/3, Ms1 3.2/3, ms1mx2.8/18, Error ellipse: s-maj=199.0km s-min=22.8km az=39.0*

ISC 26 21:31:58.0±0.6**, 14.15N**±0.05×**91.93W**±0.04**, h56**^{km}±8^{km}**, n59, σ1^{s}04**/89**, mb3.9**/4**, MS3.1**/3**, 6C-10D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	1.09	74	*e*P	P	21 32 16.0	-1.5
PCG	Pacaya	1.30	79	⇓*e*P	P	21 32 20.5	-0.1
PCG				*e*S	S	21 32 36.4	-0.8
IXG	Ixpaco	1.43	89	⇓*e*P	P	21 32 22.6	+0.3
IXG				*e*S	S	21 32 40.2	0.0
CCIG	Comitan	2.13	355	*e*P	P	21 32 33.1	+1.2
CCIG				*e*S	S	21 32 58.1	+0.9
CCIG	Comitan	2.13	355	*e*P	P	21 32 33.0	+1.0
CCIG				*e*S	S	21 32 58.1	+0.9
RTR	El Retiro	2.23	96	⇑*e*P	P	21 32 40.7	+7.3
RTR				*e*S	S	21 33 09.0	+9.2
SBLS	San Blas	2.26	98	⇑*e*P	P	21 32 41.5	+7.6
SBLS				*e*S	S	21 33 08.9	+8.4
SNJE	San Jose	2.27	97	⇓*e*P	P	21 32 41.5	+7.4
SNJE				*e*S	S	21 33 09.1	+8.3
MRL	Marmol	2.35	67	⇑*e*P	P	21 32 34.3	-0.8
MRL				*e*S	S	21 33 02.1	-0.7
BOQS	Boqueron	2.61	99	⇑*e*P	P	21 32 46.2	+7.5
BOQS				*e*S	S	21 33 18.8	+10
SCX	San Cristobal	2.66	345	*i* P	P	21 32 41.8	+2.3
SCX				*i* S	S	21 33 16.5	+5.9
SCX	San Cristobal	2.66	345	*i* P	P	21 32 41.8	+2.3
SCX				*i* S	S	21 33 10.5	-0.1
SNET	Serv Nac Est T	2.66	100	*e*P	P	21 32 46.7	+7.2
SNET				*e*S	S	21 33 17.4	+6.8
LBRS	Las Brisas	2.83	98	⇓*e*P	P	21 32 49.7	+7.7
LBRS				*e*S	S	21 33 21.9	+6.9
LFRS	El Faro	2.83	100	⇓*e*P	P	21 32 49.4	+7.4
LFRS				*e*S	S	21 33 22.6	+7.6
LCBS	La Ceiba	2.91	99	⇓*e*P	P	21 32 50.8	+7.7
LCBS				*e*S	S	21 33 27.6	+11
SNVI	San Vicente	3.05	100	*e*P	P	21 32 52.5	+7.5
SNVI				*e*S	S	21 33 29.3	+8.8
VSM	San Miguel	3.62	101	*e*P	P	21 33 00.5	+7.4
VSM				*e*S	S	21 33 42.8	+7.8
BLLM	Bellamira	3.66	101	*e*P	P	21 33 00.5	+7.0
BLLM				*e*S	S	21 33 44.6	+8.8
CNCH	Conchagua	4.07	102	⇓*e*P	P	21 33 06.1	+6.7
CNCH				*e*S	S	21 33 55.1	+8.8
CMIG	Matias Romero	4.08	316	*e*P	P	21 32 59.7	+0.2
CMIG				*e*S	S	21 33 45.5	-1.0
CRIN	San Cristobal	4.96	106	*e*P	P	21 33 11.6	-0.3
TEL3	Telica 3	5.19	107	*e*P	P	21 33 14.8	-0.2
TEL3				*e*S	S	21 34 14.4	+0.1
LEON	Leon	5.20	109	*e*P	P	21 33 14.8	-0.3
CNGN	Cerro Negro	5.35	107	*e*P	P	21 33 16.5	-0.7
CNGN				*e*S	S	21 34 17.6	-0.7
MIRN	Miramar	5.36	108	⇑*e*P	P	21 33 17.2	-0.1
OXX	Oaxaca	5.46	303	*e*P	P	21 33 19.0	+0.2
OXX				*i* S	S	21 34 16.0	-5.1
VHO	Vista Hermosa	5.46	303	*e*P	P	21 33 19.7	+0.9
VHO				⇓*e*S	S	21 34 18.9	-2.3
MOMJ	Momotombo	5.53	108	⇓*e*P	P	21 33 19.5	-0.1
APYN	Apoyeque	5.76	109	⇓*e*P	P	21 33 22.8	-0.1
XAVN	Gruta Xavier	5.81	109	*e*P	P	21 33 22.8	-0.9
XAVN				*e*S	S	21 34 29.3	-0.4
MGAN	Managua	5.88	109	*e*S	S	21 34 31.8	+0.2
MGAN				*e*		21 34 43.0	
	comp=N,230nm,0.9s						
CRUN	El Crucero	5.89	111	*e*P	P	21 33 24.9	+0.1
TICN	Ticuantepe	5.94	110	*e*P	P	21 33 25.5	+0.1
TICN				*e*S	S	21 34 33.8	+0.8
APON	Apoyo	6.13	111	*e*P	P	21 33 28.2	+0.1
CONN	Concepcion	6.66	112	⇑*e*P	P	21 33 35.5	-0.1
CONN				*e*S	S	21 34 54.1	+3.1
IISM	Ciudad Serdan	7.10	313	*e*P	P	21 33 45.0	+3.3
JTS	JuntasAbangare	7.82	119	P	P	21 33 52.2	+0.5
	comp=N,3.7nm,0.3s,baz=320,slow=17,SNR=10						
JTS				S	S	21 35 22.7	+2.9
	comp=N,2.5nm,0.3s,baz=315,slow=20,SNR=2.5						
JTS	JuntasAbangare	7.82	119	*e*Pn	P	21 33 52.1	+0.4
JTS				S	S	21 35 22.6	+2.9
PPM	Popocatepetl	8.07	308	*e*P	P	21 33 58.0	+2.9
PPM				*e*S	S	21 35 24.8	-1.0
PPM	Popocatepetl	8.07	308	*e*P	P	21 33 57.0	+1.9
PPM				*e*P		21 33 58.0	
PPM				*e*S	S	21 35 24.8	-1.0
TRTC	Tortuguero	8.78	113	*e*P	P	21 34 03.3	-1.6
TRTC				*e*S	S	21 35 44.5	+1.2
URSC	Urasca	9.05	117	*e*P	P	21 34 09.0	+0.4
URSC				*e*S	S	21 35 55.9	+5.8
BUS	Buena Vista	9.21	119	*e*P	P	21 34 11.7	+1.0
BUS				*e*S	S	21 35 59.3	+5.4
TXAR	Lajitas Array	18.61	326	P	P	21 36 13.6	+0.2
	comp=N,0.1nm,0.3s,baz=151,slow=11,SNR=9.2						
OTAV	Otavalo	19.21	135	P	P	21 36 20.1	-0.2
	comp=N,2.6nm,1.0s						
OTAV				*e*		21 36 26.8	
LRAL	Lakeview Retre	19.33	13	*e*P	P	21 36 20.7	-0.7
	comp=N,24nm,1.4s						
ROSC	El Rosal	19.64	116	P	P	21 36 24.9	-0.1
	comp=N,0.8nm,0.3s,baz=260,slow=19,SNR=3.4						
WMOK	Wichita Mounta	21.41	344	P	P	21 36 43.7	+0.6
SDV	Santo Domingo	21.51	102	*e*P	P	21 36 42.4	-1.8
	comp=N,4.3nm,0.6s,mb4.1						
SWET	Sewanee	21.66	13	*e*P	P	21 36 48.2	+2.6
SJG	San Juan	25.07	78	LR	LR	21 47 03.0	
	comp=N,22nm,21.6s,MS2.6,baz=180,slow=36						
NVAR	Mina Array Bea	33.60	321	P	P	21 38 35.9	+0.7
	comp=N,1.0nm,0.6s,mb3.9,baz=139,slow=8.3,SNR=6.5						
NVAR				pP	pP	21 38 50.9	+1.5
	comp=N,1.9nm,0.7s,baz=137,slow=8.8,SNR=7.1						
NVAR	Mina Array Bea	33.60	321	P	P	21 38 35.9	+0.7
NVAR				pP	pP	21 38 50.9	+1.5
SAML	Samuel	36.61	127	*e*P	P	21 38 57.4	-3.6
	comp=N,3.2nm,0.9s,mb4.2						
SAML				*e*pP	pP	21 39 14.8	-0.6
LPAZ	La Paz	38.31	141	LR	LR	21 54 52.5	
	comp=N,53nm,20.2s,MS3.4,baz=90,slow=36						
SCHQ	Schefferville	45.06	20	LR	LR	21 58 49.6	
	comp=N,51nm,21.0s,MS3.4,baz=304,slow=36						
ILAR	Eielson Array	62.73	337	P	P	21 42 17.9	-1.5
	comp=N,0.5nm,1.0s,mb3.6,baz=104,slow=7.4,SNR=5.5						
CMAR	Chiang Mai Arr	145.87	341	PKPbc	PKPbc	21 51 30.9	-1.5
	comp=N,0.6nm,0.4s,baz=335,slow=3.4,SNR=6.6						

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*NIED **26** 21:41:00, 40.70N×142.20E, h32^{km}, Mw3.2 Best double couple: $M_0$8.1×10^{13} NP1:ϕ_s15°, δ66°, λ112°. NP2:ϕ_s150°, δ32°, λ50°.*

JMA 26 21:41:56.6±0.1**, 40.74N**×**142.23E, h46**^{km}±3^{km}**, M3.5, 2C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JANG	Nango	0.66	236	⇓P	P	21 42 09.8	+0.2
JANG				S	S	21 42 18.7	-0.5
JTH	Tanohata	0.85	199	⇑P	P	21 42 11.9	-0.4
JTH				*e*S	S	21 42 22.3	-1.5
JTM	Tenmabayashi	0.88	273	⇓P	P	21 42 12.4	-0.4
JTM				*e*S	S	21 42 23.4	-1.3
JKZ	Kuzumaki	1.02	223	⇓P	P	21 42 15.1	+0.4
JKZ				S	S	21 42 27.4	-0.7
JOT	Ohata	1.10	306	⇓P	P	21 42 15.2	-0.6
JOT				*e*S	S	21 42 28.9	-1.2
JAH	Hinai	1.33	246	⇓P	P	21 42 19.1	-0.2
JAH				*e*S	S	21 42 35.2	-0.9

JEM	Erimo	1.45	28	P	P	21 42 22.3	+1.4
JEM				*e*S	S	21 42 41.2	+2.2
JOM	Ohasama	1.46	210	P	P	21 42 21.0	0.0
JOM				*e*S	S	21 42 38.1	-0.9
JKB	Kayabe	1.46	322	⇓P	P	21 42 20.4	-0.6
JKB				*e*S	S	21 42 37.7	-1.4
JSR	Shiriuchi	1.58	301	P	P	21 42 22.1	-0.6
JSR				*e*S	S	21 42 41.1	-1.0
JNBK	Urakawa-nobuka	1.59	14	*e*S	S	21 42 46.8	+4.5
JIW	Iwasaki	1.70	266	⇑P	P	21 42 24.2	-0.1

IDC ***26*** *22:31:34.7±0.6, 7.48N×93.75E, mb4.0/13, mb1 4.1/14, mb1mx4.1/19, mbtmp4.0/14, ML4.1/1, MS3.6/7, Ms1 3.6/7, ms1mx3.3/21, Error ellipse: s-maj=26.6km s-min=15.9km az=53.0*

NEIC ***26*** *22:31:42.0±2.0, 7.58N×93.97E, h52^{km}±18^{km}, mb4.3/10, Error ellipse: s-maj=19.9km s-min=8.1km az=55.0*

BJI ***26*** *22:31:46.0, 7.60N×94.00E, h51^{km}, mb3.9*

ISC 26 22:31:40.8±2.8**, 7.59N**±0.10×**94.1E**±0.1**, h55**^{km}±25^{km}**, n36, σ1^{s}06**/32**, mb4.2**/23**, MS3.6**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	6.91	109	*e*Pn	P	22 33 21.4	-0.4
KULM				*e*Sn	S	22 34 39.2	-0.7
CMAR	Chiang Mai Arr	11.79	23	Pn	P	22 34 29.4	+0.7
	0.4nm,0.3s,baz=207,slow=14,SNR=4.2						
KMI	Kunming	19.30	24	P	P	22 36 11.8	+7.8
	5.0nm,1.3s						
PKI	Pulchoki	21.51	339	*e*P	P	22 36 28.5	+1.5
DMN	Daman	21.65	338	*e*P	P	22 36 28.9	+0.5
	21nm,0.7s,mb4.7						
GUN	Gumba	21.65	340	*e*P	P	22 36 28.0	-0.4
	33nm,0.8s,mb4.8						
KKN	Kakani	21.75	339	*e*P	P	22 36 30.5	+1.1
	13nm,0.5s,mb4.6						
LSA	Lhasa	22.17	353	*e*P	P	22 36 33.1	-0.4
	7.8nm,0.5s,mb4.4						
GKN	Gorkha	22.18	337	*e*P	P	22 36 33.2	-0.5
	27nm,0.6s,mb4.9						
KOLN	Koldanda	22.39	335	*e*P	P	22 36 35.6	-0.1
	15nm,0.6s,mb4.6						
FITZ	Fitzroy Crossi	40.27	130	P	P	22 39 15.1	+0.8
	11nm,0.9s,mb4.6,baz=350,slow=11,SNR=8.4						
FITZ				LR	LR	22 54 43.1	
	comp=Z,88nm,20.9s,MS3.6,baz=276,slow=34						
MKAR	Makanchi Array	40.35	347	P	P	22 39 14.9	+0.3
	0.4nm,0.5s,mb3.4,baz=173,slow=8.3,SNR=5.4						
SONM	Songino Array	41.45	13	P	P	22 39 24.2	+0.5
	0.7nm,0.6s,mb3.5,baz=200,slow=7.9,SNR=5.6						
WRA	Warramunga Arr	48.14	125	P	P	22 40 17.9	+0.2
	1.8nm,0.4s,mb4.5,baz=304,slow=8.7,SNR=47						
WRAB	Tennant Creek	48.15	125	*e*P	P	22 40 18.0	+0.3
	4.4nm,0.4s,mb4.8						
WB2	Warramunga Arr	48.15	125	*e*P	P	22 40 18.0	+0.3
BVAR	Borovoye Array	49.24	341	PcP	PcP	22 41 48.4	+0.1
	0.5nm,0.6s,baz=153,slow=6.4,SNR=3.4						
MJAR	Matsushiro Arr	49.40	48	LR	LR	23 02 07.5	
	comp=Z,54nm,18.8s,MS3.6,baz=150,slow=37						
OPO	Ambohidratompo	53.05	240	P	P	22 40 51.1	-3.8
	5.2nm,1.2s,mb4.3,baz=114,slow=16,SNR=4.5						
ASAJ	Asahikawa	55.67	41	LR	LR	23 04 41.0	
	comp=Z,25nm,18.0s,MS3.3,baz=175,slow=36						
STKA	Stephens Creek	59.95	134	P	P	22 41 44.1	+0.1
	0.7nm,0.4s,mb4.1,baz=290,slow=5.1,SNR=5.3						
BRTR	Keskin Array B	62.57	311	P	P	22 41 59.0	-2.5
	0.6nm,0.6s,mb3.9,baz=129,slow=9.2,SNR=2.9						
AKASG	Malin Array Be	68.34	322	P	P	22 42 35.7	-2.6
	0.1nm,0.3s,mb3.4,baz=83,slow=6.4,SNR=3.1						
AKASG	Malin Array Be	68.34	322	P	P	22 42 35.7	-2.6
LSZ	Lusaka	69.12	251	*e*P	P	22 42 45.1	+1.3
	2.1nm,0.6s,mb4.2						
FINES	FINESS Array B	72.94	332	P	P	22 43 05.4	-0.4
	1.6nm,0.6s,mb4.1,baz=107,slow=6.3,SNR=13						
KAF	Kangasniemi	73.02	333	*e*p	P	22 43 04.8	-1.5
BOSA	Boshof	75.38	238	P	P	22 43 22.2	+1.5
	4.0nm,0.7s,mb4.5,baz=78,slow=0.4,SNR=13						
BOSA				LR	LR	23 12 19.9	
	comp=Z,63nm,18.7s,MS3.9,baz=233,slow=33						
ARCES	ARCESS Array B	75.51	340	P	P	22 43 20.9	+0.3
	1.2nm,0.6s,mb4.0,baz=90,slow=7.2,SNR=4.8						
ARCES				LR	LR	23 19 34.4	
	comp=Z,71nm,18.0s,MS4.0,baz=119,slow=38						
GERES	GERESS Array B	78.00	318	P	P	22 43 35.2	+0.3
	0.7nm,0.6s,mb3.8,baz=88,slow=6.0,SNR=13						
GERES				LR	LR	23 22 46.2	
	comp=Z,18nm,18.7s,MS3.4,baz=160,slow=39						
NB2	NORSAR Subarra	79.95	331	P	P	22 43 43.8	-1.6
	1.9nm,1.0s,mb4.0,baz=94,slow=5.0						
NOA	NORSAR Array B	79.95	331	P	P	22 43 43.9	-1.4
	1.2nm,0.8s,mb3.9,baz=219,slow=25,SNR=3.3						
NOA				LR	LR	23 24 27.5	
	comp=Z,21nm,20.5s,MS3.5,baz=90,slow=40						
LPG	La Plagne	82.78	315	*e*P	P	22 44 00.7	+0.3
	3.5nm,0.6s,mb4.3						
ESDC	Sonseca Array	91.36	310	P	P	22 44 43.3	+1.1
	0.4nm,0.5s,mb4.0,baz=63,slow=4.0,SNR=7.1						
TXAR	Lajitas Array	139.51	24	PKP	PKPdf	22 51 05.4	+2.6
	0.2nm,0.7s,baz=270,slow=0.9,SNR=2.7						
CPUP	Villa Florida	147.04	232	PKPbc		22 51 21.0	
	1.6nm,0.7s,baz=142,slow=4.8,SNR=5.0						

ATH ***26*** *22:41:20.8, 37.71N×26.81E, h19^{km}, MD3.3/3*

CSEM ***26*** *22:41:20.7±0.1, 37.81N×26.82E, h20^{km}, MD3.3, Error ellipse: s-maj=2.5km s-min=1.7km az=96.0*

ISK ***26*** *22:41:21.0, 37.84N×26.80E, h26^{km}, MD3.3*

ISC 26 22:41:21.4±0.6**, 37.82N**±0.03×**26.76E**±0.05**, h17**^{km}±6^{km}**, n17, σ0^{s}88**/25**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.12	151	*e*PB	Pb	22 41 24.3	-0.9
SMG				*e*SB	Sb	22 41 26.6	-1.2
URLA	Izmir	0.56	346	*i* P	Pb	22 41 32.2	-0.1
URLA				*i* S	Sb	22 41 40.5	+0.7
BLCB	Balcova	0.61	21	*i* PG	Pb	22 41 33.1	-0.1
IZM	Izmir	0.70	34	PG	Pb	22 41 34.9	+0.1
KDAG	Bornova	0.71	34	*i* P	Pb	22 41 35.1	+0.3
KDAG				*i* S	Sb	22 41 44.9	+0.8
BODT	Bodrum	0.87	150	PG	Pb	22 41 37.7	+0.1
BODT				SG	Sb	22 41 49.9	+1.1
AYDN	Tasoluk	0.90	100	*i* P	Pb	22 41 38.1	0.0
AYDN				*i* S	Sb	22 41 50.5	+1.0
BDRM	Kayabasi	0.92	144	*i* P	Pb	22 41 39.5	+0.9
BDRM				*i* S	Sb	22 41 51.3	+1.0
MLSB	Milas	0.96	122	PG	Pb	22 41 39.0	-0.1
APE	Apeiranthos	1.23	233	*e*PN	Pn	22 41 44.0	+0.1
APE				*e*SN	Sn	22 42 00.4	+0.2
APE	Apeiranthos	1.23	233	*e*Pn	Pn	22 41 43.8	-0.1
APE				*e*Sn	Sn	22 42 00.4	+0.2
AKS	Akhisar	1.34	38	*e*PN	Pn	22 41 44.4	-1.1
YER	Yerkesik	1.39	119	*e*PN	Pn	22 41 45.4	-0.7
PRK	Paraskevi	1.48	345	*e*PN	Pn	22 41 50.0	+2.5
DENT	Denizli	1.80	91	*e*PN	Pn	22 41 51.0	-1.0
BALB	Balikesir	2.02	25	*e*PN	Pn	22 41 53.6	-1.6
FETY	Fethiye	2.19	122	*e*PN	Pn	22 41 56.9	-0.8

NIED ***26*** *22:42:00, 42.10N×138.70E, h250^{km}, Mw4.1 Best double couple: M$_0$1.81×10^{15} NP1:φ$_s$194°, δ81°, λ79°. NP2:φ$_s$64°, δ14°, λ140°.*

MOS ***26*** *22:42:20.0±0.9, 42.16N×138.45E, h230^{km}, mb4.2/8, Error ellipse: s-maj=12.7km s-min=8.7km az=103.4*

IDC ***26*** *22:42:20.4±1.1, 42.07N×138.48E, h222^{km}±11^{km}, mb3.7/13, mb1 3.9/15, mb1mx3.7/21, mbtmp4.2/15, Error ellipse: s-maj=12.9km s-min=11.3km az=147.0*

NEIC ***26*** *22:42:21.9±0.5, 42.07N×138.43E, h235^{km}±5^{km}, mb4.2/14, Error ellipse: s-maj=6.1km s-min=4.9km az=201.0*

BJI ***26*** *22:42:21.3, 42.26N×138.57E, h253^{km}, mB4.5, mb4.3*

JMA ***26*** *22:42:22.0±0.1, 42.06N×138.66E, h231^{km}±1^{km}, M3.9*

ISC 26 22:42:20.3±0.3**, 42.10N**±0.04×**138.57E**±0.05**, h235**^{km}±3^{km}**, n80, σ0^{s}94**/84**, mb4.0**/32**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	Okushiri--Mats	0.67	91	P	P	22 42 52.9	+0.6
JOSM				S	S	22 43 16.9	-0.3
JSH	Shimam	1.22	63	P	P	22 42 56.4	+1.0
JSH				*e*S	S	22 43 23.0	+0.4
JKB	Kayabe	1.85	96	P	P	22 43 00.9	+0.5
JSK	Shakotan	1.88	48	P	P	22 43 01.7	+1.0
JSK				*e*S	S	22 43 32.3	+0.4
JOT	Ohata	1.99	110	P	P	22 43 01.9	+0.2
JEW	Eniwo	2.25	70	P	P	22 43 05.4	+1.1
JANG	Nango	2.81	127	P	P	22 43 09.3	-0.9
JHR	Hokuryu	2.84	54	P	P	22 43 12.0	+1.5
JNBK	Urakawa-nobuka	3.11	85	P	P	22 43 13.4	-0.2
JNBK				*e*S	S	22 43 54.2	-0.7
JFR	Furan	3.15	69	P	P	22 43 14.4	+0.4
JFR				*e*S	S	22 43 55.5	-0.2
JOM	Ohasama	3.34	141	P	P	22 43 14.7	-1.5
JYK	Kaneyama	3.46	156	P	P	22 43 17.1	-0.5
ASAJ	Asahikawa	3.57	54	P	P	22 43 19.7	+0.8
ASAJ				S	S	22 44 04.1	-0.2
ASAJ				pmax	pmax		
	comp=Z,21nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
ASAJ	Asahikawa	3.57	54	P	P	22 43 19.6	+0.8
	comp=N,21nm,0.3s,baz=247,slow=11,SNR=88						
ASAJ				S	S	22 44 04.0	-0.2
	comp=N,5.5nm,0.3s,baz=9.6,slow=31,SNR=14						
JCH	Churui	3.59	80	P	P	22 43 18.9	-0.2
JCH				S	S	22 44 02.7	-2.0
JMK	Ichinoseki	3.74	146	P	P	22 43 19.4	-1.5
MAJO	Matsushiro	5.56	183	*e*P	P	22 43 43.6	+0.4
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MAJO	Matsushiro	5.56	183	*e*P	P	22 43 43.6	+0.4
	comp=Z,9.2nm,0.5s						
MAT	Matsushiro	5.56	183	*e*P	P	22 43 44.0	+0.8
MAT	Matsushiro	5.56	183	P	P	22 43 44.0	+0.8
MAT				*e*S	S	22 44 50.9	+3.0
MJAR	Matsushiro Arr	5.56	183	P	P	22 43 43.5	+0.3
	comp=Z,1.2nm,0.3s,baz=353,slow=13,SNR=10						
YUK	Yuzh-Kuril'sk	5.68	68	*e*P	P	22 43 43.0	-1.7
YUK				*i* S	S	22 44 48.5	-2.0
YUK				smax			
	comp=N,350nm,0.5s						
YUK				smax			
	comp=E,190nm,0.5s						
MDJ	Mudanjiang	7.01	294	P	P	22 44 02.5	+0.9
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,30nm,3.2s						
MDJ	Mudanjiang	7.01	294	*e*P	P	22 44 02.0	+0.4
	comp=Z,22nm,1.0s						
HIA	Hailar	14.96	305	P	P	22 45 40.2	-1.4
HIA				pmax	pmax		
	comp=Z,4.0nm,0.3s						
HIA	Hailar	14.96	305	P	P	22 45 40.1	-1.5
	comp=Z,4.3nm,0.3s						
BOD	Bodaibo	22.11	324	*e*P	P	22 46 55.5	-1.2
ULN	Ulaanbaatar	22.92	295	*e*P	P	22 47 04.2	-0.4
ULN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
ULN	Ulaanbaatar	22.92	295	*e*P	P	22 47 04.2	-0.5
	comp=Z,4.6nm,0.7s,mb4.1						
SONM	Songino Array	23.36	295	P	P	22 47 08.7	-0.1
	comp=Z,3.8nm,0.5s,mb4.2,baz=88,slow=9.1,SNR=35						
XAN	Xi'an	24.60	261	P	P	22 47 23.0	+2.5
FX1	Attu Island--F	25.50	53	*e*P	P	22 47 29.9	+1.4
ZAK	Zakamensk	25.57	301	*e*P	P	22 47 28.6	-0.7
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
BILL	Bilibino	29.92	21	*e*P	P	22 48 08.0	0.0
BILL				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.4						
BILL	Bilibino	29.92	21	*e*P	P	22 48 08.0	0.0
	comp=Z,3.3nm,0.3s,mb4.4						
NVS	Novosibirsk	37.84	309	*e*P	P	22 49 14.4	-1.2
MKAR	Makanchi Array	39.72	297	P	P	22 49 30.8	-0.4
	comp=Z,4.2nm,0.4s,mb4.2,baz=84,slow=12,SNR=108						
GUN	Gumba	44.75	269	*e*P	P	22 50 12.0	0.0
	comp=Z,66nm,0.4s,mb5.3						
KKN	Kakani	45.26	269	*e*P	P	22 50 15.9	-0.2
	comp=Z,11nm,0.3s,mb4.7						
KKN	Kakani	45.26	269	*e*P	P	22 50 15.9	-0.2
KKN				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.3						
PKI	Pulchoki	45.28	269	*e*P	P	22 50 16.1	-0.1
	comp=Z,11nm,0.3s,mb4.6						
PKI	Pulchoki	45.28	269	*e*P	P	22 50 16.1	-0.1
PKI				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb4.4						
VOSK	Vostochnaya	45.35	308	P	P	22 50 16.1	-0.3
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.2						
DMN	Daman	45.49	269	*e*P	P	22 50 17.8	-0.1
	comp=Z,8.7nm,0.3s,mb4.5						
BVA0	Borovoye Array	45.62	308	*i* P	P	22 50 18.5	-0.1
BVAR	Borovoye Array	45.62	308	P	P	22 50 18.5	0.0
	comp=Z,2.2nm,0.4s,mb3.9,baz=78,slow=8.7,SNR=26						
GKN	Gorkha	45.62	270	*e*P	P	22 50 18.7	-0.2
	comp=Z,31nm,0.3s,mb5.1						
AAK	Ala-Archa	46.30	293	P	P	22 50 23.9	-0.1
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.5						
ZRNK	Zerenda	46.45	309	P	P	22 50 25.1	+0.1
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.8						
ILAR	Eielson Array	46.49	35	P	P	22 50 25.4	+0.3
	comp=Z,3.4nm,0.5s,mb3.9,baz=270,slow=7.5,SNR=58						
KOLN	Koldanda	46.52	270	*e*P	P	22 50 25.7	-0.2
	comp=Z,9.1nm,0.3s,mb4.6						
KKAR	Karatay Array	48.82	295	*i* P	P	22 50 42.5	-0.9
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
INK	Inuvik	50.94	29	*e*P	P	22 50 59.4	+0.4
INK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
INK	Inuvik	50.94	29	*e*P	P	22 50 59.4	+0.3
	comp=Z,4.2nm,0.4s,mb4.2						
ARU	Arti	51.16	315	*e*P	P	22 51 00.7	-0.1
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
ARU	Arti	51.16	315	*e*P	P	22 51 00.7	-0.1
	comp=Z,5.1nm,0.6s,mb4.1						
AB31	Akbulak array	53.08	307	P	P	22 51 14.4	-0.7
AB31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.9						
ARCES	ARCESS Array B	58.48	338	P	P	22 51 57.4	+4.1
	comp=Z,3.3nm,0.9s,mb4.0,baz=63,slow=6.0,SNR=6.7						
YKA	Yellowknife Ar	60.55	31	P	P	22 52 07.6	+0.2
	comp=Z,1.0nm,0.5s,mb3.8,baz=304,slow=6.6,SNR=6.1						
YKA	Yellowknife Ar	60.55	31	P	P	22 52 07.6	+0.2
WRA	Warramunga Arr	61.85	185	P	P	22 52 15.2	-1.5
	comp=Z,2.6nm,0.4s,mb4.2,baz=2.4,slow=7.1,SNR=47						
KAF	Kangasniemi	62.81	331	*e*p	P	22 52 25.3	+2.9
	baz=48,slow=6.4						
FINES	FINESS Array B	63.32	330	P	P	22 52 24.9	-0.8
	comp=Z,3.4nm,1.1s,mb3.9,baz=31,slow=8.1,SNR=5.2						
FINES	FINESS Array B	63.32	330	P	P	22 52 24.9	-0.8
NOA	NORSAR Array B	68.67	335	P	P	22 52 58.5	-0.9
	comp=Z,0.6nm,0.8s,mb3.3,baz=46,slow=7.3,SNR=2.9						
AKASG	Malin Array Be	68.98	320	P	P	22 53 01.1	-0.4
	comp=Z,0.8nm,0.3s,mb3.8,baz=44,slow=6.8,SNR=14						
HLID	Hailey	72.52	47	P	P	22 53 23.9	+1.0
	comp=Z,0.7nm,0.6s,mb3.5						
BOZ	Bozeman (W)	72.59	44	*e*P	P	22 53 24.6	+1.3
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
BOZ	Bozeman (W)	72.59	44	*e*P	P	22 53 24.6	+1.3
	comp=Z,3.1nm,0.7s,mb4.0						
STKA	Stephens Creek	73.67	177	P	P	22 53 29.2	-0.6
	comp=Z,0.5nm,0.3s,mb3.6,baz=3.4,slow=9.2,SNR=4.5						
NVAR	Mina Array Bea	73.70	53	P	P	22 53 30.9	+1.1
	comp=Z,0.9nm,0.6s,mb3.6,baz=304,slow=3.7,SNR=7.6						
PDAR	Pinedale Array	75.66	45	P	P	22 53 41.8	+0.9
	comp=Z,3.4nm,0.4s,mb4.3,baz=100,slow=0.5,SNR=41						
SRU	San Rafael	77.70	48	*e*P	P	22 53 53.5	+1.2
TXAR	Lajitas Array	88.69	51	P	P	22 54 49.4	+1.4
	comp=Z,1.2nm,0.6s,mb3.9,baz=289,slow=2.7,SNR=20						
LPAZ	La Paz	145.55	50	PKPbc	PKPbc	23 01 33.7	+2.3
	comp=Z,1.2nm,0.3s,baz=1.6,slow=24,SNR=6.8						
LPAZ	La Paz	145.55	50	PKPbc	PKPbc	23 01 33.7	+2.3
VNA2	Neumayer--Watz	146.47	199		PKPdf	23 01 22.8	-7.7
VNA2	Neumayer--Watz	146.47	199		PKPdf	23 01 34.2	+3.7
VNA3	Neumayer Olymp	146.80	198		PKPdf	23 01 22.9	-8.2
VNA3	Neumayer Olymp	146.80	198		PKPdf	23 01 34.5	+3.4

NEIC ***26*** *23:33:26.8, 31.98S×68.32W, h150^{km}, MD3.4(GUC), After GUC.*

GUC 26 23:33:26.8±0.7**, 31.98S**×**68.32W, h150**^{km}**, MD3.4, ML3.7, 2C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	Zonda	0.53	324	⇑*i*P	P	23 33 46.0	-2.8
ZON				*e*S	S	23 34 01.0	-4.6
MDZ	Mendoza	1.01	206	*e*P	P	23 33 49.1	-2.7
MDZ				*i* S	S	23 34 06.3	-4.7
JACH	Jahuel	2.05	249	*i* P	P	23 34 03.2	+0.3
JACH				*i* S	S	23 34 30.7	+0.1
FCH	Farellones	2.14	231	*i* P	P	23 34 04.5	+0.5
FCH				*i* S	S	23 34 33.7	+1.2
FCH				AMP		23 34 37.2	
	comp=N,152nm,0.3s						
PEL	Peldehue	2.31	239	*i* S	S	23 34 36.4	+0.1
PEL				AMP		23 34 39.0	
	comp=N,363nm,0.3s						
CLCH	Cerro Calan	2.35	232	*i* P	P	23 34 06.6	+0.1
CLCH				*i* S	S	23 34 36.8	-0.3
CLCH				AMP		23 34 42.4	
	comp=E,345nm,0.7s						
CMCH	Combarbala	2.43	289	⇓*i*P	P	23 34 08.0	+0.4
CMCH				*i* S	S	23 34 38.9	0.0
CMCH				AMP		23 34 42.9	
	comp=E,847nm,0.5s						
PCH	Pirque	2.47	228	*i* P	P	23 34 08.0	-0.1
PCH				*i* S	S	23 34 39.7	-0.1
RCDM	Rinconada Maip	2.58	234	*i* P	P	23 34 09.6	0.0
RCDM				*i* S	S	23 34 42.4	+0.1
RCDM				AMP		23 34 44.5	
	comp=E,236nm,0.3s						
CHCH	Chadas Angostu	2.77	225	⇑*i*P	P	23 34 12.1	+0.2
CHCH				*i* S	S	23 34 46.6	+0.3
TACH	Talagante	2.77	232	*i* P	P	23 34 11.5	-0.4
TACH				*i* S	S	23 34 45.8	-0.6
CICH	Cipreses	2.93	217	*i* P	P	23 34 14.4	+0.5
CICH				*i* S	S	23 34 50.2	+0.2
LCCH	Las Cruces	3.12	241	*i* P	P	23 34 15.9	-0.5
LCCH				*i* S	S	23 34 53.5	-1.0

IDC ***26*** *23:44:04.6±1.1, 4.63N×94.98E, mb4.1/11, mb1 4.2/12, mb1mx4.1/21, mbtmp4.1/12, ML4.0/1, MS3.0/1, Ms1 3.2/1, ms1mx2.8/21, Error ellipse: s-maj=41.7km s-min=24.1km az=48.0*

NEIC ***26*** *23:44:09.2±0.6, 4.60N×94.92E, h30^{km}, mb4.5/2, Error ellipse: s-maj=15.3km s-min=9.6km az=213.0*

ISC 26 23:44:07.6±0.8**, 4.7N**±0.1×**95.01E**±0.07**, h30**^{km}**, n16, σ0^{s}81**/17**, mb4.1**/13**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.65	83	*e*P	Pn	23 45 33.5	+1.7
KULM				*e*S	Sn	23 46 35.6	-0.9
CMAR	Chiang Mai Arr	14.24	15	Pn	P	23 47 30.4	+0.9
	0.2nm,0.3s,baz=208,slow=11,SNR=3.2						
CMAR				LR	LR	23 52 37.9	
	comp=Z,59nm,18.1s,baz=209,slow=36						
MKAR	Makanchi Array	43.39	347	P	P	23 52 09.1	-0.1
	1.5nm,0.3s,mb4.2,baz=163,slow=8.2,SNR=26						
SONM	Songino Array	44.11	11	P	P	23 52 14.4	-0.7
	0.2nm,0.5s,mb3.1,baz=207,slow=9.7,SNR=2.7						
WRA	Warramunga Arr	45.73	124	P	P	23 52 28.1	-0.3
	3.2nm,0.7s,mb4.4,baz=302,slow=9.2,SNR=13						
WRAB	Tennant Creek	45.74	124	*e*P	P	23 52 28.3	-0.1
	4.8nm,0.5s,mb4.7						
BVAR	Borovoye Array	52.29	341	P	P	23 53 18.1	-0.4
	3.4nm,0.6s,mb4.4,baz=143,slow=9.0,SNR=32						
ZRNK	Zerenda	52.68	341	*e*P	P	23 53 20.6	-0.9
	2.7nm,0.8s,mb4.2						
BRTR	Keskin Array B	65.19	312	P	P	23 54 47.8	-0.7
	0.8nm,0.6s,mb3.9,baz=135,slow=7.0,SNR=5.0						
AKASG	Malin Array Be	71.20	322	P	P	23 55 24.5	-1.2
	0.7nm,0.4s,mb4.0,baz=87,slow=6.0,SNR=6.4						
AKASG	Malin Array Be	71.20	322	P	P	23 55 24.5	-1.2
MLR	Muntele Rosu	72.07	316	P	P	23 55 32.0	+1.0
	0.9nm,0.5s,mb4.0,baz=204,slow=3.5,SNR=3.9						
FINES	FINESS Array B	75.94	332	P	P	23 55 53.0	-0.2
	1.0nm,0.3s,mb4.2,baz=110,slow=5.4,SNR=23						
ARCES	ARCESS Array B	78.56	340	P	P	23 56 07.8	+0.2
	2.7nm,0.7s,mb4.3,baz=91,slow=5.4,SNR=15						
GERES	GERESS Array B	80.79	319	P	P	23 56 20.7	+0.8
	0.6nm,0.5s,mb3.8,baz=104,slow=5.5,SNR=8.0						
DAVOX	Davos	83.29	316	P	P	23 56 34.0	+1.0
	2.3nm,0.5s,mb4.5,baz=165,slow=4.0,SNR=8.3						

IDC ***26*** *23:51:50.5±1.1, 63.73S×173.17E, mb4.2/3, mb1 4.6/4, mb1mx4.2/12, mbtmp4.4/4, ML4.6/1, MS4.1/9, Ms1 4.1/9, ms1mx4.0/16, Error ellipse: s-maj=45.9km s-min=31.9km az=75.0*

NEIC ***26*** *23:51:52.0±0.7, 63.83S×173.13E, h10^{km}, mb3.9/1, Error ellipse: s-maj=32.8km s-min=12.5km az=91.0*

ISC 26 23:51:50.4±0.8**, 63.77S**±0.09×**172.5E**±0.6**, h10**^{km}**, n24, σ1^{s}19**/12**, mb4.1**/4**, MS4.0**/8**, 3C, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	14.22	189	Pn	P	23 55 13.0	-0.5
	2.8nm,0.3s,baz=26,slow=15,SNR=120						
VNDA				LR	LR	23 59 27.6	
	comp=Z,917nm,19.6s,baz=34,slow=32						
VNDA	Vanda	14.22	189	*e*P	P	23 55 12.7	-0.7
VNDA				LR	LR	23 59 27.6	
SBA	Scott Base	14.27	185	*e*P	P	23 55 11.9	-2.2
	17nm,0.7s						
RPZ	Rata Peaks	20.11	357	LR	LR	00 02 56.8	
	comp=Z,462nm,18.4s,MS3.9,baz=255,slow=33						
URZ	Urewera	25.69	8	P	P	23 57 21.4	-0.5
	9.8nm,0.9s,mb4.3,baz=168,slow=7.3,SNR=3.6						
URZ				LR	LR	00 05 14.2	
	comp=Z,444nm,20.5s,MS4.0,baz=194,slow=31						
STKA	Stephens Creek	37.32	314	LR	LR	00 12 15.0	
	comp=Z,136nm,20.4s,MS3.7,baz=191,slow=33						
MAW	Mawson	39.62	214	LR	LR	00 15 38.4	
	comp=Z,283nm,21.6s,MS4.1,baz=329,slow=36						
SNAA	Sanae	44.80	182	*e*P	P	00 00 05.5	+0.3
	1.2nm,0.7s,mb3.8						
VNA3	Neumayer Olymp	45.26	179	⇑*i*	P	00 00 12.3	+3.4
VNA3	Neumayer Olymp	45.26	179	*e*	P	00 00 18.8	+10
VNA2	Neumayer--Watz	45.58	180	⇑*i*	P	00 00 18.6	+7.1
VNA2	Neumayer--Watz	45.58	180	*e*	P	00 00 24.8	+13
VNA1	Neumayer--Stat	45.86	180	⇑*i*	P	00 00 15.4	+1.7
CTA	Charters Tower	47.11	325	LR	LR	00 18 52.5	
	comp=Z,174nm,19.0s,MS4.0,baz=301,slow=34						
WRA	Warramunga Arr	50.76	311	P	P	00 00 52.6	+0.1
	1.5nm,0.9s,mb3.9,baz=164,slow=6.5,SNR=5.0						
PPT	Papeete	52.91	47	LR	LR	00 17 48.6	
	comp=Z,277nm,19.2s,MS4.3,baz=205,slow=30						
BOSA	Boshof	84.37	209	LR	LR	00 39 53.0	
	comp=Z,146nm,18.4s,MS4.4,baz=205,slow=34						
LPAZ	La Paz	87.69	123	P	P	00 04 39.8	-0.3
	1.2nm,0.7s,mb4.2,baz=205,slow=22,SNR=3.6						
CMAR	Chiang Mai Arr	99.35	293	LR	LR	00 47 59.5	
	comp=Z,48nm,19.5s,MS4.0,baz=215,slow=34						
BVAR	Borovoye Array	140.37	292	PKP	PKPdf	00 11 21.4	-0.2
	0.2nm,0.5s,baz=180,slow=4.3,SNR=4.0						
KIV	Kislovodsk	145.60	259	*e*PKP	PKPdf	00 11 31.5	+0.7
BRTR	Keskin Array B	145.93	245	PKPbc	PKPbc	00 11 32.4	+3.0
	1.3nm,0.9s,baz=148,slow=5.5,SNR=7.4						
SCHQ	Schefferville	149.52	79	PKPbc	PKPdf	00 11 39.0	+2.1
	2.9nm,0.8s,baz=318,slow=6.0,SNR=2.7						
SCHQ	Schefferville	149.52	79	PKPbc	PKPdf	00 11 39.0	+2.1

NEIC ***27*** *00:03:04.8±0.3, 26.77S×176.35W, mb4.7/6, Error ellipse: s-maj=14.3km s-min=10.3km az=133.0*

IDC ***27*** *00:03:14.6±11.0, 26.97S×176.30W, h116^{km}±98^{km}, mb3.8/10, mb1 4.1/10, mb1mx4.1/14, mbtmp4.2/10, MS3.8/3, Ms1 3.8/3, ms1mx3.4/16, Error ellipse: s-maj=29.5km s-min=26.7km az=78.0*

ISC 27 00:03:03.8±0.5**, 26.9S**±0.1×**176.3W**±0.1**, h33**^{km}**, n32, σ0^{s}76**/22**, mb4.3**/15**, MS3.8**/3**, 2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	13.58	19	*e*P	P	00 06 06.7	-10
	88nm,1.0s						
AFI				*e*S	S	00 08 28.7	-18
RAR	Rarotonga	16.13	73	*e*P	P	00 06 37.9	-12
DZM	Mont Dzumac	16.39	283	P	P	00 07 02.3	+9.2
	0.4nm,0.3s,baz=101,slow=16,SNR=4.1						
CTA	Charters Tower	34.89	273	P	P	00 09 56.1	+1.7

	5.2nm,0.5s,mb4.7,baz=95,slow=11,SNR=8.2						
CTAO	**Charters Tower**	**34.89**	**273**	*e*P	**P**	**00 09 56.4**	**+1.9**
	6.6nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**36.84**	**252**	P	**P**	**00 10 11.5**	**+0.6**
	0.5nm,0.3s,mb3.8,baz=89,slow=14,SNR=3.2						
STKA				LR	LR	00 24 06.3	
	comp=Z,105nm,20.7s,MS3.6,baz=27,slow=34						
WB2	**Warramunga Arr**	**45.56**	**268**	*e*P	**P**	**00 11 21.4**	**-1.3**
WRAB	**Tennant Creek**	**45.57**	**268**	*e*P	**P**	**00 11 22.4**	**-0.3**
	10nm,0.6s,mb4.9						
WRA	**Warramunga Arr**	**45.57**	**268**	P	**P**	**00 11 22.3**	**-0.5**
	2.6nm,0.5s,mb4.4,baz=106,slow=7.4,SNR=4.7						
SBA	**Scott Base**	**51.66**	**185**	*e*P	**P**	**00 12 10.5**	**+1.4**
	25nm,1.6s,mb4.9						
VNDA	**Vanda**	**51.75**	**186**	P	**P**	**00 12 09.1**	**-0.6**
	0.8nm,1.0s,mb3.6,baz=12,slow=9.0,SNR=4.6						
VNDA				LR	LR	00 30 19.9	
	comp=Z,63nm,18.7s,MS3.7,baz=324,slow=32						
QSPA	**South Pole Qui**	**63.23**	**180**	⇓*i*P	**P**	**00 13 30.7**	**-0.1**
	9.4nm,1.0s,mb4.9						
MAW	**Mawson**	**76.12**	**200**	P	**P**	**00 14 48.5**	**-1.1**
	1.3nm,0.5s,mb4.1,baz=153,slow=9.0,SNR=4.1						
MJAR	**Matsushiro Arr**	**76.23**	**324**	P	**P**	**00 14 50.6**	**-0.2**
	1.0nm,0.4s,mb4.1,baz=161,slow=5.8,SNR=4.7						
NVAR	**Mina Array Bea**	**84.65**	**42**	P	**P**	**00 15 35.6**	**+0.2**
	1.9nm,1.0s,mb4.2,baz=207,slow=6.5,SNR=8.1						
NVAR				LR	LR	00 49 22.2	
	comp=Z,63nm,18.1s,MS4.0,baz=195,slow=33						
TXAR	**Lajitas Array**	**89.23**	**56**	P	**P**	**00 15 58.0**	**0.0**
	1.5nm,1.0s,mb4.3,baz=207,slow=5.6,SNR=9.0						
HLID	**Hailey**	**90.17**	**40**	*e*P	**P**	**00 16 02.8**	**+0.8**
	1.7nm,1.0s,mb4.3						
HLID				*e*pP	pP	00 16 13.0	+0.4
BW06	**Boulder Array**	**92.56**	**43**	P	**P**	**00 16 13.1**	**0.0**
PDAR	**Pinedale Array**	**92.56**	**43**	P	**P**	**00 16 12.8**	**-0.3**
	0.3nm,0.4s,mb4.1,baz=233,slow=7.4,SNR=3.7						
BOZ	**Bozeman (W)**	**93.01**	**39**	*e*P	**P**	**00 16 14.8**	**-0.3**
	2.0nm,1.0s,mb4.5						
BOZ				*e*pP	pP	00 16 24.5	-1.2
ILAR	**Eielson Array**	**94.17**	**12**	P	**P**	**00 16 19.8**	**-0.1**
	1.0nm,1.0s,mb4.2,baz=219,slow=4.9,SNR=6.7						
MKAR	**Makanchi Array**	**116.60**	**311**	PKP	PKPdf	00 21 44.0	-0.5
	0.4nm,0.7s,baz=90,slow=1.2,SNR=4.4						
ZRNK	**Zerenda**	**125.70**	**317**	*e*PKPdf	PKPdf	00 22 02.8	+0.9
FINES	**FINESS Array B**	**142.28**	**343**	PKP	PKPdf	00 22 33.5	+1.1
	2.0nm,0.9s,baz=166,slow=7.9,SNR=4.2						
NB2	**NORSAR Subarra**	**145.46**	**354**	PKPabc	PKPdf	00 22 38.9	+1.1
	18nm,1.1s,baz=11,slow=3.4						
NOA	**NORSAR Array B**	**145.46**	**354**	PKPbc	PKPbc	00 22 39.3	+0.9
	10nm,1.0s,baz=9.1,slow=2.4,SNR=9.7						
AKASG	**Malin Array Be**	**149.25**	**328**	PKPbc	PKPdf	00 22 50.2	+5.8
	0.5nm,0.3s,baz=40,slow=3.2,SNR=11						
AKASG	**Malin Array Be**	**149.25**	**328**	PKPbc	PKPdf	00 22 50.2	+5.8
BRTR	**Keskin Array B**	**152.00**	**305**	PKPbc	PKPdf	00 22 55.8	+6.8
	1.1nm,1.0s,baz=135,slow=3.5,SNR=6.0						
CLL	**Collm**	**154.59**	**346**	⇓*i*PKP1	PKPdf	00 23 02.8	+11
BRG	**Berggiesshubel**	**154.78**	**345**	*e*P	PKPdf	00 23 04.9	+12
BRG				*e*		00 23 20.5	
GERES	**GERESS Array B**	**156.72**	**343**	PKPab	PKPab	00 23 25.2	-1.8
	0.2nm,0.5s,baz=333,slow=6.0,SNR=3.6						

*CSEM **27** 00:07:30.0±0.1, 29.25N×58.42E, h18^{km}, ML4.7/1, Error ellipse: s-maj=2.7km s-min=1.2km az=178.0, After THR*

THR 27 00:07:30.0±0.3**, 29.25N×58.42E, h18**^{km}±9^{km}**, ML3.3, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	**Kerman**	**1.62**	**297**	*e*PG	Pn	00 07 60.0	+1.9
KRBR				*e*SG	Sn	00 08 21.8	+3.2
KRBR				AML	AML	00 08 24.3	
	comp=N,636nm,0.3s						
KRBR	**Kerman**	**1.62**	**297**	*e*Pg	Pn	00 08 00.0	+2.0
	SNR=92						
KRBR				*e*Sg	Sn	00 08 21.8	+3.2
	comp=N,636nm,0.3s,SNR=92						
ZHSF	**Zahedan**	**2.08**	**80**	*e*PG	Pn	00 08 08.1	+3.5
ZHSF				*e*SG	Sn	00 08 35.6	+5.4
BNDS	**Bandar-Abbas**	**2.71**	**228**	*e*PN	Pn	00 08 14.9	+1.3
BNDS				AML	AML	00 09 00.1	
	comp=N,68nm,0.3s						
GHIR	**Ghir-Karzin**	**4.87**	**260**	*e*PN	Pn	00 08 44.7	+0.4

NEIC 27 00:30:28.4, 35.43N×121.00W, h6^{km}**, ML3.7**(NCEDC)**, After NCEDC., Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LRV	**Little Rabbit**	**0.99**	**359**	*e*P	Pb	00 30 47.3	-0.4
SAO	**San Andreas Ge**	**1.38**	**345**	*e*P	Pb	00 30 51.4	-2.8
SAC	**San Andreas**	**2.43**	**332**	*e*Pn	Pn	00 31 06.2	-3.2
CMB	**Columbia Colle**	**2.65**	**11**	*e*Pn	Pn	00 31 10.6	-1.8
MWC	**Mount Wilson**	**2.70**	**116**	*e*Pn	Pn	00 31 11.1	-2.1
OMM	**Old Mammoth Mi**	**2.72**	**36**	*e*Pn	Pn	00 31 12.4	-1.0
DAC	**Darwin (Calif)**	**2.89**	**72**	*e*Pn	Pn	00 31 14.4	-1.4
MNV	**Mina**	**3.77**	**36**	*e*Pn	Pn	00 31 27.3	-1.0
WCN	**Washoe City**	**3.99**	**14**	*e*Pn	Pn	00 31 29.8	-1.7
TPH	**Tonopah**	**4.02**	**48**	Pn	Pn	00 31 28.9	-3.1
PFO	**Pinyon Flat Ob**	**4.17**	**115**	*e*Pn	Pn	00 31 30.8	-3.2
BEKR	**Beckwourth**	**4.46**	**6**	*e*Pn	Pn	00 31 36.1	-2.0

*GUC **27** 00:41:13.5±1.2, 22.94S×69.09W, h103^{km}±21^{km}, ML4.3*
*IDC **27** 00:41:14.4±2.7, 22.99S×69.01W, h96^{km}±24^{km}, mb4.0/2, mb1 3.7/6, mb1mx3.5/16, mbtmp4.0/6, Error ellipse: s-maj=39.7km s-min=23.9km az=99.0, Incorrectly calculated travel-time residual on T phase at H03N*
*NEIC **27** 00:41:15.8±1.7, 22.89S×68.98W, h112^{km}±18^{km}, mb4.1/2, Error ellipse: s-maj=23.5km s-min=13.8km az=93.0*

ISC 27 00:41:13.6±0.8**, 23.00S**±0.08×**69.03W**±0.10**, h116**^{km}±7^{km}**, n18,** σ1^{s}**10**/20**, mb4.2**/2**, 2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**0.77**	**83**	⇓*i*P	**P**	**00 41 33.6**	**+0.2**
SPCH				*i* S	**S**	**00 41 48.0**	**-0.2**
SPCH				AMP		00 41 48.4	
	comp=E,10µm,0.3s						
CPN1	**Cerro Paranal**	**2.05**	**218**	⇓*i*P	**P**	**00 41 48.7**	**+0.8**
CPN1				*i* S	**S**	**00 42 15.0**	**+1.2**
CPN1				AMP		00 42 23.0	
	comp=N,2µm,0.3s						
CRCH	**Chaqaral**	**3.63**	**203**	*i* P	**P**	**00 42 08.4**	**-0.8**
CRCH				*i* S	**S**	**00 42 50.1**	**-1.5**
LPAZ	**La Paz**	**6.73**	**7**	P	**P**	**00 42 51.2**	**-0.1**
	comp=N,0.5nm,0.3s,baz=183,slow=19,SNR=13						
LPAZ	**La Paz**	**6.73**	**7**	P	**P**	**00 42 51.2**	**-0.1**
CFAA	**Coronel Fontan**	**8.60**	**175**	P	**P**	**00 43 15.4**	**-1.1**
	comp=N,0.6nm,0.3s,baz=350,slow=13,SNR=32						
CFAA				S	**S**	**00 44 44.9**	**-7.5**
	comp=N,0.1nm,0.3s,baz=260,slow=19,SNR=2.0						
SIV	**San Ignacio**	**10.24**	**49**	P	**P**	**00 43 35.1**	**-3.5**
	comp=N,1.9nm,0.3s,baz=245,slow=14,SNR=38						
SIV				S	**S**	**00 45 19.5**	**-12**
	comp=N,0.2nm,0.3s,baz=130,slow=19,SNR=3.0						
CPUP	**Villa Florida**	**11.15**	**110**	P	**P**	**00 43 52.4**	**+1.9**
	comp=N,0.2nm,0.3s,baz=304,slow=15,SNR=14						
CPUP	**Villa Florida**	**11.15**	**110**	*e*P	**P**	**00 43 52.3**	**+1.7**
CPUP				*e*		00 44 01.3	
TRQA	**Tornquist**	**16.18**	**160**	*e*P	**P**	**00 44 58.7**	**+3.3**
	comp=N,4.5nm,0.7s						
PLCA	**Paso Flores**	**17.73**	**184**	P	**P**	**00 45 14.7**	**+0.2**
	comp=N,0.1nm,0.3s,baz=5.7,slow=10,SNR=2.1						
BDFB	**Brasilia**	**21.13**	**73**	P	**P**	**00 45 50.3**	**-0.4**
	comp=N,5.2nm,0.6s,mb4.0,baz=248,slow=12,SNR=11						
BAO	**Brasilia Array**	**21.15**	**73**	P	**P**	**00 45 50.0**	**-0.9**
DBIC	**Dimbokro**	**69.28**	**73**	P	**P**	**00 52 11.9**	**+1.2**
	comp=N,3.6nm,0.7s,mb4.3,baz=193,slow=14,SNR=5.5						
DBIC	**Dimbokro**	**69.28**	**73**	*e*P	**P**	**00 52 12.0**	**+1.3**
	comp=N,4.8nm,0.8s,mb4.4						
YKA	**Yellowknife Ar**	**92.56**	**341**	pP	pP	00 54 39.9	-3.2
	comp=N,0.5nm,0.7s,baz=136,slow=4.3,SNR=5.4						
MKAR	**Makanchi Array**	**146.90**	**37**	PKPbc	PKPbc	01 00 45.2	+3.3
	comp=N,1.9nm,1.0s,baz=320,slow=2.7,SNR=6.7						
MKAR				pPKPbc		01 01 11.4	
	comp=N,0.7nm,0.7s,baz=304,slow=4.4,SNR=4.8						
MKAR	**Makanchi Array**	**146.90**	**37**	PKPbc	PKPbc	01 00 45.2	+3.3
MKAR				pPKPbc		01 01 11.4	

*LDG **27** 00:53:39.8±3.0, 18.71S×69.80W, h10^{km}, Mb5.1/20, Ms4.0/3, Error ellipse: s-maj=190.7km s-min=7.9km az=53.0*
*MOS **27** 00:53:42.2±1.0, 19.48S×69.60W, h37^{km}, mb5.1/41, Error ellipse: s-maj=10.7km s-min=7.7km az=99.8*
*HRVD **27** 00:53:43.7±0.7, 19.55S×69.86W, h43^{km}±2^{km}, MW4.9/41, Centroid moment Tensor Solution. LP body waves: s20,c23;Mantle waves: s41,c55; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.31±.32; $M_{\theta\theta}$-2.12±.17; $M_{\phi\phi}$0.80±.21; $M_{r\theta}$0.50±.16; $M_{\theta\phi}$-1.48±.12; $M_{\phi r}$-1.81±.17; Best double couple: $M_0$2.995×10^{16} NP1:ϕ_s103°, δ57°, λ148°. NP2:ϕ_s211°, δ64°, λ37°. Principal axes: T 3.236, Plg44°, Azm70°; N -.486, Plg46°, Azm241°; P -2.755, Plg4°, Azm335°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **27** 00:53:43.7±0.2, 19.56S×69.60W, mb5.0/83, MS4.2/5 Error ellipse: s-maj=5.9km s-min=3.9km az=45.0*
NEIC Felt [V] at Iquique; [IV] at Huara, Mamina, Pica and Pisagua; [III] at Arica, Colchane and Pozo Almonte. Felt [II] at Arequipa, Peru.
*IDC **27** 00:53:44.0±0.4, 19.58S×69.71W, h38^{km}±3^{km}, mb4.5/17, mb1 4.7/19, mb1mx4.7/20, mbtmp4.8/19, ML4.8/1, MS4.0/10, Ms1 4.0/10, ms1mx3.8/23, Error ellipse: s-maj=17.6km s-min=11.3km az=65.0, Incorrectly calculated travel-time residual on T phase at H03N*
*GUC **27** 00:53:44.8±0.6, 19.69S×69.91W, h31^{km}±9^{km}, MD4.9, ML5.3*
*BJI **27** 00:53:44.7, 19.60S×69.60W, h39^{km}, mB4.9, Ms4.8, Msz4.6*

ISC 27 00:53:42.2±1.1**, 19.58S**±0.05×**69.64W**±0.05**, h39**^{km}±9^{km}**, h38**^{km}±.5^{km}**:pP-P, n275,** σ0^{s}**89**/208**, mb4.9**/95**, MS4.2**/13**, 8C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	**Arequipa**	**3.56**	**330**	⇓*i*P	**P**	**00 54 37.4**	**+0.9**
ARE				*e*S	**S**	**00 55 10.0**	**-7.9**
LPAZ	**La Paz**	**3.58**	**24**	Pn	**P**	**00 54 44.2**	**+7.6**
	24nm,0.3s,baz=219,slow=6.7,SNR=289						
LPAZ	**La Paz**	**3.58**	**24**	*e*Pn	**P**	**00 54 43.1**	**+6.4**
LPAZ				*e*		00 54 54.0	
CPN1	**Cerro Paranal**	**5.07**	**188**	*e*P	**P**	**00 54 54.5**	**-3.3**
SIV	**San Ignacio**	**8.91**	**68**	Pn	**P**	**00 55 52.3**	**+1.0**
	36nm,0.3s,baz=260,slow=11,SNR=1061						
CFAA	**Coronel Fontan**	**12.04**	**174**	Pn	**P**	**00 56 28.5**	**-5.7**
	0.2nm,0.3s,baz=355,slow=12,SNR=10						
CFAA				Sn	**S**	**00 58 36.7**	**-11**
	0.1nm,0.3s,baz=79,slow=22,SNR=2.4						
CFAA				LR	LR	01 01 06.1	
	comp=Z,86nm,18.2s,baz=334,slow=37						
SAML	**Samuel**	**12.28**	**32**	*e*Pn	**P**	**00 56 37.5**	**+0.1**
	0.7nm,1.2s						
CPUP	**Villa Florida**	**13.18**	**123**	*e*P	**P**	**00 56 48.9**	**-0.4**
CPUP				pmax	pmax		
	comp=Z,48nm,1.2s						
CPUP	**Villa Florida**	**13.18**	**123**	Pn	**P**	**00 56 49.6**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=318,slow=14,SNR=29						
CPUP				LR	LR	01 03 19.5	
	comp=Z,370nm,20.5s,baz=147,slow=44						
CPUP	**Villa Florida**	**13.18**	**123**	*e*Pn	**P**	**00 56 48.9**	**-0.5**
	comp=Z,48nm,1.2s						
JATB	**Jatai**	**17.27**	**87**	⇓*i*P	**P**	**00 57 45.9**	**+3.7**
JATB				*i*		00 57 46.5	
JATB				*i*		00 57 49.4	
JATB				*i*		00 57 52.9	
JATB				*i*		00 57 55.5	
JATB				*i*		00 58 00.8	
JATB				*e*		00 58 13.6	
TRQA	**Tornquist**	**19.58**	**162**	*e*P	**P**	**00 58 08.6**	**-1.2**
	comp=Z,196nm,1.4s						
BDFB	**Brasilia**	**20.98**	**83**	P	**P**	**00 58 24.8**	**+0.3**
	comp=Z,50nm,0.6s,baz=262,slow=11,SNR=23						
BDFB				LR	LR	01 07 52.9	
	comp=Z,425nm,20.9s,MS3.8,baz=202,slow=40						
BAO	**Brasilia Array**	**21.00**	**83**	P	**P**	**00 58 24.5**	**-0.3**
PLCA	**Paso Flores**	**21.10**	**182**	*e*P	**P**	**00 58 24.9**	**-0.7**
PLCA				pmax	pmax		
	comp=Z,94nm,1.2s						
PLCA	**Paso Flores**	**21.10**	**182**	P	**P**	**00 58 25.1**	**-0.4**
	comp=Z,5.3nm,0.5s,mb4.1,baz=2.7,slow=14,SNR=12						
PLCA				PcP	PcP	01 02 30.8	-0.4
	comp=Z,1.6nm,0.4s,baz=333,slow=2.3,SNR=3.0						
PLCA	**Paso Flores**	**21.10**	**182**	*e*P	**P**	**00 58 24.9**	**-0.7**
	comp=Z,94nm,1.2s,mb5.0						
OTAV	**Otavalo**	**21.50**	**335**	*e*P	**P**	**00 58 31.6**	**+1.8**
	comp=Z,33nm,0.8s,mb4.8						
ROSC	**El Rosal**	**24.72**	**349**	P	**P**	**00 59 03.3**	**+1.8**
	comp=Z,8.6nm,0.6s,mb4.4,baz=128,slow=13,SNR=7.9						
CAM4	**Nova Friburgo**	**25.42**	**101**	⇓*i*P	**P**	**00 59 08.2**	**+0.1**
CAM4				*i*		00 59 10.0	
CAM4				*i*	pP	00 59 16.2	-2.4
CAM4				*i*		00 59 25.5	
CAM4				*i*		00 59 38.1	
SDV	**Santo Domingo**	**28.30**	**358**	P	**P**	**00 59 33.5**	**-1.0**
	comp=Z,3.2nm,0.3s,mb4.4,baz=146,slow=5.1,SNR=6.6						
SDV				LR	LR	01 12 06.3	
	comp=Z,846nm,18.3s,MS4.4,baz=179,slow=39						
SDV	**Santo Domingo**	**28.30**	**358**	*e*P	**P**	**00 59 33.5**	**-1.1**
	comp=Z,9.2nm,0.5s,mb4.7						
SDV				LR	LR		
	comp=Z,253nm,19.0s,MS3.8						
RCBR	**Riachuelo**	**35.54**	**72**	*e*P	**P**	**01 00 38.1**	**+0.2**
SJG	**San Juan**	**37.61**	**5**	*e*P	**P**	**01 00 53.2**	**-2.0**
SJG				pmax	pmax		
	comp=Z,24nm,0.8s						
SJG	**San Juan**	**37.61**	**5**	*e*P	**P**	**01 00 53.2**	**-2.0**
	comp=Z,24nm,0.8s,mb5.0						
DWPF	**Disney**	**48.76**	**346**	*e*pP	pP	01 02 36.6	0.0
	comp=Z,27nm,0.7s						
LRAL	**Lakeview Retre**	**54.88**	**342**	*e*pP	pP	01 03 20.6	-2.1
	comp=Z,6.9nm,0.7s						
LRAL				LR	LR		
	comp=Z,122nm,22.0s,MS3.9						
NATX	**Nacogdoches**	**56.40**	**334**	*e*pP	pP	01 03 33.0	-0.8
	comp=Z,21nm,0.6s						
NATX				*e*sP	sP	01 03 38.9	+0.6
CPCT	**Cooper Cave**	**56.52**	**345**	*e*P	**P**	**01 03 21.5**	**-1.6**
CPCT				*e*	pP	01 03 31.7	-2.8
PLAL	**Pickwick Lake**	**57.02**	**342**	*e*P	**P**	**01 03 24.7**	**-1.9**
	comp=Z,7.4nm,0.8s,mb4.8						
TZTN	**Tazewell**	**57.34**	**347**	*e*pP	pP	01 03 38.4	-2.0
BLA	**Blacksburg**	**57.39**	**350**	*e*P	**P**	**01 03 26.0**	**-3.3**
BLA				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.1						
BLA	**Blacksburg**	**57.39**	**350**	*e*P	**P**	**01 03 26.0**	**-3.3**
	comp=Z,13nm,0.7s,mb5.1						
ELN	**Prospectdale**	**57.46**	**349**	*e*P	**P**	**01 03 29.9**	**+0.2**
ELN				*e*	pP	01 03 41.2	0.0
FWV	**Forest Hill**	**57.82**	**350**	*e*P	**P**	**01 03 31.9**	**-0.3**
WVT	**Waverly**	**58.02**	**343**	*e*P	**P**	**01 03 31.2**	**-2.4**
WVT				*e*	pP	01 03 42.5	-2.6
WVT				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.2						
WVT	**Waverly**	**58.02**	**343**	*e*P	**P**	**01 03 31.2**	**-2.4**
	comp=Z,18nm,0.6s,mb5.3						
WVT				*e*	pP	01 03 42.5	-2.6
LTX	**Lajitas**	**58.67**	**325**	*e*P	**P**	**01 03 48.0**	**+10**
LTX				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
LTX	**Lajitas**	**58.67**	**325**	*e*pP	pP	01 03 48.0	-1.8
	comp=Z,5.8nm,0.9s						
TXAR	**Lajitas Array**	**58.67**	**325**	P	**P**	**01 03 37.4**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=152,slow=9.3,SNR=4.8						
TXAR				pP	pP	01 03 48.6	-1.1
	comp=Z,2.7nm,0.7s,baz=150,slow=8.9,SNR=22						
FVM	**French Village**	**60.50**	**341**	*e*P	**P**	**01 03 49.7**	**-1.1**
FVM				*e**PP	pP	01 04 01.0	-1.3
FVM				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.3						
FVM	**French Village**	**60.50**	**341**	*e*P	**P**	**01 03 49.6**	**-1.1**
	comp=Z,16nm,0.6s,mb5.3						
FVM				*e*pP	pP	01 04 01.0	-1.3
RKT	**Rikitea**	**60.50**	**254**	*e*PP	Px	01 05 12.7	
	comp=Z,2µm,25.8s						
RKT				*e*S	**S**	**01 11 55.1**	**-6.9**
	comp=Z,132nm,38.8s						
RKT				*e*SS	SS	01 15 40.6	-21
	comp=Z,872nm,42.0s						
RKT				*e*LR	LR	01 21 50.5	
	comp=Z,200nm,30.5s						
WMOK	**Wichita Mounta**	**60.71**	**333**	*e*P	**P**	**01 03 50.8**	**-1.4**
WMOK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
WMOK	**Wichita Mounta**	**60.71**	**333**	*e*P	**P**	**01 03 50.8**	**-1.4**
	comp=Z,9.1nm,0.9s,mb4.9						
CCM	**Cathedral Cave**	**60.82**	**341**	P	**P**	**01 03 50.8**	**-2.1**
CCM				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
CCM	**Cathedral Cave**	**60.82**	**341**	P	**P**	**01 03 50.8**	**-2.2**
	comp=Z,8.3nm,0.8s,mb4.9						
BRYW	**Bryant College**	**61.21**	**358**	*e*P	**P**	**01 03 54.4**	**-1.1**
	comp=Z,109nm,1.1s,mb5.9						
MNTX	**Cornudas Mount**	**61.43**	**325**	*e*P	**P**	**01 03 55.7**	**-1.5**
	comp=Z,9.5nm,0.8s,mb5.0						
MNTX				*e*pP	pP	01 04 06.6	-2.1
ALLY	**Alegheny Colle**	**61.69**	**351**	*e*P	**P**	**01 03 58.0**	**-0.7**
ALLY				*e*pP	pP	01 04 09.5	-0.8
HRV	**Harvard--Oak R**	**61.80**	**358**	*e*P	**P**	**01 03 58.9**	**-0.6**
HRV				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.2						
HRV	**Harvard--Oak R**	**61.80**	**358**	*e*P	**P**	**01 03 58.9**	**-0.5**
	comp=Z,11nm,0.6s,mb5.2						
VNA3	**Neumayer Olymp**	**62.11**	**162**	⇑*i*P	**P**	**01 04 01.1**	**0.0**
VNA3				*e*	pP	01 04 12.3	-0.4
VNA3				*e*		01 04 15.8	
VNA3				*e*		01 04 40.8	
VNA1	**Neumayer--Stat**	**62.31**	**161**	⇑*i*P	**P**	**01 04 02.9**	**+0.4**
VNA1				*e*	pP	01 04 13.7	-0.4
VNA1				*e*	pP	01 04 17.0	+2.9
VNA1				*e*		01 04 41.6	
GENY	**Geneseo**	**62.49**	**353**	*e*P	**P**	**01 04 03.9**	**-0.2**
VNA2	**Neumayer--Watz**	**62.68**	**161**	⇑*i*P	**P**	**01 04 05.1**	**+0.1**
VNA2				*e*	pP	01 04 16.3	-0.3
VNA2				*e*		01 04 19.9	
VNA2				*e*		01 04 43.8	
NCB	**Newcomb**	**63.38**	**356**	*e*P	**P**	**01 04 09.3**	**-0.7**
	comp=Z,12nm,0.9s,mb5.0						
NCB				*e*pP	pP	01 04 19.7	-1.9
KSU1	**Kansas State U**	**63.60**	**337**	*e*pP	pP	01 04 20.9	-2.2
KSU1				*e*sP	sP	01 04 26.9	-0.7
FRNY	**Flat Rock**	**64.20**	**357**	*e*P	**P**	**01 04 14.9**	**-0.4**
SNAA	**Sanae**	**64.31**	**161**	*e*	**P**	**01 04 27.5**	**+12**
SNAA	**Sanae**	**64.31**	**161**	*e*	**P**	**01 04 30.7**	**+15**
SNAA	**Sanae**	**64.31**	**161**	P	**P**	**01 04 15.5**	**-0.1**
	comp=Z,5.3nm,0.6s,mb4.7,baz=285,slow=6.2,SNR=101						
SNAA	**Sanae**	**64.31**	**161**	⇑*i*P	**P**	**01 04 15.4**	**-0.2**
SNAA				*e*	pP	01 04 27.5	+0.3
SNAA				*e*		01 04 30.7	
SNAA				*e*		01 04 51.2	
ANMO	**Albuquerque**	**64.53**	**327**	*e*P	**P**	**01 04 17.2**	**-0.4**
ANMO				*e**PP	pP	01 04 28.5	-0.8
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ANMO				MLR	MLR		
	comp=Z,271nm,19.0s						
ANMO	**Albuquerque**	**64.53**	**327**	*e*P	**P**	**01 04 17.2**	**-0.4**
	comp=Z,4.0nm,0.7s,mb4.6						
ANMO				*e*pP	pP	01 04 28.5	-0.8
ANMO				LR	LR		
	comp=Z,271nm,19.0s,MS4.5						
ISCO	**Idaho Springs**	**67.94**	**331**	*e*P	**P**	**01 04 39.4**	**+0.2**
ISCO				*e**PP	pP	01 04 49.9	-1.1
ISCO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
ISCO	**Idaho Springs**	**67.94**	**331**	*e*P	**P**	**01 04 39.4**	**+0.2**
	comp=Z,8.4nm,0.8s,mb4.8						
ISCO				*e*pP	pP	01 04 49.9	-1.0
TAOE	**Nuku Hiva Isla**	**68.78**	**268**	*e*LQ		01 23 23.2	
	comp=Z,2µm,27.6s						
TAOE				*e*LR	LR	01 26 41.3	
	comp=Z,794nm,37.0s						
DBIC	**Dimbokro**	**68.87**	**74**	*e*P	**P**	**01 04 44.6**	**-0.8**
DBIC				pmax	pmax		
	comp=Z,33nm,0.9s						
DBIC	**Dimbokro**	**68.87**	**74**	P	**P**	**01 04 44.8**	**-0.5**
	comp=Z,24nm,0.8s,mb5.2,baz=216,slow=6.3,SNR=37						
DBIC	**Dimbokro**	**68.87**	**74**	*e*P	**P**	**01 04 44.6**	**-0.7**
	comp=Z,32nm,0.9s,mb5.3						
PHWY	**Pilot Hill**	**69.08**	**332**	P	**P**	**01 04 46.3**	**+0.1**
PHWY				*e*pP	pP	01 04 57.7	-0.3
EGOM	**La Gomera**	**69.44**	**48**	P	**P**	**01 04 48.3**	**-0.4**
	comp=Z,87nm,0.8s,mb5.7						
NEN	**Nelson**	**69.65**	**322**	*e*P	**P**	**01 04 50.3**	**+0.5**
NEN				*e*pP	pP	01 05 01.6	0.0
SRU	**San Rafael**	**69.80**	**327**	*e*P	**P**	**01 04 51.0**	**+0.3**
SRU				*e**PP	pP	01 05 02.3	-0.1
MSU	**Marysvale**	**70.22**	**326**	*e*P	**P**	**01 04 54.0**	**+0.8**
MSU				*e**PP	pP	01 05 05.3	+0.3
MVU	**Marysvale**	**70.23**	**326**	*e*P	**P**	**01 04 54.3**	**+1.0**
	comp=Z,22nm,0.8s,mb5.2						
MVU				*e*	pP	01 05 05.6	+0.5
TMUT	**Trail Mountain**	**70.29**	**327**	*e*pP	pP	01 05 05.7	+0.3
ARUT	**Antelope Range**	**70.37**	**324**	*e*P	**P**	**01 04 55.8**	**+1.6**
ARUT				*e*	pP	01 05 06.7	+0.8
QSPA	**South Pole Qui**	**70.60**	**180**	*e*P	**P**	**01 04 55.6**	**+0.7**
	comp=Z,17nm,1.1s,mb4.9						
QSPA				*e*P	pP	01 05 04.7	-2.0
RSSD	**Black Hills**	**70.78**	**334**	*e*P	**P**	**01 04 56.8**	**+0.3**
RSSD				*e*	pP	01 05 08.0	-0.3
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
RSSD	**Black Hills**	**70.78**	**334**	*e*P	**P**	**01 04 56.8**	**+0.3**
	comp=Z,6.6nm,0.8s,mb4.6						
RSSD				*e*	pP	01 05 08.0	-0.2
MPU	**Maple Canyon**	**71.04**	**327**	*e*pP	pP	01 05 09.9	0.0
DAU	**Daniels Canyon**	**71.15**	**328**	*e*P	**P**	**01 04 58.7**	**-0.1**
DAU				*e**PP	pP	01 05 11.8	+1.2
JLU	**Jordanelle**	**71.39**	**328**	*e*P	**P**	**01 05 00.9**	**+0.7**
JLU				*e*pP	pP	01 05 12.3	+0.3
CTU	**Camp Tracy**	**71.61**	**327**	*e*pP	pP	01 05 13.5	+0.2
DAC	**Darwin (Calif)**	**71.70**	**321**	*e*P	**P**	**01 04 59.7**	**-2.5**
DAC				*e*	pP	01 05 13.5	-0.4
DAC				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
DAC	**Darwin (Calif)**	**71.70**	**321**	*e*P	**P**	**01 04 59.6**	**-2.5**
	comp=Z,5.3nm,1.0s,mb4.4						
DAC				*e*	pP	01 05 13.5	-0.4
TCUT	**Toone Canyon**	**71.75**	**328**	*e*pP	pP	01 05 14.7	+0.6
TRCR	**Troy Canyon**	**71.96**	**324**	P	**P**	**01 05 03.7**	**0.0**
TRCR				*e*pP	pP	01 05 15.2	-0.2
PDAR	**Pinedale Array**	**72.11**	**330**	P	**P**	**01 05 03.8**	**-0.7**
	comp=Z,0.9nm,0.7s,mb3.8,baz=131,slow=7.0,SNR=7.3						
PDAR				pP	pP	01 05 15.6	-0.7
	comp=Z,3.2nm,0.7s,baz=135,slow=5.9,SNR=14						
HWUT	**Hardware Ranch**	**72.20**	**328**	*e*P	**P**	**01 05 04.7**	**-0.3**
	comp=Z,3.2nm,0.7s,mb4.4						
HWUT				*e*pP	pP	01 05 16.4	-0.4
SPUT	**South Promonto**	**72.42**	**328**	P	**P**	**01 05 07.7**	**+1.4**
SPUT				*e*pP	pP	01 05 18.7	+0.6
BGU	**Big Grassy Mou**	**72.43**	**327**	*e*P	**P**	**01 05 06.9**	**+0.5**
BGU				*e*pP	pP	01 05 18.1	-0.1
AHID	**Auburn Hatcher**	**72.84**	**329**	*e*pP	pP	01 05 20.5	-0.1
	comp=Z,8.6nm,0.7s						
REDW	**Red Top Meadow**	**73.18**	**330**	*e*P	**P**	**01 05 11.4**	**+0.6**
	comp=Z,7.0nm,0.8s,mb4.6						
REDW				*e*pP	pP	01 05 22.5	-0.1
LOHW	**Long Hollow**	**73.25**	**330**	P	**P**	**01 05 11.8**	**+0.5**
	comp=Z,4.6nm,0.8s,mb4.5						
LOHW				*e*pP	pP	01 05 22.9	-0.1
TPAW	**Teton Pass**	**73.32**	**330**	*e*pP	pP	01 05 23.7	+0.3
	comp=Z,5.8nm,0.7s						
RRI2	**Red Ridge**	**73.39**	**330**	*e*P	**P**	**01 05 13.0**	**+0.9**
	comp=Z,5.4nm,1.0s,mb4.4						
RRI2				*e*pP	pP	01 05 24.2	+0.4
OMM	**Old Mammoth Mi**	**73.42**	**321**	*e*P	**P**	**01 05 13.2**	**+0.8**
OMM				*e*pP	pP	01 05 24.8	+0.6
ELK	**Elko**	**73.46**	**326**	*e*P	**P**	**01 05 12.6**	**+0.1**
ELK				*e**PP	pP	01 05 24.2	-0.1
ELK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ELK				MLR	MLR		
	comp=Z,166nm,19.0s						
ELK	**Elko**	**73.46**	**326**	*e*P	**P**	**01 05 12.6**	**0.0**
	comp=Z,8.7nm,0.9s,mb4.7						
ELK				*e*pP	pP	01 05 24.2	-0.1
ELK				LR	LR		
	comp=Z,166nm,19.0s,MS4.3						
TBI	**Tubuai**	**73.47**	**251**	*e*PP	PP	01 08 16.3	+17
	comp=Z,118nm,35.0s						
TBI				*e*SS	SS	01 18 53.8	-30
	comp=Z,147nm,35.2s						
TBI				*e*LQ		01 25 17.9	
	comp=Z,70nm,48.8s						
TBI				*e*LR	LR	01 27 24.1	
	comp=Z,130nm,25.5s						
MNV	**Mina**	**73.48**	**322**	P	**P**	**01 05 12.3**	**-0.4**
MNV				*e**PP	pP	01 05 24.6	+0.1
MNV				pmax	pmax		

	comp=Z,8.0nm,0.9s,mb4.7						
MNV	**Mina**	**73.48**	**322**	P	**P**	**01 05 12.3**	**-0.4**
	comp=Z,8.1nm,0.9s,mb4.7						
MNV				*e*pP	pP	01 05 24.6	+0.1
NVAR	**Mina Array Bea**	**73.56**	**322**	P	**P**	**01 05 14.0**	**+0.8**
	comp=Z,1.9nm,0.8s,mb4.1,baz=133,slow=7.6,SNR=16						
NVAR				pP	pP	01 05 25.2	+0.2
	comp=Z,7.6nm,0.9s,baz=136,slow=7.8,SNR=20						
NVAR	**Mina Array Bea**	**73.56**	**322**	P	**P**	**01 05 14.0**	**+0.8**
NVAR				pP	pP	01 05 25.2	+0.2
LRV	**Little Rabbit**	**73.87**	**319**	*e*P	**P**	**01 05 16.5**	**+1.5**
LRV				*e*pP	pP	01 05 28.1	+1.3
SCHQ	**Schefferville**	**74.15**	**2**	P	**P**	**01 05 15.6**	**-0.7**
	comp=Z,9.6nm,0.7s,mb4.9,baz=181,slow=4.1,SNR=24						
SCHQ				pP	pP	01 05 28.2	+0.2
	comp=Z,11nm,0.7s,baz=214,slow=3.2,SNR=11						
SCHQ	**Schefferville**	**74.15**	**2**	P	**P**	**01 05 15.6**	**-0.7**
SCHQ				pP	pP	01 05 28.2	+0.2
DGMT	**Dagmar**	**74.44**	**337**	P	**P**	**01 05 17.9**	**-0.2**
DGMT				*e*pP	pP	01 05 29.8	-0.1
QLMT	**Earthquake Lak**	**74.56**	**331**	*e*P	**P**	**01 05 20.5**	**+1.6**
QLMT				*e*pP	pP	01 05 31.7	+1.1
HLID	**Hailey**	**75.06**	**328**	*e*P	**P**	**01 05 22.6**	**+0.9**
	comp=Z,16nm,0.9s,mb4.9						
HLID				*e*pP	pP	01 05 34.2	+0.7
PPT	**Papeete**	**75.10**	**256**	*e*PP	PP	01 07 55.0	-18
	comp=Z,60nm,24.8s						
PPT				*e*SS	tx	01 18 36.7	
	comp=Z,308nm,36.0s						
PPT				*e*LR	LR	01 28 18.4	
	comp=Z,171nm,25.5s						
PPT	**Papeete**	**75.10**	**256**	LR	LR	01 29 31.8	
	comp=Z,132nm,19.1s,MS4.2,baz=96,slow=29						
MCMT	**McKenzie Canyo**	**75.23**	**330**	*e*P	**P**	**01 05 23.9**	**+1.2**
MCMT				*e*pP	pP	01 05 34.9	+0.5
BOZ	**Bozeman (W)**	**75.27**	**331**	*e*P	**P**	**01 05 23.2**	**+0.3**
BOZ				*e**PP	pP	01 05 34.6	-0.1
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
BOZ				MLR	MLR		
	comp=Z,155nm,20.0s,MS4.3						
BOZ	**Bozeman (W)**	**75.27**	**331**	*e*P	**P**	**01 05 23.2**	**+0.3**
	comp=Z,5.9nm,0.8s,mb4.6						
BOZ				*e*pP	pP	01 05 34.6	-0.1
BOZ				LR	LR		
	comp=Z,155nm,20.0s,MS4.3						
BEKR	**Beckwourth**	**75.71**	**322**	*e*P	**P**	**01 05 26.2**	**+0.6**
	comp=Z,17nm,1.3s,mb4.8						
BEKR				*e*pP	pP	01 05 37.2	-0.2
HRY	**Holter Researc**	**76.17**	**332**	*e*pP	pP	01 05 39.7	-0.1
CHMT	**Chamberlain Mo**	**76.97**	**331**	*e*pP	pP	01 05 44.7	+0.4
MOD	**Modoc**	**77.02**	**324**	*e*P	**P**	**01 05 33.7**	**+0.8**
	comp=Z,7.6nm,0.8s,mb4.7						
MOD				*e*pP	pP	01 05 44.9	+0.2
MSO	**Missoula**	**77.22**	**331**	P	**P**	**01 05 34.4**	**+0.4**
	comp=Z,2.6nm,0.8s,mb4.2						
MSO				*e*pP	pP	01 05 45.8	0.0
BMO	**Blue Mountains**	**77.44**	**327**	*e*P	**P**	**01 05 35.4**	**+0.2**
	comp=Z,15nm,0.9s,mb4.9						
BMO				*e*pP	pP	01 05 47.0	0.0
YBH	**Yreka Blue Hor**	**78.28**	**322**	*e*P	**P**	**01 05 39.7**	**-0.2**
YBH				*e**PP	pP	01 05 50.8	-0.9
YBH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YBH	**Yreka Blue Hor**	**78.28**	**322**	*e*P	**P**	**01 05 39.7**	**-0.2**
	comp=Z,3.6nm,1.1s,mb4.2						
YBH				*e*pP	pP	01 05 50.8	-0.9
SYO	**Syowa Base**	**78.53**	**160**	⇓P	**P**	**01 05 39.6**	**-1.1**
VNDA	**Vanda**	**78.61**	**190**	P	**P**	**01 05 41.6**	**+0.5**
	comp=Z,2.2nm,0.8s,mb4.2,baz=127,slow=4.4,SNR=17						
VNDA				pP	pP	01 05 53.1	+0.3
	comp=Z,2.5nm,0.8s,baz=133,slow=4.8,SNR=8.3						
FFC	**Flin Flon**	**79.00**	**342**	*e*pP	pP	01 05 55.3	-0.1
	comp=Z,2.1nm,0.8s						
PTEO	**Sao Teotonio**	**80.67**	**45**	*e*P	**P**	**01 05 55.2**	**+2.3**
PLOU	**Loures**	**81.13**	**43**	*e*P	**P**	**01 05 57.2**	**+1.9**
	comp=Z,34nm,1.3s,mb5.1						
TSUM	**Tsumeb**	**81.25**	**107**	P	**P**	**01 05 57.5**	**+1.2**
	comp=Z,28nm,0.8s,mb5.3,baz=240,slow=5.2,SNR=48						
TSUM	**Tsumeb**	**81.25**	**107**	*e*P	**P**	**01 05 57.4**	**+1.1**
	comp=Z,27nm,0.8s,mb5.2						
PBEJ	**Beja**	**81.50**	**45**	*e*P	**P**	**01 05 58.0**	**+0.8**
	comp=Z,20nm,1.7s,mb4.8						
EVO	**Evora**	**81.68**	**44**	⇑*i*P	**P**	**01 05 58.5**	**+0.4**
	comp=Z,20nm,0.9s,mb4.7						
EVO				*e*R			
	comp=Z,64nm,21.0s						
EDM	**Edmonton**	**81.74**	**335**	*e*P	**P**	**01 05 57.5**	**-0.6**
EDM				*e**PP	pP	01 06 09.0	-1.1
PTOM	**Tomar**	**82.01**	**43**	*e*P	**P**	**01 06 00.7**	**+0.9**
	comp=Z,27nm,0.9s,mb5.2						
PTOM				*e*pP	pP	01 06 12.8	+1.0
EMIN	**Mina Concepcio**	**82.16**	**45**	P	**P**	**01 06 00.4**	**-0.2**
	comp=Z,18nm,0.9s,mb5.0						
ESPR	**Espera**	**82.24**	**47**	P	**P**	**01 06 01.2**	**+0.1**
	comp=Z,33nm,1.8s,mb5.0						
EBAD	**Badajoz**	**82.46**	**44**	P	**P**	**01 06 02.9**	**+0.8**
	comp=Z,16nm,1.3s,mb4.8						
PCBR	**Castelo Branco**	**82.74**	**43**	*e*P	**P**	**01 06 04.1**	**+0.6**
	comp=Z,15nm,1.2s,mb4.9						
EMIJ	**Mijas**	**82.83**	**47**	P	**P**	**01 06 04.7**	**+0.6**
	comp=Z,6.0nm,0.6s,mb4.8						
PVIS	**Viseu**	**82.95**	**42**	*e*P	**P**	**01 06 05.5**	**+0.9**
	comp=Z,18nm,1.2s,mb5.0						
MTE	**Manteigas**	**83.00**	**43**	*e*P	**P**	**01 06 05.7**	**+0.9**
	comp=Z,19nm,1.3s,mb5.0						
MTE				*e*pP	pP	01 06 17.9	+1.1
PVRL	**Vila Real**	**83.36**	**42**	*e*P	**P**	**01 06 07.5**	**+0.8**
	comp=Z,13nm,1.0s,mb4.9						
PVRL				*e*pP	pP	01 06 19.3	+0.6
ELOB	**Lobios**	**83.47**	**41**	P	**P**	**01 06 06.6**	**-0.7**
	comp=Z,35nm,1.4s,mb5.2						
ELOJ	**Sierra Loja**	**83.56**	**47**	P	**P**	**01 06 07.5**	**-0.3**
ELOJ				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0						
ELOJ	**Sierra Loja**	**83.56**	**47**	P	**P**	**01 06 07.5**	**-0.3**
	comp=Z,8.1nm,0.7s,mb5.0						
ERON	**Agron**	**83.73**	**47**	P	**P**	**01 06 09.9**	**+1.2**
	comp=Z,2.4nm,0.3s,mb4.8						
EBER	**Berja**	**84.31**	**48**	P	**P**	**01 06 11.1**	**-0.5**
	comp=Z,18nm,0.9s,mb5.2						
EBAN	**Banos Encina**	**84.32**	**46**	P	**P**	**01 06 12.2**	**+0.6**
EBAN				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1						
EBAN	**Banos Encina**	**84.32**	**46**	P	**P**	**01 06 12.2**	**+0.6**
	comp=Z,12nm,0.8s,mb5.1						
ECAL	**Calabor**	**84.34**	**42**	P	**P**	**01 06 12.0**	**+0.3**
	comp=Z,27nm,1.3s,mb5.2						
EQES	**Quesada**	**84.63**	**47**	P	**P**	**01 06 13.1**	**-0.1**
	comp=Z,13nm,0.9s,mb5.0						
ENIJ	**Nijar**	**84.82**	**48**	P	**P**	**01 06 13.8**	**-0.4**
ENIJ				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.2						
ENIJ	**Nijar**	**84.82**	**48**	P	**P**	**01 06 13.8**	**-0.4**
	comp=Z,17nm,0.8s,mb5.2						
EPON	**Pontenova**	**84.83**	**41**	P	**P**	**01 06 15.0**	**+0.9**
	comp=Z,50nm,1.3s,mb5.5						
BOSA	**Boshof**	**84.96**	**118**	*e*P	**P**	**01 06 15.5**	**+0.5**
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.8						
BOSA	**Boshof**	**84.96**	**118**	P	**P**	**01 06 16.0**	**+1.0**
	comp=Z,13nm,0.9s,mb5.0,baz=262,slow=6.2,SNR=27						
BOSA	**Boshof**	**84.96**	**118**	*e*P	**P**	**01 06 15.5**	**+0.4**
	comp=Z,3.9nm,0.5s,mb4.8						
ESDC	**Sonseca Array**	**84.96**	**45**	P	**P**	**01 06 16.1**	**+1.3**
	comp=Z,4.2nm,0.8s,mb4.6,baz=246,slow=5.1,SNR=26						
ESDC	**Sonseca Array**	**84.96**	**45**	P	**P**	**01 06 15.4**	**+0.6**
	comp=Z,11nm,1.2s,mb4.9						
ESLA	**Sonseca Array**	**84.96**	**45**	*e*P	**P**	**01 06 15.2**	**+0.4**
	comp=Z,2.5nm,1.2s,mb4.2						
EHUE	**Huescar**	**84.96**	**47**	P	**P**	**01 06 14.9**	**0.0**
EHUE				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.6						
EHUE	**Huescar**	**84.96**	**47**	P	**P**	**01 06 14.9**	**+0.1**
	comp=Z,5.1nm,1.0s,mb4.6						
EVIA	**Vianos**	**85.43**	**46**	P	**P**	**01 06 16.6**	**-0.5**
EVIA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
EVIA	**Vianos**	**85.43**	**46**	P	**P**	**01 06 16.6**	**-0.6**
	comp=Z,9.0nm,0.8s,mb5.0						
EARI	**Arriondas**	**86.02**	**41**	P	**P**	**01 06 18.8**	**-1.1**
	comp=Z,53nm,1.9s,mb5.4						
MAW	**Mawson**	**86.36**	**164**	P	**P**	**01 06 21.4**	**+0.4**
	comp=Z,3.4nm,0.8s,mb4.6,baz=202,slow=4.0,SNR=6.1						
MAW				LR	LR	01 44 02.6	
	comp=Z,305nm,20.1s,MS4.7,baz=351,slow=35						
LBTB	**Lobatse**	**86.45**	**115**	P	**P**	**01 06 23.4**	**+1.0**
	comp=Z,10nm,0.6s,mb5.2,baz=272,slow=6.6,SNR=30						
LBTB	**Lobatse**	**86.45**	**115**	P	**P**	**01 06 23.4**	**+1.0**
ELAN	**Lanestosa**	**87.10**	**42**	P	**P**	**01 06 24.5**	**-0.7**
	comp=Z,59nm,2.0s,mb5.5						
BBB	**Bella Bella**	**87.64**	**328**	LR	LR	01 50 03.0	
	comp=Z,67nm,19.1s,MS4.1,baz=165,slow=39						
SJPF	**Ste Jean**	**88.44**	**43**	*e*P	**P**	**01 06 32.1**	**+0.5**
	comp=Z,13nm,1.0s,mb4.8						
SJPF	**Ste Jean**	**88.44**	**43**	*e*P	**P**	**01 06 32.1**	**+0.5**
SJPF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
ETSF	**Etsaut**	**88.77**	**43**	*e*P	**P**	**01 06 33.4**	**+0.2**
	comp=Z,4.2nm,0.7s,mb4.6						
ETSF	**Etsaut**	**88.77**	**43**	*e*P	**P**	**01 06 33.4**	**+0.2**
ETSF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.6						
EGRA	**Graus**	**89.01**	**44**	P	**P**	**01 06 35.0**	**+0.6**
	comp=Z,3.3nm,0.8s,mb4.7						
YKA	**Yellowknife Ar**	**89.16**	**341**	P	**P**	**01 06 34.7**	**+0.1**
	comp=Z,7.2nm,0.8s,mb5.0,baz=135,slow=4.8,SNR=68						
YKA				pP	pP	01 06 46.7	0.0
	comp=Z,8.8nm,0.8s,baz=135,slow=4.8,SNR=19						
YKA	**Yellowknife Ar**	**89.16**	**341**	P	**P**	**01 06 34.7**	**+0.1**
YKA				pP	pP	01 06 46.7	0.0
YKW3	**Yellowknife Ar**	**89.21**	**341**	*e*P	**P**	**01 06 34.8**	**0.0**
YKW3				*e*pP	pP	01 06 45.8	-1.2
EPF	**Esparros**	**89.42**	**44**	*e*P	**P**	**01 06 35.6**	**-0.7**
	comp=Z,4.1nm,0.7s,mb4.6						
EPF	**Esparros**	**89.42**	**44**	*e*P	**P**	**01 06 35.6**	**-0.7**
EPF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.6						
QUIF	**Quistinic**	**89.62**	**38**	*e*P	**P**	**01 06 36.1**	**-1.0**
ROSF	**Rostrenen**	**89.77**	**38**	*e*P	**P**	**01 06 36.9**	**-0.9**
	comp=Z,29nm,1.0s,mb5.3						
ROSF	**Rostrenen**	**89.77**	**38**	*e*P	**P**	**01 06 36.9**	**-0.9**
ROSF				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.3						
SGMF	**Saint Gilles**	**90.14**	**38**	*e*P	**P**	**01 06 38.9**	**-0.6**
	comp=Z,62nm,1.3s,mb5.5						
SGMF	**Saint Gilles**	**90.14**	**38**	*e*P	**P**	**01 06 38.9**	**-0.6**
SGMF				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.5						
LFF	**La Frestale**	**90.55**	**42**	*e*P	**P**	**01 06 41.2**	**-0.4**
	comp=Z,19nm,0.8s,mb5.2						
LFF	**La Frestale**	**90.55**	**42**	*e*P	**P**	**01 06 41.2**	**-0.4**
LFF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.2						
MATP	**Matopo**	**90.55**	**112**	P	**P**	**01 06 43.5**	**+1.4**
	comp=Z,8.9nm,0.5s,mb5.3,baz=250,slow=4.4,SNR=65						
MATP				pP	pP	01 06 55.0	+0.8
	comp=Z,3.7nm,0.6s,baz=258,slow=6.0,SNR=6.1						
MATP				PP	PP	01 10 15.1	-4.5
	comp=Z,1.6nm,1.0s,baz=261,slow=12,SNR=4.1						
MFF	**Saint Martin d**	**90.78**	**40**	*e*P	**P**	**01 06 42.1**	**-0.5**
MTLF	**Montolieu**	**90.78**	**44**	*e*P	**P**	**01 06 42.0**	**-0.7**
	comp=Z,13nm,1.1s,mb4.9						
MTLF	**Montolieu**	**90.78**	**44**	*e*P	**P**	**01 06 42.0**	**-0.7**
MTLF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.8						
GRR	**Gorron**	**91.20**	**38**	*e*P	**P**	**01 06 43.5**	**-1.0**
	comp=Z,29nm,1.1s,mb5.2						
GRR	**Gorron**	**91.20**	**38**	*e*P	**P**	**01 06 43.5**	**-1.0**
GRR				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.2						
RJF	**Les Rejaudoux**	**91.21**	**42**	*e*P	**P**	**01 06 44.1**	**-0.5**
	comp=Z,21nm,1.2s,mb5.0						
RJF	**Les Rejaudoux**	**91.21**	**42**	*e*P	**P**	**01 06 44.1**	**-0.5**
RJF				pmax	pmax		
	comp=Z,11nm,1.2s,mb5.1						
CAF	**Calviac**	**91.39**	**42**	*e*P	**P**	**01 06 45.0**	**-0.4**
	comp=Z,11nm,1.0s,mb4.8						
CAF	**Calviac**	**91.39**	**42**	*e*P	**P**	**01 06 45.0**	**-0.4**
CAF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.8						
LDF	**La Druitiere**	**91.72**	**38**	*e*P	**P**	**01 06 45.9**	**-1.0**
	comp=Z,26nm,1.2s,mb5.1						
LDF	**La Druitiere**	**91.72**	**38**	*e*P	**P**	**01 06 45.9**	**-1.0**
LDF				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.1						
TCF	**Toulx Ste Croi**	**92.08**	**41**	*e*P	**P**	**01 06 48.0**	**-0.6**
LSZ	**Lusaka**	**92.11**	**107**	P	**P**	**01 06 50.9**	**+1.5**
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
LSZ	**Lusaka**	**92.11**	**107**	P	**P**	**01 06 50.9**	**+1.5**
	comp=Z,3.0nm,0.9s,mb4.6						
LASF	**Ste Croix**	**92.17**	**44**	*e*P	**P**	**01 06 48.1**	**-1.0**
	comp=Z,20nm,1.4s,mb5.0						
DLBC	**Dease Lake**	**92.19**	**333**	LR	LR	01 49 24.2	
	comp=Z,50nm,19.4s,MS4.0,baz=202,slow=36						
BGF	**Bois d'Agland**	**92.60**	**41**	*e*P	**P**	**01 06 50.3**	**-0.7**
VIVF	**Saint-Julien-l**	**93.03**	**43**	*e*P	**P**	**01 06 51.7**	**-1.3**
SMF	**Signal de Mont**	**93.25**	**41**	*e*P	**P**	**01 06 53.3**	**-0.7**
	comp=Z,24nm,1.3s,mb5.1						
SMF	**Signal de Mont**	**93.25**	**41**	*e*P	**P**	**01 06 53.3**	**-0.7**
SMF				pmax	pmax		
	comp=Z,12nm,1.3s,mb5.2						
SMRF	**Simiane la Rot**	**93.26**	**44**	*e*P	**P**	**01 06 54.4**	**+0.4**
LMR	**La Mourre**	**93.62**	**45**	*e*P	**P**	**01 06 54.7**	**-1.0**
	comp=Z,12nm,1.1s,mb5.0						
LMR	**La Mourre**	**93.62**	**45**	*e*P	**P**	**01 06 54.7**	**-1.0**
LMR				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.9						
FRF	**La Foret Royal**	**93.80**	**45**	*e*P	**P**	**01 06 56.0**	**-0.5**
ORIF	**Oris-en-Rattie**	**93.84**	**44**	*e*P	**P**	**01 06 56.5**	**-0.1**
SUMG	**Summit**	**94.28**	**9**	*e*P	**P**	**01 06 59.6**	**+1.6**
	comp=Z,6.6nm,0.8s,mb5.1						
MBDF	**Montbardon**	**94.34**	**44**	*e*P	**P**	**01 06 58.6**	**-0.3**
SBF	**Sospel**	**94.44**	**45**	*e*P	**P**	**01 06 59.0**	**-0.4**
	comp=Z,5.4nm,0.8s,mb4.7						
SBF	**Sospel**	**94.44**	**45**	*e*P	**P**	**01 06 59.0**	**-0.4**
SBF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
LPL	**La Plagne**	**94.63**	**43**	*e*P	**P**	**01 07 00.1**	**-0.1**
LPG	**La Plagne**	**94.63**	**43**	*e*P	**P**	**01 07 00.2**	**0.0**
MEZF	**Maizieres J'vi**	**94.77**	**40**	*e*P	**P**	**01 07 00.1**	**-0.7**
BAIF	**Baives**	**94.91**	**38**	*e*P	**P**	**01 07 01.4**	**0.0**
	comp=Z,64nm,1.6s,mb5.5						
BAIF	**Baives**	**94.91**	**38**	*e*P	**P**	**01 07 01.4**	**0.0**
BAIF				pmax	pmax		
	comp=Z,32nm,1.6s,mb5.5						
URZ	**Urewera**	**95.02**	**227**	LR	LR	01 43 11.8	
	comp=Z,150nm,18.1s,MS4.5,baz=258,slow=31						
CDF	**Champ du Feu**	**96.10**	**41**	*e*P	**P**	**01 07 06.2**	**-0.6**
	comp=Z,12nm,1.1s,mb4.9						
CDF	**Champ du Feu**	**96.10**	**41**	*e*P	**P**	**01 07 06.2**	**-0.6**
CDF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.9						
INK	**Inuvik**	**98.91**	**340**	LR	LR	01 51 14.5	
	comp=Z,37nm,21.2s,MS3.9,baz=136,slow=35						
ILAR	**Eielson Array**	**102.22**	**335**	PP	PP	01 11 51.0	+2.1
	comp=Z,0.3nm,0.8s,baz=108,slow=5.7,SNR=3.4						
KAF	**Kangasniemi**	**109.87**	**30**	*e*p	PP	01 12 38.6	-7.7
KEV	**Kevo**	**110.50**	**22**	*e*p	PKPdf	01 12 35.7	+26
BRTR	**Keskin Array B**	**112.28**	**54**	PKiKP		01 12 15.6	
	comp=Z,0.9nm,0.8s,baz=183,slow=2.5,SNR=6.8						
BRTR				PP	PP	01 13 05.5	+1.5
	comp=Z,1.3nm,1.0s,baz=259,slow=6.3,SNR=5.1						
STKA	**Stephens Creek**	**120.72**	**211**	PKP	PKPdf	01 12 31.4	+0.8
	comp=Z,2.3nm,0.9s,baz=56,slow=4.7,SNR=4.1						
ARU	**Arti**	**126.94**	**33**	*e*PKIKP	PKPdf	01 12 43.8	+1.8
NWAO	**Narrogin (SRO)**	**127.38**	**187**	PKP	PKPdf	01 12 44.0	+0.5
	comp=Z,6.1nm,0.7s,baz=167,slow=5.1,SNR=4.8						
NWAO	**Narrogin (SRO)**	**127.38**	**187**	PKP	PKPdf	01 12 44.0	+0.5
AB31	**Akbulak array**	**130.19**	**41**	PKIKP	PKPdf	01 12 50.5	+2.1
AB31				pmax	pmax		
	comp=Z,11nm,0.9s						
ZRNK	**Zerenda**	**133.91**	**34**	*e*PKIKP	PKPdf	01 12 57.4	+2.1
ZRNK				*e*		01 13 09.4	
WRA	**Warramunga Arr**	**134.23**	**212**	PKP	PKPdf	01 12 57.5	+0.7
	comp=Z,3.2nm,0.7s,baz=161,slow=1.6,SNR=9.1						
BVA0	**Borovoye Array**	**134.59**	**33**	PKIKP	PKPdf	01 12 58.4	+1.9
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.6s						
BVAR	**Borovoye Array**	**134.59**	**33**	PKP	PKPdf	01 12 58.6	+2.0
	comp=Z,2.7nm,0.7s,baz=265,slow=2.5,SNR=19						
BVAR				PP	PP	01 15 28.2	-5.6
	comp=Z,1.1nm,0.8s,baz=270,slow=1.5,SNR=5.4						
VOSK	**Vostochnaya**	**135.05**	**33**	PKIKP	PKPdf	01 12 59.5	+2.1
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NVS	**Novosibirsk**	**139.22**	**24**	⇑*i*PKIKP	PKPdf	01 13 06.6	+1.7
NVS				*i*		01 13 19.2	
NVS				pmax	pmax		
	comp=Z,11nm,1.3s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.1s						
KSH	**Kashi**	**144.39**	**49**	*e*PKP	PKPdf	01 13 14.8	+0.4
KSH				*e*PKS	PKS	01 16 46.8	-2.3
KSH				*e*SKS	SKS	01 20 20.0	+2.1
KSH				PP	PP		
	comp=Z,250nm,5.5s						
MKAR	**Makanchi Array**	**144.46**	**34**	PKP	PKPdf	01 13 14.9	+0.6
	comp=Z,6.9nm,0.6s,baz=321,slow=3.5,SNR=58						
MKAR				pPKP		01 13 27.4	
	comp=Z,2.0nm,0.5s,baz=333,slow=2.7,SNR=7.7						
KLR	**Kul'dur**	**145.80**	**335**	*e*PKIKP	PKPdf	01 13 15.6	-1.0
MOY	**Mondy**	**147.14**	**11**	*e*PKP2	PKPab	01 13 24.0	-0.7
MOY				pmax	pmax		
	comp=Z,37nm,1.6s						
CIT	**Chita**	**147.53**	**356**	*e*PKP2	PKPab	01 13 24.3	-1.9
TLY	**Talaya**	**147.53**	**8**	*e*PKP2	PKPab	01 13 24.1	-2.1
KUDL	**Kundal**	**147.96**	**68**	*e*P	PKPdf	01 13 23.2	+2.4
KUDL				AMb	AMB	01 13 27.2	
	comp=Z,44nm,0.9s						
SONA	**Sohna**	**148.46**	**68**	*e*P	PKPdf	01 13 24.1	+2.5
AYAN	**Aya Nagar**	**148.47**	**67**	*e*P	PKPdf	01 13 24.0	+2.4
AYAN				AMb	AMB	01 13 28.2	
	comp=Z,3.0nm,1.5s						
NDI	**New Delhi**	**148.51**	**67**	*e*P	PKPdf	01 13 23.0	+1.3
ZAK	**Zakamensk**	**148.75**	**9**	*e*PKIKP	PKPdf	01 13 24.6	+3.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
DDI	**Dehra Dun**	**148.92**	**64**	*e*x	PKPdf	01 13 29.0	+6.7
BHPL	**Bhopal**	**149.16**	**77**	*e*P	PKPdf	01 13 25.5	+2.6
BHPL				AMb	AMB	01 13 29.6	
	comp=Z,27nm,0.9s						
WMQ	**Urumqi**	**149.28**	**33**	*e*PKP	PKPdf	01 13 24.0	+1.6
AGRA	**Agra**	**149.36**	**69**	*e*P	PKPdf	01 13 22.0	-1.1
AGRA				AMb	AMB	01 13 22.7	
	comp=Z,88nm,0.3s						
HYB	**Hyderabad**	**149.78**	**89**	⇑*e*PKP2	PKPab	01 13 30.5	-5.9
HYB	**Hyderabad**	**149.78**	**89**	⇑*i*PKP	PKPdf	01 13 37.0	+13
MJAR	**Matsushiro Arr**	**150.33**	**311**	PKPbc	PKPdf	01 13 30.8	+6.4
	comp=Z,8.0nm,0.7s,baz=112,slow=1.3,SNR=17						
MJAR				pPKPbc		01 13 43.6	
	comp=Z,12nm,0.7s,baz=96,slow=1.5,SNR=14						
MAJO	**Matsushiro**	**150.33**	**311**	*e*PKIKP	PKPdf	01 13 31.3	+7.0
MAT	**Matsushiro**	**150.33**	**311**	*e*PKIKP	PKPdf	01 13 31.0	+6.7
MAT	**Matsushiro**	**150.33**	**311**	PKP	PKPdf	01 13 31.2	+6.9
MDJ	**Mudanjiang**	**150.34**	**332**	PKP	PKPdf	01 13 30.3	+6.2
SONM	**Songino Array**	**151.63**	**6**	PKP	PKPdf	01 13 28.5	+2.6
	comp=Z,1.8nm,0.8s,baz=302,slow=1.3,SNR=15						
SONM				PKPbc	PKPdf	01 13 34.7	+8.8
	comp=Z,14nm,0.8s,baz=311,slow=1.4,SNR=66						
SONM				pPKPbc		01 13 46.3	
	comp=Z,6.2nm,0.6s,baz=332,slow=1.4,SNR=9.9						
ULN	**Ulaanbaatar**	**151.66**	**5**	*e*PKIKP	PKPdf	01 13 28.4	+2.5
ULN				*e*		01 13 34.3	
CN2	**Changchun**	**152.74**	**336**	*e*PKP	PKPdf	01 13 29.0	+1.4
GTA	**Gaotai**	**158.24**	**22**	*e*PKP	PKPdf	01 13 37.8	+2.7
GTA				APKP		01 13 50.5	
GTA				XPKP		01 13 53.5	
GTA				PKP2	PKPab	01 14 08.3	-3.3
GTA				SKS	SKS	01 20 39.5	+4.7
GTA				PP	PP		
	comp=Z,40nm,8.8s						
GTA				LR	LR		
	comp=N,70nm,20.2s,MS4.7						
GTA				LR	LR		
	comp=E,100nm,22.9s,MS4.7						
GTA				LR	LR		
	comp=Z,80nm,20.6s,MS4.5						
LZH	**Lanzhou**	**162.59**	**18**	*e*PKP	PKPdf	01 13 40.5	+0.7
LZH				XPKP		01 13 56.0	
SSE	**Sheshan**	**164.94**	**322**	*e*PKP	PKPdf	01 13 43.3	+1.0
SSE				LR	LR		
	comp=N,30nm,23.9s						
SSE				LR	LR		
	comp=E,10.0nm,23.9s						
SSE				LR	LR		
	comp=Z,30nm,22.6s						
NJ2	**Nanjing**	**165.42**	**330**	*e*PKP	PKPdf	01 13 44.0	+1.3
NJ2				APKP		01 13 54.8	
NJ2				XPKP		01 13 58.3	
NJ2				PP	PP	01 18 32.0	+0.9
NJ2				SKS	SKS	01 20 42.0	+1.1
NJ2				SKKS		01 25 14.0	
NJ2				SS	SS	01 39 03.0	+1.3
NJ2				PP	PP		
	comp=Z,130nm,7.4s						
NJ2				LR	LR		
	comp=N,320nm,30.8s						
NJ2				LR	LR		
	comp=E,160nm,30.7s						
NJ2				LR	LR		
	comp=Z,110nm,27.0s						
KMI	**Kunming**	**171.05**	**51**	PKP	PKPdf	01 13 47.0	+0.4
KMI				LR	LR		
	comp=Z,60nm,27.6s						
GYA	**Guiyang**	**172.36**	**26**	*e*PKP	PKPdf	01 13 49.5	+2.2
GYA				XPKP		01 14 04.3	
GYA				PP	PP		
	comp=Z,100nm,7.3s						

IDC 27 01:00:08.6±2.3**, 1.80S**×**99.75E, mb3.7**/5**, mb1 3.8**/5**, mb1mx3.6**/16**, mbtmp3.7**/5**, Error ellipse: s-maj=107.5km s-min=30.3km az=51.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.31**	**121**	P	P	01 07 31.0	-1.9
	0.4nm,0.4s,baz=303,slow=9.1,SNR=2.4						
SONM	**Songino Array**	**49.77**	**6**	P	P	01 09 03.7	-1.2
	0.2nm,0.4s,baz=187,slow=9.5,SNR=2.9						
MKAR	**Makanchi Array**	**50.77**	**345**	P	P	01 09 10.8	-1.7
	1.0nm,0.5s,baz=159,slow=8.8,SNR=15						
BVAR	**Borovoye Array**	**59.92**	**340**	P	P	01 10 15.4	-3.3
	0.5nm,0.5s,baz=130,slow=12,SNR=4.7						
FINES	**FINESS Array B**	**83.82**	**332**	P	P	01 12 39.6	-1.4
	1.2nm,0.6s,baz=108,slow=6.0,SNR=8.7						
TXAR	**Lajitas Array**	**144.70**	**37**	PKP	PKPdf	01 19 47.8	-2.0
	0.4nm,0.4s,baz=244,slow=0.7,SNR=7.4						

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*IDC **27** 01:31:22.8±5.2, 12.08S×167.08E, h246^{km}±51^{km}, mb3.7/10, mb1 3.9/11, mb1mx3.7/18, mbtmp4.2/11, Error ellipse: s-maj=30.1km s-min=20.7km az=167.0*

*NEIC **27** 01:31:25.9±2.5, 12.20S×167.13E, h283^{km}±24^{km}, mb4.0/4, Error ellipse: s-maj=20.6km s-min=12.9km az=156.0*

ISC 27 01:31:23.7±3.0**, 12.2S**±0.1×**167.1E**±0.1**, h267**^{km}±29^{km}**, n37, **σ**0**^{s}**67**/20**, mb4.0**/13**, 2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.84**	**183**	P	**P**	**01 33 41.0**	**-0.1**
	0.2nm,0.3s,baz=24,slow=18,SNR=2.9						
CTA	**Charters Tower**	**21.48**	**246**	P	**P**	**01 35 52.7**	**+0.6**
	3.7nm,0.7s,mb3.8,baz=93,slow=5.4,SNR=4.1						
CTA	**Charters Tower**	**21.48**	**246**	P	**P**	**01 35 52.7**	**+0.6**
CTAO	**Charters Tower**	**21.48**	**246**	*e*P	**P**	**01 35 54.0**	**+2.0**
	2.9nm,0.6s,mb3.8						
STKA	**Stephens Creek**	**30.56**	**226**	P	**P**	**01 37 15.1**	**+0.2**
	2.1nm,0.7s,mb3.8,baz=27,slow=8.5,SNR=6.3						
STKA	**Stephens Creek**	**30.56**	**226**	*e*P	**P**	**01 37 15.0**	**+0.2**
RPZ	**Rata Peaks**	**31.60**	**175**	P	**P**	**01 37 23.5**	**-0.2**
	4.4nm,0.4s,mb4.4,baz=49,slow=17,SNR=6.5						
WRA	**Warramunga Arr**	**32.35**	**252**	P	**P**	**01 37 29.1**	**-1.4**
	1.2nm,0.6s,mb3.6,baz=85,slow=9.0,SNR=5.0						
FORT	**Forrest**	**40.49**	**237**	⇑*i*P	**P**	**01 38 38.6**	**+0.2**
	7.7nm,0.5s,mb4.3						
CASY	**Casey**	**65.80**	**202**	*e*P	**P**	**01 41 41.3**	**-0.5**
SONM	**Songino Array**	**80.36**	**323**	P	**P**	**01 43 07.0**	**+0.3**
	0.4nm,0.7s,mb3.3,baz=153,slow=5.5,SNR=4.5						
YBH	**Yreka Blue Hor**	**83.76**	**45**	P	**P**	**01 43 24.7**	**+0.4**
	3.4nm,0.9s,mb4.2,baz=229,slow=2.5,SNR=11						
ILAR	**Eielson Array**	**84.18**	**18**	P	**P**	**01 43 24.9**	**-0.9**
	6.1nm,0.6s,mb4.6,baz=249,slow=5.2,SNR=94						
NVAR	**Mina Array Bea**	**85.76**	**49**	P	**P**	**01 43 34.8**	**+0.5**
	1.3nm,0.8s,mb3.8,baz=235,slow=11,SNR=7.9						
ELK	**Elko**	**88.73**	**48**	*e*P	**P**	**01 43 48.8**	**+0.4**
	1.9nm,0.8s,mb4.0						
HLID	**Hailey**	**90.14**	**45**	*e*P	**P**	**01 43 55.3**	**+0.4**
	1.3nm,0.8s,mb3.8						
MKAR	**Makanchi Array**	**95.25**	**317**	P	**P**	**01 44 18.7**	**+0.4**
	0.8nm,0.5s,mb4.1,baz=85,slow=6.2,SNR=10						
YKA	**Yellowknife Ar**	**95.38**	**27**	P	**P**	**01 44 17.2**	**-1.3**
	0.6nm,0.6s,mb3.9,baz=253,slow=5.5,SNR=5.2						
VNA3	**Neumayer Olymp**	**96.73**	**181**	⇑*i*	**P**	**01 44 24.9**	**+0.4**

VNA1	**Neumayer--Stat**	97.30	182		P	01 44 32.6	+5.5
ARCES	**ARCESS Array B**	117.77	346	PKP	PKPdf	01 49 37.9	+0.2
	1.3nm,0.6s,baz=80,slow=2.1,SNR=8.6						
ARCES	**ARCESS Array B**	117.77	346	PKP	PKPdf	01 49 37.9	+0.2
FINES	**FINESS Array B**	123.31	339	PKP	PKPdf	01 49 49.2	+0.5
	0.9nm,0.6s,baz=225,slow=2.7,SNR=4.9						
BAIF	**Baives**	139.70	343	*e*PKP1	PKPdf	01 50 19.3	-0.4
	9.4nm,0.9s						
HAU	**Haudompre**	140.83	339	*e*PKP1	PKPdf	01 50 22.4	+0.6
MBDF	**Montbardon**	143.46	336	*e*PKP1	PKPbc	01 50 26.0	+0.8
ORIF	**Oris-en-Rattie**	143.64	337	*e*PKP1	PKPbc	01 50 26.4	+0.7
	5.4nm,0.8s						
TCF	**Toulx Ste Croi**	143.68	342	*e*PKP1	PKPbc	01 50 26.4	+0.6
	6.4nm,1.0s						
SBF	**Sospel**	143.90	335	*e*PKP1	PKPbc	01 50 26.7	+0.2
	11nm,0.8s						
MFF	**Saint Martin d**	144.04	345	*e*PKP1	PKPbc	01 50 27.2	+0.3
	6.6nm,0.9s						
VIVF	**Saint-Julien-l**	144.14	338	*e*PKP1	PKPbc	01 50 28.0	+0.8
PGF	**Pioggiola**	144.26	332	*e*PKP1	PKPbc	01 50 28.2	+0.6
	7.6nm,0.7s						
FRF	**La Foret Royal**	144.47	335	*e*PKP1	PKPbc	01 50 28.6	+0.4
	7.4nm,0.9s						
SMRF	**Simiane la Rot**	144.55	337	*e*PKP1	PKPbc	01 50 28.5	+0.1
	4.6nm,0.9s						
LMR	**La Mourre**	144.72	335	*e*PKP1	PKPbc	01 50 29.6	+0.7
	13nm,1.1s						
LASF	**Ste Croix**	145.10	339	*e*PKP1	PKPbc	01 50 28.0	-1.9
ESDC	**Sonseca Array**	151.50	345	PKPbc	PKPdf	01 50 47.8	+8.2
	0.2nm,0.5s,baz=7.2,slow=5.1,SNR=4.6						
ESDC				PKPab	PKPab	01 50 57.2	-0.8
	0.1nm,0.3s,baz=9.7,slow=3.8,SNR=5.7						

GUC 27 01:50:26.1±0.5**,31.35S**×**71.65W,h28**^{km}±9^{km}**,MD3.8, ML2.4,2C,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILCH	**Illapel**	0.50	125	⇑*i*P	Pb	01 50 36.3	-0.1
ILCH				*i* S	Sb	01 50 44.0	+0.6
ILCH				AMP		01 50 47.8	
	comp=N,328nm,0.3s						
ILCH				AMP		01 50 47.8	
	comp=E,296nm,0.2s						
CMCH	**Combarbala**	0.58	73	⇑*i*P	Pb	01 50 37.7	+0.1
CMCH				*i* S	Sb	01 50 46.1	+0.4
CMCH				AMP		01 50 50.4	
	comp=N,815nm,0.4s						
CMCH				AMP		01 50 53.0	
	comp=E,620nm,0.4s						
JACH	**Jahuel**	1.60	146	*e*P	Pn	01 50 53.4	+0.3
JACH				*i* S	Sn	01 51 14.8	+1.8
FCH	**Farellones**	2.28	150	*e*P	Pn	01 51 04.0	+1.2
FCH				*i* S	Sn	01 51 34.1	+3.8

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*IDC **27** 02:00:11.2±1.6,5.54N×94.34E,mb4.0/6,mb1 4.2/6, mb1mx3.9/17,mbtmp4.0/6,MS2.7/1,Ms1 2.9/1, ms1mx2.7/20,Error ellipse: s-maj=61.2km s-min=27.3km az=51.0*

*NEIC **27** 02:00:15.4±0.9,5.46N×94.19E,h30^{km},mb4.3/2,Error ellipse: s-maj=28.9km s-min=11.7km az=218.0*

ISC 27 02:00:13.7±1.1**,5.5N**±0.2×**94.2E**±0.2**,h30**^{km}**,n10,** σ**0**$\overset{s}{.}$**64**/10**,mb4.0**/8**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	6.40	91	*e*P	Pn	02 01 48.9	+0.5
CMAR	**Chiang Mai Arr**	13.71	19	Pn	P	02 03 33.5	+4.8
	0.5nm,0.3s,baz=201,slow=14,SNR=12						
CMAR				LR	LR	02 09 58.1	
	comp=Z,29nm,18.1s,baz=130,slow=43						
MKAR	**Makanchi Array**	42.45	348	P	P	02 08 08.0	+0.3
	3.2nm,0.5s,mb4.2,baz=168,slow=8.4,SNR=8.2						
SONM	**Songino Array**	43.49	12	P	P	02 08 15.5	-0.5
	1.6nm,0.9s,mb3.8,baz=201,slow=6.8,SNR=10						
WRA	**Warramunga Arr**	46.83	124	P	P	02 08 43.0	-0.1
	1.6nm,0.5s,mb4.2,baz=302,slow=9.5,SNR=8.5						
WRAB	**Tennant Creek**	46.83	124	*e*P	P	02 08 42.7	-0.4
	3.0nm,0.5s,mb4.5						
ZRNK	**Zerenda**	51.67	341	*e*P	P	02 09 19.2	-0.8
	0.8nm,0.4s,mb4.0						
FINES	**FINESS Array B**	74.87	332	P	P	02 11 53.0	-0.2
	1.2nm,0.9s,mb3.8,baz=112,slow=10,SNR=7.3						
GERES	**GERESS Array B**	79.68	319	P	P	02 12 21.4	+1.3
	0.9nm,0.7s,mb3.8,baz=63,slow=3.0,SNR=8.7						
ILAR	**Eielson Array**	96.93	22	P	P	02 13 43.1	-0.1
	0.2nm,0.6s,mb3.8,baz=329,slow=5.3,SNR=4.7						

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*ATH **27** 02:11:50.1,37.21N×28.00E,h10^{km},MD3.0/3*

*ISK **27** 02:11:53.3,36.95N×27.80E,h16^{km},MD3.2*

*CSEM **27** 02:11:53.4±0.1,37.00N×27.83E,h12^{km},MD3.2,Error ellipse: s-maj=3.8km s-min=2.2km az=35.0*

ISC 27 02:11:53.9±0.5**,36.96N**±0.04×**27.81E**±0.03**,h5**^{km}±6^{km}**, n17,** σ**0**$\overset{s}{.}$**95**/25**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BDRM	**Kayabasi**	0.31	291	*i* P	Pg	02 12 00.6	+0.3
BDRM				*i* S	Sg	02 12 05.4	+1.0
MLSB	**Milas**	0.34	355	*i* PG	Pg	02 12 00.8	0.0
BODT	**Bodrum**	0.41	285	*i* PG	Pg	02 12 01.8	-0.5
BODT				*i* SG	Sg	02 12 08.6	+0.8
YER	**Yerkesik**	0.42	64	*i* PG	Pg	02 12 02.2	-0.1
NISR	**Nisiros**	0.65	238	*e*PB	Pb	02 12 07.5	+0.2
DALT	**Dalyan (Mudla)**	0.69	105	PG	Pg	02 12 06.9	-0.8
DALT				SG	Sg	02 12 17.7	+0.8
AYDN	**Tasoluk**	0.71	4	*i* P	Pg	02 12 07.7	-0.3
AYDN				*i* S	Sg	02 12 17.3	-0.2
ARG	**Arkhangelos**	0.78	161	*e*PB	Pb	02 12 09.0	-0.6
FETY	**Fethiye**	1.07	107	PG	Pg	02 12 14.6	-0.7
FETY				SG	Sg	02 12 29.3	-0.3
SMG	**Samos**	1.08	314	*e*PB	Pb	02 12 10.0	-4.7
DNZL	**Cakiroluk**	1.23	53	*i* P	Pb	02 12 17.4	+0.2
DNZL				*i* S	Sb	02 12 35.4	+2.1
DENT	**Denizli**	1.26	50	PN	Pn	02 12 17.1	-1.1
GOLH	**Golhisar**	1.43	78	*i* P	Pn	02 12 22.2	+1.6
GOLH				*i* S	Sb	02 12 44.4	+5.3
IZM	**Izmir**	1.50	343	PN	Pn	02 12 20.4	-1.3
BLCB	**Balcova**	1.55	337	*e*PN	Pn	02 12 21.1	-1.3
AKAS	**Kas**	1.61	116	*i* P	Pn	02 12 25.1	+1.9
AKAS				*i* S	Sb	02 12 51.0	+6.6
ELL	**Elmali**	1.69	96	*e*PN	Pn	02 12 23.3	-1.1

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*CSEM **27** 02:15:23.8±0.1,39.32N×21.89E,ML3.4,Error ellipse: s-maj=2.0km s-min=1.5km az=1.0*

*ATH **27** 02:15:24.0,39.28N×21.85E,h12^{km}±1^{km},MD3.4/14, ML3.4*

*THE **27** 02:15:24.4,39.24N×21.76E,h14^{km},ML3.5*

*NEIC **27** 02:15:24.0,39.31N×21.90E,h6^{km},ML3.4(ATH),After ATH.*

*SOF **27** 02:15:25.6,39.39N×22.04E,h163^{km},MD2.8*

ISC 27 02:15:23.0±0.4**,39.29N**±0.02×**21.80E**±0.02**,h3**^{km}±3^{km}**, n63,** σ**1**$\overset{s}{.}$**23**/84**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	0.37	179	*e*PG	Pg	02 15 31.0	+0.6
EVR				*e*SB	Sb	02 15 36.5	-1.3
EVR	**Evrytania**	0.37	179	*e*Pg	Pg	02 15 30.7	+0.3
EVR				*e*Sb	Sb	02 15 36.8	-1.0
AGG	**Agios Georgios**	0.49	123	*e*Pg	Pg	02 15 33.8	+1.0
AGG				*e*Sg	Sg	02 15 42.0	+2.7
MEV	**Metsovon**	0.66	318	*e*Pg	Pg	02 15 36.7	+0.4
MEV				*e*Sg	Sg	02 15 47.5	+2.4
JAN	**Janina**	0.82	297	*e*PB	Pb	02 15 40.2	+0.6
JAN				*e*SB	Sb	02 15 52.1	+1.2
JAN	**Janina**	0.82	297	*e*Pg	Pb	02 15 40.2	+0.6
JAN				*e*Sb	Sb	02 15 53.1	+2.2
LIT	**Litokhoron**	0.97	33	*e*Pg	Pg	02 15 42.8	+0.5
LIT				*e*Sg	Sg	02 15 58.5	+3.3
KZN	**Kozani**	1.02	359	*e*PB	Pb	02 15 43.7	+0.8
LKD	**Levkas**	1.07	237	*e*Pg	Pg	02 15 43.1	-1.2
XOR	**Xorichti**	1.08	85	*e*Pg	Pg	02 15 44.5	-0.1
XOR				*e*Sg	Sg	02 16 00.1	+1.1
NEO	**Neokhori**	1.10	89	*e*PB	Pb	02 15 44.3	-0.1
LKR	**Lokris**	1.13	124	*e*PN	Pn	02 15 45.5	-0.2
IGT	**Igoumenitsa**	1.16	283	*e*Pg	Pg	02 15 45.3	-0.9
RLS	**Riolos of Patr**	1.26	192	*e*PG	Pg	02 15 47.5	-0.6
LSK	**Leskovik**	1.26	313	*e*Pg	Pg	02 15 47.6	-0.6
LSK				*i* Sg	Sg	02 16 06.6	+1.5
VLS	**Valsamata**	1.46	221	*e*PB	Pb	02 15 52.7	+2.2
VLS	**Valsamata**	1.46	221	*e*Pb	Pb	02 15 54.0	+3.5
SRN	**Sarande**	1.51	294	*i* Pg	Pg	02 15 52.0	-1.2
SRN				*i* Sg	Sg	02 16 14.5	+1.2
SRN	**Sarande**	1.51	294	*e*Pg	Pg	02 15 52.0	-1.2
SRN				*i* Sg	Sg	02 16 14.5	+1.2
FNA	**Florina**	1.53	348	*e*Pg	Pg	02 15 51.7	-1.8
FNA				*e*Sg	Sg	02 16 12.2	-1.7
PAIG	**Paliouri**	1.58	66	*e*Pb	Pb	02 15 51.2	-1.4
KEK	**Kerkira**	1.61	286	*e*PG	Pg	02 15 54.7	-0.4
THE	**Thessaloniki**	1.61	33	*e*Pb	Pb	02 15 51.6	-1.5
PLG	**Polygyros**	1.67	49	*e*Pb	Pb	02 15 52.7	-1.3
GRG	**Griva**	1.73	15	*e*Pb	Pb	02 15 54.3	-0.8
MGER	**Gerania Oros**	1.73	138	*e*PG	Pg	02 15 56.0	-1.6
MGER	**Gerania Oros**	1.73	138	*e*Pn	Pn	02 15 57.0	+2.7
MPAR	**Parnis Oros**	1.89	126	*e*PN	Pn	02 15 58.0	+1.4
MPAR	**Parnis Oros**	1.89	126	*e*Pg	Pg	02 15 57.0	-3.8
NSAL	**Nisos Salamina**	1.90	136	*e*PN	Pn	02 15 58.0	+1.4
NSAL	**Nisos Salamina**	1.90	136	*e*Pg	Pg	02 15 59.2	-1.7
SOH	**Sokhos**	1.94	37	*e*Pn	Pn	02 15 57.6	+0.4
SOH				*e*Sn	Sn	02 16 22.0	-0.5
OUR	**Ouranopolis**	1.98	57	*e*Pn	Pn	02 15 57.6	-0.2
ATH	**Athens Observa**	2.00	131	*e*PN	Pn	02 15 59.0	+1.0
ATH	**Athens Observa**	2.00	131	*e*Pn	Pn	02 15 58.5	+0.5
ITM	**Ithomi**	2.11	177	*e*PN	Pn	02 16 01.5	+1.8
ITM	**Ithomi**	2.11	177	*e*Pg	Pg	02 16 03.1	-2.0
TIR	**Tirane**	2.53	325	Pn	Pn	02 16 10.5	+4.8
NVR	**Nevrokopi**	2.59	37	*e*PB	Pb	02 16 07.5	-2.4
SKO	**Skopje**	2.69	354	*e*Pn	Pn	02 16 16.0	+8.0
VLI	**Veliai**	2.72	160	*e*PN	Pn	02 16 10.0	+1.6
VLI	**Veliai**	2.72	160	*e*Pn	Pn	02 16 11.3	+2.9
MMB	**Musomiste**	2.73	32	*i* P	Pn	02 16 08.5	0.0
KKB	**Krupnik**	2.75	20	*e*P	Pn	02 16 09.0	+0.1
RZN	**Rozhen**	3.27	42	*i* P	Pn	02 16 15.7	-0.5
VTS	**Vitosha**	3.47	17	*i* P	Pn	02 16 19.0	0.0
LTRZ	**Laterza**	4.05	290	Pn	Pn	02 16 27.4	+0.1
LTRZ				Sn	Sn	02 17 13.2	-2.7
SG1	**Sgolgore (BA)**	4.22	293	*e*Pn	Pn	02 16 29.9	+0.1
CDT	**Castel del Mon**	4.60	295	*e*Pn	Pn	02 16 34.9	-0.2
SOI	**Samo**	4.66	257	Pn	Pn	02 16 35.1	-0.8
SOI				Sn	Sn	02 17 24.9	-6.4
SLCN	**Sala Consilina**	4.87	285	Pn	Pn	02 16 40.0	+1.0
SLCN				Sn	Sn	02 17 36.7	-0.1
MGR	**Morigerati**	4.89	282	Pn	Pn	02 16 39.9	+0.6
MGR				Sn	Sn	02 17 34.8	-2.4
MRLC	**Muro Lucano**	5.06	289	Pn	Pn	02 16 41.7	0.0
MRLC				Sn	Sn	02 17 42.8	+1.3
SGO	**Sicignano**	5.15	286	Pn	Pn	02 16 43.2	+0.3
	3.7nm,0.3s						
SGO				Sn	Sn	02 17 36.1	-7.7
RGNG	**Rignano Grg**	5.30	299	Pn	Pn	02 16 44.5	-0.6
RGNG				Sn	Sn	02 17 42.9	-4.7
FG5	**Orsara di Pugl**	5.38	294	Pn	Pn	02 16 47.0	+0.9
CSSN	**Cassano Irpino**	5.43	289	Pn	Pn	02 16 47.6	+0.7
SLNA	**Salina**	5.48	265	Pn	Pn	02 16 46.9	-0.7
SLNA				Sn	Sn	02 17 49.1	-3.0
MRB1	**Monte Rocchett**	5.54	292	Pn	Pn	02 16 49.6	+1.2
SGG	**Gregorio Mates**	6.04	293	Pn	Pn	02 16 56.5	+1.0
	13nm,0.5s						
CII	**Carovilli**	6.21	295	Pn	Pn	02 16 58.3	+0.5
MIDA	**Miranda**	6.22	295	Pn	Pn	02 16 58.8	+0.9
	11nm,0.6s						
USI	**Ustica**	6.74	268	Pn	Pn	02 17 03.5	-1.8
	15nm,0.3s						

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*BGR **27** 02:34:22.7±0.3,49.37N×6.86E,h1^{km},ML1.5/2,Error ellipse: s-maj=2.2km s-min=2.2km az=82.0*

*LDG **27** 02:34:22.7±0.2,49.38N×6.92E,h1^{km},Md2.6/1,Ml2.5/6, Error ellipse: s-maj=3.4km s-min=2.6km az=90.0, Suspected Mining induced.*

*NEIC **27** 02:34:22.7,49.38N×6.92E,h1^{km},ML2.5(LDG), ML2.0(STR),After LDG.*

*CSEM **27** 02:34:22.8±0.1,49.38N×6.89E,h2^{km},ML2.5/5,Error ellipse: s-maj=1.7km s-min=1.4km az=105.0*

ISC 27 02:34:21.0±0.4**,49.36N**±0.02×**6.83E**±0.03**,n28,** σ**0**$\overset{s}{.}$**93**/46**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUP	**Ruppelstein**	0.38	23	*e*Pg	Pg	02 34 29.5	+1.0
	SNR=3.1						
RUP	**Ruppelstein**	0.38	23	Pg	Pg	02 34 29.3	+0.8
RUP				Sg	Sg	02 34 33.3	-0.2
WLF	**Walferdange**	0.54	305	*e*Pg	Pg	02 34 33.5	+1.7
	SNR=2.8						
WLF				*e*Sg	Sg	02 34 39.7	+0.8
	SNR=3.2						
WLF	**Walferdange**	0.54	305	*e*Pg	Pg	02 34 33.6	+1.9
LANF	**Langenberg**	0.74	120	*e*Pg	Pg	02 34 35.9	+0.1
	SNR=2.7						
LANF	**Langenberg**	0.74	120	Pg	Pg	02 34 36.2	+0.4
KTD	**Kalmit**	0.82	92	*e*Pg	Pg	02 34 38.2	+0.8
	SNR=3.4						
CDF	**Champ du Feu**	0.99	163	*e*Pn	Pn	02 34 42.0	+0.1
CDF				*e*Sg	Sg	02 34 53.7	-0.2
	9.7nm,0.2s						
WLS	**Welschbruch**	1.00	160	*e*Pg	Pg	02 34 42.3	+1.2
	SNR=3.1						
WLS	**Welschbruch**	1.00	160	Pg	Pg	02 34 42.4	+1.3
WLS				Sg	Sg	02 34 56.7	+2.2
WLS	**Welschbruch**	1.00	160	Pg	Pg	02 34 42.3	+1.2
	SNR=3.1						
WLS				Sg	Sg	02 34 56.7	+2.2
ECH	**Echery**	1.16	169	*e*Pg	Pg	02 34 45.1	+0.9
	SNR=2.3						
ECH				*e*Sg	Sg	02 34 59.8	+0.1
	SNR=5.4						
ECH	**Echery**	1.16	169	Pg	Pg	02 34 45.1	+0.9
	SNR=2.3						
ECH				Sg	Sg	02 35 00.0	+0.3
THEF	**They Montfort**	1.26	207	*e*Pg	Pg	02 34 46.8	+0.6
	SNR=5.1						
THEF				*e*Sg	Sg	02 35 03.5	+0.5
	SNR=3.6						
THEF	**They Montfort**	1.26	207	Pg	Pg	02 34 46.9	+0.7
THEF				Sg	Sg	02 35 03.3	+0.3
THEF	**They Montfort**	1.26	207	Pg	Pg	02 34 46.9	+0.7
THEF				Sg	Sg	02 35 03.5	+0.5
	SNR=3.6						
TOD	**Tromm**	1.31	78	*e*Sg	Sg	02 35 03.8	-0.8
	SNR=2.2						
TNS	**Taunus Mts**	1.36	50	*e*Pg	Pg	02 34 47.6	-0.5
	SNR=1.8						
TNS				*e*Sg	Sg	02 35 05.0	-1.2
	SNR=2.3						
HAU	**Haudompre**	1.39	194	*e*Pg	Pg	02 34 48.7	-0.1
HAU				*e*Sg	Sg	02 35 07.6	+0.3
	5.8nm,0.2s						
BFO	**Black Forest**	1.43	136	*e*Pg	Pg	02 34 49.5	0.0
	SNR=2.8						
BFO				*e*Sg	Sg	02 35 07.9	-0.6
	SNR=5.6						
MOF	**Molkenrain**	1.52	172	Pg	Pg	02 34 52.8	+1.5
MOF				Sg	Sg	02 35 11.0	-0.6
	SNR=4.6						
HGN	**Heimansgroeve**	1.52	338	*e*Sg	Sg	02 35 10.3	-1.4
	SNR=1.6						
HINF	**Hinteralfeld**	1.54	180	*e*Pg	Pg	02 34 52.0	+0.2
HINF				*e*Sg	Sg	02 35 11.5	-0.8
	16nm,0.2s						
SFTF	**Sexfontaines**	1.66	227	*e*Pn	Pn	02 34 52.3	+0.8
SFTF				*e*Sg	Sg	02 35 15.4	-0.7
	4.3nm,0.3s						
FELD	**Feldberg**	1.67	152	*e*Sg	Sg	02 35 15.9	-0.8
	SNR=5.3						
BAIF	**Baives**	1.84	293	*e*Pg	Pg	02 34 58.0	+0.2
LOMF	**Lomont**	2.01	180	*e*Sg	Sg	02 35 27.0	-0.9
	SNR=2.0						
LOR	**Lormes**	2.88	225	*e*Pn	Pn	02 35 08.3	-0.7
LOR				*e*Sn	Sn	02 35 43.0	-1.9
	baz=50						
LOR				*e*Sg	Sg	02 35 55.4	-1.6
	3.2nm,0.4s,baz=48						

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*ROM **27** 02:43:05.7±0.1,42.70N×12.58E,h19^{km}±1^{km},Md3.4/11, Ml2.8/18,Error ellipse: s-maj=1.1km s-min=0.8km az=125.0*

*CSEM **27** 02:43:05.8±0.1,42.70N×12.58E,h12^{km},ML3.3/9,Error ellipse: s-maj=1.1km s-min=0.9km az=57.0*

*NEIC **27** 02:43:06.4±0.2,42.69N×12.55E,h10^{km},ML2.8(ROM), ML2.7(LDG),Error ellipse: s-maj=2.9km s-min=2.2km az=56.0*

NEIC Felt in Perugia and Terni.

*LDG **27** 02:43:08.2±0.1,42.64N×12.58E,h10^{km},Ml2.7/7,Error ellipse: s-maj=4.9km s-min=3.2km az=55.0*

ISC 27 02:43:06.5±0.3**,42.67N**±0.02×**12.50E**±0.03**,h22**^{km}±4^{km}**, n61,** σ**1**$\overset{s}{.}$**13**/90**,8C-6D,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNS	**Montasola**	0.31	154	Pg	Pb	02 43 13.1	-0.4
MNS				Sg	Sb	02 43 18.8	+0.5
	438nm,0.2s						
LNSS	**Leonessa**	0.41	99	⇓*e*Pg	Pb	02 43 13.8	-1.2
LNSS				Sg	Sb	02 43 20.1	-0.7
	2µm,0.3s						
ASS	**Assisi**	0.41	16	⇓*e*Pg	Pb	02 43 14.0	-1.2
ASS				Sg	Sb	02 43 19.0	-2.0
SACS	**San Casciano d**	0.47	293	⇓*e*Pg	Pb	02 43 16.5	+0.4
SACS				Sg	Sb	02 43 25.2	+2.6
	515nm,0.3s						
NRCA	**Norcia**	0.48	69	⇑*i*Pg	Pb	02 43 15.0	-1.4
MURB	**Monte Urbino**	0.60	2	⇓*e*Pg	Pb	02 43 17.5	-0.7
MURB				Sg	Sb	02 43 26.8	+0.6
	4µm,0.3s						
FIAM	**Fiamignano**	0.61	131	⇓*e*Pg	Pb	02 43 17.6	-0.8
FIAM				Sg	Sb	02 43 27.4	+0.9
	354nm,0.3s						
MTCE	**Montecelio**	0.67	164	Pg	Pb	02 43 19.6	+0.2
MTCE				Sg	Sb	02 43 31.4	+3.2
	273nm,0.6s						
CAMP	**Campotosto**	0.69	101	⇓*e*Pg	Pb	02 43 18.6	-1.1
CAMP				Sg	Sb	02 43 28.7	-0.1
	428nm,0.8s						
TOLF	**Tolfa**	0.70	212	Pg	Pb	02 43 20.9	+0.9
TOLF				Sg	Sb	02 43 33.4	+4.1
	243nm,0.5s						
AQU	**L'Aquila**	0.74	115	Pg	Pb	02 43 20.0	-0.6
	154nm,0.4s						
ARCI	**Arcidosso**	0.78	284	Pg	Pb	02 43 22.3	+1.1
	96nm,0.5s						
CERT	**Cerreto**	0.80	153	Pg	Pb	02 43 21.4	-0.3
CERT				Sg	Sb	02 43 34.6	+2.6
	383nm,0.4s						
TERO	**Teramo**	0.82	93	⇑*e*Pg	Pb	02 43 20.6	-1.4
TERO				Sg	Sb	02 43 32.7	+0.1
	262nm,0.3s						
BADI	**Badiali**	0.86	348	Pg	Pb	02 43 22.8	+0.1
BADI				Sg	Sb	02 43 36.2	+2.3
	403nm,0.5s						
CING	**Cingoli**	0.88	36	⇑*e*Pg	Pb	02 43 21.9	-1.0
CING				Sg	Sb	02 43 34.5	+0.3
	336nm,0.3s						
ARV	**Arcevia**	0.89	21	⇑*e*Pg	Pb	02 43 22.4	-0.8
ARV				Sg	Sb	02 43 35.5	+0.8
	141nm,0.3s						
FAGN	**Fagnano**	0.90	116	Pg	Pb	02 43 22.9	-0.4
	752nm,0.5s						
MA9	**Marino**	0.90	172	Pg	Pb	02 43 24.3	+0.9
	164nm,0.3s						
PTQR	**Pietraquaria**	0.93	133	Pg	Pb	02 43 23.2	-0.6
	41nm,0.3s						
MAON	**Monte Argentar**	1.04	257	Pg	Pb	02 43 27.1	+1.4
	71nm,0.7s						
FSSB	**Fossombrone**	1.05	11	Pg	Pb	02 43 25.3	-0.6
	160nm,0.4s						
CSNT	**Castellina Chi**	1.20	313	Pg	Pn	02 43 29.4	+1.2
	44nm,0.4s						
AOI	**Ancona**	1.20	42	Pg	Pn	02 43 28.1	-0.1
	195nm,0.5s						
RSM	**Repubblica di**	1.27	358	Pg	Pn	02 43 31.1	+1.9
	366nm,1.4s						
SFI	**Santa Sofia**	1.33	339	Pg	Pn	02 43 30.6	+0.6
	94nm,0.7s						
PGD	**Poggio Sodo**	1.34	335	Pg	Pn	02 43 30.9	+0.7
	28nm,0.3s						
VMG	**Vicchio**	1.47	332	Pg	Pn	02 43 34.1	+2.0
	108nm,0.5s						
SEI	**Scarperia**	1.62	329	Pg	Pn	02 43 35.6	+1.4
	98nm,0.3s						
CII	**Carovilli**	1.64	124	*e*Pg	Pn	02 43 38.3	+3.8
CII	**Carovilli**	1.64	124	*e*Pg	Pn	02 43 38.3	+3.8
FNVD	**Fontana Vidola**	1.81	327	Pg	Pn	02 43 38.2	+1.3
	51nm,0.6s						
NVLJ	**Novalja**	2.56	41	*i* Pn	Pn	02 43 48.0	+0.2
NVLJ				*i* Sn	Sn	02 44 20.2	+1.7
NVLJ	**Novalja**	2.56	41	*i* Pn	Pn	02 43 47.9	+0.2
NVLJ				*i* Sn	Sn	02 44 20.2	+1.6
PGF	**Pioggiola**	2.58	269	*e*Pn	Pn	02 43 49.0	+1.0
PGF				*e*Sn	Sn	02 44 17.6	-1.5
	2.1nm,0.3s						
CEY	**Cerknica**	3.37	24	*e*Pn	Pn	02 44 00.0	+0.8
BOJS	**Bojanci**	3.46	34	*i* Pn	Pn	02 44 02.6	+2.1
BOJS				*e*Sn	Sn	02 44 43.1	+1.8
VOJS	**Vojsko**	3.51	16	*e*Pn	Pn	02 44 01.0	-0.2
VOY	**Vojsko**	3.51	16	*e*Pn	Pn	02 44 01.1	-0.1
VOY				*e*Sn	Sn	02 44 43.3	+0.7
SBF	**Sospel**	3.89	290	*e*Pn	Pn	02 44 06.2	-0.3
SBF				*e*Sn	Sn	02 44 50.2	-1.8
	6.2nm,0.6s						
OBKA	**Obir**	4.11	20	⇑*i*PN	Pn	02 44 09.3	-0.5
OBKA				*i* SN	Sn	02 44 56.4	-1.4
FRF	**La Foret Royal**	4.38	284	*e*Pn	Pn	02 44 12.3	-1.2
FRF				*e*Sn	Sn	02 45 00.8	-3.6
	2.1nm,0.5s						
LMR	**La Mourre**	4.44	281	*e*Pn	Pn	02 44 13.1	-1.3
LMR				*e*Sn	Sn	02 45 02.5	-3.6
	1.9nm,0.4s						
MBDF	**Montbardon**	4.63	298	*e*Pn	Pn	02 44 17.6	+0.5
WTTA	**Wattenberg**	4.64	353	⇑*i*PN	Pn	02 44 17.7	+0.5
WTTA				*i* SN	Sn	02 45 12.6	+1.5
SQTA	**Sankt Quirin**	4.65	349	⇑*i*PN	Pn	02 44 18.3	+1.0
SQTA				*i* SN	Sn	02 45 12.5	+1.2
LPG	**La Plagne**	5.01	306	*e*Pn	Pn	02 44 22.3	-0.2
LPL	**La Plagne**	5.04	306	*e*Pn	Pn	02 44 22.8	0.0
SMRF	**Simiane la Rot**	5.22	287	*e*Pn	Pn	02 44 25.8	+0.4
ORIF	**Oris-en-Rattie**	5.29	297	*e*Pn	Pn	02 44 26.4	0.0
MOA	**Molln**	5.33	13	⇑*i*PN	Pn	02 44 26.8	-0.2
MOA				*i* SN	Sn	02 45 26.9	-1.6
CABF	**La Chapelle**	6.04	313	*e*Pn	Pn	02 44 36.4	-0.6
VIVF	**Saint-Julien-l**	6.07	294	*e*Pn	Pn	02 44 36.7	-0.8
LASF	**Ste Croix**	6.45	286	*e*Pn	Pn	02 44 42.2	-0.6
HINF	**Hinteralfeld**	6.51	324	*e*Pn	Pn	02 44 42.9	-0.7
HINF				*e*Sn	Sn	02 45 53.1	-4.9
	2.7nm,0.4s						
CDF	**Champ du Feu**	6.81	329	*e*Pn	Pn	02 44 46.5	-1.4
CDF				*e*Sn	Sn	02 46 00.2	-5.4
	1.2nm,0.4s						
HAU	**Haudompre**	6.88	323	*e*Pn	Pn	02 44 47.6	-1.1
HAU				*e*Sn	Sn	02 46 01.8	-5.3
	3.6nm,0.4s						
SMF	**Signal de Mont**	7.34	306	*e*Pn	Pn	02 44 54.6	-0.7
LOR	**Lormes**	7.66	310	*e*Pn	Pn	02 44 58.4	-1.3
CAF	**Calviac**	7.88	290	*e*Pn	Pn	02 45 01.3	-1.5
BGF	**Bois d'Agland**	7.91	303	*e*Pn	Pn	02 45 01.3	-1.9

MOS 27 02:44:00.4±2.2**,52.10N**×**99.10E,h20**^{km}**,mb4.2**/1**,Error ellipse: s-maj=73.4km s-min=25.3km az=179.7, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOY	**Mondy**	1.25	110	*e*PG	Pn	02 44 22.3	-0.7
MOY				*e*		02 44 39.6	
MOY				pmax	pmax		
	comp=Z,74nm,0.6s						
MOY				smax			
	comp=N,511nm,1.3s						
ARS	**Arshan**	2.06	94	*e*PN	Pn	02 44 37.2	+2.6
TLY	**Talaya**	2.85	97	*e*PN	Pn	02 44 50.2	+4.4
TLY				*e*		02 45 29.1	
TLY				pmax	pmax		
	comp=Z,14nm,0.4s						
TLY				smax			
	comp=N,100nm,0.4s						
IRK	**Irkutsk**	3.19	85	*e*PN	Pn	02 44 59.5	+8.9
IRK				*e*		02 45 38.8	
IRK				pmax	pmax		
	comp=Z,28nm,1.1s						
IRK				smax			
	comp=E,445nm,0.3s						

LSTR	**Listvyanka**	**3.55**	**91**	*e*PN	Pn	02 45 03.7	+7.9
LSTR				*e*S	Sn	02 45 37.4	-0.3
LSTR				*e*		02 45 49.1	
LSTR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
LSTR				smax			
	comp=N,80nm,1.4s						
TRG	**Tyrgan**	**4.49**	**79**	*e*PN	Pn	02 45 08.2	-0.9
TRG				*e*		02 45 20.7	
TRG				*e*S	Sn	02 46 00.8	-0.5
TRG				*e*		02 46 19.7	
TRG				pmax	pmax		
	comp=Z,13nm,0.4s						
TRG				smax			
	comp=N,122nm,0.7s						
OGRR	**Ongureny**	**5.37**	**70**	*e*PN	Pn	02 45 20.4	-1.2
OGRR				*e*		02 45 37.0	
OGRR				*e*		02 46 47.3	
OGRR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
OGRR				smax			
	comp=N,78nm,1.3s						

*CSEM **27** 02:53:00.2±0.9, 38.64N×28.54W, h5^{km}, ML1.6, Error ellipse: s-maj=53.3km s-min=17.4km az=169.0, After PDA*
*PDA **27** 02:53:00.2±0.9, 38.64N×28.54W, h5^{km}±10^{km}, MD2.8, ML1.6, Error ellipse: s-maj=4.7km s-min=3.5km az=30.0*
SVSA 27 02:53:00.2±0.9, **38.64N×28.54W, h5**^{km}±10^{km}**, MD2.8, ML1.6, Error ellipse: s-maj=4.7km s-min=3.5km az=30.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOR	**Horta**	**0.13**	**213**	*e*P	Pg	02 53 02.4	-0.6
HOR				*e*S	Sg	02 53 04.8	-0.1
CALA	**Caldeira**	**0.14**	**246**	*i* P	Pg	02 53 03.0	-0.2
CALA				*e*S	Sg	02 53 05.2	+0.1
PICO	**Pico**	**0.16**	**147**	*i* P	Pg	02 53 03.2	-0.4
PICO				*e*S	Sg	02 53 05.7	-0.1
PMAN	**Manadas**	**0.35**	**91**	*e*P	Pg	02 53 06.3	-1.0
PMAN				*e*S	Sg	02 53 11.6	-0.4
	28nm,0.1s						

*SOF **27** 02:58:10.1, 40.22N×27.67E, h10^{km}, MD3.2*
*ATH **27** 02:58:14.8, 40.68N×27.48E, h14^{km}±4^{km}, MD3.7/5*
*ISK **27** 02:58:16.0, 40.69N×27.39E, h13^{km}, MD3.5, ML3.6*
*CSEM **27** 02:58:16.1±0.1, 40.68N×27.42E, h10^{km}, MD3.5, Error ellipse: s-maj=1.7km s-min=1.2km az=29.0*
ISC 27 02:58:16.1±0.5**, 40.70N**±0.02×**27.40E**±0.03**, h6**^{km}±4^{km}**, n59, σ0.^{s}69**/66**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MFT	**Murefte**	**0.13**	**314**	*i* PG	**Pg**	**02 58 19.2**	**+0.4**
RKY	**Sarkoy-Tekirda**	**0.17**	**266**	*i* PG	**Pg**	**02 58 20.3**	**+0.6**
MRMT	**Marmara Adasi**	**0.18**	**123**	*i* PG	**Pg**	**02 58 19.8**	**0.0**
TKR	**Tekirdag**	**0.31**	**19**	*i* PG	**Pg**	**02 58 23.2**	**+0.9**
BNT	**Bandirma**	**0.52**	**131**	*i* PG	**Pg**	**02 58 26.6**	**0.0**
BNT				SG	**Sg**	**02 58 34.2**	**+0.6**
LPK	**Lapseki**	**0.59**	**236**	*i* PG	**Pg**	**02 58 27.6**	**-0.3**
CANB	**Canakkale**	**0.73**	**201**	*i* PG	**Pg**	**02 58 30.1**	**-0.6**
SLVT	**Silivri**	**0.81**	**49**	*i* PG	**Pg**	**02 58 32.9**	**+0.6**
KCT	**Karacabey**	**0.85**	**120**	*i* PG	**Pg**	**02 58 32.5**	**-0.6**
CTT	**Catalca**	**0.90**	**60**	*i* PG	**Pg**	**02 58 33.8**	**-0.3**
ALN	**Alexandroupoli**	**1.05**	**281**	*e*P	**Pb**	**02 58 36.2**	**-0.1**
BTOK	**Tokmak**	**1.05**	**153**	*i* P	**Pb**	**02 58 36.4**	**0.0**
BTOK				*i* S	**Sb**	**02 58 52.4**	**+2.2**
BALB	**Balikesir**	**1.12**	**161**	*i* PN	**Pn**	**02 58 37.6**	**-0.7**
EZN	**Ezine**	**1.20**	**224**	*i* PN	**Pn**	**02 58 38.3**	**-1.1**
EDRB	**Edirne**	**1.25**	**337**	*i* PN	**Pn**	**02 58 40.0**	**-0.1**
ISK	**Istanbul-Kandi**	**1.31**	**73**	*i* PN	**Pn**	**02 58 40.5**	**-0.5**
BADT	**Buyukada**	**1.31**	**83**	*i* PN	**Pn**	**02 58 39.9**	**-1.1**
KLYT	**Kilyos**	**1.36**	**65**	*i* PN	**Pn**	**02 58 41.0**	**-0.7**
ULDT	**Uludag**	**1.44**	**112**	*i* P	**Pn**	**02 58 43.0**	**+0.2**
ULDT				*i* S	**Sb**	**02 59 02.8**	**+1.4**
DST	**Dursunbey**	**1.44**	**139**	*i* PN	**Pn**	**02 58 42.9**	**0.0**
RDO	**Rodhopi**	**1.48**	**288**	*e*Pn	**Pn**	**02 58 43.9**	**+0.4**
RDO				*e*Sn	**Sn**	**02 59 03.9**	**+0.6**
AYVA	**Ayvalik**	**1.49**	**202**	*i* P	**Pn**	**02 58 44.5**	**+0.9**
AYVA				*i* S	**Sb**	**02 59 04.0**	**+1.0**
YLV	**Yalova**	**1.51**	**94**	*i* PN	**Pn**	**02 58 43.9**	**+0.1**
PRK	**Paraskevi**	**1.69**	**211**	*e*PN	**Pn**	**02 58 46.3**	**-0.2**
PRK				*e*SN	**Sn**	**02 59 09.3**	**+0.6**
HRT	**Hereke**	**1.73**	**85**	*i* PN	**Pn**	**02 58 46.1**	**-0.9**
SILT	**Sile**	**1.76**	**74**	*i* PN	**Pn**	**02 58 47.5**	**+0.1**
KDZ	**Kurdzhali**	**1.77**	**303**	*i* P	**Pn**	**02 58 48.0**	**+0.4**
AKS	**Akhisar**	**1.84**	**170**	PN	**Pn**	**02 58 48.4**	**-0.3**
JMB	**Yambol**	**1.87**	**341**	*e*P	**Pn**	**02 58 52.0**	**+3.0**
LIA	**Limnos Island**	**1.88**	**245**	*e*PN	**Pn**	**02 58 48.7**	**-0.4**
LOS	**Limnos**	**1.93**	**247**	*e*P	**Pn**	**02 58 49.0**	**-0.9**
DIM	**Dimitrovgrad**	**1.95**	**314**	*i* P	**Pn**	**02 58 50.0**	**-0.1**
EYL	**Eskiyayla**	**2.10**	**93**	PN	**Pn**	**02 58 51.3**	**-1.0**
RZN	**Rozhen**	**2.25**	**297**	*i* P	**Pn**	**02 58 54.5**	**0.0**
IZM	**Izmir**	**2.30**	**183**	PN	**Pn**	**02 58 54.8**	**-0.4**
BLCB	**Balcova**	**2.33**	**187**	PN	**Pn**	**02 58 55.5**	**-0.1**
MANT	**Manisa**	**2.38**	**158**	*i* P	**Pn**	**02 58 57.2**	**+0.9**
MANT				*i* S	**Sn**	**02 59 31.2**	**+5.1**
PLD	**Plovdiv**	**2.47**	**306**	*e*P	**Pn**	**02 58 57.5**	**-0.1**
OUR	**Ouranopolis**	**2.63**	**263**	*e*P	**Pn**	**02 58 58.8**	**-1.1**
ALT	**Altintas**	**2.65**	**127**	PN	**Pn**	**02 59 00.3**	**+0.1**
NVR	**Nevrokopi**	**2.76**	**285**	*e*PN	**Pn**	**02 59 02.0**	**+0.3**
SZH	**Strazhica**	**2.79**	**337**	*e*P	**Pn**	**02 59 08.5**	**+6.3**
ESKT	**Eskisehir**	**2.90**	**113**	PN	**Pn**	**02 59 03.7**	**0.0**
MMB	**Musomiste**	**2.91**	**289**	*i* P	**Pn**	**02 59 05.0**	**+1.1**
PAIG	**Paliouri**	**2.95**	**256**	*e*P	**Pn**	**02 59 02.8**	**-1.6**
PVL	**Pavlikeni**	**2.95**	**329**	*e*P	**Pn**	**02 59 05.5**	**+1.0**
PLG	**Polygyros**	**3.03**	**265**	*e*PN	**Pn**	**02 59 05.4**	**-0.2**
PGB	**Panagyurishte**	**3.05**	**308**	*i* P	**Pn**	**02 59 06.0**	**+0.1**
SOH	**Sokhos**	**3.08**	**274**	*e*P	**Pn**	**02 59 05.6**	**-0.7**
AOS	**Alonnisos**	**3.11**	**242**	*e*P	**Pn**	**02 59 06.2**	**-0.6**
KKB	**Krupnik**	**3.46**	**291**	*i* P	**Pn**	**02 59 12.0**	**+0.3**
YER	**Yerkesik**	**3.62**	**169**	PN	**Pn**	**02 59 14.0**	**0.0**
VTS	**Vitosha**	**3.67**	**302**	*i* P	**Pn**	**02 59 15.0**	**+0.4**
ISP	**Isparta**	**3.73**	**139**	PN	**Pn**	**02 59 15.4**	**-0.2**
KIZT	**Kizilcal**	**3.90**	**116**	PN	**Pn**	**02 59 17.5**	**-0.4**
SAFT	**Safranbolu**	**4.04**	**81**	*e*PN	**Pn**	**02 59 19.5**	**-0.4**
FETY	**Fethiye**	**4.27**	**161**	*e*PN	**Pn**	**02 59 23.0**	**-0.2**
ELL	**Elmali**	**4.41**	**153**	*e*PN	**Pn**	**02 59 24.8**	**-0.3**
KONT	**Konya--Tatoy**	**4.73**	**124**	*e*PN	**Pn**	**02 59 29.7**	**0.0**

*IDC **27** 03:02:15.2±3.3, 35.84N×11.31E, mb4.0/3, mb1 3.9/8, mb1mx3.7/25, mbtmp3.9/8, ML3.4/5, MS3.4/11, Ms1 3.4/11, ms1mx3.1/31, Error ellipse: s-maj=60.1km s-min=27.8km az=7.0*
*LDG **27** 03:02:16.8±0.4, 35.70N×11.44E, h10^{km}, Ml3.3/6, Error ellipse: s-maj=10.9km s-min=3.6km az=16.0*
*CSEM **27** 03:02:18.4±0.2, 36.11N×11.27E, h40^{km}, ML2.9/3, Error ellipse: s-maj=5.6km s-min=2.1km az=16.0*
*NEIC **27** 03:02:19.9±2.0, 36.15N×11.53E, h14^{km}±13^{km}, MG4.2(MDD), Error ellipse: s-maj=13.5km s-min=4.4km az=186.0*
ISC 27 03:02:15.3±0.7**, 36.02N**±0.06×**11.26E**±0.03**, h10**^{km}**, n67, σ1.^{s}55**/81**, mb3.8**/3**, MS3.6**/9**, Tunisia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTS	**Pantelleria**	**0.99**	**37**	P	**Pb**	**03 02 35.1**	**+1.1**
LVI	**Isola Levanzo**	**2.14**	**24**	P	**Pn**	**03 02 54.2**	**+2.6**
ERC	**Erice**	**2.28**	**27**	P	**Pn**	**03 02 54.7**	**+1.2**
FAVR	**Favara**	**2.30**	**57**	P	**Pn**	**03 02 54.5**	**+0.6**
WDD	**Wield Dalam**	**2.65**	**92**	P	**Pn**	**03 02 55.4**	**-3.5**
VAE	**Valguarnera**	**2.92**	**59**	Pn	**Pn**	**03 03 02.7**	**0.0**
	8.7nm,0.3s,baz=93,slow=3.8,SNR=35						
VAE				Sn	**Sn**	**03 03 41.1**	**+2.9**
	24nm,0.3s,baz=248,slow=16,SNR=5.8						
VAE	**Valguarnera**	**2.92**	**59**	Pn	**Pn**	**03 03 02.8**	**+0.1**
VAE				Sn	**Sn**	**03 03 41.2**	**+3.0**
GIB	**Gibilmanna**	**2.96**	**48**	P	**Pn**	**03 03 03.5**	**+0.2**
USI	**Ustica**	**3.09**	**29**	P	**Pn**	**03 03 07.0**	**+1.9**
PZI	**Palazzolo**	**3.15**	**70**	P	**Pn**	**03 03 03.6**	**-2.3**
SSY	**Sortino**	**3.27**	**69**	P	**Pn**	**03 03 05.4**	**-2.3**
MNO	**Monte Soro**	**3.35**	**54**	P	**Pn**	**03 03 09.2**	**+0.4**
AGST	**Augusta-Monte**	**3.42**	**68**	P	**Pn**	**03 03 07.4**	**-2.4**
VSL	**Villasalto**	**3.77**	**337**	P	**Pn**	**03 03 17.6**	**+2.8**
SLNA	**Salina**	**3.82**	**47**	P	**Pn**	**03 03 14.9**	**-0.5**
MTTG	**Motta San Giov**	**4.06**	**60**	P	**Pn**	**03 03 17.8**	**-1.2**
SOI	**Samo**	**4.35**	**61**	P	**Pn**	**03 03 22.1**	**-0.9**
TIP	**Timpagrande**	**5.39**	**53**	*e*P	**Pn**	**03 03 36.7**	**-0.9**
TIP	**Timpagrande**	**5.39**	**53**	*e*P	**Pn**	**03 03 36.7**	**-1.0**
PGF	**Pioggiola**	**6.75**	**346**	*e*Pn	**Pn**	**03 03 59.4**	**+2.5**
PGF				*e*Sn	**Sn**	**03 05 14.7**	**+0.1**
	6.8nm,0.4s						
ETOS	**Mallorca**	**7.65**	**302**	P	**Pn**	**03 04 13.0**	**+3.5**
ETOS				S	**Sn**	**03 05 35.2**	**-1.9**
ETOS	**Mallorca**	**7.65**	**302**	P	**Pn**	**03 04 13.0**	**+3.5**
	2.7nm,0.4s,SNR=7.9						
ETOS				S	**Sn**	**03 05 35.2**	**-2.0**
LMR	**La Mourre**	**8.17**	**335**	*e*Pn	**P**	**03 04 16.9**	**+0.1**
LMR				*e*Sn	**Sn**	**03 05 47.7**	**-2.4**
	1.3nm,0.3s						
FRF	**La Foret Royal**	**8.32**	**336**	*e*Pn	**P**	**03 04 19.2**	**+0.3**
FRF				*e*Sn	**Sn**	**03 05 50.8**	**-3.1**
	0.6nm,0.3s						
SBF	**Sospel**	**8.36**	**341**	*e*Pn	**P**	**03 04 18.4**	**-1.1**
SBF				*e*Sn	**Sn**	**03 05 52.7**	**-2.3**
	0.8nm,0.2s						
EIBI	**Ibiza**	**8.43**	**294**	P	**P**	**03 04 23.6**	**+3.2**
EIBI				S	**Sn**	**03 05 54.2**	**-2.4**
EIBI	**Ibiza**	**8.43**	**294**	P	**P**	**03 04 23.6**	**+3.2**
	7.0nm,0.5s,SNR=7.9						
EIBI				S	**Sn**	**03 05 54.2**	**-2.4**
SMRF	**Simiane la Rot**	**9.06**	**333**	*e*Pn	**P**	**03 04 30.7**	**+1.6**
SMRF				*e*Sn	**Sn**	**03 06 09.6**	**-2.7**
	2.8nm,0.4s						
MBDF	**Montbardon**	**9.34**	**340**	*e*Pn	**P**	**03 04 34.0**	**+0.9**
EBEN	**Beniarda**	**9.53**	**290**	P	**P**	**03 04 41.4**	**+5.8**
EBEN				S	**Sn**	**03 06 22.6**	**-1.1**
EBEN	**Beniarda**	**9.53**	**290**	P	**P**	**03 04 41.4**	**+5.8**
	3.5nm,0.6s,SNR=7.9						
EBEN				S	**Sn**	**03 06 22.6**	**-1.2**
EMIR	**Miracle**	**9.59**	**311**	P	**P**	**03 04 38.5**	**+2.1**
EMIR				S	**Sn**	**03 06 19.2**	**-6.1**
EMIR	**Miracle**	**9.59**	**311**	S	**Sn**	**03 06 19.2**	**-6.2**
	1.0nm,0.5s,SNR=7.9						
EMIR	**Miracle**	**9.59**	**311**	P	**P**	**03 04 38.5**	**+2.1**
	2.2nm,0.5s,SNR=7.9						
EMIR				S	**Sn**	**03 06 19.2**	**-6.2**
BNI	**Bardonecchia**	**9.67**	**340**	*e*Pn	**P**	**03 04 41.3**	**+3.8**
BNI	**Bardonecchia**	**9.67**	**340**	*e*Pn	**P**	**03 04 41.3**	**+3.8**
LASF	**Ste Croix**	**9.84**	**327**	*e*Pn	**P**	**03 04 40.2**	**+0.3**
LPL	**La Plagne**	**10.08**	**342**	*e*P	**P**	**03 04 49.7**	**+6.5**
MTLF	**Montolieu**	**10.09**	**319**	*e*Pn	**P**	**03 04 43.4**	**+0.1**
MTLF				*e*Sn	**S**	**03 06 34.4**	**-3.3**
	2.1nm,0.5s						
VIVF	**Saint-Julien-l**	**10.15**	**332**	*e*Pn	**P**	**03 04 44.3**	**+0.2**
EGRA	**Graus**	**10.50**	**309**	P	**P**	**03 04 50.6**	**+1.7**
	1.4nm,0.6s						
EGRA				S	**S**	**03 06 41.6**	**-6.0**
EGRA	**Graus**	**10.50**	**309**	P	**P**	**03 04 50.6**	**+1.7**
	1.4nm,0.6s,SNR=7.9						
EGRA				S	**S**	**03 06 41.6**	**-6.0**
ETOB	**Tobarra**	**10.53**	**288**	P	**P**	**03 04 53.6**	**+4.3**
	1.2nm,0.5s						
ETOB				S	**S**	**03 06 46.8**	**-1.6**
ETOB	**Tobarra**	**10.53**	**288**	P	**P**	**03 04 53.6**	**+4.3**
	1.2nm,0.5s,SNR=7.9						
ETOB				S	**S**	**03 06 46.8**	**-1.6**
DAVOX	**Davos**	**10.80**	**355**	Pn	**P**	**03 04 59.3**	**+6.3**
	0.2nm,0.3s,baz=174,slow=18,SNR=4.3						
DAVOX				LR	LR	03 09 27.1	
	comp=Z,207nm,18.2s,baz=202,slow=39						
EPF	**Esparros**	**10.95**	**313**	*e*Pn	**P**	**03 04 55.2**	**+0.1**
IDI	**Anoyia**	**11.12**	**90**	Pn	**P**	**03 04 55.5**	**-1.9**
	0.4nm,0.3s,baz=29,slow=6.3,SNR=5.4						
IDI				LR	LR	03 10 00.0	
	comp=Z,91nm,18.6s,baz=287,slow=42						
CAF	**Calviac**	**11.31**	**325**	*e*Pn	**P**	**03 05 00.4**	**+0.4**
EQES	**Quesada**	**11.61**	**283**	P	**P**	**03 05 08.8**	**+4.7**
	4.3nm,0.8s						
EQES				S	**S**	**03 07 15.8**	**+1.0**
EQES	**Quesada**	**11.61**	**283**	P	**P**	**03 05 08.8**	**+4.7**
	4.3nm,0.8s,SNR=7.9						
EQES				S	**S**	**03 07 15.9**	**+1.1**
RJF	**Les Rejaudoux**	**11.85**	**324**	*e*Pn	**P**	**03 05 07.8**	**+0.5**
ESDC	**Sonseca Array**	**12.57**	**291**	Pn	**P**	**03 05 16.4**	**-0.6**
	0.1nm,0.3s,baz=99,slow=14,SNR=3.0						
GERES	**GERESS Array B**	**12.94**	**7**	LR	LR	03 10 50.3	
	comp=Z,44nm,20.0s,baz=190,slow=39						
BR131	**Keskin Array S**	**18.04**	**71**	*e*P	**P**	**03 06 28.4**	**+0.6**
BR131	**Keskin Array S**	**18.04**	**71**	*e*P	**P**	**03 06 28.4**	**+0.7**
BRTR	**Keskin Array B**	**18.04**	**71**	P	**P**	**03 06 27.9**	**+0.2**
	0.0nm,0.3s,baz=249,slow=11,SNR=16						
AKASG	**Malin Array Be**	**19.57**	**36**	P	**P**	**03 06 44.3**	**-1.7**
	0.2nm,0.3s,baz=228,slow=9.3,SNR=6.2						
HFS	**Hagfors**	**24.18**	**3**	P	**P**	**03 07 34.4**	**+1.9**
	3.8nm,0.9s,mb3.8,baz=192,slow=14,SNR=4.2						
HFS				LR	LR	03 19 02.7	
	comp=Z,56nm,19.8s,MS3.0,baz=292,slow=41						
NOA	**NORSAR Array B**	**25.04**	**360**	LR	LR	03 17 47.7	
	comp=Z,41nm,20.1s,MS2.9,baz=190,slow=37						
FINES	**FINESS Array B**	**27.12**	**16**	P	**P**	**03 08 02.3**	**+2.3**
	2.6nm,0.8s,mb3.8,baz=259,slow=7.1,SNR=4.6						
ARCES	**ARCESS Array B**	**34.47**	**9**	LR	LR	03 24 27.6	
	comp=Z,52nm,19.3s,MS3.3,baz=293,slow=38						
MKAR	**Makanchi Array**	**52.67**	**55**	P	**P**	**03 11 31.3**	**-0.4**
	0.8nm,0.7s,mb3.7,baz=293,slow=4.5,SNR=7.1						
MKAR				LR	LR	03 36 35.4	
	comp=Z,20nm,20.6s,MS3.1,baz=39,slow=39						
BOSA	**Boshof**	**65.63**	**166**	LR	LR	03 42 32.5	
	comp=Z,50nm,18.4s,MS3.8,baz=199,slow=37						
YKA	**Yellowknife Ar**	**72.66**	**337**	LR	LR	03 47 12.8	
	comp=Z,24nm,19.6s,MS3.5,slow=37						
BDFB	**Brasilia**	**75.98**	**239**	LR	LR	03 51 13.1	
	comp=Z,45nm,18.4s,MS3.8,baz=77,slow=39						
JTS	**JuntasAbangare**	**88.99**	**282**	LR	LR	03 47 33.1	
	comp=Z,318nm,18.8s,MS4.8,baz=150,slow=30						
CPUP	**Villa Florida**	**89.58**	**237**	LR	LR	03 54 11.1	
	comp=Z,65nm,19.8s,MS4.1,baz=296,slow=35						

CASC 27 03:04:42.1±1.3**, 8.67N×82.74W, h35**^{km}±4^{km}**, MD3.4, MW4.0, 4C-2D, Fault plane solution: NP1:**ϕ_s337.84°, δ30°, λ-90°.**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.13**	**19**	⇓*i*P	P	03 04 49.1	+0.8
BRU2				*e*S	S	03 04 53.9	+1.3
BRU	**Baru**	**0.22**	**51**	⇑*i*P	P	03 04 50.9	+1.8
BRU				*e*S	S	03 04 55.8	+1.8
SVTC	**San Vito de Co**	**0.25**	**298**	*e*P	P	03 04 49.2	-0.2
DVD	**David**	**0.36**	**129**	⇑*i*P	P	03 04 51.4	+0.6
DVD				*e*S	S	03 04 57.0	+0.1
PTP1	**Petroterminal**	**0.55**	**147**	⇓*e*P	P	03 04 52.5	-0.8
PTP1				*e*S	S	03 05 00.1	-1.3
BUS	**Buena Vista**	**1.34**	**311**	⇑*i*P	P	03 05 05.0	+0.3
BUS				*e*S	S	03 05 22.3	+0.8
PRS1	**Puriscal**	**2.03**	**310**	⇑*e*P	P	03 05 14.6	+0.1

*NEIC **27** 03:18:43.3, 13.71N×59.79W, h23^{km}, MD4.0(TRN), After TRN.*
TRN 27 03:18:43.6, 13.70N×59.84W, h31^{km}**, MD4.0, Md3.4**(FDF)**, 4C-1D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBSP	**Saint Philip**	**0.70**	**148**	*e*P	Pb	03 18 58.1	+0.8
BBSP				*e*S	Sb	03 19 09.2	+2.4
SLW	**Petit Monier**	**1.11**	**287**	⇑*e*P	Pn	03 19 03.4	+0.1
SLW				*e*S	Sn	03 19 18.8	+1.1
MVM	**Montagne Vaucl**	**1.33**	**310**	⇑*e*P	Pn	03 19 06.5	+0.1
MVM				*e*S	Sn	03 19 23.7	+0.6
SVB	**Belmont**	**1.44**	**253**	*e*P	Pn	03 19 08.3	+0.3
SVB				*e*S	Sn	03 19 27.1	+1.1
BIM	**Bigot**	**1.44**	**304**	*e*P	Pn	03 19 08.3	+0.3
BIM				*e*S	Sn	03 19 27.3	+1.3
FCV	**Fort Charlotte**	**1.47**	**248**	⇓*e*P	Pn	03 19 08.8	+0.3
FCV				*e*S	Sn	03 19 27.9	+1.1
CRM	**Caravelle**	**1.48**	**315**	⇑*e*P	Pn	03 19 08.8	+0.3
CRM				*e*S	Sn	03 19 27.0	+0.1
FDF	**Fort de France**	**1.63**	**309**	⇑*e*P	Pn	03 19 11.1	+0.3
FDF				*e*S	Sn	03 19 31.2	+0.3
DSHT	**Scott's Head**	**2.11**	**315**	*e*P	Pn	03 19 19.5	+1.9
DSHT				*e*S	Sn	03 19 45.1	+2.0
DBCT	**Belle View Cho**	**2.13**	**317**	*e*P	Pn	03 19 18.9	+1.0
DBCT				*e*S	Sn	03 19 45.6	+2.0
MDN	**Morne-Daniel**	**2.20**	**317**	*e*P	Pn	03 19 20.7	+1.8
GRHS	**Sauteurs**	**2.29**	**230**	*e*P	Pn	03 19 21.0	+0.8
GRHS				*e*S	Sn	03 19 49.0	+1.4
GRW	**Mount Saint Ca**	**2.35**	**229**	*e*P	Pn	03 19 22.6	+1.7
GRW				*e*S	Sn	03 19 52.0	+3.0
BBL	**Barber's Block**	**2.40**	**319**	*e*P	Pn	03 19 19.5	-2.3
MGG	**Marie-Galante**	**2.62**	**327**	*e*P	Pn	03 19 25.1	+0.2
DEG	**La Desirade**	**2.85**	**336**	*e*P	Pn	03 19 27.8	-0.3
DEG				*e*S	Sn	03 20 01.2	-0.6
DOG	**Dongo Capester**	**2.88**	**324**	*e*P	Pn	03 19 29.6	+1.0
BCG	**Bois Riant Cap**	**2.93**	**324**	*e*P	Pn	03 19 29.8	+0.6
SEG	**Port Louis**	**3.13**	**329**	*e*P	Pn	03 19 33.2	+1.1
SJG	**San Juan**	**7.49**	**307**	*e*Pn	Pn	03 20 32.4	-1.2
	14nm,0.4s						

*PRU **27** 03:31:11.6, 43.63N×16.69E*
*ROM **27** 03:31:16.2±0.3, 43.79N×16.29E, h33^{km}±8^{km}, Ml3.0/17, Error ellipse: s-maj=6.8km s-min=3.1km az=31.0*
*LDG **27** 03:31:16.9±0.1, 43.90N×16.32E, h10^{km}, Ml3.2/8, Error ellipse: s-maj=3.4km s-min=2.2km az=30.0*
*NEIC **27** 03:31:16.4±0.2, 43.79N×16.14E, h10^{km}, MD3.1(PDG), ML3.2(LDG), ML3.0(ROM), Error ellipse: s-maj=3.4km s-min=2.6km az=219.0*
*PDG **27** 03:31:16.3±0.2, 43.38N×16.01E, h11^{km}±1^{km}*
*CSEM **27** 03:31:16.7±0.1, 43.80N×16.34E, h60^{km}, ML3.5/17, Error ellipse: s-maj=2.7km s-min=1.9km az=94.0*
ISC 27 03:31:15.5±0.2**, 43.80N**±0.02×**16.17E**±0.02**, h10**^{km}**, n86, σ1.^{s}34**/137**, 9C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**1.20**	**37**	Pn	**Pn**	**03 31 36.5**	**-1.8**
BLY				Sn	**Sn**	**03 31 53.2**	**-1.4**
NVLJ	**Novalja**	**1.21**	**310**	*i* Pg	**Pg**	**03 31 37.7**	**-2.0**
NVLJ				*i* Sg	**Sg**	**03 31 55.2**	**-0.6**
STON	**Ston**	**1.45**	**129**	*i* Pn	**Pn**	**03 31 39.6**	**-2.4**
STON				*i* Pg	**Pg**	**03 31 40.3**	**-4.3**
STON				*i* Sn	**Sn**	**03 32 00.8**	**-0.4**
STON				*i* Sg	**Sg**	**03 32 00.9**	**-3.1**
STON	**Ston**	**1.45**	**129**	*i* Pg	**Pg**	**03 31 40.3**	**-4.3**
STON				*i* Sg	**Sg**	**03 32 00.8**	**-3.2**
SISC	**Sisak**	**1.68**	**5**	*i* Pn	**Pn**	**03 31 45.0**	**-0.2**
SISC				*i* Sn	**Sn**	**03 32 08.5**	**+1.7**
SISC	**Sisak**	**1.68**	**5**	*i* Pn	**Pn**	**03 31 44.9**	**-0.3**
SISC				*i* Sn	**Sn**	**03 32 08.5**	**+1.6**
BOJS	**Bojanci**	**1.82**	**339**	*i* Pn	**Pn**	**03 31 48.2**	**+0.9**
BOJS				*e*Sn	**Sn**	**03 32 12.8**	**+2.2**
AOI	**Ancona**	**1.88**	**263**	Pn	**Pn**	**03 31 48.5**	**+0.4**
AOI				Sn	**Sn**	**03 32 14.2**	**+2.1**
	213nm,0.8s						
TREB	**Trebinje**	**1.93**	**123**	Pn	**Pn**	**03 31 48.3**	**-0.4**
TREB				Sn	**Sn**	**03 32 13.3**	**+0.1**
BRY	**Bratogost**	**1.95**	**117**	*e*Pn	**Pn**	**03 31 49.7**	**+0.6**
BRY				*e*Sn	**Sn**	**03 32 16.2**	**+2.4**
UPM	**Unac-Piva**	**2.08**	**106**	⇑*i*Pn	**Pn**	**03 31 52.5**	**+1.5**
UPM				*e*Sn	**Sn**	**03 32 21.2**	**+4.1**
RGNG	**Rignano Grg**	**2.17**	**192**	Pn	**Pn**	**03 31 51.6**	**-0.6**
HCY	**Herceg Novi**	**2.18**	**128**	⇑*i*Pn	**Pn**	**03 31 51.5**	**-0.9**
HCY				*e*Sn	**Sn**	**03 32 19.5**	**-0.1**
CING	**Cingoli**	**2.20**	**260**	Pn	**Pn**	**03 31 53.0**	**+0.3**
CING				Sn	**Sn**	**03 32 21.8**	**+1.5**
	59nm,0.6s						
VISS	**Visnje**	**2.21**	**335**	*e*Pn	**Pn**	**03 31 53.9**	**+1.1**
TERO	**Teramo**	**2.22**	**239**	Pn	**Pn**	**03 31 53.1**	**+0.2**
TERO				Sn	**Sn**	**03 32 22.4**	**+1.8**
	47nm,0.5s						
NKY	**Niksic**	**2.29**	**115**	⇑*i*Pn	**Pn**	**03 31 55.0**	**+1.1**
NKY				*e*Sn	**Sn**	**03 32 24.8**	**+2.3**
CEY	**Cerknica**	**2.30**	**328**	*i* Pn	**Pn**	**03 31 54.8**	**+0.7**
CIGN	**Sant'Elia a Pi**	**2.34**	**204**	Pn	**Pn**	**03 31 54.7**	**0.0**
	15nm,0.4s						
BBLS	**Bajina Basta -**	**2.34**	**87**	⇓*i*Pn	**Pn**	**03 31 53.6**	**-1.1**
BBLS				Sn	**Sn**	**03 32 25.8**	**+1.9**
ARV	**Arcevia**	**2.36**	**264**	Pn	**Pn**	**03 31 55.2**	**+0.2**
ARV				Sn	**Sn**	**03 32 25.9**	**+1.6**
	36nm,0.6s						
PLE	**Pljevlja**	**2.39**	**100**	*e*Pn	**Pn**	**03 31 57.6**	**+2.2**
PLE				*e*Sn	**Sn**	**03 32 29.6**	**+4.6**
NRCA	**Norcia**	**2.43**	**248**	Pn	**Pn**	**03 31 56.0**	**0.0**
NRCA				Sn	**Sn**	**03 32 27.9**	**+1.8**
	33nm,0.6s						
FAGN	**Fagnano**	**2.44**	**232**	Pn	**Pn**	**03 31 55.9**	**-0.2**
	91nm,0.5s						
FSSB	**Fossombrone**	**2.46**	**269**	Pn	**Pn**	**03 31 56.8**	**+0.4**
FSSB				Sn	**Sn**	**03 32 27.9**	**+1.1**
	36nm,0.2s						
CII	**Carovilli**	**2.49**	**214**	Pn	**Pn**	**03 31 56.2**	**-0.6**
	24nm,0.6s						
BUM	**Brajici-Budva**	**2.50**	**126**	⇑*i*Pn	**Pn**	**03 31 56.2**	**-0.8**
BUM				*e*Sn	**Sn**	**03 32 27.7**	**-0.1**
BSSO	**Busso**	**2.54**	**208**	Pn	**Pn**	**03 31 57.6**	**+0.1**
	68nm,0.6s						
MIDA	**Miranda**	**2.58**	**214**	Pn	**Pn**	**03 31 56.9**	**-1.2**
	43nm,0.5s						
LNSS	**Leonessa**	**2.58**	**243**	Pn	**Pn**	**03 31 58.5**	**+0.3**
LNSS				Sn	**Sn**	**03 32 31.8**	**+1.9**
	72nm,0.4s						
TTG	**Podgorica**	**2.65**	**120**	*e*Pn	**Pn**	**03 31 59.4**	**+0.4**
TTG				*e*Sn	**Sn**	**03 32 32.2**	**+0.7**
KOGS	**Kog**	**2.65**	**1**	*i* Pn	**Pn**	**03 31 58.4**	**-0.7**
ASS	**Assisi**	**2.67**	**255**	Pn	**Pn**	**03 31 59.4**	**0.0**
ASS				Sn	**Sn**	**03 32 33.7**	**+1.7**
	164nm,1.2s						
RSM	**Repubblica di**	**2.69**	**274**	Pn	**Pn**	**03 32 00.6**	**+0.9**
	52nm,0.8s						
PTQR	**Pietraquaria**	**2.70**	**230**	Pn	**Pn**	**03 32 00.6**	**+0.7**
	3.0nm,0.3s						
MURB	**Monte Urbino**	**2.71**	**260**	Pn	**Pn**	**03 32 00.2**	**+0.3**
MURB				Sn	**Sn**	**03 32 34.7**	**+1.7**
	170nm,0.3s						
FIAM	**Fiamignano**	**2.71**	**237**	Pn	**Pn**	**03 32 00.9**	**+0.9**
	40nm,0.7s						
SGG	**Gregorio Mates**	**2.75**	**209**	Pn	**Pn**	**03 32 00.2**	**-0.4**
	35nm,0.6s						
VOY	**Vojsko**	**2.75**	**325**	*e*Pn	**Pn**	**03 32 00.9**	**+0.3**
VOY				*e*Sn	**Sn**	**03 32 35.6**	**+1.3**
VAGA	**Valle Agricola**	**2.78**	**212**	Pn	**Pn**	**03 32 00.6**	**-0.4**
IVA	**Berane**	**2.87**	**108**	*e*Pn	**Pn**	**03 32 03.8**	**+1.5**
IVA				*e*Sn	**Sn**	**03 32 40.4**	**+3.1**
ULC	**Ulcinj**	**2.92**	**128**	*e*Pn	**Pn**	**03 32 01.9**	**-1.0**
ULC				*e*Sn	**Sn**	**03 32 37.1**	**-1.3**
MNS	**Montasola**	**2.92**	**242**	Pn	**Pn**	**03 32 03.3**	**+0.3**
	17nm,0.5s						
PERS	**Pernice**	**2.93**	**346**	*e*Pn	**Pn**	**03 32 03.0**	**-0.1**
OBKA	**Obir**	**2.94**	**338**	⇑*i*PN	**Pn**	**03 32 03.7**	**+0.4**
OBKA				*i* SN	**Sn**	**03 32 42.7**	**+3.7**
CADS	**Cadrg**	**2.98**	**325**	*e*Pn	**Pn**	**03 32 03.8**	**0.0**
PKSM	**Moragy**	**2.98**	**35**	*e*P	**Pn**	**03 32 01.4**	**-2.4**
PKSM				*e*S	**Sn**	**03 32 35.5**	**-4.5**
SG1	**Sgolgore (BA)**	**2.98**	**173**	*e*Pn	**Pn**	**03 32 01.6**	**-2.3**
CERT	**Cerreto**	**2.99**	**233**	Pn	**Pn**	**03 32 04.4**	**+0.5**
	24nm,0.6s						
PVY	**Plav**	**3.03**	**112**	*e*Pn	**Pn**	**03 32 05.5**	**+0.9**
PVY				*e*Sn	**Sn**	**03 32 43.2**	**+1.9**
PVY	**Plav**	**3.03**	**112**	*e*Pn	**Pn**	**03 32 05.4**	**+0.9**
CSSN	**Cassano Irpino**	**3.06**	**197**	Pn	**Pn**	**03 32 05.0**	**+0.1**
	5.0nm,0.3s						
MRLC	**Muro Lucano**	**3.08**	**190**	Pn	**Pn**	**03 32 03.8**	**-1.5**
	12nm,0.7s						
PGD	**Poggio Sodo**	**3.22**	**273**	Pn	**Pn**	**03 32 08.6**	**+1.4**
	15nm,0.6s						
SACS	**San Casciano d**	**3.25**	**254**	Pn	**Pn**	**03 32 07.7**	**0.0**
	40nm,0.6s						
PTCC	**Patocco-Chiusa**	**3.28**	**324**	Pn	**Pn**	**03 32 07.4**	**-0.7**
	21nm,0.4s						
SGO	**Sicignano**	**3.30**	**191**	Pn	**Pn**	**03 32 07.6**	**-0.8**
	5.0nm,0.4s						
ARSA	**Arzberg**	**3.48**	**353**	⇓*i*PN	**Pn**	**03 32 10.1**	**-0.8**
ARSA				*i* SN	**Sn**	**03 32 55.2**	**+2.6**
FVI	**Forni Avoltri**	**3.68**	**321**	Pn	**Pn**	**03 32 15.0**	**+1.2**
	36nm,0.6s						
CTI	**Castel Tesino**	**3.92**	**307**	Pn	**Pn**	**03 32 16.7**	**-0.4**
	15nm,0.4s						
SEST	**Monte Rota**	**4.06**	**318**	Pn	**Pn**	**03 32 19.1**	**0.0**
PII	**Pisa**	**4.09**	**271**	Pn	**Pn**	**03 32 19.1**	**-0.5**
	11nm,0.2s						
MOA	**Molln**	**4.26**	**342**	⇓*i*PN	**Pn**	**03 32 21.8**	**-0.2**
MOA				*i* SN	**Sn**	**03 33 13.6**	**+1.2**
APPI	**Appiano**	**4.40**	**309**	Pn	**Pn**	**03 32 23.3**	**-0.7**
	30nm,0.3s						
MABI	**Malga Bissina**	**4.61**	**301**	Pn	**Pn**	**03 32 26.2**	**-0.7**
	12nm,0.5s						
WTTA	**Wattenberg**	**4.71**	**319**	⇑*i*PN	**Pn**	**03 32 27.6**	**-0.7**
WTTA				*i* SN	**Sn**	**03 33 26.7**	**+3.1**

WATA	Walderalm	4.79	319	⇑iPN	Pn	03 32 29.2	-0.2
WATA				i SN	Sn	03 33 30.1	+4.5
SQTA	Sankt Quirin	4.88	316	⇑iPN	Pn	03 32 30.5	-0.3
SQTA				i SN	Sn	03 33 31.1	+3.0
PGF	Pioggiola	5.39	259	ePn	Pn	03 32 36.8	-1.2
PGF				eSn	Sn	03 33 37.2	-3.7
KHC	Kasperske Hory	5.62	342	ePn	Pn	03 32 40.1	-1.2
KHC				eSn	Sn	03 33 42.5	-4.2
KHC				e		03 33 55.5	
KHC	Kasperske Hory	5.62	342	ePN	Pn	03 32 40.1	-1.2
KHC				eSN	Sn	03 33 42.5	-4.2
KHC				x	x	03 33 55.5	
DAVA	Damuels	5.63	310	⇑iPN	Pn	03 32 39.6	-1.7
DAVA				i SN	Sn	03 33 48.8	+2.0
SBF	Sospel	6.32	274	ePn	Pn	03 32 47.3	-3.8
SBF				eSn	Sn	03 33 57.6	-6.5
MBDF	Montbardon	6.81	281	ePn	Pn	03 32 55.3	-2.7
MBDF				eSn	Sn	03 34 08.8	-7.7
	5.1nm,0.4s						
FRF	La Foret Royal	6.91	271	ePn	Pn	03 32 57.2	-2.2
FRF				eSn	Sn	03 34 12.1	-6.8
	3.1nm,0.4s						
LPG	La Plagne	6.93	287	ePn	Pn	03 32 57.7	-2.0
LPG				eSn	Sn	03 34 12.3	-7.1
	4.8nm,0.3s						
LPL	La Plagne	6.95	288	ePn	Pn	03 32 58.4	-1.5
LPL				eSn	Sn	03 34 12.5	-7.3
	5.5nm,0.3s						
LMR	La Mourre	7.03	270	ePn	Pn	03 32 59.1	-2.1
ORIF	Oris-en-Rattie	7.46	282	ePn	Pn	03 33 04.7	-2.4
ORIF				eSn	Sn	03 34 25.6	-7.1
	7.8nm,0.6s						
HINF	Hinteralfeld	7.65	305	ePn	Pn	03 33 06.6	-3.1
HINF				eSn	Sn	03 34 28.2	-9.1
	2.3nm,0.3s						
CABF	La Chapelle	7.66	295	ePn	Pn	03 33 07.1	-2.8
CABF				eSn	Sn	03 34 29.4	-8.1
	0.6nm,0.2s						
SMRF	Simiane la Rot	7.66	275	ePn	Pn	03 33 07.5	-2.4
HAU	Haudompre	8.04	305	ePn	P	03 33 11.6	-3.6
HAU				eSn	Sn	03 34 37.8	-9.2
	2.3nm,0.3s						
VIVF	Saint-Julien-l	8.31	281	ePn	P	03 33 15.8	-3.2
SMF	Signal de Mont	9.15	292	ePn	P	03 33 27.2	-3.5
LOR	Lormes	9.31	296	eSn	Sn	03 35 08.7	-10

ISC 27 03:48:41.1±1.1**,43.66N**±0.09×**16.1E**±0.1**,h10^{km},n10, σ0^{s}93**/16**,2C-1D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVLJ	Novalja	1.25	317	i Pg	Pg	03 49 04.8	-1.3
NVLJ				i Sg	Sg	03 49 22.4	-0.3
STON	Ston	1.43	123	i Pn	Pn	03 49 07.5	+0.3
STON				i Sg	Sg	03 49 28.8	0.0
BOJS	Bojanci	1.94	343	ePn	Pn	03 49 15.1	+0.6
BOJS				eSn	Sn	03 49 39.7	+0.7
GCIS	Gornji Cirnik	2.23	352	i Pn	Pn	03 49 18.4	-0.3
VISS	Visnje	2.32	338	ePn	Pn	03 49 20.9	+1.0
VOJS	Vojsko	2.83	328	i Pn	Pn	03 49 28.2	+0.8
OBKA	Obir	3.05	340	⇑iPN	Pn	03 49 31.0	+0.7
OBKA				i SN	Sn	03 50 10.1	+2.8
PERS	Pernice	3.05	348	ePn	Pn	03 49 30.0	-0.4
ARSA	Arzberg	3.62	354	⇑iPN	Pn	03 49 36.3	-2.1
ARSA				i SN	Sn	03 50 21.0	-0.6
MOA	Molln	4.38	344	⇓iPN	Pn	03 49 49.0	-0.3
MOA				i SN	Sn	03 50 40.5	-0.5

*NEIC **27** 03:50:05.4, 15.73N×61.52W, h30^{km}, MD3.8(TRN), After TRN.*

TRN 27 03:50:04.4,15.79N×61.44W,h22^{km},MD3.8,4C-14D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGG	Marie-Galante	0.18	43	⇑iP	Pb	03 50 11.5	+2.0
BBL	Barber's Block	0.26	186	⇓iP	Pb	03 50 12.1	+1.4
DOG	Dongo Capester	0.29	325	⇓iP	Pb	03 50 12.3	+1.1
SCG	Saint Claude	0.33	316	⇓iP	Pb	03 50 12.6	+0.9
BCG	Bois Riant Cap	0.34	330	eP	Pb	03 50 12.9	+1.0
MDN	Morne-Daniel	0.47	174	⇓iP	Pb	03 50 16.9	+2.9
MDN				eS	Sb	03 50 23.6	+3.1
DBCT	Belle View Cho	0.52	170	eP	Pb	03 50 17.9	+3.1
DBCT				eS	Sb	03 50 26.3	+4.3
DSHT	Scott's Head	0.58	173	eP	Pb	03 50 18.7	+2.9
DSHT				eS	Sb	03 50 26.8	+3.3
SEG	Port Louis	0.61	354	⇓eP	Pb	03 50 17.8	+1.4
DEG	La Desirade	0.64	35	⇑iP	Pb	03 50 18.2	+1.4
FDF	Fort de France	1.09	165	⇑eP	Pb	03 50 25.7	+1.3
FDF				eS	Sb	03 50 41.2	+3.1
MBRY		1.14	323	⇓eP	Pn	03 50 26.3	+1.1
MBRY				i S	Sb	03 50 42.0	+2.4
MRYT		1.14	323	⇓eP	Pn	03 50 26.3	+1.1
MRYT				i S	Sb	03 50 42.0	+2.4
CRM	Caravelle	1.15	154	⇓eP	Pn	03 50 26.6	+1.2
CRM				eS	Sb	03 50 42.0	+2.0
MBLG		1.16	323	⇓eP	Pn	03 50 26.7	+1.2
MBLG				i S	Sb	03 50 42.0	+1.7
MLGT	Long Ground	1.16	323	⇓eP	Pn	03 50 26.7	+1.2
MLGT				i S	Sb	03 50 42.0	+1.7
MLYT		1.17	322	⇓eP	Pn	03 50 28.2	+2.5
MBWH		1.19	323	⇓eP	Pn	03 50 26.9	+0.9
MBWH				i S	Sb	03 50 42.6	+1.4
MBGB		1.20	321	eP	Pn	03 50 27.4	+1.2
MBGB				i S	Sb	03 50 43.7	+2.1
BPA	Boggy Peak	1.31	342	⇑eP	Pn	03 50 29.6	+2.0
BPA				eS	Sn	03 50 46.7	+2.1
BIM	Bigot	1.31	164	eP	Pn	03 50 29.2	+1.5
MVM	Montagne Vaucl	1.34	157	⇓eP	Pn	03 50 29.6	+1.5
MVM				eS	Sn	03 50 47.5	+2.3
NVBH	Bath Hotel, Ne	1.74	320	eP	Pn	03 50 35.4	+1.6
NVBH				eS	Sn	03 50 58.6	+3.2
SKTB	Turtle Beach	1.81	322	eP	Pn	03 50 36.4	+1.6
SKTB				eS	Sn	03 50 59.7	+2.5
CPB	Codrington	1.88	349	⇓eP	Pn	03 50 37.5	+1.8
CPB				eS	Sn	03 51 02.6	+3.6
SKI	Saint Kitts	1.98	321	eP	Pn	03 50 38.9	+1.7
SKI				eS	Sn	03 51 04.0	+2.5
SKDB	Saint Kitts 2	2.07	321	eP	Pn	03 50 40.2	+1.7
STAT	Sint Eustatius	2.25	319	eP	Pn	03 50 43.6	+2.6
STAT				eS	Sn	03 51 11.3	+2.9
SVB	Belmont	2.51	176	eP	Pn	03 50 48.8	+4.0
SVB				eS	Sn	03 51 17.1	+2.0
GRW	Mount Saint Ca	3.61	183	eP	Pn	03 51 05.1	+4.6
SJG	San Juan	5.06	298	ePn	Pn	03 51 20.4	-0.7
	20nm,0.3s						
SJG				eSn	Sn	03 52 12.8	-6.8

*NIED **27** 03:57:00, 43.30N×146.80E, h32^{km}, Mw3.5 Best double couple: $M_0$1.78×10^{14} NP1:ϕ_s152°, δ89°, λ40°. NP2:ϕ_s62°, δ50°, λ179°.*
*JMA **27** 03:57:03.0±0.3, 43.30N×146.84E, h43^{km}±3^{km}, M3.7*
*MOS **27** 03:57:03.9±0.8, 43.97N×147.01E, h33^{km}, mb3.8/1, Error ellipse: s-maj=61.6km s-min=39.8km az=0.1*
*IDC **27** 03:57:07.9±4.7, 43.57N×146.70E, h78^{km}±33^{km}, mb3.1/5, mb1 3.4/7, mb1mx3.2/21, mbtmp3.6/7, Error ellipse: s-maj=96.2km s-min=22.3km az=172.0*

ISC 27 03:57:03.3±1.2**,43.41N**±0.09×**146.8E**±0.1**,h55^{km}**±10^{km}**, n19,σ0^{s}75**/29**,mb3.3**/5**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.78	267	P	P	03 57 18.0	-0.4
NEM2				eS	S	03 57 29.3	-0.3
YUK	Yuzh-Kuril'sk	0.93	313	ePN	P	03 57 19.5	-1.0
YUK				i S	S	03 57 32.0	-1.2
YUK				pmax	pmax		
	comp=Z,880nm,0.4s						
YUK				smax			
	comp=N,3μm,0.5s						
YUK				smax			
	comp=E,3μm,0.5s						
YUK				smax			
	comp=N,8μm,1.0s						
YUK				smax			
	comp=E,3.0nm,0.6s						
JRA	Rausu	1.34	294	P	P	03 57 26.8	+0.6
JRA				eS	S	03 57 43.9	+0.7
JNK	Nakash	1.54	277	P	P	03 57 28.7	-0.2
JNK				eS	S	03 57 48.0	+0.1
JAK	Akkeshi	1.60	256	P	P	03 57 29.4	-0.5
JAK				eS	S	03 57 48.6	-0.9
JTKR	Abashiri--Toko	2.18	286	P	P	03 57 39.1	+1.1
JAR	Ashorobuto	2.22	268	P	P	03 57 38.7	+0.1
JAR				eS	S	03 58 05.8	+1.0
JOB	Onbets	2.24	258	P	P	03 57 38.7	-0.1
JOB				eS	S	03 58 05.6	+0.4
JMP	Maruseppu	2.58	285	P	P	03 57 44.7	+1.1
JCH	Churui	2.65	254	P	P	03 57 44.7	0.0
JCH				eS	S	03 58 14.9	-0.8
ASAJ	Asahikawa	3.14	285	PN	P	03 57 53.2	+1.7
ASAJ				S	S	03 58 35.9	+7.9
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=E,1.0nm,0.3s						
ASAJ	Asahikawa	3.14	285	P	P	03 57 53.2	+1.7
	comp=E,3.6nm,0.3s,baz=109,slow=10,SNR=14						
ASAJ				S	S	03 58 35.9	+7.9
	comp=E,1.3nm,0.3s,baz=225,slow=19,SNR=3.4						
FX1	Attu Island--F	19.87	52	P	P	04 01 33.0	+0.7
FX1				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FX1	Attu Island--F	19.87	52	P	P	04 01 33.0	+0.6
	comp=Z,0.8nm,0.3s,baz=238,slow=9.5,SNR=4.4						
SONM	Songino Array	28.38	293	P	P	04 02 53.4	-0.7
	comp=Z,0.2nm,0.4s,mb3.1,baz=85,slow=9.2,SNR=2.8						
ILAR	Eielson Array	41.91	36	P	P	04 04 48.9	-0.5
	comp=Z,0.4nm,0.5s,mb3.3,baz=269,slow=9.0,SNR=7.8						
MKAR	Makanchi Array	44.53	298	P	P	04 05 10.3	-0.6
	comp=Z,0.1nm,0.4s,mb3.0,baz=79,slow=9.1,SNR=3.8						
FINES	FINESS Array B	65.07	333	P	P	04 07 38.8	-0.7
	comp=Z,0.4nm,0.7s,mb3.6,baz=53,slow=6.9,SNR=4.3						
TXAR	Lajitas Array	83.04	56	P	P	04 09 24.7	+0.7
	comp=Z,0.2nm,0.5s,mb3.4,baz=292,slow=3.2,SNR=6.4						

*NEIC **27** 04:04:14.5±1.4, 19.69S×68.93W, h119^{km}±12^{km}, mb3.9/1, Error ellipse: s-maj=23.3km s-min=11.8km az=214.0*
*IDC **27** 04:04:16.6±4.7, 19.61S×68.77W, h135^{km}±33^{km}, mb3.8/2, mb1 3.6/5, mb1mx3.3/18, mbtmp3.9/5, Error ellipse: s-maj=63.0km s-min=30.0km az=45.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 27 04:04:13.7±1.9**,19.7S**±0.2×**68.9W**±0.2**,h129^{km}**±18^{km}**,n14, σ0^{s}92**/12**,mb3.9**/2**,1C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.45	13	P	P	04 05 09.2	+2.1
	4.9nm,0.3s,baz=212,slow=7.0,SNR=154						
LPAZ	La Paz	3.45	13	⇑iPn	P	04 05 09.1	+2.0
LPAZ				eSn	S	04 05 22.3	-25
ARE	Arequipa	4.02	322	eP	P	04 05 14.0	-0.7
ARE				eS	S	04 05 52.0	-9.4
SIV	San Ignacio	8.32	65	P	P	04 06 11.8	-0.9
	0.5nm,0.3s,baz=258,slow=10,SNR=28						
CPUP	Villa Florida	12.56	124	P	P	04 07 09.3	+0.5
	0.1nm,0.3s,baz=299,slow=10,SNR=3.3						
CPUP	Villa Florida	12.56	124	P	P	04 07 09.2	+0.3
DBIC	Dimbokro	68.24	74	P	P	04 15 02.7	-0.3
	1.2nm,0.5s,mb3.9,baz=275,slow=11,SNR=3.5						
DBIC	Dimbokro	68.24	74	eP	P	04 15 02.7	-0.3
	0.8nm,0.5s,mb3.7						
YKA	Yellowknife Ar	89.47	341	P	P	04 16 57.2	+0.4
	1.3nm,0.7s,mb4.0,baz=129,slow=4.5,SNR=9.1						
YKA	Yellowknife Ar	89.47	341	P	P	04 16 57.2	+0.4
WRA	Warramunga Arr	134.51	211	PKP	PKPdf	04 23 20.0	+2.5
	0.5nm,0.6s,baz=144,slow=1.8,SNR=4.5						
WRAB	Tennant Creek	134.51	211	PKPdf	PKPdf	04 23 20.0	+2.4
TLY	Talaya	147.53	9	ePKPdf	PKPdf	04 23 42.0	+2.3
SONM	Songino Array	151.65	7	PKPbc	PKPdf	04 23 54.9	+8.8
	0.8nm,0.5s,baz=298,slow=1.3,SNR=6.5						

MAN 27 04:46:20.6,10.32N×123.72E,h1^{km},mb3.8,ML2.6,MS2.1, 1D,Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.25	90	⇓iP	Pg	04 46 25.6	+0.1
LLP				i S	Sg	04 46 28.9	+0.1
TBP	Tagbilaran	0.64	167	eP	Pg	04 46 33.2	-0.2
TBP				eS	Sg	04 46 40.2	-1.6
MSLP	Maasin	1.14	99	i P	Pb	04 46 42.6	-0.2
MSLP				eS	Sb	04 46 58.0	+0.1
GUIM	Jordan	1.15	286	i P	Pb	04 46 42.5	-0.4
GUIM				eS	Sb	04 47 00.4	+2.2

*CSEM **27** 04:53:21.0±0.3, 35.46N×11.51E, h10^{km}, ML3.2/2, Error ellipse: s-maj=9.6km s-min=2.5km az=6.0*
*NEIC **27** 04:53:22.6±2.9, 35.73N×11.35E, h10^{km}, Error ellipse: s-maj=38.5km s-min=7.2km az=194.0*
*LDG **27** 04:53:23.3±0.8, 35.58N×11.37E, h10^{km}, Ml3.2/2, Error ellipse: s-maj=22.2km s-min=4.9km az=17.0*

ISC 27 04:53:20.0±1.5**,35.7N**±0.1×**11.22E**±0.06**,h10^{km},n21, σ0^{s}93**/28**,Tunisia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTS	Pantelleria	1.26	30	Pn	Pn	04 53 42.8	-0.9
PTS				Sn	Sn	04 54 04.7	+3.9
FAVR	Favara	2.50	51	Pn	Pn	04 54 03.3	+1.8
GIB	Gibilmanna	3.19	44	Pn	Pn	04 54 11.5	+0.1
GIB				Sn	Sn	04 54 49.8	-0.1
PZI	Palazzolo	3.29	65	P	Pn	04 54 11.9	-0.8
USI	Ustica	3.37	27	Pn	Pn	04 54 14.3	+0.4
SSY	Sortino	3.42	64	Pn	Pn	04 54 13.2	-1.4
SSY				Sn	Sn	04 54 55.1	-0.5
AGST	Augusta-Monte	3.57	63	Pn	Pn	04 54 16.9	+0.1
VSL	Villasalto	4.05	339	ePn	Pn	04 54 25.1	+1.6
VSL				eS	Sn	04 55 11.2	-0.4
VSL	Villasalto	4.05	339	ePn	Pn	04 54 25.1	+1.6
VSL				eS	Sn	04 55 11.2	-0.3
SLNA	Salina	4.05	44	P	Pn	04 54 24.2	+0.7
MTTG	Motta San Giov	4.25	56	P	Pn	04 54 26.9	+0.5
SCLL	Scilla	4.40	53	P	Pn	04 54 29.3	+0.8
SOI	Samo	4.53	57	P	Pn	04 54 29.8	-0.6
MGR	Morigerati	5.58	36	P	Pn	04 54 45.3	+0.1
PGF	Pioggiola	7.04	346	ePn	Pn	04 55 07.0	+1.3
PGF				eSn	Sn	04 56 22.2	-4.4
	1.3nm,0.2s						
LMR	La Mourre	8.43	336	ePn	P	04 55 24.4	-0.8
FRF	La Foret Royal	8.59	337	ePn	P	04 55 26.6	-0.8
SBF	Sospel	8.64	341	ePn	P	04 55 25.6	-2.5
SMRF	Simiane la Rot	9.32	334	ePn	P	04 55 38.2	+0.7
LASF	Ste Croix	10.08	328	ePn	P	04 55 47.8	-0.2
MTLF	Montolieu	10.31	320	ePn	P	04 55 51.2	+0.1
MTLF				eSn	S	04 57 42.0	-5.7
	1.0nm,0.4s						

*CSEM **27** 05:11:10.4±0.4, 35.14N×11.32E, h30^{km}, ML3.5/2, Error ellipse: s-maj=9.6km s-min=2.9km az=14.0*
*NEIC **27** 05:11:17.4±2.9, 35.91N×11.61E, h10^{km}, mb3.6/2, Error ellipse: s-maj=38.6km s-min=9.5km az=197.0*
*LDG **27** 05:11:18.4±1.3, 35.72N×11.66E, h10^{km}, Ml3.6/5, Error ellipse: s-maj=31.9km s-min=8.0km az=20.0*

ISC 27 05:11:18.8±1.6**,36.0N**±0.1×**11.49E**±0.07**,h33^{km}**±19^{km}**, n29,σ1^{s}37**/38**,mb3.9**/1**,Tunisia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMGO	Monte Magaggia	2.01	36	Pn	P	05 11 50.3	-0.7
LVI	Isola Levanzo	2.06	19	Pn	P	05 11 54.8	+3.1
FAVR	Favara	2.14	54	Pn	P	05 11 55.1	+2.3
WDD	Wield Dalam	2.47	93	Pn	P	05 12 02.0	+4.5
WDD				Sn	S	05 12 23.1	-3.7
GIB	Gibilmanna	2.81	45	Pn	P	05 12 02.3	-0.2
GIB				Sn	S	05 12 43.3	+7.7
PZI	Palazzolo	2.97	69	Pn	P	05 12 02.3	-2.3
PZI				Sn	S	05 12 39.7	+0.3
USI	Ustica	2.99	26	Pn	P	05 12 05.3	+0.4
SSY	Sortino	3.09	68	Pn	P	05 12 04.3	-2.1
SSY				Sn	S	05 12 43.0	+0.3
MNO	Monte Soro	3.19	53	Pn	P	05 12 08.1	+0.3
AGST	Augusta-Monte	3.24	67	Pn	P	05 12 06.1	-2.5
VSL	Villasalto	3.83	335	Pn	P	05 12 16.1	-0.8
VSL				Sn	S	05 13 00.4	-1.1
MTTG	Motta San Giov	3.90	59	Pn	P	05 12 17.8	0.0
SCLL	Scilla	4.04	56	Pn	P	05 12 21.1	+1.3
SOI	Samo	4.18	60	Pn	P	05 12 21.4	-0.5
DGI	Dorgali Grotta	4.52	341	Pn	P	05 12 26.0	-0.7
MGR	Morigerati	5.20	37	Pn	P	05 12 35.7	-0.6
	9.1nm,0.6s						
TIP	Timpagrande	5.23	52	ePn	P	05 12 37.9	+1.2
TIP	Timpagrande	5.23	52	ePn	P	05 12 37.8	+1.1
PGF	Pioggiola	6.78	344	ePn	P	05 12 58.0	-0.5
PGF				eSn	S	05 14 18.4	+3.0
	12nm,0.5s						
LMR	La Mourre	8.23	334	ePn	P	05 13 21.1	+2.4
FRF	La Foret Royal	8.38	335	ePn	P	05 13 23.4	+2.6
FRF				eSn	S	05 14 54.2	-1.1
	5.1nm,0.4s						
SBF	Sospel	8.41	340	ePn	P	05 13 21.5	+0.3
SMRF	Simiane la Rot	9.13	332	ePn	P	05 13 34.9	+3.7
SMRF				eSn	S	05 15 13.5	-0.4
	4.3nm,0.5s						
LASF	Ste Croix	9.93	326	ePn	P	05 13 38.4	-3.8
LASF				eSn	S	05 15 25.0	-8.6
	1.1nm,0.3s						
MTLF	Montolieu	10.20	318	ePn	P	05 13 47.0	+1.1
MTLF				eSn	S	05 15 37.2	-3.1
	2.7nm,0.5s						
VIVF	Saint-Julien-l	10.22	332	ePn	P	05 13 47.8	+1.6
CLL	Collm	15.30	4	e*PP		05 14 57.0	
BR131	Keskin Array S	17.86	71	P	P	05 15 26.6	+0.3
	2.2nm,0.8s						
MALT	Malatya	21.56	76	eP	P	05 16 06.7	-0.6
	4.5nm,0.9s,mb3.9						

*SNSN **27** 05:12:30.6, 28.06N×33.80E, h4^{km}, Ml2.7*
*CSEM **27** 05:12:31.5±0.4, 28.03N×33.95E, h2^{km}, ML2.7, Error ellipse: s-maj=9.9km s-min=3.5km az=80.0*
*GII **27** 05:12:32.4±0.9, 28.24N×33.70E, h2^{km}±30^{km}, ML2.6/3*

ISC 27 05:12:30.5±3.6**,28.05N**±0.08×**33.7E**±0.2**,h16^{km}**±20^{km}**, n10,σ0^{s}26**/12**,Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAYS	Tayyib Ism	1.14	63	P	Pb	05 12 51.0	-0.3
TAYS				S	Sb	05 13 05.8	+0.2
AYUS	'Aynunah	1.38	84	P	Pn	05 12 54.9	-0.3
JMOS	Jabal al Moall	1.66	47	P	Pn	05 12 59.7	+0.5
EIL	Elat	1.95	34	Sn	Sn	05 13 27.4	-0.1
MBH	Mount Berech	2.03	31	Sn	Sn	05 13 29.8	+0.1
AQBJ	Aqaba	2.04	35	Sn	Sn	05 13 30.3	+0.3
JMQS	Jabal Moqyreh	2.08	66	P	Pn	05 13 05.1	-0.1
DBAS	Duba	2.17	112	P	Pn	05 13 06.6	+0.1
HRFI	Mount Harif	2.30	30	Pn	Pn	05 13 08.5	+0.2
HRFI				Sn	Sn	05 13 36.4	0.0
PRNI	Paran	2.56	26	Sn	Sn	05 13 42.7	-0.4

*NEIC **27** 05:37:47.0±2.1, 35.60N×11.35E, h10^{km}, Error ellipse: s-maj=29.3km s-min=5.7km az=196.0*
*LDG **27** 05:37:49.0±0.9, 35.57N×11.33E, h10^{km}, Ml3.4/3, Error ellipse: s-maj=22.5km s-min=5.3km az=14.0*
*CSEM **27** 05:37:49.7±0.2, 35.74N×11.49E, h10^{km}, ML3.2/2, Error ellipse: s-maj=7.1km s-min=1.6km az=19.0*

ISC 27 05:37:47.3±1.4**,35.9N**±0.1×**11.32E**±0.07**,h10^{km},n26, σ1^{s}18**/31**,Tunisia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMGO	Monte Magaggia	2.25	36	Pn	Pn	05 38 25.9	+0.8
FAVR	Favara	2.36	52	Pn	Pn	05 38 28.9	+2.2
WDD	Wield Dalam	2.60	89	Pn	Pn	05 38 29.6	-0.6
GIB	Gibilmanna	3.05	45	Pn	Pn	05 38 37.4	+0.9
PZI	Palazzolo	3.17	67	Pn	Pn	05 38 37.8	-0.4
PZI				Sn	Sn	05 39 15.1	-1.3
USI	Ustica	3.22	27	Pn	Pn	05 38 45.7	+6.8
SSY	Sortino	3.29	66	Pn	Pn	05 38 39.3	-0.7
MNO	Monte Soro	3.41	51	Pn	Pn	05 38 43.1	+1.4
AGST	Augusta-Monte	3.45	65	Pn	Pn	05 38 41.4	-0.8
VSL	Villasalto	3.95	338	Pn	Pn	05 38 52.1	+2.7
VSL				Sn	Sn	05 39 36.6	+0.3
MTTG	Motta San Giov	4.11	57	Pn	Pn	05 38 51.8	+0.2
SCLL	Scilla	4.26	54	Pn	Pn	05 38 53.5	-0.2
DGI	Dorgali Grotta	4.66	344	Pn	Pn	05 39 01.8	+2.4
MGR	Morigerati	5.43	37	Pn	Pn	05 39 10.0	-0.3
	4.0nm,0.4s						
TIP	Timpagrande	5.45	51	eP	Pn	05 39 10.3	-0.3
TIP	Timpagrande	5.45	51	eP	Pn	05 39 10.3	-0.3
PGF	Pioggiola	6.93	346	ePn	Pn	05 39 33.7	+2.3
PGF				eSn	Sn	05 40 49.4	-1.7
	7.3nm,0.6s						
LMR	La Mourre	8.35	335	ePn	P	05 39 50.6	-0.6
LMR				eSn	Sn	05 41 21.2	-5.3
	1.5nm,0.3s						
FRF	La Foret Royal	8.50	336	ePn	P	05 39 52.8	-0.6
SBF	Sospel	8.54	341	ePn	P	05 39 51.8	-2.1
SMRF	Simiane la Rot	9.24	333	ePn	P	05 40 04.7	+1.2
MBDF	Montbardon	9.52	340	ePn	P	05 40 08.0	+0.5
LASF	Ste Croix	10.01	327	ePn	P	05 40 12.5	-1.7
MTLF	Montolieu	10.26	320	ePn	P	05 40 16.8	-0.8
MTLF				eSn	S	05 42 07.5	-6.2
	1.7nm,0.4s						
VIVF	Saint-Julien-l	10.32	333	ePn	P	05 40 17.7	-0.8
CAF	Calviac	11.48	325	ePn	P	05 40 34.3	0.0

IGQ 27 05:58:55.4,0.66S×78.39W,h10^{km}±1^{km},mb4.0,16C-7D, Error ellipse: s-maj=1.0km s-min=0.5km az=11.5, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VC1	Cotopaxi 1	0.02	334	⇑P	Pg	05 58 57.6	+0.4
TAMB	Tambo	0.04	142	⇓P	Pg	05 58 58.1	+0.8
CAMI	Rancho Maria	0.11	262	⇓P	Pg	05 58 59.2	+1.0
ANTI	Antisana	0.31	48	⇑P	Pg	05 59 02.1	+0.2
PISA	Pisayambo	0.39	179	⇑P	Pg	05 59 04.2	+0.8
JUA2	San Juan 2	0.49	335	⇑P	Pg	05 59 05.8	+0.4
JUA2				S	Sg	05 59 13.4	+1.4
GGP	Refugio Guagua	0.52	337	⇑P	Pg	05 59 06.4	+0.4
TERV	Terraza Guagua	0.53	336	⇑P	Pg	05 59 06.5	+0.4
PINO	Pino	0.54	337	⇑P	Pg	05 59 06.8	+0.3
YANA	Yana	0.57	342	⇑P	Pg	05 59 07.0	+0.1
YANA				S	Sg	05 59 14.9	+0.3
RUN5	Runtun	0.75	182	P	Pb	05 59 10.0	-0.1
RUN5				S	Sb	05 59 21.1	+1.0
JUIV	Juive	0.76	185	⇓P	Pb	05 59 10.4	+0.1
CAYR	Refugio Cayamb	0.78	30	⇑P	Pb	05 59 11.1	+0.6
CAYR				S	Sb	05 59 22.0	+1.1
CUSU	Cusua	0.78	186	⇓P	Pb	05 59 10.8	+0.2
CUSU				S	Sb	05 59 20.9	-0.2
ULBA	Ulba	0.78	181	⇑P	Pb	05 59 10.4	-0.3
CAYA	Cayambe	0.83	29	⇑P	Pb	05 59 11.9	+0.4
CAYA				S	Sb	05 59 22.8	+0.2
ARRY	Arrayan	0.84	184	⇑P	Pb	05 59 11.4	-0.3
ARRY				S	Sb	05 59 23.2	+0.5
IGUA	Igualata	0.86	197	⇑P	Pb	05 59 12.7	+0.7
CHAR	Charly	0.92	52	⇓P	Pb	05 59 14.0	+0.9
LAV3	Lava3-Reventad	0.95	54	⇓P	Pb	05 59 14.2	+0.7
ECOPE	Copete-Rev Vol	0.95	54	⇓P	Pb	05 59 14.2	+0.7
ECOPE				S	Sb	05 59 26.8	+0.8
CONE	Cono NE Rev Vo	0.95	52	⇑P	Pb	05 59 14.4	+0.8
CONE				S	Sb	05 59 27.5	+1.4
COTA	Cotacachi	0.99	3	⇑P	Pb	05 59 14.6	+0.3
ECEN	Cerro Negro	1.54	16	⇑P	Pn	05 59 24.3	+1.2
LORE	San Lorenzo	2.00	347	P	Pn	05 59 32.4	+2.7
HOJA	Cerro de Hojas	2.19	260	P	Pn	05 59 33.4	+1.0

*BJI **27** 06:05:45.7, 13.30N×89.00W, h76^{km}, Ms4.3, Msz4.0*
*NEIC **27** 06:05:48.8±0.4, 13.27N×89.01W, mb4.3/23, MD4.9(CASC), MD4.5(SNET), Error ellipse: s-maj=16.8km s-min=4.7km az=51.0*
NEIC Felt [III] at San Salvador.
*CASC **27** 06:05:48.4±2.2, 13.10N×89.10W, h55^{km}±22^{km}, MD4.4, ML4.3, mb4.3(NEIC)*
*IDC **27** 06:05:49.4±0.8, 13.40N×88.84W, h83^{km}±8^{km}, mb3.7/10, mb1 4.0/12, mb1mx3.9/22, mbtmp4.1/12, Error ellipse: s-maj=29.0km s-min=9.8km az=51.0*

ISC 27 06:05:47.5±0.6**,13.27N**±0.07×**89.03W**±0.07**,h79^{km}**±4^{km}**, n89,σ1^{s}04**/87**,mb4.2**/31**,6C-15D,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LFRS	El Faro	0.35	355	⇓*i*P	Px	06 06 09.8	
LFRS				*e*S	Sx	06 06 20.5	
LCBS	La Ceiba	0.39	8	⇓*i*P	Px	06 06 10.4	
LCBS				*e*S	Sx	06 06 19.9	
SNVI	San Vicente	0.39	29	⇓*e*P	Px	06 06 10.8	
SNVI				*e*S	Sx	06 06 20.2	
SNET	Serv Nac Est T	0.46	335	⇓*e*P	P	06 05 60.0	-0.8
SNET				*e*S	S	06 06 09.9	-0.9
SNET				*i*		06 06 23.8	
	comp=Z,21µm,0.3s						
LBRS	Las Brisas	0.47	358	⇓*i*P	Px	06 06 11.7	
LBRS				*e*S	Sx	06 06 20.7	
BOQS	Boqueron	0.52	332	⇓*i*P	Px	06 06 11.5	
BOQS				*e*S	Sx	06 06 22.4	
VSM	San Miguel	0.75	78	⇑*e*P	Px	06 06 11.0	
VSM				*e*S	Sx	06 06 23.8	
BLLM	Bellamira	0.79	77	⇓*i*P	Px	06 06 15.6	
BLLM				*e*S	Sx	06 06 29.0	
SBLS	San Blas	0.81	314	⇓*i*P	Px	06 06 14.2	
SBLS				*e*S	Sx	06 06 27.0	
SNJE	San Jose	0.82	317	⇓*e*P	Px	06 06 14.4	
SNJE				*e*S	Sx	06 06 26.9	
RTR	El Retiro	0.86	316	⇓*i*P	Px	06 06 15.1	
RTR				*e*S	Sx	06 06 27.9	
CAHU	Cacacuatique	0.94	58	⇑*e*P	Px	06 06 18.3	
CAHU				*e*S	Sx	06 06 32.9	
CNCH	Conchagua	1.17	90	⇓*e*P	Px	06 06 20.2	
CNCH				*e*S	Sx	06 06 37.8	
CRIN	San Cristobal	2.01	106	*e*P	P	06 06 21.5	+1.4
TEL3	Telica 3	2.24	108	*e*P	P	06 06 24.0	+0.7
TEL3				*e*S	S	06 06 51.3	+1.4
LEON	Leon	2.25	112	*e*P	P	06 06 23.1	-0.4
LEON				*e*S	S	06 06 48.1	-2.0
CNGN	Cerro Negro	2.40	108	*e*P	P	06 06 25.7	+0.2
MIRN	Miramar	2.41	110	⇓*e*P	P	06 06 25.6	-0.1
MOMJ	Momotombo	2.58	109	⇑*e*P	P	06 06 28.2	+0.2
MOMJ				*e*S	S	06 06 59.0	+0.7
APYN	Apoyeque	2.81	111	⇓*e*P	P	06 06 31.5	+0.2
APYN				*e*S	S	06 07 02.9	-1.3
XAVN	Gruta Xavier	2.87	113	⇑*e*P	P	06 06 32.0	0.0
MGAN	Managua	2.94	112	*e*P	P	06 06 32.4	-0.7
MGAN				*e*S	S	06 07 06.2	-1.0
MGAN				*i*		06 07 10.6	
	comp=N,831nm,0.4s						
CRUN	El Crucero	2.96	115	*e*P	P	06 06 34.2	+0.8
WILN	Americas 2	2.98	111	*e*P	P	06 06 33.6	-0.1
WILN				*e*S	S	06 07 08.5	0.0
PYTN	Playitas	2.99	104	*e*P	P	06 06 34.3	+0.5
TICN	Ticuantepe	3.00	114	⇑*e*P	P	06 06 33.7	-0.2
APON	Apoyo	3.19	115	⇓*e*P	P	06 06 36.5	-0.1
CONN	Concepcion	3.73	117	*e*P	P	06 06 44.0	-0.2
VCR	Vista de Mar	4.57	133	*e*P	P	06 06 54.7	-1.0
VCR	Vista de Mar	4.57	133	*e*P	P	06 06 54.4	-1.3
JTS	JuntasAbangare	4.97	126	P	P	06 07 01.2	-0.1
	comp=N,11nm,0.3s,baz=311,slow=22,SNR=24						
JTS				S	S	06 07 57.4	-0.5
	comp=N,7.3nm,0.3s,baz=340,slow=21,SNR=3.2						
JTS	JuntasAbangare	4.97	126	*e*Pn	P	06 07 00.4	-0.9
JTS				*e*		06 07 08.5	
JTS				Sn	S	06 07 59.8	+1.8
PRS1	Puriscal	5.66	125	*e*P	P	06 07 12.0	+1.2
PRS1	Puriscal	5.66	125	⇑*e*P	P	06 07 12.1	+1.4
PRS1				*e*S	S	06 08 16.1	+1.0
TRTC	Tortuguero	5.85	117	*e*P	P	06 07 12.4	-0.9
TRTC	Tortuguero	5.85	117	*e*P	P	06 07 11.9	-1.5
SJS	Escuela Geolog	5.89	124	*e*P	P	06 07 15.5	+1.6
SJS				*e*S	S	06 08 27.1	+6.3
SJS	Escuela Geolog	5.89	124	*e*P	P	06 07 14.6	+0.7
SJS				*e*S	S	06 08 19.9	-1.0
URSC	Urasca	6.18	123	*e*P	P	06 07 18.7	+0.8
URSC	Urasca	6.18	123	*e*P	P	06 07 18.3	+0.4
BUS	Buena Vista	6.35	125	*e*P	P	06 07 21.6	+1.2
BUS	Buena Vista	6.35	125	*e*P	P	06 07 21.4	+1.1
BUS				*e*S	S	06 08 32.1	0.0
SVTC	San Vito de Co	7.44	126	⇓*e*P	P	06 07 35.8	+0.4
SVTC				*e*S	S	06 08 60.0	+1.0
SDV	Santo Domingo	18.57	102	P	P	06 09 59.4	-1.4
	comp=N,2.3nm,0.3s,baz=304,slow=4.8,SNR=18						
SDV	Santo Domingo	18.57	102	*e*P	P	06 09 58.5	-2.3
	comp=N,10nm,0.7s						
LRAL	Lakeview Retre	19.76	5	*e*Pn	P	06 10 14.8	+1.1
	comp=N,7.9nm,0.8s						
TXAR	Lajitas Array	20.97	322	P	P	06 10 27.1	+0.8
	comp=N,1.9nm,0.5s,baz=145,slow=10,SNR=34						
TXAR				PcP	PcP	06 14 31.2	-0.2
	comp=N,0.2nm,0.5s,baz=120,slow=1.4,SNR=4.4						
TXAR	Lajitas Array	20.97	322	P	P	06 10 27.1	+0.8
TXAR				PcP	PcP	06 14 31.2	-0.2
OXF	Oxford	21.15	359	*e*P	P	06 10 29.3	+1.4
	comp=N,17nm,0.8s,mb4.4						
MIAR	Mount Ida	21.58	350	*e*P	P	06 10 34.7	+2.5
	comp=N,8.0nm,0.9s,mb4.0						
WVT	Waverly	22.79	3	*e*P	P	06 10 45.8	+1.7
	comp=N,8.1nm,1.1s,mb4.0						
WMOK	Wichita Mounta	23.12	339	*e*P	P	06 10 47.0	-0.4
	comp=N,3.1nm,0.5s,mb3.9						
TZTN	Tazewell	23.69	11	*e*P	P	06 10 54.4	+1.5
AMTX	Amarillo	24.37	334	*e*P	P	06 11 00.2	+0.7
	comp=N,6.2nm,0.5s,mb4.2						
CCM	Cathedral Cave	24.76	356	*e*P	P	06 11 03.1	-0.2
	comp=N,10nm,0.8s,mb4.3						
SDCO	Great Sand Dun	28.45	332	*e*P	P	06 11 37.3	+0.1
	comp=N,1.5nm,0.8s,mb3.6						
MSU	Marysvale	32.46	325	*e*P	P	06 12 12.1	-0.4
SADO	Sadowa	32.51	13	P	P	06 12 10.8	-2.0
	comp=N,2.7nm,0.6s,mb4.3,baz=215,slow=8.2,SNR=6.8						
RSSD	Black Hills	33.33	340	*e*P	P	06 12 20.1	+0.1
	comp=N,2.6nm,0.6s,mb4.2						
SAML	Samuel	33.85	129	*e*P	P	06 12 21.5	-3.2
	comp=N,7.8nm,0.9s,mb4.5						
BW06	Boulder Array	34.33	333	*e*P	P	06 12 28.6	0.0
	comp=N,0.8nm,0.6s,mb3.7						
PDAR	Pinedale Array	34.33	333	P	P	06 12 28.3	-0.3
	comp=N,1.0nm,0.6s,mb3.8,baz=132,slow=9.8,SNR=12						
PDAR				PcP	PcP	06 15 01.7	-1.5
	comp=N,0.6nm,0.6s,baz=156,slow=4.7,SNR=5.3						
REDW	Red Top Meadow	35.38	332	*e*P	P	06 12 37.9	+0.3
	comp=N,9.6nm,0.6s,mb4.8						
SNOW	Snow King Moun	35.42	332	*e*P	P	06 12 37.8	0.0
	comp=N,12nm,0.6s,mb4.9						
LOHW	Long Hollow	35.47	333	*e*P	P	06 12 38.9	+0.6
	comp=N,6.1nm,0.8s,mb4.5						
RRI2	Red Ridge	35.59	332	*e*P	P	06 12 40.2	+0.9
	comp=N,2.3nm,0.6s,mb4.3						
MOOW	Moose Ponds	35.64	333	*e*P	P	06 12 40.3	+0.6
	comp=N,2.7nm,0.8s,mb4.2						
IMW	Indian Meadow	35.84	333	*e*P	P	06 12 42.8	+1.3
	comp=N,3.2nm,0.6s,mb4.4						
LPAZ	La Paz	35.91	144	P	P	06 12 42.6	+0.4
	comp=N,0.3nm,0.3s,mb3.7,baz=333,slow=11,SNR=2.8						
NVAR	Mina Array Bea	36.08	319	P	P	06 12 44.4	+0.9
	comp=N,0.8nm,0.7s,mb3.7,baz=126,slow=8.4,SNR=6.2						
NVAR				pP	pP	06 13 03.1	+0.6
	comp=N,0.9nm,0.7s,baz=127,slow=8.5,SNR=4.9						
NVAR				PcP	PcP	06 15 08.5	+0.1
	comp=N,1.4nm,0.9s,baz=123,slow=5.2,SNR=5.6						
NVAR				pPcP		06 15 26.2	
	comp=N,0.6nm,0.6s,baz=108,slow=3.1,SNR=4.3						
LAO	LASA Array	36.32	340	*e*P	P	06 12 45.4	0.0
	comp=N,5.0nm,0.6s,mb4.6						
HLID	Hailey	37.24	329	*e*P	P	06 12 53.3	+0.1
	comp=N,0.8nm,0.6s,mb3.8						
MCMT	McKenzie Canyo	37.43	332	*e*P	P	06 12 56.1	+1.3
BOZ	Bozeman (W)	37.52	334	*e*P	P	06 12 55.5	0.0
	comp=N,1.4nm,0.7s,mb3.9						
SIV	San Ignacio	40.12	136	P	P	06 13 17.5	+0.1
	comp=N,1.4nm,0.4s,mb4.1,baz=316,slow=11,SNR=5.9						
EDM	Edmonton	44.30	339	*e*P	P	06 13 49.8	-1.2
SCHQ	Schefferville	44.96	18	P	P	06 13 54.8	-1.6
	comp=N,5.3nm,0.9s,mb4.3,baz=213,slow=8.1,SNR=11						
SCHQ				PcP	PcP	06 15 34.3	-2.6
	comp=N,1.4nm,0.5s,baz=245,slow=6.3,SNR=6.0						
FCC	Fort Churchill	45.56	356	*e*P	P	06 13 59.6	-1.5
	comp=N,2.8nm,0.5s,mb4.2						
CFAA	Coronel Fontan	48.88	156	P	P	06 14 27.1	-0.3
	comp=N,0.1nm,0.4s,mb3.1,baz=319,slow=9.3,SNR=3.4						
CFAA				pP	pP	06 14 46.0	-0.9
	comp=N,0.1nm,0.5s,baz=307,slow=7.7,SNR=2.7						
BDFB	Brasilia	49.71	124	P	P	06 14 32.0	-2.1
	comp=N,1.5nm,0.5s,mb4.2,baz=279,slow=6.6,SNR=4.1						
YKA	Yellowknife Ar	52.42	345	P	P	06 14 52.2	-1.7
	comp=N,2.5nm,0.4s,mb4.5,baz=143,slow=7.6,SNR=46						
YKA	Yellowknife Ar	52.42	345	P	P	06 14 52.2	-1.7
DLBC	Dease Lake	54.51	335	P	P	06 15 08.4	-1.0
RES	Resolute Bay	61.49	358	*e*P	P	06 15 55.3	-2.7
	comp=N,2.3nm,0.4s,mb4.6						
ILAR	Eielson Array	64.65	336	P	P	06 16 16.8	-2.1
	comp=N,0.9nm,0.6s,mb3.8,baz=166,slow=4.6,SNR=15						
WMQ	Urumqi	123.11	3	*e*PKP	PKPdf	06 24 33.5	-1.8
NJ2	Nanjing	127.61	330	*e*PKP	PKPdf	06 24 44.5	+0.1
WRA	Warramunga Arr	138.00	255	PKP	PKPdf	06 25 05.7	+1.6
	comp=N,0.3nm,0.4s,baz=85,slow=2.1,SNR=4.9						
WRA				pPKP		06 25 29.6	
	comp=N,0.4nm,0.6s,baz=97,slow=2.6,SNR=2.3						
CMAR	Chiang Mai Arr	147.51	346	PKPbc	PKPdf	06 25 23.5	+2.8
	comp=N,0.9nm,0.6s,baz=341,slow=6.2,SNR=5.6						

IDC ***27*** *07:02:54.0±0.8, 6.75N×72.95W, h158^{km}±13^{km}, mb3.0/3, mb1 3.3/5, mb1mx3.1/21, mbtmp3.6/5, Error ellipse: s-maj=43.2km s-min=7.4km az=132.0*

NEIC ***27*** *07:02:54.1±0.8, 6.59N×72.78W, h172^{km}±9^{km}, mb3.3/1, Error ellipse: s-maj=17.5km s-min=11.2km az=120.0*

ISC 27 07:02:53.1±0.7**, 6.6N**±0.1×**72.8W**±0.1**, h177**^{km}±9^{km}**, n10, σ0**^{s}**70**/12**, mb3.2**/3**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.33	221	P	P	07 03 34.8	+0.6
	27nm,0.3s,baz=85,slow=14,SNR=96						
ROSC				S	S	07 04 05.0	-0.7
	38nm,0.3s,baz=90,slow=20,SNR=27						
SDV	Santo Domingo	3.10	44	P	P	07 03 44.4	+1.0
	11nm,0.3s,baz=266,slow=13,SNR=48						
SDV				S	S	07 04 21.8	-0.3
	37nm,0.3s,baz=268,slow=22,SNR=42						
SDV	Santo Domingo	3.10	44	*e*Pn	P	07 03 44.1	+0.7
SDV				*e*Sn	S	07 04 21.2	-1.0
OTAV	Otavalo	8.49	222	*e*Pn	P	07 04 54.3	+0.5
SAML	Samuel	18.22	148	*e*Pn	P	07 06 55.1	-0.3
	0.6nm,0.4s						
TXAR	Lajitas Array	36.81	312	P	P	07 09 45.6	-0.2
	0.1nm,0.5s,mb2.7,baz=148,slow=12,SNR=3.0						
SCHQ	Schefferville	48.29	5	P	P	07 11 19.0	+0.9
	2.2nm,1.1s,mb3.7,baz=187,slow=8.1,SNR=5.1						
YKA	Yellowknife Ar	63.54	340	P	P	07 13 05.6	-1.0
	0.2nm,0.6s,mb3.2,baz=131,slow=6.6,SNR=4.6						
YKA	Yellowknife Ar	63.54	340	P	P	07 13 05.6	-1.0
WRA	Warramunga Arr	150.52	241	PKPbc	PKPdf	07 22 27.4	+8.4
	0.2nm,0.3s,baz=108,slow=2.8,SNR=7.6						

NEIC ***27*** *07:29:51.7, 18.11N×67.96W, h100^{km}, MD3.6(RSPR), After RSPR.*

RSPR 27 07:29:51.7, 18.11N×67.96W, h100^{km}±2^{km}**, MD3.6**/14**, MD3.6**/14**, 11C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPR	Mayaguez	0.79	82	⇑*e*P	P	07 30 08.7	-1.4
MPR				*e*S	S	07 30 23.8	0.0
CRPR	Cabo Rojo, PR	0.81	97	⇑*e*P	P	07 30 09.4	-1.0
CRPR				*e*S	S	07 30 23.4	-0.9
LSP	Las Mesas	0.83	85	⇓*e*P	P	07 30 09.4	-1.2
MGP	Maguayo	0.83	97	⇓*e*P	P	07 30 09.6	-1.0
LRS	Lares	1.08	80	⇑*e*P	P	07 30 12.3	-0.9
LRS				*e*S	S	07 30 29.4	0.0
PORP	Portuguez	1.26	92	⇓*e*P	P	07 30 14.7	-0.8
PORP				*e*S	S	07 30 32.3	-1.0
ICM	Isla Caja Muer	1.39	99	⇑*e*P	P	07 30 16.1	-0.9
ICM				*e*S	S	07 30 35.2	-0.6
SJG	San Juan	1.72	90	⇑*e*P	P	07 30 20.6	-0.5
SJG				*e*S	S	07 30 43.3	+0.3
STDO	Santo Domingo	1.90	281	⇑*e*P	P	07 30 23.4	0.0
STDO				*e*S	S	07 30 46.1	-0.8
CPD	Cerro la Pandu	1.95	92	⇑*e*P	P	07 30 23.0	-1.0
CPD				*e*S	S	07 30 47.8	-0.2
CBYP	Canovanas	2.01	85	⇑*e*P	P	07 30 23.9	-0.9
CBYP				*e*S	S	07 30 48.9	-0.5
HUMP	Col San Antoni	2.01	89	⇑*e*P	P	07 30 24.6	-0.2
HUMP				*e*S	S	07 30 50.0	+0.7
MTP	Monte Pirata	2.29	90	⇑*e*P	P	07 30 28.1	-0.5
MTP				*e*S	S	07 30 55.4	-0.8
STVI	Saint Thomas	2.86	85	⇑*e*P	P	07 30 35.7	-0.8
STVI				*e*S	S	07 31 09.0	-1.1
TBVI	Tortola	3.20	84	*e*S	S	07 31 16.6	-1.9

IDC ***27*** *08:09:37.5±0.8, 0.86N×30.15W, mb3.9/10, mb1 4.0/10, mb1mx3.8/23, mbtmp3.9/10, MS3.8/16, Ms1 3.8/16, ms1mx3.8/21, Error ellipse: s-maj=35.0km s-min=16.0km az=148.0*

NEIC ***27*** *08:09:38.7±0.5, 0.75N×30.12W, h10^{km}, mb4.6/3, Error ellipse: s-maj=18.5km s-min=9.2km az=148.0*

ISC 27 08:09:37.0±0.6**, 0.8N**±0.1×**30.10W**±0.10**, h10**^{km}**, n27, σ1**^{s}**10**/17**, mb3.9**/11**, MS3.8**/16**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	8.74	222	*e*Pn	P	08 11 43.5	-2.9
RCBR				*e*Sn	Sn	08 13 15.2	-11
BDFB	Brasilia	24.06	227	P	P	08 14 54.5	+0.8
	1.3nm,0.5s,mb3.6,baz=44,slow=10,SNR=4.1						
BDFB				LR	LR	08 23 33.9	
	comp=Z,411nm,18.2s,MS4.0,baz=101,slow=35						
DBIC	Dimbokro	25.85	76	P	P	08 15 11.4	+0.6
	14nm,1.0s,mb4.5,baz=236,slow=12,SNR=12						
DBIC				LR	LR	08 23 37.6	
	comp=Z,221nm,19.0s,MS3.7,baz=238,slow=32						
DBIC	Dimbokro	25.85	76	*e*P	P	08 15 10.8	0.0
	15nm,0.9s,mb4.5						
DBIC				LR	LR	08 23 37.6	
SAML	Samuel	34.34	253	P	P	08 16 26.3	0.0
	24nm,1.9s,mb4.8						
SIV	San Ignacio	34.82	240	P	P	08 16 29.9	-0.6
	2.3nm,0.8s,mb4.2,baz=86,slow=9.7,SNR=8.4						
CPUP	Villa Florida	37.62	222	LR	LR	08 32 16.6	
	comp=Z,395nm,18.4s,MS4.2,baz=254,slow=36						
SJG	San Juan	39.39	298	LR	LR	08 30 51.0	
	comp=Z,70nm,21.5s,MS3.5,baz=273,slow=32						
SDV	Santo Domingo	41.16	283	P	P	08 17 24.4	+0.9
	2.0nm,0.7s,mb3.9,baz=114,slow=10.0,SNR=2.2						
LPAZ	La Paz	41.17	244	P	P	08 17 25.6	+2.0
	2.4nm,0.8s,mb3.9,baz=54,slow=4.6,SNR=12						
LPAZ				LR	LR	08 33 20.6	
	comp=Z,200nm,20.3s,MS4.0,baz=80,slow=35						
LPAZ	La Paz	41.17	244	*e*P	P	08 17 25.1	+1.5
	5.5nm,1.2s,mb4.1						
LPAZ				LR	LR	08 33 20.6	
ROSC	El Rosal	44.36	276	LR	LR	08 35 45.0	
	comp=Z,150nm,21.4s,MS3.9,baz=268,slow=35						
ESDC	Sonseca Array	45.48	28	P	P	08 17 58.5	+0.1
	0.1nm,0.3s,mb3.1,baz=212,slow=8.9,SNR=3.7						
CFAA	Coronel Fontan	48.38	225	P	P	08 18 21.1	-0.3
	0.1nm,0.6s,mb3.0,baz=57,slow=7.9,SNR=4.4						
TSUM	Tsumeb	50.80	116	P	P	08 18 39.7	-0.3
BOSA	Boshof	60.42	124	P	P	08 19 50.9	+1.5
	2.6nm,0.9s,mb4.3,baz=243,slow=4.5,SNR=1.8						
BOSA				LR	LR	08 40 16.7	
	comp=Z,107nm,20.9s,MS4.0,baz=128,slow=30						
GERES	GERESS Array B	60.88	32	P	P	08 19 51.7	-0.6
	0.4nm,0.4s,mb3.9,baz=233,slow=6.7,SNR=3.6						
GERES				LR	LR	08 44 06.7	
	comp=Z,47nm,19.2s,MS3.6,baz=347,slow=34						
GERES	GERESS Array B	60.88	32	P	P	08 19 51.7	-0.6
GERES				LR	LR	08 44 06.7	
SCHQ	Schefferville	61.69	337	LR	LR	08 42 05.2	
	comp=Z,57nm,19.4s,MS3.7,baz=81,slow=32						
NOA	NORSAR Array B	67.86	20	LR	LR	08 45 24.3	
	comp=Z,48nm,19.3s,MS3.7,baz=250,slow=32						
AKASG	Malin Array Be	70.46	35	P	P	08 20 52.1	-1.5
	0.2nm,0.3s,mb3.5,baz=242,slow=6.6,SNR=3.8						
FINES	FINESS Array B	73.81	25	LR	LR	08 49 54.1	
	comp=Z,85nm,20.4s,MS4.0,baz=250,slow=33						
TXAR	Lajitas Array	75.33	300	LR	LR	08 51 39.9	
	comp=Z,27nm,21.4s,MS3.5,baz=230,slow=34						
ARCES	ARCESS Array B	77.83	17	LR	LR	08 49 56.2	
	comp=Z,59nm,19.4s,MS3.9,baz=267,slow=31						
PDAR	Pinedale Array	81.75	313	LR	LR	08 53 39.3	
	comp=Z,84nm,19.7s,MS4.1,baz=106,slow=32						
YKA	Yellowknife Ar	86.79	332	LR	LR	08 57 47.8	
	comp=Z,76nm,18.3s,MS4.1,baz=80,slow=33						
NVAR	Mina Array Bea	88.13	308	LR	LR	08 59 30.4	
	comp=Z,18nm,19.3s,MS3.5,baz=180,slow=34						

NEIC ***27*** *08:11:38.8, 16.62N×93.71W, h165^{km}, mb3.8/5, MD4.2(MEX), After MEX.*

MEX ***27*** *08:11:39.4±1.1, 16.57N×93.71W, h159^{km}±13^{km}, MD4.2*

IDC ***27*** *08:11:39.7±5.2, 16.88N×93.20W, h179^{km}±53^{km}, mb3.4/9, mb1 3.6/10, mb1mx3.4/23, mbtmp3.9/10, Error ellipse: s-maj=50.3km s-min=12.9km az=52.0*

ISC 27 08:11:36.3±0.4**, 16.70N**±0.06×**93.70W**±0.04**, h169**^{km}±3^{km}**, n35, σ1**^{s}**34**/45**, mb3.7**/12**, 1C-1D, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCX	San Cristobal	1.02	88	*i* P	P	08 12 04.5	+1.3
SCX				*i* S	S	08 12 24.0	0.0
CMIG	Matias Romero	1.20	289	⇑*i*P	P	08 12 06.0	+1.1
CMIG				*i* S	S	08 12 26.4	-0.4
TUIG	Tuzandepetl	1.50	333	*e*P	P	08 12 08.5	+0.9
TUIG				*i* S	S	08 12 32.0	0.0
CCIG	Comitan	1.55	105	*i* P	P	08 12 08.8	+0.6
CCIG				*i* S	S	08 12 32.2	-0.7
CCIG	Comitan	1.55	105	⇓*i*P	P	08 12 09.2	+1.0
CCIG				*i* S	S	08 12 30.9	-1.9
HUIG	Huatulco	2.49	249	*i* P	P	08 12 17.6	-1.2
HUIG				*i* S	S	08 12 50.9	-0.6
OXX	Oaxaca	2.92	278	*i* P	P	08 12 26.5	+2.4
OXX				*i* S	S	08 13 00.3	-0.5
VHO	Vista Hermosa	2.93	278	*i* P	P	08 12 26.1	+1.9
VHO				*i* S	S	08 13 00.5	-0.5
IISM	Ciudad Serdan	4.18	304	*e*P	P	08 12 45.0	+4.9
IISM				*i* S	S	08 13 27.0	-2.4
PPM	Popocatepetl	5.25	297	*i* P	P	08 12 58.2	+4.1
PPM				*i* S	S	08 13 52.3	-2.1
PPM	Popocatepetl	5.25	297	*i* P	P	08 12 57.2	+3.1
PPM				*i* P		08 12 58.2	
PPM				*i* S	S	08 13 52.3	-2.1
TXAR	Lajitas Array	15.56	326	P	P	08 15 11.8	+3.9
	0.1nm,0.3s,baz=152,slow=13,SNR=14						
LRAL	Lakeview Retre	17.36	19	*e*P	P	08 15 29.4	-0.2
OXF	Oxford	18.16	11	*e*P	P	08 15 36.5	-1.9
WMOK	Wichita Mounta	18.54	347	*e*P	P	08 15 42.3	-0.2
	1.3nm,0.8s						
AMTX	Amarillo	19.47	340	*e*P	P	08 15 52.5	+0.4
	16nm,0.5s						
AMTX				*e*		08 15 55.6	
WVT	Waverly	20.05	14	*e*P	P	08 15 56.9	-1.2
CCM	Cathedral Cave	21.39	5	*e*P	P	08 16 09.3	-2.1
ANMO	Albuquerque	21.47	330	P	P	08 16 14.8	+2.7
	0.8nm,0.7s,mb3.1,baz=134,slow=14,SNR=5.7						
OTAV	Otavalo	22.21	136	*e*P	P	08 16 19.9	+0.4
SDCO	Great Sand Dun	23.41	336	*e*P	P	08 16 33.4	+2.5
	1.0nm,0.6s,mb3.4						
SDV	Santo Domingo	23.78	106	P	P	08 16 33.1	-1.6
	1.6nm,0.5s,mb3.9,baz=336,slow=12,SNR=3.4						
SDV	Santo Domingo	23.78	106	P	P	08 16 32.8	-1.9
SNOW	Snow King Moun	30.36	335	*e*P	P	08 17 35.2	+0.8
	9.2nm,1.3s,mb4.3						
NVAR	Mina Array Bea	30.56	320	P	P	08 17 39.4	+3.2
	0.3nm,0.6s,mb3.2,baz=135,slow=8.9,SNR=3.5						
HLID	Hailey	32.04	331	*e*P	P	08 17 50.6	+1.6
	0.9nm,0.7s,mb3.6						
LPAZ	La Paz	41.35	141	P	P	08 19 08.2	+0.9
	1.0nm,0.5s,mb3.7,baz=187,slow=24,SNR=4.5						
LPAZ	La Paz	41.35	141	*e*P	P	08 19 07.9	+0.6
SIV	San Ignacio	45.72	134	P	P	08 19 40.7	-1.9
	1.4nm,0.5s,mb3.9,baz=311,slow=8.2,SNR=7.6						
YKA	Yellowknife Ar	48.05	347	P	P	08 19 59.4	-0.6
	1.9nm,0.5s,mb4.0,baz=153,slow=7.2,SNR=12						
YKA	Yellowknife Ar	48.05	347	P	P	08 19 59.4	-0.6
INK	Inuvik	57.41	344	P	P	08 21 08.4	-0.6
	1.4nm,1.0s,mb3.8,baz=4.8,slow=3.7,SNR=3.7						
ILAR	Eielson Array	59.73	337	P	P	08 21 24.9	-0.2
	0.6nm,0.7s,mb3.6,baz=141,slow=5.2,SNR=9.1						
ARCES	ARCESS Array B	84.10	18	P	P	08 23 49.3	+0.5
	3.5nm,0.8s,mb4.2,baz=279,slow=5.2,SNR=7.7						
WRA	Warramunga Arr	134.40	258	PKP	PKPdf	08 30 38.2	+3.1
	0.2nm,0.5s,baz=84,slow=1.5,SNR=4.8						

WEL 27 08:20:40.8±0.9**, 34.88S×178.36E, h33**^{km}**, ML3.5**/3**, Error ellipse: s-maj=15.0km s-min=5.8km az=90.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	3.19	182	PN	Pn	08 21 27.9	-2.1
PUZ				SN	Sn	08 22 04.1	-3.1
PUZ				SN	Sn	08 22 04.3	-3.0
MWZ	Matawai	3.52	191	P*	Pb	08 21 33.4	-8.8
MWZ				S*	Sb	08 22 12.1	-13
URZ	Urewera	3.52	196	P*	Pb	08 21 33.9	-8.4
URZ				S*	Sb	08 22 13.1	-12

NEIC ***27*** *08:57:15.0, 31.67S×70.16W, h126^{km}, MD4.1(GUC), After GUC.*

GUC ***27*** *08:57:15.0±0.7, 31.67S×70.16W, h126^{km}±6^{km}, MD4.1, ML4.1*

ISC 27 08:57:14.8±0.5**, 31.67S**±0.03×**70.10W**±0.08**, h124**^{km}±6^{km}**, n31, σ0**^{s}**63**/47**, 4C-6D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILCH	Illapel	0.91	272	⇑*i*P	P	08 57 36.8	+0.2
ILCH				*i* S	S	08 57 52.7	-0.4
ILCH				AMP		08 57 53.6	
	comp=N,5µm,0.3s						
CMCH	Combarbala	0.91	302	⇑*i*P	P	08 57 37.1	+0.4
CMCH				*i* S	S	08 57 53.2	+0.1
CMCH				AMP		08 57 54.1	
	comp=E,19µm,0.4s						
JACH	Jahuel	1.10	202	⇓*i*P	P	08 57 38.7	+0.2
JACH				*i* S	S	08 57 56.3	+0.1
OVCH	Ovalle	1.42	318	*i* S	S	08 58 02.4	-0.2
OVCH				AMP		08 58 03.6	
	comp=N,4µm,0.2s						
PACH	Papudo	1.43	232	⇑*i*P	P	08 57 41.9	-0.3
PACH				*i* S	S	08 58 02.2	-0.7
ROCH	El Roble	1.51	210	*e*P	P	08 57 43.2	+0.1
ROCH				*i* S	S	08 58 04.1	-0.5
MDZ	Mendoza	1.61	139	*e*P	P	08 57 44.0	-0.2
MDZ				*i* S	S	08 58 06.0	-0.5
FCH	Farellones	1.67	186	⇓*i*P	P	08 57 45.9	+1.1
FCH				*i* S	S	08 58 09.2	+1.6
CLCH	Cerro Calan	1.76	192	*e*P	P	08 57 46.3	+0.2
CLCH				*i* S	S	08 58 09.8	+0.1
CLCH				AMP		08 58 13.9	
	comp=E,950nm,0.5s						
DSCH	Colegio Aleman	1.77	193	*e*P	P	08 57 46.4	+0.2
DSCH				*i* S	S	08 58 09.9	0.0
DSCH				AMP		08 58 14.6	
	comp=N,1µm,0.6s						
STL	Santa Lucia	1.82	194	*e*P	P	08 57 46.2	-0.5
STL				*i* S	S	08 58 10.7	-0.2
FSR	Penalolen	1.84	191	*e*P	P	08 57 47.6	+0.6
FSR				*i* S	S	08 58 11.5	+0.1
ANTU	Antumapu	1.95	193	*e*P	P	08 57 48.6	+0.3
ANTU				*i* S	S	08 58 13.6	-0.1
ANTU				AMP		08 58 14.8	
	comp=E,876nm,0.9s						
PCH	Pirque	1.98	190	*e*P	P	08 57 49.0	+0.3
PCH				*i* S	S	08 58 14.7	+0.4
SJCH	San Jose de Ma	1.98	186	*e*P	P	08 57 49.0	+0.4
SJCH				*i* S	S	08 58 15.1	+0.8
SJCH				AMP		08 58 18.0	
	comp=E,454nm,0.9s						
TACH	Talagante	2.10	199	⇓*i*P	P	08 57 50.0	-0.3
LCCH	Las Cruces	2.19	214	*e*P	P	08 57 51.0	-0.4
CHCH	Chadas Angostu	2.31	191	⇑*i*P	P	08 57 52.7	-0.3
CACH	El Canelo	2.48	190	*e*P	P	08 57 55.5	+0.2
LNV	Longovilo	2.54	205	*e*P	P	08 57 54.7	-1.3
CICH	Cipreses	2.66	186	*e*P	P	08 57 57.9	+0.3
LCO	Las Campanas	2.70	349	⇓*i*P	P	08 57 58.6	+0.6
LCO				*i* S	S	08 58 31.2	+0.4
LCO				AMP		08 58 32.8	
	comp=E,1µm,0.4s						
SFDO	San Fernando	3.04	194	⇓*i*P	P	08 58 01.6	-1.0
VACH	Vallenar	3.13	349	*e*P	P	08 58 03.9	0.0
CPCH	Copiapo	4.30	357	*e*P	P	08 58 18.9	-0.6
PLCA	Paso Flores	9.05	182	*e*P	P	08 59 22.7	-0.9
TRQA	Tornquist	9.22	136	*e*P	P	08 59 23.7	-2.2
TRQA				*e*S	S	09 01 03.2	-5.1
VNA2	Neumayer--Watz	51.54	158		P	09 06 10.8	+1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**53.14**	**159**	⇓*i*	**P**	**09 06 22.1**	**+0.6**
SNAA	**Sanae**	**53.14**	**159**	*e*P	**P**	**09 06 21.9**	**+0.5**
SNAA				*e*		09 14 58.9	
NHSC	**New Hope**	**65.12**	**351**	P	**P**	**09 07 38.1**	**-6.6**

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*NERS **27** 08:59:52.4, 64.21N×144.91E, h5^{km}*

*MOS **27** 08:59:53.7±1.4, 64.05N×144.86E, h11^{km}, mb4.1/2, Error ellipse: s-maj=24.5km s-min=13.3km az=96.8*

*IDC **27** 08:59:53.6±0.9, 64.12N×145.10E, mb3.7/9, mb1 3.9/9, mb1mx3.8/21, mbtmp3.7/9, Error ellipse: s-maj=31.5km s-min=18.6km az=149.0*

*NEIC **27** 08:59:55.0±0.6, 64.12N×145.10E, h10^{km}, mb3.6/1, Error ellipse: s-maj=16.8km s-min=13.1km az=165.0*

ISC 27 08:59:53.6±0.5**, 64.03N**±0.05×**145.20E**±0.10**, h11^{km}, n28, σ1^{s}62**/45**, mb3.5**/9**, 3C-4D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SUUS	**Susuman**	**1.83**	**132**	c *i*P	**Pn**	**09 00 28.2**	**+2.8**
SUUS				*e*		09 00 55.6	
SUUS				pmax	pmax		
	comp=Z,800nm,0.4s						
SUUS				smax			
	comp=N,1µm,0.2s						
SUUS				smax			
	comp=E,1µm,0.2s						
SUUS	**Susuman**	**1.83**	**132**	⇑*i*P	**Pn**	**09 00 28.2**	**+2.8**
SUUS				⇓*i*Pg	**Pg**	**09 00 32.7**	**+2.5**
SUUS				Pgmax		09 00 33.2	
	comp=E,590nm,0.3s						
SUUS				*e*Sg	**Sg**	**09 00 55.6**	**+0.9**
SUUS				Sgmax		09 00 56.3	
	comp=E,1µm,0.2s						
SUUS				Sgmax		09 00 56.3	
	comp=E,1µm,0.2s						
OCHR	**Omchak**	**2.67**	**152**	⇑*i*P	**Pn**	**09 00 39.6**	**+2.3**
OCHR				*e*Pg	**Pg**	**09 00 48.3**	**+1.4**
OCHR				Pgmax		09 00 48.9	
	comp=E,330nm,0.2s						
OCHR				*e*		09 01 14.8	
OCHR				*e*Sg	**Sg**	**09 01 22.2**	**-0.4**
OCHR				Sgmax		09 01 27.8	
	comp=E,440nm,0.6s						
OCHR				Sgmax		09 01 27.8	
	comp=E,200nm,0.5s						
SEY	**Seymchan**	**3.40**	**106**	d *i*P	**Pn**	**09 00 50.4**	**+2.7**
SEY				*e*S	**Sn**	**09 01 30.8**	**+2.3**
SEY				pmax	pmax		
	comp=Z,40nm,0.4s						
SEY				smax			
	comp=N,380nm,0.7s						
SEY				smax			
	comp=E,110nm,0.7s						
SEY	**Seymchan**	**3.40**	**106**	⇓*i*P	**Pn**	**09 00 50.4**	**+2.7**
SEY				*e*		09 00 53.2	
SEY				*e*Pg	**Pg**	**09 00 59.5**	**-2.0**
SEY				Pgmax		09 01 04.3	
	comp=E,40nm,0.4s						
SEY				*e*S	**Sn**	**09 01 30.8**	**+2.3**
SEY				*e*Sg	**Sg**	**09 01 45.4**	**-1.5**
SEY				Sgmax		09 01 49.9	
	comp=E,380nm,0.7s						
SEY				Sgmax		09 01 49.9	
	comp=E,110nm,0.7s						
TLAR	**Talaya**	**4.42**	**128**	*e*Pg	**Pg**	**09 01 17.6**	**-4.2**
TLAR				*e*		09 01 56.4	
TLAR				*e*Sg	**Sg**	**09 02 17.0**	**-3.8**
TLAR				Sgmax		09 02 33.0	
	comp=E,220nm,0.8s						
MGD	**Magadan 1**	**4.77**	**144**	*e*Pg	**Pg**	**09 01 25.7**	**-3.1**
MGD				*e*		09 02 12.3	
MGD				*e*Sg	**Sg**	**09 02 27.7**	**-4.8**
MGD				Sgmax		09 02 38.3	
	comp=E,320nm,0.6s						
MGD				Sgmax		09 02 38.3	
	comp=E,320nm,0.6s						
OMS	**Omsukchan**	**5.01**	**103**	*e*Pg	**Pg**	**09 01 28.0**	**-5.6**
OMS				Pgmax		09 01 30.0	
	comp=E,30nm,1.0s						
OMS				Pgmax		09 01 30.0	
	comp=E,30nm,1.0s						
OMS				Pgmax		09 01 30.0	
	comp=E,50nm,1.0s						
OMS				*e*		09 02 25.2	
OMS				*e*Sg	**Sg**	**09 02 33.0**	**-7.4**
OMS				Sgmax		09 02 41.3	
	comp=E,220nm,1.2s						
OMS				Sgmax		09 02 41.3	
	comp=E,190nm,1.2s						
MA2	**Magadan**	**5.19**	**147**	*e*P	**Pn**	**09 01 13.9**	**+0.8**
MA2				*e*S	**Sn**	**09 02 11.4**	**-2.3**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MA2				smax			
	comp=N,130nm,1.0s						
MA2				smax			
	comp=E,270nm,1.0s						
MA2	**Magadan**	**5.19**	**147**	*e*P	**Pn**	**09 01 13.9**	**+0.8**
MA2				*e*Pg	**Pg**	**09 01 31.9**	**-5.3**
MA2				Pgmax		09 01 35.3	
	comp=E,10.0nm,0.4s						
MA2				*e*S	**Sn**	**09 02 11.4**	**-2.3**
MA2				*e*Sg	**Sg**	**09 02 41.7**	**-4.8**
MA2				Sgmax		09 02 50.7	
	comp=E,270nm,1.1s						
MA2				Sgmax		09 02 50.7	
	comp=E,130nm,1.0s						
MA2	**Magadan**	**5.19**	**147**	*e*Pn	**Pn**	**09 01 13.8**	**+0.7**
MA2				*e*Pg	**Pg**	**09 01 33.5**	**-3.8**
MA2				*e*Sg	**Sg**	**09 02 42.5**	**-3.9**
YAK	**Yakutsk**	**7.34**	**261**	*i* P	**Pn**	**09 01 59.0**	**+16**
BILL	**Bilibino**	**9.44**	**56**	*i* P	**P**	**09 02 17.3**	**+4.8**
TIXI	**Tiksi**	**9.78**	**328**	⇓*i*P	**P**	**09 02 15.8**	**-1.2**
ASAJ	**Asahikawa**	**20.01**	**185**	P	**P**	**09 04 28.5**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ASAJ	**Asahikawa**	**20.01**	**185**	P	**P**	**09 04 28.5**	**-0.4**
	comp=Z,6.4nm,0.7s,baz=65,slow=11,SNR=4.7						
TLY	**Talaya**	**24.81**	**260**	*i* P	**P**	**09 05 30.7**	**+14**
ULN	**Ulaanbaatar**	**26.24**	**250**	P	**P**	**09 05 29.5**	**-0.4**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
ULN	**Ulaanbaatar**	**26.24**	**250**	P	**P**	**09 05 29.5**	**-0.4**
	comp=Z,0.8nm,0.6s,mb3.4						
SONM	**Songino Array**	**26.54**	**251**	P	**P**	**09 05 34.2**	**+1.6**
	comp=Z,0.5nm,0.5s,mb3.3,baz=59,slow=7.2,SNR=5.6						
ILAR	**Eielson Array**	**28.09**	**57**	P	**P**	**09 05 46.8**	**+0.1**
	comp=Z,0.8nm,0.9s,mb3.3,baz=298,slow=8.0,SNR=9.4						
MKAR	**Makanchi Array**	**37.80**	**274**	P	**P**	**09 07 09.6**	**-1.5**
	comp=Z,0.2nm,0.5s,mb3.1,baz=63,slow=13,SNR=2.8						
YKA	**Yellowknife Ar**	**40.62**	**45**	*e*P	**P**	**09 07 36.9**	**+2.5**
YKA	**Yellowknife Ar**	**40.62**	**45**	P	**P**	**09 07 32.3**	**-2.1**
	comp=Z,0.5nm,0.6s,mb3.3,baz=318,slow=7.4,SNR=3.7						
FINES	**FINESS Array B**	**46.81**	**325**	P	**P**	**09 08 23.6**	**-0.7**
	comp=Z,1.2nm,0.8s,mb3.9,slow=11,SNR=3.8						
PDAR	**Pinedale Array**	**58.52**	**56**	P	**P**	**09 09 51.8**	**0.0**
	comp=Z,0.5nm,0.8s,mb3.6,baz=326,slow=5.3,SNR=4.1						
NVAR	**Mina Array Bea**	**58.89**	**66**	P	**P**	**09 09 55.3**	**+0.9**
	comp=Z,0.4nm,0.6s,mb3.6,baz=329,slow=4.9,SNR=4.8						
WRA	**Warramunga Arr**	**84.13**	**190**	P	**P**	**09 12 25.3**	**-0.2**
	comp=Z,0.4nm,0.8s,mb3.6,baz=21,slow=4.6,SNR=4.9						

MEX 27 09:07:11.2±0.8**, 18.31N×94.33W, h33^{km}±9^{km}, MD3.7, 1C, Bay of Campeche**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.29**	**199**	*i* P	P	09 07 17.1	-1.7
TUIG				*i* S	S	09 07 22.6	-1.6
CMIG	**Matias Romero**	**1.32**	**204**	⇑*i*P	P	09 07 31.7	-1.9
CMIG				*i* S	S	09 07 47.2	-3.0
OXX	**Oaxaca**	**2.59**	**242**	*i* P	P	09 07 50.0	-1.7
OXX				*i* S	S	09 08 16.0	-6.3
VHO	**Vista Hermosa**	**2.60**	**242**	*i* P	P	09 07 50.0	-1.8
VHO				*i* S	S	09 08 19.6	-3.0

MEX 27 09:08:54.3±1.2**, 16.31N×98.24W, h8^{km}±8^{km}, MD3.7, 1C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.13**	**54**	⇑*i*P	Pg	09 08 56.5	-0.8
PNIG				*i* S	Sg	09 08 59.2	-0.1
VHO	**Vista Hermosa**	**1.63**	**62**	*i* P	Pn	09 09 19.1	-4.4
VHO				*i* S	Sb	09 09 40.2	-4.6
OXX	**Oaxaca**	**1.64**	**62**	*i* P	Pn	09 09 21.0	-2.6
OXX				*i* S	Sn	09 09 40.0	-5.1
ACX	**Acapulco**	**1.70**	**289**	*i* P	Pn	09 09 21.5	-3.0
ACX				*i* S	Sn	09 09 41.0	-5.7
PPM	**Popocatepetl**	**2.76**	**352**	*e*P	Pn	09 09 40.0	+0.3
PPM				*i* S	Sn	09 10 13.0	-0.6
IISM	**Ciudad Serdan**	**2.78**	**17**	*e*P	Pn	09 09 40.0	0.0
IISM				*i* S	Sn	09 10 17.0	+2.9

MAN 27 09:19:19.7, 19.20N×119.91E, h35^{km}, mb3.9, ML2.7, MS2.3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**1.72**	**154**	*e*S	S	09 20 08.6	0.0
APYP	**Conner**	**1.83**	**136**	*e*P	P	09 19 49.0	-0.3
APYP				*e*S	S	09 20 10.8	-0.7
BBP	**Basco**	**2.29**	**57**	*e*P	P	09 19 55.9	0.0
BBP				*e*S	S	09 20 18.0	-5.2
CVP	**Callao Caves**	**2.34**	**129**	*e*P	P	09 19 57.0	+0.4
CVP				*e*S	S	09 20 24.0	-0.5

IDC 27 09:54:03.5±2.0**, 30.71S×177.48W, mb3.8**/1**, mb1 4.2**/1**, mb1mx3.6**/14**, mbtmp3.8**/1**, Error ellipse: s-maj=56.4km s-min=29.4km az=92.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.50**	**345**	Pn	Pn	09 54 30.9	-0.9
	42nm,0.3s,baz=321,slow=23,SNR=3.6						
RAO				Sn	Sn	09 54 54.4	+2.0
	307nm,0.3s,baz=100,slow=23,SNR=8.7						
URZ	**Urewera**	**8.75**	**209**	Sn	Sn	09 57 44.2	-11
	1.5nm,0.3s,baz=315,slow=17,SNR=7.7						
WRA	**Warramunga Arr**	**44.56**	**272**	P	P	10 02 17.3	-1.8
	1.0nm,0.6s,baz=110,slow=8.0,SNR=17						
FINES	**FINESS Array B**	**145.59**	**340**	PKPbc	PKPbc	10 13 43.5	0.0
	0.6nm,0.3s,baz=48,slow=4.3,SNR=9.3						
AKASG	**Malin Array Be**	**151.82**	**323**	PKPbc	PKPdf	10 13 58.9	+3.9
	0.1nm,0.2s,baz=64,slow=2.4,SNR=3.2						
AKASG				PKPab	PKPab	10 14 08.2	-2.7
	0.2nm,0.3s,baz=52,slow=3.3,SNR=4.4						

IDC 27 10:06:33.4±2.1**, 10.00N×92.54E, mb3.9**/5**, mb1 4.2**/6**, mb1mx3.8**/20**, mbtmp3.9**/6**, ML4.3**/1**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.6**/17**, Error ellipse: s-maj=68.5km s-min=22.2km az=67.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.45**	**36**	Pn	P	10 09 06.6	-1.0
	0.6nm,0.3s,baz=226,slow=15,SNR=12						
MKAR	**Makanchi Array**	**37.69**	**348**	P	P	10 13 51.1	-1.1
	0.4nm,0.7s,baz=190,slow=8.8,SNR=2.9						
SONM	**Songino Array**	**39.48**	**15**	P	P	10 14 04.6	-2.6
	0.9nm,0.7s,baz=196,slow=10,SNR=6.6						
FITZ	**Fitzroy Crossi**	**42.99**	**130**	P	P	10 14 35.5	-0.9
	9.1nm,1.0s,baz=338,slow=17,SNR=5.8						
MJAR	**Matsushiro Arr**	**48.96**	**50**	LR	LR	10 36 24.3	
	comp=Z,16nm,20.3s,baz=155,slow=37						
WRA	**Warramunga Arr**	**50.78**	**126**	P	P	10 15 35.3	-2.4
	1.2nm,0.4s,baz=306,slow=8.3,SNR=51						
ILAR	**Eielson Array**	**93.37**	**22**	P	P	10 19 49.4	-1.9
	0.3nm,0.6s,baz=303,slow=4.6,SNR=5.4						

MOS 27 10:27:09.8±1.3**, 55.86N×109.85E, h15^{km}, mb4.2**/1**, 1C-1D, Error ellipse: s-maj=28.5km s-min=21.5km az=168.1, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.19**	**244**	*e*PG	Pg	10 27 14.1	-0.4
NIZ				*e*S	Sb	10 27 17.5	-0.1
YOA	**Uoyan**	**1.09**	**75**	⇓*i*PG	Pg	10 27 28.8	-2.9
YOA				*i*		10 27 44.4	
YOA				pmax	pmax		
	comp=Z,115nm,0.3s						
YOA				smax			
	comp=N,608nm,0.5s						
YLYR	**Ulyunkhan**	**1.24**	**142**	⇑*i*PG	Pg	10 27 32.1	-2.6
YLYR				*e*		10 27 49.4	
YLYR				pmax	pmax		
	comp=Z,78nm,0.1s						
YLYR				smax			
	comp=E,496nm,0.3s						
SVKR	**Severomuysk**	**2.10**	**81**	*e*PN	Pn	10 27 47.0	+2.1
SVKR				*e*		10 28 15.6	
SVKR				pmax	pmax		
	comp=Z,269nm,0.5s						
UKT	**Uakit**	**2.17**	**98**	*e*PN	Pn	10 27 48.2	+2.2
UKT				*e*		10 28 16.8	
UKT				pmax	pmax		
	comp=Z,47nm,0.3s						
UKT				smax			
	comp=E,227nm,0.4s						
CRS	**Chara**	**4.79**	**74**	*e*PN	Pn	10 28 23.5	+0.2
CRS				*e*		10 28 35.0	
CRS				*e*		10 29 37.6	
CRS				pmax	pmax		
	comp=Z,24nm,1.1s						
CRS				smax			
	comp=E,72nm,1.4s						
TUP	**Tupik**	**5.97**	**100**	*e*PN	Pn	10 28 38.4	-1.5
TUP				*e*		10 28 56.6	
TUP				*e*S	Sn	10 29 43.7	-5.0
TUP				*e*		10 30 12.1	
TUP				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TUP				smax			
	comp=N,49nm,0.8s						

IDC 27 10:31:10.2±2.3**, 31.39S×177.70W, mb4.0**/1**, mb1 4.2**/2**, mb1mx3.7**/15**, mbtmp4.0**/2**, ML3.2**/1**, Error ellipse: s-maj=72.4km s-min=35.0km az=120.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.07**	**210**	Pn	P	10 33 08.8	-2.7
	0.3nm,0.3s,baz=164,slow=22,SNR=2.2						
URZ				Sn	Sn	10 34 40.7	-3.9
	0.3nm,0.3s,baz=298,slow=21,SNR=5.5						
WRA	**Warramunga Arr**	**44.40**	**273**	P	P	10 39 22.7	-1.7
	1.0nm,0.4s,baz=111,slow=8.1,SNR=15						
WRA				pP	pP	10 39 33.7	+9.2
	6.1nm,0.6s,baz=113,slow=7.7,SNR=26						
FINES	**FINESS Array B**	**146.16**	**340**	PKPbc	PKPbc	10 50 51.0	-0.6
	2.7nm,0.7s,baz=18,slow=4.4,SNR=7.2						
AKASG	**Malin Array Be**	**152.24**	**322**	PKPbc	PKPdf	10 51 07.0	+4.7
	0.1nm,0.2s,baz=57,slow=2.5,SNR=5.2						

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*NNC **27** 10:33:41.2±1.9, 36.80N×70.16E, h142^{km}±40^{km}, mpv3.7, Error ellipse: s-maj=17.2km s-min=13.4km az=23.0*

ISC 27 10:33:38.3±2.2**, 36.7N**±0.1×**70.1E**±0.2**, h100^{km}, n9, σ0^{s}54**/11**, 2C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.07**	**26**	P	**P**	**10 35 06.0**	**-1.0**
	SNR=43						
KK31	**Karatay Array**	**6.38**	**3**	P	**P**	**10 35 12.2**	**+0.9**
	1.2nm,0.2s,baz=184,slow=13,SNR=60						
KK31				⇑S	**S**	**10 36 23.2**	**0.0**
	3.0nm,0.6s,baz=185,slow=24,SNR=3.9						
UCH	**Uchtor**	**6.47**	**31**	P	**P**	**10 35 12.7**	**+0.2**
	SNR=32						
EKS2	**Erkin-Say**	**6.57**	**24**	P	**P**	**10 35 14.3**	**+0.4**
	SNR=5.3						
KZA	**Kyzart**	**6.67**	**35**	P	**P**	**10 35 16.1**	**+0.8**
	SNR=6.1						
AAK	**Ala-Archa**	**6.80**	**29**	⇓P	**P**	**10 35 17.2**	**+0.1**
	3.7nm,0.5s						
AAK				⇑S	**S**	**10 36 33.5**	**-0.2**
	4.8nm,0.6s						
USP	**Ospenovka**	**7.36**	**26**	P	**P**	**10 35 24.6**	**-0.1**
	SNR=7.8						
TKM2	**Tokmak 2**	**7.50**	**33**	P	**P**	**10 35 25.9**	**-0.7**
	SNR=5.8						
AB31	**Akbulak array**	**14.54**	**333**	P	**P**	**10 36 59.6**	**-0.5**
	0.5nm,0.3s,baz=148,slow=12,SNR=40						

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*CSEM **27** 10:55:05.9, 56.62N×13.29E, h3^{km}, ML3.5, Mining explosion. After UPP*

UPP 27 10:55:05.9, 56.62N×13.29E, h3^{km}, ML3.5, Mining explosion., Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLEU	**Blekinge**	**1.44**	**102**	P	Pn	10 55 32.4	-0.6
ARNU	**Arnoeviken**	**5.50**	**21**	P	Pn	10 56 27.0	-3.8
	baz=63						

MAN 27 11:01:52.2, 10.23N×121.93E, h6^{km}, mb4.0, ML2.8, MS2.4, 1C-2D, Panay

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAP	**Anini-y**	**0.19**	**4**	⇓*i*P	Pg	11 01 58.2	+2.1
AAP				*i* S	Sg	11 02 05.1	+6.4
GUIM	**Jordan**	**0.76**	**59**	*e*P	Pg	11 02 06.5	-0.9
GUIM				*e*S	Sg	11 02 17.9	+0.4
CUYO	**Cuyo Island**	**1.09**	**305**	*e*P	Pb	11 02 13.5	+0.5
CUYO				*e*S	Sb	11 02 29.0	+1.7
RCP	**Roxas**	**1.54**	**31**	⇑*e*P	Pn	11 02 21.1	+0.6
SNPH	**Sibulan**	**1.56**	**124**	⇓*i*P	Pn	11 02 21.0	+0.4
SNPH				*i* S	Sb	11 02 41.5	+0.5
BUSP	**Coron**	**2.45**	**316**	*e*P	Pn	11 02 32.6	-0.7
BUSP				*e*S	Sn	11 03 11.0	+7.1
ENPP	**El Nido**	**2.65**	**292**	*e*P	Pn	11 02 36.0	-0.2
ENPP				*e*S	Sn	11 03 05.6	-3.4
LUBP	**Lubang**	**3.85**	**335**	*e*P	Pn	11 02 52.7	-0.6

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*BGS **27** 11:35:39.9, 17.04N×107.27W, h20^{km}, mb6.0*

*UCR **27** 11:35:39.5, 18.17N×108.43W, h11^{km}*

*IDC **27** 11:35:42.1±0.6, 18.79N×107.37W, mb4.8/24, mb1 4.9/26, mb1mx4.9/27, mbtmp4.8/26, ML4.9/1, MS6.0/22, Ms1 6.0/22, ms1mx5.9/29, Error ellipse: s-maj=22.5km s-min=10.4km az=58.0*

*HRVD **27** 11:35:45.6±0.1, 18.89N×107.38W, h16^{km}, MW6.2/73, Centroid moment Tensor Solution. LP body waves: s72,c163;Mantle waves: s73,c300; Half duration: 2^{s}9 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.23±.01; M$_{\theta\theta}$-1.18±.01; M$_{\phi\phi}$1.41±.01; M$_{r\theta}$-0.27±.03; M$_{\theta\phi}$-1.57±.01; M$_{\phi r}$0.51±.03; Best double couple: M$_{0}$2.101×10^{18} NP1: φ$_{s}$21°, δ80°, λ8°. NP2: φ$_{s}$289°, δ82°, λ170°. Principal axes: T 2.28, Plg13°, Azm245°; N -.363, Plg77°, Azm69°; P -1.921, Plg1°, Azm335°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*BJI **27** 11:35:45.6, 18.80N×107.30W, h10^{km}, mB6.5, mb5.4, Ms6.2, Msz5.9*

*NEIC **27** 11:35:45.6, 18.78N×107.30W, h20^{km}, mb5.8/187, ME6.8, MS5.9/121, MW6.2, MD5.7(MEX) Broadband fault plane solution: P waves. NP1: φ$_{s}$205°, δ88°, λ9°. NP2: φ$_{s}$115°, δ81°, λ178°. Principal axes: T Plg8°, Azm70°; N Plg0°, Azm0°; P Plg5°, Azm340°; Moment Tensor Solution. s25 Moment tensor: Scale 10^{18} Nm; M$_{rr}$-0.24; M$_{\theta\theta}$-1.68; M$_{\phi\phi}$1.92; M$_{r\theta}$-0.04; M$_{\theta\phi}$-1.72; M$_{\phi r}$-0.43; Best double couple: M$_{0}$2.5×10^{18} NP1: φ$_{s}$113°, δ81°, λ178°. NP2: φ$_{s}$203°, δ88°, λ9°. Principal axes: T 2.67, Plg8°, Azm68°; N -.28, Plg81°, Azm213°; P -2.39, Plg5°, Azm338°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism. After MEX.*

*MEX **27** 11:35:46.5±0.4, 18.86N×107.26W, h20^{km}±63^{km}, MD5.7*

*MOS **27** 11:35:46.7±1.2, 18.87N×107.27W, h33^{km}, mb6.0/85, MS6.0/38, Error ellipse: s-maj=6.7km s-min=3.9km az=89.4*

*CSEM **27** 11:35:58.2, 19.59N×107.45W, h80^{km}, mb5.6*

ISC 27 11:35:44.9±0.2**, 18.93N**±0.03×**107.24W**±0.02**, h16^{km}, h16^{km}**±1.0^{km}**:pP-P, n771, σ1^{s}37**/694**, mb5.6**/217**, MS5.9**/147**, 43C-87D, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SFJM	**Santa Fe**	**4.25**	**68**	*i* P	**Pn**	**11 36 48.7**	**-1.8**
SFJM				*i* S	**Sn**	**11 37 38.0**	**-2.4**
MAIG	**Mazatlaan**	**4.30**	**10**	*i* P	**Pn**	**11 36 50.2**	**-1.1**
MAIG				*e*S	**Sn**	**11 37 34.2**	**-7.5**
MAIG	**Mazatlaan**	**4.30**	**10**	*i* P	**Pn**	**11 36 50.2**	**-1.1**
MAIG				*e*S	**Sn**	**11 37 38.8**	**-2.9**
MOIG	**Morelia**	**5.76**	**82**	*e*P	**Pn**	**11 37 09.5**	**-2.5**
MOIG				*i* S	**Sn**	**11 38 20.9**	**+2.5**
MOIG	**Morelia**	**5.76**	**82**	*e*P	**Pn**	**11 37 09.5**	**-2.5**
MOIG				*i* S	**Sn**	**11 38 13.9**	**-4.5**
LPIG	**La Paz**	**5.88**	**331**	*i* P	**Pn**	**11 37 11.4**	**-2.3**
LPIG				*i* S	**Sn**	**11 38 34.0**	**+12**
LPIG	**La Paz**	**5.88**	**331**	*i* P	**Pn**	**11 37 11.4**	**-2.3**
LPIG				*i* S	**Sn**	**11 38 18.7**	**-2.8**
CAIG	**El Cayaco**	**6.89**	**105**	*i* P	**Pn**	**11 37 22.1**	**-5.8**
CAIG	**El Cayaco**	**6.89**	**105**	*i* P	**Pn**	**11 37 25.1**	**-2.8**
IIJ	**Jocotitlan**	**7.13**	**82**	*i* P	**Pn**	**11 37 47.0**	**+16**
IIJ	**Jocotitlan**	**7.13**	**82**	*e*P	**Pn**	**11 37 33.3**	**+2.1**
ACX	**Acapulco**	**7.27**	**105**	*i* P	**Pn**	**11 37 32.2**	**-0.9**
ACX	**Acapulco**	**7.27**	**105**	*i* P	**Pn**	**11 37 30.2**	**-3.0**
PLIG	**Platanillo**	**7.35**	**93**	*i* P	**Pn**	**11 37 32.3**	**-2.1**
PLIG				*e*S	**Sn**	**11 39 00.5**	**+2.2**
PLIG	**Platanillo**	**7.35**	**93**	*i* P	**Pn**	**11 37 32.3**	**-2.1**
PLIG				*e*S	**Sn**	**11 38 54.5**	**-3.8**
SZVM	**Salazar**	**7.44**	**86**	*e*P	**Pn**	**11 37 34.2**	**-1.3**
IIZ	**Mezontepec**	**7.57**	**87**	*i* P	**Pn**	**11 37 37.1**	**-0.2**
IIC	**Rita Coyotepec**	**7.58**	**82**	*i* P	**Pn**	**11 37 36.6**	**-0.9**
IIC	**Rita Coyotepec**	**7.58**	**82**	*i* P	**Pn**	**11 37 36.2**	**-1.3**
UNM	**Universidad Na**	**7.63**	**86**	*i* P	**Pn**	**11 37 37.5**	**-0.7**
UNM				*e*S	**Sn**	**11 39 04.7**	**-0.5**
UNM	**Universidad Na**	**7.63**	**86**	*i* P	**Pn**	**11 37 37.5**	**-0.7**
UNM				*i* S	**Sn**	**11 39 01.1**	**-4.1**
CHVM	**Chichinautzin**	**7.66**	**88**	*i* P	**Pn**	**11 37 36.1**	**-2.4**
PTVM	**Pico Tres Padr**	**7.70**	**84**	*e*P	**Pn**	**11 37 37.6**	**-1.6**
YAIG	**Yautepec**	**7.74**	**89**	*i* P	**Pn**	**11 37 37.8**	**-1.9**
YAIG				*e*S	**Sn**	**11 39 06.7**	**-1.1**
CIVM	**Cilcuayo**	**7.81**	**87**	*i* P	**Pn**	**11 37 37.6**	**-3.1**
IIO	**Organos**	**8.07**	**84**	*e*P	**P**	**11 37 42.9**	**-1.5**
IIO	**Organos**	**8.07**	**84**	*i* P	**P**	**11 37 41.5**	**-2.9**
PPM	**Popocatepetl**	**8.15**	**88**	*i* P	**P**	**11 37 41.0**	**-4.4**
PPM	**Popocatepetl**	**8.15**	**88**	*i* P	**P**	**11 37 42.4**	**-3.1**
PPM				*i* P		11 37 44.7	
PPM				*e*P		11 37 45.3	
PPM				*i* S	**Sn**	**11 39 19.2**	**+1.1**
PNIG	**Pinotepa**	**9.04**	**105**	*e*P	**P**	**11 37 55.6**	**-2.3**
PNIG				*e*S	**Sn**	**11 39 36.9**	**-3.5**
IISM	**Ciudad Serdan**	**9.33**	**88**	*i* P	**P**	**11 38 00.9**	**-1.0**
VHO	**Vista Hermosa**	**10.16**	**99**	*i* P	**P**	**11 38 12.4**	**-1.0**
VHO				*e*S	**S**	**11 40 13.8**	**+5.7**
VHO	**Vista Hermosa**	**10.16**	**99**	*i* P	**P**	**11 38 12.4**	**-1.0**
VHO				*e*S	**S**	**11 40 03.8**	**-4.3**
OXX	**Oaxaca**	**10.17**	**99**	*i* P	**P**	**11 38 13.1**	**-0.4**
LVIG	**Laguna Verde**	**10.25**	**84**	*e*P	**P**	**11 38 12.2**	**-2.3**
LVIG				*e*S	**S**	**11 40 18.1**	**+8.1**
LVIG	**Laguna Verde**	**10.25**	**84**	*e*P	**P**	**11 38 12.2**	**-2.3**
LVIG				*e*S	**S**	**11 40 06.2**	**-3.9**
LTX	**Lajitas**	**10.86**	**17**	*e*P	**P**	**11 38 24.0**	**+1.2**
LTX				pmax	pmax		
	comp=Z,246nm,1.3s						
LTX	**Lajitas**	**10.86**	**17**	*e*P	**P**	**11 38 24.0**	**+1.1**
	comp=Z,246nm,1.3s						
TXAR	**Lajitas Array**	**10.86**	**17**	Pn	**P**	**11 38 22.4**	**-0.4**
	comp=Z,2.1nm,0.3s,baz=198,slow=16,SNR=76						
TXAR				LR	LR	11 42 31.0	
	comp=Z,58µm,18.2s,baz=45,slow=37						
HUIG	**Huatulco**	**11.08**	**105**	*i* P	**P**	**11 38 25.0**	**-1.0**
HUIG				*i* S	**S**	**11 40 26.3**	**-4.2**
CMIG	**Matias Romero**	**11.89**	**97**	*i* P	P	11 38 57.7	+21
CMIG				*e*S	**S**	**11 41 06.3**	**+16**
TUIG	**Tuzandepetl**	**12.19**	**92**	*i* P	**P**	**11 38 38.1**	**-2.9**
MNTX	**Cornudas Mount**	**12.82**	**7**	⇓*i*P	**P**	**11 38 50.2**	**+0.9**
	comp=Z,508nm,0.8s						
MNTX				*e*S	**S**	**11 41 19.8**	**+7.1**
TUC	**Tucson**	**13.70**	**347**	⇓*i*P	**P**	**11 39 02.1**	**+1.1**
TUC				*e*S	**S**	**11 41 43.3**	**+10**
TUC				pmax	pmax		

```
      comp=Z,130nm,1.1s
TUC   Tucson          13.70 347⇓iP     P      11 39 02.1 +1.1
      comp=Z,130nm,1.1s
TUC                             eS     S      11 41 43.3  +10
CCIG  Comitan         14.64  98 iP     P      11 39 13.0 -0.4
CCIG                            eS     S      11 41 41.1  -15
CCIG  Comitan         14.64  98 iP     P      11 39 12.7 -0.7
CCIG                            eS     S      11 41 51.1 -5.0
SCIG                  15.19  87 iP     P      11 39 17.1 -3.5
ANMO  Albuquerque     15.97   2  Pn    P      11 39 32.4 +1.7
      baz=178,slow=13,SNR=27
ANMO                             LR    LR     11 45 43.6
      comp=Z,48µm,18.6s,slow=37
BAR   Barrett         16.10 330⇓iP     P      11 39 32.3  0.0
AMTX  Amarillo        16.64  16⇓eP     P      11 39 42.2 +3.1
      comp=Z,766nm,1.7s
PFO   Pinyon Flat Ob  16.78 332⇓iP     P      11 39 42.1 +1.2
PFO                              pmax  pmax
      comp=Z,1µm,1.4s
PFO   Pinyon Flat Ob  16.78 332⇓iP     P      11 39 42.1 +1.2
      comp=Z,1µm,1.4s
NATX  Nacogdoches     17.08  39⇑iP     P      11 39 45.1 +0.4
      comp=Z,3µm,1.4s
WMOK  Wichita Mounta  17.44  24  P     P      11 39 49.5 +0.2
WMOK                             pmax  pmax
      comp=Z,11nm,0.4s
WMOK  Wichita Mounta  17.44  24⇑eP     P      11 39 49.0 -0.2
      comp=Z,11nm,0.4s
LDFC  Landfair        17.53 338⇓iP     P      11 39 52.9 +2.5
NEN   Nelson          17.96 340 eP     P      11 39 56.5 +0.9
MWC   Mount Wilson    18.02 330⇑eP     P      11 39 56.9 +0.4
SDCO  Great Sand Dun  18.81   4⇓iP     P      11 40 06.5 +0.4
      comp=Z,4.7nm,1.9s
DAC   Darwin (Calif)  19.54 334⇓iP     P      11 40 13.7 -1.0
DAC                              pmax  pmax
      comp=Z,1µm,2.0s
DAC   Darwin (Calif)  19.54 334⇓iP     P      11 40 13.7 -1.0
      comp=Z,1µm,2.0s
ARUT  Antelope Range  19.55 345  P     P      11 40 15.3 +0.5
ARUT  Antelope Range  19.55 345 eP     P      11 40 14.4 -0.4
MVU   Marysvale       19.98 349⇓iP     P      11 40 19.6 +0.1
      comp=Z,619nm,1.5s
MVU                              LR    LR
      comp=Z,58µm,20.0s
MSU   Marysvale       19.98 349  P     P      11 40 19.7 +0.2
MSU   Marysvale       19.98 349 eP     P      11 40 19.5  0.0
SRU   San Rafael      20.31 353⇓eP     P      11 40 22.4 -0.6
SOMN  Somoto          20.55 102 eP     P      11 40 25.0 -0.5
TMUT  Trail Mountain  20.58 351⇓eP     P      11 40 26.0 +0.2
UALR  University of   20.59  37⇑eP     P      11 40 25.1 -0.8
      comp=Z,286nm,1.1s
TEL3  Telica 3        20.61 105 eP     P      11 40 27.5 +1.2
LEON  Leon            20.62 105 eP     P      11 40 26.8 +0.5
TRCR  Troy Canyon     20.67 341⇓eP     P      11 40 26.2 -0.5
CNGN  Cerro Negro     20.77 105 eP     P      11 40 26.5 -1.4
MIRN  Miramar         20.78 105 eP     P      11 40 28.6 +0.6
ISCO  Idaho Springs   20.84   4⇓iP     P      11 40 28.8 +0.3
ISCO                             pmax  pmax
      comp=Z,240nm,1.3s
ISCO                             MLR   MLR
      comp=Z,118µm,21.0s,MS6.2
ISCO  Idaho Springs   20.84   4⇓iP     P      11 40 28.8 +0.3
      comp=Z,240nm,1.3s
ISCO                             LR    LR
      comp=Z,118µm,21.0s,MS6.2
MTUM  Tungsten Hills  20.86 334 eP     P      11 40 28.8 +0.1
MOMJ  Momotombo       20.95 105 eP     P      11 40 30.2 +0.5
TPH   Tonopah         20.97 338  P     P      11 40 30.1 +0.3
TPH                              pmax  pmax
      comp=Z,470nm,1.5s
TPH   Tonopah         20.97 338⇓iP     P      11 40 29.3 -0.4
      comp=Z,474nm,1.5s
TPH                              LR    LR
      comp=Z,44µm,20.0s,MS5.8
APYN  Apoyeque        21.18 105 eP     P      11 40 32.1 +0.1
LRV   Little Rabbit   21.23 328 eP     P      11 40 32.0 -0.5
XAVN  Gruta Xavier    21.23 105 eP     P      11 40 35.9 +3.2
OMM   Old Mammoth Mi  21.27 334⇓iP     P      11 40 32.6 -0.2
MGAN  Managua         21.31 105 eP     P      11 40 36.7 +3.3
CRUN  El Crucero      21.32 106 eP     P      11 40 34.6 +1.1
PYTN  Playitas        21.34 104⇓eP     P      11 40 34.2 +0.5
MPU   Maple Canyon    21.35 351⇓eP     P      11 40 34.0 +0.3
WILN  Americas 2      21.36 105 eP     P      11 40 36.8 +3.0
APON  Apoyo           21.55 106 eP     P      11 40 36.2 +0.3
NVAR  Mina Array Bea  21.68 336  P     P      11 40 36.4 -0.6
      comp=Z,28nm,1.0s,mb4.6,baz=160,slow=9.5,SNR=110
NVAR                             LR    LR     11 48 36.2
      comp=Z,39µm,18.1s,MS5.8,baz=140,slow=36
DAU   Daniels Canyon  21.68 352  P     P      11 40 37.7 +0.7
DAU   Daniels Canyon  21.68 352 eP     P      11 40 37.5 +0.5
SAO   San Andreas Ge  21.71 328  P     P      11 40 37.6 +0.3
SAO                              pmax  pmax
      comp=Z,520nm,1.8s,mb5.7
SAO   San Andreas Ge  21.71 328⇓eP     P      11 40 35.9 -1.4
      comp=Z,519nm,1.8s,mb5.7
SAO                              LR    LR
      comp=Z,34µm,19.0s,MS5.8
JLU   Jordanelle      21.90 351⇓iP     P      11 40 39.5 +0.3
CTU   Camp Tracy      22.03 351⇓eP     P      11 40 40.7 +0.3
NOQ   North Oquirrh   22.05 350 eP     P      11 40 42.2 +1.6
CONN  Concepcion      22.09 106 eP     P      11 40 41.7 +0.5
KSU1  Kansas State U  22.11  22 eP     P      11 40 41.7 +0.5
HBAR  Harrisburg      22.11  38 eP     P      11 40 43.9 +2.6
OXF   Oxford          22.18  42  P     P      11 40 42.4 +0.4
OXF                              pmax  pmax
      comp=Z,1µm,1.3s,mb6.1
OXF   Oxford          22.18  42⇑iP     P      11 40 41.2 -0.8
      comp=Z,1µm,1.4s,mb6.1
OXF                              LR    LR
      comp=Z,24µm,22.0s,MS5.6
CMB   Columbia Colle  22.22 332  P     P      11 40 41.9 -0.5
CMB                              pmax  pmax
      comp=Z,300nm,1.4s,mb5.5
CMB   Columbia Colle  22.22 332⇓eP     P      11 40 41.2 -1.1
      comp=Z,302nm,1.4s,mb5.5
CMB                              LR    LR
      comp=Z,60µm,20.0s,MS6.0
MET   Memphis--Engin  22.25  40 eP     P      11 40 43.1 +0.4
PHWY  Pilot Hill      22.35   4⇓eP     P      11 40 43.8 +0.1
TCUT  Toone Canyon    22.40 352⇓eP     P      11 40 44.7 +0.6
BGU   Big Grassy Mou  22.48 348⇓iP     P      11 40 45.2 +0.4
VCR   Vista de Mar    22.65 110 eP     P      11 40 50.1 +3.2
VCR   Vista de Mar    22.65 110 eP     P      11 40 49.8 +2.9
RWWY  Rawlins         22.68   0⇓eP     P      11 40 47.3 +0.3
      comp=Z,860nm,1.7s,mb5.9
SPUT  South Promonto  22.74 350⇓eP     P      11 40 48.2 +0.6
GNAR  Gosnell         22.77  38 eP     P      11 40 49.5 +1.6
ELK   Elko            22.80 344⇓iP     P      11 40 48.7 +0.6
ELK                              pmax  pmax
      comp=Z,899nm,2.2s
ELK                              MLR   MLR
      comp=Z,57µm,20.0s
ELK   Elko            22.80 344  P     P      11 40 48.0 -0.1
      comp=Z,18nm,1.0s,baz=178,slow=6.5,SNR=23
ELK                              S     S      11 44 55.4 +3.6
      comp=Z,1.4nm,0.8s,baz=88,slow=22,SNR=1.7
ELK                              LR    LR     11 49 11.7
      comp=Z,51µm,19.5s,MS6.0,baz=166,slow=35
ELK   Elko            22.80 344⇓iP     P      11 40 48.7 +0.6
      comp=Z,899nm,2.2s,mb5.8
ELK                              LR    LR
      comp=Z,57µm,20.0s,MS6.0
SAC   San Andreas     22.83 328  P     P      11 40 52.5 +4.0
SAC   San Andreas     22.83 328 eP     P      11 40 48.9 +0.4
HWUT  Hardware Ranch  22.90 352  PFAKE        11 41 00.0  +11
HWUT                             LR    LR
      comp=Z,59µm,20.0s,MS6.0
LRAL  Lakeview Retre  22.93  48⇑iP     P      11 40 49.5 +0.1
      comp=Z,737nm,1.1s,mb6.0
LRAL                             LR    LR
      comp=Z,7µm,20.0s,MS5.1
WCN   Washoe City     23.01 335  P     P      11 40 51.3 +1.1
WCN                              pmax  pmax
      comp=Z,970nm,1.8s,mb5.9
WCN   Washoe City     23.01 335⇓eP     P      11 40 51.1 +1.0
      comp=Z,970nm,1.8s,mb5.9
BMN   Battle Mountai  23.08 340  P     P      11 40 52.2 +1.3
BMN                              pmax  pmax
      comp=Z,890nm,1.6s,mb6.0
BMN   Battle Mountai  23.08 340⇓eP     P      11 40 51.2 +0.3
      comp=Z,891nm,1.6s,mb6.0
BMN                              LR    LR
      comp=Z,24µm,19.0s,MS5.7
HALT  Halls           23.14  39 eP     P      11 40 51.8 +0.3
JTS   JuntasAbangare  23.19 109c iP    P      11 40 53.6 +1.4
JTS   JuntasAbangare  23.19 109  P     P      11 40 52.5 +0.4
      comp=Z,75nm,1.1s,mb5.0,baz=325,slow=6.3,SNR=23
JTS                              S     S      11 45 12.2  +13
      comp=Z,1.4nm,0.3s,baz=347,slow=20,SNR=1.4
JTS   JuntasAbangare  23.19 109⇑iP     P      11 40 52.8 +0.7
      comp=Z,2µm,1.9s,mb6.2
JTS                              LR    LR
      comp=Z,11µm,21.0s,MS5.3
PAHR  Pah Rah Range   23.21 336⇓eP     P      11 40 52.9 +0.8
      comp=Z,682nm,2.0s,mb5.7
HVU   Hansel Valley   23.26 349  P     P      11 40 53.6 +1.0
HVU   Hansel Valley   23.26 349⇓eP     P      11 40 53.2 +0.7
PVMO  Portageville    23.27  38 eP     P      11 40 53.1 +0.4
FORC  Fortuna         23.37 108 eP     P      11 40 55.4 +1.4
FORC  Fortuna         23.37 108 eP     P      11 40 53.9  0.0
PARMO Parma           23.41  37⇑eP     P      11 40 54.6 +0.5
GLAT  Glass           23.41  39 eP     P      11 40 54.8 +0.7
CCM   Cathedral Cave  23.61  33  P     P      11 40 56.8 +0.8
CCM                              pmax  pmax
      comp=Z,910nm,1.6s,mb6.0
CCM   Cathedral Cave  23.61  33⇑iP     P      11 40 55.6 -0.5
      comp=Z,906nm,1.6s,mb6.0
CCM                              LR    LR
      comp=Z,2µm,20.0s
NSHM  Saint Helena R  23.65 329 eP     P      11 40 57.3 +0.8
UTMT  University of   23.71  39  P     P      11 40 58.0 +0.9
      comp=Z,2µm,1.4s,mb6.5
BEKR  Beckwourth      23.73 334⇓eP     P      11 40 58.0 +0.8
      comp=Z,2µm,2.2s,mb6.1
BW06  Boulder Array   23.84 356⇓iP     P      11 40 58.1 -0.1
      comp=Z,123nm,1.4s,mb5.1
BW06                             LR    LR
      comp=Z,45µm,19.0s,MS6.0
PDAR  Pinedale Array  23.84 356  P     P      11 40 58.2  0.0
      comp=Z,10nm,0.8s,baz=162,slow=9.7,SNR=47
PDAR                             PcP   PcP    11 44 40.1 -2.8
      comp=Z,3.2nm,1.0s,baz=180,slow=9.0,SNR=3.2
PDAR                             LR    LR     11 50 10.4
      comp=Z,34µm,18.1s,MS5.9,baz=191,slow=36
PDAR                             PKiKP        11 52 26.7
      comp=Z,0.7nm,0.8s,baz=135,slow=2.1,SNR=4.1
PRS1  Puriscal        23.89 109 eP     P      11 41 01.0 +2.0
PRS1  Puriscal        23.89 109 eP     P      11 41 01.1 +2.1
AHID  Auburn Hatcher  23.98 353⇓eP     P      11 40 59.7 +0.1
      comp=Z,439nm,1.8s,mb5.6
AHID                             LR    LR
      comp=Z,48µm,19.0s,MS6.0
FVM   French Village  23.99  34  P     P      11 40 59.8 +0.1
FVM                              pmax  pmax
      comp=Z,620nm,1.5s,mb5.8
FVM   French Village  23.99  34⇑iP     P      11 40 59.6  0.0
      comp=Z,616nm,1.5s,mb5.8
SJS   Escuela Geolog  24.14 108 eP     P      11 41 04.8 +3.4
      comp=Z,668nm,1.7s,mb5.8
SJS   Escuela Geolog  24.14 108 eP     P      11 41 05.3 +3.9
TRTC  Tortuguero      24.20 107 eP     P      11 41 05.0 +3.1
TRTC  Tortuguero      24.20 107⇑eP     P      11 41 05.5 +3.6
WVT   Waverly         24.20  41⇑iP     P      11 41 01.5 -0.3
WVT                              pmax  pmax
      comp=Z,387nm,1.4s,mb5.6
WVT                              MLR   MLR
      comp=Z,36µm,20.0s,MS5.9
WVT   Waverly         24.20  41⇑iP     P      11 41 01.5 -0.4
      comp=Z,387nm,1.4s,mb5.6
WVT                              LR    LR
      comp=Z,36µm,20.0s,MS5.9
HOPS  Hopland         24.25 329⇓eP     P      11 41 02.2  0.0
      comp=Z,238nm,1.6s,mb5.4
HOPS                             LR    LR
      comp=Z,54µm,19.0s,MS6.0
URSC  Urasca          24.43 108 eP     P      11 41 08.3 +4.1
URSC  Urasca          24.43 108 eP     P      11 41 07.8 +3.6
REDW  Red Top Meadow  24.55 354 eP     P      11 41 05.2 +0.1
      comp=Z,513nm,1.4s,mb5.9
BUS   Buena Vista     24.57 109 eP     P      11 41 07.8 +2.3
BUS   Buena Vista     24.57 109 eP     P      11 41 07.7 +2.1
SLM   Saint Louis     24.57  33  P     P      11 41 06.1 +0.8
SLM                              pmax  pmax
      comp=Z,840nm,1.5s,mb6.0
SLM   Saint Louis     24.57  33 eP     P      11 41 05.4 +0.1
      comp=Z,844nm,1.5s,mb6.0
RRI2  Red Ridge       24.58 353⇓eP     P      11 41 05.6 +0.2
      comp=Z,963nm,1.5s,mb6.1
SNOW  Snow King Moun  24.64 354⇓iP     P      11 41 06.0  0.0
      comp=Z,444nm,1.3s,mb5.8
TPAW  Teton Pass      24.68 354⇓eP     P      11 41 06.3 -0.1
      comp=Z,817nm,1.6s,mb6.0
LOHW  Long Hollow     24.77 354⇓eP     P      11 41 07.1 -0.1
      comp=Z,802nm,1.5s,mb6.0
MOOW  Moose Ponds     24.92 354⇓eP     P      11 41 08.1 -0.5
      comp=Z,599nm,1.7s,mb5.8
LIO   Limon           25.03 107 eP     P      11 41 11.8 +1.8
IMW   Indian Meadow   25.08 354⇓eP     P      11 41 10.0 -0.2
      comp=Z,195nm,1.3s,mb5.5
RSSD  Black Hills     25.26   5  P     P      11 41 13.3 +1.5
RSSD                             pmax  pmax
      comp=Z,87nm,1.1s,mb5.2
RSSD  Black Hills     25.26   5⇓eP     P      11 41 11.9  0.0
      comp=Z,88nm,1.1s,mb5.2
WDC   Whiskeytown Da  25.26 332 eP     P      11 41 10.7 -1.2
WDC                              pmax  pmax
      comp=Z,196nm,1.8s,mb5.3
WDC                              MLR   MLR
      comp=Z,45µm,19.0s,MS6.0
WDC   Whiskeytown Da  25.26 332 eP     P      11 41 10.7 -1.3
      comp=Z,196nm,1.8s,mb5.3
WDC                              LR    LR
      comp=Z,45µm,19.0s,MS6.0
HLID  Hailey          25.29 348⇓iP     P      11 41 12.1 -0.1
      comp=Z,132nm,1.3s,mb5.3
HLID                             LR    LR
      comp=Z,43µm,20.0s,MS6.0
DWPF  Disney          25.32  64⇑iP     P      11 41 12.6 -0.1
      comp=Z,2µm,1.4s,mb6.5
DWPF                             LR    LR
      comp=Z,5µm,22.0s,MS5.0
WVOR  Wild Horse Val  25.35 340⇓eP     P      11 41 12.1 -0.6
WVOR                             pmax  pmax
      comp=Z,563nm,1.5s,mb5.9
WVOR  Wild Horse Val  25.35 340⇓eP     P      11 41 12.1 -0.6
      comp=Z,563nm,1.5s,mb5.9
MOD   Modoc           25.46 337⇓iP     P      11 41 13.3 -0.4
      comp=Z,208nm,1.4s,mb5.5
MOD                              LR    LR
      comp=Z,78µm,20.0s,MS6.2
YFT   Old Faithful    25.62 354 eP     P      11 41 16.2 +0.9
PAYG  Puerto Ayora    25.63 138 eP     P      11 41 14.1 -1.6
      comp=Z,318nm,1.4s,mb5.7
PAYG                             LR    LR
      comp=Z,18µm,19.0s,MS5.6
LKWY  Lake            25.70 355  P     P      11 41 18.3 +2.4
LKWY                             pmax  pmax
      comp=Z,750nm,1.9s,mb5.9
LKWY  Lake            25.70 355⇓eP     P      11 41 16.5 +0.5
      comp=Z,750nm,2.0s,mb5.9
LKWY                             LR    LR
      comp=Z,52µm,20.0s,MS6.0
YMR   Madison River   25.85 354 eP     P      11 41 18.3 +0.9
YNR   Norris Junctio  25.87 354 eP     P      11 41 17.9 +0.4
CPCT  Cooper Cave     25.96  46⇑eP     P      11 41 17.7 -0.8
KHMM  Horse Mountain  26.04 331 eP     P      11 41 18.6 -0.6
QLMT  Earthquake Lak  26.06 353 eP     P      11 41 20.1 +0.7
MCMT  McKenzie Canyo  26.24 351 eP     P      11 41 21.4 +0.4
YBH   Yreka Blue Hor  26.27 333  P     P      11 41 19.8 -1.5
YBH                              pmax  pmax
      comp=Z,62nm,1.5s
YBH   Yreka Blue Hor  26.27 333  P     P      11 41 18.8 -2.6
      comp=Z,6.2nm,0.8s,baz=106,slow=6.7,SNR=17
YBH                              LR    LR     11 51 25.9
      comp=Z,37µm,20.9s,MS5.9,baz=154,slow=36
YBH   Yreka Blue Hor  26.27 333 eP     P      11 41 18.7 -2.7
      comp=Z,62nm,1.5s,mb4.9
YBH                              LR    LR
      comp=Z,33µm,21.0s,MS5.9
BOZ   Bozeman (W)     26.89 353  P     P      11 41 26.3 -0.6
BOZ                              pmax  pmax
      comp=Z,170nm,1.3s,mb5.4
BOZ   Bozeman (W)     26.89 353⇓iP     P      11 41 26.0 -0.9
      comp=Z,168nm,1.4s,mb5.4
BOZ                              LR    LR
      comp=Z,26µm,19.0s,MS5.8
BLO   Bloomington     26.99  37 eP     P      11 41 27.3 -0.6
BLO                              pmax  pmax
      comp=Z,483nm,1.8s,mb5.7
BLO   Bloomington     26.99  37 eP     P      11 41 27.3 -0.6
      comp=Z,483nm,1.8s,mb5.7
HUMO  Hull Mountain   27.10 334 eP     P      11 41 27.7 -1.2
      comp=Z,67nm,1.7s,mb4.9
HUMO                             LR    LR
      comp=Z,28µm,19.0s,MS5.8
LCCM  Lewis and Clar  27.11 353  P     P      11 41 29.1 +0.2
BMO   Blue Mountains  27.18 344⇓eP     P      11 41 27.7 -1.9
      comp=Z,168nm,1.6s,mb5.3
BMO                              LR    LR
      comp=Z,31µm,20.0s,MS5.9
TZTN  Tazewell        27.22  45⇑iP     P      11 41 29.1 -0.9
KBO   Bosley Butte    27.33 332⇓eP     P      11 41 30.2 -0.8
LAO   LASA Array      27.69   2⇓eP     P      11 41 33.2 -1.1
      comp=Z,589nm,1.7s,mb5.9
LAO                              LR    LR
      comp=Z,102µm,20.0s,MS6.4
JSC   Jenkinsville    27.70  51  P     P      11 41 34.4  0.0
JSC   Jenkinsville    27.70  51 eP     P      11 41 34.1 -0.3
COW   Cow Castle Cre  27.73  53 eP     P      11 41 34.4 -0.3
HBF   Harts Bluff     27.79  55 eP     P      11 41 38.6 +3.3
HBF   Harts Bluff     27.79  55 eP     P      11 41 33.2 -2.1
KEBM  Edson Butte     27.90 332 eP     P      11 41 35.5 -0.7
HRY   Holter Researc  27.96 353 eP     P      11 41 36.1 -0.5
NHSC  New Hope        28.01  54 eP     P      11 41 36.6 -0.8
      comp=Z,354nm,1.0s,mb6.0
NHSC                             LR    LR
      comp=Z,40µm,21.0s,MS6.0
CSU   Charleston Sou  28.05  55 eP     P      11 41 38.5 +0.8
CHMT  Chamberlain Mo  28.34 351 eP     P      11 41 39.2 -0.9
MSO   Missoula        28.36 350⇓iP     P      11 41 39.2 -1.1
      comp=Z,189nm,1.5s,mb5.5
MSO                              LR    LR
      comp=Z,22µm,22.0s,MS5.7
COR   Corvallis       28.89 336  P     P      11 41 45.5 +0.5
COR                              pmax  pmax
      comp=Z,440nm,1.7s,mb5.9
COR   Corvallis       28.89 336 eP     P      11 41 44.1 -0.9
      comp=Z,440nm,1.8s,mb5.9
COR                              LR    LR
      comp=Z,10µm,21.0s,MS5.4
ELN   Prospectdale    29.48  46 eP     P      11 41 49.6 -0.9
DGMT  Dagmar          29.57   4 eP     P      11 41 51.1 -0.1
      comp=Z,344nm,1.7s,mb5.8
DGMT                             LR    LR
      comp=Z,36µm,22.0s,MS6.0
FWV   Forest Hill     29.62  46 eP     P      11 41 51.0 -0.7
BLA   Blacksburg      29.70  47  P     P      11 41 52.7 +0.2
BLA                              pmax  pmax
      comp=Z,77nm,1.0s,mb5.4
BLA   Blacksburg      29.70  47 eP     P      11 41 52.1 -0.4
      comp=Z,77nm,1.0s,mb5.4
BLA                              LR    LR
      comp=Z,29µm,22.0s,MS5.9
TBM   Table Mountain  30.22 342  P     P      11 41 57.3 +0.4
LON   Longmire        30.22 340  P     P      11 41 55.8 -1.2
NEW   Newport         30.34 347  P     P      11 41 57.7 -0.3
NEW                              pmax  pmax
      comp=Z,230nm,1.7s
NEW   Newport         30.34 347 eP     P      11 41 56.4 -1.6
      comp=Z,231nm,1.7s,mb5.6
NEW                              LR    LR
      comp=Z,30µm,19.0s,MS6.0
MCWV  Mont Chateau    31.37  43 eP     P      11 42 05.8 -1.4
      comp=Z,370nm,1.4s,mb6.0
MCWV                             LR    LR
      comp=Z,6µm,20.0s,MS5.3
SQM   Sequim          31.79 340  P     P      11 42 10.1 -0.7
OCWA  Octopus Mounta  31.89 338⇓eP     P      11 42 11.0 -0.7
      comp=Z,465nm,1.8s,mb6.0
OCWA                             LR    LR
      comp=Z,31µm,20.0s,MS6.0
CBN   Corbin          32.29  47 eP     P      11 42 14.4 -0.9
      comp=Z,614nm,1.2s,mb6.3
CBN                              LR    LR
      comp=Z,26µm,19.0s,MS5.9
ALLY  Alegheny Colle  32.32  40  P     P      11 42 15.7 +0.2
PGC   Sidney          32.42 340⇓eP     P      11 42 14.7 -1.6
      comp=Z,236nm,1.6s,mb5.8
SDMD  Soldier’s Deli  33.23  46 eP     P      11 42 24.1 +0.7
OTAV  Otavalo         33.81 120 eP     P      11 42 28.1 -0.5
      comp=Z,282nm,1.6s,mb6.0
OTAV                             LR    LR
      comp=Z,17µm,21.0s,MS5.7
GENY  Geneseo         34.38  40 eP     P      11 42 31.9 -1.4
EDM   Edmonton        34.55 354  P     P      11 42 33.5 -1.2
EDM   Edmonton        34.55 354⇓eP     P      11 42 32.7 -2.0
ROSC  El Rosal        35.02 109  P     P      11 42 39.2 +0.1
      comp=Z,2.4nm,0.3s,mb4.6,baz=104,slow=19,SNR=3.2
ROSC                             S     S      11 48 18.3 +8.8
      comp=Z,2.6nm,0.4s,baz=95,slow=22,SNR=1.4
BINY  Binghamton      35.20  42 eP     P      11 42 38.4 -2.0
      comp=Z,426nm,1.6s,mb6.1
BINY                             LR    LR
      comp=Z,23µm,20.0s,MS5.9
BRNJ  Basking Ridge   35.38  45 eP     P      11 42 41.8 -0.1
CPNY  Central Park    35.83  45 eP     P      11 42 44.1 -1.6
FFC   Flin Flon       35.95   5⇓eP     P      11 42 44.8 -1.8
FFC                              MLR   MLR
      comp=Z,14µm,20.0s,MS5.7
PAL   Palisades       35.97  45  P     P      11 42 48.7 +1.8
PAL                              pmax  pmax
      comp=Z,160nm,1.1s,mb5.9
PAL   Palisades       35.97  45 eP     P      11 42 45.2 -1.6
      comp=Z,155nm,1.1s,mb5.8
SDV   Santo Domingo   36.84 101  P     P      11 42 54.2 -0.2
      comp=Z,48nm,0.9s,mb5.3,baz=303,slow=5.6,SNR=15
SDV                              PcP   PcP    11 45 16.8 +0.1
      comp=Z,17nm,0.7s,baz=14,slow=6.6,SNR=5.4
SDV                              LR    LR     12 00 18.4
      comp=Z,4µm,18.0s,MS5.2,baz=316,slow=40
SDV   Santo Domingo   36.84 101⇑iP     P      11 42 54.1 -0.3
      comp=Z,192nm,1.0s,mb5.9
SDV                              LR    LR
      comp=Z,5µm,20.0s,MS5.3
ACCN  Adirondack Com  37.27  42 eP     P      11 42 56.6 -1.2
MSNY  Massena         37.40  39 eP     P      11 42 59.6 +0.8
QUA2  Belchertown     37.59  44  P     P      11 42 59.5 -1.0
      comp=Z,235nm,1.5s,mb5.7
MIV   Mineville/With  37.71  41 eP     P      11 43 00.0 -1.5
BRYW  Bryant College  37.97  45 eP     P      11 43 03.9 +0.2
      comp=Z,296nm,1.5s,mb5.8
FRNY  Flat Rock       38.07  40 eP     P      11 43 04.8 +0.3
HRV   Harvard--Oak R  38.22  44  P     P      11 43 05.2 -0.6
HRV                              PP    PP     11 44 34.5 -2.1
HRV                              S     S      11 49 02.2 +3.9
HRV   Harvard--Oak R  38.22  44  P     P      11 43 07.9 +2.1
HRV                              pmax  pmax
      comp=Z,160nm,1.5s,mb5.5
HRV   Harvard--Oak R  38.22  44 eP     P      11 43 04.9 -0.9
      comp=Z,161nm,1.5s,mb5.5
HRV                              LR    LR
      comp=Z,11µm,19.0s,MS5.7
HNH   Hanover         38.31  42  P     P      11 43 07.1 +0.6
      comp=Z,10nm,1.4s
WES   Weston          38.32  45 eP     P      11 43 05.5 -1.1
WES                              pmax  pmax
      comp=Z,181nm,1.5s,mb5.6
WES                              MLR   MLR
      comp=Z,12µm,19.0s,MS5.7
WES   Weston          38.32  45 eP     P      11 43 05.5 -1.2
      comp=Z,180nm,1.5s,mb5.6
WES                              LR    LR
      comp=Z,12µm,19.0s,MS5.7
FFD   Franklin Falls  38.60  43  P     P      11 43 06.6 -2.4
      comp=Z,141nm,1.4s,mb5.5
SJG   San Juan        38.91  84  P     P      11 43 11.1 -0.7
SJG                              pmax  pmax
      comp=Z,290nm,1.1s
SJG   San Juan        38.91  84  P     P      11 43 09.9 -1.9
      comp=Z,44nm,0.9s,mb5.2,baz=283,slow=6.4,SNR=9.4
SJG                              S     S      11 49 15.8 +6.9
      comp=Z,4.2nm,0.3s,baz=347,slow=21,SNR=5.7
SJG   San Juan        38.91  84⇑eP     P      11 43 09.9 -1.9
      comp=Z,293nm,1.1s,mb5.9
SJG                              LR    LR
      comp=Z,9µm,21.0s,MS5.6
BBSR  BB Station      40.36  62  P     P      11 43 22.6 -1.0
BBSR  BB Station      40.36  62⇑iP     P      11 43 22.4 -1.2
      comp=Z,393nm,1.6s,mb5.9
BBSR                            ePP    PP     11 45 02.1 +1.9
BBSR                            eS     S      11 49 35.1 +4.4
BBSR                             LR    LR
      comp=Z,7µm,22.0s,MS5.5
WVL   Waterville      40.38  42 eP     P      11 43 24.0 +0.3
      comp=Z,445nm,1.5s,mb6.0
WVL                              LR    LR
      comp=Z,78µm,21.0s,MS6.5
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FCC   Fort Churchill    40.92  10 P       P       11 43 26.7 -1.3
FCC                               pmax    pmax
      comp=Z,330nm,1.3s,mb5.8
FCC   Fort Churchill    40.92  10 eP      P       11 43 26.5 -1.5
      comp=Z,329nm,1.4s,mb5.8
CRAG  Craig             41.41 338 eP      P       11 43 30.4 -1.6
      comp=Z,308nm,1.6s,mb5.7
EMMW  East Machias      41.86  43 P       P       11 43 35.7 -0.1
      comp=Z,628nm,1.5s,mb6.0
EMMW                              LR      LR
      comp=Z,94µm,21.0s,MS6.6
PCRV  Puerto La Cruz    42.05  96 P       P       11 43 37.5 -0.4
      comp=Z,14nm,0.7s,mb4.7,baz=344,slow=6.6,SNR=3.8
PCRV                              S       S       11 49 55.8 -0.2
      comp=Z,3.3nm,0.4s,baz=274,slow=1.5,SNR=2.3
SKI   Saint Kitts       42.24  85 eP      P       11 43 38.9 -0.4
PQI   Presque Isle      42.37  40 PFAKE           11 43 50.0  +10
PQI                               LR      LR
      comp=Z,58µm,19.0s,MS6.5
SKTB  Turtle Beach      42.37  85 eP      P       11 43 40.7 +0.3
TAOE  Nuku Hiva Isla    42.61 232 eP      Px      11 43 16.3
      comp=Z,3µm,25.2s
TAOE                              ePP     PP      11 45 18.3 -5.7
      comp=Z,2µm,27.0s
TAOE                              eS      S       11 49 54.5  -10
      comp=Z,13µm,24.6s
TAOE                              eLQ             11 53 10.5
      comp=Z,56µm,27.4s
TAOE                              eLR     LR      11 54 47.1
      comp=Z,164µm,25.7s,baz=52
DLBC  Dease Lake        42.84 343⇓eP      P       11 43 43.6  0.0
NNA   Nana              42.92 133 eP      P       11 43 44.4 -0.6
      comp=Z,476nm,1.8s,mb5.9
CPB   Codrington        43.05  84 eP      P       11 43 40.2 -5.7
BPA   Boggy Peak        43.12  85 eP      P       11 43 41.6 -4.9
SIT   Sitka             43.42 338⇓eP      P       11 43 47.3 -1.1
SIT                               pmax    pmax
      comp=Z,59nm,1.3s,mb5.2
SIT                               MLR     MLR
      comp=Z,17µm,21.0s,MS5.9
SIT   Sitka             43.42 338⇓eP      P       11 43 47.3 -1.1
      comp=Z,59nm,1.3s,mb5.2
SIT                               LR      LR
      comp=Z,17µm,21.0s,MS5.9
SEG   Port Louis        43.56  86 eP      P       11 43 54.6 +4.5
BBL   Barber’s Block    43.76  87 eP      P       11 43 55.9 +4.2
YKA   Yellowknife Ar    43.82 355 P       P       11 43 49.1 -2.5
      comp=Z,9.8nm,1.1s,baz=169,slow=7.1,SNR=34
YKA                               PcP     PcP     11 45 36.5 -2.1
      comp=Z,5.3nm,1.0s,baz=165,slow=3.5,SNR=5.6
YKA                               S       S       11 50 18.2 -3.0
      comp=Z,0.4nm,0.8s,baz=305,slow=8.4,SNR=2.5
YKA                               LR      LR      12 02 16.6
      comp=Z,37µm,19.2s,MS6.3,baz=180,slow=36
YKA   Yellowknife Ar    43.82 355 P       P       11 43 49.1 -2.5
YKA                               PcP     PcP     11 45 36.5 -2.2
YKA                               S       S       11 50 18.2 -3.0
YKA                               LR      LR      12 02 16.6
MGG   Marie-Galante     43.83  87 eP      P       11 43 57.0 +4.7
YKW3  Yellowknife Ar    43.89 355⇓eP      P       11 43 50.0 -2.1
DEG   La Desirade       44.00  86 eP      P       11 43 58.2 +4.5
TRN   Trinidad (W)      44.97  94 eP      P       11 44 02.8 +1.2
SCHQ  Schefferville     47.15  31 P       P       11 44 16.6 -1.6
      comp=Z,7.2nm,0.5s,mb4.8,baz=256,slow=3.2,SNR=18
SCHQ                              S       S       11 51 10.2 +1.0
      comp=Z,2.3nm,1.1s,baz=235,slow=12,SNR=2.5
SCHQ  Schefferville     47.15  31 eP      P       11 44 18.0 -0.3
      comp=Z,44nm,1.3s,mb5.2
HON   Honolulu          47.56 282 P       P       11 44 20.3 -1.6
KIP   Kipapa            47.56 282 P       P       11 44 22.9 +0.9
KIP                               pmax    pmax
      comp=Z,660nm,1.9s,mb6.3
KIP   Kipapa            47.56 282 eP      P       11 44 20.8 -1.1
      comp=Z,658nm,1.9s,mb6.3
KIP                               LR      LR
      comp=Z,21µm,21.0s,MS6.1
PTCN  Pitcairn Islan    49.07 208 PFAKE           11 44 40.0 +6.4
PTCN                              LR      LR
      comp=Z,19µm,21.0s,MS6.1
EYAK  Cordova Ski Ar    49.73 336 eP      P       11 44 36.8 -1.4
ARE   Arequipa          49.73 133 eP      P       11 44 37.0 -1.8
RKT   Rikitea           49.80 214 eS      S       11 51 33.7  -13
      comp=Z,5µm,25.8s
RKT                               eLQ             11 56 24.9
      comp=Z,10µm,26.2s
RKT                               eLR     LR      11 58 26.5
      comp=Z,35µm,27.8s,baz=33
DIV   Divide            50.11 337⇓eP      P       11 44 40.1 -1.0
      comp=Z,683nm,1.8s,mb6.4
DIV                               LR      LR
      comp=Z,27µm,20.0s,MS6.2
KDAK  Kodiak Island     51.05 331 eP      P       11 44 47.9 -0.3
SLKM  Skilak Lake       51.47 334 eP      P       11 44 50.2 -1.2
SML   Sawmill           51.49 336 P       P       11 44 50.5 -1.1
SML   Sawmill           51.49 336 eP      P       11 44 50.1 -1.5
SAML  Samuel            51.52 119 eP      P       11 44 49.1 -3.3
      comp=Z,282nm,1.8s,mb5.9
SAML                              LR      LR
      comp=Z,6µm,20.0s,MS5.6
THY   Trims Highway     51.59 339 eP      P       11 44 51.1 -1.3
PMR   Palmer            51.67 336 eP      P       11 44 52.2 -0.7
PMR                               pmax    pmax
      comp=Z,316nm,1.9s,mb5.9
PMR   Palmer            51.67 336 eP      P       11 44 52.2 -0.7
      comp=Z,316nm,1.9s,mb5.9
FIB   Fire Island       51.83 335 PFAKE           11 45 10.0  +16
FIB                               LR      LR
      comp=Z,5µm,21.0s,MS5.5
PWA   Palmer West       51.99 336 eP      P       11 44 54.5 -0.9
PWA                               pmax    pmax
      comp=Z,130nm,1.5s,mb5.6
PWA   Palmer West       51.99 336 eP      P       11 44 54.5 -0.9
      comp=Z,130nm,1.5s,mb5.6
LPAZ  La Paz            52.01 130 P       P       11 44 54.4 -1.7
LPAZ                              pmax    pmax
      comp=Z,270nm,1.7s
LPAZ  La Paz            52.01 130 P       P       11 44 53.7 -2.4
      comp=Z,29nm,0.9s,mb5.2,baz=325,slow=7.8,SNR=55
LPAZ                              S       S       11 52 16.4 -1.0
      comp=Z,0.4nm,0.4s,baz=4.3,slow=25,SNR=2.0
LPAZ                              LR      LR      12 04 35.0
      comp=Z,8µm,21.2s,MS5.7,baz=316,slow=33
LPAZ  La Paz            52.01 130 eP      P       11 44 53.8 -2.3
      comp=Z,274nm,1.7s,mb5.9
LPAZ                              LR      LR
      comp=Z,10µm,22.0s,MS5.8
INK   Inuvik            52.05 348 P       P       11 44 54.3 -1.5
INK                               pmax    pmax
      comp=Z,270nm,1.2s
INK   Inuvik            52.05 348⇓eP      P       11 44 53.6 -2.2
      comp=Z,266nm,1.3s,mb6.0
RSO   Redoubt South     52.50 334 eP      P       11 44 58.5 -0.6
SPU   Mount Spurr       52.59 335 eP      P       11 44 58.3 -1.6
ILAR  Eielson Array     52.86 340 P       P       11 44 59.6 -2.2
      comp=Z,35nm,1.2s,mb5.2,baz=148,slow=5.5,SNR=68
ILAR                              LR      LR      12 08 37.7
      comp=Z,7µm,18.4s,MS5.8,baz=147,slow=37
SVW2  Sparrevohn        54.02 333 eP      P       11 45 07.8 -2.6
TTA   Tatalina          55.10 335 eP      P       11 45 16.6 -1.7
PPT   Papeete           55.20 231 ePP     PP      11 47 05.0  -20
      comp=Z,485nm,24.2s
PPT                               eS      S       11 53 00.0 -0.4
      comp=Z,10µm,26.5s
PPT                               eSS     SS      11 56 36.5 -8.1
      comp=Z,3µm,25.2s
PPT                               eLQ             11 58 33.2
      comp=Z,4µm,27.0s
PPT                               eLR     LR      12 00 36.2
      comp=Z,63µm,26.8s,baz=44
PPT   Papeete           55.20 231 LR      LR      12 02 16.8
      comp=Z,14µm,19.8s,MS6.0,baz=57,slow=29
IMA   Indian Mountai    55.91 339 eP      P       11 45 22.6 -1.5
IMA                               pmax    pmax
      comp=Z,216nm,2.0s,mb5.8
IMA   Indian Mountai    55.91 339 eP      P       11 45 22.6 -1.5
      comp=Z,216nm,2.0s,mb5.8
RES   Resolute Bay      56.18   4 P       P       11 45 25.8 -0.1
RES                               pmax    pmax
      comp=Z,44nm,1.1s,mb5.4
RES   Resolute Bay      56.18   4 eP      P       11 45 25.2 -0.8
      comp=Z,44nm,1.1s,mb5.4
UNV   Unalaska Valle    56.88 323⇓eP      P       11 45 31.3 +0.1
      comp=Z,3µm,2.5s
UNV                               LR      LR
      comp=Z,26µm,22.0s,MS6.3
SIV   San Ignacio       57.16 124 P       P       11 45 30.0 -3.7
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      comp=Z,16nm,0.9s,mb5.1,baz=308,slow=8.3,SNR=32
NIKO  Nikolski          58.06 321 eP      P       11 45 38.3 -1.3
TBI   Tubuai            58.86 226 ePP     PP      11 47 39.0  -19
      comp=Z,324nm,26.5s
TBI                               eS      S       11 53 51.1 +2.4
      comp=Z,15µm,26.8s
TBI                               eSS     SS      11 57 36.4 -7.7
      comp=Z,2µm,39.2s
TBI                               eLQ             11 59 49.1
      comp=Z,5µm,43.2s
TBI                               eLR     LR      12 02 27.2
      comp=Z,46µm,28.2s,baz=45
SFJD  Kangerlussuaq     59.92  22 P       P       11 45 51.5 -0.8
SFJD  Kangerlussuaq     59.92  22 eP      P       11 45 50.9 -1.3
TNA   Tin City          60.92 335 eP      P       11 45 57.3 -1.8
      comp=Z,28nm,1.0s,mb5.3
TNA                               LR      LR
      comp=Z,4µm,20.0s,MS5.5
CFAA  Coronel Fontan    62.65 143 P       P       11 46 08.7 -2.5
      comp=Z,10nm,1.0s,mb4.9,baz=314,slow=5.6,SNR=22
CLCH  Cerro Calan       62.73 146 eP      P       11 46 08.9 -2.8
MIDW  Midway            64.18 293 PFAKE           11 46 30.0 +8.6
MIDW                              LR      LR
      comp=Z,5µm,20.0s,MS5.7
RAR   Rarotonga         65.09 235 PFAKE           11 46 40.0  +13
RAR                               LR      LR
      comp=Z,22µm,20.0s,MS6.3
SUMG  Summit            65.75  18⇑eP      P       11 46 30.5 -0.3
      comp=Z,174nm,1.4s,mb5.9
JATB  Jatai             65.87 120ceP      P       11 46 31.3 -1.1
JATB                              i               11 46 33.4
JATB                              i       pP      11 46 37.1 -0.3
JATB                              i               11 46 59.4
JATB                              i               11 47 15.8
JATB                              i               11 47 15.9
CPUP  Villa Florida     66.12 131 P       P       11 46 31.4 -2.5
CPUP                              pmax    pmax
      comp=Z,390nm,1.7s
CPUP  Villa Florida     66.12 131 P       P       11 46 30.4 -3.5
      comp=Z,27nm,0.9s,mb5.3,baz=331,slow=10,SNR=44
CPUP                              LR      LR      12 14 57.1
      comp=Z,5µm,19.6s,MS5.7,baz=346,slow=36
CPUP  Villa Florida     66.12 131 eP      P       11 46 31.1 -2.8
      comp=Z,393nm,1.7s,mb6.2
CPUP                              LR      LR
      comp=Z,5µm,19.0s,MS5.8
BDFB  Brasilia          67.65 116 P       P       11 46 41.6 -2.2
      comp=Z,58nm,0.9s,mb5.6,baz=292,slow=7.0,SNR=31
BAO   Brasilia Array    67.67 116 P       P       11 46 42.5 -1.4
SMY   Shemya            68.34 320 PFAKE           11 47 00.0  +13
SMY                               LR      LR
      comp=Z,15µm,22.0s,MS6.2
PLCA  Paso Flores       68.46 151⇓eP      P       11 46 45.3 -3.1
PLCA                              pmax    pmax
      comp=Z,117nm,1.4s
PLCA                              MLR     MLR
      comp=Z,24µm,20.0s
PLCA  Paso Flores       68.46 151 P       P       11 46 45.5 -3.0
      comp=Z,32nm,1.1s,mb5.3,baz=323,slow=6.9,SNR=18
PLCA                              LR      LR      12 10 45.3
      comp=Z,22µm,18.1s,MS6.4,baz=336,slow=31
PLCA  Paso Flores       68.46 151⇓eP      P       11 46 45.3 -3.1
      comp=Z,117nm,1.4s,mb5.7
PLCA                              LR      LR
      comp=Z,24µm,20.0s,MS6.4
FX1   Attu Island--F    68.89 320 eP      P       11 46 47.4 -3.5
SCO   Scoresbysund      70.74  21 i P     P       11 47 02.7 +0.8
SCO                               i S     S       11 56 14.5 +0.1
SCO                               pmax    pmax
      comp=Z,9.0nm,0.9s,mb4.7
SCO   Scoresbysund      70.74  21 i P     P       11 47 02.7 +0.8
      comp=Z,8.8nm,0.9s,mb4.7
SCO                               i S     S       11 56 14.5 +0.1
ADH   Angra Heroismo    70.78  55 eLR     LR      12 09 20.0
TRQA  Tornquist         70.85 144 eP      P       11 47 01.1 -2.0
      comp=Z,906nm,2.3s,mb6.3
TRQA                              LR      LR
      comp=Z,20µm,19.0s,MS6.4
LPA   La Plata          71.12 139deP      P       11 47 02.0 -2.8
LPA                               epP     pP      11 47 05.0 -4.9
LPA                               eS      S       11 56 19.0 -0.4
LPA                               esS             11 56 25.0
LPA                               SKIKP           11 56 43.0
      comp=Z,11µm,19.0s
BILL  Bilibino          71.30 337⇑iP      P       11 47 03.3 -2.0
BILL                              pmax    pmax
      comp=Z,164nm,2.2s,mb5.6
BILL                              MLR     MLR
      comp=Z,6µm,16.0s,MS5.9
BILL  Bilibino          71.30 337⇓eP      P       11 47 03.1 -2.2
      comp=Z,228nm,1.7s,mb5.8
BILL                              LR      LR
      comp=Z,5µm,21.0s,MS5.8
DAG   Danmarks Havn     71.39  14⇓eP      P       11 47 04.2 -1.5
DAG                               i               11 49 44.0
DAG                               pmax    pmax
      comp=Z,34nm,1.0s,mb5.2
DAG                               MLR     MLR
      comp=Z,30µm,18.0s,MS6.6
DAG   Danmarks Havn     71.39  14⇓eP      P       11 47 04.2 -1.5
      comp=Z,34nm,1.0s,mb5.2
DAG                               i               11 49 44.0
DAG                               LR      LR
      comp=Z,30µm,18.0s,MS6.6
DAG   Danmarks Havn     71.39  14⇓iP      P       11 47 04.2 -1.5
      comp=Z,34nm,1.0s,mb5.2
DAG                               i               11 49 44.0
      comp=Z,30µm,18.0s
AFI   Afiamalu          71.45 248 PFAKE           11 47 20.0  +13
AFI                               LR      LR
      comp=Z,11µm,21.0s,MS6.1
CMLA  Cha da Macela     72.25  55 P       P       11 47 11.0 -0.6
      comp=Z,535nm,1.7s,mb6.2
CMLA                              LR      LR
      comp=Z,889nm,20.0s,MS5.0
RCBR  Riachuelo         74.41 102 eP      P       11 47 23.2 -1.4
      comp=Z,446nm,1.8s,mb6.1
RCBR                              LR      LR
      comp=Z,4µm,21.0s,MS5.7
JMIC  Jan Mayen         75.07  20 eP      P       11 47 26.4 -0.9
JMIC                              eS      S       11 57 04.5 +1.1
JMIC                              AMS     AMS     12 16 54.2
      comp=Z,9µm,18.6s,MS6.1
CAM4  Nova Friburgo     75.35 120⇑iP      P       11 47 28.6 -1.3
CAM4                              i               11 47 29.3
CAM4                              i       pP      11 47 32.0 -3.0
CAM4                              i               11 48 25.4
KBS   Kingsbay          76.87  10 P       P       11 47 38.1 +0.7
KBS                               pmax    pmax
      comp=Z,206nm,1.6s,mb5.8
KBS                               MLR     MLR
      comp=Z,10µm,20.0s,MS6.1
KBS   Kingsbay          76.87  10 P       P       11 47 38.1 +0.8
      comp=Z,206nm,1.6s,mb5.8
KBS                               LR      LR
      comp=Z,10µm,20.0s,MS6.1
KBS   Kingsbay          76.87  10 eP      P       11 47 35.4 -1.9
KBS                               epP     pP      11 47 41.6 -0.8
KBS                               AMb     AMB     11 47 54.2
      comp=Z,113nm,1.8s,mb5.5
KBS                               eS      S       11 57 24.8 +1.9
KBS                               AMS     AMS     12 23 06.4
      comp=Z,7µm,21.6s,MS6.0
PET   Petropavlovsk     77.52 322d iP     P       11 47 39.7 -1.7
PET                               e               11 50 37.3
PET                               i S     S       11 57 29.8 -0.7
PET                               ePS     PS      11 58 12.8 +0.1
PET                               ePPS    PPS     11 58 27.1 -3.1
PET                               eSSS    SSS     12 05 51.3 +1.5
PET                               pmax    pmax
      comp=Z,2µm,3.9s
PET                               pmax    pmax
      comp=Z,70nm,2.5s,mb5.2
PET                               pmax    pmax
      comp=E,900nm,4.4s
PET                               pmax    pmax
      comp=Z,1µm,5.2s
PET                               pmax    pmax
      comp=E,500nm,5.1s
PET                               pmax    pmax
      comp=Z,19nm,2.1s,mb4.7
PET                               smax
      comp=E,3µm,9.7s
PET                               smax
      comp=E,3µm,16.9s
PET                               smax
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      comp=N,3µm,12.9s
PET                               smax
      comp=N,3µm,11.9s
PET   Petropavlovsk     77.52 322 eP      P       11 47 41.0 -0.4
      comp=N,258nm,1.8s,mb5.9
PET                               LR      LR
      comp=Z,6µm,22.0s,MS5.9
SEY   Seymchan          77.95 333 eP      P       11 47 44.1 +0.6
SEY                                               11 47 55.0
SEY                                               11 50 39.4
SEY                               ePPP    PPP     11 52 31.3 +0.6
SEY                               eS      S       11 57 32.9 -2.0
SEY                               e               11 57 59.4
SEY                               ePS     PS      11 58 30.1  +12
SEY                               SS      SS      12 02 34.0 -5.0
SEY                               pmax    pmax
      comp=E,50nm,1.8s
SEY                               pmax    pmax
      comp=Z,180nm,1.8s,mb5.7
SEY                               pmax    pmax
      comp=N,20nm,1.3s
SEY                               smax
      comp=N,2µm,9.3s
SEY                               smax
      comp=E,4µm,13.6s
SEY                               MLR     MLR
      comp=Z,6µm,18.0s,MS6.0
SEY                               MLR     MLR
      comp=N,4µm,21.0s,MS5.8
SEY                               MLR     MLR
      comp=E,4µm,19.0s,MS5.8
VAL   Valentia          79.52  39 eP      P       11 47 55.7 +3.4
VAL                               eS      S       11 57 55.8 +4.0
SKR   Severo-Kuril’s    79.68 320 eP      P       11 47 49.0 -4.2
SKR                               eS      S       11 57 53.0 -0.5
SKR                               e               11 58 42.0
SKR                               pmax    pmax
      comp=Z,20nm,1.0s,mb5.0
SKR                               pmax    pmax
      comp=N,2µm,4.0s
SKR                               pmax    pmax
      comp=E,2µm,4.0s
SKR                               pmax    pmax
      comp=Z,3µm,4.0s
SKR                               smax
      comp=N,3µm,14.0s
SKR                               smax
      comp=E,4µm,14.0s
SKR                               MLR     MLR
      comp=Z,3µm,16.0s,MS5.7
SKR                               MLR     MLR
      comp=N,3µm,18.0s,MS5.8
SKR                               MLR     MLR
      comp=E,3µm,18.0s,MS5.8
KSK   Scoval            79.76  33 eP      P       11 47 54.2 +0.7
MA2   Magadan           79.78 330 eP      P       11 47 53.9 +0.3
MA2                               e               11 48 10.2
MA2                               eS      S       11 57 57.3 +3.0
MA2                               e               11 58 11.8
MA2                               ePS     PS      11 58 57.2  +16
MA2                               pmax    pmax
      comp=Z,100nm,1.8s,mb5.4
MA2                               MLR     MLR
      comp=Z,12µm,24.4s,MS6.2
MA2   Magadan           79.78 330 eP      P       11 47 53.2 -0.4
      comp=Z,242nm,1.5s,mb5.9
MA2                               LR      LR
      comp=Z,4µm,22.0s,MS5.7
RRR   Rubha Reidh       80.08  32⇑eP      P       11 47 57.8 +2.6
REB   Eisghbrachaidh    80.25  32⇑eP      P       11 47 59.1 +2.9
KAR1  Arisaig           80.39  33 eP      P       11 47 58.2 +1.3
WAKE  Wake Island       80.41 287 PFAKE           11 48 10.0  +12
WAKE                              LR      LR
      comp=Z,7µm,21.0s,MS6.0
KAC   Achnashellach     80.46  32 eP      P       11 47 57.8 +0.6
KSB   Sheil Bridge      80.50  33 eP      P       11 47 58.6 +1.2
USHA  Ushuaia           80.58 158 P       P       11 47 58.2 +0.3
      comp=Z,18nm,1.3s,mb4.8,baz=256,slow=8.3,SNR=2.9
USHA                              S       S       11 58 08.5 +5.8
      comp=Z,1.2nm,0.4s,baz=350,slow=14,SNR=2.2
DCN   Croghan           80.80  37 eP      P       11 47 58.1 -1.0
CHIE  El Hierro         80.80  64 P       P       11 48 05.0 +5.3
      comp=Z,62nm,1.2s,mb5.4
GCL   Cushendall        80.85  35⇑eP      P       11 48 01.8 +2.4
GMK   Mull of Kintyr    81.05  34 eP      P       11 48 03.0 +2.6
DLF   Lyons Farm        81.24  37 eP      P       11 48 00.4 -1.0
GMM   Mts of Mourne     81.24  36⇑eP      P       11 48 02.2 +0.7
EGOM  La Gomera         81.32  63 P       P       11 48 04.6 +2.2
      comp=Z,358nm,1.5s,mb6.1
GAL1  Galloway          81.69  35⇑eP      P       11 48 04.7 +0.9
CCAN  Las Canadas       81.81  63 P       P       11 48 09.3 +4.4
      comp=Z,159nm,1.3s,mb5.8
WIM   Isle of Man       81.97  35 eP      P       11 48 06.1 +0.9
WIM                               AMb     AMB     11 48 09.9
      comp=Z,74nm,1.1s,mb5.5
TIXI  Tiksi             82.03 345 eP      P       11 48 01.8 -3.4
TIXI                              e               11 51 11.7
TIXI                              eS      S       11 58 09.7 -7.7
TIXI                              e               11 59 04.4
TIXI                              eSSS    SSS     12 07 02.6 -0.5
TIXI                              pmax    pmax
      comp=Z,82nm,1.3s,mb5.5
TIXI                              MLR     MLR
      comp=Z,3µm,16.0s,MS5.7
TIXI  Tiksi             82.03 345 i Pr            11 48 02.8
TIXI                              LR      LR
      comp=Z,6µm,22.0s,MS5.9
EDI   Edinburgh         82.11  33 eP      P       11 48 08.4 +2.5
EDI                               AMb     AMB     11 48 21.4
      comp=Z,362nm,1.9s,mb6.0
BWH   Wardlaw           82.15  34 eP      P       11 48 07.0 +0.9
ESK   Eskdalemuir       82.33  34 P       P       11 48 10.5 +3.4
ESK                               pmax    pmax
      comp=Z,320nm,1.7s,mb6.0
ESK   Eskdalemuir       82.33  34⇑eP      P       11 48 07.2 +0.1
      comp=Z,322nm,1.7s,mb6.0
ESK                               LR      LR
      comp=Z,2µm,22.0s,MS5.4
ESK   Eskdalemuir       82.33  34 eP      P       11 48 06.6 -0.5
BHH   Howats Hill       82.41  34 eP      P       11 48 09.2 +1.8
BBO1  Bothel            82.53  35 eP      P       11 48 09.3 +1.2
BBH   Bruntsheil        82.55  34 eP      P       11 48 10.9 +2.7
KWAJ  Kwajalein Atol    82.64 277 PFAKE           11 48 20.0  +10
KWAJ                              LR      LR
      comp=Z,3µm,22.0s,MS5.6
SBD1  Bryn Du           83.22  36 eP      P       11 48 13.4 +1.7
SBD1                              AMb     AMB     11 48 21.6
      comp=Z,251nm,1.7s,mb6.0
RAO   Raoul Island      83.29 236 LR      LR      12 15 35.1
      comp=Z,11µm,21.8s,MS6.2,baz=70,slow=29
RAO   Raoul Island      83.29 236 PFAKE           11 48 20.0 +7.4
RAO                               LR      LR
      comp=Z,12µm,22.0s,MS6.2
STS   Santiago          83.48  47 P       P       11 48 17.3 +4.0
STS                               pmax    pmax
      comp=Z,87nm,0.9s,mb5.8
STS   Santiago          83.48  47 P       P       11 48 17.3 +4.0
      comp=Z,87nm,0.9s,mb5.8
SSP1  Stoney Pound      83.49  37 eP      P       11 48 14.0 +0.9
SSP1                              AMb     AMB     11 48 22.3
      comp=Z,277nm,1.7s,mb6.0
HTR   Trewern Hill      83.53  37 eP      P       11 48 13.7 +0.4
HTR                               AMb     AMB     11 48 23.5
      comp=Z,280nm,1.6s,mb6.1
HLM1  Long Mynd         83.58  37 eP      P       11 48 14.4 +0.9
HLM1                              AMb     AMB     11 48 22.8
      comp=Z,383nm,1.7s,mb6.3
HEX   Exmoor            83.60  38 eP      P       11 48 16.0 +2.3
EZAM  Zamans            83.62  48 P       P       11 48 17.6 +3.5
EZAM                              pmax    pmax
      comp=Z,27nm,1.0s,mb5.3
EZAM  Zamans            83.62  48 P       P       11 48 17.6 +3.6
      comp=Z,26nm,1.0s,mb5.3
HPK   Haverah Park      83.71  35 eP      P       11 48 15.3 +1.2
HPK                               AMb     AMB     11 48 24.5
      comp=Z,849nm,1.5s,mb6.6
MCH1  Michaelchurch     83.71  37 eP      P       11 48 14.7 +0.4
LHO   Holmfirth         83.75  35 eP      P       11 48 15.3 +0.9
CFTV  Fuerteventura     83.87  62 P       P       11 48 22.2 +6.6
      comp=Z,45nm,1.0s,mb5.5
TRO   Tromso            83.89  17 eP      P       11 48 15.1 +0.3
TRO                               AMb     AMB     11 48 28.2
      comp=Z,92nm,1.7s,mb5.6
TRO                               eSKSa           11 58 34.9
TRO                               eSS     SS      12 04 05.7 -1.3
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TRO				AMS	AMS	12 25 30.2	
	comp=Z,6µm,18.9s,MS6.0						
HAE	**Alders End**	**83.95**	**37**	*e*P	**P**	**11 48 16.3**	**+0.9**
HAE				AMb	AMB	11 48 24.6	
	comp=Z,333nm,1.8s,mb6.2						
HGH	**Gray Hill**	**83.96**	**37**	*e*P	**P**	**11 48 16.2**	**+0.6**
HGH				AMb	AMB	11 48 24.8	
	comp=Z,317nm,1.7s,mb6.2						
KWE	**Weaver Farm**	**83.96**	**36**	*e*P	**P**	**11 48 16.7**	**+1.2**
KBI1	**Birley Grange**	**84.04**	**36**	*e*P	**P**	**11 48 17.2**	**+1.3**
EPON	**Pontenova**	**84.29**	**46**	P	**P**	**11 48 20.4**	**+3.0**
	comp=Z,175nm,1.7s,mb5.9						
BER	**Bergen**	**84.29**	**27**	*e*P	**P**	**11 48 18.7**	**+1.7**
BER				*e*SS	SS	12 04 12.7	-0.5
BER				AMS	AMS	12 23 53.0	
	comp=Z,6µm,18.8s,MS6.0						
PLOU	**Loures**	**84.39**	**51**	*e*P	**P**	**11 48 17.9**	**-0.1**
	comp=Z,138nm,1.7s,mb5.8						
PLOU				*e*pP	pP	11 48 25.1	+1.9
LIS	**Lisbon**	**84.45**	**51**	*e*P	**P**	**11 48 18.0**	**-0.3**
LIS				*e*S	S	11 58 46.8	+4.3
LIS				*e*S	S	11 58 46.8	+4.3
PVRL	**Vila Real**	**84.61**	**48**	*e*P	**P**	**11 48 21.5**	**+2.5**
	comp=Z,86nm,1.6s,mb5.6						
PVRL				*e*pP	pP	11 48 25.8	+1.6
ERUA	**La Rua**	**84.62**	**47**	P	**P**	**11 48 24.2**	**+5.1**
ERUA				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.4						
ERUA	**La Rua**	**84.62**	**47**	P	**P**	**11 48 24.2**	**+5.2**
	comp=Z,26nm,0.9s,mb5.3						
PVIS	**Viseu**	**84.68**	**49**	*e*P	**P**	**11 48 21.1**	**+1.7**
	comp=Z,73nm,1.6s,mb5.6						
PVIS				*e*pP	pP	11 48 26.1	+1.5
PTOM	**Tomar**	**84.69**	**50**	*e*P	**P**	**11 48 21.8**	**+2.3**
	comp=Z,138nm,1.5s,mb5.9						
PTOM				*e*pP	pP	11 48 26.4	+1.8
NSS	**Namsos**	**84.78**	**22**	*e*P	**P**	**11 48 19.4**	**+0.1**
NSS				*e*S	S	11 58 44.6	-0.5
NSS				*e*SS	SS	12 04 19.1	-1.2
NSS				AMS	AMS	12 25 48.2	
	comp=Z,7µm,19.0s,MS6.1						
ROSF	**Rostrenen**	**84.96**	**41**	*e*P	**P**	**11 48 20.9**	**+0.3**
	comp=Z,331nm,1.7s,mb5.9						
ROSF	**Rostrenen**	**84.96**	**41**	*e*P	**P**	**11 48 20.9**	**+0.3**
ROSF				pmax	pmax		
	comp=Z,165nm,1.7s,mb5.9						
MTE	**Manteigas**	**85.04**	**49**	*e*P	**P**	**11 48 22.5**	**+1.3**
	comp=Z,62nm,1.1s,mb5.7						
MTE				*e*pP	pP	11 48 27.1	+0.7
MTE	**Manteigas**	**85.04**	**49**	*e*S	S	11 58 44.9	-3.3
MTE				*e*SS	SS	12 04 28.4	+3.6
MTE				*e*LQ		12 11 15.8	
MTE				*e*LR	LR	12 16 10.2	
	comp=Z,4µm,18.0s						
MTE	**Manteigas**	**85.04**	**49**	*e*P	**P**	**11 48 21.2**	**0.0**
	comp=Z,185nm,1.4s,mb6.0						
ECAL	**Calabor**	**85.06**	**47**	P	**P**	**11 48 25.9**	**+4.6**
	comp=Z,324nm,2.5s,mb6.0						
PTEO	**Sao Teotonio**	**85.16**	**52**	*e*P	**P**	**11 48 22.6**	**+0.7**
	comp=Z,106nm,1.8s,mb5.7						
PTEO				*e*pP	pP	11 48 29.1	+2.0
QUIF	**Quistinic**	**85.19**	**41**	*e*P	**P**	**11 48 22.1**	**+0.3**
PCBR	**Castelo Branco**	**85.28**	**50**	*e*P	**P**	**11 48 23.6**	**+1.2**
	comp=Z,79nm,1.4s,mb5.7						
PCBR				*e*pP	pP	11 48 28.9	+1.3
EVO	**Evora**	**85.35**	**51**	*e*P	**P**	**11 48 21.4**	**-1.4**
	comp=Z,443nm,1.5s,mb6.1						
EVO				*e*R			
	comp=Z,8µm,21.8s						
SGMF	**Saint Gilles**	**85.44**	**40**	*e*P	**P**	**11 48 23.1**	**+0.1**
	comp=Z,55nm,0.8s,mb5.4						
SGMF	**Saint Gilles**	**85.44**	**40**	*e*P	**P**	**11 48 23.1**	**+0.1**
SGMF				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.4						
EARI	**Arriondas**	**85.62**	**46**	P	**P**	**11 48 28.8**	**+4.7**
	comp=Z,276nm,3.0s						
PBEJ	**Beja**	**85.64**	**51**	*e*P	**P**	**11 48 26.1**	**+1.9**
	comp=Z,56nm,1.6s,mb5.5						
PBEJ				*e*pP	pP	11 48 31.3	+1.9
ARCES	**ARCESS Array B**	**85.64**	**15**	P	**P**	**11 48 23.5**	**0.0**
	comp=Z,8.8nm,1.0s,mb4.9,baz=307,slow=6.1,SNR=8.3						
ARCES				PP	PP	11 51 39.4	-4.8
	comp=Z,3.1nm,0.9s,baz=21,slow=10,SNR=2.3						
ARCES				LR	LR	12 25 52.9	
	comp=Z,10µm,21.2s,MS6.2,baz=313,slow=35						
ARE0	**ARCESS Array S**	**85.64**	**15**	*e*P	**P**	**11 48 23.9**	**+0.4**
KEV	**Kevo**	**85.85**	**14**	*e*p	**P**	**11 48 23.7**	**-0.8**
EBAD	**Badajoz**	**86.00**	**50**	P	**P**	**11 48 29.0**	**+3.0**
	comp=Z,307nm,3.0s						
NAO01	**NORSAR Array S**	**86.41**	**26**	*e*P	**P**	**11 48 25.3**	**-2.2**
NAO01				LR	LR		
	comp=Z,6µm,19.0s,MS6.0						
GRR	**Gorron**	**86.42**	**40**	*e*P	**P**	**11 48 27.4**	**-0.5**
	comp=Z,73nm,0.8s,mb5.7						
GRR	**Gorron**	**86.42**	**40**	*e*P	**P**	**11 48 27.4**	**-0.5**
GRR				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.7						
NB2	**NORSAR Subarra**	**86.43**	**25**	P	**P**	**11 48 28.9**	**+1.3**
	comp=Z,6.1nm,1.0s,mb4.8,baz=305,slow=4.8						
NB2	**NORSAR Subarra**	**86.43**	**25**	P	**P**	**11 48 28.9**	**+1.3**
NB2				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.8						
NB2	**NORSAR Subarra**	**86.43**	**25**	P	**P**	**11 48 28.9**	**+1.3**
	baz=305,slow=5.1						
NOA	**NORSAR Array B**	**86.43**	**25**	P	**P**	**11 48 28.1**	**+0.5**
	comp=Z,3.8nm,1.0s,mb4.6,baz=313,slow=4.6,SNR=2.8						
NOA				LR	LR	12 24 08.2	
	comp=Z,4µm,20.4s,MS5.8,baz=300,slow=34						
NOA	**NORSAR Array B**	**86.43**	**25**	P	**P**	**11 48 28.1**	**+0.5**
NOA				LR	LR	12 24 08.2	
FLN	**La Foliniere**	**86.49**	**39**	*e*P	**P**	**11 48 27.8**	**-0.4**
	comp=Z,111nm,0.8s,mb5.8						
FLN				*e*R			
	comp=Z,10µm,19.5s						
FLN	**La Foliniere**	**86.49**	**39**	*e*P	**P**	**11 48 27.8**	**-0.4**
FLN				pmax	pmax		
	comp=Z,56nm,0.8s,mb5.8						
FLN				MLR	MLR		
	comp=Z,10µm,19.5s,MS6.2						
KONO	**Kongsberg**	**86.51**	**27**	P	**P**	**11 48 31.1**	**+3.1**
KONO				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.5						
KONO	**Kongsberg**	**86.51**	**27**	P	**P**	**11 48 27.0**	**-1.1**
	comp=Z,80nm,1.3s,mb5.8						
KONO				LR	LR		
	comp=Z,9µm,20.0s,MS6.2						
EMIN	**Mina Concepcio**	**86.61**	**51**	P	**P**	**11 48 33.1**	**+4.0**
	comp=Z,103nm,2.2s,mb5.7						
LDF	**La Druitiere**	**86.78**	**39**	*e*P	**P**	**11 48 28.9**	**-0.7**
	comp=Z,73nm,1.2s,mb5.5						
LDF	**La Druitiere**	**86.78**	**39**	*e*P	**P**	**11 48 28.9**	**-0.7**
LDF				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.5						
ELAN	**Lanestosa**	**86.85**	**45**	P	**P**	**11 48 33.7**	**+3.7**
	comp=Z,23nm,1.2s,mb5.3						
ECAB	**El Cabril**	**87.42**	**51**	P	**P**	**11 48 36.1**	**+3.1**
	comp=Z,62nm,1.8s,mb5.5						
ESPR	**Espera**	**87.54**	**52**	P	**P**	**11 48 37.5**	**+3.9**
	comp=Z,6.5nm,0.8s,mb4.9						
MFF	**Saint Martin d**	**87.61**	**41**	*e*P	**P**	**11 48 32.5**	**-1.2**
	comp=Z,168nm,1.6s,mb5.7						
MFF	**Saint Martin d**	**87.61**	**41**	*e*P	**P**	**11 48 32.5**	**-1.2**
MFF				pmax	pmax		
	comp=Z,84nm,1.6s,mb5.7						
YAK	**Yakutsk**	**87.66**	**337**	*e*P	**P**	**11 48 32.1**	**-1.4**
YAK				*e**PP	pP	11 48 44.6	+5.9
YAK				*e*		11 52 00.7	
YAK				*e*S	S	11 59 03.2	-10
YAK				*i* PS	PS	12 00 18.3	-0.3
YAK				*e*SS	SS	12 05 01.8	-0.8
YAK				pmax	pmax		
	comp=Z,65nm,1.0s,mb5.8						
YAK				pmax	pmax		
	comp=N,14nm,1.1s						
YAK				pmax	pmax		
	comp=E,23nm,1.2s						
YAK				pmax	pmax		
	comp=Z,275nm,9.8s						
YAK				pmax	pmax		
	comp=N,86nm,8.7s						
YAK				pmax	pmax		
	comp=E,70nm,8.7s						
YAK				smax			
	comp=N,403nm,10.9s						
YAK				smax			
	comp=E,532nm,13.3s						
YAK				MLR	MLR		
	comp=N,2µm,18.0s,MS5.8						
YAK				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.7						
YAK				MLR	MLR		
	comp=E,2µm,15.0s,MS5.8						
ECRI	**Cripan**	**87.72**	**46**	P	**P**	**11 48 37.8**	**+3.5**
ESDC	**Sonseca Array**	**87.86**	**49**	P	**P**	**11 48 35.8**	**+0.8**
	comp=E,4.4nm,0.9s,mb4.7,baz=302,slow=5.3,SNR=9.5						
ESDC	**Sonseca Array**	**87.86**	**49**	P	**P**	**11 48 38.5**	**+3.4**
	comp=E,4.9nm,0.9s,mb4.7						
ESLA	**Sonseca Array**	**87.86**	**49**	*e*P	**P**	**11 48 33.9**	**-1.2**
	comp=E,26nm,1.7s,mb5.2						
ESLA				LR	LR		
	comp=Z,18µm,19.0s,MS6.5						
MUD	**Monsted U’grnd**	**88.03**	**30**	*i* P	**P**	**11 48 47.6**	**+12**
MUD				*i*		11 53 06.5	
MUD				*i* S	S	11 59 32.7	+16
	comp=Z,5µm,21.0s						
EALK	**Alkurruntz**	**88.14**	**45**	P	**P**	**11 48 39.7**	**+3.4**
	comp=Z,120nm,2.4s,mb5.7						
SJPF	**Ste Jean**	**88.37**	**45**	*e*P	**P**	**11 48 36.3**	**-1.1**
	comp=Z,158nm,1.8s,mb5.7						
SJPF	**Ste Jean**	**88.37**	**45**	*e*P	**P**	**11 48 36.3**	**-1.1**
SJPF				pmax	pmax		
	comp=Z,79nm,1.8s,mb5.6						
ELUQ	**Luque**	**88.46**	**51**	P	**P**	**11 48 44.7**	**+6.7**
EMIJ	**Mijas**	**88.47**	**52**	P	**P**	**11 48 38.1**	**+0.1**
	comp=Z,6.6nm,0.7s,mb5.0						
LARF	**Larrau**	**88.56**	**45**	*e*P	**P**	**11 48 40.3**	**+2.0**
EBAN	**Banos Encina**	**88.58**	**50**	P	**P**	**11 48 42.7**	**+4.2**
EBAN				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.9						
EBAN	**Banos Encina**	**88.58**	**50**	P	**P**	**11 48 42.7**	**+4.2**
	comp=Z,3.3nm,0.5s,mb4.9						
BAIF	**Baives**	**88.65**	**37**	*e*P	**P**	**11 48 37.8**	**-0.8**
	comp=Z,216nm,1.5s,mb6.0						
BAIF	**Baives**	**88.65**	**37**	*e*P	**P**	**11 48 37.8**	**-0.8**
BAIF				pmax	pmax		
	comp=Z,108nm,1.5s,mb6.0						
ELOJ	**Sierra Loja**	**88.70**	**51**	P	**P**	**11 48 44.2**	**+5.1**
	comp=Z,2.5nm,0.4s,mb4.9						
LFF	**La Frestale**	**88.88**	**43**	*e*P	**P**	**11 48 38.5**	**-1.3**
ETSF	**Etsaut**	**88.91**	**45**	*e*P	**P**	**11 48 38.9**	**-1.1**
	comp=Z,146nm,1.6s,mb5.8						
ETSF	**Etsaut**	**88.91**	**45**	*e*P	**P**	**11 48 38.9**	**-1.1**
ETSF				pmax	pmax		
	comp=Z,73nm,1.6s,mb5.8						
GIVF	**Givet**	**88.98**	**37**	*e*P	**P**	**11 48 39.3**	**-0.8**
	comp=Z,426nm,1.6s,mb6.2						
GIVF	**Givet**	**88.98**	**37**	*e*P	**P**	**11 48 39.3**	**-0.8**
GIVF				pmax	pmax		
	comp=Z,213nm,1.6s,mb6.2						
ERON	**Agron**	**89.01**	**51**	P	**P**	**11 48 47.5**	**+6.9**
	comp=Z,2.3nm,0.2s,mb5.2						
HYF	**Humbligny**	**89.03**	**40**	*e*P	**P**	**11 48 39.4**	**-1.0**
APA	**Apatity**	**89.03**	**14**	*e*P	**P**	**11 48 47.0**	**+7.0**
APA				*e*		11 49 06.0	
APA				*i*		11 59 30.0	
APA				*e*PS	PS	12 00 35.0	+0.1
APA				*i* SS	SS	12 05 20.0	-2.0
APA				MLR	MLR		
	comp=Z,14µm,16.0s,MS6.5						
LVZ	**Lovozero**	**89.05**	**14**	*e*P	**P**	**11 48 41.8**	**+1.8**
LVZ				*e*S	S	11 59 15.7	-10
LVZ				MLR	MLR		
	comp=N,6µm,17.0s,MS6.1						
LVZ				MLR	MLR		
	comp=Z,8µm,17.0s,MS6.2						
LVZ				MLR	MLR		
	comp=E,3µm,16.0s,MS6.1						
WTSB	**Winterswijk**	**89.15**	**34**	*e*P	**P**	**11 48 45.3**	**+4.4**
	comp=E,28nm,2.0s,mb5.2						
TCF	**Toulx Ste Croi**	**89.21**	**41**	*e*P	**P**	**11 48 39.8**	**-1.5**
	comp=E,72nm,1.1s,mb5.6						
TCF	**Toulx Ste Croi**	**89.21**	**41**	*e*P	**P**	**11 48 39.8**	**-1.5**
TCF				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.6						
RJF	**Les Rejaudoux**	**89.22**	**42**	*e*P	**P**	**11 48 39.9**	**-1.5**
	comp=Z,117nm,1.2s,mb5.8						
RJF				*e*R			
	comp=Z,8µm,21.0s						
RJF	**Les Rejaudoux**	**89.22**	**42**	*e*P	**P**	**11 48 39.9**	**-1.5**
RJF				pmax	pmax		
	comp=Z,59nm,1.3s,mb5.8						
RJF				MLR	MLR		
	comp=Z,8µm,21.0s,MS6.1						
EQES	**Quesada**	**89.24**	**50**	P	**P**	**11 48 45.1**	**+3.4**
	comp=Z,73nm,2.1s,mb5.6						
YSS	**Yuzh-Sakhalins**	**89.25**	**320**	α*e*P	**P**	**11 48 41.3**	**-0.2**
YSS				*e**SP	sP	11 48 48.0	-0.3
YSS				*e*		11 52 10.0	
YSS				*e*PPP	PPP	11 54 10.0	-3.5
YSS				*i*		11 59 09.0	
YSS				*e*S	S	11 59 28.0	0.0
YSS				*e*PPS	PPS	12 00 34.0	-32
YSS				pmax	pmax		
	comp=Z,310nm,2.0s,mb6.3						
YSS				pmax	pmax		
	comp=Z,1µm,4.0s						
YSS				pmax	pmax		
	comp=E,1µm,10.0s						
YSS				smax			
	comp=N,2µm,9.0s						
YSS				smax			
	comp=E,2µm,9.0s						
YSS				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
YSS	**Yuzh-Sakhalins**	**89.25**	**320**	*e*P	**P**	**11 48 41.8**	**+0.3**
	comp=Z,46nm,1.1s,mb5.7						
YSS				LR	LR		
	comp=Z,4µm,21.0s,MS5.8						
HGN	**Heimansgroeve**	**89.28**	**36**	*e*P	**P**	**11 48 43.8**	**+2.2**
	comp=Z,44nm,2.1s,mb5.4						
HGN				*e*x	x	11 48 51.4	
	comp=Z,69nm,1.8s						
HGN	**Heimansgroeve**	**89.28**	**36**	*e*S	S	11 59 21.0	-7.1
HGN				*i* S	S	11 59 37.3	+9.1
HGN				*e*x	x	12 00 43.0	
HGN				*e*SS	SS	12 05 16.1	-10
HGN				*e*SKKP		12 09 36.8	
HGN				*e*PKKS		12 09 36.8	
HGN				*e*x	x	12 12 08.0	
EVIA	**Vianos**	**89.31**	**49**	P	**P**	**11 48 47.1**	**+5.1**
	comp=Z,20nm,0.9s,mb5.5						
EPF	**Esparros**	**89.45**	**44**	*e*P	**P**	**11 48 41.1**	**-1.4**
	comp=Z,123nm,1.7s,mb5.7						
EPF	**Esparros**	**89.45**	**44**	*e*P	**P**	**11 48 41.1**	**-1.4**
EPF				pmax	pmax		
	comp=Z,62nm,1.7s,mb5.7						
ESAC	**San Caprasio**	**89.46**	**46**	P	**P**	**11 48 46.5**	**+3.8**
	comp=Z,147nm,1.8s,mb6.0						
BGF	**Bois d’Agland**	**89.48**	**40**	*e*P	**P**	**11 48 41.1**	**-1.5**
	comp=Z,155nm,1.4s,mb5.8						
BGF	**Bois d’Agland**	**89.48**	**40**	*e*P	**P**	**11 48 41.1**	**-1.5**
BGF				pmax	pmax		
	comp=Z,77nm,1.4s,mb5.8						
CAF	**Calviac**	**89.73**	**42**	*e*P	**P**	**11 48 42.1**	**-1.7**
	comp=Z,148nm,1.8s,mb5.7						
CAF	**Calviac**	**89.73**	**42**	*e*P	**P**	**11 48 42.1**	**-1.7**
CAF				pmax	pmax		
	comp=Z,74nm,1.8s,mb5.7						
PMSA	**Palmer Station**	**89.75**	**163**	PFAKE		11 48 50.0	+6.6
PMSA				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
LOR	**Lormes**	**89.76**	**39**	*e*P	**P**	**11 48 42.7**	**-1.2**
	comp=Z,156nm,1.4s,mb5.9						
LOR				*e*R			
	comp=Z,9µm,22.2s						
LOR	**Lormes**	**89.76**	**39**	*e*P	**P**	**11 48 42.7**	**-1.2**
LOR				pmax	pmax		
	comp=Z,78nm,1.4s,mb5.8						
LOR				MLR	MLR		
	comp=Z,9µm,22.3s,MS6.2						
EGRA	**Graus**	**89.79**	**45**	P	**P**	**11 48 47.3**	**+3.1**
	comp=Z,21nm,1.3s,mb5.3						
MEZF	**Maizieres J’vi**	**89.88**	**38**	*e*P	**P**	**11 48 43.4**	**-1.0**
WLF	**Walferdange**	**89.95**	**37**	*e*P	**P**	**11 48 44.5**	**-0.2**
WLF				pmax	pmax		
	comp=Z,260nm,1.8s,mb6.3						
WLF	**Walferdange**	**89.95**	**37**	*e*P	**P**	**11 48 44.5**	**-0.2**
	comp=Z,260nm,1.8s,mb6.3						
COP	**Copenhagen**	**89.97**	**29**	*i* P	**P**	**11 48 55.7**	**+11**
	comp=Z,24nm,0.8s,mb5.6						
COP				*i*		11 53 28.5	
COP				*i*		12 00 54.4	
COP				*i*		12 05 39.4	
	comp=Z,3µm,18.0s						
ETOB	**Tobarra**	**89.99**	**49**	P	**P**	**11 48 50.2**	**+5.0**
	comp=Z,77nm,1.8s,mb5.7						
ECHE	**Chera**	**90.01**	**48**	P	**P**	**11 48 49.4**	**+4.1**
SMF	**Signal de Mont**	**90.05**	**40**	*e*P	**P**	**11 48 43.4**	**-1.8**
	comp=Z,170nm,1.8s,mb5.8						
SMF	**Signal de Mont**	**90.05**	**40**	*e*P	**P**	**11 48 43.4**	**-1.8**
SMF				pmax	pmax		
	comp=Z,85nm,1.8s,mb5.8						
SALF	**Salau**	**90.13**	**44**	*e*P	**P**	**11 48 49.6**	**+3.9**
RUP	**Ruppelstein**	**90.44**	**36**	*e*P	**P**	**11 48 49.7**	**+2.7**
COLF	**Collangettes**	**90.48**	**41**	*e*P	**P**	**11 48 49.4**	**+2.1**
EBR	**Ebro Roquetas**	**90.50**	**46**	*e*PCP	PcP	11 48 48.2	-0.8
MTLF	**Montolieu**	**90.54**	**43**	*e*P	**P**	**11 48 46.1**	**-1.5**
	comp=Z,107nm,1.7s,mb5.6						
MTLF	**Montolieu**	**90.54**	**43**	*e*P	**P**	**11 48 46.1**	**-1.5**
MTLF				pmax	pmax		
	comp=Z,54nm,1.7s,mb5.6						
THEF	**They Montfort**	**90.56**	**38**	*e*P	**P**	**11 48 50.1**	**+2.5**
URZ	**Urewera**	**90.81**	**230**	LR	LR	12 19 29.7	
	comp=Z,14µm,22.0s,MS6.3,baz=14,slow=29						
HAU	**Haudompre**	**90.88**	**38**	*e*P	**P**	**11 48 48.0**	**-1.0**
	comp=Z,332nm,1.7s,mb6.1						
HAU				*e*R			
	comp=Z,16µm,20.0s						
HAU	**Haudompre**	**90.88**	**38**	*e*P	**P**	**11 48 48.0**	**-1.0**
HAU				pmax	pmax		
	comp=Z,166nm,1.7s,mb6.1						
HAU				MLR	MLR		
	comp=Z,16µm,20.0s,MS6.5						
EBEN	**Beniarda**	**90.91**	**48**	P	**P**	**11 48 55.8**	**+6.4**
	comp=Z,9.0nm,0.8s,mb5.2						
KTD	**Kalmit**	**91.21**	**36**	*e*P	**P**	**11 48 56.0**	**+5.5**
CDF	**Champ du Feu**	**91.21**	**37**	*e*P	**P**	**11 48 49.4**	**-1.2**
	comp=Z,265nm,1.7s,mb6.0						
CDF	**Champ du Feu**	**91.21**	**37**	*e*P	**P**	**11 48 49.4**	**-1.2**
CDF				pmax	pmax		
	comp=Z,133nm,1.7s,mb6.0						
ECH	**Echery**	**91.25**	**38**	*e*P	**P**	**11 48 52.5**	**+1.8**
WLS	**Welschbruch**	**91.26**	**37**	*e*P	**P**	**11 48 52.7**	**+1.9**
KAF	**Kangasniemi**	**91.26**	**20**	*e*p	**P**	**11 48 54.2**	**+3.8**
LASF	**Ste Croix**	**91.26**	**42**	*e*P	**P**	**11 48 49.8**	**-1.1**
	comp=Z,77nm,1.3s,mb5.6						
HINF	**Hinteralfeld**	**91.27**	**38**	*e*P	**P**	**11 48 49.6**	**-1.2**
	comp=Z,342nm,1.8s,mb6.1						
HINF	**Hinteralfeld**	**91.27**	**38**	*e*P	**P**	**11 48 49.6**	**-1.2**
HINF				pmax	pmax		
	comp=Z,171nm,1.8s,mb6.1						
EJON	**La Jonquera**	**91.39**	**44**	P	**P**	**11 48 53.6**	**+2.1**
	comp=Z,6.8nm,1.0s,mb4.9						
VIVF	**Saint-Julien-l**	**91.41**	**41**	*e*P	**P**	**11 48 50.5**	**-1.0**
	comp=Z,196nm,1.9s,mb5.8						
VIVF	**Saint-Julien-l**	**91.41**	**41**	*e*P	**P**	**11 48 50.5**	**-1.0**
VIVF				pmax	pmax		
	comp=Z,98nm,1.9s,mb5.8						
CABF	**La Chapelle**	**91.42**	**39**	*e*P	**P**	**11 48 50.6**	**-1.0**
	comp=Z,110nm,1.6s,mb5.6						
CABF	**La Chapelle**	**91.42**	**39**	*e*P	**P**	**11 48 50.6**	**-1.0**
CABF				pmax	pmax		
	comp=Z,55nm,1.6s,mb5.6						
TOD	**Tromm**	**91.46**	**36**	*e*P	**P**	**11 48 56.4**	**+4.7**
BSD	**Bornholm Skovb**	**91.46**	**29**	*e*P	**P**	**11 48 41.0**	**-11**
BSD	**Bornholm Skovb**	**91.46**	**29**	*i* P	**P**	**11 48 41.0**	**-11**
	comp=Z,21nm,1.1s,mb5.4						
LOMF	**Lomont**	**91.49**	**38**	*e*P	**P**	**11 48 54.0**	**+2.1**
FINES	**FINESS Array B**	**91.67**	**20**	P	**P**	**11 48 52.4**	**0.0**
	comp=Z,3.0nm,0.9s,mb4.6,slow=5.7,SNR=4.8						
BBS	**Basel-Blauen**	**91.83**	**38**	*e*P	**P**	**11 48 55.5**	**+2.1**
FELD	**Feldberg**	**91.91**	**38**	*e*P	**P**	**11 48 56.0**	**+2.2**
OCF	**Saint Nazaire**	**91.93**	**41**	*e*P	**P**	**11 48 58.2**	**+4.2**
OG26	**St.-Nazaire-De**	**91.93**	**41**	*e*P	**P**	**11 48 58.2**	**+4.2**
ORIF	**Oris-en-Rattie**	**92.13**	**41**	*e*P	**P**	**11 48 53.8**	**-1.1**
ORIF				*e*R			
	comp=Z,7µm,19.8s						
EMV	**Vieux Emosson**	**92.18**	**39**	P	**P**	**11 49 00.6**	**+5.5**
PRAF	**Pradon**	**92.22**	**42**	*e*P	**P**	**11 49 01.2**	**+5.9**
LPL	**La Plagne**	**92.35**	**40**	*e*P	**P**	**11 48 55.7**	**-0.2**
SMRF	**Simiane la Rot**	**92.40**	**42**	*e*P	**P**	**11 48 55.5**	**-0.6**
	comp=Z,79nm,1.7s,mb5.5						
MOX	**Moxa**	**92.42**	**34**	*e*P	**P**	**11 49 01.0**	**+5.0**
MOX				MLR	MLR		
	comp=Z,6µm,19.0s,MS6.1						
MOX	**Moxa**	**92.42**	**34**	*e*P	**P**	**11 49 01.0**	**+5.0**
MOX				*e*		11 51 56.2	
MOX				LR	LR		
	comp=Z,6µm,19.0s,MS6.1						
MOX	**Moxa**	**92.42**	**34**	*i* P	**P**	**11 49 01.0**	**+5.0**
MOX				*e*		11 51 56.0	
MOX				PP	PP	11 52 35.0	-4.8
MOX				SKS	SKS	11 59 32.0	-1.3
MOX				PS	PS	12 01 10.0	-4.5
MOX				SS	SS	12 06 13.0	+1.8
MOX				L		12 32 19.0	
TREF	**Trevaresse**	**92.45**	**42**	*e*P	**P**	**11 48 59.9**	**+3.5**
DIX	**Grande Dixence**	**92.48**	**39**	P	**P**	**11 49 02.2**	**+5.8**
VILF	**Villemus**	**92.55**	**42**	*e*P	**P**	**11 49 02.5**	**+5.7**
BNI	**Bardonecchia**	**92.55**	**40**	*e*P	**P**	**11 48 57.7**	**+0.9**
BNI				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.6						
BNI	**Bardonecchia**	**92.55**	**40**	*e*P	**P**	**11 48 57.6**	**+0.8**
	comp=Z,35nm,1.4s,mb5.6						
GELF	**Grande-Etoile**	**92.59**	**42**	*e*P	**P**	**11 49 02.5**	**+5.5**
STOF	**St-Etienne Org**	**92.60**	**42**	*e*P	**P**	**11 49 02.7**	**+5.7**
PUYF	**Puyloubier**	**92.69**	**42**	*e*P	**P**	**11 49 02.2**	**+4.7**
GRA1	**Grafenberg Arr**	**92.73**	**35**	*e*P	**P**	**11 49 01.5**	**+4.0**
	comp=Z,130nm,2.4s,mb5.9						
GRA1				*e*PP	PP	11 52 37.8	-4.5
GRA1				*e*SP	SP	12 01 13.8	-1.8
GRA1				*e*SS	SS	12 06 20.5	+4.5
GRA1				LR	LR		
	comp=Z,5µm,20.3s,MS6.0						
GRF	**Grafenberg Arr**	**92.73**	**35**	*e*P	**P**	**11 49 01.5**	**+4.0**
GRF				*e*		11 52 37.8	
GRF				*e*SP	SP	12 01 13.8	-1.8
GRF				*e*SS	SS	12 06 20.5	+4.5
GRF				pmax	pmax		
	comp=Z,130nm,2.4s,mb5.9						
GRF				MLR	MLR		
	comp=Z,5µm,20.3s,MS6.0						
GRF	**Grafenberg Arr**	**92.73**	**35**	*e*P	**P**	**11 49 01.5**	**+4.0**
GRF				*e*		11 52 37.8	
GRF				*e*SP	SP	12 01 13.8	-1.8
GRF				*e*SS	SS	12 06 20.5	+4.5
GRF				pmax	pmax		
	comp=Z,130nm,2.4s,mb5.9						
GRF				MLR	MLR		
	comp=Z,5µm,20.3s,MS6.0						
GRF	**Grafenberg Arr**	**92.73**	**35**	*e*P	**P**	**11 49 01.5**	**+4.0**
	comp=Z,130nm,2.4s,mb5.9						
GRF				*e*PP	PP	11 52 37.8	-4.5
GRF				*e*SP	SP	12 01 13.8	-1.8
GRF				*e*SS	SS	12 06 20.5	+4.5
GRF				LR	LR		
	comp=Z,5µm,20.3s,MS6.0						
CLL	**Collm**	**92.76**	**33**	*e*P	**P**	**11 49 02.0**	**+4.4**
CLL				*e*		11 59 27.0	
CLL				*e*S	S	12 00 02.0	+2.8
CLL				MLR	MLR		
	comp=Z,9µm,17.6s,MS6.3						
CLL	**Collm**	**92.76**	**33**	P	**P**	**11 49 02.0**	**+4.4**
CLL				*e*PP	PP	11 52 41.0	-1.5
CLL				*e*		11 53 44.0	
CLL				*e*		11 59 27.0	
CLL				*e*S	S	12 00 02.0	+2.8
CLL				*e*SP	SP	12 01 04.0	-12
CLL				*e*PS	PS	12 01 18.0	-0.3
CLL				*e*PPS	PPS	12 01 47.0	-4.1
CLL				*e*SS	SS	12 06 16.0	-0.4
MBDF	**Montbardon**	**92.77**	**41**	*e*P	**P**	**11 48 57.0**	**-0.8**
	comp=Z,28nm,1.1s,mb5.3						
MBDF	**Montbardon**	**92.77**	**41**	*e*P	**P**	**11 48 57.0**	**-0.8**
MBDF				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.3						
BERF	**Bertagne**	**92.79**	**42**	*e*P	**P**	**11 49 03.1**	**+5.1**
MMK	**Mattmark**	**92.83**	**39**	P	**P**	**11 49 04.0**	**+6.0**
CLNS	**Chul’man**	**92.86**	**334**	*e*P	**P**	**11 48 59.3**	**+1.4**
CLNS				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.4						
CLNS				pmax	pmax		
	comp=N,5.0nm,1.2s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.7s						
TAVF	**Tavernes**	**92.88**	**42**	*e*P	**P**	**11 49 02.0**	**+3.7**

MCGN	**Macugnaga**	92.89	39	P	P	11 49 04.1	+5.8
ORO	**Oropa**	93.05	39	P	P	11 49 00.8	+1.7
ORO				pmax	pmax		
	comp=Z,55nm,1.3s,mb5.8						
ORO	**Oropa**	93.05	39	P	P	11 49 00.8	+1.7
	comp=Z,55nm,1.3s,mb5.8						
NKC	**Novy Kostel**	93.09	34	*e*P	P	11 49 00.6	+1.5
NKC				*e*		11 52 39.6	
NKC				*e*PS	PS	12 01 24.8	+2.9
NKC	**Novy Kostel**	93.09	34	*e*P	P	11 49 00.6	+1.5
NKC				*e*PP	PP	11 52 39.6	-5.5
NKC				*e*S	S	12 00 16.7	+15
NKC				*e*PS	PS	12 01 24.8	+2.9
NKC				*e*x	x	12 07 03.7	
NKC				AMS	AMS	12 27 40.0	
	comp=Z,8µm,20.9s						
DOI	**San Damiano**	93.18	41	P	P	11 49 10.1	+10
FRF	**La Foret Royal**	93.28	42	*e*P	P	11 48 58.9	-1.3
DAVA	**Damuels**	93.30	37	⇓*i*P	P	11 49 02.6	+2.4
	comp=Z,40nm,1.3s,mb5.7						
LMR	**La Mourre**	93.30	42	*e*P	P	11 48 58.9	-1.4
	comp=Z,42nm,1.1s,mb5.5						
LMR	**La Mourre**	93.30	42	*e*P	P	11 48 58.9	-1.4
LMR				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.5						
CALN	**Calern**	93.33	41	*e*P	P	11 49 04.5	+4.1
VAI	**Varese**	93.40	39	P	P	11 49 05.1	+4.4
MVIF	**Mont Vial**	93.43	41	*e*P	P	11 49 05.0	+4.1
TOUF	**Mont Tournerai**	93.43	41	*e*P	P	11 49 04.8	+3.9
BRG	**Berggiesshubel**	93.50	33	*i* P	P	11 49 05.4	+4.4
BRG				S	S	12 00 12.0	+6.4
BRG				PS	PS	12 01 29.0	+2.6
BRG				SS	SS	12 06 26.0	-0.9
BRG				pmax	pmax		
	comp=Z,14nm,1.4s,mb5.2						
BRG				MLR	MLR		
	comp=Z,8µm,18.6s,MS6.2						
BRG	**Berggiesshubel**	93.50	33	*i* P	P	11 49 05.4	+4.4
	comp=Z,14nm,1.4s,mb5.2						
BRG				PP	PP	11 52 57.6	+9.2
BRG				SKS	SKS	11 59 39.0	-0.3
BRG				S	S	12 00 12.0	+6.4
BRG				PS	PS	12 01 29.0	+2.6
BRG				SS	SS	12 06 26.0	-0.9
BRG				LR	LR		
	comp=Z,8µm,18.6s,MS6.2						
AUTN	**L'Aution**	93.55	41	*e*P	P	11 49 05.8	+4.4
DAVOX	**Davos**	93.57	38	P	P	11 49 06.5	+5.1
SBF	**Sospel**	93.62	41	*e*P	P	11 49 00.2	-1.5
SAOF	**Saorge**	93.63	41	*e*P	P	11 49 05.5	+3.7
DZM	**Mont Dzumac**	93.67	248	LR	LR	12 21 50.3	
	comp=Z,13µm,20.4s,MS6.4,baz=149,slow=30						
SNZO	**South Karori**	93.70	228	PFAKE		11 49 10.0	+7.8
SNZO				LR	LR		
	comp=Z,7µm,21.0s,MS6.1						
FUORN	**Ofenpass**	93.88	38	P	P	11 49 06.3	+3.4
FIN	**Finale Ligure**	93.92	41	P	P	11 49 07.0	+3.9
BRMO	**Bormio**	94.02	38	P	P	11 49 10.6	+7.1
PVCC	**Panska Ves**	94.02	33	*e*PP	PP	11 52 54.4	+1.8
PVCC				*e*S	S	12 00 15.1	+5.0
PVCC				*e*PS	PS	12 01 33.0	+0.8
PVCC				*e*SS	SS	12 06 33.3	-1.0
PVCC				AMS	AMS	12 27 20.0	
	comp=Z,7µm,22.6s						
SQTA	**Sankt Quirin**	94.09	37	⇑*i*P	P	11 49 07.0	+3.2
	comp=Z,96nm,1.5s,mb6.0						
SQTA	**Sankt Quirin**	94.09	37	⇑*i*P	P	11 49 07.0	+3.2
SQTA				pmax	pmax		
	comp=Z,96nm,1.5s,mb6.0						
PRA	**Prague**	94.22	33	S	S	12 00 20.0	+8.1
PRA				AMS	AMS	12 35 00.0	
WATA	**Walderalm**	94.24	37	⇓*i*P	P	11 49 07.9	+3.4
	comp=Z,54nm,1.3s,mb5.8						
WATA	**Walderalm**	94.24	37	⇓*i*P	P	11 49 07.9	+3.4
WATA				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.8						
WTTA	**Wattenberg**	94.31	37	⇑*i*P	P	11 49 08.2	+3.4
	comp=Z,105nm,1.5s,mb6.0						
WTTA	**Wattenberg**	94.31	37	⇑*i*P	P	11 49 08.2	+3.4
WTTA				pmax	pmax		
	comp=Z,105nm,1.5s,mb6.0						
KHC	**Kasperske Hory**	94.32	34	*e*P	P	11 49 09.3	+4.5
KHC				*e*PP	PP	11 52 53.1	-1.6
KHC				*e*S	S	12 00 19.1	+6.4
KHC				*e*PS	PS	12 01 37.9	+2.4
KHC				*e*SS	SS	12 06 40.6	+2.1
KHC				AMS	AMS	12 33 10.0	
	comp=Z,7µm,17.0s						
PRU	**Pruhonice**	94.33	33	*e*P	P	11 49 10.0	+5.2
PRU				*e*PP	PP	11 52 50.3	-4.5
PRU				*e*S	S	12 00 17.5	+4.7
PRU				*e*PS	PS	12 01 38.6	+3.0
PRU				*e*SS	SS	12 06 43.1	+4.5
PRU				AMS	AMS	12 27 40.0	
	comp=Z,8µm,22.4s						
MABI	**Malga Bissina**	94.33	38	P	P	11 49 09.8	+4.8
	comp=Z,85nm,2.2s,mb5.8						
KLR	**Kul'dur**	94.37	326	*e*P	P	11 49 02.4	-2.6
KLR				*e*		11 52 50.5	
KLR				*e*S	S	11 59 36.0	-37
KLR				*e*		12 00 20.5	
KLR				*e*		12 01 34.0	
KLR				*e*		12 06 48.5	
KLR				pmax	pmax		
	comp=N,47nm,2.2s						
KLR				pmax	pmax		
	comp=Z,82nm,2.2s,mb5.8						
KLR				smax			
	comp=N,1µm,11.0s						
KLR				smax			
	comp=E,1µm,11.0s						
KLR				MLR	MLR		
	comp=N,2µm,16.0s,MS5.8						
KLR				MLR	MLR		
	comp=E,1µm,16.0s,MS5.8						
APPI	**Appiano**	94.51	38	P	P	11 49 09.2	+3.4
	comp=E,13nm,0.3s,mb5.8						
GERES	**GERESS Array B**	94.55	35	P	P	11 49 06.9	+1.0
	comp=E,0.4nm,0.2s,baz=323,slow=4.9,SNR=3.4						
GERES				PP	PP	11 52 53.5	-2.9
	comp=E,0.4nm,0.6s,baz=352,slow=6.9,SNR=2.5						
GERES				LR	LR	12 31 03.9	
	comp=E,6µm,19.0s,MS6.1,baz=303,slow=35						
GERES	**GERESS Array B**	94.55	35	P	P	11 49 06.9	+1.0
GERES				PP	PP	11 52 53.5	-2.9
GERES				LR	LR	12 31 03.9	
SEST	**Monte Rota**	94.93	37	P	P	11 49 13.6	+5.9
	comp=E,91nm,1.5s,mb6.0						
CTI	**Castel Tesino**	95.00	38	P	P	11 49 11.0	+3.0
CTI				pmax	pmax		
	comp=Z,68nm,1.2s,mb6.0						
CTI	**Castel Tesino**	95.00	38	P	P	11 49 11.0	+3.0
	comp=Z,68nm,1.2s,mb6.0						
DPC	**Dobruska-Polom**	95.03	32	*e*P	P	11 49 09.6	+1.6
DPC				*e*PP	PP	11 53 02.7	+3.0
DPC				*e*S	S	12 00 23.7	+5.0
DPC				*e*PS	PS	12 01 47.9	+4.7
DPC				*e*SS	SS	12 06 49.6	+1.3
DPC				AMS	AMS	12 31 40.0	
	comp=Z,8µm,18.9s						
PGF	**Pioggiola**	95.28	42	*e*P	P	11 49 07.9	-1.5
	comp=Z,40nm,1.3s,mb5.4						
PGF	**Pioggiola**	95.28	42	*e*P	P	11 49 07.9	-1.5
PGF				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.4						
FVI	**Forni Avoltri**	95.34	37	P	P	11 49 14.3	+4.7
KBA	**Koelnbreinsper**	95.38	36	⇓*i*P	P	11 49 14.4	+4.6
	comp=Z,33nm,1.6s,mb5.5						
KBA	**Koelnbreinsper**	95.38	36	⇓*i*P	P	11 49 14.4	+4.6
KBA				pmax	pmax		
	comp=Z,33nm,1.6s,mb5.5						
MOA	**Molln**	95.44	35	⇓*i*P	P	11 49 14.2	+4.2
	comp=Z,12nm,1.1s,mb5.2						
ZCCA	**Zocca**	95.53	39	P	P	11 49 15.7	+5.2
HNR	**Honiara**	95.64	262	PFAKE		11 49 20.0	+8.3
HNR				LR	LR		
	comp=Z,5µm,22.0s,MS6.0						
FNVD	**Fontana Vidola**	95.72	40	P	P	11 49 16.8	+5.4
PTCC	**Patocco-Chiusa**	95.77	37	P	P	11 49 13.9	+2.3
GMNA	**Gemona**	95.78	37	P	P	11 49 13.3	+1.7
ROBS	**Robic**	95.95	37	*e*P	P	11 49 11.7	-0.7
RAC	**Raciborz**	96.14	32	*e*P	P	11 49 26.3	+13
RAC				MLR	MLR	12 34 49.7	
	comp=Z,9µm,19.7s,MS6.2						
GRFL	**Gerfalco**	96.19	40	P	P	11 49 15.7	+2.1
	comp=Z,1.9nm,0.3s,mb5.0						
CSNT	**Castellina Chi**	96.20	40	P	P	11 49 17.8	+4.2
BOD	**Bodaibo**	96.23	339	*e*P	P	11 49 12.3	-1.1
BOD				pmax	pmax		
	comp=Z,17nm,1.4s,mb5.3						
PGD	**Poggio Sodo**	96.24	40	P	P	11 49 18.6	+4.8
	comp=Z,70nm,2.2s,mb5.7						
OKC	**Ostrava-Krasne**	96.27	32	*e*PP	PP	11 53 07.7	-1.9
OKC				*e*S	S	12 00 35.0	+5.8
OKC				*e*PS	PS	12 02 02.0	+5.3
OKC				*e*SS	SS	12 07 17.1	+11
OKC				AMS	AMS	12 32 20.0	
	comp=Z,6µm,18.1s						
VOY	**Vojsko**	96.29	37	*e*P	P	11 49 14.8	+0.8
VOY				*e*	pP	11 49 20.3	+1.2
SFI	**Santa Sofia**	96.30	39	P	P	11 49 17.1	+3.0
	comp=Z,47nm,1.6s,mb5.7						
OBKA	**Obir**	96.38	36	⇓*i*P	P	11 49 15.3	+0.9
	comp=Z,42nm,1.6s,mb5.6						
TRI	**Trieste**	96.41	37	P	P	11 49 19.3	+4.8
ARSA	**Arzberg**	96.48	35	⇓*i*P	P	11 49 17.7	+2.9
	comp=Z,7.1nm,1.2s,mb5.0						
CRE	**Caprese Michel**	96.52	40	P	P	11 49 20.6	+5.5
PERS	**Pernice**	96.62	36	*e*P	P	11 49 18.9	+3.5
LJU	**Ljubljana**	96.64	37	*e*P	P	11 49 19.9	+4.4
RSM	**Repubblica di**	96.65	39	P	P	11 49 26.5	+11
ZST	**Bratislava**	96.75	34	*e*P	P	11 49 26.2	+10
ZST				*e*PP	PP	11 53 10.6	-2.9
ZST				*e*S		11 59 55.5	
ZST				*e*SS	SS	12 07 13.6	+1.0
ZST	**Bratislava**	96.75	34	*e*sP	sP	11 49 26.2	+3.4
ZST				*e*PP	PP	11 53 10.6	-2.9
FSSB	**Fossombrone**	96.98	39	P	P	11 49 22.4	+5.3
MURB	**Monte Urbino**	97.07	40	P	P	11 49 24.0	+6.5
	comp=Z,63nm,1.6s,mb5.8						
RPZ	**Rata Peaks**	97.07	226	LR	LR	12 26 44.3	
	comp=Z,7µm,18.7s,MS6.2,baz=48,slow=32						
VSL	**Villasalto**	97.11	44	P	P	11 49 16.1	-1.7
	comp=Z,49nm,1.6s,mb5.7						
ARV	**Arcevia**	97.19	39	P	P	11 49 22.5	+4.5
	comp=Z,1.9nm,0.3s,mb5.0						
MJAR	**Matsushiro Arr**	97.22	312	P	P	11 49 18.2	-0.1
	comp=Z,0.7nm,0.3s,baz=55,slow=19,SNR=5.9						
MJAR				LR	LR	12 23 25.1	
	comp=Z,5µm,21.7s,MS6.0,baz=75,slow=30						
MAJO	**Matsushiro**	97.22	312	*e*P	P	11 49 19.0	+0.7
MAJO				pmax	pmax		
	comp=Z,68nm,1.5s,mb5.9						
MAJO				MLR	MLR		
	comp=Z,5µm,22.0s,MS6.0						
MAJO	**Matsushiro**	97.22	312	*e*P	P	11 49 19.0	+0.7
	comp=Z,68nm,1.5s,mb5.9						
MAJO				LR	LR		
	comp=Z,5µm,22.0s,MS6.0						
MAT	**Matsushiro**	97.22	312	*e*P	P	11 49 18.0	-0.3
MAT				*e*S	S	12 00 43.0	+5.4
MAT				pmax	pmax		
	comp=Z,111nm,1.9s,mb6.0						
MAT				MLR	MLR		
	comp=Z,5µm,20.0s,MS6.0						
MAT	**Matsushiro**	97.22	312	*e*P	P	11 49 18.0	-0.3
	comp=Z,110nm,1.9s,mb6.0						
MAT				*e*S	S	12 00 43.0	+5.4
MAT				LR	LR		
	comp=Z,5µm,20.0s,MS6.0						
MAT	**Matsushiro**	97.22	312	P	P	11 49 17.9	-0.5
MAT				S	S	12 00 42.0	+4.4
ASS	**Assisi**	97.26	40	P	P	11 49 20.7	+2.3
BOJS	**Bojanci**	97.37	37	*e*P	P	11 49 21.8	+3.0
CING	**Cingoli**	97.41	39	P	P	11 49 24.4	+5.4
	comp=Z,108nm,2.3s,mb5.9						
MNK	**Minsk**	97.41	25	*e*P	P	11 49 21.0	+2.2
VYHS	**Vyhne**	97.47	33	*e*P	P	11 49 21.7	+2.5
VYHS				*e*PP	PP	11 53 19.5	+0.3
VYHS				*e*S		11 59 58.3	
VYHS				*e*SS	SS	12 07 09.8	-13
AOI	**Ancona**	97.55	39	P	P	11 49 24.2	+4.5
MNS	**Montasola**	97.65	40	P	P	11 49 24.0	+3.8
NRCA	**Norcia**	97.67	40	P	P	11 49 25.8	+5.6
NVLJ	**Novalja**	97.71	38	*i* P	P	11 49 22.8	+2.4
AQU	**L'Aquila**	98.11	40	*e*P	P	11 49 27.4	+5.2
PTQR	**Pietraquaria**	98.30	40	P	P	11 49 27.1	+4.0
KECS	**Kecovo**	98.31	32	*e*P	P	11 49 25.4	+2.4
CII	**Carovilli**	99.03	40	P	P	11 49 32.7	+6.3
DBIC	**Dimbokro**	99.46	80	P	P	11 49 28.5	-0.5
	comp=Z,2.6nm,0.9s,mb4.8,baz=311,slow=13,SNR=2.2						
DBIC				LR	LR	12 33 08.2	
	comp=Z,3µm,21.2s,MS5.8,baz=275,slow=35						
DBIC	**Dimbokro**	99.46	80	P	P	11 49 28.5	-0.5
DBIC				LR	LR	12 33 08.2	
OBN	**Obninsk**	100.08	20	P	P	11 49 21.0	-10
OBN				*e*		11 53 33.3	
OBN				*e*		12 01 07.5	
OBN				*e*		12 03 30.7	
OBN				*e*SS	SS	12 07 58.6	-0.3
OBN				*i* SSS	SSS	12 11 49.4	+0.3
OBN				MLR	MLR		
	comp=Z,12µm,20.0s,MS6.4						
OBN	**Obninsk**	100.08	20	⇓*e*P	P	11 49 30.1	-0.7
OBN				LR	LR		
	comp=Z,12µm,20.0s,MS6.4						
BBLS	**Bajina Basta -**	100.72	36	⇑*i*(P)	PP	11 53 42.7	-1.7
AKASG	**Malin Array Be**	100.81	26	P	P	11 49 31.8	-2.5
	comp=Z,3.7nm,0.8s,baz=302,slow=3.7,SNR=9.8						
AKASG				PP	PP	11 53 39.4	-5.5
	comp=Z,3.1nm,1.0s,baz=309,slow=5.7,SNR=3.5						
AKASG	**Malin Array Be**	100.81	26	P	P	11 49 31.8	-2.5
AKASG				PP	PP	11 53 39.4	-5.5
CN2	**Changchun**	101.13	324	*e*P	P	11 49 35.5	-0.4
CN2				*e*AP		11 49 40.5	
CN2				SKS	SKS	12 00 12.8	-6.4
CN2				*e*S	S	12 01 10.0	-0.3
CN2				PS	PS	12 02 46.5	-1.4
CN2				SS	SS	12 08 12.8	-1.2
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s						
CN2				AMB	AMB		
	comp=Z,350nm,5.0s						
CN2				LR	LR		
	comp=N,2µm,21.0s,MS5.8						
CN2				LR	LR		
	comp=E,3µm,21.0s,MS5.8						
CN2				LR	LR		
	comp=Z,4µm,23.0s,MS5.8						
GUMO	**Guam**	101.98	289	PFAKE		11 49 50.0	+10
GUMO				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
SKO	**Skopje**	103.08	37	*e*P	Pdif	11 49 49.0	+4.3
SNY	**Shenyang**	103.46	323	⇑P	Pdif	11 49 44.5	-1.8
SNY				SKS	SKS	12 00 28.3	-1.9
SNY				S	S	12 01 40.8	+11
SNY				LR	LR		
	comp=N,2µm,19.2s,MS5.9						
SNY				LR	LR		
	comp=E,2µm,19.8s,MS5.9						
SNY				LR	LR		
	comp=Z,3µm,19.2s,MS5.9						
ARU	**Arti**	103.98	8	PFAKE		11 50 00.0	+12
ARU				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
IRK	**Irkutsk**	104.00	341	*e*P	Pdif	11 49 49.6	+1.2
IRK				*e*		11 54 08.4	
INCN	**Inchon**	104.39	318	PFAKE		11 50 00.0	+9.4
INCN				LR	LR		
	comp=Z,4µm,21.0s,MS5.9						
TLY	**Talaya**	104.68	341	*e*P	Pdif	11 49 54.5	+3.0
TLY				*e*		11 54 14.3	
TLY				*e*		12 00 28.5	
TLY				*e*S	S	12 01 43.0	+3.3
TLY				*e*PS	PS	12 03 28.3	+4.1
TLY				*e*PPS	PPS	12 04 20.5	+0.4
TLY				*e*SS	SS	12 09 05.3	+2.8
TLY				pmax	pmax		
	comp=Z,10.0nm,1.7s						
TLY				MLR	MLR		
	comp=Z,5µm,23.0s,MS6.0						
TLY	**Talaya**	104.68	341	P	Pdif	11 49 54.6	+3.1
TLY				LR	LR		
	comp=Z,778nm,19.0s,MS5.3						
ZAK	**Zakamensk**	105.92	340	*e*P	Pdif	11 49 59.0	+2.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.9s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.8s						
ZAL	**Zalesovo**	106.70	353	PP	PP	11 54 22.9	-6.0
	comp=Z,1.3nm,0.2s,baz=82,slow=2.9,SNR=3.9						
ULN	**Ulaanbaatar**	106.75	337	*d i*P	Pdif	11 50 03.6	+2.9
ULN	**Ulaanbaatar**	106.75	337	PFAKE		11 54 20.0	
ULN				LR	LR		
	comp=Z,6µm,21.0s,MS6.1						
SONM	**Songino Array**	107.02	337	Pdiff	Pdif	11 50 01.9	0.0
	comp=Z,3.0nm,1.2s,slow=1.2,SNR=7.6						
SONM				PP	PP	11 54 22.9	-8.8
	comp=Z,0.9nm,0.9s,baz=90,slow=2.5,SNR=3.9						
SBA	**Scott Base**	107.53	193	PFAKE		11 54 20.0	
SBA				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
PMG	**Port Moresby**	107.67	266	PFAKE		11 54 20.0	
PMG				LR	LR		
	comp=Z,9µm,20.0s,MS6.3						
ZRNK	**Zerenda**	108.35	2	*e*P	Pdif	11 50 08.9	+1.3
ZRNK				*e*		11 54 37.2	
ZRNK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ZRNK	**Zerenda**	108.35	2	*e*Pdif	Pdif	11 50 08.9	+1.3
	comp=Z,6.6nm,1.3s						
ZRNK				*e*PP	PP	11 54 37.2	-4.0
VNDA	**Vanda**	108.54	193	PFAKE		11 54 20.0	
VNDA				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
VNA3	**Neumayer Olymp**	110.21	160	⇑*i*P	PP	11 54 48.4	-6.1
VNA1	**Neumayer--Stat**	110.69	159	⇑*i*P	PP	11 54 52.4	-5.4
VNA2	**Neumayer--Watz**	110.96	160	⇑*i*P	PP	11 54 54.8	-4.9
BR131	**Keskin Array S**	111.17	31	PKP	PKPdf	11 54 17.5	-4.1
BR131				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
BRTR	**Keskin Array B**	111.17	31	PKiKP		11 54 18.9	
	comp=Z,0.4nm,0.4s,baz=109,slow=18,SNR=3.5						
BRTR				PP	PP	11 54 59.5	-2.3
	comp=Z,0.3nm,0.3s,baz=326,slow=24,SNR=3.6						
BRTR				PKKPbc		12 05 13.1	
	comp=Z,0.6nm,0.5s,baz=72,slow=11,SNR=2.4						
BRTR				PKKPab		12 05 20.9	
	comp=Z,0.8nm,0.5s,baz=198,slow=3.9,SNR=3.9						
CTAO	**Charters Tower**	111.28	255	PFAKE		11 54 30.0	+7.7
CTAO				LR	LR		
	comp=Z,5µm,21.0s,MS6.1						
KIV	**Kislovodsk**	111.62	23	PFAKE		11 54 30.0	+7.6
KIV				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
SSE	**Sheshan**	111.91	316	*e*PKP	PKPdf	11 54 21.8	-1.4
SSE				PP	PP	11 55 07.0	-0.3
SSE				SS	SS	12 10 41.0	+0.7
SSE				LR	LR		
	comp=N,420nm,22.9s,MS5.7						
SSE				LR	LR		
	comp=E,2µm,22.9s,MS5.7						
SSE				LR	LR		
	comp=Z,3µm,19.1s,MS5.9						
SSE	**Sheshan**	111.91	316	*e*PKP	PKPdf	11 54 21.7	-1.5
SSE				PP	PP	11 55 06.9	-0.4
SSE				SS	SS	12 10 41.0	+0.7
SSE				LR	LR		
	comp=Z,3µm,19.1s,MS5.9						
SNAA	**Sanae**	112.36	161	⇑*i*P	PP	11 55 02.0	-7.8
MKAR	**Makanchi Array**	114.02	353	PKiKP		11 54 23.3	
	comp=Z,1.4nm,0.9s,baz=333,slow=2.7,SNR=7.1						
MKAR				PP	PP	11 55 19.2	-3.5
	comp=Z,1.1nm,0.8s,slow=1.4,SNR=3.7						
MKAR				PKKPbc		12 05 04.0	
	comp=Z,1.4nm,0.8s,baz=198,slow=3.8,SNR=9.3						
MKAR	**Makanchi Array**	114.02	353	PKPdf	PKPdf	11 54 23.3	-3.8
MKAR				PP	PP	11 55 19.2	-3.5
MKAR				PKKPbc		12 05 04.0	
TATO	**Taipei**	115.55	311	PFAKE		11 54 40.0	+9.4
TATO				LR	LR		
	comp=Z,4µm,22.0s,MS6.0						
GNI	**Garni**	115.68	24	PFAKE		11 54 40.0	+9.5
GNI				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
WMQ	**Urumqi**	116.07	348	*e*PKP	PKPdf	11 54 27.8	-3.4
WMQ				PP	PP	11 55 37.8	+0.7
WMQ				PPP	PPP	11 58 05.5	+1.2
WMQ				SKS	SKS	12 01 35.0	+12
WMQ				SS	SS	12 11 35.5	+0.4
WMQ				LR	LR		
	comp=N,5µm,22.0s,MS6.2						
WMQ				LR	LR		
	comp=E,4µm,20.0s,MS6.2						
WMQ				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
STKA	**Stephens Creek**	117.41	243	*e*PKP	PKPdf	11 54 30.0	-4.0
	comp=Z,2.6nm,0.9s						
STKA	**Stephens Creek**	117.41	243	PKP	PKPdf	11 54 30.1	-3.9
	comp=Z,2.4nm,0.8s,baz=1.9,slow=0.9,SNR=8.8						
STKA				PKKPbc		12 04 55.9	
	comp=Z,1.5nm,0.7s,baz=355,slow=6.2,SNR=3.9						
LZH	**Lanzhou**	117.88	332	*e*PKP	PKPdf	11 54 12.0	-23
LZH				sPKP		11 54 18.1	
LZH				PP	PP	11 55 29.0	-21
LZH				SKS	SKS	12 01 19.5	-10
LZH				SKKS		12 02 17.0	
LZH				SS	SS	12 11 37.0	-22
LZH				LR	LR		
	comp=Z,14µm,20.4s,MS6.6						
ENH	**Enshi**	119.64	323	*e*PKPdf	PKPdf	11 54 35.5	-2.9
CD2	**Chengdu**	122.18	328	*e*PKP	PKPdf	11 54 39.3	-4.0
CD2				PP	PP	11 56 16.5	-2.7
CD2				SKS	SKS	12 01 45.8	+1.7
CD2				PP	PP		
	comp=Z,870nm,5.5s						
CD2				LR	LR		
	comp=E,4µm,19.2s						
CD2				LR	LR		
	comp=Z,3µm,22.8s,MS5.8						
WRAB	**Tennant Creek**	122.21	258	*i* PKIKP	PKPdf	11 54 40.5	-3.1
WRAB	**Tennant Creek**	122.21	258	*e*PKPdf	PKPdf	11 54 39.6	-4.0
WRAB				LR	LR		
	comp=Z,3µm,22.0s,MS5.8						
WB2	**Warramunga Arr**	122.21	258	*e*PKP	PKPdf	11 54 39.4	-4.2
WRA	**Warramunga Arr**	122.22	258	PKP	PKPdf	11 54 38.9	-4.7
	comp=Z,6.1nm,0.8s,baz=73,slow=1.7,SNR=30						
WRA				PP	PP	11 56 12.7	-7.0
	comp=Z,4.0nm,1.3s,baz=68,slow=3.0,SNR=3.6						
WRA				PKKPbc		12 04 35.4	
	comp=Z,0.6nm,1.0s,baz=261,slow=2.6,SNR=2.8						
GYA	**Guiyang**	124.15	323	⇑*i*PKP	PKPdf	11 54 45.3	-2.0
GYA				PKS	PKS	11 58 20.8	+1.6
GYA				SKS	SKS	12 01 56.0	+5.6
GYA				PP	PP		
	comp=Z,510nm,10.4s						
GYA				LR	LR		
	comp=N,3µm,20.1s,MS6.0						
GYA				LR	LR		
	comp=E,1µm,19.8s,MS6.0						
GYA				LR	LR		
	comp=Z,4µm,21.3s,MS6.1						
SYO	**Syowa Base**	125.90	166	⇓PKiKP		11 54 49.0	
CASY	**Casey**	126.70	198	PKPdf	PKPdf	11 54 45.4	-5.6
CASY				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
KMI	**Kunming**	127.38	325	PKP	PKPdf	11 54 49.8	-3.7
KMI				XPKP		11 54 56.5	
KMI				PP	PP	11 56 50.5	-3.3
KMI				PKS	PKS	11 58 23.5	-1.9
KMI				PPP	PPP	11 59 31.3	-6.9
KMI				SKS	SKS	12 01 55.0	-5.1
KMI				SKKS		12 03 42.5	
KMI				PP	PP		
	comp=Z,380nm,7.3s						
KMI				LR	LR		
	comp=N,2µm,22.1s,MS5.9						
KMI				LR	LR		
	comp=E,2µm,25.9s,MS5.9						
KMI				LR	LR		
	comp=Z,3µm,22.1s,MS5.9						
KMI	**Kunming**	127.38	325	PKIKP	PKPdf	11 54 49.7	-3.8
KMI						11 54 56.4	
KMI						11 56 50.6	
KMI				PPP	PPP	11 59 31.3	-6.9
KMI						12 01 55.1	
KMI				SS	SS	12 13 55.4	-4.8
KMI				SSS	SSS	12 18 41.3	-3.1
KMI				MLR	MLR		
	comp=Z,3µm,22.1s,MS5.9						
KMI	**Kunming**	127.38	325	PKP	PKPdf	11 54 49.7	-3.8
KMI				sPKP		11 54 56.4	
KMI				PP	PP	11 56 50.6	-3.2

KMI				PKS	PKS	11 58 23.6	-1.8
KMI				PPP	PPP	11 59 31.3	-6.9
KMI				SKS	SKS	12 01 55.1	-5.0
KMI				SKKS		12 03 42.4	
KMI				SS	SS	12 13 55.4	-4.8
KMI				SSS	SSS	12 18 41.3	-3.1
KMI				LR	LR		
	comp=Z,3μm,22.1s,MS5.9						
QIZ	**Qiongzhong**	**127.58**	**314**	*e*PKP	PKPdf	11 54 47.8	-6.3
QIZ				SS	SS	12 14 01.0	-1.8
QIZ				PP	PP		
	comp=Z,580nm,7.4s						
QIZ				LR	LR		
	comp=E,2μm,19.4s						
QIZ				LR	LR		
	comp=Z,3μm,34.4s						
TSUM	**Tsumeb**	**128.04**	**100**	*e*PKPdf	PKPdf	11 54 49.8	-5.2
TSUM				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
AFFS	**'Afif**	**128.45**	**35**	P	PKPdf	11 54 58.1	+2.4
LSA	**Lhasa**	**128.50**	**339**	*e*PKIKP	PKPdf	11 54 50.0	-5.6
LSA				*e*		11 56 55.5	
RYDS	**Riyadh**	**130.15**	**32**	P	PKPdf	11 54 58.3	-0.6
DDI	**Dehra Dun**	**130.77**	**354**	*e*P	PKPdf	11 55 00.0	+0.1
DDI				*e*x	x	11 57 10.0	
BLJS	**Baljurashi**	**130.79**	**40**	P	PKPdf	11 55 03.3	+3.1
MAW	**Mawson**	**130.94**	**175**	*e*PKP	PKPdf	11 54 56.6	-2.6
	comp=Z,15nm,1.1s						
MAW				*e*PKS	PKS	11 58 20.9	-10
MAW	**Mawson**	**130.94**	**175**	PKP	PKPdf	11 54 55.3	-3.9
	comp=Z,4.8nm,0.8s,baz=271,slow=3.5,SNR=8.2						
SUR	**Sutherland**	**131.72**	**117**	PKP	PKPdf	11 54 59.5	-2.2
	comp=Z,11nm,1.0s,baz=353,slow=16,SNR=2.4						
SUR	**Sutherland**	**131.72**	**117**	PKP	PKPdf	11 54 59.5	-2.2
SUR				LR	LR		
	comp=Z,796nm,20.0s,MS5.4						
SHL	**Shillong**	**132.02**	**337**	*e*P	PKPdf	11 55 00.5	-1.9
SHL				*e*x	x	11 58 27.0	
NDI	**New Delhi**	**132.47**	**355**	*e*P	PKPdf	11 55 01.5	-1.7
NDI				*e*x	x	11 58 28.0	
DJNS	**Zahran al Janu**	**133.63**	**40**	P	PKPdf	11 55 08.9	+3.4
CM31	**Chiang Mai Arr**	**134.81**	**324**	*e*PKPdf	PKPdf	11 55 03.8	-4.0
CM31				LR	LR		
	comp=Z,2μm,19.0s,MS6.0						
CMAR	**Chiang Mai Arr**	**134.81**	**324**	PKP	PKPdf	11 55 06.7	-1.1
	comp=Z,4.4nm,1.0s,baz=331,slow=2.6,SNR=11						
MBAR	**Mbarara**	**134.95**	**71**	*e*PKIKP	PKPdf	11 55 10.2	+2.0
MBAR				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.6						
BOSA	**Boshof**	**135.71**	**112**	PFAKE		11 55 20.0	+11
BOSA				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
MBWA	**Marble Bar**	**135.94**	**259**	PFAKE		11 55 20.0	+10
MBWA				LR	LR		
	comp=Z,5μm,19.0s,MS6.2						
LBTB	**Lobatse**	**136.01**	**107**	*e*PKIKP	PKPdf	11 55 03.5	-6.3
LBTB				MLR	MLR		
	comp=Z,3μm,19.0s,MS6.0						
LSZ	**Lusaka**	**137.32**	**92**	*e*PKIKP	PKPdf	11 55 03.4	-9.0
LSZ				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.9						
KSM	**Kuching**	**137.90**	**295**	PKPdf	PKPdf	11 55 08.8	-4.8
NWAO	**Narrogin (SRO)**	**137.95**	**242**	*e*PKIKP	PKPdf	11 55 09.6	-3.6
NWAO				MLR	MLR		
	comp=Z,7μm,21.0s						
HYB	**Hyderabad**	**143.43**	**351**	*e*PKIKP	PKPdf	11 55 19.0	-4.3
HYB	**Hyderabad**	**143.43**	**351**	*i* PKP	PKPdf	11 55 19.0	-4.3
HYB				*e*		11 55 19.0	
KULM	**Kulim**	**143.47**	**309**	*e*PKPdf	PKPdf	11 55 20.6	-2.8
MDRS	**Chennai**	**147.36**	**346**	*e*x	PKPdf	11 55 30.0	-0.1
SALM	**Salem**	**149.14**	**350**	*e*x	PKPdf	11 55 40.0	+7.0
PALK	**Pallekele**	**152.81**	**343**	PFAKE		11 55 50.0	+11
PALK				LR	LR		
	comp=Z,1μm,19.0s,MS5.8						
DGAR	**Diego Garcia**	**168.54**	**2**	PFAKE		11 56 00.0	+4.7
DGAR				LR	LR		
	comp=Z,2μm,22.0s						

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*IDC **27** 12:07:37.9±2.3,2.00N×96.61E,mb4.1/5,mb1 4.3/6,mb1mx3.9/18,mbtmp4.1/6,ML4.1/1,MS5.2/1,Ms1 5.2/1,ms1mx4.3/23,Error ellipse: s-maj=87.9km s-min=24.9km az=58.0*

*NEIC **27** 12:07:42.5±0.8,2.02N×96.62E,h30^{km},mb4.2/1,Error ellipse: s-maj=17.6km s-min=11.1km az=53.0*

ISC 27 12:07:40.8±1.2,**2.0N**±0.1×**96.7E**±0.2,**h30**^{km},**n10,**σ**0^{s}56**/9,**mb4.1**/6,**MS5.2**/1,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.12**	**51**	*e*Pn	**Pn**	**12 08 58.1**	**+0.5**
CMAR	**Chiang Mai Arr**	**16.47**	**8**	Pn	**P**	**12 11 31.6**	**+0.1**
	0.3nm,0.3s,baz=197,slow=12,SNR=17						
KKM	**Kota Kinabalu**	**19.90**	**78**	P	**P**	**12 12 12.4**	**-0.7**
WRA	**Warramunga Arr**	**42.93**	**122**	P	**P**	**12 15 39.0**	**0.0**
	1.9nm,0.6s,mb4.0,baz=301,slow=9.0,SNR=22						
WRAB	**Tennant Creek**	**42.93**	**122**	*e*P	**P**	**12 15 39.2**	**+0.2**
	2.1nm,0.5s,mb4.1						
MKAR	**Makanchi Array**	**46.31**	**346**	P	**P**	**12 16 05.5**	**-0.2**
	2.1nm,0.7s,mb4.2,baz=164,slow=8.0,SNR=20						
SONM	**Songino Array**	**46.39**	**9**	P	**P**	**12 16 06.6**	**+0.2**
	0.8nm,0.4s,mb4.0,baz=188,slow=9.1,SNR=9.3						
ZAL	**Zalesovo**	**52.65**	**351**	P	**P**	**12 16 53.3**	**-1.1**
	1.4nm,0.5s,mb4.1,baz=334,slow=8.2,SNR=6.5						
ASAJ	**Asahikawa**	**58.32**	**37**	LR	LR	12 43 48.1	
	comp=Z,2μm,18.6s,MS5.2,baz=24,slow=37						
ARCES	**ARCESS Array B**	**81.57**	**340**	P	**P**	**12 19 57.7**	**+0.9**
	4.5nm,1.2s,mb4.3,baz=104,slow=5.0,SNR=7.0						

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*MOS **27** 12:13:18.2±1.5,36.48N×70.34E,h195^{km},mb4.0/3,Error ellipse: s-maj=12.9km s-min=7.5km az=100.3*

*NEIC **27** 12:13:20.4±0.3,36.42N×70.43E,mb4.7/9,Error ellipse: s-maj=8.4km s-min=5.0km az=221.0*

*IDC **27** 12:13:22.1±4.4,36.45N×70.43E,h226^{km}±42^{km},mb3.6/13,mb1 3.7/15,mb1mx3.6/21,mbtmp4.2/15,Error ellipse: s-maj=17.5km s-min=14.4km az=167.0*

*NNC **27** 12:13:25.2±5.4,36.98N×70.28E,h194^{km}±53^{km},mpv4.3,Error ellipse: s-maj=48.5km s-min=32.7km az=10.0*

ISC 27 12:13:18.4±0.4,**36.46N**±0.03×**70.40E**±0.06,**h202**^{km}±6^{km},**n76,**σ**1^{s}11**/88,**mb3.8**/13,**5C-5D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.91**	**154**	⇓P	**P**	**12 14 09.0**	**+1.5**
CHCP	**Chirah Chowk**	**3.65**	**139**	⇓P	**P**	**12 14 18.4**	**+1.9**
THW	**Thamme Wali**	**3.82**	**163**	P	**P**	**12 14 13.1**	**-5.5**
SBDP	**Sheikh Budin**	**4.16**	**175**	⇑P	**P**	**12 14 23.4**	**+0.5**
SBDP				S	**S**	**12 15 11.0**	**-1.8**
DRP	**Derazinda**	**4.70**	**182**	P	**P**	**12 14 30.6**	**+0.9**
SARP	**Sargodha**	**4.90**	**157**	P	**P**	**12 14 32.5**	**+0.2**
JMU	**Jammu**	**5.26**	**134**	*e*x	**S**	**12 15 39.0**	**+1.1**
AML	**Almayashu**	**6.22**	**23**	P	**P**	**12 14 49.6**	**+0.4**
	SNR=30						
PONG	**Pong**	**6.43**	**133**	*e*P	**P**	**12 14 54.0**	**+2.0**
PONG				*e*S	**S**	**12 16 03.0**	**-1.9**
UCH	**Uchtor**	**6.59**	**28**	P	**P**	**12 14 54.6**	**+0.6**
	SNR=62						
KK31	**Karatay Array**	**6.64**	**1**	⇓P	**P**	**12 14 54.0**	**-0.7**
	15nm,0.5s,baz=176,slow=12,SNR=255						
KK31				⇑S	**S**	**12 16 04.2**	**-5.6**
	43nm,0.5s,baz=196,slow=26						
KKAR	**Karatay Array**	**6.64**	**1**	*i* PN	**P**	**12 14 54.0**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.2s						
EKS2	**Erkin-Say**	**6.72**	**22**	P	**P**	**12 14 56.2**	**+0.4**
	SNR=15						
KZA	**Kyzart**	**6.76**	**32**	P	**P**	**12 14 56.3**	**0.0**
	SNR=19						
AAK	**Ala-Archa**	**6.93**	**26**	P	**P**	**12 14 59.1**	**+0.6**
	SNR=9.5						
AAK	**Ala-Archa**	**6.93**	**26**	⇑P	**P**	**12 14 58.8**	**+0.3**
	comp=Z,12nm,0.6s						
AAK				⇓S	**S**	**12 16 14.5**	**-2.2**
	comp=Z,166nm,0.7s						
BHK	**Bhakra**	**7.09**	**133**	*e*x	x	12 15 21.3	
BHK				*e*x	**S**	**12 16 21.9**	**+1.5**
KBK	**Karagaybulak**	**7.12**	**28**	P	**P**	**12 15 01.7**	**+0.7**
	SNR=8.0						
FRU	**Bishkek**	**7.15**	**26**	*e*PN	**P**	**12 14 59.5**	**-1.9**
FRU				*i*		12 16 26.5	
FRU				pmax	pmax		
	comp=E,420nm,1.6s						
CHMS	**Chumysh**	**7.34**	**26**	P	**P**	**12 15 04.1**	**+0.2**
	SNR=9.8						
SDNR	**Sundarnagar**	**7.37**	**130**	*e*P	**P**	**12 15 03.0**	**-1.2**
SDNR				*e*S	**S**	**12 16 22.0**	**-4.8**
USP	**Ospenovka**	**7.50**	**24**	P	**P**	**12 15 06.9**	**+1.0**
	SNR=8.1						
TKM2	**Tokmak 2**	**7.60**	**30**	P	**P**	**12 15 08.0**	**+0.8**
	SNR=7.4						
SMLA	**Simla**	**7.75**	**131**	*i* P	**P**	**12 15 06.3**	**-2.8**
SMLA				*i* S	**S**	**12 16 30.4**	**-5.3**
DDI	**Dehra Dun**	**8.85**	**132**	*e*P	**P**	**12 15 24.5**	**+0.9**
DDI				*e*x	x	12 16 37.0	
NDI	**New Delhi**	**9.65**	**141**	*e*P	**P**	**12 15 33.0**	**-0.9**
NDI				*e*S	**S**	**12 17 18.0**	**-1.9**
KUDL	**Kundal**	**9.76**	**146**	*e*P	**P**	**12 15 34.4**	**-0.9**
KUDL				AMb	AMB	12 15 36.0	
	comp=Z,58nm,1.1s						
KUDL				*e*S	**S**	**12 17 17.5**	**-4.9**
AYAN	**Aya Nagar**	**9.77**	**143**	*e*P	**P**	**12 15 35.8**	**+0.4**
AYAN				*e*S	**S**	**12 17 17.4**	**-5.3**
SONA	**Sohna**	**9.94**	**143**	*i* P	**P**	**12 15 37.5**	**-0.2**
SONA				AMb	AMB	12 15 39.7	
	comp=Z,32nm,0.8s						
SONA				*e*S	**S**	**12 17 21.9**	**-4.8**
AJM	**Ajmer**	**10.59**	**159**	*i* P	**P**	**12 15 45.0**	**-1.0**
LGTI	**Lohaghat**	**10.82**	**127**	*i* P	**P**	**12 15 47.7**	**-1.4**
LGTI				*e*S	**S**	**12 17 42.7**	**-4.6**
MK31	**Makanchi Array**	**13.62**	**37**	P	**P**	**12 16 26.8**	**+2.6**
	comp=Z,0.8nm,0.3s,baz=203,slow=9.8,SNR=14						
MKAR	**Makanchi Array**	**13.62**	**37**	P	**P**	**12 16 25.0**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=214,slow=13,SNR=7.3						
KOLN	**Koldanda**	**14.14**	**124**	*e*P	**P**	**12 16 30.5**	**-0.4**
	comp=Z,18nm,0.3s						
BHPL	**Bhopal**	**14.51**	**153**	*e*P	**P**	**12 16 35.9**	**+0.4**
BHPL				AMb	AMB	12 16 40.3	
	comp=Z,31nm,0.4s						
GKN	**Gorkha**	**14.70**	**121**	*e*P	**P**	**12 16 37.4**	**-0.4**
	comp=Z,61nm,0.3s						
AB31	**Akbulak array**	**14.89**	**332**	P	**P**	**12 16 38.9**	**-1.2**
	comp=Z,4.7nm,0.3s,baz=146,slow=12,SNR=284						
AB31	**Akbulak array**	**14.89**	**332**	*i* P	**P**	**12 16 38.8**	**-1.3**
AB31				S	**S**	**12 19 17.4**	**-2.4**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.3s						
DMN	**Daman**	**15.27**	**121**	*e*P	**P**	**12 16 45.3**	**+0.4**
	comp=Z,36nm,0.4s						
KKN	**Kakani**	**15.27**	**120**	*e*P	**P**	**12 16 44.7**	**-0.3**
	comp=Z,34nm,0.6s						
KKN	**Kakani**	**15.27**	**120**	*e*P	**P**	**12 16 44.7**	**-0.3**
KKN				pmax	pmax		
	comp=Z,17nm,0.6s						
PKI	**Pulchoki**	**15.50**	**121**	*e*P	**P**	**12 16 48.5**	**+0.8**
	comp=Z,121nm,0.5s						
PKI	**Pulchoki**	**15.50**	**121**	*e*P	**P**	**12 16 48.5**	**+0.8**
PKI				pmax	pmax		
	comp=Z,60nm,0.5s						
GUN	**Gumba**	**15.62**	**119**	*e*P	**P**	**12 16 50.2**	**+1.0**
	comp=Z,41nm,0.4s						
VOSK	**Vostochnaya**	**16.27**	**1**	⇑P	**P**	**12 16 55.9**	**-1.1**
	comp=Z,7.0nm,1.4s						
VOSK	**Vostochnaya**	**16.27**	**1**	P	**P**	**12 16 55.8**	**-1.2**
VOSK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ZRNK	**Zerenda**	**16.52**	**357**	⇓P	**P**	**12 16 59.6**	**-0.4**
	comp=Z,0.1nm,0.6s						
ZRNK	**Zerenda**	**16.52**	**357**	P	**P**	**12 16 59.5**	**-0.5**
ZRNK	**Zerenda**	**16.52**	**357**	*e*P	**P**	**12 16 59.1**	**-0.8**
	comp=Z,6.8nm,0.4s						
BVA0	**Borovoye Array**	**16.57**	**360**	⇑P	**P**	**12 17 00.4**	**-0.1**
	comp=Z,0.6nm,0.6s						
BVA0	**Borovoye Array**	**16.57**	**360**	P	**P**	**12 16 59.9**	**-0.6**
BVAR	**Borovoye Array**	**16.57**	**360**	P	**P**	**12 16 59.5**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=199,slow=11,SNR=18						
LSA	**Lhasa**	**18.64**	**105**	*e*P	**P**	**12 17 27.0**	**+4.0**
ZAL	**Zalesovo**	**20.14**	**25**	P	**P**	**12 17 39.2**	**+0.9**
	comp=Z,4.0nm,0.3s,baz=253,slow=7.7,SNR=8.6						
ZAL	**Zalesovo**	**20.14**	**25**	P	**P**	**12 17 39.2**	**+0.9**
GNI	**Garni**	**20.44**	**288**	*e*P	**P**	**12 17 42.3**	**+1.0**
GNI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GNI	**Garni**	**20.44**	**288**	*e*P	**P**	**12 17 42.3**	**+1.0**
	comp=Z,7.2nm,0.7s						
ZEI	**Tsey**	**21.32**	**295**	*e*P	**P**	**12 17 52.2**	**+2.3**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
SONM	**Songino Array**	**28.76**	**55**	P	**P**	**12 19 00.0**	**+0.9**
	comp=Z,0.6nm,0.6s,mb3.4,baz=253,slow=9.5,SNR=6.5						
SONM				pP	pP	12 19 43.5	+3.5
	comp=Z,0.2nm,0.4s,baz=252,slow=7.8,SNR=2.3						
BRTR	**Keskin Array B**	**28.98**	**288**	P	**P**	**12 19 01.2**	**+0.1**
	comp=Z,1.0nm,0.6s,mb3.6,baz=92,slow=9.0,SNR=5.1						
AKASG	**Malin Array Be**	**32.59**	**309**	P	**P**	**12 19 32.0**	**-0.6**
	comp=Z,2.3nm,0.6s,mb3.9,baz=81,slow=7.9,SNR=11						
FINES	**FINESS Array B**	**37.25**	**326**	P	**P**	**12 20 12.0**	**+0.2**
	comp=Z,2.5nm,0.6s,mb3.9,baz=112,slow=10,SNR=9.8						
KAF	**Kangasniemi**	**37.40**	**327**	*e*p	**P**	**12 20 16.4**	**+3.3**
KEV	**Kevo**	**40.66**	**338**	*e*p	**P**	**12 20 40.5**	**+0.5**
ARCES	**ARCESS Array B**	**41.00**	**338**	P	**P**	**12 20 43.2**	**+0.5**
	comp=Z,3.3nm,0.7s,mb3.9,baz=108,slow=7.7,SNR=15						
NB2	**NORSAR Subarra**	**44.12**	**323**	P	**P**	**12 21 07.7**	**-0.2**
	comp=Z,1.6nm,0.5s,mb3.6,baz=98,slow=7.9						
NB2	**NORSAR Subarra**	**44.12**	**323**	P	**P**	**12 21 07.7**	**-0.2**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						
NOA	**NORSAR Array B**	**44.12**	**323**	P	**P**	**12 21 06.8**	**-1.1**
	comp=Z,1.7nm,0.5s,mb3.6,baz=98,slow=7.9,SNR=5.9						
MATP	**Matopo**	**69.05**	**222**	P	**P**	**12 24 04.3**	**+0.1**
	comp=Z,6.2nm,0.4s,mb4.5,baz=25,slow=5.5,SNR=29						
MATP	**Matopo**	**69.05**	**222**	P	**P**	**12 24 04.3**	**+0.1**
DBIC	**Dimbokro**	**74.21**	**267**	P	**P**	**12 24 34.5**	**-0.6**
	comp=Z,1.6nm,0.8s,mb3.7,baz=35,slow=7.9,SNR=4.9						
ILAR	**Eielson Array**	**74.95**	**16**	P	**P**	**12 24 37.9**	**-0.4**
	comp=Z,0.9nm,0.8s,mb3.4,baz=314,slow=4.4,SNR=12						
BOSA	**Boshof**	**77.40**	**220**	P	**P**	**12 24 53.0**	**+0.4**
	comp=Z,1.0nm,0.4s,mb3.8,baz=60,slow=8.1,SNR=6.4						
YKA	**Yellowknife Ar**	**81.31**	**2**	P	**P**	**12 25 13.4**	**+0.6**
	comp=Z,0.7nm,0.5s,mb3.6,baz=350,slow=5.2,SNR=8.3						
YKA				pP	pP	12 26 03.0	+0.9
	comp=Z,0.6nm,0.5s,baz=354,slow=5.7,SNR=5.9						
YKA	**Yellowknife Ar**	**81.31**	**2**	P	**P**	**12 25 13.4**	**+0.6**
YKA				pP	pP	12 26 03.0	+0.9
WRA	**Warramunga Arr**	**82.38**	**121**	P	**P**	**12 25 17.7**	**-1.5**
	comp=Z,1.6nm,0.7s,mb3.8,baz=323,slow=4.8,SNR=20						

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*ATH **27** 12:24:10.3,39.82N×20.79E,h11^{km},MD3.2/5*

*NEIC **27** 12:24:10.3,39.82N×20.79E,h11^{km},MD3.2(ATH),After ATH.*

*CSEM **27** 12:24:10.7±0.1,39.82N×20.80E,h5^{km},MD3.2,Error ellipse: s-maj=1.5km s-min=1.4km az=9.0*

*THE **27** 12:24:11.1,39.84N×20.76E,h3^{km},ML3.0*

ISC 27 12:24:10.4±0.4,**39.81N**±0.03×**20.81E**±0.04,**h12**^{km}±5^{km},**n22,**σ**0^{s}91**/31,**1D,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	**Janina**	**0.16**	**167**	*e*PG	**Pg**	**12 24 13.8**	**-0.4**
JAN				*e*SG	**Sg**	**12 24 16.5**	**-0.3**
MEV	**Metsovon**	**0.33**	**94**	*e*Pg	**Pg**	**12 24 17.1**	**-0.2**
MEV				*e*Sg	**Sg**	**12 24 23.9**	**+2.0**
MEV	**Metsovon**	**0.33**	**94**	*e*Pg	**Pg**	**12 24 17.0**	**-0.3**
MEV				*e*Sg	**Sg**	**12 24 23.9**	**+2.0**
LSK	**Leskovik**	**0.38**	**335**	*i* Pg	**Pg**	**12 24 17.6**	**-0.6**
LSK				*i* Sg	**Sg**	**12 24 24.0**	**+0.6**
LSK	**Leskovik**	**0.38**	**335**	*e*Pg	**Pg**	**12 24 17.6**	**-0.6**
LSK				*i* Sg	**Sg**	**12 24 24.0**	**+0.6**
IGT	**Igoumenitsa**	**0.46**	**233**	*e*Pg	**Pg**	**12 24 19.4**	**-0.4**
SRN	**Sarande**	**0.62**	**277**	*i* Pg	**Pg**	**12 24 22.5**	**-0.6**
SRN				*i* Sg	**Sg**	**12 24 32.5**	**+1.0**
SRN	**Sarande**	**0.62**	**277**	*e*Pg	**Pg**	**12 24 22.5**	**-0.6**
SRN				*i* Sg	**Sg**	**12 24 32.5**	**+1.0**
KEK	**Kerkira**	**0.78**	**263**	*e*PB	**Pb**	**12 24 25.0**	**-0.4**
KBN	**Korca**	**0.81**	**359**	*e*Pg	**Pg**	**12 24 29.3**	**+2.5**
KBN				*i* Sg	**Sg**	**12 24 37.5**	**-0.2**
KZN	**Kozani**	**0.89**	**56**	*e*PB	**Pb**	**12 24 27.5**	**+0.2**
FNA	**Florina**	**1.07**	**24**	*e*Pg	**Pg**	**12 24 30.7**	**-1.1**
LKD	**Levkas**	**1.11**	**186**	*e*Pg	**Pg**	**12 24 32.7**	**+0.1**
EVR	**Evrytania**	**1.18**	**139**	*e*PB	**Pb**	**12 24 32.8**	**+0.5**
LIT	**Litokhoron**	**1.33**	**77**	*e*Pg	**Pg**	**12 24 36.2**	**-0.7**
LIT	**Litokhoron**	**1.33**	**77**	*e*Pg	**Pg**	**12 24 36.2**	**-0.8**
AGG	**Agios Georgios**	**1.42**	**123**	*e*Pg	**Pg**	**12 24 37.4**	**-1.4**
AGG				*e*Sg	**Sg**	**12 24 57.8**	**0.0**
VLS	**Valsamata**	**1.64**	**186**	⇓*i*PB	**Pb**	**12 24 41.5**	**+1.4**
GRG	**Griva**	**1.67**	**46**	*e*Pb	**Pb**	**12 24 41.3**	**+0.6**
XOR	**Xorichti**	**1.90**	**103**	*e*Pb	**Pb**	**12 24 43.9**	**-0.6**
SKO	**Skopje**	**2.21**	**12**	*e*Pn	**Pn**	**12 24 46.0**	**-1.5**
PAIG	**Paliouri**	**2.21**	**86**	*e*Pn	**Pn**	**12 24 48.0**	**+0.5**

MAN 27 12:31:44.6,10.23N×122.27E,h31^{km},mb3.7,ML2.4,MS2.0,1D,Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAP	**Anini-y**	**0.37**	**301**	⇓*e*P	Pb	12 31 54.1	+1.0
GUIM	**Jordan**	**0.51**	**39**	*e*P	Pb	12 31 55.9	+0.8
GUIM				*e*S	Sb	12 32 03.6	+1.3
CUYO	**Cuyo Island**	**1.37**	**297**	*e*P	Pn	12 32 08.2	+0.3
CUYO				*e*S	Sn	12 32 24.5	-0.7
IPIL	**Ipil**	**2.44**	**173**	*e*P	Pn	12 32 23.1	-0.2
IPIL				*e*S	Sn	12 32 52.0	-0.5
BUSP	**Coron**	**2.69**	**311**	*e*P	Pn	12 32 26.6	-0.2
ENPP	**El Nido**	**2.96**	**289**	*e*P	Pn	12 32 30.6	+0.1
ENPP				*e*S	Sn	12 33 02.3	-3.1

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*IDC **27** 12:39:49.1±5.4,2.36N×124.48E,h260^{km}±56^{km},mb4.0/10,mb1 4.1/10,mb1mx3.9/20,mbtmp4.6/10,Error ellipse: s-maj=42.5km s-min=11.9km az=67.0*

*NEIC **27** 12:39:51.3±3.5,2.38N×124.56E,h282^{km}±36^{km},mb4.5/12,Error ellipse: s-maj=22.2km s-min=6.6km az=60.0*

ISC 27 12:39:49.2±0.7,**2.42N**±0.06×**124.7E**±0.1,**h279**^{km}±9^{km},**n36,**σ**0^{s}86**/38,**mb4.3**/19,**6C-1D,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**4.58**	**5**	⇓*e*P	**P**	**12 41 01.6**	**0.0**
MATI	**Mati**	**4.77**	**19**	*e*P	**P**	**12 41 02.5**	**-1.2**
MATI				*e*S	**S**	**12 41 59.6**	**-2.4**
BUKP	**Musuan**	**5.44**	**4**	*e*P	**P**	**12 41 12.2**	**+0.4**
PAGZ	**Pagadian**	**5.54**	**347**	*e*P	**P**	**12 41 13.8**	**+0.8**
BUTP	**Butuan**	**6.58**	**8**	*e*P	**P**	**12 41 25.8**	**+0.1**
PVCP	**Virac**	**11.12**	**357**	*e*P	**P**	**12 42 23.9**	**+1.6**
BALP	**Baler**	**13.59**	**347**	*e*P	**P**	**12 42 54.6**	**+1.8**
KSM	**Kuching**	**14.39**	**267**	*e*P	**P**	**12 43 03.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**20.41**	**177**	*e*P	**P**	**12 44 06.0**	**-0.2**
	58nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.41**	**177**	P	**P**	**12 44 06.1**	**-0.2**
	106nm,0.7s,baz=3.5,slow=7.4,SNR=80						
MBWA	**Marble Bar**	**23.93**	**191**	*e*P	**P**	**12 44 39.8**	**-0.1**
	31nm,0.9s,mb4.6						
WRAB	**Tennant Creek**	**24.16**	**157**	*e*P	**P**	**12 44 41.9**	**-0.2**
	16nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**24.16**	**157**	P	**P**	**12 44 42.0**	**-0.1**
	13nm,0.7s,mb4.4,baz=333,slow=11,SNR=111						
WB2	**Warramunga Arr**	**24.17**	**157**	⇑*i*P	**P**	**12 44 42.1**	**-0.1**
WB2				*e*S	**S**	**12 48 36.5**	**-1.3**
CMAR	**Chiang Mai Arr**	**29.83**	**304**	P	**P**	**12 45 31.7**	**-1.4**
	0.3nm,0.3s,mb3.3,baz=135,slow=6.3,SNR=4.3						
FORT	**Forrest**	**33.17**	**175**	⇑*i*P	**P**	**12 46 01.8**	**-0.1**
	26nm,0.5s,mb5.0						
KLBR	**Kellerberrin**	**34.45**	**190**	⇑*i*P	**P**	**12 46 12.2**	**-0.5**
	12nm,0.4s,mb4.8						
MUN	**Mundaring**	**35.14**	**193**	⇑*i*P	**P**	**12 46 18.1**	**-0.4**
	6.1nm,0.4s,mb4.5						
NWAO	**Narrogin (SRO)**	**35.85**	**191**	P	**P**	**12 46 24.1**	**-0.4**
	11nm,0.4s,mb4.7,baz=26,slow=8.2,SNR=28						
STKA	**Stephens Creek**	**37.70**	**156**	⇑*i*P	**P**	**12 46 41.2**	**+1.2**
	10nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**37.70**	**156**	P	**P**	**12 46 40.5**	**+0.6**
	11nm,0.6s,mb4.5,baz=332,slow=8.4,SNR=38						
TOO	**Toolangi**	**44.23**	**156**	⇑*i*P	**P**	**12 47 35.3**	**+2.4**
	2.2nm,0.4s,mb3.7						
PKI	**Pulchoki**	**45.09**	**308**	*e*P	**P**	**12 47 39.5**	**-0.4**
KKN	**Kakani**	**45.29**	**308**	*e*P	**P**	**12 47 41.3**	**-0.1**
GKN	**Gorkha**	**45.90**	**308**	*e*P	**P**	**12 47 45.4**	**-0.8**
KOLN	**Koldanda**	**46.62**	**307**	*e*P	**P**	**12 47 51.4**	**-0.4**
	21nm,0.4s,mb4.8						
ULN	**Ulaanbaatar**	**47.76**	**344**	P	**P**	**12 48 01.5**	**+1.1**
	3.1nm,0.8s,mb3.7						
SONM	**Songino Array**	**47.92**	**343**	P	**P**	**12 48 02.1**	**+0.5**
	3.4nm,0.8s,mb3.7,baz=158,slow=8.3,SNR=7.1						
MKAR	**Makanchi Array**	**57.48**	**327**	P	**P**	**12 49 10.6**	**-0.8**
	9.1nm,0.4s,mb4.6,baz=122,slow=7.2,SNR=67						
MKAR				PcP	PcP	12 50 00.3	-1.5
	2.0nm,0.7s,baz=108,slow=3.8,SNR=5.1						
MKAR	**Makanchi Array**	**57.48**	**327**	P	**P**	**12 49 10.6**	**-0.8**
MKAR				PcP	PcP	12 50 00.3	-1.5
ZAL	**Zalesovo**	**60.85**	**334**	P	**P**	**12 49 34.4**	**+0.1**
	1.9nm,0.3s,mb4.1,baz=4.3,slow=3.5,SNR=6.0						
BVAR	**Borovoye Array**	**67.31**	**328**	P	**P**	**12 50 15.6**	**-0.3**
	3.4nm,0.7s,mb4.2,baz=121,slow=8.6,SNR=7.5						
ZRNK	**Zerenda**	**68.02**	**327**	*e*P	**P**	**12 50 19.9**	**-0.4**
	7.5nm,0.5s,mb4.7						
ARU	**Arti**	**74.95**	**328**	P	**P**	**12 51 01.2**	**-0.1**
	5.0nm,0.6s,mb4.3						
VNDA	**Vanda**	**82.40**	**172**	P	**P**	**12 51 41.8**	**+0.8**
	0.6nm,0.5s,mb3.6,baz=326,slow=7.4,SNR=7.2						
VNDA	**Vanda**	**82.40**	**172**	*e*P	**P**	**12 51 41.9**	**+0.9**
	0.6nm,0.5s,mb3.6						

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*MOS **27** 12:41:23.0±0.9,31.18N×130.23E,h179^{km},mb4.7/54,Error ellipse: s-maj=8.3km s-min=5.2km az=106.8*

*NEIC **27** 12:41:23.7±0.1,31.18N×130.23E,mb4.6/87,Error ellipse: s-maj=4.3km s-min=3.7km az=129.0*

NEIC Recorded [2 JMA] at Kagoshima and Miyazaki Prefectures.

*BJI **27** 12:41:23.8,31.18N×130.32E,h197^{km},mB4.7,mb4.7*

*IDC **27** 12:41:23.7±0.5,31.21N×130.20E,h175^{km}±4^{km},mb4.3/22,mb1 4.4/26,mb1mx4.4/28,mbtmp4.7/26,Error ellipse: s-maj=10.8km s-min=7.6km az=88.0*

*JMA **27** 12:41:24.1±0.1,31.16N×130.28E,h169^{km}±1^{km},M4.5*

JMA Felt I J1.

ISC 27 12:41:22.7±0.2,**31.14N**±0.03×**130.27E**±0.03,**h177**^{km}±1^{km},**h176**^{km}±3.3^{km}**:pP-P,n300,**σ**0^{s}92**/301,**mb4.5**/106,**32C-7D,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSU	**Suzuyama**	**0.40**	**24**	⇑P	**P**	**12 41 47.3**	**+0.1**
JTSR	**Tashiro 2**	**0.56**	**88**	⇑P	**P**	**12 41 47.9**	**+0.1**
JTSR				S	**S**	**12 42 05.8**	**-1.4**
JKC	**Kuchinoerabu**	**0.68**	**185**	⇑P	**P**	**12 41 48.7**	**+0.3**
JKC				S	**S**	**12 42 07.7**	**-0.5**
JSJ	**Shimokoshiki**	**0.71**	**319**	⇑P	**P**	**12 41 48.7**	**+0.2**
JSJ				S	**S**	**12 42 07.4**	**-1.1**
JTN	**Tanegashima 3**	**0.78**	**128**	⇑P	**P**	**12 41 49.4**	**+0.5**
JTN				S	**S**	**12 42 08.4**	**-0.8**
JTZ	**Takazaki**	**1.03**	**43**	⇑P	**P**	**12 41 51.0**	**+0.5**
JTZ				S	**S**	**12 42 11.8**	**-0.2**
JNN	**Nakanoshima**	**1.34**	**195**	⇑P	**P**	**12 41 54.0**	**+0.7**
JNN				S	**S**	**12 42 17.1**	**+0.2**
JIU2	**Izumi 2**	**1.47**	**18**	⇑P	**P**	**12 41 55.1**	**+0.5**
JIU2				S	**S**	**12 42 18.1**	**-1.0**
JNU	**Nakatsue**	**2.04**	**15**	P	**P**	**12 42 00.7**	**+0.3**
	baz=220,slow=7.9						
JNU				S	**S**	**12 42 29.1**	**-0.3**
JOW	**Kunigami**	**4.64**	**203**	P	**P**	**12 42 31.6**	**-1.1**
	baz=95,slow=12						
JOW				S	**S**	**12 43 23.1**	**-3.7**
	27nm,0.3s,baz=315,slow=30,SNR=15						
KS15	**Wonju Array Si**	**6.58**	**343**	*e*Pn	**P**	**12 42 59.2**	**+1.0**
INCN	**Inchon**	**7.00**	**336**	*e*Pn	**P**	**12 43 04.4**	**+0.7**
	45nm,0.7s						
SSE	**Sheshan**	**7.79**	**272**	*e*P	**P**	**12 43 15.3**	**+1.2**
SSE				AMB	AMB		
	comp=Z,20nm,0.8s						
SSE				AMB	AMB		
	comp=Z,860nm,12.0s						
SSE	**Sheshan**	**7.79**	**272**	*e*P	**P**	**12 43 15.3**	**+1.2**
	comp=Z,21nm,0.8s						
JHJ	**Hachijo jima 2**	**8.31**	**74**	P	**P**	**12 43 26.2**	**+5.3**
	comp=Z,21nm,0.3s,baz=114,slow=7.1,SNR=5.3						
MAJO	**Matsushiro**	**8.52**	**49**	*e*Pn	**P**	**12 43 24.8**	**+1.0**
MAJO				*e*Sn	**S**	**12 44 57.9**	**-0.3**
MAT	**Matsushiro**	**8.52**	**49**	*e*P	**P**	**12 43 24.0**	**+0.3**
MAT				*e*S	**S**	**12 44 58.0**	**-0.2**
MAT	**Matsushiro**	**8.52**	**49**	P	**P**	**12 43 24.2**	**+0.5**
MAT				S	**S**	**12 44 57.7**	**-0.5**
MJAR	**Matsushiro Arr**	**8.52**	**49**	P	**P**	**12 43 24.7**	**+1.0**
	comp=Z,1.5nm,0.3s,baz=237,slow=15,SNR=12						
MJAR				S	**S**	**12 44 58.3**	**+0.1**
	comp=Z,5.6nm,0.3s,baz=236,slow=24,SNR=19						
NJ2	**Nanjing**	**9.78**	**278**	*e*P	**P**	**12 43 40.5**	**+0.3**
NJ2				XP		12 44 25.5	
NJ2				S	**S**	**12 45 30.0**	**+2.2**

NJ2				AMB	AMB		
	comp=Z,30nm,1.0s						
NJ2				LR	LR		
	comp=N,2µm,20.2s						
NJ2				LR	LR		
	comp=E,2µm,18.9s						
NJ2				LR	LR		
	comp=Z,860nm,19.2s						
YHNB	Yeheng	10.17	233	ePn	P	12 43 48.0	+2.7
CBIJ	Chichi jima	11.17	108	P	P	12 44 00.3	+2.0
	comp=Z,9.1nm,0.3s,baz=272,slow=2.4,SNR=21						
QZH	Quanzhou	12.02	242	⇓iP	P	12 44 12.0	+2.8
QZH				AMB	AMB		
	comp=Z,50nm,0.6s						
MDJ	Mudanjiang	13.46	358	P	P	12 44 28.5	+1.0
ASAJ	Asahikawa	16.20	33	P	P	12 44 59.3	-2.3
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	Asahikawa	16.20	33	P	P	12 44 59.3	-2.3
	comp=Z,1.9nm,0.3s,baz=230,slow=9.2,SNR=14						
ENH	Enshi	17.89	273	eP	P	12 45 21.6	+0.2
	comp=Z,175nm,0.7s						
HHC	Hu-ho-hao-te	17.94	308	eP	P	12 45 21.3	-0.5
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s						
HHC				LR	LR		
	comp=N,2µm,18.6s						
HHC				LR	LR		
	comp=E,1µm,16.7s						
HHC				LR	LR		
	comp=Z,3µm,17.2s						
KLR	Kul'dur	18.10	3	eP	P	12 45 19.2	-4.3
XAN	Xi'an	18.22	285	P	P	12 45 24.5	-0.3
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s						
YSS	Yuzh-Sakhalins	18.49	28	⇑eP	P	12 45 28.3	+0.7
YSS	Yuzh-Sakhalins	18.49	28	eP	P	12 45 27.8	+0.3
BTO	Baotou	18.89	306	eP	P	12 45 34.5	+2.7
HIA	Hailar	19.77	339	eP	P	12 45 40.1	-0.7
OTRP	Odiongan	20.18	204	eP	P	12 45 49.9	+4.7
GYA	Guiyang	21.19	263	⇑iP	P	12 45 55.0	-0.1
GYA				S	S	12 49 34.3	-0.7
GYA				SCP		12 53 10.0	
GYA				AMB	AMB		
	comp=Z,30nm,0.5s,mb4.9						
GYA				AMB	AMB		
	comp=Z,90nm,2.6s,mb4.6						
LZH	Lanzhou	22.52	290	eP	P	12 46 09.5	+1.5
LZH				PP	PP	12 46 47.8	+5.4
LZH				XP		12 47 05.3	
LZH				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,330nm,4.0s						
LZH	Lanzhou	22.52	290	eP	P	12 46 09.5	+1.5
LZH				*PP		12 46 44.5	
LZH						12 46 47.8	
LZH				*SP		12 47 05.3	
LZH				pmax	pmax		
	comp=Z,76nm,1.0s,mb5.1						
LZH	Lanzhou	22.52	290	eP	P	12 46 09.5	+1.5
	comp=Z,76nm,1.0s,mb5.1						
LZH				pP		12 46 44.5	
LZH				PP	PP	12 46 47.8	+5.4
LZH				sP		12 47 05.3	
LZH				PcP	PcP	12 50 09.0	+12
CD2	Chengdu	22.70	276	eP	P	12 46 10.5	+0.6
CD2				AMB	AMB		
	comp=Z,100nm,0.6s,mb5.4						
ULN	Ulaanbaatar	24.34	320	eP	P	12 46 25.0	-0.3
ULN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
ULN	Ulaanbaatar	24.34	320	eP	P	12 46 25.0	-0.3
	comp=Z,8.4nm,0.8s,mb4.3						
SONM	Songino Array	24.69	319	P	P	12 46 27.9	-0.7
	comp=Z,4.1nm,0.5s,mb4.2,baz=136,slow=9.7,SNR=30						
SONM				pP		12 47 04.0	
	comp=Z,2.9nm,0.8s,baz=139,slow=11,SNR=2.5						
SONM				PcP	PcP	12 49 59.4	-2.3
	comp=Z,0.7nm,0.5s,baz=120,slow=3.4,SNR=3.8						
KMI	Kunming	24.97	263	P	P	12 46 32.8	+1.4
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.4						
KMI	Kunming	24.97	263	P	P	12 46 32.8	+1.4
	comp=Z,6.0nm,0.5s,mb4.4						
GTA	Gaotai	26.10	297	P	P	12 46 41.5	-0.3
GTA				AP	pP	12 47 19.8	+2.3
GTA				XP	sP	12 47 41.3	+2.9
ZAK	Zakamensk	27.81	321	eP	P	12 46 55.5	-1.7
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.5						
PET	Petropavlovsk	30.03	35	eP	P	12 47 16.5	-0.4
PET				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
PET	Petropavlovsk	30.03	35	eP	P	12 47 16.5	-0.4
	comp=Z,8.2nm,0.6s,mb4.6						
CMAR	Chiang Mai Arr	31.00	253	P	P	12 47 25.2	-0.5
	comp=Z,2.7nm,0.4s,mb4.3,baz=49,slow=8.1,SNR=20						
CMAR				PcP	PcP	12 50 16.8	-0.6
	comp=Z,1.9nm,0.6s,baz=34,slow=1.5,SNR=9.7						
MA2	Magadan	31.60	20	eP	P	12 47 29.8	-0.7
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
MA2	Magadan	31.60	20	eP	P	12 47 29.8	-0.8
	comp=Z,9.8nm,0.8s,mb4.6						
WMQ	Urumqi	35.70	303	eP	P	12 48 06.0	+0.3
WMQ				AP	pP	12 48 46.3	+2.7
WMQ				XP	sP	12 49 08.0	+3.8
FX1	Attu Island--F	37.81	42	eP	P	12 48 24.8	+1.5
KULM	Kulim	37.87	233	eP	P	12 48 24.7	+0.5
GUN	Gumba	38.57	277	eP	P	12 48 31.3	+1.4
	comp=Z,90nm,0.4s						
PKI	Pulchoki	39.06	276	eP	P	12 48 34.0	0.0
	comp=Z,9.6nm,0.4s,mb4.8						
PKI	Pulchoki	39.06	276	eP	P	12 48 34.0	0.0
PKI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.5						
KKN	Kakani	39.11	277	eP	P	12 48 35.0	+0.6
	comp=Z,18nm,0.4s,mb5.1						
KKN	Kakani	39.11	277	eP	P	12 48 35.0	+0.6
KKN				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb4.8						
DMN	Daman	39.31	277	eP	P	12 48 36.5	+0.5
	comp=Z,8.5nm,0.3s,mb4.8						
ZAL	Zalesovo	39.59	319	P	P	12 48 37.4	-0.6
	comp=Z,2.1nm,0.3s,mb4.2,baz=40,slow=4.5,SNR=7.1						
ZAL				PcP	PcP	12 50 40.7	-1.4
	comp=Z,3.9nm,0.3s,baz=121,slow=3.4,SNR=5.7						
ZAL				ScP		12 54 11.8	
	comp=Z,1.4nm,0.3s,baz=84,slow=17,SNR=4.1						
ZAL	Zalesovo	39.59	319	P	P	12 48 37.4	-0.6
ZAL				PcP	PcP	12 50 40.7	-1.5
ZAL				ScP		12 54 11.8	
GKN	Gorkha	39.60	277	eP	P	12 48 38.6	+0.2
	comp=Z,8.6nm,0.4s,mb4.8						
MKAR	Makanchi Array	39.80	307	P	P	12 48 38.9	-0.9
	comp=Z,1.3nm,0.4s,mb3.9,baz=88,slow=10,SNR=20						
MKAR				PcP	PcP	12 50 41.7	-1.2
	comp=Z,1.5nm,0.4s,baz=76,slow=3.9,SNR=6.9						
MKAR				ScP		12 54 12.5	
	comp=Z,1.6nm,0.7s,baz=88,slow=4.7,SNR=12						
MKAR	Makanchi Array	39.80	307	P	P	12 48 38.9	-0.9
MKAR				PcP	PcP	12 50 41.7	-1.2
MKAR				ScP		12 54 12.5	
KOLN	Koldanda	40.55	277	eP	P	12 48 46.7	+0.6
	comp=Z,6.4nm,0.3s,mb4.8						
TIXI	Tiksi	40.57	359	⇓iP	P	12 48 44.3	-1.6
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
BILL	Bilibino	42.46	19	⇑iP	P	12 49 01.1	-0.1
BILL				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.3						
BILL				MLR	MLR		
	comp=Z,900nm,19.0s						
BILL	Bilibino	42.46	19	eP	P	12 49 00.7	-0.5
	comp=Z,10.0nm,0.9s,mb4.5						
BVAR	Borovoye Array	47.93	315	P	P	12 49 43.9	-0.8
	comp=Z,4.3nm,0.3s,mb4.5,baz=102,slow=9.9,SNR=20						
BVAR				PcP	PcP	12 51 09.4	-1.1
	comp=Z,3.6nm,0.5s,baz=128,slow=2.9,SNR=9.0						
ZRNK	Zerenda	48.76	315	eP	P	12 49 50.3	-0.8
ZRNK				e		12 51 12.0	
ZRNK				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.6						
ZRNK	Zerenda	48.76	315	eP	P	12 49 50.3	-0.8
	comp=Z,6.7nm,0.4s,mb4.6						
ZRNK				ePcP	PcP	12 51 12.0	-1.6
FITZ	Fitzroy Crossi	49.16	186	eP	P	12 49 54.6	0.0
	comp=Z,27nm,0.6s,mb5.0						
FITZ	Fitzroy Crossi	49.16	186	P	P	12 49 54.5	-0.1
	comp=Z,37nm,0.6s,mb5.2,baz=2.8,slow=6.3,SNR=31						
WRAB	Tennant Creek	50.93	175	eP	P	12 50 07.5	-0.5
WRAB				pmax	pmax		
	comp=Z,12nm,0.5s,mb4.8						
WRAB	Tennant Creek	50.93	175	eP	P	12 50 07.5	-0.6
	comp=Z,12nm,0.5s,mb4.8						
WRA	Warramunga Arr	50.94	175	P	P	12 50 07.2	-0.9
	comp=Z,8.1nm,0.4s,mb4.7,baz=354,slow=8.0,SNR=41						
WB2	Warramunga Arr	50.94	175	eP	P	12 50 07.4	-0.7
MBWA	Marble Bar	52.98	192	eP	P	12 50 22.1	-1.1
	comp=Z,6.3nm,0.6s,mb4.5						
CTA	Charters Tower	53.20	161	P	P	12 50 24.8	-0.1
	comp=Z,6.1nm,0.6s,mb4.5,baz=342,slow=9.4,SNR=7.0						
CTA	Charters Tower	53.20	161	P	P	12 50 24.8	-0.1
CTAO	Charters Tower	53.20	161	eP	P	12 50 25.2	+0.3
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
CTAO	Charters Tower	53.20	161	eP	P	12 50 25.2	+0.3
	comp=Z,5.7nm,0.6s,mb4.5						
IMA	Indian Mountai	56.35	28	eP	P	12 50 46.6	-0.4
IMA				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
IMA	Indian Mountai	56.35	28	eP	P	12 50 46.6	-0.4
	comp=Z,15nm,0.8s,mb4.9						
RSO	Redoubt South	57.13	35	eP	P	12 50 52.2	-0.3
KDAK	Kodiak Island	57.54	38	eP	P	12 50 54.4	-1.0
	comp=Z,10.0nm,0.8s,mb4.7						
ILAR	Eielson Array	59.29	30	P	P	12 51 05.8	-1.7
	comp=Z,1.5nm,0.7s,mb3.9,baz=262,slow=5.9,SNR=25						
ILAR				pP	pP	12 51 47.6	-1.1
	comp=Z,1.3nm,0.6s,baz=285,slow=3.5,SNR=4.1						
FORT	Forrest	61.62	182	⇑iP	P	12 51 23.0	-0.7
	comp=Z,13nm,0.8s,mb4.8						
KLBR	Kellerberrin	63.51	192	⇑iP	P	12 51 34.7	-1.5
	comp=Z,6.8nm,0.7s,mb4.6						
STKA	Stephens Creek	63.59	169	⇑iP	P	12 51 36.6	-0.2
	comp=Z,7.2nm,0.5s,mb4.8						
STKA	Stephens Creek	63.59	169	P	P	12 51 36.4	-0.4
	comp=Z,8.9nm,0.5s,mb4.9,baz=346,slow=6.2,SNR=36						
INK	Inuvik	63.69	24	eP	P	12 51 35.8	-1.0
INK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
INK	Inuvik	63.69	24	eP	P	12 51 35.8	-1.0
	comp=Z,5.9nm,0.9s,mb4.4						
NWAO	Narrogin (SRO)	64.91	192	P	P	12 51 44.0	-1.2
	comp=Z,4.9nm,0.4s,mb4.7,baz=6.4,slow=8.1,SNR=11						
KEV	Kevo	65.55	338	ep	P	12 51 46.4	-2.3
	comp=Z,1.6nm,0.4s,mb4.2						
KEV	Kevo	65.55	338	eP	P	12 51 46.4	-2.3
KEV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
ARCES	ARCESS Array B	66.11	338	P	P	12 51 50.6	-1.8
	comp=Z,3.9nm,0.5s,mb4.5,baz=61,slow=7.2,SNR=29						
OBN	Obninsk	67.08	322	⇓iP	P	12 51 57.6	-1.1
OBN				e		12 52 24.6	
OBN				e	pP	12 52 40.1	-0.7
OBN				pmax	pmax		
	comp=Z,28nm,1.3s,mb4.9						
KIV	Kislovodsk	67.54	309	⇑iP	P	12 52 01.8	+0.1
KIV				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.0						
GNI	Garni	67.56	304	eP	P	12 52 02.5	+0.6
RIV	Riverview	67.56	161	eP	P	12 52 00.3	-1.8
KAF	Kangasniemi	69.09	331	ep	P	12 52 08.9	-2.0
	comp=Z,16nm,0.7s,mb4.9,baz=61,slow=5.7						
KAF	Kangasniemi	69.09	331	eP	P	12 52 08.9	-2.0
KAF				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.9						
FINES	FINESS Array B	69.49	330	P	P	12 52 12.0	-1.4
	comp=Z,25nm,0.5s,mb5.2,baz=69,slow=5.5,SNR=201						
SOC	Sochi	69.66	309	eP	P	12 52 14.1	-0.6
SOC				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.2						
SOC				pmax	pmax		
	comp=N,15nm,0.6s						
SOC				pmax	pmax		
	comp=E,8.0nm,0.6s						
HASS	Wahat al Ahsa'	69.81	288	P	P	12 52 12.8	-3.2
TOO	Toolangi	69.82	167	eP	P	12 52 16.2	+0.4
	comp=E,2.1nm,0.4s,mb4.2						
TOO	Toolangi	69.82	167	eP	P	12 52 16.2	+0.4
TOO				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
RES	Resolute Bay	70.40	12	eP	P	12 52 17.8	-0.9
RES				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
RES	Resolute Bay	70.40	12	eP	P	12 52 17.8	-0.9
	comp=Z,3.8nm,0.5s,mb4.4						
MALT	Malatya	72.78	305	eP	P	12 52 34.2	+0.8
MALT				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.5						
MALT	Malatya	72.78	305	eP	P	12 52 34.2	+0.8
	comp=Z,4.3nm,0.4s,mb4.5						
AKASG	Malin Array Be	72.98	319	P	P	12 52 33.1	-1.2
	comp=Z,6.4nm,0.3s,mb4.8,baz=54,slow=6.2,SNR=40						
AKASG				pP	pP	12 53 13.9	-3.2
	comp=Z,0.8nm,0.4s,baz=55,slow=6.2,SNR=1.4						
YKW3	Yellowknife Ar	73.29	26	eP	P	12 52 35.6	-0.3
YKA	Yellowknife Ar	73.34	26	P	P	12 52 36.0	-0.1
	comp=Z,2.9nm,0.6s,mb4.2,baz=304,slow=5.8,SNR=26						
YKA				pP	pP	12 53 17.1	-1.9
	comp=Z,0.4nm,0.6s,baz=306,slow=5.3,SNR=1.4						
YKA	Yellowknife Ar	73.34	26	P	P	12 52 36.0	-0.1
YKA				pP	pP	12 53 17.1	-1.9
MZLS	Mizel	73.99	289	P	P	12 52 38.9	-1.9
SUW	Suwalki	74.53	324	eP	P	12 52 42.6	-0.6
HILS	Ha'il	75.18	293	P	P	12 52 46.8	-0.7
BR131	Keskin Array S	75.45	308	i P	P	12 52 48.9	+0.2
	comp=Z,12nm,0.8s,mb4.6						
BRTR	Keskin Array B	75.45	308	P	P	12 52 48.8	0.0
	comp=Z,15nm,0.7s,mb4.7,baz=100,slow=5.2,SNR=79						
NB2	NORSAR Subarra	75.70	334	P	P	12 52 48.2	-1.5
	comp=Z,9.6nm,0.6s,mb4.6,baz=47,slow=5.6						
NB2	NORSAR Subarra	75.70	334	P	P	12 52 48.2	-1.5
NB2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
NB2	NORSAR Subarra	75.70	334	P	P	12 52 48.2	-1.5
	baz=47,slow=5.6						
NOA	NORSAR Array B	75.70	334	P	P	12 52 48.0	-1.7
	comp=Z,7.0nm,0.5s,mb4.5,baz=49,slow=5.5,SNR=26						
AFFS	'Afif	75.82	289	P	P	12 52 50.0	-1.1
NAO01	NORSAR Array S	75.95	334	P	P	12 52 49.5	-1.6
SUMG	Summit	76.27	357	eP	P	12 52 53.4	+0.8
	comp=Z,26nm,0.7s,mb5.0						
ASF	Jabal al Asfar	76.71	300	P	P	12 52 56.1	+0.2
	comp=Z,8.6nm,0.6s,mb4.5,baz=294,slow=2.9,SNR=6.5						
BURAR	Bucovina Array	76.80	318	⇓P	P	12 52 56.4	+0.3
VRI	Vrincioaia	76.83	316	⇓P	P	12 52 57.3	+1.1
KWP	Kalwaria	77.13	321	eP	P	12 52 58.4	+0.6
MLR	Muntele Rosu	77.49	316	⇓P	P	12 52 59.8	-0.1
TATS	Tathlith	77.50	285	P	P	12 53 00.1	-0.4
KOLS	Kolonicke sedl	77.75	320	eP	P	12 53 01.1	-0.2
KOLS				e		12 53 07.1	
CRVS	Cervenica-Dubn	78.21	320	eP	P	12 53 04.9	+1.1
OJC	Ojcow	78.36	322	eP	P	12 53 05.0	+0.4
NIE	Niedzica	78.54	321	eP	P	12 53 06.6	+1.0
BLJS	Baljurashi	78.89	286	P	P	12 53 07.7	-0.3
KECS	Kecovo	78.98	320	eP	P	12 53 07.0	-1.0
JMQS	Jabal Moqyreh	79.06	297	P	P	12 53 08.2	-0.6
EIL	Elat	79.38	298	eP	P	12 53 10.2	-0.3
	comp=Z,5.6nm,0.8s,mb4.2						
JMOS	Jabal al Moall	79.51	298	P	P	12 53 12.0	+0.8
EDM	Edmonton	79.51	33	eP	P	12 53 11.1	+0.4
PSZ	Piszkesteto	79.63	320	eP	P	12 53 11.8	+0.3
PSZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
PSZ	Piszkesteto	79.63	320	eP	P	12 53 11.8	+0.3
	comp=Z,5.8nm,0.7s,mb4.3						
UMJS	Umm Lajj	79.74	293	P	P	12 53 11.9	-0.6
KSP	Ksiaz	79.80	324	eP	P	12 53 12.5	+0.2
KSP	Ksiaz	79.80	324	eP	P	12 53 12.9	+0.6
MORC	Moravsky Berou	79.80	323	eP	P	12 53 12.3	0.0
MORC				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
MORC	Moravsky Berou	79.80	323	eP	P	12 53 12.3	0.0
	comp=Z,2.6nm,0.6s,mb4.0						
VYHS	Vyhne	79.87	321	eP	P	12 53 12.6	-0.1
TAYS	Tayyib Ism	79.99	297	P	P	12 53 14.3	+0.5
DPC	Dobruska-Polom	80.08	324	eP	P	12 53 14.5	+0.7
UPC	Upice	80.14	324	eP	P	12 53 14.6	+0.4
SMOL	Smolenice	80.61	322	eP	P	12 53 17.6	+0.9
NEW	Newport	80.64	39	eP	P	12 53 17.6	+0.8
NEW				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NEW	Newport	80.64	39	eP	P	12 53 17.6	+0.7
	comp=Z,2.4nm,0.5s,mb4.1						
BSEG	Bad Segeberg	80.68	329	eP	P	12 53 16.8	-0.1
PVCC	Panska Ves	80.86	324	eP	P	12 53 18.6	+0.7
BRG	Berggiesshubel	80.95	325	i P	P	12 53 18.6	+0.2
BRG				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.5						
BRG	Berggiesshubel	80.95	325	i P	P	12 53 18.6	+0.2
	comp=Z,8.4nm,0.6s,mb4.5						
CLL	Collm	81.14	326	⇑iP	P	12 53 19.2	-0.2
CLL				pmax	pmax		
	comp=Z,39nm,0.6s,mb5.2						
CLL	Collm	81.14	326	⇑iP	P	12 53 19.2	-0.2
	comp=Z,39nm,0.6s,mb5.2						
CLL	Collm	81.14	326	⇑P	P	12 53 19.2	-0.2
	comp=Z,logA/T=1.8,mb5.2						
CLL				ePP	PP	12 56 27.0	-1.9
PRU	Pruhonice	81.21	324	eP	P	12 53 20.2	+0.4
CLZ	Clausthal	82.04	327	eP	P	12 53 24.4	+0.4
CLZ				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.8						
CLZ	Clausthal	82.04	327	eP	P	12 53 24.4	+0.4
	comp=Z,21nm,0.8s,mb4.8						
MOX	Moxa	82.24	326	eP	P	12 53 26.0	+0.9
KHC	Kasperske Hory	82.24	324	⇓iP	P	12 53 25.6	+0.5
KHC	Kasperske Hory	82.24	324	eP	P	12 53 25.8	+0.7
KHC	Kasperske Hory	82.24	324	eP	P	12 53 25.8	+0.7
GEC2	GERESS Array S	82.36	323	eP	P	12 53 25.6	-0.1
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
GEC2	GERESS Array S	82.36	323	eP	P	12 53 25.6	-0.1
	comp=Z,6.0nm,0.7s,mb4.3						
GERES	GERESS Array B	82.36	323	P	P	12 53 25.3	-0.4
	comp=Z,3.1nm,0.4s,mb4.3,baz=56,slow=4.8,SNR=27						
ARSA	Arzberg	82.40	321	⇑iP	P	12 53 26.5	+0.5
	comp=Z,5.8nm,0.6s,mb4.4						
WET	Wettzell	82.58	324	eP	P	12 53 27.2	+0.3
WET				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
WET	Wettzell	82.58	324	eP	P	12 53 27.2	+0.3
	comp=Z,6.0nm,0.8s,mb4.4						
MOA	Molln	82.69	322	⇑iP	P	12 53 28.4	+0.9
	comp=Z,9.7nm,0.5s,mb4.8						
PERS	Pernice	83.00	321	i P	P	12 53 29.4	+0.3
GRA1	Grafenberg Arr	83.05	325	eP	P	12 53 29.8	+0.5
	comp=Z,40nm,0.8s,mb5.2						
GRF	Grafenberg Arr	83.05	325	eP	P	12 53 29.8	+0.5
GRF				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.2						
GRF	Grafenberg Arr	83.05	325	eP	P	12 53 29.8	+0.5
GRF				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.2						
GRF	Grafenberg Arr	83.05	325	eP	P	12 53 29.8	+0.5
	comp=Z,40nm,0.8s,mb5.2						
FCC	Fort Churchill	83.12	22	eP	P	12 53 29.3	-0.1
FCC				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
FCC	Fort Churchill	83.12	22	eP	P	12 53 29.3	-0.2
	comp=Z,9.3nm,1.0s,mb4.5						
OBKA	Obir	83.39	321	⇑iP	P	12 53 31.2	+0.2
	comp=Z,23nm,0.7s,mb5.0						
FFC	Flin Flon	83.42	27	eP	P	12 53 30.8	-0.2
FFC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
FFC	Flin Flon	83.42	27	eP	P	12 53 30.8	-0.2
	comp=Z,4.5nm,0.8s,mb4.2						
BOJS	Bojanci	83.63	320	i P	P	12 53 32.6	+0.3
KBA	Koelnbreinsper	83.67	322	⇑iP	P	12 53 32.6	+0.2
	comp=Z,17nm,0.5s,mb5.0						
KBA	Koelnbreinsper	83.67	322	⇑iP	P	12 53 32.6	+0.2
KBA				pmax	pmax		
	comp=Z,17nm,0.5s,mb5.0						
LJU	Ljubljana	83.69	321	eP	P	12 53 32.7	+0.2
FUR	Furstenfeldbru	84.03	324	eP	P	12 53 34.7	+0.6
FUR				pmax	pmax		
	comp=Z,52nm,0.9s,mb5.3						
FUR	Furstenfeldbru	84.03	324	eP	P	12 53 34.7	+0.6
	comp=Z,52nm,0.9s,mb5.3						
TNS	Taunus Mts	84.03	327	eP	P	12 53 34.4	+0.3
TNS				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.9						
TNS	Taunus Mts	84.03	327	eP	P	12 53 34.4	+0.3
	comp=Z,22nm,0.9s,mb4.9						
PTCC	Patocco-Chiusa	84.09	322	P	P	12 53 34.1	-0.4
ROBS	Robic	84.11	321	eP	P	12 53 33.9	-0.7
FVI	Forni Avoltri	84.27	322	P	P	12 53 35.1	-0.3
FVI				pmax	pmax		
	comp=Z,14nm,0.4s,mb5.0						
FVI	Forni Avoltri	84.27	322	P	P	12 53 35.1	-0.3
	comp=Z,14nm,0.4s,mb5.0						
HRY	Holter Researc	84.42	38	eP	P	12 53 36.9	+0.8
WTTA	Wattenberg	84.43	323	⇑iP	P	12 53 36.3	+0.1
	comp=Z,6.6nm,0.6s,mb4.5						
WTTA	Wattenberg	84.43	323	⇑iP	P	12 53 36.3	+0.1
WTTA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
SEST	Monte Rota	84.47	322	P	P	12 53 37.0	+0.6
SQTA	Sankt Quirin	84.68	323	⇑iP	P	12 53 37.9	+0.5
	comp=Z,6.7nm,0.7s,mb4.5						
SQTA	Sankt Quirin	84.68	323	⇑iP	P	12 53 37.9	+0.5
SQTA				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
HLID	Hailey	85.02	41	eP	P	12 53 40.6	+1.4
	comp=Z,1.6nm,0.5s,mb4.0						
BOZ	Bozeman (W)	85.21	38	eP	P	12 53 41.1	+1.0
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
BOZ	Bozeman (W)	85.21	38	eP	P	12 53 41.1	+1.0
	comp=Z,1.0nm,0.6s,mb3.7						
BMN	Battle Mountai	85.30	45	eP	P	12 53 42.8	+2.1
DAVA	Damuels	85.31	324	⇑iP	P	12 53 40.2	-0.4
	comp=Z,3.6nm,0.5s,mb4.4						
BFO	Black Forest	85.38	325	eP	P	12 53 40.7	-0.2
BFO				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
BFO	Black Forest	85.38	325	eP	P	12 53 40.7	-0.2
	comp=Z,11nm,1.2s,mb4.5						
WLF	Walferdange	85.49	327	eP	P	12 53 41.5	+0.1
WLF				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
WLF	Walferdange	85.49	327	eP	P	12 53 41.5	+0.2
	comp=Z,10nm,0.5s,mb4.8						
GIVF	Givet	85.78	328	eP	P	12 53 42.4	-0.4
CDF	Champ du Feu	85.83	326	eP	P	12 53 43.1	0.0
	comp=Z,14nm,0.7s,mb4.5						
CDF	Champ du Feu	85.83	326	eP	P	12 53 43.1	0.0
CDF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
NVAR	Mina Array Bea	85.84	47	P	P	12 53 44.7	+1.3
	comp=Z,2.7nm,0.6s,mb4.2,baz=295,slow=5.7,SNR=28						
NVAR				pP	pP	12 54 27.0	-0.5
	comp=Z,1.8nm,0.7s,baz=294,slow=5.0,SNR=5.7						
NVAR	Mina Array Bea	85.84	47	P	P	12 53 44.7	+1.3
NVAR				pP	pP	12 54 27.0	-0.5
BAIF	Baives	86.09	329	eP	P	12 53 43.8	-0.5
ELK	Elko	86.30	44	eP	P	12 53 46.9	+1.3
ELK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ELK	Elko	86.30	44	eP	P	12 53 46.9	+1.3
	comp=Z,1.1nm,0.9s,mb3.6						
HINF	Hinteralfeld	86.45	326	eP	P	12 53 45.2	-0.9
	comp=Z,6.4nm,0.6s,mb4.3						
HINF	Hinteralfeld	86.45	326	eP	P	12 53 45.2	-0.9
HINF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
NRCA	Norcia	86.52	319	P	P	12 53 47.7	+1.2
SFI	Santa Sofia	86.52	320	P	P	12 53 47.9	+1.4
HAU	Haudompre	86.56	326	eP	P	12 53 45.3	-1.3
ASS	Assisi	86.63	319	P	P	12 53 48.1	+1.0
ASS				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.9						
ASS	Assisi	86.63	319	P	P	12 53 48.1	+1.0
	comp=Z,13nm,0.6s,mb4.9						
AQU	L'Aquila	86.66	319	eP	P	12 53 48.3	+1.1
AQU				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
AQU	L'Aquila	86.66	319	eP	P	12 53 48.3	+1.1
	comp=Z,20nm,0.8s,mb5.0						
TIP	Timpagrande	86.68	314	eP	P	12 53 47.8	+0.4

RRI2	Red Ridge	86.88	40	*e*P	P	12 53 49.6	+1.3
	comp=Z,2.0nm,0.7s,mb4.1						
MOOW	Moose Ponds	86.93	39	*e*P	P	12 53 50.1	+1.6
	comp=Z,0.9nm,0.7s,mb3.7						
TPAW	Teton Pass	86.99	40	*e*P	P	12 53 50.6	+1.8
	comp=Z,2.5nm,0.9s,mb4.0						
LOHW	Long Hollow	87.10	39	*e*P	P	12 53 50.4	+1.1
CABF	La Chapelle	87.67	325	*e*P	P	12 53 50.5	-1.4
	comp=Z,9.9nm,0.7s,mb4.5						
CABF	La Chapelle	87.67	325	*e*P	P	12 53 50.5	-1.4
CABF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
HWUT	Hardware Ranch	87.89	41	*e*P	P	12 53 54.7	+1.6
	comp=Z,11nm,1.4s,mb4.5						
LPL	La Plagne	88.11	324	*e*P	P	12 53 53.8	-0.3
LPG	La Plagne	88.12	324	*e*P	P	12 53 53.9	-0.2
	comp=Z,17nm,0.8s,mb4.6						
LPG	La Plagne	88.12	324	*e*P	P	12 53 53.9	-0.2
LPG				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
BW06	Boulder Array	88.23	40	*e*P	P	12 53 55.7	+1.0
	comp=Z,2.9nm,0.8s,mb4.2						
PDAR	Pinedale Array	88.23	40	P	P	12 53 55.8	+1.1
	comp=Z,2.4nm,0.7s,mb4.1,baz=22,slow=0.9,SNR=27						
PDAR				pP	pP	12 54 39.5	+0.4
	comp=Z,0.9nm,0.7s,baz=0.9,slow=2.0,SNR=4.0						
LOR	Lormes	88.27	327	*e*P	P	12 53 53.7	-1.0
	comp=Z,7.3nm,0.6s,mb4.4						
LOR	Lormes	88.27	327	*e*P	P	12 53 53.7	-1.0
LOR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
BNI	Bardonecchia	88.47	324	*e*P	P	12 53 55.8	+0.1
BNI				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
BNI	Bardonecchia	88.47	324	*e*P	P	12 53 55.8	0.0
	comp=Z,2.5nm,0.4s,mb4.4						
MBDF	Montbardon	88.65	324	*e*P	P	12 53 55.4	-1.2
	comp=Z,4.8nm,0.5s,mb4.4						
MBDF	Montbardon	88.65	324	*e*P	P	12 53 55.4	-1.2
MBDF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
SMF	Signal de Mont	88.73	326	*e*P	P	12 53 56.2	-0.7
	comp=Z,25nm,0.8s,mb4.9						
SMF	Signal de Mont	88.73	326	*e*P	P	12 53 56.2	-0.7
SMF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
HYF	Humbligny	88.83	327	*e*P	P	12 53 57.4	0.0
	comp=Z,113nm,0.7s,mb5.6						
SBF	Sospel	88.91	323	*e*P	P	12 53 56.5	-1.3
	comp=Z,14nm,0.7s,mb4.7						
SBF	Sospel	88.91	323	*e*P	P	12 53 56.5	-1.3
SBF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
ORIF	Oris-en-Rattie	88.96	324	*e*P	P	12 53 57.0	-1.1
PGF	Pioggiola	88.98	321	*e*P	P	12 53 57.6	-0.6
	comp=Z,9.0nm,0.9s,mb4.4						
PGF	Pioggiola	88.98	321	*e*P	P	12 53 57.6	-0.6
PGF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MSU	Marysvale	89.54	44	*e*P	P	12 54 03.3	+2.3
VIVF	Saint-Julien-l	89.61	325	*e*P	P	12 54 00.0	-1.1
	comp=Z,6.0nm,0.7s,mb4.3						
VIVF	Saint-Julien-l	89.61	325	*e*P	P	12 54 00.0	-1.1
VIVF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
TCF	Toulx Ste Croi	89.76	327	*e*P	P	12 54 01.2	-0.6
	comp=Z,13nm,0.9s,mb4.5						
TCF	Toulx Ste Croi	89.76	327	*e*P	P	12 54 01.2	-0.6
TCF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
LMR	La Mourre	89.76	323	*e*P	P	12 54 01.0	-0.8
	comp=Z,14nm,0.7s,mb4.7						
LMR	La Mourre	89.76	323	*e*P	P	12 54 01.0	-0.8
LMR				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
SMRF	Simiane la Rot	89.78	324	*e*P	P	12 54 01.3	-0.7
SRU	San Rafael	90.13	43	*e*P	P	12 54 05.2	+1.5
RSSD	Black Hills	90.19	36	*e*P	P	12 54 05.3	+1.4
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
RSSD	Black Hills	90.19	36	*e*P	P	12 54 05.3	+1.4
	comp=Z,3.8nm,0.8s,mb4.4						
LASF	Ste Croix	90.58	325	*e*P	P	12 54 04.9	-0.8
MFF	Saint Martin d	90.60	328	*e*P	P	12 54 05.4	-0.3
	comp=Z,24nm,0.9s,mb4.9						
MFF	Saint Martin d	90.60	328	*e*P	P	12 54 05.4	-0.3
MFF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
ROSF	Rostrenen	90.62	331	*e*P	P	12 54 05.2	-0.6
	comp=Z,61nm,1.2s,mb5.2						
ROSF	Rostrenen	90.62	331	*e*P	P	12 54 05.2	-0.6
ROSF				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.2						
RJF	Les Rejaudoux	90.81	327	*e*P	P	12 54 06.4	-0.3
CAF	Calviac	90.83	326	*e*P	P	12 54 06.6	-0.2
LFF	La Frestale	91.45	327	*e*P	P	12 54 09.5	-0.2
	comp=Z,15nm,0.7s,mb4.9						
LFF	La Frestale	91.45	327	*e*P	P	12 54 09.5	-0.2
LFF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
MTLF	Montolieu	91.93	325	*e*P	P	12 54 11.0	-1.0
SDCO	Great Sand Dun	93.94	41	*e*P	P	12 54 22.9	+1.6
	comp=Z,1.0nm,0.8s,mb4.0						
ESDC	Sonseca Array	97.72	326	P	P	12 54 38.0	-0.4
	comp=Z,0.2nm,0.3s,mb4.0,baz=12,slow=6.3,SNR=4.0						
MNTX	Cornudas Mount	98.24	45	*e*P	P	12 54 40.0	-1.0
TXAR	Lajitas Array	100.95	46	P	P	12 54 54.2	+0.9
	comp=Z,0.3nm,0.5s,baz=297,slow=2.8,SNR=4.5						
TXAR	Lajitas Array	100.95	46	P	P	12 54 54.2	+0.9
SBA	Scott Base	110.91	172	*e*PKIKP	PKPdf	12 59 42.5	+8.9
BOSA	Boshof	116.13	251	PKP	PKPdf	12 59 46.3	+1.4
	comp=Z,2.4nm,0.8s,baz=79,slow=5.2,SNR=3.7						
DBIC	Dimbokro	122.97	303	PKP	PKPdf	12 59 59.1	+0.7
	comp=Z,2.6nm,0.4s,baz=43,slow=3.2,SNR=9.8						
SNAA	Sanae	132.34	198	*e*PKIKP	PKPdf	13 00 16.5	+1.5
VNA2	Neumayer--Watz	133.98	198	⇑*i*P	PKPdf	13 00 20.6	+2.6
VNA2	Neumayer--Watz	133.98	198	⇑*i*	PKPdf	13 00 21.7	+3.7
VNA3	Neumayer Olymp	134.37	197	P	PKPdf	13 00 19.7	+1.0
VNA3	Neumayer Olymp	134.37	197	⇑*i*	PKPdf	13 00 21.8	+3.1
VNA1	Neumayer--Stat	134.38	198	⇑*i*P	PKPdf	13 00 22.7	+4.0
SAML	Samuel	154.61	32	*e*PKPdf	PKPdf	13 00 55.8	+1.8
SAML				*e*PKPbc	PKPdf	13 01 04.1	+10
SAML				*e*PKPab	PKPab	13 01 18.5	-2.1
LPAZ	La Paz	157.64	53	*e*PKPdf	PKPdf	13 01 00.3	+2.4
LPAZ				*e*PKPab	PKPab	13 01 32.9	-0.5
SIV	San Ignacio	161.70	37	PKPab	PKPab	13 01 50.1	-1.0
	comp=Z,1.6nm,0.5s,baz=329,slow=8.2,SNR=5.2						

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*MAN **27** 12:50:53.8,21.31N×120.11E,h15^{km},mb4.5,ML3.4,MS3.3*
*TAP **27** 12:50:55.6,21.32N×120.01E,h58^{km}±2^{km},ML4.6*
*JMA **27** 12:50:57.3±0.3,21.26N×120.75E,M4.3*
*IDC **27** 12:50:57.7±8.4,21.26N×120.19E,h33^{km}±65^{km},mb3.7/14,mb1 3.9/14,mb1mx3.9/19,mbtmp3.9/14,Error ellipse: s-maj=25.4km s-min=15.9km az=65.0*
*NEIC **27** 12:51:00.4±0.9,21.38N×120.30E,h54^{km}±9^{km},mb4.6/7,Error ellipse: s-maj=10.0km s-min=7.6km az=101.0*
*BJI **27** 12:51:00.1,21.75N×120.01E,h29^{km},mB4.7,mb4.3,ML3.9,Ms4.6,Msz4.5*
ISC 27 12:50:57.3±0.6**,21.29N**±0.02×**120.33E**±0.04**,h43**^{km}±7^{km}**,n60,**σ**1^{s}16**/76**,mb4.1**/20**,MS4.3**/2**,4C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	1.74	119	*e*P	P	12 51 26.0	+0.3
BBP				*e*S	S	12 51 49.4	+2.5
NACB	Ninganchiao	3.09	22	*e*Pn	P	12 51 45.4	+0.5
NACB				*e*Sn	S	12 52 16.6	-4.5
SGCP	Mt. Cagua	3.44	152	*e*P	P	12 51 48.0	-1.8
SGCP				*e*S	S	12 52 27.6	-2.1
YHNB	Yeheng	3.50	16	*e*Pn	P	12 51 50.1	-0.5
YHNB				*e*Sn	S	12 52 25.6	-5.6
APYP	Conner	3.52	166	*e*P	P	12 51 49.6	-1.4
APYP				*e*S	S	12 52 33.2	+1.4
ABRA	Dolores	3.64	174	*e*P	P	12 51 50.3	-2.4
ABRA				*e*S	S	12 52 33.0	-1.9
TATO	Taipei	3.82	16	*e*Pn	P	12 51 56.2	+1.1
TATO				*e*Sn	S	12 52 23.7	-16
CVP	Callao Caves	3.84	158	*e*P	P	12 51 56.0	+0.6
QZH	Quanzhou	3.97	337	*e*P	P	12 51 52.8	-4.5
QZH				S	S	12 52 35.3	-7.9
QZH				Smax			
	comp=N,240nm,0.9s						
QZH				Smax			
	comp=E,220nm,0.8s						
QZH				LR	LR		
	comp=N,2µm,8.0s						
QZH				LR	LR		
	comp=E,3µm,9.0s						
QZH				LR	LR		
	comp=Z,6µm,10.4s						
YOJ	Yonaguni jima	4.00	38	P	P	12 51 59.0	+1.2
YOJ				*e*S	S	12 52 45.1	+1.0
HATJ	Hateruma jima	4.22	49	*e*S	S	12 52 48.1	-1.5
IRIF	Iriomote-Funau	4.36	45	P	P	12 52 03.1	+0.3
IRIF				*e*S	S	12 52 52.9	-0.1
JKRS	Kuro-shima	4.48	48	P	P	12 52 05.3	+0.7
JKRS				*e*S	S	12 52 55.1	-1.0
CAUP	Cauayan	4.55	162	*e*P	P	12 52 06.4	+0.8
JIJ	Ishigaki jima	4.66	48	P	P	12 52 07.2	+0.2
JIJ				*e*S	S	12 52 59.0	-1.5
JTJ	Tarama	5.22	50	P	P	12 52 15.4	+0.4
JTJ				*e*S	S	12 53 13.7	-1.1
BALP	Baler	5.65	168	*e*P	P	12 52 21.6	+0.8
BALP				*e*S	S	12 53 25.5	+0.1
GZH	Guangzhou	6.72	287	P	P	12 52 28.8	-7.1
GZH				S	S	12 53 42.8	-9.2
GZH				Smax			
	comp=N,100nm,1.0s						
GZH				Smax			
	comp=E,110nm,0.8s						
QIZ	Qiongzhong	10.11	259	*e*P	P	12 53 24.3	+1.4
QIZ				*e*S	S	12 55 15.5	-0.5
GYA	Guiyang	13.52	295	⇑*i*P	P	12 54 04.5	-4.2
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
KKM	Kota Kinabalu	15.68	195	*e*P	P	12 54 40.7	+3.8
XAN	Xi'an	16.21	324	P	P	12 54 43.8	+0.2
KMI	Kunming	16.62	287	P	P	12 54 50.8	+2.1
KMI				AP		12 54 59.5	
KMI				PP	PP	12 55 04.0	+1.3
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	16.62	287	P	P	12 54 50.8	+2.1
	comp=Z,11nm,1.0s						
KMI				pP		12 54 59.6	
KMI				PP	PP	12 55 04.1	+1.4
CMAR	Chiang Mai Arr	20.31	266	P	P	12 55 29.6	-2.8
	comp=Z,0.9nm,0.5s,baz=72,slow=9.8,SNR=4.7						
LZH	Lanzhou	20.61	319	*e*P	P	12 55 35.0	-0.3
LZH				AP		12 55 42.0	
LZH				XP		12 55 45.0	
LZH				AMB	AMB		
	comp=Z,50nm,1.5s						
LZH				AMB	AMB		
	comp=Z,170nm,4.2s						
LZH	Lanzhou	20.61	319	*e*P	P	12 55 35.0	-0.3
	comp=Z,53nm,1.5s						
LZH				pP		12 55 42.1	
LZH				sP		12 55 45.1	
HHC	Hu-ho-hao-te	20.87	341	*e*P	P	12 55 37.5	-0.5
HHC				AP		12 55 48.0	
HHC				S	S	12 59 20.5	-2.8
HHC				XS		12 59 36.0	
HHC				PCP	PcP	12 59 45.3	0.0
HHC				SCP		13 03 18.3	
HHC				AMB	AMB		
	comp=Z,20nm,0.9s						
HHC				LR	LR		
	comp=N,1µm,19.0s,MS4.5						
HHC				LR	LR		
	comp=E,970nm,16.7s,MS4.5						
HHC				LR	LR		
	comp=Z,3µm,17.8s,MS4.7						
MJAR	Matsushiro Arr	21.75	42	P	P	12 55 47.8	+0.9
	comp=Z,1.8nm,0.5s,mb3.8,baz=238,slow=9.9,SNR=6.6						
MDJ	Mudanjiang	24.49	16	P	P	12 56 15.0	+1.4
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
KULM	Kulim	24.85	233	*e*P	P	12 56 18.3	+0.9
GTA	Gaotai	25.19	320	⇑P	P	12 56 21.3	+0.9
GTA				AP	pP	12 56 32.5	+0.8
GTA				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.2						
LSA	Lhasa	27.58	294	*e*P	P	12 56 42.7	+0.1
HIA	Hailar	27.92	359	*e*P	P	12 56 44.2	-1.2
SONM	Songino Array	28.77	340	P	P	12 56 52.1	-1.0
	comp=Z,1.4nm,1.0s,mb3.6,baz=164,slow=9.0,SNR=6.8						
TLY	Talaya	33.00	341	*e*P	P	12 57 28.1	-2.2
WMQ	Urumqi	35.16	317	*e*P	P	12 57 50.0	+1.0
WMQ				AP	pP	12 58 02.3	+1.5
WMQ				AMB	AMB		
	comp=Z,50nm,4.6s						
WMQ				LR	LR		
	comp=Z,410nm,22.0s,MS4.1						
MDRS	Chennai	39.07	265	*e*x	x	12 59 01.0	
MKAR	Makanchi Array	39.92	319	P	P	12 58 28.1	-0.7
	comp=Z,0.7nm,0.4s,mb3.7,baz=124,slow=8.7,SNR=12						
ZAL	Zalesovo	42.28	329	P	P	12 58 48.0	-0.1
	comp=Z,1.1nm,0.4s,mb3.9,baz=37,slow=7.2,SNR=5.0						
WRAB	Tennant Creek	43.21	161	*e*P	P	12 58 56.7	+0.6
	comp=Z,3.1nm,0.3s,mb4.5						
WRA	Warramunga Arr	43.21	161	P	P	12 58 55.6	-0.6
	comp=Z,1.5nm,0.5s,mb4.0,baz=342,slow=9.1,SNR=16						
WRA				PcP	PcP	13 00 44.5	-1.0
	comp=Z,0.8nm,0.5s,baz=344,slow=3.4,SNR=7.4						
BVAR	Borovoye Array	49.44	323	P	P	12 59 44.2	-0.7
	comp=Z,0.6nm,0.6s,mb3.8,baz=124,slow=5.2,SNR=3.2						
BVAR				PcP	PcP	13 01 06.2	-0.7
	comp=Z,0.7nm,0.6s,baz=90,slow=3.0,SNR=3.6						
ZRNK	Zerenda	50.21	322	*e*P	P	12 59 49.8	-1.0
	comp=Z,8.9nm,1.5s,mb4.6						
BILL	Bilibino	54.66	19	*e*P	P	13 00 24.2	+0.3
	comp=Z,2.9nm,0.3s,mb4.8						
STKA	Stephens Creek	56.66	158	P	P	13 00 38.3	-0.4
	comp=Z,1.0nm,0.5s,mb4.1,baz=325,slow=9.0,SNR=6.2						
IMA	Indian Mountai	69.13	26	*e*P	P	13 02 03.1	+2.4
	comp=Z,16nm,1.1s,mb4.9						
ARCES	ARCESS Array B	71.92	338	P	P	13 02 17.7	+0.2
	comp=Z,4.5nm,1.0s,mb4.4,baz=63,slow=8.1,SNR=5.3						
ARCES	ARCESS Array B	71.92	338	P	P	13 02 17.7	+0.2
ILAR	Eielson Array	72.13	27	P	P	13 02 18.9	0.0
	comp=Z,1.0nm,0.8s,mb3.8,baz=285,slow=6.0,SNR=13						
FINES	FINESS Array B	73.54	330	P	P	13 02 26.9	-0.2
	comp=Z,0.8nm,0.5s,mb3.9,baz=56,slow=6.9,SNR=8.5						
FINES	FINESS Array B	73.54	330	P	P	13 02 26.9	-0.2
BR131	Keskin Array S	74.26	307	*e*P	P	13 02 31.9	+0.1
AKASG	Malin Array Be	74.51	319	P	P	13 02 31.6	-1.4
	comp=Z,0.2nm,0.3s,mb3.6,baz=68,slow=6.5,SNR=5.1						
CLL	Collm	83.88	323	⇑*i*P	P	13 03 24.6	+1.0
	comp=Z,16nm,1.4s,mb5.0						
CLL				*i*		13 03 33.6	
CLL	Collm	83.88	323	⇑P	P	13 03 24.6	+1.0
	comp=Z,logA/T=1.1,mb5.0						
CLL				*i*		13 03 33.6	
GERES	GERESS Array B	84.57	321	P	P	13 03 27.2	0.0
	comp=Z,0.7nm,0.7s,mb3.9,baz=56,slow=4.8,SNR=6.2						
MOX	Moxa	84.96	323	*e*P	P	13 03 30.0	+0.9
YKA	Yellowknife Ar	85.93	22	P	P	13 03 35.5	+1.9
	comp=Z,0.7nm,0.9s,mb3.9,baz=321,slow=4.0,SNR=3.7						
YKA	Yellowknife Ar	85.93	22	P	P	13 03 35.5	+1.9

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*NEIC **27** 12:58:49.5±0.6,6.75N×73.00W,h164^{km}±11^{km},mb3.9/2,Error ellipse: s-maj=24.2km s-min=8.8km az=138.0*
*IDC **27** 12:58:49.2±0.7,6.81N×72.99W,h160^{km}±12^{km},mb3.3/3,mb1 3.6/6,mb1mx3.3/22,mbtmp3.9/6,MS3.2/1,Ms1 3.2/1,ms1mx3.1/13,Error ellipse: s-maj=35.9km s-min=7.2km az=134.0*
ISC 27 12:58:48.8±0.6**,6.9N**±0.1×**73.1W**±0.1**,h164**^{km}±13^{km}**,n12,**σ**0^{s}63**/16**,mb3.5**/4**,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.37	212	P	P	12 59 29.5	0.0
	48nm,0.3s,baz=86,slow=23,SNR=58						
ROSC				S	S	13 00 01.1	+0.3
	73nm,0.3s,baz=80,slow=21,SNR=16						
ROSC				LR	LR	13 00 04.1	
	comp=Z,440nm,18.1s,baz=21,slow=32						
ROSC	El Rosal	2.37	212	P	P	12 59 29.5	0.0
ROSC				S	S	13 00 01.1	+0.3
ROSC				LR	LR	13 00 04.1	
SDV	Santo Domingo	3.13	50	P	P	12 59 39.5	+0.5
	57nm,0.3s,baz=226,slow=4.3,SNR=197						
SDV				S	S	13 00 17.0	-0.6
	36nm,0.3s,baz=83,slow=24,SNR=24						
SDV	Santo Domingo	3.13	50	*e*Pn	P	12 59 39.3	+0.3
SDV				*e*Sn	S	13 00 16.9	-0.7
OTAV	Otavalo	8.51	219	*e*Pn	P	13 00 49.0	-0.7
	3.3nm,0.6s						
PCRV	Puerto La Cruz	8.96	68	P	P	13 00 55.7	-0.1
	1.4nm,0.3s,baz=233,slow=5.1,SNR=3.8						
PCRV				S	S	13 02 35.4	+0.4
	1.3nm,0.3s,baz=115,slow=16,SNR=2.8						
TXAR	Lajitas Array	36.45	312	P	P	13 05 40.0	+0.3
	0.2nm,0.4s,mb3.1,baz=125,slow=9.4,SNR=3.5						
MNTX	Cornudas Mount	38.96	314	*e*P	P	13 06 01.3	+0.7
	0.7nm,0.4s,mb3.6						
SCHQ	Schefferville	48.08	5	P	P	13 07 14.1	+0.6
	0.9nm,0.4s,mb3.7,baz=209,slow=13,SNR=3.9						
YKA	Yellowknife Ar	63.22	340	P	P	13 09 00.2	-1.5
	0.6nm,0.6s,mb3.6,baz=130,slow=6.9,SNR=6.0						
YKA	Yellowknife Ar	63.22	340	P	P	13 09 00.2	-1.5
WRA	Warramunga Arr	150.41	241	PKPbc	PKPdf	13 18 22.3	+6.3
	0.5nm,0.4s,baz=107,slow=2.7,SNR=8.2						

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*NEIC **27** 13:08:14.3±5.5,26.86S×176.19W,h31^{km}±37^{km},mb4.8/5,Error ellipse: s-maj=18.2km s-min=13.6km az=49.0*
*IDC **27** 13:08:16.8±4.1,27.07S×176.17W,h56^{km}±37^{km},mb3.9/10,mb1 4.2/12,mb1mx4.1/17,mbtmp4.2/12,ML3.6/1,MS3.3/1,Ms1 3.3/1,ms1mx3.2/20,Error ellipse: s-maj=36.7km s-min=23.8km az=164.0*
ISC 27 13:08:14.4±2.9**,26.9S**±0.1×**176.3W**±0.1**,h44**^{km}±23^{km}**,n31,**σ**1^{s}08**/23**,mb4.3**/14**,1D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.79	211	P	P	13 08 58.0	+0.2
	144nm,0.3s,baz=72,slow=16,SNR=5.8						
RAO				S	S	13 09 33.0	+2.5
	196nm,0.3s,baz=75,slow=22,SNR=6.7						
RAO				LR	LR	13 09 36.2	
	comp=Z,604nm,20.0s,baz=44,slow=30						
URZ	Urewera	12.66	204	P	P	13 11 12.0	-2.5
	0.4nm,0.3s,baz=352,slow=1.5,SNR=2.6						
URZ				S	S	13 13 24.0	-11
	0.9nm,0.3s,baz=232,slow=21,SNR=9.5						
CTA	Charters Tower	34.93	273	P	P	13 15 04.2	-0.1
	1.8nm,0.3s,mb4.4,baz=124,slow=13,SNR=5.0						
CTAO	Charters Tower	34.93	273	P	P	13 15 06.2	+2.0
	3.4nm,0.3s,mb4.8						
STKA	Stephens Creek	36.88	252	P	P	13 15 20.2	-0.5
	0.9nm,0.6s,mb3.8,baz=106,slow=13,SNR=4.1						
WRAB	Tennant Creek	45.61	268	*e*P	P	13 16 32.2	-0.2
	11nm,0.8s,mb4.8						
WRA	Warramunga Arr	45.61	268	P	P	13 16 31.2	-1.3
	6.2nm,0.6s,mb4.7,baz=107,slow=7.7,SNR=35						
FITZ	Fitzroy Crossi	53.98	266	P	P	13 17 36.0	-0.6
	25nm,1.3s,mb5.0,baz=180,slow=18,SNR=3.9						
CASY	Casey	58.97	207	⇓*i*P	P	13 18 11.0	-0.5
CASY	Casey	58.97	207	*e*P	P	13 18 10.7	-0.8
	5.7nm,0.5s,mb4.9						
QSPA	South Pole Qui	63.25	180	*e*P	P	13 18 40.9	+0.6
	4.4nm,0.7s,mb4.7						
MAW	Mawson	76.15	200	P	P	13 19 57.3	-1.7
	1.3nm,0.4s,mb4.2,baz=140,slow=20,SNR=5.6						
MJAR	Matsushiro Arr	76.24	324	P	P	13 20 01.0	+0.8
	2.7nm,0.8s,mb4.2,baz=168,slow=8.2,SNR=4.9						
SNAA	Sanae	81.64	178		P	13 20 29.0	+0.2
SNAA	Sanae	81.64	178		pP	13 20 38.4	-3.5
SNAA	Sanae	81.64	178		sP	13 20 43.5	-3.2
SNAA	Sanae	81.64	178	*e*P	P	13 20 28.8	0.0
	2.5nm,0.9s,mb4.1						
VNA3	Neumayer Olymp	81.72	176		P	13 20 29.8	+0.5
VNA3	Neumayer Olymp	81.72	176		pP	13 20 39.3	-3.0
VNA3	Neumayer Olymp	81.72	176		sP	13 20 45.5	-1.6
VNA2	Neumayer--Watz	82.18	176		P	13 20 32.9	+1.3
VNA2	Neumayer--Watz	82.18	176		pP	13 20 42.2	-2.5
VNA2	Neumayer--Watz	82.18	176		sP	13 20 48.2	-1.3
NVAR	Mina Array Bea	84.61	42	P	P	13 20 43.7	-0.9
	0.3nm,0.8s,mb3.5,baz=218,slow=10,SNR=2.7						
TXAR	Lajitas Array	89.19	56	P	P	13 21 07.1	+0.1
	0.2nm,0.4s,mb3.8,baz=217,slow=6.3,SNR=3.6						
CMAR	Chiang Mai Arr	93.68	289	P	P	13 21 29.6	+1.6
	1.1nm,0.7s,mb4.4,baz=158,slow=3.6,SNR=6.6						
ILAR	Eielson Array	94.15	12	P	P	13 21 29.6	+0.5
	0.3nm,0.7s,mb3.9,baz=219,slow=5.8,SNR=3.8						
NB2	NORSAR Subarra	145.44	354	PKPabc	PKPdf	13 27 49.0	+2.0
	0.7nm,0.6s,baz=4.0,slow=3.4						
NOA	NORSAR Array B	145.44	354	PKPbc	PKPbc	13 27 48.5	+0.9
	2.4nm,0.9s,baz=4.0,slow=2.4,SNR=3.8						
AKASG	Malin Array Be	149.26	328	PKPbc	PKPdf	13 27 58.8	+5.2
	2.2nm,0.7s,baz=40,slow=3.6,SNR=6.9						
BRTR	Keskin Array B	152.03	305	PKPbc	PKPdf	13 28 06.7	+8.5
	0.4nm,0.5s,baz=128,slow=4.9,SNR=3.0						

MAN 27 13:30:41.5,8.81N×122.06E,h95^{km},mb3.9,ML2.6,MS2.2,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPIL	Ipil	1.13	153	*e*P	P	13 31 02.7	-0.7
IPIL				*e*S	S	13 31 16.2	-3.5
SNPH	Sibulan	1.28	65	⇓*i*P	P	13 31 05.9	+0.7
SNPH				*i* S	S	13 31 21.2	-1.7
PAGZ	Pagadian	1.62	126	*e*P	P	13 31 10.1	+0.8
PAGZ				*e*S	S	13 31 30.5	+0.5
GUIM	Jordan	1.88	16	*e*P	P	13 31 12.9	+0.1
GUIM				*e*S	S	13 31 36.2	+0.4
CUYO	Cuyo Island	2.28	333	*e*P	P	13 31 18.7	+0.6
CUYO				*e*S	S	13 31 44.4	-1.0
ENPP	El Nido	3.52	313	*e*P	P	13 31 35.6	+0.3
OTRP	Odiongan	3.53	359	*e*P	P	13 31 35.0	-0.5
BUSP	Coron	3.67	330	*e*P	P	13 31 37.4	+0.2

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*MOS **27** 14:05:06.3±0.8,7.39N×34.98W,h10^{km},mb5.2/55,MS4.9/20,Error ellipse: s-maj=7.9km s-min=4.5km az=58.4*
*IDC **27** 14:05:06.5±0.5,7.42N×34.98W,mb4.6/20,mb1 4.8/20,mb1mx4.7/22,mbtmp4.6/20,MS4.8/18,Ms1 4.8/18,ms1mx4.8/20,Error ellipse: s-maj=16.0km s-min=13.0km az=142.0*
*HRVD **27** 14:05:08.3±0.2,7.52N×35.00W,h12^{km}±1^{km},MW5.3/68,Centroid moment Tensor Solution. LP body waves: s46,c67;Mantle waves: s68,c143; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.09±.03; $M_{\theta\theta}$0.05±.03; $M_{\phi\phi}$0.03±.03; $M_{r\theta}$-0.14±.07; $M_{\theta\phi}$-1.15±.03; $M_{\phi r}$-0.52±.10; Best double couple: $M_0$1.271×10^{17} NP1: ϕ_s91°,δ66°,λ-173°. NP2:ϕ_s358°,δ84°,λ-24°. Principal axes: T 1.251, Plg12°, Azm47°; N .041, Plg65°, Azm165°; P -1.292, Plg22°, Azm312°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **27** 14:05:08.3±0.2,7.41N×35.02W,h10^{km},mb5.1/106,MS5.0/20 Error ellipse: s-maj=5.3km s-min=3.0km az=162.0*
*BJI **27** 14:05:08.3,7.40N×35.00W,h12^{km},mB5.6,Ms5.4,Msz5.1*
ISC 27 14:05:06.4±0.3**,7.38N**±0.05×**34.97W**±0.03**,h10**^{km}**,n340,**σ**0^{s}92**/327**,mb4.9**/126**,MS4.9**/44**,4C-3D,Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	13.15	184	*e*Pn	P	14 08 12.8	-3.2
	68nm,0.4s						
RCBR				*e*Sn	S	14 10 29.8	-14
BAO	Brasilia Array	26.25	209	P	P	14 10 50.0	+6.3
BDFB	Brasilia	26.27	209	P	P	14 10 43.4	-0.5
	18nm,0.5s,mb4.8,baz=37,slow=12,SNR=24						
BDFB				LR	LR	14 20 22.9	
	comp=Z,5µm,18.9s,MS5.1,baz=23,slow=35						
PCRV	Puerto La Cruz	29.44	278	LR	LR	14 21 08.0	
	comp=Z,662nm,21.9s,MS4.2,baz=75,slow=33						
DBIC	Dimbokro	29.90	89	P	P	14 11 15.3	-1.6
	17nm,0.8s,mb4.8,baz=255,slow=8.9,SNR=18						
DBIC				LR	LR	14 20 22.2	
	comp=Z,781nm,18.5s,MS4.4,baz=250,slow=31						
DBIC	Dimbokro	29.90	89	P	P	14 11 15.3	-1.6
DBIC				LR	LR	14 20 22.2	
PDA	Ponta Delgada	31.39	14	*e*LQ		14 18 42.0	
PDA				*e*LR	LR	14 19 49.0	
SJG	San Juan	32.17	292	*e*P	P	14 11 35.8	-1.0
SJG				pmax	pmax		
	comp=Z,23nm,0.6s						
SJG	San Juan	32.17	292	*e*P	P	14 11 35.8	-1.0

	comp=Z,23nm,0.6s,mb5.2						
SAML	Samuel	32.45	240	eP	P	14 11 38.4	-1.0
	comp=Z,24nm,0.9s,mb5.0						
SAML				LR	LR		
	comp=Z,2µm,22.0s,MS4.8						
SDV	Santo Domingo	35.33	275	eP	P	14 12 03.4	-0.8
	comp=Z,9.7nm,0.8s,mb4.8						
ROSC	El Rosal	39.20	269	P	P	14 12 38.1	+1.4
	comp=Z,35nm,0.6s,mb5.3,baz=108,slow=13,SNR=22						
ROSC				LR	LR	14 28 50.1	
	comp=Z,797nm,19.9s,MS4.5,baz=200,slow=36						
EVO	Evora	39.42	34	eP	P	14 12 37.6	-0.7
	comp=Z,11nm,0.7s,mb4.4						
EVO				eR			
	comp=Z,2µm,20.2s						
ESPR	Espera	39.55	38	P	P	14 12 40.0	+0.5
	comp=Z,38nm,1.8s,mb4.8						
EMIN	Mina Concepcio	39.66	36	P	P	14 12 39.6	-0.7
	comp=Z,54nm,1.9s,mb5.0						
CPUP	Villa Florida	39.92	212	eP	P	14 12 43.0	+0.4
CPUP				pmax	pmax		
	comp=Z,13nm,1.1s						
CPUP	Villa Florida	39.92	212	P	P	14 12 43.0	+0.5
	comp=Z,8.0nm,1.1s,mb4.4,baz=49,slow=9.3,SNR=10						
CPUP				LR	LR	14 28 57.3	
	comp=Z,2µm,18.2s,MS5.0,baz=60,slow=36						
CPUP	Villa Florida	39.92	212	eP	P	14 12 43.0	+0.5
	comp=Z,13nm,1.1s,mb4.6						
EMIJ	Mijas	40.02	39	P	P	14 12 42.8	-0.5
	comp=Z,10nm,1.5s,mb4.3						
EBAD	Badajoz	40.14	35	P	P	14 12 43.2	-1.1
	comp=Z,50nm,2.2s,mb4.9						
LPAZ	La Paz	40.37	234	eP	P	14 12 47.3	+1.0
LPAZ				pmax	pmax		
	comp=Z,28nm,0.8s						
LPAZ				MLR	MLR		
	comp=Z,1µm,20.0s						
LPAZ	La Paz	40.37	234	P	P	14 12 47.2	+0.8
	comp=Z,21nm,0.7s,mb5.0,baz=58,slow=7.5,SNR=41						
LPAZ				LR	LR	14 29 02.2	
	comp=Z,1µm,19.5s,MS4.8,baz=73,slow=36						
LPAZ	La Paz	40.37	234	eP	P	14 12 47.3	+1.0
	comp=Z,28nm,0.8s,mb5.0						
LPAZ				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
ECAB	El Cabril	40.60	37	P	P	14 12 48.2	+0.1
	comp=Z,22nm,1.0s,mb4.7						
MTE	Manteigas	41.01	32	eP	P	14 12 53.1	+1.8
	comp=Z,51nm,1.4s,mb5.0						
EQES	Quesada	41.86	39	P	P	14 12 58.0	-0.3
	comp=Z,56nm,1.7s,mb4.9						
EHUE	Huescar	42.16	39	P	P	14 13 00.8	-0.1
EHUE				pmax	pmax		
	comp=Z,1.0nm,1.4s						
EHUE	Huescar	42.16	39	P	P	14 13 00.8	-0.2
	comp=Z,0.9nm,1.4s						
ESDC	Sonseca Array	42.51	36	P	P	14 13 04.4	+0.6
	comp=Z,0.2nm,0.3s,baz=234,slow=7.6,SNR=7.3						
ECAL	Calabor	42.54	31	P	P	14 13 03.2	-0.8
	comp=Z,34nm,1.1s,mb5.0						
OTAV	Otavalo	43.93	263	eP	P	14 13 15.8	+0.2
	comp=Z,12nm,0.5s,mb4.9						
ELAN	Lanestosa	45.18	33	P	P	14 13 25.6	+0.2
	comp=Z,24nm,2.8s,mb4.5						
ESAC	San Caprasio	45.86	36	P	P	14 13 31.7	+1.0
	comp=Z,18nm,1.3s,mb4.8						
EALK	Alkurruntz	46.22	34	P	P	14 13 31.8	-1.7
	comp=Z,15nm,1.3s,mb4.8						
SJPF	Ste Jean	46.31	34	eP	P	14 13 34.7	+0.5
ETSF	Etsaut	46.55	35	eP	P	14 13 36.8	+0.7
	comp=Z,13nm,0.9s,mb4.6						
ETSF	Etsaut	46.55	35	eP	P	14 13 36.8	+0.7
ETSF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
EPF	Esparros	47.14	35	eP	P	14 13 41.8	+1.0
	comp=Z,43nm,1.1s,mb5.0						
EPF	Esparros	47.14	35	eP	P	14 13 41.8	+1.0
EPF				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
EMIR	Miracle	47.16	37	P	P	14 13 40.4	-0.6
	comp=Z,33nm,1.4s,mb5.1						
BRYW	Bryant College	47.20	323	eP	P	14 13 40.8	-0.5
	comp=Z,60nm,1.2s,mb5.4						
MLS	Moulis	47.53	36	eP	P	14 13 43.7	-0.2
HRV	Harvard--Oak R	47.56	323	eP	P	14 13 43.3	-0.9
HRV				pmax	pmax		
	comp=Z,57nm,1.4s,mb5.4						
HRV	Harvard--Oak R	47.56	323	eP	P	14 13 43.3	-0.9
	comp=Z,57nm,1.4s,mb5.4						
PAL	Palisades	48.15	320	eP	P	14 13 47.8	-0.9
PAL				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
PAL	Palisades	48.15	320	eP	P	14 13 47.8	-0.9
	comp=Z,16nm,0.8s,mb5.1						
EJON	La Jonquera	48.29	37	P	P	14 13 51.8	+2.0
	comp=Z,4.2nm,0.9s,mb4.5						
MTLF	Montolieu	48.42	36	eP	P	14 13 50.7	-0.1
	comp=Z,14nm,0.8s,mb4.7						
MTLF	Montolieu	48.42	36	eP	P	14 13 50.7	-0.1
MTLF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
LFF	La Frestale	48.57	34	eP	P	14 13 52.1	+0.2
QUIF	Quistinic	48.60	28	eP	P	14 13 51.7	-0.4
ROSF	Rostrenen	48.85	28	eP	P	14 13 54.1	+0.1
	comp=Z,54nm,1.0s,mb5.2						
ROSF	Rostrenen	48.85	28	eP	P	14 13 54.1	+0.1
ROSF				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.2						
SGMF	Saint Gilles	49.12	28	eP	P	14 13 56.2	+0.1
	comp=Z,52nm,1.0s,mb5.2						
SGMF	Saint Gilles	49.12	28	eP	P	14 13 56.2	+0.1
SGMF				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.2						
MFF	Saint Martin d	49.18	31	eP	P	14 13 56.3	-0.3
	comp=Z,8.7nm,0.7s,mb4.6						
MFF	Saint Martin d	49.18	31	eP	P	14 13 56.3	-0.3
MFF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
RJF	Les Rejaudoux	49.22	34	eP	P	14 13 56.5	-0.5
RJF				eR			
	comp=Z,2µm,19.2s						
CAF	Calviac	49.29	34	eP	P	14 13 57.4	-0.1
	comp=Z,38nm,1.0s,mb5.1						
CAF	Calviac	49.29	34	eP	P	14 13 57.4	-0.1
CAF				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
ACCN	Adirondack Com	49.33	323	eP	P	14 13 58.3	+0.5
MIV	Mineville/With	49.66	324	eP	P	14 14 00.2	-0.1
LASF	Ste Croix	49.81	36	eP	P	14 14 01.2	-0.3
	comp=Z,38nm,1.3s,mb5.0						
NCB	Newcomb	50.00	323	eP	P	14 14 03.8	+0.8
	comp=Z,39nm,1.4s,mb5.2						
GRR	Gorron	50.03	29	eP	P	14 14 02.7	-0.4
BINY	Binghamton	50.10	321	eP	P	14 14 04.6	+0.9
	comp=Z,41nm,1.4s,mb5.3						
FRNY	Flat Rock	50.13	325	eP	P	14 14 03.9	-0.1
TCF	Toulx Ste Croi	50.22	33	eP	P	14 14 04.4	-0.2
JSC	Jenkinsville	50.28	309	eP	P	14 14 04.5	-0.7
GELF	Grande-Etoile	50.36	38	eP	P	14 14 06.8	+1.1
PRAF	Pradon	50.44	37	eP	P	14 14 06.1	-0.2
FLN	La Foliniere	50.47	29	eP	P	14 14 06.0	-0.4
	comp=Z,16nm,0.7s,mb4.8						
FLN				eR			
	comp=Z,896nm,18.2s						
FLN	La Foliniere	50.47	29	eP	P	14 14 06.0	-0.4
FLN				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
FLN				MLR	MLR		
	comp=Z,900nm,18.3s,MS4.8						
TREF	Trevaresse	50.47	38	eP	P	14 14 08.5	+2.0
BERF	Bertagne	50.48	38	eP	P	14 14 06.6	0.0
LDF	La Druitiere	50.52	29	eP	P	14 14 06.3	-0.6
PUYF	Puyloubier	50.61	38	eP	P	14 14 07.4	-0.2
BGF	Bois d'Agland	50.73	33	eP	P	14 14 08.0	-0.5
	comp=Z,13nm,0.6s,mb4.7						
BGF	Bois d'Agland	50.73	33	eP	P	14 14 08.0	-0.5
BGF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
VIVF	Saint-Julien-l	50.74	36	eP	P	14 14 08.9	+0.3
	comp=Z,26nm,0.9s,mb4.8						
VIVF	Saint-Julien-l	50.74	36	eP	P	14 14 08.9	+0.3
VIVF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
SMRF	Simiane la Rot	50.78	37	eP	P	14 14 09.3	+0.4
	comp=Z,11nm,0.9s,mb4.5						
VSL	Villasalto	50.98	44	eP	P	14 14 11.6	+1.1
	comp=Z,30nm,1.3s,mb5.1						
LMR	La Mourre	51.00	38	eP	P	14 14 10.3	-0.2
ELN	Prospectdale	51.03	313	eP	P	14 14 10.6	-0.3
FRF	La Foret Royal	51.20	38	eP	P	14 14 11.7	-0.4
SMF	Signal de Mont	51.33	34	eP	P	14 14 12.8	-0.2
CALN	Calern	51.45	38	eP	P	14 14 14.7	+0.7
ORIF	Oris-en-Rattie	51.48	36	eP	P	14 14 14.6	+0.4
ORIF				eR			
	comp=Z,885nm,19.2s						
MVIF	Mont Vial	51.69	38	eP	P	14 14 16.5	+0.7
LOR	Lormes	51.72	33	eP	P	14 14 15.5	-0.4
	comp=Z,14nm,0.7s,mb4.7						
LOR				eR			
	comp=Z,2µm,21.5s						
LOR	Lormes	51.72	33	eP	P	14 14 15.5	-0.4
LOR				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
LOR				MLR	MLR		
	comp=Z,2µm,21.5s,MS5.0						
TRQA	Tornquist	51.73	207	eP	P	14 14 15.2	-1.0
	comp=Z,10nm,0.8s,mb4.8						
TRQA				LR	LR		
	comp=Z,3µm,21.0s,MS5.2						
TOUF	Mont Tournerai	51.81	38	eP	P	14 14 17.5	+0.8
SBF	Sospel	51.85	38	eP	P	14 14 16.9	-0.1
	comp=Z,57nm,1.1s,mb5.1						
SBF	Sospel	51.85	38	eP	P	14 14 16.9	-0.1
SBF				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.1						
MBDF	Montbardon	51.91	37	eP	P	14 14 17.7	+0.3
	comp=Z,18nm,1.0s,mb4.7						
MBDF	Montbardon	51.91	37	eP	P	14 14 17.7	+0.3
MBDF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
AUTN	L'Aution	51.91	38	eP	P	14 14 18.5	+1.0
SAOF	Saorge	51.98	38	eP	P	14 14 19.0	+1.0
BNI	Bardonecchia	52.03	37	eP	P	14 14 18.6	+0.3
BNI				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
BNI	Bardonecchia	52.03	37	eP	P	14 14 18.6	+0.2
	comp=Z,22nm,1.2s,mb5.0						
DOI	San Damiano	52.07	38	P	P	14 14 12.7	-6.0
	comp=Z,18nm,1.0s,mb5.0						
IMI	Imperia	52.15	39	P	P	14 14 18.5	-0.8
PGF	Pioggiola	52.16	41	eP	P	14 14 19.0	-0.4
	comp=Z,20nm,1.0s,mb4.7						
PGF	Pioggiola	52.16	41	eP	P	14 14 19.0	-0.4
PGF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
LPG	La Plagne	52.32	36	eP	P	14 14 20.7	+0.2
FIN	Finale Ligure	52.50	38	P	P	14 14 22.1	+0.2
CABF	La Chapelle	52.56	35	eP	P	14 14 22.1	-0.2
TZTN	Tazewell	52.84	311	eP	P	14 14 19.9	-4.6
DIX	Grande Dixence	53.02	36	P	P	14 14 26.6	+0.8
MEZF	Maizieres J'vi	53.10	32	eP	P	14 14 25.7	-0.6
CPCT	Cooper Cave	53.20	309	eP	P	14 14 26.0	-1.2
MCGN	Macugnaga	53.29	36	P	P	14 14 28.2	+0.4
LOMF	Lomont	53.40	34	eP	P	14 14 29.3	+0.8
HAU	Haudompre	53.51	33	eP	P	14 14 28.7	-0.6
HAU				eR			
	comp=Z,1µm,22.2s						
BAIF	Baives	53.63	30	eP	P	14 14 29.4	-0.8
	comp=Z,30nm,0.9s,mb4.9						
BAIF	Baives	53.63	30	eP	P	14 14 29.4	-0.8
BAIF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
HINF	Hinteralfeld	53.68	34	eP	P	14 14 29.9	-0.6
GRFL	Gerfalco	53.73	41	P	P	14 14 31.8	+0.8
	comp=Z,1.8nm,0.2s,mb4.7						
SCHQ	Schefferville	53.74	338	P	P	14 14 30.1	-0.8
	comp=Z,4.8nm,0.5s,mb4.7,baz=139,slow=6.9,SNR=15						
SCHQ				LR	LR	14 35 03.3	
	comp=Z,618nm,18.4s,MS4.7,baz=287,slow=34						
SCHQ	Schefferville	53.74	338	eP	P	14 14 30.1	-0.9
	comp=Z,17nm,0.9s,mb5.0						
MOF	Molkenrain	53.85	34	eP	P	14 14 32.1	+0.3
MUGIO	Muggio	53.90	37	P	P	14 14 32.7	+0.5
GIVF	Givet	53.96	31	eP	P	14 14 31.5	-1.1
GSCL	Gusciola	54.05	39	P	P	14 14 34.0	+0.7
ECH	Echery	54.07	34	eP	P	14 14 33.2	-0.2
SWET	Sewanee	54.22	308	eP	P	14 14 33.7	-1.0
CDF	Champ du Feu	54.25	34	eP	P	14 14 33.9	-0.8
FELD	Feldberg	54.35	34	eP	P	14 14 35.6	+0.1
LRAL	Lakeview Retre	54.42	305	eP	P	14 14 35.6	-0.6
	comp=Z,59nm,1.4s,mb5.3						
ASS	Assisi	54.78	42	P	P	14 14 38.4	-0.3
ASS				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.1						
ASS	Assisi	54.78	42	P	P	14 14 38.4	-0.3
	comp=Z,28nm,1.5s,mb5.1						
RUP	Ruppelstein	54.88	32	eP	P	14 14 39.0	-0.4
SGG	Gregorio Mates	55.24	44	P	P	14 14 42.3	+0.2
CII	Carovilli	55.32	44	eP	P	14 14 43.2	+0.4
	comp=Z,68nm,1.4s,mb5.5						
PLAL	Pickwick Lake	55.82	307	eP	P	14 14 45.3	-1.1
	comp=Z,56nm,1.4s,mb5.4						
WVT	Waverly	55.97	309	eP	P	14 14 46.2	-1.2
WVT				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
WVT	Waverly	55.97	309	eP	P	14 14 46.2	-1.2
	comp=Z,12nm,0.8s,mb5.0						
TIP	Timpagrande	56.10	47	eP	P	14 14 46.7	-1.6
ROBS	Robic	56.77	38	eP	P	14 14 53.0	0.0
VOY	Vojsko	56.91	39	eP	P	14 14 53.3	-0.7
VOY				e	pP	14 14 58.0	+0.9
VOY				e		14 15 17.7	
CEY	Cerknica	57.11	39	i P	P	14 15 05.8	+10
LJU	Ljubljana	57.30	39	eP	P	14 14 56.0	-0.9
VISS	Visnje	57.40	39	eP	P	14 14 56.7	-0.8
BOJS	Bojanci	57.53	40	eP	P	14 14 58.1	-0.3
MOX	Moxa	57.84	33	eP	P	14 15 01.0	+0.5
MOX				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.7						
MOX	Moxa	57.84	33	eP	P	14 15 01.0	+0.5
	comp=Z,13nm,1.6s,mb4.7						
MOX	Moxa	57.84	33	i P	P	14 15 01.0	+0.5
	comp=Z,logA/T=0.9,mb4.7						
PERS	Pernice	57.93	39	eP	P	14 15 00.2	-1.0
PLCA	Paso Flores	57.98	211	eP	P	14 15 01.1	-0.6
PLCA				pmax	pmax		
	comp=Z,34nm,1.6s						
PLCA	Paso Flores	57.98	211	P	P	14 14 59.7	-1.9
	comp=Z,8.7nm,1.2s,mb4.7,baz=48,slow=11,SNR=3.2						
PLCA				LR	LR	14 40 28.9	
	comp=Z,5µm,18.5s,MS5.7,baz=50,slow=37						
PLCA	Paso Flores	57.98	211	eP	P	14 15 01.1	-0.6
	comp=Z,34nm,1.6s,mb5.1						
NKC	Novy Kostel	58.08	34	eP	P	14 15 02.8	+0.6
NKC				eS	S	14 23 07.8	+6.5
NKC				AMS	AMS	14 36 20.0	
	comp=Z,800nm,17.0s						
GERES	GERESS Array B	58.10	36	LR	LR	14 36 36.0	
	comp=Z,1µm,21.2s,MS5.0,baz=249,slow=32						
TSUM	Tsumeb	58.12	118	P	P	14 15 04.2	+1.4
	comp=Z,2.0nm,0.6s,mb4.3,baz=285,slow=12,SNR=3.3						
KHC	Kasperske Hory	58.17	35	eP	P	14 15 04.2	+1.4
KHC				eS	S	14 23 08.2	+5.7
KHC				AMS	AMS	14 35 20.0	
	comp=Z,900nm,23.7s						
FVM	French Village	58.49	310	eP	P	14 15 03.6	-1.7
FVM				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.1						
FVM	French Village	58.49	310	eP	P	14 15 03.6	-1.7
	comp=Z,25nm,1.3s,mb5.1						
CLL	Collm	58.93	33	eP	P	14 15 08.0	-0.1
CLL				e		14 15 17.0	
CLL				eS	S	14 23 12.0	-0.5
CLL	Collm	58.93	33	P	P	14 15 08.0	-0.1
CLL				e		14 15 17.0	
CLL				eS	S	14 23 12.0	-0.5
CLL				eSSS	SSS	14 29 48.0	+16
PRU	Pruhonice	59.13	35	eP	P	14 15 03.5	-6.1
PRU				eS	S	14 23 20.9	+5.8
PRU				AMS	AMS	14 35 20.0	
	comp=Z,700nm,23.5s						
CCM	Cathedral Cave	59.13	310	eP	P	14 15 08.1	-1.6
CCM				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
CCM	Cathedral Cave	59.13	310	eP	P	14 15 08.1	-1.6
	comp=Z,15nm,1.0s,mb5.0						
UALR	University of	59.16	306	eP	P	14 15 08.5	-1.5
	comp=Z,28nm,0.9s,mb5.3						
BRG	Berggiesshubel	59.23	34	eP	P	14 15 10.6	+0.4
BRG				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.8						
BRG				MLR	MLR		
	comp=Z,870nm,16.3s,MS5.0						
BRG	Berggiesshubel	59.23	34	eP	P	14 15 10.6	+0.4
	comp=Z,16nm,1.5s,mb4.8						
BRG				i		14 15 20.1	
BRG				LR	LR		
	comp=Z,870nm,16.3s,MS5.0						
PVCC	Panska Ves	59.41	34	eP	P	14 15 11.1	-0.3
PVCC				eS	S	14 23 27.5	+8.9
PVCC				AMS	AMS	14 44 00.0	
	comp=Z,600nm,16.4s						
ZST	Bratislava	59.83	38	eP	P	14 15 11.8	-2.6
UPC	Upice	60.21	35	eP	P	14 15 16.4	-0.6
DPC	Dobruska-Polom	60.31	35	eP	P	14 15 17.0	-0.7
DPC				eS	S	14 23 37.2	+6.9
DPC				AMS	AMS	14 36 00.0	
	comp=Z,700nm,17.6s						
SKO	Skopje	60.39	46	eP	P	14 15 18.0	-0.3
NATX	Nacogdoches	60.45	302	eP	P	14 15 18.0	-0.9
	comp=Z,36nm,0.5s,mb5.7						
KSP	Ksiaz	60.52	35	eP	P	14 15 18.4	-0.7
KSP				eS	S	14 23 36.0	+3.0
KSP				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.1						
MORC	Moravsky Berou	60.77	36	eP	P	14 15 21.4	+0.7
VYHS	Vyhne	61.00	38	eP	P	14 15 19.8	-2.6
VYHS				e		14 15 31.9	
OKC	Ostrava-Krasne	61.15	36	eP	P	14 15 25.0	+1.7
OKC				eS	S	14 23 52.5	+12
OKC				AMS	AMS	14 38 00.0	
	comp=Z,700nm,21.2s						
PSZ	Piszkesteto	61.42	39	eP	P	14 15 26.2	+0.9
PSZ				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.2						
PSZ	Piszkesteto	61.42	39	eP	P	14 15 26.1	+0.9
	comp=Z,21nm,1.1s,mb5.2						
PSZ	Piszkesteto	61.42	39	eP	P	14 15 25.1	-0.2
KOLS	Kolonicke sedl	63.27	38	eP	P	14 15 37.8	+0.3
KSU1	Kansas State U	63.47	310	eP	P	14 15 35.9	-3.1
NB2	NORSAR Subarra	63.54	23	P	P	14 15 38.4	-0.7
	comp=Z,2.5nm,0.5s,mb4.5,baz=234,slow=6.5						
NB2	NORSAR Subarra	63.54	23	P	P	14 15 38.4	-0.7
NB2				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
NOA	NORSAR Array B	63.54	23	P	P	14 15 38.2	-0.9
	comp=Z,2.0nm,0.5s,mb4.4,baz=233,slow=6.7,SNR=8.8						
NOA				LR	LR	14 39 11.6	
	comp=Z,894nm,19.7s,MS5.0,baz=250,slow=32						
WMOK	Wichita Mounta	64.35	305	eP	P	14 15 42.2	-2.7
WMOK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
WMOK				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.0						
WMOK	Wichita Mounta	64.35	305	eP	P	14 15 42.2	-2.7
	comp=Z,8.4nm,0.9s,mb4.8						
WMOK				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
SUMG	Summit	65.17	359	eP	P	14 15 49.8	+0.2
	comp=Z,47nm,1.3s,mb5.4						
ULDT	Uludag	65.55	49	i P	P	14 15 52.2	-0.4
SUW	Suwalki	65.68	33	eP	P	14 15 52.6	-0.5
SUW	Suwalki	65.68	33	eP	P	14 15 52.9	-0.3
CBKS	Cedar Bluff	65.80	309	eP	P	14 15 54.9	+0.7
LSZ	Lusaka	66.50	110	eP	P	14 15 59.5	+0.5
LSZ				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.8						
LSZ	Lusaka	66.50	110	eP	P	14 15 59.5	+0.6
	comp=Z,15nm,1.4s,mb4.8						
AMTX	Amarillo	66.73	305	eP	P	14 15 59.2	-1.0
	comp=Z,16nm,1.0s,mb5.0						
LBTB	Lobatse	67.14	121	eP	P	14 16 03.3	+0.4
LBTB				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.9						
LBTB	Lobatse	67.14	121	eP	P	14 16 03.3	+0.3
	comp=Z,16nm,1.3s,mb4.9						
SGKT	Sivrigoynuk	67.82	49	i P	P	14 16 02.6	-4.4
LTX	Lajitas	67.86	299	eP	P	14 16 06.8	-0.6
LTX				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.1						
LTX	Lajitas	67.86	299	eP	P	14 16 06.8	-0.7
	comp=Z,30nm,1.4s,mb5.1						
TXAR	Lajitas Array	67.86	299	P	P	14 16 06.9	-0.6
	comp=Z,3.2nm,0.5s,mb4.6,baz=105,slow=6.7,SNR=37						
TXAR				LR	LR	14 43 12.9	
	comp=Z,638nm,21.1s,MS4.8,baz=5.0,slow=34						
FCC	Fort Churchill	68.03	331	eP	P	14 16 06.1	-1.8
FCC				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.3						
FCC	Fort Churchill	68.03	331	eP	P	14 16 06.0	-1.9
	comp=Z,32nm,1.0s,mb5.3						
AKASG	Malin Array Be	68.10	38	P	P	14 16 07.4	-1.2
	comp=Z,5.2nm,0.6s,mb4.7,baz=259,slow=5.9,SNR=18						
BOSA	Boshof	68.14	125	eP	P	14 16 08.4	-0.8
BOSA				pmax	pmax		
	comp=Z,51nm,1.5s,mb5.3						
BOSA	Boshof	68.14	125	P	P	14 16 09.2	0.0
	comp=Z,8.8nm,1.0s,mb4.8,baz=311,slow=5.0,SNR=9.4						
BOSA				LR	LR	14 40 21.8	
	comp=Z,807nm,19.2s,MS5.0,baz=281,slow=31						
BOSA	Boshof	68.14	125	eP	P	14 16 08.3	-0.9
	comp=Z,51nm,1.5s,mb5.3						
ELDT	Eldivan	68.84	49	i P	P	14 16 12.3	-1.1
BR131	Keskin Array S	68.89	50	eP	P	14 16 13.4	-0.2
	comp=Z,1.1nm,0.4s,mb4.1						
BR131				LR	LR		
	comp=Z,567nm,22.0s,MS4.8						
BRTR	Keskin Array B	68.89	50	P	P	14 16 13.2	-0.5
	comp=Z,1.6nm,0.7s,mb4.1,baz=244,slow=5.7,SNR=12						
EIL	Elat	68.95	61	eP	P	14 16 15.6	+1.4
	comp=Z,32nm,1.4s,mb5.0						
BALT	Daday	68.97	48	i P	P	14 16 11.1	-3.1
MNTX	Cornudas Mount	69.50	301	eP	P	14 16 16.1	-1.4
	comp=Z,13nm,0.9s,mb4.9						
MNTX				LR	LR		
	comp=Z,709nm,19.0s,MS4.9						
RSSD	Black Hills	69.90	314	P	P	14 16 23.5	+3.8
DAG	Danmarks Havn	69.92	4⇓	eP	P	14 16 20.1	+0.7
DAG				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
DAG	Danmarks Havn	69.92	4⇓	eP	P	14 16 20.1	+0.7
	comp=Z,11nm,1.2s,mb4.7						
DAG	Danmarks Havn	69.92	4⇓	i P	P	14 16 20.1	+0.7
	comp=Z,11nm,1.2s,mb4.7						
FINES	FINESS Array B	69.97	27	P	P	14 16 19.5	-0.3
	comp=Z,3.4nm,0.8s,mb4.3,baz=225,slow=8.1,SNR=9.3						
FINES				LR	LR	14 45 17.1	
	comp=Z,730nm,19.1s,MS5.0,baz=69,slow=34						
FINES	FINESS Array B	69.97	27	P	P	14 16 19.5	-0.3
FINES				LR	LR	14 45 17.1	
SDCO	Great Sand Dun	70.13	307	eP	P	14 16 21.3	0.0
	comp=Z,35nm,1.6s,mb5.0						
KAF	Kangasniemi	70.33	26	ep	P	14 16 19.2	-2.8
ISCO	Idaho Springs	70.45	310	eP	P	14 16 23.4	+0.2
ISCO				pmax	pmax		
	comp=Z,56nm,1.7s,mb5.2						
ISCO	Idaho Springs	70.45	310	eP	P	14 16 23.4	+0.2
	comp=Z,56nm,1.7s,mb5.2						
DGMT	Dagmar	70.77	319	eP	P	14 16 23.9	-1.1
	comp=Z,85nm,1.3s,mb5.5						
FFC	Flin Flon	70.81	326	eP	P	14 16 24.0	-1.1
FFC				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.2						
FFC	Flin Flon	70.81	326	eP	P	14 16 24.0	-1.1
	comp=Z,36nm,1.1s,mb5.2						
GZT	Gaziantep	71.69	53	i P	P	14 16 31.0	+0.3
LAO	LASA Array	71.82	317	eP	P	14 16 31.2	-0.2
	comp=Z,82nm,1.4s,mb5.5						
LAO				LR	LR		
	comp=Z,718nm,21.0s,MS4.9						
RWWY	Rawlins	71.87	311	eP	P	14 16 33.2	+1.4
	comp=Z,66nm,1.6s,mb5.3						
RW3	Ridgway	71.90	308	eP	P	14 16 32.8	+0.8
MALT	Malatya	72.44	52	eP	P	14 16 35.2	0.0
MALT				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6						
MALT	Malatya	72.44	52	eP	P	14 16 35.2	0.0
	comp=Z,11nm,1.4s,mb4.6						
ARCES	ARCESS Array B	73.07	19	P	P	14 16 37.5	-0.7
	comp=Z,3.8nm,0.7s,mb4.5,baz=245,slow=5.9,SNR=27						
ARCES				LR	LR	14 45 55.9	
	comp=Z,349nm,19.2s,MS4.7,baz=241,slow=34						
OBN	Obninsk	73.45	35	eP	P	14 16 43.7	+2.9
OBN				e		14 16 49.2	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
OBN				MLR	MLR		

	comp=Z,300nm,17.0s,MS4.6						
KEV	Kevo	73.64	19	*e*p	P	14 16 40.7	-0.9
PDAR	Pinedale Array	73.72	312	P	P	14 16 42.2	-0.3
	comp=Z,2.8nm,0.6s,mb4.3,baz=97,slow=6.3,SNR=31						
PDAR				LR	LR	14 44 42.7	
	comp=Z,694nm,20.1s,MS4.9,baz=117,slow=32						
BW06	Boulder Array	73.72	312	*e*P	P	14 16 41.9	-0.7
	comp=Z,24nm,1.3s,mb5.0						
TUC	Tucson	74.12	301	*e*P	P	14 16 45.4	+0.3
TUC				pmax	pmax		
	comp=Z,53nm,1.5s,mb5.2						
TUC	Tucson	74.12	301	*e*P	P	14 16 45.4	+0.3
	comp=Z,53nm,1.5s,mb5.2						
MOS	Moscow	74.16	34	*e*P	P	14 16 38.9	-5.9
SRU	San Rafael	74.18	308	*e*P	P	14 16 45.5	+0.2
LOHW	Long Hollow	74.55	313	*e*P	P	14 16 47.1	-0.2
	comp=Z,82nm,1.6s,mb5.4						
SNOW	Snow King Moun	74.65	313	*e*P	P	14 16 49.7	+1.8
	comp=Z,12nm,0.4s,mb5.2						
MOOW	Moose Ponds	74.66	313	*e*P	P	14 16 47.9	-0.1
	comp=Z,19nm,1.3s,mb4.9						
REDW	Red Top Meadow	74.71	313	*e*P	P	14 16 49.3	+1.0
	comp=Z,66nm,1.4s,mb5.4						
TMUT	Trail Mountain	74.72	309	*e*P	P	14 16 48.6	+0.2
YFT	Old Faithful	74.78	314	*e*P	P	14 16 49.4	+0.7
TPAW	Teton Pass	74.79	313	*e*P	P	14 16 48.9	+0.2
	comp=Z,42nm,1.2s,mb5.2						
IMW	Indian Meadow	74.81	313	*e*P	P	14 16 49.1	+0.2
	comp=Z,53nm,1.3s,mb5.3						
DAU	Daniels Canyon	74.82	310	*e*P	P	14 16 49.9	+0.9
AHID	Auburn Hatcher	74.85	312	*e*P	P	14 16 50.5	+1.4
	comp=Z,6.9nm,0.8s,mb4.6						
YMR	Madison River	74.89	314	*e*P	P	14 16 50.1	+0.8
TCUT	Toone Canyon	74.97	310	*e*P	P	14 16 49.7	-0.2
JLU	Jordanelle	74.97	310	*e*P	P	14 16 51.7	+1.8
APA	Apatity	75.05	22	⇑*e*P	P	14 16 52.0	+2.2
APA				*e*S	S	14 26 31.0	+4.6
APA				pmax	pmax		
	comp=Z,58nm,1.5s,mb5.3						
RRI2	Red Ridge	75.05	313	*e*P	P	14 16 49.9	-0.4
	comp=Z,73nm,1.4s,mb5.4						
HWUT	Hardware Ranch	75.12	311	*e*P	P	14 16 49.6	-1.1
	comp=Z,30nm,1.2s,mb5.1						
HWUT				LR	LR		
	comp=Z,994nm,22.0s,MS5.1						
RES	Resolute Bay	75.23	346	*e*P	P	14 16 50.6	-0.1
QLMT	Earthquake Lak	75.23	314	*e*P	P	14 16 52.6	+1.3
BOZ	Bozeman (W)	75.44	315	*e*P	P	14 16 52.3	-0.1
BOZ				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
BOZ				MLR	MLR		
	comp=Z,525nm,20.0s,MS4.8						
BOZ	Bozeman (W)	75.44	315	*e*P	P	14 16 52.3	-0.2
	comp=Z,7.9nm,1.1s,mb4.6						
BOZ				LR	LR		
	comp=Z,525nm,20.0s,MS4.8						
MSU	Marysvale	75.44	308	*e*P	P	14 16 53.5	+0.9
HRY	Holter Researc	75.66	316	*e*P	P	14 16 53.5	-0.2
SPUT	South Promonto	75.77	311	*e*P	P	14 16 54.9	+0.5
HVU	Hansel Valley	76.03	311	*e*P	P	14 16 56.3	+0.4
KIV	Kislovodsk	76.04	47	*e*P	P	14 16 55.8	-0.1
KIV				pmax	pmax		
	comp=N,8.0nm,1.1s						
KIV				pmax	pmax		
	comp=E,12nm,1.1s						
KIV				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
BGU	Big Grassy Mou	76.19	310	*e*P	P	14 16 56.6	-0.2
MCMT	McKenzie Canyo	76.24	314	*e*P	P	14 16 57.7	+0.7
CHMT	Chamberlain Mo	76.65	316	*e*P	P	14 16 59.0	-0.3
ZEI	Tsey	76.86	48	*e*P	P	14 16 58.5	-2.0
ZEI				*i* *PP	pP	14 17 05.8	+2.1
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
MSO	Missoula	77.11	316	*e*P	P	14 17 02.5	+0.7
	comp=Z,12nm,1.4s,mb4.6						
EDM	Edmonton	77.17	323	*e*P	P	14 17 01.7	-0.3
HLID	Hailey	77.31	313	*e*P	P	14 17 03.2	+0.2
	comp=Z,31nm,1.5s,mb5.0						
HLID				LR	LR		
	comp=Z,652nm,20.0s,MS5.0						
NEN	Nelson	77.52	305	*e*P	P	14 17 05.6	+1.3
LDFC	Landfair	77.74	304	*e*P	P	14 17 05.1	-0.4
ELK	Elko	77.86	310	*e*P	P	14 17 06.4	+0.3
ELK				pmax	pmax		
	comp=Z,30nm,1.4s						
ELK				MLR	MLR		
	comp=Z,732nm,20.0s						
ELK	Elko	77.86	310	*e*P	P	14 17 06.4	+0.3
	comp=Z,30nm,1.4s,mb5.0						
ELK				LR	LR		
	comp=Z,732nm,20.0s,MS5.0						
TRCR	Troy Canyon	78.11	308	*e*P	P	14 17 07.9	+0.4
YKA	Yellowknife Ar	78.71	332	P	P	14 17 09.4	-0.9
	comp=Z,4.4nm,0.7s,mb4.5,baz=93,slow=5.4,SNR=27						
YKA				LR	LR	14 48 57.2	
	comp=Z,562nm,18.0s,MS4.9,baz=90,slow=33						
YKW3	Yellowknife Ar	78.72	332	*e*P	P	14 17 09.1	-1.2
NEW	Newport	79.32	318	*e*P	P	14 17 14.0	+0.1
NEW				pmax	pmax		
	comp=Z,43nm,1.9s						
NEW				MLR	MLR		
	comp=Z,704nm,21.0s						
NEW	Newport	79.32	318	*e*P	P	14 17 14.0	+0.1
	comp=Z,43nm,1.9s,mb5.0						
NEW				LR	LR		
	comp=Z,704nm,21.0s,MS5.0						
BMN	Battle Mountai	79.37	310	*e*P	P	14 17 14.8	+0.5
BMN				pmax	pmax		
	comp=Z,44nm,1.4s,mb5.2						
BMN	Battle Mountai	79.37	310	*e*P	P	14 17 14.8	+0.5
	comp=Z,44nm,1.4s,mb5.2						
BMO	Blue Mountains	79.41	314	*e*P	P	14 17 15.5	+1.0
BMO				pmax	pmax		
	comp=Z,29nm,1.7s,mb4.9						
BMO				MLR	MLR		
	comp=Z,483nm,19.0s,MS4.9						
BMO	Blue Mountains	79.41	314	*e*P	P	14 17 15.5	+1.0
	comp=Z,29nm,1.7s,mb4.9						
BMO				LR	LR		
	comp=Z,483nm,19.0s,MS4.9						
DAC	Darwin (Calif)	79.74	305	*e*P	P	14 17 17.6	+1.1
DAC				pmax	pmax		
	comp=Z,34nm,1.4s,mb5.1						
DAC	Darwin (Calif)	79.74	305	*e*P	P	14 17 17.6	+1.1
	comp=Z,34nm,1.4s,mb5.1						
VNA1	Neumayer--Stat	79.92	171	P	P	14 17 19.9	+3.2
VNA1	Neumayer--Stat	79.92	171		P	14 17 24.6	+7.9
VNA1	Neumayer--Stat	79.92	171		P	14 17 26.8	+10
MNV	Mina	80.13	308	*e*P	P	14 17 19.0	+0.5
MNV				pmax	pmax		
	comp=Z,34nm,1.6s,mb5.0						
MNV	Mina	80.13	308	*e*P	P	14 17 19.0	+0.6
	comp=Z,34nm,1.6s,mb5.0						
VNA3	Neumayer Olymp	80.25	172	P	P	14 17 21.5	+3.1
VNA3	Neumayer Olymp	80.25	172		P	14 17 25.6	+7.2
VNA3	Neumayer Olymp	80.25	172		P	14 17 28.1	+10
NVAR	Mina Array Bea	80.25	308	P	P	14 17 20.1	+1.0
	comp=Z,1.8nm,0.6s,mb4.2,baz=91,slow=6.0,SNR=17						
VNA2	Neumayer--Watz	80.29	171	P	P	14 17 18.0	-0.7
VNA2	Neumayer--Watz	80.29	171		P	14 17 22.3	+3.6
VNA2	Neumayer--Watz	80.29	171	⇑*i*	P	14 17 28.5	+10
MTUM	Tungsten Hills	80.49	307	*e*P	P	14 17 21.0	+0.6
OMM	Old Mammoth Mi	80.82	307	*e*P	P	14 17 23.5	+1.4
MOD	Modoc	81.66	311	*e*P	P	14 17 27.0	+0.6
	comp=Z,71nm,1.6s,mb5.3						
SNAA	Sanae	81.68	170	P	P	14 17 26.0	+0.1
SNAA	Sanae	81.68	170		P	14 17 31.9	+6.0
SNAA	Sanae	81.68	170		P	14 17 35.1	+9.2
BEKR	Beckwourth	81.79	309	*e*P	P	14 17 27.7	+0.5
	comp=Z,31nm,1.3s,mb5.1						
CMB	Columbia Colle	81.90	307	*e*P	P	14 17 29.4	+1.6
CMB				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
CMB				MLR	MLR		
	comp=Z,651nm,20.0s,MS5.0						
CMB	Columbia Colle	81.90	307	*e*P	P	14 17 29.4	+1.6
	comp=Z,7.7nm,1.1s,mb4.5						
CMB				LR	LR		
	comp=Z,651nm,20.0s,MS5.0						
PGC	Sidney	83.52	318	*e*P	P	14 17 36.9	+1.0
	comp=Z,86nm,1.4s,mb5.7						
SOKR	Solikamsk	84.59	31	⇑*i*P	P	14 17 45.5	+4.4
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,840nm,19.0s,MS5.1						
ARU	Arti	85.87	34	*e*P	P	14 17 48.1	+0.6
ARU				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.2						
ARU				MLR	MLR		
	comp=Z,133nm,20.0s,MS4.3						
ARU	Arti	85.87	34	*e*P	P	14 17 48.1	+0.6
	comp=Z,22nm,1.3s,mb5.2						
ARU				LR	LR		
	comp=Z,133nm,20.0s,MS4.3						
INK	Inuvik	86.36	338	*e*P	P	14 17 51.6	+1.9
INK				pmax	pmax		
	comp=Z,21nm,1.3s						
INK	Inuvik	86.36	338	*e*P	P	14 17 51.6	+1.9
	comp=Z,21nm,1.3s,mb5.2						
DLBC	Dease Lake	86.42	328	*e*P	P	14 17 52.0	+1.8
SYO	Syowa Base	91.36	160	⇑pP	pP	14 18 15.2	-1.4
ZRNK	Zerenda	92.49	36	*e*P	P	14 18 20.0	+1.1
ZRNK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.9						
ZRNK	Zerenda	92.49	36	*e*P	P	14 18 20.0	+1.2
	comp=Z,8.0nm,1.4s,mb4.9						
ILAR	Eielson Array	92.49	337	P	P	14 18 20.6	+1.9
	comp=Z,2.6nm,1.0s,mb4.5,baz=51,slow=4.2,SNR=20						
ILAR				LR	LR	14 57 52.4	
	comp=Z,733nm,18.7s,MS5.2,baz=81,slow=34						
IMA	Indian Mountai	94.47	339	*e*P	P	14 18 30.7	+3.0
	comp=Z,0.4nm,0.3s,mb4.3						
MAW	Mawson	99.77	157	LR	LR	14 54 52.5	
	comp=Z,281nm,18.8s,MS4.8,baz=137,slow=30						
TAOE	Nuku Hiva Isla	106.03	263	*e*P	Pdif	14 20 03.6	+43
	comp=Z,3µm,43.3s						
TAOE				*e*PP	PP	14 24 01.9	+15
	comp=Z,3µm,32.2s						
TAOE				*e*S	tx	14 32 53.2	
	comp=Z,5µm,41.7s						
TAOE				*e*SS	SS	14 39 11.2	+26
	comp=Z,7µm,46.4s						
TAOE				*e*LR	LR	14 55 10.7	
	comp=Z,539nm,25.5s						
WMQ	Urumqi	107.43	40	*e*PDIF	Pdif	14 19 28.0	+1.7
WMQ				PP	PP	14 23 58.8	+1.7
WMQ				PP	PP		
	comp=Z,90nm,4.6s						
WMQ				LR	LR		
	comp=N,530nm,24.0s,MS5.2						
WMQ				LR	LR		
	comp=E,490nm,22.4s,MS5.2						
WMQ				LR	LR		
	comp=Z,540nm,22.4s,MS5.0						
TBI	Tubuai	115.35	248	*e*S	tx	14 32 38.8	
	comp=Z,191nm,23.0s						
PPT	Papeete	115.61	254	*e*S	tx	14 32 13.1	
	comp=Z,236nm,23.5s						
PPT				*e*LR	LR	15 00 12.1	
	comp=Z,330nm,23.2s,baz=82						
LZH	Lanzhou	122.00	39	*e*PKP	PKPdf	14 23 58.5	-6.2
LZH				XPKP		14 24 03.5	
LZH				PP	PP	14 25 38.0	-2.3
LZH				PP	PP		
	comp=Z,180nm,9.1s						
LZH				LR	LR		
	comp=N,800nm,19.0s						
LZH				LR	LR		
	comp=Z,980nm,19.4s,MS5.5						
LZH	Lanzhou	122.00	39	*e*PKP	PKPdf	14 23 58.4	-6.3
LZH				sPKP		14 24 03.5	
LZH				PP	PP	14 25 38.0	-2.3
LZH				SKS	SKS	14 31 05.6	+0.1
LZH				SKKS		14 32 25.0	
CN2	Changchun	126.06	17	*e*PKP	PKPdf	14 24 06.8	-5.6
CN2				PP	PP	14 26 04.8	-2.7
CN2				PP	PP		
	comp=Z,200nm,14.0s						
CN2				LR	LR		
	comp=N,300nm,21.0s,MS5.1						
CN2				LR	LR		
	comp=E,300nm,21.0s,MS5.1						
CN2				LR	LR		
	comp=Z,400nm,23.0s,MS5.0						
KMI	Kunming	127.68	50	PKP	PKPdf	14 24 13.5	-2.6
KMI				PP	PP	14 26 17.5	-0.9
KMI				SS	SS	14 43 29.8	+2.8
KMI				PP	PP		
	comp=Z,30nm,18.4s						
KMI				LR	LR		
	comp=N,210nm,21.0s,MS4.9						
KMI				LR	LR		
	comp=E,170nm,21.0s,MS4.9						
KMI				LR	LR		
	comp=Z,230nm,24.1s,MS4.8						
KMI	Kunming	127.68	50	PKP	PKPdf	14 24 13.4	-2.7
KMI				PP	PP	14 26 17.6	-0.8
KMI				SS	SS	14 43 29.8	+2.8
KMI				LR	LR		
	comp=Z,240nm,24.1s,MS4.8						
CMAR	Chiang Mai Arr	127.80	60	PKP	PKPdf	14 24 16.8	+0.4
	comp=Z,1.8nm,1.1s,baz=284,slow=3.7,SNR=4.7						
NJ2	Nanjing	133.51	31	*e*PKP	PKPdf	14 24 21.3	-5.6
NJ2				PP	PP	14 26 55.0	-1.1
NJ2				SKKS		14 33 43.0	
NJ2				SS	SS	14 44 35.0	-3.7
NJ2				PP	PP		
	comp=Z,570nm,6.2s						
NJ2				LR	LR		
	comp=N,390nm,32.0s,MS5.1						
NJ2				LR	LR		
	comp=E,370nm,29.0s,MS5.1						
NJ2				LR	LR		
	comp=Z,150nm,32.8s,MS4.5						
SSE	Sheshan	135.46	30	*e*PKP	PKPdf	14 24 30.3	-0.3
SSE				PP	PP	14 27 10.0	+1.7
SSE				PP	PP		
	comp=Z,110nm,3.9s						
SSE				LR	LR		
	comp=N,270nm,18.6s,MS5.1						
SSE				LR	LR		
	comp=E,150nm,18.6s,MS5.1						
SSE				LR	LR		
	comp=Z,330nm,19.0s,MS5.1						
SSE	Sheshan	135.46	30	*e*PKP	PKPdf	14 24 30.2	-0.4
SSE				PP	PP	14 27 10.0	+1.7
SSE				SS	SS	14 45 14.2	+12
SSE				LR	LR		
	comp=Z,330nm,19.0s,MS5.1						
KSM	Kuching	144.26	77	*e*P	PKPbc	14 24 42.0	-1.3
KKM	Kota Kinabalu	148.31	66	*e*PKP	PKPdf	14 24 59.4	+5.7
TOO	Toolangi	149.94	181	*e*PKP	PKPdf	14 24 59.2	+3.7
	comp=Z,10.0nm,1.1s						
MBWA	Marble Bar	151.98	122	*e*PKPab	PKPab	14 25 13.5	-0.8
WRAB	Tennant Creek	163.78	141	*e*PKIKP	PKPdf	14 25 11.8	-1.5

NEIC ***27*** *14:21:24.5±0.9, 36.41N×69.81E, h180^{km}, mb4.4/5, Error ellipse: s-maj=18.9km s-min=9.1km az=52.0*
IDC ***27*** *14:21:27.3±38.0, 36.08N×70.60E, h217^{km}±234^{km}, mb3.0/2, mb1 3.1/4, mb1mx2.8/20, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=319.6km s-min=106.2km az=24.0*
NNC ***27*** *14:21:37.3±6.3, 37.39N×69.99E, mpv3.5, Error ellipse: s-maj=52.6km s-min=48.9km az=88.0*
ISC 27 14:21:28.1±0.7**, 36.43N**±0.04×**70.2E**±0.1**, h230**^{km}±8^{km}**, n32,** σ1^{s}05/38**, mb3.1**/1**, 5C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.96	151	⇓P	P	14 22 20.1	+0.8
CEP				S	S	14 22 59.0	-0.1
CHCP	Chirah Chowk	3.75	137	P	P	14 22 29.4	+0.9
THW	Thamme Wali	3.84	160	⇑P	P	14 22 30.0	+0.3
SBDP	Sheikh Budin	4.15	173	⇓P	P	14 22 33.6	+0.2
DRP	Derazinda	4.67	180	P	P	14 22 40.5	+0.7
THN	Thein Dam	6.07	129	*e*P	P	14 22 57.1	-0.2
THN				*e*S	S	14 24 07.0	+0.1
AML	Almayashu	6.32	24	P	P	14 23 00.3	-0.1
	SNR=27						
KK31	Karatay Array	6.67	2	Pn	P	14 23 04.5	-0.6
	1.8nm,0.4s,baz=180,slow=12,SNR=31						
KK31				⇑Pg	P	14 23 21.1	+16
	2.5nm,0.2s						
KK31				⇑Sn	S	14 24 10.4	-10
	16nm,0.9s,baz=163,slow=14,SNR=4.4						
KK31				⇓Lg		14 24 37.4	
	baz=171,slow=27						
UCH	Uchtor	6.70	29	P	P	14 23 05.9	+0.5
	SNR=12						
EKS2	Erkin-Say	6.82	23	P	P	14 23 07.2	+0.3
	SNR=9.6						
KZA	Kyzart	6.88	33	P	P	14 23 07.6	-0.1
	SNR=5.8						
AAK	Ala-Archa	7.04	27	⇑P	P	14 23 10.1	+0.4
	2.1nm,0.5s						
AAK				⇑S	S	14 24 26.3	-2.8
	11nm,0.7s						
ULHL	Ulahol	7.47	37	P	P	14 23 15.5	+0.2
	SNR=7.0						
SMLA	Simla	7.86	130	*i* x	x	14 23 16.8	
SMLA				*i* x	x	14 24 40.3	
KHET	Khetri	9.59	149	*e*P	P	14 23 40.6	-1.9
KHET				*e*S	S	14 25 22.5	-5.3
KHET				AML	AML	14 25 26.0	
	comp=E,17nm,0.4s						
KHET				AML	AML	14 25 26.2	
	comp=N,11nm,0.2s						
JOSI	Joshimath	9.77	124	AML	AML	14 23 33.5	
	comp=N,124nm,0.4s						
JOSI				AML	AML	14 23 36.8	
	comp=E,114nm,1.0s						
KUDL	Kundal	9.83	145	*e*P	P	14 23 44.8	-0.7
KUDL				*e*S	S	14 25 24.2	-9.1
AYAN	Aya Nagar	9.85	142	*e*S	S	14 25 26.9	-6.9
SONA	Sohna	10.02	142	*e*P	P	14 23 46.1	-1.8
SONA				*e*S	S	14 25 34.7	-3.1
SONA				AML	AML	14 25 34.8	
	comp=N,9.4nm,0.4s						
SONA				AML	AML	14 25 35.6	
	comp=E,19nm,0.5s						
MK31	Makanchi Array	13.74	37	P	P	14 24 33.4	-1.2
	comp=E,0.8nm,0.6s,baz=200,slow=6.5,SNR=14						
MKAR	Makanchi Array	13.74	37	P	P	14 24 34.1	-0.5
	comp=E,0.2nm,0.3s,baz=227,slow=14,SNR=8.0						
KOLN	Koldanda	14.27	123	*e*P	P	14 24 41.1	-0.1
	comp=E,9.4nm,0.4s						
GKN	Gorkha	14.83	120	*e*P	P	14 24 48.2	+0.1
	comp=E,19nm,0.4s						
DMN	Daman	15.40	121	*e*P	P	14 24 55.6	+0.5
	comp=E,15nm,0.4s						
KKN	Kakani	15.41	120	*e*P	P	14 24 55.3	+0.1
	comp=E,18nm,0.6s						
PKI	Pulchoki	15.63	120	*e*P	P	14 25 00.1	+2.2
GUN	Gumba	15.76	118	*e*P	P	14 25 00.9	+1.5
	comp=E,20nm,0.5s						
BVAR	Borovoye Array	16.60	0	P	P	14 25 10.2	+1.3
	comp=E,0.2nm,0.3s,baz=172,slow=10,SNR=6.4						
ZAL	Zalesovo	20.25	26	P	P	14 25 47.7	+0.9
	comp=E,1.1nm,0.3s,baz=228,slow=10,SNR=3.4						
ZAL	Zalesovo	20.25	26	P	P	14 25 47.7	+0.9
KIV	Kislovodsk	22.24	298	P	P	14 26 04.3	-2.0
ILAR	Eielson Array	75.03	16	P	P	14 32 45.9	+0.6
	comp=E,0.3nm,0.6s,mb3.1,baz=342,slow=3.9,SNR=4.4						

NIED ***27*** *14:39:00, 33.80N×131.50E, h11^{km}, Mw3.6 Best double couple: M$_0$2.96×10^{14} NP1:φ$_s$112°, δ87°, λ12°. NP2:φ$_s$22°, δ78°, λ177°.*
JMA 27 14:39:50.1, 33.76N×131.47E, h17^{km}±1^{km}**, M3.9, 1C-1D Broadband fault plane solution: P waves. NP1:**φ$_s$19°, δ72°, λ172°. **NP2:**φ$_s$111°, δ82°, λ18°. **Principal axes:** T Plg18°, Azm336°; N Plg71°, Azm134°; P Plg7°, Azm244°;
Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKI	Kunimi	0.15	147	⇑P	Pb	14 39 54.3	0.0
JKI				S	Sb	14 39 57.1	-0.1
JKD	Kudamatsu	0.45	49	⇓P	Pb	14 39 59.0	-0.1
JKD				S	Sb	14 40 05.0	-0.2
OIT2	Oita 2	0.48	182	P	Pb	14 39 59.8	+0.1
OIT2				S	Sb	14 40 06.4	+0.1

MAN 27 14:52:14.9, 8.50N×122.06E, h30^{km}, mb3.9, ML2.7, MS2.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPIL	Ipil	0.88	144	*e*P	Pn	14 52 30.8	-0.5
IPIL				*e*S	Sb	14 52 41.2	-1.6
SNPH	Sibulan	1.43	54	⇑*i*P	Pn	14 52 38.7	-0.6
SNPH				*i* S	Sn	14 52 57.1	0.0
PAGZ	Pagadian	1.47	116	*e*P	Pn	14 52 39.6	-0.1
PAGZ				*e*S	Sn	14 52 58.1	+0.1
GUIM	Jordan	2.17	14	*e*P	Pn	14 52 49.6	-0.2
GUIM				*e*S	Sn	14 53 14.0	-2.0
CUYO	Cuyo Island	2.55	336	*e*P	Pn	14 52 55.2	0.0
ENPP	El Nido	3.73	316	*e*P	Pn	14 53 11.7	-0.4
ENPP				*e*S	Sn	14 53 51.3	-4.2

BJI ***27*** *14:55:38.8, 27.43N×140.01E, h509^{km}, mB4.7, mb4.5*
JMA ***27*** *14:55:42.3±0.2, 27.89N×140.09E, h512^{km}±4^{km}, M4.5*
IDC ***27*** *14:55:42.0±0.5, 27.84N×139.92E, h496^{km}±7^{km}, mb3.5/13, mb1 3.6/18, mb1mx3.4/28, mbtmp4.4/18, Error ellipse: s-maj=19.2km s-min=10.4km az=77.0*
NEIC ***27*** *14:55:43.2±0.7, 27.86N×139.78E, h509^{km}±8^{km}, mb4.2/13, Error ellipse: s-maj=10.8km s-min=7.0km az=85.0*
ISC 27 14:55:41.7±0.3**, 27.79N**±0.04×**139.88E**±0.09**, h508**^{km}±5^{km}**, n61,** σ1^{s}05/71**, mb3.9**/23**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.16	108	P	P	14 56 48.8	-0.1
	265nm,0.3s,baz=323,slow=1.3,SNR=286						
CBIJ				S	S	14 57 40.4	-1.7
	400nm,0.3s,baz=302,slow=22,SNR=21						
CBIJ	Chichi jima	2.16	108	P	P	14 56 48.9	0.0
CBIJ				*e*S	S	14 57 41.7	-0.3
JHHJ	Haha-jima-NKT	2.35	119	P	P	14 56 50.4	+0.5
JHHJ				*e*S	S	14 57 43.9	0.0
JHJ2	Mitsune	5.30	359	P	P	14 57 12.7	0.0
JHJ2				*e*S	S	14 58 24.1	-0.6
JHJ	Hachijo jima 2	5.31	359	P	P	14 57 11.7	-1.1
	13nm,0.3s,baz=109,slow=20,SNR=3.2						
JWZ	Kozaga	6.75	329	P	P	14 57 27.4	+0.8
BSO1	Boso 1	6.90	8	P	P	14 57 28.2	+0.1
BSO1				*e*S	S	14 58 51.4	-1.2
JIE	Ise	7.12	338	P	P	14 57 31.7	+1.4
JIE				*e*S	S	14 58 58.5	+1.9
JOD2	Odawara 2	7.48	355	P	P	14 57 33.9	-0.1
JOD2				*e*S	S	14 59 03.1	-0.1
JTO	Tosashimizu	7.93	311	P	P	14 57 40.0	+1.3
JRY	Ryogami san	8.24	354	P	P	14 57 41.1	-0.8
JRY				*e*S	S	14 59 17.2	-0.2
MJAR	Matsushiro Arr	8.84	351	P	P	14 57 46.7	-1.5
	4.2nm,0.3s,baz=178,slow=12,SNR=24						
MAJO	Matsushiro	8.84	351	*e*Pn	P	14 57 47.3	-0.9
	56nm,0.8s						
MAT	Matsushiro	8.84	351	*e*P	P	14 57 46.0	-2.1
	27nm,0.8s						
MAT				*e*S	S	14 59 27.0	-1.7
MAT	Matsushiro	8.84	351	P	P	14 57 46.1	-2.0
MAT				S	S	14 59 26.8	-1.9
JHS	Saijyo	9.22	323	P	P	14 57 53.5	+1.4
JNU	Nakatsue	9.41	307	P	P	14 57 54.8	+0.7
	1.1nm,0.3s,baz=94,slow=11,SNR=9.8						
JMK	Ichinoseki	11.19	5	P	P	14 58 13.2	+0.6
JMK				S	S	15 00 15.6	+2.0
JOT	Ohata	13.59	4	P	P	14 58 38.0	+0.5
GUMO	Guam	14.88	161	P	P	14 58 53.7	+2.9
	46nm,0.6s						
ASAJ	Asahikawa	16.44	7	P	P	14 59 08.0	+2.0
	0.7nm,0.3s,baz=140,slow=16,SNR=5.6						
YHNB	Yeheng	16.89	264	P	P	14 59 13.0	+2.3
MDJ	Mudanjiang	18.70	337	P	P	14 59 29.3	+1.1
MDJ				AMB	AMB		
	comp=Z,40nm,4.9s						
HHC	Hu-ho-hao-te	26.64	307	*e*P	P	15 00 40.0	-0.6
HHC				S	S	15 04 43.8	+3.9
HHC				AMB	AMB		
	comp=Z,50nm,4.5s						
GTA	Gaotai	35.06	300	*e*P	P	15 01 51.5	-1.1
GTA				AP	pP	15 03 22.8	-0.1
GTA				PCP	PcP	15 04 13.3	+2.3
GTA				XP	sP	15 04 16.8	-3.4
GTA				SCP		15 07 07.3	
GTA				SCS	ScS	15 11 12.0	-0.2
FX1	Attu Island--F	35.14	35	*e*P	P	15 01 55.4	+2.4
PMG	Port Moresby	37.64	168	PcP	PcP	15 04 20.3	+1.2

	comp=Z,4.9nm,0.8s,baz=255,slow=3.6,SNR=3.7						
CMAR	**Chiang Mai Arr**	**38.63**	**265**	P	**P**	**15 02 22.8**	**+0.7**
	comp=Z,0.8nm,0.4s,mb3.5,baz=63,slow=6.1,SNR=5.0						
KULM	**Kulim**	**43.46**	**246**	*e*P	**P**	**15 03 01.3**	**+0.4**
WMQ	**Urumqi**	**44.51**	**305**	*e*P	**P**	**15 03 09.3**	**+0.6**
GUN	**Gumba**	**47.41**	**283**	*e*P	**P**	**15 03 32.0**	**+0.8**
	comp=Z,16nm,0.4s,mb4.8						
ZAL	**Zalesovo**	**47.63**	**319**	P	**P**	**15 03 32.7**	**+0.2**
	comp=Z,0.7nm,0.4s,mb3.4,baz=326,slow=13,SNR=2.7						
ZAL				PcP	PcP	15 04 52.1	-0.5
	comp=Z,1.1nm,0.3s,baz=313,slow=8.2,SNR=3.1						
ZAL	**Zalesovo**	**47.63**	**319**	P	**P**	**15 03 32.7**	**+0.2**
ZAL				PcP	PcP	15 04 52.1	-0.5
FITZ	**Fitzroy Crossi**	**47.66**	**198**	P	**P**	**15 03 33.3**	**+0.1**
	comp=Z,5.9nm,0.6s,mb4.1,baz=4.4,slow=8.5,SNR=12						
WRAB	**Tennant Creek**	**47.74**	**187**	*e*P	**P**	**15 03 33.3**	**-0.6**
	comp=Z,4.2nm,0.5s,mb4.0						
WB2	**Warramunga Arr**	**47.75**	**187**	*e*P	**P**	**15 03 33.7**	**-0.2**
WRA	**Warramunga Arr**	**47.76**	**187**	P	**P**	**15 03 33.7**	**-0.3**
	comp=Z,3.6nm,0.4s,mb4.1,baz=2.5,slow=7.6,SNR=165						
WRA				PcP	PcP	15 04 54.0	+0.4
	comp=Z,1.3nm,0.7s,baz=359,slow=3.7,SNR=7.3						
PKI	**Pulchoki**	**47.89**	**283**	*e*P	**P**	**15 03 33.7**	**-1.2**
KKN	**Kakani**	**47.95**	**283**	*e*P	**P**	**15 03 34.6**	**-0.7**
	comp=Z,10nm,0.6s,mb4.3						
DMN	**Daman**	**48.14**	**283**	*e*P	**P**	**15 03 35.2**	**-1.6**
	comp=Z,19nm,0.8s,mb4.5						
MKAR	**Makanchi Array**	**48.45**	**309**	P	**P**	**15 03 38.5**	**-0.3**
	comp=Z,0.6nm,0.3s,mb3.4,baz=88,slow=10,SNR=15						
MKAR				PcP	PcP	15 04 55.2	-0.5
	comp=Z,1.0nm,0.8s,baz=90,slow=6.1,SNR=6.4						
MKAR				ScP		15 08 00.3	
	comp=Z,0.4nm,0.6s,baz=90,slow=2.9,SNR=4.3						
GKN	**Gorkha**	**48.45**	**284**	*e*P	**P**	**15 03 38.4**	**-0.7**
KOLN	**Koldanda**	**49.40**	**284**	*e*P	**P**	**15 03 42.2**	**-4.0**
MBWA	**Marble Bar**	**52.42**	**204**	*e*P	**P**	**15 04 07.6**	**-0.8**
	comp=Z,4.5nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**56.14**	**317**	P	**P**	**15 04 33.8**	**-0.4**
	comp=Z,7.0nm,0.4s,mb4.3,baz=88,slow=6.9,SNR=72						
BVAR				ScP		15 08 33.5	
	comp=Z,0.4nm,0.6s,baz=68,slow=7.8,SNR=3.7						
ZRNK	**Zerenda**	**56.98**	**317**	*e*P	**P**	**15 04 39.1**	**-0.9**
	comp=Z,1.7nm,0.5s,mb3.6						
FORT	**Forrest**	**59.33**	**192**	*e*P	**P**	**15 04 56.1**	**0.0**
	comp=Z,8.3nm,0.5s,mb4.3						
NWAO	**Narrogin (SRO)**	**64.11**	**201**	P	**P**	**15 05 27.2**	**0.0**
	comp=Z,5.0nm,0.9s,mb4.0,baz=18,slow=7.7,SNR=5.2						
KEV	**Kevo**	**71.64**	**340**	*e*p	**P**	**15 06 10.5**	**-1.8**
	comp=Z,5.1nm,0.9s,mb4.0						
ARCES	**ARCESS Array B**	**72.21**	**340**	P	**P**	**15 06 15.8**	**+0.3**
	comp=Z,2.2nm,0.7s,mb3.8,baz=72,slow=7.7,SNR=13						
ARCES	**ARCESS Array B**	**72.21**	**340**	P	**P**	**15 06 15.8**	**+0.2**
KAF	**Kangasniemi**	**75.95**	**334**	*e*p	**P**	**15 06 36.0**	**-0.6**
	comp=Z,2.3nm,0.4s,mb4.1,baz=55,slow=5.2						
FINES	**FINESS Array B**	**76.41**	**333**	P	**P**	**15 06 39.1**	**0.0**
	comp=Z,2.9nm,0.3s,mb4.2,baz=68,slow=5.0,SNR=45						
AKASG	**Malin Array Be**	**80.84**	**323**	P	**P**	**15 07 02.5**	**-0.3**
	comp=Z,0.4nm,0.3s,mb3.4,baz=45,slow=5.7,SNR=5.4						
NVAR	**Mina Array Bea**	**81.69**	**51**	P	**P**	**15 07 10.0**	**+2.6**
	comp=Z,0.2nm,0.3s,mb3.1,baz=299,slow=6.3,SNR=4.5						
NVAR	**Mina Array Bea**	**81.69**	**51**	P	**P**	**15 07 10.0**	**+2.6**
HFS	**Hagfors**	**81.97**	**336**	P	**P**	**15 07 08.1**	**-0.3**
	comp=Z,1.1nm,0.4s,mb3.7,baz=90,slow=3.0,SNR=9.6						
NB2	**NORSAR Subarra**	**82.20**	**337**	P	**P**	**15 07 09.0**	**-0.5**
	comp=Z,2.9nm,1.0s,mb3.8,baz=44,slow=5.3						
NOA	**NORSAR Array B**	**82.20**	**337**	P	**P**	**15 07 09.0**	**-0.5**
	comp=Z,2.0nm,0.6s,mb3.8,baz=46,slow=4.9,SNR=5.2						
BR131	**Keskin Array S**	**84.02**	**312**	*e*P	**P**	**15 07 19.5**	**+0.4**
	comp=Z,2.0nm,0.4s,mb4.0						
PLCA	**Paso Flores**	**151.88**	**125**	PKPbc	PKPdf	15 14 41.3	+10
	comp=Z,1.0nm,0.4s,baz=270,slow=4.0,SNR=3.5						

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*IDC **27** 15:04:31.8±1.6, 0.96N×127.64E, mb3.7/4, mb1 3.9/4, mb1mx3.7/16, mbtmp3.8/4, Error ellipse: s-maj=136.5km s-min=26.5km az=68.0*

NEIC 27 15:04:45.3±0.5**, 1.03N×128.30E, h130**^{km}**, mb3.9**/3**, Error ellipse: s-maj=44.0km s-min=8.8km az=71.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**21.66**	**164**	*e*P	P	15 09 25.7	-0.7
	5.7nm,0.7s						
WRA	**Warramunga Arr**	**21.66**	**164**	P	P	15 09 25.5	-1.0
	4.4nm,0.8s,baz=342,slow=11,SNR=18						
WB2	**Warramunga Arr**	**21.67**	**164**	*e*P	P	15 09 25.7	-0.8
ULN	**Ulaanbaatar**	**50.16**	**341**	*e*P	P	15 13 27.2	-2.3
	1.2nm,0.6s						
SONM	**Songino Array**	**50.34**	**341**	P	P	15 13 29.5	-1.4
	0.6nm,0.8s,baz=162,slow=7.8,SNR=4.2						
MKAR	**Makanchi Array**	**60.66**	**325**	P	P	15 14 42.7	-2.3
	1.0nm,0.6s,baz=116,slow=8.4,SNR=11						
BVAR	**Borovoye Array**	**70.43**	**327**	P	P	15 15 45.9	-1.4
	0.3nm,0.4s,baz=90,slow=2.9,SNR=3.5						
ZRNK	**Zerenda**	**71.15**	**327**	*e*P	P	15 15 49.3	-2.4
	0.9nm,0.7s						
BPBC	**Brooks Peninsu**	**98.11**	**39**	P	P	15 18 07.4	-1.0

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*ATH **27** 15:18:00.9, 39.37N×22.47E, h107^{km}±1^{km}*
*NEIC **27** 15:18:01.7, 39.38N×22.47E, h97^{km}, After ATH.*
*CSEM **27** 15:18:01.0±0.2, 39.42N×22.46E, h90^{km}±2^{km}, ML3.3, Error ellipse: s-maj=4.0km s-min=1.9km az=168.0*
*THE **27** 15:18:02.3, 39.41N×22.48E, h20^{km}, ML3.3*
*HLW **27** 15:18:02.0, 39.32N×23.46E, h33^{km}, Mb3.6*

ISC 27 15:17:59.2±0.5**, 39.32N**±0.03×**22.50E**±0.04**, h117**^{km}±4^{km}**, n42,**σ1§**14**/65**, 3C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGG	**Agios Georgios**	**0.33**	**204**	*e*Pg	**P**	**15 18 16.9**	**+0.8**
AGG				*e*Sg	**S**	**15 18 27.8**	**-1.0**
XOR	**Xorichti**	**0.54**	**85**	*e*Pg	**P**	**15 18 18.4**	**+1.1**
XOR				*e*Sg	**S**	**15 18 29.6**	**-1.4**
NEO	**Neokhori**	**0.56**	**91**	*e*P	**P**	**15 18 18.6**	**+1.2**
NEO				*e*S	**S**	**15 18 31.5**	**+0.3**
NEO	**Neokhori**	**0.56**	**91**	*e*P	**P**	**15 18 18.6**	**+1.2**
NEO				*e*S	**S**	**15 18 30.7**	**-0.5**
EVR	**Evrytania**	**0.67**	**233**	*e*P	**P**	**15 18 19.8**	**+1.6**
EVR				*e*S	**S**	**15 18 33.0**	**+0.4**
EVR	**Evrytania**	**0.67**	**233**	*e*P	**P**	**15 18 19.8**	**+1.6**
EVR				*e*S	**S**	**15 18 32.0**	**-0.6**
LKR	**Lokris**	**0.77**	**150**	*e*P	**P**	**15 18 20.7**	**+1.6**
LIT	**Litokhoron**	**0.78**	**359**	*e*Pg	**P**	**15 18 19.3**	**+0.2**
LIT				*e*Sg	**S**	**15 18 31.7**	**-2.5**
AOS	**Alonnisos**	**1.08**	**97**	*e*Pg	**P**	**15 18 23.6**	**+1.4**
AOS				*e*Sg	**S**	**15 18 38.4**	**-0.9**
MEV	**Metsovon**	**1.09**	**296**	*e*Pg	**P**	**15 18 23.4**	**+1.2**
MEV				*e*Sg	**S**	**15 18 39.2**	**-0.3**
PAIG	**Paliouri**	**1.09**	**56**	*e*Pg	**P**	**15 18 23.2**	**+0.9**
PAIG				*e*Sg	**S**	**15 18 38.3**	**-1.3**
KZN	**Kozani**	**1.14**	**331**	*e*P	**P**	**15 18 23.4**	**+0.6**
KZN				*e*S	**S**	**15 18 40.0**	**-0.4**
KZN	**Kozani**	**1.14**	**331**	*e*P	**P**	**15 18 23.4**	**+0.6**
KZN				*e*S	**S**	**15 18 39.0**	**-1.4**
PLG	**Polygyros**	**1.28**	**34**	*e*P	**P**	**15 18 25.2**	**+0.8**
JAN	**Janina**	**1.32**	**285**	*e*P	**P**	**15 18 25.5**	**+0.6**
JAN				*e*S	**S**	**15 18 43.5**	**-0.8**
JAN	**Janina**	**1.32**	**285**	*e*P	**P**	**15 18 27.0**	**+2.1**
JAN				*e*S	**S**	**15 18 44.0**	**-0.3**
THE	**Thessaloniki**	**1.36**	**15**	*e*Pg	**P**	**15 18 25.1**	**-0.2**
OUR	**Ouranopolis**	**1.53**	**48**	*e*Pg	**P**	**15 18 28.2**	**+1.0**
LKD	**Levkas**	**1.56**	**248**	*e*Pg	**P**	**15 18 29.0**	**+1.3**
LKD				*e*Sg	**S**	**15 18 49.1**	**-0.1**
GRG	**Griva**	**1.64**	**357**	*e*Pg	**P**	**15 18 28.9**	**+0.3**
GRG				*e*Sg	**S**	**15 18 48.4**	**-2.3**
SOH	**Sokhos**	**1.64**	**23**	*e*Pg	**P**	**15 18 29.6**	**+1.0**
SOH				*e*Sg	**S**	**15 18 49.1**	**-1.6**
IGT	**Igoumenitsa**	**1.69**	**278**	*e*Pb	**P**	**15 18 30.4**	**+1.2**
IGT				*e*Sb	**S**	**15 18 51.6**	**-0.3**
FNA	**Florina**	**1.70**	**330**	*e*Pg	**P**	**15 18 30.1**	**+0.8**
VLS	**Valsamata**	**1.88**	**233**	*e*P	**P**	**15 18 33.8**	**+2.3**
SRS	**Serrai**	**1.98**	**25**	*e*Pb	**P**	**15 18 33.6**	**+0.8**
MMB	**Musomiste**	**2.45**	**22**	P	**P**	**15 18 39.0**	**0.0**
KKB	**Krupnik**	**2.58**	**10**	*e*P	**P**	**15 18 41.0**	**+0.2**
SKO	**Skopje**	**2.77**	**343**	*e*Pn	**P**	**15 18 44.0**	**+0.7**
RZN	**Rozhen**	**2.91**	**35**	P	**P**	**15 18 46.0**	**+0.9**
VTS	**Vitosha**	**3.31**	**9**	*e*P	**P**	**15 18 51.0**	**+0.4**
PE1	**Pezze di Greco**	**4.17**	**292**	*e*Pn	**P**	**15 19 01.5**	**-0.6**
TIP	**Timpagrande**	**4.46**	**270**	*e*Pn	**P**	**15 19 05.9**	**-0.2**
TIP				*e*Sn	**S**	**15 19 53.8**	**-3.5**
TIP	**Timpagrande**	**4.46**	**270**	*e*Pn	**P**	**15 19 05.9**	**-0.1**
TIP				*e*Sn	**S**	**15 19 53.8**	**-3.5**
SG1	**Sgolgore (BA)**	**4.72**	**291**	*e*Pn	**P**	**15 19 08.9**	**-0.6**
STON	**Ston**	**5.07**	**316**	*i* Pn	**P**	**15 19 12.8**	**-1.5**
STON				*i* Sn	**S**	**15 20 06.1**	**-6.1**
STON	**Ston**	**5.07**	**316**	*i* Pn	**P**	**15 19 12.7**	**-1.6**
STON				*i* Sn	**S**	**15 20 06.0**	**-6.2**
MS1	**Monte Sant'Ang**	**5.54**	**298**	*e*Pn	**P**	**15 19 19.5**	**-1.0**
SLUM		**8.12**	**163**	⇑P	**P**	**15 19 53.9**	**-1.7**
SWA2		**10.34**	**165**	⇑P	**P**	**15 20 23.9**	**-1.5**
SWA2				S	**S**	**15 22 09.8**	**-10**
SWA1		**10.38**	**164**	⇑P	**P**	**15 20 24.1**	**-1.8**
SWA1		**10.38**	**164**	P	**P**	**15 20 24.0**	**-1.8**
HFRF	**Wahat Farafira**	**13.07**	**156**	P	**P**	**15 20 60.0**	**-1.4**

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*IDC **27** 15:18:54.0±1.2, 3.19N×128.28E, mb3.9/7, mb1 4.1/7, mb1mx3.9/19, mbtmp4.0/7, Error ellipse: s-maj=63.9km s-min=16.9km az=69.0*

NEIC 27 15:19:07.1±0.7**, 3.01N×128.17E, h115**^{km}**, mb4.0**/3**, Error ellipse: s-maj=37.9km s-min=9.1km az=70.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.13**	**187**	P	P	15 23 42.0	-2.4
	11nm,1.1s,slow=10,SNR=2.6						
WRAB	**Tennant Creek**	**23.60**	**165**	*e*P	P	15 24 07.5	-1.0
	2.8nm,0.7s						
WRA	**Warramunga Arr**	**23.60**	**165**	P	P	15 24 08.5	-0.1
	1.7nm,0.7s,baz=344,slow=10.0,SNR=19						
CMAR	**Chiang Mai Arr**	**32.47**	**300**	P	P	15 25 27.8	-1.2
	1.0nm,0.8s,baz=123,slow=8.2,SNR=5.7						
STKA	**Stephens Creek**	**36.97**	**161**	P	P	15 26 05.8	-1.3
	1.1nm,0.6s,baz=342,slow=10,SNR=6.1						
ULN	**Ulaanbaatar**	**48.25**	**341**	*e*P	P	15 27 36.4	-1.8
	1.8nm,0.5s						
SONM	**Songino Array**	**48.44**	**340**	P	P	15 27 37.9	-1.7
	1.0nm,0.6s,baz=149,slow=8.6,SNR=6.7						
MKAR	**Makanchi Array**	**58.96**	**325**	P	P	15 28 54.9	-1.9
	2.3nm,0.5s,baz=118,slow=8.3,SNR=29						
MKAR	**Makanchi Array**	**58.96**	**325**	P	P	15 28 54.9	-1.9
BVAR	**Borovoye Array**	**68.70**	**327**	P	P	15 29 57.7	-2.5
	1.0nm,0.5s,baz=135,slow=6.3,SNR=11						
ZRNK	**Zerenda**	**69.43**	**326**	*e*P	P	15 30 02.1	-2.6
	1.8nm,0.6s						

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*NEIC **27** 15:46:55.4, 32.69S×71.59W, h40^{km}, MD3.7(GUC), After GUC.*

GUC 27 15:46:55.4±0.8**, 32.69S×71.59W, h40**^{km}±2^{km}**, MD3.7, ML2.7, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	**0.20**	**39**	⇑*i*P	P	15 47 03.1	+0.4
PACH				*i* S	S	15 47 08.6	+0.9
ROCH	**El Roble**	**0.56**	**120**	*e*P	P	15 47 07.4	+0.4
ROCH				*i* S	S	15 47 16.1	+0.8
JACH	**Jahuel**	**0.84**	**90**	*e*P	P	15 47 11.5	+0.7
JACH				*i* S	S	15 47 23.7	+1.5
TACH	**Talagante**	**1.10**	**151**	*e*P	P	15 47 15.3	+0.8
DSCH	**Colegio Aleman**	**1.11**	**130**	*i* P	P	15 47 15.4	+0.8
DSCH				*i* S	S	15 47 30.6	+1.6
DSCH				AMP		15 47 34.4	
	comp=E,402nm,0.4s						
CLCH	**Cerro Calan**	**1.13**	**129**	*e*P	P	15 47 15.8	+0.9
CLCH				*i* S	S	15 47 30.8	+1.3
CLCH				AMP		15 47 32.8	
	comp=E,206nm,0.6s						
ANTU	**Antumapu**	**1.19**	**138**	*e*P	P	15 47 16.8	+1.1
ANTU				*i* S	S	15 47 33.0	+2.0
ANTU				AMP		15 47 34.5	
	comp=E,218nm,0.6s						
FCH	**Farellones**	**1.26**	**120**	*i* P	P	15 47 17.9	+1.1
PCH	**Pirque**	**1.29**	**136**	*e*P	P	15 47 18.4	+1.1
PCH				*i* S	S	15 47 35.8	+2.2
CHCH	**Chadas Angostu**	**1.46**	**148**	*e*P	P	15 47 20.8	+0.9
CMCH	**Combarbala**	**1.59**	**18**	⇓*i*P	P	15 47 22.2	+0.5
CMCH				*i* S	S	15 47 43.1	+1.9
CMCH				AMP		15 47 47.1	
	comp=N,264nm,0.5s						
SFDO	**San Fernando**	**1.98**	**166**	*e*P	P	15 47 27.2	+0.2

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*BGR **27** 15:50:30.5±0.6, 51.49N×16.23E, h1^{km}, ML3.2/6, Error ellipse: s-maj=8.9km s-min=5.6km az=169.0*
*NEIC **27** 15:50:30.7±0.4, 51.50N×16.20E, h5^{km}, ML3.2(VIE), ML2.5(BRG), Error ellipse: s-maj=4.4km s-min=4.0km az=213.0*
*IPEC **27** 15:50:31.6±0.3, 51.46N×16.40E, ML2.5/3, Error ellipse: s-maj=3.7km s-min=2.0km az=85.0*
*PRU **27** 15:50:32.0, 51.43N×16.15E*
*CSEM **27** 15:50:32.6±0.1, 51.42N×16.15E, h2^{km}, ML3.5/8, Error ellipse: s-maj=2.7km s-min=1.7km az=11.0*
*IDC **27** 15:50:32.3±0.7, 51.46N×15.99E, mb1 3.4/6, mb1mx3.3/22, mbtmp3.4/6, ML3.1/6, Error ellipse: s-maj=13.5km s-min=7.5km az=107.0*

WAR 27 15:50:32.4, 51.45N×16.12E, h1^{km}**, ML3.1, 3C-1D, Mining Induced, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.61**	**170**	*i* PG	Pg	15 50 43.6	-1.1
KSP				*e*SG	Sg	15 50 51.6	-1.2
KSP	**Ksiaz**	**0.61**	**170**	*e*Pg	Pg	15 50 43.3	-1.4
KSP				*e*Sg	Sg	15 50 51.1	-1.8
KSP	**Ksiaz**	**0.61**	**170**	⇓*i*Pg	Pg	15 50 43.6	-1.1
KSP				*e*Sg	Sg	15 50 51.0	-1.8
UPC	**Upice**	**0.94**	**184**	*e*PG	Pg	15 50 49.7	-1.5
DPC	**Dobruska-Polom**	**1.10**	**173**	*e*PG	Pn	15 50 52.5	-2.4
DPC				*e*SG	Sn	15 51 06.9	-4.1
	70nm,0.2s						
DPC	**Dobruska-Polom**	**1.10**	**173**	Pg	Pn	15 50 52.5	-2.4
DPC				*e*Sg	Sn	15 51 06.6	-4.4
PVCC	**Panska Ves**	**1.34**	**227**	*e*PG	Pn	15 50 57.0	-1.3
BRG	**Berggiesshubel**	**1.48**	**248**	*e*Pg	Pn	15 50 59.5	-0.8
BRG				*e*Sg	Sn	15 51 19.6	-1.0
BRG	**Berggiesshubel**	**1.48**	**248**	Pn	Pn	15 50 58.4	-1.9
BRG				Pg	Pg	15 50 59.9	-2.1
BRG				Sg	Sg	15 51 19.9	-1.9
BRG	**Berggiesshubel**	**1.48**	**248**	Pn	Pn	15 50 58.4	-1.9
BRG	**Berggiesshubel**	**1.48**	**248**	Pg	Pg	15 50 59.9	-2.1
BRG				Sg	Sg	15 51 19.6	-2.2
PRU	**Pruhonice**	**1.77**	**215**	*e*Pn	Pn	15 51 02.4	-2.0
PRU				*e*Pg	Pg	15 51 04.5	-3.2
PRU				*e*		15 51 21.8	
PRU				*e*Sg	Sg	15 51 28.2	-3.1
PRU	**Pruhonice**	**1.77**	**215**	*e*PN	Pn	15 51 02.4	-2.0
PRU				*e*PG	Pg	15 51 04.5	-3.2
PRU				*e*x	x	15 51 08.7	
PRU				*e*x	x	15 51 21.8	
PRU				*e*SG	Sg	15 51 28.2	-3.1
	32nm,0.2s						
RUE	**Ruedersdorf**	**1.78**	**307**	*e*Pn	Pn	15 51 02.0	-2.5
RUE				*e*Sn	Sn	15 51 28.7	+0.6
RUE	**Ruedersdorf**	**1.78**	**307**	*e*Pn	Pn	15 51 02.0	-2.5
RUE				*e*Sn	Sn	15 51 28.7	+0.6
FBE	**Freiberg**	**1.82**	**254**	Sg	Sn	15 51 30.2	+1.2
RAC	**Raciborz**	**1.90**	**135**	*e*P	Pn	15 51 07.0	+0.8
RAC				*e*S	Sn	15 51 32.0	+0.9
MORC	**Moravsky Berou**	**1.90**	**151**	*e*Pn	Pn	15 51 04.2	-2.1
MORC				*e*Sn	Sn	15 51 31.3	+0.1
MORC	**Moravsky Berou**	**1.90**	**151**	*e*Pn	Pn	15 51 04.2	-2.1
MORC				*e*Sg	Sg	15 51 29.0	-6.7
MORC				*e*Sn	Sn	15 51 31.3	+0.1
CLL	**Collm**	**1.96**	**267**	*e*Pn	Pn	15 51 04.8	-2.2
CLL				*e*Sg	Sg	15 51 34.1	-3.4
CLL	**Collm**	**1.96**	**267**	*i* PN	Pn	15 51 04.5	-2.6
CLL				*i* PG	Pg	15 51 08.0	-3.5
CLL				*i* SG	Sg	15 51 34.5	-3.0
CLL	**Collm**	**1.96**	**267**	*i* Pg	Pg	15 51 08.0	-3.5
CLL				Sg	Sg	15 51 34.1	-3.4
OKC	**Ostrava-Krasne**	**2.06**	**140**	*e*PN	Pn	15 51 06.6	-2.0
OKC				*e*PG	Pg	15 51 09.6	-4.0
OKC				*e*SG	Sg	15 51 36.0	-5.1
	104nm,0.8s						
VRAC	**Vranov**	**2.16**	**172**	Pn	Pn	15 51 09.4	-0.6
	4.4nm,0.3s,baz=340,slow=16,SNR=25						
VRAC				Lg		15 51 42.4	
	6.7nm,0.3s,baz=82,slow=20,SNR=7.6						
VRAC	**Vranov**	**2.16**	**172**	*e*Pn	Pn	15 51 09.2	-0.8
VRAC				*e*Sg	Sn	15 51 39.9	+2.1
	26nm,0.3s						
KRUC	**Moravsky**	**2.39**	**176**	*e*Pn	Pn	15 51 12.1	-1.2
KRUC				*e*Sg	Sn	15 51 46.2	+2.5
	21nm,0.3s						
TANN	**Tannenbergstha**	**2.53**	**247**	*e*Pn	Pn	15 51 13.6	-1.7
WERD	**Werda**	**2.61**	**249**	*e*Pn	Pn	15 51 14.6	-1.8
NKC	**Novy Kostel**	**2.62**	**244**	*e*PN	Pn	15 51 15.1	-1.5
NKC				*e*PG	Pg	15 51 21.8	-3.0
NKC				*e*SG	Sg	15 51 57.5	-2.3
	46nm,0.2s						
GUNZ	**Gunzen**	**2.63**	**247**	*e*Pn	Pn	15 51 15.0	-1.7
GUNZ				*e*Sg	Sg	15 51 57.6	-2.4
OJC	**Ojcow**	**2.64**	**116**	*e*PN	Pn	15 51 13.0	-3.8
OJC				*e*PG	Pg	15 51 22.0	-3.1
OJC				*e*SG	Sg	15 51 57.0	-3.2
OJC	**Ojcow**	**2.64**	**116**	*e*Pg	Pg	15 51 22.3	-2.8
OJC				*e*Sg	Sg	15 51 56.9	-3.3
KHC	**Kasperske Hory**	**2.83**	**216**	*e*PN	Pn	15 51 18.0	-1.6
KHC				*e*PG	Pg	15 51 23.9	-5.0
KHC				*e*SN	Sn	15 51 52.0	-2.9
KHC				*e*SG	Sg	15 52 02.0	-4.7
	11nm,0.2s						
MOX	**Moxa**	**2.95**	**256**	*e*Pn	Pn	15 51 19.2	-2.1
MOX				*e*Sg	Sg	15 52 07.1	-3.6
MOX	**Moxa**	**2.95**	**256**	*e*Pn	Pn	15 51 19.0	-2.3
MOX				*e*Pg	Pg	15 51 27.5	-3.8
MOX				*e*Sg	Sg	15 52 07.5	-3.2
MOX	**Moxa**	**2.95**	**256**	*i* P	Pn	15 51 19.0	-2.3
MOX				Pg	Pg	15 51 28.0	-3.3
MOX				Sg	Sg	15 52 08.0	-2.7
MOX	**Moxa**	**2.95**	**256**	*e*Pg	Pg	15 51 27.5	-3.8
MOX				Sg	Sg	15 52 07.1	-3.6
NOTT	**Nottersdorf**	**3.02**	**239**	*e*Pn	Pn	15 51 20.3	-2.0
GEC2	**GERESS Array S**	**3.03**	**212**	*e*Pn	Pn	15 51 21.4	-1.0
GEC2				*e*Sg	Sg	15 52 08.1	-5.3
GEC2	**GERESS Array S**	**3.03**	**212**	*e*Pn	Pn	15 51 21.4	-1.0
GEC2				*e*Sg	Sg	15 52 08.1	-5.2
GERES	**GERESS Array B**	**3.03**	**212**	Pn	Pn	15 51 21.2	-1.2
	1.4nm,0.3s,baz=26,slow=13,SNR=26						
GERES				Pg	Pg	15 51 27.1	-5.8
	4.7nm,0.3s,baz=29,slow=16,SNR=57						
GERES				Lg		15 52 07.7	
	6.5nm,0.3s,baz=30,slow=26,SNR=8.1						
GERES	**GERESS Array B**	**3.03**	**212**	Pg	Pg	15 51 27.1	-5.8
SMOL	**Smolenice**	**3.06**	**163**	*e*PG	Pg	15 51 28.7	-4.7
SMOL				*e*SG	Sg	15 52 08.3	-5.8
WET	**Wettzell**	**3.10**	**223**	*e*Pn	Pn	15 51 21.4	-2.0
WET	**Wettzell**	**3.10**	**223**	*e*Pn	Pn	15 51 21.4	-2.0
ZST	**Bratislava**	**3.31**	**169**	*e*PG	Pg	15 51 33.1	-5.5
ZST				*e*SG	Sg	15 52 16.5	-6.3
NIE	**Niedzica**	**3.36**	**125**	*e*P	Pg	15 51 36.6	-3.0
NIE				*e*(S)	Sg	15 52 18.7	-5.7
VYHS	**Vyhne**	**3.44**	**148**	*e*PG	Pg	15 51 34.1	-6.9
GRA1	**Grafenberg Arr**	**3.58**	**243**	*e*Pn	Pn	15 51 28.5	-1.7
GRA1				*e*Sg	Sg	15 52 27.6	-4.0
GRA1	**Grafenberg Arr**	**3.58**	**243**	Pn	Pn	15 51 28.5	-1.7
GRA1				Sg	Sg	15 52 27.6	-4.0
GRF	**Grafenberg Arr**	**3.58**	**243**	*e*Pn	Pn	15 51 28.5	-1.7
GRF				*e*Sg	Sg	15 52 27.6	-4.0
MOA	**Molln**	**3.80**	**199**	⇑*i*PN	Pn	15 51 31.2	-2.1
MOA				*i* SG	Sg	15 52 33.3	-5.5
	22nm,0.7s						
KECS	**Kecovo**	**4.09**	**135**	*e*P	Pn	15 51 34.5	-3.0
KECS				*e*Pg	Pg	15 51 49.9	-4.2
KECS	**Kecovo**	**4.09**	**135**	*e*	Pn	15 51 34.5	-3.0
KECS	**Kecovo**	**4.09**	**135**	*e*PG	Pg	15 51 49.9	-4.2
ARSA	**Arzberg**	**4.22**	**186**	⇑*i*PN	Pn	15 51 36.4	-2.9
ARSA				*i* SG	Sg	15 52 46.9	-5.9
	29nm,0.8s						
CRVS	**Cervenica-Dubn**	**4.28**	**124**	*e*P	Pn	15 51 38.3	-1.8
CRVS				*e*Pg	Pg	15 51 52.7	-5.1
CRVS				*e*Sg	Sg	15 52 52.2	-2.5
CRVS	**Cervenica-Dubn**	**4.28**	**124**	*e*	Pn	15 51 38.3	-1.8
CRVS	**Cervenica-Dubn**	**4.28**	**124**	*e*PG	Pg	15 51 52.7	-5.1
CRVS				*e*SG	Sg	15 52 52.2	-2.5
KOLS	**Kolonicke sedl**	**4.69**	**120**	*e*PN	Pn	15 51 42.6	-3.3
KOLS				*e*PG	Pg	15 52 00.5	-5.5
KBA	**Koelnbreinsper**	**4.73**	**204**	⇑*i*PN	Pn	15 51 44.4	-2.2
KBA				*i* SG	Sg	15 53 04.5	-5.5
	23nm,0.8s						
AKASG	**Malin Array Be**	**8.29**	**90**	Pn	P	15 52 30.6	-6.0
	0.9nm,0.3s,baz=277,slow=12,SNR=6.1						
AKASG				Lg		15 54 58.4	
	0.1nm,0.3s,baz=274,slow=26,SNR=3.0						
HFS	**Hagfors**	**8.81**	**352**	Pn	P	15 52 37.7	-6.2
	0.0nm,0.3s,baz=166,slow=14,SNR=9.8						
FINES	**FINESS Array B**	**11.42**	**25**	Pn	P	15 53 13.0	-6.6
	0.2nm,0.3s,baz=218,slow=12,SNR=12						
ARCES	**ARCESS Array B**	**18.68**	**10**	Pn	P	15 54 45.9	-7.8
	0.1nm,0.3s,baz=191,slow=13,SNR=6.2						

WEL 27 16:11:19.1±0.2**, 39.91S×177.04E, h38**^{km}±3^{km}**, ML3.6**/8**, 3C-1D, Error ellipse: s-maj=2.1km s-min=1.1km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PWZ	**Pawanui**	**0.18**	**227**	⇑PN	P	16 11 26.5	+0.5
PWZ				SN	S	16 11 31.8	+1.0
TSZ	**Takapari Road**	**0.84**	**259**	⇓PN	P	16 11 33.6	-0.9
TSZ				SN	S	16 11 44.2	-1.7
BKZ	**Black Stump Fm**	**0.85**	**330**	⇑PN	P	16 11 33.7	-0.9
BKZ				SN	S	16 11 44.2	-1.8
BFZ	**Birch Farm**	**0.98**	**218**	PN	P	16 11 36.3	-0.2
BFZ				SN	S	16 11 49.8	+0.4
KNZ	**Kokohu**	**1.01**	**29**	PN	P	16 11 36.9	-0.1
MOVZ	**Moawhango**	**1.11**	**296**	PN	P	16 11 37.5	-0.8
MOVZ				SN	S	16 11 50.3	-2.3
TUVZ	**Tukino**	**1.24**	**300**	⇑PN	P	16 11 40.1	-0.1
TUVZ				SN	S	16 11 55.3	-0.7
HATZ	**Hinemaiaia**	**1.25**	**324**	PN	P	16 11 39.7	-0.6
HATZ				SN	S	16 11 56.6	+0.4
WNVZ	**Wahianoa**	**1.25**	**297**	PN	P	16 11 40.3	0.0
WNVZ				SN	S	16 11 55.5	-0.8
OTVZ	**Oturere**	**1.29**	**304**	PN	P	16 11 40.8	-0.1
RITZ	**Rihia Road**	**1.30**	**315**	PN	P	16 11 40.6	-0.4
TRVZ	**Turoa**	**1.30**	**297**	PN	P	16 11 41.0	0.0
DRZ	**Dome Shelter**	**1.30**	**298**	PN	P	16 11 41.3	+0.3
MTVZ	**Mangateitei**	**1.32**	**293**	PN	P	16 11 41.2	-0.2
MTVZ				SN	S	16 11 56.9	-1.0
FWVZ	**Far West T-bar**	**1.32**	**299**	PN	P	16 11 40.9	-0.5
NGZ	**Ngauruhoe**	**1.33**	**303**	PN	P	16 11 41.2	-0.3
NGZ				SN	S	16 11 57.3	-0.9
MRZ	**Mangatainoka R**	**1.35**	**235**	PN	P	16 11 40.8	-1.0
MRZ				SN	S	16 11 57.6	-1.1
WPVZ	**Whakapapa**	**1.35**	**301**	PN	P	16 11 42.0	+0.2
CNZ	**Chateau**	**1.35**	**301**	PN	P	16 11 41.4	-0.5
KRVZ	**Karewarewa**	**1.35**	**306**	PN	P	16 11 42.1	+0.3
WTVZ	**West Tongariro**	**1.37**	**305**	PN	P	16 11 42.1	0.0
KATZ	**Kakaramea**	**1.39**	**311**	PN	P	16 11 42.8	+0.4
RATZ	**Rangitukua**	**1.43**	**316**	PN	P	16 11 43.1	+0.2
PKVZ	**Pokaka**	**1.44**	**295**	PN	P	16 11 43.0	-0.2
TWVZ	**Taurewa**	**1.49**	**303**	PN	P	16 11 44.1	+0.3
WHTZ	**Whakaora**	**1.49**	**326**	PN	P	16 11 43.2	-0.6
WATZ	**Wairara**	**1.56**	**319**	PN	P	16 11 43.8	-1.0
WAZ	**Wanganui**	**1.59**	**275**	PN	P	16 11 45.2	+0.1
WAZ				SN	S	16 12 05.0	+0.3
MWZ	**Matawai**	**1.61**	**14**	PN	P	16 11 44.5	-1.1
URZ	**Urewera**	**1.64**	**2**	PN	P	16 11 44.7	-1.3
URZ				SN	S	16 12 04.1	-2.0
MTW	**Mount Morrison**	**1.71**	**223**	PN	P	16 11 45.0	-2.0
MTW				SN	S	16 12 05.7	-2.2
TAZ	**Tarawera**	**1.72**	**346**	PN	P	16 11 46.2	-0.8
TRWZ	**Traveller**	**1.81**	**214**	PN	P	16 11 46.3	-2.1
KIW	**Kapiti Island**	**1.89**	**239**	PN	P	16 11 48.1	-1.4
PAWZ	**Paruwai Farm**	**1.92**	**219**	PN	P	16 11 47.9	-2.0
CAW	**Cannon Point**	**1.92**	**231**	PN	P	16 11 47.9	-2.0
CAW				SN	S	16 12 11.1	-2.0
VRZ	**Vera Road**	**1.93**	**293**	PN	P	16 11 49.4	-0.6
MSWZ	**Moikau Station**	**2.03**	**221**	PN	P	16 11 49.5	-2.0
MSWZ				SN	S	16 12 13.0	-2.8
PUZ	**Puketiti**	**2.06**	**28**	PN	P	16 11 50.4	-1.6
PUZ				SN	S	16 12 15.3	-1.3

IDC 27 16:53:14.9±1.9**, 1.42N×128.61E, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.4**/15**, mbtmp3.4**/3**, Error ellipse: s-maj=157.1km s-min=27.6km az=71.0, Halmahera**

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

WRA	**Warramunga Arr**	**21.96**	**165**	P	P	16 58 10.5	-1.7
	0.6nm,0.8s,baz=345,slow=11,SNR=3.6						
SONM	**Songino Array**	**50.08**	**341**	P	P	17 02 11.4	-2.2
	0.2nm,0.7s,baz=135,slow=6.1,SNR=2.1						
MKAR	**Makanchi Array**	**60.51**	**325**	P	P	17 03 27.0	-2.2
	0.3nm,0.5s,baz=111,slow=8.7,SNR=10						

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*IDC **27** 17:14:19.6±0.8, 1.25N×97.04E, mb4.7/16, mb1 4.8/17, mb1mx4.7/21, mbtmp4.7/17, ML4.5/1, MS4.3/11, Ms1 4.3/11, ms1mx4.1/19, Error ellipse: s-maj=26.9km s-min=14.8km az=47.0*

*BJI **27** 17:14:21.4, 1.28N×97.22E, $h24^{km}$, mB5.2, mb5.2, Ms5.0, Msz4.8*

*MOS **27** 17:14:23.4±1.1, 1.34N×97.15E, $h33^{km}$, mb5.3/29, MS4.7/11, Error ellipse: s-maj=12.6km s-min=5.9km az=105.5*

*HRVD **27** 17:14:23.6±1.4, 1.25N×97.20E, $h22^{km}$, MW4.8/30, Centroid moment Tensor Solution. LP body waves: s19,c24;Mantle waves: s30,c52; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.58±.15; $M_{\theta\theta}$-0.66±.09; $M_{\phi\phi}$-0.91±.12; $M_{r\theta}$1.13±.18; $M_{\theta\phi}$1.11±.07; $M_{\phi r}$-0.36±.22; Best double couple: $M_0$2.124×10^{16} NP1:ϕ_s338°,δ33°, λ123°. NP2:ϕ_s120°,δ63°,λ71°. Principal axes: T 2.054, Plg66°, Azm354°; N .139, Plg17°, Azm129°; P -2.193, Plg16°, Azm224°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **27** 17:14:23.6±0.3, 1.28N×97.14E, mb5.0/38, MS4.4/7 Error ellipse: s-maj=7.3km s-min=5.2km az=218.0*

NEIC Felt [III] at Gunungsitoli.

ISC 27 17:14:21.8±0.3**, 1.27N**±0.05×**97.13E**±0.04**, $h25^{km}$, $h25^{km}$±.7^{km}:pP-P, n183,** $\sigma 1^{s}$**10**/188**, mb5.0**/80**, MS4.6**/41**, 19C-8D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.09**	**50**	P	**Pn**	**17 15 39.7**	**+1.0**
KULM	**Kulim**	**5.32**	**41**	*e*Pn	**Pn**	**17 15 41.6**	**-0.2**
KGM	**Kluang**	**6.23**	**83**	P	**Pn**	**17 15 56.6**	**+1.9**
SNG	**Songkhla**	**6.82**	**31**	P	**Pn**	**17 16 02.0**	**-1.0**
	606nm,1.0s						
NNT	**Nongplab**	**11.54**	**13**	P	**P**	**17 17 07.0**	**-1.3**
KSM	**Kuching**	**13.18**	**89**	*e*Pn	**P**	**17 17 32.9**	**+2.8**
KSM				*e*pPn		17 17 41.7	
NST	**Nakhon Sawan**	**14.62**	**12**	P	**P**	**17 17 48.2**	**-1.0**
KKTK	**Khon Kaen**	**15.99**	**20**	P	**P**	**17 18 10.0**	**+2.9**
	586nm,0.8s						
CM31	**Chiang Mai Arr**	**17.18**	**6**	*e*P	**P**	**17 18 20.6**	**-1.4**
	28nm,0.8s						
CMAR	**Chiang Mai Arr**	**17.18**	**6**	Pn	**P**	**17 18 20.6**	**-1.5**
	0.7nm,0.3s,baz=194,slow=13,SNR=42						
CMAR				LR	LR	17 24 57.6	
	comp=Z,881nm,20.0s,baz=190,slow=37						
PALK	**Pallekele**	**17.43**	**290**	Pn	**P**	**17 18 23.8**	**-1.4**
	29nm,1.2s						
KKM	**Kota Kinabalu**	**19.62**	**76**	*e*P	**P**	**17 18 51.2**	**-0.5**
KKM	**Kota Kinabalu**	**19.62**	**76**	P	**P**	**17 18 52.3**	**+0.6**
TSM	**Tawau**	**20.93**	**81**	P	**P**	**17 19 05.5**	**+0.1**
VIS	**Vishakhapatnam**	**21.24**	**321**	*e*P	**P**	**17 19 08.7**	**+0.2**
VIS				*e*x	x	17 19 11.4	
VIS				AMb	AMB	17 19 25.3	
	comp=Z,76nm,1.3s,mb4.9						
VIS				*i* x	x	17 23 58.7	
QIZ	**Qiongzhong**	**21.61**	**34**	P	**P**	**17 19 12.5**	**+0.3**
QIZ				XP		17 19 22.8	
QIZ				PP	PP	17 19 34.0	-2.9
QIZ				*e*S	**S**	**17 23 08.5**	**+3.2**
QIZ				XS		17 23 20.8	
QIZ				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.5						
QIZ				LR	LR		
	comp=N,780nm,15.7s,MS4.4						
QIZ				LR	LR		
	comp=E,1μm,15.5s,MS4.4						
QIZ				LR	LR		
	comp=Z,830nm,15.2s,MS4.2						
QIZ	**Qiongzhong**	**21.61**	**34**	*e*P	**P**	**17 19 12.3**	**+0.1**
	comp=Z,31nm,0.8s,mb4.8						
HYB	**Hyderabad**	**24.32**	**312**	*e*P	**P**	**17 19 41.0**	**+2.1**
HYB	**Hyderabad**	**24.32**	**312**	*i* P	**P**	**17 19 40.0**	**+1.1**
KMI	**Kunming**	**24.33**	**12**	⇑P	**P**	**17 19 40.5**	**+1.5**
KMI				AP		17 19 47.0	
KMI				XP		17 19 49.8	
KMI				PP	PP	17 20 16.5	+2.1
KMI				PPP	PPP	17 20 27.5	+2.8
KMI				S	**S**	**17 23 57.0**	**+3.3**
KMI				XS		17 24 09.5	
KMI				SS	SS	17 24 51.0	+3.2
KMI				AMB	AMB		
	comp=Z,110nm,1.4s,mb5.1						
KMI				AMB	AMB		
	comp=Z,450nm,3.1s						
KMI				LR	LR		
	comp=N,3μm,14.2s,MS5.0						
KMI				LR	LR		
	comp=E,2μm,14.5s,MS5.0						
KMI				LR	LR		
	comp=Z,3μm,13.5s,MS5.0						
KMI	**Kunming**	**24.33**	**12**	⇑P	**P**	**17 19 40.4**	**+1.4**
KMI				*SP		17 19 49.8	
KMI						17 20 16.5	
KMI				PPP	PPP	17 20 27.6	+2.9
KMI				S	**S**	**17 23 57.0**	**+3.3**
KMI				*SS		17 24 09.6	
KMI				SS	SS	17 24 51.0	+3.2
KMI				pmax	pmax		
	comp=Z,117nm,1.4s,mb5.1						
KMI				MLR	MLR		
	comp=Z,3μm,13.5s,MS5.0						
KMI	**Kunming**	**24.33**	**12**	⇑P	**P**	**17 19 40.4**	**+1.4**
	comp=Z,117nm,1.4s,mb5.1						
KMI				pP		17 19 47.1	
KMI				sP		17 19 49.8	
KMI				PP	PP	17 20 16.5	+2.1
KMI				PPP	PPP	17 20 27.6	+2.9
KMI				S	**S**	**17 23 57.0**	**+3.3**
KMI				sS		17 24 09.6	
KMI				SS	SS	17 24 51.0	+3.2
KMI				LR	LR		
	comp=Z,3μm,13.5s,MS5.0						
SHL	**Shillong**	**24.68**	**349**	⇑*i*P	**P**	**17 19 42.0**	**-0.4**
SHL				*e*x	**S**	**17 24 09.0**	**+9.3**
GYA	**Guiyang**	**26.67**	**19**	⇑*i*P	**P**	**17 20 00.0**	**-1.0**
GYA				AP	pP	17 20 07.5	-0.7
GYA				XP	sP	17 20 10.8	-0.7
GYA				PP	PP	17 20 46.8	+1.3
GYA				S	**S**	**17 24 34.8**	**+2.0**
GYA				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,160nm,3.0s						
GYA				LR	LR		
	comp=N,2μm,14.7s,MS4.9						
GYA				LR	LR		
	comp=E,920nm,12.6s,MS4.9						
GYA				LR	LR		
	comp=Z,3μm,15.0s,MS5.0						
PKI	**Pulchoki**	**28.47**	**338**	*e*P	**P**	**17 20 17.6**	**+0.4**
	comp=Z,219nm,1.5s,mb5.6						
PKI	**Pulchoki**	**28.47**	**338**	*e*P	**P**	**17 20 17.6**	**+0.4**
PKI				pmax	pmax		
	comp=Z,110nm,1.5s,mb5.3						
GUN	**Gumba**	**28.60**	**339**	*e*P	**P**	**17 20 19.4**	**+1.0**
	comp=Z,134nm,0.7s,mb5.8						
DMN	**Daman**	**28.61**	**337**	*e*P	**P**	**17 20 18.7**	**+0.1**
	comp=Z,81nm,0.8s,mb5.5						
KKN	**Kakani**	**28.71**	**338**	*e*P	**P**	**17 20 19.9**	**+0.4**
	comp=Z,93nm,1.0s,mb5.5						
KKN	**Kakani**	**28.71**	**338**	*e*P	**P**	**17 20 19.9**	**+0.4**
KKN				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.2						
LSA	**Lhasa**	**28.84**	**349**	P	**P**	**17 20 21.8**	**+1.2**
LSA				AP	pP	17 20 29.8	+1.9
LSA				XP	sP	17 20 34.3	+3.2
LSA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
LSA				AMB	AMB		
	comp=Z,70nm,4.4s						
LSA				LR	LR		
	comp=N,280nm,17.5s,MS4.3						
LSA				LR	LR		
	comp=E,600nm,17.5s,MS4.3						
LSA				LR	LR		
	comp=Z,550nm,18.5s,MS4.2						
LSA	**Lhasa**	**28.84**	**349**	*e*P	**P**	**17 20 21.8**	**+1.2**
LSA				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.1						
LSA				MLR	MLR		
	comp=Z,436nm,21.0s,MS4.0						
LSA	**Lhasa**	**28.84**	**349**	*e*P	**P**	**17 20 21.8**	**+1.2**
	comp=Z,31nm,0.8s,mb5.1						
LSA				LR	LR		
	comp=Z,436nm,21.0s,MS4.0						
BHPL	**Bhopal**	**29.03**	**320**	*e*P	**P**	**17 20 17.6**	**-4.8**
BHPL				AMb	AMB	17 20 47.3	
	comp=Z,19nm,2.3s,mb4.4						
GKN	**Gorkha**	**29.15**	**337**	*e*P	**P**	**17 20 23.8**	**+0.4**
	comp=Z,138nm,1.0s,mb5.6						
KOLN	**Koldanda**	**29.37**	**335**	*e*P	**P**	**17 20 25.8**	**+0.4**
	comp=Z,87nm,0.9s,mb5.5						
CD2	**Chengdu**	**30.14**	**11**	⇑*i*P	**P**	**17 20 30.8**	**-1.5**
CD2				S	**S**	**17 25 20.8**	**-7.7**
CD2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
CD2				AMB	AMB		
	comp=Z,190nm,12.0s						
CD2				LR	LR		
	comp=E,2μm,13.2s						
CD2				LR	LR		
	comp=Z,2μm,15.6s,MS4.9						
ENH	**Enshi**	**31.14**	**21**	*e*P	**P**	**17 20 39.1**	**-2.0**
	comp=Z,93nm,0.8s,mb5.7						
ENH				*e*pP	pP	17 20 46.5	-1.8
ENH				LR	LR		
	comp=Z,650nm,21.0s,MS4.3						
QZH	**Quanzhou**	**31.36**	**40**	P	**P**	**17 20 43.3**	**+0.2**
QZH				S	**S**	**17 25 49.3**	**+1.6**
QZH				LR	LR		
	comp=N,2μm,11.7s,MS5.0						
QZH				LR	LR		
	comp=E,1μm,13.6s,MS5.0						
QZH				LR	LR		
	comp=Z,3μm,14.0s,MS5.1						
LGTI	**Lohaghat**	**32.31**	**332**	*e*P	**P**	**17 20 52.5**	**+1.2**
YHNB	**Yeheng**	**33.02**	**43**	*e*P	**P**	**17 20 57.3**	**-0.3**
NDI	**New Delhi**	**33.24**	**327**	*e*P	**P**	**17 21 01.5**	**+2.1**
WHN	**Wuhan**	**33.39**	**28**	⇓P	**P**	**17 21 00.5**	**-0.2**
WHN				S	**S**	**17 26 20.0**	**+0.9**
WHN				LR	LR		
	comp=N,670nm,15.0s,MS5.0						
WHN				LR	LR		
	comp=E,2μm,18.0s,MS5.0						
WHN				LR	LR		
	comp=Z,2μm,15.1s,MS5.0						
FITZ	**Fitzroy Crossi**	**34.02**	**126**	P	**P**	**17 21 05.1**	**-1.2**
	comp=Z,11nm,0.8s,mb4.9,baz=356,slow=12,SNR=7.5						
XAN	**Xi'an**	**34.42**	**17**	P	**P**	**17 21 08.0**	**-1.6**
XAN				S	**S**	**17 26 41.8**	**+6.7**
XAN				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
XAN				LR	LR		
	comp=N,820nm,15.8s,MS4.6						
XAN				LR	LR		
	comp=E,460nm,15.5s,MS4.6						
XAN				LR	LR		
	comp=Z,2μm,14.7s,MS4.9						
LZH	**Lanzhou**	**35.20**	**9**	⇑P	**P**	**17 21 15.5**	**-0.7**
LZH				AP	pP	17 21 23.3	-0.3
LZH				XP	sP	17 21 26.5	-0.2
LZH				PP	PP	17 22 35.8	+0.4
LZH				*e*S	**S**	**17 26 48.0**	**+0.8**
LZH				XS		17 27 00.0	
LZH				SS	SS	17 29 05.0	+0.9
LZH				AMB	AMB		
	comp=Z,80nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,240nm,4.0s						
LZH				LR	LR		
	comp=N,2μm,17.7s						
LZH				LR	LR		
	comp=Z,3μm,18.3s,MS5.0						
LZH	**Lanzhou**	**35.20**	**9**	⇑P	**P**	**17 21 15.6**	**-0.6**
LZH				*SP	sP	17 21 26.6	-0.1
LZH						17 22 35.8	
LZH				*e*S	**S**	**17 26 48.0**	**+0.8**
LZH				*SS		17 27 00.0	
LZH				SS	SS	17 29 05.0	+0.9
LZH				pmax	pmax		
	comp=Z,83nm,1.5s,mb5.4						
LZH				MLR	MLR		
	comp=Z,3μm,18.3s,MS5.0						
LZH	**Lanzhou**	**35.20**	**9**	⇑P	**P**	**17 21 15.6**	**-0.6**
	comp=Z,83nm,1.5s,mb5.4						
LZH				pP	pP	17 21 23.2	-0.4
LZH				sP	sP	17 21 26.6	-0.1
LZH				PP	PP	17 22 35.8	+0.4
LZH				*e*S	**S**	**17 26 48.0**	**+0.8**
LZH				sS		17 27 00.0	
LZH				SS	SS	17 29 05.0	+0.9
LZH				LR	LR		
	comp=Z,3μm,18.3s,MS5.0						
SDNR	**Sundarnagar**	**35.60**	**330**	*e*P	**P**	**17 21 19.0**	**-0.7**
SSE	**Sheshan**	**37.40**	**35**	*e*P	**P**	**17 21 35.0**	**+0.2**
SSE				AP	pP	17 21 42.0	-0.2
SSE				XP	sP	17 21 45.8	+0.5
SSE				PP	PP	17 23 03.8	+0.9
SSE				S	**S**	**17 27 24.0**	**+3.0**
SSE				XS		17 27 37.0	
SSE				SCS	ScS	17 31 47.5	+2.6
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,30nm,3.5s						
SSE				LR	LR		
	comp=N,760nm,14.7s,MS4.7						
SSE				LR	LR		
	comp=E,400nm,14.6s,MS4.7						
SSE				LR	LR		
	comp=Z,900nm,16.4s,MS4.7						
SSE	**Sheshan**	**37.40**	**35**	*e*P	**P**	**17 21 35.1**	**+0.3**
	comp=Z,31nm,0.7s,mb5.2						
SSE				pP	pP	17 21 42.0	-0.2
SSE				sP	sP	17 21 45.8	+0.5
SSE				PP	PP	17 23 03.7	+0.8
SSE				S	**S**	**17 27 24.1**	**+3.1**
SSE				sS		17 27 37.0	
SSE				SS	SS	17 30 12.7	+19
SSE				ScS	ScS	17 31 47.6	+2.7
SSE				LR	LR		
	comp=Z,900nm,16.4s,MS4.7						
KAKA	**Kakadu**	**37.69**	**113**	*e*P	**P**	**17 21 36.2**	**-1.2**
	comp=Z,26nm,1.0s,mb4.9						
GTA	**Gaotai**	**38.04**	**3**	⇑P	**P**	**17 21 40.0**	**-0.1**
GTA				AP	pP	17 21 47.5	0.0
GTA				XP	sP	17 21 50.8	+0.2
GTA				PP	PP	17 23 10.0	-0.5
GTA				S	**S**	**17 27 26.8**	**-3.9**
GTA				SCP		17 27 44.5	
GTA				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.0						
GTA				AMB	AMB		
	comp=Z,140nm,4.2s						
GTA				LR	LR		
	comp=N,790nm,14.1s,MS4.8						
GTA				LR	LR		
	comp=E,580nm,14.5s,MS4.8						
GTA				LR	LR		
	comp=Z,830nm,13.7s,MS4.7						
JOW	**Kunigami**	**39.25**	**47**	P	**P**	**17 21 50.4**	**+0.1**
	comp=Z,49nm,0.5s,mb5.5,baz=207,slow=11						
BTO	**Baotou**	**40.87**	**15**	*e*P	**P**	**17 22 01.8**	**-1.7**
HHC	**Hu-ho-hao-te**	**41.51**	**17**	*e*P	**P**	**17 22 09.8**	**+0.9**
HHC				AP	pP	17 22 17.0	+0.7
HHC				XP	sP	17 22 20.8	+1.4
HHC				PP	PP	17 23 47.0	-0.9
HHC				SCP		17 27 57.8	
HHC				S	**S**	**17 28 18.0**	**-4.8**
HHC				SCS	ScS	17 32 11.5	+2.7
HHC				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
HHC				AMB	AMB		
	comp=Z,200nm,5.7s						
HHC				LR	LR		
	comp=N,1μm,15.1s,MS5.0						
HHC				LR	LR		
	comp=E,1μm,17.1s,MS5.0						
HHC				LR	LR		
	comp=Z,1μm,16.5s,MS4.8						
WRA	**Warramunga Arr**	**42.13**	**122**	P	**P**	**17 22 14.0**	**-0.2**
	comp=Z,8.4nm,0.8s,mb4.5,baz=303,slow=9.0,SNR=62						
WRAB	**Tennant Creek**	**42.13**	**122**	⇓*i*P	**P**	**17 22 14.3**	**0.0**
WRAB	**Tennant Creek**	**42.13**	**122**	*e*P	**P**	**17 22 14.0**	**-0.2**
	comp=Z,20nm,0.8s,mb4.8						
WB2	**Warramunga Arr**	**42.14**	**122**	*e*P	**P**	**17 22 14.4**	**+0.1**
KSH	**Kashi**	**42.68**	**336**	*e*P	**P**	**17 22 18.0**	**-0.5**
KSH				*e*AP	pP	17 22 25.3	-0.6
KSH				*e*XP	sP	17 22 28.3	-0.7
KSH				*e*PP	PP	17 23 59.5	-0.6
KSH				*e*PCP	PcP	17 24 10.0	-0.7
KSH				*e*PPP	PPP	17 24 33.0	-0.9
KSH				*e*SCP		17 27 58.0	
KSH				*e*PCS		17 28 01.0	
KSH				*e*S	**S**	**17 28 39.3**	**-0.7**
KSH				*e*XS		17 28 51.0	
KSH				*e*SS	SS	17 31 43.0	-1.7
KSH				*e*SCS	ScS	17 32 15.0	-0.9
KSH				AMB	AMB		
	comp=Z,290nm,5.0s						
KSH				LR	LR		
	comp=N,310nm,5.9s						
KSH				LR	LR		
	comp=E,380nm,4.9s						
WMQ	**Urumqi**	**43.20**	**350**	⇑P	**P**	**17 22 23.5**	**+0.9**
WMQ				AP	pP	17 22 31.0	+1.0
WMQ				XP	sP	17 22 34.3	+1.2
WMQ				PCP	PcP	17 24 13.3	+0.9
WMQ				PPP	PPP	17 24 41.5	+1.0
WMQ				S	**S**	**17 28 48.5**	**+1.1**
WMQ				SS	SS	17 31 55.0	+1.0
WMQ				SCS	ScS	17 32 19.8	+0.8
WMQ				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,140nm,5.4s						
WMQ				LR	LR		
	comp=N,630nm,20.0s,MS4.7						
WMQ				LR	LR		
	comp=E,780nm,22.8s,MS4.7						
WMQ				LR	LR		
	comp=Z,620nm,22.0s,MS4.5						
FORT	**Forrest**	**43.37**	**140**	*e*P	**P**	**17 22 27.0**	**+2.8**
	comp=Z,15nm,0.6s,mb4.9						
DL2	**Dalian**	**43.65**	**28**	P	**P**	**17 22 27.0**	**+0.6**
DL2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
DL2				AMB	AMB		
	comp=Z,180nm,4.6s						
DL2				LR	LR		
	comp=N,270nm,15.9s,MS4.3						
DL2				LR	LR		
	comp=E,200nm,16.5s,MS4.3						
DL2				LR	LR		
	comp=Z,270nm,15.1s,MS4.3						
JNU	**Nakatsue**	**44.80**	**41**	P	**P**	**17 22 36.0**	**+0.2**
	comp=Z,31nm,0.8s,mb5.2,baz=137,slow=0.9,SNR=12						
UCH	**Uchtor**	**45.56**	**336**	P	**P**	**17 22 42.9**	**+1.2**
	SNR=17						
TKM2	**Tokmak 2**	**45.73**	**338**	P	**P**	**17 22 44.4**	**+1.4**
	SNR=10						
KBK	**Karagaybulak**	**45.75**	**337**	P	**P**	**17 22 45.1**	**+2.0**
	SNR=8.4						
KS15	**Wonju Array Si**	**45.80**	**35**	*e*P	**P**	**17 22 43.6**	**0.0**
KS15				*e*pP	pP	17 22 50.4	-0.6
AML	**Almayashu**	**45.81**	**336**	P	**P**	**17 22 45.1**	**+1.5**
	SNR=7.8						
FRU	**Bishkek**	**46.03**	**337**	*e*P	**P**	**17 22 47.0**	**+1.6**
FRU				pmax	pmax		
	comp=Z,155nm,3.0s						
CHMS	**Chumysh**	**46.12**	**337**	P	**P**	**17 22 47.0**	**+0.9**
	SNR=5.3						
EKS2	**Erkin-Say**	**46.22**	**336**	P	**P**	**17 22 48.4**	**+1.6**
	SNR=9.8						
USP	**Ospenovka**	**46.44**	**337**	P	**P**	**17 22 49.3**	**+0.7**
	SNR=14						
SNY	**Shenyang**	**46.88**	**27**	⇑P	**P**	**17 22 51.5**	**-0.5**
SNY				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
SNY				LR	LR		
	comp=N,630nm,16.8s,MS4.9						
SNY				LR	LR		
	comp=E,770nm,15.0s,MS4.9						
SNY				LR	LR		
	comp=Z,900nm,15.0s,MS4.8						
SONM	**Songino Array**	**47.08**	**9**	P	**P**	**17 22 53.7**	**+0.1**
	comp=Z,22nm,0.8s,mb5.2,baz=189,slow=8.8,SNR=215						
SONM				LR	LR	17 45 07.4	
	comp=Z,661nm,18.5s,MS4.6,baz=189,slow=39						
MKAR	**Makanchi Array**	**47.16**	**346**	*i* P	**P**	**17 22 54.1**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,14nm,0.6s						
MKAR	**Makanchi Array**	**47.16**	**346**	P	**P**	**17 22 54.2**	**0.0**
	comp=Z,14nm,0.8s,mb5.0,baz=159,slow=7.8,SNR=125						
MKAR				LR	LR	17 45 56.0	
	comp=Z,215nm,20.9s,MS4.1,baz=171,slow=40						
MKAR	**Makanchi Array**	**47.16**	**346**	P	**P**	**17 22 54.2**	**0.0**
MKAR				LR	LR	17 45 56.0	
ULN	**Ulaanbaatar**	**47.21**	**9**	*e*P	**P**	**17 22 54.2**	**-0.4**
ULN				*e**PP	pP	17 23 02.1	0.0
ULN				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
ULN				MLR	MLR		
	comp=Z,894nm,19.0s,MS4.8						
ULN	**Ulaanbaatar**	**47.21**	**9**	*e*P	**P**	**17 22 54.2**	**-0.4**
	comp=Z,15nm,0.8s,mb5.0						
ULN				*e*pP	pP	17 23 02.1	0.0
ULN				LR	LR		
	comp=Z,894nm,19.0s,MS4.8						
KKAR	**Karatay Array**	**47.97**	**334**	*i* P	**P**	**17 23 00.3**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
GUMO	**Guam**	**48.78**	**73**	*e*P	**P**	**17 23 04.3**	**-3.0**
GUMO				pmax	pmax		
	comp=Z,99nm,1.2s,mb5.7						
GUMO	**Guam**	**48.78**	**73**	*e*P	**P**	**17 23 04.3**	**-3.0**
	comp=Z,98nm,1.2s,mb5.7						
ZAK	**Zakamensk**	**49.21**	**5**	⇑*i*P	**P**	**17 23 09.9**	**-0.2**
ZAK				*e*		17 24 34.4	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
CN2	**Changchun**	**49.28**	**27**	*e*P	**P**	**17 23 10.3**	**-0.4**
CN2				*e*AP	pP	17 23 16.0	-2.2
CN2				*e*S	**S**	**17 30 14.5**	**+0.3**
CN2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.5						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,700nm,15.0s,MS4.9						
CN2				LR	LR		
	comp=E,700nm,15.0s,MS4.9						
CN2				LR	LR		
	comp=Z,800nm,16.0s,MS4.8						
MOY	**Mondy**	**50.33**	**3**	*e*P	**P**	**17 23 18.6**	**0.0**
TLY	**Talaya**	**50.53**	**5**	*e*P	**P**	**17 23 20.5**	**+0.3**
TLY				*e*		17 25 12.9	
TLY				*e*S	**S**	**17 30 28.1**	**-3.4**
TLY				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
TLY				MLR	MLR		
	comp=Z,550nm,16.0s,MS4.7						
TLY	**Talaya**	**50.53**	**5**	*e*P	**P**	**17 23 20.3**	**+0.1**
	comp=Z,11nm,0.7s,mb4.9						
IRK	**Irkutsk**	**51.15**	**6**	*e*P	**P**	**17 23 24.2**	**-0.7**
IRK				*e*		17 25 25.8	
IRK				pmax	pmax		
	comp=Z,28nm,2.0s,mb4.8						
HIA	**Hailar**	**51.60**	**19**	*e*P	**P**	**17 23 27.9**	**-0.4**
HIA				pmax	pmax		
	comp=Z,27nm,0.9s						
HIA				MLR	MLR		
	comp=Z,375nm,20.0s						
HIA	**Hailar**	**51.60**	**19**	*e*P	**P**	**17 23 27.9**	**-0.4**
	comp=Z,27nm,0.9s,mb5.2						
HIA				LR	LR		
	comp=Z,375nm,20.0s,MS4.4						
MJAR	**Matsushiro Arr**	**51.69**	**42**	P	**P**	**17 23 28.9**	**-0.3**
	comp=Z,6.5nm,0.9s,mb4.5,baz=216,slow=6.9,SNR=12						
MJAR				LR	LR	17 45 33.7	
	comp=Z,226nm,21.6s,MS4.2,baz=245,slow=36						
MJAR	**Matsushiro Arr**	**51.69**	**42**	P	**P**	**17 23 28.9**	**-0.3**

MJAR				LR	LR	17 45 33.7	
MDJ	**Mudanjiang**	**51.84**	**29**	P	**P**	**17 23 30.5**	**+0.2**
MDJ				AP	pP	17 23 36.8	-1.0
MDJ				XP	sP	17 23 39.3	-1.4
MDJ				PCP	PcP	17 24 42.5	-0.6
MDJ				PP	PP	17 25 27.8	-1.0
MDJ				S	**S**	**17 30 53.3**	**+3.6**
MDJ				XS		17 31 01.3	
MDJ				SS	SS	17 34 27.5	+3.0
MDJ				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,90nm,4.8s						
MDJ				LR	LR		
	comp=N,410nm,16.2s,MS4.7						
MDJ				LR	LR		
	comp=E,360nm,16.5s,MS4.7						
MDJ				LR	LR		
	comp=Z,660nm,16.5s,MS4.8						
MDJ	**Mudanjiang**	**51.84**	**29**	eP	**P**	**17 23 29.9**	**-0.4**
	comp=Z,20nm,0.8s,mb5.1						
CIT	**Chita**	**52.42**	**13**	⇑iP	**P**	**17 23 34.9**	**+0.4**
CIT				e	pP	17 23 42.8	+0.7
CIT				e		17 23 49.2	
CIT				e		17 25 32.1	
CIT				pmax	pmax		
	comp=Z,68nm,1.5s,mb5.4						
CTAO	**Charters Tower**	**52.59**	**117**	P	**P**	**17 23 35.5**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
CTAO				MLR	MLR		
	comp=Z,608nm,22.0s,MS4.6						
CTAO	**Charters Tower**	**52.59**	**117**	P	**P**	**17 23 35.5**	**-0.7**
	comp=Z,9.7nm,1.0s,mb4.7						
CTAO				LR	LR		
	comp=Z,608nm,22.0s,MS4.6						
STKA	**Stephens Creek**	**53.45**	**132**	eP	**P**	**17 23 42.6**	**+0.2**
	comp=Z,9.4nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**53.45**	**132**	P	**P**	**17 23 43.4**	**+1.0**
	comp=Z,12nm,1.0s,mb4.8,baz=299,slow=7.0,SNR=21						
ZAL	**Zalesovo**	**53.47**	**351**	P	**P**	**17 23 42.6**	**+0.4**
	comp=Z,17nm,0.6s,mb5.1,baz=306,slow=5.6,SNR=109						
NVS	**Novosibirsk**	**54.60**	**350**	eP	**P**	**17 23 48.6**	**-1.9**
NVS				e*PP	pP	17 24 00.6	+2.5
NVS				eS	**S**	**17 31 23.1**	**-3.8**
NVS				pmax	pmax		
	comp=N,14nm,1.0s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
NVS				smax			
	comp=N,18nm,2.0s						
NVS				smax			
	comp=E,8.0nm,1.7s						
VOSK	**Vostochnaya**	**55.72**	**341**	P	**P**	**17 23 57.1**	**-1.6**
VOSK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
BVA0	**Borovoye Array**	**56.16**	**341**	P	**P**	**17 24 00.3**	**-1.6**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**56.16**	**341**	P	**P**	**17 24 00.9**	**-1.0**
	comp=Z,15nm,0.7s,mb5.1,baz=143,slow=7.4,SNR=98						
KLR	**Kul'dur**	**56.23**	**27**	eP	**P**	**17 23 58.4**	**-4.0**
KLR				MLR	MLR		
	comp=E,500nm,13.5s						
KLR				MLR	MLR		
	comp=Z,1μm,13.5s,MS5.1						
ZRNK	**Zerenda**	**56.56**	**340**	eP	**P**	**17 24 03.7**	**-1.1**
ZRNK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
ZRNK	**Zerenda**	**56.56**	**340**	eP	**P**	**17 24 03.7**	**-1.1**
	comp=Z,9.5nm,0.8s,mb4.9						
AB31	**Akbulak array**	**57.42**	**332**	P	**P**	**17 24 09.4**	**-1.5**
AB31				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.3						
BOD	**Bodaibo**	**57.96**	**11**	eP	**P**	**17 24 14.1**	**-0.4**
BOD				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
CLNS	**Chul'man**	**59.70**	**17**	eP	**P**	**17 24 26.1**	**-0.5**
CLNS				e*PP	pP	17 24 32.8	-1.5
CLNS				eS	**S**	**17 32 28.1**	**-6.0**
CLNS				pmax	pmax		
	comp=N,17nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.5						
CLNS				pmax	pmax		
	comp=E,14nm,0.8s						
CLNS				pmax	pmax		
	comp=N,9.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
CLNS				smax			
	comp=E,70nm,14.1s						
CLNS				smax			
	comp=Z,34nm,12.3s						
CLNS				smax			
	comp=N,93nm,14.1s						
CLNS				MLR	MLR		
	comp=N,500nm,15.0s,MS4.8						
CLNS				MLR	MLR		
	comp=Z,900nm,15.0s,MS5.0						
CLNS				MLR	MLR		
	comp=E,100nm,13.0s,MS4.8						
YSS	**Yuzh-Sakhalins**	**60.33**	**34**	⇑eP	**P**	**17 24 30.0**	**-1.1**
YSS				e	pP	17 24 36.5	-2.3
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s,MS4.7						
YSS	**Yuzh-Sakhalins**	**60.33**	**34**	eP	**P**	**17 24 30.8**	**-0.3**
	comp=Z,48nm,1.0s,mb5.5						
GNI	**Garni**	**61.20**	**316**	eP	**P**	**17 24 35.7**	**-1.4**
GNI				pmax	pmax		
	comp=Z,18nm,1.2s						
GNI				MLR	MLR		
	comp=Z,130nm,20.0s						
GNI	**Garni**	**61.20**	**316**	eP	**P**	**17 24 35.7**	**-1.4**
	comp=Z,18nm,1.2s,mb5.1						
GNI				LR	LR		
	comp=Z,130nm,20.0s,MS4.1						
SVE	**Sverdlovsk**	**62.60**	**338**	eP	**P**	**17 24 44.5**	**-1.8**
SVE				e		17 25 32.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.3						
SVE				MLR	MLR		
	comp=N,100nm,16.0s,MS4.2						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.2						
SVE				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.6						
ARNR	**Ardon**	**62.84**	**319**	eP	**P**	**17 24 50.5**	**+2.5**
ZEI	**Tsey**	**62.90**	**319**	eP	**P**	**17 24 47.9**	**-0.5**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
ARU	**Arti**	**63.09**	**337**	⇑iP	**P**	**17 24 48.0**	**-1.5**
ARU				e		17 25 25.6	
ARU				e		17 27 09.4	
ARU				eS	**S**	**17 33 18.4**	**+1.2**
ARU				eSS	SS	17 37 26.0	+0.8
ARU				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1						
ARU	**Arti**	**63.09**	**337**	eP	**P**	**17 24 47.9**	**-1.7**
	comp=Z,17nm,1.0s,mb5.1						
KIV	**Kislovodsk**	**64.21**	**319**	eP	**P**	**17 24 56.2**	**-0.9**
KIV				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
KIV	**Kislovodsk**	**64.21**	**319**	eP	**P**	**17 24 56.1**	**-0.9**
	comp=Z,15nm,0.8s,mb5.1						
MALT	**Malatya**	**65.03**	**312**	eP	**P**	**17 25 01.6**	**-0.9**
MALT				e*PP	pP	17 25 09.8	-0.4
MALT				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
MALT	**Malatya**	**65.03**	**312**	eP	**P**	**17 25 01.6**	**-0.9**
	comp=Z,5.3nm,1.0s,mb4.5						
MALT				epP	pP	17 25 09.8	-0.4
EIL	**Elat**	**65.36**	**302**	LR	LR	17 54 13.6	
	comp=Z,186nm,18.3s,MS4.3,baz=316,slow=37						
EIL	**Elat**	**65.36**	**302**	eP	**P**	**17 25 06.1**	**+1.3**
	comp=Z,3.1nm,0.7s,mb4.5						
YAK	**Yakutsk**	**65.38**	**16**	c iP	**P**	**17 25 02.9**	**-1.4**
YAK				i *PP	pP	17 25 10.6	-1.4
YAK				e		17 25 32.9	
YAK				eS	S	17 33 44.9	-0.4
YAK				e		17 34 49.8	
YAK				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.5						
YAK				pmax	pmax		
	comp=N,20nm,1.2s						
YAK				pmax	pmax		
	comp=E,11nm,1.1s						
YAK				smax			
	comp=N,27nm,10.3s						
YAK				smax			
	comp=E,15nm,10.3s						
YAK				MLR	MLR		
	comp=N,241nm,15.0s,MS4.7						
YAK				MLR	MLR		
	comp=Z,353nm,15.0s,MS4.7						
YAK				MLR	MLR		
	comp=E,282nm,17.0s,MS4.7						
SOKR	**Solikamsk**	**66.00**	**339**	⇓iP	**P**	**17 25 07.0**	**-1.3**
SOKR				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
SOKR				MLR	MLR		
	comp=Z,310nm,18.0s,MS4.6						
SOC	**Sochi**	**66.02**	**318**	eP	**P**	**17 25 09.4**	**+0.7**
SOC				e		17 25 35.8	
SOC				eS	S	17 33 46.0	-7.6
SOC				e		17 34 56.6	
SOC				eSS	SS	17 38 02.1	-8.3
SOC				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.2						
SOC				pmax	pmax		
	comp=N,14nm,1.0s						
SOC				pmax	pmax		
	comp=E,7.0nm,1.0s						
BR131	**Keskin Array S**	**69.02**	**312**	eP	**P**	**17 25 27.1**	**-0.6**
	comp=E,2.2nm,0.5s,mb4.3						
BR131				epP	pP	17 25 34.7	-0.6
BRTR	**Keskin Array B**	**69.02**	**312**	P	**P**	**17 25 26.6**	**-1.0**
	comp=E,1.2nm,0.6s,mb4.0,baz=132,slow=6.8,SNR=7.9						
SKR	**Severo-Kuril's**	**69.84**	**36**	eP	**P**	**17 25 29.0**	**-3.5**
SKR				eS	pP	17 25 38.0	-2.2
SKR				pmax	pmax		
	comp=N,80nm,0.4s						
SKR				pmax	pmax		
	comp=E,80nm,0.4s						
SKR				pmax	pmax		
	comp=Z,110nm,0.4s,mb6.1						
MA2	**Magadan**	**71.30**	**26**	eP	**P**	**17 25 40.8**	**-0.4**
MA2				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
MA2	**Magadan**	**71.30**	**26**	eP	**P**	**17 25 40.8**	**-0.4**
	comp=Z,17nm,0.7s,mb5.1						
PET	**Petropavlovsk**	**72.21**	**34**	⇓iP	**P**	**17 25 46.6**	**-0.2**
PET				pmax	pmax		
	comp=Z,51nm,1.2s,mb5.3						
OBN	**Obninsk**	**72.53**	**328**	eP	**P**	**17 25 47.5**	**-1.1**
OBN				e	pP	17 25 55.6	-0.7
OBN				e		17 26 07.9	
OBN						17 28 29.0	
OBN				S	S	17 35 17.0	+7.0
OBN				e		17 36 02.1	
OBN				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
MAW	**Mawson**	**72.76**	**193**	LR	LR	17 54 15.7	
	comp=Z,159nm,18.8s,MS4.3,baz=258,slow=33						
SEY	**Seymchan**	**73.73**	**23**	eP	**P**	**17 25 57.3**	**+1.9**
SEY						17 26 11.9	
SEY						17 28 43.9	
SEY				ePPP	PPP	17 30 23.4	-2.8
SEY				eS	S	17 35 30.9	+7.5
SEY				ePS	PS	17 36 08.9	+8.8
SEY				SS	SS	17 40 13.9	+4.3
SEY				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
SEY				pmax	pmax		
	comp=E,1.0nm,0.5s						
SEY				smax			
	comp=N,200nm,23.0s						
SEY				smax			
	comp=E,90nm,23.0s						
SEY				MLR	MLR		
	comp=Z,5μm,17.0s,MS5.9						
SEY				MLR	MLR		
	comp=N,2μm,17.0s,MS5.8						
SEY				MLR	MLR		
	comp=E,3μm,17.0s,MS5.8						
BOSA	**Boshof**	**74.75**	**240**	LR	LR	17 57 20.1	
	comp=E,162nm,18.7s,MS4.3,baz=271,slow=35						
AKASG	**Malin Array Be**	**75.16**	**322**	P	**P**	**17 26 02.7**	**-1.2**
	comp=E,3.0nm,0.6s,mb4.4,baz=89,slow=5.1,SNR=17						
AKASG	**Malin Array Be**	**75.16**	**322**	P	**P**	**17 26 02.7**	**-1.2**
VRI	**Vrincioaia**	**75.52**	**317**	⇓P	**P**	**17 26 06.8**	**+0.7**
MLR	**Muntele Rosu**	**75.97**	**317**	⇑P	**P**	**17 26 09.2**	**+0.5**
BURAR	**Bucovina Array**	**76.93**	**319**	⇓P	**P**	**17 26 15.3**	**+1.3**
BURAR	**Bucovina Array**	**76.93**	**319**	⇓P	**P**	**17 26 15.3**	**+1.3**
APA	**Apatity**	**79.04**	**339**	⇑eP	**P**	**17 26 27.5**	**+2.3**
APA				i		17 26 33.0	
FINES	**FINESS Array B**	**79.91**	**333**	P	**P**	**17 26 29.8**	**-0.2**
	comp=E,4.4nm,0.8s,mb4.5,baz=90,slow=5.7,SNR=9.6						
KAF	**Kangasniemi**	**79.99**	**333**	ep	**P**	**17 26 29.9**	**-0.5**
BILL	**Bilibino**	**81.13**	**21**	⇓iP	**P**	**17 26 35.7**	**-0.6**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.6s,mb4.5						
KEV	**Kevo**	**82.02**	**341**	ep	**P**	**17 26 36.7**	**-4.2**
MORC	**Moravsky Berou**	**82.31**	**320**	eP	**P**	**17 26 42.9**	**+0.1**
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
MORC	**Moravsky Berou**	**82.31**	**320**	eP	**P**	**17 26 42.9**	**+0.1**
	comp=Z,2.4nm,0.8s,mb4.2						
ARCES	**ARCESS Array B**	**82.45**	**340**	P	**P**	**17 26 43.8**	**+0.6**
	comp=Z,5.8nm,0.9s,mb4.5,baz=83,slow=9.8,SNR=8.9						
ARCES				LR	LR	18 07 26.7	
	comp=Z,171nm,19.6s,MS4.4,baz=316,slow=39						
BRG	**Berggiesshubel**	**84.71**	**321**	eP	**P**	**17 26 55.4**	**+0.3**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
BRG	**Berggiesshubel**	**84.71**	**321**	eP	**P**	**17 26 55.4**	**+0.3**
	comp=Z,4.5nm,1.1s,mb4.5						
GERES	**GERESS Array B**	**84.72**	**319**	P	**P**	**17 26 56.1**	**+1.0**
	comp=Z,1.6nm,0.7s,mb4.3,baz=104,slow=5.5,SNR=9.6						
KHC	**Kasperske Hory**	**84.82**	**319**	eP	**P**	**17 26 51.5**	**-4.1**
KHC				e		17 26 57.0	
KHC	**Kasperske Hory**	**84.82**	**319**	P	**P**	**17 26 57.0**	**+1.4**
VNDA	**Vanda**	**85.90**	**169**	LR	LR	18 03 00.0	
	comp=Z,164nm,18.1s,MS4.5,baz=314,slow=34						
NB2	**NORSAR Subarra**	**86.91**	**331**	P	**P**	**17 27 05.8**	**+0.1**
	comp=Z,2.4nm,0.9s,mb4.4,baz=96,slow=5.0						
NB2	**NORSAR Subarra**	**86.91**	**331**	P	**P**	**17 27 05.8**	**+0.1**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.3						
NOA	**NORSAR Array B**	**86.91**	**331**	P	**P**	**17 27 06.1**	**+0.4**
	comp=Z,1.9nm,0.8s,mb4.4,baz=93,slow=4.9,SNR=4.1						
NOA				LR	LR	18 11 42.2	
	comp=Z,104nm,20.5s,MS4.2,baz=40,slow=40						
LPG	**La Plagne**	**89.37**	**315**	eP	**P**	**17 27 18.2**	**+0.3**
	comp=Z,7.2nm,0.8s,mb4.7						
LPG	**La Plagne**	**89.37**	**315**	eP	**P**	**17 27 18.2**	**+0.3**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
IMA	**Indian Mountai**	**96.55**	**23**	eP	**P**	**17 27 51.7**	**+1.3**
IMA				e*PP	pP	17 27 59.1	+0.8
IMA				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.6						
IMA	**Indian Mountai**	**96.55**	**23**	eP	**P**	**17 27 51.7**	**+1.3**
	comp=Z,32nm,1.2s,mb5.6						
IMA				epP	pP	17 27 59.1	+0.8
ILAR	**Eielson Array**	**99.67**	**23**	PP	PP	17 32 13.1	+1.9
	comp=Z,0.5nm,1.0s,baz=303,slow=9.5,SNR=4.4						
ILAR				LR	LR	18 19 33.0	
	comp=Z,137nm,18.0s,MS4.5,baz=178,slow=39						
YKA	**Yellowknife Ar**	**112.05**	**15**	PP	PP	17 33 40.9	-2.4
	comp=Z,0.2nm,0.3s,baz=328,slow=6.6,SNR=4.9						
WVOR	**Wild Horse Val**	**125.86**	**32**	ePKIKP	PKPdf	17 33 23.8	-2.9
BOZ	**Bozeman (W)**	**126.81**	**25**	ePKIKP	PKPdf	17 33 24.9	-3.5
NVAR	**Mina Array Bea**	**128.77**	**36**	PKP	PKPdf	17 33 30.3	-2.2
	comp=Z,1.5nm,0.9s,baz=222,slow=0.8,SNR=8.5						
RRI2	**Red Ridge**	**128.77**	**26**	ePKPdf	PKPdf	17 33 30.6	-1.7
ELK	**Elko**	**128.85**	**31**	ePKIKP	PKPdf	17 33 31.2	-1.4
MNV	**Mina**	**128.85**	**36**	ePKIKP	PKPdf	17 33 30.2	-2.4
BW06	**Boulder Array**	**130.01**	**26**	ePKPdf	PKPdf	17 33 32.4	-2.3
PDAR	**Pinedale Array**	**130.01**	**26**	PKP	PKPdf	17 33 32.0	-2.6
	comp=Z,0.8nm,0.9s,baz=270,slow=1.5,SNR=6.2						
PDAR				PP	PP	17 35 44.2	-2.3
	comp=Z,0.3nm,0.6s,baz=288,slow=4.7,SNR=3.8						
ANMO	**Albuquerque**	**137.74**	**29**	PKIKP	PKPdf	17 33 46.1	-3.2
MNTX	**Cornudas Mount**	**140.88**	**31**	ePKPdf	PKPdf	17 33 52.3	-2.8
TXAR	**Lajitas Array**	**143.65**	**32**	PKhKP		17 33 54.8	
	comp=Z,1.6nm,0.8s,SNR=11						
CPUP	**Villa Florida**	**145.01**	**222**	ePKIKP	PKPdf	17 33 59.9	-2.5
NATX	**Nacogdoches**	**145.30**	**18**	ePKPbc	PKPbc	17 33 59.8	+1.1
LRAL	**Lakeview Retre**	**145.66**	**6**	ePKPdf	PKPdf	17 34 00.1	-3.3
LRAL				epPKPdf		17 34 07.0	

ISK ***27*** *17:59:50.4, 38.86N×27.72E, h19^{km}, MD3.4*
CSEM ***27*** *17:59:50.2±0.1, 38.88N×27.73E, h15^{km}, MD3.8/1, Error ellipse: s-maj=1.7km s-min=1.4km az=105.0*
ATH ***27*** *17:59:51.6, 38.87N×27.67E, h23^{km}±2^{km}, MD3.6/3*
NEIC ***27*** *17:59:51.6, 38.87N×27.67E, h23^{km}, MD3.6(ATH), MD3.4(ISK), After ATH.*
ISC 27 17:59:50.6±0.5**, 38.88N**±0.02×**27.75E**±0.03**, h11**^{km}±4^{km}**, n48, σ0^{s}80**/58**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKS	**Akhisar**	**0.05**	**94**	i PG	**Pg**	**17 59 53.7**	**+0.9**
KDAG	**Bornova**	**0.61**	**218**	i P	**Pb**	**18 00 02.1**	**-0.7**
KDAG				i S	**Sg**	**18 00 12.4**	**+1.2**
IZM	**Izmir**	**0.62**	**218**	i PG	**Pg**	**18 00 02.3**	**-0.7**
IZM				SG	**Sg**	**18 00 11.3**	**-0.1**
MANT	**Manisa**	**0.74**	**121**	i P	**Pb**	**18 00 05.2**	**+0.2**
MANT				i S	**Sb**	**18 00 14.0**	**-0.9**
BLCB	**Balcova**	**0.74**	**228**	i PG	**Pg**	**18 00 04.9**	**-0.7**
BALB	**Balikesir**	**0.76**	**8**	i PG	**Pg**	**18 00 06.6**	**+0.6**
BTOK	**Tokmak**	**0.91**	**14**	i P	**Pb**	**18 00 08.4**	**+0.6**
BTOK				i S	**Sb**	**18 00 21.2**	**+1.6**
AYVA	**Ayvalik**	**0.93**	**298**	i P	**Pb**	**18 00 09.5**	**+1.3**
AYVA				i S	**Sb**	**18 00 22.0**	**+1.8**
DST	**Dursunbey**	**0.99**	**43**	i PG	**Pg**	**18 00 10.1**	**-0.4**
PRK	**Paraskevi**	**1.21**	**288**	ePN	**Pn**	**18 00 13.7**	**+0.3**
PRK				eSN	**Sn**	**18 00 29.5**	**-0.2**
AYDN	**Tasoluk**	**1.22**	**175**	i P	**Pb**	**18 00 12.7**	**-0.6**
AYDN				i S	**Sb**	**18 00 29.0**	**+0.2**
CANB	**Canakkale**	**1.25**	**335**	i PN	**Pn**	**18 00 14.1**	**+0.1**
GDZ	**Gediz**	**1.36**	**81**	i P	**Pn**	**18 00 16.5**	**+0.9**
GDZ				i S	**Sb**	**18 00 34.9**	**+1.9**
SMG	**Samos**	**1.37**	**212**	ePN	**Pn**	**18 00 16.5**	**+0.7**
SMG				eSN	**Sn**	**18 00 35.0**	**+1.0**
EZN	**Ezine**	**1.45**	**311**	ePN	**Pn**	**18 00 16.4**	**-0.5**
KCT	**Karacabey**	**1.46**	**19**	PN	**Pn**	**18 00 16.8**	**-0.2**
ORLT	**Orhaneli**	**1.46**	**37**	PN	**Pn**	**18 00 16.8**	**-0.2**
BNT	**Bandirma**	**1.48**	**5**	PN	**Pn**	**18 00 17.2**	**0.0**
DENT	**Denizli**	**1.51**	**138**	ePN	**Pn**	**18 00 17.2**	**-0.5**
DNZL	**Cakiroluk**	**1.57**	**139**	i P	**Pn**	**18 00 17.6**	**-0.9**
DNZL				i S	**Sb**	**18 00 41.0**	**+2.2**
MLSB	**Milas**	**1.58**	**179**	ePN	**Pn**	**18 00 18.6**	**-0.2**
LPK	**Lapseki**	**1.67**	**333**	ePN	**Pn**	**18 00 19.7**	**-0.3**
MRMT	**Marmara Adasi**	**1.72**	**356**	ePN	**Pn**	**18 00 19.8**	**-0.9**
YER	**Yerkesik**	**1.79**	**166**	ePN	**Pn**	**18 00 20.6**	**-1.2**
ALT	**Altintas**	**1.85**	**84**	ePN	**Pn**	**18 00 22.6**	**+0.1**
BODT	**Bodrum**	**1.85**	**191**	ePN	**Pn**	**18 00 21.7**	**-0.9**
MFT	**Murefte**	**1.94**	**349**	ePN	**Pn**	**18 00 23.7**	**-0.1**
YLV	**Yalova**	**2.10**	**36**	ePN	**Pn**	**18 00 25.4**	**-0.7**
BADT	**Buyukada**	**2.23**	**28**	ePN	**Pn**	**18 00 27.2**	**-0.8**
CTT	**Catalca**	**2.32**	**13**	ePN	**Pn**	**18 00 28.6**	**-0.7**
ISK	**Istanbul-Kandi**	**2.40**	**24**	ePN	**Pn**	**18 00 29.7**	**-0.8**
ISP	**Isparta**	**2.40**	**115**	ePN	**Pn**	**18 00 31.1**	**+0.6**
HRT	**Hereke**	**2.44**	**37**	ePN	**Pn**	**18 00 30.4**	**-0.5**
FETY	**Fethiye**	**2.48**	**154**	ePN	**Pn**	**18 00 31.3**	**-0.3**
ESKT	**Eskisehir**	**2.49**	**74**	ePN	**Pn**	**18 00 32.0**	**+0.3**
EYL	**Eskiyayla**	**2.50**	**47**	ePN	**Pn**	**18 00 31.8**	**-0.1**
ELL	**Elmali**	**2.73**	**141**	ePN	**Pn**	**18 00 35.2**	**0.0**
RDO	**Rodhopi**	**2.83**	**324**	ePN	**Pn**	**18 00 37.5**	**+0.9**
EDRB	**Edirne**	**3.06**	**346**	ePN	**Pn**	**18 00 38.8**	**-1.0**
KIZT	**Kizilcal**	**3.22**	**89**	ePN	**Pn**	**18 00 41.9**	**-0.3**
KDZ	**Kurdzhali**	**3.29**	**328**	eP	**Pn**	**18 00 42.3**	**-0.8**
RZN	**Rozhen**	**3.64**	**321**	eP	**Pn**	**18 00 42.0**	**-6.1**
LOD	**Lodumlu**	**4.01**	**74**	ePN	**Pn**	**18 00 53.8**	**+0.4**
ANTO	**Ankara**	**4.03**	**74**	ePN	**Pn**	**18 00 54.3**	**+0.7**
MMB	**Musomiste**	**4.10**	**313**	eP	**Pn**	**18 00 54.0**	**-0.6**
BR131	**Keskin Array S**	**4.64**	**78**	ePn	**Pn**	**18 01 01.4**	**-1.0**
BR131	**Keskin Array S**	**4.64**	**78**	ePn	**Pn**	**18 01 01.4**	**-1.0**
KKB	**Krupnik**	**4.65**	**311**	eP	**Pn**	**18 01 10.0**	**+7.6**

BJI ***27*** *18:06:05.1, 23.20S×66.50W, h202^{km}, mB4.7*
NEIC ***27*** *18:06:06.1±0.6, 23.25S×66.53W, h203^{km}±6^{km}, mb4.2/19, Error ellipse: s-maj=8.3km s-min=5.3km az=76.0*
IDC ***27*** *18:06:06.6±1.7, 23.25S×66.50W, h207^{km}±15^{km}, mb3.6/10, mb1 3.8/16, mb1mx3.8/19, mbtmp4.2/16, Error ellipse: s-maj=18.0km s-min=11.7km az=83.0, Incorrectly calculated travel-time residual on T phase at H03N*
ISC 27 18:06:05.0±0.8**, 23.26S**±0.05×**66.55W**±0.08**, h205**^{km}±8^{km}**, n59, σ0^{s}92**/58**, mb3.9**/23**, 7C-4D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**7.09**	**348**	P	**P**	**18 07 49.7**	**+2.6**
	10.0nm,0.3s,baz=158,slow=8.9,SNR=135						
LPAZ				S	**S**	**18 09 06.5**	**-0.5**
	0.9nm,0.3s,baz=325,slow=18,SNR=4.7						
LPAZ	**La Paz**	**7.09**	**348**	ePn	**P**	**18 07 49.4**	**+2.3**
	47nm,0.6s						
LPAZ				eSn	**S**	**18 09 07.6**	**+0.6**
ARE	**Arequipa**	**8.21**	**325**	eP	**P**	**18 08 02.0**	**+0.3**
ARE				i S	**S**	**18 09 29.6**	**-3.3**
CFAA	**Coronel Fontan**	**8.45**	**190**	P	**P**	**18 08 04.5**	**-0.4**
	baz=11,slow=10,SNR=2.5						
CFAA				S	**S**	**18 09 32.9**	**-5.6**
	0.7nm,0.3s,baz=273,slow=18,SNR=6.5						
CFAA	**Coronel Fontan**	**8.45**	**190**	P	**P**	**18 08 04.5**	**-0.4**
CFAA				S	**S**	**18 09 32.9**	**-5.6**
SIV	**San Ignacio**	**8.88**	**36**	P	**P**	**18 08 10.5**	**+0.1**
	3.4nm,0.3s,baz=220,slow=14,SNR=108						
SIV				S	**S**	**18 09 38.9**	**-10**
	0.5nm,0.3s,baz=226,slow=19,SNR=5.8						
CPUP	**Villa Florida**	**8.92**	**112**	P	**P**	**18 08 11.1**	**+0.2**
	0.3nm,0.3s,baz=304,slow=14,SNR=28						
CPUP	**Villa Florida**	**8.92**	**112**	ePn	**P**	**18 08 10.8**	**-0.1**
	11nm,0.8s						
SAML	**Samuel**	**14.59**	**13**	eP	**P**	**18 09 23.3**	**+0.1**
	9.1nm,0.8s						
TRQA	**Tornquist**	**15.26**	**166**	eP	**P**	**18 09 30.7**	**-0.6**
	8.7nm,0.5s						
PLCA	**Paso Flores**	**17.75**	**190**	P	**P**	**18 09 59.0**	**-1.1**
	0.5nm,0.3s,baz=9.6,slow=12,SNR=12						
PLCA	**Paso Flores**	**17.75**	**190**	eP	**P**	**18 09 58.8**	**-1.3**
	6.8nm,0.5s						
BDFB	**Brasilia**	**19.04**	**70**	P	**P**	**18 10 13.5**	**-0.1**
	1.5nm,0.3s,baz=250,slow=10,SNR=37						
BAO	**Brasilia Array**	**19.06**	**70**	P	**P**	**18 10 14.0**	**+0.2**
RCBR	**Riachuelo**	**34.23**	**64**	eP	**P**	**18 12 32.6**	**-0.7**
	6.3nm,0.5s,mb4.4						
VNA3	**Neumayer Olymp**	**57.72**	**161**	⇑i	**P**	**18 15 37.8**	**+1.8**
VNA3	**Neumayer Olymp**	**57.72**	**161**	⇑i	**P**	**18 15 41.2**	**+5.2**
VNA3	**Neumayer Olymp**	**57.72**	**161**	⇓iP	**P**	**18 15 36.1**	**+0.1**
VNA3				⇑iP		18 15 37.8	
VNA3				⇑iP		18 15 41.2	
VNA1	**Neumayer--Stat**	**57.90**	**160**		**P**	**18 15 39.6**	**+2.3**
VNA1	**Neumayer--Stat**	**57.90**	**160**		**P**	**18 15 43.3**	**+6.0**
VNA1	**Neumayer--Stat**	**57.90**	**160**	⇓iP	**P**	**18 15 37.7**	**+0.4**
VNA1				P		18 15 39.6	
VNA1				P		18 15 43.3	
VNA2	**Neumayer--Watz**	**58.27**	**161**	⇑i	**P**	**18 15 41.4**	**+1.5**
VNA2	**Neumayer--Watz**	**58.27**	**161**		**P**	**18 15 44.6**	**+4.7**
VNA2	**Neumayer--Watz**	**58.27**	**161**	⇓iP	**P**	**18 15 40.1**	**+0.2**
VNA2				P		18 15 44.6	
SNAA	**Sanae**	**59.91**	**161**		**P**	**18 15 51.7**	**+0.6**
SNAA	**Sanae**	**59.91**	**161**		**P**	**18 15 56.6**	**+5.5**
SNAA	**Sanae**	**59.91**	**161**	P	**P**	**18 15 50.3**	**-0.8**
	1.3nm,0.6s,mb3.7,baz=288,slow=6.6,SNR=21						
SNAA	**Sanae**	**59.91**	**161**	⇑iP	**P**	**18 15 50.6**	**-0.5**
SNAA				P		18 15 51.7	
SNAA				P		18 15 56.6	
WVT	**Waverly**	**62.40**	**341**	eP	**P**	**18 16 05.6**	**-2.6**
	3.9nm,0.6s,mb4.2						
TXAR	**Lajitas Array**	**63.32**	**324**	P	**P**	**18 16 13.6**	**-0.8**
	0.5nm,0.5s,mb3.5,baz=165,slow=10,SNR=3.6						
MNTX	**Cornudas Mount**	**66.09**	**324**	eP	**P**	**18 16 30.6**	**-1.6**
	2.5nm,0.9s,mb3.8						
QSPA	**South Pole Qui**	**66.94**	**180**	⇓iP	**P**	**18 16 37.2**	**+0.4**
	11nm,0.6s,mb4.7						
DBIC	**Dimbokro**	**67.17**	**72**	P	**P**	**18 16 38.1**	**-1.2**

	4.5nm,0.7s,mb4.2,baz=221,slow=6.1,SNR=6.6						
ANMO	**Albuquerque**	69.17	326	*e*P	P	18 16 51.3	+0.1
	1.4nm,0.7s,mb3.7						
SDCO	**Great Sand Dun**	70.88	328	*e*P	P	18 17 01.5	0.0
	2.1nm,0.7s,mb3.9						
SYO	**Syowa Base**	74.09	159	⇑P	P	18 17 18.4	-1.4
VNDA	**Vanda**	75.50	190	P	P	18 17 28.8	+1.1
	0.9nm,0.9s,mb3.4,baz=304,slow=5.5,SNR=4.8						
VNDA	**Vanda**	75.50	190	*e*P	P	18 17 28.6	+0.9
	1.5nm,1.0s,mb3.6						
PDAR	**Pinedale Array**	76.73	329	P	P	18 17 35.1	-0.1
	0.7nm,0.5s,mb3.5,baz=128,slow=7.1,SNR=8.2						
HWUT	**Hardware Ranch**	76.83	327	*e*P	P	18 17 36.1	+0.4
	2.8nm,0.6s,mb4.1						
SCHQ	**Schefferville**	77.77	360	P	P	18 17 40.0	-0.6
	1.3nm,0.6s,mb3.8,baz=225,slow=2.8,SNR=5.2						
RRI2	**Red Ridge**	78.01	328	*e*P	P	18 17 42.9	+0.7
	3.8nm,1.0s,mb4.0						
MOOW	**Moose Ponds**	78.04	329	*e*P	P	18 17 42.4	0.0
	1.5nm,0.6s,mb3.8						
ELK	**Elko**	78.11	324	*e*P	P	18 17 43.0	+0.2
	1.2nm,0.7s,mb3.6						
NVAR	**Mina Array Bea**	78.22	321	P	P	18 17 44.4	+0.9
	0.3nm,0.5s,mb3.2,baz=142,slow=4.7,SNR=4.0						
IMW	**Indian Meadow**	78.24	329	*e*P	P	18 17 44.0	+0.6
	1.3nm,0.6s,mb3.7						
HLID	**Hailey**	79.69	327	*e*P	P	18 17 52.4	+1.2
	6.2nm,1.1s,mb4.2						
BOSA	**Boshof**	80.70	117	P	P	18 17 57.0	+0.1
	2.2nm,0.7s,mb3.9,baz=288,slow=3.2,SNR=3.1						
MAW	**Mawson**	82.02	163	P	P	18 18 03.5	+0.6
	1.2nm,0.5s,mb3.8,baz=226,slow=9.6,SNR=3.8						
CASY	**Casey**	90.72	179	*e*P	P	18 18 46.1	+1.0
	4.8nm,0.7s,mb4.5						
YKA	**Yellowknife Ar**	93.57	340	P	P	18 18 58.0	-0.3
	0.7nm,0.5s,mb4.0,baz=133,slow=4.7,SNR=6.8						
YKA	**Yellowknife Ar**	93.57	340	P	P	18 18 58.0	-0.3
WRA	**Warramunga Arr**	132.47	207	PKP	PKPdf	18 24 56.4	+0.6
	0.4nm,0.5s,baz=174,slow=1.3,SNR=8.9						
ZAL	**Zalesovo**	142.55	28	PKP	PKPdf	18 25 11.8	-1.2
	1.1nm,0.5s,baz=325,slow=0.1,SNR=4.7						
MKAR	**Makanchi Array**	145.69	39	PKPbc	PKPbc	18 25 20.3	+0.6
	4.0nm,0.7s,baz=308,slow=3.2,SNR=49						
MKAR	**Makanchi Array**	145.69	39	PKPbc	PKPbc	18 25 20.3	+0.6
WMQ	**Urumqi**	150.51	40	*e*PKP	PKPdf	18 25 25.0	-1.5
SONM	**Songino Array**	154.84	11	PKPbc	PKPdf	18 25 43.1	+11
	0.3nm,0.5s,baz=326,slow=0.9,SNR=3.4						
SONM				PKPab	PKPab	18 25 59.5	-0.3
	0.5nm,0.7s,baz=327,slow=3.7,SNR=5.4						
XAN	**Xi’an**	168.55	19	PKP	PKPdf	18 25 49.0	+2.2

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*NEIC **27** 18:06:07.4,33.15S×70.12W,h6^{km},ML2.8(GUC),After GUC.*

GUC 27 18:06:07.4±0.9**,33.15S×70.12W,h6^{km}**±2^{km}**,MD3.8, ML2.8,6C-5D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	**Farellones**	0.23	218	⇓*i*P	Pg	18 06 12.7	+0.6
CLCH	**Cerro Calan**	0.42	235	⇓*i*P	Pg	18 06 16.4	+0.5
CLCH				*i* S	Sg	18 06 22.8	+1.2
CLCH				AMP		18 06 24.4	
	comp=N,2µm,0.5s						
DSCH	**Colegio Aleman**	0.45	236	⇑*i*P	Pg	18 06 17.0	+0.6
DSCH				*i* S	Sg	18 06 23.9	+1.5
DSCH				AMP		18 06 24.6	
	comp=N,2µm,0.3s						
STL	**Santa Lucia**	0.52	237	*e*P	Pg	18 06 17.2	-0.6
STL				*i* S	Sg	18 06 24.9	+0.1
SJCH	**San Jose de Ma**	0.53	201	*e*P	Pg	18 06 16.9	-1.0
SJCH				*i* S	Sg	18 06 24.9	-0.1
SJCH				AMP		18 06 26.4	
	comp=E,632nm,0.4s						
PCH	**Pirque**	0.57	215	⇑*i*P	Pg	18 06 18.6	-0.3
PCH				*i* S	Sg	18 06 27.2	+0.6
ANTU	**Antumapu**	0.60	225	*e*P	Pg	18 06 19.1	-0.3
ANTU				*i* S	Sg	18 06 27.6	+0.3
JACH	**Jahuel**	0.61	320	*e*P	Pg	18 06 20.1	+0.4
JACH				*i* S	Sg	18 06 29.2	+1.4
ROCH	**El Roble**	0.77	283	⇑*i*P	Pg	18 06 23.0	+0.3
ROCH				*i* S	Sg	18 06 34.4	+1.4
TACH	**Talagante**	0.85	233	⇑*i*P	Pb	18 06 23.7	-0.5
TACH				*i* S	Sb	18 06 35.9	+0.3
CHCH	**Chadas Angostu**	0.90	209	⇑*i*P	Pb	18 06 24.1	-1.0
CHCH				*i* S	Sb	18 06 36.8	-0.3
CACH	**El Canelo**	1.04	202	⇓*i*P	Pb	18 06 27.0	-0.5
CACH				*i* S	Sb	18 06 41.9	+0.6
CICH	**Cipreses**	1.19	192	⇓*i*P	Pb	18 06 29.3	-0.8
CICH				*i* S	Sb	18 06 46.2	+0.6
LCCH	**Las Cruces**	1.25	255	⇑*i*P	Pb	18 06 30.9	-0.2
LCCH				*i* S	Sb	18 06 48.1	+0.7
PACH	**Papudo**	1.26	299	*e*P	Pb	18 06 31.4	+0.1
LNV	**Longovilo**	1.34	233	⇓*i*P	Pb	18 06 31.5	-1.1
LNV				*i* S	Sb	18 06 50.0	0.0
SFDO	**San Fernando**	1.64	207	*e*P	Pn	18 06 36.6	-0.3
SFDO				*i* S	Sb	18 06 58.8	+0.3
CMCH	**Combarbala**	2.11	339	*e*P	Pn	18 06 45.8	+2.1

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*ATH **27** 18:06:33.5,38.95N×20.63E,h43^{km}±1^{km},MD3.1/5*
*THE **27** 18:06:33.8,38.97N×20.61E,h10^{km},ML3.1*
*NEIC **27** 18:06:33.5,38.95N×20.64E,h43^{km},MD3.1(ATH),After ATH.*
*CSEM **27** 18:06:33.1±0.2,38.95N×20.56E,h12^{km},ML3.1,Error ellipse: s-maj=5.3km s-min=3.4km az=80.0*

ISC 27 18:06:33.2±0.8**,38.98N**±0.03×**20.62E**±0.06**,h5^{km}**±7^{km}**, n13,σ0^{s}.81**/17**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD	**Levkas**	0.27	174	*e*Pg	Pg	18 06 38.7	0.0
LKD				*e*Sg	Sg	18 06 43.2	+0.8
IGT	**Igoumenitsa**	0.60	338	*e*Pg	Pg	18 06 45.0	-0.2
JAN	**Janina**	0.70	15	*e*P	Pg	18 06 48.3	+1.0
VLS	**Valsamata**	0.80	182	*e*P	Pb	18 06 49.0	-0.3
VLS				*e*S	Sb	18 07 01.0	+0.8
VLS	**Valsamata**	0.80	182	*e*P	Pb	18 06 48.5	-0.8
VLS				*e*S	Sb	18 07 01.5	+1.3
EVR	**Evrytania**	0.93	93	*e*P	Pb	18 06 50.9	-0.6
MEV	**Metsovon**	0.94	30	*e*Pg	Pg	18 06 51.6	-0.3
KEK	**Kerkira**	0.97	319	*e*P	Pb	18 06 52.2	0.0
RLS	**Riolos of Patr**	1.14	144	*e*P	Pb	18 06 53.8	-1.2
AGG	**Agios Georgios**	1.34	88	*e*Pg	Pg	18 06 58.4	-1.5
AGG				*e*Sg	Sg	18 07 18.4	+0.7
LIT	**Litokhoron**	1.83	52	*e*Sb	Sb	18 07 31.4	+1.3
XOR	**Xorichti**	2.04	78	*e*Pn	Pn	18 07 08.8	+0.1
AOS	**Alonnisos**	2.55	85	*e*Pn	Pn	18 07 15.5	-0.5

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*IDC **27** 18:18:53.1±2.4,0.16N×97.94E,mb4.2/5,mb1 4.3/6, mb1mx3.9/18,mbtmp4.2/6,ML4.2/1,MS3.2/2,Ms1 3.3/2, ms1mx2.9/20,Error ellipse: s-maj=90.6km s-min=24.5km az=56.0*
*NEIC **27** 18:18:57.6±1.1,0.22N×97.89E,h30^{km},mb4.0/4,Error ellipse: s-maj=28.8km s-min=14.0km az=66.0*

ISC 27 18:18:55.5±1.1**,0.2N**±0.1×**97.8E**±0.2**,h30^{km},n11, σ0^{s}.86**/11**,mb4.2**/8**,MS3.2**/1**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	5.75	29	*e*Pn	Pn	18 20 21.8	+0.5
CM31	**Chiang Mai Arr**	18.14	3	*e*P	P	18 23 06.6	-0.7
	11nm,1.1s						
CMAR	**Chiang Mai Arr**	18.14	3	P	P	18 23 05.8	-1.4
	0.3nm,0.3s,baz=194,slow=11,SNR=12						
CMAR				LR	LR	18 31 08.2	
	comp=Z,70nm,18.7s,baz=195,slow=40						
WRA	**Warramunga Arr**	40.99	121	P	P	18 26 36.9	-0.8
	1.6nm,0.6s,mb3.8,baz=301,slow=9.0,SNR=11						
WRAB	**Tennant Creek**	40.99	121	*e*P	P	18 26 38.0	+0.3
	4.3nm,0.7s,mb4.2						
SONM	**Songino Array**	47.99	8	P	P	18 27 34.8	+1.0
	1.6nm,0.6s,mb4.2,baz=189,slow=9.1,SNR=20						
ULN	**Ulaanbaatar**	48.11	8	*e*P	P	18 27 35.0	+0.3
	1.0nm,0.6s,mb4.0						
MKAR	**Makanchi Array**	48.33	346	P	P	18 27 36.9	+0.5
	3.2nm,0.5s,mb4.6,baz=160,slow=8.7,SNR=47						
ZAL	**Zalesovo**	54.60	351	P	P	18 28 25.1	+1.6
	3.9nm,0.4s,mb4.8,baz=310,slow=6.3,SNR=19						
ZAL				LR	LR	18 55 07.7	
	comp=Z,25nm,21.0s,MS3.2,baz=34,slow=40						
BVAR	**Borovoye Array**	57.37	341	P	P	18 28 42.7	-0.7
	1.4nm,0.7s,mb4.1,baz=143,slow=7.4,SNR=11						
ZRNK	**Zerenda**	57.77	340	*e*P	P	18 28 45.7	-0.6
	1.4nm,0.9s,mb4.0						

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*CSEM **27** 18:24:58.7±0.4,34.51N×24.62E,h60^{km},ML3.0,Error ellipse: s-maj=21.9km s-min=8.4km az=82.0*
*HLW **27** 18:24:59.2,34.69N×24.68E,h33^{km},Mb3.0*
*ATH **27** 18:25:02.9,34.80N×24.67E,h10^{km},MD3.0/3*

ISC 27 18:24:59.1±1.5**,34.5N**±0.1×**24.6E**±0.2**,h63^{km}**±41^{km}**,n8, σ0^{s}.72**/10**,3C,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	0.58	310	*e*PB	P	18 25 12.2	0.0
VAM	**Vamos**	1.00	340	*e*PB	P	18 25 16.7	-0.8
NPS	**Neapolis**	1.14	45	*e*PB	P	18 25 19.5	+0.2
SLUM		3.01	170	⇑P	P	18 25 46.6	+1.0
HMAT	**Matruh**	3.96	148	⇑P	P	18 25 59.2	+0.4
HMAT				S	S	18 26 43.9	-0.5
SWA2		5.26	172	⇑P	P	18 26 17.9	+1.0
SWA2				S	S	18 27 15.7	-1.2
SWA1		5.27	170	P	P	18 26 17.6	+0.5
HFRF	**Wahat Farafira**	7.96	156	P	P	18 26 53.7	-0.7

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*CSEM **27** 18:46:32.4±0.7,61.01N×3.49E,h2^{km},ML3.2,Error ellipse: s-maj=12.1km s-min=10.4km az=131.0,Suspected Mining explosion.*
*NEIC **27** 18:46:34.2,61.19N×3.13E,h15^{km},ML2.8(BER),After BER.*
*BER **27** 18:46:37.3±4.3,61.12N×3.48E,h16^{km}±11^{km},MD2.7, ML2.7,MW2.8,ML2.8(NAO)*
*BGS **27** 18:46:37.0±1.8,61.08N×3.46E,h15^{km},ML3.2*
*NAO **27** 18:46:39.8±3.8,61.08N×4.02E,ML2.8*
*UPP **27** 18:46:39.9,60.97N×4.20E,h0^{km},ML2.0,Suspected Mining explosion.*

ISC 27 18:46:32.4±0.4**,61.08N**±0.03×**3.36E**±0.04**,n61,σ1^{s}.19**/93**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUE	**Sulen**	0.68	91	*e*P	Pg	18 46 48.5	+2.5
SUE				*e*S	Sg	18 46 56.8	+1.7
SUE	**Sulen**	0.68	91	*e*P	Pg	18 46 48.5	+2.5
SUE				*e*S	Sg	18 46 56.9	+1.8
SUE	**Sulen**	0.68	91	*e*P	Pg	18 46 48.5	+2.5
SUE				*e*		18 46 48.5	
SUE				*e*S	Sg	18 46 56.9	+1.8
SUE				AML	AML	18 46 58.2	
	comp=Z,2µm,0.2s						
SUE	**Sulen**	0.68	91	*e*P	Pg	18 46 48.5	+2.5
SUE				*e*S	Sg	18 46 56.9	+1.8
	comp=Z,2µm,0.2s,SNR=97						
FOO	**Floro**	0.96	57	*e*P	Pg	18 46 52.4	+0.7
FOO				*e*S	Sg	18 47 04.2	-0.2
FOO	**Floro**	0.96	57	*e*P	Pg	18 46 52.4	+0.8
FOO				*e*S	Sg	18 47 03.6	-0.8
FOO				AML	AML	18 47 04.9	
	comp=Z,454nm,0.4s						
FOO	**Floro**	0.96	57	*e*P	Pg	18 46 52.4	+0.8
FOO				*e*S	Sg	18 47 04.2	-0.3
RUND	**Rundenannen**	1.19	123	*e*P	Pb	18 46 57.3	+1.7
RUND				*e*S	Sb	18 47 12.0	+0.6
RUND				AML	AML	18 47 15.4	
	comp=Z,604nm,0.1s						
RUND	**Rundenannen** SNR=55	1.19	123	*e*P	Pb	18 46 57.3	+1.8
RUND				*e*S	Sb	18 47 12.0	+0.6
	comp=Z,604nm,0.1s,SNR=55						
BER	**Bergen**	1.19	125	*e*P	Pb	18 46 57.3	+1.7
BER	**Bergen**	1.19	125	*e*P	Pb	18 46 57.4	+1.8
BER				*e*S	Sb	18 47 12.1	+0.6
BER	**Bergen**	1.19	125	*e*P	Pb	18 46 57.4	+1.8
BER				AML	AML	18 47 15.6	
	comp=Z,328nm,0.3s						
BER	**Bergen** SNR=55	1.19	125	*e*P	Pb	18 46 57.4	+1.8
BER				*e*S	Sb	18 47 12.1	+0.6
HYA	**Hoyanger**	1.37	85	*e*P	Pb	18 46 59.4	+0.7
HYA				*e*S	Sb	18 47 16.1	-0.6
HYA				AML	AML	18 47 19.9	
	comp=Z,438nm,0.4s						
HYA	**Hoyanger**	1.37	85	*e*P	Pb	18 46 59.3	+0.6
HYA				*e*S	Sb	18 47 16.1	-0.6
ODD1	**Odda**	2.00	125	*e*P	Pn	18 47 07.4	-0.3
ODD1	**Odda**	2.00	125	*e*P	Pn	18 47 07.5	-0.2
ODD1				*e*S	Sn	18 47 30.4	-3.4
ODD1				AML	AML	18 47 37.5	
	comp=Z,184nm,0.2s						
ODD1	**Odda** SNR=55	2.00	125	*e*P	Pn	18 47 07.5	-0.3
ODD1				*e*S	Sn	18 47 30.4	-3.4
	comp=Z,184nm,0.2s,SNR=55						
KMY	**Karmoy**	2.10	152	*e*P	Pn	18 47 10.1	+0.8
KMY	**Karmoy**	2.10	152	*e*P	Pn	18 47 10.2	+1.0
KMY				*e*Sg	Sg	18 47 40.8	-1.5
KMY				AML	AML	18 47 45.1	
	comp=Z,50nm,0.2s						
BLS5	**Blasjo**	2.27	136	*e*P	Pn	18 47 12.6	+1.0
BLS5	**Blasjo**	2.27	136	*e*P	Pn	18 47 12.6	+0.9
BLS5				*e*Sg	Sg	18 47 46.2	-1.7
BLS5				AML	AML	18 47 47.9	
	comp=Z,69nm,0.3s						
LRW	**Lerwick**	2.43	249	*e*S	Sn	18 47 43.1	-1.7
LRW	**Lerwick** SNR=55	2.43	249	*e*S	Sn	18 47 44.2	-0.7
STAV	**Stavanger**	2.45	150	*e*P	Pn	18 47 14.6	+0.3
STAV				*e*S	Sn	18 47 41.8	-3.6
STAV				AML	AML	18 47 56.3	
	comp=Z,45nm,0.2s						
STAV	**Stavanger** SNR=55	2.45	150	*e*P	Pn	18 47 14.6	+0.3
STAV				*e*S	Sn	18 47 41.8	-3.6
	comp=Z,45nm,0.2s,SNR=55						
MOL	**Molde**	2.49	51	*e*P	Pn	18 47 16.3	+1.6
MOL	**Molde**	2.49	51	*e*P	Pn	18 47 16.3	+1.5
MOL				*e*Pg	Pg	18 47 19.1	-2.9
MOL				*e*Sg	Sg	18 47 49.7	-5.4
MOL				AML	AML	18 47 52.5	
	comp=Z,120nm,0.3s						
DOMB	**Dombas**	2.89	68	*e*P	Pn	18 47 21.9	+1.3
DOMB				*e*Sg	Sg	18 48 01.8	-7.0
DOMB				AML	AML	18 48 06.4	
	comp=Z,71nm,0.7s						
OST	**Stronsay**	3.57	239	*e*P	Pn	18 47 30.8	+0.6
OST	**Stronsay**	3.57	239	*e*P	Pn	18 47 31.8	+1.5
OWE	**Westray**	3.65	244	*e*P	Pn	18 47 32.1	+0.8
OWE	**Westray**	3.65	244	*e*P	Pn	18 47 33.3	+2.0
NAO01	**NORSAR Array S**	3.68	90	*e*Pn	Pn	18 47 31.2	-0.5
NAO01				*e*Sb	Sb	18 48 23.8	+0.2
NAO01	**NORSAR Array S**	3.68	90	*e*Pn	Pn	18 47 31.2	-0.5
OSL	**Oslo**	3.82	104	*e*Sg	Sb	18 48 30.9	+3.4
OSL				AML	AML	18 48 35.4	
	comp=Z,94nm,0.5s						
NB2	**NORSAR Subarra**	3.82	87	Pn	Pn	18 47 34.5	+0.8
	baz=275,slow=14						
NB2				Sn	Sn	18 48 17.0	-2.9
	baz=250,slow=22						
NB2				Lg		18 48 32.0	
	baz=276,slow=37						
NOA	**NORSAR Array B**	3.82	87	*e*P	Pn	18 47 33.5	-0.2
OHO	**Hoy**	4.01	239	*e*P	Pn	18 47 37.2	+0.7
TRON	**Trondheim**	4.08	51	*e*Sg	Sb	18 48 34.8	-0.3
OBR	**Brabster**	4.12	236	*e*P	Pn	18 47 38.8	+0.8
MLA1	**Latheron**	4.40	234	*e*P	Pn	18 47 42.3	+0.4
MLA1				*e*S	Sn	18 48 29.6	-5.2
ORE	**Reay**	4.40	238	*e*P	Pn	18 47 42.5	+0.5
ORE				*e*S	Sn	18 48 29.4	-5.4
ORE				AML	AML	18 48 31.5	
	comp=E,18nm,0.3s						
ORE				AML	AML	18 48 32.5	
	comp=N,21nm,0.2s						
OTO	**Tongue**	4.70	240	*e*P	Pn	18 47 46.3	+0.1
OTO				*e*S	Sn	18 48 36.3	-6.0
FINU	**Finntorp**	4.84	106	P	Pn	18 47 47.0	-1.3
MCD	**Coleburn Disti**	4.88	227	*e*P	Pn	18 47 48.7	0.0
MCD				*e*S	Sn	18 48 41.5	-5.3
MCD				AML	AML	18 48 44.5	
	comp=N,20nm,0.4s						
MCD				AML	AML	18 48 45.9	
	comp=E,13nm,0.3s						
MVH1	**Achvaich**	4.98	234	*e*P	Pn	18 47 49.5	-0.7
MME1	**Meikle Cairn**	4.98	224	*e*P	Pn	18 47 50.0	-0.2
HFS	**Hagfors**	5.18	96	Pn	Pn	18 47 51.1	-1.9
	baz=282,slow=16						
HFS				Sn	Sn	18 48 47.4	-7.0
	baz=291,slow=18						
HFS				Lg		18 49 13.9	
	baz=284,slow=37						
HFS	**Hagfors**	5.18	96	*e*P	Pn	18 47 50.6	-2.4
HFS				Pn	Pn	18 47 51.1	-1.9
	baz=282,slow=16						
HFS				Sn	Sn	18 48 47.4	-7.0
	baz=291,slow=18						
HFS				Lg		18 49 13.9	
	baz=284,slow=37						
NSS	**Namsos**	5.25	45	*e*Sg	Sb	18 49 07.3	-1.9
NSS				AML	AML	18 49 20.2	
	comp=Z,12nm,0.8s						
NSS	**Namsos**	5.25	45	*e*Sg	Sb	18 49 07.3	-1.9
	comp=Z,12nm,0.8s,SNR=90						
MDO	**Dochfour**	5.39	231	*e*P	Pn	18 47 54.9	-1.0
RRR	**Rubha Reidh**	5.68	239	*e*S	Sn	18 48 59.6	-7.4
RRR				AML	AML	18 49 02.8	
	comp=N,11nm,0.3s						
RRR				AML	AML	18 49 02.8	
	comp=E,11nm,0.3s						
KAC	**Achnashellach**	5.71	235	*e*P	Pn	18 47 59.9	-0.6
KSB	**Sheil Bridge**	5.96	233	*e*P	Pn	18 48 03.0	-1.0
KSB	**Sheil Bridge**	5.96	233	*e*P	Pn	18 48 02.9	-1.1
KSK	**Scoval**	6.30	239	*e*P	Pn	18 48 09.2	+0.3
KAR1	**Arisaig**	6.32	233	*e*P	Pn	18 48 08.5	-0.6
STOK	**Stokkvaagen**	6.79	35	*e*S	Sn	18 49 22.3	-12
STOK				AML	AML	18 49 38.8	
	comp=Z,4.8nm,0.8s						
FIA0	**FINESS Array S**	10.93	78	Pn	P	18 49 12.4	-0.5
	baz=283,slow=11						
FIA0				Sn	S	18 51 04.4	-13
	baz=266,slow=22						
FIA0				Lg		18 52 11.1	
	baz=280,slow=28						

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*BJI **27** 18:50:19.5,1.63N×93.78E,h26^{km},mB4.9,mb4.4,Ms4.3, Msz4.0*
*NEIC **27** 18:50:28.2±0.5,2.62N×94.10E,mb4.3/8,Error ellipse: s-maj=11.7km s-min=9.1km az=214.0*
*IDC **27** 18:50:28.2±0.6,2.69N×94.11E,h24^{km}±3^{km},mb4.0/10, mb1 4.1/11,mb1mx4.0/19,mbtmp4.1/11,ML4.4/1,MS3.3/3, Ms1 3.4/3,ms1mx3.0/17,Error ellipse: s-maj=21.9km s-min=13.3km az=57.0*

ISC 27 18:50:26.5±0.6**,2.65N**±0.09×**94.11E**±0.08**,h26^{km}, h26^{km}**±.6^{km}**:pP-P,n31,σ0^{s}.91**/27**,mb4.2**/17**,MS3.7**/4**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	7.03	68	*e*Pn	Pn	18 52 09.5	-1.0
KSM	**Kuching**	16.23	94	*e*P	P	18 54 14.9	+0.3
CM31	**Chiang Mai Arr**	16.41	16	*e*P	P	18 54 18.8	+1.8
	8.3nm,0.6s						
CM31				*e*pP		18 54 26.8	
CMAR	**Chiang Mai Arr**	16.41	16	Pn	P	18 54 15.7	-1.2
	0.5nm,0.3s,baz=213,slow=11,SNR=41						
CMAR				LR	LR	19 00 19.6	
	comp=Z,62nm,21.4s,baz=180,slow=36						
KKM	**Kota Kinabalu**	22.30	81	P	P	18 55 23.9	+0.3
KMI	**Kunming**	23.84	20	P	P	18 55 47.2	+8.4
	12nm,1.8s,mb4.0						
KMI				pP		18 55 55.1	
KMI				sP		18 55 58.8	
KMI				S	S	18 59 58.1	+8.2
KMI				sS		19 00 11.1	
KMI				SS	SS	19 00 48.7	+8.3
KMI				LR	LR		
	comp=Z,260nm,12.1s,MS3.9						
LSA	**Lhasa**	27.05	354	*e*P	P	18 56 15.5	+6.5
LSA	**Lhasa**	27.05	354	*e*P	P	18 56 11.5	+2.5
	comp=Z,11nm,0.6s,mb4.6						
LSA				*e*pP	pP	18 56 19.7	+3.2
XAN	**Xi’an**	34.16	22	P	P	18 57 18.0	+6.2
WMQ	**Urumqi**	41.39	353	*e*P	P	18 58 14.0	+1.7
WMQ				AP	pP	18 58 21.3	+1.3
WMQ				XP	sP	18 58 24.8	+1.6
WMQ				LR	LR		
	comp=N,330nm,22.0s						
WMQ				LR	LR		
	comp=Z,220nm,21.0s,MS4.0						
MKAR	**Makanchi Array**	45.16	349	P	P	18 58 42.9	-0.1
	comp=Z,3.2nm,0.6s,mb4.3,baz=165,slow=8.1,SNR=48						
MKAR				pP	pP	18 58 50.8	+0.1
	comp=Z,7.1nm,0.7s,baz=163,slow=7.7,SNR=21						
WRA	**Warramunga Arr**	45.42	121	P	P	18 58 45.0	-0.4
	comp=Z,4.0nm,1.1s,mb4.2,baz=302,slow=9.0,SNR=8.1						
WRA				pP	pP	18 58 53.1	0.0
	comp=Z,3.2nm,0.9s,baz=300,slow=8.6,SNR=9.4						
WRA				PcP	PcP	19 00 24.7	-0.1
	comp=Z,0.6nm,0.9s,baz=312,slow=2.8,SNR=5.3						
WRAB	**Tennant Creek**	45.42	121	*e*P	P	18 58 46.3	+1.0
	comp=Z,10nm,0.9s,mb4.7						
SONM	**Songino Array**	46.25	11	P	P	18 58 51.8	+0.3
	comp=Z,1.9nm,0.8s,mb4.1,baz=191,slow=8.7,SNR=19						
SONM				pP	pP	18 58 57.9	-1.4
	comp=Z,4.1nm,0.7s,baz=191,slow=8.0,SNR=19						
SONM				pPcP		19 00 34.9	
	comp=Z,1.5nm,0.9s,baz=196,slow=3.3,SNR=4.1						
SONM				LR	LR	19 21 00.3	
	comp=Z,33nm,19.3s,MS3.3,baz=240,slow=40						
TLY	**Talaya**	49.52	8	P	P	18 59 16.8	-0.2
	comp=Z,2.3nm,0.8s,mb4.3						
HIA	**Hailar**	51.34	21	*e*P	P	18 59 30.1	-0.8
	comp=Z,3.7nm,0.8s,mb4.4						
ZAL	**Zalesovo**	51.70	353	P	P	18 59 34.1	+0.6
	comp=Z,2.3nm,0.4s,mb4.5,baz=290,slow=4.7,SNR=11						
ZAL				pP	pP	18 59 41.2	-0.1
	comp=Z,5.4nm,0.4s,baz=305,slow=5.3,SNR=9.2						
MJAR	**Matsushiro Arr**	52.78	45	LR	LR	19 25 12.8	
	comp=Z,64nm,18.1s,MS3.7,baz=220,slow=40						
ZRNK	**Zerenda**	54.28	342	*e*P	P	18 59 51.4	-1.3
	comp=Z,0.5nm,0.7s,mb3.5						
ZRNK				*e*pP	pP	18 59 59.6	-0.9
STKA	**Stephens Creek**	56.62	131	P	P	19 00 09.8	-0.2
	comp=Z,1.9nm,0.8s,mb4.2,baz=283,slow=7.7,SNR=4.7						
STKA				pP	pP	19 00 17.9	+0.1
	comp=Z,2.2nm,0.7s,baz=319,slow=7.3,SNR=4.9						
STKA				ScP		19 05 03.0	
	comp=Z,1.4nm,0.8s,baz=319,slow=9.4,SNR=3.4						
STKA	**Stephens Creek**	56.62	131	P	P	19 00 09.8	-0.2
STKA				pP	pP	19 00 17.9	+0.1
STKA				ScP		19 05 03.0	
MALT	**Malatya**	61.88	313	*e*P	P	19 00 46.5	+0.3
	comp=Z,4.7nm,1.0s,mb4.6						
MALT				*e*pP	pP	19 00 55.1	+0.8
BRTR	**Keskin Array B**	65.86	313	P	P	19 01 11.5	-0.8
	comp=Z,0.5nm,0.4s,mb3.9,baz=141,slow=7.9,SNR=5.4						
BRTR				pP	pP	19 01 20.1	-0.3
	comp=Z,1.3nm,0.7s,baz=143,slow=6.2,SNR=4.9						
MATP	**Matopo**	68.22	247	P	P	19 01 28.1	+0.5
	comp=Z,3.4nm,0.9s,mb4.4,baz=62,slow=8.6,SNR=4.4						
MATP				pP	pP	19 01 36.8	+1.2
	comp=Z,3.6nm,0.9s,baz=68,slow=9.9,SNR=3.7						
AKASG	**Malin Array Be**	72.24	323	P	P	19 01 50.1	-1.4
	comp=Z,0.3nm,0.4s,mb3.6,baz=92,slow=5.5,SNR=4.2						
AKASG				pP	pP	19 01 57.6	-1.9
	comp=Z,0.5nm,0.5s,baz=87,slow=5.7,SNR=4.0						
FINES	**FINESS Array B**	77.31	333	P	P	19 02 19.9	-0.4
	comp=Z,2.7nm,1.1s,mb4.1,baz=90,slow=2.8,SNR=4.0						
FINES				pP	pP	19 02 27.8	-0.7
	comp=Z,1.7nm,1.0s,baz=90,slow=3.8,SNR=2.6						
GERES	**GERESS Array B**	81.70	319	P	P	19 02 44.5	+0.3
	comp=Z,1.6nm,0.8s,mb4.0,baz=90,slow=5.3,SNR=11						
GERES				pP	pP	19 02 52.6	+0.3
	comp=Z,3.4nm,1.0s,baz=104,slow=5.5,SNR=9.6						
NOA	**NORSAR Array B**	84.25	331	pP	pP	19 03 06.8	+1.5
	comp=Z,1.6nm,0.9s,baz=78,slow=10,SNR=3.4						
CPUP	**Villa Florida**	143.87	227	PKP	PKPdf	19 10 00.8	-4.2
	comp=Z,1.6nm,0.6s,baz=196,slow=2.9,SNR=6.2						
CPUP				pPKP		19 10 09.1	
	comp=Z,2.3nm,0.8s,baz=124,slow=4.0,SNR=4.5						
CPUP	**Villa Florida**	143.87	227	PKP	PKPdf	19 10 00.8	-4.2
CPUP				pPKP		19 10 09.1	
TXAR	**Lajitas Array**	143.93	27	PKP	PKPdf	19 10 00.8	-4.3
	comp=Z,0.1nm,0.3s,baz=304,slow=4.5,SNR=3.7						
TXAR				pPKP		19 10 09.1	
	comp=Z,0.7nm,0.6s,baz=180,slow=1.3,SNR=4.4						

*IDC **27** 18:53:18.9±1.1, 7.35N×34.93W, mb4.1/7, mb1 4.3/7, mb1mx3.9/22, mbtmp4.1/7, MS3.6/10, Ms1 3.6/10, ms1mx3.4/21, Error ellipse: s-maj=30.9km s-min=23.4km az=121.0*

*NEIC **27** 18:53:20.2±0.8, 7.31N×34.95W, h10^{km}, mb4.3/3, Error ellipse: s-maj=18.0km s-min=14.4km az=98.0*

ISC 27 18:53:18.3±0.8**, 7.3N**±0.1×**34.9W**±0.1**, h10^{km}, n19, σ0^{s}86**/11**, mb4.1**/9**, MS3.6**/10**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	Riachuelo	13.08	184	*e*Pn	P	18 56 26.1	-0.7
BDFB	Brasilia	26.24	210	P	P	18 58 56.0	+0.4
	3.5nm,0.6s,mb4.1,baz=49,slow=11,SNR=5.4						
BDFB				LR	LR	19 08 35.3	
	comp=Z,170nm,18.3s,MS3.6,baz=195,slow=35						
DBIC	Dimbokro	29.81	89	P	P	18 59 28.1	+0.1
	4.5nm,0.8s,mb4.2,baz=271,slow=9.2,SNR=4.7						
SJG	San Juan	32.28	292	LR	LR	19 09 51.9	
	comp=Z,88nm,20.8s,MS3.4,baz=103,slow=31						
SAML	Samuel	32.49	241	*e*P	P	18 59 50.8	-0.7
	10nm,1.3s,mb4.5						
SIV	San Ignacio	34.75	228	P	P	19 00 11.9	+0.9
	6.8nm,0.8s,mb4.7,baz=72,slow=9.8,SNR=40						
CPUP	Villa Florida	39.90	212	LR	LR	19 17 11.2	
	comp=Z,74nm,20.1s,MS3.5,baz=188,slow=36						
LPAZ	La Paz	40.39	234	P	P	19 00 59.8	+1.4
	3.7nm,0.6s,mb4.3,baz=49,slow=8.7,SNR=20						
LPAZ				LR	LR	19 17 32.9	
	comp=Z,43nm,19.6s,MS3.3,baz=199,slow=36						
LPAZ	La Paz	40.39	234	*e*P	P	19 00 59.1	+0.7
	5.3nm,0.8s,mb4.3						
LPAZ				LR	LR	19 17 32.9	
OTAV	Otavalo	44.00	263	*e*P	P	19 01 28.0	-0.1
	2.4nm,0.7s,mb4.0						
SCHQ	Schefferville	53.85	338	P	P	19 02 44.8	+1.2
	1.3nm,0.7s,mb4.0,baz=170,slow=12,SNR=3.3						
PLCA	Paso Flores	57.96	212	LR	LR	19 28 11.6	
	comp=Z,123nm,19.5s,MS4.0,baz=5.8,slow=36						
GERES	GERESS Array B	58.12	36	LR	LR	19 24 35.2	
	comp=Z,39nm,18.3s,MS3.6,baz=351,slow=32						
NOA	NORSAR Array B	63.58	23	LR	LR	19 27 00.2	
	comp=Z,26nm,21.1s,MS3.4,baz=265,slow=32						
TXAR	Lajitas Array	67.97	299	P	P	19 04 19.3	-0.7
	0.3nm,0.5s,mb3.6,baz=121,slow=7.3,SNR=3.6						
FINES	FINESS Array B	70.00	27	LR	LR	19 33 38.0	
	comp=Z,27nm,20.0s,MS3.5,baz=138,slow=35						
PDAR	Pinedale Array	73.83	312	P	P	19 04 53.6	-1.5
	0.4nm,0.6s,mb3.5,baz=79,slow=5.1,SNR=4.6						
YBH	Yreka Blue Hor	83.58	311	LR	LR	19 39 16.9	
	comp=Z,46nm,19.7s,MS3.9,baz=150,slow=33						
ILAR	Eielson Array	92.59	337	LR	LR	19 46 01.9	
	comp=Z,45nm,18.3s,MS4.0,baz=2.2,slow=34						

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*NEIC **27** 19:11:36.0±1.3, 8.18S×120.41E, h178^{km}±16^{km}, mb3.8/4, Error ellipse: s-maj=15.5km s-min=7.4km az=59.0*

*IDC **27** 19:11:38.1±4.3, 8.13S×120.61E, h203^{km}±50^{km}, mb3.2/4, mb1 3.5/6, mb1mx3.3/17, mbtmp3.9/6, Error ellipse: s-maj=89.7km s-min=12.8km az=51.0*

ISC 27 19:11:35.5±1.4**, 8.14S**±0.09×**120.5E**±0.1**, h192^{km}**±17^{km}**, n15, σ0^{s}85**/19**, mb3.7**/6**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.10	154	P	P	19 14 09.8	-0.2
	4.2nm,0.3s,baz=350,slow=9.2,SNR=28						
FITZ				S	S	19 16 12.0	+0.8
	2.1nm,0.3s,baz=186,slow=20,SNR=4.1						
KAKA	Kakadu	12.61	112	*e*P	P	19 14 29.8	+0.6
	6.3nm,0.4s						
KAKA				*e*S	S	19 16 39.2	-6.8
MBWA	Marble Bar	12.96	183	*e*Pn	P	19 14 32.9	-0.7
KKM	Kota Kinabalu	14.72	343	*e*Pn	P	19 14 56.2	+0.4
WRA	Warramunga Arr	17.83	133	P	P	19 15 31.8	-0.9
	0.5nm,0.3s,baz=311,slow=11,SNR=45						
WRA				S	S	19 18 44.1	+1.8
	1.0nm,0.3s,baz=298,slow=24,SNR=9.3						
WRAB	Tennant Creek	17.83	133	*e*P	P	19 15 31.6	-1.0
	4.0nm,0.5s						
WB2	Warramunga Arr	17.84	133	*e*P	P	19 15 31.8	-0.9
WB2				*e*S	S	19 18 41.8	-0.8
KLBR	Kellerberrin	23.47	186	*e*P	P	19 16 29.6	+0.6
	54nm,1.6s,mb4.8						
KULM	Kulim	23.86	303	P	P	19 16 32.8	0.0
STKA	Stephens Creek	30.72	143	*e*P	P	19 17 35.3	+0.5
	2.0nm,1.4s,mb3.5						
STKA	Stephens Creek	30.72	143	P	P	19 17 35.0	+0.2
	0.9nm,0.4s,mb3.8,baz=335,slow=9.0,SNR=8.2						
CMAR	Chiang Mai Arr	33.91	321	P	P	19 18 03.7	+1.3
	0.8nm,0.9s,mb3.2,baz=157,slow=8.4,SNR=4.1						
LSA	Lhasa	47.02	324	P	P	19 19 50.1	+0.6
	1.5nm,0.6s,mb3.5						
SONM	Songino Array	57.11	349	P	P	19 21 03.7	-0.3
	0.4nm,0.5s,mb3.3,baz=174,slow=7.7,SNR=5.2						
MKAR	Makanchi Array	64.38	332	P	P	19 21 51.6	-1.4
	0.6nm,0.6s,mb3.4,baz=149,slow=7.8,SNR=8.6						

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*CASC **27** 19:23:55.2±1.8, 13.20N×90.43W, h23^{km}±9^{km}, MD4.2, ML3.9, mb3.9(NEIC)*

*NEIC **27** 19:23:58.6±2.1, 13.43N×89.93W, h69^{km}±21^{km}, mb3.9/3, Error ellipse: s-maj=48.1km s-min=12.2km az=47.0*

*IDC **27** 19:23:59.3±3.7, 13.49N×89.85W, h67^{km}±37^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.5/20, mbtmp3.9/5, ML3.9/1, Error ellipse: s-maj=52.9km s-min=19.1km az=46.0*

ISC 27 19:23:55.1±1.2**, 13.21N**±0.09×**90.16W**±0.10**, h57^{km}**±11^{km}**, n24, σ1^{s}02**/17**, mb3.9**/6**, 8C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBLS	San Blas	0.81	40	⇑*e*P	Px	19 24 29.0	
SBLS				*e*S	Sx	19 24 44.4	
SNJE	San Jose	0.84	39	⇑*e*P	Px	19 24 29.4	
SNJE				*e*S	Sx	19 24 44.0	
IXG	Ixpaco	1.00	343	⇑*e*P	P	19 24 12.2	-1.1
IXG				*e*S	S	19 24 26.9	+0.2
BOQS	Boqueron	1.00	59	⇑*e*P	Px	19 24 31.8	
BOQS				*e*S	Sx	19 24 49.4	
RBDL	Robledal	1.00	27	⇓*i*P	Px	19 24 31.7	
RBDL				*e*S	Sx	19 24 48.1	
SNET	Serv Nac Est T	1.02	62	*e*P	Px	19 24 32.1	
SNET				*e*S	Sx	19 24 48.9	
SNET				*i*		19 24 56.5	
	comp=Z,3μm,0.5s						
LFRS	El Faro	1.14	69	⇑*e*P	Px	19 24 33.2	
LFRS				*e*S	Sx	19 24 51.9	
LBRS	Las Brisas	1.20	64	⇓*e*P	Px	19 24 35.1	
LBRS				*e*S	Sx	19 24 53.9	
LCBS	La Ceiba	1.23	69	⇑*e*P	Px	19 24 34.5	
LCBS				*e*S	Sx	19 24 54.8	
MTO2	Montecristo 2	1.41	33	*e*P	Px	19 24 37.8	
MTO2				*e*S	Sx	19 24 58.5	
TP2	Tecpan 2	1.77	332	⇑*e*P	P	19 24 22.9	-1.1
TP2				*e*S	S	19 24 45.6	+0.2
BLLM	Bellamira	1.88	83	*e*P	Px	19 24 44.4	
BLLM				*e*S	Sx	19 25 11.2	
MRL	Marmol	1.90	14	⇑*e*P	P	19 24 28.3	+2.5
MRL				*e*S	S	19 24 48.4	-0.1
JTS	JuntasAbangare	5.87	119	P	P	19 25 22.3	+0.8
	comp=Z,3.2nm,0.3s,baz=320,slow=18,SNR=8.8						
JTS				S	S	19 26 27.8	-0.4
	comp=Z,1.0nm,0.3s,baz=271,slow=22,SNR=2.5						
JTS	JuntasAbangare	5.87	119	*e*Pn	P	19 25 22.3	+0.8
	comp=Z,11nm,0.4s						
JTS				*e*Sn	S	19 26 27.8	-0.5
TXAR	Lajitas Array	20.36	324	P	P	19 28 29.6	+0.1
	comp=Z,1.3nm,0.7s,baz=150,slow=12,SNR=7.2						
MNTX	Cornudas Mount	23.11	325	*e*P	P	19 28 56.8	-0.1
	comp=Z,4.0nm,1.0s,mb3.8						
SDCO	Great Sand Dun	28.00	333	*e*P	P	19 29 37.7	-5.2
	comp=Z,2.9nm,1.0s,mb3.9						
SAML	Samuel	34.67	128	*e*P	P	19 30 40.5	-1.1
	comp=Z,1.4nm,0.9s,mb3.9						
NVAR	Mina Array Bea	35.41	320	P	P	19 30 49.1	+1.5
	comp=Z,1.9nm,0.8s,mb4.1,baz=133,slow=8.2,SNR=10						
SIV	San Ignacio	40.86	134	P	P	19 31 34.2	+1.0
	comp=Z,0.5nm,0.4s,mb3.5,baz=317,slow=14,SNR=4.9						
SCHQ	Schefferville	45.36	19	P	P	19 32 07.8	-1.6
	comp=Z,0.9nm,0.3s,mb4.1,baz=226,slow=4.9,SNR=8.7						
WRA	Warramunga Arr	136.93	255	PKP	PKPdf	19 43 19.1	+6.6
	comp=Z,0.5nm,0.8s,baz=87,slow=2.7,SNR=6.3						
CMAR	Chiang Mai Arr	147.28	344	PKPbc	PKPdf	19 43 35.2	+4.6
	comp=Z,0.8nm,0.7s,baz=336,slow=5.2,SNR=4.8						

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*IDC **27** 19:49:07.0±5.0, 21.74S×179.03W, h600^{km}±65^{km}, mb3.4/7, mb1 3.8/8, mb1mx3.5/15, mbtmp4.4/8, Error ellipse: s-maj=54.6km s-min=21.9km az=166.0*

*NEIC **27** 19:49:07.0±3.2, 21.81S×179.08W, h606^{km}±40^{km}, mb4.2/6, Error ellipse: s-maj=31.3km s-min=16.4km az=180.0*

ISC 27 19:49:05.7±0.6**, 21.8S**±0.2×**179.1W**±0.1**, h600^{km}, n33, σ0^{s}91**/17**, mb4.0**/11**, 4C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	16.74	190	P	P	19 52 29.8	-0.5
	3.4nm,0.3s,baz=311,slow=2.4,SNR=15						
CTA	Charters Tower	32.34	267	*e*P	P	19 54 49.3	+0.6
	2.7nm,0.4s,mb4.2						
CTAO	Charters Tower	32.34	267	*e*P	P	19 54 48.4	-0.4
	4.5nm,0.4s,mb4.5						
STKA	Stephens Creek	36.29	246	*e*P	P	19 55 22.9	+1.5
	2.1nm,0.4s,mb4.0						
STKA	Stephens Creek	36.29	246	P	P	19 55 23.0	+1.6
	1.9nm,0.4s,mb4.0,baz=94,slow=10.0,SNR=18						
WB2	Warramunga Arr	43.38	264	*e*P	P	19 56 18.0	-0.4
WRAB	Tennant Creek	43.39	264	*e*P	P	19 56 17.6	-0.9
	4.5nm,0.3s,mb4.5						
WRA	Warramunga Arr	43.39	264	P	P	19 56 18.1	-0.4
	2.3nm,0.3s,mb4.2,baz=96,slow=7.6,SNR=213						
MBWA	Marble Bar	56.55	258	*e*P	P	19 57 54.0	-0.6
	3.9nm,0.3s,mb4.1						
NVAR	Mina Array Bea	82.68	44	P	P	20 00 28.8	+0.2
	2.2nm,0.6s,mb3.9,baz=216,slow=7.0,SNR=17						
NVAR	Mina Array Bea	82.68	44	P	P	20 00 28.8	+0.2
MNTX	Cornudas Mount	88.35	55	*e*P	P	20 00 56.1	0.0
	2.9nm,0.8s,mb4.1						
TXAR	Lajitas Array	88.63	58	P	P	20 00 58.4	+1.0
	2.4nm,0.9s,mb4.0,baz=225,slow=7.1,SNR=7.5						
TXAR	Lajitas Array	88.63	58	P	P	20 00 58.4	+1.0
CMAR	Chiang Mai Arr	89.55	290	P	P	20 01 03.9	+1.9
	1.1nm,0.8s,mb3.7,baz=118,slow=2.8,SNR=5.9						
ILAR	Eielson Array	89.80	13	P	P	20 01 00.5	-1.5
	0.7nm,0.6s,mb3.6,baz=247,slow=5.3,SNR=7.7						
PDAR	Pinedale Array	90.62	44	P	P	20 01 06.0	-0.3
	1.3nm,0.7s,mb4.0,baz=210,slow=2.6,SNR=12						
ZRNK	Zerenda	120.21	319	*e*PKPdf	PKPdf	20 06 49.5	+0.3
ARCES	ARCESS Array B	129.98	349	PKP	PKPdf	20 07 08.2	+0.6
	1.4nm,0.5s,baz=97,slow=1.7,SNR=13						
FINES	FINESS Array B	136.69	343	PKP	PKPdf	20 07 20.3	+0.2
	0.9nm,0.7s,baz=45,slow=2.7,SNR=6.0						
AKASG	Malin Array Be	143.60	329	PKP	PKPdf	20 07 31.7	-1.0
	1.3nm,0.3s,baz=43,slow=4.2,SNR=31						
BRTR	Keskin Array B	146.89	310	PKPbc	PKPbc	20 07 42.9	+2.0
	1.3nm,0.6s,baz=132,slow=4.2,SNR=7.0						
UPC	Upice	148.96	341	*e*P	PKPdf	20 07 49.5	+8.0
UPC	Upice	148.96	341	⇑*e*PKPB	PKPdf	20 07 49.5	+8.0
CLL	Collm	149.05	345	⇓*i*PKP1	PKPdf	20 07 47.7	+6.1
CLL				*i* PKP2	PKPab	20 07 52.9	-3.0
BRG	Berggiesshubel	149.22	344	*i* P	PKPdf	20 07 48.8	+7.0
PVCC	Panska Ves	149.36	343	*e*P	PKPdf	20 07 49.9	+7.8
PVCC	Panska Ves	149.36	343	⇑*e*PKPB	PKPdf	20 07 49.9	+7.8
PRU	Pruhonice	149.85	342	*e*P	PKPdf	20 07 50.1	+7.2
PRU	Pruhonice	149.85	342	⇑*e*PKPB	PKPdf	20 07 50.1	+7.2
KHC	Kasperske Hory	150.90	343	*e*P	PKPdf	20 07 52.7	+8.2
KHC	Kasperske Hory	150.90	343	⇑*e*PKPB	PKPdf	20 07 52.7	+8.2
GERES	GERESS Array B	151.12	342	PKPbc	PKPdf	20 07 53.0	+8.1
	1.1nm,0.5s,baz=45,slow=1.9,SNR=15						

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*NEIC **27** 20:00:03.3, 38.06S×176.44E, h157^{km}, MG4.1(WEL), After WEL.*

WEL 27 20:00:03.8±0.2**, 38.06S**×**176.44E, h151^{km}**±1^{km}**, ML4.0**/15**, 9C-3D, Error ellipse: s-maj=1.2km s-min=1.0km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIRZ	Lichensteins R	0.07	321	P	P	20 00 24.1	-0.2
LIRZ	Lichensteins R	0.07	321	PN	P	20 00 24.1	-0.2
TAZ	Tarawera	0.18	163	P	P	20 00 24.6	+0.1
TAZ	Tarawera	0.18	163	PN	P	20 00 24.6	0.0
MARZ	Manawahe	0.20	67	P	P	20 00 24.4	-0.2
MARZ	Manawahe	0.20	67	PN	P	20 00 24.4	-0.2
UTU	Utuhina	0.23	240	P	P	20 00 24.7	0.0
UTU	Utuhina	0.23	240	PN	P	20 00 24.7	0.0
EDRZ	Edgecumbe	0.24	101	P	P	20 00 24.4	-0.3
EDRZ	Edgecumbe	0.24	101	PN	P	20 00 24.4	-0.3
PATZ	Paeroa	0.35	205	P	P	20 00 25.1	0.0
PATZ	Paeroa	0.35	205	PN	P	20 00 25.0	-0.1
TGRZ	Tauranga	0.36	336	P	P	20 00 24.4	-0.8
TGRZ				S	S	20 00 41.3	-0.2
TGRZ	Tauranga	0.36	336	PN	P	20 00 24.4	-0.8
TGRZ				SN	S	20 00 41.0	-0.5
URZ	Urewera	0.56	111	P	P	20 00 25.3	-0.7
URZ	Urewera	0.56	111	⇑PN	P	20 00 25.3	-0.8
URZ				SN	S	20 00 41.6	-1.5
MWZ	Matawai	0.90	108	P	P	20 00 27.9	-0.2
MWZ	Matawai	0.90	108	PN	P	20 00 27.9	-0.2
MWZ				SN	S	20 00 46.3	-0.4
RATZ	Rangitukua	0.96	213	⇑PN	P	20 00 28.5	0.0
RITZ	Rihia Road	1.02	206	P	P	20 00 29.4	+0.4
RITZ	Rihia Road	1.02	206	PN	P	20 00 29.4	+0.4
BKZ	Black Stump Fm	1.10	178	P	P	20 00 29.5	-0.3
BKZ				S	S	20 00 48.9	-0.9
BKZ	Black Stump Fm	1.10	178	PN	P	20 00 29.5	-0.3
BKZ				SN	S	20 00 48.9	-0.9
TWVZ	Taurewa	1.28	218	P	P	20 00 31.3	-0.2
TWVZ	Taurewa	1.28	218	PN	P	20 00 31.3	-0.2
NGZ	Ngauruhoe	1.29	210	P	P	20 00 31.5	-0.2
NGZ	Ngauruhoe	1.29	210	PN	P	20 00 31.6	-0.1
NGZ				PN	P	20 00 31.6	-0.1
CNZ	Chateau	1.33	211	P	P	20 00 31.7	-0.4
CNZ	Chateau	1.33	211	PN	P	20 00 31.9	-0.2
WPVZ	Whakapapa	1.34	211	P	P	20 00 31.7	-0.4
WPVZ	Whakapapa	1.34	211	PN	P	20 00 32.0	-0.1
TUVZ	Tukino	1.35	207	P	P	20 00 32.1	-0.2
TUVZ	Tukino	1.35	207	⇓PN	P	20 00 32.0	-0.3
TUVZ				⇑PN	P	20 00 32.1	-0.1
TUVZ				SN	S	20 00 53.8	-0.4
KNZ	Kokohu	1.36	135	P	P	20 00 32.4	+0.1
KNZ	Kokohu	1.36	135	PN	P	20 00 32.4	0.0
KNZ				SN	S	20 00 53.4	-0.9
FWVZ	Far West T-bar	1.38	210	PN	P	20 00 32.2	-0.3
MKAZ	Moumakai	1.39	313	P	P	20 00 32.1	-0.5
MKAZ	Moumakai	1.39	313	⇓PN	P	20 00 32.1	-0.5
DRZ	Dome Shelter	1.39	209	PN	P	20 00 33.2	+0.5
DRZ				PN	P	20 00 33.3	+0.7
WNVZ	Wahianoa	1.43	207	P	P	20 00 32.8	-0.2
WNVZ	Wahianoa	1.43	207	⇑PN	P	20 00 32.8	-0.2
PUZ	Puketiti	1.43	91	P	P	20 00 32.5	-0.6
PUZ	Puketiti	1.43	91	PN	P	20 00 32.5	-0.6
PUZ				SN	S	20 00 54.4	-1.3
MOVZ	Moawhango	1.45	202	P	P	20 00 32.5	-0.7
MOVZ	Moawhango	1.45	202	⇑PN	P	20 00 32.5	-0.8
MOVZ				SN	S	20 00 53.8	-2.1
PKVZ	Pokaka	1.50	215	⇑PN	P	20 00 33.4	-0.3
PKVZ				SN	S	20 00 56.6	-0.2
MTVZ	Mangateitei	1.52	210	⇑PN	P	20 00 33.8	-0.3
MTVZ				SN	S	20 00 57.1	-0.3
MXZ	Matakaoa Point	1.56	72	P	P	20 00 34.1	-0.3
MXZ	Matakaoa Point	1.56	72	PN	P	20 00 34.1	-0.3
MXZ				SN	S	20 00 56.7	-1.2
MTAZ	Motutapu	1.76	316	P	P	20 00 36.1	-0.5
MTAZ	Motutapu	1.76	316	⇓PN	P	20 00 36.1	-0.5
WTAZ	Waiatarua	1.86	307	P	P	20 00 37.1	-0.7
WTAZ	Waiatarua	1.86	307	PN	P	20 00 37.1	-0.7
PWZ	Pawanui	1.99	171	P	P	20 00 38.6	-0.6
PWZ	Pawanui	1.99	171	⇑PN	P	20 00 38.6	-0.6
PWZ				SN	S	20 01 04.2	-2.2
TSZ	Takapari Road	2.03	191	*e*P	P	20 00 38.5	-1.2
TSZ	Takapari Road	2.03	191	PN	P	20 00 38.5	-1.2
TSZ				SN	S	20 01 05.7	-1.6
WAZ	Wanganui	2.04	213	*e*P	P	20 00 39.1	-0.7
WAZ	Wanganui	2.04	213	PN	P	20 00 39.1	-0.7
WAZ				SN	S	20 01 07.1	-0.4
BFZ	Birch Farm	2.62	183	P	P	20 00 45.1	-2.0
BFZ	Birch Farm	2.62	183	PN	P	20 00 45.1	-2.0
BFZ				SN	S	20 01 16.0	-4.2
MRZ	Mangatainoka R	2.68	194	P	P	20 00 45.4	-2.4
MRZ	Mangatainoka R	2.68	194	PN	P	20 00 45.4	-2.4
MRZ				SN	S	20 01 17.1	-4.4
KIW	Kapiti Island	3.04	203	P	P	20 00 49.2	-3.2
KIW	Kapiti Island	3.04	203	PN	P	20 00 49.2	-3.2
KIW				SN	S	20 01 25.0	-4.6
MTW	Mount Morrison	3.18	193	P	P	20 00 51.0	-3.2
MTW	Mount Morrison	3.18	193	⇑PN	P	20 00 51.0	-3.2
MTW				SN	S	20 01 27.6	-5.2
CAW	Cannon Point	3.22	199	PN	P	20 00 51.6	-3.2
MRW	Makara Radio	3.44	202	P	P	20 00 54.0	-3.6
MSWZ	Moikau Station	3.47	195	P	P	20 00 54.4	-3.6
SNZO	South Karori	3.51	202	P	P	20 00 54.6	-3.9
BHW	Baring Head	3.56	199	P	P	20 00 55.2	-3.9
TCW	Tory Channel	3.56	207	P	P	20 00 55.4	-3.8
NNZ	Nelson	3.94	216	*e*P	P	20 01 00.2	-3.9
THZ	Tophouse	4.59	215	*e*P	P	20 01 08.6	-4.1
KHZ	Kahutara	4.88	206	*e*P	P	20 01 11.9	-4.7
LTZ	Lake Taylor	5.69	213	*e*P	P	20 01 22.9	-4.3
MQZ	McQueen's Vall	6.33	206	*e*P	P	20 01 29.3	-6.5

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*IDC **27** 20:16:45.3±0.7, 36.21S×52.71E, mb4.0/10, mb1 4.1/11, mb1mx4.0/21, mbtmp4.0/11, MS3.5/5, Ms1 3.5/5, ms1mx3.3/18, Error ellipse: s-maj=26.0km s-min=20.5km az=60.0*

*NEIC **27** 20:16:47.1±0.4, 36.16S×52.72E, h10^{km}, mb4.6/2, Error ellipse: s-maj=12.6km s-min=10.0km az=78.0*

ISC 27 20:16:45.5±0.6**, 36.2S**±0.1×**52.7E**±0.1**, h10^{km}, n34, σ0^{s}89**/29**, mb4.0**/12**, MS3.4**/5**, 7C, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	Ambohidratompo	18.24	343	P	P	20 21 02.0	+1.4
	0.7nm,0.3s,baz=187,slow=8.3,SNR=8.8						
BOSA	Boshof	24.35	280	P	P	20 22 05.3	+0.7
	16nm,1.1s,mb4.3,baz=114,slow=8.8,SNR=9.1						
BOSA				LR	LR	20 29 49.6	
	comp=Z,79nm,19.5s,MS3.2,baz=173,slow=32						
BOSA	Boshof	24.35	280	P	P	20 22 05.3	+0.7
LBTB	Lobatse	25.80	288	LR	LR	20 31 03.2	
	comp=Z,60nm,19.4s,MS3.1,baz=138,slow=33						
LBTB	Lobatse	25.80	288	P	P	20 22 17.1	-1.4
MATP	Matopo	26.40	300	P	P	20 22 22.7	-1.3
	2.1nm,0.8s,mb3.7,baz=88,slow=7.3,SNR=5.2						
MATP				LR	LR	20 31 08.7	
	comp=Z,112nm,19.3s,MS3.4,baz=142,slow=33						
MATP	Matopo	26.40	300	P	P	20 22 22.7	-1.3
MAW	Mawson	31.97	173	LR	LR	20 32 25.6	
	comp=Z,127nm,21.3s,MS3.6,baz=48,slow=29						
SNAA	Sanae	45.37	202	⇑*i*	P	20 25 06.3	+1.1
SNAA	Sanae	45.37	202		P	20 25 21.5	+16
SNAA	Sanae	45.37	202	P	P	20 25 04.3	-0.9
	0.9nm,0.6s,mb3.8,baz=87,slow=11,SNR=12						
VNA2	Neumayer--Watz	46.54	203	⇑*i*	P	20 25 17.3	+2.8
VNA2	Neumayer--Watz	46.54	203		P	20 25 22.0	+7.5
VNA2	Neumayer--Watz	46.54	203		P	20 25 27.6	+13
VNA2	Neumayer--Watz	46.54	203		P	20 25 31.9	+17
VNA2	Neumayer--Watz	46.54	203	⇑*i*P	P	20 25 15.2	+0.7
VNA2				⇑*i*P	pP	20 25 17.3	-0.2
VNA3	Neumayer Olymp	47.34	203	⇑*i*	P	20 25 22.9	+2.1
VNA3	Neumayer Olymp	47.34	203		P	20 25 27.9	+7.1
VNA3	Neumayer Olymp	47.34	203		P	20 25 31.6	+11
VNA3	Neumayer Olymp	47.34	203		P	20 25 37.6	+17
VNA3	Neumayer Olymp	47.34	203	⇑*i*P	P	20 25 21.4	+0.6
VNA3				⇑*i*P	pP	20 25 22.9	-0.9
VNDA	Vanda	58.91	166	P	P	20 26 46.9	+0.4
	0.4nm,0.5s,mb3.7,baz=241,slow=9.7,SNR=3.8						
VNDA				LR	LR	20 48 12.4	
	comp=Z,71nm,21.0s,MS3.8,baz=305,slow=32						
WRA	Warramunga Arr	71.91	102	P	P	20 28 10.5	-0.5
	2.0nm,0.8s,mb4.1,baz=233,slow=5.1,SNR=21						
WRAB	Tennant Creek	71.92	102	P	P	20 28 10.4	-0.7
	5.6nm,0.8s,mb4.5						
LSA	Lhasa	74.84	34	*e*P	P	20 28 28.5	+0.5
	5.6nm,1.1s,mb4.4						
BRTR	Keskin Array B	77.58	345	P	P	20 28 43.0	-0.2
	0.5nm,0.5s,mb3.8,baz=180,slow=7.4,SNR=4.3						
MKAR	Makanchi Array	86.79	20	P	P	20 29 31.3	+0.4
	0.2nm,0.5s,mb3.6,baz=214,slow=5.2,SNR=4.1						
MKAR	Makanchi Array	86.79	20	P	P	20 29 31.3	+0.4
AKASG	Malin Array Be	88.99	345	P	P	20 29 41.2	-0.1
	1.1nm,0.7s,mb4.3,baz=160,slow=4.3,SNR=7.2						
GERES	GERESS Array B	91.52	335	P	P	20 29 53.7	+0.5
	0.2nm,0.7s,mb3.6,baz=162,slow=4.2,SNR=4.1						
ZAL	Zalesovo	93.96	18	P	P	20 30 03.3	-0.9
	0.7nm,0.2s,mb4.7,baz=232,slow=5.2,SNR=4.5						
INK	Inuvik	147.66	4	PKPbc	PKPdf	20 36 30.9	+1.6
	5.0nm,0.9s,baz=306,slow=1.3,SNR=5.6						
ILAR	Eielson Array	149.08	16	PKPbc	PKPdf	20 36 33.8	+2.0
	4.5nm,0.9s,baz=316,slow=3.2,SNR=28						
YKA	Yellowknife Ar	152.53	347	PKPbc	PKPdf	20 36 42.3	+5.3
	0.6nm,0.3s,baz=28,slow=2.2,SNR=4.3						

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*IDC **27** 20:36:04.6±1.4, 7.84S×125.18E, mb4.0/3, mb1 4.2/5, mb1mx4.0/14, mbtmp4.0/5, ML3.9/2, Error ellipse: s-maj=116.7km s-min=22.9km az=71.0*

*NEIC **27** 20:36:08.0±0.7, 7.96S×125.08E, h25^{km}, mb3.9/3, Error ellipse: s-maj=38.3km s-min=9.8km az=63.0*

ISC 27 20:36:06.5±0.8**, 8.26S**±0.07×**124.9E**±0.1**, h33^{km}, n12, σ1^{s}53**/16**, mb4.0**/6**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	9.81	176	*e*P	P	20 38 30.9	+2.4
	9.6nm,0.9s						
FITZ				*e*S	S	20 40 18.5	-0.1
FITZ	Fitzroy Crossi	9.81	176	Pn	P	20 38 31.4	+3.0
	0.7nm,0.3s,baz=26,slow=9.1,SNR=3.5						
FITZ				Sn	Sn	20 40 17.7	-1.0
	2.4nm,0.3s,baz=244,slow=2.2,SNR=10						
WRA	Warramunga Arr	14.77	143	Pn	P	20 39 37.0	+2.1
	0.5nm,0.3s,baz=319,slow=13,SNR=18						
WRA				Sn	S	20 42 14.0	-4.2
	0.4nm,0.3s,baz=246,slow=22,SNR=7.7						
WB2	Warramunga Arr	14.77	143	*e*P	P	20 39 37.3	+2.3
WB2				*e*S	S	20 42 15.9	-2.5
STKA	Stephens Creek	28.16	149	*e*P	P	20 42 03.4	+5.3
	1.3nm,0.8s,mb3.6						
STKA	Stephens Creek	28.16	149	P	P	20 42 03.5	+5.4
	1.1nm,0.4s,mb3.8,baz=333,slow=8.9,SNR=5.9						
LSA	Lhasa	49.80	321	*e*P	P	20 44 58.2	-0.2
	1.3nm,0.4s,mb4.3						
MKAR	Makanchi Array	66.63	330	P	P	20 46 55.2	-0.8
	1.4nm,0.6s,mb4.2,baz=131,slow=7.6,SNR=17						
ZAL	Zalesovo	70.58	336	P	P	20 47 20.2	-0.1
	0.9nm,0.4s,mb4.0,baz=272,slow=2.5,SNR=6.7						
ZAL	Zalesovo	70.58	336	P	P	20 47 20.2	-0.1
VNDA	Vanda	71.86	172	P	P	20 47 31.6	+4.0
	0.5nm,0.5s,mb3.7,baz=318,slow=8.3,SNR=8.3						
ZRNK	Zerenda	77.17	329	*e*P	P	20 47 57.9	-0.9
	0.9nm,0.7s,mb3.8						

NEIC 27 20:42:06.4±2.9**, 40.91N**×**126.55W, h10^{km}, mb3.6**/2**, Error ellipse: s-maj=33.5km s-min=9.6km az=72.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRMB	Red Mountain	2.09	72	*e*P	Pn	20 42 40.1	-1.8
KRMB				*e*S	Sn	20 42 57.3	-11
KHMM	Horse Mountain	2.14	90	*e*P	Pn	20 42 41.1	-1.6
KBO	Bosley Butte	2.18	53	*e*P	Pn	20 42 41.2	-2.0
KEBM	Edson Butte	2.57	39	P	Pn	20 42 46.8	-2.0
YBH	Yreka Blue Hor	3.01	73	P	Pn	20 42 54.5	-0.6
LAMM	Antelope Mount	3.04	75	P	Pn	20 42 55.1	-0.5
WDC	Whiskeytown Da	3.07	95	*e*P	Pn	20 42 54.7	-1.2
HUMO	Hull Mountain	3.18	57	P	Pn	20 42 56.0	-1.6
HOPS	Hopland	3.29	124	*e*P	Pn	20 42 58.2	-0.9
DBO	Dodson Butte	3.31	47	P	Pn	20 42 57.8	-1.6
LHEM	Herd Peak	3.34	76	P	Pn	20 42 60.0	+0.1
BBOR	Butler Butte	3.50	54	P	Pn	20 43 01.1	-1.0
BUOR	Burton Butte	3.51	66	P	Pn	20 43 02.4	+0.2
HSO	Harness Mounta	3.67	43	P	Pn	20 43 02.8	-1.6
LASM	Arnica Sink	3.81	78	P	Pn	20 43 06.5	-0.1
LBCM	Butte Creek Ri	3.95	89	P	Pn	20 43 07.7	-0.7
HBO	Huckleberry Mo	4.29	46	P	Pn	20 43 12.6	-0.8
IRO	Indian Ridge	4.44	44	P	Pn	20 43 14.4	-1.0
FRIS	Frissel Point	4.66	43	P	Pn	20 43 17.4	-1.1
HUOR	Husband	4.73	46	P	Pn	20 43 18.6	-1.0
MOD	Modoc	4.80	76	*e*P	Pn	20 43 18.0	-2.6
PINOR	Pine Mountain	5.11	54	P	Pn	20 43 23.9	-1.1
VIPM	Ingram Point	5.66	49	P	Pn	20 43 31.4	-1.2
WVOR	Wild Horse Val	6.12	73	*e*P	Pn	20 43 36.1	-3.1
BMO	Blue Mountains	7.85	57	*e*P	Pn	20 44 00.9	-2.5
HLID	Hailey	9.39	70	P	P	20 44 22.4	-2.4

SDCO	**Great Sand Dun**	16.59	94	P	P	20 46 03.3	+2.7
	1.0nm,0.4s						
FFC	**Flin Flon**	21.38	41	*e*P	P	20 46 53.9	-2.1
	7.0nm,1.0s						

CASC 27 20:49:39.6±2.5, 13.99N×89.75W, h6^{km}±12^{km}, MD4.0, 5C-1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOQS	**Boqueron**	0.52	120	⇑*i*P	Pg	20 50 07.9	+18
BOQS				*e*S	Sg	20 50 16.0	+19
LFU	**La Fuente**	0.66	112	*e*P	Pg	20 50 10.0	+17
LFU				*e*S	Sg	20 50 19.2	+18
IXG	**Ixpaco**	0.71	285	⇑*e*P	Pg	20 49 53.4	-0.4
IXG				*e*S	Sg	20 50 03.5	+0.2
LFRS	**El Faro**	0.76	119	⇑*i*P	Pb	20 50 11.9	+17
LFRS				*e*S	Sg	20 50 22.7	+18
LCBS	**La Ceiba**	0.82	114	⇑*i*P	Pb	20 50 12.6	+17
LCBS				*e*S	Sb	20 50 26.1	+19
SNVI	**San Vicente**	0.96	113	*e*P	Pb	20 50 15.4	+17
SNVI				*e*S	Sb	20 50 29.0	+18
MRL	**Marmol**	1.07	3	⇓*e*P	Pb	20 49 58.4	-1.7
TP2	**Tecpan 2**	1.47	303	⇑*e*P	Pn	20 50 07.1	+0.5
TP2				*e*S	Sb	20 50 27.0	+1.4
CAHU	**Cacacuatique**	1.51	98	*e*P	Pn	20 50 23.6	+16
CAHU				*e*S	Sb	20 50 45.0	+18

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*IDC **27** 21:11:30.8±6.4, 6.27S×146.92E, h37^{km}±53^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.9/15, mbtmp4.0/8, ML3.3/2, Error ellipse: s-maj=37.2km s-min=26.2km az=66.0*

*NEIC **27** 21:11:31.4±2.8, 6.32S×146.86E, h43^{km}±26^{km}, mb4.1/2, Error ellipse: s-maj=22.3km s-min=19.9km az=177.0*

ISC 27 21:11:29.9±3.4, **6.3S**±0.1×**146.8E**±0.1, **h44**^{km}±31^{km}, **n11, σ0ˢ88**/12, **mb4.0**/6, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.11	174	Pn	P	21 12 17.7	-0.1
	17nm,0.3s,baz=18,slow=6.6,SNR=17						
PMG				Sn	S	21 12 54.4	+0.4
	10.0nm,0.3s,baz=12,slow=20,SNR=4.0						
KAKA	**Kakadu**	15.55	245	*e*P	P	21 15 08.4	+0.5
	14nm,0.6s						
WRAB	**Tennant Creek**	18.19	221	*e*P	P	21 15 39.7	-1.4
	6.2nm,0.7s						
WRA	**Warramunga Arr**	18.20	221	P	P	21 15 40.5	-0.7
	0.1nm,0.3s,baz=46,slow=12,SNR=17						
FITZ	**Fitzroy Crossi**	23.77	239	P	P	21 16 40.7	+1.2
	9.3nm,0.8s,mb4.3,baz=56,slow=7.3,SNR=4.3						
CMAR	**Chiang Mai Arr**	53.24	298	P	P	21 20 48.1	+1.4
	0.9nm,0.6s,mb3.9,baz=128,slow=5.8,SNR=8.1						
CMAR				pP	pP	21 20 55.0	-4.1
	2.3nm,1.0s,baz=125,slow=5.7,SNR=6.7						
VNDA	**Vanda**	71.63	177	P	P	21 22 48.4	0.0
	1.4nm,0.6s,mb4.1,baz=333,slow=6.2,SNR=15						
MKAR	**Makanchi Array**	77.61	321	P	P	21 23 22.4	-1.0
	0.3nm,0.6s,mb3.4,baz=102,slow=5.9,SNR=5.1						
MKAR	**Makanchi Array**	77.61	321	P	P	21 23 22.4	-1.0
ZAL	**Zalesovo**	79.17	328	P	P	21 23 30.7	-1.1
	0.7nm,0.4s,mb4.0,baz=100,slow=6.1,SNR=3.1						
ILAR	**Eielson Array**	85.82	23	P	P	21 24 06.2	+0.6
	1.3nm,0.7s,mb4.3,baz=252,slow=5.0,SNR=12						

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*IDC **27** 21:29:14.2±2.7, 22.66N×144.78E, mb4.0/7, mb1 4.1/8, mb1mx3.9/22, mbtmp4.0/8, ML3.8/1, MS3.3/2, Ms1 3.4/2, ms1mx2.7/24, Error ellipse: s-maj=108.5km s-min=19.0km az=78.0*

*NEIC **27** 21:29:21.4±1.6, 22.62N×144.58E, h50^{km}, mb4.1/1, Error ellipse: s-maj=65.4km s-min=10.9km az=79.0*

ISC 27 21:29:18.4±2.0, **22.6N**±0.1×**144.3E**±0.6, **h33**^{km}, **n12, σ0ˢ89**/11, **mb3.9**/8, **MS3.3**/2, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	4.83	337	Pn	Pn	21 30 31.5	+0.7
	8.6nm,0.3s,baz=286,slow=22,SNR=19						
CBIJ				Sn	Sn	21 31 24.6	-1.7
	9.1nm,0.3s,baz=282,slow=23,SNR=7.7						
ASAJ	**Asahikawa**	21.47	357	LR	LR	21 41 43.4	
	comp=Z,24nm,18.4s,MS2.6,baz=184,slow=35						
SONM	**Songino Array**	39.28	319	P	P	21 36 47.5	+1.9
	0.3nm,0.3s,mb3.5,baz=130,slow=6.1,SNR=4.0						
WRAB	**Tennant Creek**	43.40	194	P	P	21 37 19.4	-0.5
WRA	**Warramunga Arr**	43.41	194	P	P	21 37 20.3	+0.2
	0.5nm,0.3s,mb3.8,baz=13,slow=8.6,SNR=37						
FITZ	**Fitzroy Crossi**	44.39	206	P	P	21 37 27.6	-0.4
	4.5nm,0.8s,mb4.3,baz=18,slow=13,SNR=2.9						
ZAL	**Zalesovo**	54.12	321	P	P	21 38 42.9	+0.5
	0.7nm,0.4s,mb3.9,baz=17,slow=15,SNR=3.5						
STKA	**Stephens Creek**	54.26	183	P	P	21 38 42.6	-1.0
	1.0nm,0.8s,mb3.8,baz=331,slow=10,SNR=3.5						
MKAR	**Makanchi Array**	54.81	312	P	P	21 38 48.1	+0.6
	0.7nm,0.5s,mb3.9,baz=87,slow=8.6,SNR=18						
ZRNK	**Zerenda**	63.46	319	*e*P	P	21 39 46.8	-0.4
	1.0nm,0.5s,mb4.2						
YKA	**Yellowknife Ar**	75.16	28	LR	LR	22 09 56.1	
	comp=Z,76nm,20.9s,MS4.0,baz=170,slow=33						
FINES	**FINESS Array B**	82.77	335	P	P	21 41 40.2	0.0
	0.7nm,0.5s,mb4.0,baz=45,slow=2.7,SNR=5.3						

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*IDC **27** 21:43:18.2±9.0, 18.23N×106.99W, mb3.3/4, mb1 3.8/5, mb1mx3.7/21, mbtmp3.5/5, ML4.2/1, MS3.4/5, Ms1 3.5/5, ms1mx3.3/10, Error ellipse: s-maj=146.6km s-min=79.1km az=145.0*

*MEX **27** 21:43:26.9±0.4, 17.73N×106.69W, h20^{km}±44^{km}, MD4.1*

*NEIC **27** 21:43:31.6±11.0, 18.84N×107.00W, h73^{km}±47^{km}, mb3.7/3, Error ellipse: s-maj=118.0km s-min=27.3km az=180.0*

ISC 27 21:43:27.1±3.4, **18.7N**±0.2×**107.2W**±0.1, **h46**^{km}±26^{km}, **n20, σ1ˢ12**/19, **mb3.4**/5, **MS3.4**/5, **1C, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	2.21	69	⇑*i*P	P	21 44 01.9	-0.2
CJM				*i* S	S	21 44 28.9	+0.7
SFJM	**Santa Fe**	4.32	65	*i* P	P	21 44 31.0	-1.1
ZAIG	**Zacatecas**	5.93	47	*e*P	P	21 44 56.8	+2.1
ZAIG				*i* S	S	21 46 09.9	+7.7
LTX	**Lajitas**	11.05	16	*e*P	P	21 46 05.1	-0.4
TXAR	**Lajitas Array**	11.05	16	Pn	P	21 46 04.4	-1.0
	0.3nm,0.3s,baz=196,slow=13,SNR=15						
MNTX	**Cornudas Mount**	13.02	7	*e*P	P	21 46 31.4	-0.5
	7.1nm,1.3s						
TUC	**Tucson**	13.90	347	*e*P	P	21 46 43.9	+0.5
	2.5nm,0.8s						
WMOK	**Wichita Mounta**	17.63	24	*e*P	P	21 47 30.1	-0.9
	1.3nm,0.6s						
NEN	**Nelson**	18.16	340	P	P	21 47 38.6	+1.0
SDCO	**Great Sand Dun**	19.01	4	*e*P	P	21 47 44.9	-3.0
DAC	**Darwin (Calif)**	19.73	334	*e*P	P	21 47 55.1	-0.6
	14nm,1.7s						
ISCO	**Idaho Springs**	21.05	3	*e*P	P	21 48 10.1	+0.7
	4.4nm,0.9s,mb3.8						
NVAR	**Mina Array Bea**	21.88	336	P	P	21 48 18.4	+0.7
	0.8nm,0.8s,mb3.2,baz=165,slow=10,SNR=3.2						
NVAR				LR	LR	21 56 40.4	
	comp=Z,96nm,18.1s,MS3.2,baz=245,slow=36						
ELK	**Elko**	23.00	344	P	P	21 48 31.0	+2.2
	0.5nm,0.4s,mb3.3,baz=184,slow=11,SNR=3.3						
BW06	**Boulder Array**	24.05	356	P	P	21 48 37.7	-1.3
PDAR	**Pinedale Array**	24.05	356	P	P	21 48 39.9	+1.0
	0.6nm,0.8s,mb3.1,baz=164,slow=11,SNR=4.9						
ULM	**Lac du Bonnet**	32.73	14	LR	LR	22 02 39.2	
	comp=Z,26nm,21.1s,MS2.9,baz=202,slow=35						
LPAZ	**La Paz**	51.87	130	LR	LR	22 11 30.0	
	comp=Z,62nm,21.3s,MS3.6,baz=55,slow=33						
ILAR	**Eielson Array**	53.06	340	P	P	21 52 40.7	-1.0
	0.4nm,0.8s,mb3.4,baz=142,slow=6.8,SNR=4.3						
ILAR				LR	LR	22 15 27.1	
	comp=Z,25nm,18.0s,MS3.3,baz=0.7,slow=36						
PPT	**Papeete**	55.08	232	LR	LR	22 09 11.1	
	comp=Z,96nm,19.9s,MS3.9,baz=11,slow=28						

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*NEIC **27** 21:49:50.0, 15.29N×96.62W, h16^{km}, MD3.6(MEX), After MEX.*

MEX 27 21:49:50.6±1.1, **15.31N×96.57W, h16**^{km}±934^{km}, **MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	0.64	44	*e*P	Pb	21 50 00.7	-2.3
HUIG				*e*S	Sb	21 50 09.4	-1.9
VHO	**Vista Hermosa**	1.76	355	*e*P	Pn	21 50 16.5	-4.3
VHO				*i* S	Sn	21 50 36.3	-6.7
VHO	**Vista Hermosa**	1.76	355	*e*P	Pn	21 50 16.5	-4.3
VHO				*i* S	Sn	21 50 36.9	-6.1
OXX	**Oaxaca**	1.77	355	*i* P	Pn	21 50 18.2	-2.7
OXX				*i* S	Sn	21 50 38.2	-5.0
CMIG	**Matias Romero**	2.40	42	*e*P	Pn	21 50 26.9	-3.1
CMIG				*i* S	Sn	21 50 55.0	-4.3
CMIG	**Matias Romero**	2.40	42	*e*P	Pn	21 50 26.9	-3.1
CMIG				*i* S	Sn	21 50 53.8	-5.5

NNC 27 22:16:18.7±4.6, **38.43N×69.74E, mpv3.0, 3D, Error ellipse: s-maj=36.3km s-min=27.8km az=172.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	4.70	7	⇓Pn	Pn	22 17 30.9	-1.6
	0.4nm,0.3s,baz=183,slow=12,SNR=35						
KK31				⇓Pg	Pg	22 17 43.8	-8.8
	0.4nm,0.2s,baz=184,slow=15,SNR=11						
KK31				⇓Sn	Sn	22 18 26.8	-1.8
	5.4nm,0.4s,baz=177,slow=28,SNR=8.6						
AAK	**Ala-Archa**	5.54	39	P	Pn	22 17 41.8	-2.6
	2.7nm,0.4s						
AAK				S	Sn	22 18 49.6	-0.2
	6.3nm,0.7s						
AB31	**Akbulak array**	12.91	330	P	P	22 19 24.1	-2.1
	0.2nm,0.4s,baz=136,slow=11,SNR=7.4						

NEIC 27 22:17:33.6, 34.05N×117.03W, h12^{km}, **ML4.0**(PAS), **1C, After PAS., Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFO	**Pinyon Flat Ob**	0.65	133	⇑*i*P	Pb	22 17 45.4	-1.0
PFO				*e*S	Sb	22 17 54.1	-1.1
MWC	**Mount Wilson**	0.87	282	*e*P	Pb	22 17 49.2	-1.0
MWC				*e*S	Sb	22 18 00.7	-0.8
BAR	**Barrett**	1.40	168	*e*P	Pn	22 17 57.6	-1.5
BAR				*e*S	Sb	22 18 15.6	-1.3
LDFC	**Landfair**	1.89	57	*e*P	Pn	22 18 05.8	-0.2
DAC	**Darwin (Calif)**	2.27	348	*e*Pn	Pn	22 18 10.2	-1.2
MTUM	**Tungsten Hills**	3.52	340	*e*Pn	Pn	22 18 28.9	-0.4
MTUM				*e*Pg	Pg	22 18 38.4	-5.6
OMM	**Old Mammoth Mi**	3.90	336	*e*Pn	Pn	22 18 33.7	-1.0
TPH	**Tonopah**	4.02	358	*e*Pn	Pn	22 18 35.9	-0.5
TPH				*e*Pg	Pg	22 18 48.9	-4.9
TPH				*e*Sn	Sn	22 19 23.0	-0.8
TPH				*e*Sg	Sg	22 19 40.6	-6.8
LRV	**Little Rabbit**	4.03	307	*e*Pn	Pn	22 18 33.9	-2.6
TRCR	**Troy Canyon**	4.44	15	Pn	Pn	22 18 41.1	-1.4
TRCR				*e*Pg	Pg	22 18 55.3	-7.0
MNV	**Mina**	4.46	349	*e*Pn	Pn	22 18 42.2	-0.5
MNV				*e*Pg	Pg	22 18 56.1	-6.6
MNV				*e*Sg	Sg	22 19 56.4	-5.8
SAO	**San Andreas Ge**	4.51	308	*e*Pn	Pn	22 18 40.2	-3.2
ARUT	**Antelope Range**	4.73	37	*e*Pn	Pn	22 18 45.0	-1.5
CMB	**Columbia Colle**	4.81	327	*e*Pn	Pn	22 18 45.6	-2.0
TUC	**Tucson**	5.52	107	*e*Pn	Pn	22 18 53.9	-3.7
MVU	**Marysvale**	5.90	40	*e*Pn	Pn	22 19 01.1	-2.0
MVU				*e*Pg	Pg	22 19 22.2	-9.3
MSU	**Marysvale**	5.93	40	Pn	Pn	22 19 01.6	-1.9
BMN	**Battle Mountai**	6.37	359	*e*Pg	Pg	22 19 33.2	-7.6
BMN				*e*Sg	Sg	22 20 54.9	-11
BEKR	**Beckwourth**	6.38	336	*e*Pn	Pn	22 19 08.9	-1.0
BEKR				*e*Pg	Pg	22 19 30.0	-11
ELK	**Elko**	6.83	12	*e*Pn	Pn	22 19 14.9	-1.3
ELK				*e*Pg	Pg	22 19 40.8	-9.1
ELK				*e*Sg	Sg	22 21 07.3	-14
TMUT	**Trail Mountain**	7.02	40	*e*Pg	Pg	22 19 45.1	-8.6
SRU	**San Rafael**	7.27	44	*e*Pg	Pg	22 19 49.4	-9.3
BGU	**Big Grassy Mou**	7.56	24	*e*Pn	Pn	22 19 26.1	-0.2
BGU				*e*Pg	Pg	22 19 53.3	-11
HVU	**Hansel Valley**	8.41	22	Pn	P	22 19 41.5	+3.2

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*IDC **27** 22:37:56.0±2.6, 1.06N×96.88E, mb3.7/5, mb1 3.9/6, mb1mx3.7/19, mbtmp3.7/6, Error ellipse: s-maj=94.6km s-min=26.0km az=57.0*

*NEIC **27** 22:38:00.8±0.9, 1.15N×97.05E, h30^{km}, mb4.1/1, Error ellipse: s-maj=23.0km s-min=13.3km az=61.0*

ISC 27 22:37:58.7±1.2, **1.2N**±0.1×**97.0E**±0.2, **h30**^{km}, **n10, σ0ˢ85**/10, **mb3.8**/6, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	5.47	41	*e*P	Pn	22 39 19.4	-1.0
CMAR	**Chiang Mai Arr**	17.29	6	P	P	22 42 01.4	+1.6
	baz=198,slow=11,SNR=4.5						
WRA	**Warramunga Arr**	42.17	122	P	P	22 45 51.2	+0.4
	0.5nm,0.4s,mb3.5,baz=301,slow=9.0,SNR=3.6						
WRAB	**Tennant Creek**	42.18	122	P	P	22 45 50.9	+0.1
	2.5nm,0.6s,mb4.0						
SONM	**Songino Array**	47.19	9	P	P	22 46 31.0	+0.3
	0.8nm,0.7s,mb3.8,baz=191,slow=8.9,SNR=7.9						
MKAR	**Makanchi Array**	47.23	346	P	P	22 46 31.5	+0.5
	0.5nm,0.4s,mb3.8,baz=155,slow=8.6,SNR=9.6						
ZAL	**Zalesovo**	53.55	351	P	P	22 47 19.3	+0.3
	1.4nm,0.4s,mb4.2,baz=337,slow=3.2,SNR=5.0						
ZAL	**Zalesovo**	53.55	351	P	P	22 47 19.3	+0.3
BVAR	**Borovoye Array**	56.22	341	P	P	22 47 37.7	-0.7
	0.7nm,0.7s,mb3.8,baz=141,slow=9.5,SNR=5.7						
ZRNK	**Zerenda**	56.62	340	P	P	22 47 39.9	-1.4

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*NEIC **27** 23:05:29.8, 36.50N×1.68E, h10^{km}, MG3.0(MDD), After ALG.*

*CRAAG **27** 23:05:29.8, 36.50N×1.68E, Ml2.2*

*MDD **27** 23:05:34.1±1.6, 36.41N×1.54E, mb3.0/3, Error ellipse: s-maj=24.0km s-min=7.0km az=96.0, PRXIMO SIN SOLUCIN*

CSEM 27 23:05:32.5±0.5, **36.44N×1.46E, h2**^{km}, **mb3.0**/3, **Error ellipse: s-maj=18.5km s-min=8.7km az=75.0, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	0.16	160	P	Pg	23 05 35.0	-0.7
ECHA	**Ech Chlef**	0.30	195	P	Pg	23 05 40.0	+1.5
ECHF	**Ech Chlef**	0.30	199	P	Pg	23 05 40.0	+1.5
EANR	**'Ain N'Sour**	0.57	211	P	Pg	23 05 44.0	+0.1
EIBI	**Ibiza**	2.58	358	P	Pn	23 06 16.5	+0.5
	0.5nm,0.1s,SNR=7.9						
EIBI				S	Sn	23 06 47.2	-1.3
	3.2nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	2.58	358	P	Pn	23 06 16.5	+0.5
	0.5nm,0.1s,SNR=7.9						
EIBI				S	Sn	23 06 47.2	-1.3
	3.2nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	3.25	314	P	Pn	23 06 26.8	+1.3
	0.2nm,0.1s,SNR=7.9						
ETOB				S	Sn	23 07 04.9	-0.4
	0.3nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	3.25	314	P	Pn	23 06 26.8	+1.3
	0.2nm,0.1s,SNR=7.9						
ETOB				S	Sn	23 07 04.9	-0.5
	0.3nm,0.2s,SNR=7.9						
EQES	**Quesada**	3.87	292	P	Pn	23 06 33.9	-0.5
	0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	23 07 20.0	-1.0
	0.3nm,0.1s,SNR=7.9						
EQES	**Quesada**	3.87	292	P	Pn	23 06 33.9	-0.4
	0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	23 07 20.0	-1.0
	0.3nm,0.1s,SNR=7.9						

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*IDC **27** 23:06:06.8±15.0, 38.20N×142.39E, mb3.6/2, mb1 3.4/3, mb1mx3.3/22, mbtmp3.4/3, ML2.9/1, MS3.0/1, Ms1 3.0/1, ms1mx2.0/29, Error ellipse: s-maj=269.8km s-min=57.3km az=115.0*

*JMA **27** 23:06:19.3±0.1, 37.76N×141.58E, h81^{km}±1^{km}, M3.4*

ISC 27 23:06:18.3±1.1, **37.76N**±0.05×**141.6E**±0.1, **h86**^{km}±6^{km}, **n16, σ0ˢ47**/26, **mb3.0**/2, **6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMM	**Marumori**	0.68	279	⇓P	P	23 06 34.5	+0.1
JMM				S	S	23 06 45.6	-0.8
JFK	**Kawauchi**	0.72	237	⇓P	P	23 06 34.9	0.0
JFK				S	S	23 06 46.3	-0.9
JIO	**Ouri**	0.73	342	⇓P	P	23 06 35.5	+0.5
JIO				S	S	23 06 47.1	-0.2
JOU	**Okura**	0.98	308	⇓P	P	23 06 37.7	+0.1
JOU				S	S	23 06 51.8	-0.4
JFT	**Otama**	1.06	257	⇓P	P	23 06 39.0	+0.4
JFT				S	S	23 06 53.4	-0.6
JMK	**Ichinoseki**	1.23	345	⇓P	P	23 06 41.2	+0.4
JMK				S	S	23 06 57.5	-0.2
JYS	**Shirataka**	1.32	291	P	P	23 06 42.6	+0.5
JYS				S	S	23 06 59.9	+0.2
JYK	**Kaneyama**	1.53	319	P	P	23 06 45.0	+0.3
JYK				S	S	23 07 04.1	-0.1
JFY	**Yanaizu**	1.57	258	P	P	23 06 45.5	+0.2
JFY				S	S	23 07 05.5	+0.3
JYA	**Atsumi**	1.73	299	S	S	23 07 09.3	+0.7
JOM	**Ohasama**	1.73	351	P	P	23 06 47.5	+0.2
JOM				S	S	23 07 08.6	-0.1
MJAR	**Matsushiro Arr**	3.00	247	Pn	P	23 07 05.3	+0.5
	1.0nm,0.3s,baz=57,slow=9.7,SNR=7.4						
MAT	**Matsushiro**	3.00	247	P	P	23 07 05.2	+0.4
MAT				S	S	23 07 40.0	+0.3
JNU	**Nakatsue**	9.92	245	LR	LR	23 11 56.7	
	comp=Z,80nm,21.8s,baz=177,slow=33						
SONM	**Songino Array**	27.54	303	P	P	23 11 58.3	-0.4
	0.8nm,0.8s,mb3.3,baz=100,slow=9.0,SNR=8.4						
MKAR	**Makanchi Array**	43.89	302	P	P	23 14 16.4	-1.3
	0.1nm,0.5s,mb2.8,baz=84,slow=9.9,SNR=4.3						

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*ISK **27** 23:13:16.9, 37.83N×29.00E, h5^{km}, MD3.4*

*NEIC **27** 23:13:16.0, 37.83N×29.01E, h6^{km}, MD3.4(ISK), MD3.3(ATH), After ISK.*

*CSEM **27** 23:13:17.1±0.1, 37.79N×29.01E, h10^{km}, MD3.4, Error ellipse: s-maj=3.0km s-min=1.7km az=101.0*

*ATH **27** 23:13:24.2, 37.55N×28.27E, h34^{km}±4^{km}, MD3.3/5*

ISC 27 23:13:16.9±0.7, **37.84N**±0.03×**29.00E**±0.04, **h4**^{km}±6^{km}, **n40, σ1ˢ09**/49, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	**Denizli**	0.09	164	*i* PG	Pg	23 13 19.4	+0.7
MANT	**Manisa**	0.74	332	*i* P	Pg	23 13 31.7	0.0
MANT				*i* S	Sg	23 13 40.4	-1.2
GOLH	**Golhisar**	0.74	143	*i* P	Pg	23 13 31.0	-0.8
GOLH				*i* S	Sg	23 13 47.9	+6.2
YER	**Yerkesik**	0.91	219	*i* PG	Pg	23 13 34.2	-0.8
AYDN	**Tasoluk**	0.91	259	*i* P	Pb	23 13 33.9	-1.0
AYDN				*i* S	Sg	23 13 50.0	+2.8
DALT	**Dalyan (Mudla)**	1.10	195	PN	Pn	23 13 38.8	-0.3
MLSB	**Milas**	1.11	241	PN	Pn	23 13 37.8	-1.4
MLSB				SN	Sn	23 13 54.4	-0.8
ISP	**Isparta**	1.19	89	PN	Pn	23 13 39.6	-0.7
ISP	**Isparta**	1.19	89	*e*P	Pb	23 13 38.4	-1.3
FETY	**Fethiye**	1.20	177	PN	Pn	23 13 40.2	-0.3
ELL	**Elmali**	1.30	146	*e*PN	Pn	23 13 42.0	+0.1
GDZ	**Gediz**	1.30	17	*i* P	Pb	23 13 39.3	-2.4
GDZ				*i* S	Sb	23 13 56.7	-2.0
BCK	**Bucak**	1.31	106	*e*PN	Pn	23 13 42.8	+0.7
AKS	**Akhisar**	1.40	318	*e*PN	Pn	23 13 43.6	+0.3
BDRM	**Kayabasi**	1.46	239	*i* P	Pn	23 13 44.5	+0.3
BDRM				*i* S	Sb	23 14 06.9	+3.7
KDAG	**Bornova**	1.48	293	*i* P	Pn	23 13 43.9	-0.6
KDAG				*i* S	Sb	23 14 02.6	-1.2
IZM	**Izmir**	1.48	293	*e*PN	Pn	23 13 44.2	-0.3
ALT	**Altintas**	1.50	35	*e*PN	Pn	23 13 44.7	+0.1
BODT	**Bodrum**	1.55	241	*e*PN	Pn	23 13 46.4	+0.9
BLCB	**Balcova**	1.64	290	*e*PN	Pn	23 13 47.7	+1.0
AKAS	**Kas**	1.67	163	*i* P	Pn	23 13 50.1	+2.9
AKAS				*i* S	Sb	23 14 13.9	+4.7
SMG	**Samos**	1.72	266	*e*PN	Pn	23 13 45.6	-2.3
KSL	**Kastellorizon**	1.75	164	*e*PN	Pn	23 13 54.0	+5.7
ARG	**Arkhangelos**	1.76	204	*e*PN	Pn	23 13 49.0	+0.5
ARG				*e*SN	Sn	23 14 06.0	-5.7
ARG	**Arkhangelos**	1.76	204	*e*Pn	Pn	23 13 50.0	+1.5
DST	**Dursunbey**	1.79	351	*e*PN	Pn	23 13 48.4	-0.5
BALB	**Balikesir**	2.00	334	*e*PN	Pn	23 13 52.7	+0.8
ORLT	**Orhaneli**	2.21	358	*e*PN	Pn	23 13 55.6	+0.8
ESKT	**Eskisehir**	2.22	40	*e*PN	Pn	23 13 55.4	+0.4
KCT	**Karacabey**	2.48	348	*e*PN	Pn	23 13 59.0	+0.3
KIZT	**Kizilcal**	2.49	64	*e*PN	Pn	23 13 59.2	+0.3
PRK	**Paraskevi**	2.56	304	*e*PN	Pn	23 14 02.0	+2.1
CANB	**Canakkale**	2.65	326	*e*PN	Pn	23 14 02.1	+0.9
BNT	**Bandirma**	2.65	342	*e*PN	Pn	23 14 02.3	+1.1
KARP	**Karpathos**	2.72	213	*e*PN	Pn	23 14 00.0	-2.2
YLV	**Yalova**	2.74	6	*e*PN	Pn	23 14 03.2	+0.7
EZN	**Ezine**	2.88	314	*e*PN	Pn	23 14 05.4	+0.9
BADT	**Buyukada**	3.01	2	*e*PN	Pn	23 14 07.0	+0.7
HRT	**Hereke**	3.02	10	*e*PN	Pn	23 14 07.1	+0.6
ISK	**Istanbul-Kandi**	3.22	1	*e*PN	Pn	23 14 10.2	+0.8

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*IDC **28** 00:20:29.0±14.0, 23.71S×179.98W, h319^{km}±136^{km}, mb3.8/5, mb1 4.1/5, mb1mx3.5/15, mbtmp4.5/5, Error ellipse: s-maj=89.0km s-min=46.1km az=169.0*

*NEIC **28** 00:20:36.0±1.6, 24.40S×179.96W, h400^{km}, mb4.5/2, Error ellipse: s-maj=103.0km s-min=23.2km az=164.0*

ISC 28 00:20:34.9±1.7, **24.0S**±0.8×**179.9E**±0.3, **h400**^{km}, **n9, σ0ˢ80**/8, **mb4.0**/6, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	31.39	270	P	P	00 26 24.0	+1.7
	16nm,0.4s,mb4.8,baz=93,slow=11,SNR=43						
CTAO	**Charters Tower**	31.39	270	*e*P	P	00 26 23.7	+1.4
	19nm,0.4s,mb4.8						
STKA	**Stephens Creek**	34.60	248	P	P	00 26 50.1	+0.6
	1.6nm,0.5s,mb3.6,baz=102,slow=10.0,SNR=8.6						
STKA	**Stephens Creek**	34.60	248	*e*P	P	00 26 49.9	+0.3
STKA				P		00 26 50.1	
WRAB	**Tennant Creek**	42.30	266	*e*P	P	00 27 52.1	-0.8
	5.7nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	42.31	266	P	P	00 27 52.4	-0.6
	3.3nm,0.3s,mb4.1,baz=98,slow=8.4,SNR=27						
FITZ	**Fitzroy Crossi**	50.73	266	P	P	00 28 57.4	-0.6
	7.2nm,0.6s,mb4.1,baz=118,slow=4.2,SNR=6.6						
TXAR	**Lajitas Array**	90.56	58	P	P	00 32 54.1	+0.1
	0.5nm,0.7s,mb3.4,baz=220,slow=7.0,SNR=6.0						
BRTR	**Keskin Array B**	147.57	307	PKPbc	PKPdf	00 39 36.5	+7.1
	0.7nm,0.6s,baz=85,slow=2.6,SNR=4.1						

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*IDC **28** 02:07:25.4±0.9, 0.69N×97.69E, mb4.2/11, mb1 4.3/12, mb1mx4.2/18, mbtmp4.2/12, ML4.3/1, Error ellipse: s-maj=43.8km s-min=19.5km az=53.0*

*BJI **28** 02:07:28.1, 1.03N×97.98E, h14^{km}, mb4.8*

*NEIC **28** 02:07:30.2±0.6, 0.73N×97.75E, h30^{km}, mb4.6/8, Error ellipse: s-maj=13.8km s-min=11.0km az=43.0*

ISC 28 02:07:28.9±0.7, **0.75N**±0.09×**97.81E**±0.09, **h33**^{km}, **n37, σ0ˢ80**/35, **mb4.4**/20, **6D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	5.33	32	*e*Pn	Pn	02 08 48.7	+0.4
KSM	**Kuching**	12.52	87	P	P	02 10 17.4	-10
CM31	**Chiang Mai Arr**	17.63	4	P	P	02 11 34.3	+0.5
CMAR	**Chiang Mai Arr**	17.63	4	P	P	02 11 32.6	-1.2
	0.4nm,0.3s,baz=197,slow=12,SNR=8.2						
KKM	**Kota Kinabalu**	19.11	74	*e*P	P	02 11 51.6	-0.2
GUN	**Gumba**	29.33	338	*e*P	P	02 13 31.3	+0.4
	53nm,1.0s,mb5.2						
KKN	**Kakani**	29.45	337	*e*P	P	02 13 32.9	+0.9
	31nm,0.9s,mb5.0						
LSA	**Lhasa**	29.48	348	*e*P	P	02 13 32.5	+0.2
LSA	**Lhasa**	29.48	348	*e*P	P	02 13 33.3	+1.0
	9.1nm,0.9s,mb4.5						
GKN	**Gorkha**	29.89	336	*e*P	P	02 13 36.1	+0.2
	24nm,0.9s,mb4.9						
KOLN	**Koldanda**	30.12	334	*e*P	P	02 13 34.7	-3.3
	17nm,0.8s,mb4.8						
XAN	**Xi'an**	34.72	16	P	P	02 14 16.8	-1.2
XAN				AP	pP	02 14 24.0	-3.7
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GTA	**Gaotai**	38.52	2	*e*P	P	02 14 50.5	+0.5
GTA				AP	pP	02 14 55.5	-4.3

GTA				XP	sP	02 14 58.8	-5.2
WRA	Warramunga Arr	41.28	122	P	P	02 15 12.3	-0.8
	comp=Z,1.6nm,0.6s,mb3.8,baz=302,slow=9.1,SNR=5.9						
SONM	Songino Array	47.49	8	P	P	02 16 03.2	+0.5
	comp=Z,2.0nm,0.8s,mb4.1,baz=187,slow=8.1,SNR=10						
SONM				PcP	PcP	02 17 33.2	+0.3
	comp=Z,0.8nm,0.6s,baz=230,slow=1.9,SNR=4.5						
ULN	Ulaanbaatar	47.61	8	eP	P	02 16 04.3	+0.6
	comp=Z,1.8nm,0.7s,mb4.2						
MKAR	Makanchi Array	47.83	346	P	P	02 16 05.5	+0.1
	comp=Z,6.0nm,0.8s,mb4.7,baz=160,slow=7.5,SNR=29						
MKAR	Makanchi Array	47.83	346	P	P	02 16 05.5	+0.1
STKA	Stephens Creek	52.60	132	P	P	02 16 42.6	+0.7
	comp=Z,1.7nm,0.8s,mb4.0,baz=209,slow=11,SNR=4.8						
BVAR	Borovoye Array	56.88	341	P	P	02 17 11.8	-1.1
	comp=Z,2.7nm,0.7s,mb4.4,baz=141,slow=9.5,SNR=23						
ZRNK	Zerenda	57.28	340	eP	P	02 17 13.9	-1.8
	comp=Z,2.9nm,0.9s,mb4.3						
EIL	Elat	66.21	302	eP	P	02 18 15.0	-0.9
	comp=Z,6.1nm,1.0s,mb4.6						
BRTR	Keskin Array B	69.86	312	P	P	02 18 38.0	-0.5
	comp=Z,1.8nm,0.8s,mb4.0,baz=130,slow=7.5,SNR=11						
AKASG	Malin Array Be	75.99	322	P	P	02 19 13.8	-0.6
	comp=Z,1.5nm,0.6s,mb4.1,baz=89,slow=5.4,SNR=9.4						
AKASG	Malin Array Be	75.99	322	P	P	02 19 13.8	-0.6
VRI	Vrincioaia	76.36	317	⇓P	P	02 19 16.7	+0.1
VRI	Vrincioaia	76.36	317	⇓P	P	02 19 16.7	+0.1
MLR	Muntele Rosu	76.81	317	⇓P	P	02 19 19.4	+0.1
MLR	Muntele Rosu	76.81	317	⇓P	P	02 19 19.4	+0.2
BURAR	Bucovina Array	77.76	319	⇓P	P	02 19 25.5	+1.1
BURAR	Bucovina Array	77.76	319	⇓P	P	02 19 25.5	+1.0
FINES	FINESS Array B	80.68	332	P	P	02 19 40.3	+0.3
	comp=Z,3.2nm,0.8s,mb4.3,baz=135,slow=8.1,SNR=8.1						
ARCES	ARCESS Array B	83.16	340	P	P	02 19 53.2	+0.5
	comp=Z,4.2nm,0.9s,mb4.5,baz=104,slow=5.0,SNR=10.0						
GERES	GERESS Array B	85.55	319	P	P	02 20 05.9	+0.8
	comp=Z,1.8nm,1.0s,mb4.3,baz=90,slow=4.0,SNR=12						
NOA	NORSAR Array B	87.69	331	P	P	02 20 15.6	+0.4
	comp=Z,1.6nm,0.8s,mb4.3,baz=95,slow=4.7,SNR=3.9						
TXAR	Lajitas Array	143.72	33	PKP	PKPdf	02 27 01.8	+0.6
	comp=Z,0.5nm,0.8s,baz=248,slow=1.5,SNR=6.7						
CPUP	Villa Florida	145.08	221	PKP	PKPdf	02 27 05.4	+1.7
	comp=Z,3.1nm,0.8s,baz=134,slow=5.8,SNR=10						

CASC 28 02:10:36.6±2.8, 8.31N×82.73W, h25^{km}±11^{km}, MD3.7, MW3.8, 2C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVD	David	0.30	65	⇓iP	Pb	02 10 44.3	+0.6
DVD				eS	Sb	02 10 49.8	+1.2
PTP1	Petroterminal	0.32	109	⇑iP	Pb	02 10 40.9	-3.0
PTP1				eS	Sb	02 10 46.5	-2.3
BRU2	Volcan	0.48	4	⇓iP	Pb	02 10 46.6	+0.1
BRU2				eS	Sb	02 10 54.8	+1.5
BRU	Baru	0.52	19	⇑iP	Pb	02 10 48.0	+0.9
BUS	Buena Vista	1.60	321	eS	Sn	02 11 24.2	+0.4
URSC	Urasca	1.84	326	eP	Pn	02 11 05.9	-1.2
URSC				eS	Sn	02 11 29.5	-0.2
PRS1	Puriscal	2.28	317	eP	Pn	02 11 12.5	-1.0
PRS1				eS	Sn	02 11 43.2	+2.1
FORC	Fortuna	2.88	318	eP	Pn	02 11 22.1	+0.1

*IDC **28** 02:32:07.7±9.3, 6.99S×129.65E, h167^{km}±92^{km}, mb3.5/2, mb1 3.7/4, mb1mx3.4/13, mbtmp4.1/4, Error ellipse: s-maj=87.8km s-min=32.0km az=51.0*

ISC 28 02:32:10.8±4.3, 7.2S±0.2×129.8E±0.2, h220^{km}±46^{km}, n5, σ1^{s}61/7, mb3.8/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.51	200	P	P	02 34 51.0	+1.0
	1.5nm,0.3s,baz=11,slow=12,SNR=25						
FITZ				S	S	02 36 54.7	-0.4
	5.0nm,0.3s,baz=177,slow=19,SNR=7.5						
WRA	Warramunga Arr	13.39	161	P	P	02 35 12.8	-0.7
	1.4nm,0.3s,baz=338,slow=13,SNR=17						
WRA				S	S	02 37 36.9	-0.8
	1.7nm,0.3s,baz=343,slow=22,SNR=8.2						
FORT	Forrest	23.47	184	eP	P	02 37 07.6	+5.7
	7.1nm,0.6s,mb4.4						
STKA	Stephens Creek	26.89	157	P	P	02 37 35.8	+2.3
	0.6nm,0.3s,mb3.7,baz=333,slow=8.3,SNR=4.8						
MKAR	Makanchi Array	68.29	327	P	P	02 42 49.0	-1.0
	0.5nm,0.5s,mb3.4,baz=124,slow=8.7,SNR=5.5						

*NEIC **28** 03:06:16.4±1.1, 19.71S×177.59W, h326^{km}±12^{km}, mb4.5/13, Error ellipse: s-maj=17.2km s-min=6.7km az=148.0*

*IDC **28** 03:06:25.9±3.5, 19.94S×177.66W, h430^{km}±37^{km}, mb3.7/10, mb1 3.9/12, mb1mx3.7/19, mbtmp4.5/12, Error ellipse: s-maj=21.5km s-min=12.7km az=117.0*

ISC 28 03:06:14.9±1.3, 19.74S±0.09×177.62W±0.09, h323^{km}±13^{km}, n38, σ0^{s}88/35, mb4.2/21, 5C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	8.06	45	P	P	03 08 12.9	+2.7
	6.4nm,0.3s,baz=210,slow=10,SNR=8.1						
AFI				S	S	03 09 39.4	-1.5
	14nm,0.3s,baz=251,slow=23,SNR=8.8						
AFI	Afiamalu	8.06	45	ePn	P	03 08 10.2	0.0
DZM	Mont Dzumac	15.07	258	P	P	03 09 39.0	+4.9
	2.9nm,0.3s,baz=79,slow=17,SNR=28						
NOUC	Port Laguerre	15.20	258	eP	P	03 09 40.1	+4.5
NOUC	Port Laguerre	15.20	258	eP	P	03 09 40.1	+4.5
URZ	Urewera	19.01	193	P	P	03 10 15.8	+0.9
	2.8nm,0.3s,baz=296,slow=2.3,SNR=9.6						
URZ				S	S	03 13 28.0	-0.9
	1.2nm,0.3s,baz=117,slow=24,SNR=7.0						
CNB	Canberra Magne	32.95	235	⇓iP	P	03 12 22.7	+1.0
	14nm,0.6s,mb4.4						
CTA	Charters Tower	33.93	263	⇑iP	P	03 12 31.3	+1.1
	45nm,0.4s,mb5.0						
CTAO	Charters Tower	33.93	263	eP	P	03 12 30.9	+0.7
	72nm,0.5s,mb5.2						
PMG	Port Moresby	35.53	282	P	P	03 12 44.4	+0.7
	8.9nm,0.7s,mb4.1,baz=101,slow=8.6,SNR=4.3						
PMG	Port Moresby	35.53	282	eP	P	03 12 44.8	+1.0
	14nm,0.9s,mb4.2						
STKA	Stephens Creek	38.44	243	⇑iP	P	03 13 08.7	+0.9
	11nm,0.6s,mb4.3						
STKA	Stephens Creek	38.44	243	P	P	03 13 08.8	+1.0
	13nm,0.5s,mb4.4,baz=91,slow=10.0,SNR=28						
STKA	Stephens Creek	38.44	243	eP	P	03 13 08.3	+0.5
STKA				⇑iP		03 13 08.7	
WRAB	Tennant Creek	45.05	261	eP	P	03 14 00.7	-0.6
	16nm,0.5s,mb4.4						
WRA	Warramunga Arr	45.06	261	P	P	03 14 01.1	-0.3
	5.3nm,0.3s,mb4.2,baz=97,slow=7.5,SNR=82						
KAKA	Kakadu	48.32	270	⇓iP	P	03 14 26.4	-0.2
	8.6nm,0.3s,mb4.5						
FORT	Forrest	49.92	246	⇑iP	P	03 14 37.6	-1.0
	24nm,0.5s,mb4.7						
FITZ	Fitzroy Crossi	53.48	262	⇓iP	P	03 15 04.9	0.0
	8.3nm,0.4s,mb4.4						
MBWA	Marble Bar	58.37	257	eP	P	03 15 37.8	-1.4
	16nm,0.5s,mb4.6						
KLBR	Kellerberrin	58.70	244	⇑iP	P	03 15 40.0	-1.4
	15nm,0.8s,mb4.5						
MJAR	Matsushiro Arr	69.82	323	P	P	03 16 52.9	+0.4
	2.5nm,0.5s,mb4.2,baz=160,slow=6.7,SNR=8.1						
YBH	Yreka Blue Hor	79.48	39	P	P	03 17 48.2	+0.8
	1.6nm,0.5s,mb4.0,baz=111,slow=1.1,SNR=7.6						
NVAR	Mina Array Bea	80.23	43	P	P	03 17 51.9	+0.5
	2.5nm,0.7s,mb4.0,baz=219,slow=7.4,SNR=18						
TUC	Tucson	82.23	52	eP	P	03 18 03.1	+1.2
	6.6nm,0.9s,mb4.5						
ELK	Elko	83.48	43	eP	P	03 18 08.2	+0.2
	3.7nm,0.8s,mb4.3						
SRU	San Rafael	85.74	46	eP	P	03 18 19.1	-0.2
TXAR	Lajitas Array	86.35	57	P	P	03 18 23.1	+0.7
	1.7nm,0.7s,mb4.0,baz=219,slow=6.0,SNR=28						
MCMT	McKenzie Canyo	87.15	40	eP	P	03 18 25.5	-0.3
MCMT				esP	sP	03 20 32.4	+17
DLBC	Dease Lake	87.22	23	P	P	03 18 25.6	-0.2
	0.6nm,0.4s,mb3.8,baz=350,slow=26,SNR=4.0						
ILAR	Eielson Array	87.50	13	P	P	03 18 25.6	-1.5
	0.4nm,0.4s,mb3.6,baz=244,slow=5.3,SNR=6.0						
PDAR	Pinedale Array	88.17	43	P	P	03 18 30.6	-0.2
	0.6nm,0.6s,mb3.6,baz=227,slow=2.0,SNR=6.9						
BOZ	Bozeman (W)	88.31	40	eP	P	03 18 31.2	-0.1
	3.1nm,0.9s,mb4.1						
ARCES	ARCESS Array B	128.24	350	PKP	PKPdf	03 24 41.7	-0.9
	2.7nm,1.1s,slow=2.4,SNR=7.1						
AKASG	Malin Array Be	142.52	332	PKhKP		03 25 04.7	
	0.3nm,0.3s,baz=43,slow=4.4,SNR=5.8						
EKA	Eskdalemuir Ar	144.22	5	PKP	PKPdf	03 25 10.6	-1.4
	2.1nm,0.9s,slow=4.2,SNR=5.7						
BRTR	Keskin Array B	146.59	313	PKPbc	PKPbc	03 25 16.9	-1.3
	0.7nm,0.7s,baz=148,slow=4.0,SNR=4.0						
GERES	GERESS Array B	149.57	345	PKPbc	PKPdf	03 25 26.4	+5.4
	0.6nm,0.6s,baz=45,slow=3.8,SNR=6.7						

ISC 28 03:11:51.9±0.8, 37.96N±0.04×29.03E±0.07, h7^{km}±8^{km}, n7, σ0^{s}47/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	Denizli	0.21	179	i PG	Pg	03 11 56.3	+0.1
DENT				SG	Sg	03 11 59.3	+0.2
DNZL	Cakiroluk	0.27	177	i P	Pg	03 11 57.2	-0.2
DNZL				i S	Sg	03 12 01.6	+0.4
MANT	Manisa	0.65	325	i P	Pg	03 12 04.9	0.0
MANT				i S	Sg	03 12 13.9	+0.3
AYDN	Tasoluk	0.96	252	i P	Pb	03 12 10.4	0.0
AYDN				i S	Sb	03 12 23.4	+0.4
YER	Yerkesik	1.01	216	PG	Pg	03 12 11.0	-1.2
TKTP	Tekketepe	1.02	85	i P	Pb	03 12 12.0	+0.5
TKTP				i S	Sb	03 12 31.5	+6.5
ALT	Altintas	1.38	37	ePN	Pn	03 12 17.1	-0.6

*NEIC **28** 03:18:50.4, 16.31N×93.50W, h156^{km}, MD4.2(MEX), After MEX.*

MEX 28 03:18:50.4±0.7, 16.31N×93.51W, h156^{km}±10^{km}, MD4.2, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCX	San Cristobal	0.94	63	i P	P	03 19 14.3	-1.1
SCX				i S	S	03 19 33.2	-1.5
CCIG	Comitan	1.31	91	i P	P	03 19 17.3	-1.6
CCIG				i S	S	03 19 38.0	-2.9
CMIG	Matias Romero	1.53	301	i P	P	03 19 19.7	-1.4
CMIG				i S	S	03 19 42.2	-2.6
TUIG	Tuzandepetl	1.93	333	i S	S	03 19 49.2	-3.1
HUIG	Huatulco	2.56	258	i P	P	03 19 30.5	-2.7
HUIG				i S	S	03 20 02.8	-3.1
EVV	El Vigia	2.77	321	i P	P	03 19 34.3	-1.4
EVV				i S	S	03 20 07.1	-3.3
EVV				i S	S	03 20 07.5	-2.9
EVV	El Vigia	2.77	321	i P	P	03 19 34.3	-1.4
EVV				i S	S	03 20 05.8	-4.7
OXX	Oaxaca	3.18	284	i P	P	03 19 41.5	+0.5
OXX				i S	S	03 20 19.5	-0.3
OXX	Oaxaca	3.18	284	eP	P	03 19 41.0	0.0
OXX				i S	S	03 20 19.1	-0.6
VHO	Vista Hermosa	3.19	284	eP	P	03 19 40.1	-1.0
VHO				eS	S	03 20 18.3	-1.6
IISM	Ciudad Serdan	4.55	306	i P	P	03 20 01.8	+2.9
IISM				i S	S	03 20 49.5	-2.1
IISM	Ciudad Serdan	4.55	306	i P	P	03 19 57.0	-1.9
IISM				i S	S	03 20 49.5	-2.1
PPM	Popocatepetl	5.60	300	i P	P	03 20 13.8	+1.1
PPM				i P		03 20 14.1	
PPM				eS	S	03 21 13.1	-3.4
PPM				i S	S	03 21 18.4	+1.9
PPM	Popocatepetl	5.60	300	i P	P	03 20 13.8	+1.1
PPM				i P		03 20 14.1	
PPM				eS	S	03 21 13.1	-3.4
PPM				i S	S	03 21 13.9	-2.6
YAIG	Yautepec	5.88	296	i P	P	03 20 17.4	+1.0
YAIG				i S	S	03 21 21.6	-1.6

*IDC **28** 03:20:39.7±0.7, 53.48S×24.93E, mb4.1/11, mb1 4.2/11, mb1mx4.1/18, mbtmp4.2/11, MS3.4/5, Ms1 3.4/5, ms1mx3.3/15, Error ellipse: s-maj=25.2km s-min=18.0km az=73.0*

*NEIC **28** 03:20:42.0±0.5, 53.50S×24.92E, h10^{km}, mb4.5/3, Error ellipse: s-maj=17.5km s-min=11.8km az=76.0*

ISC 28 03:20:39.6±0.6, 53.48S±0.09×24.8E±0.2, h10^{km}, n23, σ0^{s}56/17, mb4.2/14, MS3.4/5, 2D, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	Sutherland	21.29	351	P	P	03 25 29.2	+0.8
	19nm,1.2s,mb4.3,baz=190,slow=10,SNR=2.7						
SUR	Sutherland	21.29	351	P	P	03 25 29.2	+0.8
SNAA	Sanae	21.87	203	e	P	03 25 44.5	+11
SNAA	Sanae	21.87	203	P	P	03 25 35.4	+1.4
	5.9nm,0.8s,mb4.0,baz=70,slow=6.5,SNR=29						
SNAA				LR	LR	03 31 37.4	
	comp=Z,48nm,21.2s,MS2.9,baz=202,slow=30						
SNAA	Sanae	21.87	203	⇓iP	P	03 25 34.7	+0.8
SNAA				e		03 25 44.5	
SNAA				e		03 25 54.1	
MAW	Mawson	22.95	143	P	P	03 25 44.9	+0.4
	6.5nm,0.9s,mb4.0,baz=282,slow=12,SNR=9.4						
BOSA	Boshof	24.85	1	LR	LR	03 33 46.4	
	comp=Z,100nm,18.5s,MS3.4,baz=178,slow=32						
LBTB	Lobatse	28.43	1	LR	LR	03 36 05.0	
	comp=Z,92nm,18.2s,MS3.4,baz=325,slow=32						
MATP	Matopo	33.12	6	P	P	03 27 17.6	-0.2
	3.5nm,0.8s,mb4.4,baz=196,slow=6.5,SNR=7.6						
QSPA	South Pole Qui	36.74	180	⇓iP	P	03 27 47.9	-0.4
	13nm,1.4s,mb4.6						
VNDA	Vanda	46.58	168	P	P	03 29 08.8	+0.2
	0.9nm,0.8s,mb3.7,baz=266,slow=8.0,SNR=5.2						
VNDA				LR	LR	03 48 20.3	
	comp=Z,78nm,20.4s,MS3.6,baz=281,slow=36						
TRQA	Tornquist	58.76	247	eP	P	03 30 39.8	-0.1
	3.7nm,0.7s,mb4.5						
PLCA	Paso Flores	61.40	240	P	P	03 30 57.0	-0.9
	3.0nm,0.9s,mb4.4,baz=103,slow=8.7,SNR=3.1						
CPUP	Villa Florida	64.72	259	LR	LR	03 51 41.7	
	comp=Z,32nm,21.0s,MS3.5,baz=176,slow=29						
DBIC	Dimbokro	64.95	327	P	P	03 31 20.9	-0.8
	2.3nm,0.5s,mb4.5,baz=72,slow=13,SNR=3.2						
CFAA	Coronel Fontan	66.98	248	P	P	03 31 34.1	-0.4
	0.2nm,0.3s,mb3.6,baz=150,slow=4.2,SNR=6.9						
BDFB	Brasilia	67.36	274	P	P	03 31 37.7	+0.6
	2.6nm,0.9s,mb4.3,baz=123,slow=8.1,SNR=3.2						
STKA	Stephens Creek	78.92	129	P	P	03 32 44.4	-0.2
	2.8nm,1.0s,mb4.2,baz=322,slow=3.6,SNR=4.5						
SAML	Samuel	81.69	266	eP	P	03 33 00.0	+0.5
	2.4nm,0.9s,mb4.1						
WRA	Warramunga Arr	85.19	117	P	P	03 33 16.9	-0.4
	0.7nm,0.7s,mb3.9,baz=207,slow=4.2,SNR=4.6						
PDAR	Pinedale Array	148.23	269	PKPbc	PKPdf	03 40 26.1	+1.5
	0.7nm,0.9s,baz=124,slow=5.3,SNR=5.0						
ELK	Elko	150.39	261	PKPbc	PKPdf	03 40 33.3	+5.1
	1.2nm,0.8s,baz=184,slow=4.8,SNR=5.2						
NVAR	Mina Array Bea	150.66	254	PKPbc	PKPdf	03 40 32.3	+3.7
	1.2nm,0.8s,baz=127,slow=4.9,SNR=4.9						

*NEIC **28** 03:27:52.4, 59.87N×151.01W, h43^{km}, ML3.5(AEIC), ML3.4(PMR), After AEIC.*

*IDC **28** 03:27:57.3±6.7, 60.24N×150.78W, h100^{km}±46^{km}, mb3.6/5, mb1 3.6/7, mb1mx3.3/22, mbtmp3.8/7, MS2.9/2, Ms1 2.9/2, ms1mx2.4/27, Error ellipse: s-maj=53.9km s-min=41.5km az=167.0*

ISC 28 03:27:50.2±0.3, 59.85N±0.02×151.01W±0.04, h65^{km}±3^{km}, n84, σ0^{s}88/103, mb4.0/5, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRLK	Bradley Lake	0.10	144	P	P	03 27 59.0	-0.8
BRLK				S	S	03 28 04.4	-2.4
NNL	Ninilchik	0.24	323	P	P	03 28 00.1	-0.3
CNPM	China Poot	0.34	200	P	P	03 28 00.7	-0.5
CNPM				S	S	03 28 08.3	-1.1
HOM	Homer	0.38	240	P	P	03 28 01.3	-0.2
HOM				S	S	03 28 09.2	-0.6
XLV	Seldovia	0.54	223	P	P	03 28 02.6	-0.4
XLV				S	S	03 28 10.9	-1.5
SLKM	Skilak Lake	0.77	30	P	P	03 28 05.8	+0.1
SLKM				S	S	03 28 16.9	-0.2
SEW	Seward	0.82	71	P	P	03 28 06.7	+0.3
SEW				S	S	03 28 20.0	+1.7
RDT	Redoubt	1.01	317	P	P	03 28 08.4	-0.4
RDT				S	S	03 28 21.6	-1.0
ILIM	Iliamna	1.01	284	P	P	03 28 08.2	-0.6
ILIM				S	S	03 28 21.7	-0.9
IVE	Iliamna Volcan	1.03	280	P	P	03 28 08.5	-0.5
IVE				S	S	03 28 22.0	-1.0
MPA	Moose Pass	1.04	51	P	P	03 28 09.4	+0.1
ILS	Iliamna Low So	1.04	277	P	P	03 28 09.0	-0.3
RED	Redoubt Volcan	1.05	304	P	P	03 28 08.6	-0.8
INE	Iliamna NE	1.06	283	P	P	03 28 08.9	-0.6
IVS	Iliamna South	1.06	280	P	P	03 28 09.2	-0.3
RSO	Redoubt South	1.07	306	P	P	03 28 09.3	-0.3
ILW	Iliamna West	1.09	282	P	P	03 28 09.6	-0.4
ILW				S	S	03 28 23.6	-0.9
OPT	Oil Point	1.14	261	P	P	03 28 10.7	+0.1
VOGL	Vogel Lake	1.19	14	P	P	03 28 12.8	+1.6
VOGL				S	S	03 28 29.0	+2.2
AUE	Augustine Isla	1.30	249	P	P	03 28 13.2	+0.4
AUE				S	S	03 28 30.5	+1.1
AUL	Augustine Lava	1.32	250	P	P	03 28 13.7	+0.6
AUL				S	S	03 28 31.5	+1.4
AUP	Augustine Pinn	1.32	249	P	P	03 28 13.9	+0.7
AGU	Augustine-Summ	1.33	249	P	P	03 28 13.8	+0.6
AUI	Augustine Isla	1.33	248	P	P	03 28 13.7	+0.4
AUI				S	S	03 28 31.6	+1.1
AUW	Augustine West	1.34	250	P	P	03 28 14.0	+0.6
FIB	Fire Island	1.39	17	P	P	03 28 15.3	+1.3
FIB				S	S	03 28 33.5	+1.9
RC01	Rabbit Creek A	1.40	26	P	P	03 28 14.6	+0.4
SPU	Mount Spurr	1.44	339	P	P	03 28 14.7	0.0
SPU				S	S	03 28 33.0	+0.3
CKN	Chakachatna No	1.50	338	P	P	03 28 15.8	+0.3
CKL	Chakachamna La	1.50	335	P	P	03 28 15.5	-0.1
CKL				S	S	03 28 34.8	+0.5
CRP	Crater Peak	1.53	339	P	P	03 28 16.6	+0.6
CRP				S	S	03 28 36.0	+1.0
CP2	Crater Peak Tw	1.55	337	P	P	03 28 16.8	+0.6
BGL	Barrier Glacie	1.58	335	P	P	03 28 16.9	+0.3
MCNL	McNeil River	1.82	250	P	P	03 28 20.7	+0.8
MCNL				S	S	03 28 42.8	+0.9
PWA	Palmer West	1.89	17	eP	P	03 28 21.4	+0.5
PMR	Palmer	1.98	27	eP	P	03 28 21.9	-0.2
KNK	Knik Glacier	2.01	38	P	P	03 28 22.8	+0.3
KAPH	Katmai Pasha	2.13	235	P	P	03 28 25.9	+1.7
GHO	Glory Hole Cre	2.18	27	P	P	03 28 25.2	+0.2
KDAK	Kodiak Island	2.23	202	P	P	03 28 25.1	-0.6
KAHG	Katmai Hook Gl	2.27	235	P	P	03 28 27.9	+1.7
HIN	Hinchinbrook I	2.32	74	P	P	03 28 28.8	+1.9
SML	Sawmill	2.36	32	P	P	03 28 27.6	+0.1
KAHC	Katmai Hardscr	2.38	241	P	P	03 28 28.7	+0.9
MID	Middleton Isla	2.41	98	P	P	03 28 29.0	+0.9
SVW2	Sparrevohn	2.59	301	eP	P	03 28 29.6	-1.1
VLZ	Valdez	2.65	59	P	P	03 28 31.0	-0.5
VLZ				S	S	03 29 01.2	-1.4
SCM	Sheep Creek Mo	2.69	41	P	P	03 28 32.4	+0.3
CVA	Cordova	2.72	73	P	P	03 28 32.9	+0.4
EYAK	Cordova Ski Ar	2.72	73	P	P	03 28 31.4	-1.2
MGLS	Mageik LS	2.77	236	P	P	03 28 33.0	-0.3
CAHL	Cahill	2.86	233	P	P	03 28 34.6	+0.1
DIV	Divide	2.89	61	P	P	03 28 34.2	-0.8
CNTC	Contact Creek	2.98	240	P	P	03 28 37.4	+1.2
RND	Reindeer	3.72	15	P	P	03 28 47.5	+1.0
KTH	Kantishna Hill	3.72	1	P	P	03 28 48.0	+1.5
GLB	Gilahina Butte	3.89	63	P	P	03 28 47.7	-1.2
TT01	Tatalina	3.90	324	P	P	03 28 48.3	-0.9
CRQM	Cirque	4.02	74	P	P	03 28 51.5	+0.7
PAX	Paxson	4.11	38	P	P	03 28 51.9	-0.1
THY	Trims Highway	4.37	33	P	P	03 28 56.2	+0.5
BALM	Baldy	4.45	71	P	P	03 28 57.2	+0.3
YAH	Yahtse	4.66	80	P	P	03 29 00.3	+0.5
WRH	Wood River Hil	4.84	15	P	P	03 29 01.8	-0.4
CCB	Clear Creek Bu	5.04	16	P	P	03 29 04.6	-0.5
COLA	College	5.25	15	P	P	03 29 07.3	-0.7
MDM	Murphy Dome	5.29	13	P	P	03 29 08.1	-0.4
IL1	Eielson Array	5.30	19	P	P	03 29 08.2	-0.4
ILAR	Eielson Array	5.30	19	P	P	03 29 08.3	-0.3
	1.1nm,0.3s,baz=200,slow=14,SNR=33						
ILAR				S	S	03 30 04.2	-4.9
	3.0nm,0.3s,baz=210,slow=20,SNR=4.7						
BCA3	Beaver Creek A	5.47	50	P	P	03 29 10.3	-0.6
GCSA	Galena City Sc	5.62	333	P	P	03 29 12.1	-0.9
PNL	Peninsula	5.87	87	P	P	03 29 15.9	-0.6
IM3	Indian Mountai	6.28	350	P	P	03 29 22.1	-0.2
IMA	Indian Mountai	6.36	350	eP	P	03 29 23.1	-0.3
BM3	Burnt Mountain	8.11	18	P	P	03 29 46.1	-1.5
DLBC	Dease Lake	10.86	88	LR	LR	03 35 06.5	
	comp=Z,54nm,18.1s,baz=9.0,slow=40						
YKA	Yellowknife Ar	17.60	66	P	P	03 31 52.3	+0.2
	0.1nm,0.3s,baz=275,slow=12,SNR=5.7						
JMIC	Jan Mayen	46.82	16	LR	LR	03 58 28.1	
	comp=Z,15nm,18.2s,baz=251,slow=39						
ARCES	ARCESS Array B	50.89	2	P	P	03 36 44.8	-1.1
	2.3nm,0.8s,mb4.1,baz=22,slow=13,SNR=3.6						
SONM	Songino Array	55.69	307	P	P	03 37 22.1	+0.5
	0.3nm,0.6s,mb3.5,baz=37,slow=6.2,SNR=5.1						
FINES	FINESS Array B	59.02	2	P	P	03 37 43.5	-1.3
	1.6nm,0.9s,mb4.0,baz=349,slow=9.7,SNR=5.6						
BVAR	Borovoye Array	62.67	333	P	P	03 38 07.8	-1.9
	0.8nm,0.7s,mb4.0,baz=45,slow=8.4,SNR=4.1						
AKASG	Malin Array Be	69.81	360	P	P	03 38 53.4	-1.5
	1.9nm,0.6s,mb4.2,baz=0.6,slow=6.4,SNR=10						
AKASG	Malin Array Be	69.81	360	P	P	03 38 53.4	-1.5

*IDC **28** 03:36:01.1±14.0, 19.14S×177.98W, h432^{km}±162^{km}, mb3.3/5, mb1 3.6/5, mb1mx3.3/16, mbtmp4.1/5, Error ellipse: s-maj=104.9km s-min=45.0km az=165.0*

*NEIC **28** 03:36:02.7±1.2, 19.10S×178.09W, h450^{km}, mb4.1/2, Error ellipse: s-maj=75.5km s-min=17.0km az=151.0*

ISC 28 03:36:05.9±0.9, 19.3S±0.2×178.1W±0.2, h500^{km}, n11, σ0^{s}42/10, mb3.7/6, 3C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.19	243	P	P	03 42 43.1	0.0
	0.7nm,0.4s,mb3.5,baz=96,slow=9.2,SNR=3.6						
WRAB	Tennant Creek	44.63	261	eP	P	03 43 34.4	-0.4
	4.7nm,0.6s,mb4.1						
WRA	Warramunga Arr	44.64	261	P	P	03 43 34.8	0.0
	1.8nm,0.4s,mb3.9,baz=98,slow=6.8,SNR=18						
FITZ	Fitzroy Crossi	53.06	262	eP	P	03 44 38.3	+0.5
	4.4nm,0.4s,mb4.1						
FITZ	Fitzroy Crossi	53.06	262	P	P	03 44 38.5	+0.7
	12nm,0.9s,mb4.2,baz=106,slow=1.2,SNR=19						
TXAR	Lajitas Array	86.53	57	P	P	03 47 57.0	+0.5
	0.3nm,0.7s,mb3.1,baz=217,slow=6.7,SNR=5.0						
ILAR	Eielson Array	87.19	13	P	P	03 47 58.2	-0.5
	0.3nm,0.5s,mb3.3,baz=216,slow=6.1,SNR=4.7						
VNA3	Neumayer Olymp	89.33	176	⇑i	P	03 48 08.3	-0.3
VNA2	Neumayer--Watz	89.77	177	⇑i	P	03 48 10.8	+0.1
VNA1	Neumayer--Stat	90.00	177	⇑i	P	03 48 07.3	-4.4
GERES	GERESS Array B	149.03	345	PKPbc	PKPdf	03 54 58.3	+6.5
	0.6nm,0.7s,baz=14,slow=4.0,SNR=6.0						

JSN 28 03:46:25.6±0.6, 19.21N×81.32W, h50^{km}±999^{km}, MD4.3, 4C-4D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCJ	Malvern	3.67	110	⇓iP	P	03 47 18.8	-2.6
MCJ				eS	S	03 47 59.4	-4.4
CVJ	Coleyville	3.71	105	⇓eP	P	03 47 19.4	-2.6
BBJ	Bamboo Saint A	3.92	101	⇑iP	P	03 47 22.4	-2.5
PCJ	Portland Cotta	4.21	110	⇑iP	P	03 47 26.3	-2.6
STH	Stony Hill	4.42	104	⇓eP	P	03 47 29.2	-2.7
STH				eS	S	03 48 16.5	-6.1
HOJ	Hope	4.49	105	⇑eP	P	03 47 30.7	-2.2
GWJ	Greenwich	4.49	104	⇑eP	P	03 47 30.5	-2.5
YHJ	Yallahs	4.76	105	⇓iP	P	03 47 34.1	-2.5

IDC 28 04:01:05.8±6.9, 33.63N×109.56E, mb3.7/3, mb1 3.7/4, mb1mx3.5/18, mbtmp3.6/4, ML2.9/1, MS3.2/2, Ms1 3.3/2, ms1mx2.9/19, Error ellipse: s-maj=132.1km s-min=96.3km az=136.0, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	14.39	351	Pn	P	04 04 30.4	-2.3
	0.1nm,0.3s,baz=168,slow=11,SNR=4.9						
SONM				LR	LR	04 10 46.5	
	comp=Z,82nm,18.6s,baz=50,slow=40						

CMAR	Chiang Mai Arr	17.85	215	LR	LR	04 12 57.8	
	comp=Z,76nm,20.2s,baz=185,slow=40						
MKAR	Makanchi Array	24.49	311	P	P	04 06 26.7	-0.8
	0.9nm,0.5s,baz=105,slow=11,SNR=9.1						
ARCES	ARCESS Array B	56.88	335	P	P	04 10 52.3	-2.0
	1.6nm,0.9s,baz=82,slow=8.2,SNR=11						
NOA	NORSAR Array B	65.00	328	P	P	04 11 46.9	-2.5
	0.1nm,0.4s,baz=74,slow=5.8,SNR=2.6						

IDC 28 04:03:03.0±4.7, 1.19N×97.80E, mb3.6/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=179.3km s-min=31.2km az=57.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.52	122	P	P	04 10 52.3	-1.8
	0.2nm,0.3s,baz=303,slow=9.5,SNR=4.9						
SONM	Songino Array	47.06	8	P	P	04 11 37.0	-1.2
	0.3nm,0.4s,baz=190,slow=11,SNR=3.8						
MKAR	Makanchi Array	47.40	346	P	P	04 11 38.6	-2.4
	1.1nm,0.5s,baz=162,slow=8.6,SNR=7.1						

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*NEIC **28** 05:12:11.9±1.4, 23.63S×179.62W, h510^{km}±18^{km}, mb4.2/1, Error ellipse: s-maj=22.8km s-min=15.8km az=129.0*

*IDC **28** 05:12:11.8±3.0, 23.50S×179.76W, h499^{km}±36^{km}, mb2.9/4, mb1 3.3/6, mb1mx3.1/16, mbtmp4.1/6, Error ellipse: s-maj=28.4km s-min=22.1km az=143.0*

ISC 28 05:12:11.1±1.9, **23.6S**±0.1×**179.7W**±0.2, **h507**^{km}±27^{km}, **n13, σ0^{s}79**/11, **mb3.5**/5, **1C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	12.21	39	P	P	05 14 52.3	-0.4
	4.8nm,0.3s,baz=195,slow=3.3,SNR=5.1						
URZ	Urewera	14.83	190	P	P	05 15 19.8	+0.2
	1.1nm,0.3s,baz=247,slow=3.0,SNR=5.5						
CTAO	Charters Tower	31.79	270	P	P	05 17 54.9	+0.2
	2.8nm,0.3s,mb4.2						
STKA	Stephens Creek	35.11	248	P	P	05 18 23.1	+0.6
	0.8nm,0.4s,mb3.5,baz=100,slow=12,SNR=2.9						
WRA	Warramunga Arr	42.74	266	P	P	05 19 23.9	-0.7
	0.4nm,0.3s,mb3.4,baz=93,slow=8.3,SNR=8.8						
VNDA	Vanda	54.66	185	P	P	05 20 53.9	+0.8
	0.5nm,0.6s,mb3.0,baz=18,slow=5.6,SNR=7.1						
VNDA				PcP	PcP	05 21 47.5	-0.7
	0.4nm,0.7s,baz=31,slow=3.4,SNR=3.7						
VNDA	Vanda	54.66	185	P	P	05 20 53.9	+0.8
VNDA				eP		05 20 54.3	
VNDA				PcP	PcP	05 21 47.5	-0.7
VNA3	Neumayer Olymp	85.11	177		P	05 23 52.2	-1.0
VNA2	Neumayer--Watz	85.54	177		P	05 23 54.2	-1.0
VNA1	Neumayer--Stat	85.77	177	⇑i	P	05 23 51.3	-5.1
TXAR	Lajitas Array	90.03	58	P	P	05 24 18.6	+1.3
	0.5nm,0.7s,mb3.5,baz=216,slow=6.7,SNR=8.5						
ARCES	ARCESS Array B	131.70	348	PKP	PKPdf	05 30 25.2	+0.1
	1.0nm,0.8s,baz=27,slow=2.0,SNR=4.1						
AKASG	Malin Array Be	144.93	328	PKP	PKPdf	05 30 49.8	+0.4
	0.4nm,0.3s,baz=40,slow=4.4,SNR=4.5						

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*SOF **28** 05:14:50.7, 40.80N×28.04E, h4^{km}, MD2.7*

*ISK **28** 05:14:52.8, 40.84N×28.14E, h22^{km}, MD3.0*

*CSEM **28** 05:14:52.7±0.1, 40.80N×28.15E, h15^{km}, MD3.0, Error ellipse: s-maj=2.0km s-min=1.3km az=8.0*

ISC 28 05:14:53.6±0.4, **40.86N**±0.03×**28.13E**±0.03, **h22**^{km}**, n32, σ0^{s}65**/43, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTT	Catalca	0.36	38	i PG	Pb	05 15 01.3	-0.1
CRLT	Corlu	0.40	312	i PG	Pb	05 15 02.2	+0.2
TKR	Tekirdag	0.47	286	i PG	Pb	05 15 03.2	+0.1
TKR				SG	Sb	05 15 10.9	+1.3
BNT	Bandirma	0.53	198	i PG	Pb	05 15 03.9	-0.3
KCT	Karacabey	0.62	164	PG	Pb	05 15 05.1	-0.6
MFT	Murefte	0.65	263	PG	Pb	05 15 06.2	0.0
ISK	Istanbul-Kandi	0.73	74	PG	Pb	05 15 07.4	-0.2
RKY	Sarkoy-Tekirda	0.74	257	PG	Pb	05 15 07.6	-0.2
BADT	Buyukada	0.75	91	PG	Pb	05 15 07.8	0.0
KLYT	Kilyos	0.79	60	PG	Pb	05 15 08.9	+0.3
YLV	Yalova	0.99	107	PG	Pb	05 15 11.6	-0.3
ORLT	Orhaneli	1.00	144	PG	Pb	05 15 11.8	-0.4
ULDT	Uludag	1.05	133	i P	Pb	05 15 13.0	0.0
ULDT				i S	Sb	05 15 27.9	+1.5
BTOK	Tokmak	1.10	184	i P	Pb	05 15 14.5	+0.6
BTOK				i S	Sb	05 15 29.0	+1.2
LPK	Lapseki	1.15	245	PN	Pn	05 15 14.1	-0.5
HRT	Hereke	1.17	92	PN	Pn	05 15 14.6	-0.2
CANB	Canakkale	1.18	224	PN	Pn	05 15 14.3	-0.6
SILT	Sile	1.18	75	PN	Pn	05 15 14.4	-0.6
BALB	Balikesir	1.24	189	ePN	Pn	05 15 15.4	-0.4
DST	Dursunbey	1.31	163	ePN	Pn	05 15 16.6	-0.3
EDRB	Edirne	1.43	314	ePN	Pn	05 15 18.5	-0.1
EYL	Eskiyayla	1.57	100	ePN	Pn	05 15 19.7	-0.9
EZN	Ezine	1.73	234	ePN	Pn	05 15 22.3	-0.5
AYVA	Ayvalik	1.91	216	i P	Pn	05 15 29.8	+4.4
AYVA				i S	Sn	05 15 54.0	+5.1
JMB	Yambol	1.98	325	eP	Pn	05 15 27.3	+0.9
JMB				ePg	Pn	05 15 31.0	+4.6
GDZ	Gediz	2.05	149	i P	Pn	05 15 32.6	+5.1
GDZ				i S	Sn	05 15 58.7	+6.0
HENT	Hendek	2.10	90	i P	Pn	05 15 29.6	+1.4
HENT				i S	Sn	05 16 00.3	+6.4
KDZ	Kurdzhali	2.19	292	eP	Pn	05 15 29.5	0.0
KDZ				ePg	Pn	05 15 34.5	+5.0
MANT	Manisa	2.39	172	i P	Pn	05 15 31.7	-0.6
MANT				i S	Sn	05 16 07.3	+6.0
ESKT	Eskisehir	2.48	122	ePN	Pn	05 15 32.8	-0.8
RZN	Rozhen	2.70	289	eP	Pn	05 15 36.0	-0.8
RZN				ePg	Pn	05 15 43.0	+6.2
SGKT	Sivrigoynuk	3.00	94	i P	Pn	05 15 41.8	+0.9
SGKT				i S	Sn	05 16 25.6	+9.0

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*IDC **28** 05:22:03.1±2.1, 10.57N×91.90E, mb4.1/6, mb1 4.2/6, mb1mx3.9/18, mbtmp4.1/6, MS2.8/1, Ms1 3.0/1, ms1mx2.5/26, Error ellipse: s-maj=94.5km s-min=20.2km az=62.0*

*NEIC **28** 05:22:07.9±1.1, 10.64N×92.03E, h30^{km}, mb4.5/1, Error ellipse: s-maj=36.6km s-min=12.8km az=67.0*

ISC 28 05:22:05.8±1.4, **10.6N**±0.2×**92.0E**±0.3, **h30**^{km}**, n9, σ0^{s}24**/8, **mb4.1**/7, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.31	40	LR	LR	05 28 07.9	
	comp=Z,48nm,19.7s,baz=195,slow=35						
ENH	Enshi	25.46	37	eP	P	05 27 32.8	-0.3
	7.6nm,0.6s,mb4.4						
MKAR	Makanchi Array	37.00	349	P	P	05 29 14.3	-0.2
	2.1nm,0.8s,mb4.0,baz=153,slow=8.1,SNR=8.0						
MKAR	Makanchi Array	37.00	349	P	P	05 29 14.3	-0.2
SONM	Songino Array	39.05	15	P	P	05 29 32.1	+0.4
	0.6nm,0.6s,mb3.5,baz=198,slow=7.8,SNR=5.7						
FITZ	Fitzroy Crossi	43.78	130	P	P	05 30 11.0	0.0
	9.3nm,1.0s,mb4.5,baz=329,slow=5.9,SNR=5.7						
WRA	Warramunga Arr	51.57	126	P	P	05 31 11.9	+0.2
	1.0nm,0.4s,mb4.1,baz=306,slow=8.3,SNR=55						
STKA	Stephens Creek	63.51	134	P	P	05 32 35.6	-0.3
	1.3nm,0.8s,mb4.0,baz=319,slow=9.3,SNR=2.9						
ARCES	ARCESS Array B	72.00	340	P	P	05 33 28.4	0.0
	1.4nm,0.8s,mb3.9,baz=97,slow=7.3,SNR=3.7						

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*NNC **28** 05:32:39.1±4.7, 40.38N×71.90E, mpv3.5, Error ellipse: s-maj=45.2km s-min=25.6km az=6.0*

*IDC **28** 05:32:42.6±3.2, 40.10N×72.82E, mb3.5/2, mb1 3.5/4, mb1mx3.4/21, mbtmp3.4/4, ML3.1/2, MS4.3/1, Ms1 4.3/1, ms1mx2.7/20, Error ellipse: s-maj=44.9km s-min=26.2km az=2.0*

*MOS **28** 05:32:58.8±1.1, 41.71N×72.32E, h33^{km}, mb4.0/1, Error ellipse: s-maj=38.2km s-min=28.0km az=91.5*

ISC 28 05:32:42.5±4.1, **40.4N**±0.3×**71.9E**±0.2, **h63**^{km}±22^{km}**, n23, σ0^{s}71**/24, **mb3.2**/2, **2C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	2.23	38	P	P	05 33 17.9	0.0
	SNR=30						
EKS2	Erkin-Say	2.70	32	P	P	05 33 24.8	+0.3
	SNR=12						
UCH	Uchtor	2.72	46	P	P	05 33 24.9	+0.1
	SNR=24						
KK31	Karatay Array	2.90	340	Pn	P	05 33 28.2	+0.8
	0.6nm,0.2s,baz=153,slow=12,SNR=575						
KK31				⇓Pg	P	05 33 34.5	+7.1
	15nm,0.3s,baz=148,slow=17,SNR=68						
KK31				⇓Lg		05 34 10.9	
	39nm,0.3s,baz=153,slow=30,SNR=6.7						
KKAR	Karatay Array	2.90	340	ePN	P	05 33 28.1	+0.7
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.2s						
AAK	Ala-Archa	3.00	40	P	P	05 33 28.9	+0.2
	SNR=11						
AAK	Ala-Archa	3.00	40	⇑Pn	P	05 33 28.9	+0.1
	comp=Z,55nm,0.6s						
AAK				⇑Lg		05 34 11.8	
	comp=Z,76nm,0.5s						
AAK	Ala-Archa	3.00	40	PN	P	05 33 28.8	0.0
AAK				pmax	pmax		
	comp=Z,11nm,0.3s						
KZA	Kyzart	3.07	55	P	P	05 33 30.0	+0.2
	SNR=7.0						
KBK	Karagaybulak	3.25	45	P	P	05 33 39.1	+6.9
	SNR=18						
CHMS	Chumysh	3.40	39	P	P	05 33 40.5	+6.1
	SNR=9.8						
USP	Ospenovka	3.50	34	P	P	05 33 35.3	-0.4
	SNR=10						
TKM2	Tokmak 2	3.78	47	P	P	05 33 39.5	-0.2
	SNR=17						
ULHL	Ulahol	3.79	59	P	P	05 33 40.0	+0.2
	SNR=6.2						
MKAR	Makanchi Array	9.91	46	Pn	P	05 35 03.2	-1.3
	comp=Z,0.1nm,0.3s,baz=229,slow=13,SNR=3.1						
MKAR				Lg		05 37 46.5	
	comp=Z,0.2nm,0.3s,baz=238,slow=27,SNR=3.5						
AB31	Akbulak array	12.25	320	Pn	P	05 35 34.3	-1.7
	comp=Z,0.6nm,0.4s,baz=133,slow=12,SNR=12						
AB31				Sn	S	05 37 51.9	+0.3
	comp=Z,1.3nm,0.4s,baz=126,slow=25,SNR=4.3						
AB31	Akbulak array	12.25	320	P	P	05 35 34.5	-1.5
BVAR	Borovoye Array	12.69	356	Pn	P	05 35 46.3	+4.4
	comp=Z,0.3nm,0.3s,baz=158,slow=7.8,SNR=3.1						
BVAR				Lg		05 39 23.8	
	comp=Z,0.4nm,0.3s,baz=166,slow=24,SNR=3.5						
ARU	Arti	18.27	336	eP	P	05 36 59.6	+6.7
SONM	Songino Array	25.73	62	P	P	05 38 09.4	+0.9
	comp=Z,0.1nm,0.3s,mb2.8,baz=277,slow=12,SNR=2.4						
ARCES	ARCESS Array B	37.86	336	P	P	05 40 05.6	+11
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	37.86	336	P	P	05 40 05.6	+11
	comp=Z,0.7nm,0.5s,mb3.7,baz=113,slow=9.2,SNR=9.0						
JHJ	Hachijo jima 2	53.71	75	LR	LR	06 06 52.6	
	comp=Z,304nm,21.5s,baz=88,slow=39						

IDC 28 05:33:32.1±18.0, **20.00S**×**178.28W, h646**^{km}±248^{km}, **mb3.0**/4, **mb1 3.2**/4, **mb1mx2.9**/15, **mbtmp4.1**/4, **Error ellipse: s-maj=107.1km s-min=85.0km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.28	264	P	P	05 39 19.6	-1.1
	3.0nm,0.3s,baz=90,slow=10,SNR=7.6						
STKA	Stephens Creek	37.77	244	P	P	05 39 55.9	-1.7
	1.0nm,0.5s,baz=94,slow=9.0,SNR=4.9						
WRA	Warramunga Arr	44.41	262	P	P	05 40 48.5	-1.7
	1.0nm,0.4s,baz=97,slow=7.2,SNR=15						
TXAR	Lajitas Array	87.01	57	P	P	05 45 11.3	-1.1
	0.3nm,0.6s,baz=211,slow=8.6,SNR=5.4						

MAN 28 05:37:26.6, 13.78N×119.99E, h1^{km}**, mb4.3, ML3.1, MS2.9, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.25	99	eP	Pg	05 37 40.6	+9.0
LUBP						05 37 46.0	
SJMP	San Jose	1.71	140	eP	Pn	05 37 55.1	-2.6
SJMP						05 38 12.0	
BUSP	Coron	1.77	173	eP	Pn	05 37 56.2	-2.5
BUSP				eS	Sn	05 38 12.3	-10
OTRP	Odiongan	2.43	125	eP	Pn	05 38 11.1	+3.1
APYP	Conner	4.24	16	eP	Pn	05 38 30.2	-3.6

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*IDC **28** 05:38:43.9±1.6, 13.39N×120.51E, mb3.6/3, mb1 3.9/3, mb1mx3.6/18, mbtmp3.6/3, Error ellipse: s-maj=62.3km s-min=26.9km az=59.0*

ISC 28 05:38:46.5±0.8, **13.29N**±0.03×**120.12E**±0.05, **h20**^{km}±7^{km}**, n17, σ1^{s}13**/24, **mb3.7**/3, **1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.46	15	eP	Pb	05 38 54.8	-1.0
LUBP				eS	Sb	05 39 00.7	-1.5
PGP	Puerto Galera	0.84	75	eP	Pb	05 39 01.4	-0.8
TGY	Tagaytay City	1.13	44	⇓iP	Pn	05 39 08.2	+0.9
TGY				i S	Sb	05 39 23.7	+2.1
SJMP	San Jose	1.27	130	eP	Pn	05 39 09.2	-0.1
SJMP				eS	Sb	05 39 26.0	+0.4
BUSP	Coron	1.28	177	eP	Pn	05 39 10.0	+0.5
BUSP				eS	Sb	05 39 26.4	+0.6
LBPH	Los Banos	1.34	50	eP	Pn	05 39 10.4	0.0
NBP	Mount Natib	1.47	11	eP	Pn	05 39 11.8	-0.4
ARP	Angono	1.60	39	eP	Pn	05 39 13.2	-0.8
BOAC	Boac	1.69	84	eS	Sn	05 39 34.6	-1.8
BOAC	Boac	1.69	84	eP	Pn	05 39 15.8	+0.6
OTRP	Odiongan	2.07	116	eP	Pn	05 39 21.2	+0.4
OTRP				eS	Sn	05 39 52.5	+6.3
ENPP	El Nido	2.18	198	eP	Pn	05 39 22.9	+0.6
ENPP				eS	Sn	05 39 48.6	-0.3
CUYO	Cuyo Island	2.58	160	eP	Pn	05 39 27.6	-0.4
BALP	Baler	2.82	30	eP	Pn	05 39 32.4	+1.0
BALP				eS	Sn	05 40 07.2	+2.0
CMAR	Chiang Mai Arr	21.00	287	P	P	05 43 33.3	+2.0
	0.7nm,0.4s,mb3.3,baz=92,slow=8.9,SNR=4.9						
WRA	Warramunga Arr	35.86	157	P	P	05 45 45.1	-2.1
	1.2nm,0.4s,mb4.2,baz=332,slow=10,SNR=8.8						
SONM	Songino Array	36.30	344	P	P	05 45 48.9	-1.7
	0.5nm,0.7s,mb3.6,baz=153,slow=8.3,SNR=4.8						

IGQ 28 05:42:16.7, 2.04S×78.12W, h8^{km}±1^{km}**, mb4.1, 3C-9D, Error ellipse: s-maj=2.8km s-min=1.9km az=32.0, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARRY	Arrayan	0.63	327	⇓P	Pg	05 42 29.1	-0.2
ULBA	Ulba	0.65	334	⇓P	Pg	05 42 30.1	+0.2
RETU	Refugio	0.67	331	P	Pg	05 42 30.5	+0.4
RUN5	Runtun	0.69	334	⇓P	Pb	05 42 30.4	-0.1
CUSU	Cusua	0.69	329	⇓P	Pb	05 42 30.5	-0.1
JUIV	Juive	0.70	330	⇓P	Pb	05 42 30.5	-0.2
IGUA	Igualata	0.75	316	⇓P	Pb	05 42 32.1	+0.5
PISA	Pisayambo	1.01	345	⇓P	Pb	05 42 36.7	+0.7
PISA				S	Sb	05 42 50.3	+1.2
TAMB	Tambo	1.36	349	P	Pb	05 42 43.1	+1.1
CAMI	Rancho Maria	1.41	344	P	Pn	05 42 43.9	+1.2
VC1	Cotopaxi 1	1.42	348	⇑P	Pn	05 42 43.7	+0.9
VC1				S	Sb	05 43 03.2	+2.2
NAS1	Nasa	1.44	346	⇓P	Pn	05 42 45.0	+1.8
ANTI	Antisana	1.58	358	⇑P	Pn	05 42 46.1	+0.9
JUA2	San Juan 2	1.88	345	P	Pn	05 42 52.2	+2.8
GGP	Refugio Guagua	1.91	346	P	Pn	05 42 52.9	+3.0
TERV	Terraza Guagua	1.91	345	P	Pn	05 42 53.3	+3.3
PINO	Pino	1.93	345	P	Pn	05 42 52.9	+2.7
YANA	Yana	1.96	347	P	Pn	05 42 53.4	+2.8
YANA				S	Sn	05 43 18.8	+3.2
ECOPE	Copete-Rev Vol	1.98	15	P	Pn	05 42 53.0	+2.1
ECOPE				S	Sn	05 43 18.9	+2.8
LAV3	Lava3-Reventad	1.99	14	P	Pn	05 42 53.2	+2.1
LAV3				S	Sn	05 43 19.4	+3.1
CONE	Cono NE Rev Vo	2.01	14	⇑P	Pn	05 42 53.6	+2.3
CONE				S	Sn	05 43 20.9	+4.0
CAYR	Refugio Cayamb	2.04	3	⇓P	Pn	05 42 54.8	+3.0
CAYR				S	Sn	05 43 21.7	+4.0
CAYA	Cayambe	2.10	4	P	Pn	05 42 55.8	+3.2
HOJA	Cerro de Hojas	2.62	292	P	Pn	05 43 00.3	+0.3
HOJA				S	Sn	05 43 30.4	-1.9
ECEN	Cerro Negro	2.85	3	P	Pn	05 43 09.2	+5.9

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*IDC **28** 05:52:48.6±21.0, 35.47N×71.37E, h305^{km}±184^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.1/20, mbtmp4.0/6, Error ellipse: s-maj=136.6km s-min=22.6km az=15.0*

*NNC **28** 05:52:51.0±5.8, 36.83N×70.48E, h142^{km}±93^{km}, mpv3.9, Error ellipse: s-maj=54.8km s-min=41.4km az=9.0*

ISC 28 05:52:49.2±0.9, **36.60N**±0.07×**71.2E**±0.1, **h250**^{km}**, n12, σ1^{s}23**/15, **mb3.5**/4, **3C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	5.56	137	eP	P	05 54 11.7	-0.8
	19nm,0.6s						
THN				eS	S	05 55 17.8	+0.2
KK31	Karatay Array	6.52	355	⇑P	P	05 54 21.7	-2.8
	5.7nm,0.3s,baz=176,slow=11,SNR=179						
KK31				⇑S	S	05 55 32.0	-7.1
	1.6nm,0.2s,baz=183,slow=27,SNR=10						
AAK	Ala-Archa	6.53	22	⇓P	P	05 54 24.7	0.0
	2.9nm,0.6s						
AAK				⇑S	S	05 55 39.7	+0.4
	6.6nm,0.6s						
SDNR	Sundarnagar	6.96	135	eP	S	05 55 42.0	-7.1
MK31	Makanchi Array	13.10	36	P	P	05 55 54.4	+7.0
	3.0nm,0.7s,baz=211,slow=10,SNR=11						
MKAR	Makanchi Array	13.10	36	P	P	05 55 54.6	+7.3
	0.5nm,0.3s,baz=217,slow=12,SNR=11						
AB31	Akbulak array	15.09	330	P	P	05 56 10.0	-1.7
	0.5nm,0.4s,baz=158,slow=12,SNR=20						
ZAL	Zalesovo	19.73	24	P	P	05 57 05.8	+4.5
	2.5nm,0.3s,baz=269,slow=7.9,SNR=6.3						
FINES	FINESS Array B	37.51	326	P	P	05 59 41.0	+0.6
	2.1nm,1.0s,mb3.6,baz=155,slow=27,SNR=2.2						
ARCES	ARCESS Array B	41.13	337	P	P	06 00 12.3	+2.2
	2.6nm,1.0s,mb3.6,baz=117,slow=10,SNR=3.8						
NOA	NORSAR Array B	44.42	323	P	P	06 00 37.2	+0.7
	0.7nm,0.6s,mb3.1,baz=108,slow=7.1,SNR=2.0						
MJAR	Matsushiro Arr	52.74	69	P	P	06 01 35.2	-5.0
	1.1nm,0.3s,mb3.7,baz=297,slow=11,SNR=3.7						

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*GUC **28** 06:10:30.9±0.4, 19.91S×69.30W, h106^{km}±1^{km}, ML5.0*

*IDC **28** 06:10:30.9±0.8, 20.00S×69.04W, h105^{km}±6^{km}, mb4.2/11, mb1 4.4/14, mb1mx4.3/19, mbtmp4.6/14, MS3.3/3, Ms1 3.3/3, ms1mx2.9/19, Error ellipse: s-maj=16.9km s-min=11.9km az=85.0*

*NEIC **28** 06:10:31.1±0.3, 19.82S×68.96W, mb4.5/25, Error ellipse: s-maj=9.1km s-min=5.5km az=47.0*

*BJI **28** 06:10:31.0, 19.80S×69.00W, h103^{km}, mB4.8*

ISC 28 06:10:29.5±0.9, **19.78S**±0.06×**68.99W**±0.07, **h103**^{km}±8^{km}**, h105**^{km}±.9^{km}**:pP-P, n78, σ1^{s}12**/65, **mb4.5**/30, **1C-6D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	3.20	167	i P	P	06 11 20.8	+1.7
SPCH				AMP		06 12 35.5	
	comp=N,4µm,0.6s						
LPAZ	La Paz	3.57	13	P	P	06 11 29.8	+5.7
	comp=N,28nm,0.3s,baz=197,slow=7.1,SNR=282						
LPAZ				S	S	06 12 13.9	+8.5
	comp=N,5.6nm,0.3s,baz=288,slow=14,SNR=4.5						
LPAZ				LR	LR	06 12 59.8	
	comp=N,227nm,18.7s,baz=105,slow=39						
LPAZ	La Paz	3.57	13	ePn	P	06 11 29.7	+5.7
ARE	Arequipa	4.06	324	eP	P	06 11 31.0	+0.1
ARE				eS	S	06 12 17.0	-0.6
SIV	San Ignacio	8.43	65	P	P	06 12 30.9	+0.5
	comp=N,28nm,0.3s,baz=255,slow=12,SNR=1164						
CFAA	Coronel Fontan	11.80	177	P	P	06 13 11.8	-3.8
	comp=N,0.1nm,0.3s,baz=343,slow=13,SNR=4.6						
CFAA	Coronel Fontan	11.80	177	P	P	06 13 11.8	-3.8
SAML	Samuel	12.14	28	eP	P	06 13 17.6	-2.6
	comp=N,13nm,0.7s						
CPUP	Villa Florida	12.56	123	P	P	06 13 25.0	-0.7
	comp=N,1.6nm,0.3s,baz=318,slow=13,SNR=51						
CPUP	Villa Florida	12.56	123	eP	P	06 13 24.3	-1.3
	comp=N,17nm,0.8s						
JATB	Jatai	16.67	86	⇓iP	P	06 14 20.6	+2.3
JATB				e		06 14 26.1	
JATB				i		06 14 31.7	
JATB				i		06 14 35.8	
JATB				i		06 14 39.6	
JATB				i		06 14 42.1	
BDFB	Brasilia	20.40	82	P	P	06 15 00.6	+0.2
	comp=N,44nm,0.4s,baz=262,slow=12,SNR=69						
BDFB				LR	LR	06 24 06.1	
	comp=N,129nm,18.7s,baz=90,slow=40						
BAO	Brasilia Array	20.42	82	P	P	06 15 00.5	-0.2
PLCA	Paso Flores	20.93	183	P	P	06 15 04.0	-1.7
	comp=N,9.3nm,0.8s,baz=23,slow=14,SNR=13						
PLCA	Paso Flores	20.93	183	eP	P	06 15 04.1	-1.5
	comp=N,12nm,0.9s						
OTAV	Otavalo	21.95	334	eP	P	06 15 18.1	+2.2
	comp=N,9.1nm,0.9s,mb4.1						
CAM4	Nova Friburgo	24.78	101	⇓iP	P	06 15 44.0	+0.7
CAM4				i		06 15 45.1	
CAM4				i		06 15 47.1	
CAM4				i		06 15 48.2	
CAM4				i		06 15 59.4	
SDV	Santo Domingo	28.53	357	P	P	06 16 19.1	+1.3
	comp=N,1.8nm,0.4s,mb4.1,baz=229,slow=6.5,SNR=5.4						
SDV				LR	LR	06 28 57.5	
	comp=N,49nm,21.5s,baz=220,slow=38						
PLAL	Pickwick Lake	57.40	341	eP	P	06 20 05.7	-4.0
	comp=N,7.5nm,0.9s,mb4.7						
ELN	Prospectdale	57.77	349	eP	P	06 20 09.9	-2.5
WVT	Waverly	58.39	342	eP	P	06 20 14.8	-1.9
	comp=N,14nm,0.7s,mb5.1						
WVT				epP	pP	06 20 40.2	-1.7
TXAR	Lajitas Array	59.18	325	P	P	06 20 21.4	-0.8
	comp=N,1.5nm,0.8s,mb4.0,baz=147,slow=8.5,SNR=16						
MCWV	Mont Chateau	59.99	350	P	P	06 20 26.4	-1.2
	comp=N,25nm,0.8s,mb5.3						
FVM	French Village	60.89	341	eP	P	06 20 32.0	-1.8
	comp=N,24nm,0.9s,mb5.2						
FVM				epP	pP	06 20 58.4	-0.8
BLO	Bloomington	60.89	344	eP	P	06 20 31.9	-1.8
	comp=N,7.9nm,0.6s,mb4.9						
CCM	Cathedral Cave	61.21	340	eP	P	06 20 34.0	-2.0
	comp=N,10nm,1.0s,mb4.8						
VNA3	Neumayer Olymp	61.73	162	⇓iP	P	06 20 38.0	-0.9
VNA3				e	pP	06 21 05.7	+1.2
VNA3				e		06 21 16.8	
VNA1	Neumayer--Stat	61.93	161	⇓iP	P	06 20 43.0	+2.7
VNA1				e	pP	06 21 07.6	+1.8
VNA1				e		06 21 18.5	
MNTX	Cornudas Mount	61.94	325	eP	P	06 20 39.2	-1.8
	comp=N,5.1nm,1.0s,mb4.5						
MNTX				e		06 21 15.0	
ALLY	Alegheny Colle	61.98	351	eP	P	06 20 40.4	-0.6
VNA2	Neumayer--Watz	62.30	161	⇓iP	P	06 20 41.8	-1.0
VNA2				e	pP	06 21 08.1	-0.2
VNA2				e		06 21 19.8	
DBIC	Dimbokro	68.33	74	P	P	06 21 21.4	-0.9
	comp=N,14nm,0.7s,mb4.9,baz=233,slow=5.9,SNR=21						
DBIC	Dimbokro	68.33	74	eP	P	06 21 20.9	-1.3
	comp=N,34nm,1.1s,mb5.1						
DBIC				epP	pP	06 21 50.1	+1.8
ISCO	Idaho Springs	68.42	330	eP	P	06 21 22.3	-0.1
	comp=N,8.8nm,1.4s,mb4.4						
LDFC	Landfair	69.94	321	eP	P	06 21 33.2	+1.4
NEN	Nelson	70.18	322	eP	P	06 21 33.6	+0.3
NEN				epP	pP	06 22 00.2	+0.8
SRU	San Rafael	70.30	327	eP	P	06 21 34.3	+0.4
SRU				epP	pP	06 22 00.6	+0.5
QSPA	South Pole Qui	70.41	180	⇓iP	P	06 21 33.8	-0.1
	comp=N,5.2nm,0.8s,mb4.4						
MSU	Marysvale	70.72	325	eP	P	06 21 37.3	+0.8
MSU				e		06 21 57.7	
MSU				e	pP	06 22 04.1	+1.4
MVU	Marysvale	70.74	325	eP	P	06 21 37.4	+0.8
	comp=N,12nm,1.1s,mb4.7						
MVU				epP	pP	06 22 04.0	+1.2
ARUT	Antelope Range	70.89	324	eP	P	06 21 38.9	+1.4
ARUT				epP	pP	06 22 05.1	+1.5
RSSD	Black Hills	71.22	334	eP	P	06 21 39.6	+0.2
	comp=N,5.4nm,0.9s,mb4.4						

DAC	Darwin (Calif)	72.24	320	eP	P	06 21 45.9	+0.4
	comp=N,6.4nm,0.9s,mb4.5						
DAC				epP	pP	06 22 11.6	-0.2
PDAR	Pinedale Array	72.59	330	P	P	06 21 47.5	+0.1
	comp=N,1.4nm,0.9s,mb3.8,baz=158,slow=8.0,SNR=8.5						
HWUT	Hardware Ranch	72.69	328	eP	P	06 21 47.7	-0.4
	comp=N,4.6nm,0.8s,mb4.4						
ULM	Lac du Bonnet	73.66	342	P	P	06 21 52.6	-0.9
	comp=N,4.2nm,0.6s,mb4.4,baz=153,slow=6.8,SNR=5.0						
SNOW	Snow King Moun	73.68	330	eP	P	06 21 54.4	+0.5
LOHW	Long Hollow	73.73	330	eP	P	06 21 54.6	+0.5
	comp=N,1.9nm,0.8s,mb3.9						
TPAW	Teton Pass	73.80	330	eP	P	06 21 54.9	+0.4
	comp=N,9.7nm,1.3s,mb4.4						
RRI2	Red Ridge	73.87	329	eP	P	06 21 55.9	+0.9
	comp=N,22nm,1.3s,mb4.7						
RRI2				epP	pP	06 22 22.3	+1.0
OMM	Old Mammoth Mi	73.96	321	eP	P	06 21 56.4	+0.8
OMM				epP	pP	06 22 22.3	+0.3
NVAR	Mina Array Bea	74.10	322	P	P	06 21 57.3	+0.9
	comp=N,3.5nm,0.9s,mb4.1,baz=139,slow=7.5,SNR=20						
NVAR				pP	pP	06 22 23.8	+1.0
	comp=N,1.0nm,0.7s,baz=140,slow=6.8,SNR=2.7						
IMW	Indian Meadow	74.10	330	eP	P	06 21 56.7	+0.4
	comp=N,4.6nm,0.8s,mb4.3						
SCHQ	Schefferville	74.33	1	P	P	06 21 57.2	-0.2
	comp=N,2.9nm,0.8s,mb4.0,baz=211,slow=7.7,SNR=3.8						
LRV	Little Rabbit	74.42	319	eP	P	06 21 59.1	+0.8
HLID	Hailey	75.55	328	eP	P	06 22 05.5	+1.0
	comp=N,8.1nm,1.0s,mb4.4						
HLID				epP	pP	06 22 32.7	+1.6
MCMT	McKenzie Canyo	75.70	329	eP	P	06 22 06.7	+1.2
BMO	Blue Mountains	77.93	327	eP	P	06 22 18.5	+0.6
	comp=N,4.7nm,0.8s,mb4.3						
BMO				epP	pP	06 22 45.6	+1.2
SYO	Syowa Base	78.14	160	⇑pP	pP	06 22 46.2	+1.1
FCC	Fort Churchill	80.94	347	eP	P	06 22 33.3	-0.5
	comp=N,3.7nm,0.6s,mb4.4						
EDM	Edmonton	82.18	335	eP	P	06 22 39.9	-0.5
EDM				epP	pP	06 23 07.3	+0.2
EDM				esP	sP	06 23 19.3	+0.8
MAW	Mawson	86.00	163	P	P	06 22 59.3	+0.3
	comp=N,1.9nm,0.7s,mb4.2,baz=239,slow=5.9,SNR=4.6						
YKA	Yellowknife Ar	89.54	341	P	P	06 23 16.5	+0.4
	comp=N,11nm,0.7s,mb5.1,baz=135,slow=4.6,SNR=59						
YKA				pP	pP	06 23 44.4	+1.0
	comp=N,4.1nm,0.7s,baz=136,slow=4.6,SNR=5.5						
YKW3	Yellowknife Ar	89.60	341	eP	P	06 23 16.6	+0.2
YKW3				epP	pP	06 23 44.6	+0.9
WRA	Warramunga Arr	134.38	211	PKP	PKPdf	06 29 37.2	+0.9
	comp=N,1.6nm,0.7s,baz=162,slow=1.9,SNR=14						
BVAR	Borovoye Array	134.41	33	PKP	PKPdf	06 29 37.7	+2.2
	comp=N,0.4nm,0.7s,baz=288,slow=4.7,SNR=3.5						
ZAL	Zalesovo	140.43	24	PKP	PKPdf	06 29 47.4	+0.9
	comp=N,1.3nm,0.8s,baz=177,slow=3.0,SNR=7.8						
MKAR	Makanchi Array	144.28	34	PKP	PKPdf	06 29 53.9	+0.6
	comp=N,1.5nm,0.8s,slow=3.6,SNR=8.3						
WMQ	Urumqi	149.10	34	ePKP	PKPdf	06 30 03.3	+1.8
WMQ				LR	LR		
	comp=N,70nm,20.4s						
WMQ				LR	LR		
	comp=Z,40nm,20.2s						
MDJ	Mudanjiang	150.80	332	PKP	PKPdf	06 30 05.5	+1.4
MJAR	Matsushiro Arr	150.92	311	PKPbc	PKPdf	06 30 12.3	+7.7
	comp=Z,4.5nm,0.5s,baz=98,slow=0.8,SNR=10						
MAJO	Matsushiro	150.92	311	ePKPbc	PKPdf	06 30 12.1	+7.6
SONM	Songino Array	151.76	7	PKP	PKPdf	06 30 08.0	+2.6
	comp=Z,0.5nm,0.8s,SNR=6.0						
SONM				PKPbc	PKPdf	06 30 14.0	+8.6
	comp=Z,4.1nm,0.7s,baz=325,slow=1.7,SNR=27						
SONM				pPKP		06 30 34.1	
	comp=Z,3.6nm,0.4s,baz=301,slow=1.7,SNR=11						
ULN	Ulaanbaatar	151.80	6	ePKPbc	PKPdf	06 30 14.6	+9.1
CN2	Changchun	153.17	336	ePKP	PKPdf	06 30 09.8	+2.3
HHC	Hu-ho-hao-te	158.99	359	ePKP	PKPdf	06 30 15.3	+0.1
HHC				PP	PP		
	comp=Z,80nm,18.1s						
HHC				LR	LR		
	comp=N,90nm,12.6s						
HHC				LR	LR		
	comp=E,120nm,15.9s						
HHC				LR	LR		
	comp=Z,70nm,12.7s						
SSE	Sheshan	165.47	323	PKP	PKPdf	06 30 22.3	+0.2
NJ2	Nanjing	165.89	332	ePKP	PKPdf	06 30 24.0	+1.6
NJ2				APKP		06 30 51.0	
NJ2				XPKP		06 31 01.5	
NJ2				PKP2	PKPab	06 31 26.5	+1.7
NJ2				PP	PP	06 35 14.0	+1.2
NJ2				SKS	SKS	06 37 16.0	+1.7
NJ2				PP	PP		
	comp=Z,60nm,10.2s						
NJ2				LR	LR		
	comp=N,1µm,21.2s						
NJ2				LR	LR		
	comp=E,2µm,20.4s						
NJ2				LR	LR		
	comp=Z,4µm,19.4s						

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*MOS **28** 06:28:41.1±1.1, 50.44N×157.16E, h58^{km}, mb4.4/1, Error ellipse: s-maj=80.5km s-min=19.6km az=72.8*

KRSC 28 06:28:40.5±1.2**, 50.42N×156.92E, h19**^{km}±7^{km}**, ML4.6, 1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	0.58	298	⇑iPN	Pn	06 28 50.5	-3.0
SKR				eS	Sb	06 29 01.9	+2.4
SKR				pmax	pmax		
	comp=N,620nm,0.5s						
SKR				pmax	pmax		
	comp=E,1µm,0.5s						
SKR				pmax	pmax		
	comp=Z,3µm,0.5s						
SKR				pmax	pmax		
	comp=N,2µm,2.0s						
SKR				pmax	pmax		
	comp=Z,2µm,2.0s						
SKR				smax			
	comp=N,12µm,0.2s						
SKR				smax			
	comp=E,14µm,0.2s						
SKR				smax			
	comp=N,12µm,2.0s						
SKR				smax			
	comp=E,10µm,2.0s						
SKR	Severo-Kuril's	0.58	298	iP	Pb	06 28 50.5	-1.2
SKR				eS	Sb	06 29 01.9	+2.4
ALID	Alaid	0.98	298	iP	Pb	06 28 59.8	+1.1
ALID				iS	Sb	06 29 13.8	+2.7
PAU	Pauzhetka	1.05	356	iP	Pb	06 29 01.4	+1.6
PAU				iS	Sb	06 29 15.8	+2.6
PAU				Smax			
	comp=E,19µm,0.1s						
MIPR	Malaya Ipel'ka	1.86	357	iP	Pn	06 29 12.4	+0.5
MIPR				iS	Sn	06 29 35.2	+0.1
RUS	Russkaya	2.25	26	P	Pn	06 29 16.9	-0.5
RUS				S	Sn	06 29 42.6	-2.3
RUS	Russkaya	2.25	26	iP	Pn	06 29 16.9	-0.5
RUS				iS	Sn	06 29 43.4	-1.5
GRL	Gorelyy	2.25	18	iP	Pn	06 29 17.9	+0.4
GRL				eS	Sn	06 29 44.7	-0.3
APC	Apacha	2.51	3	iP	Pn	06 29 21.3	+0.1
APC				iS	Sn	06 29 50.9	-0.7
APC				Smax			
	comp=E,140nm,0.9s						
PET	Petropavlovsk	2.82	22	⇓iPN	Pn	06 29 25.5	-0.1
PET				eS	Sn	06 29 58.5	-1.0
PET				pmax	pmax		
	comp=Z,147nm,0.4s						
PET				smax			
	comp=E,500nm,1.3s						
PET				smax			
	comp=N,495nm,0.5s						
PET	Petropavlovsk	2.82	22	iP	Pn	06 29 25.7	+0.1
PET				iS	Sn	06 29 58.5	-1.0
UGLR	Uglovaya	3.03	22	iP	Pn	06 29 29.2	+0.6
AVH	Avacha	3.06	21	iP	Pn	06 29 30.1	+1.0
AVH				iS	Sn	06 30 05.8	+0.2
KOK	Koryaka	3.07	20	iP	Pn	06 29 30.3	+1.2
SMAR	Somma	3.08	22	iP	Pn	06 29 29.9	+0.7
SDLR	Sedlovina	3.11	22	iP	Pn	06 29 29.7	0.0
NLC	Nalytchevo	3.14	28	iP	Pn	06 29 28.5	-1.6
NLC				iS	Sn	06 30 04.0	-3.5
SPN	Mys Shipunski	3.30	35	P	Pn	06 29 31.7	-0.8
SPN				S	Sn	06 30 08.3	-3.3
SPN	Mys Shipunski	3.30	35	iP	Pn	06 29 32.1	-0.3
SPN				iS	Sn	06 30 09.4	-2.2
GNL	Ganaly	3.34	10	eP	Pn	06 29 33.7	+0.7
GNL				eS	Sn	06 30 13.4	+0.8
MKZ	Mys Kozlova	5.08	33	P	Pn	06 29 55.0	-2.6
MKZ				S	Sn	06 30 49.0	-7.5
MKZ	Mys Kozlova	5.08	33	eP	Pn	06 29 55.9	-1.7
MKZ				eS	Sn	06 30 51.8	-4.7
TUMR	Tumrok	5.25	21	eP	Pn	06 30 00.8	+0.8
ESO	Esso	5.62	10	eP	Pn	06 30 05.3	+0.1
KMNR	Kamenistaya	5.71	19	eP	Pn	06 30 07.6	+1.1
KBTR	Krutoberegovo	6.79	29	P	Pn	06 30 18.5	-3.2
KBTR				S	Sn	06 31 32.2	-7.1
KBTR	Krutoberegovo	6.79	29	eP	Pn	06 30 18.9	-2.8
BKI	Bering	7.28	45	iP	Pn	06 30 23.3	-5.4
BKI				eS	Sn	06 31 40.7	-11
BKI				Smax			
	comp=N,30nm,0.3s						

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*IDC **28** 06:41:03.7±0.8, 12.10N×92.39E, mb4.1/12, mb1 4.2/13, mb1mx4.1/21, mbtmp4.0/13, ML4.0/1, Error ellipse: s-maj=32.8km s-min=15.4km az=57.0*

*NEIC **28** 06:41:08.0±0.4, 12.15N×92.46E, h30^{km}, mb4.3/8, Error ellipse: s-maj=13.9km s-min=5.9km az=55.0*

*BJI **28** 06:41:09.0, 12.10N×92.50E, h30^{km}, mb4.3*

ISC 28 06:41:06.2±0.5**, 12.03N**±0.06×**92.31E**±0.07**, h33**^{km}**, n33,** σ**0**^{s}**89**/33**, mb4.2**/15**, 1C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	9.04	44	ePn	P	06 43 20.9	+3.5
	4.5nm,0.4s						
CMAR	Chiang Mai Arr	9.04	44	Pn	P	06 43 14.5	-2.9
	0.5nm,0.3s,baz=235,slow=17,SNR=10						
CMAR				Sn	Sn	06 44 59.0	-0.3
	baz=239,slow=30,SNR=2.9						
VIS	Vishakhapatnam	10.37	304	iP	P	06 43 34.6	-1.1
VIS				iS	S	06 45 16.6	-15
PKI	Pulchoki	16.76	338	eP	P	06 44 59.1	-1.0
	19nm,0.5s						
DMN	Daman	16.91	337	eP	P	06 45 01.2	-0.7
GUN	Gumba	16.91	340	eP	P	06 45 02.3	+0.3
	22nm,0.8s						
GKN	Gorkha	17.44	337	eP	P	06 45 08.0	-0.6
	18nm,0.3s						
KOLN	Koldanda	17.66	334	eP	P	06 45 12.4	+1.0
	22nm,0.6s						
GYA	Guiyang	19.71	41	⇑iP	P	06 45 37.3	+1.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
ENH	Enshi	24.15	39	eP	P	06 46 20.2	-0.2
	comp=Z,13nm,0.6s,mb4.5						
XAN	Xi'an	26.64	32	P	P	06 46 44.5	+0.7
MKAR	Makanchi Array	35.67	348	P	P	06 48 03.5	+0.2
	comp=Z,1.6nm,0.6s,mb4.1,baz=163,slow=8.3,SNR=15						
SONM	Songino Array	37.59	16	P	P	06 48 19.3	-0.2
	comp=Z,0.6nm,0.7s,mb3.4,baz=196,slow=9.0,SNR=4.3						
KS15	Wonju Array Si	40.65	45	eP	P	06 48 53.3	+8.4
ZAL	Zalesovo	42.23	353	P	P	06 48 57.4	-0.4
	comp=Z,1.5nm,0.3s,mb4.1,baz=289,slow=4.4,SNR=6.3						
FITZ	Fitzroy Crossi	44.47	132	eP	P	06 49 16.8	+0.4
	comp=Z,9.7nm,1.1s,mb4.5						
FITZ	Fitzroy Crossi	44.47	132	P	P	06 49 16.5	+0.1
	comp=Z,4.9nm,0.5s,mb4.5,baz=337,slow=5.4,SNR=9.2						
BVAR	Borovoye Array	44.50	341	P	P	06 49 16.4	+0.2
	comp=Z,0.8nm,0.6s,mb3.8,baz=127,slow=9.1,SNR=6.2						
WRA	Warramunga Arr	52.16	127	P	P	06 50 16.1	+0.1
	comp=Z,3.4nm,0.6s,mb4.5,baz=303,slow=8.7,SNR=30						
WRAB	Tennant Creek	52.16	127	eP	P	06 50 15.1	-0.9
	comp=Z,9.5nm,0.7s,mb4.8						
WB2	Warramunga Arr	52.16	127	eP	P	06 50 16.3	+0.2
CTAO	Charters Tower	61.93	121	P	P	06 51 23.8	-1.5
	comp=Z,52nm,1.8s,mb5.4						
STKA	Stephens Creek	64.27	134	P	P	06 51 41.2	+0.5
	comp=Z,1.0nm,0.3s,mb4.4,baz=339,slow=3.9,SNR=8.0						
STKA	Stephens Creek	64.27	134	eP	P	06 51 41.3	+0.6
FINES	FINESS Array B	68.22	332	P	P	06 52 05.8	+0.4
	comp=Z,0.9nm,0.7s,mb3.9,baz=45,slow=2.0,SNR=4.4						
ARCES	ARCESS Array B	70.77	340	P	P	06 52 21.7	+0.9
	comp=Z,2.1nm,0.6s,mb4.2,baz=98,slow=6.4,SNR=17						
GERES	GERESS Array B	73.56	318	P	P	06 52 38.9	+1.2
	comp=Z,0.5nm,0.2s,mb4.0,baz=79,slow=5.0,SNR=3.3						
NB2	NORSAR Subarra	75.25	330	P	P	06 52 47.9	+0.6
	comp=Z,1.0nm,0.6s,mb3.9,baz=94,slow=5.3						
NOA	NORSAR Array B	75.25	330	P	P	06 52 47.9	+0.7
	comp=Z,1.5nm,0.7s,mb4.0,baz=92,slow=5.7,SNR=4.7						
NOA	NORSAR Array B	75.25	330	P	P	06 52 47.9	+0.7
ILAR	Eielson Array	91.58	22	P	P	06 54 10.1	-0.6
	comp=Z,0.3nm,0.6s,mb3.8,baz=293,slow=4.8,SNR=5.3						
NVAR	Mina Array Bea	122.22	28	PKP	PKPdf	07 00 02.2	+4.0
	comp=Z,0.1nm,0.4s,baz=355,slow=1.3,SNR=3.8						
TXAR	Lajitas Array	136.08	20	PKP	PKPdf	07 00 28.4	+3.6
	comp=Z,0.1nm,0.5s,SNR=3.2						

CASC 28 06:55:32.3±3.6**, 8.39N×82.83W, h18**^{km}±14^{km}**, MD3.5, MW3.9, 2C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVD	David	0.38	82	⇓iP	Pb	06 55 39.7	-0.5
DVD				eS	Sb	06 55 45.3	-0.2
SVTC	San Vito de Co	0.42	342	⇑eP	Pb	06 55 40.0	-0.9
SVTC				eS	Sb	06 55 47.7	+1.0
ACR	Cerro Adams	0.43	308	eP	Pb	06 55 39.1	-1.9
BRU2	Volcan	0.43	19	⇓iP	Pb	06 55 40.9	-0.1
BRU2				eS	Sb	06 55 48.8	+1.8
PTP1	Petroterminal	0.44	114	⇑iP	Pb	06 55 36.8	-4.4
PTP1				eS	Sb	06 55 42.3	-4.9
BRU	Baru	0.50	32	eP	Pb	06 55 42.4	+0.2
BRU				eS	Sb	06 55 52.7	+3.8
BUS	Buena Vista	1.48	322	eP	Pn	06 56 01.2	+2.9
BUS				eS	Sn	06 56 16.4	-1.0
URSC	Urasca	1.72	327	eP	Pn	06 55 60.0	-1.8
URSC				eS	Sn	06 56 25.0	+1.7
PRS1	Puriscal	2.16	317	eP	Pn	06 56 07.3	-0.8
PRS1				eS	Sn	06 56 34.5	-0.1
TRTC	Tortuguero	2.34	338	eP	Pn	06 56 12.6	+1.9

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*NSSP **28** 07:13:32.2, 40.83N×47.80E, h10^{km}, ML3.6*

*TIF **28** 07:13:41.0, 40.02N×48.81E, h25^{km}±32^{km}*

*IDC **28** 07:13:43.6±1.8, 40.63N×48.51E, mb3.8/5, mb1 3.9/7, mb1mx3.7/21, mbtmp3.7/7, ML2.3/2, MS3.1/5, Ms1 3.2/5, ms1mx2.9/28, Error ellipse: s-maj=45.0km s-min=10.4km az=159.0*

*TEH **28** 07:13:47.2, 40.55N×48.46E, h10^{km}, Mn3.4*

*MOS **28** 07:13:48.2±1.9, 40.64N×48.50E, h33^{km}, mb4.4/2, Error ellipse: s-maj=21.5km s-min=13.0km az=110.2*

*CSEM **28** 07:13:48.5±0.1, 40.56N×48.62E, h70^{km}, ML3.6, Error ellipse: s-maj=3.8km s-min=2.1km az=58.0*

*NEIC **28** 07:13:53.0±1.9, 41.01N×48.61E, h50^{km}, mb4.4/3, Error ellipse: s-maj=37.2km s-min=12.8km az=179.0*

ISC 28 07:13:44.5±0.4**, 40.62N**±0.03×**48.70E**±0.04**, h10**^{km}**, n48,** σ**1**^{s}**23**/54**, mb3.9**/6**, MS3.1**/4**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAK	Makhachkala	2.50	339	ePN	Pb	07 14 29.9	+0.7
MAK				i	Pg	07 14 36.0	+1.5
MAK				iS	Sg	07 15 07.8	-0.1
MAK				i		07 15 14.6	
MAK				smax			
	comp=N,1µm,0.9s						
MAK				MLR	MLR		
	comp=Z,2µm,10.0s						
MAK				MLR	MLR		
	comp=N,2µm,8.0s						
MAK				MLR	MLR		
	comp=E,2µm,8.0s						
MGRZ	Megri	2.56	229	S	Sn	07 14 57.0	-1.4
IHSH	Hashtroud	2.57	206	Pn	Pg	07 14 40.1	+4.3
IHRS	Heris	2.64	210	Pn	Pn	07 14 26.9	-1.0
DGRG	David-gareji	2.65	289	P	Pn	07 14 29.7	+1.6
DGRG				S	Sn	07 15 05.3	+4.7
GNI	Garni	3.06	262	Pn	Pn	07 14 33.3	-0.7
	comp=E,8.6nm,0.3s,baz=15,slow=2.6,SNR=18						
GNI				Pg	Pg	07 14 41.6	-4.1
	comp=E,17nm,0.3s,baz=3.0,slow=5.4,SNR=30						
GNI				Sn	Sn	07 15 12.0	+1.0
	comp=E,25nm,0.3s,baz=81,slow=16,SNR=5.8						
GNI				Lg		07 15 18.9	
	comp=E,41nm,0.3s,baz=56,slow=22,SNR=7.4						
GNI	Garni	3.06	262	ePn	Pn	07 14 34.5	+0.5
GNI	Garni	3.06	262	ePn	Pn	07 14 34.5	+0.5
TI2	Plekhanov	3.18	292	ePN	Pn	07 14 27.6	-8.1
TI2				eS	Sn	07 15 11.0	-3.1
TI2				pmax	pmax		
	comp=Z,50nm,0.6s						
TI2	Plekhanov	3.18	292	eSn	Sn	07 15 11.0	-3.1
TBLG	Delisi	3.19	292	P	Pn	07 14 36.1	+0.3
TBLG				S	Sn	07 15 17.3	+3.0
IBST	Bostanabad	3.24	206	Pn	Pn	07 14 35.5	-1.0
IAZR	Azarshahr	3.62	217	Pn	Pb	07 14 49.7	+1.3
GOR	Gori	3.72	293	P	Pn	07 14 44.1	+0.8
GOR				S	Sn	07 15 27.2	-0.5
ONI	Oni	4.40	298	P	Pn	07 14 53.5	+0.5
IPRN	Paran-Amol	5.18	146	Pn	Pn	07 15 04.2	+0.2
IRAZ	Razeghan	5.30	169	Sn	Sn	07 16 03.0	-4.6
IRAZ	Razeghan	5.30	169	Pn	Pb	07 15 18.7	+1.7
KIV	Kislovodsk	5.57	309	eP	Pb	07 15 20.8	-0.8
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIV				pmax	pmax		
	comp=N,10.0nm,0.8s						
KIV				pmax	pmax		
	comp=E,11nm,0.8s						
KIV				MLR	MLR		
	comp=N,46nm,15.0s						
KIV				MLR	MLR		
	comp=E,83nm,15.0s						
KIV				MLR	MLR		
	comp=Z,106nm,15.0s						
IDMV	Damavand	5.68	151	Pn	Pn	07 15 11.4	+0.3
IGLO	Galoogah	5.72	137	Pn	Pn	07 15 13.0	+1.4
IKIA	Kiasar	5.89	137	Pn	Pn	07 15 14.5	+0.4
IFIR	Firoozkooh	5.91	146	Pn	Pn	07 15 15.1	+0.8
IFIR				Sn	Sn	07 16 19.3	-3.6
ISHM	Shahmirzad	6.01	142	Pn	Pn	07 15 16.8	+1.0
IQOM	Qom	6.07	161	Pn	Pb	07 15 25.9	-4.3
IVRN	Varamin	6.10	156	Pn	Pn	07 15 15.4	-1.7
IVRN				Sn	Sn	07 16 23.1	-4.7
ILAS	Lasjerd	6.22	146	Pn	Pn	07 15 09.2	-9.4
IANJ	Anjiloo	6.59	140	Pn	Pn	07 15 23.1	-0.8
AKASG	Malin Array Be	16.89	313	Pn	P	07 17 42.0	-0.5
	comp=Z,0.7nm,0.3s,baz=127,slow=11,SNR=7.4						
ARU	Arti	17.08	19	eP	P	07 17 45.6	+0.8
ARU	Arti	17.08	19	eP	P	07 17 44.6	-0.2
	comp=Z,4.4nm,0.4s						
BVAR	Borovoye Array	19.25	43	P	P	07 18 10.3	-1.2
	comp=Z,0.1nm,0.3s,baz=239,slow=8.6,SNR=8.0						
IDI	Anoyia	19.50	262	LR	LR	07 27 08.4	
	comp=Z,39nm,18.6s,baz=20,slow=42						
KWP	Kalwaria	20.35	305	eP	P	07 18 23.7	+0.1
KWP				pmax	pmax		
	comp=Z,26nm,1.1s						
KWP	Kalwaria	20.35	305	eP	P	07 18 23.7	0.0
	comp=Z,26nm,1.1s						
KWP	Kalwaria	20.35	305	eP	P	07 18 23.7	+0.1
	comp=Z,26nm,1.1s						
MKAR	Makanchi Array	24.92	64	P	P	07 19 10.5	+1.6
	comp=Z,1.4nm,0.7s,mb3.6,baz=260,slow=8.3,SNR=11						
FINES	FINESS Array B	24.99	334	P	P	07 19 07.6	-1.9
	comp=Z,3.0nm,0.6s,mb4.0,baz=137,slow=9.6,SNR=10						
FINES	FINESS Array B	24.99	334	P	P	07 19 07.6	-1.9
KAF	Kangasniemi	25.41	335	ep	P	07 19 11.2	-2.2
GERES	GERESS Array B	26.00	300	P	P	07 19 18.9	-0.2
	comp=Z,0.3nm,0.2s,mb3.4,baz=101,slow=6.8,SNR=3.6						
ZAL	Zalesovo	27.54	49	iP	P	07 19 46.2	+13
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	27.54	49	LR	LR	07 33 00.6	
	comp=Z,78nm,18.6s,MS3.3,baz=33,slow=42						
HFS	Hagfors	29.13	324	P	P	07 19 44.3	-3.1
	comp=Z,2.1nm,0.8s,mb3.9,baz=121,slow=9.9,SNR=7.4						
HFS				LR	LR	07 33 23.4	
	comp=Z,39nm,18.1s,MS3.1,baz=109,slow=41						
NOA	NORSAR Array B	30.63	324	LR	LR	07 34 48.7	
	comp=Z,21nm,20.8s,MS2.8,baz=125,slow=41						
WLF	Walferdange	30.98	301	P	P	07 20 08.7	+4.8
	comp=Z,13nm,0.7s,mb4.9						
ARCES	ARCESS Array B	31.44	345	LR	LR	07 33 57.1	
	comp=Z,44nm,19.2s,MS3.1,baz=319,slow=39						
ILAR	Eielson Array	74.23	7	P	P	07 25 22.0	-0.7
	comp=Z,0.2nm,0.4s,mb3.4,baz=333,slow=6.2,SNR=4.4						

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*ATH **28** 07:27:39.3, 37.75N×26.70E, h10^{km}, MD2.9/3*

*ISK **28** 07:27:39.1, 37.86N×26.72E, h31^{km}, MD3.2*

*CSEM **28** 07:27:39.0±0.4, 37.82N×26.80E, h19^{km}±1^{km}, MD3.2, Error ellipse: s-maj=11.2km s-min=2.4km az=85.0*

ISC 28 07:27:38.9±0.7**, 37.80N**±0.03×**26.73E**±0.05**, h7**^{km}±6^{km}**, n21,** σ**1**^{s}**02**/30**, 1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.12	137	⇑iPG	Pg	07 27 42.2	+0.6
URLA	Izmir	0.57	349	iP	Pg	07 27 50.2	-0.2
URLA				iS	Sg	07 27 58.8	+0.7
BLCB	Balcova	0.64	22	iPG	Pg	07 27 51.3	-0.3
IZM	Izmir	0.73	35	PG	Pg	07 27 53.0	-0.5
IZM				SG	Sg	07 28 03.0	-0.3
KDAG	Bornova	0.74	35	iP	Pg	07 27 53.2	-0.4
KDAG				iS	Sg	07 28 03.1	-0.4
KDAG	Bornova	0.74	35	iP	Pg	07 27 53.1	-0.5
KDAG				iS	Sg	07 28 03.3	-0.2
BODT	Bodrum	0.87	148	PG	Pg	07 27 56.2	0.0
BODT				SG	Sg	07 28 08.1	+0.3
AYDN	Tasoluk	0.92	98	iP	Pb	07 27 56.3	-0.4
AYDN				iS	Sb	07 28 07.9	-1.0
BDRM	Kayabasi	0.92	142	iP	Pb	07 27 57.6	+0.8
BDRM				iS	Sb	07 28 10.0	+0.9
MLSB	Milas	0.97	121	PG	Pg	07 27 58.0	-0.2
APE	Apeiranthos	1.20	233	ePN	Pn	07 28 00.7	-1.4
APE	Apeiranthos	1.20	233	ePb	Pb	07 28 01.2	-0.4
AKS	Akhisar	1.37	38	ePN	Pn	07 28 01.3	-3.3
YER	Yerkesik	1.40	118	ePN	Pn	07 28 04.0	-0.9
PRK	Paraskevi	1.49	346	ePB	Pb	07 28 08.0	+1.5
MANT	Manisa	1.60	64	iP	Pn	07 28 10.1	+2.3
MANT				iS	Sb	07 28 22.5	-6.1
DNZL	Cakiroluk	1.84	93	iP	Pn	07 28 13.8	+2.6
DNZL				iS	Sn	07 28 41.2	+6.3
FETY	Fethiye	2.21	121	ePN	Pn	07 28 15.2	-1.3
ULDT	Uludag	3.00	38	iP	Pn	07 28 36.0	+8.3
SGKT	Sivrigoynuk	4.98	55	iP	Pn	07 29 11.4	+16
ELDT	Eldivan	5.86	61	iP	Pn	07 29 19.0	+11

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*PRU **28** 07:48:43.3, 51.41N×16.18E*

*NEIC **28** 07:48:43.5±2.0, 51.38N×16.12E, h5^{km}, ML2.9(VIE), Error ellipse: s-maj=21.9km s-min=7.7km az=207.0*

*CSEM **28** 07:48:43.6±0.3, 51.42N×16.18E, h0^{km}, ML3.3/2, Error ellipse: s-maj=5.0km s-min=2.1km az=17.0*

WAR 28 07:48:43.7, 51.45N×16.17E, h1^{km}**, ML2.8, 1C-1D, Mining Induced, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.61	173	ePG	Pg	07 48 55.0	-0.9
KSP				eSG	Sg	07 49 03.0	-1.1
KSP	Ksiaz	0.61	173	⇓iPg	Pg	07 48 54.9	-1.0
KSP				eSg	Sg	07 49 02.8	-1.3
UPC	Upice	0.95	186	ePG	Pg	07 49 00.9	-1.7
DPC	Dobruska-Polom	1.10	175	ePG	Pg	07 49 03.7	-2.0
DPC				eSG	Sg	07 49 18.0	-2.5
	27nm,0.3s						
PVCC	Panska Ves	1.37	228	ePG	Pg	07 49 09.2	-1.8
BRG	Berggiesshubel	1.52	249	Pg	Pg	07 49 11.8	-2.2
BRG				Sg	Sg	07 49 32.2	-2.0
BRG	Berggiesshubel	1.52	249	Pg	Pg	07 49 11.8	-2.2
BRG				Sg	Sg	07 49 32.2	-2.0
PRU	Pruhonice	1.79	216	ePG	Pg	07 49 14.6	-4.9
PRU				eSG	Sg	07 49 39.5	-3.9
MORC	Moravsky Berou	1.89	152	ePn	Pn	07 49 15.6	-1.8
MORC	Moravsky Berou	1.89	152	ePn	Pn	07 49 15.6	-1.8
MORC	Moravsky Berou	1.89	152	ePg	Pg	07 49 15.7	-5.7
MORC				eSg	Sg	07 49 42.0	-4.6
CLL	Collm	1.99	267	iPG	Pg	07 49 19.8	-3.6
CLL				eSG	Sg	07 49 47.0	-3.0
OKC	Ostrava-Krasne	2.05	141	ePG	Pg	07 49 21.6	-2.9
OKC				eSG	Sg	07 49 46.4	-5.4

VRAC	**Vranov**	**2.16**	**173**	*e*Sg	Sg	07 49 51.4	-4.2
OJC	**Ojcow**	**2.61**	**117**	*e*PG	Pg	07 49 32.0	-3.8
OJC				*e*SG	Sg	07 50 08.0	-2.5
NKC	**Novy Kostel**	**2.66**	**244**	*e*PN	Pn	07 49 27.3	-1.1
NKC				*e*SG	Sg	07 50 07.6	-4.5
	18nm,0.2s						
KHC	**Kasperske Hory**	**2.85**	**217**	*e*PN	Pn	07 49 30.2	-1.0
KHC				*e*PG	Pg	07 49 35.4	-5.3
KHC				*e*SN	Sn	07 50 02.0	-4.7
KHC				*e*SG	Sg	07 50 12.7	-6.0
MOX	**Moxa**	**2.99**	**256**	*e*Pg	Pg	07 49 39.7	-3.6
MOX				*e*Sg	Sg	07 50 19.3	-3.8
MOA	**Molln**	**3.81**	**200**	⇑*i*PN	Pn	07 49 39.6	-5.2
MOA				*i* SG	Sg	07 50 41.7	-8.8
	6.2nm,0.3s						

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*NEIC **28** 09:32:29.3±1.4, 4.54S×105.68E, h30^{km}, mb4.6/2, Error ellipse: s-maj=60.0km s-min=26.8km az=49.0*

IDC 28 09:32:12.3±4.4**, 5.90S×103.44E, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.7**/16**, mbtmp3.7**/3**, Error ellipse: s-maj=185.9km s-min=28.9km az=58.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**24.61**	**350**	P	P	09 37 35.1	-0.6
	1.1nm,0.3s,baz=191,slow=9.2,SNR=5.2						
WRA	**Warramunga Arr**	**33.11**	**118**	P	P	09 38 51.2	-1.2
	0.5nm,0.7s,baz=291,slow=12,SNR=5.3						
STKA	**Stephens Creek**	**44.02**	**131**	P	P	09 40 21.4	-2.2
	0.8nm,0.6s,baz=310,slow=8.4,SNR=3.9						
ULN	**Ulaanbaatar**	**53.63**	**3**	*e*P	P	09 41 38.0	+0.3
	3.6nm,0.9s						
TXAR	**Lajitas Array**	**145.39**	**44**	PKPbc	PKPbc	09 51 51.3	-2.1
	1.2nm,0.7s,baz=270,slow=2.7,SNR=9.3						

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*NEIC **28** 09:33:08.6±0.9, 1.54N×97.05E, mb4.9/1, Error ellipse: s-maj=21.0km s-min=13.4km az=67.0*

*IDC **28** 09:33:08.5±1.3, 1.45N×97.03E, h25^{km}±4^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.8/19, mbtmp4.0/9, ML4.3/1, Error ellipse: s-maj=65.9km s-min=15.8km az=55.0*

ISC 28 09:33:06.7±1.0**, 1.5N**±0.1×**97.1E**±0.2**, h26^{km}, h26^{km}**±1.0^{km}**:pP-P, n11, σ0^{s}73**/11**, mb4.1**/9**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.18**	**44**	*e*Pn	**Pn**	**09 34 25.2**	**+0.6**
CMAR	**Chiang Mai Arr**	**16.92**	**6**	Pn	**P**	**09 37 03.7**	**+0.1**
	0.4nm,0.3s,baz=198,slow=12,SNR=7.7						
ENH	**Enshi**	**30.92**	**21**	*e*P	**P**	**09 39 22.0**	**-1.9**
	6.6nm,0.4s,mb4.8						
WRA	**Warramunga Arr**	**42.33**	**122**	P	**P**	**09 41 00.7**	**0.0**
	0.5nm,0.5s,mb3.4,baz=305,slow=8.9,SNR=4.6						
WRA				pP	pP	09 41 07.0	-1.3
	0.8nm,0.6s,baz=302,slow=9.2,SNR=5.3						
SONM	**Songino Array**	**46.83**	**9**	P	**P**	**09 41 36.8**	**+0.5**
	2.8nm,0.8s,mb4.3,baz=185,slow=8.3,SNR=4.8						
MKAR	**Makanchi Array**	**46.89**	**346**	P	**P**	**09 41 37.8**	**+0.9**
	2.8nm,0.5s,mb4.4,baz=163,slow=8.8,SNR=21						
MKAR				pP	pP	09 41 46.0	+1.5
	1.2nm,0.4s,baz=162,slow=8.9,SNR=6.6						
ZAL	**Zalesovo**	**53.20**	**351**	P	**P**	**09 42 24.6**	**-0.4**
	2.1nm,0.4s,mb4.4,baz=320,slow=6.5,SNR=4.3						
STKA	**Stephens Creek**	**53.68**	**132**	P	**P**	**09 42 28.8**	**-0.1**
	0.6nm,0.4s,mb3.9,baz=294,slow=12,SNR=2.9						
STKA				pP	pP	09 42 36.5	-0.2
	1.4nm,0.6s,baz=304,slow=7.1,SNR=2.8						
BVAR	**Borovoye Array**	**55.89**	**341**	P	**P**	**09 42 43.9**	**-0.7**
	0.8nm,0.5s,mb4.0,baz=149,slow=8.6,SNR=3.7						
BVAR				pP	pP	09 42 52.7	+0.1
	1.5nm,0.7s,baz=143,slow=7.4,SNR=4.2						
FINES	**FINESS Array B**	**79.64**	**332**	P	**P**	**09 45 13.4**	**+0.1**
	1.3nm,0.9s,mb3.9,baz=143,slow=6.9,SNR=4.2						
FINES				pP	pP	09 45 21.7	+0.2
	1.7nm,0.8s,baz=153,slow=4.3,SNR=2.6						
ARCES	**ARCESS Array B**	**82.18**	**340**	P	**P**	**09 45 27.2**	**+0.7**
	1.5nm,0.8s,mb4.0,baz=124,slow=4.4,SNR=6.8						
ARCES				pP	pP	09 45 35.2	+0.6
	1.5nm,0.9s,baz=90,slow=3.6,SNR=1.4						

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*IDC **28** 09:39:27.1±3.4, 19.21N×145.37E, h172^{km}±31^{km}, mb3.7/11, mb1 3.9/12, mb1mx3.7/25, mbtmp4.2/12, MS3.7/1, Ms1 3.7/1, ms1mx2.5/33, Error ellipse: s-maj=29.8km s-min=12.8km az=106.0*

*NEIC **28** 09:39:48.6±0.7, 18.83N×145.72E, h400^{km}, mb3.9/1, Error ellipse: s-maj=32.7km s-min=13.7km az=103.0*

ISC 28 09:39:27.4±2.9**, 19.21N**±0.09×**145.2E**±0.2**, h187^{km}**±26^{km}**, n17, σ0^{s}92**/17**, mb3.8**/12**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**8.32**	**341**	P	**P**	**09 41 27.4**	**+1.7**
	2.4nm,0.3s,baz=238,slow=22,SNR=5.8						
CBIJ				S	**S**	**09 42 56.8**	**-1.4**
	4.3nm,0.3s,baz=283,slow=24,SNR=4.3						
KS15	**Wonju Array Si**	**23.64**	**324**	*e*P	**P**	**09 44 32.3**	**+10**
WB2	**Warramunga Arr**	**40.34**	**196**	*e*P	**P**	**09 46 47.5**	**-0.8**
WRA	**Warramunga Arr**	**40.35**	**196**	P	**P**	**09 46 47.6**	**-0.7**
	2.2nm,0.5s,mb4.0,baz=14,slow=8.4,SNR=40						
FITZ	**Fitzroy Crossi**	**41.77**	**209**	P	**P**	**09 47 00.5**	**+0.4**
	3.0nm,0.4s,mb4.2,baz=28,slow=8.2,SNR=22						
SONM	**Songino Array**	**42.45**	**321**	LR	LR	10 03 12.6	
	comp=Z,82nm,18.5s,baz=242,slow=34						
BILL	**Bilibino**	**50.59**	**10**	*e*P	**P**	**09 48 09.0**	**+0.4**
	4.9nm,0.8s,mb4.2						
ILAR	**Eielson Array**	**63.39**	**26**	P	**P**	**09 49 36.8**	**-1.9**
	1.4nm,0.4s,mb4.1,baz=268,slow=5.9,SNR=30						
BVAR	**Borovoye Array**	**65.78**	**320**	P	**P**	**09 49 55.2**	**+0.9**
	0.5nm,0.4s,mb3.7,baz=85,slow=7.7,SNR=5.6						
INK	**Inuvik**	**69.08**	**23**	P	**P**	**09 50 14.0**	**-0.5**
	1.3nm,0.6s,mb3.8,baz=330,slow=10,SNR=5.1						
INK	**Inuvik**	**69.08**	**23**	P	**P**	**09 50 14.0**	**-0.5**
YKA	**Yellowknife Ar**	**77.75**	**28**	P	**P**	**09 51 04.5**	**-0.2**
	0.9nm,0.5s,mb3.7,baz=285,slow=5.7,SNR=4.4						
ARCES	**ARCESS Array B**	**81.86**	**342**	P	**P**	**09 51 27.6**	**+1.1**
	1.1nm,0.6s,mb3.6,baz=63,slow=8.1,SNR=8.0						
NVAR	**Mina Array Bea**	**83.19**	**52**	P	**P**	**09 51 34.7**	**+0.7**
	1.6nm,0.7s,mb3.9,baz=268,slow=3.5,SNR=13						
ELK	**Elko**	**84.63**	**49**	P	**P**	**09 51 41.7**	**+0.5**
	0.3nm,0.3s,mb3.5,baz=271,slow=7.1,SNR=5.7						
FINES	**FINESS Array B**	**86.22**	**335**	P	**P**	**09 51 48.1**	**-0.4**
	0.8nm,0.5s,mb3.7,baz=61,slow=4.4,SNR=9.8						
PDAR	**Pinedale Array**	**87.80**	**45**	P	**P**	**09 51 56.5**	**0.0**
	0.3nm,0.5s,mb3.4,baz=171,slow=1.7,SNR=4.9						

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*JMA **28** 10:02:23.6±0.2, 30.60N×141.92E, h48^{km}, M3.8*

*IDC **28** 10:02:23.5±2.9, 30.35N×141.26E, mb3.6/2, mb1 3.6/5, mb1mx3.5/23, mbtmp3.6/5, ML3.1/3, Error ellipse: s-maj=128.6km s-min=21.3km az=73.0*

*NEIC **28** 10:02:28.8±1.2, 30.47N×141.20E, h40^{km}, mb4.4/1, Error ellipse: s-maj=35.9km s-min=15.8km az=79.0*

ISC 28 10:02:24.1±1.1**, 30.68N**±0.08×**142.0E**±0.2**, h40^{km}**±17^{km}**, n21, σ0^{s}94**/29**, mb3.9**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**3.07**	**323**	Pn	**P**	**10 03 12.3**	**+1.0**
	5.3nm,0.3s,baz=86,slow=22,SNR=2.6						
JHJ				Sn	**S**	**10 03 46.4**	**-0.9**
	8.8nm,0.3s,baz=256,slow=21,SNR=2.5						
CBIJ	**Chichi jima**	**3.57**	**177**	Pn	**P**	**10 03 17.4**	**-1.0**
	2.2nm,0.3s,baz=285,slow=20,SNR=5.2						
CBIJ				Sn	**S**	**10 03 55.5**	**-4.5**
	12nm,0.3s,baz=281,slow=21,SNR=6.7						
CBIJ	**Chichi jima**	**3.57**	**177**	*e*S	**S**	**10 03 54.0**	**-6.0**
BSO1	**Boso 1**	**4.05**	**348**	P	**P**	**10 03 25.6**	**+0.3**
BSO3	**Boso 3**	**4.29**	**344**	P	**P**	**10 03 29.5**	**+0.8**
BSO4	**Boso 4**	**4.52**	**343**	P	**P**	**10 03 32.8**	**+1.0**
JOD2	**Odawara 2**	**5.18**	**333**	P	**P**	**10 03 42.1**	**+0.9**
JHU	**Hanno**	**5.63**	**337**	P	**P**	**10 03 47.8**	**+0.3**
JHU				*e*S	**S**	**10 04 51.6**	**-0.3**
JRY	**Ryogami san**	**5.92**	**335**	P	**P**	**10 03 51.7**	**+0.3**
JRY				*e*S	**S**	**10 04 58.0**	**-0.9**
JHO	**Hitachi**	**6.03**	**349**	P	**P**	**10 03 51.2**	**-1.9**
JHO				*e*S	**S**	**10 04 56.1**	**-5.8**
JAG	**Ashikaga**	**6.11**	**340**	P	**P**	**10 03 53.4**	**-0.8**
JAG				*e*S	**S**	**10 05 00.5**	**-3.2**
MJAR	**Matsushiro Arr**	**6.64**	**333**	Pn	**P**	**10 04 01.8**	**+0.2**
	1.0nm,0.3s,baz=160,slow=11,SNR=8.7						
MAJO	**Matsushiro**	**6.64**	**333**	*e*Pn	**P**	**10 04 02.4**	**+0.7**
MAT	**Matsushiro**	**6.64**	**333**	*e*P	**P**	**10 04 02.0**	**+0.3**
MAT				*e*S	**S**	**10 05 11.0**	**-6.0**
MAT	**Matsushiro**	**6.64**	**333**	P	**P**	**10 04 02.1**	**+0.4**
MAT				S	**S**	**10 05 11.4**	**-5.6**
MAT	**Matsushiro**	**6.64**	**333**	P	**P**	**10 04 02.2**	**+0.5**
JFK	**Kawauchi**	**6.73**	**352**	*e*S	**S**	**10 05 11.6**	**-7.7**
PET	**Petropavlovsk**	**25.42**	**24**	*e*P	**P**	**10 07 57.2**	**+7.8**
	6.4nm,0.6s,mb4.3						
MKAR	**Makanchi Array**	**48.12**	**307**	P	**P**	**10 11 03.2**	**+1.3**
	0.3nm,0.5s,mb3.6,baz=90,slow=12,SNR=3.4						
MKAR	**Makanchi Array**	**48.12**	**307**	P	**P**	**10 11 03.1**	**+1.3**
WRA	**Warramunga Arr**	**50.86**	**189**	P	**P**	**10 11 22.6**	**-0.6**
	0.4nm,0.3s,mb3.8,baz=6.8,slow=8.0,SNR=12						

MAN 28 10:03:41.9, 12.06N×125.45E, h26^{km}, mb3.5, ML2.2, MS1.6, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.45**	**181**	*e*P	Pb	10 03 52.1	+0.7
BESP				*e*S	Sb	10 04 01.8	+4.0
CNP	**Catarman**	**0.89**	**300**	*e*P	Pb	10 03 58.3	-0.3
CNP				*e*S	Sb	10 04 07.7	-2.3
PLP	**Palo**	**1.00**	**207**	⇑*e*P	Pn	10 04 00.9	+0.5
PLP				*e*S	Sb	10 04 13.5	+0.3

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*NIED **28** 10:14:00, 47.40N×147.70E, h500^{km}, Mw4.6 Best double couple: M$_0$7.51×10^{15} NP1:φ$_s$199°, δ74°, λ142°. NP2: φ$_s$302°, δ54°, λ20°.*

*SKHL **28** 10:14:14.0±1.9, 47.94N×147.60E, h450^{km}±20^{km}, mb5.3/3, mbh5.6/1, msh5.3/6*

*BJI **28** 10:14:15.3, 48.11N×147.13E, h422^{km}, mB4.6, mb4.8*

*JMA **28** 10:14:16.4±0.3, 47.43N×147.69E, h485^{km}, M4.2*

*MOS **28** 10:14:16.2±1.1, 48.09N×147.17E, h442^{km}, mb4.4/29, Error ellipse: s-maj=9.5km s-min=6.7km az=87.7*

*NEIC **28** 10:14:17.0±0.2, 48.14N×147.18E, mb4.3/32, Error ellipse: s-maj=6.9km s-min=3.8km az=150.0*

*IDC **28** 10:14:18.5±0.6, 48.10N×147.09E, h454^{km}±6^{km}, mb3.7/27, mb1 3.9/31, mb1mx3.8/34, mbtmp4.6/31, Error ellipse: s-maj=9.4km s-min=6.6km az=135.0*

ISC 28 10:14:15.7±0.2**, 48.05N**±0.03×**147.24E**±0.04**, h436^{km}**±2^{km}**, h446^{km}**±5.7^{km}**:pP-P, n219, σ1^{s}14**/246**, mb4.3**/76**, 11C-13D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.85**	**171**	⇓*i*PN	**P**	**10 15 19.4**	**-1.7**
KUR				*e*S	**S**	**10 16 12.0**	**-0.6**
KUR				pmax	pmax		
	comp=N,150nm,1.0s						
KUR				pmax	pmax		
	comp=E,190nm,1.0s						
KUR				pmax	pmax		
	comp=Z,430nm,1.0s						
KUR				smax			
	comp=N,190nm,1.2s						
KUR				smax			
	comp=N,2µm,2.0s						
KUR				smax			
	comp=E,5µm,2.0s						
KUR	**Kuril'sk**	**2.85**	**171**	⇓*i*P	**P**	**10 15 19.4**	**-1.7**
KUR				AMB	AMB	10 15 20.2	
	comp=E,151nm,1.0s						
KUR				AMB	AMB	10 15 20.2	
	comp=E,189nm,1.0s						
KUR				AMB	AMB	10 15 20.2	
	comp=E,433nm,1.0s						
KUR				*e*S	**S**	**10 16 12.0**	**-0.6**
KUR				A		10 16 14.0	
	comp=E,2µm,2.0s						
KUR				A		10 16 14.0	
	comp=E,5µm,2.0s						
KUR				A		10 16 14.4	
	comp=E,191nm,1.2s						
KUR				A		10 16 14.4	
	comp=E,445nm,1.2s						
YSS	**Yuzh-Sakhalins**	**3.23**	**252**	*e*PN	**P**	**10 15 27.0**	**+3.0**
YSS	**Yuzh-Sakhalins**	**3.23**	**252**	⇑*i*P	**P**	**10 15 27.0**	**+3.0**
YSS				⇑*i*P		10 15 27.0	
YSS				AMB	AMB	10 15 27.8	
	comp=E,140nm,0.8s						
YSS				AMB	AMB	10 15 27.8	
	comp=E,70nm,0.8s						
YSS				AMB	AMB	10 15 27.8	
	comp=E,80nm,0.8s						
YSS				AMB	AMB	10 15 27.8	
	comp=E,60nm,0.8s						
YSS				AMB	AMB	10 15 27.8	
	comp=E,80nm,0.8s						
YSS				AMB	AMB	10 15 27.8	
	comp=E,140nm,0.8s						
YSS				*i* S	**S**	**10 16 21.6**	**+3.7**
YSS				A		10 16 24.0	
	comp=E,250nm,1.0s						
YSS				A		10 16 24.0	
	comp=E,370nm,1.0s						
YSS				A		10 16 26.6	
	comp=E,2µm,10.0s						
YSS				A		10 16 26.6	
	comp=E,1µm,4.5s						
UGL	**Uglegorsk**	**3.58**	**289**	⇑*i*PN	**P**	**10 15 30.0**	**+3.0**
UGL				*e*S	**S**	**10 16 28.0**	**+4.9**
UGL				pmax	pmax		
	comp=Z,160nm,0.5s						
UGL				smax			
	comp=N,400nm,1.0s						
UGL				smax			
	comp=E,600nm,1.0s						
UGL				smax			
	comp=N,1µm,4.0s						
UGL				smax			
	comp=E,1µm,4.0s						
UGL	**Uglegorsk**	**3.58**	**289**	⇑*i*P	**P**	**10 15 30.0**	**+3.0**
UGL				AMB	AMB	10 15 31.0	
	comp=E,160nm,0.5s						
UGL				*e*S	**S**	**10 16 28.0**	**+4.9**
UGL				A		10 16 29.0	
	comp=E,400nm,1.0s						
UGL				A		10 16 29.0	
	comp=E,600nm,1.0s						
UGL				A		10 16 29.0	
	comp=E,84nm,0.8s						
UGL				A		10 16 33.0	
	comp=E,1µm,4.0s						
UGL				A		10 16 33.0	
	comp=E,1µm,4.0s						
TYV	**Tymovskoe**	**4.10**	**315**	⇑*i*P	**P**	**10 15 31.2**	**-0.4**
TYV				AMB	AMB	10 15 32.0	
	comp=E,900nm,2.0s						
TYV				AMB	AMB	10 15 32.0	
	comp=E,1µm,2.0s						
TYV				AMB	AMB	10 15 32.0	
	comp=E,97nm,0.7s						
TYV				AMB	AMB	10 15 32.0	
	comp=E,198nm,0.7s						
TYV				AMB	AMB	10 15 32.0	
	comp=E,234nm,0.7s						
TYV				*e*S	**S**	**10 16 32.5**	**+1.2**
TYV				A		10 16 34.0	
	comp=E,2µm,3.0s						
TYV				A		10 16 34.0	
	comp=E,400nm,3.0s						
TYV				A		10 16 34.4	
	comp=E,57nm,0.9s						
TYV				A		10 16 34.4	
	comp=E,230nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**4.13**	**194**	*e*PN	**P**	**10 15 30.5**	**-1.3**
YUK				*e*S	**S**	**10 16 30.5**	**-1.2**
YUK				pmax	pmax		
	comp=N,100nm,0.4s						
YUK				pmax	pmax		
	comp=Z,180nm,0.4s						
YUK				smax			
	comp=N,2µm,1.2s						
YUK				smax			
	comp=E,2µm,1.2s						
YUK				smax			
	comp=N,520nm,0.5s						
YUK				smax			
	comp=E,390nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.13**	**194**	*e*P	**P**	**10 15 30.5**	**-1.3**
YUK				AMB	AMB	10 15 32.5	
	comp=E,100nm,0.4s						
YUK				AMB	AMB	10 15 32.5	
	comp=E,180nm,0.4s						
YUK				*e*S	**S**	**10 16 30.5**	**-1.2**
YUK				A		10 16 35.0	
	comp=E,2µm,1.2s						
YUK				A		10 16 37.0	
	comp=E,520nm,0.5s						
YUK				A		10 16 37.0	
	comp=E,390nm,0.5s						
JRA	**Rausu**	**4.37**	**200**	P	**P**	**10 15 34.2**	**+0.1**
JSE	**Soyaes**	**4.46**	**228**	P	**P**	**10 15 37.1**	**+2.2**
JSE				*e*S	**S**	**10 16 40.4**	**+3.2**
JWK2	**Keihoku**	**4.58**	**235**	P	**P**	**10 15 39.1**	**+3.0**
JWK2				*e*S	**S**	**10 16 43.8**	**+4.5**
JTKR	**Abashiri--Toko**	**4.69**	**211**	P	**P**	**10 15 37.6**	**+0.4**
JTKR				*e*S	**S**	**10 16 41.3**	**+0.1**
NEM2	**Nemuro 2**	**4.80**	**193**	P	**P**	**10 15 35.6**	**-2.6**
NEM2				*e*S	**S**	**10 16 38.9**	**-4.2**
ASAJ	**Asahikawa**	**5.09**	**221**	PN	**P**	**10 15 42.6**	**+1.6**
ASAJ				S	**S**	**10 16 50.5**	**+2.3**
ASAJ				pmax	pmax		
	comp=Z,20nm,0.3s						
ASAJ				smax			
	comp=E,1.0nm,0.3s						
ASAJ	**Asahikawa**	**5.09**	**221**	P	**P**	**10 15 42.5**	**+1.5**
	comp=E,20nm,0.3s,baz=60,slow=1.2,SNR=56						
ASAJ				S	**S**	**10 16 50.5**	**+2.3**
	comp=E,0.8nm,0.3s,baz=180,slow=20,SNR=11						
JKK2	**Kamakawa 2**	**5.22**	**218**	P	**P**	**10 15 43.5**	**+1.1**
JKK2				*e*S	**S**	**10 16 52.3**	**+1.8**
JAR	**Ashorobuto**	**5.34**	**208**	P	**P**	**10 15 43.2**	**-0.4**
JAR				*e*S	**S**	**10 16 51.7**	**-1.0**
JAK	**Akkeshi**	**5.36**	**200**	P	**P**	**10 15 42.1**	**-1.7**
JAK				*e*S	**S**	**10 16 49.7**	**-3.4**
JYG	**Yagishiri**	**5.42**	**230**	P	**P**	**10 15 46.0**	**+1.6**
JYG				*e*S	**S**	**10 16 56.5**	**+2.4**
JHR	**Hokuryu**	**5.77**	**224**	P	**P**	**10 15 49.5**	**+1.5**
JHR				*e*S	**S**	**10 17 02.6**	**+1.9**
JFR	**Furan**	**5.87**	**215**	P	**P**	**10 15 49.5**	**+0.5**
JFR				*e*S	**S**	**10 17 02.1**	**-0.4**
JCH	**Churui**	**6.08**	**208**	P	**P**	**10 15 49.3**	**-2.0**
JCH				*e*S	**S**	**10 17 02.4**	**-4.1**
SKR	**Severo-Kuril's**	**6.37**	**62**	*i* PN	**P**	**10 15 52.5**	**-1.8**
SKR				*e*S	**S**	**10 17 10.0**	**-2.1**
SKR				pmax	pmax		
	comp=N,150nm,0.5s						
SKR				pmax	pmax		
	comp=E,220nm,0.5s						
SKR				pmax	pmax		
	comp=Z,770nm,0.5s						
SKR				smax			
	comp=N,360nm,0.9s						
SKR				smax			
	comp=E,330nm,0.9s						
SKR				smax			
	comp=N,2µm,4.0s						
SKR				smax			
	comp=E,2µm,4.0s						
SKR	**Severo-Kuril's**	**6.37**	**62**	⇓*i*P	**P**	**10 15 52.5**	**-1.8**
SKR				AMB	AMB	10 15 53.4	
	comp=E,150nm,0.5s						
SKR				AMB	AMB	10 15 53.4	
	comp=E,220nm,0.5s						
SKR				AMB	AMB	10 15 53.4	
	comp=E,770nm,0.5s						
SKR				*e*S	**S**	**10 17 10.0**	**-2.1**
SKR				A		10 17 12.5	
	comp=E,360nm,0.9s						
SKR				A		10 17 12.5	
	comp=E,330nm,0.9s						
SKR				A		10 17 12.5	
	comp=E,800nm,0.5s						
SKR				A		10 17 12.5	
	comp=E,2µm,4.0s						
SKR				A		10 17 12.5	
	comp=E,2µm,4.0s						
JNBK	**Urakawa-nobuka**	**6.58**	**210**	P	**P**	**10 15 54.4**	**-2.2**
JNBK				*e*S	**S**	**10 17 10.3**	**-5.9**
JEW	**Eniwo**	**6.61**	**220**	P	**P**	**10 15 57.0**	**+0.1**
JEW				*e*S	**S**	**10 17 14.6**	**-2.2**
JSK	**Shakotan**	**6.67**	**228**	P	**P**	**10 15 58.3**	**+0.8**
JSK				*e*S	**S**	**10 17 17.4**	**-0.5**
JKB	**Kayabe**	**7.57**	**218**	P	**P**	**10 16 05.4**	**-2.0**
JKB				*e*S	**S**	**10 17 29.8**	**-5.8**
TEY	**Ternei**	**7.93**	**252**	*e*P	**P**	**10 16 11.0**	**-0.4**
TEY				AMB	AMB	10 16 11.5	
	comp=E,130nm,1.0s						
JOT	**Ohata**	**7.99**	**216**	P	**P**	**10 16 09.9**	**-2.2**
JOT				*e*S	**S**	**10 17 38.5**	**-5.5**
JOSM	**Okushiri--Mats**	**8.11**	**225**	P	**P**	**10 16 12.0**	**-1.4**
JANG	**Nango**	**8.70**	**210**	P	**P**	**10 16 17.7**	**-2.3**
JANG				*e*S	**S**	**10 17 52.3**	**-6.1**
PET	**Petropavlovsk**	**8.81**	**51**	*e*PN	**P**	**10 16 22.9**	**+1.7**
PET				*e*S	**S**	**10 18 01.2**	**+0.6**
PET				pmax	pmax		
	comp=Z,25nm,1.2s						
PET				smax			
	comp=N,200nm,2.6s						
PET				smax			
	comp=N,46nm,0.5s						
PET				smax			
	comp=E,43nm,0.6s						
JOM	**Ohasama**	**9.59**	**209**	P	**P**	**10 16 28.8**	**-1.1**
JOM				*e*S	**S**	**10 18 10.5**	**-5.8**
JMK	**Ichinoseki**	**10.09**	**208**	P	**P**	**10 16 35.1**	**-0.4**
JMK				*e*S	**S**	**10 18 25.7**	**-0.7**
KLR	**Kul'dur**	**10.32**	**282**	⇑*i*PN	**P**	**10 16 37.2**	**-0.9**
KLR				*e*S	**S**	**10 18 32.1**	**+0.9**
KLR				pmax	pmax		
	comp=N,24nm,1.0s						
KLR				pmax	pmax		
	comp=E,40nm,1.0s						
KLR				pmax	pmax		
	comp=Z,68nm,1.0s						
KLR				smax			
	comp=N,35nm,1.8s						
KLR				smax			
	comp=E,64nm,1.8s						
MA2	**Magadan**	**11.73**	**9**	*e*PN	**P**	**10 16 54.7**	**+1.0**
MA2				*e*S	**S**	**10 19 00.7**	**+0.6**
MA2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MDJ	**Mudanjiang**	**12.67**	**261**	P	**P**	**10 17 02.8**	**-1.2**
MDJ				S	**S**	**10 19 18.5**	**-0.2**
MDJ				SCP		10 24 53.3	
MDJ				AMB	AMB		
	comp=Z,90nm,4.9s						
MDJ	**Mudanjiang**	**12.67**	**261**	*e*P	**P**	**10 17 03.5**	**-0.5**
	comp=Z,134nm,0.8s						
MAJO	**Matsushiro**	**13.29**	**213**	*e*PN	**P**	**10 17 10.6**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,20nm,0.5s						
MAJO	**Matsushiro**	**13.29**	**213**	*e*P	**P**	**10 17 10.6**	**-0.1**
	comp=Z,20nm,0.5s						
MAT	**Matsushiro**	**13.29**	**213**	*e*PN	**P**	**10 17 11.0**	**+0.3**
MAT				*e*S	**S**	**10 19 33.0**	**+2.0**
MAT				pmax	pmax		
	comp=Z,16nm,0.7s						
MAT	**Matsushiro**	**13.29**	**213**	*e*P	**P**	**10 17 11.0**	**+0.3**
	comp=Z,16nm,0.7s						
MAT				*e*S	**S**	**10 19 33.0**	**+2.0**
MAT	**Matsushiro**	**13.29**	**213**	P	**P**	**10 17 10.8**	**+0.1**
MAT				S	**S**	**10 19 32.7**	**+1.7**
MJAR	**Matsushiro Arr**	**13.29**	**213**	P	**P**	**10 17 11.1**	**+0.4**
	comp=Z,5.6nm,0.3s,baz=13,slow=11,SNR=79						
MJAR				S	**S**	**10 19 34.0**	**+2.9**
	baz=41,slow=12,SNR=4.6						
ZEA	**Zeya**	**13.82**	**302**	*e*P	**P**	**10 17 13.0**	**-3.1**
ZEA				AMB	AMB	10 17 14.2	
	comp=Z,46nm,1.4s						
ZEA				AMB	AMB	10 17 14.2	
	comp=Z,37nm,1.4s						
ZEA				AMB	AMB	10 17 14.2	
	comp=Z,55nm,1.4s						
ZEA				*e*S	**S**	**10 19 39.0**	**-2.2**
ZEA				A		10 19 43.0	
	comp=Z,200nm,3.0s						
ZEA				A		10 19 43.0	
	comp=Z,200nm,4.0s						
ZEA				A		10 19 43.1	
	comp=Z,65nm,1.4s						
ZEA				A		10 19 43.1	
	comp=Z,93nm,1.4s						

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ZEA                                   A                  10 19 43.1
       comp=Z,32nm,1.4s
SEY    Seymchan         15.19    9  eP        P          10 17 31.2 +1.0
SEY                                   pmax    pmax
       comp=Z,3.0nm,0.6s
CN2    Changchun        15.73 262⇓iP        P          10 17 34.8  -1.0
CN2                                 eS        S          10 20 15.3  -2.4
CN2                                   AMB     AMB
       comp=Z,90nm,1.0s
CN2                                   AMB     AMB
       comp=Z,200nm,3.0s
YAK    Yakutsk          17.16 331  eP        P          10 17 49.7  -0.4
YAK                                   pmax    pmax
       comp=Z,138nm,0.7s
YAK    Yakutsk          17.16 331  eP        P          10 17 49.7  -0.4
       comp=Z,138nm,0.7s
FX1    Attu Island--F   17.16   64   P        P          10 17 52.8 +2.6
FX1                                   pmax    pmax
       comp=Z,4.0nm,0.3s
FX1    Attu Island--F   17.16   64   P        P          10 17 52.8 +2.6
       comp=Z,4.1nm,0.3s,baz=333,slow=4.5,SNR=17
FX1    Attu Island--F   17.16   64  eP        P          10 17 52.0 +1.8
KS15   Wonju Array Si   17.68 240  eP        P          10 17 57.5 +1.9
SNY    Shenyang         17.83 258 ⇓P        P          10 17 57.5 +0.5
HIA    Hailar           18.17 284  eP        P          10 17 59.6  -0.7
HIA                                   pmax    pmax
       comp=Z,8.0nm,0.6s
HIA    Hailar           18.17 284  eP        P          10 17 59.5  -0.8
       comp=Z,8.1nm,0.6s
JNU    Nakatsue         19.35 226   P        P          10 18 14.3 +2.4
       comp=Z,1.3nm,0.3s,baz=36,slow=14,SNR=14
DL2    Dalian           20.63 253   P        P          10 18 25.5 +1.4
DL2                                   AMB     AMB
       comp=Z,90nm,0.9s
CIT    Chita            21.88 293  eP        P          10 18 34.7  -1.1
CIT                                   pmax    pmax
       comp=Z,32nm,1.5s,mb4.5
BOD    Bodaibo          22.07 309  eP        P          10 18 31.7  -5.9
BOD                                   pmax    pmax
       comp=Z,8.0nm,1.3s,mb4.0
BILL   Bilibino         22.24   19 i P        P          10 18 38.9  -0.1
BILL                                  pmax    pmax
       comp=Z,2.0nm,0.6s,mb3.7
TIXI   Tiksi            25.18 346 i P        P          10 19 04.2  -1.2
TIXI                                  pmax    pmax
       comp=Z,3.0nm,0.8s,mb3.8
JOW    Kunigami         25.85 222   P        P          10 19 12.1 +0.2
       comp=Z,5.9nm,0.5s,mb4.3,baz=323,slow=15,SNR=3.7
SSE    Sheshan          26.08 239   P        P          10 19 14.5 +0.6
SSE                                   S       S          10 23 14.3 +1.0
SSE                                   PCS                10 26 09.0
SSE                                   AMB     AMB
       comp=Z,10.0nm,0.7s,mb4.3
SSE                                   AMB     AMB
       comp=Z,90nm,4.6s
SSE    Sheshan          26.08 239   P        P          10 19 14.4 +0.5
       comp=Z,19nm,0.7s,mb4.6
SSE                                   pP                 10 20 30.8
SSE                                   sP      sP         10 21 22.8 +2.6
SSE                                   S       S          10 23 14.2 +0.9
SSE                                   sS                 10 25 37.5
SSE                                   PcS                10 26 09.1
HHC    Hu-ho-hao-te     26.28 267  eP        P          10 19 16.3 +0.6
HHC                                   AP                 10 20 28.0
HHC                                   XP      sP         10 21 17.5  -4.6
HHC                                   S       S          10 23 15.5  -1.0
HHC                                   SCP                10 25 27.5
HHC                                   SCS     ScS        10 29 16.3 +0.6
HHC                                   AMB     AMB
       comp=Z,60nm,1.0s,mb5.0
HHC                                   AMB     AMB
       comp=Z,100nm,7.4s
ULN    Ulaanbaatar      26.70 285⇑eP        P          10 19 20.2 +0.9
ULN    Ulaanbaatar      26.70 285  eP        P          10 19 19.9 +0.6
       comp=Z,15nm,1.0s,mb4.4
NJ2    Nanjing          26.76 244  eP        P          10 19 20.5 +0.5
NJ2                                   S       S          10 23 25.0 +0.9
NJ2                                   PCS                10 26 11.0
NJ2                                   AMB     AMB
       comp=Z,10.0nm,0.5s,mb4.5
NJ2                                   AMB     AMB
       comp=Z,230nm,5.2s
SONM   Songino Array    27.14 285   P        P          10 19 22.8  -0.3
       comp=Z,4.6nm,0.8s,mb4.0,baz=60,slow=10.0,SNR=9.6
SONM                                  ScP                10 25 24.9
       comp=Z,2.2nm,0.5s,baz=45,slow=3.5,SNR=4.9
TLY    Talaya           28.02 294⇓iP        P          10 19 30.8   0.0
TLY                                   pmax    pmax
       comp=Z,13nm,0.8s,mb4.3
ZAK    Zakamensk        28.50 291  eP        P          10 19 35.0   0.0
ZAK                                   pmax    pmax
       comp=Z,12nm,1.0s,mb4.2
ZAK                                   pmax    pmax
       comp=Z,6.0nm,1.3s,mb3.8
TNA    Tin City         29.29   37  eP        P          10 19 41.2  -0.6
       comp=Z,3.7nm,1.0s,mb3.7
XAN    Xi'an            31.75 258   P        P          10 20 03.5 +0.2
XAN                                   AMB     AMB
       comp=Z,10.0nm,1.1s,mb4.1
ENH    Enshi            33.81 252  eP        P          10 20 20.8   0.0
       comp=Z,8.9nm,0.4s,mb4.5
LZH    Lanzhou          33.93 266⇓iP        P          10 20 23.0 +1.3
LZH                                   AP      pP         10 21 42.0  -0.2
LZH                                   PP      PP         10 21 54.8 +5.0
LZH                                   XP      sP         10 22 28.0  -3.2
LZH                                   PCP     PcP        10 22 50.0 +1.1
LZH                                   AMB     AMB
       comp=Z,130nm,1.0s,mb5.2
LZH                                   AMB     AMB
       comp=Z,530nm,4.0s
LZH    Lanzhou          33.93 266⇓iP        P          10 20 23.0 +1.3
LZH                                   *PP     pP         10 21 42.0  -0.2
LZH                                                      10 21 54.8
LZH                                                      10 22 50.0
LZH                                   pmax    pmax
       comp=Z,139nm,1.0s,mb5.2
LZH    Lanzhou          33.93 266⇓iP        P          10 20 23.0 +1.3
       comp=Z,139nm,1.0s,mb5.2
LZH                                   pP      pP         10 21 42.0  -0.2
LZH                                   PP      PP         10 21 54.8 +5.0
LZH                                   sP      sP         10 22 28.0  -3.2
LZH                                   PcP     PcP        10 22 50.0 +1.1
GTA    Gaotai           34.86 274 ⇓P        P          10 20 31.0 +1.5
GTA                                   AP      pP         10 21 51.0 +0.5
GTA                                   PP      PP         10 22 03.0 +3.1
GTA                                   PCP     PcP        10 22 49.5  -2.1
GTA                                   S       S          10 25 34.0 +4.7
GTA                                   SCP                10 25 53.5
GTA                                   SS      SS         10 28 24.0 +4.3
GTA                                   AMB     AMB
       comp=Z,20nm,0.9s,mb4.5
GTA                                   AMB     AMB
       comp=Z,80nm,6.1s
IMA    Indian Mountai   35.16   37  eP        P          10 20 32.0 +0.3
IMA                                   pmax    pmax
       comp=Z,7.0nm,0.4s,mb4.3
IMA    Indian Mountai   35.16   37  eP        P          10 20 32.0 +0.3
       comp=Z,7.3nm,0.4s,mb4.4
CD2    Chengdu          37.11 259  eP        P          10 20 49.0 +0.7
CD2                                   AMB     AMB
       comp=Z,60nm,1.0s,mb4.9
ILAR   Eielson Array    38.05   39   P        P          10 20 55.5  -0.2
       comp=Z,2.1nm,0.4s,mb3.8,baz=253,slow=6.0,SNR=70
ILAR                                  pP      pP         10 22 20.7 +2.8
       comp=Z,0.6nm,0.8s,baz=270,slow=7.2,SNR=2.8
ILAR                                  PcP     PcP        10 22 58.5  -2.6
       comp=Z,0.7nm,0.6s,baz=281,slow=3.0,SNR=5.8
ILAR                                  ScP                10 26 03.0
       comp=Z,1.0nm,0.9s,baz=287,slow=5.1,SNR=8.1
ZAL    Zalesovo         38.60 303 i P        P          10 20 59.5  -0.8
ZAL                                   pmax    pmax
       comp=Z,2.0nm,0.3s
ZAL    Zalesovo         38.60 303   P        P          10 20 59.8  -0.5
       comp=Z,1.9nm,0.3s,mb3.9,baz=14,slow=5.1,SNR=7.8
ZAL                                   ScP                10 26 05.7
       comp=Z,1.7nm,0.4s,baz=357,slow=3.3,SNR=7.9
ZAL    Zalesovo         38.60 303   P        P          10 20 59.8  -0.5
ZAL                                   ScP                10 26 05.7
NVS    Novosibirsk      39.20 305 i P        P          10 21 05.3 +0.1
WMQ    Urumqi           40.73 287   P        P          10 21 18.8 +1.0
WMQ                                   AP      pP         10 22 43.0 +2.0
WMQ                                   AMB     AMB
       comp=Z,20nm,0.8s,mb4.5
WMQ                                   AMB     AMB
       comp=Z,110nm,4.2s
KMI    Kunming          41.67 253   P        P          10 21 26.3 +0.7
KMI                                   AP      pP         10 22 50.0 +1.0
KMI                                   S       S          10 27 11.3 +1.1
KMI                                   XS                 10 29 39.5
KMI                                   AMB     AMB
       comp=Z,10.0nm,0.8s,mb4.2
KMI                                   AMB     AMB
       comp=Z,80nm,5.8s
KMI    Kunming          41.67 253   P        P          10 21 26.3 +0.7
KMI                                   *PP     pP         10 22 50.0 +1.0
KMI                                   *SP     sP         10 23 13.0   -25
KMI                                   S       S          10 27 11.3 +1.1
KMI                                   *SS                10 29 39.6
KMI                                   pmax    pmax
       comp=Z,13nm,0.8s,mb4.3
KMI    Kunming          41.67 253   P        P          10 21 26.3 +0.7
       comp=Z,13nm,0.8s,mb4.3
KMI                                   pP      pP         10 22 50.0 +1.0
KMI                                   sP      sP         10 23 13.0   -25
KMI                                   S       S          10 27 11.3 +1.1
KMI                                   sS                 10 29 39.6
INK    Inuvik           42.70   33  eP        P          10 21 32.6  -0.6
INK                                   pmax    pmax
       comp=Z,4.0nm,0.4s
INK    Inuvik           42.70   33   P        P          10 21 32.8  -0.4
       comp=Z,4.3nm,0.4s,mb4.2,baz=283,slow=6.0,SNR=50
INK    Inuvik           42.70   33  eP        P          10 21 32.6  -0.5
       comp=Z,4.2nm,0.4s,mb4.1
MKAR   Makanchi Array   42.78 294   P        P          10 21 34.1   0.0
       comp=Z,16nm,0.8s,mb4.4,baz=63,slow=8.1,SNR=95
MKAR                                  ScP                10 26 22.4
       comp=Z,1.7nm,0.7s,baz=70,slow=2.4,SNR=6.7
LSA    Lhasa            46.27 268   P        P          10 22 03.5 +1.8
LSA                                   AMB     AMB
       comp=Z,40nm,0.8s,mb4.8
LSA    Lhasa            46.27 268  eP        P          10 22 03.6 +1.9
LSA                                   pmax    pmax
       comp=Z,32nm,0.6s,mb4.8
LSA    Lhasa            46.27 268  eP        P          10 22 03.6 +1.9
       comp=Z,32nm,0.6s,mb4.8
VOSK   Vostochnaya      46.72 306   P        P          10 22 03.7  -1.1
VOSK                                  pmax    pmax
       comp=Z,11nm,0.8s,mb4.2
BVAR   Borovoye Array   46.91 306   P        P          10 22 05.6  -0.7
       comp=Z,6.4nm,0.7s,mb4.0,baz=59,slow=8.3,SNR=16
DLBC   Dease Lake       47.53   45   P        P          10 22 11.2 +0.3
       comp=Z,0.4nm,0.4s,baz=307,slow=10,SNR=3.5
ZRNK   Zerenda          47.69 307  eP        P          10 22 11.4  -0.8
ZRNK                                  pmax    pmax
       comp=Z,9.0nm,0.7s,mb4.2
ZRNK   Zerenda          47.69 307  eP        P          10 22 11.4  -0.8
       comp=Z,9.3nm,0.7s,mb4.2
SHL    Shillong         48.49 263  eP        P          10 22 18.5  -0.1
ULHL   Ulahol           48.78 291   P        P          10 22 21.2 +0.6
       SNR=20
TKM2   Tokmak 2         48.82 292   P        P          10 22 21.5 +0.5
       SNR=8.2
CMAR   Chiang Mai Arr   48.92 250   P        P          10 22 22.3 +0.3
       comp=Z,3.8nm,0.7s,mb3.8,baz=34,slow=7.1,SNR=17
CMAR                                  ScP                10 26 50.4
       comp=Z,1.6nm,0.5s,baz=8.3,slow=3.0,SNR=6.7
USP    Ospenovka        49.32 293   P        P          10 22 24.7   0.0
       SNR=24
KBK    Karagaybulak     49.37 292   P        P          10 22 25.6 +0.6
       SNR=8.9
KZA    Kyzart           49.49 291   P        P          10 22 27.2 +1.2
       SNR=11
AAK    Ala-Archa        49.66 292   P        P          10 22 27.8 +0.6
       SNR=8.4
AAK    Ala-Archa        49.66 292 i P        P          10 22 27.1  -0.2
AAK                                   pmax    pmax
       comp=Z,19nm,0.8s,mb4.5
EKS2   Erkin-Say        50.09 293   P        P          10 22 30.7 +0.2
       SNR=20
SVE    Sverdlovsk       50.11 314⇓eP        P          10 22 30.0  -0.4
SVE                                   pmax    pmax
       comp=Z,40nm,0.9s,mb4.8
GUN    Gumba            50.96 270  eP        P          10 22 37.4 +0.3
       comp=Z,24nm,0.4s,mb4.8
ARU    Arti             51.31 315⇓iP        P          10 22 38.2  -1.0
ARU                                 e                    10 23 44.2
ARU                                 e                    10 24 39.9
ARU                                 eS        S          10 29 23.2  -0.7
ARU                                 eSS       SS         10 33 08.0 +0.8
ARU                                   pmax    pmax
       comp=Z,26nm,0.7s,mb4.6
ARU    Arti             51.31 315  eP        P          10 22 38.0  -1.3
       comp=Z,29nm,0.8s,mb4.6
KKN    Kakani           51.44 270  eP        P          10 22 40.8 +0.2
       comp=Z,33nm,0.4s,mb4.9
PKI    Pulchoki         51.49 270  eP        P          10 22 41.3 +0.3
       comp=Z,27nm,0.7s,mb4.6
PKI    Pulchoki         51.49 270  eP        P          10 22 41.3 +0.3
PKI                                   pmax    pmax
       comp=Z,13nm,0.7s,mb4.3
DMN    Daman            51.67 270  eP        P          10 22 42.5 +0.2
       comp=Z,108nm,1.0s,mb5.0
GKN    Gorkha           51.73 271  eP        P          10 22 42.6  -0.2
       comp=Z,176nm,1.0s,mb5.2
KKAR   Karatay Array    51.85 295 i P        P          10 22 42.7  -0.7
KKAR                                  pmax    pmax
       comp=Z,10.0nm,0.7s,mb4.2
YKA    Yellowknife Ar   52.23   36   P        P          10 22 44.7  -1.2
       comp=Z,1.1nm,0.4s,mb3.4,baz=303,slow=7.1,SNR=6.3
YKA                                   ScP                10 27 02.5
       comp=Z,0.2nm,0.4s,baz=303,slow=4.8,SNR=3.8
YKA    Yellowknife Ar   52.23   36   P        P          10 22 44.7  -1.2
YKA                                   ScP                10 27 02.5
KOLN   Koldanda         52.58 271  eP        P          10 22 49.0 +0.1
       comp=Z,65nm,0.8s,mb4.9
POHA   Pohakuloa        53.76 101  eP        P          10 22 57.0  -0.6
       comp=Z,653nm,0.8s
AB31   Akbulak array    54.48 306   P        P          10 23 01.3  -1.0
AB31                                  pmax    pmax
       comp=Z,1.0nm,0.3s,mb3.5
KEV    Kevo             54.72 338  ep        P          10 23 01.6  -2.1
       comp=Z,13nm,1.0s,mb4.1
KEV    Kevo             54.72 338  eP        P          10 23 01.6  -2.1
KEV                                   pmax    pmax
       comp=Z,13nm,1.0s,mb4.1
ARCES  ARCESS Array B   55.25 339   P        P          10 23 06.0  -1.4
       comp=Z,1.5nm,0.4s,mb3.5,baz=49,slow=8.5,SNR=13
ARCES                                 PcP     PcP        10 24 00.7  -1.3
       comp=Z,0.6nm,0.5s,baz=80,slow=5.5,SNR=3.1
NDI    New Delhi        56.26 277  eP        P          10 23 13.5  -1.5
PMG    Port Moresby     57.20 180   P        P          10 23 21.2  -0.4
       comp=Z,3.6nm,0.4s,mb4.0,baz=113,slow=7.7,SNR=3.4
NEW    Newport          59.50   51   P        P          10 23 36.9 +0.2
       comp=Z,1.3nm,0.3s,mb3.7,baz=282,slow=5.1,SNR=6.1
KAF    Kangasniemi      60.51 332  ep        P          10 23 41.3  -1.9
       comp=Z,3.5nm,0.8s,mb3.8,baz=40,slow=6.2
KAF    Kangasniemi      60.51 332  eP        P          10 23 41.3  -1.9
KAF                                   pmax    pmax
       comp=Z,4.0nm,0.8s,mb3.9
YBH    Yreka Blue Hor   60.58   59   P        P          10 23 45.2 +1.2
       comp=Z,4.2nm,0.8s,mb4.0,baz=31,slow=3.2,SNR=13
FINES  FINESS Array B   61.09 332   P        P          10 23 45.8  -1.3
       comp=Z,8.7nm,0.6s,mb4.4,baz=36,slow=8.0,SNR=44
BMO    Blue Mountains   61.59   54  eP        P          10 23 51.0 +0.4
       comp=Z,5.9nm,1.4s,mb3.9
KAKA   Kakadu           61.91 196  eP        P          10 23 51.5  -1.6
       comp=Z,6.6nm,0.6s,mb4.3
OBN    Obninsk          61.91 322⇑eP        P          10 23 51.5  -1.1
OBN                                   pmax    pmax
       comp=Z,20nm,0.7s,mb4.8
MSO    Missoula         62.07   50  eP        P          10 23 53.5  -0.2
       comp=Z,2.1nm,1.0s,mb3.6
MSO                                 ePcP      PcP        10 24 28.5  -0.9
HRY    Holter Researc   63.23   49  eP        P          10 24 01.2  -0.1
MCMT   McKenzie Canyo   63.98   51  eP        P          10 24 06.5 +0.5
BOZ    Bozeman (W)      64.05   50  eP        P          10 24 07.2 +0.7
BOZ                                   pmax    pmax
       comp=Z,3.0nm,0.5s,mb4.1
BOZ    Bozeman (W)      64.05   50  eP        P          10 24 07.2 +0.7
       comp=Z,3.4nm,0.5s,mb4.1
NVAR   Mina Array Bea   65.29   60   P        P          10 24 15.4 +1.0
       comp=Z,3.6nm,0.7s,mb4.1,baz=312,slow=4.2,SNR=27
NVAR                                  pP      pP         10 25 50.8 +3.0
       comp=Z,0.4nm,0.4s,baz=302,slow=8.5,SNR=1.7
NB2    NORSAR Subarra   65.62 338   P        P          10 24 14.7  -1.4
       comp=Z,12nm,0.9s,mb4.5,baz=29,slow=6.2
NOA    NORSAR Array B   65.62 338   P        P          10 24 15.0  -1.1
NOA                                   *PP     pP         10 25 51.9 +2.3
NOA                                   pmax    pmax
       comp=Z,5.0nm,0.7s
NOA                                   pmax    pmax
       comp=Z,1.0nm,0.8s
NOA    NORSAR Array B   65.62 338   P        P          10 24 15.0  -1.1
       comp=Z,5.3nm,0.7s,mb4.3,baz=31,slow=6.2,SNR=18
NOA                                   pP      pP         10 25 51.9 +2.3
       comp=Z,1.3nm,0.8s,baz=31,slow=6.6,SNR=3.4
RRI2   Red Ridge        65.79   52  eP        P          10 24 19.0 +1.5
       comp=Z,7.8nm,0.6s,mb4.5
TPAW   Teton Pass       65.89   51  eP        P          10 24 19.5 +1.4
       comp=Z,4.8nm,1.1s,mb4.0
GOF    Gofitskoye       66.02 311  eP        P          10 24 15.0  -3.9
GOF                                   pmax    pmax
       comp=Z,48nm,0.8s,mb5.2
KIV    Kislovodsk       66.97 311  eP        P          10 24 25.8 +1.0
KIV                                   pmax    pmax
       comp=Z,11nm,0.6s,mb4.7
KIV    Kislovodsk       66.97 311  eP        P          10 24 25.8 +1.0
       comp=Z,11nm,0.6s,mb4.7
PDAR   Pinedale Array   67.12   51   P        P          10 24 26.1 +0.4
       comp=Z,3.8nm,0.5s,mb4.3,baz=323,slow=1.6,SNR=42
PDAR                                  pP      pP         10 26 03.2 +3.5
       comp=Z,0.8nm,0.8s,baz=321,slow=5.8,SNR=3.1
AKASG  Malin Array Be   68.17 323   P        P          10 24 30.9  -1.1
AKASG                                 pmax    pmax
       comp=Z,5.0nm,0.6s
AKASG  Malin Array Be   68.17 323   P        P          10 24 30.9  -1.1
       comp=Z,5.1nm,0.6s,mb4.4,baz=34,slow=5.8,SNR=18
ARUT   Antelope Range   68.51   57  eP        P          10 24 35.2 +0.9
FITZ   Fitzroy Crossi   68.63 202   P        P          10 24 35.3   0.0
       comp=Z,18nm,1.0s,mb4.6,baz=359,slow=3.7,SNR=7.2
WB2    Warramunga Arr   68.66 193  eP        P          10 24 34.5  -0.9
WRA    Warramunga Arr   68.66 193   P        P          10 24 34.6  -0.8
WRA                                   pmax    pmax
       comp=Z,4.0nm,0.6s
WRA    Warramunga Arr   68.66 193   P        P          10 24 34.6  -0.9
       comp=Z,4.4nm,0.6s,mb4.2,baz=11,slow=6.8,SNR=60
MSU    Marysvale        68.71   56  eP        P          10 24 36.9 +1.4
RSSD   Black Hills      68.95   47  eP        P          10 24 36.7  -0.1
RSSD                                  pmax    pmax
       comp=Z,3.0nm,0.6s,mb4.1
RSSD   Black Hills      68.95   47  eP        P          10 24 36.7  -0.1
       comp=Z,2.5nm,0.6s,mb4.0
SRU    San Rafael       69.20   54  eP        P          10 24 38.8 +0.4
NEN    Nelson           69.21   60  eP        P          10 24 39.0 +0.4
PV10   Paradox Valley   70.53   54  eP        P          10 24 48.0 +1.6
PV01   Paradox Valley   70.96   54  eP        P          10 24 49.6 +0.7
KOLS   Kolonicke sedl   72.31 325  eP        P          10 24 51.4  -5.2
MALT   Malatya          73.28 309  eP        P          10 25 03.4 +1.0
MALT                                  pmax    pmax
       comp=Z,4.0nm,0.8s,mb4.0
MALT   Malatya          73.28 309  eP        P          10 25 03.4 +1.0
       comp=Z,4.5nm,0.8s,mb4.0
KECS   Kecovo           73.36 326  eP        P          10 25 00.1  -2.4
CLL    Collm            73.54 332 i P        P          10 25 03.1  -0.4
CLL                                   pmax    pmax
       comp=Z,14nm,0.9s,mb4.6
CLL    Collm            73.54 332   P        P          10 25 03.1  -0.4
       comp=Z,logA/T=1.2,mb4.6
SCHQ   Schefferville    73.55   20   P        P          10 25 02.8  -0.7
       comp=Z,1.2nm,0.4s,mb3.8,baz=251,slow=2.4,SNR=8.5
TUC    Tucson           73.95   60  eP        P          10 25 07.0 +0.7
TUC                                   pmax    pmax
       comp=Z,3.0nm,1.0s,mb3.9
TUC    Tucson           73.95   60  eP        P          10 25 07.0 +0.7
       comp=Z,3.4nm,1.0s,mb3.9
VYHS   Vyhne            73.95 327  eP        P          10 25 06.3 +0.3
ANMO   Albuquerque      74.45   55  eP        P          10 25 09.2 +0.2
ANMO                                  pmax    pmax
       comp=Z,2.0nm,0.8s
ANMO   Albuquerque      74.45   55  eP        P          10 25 09.2 +0.2
       comp=Z,1.5nm,0.8s,mb3.7
MOX    Moxa             74.55 332  eP        P          10 25 08.0  -1.2
BRTR   Keskin Array B   74.64 313   P        P          10 25 10.0   0.0
BRTR                                  pmax    pmax
       comp=Z,2.0nm,0.9s
BRTR   Keskin Array B   74.64 313   P        P          10 25 09.9  -0.1
       comp=Z,2.4nm,0.9s,mb3.8,baz=76,slow=5.1,SNR=10
KHC    Kasperske Hory   75.24 331⇓eP        P          10 25 13.3 +0.2
GERES  GERESS Array B   75.44 330   P        P          10 25 13.8  -0.5
GERES                                 pmax    pmax
       comp=Z,1.0nm,0.5s
GERES  GERESS Array B   75.44 330   P        P          10 25 13.8  -0.5
       comp=Z,1.3nm,0.5s,mb3.8,baz=34,slow=4.8,SNR=12
MNTX   Cornudas Mount   77.48   56  eP        P          10 25 26.2 +0.3
       comp=Z,3.6nm,0.9s,mb4.0
STKA   Stephens Creek   79.72 185   P        P          10 25 38.0 +0.3
       comp=Z,2.2nm,0.5s,mb4.0,baz=325,slow=7.6,SNR=8.0
TXAR   Lajitas Array    80.23   57   P        P          10 25 41.5 +1.1
TXAR                                  pmax    pmax
       comp=Z,5.0nm,0.5s
TXAR                                  pmax    pmax
       comp=Z,1.0nm,0.8s
TXAR   Lajitas Array    80.23   57   P        P          10 25 41.5 +1.0
       comp=Z,5.0nm,0.5s,mb4.4,baz=289,slow=3.6,SNR=101
TXAR                                  pP      pP         10 27 26.4 +8.1
       comp=Z,0.9nm,0.8s,baz=299,slow=4.3,SNR=7.5
NWAO   Narrogin (SRO)   84.98 205   P        P          10 26 03.9  -0.4
NWAO                                  pmax    pmax
       comp=Z,5.0nm,0.9s
NWAO   Narrogin (SRO)   84.98 205   P        P          10 26 03.9  -0.4
       comp=Z,5.0nm,0.9s,mb4.3,baz=342,slow=5.3,SNR=4.1
PCNG   Congro           94.31 354  eS        S          10 37 15.0  -3.4
       comp=Z,12nm,0.1s
VIF    Vila Franca      94.33 354  eS        S          10 37 15.1  -3.6
       comp=Z,7.4nm,0.1s
VNDA   Vanda           125.62 176   PKIKP    PKPdf      10 32 26.0 +1.1
VNDA                                  pmax    pmax
       comp=Z,1.0nm,0.6s
VNDA   Vanda           125.62 176   PKP      PKPdf      10 32 25.9 +1.0
       comp=Z,1.1nm,0.6s,baz=319,slow=3.4,SNR=7.6
MAW    Mawson          131.27 210   SKPbc               10 35 19.9
       comp=Z,5.1nm,0.9s,baz=85,slow=5.2,SNR=8.7
BOSA   Boshof          131.74 272   SKPbc               10 35 20.9
       comp=Z,2.5nm,0.8s,baz=76,slow=8.3,SNR=3.8
LPAZ   La Paz          137.07   55   SKP                 10 35 39.9
       comp=Z,3.6nm,1.1s,baz=359,slow=5.6,SNR=6.7
BDFB   Brasilia        145.32   26   PKP2     PKPab      10 33 05.1  -1.7
BDFB                                  pmax    pmax
       comp=Z,2.0nm,0.4s
BDFB                                  pmax    pmax
       comp=E,2.0nm,0.3s
BDFB   Brasilia        145.32   26   PKPbc    PKPbc      10 33 05.1 +1.7
       comp=E,1.6nm,0.3s,baz=334,slow=4.1,SNR=5.0
BDFB                                  SKPbc              10 36 00.1
       comp=E,1.5nm,0.3s,baz=350,slow=2.9,SNR=3.1
CFAA   Coronel Fontan  148.53   72   PKPbc    PKPdf      10 33 12.6 +5.2
       comp=E,0.5nm,0.4s,baz=275,slow=2.3,SNR=14
CPUP   Villa Florida   151.02   50   PKIKP    PKPdf      10 33 18.9 +7.6
CPUP                                  pmax    pmax
       comp=Z,2.0nm,0.5s
CPUP   Villa Florida   151.02   50   PKPbc    PKPdf      10 33 18.9 +7.5
       comp=Z,2.2nm,0.5s,baz=4.3,slow=3.7,SNR=7.0
PLCA   Paso Flores     152.24   89   PKIKP    PKPdf      10 33 21.3 +8.7
PLCA                                  pmax    pmax
       comp=Z,2.0nm,0.7s
PLCA   Paso Flores     152.24   89   PKPbc    PKPdf      10 33 21.3 +8.7
       comp=Z,2.1nm,0.7s,baz=219,slow=14,SNR=8.2
VNA2   Neumayer--Watz  154.10 199⇑iP        PKPdf      10 33 16.0 +1.7
VNA2   Neumayer--Watz  154.10 199  e         PKPdf      10 33 24.3   +10
VNA2   Neumayer--Watz  154.10 199  e         PKPdf      10 33 40.3   +26
VNA3   Neumayer Olymp  154.33 197⇑iP        PKPdf      10 33 15.8 +1.2
VNA3   Neumayer Olymp  154.33 197  e         PKPdf      10 33 24.4   +10
VNA3   Neumayer Olymp  154.33 197  e         PKPdf      10 33 41.0   +26
VNA1   Neumayer--Stat  154.50 199⇑iP        PKPdf      10 33 15.4 +0.6
VNA1   Neumayer--Stat  154.50 199  e         PKPdf      10 33 25.7   +11
VNA1   Neumayer--Stat  154.50 199  e         PKPdf      10 33 42.0   +27
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IDC 28 10:25:17.4±3.0**, 6.22N**×**92.33E, mb3.7**/2**, mb1 3.8**/3**, mb1mx3.6**/19**, mbtmp3.6**/3**, Error ellipse: s-maj=98.6km s-min=32.6km az=62.0, Nicobar Islands region**

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Code   Station Name        Δ°   AZ°   Phase ID           Time        Res
                                      Op       ISC       h  m  s     ISC
CMAR   Chiang Mai Arr   13.77   27    Pn       P         10 28 34.5  -1.9
       baz=238,slow=14,SNR=4.5
MKAR   Makanchi Array   41.34  350    P        P         10 33 04.8  -1.8
       1.1nm,0.6s,baz=172,slow=8.6,SNR=9.3
WRA    Warramunga Arr   48.81  123    P        P         10 34 04.7  -2.0
       0.3nm,0.4s,baz=303,slow=9.0,SNR=5.0
```

ISK ***28*** *10:41:38.1, 35.00N×27.47E, h75km, MD3.9, ML3.9*
ATH ***28*** *10:41:40.6, 35.31N×27.79E, h29km±1km, MD3.8/9*
CSEM ***28*** *10:41:40.8±0.2, 35.29N×27.82E, h10km, MD3.8, Error ellipse: s-maj=6.0km s-min=2.7km az=179.0*

*NEIC **28** 10:41:41.2, 35.38N×27.78E, h27^{km}, MD3.8(ATH), After ATH.*

ISC 28 10:41:38.7±1.3, 35.16N±0.07×27.73E±0.04, h4^{km}±12^{km}, n31, σ1^{s}06/45, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.61	310	ePn	Pb	10 41 51.3	-0.2
KARP				eSn	Sb	10 42 00.0	-0.2
KARP	Karpathos	0.61	310	ePN	Pb	10 41 52.0	+0.5
KARP				eSN	Sb	10 42 01.0	+0.8
ARG	Arkhangelos	1.10	17	ePn	Pn	10 41 59.3	-1.5
ARG				eSn	Sn	10 42 10.9	-5.8
ARG	Arkhangelos	1.10	17	ePN	Pn	10 41 59.3	-1.5
ARG				eSN	Sn	10 42 12.5	-4.2
NPS	Neapolis	1.74	274	ePB	Pb	10 42 12.0	+1.1
NPS	Neapolis	1.74	274	ePb	Pb	10 42 13.1	+2.2
DALT	Dalyan (Mudla)	1.77	24	PN	Pn	10 42 11.1	+0.8
DALT				SN	Sn	10 42 35.1	+1.6
KSL	Kastellorizon	1.80	56	ePN	Pn	10 42 10.0	-0.8
FETY	Fethiye	1.84	36	PN	Pn	10 42 12.5	+1.2
AKAS	Kas	1.86	54	i P	Pn	10 42 12.2	+0.5
AKAS				i S	Sn	10 42 34.2	-1.8
BDRM	Kayabasi	1.92	353	i P	Pn	10 42 11.4	-1.1
BDRM				i S	Sn	10 42 37.8	+0.4
BODT	Bodrum	1.93	350	PN	Pn	10 42 12.5	-0.2
BODT				SN	Sn	10 42 36.4	-1.3
YER	Yerkesik	2.02	13	PN	Pn	10 42 14.6	+0.6
MLSB	Milas	2.13	1	PN	Pn	10 42 15.7	+0.1
ELL	Elmali	2.37	47	PN	Pn	10 42 19.6	+0.6
GOLH	Golhisar	2.55	35	i P	Pn	10 42 21.8	+0.3
GOLH				i S	Sn	10 42 53.8	+0.5
APE	Apeiranthos	2.61	318	PN	Pn	10 42 19.0	-3.4
SMG	Samos	2.65	344	ePN	Pn	10 42 21.6	-1.3
DENT	Denizli	2.80	22	PN	Pn	10 42 25.5	+0.5
VAM	Vamos	2.90	276	ePN	Pn	10 42 28.0	+1.5
VAM				eSN	Sn	10 43 02.5	+0.2
VAM	Vamos	2.90	276	ePb	Pb	10 42 29.6	-1.1
VAM				eSn	Sn	10 43 02.8	+0.5
IZM	Izmir	3.26	353	ePN	Pn	10 42 31.0	-0.6
ISP	Isparta	3.49	39	ePN	Pn	10 42 35.9	+1.0
TKTP	Tekketepe	3.55	35	i P	Pn	10 42 34.9	-0.9
TKTP				i S	Sn	10 43 21.2	+2.5
KYTH	Kithira	3.98	288	ePN	Pn	10 42 42.5	+0.6
VLI	Veliai	4.19	293	ePN	Pn	10 42 45.6	+0.7
VLI				eSN	Sn	10 43 32.5	-2.5
VLI	Veliai	4.19	293	ePn	Pn	10 42 45.6	+0.7
VLI				eSn	Sn	10 43 31.8	-3.2
LEF	Lefka	4.23	89	ePN	Pn	10 42 44.4	-1.0
HDMB	Hadim	4.25	64	ePN	Pn	10 42 45.6	-0.1
KONT	Konya--Tatoy	4.65	52	ePN	Pn	10 42 51.4	0.0
KIZT	Kizilcal	4.98	41	ePN	Pn	10 42 55.3	-0.8

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*IDC **28** 11:05:11.8±8.1, 1.17N×126.37E, h61^{km}±75^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.7/17, mbtmp4.0/7, ML4.2/1, Error ellipse: s-maj=89.7km s-min=19.4km az=67.0*

*NEIC **28** 11:05:20.4±5.3, 0.96N×126.13E, h144^{km}±52^{km}, mb4.6/2, Error ellipse: s-maj=75.4km s-min=22.3km az=68.0*

ISC 28 11:05:18.7±5.1, 0.8N±0.2×125.7E±0.5, h139^{km}±51^{km}, n13, σ1^{s}16/12, mb3.8/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	15.04	154	eP	P	11 08 46.5	+1.2
	20nm,0.8s						
FITZ	Fitzroy Crossi	18.82	180	P	P	11 09 30.1	-0.1
	0.6nm,0.3s,baz=355,slow=7.0,SNR=18						
WRAB	Tennant Creek	22.33	158	eP	P	11 10 05.1	-0.4
	19nm,0.7s,mb4.6						
WRA	Warramunga Arr	22.33	158	P	P	11 10 04.7	-0.9
	11nm,0.7s,mb4.4,baz=337,slow=10,SNR=68						
WB2	Warramunga Arr	22.34	158	eP	P	11 10 04.8	-0.8
STKA	Stephens Creek	35.86	157	eP	P	11 12 06.7	-0.3
	2.8nm,0.8s,mb3.9						
STKA	Stephens Creek	35.86	157	P	P	11 12 06.6	-0.3
	3.1nm,0.7s,mb4.0,baz=348,slow=9.7,SNR=8.9						
STKA	Stephens Creek	35.86	157	eP	P	11 12 06.5	-0.5
STKA				eP		11 12 06.7	
SONM	Songino Array	49.71	343	P	P	11 13 58.4	-0.1
	0.4nm,0.7s,mb3.2,baz=158,slow=6.7,SNR=4.4						
MKAR	Makanchi Array	59.35	327	P	P	11 15 06.6	-1.8
	0.6nm,0.4s,mb3.8,baz=120,slow=7.6,SNR=9.4						
BVAR	Borovoye Array	69.17	328	P	P	11 16 13.7	+1.7
	0.3nm,0.3s,mb3.5,baz=124,slow=11,SNR=5.7						
VNDA	Vanda	80.72	173	P	P	11 17 19.9	+2.5
	0.6nm,0.6s,mb3.4,baz=317,slow=4.6,SNR=7.2						
TXAR	Lajitas Array	124.17	53	PKP	PKPdf	11 24 01.1	-0.3
	0.2nm,0.7s,baz=315,slow=2.6,SNR=3.7						

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*IDC **28** 11:29:32.0±2.0, 4.96S×102.82E, mb4.0/9, mb1 4.2/9, mb1mx4.0/18, mbtmp4.0/9, Error ellipse: s-maj=92.9km s-min=17.2km az=53.0*

*NEIC **28** 11:29:36.7±1.1, 4.91S×102.89E, h30^{km}, mb4.1/1, Error ellipse: s-maj=54.4km s-min=9.9km az=53.0*

ISC 28 11:29:35.0±1.6, 5.0S±0.3×102.8E±0.4, h33^{km}, n12, σ0^{s}89/11, mb4.0/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	23.58	351	P	P	11 34 45.0	+1.2
	0.7nm,0.4s,mb3.4,baz=183,slow=8.1,SNR=4.3						
FITZ	Fitzroy Crossi	25.84	122	P	P	11 35 05.3	-0.2
	8.1nm,1.0s,mb4.2,baz=190,slow=4.8,SNR=7.1						
WRA	Warramunga Arr	34.09	119	P	P	11 36 18.2	-0.6
	0.9nm,0.5s,mb3.9,baz=302,slow=9.0,SNR=18						
STKA	Stephens Creek	45.09	131	P	P	11 37 50.8	+0.8
	0.6nm,0.5s,mb3.7,baz=319,slow=9.1,SNR=3.2						
SONM	Songino Array	52.66	3	P	P	11 38 48.7	+0.5
	0.9nm,0.6s,mb3.9,baz=179,slow=11,SNR=7.0						
MKAR	Makanchi Array	54.64	343	P	P	11 39 02.1	-0.7
	1.2nm,0.8s,mb4.0,baz=135,slow=8.6,SNR=7.8						
ZAL	Zalesovo	60.60	348	P	P	11 39 43.6	-1.1
	1.3nm,0.3s,mb4.5,baz=274,slow=3.4,SNR=3.7						
BVAR	Borovoye Array	63.93	339	P	P	11 40 06.5	-0.4
	1.0nm,0.5s,mb4.1,baz=141,slow=9.5,SNR=7.1						
ZRNK	Zerenda	64.37	338	eP	P	11 40 08.9	-0.9
	0.8nm,0.5s,mb4.0						
FINES	FINESS Array B	88.03	332	P	P	11 42 24.4	+1.6
	2.3nm,1.0s,mb4.3,baz=135,slow=5.4,SNR=5.5						
FINES	FINESS Array B	88.03	332	P	P	11 42 24.4	+1.6
TXAR	Lajitas Array	145.13	43	PKPbc	PKPbc	11 49 11.4	+1.4
	0.5nm,0.5s,baz=285,slow=1.5,SNR=13						

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*THR **28** 12:00:26.3±0.5, 31.53N×51.22E, h45^{km}±5^{km}, ML3.1*

*CSEM **28** 12:00:31.0±0.1, 32.05N×51.01E, h20^{km}, ML3.3, Error ellipse: s-maj=3.7km s-min=2.6km az=6.0*

*TEH **28** 12:00:35.8, 32.11N×51.51E, h10^{km}, Mn3.3*

ISC 28 12:00:31.6±0.7, 32.11N±0.06×51.14E±0.06, h10^{km}, n23, σ1^{s}49/25, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGAR	Garneh	0.91	81	Pg	Pg	12 00 45.6	-4.3
IKLH	Kalahroud	1.26	17	Pg	Pn	12 00 50.6	-4.7
IZEF	Zefreh	1.27	52	Pg	Pg	12 00 53.5	-3.7
NASN	Na’in	1.57	64	ePG	Pn	12 00 59.9	+0.1
NASN				AML	AML	12 01 32.5	
	comp=N,154nm,0.5s						
QAM	Qamsar	1.87	17	Pn	Pn	12 01 02.0	-2.0
SHGO	Shushtar	1.98	271	ePG	Pn	12 01 04.6	-1.1
SHGO				eSG	Sn	12 01 32.4	+1.7
SHGR	Shooshtar-Gavs	1.98	271	ePG	Pn	12 01 04.6	-1.1
SHGR				AML	AML	12 01 57.5	
	comp=N,133nm,0.7s						
IQOM	Qom	2.72	359	Pn	Pn	12 01 10.6	-5.7
ICHK	Chekchek	2.78	86	Pn	Pn	12 01 17.7	+0.7
IPAR	Pars	2.80	144	Pn	Pn	12 01 17.4	+0.1
IVRN	Varamin	2.92	10	Pn	Pn	12 01 21.1	+2.0
IVRN				Sn	Sn	12 01 56.0	+1.5
IRAZ	Razeghan	3.43	343	Pn	Pn	12 01 31.4	+5.0
IRAZ	Razeghan	3.43	343	Lg		12 02 25.1	
IDMV	Damavand	3.54	12	Pn	Pn	12 01 30.2	+2.4
DAMV	Damavand	3.58	11	ePN	Pn	12 01 28.9	+0.5
ILAS	Lasjerd	3.60	24	Pn	Pn	12 01 37.1	+8.4
IFIR	Firoozkooh	3.77	20	Pn	Pn	12 01 32.4	+1.3
IFIR				Sn	Sn	12 02 14.3	-1.7
IANJ	Anjiloo	4.07	34	Pn	Pg	12 01 45.8	-7.1
ISHM	Shahmirzad	4.10	25	Pn	Pn	12 01 44.8	+9.0
IPRN	Paran-Amol	4.22	12	Pn	Pg	12 01 50.1	-5.8
SNGE	Sanandaj	4.34	314	ePN	Pn	12 01 37.6	-1.7
IKIA	Kiasar	4.60	27	Pn	Pg	12 02 01.3	-2.2
IGLO	Galoogah	4.62	24	Pn	Pn	12 01 51.3	+8.1

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*HEL **28** 12:06:22.1±0.1, 59.64N×22.31E, ML1.5, ML2.3(UPP), Explosion*

*IDC **28** 12:06:23.4±2.2, 59.67N×22.25E, mb1 2.9/4, mb1mx2.8/22, mbtmp2.8/4, ML2.5/4, Error ellipse: s-maj=32.7km s-min=7.9km az=166.0*

ISC 28 12:06:20.8±0.6, 59.70N±0.05×22.32E±0.05, n24, σ1^{s}23/37, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	Aland	1.27	293	eP	Pb	12 06 44.8	-0.5
AAL				eS	Sb	12 07 00.7	-1.3
NRTU	Norrtaelje	1.87	271	eP	Pn	12 06 54.7	+0.3
NRTU				eS	Sn	12 07 19.3	+0.2
PVF	Pernaja	1.96	63	ePG	Pg	12 06 58.7	-1.4
PVF				eSG	Sg	12 07 23.4	-2.9
GRAU	Graesoe	2.00	290	eP	Pn	12 06 56.6	+0.3
FORU	Forsmark	2.19	290	eP	Pn	12 06 59.4	+0.4
FLYU	Flymyra	2.28	283	eP	Pn	12 07 00.9	+0.7
NYNU	Nynaeshamn	2.32	254	eP	Pn	12 07 01.8	+1.0
FIA0	FINESS Array S	2.55	45	ePG	Pg	12 07 08.5	-3.3
FIA0				eSB	Sb	12 07 40.1	+0.8
FINES	FINESS Array B	2.55	45	Pn	Pn	12 07 07.0	+2.9
	0.4nm,0.3s,baz=231,slow=12,SNR=16						
FINES				Sn	Sn	12 07 40.2	+3.8
	1.7nm,0.3s,baz=233,slow=22,SNR=23						
VSU	Vasula	2.59	117	ePB	Pb	12 07 06.2	-1.8
VSU				eSG	Sg	12 07 40.9	-6.2
BACU	Backbrunna	2.64	276	eP	Pn	12 07 06.3	+0.9
VJF	Virojoki	2.75	70	eP	Pn	12 07 08.3	+1.3
VJF				eS	Sn	12 07 42.7	+1.2
IGGU	Iggoen	2.76	297	eP	Pn	12 07 07.7	+0.6
KEF	Keuruu	2.77	26	ePB	Pb	12 07 11.0	0.0
KEF				eSG	Sg	12 07 48.6	-4.5
KEF				MSG		12 07 49.8	
	comp=Z,1.2nm,0.1s						
ESKU	Eskilstuna	3.06	264	eP	Pn	12 07 11.9	+0.5
KAF	Kangasniemi	3.11	37	ePB	Pb	12 07 16.1	-0.6
KAF				eSB	Sb	12 07 56.2	+0.7
KAF				MSG		12 07 58.5	
	comp=Z,0.7nm,0.1s						
ARNU	Arnoeviken	3.15	312	eP	Pn	12 07 13.5	+0.8
FALU	Falun	3.35	287	eP	Pn	12 07 15.9	+0.4
SUF	Sumiainen	3.55	30	eP	Pn	12 07 19.3	+0.9
SUF				eSB	Sb	12 08 09.2	+0.8
SUF				MSG		12 08 10.9	
	comp=Z,0.7nm,0.2s						
HASU	Hassela	3.72	314	eP	Pn	12 07 21.7	+1.0
HFS	Hagfors	4.37	279	Pn	Pn	12 07 29.7	-0.3
	comp=Z,0.0nm,0.3s,baz=95,slow=16,SNR=2.5						
HFS				Sn	Sn	12 08 20.2	-2.1
	comp=Z,0.0nm,0.3s,baz=103,slow=25,SNR=2.4						
HFS				Lg		12 08 37.1	
	comp=Z,0.1nm,0.3s,baz=93,slow=29,SNR=6.0						
OUL	Oulu	5.66	16	eP	Pn	12 07 48.3	+0.1
OUL				eS	Sn	12 08 51.6	-3.2
NOA	NORSAR Array B	5.67	289	Pn	Pn	12 07 46.6	-1.9
	comp=Z,0.2nm,0.3s,baz=109,slow=14,SNR=2.5						
NOA				Sn	Sn	12 08 49.9	-5.3
	comp=Z,0.2nm,0.3s,baz=120,slow=22,SNR=2.6						
ARCES	ARCESS Array B	9.97	6	Pn	P	12 08 45.8	-2.4
	comp=Z,0.1nm,0.3s,baz=193,slow=13,SNR=7.7						

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*NEIC **28** 12:14:07.5, 35.91N×31.14E, h25^{km}, ML3.5(NIC), After NIC.*

*NIC **28** 12:14:07.5±0.3, 35.91N×31.14E, h25^{km}, ML3.5, MW3.2*

*HLW **28** 12:14:08.7, 35.57N×31.14E, h33^{km}, Mb3.4*

*CSEM **28** 12:14:08.2±0.1, 35.48N×31.17E, h60^{km}, Mw3.2, Error ellipse: s-maj=2.1km s-min=1.6km az=67.0*

*ISK **28** 12:14:09.1, 35.46N×31.19E, h40^{km}, ML3.6*

ISC 28 12:14:08.9±0.3, 35.36N±0.02×31.19E±0.03, h33^{km}, n48, σ1^{s}18/59, 9C-3D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPCY	Paphos	1.06	116	P	P	12 14 30.3	+2.9
ALFC	Alevga	1.17	100	P	P	12 14 29.6	+0.6
	33nm,0.2s						
ALFC				S	S	12 14 47.2	+3.2
LEF	Lefka	1.41	99	PN	Pn	12 14 32.8	+0.1
LEF				SN	Sn	12 14 51.6	+1.4
SZAC	Souni-Zanaja	1.51	113	P	P	12 14 35.6	+1.7
ELL	Elmali	1.73	324	PN	Pn	12 14 37.1	-0.1
CSS	Prodhromos	1.80	102	P	P	12 14 38.8	+0.8
	2.5nm,0.3s						
CSS				S	S	12 15 02.9	+3.1
HDMB	Hadim	1.91	33	PN	Pn	12 14 39.2	-0.6
FETY	Fethiye	2.13	307	PN	Pn	12 14 42.5	-0.5
FETY				SN	Sn	12 15 06.0	-2.6
IKL	Isikli	2.21	66	PN	Pn	12 14 43.7	-0.4
PHNC	Paralimni	2.35	98	P	P	12 14 51.6	+5.6
DALT	Dalyan (Mudla)	2.50	305	ePN	Pn	12 14 48.8	+0.5
ISP	Isparta	2.54	348	ePN	Pn	12 14 48.1	-0.7
KONT	Konya--Tatoy	2.75	20	ePN	Pn	12 14 50.8	-1.0
DNZL	Cakiroluk	2.90	324	i P	P	12 15 01.0	+7.2
DNZL				i S	S	12 15 36.4	+8.6
YER	Yerkesik	2.94	308	ePN	Pn	12 14 54.7	+0.1
KDHN	Kadinhani	3.24	13	i P	P	12 15 01.0	+2.3
KDHN				i S	S	12 15 32.6	-4.0
KIZT	Kizilcal	3.56	9	ePN	Pn	12 15 02.4	-0.8
MANT	Manisa	3.77	327	i P	P	12 15 08.6	+2.5
MANT				i S	S	12 15 53.7	+3.7
HNTI	Hanita	4.00	123	Sn	Sn	12 15 54.1	-1.9
HAF	Haifa	4.09	128	Sn	Sn	12 15 57.0	-1.2
HTY	Hatay	4.09	78	ePN	Pn	12 15 10.8	-0.1
ESKT	Eskisehir	4.16	356	ePN	Pn	12 15 10.5	-1.4
OFRI	‘Ofer	4.17	130	Sn	Sn	12 15 59.3	-0.9
COBT	Iskenderun	4.27	73	i P	P	12 15 12.8	-0.4
COBT				i S	S	12 16 02.2	-0.4
KSDI	Kefar Szold	4.28	119	Sn	Sn	12 16 01.8	-1.3
SLTI	Sal’it	4.47	133	Sn	Sn	12 16 06.5	-1.2
MMLI	Mount Malkishu	4.57	128	Sn	Sn	12 16 08.3	-1.9
HRSH	Kfar Ka’horesh	4.87	153	⇑P	P	12 15 22.9	+1.1
RSH		4.87	153	P	P	12 15 23.0	+1.2
HBRG	Burj al ‘Arab	4.91	194	⇑P	P	12 15 23.2	+1.0
AMAG	Maghara	5.00	160	⇓P	P	12 15 24.2	+0.6
KZIT	Kziot	5.19	148	Pn	Pn	12 15 26.4	0.0
KZIT				Sn	Sn	12 16 23.9	-2.0
KOT	Kottamia	5.44	174	⇑P	P	12 15 30.9	+1.1
KOT				S	S	12 16 30.6	-1.6
HHAG	Hagoal	5.45	172	⇑P	P	12 15 30.8	+1.0
HMAT	Matruh	5.46	220	⇑P	P	12 15 30.0	-0.1
HMYD	Mayadein	5.56	184	⇓P	P	12 15 32.4	+1.0
HNAT	Natroun	5.73	185	⇑P	P	12 15 35.1	+1.3
HSAF	As Saff	5.73	177	⇑P	P	12 15 34.9	+1.0
GLL	Jalalah	5.78	176	⇑P	P	12 15 35.5	+1.0
HNKL	Nakhl	5.90	156	P	P	12 15 36.7	+0.5
PRNI	Paran	5.94	146	Pn	Pn	12 15 36.8	-0.1
KMTI	Karmit	6.03	149	Pn	Pn	12 15 38.2	0.0
SLUM		6.31	234	P	P	12 15 40.4	-1.6
SLUM				S	S	12 16 48.7	-5.2
MBH	Mount Berech	6.38	149	Pn	Pn	12 15 43.2	+0.1
EIL	Elat	6.50	150	Pn	Pn	12 15 43.9	-1.0
SWA1		7.64	219	P	P	12 16 00.2	-0.4
SWA2		7.79	220	⇓P	P	12 16 02.2	-0.5
HFRF	Wahat Farafira	8.55	198	⇑P	P	12 16 12.5	-0.7

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*IDC **28** 12:35:38.3±3.3, 49.96N×19.47E, mb1 3.5/3, mb1mx3.3/20, mbtmp3.3/3, ML3.5/1, Error ellipse: s-maj=53.2km s-min=10.5km az=136.0*

*WAR **28** 12:35:39.8, 50.10N×19.21E, h0^{km}, ML2.9, Mining Induced*

*IPEC **28** 12:35:39.1±0.2, 49.92N×19.32E, ML2.9/3, Error ellipse: s-maj=4.2km s-min=0.8km az=152.0*

*PRU **28** 12:35:40.6, 50.11N×19.16E*

*CSEM **28** 12:35:40.4±0.2, 50.15N×19.14E, h2^{km}, ML2.9/3, Error ellipse: s-maj=4.0km s-min=2.1km az=15.0*

*NEIC **28** 12:35:40.3±0.8, 50.08N×19.17E, h5^{km}, ML3.3(VIE), Error ellipse: s-maj=11.9km s-min=7.3km az=196.0*

*BGR **28** 12:35:44.0±1.7, 50.07N×18.93E, h1^{km}, ML3.4/5, Error ellipse: s-maj=20.0km s-min=12.2km az=65.0*

ISC 28 12:35:39.0±0.4, 50.10N±0.03×19.13E±0.03, n40, σ1^{s}27/69, 2C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.45	74	ePg	Pg	12 35 47.5	-0.4
OJC				i Sg	Sg	12 35 53.5	-0.3
RAC	Raciborz	0.60	269	ePG	Pg	12 35 52.0	+0.9
RAC				eSG	Sg	12 36 02.0	+2.9
RAC	Raciborz	0.60	269	ePg	Pg	12 35 52.2	+1.1
RAC				eSg	Sg	12 36 01.6	+2.5
OKC	Ostrava-Krasne	0.69	248	ePg	Pg	12 35 53.4	+0.7
OKC				eSg	Sg	12 36 03.6	+1.7
OKC	Ostrava-Krasne	0.69	248	ePg	Pg	12 35 53.3	+0.6
OKC				Sg	Sg	12 36 03.6	+1.7
NIE	Niedzica	1.02	131	⇓ePg	Pg	12 35 58.6	-0.8
NIE				eSg	Sg	12 36 14.2	+1.2
LIKS	Likavka	1.05	181	ePN	Pn	12 35 59.8	-1.0
LIKS				eSN	Sn	12 36 14.1	-2.2
MORC	Moravsky Berou	1.08	253	ePn	Pn	12 36 00.8	-0.4
MORC				eSn	Sn	12 36 15.9	-1.1
MORC	Moravsky Berou	1.08	253	ePn	Pn	12 36 00.8	-0.4
MORC	Moravsky Berou	1.08	253	Pg	Pg	12 36 01.0	+0.5
MORC				eSg	Sg	12 36 15.5	+0.7
MORC				eSn	Sn	12 36 15.9	-1.1
KOLL	Kolacno	1.59	198	ePN	Pn	12 36 09.1	+0.5
KOLL				eSN	Sn	12 36 28.6	-1.6
VYHS	Vyhne	1.62	187	ePN	Pn	12 36 08.3	-0.6
VYHS				eSN	Sn	12 36 29.5	-1.2
VRAC	Vranov	1.83	245	ePn	Pn	12 36 12.5	+0.6
VRAC				eSn	Sn	12 36 37.9	+1.8
KECS	Kecovo	1.84	151	i PN	Pn	12 36 11.2	-0.9
KECS				eSN	Sn	12 36 36.9	+0.4
CRVS	Cervenica-Dubn	1.93	127	ePN	Pn	12 36 15.3	+1.9
CRVS				eSN	Sn	12 36 40.3	+1.5
SMOL	Smolenice	1.94	216	ePN	Pn	12 36 15.7	+2.2
SMOL				e		12 36 21.1	
KSP	Ksiaz	1.96	293	ePn	Pn	12 36 15.4	+1.6
KSP				ePg	Pg	12 36 17.2	-1.0
KSP				eSg	Sg	12 36 42.7	-1.6
KSP	Ksiaz	1.96	293	ePn	Pn	12 36 14.2	+0.3
KSP				ePg	Pg	12 36 17.5	-0.6
KSP				eSg	Sg	12 36 44.0	-0.3
KSP	Ksiaz	1.96	293	ePg	Pg	12 36 17.2	-1.0
KSP				eSg	Sg	12 36 42.7	-1.6
KRUC	Moravsky	2.06	241	ePn	Pn	12 36 15.3	0.0
PSZ	Piszkesteto	2.24	167	ePn	Pn	12 36 19.4	+1.6
PSZ	Piszkesteto	2.24	167	⇑ePn	Pn	12 36 17.4	-0.4
PSZ				eSn	Sn	12 36 45.0	-1.5
PSZ	Piszkesteto	2.24	167	eS	Sn	12 36 45.0	-1.5
KOLS	Kolonicke sedl	2.35	118	ePN	Pn	12 36 22.9	+3.4
KWP	Kalwaria	2.36	100	ePG	Pg	12 36 27.0	+0.9
KWP				eSG	Sg	12 36 57.0	-0.5
KWP	Kalwaria	2.36	100	eSg	Sg	12 36 56.6	-0.9
BRG	Berggiesshubel	3.41	285	Pg	Pg	12 36 47.3	+0.3
BRG				Sg	Sg	12 37 28.0	-4.4
KHC	Kasperske Hory	3.74	257	ePN	Pn	12 36 38.0	-1.2
KHC				ePG	Pg	12 36 53.5	-0.1
KHC				ex	x	12 37 35.0	
KHC				eSG	Sg	12 37 48.5	+5.0
GEC2	GERESS Array S	3.76	253	eSg	Sg	12 37 37.2	-6.8
GERES	GERESS Array B	3.76	253	Pn	Pn	12 36 38.5	-0.9
	baz=83,slow=17,SNR=2.7						
GERES				Pg	Pg	12 36 49.1	-4.9
	1.5nm,0.3s,baz=68,slow=17,SNR=12						
GERES				Sn	Sn	12 37 27.6	+2.5
	1.5nm,0.3s,baz=69,slow=26,SNR=5.7						
GERES				Lg		12 37 38.8	
	5.2nm,0.3s,baz=72,slow=27,SNR=15						
GERES	GERESS Array B	3.76	253	Pg	Pg	12 36 49.1	-4.9
MOA	Molln	3.92	237	⇑i PN	Pn	12 36 40.7	-1.0
MOA				i SG	Sg	12 37 44.1	-5.3
	10nm,0.5s						
CLL	Collm	4.08	290	eSG	Sg	12 37 51.0	-3.9
WET	Wettzell	4.18	259	eSg	Sg	12 37 51.0	-7.0
TANN	Tannenbergstha	4.29	277	eSg	Sg	12 37 55.0	-6.9
NOTT	Nottersdorf	4.54	269	eSg	Sg	12 38 02.4	-7.6
MOX	Moxa	4.84	279	eSg	Sg	12 38 15.2	-5.0
GRF	Grafenberg Arr	5.13	268	eSg	Sg	12 38 22.9	-6.9
FINES	FINESS Array B	12.02	16	Pn	P	12 38 26.7	-7.7
	0.3nm,0.3s,baz=194,slow=12,SNR=7.7						
FINES				Sn	S	12 40 35.0	-15
	0.2nm,0.3s,baz=183,slow=26,SNR=3.2						
ARCES	ARCESS Array B	19.74	7	Pn	P	12 40 07.1	-5.7
	0.1nm,0.3s,baz=186,slow=12,SNR=5.7						

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*IDC **28** 13:27:40.9±5.2, 5.60S×153.01E, h65^{km}±49^{km}, mb3.8/10, mb1 4.0/11, mb1mx3.8/18, mbtmp4.1/11, ML3.1/1, Error ellipse: s-maj=29.9km s-min=24.2km az=27.0*

*NEIC **28** 13:27:41.3±2.9, 5.60S×152.97E, h68^{km}±27^{km}, mb4.7/2, Error ellipse: s-maj=20.8km s-min=18.0km az=53.0*

ISC 28 13:27:37.3±3.9, 5.5S±0.1×153.0E±0.1, h43^{km}±36^{km}, n15, σ0^{s}69/19, mb4.1/12, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.95	236	P	P	13 29 19.2	+0.1
	2.0nm,0.3s,baz=63,slow=10,SNR=13						
PMG				S	S	13 30 37.0	-0.7
	7.6nm,0.3s,baz=0.8,slow=21,SNR=14						
PMG	Port Moresby	6.95	236	P	P	13 29 19.2	+0.1
PMG				ePn	P	13 29 19.5	+0.4
PMG				S	S	13 30 37.0	-0.7
PMG				eSn	S	13 30 37.5	-0.3
DZM	Mont Dzumac	21.01	143	P	P	13 32 20.0	+0.5
	3.8nm,0.7s,mb3.8,baz=38,slow=19,SNR=2.1						
WRA	Warramunga Arr	23.12	230	P	P	13 32 41.2	+0.5
	5.2nm,0.8s,mb4.0,baz=53,slow=10,SNR=13						
STKA	Stephens Creek	28.32	201	P	P	13 33 25.9	-3.4
	2.4nm,0.8s,mb3.9,baz=31,slow=7.1,SNR=3.7						
FITZ	Fitzroy Crossi	29.48	243	P	P	13 33 40.4	+0.6
	8.9nm,1.0s,mb4.5,baz=56,slow=3.6,SNR=3.7						
CMAR	Chiang Mai Arr	58.33	295	P	P	13 37 31.1	+0.3
	0.5nm,0.6s,mb3.7,baz=118,slow=5.3,SNR=4.1						
MA2	Magadan	64.89	359	eP	P	13 38 13.8	-0.4
	8.4nm,0.7s,mb4.9						
SONM	Songino Array	67.00	328	P	P	13 38 28.6	+0.8
	0.7nm,0.4s,mb4.0,baz=139,slow=6.0,SNR=7.3						
BILL	Bilibino	73.96	5	eP	P	13 39 09.8	+0.2
	4.9nm,0.6s,mb4.6						
MKAR	Makanchi Array	80.96	319	P	P	13 39 48.4	-0.5
	0.5nm,0.5s,mb3.7,baz=101,slow=6.2,SNR=3.9						
MKAR	Makanchi Array	80.96	319	P	P	13 39 48.4	-0.5
ZAL	Zalesovo	81.83	326	P	P	13 39 53.5	+0.2
	1.3nm,0.4s,mb4.2,baz=29,slow=3.7,SNR=5.8						
ILAR	Eielson Array	82.74	22	P	P	13 39 56.5	-1.2
	1.4nm,0.9s,mb4.0,baz=231,slow=5.8,SNR=9.7						
BVAR	Borovoye Array	89.90	323	P	P	13 40 33.0	0.0
	1.8nm,0.7s,mb4.5,baz=108,slow=4.7,SNR=14						

MAN 28 13:40:54.7, 13.92N×121.44E, h3^{km}, mb3.7, ML2.4, MS1.9, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOAC	Boac	0.60	140	eP	Pg	13 41 06.4	-0.3
BOAC				eS	Sg	13 41 31.0	+16
PGP	Puerto Galera	0.63	229	eP	Pg	13 41 07.3	0.0
LUBP	Lubang	1.18	261	eP	Pb	13 41 16.5	-0.8
LUBP				eS	Sb	13 41 28.1	-4.7
SJMP	San Jose	1.48	192	eP	Pn	13 41 22.3	-0.1
SJMP				eS	Sb	13 41 42.2	+0.4

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*IDC **28** 13:53:07.7±1.0, 6.05N×92.71E, mb4.0/10, mb1 4.2/11, mb1mx4.0/22, mbtmp4.0/11, ML4.2/1, MS3.7/4, Ms1 3.7/4, ms1mx3.3/32, Error ellipse: s-maj=40.9km s-min=16.9km az=53.0*

*BJI **28** 13:53:09.0, 5.79N×92.78E, h37^{km}, mB4.5, mb4.4, Ms4.3, Msz4.2*

*NEIC **28** 13:53:12.1±0.7, 6.03N×92.69E, h30^{km}, mb4.5/3, Error ellipse: s-maj=14.5km s-min=9.4km az=53.0*

ISC 28 13:53:11.6±2.3, 6.11N±0.10×92.78E±0.09, h39^{km}±20^{km}, n41, σ1^{s}05/29, mb4.2/14, MS3.9/7, 1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	7.87	96	ePn	P	13 55 05.7	-0.6
CM31	Chiang Mai Arr	13.67	26	ePn	P	13 56 27.8	+2.5
	9.5nm,0.6s						

CMAR	**Chiang Mai Arr**	**13.67**	**26**	Pn	**P**	**13 56 23.7**	**-1.6**
	0.4nm,0.3s,baz=213,slow=14,SNR=19						
KKTK	**Khon Kaen**	**14.15**	**43**	PN	**P**	**13 56 39.0**	**+7.4**
VIS	**Vishakhapatnam**	**14.78**	**322**	*e*P	**P**	**13 56 39.8**	**0.0**
VIS				*e*PP	PP	13 56 49.7	-1.9
VIS				*e*x	x	13 59 10.0	
HYB	**Hyderabad**	**17.88**	**310**	*e*P	**P**	**13 57 29.0**	**+10**
HYB	**Hyderabad**	**17.88**	**310**	*i* P	**P**	**13 57 29.0**	**+10**
HYB				*e*S	**S**	**14 00 34.5**	**0.0**
KSM	**Kuching**	**18.08**	**104**	*e*P	**P**	**13 57 22.8**	**+1.1**
BLSP	**Bilaspur**	**18.96**	**328**	*e*P	**P**	**13 57 33.0**	**+0.6**
BLSP				AMb	AMB	13 57 34.7	
	comp=Z,38nm,1.9s						
BLSP				*i* PP	PP	13 57 44.9	-4.2
SHL	**Shillong**	**19.37**	**358**	*e*P	**P**	**13 57 34.0**	**-2.9**
SHL				*e*x	x	14 01 03.0	
LATR	**Latur**	**20.00**	**309**	*e*x	**P**	**13 57 48.0**	**+4.2**
NGP	**Nagpur**	**20.02**	**320**	*e*x	x	13 57 50.0	
NGP				*e*x	x	14 01 51.2	
QIZ	**Qiongzhong**	**21.00**	**51**	P	**P**	**13 57 54.5**	**+0.3**
QIZ	**Qiongzhong**	**21.00**	**51**	*e*P	**P**	**13 57 54.2**	**0.0**
KMI	**Kunming**	**21.18**	**26**	P	**P**	**13 57 56.5**	**+0.5**
KMI				AP		13 58 07.8	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.1						
KMI				LR	LR		
	comp=N,300nm,10.7s,MS4.0						
KMI				LR	LR		
	comp=E,230nm,12.7s,MS4.0						
KMI				LR	LR		
	comp=Z,250nm,11.7s,MS3.8						
KMI	**Kunming**	**21.18**	**26**	P	**P**	**13 57 56.6**	**+0.6**
	comp=Z,12nm,1.1s,mb4.1						
KMI				pP		13 58 07.7	
PKI	**Pulchoki**	**22.47**	**343**	*e*P		13 58 24.2	
	comp=Z,43nm,0.6s						
BHPL	**Bhopal**	**22.56**	**321**	*e*x		13 58 23.0	
BHPL				AMb	AMB	13 58 25.5	
	comp=Z,7.5nm,0.2s,mb4.7						
BHPL				*e*PP	PP	13 58 33.6	-4.9
BHPL				*i* x	x	13 58 34.8	
DMN	**Daman**	**22.60**	**342**	*e*P		13 58 25.5	
	comp=Z,62nm,0.9s						
GUN	**Gumba**	**22.66**	**344**	*e*P		13 58 26.2	
KKN	**Kakani**	**22.71**	**343**	*e*P		13 58 27.0	
	comp=Z,38nm,0.6s						
GKN	**Gorkha**	**23.11**	**341**	*e*P		13 58 29.5	
	comp=Z,27nm,0.3s						
BOM	**Bombay**	**23.24**	**305**	*e*x	x	13 58 35.0	
KOLN	**Koldanda**	**23.24**	**339**	*e*P		13 58 30.2	
	comp=Z,25nm,0.5s						
LSA	**Lhasa**	**23.52**	**356**	*e*P		13 58 30.0	
	comp=Z,12nm,0.8s						
GYA	**Guiyang**	**24.19**	**32**	⇓*i*P	**P**	**13 58 26.0**	**+0.4**
GYA				AP		13 58 37.0	
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
GYA				AMB	AMB		
	comp=Z,90nm,3.2s						
GYA				LR	LR		
	comp=N,340nm,11.4s,MS4.2						
GYA				LR	LR		
	comp=E,350nm,11.4s,MS4.2						
GYA				LR	LR		
	comp=Z,510nm,10.2s,MS4.3						
XAN	**Xi’an**	**31.56**	**26**	P	**P**	**13 59 31.0**	**-1.8**
XAN				LR	LR		
	comp=N,130nm,11.8s,MS4.0						
XAN				LR	LR		
	comp=E,180nm,13.3s,MS4.0						
XAN				LR	LR		
	comp=Z,290nm,12.2s,MS4.2						
FITZ	**Fitzroy Crossi**	**40.37**	**127**	P	**P**	**14 00 47.5**	**-0.1**
	comp=Z,4.4nm,0.5s,mb4.5,baz=303,slow=5.0,SNR=5.6						
MKAR	**Makanchi Array**	**41.53**	**349**	P	**P**	**14 00 56.8**	**-0.1**
	comp=Z,0.4nm,0.4s,mb3.4,baz=171,slow=7.6,SNR=4.2						
SONM	**Songino Array**	**43.18**	**13**	P	**P**	**14 01 10.4**	**0.0**
	comp=Z,1.3nm,0.7s,mb3.8,baz=192,slow=8.2,SNR=10						
SONM				LR	LR	14 19 37.5	
	comp=Z,61nm,18.7s,MS3.5,baz=221,slow=37						
ZAL	**Zalesovo**	**48.13**	**354**	P	**P**	**14 01 50.0**	**+0.4**
	comp=Z,1.1nm,0.4s,mb4.2,baz=315,slow=5.0,SNR=6.2						
WRA	**Warramunga Arr**	**48.38**	**123**	P	**P**	**14 01 52.1**	**+0.1**
	comp=Z,3.4nm,0.6s,mb4.5,baz=304,slow=8.6,SNR=25						
WRAB	**Tennant Creek**	**48.38**	**123**	*e*P	**P**	**14 01 52.1**	**0.0**
	comp=Z,18nm,0.8s,mb5.1						
WRAB				*e*pP	pP	14 02 02.7	-0.5
BVAR	**Borovoye Array**	**50.24**	**343**	P	**P**	**14 02 05.2**	**-0.7**
	comp=Z,0.2nm,0.4s,mb3.5,baz=149,slow=8.4,SNR=3.0						
STKA	**Stephens Creek**	**59.90**	**132**	P	**P**	**14 03 15.4**	**-0.8**
	comp=Z,1.2nm,0.6s,mb4.1,baz=337,slow=13,SNR=3.2						
BRTR	**Keskin Array B**	**62.57**	**312**	P	**P**	**14 03 32.5**	**-1.7**
	comp=Z,0.5nm,0.5s,mb3.9,baz=112,slow=7.8,SNR=3.5						
LBTB	**Lobatse**	**72.22**	**241**	LR	LR	14 34 50.3	
	comp=Z,65nm,18.7s,MS3.9,baz=295,slow=35						
FINES	**FINESS Array B**	**73.64**	**333**	P	**P**	**14 04 44.4**	**+1.7**
	comp=Z,2.3nm,1.0s,mb4.1,baz=180,slow=32,SNR=2.8						
ARCES	**ARCESS Array B**	**76.47**	**341**	LR	LR	14 45 59.0	
	comp=Z,42nm,20.1s,MS3.8,baz=69,slow=42						
TSUM	**Tsumeb**	**78.14**	**249**	LR	LR	14 35 57.8	
	comp=Z,63nm,19.6s,MS4.0,baz=314,slow=33						
GERES	**GERESS Array B**	**78.24**	**319**	P	**P**	**14 05 10.1**	**+1.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=90,slow=2.9,SNR=3.5						

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*IDC **28** 13:55:50.1±2.9, 35.74S×179.31W, mb4.5/4, mb1 4.5/6, mb1mx4.2/16, mbtmp4.4/6, ML3.9/2, MS3.4/3, Ms1 3.4/3, ms1mx3.0/27, Error ellipse: s-maj=63.7km s-min=31.8km az=122.0*

*NEIC **28** 13:56:01.8±1.0, 36.47S×179.46W, h100^{km}, mb4.9/1, Error ellipse: s-maj=24.8km s-min=17.9km az=154.0*

ISC 28 13:55:55.0±2.0**, 36.3S**±0.2×**178.8W**±0.2**, h92**^{km}±17^{km}**, n20,** σ**0**^{s}**90**/24**, mb4.5**/5**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.60**	**241**	PN	**P**	**13 56 35.6**	**-0.6**
MXZ				*e*SN	**S**	**13 57 06.0**	**-0.9**
PUZ	**Puketiti**	**2.90**	**232**	PN	**P**	**13 56 41.2**	**+0.9**
PUZ				*e*SN	**S**	**13 57 18.0**	**+3.7**
MWZ	**Matawai**	**3.53**	**234**	PN	**P**	**13 56 49.4**	**+0.5**
MWZ				*e*SN	**S**	**13 57 30.5**	**+0.9**
URZ	**Urewera**	**3.77**	**238**	Pn	**P**	**13 56 51.5**	**-0.7**
	12nm,0.3s,baz=45,slow=5.5,SNR=46						
URZ				Sn	**S**	**13 57 35.9**	**+0.3**
	11nm,0.3s,baz=279,slow=23,SNR=8.7						
URZ				LR	LR	13 58 26.0	
	comp=Z,116nm,20.3s,baz=74,slow=41						
URZ	**Urewera**	**3.77**	**238**	PN	**P**	**13 56 51.5**	**-0.7**
URZ				*e*SN	**S**	**13 57 35.6**	**0.0**
KNZ	**Kokohu**	**3.86**	**225**	*e*PN	**P**	**13 56 55.0**	**+1.5**
NGZ	**Ngauruhoe**	**5.25**	**236**	PN	**P**	**13 57 11.8**	**-0.6**
CNZ	**Chateau**	**5.29**	**236**	PN	**P**	**13 57 13.2**	**+0.1**
TSZ	**Takapari Road**	**5.54**	**226**	PN	**P**	**13 57 16.8**	**+0.4**
MRZ	**Mangatainoka R**	**6.16**	**224**	PN	**P**	**13 57 24.3**	**-0.7**
MRZ				SN	**S**	**13 58 34.3**	**-0.3**
RPZ	**Rata Peaks**	**10.70**	**223**	Pn	**P**	**13 58 24.9**	**-1.8**
	0.7nm,0.3s,baz=64,slow=14,SNR=3.4						
RPZ				Sn	**S**	**14 00 19.0**	**-6.2**
	0.9nm,0.3s,baz=117,slow=22,SNR=6.5						
DZM	**Mont Dzumac**	**19.13**	**314**	LR	LR	14 05 01.2	
	comp=Z,169nm,18.2s,baz=42,slow=30						
STKA	**Stephens Creek**	**32.91**	**266**	P	**P**	**14 02 24.5**	**+2.0**
	1.3nm,0.8s,mb3.8,baz=110,slow=13,SNR=2.8						
CTA	**Charters Tower**	**34.54**	**288**	P	**P**	**14 02 36.0**	**-0.6**
	7.3nm,0.9s,mb4.5,baz=121,slow=4.1,SNR=4.0						
PMG	**Port Moresby**	**40.87**	**302**	LR	LR	14 15 00.8	
	comp=Z,126nm,21.8s,baz=266,slow=29						
WRAB	**Tennant Creek**	**43.97**	**279**	*e*P	**P**	**14 03 54.5**	**-0.3**
	12nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	**43.97**	**279**	P	**P**	**14 03 54.4**	**-0.5**
	5.8nm,0.5s,mb4.5,baz=120,slow=7.7,SNR=31						
FITZ	**Fitzroy Crossi**	**51.92**	**275**	P	**P**	**14 04 57.0**	**+0.4**
	9.8nm,1.0s,mb4.8,baz=157,slow=7.0,SNR=5.2						
RPN	**Rapa Nui**	**58.69**	**102**	*e*P	**P**	**14 05 52.2**	**+6.9**
	219nm,1.0s						
FINES	**FINESS Array B**	**150.37**	**336**	PKPbc	PKPdf	14 15 40.6	+11
	1.7nm,0.8s,baz=27,slow=3.1,SNR=5.8						

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*JMA **28** 14:10:11.7±0.3, 24.99N×122.77E, h31^{km}, M3.4*

*TAP **28** 14:10:13.3, 24.95N×122.71E, h5^{km}±1^{km}, ML3.6*

*IDC **28** 14:10:31.9±3.0, 25.54N×124.15E, h214^{km}±31^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.1/22, mbtmp3.7/4, MS3.3/2, Ms1 3.3/2, ms1mx2.9/9, Error ellipse: s-maj=38.4km s-min=20.3km az=69.0*

ISC 28 14:10:14.3±1.4**, 24.88N**±0.09×**122.87E**±0.08**, h29**^{km}±9^{km}**, n10,** σ**0**^{s}**76**/14**, mb3.7**/2**, MS3.4**/1**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.44**	**163**	P	**Pb**	**14 10 22.9**	**-0.8**
YOJ				S	**Sb**	**14 10 31.0**	**+0.9**
IRIF	**Iriomote-Funau**	**0.95**	**125**	P	**Pn**	**14 10 30.9**	**-0.9**
IRIF				*e*S	**Sb**	**14 10 44.3**	**-0.1**
HATJ	**Hateruma jima**	**1.18**	**134**	P	**Pn**	**14 10 34.6**	**-0.5**
HATJ				*e*S	**Sn**	**14 10 51.1**	**+0.8**
JKRS	**Kuro-shima**	**1.22**	**122**	P	**Pn**	**14 10 35.2**	**-0.4**
JKRS				*e*S	**Sn**	**14 10 52.5**	**+1.3**
JIJ	**Ishigaki jima**	**1.27**	**114**	P	**Pn**	**14 10 35.5**	**-0.8**
JIJ				*e*S	**Sn**	**14 10 51.4**	**-1.0**
JTJ	**Tarama**	**1.68**	**98**	P	**Pn**	**14 10 42.9**	**+0.7**
JOW	**Kunigami**	**5.24**	**67**	P	**Pn**	**14 11 33.4**	**+0.6**
	0.5nm,0.3s,baz=240,slow=20,SNR=2.3						
JOW				LR	LR	14 13 31.6	
	comp=Z,254nm,19.4s,baz=343,slow=46						
ASAJ	**Asahikawa**	**25.03**	**35**	LR	LR	14 25 50.8	
	comp=Z,100nm,18.3s,MS3.4,baz=170,slow=38						
MKAR	**Makanchi Array**	**38.92**	**315**	P	**P**	**14 17 39.9**	**+0.7**
	0.4nm,0.6s,mb3.3,baz=117,slow=6.4,SNR=1.7						
WRA	**Warramunga Arr**	**45.93**	**165**	P	**P**	**14 18 36.1**	**-0.5**
	1.3nm,0.6s,mb4.1,baz=347,slow=8.8,SNR=13						

WEL 28 14:14:54.7±0.2**, 37.17S**×**176.93E, h25**^{km}±3^{km}**, ML3.6**/13**, 2C, Error ellipse: s-maj=2.2km s-min=1.5km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.41**	**151**	P*	Pb	14 15 02.6	-0.8
MYRZ	**Mayor Island**	**0.56**	**258**	P*	Pb	14 15 05.7	-0.2
MYRZ				S*	Sb	14 15 13.0	-0.6
TGRZ	**Tauranga**	**0.78**	**223**	P*	Pb	14 15 08.4	-1.0
TGRZ				S*	Sb	14 15 18.6	-1.0
MARZ	**Manawahe**	**0.84**	**194**	P*	Pb	14 15 09.3	-1.3
LIRZ	**Lichensteins R**	**0.94**	**207**	P*	Pb	14 15 11.2	-1.1
KUZ	**Kuaotunu**	**1.06**	**293**	PN	Pn	14 15 13.3	-0.8
KUZ				SN	Sn	14 15 26.7	-1.5
URZ	**Urewera**	**1.10**	**173**	⇑P*	Pb	14 15 13.1	-1.8
MXZ	**Matakaoa Point**	**1.16**	**110**	P*	Pb	14 15 14.5	-1.5
MWZ	**Matawai**	**1.26**	**158**	⇑P*	Pb	14 15 15.9	-1.7
PUZ	**Puketiti**	**1.39**	**131**	PN	Pn	14 15 19.8	+1.0
MKAZ	**Moumakai**	**1.41**	**272**	PN	Pn	14 15 18.5	-0.7
MTAZ	**Motutapu**	**1.66**	**283**	*e*PN	Pn	14 15 23.3	+0.5
OUZ	**Omahuta**	**3.33**	**305**	*e*PN	Pn	14 15 46.2	-0.2

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*BJI **28** 14:25:56.9, 8.10N×69.90W, h9^{km}, Ms4.9, Msz4.5*

*IDC **28** 14:25:58.3±0.6, 8.07N×69.83W, mb4.1/12, mb1 4.4/14, mb1mx4.2/24, mbtmp4.2/14, ML4.7/2, MS3.4/3, Ms1 3.4/3, ms1mx2.8/25, Error ellipse: s-maj=17.0km s-min=9.7km az=59.0*

*NEIC **28** 14:25:60.0±1.6, 8.08N×69.88W, h9^{km}±10^{km}, mb4.5/10, Error ellipse: s-maj=11.0km s-min=7.0km az=81.0*

*FUNV **28** 14:26:01.6, 7.96N×70.00W, h8^{km}, MW3.8*

ISC 28 14:25:58.6±0.3**, 7.96N**±0.03×**69.93W**±0.02**, h8**^{km}**, n67,** σ**1**^{s}**31**/76**, mb4.2**/20**, MS3.7**/2**, 1C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.97**	**289**	⇓*i*P	**Pb**	**14 26 17.9**	**+0.7**
SOCV				*e*S	**Sb**	**14 26 30.6**	**+0.7**
SDV	**Santo Domingo**	**1.15**	**323**	Pg	**Pg**	**14 26 21.5**	**-0.1**
	681nm,0.3s,baz=178,slow=12,SNR=2267						
SDV				Lg		14 26 35.8	
	baz=59,slow=19						
SDV	**Santo Domingo**	**1.15**	**323**	*e*Pg	**Pg**	**14 26 21.1**	**-0.5**
SANV	**Sanarito**	**1.58**	**14**	*e*P	**Pn**	**14 26 29.2**	**+2.2**
SANV				*e*S	**Sb**	**14 26 50.8**	**+3.1**
VIGV	**El Vigia**	**1.66**	**302**	*e*P	**Pn**	**14 26 29.7**	**+1.4**
VIGV				*e*S	**Sn**	**14 26 51.1**	**+1.1**
BAUV	**El Baul**	**2.11**	**62**	*e*P	**Pn**	**14 26 36.3**	**+1.6**
BAUV				*e*S	**Sn**	**14 27 03.6**	**+2.2**
TEPV	**Terepaima**	**2.12**	**20**	⇑*i*P	**Pn**	**14 26 37.1**	**+2.3**
TEPV				*e*S	**Sn**	**14 27 03.0**	**+1.4**
CAPV	**Capacho**	**2.36**	**268**	*e*P	**Pn**	**14 26 39.9**	**+1.6**
CAPV				*e*S	**Sn**	**14 27 07.1**	**-0.6**
SIQV	**Siquisique**	**2.67**	**3**	*e*P	**Pn**	**14 26 44.7**	**+2.0**
SIQV				*e*S	**Sn**	**14 27 16.3**	**+0.6**
TURV	**Turiamo**	**3.22**	**40**	*e*S	**Sn**	**14 27 29.8**	**+0.2**
PAYV	**Puerto Ayacuch**	**3.39**	**138**	*e*P	**Pn**	**14 26 53.8**	**+0.9**
PAYV				*e*S	**Sn**	**14 27 33.2**	**-0.6**
VIRV	**Villa del Rosa**	**3.51**	**316**	*e*P	**Pn**	**14 26 54.1**	**-0.5**
CAOV	**Caicara del Or**	**3.63**	**100**	*e*P	**Pn**	**14 26 58.1**	**+1.7**
CAOV				*e*S	**Sn**	**14 27 39.9**	**-0.1**
MERV	**Las Mercedes**	**3.82**	**70**	*e*P	**Pn**	**14 27 00.7**	**+1.7**
MERV				*e*S	**Sn**	**14 27 43.5**	**-1.1**
FUNV	**FUNVISIS**	**3.96**	**51**	*e*P	**Pn**	**14 27 02.7**	**+1.7**
FUNV				*e*S	**Sn**	**14 27 46.7**	**-1.6**
MONV	**Montecano**	**3.97**	**359**	*e*P	**Pn**	**14 27 01.7**	**+0.6**
MONV				*e*S	**Sn**	**14 27 45.4**	**-3.0**
BIRV	**Birongo**	**4.39**	**55**	*e*P	**Pn**	**14 27 08.7**	**+1.5**
BIRV				*e*S	**Sn**	**14 27 57.5**	**-1.8**
ROSC	**El Rosal**	**5.35**	**235**	Pn	**Pn**	**14 27 22.2**	**+1.5**
	23nm,0.3s,baz=91,slow=17,SNR=28						
ROSC				Sn	**Sn**	**14 28 23.1**	**-0.2**
	20nm,0.3s,baz=90,slow=20,SNR=3.5						
ROSC				Lg		14 28 51.8	
	23nm,0.3s,baz=72,slow=19,SNR=3.7						
ROSC				LR	LR	14 29 38.9	
	comp=Z,456nm,18.1s,baz=13,slow=40						
IBAV	**Isla La Blanqu**	**6.52**	**54**	*e*P	**Pn**	**14 27 36.4**	**-0.9**
IBAV				*e*S	**Sn**	**14 28 46.5**	**-6.2**
GURV	**El Guri**	**6.79**	**91**	*e*P	**Pn**	**14 27 40.6**	**-0.3**
GURV				*e*S	**Sn**	**14 28 53.1**	**-6.2**
ITEV	**Isla Los Testi**	**7.50**	**63**	*e*P	**Pn**	**14 27 50.1**	**-1.0**
LUEV	**Luepa**	**8.67**	**104**	*e*P	**P**	**14 28 05.9**	**-1.4**
SJG	**San Juan**	**10.74**	**20**	Pn	**P**	**14 28 32.5**	**-3.4**
	8.2nm,0.3s,baz=206,slow=14,SNR=12						
SJG				Sn	**S**	**14 30 28.3**	**-9.1**
	1.8nm,0.3s,baz=311,slow=19,SNR=1.8						
SJG	**San Juan**	**10.74**	**20**	*e*P	**P**	**14 28 32.1**	**-3.8**
	29nm,0.6s						
JTS	**JuntasAbangare**	**15.01**	**280**	LR	LR	14 35 53.0	
	comp=Z,89nm,20.1s,baz=51,slow=39						
SAML	**Samuel**	**18.09**	**158**	*e*P	**P**	**14 30 08.5**	**-3.8**
	3.3nm,0.5s						
SAML				*e*S	**S**	**14 33 18.1**	**-13**
LPAZ	**La Paz**	**24.16**	**176**	P	**P**	**14 31 17.9**	**+1.5**
	8.0nm,0.9s,mb4.1,baz=357,slow=12,SNR=22						
LPAZ	**La Paz**	**24.16**	**176**	*e*P	**P**	**14 31 17.6**	**+1.1**
	21nm,1.3s,mb4.4						
SIV	**San Ignacio**	**25.36**	**160**	P	**P**	**14 31 27.4**	**-0.6**
	3.4nm,0.7s,mb4.0,baz=356,slow=11,SNR=16						
BLA	**Blacksburg**	**30.64**	**343**	*e*P	**P**	**14 32 13.7**	**-2.0**
	44nm,1.0s,mb5.2						
CPUP	**Villa Florida**	**36.22**	**161**	LR	LR	14 47 16.1	
	comp=Z,60nm,18.4s,MS3.4,baz=357,slow=35						
WMOK	**Wichita Mounta**	**37.58**	**319**	*e*P	**P**	**14 33 13.9**	**-1.5**
	5.1nm,0.7s,mb4.4						
TXAR	**Lajitas Array**	**38.16**	**308**	P	**P**	**14 33 19.6**	**-0.8**
	1.0nm,0.5s,mb3.8,baz=128,slow=9.4,SNR=7.2						
CFAA	**Coronel Fontan**	**39.38**	**178**	P	**P**	**14 33 31.3**	**+0.8**
	0.2nm,0.4s,mb3.2,baz=8.8,slow=5.8,SNR=5.2						
MNTX	**Cornudas Mount**	**40.56**	**311**	*e*P	**P**	**14 33 39.7**	**-0.6**
	4.9nm,0.7s,mb4.2						
PV01	**Paradox Valley**	**45.99**	**317**	*e*P	**P**	**14 34 25.1**	**+0.8**
SCHQ	**Schefferville**	**46.81**	**2**	P	**P**	**14 34 30.0**	**-0.5**
	3.3nm,0.6s,mb4.4,baz=161,slow=4.2,SNR=6.3						
ULM	**Lac du Bonnet**	**47.37**	**338**	P	**P**	**14 34 33.2**	**-1.8**
	5.3nm,0.6s,mb4.6,baz=139,slow=8.9,SNR=5.2						
ULM	**Lac du Bonnet**	**47.37**	**338**	*e*P	**P**	**14 34 32.8**	**-2.2**
	6.8nm,0.6s,mb4.8						
PLCA	**Paso Flores**	**48.45**	**181**	P	**P**	**14 34 44.9**	**+1.3**
	1.9nm,0.6s,mb4.3,baz=6.7,slow=9.3,SNR=8.8						
PLCA	**Paso Flores**	**48.45**	**181**	P	**P**	**14 34 44.9**	**+1.3**
MVU	**Marysvale**	**48.68**	**315**	*e*P	**P**	**14 34 45.3**	**0.0**
	2.2nm,0.9s,mb4.2						
PDAR	**Pinedale Array**	**49.09**	**322**	P	**P**	**14 34 47.6**	**-0.9**
	1.8nm,0.6s,mb4.3,baz=128,slow=10.0,SNR=18						
LOHW	**Long Hollow**	**50.19**	**322**	*e*P	**P**	**14 34 55.8**	**-1.1**
	1.5nm,0.6s,mb4.2						
RRI2	**Red Ridge**	**50.49**	**321**	*e*P	**P**	**14 34 56.5**	**-2.7**
	4.5nm,0.8s,mb4.5						
MCMT	**McKenzie Canyo**	**52.20**	**322**	*e*P	**P**	**14 35 11.9**	**-0.3**
HRY	**Holter Researc**	**52.62**	**325**	*e*P	**P**	**14 35 13.7**	**-1.6**
NVAR	**Mina Array Bea**	**52.99**	**313**	P	**P**	**14 35 17.4**	**-0.8**
	1.2nm,0.7s,mb3.9,baz=122,slow=7.3,SNR=8.0						
YKA	**Yellowknife Ar**	**63.33**	**339**	P	**P**	**14 36 28.1**	**-2.1**
	0.9nm,0.6s,mb4.1,baz=127,slow=7.0,SNR=6.4						
YKA	**Yellowknife Ar**	**63.33**	**339**	P	**P**	**14 36 28.1**	**-2.2**
DBIC	**Dimbokro**	**64.50**	**86**	P	**P**	**14 36 38.2**	**-0.6**
	6.1nm,0.9s,mb4.7,baz=284,slow=3.8,SNR=4.9						
SUMG	**Summit**	**67.31**	**10**	*e*P	**P**	**14 36 55.7**	**-0.1**
	13nm,0.7s,mb5.1						
ILAR	**Eielson Array**	**77.28**	**335**	P	**P**	**14 37 53.4**	**-1.5**
	0.8nm,0.8s,mb3.7,baz=110,slow=4.3,SNR=8.4						
GERES	**GERESS Array B**	**79.87**	**42**	P	**P**	**14 38 08.0**	**-1.4**
	1.0nm,0.8s,mb3.8,baz=270,slow=5.3,SNR=6.1						
VNA3	**Neumayer Olymp**	**88.35**	**164**	P	**P**	**14 38 53.2**	**+1.4**
VNA3	**Neumayer Olymp**	**88.35**	**164**		**P**	**14 38 57.6**	**+5.8**
VNA1	**Neumayer--Stat**	**88.46**	**163**	P	**P**	**14 38 52.9**	**+0.6**
VNA1	**Neumayer--Stat**	**88.46**	**163**		**P**	**14 38 57.9**	**+5.6**
VNA2	**Neumayer--Watz**	**88.84**	**163**	P	**P**	**14 38 54.9**	**+0.8**
VNA2	**Neumayer--Watz**	**88.84**	**163**		**P**	**14 38 59.2**	**+5.1**
WMQ	**Urumqi**	**124.61**	**20**	*e*PKP	PKPdf	14 44 59.0	-3.0
WMQ				LR	LR		
	comp=N,50nm,19.0s						
WMQ				LR	LR		
	comp=Z,30nm,19.0s,MS4.0						
CN2	**Changchun**	**126.63**	**346**	*e*PKP	PKPdf	14 44 59.0	-6.7
LZH	**Lanzhou**	**135.80**	**7**	*e*PKP	PKPdf	14 45 17.0	-6.4
LZH				XPKP		14 45 22.0	
NJ2	**Nanjing**	**139.34**	**349**	*e*PKP	PKPdf	14 45 23.5	-6.4
NJ2				PP	PP	14 48 21.0	-4.0
NJ2				PKS	PKS	14 48 59.0	-2.9
SSE	**Sheshan**	**139.73**	**345**	PKP	PKPdf	14 45 29.3	-1.4
CMAR	**Chiang Mai Arr**	**151.55**	**23**	PKPbc	PKPdf	14 45 53.0	+2.3
	comp=Z,0.6nm,0.7s,baz=315,slow=3.8,SNR=4.4						
WRA	**Warramunga Arr**	**153.65**	**241**	PKPbc	PKPdf	14 45 59.4	+5.7
	comp=Z,3.2nm,0.7s,baz=109,slow=2.2,SNR=40						

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*IDC **28** 14:41:33.0±3.4, 6.82S×155.58E, h58^{km}±27^{km}, mb4.1/12, mb1 4.3/13, mb1mx4.3/16, mbtmp4.5/13, ML4.2/1, MS3.7/6, Ms1 3.7/6, ms1mx3.5/19, Error ellipse: s-maj=26.0km s-min=15.8km az=97.0*

*BJI **28** 14:41:34.9, 6.24S×155.81E, h80^{km}, mB5.0, mb4.7, Ms4.7, Msz4.5*

*MOS **28** 14:41:35.8±1.1, 6.76S×155.30E, h84^{km}, mb4.3/6, Error ellipse: s-maj=20.9km s-min=16.4km az=23.2*

*NEIC **28** 14:41:36.9±1.3, 6.85S×155.41E, h91^{km}±12^{km}, mb4.8/11, Error ellipse: s-maj=12.4km s-min=11.0km az=188.0*

ISC 28 14:41:34.8±1.5**, 6.83S**±0.09×**155.42E**±0.07**, h84**^{km}±14^{km}**, n48,** σ**0**^{s}**80**/47**, mb4.5**/27**, 5C-1D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.17**	**120**	*e*Pn	**P**	**14 42 52.6**	**+1.3**
	350nm,0.9s						
PMG	**Port Moresby**	**8.57**	**252**	⇓*e*P	**P**	**14 43 37.7**	**-0.3**
PMG	**Port Moresby**	**8.57**	**252**	P	**P**	**14 43 37.8**	**-0.2**
	14nm,0.3s,baz=50,slow=10.0,SNR=54						
PMG				S	**S**	**14 45 13.5**	**-0.4**
	3.6nm,0.3s,baz=102,slow=18,SNR=6.3						
PMG				LR	LR	14 46 49.2	
	comp=Z,320nm,21.0s,baz=72,slow=36						
PMG	**Port Moresby**	**8.57**	**252**	*e*Pn	**P**	**14 43 37.4**	**-0.6**
	98nm,0.6s						
PMG				*e*Sn	**S**	**14 45 15.0**	**+1.0**
CTA	**Charters Tower**	**15.90**	**213**	LR	LR	14 50 31.4	
	comp=Z,252nm,19.9s,baz=35,slow=34						
WRAB	**Tennant Creek**	**24.25**	**235**	*c i*P	**P**	**14 46 45.5**	**+0.3**
WRAB	**Tennant Creek**	**24.25**	**235**	*e*P	**P**	**14 46 45.2**	**0.0**
	31nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**24.26**	**235**	P	**P**	**14 46 45.6**	**+0.3**
	14nm,0.6s,mb4.5,baz=60,slow=9.8,SNR=103						
WRA				ScP		14 53 57.8	
	1.0nm,0.8s,baz=62,slow=3.0,SNR=5.4						
STKA	**Stephens Creek**	**28.07**	**206**	P	**P**	**14 47 18.8**	**-1.8**
	3.6nm,0.8s,mb4.0,baz=29,slow=11,SNR=9.0						
STKA				LR	LR	14 58 57.0	
	comp=Z,60nm,20.0s,baz=31,slow=37						
URZ	**Urewera**	**36.94**	**151**	LR	LR	14 59 34.0	
	comp=Z,481nm,20.8s,baz=233,slow=29						
MJAR	**Matsushiro Arr**	**46.06**	**341**	P	**P**	**14 49 49.9**	**-2.2**
	1.1nm,0.5s,mb3.8,baz=162,slow=9.0,SNR=5.8						
SSE	**Sheshan**	**49.94**	**321**	P	**P**	**14 50 21.3**	**-1.1**
SSE				AP	pP	14 50 41.0	-2.2
SSE				XP	sP	14 50 50.0	-2.6
SSE				PP	PP	14 52 16.8	-1.9
SSE				S	**S**	**14 57 26.3**	**+1.4**
SSE				XS		14 58 00.8	
SSE				SCS	ScS	15 00 04.3	+2.1
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
SSE				AMB	AMB		
	comp=Z,90nm,4.7s						
SSE				LR	LR		
	comp=N,40nm,19.2s						
SSE				LR	LR		
	comp=E,40nm,19.2s						
SSE				LR	LR		
	comp=Z,50nm,18.0s						
SSE	**Sheshan**	**49.94**	**321**	P	**P**	**14 50 21.2**	**-1.2**
	comp=Z,15nm,0.8s,mb5.0						
SSE				pP	pP	14 50 40.9	-2.3
SSE				sP	sP	14 50 50.1	-2.5
SSE				PP	PP	14 52 16.8	-1.9
SSE				S	**S**	**14 57 26.3**	**+1.4**
SSE				sS		14 58 00.7	
SSE				ScS	ScS	15 00 04.3	+2.1
SSE				SS	SS	15 01 01.7	+6.4
ASAJ	**Asahikawa**	**52.02**	**348**	P	**P**	**14 50 37.9**	**0.0**
	comp=Z,6.8nm,0.6s,mb4.8,baz=206,slow=4.4,SNR=9.3						
NJ2	**Nanjing**	**52.06**	**320**	*e*P	**P**	**14 50 38.5**	**+0.2**
NJ2				AP	pP	14 50 57.3	-2.0
NJ2				XP	sP	14 51 06.3	-2.4
NJ2				PP	PP	14 52 36.5	-1.4
NJ2				S	**S**	**14 57 55.0**	**+1.0**
NJ2				XS		14 58 28.0	
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,260nm,5.4s						
NJ2				LR	LR		
	comp=N,2μm,16.4s						
NJ2				LR	LR		
	comp=E,2μm,19.4s						
NJ2				LR	LR		
	comp=Z,3μm,18.4s						
PPT	**Papeete**	**54.64**	**107**	LR	LR	15 12 48.8	
	comp=Z,62nm,18.2s,baz=293,slow=34						
YSS	**Yuzh-Sakhalins**	**54.72**	**349**	*e*P	**P**	**14 50 57.6**	**-0.1**
XAN	**Xi’an**	**59.88**	**316**	P	**P**	**14 51 33.5**	**-0.8**
CM31	**Chiang Mai Arr**	**61.10**	**295**	*e*P	**P**	**14 51 43.0**	**+0.3**
	comp=Z,17nm,0.7s,mb5.2						
CMAR	**Chiang Mai Arr**	**61.10**	**295**	*i* P	**P**	**14 51 43.3**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,21nm,0.9s						
CMAR	**Chiang Mai Arr**	**61.10**	**295**	P	**P**	**14 51 43.2**	**+0.5**
	comp=Z,21nm,0.9s,mb5.2,baz=116,slow=5.3,SNR=85						
HIA	**Hailar**	**63.95**	**335**	*e*P	**P**	**14 52 01.2**	**-0.1**
	comp=Z,7.4nm,0.9s,mb4.5						
GTA	**Gaotai**	**68.91**	**317**	*e*P	**P**	**14 52 33.5**	**+0.6**
ULN	**Ulaanbaatar**	**69.09**	**327**	*c i*P	**P**	**14 52 34.8**	**+1.0**
ULN	**Ulaanbaatar**	**69.09**	**327**	*e*P	**P**	**14 52 35.0**	**+1.2**
	comp=Z,5.2nm,0.8s,mb4.4						
SONM	**Songino Array**	**69.43**	**327**	P	**P**	**14 52 36.3**	**+0.4**
	comp=Z,4.4nm,0.6s,mb4.5,baz=139,slow=5.9,SNR=35						
VNDA	**Vanda**	**70.73**	**179**	P	**P**	**14 52 43.1**	**-0.3**
	comp=Z,0.9nm,0.8s,mb3.7,baz=315,slow=4.5,SNR=6.7						
YAK	**Yakutsk**	**71.48**	**348**	*c i*P	**P**	**14 52 48.1**	**+0.1**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
YAK				MLR	MLR		
	comp=Z,100nm,18.0s						
ZAK	**Zakamensk**	**72.58**	**328**	⇑*e*P	**P**	**14 52 54.8**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
TLY	**Talaya**	**73.14**	**329**	*i* P	**P**	**14 52 58.0**	**+0.1**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BILL	**Bilibino**	**75.08**	**4**	*e*P	**P**	**14 53 10.1**	**+1.2**
BILL				*e*		14 53 24.2	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
BILL	**Bilibino**	**75.08**	**4**	*e*P	**P**	**14 53 10.5**	**+1.6**
	comp=Z,8.2nm,1.1s,mb4.4						

GUN	Gumba	75.40	301	eP	P	14 53 12.6	+1.1
	comp=Z,33nm,0.7s,mb5.2						
PKI	Pulchoki	75.70	301	eP	P	14 53 13.4	+0.1
	comp=Z,28nm,1.1s,mb4.9						
KKN	Kakani	75.87	301	eP	P	14 53 14.3	+0.1
	comp=Z,12nm,0.6s,mb4.8						
DMN	Daman	75.97	301	eP	P	14 53 14.7	-0.1
	comp=Z,26nm,0.8s,mb5.0						
GKN	Gorkha	76.48	301	eP	P	14 53 17.7	+0.1
	comp=Z,46nm,1.2s,mb5.1						
KOLN	Koldanda	77.31	300	eP	P	14 53 21.5	-0.8
ILAR	Eielson Array	83.06	21	P	P	14 53 50.7	-1.4
	comp=Z,1.3nm,1.0s,mb3.7,baz=253,slow=5.7,SNR=7.1						
ILAR				LR	LR	15 25 15.0	
	comp=Z,48nm,19.3s,baz=181,slow=32						
MKAR	Makanchi Array	83.56	319	i P	P	14 53 55.4	+0.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	83.56	319	P	P	14 53 54.8	-0.3
	comp=Z,3.1nm,0.7s,mb4.2,baz=100,slow=5.7,SNR=21						
ZAL	Zalesovo	84.29	326	i P	P	14 53 57.6	-0.9
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAL	Zalesovo	84.29	326	P	P	14 53 57.6	-0.9
	comp=Z,1.1nm,0.3s,mb4.1,baz=331,slow=2.8,SNR=5.3						
MAW	Mawson	84.71	203	P	P	14 54 00.9	+0.6
	comp=Z,2.5nm,0.5s,mb4.4,baz=102,slow=6.1,SNR=12						
PDAR	Pinedale Array	98.27	48	P	P	14 55 03.5	-0.7
	comp=Z,0.5nm,0.7s,mb4.2,baz=243,slow=2.0,SNR=3.8						
KHC	Kasperske Hory	127.01	329 ⇑	i PKIKP	PKPdf	15 00 31.9	+2.6
GERES	GERESS Array B	127.13	329	PKP	PKPdf	15 00 30.8	+1.3
	comp=Z,0.6nm,0.6s,baz=90,slow=2.7,SNR=7.7						
BDFB	Brasilia	147.79	134	PKPbc	PKPdf	15 01 12.2	+4.3
	comp=Z,5.0nm,0.6s,baz=313,slow=1.3,SNR=5.3						

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*IDC **28** 14:41:54.0±1.7, 24.85N×112.17W, mb4.2/4, mb1 4.1/8, mb1mx3.9/24, mbtmp3.9/8, ML3.8/3, MS3.4/1, Ms1 3.4/1, ms1mx2.6/27, Error ellipse: s-maj=47.7km s-min=18.9km az=62.0*

*NEIC **28** 14:41:55.8±1.0, 24.82N×112.21W, h10^{km}, mb4.5/4, Error ellipse: s-maj=19.5km s-min=9.5km az=59.0*

ISC 28 14:41:53.6±1.0**, 24.86N**±0.08×**112.3W**±0.1**, h10^{km}, n22, σ1^{s}47**/23**, mb4.2**/8**, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	2.00	112	i P	Pn	14 42 29.6	+1.7
LPIG				i S	Sn	14 42 55.5	+2.4
TUC	Tucson	7.54	10	ePn	Pn	14 43 46.7	+0.3
	3.7nm,0.8s						
TXAR	Lajitas Array	8.91	58	Pn	P	14 44 03.4	-2.1
	0.5nm,0.3s,baz=235,slow=13,SNR=11						
TXAR				LR	LR	14 47 35.9	
	comp=Z,232nm,18.5s,baz=270,slow=39						
MNTX	Cornudas Mount	9.16	40	ePn	P	14 44 08.0	-0.9
	3.6nm,0.9s						
DAC	Darwin (Calif)	12.24	340	ePn	P	14 44 49.2	-1.8
	4.1nm,1.0s						
ARUT	Antelope Range	12.92	356	Pn	P	14 45 00.9	+0.9
NVAR	Mina Array Bea	14.44	341	Pn	P	14 45 23.7	+3.6
	baz=164,slow=12,SNR=5.4						
WMOK	Wichita Mounta	15.32	47	eP	P	14 45 30.7	-1.0
	9.3nm,1.1s						
ELK	Elko	16.02	352	Pn	P	14 45 43.0	+2.3
	0.0nm,0.3s,baz=188,slow=4.9,SNR=5.1						
ELK	Elko	16.02	352	Pn	P	14 45 43.0	+2.3
PDAR	Pinedale Array	18.00	7	P	P	14 46 05.8	+0.2
	0.1nm,0.3s,baz=174,slow=8.2,SNR=7.1						
CHMT	Chamberlain Mo	22.02	358	eP	P	14 46 50.4	+0.6
DGMT	Dagmar	24.42	13	eP	P	14 47 14.6	+1.3
	21nm,1.1s,mb4.5						
CPCT	Cooper Cave	26.18	60	eP	P	14 47 30.1	0.0
JTS	JuntasAbangare	29.77	114	eP	P	14 47 59.8	-3.1
	8.2nm,0.9s,mb4.5						
OTAV	Otavalo	40.90	122	eP	P	14 49 40.6	+2.7
	13nm,1.4s,mb4.4						
SDV	Santo Domingo	42.75	104	P	P	14 49 52.9	-0.2
	5.6nm,0.6s,mb4.5,baz=297,slow=6.8,SNR=4.9						
SDV	Santo Domingo	42.75	104	P	P	14 49 53.0	-0.2
SDV				eP		14 49 53.8	
INK	Inuvik	45.33	349	P	P	14 50 13.2	-0.1
	2.2nm,1.0s,mb3.9,baz=154,slow=11,SNR=3.4						
ILAR	Eielson Array	45.70	340	P	P	14 50 13.4	-2.8
	0.9nm,0.8s,mb3.7,baz=157,slow=7.3,SNR=6.8						
SIV	San Ignacio	64.39	124	P	P	14 52 31.2	-1.3
	1.8nm,0.7s,mb4.2,baz=320,slow=9.8,SNR=6.2						
CPUP	Villa Florida	73.56	130	P	P	14 53 28.3	-0.7
	2.0nm,0.8s,mb4.1,baz=277,slow=8.1,SNR=3.5						

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*ISK **28** 15:03:21.5, 38.26N×29.77E, h5^{km}, MD2.7*

*CSEM **28** 15:03:22.1±0.2, 38.25N×29.78E, h5^{km}, MD2.7, Error ellipse: s-maj=6.5km s-min=4.9km az=36.0*

ISC 28 15:03:23.0±0.8**, 38.23N**±0.04×**29.68E**±0.06**, h4^{km}**±17^{km}**, n9, σ1^{s}34**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHL	Karahalli	0.15	309	i PG	Pg	15 03 26.5	+0.3
TKTP	Tekketepe	0.54	110	i P	Pg	15 03 33.6	-0.3
TKTP				i S	Sg	15 03 43.7	+2.6
DENT	Denizli	0.69	227	PG	Pg	15 03 37.8	+0.9
ISP	Isparta	0.76	120	PG	Pg	15 03 36.5	-1.7
ISP				SG	Sg	15 03 48.1	-0.3
GDZ	Gediz	0.87	350	i P	Pg	15 03 30.6	-10
GDZ				i S	Sg	15 03 53.3	+1.1
ALT	Altintas	0.89	22	ePG	Pg	15 03 39.1	-1.8
GOLH	Golhisar	0.99	185	i P	Pb	15 03 41.2	-1.2
GOLH				i S	Sb	15 03 56.6	+0.9
ESKT	Eskisehir	1.58	35	i P	Pg	15 03 56.1	+1.4
ESKT				i S	Sg	15 04 20.5	+4.8
ULDT	Uludag	1.96	348	i P	Pg	15 03 59.6	-2.5
ULDT				i S	Sg	15 04 28.5	+0.3

GUC 28 15:04:55.2±0.8**, 34.10S**×**70.14W, h8^{km}**±3^{km}**, MD3.7, ML2.1, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACH	El Canelo	0.38	267	eP	Pg	15 04 57.4	-5.6
CACH				i S	Sg	15 05 03.0	-5.0
CHCH	Chadas Angostu	0.46	291	eP	Pg	15 05 04.3	0.0
PCH	Pirque	0.57	327	eP	Pg	15 05 07.5	+0.9
PCH				i S	Sg	15 05 15.9	+1.7
CLCH	Cerro Calan	0.77	335	eP	Pb	15 05 10.0	-0.4
CLCH				i S	Sb	15 05 21.8	+0.9
CLCH				AMP		15 05 24.6	
	comp=E,172nm,0.6s						
FCH	Farellones	0.78	351	eP	Pb	15 05 10.6	0.0
SFDO	San Fernando	0.89	234	eP	Pb	15 05 12.3	-0.1
SFDO				i S	Sb	15 05 24.7	+0.6

IDC 28 15:13:53.8±4.4**, 5.63N**×**93.00E, mb3.5**/3**, mb1 3.6**/3**, mb1mx3.4**/19**, mbtmp3.5**/3**, Error ellipse: s-maj=155.9km s-min=31.9km az=62.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	42.04	349	P	P	15 21 47.1	-1.6
	0.5nm,0.6s,baz=171,slow=8.8,SNR=6.4						
SONM	Songino Array	43.59	13	P	P	15 21 59.5	-1.8
	0.4nm,0.6s,baz=202,slow=7.8,SNR=3.2						
WRA	Warramunga Arr	47.94	123	P	P	15 22 34.5	-1.9
	0.4nm,0.5s,baz=299,slow=9.5,SNR=4.7						

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*HEL **28** 15:40:32.7±0.1, 67.10N×20.95E, ML1.7, ML1.4(BER), Explosion*

*IDC **28** 15:40:33.0±0.9, 67.07N×21.07E, mb1 2.9/4, mb1mx2.8/23, mbtmp2.9/4, ML2.5/4, Error ellipse: s-maj=18.7km s-min=6.8km az=115.0*

*BER **28** 15:40:35.5±2.9, 67.17N×20.68E, ML1.4, Suspected explosion*

ISC 28 15:40:29.4±0.5**, 67.08N**±0.02×**20.80E**±0.08**, n18, σ1^{s}38**/31**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIF	Kilpisjarvi	1.93	0	ePG	Pg	15 41 07.7	-0.3
KIF				eSG	Sg	15 41 32.7	-1.1
KTK1	Kautokeino	2.15	24	eP	Pn	15 41 10.8	+3.8
KTK1				eSG	Sg	15 41 39.9	-1.0
KTK1				AML	AML	15 41 41.2	
	comp=Z,4.2nm,0.3s						
SGF	Sodankyl	2.25	78	ePB	Pb	15 41 11.1	+0.3
SGF				eSG	Sg	15 41 40.2	-4.3
TRO	Tromso	2.66	346	eSG	Sg	15 41 54.4	-3.5
TRO				AML	AML	15 41 56.0	
	comp=Z,2.6nm,0.5s						
MOR8	Moi Rana	2.69	253	eSG	Sg	15 41 53.1	-6.0
MOR8				AML	AML	15 41 54.8	
	comp=Z,4.3nm,0.3s						
OUL	Oulu	2.88	132	ePB	Pb	15 41 21.8	+0.3
OUL				eS	Sn	15 41 53.8	+0.4
OUL				MSG		15 42 05.2	
	comp=Z,2.5nm,0.2s						
LOF	Lofoten	2.97	294	eSG	Sg	15 42 06.9	-1.5
LOF				AML	AML	15 42 13.1	
	comp=Z,3.4nm,0.8s						
ARCES	ARCESS Array B	3.02	33	Pn	Pn	15 41 21.1	+1.7
	comp=Z,0.5nm,0.3s,baz=219,slow=14,SNR=43						
ARCES				Sn	Sn	15 41 58.6	+1.8
	comp=Z,0.7nm,0.3s,baz=219,slow=23,SNR=6.8						
ARCES				Lg		15 42 06.9	
	comp=Z,0.4nm,0.3s,baz=210,slow=27,SNR=5.3						
STOK	Stokkvaagen	3.18	260	eSB	Sb	15 42 09.0	+2.8
STOK				AML	AML	15 42 29.9	
	comp=Z,5.6nm,0.7s						
KEV	Kevo	3.53	38	eP	Pn	15 41 27.9	+1.2
KEV				eS	Sn	15 42 08.8	-1.0
KEV				MSG		15 42 32.0	
	comp=Z,1.0nm,0.2s						
KU4	Liikasenvaara	3.56	98	eP	Pn	15 41 28.3	+1.2
KU4				eS	Sn	15 42 09.4	-1.1
KJN	Kajaani	4.16	133	eP	Pn	15 41 37.1	+1.6
KJN				eS	Sn	15 42 24.1	-1.4
KJN				MSG		15 42 42.6	
	comp=Z,1.2nm,0.2s						
SUF	Sumiainen	4.93	150	eP	Pn	15 41 48.5	+1.9
SUF				eS	Sn	15 42 43.6	-1.6
KEF	Keuruu	5.23	159	eP	Pn	15 41 52.2	+1.4
KEF				eS	Sn	15 42 51.4	-1.4
KAF	Kangasniemi	5.52	152	eP	Pn	15 41 55.9	+1.0
KAF				eS	Sn	15 42 57.2	-2.8
FINES	FINESS Array B	6.11	155	Pn	Pn	15 42 04.3	+1.2
	comp=Z,0.1nm,0.3s,baz=348,slow=34,SNR=7.2						
FINES				Sn	Sn	15 43 12.7	-1.9
	comp=Z,0.2nm,0.3s,baz=345,slow=22,SNR=4.2						
NOA	NORSAR Array B	7.37	219	Pn	Pn	15 42 21.0	+0.1
	comp=Z,0.1nm,0.3s,baz=37,slow=11,SNR=2.6						
HFS	Hagfors	7.65	208	Pn	Pn	15 42 24.6	-0.2
	comp=Z,0.0nm,0.3s,baz=30,slow=13,SNR=7.2						
HFS				Sn	Sn	15 43 49.2	-4.2
	comp=Z,0.0nm,0.3s,baz=153,slow=30,SNR=2.4						

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*IDC **28** 15:46:20.6±0.4, 26.86S×176.15W, mb4.9/20, mb1 5.0/23, mb1mx5.0/24, mbtmp4.8/23, ML4.6/2, MS5.3/19, Ms1 5.3/19, ms1mx5.3/21, Error ellipse: s-maj=16.0km s-min=12.0km az=145.0*

*BJI **28** 15:46:24.4, 26.63S×176.03W, h27^{km}, mB5.9, mb5.3, Ms5.6, Msz5.3*

*MOS **28** 15:46:25.3±1.1, 26.87S×176.41W, h33^{km}, mb5.5/36, MS5.5/39, Error ellipse: s-maj=11.5km s-min=8.1km az=69.1*

*HRVD **28** 15:46:25.5±0.1, 26.85S×175.69W, h15^{km}, MW5.8/75, Centroid moment Tensor Solution. LP body waves: s73,c168;Mantle waves: s75,c249; Half duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}4.26±.04; $M_{\theta\theta}$0.01±.04; $M_{\phi\phi}$-4.27±.04; $M_{r\theta}$0.57±.13; $M_{\theta\phi}$-0.53±.03; $M_{\phi r}$4.53±.13; Best double couple: $M_0$6.27×10^{17} NP1:ϕ_s187°,δ22°,λ90°. NP2:ϕ_s7°,δ68°,λ90°. Principal axes: T 6.233, Plg67°, Azm277°; N .078, Plg0°, Azm187°; P -6.308, Plg23°, Azm97°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **28** 15:46:25.6±0.1, 26.93S×176.29W, mb5.4/56, MS5.6/130 Error ellipse: s-maj=6.9km s-min=4.3km az=134.0*

*BGS **28** 15:46:29.8±2.3, 26.93S×176.29W, h33^{km}*

ISC 28 15:46:24.2±0.2**, 27.03S**±0.04×**176.33W**±0.05**, h30^{km}, h30^{km}**±1.3^{km}**:pP-P, n474, σ1^{s}10**/215**, mb5.3**/79**, MS5.6**/171**, 34C-13D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.62	212	eP	Pn	15 47 06.1	+0.6
RAO	Raoul Island	2.62	212	Pn	Pn	15 47 07.3	+1.8
	848nm,0.3s,baz=238,slow=21,SNR=49						
RAO				Sn	Sn	15 47 42.7	+6.1
	758nm,0.3s,baz=253,slow=22,SNR=5.5						
RAO				LR	LR	15 48 01.8	
	comp=Z,17μm,19.2s,baz=213,slow=36						
PUZ	Puketiti	11.92	201	eSN	S	15 51 19.4	-8.7
MWZ	Matawai	12.40	203	ePN	P	15 49 09.9	-12
MWZ				SN	S	15 51 31.6	-8.1
URZ	Urewera	12.48	205	Pn	P	15 49 21.7	-1.0
	2.1nm,0.3s,baz=81,slow=1.4,SNR=7.8						
URZ				Sn	S	15 51 35.2	-6.5
	5.2nm,0.3s,baz=193,slow=19,SNR=7.7						
URZ				LR	LR	15 53 49.4	
	comp=Z,4μm,18.1s,baz=25,slow=35						
AFI	Afiamalu	13.73	19	ePn	P	15 49 28.7	-11
AFI				eSn	S	15 51 45.0	-27
NGZ	Ngauruhoe	13.87	207	ePN	P	15 49 41.0	0.0
NGZ				eSN	S	15 51 56.2	-18
SNZO	South Karori	16.05	205	eP	P	15 50 02.0	-7.3
SNZO				eS	S	15 52 41.4	-25
RAR	Rarotonga	16.18	73	eP	P	15 49 58.3	-13
DZM	Mont Dzumac	16.43	284	eP	P	15 50 19.5	+5.2
DZM	Mont Dzumac	16.43	284	Pn	P	15 50 20.6	+6.4
	0.9nm,0.3s,baz=92,slow=15,SNR=9.8						
DZM				LR	LR	15 54 20.2	
	comp=Z,7μm,19.9s,baz=89,slow=29						
TUWZ	Tuamarina	16.45	207	ePN	P	15 50 11.4	-3.0
THZ	Tophouse	17.15	208	ePN	P	15 50 17.6	-5.7
KHZ	Kahutara	17.44	206	ePN	P	15 50 20.1	-6.8
RPZ	Rata Peaks	19.53	208	P	P	15 50 53.4	+1.3
	2.7nm,0.3s,baz=241,slow=3.2,SNR=7.4						
RPZ				S	S	15 54 21.8	-3.4
	0.7nm,0.3s,baz=348,slow=19,SNR=3.2						
RPZ				LR	LR	15 58 10.8	
	comp=Z,4μm,18.5s,baz=21,slow=36						
TBI	Tubuai	24.57	87	eLQ		15 56 00.4	
	6μm,30.2s						
TBI				eLR	LR	15 56 55.4	
	19μm,30.2s,baz=254						
PPT	Papeete	26.44	75	LR	LR	16 01 04.1	
	comp=Z,11μm,18.3s,MS5.5,baz=253,slow=34						
HNR	Honiara	28.44	304	PFAKE		15 52 30.0	+11
HNR				LR	LR		
	comp=Z,5μm,19.0s,MS5.2						
TOO	Toolangi	33.74	242	eP	P	15 53 07.4	+2.3
	comp=Z,4.9nm,0.6s,mb4.6						
TOO	Toolangi	33.74	242	eP	P	15 53 07.4	+2.3
TOO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
CTA	Charters Tower	34.89	273	eP	P	15 53 15.9	+0.7
	comp=Z,20nm,0.6s,mb5.2						
CTA	Charters Tower	34.89	273	eP	P	15 53 15.9	+0.7
CTA				pmax	pmax		
	comp=Z,21nm,0.6s						
CTA	Charters Tower	34.89	273	P	P	15 53 15.6	+0.4
	comp=Z,26nm,0.7s,mb5.3,baz=103,slow=11,SNR=27						
CTA				LR	LR	16 06 24.7	
	comp=Z,7μm,18.3s,MS5.4,baz=183,slow=34						
CTAO	Charters Tower	34.89	273	eP	P	15 53 15.9	+0.7
CTAO				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
CTAO				MLR	MLR		
	comp=Z,6μm,19.0s,MS5.3						
CTAO	Charters Tower	34.89	273	eP	P	15 53 15.8	+0.7
	comp=Z,29nm,0.8s,mb5.3						
CTAO				LR	LR		
	comp=Z,6μm,19.0s,MS5.3						
STKA	Stephens Creek	36.79	252	eP	P	15 53 32.1	+1.0
	comp=Z,8.7nm,0.8s,mb4.6						
STKA	Stephens Creek	36.79	252	P	P	15 53 32.2	+1.1
	comp=Z,6.3nm,0.6s,mb4.6,baz=94,slow=9.7,SNR=21						
STKA				LR	LR	16 08 22.4	
	comp=Z,4μm,18.0s,MS5.2,baz=89,slow=36						
RKT	Rikitea	37.55	93	eS	Sx	15 59 01.2	
	comp=Z,1μm,27.2s						
RKT				eLR	LR	16 02 54.7	
	comp=Z,11μm,32.2s,baz=256						
PMG	Port Moresby	38.66	290	eP	P	15 53 46.5	-0.5
PMG				pmax	pmax		
	comp=Z,29nm,0.9s						
PMG				MLR	MLR		
	comp=Z,7μm,19.0s						
PMG	Port Moresby	38.66	290	P	P	15 53 47.2	+0.2
	comp=Z,13nm,0.7s,mb4.8,baz=101,slow=6.5,SNR=8.7						
PMG				LR	LR	16 07 25.8	
	comp=Z,5μm,18.1s,MS5.4,baz=326,slow=33						
PMG	Port Moresby	38.66	290	eP	P	15 53 46.5	-0.6
	comp=Z,29nm,0.9s,mb5.0						
PMG				LR	LR		
	comp=Z,7μm,19.0s,MS5.5						
TAOE	Nuku Hiva Isla	38.68	69	eS	S	15 59 30.1	-11
	comp=Z,4μm,24.5s						
TAOE				eLR	LR	16 03 19.9	
	comp=Z,23μm,30.7s,baz=243						
PTCN	Pitcairn Islan	41.41	98	PFAKE		15 54 20.0	+10
PTCN				LR	LR		
	comp=Z,8μm,19.0s,MS5.6						
WB2	Warramunga Arr	45.55	268	eP	P	15 54 42.0	-1.2
WB2				eS	S	16 01 28.7	+6.1
WRAB	Tennant Creek	45.55	268 ⇓	eP	P	15 54 42.9	-0.4
WRAB	Tennant Creek	45.55	268	eP	P	15 54 42.5	-0.7
	comp=Z,50nm,0.6s,mb5.6						
WRAB				LR	LR		
	comp=Z,1μm,20.0s,MS4.8						
WRA	Warramunga Arr	45.56	268	P	P	15 54 42.6	-0.8
	comp=Z,37nm,0.7s,mb5.5,baz=106,slow=7.8,SNR=102						
WRA				S	S	16 01 29.1	+6.3
	comp=Z,3.2nm,0.9s,baz=99,slow=16,SNR=6.6						
DRV	Dumont d'Urvil	47.81	202	P	P	15 55 04.0	+3.6
DRV				S	S	16 02 04.0	+10
DRV				L		16 06 00.0	
FORT	Forrest	48.41	252	eP	P	15 55 04.4	-1.2
	comp=Z,36nm,0.6s,mb5.6						
WAKE	Wake Island	48.90	338	PFAKE		15 55 20.0	+10
WAKE				LR	LR		
	comp=Z,5μm,19.0s,MS5.5						
KAKA	Kakadu	49.92	276 ⇓	i P	P	15 55 16.1	-1.3
	comp=Z,13nm,0.3s,mb5.5						
POHA	Pohakuloa	50.69	26	PFAKE		15 55 30.0	+6.8
POHA				LR	LR		
	comp=Z,30μm,19.0s,MS6.3						
KIP	Kipapa	51.33	22	PFAKE		15 55 40.0	+12
KIP				LR	LR		
	comp=Z,2μm,19.0s,MS5.1						
SBA	Scott Base	51.50	185	eP	P	15 55 29.8	+1.2
SBA				pmax	pmax		
	comp=Z,307nm,2.0s,mb5.9						
SBA				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.1						
SBA	Scott Base	51.50	185	eP	P	15 55 29.8	+1.2
	comp=Z,307nm,2.0s,mb5.9						
SBA				LR	LR		
	comp=Z,2μm,19.0s,MS5.1						
VNDA	Vanda	51.59	186	eP	P	15 55 30.6	+1.3
VNDA				pmax	pmax		
	comp=Z,42nm,1.5s						
VNDA				MLR	MLR		
	comp=Z,1μm,19.0s						
VNDA	Vanda	51.59	186	P	P	15 55 30.6	+1.3
	comp=Z,4.9nm,0.9s,mb4.4,baz=2.7,slow=7.3,SNR=23						
VNDA				LR	LR	16 13 13.3	
	comp=Z,1μm,19.9s,MS5.0,baz=16,slow=31						
VNDA	Vanda	51.59	186	eP	P	15 55 30.6	+1.3
	comp=Z,42nm,1.5s,mb5.2						
VNDA				LR	LR		
	comp=Z,1μm,19.0s,MS5.0						
FITZ	Fitzroy Crossi	53.93	267	eP	P	15 55 46.2	-1.2
	comp=Z,16nm,0.6s,mb5.1						
FITZ	Fitzroy Crossi	53.93	267	LR	LR	16 18 56.5	
	comp=Z,4μm,18.5s,MS5.5,baz=97,slow=36						
MIDW	Midway	54.94	359	PFAKE		15 56 10.0	+15
MIDW				LR	LR		
	comp=Z,3μm,20.0s,MS5.4						
GUMO	Guam	55.22	312	PFAKE		15 56 10.0	+13
GUMO				LR	LR		
	comp=Z,2μm,19.0s,MS5.2						
KLBR	Kellerberrin	56.89	248	eP	P	15 56 06.7	-2.1
	comp=Z,16nm,0.7s,mb5.2						
NWAO	Narrogin (SRO)	57.01	247	PFAKE		15 56 20.0	+10
NWAO				LR	LR		
	comp=Z,3μm,19.0s,MS5.4						
MBWA	Marble Bar	58.13	261	eP	P	15 56 16.0	-1.6
MBWA				LR	LR		
	comp=Z,4μm,19.0s,MS5.5						
CASY	Casey	58.80	207	eP	P	15 56 21.1	-0.6
RPN	Rapa Nui	58.96	107	LR	LR	16 17 16.6	
	comp=Z,2μm,18.3s,MS5.4,baz=234,slow=32						
RPN	Rapa Nui	58.96	107	PFAKE		15 56 30.0	+6.7
RPN				LR	LR		
	comp=Z,742nm,19.0s,MS4.8						
QSPA	South Pole Qui	63.07	180	eP	P	15 56 50.7	+0.2
	comp=Z,39nm,0.9s,mb5.5						
MIR	Mirnyy	65.79	206 d	i P	P	15 57 08.8	+0.6
MIR				i		15 57 38.0	
MIR				eS	S	16 05 54.0	+2.9
MIR				eS	S	16 05 58.0	+6.9
MIR				pmax	pmax		
	comp=Z,243nm,2.0s,mb5.9						
MIR				smax			
	comp=N,1μm,9.0s						
MIR				smax			
	comp=E,1μm,8.0s						
MIR				MLR	MLR		
	comp=Z,2μm,18.0s,MS5.2						
PMSA	Palmer Station	74.73	156	PFAKE		15 58 10.0	+7.6
PMSA				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
KSM	Kuching	75.89	279	eP	P	15 58 08.3	-1.8
MAW	Mawson	75.97	200	eP	P	15 58 10.6	+1.1
	comp=Z,28nm,1.7s,mb4.9						
MAW	Mawson	75.97	200	eP	P	15 58 10.6	+1.1
MAW				pmax	pmax		
	comp=Z,28nm,1.7s						
MAW	Mawson	75.97	200	P	P	15 58 10.5	+1.0
	comp=Z,12nm,0.7s,mb4.9,baz=125,slow=7.1,SNR=24						
MAW				LR	LR	16 29 58.7	
	comp=Z,2μm,18.3s,MS5.4,baz=115,slow=34						
MJAR	Matsushiro Arr	76.35	324	P	P	15 58 11.1	-1.2
	comp=Z,15nm,0.7s,mb5.0,baz=167,slow=6.8,SNR=32						
MJAR				LR	LR	16 27 12.7	
	comp=Z,2μm,21.6s,MS5.3,baz=125,slow=32						
MAJO	Matsushiro	76.35	324	eP	P	15 58 11.2	-1.1
MAJO				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
MAJO				MLR	MLR		
	comp=Z,2μm,21.0s,MS5.3						
MAJO	Matsushiro	76.35	324	eP	P	15 58 11.2	-1.1
	comp=Z,19nm,0.8s,mb5.1						
MAJO				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
MAT	Matsushiro	76.35	324	eP	P	15 58 11.0	-1.3
MAT				eS	S	16 08 00.0	+6.2
MAT				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
MAT				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.3						
MAT	Matsushiro	76.35	324	eP	P	15 58 11.0	-1.3
	comp=Z,13nm,0.8s,mb4.9						
MAT				eS	S	16 08 00.0	+6.2
MAT				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
MAT	Matsushiro	76.35	324	P	P	15 58 11.2	-1.1
MAT				S	S	16 07 59.0	+5.2
USHA	Ushuaia	77.88	146	LR	LR	16 26 42.4	
	comp=Z,1μm,19.7s,MS5.2,baz=213,slow=31						
KIWB	Kanaga Island	78.54	359	eP	P	15 58 19.8	-4.2
YUK	Yuzh-Kuril'sk	78.74	333	eP	P	15 58 23.0	-2.3
YUK				e		16 01 30.0	
YUK				eS	S	16 08 28.0	+8.7
YUK				ePS	PS	16 09 19.0	+13
YUK				pmax	pmax		
	comp=Z,1μm,6.0s						
YUK				smax			
	comp=N,2μm,8.0s						
YUK				smax			
	comp=E,2μm,9.0s						
YUK				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.5						
YUK				MLR	MLR		
	comp=N,2μm,20.0s,MS5.6						
YUK				MLR	MLR		
	comp=E,2μm,18.0s,MS5.6						

SMY	**Shemya**	**79.85**	**354**	PFAKE		15 58 40.0	+8.9
SMY				LR	LR		
	comp=Z,6µm,19.0s,MS6.0						
FX1	**Attu Island--F**	**80.09**	**354**	P	**P**	**15 58 30.9**	**-1.5**
	comp=Z,14nm,0.9s,mb4.9,baz=100,slow=9.2,SNR=6.2						
FX1	**Attu Island--F**	**80.09**	**354**	*e*P	**P**	**15 58 29.9**	**-2.5**
ASAJ	**Asahikawa**	**80.16**	**331**	P	**P**	**15 58 33.9**	**+0.9**
	comp=Z,16nm,0.7s,mb5.0,baz=199,slow=8.4,SNR=14						
SYO	**Syowa Base**	**80.72**	**192**	⇓P	**P**	**15 58 34.0**	**-1.4**
UNV	**Unalaska Valle**	**80.98**	**6**	PFAKE		15 58 50.0	+13
UNV				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
SKR	**Severo-Kuril's**	**81.12**	**343**	*e*P	**P**	**15 58 36.0**	**-1.9**
SKR				*e*PPP	PPP	16 03 42.0	+5.6
SKR				*e*S	S	16 08 50.0	+6.0
SKR				*e*		16 08 52.0	
SKR				*e*PS	PS	16 09 25.0	-11
SKR				pmax	pmax		
	comp=N,4µm,12.0s						
SKR				pmax	pmax		
	comp=E,3µm,12.0s						
SKR				MLR	MLR		
	comp=N,3µm,18.0s						
SKR				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.7						
QZH	**Quanzhou**	**81.28**	**304**	⇑*i*P	**P**	**15 58 40.0**	**+0.8**
QZH				S	S	16 08 52.0	+5.8
QZH				AMB	AMB		
	comp=Z,2µm,8.4s						
QZH				LR	LR		
	comp=Z,2µm,19.1s,MS5.5						
SNAA	**Sanae**	**81.47**	**178**	⇑*e*P	**P**	**15 58 39.1**	**-0.2**
SNAA	**Sanae**	**81.47**	**178**	*e*P	**P**	**15 58 38.8**	**-0.5**
	comp=Z,34nm,1.0s,mb5.2						
VNA3	**Neumayer Olymp**	**81.55**	**176**	⇑*i*	**P**	**15 58 43.1**	**+3.4**
VNA3	**Neumayer Olymp**	**81.55**	**176**	⇑*i*	PcP	15 58 46.5	+0.5
VNA3	**Neumayer Olymp**	**81.55**	**176**	⇑*i*	pP	15 58 50.7	+1.2
VNA3	**Neumayer Olymp**	**81.55**	**176**		sP	15 58 58.5	+5.8
VNA3	**Neumayer Olymp**	**81.55**	**176**	⇑*i*P	**P**	**15 58 39.4**	**-0.3**
VNA3				⇑*i*P		15 58 43.1	
SAO	**San Andreas Ge**	**81.80**	**42**	*e*P	**P**	**15 58 41.9**	**+0.2**
SAO				pmax	pmax		
	comp=Z,59nm,1.7s,mb5.2						
SAO				MLR	MLR		
	comp=Z,8µm,19.0s,MS6.1						
SAO	**San Andreas Ge**	**81.80**	**42**	*e*P	**P**	**15 58 41.9**	**+0.2**
	comp=Z,59nm,1.7s,mb5.2						
SAO				LR	LR		
	comp=Z,8µm,19.0s,MS6.1						
VNA2	**Neumayer--Watz**	**82.01**	**176**	⇑*i*P	**P**	**15 58 42.8**	**+0.7**
VNA2	**Neumayer--Watz**	**82.01**	**176**		PcP	15 58 48.7	+0.6
VNA2	**Neumayer--Watz**	**82.01**	**176**	⇑*i*	pP	15 58 53.0	+1.2
VNA2	**Neumayer--Watz**	**82.01**	**176**	⇑*i*	sP	15 58 55.1	+0.1
MWC	**Mount Wilson**	**82.20**	**45**	*e*P	**P**	**15 58 43.9**	**0.0**
VNA1	**Neumayer--Stat**	**82.23**	**176**	⇑*i*	**P**	**15 58 47.3**	**+4.0**
VNA1	**Neumayer--Stat**	**82.23**	**176**		PcP	15 58 50.6	+1.6
VNA1	**Neumayer--Stat**	**82.23**	**176**		pP	15 58 54.4	+1.4
VNA1	**Neumayer--Stat**	**82.23**	**176**	⇓*i*	sP	15 58 57.3	+1.1
VNA1	**Neumayer--Stat**	**82.23**	**176**	⇑*i*P	**P**	**15 58 44.0**	**+0.7**
VNA1				⇑*i*P		15 58 47.3	
NVL	**N'lazarevskaya**	**82.31**	**183**	⇓*i*P	**P**	**15 58 44.3**	**+0.6**
NVL				*i*		15 58 51.6	
NVL				*i* PPP	PPP	16 03 56.0	+9.2
NVL				*i* S	S	16 08 53.1	-2.8
NVL				*e*SS	SS	16 14 27.8	+7.9
NVL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NVL				MLR	MLR		
	comp=Z,90nm,15.8s						
HOPS	**Hopland**	**82.38**	**39**	PFAKE		15 59 00.0	+15
HOPS				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
YSS	**Yuzh-Sakhalins**	**82.39**	**333**	α*i*P	**P**	**15 58 44.8**	**+0.3**
YSS				*e**PP	pP	15 58 53.0	-1.3
YSS				*e*PPS	PPS	16 10 12.0	-0.8
YSS				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.3						
YSS				pmax	pmax		
	comp=Z,700nm,7.0s						
YSS				MLR	MLR		
	comp=N,2µm,18.0s,MS5.4						
YSS				MLR	MLR		
	comp=E,700nm,18.0s,MS5.4						
YSS				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.4						
YSS	**Yuzh-Sakhalins**	**82.39**	**333**	⇑*e*P	**P**	**15 58 45.4**	**+0.9**
PET	**Petropavlovsk**	**82.64**	**345**	*c i*P	**P**	**15 58 44.7**	**-1.0**
PET				*e*S	S	16 09 03.3	+3.7
PET				*e*SP	SP	16 09 52.3	+1.9
PET				*e*SS	SS	16 14 19.3	-5.9
PET				pmax	pmax		
	comp=Z,500nm,9.4s						
PET				pmax	pmax		
	comp=Z,500nm,10.9s						
PET				smax			
	comp=E,1µm,13.6s						
PET				smax			
	comp=N,900nm,16.4s						
PET				smax			
	comp=E,2µm,18.9s						
PET				smax			
	comp=N,1µm,14.9s						
PET	**Petropavlovsk**	**82.64**	**345**	PFAKE		15 59 00.0	+14
PET				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
KS15	**Wonju Array Si**	**82.78**	**318**	*e*P	**P**	**15 58 47.6**	**+0.8**
PFO	**Pinyon Flat Ob**	**82.84**	**47**	PFAKE		15 59 00.0	+13
PFO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
SSE	**Sheshan**	**83.03**	**310**	P	**P**	**15 58 48.5**	**+0.3**
SSE				AP	pP	15 58 58.0	0.0
SSE				XP	sP	15 59 01.8	+0.6
SSE				PP	PP	16 01 59.8	-1.3
SSE				S	S	16 09 07.5	+3.4
SSE				XS		16 09 23.8	
SSE				SS	SS	16 14 33.5	+2.0
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,560nm,7.2s						
SSE				LR	LR		
	comp=N,790nm,23.5s,MS5.2						
SSE				LR	LR		
	comp=E,740nm,23.7s,MS5.2						
SSE				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
SSE	**Sheshan**	**83.03**	**310**	P	**P**	**15 58 48.4**	**+0.2**
	comp=Z,22nm,0.7s,mb5.3						
SSE				pP	pP	15 58 57.9	-0.1
SSE				sP	sP	15 59 01.7	+0.5
SSE				PP	PP	16 01 59.7	-1.4
SSE				S	S	16 09 07.5	+3.4
SSE				sS		16 09 23.8	
SSE				SS	SS	16 14 33.5	+2.0
SSE				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
CMB	**Columbia Colle**	**83.27**	**41**	P	**P**	**15 58 49.3**	**0.0**
CMB				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.2						
CMB	**Columbia Colle**	**83.27**	**41**	*e*P	**P**	**15 58 48.5**	**-0.8**
	comp=Z,13nm,0.9s,mb5.0						
CMB				LR	LR		
	comp=Z,6µm,19.0s,MS6.0						
INCN	**Inchon**	**83.56**	**318**	PFAKE		15 59 00.0	+9.2
INCN				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
PLCA	**Paso Flores**	**83.72**	**133**	P	**P**	**15 58 51.9**	**+0.4**
	comp=Z,4.2nm,1.0s,mb4.5,baz=237,slow=2.1,SNR=5.2						
PLCA				LR	LR	16 28 51.0	
	comp=Z,888nm,19.1s,MS5.2,baz=245,slow=30						
WDC	**Whiskeytown Da**	**83.77**	**38**	P	**P**	**15 58 52.5**	**+0.7**
WDC				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.3						
WDC	**Whiskeytown Da**	**83.77**	**38**	*e*P	**P**	**15 58 50.1**	**-1.7**
	comp=Z,85nm,1.8s,mb5.6						
WDC				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
DAC	**Darwin (Calif)**	**83.81**	**44**	P	**P**	**15 58 52.0**	**-0.1**
DAC				pmax	pmax		
	comp=Z,67nm,1.9s,mb5.5						
DAC	**Darwin (Calif)**	**83.81**	**44**	*e*P	**P**	**15 58 50.9**	**-1.3**
	comp=Z,96nm,2.2s,mb5.5						
DAC				LR	LR		
	comp=Z,7µm,19.0s,MS6.1						
OMM	**Old Mammoth Mi**	**83.83**	**42**	*e*P	**P**	**15 58 52.6**	**+0.4**
MTUM	**Tungsten Hills**	**83.91**	**43**	*e*P	**P**	**15 58 52.0**	**-0.6**
GZH	**Guangzhou**	**84.24**	**299**	P	**P**	**15 58 56.0**	**+1.4**
GZH				S	S	16 09 25.8	+9.5
GZH				LR	LR		
	comp=N,390nm,24.3s,MS5.0						
GZH				LR	LR		
	comp=E,780nm,24.7s,MS5.0						
GZH				LR	LR		
	comp=Z,1µm,21.8s,MS5.2						
YBH	**Yreka Blue Hor**	**84.47**	**37**	P	**P**	**15 58 56.6**	**+1.3**
YBH				pmax	pmax		
	comp=Z,72nm,1.7s						
YBH	**Yreka Blue Hor**	**84.47**	**37**	P	**P**	**15 58 55.3**	**-0.1**
	comp=Z,4.5nm,0.8s,mb4.7,baz=202,slow=0.3,SNR=8.4						
YBH	**Yreka Blue Hor**	**84.47**	**37**	*e*P	**P**	**15 58 55.3**	**0.0**
	comp=Z,72nm,1.7s,mb5.5						
YBH				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
LDFC	**Landfair**	**84.63**	**46**	*e*P	**P**	**15 58 56.7**	**+0.4**
NVAR	**Mina Array Bea**	**84.77**	**42**	P	**P**	**15 58 55.9**	**-1.0**
	comp=Z,8.2nm,1.0s,mb4.8,baz=213,slow=7.3,SNR=24						
NVAR				LR	LR	16 32 28.1	
	comp=Z,7µm,18.1s,MS6.1,baz=240,slow=33						
MNV	**Mina**	**84.86**	**42**	P	**P**	**15 58 58.1**	**+0.8**
MNV				pmax	pmax		
	comp=Z,75nm,1.7s,mb5.5						
MNV	**Mina**	**84.86**	**42**	*e*P	**P**	**15 58 57.0**	**-0.3**
	comp=Z,75nm,1.7s,mb5.5						
MNV				LR	LR		
	comp=Z,7µm,19.0s,MS6.0						
QIZ	**Qiongzhong**	**84.92**	**294**	P	**P**	**15 58 58.0**	**0.0**
QIZ				XP	sP	15 59 12.5	+1.6
QIZ				S	S	16 09 24.3	+1.2
QIZ				AMB	AMB		
	comp=Z,430nm,8.1s						
QIZ				LR	LR		
	comp=N,260nm,16.6s,MS5.0						
QIZ				LR	LR		
	comp=E,460nm,17.6s,MS5.0						
QIZ				LR	LR		
	comp=Z,530nm,18.1s,MS5.0						
QIZ	**Qiongzhong**	**84.92**	**294**	PFAKE		15 59 10.0	+12
QIZ				LR	LR		
	comp=Z,683nm,19.0s,MS5.1						
HUMO	**Hull Mountain**	**84.95**	**36**	*e*P	**P**	**15 58 57.4**	**-0.3**
	comp=Z,57nm,1.5s,mb5.5						
HUMO				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
PAHR	**Pah Rah Range**	**84.97**	**40**	*e*P	**P**	**15 58 58.6**	**+0.8**
NEN	**Nelson**	**85.15**	**46**	*e*P	**P**	**15 58 59.2**	**+0.4**
TPH	**Tonopah**	**85.19**	**43**	P	**P**	**15 58 59.8**	**+0.8**
TPH				pmax	pmax		
	comp=Z,100nm,1.7s,mb5.7						
TPH	**Tonopah**	**85.19**	**43**	*e*P	**P**	**15 58 58.2**	**-0.8**
	comp=Z,101nm,1.8s,mb5.7						
TPH				LR	LR		
	comp=Z,5µm,19.0s,MS5.9						
NJ2	**Nanjing**	**85.20**	**310**	*e*P	**P**	**15 59 00.3**	**+1.1**
NJ2				AP	pP	15 59 10.8	+1.8
NJ2				XP	sP	15 59 14.5	+2.4
NJ2				SKS	SKS	16 09 19.0	-7.9
NJ2				S	S	16 09 26.0	+0.4
NJ2				XS		16 09 39.0	
NJ2				SS	SS	16 15 03.0	-0.1
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,680nm,5.8s						
NJ2				LR	LR		
	comp=N,2µm,16.5s,MS5.9						
NJ2				LR	LR		
	comp=E,4µm,19.2s,MS5.9						
NJ2				LR	LR		
	comp=Z,7µm,21.6s,MS6.0						
TUC	**Tucson**	**85.86**	**51**	*e*P	**P**	**15 59 02.3**	**-0.1**
TUC				pmax	pmax		
	comp=Z,50nm,1.5s,mb5.5						
TUC				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.6						
TUC	**Tucson**	**85.86**	**51**	*e*P	**P**	**15 59 02.3**	**-0.2**
	comp=Z,50nm,1.5s,mb5.5						
TUC				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
MOD	**Modoc**	**85.91**	**38**	*e*P	**P**	**15 59 02.5**	**+0.1**
	comp=Z,33nm,1.4s,mb5.4						
MOD				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
COR	**Corvallis**	**86.15**	**35**	PFAKE		15 59 10.0	+6.4
COR				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
PAYG	**Puerto Ayora**	**86.17**	**89**	PFAKE		15 59 20.0	+16
PAYG				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
KULM	**Kulim**	**86.18**	**278**	*e*P	**P**	**15 59 04.8**	**+0.4**
BMN	**Battle Mountai**	**86.70**	**41**	P	**P**	**15 59 07.1**	**+0.7**
BMN				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.2						
BMN	**Battle Mountai**	**86.70**	**41**	*e*P	**P**	**15 59 06.5**	**+0.2**
	comp=Z,19nm,1.2s,mb5.2						
BMN				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
MDJ	**Mudanjiang**	**86.71**	**325**	P	**P**	**15 59 08.3**	**+2.0**
MDJ				AP	pP	15 59 16.3	+0.2
MDJ				XP	sP	15 59 20.8	+1.6
MDJ				PP	PP	16 02 31.5	+0.6
MDJ				S	S	16 09 34.5	-5.3
MDJ				XS		16 10 01.5	
MDJ				SS	SS	16 15 26.8	+2.1
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,630nm,7.6s						
MDJ				LR	LR		
	comp=N,510nm,21.6s,MS5.2						
MDJ				LR	LR		
	comp=E,790nm,20.6s,MS5.2						
MDJ				LR	LR		
	comp=Z,1µm,20.6s,MS5.3						
MDJ	**Mudanjiang**	**86.71**	**325**	*e*P	**P**	**15 59 08.3**	**+2.0**
	comp=Z,34nm,1.3s,mb5.4						
MDJ				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
WVOR	**Wild Horse Val**	**87.19**	**39**	P	**P**	**15 59 09.5**	**+0.8**
WVOR				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.2						
WVOR	**Wild Horse Val**	**87.19**	**39**	*e*P	**P**	**15 59 07.4**	**-1.3**
	comp=Z,18nm,1.3s,mb5.1						
WVOR				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
ARUT	**Antelope Range**	**87.35**	**45**	*e*P	**P**	**15 59 10.8**	**+1.2**
ARUT	**Antelope Range**	**87.35**	**45**	*e*P	**P**	**15 59 09.8**	**+0.3**
DL2	**Dalian**	**87.50**	**316**	P	**P**	**15 59 11.3**	**+1.0**
DL2				SKS	SKS	16 09 38.5	-3.4
DL2				S	S	16 09 53.3	+5.9
DL2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.0						
DL2				AMB	AMB		
	comp=Z,350nm,6.4s						
DL2				LR	LR		
	comp=N,410nm,16.9s,MS5.0						
DL2				LR	LR		
	comp=E,370nm,17.5s,MS5.0						
DL2				LR	LR		
	comp=Z,750nm,16.7s,MS5.2						
WHN	**Wuhan**	**87.52**	**306**	⇓P	**P**	**15 59 13.0**	**+2.4**
WHN				LR	LR		
	comp=N,1µm,26.5s,MS5.6						
WHN				LR	LR		
	comp=E,2µm,26.0s,MS5.6						
WHN				LR	LR		
	comp=Z,3µm,26.8s,MS5.6						
OCWA	**Octopus Mounta**	**87.95**	**32**	PFAKE		15 59 20.0	+7.8
OCWA				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
ELK	**Elko**	**88.06**	**42**	P	**P**	**15 59 12.5**	**-0.4**
ELK				pmax	pmax		
	comp=Z,60nm,2.1s						
ELK	**Elko**	**88.06**	**42**	P	**P**	**15 59 11.3**	**-1.7**
ELK	**Elko**	**88.06**	**42**	*e*P	**P**	**15 59 11.7**	**-1.2**
	comp=Z,60nm,2.1s,mb5.5						
ELK				LR	LR		
	comp=Z,6µm,19.0s,MS6.0						
SNY	**Shenyang**	**88.16**	**320**	⇓P	**P**	**15 59 14.5**	**+1.1**
SNY				S	S	16 09 45.3	-8.2
SNY				LR	LR		
	comp=N,650nm,15.0s,MS5.3						
SNY				LR	LR		
	comp=E,680nm,18.0s,MS5.3						
SNY				LR	LR		
	comp=Z,1µm,17.7s,MS5.3						
CN2	**Changchun**	**88.37**	**322**	*e*P	**P**	**15 59 14.5**	**+0.2**
CN2				*e*AP	pP	15 59 24.0	-0.1
CN2				*e*S	S	16 10 03.0	+7.6
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.2						
CN2				AMB	AMB		
	comp=Z,700nm,6.0s						
CN2				LR	LR		
	comp=N,800nm,19.0s,MS5.4						
CN2				LR	LR		
	comp=E,1µm,19.0s,MS5.4						
CN2				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
MVU	**Marysvale**	**88.55**	**45**	*e*P	**P**	**15 59 14.7**	**-0.6**
	comp=Z,20nm,1.5s,mb5.2						
MVU				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
MSU	**Marysvale**	**88.58**	**45**	P	**P**	**15 59 16.9**	**+1.4**
MSU	**Marysvale**	**88.58**	**45**	*e*P	**P**	**15 59 15.0**	**-0.4**
TIA	**Tai'an**	**88.78**	**312**	*e*P	**P**	**15 59 17.5**	**+1.0**
KLR	**Kul'dur**	**88.89**	**329**	*e*P	**P**	**15 59 14.8**	**-1.9**
KLR				*e*S	S	16 10 06.5	+6.4
KLR				pmax	pmax		
	comp=Z,800nm,6.5s						
KLR				smax			
	comp=N,2µm,14.0s						
KLR				smax			
	comp=E,1µm,14.0s						
RMW	**Rattlesnake Mo**	**88.89**	**34**	P	**P**	**15 59 17.6**	**+0.8**
EBG	**Ellensburg**	**89.14**	**35**	P	**P**	**15 59 18.8**	**+0.9**
MNTX	**Cornudas Mount**	**89.32**	**54**	*e*P	**P**	**15 59 17.5**	**-1.6**
	comp=E,102nm,2.1s,mb5.8						
MNTX				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
LTX	**Lajitas**	**89.32**	**56**	P	**P**	**15 59 20.0**	**+0.8**
LTX				pmax	pmax		
	comp=Z,90nm,1.8s,mb5.8						
LTX	**Lajitas**	**89.32**	**56**	*e*P	**P**	**15 59 19.5**	**+0.3**
	comp=Z,90nm,1.8s,mb5.8						
LTX				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
TXAR	**Lajitas Array**	**89.32**	**56**	P	**P**	**15 59 18.4**	**-0.9**
	comp=Z,3.9nm,0.9s,mb4.7,baz=190,slow=7.6,SNR=23						
TXAR				LR	LR	16 34 53.2	
	comp=Z,2µm,18.0s,MS5.7,baz=240,slow=33						
SVW2	**Sparrevohn**	**89.42**	**10**	*e*P	**P**	**15 59 18.7**	**-0.2**
BMO	**Blue Mountains**	**89.49**	**38**	*e*P	**P**	**15 59 19.2**	**-0.5**
	comp=Z,59nm,1.9s,mb5.6						
BMO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
BGU	**Big Grassy Mou**	**89.50**	**43**	*e*P	**P**	**15 59 19.5**	**-0.3**
TMUT	**Trail Mountain**	**89.65**	**45**	*e*P	**P**	**15 59 20.3**	**-0.2**
MBW	**Mount Baker**	**89.76**	**33**	P	**P**	**15 59 21.4**	**+0.6**
SLKM	**Skilak Lake**	**89.79**	**13**	P	**P**	**15 59 20.6**	**-0.1**
SLKM	**Skilak Lake**	**89.79**	**13**	*e*P	**P**	**15 59 20.0**	**-0.6**
EPH	**Ephrata**	**89.93**	**35**	P	**P**	**15 59 22.1**	**+0.5**
SRU	**San Rafael**	**89.97**	**45**	P	**P**	**15 59 22.8**	**+0.8**
SRU	**San Rafael**	**89.97**	**45**	*e*P	**P**	**15 59 22.5**	**+0.4**
CFAA	**Coronel Fontan**	**90.04**	**126**	P	**P**	**15 59 20.6**	**-1.9**
	comp=Z,0.3nm,0.5s						
SPU	**Mount Spurr**	**90.08**	**11**	*e*P	**P**	**15 59 19.9**	**-2.1**
HVU	**Hansel Valley**	**90.17**	**42**	P	**P**	**15 59 23.2**	**+0.3**
HVU	**Hansel Valley**	**90.17**	**42**	*e*P	**P**	**15 59 23.1**	**+0.2**
HLID	**Hailey**	**90.29**	**40**	*e*P	**P**	**15 59 23.7**	**+0.3**
	comp=Z,34nm,1.8s,mb5.4						
HLID				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
ANMO	**Albuquerque**	**90.32**	**50**	P	**P**	**15 59 24.5**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,12nm,1.1s						
ANMO	**Albuquerque**	**90.32**	**50**	*e*P	**P**	**15 59 24.1**	**+0.3**
	comp=Z,12nm,1.1s,mb5.1						
ANMO				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
OD2	**Odessa Site #2**	**90.40**	**35**	P	**P**	**15 59 24.2**	**+0.4**
FIB	**Fire Island**	**90.41**	**12**	PFAKE		15 59 30.0	+6.5
FIB				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
MA2	**Magadan**	**90.45**	**344**	*e*P	**P**	**15 59 23.9**	**+0.2**
MA2				*i* S	S	16 10 15.5	+1.4
MA2				*e*SS	SS	16 16 31.7	+13
MA2				*e*SSS	SSS	16 19 58.5	+3.9
MA2				pmax	pmax		
	comp=Z,20nm,1.6s,mb5.2						
MA2				MLR	MLR		
	comp=E,2µm,20.0s						
MA2	**Magadan**	**90.45**	**344**	*i* P	**P**	**15 59 23.0**	**-0.7**
MA2				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
SIT	**Sitka**	**90.61**	**21**	PFAKE		15 59 40.0	+15
SIT				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
TRQA	**Tornquist**	**90.74**	**134**	PFAKE		15 59 40.0	+14
TRQA				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
EYAK	**Cordova Ski Ar**	**90.77**	**15**	*e*P	**P**	**15 59 25.0**	**-0.2**
HWUT	**Hardware Ranch**	**90.79**	**43**	*e*P	**P**	**15 59 25.4**	**-0.3**
	comp=Z,46nm,1.8s,mb5.5						
HWUT				LR	LR		
	comp=Z,6µm,19.0s,MS6.1						
ENH	**Enshi**	**90.94**	**304**	*e*P	**P**	**15 59 27.8**	**+1.1**
	comp=Z,235nm,1.5s,mb6.3						
ENH				LR	LR		
	comp=Z,557nm,21.0s,MS5.0						
PMR	**Palmer**	**91.00**	**13**	*e*P	**P**	**15 59 26.2**	**0.0**
GYA	**Guiyang**	**91.17**	**299**	⇓*i*P	**P**	**15 59 30.3**	**+2.4**
GYA				AP	pP	15 59 41.5	+3.9
GYA				XP	sP	15 59 43.8	+3.0
GYA				SKS	SKS	16 09 52.0	-13
GYA				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.5						
GYA				AMB	AMB		
	comp=Z,160nm,3.9s						
GYA				LR	LR		
	comp=N,510nm,16.8s,MS5.3						
GYA				LR	LR		
	comp=E,880nm,18.2s,MS5.3						
GYA				LR	LR		
	comp=Z,980nm,18.0s,MS5.3						
DIV	**Divide**	**91.28**	**14**	*e*P	**P**	**15 59 28.3**	**+0.8**
	comp=Z,52nm,0.9s,mb5.9						
DIV				LR	LR		
	comp=Z,7µm,19.0s,MS6.1						
RW3	**Ridgway**	**91.31**	**47**	P	**P**	**15 59 30.5**	**+2.3**
RW3	**Ridgway**	**91.31**	**47**	*e*P	**P**	**15 59 29.1**	**+0.9**
SML	**Sawmill**	**91.36**	**13**	*e*P	**P**	**15 59 35.7**	**+7.9**
AHID	**Auburn Hatcher**	**91.75**	**42**	*e*P	**P**	**15 59 30.5**	**+0.3**
	comp=Z,6.1nm,0.3s,mb5.4						
AHID				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
NEW	**Newport**	**91.78**	**35**	P	**P**	**15 59 28.8**	**-1.3**
	comp=Z,3.2nm,0.8s,mb4.7						
NEW	**Newport**	**91.78**	**35**	P	**P**	**15 59 28.8**	**-1.3**
NEW				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
MCMT	**McKenzie Canyo**	**91.96**	**40**	*e*P	**P**	**15 59 30.7**	**-0.3**
RRI2	**Red Ridge**	**91.96**	**41**	*e*P	**P**	**15 59 31.6**	**+0.5**
	comp=Z,17nm,1.2s,mb5.2						
REDW	**Red Top Meadow**	**92.25**	**42**	*e*P	**P**	**15 59 32.0**	**-0.4**
	comp=Z,41nm,1.4s,mb5.6						
TPAW	**Teton Pass**	**92.26**	**41**	*e*P	**P**	**15 59 33.3**	**+0.8**
	comp=Z,33nm,1.5s,mb5.4						
SDCO	**Great Sand Dun**	**92.48**	**49**	PFAKE		15 59 40.0	+6.4
SDCO				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
IMW	**Indian Meadow**	**92.51**	**41**	*e*P	**P**	**15 59 34.2**	**+0.6**
	comp=Z,16nm,1.2s,mb5.3						
TNA	**Tin City**	**92.51**	**3**	*e*P	**P**	**15 59 32.8**	**-0.3**
	comp=Z,14nm,1.0s,mb5.3						
TNA				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
MOOW	**Moose Ponds**	**92.54**	**41**	*e*P	**P**	**15 59 34.1**	**+0.4**
	comp=Z,43nm,1.9s,mb5.5						
LOHW	**Long Hollow**	**92.54**	**42**	*e*P	**P**	**15 59 33.5**	**-0.3**
	comp=Z,11nm,0.9s,mb5.3						
MSO	**Missoula**	**92.56**	**38**	*e*P	**P**	**15 59 32.5**	**-1.3**
	comp=Z,12nm,1.4s,mb5.1						
MSO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
BW06	**Boulder Array**	**92.68**	**43**	PFAKE		15 59 50.0	+16
BW06				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						

PDAR	**Pinedale Array**	**92.68**	**43**	P	**P**	**15 59 34.1**	**-0.3**
	comp=Z,1.4nm,0.9s,mb4.4,baz=225,slow=4.2,SNR=11						
PDAR				PP	PP	16 03 12.8	-6.2
	comp=Z,1.4nm,1.1s,baz=259,slow=7.6,SNR=4.2						
PDAR				LR	LR	16 36 13.5	
	comp=Z,3µm,18.2s,MS5.8,baz=246,slow=32						
TIY	**Taiyuan**	**92.74**	**311**	*e*P	**P**	**15 59 36.5**	**+1.7**
TIY				LR	LR		
	comp=N,1µm,16.0s						
QLMT	**Earthquake Lak**	**92.77**	**40**	P	**P**	**15 59 35.8**	**+1.0**
CHMT	**Chamberlain Mo**	**92.99**	**38**	P	**P**	**15 59 36.0**	**+0.3**
SEY	**Seymchan**	**93.05**	**346**	*i* P	**P**	**15 59 35.0**	**-0.6**
SEY						16 03 15.9	
SEY						16 10 07.1	
SEY				*e*S	S	16 10 32.5	-4.4
SEY				pmax	pmax		
	comp=N,10.0nm,1.1s						
SEY				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.5						
SEY				pmax	pmax		
	comp=E,6.0nm,1.0s						
SEY				smax			
	comp=N,2µm,15.2s						
SEY				smax			
	comp=E,2µm,17.6s						
BOZ	**Bozeman (W)**	**93.14**	**39**	*e*P	**P**	**15 59 36.0**	**-0.4**
BOZ				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.5						
BOZ	**Bozeman (W)**	**93.14**	**39**	*e*P	**P**	**15 59 35.5**	**-0.9**
	comp=Z,29nm,1.3s,mb5.5						
BOZ				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
LKWY	**Lake**	**93.21**	**41**	PFAKE		15 59 50.0	+13
LKWY				LR	LR		
	comp=Z,6µm,19.0s,MS6.1						
XAN	**Xi’an**	**93.27**	**307**	P	**P**	**15 59 35.5**	**-1.8**
XAN				SS	SS	16 16 55.8	-3.9
XAN				AMB	AMB		
	comp=Z,380nm,9.6s						
XAN				LR	LR		
	comp=N,1µm,17.2s						
XAN				LR	LR		
	comp=Z,1µm,17.2s,MS5.5						
DLBC	**Dease Lake**	**93.45**	**22**	P	**P**	**15 59 38.3**	**+0.7**
	comp=Z,2.2nm,1.0s,mb4.5,baz=165,slow=2.6,SNR=4.1						
ISCO	**Idaho Springs**	**93.51**	**47**	PFAKE		15 59 50.0	+12
ISCO				LR	LR		
	comp=Z,6µm,19.0s,MS6.0						
AMTX	**Amarillo**	**93.62**	**53**	PFAKE		15 59 50.0	+11
AMTX				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
KMI	**Kunming**	**93.63**	**296**	⇑P	**P**	**15 59 41.5**	**+2.3**
KMI				AP	pP	15 59 51.5	+2.5
KMI				XP	sP	15 59 54.0	+1.9
KMI				PP	PP	16 03 27.0	0.0
KMI				SKS	SKS	16 10 13.0	-5.4
KMI				S	S	16 10 45.8	+2.9
KMI				PS	PS	16 12 05.0	-0.8
KMI				SS	SS	16 17 07.3	+2.2
KMI				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb5.0						
KMI				AMB	AMB		
	comp=Z,320nm,4.5s						
KMI				LR	LR		
	comp=N,590nm,20.8s,MS5.2						
KMI				LR	LR		
	comp=E,530nm,20.8s,MS5.2						
KMI				LR	LR		
	comp=Z,740nm,25.7s,MS5.0						
KMI	**Kunming**	**93.63**	**296**	⇑P	**P**	**15 59 41.6**	**+2.4**
KMI				*PP	pP	15 59 51.6	+2.6
KMI				*SP	sP	15 59 54.1	+2.0
KMI						16 03 26.9	
KMI						16 10 13.1	
KMI				S	S	16 10 45.7	+2.8
KMI				PS	PS	16 12 04.9	-0.9
KMI				SS	SS	16 17 07.3	+2.2
KMI				pmax	pmax		
	comp=Z,15nm,1.5s,mb5.2						
KMI				MLR	MLR		
	comp=Z,750nm,25.7s,MS5.0						
KMI	**Kunming**	**93.63**	**296**	⇑P	**P**	**15 59 41.6**	**+2.4**
	comp=Z,15nm,1.5s,mb5.2						
KMI				pP	pP	15 59 51.6	+2.6
KMI				sP	sP	15 59 54.1	+2.0
KMI				PP	PP	16 03 26.9	-0.1
KMI				SKS	SKS	16 10 13.1	-5.3
KMI				S	S	16 10 45.7	+2.8
KMI				PS	PS	16 12 04.9	-0.9
KMI				SS	SS	16 17 07.3	+2.2
KMI				LR	LR		
	comp=Z,750nm,25.7s,MS5.0						
HRY	**Holter Researc**	**93.65**	**38**	*e*P	**P**	**15 59 38.0**	**-0.8**
CM31	**Chiang Mai Arr**	**93.69**	**289**	*e*P	**P**	**15 59 41.4**	**+1.8**
	comp=Z,13nm,0.8s,mb5.4						
CM31				LR	LR		
	comp=Z,820nm,19.0s,MS5.2						
CMAR	**Chiang Mai Arr**	**93.69**	**289**	P	**P**	**15 59 41.9**	**+2.3**
	comp=Z,7.2nm,0.8s,mb5.2,baz=134,slow=3.9,SNR=36						
ILAR	**Eielson Array**	**94.33**	**12**	P	**P**	**15 59 40.2**	**-1.2**
	comp=Z,3.2nm,0.8s,mb4.8,baz=232,slow=5.7,SNR=22						
ILAR				PP	PP	16 03 26.1	-5.2
	comp=Z,0.5nm,0.5s,baz=212,slow=6.7,SNR=4.2						
IMA	**Indian Mountai**	**94.41**	**9**	P	**P**	**15 59 43.2**	**+1.4**
IMA				pmax	pmax		
	comp=Z,35nm,1.5s,mb5.6						
IMA	**Indian Mountai**	**94.41**	**9**	*e*P	**P**	**15 59 41.2**	**-0.6**
	comp=Z,34nm,1.5s,mb5.6						
HIA	**Hailar**	**94.86**	**324**	PFAKE		16 00 00.0	+16
HIA				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
HHC	**Hu-ho-hao-te**	**94.97**	**314**	*e*P	**P**	**15 59 46.8**	**+1.8**
HHC				AP	pP	15 59 58.0	+3.3
HHC				XP	sP	16 00 02.0	+4.1
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
HHC				AMB	AMB		
	comp=Z,330nm,8.2s						
HHC				LR	LR		
	comp=N,770nm,18.2s,MS5.3						
HHC				LR	LR		
	comp=E,500nm,19.4s,MS5.3						
HHC				LR	LR		
	comp=Z,730nm,23.8s,MS5.1						
CD2	**Chengdu**	**95.55**	**302**	P	**P**	**15 59 51.8**	**+3.9**
CD2				PP	PP	16 03 45.3	+4.1
CD2				PPP	PPP	16 05 47.5	+1.3
CD2				SKS	SKS	16 10 25.5	-3.3
CD2				S	S	16 11 04.0	+4.9
CD2				PS	PS	16 12 29.0	+2.3
CD2				SS	SS	16 17 35.0	+3.2
CD2				AMB	AMB		
	comp=Z,580nm,12.0s						
CD2				LR	LR		
	comp=N,630nm,26.4s						
CD2				LR	LR		
	comp=Z,1µm,42.0s						
WMOK	**Wichita Mounta**	**95.62**	**54**	*e*P	**P**	**15 59 45.7**	**-2.4**
WMOK				pmax	pmax		
	comp=Z,16nm,1.7s,mb5.2						
WMOK				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
WMOK	**Wichita Mounta**	**95.62**	**54**	*e*P	**P**	**15 59 45.7**	**-2.5**
	comp=Z,16nm,1.7s,mb5.2						
WMOK				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
BILL	**Bilibino**	**95.66**	**354***c*	*i*P	**P**	**15 59 47.1**	**-0.4**
BILL				*e*		16 03 38.7	
BILL				*e*S	SKS	16 10 24.6	-3.9
BILL				*e*PS	PS	16 12 29.4	+2.4
BILL				*e*SS	SS	16 17 38.1	+5.7
BILL				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.3						
BILL				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.7						
BILL	**Bilibino**	**95.66**	**354**	⇑*i*P	**P**	**15 59 47.2**	**-0.3**
JTS	**JuntasAbangare**	**95.82**	**81**	PFAKE		16 00 00.0	+11
JTS				LR	LR		
	comp=Z,958nm,19.0s,MS5.3						
RSSD	**Black Hills**	**96.79**	**44**	*e*P	**P**	**15 59 52.8**	**-0.4**
RSSD				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.2						
RSSD				MLR	MLR		
	comp=Z,10µm,19.0s,MS6.3						
RSSD	**Black Hills**	**96.79**	**44**	*e*P	**P**	**15 59 52.8**	**-0.4**
	comp=Z,11nm,1.0s,mb5.2						
RSSD				LR	LR		
	comp=Z,10µm,19.0s,MS6.3						
LAO	**LASA Array**	**96.83**	**41**	PFAKE		16 00 00.0	+6.7
LAO				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
CBKS	**Cedar Bluff**	**96.92**	**50**	PFAKE		16 00 00.0	+6.1
CBKS				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
OTAV	**Otavalo**	**97.13**	**93**	PFAKE		16 00 10.0	+15
OTAV				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
NATX	**Nacogdoches**	**97.28**	**58**	PFAKE		16 00 10.0	+14
NATX				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
LPAZ	**La Paz**	**98.14**	**113**	*e*P	**P**	**16 00 01.1**	**+1.2**
LPAZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LPAZ				MLR	MLR		
	comp=Z,782nm,19.0s						
LPAZ	**La Paz**	**98.14**	**113**	P	**P**	**15 59 59.1**	**-0.7**
	comp=Z,0.6nm,0.3s,mb4.5,baz=207,slow=9.0,SNR=4.2						
LPAZ				LR	LR	16 37 13.0	
	comp=Z,644nm,18.1s,MS5.2,baz=148,slow=31						
LPAZ	**La Paz**	**98.14**	**113**	*e*P	**P**	**16 00 01.1**	**+1.3**
	comp=Z,6.1nm,1.3s,mb5.0						
LPAZ				LR	LR		
	comp=Z,782nm,19.0s,MS5.2						
YAK	**Yakutsk**	**98.70**	**337**	*i* P	**P**	**16 00 00.9**	**-0.4**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.2						
YAK				MLR	MLR		
	comp=Z,800nm,20.0s,MS5.2						
YAK	**Yakutsk**	**98.70**	**337**	*i* P	**P**	**16 00 00.0**	**-1.3**
YAK				LR	LR		
	comp=Z,757nm,20.0s,MS5.2						
DGMT	**Dagmar**	**98.93**	**40**	PFAKE		16 00 10.0	+7.3
DGMT				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
INK	**Inuvik**	**100.15**	**15**	P	P	16 00 06.5	-1.3
	comp=Z,1.0nm,0.8s,baz=189,slow=6.0,SNR=2.6						
CPUP	**Villa Florida**	**100.88**	**127**	PFAKE		16 00 20.0	+7.9
CPUP				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
ULN	**Ulaanbaatar**	**101.25**	**318**	*i* P	P	16 00 11.7	-1.6
ULN	**Ulaanbaatar**	**101.25**	**318**	PFAKE		16 00 20.0	+6.7
ULN				LR	LR		
	comp=Z,862nm,21.0s,MS5.2						
OXF	**Oxford**	**102.44**	**58**	PFAKE		16 00 30.0	+11
OXF				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
CCM	**Cathedral Cave**	**102.54**	**54**	PFAKE		16 00 30.0	+11
CCM				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
FFC	**Flin Flon**	**103.21**	**35**	PFAKE		16 00 30.0	+8.3
FFC				LR	LR		
	comp=Z,416nm,19.0s,MS5.0						
PLAL	**Pickwick Lake**	**103.63**	**58**	PFAKE		16 00 40.0	+16
PLAL				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
LRAL	**Lakeview Retre**	**103.68**	**60**	PFAKE		16 00 40.0	+16
LRAL				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
WVT	**Waverly**	**104.27**	**57**	PFAKE		16 00 40.0	+13
WVT				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
ULM	**Lac du Bonnet**	**104.57**	**41**	PFAKE		16 00 40.0	+12
ULM				LR	LR		
	comp=Z,6µm,19.0s,MS6.1						
ZAK	**Zakamensk**	**104.59**	**319**	*e*P	Pdif	16 00 31.2	+3.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.7s						
LSA	**Lhasa**	**104.89**	**296**	PFAKE		16 00 40.0	+10
LSA				LR	LR		
	comp=Z,493nm,20.0s,MS5.0						
TLY	**Talaya**	**104.92**	**321**	*e*P	Pdif	16 00 40.6	+11
TLY				*e*		16 13 59.0	
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TLY				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.5						
TLY	**Talaya**	**104.92**	**321**	PFAKE		16 00 40.0	+11
TLY				LR	LR		
	comp=Z,376nm,20.0s,MS4.9						
DGAR	**Diego Garcia**	**105.20**	**253**	PFAKE		16 05 00.0	
DGAR				LR	LR		
	comp=Z,381nm,20.0s,MS4.9						
TIXI	**Tiksi**	**105.42**	**344**	PFAKE		16 05 00.0	
TIXI				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
SAML	**Samuel**	**106.06**	**109**	PFAKE		16 05 00.0	
SAML				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
DWPF	**Disney**	**106.21**	**66**	PFAKE		16 05 00.0	
DWPF				LR	LR		
	comp=Z,819nm,19.0s,MS5.3						
MYNC	**Murphy**	**106.66**	**59**	PFAKE		16 05 00.0	
MYNC				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
SDV	**Santo Domingo**	**107.93**	**89**	PFAKE		16 05 00.0	
SDV				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
NHSC	**New Hope**	**109.02**	**62**	PFAKE		16 05 00.0	
NHSC				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
BLA	**Blacksburg**	**110.21**	**58**	PFAKE		16 05 10.0	+12
BLA				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
MCWV	**Mont Chateau**	**111.41**	**55**	PFAKE		16 05 10.0	+10
MCWV				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
WMQ	**Urumqi**	**112.28**	**309**	*e*PDIF	Pdif	16 01 03.0	+1.1
WMQ				PP	PP	16 05 47.5	+0.8
WMQ				PPP	PPP	16 08 09.8	+0.8
WMQ				SKS	SKS	16 12 05.5	+20
WMQ				SS	SS	16 21 20.8	+0.2
WMQ				PP	PP		
	comp=Z,220nm,10.0s						
WMQ				LR	LR		
	comp=N,460nm,20.0s,MS5.2						
WMQ				LR	LR		
	comp=E,380nm,20.2s,MS5.2						
WMQ				LR	LR		
	comp=Z,410nm,20.0s,MS5.0						
CBN	**Corbin**	**112.82**	**58**	PFAKE		16 05 10.0	+6.8
CBN				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
BINY	**Binghamton**	**114.93**	**54**	PFAKE		16 05 10.0	+2.8
BINY				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
SJG	**San Juan**	**115.62**	**82**	PFAKE		16 05 20.0	+11
SJG				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
ZAL	**Zalesovo**	**116.48**	**319**	*i* PKIKP	PKPdf	16 05 05.6	-4.3
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZAL	**Zalesovo**	**116.48**	**319**	PKP	PKPdf	16 05 04.5	-5.5
	comp=Z,1.7nm,0.8s,baz=329,slow=0.5,SNR=9.9						
ZAL	**Zalesovo**	**116.48**	**319**	PKP	PKPdf	16 05 04.5	-5.5
NCB	**Newcomb**	**116.60**	**52**	PFAKE		16 05 20.0	+10
NCB				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
MKAR	**Makanchi Array**	**116.70**	**311**	*i* PKIKP	PKPdf	16 05 05.8	-4.8
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**116.70**	**311**	PKP	PKPdf	16 05 04.7	-5.9
	comp=Z,3.1nm,0.8s,baz=67,slow=3.1,SNR=21						
NVS	**Novosibirsk**	**117.53**	**320**	*i* PKIKP	PKPdf	16 05 06.2	-5.7
NVS				pmax	pmax		
	comp=Z,17nm,1.9s						
NVS				pmax	pmax		
	comp=N,3.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.4s						
HRV	**Harvard--Oak R**	**118.19**	**54**	PFAKE		16 05 20.0	+6.5
HRV				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
WES	**Weston**	**118.34**	**54**	PFAKE		16 05 20.0	+6.2
WES				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
SUR	**Sutherland**	**118.71**	**197**	PFAKE		16 05 20.0	+5.2
SUR				LR	LR		
	comp=Z,325nm,20.0s,MS5.0						
WVL	**Waterville**	**119.94**	**52**	PFAKE		16 05 20.0	+3.2
WVL				LR	LR		
	comp=Z,10µm,21.0s,MS6.4						
SEK	**Senekal**	**120.36**	**205**	*e*S	SKS	16 12 11.5	-4.5
SEK				AML	AML	16 12 14.0	
	comp=Z,183nm,0.3s						
BOSA	**Boshof**	**120.93**	**202**	PKP	PKPdf	16 05 15.9	-3.3
	comp=Z,3.7nm,0.8s,baz=149,slow=8.9,SNR=5.4						
BOSA	**Boshof**	**120.93**	**202**	PKP	PKPdf	16 05 15.9	-3.3
BOSA				LR	LR		
	comp=Z,941nm,20.0s,MS5.4						
BBSR	**BB Station**	**121.27**	**67**	PFAKE		16 05 30.0	+10
BBSR				LR	LR		
	comp=Z,720nm,19.0s,MS5.3						
FRU	**Bishkek**	**121.36**	**305**	*e*PKIKP	PKPdf	16 05 20.5	+0.8
PQI	**Presque Isle**	**121.38**	**50**	PFAKE		16 05 30.0	+10
PQI				LR	LR		
	comp=Z,15µm,19.0s						
EMMW	**East Machias**	**121.51**	**52**	PFAKE		16 05 30.0	+10
EMMW				LR	LR		
	comp=Z,7µm,20.0s,MS6.3						
SCHQ	**Schefferville**	**122.75**	**40**	PFAKE		16 05 30.0	+8.0
SCHQ				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
LBTB	**Lobatse**	**124.11**	**204**	PFAKE		16 05 30.0	+4.5
LBTB				LR	LR		
	comp=Z,742nm,19.0s,MS5.4						
BVAR	**Borovoye Array**	**124.97**	**317**	PKP	PKPdf	16 05 21.2	-5.1
	comp=Z,6.5nm,0.9s,baz=90,slow=1.5,SNR=23						
KBS	**Kingsbay**	**127.89**	**358**	PFAKE		16 05 40.0	+8.6
KBS				LR	LR		
	comp=Z,743nm,19.0s,MS5.4						
KBS	**Kingsbay**	**127.89**	**358**	AMS	AMS	17 10 25.5	
	comp=Z,502nm,17.7s,MS5.2						
DAG	**Danmarks Havn**	**129.04**	**6**	⇑*e*PKIKP	PKPdf	16 05 28.5	-5.2
DAG				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.8						
DAG	**Danmarks Havn**	**129.04**	**6**	⇑*i*P	PKPdf	16 05 28.5	-5.2
	comp=Z,2.7nm,0.6s						
	comp=Z,2µm,17.0s						
RCBR	**Riachuelo**	**129.68**	**125**	PFAKE		16 05 40.0	+3.5
RCBR				LR	LR		
	comp=Z,964nm,19.0s,MS5.5						
SVE	**Sverdlovsk**	**130.16**	**323**	*e*PKIKP	PKPdf	16 05 30.0	-6.2
SVE				*e*		16 05 37.0	
SVE				*e*		16 07 45.8	
SVE				MLR	MLR		
	comp=N,400nm,18.0s,MS5.3						
SVE				MLR	MLR		
	comp=E,400nm,18.0s,MS5.3						
SVE				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.5						
ARU	**Arti**	**131.36**	**323**	*i* PKIKP	PKPdf	16 05 33.9	-4.6
ARU				*e*		16 07 51.4	
ARU				*e*SP	SP	16 17 58.0	-3.4
ARU				*e*SS	SS	16 25 18.1	-5.9
ARU				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.5						
ARU				MLR	MLR		
	comp=N,400nm,18.0s,MS5.4						
ARU				MLR	MLR		
	comp=E,600nm,19.0s,MS5.4						
LSZ	**Lusaka**	**131.68**	**212**	*e*PKIKP	PKPdf	16 05 37.0	-3.2
LSZ				MLR	MLR		
	comp=Z,727nm,19.0s,MS5.4						
LVZ	**Lovozero**	**135.05**	**344***c*	*i*PKIKP	PKPdf	16 05 38.5	-6.6
KEV	**Kevo**	**135.14**	**349**	*e*PKIKP	PKPdf	16 05 37.1	-8.2
KEV				MLR	MLR		
	comp=Z,933nm,20.0s,MS5.5						
JMIC	**Jan Mayen**	**135.46**	**6**	*e*P	PKPdf	16 05 44.6	-1.2
JMIC				AMS	AMS	17 07 32.6	
	comp=Z,770nm,19.1s,MS5.4						
ARCES	**ARCESS Array B**	**135.59**	**349**	PKP	PKPdf	16 05 40.4	-5.7
	comp=Z,3.4nm,0.7s,slow=0.9,SNR=10						
APA	**Apatity**	**135.61**	**344**	⇑*i*PKIKP	PKPdf	16 05 39.0	-7.2
APA				*i*		16 05 51.4	
APA				*e*		16 08 21.0	
APA				*i* SS	SS	16 26 21.0	+6.1
APA				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.7						
TRO	**Tromso**	**136.44**	**352**	*e*P	PKPdf	16 05 45.5	-2.1
TRO				*e*SS	SS	16 26 26.9	+2.1
TRO				AMS	AMS	17 13 45.0	
	comp=Z,532nm,19.1s,MS5.3						
KMBO	**Kilima Mbogo**	**137.24**	**235**	PKP	PKPdf	16 05 48.8	-1.8
	comp=Z,1.5nm,0.9s,baz=33,slow=17,SNR=2.8						
PECR	**Pechory**	**138.91**	**327**	*e*PKIKP	PKPdf	16 05 48.0	-4.5
PECR				MLR	MLR		
	comp=E,1µm,22.0s,MS5.6						
PECR				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.7						
PECR				MLR	MLR		
	comp=N,500nm,16.0s						
PECR				MLR	MLR		
	comp=E,700nm,20.0s						
PECR				MLR	MLR		
	comp=Z,2µm,20.0s						
PECR				MLR	MLR		
	comp=N,500nm,18.0s,MS5.6						
MAK	**Makhachkala**	**141.19**	**306**	*e*PKHKP		16 05 45.0	
MAK				*e*		16 09 01.0	
MAK				pmax	pmax		
	comp=Z,800nm,6.0s						
MAK				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.6						
NSS	**Namsos**	**142.11**	**354**	AMS	AMS	17 13 54.1	
	comp=Z,835nm,19.8s,MS5.5						
MBAR	**Mbarara**	**142.14**	**228**	PFAKE		16 06 10.0	+11
MBAR				LR	LR		
	comp=Z,115nm,19.0s,MS4.7						
MOS	**Moscow**	**142.30**	**329**	*e*PKIKP	PKPdf	16 05 54.7	-3.7
MOS				*e*		16 09 03.1	
MOS				*e*SS	SS	16 27 33.4	-0.3
MOS				pmax	pmax		
	comp=Z,30nm,0.6s						
MOS				MLR	MLR		
	comp=Z,1µm,21.1s,MS5.7						
MOS				MLR	MLR		
	comp=N,800nm,19.4s,MS5.7						
MOS				MLR	MLR		
	comp=E,1µm,22.2s,MS5.7						
FINES	**FINESS Array B**	**142.43**	**343**	PKhKP		16 05 49.0	
	comp=E,0.9nm,0.5s,baz=27,slow=4.3,SNR=7.7						
FINES				PKP	PKPdf	16 05 55.5	-3.0
	comp=E,5.5nm,0.8s,baz=117,slow=4.3,SNR=9.5						
PUL	**Pulkovo**	**142.50**	**338***d*	*i*PKIKP	PKPdf	16 05 50.6	-8.0
DGRG	**David-gareji**	**143.01**	**304**	P	PKPdf	16 05 52.9	-7.2
OBN	**Obninsk**	**143.15**	**329**	*i* PKIKP	PKPdf	16 05 53.6	-6.3
OBN				*e*SS	SS	16 27 47.9	+4.6
OBN				pmax	pmax		
	comp=Z,16nm,1.2s						
OBN				MLR	MLR		
	comp=Z,800nm,14.0s,MS5.6						
OBN	**Obninsk**	**143.15**	**329**	*i* PKP	PKPdf	16 05 53.7	-6.2
OBN				LR	LR		
	comp=Z,800nm,14.0s,MS5.6						
TI2	**Plekhanov**	**143.42**	**304**	*i* PKHKP		16 05 46.0	
VOR	**Voronezh**	**143.65**	**322**	PKIKP	PKPdf	16 05 55.0	-5.8
VOR				pmax	pmax		
	comp=Z,80nm,2.0s						
GNI	**Garni**	**143.68**	**302**	PKP	PKPdf	16 05 58.3	-2.9
	comp=Z,2.5nm,0.4s,baz=18,slow=5.1,SNR=2.7						
GNI	**Garni**	**143.68**	**302**	PKP	PKPdf	16 05 58.3	-2.9
ZEI	**Tsey**	**143.83**	**306**	*e*PKIKP	PKPdf	16 05 55.8	-5.6
ONI	**Oni**	**144.20**	**306**	P	PKPbc	16 05 58.4	+2.1
KIV	**Kislovodsk**	**144.41**	**309***c*	*i*PKIKP	PKPdf	16 05 57.0	-5.4
KIV				*e*		16 09 09.9	
KIV				*e*SS	SS	16 27 54.0	-4.3
KIV				*e*SSS	SSS	16 33 19.5	-4.9
KIV				pmax	pmax		
	comp=E,4.0nm,0.9s						
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV	**Kislovodsk**	**144.41**	**309**	⇑*i*PKP	PKPdf	16 05 57.1	-5.3
KIV				LR	LR		
	comp=Z,201nm,19.0s,MS4.9						
VSU	**Vasula**	**144.68**	**339**	⇑*e*PKIKP	PKPdf	16 05 57.1	-5.3
NB2	**NORSAR Subarra**	**145.61**	**354**	PKPabc	PKPdf	16 05 59.4	-4.6
	comp=Z,2.7nm,0.8s,baz=19,slow=3.5						
NB2	**NORSAR Subarra**	**145.61**	**354**	PKPa	PKPdf	16 05 59.4	-4.6
	baz=19,slow=3.5						
NOA	**NORSAR Array B**	**145.61**	**354**	PKPbc	PKPbc	16 05 59.8	+0.3
	comp=Z,29nm,0.9s,baz=8.3,slow=2.4,SNR=55						
NOA				SKP		16 09 36.1	
	comp=Z,1.9nm,0.9s,baz=13,slow=3.4,SNR=5.0						
NAO01	**NORSAR Array S**	**145.84**	**354**	*e*PKPdf	PKPdf	16 06 00.5	-3.9

ERZM	**Erzurum**	**146.28**	**302**	*i* P	PKPbc	16 06 03.9	+2.1
SOC	**Sochi**	**146.57**	**309***c*	*i*PKHKP		16 06 00.0	
SOC				*e*SS	SS	16 28 14.1	-8.6
SOC				*e*SSS	SSS	16 33 52.4	-2.4
SOC				pmax	pmax		
	comp=N,5.0nm,0.9s						
SOC				pmax	pmax		
	comp=E,7.0nm,0.9s						
SOC				pmax	pmax		
	comp=Z,26nm,0.9s						
BER	**Bergen**	**146.63**	**358**	*e*P	PKPbc	16 06 01.4	-0.6
BER				AMS	AMS	17 14 34.3	
	comp=Z,977nm,19.0s,MS5.6						
KONO	**Kongsberg**	**147.13**	**354***c*	*i*PKP2	PKPab	16 06 04.9	-2.4
KONO	**Kongsberg**	**147.13**	**354**	PFAKE		16 06 10.0	+3.4
KONO				LR	LR		
	comp=Z,642nm,20.0s,MS5.4						
MARD	**Mardin**	**147.14**	**298**	*i* P	PKPdf	16 06 01.6	-5.7
MNK	**Minsk**	**147.34**	**334**	*e*PKP2	PKPab	16 06 06.0	-2.3
ANN	**Anapa**	**147.71**	**312**	*i* PKIKP	PKPdf	16 06 02.7	-5.3
ANN				pmax	pmax		
	comp=Z,731nm,8.1s						
KBRS	**Khaybar**	**148.16**	**276**	P	PKPdf	16 06 11.4	+2.1
MLA1	**Latheron**	**148.35**	**7**	*e*P	PKPdf	16 06 07.6	-1.0
MLA1				AMb	AMB	16 06 15.3	
	comp=Z,54nm,1.2s						
ELZG	**Elazig**	**148.36**	**300**	*i* P	PKPdf	16 06 10.2	+0.9
MVH1	**Achvaich**	**148.62**	**8**	*e*P	PKPdf	16 06 08.3	-0.7
MVH1				AMb	AMB	16 06 11.0	
	comp=Z,67nm,1.9s						
KSK	**Scoval**	**148.70**	**11**	*e*P	PKPdf	16 06 09.1	-0.1
KAC	**Achnashellach**	**148.89**	**9**	*e*P	PKPdf	16 06 09.4	-0.1
KAC				AMb	AMB	16 06 11.6	
	comp=Z,107nm,1.0s						
MCD	**Coleburn Disti**	**149.07**	**7**	*e*P	PKPdf	16 06 09.2	-0.6
MCD				AMb	AMB	16 06 11.2	
	comp=Z,54nm,1.0s						
MDO	**Dochfour**	**149.07**	**8**	*e*P	PKPdf	16 06 09.5	-0.3
MDO				AMb	AMB	16 06 16.9	
	comp=Z,105nm,1.7s						
KSB	**Sheil Bridge**	**149.15**	**10**	*e*P	PKPdf	16 06 09.8	-0.1
KSB				AMb	AMB	16 06 13.6	
	comp=Z,39nm,1.6s						
MME1	**Meikle Cairn**	**149.37**	**7**	*e*P	PKPdf	16 06 09.9	-0.3
KAR1	**Arisaig**	**149.37**	**10**	*e*P	PKPdf	16 06 10.2	-0.1
KAR1				AMb	AMB	16 06 12.6	
	comp=Z,44nm,1.0s						
AKASG	**Malin Array Be**	**149.38**	**327**	PKPbc	PKPdf	16 06 09.2	-1.2
	comp=Z,18nm,0.8s,baz=37,slow=3.3,SNR=36						
AKASG				SKPbc		16 09 47.2	
	comp=Z,2.1nm,0.6s,baz=36,slow=3.4,SNR=4.7						
SUW	**Suwalki**	**149.44**	**337**	*e*PKP	PKPdf	16 06 12.1	+1.6
GZT	**Gaziantep**	**149.66**	**298**	*i* P	PKPdf	16 06 12.4	+1.1
UMJS	**Umm Lajj**	**149.79**	**274**	P	PKPdf	16 06 14.6	+2.7
SIM	**Simferopol'**	**149.81**	**314**	*i* PKP2	PKPab	16 06 13.3	-5.3
SIM				pmax	pmax		
	comp=Z,32nm,0.7s						
MUD	**Monsted U'grnd**	**150.33**	**354**	*e*PKIKP	PKPdf	16 06 13.0	+1.2
MUD	**Monsted U'grnd**	**150.33**	**354**	*i* P	PKPdf	16 06 13.0	+1.2
	comp=Z,36nm,0.8s						
QURS	**Qurayyt al Mil**	**150.37**	**287**	P	PKPdf	16 06 16.3	+3.6
BOYT	**Boyabat**	**150.64**	**307**	*i* P	PKPdf	16 06 13.4	+0.6
EDI	**Edinburgh**	**150.70**	**8**	*e*P	PKPdf	16 06 12.8	+0.4
EDI				AMb	AMB	16 06 20.9	
	comp=Z,65nm,1.5s						
ASF	**Jabal al Asfar**	**150.73**	**288**	PKPbc	PKPdf	16 06 16.0	+2.8
	comp=Z,10nm,0.8s,baz=330,slow=2.5,SNR=11						
ASF				PKPab	PKPab	16 06 20.7	-2.2
	comp=Z,9.3nm,0.8s,baz=224,slow=0.4,SNR=14						
COBT	**Iskenderun**	**150.84**	**297**	*i* P	PKPdf	16 06 15.2	+2.0
TBKS	**Tabuk**	**150.89**	**280**	P	PKPdf	16 06 16.0	+2.5
CTKT	**Corum**	**150.97**	**306**	*i* P	PKPdf	16 06 15.6	+2.4
ESK	**Eskdalemuir**	**151.29**	**8**	PFAKE		16 06 20.0	+6.7
ESK				LR	LR		
	comp=Z,310nm,20.0s,MS5.1						
AVNT	**Avonos**	**151.45**	**302**	*i* P	PKPdf	16 06 16.1	+2.0
JMQS	**Jabal Moqyreh**	**151.53**	**281**	P	PKPdf	16 06 17.5	+3.1
CDAG	**Cicekdag**	**151.58**	**304**	*i* P	PKPdf	16 06 08.4	-5.8
BALT	**Daday**	**151.67**	**308**	*i* P	PKPdf	16 06 08.9	-5.3
KIS	**Kishinev**	**151.91**	**322**	*i* PKIKP	PKPdf	16 06 16.0	+1.5
KIS				MLR	MLR		
	comp=N,500nm,20.0s						
KIS				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.7						
ELDT	**Eldivan**	**152.00**	**306**	*i* P	PKPdf	16 06 09.5	-5.3
AYUS	**'Aynunah**	**152.01**	**280**	P	PKPdf	16 06 19.6	+4.3
BR131	**Keskin Array S**	**152.09**	**305**	PFAKE		16 06 20.0	+5.0
BR131				LR	LR		
	comp=Z,407nm,20.0s,MS5.2						
BRTR	**Keskin Array B**	**152.09**	**305**	PKP	PKPdf	16 06 11.1	-3.9
	comp=Z,1.1nm,0.7s,baz=349,slow=6.3,SNR=4.7						
BRTR				PKPbc	PKPdf	16 06 17.6	+2.6
	comp=Z,3.5nm,0.7s,baz=108,slow=3.9,SNR=17						
BRTR				PKPab	PKPab	16 06 27.1	-1.2
	comp=Z,5.9nm,0.7s,baz=119,slow=2.3,SNR=13						
JMOS	**Jabal al Moall**	**152.22**	**282**	P	PKPdf	16 06 19.7	+4.2
LVV	**L'vov**	**152.38**	**331**	*e*PKIKP	PKPdf	16 06 18.9	+3.9
TAYS	**Tayyib Ism**	**152.39**	**280**	P	PKPdf	16 06 19.9	+4.1
MEST	**Erdemli**	**152.50**	**298**	*i* P	PKPdf	16 06 18.3	+2.7
BSEG	**Bad Segeberg**	**152.67**	**351**	*e*PKPdf	PKPdf	16 06 12.0	-3.3
BSEG				*e*PKPab	PKPab	16 06 36.0	+5.7
SGKT	**Sivrigoynuk**	**152.95**	**307**	*i* P	PKPdf	16 06 16.8	+0.7
KWP	**Kalwaria**	**153.09**	**332**	*e*PKP	PKPdf	16 06 20.4	+4.4
LHO	**Holmfirth**	**153.19**	**7**	*e*P	PKPdf	16 06 16.6	+0.5
CMLA	**Cha da Macela**	**153.23**	**59**	PFAKE		16 06 20.0	+3.4
CMLA				LR	LR		
	comp=Z,507nm,19.0s,MS5.3						
BURAR	**Bucovina Array**	**153.40**	**326**	⇓P	PKPdf	16 06 21.7	+5.2
ERMK	**Ermenek**	**153.46**	**298**	*i* P	PKPdf	16 06 17.5	+0.5
VRI	**Vrincioaia**	**153.75**	**322**	⇓P	PKPdf	16 06 22.0	+4.9
OJC	**Ojcow**	**153.75**	**336**	*e*PKP	PKPdf	16 06 12.6	-4.3
KOLS	**Kolonicke sedl**	**153.80**	**332**	*e*PKP	PKPdf	16 06 13.5	-3.5
KOLS				*e*		16 06 21.8	
CRVS	**Cervenica-Dubn**	**154.17**	**332**	*e*PKP	PKPdf	16 06 30.2	+13
ESKT	**Eskisehir**	**154.19**	**306**	*i* P	PKPdf	16 06 22.5	+4.6
NIE	**Niedzica**	**154.21**	**335**	*e*PKP	PKPdf	16 06 16.0	-1.6
KSP	**Ksiaz**	**154.34**	**341**	*e*PKIKP	PKPdf	16 06 15.7	-2.0
KSP				*e*		16 10 10.0	
KSP				*e*SS	SS	16 29 51.0	+2.6
KSP				MLR	MLR		
	comp=Z,2µm,18.9s,MS6.0						
KSP	**Ksiaz**	**154.34**	**341**	*e*PKP2	PKPab	16 06 37.3	-0.1
KSP				*e*		16 10 10.0	
KSP				*e*SS	SS	16 29 51.0	+2.6
KSP				MLR	MLR		
	comp=Z,2µm,18.9s,MS6.0						
KSP	**Ksiaz**	**154.34**	**341**	*e*PKPdf	PKPdf	16 06 15.7	-2.0
KSP				*e*PKPab	PKPab	16 06 37.3	-0.1
KSP				*e*PP	PP	16 10 10.0	-4.0
KSP				*e*SS	SS	16 29 51.0	+2.6
KSP				LR	LR		
	comp=Z,2µm,18.9s,MS6.0						
MLR	**Muntele Rosu**	**154.41**	**322**	⇑P	PKPdf	16 06 22.9	+4.9
OKC	**Ostrava-Krasne**	**154.65**	**338**	*e*PKIKP	PKPdf	16 06 24.6	+6.5
OKC				*e*		16 06 39.9	
OKC				MLR	MLR		
	comp=Z,1µm,19.8s,MS5.6						
OKC	**Ostrava-Krasne**	**154.65**	**338**	*e*PKPDF	PKPdf	16 06 24.6	+6.5
OKC				*e*PKPAB	PKPab	16 06 39.9	+1.1
OKC				*e*x	x	16 10 36.5	
OKC				*e*x	x	16 20 43.1	
OKC				*e*SS	SS	16 29 58.2	+6.5
OKC				AMS	AMS	17 16 40.0	
	comp=Z,1µm,19.8s						
CLZ	**Clausthal**	**154.71**	**350**	*e*PKPdf	PKPdf	16 06 14.8	-3.4
CLZ				*e*PKPab	PKPab	16 06 43.8	+4.9
UPC	**Upice**	**154.72**	**341**	*e*PKPDF	PKPdf	16 06 23.8	+5.6
UPC				*e*PKPAB	PKPab	16 06 38.1	-1.0
UPC				*e*pPKP		16 06 52.0	
CLL	**Collm**	**154.74**	**346**	*e*PKIKP	PKPdf	16 06 15.0	-3.2
CLL				*e*PKP1	PKPdf	16 06 24.0	+5.8
CLL				e*PPKP		16 06 32.0	
CLL				*e*PKP2	PKPab	16 06 39.0	-0.1
CLL				*e*		16 06 58.0	
CLL				*e*PP	PP	16 10 26.0	+10
CLL				*e*SS	SS	16 29 56.0	+3.3
DPC	**Dobruska-Polom**	**154.78**	**341**	*e*PKIKP	PKPdf	16 06 15.3	-3.0
DPC				*e*		16 06 24.9	
DPC				*e*		16 06 38.2	
DPC				MLR	MLR		
	comp=Z,1µm,18.9s,MS5.7						
DPC	**Dobruska-Polom**	**154.78**	**341**	*e*PKPDF	PKPdf	16 06 15.3	-3.0
DPC				⇑*e*PKPB	PKPdf	16 06 24.9	+6.6
DPC				*e*PKPAB	PKPab	16 06 38.2	-1.1
DPC				*e*x	x	16 10 30.3	
DPC				*e*x	x	16 20 34.2	
DPC				*e*SS	SS	16 30 00.2	+7.1
DPC				AMS	AMS	17 23 50.0	
	comp=Z,1µm,18.9s						
KECS	**Kecovo**	**154.90**	**333**	*e*PKP	PKPab	16 06 37.7	-2.1
VOIR		**154.93**	**323**	⇑P	PKPab	16 06 37.4	-2.7
BRG	**Berggiesshubel**	**154.93**	**345**	*i* PKIKP	PKPdf	16 06 16.1	-2.4
BRG				*e*		16 06 25.1	
BRG				*e*		16 06 37.4	
BRG				MLR	MLR		
	comp=Z,940nm,17.2s,MS5.7						
BRG	**Berggiesshubel**	**154.93**	**345**	*i* PKP	PKPdf	16 06 16.1	-2.4
BRG				*e*		16 06 25.1	
BRG				*e*		16 06 37.4	
BRG				SS	SS	16 30 02.0	+7.2
BRG				LR	LR		
	comp=Z,940nm,17.2s,MS5.7						
PVCC	**Panska Ves**	**155.10**	**343**	*e*PKIKP	PKPdf	16 06 15.8	-2.9
PVCC				*e*		16 06 25.7	
PVCC				*e*		16 06 37.7	
PVCC				MLR	MLR		
	comp=Z,2µm,18.8s,MS5.8						
PVCC	**Panska Ves**	**155.10**	**343**	*e*PKPDF	PKPdf	16 06 15.8	-2.9
PVCC				⇑*e*PKPB	PKPdf	16 06 25.7	+7.0
PVCC				*e*PKPAB	PKPab	16 06 37.7	-2.9
PVCC				*e*P		16 10 32.5	
PVCC				*e*x	x	16 20 22.0	
PVCC				*e*SS	SS	16 30 08.5	+12
PVCC				AMS	AMS	17 21 40.0	
	comp=Z,2µm,18.8s						
VYHS	**Vyhne**	**155.53**	**335**	*e*PKP	PKPdf	16 06 13.9	-5.4
VYHS				*e*		16 06 41.5	
VYHS				*e*PP	PP	16 10 17.9	-2.6
PRU	**Pruhonice**	**155.60**	**343**	*e*PKIKP	PKPdf	16 06 17.0	-2.4
PRU				*e*SS	SS	16 30 07.9	+5.7
PRU				MLR	MLR		
	comp=Z,1µm,18.6s,MS5.8						
PRU	**Pruhonice**	**155.60**	**343**	*e*PKPDF	PKPdf	16 06 17.0	-2.4
PRU				*e*PKPAB	PKPab	16 06 43.1	+0.3
PRU				*e*x	x	16 10 40.2	
PRU				*e*x	x	16 20 37.7	
PRU				*e*SS	SS	16 30 07.9	+5.7
PRU				AMS	AMS	17 22 10.0	
	comp=Z,1µm,18.6s						
MOX	**Moxa**	**155.65**	**348**	*e*PKIKP	PKPdf	16 06 16.6	-2.8
MOX				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.7						
MOX	**Moxa**	**155.65**	**348**	*i* P	PKPdf	16 06 16.6	-2.8
MOX				PKP2	PKPab	16 06 40.0	-3.0
MOX				*e*		16 06 50.0	
MOX				SS	SS	16 30 09.0	+6.3
MOX				L		17 21 55.0	
NKC	**Novy Kostel**	**155.87**	**346**	*e*PKPDF	PKPdf	16 06 17.4	-2.3
NKC				*e*pPKP		16 06 30.8	
NKC				*e*PKPAB	PKPab	16 06 43.5	-0.5
NKC				*e*PP	PP	16 10 18.1	-4.4
NKC				*e*SS	SS	16 30 09.3	+4.1
NKC				AMS	AMS	17 28 10.0	
	comp=Z,2µm,17.8s						
SMOL	**Smolenice**	**156.02**	**337**	*e*PKP	PKPab	16 06 45.8	+1.1
AKAS	**Kas**	**156.14**	**299**	*i* P	PKPdf	16 06 15.6	-5.0
ZST	**Bratislava**	**156.41**	**337**	*e*PKP	PKPdf	16 06 17.6	-2.9
ZST				*e*		16 06 50.3	
TNS	**Taunus Mts**	**156.55**	**352**	*e*PKPdf	PKPdf	16 06 16.5	-4.1
TNS				*e*PKPab	PKPab	16 06 51.6	+4.7
GRA1	**Grafenberg Arr**	**156.63**	**348**	*e*PKPdf	PKPdf	16 06 16.9	-3.9
GRA1				*e*PKPab	PKPab	16 06 52.2	+4.9
GRA1				*e*PP	PP	16 10 25.7	-0.8
GRA1				*e*SS	SS	16 30 19.4	+6.4
GRA1				LR	LR		
	comp=Z,2µm,18.2s,MS5.9						
GRF	**Grafenberg Arr**	**156.63**	**348**	*e*PKIKP	PKPdf	16 06 16.9	-3.9
GRF				*e*		16 10 25.7	
GRF				*e*SS	SS	16 30 19.4	+6.4
GRF				MLR	MLR		
	comp=Z,2µm,18.2s,MS5.9						
GRF	**Grafenberg Arr**	**156.63**	**348**	*e*PKIKP	PKPdf	16 06 16.9	-3.9
GRF				*e*		16 10 25.7	
GRF				*e*SS	SS	16 30 19.4	+6.4
GRF				MLR	MLR		
	comp=Z,2µm,18.2s,MS5.9						
GRF	**Grafenberg Arr**	**156.63**	**348**	*e*PKP	PKPdf	16 06 16.9	-3.9
GRF				*e*PKP	PKPab	16 06 52.2	+4.9
GRF				*e*PP	PP	16 10 25.7	-0.8
GRF				*e*SS	SS	16 30 19.4	+6.4
GRF				LR	LR		
	comp=Z,2µm,18.2s,MS5.9						
KHC	**Kasperske Hory**	**156.63**	**343**	*e*PKIKP	PKPdf	16 06 17.5	-3.3
KHC				*e*		16 06 30.3	
KHC				*e*		16 10 22.8	
KHC				*e*SS	SS	16 30 14.5	+1.5
KHC				MLR	MLR		
	comp=Z,2µm,18.3s,MS6.0						
KHC	**Kasperske Hory**	**156.63**	**343**	*e*PKPDF	PKPdf	16 06 17.5	-3.3
KHC				*e*pPKP		16 06 30.3	
KHC				*e*PKPAB	PKPab	16 06 47.8	+0.5
KHC				*e*PP	PP	16 10 22.8	-3.7
KHC				*e*SKKS		16 20 47.3	
KHC				*e*SS	SS	16 30 14.5	+1.5
KHC				AMS	AMS	17 23 30.0	
	comp=Z,2µm,18.3s						
WET	**Wettzell**	**156.79**	**345**	*e*PKPdf	PKPdf	16 06 17.1	-3.9
WET				*e*PKPab	PKPab	16 06 52.9	+4.9
GEC2	**GERESS Array S**	**156.87**	**343**	*e*PKPdf	PKPdf	16 06 17.1	-4.0
GEC2				*e*PKPab	PKPab	16 06 53.0	+4.7
GERES	**GERESS Array B**	**156.87**	**343**	PKP	PKPdf	16 06 17.6	-3.5
	comp=Z,0.2nm,0.4s,baz=76,slow=4.0,SNR=4.1						
BAIF	**Baives**	**157.00**	**359**	*e*PKP2	PKPab	16 06 47.4	-1.4
	comp=Z,41nm,1.1s						
ROSF	**Rostrenen**	**158.05**	**12**	*e*PKP2	PKPab	16 06 52.5	-0.9
	comp=Z,31nm,1.1s						
FLN	**La Foliniere**	**158.06**	**7**	*e*PKP2	PKPab	16 06 51.6	-1.8
	comp=Z,95nm,1.3s						
FUR	**Furstenfeldbru**	**158.08**	**346**	*e*PKIKP	PKPdf	16 06 18.7	-4.0
DBIC	**Dimbokro**	**158.19**	**157**	PFAKE		16 06 30.0	+6.1
DBIC				LR	LR		
	comp=Z,991nm,19.0s,MS5.7						
SGMF	**Saint Gilles**	**158.26**	**11**	*e*PKP2	PKPab	16 06 53.0	-1.3
GRR	**Gorron**	**158.38**	**8**	*e*PKP2	PKPab	16 06 53.3	-1.5
	comp=Z,24nm,0.9s						
BFO	**Black Forest**	**158.42**	**352**	*e*PKIKP	PKPdf	16 06 19.0	-4.2
CDF	**Champ du Feu**	**158.47**	**353**	*e*PKP2	PKPab	16 06 53.6	-1.6
	comp=Z,22nm,1.2s						
VAY	**Valandovo**	**158.90**	**317**	⇓*i*PKP	PKPab	16 06 57.2	-0.1
HAU	**Haudompre**	**158.95**	**355**	*e*PKP2	PKPab	16 06 55.7	-1.6
HINF	**Hinteralfeld**	**159.10**	**354**	*e*PKP2	PKPab	16 06 56.2	-1.7
	comp=Z,14nm,0.9s						
SKO	**Skopje**	**159.16**	**320**	*e*PKP	PKPdf	16 06 20.0	-4.2
SKO				*i*		16 06 59.0	
LOR	**Lormes**	**159.79**	**360**	*e*PKP2	PKPab	16 06 59.3	-1.6
SSF	**Saint Saulge**	**160.00**	**0**	*e*PKP2	PKPab	16 07 00.4	-1.4
	comp=Z,18nm,0.8s						
MFF	**Saint Martin d**	**160.23**	**8**	*e*PKP2	PKPab	16 07 01.3	-1.5
	comp=Z,44nm,1.1s						
AVF	**Avril sur Loir**	**160.27**	**1**	*e*PKP2	PKPab	16 07 01.3	-1.7
	comp=Z,20nm,1.0s						
SMF	**Signal de Mont**	**160.42**	**360**	*e*PKP2	PKPab	16 07 02.1	-1.5
	comp=Z,34nm,0.9s						
BGF	**Bois d'Agland**	**160.50**	**2**	*e*PKP2	PKPab	16 07 02.4	-1.6
	comp=Z,16nm,0.9s						
TCF	**Toulx Ste Croi**	**160.74**	**3**	*e*PKP2	PKPab	16 07 03.3	-1.7
LPL	**La Plagne**	**161.39**	**353**	*e*PKP2	PKPab	16 07 07.4	-0.5
LPG	**La Plagne**	**161.40**	**353**	*e*PKP2	PKPab	16 07 07.7	-0.3
	comp=Z,25nm,1.1s						
RJF	**Les Rejaudoux**	**161.68**	**5**	*e*PKP2	PKPab	16 07 08.0	-1.2
LFF	**La Frestale**	**161.97**	**7**	*e*PKP2	PKPab	16 07 08.9	-1.6
ORIF	**Oris-en-Rattie**	**162.06**	**355**	*e*PKP2	PKPab	16 07 10.1	-0.8
	comp=Z,24nm,1.0s						
CAF	**Calviac**	**162.09**	**4**	*e*PKP2	PKPab	16 07 09.5	-1.5
MBDF	**Montbardon**	**162.16**	**353**	*e*PKP2	PKPab	16 07 10.3	-1.0
	comp=Z,5.8nm,0.7s						
VIVF	**Saint-Julien-l**	**162.19**	**358**	*e*PKP2	PKPab	16 07 10.3	-1.1
LASF	**Ste Croix**	**162.99**	**360**	*e*PKP2	PKPab	16 07 13.9	-1.0
SMRF	**Simiane la Rot**	**163.02**	**355**	*e*PKP2	PKPab	16 07 14.4	-0.6
	comp=Z,28nm,1.2s						
FRF	**La Foret Royal**	**163.33**	**352**	*e*PKP2	PKPab	16 07 14.9	-1.5
MTLF	**Montolieu**	**163.68**	**4**	*e*PKP2	PKPab	16 07 16.7	-1.2
	comp=Z,15nm,1.1s						
ESDC	**Sonseca Array**	**165.88**	**25**	PKP	PKPdf	16 06 28.2	-2.9
	comp=Z,0.2nm,0.3s,baz=307,slow=7.4,SNR=3.3						
ESDC				PKPab	PKPab	16 07 25.2	-2.4
	comp=Z,0.2nm,0.3s,baz=314,slow=5.7,SNR=4.0						
ESLA	**Sonseca Array**	**165.88**	**25**	PFAKE		16 06 40.0	+9.0
ESLA				LR	LR		
	comp=Z,8µm,19.0s						

*IDC **28** 15:54:39.5±1.5,26.91S×176.12W,mb4.4/6,mb1 4.5/6,mb1mx4.2/14,mbtmp4.4/6,Error ellipse: s-maj=43.4km s-min=36.0km az=127.0*

*NEIC **28** 15:54:43.5±0.9,26.99S×176.00W,h30^{km},mb4.7/2,Error ellipse: s-maj=27.2km s-min=21.1km az=213.0*

ISC 28 15:54:43.0±1.4**,27.0S**±0.2×**176.1W**±0.2**,h33**^{km}**,n17,** σ**1**^{s}**08**/11**,mb4.4**/7**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.06**	**273**	P	**P**	**16 01 35.6**	**+0.6**
	7.1nm,0.7s,mb4.7,baz=97,slow=10,SNR=6.6						
CTAO	**Charters Tower**	**35.06**	**273**	P	**P**	**16 01 35.5**	**+0.5**
	6.8nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**36.94**	**252**	P	**P**	**16 01 50.9**	**+0.1**
	1.7nm,0.9s,mb3.9,baz=117,slow=10,SNR=3.8						
STKA	**Stephens Creek**	**36.94**	**252**	P	**P**	**16 01 50.9**	**+0.1**
WRAB	**Tennant Creek**	**45.72**	**268**	*e*P	**P**	**16 03 03.0**	**-0.1**
	9.0nm,0.7s,mb4.8						
WRA	**Warramunga Arr**	**45.73**	**268**	P	**P**	**16 03 01.3**	**-1.8**
	6.4nm,0.7s,mb4.7,baz=106,slow=7.8,SNR=14						
MAW	**Mawson**	**76.01**	**200**	P	**P**	**16 06 29.2**	**+1.2**
	1.7nm,0.8s,mb4.0,baz=101,slow=6.7,SNR=6.2						
MJAR	**Matsushiro Arr**	**76.46**	**324**	P	**P**	**16 06 30.6**	**-0.7**
	2.4nm,0.8s,mb4.2,baz=162,slow=8.1,SNR=6.1						
VNA3	**Neumayer Olymp**	**81.53**	**176**		pP	16 07 08.4	-0.1
VNA3	**Neumayer Olymp**	**81.53**	**176**	P	**P**	**16 06 56.9**	**-1.2**
VNA3				P	pP	16 07 08.4	-0.1
VNA2	**Neumayer--Watz**	**81.98**	**176**		pP	16 07 10.8	-0.1
VNA2	**Neumayer--Watz**	**81.98**	**176**	P	**P**	**16 07 00.4**	**0.0**
VNA2				P	pP	16 07 10.8	-0.1
CMAR	**Chiang Mai Arr**	**93.86**	**289**	P	**P**	**16 08 00.8**	**+2.1**
	1.6nm,0.8s,mb4.5,baz=138,slow=3.4,SNR=8.1						
NB2	**NORSAR Subarra**	**145.65**	**354**	PKPabc	PKPdf	16 14 18.6	+1.3
	1.0nm,0.9s,baz=10.0,slow=3.1						
NOA	**NORSAR Array B**	**145.65**	**354**	PKPbc	PKPbc	16 14 18.5	+0.5
	1.6nm,0.8s,baz=8.6,slow=2.4,SNR=4.8						
NOA	**NORSAR Array B**	**145.65**	**354**	PKPbc	PKPbc	16 14 18.5	+0.5
AKASG	**Malin Array Be**	**149.49**	**328**	PKPbc	PKPdf	16 14 28.4	+4.5
	1.8nm,0.6s,baz=45,slow=4.4,SNR=6.0						

*IDC **28** 16:02:02.9±1.3,27.10S×176.07W,h33^{km}±5^{km},mb4.0/4,mb1 4.3/5,mb1mx4.0/12,mbtmp4.2/5,Error ellipse: s-maj=58.4km s-min=22.1km az=151.0*

ISC 28 16:02:02.4±1.0**,27.0S**±0.1×**176.3W**±0.2**,h33**^{km}**,n21,** σ**0**^{s}**71**/9**,mb4.1**/4**,5C-1D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.70**	**212**	Pn	**Pn**	**16 02 44.2**	**-0.4**
	131nm,0.3s,baz=80,slow=22,SNR=6.3						
RAO				Sn	**Sn**	**16 03 21.1**	**+4.6**
	79nm,0.3s,baz=90,slow=20,SNR=3.3						
URZ	**Urewera**	**12.56**	**205**	Sn	**S**	**16 07 12.0**	**-10**
	0.2nm,0.3s,baz=150,slow=20,SNR=4.6						
CTA	**Charters Tower**	**34.94**	**273**	P	**P**	**16 08 54.1**	**+0.6**
	4.3nm,0.8s,mb4.5,baz=107,slow=12,SNR=5.6						
WRA	**Warramunga Arr**	**45.62**	**268**	P	**P**	**16 10 22.1**	**+0.5**
	2.9nm,0.7s,mb4.3,baz=106,slow=7.7,SNR=14						
WRA				pP	pP	16 10 31.2	-0.3
	2.7nm,0.7s,baz=107,slow=7.7,SNR=8.4						
MAW	**Mawson**	**76.05**	**200**	pP	pP	16 13 57.4	-0.7
	1.4nm,0.6s,baz=130,slow=9.7,SNR=3.4						
MJAR	**Matsushiro Arr**	**76.33**	**324**	pP	pP	16 13 59.7	-0.7
	1.8nm,0.8s,baz=170,slow=6.7,SNR=3.2						
VNA3	**Neumayer Olymp**	**81.61**	**176**	⇑*i*	**P**	**16 14 17.6**	**-0.3**
VNA3	**Neumayer Olymp**	**81.61**	**176**	⇑*i*	pP	16 14 27.8	-0.6
VNA3	**Neumayer Olymp**	**81.61**	**176**		sP	16 14 34.9	+3.1
VNA3	**Neumayer Olymp**	**81.61**	**176**	⇑*i*	Px	16 14 44.0	
VNA2	**Neumayer--Watz**	**82.07**	**176**	⇑*i*	**P**	**16 14 21.1**	**+0.8**
VNA2	**Neumayer--Watz**	**82.07**	**176**	⇑*i*	pP	16 14 30.4	-0.4
VNA2	**Neumayer--Watz**	**82.07**	**176**	⇓*i*	sP	16 14 35.8	+1.6
VNA2	**Neumayer--Watz**	**82.07**	**176**		Px	16 14 41.4	
NVAR	**Mina Array Bea**	**84.69**	**42**	P	**P**	**16 14 34.4**	**+0.1**
	0.2nm,0.3s,mb3.7,baz=205,slow=7.6,SNR=3.8						
NVAR				pP	pP	16 14 44.0	-0.8
	1.4nm,0.8s,baz=214,slow=7.1,SNR=5.6						
PDAR	**Pinedale Array**	**92.60**	**43**	pP	pP	16 15 20.6	-1.9
	0.8nm,1.0s,baz=243,slow=3.3,SNR=3.9						
CMAR	**Chiang Mai Arr**	**93.72**	**289**	P	**P**	**16 15 16.2**	**-1.4**
	0.6nm,0.8s,mb4.1,baz=153,slow=4.0,SNR=3.1						
NB2	**NORSAR Subarra**	**145.56**	**354**	PKPabc	PKPdf	16 21 37.3	-4.7
	1.3nm,0.7s,baz=10.0,slow=3.6						
NOA	**NORSAR Array B**	**145.56**	**354**	PKPbc	PKPbc	16 21 37.6	+0.4
	2.2nm,0.8s,baz=7.3,slow=2.4,SNR=6.2						
NOA				pPKPbc		16 21 47.8	
	4.6nm,0.9s,baz=10,slow=2.4,SNR=7.5						
AKASG	**Malin Array Be**	**149.36**	**328**	PKPbc	PKPdf	16 21 47.4	-1.1
	0.4nm,0.4s,baz=36,slow=3.3,SNR=5.1						
BRTR	**Keskin Array B**	**152.10**	**305**	PKPbc	PKPdf	16 21 54.8	+1.7
	0.3nm,0.4s,baz=63,slow=3.2,SNR=2.8						
BRTR				PKPab	PKPab	16 22 06.2	-0.1
	0.8nm,0.6s,baz=135,slow=7.0,SNR=2.8						

*IDC **28** 16:05:54.0±0.8,26.73S×176.34W,mb4.2/9,mb1 4.5/10,mb1mx4.4/15,mbtmp4.2/10,Error ellipse: s-maj=29.2km s-min=19.7km az=121.0*

*NEIC **28** 16:05:59.0±6.4,26.79S×176.34W,h34^{km}±43^{km},mb4.9/3,Error ellipse: s-maj=19.3km s-min=14.0km az=49.0*

ISC 28 16:05:58.7±3.1**,26.8S**±0.1×**176.5W**±0.2**,h40**^{km}±25^{km}**,n30,** σ**0**^{s}**93**/23**,mb4.3**/11**,6C-2D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.75**	**207**	Pn	**P**	**16 06 41.5**	**+0.1**
	152nm,0.3s,baz=83,slow=23,SNR=5.5						
RAO				Sn	**S**	**16 07 18.2**	**+4.5**
	200nm,0.3s,baz=92,slow=22,SNR=6.5						
URZ	**Urewera**	**12.63**	**204**	Sn	**S**	**16 11 08.9**	**-10**
	1.1nm,0.3s,baz=158,slow=22,SNR=8.5						
CTA	**Charters Tower**	**34.74**	**273**	P	**P**	**16 12 48.4**	**+1.2**
	3.5nm,0.6s,mb4.5,baz=95,slow=12,SNR=6.4						
CTA	**Charters Tower**	**34.74**	**273**	P	**P**	**16 12 48.4**	**+1.2**
CTAO	**Charters Tower**	**34.74**	**273**	*e*P	**P**	**16 12 48.6**	**+1.4**
	2.6nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**36.73**	**252**	P	**P**	**16 13 02.8**	**-1.1**
	1.2nm,0.6s,mb3.9,baz=89,slow=13,SNR=5.5						
WB2	**Warramunga Arr**	**45.42**	**268**	*e*P	**P**	**16 14 15.3**	**-0.3**
WRAB	**Tennant Creek**	**45.42**	**268**	*e*P	**P**	**16 14 15.1**	**-0.5**
	12nm,0.7s,mb4.8						
WRA	**Warramunga Arr**	**45.43**	**268**	P	**P**	**16 14 14.7**	**-1.0**
	8.7nm,0.7s,mb4.7,baz=107,slow=7.6,SNR=34						
VNDA	**Vanda**	**51.80**	**186**	P	**P**	**16 15 04.0**	**-0.1**
	1.7nm,1.1s,mb3.9,baz=27,slow=6.3,SNR=4.6						
CASY	**Casey**	**58.94**	**207**	*e*P	**P**	**16 15 55.2**	**-0.7**
	15nm,0.8s,mb5.1						
MJAR	**Matsushiro Arr**	**76.09**	**324**	P	**P**	**16 17 44.2**	**+0.2**
	2.8nm,0.8s,mb4.3,baz=165,slow=6.7,SNR=6.4						
MAW	**Mawson**	**76.13**	**200**	P	**P**	**16 17 44.2**	**+0.6**
	1.1nm,0.5s,mb4.0,baz=145,slow=9.1,SNR=5.8						
VNA3	**Neumayer Olymp**	**81.79**	**176**	⇑*i*	**P**	**16 18 15.8**	**+1.5**
VNA3	**Neumayer Olymp**	**81.79**	**176**	⇑*i*	**P**	**16 18 24.5**	**+10**
VNA3	**Neumayer Olymp**	**81.79**	**176**	⇓*i*P	**P**	**16 18 13.4**	**-0.9**
VNA3				⇑*i*P		16 18 15.8	
VNA3				⇑*i*P	pP	16 18 24.5	-2.0
VNA2	**Neumayer--Watz**	**82.24**	**176**		**P**	**16 18 19.8**	**+3.2**
VNA2	**Neumayer--Watz**	**82.24**	**176**	⇑*i*	**P**	**16 18 27.4**	**+11**
VNA2	**Neumayer--Watz**	**82.24**	**176**	⇓*i*P	**P**	**16 18 16.5**	**-0.1**
VNA2				P		16 18 19.8	
VNA2				⇑*i*P	pP	16 18 27.4	-1.4
NVAR	**Mina Array Bea**	**84.69**	**42**	P	**P**	**16 18 28.9**	**-0.7**
	0.3nm,0.3s,mb3.9,baz=213,slow=7.2,SNR=4.6						
PDAR	**Pinedale Array**	**92.61**	**43**	P	**P**	**16 19 07.1**	**-0.2**
	0.3nm,0.7s,mb3.9,baz=90,slow=1.5,SNR=3.8						
CMAR	**Chiang Mai Arr**	**93.49**	**289**	P	**P**	**16 19 14.1**	**+2.2**
	1.6nm,0.9s,mb4.5,baz=156,slow=2.6,SNR=8.5						
MKAR	**Makanchi Array**	**116.45**	**311**	PKP	PKPdf	16 24 38.1	0.0
	0.7nm,0.8s,baz=90,slow=1.2,SNR=7.4						
ARCES	**ARCESS Array B**	**135.34**	**349**	PKP	PKPdf	16 25 14.0	+0.4
	2.4nm,0.8s,baz=27,slow=2.7,SNR=4.1						
FINES	**FINESS Array B**	**142.18**	**343**	PKP	PKPdf	16 25 27.4	+1.4
	2.0nm,1.0s,baz=63,slow=4.3,SNR=3.6						
NB2	**NORSAR Subarra**	**145.37**	**353**	PKPabc	PKPdf	16 25 32.3	+0.7
	10nm,0.9s,baz=18,slow=4.0						
NOA	**NORSAR Array B**	**145.37**	**353**	PKPbc	PKPbc	16 25 32.2	+0.1
	4.5nm,0.8s,baz=11,slow=2.5,SNR=9.2						
NOA	**NORSAR Array B**	**145.37**	**353**	PKPbc	PKPbc	16 25 32.2	+0.1

AKASG	Malin Array Be	149.12	327	PKPbc	PKPdf	16 25 43.7	+5.6
	1.6nm,0.5s,baz=41,slow=3.5,SNR=13						
BRTR	Keskin Array B	151.85	305	PKPbc	PKPdf	16 25 50.5	+7.9
	0.6nm,0.4s,baz=90,slow=2.5,SNR=4.4						

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*NEIC **28** 16:17:10.3±1.6, 51.56N×16.08E, h5^{km}, ML2.6(VIE), ML2.1(CLL), ML2.1(BRG), Error ellipse: s-maj=17.4km s-min=6.1km az=28.0*

*PRU **28** 16:17:11.4, 51.51N×16.04E*

WAR 28 16:17:11.7, 51.54N×16.03E, h1^{km}, ML2.4, 1C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.71	166	ePg	Pg	16 17 24.7	-1.2
KSP				e		16 17 26.6	
KSP				eSg	Sg	16 17 34.2	-1.3
KSP	Ksiaz	0.71	166	ePG	Pg	16 17 25.0	-0.9
KSP				eSG	Sg	16 17 34.0	-1.5
UPC	Upice	1.03	181	ePG	Pg	16 17 30.4	-1.9
DPC	Dobruska-Polom	1.20	171	ePG	Pg	16 17 33.5	-2.2
DPC				eSG	Sg	16 17 49.0	-2.7
	13nm,0.2s						
PVCC	Panska Ves	1.37	223	ePG	Pg	16 17 36.8	-2.2
BRG	Berggiesshubel	1.47	244	Pn	Pn	16 17 38.9	-0.6
BRG				Pg	Pg	16 17 39.3	-1.8
BRG				Sg	Sg	16 17 59.0	-1.7
PRU	Pruhonice	1.81	212	ePN	Pn	16 17 42.6	-1.7
PRU				ePG	Pg	16 17 44.5	-3.4
PRU				eSG	Sg	16 18 08.4	-3.7
	13nm,0.3s						
CLL	Collm	1.91	264	i Pn	Pn	16 17 43.4	-2.3
CLL				i Pg	Pg	16 17 46.4	-3.4
CLL				i Sg	Sg	16 18 12.3	-3.0
CLL	Collm	1.91	264	i PN	Pn	16 17 43.4	-2.3
	logA/T=1.2						
CLL				i PG	Pg	16 17 46.4	-3.4
CLL				i		16 17 50.6	
CLL				i SG	Sg	16 18 12.3	-3.0
MORC	Moravsky Berou	2.01	151	ePn	Pn	16 17 45.3	-1.8
MORC				ePg	Pg	16 17 49.5	-2.3
MORC				eS	Sn	16 18 12.5	-0.7
OKC	Ostrava-Krasne	2.17	141	ePG	Pg	16 17 51.1	-3.9
OKC				eSG	Sg	16 18 20.1	-3.8
	18nm,0.8s						
NKC	Novy Kostel	2.62	241	ePN	Pn	16 17 54.3	-1.5
NKC				ePG	Pg	16 18 00.2	-3.7
NKC				eSG	Sg	16 18 34.4	-4.4
	46nm,0.9s						
KHC	Kasperske Hory	2.88	214	ePN	Pn	16 17 58.3	-1.2
KHC				ePG	Pg	16 18 03.7	-5.4
KHC				eSN	Sn	16 18 32.5	-2.7
KHC				eSG	Sg	16 18 42.3	-5.1
	5.6nm,0.5s						
MOX	Moxa	2.92	254	ePg	Pg	16 18 06.2	-3.9
MOX				eSg	Sg	16 18 45.6	-3.4
MOA	Molln	3.86	198	⇑iPN	Pn	16 18 11.6	-2.0
MOA				i SG	Sg	16 19 13.3	-7.0
	2.4nm,0.4s						

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*IDC **28** 16:17:34.0±1.1, 26.78S×176.28W, mb4.3/6, mb1 4.5/7, mb1mx4.2/15, mbtmp4.3/7, MS4.2/1, Ms1 4.2/1, ms1mx3.7/15, Error ellipse: s-maj=35.8km s-min=22.8km az=128.0*

ISC 28 16:17:38.1±1.1**, 26.7S**±0.1×**176.4W**±0.2**, h33^{km}, n15, σ1^{s}08**/10**, mb4.3**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.87	207	Pn	Pn	16 18 21.5	-1.2
	98nm,0.3s,baz=94,slow=23,SNR=5.0						
RAO				Sn	Sn	16 18 57.8	+1.3
	214nm,0.3s,baz=67,slow=23,SNR=6.7						
RAO				LR	LR	16 19 15.2	
	comp=Z,4μm,20.1s,baz=350,slow=35						
URZ	Urewera	12.75	204	Sn	S	16 22 46.2	-15
	0.8nm,0.3s,baz=186,slow=18,SNR=5.2						
CTA	Charters Tower	34.81	273	P	P	16 24 29.0	+1.0
	4.3nm,0.6s,mb4.6,baz=107,slow=11,SNR=8.2						
WRA	Warramunga Arr	45.51	268	P	P	16 25 55.1	-1.4
	3.7nm,0.7s,mb4.4,baz=107,slow=7.7,SNR=13						
FITZ	Fitzroy Crossi	53.88	266	P	P	16 26 59.8	-0.8
	baz=141,slow=6.9						
MJAR	Matsushiro Arr	76.06	324	P	P	16 29 24.0	0.0
	2.9nm,0.9s,mb4.2,baz=159,slow=5.9,SNR=3.2						
MAW	Mawson	76.25	200	P	P	16 29 23.8	-0.7
	1.5nm,0.7s,mb4.0,baz=147,slow=7.0,SNR=4.3						
NVAR	Mina Array Bea	84.57	42	P	P	16 30 09.8	+0.5
	1.0nm,0.8s,mb4.0,baz=209,slow=7.2,SNR=3.7						
CMAR	Chiang Mai Arr	93.53	289	P	P	16 30 53.8	+1.5
	1.2nm,0.9s,mb4.3,baz=143,slow=4.5,SNR=4.4						
MKAR	Makanchi Array	116.44	311	PKP	PKPdf	16 36 18.6	+0.2
	0.5nm,0.7s,baz=188,slow=1.5,SNR=5.0						
ARCES	ARCESS Array B	135.26	349	PKP	PKPdf	16 36 53.0	-0.8
	1.6nm,0.7s,baz=18,slow=3.8,SNR=4.3						
NB2	NORSAR Subarra	145.28	353	PKPabc	PKPdf	16 37 13.6	+1.8
	0.4nm,0.8s,baz=20,slow=3.5						
NOA	NORSAR Array B	145.28	353	PKPbc	PKPbc	16 37 13.7	+1.5
	4.5nm,0.9s,baz=6.3,slow=2.4,SNR=6.8						
AKASG	Malin Array Be	149.07	328	PKPbc	PKPdf	16 37 23.1	+4.8
	2.1nm,0.7s,baz=40,slow=3.2,SNR=6.6						
BRTR	Keskin Array B	151.85	305	PKPbc	PKPdf	16 37 31.4	+8.5
	0.8nm,0.6s,baz=135,slow=3.5,SNR=4.0						

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*IDC **28** 16:19:52.9±1.0, 26.92S×176.24W, mb4.2/7, mb1 4.4/8, mb1mx4.3/15, mbtmp4.3/8, ML4.8/1, Error ellipse: s-maj=35.7km s-min=21.4km az=128.0*

ISC 28 16:19:58.7±3.6**, 27.0S**±0.2×**176.4W**±0.2**, h47^{km}**±28^{km}**, n18, σ0^{s}72**/12**, mb4.2**/7**, 3C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.58	211	Pn	P	16 20 39.1	+0.2
	161nm,0.3s,baz=74,slow=18,SNR=8.5						
RAO				Sn	S	16 21 15.3	+6.0
	212nm,0.3s,baz=59,slow=19,SNR=4.8						
URZ	Urewera	12.45	204	Sn	S	16 25 05.9	-7.9
	1.2nm,0.3s,baz=163,slow=19,SNR=5.6						
CTA	Charters Tower	34.83	273	P	P	16 26 47.6	+0.3
	4.9nm,0.6s,mb4.6,baz=112,slow=11,SNR=7.8						
STKA	Stephens Creek	36.73	252	P	P	16 27 02.6	-0.6
	0.6nm,0.5s,mb3.7,baz=112,slow=11,SNR=3.5						
WRA	Warramunga Arr	45.50	268	P	P	16 28 14.3	-1.2
	4.8nm,0.7s,mb4.5,baz=106,slow=7.7,SNR=14						
MAW	Mawson	75.94	200	P	P	16 31 42.1	+0.5
	2.2nm,0.7s,mb4.2,baz=120,slow=9.5,SNR=6.0						
MJAR	Matsushiro Arr	76.33	324	P	P	16 31 44.5	+0.1
	2.9nm,0.8s,mb4.3,baz=171,slow=6.3,SNR=6.7						
VNA3	Neumayer Olymp	81.55	176		P	16 32 11.7	-0.5
VNA3	Neumayer Olymp	81.55	176	⇑i	pP	16 32 25.2	-0.9
VNA2	Neumayer--Watz	82.00	176	⇑i	P	16 32 14.6	+0.1
VNA2	Neumayer--Watz	82.00	176	⇑i	pP	16 32 26.2	-2.2
NVAR	Mina Array Bea	84.82	42	P	P	16 32 28.9	-0.5
	0.2nm,0.3s,mb3.7,baz=229,slow=9.6,SNR=3.1						
CMAR	Chiang Mai Arr	93.64	289	P	P	16 33 13.3	+1.7
	1.3nm,0.8s,mb4.4,baz=136,slow=3.7,SNR=6.4						
MKAR	Makanchi Array	116.66	311	PKP	PKPdf	16 38 37.4	-0.2
	0.6nm,0.9s,baz=68,slow=6.5,SNR=3.9						
NB2	NORSAR Subarra	145.62	353	PKPabc	PKPdf	16 39 31.4	+0.3
	0.4nm,0.8s,baz=19,slow=3.6						
NOA	NORSAR Array B	145.62	353	PKPbc	PKPbc	16 39 31.8	0.0
	6.9nm,1.0s,baz=9.1,slow=2.4,SNR=6.7						
AKASG	Malin Array Be	149.36	327	PKPbc	PKPdf	16 39 42.1	+4.5
	0.4nm,0.4s,baz=36,slow=3.0,SNR=5.8						
BRTR	Keskin Array B	152.04	305	PKPbc	PKPdf	16 39 49.6	+7.6
	0.8nm,0.6s,baz=117,slow=2.8,SNR=4.1						
BRTR				PKPab	PKPab	16 40 00.1	-0.4
	0.4nm,0.3s,baz=135,slow=3.5,SNR=3.6						

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*ATH **28** 16:24:42.1, 38.08N×22.14E, h64^{km}±3^{km}*

*CSEM **28** 16:24:43.4±0.1, 38.07N×22.17E, h40^{km}, ML2.8, Error ellipse: s-maj=2.0km s-min=1.8km az=82.0*

*THE **28** 16:24:45.5, 38.17N×22.37E, h20^{km}, ML2.8*

ISC 28 16:24:43.3±0.8**, 38.07N**±0.03×**22.17E**±0.04**, h58^{km}**±14^{km}**, n18, σ0^{s}68**/30**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	Riolos of Patr	0.56	269	eP	P	16 24 55.0	-0.8
RLS				eS	S	16 25 04.7	-0.2
MGER	Gerania Oros	0.86	95	eP	P	16 25 00.0	+0.4
LKR	Lokris	0.87	48	eP	P	16 24 59.8	+0.1
LKR				eS	S	16 25 12.3	+0.4
EVR	Evrytania	0.89	341	eP	P	16 25 00.3	+0.4
EVR				eS	S	16 25 12.9	+0.5
ITM	Ithomi	0.91	192	eP	P	16 25 00.6	+0.4
ITM				eS	S	16 25 13.3	+0.4
AGG	Agios Georgios	0.96	7	ePg	P	16 25 01.1	+0.2
AGG				eSg	S	16 25 13.7	-0.2
NSAL	Nisos Salamina	1.03	99	eP	P	16 25 01.8	-0.2
NAIG	Nisos Aigina	1.09	106	eP	P	16 25 02.5	-0.2
ATH	Athens Observa	1.22	94	eP	P	16 25 04.9	+0.4
ATH				eS	S	16 25 20.6	+0.2
MPAR	Parnis Oros	1.24	86	eP	P	16 25 04.5	-0.2
MPAR				eS	S	16 25 21.0	+0.3
VLS	Valsamata	1.25	275	eP	P	16 25 03.8	-1.2
VLS				eS	S	16 25 20.9	-0.2
NEO	Neokhori	1.48	33	eP	P	16 25 08.1	-0.1
NEO				eS	S	16 25 26.5	-0.2
VLI	Veliai	1.48	156	eP	P	16 25 07.4	-0.8
VLI				eS	S	16 25 27.3	+0.6
XOR	Xorichti	1.52	31	ePg	P	16 25 08.9	+0.2
XOR				eSg	S	16 25 25.9	-1.6
AOS	Alonnisos	1.73	50	ePg	P	16 25 11.3	-0.3
MEV	Metsovon	1.86	337	ePb	P	16 25 14.9	+1.4
MEV				eSb	S	16 25 38.6	+2.8
PAIG	Paliouri	2.19	32	ePn	P	16 25 17.6	-0.6
OUR	Ouranopolis	2.66	31	ePn	P	16 25 24.3	-0.5

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*IDC **28** 16:29:10.7±0.8, 26.92S×176.14W, mb4.3/8, mb1 4.5/10, mb1mx4.4/16, mbtmp4.3/10, ML3.9/1, MS3.7/1, Ms1 3.7/1, ms1mx3.6/17, Error ellipse: s-maj=28.1km s-min=19.1km az=114.0*

*NEIC **28** 16:29:16.4±0.5, 27.00S×176.26W, mb5.0/2, Error ellipse: s-maj=17.0km s-min=11.8km az=107.0*

ISC 28 16:29:16.2±3.3**, 26.9S**±0.1×**176.3W**±0.2**, h48^{km}**±25^{km}**, h37^{km}**±4.5^{km}**:pP-P, n30, σ0^{s}91**/18**, mb4.5**/10**, 11C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.72	211	Pn	P	16 29 58.0	-0.5
	99nm,0.3s,baz=83,slow=23,SNR=8.4						
RAO				Sn	S	16 30 32.7	+2.3
	191nm,0.3s,baz=77,slow=22,SNR=12						
RAO				LR	LR	16 30 35.9	
	comp=Z,1μm,19.6s,baz=204,slow=30						
URZ	Urewera	12.59	205	Pn	P	16 32 09.8	-5.3
	0.6nm,0.3s,baz=343,slow=19,SNR=4.2						
URZ				Sn	S	16 34 23.4	-11
	1.6nm,0.3s,baz=181,slow=21,SNR=6.4						
CTA	Charters Tower	34.92	273	P	P	16 36 06.1	+0.6
	9.0nm,0.6s,mb4.8,baz=99,slow=12,SNR=14						
CTA	Charters Tower	34.92	273	P	P	16 36 06.1	+0.6
STKA	Stephens Creek	36.85	252	P	P	16 36 22.3	+0.6
	2.2nm,0.6s,mb4.2,baz=93,slow=11,SNR=7.4						
WB2	Warramunga Arr	45.59	268	eP	P	16 37 32.6	-1.0
WRAB	Tennant Creek	45.59	268	eP	P	16 37 32.8	-0.8
	13nm,0.7s,mb5.0						
WRAB				epP	pP	16 37 44.1	-2.5
WRA	Warramunga Arr	45.60	268	P	P	16 37 32.7	-1.0
	8.9nm,0.7s,mb4.8,baz=106,slow=7.8,SNR=44						
VNDA	Vanda	51.69	186	P	P	16 38 20.1	0.0
	1.1nm,0.9s,mb3.8,baz=20,slow=7.5,SNR=5.8						
CASY	Casey	58.90	207	eP	P	16 39 11.7	-0.7
	9.4nm,0.6s,mb5.0						
CASY				epP	pP	16 39 22.0	-3.7
MAW	Mawson	76.07	200	P	P	16 40 59.6	-0.3
	1.5nm,0.6s,mb4.1,baz=128,slow=12,SNR=3.7						
MJAR	Matsushiro Arr	76.29	324	P	P	16 41 02.2	+0.4
	4.1nm,0.7s,mb4.5,baz=167,slow=6.5,SNR=11						
VNA3	Neumayer Olymp	81.65	176	⇑i	PcP	16 41 36.8	+0.5
VNA3	Neumayer Olymp	81.65	176	⇑i	pP	16 41 40.7	-3.4
VNA3	Neumayer Olymp	81.65	176	⇑i	sP	16 41 48.0	-1.4
VNA3	Neumayer Olymp	81.65	176	⇑iP	P	16 41 29.6	-0.6
VNA3				⇑iP		16 41 36.8	
VNA3				⇑iP	pP	16 41 40.7	-3.4
VNA3				⇑iP	pP	16 41 48.0	+3.9
VNA2	Neumayer--Watz	82.11	176		PcP	16 41 38.4	+0.1
VNA2	Neumayer--Watz	82.11	176	⇑i	pP	16 41 42.7	-3.8
VNA2	Neumayer--Watz	82.11	176	⇑i	sP	16 41 46.7	-5.0
VNA2	Neumayer--Watz	82.11	176	⇓iP	P	16 41 33.0	+0.5
VNA2				P		16 41 38.4	
VNA2				⇑iP	pP	16 41 42.7	-3.8
VNA2				⇑iP	pP	16 41 46.7	+0.2
NVAR	Mina Array Bea	84.67	42	P	P	16 41 46.4	+0.2
	0.8nm,0.7s,mb4.0,baz=209,slow=8.0,SNR=5.2						
CMAR	Chiang Mai Arr	93.69	289	P	P	16 42 31.6	+2.3
	1.6nm,0.8s,mb4.5,baz=122,slow=3.9,SNR=9.7						
MKAR	Makanchi Array	116.66	311	PKP	PKPdf	16 47 55.7	+0.7
	0.3nm,0.6s,baz=180,slow=1.3,SNR=4.5						
MKAR	Makanchi Array	116.66	311	PKP	PKPdf	16 47 55.7	+0.7
BOSA	Boshof	121.03	202	PKP	PKPdf	16 48 05.8	+1.7
	0.6nm,0.4s,baz=113,slow=7.7,SNR=2.8						
ARCES	ARCESS Array B	135.50	349	PKP	PKPdf	16 48 32.5	+2.1
	1.1nm,0.7s,baz=63,slow=5.4,SNR=4.0						
NB2	NORSAR Subarra	145.52	354	PKPabc	PKPdf	16 48 50.1	+1.7
	24nm,2.0s,baz=10.0,slow=3.1						
NOA	NORSAR Array B	145.52	354	PKPbc	PKPbc	16 48 50.1	+1.1
	1.0nm,0.7s,baz=22,slow=3.0,SNR=4.6						
AKASG	Malin Array Be	149.31	328	PKPbc	PKPdf	16 49 00.1	+5.2
	1.5nm,0.6s,baz=42,slow=3.8,SNR=8.2						
BRTR	Keskin Array B	152.06	305	PKPbc	PKPdf	16 49 07.4	+7.9
	0.5nm,0.5s,baz=105,slow=6.3,SNR=3.3						
BRTR				PKPab	PKPab	16 49 17.2	-0.8
	1.3nm,0.6s,baz=111,slow=2.9,SNR=5.1						

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*SSS **28** 16:35:42.9, 14.01N×89.63W, h1^{km}, MD2.8*

*GCG **28** 16:35:44.1, 14.03N×89.65W, h50^{km}, MD4.0*

CASC 28 16:35:42.9±1.3**, 13.99N**×**89.71W, h6^{km}**±6^{km}**, MD3.5, 7C-3D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTR	El Retiro	0.11	144	⇑iP	Pg	16 35 45.9	+0.5
RBDL	Robledal	0.13	12	⇓iP	Pg	16 35 46.0	+0.4
RBDL				eS	Sg	16 35 48.9	+1.4
SNJE	San Jose	0.16	139	⇑iP	Pg	16 35 46.8	+0.5
SBLS	San Blas	0.17	149	⇓eP	Pg	16 35 46.7	+0.2
BOQS	Boqueron	0.49	121	eP	Pg	16 35 53.0	+0.3
MTO2	Montecristo 2	0.53	40	⇑eP	Pg	16 35 53.4	-0.2
MTO2				eS	Sg	16 36 01.6	+0.8
LFU	La Fuente	0.63	112	⇑eP	Pg	16 35 55.6	+0.1
LFU				eS	Sg	16 36 04.0	+0.1
LBRS	Las Brisas	0.70	111	eP	Pg	16 35 56.4	-0.5
LFRS	El Faro	0.73	120	⇑eP	Pg	16 35 57.1	-0.3
LFRS				eS	Sg	16 36 08.0	+0.8
IXG	Ixpaco	0.74	285	⇑eP	Pg	16 35 55.9	-1.9
LCBS	La Ceiba	0.79	115	eP	Pb	16 35 58.1	-0.5
MRL	Marmol	1.07	1	⇓eP	Pb	16 36 03.3	-0.1
MRL				eS	Sb	16 36 18.2	+0.6
TP2	Tecpan 2	1.50	302	⇑iP	Pn	16 36 10.5	+0.1
TP2				eS	Sb	16 36 31.0	+1.2

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*IDC **28** 16:40:04.5±1.1, 26.82S×176.32W, mb4.2/7, mb1 4.4/8, mb1mx4.3/15, mbtmp4.2/8, ML5.0/1, Error ellipse: s-maj=35.6km s-min=21.8km az=102.0*

*NEIC **28** 16:40:09.6±0.6, 26.90S×176.32W, h35^{km}, mb5.0/1, Error ellipse: s-maj=18.2km s-min=12.3km az=94.0*

ISC 28 16:40:07.6±0.8**, 26.84S**±0.09×**176.3W**±0.2**, h33^{km}, n22, σ0^{s}91**/14**, mb4.3**/8**, 6C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.81	211	Pn	Pn	16 40 50.5	-0.8
	218nm,0.3s,baz=91,slow=19,SNR=14						
RAO				Sn	Sn	16 41 25.6	+1.2
	328nm,0.3s,baz=76,slow=22,SNR=6.9						
URZ	Urewera	12.68	204	Sn	S	16 45 16.3	-13
	0.9nm,0.3s,baz=199,slow=20,SNR=8.3						
CTA	Charters Tower	34.92	273	P	P	16 46 58.6	+0.1
	4.4nm,0.6s,mb4.5,baz=115,slow=12,SNR=6.2						
WB2	Warramunga Arr	45.60	268	eP	P	16 48 26.2	-0.5
WRA	Warramunga Arr	45.61	268	P	P	16 48 25.5	-1.3
	5.2nm,0.7s,mb4.6,baz=107,slow=7.8,SNR=29						
VNDA	Vanda	51.78	186	P	P	16 49 13.5	-0.3
	1.0nm,1.1s,mb3.7,baz=23,slow=6.8,SNR=3.6						
CASY	Casey	58.99	207	eP	P	16 50 04.5	-1.5
	8.4nm,0.6s,mb5.0						
MAW	Mawson	76.16	200	P	P	16 51 54.5	+1.0
	1.9nm,0.8s,mb4.1,baz=108,slow=5.5,SNR=4.1						
MJAR	Matsushiro Arr	76.22	324	P	P	16 51 54.9	+0.4
	2.6nm,0.7s,mb4.2,baz=168,slow=6.6,SNR=6.2						
VNA3	Neumayer Olymp	81.74	176	⇑i	pP	16 52 33.1	-1.1
VNA3	Neumayer Olymp	81.74	176		sP	16 52 41.1	+3.3
VNA3	Neumayer Olymp	81.74	176	⇑iP	P	16 52 23.6	-0.2
VNA3				⇑iP	pP	16 52 33.1	-1.1
VNA3				P		16 52 41.1	
VNA2	Neumayer--Watz	82.19	176	⇑i	pP	16 52 34.1	-2.5
VNA2	Neumayer--Watz	82.19	176		sP	16 52 43.6	+3.4
VNA2	Neumayer--Watz	82.19	176	⇑iP	P	16 52 26.0	-0.2
VNA2				⇑iP		16 52 34.1	
VNA2				P		16 52 43.6	
CMAR	Chiang Mai Arr	93.67	289	P	P	16 53 24.2	+1.7
	0.8nm,0.6s,mb4.3,baz=132,slow=3.0,SNR=5.4						
ILAR	Eielson Array	94.13	12	P	P	16 53 24.0	+0.5
	0.6nm,0.7s,mb4.2,baz=222,slow=6.0,SNR=5.4						
NB2	NORSAR Subarra	145.43	354	PKPabc	PKPbc	16 59 43.1	+1.0
	1.6nm,0.8s,baz=12,slow=3.8						
NOA	NORSAR Array B	145.43	354	PKPbc	PKPbc	16 59 43.2	+1.1
	2.8nm,0.9s,baz=7.9,slow=2.4,SNR=5.8						
NOA	NORSAR Array B	145.43	354	PKPbc	PKPbc	16 59 43.2	+1.1
AKASG	Malin Array Be	149.25	328	PKPbc	PKPdf	16 59 53.4	+5.3
	1.6nm,0.6s,baz=43,slow=3.3,SNR=9.2						
AKASG	Malin Array Be	149.25	328	PKPbc	PKPdf	16 59 53.4	+5.3

IDC 28 16:49:32.2±1.4**, 26.82S**×**176.16W, mb4.0**/3**, mb1 4.3**/4**, mb1mx3.9**/15**, mbtmp4.0**/4**, ML4.1**/1**, Error ellipse: s-maj=47.1km s-min=25.0km az=140.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.88	212	Pn	Pn	16 50 19.7	-0.4
	25nm,0.3s,baz=75,slow=20,SNR=4.4						
RAO				Sn	Sn	16 50 55.8	-0.3
	52nm,0.3s,baz=73,slow=19,SNR=3.1						
URZ	Urewera	12.74	205	Sn	S	16 54 45.5	-16
	0.3nm,0.3s,baz=170,slow=18,SNR=3.3						
CTA	Charters Tower	35.03	273	P	P	16 56 28.3	-0.5
	1.4nm,0.5s,baz=95,slow=12,SNR=4.9						
WRA	Warramunga Arr	45.72	268	P	P	16 57 53.8	-3.3
	2.7nm,0.6s,baz=108,slow=7.5,SNR=12						
TXAR	Lajitas Array	89.08	56	P	P	17 02 29.6	-1.3
	0.1nm,0.3s,baz=219,slow=5.8,SNR=2.3						
NB2	NORSAR Subarra	145.42	354	PKPabc	PKPdf	17 09 11.0	-2.3
	1.0nm,0.8s,baz=13,slow=3.3						
NOA	NORSAR Array B	145.42	354	PKPbc	PKPbc	17 09 11.2	-0.7
	2.3nm,0.9s,baz=9.5,slow=2.5,SNR=4.5						
AKASG	Malin Array Be	149.29	328	PKPbc	PKPdf	17 09 21.8	+1.8
	0.1nm,0.3s,baz=34,slow=3.4,SNR=5.7						

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*IDC **28** 16:50:17.8±2.3, 26.81S×176.27W, mb4.4/2, mb1 4.7/3, mb1mx4.0/14, mbtmp4.4/3, Error ellipse: s-maj=74.2km s-min=30.3km az=118.0*

ISC 28 16:50:20.1±1.4**, 26.7S**±0.1×**176.2W**±0.3**, h33^{km}, n10, σ1^{s}47**/6**, mb4.4**/2**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.96	210	Pn	Pn	16 51 04.7	-1.3
	102nm,0.3s,baz=88,slow=23,SNR=4.2						
RAO				Sn	Sn	16 51 41.5	+0.7
	149nm,0.3s,baz=175,slow=23,SNR=7.7						
WRA	Warramunga Arr	45.68	268	P	P	16 58 39.3	-0.5
	4.6nm,0.7s,mb4.5,baz=110,slow=7.2,SNR=14						
VNA3	Neumayer Olymp	81.88	176		P	17 02 36.8	-0.2
VNA3	Neumayer Olymp	81.88	176		pP	17 02 46.9	-0.5
VNA2	Neumayer--Watz	82.33	176		P	17 02 39.7	+0.3
VNA2	Neumayer--Watz	82.33	176		pP	17 02 49.8	0.0
CMAR	Chiang Mai Arr	93.69	289	P	P	17 03 38.5	+3.4
	0.8nm,0.8s,mb4.2,baz=138,slow=4.5,SNR=4.4						
NB2	NORSAR Subarra	145.29	354	PKPabc	PKPbc	17 09 56.6	+2.3
	1.0nm,0.7s,baz=8.0,slow=3.8						
NOA	NORSAR Array B	145.29	354	PKPbc	PKPbc	17 09 56.6	+2.4
	1.9nm,0.8s,baz=9.0,slow=2.5,SNR=4.7						
AKASG	Malin Array Be	149.16	328	PKPbc	PKPdf	17 10 06.9	+6.4
	1.3nm,0.7s,baz=44,slow=3.9,SNR=8.0						

IDC 28 16:52:13.1±2.3**, 26.80S**×**176.08W, mb4.5**/3**, mb1 4.6**/4**, mb1mx4.0**/16**, mbtmp4.5**/4**, ML4.4**/1**, Error ellipse: s-maj=59.6km s-min=30.3km az=124.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.93	213	Pn	Pn	16 53 01.3	-0.5
	48nm,0.3s,baz=82,slow=19,SNR=2.7						
RAO				Sn	Sn	16 53 37.4	-0.8
	80nm,0.3s,baz=107,slow=19,SNR=5.6						
CTA	Charters Tower	35.10	273	P	P	16 59 10.0	-0.3
	5.6nm,1.0s,baz=95,slow=14,SNR=7.2						
WRA	Warramunga Arr	45.79	268	P	P	17 00 35.7	-2.9
	4.2nm,0.6s,baz=107,slow=7.7,SNR=17						
FITZ	Fitzroy Crossi	54.16	266	P	P	17 01 40.1	-2.6
	5.9nm,0.8s,baz=88,slow=3.6,SNR=3.5						
NB2	NORSAR Subarra	145.41	354	PKPabc	PKPdf	17 11 52.5	-1.7
	2.0nm,1.0s,baz=12,slow=2.7						
NOA	NORSAR Array B	145.41	354	PKPbc	PKPbc	17 11 52.4	-0.5
	1.1nm,0.8s,baz=1.6,slow=2.3,SNR=3.6						
AKASG	Malin Array Be	149.31	328	PKPbc	PKPdf	17 12 02.6	+1.7
	0.7nm,0.3s,baz=42,slow=3.4,SNR=6.4						

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*IDC **28** 16:53:59.0±0.6, 26.81S×176.27W, mb4.5/12, mb1 4.7/14, mb1mx4.7/17, mbtmp4.5/14, ML4.4/2, MS4.3/7, Ms1 4.3/7, ms1mx4.1/18, Error ellipse: s-maj=24.5km s-min=16.2km az=129.0*

*NEIC **28** 16:54:04.9±2.0, 26.95S×176.27W, h43^{km}±17^{km}, mb4.8/6, Error ellipse: s-maj=14.6km s-min=12.4km az=217.0*

ISC 28 16:54:03.5±0.5**, 26.96S**±0.09×**176.4W**±0.1**, h40^{km}, h40^{km}**±2.6^{km}**:pP-P, n48, σ1^{s}04**/29**, mb4.6**/16**, MS4.3**/6**, 16C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.66	210	Pn	P	16 54 46.0	+1.1
	169nm,0.3s,baz=86,slow=18,SNR=7.9						
RAO				Sn	S	16 55 22.5	+6.3
	349nm,0.3s,baz=76,slow=23,SNR=10						
URZ	Urewera	12.53	204	Pn	P	16 57 01.2	-0.7
	0.7nm,0.3s,baz=2.9,slow=17,SNR=3.1						
URZ				Sn	S	16 59 13.6	-7.4
	1.8nm,0.3s,baz=249,slow=23,SNR=10						
DZM	Mont Dzumac	16.37	284	Pn	P	16 57 58.0	+6.1
	0.2nm,0.3s,baz=102,slow=17,SNR=3.2						
DZM				LR	LR	17 02 29.2	
	comp=Z,625nm,21.6s,baz=28,slow=31						
TBI	Tubuai	24.61	88	eLQ		17 03 38.9	
	435nm,23.5s						
TBI				eLR	LR	17 04 33.0	
	704nm,30.5s						
PPT	Papeete	26.46	75	eLQ		17 04 14.2	
	641nm,22.5s						
PPT				eLR	LR	17 05 18.2	
	1μm,26.5s						
PPT	Papeete	26.46	75	LR	LR	17 07 43.7	
	comp=Z,398nm,20.6s,MS4.0,baz=77,slow=31						
CTA	Charters Tower	34.84	273	P	P	17 00 53.5	+0.6
	7.3nm,0.5s,mb4.8,baz=95,slow=11,SNR=15						
CTA				LR	LR	17 12 30.9	
	comp=Z,336nm,19.1s,MS4.1,baz=31,slow=32						
CTAO	Charters Tower	34.84	273	eP	P	17 00 53.9	+1.0
	5.0nm,0.6s,mb4.6						
CTAO				e	pP	17 01 06.0	+1.9
STKA	Stephens Creek	36.77	252	P	P	17 01 09.2	+0.1
	2.3nm,0.7s,mb4.1,baz=122,slow=9.7,SNR=6.0						
RKT	Rikitea	37.59	93	eLR	LR	17 10 33.0	
	547nm,32.5s						
PMG	Port Moresby	38.60	290	LR	LR	17 14 33.0	
	comp=Z,427nm,20.6s,MS4.2,baz=312,slow=32						
WB2	Warramunga Arr	45.51	268	eP	P	17 02 21.4	+0.3
WRAB	Tennant Creek	45.52	268	eP	P	17 02 19.5	-1.6
	23nm,0.7s,mb5.2						
WRAB				e	pP	17 02 32.9	+0.4
WRA	Warramunga Arr	45.52	268	P	P	17 02 21.3	+0.2
	16nm,0.6s,mb5.1,baz=107,slow=7.7,SNR=40						
KAKA	Kakadu	49.87	276	eP	P	17 02 55.1	0.0
	6.9nm,0.6s,mb4.9						
VNDA	Vanda	51.65	186	P	P	17 03 07.7	-0.2
	2.2nm,1.1s,mb4.0,baz=16,slow=5.9,SNR=6.9						
VNDA				LR	LR	17 20 49.5	
	comp=Z,250nm,19.8s,MS4.2,baz=40,slow=31						

FITZ	Fitzroy Crossi	53.89	267	eP	P	17 03 24.5	-0.8
	7.3nm,0.8s,mb4.7						
FITZ	Fitzroy Crossi	53.89	267	P	P	17 03 24.5	-0.8
	13nm,0.9s,mb4.9,baz=177,slow=5.9,SNR=7.3						
CASY	Casey	58.84	207	eP	P	17 03 58.5	-1.5
	30nm,1.0s,mb5.3						
MAW	Mawson	76.02	200	P	P	17 05 48.9	+1.2
	2.5nm,0.6s,mb4.3,baz=108,slow=7.3,SNR=11						
MAW				LR	LR	17 39 12.4	
	comp=Z,244nm,18.7s,MS4.5,baz=237,slow=36						
MJAR	Matsushiro Arr	76.27	324	P	P	17 05 49.4	-0.4
	6.4nm,0.8s,mb4.6,baz=168,slow=6.9,SNR=15						
SNAA	Sanae	81.54	178	eP	P	17 06 15.7	-2.1
	4.8nm,0.9s,mb4.4						
SNAA				e	pP	17 06 27.3	-2.7
VNA3	Neumayer Olymp	81.63	176	⇑i	P	17 06 21.3	+3.1
VNA3	Neumayer Olymp	81.63	176	⇑i	pP	17 06 29.2	-1.2
VNA3	Neumayer Olymp	81.63	176	⇑i	sP	17 06 36.5	+1.7
VNA3	Neumayer Olymp	81.63	176	⇑iP	P	17 06 18.4	+0.2
VNA3				⇑iP		17 06 21.3	
VNA3				⇑iP	pP	17 06 29.2	-1.2
VNA3				⇑iP		17 06 36.5	
VNA2	Neumayer--Watz	82.08	176	⇑i	P	17 06 21.3	+0.8
VNA2	Neumayer--Watz	82.08	176	⇑i	pP	17 06 32.1	-0.7
VNA2	Neumayer--Watz	82.08	176	⇑i	sP	17 06 38.3	+1.1
VNA2	Neumayer--Watz	82.08	176	⇑iP	P	17 06 18.7	-1.9
VNA2				⇑iP		17 06 21.3	
VNA2				⇑iP	pP	17 06 32.1	-0.7
VNA2				⇑iP		17 06 38.3	
VNA1	Neumayer--Stat	82.30	176	⇑i	pP	17 06 33.5	-0.4
VNA1	Neumayer--Stat	82.30	176	⇓iP	P	17 06 23.0	+1.3
VNA1				⇑iP	pP	17 06 33.5	-0.4
NVAR	Mina Array Bea	84.74	42	P	P	17 06 35.1	+0.4
	2.4nm,1.0s,mb4.3,baz=212,slow=8.4,SNR=9.5						
NVAR				LR	LR	17 41 30.1	
	comp=Z,328nm,18.4s,MS4.8,baz=225,slow=34						
TXAR	Lajitas Array	89.32	56	P	P	17 06 57.5	+0.3
	1.3nm,0.9s,mb4.3,baz=211,slow=7.3,SNR=10						
PDAR	Pinedale Array	92.66	43	P	P	17 07 12.2	0.0
	0.6nm,0.9s,mb4.0,baz=243,slow=3.3,SNR=4.9						
CMAR	Chiang Mai Arr	93.63	289	P	P	17 07 19.3	+2.1
	2.5nm,0.8s,mb4.7,baz=135,slow=3.5,SNR=14						
ILAR	Eielson Array	94.27	12	P	P	17 07 18.1	-0.9
	0.9nm,0.7s,mb4.3,baz=229,slow=4.8,SNR=7.4						
MKAR	Makanchi Array	116.62	311	PKP	PKPdf	17 12 44.1	+1.0
	1.1nm,0.7s,baz=64,slow=3.5,SNR=9.3						
BVAR	Borovoye Array	124.89	317	PKP	PKPdf	17 13 00.2	+1.2
	1.6nm,0.8s,baz=90,slow=1.5,SNR=12						
ARCES	ARCESS Array B	135.51	349	PKP	PKPdf	17 13 19.8	+1.0
	1.6nm,0.7s,slow=1.2,SNR=8.7						
FINES	FINESS Array B	142.35	343	PKP	PKPdf	17 13 33.1	+2.0
	2.6nm,0.9s,baz=135,slow=5.4,SNR=4.4						
NB2	NORSAR Subarra	145.54	353	PKPabc	PKPab	17 13 36.9	-2.2
	0.9nm,0.8s,baz=17,slow=3.8						
NOA	NORSAR Array B	145.54	353	PKPbc	PKPbc	17 13 37.0	-0.3
	9.0nm,0.9s,baz=8.3,slow=2.4,SNR=19						
NAO01	NORSAR Array S	145.76	354	ePKPdf	PKPdf	17 13 38.1	+1.1
NAO01				epPKPdf		17 13 47.2	
MALT	Malatya	148.75	300	ePKPbc	PKPdf	17 13 49.7	+7.0
AKASG	Malin Array Be	149.30	327	PKPbc	PKPdf	17 13 47.9	+4.7
	7.1nm,0.8s,baz=37,slow=3.3,SNR=14						
BR131	Keskin Array S	152.01	305	ePKPab	PKPab	17 14 06.0	0.0
BRTR	Keskin Array B	152.01	305	PKPbc	PKPdf	17 13 55.2	+7.6
	0.7nm,0.4s,baz=135,slow=7.0,SNR=5.3						
BRTR				PKPab	PKPab	17 14 05.8	-0.3
	2.5nm,0.7s,baz=103,slow=3.4,SNR=9.4						

IDC ***28*** *16:58:15.5±0.8, 26.89S×176.14W, h28^{km}±4^{km}, mb4.0/7, mb1 4.3/8, mb1mx4.1/16, mbtmp4.2/8, ML4.7/1, Error ellipse: s-maj=32.0km s-min=20.2km az=146.0*

NEIC ***28*** *16:58:16.1±0.4, 26.84S×176.21W, mb4.9/2, Error ellipse: s-maj=14.4km s-min=11.4km az=112.0*

ISC 28 16:58:15.7±3.1**, 26.9S**±0.2×**176.3W**±0.2**, h41**^{km}±25^{km}**, n25, σ0^{s}68**/19**, mb4.3**/9**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.77	211	Pn	P	16 58 58.7	0.0
	105nm,0.3s,baz=32,slow=19,SNR=5.6						
RAO				Sn	S	16 59 35.9	+4.7
	200nm,0.3s,baz=93,slow=20,SNR=5.6						
URZ	Urewera	12.63	204	Sn	S	17 03 25.7	-10
	0.5nm,0.3s,baz=139,slow=20,SNR=5.7						
CTA	Charters Tower	34.92	273	P	P	17 05 07.2	+1.4
	2.2nm,0.7s,mb4.2,baz=99,slow=13,SNR=3.9						
WRAB	Tennant Creek	45.60	268	eP	P	17 06 33.5	-0.5
WRA	Warramunga Arr	45.61	268	P	P	17 06 33.0	-1.1
	5.7nm,0.8s,mb4.6,baz=106,slow=7.9,SNR=16						
WRA				pP	pP	17 06 43.6	-2.0
	4.1nm,0.7s,baz=107,slow=7.7,SNR=11						
FITZ	Fitzroy Crossi	53.98	266	P	P	17 07 38.0	-0.1
	9.6nm,0.9s,mb4.7,baz=153,slow=4.5,SNR=3.4						
CASY	Casey	58.95	207	eP	P	17 08 12.2	-0.7
	9.4nm,0.9s,mb4.8						
QSPA	South Pole Qui	63.22	180	⇓iP	P	17 08 41.7	0.0
	7.1nm,0.9s,mb4.8						
MAW	Mawson	76.12	200	P	P	17 10 01.0	+0.6
	1.0nm,0.6s,mb3.9,baz=140,slow=11,SNR=4.0						
MJAR	Matsushiro Arr	76.26	324	P	P	17 10 02.1	+0.2
	3.0nm,0.8s,mb4.2,baz=173,slow=7.3,SNR=5.8						
MJAR				pP	pP	17 10 11.1	-3.1
	1.6nm,0.8s,baz=164,slow=5.4,SNR=3.1						
VNA3	Neumayer Olymp	81.70	176		P	17 10 39.0	+8.2
VNA3	Neumayer Olymp	81.70	176	P	P	17 10 30.1	-0.7
VNA3				P		17 10 39.0	
VNA2	Neumayer--Watz	82.15	176		P	17 10 42.3	+9.2
VNA2	Neumayer--Watz	82.15	176	P	P	17 10 33.7	+0.6
VNA2				P		17 10 42.3	
VNA1	Neumayer--Stat	82.37	176		P	17 10 43.7	+9.5
VNA1	Neumayer--Stat	82.37	176	P	P	17 10 35.4	+1.2
VNA1				P		17 10 43.7	
NVAR	Mina Array Bea	84.63	42	P	P	17 10 46.6	+0.3
	0.3nm,0.4s,mb3.7,baz=217,slow=8.0,SNR=5.6						
TXAR	Lajitas Array	89.21	56	P	P	17 11 08.2	-0.6
	0.1nm,0.3s,mb3.6,baz=220,slow=9.8,SNR=3.4						
MKAR	Makanchi Array	116.63	311	PKP	PKPdf	17 16 56.2	+0.9
	0.6nm,0.8s,baz=90,slow=1.2,SNR=5.0						
MKAR				pPKP		17 17 05.2	
	0.5nm,0.8s,baz=63,slow=8.1,SNR=4.0						
BVAR	Borovoye Array	124.89	317	PKP	PKPdf	17 17 10.6	-0.6
	0.2nm,0.3s,baz=135,slow=4.2,SNR=4.0						
BVAR				pPKP		17 17 21.7	
	1.0nm,0.9s,baz=90,slow=3.0,SNR=3.9						
NB2	NORSAR Subarra	145.47	354	PKPabc	PKPdf	17 17 55.4	+6.7
	2.0nm,0.8s,baz=15,slow=3.5						
NOA	NORSAR Array B	145.47	354	PKPbc	PKPbc	17 17 50.4	+1.1
	3.5nm,0.9s,baz=7.8,slow=2.4,SNR=7.5						
NOA				pPKPbc		17 17 59.0	
	0.7nm,0.8s,baz=18,slow=3.5,SNR=1.9						
NOA	NORSAR Array B	145.47	354	PKPbc	PKPbc	17 17 50.4	+1.1
NOA				pPKPbc		17 17 59.0	
AKASG	Malin Array Be	149.28	328	PKPbc	PKPdf	17 18 01.2	+5.9
	1.7nm,0.6s,baz=38,slow=3.6,SNR=7.3						
AKASG				pPKPbc		17 18 10.2	
	2.3nm,0.8s,baz=37,slow=3.4,SNR=3.5						
BRTR	Keskin Array B	152.04	305	PKPbc	PKPdf	17 18 08.2	+8.3
	0.4nm,0.5s,baz=270,slow=4.3,SNR=2.5						
BRTR				pPKPbc		17 18 17.9	
	1.4nm,0.9s,baz=90,slow=1.2,SNR=4.2						

TAP ***28*** *17:09:39.3, 24.59N×122.57E, h5^{km}±1^{km}, ML2.8*

JMA 28 17:09:38.2±0.1**, 24.29N×122.45E, M2.2, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.54	71	P	Pg	17 09 49.1	+0.1
YOJ				eS	Sg	17 09 56.7	+0.5
IRIF	Iriomote-Funau	1.17	88	P	Pb	17 10 00.5	-0.5
IRIF				eS	Sb	17 10 16.4	-0.1
JKRS	Kuro-shima	1.42	92	P	Pb	17 10 05.4	+0.1
JKRS				eS	Sb	17 10 24.5	+0.6
JIJ	Ishigaki jima	1.55	87	P	Pn	17 10 07.2	+0.1
JIJ				eS	Sb	17 10 27.1	-0.4

IDC ***28*** *17:11:13.9±0.7, 26.86S×176.14W, mb4.3/11, mb1 4.5/13, mb1mx4.5/16, mbtmp4.2/13, ML3.9/1, MS3.9/4, Ms1 3.9/4, ms1mx3.7/23, Error ellipse: s-maj=26.7km s-min=16.8km az=126.0*

HRVD ***28*** *17:11:18.6±1.2, 26.89S×175.86W, h28^{km}±2^{km}, MW5.0/31, Centroid moment Tensor Solution. LP body waves: s14,c16;Mantle waves: s31,c41; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.45±.46; M$_{\theta\theta}$-0.32±.30; M$_{\phi\phi}$-3.13±.33; M$_{r\theta}$0.69±.53; M$_{\theta\phi}$-0.60±.26; M$_{\phi r}$1.76±.49; Best double couple: M$_0$3.848×10^{16} NP1:ϕ_s187°,δ31°,λ82°. NP2:ϕ_s16°,δ60°,λ94°. Principal axes: T 3.957, Plg75°, Azm298°; N -.215, Plg4°, Azm194°; P -3.738, Plg15°, Azm103°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***28*** *17:11:18.6±0.4, 26.92S×176.22W, h30^{km}, mb5.0/3 Error ellipse: s-maj=13.3km s-min=8.9km az=114.0*

ISC 28 17:11:17.7±2.9**, 26.9S**±0.1×**176.3W**±0.1**, h33**^{km}±23^{km}**, n40, σ0^{s}72**/25**, mb4.4**/14**, MS3.9**/3**, 4C-5D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.74	212	Pn	P	17 12 00.6	+0.2
	95nm,0.3s,baz=88,slow=23,SNR=11						
RAO				Sn	S	17 12 38.8	+6.1
	186nm,0.3s,baz=80,slow=23,SNR=7.6						
URZ	Urewera	12.61	205	Pn	P	17 14 13.9	-3.6
	0.7nm,0.3s,baz=241,slow=19,SNR=4.0						
URZ				Sn	S	17 16 28.6	-9.1
	0.6nm,0.3s,baz=32,slow=17,SNR=6.3						
DZM	Mont Dzumac	16.46	283	Pn	P	17 15 14.1	+6.4
	0.5nm,0.3s,baz=91,slow=17,SNR=5.2						
DZM				LR	LR	17 20 08.2	
	comp=Z,423nm,19.8s,baz=40,slow=32						
PPT	Papeete	26.35	75	LR	LR	17 25 34.2	
	comp=Z,371nm,19.1s,MS4.0,baz=145,slow=33						
CTA	Charters Tower	34.94	273	P	P	17 18 09.0	+0.3
	3.5nm,0.6s,mb4.5,baz=94,slow=10,SNR=7.1						
CTA	Charters Tower	34.94	273	P	P	17 18 09.0	+0.3
STKA	Stephens Creek	36.88	252	P	P	17 18 25.5	+0.5
	1.5nm,0.9s,mb3.8,baz=119,slow=15,SNR=4.5						
STKA				LR	LR	17 30 32.7	
	comp=Z,247nm,20.2s,MS4.0,baz=282,slow=31						
STKA	Stephens Creek	36.88	252	P	P	17 18 25.5	+0.5
STKA				LR	LR	17 30 32.7	
RKT	Rikitea	37.49	93	eLQ		17 25 54.8	
	918nm,38.8s						
RKT				eLR	LR	17 27 54.2	
	301nm,30.5s						
PMG	Port Moresby	38.68	290	LR	LR	17 31 07.3	
	comp=Z,129nm,21.3s,MS3.7,baz=306,slow=31						
WB2	Warramunga Arr	45.61	268	eP	P	17 19 37.0	+0.1
WRAB	Tennant Creek	45.62	268	eP	P	17 19 36.1	-0.8
	14nm,0.8s,mb4.9						
WRA	Warramunga Arr	45.62	268	P	P	17 19 36.5	-0.5
	9.8nm,0.8s,mb4.8,baz=105,slow=7.9,SNR=33						
VNDA	Vanda	51.70	186	P	P	17 20 24.2	+1.0
	2.8nm,1.2s,mb4.1,baz=11,slow=8.6,SNR=6.4						
CASY	Casey	58.92	207	eP	P	17 21 14.6	-1.1
	21nm,0.9s,mb5.2						
CASY				epP	pP	17 21 26.1	+0.3
QSPA	South Pole Qui	63.18	180	⇓iP	P	17 21 44.3	0.0
	11nm,0.9s,mb5.0						
MAW	Mawson	76.09	200	P	P	17 23 02.6	-0.6
	2.0nm,0.8s,mb4.1,baz=148,slow=9.5,SNR=3.2						
MJAR	Matsushiro Arr	76.30	324	P	P	17 23 05.1	0.0
	5.0nm,0.8s,mb4.5,baz=168,slow=6.8,SNR=14						
VNA3	Neumayer Olymp	81.66	176		PcP	17 23 36.6	-3.0
VNA3	Neumayer Olymp	81.66	176	⇑i	pP	17 23 47.3	+3.3
VNA3	Neumayer Olymp	81.66	176	⇓iP	P	17 23 33.1	-0.4
VNA3				P		17 23 36.6	
VNA3				⇑iP		17 23 47.3	
VNA2	Neumayer--Watz	82.11	176	⇓i	PcP	17 23 40.7	-0.9
VNA2	Neumayer--Watz	82.11	176	⇑i	pP	17 23 47.7	+1.3
VNA2	Neumayer--Watz	82.11	176	⇓iP	P	17 23 36.2	+0.4
VNA2				⇓iP		17 23 40.7	
VNA2				⇑iP	pP	17 23 47.7	+1.3
VNA1	Neumayer--Stat	82.33	176		P	17 23 37.5	+0.5
NVAR	Mina Array Bea	84.65	42	P	P	17 23 49.1	-0.3
	0.6nm,0.5s,mb4.0,baz=214,slow=8.2,SNR=5.6						
TXAR	Lajitas Array	89.22	56	P	P	17 24 11.5	-0.3
	0.8nm,1.0s,mb4.0,baz=225,slow=3.5,SNR=6.7						
PDAR	Pinedale Array	92.56	43	P	P	17 24 27.6	+0.6
	0.4nm,1.0s,mb3.8,baz=243,slow=4.0,SNR=3.1						
CMAR	Chiang Mai Arr	93.71	289	P	P	17 24 34.5	+1.8
	2.5nm,0.8s,mb4.7,baz=128,slow=3.4,SNR=15						
ILAR	Eielson Array	94.21	12	P	P	17 24 33.1	-0.8
	0.7nm,0.8s,mb4.1,baz=233,slow=4.3,SNR=6.1						
ZAL	Zalesovo	116.44	319	PKP	PKPdf	17 29 58.2	+0.4
	1.4nm,0.3s,baz=328,slow=3.3,SNR=3.6						
ZAL	Zalesovo	116.44	319	PKP	PKPdf	17 29 58.2	+0.4
MKAR	Makanchi Array	116.67	311	PKP	PKPdf	17 29 59.2	+0.7
	1.1nm,0.9s,baz=65,slow=2.2,SNR=8.9						
MKAR	Makanchi Array	116.67	311	PKP	PKPdf	17 29 59.2	+0.7
ARCES	ARCESS Array B	135.49	349	PKP	PKPdf	17 30 36.0	+2.1
	1.0nm,0.7s,slow=2.4,SNR=5.3						
NB2	NORSAR Subarra	145.51	354	PKPabc	PKPdf	17 30 52.3	+0.5
	18nm,1.0s,baz=11,slow=3.6						
NOA	NORSAR Array B	145.51	354	PKPbc	PKPbc	17 30 52.7	+0.3
	6.5nm,0.8s,baz=8.3,slow=2.4,SNR=17						
MALT	Malatya	148.82	300	ePKPbc	PKPdf	17 31 04.9	+7.0
AKASG	Malin Array Be	149.32	328	PKPbc	PKPdf	17 31 03.3	+5.0
	3.5nm,0.7s,baz=41,slow=3.6,SNR=15						
BRTR	Keskin Array B	152.08	305	PKPbc	PKPdf	17 31 10.9	+8.0
	1.4nm,0.9s,baz=135,slow=1.7,SNR=5.2						

IDC ***28*** *17:31:51.7±0.8, 26.80S×176.20W, mb4.1/10, mb1 4.4/11, mb1mx4.3/15, mbtmp4.1/11, MS4.0/1, Ms1 4.0/1, ms1mx3.4/19, Error ellipse: s-maj=28.3km s-min=20.4km az=134.0*

NEIC ***28*** *17:31:55.3±5.7, 26.82S×176.22W, h26^{km}±38^{km}, mb4.7/4, Error ellipse: s-maj=15.9km s-min=11.4km az=60.0*

ISC 28 17:31:55.3±2.7**, 26.81S**±0.09×**176.3W**±0.1**, h35**^{km}±22^{km}**, n30, σ0^{s}99**/24**, mb4.2**/13**, MS4.0**/1**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.82	210	Pn	P	17 32 39.1	+0.1
	98nm,0.3s,baz=60,slow=17,SNR=5.4						
URZ	Urewera	12.69	204	Sn	S	17 37 17.5	+0.3
	1.7nm,0.3s,baz=146,slow=22,SNR=8.4						
CTA	Charters Tower	34.90	273	P	P	17 38 46.0	+0.3
	5.5nm,0.8s,mb4.5,baz=119,slow=13,SNR=2.8						
CTAO	Charters Tower	34.90	273	eP	P	17 38 45.9	+0.2
	6.1nm,0.8s,mb4.6						
STKA	Stephens Creek	36.87	252	P	P	17 39 02.6	+0.3
	1.0nm,0.8s,mb3.7,baz=116,slow=17,SNR=3.0						
STKA				LR	LR	17 51 08.8	
	comp=Z,227nm,18.2s,MS4.0,baz=24,slow=31						
WB2	Warramunga Arr	45.58	268	eP	P	17 40 13.4	-0.6
WRA	Warramunga Arr	45.59	268	P	P	17 40 13.7	-0.4
	4.3nm,0.7s,mb4.5,baz=107,slow=7.7,SNR=22						
VNDA	Vanda	51.81	186	P	P	17 41 01.1	-0.3
	1.3nm,1.0s,mb3.8,baz=1.8,slow=8.6,SNR=3.7						
CASY	Casey	59.00	207	eP	P	17 41 52.1	-1.4
	9.5nm,0.9s,mb4.8						
QSPA	South Pole Qui	63.29	180	⇓iP	P	17 42 22.1	-0.3
	10.0nm,1.0s,mb4.9						
MAW	Mawson	76.18	200	P	P	17 43 41.8	+0.7
	1.8nm,0.8s,mb4.1,baz=98,slow=7.1,SNR=3.4						
MJAR	Matsushiro Arr	76.19	324	P	P	17 43 42.7	+1.0
	1.8nm,0.2s,mb4.6,baz=86,slow=13,SNR=29						
MJAR	Matsushiro Arr	76.19	324	P	P	17 43 42.7	+1.0
MAT	Matsushiro	76.19	324	eP	P	17 43 40.0	-1.8
SNAA	Sanae	81.69	178	eP	P	17 44 09.5	-1.5
	4.0nm,1.1s,mb4.3						
VNA3	Neumayer Olymp	81.77	176		P	17 44 13.7	+2.3
VNA3	Neumayer Olymp	81.77	176	P	P	17 44 11.0	-0.4
VNA3				P		17 44 13.7	
VNA2	Neumayer--Watz	82.23	176		P	17 44 16.5	+2.7
VNA2	Neumayer--Watz	82.23	176	P	P	17 44 13.9	+0.1
VNA2				P		17 44 16.5	
NVAR	Mina Array Bea	84.59	42	P	P	17 44 25.7	-0.8
	0.2nm,0.3s,mb3.7,baz=203,slow=7.7,SNR=5.0						
NVAR	Mina Array Bea	84.59	42	P	P	17 44 25.7	-0.8
TXAR	Lajitas Array	89.19	56	P	P	17 44 49.0	+0.1
	0.2nm,0.3s,mb4.0,baz=231,slow=8.0,SNR=3.9						
PDAR	Pinedale Array	92.50	43	P	P	17 45 05.2	+1.1
	0.2nm,0.5s,mb3.8,baz=256,slow=7.4,SNR=2.3						
CMAR	Chiang Mai Arr	93.64	289	P	P	17 45 11.4	+1.7
	0.6nm,0.5s,mb4.3,baz=140,slow=3.6,SNR=6.5						
NB2	NORSAR Subarra	145.40	354	PKPabc	PKPbc	17 51 30.3	+0.9
	10nm,1.0s,baz=12,slow=3.6						
NOA	NORSAR Array B	145.40	354	PKPbc	PKPbc	17 51 30.8	+1.4
	3.8nm,0.9s,baz=11,slow=2.4,SNR=7.6						
AKASG	Malin Array Be	149.21	328	PKPbc	PKPdf	17 51 41.5	+6.0
	0.5nm,0.4s,baz=38,slow=3.5,SNR=6.5						
BRTR	Keskin Array B	151.98	305	PKPbc	PKPdf	17 51 48.1	+8.0
	0.5nm,0.7s,baz=146,slow=5.2,SNR=3.2						
CLL	Collm	154.53	346	ePKP2	PKPab	17 52 09.0	+0.3
KHC	Kasperske Hory	156.43	344	ePKP	PKPab	17 52 16.0	-0.9

IDC ***28*** *17:32:04.7±0.7, 26.91S×176.11W, mb4.5/11, mb1 4.7/12, mb1mx4.6/16, mbtmp4.5/12, MS4.1/4, Ms1 4.1/4, ms1mx3.8/20, Error ellipse: s-maj=24.8km s-min=17.9km az=133.0*

BJI ***28*** *17:32:08.9, 27.00S×176.10W, h35^{km}, mb5.0*

NEIC ***28*** *17:32:09.9±0.3, 26.97S×176.11W, h35^{km}, mb4.7/6, Error ellipse: s-maj=12.0km s-min=9.0km az=127.0*

ISC 28 17:32:09.3±2.7**, 27.0S**±0.1×**176.1W**±0.1**, h40**^{km}±23^{km}**, n42, σ0^{s}96**/25**, mb4.5**/17**, MS4.2**/3**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.77	214	Pn	P	17 32 51.4	-1.0
	167nm,0.3s,baz=95,slow=22,SNR=7.2						
RAO				Sn	S	17 33 26.6	+1.7
	251nm,0.3s,baz=66,slow=23,SNR=8.0						
DZM	Mont Dzumac	16.58	283	Pn	P	17 36 04.4	+3.9
	0.6nm,0.3s,baz=96,slow=11,SNR=4.6						
DZM				LR	LR	17 40 07.0	
	comp=Z,216nm,19.0s,baz=196,slow=29						
PPT	Papeete	26.25	75	LR	LR	17 47 05.2	
	comp=Z,360nm,18.0s,MS4.0,baz=333,slow=34						
CTA	Charters Tower	35.06	273	P	P	17 38 59.8	-0.9
	13nm,0.8s,mb4.9,baz=101,slow=12,SNR=12						
CTAO	Charters Tower	35.06	273	eP	P	17 39 00.9	+0.2
	11nm,0.9s,mb4.8						
STKA	Stephens Creek	36.98	252	P	P	17 39 16.7	0.0
	2.6nm,0.9s,mb4.1,baz=76,slow=7.8,SNR=4.9						
PMG	Port Moresby	38.81	290	P	P	17 39 31.3	-0.9
	3.0nm,0.7s,mb4.2,baz=126,slow=4.8,SNR=3.6						
WRA	Warramunga Arr	45.74	268	P	P	17 40 28.0	-0.9
	10nm,0.7s,mb4.9,baz=107,slow=7.7,SNR=25						
VNDA	Vanda	51.67	186	P	P	17 41 13.0	-0.9
	2.8nm,1.0s,mb4.1,baz=10,slow=5.7,SNR=7.0						
CASY	Casey	58.93	207	eP	P	17 42 05.0	-1.6
	18nm,0.9s,mb5.1						
MAW	Mawson	76.09	200	P	P	17 43 54.5	+0.5
	9.0nm,1.1s,mb4.6,baz=96,slow=6.2,SNR=8.6						
MJAR	Matsushiro Arr	76.41	324	P	P	17 43 55.8	-0.7
	6.8nm,0.8s,mb4.6,baz=170,slow=6.5,SNR=12						
SNAA	Sanae	81.53	178	eP	P	17 44 22.9	-0.8
	6.2nm,1.1s,mb4.5						
VNA3	Neumayer Olymp	81.60	176		PcP	17 44 26.9	-3.3
VNA3	Neumayer Olymp	81.60	176		pP	17 44 35.7	-0.4
VNA3	Neumayer Olymp	81.60	176	P	P	17 44 23.6	-0.4
VNA3				P		17 44 26.9	
VNA3				P	pP	17 44 35.7	-0.4
VNA2	Neumayer--Watz	82.06	176		PcP	17 44 29.4	-2.8
VNA2	Neumayer--Watz	82.06	176		pP	17 44 37.2	-1.3
VNA2	Neumayer--Watz	82.06	176	P	P	17 44 27.0	+0.6
VNA2				P		17 44 29.4	
VNA2				P	pP	17 44 37.2	-1.3
PLCA	Paso Flores	83.63	133	LR	LR	18 14 43.9	
	comp=Z,95nm,20.0s,MS4.2,baz=12,slow=31						
NVAR	Mina Array Bea	84.60	42	P	P	17 44 40.7	+0.7
	2.0nm,1.0s,mb4.2,baz=212,slow=6.8,SNR=8.4						
NVAR				LR	LR	18 15 22.3	
	comp=Z,200nm,18.6s,MS4.5,slow=31						
NVAR	Mina Array Bea	84.60	42	P	P	17 44 40.7	+0.7
NVAR				LR	LR	18 15 22.2	
CN2	Changchun	88.43	322	eP	P	17 44 58.0	-0.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.1						
MNTX	Cornudas Mount	89.14	54	eP	P	17 45 02.7	+0.5
	comp=Z,3.8nm,1.3s,mb4.6						
TXAR	Lajitas Array	89.14	56	P	P	17 45 02.8	+0.5
	comp=Z,1.0nm,0.8s,mb4.2,baz=236,slow=4.5,SNR=7.5						
MCMT	McKenzie Canyo	91.80	39	eP	P	17 45 14.3	+0.1
PDAR	Pinedale Array	92.51	43	P	P	17 45 17.6	0.0
	comp=Z,0.8nm,1.1s,mb4.1,baz=243,slow=6.6,SNR=4.1						
KMI	Kunming	93.76	296	P	P	17 45 25.8	+2.1
	comp=Z,6.0nm,1.4s,mb4.8						
CMAR	Chiang Mai Arr	93.84	289	P	P	17 45 26.1	+1.9
	comp=Z,2.2nm,0.8s,mb4.6,baz=128,slow=3.3,SNR=10						
BILL	Bilibino	95.62	353	eP	P	17 45 31.0	-0.1
	comp=Z,2.5nm,0.8s,mb4.7						
ZAL	Zalesovo	116.55	319	PKP	PKPdf	17 50 48.7	-0.1
	comp=Z,0.7nm,0.3s,baz=227,slow=2.6,SNR=3.5						
ZAL	Zalesovo	116.55	319	PKP	PKPdf	17 50 48.7	-0.1
MKAR	Makanchi Array	116.79	311	PKP	PKPdf	17 50 49.6	+0.1
	comp=Z,0.8nm,0.6s,baz=79,slow=1.2,SNR=7.9						
ZRNK	Zerenda	125.88	317	ePKPdf	PKPdf	17 51 06.7	-0.2
ARCES	ARCESS Array B	135.56	349	PKP	PKPdf	17 51 24.9	+0.1
	comp=Z,2.3nm,0.8s,baz=34,slow=4.4,SNR=5.5						
FINES	FINESS Array B	142.43	343	PKhKP		17 51 33.8	
	comp=Z,2.1nm,0.9s,baz=315,slow=2.7,SNR=5.0						
NB2	NORSAR Subarra	145.57	354	PKPabc	PKPbc	17 51 43.5	+0.1
	comp=Z,26nm,1.1s,baz=11,slow=4.0						
NOA	NORSAR Array B	145.57	354	PKPbc	PKPbc	17 51 43.7	+0.3
	comp=Z,10.0nm,0.9s,baz=10,slow=2.4,SNR=13						
NOA	NORSAR Array B	145.57	354	PKPbc	PKPbc	17 51 43.7	+0.3
AKASG	Malin Array Be	149.42	328	PKPbc	PKPdf	17 51 54.0	+4.6
	comp=Z,5.1nm,0.8s,baz=42,slow=3.9,SNR=14						
AKASG	Malin Array Be	149.42	328	PKPbc	PKPdf	17 51 54.0	+4.6
BRTR	Keskin Array B	152.20	305	PKPbc	PKPdf	17 52 01.9	+8.0
	comp=Z,0.9nm,0.6s,baz=153,slow=5.5,SNR=5.0						
BRTR				PKPab	PKPab	17 52 12.2	-0.6
	comp=Z,1.5nm,0.7s,baz=87,slow=5.0,SNR=5.3						

IDC ***28*** *17:47:00.8±0.8, 50.69S×72.00W, mb4.3/10, mb1 4.4/11, mb1mx4.3/16, mbtmp4.3/11, ML3.5/2, MS4.0/8, Ms1 4.0/8, ms1mx3.8/20, Error ellipse: s-maj=33.8km s-min=14.0km az=91.0*

NEIC ***28*** *17:47:02.2±0.4, 50.66S×72.15W, h10^{km}, mb4.6/5, Error ellipse: s-maj=19.9km s-min=7.5km az=86.0*

ISC 28 17:47:00.6±0.6**, 50.67S**±0.05×**72.0W**±0.2**, h10**^{km}**, (h11**^{km}±1.3^{km}**:pP-P), n50, σ0^{s}79**/28**, mb4.4**/14**, MS4.2**/7**, 13C, Southern Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USHA	Ushuaia	4.69	154	Pn	Pn	17 48 11.7	-1.5
	14nm,0.3s,baz=314,slow=12,SNR=110						
USHA				Sn	Sn	17 49 08.1	-0.2
	14nm,0.3s,baz=346,slow=15,SNR=6.3						
PLCA	Paso Flores	9.99	6	LR	LR	17 53 20.2	
	comp=Z,160nm,20.8s,baz=192,slow=38						
CFAA	Coronel Fontan	19.25	10	P	P	17 51 27.6	-0.1
	0.0nm,0.3s,baz=218,slow=12,SNR=2.2						
CPUP	Villa Florida	26.77	30	P	P	17 52 43.1	+0.8
	3.0nm,0.9s,mb3.8,baz=220,slow=8.6,SNR=5.4						
CPUP				LR	LR	18 03 50.9	
	comp=Z,219nm,18.7s,MS3.7,baz=212,slow=38						
VNA3	Neumayer Olymp	34.35	149	⇑i	P	17 53 53.3	+4.2
VNA3	Neumayer Olymp	34.35	149	⇑i	P	17 53 57.2	+8.1
VNA3	Neumayer Olymp	34.35	149	⇑iP	P	17 53 50.4	+1.3
VNA3				⇑iP	pP	17 53 53.3	+1.3
VNA3				⇑iP		17 53 57.2	
LPAZ	La Paz	34.44	7	P	P	17 53 50.8	+0.4
	1.8nm,0.6s,mb4.2,baz=179,slow=7.3,SNR=8.3						
LPAZ				LR	LR	18 07 45.8	
	comp=Z,145nm,19.1s,MS3.7,baz=272,slow=36						
LPAZ	La Paz	34.44	7	eP	P	17 53 50.2	-0.1
	2.3nm,0.8s,mb4.2						
VNA1	Neumayer--Stat	34.79	148	⇑i	P	17 53 58.4	+5.5
VNA1	Neumayer--Stat	34.79	148		P	17 54 02.1	+9.2
VNA1	Neumayer--Stat	34.79	148	⇑iP	P	17 53 54.4	+1.5
VNA1				⇑iP	pP	17 53 58.4	+2.6
VNA1				P		17 54 02.1	
VNA2	Neumayer--Watz	35.08	149	⇑i	P	17 53 59.2	+3.8
VNA2	Neumayer--Watz	35.08	149	⇑i	P	17 54 04.6	+9.2
VNA2	Neumayer--Watz	35.08	149	⇑iP	P	17 53 56.7	+1.3
VNA2				⇑iP	pP	17 53 59.2	+0.9
VNA2				⇑iP		17 54 04.6	
SIV	San Ignacio	35.69	18	P	P	17 54 00.9	-0.1
	3.5nm,0.9s,mb4.3,baz=198,slow=9.3,SNR=11						
SNAA	Sanae	36.53	150	P	P	17 54 08.0	+0.3
	3.3nm,0.7s,mb4.3,baz=272,slow=5.9,SNR=20						
QSPA	South Pole Qui	39.58	180	eP	P	17 54 33.5	+0.4
	13nm,0.9s,mb4.7						
BDFB	Brasilia	39.92	38	P	P	17 54 36.8	+0.3
	7.9nm,0.9s,mb4.5,baz=181,slow=8.1,SNR=6.8						
BDFB				LR	LR	18 12 09.5	
	comp=Z,207nm,18.2s,MS4.0,baz=293,slow=38						
SAML	Samuel	42.22	13	eP	P	17 54 54.4	-1.1
	4.1nm,1.0s,mb4.0						
VNDA	Vanda	47.84	194	P	P	17 55 41.0	+1.4
	3.3nm,1.0s,mb4.3,baz=144,slow=7.7,SNR=12						
MAW	Mawson	57.28	161	P	P	17 56 49.8	-0.3
	2.5nm,0.8s,mb4.3,baz=257,slow=5.1,SNR=5.3						
MAW				LR	LR	18 19 56.6	
	comp=Z,264nm,19.3s,MS4.3,baz=317,slow=34						
CASY	Casey	63.37	181	eP	P	17 57 30.9	-0.8

	12nm,1.0s,mb5.0						
PPT	Papeete	68.80	268	LR	LR	18 22 06.6	
	comp=Z,216nm,18.2s,MS4.4,baz=134,slow=31						
BOSA	Boshof	72.71	114	P	P	17 58 30.8	+0.3
	5.3nm,0.9s,mb4.5,baz=209,slow=10,SNR=6.7						
BOSA				LR	LR	18 27 26.7	
	comp=Z,236nm,18.2s,MS4.5,baz=214,slow=33						
DBIC	Dimbokro	80.98	68	LR	LR	18 29 14.1	
	comp=Z,158nm,18.5s,MS4.4,baz=117,slow=31						
TXAR	Lajitas Array	84.44	333	P	P	17 59 35.0	+0.5
	0.2nm,0.3s,mb3.7,baz=150,slow=10,SNR=3.6						
TXAR	Lajitas Array	84.44	333	P	P	17 59 35.0	+0.5
CCM	Cathedral Cave	89.96	345	eP	P	17 59 59.8	-1.2
	8.8nm,0.9s,mb5.1						
STKA	Stephens Creek	92.62	208	P	P	18 00 12.8	-0.5
	2.3nm,0.8s,mb4.7,baz=190,slow=5.9,SNR=4.9						
GERES	GERESS Array B	123.19	52	PKP	PKPdf	18 05 58.2	-1.8
	0.7nm,0.7s,baz=180,slow=1.3,SNR=7.1						
BR131	Keskin Array S	128.54	72	ePKPdf	PKPdf	18 06 08.9	-1.7
BRTR	Keskin Array B	128.54	72	PKP	PKPdf	18 06 09.3	-1.2
	2.4nm,0.9s,baz=180,slow=2.5,SNR=11						
KIV	Kislovodsk	136.49	72	ePKPdf	PKPdf	18 06 24.7	-0.5
CMAR	Chiang Mai Arr	147.06	164	PKPbc	PKPdf	18 06 42.7	-1.9
	1.3nm,0.5s,baz=213,slow=2.7,SNR=10						
BILL	Bilibino	147.22	324	ePKPdf	PKPdf	18 06 42.8	-0.6
KOLN	Koldanda	150.56	132	eP	PKPdf	18 06 53.3	+3.4
	35nm,0.9s						
ARU	Arti	150.59	59	PKPdf	PKPdf	18 06 48.8	-0.2
ARU				i PKPbc	PKPdf	18 06 53.4	+4.4
DMN	Daman	151.13	134	eP	PKPdf	18 06 54.9	+4.2
	26nm,0.8s						
PKI	Pulchoki	151.23	135	eP	PKPdf	18 06 54.8	+3.9
	29nm,1.0s						
GKN	Gorkha	151.25	133	eP	PKPdf	18 06 54.6	+3.7
	35nm,0.9s						
KKN	Kakani	151.36	134	eP	PKPdf	18 06 55.3	+4.2
	25nm,1.0s						
GUN	Gumba	151.74	135	eP	PKPdf	18 06 56.1	+4.5
	32nm,0.9s						
LSA	Lhasa	155.51	142	ePKPab	PKPab	18 07 21.9	-0.1
ZRNK	Zerenda	155.96	69	ePKPdf	PKPdf	18 06 55.3	-1.3
MKAR	Makanchi Array	162.62	93	PKP	PKPdf	18 07 02.9	-1.5
	0.3nm,0.5s,baz=90,slow=1.4,SNR=3.0						
MKAR				PKPab	PKPab	18 07 51.9	-0.2
	0.9nm,0.7s,baz=252,slow=3.8,SNR=5.3						
MKAR	Makanchi Array	162.62	93	PKP	PKPdf	18 07 02.9	-1.5
MKAR				PKPab	PKPab	18 07 51.9	-0.2
ZAL	Zalesovo	165.43	68	PKP	PKPdf	18 07 05.9	-1.1
	0.9nm,0.3s,baz=296,slow=3.0,SNR=4.0						
SONM	Songino Array	176.97	159	PKPab	PKPab	18 08 54.3	-1.0
	1.4nm,1.0s,baz=225,slow=1.7,SNR=7.0						
ULN	Ulaanbaatar	177.12	167	ePKPdf	PKPdf	18 07 11.8	-1.2
ULN				ePKPab	PKPab	18 08 55.5	-0.6

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*MOS **28** 18:08:59.6±1.0, 55.68N×161.31E, h94^{km}, mb4.2/1, Error ellipse: s-maj=50.7km s-min=13.7km az=78.4*

KRSC 28 18:08:59.5±0.6**, 55.71N×161.23E, h100^{km}±2^{km}, ML4.1, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZLN	Zelenaya	0.39	322	eP	P	18 09 15.6	+0.9
ZLN				eS	S	18 09 27.3	+1.2
LGNR	Loginova	0.48	321	eP	P	18 09 16.4	+1.1
LGNR				eS	S	18 09 28.6	+1.5
CIRR	Tsirk	0.49	326	i P	P	18 09 16.3	+0.9
CIRR				i S	S	18 09 28.4	+1.2
KMNR	Kamenistaya	0.56	275	i P	P	18 09 16.2	+0.3
KMNR				eS	S	18 09 28.4	+0.2
KPT	Kopyto	0.62	295	i P	P	18 09 16.5	+0.1
KPT				i S	S	18 09 29.0	-0.1
KRSR	Krestovskiy	0.63	324	i P	P	18 09 16.7	+0.2
KRSR				i S	S	18 09 29.1	-0.1
KLY	Klyuchi	0.69	332	P	P	18 09 16.9	-0.1
KLY				S	S	18 09 29.7	-0.4
KLY	Klyuchi	0.69	332	i P	P	18 09 16.9	-0.1
KLY				i S	S	18 09 29.4	-0.7
TUMR	Tumrok	0.75	236	i P	P	18 09 18.2	+0.6
TUMR				i S	S	18 09 31.6	+0.5
KOZR	Kozyr	0.83	296	PN	P	18 09 19.0	+0.6
KOZR				S	S	18 09 33.3	+0.8
KOZ	Kozyrevsk	0.84	295	i P	P	18 09 19.0	+0.5
KOZ				i S	S	18 09 33.3	+0.6
KBTR	Krutoberegovo	1.02	60	P	P	18 09 20.7	+0.3
KBTR				S	S	18 09 36.2	0.0
KBTR	Krutoberegovo	1.02	60	i P	P	18 09 20.9	+0.5
KBTR				i S	S	18 09 36.4	+0.2
SRDR	Sredinnyy	1.04	306	i P	P	18 09 21.1	+0.4
SRDR				i S	S	18 09 37.0	+0.4
MKZ	Mys Kozlova	1.19	166	P	P	18 09 22.0	-0.5
MKZ				S	S	18 09 38.8	-0.9
MKZ	Mys Kozlova	1.19	166	i P	P	18 09 22.2	-0.3
MKZ				eS	S	18 09 38.7	-1.0
ESO	Esso	1.44	280	i P	P	18 09 25.5	0.0
ESO				i S	S	18 09 44.8	0.0
ESO				Smax			
	200nm,0.9s						
SPN	Mys Shipunski	2.71	196	P	P	18 09 42.0	-0.3
SPN				S	S	18 10 14.1	-0.3
SPN	Mys Shipunski	2.71	196	eP	P	18 09 41.9	-0.4
SPN				eS	S	18 10 13.1	-1.3
BKI	Bering	2.75	99	i P	P	18 09 42.2	-0.6
BKI				i S	S	18 10 13.5	-1.8
BKI				Smax			
	320nm,0.6s						
NLC	Nalytchevo	2.77	204	P	P	18 09 43.3	+0.2
NLC				S	S	18 10 16.3	+0.4
NLC	Nalytchevo	2.77	204	eP	P	18 09 43.8	+0.7
NLC				eS	S	18 10 16.3	+0.4
GNL	Ganaly	2.78	225	i P	P	18 09 43.8	+0.6
GNL				eS	S	18 10 16.3	+0.3
SDLR	Sedlovina	2.79	210	eP	P	18 09 44.3	+0.8
SMAR	Somma	2.83	211	eP	P	18 09 44.9	+0.9
AVH	Avacha	2.85	212	eP	P	18 09 45.0	+0.8
AVH				eS	S	18 10 18.3	+0.5
KOK	Koryaka	2.86	213	eP	P	18 09 46.0	+1.7
UGLR	Uglovaya	2.87	210	eP	P	18 09 47.1	+2.6
PET	Petropavlovsk	3.08	210	P	P	18 09 50.0	+2.6
PET				S	S	18 10 26.5	+3.0
PET	Petropavlovsk	3.08	210	eP	P	18 09 49.5	+2.1
PET				eS	S	18 10 25.9	+2.4
RUS	Russkaya	3.65	207	P	P	18 09 55.2	0.0
RUS				S	S	18 10 36.5	-0.9
RUS	Russkaya	3.65	207	eP	P	18 09 55.5	+0.3
RUS				eS	S	18 10 37.7	+0.2
GRL	Gorelyy	3.67	212	eP	P	18 09 57.8	+2.4
APC	Apacha	3.67	222	eP	P	18 09 56.2	+0.8
APC				Smax			
	10.0nm,0.8s						
KAMR	Kamenskoye	7.23	19	eP	P	18 10 45.2	+1.0

IDC 28 18:21:53.7±2.2**, 26.81S×176.18W, mb4.2**/3**, mb1 4.4**/4**, mb1mx4.0**/14**, mbtmp4.2**/4**, Error ellipse: s-maj=59.8km s-min=30.0km az=121.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.88	212	Pn	Pn	18 22 40.7	-0.9
	115nm,0.3s,baz=93,slow=7.4,SNR=15						
RAO				Sn	Sn	18 23 17.3	-0.1
	114nm,0.3s,baz=138,slow=23,SNR=4.3						
URZ	Urewera	12.74	205	Sn	S	18 27 06.4	-16
	0.4nm,0.3s,baz=225,slow=20,SNR=3.9						
CTA	Charters Tower	35.01	273	P	P	18 28 49.5	-0.7
	1.2nm,0.4s,baz=82,slow=14,SNR=3.1						
WRA	Warramunga Arr	45.70	268	P	P	18 30 15.1	-3.3
	3.1nm,0.7s,baz=107,slow=7.8,SNR=18						
CMAR	Chiang Mai Arr	93.75	289	P	P	18 35 14.2	+0.1
	0.7nm,0.8s,baz=149,slow=3.6,SNR=4.4						
NB2	NORSAR Subarra	145.41	354	PKPabc	PKPdf	18 41 33.0	-1.8
	0.8nm,0.8s,baz=13,slow=3.3						
NOA	NORSAR Array B	145.41	354	PKPbc	PKPbc	18 41 32.2	-1.3
	1.5nm,0.8s,baz=5.2,slow=2.4,SNR=3.7						
AKASG	Malin Array Be	149.27	328	PKPbc	PKPdf	18 41 43.1	+1.6
	0.5nm,0.5s,baz=35,slow=3.1,SNR=5.3						

HLW 28 18:22:10.9, 20.37N×26.51E, h17^{km}, Mb3.7, 2C-2D, Sudan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HDK2	Wahat Dakhilah	4.54	29	⇓P	Pn	18 23 18.2	-2.3
HKFR	Khafra	4.98	63	P	Pn	18 23 24.4	-2.4
ASHG	Umm Shaghir	5.58	58	⇓P	Pn	18 23 32.5	-2.9
ASHG				S	Sn	18 24 33.0	-6.8
HMSM	Jabal Masmas	5.59	62	⇑P	Pn	18 23 32.4	-3.0
HDK1	Dakhla	5.80	27	⇑P	Pn	18 23 35.5	-2.8
HFRF	Wahat Farafira	6.95	13	P	Pn	18 23 50.9	-3.6

NEIC 28 18:45:48.5, 59.62N×150.10W, h19^{km}, ML3.7(PMR)**, ML3.6**(AEIC)**, After AEIC., Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRLK	Bradley Lake	0.43	291	P	Pb	18 45 57.0	-0.2
BRLK				S	Sb	18 46 03.7	+0.6
CNPM	China Poot	0.59	262	P	Pb	18 45 59.4	-0.5
CNPM				S	Sb	18 46 07.2	-0.5
SEW	Seward	0.59	34	P	Pb	18 45 59.1	-0.8
SEW				S	Sb	18 46 07.2	-0.7
NNL	Ninilchik	0.74	306	P	Pb	18 46 02.1	-0.4
HOM	Homer	0.79	274	P	Pb	18 46 02.9	-0.4
HOM				S	Sb	18 46 13.6	+0.1
XLV	Seldovia	0.84	260	P	Pb	18 46 02.9	-1.3
XLV				S	Sb	18 46 14.2	-0.9
SLKM	Skilak Lake	0.90	356	P	Pb	18 46 03.4	-1.8
SLKM				S	Sb	18 46 15.6	-1.1
MPA	Moose Pass	0.95	23	P	Pb	18 46 04.1	-2.0
MPA				S	Sb	18 46 16.2	-2.1
VOGL	Vogel Lake	1.40	353	P	Pn	18 46 12.1	-1.1
VOGL				S	Sb	18 46 31.3	+0.2
RC01	Rabbit Creek A	1.49	7	P	Pn	18 46 12.6	-1.9
RC01				S	Sn	18 46 31.7	-1.9
RDT	Redoubt	1.50	311	P	Pn	18 46 12.4	-2.3
RDT				S	Sn	18 46 31.6	-2.4
ILIM	Iliamna	1.52	289	P	Pn	18 46 12.7	-2.3
ILIM				S	Sn	18 46 32.6	-1.7
IVE	Iliamna Volcan	1.53	287	P	Pn	18 46 12.7	-2.4
IVE				S	Sn	18 46 32.8	-1.8
FIB	Fire Island	1.56	359	P	Pn	18 46 13.9	-1.6
FIB				S	Sn	18 46 34.9	-0.4
INE	Iliamna NE	1.56	288	P	Pn	18 46 13.0	-2.6
INE				S	Sn	18 46 33.1	-2.3
RED	Redoubt Volcan	1.57	302	P	Pn	18 46 13.4	-2.3
RSO	Redoubt South	1.58	304	P	Pn	18 46 13.2	-2.6
OPT	Oil Point	1.59	273	P	Pn	18 46 14.0	-2.0
OPT				S	Sn	18 46 35.6	-0.6
ILW	Iliamna West	1.60	288	P	Pn	18 46 13.7	-2.4
ILW				S	Sn	18 46 34.2	-2.1
AUE	Augustine Isla	1.69	263	P	Pn	18 46 15.6	-1.8
AUP	Augustine Pinn	1.71	263	P	Pn	18 46 16.1	-1.6
AUL	Augustine Lava	1.72	264	P	Pn	18 46 16.3	-1.5
AUI	Augustine Isla	1.72	262	P	Pn	18 46 16.1	-1.8
AUW	Augustine West	1.74	263	P	Pn	18 46 16.4	-1.7
SPU	Mount Spurr	1.85	329	P	Pn	18 46 17.3	-2.4
CKN	Chakachatna No	1.92	328	P	Pn	18 46 18.9	-1.8
CKN				S	Sn	18 46 42.7	-1.7
CKL	Chakachamna La	1.94	326	P	Pn	18 46 18.7	-2.3
CKL				S	Sn	18 46 42.9	-2.1
HIN	Hinchinbrook I	1.97	65	P	Pn	18 46 19.8	-1.6
HIN				S	Sn	18 46 42.2	-3.6
KNK	Knik Glacier	1.98	24	P	Pn	18 46 20.2	-1.3
PMR	Palmer	2.04	13	eP	Pn	18 46 21.1	-1.3
PWA	Palmer West	2.05	3	eP	Pn	18 46 22.1	-0.4
MCNL	McNeil River	2.21	261	P	Pn	18 46 22.8	-2.1
GHO	Glory Hole Cre	2.24	14	P	Pn	18 46 24.0	-1.3
KDAK	Kodiak Island	2.25	216	P	Pn	18 46 22.6	-2.9
SML	Sawmill	2.37	21	P	Pn	18 46 25.5	-1.6
EYAK	Cordova Ski Ar	2.37	65	eP	Pn	18 46 25.4	-1.8
VLZ	Valdez	2.41	49	P	Pn	18 46 25.6	-2.1
KAPH	Katmai Pasha	2.42	247	P	Pn	18 46 25.5	-2.3
SCM	Sheep Creek Mo	2.61	30	P	Pn	18 46 28.8	-1.8
DIV	Divide	2.63	53	P	Pn	18 46 28.9	-2.0
KAHC	Katmai Hardscr	2.71	251	P	Pn	18 46 29.1	-2.9
CUT	Chulitna	2.80	358	P	Pn	18 46 30.6	-2.7
MGLS	Mageik LS	3.06	245	P	Pn	18 46 33.4	-3.5
MGLS				S	Sn	18 47 08.3	-5.0
SVW2	Sparrevohn	3.10	301	eP	Pn	18 46 34.6	-3.0
CAHL	Cahill	3.13	242	P	Pn	18 46 34.6	-3.3
CNTC	Contact Creek	3.29	248	P	Pn	18 46 37.4	-2.9
TZL	Tazlina	3.34	41	P	Pn	18 46 38.9	-2.1
HUR	Hurricane	3.38	4	P	Pn	18 46 40.0	-1.6
GLB	Gilahina Butte	3.61	57	P	Pn	18 46 41.3	-3.4
CRQM	Cirque	3.66	69	P	Pn	18 46 43.5	-2.0
TGL	Tana Glacier	3.81	69	P	Pn	18 46 44.7	-2.9
TRF	Thorofare Moun	3.85	359	P	Pn	18 46 46.0	-2.2
RND	Reindeer	3.85	8	P	Pn	18 46 46.0	-2.2
KTH	Kantishna Hill	3.97	355	P	Pn	18 46 47.8	-2.1
PAX	Paxson	4.04	32	P	Pn	18 46 48.2	-2.7
BALM	Baldy	4.11	66	P	Pn	18 46 48.5	-3.5
YAH	Yahtse	4.26	76	P	Pn	18 46 52.0	-2.1
THY	Trims Highway	4.34	27	P	Pn	18 46 53.2	-2.0
TT01	Tatalina	4.37	322	P	Pn	18 46 51.5	-4.1
CTGM	Chitina Glacie	4.57	69	P	Pn	18 46 56.0	-2.5
WRH	Wood River Hil	4.96	10	P	Pn	18 47 00.5	-3.6
HDA	Harding Lake	5.03	16	P	Pn	18 47 02.0	-2.9
CCB	Clear Creek Bu	5.16	11	P	Pn	18 47 03.1	-3.7
BCA3	Beaver Creek A	5.29	46	P	Pn	18 47 05.7	-2.9
COLA	College	5.38	10	P	Pn	18 47 06.4	-3.5
IL1	Eielson Array	5.39	15	P	Pn	18 47 06.3	-3.7
PNL	Peninsula	5.43	85	P	Pn	18 47 06.7	-3.9
MDM	Murphy Dome	5.43	8	P	Pn	18 47 07.0	-3.6
MLY	Manley	5.45	357	P	Pn	18 47 06.8	-3.9
IM3	Indian Mountai	6.61	347	P	Pn	18 47 22.9	-4.3
IMA	Indian Mountai	6.68	347	eP	Pn	18 47 24.2	-4.0
COLD	Coldfoot	7.64	360	P	Pn	18 47 37.1	-4.6

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*BJI **28** 18:45:48.0, 2.42S×128.72E, h31^{km}, mB5.1, mb5.5, Ms4.4, Msz4.2*

*IDC **28** 18:45:50.1±0.4, 1.84S×128.34E, mb5.2/20, mb1 5.3/22, mb1mx5.3/23, mbtmp5.2/22, ML5.6/2, MS4.3/15, Ms1 4.3/15, ms1mx4.2/25, Error ellipse: s-maj=19.8km s-min=11.2km az=76.0*

*MOS **28** 18:45:53.6±1.4, 1.80S×128.28E, h33^{km}, mb5.6/37, Error ellipse: s-maj=11.7km s-min=6.0km az=110.1*

*HRVD **28** 18:45:54.8±0.2, 1.85S×128.38E, h35^{km}, MW5.2/68, Centroid moment Tensor Solution. LP body waves: s51,c81;Mantle waves: s68,c117; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.60±.03; $M_{\theta\theta}$0.17±.01; $M_{\phi\phi}$-0.76±.02; $M_{r\theta}$-0.19±.02; $M_{\theta\phi}$-0.07±.01; $M_{\phi r}$0.34±.03; Best double couple: M_0.794×10^{17} NP1:ϕ_s205°,δ36°,λ123°. NP2:ϕ_s346°,δ61°,λ68°. Principal axes: T.746, Plg67°, Azm214°; N.096, Plg19°, Azm357°; P-.842, Plg13°, Azm91°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **28** 18:45:54.8±0.2, 1.94S×128.36E, mb5.4/35 Error ellipse: s-maj=8.1km s-min=4.6km az=72.0*

ISC 28 18:45:52.0±0.2**, 1.98S**±0.03×**128.39E**±0.05**, h29^{km}, h29^{km}**±1.9^{km}**:pP-P, n267, σ1^{s}09**/227**, mb5.4**/88**, MS4.3**/32**, 30C-10D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	9.12	347	eP	P	18 48 07.4	+2.6
DAV	Davao City (W)	9.41	343	eP	P	18 48 14.5	+5.6
BUKP	Musuan	10.34	341	eP	P	18 48 22.5	+0.8
PAGZ	Pagadian	10.96	333	eP	P	18 48 29.7	-0.5
BUTP	Butuan	11.22	346	eP	P	18 48 34.6	+0.9
IPIL	Ipil	11.30	329	eP	P	18 48 34.3	-0.6
KAKA	Kakadu	11.39	160	eP	P	18 48 34.9	-1.3
	62nm,0.5s						
TSM	Tawau	12.21	301	P	P	18 48 46.4	-0.9
MSLP	Maasin	12.53	344	eP	P	18 48 43.1	-8.3
KKM	Kota Kinabalu	14.53	303	P	P	18 49 17.7	-0.3
KKM	Kota Kinabalu	14.53	303	P	P	18 49 19.5	+1.6
RCP	Roxas	14.57	337	⇓eP	P	18 49 24.7	+6.2
CNP	Catarman	14.86	346	eP	P	18 49 23.8	+1.5
PVCP	Virac	16.03	345	eP	P	18 49 37.3	-0.1
SJMP	San Jose	16.06	333	eP	P	18 49 42.0	+4.2
AUQP	San Andres	16.22	340	eP	P	18 49 45.6	+5.8
FITZ	Fitzroy Crossi	16.25	189	eP	P	18 49 39.7	-0.4
	115nm,0.6s						
FITZ				eS	S	18 52 44.9	+5.9
FITZ	Fitzroy Crossi	16.25	189	Pn	P	18 49 39.6	-0.5
	22nm,0.3s,baz=15,slow=10.0,SNR=80						
FITZ				Sn	S	18 52 44.2	+5.2
	0.7nm,0.3s,baz=40,slow=17,SNR=3.9						
FITZ				LR	LR	18 56 17.0	
	comp=Z,969nm,21.7s,baz=35,slow=38						
BOAC	Boac	16.65	337	eP	P	18 49 41.6	-3.7
LUBP	Lubang	17.57	333	eP	P	18 49 58.8	+2.0
POLP	Polilio Island	17.78	339	eP	P	18 50 01.2	+1.8
KSM	Kuching	18.40	281	eP	P	18 50 08.4	+1.3
WRAB	Tennant Creek	18.77	162	eP	P	18 50 10.0	-1.5
WRAB				eS	S	18 53 38.0	+1.5
WRAB				pmax	pmax		
	comp=Z,100nm,0.5s						
WRAB	Tennant Creek	18.77	162	eP	P	18 50 10.0	-1.6
	comp=Z,100nm,0.5s						
WRAB				eS	S	18 53 38.0	+1.5
WRA	Warramunga Arr	18.78	162	P	P	18 50 10.8	-0.8
	comp=Z,15nm,0.3s,baz=348,slow=12,SNR=218						
WRA				S	S	18 53 29.8	-6.8
	comp=Z,3.3nm,0.3s,baz=355,slow=16,SNR=6.2						
WB2	Warramunga Arr	18.78	162	eP	P	18 50 10.0	-1.7
WB2				eS	S	18 53 31.2	-5.5
BALP	Baler	18.85	339	eP	P	18 50 10.9	-1.5
CAUP	Cauayan	19.89	341	eP	P	18 50 22.1	-2.2
PMG	Port Moresby	20.07	112	P	P	18 50 25.8	-0.4
	comp=Z,99nm,1.0s,baz=309,slow=7.3,SNR=15						
MBWA	Marble Bar	20.85	203	eP	P	18 50 33.2	-1.1
	comp=Z,510nm,1.3s						
ABRA	Dolores	20.92	339	eP	P	18 50 33.6	-1.4
CTA	Charters Tower	25.08	137	eP	P	18 51 19.7	+3.8
	comp=Z,26nm,0.8s,mb4.8						
CTA	Charters Tower	25.08	137	P	P	18 51 18.9	+3.0
CTA						18 54 52.9	
CTA				pmax	pmax		
	comp=Z,25nm,1.0s						
CTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CTA	Charters Tower	25.08	137	P	P	18 51 18.9	+3.0
	comp=Z,25nm,1.0s,mb4.7,baz=317,slow=11,SNR=8.9						
CTA				PcP	PcP	18 54 52.9	+2.0
	comp=Z,8.3nm,0.8s,baz=221,slow=4.4,SNR=3.7						
CTAO	Charters Tower	25.08	137	eP	P	18 51 17.8	+1.9
CTAO				pmax	pmax		
	comp=Z,68nm,1.1s,mb5.1						
CTAO	Charters Tower	25.08	137	eP	P	18 51 17.8	+2.0
	comp=Z,68nm,1.1s,mb5.1						
KGM	Kluang	25.37	279	P	P	18 51 21.9	+3.1
YHNB	Yeheng	27.35	346	eP	P	18 51 36.5	-0.3
QIZ	Qiongzhong	27.71	320	P	P	18 51 39.5	-0.7
QIZ				eS	S	18 56 17.8	-1.2
QIZ				AMB	AMB		
	comp=Z,30nm,1.9s,mb4.6						
QIZ				LR	LR		
	comp=N,290nm,16.8s,MS4.1						
QIZ				LR	LR		
	comp=E,260nm,15.8s,MS4.1						
QIZ				LR	LR		
	comp=Z,430nm,16.5s,MS4.1						
QIZ	Qiongzhong	27.71	320	eP	P	18 51 40.6	+0.4
	comp=Z,21nm,0.8s,mb4.8						
IPM	Ipoh	28.10	283	P	P	18 51 45.6	+1.8
KULM	Kulim	28.63	285	eP	P	18 51 48.5	-0.1
JOW	Kunigami	28.64	360	P	P	18 51 49.2	+0.7
	comp=Z,32nm,0.9s,mb5.1,baz=152,slow=12,SNR=7.1						
JOW				LR	LR	19 02 20.3	
	comp=Z,944nm,20.2s,MS4.4,baz=140,slow=35						
FORT	Forrest	28.65	181	eP	P	18 51 48.5	0.0
	comp=Z,165nm,0.7s,mb5.9						
SNG	Songkhla	29.16	288	P	P	18 51 53.0	-0.4
KLBR	Kellerberrin	31.12	198	eP	P	18 52 10.3	-0.2
	comp=Z,46nm,0.5s,mb5.6						
KKTK	Khon Kaen	31.12	307	⇑P	P	18 52 11.1	+0.4
	comp=Z,2μm,0.8s						
CBIJ	Chichi jima	31.82	24	LR	LR	19 04 55.7	
	comp=Z,554nm,18.4s,MS4.3,baz=186,slow=36						
NNT	Nongplab	31.92	298	P	P	18 52 19.2	+1.5
MUN	Mundaring	31.97	200	eP	P	18 52 18.0	0.0
	comp=Z,25nm,0.6s,mb5.2						
MUN	Mundaring	31.97	200	eP	P	18 52 18.0	0.0
MUN				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.2						
STKA	Stephens Creek	32.24	159	eP	P	18 52 20.9	+0.5
	comp=Z,34nm,0.8s,mb5.2						
STKA	Stephens Creek	32.24	159	P	P	18 52 20.8	+0.4
	comp=Z,41nm,0.8s,mb5.3,baz=331,slow=8.6,SNR=92						
STKA	Stephens Creek	32.24	159	eP	P	18 52 20.8	+0.4
NWAO	Narrogin (SRO)	32.52	198	P	P	18 52 22.8	0.0
	comp=Z,53nm,0.8s,mb5.5,baz=26,slow=8.7,SNR=23						
NWAO				LR	LR	19 06 39.8	
	comp=Z,456nm,20.9s,MS4.2,baz=18,slow=38						
NST	Nakhon Sawan	32.98	303	⇓P	P	18 52 28.0	+1.1
	comp=Z,75nm,1.0s,mb5.6						
SSE	Sheshan	33.60	349	P	P	18 52 32.0	-0.2
SSE				AP	pP	18 52 40.5	-0.2
SSE				XP	sP	18 52 44.5	+0.1
SSE				S	S	18 57 54.5	+2.8
SSE				XS		18 58 08.5	
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,130nm,7.2s						
SSE				LR	LR		
	comp=N,200nm,27.0s,MS3.9						
SSE				LR	LR		
	comp=E,220nm,26.8s,MS3.9						
SSE				LR	LR		
	comp=Z,220nm,25.3s,MS3.8						
SSE	Sheshan	33.60	349	P	P	18 52 32.1	-0.1
	comp=Z,28nm,0.8s,mb5.2						
SSE				pP	pP	18 52 40.4	-0.3
SSE				sP	sP	18 52 44.6	+0.2
SSE				S	S	18 57 54.5	+2.8
SSE				sS		18 58 08.6	
SSE				SS	SS	19 00 20.6	+24
SSE				LR	LR		
	comp=Z,230nm,25.3s,MS3.8						
JNU	Nakatsue	34.99	4	LR	LR	19 05 49.9	
	comp=Z,545nm,21.2s,MS4.3,baz=180,slow=34						
WHN	Wuhan	35.00	339	⇑P	P	18 52 45.0	+0.8
WHN				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
NJ2	Nanjing	35.03	346	eP	P	18 52 44.5	0.0
NJ2				AP	pP	18 52 54.3	+1.3
NJ2				XP	sP	18 52 58.3	+1.6
NJ2				PP	PP	18 54 03.5	+0.4
NJ2				S	S	18 58 15.0	+1.1
NJ2				XS		18 58 31.0	
NJ2				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,40nm,4.2s						
GYA	Guiyang	35.20	325	⇑iP	P	18 52 46.5	+0.5
GYA				PCP	PcP	18 55 18.0	+1.1
GYA				AMB	AMB		
	comp=Z,130nm,0.8s,mb5.9						
CM31	Chiang Mai Arr	35.38	306	eP	P	18 52 48.5	+1.0
	comp=Z,59nm,1.0s,mb5.5						
CM31				i PcP	PcP	18 55 18.9	+1.5
CMAR	Chiang Mai Arr	35.38	306	P	P	18 52 48.8	+1.2
	comp=Z,35nm,1.1s,mb5.2,baz=134,slow=7.6,SNR=113						
CMAR				PcP	PcP	18 55 19.0	+1.5
	comp=Z,10nm,0.8s,baz=160,slow=1.9,SNR=16						
CMAR				LR	LR	19 07 01.7	
	comp=Z,328nm,21.6s,MS4.0,baz=119,slow=36						
JHJ	Hachijo jima 2	36.53	16	LR	LR	19 05 29.2	
	comp=Z,623nm,20.4s,MS4.4,baz=105,slow=32						
KMI	Kunming	36.66	319	⇑P	P	18 53 00.3	+2.0
KMI				S	S	18 58 41.0	+2.0
KMI				AMB	AMB		
	comp=Z,90nm,1.5s,mb5.4						
KMI				AMB	AMB		
	comp=Z,340nm,3.1s						
KMI				LR	LR		
	comp=N,340nm,15.6s						
KMI				LR	LR		
	comp=E,250nm,20.8s						
KMI				LR	LR		
	comp=Z,380nm,17.5s,MS4.2						
KMI	Kunming	36.66	319	⇑P	P	18 53 00.2	+1.9
KMI				S	S	18 58 41.0	+2.0
KMI				SS	SS	19 01 29.1	+23
KMI				pmax	pmax		
	comp=Z,92nm,1.5s,mb5.4						
KMI				MLR	MLR		
	comp=Z,380nm,17.5s,MS4.2						
KMI	Kunming	36.66	319	⇑P	P	18 53 00.2	+1.9
	comp=Z,92nm,1.5s,mb5.4						
KMI				pP	pP	18 53 34.4	+28

KMI				sP	sP	18 53 53.5	+43
KMI				PP	PP	18 54 32.8	+9.4
KMI				S	**S**	**18 58 41.0**	**+2.0**
KMI				sS		18 59 44.3	
KMI				SS	SS	19 01 29.1	+23
KMI				ScS	ScS	19 02 50.9	-19
KMI				LR	LR		
	comp=Z,380nm,17.5s,MS4.2						
ENH	**Enshi**	**36.79**	**332**	⇑ *e*P	**P**	**18 52 59.7**	**+0.3**
	comp=Z,40nm,0.7s,mb5.3						
ENH				*e*PcP	PcP	18 55 22.0	+0.4
TOO	**Toolangi**	**38.76**	**158**	*e*P	**P**	**18 53 18.5**	**+2.7**
	comp=Z,24nm,0.8s,mb5.0						
TOO	**Toolangi**	**38.76**	**158**	*e*P	**P**	**18 53 18.5**	**+2.7**
TOO				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.0						
KS15	**Wonju Array Si**	**39.22**	**359**	*e*P	**P**	**18 53 18.8**	**-0.9**
KS15				*e*PcP	PcP	18 55 29.6	+0.6
MJAR	**Matsushiro Arr**	**39.40**	**13**	P	**P**	**18 53 20.1**	**-1.0**
	comp=Z,6.5nm,0.6s,mb4.5,baz=188,slow=9.9,SNR=20						
MJAR				PcP	PcP	18 55 29.8	+0.3
	comp=Z,7.7nm,0.9s,baz=186,slow=3.5,SNR=7.2						
MJAR				LR	LR	19 07 35.6	
	comp=Z,614nm,21.2s,MS4.4,baz=190,slow=33						
MAJO	**Matsushiro**	**39.40**	**12**	*e*P	**P**	**18 53 20.6**	**-0.6**
MAJO				*e*		18 55 30.0	
MAJO				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0						
MAJO	**Matsushiro**	**39.40**	**12**	*e*P	**P**	**18 53 20.6**	**-0.5**
	comp=Z,23nm,0.8s,mb5.0						
MAJO				*e*PcP	PcP	18 55 30.0	+0.4
MAT	**Matsushiro**	**39.40**	**12**	*e*P	**P**	**18 53 21.0**	**-0.2**
MAT				pmax	pmax		
	comp=Z,118nm,2.0s,mb5.3						
MAT				MLR	MLR		
	comp=Z,710nm,20.0s,MS4.5						
MAT	**Matsushiro**	**39.40**	**12**	*e*P	**P**	**18 53 21.0**	**-0.2**
	comp=Z,118nm,2.0s,mb5.3						
MAT				*e*S	**S**	**18 59 33.0**	**+12**
MAT				LR	LR		
	comp=Z,710nm,20.0s,MS4.5						
MAT	**Matsushiro**	**39.40**	**12**	P	**P**	**18 53 20.5**	**-0.7**
MAT				S	**S**	**18 59 32.0**	**+11**
TIA	**Tai'an**	**39.42**	**346**	*e*P	**P**	**18 53 21.0**	**-0.3**
XAN	**Xi'an**	**40.24**	**335**	P	**P**	**18 53 27.5**	**-0.6**
XAN				S	**S**	**18 59 45.0**	**+12**
XAN				AMB	AMB		
	comp=Z,80nm,0.9s,mb5.5						
XAN				LR	LR		
	comp=N,260nm,24.4s,MS4.1						
XAN				LR	LR		
	comp=E,170nm,21.8s,MS4.1						
XAN				LR	LR		
	comp=Z,360nm,28.7s						
CD2	**Chengdu**	**40.24**	**326**	P	**P**	**18 53 28.5**	**+0.3**
CD2				AMB	AMB		
	comp=Z,120nm,0.9s,mb5.6						
DL2	**Dalian**	**41.16**	**352**	P	**P**	**18 53 36.0**	**+0.4**
DL2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.0						
DL2				AMB	AMB		
	comp=Z,100nm,3.2s						
DL2				LR	LR		
	comp=N,210nm,19.0s,MS4.1						
DL2				LR	LR		
	comp=E,120nm,17.7s,MS4.1						
DL2				LR	LR		
	comp=Z,230nm,16.1s,MS4.1						
LZH	**Lanzhou**	**44.25**	**331**	⇑P	**P**	**18 54 02.0**	**+1.1**
LZH				AP	pP	18 54 13.0	+3.4
LZH				XP	sP	18 54 16.5	+3.3
LZH				AMB	AMB		
	comp=Z,180nm,1.4s,mb5.6						
LZH				AMB	AMB		
	comp=Z,650nm,4.3s						
LZH	**Lanzhou**	**44.25**	**331**	⇑P	**P**	**18 54 02.0**	**+1.1**
	comp=Z,189nm,1.4s,mb5.6						
LZH				pP	pP	18 54 13.0	+3.4
LZH				sP	sP	18 54 16.5	+3.3
SHL	**Shillong**	**44.69**	**310**	*e*P	**P**	**18 54 05.0**	**+0.3**
SHL				*e*S	**S**	**19 00 37.0**	**-1.7**
HHC	**Hu-ho-hao-te**	**45.30**	**342**	*e*P	**P**	**18 54 09.5**	**+0.2**
HHC				AP	pP	18 54 15.5	-2.4
HHC				XP	sP	18 54 20.5	-1.0
HHC				PCP	PcP	18 55 46.5	-2.7
HHC				PP	PP	18 55 55.0	-0.9
HHC				SCP		18 59 33.8	
HHC				S	**S**	**19 00 50.5**	**+3.3**
HHC				XS		19 01 02.0	
HHC				SS	SS	19 04 12.3	+11
HHC				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
HHC				AMB	AMB		
	comp=Z,90nm,5.8s						
HHC				LR	LR		
	comp=N,230nm,19.4s,MS4.2						
HHC				LR	LR		
	comp=E,190nm,21.6s,MS4.2						
HHC				LR	LR		
	comp=Z,280nm,23.5s,MS4.1						
CN2	**Changchun**	**45.65**	**357**	*e*P	**P**	**18 54 11.5**	**-0.5**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
CN2				AMB	AMB		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,19.0s,MS4.4						
CN2				LR	LR		
	comp=E,200nm,19.0s,MS4.4						
CN2				LR	LR		
	comp=Z,400nm,21.0s,MS4.3						
MDJ	**Mudanjiang**	**46.40**	**1**	P	**P**	**18 54 18.5**	**+0.6**
MDJ				XP	sP	18 54 28.3	-1.8
MDJ				S	**S**	**19 01 04.5**	**+1.6**
MDJ				XS		19 01 21.0	
MDJ				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,90nm,3.7s						
MDJ				LR	LR		
	comp=N,310nm,20.6s,MS4.3						
MDJ				LR	LR		
	comp=E,120nm,21.5s,MS4.3						
MDJ				LR	LR		
	comp=Z,400nm,22.0s,MS4.3						
MDJ	**Mudanjiang**	**46.40**	**1**	*e*P	**P**	**18 54 18.4**	**+0.5**
	comp=Z,82nm,1.4s,mb5.5						
MDJ				*e*pP	pP	18 54 28.1	+1.5
LSA	**Lhasa**	**47.52**	**314**	⇑ *i*P	**P**	**18 54 28.8**	**+1.9**
LSA				pmax	pmax		
	comp=Z,167nm,0.8s,mb6.1						
LSA	**Lhasa**	**47.52**	**314**	⇑ *i*P	**P**	**18 54 28.8**	**+1.8**
	comp=Z,167nm,0.8s,mb6.1						
ASAJ	**Asahikawa**	**47.62**	**14**	LR	LR	19 12 57.3	
	comp=Z,578nm,20.2s,MS4.5,baz=206,slow=34						
VIS	**Vishakhapatnam**	**48.51**	**296**	*e*P	**P**	**18 54 35.5**	**+0.8**
VIS				AMb	AMB	18 54 38.2	
	comp=Z,110nm,1.1s,mb5.8						
GTA	**Gaotai**	**48.83**	**331**	⇑P	**P**	**18 54 37.3**	**+0.3**
GTA				AP	pP	18 54 43.5	-2.3
GTA				XP	sP	18 54 47.0	-2.2
GTA				PCP	PcP	18 56 03.0	+1.3
GTA				PP	PP	18 56 31.5	+1.3
GTA				S	**S**	**19 01 40.3**	**+3.0**
GTA				SCS	ScS	19 04 26.0	+1.7
GTA				SS	SS	19 05 04.0	+0.6
GTA				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.6						
GTA				AMB	AMB		
	comp=Z,280nm,5.0s						
GTA				LR	LR		
	comp=N,410nm,21.8s,MS4.5						
GTA				LR	LR		
	comp=E,300nm,19.1s,MS4.5						
GTA				LR	LR		
	comp=Z,850nm,20.6s,MS4.7						
YSS	**Yuzh-Sakhalins**	**50.34**	**13**	⇓ *i*P	**P**	**18 54 49.0**	**+0.5**
YSS				*e*	pP	18 54 58.0	+0.7
YSS				*e*		18 56 12.0	
YSS				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.2						
YSS	**Yuzh-Sakhalins**	**50.34**	**13**	⇓ *e*P	**P**	**18 54 49.3**	**+0.8**
GUN	**Gumba**	**50.50**	**309**	*e*P	**P**	**18 54 50.4**	**+0.4**
	comp=Z,464nm,0.8s						
PKI	**Pulchoki**	**50.70**	**309**	*e*P	**P**	**18 54 51.7**	**+0.2**
KKN	**Kakani**	**50.91**	**309**	*e*P	**P**	**18 54 53.2**	**+0.2**
	comp=Z,247nm,0.9s,mb6.1						
KKN	**Kakani**	**50.91**	**309**	*e*P	**P**	**18 54 53.2**	**+0.2**
KKN				pmax	pmax		
	comp=Z,123nm,0.9s,mb5.8						
DMN	**Daman**	**50.96**	**308**	*e*P	**P**	**18 54 53.8**	**+0.4**
	comp=Z,327nm,1.0s,mb6.2						
KLR	**Kul'dur**	**51.09**	**3**	*e*P	**P**	**18 54 51.8**	**-2.3**
KLR				*e*		18 56 07.1	
KLR				*e*S	**S**	**19 02 04.0**	**-4.4**
KLR				pmax	pmax		
	comp=E,24nm,1.4s						
KLR				pmax	pmax		
	comp=Z,38nm,1.4s,mb5.1						
GKN	**Gorkha**	**51.51**	**309**	*e*P	**P**	**18 54 57.7**	**+0.1**
	comp=Z,427nm,0.9s,mb6.4						
HIA	**Hailar**	**51.59**	**353**	⇑ *e*P	**P**	**18 54 57.5**	**-0.4**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HIA	**Hailar**	**51.59**	**353**	⇑ *e*P	**P**	**18 54 57.5**	**-0.4**
	comp=Z,9.6nm,0.8s,mb4.8						
KOLN	**Koldanda**	**52.22**	**308**	*e*P	**P**	**18 55 03.3**	**+0.3**
	comp=Z,689nm,0.9s						
HYB	**Hyderabad**	**52.75**	**294**	*e*P	**P**	**18 55 07.0**	**-0.1**
HYB	**Hyderabad**	**52.75**	**294**	*i* P	**P**	**18 55 08.0**	**+0.9**
	comp=Z,60nm,1.0s,mb5.5						
ULN	**Ulaanbaatar**	**53.02**	**342**	⇑ *i*P	**P**	**18 55 09.1**	**+0.4**
SONM	**Songino Array**	**53.20**	**342**	P	**P**	**18 55 09.4**	**-0.6**
	comp=Z,16nm,0.8s,mb5.0,baz=153,slow=7.7,SNR=109						
SONM				PcP	PcP	18 56 17.9	+0.3
	comp=Z,12nm,0.8s,baz=160,slow=3.4,SNR=8.0						
CIT	**Chita**	**55.25**	**349**	*e*P	**P**	**18 55 25.1**	**+0.2**
CIT				*e*	pP	18 55 35.0	+1.2
CIT				pmax	pmax		
	comp=Z,96nm,1.8s,mb5.5						
BHPL	**Bhopal**	**55.56**	**300**	*e*P	**P**	**18 55 27.0**	**-0.6**
BHPL				AMb	AMB	18 55 28.4	
	comp=Z,101nm,1.0s,mb5.8						
ZAK	**Zakamensk**	**56.42**	**341**	⇑ *i*P	**P**	**18 55 32.8**	**-0.6**
ZAK				*e*		18 56 29.8	
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
AGRA	**Agra**	**56.55**	**305**	*e*P	**P**	**18 55 33.0**	**-1.7**
AGRA				AMb	AMB	18 55 35.1	
	comp=Z,66nm,0.5s,mb5.9						
ASOR	**Ausora**	**57.29**	**306**	*e*P	**P**	**18 55 38.7**	**-1.2**
TLY	**Talaya**	**57.43**	**342**	*e*P	**P**	**18 55 39.4**	**-1.2**
TLY				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.2						
TLY	**Talaya**	**57.43**	**342**	⇑ *i*P	**P**	**18 55 40.2**	**-0.4**
SONA	**Sohna**	**57.65**	**305**	*e*P	**P**	**18 55 40.4**	**-2.0**
SONA				AMb	AMB	18 55 42.0	
	comp=Z,120nm,0.8s,mb6.0						
DDI	**Dehra Dun**	**57.70**	**308**	*e*P	**P**	**18 55 42.5**	**-0.2**
AYAN	**Aya Nagar**	**57.70**	**306**	*e*P	**P**	**18 55 40.7**	**-2.1**
NDI	**New Delhi**	**57.71**	**306**	*e*P	**P**	**18 55 39.5**	**-3.3**
IRK	**Irkutsk**	**57.73**	**343**	*e*P	**P**	**18 55 41.9**	**-0.8**
IRK				*e*		18 57 52.0	
IRK				pmax	pmax		
	comp=Z,45nm,2.3s,mb5.1						
KUDL	**Kundal**	**58.09**	**305**	*e*P	**P**	**18 55 42.9**	**-2.6**
KUDL				AMb	AMB	18 55 46.4	
	comp=Z,102nm,0.9s,mb5.8						
MOY	**Mondy**	**58.28**	**340**	*e*P	**P**	**18 55 46.4**	**-0.1**
MOY				pmax	pmax		
	comp=Z,76nm,2.1s,mb5.4						
WMQ	**Urumqi**	**58.34**	**326**	⇑ *i*P	**P**	**18 55 46.8**	**-0.2**
WMQ				AMB	AMB		
	comp=Z,200nm,0.8s,mb6.2						
WMQ				AMB	AMB		
	comp=Z,400nm,3.8s						
WMQ				LR	LR		
	comp=N,420nm,24.0s,MS4.5						
WMQ				LR	LR		
	comp=E,260nm,24.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,290nm,24.0s,MS4.3						
KKR	**Kurukshetra**	**58.53**	**307**	*e*P	**P**	**18 55 47.2**	**-1.4**
KHET	**Khetri**	**58.63**	**305**	*e*P	**P**	**18 55 47.4**	**-1.9**
KHET				AMb	AMB	18 55 49.9	
	comp=Z,86nm,1.3s,mb5.6						
CLNS	**Chul'man**	**58.69**	**358**	*e*P	**P**	**18 55 49.2**	**-0.1**
CLNS				*e*		18 56 42.9	
CLNS				*e*		18 57 58.8	
CLNS				*e*S	**S**	**19 03 50.7**	**+0.4**
CLNS				*e*		19 05 31.8	
CLNS				*e*SS	SS	19 07 40.5	-4.6
CLNS				*e*SSS	SSS	19 10 10.2	+1.5
CLNS				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.5						
CLNS				pmax	pmax		
	comp=N,21nm,0.8s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
CLNS				pmax	pmax		
	comp=N,4.0nm,1.1s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.8s						
CLNS				smax			
	comp=E,6.0nm,0.8s						
CLNS				smax			
	comp=N,9.0nm,0.7s						
CLNS				smax			
	comp=Z,6.0nm,0.7s						
CLNS				MLR	MLR		
	comp=Z,600nm,20.0s,MS4.7						
CLNS				MLR	MLR		
	comp=N,800nm,24.0s						
CLNS				MLR	MLR		
	comp=E,100nm,18.0s						
SMLA	**Simla**	**58.72**	**309**	*i* P	**P**	**18 55 46.8**	**-3.1**
SMLA				*i* x	x	19 03 25.8	
SDNR	**Sundarnagar**	**59.03**	**309**	*e*P	**P**	**18 55 51.6**	**-0.4**
BHK	**Bhakra**	**59.43**	**309**	*e*x	**P**	**18 55 56.0**	**+1.2**
THN	**Thein Dam**	**60.38**	**309**	*e*P	**P**	**18 55 59.0**	**-2.3**
PET	**Petropavlovsk**	**60.39**	**20**	*e*P	**P**	**18 56 01.9**	**+0.8**
PET				*e*S	**S**	**19 04 14.7**	**+2.5**
PET				pmax	pmax		
	comp=Z,57nm,1.2s,mb5.5						
PET				smax			
	comp=E,100nm,16.8s						
PET				smax			
	comp=N,100nm,13.7s						
PET				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.0						
PET	**Petropavlovsk**	**60.39**	**20**	*i* P	**P**	**18 56 01.2**	**+0.1**
BOD	**Bodaibo**	**60.72**	**351**	⇑ *i*P	**P**	**18 56 03.2**	**0.0**
BOD				pmax	pmax		
	comp=Z,71nm,1.1s,mb5.7						
JASL	**Jaisalmer**	**62.34**	**302**	*e*P	**P**	**18 56 13.3**	**-1.3**
MKAR	**Makanchi Array**	**63.17**	**326**	P	**P**	**18 56 19.2**	**-0.6**
	comp=Z,58nm,0.6s,mb5.9,baz=121,slow=8.0,SNR=460						
MKAR				PKPPKP		19 25 06.8	
	comp=Z,0.7nm,0.9s,baz=333,slow=2.7,SNR=5.2						
MKAR	**Makanchi Array**	**63.17**	**326**	P	**P**	**18 56 19.2**	**-0.6**
MKAR				P'P'		19 25 06.8	
KSH	**Kashi**	**63.27**	**317**	*e*P	**P**	**18 56 21.0**	**+0.5**
KSH				*e*AP	pP	18 56 30.3	+0.8
KSH				*e*XP	sP	18 56 36.3	+3.6
KSH				AMB	AMB		
	comp=Z,420nm,2.1s,mb6.2						
YAK	**Yakutsk**	**63.84**	**1**	⇑ *i*P	**P**	**18 56 24.1**	**+0.1**
MA2	**Magadan**	**63.84**	**12**	⇑ *i*P	**P**	**18 56 24.8**	**+0.8**
ULHL	**Ulahol**	**64.38**	**319**	P	**P**	**18 56 27.9**	**+0.1**
	SNR=6.1						
KZA	**Kyzart**	**64.95**	**319**	P	**P**	**18 56 32.3**	**+0.8**
	SNR=88						
TKM2	**Tokmak 2**	**65.12**	**320**	P	**P**	**18 56 32.6**	**0.0**
	SNR=111						
CASY	**Casey**	**65.40**	**188**	*e*P	**P**	**18 56 35.0**	**+1.0**
KBK	**Karagaybulak**	**65.42**	**319**	P	**P**	**18 56 34.8**	**+0.2**
	SNR=22						
UCH	**Uchtor**	**65.50**	**319**	P	**P**	**18 56 35.3**	**+0.3**
	SNR=122						
AAK	**Ala-Archa**	**65.70**	**319**	P	**P**	**18 56 36.6**	**+0.2**
	SNR=20						
CHMS	**Chumysh**	**65.70**	**320**	P	**P**	**18 56 35.9**	**-0.4**
	SNR=26						
FRU	**Bishkek**	**65.71**	**319**	*e*P	**P**	**18 56 36.5**	**+0.1**
FRU				*e*		18 57 04.0	
FRU				pmax	pmax		
	comp=Z,90nm,2.2s,mb5.4						
USP	**Ospenovka**	**65.99**	**320**	P	**P**	**18 56 38.5**	**+0.3**
	SNR=76						
AML	**Almayashu**	**66.00**	**318**	P	**P**	**18 56 38.8**	**+0.6**
	SNR=70						
EKS2	**Erkin-Say**	**66.18**	**319**	P	**P**	**18 56 39.8**	**+0.4**
	SNR=105						
ZAL	**Zalesovo**	**66.40**	**334**	P	**P**	**18 56 39.4**	**-1.2**
	comp=Z,27nm,1.1s,mb5.2,baz=357,slow=6.0,SNR=56						
SEY	**Seymchan**	**67.22**	**12**	*e*P	**P**	**18 56 46.6**	**+0.9**
SEY						18 57 13.9	
SEY				*e*S	S	19 05 39.8	+2.9
SEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
SEY				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
SEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
SEY				smax			
	comp=N,500nm,22.1s						
SEY				smax			
	comp=E,200nm,25.0s						
NVS	**Novosibirsk**	**67.68**	**334**	*i* P	**P**	**18 56 46.9**	**-1.8**
NVS				*e*S	S	19 05 38.6	-4.0
NVS				pmax	pmax		
	comp=Z,49nm,0.9s,mb5.5						
NVS				pmax	pmax		
	comp=N,22nm,0.8s						
NVS				pmax	pmax		
	comp=E,40nm,1.0s						
NVS				smax			
	comp=N,11nm,2.1s						
NVS				smax			
	comp=E,1.0nm,0.4s						
KKAR	**Karatay Array**	**68.54**	**318**	*i* P	**P**	**18 56 53.4**	**-0.9**
KKAR				pmax	pmax		
	comp=Z,82nm,1.1s,mb5.6						
MIR	**Mirnyy**	**69.05**	**194**	d *i*P	**P**	**18 56 58.0**	**+1.0**
MIR				pmax	pmax		
	comp=Z,52nm,1.2s,mb5.3						
BVA0	**Borovoye Array**	**72.98**	**328**	*i* P	**P**	**18 57 20.2**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
TIXI	**Tiksi**	**73.50**	**0**	*e*P	**P**	**18 57 20.4**	**-3.2**
TIXI				*e*S	S	19 06 40.0	-10
TIXI				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.1						
TIXI				MLR	MLR		
	comp=Z,239nm,16.0s,MS4.6						
ZRNK	**Zerenda**	**73.70**	**327**	*i* P	**P**	**18 57 24.3**	**-0.8**
BILL	**Bilibino**	**74.64**	**14**	d *i*P	**P**	**18 57 30.8**	**+0.6**
BILL				*e*		18 57 44.8	
BILL				*e*		19 00 19.6	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
BILL	**Bilibino**	**74.64**	**14**	*i* Pr	**P**	**18 57 30.9**	**+0.7**
VNDA	**Vanda**	**77.59**	**173**	P	**P**	**18 57 48.4**	**+1.6**
	comp=Z,44nm,0.8s,mb5.4,baz=319,slow=6.2,SNR=300						
VNDA				LR	LR	19 29 59.5	
	comp=Z,163nm,20.7s,MS4.3,baz=346,slow=34						
AB31	**Akbulak array**	**77.60**	**321**	P	**P**	**18 57 46.5**	**-0.8**
AB31				pmax	pmax		
	comp=Z,13nm,0.5s,mb5.1						
SBA	**Scott Base**	**78.49**	**172**	⇑ *i*P	**P**	**18 57 54.3**	**+2.6**
SBA				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.4						
SBA	**Scott Base**	**78.49**	**172**	⇑ *i*P	**P**	**18 57 54.3**	**+2.6**
	comp=Z,46nm,1.0s,mb5.4						
MAW	**Mawson**	**79.02**	**201**	*e*P	**P**	**18 57 56.6**	**+1.9**
	comp=Z,59nm,1.1s,mb5.4						
MAW	**Mawson**	**79.02**	**201**	*e*P	**P**	**18 57 56.6**	**+1.9**
MAW				pmax	pmax		
	comp=Z,59nm,1.1s						
MAW	**Mawson**	**79.02**	**201**	P	**P**	**18 57 57.0**	**+2.2**
	comp=Z,68nm,1.0s,mb5.5,baz=66,slow=6.6,SNR=108						
MAW				LR	LR	19 28 26.3	
	comp=Z,332nm,21.5s,MS4.6,baz=59,slow=32						
SVE	**Sverdlovsk**	**79.66**	**329**	⇑ *i*P	**P**	**18 57 58.0**	**-0.4**
SVE				*e*		18 58 12.3	
SVE				pmax	pmax		
	comp=Z,104nm,1.3s,mb5.6						
SVE				MLR	MLR		
	comp=N,100nm,15.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,100nm,15.0s,MS4.4						
SVE				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.3						
ARU	**Arti**	**80.62**	**328**	⇑ *i*P	**P**	**18 58 02.8**	**-0.7**
ARU				*e*		19 01 07.0	
ARU				*e*PPP	PPP	19 02 53.1	-7.1
ARU				*e*S	S	19 08 09.0	+1.7
ARU				*e*SS	SS	19 13 19.9	-3.4
ARU				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.4						
ARU	**Arti**	**80.62**	**328**	⇑ *i*P	**P**	**18 58 02.5**	**-1.0**
	comp=Z,48nm,0.9s,mb5.4						
OPO	**Ambohidratompo**	**81.03**	**252**	P	**P**	**18 58 08.1**	**+1.7**
	baz=76,slow=5.2						
OPO				LR	LR	19 28 04.6	
	comp=Z,53nm,21.5s,MS3.9,baz=99,slow=31						
PPT	**Papeete**	**81.82**	**107**	LR	LR	19 29 36.2	
	comp=Z,250nm,19.6s,MS4.6,baz=305,slow=32						
SOKR	**Solikamsk**	**82.47**	**331**	c *i*P	**P**	**18 58 12.9**	**-0.1**
SOKR				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.5						
RSO	**Redoubt South**	**86.22**	**29**	*e*P	**P**	**18 58 32.3**	**+0.3**
TI2	**Plekhanov**	**86.55**	**312**	*i* P	**P**	**18 58 23.0**	**-11**
IMA	**Indian Mountai**	**86.91**	**24**	*e*P	**P**	**18 58 35.7**	**+0.5**
IMA				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.5						
IMA	**Indian Mountai**	**86.91**	**24**	*e*P	**P**	**18 58 35.7**	**+0.5**
	comp=Z,34nm,1.0s,mb5.5						
ZEI	**Tsey**	**87.28**	**313**	*e*P	**P**	**18 58 35.4**	**-2.1**
ZEI				*i* *PP	pP	18 58 40.9	-5.9
ZEI				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.4						
SLKM	**Skilak Lake**	**87.47**	**29**	*e*P	**P**	**18 58 38.2**	**+0.2**
ONI	**Oni**	**87.59**	**313**	P	**P**	**18 58 39.4**	**+0.4**
SYO	**Syowa Base**	**87.73**	**201**	⇓P	**P**	**18 58 39.7**	**+0.6**
QSPA	**South Pole Qui**	**87.97**	**180**	*e*P	**P**	**18 58 42.5**	**+2.5**
	comp=Z,103nm,0.9s,mb6.1						
GOF	**Gofitskoye**	**88.10**	**315**	⇓ *i*P	**P**	**18 58 41.8**	**+0.4**
GOF				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.4						
KIV	**Kislovodsk**	**88.26**	**314**	⇑ *e*P	**P**	**18 58 42.4**	**+0.2**
SML	**Sawmill**	**88.55**	**28**	*e*P	**P**	**18 58 43.9**	**+0.8**
ILAR	**Eielson Array**	**89.52**	**25**	P	**P**	**18 58 46.8**	**-1.0**
	comp=Z,4.6nm,0.7s,mb4.9,baz=269,slow=4.1,SNR=30						
ILAR				LR	LR	19 35 49.7	
	comp=Z,123nm,19.6s,MS4.3,baz=190,slow=34						
DIV	**Divide**	**89.70**	**29**	*e*P	**P**	**18 58 49.7**	**+1.1**
	comp=Z,67nm,0.8s,mb6.0						
MALT	**Malatya**	**91.18**	**308**	*e*P	**P**	**18 58 56.6**	**+0.6**
MALT				*e**PP	pP	18 59 06.5	+1.2
MALT				pmax	pmax		
	comp=Z,19nm,1.6s,mb5.2						
MALT	**Malatya**	**91.18**	**308**	*e*P	**P**	**18 58 56.6**	**+0.6**
	comp=Z,19nm,1.6s,mb5.2						
MALT				*e*pP	pP	18 59 06.5	+1.3
MOS	**Moscow**	**92.05**	**326**	*e*P	**P**	**18 58 58.8**	**-0.8**
MOS				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.6						
MOS				MLR	MLR		
	comp=Z,600nm,20.7s,MS5.0						
ANN	**Anapa**	**92.06**	**315**	*e*P	**P**	**18 58 57.3**	**-2.6**
ANN				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.7						
ASF	**Jabal al Asfar**	**92.30**	**302**	P	**P**	**18 59 01.9**	**+0.6**
	comp=Z,6.4nm,0.8s,mb5.0,baz=312,slow=1.8,SNR=9.2						
OBN	**Obninsk**	**92.65**	**325**	c *i*P	**P**	**18 59 01.5**	**-0.9**
OBN				*e*	pP	18 59 11.6	0.0
OBN				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.5						
OBN				MLR	MLR		
	comp=Z,100nm,22.0s,MS4.2						
OBN	**Obninsk**	**92.65**	**325**	⇑ *i*P	**P**	**18 59 01.6**	**-0.8**
OBN				LR	LR		
	comp=Z,100nm,22.0s,MS4.2						
SIM	**Simferopol'**	**94.42**	**315**	d *i*P	**P**	**18 59 10.7**	**0.0**
SIM				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.7						
INK	**Inuvik**	**94.83**	**22**	P	**P**	**18 59 12.1**	**0.0**
	comp=Z,2.9nm,0.8s,mb4.7,baz=292,slow=3.4,SNR=4.2						
BR131	**Keskin Array S**	**94.91**	**310**	*e*P	**P**	**18 59 12.4**	**-0.8**
	comp=Z,3.9nm,0.8s,mb4.9						
BRTR	**Keskin Array B**	**94.91**	**310**	P	**P**	**18 59 12.2**	**-0.9**

	comp=Z,4.8nm,1.0s,mb4.9,baz=124,slow=4.5,SNR=15						
BRTR				PP	PP	19 02 56.8	-7.6
	comp=Z,1.1nm,0.7s,baz=108,slow=4.6,SNR=3.8						
ARCES	ARCESS Array B	96.34	340	P	P	18 59 17.9	-1.1
	comp=Z,11nm,0.9s,mb5.3,baz=76,slow=4.7,SNR=25						
ARCES				LR	LR	19 49 47.3	
	comp=Z,159nm,18.6s,MS4.5,baz=245,slow=40						
AKASG	Malin Array Be	97.33	321	iP	P	18 59 23.4	-0.5
AKASG	Malin Array Be	97.33	321	P	P	18 59 22.8	-1.0
	comp=Z,0.2nm,0.3s,baz=288,slow=9.3,SNR=4.4						
KAF	Kangasniemi	97.39	332	ep	P	18 59 21.9	-1.9
FINES	FINESS Array B	97.61	332	P	P	18 59 23.6	-1.3
	comp=Z,1.6nm,0.5s,mb4.8,baz=81,slow=4.4,SNR=16						
MATP	Matopo	98.57	249	P	P	18 59 30.9	+0.7
	comp=Z,6.0nm,0.9s,mb5.1,baz=78,slow=4.8,SNR=10						
LSZ	Lusaka	99.31	254	eP	P	18 59 32.9	-0.7
LSZ				e		19 03 35.9	
LSZ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb5.0						
LSZ	Lusaka	99.31	254	eP	P	18 59 32.9	-0.7
	comp=Z,6.3nm,1.1s,mb5.1						
LSZ				ePP	PP	19 03 35.9	-3.2
SNAA	Sanae	100.13	194	P	P	18 59 38.1	+2.0
	comp=Z,1.8nm,0.9s,baz=116,slow=4.1,SNR=11						
SUW	Suwalki	100.51	325	eP	P	18 59 37.6	-0.6
BOSA	Boshof	100.56	241	P	P	18 59 41.0	+1.9
	comp=Z,8.5nm,0.8s,baz=102,slow=4.8,SNR=12						
LBTB	Lobatse	100.74	244	P	P	18 59 41.1	+1.2
	comp=Z,1.8nm,0.6s,baz=210,slow=12,SNR=4.1						
VNA2	Neumayer--Watz	101.72	194		P	18 59 52.5	+9.2
VNA2	Neumayer--Watz	101.72	194		P	18 59 57.3	+14
VNA2	Neumayer--Watz	101.72	194	P	P	18 59 47.0	+3.7
VNA2				P		18 59 52.5	
VNA2				P		18 59 57.3	
VNA3	Neumayer Olymp	102.01	193		Pdif	18 59 54.3	+10
VNA3	Neumayer Olymp	102.01	193	P	Pdif	18 59 48.0	+3.5
VNA3				P		18 59 54.3	
CRVS	Cervenica-Dubn	102.58	320	eP	Pdif	18 59 48.2	+0.7
CRVS	Cervenica-Dubn	102.58	320	PDIF	Pdif	18 59 48.2	+0.7
HFS	Hagfors	103.81	332	Pdiff	Pdif	18 59 51.7	-0.9
	comp=Z,3.1nm,0.8s,baz=100,slow=9.0,SNR=6.3						
YKA	Yellowknife Ar	103.95	25	PKKPbc		19 15 44.1	
	comp=Z,0.5nm,0.6s,baz=101,slow=3.6,SNR=5.4						
NB2	NORSAR Subarra	104.60	333	P	Pdif	18 59 54.8	-1.3
	comp=Z,1.7nm,0.8s,baz=73,slow=4.5						
NB2	NORSAR Subarra	104.60	333	P	Pdif	18 59 54.8	-1.3
NB2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NB2	NORSAR Subarra	104.60	333	P	Pdif	18 59 54.8	-1.3
	baz=72,slow=4.4						
NOA	NORSAR Array B	104.60	333	Pdiff	Pdif	18 59 55.1	-1.0
	comp=Z,3.5nm,0.9s,baz=68,slow=4.5,SNR=7.9						
BRG	Berggiesshubel	106.77	323	P	PP	19 04 29.6	-5.3
CLL	Collm	107.19	324	ePP	PP	19 04 37.0	-1.1
GERES	GERESS Array B	107.55	321	PKiKP		19 04 19.0	
	comp=Z,0.6nm,0.5s,baz=81,slow=2.7,SNR=6.5						
GERES				PP	PP	19 04 34.6	-6.0
	comp=Z,0.7nm,0.7s,baz=79,slow=5.0,SNR=3.6						
NVAR	Mina Array Bea	109.38	50	PKKPbc		19 15 29.9	
	comp=Z,0.7nm,0.7s,baz=130,slow=4.9,SNR=5.0						
NVAR				PKKP	PKKP	19 15 41.6	+5.9
	comp=Z,2.7nm,1.1s,baz=110,slow=6.0,SNR=8.2						
ELK	Elko	111.08	47	PKKPbc		19 15 23.7	
	comp=Z,1.2nm,0.7s,baz=60,slow=4.0,SNR=6.2						
PGF	Pioggiola	112.67	316	ePP	PP	19 05 12.4	-6.0
CABF	La Chapelle	113.14	321	ePP	PP	19 05 16.3	-5.5
	comp=Z,73nm,1.6s						
LPG	La Plagne	113.14	319	ePP	PP	19 05 16.5	-5.4
	comp=Z,11nm,0.9s						
LPL	La Plagne	113.15	319	ePP	PP	19 05 16.6	-5.3
	comp=Z,12nm,0.7s						
MBDF	Montbardon	113.42	319	ePP	PP	19 05 18.5	-5.4
	comp=Z,7.3nm,0.8s						
ORIF	Oris-en-Rattie	113.94	319	ePP	PP	19 05 22.0	-5.5
	comp=Z,7.2nm,0.8s						
EKA	Eskdalemuir Ar	114.01	332	PKKPbc		19 15 13.1	
	comp=Z,1.1nm,0.5s,baz=231,slow=3.4,SNR=8.3						
PDAR	Pinedale Array	114.44	43	PKP	PKPdf	19 04 31.5	-3.0
	comp=Z,0.5nm,0.7s,baz=191,slow=1.0,SNR=4.3						
PDAR				PKKPbc		19 15 12.0	
	comp=Z,2.7nm,0.8s,baz=103,slow=5.1,SNR=12						
SMF	Signal de Mont	114.54	321	ePP	PP	19 05 26.4	-5.2
	comp=Z,27nm,1.0s						
ULM	Lac du Bonnet	119.06	31	PKP	PKPdf	19 04 40.0	-3.3
	comp=Z,3.6nm,0.5s,baz=232,slow=1.7,SNR=4.2						
ANMO	Albuquerque	119.49	50	⇓iPKIKP	PKPdf	19 04 43.6	-0.9
MNTX	Cornudas Mount	121.43	54	ePKPdf	PKPdf	19 04 46.5	-1.9
USHA	Ushuaia	121.70	169	PKP	PKPdf	19 04 46.7	-1.6
	comp=Z,3.8nm,0.8s,baz=135,slow=7.4,SNR=5.8						
TXAR	Lajitas Array	123.60	56	PKP	PKPdf	19 04 51.0	-1.7
	comp=Z,1.8nm,0.8s,baz=270,slow=1.3,SNR=11						
TXAR				PKKPbc		19 14 38.7	
	comp=Z,1.6nm,0.7s,baz=121,slow=7.3,SNR=10						
TXAR	Lajitas Array	123.60	56	PKP	PKPdf	19 04 51.0	-1.7
TXAR				PKKPbc		19 14 38.7	
WMOK	Wichita Mounta	125.38	48	ePKIKP	PKPdf	19 04 52.9	-3.1
SCHQ	Schefferville	125.87	11	PKP	PKPdf	19 04 53.6	-2.7
	comp=Z,3.8nm,0.7s,baz=353,slow=1.2,SNR=7.6						
DBIC	Dimbokro	133.16	277	PKP	PKPdf	19 05 09.2	-2.2
	comp=Z,4.7nm,0.5s,baz=117,slow=4.3,SNR=11						
NCB	Newcomb	133.62	23	ePKPdf	PKPdf	19 05 09.2	-2.2
PLCA	Paso Flores	134.12	160	PKP	PKPdf	19 05 11.4	-1.0
	comp=Z,6.6nm,0.8s,baz=183,slow=4.2,SNR=13						
LRAL	Lakeview Retre	134.67	43	ePKPdf	PKPdf	19 05 10.9	-2.8
CFAA	Coronel Fontan	143.06	156	PKhKP		19 05 23.8	
	comp=Z,1.7nm,0.6s,baz=220,slow=4.8,SNR=24						
JTS	JuntasAbangare	145.87	75	PKPbc	PKPbc	19 05 33.4	+3.2
	comp=Z,19nm,0.7s,baz=334,slow=5.9,SNR=8.3						
JTS	JuntasAbangare	145.87	75	ePKPdf	PKPdf	19 05 32.9	-1.3
JTS				PKPbc	PKPbc	19 05 33.4	+3.2
JTS				epPKPdf		19 05 44.1	
CPUP	Villa Florida	151.32	169	ePKIKP	PKPdf	19 05 41.6	-1.0
CPUP				i		19 05 47.5	
CPUP	Villa Florida	151.32	169	PKPbc	PKPdf	19 05 47.2	+4.6
	comp=Z,69nm,0.8s,baz=188,slow=1.9,SNR=133						
CPUP	Villa Florida	151.32	169	ePKPdf	PKPdf	19 05 41.6	-0.9
CPUP				PKPbc	PKPdf	19 05 47.2	+4.6
CPUP				i PKPbc	PKPdf	19 05 47.5	+5.0
NNA	Nana	151.35	120	ePKPbc	PKPdf	19 05 47.6	+4.7
ARE	Arequipa	153.15	134	ePKIKP	PKPdf	19 05 52.0	+6.6
CAM4	Nova Friburgo	154.25	200	(P)	PKPdf	19 05 53.9	+7.1
CAM4				i		19 06 00.0	
CAM4				i		19 06 07.9	
LPAZ	La Paz	155.59	139	ePKIKP	PKPdf	19 05 48.0	-0.7
LPAZ				e		19 05 58.1	
LPAZ				e		19 06 13.6	
LPAZ	La Paz	155.59	139	PKP	PKPdf	19 05 48.4	-0.3
	comp=Z,2.1nm,0.8s,baz=17,slow=3.1,SNR=8.2						
LPAZ				PKPbc	PKPdf	19 05 57.9	+9.2
	comp=Z,5.4nm,0.9s,baz=97,slow=3.1,SNR=16						
SIV	San Ignacio	159.85	153	PKP	PKPdf	19 05 52.2	-1.8
	comp=Z,4.7nm,0.9s,baz=160,slow=1.1,SNR=16						
SDV	Santo Domingo	159.87	69	PKP	PKPdf	19 05 52.2	-2.0
	comp=Z,9.8nm,1.0s,baz=19,slow=2.3,SNR=6.8						
SDV	Santo Domingo	159.87	69	ePKPdf	PKPdf	19 05 51.8	-2.4
SDV				PKP	PKPdf	19 05 52.2	-2.0
BDFB	Brasilia	162.14	191	PKP	PKPdf	19 05 54.6	-1.7
	comp=Z,1.6nm,0.6s,baz=57,slow=3.8,SNR=3.8						

WEL 28 18:49:22.4±0.6, 38.73S×175.27E, h238^{km}±5^{km}, ML3.5/9, 3C, Error ellipse: s-maj=8.1km s-min=7.2km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NGZ	Ngauruhoe	0.52	150	PN	P	18 49 54.2	-0.1
CNZ	Chateau	0.52	155	PN	P	18 49 54.1	-0.2
VRZ	Vera Road	0.56	225	PN	P	18 49 53.4	-1.0
PKVZ	Pokaka	0.56	174	PN	P	18 49 53.9	-0.5
FWVZ	Far West T-bar	0.57	157	PN	P	18 49 54.3	-0.1
TRVZ	Turoa	0.61	159	PN	P	18 49 54.4	-0.2
TUVZ	Tukino	0.62	151	PN	P	18 49 54.5	-0.1
TUVZ				SN	S	18 50 19.8	+0.2
MTVZ	Mangateitei	0.67	166	⇑PN	P	18 49 54.4	-0.4
MTVZ				SN	S	18 50 20.5	+0.5
MOVZ	Moawhango	0.78	151	⇑PN	P	18 49 54.6	-0.6
MOVZ				SN	S	18 50 18.8	-1.9
BKZ	Black Stump Fm	1.05	115	PN	P	18 49 56.7	+0.1
BKZ				SN	S	18 50 22.7	-0.6
TSZ	Takapari Road	1.43	158	⇑PN	P	18 49 58.6	-0.8
TSZ				SN	S	18 50 25.8	-2.3
URZ	Urewera	1.52	73	PN	P	18 49 59.6	-0.5
URZ				SN	S	18 50 28.1	-1.3
MWZ	Matawai	1.82	78	PN	P	18 50 02.5	0.0
MWZ				SN	S	18 50 33.0	-0.7
MRZ	Mangatainoka R	1.94	173	PN	P	18 50 01.5	-2.2
KIW	Kapiti Island	2.15	187	PN	P	18 50 02.8	-2.8
KIW				eSN	S	18 50 34.2	-4.8
DUWZ	D'Urville Isla	2.31	206	PN	P	18 50 04.0	-3.3
MTW	Mount Morrison	2.43	176	PN	P	18 50 05.5	-3.1
TCW	Tory Channel	2.59	197	PN	P	18 50 07.0	-3.2
TCW				SN	S	18 50 41.3	-6.0
NNZ	Nelson	2.88	210	PN	P	18 50 09.1	-4.1
NNZ				SN	S	18 50 46.3	-6.3
TUWZ	Tuamarina	2.88	200	PN	P	18 50 09.7	-3.5

NEIC 28 19:07:28.8±0.5, 43.74N×105.35W, ML3.2, Error ellipse: s-maj=9.3km s-min=6.6km az=139.0, Suspected Mining explosion.

NEIC 60 km [40 miles] SSE of Gillette.

IDC 28 19:07:28.5±1.8, 43.73N×105.44W, mb4.0/1, mb1 4.0/3, mb1mx3.5/22, mbtmp3.9/3, ML3.4/2, Error ellipse: s-maj=49.3km s-min=8.8km az=152.0

ISC 28 19:07:27.7±0.6, 43.74N±0.05×105.30W±0.07, n23, σ1^{s}27/24, mb4.2/1, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.99	67	eP	Pb	19 07 48.6	+1.2
PHWY	Pilot Hill	2.44	183	eP	Pn	19 08 10.6	+1.2
RWWY	Rawlins	2.49	215	P	Pn	19 08 10.1	+0.1
LAO	LASA Array	3.02	348	eP	Pn	19 08 19.0	+1.4
PDAR	Pinedale Array	3.26	254	Pn	Pn	19 08 23.1	+2.0
	3.5nm,0.3s,baz=79,slow=17,SNR=43						
PDAR				Pg	Pg	19 08 27.8	-4.9
	9.6nm,0.3s,baz=74,slow=20,SNR=70						
PDAR				Lg		19 09 08.8	
	12nm,0.3s,baz=72,slow=32,SNR=13						
LOHW	Long Hollow	3.85	270	P	Pn	19 08 28.5	-0.9
MOOW	Moose Ponds	3.94	272	P	Pn	19 08 33.8	+3.0
ISCO	Idaho Springs	3.95	184	eP	Pn	19 08 30.9	+0.1
SNOW	Snow King Moun	3.97	268	P	Pn	19 08 32.5	+1.3
YFT	Old Faithful	4.05	282	P	Pn	19 08 34.5	+2.2
REDW	Red Top Meadow	4.05	267	P	Pn	19 08 31.6	-0.7
IMW	Indian Meadow	4.08	274	P	Pn	19 08 32.0	-0.8
TPAW	Teton Pass	4.11	268	eP	Pn	19 08 33.2	0.0
RRI2	Red Ridge	4.39	267	P	Pn	19 08 37.7	+0.5
DGMT	Dagmar	4.79	9	P	Pn	19 08 41.8	-1.0
HWUT	Hardware Ranch	5.09	247	P	Pn	19 08 44.1	-2.8
TCUT	Toone Canyon	5.23	242	P	Pn	19 08 48.6	-0.3
HRY	Holter Researc	5.49	305	P	Pn	19 08 51.9	-0.7
MCMT	McKenzie Canyo	5.53	284	P	Pn	19 08 53.3	+0.1
SRU	San Rafael	6.07	222	P	Pn	19 08 59.1	-1.7
BGU	Big Grassy Mou	6.38	246	P	Pn	19 09 04.5	-0.7
ULM	Lac du Bonnet	9.15	41	Pn	P	19 09 40.9	-3.1
	1.2nm,0.3s,baz=229,slow=12,SNR=7.7						
ARCES	ARCESS Array B	61.42	18	P	P	19 17 46.1	-1.3
	1.7nm,0.9s,mb4.2,baz=333,slow=8.1,SNR=3.7						

ATH 28 19:14:11.9, 37.85N×26.68E, h3^{km}±1^{km}, MD3.1/3

ISK 28 19:14:12.7, 37.84N×26.75E, h25^{km}, MD3.1

CSEM 28 19:14:12.9±0.1, 37.81N×26.83E, h18^{km}±1^{km}, MD3.1, Error ellipse: s-maj=2.6km s-min=1.8km az=78.0

ISC 28 19:14:12.7±0.5, 37.81N±0.02×26.73E±0.04, h10^{km}, n16, σ0^{s}87/24, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.13	140	ePG	Pg	19 14 16.1	+0.3
SMG				eSG	Sg	19 14 18.3	+0.4
URLA	Izmir	0.56	349	iP	Pg	19 14 26.0	+2.0
URLA				iS	Sg	19 14 32.9	+1.3
BLCB	Balcova	0.62	23	PG	Pg	19 14 25.1	-0.2
IZM	Izmir	0.72	35	PG	Pg	19 14 27.1	-0.1
KDAG	Bornova	0.73	35	iP	Pb	19 14 26.9	-0.1
KDAG				iS	Sb	19 14 37.4	+0.7
BODT	Bodrum	0.88	148	PG	Pg	19 14 29.9	-0.4
BODT				SG	Sg	19 14 42.6	+0.6
AYDN	Tasoluk	0.92	99	iP	Pb	19 14 30.4	+0.1
AYDN				iS	Sb	19 14 43.0	+0.7
BDRM	Kayabasi	0.93	142	iP	Pb	19 14 31.7	+1.2
BDRM				iS	Sb	19 14 43.9	+1.2
MLSB	Milas	0.97	121	PG	Pg	19 14 31.2	-1.0
APE	Apeiranthos	1.21	233	ePN	Pn	19 14 34.9	-0.7
APE	Apeiranthos	1.21	233	ePB	Pb	19 14 35.0	-0.2
APE				eSB	Sb	19 14 51.1	+0.4
AKS	Akhisar	1.36	38	ePN	Pn	19 14 36.4	-1.5
YER	Yerkesik	1.41	118	ePN	Pn	19 14 37.2	-1.2
PRK	Paraskevi	1.48	346	ePN	Pn	19 14 39.3	-0.2
PRK				eSB	Sb	19 14 57.9	-0.7
DENT	Denizli	1.82	91	ePN	Pn	19 14 43.0	-1.4
FETY	Fethiye	2.21	121	ePN	Pn	19 14 49.1	-0.9

IGQ 28 19:33:04.2, 2.82N×79.58W, h18^{km}±3^{km}, mb4.1, Error ellipse: s-maj=10.9km s-min=3.1km az=163.0, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LORE	San Lorenzo	1.68	154	P	Pn	19 33 35.0	+1.8
COTA	Cotacachi	2.76	153	P	Pn	19 33 50.0	+1.4
COTA				S	Sn	19 34 21.6	-0.2
YANA	Yana	3.09	161	P	Pn	19 33 55.3	+2.0
YANA				S	Sn	19 34 31.4	+1.3
PINO	Pino	3.11	162	P	Pn	19 33 55.5	+1.9
PINO				S	Sn	19 34 32.4	+1.7
TERV	Terraza Guagua	3.13	162	P	Pn	19 33 56.2	+2.3
GGP	Refugio Guagua	3.13	162	P	Pn	19 33 55.9	+2.0
GGP				S	Sn	19 34 32.7	+1.5
CAYA	Cayambe	3.16	150	P	Pn	19 33 56.6	+2.4
JUA2	San Juan 2	3.17	162	P	Pn	19 33 56.5	+2.1
CAYR	Refugio Cayamb	3.20	151	P	Pn	19 33 57.1	+2.3
ANTI	Antisana	3.54	156	P	Pn	19 34 03.6	+3.9
NAS1	Nasa	3.60	162	P	Pn	19 34 04.5	+4.0
VC1	Cotopaxi 1	3.63	161	P	Pn	19 34 04.8	+3.9
VC1				S	Sn	19 34 48.7	+4.8
CAMI	Rancho Maria	3.63	163	P	Pn	19 34 05.0	+4.0
TAMB	Tambo	3.69	161	P	Pn	19 34 05.7	+3.8

IDC 28 19:36:13.9±16.0, 21.11S×178.27W, h508^{km}±172^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.3/16, mbtmp4.4/5, Error ellipse: s-maj=123.3km s-min=35.0km az=29.0

ISC 28 19:36:15.1±3.3, 21.1S±0.3×178.7W±0.5, h500^{km}, n14, σ0^{s}67/10, mb4.1/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	17.46	191	P	P	19 39 49.8	-0.1
	1.3nm,0.3s,baz=318,slow=11,SNR=5.6						
CTA	Charters Tower	32.74	265	eP	P	19 42 08.6	+1.4
	3.8nm,0.3s,mb4.3						
CTA	Charters Tower	32.74	265	P	P	19 42 08.3	+1.1
	4.8nm,0.4s,mb4.3,baz=100,slow=10,SNR=6.8						
STKA	Stephens Creek	36.90	245	eP	P	19 42 42.6	+0.8
	4.8nm,1.6s,mb3.7						
STKA	Stephens Creek	36.90	245	P	P	19 42 42.4	+0.7
	1.6nm,0.6s,mb3.7,baz=67,slow=9.7,SNR=5.8						
WB2	Warramunga Arr	43.82	263	eP	P	19 43 37.1	-0.5
WRA	Warramunga Arr	43.83	263	P	P	19 43 37.3	-0.5
	2.5nm,0.3s,mb4.1,baz=97,slow=7.5,SNR=71						
KAKA	Kakadu	47.30	272	eP	P	19 44 04.0	-0.5
	27nm,1.2s,mb4.5						
FITZ	Fitzroy Crossi	52.26	263	eP	P	19 44 40.6	-0.8
	9.2nm,1.1s,mb4.0						
CMAR	Chiang Mai Arr	89.67	290	P	P	19 48 21.1	+0.5
	1.7nm,0.9s,mb3.9,baz=129,slow=3.8,SNR=7.1						
ARCES	ARCESS Array B	129.40	349	PKP	PKPdf	19 54 23.7	-2.0
	1.5nm,0.7s,slow=2.4,SNR=6.2						
AKASG	Malin Array Be	143.21	330	PKP	PKPdf	19 54 48.0	-3.1
	1.9nm,0.5s,baz=39,slow=3.8,SNR=12						
BRTR	Keskin Array B	146.73	311	PKPbc	PKPbc	19 54 59.0	-0.6
	0.9nm,0.7s,baz=169,slow=6.3,SNR=4.1						
GERES	GERESS Array B	150.60	343	PKPbc	PKPdf	19 55 08.2	+4.7
	0.7nm,0.6s,slow=1.3,SNR=7.7						

MAN 28 19:38:17.9, 10.11N×125.14E, h14^{km}, mb4.5, ML3.4, MS3.3, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.27	275	eP	Pg	19 38 24.2	+0.3
MSLP				eS	Sg	19 38 29.5	+1.6
PLP	Palo	1.06	352	⇓eP	Pb	19 38 35.8	-1.7
PLP				eS	Sb	19 38 50.1	-0.8
LLP	Lapu-Lapu	1.17	280	⇑iP	Pb	19 38 38.7	-0.7
LLP				iS	Sb	19 38 52.9	-1.3
BUTP	Butuan	1.23	157	eP	Pb	19 38 38.4	-2.1
BUTP				eS	Sb	19 39 04.2	+8.3
TBP	Tagbilaran	1.32	252	eP	Pb	19 38 41.7	-0.3
TBP				eS	Sb	19 38 60.0	+1.3
BESP	Borongan	1.51	11	eP	Pn	19 38 43.8	-0.9
BESP				eS	Sb	19 39 04.6	+0.5
SNPH	Sibulan	2.02	248	iP	Pn	19 38 53.2	+1.2
SNPH				iS	Sn	19 39 21.3	+4.1
DCPH	Dipolog City	2.33	229	eP	Pn	19 38 55.5	-0.8
DCPH				iS	Sn	19 39 23.9	-1.1
CNP	Catarman	2.43	349	eP	Pn	19 38 57.9	0.0
CNP				eS	Sn	19 39 24.9	-2.7
GUIM	Jordan	2.56	282	eP	Pn	19 38 58.5	-1.1
GUIM				eS	Sn	19 39 27.3	-3.5
PAGZ	Pagadian	2.84	218	eP	Pn	19 39 03.0	-0.7
PAGZ				eS	Sn	19 39 37.0	-1.0
IPIL	Ipil	3.43	228	eP	Pn	19 39 12.4	+0.3
IPIL				eS	Sn	19 39 53.6	+0.7
PVCP	Virac	3.59	345	eP	Pn	19 39 15.9	+1.5
PVCP				eS	Sn	19 40 05.4	+8.3

IDC 28 19:48:04.2±1.0, 52.26N×91.25E, mb3.8/7, mb1 4.1/10, mb1mx3.9/23, mbtmp4.0/10, ML4.0/4, MS3.4/4, Ms1 3.4/4, ms1mx3.1/21, Error ellipse: s-maj=17.5km s-min=12.8km az=25.0

MOS 28 19:48:05.5±2.2, 52.16N×91.10E, h15^{km}, mb4.7/6, Error ellipse: s-maj=9.9km s-min=8.1km az=129.4

NEIC 28 19:48:06.0±0.6, 52.24N×91.15E, h10^{km}, mb4.4/7, Error ellipse: s-maj=14.8km s-min=9.3km az=201.0

BJI 28 19:48:06.7, 51.78N×91.06E, h10^{km}, mB4.4, mb3.9, ML4.8, Ms3.9, Msz3.9

NNC 28 19:48:07.1±4.5, 52.16N×90.52E, mpv4.7, Error ellipse: s-maj=41.2km s-min=35.9km az=85.0

ISC 28 19:48:05.2±0.4, 52.25N±0.05×90.95E±0.05, h10^{km}, n58, σ1^{s}43/78, mb4.0/14, MS3.5/4, 5C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CERR	Cheremushki	0.66	25	ePG	Pg	19 48 18.1	-0.5
CERR				eS	Sb	19 48 27.3	-0.1
TASR	Tashtagol	1.94	286	ePN	Pn	19 48 44.7	+6.0
TASR				eS	Sn	19 49 10.1	+6.8
AKAR	Aktash	2.85	229	ePN	Pn	19 48 54.8	+3.2
AKAR				e		19 48 58.4	
AKAR				eS	Sn	19 49 36.0	+10
ELT	Yel'tsovka	3.04	291	ePN	Pn	19 48 58.7	+4.4
ELT				eS	Sn	19 49 38.2	+7.1
ZAL	Zalesovo	4.07	297	Pn	Pn	19 49 11.5	+2.5
	35nm,0.3s,baz=360,slow=10.0,SNR=82						
ZAL				Lg		19 50 14.7	
	61nm,0.3s,baz=72,slow=17,SNR=13						
NVS	Novosibirsk	5.28	302	ePN	Pn	19 49 26.5	+0.4
NVS				eS	Sb	19 50 49.2	+7.8
MOY	Mondy	6.24	91	ePN	Pn	19 49 48.1	+8.5
MOY				e		19 50 01.3	
MOY				eS	Sb	19 51 09.1	-0.1
MOY				pmax	pmax		
	comp=Z,58nm,0.7s						
MK31	Makanchi Array	7.85	229	Pn	Pn	19 50 02.5	+0.4
	comp=Z,28nm,0.7s,baz=48,slow=12,SNR=92						
MK31				⇑Lg		19 52 06.4	
	comp=Z,153nm,1.1s,baz=48,slow=31,SNR=3.7						
MK31				⇑Rg		19 52 46.4	
	comp=Z,137nm,8.0s						
MKAR	Makanchi Array	7.85	229	Pn	Pn	19 50 02.5	+0.3
	comp=Z,3.2nm,0.3s,baz=50,slow=16,SNR=67						
MKAR				Lg		19 52 14.4	
	comp=Z,6.7nm,0.3s,baz=47,slow=22,SNR=7.2						
MKAR				LR	LR	19 53 16.7	
	comp=Z,205nm,20.8s,baz=329,slow=39						
TLY	Talaya	7.86	89	ePn	Pb	19 50 19.5	-2.1
TLY				eSn	Sn	19 51 34.8	+2.3
TLY				eSg	Sb	19 52 01.9	+5.4
ZAK	Zakamensk	7.95	99	eP	Pn	19 49 58.1	-5.5
WMQ	Urumqi	8.71	196	eP	P	19 50 08.0	-6.3
WMQ				S	Sn	19 51 46.3	-7.3
WMQ				Smax			
	comp=N,160nm,1.0s						
WMQ				Smax			
	comp=E,370nm,1.3s						
SONM	Songino Array	10.87	108	Pn	P	19 50 38.0	-5.8
	comp=E,0.1nm,0.3s,baz=295,slow=15,SNR=3.8						
SONM				Lg		19 53 40.3	
	comp=E,1.0nm,0.3s,baz=301,slow=29,SNR=4.9						
SONM				LR	LR	19 54 44.6	
	comp=E,83nm,21.4s,baz=303,slow=37						
ULN	Ulaanbaatar	11.24	107	eP	P	19 50 50.0	+1.1
VOSK	Vostochnaya	12.18	280	⇑Pn	P	19 51 00.6	-1.0
	comp=E,3.6nm,0.5s						
VOSK				⇑Sn	S	19 53 10.0	-8.6
	comp=E,8.6nm,0.5s						
VOSK	Vostochnaya	12.18	280	Pn	P	19 51 00.6	-1.0
VOSK				Sn	S	19 53 10.0	-8.6
BVA0	Borovoye Array	12.51	282	⇑Pn	P	19 51 05.8	-0.2
	comp=E,0.4nm,0.5s,baz=87,slow=14,SNR=62						
BVA0				⇓Sn	S	19 53 19.5	-7.1
	comp=E,3.9nm,0.8s,baz=85,slow=24,SNR=10.0						
BVA0	Borovoye Array	12.51	282	P	P	19 51 05.8	-0.2
BVA0						19 53 19.2	
BVAR	Borovoye Array	12.51	282	Pn	P	19 51 04.7	-1.4
	comp=E,2.9nm,0.3s,baz=76,slow=14,SNR=52						
BVAR				Sn	S	19 53 19.4	-7.1
	comp=E,4.3nm,0.3s,baz=83,slow=26,SNR=8.6						
BRVK	Borovoye	12.57	282	P	P	19 51 00.0	-6.9
ZRNK	Zerenda	13.35	282	⇓Pn	P	19 51 16.2	-1.0
	comp=E,9.1nm,0.7s						
ZRNK				⇓Sn	S	19 53 41.5	-5.3
	comp=E,8.8nm,0.7s						
ZRNK	Zerenda	13.35	282	ePn	P	19 51 15.5	-1.7
ZRNK				eS	S	19 53 41.8	-4.9
GTA	Gaotai	14.24	151	eP	P	19 51 20.8	-8.0
GTA				PP	PP	19 51 32.3	-7.8
GTA				S	S	19 53 51.5	-16
GTA				LG1		19 54 58.3	
GTA				LG2		19 55 24.0	
GTA				LR	LR		
	comp=N,250nm,10.7s						
GTA				LR	LR		
	comp=E,220nm,10.7s						
GTA				LR	LR		
	comp=Z,420nm,10.7s						
KK31	Karatay Array	16.48	244	Pn	P	19 51 54.8	-3.1
	comp=Z,3.0nm,0.8s,baz=35,slow=9.7,SNR=25						
KK31				⇓Sn	S	19 55 03.6	+3.1
	comp=Z,3.9nm,0.7s,baz=49,slow=29,SNR=3.7						
KK31	Karatay Array	16.48	244	Pn	P	19 51 54.8	-3.1
KK31				Sn	S	19 55 03.6	+3.1
KKAR	Karatay Array	16.48	244	iP	P	19 51 54.7	-3.2
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SVE	Sverdlovsk	18.09	297	eP	P	19 52 23.5	+5.6
SVE				MLR	MLR		
	comp=N,400nm,12.0s						
SVE				MLR	MLR		
	comp=E,200nm,12.0s						
SVE				MLR	MLR		
	comp=Z,100nm,12.0s						
HIA	Hailar	18.40	88	eP	P	19 52 21.8	-0.1
ARU	Arti	19.23	295	eP	P	19 52 31.1	-0.7
ARU				eS	S	19 56 09.2	+6.3
ARU	Arti	19.23	295	ePn	P	19 52 27.6	-4.2
AB31	Akbulak array	19.77	274	P	P	19 52 37.4	-0.6
	comp=Z,3.8nm,0.9s,baz=72,slow=11,SNR=19						
AB31	Akbulak array	19.77	274	iP	P	19 52 37.7	-0.3
AB31				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LSA	Lhasa	22.53	180	eP	P	19 53 07.9	+1.5
LSA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
LSA	Lhasa	22.53	180	eP	P	19 53 07.9	+1.5
	comp=Z,2.6nm,0.7s,mb3.8						
YAK	Yakutsk	22.83	49	d iP	P	19 53 12.3	+3.3
YAK				pmax	pmax		
	comp=Z,28nm,1.5s,mb4.5						
YAK				MLR	MLR		

	comp=Z,100nm,12.0s,MS3.5						
YAK	Yakutsk	22.83	49	eP	P	19 53 10.0	+1.1
	comp=Z,19nm,1.1s,mb4.4						
TIXI	Tiksi	25.61	27	eP	P	19 53 34.8	-0.9
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.3						
ARCES	ARCESS Array B	34.09	325	P	P	19 54 51.4	0.0
	comp=Z,1.4nm,0.8s,mb3.9,baz=83,slow=9.8,SNR=3.9						
ARCES				LR	LR	20 09 14.1	
	comp=Z,64nm,19.9s,MS3.4,baz=68,slow=37						
SOC	Sochi	34.76	276	eP	P	19 54 51.4	-6.0
SOC				e		19 56 16.6	
SOC				eS	S	20 00 20.4	-6.4
SOC				eSS	SS	20 02 39.0	-0.6
SOC				MLR	MLR		
	comp=E,81nm,21.0s,MS3.6						
SOC				MLR	MLR		
	comp=Z,105nm,21.0s,MS3.6						
SOC				MLR	MLR		
	comp=N,83nm,19.0s,MS3.6						
FINES	FINESS Array B	35.20	311	P	P	19 55 01.1	+0.1
	comp=N,2.1nm,0.9s,mb4.1,baz=90,slow=5.7,SNR=6.2						
BRTR	Keskin Array B	40.70	276	P	P	19 55 47.9	+0.6
	comp=N,0.6nm,0.5s,mb3.5,baz=80,slow=7.5,SNR=4.3						
NB2	NORSAR Subarra	42.07	314	P	P	19 55 59.0	+0.9
	comp=N,0.6nm,0.5s,mb3.5,baz=71,slow=7.9						
NB2	NORSAR Subarra	42.07	314	P	P	19 55 59.0	+0.9
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
NOA	NORSAR Array B	42.07	314	P	P	19 55 56.9	-1.2
	comp=Z,0.7nm,0.7s,mb3.4,baz=357,slow=20,SNR=3.9						
NOA				LR	LR	20 15 12.5	
	comp=Z,96nm,18.0s,MS3.7,baz=45,slow=39						
CLL	Collm	46.01	301	P	P	19 56 31.1	+1.1
GERES	GERESS Array B	47.02	298	P	P	19 56 39.0	+1.0
	comp=Z,0.7nm,0.8s,mb3.6,baz=51,slow=8.5,SNR=5.7						
LPL	La Plagne	52.81	299	eP	P	19 57 25.6	+3.1
LPG	La Plagne	52.82	299	eP	P	19 57 25.5	+2.9
BNI	Bardonecchia	53.14	298	P	P	19 57 23.4	-1.6
BNI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BNI	Bardonecchia	53.14	298	P	P	19 57 23.4	-1.6
	comp=Z,3.0nm,0.8s,mb4.3						
MBDF	Montbardon	53.30	298	eP	P	19 57 29.3	+3.1
	comp=Z,11nm,0.7s,mb4.6						
MBDF	Montbardon	53.30	298	eP	P	19 57 29.3	+3.1
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
ORIF	Oris-en-Rattie	53.66	299	eP	P	19 57 30.9	+2.1
	comp=Z,6.3nm,0.8s,mb4.3						
ORIF	Oris-en-Rattie	53.66	299	eP	P	19 57 30.9	+2.1
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
ESDC	Sonseca Array	62.56	300	P	P	19 58 30.5	-0.8
	comp=Z,0.9nm,0.6s,mb4.1,baz=44,slow=6.7,SNR=4.6						
WRAB	Tennant Creek	81.20	139	P	P	20 00 20.6	-1.9
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
WRAB	Tennant Creek	81.20	139	P	P	20 00 20.6	-1.9
	comp=Z,4.8nm,1.0s,mb4.4						
WRA	Warramunga Arr	81.21	139	P	P	20 00 21.0	-1.6
	comp=Z,0.7nm,0.6s,mb3.8,baz=342,slow=5.8,SNR=7.9						

IDC **28** *20:15:19.4±2.6, 56.29N×160.62E, mb3.6/8, mb1 3.9/8, mb1mx3.7/22, mbtmp3.6/8, Error ellipse: s-maj=73.5km s-min=23.8km az=8.0*

MOS **28** *20:15:36.5±1.0, 56.25N×160.61E, h176^{km}, mb3.7/3, Error ellipse: s-maj=34.4km s-min=11.6km az=82.8*

KRSC **28** *20:15:37.3±0.5, 56.15N×160.79E, h175^{km}±2^{km}, ML3.9*

ISC 28 20:15:37.4±0.4**, 56.20N**±0.04×**160.85E**±0.08**, h174**^{km}±2^{km}**, n45, σ1^{s}01**/71**, mb3.4**/8**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CIRR	Tsirk	0.10	216	iP	P	20 16 01.8	+1.1
CIRR				iS	S	20 16 19.2	+0.7
LGNR	Loginova	0.15	219	iP	P	20 16 01.7	+0.9
LGNR				iS	S	20 16 19.7	+1.1
KLY	Klyuchi	0.16	316	P	P	20 16 01.0	+0.2
KLY				S	S	20 16 18.4	-0.3
KLY	Klyuchi	0.16	316	iP	P	20 16 01.0	+0.2
KLY				iS	S	20 16 18.1	-0.6
KRSR	Krestovskiy	0.16	278	iP	P	20 16 00.8	0.0
KRSR				iS	S	20 16 17.7	-1.0
ZLN	Zelenaya	0.18	189	iP	P	20 16 01.7	+0.9
ZLN				eS	S	20 16 19.6	+0.8
KPT	Kopyto	0.42	237	iP	P	20 16 01.6	+0.1
KPT				iS	S	20 16 19.1	-1.0
KOZR	Kozyr	0.55	257	PN	P	20 16 02.1	0.0
KOZR				S	S	20 16 20.6	-0.5
KMNR	Kamenistaya	0.56	218	iP	P	20 16 02.5	+0.4
KMNR				eS	S	20 16 20.8	-0.3
KOZ	Kozyrevsk	0.57	256	P	P	20 16 02.1	0.0
KOZ				S	S	20 16 20.6	-0.6
KOZ	Kozyrevsk	0.57	256	iP	P	20 16 02.1	0.0
KOZ				iS	S	20 16 20.1	-1.1
SRDR	Sredinnyy	0.65	281	iP	P	20 16 02.4	-0.1
SRDR				eS	S	20 16 21.3	-0.6
TUMR	Tumrok	1.00	204	iP	P	20 16 06.0	+1.4
TUMR				iS	S	20 16 26.9	+1.3
KBTR	Krutoberegovo	1.10	89	iP	P	20 16 06.0	+0.5
KBTR				iS	S	20 16 26.6	-0.6
ESO	Esso	1.24	258	iP	P	20 16 06.6	-0.1
ESO				iS	S	20 16 27.8	-1.6
ESO				Smax			
	90nm,0.7s						
MKZ	Mys Kozlova	1.72	163	iP	P	20 16 11.2	-0.2
MKZ				iS	S	20 16 35.9	-1.7
GNL	Ganaly	3.02	215	iP	P	20 16 27.3	+0.7
GNL				eS	S	20 17 03.6	-0.8
BKI	Bering	3.06	107	iP	P	20 16 27.4	+0.3
BKI				iS	S	20 17 03.8	-1.6
BKI				Smax			
	130nm,0.5s						
SDLR	Sedlovina	3.14	202	eP	P	20 16 28.8	+0.7
SPN	Mys Shipunski	3.14	189	P	P	20 16 26.7	-1.4
SPN				S	S	20 17 02.7	-4.5
SPN	Mys Shipunski	3.14	189	eP	P	20 16 26.9	-1.2
SPN				eS	S	20 17 04.3	-2.9
NLC	Nalytchevo	3.15	197	P	P	20 16 28.1	-0.2
NLC				S	S	20 17 04.8	-2.7
NLC	Nalytchevo	3.15	197	eP	P	20 16 28.3	0.0
NLC				eS	S	20 17 06.8	-0.7
SMAR	Somma	3.17	203	eP	P	20 16 29.8	+1.3
KOK	Koryaka	3.18	205	eP	P	20 16 30.5	+1.9
AVH	Avacha	3.18	204	eP	P	20 16 29.9	+1.2
AVH				eS	S	20 17 08.2	+0.1
UGLR	Uglovaya	3.22	202	eP	P	20 16 30.3	+1.2
PET	Petropavlovsk	3.43	203	P	P	20 16 32.6	+0.9
PET	Petropavlovsk	3.43	203	eP	P	20 16 32.5	+0.8
APC	Apacha	3.92	215	iP	P	20 16 39.4	+1.4
APC				iS	S	20 17 24.6	-0.2
APC				Smax			
	40nm,1.4s						
GRL	Gorelyy	4.00	205	eP	P	20 16 38.7	-0.3
RUS	Russkaya	4.01	201	P	P	20 16 37.4	-1.8
RUS				S	S	20 17 21.6	-5.2
RUS	Russkaya	4.01	201	eP	P	20 16 38.5	-0.7
RUS				iS	S	20 17 23.7	-3.1
KAMR	Kamenskoye	6.85	21	eP	P	20 17 17.3	+0.9
ILAR	Eielson Array	26.39	50	P	P	20 20 57.6	-1.2
	0.3nm,0.5s,mb3.2,baz=263,slow=7.9,SNR=4.7						
YKA	Yellowknife Ar	40.62	45	P	P	20 23 00.1	-1.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	40.62	45	P	P	20 23 00.1	-1.0
	comp=Z,0.6nm,0.7s,mb3.4,baz=298,slow=9.1,SNR=2.9						
MKAR	Makanchi Array	47.26	294	P	P	20 23 52.6	-1.7
	comp=Z,0.1nm,0.4s,mb2.8,baz=63,slow=6.4,SNR=4.4						
NVAR	Mina Array Bea	54.33	73	P	P	20 24 49.3	+1.7
	comp=Z,0.2nm,0.3s,mb3.4,baz=300,slow=7.3,SNR=3.6						
PDAR	Pinedale Array	55.67	63	P	P	20 24 56.6	-0.6
	comp=Z,0.4nm,0.5s,mb3.5,baz=333,slow=3.3,SNR=4.1						
FINES	FINESS Array B	57.45	336	P	P	20 25 08.1	-1.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	57.45	336	P	P	20 25 08.1	-1.4
	comp=Z,0.7nm,0.5s,mb3.8,baz=34,slow=6.9,SNR=11						
NOA	NORSAR Array B	60.68	344	P	P	20 25 31.3	-0.4
	comp=Z,0.3nm,0.4s,mb3.5,baz=12,slow=5.3,SNR=2.4						
TXAR	Lajitas Array	69.05	69	P	P	20 26 27.3	+1.4
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	Lajitas Array	69.05	69	P	P	20 26 27.3	+1.4
	comp=Z,0.5nm,0.5s,mb3.5,baz=297,slow=5.6,SNR=3.9						

IDC **28** *20:15:44.7±0.8, 26.65S×176.38W, mb4.1/10, mb1 4.4/12, mb1mx4.3/16, mbtmp4.1/12, ML4.0/1, MS3.5/3, Ms1 3.5/3, ms1mx3.3/16, Error ellipse: s-maj=29.2km s-min=18.0km az=122.0*

NEIC **28** *20:15:50.0±0.4, 26.72S×176.41W, h35^{km}, mb4.8/4, Error ellipse: s-maj=13.3km s-min=8.9km az=110.0*

ISC 28 20:15:48.9±3.0**, 26.7S**±0.1×**176.5W**±0.1**, h38**^{km}±24^{km}**, h33**^{km}±2.6^{km}**:pP-P, n39, σ0^{s}97**/28**, mb4.3**/14**, MS3.4**/1**, 1C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.88	206	Pn	P	20 16 33.1	-0.5
	197nm,0.3s,baz=261,slow=23,SNR=13						
RAO				Sn	S	20 17 08.8	+1.4
	263nm,0.3s,baz=110,slow=21,SNR=7.1						
RAO				LR	LR	20 17 12.0	
	comp=Z,501nm,18.1s,baz=53,slow=30						
URZ	Urewera	12.77	204	Pn	P	20 18 47.1	-3.6
	0.8nm,0.3s,baz=36,slow=17,SNR=3.7						
URZ				Sn	S	20 20 59.8	-13
	1.3nm,0.3s,baz=121,slow=23,SNR=7.7						
DZM	Mont Dzumac	16.23	283	LR	LR	20 24 52.7	
	comp=Z,287nm,18.2s,baz=24,slow=34						
PPT	Papeete	26.45	76	LR	LR	20 29 28.5	
	comp=Z,106nm,19.4s,MS3.4,baz=341,slow=31						
CTA	Charters Tower	34.76	273	P	P	20 22 37.2	-0.7
	2.7nm,0.5s,mb4.4,baz=114,slow=12,SNR=5.3						
STKA	Stephens Creek	36.79	252	P	P	20 22 54.9	-0.2
	1.1nm,0.6s,mb3.8,baz=104,slow=11,SNR=2.8						
WB2	Warramunga Arr	45.45	268	eP	P	20 24 05.5	-0.8
WRAB	Tennant Creek	45.45	268	eP	P	20 24 05.5	-0.9
	10.0nm,0.8s,mb4.7						
WRA	Warramunga Arr	45.46	268	P	P	20 24 05.9	-0.5
	4.8nm,0.6s,mb4.5,baz=107,slow=6.0,SNR=34						
VNDA	Vanda	51.94	186	P	P	20 24 55.6	-0.2
	1.2nm,0.8s,mb3.9,baz=14,slow=7.5,SNR=3.6						
FITZ	Fitzroy Crossi	53.84	266	eP	P	20 25 12.1	+1.5
	7.3nm,1.1s,mb4.5						
CASY	Casey	59.07	207	eP	P	20 25 46.1	-1.3
	33nm,1.2s,mb5.2						
CASY				epP	pP	20 25 56.8	-1.8
QSPA	South Pole Qui	63.44	180	⇓iP	P	20 26 16.4	-0.3
	5.7nm,0.7s,mb4.8						
QSPA				⇑iP	pP	20 26 25.2	-2.8
MJAR	Matsushiro Arr	75.99	324	P	P	20 27 34.6	+0.6
	3.7nm,0.9s,mb4.3,baz=169,slow=7.3,SNR=5.4						
MAW	Mawson	76.27	200	P	P	20 27 35.3	+0.4
	1.7nm,0.7s,mb4.1,baz=54,slow=1.8,SNR=4.3						
VNA3	Neumayer Olymp	81.92	176		P	20 28 09.6	+4.1
VNA3	Neumayer Olymp	81.92	176		P	20 28 14.6	+9.1
VNA3	Neumayer Olymp	81.92	176		P	20 28 16.5	+11
VNA3	Neumayer Olymp	81.92	176	P	P	20 28 04.6	-0.9
VNA3				P		20 28 09.6	
VNA3				P	pP	20 28 14.6	-2.5
VNA3				P	pP	20 28 16.5	-0.6
VNA3				P		20 28 28.0	
VNA2	Neumayer--Watz	82.38	176		P	20 28 12.6	+4.8
VNA2	Neumayer--Watz	82.38	176		P	20 28 17.8	+10
VNA2	Neumayer--Watz	82.38	176		P	20 28 19.0	+11
VNA2	Neumayer--Watz	82.38	176	P	P	20 28 08.1	+0.3
VNA2				P		20 28 12.6	
VNA2				P	pP	20 28 17.8	-1.6
VNA2				P	pP	20 28 19.0	-0.4
VNA2				P		20 28 29.4	
NVAR	Mina Array Bea	84.57	42	P	P	20 28 20.3	+0.6
	0.8nm,0.8s,mb3.9,baz=234,slow=13,SNR=4.0						
NVAR	Mina Array Bea	84.57	42	P	P	20 28 20.3	+0.6
PDAR	Pinedale Array	92.49	43	P	P	20 28 56.8	-0.5
	0.3nm,0.7s,mb3.7,baz=270,slow=5.4,SNR=2.8						
CMAR	Chiang Mai Arr	93.47	289	P	P	20 29 04.6	+2.3
	1.5nm,0.8s,mb4.5,baz=132,slow=2.9,SNR=9.8						
ILAR	Eielson Array	94.00	12	P	P	20 29 03.9	+0.3
	0.4nm,0.7s,mb4.0,baz=218,slow=5.6,SNR=4.6						
ZAL	Zalesovo	116.13	319	PKP	PKPdf	20 34 28.8	+0.9
	0.4nm,0.3s,baz=194,slow=9.9,SNR=3.0						
ZAL	Zalesovo	116.13	319	PKP	PKPdf	20 34 28.8	+0.9
MKAR	Makanchi Array	116.38	311	PKP	PKPdf	20 34 29.5	+1.0
	0.7nm,0.7s,baz=62,slow=2.8,SNR=8.7						
MKAR	Makanchi Array	116.38	311	PKP	PKPdf	20 34 29.5	+1.0
ARCES	ARCESS Array B	135.21	349	PKP	PKPdf	20 35 04.8	+0.8
	1.6nm,0.8s,baz=22,slow=6.5,SNR=3.6						
FINES	FINESS Array B	142.05	343	PKP	PKPdf	20 35 18.3	+1.9
	2.3nm,1.0s,baz=207,slow=6.2,SNR=3.3						
NB2	NORSAR Subarra	145.24	353	PKPabc	PKPdf	20 35 23.3	+1.4
	7.6nm,1.0s,baz=12,slow=3.7						
NOA	NORSAR Array B	145.24	353	PKPbc	PKPbc	20 35 23.5	+1.1
	3.4nm,0.8s,baz=11,slow=2.4,SNR=9.0						
AKASG	Malin Array Be	149.01	328	PKPbc	PKPdf	20 35 32.7	+4.3
	1.3nm,0.5s,baz=38,slow=3.5,SNR=6.6						
AKASG	Malin Array Be	149.01	328	PKPbc	PKPdf	20 35 32.7	+4.2
BRTR	Keskin Array B	151.79	305	PKPbc	PKPdf	20 35 41.4	+8.3
	0.5nm,0.5s,baz=135,slow=3.5,SNR=4.2						

IDC **28** *21:09:12.8±15.0, 3.55N×127.50E, h142^{km}±153^{km}, mb3.6/6, mb1 3.7/6, mb1mx3.5/19, mbtmp4.0/6, MS2.8/1, Ms1 2.8/1, ms1mx2.7/22, Error ellipse: s-maj=85.8km s-min=24.5km az=63.0*

MAN **28** *21:09:16.6, 4.23N×127.75E, h208^{km}, mb4.3, ML3.2, MS3.0*

ISC 28 21:09:12.1±1.3**, 3.7N**±0.1×**127.6E**±0.2**, h153**^{km}±14^{km}**, n13, σ0^{s}94**/14**, mb3.8**/6**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	3.53	338	eP	P	21 10 07.2	0.0
MATI				eS	S	21 10 48.0	-1.5
KCP	Kidapawan	4.16	323	⇓eP	P	21 10 17.6	+2.2
BUKP	Musuan	4.90	329	eP	P	21 10 26.0	+0.9
PAGZ	Pagadian	5.91	315	eP	P	21 10 39.6	+1.1
IPIL	Ipil	6.47	310	eP	P	21 10 44.0	-2.0
IPIL				eS	S	21 11 58.7	-0.2
FITZ	Fitzroy Crossi	21.70	185	P	P	21 13 51.8	+0.2
	3.1nm,0.3s,mb4.2,baz=14,slow=11,SNR=10						
WRA	Warramunga Arr	24.36	164	P	P	21 14 17.1	-0.3
	1.7nm,0.5s,mb3.9,baz=342,slow=10,SNR=45						
WB2	Warramunga Arr	24.37	164	eP	P	21 14 17.3	-0.2
JNU	Nakatsue	29.48	6	LR	LR	21 26 43.2	
	comp=Z,22nm,21.9s,baz=179,slow=36						
STKA	Stephens Creek	37.76	160	P	P	21 16 14.5	-0.5
	0.7nm,0.3s,mb3.7,baz=316,slow=9.8,SNR=6.2						
SONM	Songino Array	47.65	341	P	P	21 17 34.7	0.0
	0.4nm,0.5s,mb3.3,baz=151,slow=6.3,SNR=3.6						
MKAR	Makanchi Array	58.11	325	P	P	21 18 52.2	+0.4
	1.6nm,0.4s,mb4.2,baz=114,slow=8.0,SNR=42						
BVAR	Borovoye Array	67.86	327	P	P	21 19 55.9	0.0
	1.2nm,0.6s,mb3.8,baz=122,slow=6.4,SNR=10						
BVAR				pP	pP	21 20 31.6	-1.2
	0.6nm,0.8s,baz=162,slow=4.7,SNR=2.7						

IDC **28** *21:10:39.6±0.8, 16.10S×173.40W, mb4.1/8, mb1 4.3/8, mb1mx4.1/17, mbtmp4.1/8, MS3.3/2, Ms1 3.3/2, ms1mx2.7/26, Error ellipse: s-maj=46.3km s-min=20.0km az=134.0*

ISC 28 21:10:43.1±0.7**, 15.9S**±0.2×**173.6W**±0.2**, h33**^{km}**, n17, σ0^{s}49**/8**, mb4.0**/8**, MS3.3**/2**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPT	Papeete	23.08	97	eLR	LR	21 20 51.0	
	121nm,24.8s						
PPT	Papeete	23.08	97	LR	LR	21 21 04.5	
	comp=Z,43nm,21.5s,MS2.9,baz=330,slow=27						
URZ	Urewera	23.69	198	P	P	21 15 52.2	-0.4
	3.0nm,0.4s,mb4.1,baz=49,slow=18,SNR=3.5						
TBI	Tubuai	23.90	112	eLR	LR	21 21 34.0	
	168nm,26.5s,baz=275						
RKT	Rikitea	37.04	107	eLR	LR	21 27 02.7	
	131nm,29.8s						
STKA	Stephens Creek	43.58	240	P	P	21 18 45.8	-0.2
	3.0nm,1.0s,mb4.0,baz=62,slow=7.5,SNR=4.1						
WRA	Warramunga Arr	49.51	257	P	P	21 19 32.7	-0.1
	0.7nm,0.7s,mb3.8,baz=91,slow=6.7,SNR=8.4						
ASAJ	Asahikawa	71.88	328	LR	LR	21 46 50.1	
	comp=Z,45nm,21.6s,MS3.7,baz=341,slow=30						
NVAR	Mina Array Bea	74.87	42	P	P	21 22 22.4	0.0
	1.5nm,0.7s,mb4.0,baz=221,slow=8.9,SNR=10						
TXAR	Lajitas Array	81.09	56	P	P	21 22 56.2	-0.7
	0.3nm,0.3s,mb3.7,baz=298,slow=5.2,SNR=4.0						
PDAR	Pinedale Array	82.81	42	P	P	21 23 05.7	+0.2
	2.0nm,0.8s,mb4.2,baz=256,slow=3.7,SNR=15						
ILAR	Eielson Array	83.01	11	P	P	21 23 06.2	+0.2
	0.7nm,0.6s,mb3.9,baz=232,slow=5.9,SNR=7.2						
MAW	Mawson	87.22	199	P	P	21 23 27.9	+1.1
	0.7nm,0.6s,mb4.1,baz=116,slow=8.1,SNR=4.1						
MLR	Muntele Rosu	146.26	335	PKPbc	PKPbc	21 30 23.2	+2.9
	1.7nm,0.7s,baz=127,slow=6.0,SNR=4.6						
KHC	Kasperske Hory	146.38	351	eP	PKPdf	21 30 22.0	+2.7
KHC				x	x	21 30 36.5	
BRTR	Keskin Array B	146.44	320	PKPbc	PKPbc	21 30 24.6	+3.7
	2.4nm,0.8s,baz=105,slow=2.8,SNR=13						
GERES	GERESS Array B	146.64	351	PKPbc	PKPbc	21 30 23.9	+2.8
	1.1nm,0.7s,baz=18,slow=4.2,SNR=11						

FUNV **28** *21:14:17.2, 6.67N×73.18W, h161^{km}, MW3.2*

NEIC **28** *21:14:18.6±0.7, 6.82N×73.04W, h164^{km}±10^{km}, Error ellipse: s-maj=15.7km s-min=10.4km az=116.0*

IDC **28** *21:14:18.4±1.6, 6.88N×73.04W, h157^{km}±46^{km}, mb3.3/4, mb1 3.7/6, mb1mx3.4/21, mbtmp3.9/6, Error ellipse: s-maj=111.8km s-min=14.3km az=133.0*

ISC 28 21:14:17.9±0.7**, 6.87N**±0.06×**72.93W**±0.06**, h175**^{km}±6^{km}**, n21, σ0^{s}85**/35**, mb3.6**/4**, 2C-5D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	Capacho	1.17	32	⇑iP	P	21 14 47.2	+0.5
CAPV				eS	S	21 15 08.5	-0.4
ROSC	El Rosal	2.44	215	P	P	21 14 58.9	-1.2
	34nm,0.3s,baz=86,slow=21,SNR=49						
ROSC				S	S	21 15 25.1	-7.4
	26nm,0.3s,baz=272,slow=22,SNR=8.0						
SOCV	Socops	2.49	55	⇓iP	P	21 15 02.1	+1.3
SOCV				eS	S	21 15 34.3	+0.6
VIGV	El Vigia	2.50	38	⇓iP	P	21 15 01.8	+1.0
VIGV				eS	S	21 15 33.9	0.0
SDV	Santo Domingo	3.03	48	P	P	21 15 08.1	+0.8
	37nm,0.3s,baz=235,slow=2.6,SNR=134						
SDV				S	S	21 15 46.1	+0.7
	20nm,0.3s,baz=262,slow=13,SNR=18						
SDV	Santo Domingo	3.03	48	eP	P	21 15 08.6	+1.3
SDV				eS	S	21 15 45.5	+0.1
VIRV	Villa del Rosa	3.65	8	⇓iP	P	21 15 14.2	-1.0
VIRV				eS	S	21 15 57.2	-2.0
QARV	Quebrada Arrib	4.08	35	⇓iP	P	21 15 21.8	+1.1
QARV				eS	S	21 16 08.7	-0.4
SANV	Sanarito	4.26	52	eP	P	21 15 23.6	+0.7
SANV				eS	S	21 16 13.0	-0.1
DABV	Dabajuro	4.62	29	iP	P	21 15 28.7	+1.0
DABV				eS	S	21 16 21.1	-0.4
TEPV	Terepaima	4.81	50	iP	P	21 15 30.9	+0.8
TEPV				eS	S	21 16 25.2	-0.6
SIQV	Siquisique	4.86	39	eP	P	21 15 31.1	+0.3
SIQV				eS	S	21 16 26.3	-0.8
BAUV	El Baul	5.26	67	⇓iP	P	21 15 35.4	-0.6
BAUV				eS	S	21 16 35.3	-1.2
CAOV	Caicara del Or	6.57	86	⇑iP	P	21 15 52.7	-0.5
CAOV				eS	S	21 17 03.5	-3.9
SJG	San Juan	12.98	30	P	P	21 17 18.2	+1.3
	7.1nm,0.3s,baz=278,slow=13,SNR=3.5						
SAML	Samuel	18.47	148	eP	P	21 18 22.4	-0.7
SAML				e		21 18 49.8	
TXAR	Lajitas Array	36.57	311	P	P	21 21 08.4	-0.3
	0.2nm,0.3s,mb3.2,baz=143,slow=9.0,SNR=3.9						
ULM	Lac du Bonnet	47.31	340	P	P	21 22 35.3	-0.3
	1.5nm,0.4s,mb4.0,baz=166,slow=8.6,SNR=2.9						
PDAR	Pinedale Array	48.15	324	P	P	21 22 42.9	+0.7
	0.3nm,0.5s,mb3.2,baz=127,slow=9.0,SNR=3.5						
PDAR	Pinedale Array	48.15	324	P	P	21 22 42.9	+0.7
YKA	Yellowknife Ar	63.29	340	P	P	21 24 29.7	-0.2
	1.0nm,0.5s,mb3.9,baz=136,slow=6.5,SNR=7.8						

NAO **28** *21:17:54.5±1.0, 65.49N×18.58E, ML2.2*

IDC **28** *21:17:54.8±0.9, 65.48N×18.66E, mb1 3.0/5, mb1mx2.9/23, mbtmp2.8/5, ML2.8/5, Error ellipse: s-maj=13.0km s-min=7.4km az=112.0*

CSEM **28** *21:17:54.9±0.1, 65.45N×18.24E, h10^{km}, ML1.9, Error ellipse: s-maj=2.1km s-min=1.8km az=108.0*

UPP **28** *21:17:57.1, 65.48N×18.38E, h19^{km}, ML1.9*

BER **28** *21:17:58.3±5.6, 65.44N×18.37E, h15^{km}±18^{km}, MD3.1, ML2.0, ML2.2(NAO)*

NEIC **28** *21:17:59.7, 65.44N×18.15E, h22^{km}, MD3.1(BER), After BER.*

HEL 28 21:17:57.2±0.1**, 65.48N×18.35E, h25**^{km}±1^{km}**, ML2.1, ML2.0**(UPP)**, ML2.1**(BER)**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LILU	Lilltraesk	0.66	107	iP	Pb	21 18 09.3	-0.7
LILU				iS	Sb	21 18 17.6	-1.1
LILU	Lilltraesk	0.66	107	P	Pb	21 18 09.3	-0.6
LILU				S	Sb	21 18 17.5	-1.2
BURU	Burvik	1.57	124	eP	Pn	21 18 24.5	+0.6
BURU				eS	Sn	21 18 44.9	+1.4
BURU	Burvik	1.57	124	P	Pn	21 18 24.4	+0.5
BURU				S	Sn	21 18 44.9	+1.3
MOR8	Moi Rana	1.75	295	eP	Pn	21 18 25.6	-1.0
MOR8				eSB	Sb	21 18 48.0	-2.2
MOR8				AML	AML	21 18 48.6	
	comp=Z,19nm,0.3s						
MOR8	Moi Rana	1.75	295	P	Pn	21 18 25.5	-1.1
MOR8				eSg	Sn	21 18 48.0	-0.3
	SNR=91						
DUNU	Dundret	1.88	28	eP	Pn	21 18 28.4	+0.1
DUNU				eS	Sn	21 18 52.8	+1.4
UMAU	Umeaa	1.89	147	eP	Pn	21 18 29.0	+0.5
UMAU				eS	Sn	21 18 52.7	+0.9
UMAU	Umeaa	1.89	147	P	Pn	21 18 28.9	+0.4
UMAU				S	Sn	21 18 52.7	+0.9
ERTU	Ertsjaerv	1.90	54	eP	Pn	21 18 28.3	-0.4
SOLU	Sollefteaa	2.29	192	eP	Pn	21 18 34.1	-0.2
SOLU	Sollefteaa	2.29	192	P	Pn	21 18 34.0	-0.3
MELSS	Ber_school_2	2.34	309	eP	Pn	21 18 35.0	+0.1
MELSS				eSg	Sn	21 19 05.9	+2.8
STOK	Stokkvaagen	2.35	294	eP	Pn	21 18 34.4	-0.7
STOK				eSB	Sb	21 19 08.3	+0.8
STOK				AML	AML	21 19 12.6	
	comp=Z,19nm,0.5s						
STOK	Stokkvaagen	2.35	294	P	Pn	21 18 34.3	-0.8
STOK				eSg	Sn	21 19 08.3	+4.8
	SNR=91						
NIKU	Nikkaluokta	2.41	6	eP	Pn	21 18 36.0	0.0
NIKU	Nikkaluokta	2.41	6	P	Pn	21 18 35.9	-0.1
MASU	Masugnsbyn	2.47	35	eP	Pn	21 18 36.4	-0.4
NOD	Norderasen	2.54	218	eP	Pn	21 18 37.3	-0.6
KUA	Kurravaara	2.61	17	eP	Pn	21 18 38.7	-0.1
NSS	Namsos	2.87	254	eP	Pn	21 18 40.9	-1.6
NSS				eSB	Sb	21 19 22.9	+0.2
NSS				AML	AML	21 19 29.9	
	comp=Z,18nm,0.5s						
NSS	Namsos	2.87	254	eP	Pn	21 18 40.9	-1.6
NSS				eSg	Sn	21 19 21.4	+4.6
NSS	Namsos	2.87	254	P	Pn	21 18 40.9	-1.7
NSS				eSg	Sn	21 19 21.4	+4.7
LANU	Lannavaara	2.96	28	eP	Pn	21 18 43.6	-0.1
OUL	Oulu	3.19	94	eP	Pn	21 18 45.8	-1.3
OUL				eS	Sn	21 19 22.1	-2.8
OUL				MSG		21 19 43.0	
	comp=Z,4.3nm,0.2s						
OUL	Oulu	3.19	94	P	Pn	21 18 45.7	-1.4
OUL				S	Sn	21 19 22.0	-2.8
	comp=Z,4.3nm,0.2s						
LOF	Lofoten	3.27	327	eP	Pn	21 18 46.6	-1.6
LOF				eSg	Sn	21 19 38.7	+12
LOF	Lofoten	3.27	327	eP	Pn	21 18 46.6	-1.6
LOF				eSg	Sn	21 19 39.1	+12
LOF				AML	AML	21 19 41.1	
	comp=Z,7.7nm,0.4s						
LOF	Lofoten	3.27	327	P	Pn	21 18 46.6	-1.6
	comp=Z,7.7nm,0.4s						
LOF				eSg	Sn	21 19 38.7	+12
HASU	Hassela	3.43	194	eP	Pn	21 18 49.1	-1.3
KIF	Kilpisjarvi	3.67	14	eP	Pn	21 18 53.4	-0.4
KIF				eS	Sn	21 19 35.4	-1.4
KIF	Kilpisjarvi	3.67	14	P	Pn	21 18 53.3	-0.5
KIF				S	Sn	21 19 35.3	-1.5
SGF	Sodankyl	3.83	55	eP	Pn	21 18 53.9	-2.1

SGF				*e*S	Sn	21 19 37.1	-3.7
SGF				MSG		21 19 57.8	
	comp=Z,5.0nm,0.3s						
ARNU	Arnoeviken	3.83	187	*e*P	Pn	21 18 54.9	-1.2
TRON	Trondheim	3.98	243	*e*Sg	Sn	21 19 58.3	+13
	SNR=90						
KTK1	Kautokeino	4.02	26	*e*P	Pn	21 18 59.7	+0.9
KTK1				*e*Sg	Sn	21 20 02.0	+16
KTK1	Kautokeino	4.02	26	*e*P	Pn	21 18 59.7	+0.9
KTK1				*e*Sg	Sn	21 20 02.3	+16
KTK1				AML	AML	21 20 02.6	
	comp=Z,9.4nm,0.3s						
KTK1	Kautokeino	4.02	26	P	Pn	21 18 59.7	+0.8
	comp=Z,9.4nm,0.3s						
KTK1				*e*Sg	Sn	21 20 02.0	+16
TRO	Tromso	4.18	3	*e*P	Pn	21 18 59.6	-1.5
TRO				*e*Sg	Sn	21 20 04.6	+15
TRO				AML	AML	21 20 06.1	
	comp=Z,4.8nm,0.7s						
TRO	Tromso	4.18	3	P	Pn	21 18 59.6	-1.5
	comp=Z,4.8nm,0.7s						
TRO				*e*Sg	Sn	21 20 04.6	+15
	comp=Z,4.8nm,0.7s,SNR=90						
ROTU	Roteberg	4.23	197	*e*P	Pn	21 19 00.1	-1.8
KJN	Kajaani	4.24	105	*e*P	Pn	21 19 00.2	-1.8
KJN				*e*S	Sn	21 19 46.9	-4.5
KJN				MSG		21 20 09.1	
	comp=Z,2.6nm,0.2s						
KJN	Kajaani	4.24	105	P	Pn	21 19 00.1	-1.9
SUF	Sumiainen	4.40	125	*e*P	Pn	21 19 02.8	-1.5
SUF				*e*S	Sn	21 19 51.8	-3.6
SUF	Sumiainen	4.40	125	P	Pn	21 19 02.7	-1.6
SUF				S	Sn	21 19 51.8	-3.6
KEF	Keuruu	4.40	136	*e*P	Pn	21 19 03.3	-1.0
KEF				*e*S	Sn	21 19 52.5	-3.0
KEF	Keuruu	4.40	136	P	Pn	21 19 03.2	-1.1
KEF				S	Sn	21 19 52.4	-3.0
IGGU	Iggoen	4.65	186	*e*P	Pn	21 19 06.4	-1.4
KU4	Liikasenvaara	4.68	74	*e*P	Pn	21 19 05.8	-2.4
KU4				*e*S	Sn	21 19 57.4	-5.1
ARA0	ARCESS Array S	4.91	31	Pn	Pn	21 19 08.8	-2.7
	baz=211,slow=16						
ARA0				Sn	Sn	21 20 03.3	-5.0
	baz=216,slow=28						
ARA0				Lg		21 20 23.5	
	baz=211,slow=28						
ARA0	ARCESS Array S	4.91	31	*e*P	Pn	21 19 08.8	-2.7
ARA0				*e*S	Sn	21 20 03.3	-5.0
ARA0				*e*SB	Sb	21 20 23.5	+2.0
ARCES	ARCESS Array B	4.91	31	Pn	Pn	21 19 09.0	-2.5
	comp=Z,0.4nm,0.3s,baz=210,slow=13,SNR=28						
ARCES				Sn	Sn	21 20 03.1	-5.1
	comp=Z,0.4nm,0.3s,baz=207,slow=25,SNR=6.6						
ARCES				Lg		21 20 22.5	
	comp=Z,1.3nm,0.3s,baz=213,slow=29,SNR=14						
ARCES	ARCESS Array B	4.91	31	Pn	Pn	21 19 09.0	-2.5
ARCES				Sn	Sn	21 20 03.2	-5.0
GRAU	Graesoe	5.17	179	*e*P	Pn	21 19 13.0	-2.1
FIA0	FINESS Array S	5.33	136	Pn	Pn	21 19 15.9	-1.4
	baz=321,slow=14						
FIA0				Sn	Sn	21 20 14.2	-4.5
	baz=317,slow=22						
FIA0				Lg		21 20 38.3	
	baz=327,slow=28						
FIA0	FINESS Array S	5.33	136	*e*P	Pn	21 19 15.9	-1.4
FIA0				*e*S	Sn	21 20 14.2	-4.5
FIA0				*e*		21 20 38.3	
FIA0	FINESS Array S	5.33	136	Pn	Pn	21 19 15.9	-1.4
	SNR=5.5						
FIA0				Sn	Sn	21 20 14.2	-4.5
	SNR=5.0						
FINES	FINESS Array B	5.33	136	Pn	Pn	21 19 15.5	-1.9
	comp=Z,0.1nm,0.3s,baz=326,slow=14,SNR=5.8						
FINES				Sn	Sn	21 20 14.1	-4.6
	comp=Z,0.4nm,0.3s,baz=328,slow=22,SNR=10.0						
FINES				Lg		21 20 36.9	
	comp=Z,0.4nm,0.3s,baz=323,slow=23,SNR=4.0						
KEV	Kevo	5.42	34	*e*P	Pn	21 19 16.8	-1.8
KEV				*e*S	Sn	21 20 15.5	-5.4
NB2	NORSAR Subarra	5.50	219	Pn	Pn	21 19 17.6	-2.2
	baz=30,slow=14						
NB2				Sn	Sn	21 20 22.1	-0.9
NB2				Lg		21 20 45.3	
	baz=31,slow=28						
NB2	NORSAR Subarra	5.50	219	*e*P	Pn	21 19 17.6	-2.2
NB2				*e*		21 20 22.1	
NB2				*e*		21 20 45.3	
NOA	NORSAR Array B	5.50	219	Pn	Pn	21 19 17.3	-2.4
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=2.5						
NOA				Lg		21 20 43.3	
	comp=Z,0.9nm,0.3s,baz=165,slow=18,SNR=6.2						
MOL	Molde	5.57	243	*e*SB	Sb	21 20 40.1	-0.6
MOL				AML	AML	21 20 54.9	
	comp=Z,5.2nm,0.4s						
HFS	Hagfors	5.78	204	Pn	Pn	21 19 20.8	-2.9
	baz=31,slow=12						
HFS				Sn	Sn	21 20 24.1	-5.8
	baz=4.3,slow=22						
HFS				Lg		21 20 55.7	
	baz=25,slow=37						
HFS	Hagfors	5.78	204	*e*P	Pn	21 19 20.8	-2.9
HFS				*e*S	Sn	21 20 24.1	-5.8
HFS				*e*		21 20 55.7	
HFS	Hagfors	5.78	204	Pn	Pn	21 19 20.9	-2.8
	comp=Z,0.1nm,0.3s,baz=31,slow=12,SNR=12						
HFS				Sn	Sn	21 20 22.3	-7.6
	comp=Z,0.0nm,0.3s,baz=23,slow=22,SNR=2.5						
HFS				Lg		21 20 53.8	
	comp=Z,0.4nm,0.3s,baz=27,slow=30,SNR=16						
APA0	Apatity Array	6.22	63	*e*S	Sn	21 20 34.2	-6.8
APA0				*e*		21 21 07.9	
APA0	Apatity Array	6.22	63	Sn	Sn	21 20 34.2	-6.8
	baz=272,slow=28						
APA0				Lg		21 21 07.9	
	baz=245,slow=28						
GERES	GERESS Array B	16.86	191	Pn	P	21 21 51.1	-1.8
	comp=Z,0.1nm,0.3s,baz=35,slow=16,SNR=3.1						

*IDC **28** 21:23:50.1±0.8, 26.81S×176.32W, mb4.1/9, mb1 4.4/10, mb1mx4.3/15, mbtmp4.2/10, MS3.7/4, Ms1 3.7/4, ms1mx3.4/22, Error ellipse: s-maj=34.7km s-min=19.5km az=136.0*

ISC 28 21:23:54.8±3.0**, 26.9S**±0.1×**176.4W**±0.1**, h44**^{km}±25^{km}**, n28, σ1**^{s}**03**/16**, mb4.2**/10**, MS3.8**/3**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.75	210	Pn	P	21 24 37.1	-0.4
	241nm,0.3s,baz=80,slow=8.6,SNR=13						
RAO				Sn	S	21 25 10.5	+0.7
	166nm,0.3s,baz=73,slow=21,SNR=2.5						
DZM	Mont Dzumac	16.38	283	LR	LR	21 31 46.0	
	comp=Z,164nm,20.3s,baz=177,slow=29						
PPT	Papeete	26.41	75	LR	LR	21 37 23.8	
	comp=Z,231nm,18.3s,MS3.8,baz=77,slow=31						
CTA	Charters Tower	34.87	273	*e*P	P	21 30 46.6	+2.6
	3.4nm,0.3s,mb4.8						
STKA	Stephens Creek	36.83	252	P	P	21 31 00.1	-0.4
	1.1nm,0.5s,mb3.9,baz=120,slow=17,SNR=4.5						
STKA				LR	LR	21 42 42.5	
	comp=Z,154nm,20.3s,MS3.8,baz=122,slow=31						
WB2	Warramunga Arr	45.54	268	*e*P	P	21 32 11.5	-0.7
WRA	Warramunga Arr	45.55	268	P	P	21 32 11.3	-1.0
	4.0nm,0.6s,mb4.5,baz=107,slow=7.8,SNR=31						
WRA				PcP	PcP	21 33 51.0	+0.2
	0.5nm,0.4s,baz=108,slow=2.6,SNR=6.7						
FITZ	Fitzroy Crossi	53.92	266	P	P	21 33 14.8	-1.7
	3.2nm,0.7s,mb4.4,baz=90,slow=3.0,SNR=3.3						
CASY	Casey	58.94	207	⇓*i*P	P	21 33 50.9	-0.7
MAW	Mawson	76.12	200	P	P	21 35 40.3	+1.1
	1.7nm,0.7s,mb4.1,baz=129,slow=9.5,SNR=5.0						
MJAR	Matsushiro Arr	76.21	324	P	P	21 35 40.7	+0.4
	1.8nm,0.7s,mb4.1,baz=171,slow=6.4,SNR=5.3						
VNA3	Neumayer Olymp	81.72	176		P	21 36 08.8	-0.7
VNA3	Neumayer Olymp	81.72	176		PcP	21 36 11.4	-4.2
VNA3	Neumayer Olymp	81.72	176		pP	21 36 19.1	-3.5
VNA3	Neumayer Olymp	81.72	176		sP	21 36 23.0	-4.5
VNA2	Neumayer--Watz	82.17	176		P	21 36 11.9	0.0
VNA2	Neumayer--Watz	82.17	176		PcP	21 36 14.3	-3.3
VNA2	Neumayer--Watz	82.17	176		sP	21 36 25.2	-4.6
NVAR	Mina Array Bea	84.66	42	P	P	21 36 25.2	0.0
	0.3nm,0.4s,mb3.7,baz=209,slow=9.0,SNR=4.3						
TXAR	Lajitas Array	89.25	56	P	P	21 36 47.1	-0.5
	0.4nm,0.6s,mb3.9,baz=225,slow=5.3,SNR=4.3						
TXAR				LR	LR	22 08 47.0	
	comp=Z,44nm,20.2s,MS3.9,baz=240,slow=30						
PDAR	Pinedale Array	92.57	43	P	P	21 37 03.3	+0.5
	0.2nm,0.4s,mb3.9,baz=194,slow=6.1,SNR=3.9						
CMAR	Chiang Mai Arr	93.63	289	P	P	21 37 10.7	+2.6
	0.8nm,0.8s,mb4.2,baz=132,slow=3.7,SNR=5.0						
MKAR	Makanchi Array	116.58	311	PKP	PKPdf	21 42 34.9	+0.9
	0.6nm,0.7s,baz=135,slow=2.0,SNR=5.1						
BVAR	Borovoye Array	124.84	317	PKP	PKPdf	21 42 50.9	+1.2
	0.5nm,0.6s,baz=90,slow=1.5,SNR=5.2						
NB2	NORSAR Subarra	145.45	354	PKPabc	PKPdf	21 43 29.6	+2.3
	13nm,1.2s,baz=13,slow=3.5						
NOA	NORSAR Array B	145.45	354	PKPbc	PKPbc	21 43 29.1	+1.2
	3.7nm,1.0s,baz=6.6,slow=2.3,SNR=5.6						
AKASG	Malin Array Be	149.24	328	PKPbc	PKPdf	21 43 40.1	+6.2
	0.3nm,0.3s,baz=36,slow=2.9,SNR=7.6						
BRTR	Keskin Array B	151.99	305	PKPbc	PKPdf	21 43 47.8	+9.4
	0.3nm,0.4s,baz=76,slow=5.1,SNR=3.7						

*NEIC **28** 21:41:54.6±0.2, 16.48S×177.36W, mb4.5/29, Error ellipse: s-maj=9.6km s-min=5.6km az=136.0*

*IDC **28** 21:41:54.7±0.5, 16.51S×177.39W, h423^{km}±5^{km}, mb4.0/20, mb1 4.2/22, mb1mx4.2/24, mbtmp4.8/22, Error ellipse: s-maj=13.5km s-min=9.0km az=129.0*

*BJI **28** 21:41:58.2, 15.76S×178.03W, h420^{km}, mB4.7, mb4.4*

ISC 28 21:41:53.3±0.2**, 16.49S**±0.05×**177.40W**±0.06**, h418**^{km}**, h418**^{km}±3.1^{km}**:pP-P, n188, σ1**^{s}**03**/82**, mb4.4**/46**, 17C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	6.00	65	⇓*e*P	P	21 43 25.4	-1.8
	340nm,0.6s						
RAO	Raoul Island	12.71	182	P	P	21 44 40.7	-2.2
	64nm,0.3s,baz=300,slow=20,SNR=4.1						
RAO				S	S	21 46 58.9	+0.6
	148nm,0.3s,baz=263,slow=23,SNR=11						
DZM	Mont Dzumac	16.23	247	*e*P	P	21 45 21.4	+1.7
DZM	Mont Dzumac	16.23	247	P	P	21 45 19.5	-0.2
	2.5nm,0.3s,baz=68,slow=20,SNR=22						
NOUC	Port Laguerre	16.36	248	*e*P	P	21 45 23.2	+2.2
NOUC	Port Laguerre	16.36	248	*e*P	P	21 45 23.2	+2.2
URZ	Urewera	22.22	191	P	P	21 46 15.7	-2.4
	43nm,0.8s,mb4.9,baz=355,slow=7.1,SNR=16						
URZ				S	S	21 49 46.1	-4.9
	7.6nm,0.8s,baz=75,slow=20,SNR=4.6						
HNR	Honiara	23.15	285	*e*P	P	21 46 28.8	+2.0
	163nm,1.1s,mb5.4						
RPZ	Rata Peaks	28.86	198	P	P	21 47 16.1	-1.2
	13nm,0.8s,mb4.3,baz=7.3,slow=2.7,SNR=3.8						
ARMA	Armidale	31.50	238	⇑*i*P	P	21 47 41.2	+0.9
CTA	Charters Tower	34.65	258	*e*P	P	21 48 07.2	0.0
	11nm,0.7s,mb4.3						
CTA	Charters Tower	34.65	258	P	P	21 48 07.2	-0.1
	14nm,0.7s,mb4.4,baz=87,slow=11,SNR=12						
CTAO	Charters Tower	34.65	258	*e*P	P	21 48 06.9	-0.3
	9.1nm,0.5s,mb4.4						
CNB	Canberra Magne	35.06	231	*e*P	P	21 48 11.2	+0.7
	24nm,0.6s,mb4.7						
PMG	Port Moresby	35.21	277	P	P	21 48 13.2	+1.3
	24nm,0.5s,mb4.8,baz=66,slow=5.1,SNR=11						
PMG	Port Moresby	35.21	277	⇓*e*P	P	21 48 14.1	+2.1
	58nm,0.9s,mb4.9						
TOO	Toolangi	38.81	230	*e*P	P	21 48 41.7	+0.2
	13nm,0.5s,mb4.5						
STKA	Stephens Creek	40.16	240	⇑*i*P	P	21 48 52.6	0.0
	10nm,0.6s,mb4.3						
STKA	Stephens Creek	40.16	240	P	P	21 48 52.4	-0.3
	14nm,0.6s,mb4.4,baz=78,slow=7.9,SNR=39						
WB2	Warramunga Arr	45.84	258	*e*P	P	21 49 36.8	-1.2
WRAB	Tennant Creek	45.84	258	*e*P	P	21 49 37.0	-1.0
	18nm,0.9s,mb4.4						
WRA	Warramunga Arr	45.85	258	P	P	21 49 36.5	-1.5
	9.9nm,0.7s,mb4.2,baz=96,slow=6.9,SNR=83						
WRA				pP	pP	21 51 00.1	0.0
	5.4nm,1.1s,baz=94,slow=8.6,SNR=3.6						
WRA				PcP	PcP	21 51 06.8	-0.7
	1.3nm,0.3s,baz=90,slow=3.5,SNR=6.6						
WRA				S	S	21 55 44.8	-5.4
	0.6nm,0.7s,baz=90,slow=14,SNR=4.4						
KAKA	Kakadu	48.59	267	*e*P	P	21 49 58.6	-0.4
	29nm,0.3s,mb5.1						
FORT	Forrest	51.49	244	*e*P	P	21 50 19.2	-1.3
	28nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	54.23	259	*e*P	P	21 50 40.0	-0.5
	15nm,0.5s,mb4.5						
KLBR	Kellerberrin	60.33	243	*e*P	P	21 51 21.1	-1.0
	23nm,0.7s,mb4.7						
MUN	Mundaring	61.63	242	*e*P	P	21 51 30.3	-0.4
	6.6nm,0.6s,mb4.3						
SBA	Scott Base	61.89	184	*e*P	P	21 51 33.0	+1.2
	48nm,1.2s,mb4.9						
VNDA	Vanda	61.93	185	P	P	21 51 31.9	-0.2
	5.7nm,0.7s,mb4.2,baz=14,slow=6.5,SNR=19						
VNDA				PcP	PcP	21 52 08.3	-0.1
	3.4nm,0.9s,baz=316,slow=9.2,SNR=3.7						
VNDA	Vanda	61.93	185	P	P	21 51 31.9	-0.2
VNDA				PcP	PcP	21 52 08.3	-0.1
MJAR	Matsushiro Arr	67.36	322	P	P	21 52 05.9	-1.2
	0.7nm,0.5s,mb3.5,baz=160,slow=7.3,SNR=5.5						
CASY	Casey	67.82	205	⇑*i*P	P	21 52 08.8	-0.6
FX1	Attu Island--F	69.56	354	*e*P	P	21 52 19.0	-1.1
SAO	San Andreas Ge	74.74	44	*e*P	P	21 52 50.8	+0.2
	12nm,0.9s,mb4.5						
CMB	Columbia Colle	76.15	43	*e*P	P	21 52 58.8	+0.3
	6.5nm,1.0s,mb4.2						
MDJ	Mudanjiang	77.59	324	P	P	21 53 06.0	-0.2
MDJ				S	S	22 02 23.0	+0.9
MDJ				XS		22 04 58.8	
MDJ				AMB	AMB		
	comp=Z,70nm,4.5s						
NVAR	Mina Array Bea	77.74	44	P	P	21 53 07.2	+0.1
	comp=Z,5.3nm,0.7s,mb4.3,baz=219,slow=8.0,SNR=26						
NVAR				pP	pP	21 54 40.6	-0.1
	comp=Z,2.5nm,1.0s,baz=222,slow=6.6,SNR=3.6						
NVAR	Mina Array Bea	77.74	44	P	P	21 53 07.2	+0.1
NVAR				pP	pP	21 54 40.6	-0.1
MNV	Mina	77.84	44	*e*P	P	21 53 07.9	+0.3
	comp=Z,3.7nm,0.8s,mb4.1						
CN2	Changchun	79.50	322	*e*P	P	21 53 17.5	+1.2
CN2				*e*AP	pP	21 54 51.5	+1.2
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.3						
WVOR	Wild Horse Val	79.71	40	*e*P	P	21 53 17.8	+0.4
	comp=Z,10nm,1.0s,mb4.4						
SLKM	Skilak Lake	79.79	13	*e*P	P	21 53 16.7	-0.8
BBB	Bella Bella	80.62	28	P	P	21 53 21.4	-0.6
	comp=Z,4.8nm,0.7s,mb4.3,baz=70,slow=2.4,SNR=3.7						
BMO	Blue Mountains	81.84	39	*e*P	P	21 53 27.4	-1.0
	comp=Z,3.8nm,0.8s,mb4.2						
MVU	Marysvale	81.89	46	*e*P	P	21 53 27.9	-0.9
	comp=Z,5.2nm,1.1s,mb4.2						
TNA	Tin City	82.11	4	*e*P	P	21 53 28.5	-0.9
	comp=Z,7.2nm,0.9s,mb4.4						
HLID	Hailey	82.93	41	*e*P	P	21 53 34.8	+0.8
	comp=Z,6.9nm,0.8s,mb4.4						
TMUT	Trail Mountain	82.96	46	*e*P	P	21 53 35.2	+1.0
NEW	Newport	83.80	36	P	P	21 53 37.8	-0.5
	comp=Z,3.7nm,0.8s,mb4.2,baz=213,slow=7.3,SNR=5.4						
DLBC	Dease Lake	84.15	23	P	P	21 53 40.0	+0.2
	comp=Z,1.5nm,0.4s,mb4.1,baz=176,slow=24,SNR=5.2						
IMA	Indian Mountai	84.22	9	*e*P	P	21 53 40.3	+0.4
	comp=Z,8.5nm,1.0s,mb4.4						
ILAR	Eielson Array	84.30	13	P	P	21 53 39.4	-0.9
	comp=Z,5.6nm,0.5s,mb4.5,baz=228,slow=6.1,SNR=47						
ILAR				pP	pP	21 55 15.6	+0.1
	comp=Z,2.7nm,1.0s,baz=237,slow=4.8,SNR=5.8						
LTX	Lajitas	84.42	57	*e*P	P	21 53 43.2	+1.4
	comp=Z,18nm,1.3s,mb4.7						
TXAR	Lajitas Array	84.42	57	P	P	21 53 43.1	+1.3
	comp=Z,7.0nm,0.8s,mb4.4,baz=225,slow=5.3,SNR=34						
TXAR				pP	pP	21 55 18.8	+1.8
	comp=Z,1.0nm,0.9s,baz=243,slow=5.6,SNR=2.7						
MCMT	McKenzie Canyo	84.54	40	*e*P	P	21 53 42.6	+0.6
RRI2	Red Ridge	84.79	42	*e*P	P	21 53 43.8	+0.5
	comp=Z,11nm,0.8s,mb4.7						
BILL	Bilibino	85.13	354	*e*P	P	21 53 43.9	-0.4
	comp=Z,13nm,0.8s,mb4.7						
CHMT	Chamberlain Mo	85.33	38	*e*P	P	21 53 45.4	-0.3
QLMT	Earthquake Lak	85.42	41	*e*P	P	21 53 47.1	+0.9
MAW	Mawson	85.51	199	P	P	21 53 46.2	+0.1
	comp=Z,12nm,0.8s,mb4.7,baz=115,slow=6.0,SNR=27						
PDAR	Pinedale Array	85.66	43	P	P	21 53 47.3	-0.2
	comp=Z,1.2nm,0.5s,mb3.9,baz=221,slow=2.1,SNR=16						
PDAR				pP	pP	21 55 22.4	-0.6
	comp=Z,1.2nm,1.0s,baz=236,slow=5.3,SNR=5.3						
HIA	Hailar	85.78	324	*e*P	P	21 53 47.5	-0.4
HRY	Holter Researc	86.08	39	*e*P	P	21 53 49.5	+0.1
CMAR	Chiang Mai Arr	89.32	289	P	P	21 54 05.4	0.0
	comp=Z,1.4nm,1.2s,mb3.6,baz=68,slow=4.9,SNR=3.4						
CMAR				pP	pP	21 55 43.1	+1.5
	comp=Z,0.1nm,0.3s,baz=291,slow=41,SNR=1.7						
RSSD	Black Hills	89.88	44	*e*P	P	21 54 07.3	0.0
	comp=Z,5.8nm,1.0s,mb4.4						
SYO	Syowa Base	90.74	193	⇓P	P	21 54 09.2	-1.5
LZH	Lanzhou	90.80	307	*e*P	P	21 54 14.0	+2.3
LZH				AP	pP	21 55 47.0	-1.3
LZH				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.4						
LZH	Lanzhou	90.80	307	*e*P	P	21 54 14.0	+2.3
	comp=Z,14nm,1.5s,mb4.6						
LZH				pP	pP	21 55 47.0	-1.3
LZH				sP	sP	21 56 26.0	-4.1
PLCA	Paso Flores	91.60	133	P	P	21 54 16.9	+1.6
	comp=Z,2.4nm,0.9s,mb4.1,baz=248,slow=7.7,SNR=3.9						
PLCA	Paso Flores	91.60	133	P	P	21 54 16.9	+1.6
SNAA	Sanae	91.98	178	*e*P	P	21 54 16.4	-0.1
	comp=Z,46nm,1.4s,mb5.2						
VNA3	Neumayer Olymp	92.08	176	⇑*i*P	P	21 54 18.5	+1.6
VNA3	Neumayer Olymp	92.08	176	⇑*i*	P	21 54 19.3	+2.4
VNA2	Neumayer--Watz	92.53	177	⇑*i*P	P	21 54 20.4	+1.4
VNA2	Neumayer--Watz	92.53	177	⇑*i*	P	21 54 21.7	+2.7
YKA	Yellowknife Ar	92.65	24	P	P	21 54 18.7	-0.9
	comp=Z,1.7nm,0.7s,mb4.1,baz=244,slow=4.5,SNR=8.6						
VNA1	Neumayer--Stat	92.76	176	⇑*i*P	P	21 54 20.5	+0.5
VNA1	Neumayer--Stat	92.76	176	⇑*i*	P	21 54 22.8	+2.8
SONM	Songino Array	93.11	319	P	P	21 54 22.2	0.0
	comp=Z,0.2nm,0.3s,mb3.5,baz=135,slow=4.1,SNR=2.8						
SONM				pP	pP	21 55 58.0	-0.8
	comp=Z,0.5nm,0.9s,baz=135,slow=2.0,SNR=2.8						
MKAR	Makanchi Array	108.84	314	PKiKP		21 59 33.9	
	comp=Z,0.4nm,0.3s,baz=77,slow=1.7,SNR=16						
MKAR				PKKPbc		22 10 44.6	
	comp=Z,0.4nm,0.5s,baz=258,slow=2.7,SNR=5.8						
BVAR	Borovoye Array	116.35	321	PKP	PKPdf	21 59 47.9	-0.1
	comp=Z,1.1nm,0.5s,baz=125,slow=2.0,SNR=12						
BVAR	Borovoye Array	116.35	321	PKP	PKPdf	21 59 47.9	-0.1
ZRNK	Zerenda	117.19	321	*e*PKPdf	PKPdf	21 59 49.4	-0.2
ZRNK				*e*		21 59 59.2	
ZRNK				*e*		22 00 05.8	
ARCES	ARCESS Array B	125.09	350	PKP	PKPdf	22 00 05.0	+0.6
	comp=Z,4.0nm,0.7s,baz=21,slow=1.0,SNR=28						
ARCES				PKKPbc		22 09 43.5	
	comp=Z,5.0nm,1.2s,baz=180,slow=1.2,SNR=4.6						
BOSA	Boshof	130.09	206	PKP	PKPdf	22 00 14.9	-0.2
	comp=Z,1.6nm,0.8s,baz=190,slow=6.1,SNR=2.2						
KAF	Kangasniemi	131.45	345	*e*p	PKPdf	22 00 15.8	-1.0
FINES	FINESS Array B	132.09	345	PKP	PKPdf	22 00 17.4	-0.6
	comp=Z,1.4nm,0.6s,baz=27,slow=4.3,SNR=7.9						
AKASG	Malin Array Be	139.74	334	SKP		22 03 28.6	
	comp=Z,0.5nm,0.4s,baz=35,slow=1.1,SNR=4.5						
BLJS	Baljurashi	142.85	281	P	PKPdf	22 00 38.6	0.0
KWP	Kalwaria	143.14	338	*e*P	PKPbc	22 00 37.5	+0.8
KWP	Kalwaria	143.14	338	*e*PKP	PKPdf	22 00 37.5	-0.7
OJC	Ojcow	143.60	341	*e*PKP	PKPdf	22 00 38.3	-0.7
BURAR	Bucovina Array	143.80	334	⇑P	PKPbc	22 00 40.2	+1.4
BURAR	Bucovina Array	143.80	334	⇑P	PKPbc	22 00 40.2	+1.4
KOLS	Kolonicke sedl	143.88	338	*i* PKP	PKPdf	22 00 39.4	-0.1
KOLS				*e*		22 03 06.3	
KSP	Ksiaz	144.01	345	*e*PKP	PKPdf	22 00 39.7	0.0
KSP	Ksiaz	144.01	345	*e*PKP	PKPdf	22 00 40.2	+0.6
NIE	Niedzica	144.14	340	⇑*e*PKP	PKPdf	22 00 40.9	+1.0
CLZ	Clausthal	144.19	352	*e*PKPbc	PKPbc	22 00 40.2	+0.4
CRVS	Cervenica-Dubn	144.20	339	*e*PKP	PKPdf	22 00 40.9	+0.9
CLL	Collm	144.28	349	⇑*i*PKP	PKPdf	22 00 40.3	+0.2
CLL				*i*		22 00 42.8	
CLL				*e*pPKP		22 02 20.0	
CLL	Collm	144.28	349	⇑*i*PKIKP	PKPdf	22 00 40.3	+0.2
	comp=Z,logA/T=1.1						
CLL				*i*		22 00 42.8	
CLL				*i*		22 00 46.8	
CLL				*e**PPKP		22 02 20.0	
UPC	Upice	144.39	345	*e*PKP	PKPdf	22 00 41.5	+1.2
OKC	Ostrava-Krasne	144.43	343	*e*PKP	PKPdf	22 00 41.5	+1.1
BR131	Keskin Array S	144.44	317	*e*PKPdf	PKPdf	22 00 41.7	+0.9
BR131				*e*		22 00 58.8	
BRTR	Keskin Array B	144.44	317	PKP	PKPdf	22 00 41.6	+0.9
	comp=Z,4.3nm,0.7s,baz=116,slow=2.3,SNR=19						
BRTR				pPKP		22 02 24.4	
	comp=Z,2.8nm,0.9s,baz=90,slow=1.2,SNR=6.0						
WTSB	Winterswijk	144.45	356	*e*PKP	PKPdf	22 00 40.4	0.0
	comp=Z,28nm,0.7s						
VRI	Vrincioaia	144.45	331	⇓P	PKPdf	22 00 41.2	+0.7
VRI	Vrincioaia	144.45	331	⇓P	PKPdf	22 00 41.3	+0.7
DPC	Dobruska-Polom	144.46	345	*e*PKP	PKPdf	22 00 41.9	+1.5
BRG	Berggiesshubel	144.51	348	*i* PKP	PKPdf	22 00 41.2	+0.7
MORC	Moravsky Berou	144.66	343	*e*PKPdf	PKPdf	22 00 42.4	+1.6
PVCC	Panska Ves	144.70	347	*e*PKP	PKPdf	22 00 42.5	+1.6
KECS	Kecovo	144.89	339	*e*PKP	PKPdf	22 00 41.8	+0.6
KECS				*e*		22 02 28.8	
MLR	Muntele Rosu	145.10	331	⇓P	PKPdf	22 00 43.1	+1.4
MLR	Muntele Rosu	145.10	331	⇓P	PKPdf	22 00 43.1	+1.4
MOX	Moxa	145.17	350	*e*PKP	PKPdf	22 00 43.3	+1.7
MOX	Moxa	145.17	350	*i* P	PKPdf	22 00 43.3	+1.7
	comp=Z,logA/T=1.2						
PRU	Pruhonice	145.22	346	*e*PKP	PKPdf	22 00 43.8	+2.0
ASF	Jabal al Asfar	145.25	303	PKPbc	PKPbc	22 00 44.0	+0.7
	comp=Z,2.9nm,0.7s,baz=275,slow=9.4,SNR=6.1						
NKC	Novy Kostel	145.41	349	*e*PKP	PKPdf	22 00 44.5	+2.4
VYHS	Vyhne	145.42	341	*e*PKP	PKPdf	22 00 44.5	+2.4
VYHS				*e*		22 02 25.9	
DRGR		145.48	335	⇓P	PKPdf	22 00 44.4	+2.1
DRGR		145.48	335	⇓P	PKPdf	22 00 44.4	+2.1
PSZ	Piszkesteto	145.58	339	*e*PKPdf	PKPdf	22 00 44.8	+2.4
HGN	Heimansgroeve	145.71	356	*e*PKP	PKPdf	22 00 44.5	+1.9
	comp=Z,30nm,2.1s						
SMOL	Smolenice	145.83	342	*e*PKP	PKPdf	22 00 45.5	+2.7
GRA1	Grafenberg Arr	146.15	350	*e*PKPbc	PKPbc	22 00 46.7	+1.8
GRF	Grafenberg Arr	146.15	350	*e*PKP	PKPdf	22 00 46.7	+3.3
ZST	Bratislava	146.21	342	*e*PKP	PKPdf	22 00 47.4	+3.9
ZST				*e*		22 02 28.8	
KHC	Kasperske Hory	146.24	347	*e*PKP	PKPdf	22 00 46.9	+3.4
WET	Wettzell	146.37	348	*e*PKPbc	PKPbc	22 00 47.3	+1.8
GIVF	Givet	146.43	357	*e*PKP1	PKPbc	22 00 46.7	+1.1
GEC2	GERESS Array S	146.48	347	*e*PKPbc	PKPbc	22 00 47.4	+1.7
GERES	GERESS Array B	146.48	347	PKPbc	PKPbc	22 00 45.5	-0.2
	comp=Z,2.2nm,0.6s,baz=24,slow=2.9,SNR=21						
GERES				pPKPbc		22 02 28.5	
	comp=Z,3.2nm,1.1s,baz=45,slow=1.9,SNR=5.8						
BAIF	Baives	146.49	358	*e*PKP1	PKPbc	22 00 47.0	+1.3
TBKS	Tabuk	146.62	296	P	PKPdf	22 00 49.0	+4.2
JMQS	Jabal Moqyreh	147.03	298	P	PKPdf	22 00 50.1	+4.6
MOA	Molln	147.28	345	⇑*i*P	PKPdf	22 00 49.7	+4.4
MOA				*i*		22 02 32.8	
MBAR	Mbarara	147.46	241	*e*PKPdf	PKPdf	22 00 46.7	0.0
MBAR				*e*PKPbc	PKPdf	22 00 51.2	+4.6
MBAR				*e*PKPab	PKPab	22 00 55.6	0.0
EIL	Elat	147.60	300	*e*PKPdf	PKPdf	22 00 46.9	+0.5
EIL				*e*PKPbc	PKPdf	22 00 51.0	+4.6
JMOS	Jabal al Moall	147.60	299	P	PKPdf	22 00 50.6	+4.2
FUR	Furstenfeldbru	147.62	349	*e*PKPbc	PKPdf	22 00 50.3	+4.5
FLN	La Foliniere	147.72	4	*e*PKP1	PKPdf	22 00 50.0	+4.0
AYUS	‘Aynunah	147.72	297	P	PKPdf	22 00 51.7	+5.1
ROSF	Rostrenen	147.88	7	*e*PKP1	PKPdf	22 00 49.8	+3.6
BFO	Black Forest	147.90	353	*e*PKPbc	PKPdf	22 00 51.2	+4.9
CDF	Champ du Feu	147.93	354	*e*PKP1	PKPdf	22 00 51.0	+4.7
	comp=Z,20nm,0.9s						
TAYS	Tayyib Ism	147.97	298	P	PKPdf	22 00 52.5	+5.5
MEZF	Maizieres J’vi	148.01	357	*e*PKP1	PKPdf	22 00 51.5	+5.1
SGMF	Saint Gilles	148.04	7	*e*PKP1	PKPdf	22 00 50.7	+4.2
	comp=Z,18nm,0.7s						
GRR	Gorron	148.06	4	*e*PKP1	PKPdf	22 00 51.2	+4.7
	comp=Z,17nm,0.5s						
PERS	Pernice	148.19	344	*e*PKPbc	PKPdf	22 00 51.1	+4.3
KBA	Koelnbreinsper	148.23	346	⇑*i*P	PKPdf	22 00 51.5	+4.7
KBA				*i*		22 02 35.3	
QUIF	Quistinic	148.30	7	*e*PKP1	PKPdf	22 00 51.6	+4.7
HAU	Haudompre	148.42	355	*e*PKP1	PKPdf	22 00 52.2	+5.1
HINF	Hinteralfeld	148.56	355	*e*PKP1	PKPdf	22 00 52.4	+5.1
DAVA	Damuels	148.71	350	⇑*i*P	PKPdf	22 00 53.4	+5.8
DAVA				*i*		22 01 00.7	
DAVA				*i*		22 02 37.0	
SISC	Sisak	148.88	341	*i* PKP	PKPdf	22 00 54.1	+6.2
LJU	Ljubljana	148.90	344	*e*PKPbc	PKPdf	22 00 53.5	+5.6
VISS	Visnje	149.03	343	*e*PKPbc	PKPdf	22 00 53.9	+5.7
BOJS	Bojanci	149.19	342	*e*PKPbc	PKPdf	22 00 54.6	+6.1
LOR	Lormes	149.29	358	*e*PKP1	PKPdf	22 00 54.5	+6.0
HYF	Humbligny	149.31	360	*e*PKP1	PKPdf	22 00 54.9	+6.3

SSF	Saint Saulge	149.51	359	ePKP1	PKPdf	22 00 55.1	+6.2
	comp=Z,32nm,1.1s						
AVF	Avril sur Loir	149.78	359	ePKP1	PKPdf	22 00 55.3	+6.0
CABF	La Chapelle	149.83	355	ePKP1	PKPdf	22 00 56.4	+7.0
	comp=Z,44nm,1.0s						
MFF	Saint Martin d	149.89	4	ePKP1	PKPdf	22 00 55.7	+6.2
SMF	Signal de Mont	149.91	358	ePKP1	PKPdf	22 00 55.7	+6.2
BGF	Bois d'Agland	150.02	360	ePKP1	PKPdf	22 00 56.2	+6.5
	comp=Z,22nm,0.8s						
TCF	Toulx Ste Croi	150.29	1	ePKP1	PKPdf	22 00 56.7	+6.6
	comp=Z,25nm,0.9s						
LPL	La Plagne	150.85	354	ePKP1	PKPdf	22 00 59.1	+8.1
	comp=Z,12nm,0.8s						
LPG	La Plagne	150.87	354	ePKP1	PKPdf	22 00 59.2	+8.2
	comp=Z,12nm,0.8s						
RJF	Les Rejaudoux	151.26	2	ePKP1	PKPdf	22 00 58.9	+7.3
BNI	Bardonecchia	151.32	354	PKPdf	PKPdf	22 00 53.8	+2.1
BNI				i PKPbc	PKPdf	22 01 00.4	+8.7
BNI				ePKPab	PKPab	22 01 09.8	-0.7
ORIF	Oris-en-Rattie	151.53	355	ePKP1	PKPdf	22 01 00.0	+8.0
	comp=Z,12nm,0.8s						
LFF	La Frestale	151.59	3	ePKP1	PKPdf	22 00 59.7	+7.6
MBDF	Montbardon	151.63	354	ePKP1	PKPdf	22 01 00.2	+8.1
	comp=Z,17nm,0.8s						
CAF	Calviac	151.65	1	ePKP1	PKPdf	22 01 00.1	+7.9
	comp=Z,11nm,0.7s						
VIVF	Saint-Julien-l	151.67	357	ePKP1	PKPdf	22 01 00.3	+8.1
	comp=Z,6.0nm,0.7s						
SBF	Sospel	152.41	352	ePKP1	PKPdf	22 01 01.1	+7.9
LASF	Ste Croix	152.48	358	ePKP1	PKPdf	22 01 02.3	+9.0
	comp=Z,11nm,0.8s						
SMRF	Simiane la Rot	152.49	355	ePKP1	PKPdf	22 01 03.1	+10
	comp=Z,19nm,1.1s						
FRF	La Foret Royal	152.80	354	ePKP1	PKPdf	22 01 02.4	+8.6
LMR	La Mourre	153.04	354	ePKP1	PKPdf	22 01 02.9	+8.8
MTLF	Montolieu	153.23	1	ePKP1	PKPdf	22 01 03.5	+9.1
PGF	Pioggiola	153.46	349	ePKP1	PKPdf	22 01 03.6	+8.8
ETSF	Etsaut	153.54	5	ePKP1	PKPdf	22 01 04.4	+10
	comp=Z,3.2nm,0.4s						

IDC 28 22:06:19.2±8.1**, 4.62S×151.51E, h179**^{km}±53^{km}**, mb3.2**/3**, mb1 3.3**/4**, mb1mx3.2**/15**, mbtmp3.7**/4**, Error ellipse: s-maj=125.1km s-min=37.6km az=105.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.43	222	P	P	22 07 51.7	-0.9
	1.0nm,0.3s,baz=21,slow=14,SNR=2.4						
PMG				S	S	22 09 05.3	0.0
	2.5nm,0.3s,baz=238,slow=14,SNR=5.1						
WRA	Warramunga Arr	22.62	226	P	P	22 11 05.7	0.0
	1.1nm,0.3s,baz=52,slow=9.5,SNR=24						
SONM	Songino Array	65.49	328	P	P	22 16 43.8	-1.5
	0.4nm,0.4s,baz=140,slow=7.7,SNR=5.4						
MKAR	Makanchi Array	79.35	319	P	P	22 18 04.2	-2.4
	0.2nm,0.5s,baz=112,slow=6.5,SNR=3.7						

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*IDC **28** 22:11:36.4±3.3, 32.89N×47.44E, mb3.5/5, mb1 3.7/6, mb1mx3.5/19, mbtmp3.5/6, ML3.1/1, Error ellipse: s-maj=74.6km s-min=25.8km az=179.0*

*TEH **28** 22:11:37.4, 32.64N×47.61E, h10^{km}, Mn3.4*

*THR **28** 22:11:37.9±0.8, 32.76N×47.69E, h14^{km}±6^{km}, ML3.3*

*CSEM **28** 22:11:37.9±0.1, 32.63N×47.58E, h35^{km}, ML3.3, Error ellipse: s-maj=3.0km s-min=1.8km az=34.0*

*NEIC **28** 22:11:37.4, 32.64N×47.61E, h10^{km}, MN3.4(TEH), After TEH.*

ISC 28 22:11:35.7±0.6**, 32.57N**±0.04×**47.67E**±0.06**, h10**^{km}**, n35, σ1**^{s}**27**/36**, mb3.4**/5**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.06	115	ePG	Pn	22 11 59.2	+2.6
SHGR				AML	AML	22 12 43.6	
	comp=N,529nm,0.6s						
IKOM	Komasi	1.61	355	Pn	Pn	22 12 04.7	+0.3
IGHG	Ghaleghazi	1.98	333	Pn	Pn	22 12 09.7	0.0
IVIS	Veys	2.06	341	Pn	Pn	22 12 11.3	+0.4
IDHR	Dehrash	2.38	334	Pn	Pn	22 12 15.4	0.0
ILIN	Laeen	2.41	346	Pn	Pn	22 12 15.8	-0.1
SNGE	Sanandaj	2.53	354	ePN	Pn	22 12 18.2	+0.6
SNGE				eSG	Sn	22 12 51.4	+2.6
ASAO	Ashtian	2.79	44	ePN	Pn	22 12 22.6	+1.4
ASAO				eSG	Sn	22 13 00.6	+5.4
ASAO				AML	AML	22 13 09.8	
	comp=N,176nm,0.6s						
UMR	Umm Al-Rimmam	3.01	179	eS	Sn	22 13 01.3	+0.3
NAY	Al-Naaiem	3.33	186	eS	Sn	22 13 13.8	+4.7
IKLH	Kalahroud	3.37	76	Pn	Pn	22 12 30.7	+1.1
IRAZ	Razeghan	3.39	33	Sn	Sn	22 13 08.3	-2.4
IRAZ	Razeghan	3.39	33	Lg		22 13 21.7	
IRAZ	Razeghan	3.39	33	Pn	Pn	22 12 33.9	+4.0
QAM	Qamsar	3.71	68	Pn	Pn	22 12 34.0	-0.3
IGAR	Garneh	3.84	94	Pn	Pn	22 12 35.3	-1.0
IZEF	Zefreh	3.94	84	Pn	Pn	22 12 38.6	+0.9
IVRN	Varamin	4.16	53	Lg		22 13 48.2	
IVRN	Varamin	4.16	53	Pn	Pn	22 12 41.4	+0.7
IVRN				Sn	Sn	22 13 26.6	-3.4
NASN	Na'in	4.34	86	ePN	Pn	22 12 44.9	+1.6
DAMV	Damavand	4.70	48	ePN	Pn	22 12 48.6	+0.3
DAMV				AML	AML	22 14 12.9	
	comp=N,22nm,0.7s						
IDMV	Damavand	4.70	49	Pn	Pn	22 12 48.6	+0.1
IFIR	Firoozkooh	5.21	53	Lg		22 14 18.7	
IFIR	Firoozkooh	5.21	53	Pn	Pn	22 12 55.8	+0.1
IFIR				Sn	Sn	22 13 52.2	-4.4
IPAR	Pars	5.35	119	Pn	Pn	22 12 57.0	-0.7
IMOK	Mook	5.58	128	Pn	Pn	22 13 00.2	-0.7
ICHK	Chekchek	5.71	91	Pn	Pn	22 13 00.5	-2.2
IBAF	Bafgh	6.78	96	Pn	Pg	22 13 41.6	-9.3
ASF	Jabal al Asfar	9.12	270	Pn	P	22 13 45.2	-5.2
	comp=N,0.2nm,0.3s,baz=68,slow=19,SNR=1.8						
MKAR	Makanchi Array	29.92	51	P	P	22 17 44.6	-1.4
	comp=N,0.6nm,0.7s,mb3.4,baz=252,slow=7.7,SNR=5.0						
GERES	GERESS Array B	30.14	313	P	P	22 17 46.0	-1.8
	comp=N,0.1nm,0.3s,mb3.0,baz=84,slow=8.9,SNR=3.1						
FINES	FINESS Array B	32.10	341	P	P	22 18 01.0	-3.9
	comp=N,1.7nm,0.9s,mb3.9,baz=153,slow=9.3,SNR=3.3						
FINES	FINESS Array B	32.10	341	P	P	22 18 01.0	-3.9
ARCES	ARCESS Array B	39.05	348	P	P	22 19 01.2	-2.9
	comp=N,0.5nm,0.5s,mb3.5,baz=156,slow=8.9,SNR=6.9						
SONM	Songino Array	46.27	53	P	P	22 20 04.2	+1.2
	comp=N,0.1nm,0.3s,mb3.2,baz=292,slow=7.8,SNR=3.0						

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*IDC **28** 22:14:47.8±1.7, 5.76N×125.07E, mb4.2/5, mb1 4.3/5, mb1mx3.9/20, mbtmp4.2/5, MS3.7/2, Ms1 3.8/2, ms1mx3.1/32, Error ellipse: s-maj=82.5km s-min=24.6km az=69.0*

*MAN **28** 22:15:06.9, 6.17N×126.12E, h139^{km}, mb4.2, ML3.0, MS2.7*

ISC 28 22:15:03.9±0.7**, 5.9N**±0.1×**125.9E**±0.2**, h170**^{km}±12^{km}**, n13, σ1**^{s}**24**/13**, mb4.0**/5**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.10	20	eP	P	22 15 29.8	-1.8
KCP	Kidapawan	1.34	325	⇑iP	P	22 15 34.3	+0.5
KCP				i S	S	22 15 55.6	-1.3
BUKP	Musuan	2.12	338	eP	P	22 15 43.2	+1.3
BUKP				eS	S	22 16 12.9	+1.6
KAKA	Kakadu	19.62	161	eP	P	22 19 22.1	+0.8
	11nm,0.6s						
FITZ	Fitzroy Crossi	23.86	181	⇑iP	P	22 20 03.5	+0.5
	4.7nm,0.2s,mb4.7						
FITZ	Fitzroy Crossi	23.86	181	P	P	22 20 03.3	+0.3
	6.5nm,0.3s,mb4.7,baz=360,slow=8.5,SNR=42						
WRA	Warramunga Arr	27.01	162	P	P	22 20 31.4	-0.8
	0.5nm,0.3s,mb3.6,baz=330,slow=11,SNR=17						
CMAR	Chiang Mai Arr	29.07	298	LR	LR	22 33 32.2	
	comp=Z,108nm,18.1s,baz=205,slow=40						
NWAO	Narrogin (SRO)	39.48	191	P	P	22 22 18.2	-1.2
	2.9nm,0.4s,mb4.3,baz=40,slow=9.4,SNR=8.4						
STKA	Stephens Creek	40.46	159	eP	P	22 22 29.3	+1.9
	2.0nm,0.6s,mb3.9						
STKA	Stephens Creek	40.46	159	P	P	22 22 29.1	+1.7
	2.4nm,0.5s,mb4.0,baz=337,slow=11,SNR=9.9						
MKAR	Makanchi Array	55.29	325	P	P	22 24 20.6	-1.3
	0.3nm,0.5s,mb3.3,baz=109,slow=8.2,SNR=5.6						
GNI	Garni	79.44	310	LR	LR	23 04 09.7	
	comp=Z,44nm,18.6s,baz=336,slow=38						

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*IDC **28** 22:16:48.0±0.6, 26.64S×176.31W, mb4.6/16, mb1 4.7/18, mb1mx4.7/20, mbtmp4.6/18, ML4.0/1, MS4.0/19, Ms1 4.1/19, ms1mx3.9/34, Error ellipse: s-maj=19.6km s-min=15.4km az=129.0*

*HRVD **28** 22:16:52.6±0.6, 26.65S×175.95W, h29^{km}±1^{km}, MW4.9/56, Centroid moment Tensor Solution. LP body waves: s20,c24;Mantle waves: s56,c85; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.72±.27; M$_{\theta\theta}$-0.17±.16; M$_{\phi\phi}$-2.55±.17; M$_{r\theta}$0.75±.27; M$_{\theta\phi}$0.19±.13; M$_{\phi r}$1.56±.23; Best double couple: M$_0$3.147×10^{16} NP1:ϕ_s163°,δ31°,λ67°. NP2:ϕ_s10°,δ61°,λ104°. Principal axes: T 3.317, Plg70°, Azm310°; N -.343, Plg12°, Azm184°; P -2.977, Plg15°, Azm90°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **28** 22:16:52.6±0.3, 26.68S×176.35W, h30^{km}, mb5.0/18 Error ellipse: s-maj=9.8km s-min=7.5km az=114.0*

*BJI **28** 22:16:52.0, 26.70S×176.30W, h30^{km}, mB5.3, mb5.1*

ISC 28 22:16:51.8±0.3**, 26.62S**±0.06×**176.39W**±0.08**, h33**^{km}**, n80, σ0**^{s}**98**/50**, mb4.8**/33**, MS4.1**/17**, 5C-3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.95	207	Pn	Pn	22 17 37.2	-0.3
	269nm,0.3s,baz=245,slow=3.6,SNR=22						
RAO				LR	LR	22 18 07.2	
	comp=Z,2μm,18.4s,baz=122,slow=27						
RAO				Sn	Sn	22 18 13.8	+1.7
	1μm,0.3s,baz=246,slow=22,SNR=14						
URZ	Urewera	12.83	204	Pn	P	22 19 49.8	-4.7
	0.9nm,0.3s,baz=56,slow=3.6,SNR=4.6						
DZM	Mont Dzumac	16.29	282	eP	P	22 20 46.6	+7.0
DZM	Mont Dzumac	16.29	282	LR	LR	22 25 45.1	
	comp=Z,1μm,20.6s,baz=302,slow=33						
PPT	Papeete	26.38	76	LR	LR	22 29 54.2	
	comp=Z,493nm,18.4s,MS4.1,baz=148,slow=30						
CTA	Charters Tower	34.82	273	eP	P	22 23 43.2	+1.4
	6.8nm,0.4s,mb4.9						
CTA	Charters Tower	34.82	273	P	P	22 23 42.2	+0.5
	7.7nm,0.4s,mb5.0,baz=100,slow=10,SNR=18						
STKA	Stephens Creek	36.86	252	P	P	22 23 58.5	-0.5
	1.6nm,0.5s,mb4.1,baz=103,slow=13,SNR=5.2						
STKA				LR	LR	22 38 00.1	
	comp=Z,934nm,18.6s,MS4.6,baz=282,slow=34						
PMG	Port Moresby	38.48	290	P	P	22 24 12.0	-0.7
	5.8nm,0.7s,mb4.4,baz=127,slow=5.1,SNR=3.0						
WB2	Warramunga Arr	45.51	268	eP	P	22 25 08.6	-1.6
WRAB	Tennant Creek	45.52	268	eP	P	22 25 08.4	-1.9
	23nm,0.7s,mb5.2						
WRA	Warramunga Arr	45.52	268	P	P	22 25 08.9	-1.4
	15nm,0.6s,mb5.1,baz=106,slow=7.7,SNR=59						
KAKA	Kakadu	49.82	276	eP	P	22 25 43.8	-0.1
	6.2nm,0.3s,mb5.1						
SBA	Scott Base	51.90	184	eP	P	22 25 59.9	+1.1
	22nm,1.1s,mb5.0						
VNDA	Vanda	51.98	186	P	P	22 25 59.5	+0.1
	1.7nm,0.6s,mb4.1,baz=358,slow=8.0,SNR=10						
VNDA				LR	LR	22 44 46.2	
	comp=Z,153nm,21.1s,MS4.0,baz=360,slow=32						
FITZ	Fitzroy Crossi	53.90	266	eP	P	22 26 14.6	+0.1
	12nm,0.7s,mb5.0						
FITZ	Fitzroy Crossi	53.90	266	P	P	22 26 13.3	-1.2
	13nm,0.6s,mb5.1,baz=172,slow=7.6,SNR=15						
CASY	Casey	59.13	207	eP	P	22 26 49.5	-1.7
QSPA	South Pole Qui	63.47	180	eP	P	22 27 19.7	-0.6
	17nm,0.9s,mb5.2						
JOW	Kunigami	75.24	311	P	P	22 28 33.6	+0.4
	9.8nm,0.5s,mb5.0,baz=162,slow=12,SNR=5.9						
MJAR	Matsushiro Arr	76.00	324	P	P	22 28 37.9	+0.4
	13nm,0.9s,mb4.8,baz=165,slow=6.5,SNR=27						
MJAR				LR	LR	22 56 54.1	
	comp=Z,70nm,19.3s,MS4.0,baz=190,slow=32						
MAJO	Matsushiro	76.00	324	eP	P	22 28 37.5	0.0
	6.5nm,0.6s,mb4.7						
MAT	Matsushiro	76.00	324	eP	P	22 28 37.0	-0.4
	44nm,1.3s,mb5.2						
MAT	Matsushiro	76.00	324	P	P	22 28 37.1	-0.3
MAW	Mawson	76.33	200	⇑iP	P	22 28 38.6	-0.1
	3.8nm,0.8s,mb4.4						
MAW	Mawson	76.33	200	P	P	22 28 38.9	+0.3
	5.3nm,0.9s,mb4.5,baz=132,slow=9.9,SNR=13						
MAW				LR	LR	23 02 15.7	
	comp=Z,194nm,18.1s,MS4.5,baz=83,slow=36						
JNU	Nakatsue	77.73	317	P	P	22 28 47.4	+0.2
	29nm,1.0s,mb5.2,baz=72,slow=8.2,SNR=10						
JNU				LR	LR	22 57 31.6	
	comp=Z,67nm,20.3s,MS4.0,baz=337,slow=31						
FX1	Attu Island--F	79.69	354	LR	LR	23 02 27.8	
	comp=Z,5.9nm,19.2s,MS2.9,slow=34						
FX1	Attu Island--F	79.69	354	eP	P	22 28 57.1	-0.4
ASAJ	Asahikawa	79.79	331	LR	LR	23 02 11.7	
	comp=Z,154nm,19.8s,MS4.3,baz=180,slow=34						
SNAA	Sanae	81.87	178	LR	LR	23 05 47.5	
	comp=Z,49nm,18.3s,MS3.9,baz=23,slow=36						
SNAA	Sanae	81.87	178	eP	P	22 29 07.4	-1.2
	5.5nm,0.9s,mb4.5						
VNA3	Neumayer Olymp	81.96	176	⇑i	sP	22 29 21.4	-1.7
VNA3	Neumayer Olymp	81.96	176	⇓iP	P	22 29 08.6	-0.5
VNA3				⇑iP		22 29 21.4	
VNA2	Neumayer--Watz	82.41	176	⇑i	sP	22 29 24.4	-1.0
VNA2	Neumayer--Watz	82.41	176	⇓iP	P	22 29 11.8	+0.4
VNA2				⇑iP		22 29 24.4	
VNA1	Neumayer--Stat	82.63	176		pP	22 29 22.5	-0.5
VNA1	Neumayer--Stat	82.63	176	P	P	22 29 13.0	+0.4
VNA1				P	pP	22 29 22.5	-0.5
PLCA	Paso Flores	84.03	133	P	P	22 29 19.4	-0.9
	1.2nm,0.7s,mb4.2,baz=206,slow=9.4,SNR=3.1						
PLCA				LR	LR	23 01 46.2	
	comp=Z,85nm,18.0s,MS4.2,baz=210,slow=32						
YBH	Yreka Blue Hor	84.19	37	P	P	22 29 21.1	0.0
	4.0nm,0.8s,mb4.6,baz=122,slow=4.5,SNR=5.1						
YBH				LR	LR	22 58 58.0	
	comp=Z,92nm,19.3s,MS4.2,baz=211,slow=30						
NVAR	Mina Array Bea	84.50	42	P	P	22 29 23.6	+0.8
	1.4nm,0.8s,mb4.2,baz=208,slow=6.9,SNR=9.8						
NVAR				LR	LR	23 00 54.2	
	comp=Z,52nm,18.5s,MS4.0,baz=270,slow=31						
MNV	Mina	84.59	42	eP	P	22 29 23.4	+0.3
	12nm,1.5s,mb4.8						
MOD	Modoc	85.62	38	eP	P	22 29 28.0	-0.2
	7.7nm,1.2s,mb4.8						
BMN	Battle Mountai	86.43	41	eP	P	22 29 28.7	-3.5
	22nm,0.4s,mb5.8						
WHN	Wuhan	87.24	306	⇓P	P	22 29 38.8	+2.4
CN2	Changchun	88.02	322	eP	P	22 29 41.5	+1.7
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.0						
MNTX	Cornudas Mount	89.12	54	eP	P	22 29 45.2	-0.2
	comp=Z,1.1nm,0.9s,mb4.2						
TXAR	Lajitas Array	89.14	56	P	P	22 29 45.4	-0.2
	comp=Z,0.2nm,0.3s,mb4.0,baz=225,slow=7.1,SNR=3.9						
TXAR				LR	LR	23 01 44.2	
	comp=Z,83nm,19.8s,MS4.2,baz=315,slow=30						
TXAR	Lajitas Array	89.14	56	P	P	22 29 45.4	-0.2
TXAR				LR	LR	23 01 44.1	
HLID	Hailey	90.02	40	eP	P	22 29 48.8	-0.4
	comp=Z,1.0nm,1.0s,mb4.1						
ANMO	Albuquerque	90.10	50	LR	LR	23 03 46.3	
	comp=Z,138nm,20.2s,MS4.4,slow=31						
ENH	Enshi	90.67	304	eP	P	22 29 52.7	+0.1
	comp=Z,75nm,1.3s,mb5.9						
NEW	Newport	91.49	35	LR	LR	23 06 22.0	
	comp=Z,78nm,20.2s,MS4.2,baz=55,slow=32						
PDAR	Pinedale Array	92.42	43	P	P	22 30 00.9	+0.5
	comp=Z,0.6nm,0.9s,mb3.9,baz=198,slow=4.7,SNR=5.9						
BOZ	Bozeman (W)	92.86	39	eP	P	22 30 02.6	+0.3
	comp=Z,4.2nm,1.0s,mb4.8						
KMI	Kunming	93.41	296	P	P	22 30 08.3	+2.9
KMI				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb5.1						
KMI	Kunming	93.41	296	P	P	22 30 08.3	+2.9
	comp=Z,12nm,1.3s,mb5.2						
CMAR	Chiang Mai Arr	93.52	289	P	P	22 30 07.9	+1.9
	comp=Z,2.1nm,0.6s,mb4.7,baz=141,slow=4.0,SNR=13						
ILAR	Eielson Array	93.94	12	P	P	22 30 06.5	-0.3
	comp=Z,1.3nm,0.8s,mb4.4,baz=217,slow=5.5,SNR=11						
JTS	JuntasAbangare	95.81	81	LR	LR	23 04 27.6	
	comp=Z,105nm,18.9s,MS4.3,baz=236,slow=30						
LPAZ	La Paz	98.34	113	LR	LR	23 03 56.2	
	comp=Z,81nm,20.5s,MS4.2,baz=27,slow=29						
MKAR	Makanchi Array	116.40	311	PKP	PKPdf	22 35 32.3	+0.3
	comp=Z,0.7nm,0.5s,baz=190,slow=0.8,SNR=15						
BVAR	Borovoye Array	124.64	318	PKP	PKPdf	22 35 47.6	-0.2
	comp=Z,1.2nm,0.5s,baz=90,slow=2.9,SNR=6.8						
ARCES	ARCESS Array B	135.19	349	PKP	PKPdf	22 36 08.0	+0.6
	comp=Z,2.0nm,0.7s,slow=1.2,SNR=8.4						
FINES	FINESS Array B	142.04	343	PKhKP		22 36 15.8	
	comp=Z,0.8nm,0.5s,baz=72,slow=6.0,SNR=9.8						
MSL	Mosul	145.17	296	ePKP	PKPdf	22 36 29.0	+2.9
NB2	NORSAR Subarra	145.21	354	PKPabc	PKPdf	22 36 26.3	+0.9
	comp=Z,24nm,1.0s,baz=10.0,slow=3.7						
NOA	NORSAR Array B	145.21	354	PKPbc	PKPbc	22 36 26.6	+0.8
	comp=Z,12nm,1.0s,baz=13,slow=2.4,SNR=21						
NAO01	NORSAR Array S	145.43	354	ePKPdf	PKPdf	22 36 27.2	+1.5
MALT	Malatya	148.57	301	ePKPdf	PKPdf	22 36 33.7	+2.0
MALT				ePKPbc	PKPdf	22 36 37.5	+5.8
AKASG	Malin Array Be	149.02	328	PKPbc	PKPdf	22 36 36.1	+4.1
	comp=Z,1.4nm,0.5s,baz=32,slow=2.4,SNR=11						
SUW	Suwalki	149.05	337	ePKPdf	PKPdf	22 36 36.8	+4.8
ASF	Jabal al Asfar	150.55	289	PKPbc	PKPdf	22 36 42.4	+7.5
	comp=Z,4.0nm,1.0s,baz=336,slow=1.1,SNR=5.6						
BR131	Keskin Array S	151.82	305	ePKPab	PKPab	22 36 55.7	+1.3
BRTR	Keskin Array B	151.82	305	PKPbc	PKPdf	22 36 44.2	+7.6
	comp=Z,1.9nm,0.7s,baz=131,slow=3.7,SNR=8.7						
BRTR				PKPab	PKPab	22 36 55.5	+1.1
	comp=Z,3.9nm,0.6s,baz=71,slow=4.4,SNR=14						
KWP	Kalwaria	152.71	332	ePKPbc	PKPdf	22 36 46.3	+8.8
CLL	Collm	154.34	346	ePKP1	PKPdf	22 36 50.0	+10
BRG	Berggiesshubel	154.53	345	P	PKPab	22 37 03.6	-1.9
KHC	Kasperske Hory	156.24	344	eP	PKPab	22 37 13.0	+0.2
KHC				e		22 37 17.5	
KHC	Kasperske Hory	156.24	344	ePKPAB	PKPab	22 37 13.0	+0.2
KHC				x	x	22 37 17.5	

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*NEIC **28** 22:48:15.8±4.4, 24.74N×62.90E, h10^{km}, mb4.3/2, Error ellipse: s-maj=88.3km s-min=18.7km az=178.0*

*IDC **28** 22:48:16.2±5.9, 25.02N×62.83E, mb3.9/10, mb1 4.0/10, mb1mx3.8/22, mbtmp3.9/10, Error ellipse: s-maj=119.7km s-min=25.4km az=178.0*

*OMAN **28** 22:48:24.0, 24.97N×62.58E, h30^{km}, Error ellipse: s-maj=140.0km s-min=14.7km az=258.0*

*CSEM **28** 22:48:24.0, 24.97N×62.58E, h30^{km}, mb3.5, Error ellipse: s-maj=140.0km s-min=14.7km az=258.0, After OMAN*

ISC 28 22:48:15.0±0.8**, 24.5N**±0.1×**63.28E**±0.07**, h33**^{km}**, n33, σ1**^{s}**40**/34**, mb3.9**/11**, 3C-3D, Off coast of Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIDO	Bidbid	4.81	259	⇓P	P	22 49 27.9	+0.9
	SNR=13						
SMDO	Samad	5.00	254	⇓P	P	22 49 30.7	+1.0
	SNR=16						
JMDO	Jabal Madar	5.21	247	⇑P	P	22 49 35.0	+2.4
	SNR=16						
HOQ	Hoqain	5.53	262	⇑P	P	22 49 36.4	-0.7
BANOM	Banah	6.47	284	⇓P	P	22 49 47.1	-3.3
	SNR=20						
ASHO	Ashiyiah	6.58	273	⇑P	P	22 49 49.9	-1.9
	SNR=64						
JASL	Jaisalmer	7.28	69	ex	S	22 51 17.0	-7.1
KHET	Khetri	11.78	70	eP	P	22 51 01.5	-2.2
KHET				AMb	AMB	22 51 05.0	
	comp=Z,6.3nm,1.2s						
KHET				eS	S	22 53 07.0	-8.1
KUDL	Kundal	12.39	70	eP	P	22 51 09.7	-2.1
KUDL				eS	S	22 53 21.9	-7.7
SONA	Sohna	12.92	70	eS	S	22 53 33.6	-8.9
SONA				AML	AML	22 53 38.0	
	comp=N,13nm,0.8s						
SONA				AML	AML	22 53 41.1	
	comp=E,12nm,0.1s						
AYAN	Aya Nagar	13.01	69	eP	P	22 51 21.9	+1.7
THN	Thein Dam	13.48	51	eP	P	22 51 25.1	-1.2
THN	Thein Dam	13.48	51	eP	P	22 51 25.1	-1.2
	comp=E,37nm,0.6s						
SMLA	Simla	13.94	59	i P	x	22 51 30.2	
SMLA				i x	x	22 53 59.2	
AML	Almayashu	19.58	24	P	P	22 52 43.6	+0.7
	SNR=13						
UCH	Uchtor	19.97	25	P	P	22 52 48.7	+1.6
	SNR=6.0						
KZA	Kyzart	20.14	27	P	P	22 52 50.0	+1.0
	SNR=5.7						
ULHL	Ulahol	20.69	28	P	P	22 52 56.8	+2.1
	SNR=6.7						
USP	Ospenovka	20.86	24	P	P	22 52 56.9	+0.5
	SNR=9.5						
GNI	Garni	22.03	319	P	P	22 53 07.3	-0.9
	comp=E,2.3nm,0.5s,mb3.9,baz=206,slow=23,SNR=5.0						
GNI	Garni	22.03	319	P	P	22 53 07.3	-0.9
KIV	Kislovodsk	25.68	324	eP	P	22 53 44.6	+1.0
	comp=E,17nm,1.1s,mb4.5						
KIV				e	pP	22 53 53.6	+0.6
MKAR	Makanchi Array	26.94	30	P	P	22 53 57.0	+1.8
	comp=E,1.6nm,0.6s,mb3.7,baz=213,slow=10,SNR=28						
BVAR	Borovoye Array	28.98	9	P	P	22 54 13.9	+0.4
	comp=E,0.6nm,0.5s,mb3.6,baz=190,slow=9.0,SNR=4.7						
ZAL	Zalesovo	33.51	23	P	P	22 54 54.2	+0.9
	comp=E,1.6nm,0.5s,mb4.2,baz=215,slow=10,SNR=5.3						
AKASG	Malin Array Be	37.03	324	P	P	22 55 22.1	-1.2
	comp=E,1.3nm,0.4s,mb4.1,baz=126,slow=8.4,SNR=9.0						
SONM	Songino Array	41.16	44	P	P	22 56 02.3	+4.6
	comp=E,1.1nm,0.8s,mb3.5,baz=256,slow=8.0,SNR=9.9						
FINES	FINESS Array B	44.73	336	P	P	22 56 25.3	-1.2
	comp=E,0.8nm,0.7s,mb3.6,baz=117,slow=8.5,SNR=7.7						
GERES	GERESS Array B	45.58	315	P	P	22 56 33.2	-0.4
	comp=E,0.3nm,0.6s,mb3.4,baz=108,slow=8.4,SNR=9.2						
ARCES	ARCESS Array B	50.25	344	P	P	22 57 08.7	-1.0
	comp=E,1.8nm,0.9s,mb4.1,baz=149,slow=7.1,SNR=5.3						
NB2	NORSAR Subarra	50.73	330	P	P	22 57 11.7	-1.7
	comp=E,1.1nm,0.6s,mb4.0,baz=113,slow=7.4						
NB2	NORSAR Subarra	50.73	330	P	P	22 57 11.7	-1.7
	comp=E,1.1nm,0.6s,mb4.0						
NOA	NORSAR Array B	50.73	330	P	P	22 57 11.5	-1.9
	comp=E,0.6nm,0.8s,mb3.6,baz=140,slow=4.1,SNR=2.1						

MOS 28 22:53:08.9±2.3**, 44.28N×44.99E, h9**^{km}**, mb3.7**/1**, Error ellipse: s-maj=40.7km s-min=11.8km az=67.5, Ukraine - Moldova - Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNR	Ardon	1.21	206	ePG	Pg	22 53 33.4	+0.4
ARNR				eS	Sb	22 53 50.9	+3.9
KIV	Kislovodsk	1.69	260	i PN	Pn	22 53 43.7	+4.8
KIV				pmax	pmax		
	comp=Z,15nm,0.9s						
ZEI	Tsey	1.71	208	ePN	Pn	22 53 40.4	+1.3
ZEI				eS	Sn	22 54 03.9	+2.7

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*ATH **28** 22:54:24.7, 39.27N×20.60E, h31^{km}±2^{km}, MD3.3/6*

*NEIC **28** 22:54:24.7, 39.27N×20.60E, h31^{km}, MD3.3(ATH), After ATH.*

*THE **28** 22:54:25.8, 39.24N×20.60E, h10^{km}, ML3.0*

*CSEM **28** 22:54:25.4±0.1, 39.26N×20.60E, h23^{km}±1^{km}, ML3.0, Error ellipse: s-maj=3.1km s-min=1.8km az=80.0*

ISC 28 22:54:25.4±0.5**, 39.25N**±0.03×**20.52E**±0.04**, h22**^{km}±5^{km}**, n17, σ0**^{s}**87**/30**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.31	332	ePg	Pb	22 54 32.3	-0.1
IGT				eSg	Sb	22 54 38.2	+1.1
JAN	Janina	0.48	32	ePB	Pb	22 54 34.3	-0.7
JAN				eSB	Sb	22 54 41.4	-0.2
LKD	Levkas	0.56	170	ePg	Pb	22 54 36.0	-0.4
LKD				eSg	Sb	22 54 43.9	+0.1
KEK	Kerkira	0.72	310	ePN	Pn	22 54 40.0	-0.3
KEK				eSN	Sn	22 54 51.3	+0.6
SRN	Sarande	0.74	327	ePn	Pn	22 54 40.7	+0.2
SRN				i Sn	Sn	22 54 56.6	+5.4
MEV	Metsovon	0.76	46	ePg	Pb	22 54 39.1	-0.7
MEV				eSg	Sb	22 54 50.6	+0.8
LSK	Leskovik	0.90	4	i Pn	Pn	22 54 42.0	-0.7
LSK				i Sn	Sn	22 54 59.5	+4.4
LSK	Leskovik	0.90	4	ePn	Pn	22 54 42.0	-0.7
LSK				i Sn	Sn	22 54 59.5	+4.4
EVR	Evrytania	1.06	108	ePN	Pn	22 54 44.3	-0.7
EVR				eSN	Sn	22 54 58.8	-0.3
VLS	Valsamata	1.08	177	ePB	Pb	22 54 44.8	-0.4
VLS				eSN	Sn	22 55 01.1	+1.4
RLS	Riolos of Patr	1.41	148	ePN	Pn	22 54 49.8	-0.2
RLS				eSN	Sn	22 55 08.6	+0.6
AGG	Agios Georgios	1.43	99	ePg	Pn	22 54 50.7	+0.4

AGG				eSg	Sn	22 55 11.0	+2.5
KZN	Kozani	1.43	42	ePN	Pn	22 54 49.7	-0.6
LIT	Litokhoron	1.74	60	ePb	Pb	22 54 56.3	-0.1
LIT				eSb	Sb	22 55 19.5	+1.5
LKR	Lokris	2.02	107	ePN	Pn	22 54 57.4	-1.5
NEO	Neokhori	2.10	88	ePN	Pn	22 54 58.2	-1.7
SKO	Skopje	2.80	14	ePn	Pn	22 55 10.0	0.0

IDC 28 22:57:32.3±15.0,**3.17N**×**126.24E**,**h247**^{km}±164^{km}, **mb3.4**/6,**mb1 3.5**/6,**mb1mx3.3**/18,**mbtmp4.0**/6,**Error ellipse: s-maj=87.0km s-min=25.0km az=61.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.15	182	P	P	23 01 59.1	+0.2
	7.4nm,0.7s,baz=1.9,slow=10,SNR=6.9						
WRA	Warramunga Arr	24.31	161	P	P	23 02 26.9	-2.2
	2.6nm,0.5s,baz=336,slow=11,SNR=12						
WB2	Warramunga Arr	24.31	161	eP	P	23 02 26.8	-2.4
STKA	Stephens Creek	37.79	158	P	P	23 04 25.4	-1.2
	1.7nm,0.4s,baz=3.5,slow=8.3,SNR=5.4						
SONM	Songino Array	47.67	342	P	P	23 05 43.1	-2.7
	0.3nm,0.4s,baz=157,slow=7.6,SNR=4.4						
MKAR	Makanchi Array	57.73	326	P	P	23 06 58.0	-1.5
	0.7nm,0.5s,baz=121,slow=7.6,SNR=16						
BVAR	Borovoye Array	67.52	327	P	P	23 08 01.7	-1.9
	0.2nm,0.3s,baz=135,slow=10,SNR=4.0						

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*IDC **28** 23:01:49.7±1.4,26.74S×176.20W,mb4.2/3,mb1 4.5/4, mb1mx4.0/14,mbtmp4.3/4,Error ellipse: s-maj=53.4km s-min=25.7km az=111.0*

ISC 28 23:01:49.0±5.6,**26.7S**±0.1×**176.2W**±0.2,**h5**^{km}±35^{km},**n15,** σ**0**^{s}**.90**/7,**mb4.1**/3,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.98	211	Pn	Pn	23 02 38.1	+0.3
	93nm,0.3s,baz=94,slow=23,SNR=10						
RAO				Sn	Sn	23 03 14.6	+0.2
	98nm,0.3s,baz=85,slow=23,SNR=6.8						
WRA	Warramunga Arr	45.71	268	P	P	23 10 11.9	-1.1
	3.3nm,0.6s,mb4.5,baz=107,slow=7.7,SNR=17						
MJAR	Matsushiro Arr	76.16	324	P	P	23 13 41.1	+1.1
	0.6nm,0.4s,mb3.9,baz=172,slow=8.1,SNR=4.8						
MAW	Mawson	76.33	200	P	P	23 13 40.3	0.0
	1.2nm,0.7s,mb4.0,baz=133,slow=5.8,SNR=4.1						
VNA3	Neumayer Olymp	81.88	176		P	23 14 10.0	-0.2
VNA3	Neumayer Olymp	81.88	176		pP	23 14 22.5	+11
VNA2	Neumayer--Watz	82.33	176		P	23 14 12.3	-0.3
VNA2	Neumayer--Watz	82.33	176		pP	23 14 23.9	+10
MKAR	Makanchi Array	116.58	311	PKP	PKPdf	23 20 35.0	-1.6
	0.4nm,0.8s,baz=135,slow=5.1,SNR=4.1						
BVAR	Borovoye Array	124.81	318	PKP	PKPdf	23 20 49.9	-2.5
	0.2nm,0.5s,baz=14,slow=5.9,SNR=3.5						
NB2	NORSAR Subarra	145.29	354	PKPabc	PKPbc	23 21 28.4	+0.7
	1.0nm,0.8s,baz=12,slow=3.1						
NB2	NORSAR Subarra	145.29	354	PKPab	PKPab	23 21 28.4	-0.8
NOA	NORSAR Array B	145.29	354	PKPbc	PKPbc	23 21 27.7	0.0
	1.5nm,0.8s,baz=3.0,slow=2.4,SNR=5.6						
AKASG	Malin Array Be	149.17	328	PKPbc	PKPdf	23 21 39.0	+2.6
	0.2nm,0.2s,baz=34,slow=3.4,SNR=5.4						
BRTR	Keskin Array B	152.01	305	PKPbc	PKPdf	23 21 47.5	+6.4
	0.3nm,0.4s,baz=90,slow=1.4,SNR=3.5						

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*ROM **28** 23:38:07.1±1.5,35.82N×11.72E,h12^{km},Md3.4/3,Ml3.4/3, Error ellipse: s-maj=26.8km s-min=8.4km az=28.0*

*NEIC **28** 23:38:07.1,35.82N×11.72E,h12^{km},ML3.4(ROM),After ROM.*

*TUN **28** 23:38:08.2,35.94N×11.23E,h10^{km},MD4.2*

*CSEM **28** 23:38:09.2±0.1,35.92N×11.30E,h40^{km},MD4.2,Error ellipse: s-maj=3.8km s-min=2.0km az=142.0*

ISC 28 23:38:06.4±1.7,**35.85N**±0.07×**11.52E**±0.06,**h12**^{km}±13^{km}, **n19,**σ**0**^{s}**.97**/21,**Tunisia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTS	Pantelleria	1.03	21	Pg	Pg	23 38 25.9	-1.3
	226nm,0.5s						
MBZ	Menzel Bouzelf	1.08	320	iP	Pb	23 38 26.2	-0.3
ZGN	Zaghouan	1.27	295	iP	Pb	23 38 28.5	-1.2
TROT	Trozza	1.59	260	iP	Pn	23 38 33.2	-1.4
KRIT	Krib	2.04	285	iP	Pn	23 38 42.0	+0.9
MEDT	Meda	2.18	218	iP	Pn	23 38 43.0	0.0
FAVR	Favara	2.23	50	Pn	Pn	23 38 45.5	+1.7
	33nm,0.4s						
ERC	Erice	2.34	21	Pg	Pg	23 38 45.4	-7.9
	225nm,0.7s						
WDD	Wield Dalam	2.44	89	Pn	Pn	23 38 46.0	-0.7
WDD				Sn	Sn	23 39 15.3	-1.4
	195nm,0.6s						
MART	Mareth	2.50	205	iP	Pn	23 38 48.5	+0.9
SGNT	Sidi Gnaou	2.57	212	iP	Pn	23 38 48.0	-0.7
BERT	Berda	2.61	233	iP	Pn	23 38 50.0	+0.8
GHAT	Ghardimaou	2.68	285	iP	Pn	23 38 43.8	-6.4
GIB	Gibilmanna	2.93	42	Pn	Pn	23 38 54.5	+0.7
PLLN	Pollina	3.00	44	Pn	Pn	23 38 56.1	+1.4
SSY	Sortino	3.14	64	Pn	Pn	23 38 56.6	-0.1
SSY				Sn	Sn	23 39 33.4	-1.1
LLI	Lipari	3.77	46	Pn	Pn	23 39 05.9	+0.2
	352nm,1.2s						
MSRU	Castanea	4.00	52	Pn	Pn	23 39 09.6	+0.7
SOI	Samo	4.25	57	Pn	Pn	23 39 13.4	+0.8
	528nm,5.6s						

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*TAP **28** 23:38:12.9,23.92N×121.59E,h4^{km},ML4.0*

TAP Felt III J at Hualien, I J at Chiawan, I J at Shilin.

*JMA **28** 23:38:13.7±0.5,23.93N×121.74E,M3.1*

ISC 28 23:38:12.3±0.5,**23.90N**±0.02×**121.68E**±0.02,**h0**^{km}±3^{km}, **n51,**σ**0**^{s}**.84**/86,**8C-2D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.11	319	⇑iP	Pg	23 38 14.8	+0.4
ESF	Shoufeng Towns	0.16	261	eP	Pg	23 38 15.3	-0.3
ESF				S	Sg	23 38 17.3	-0.4
TWD	Chiawan	0.20	337	⇑iP	Pg	23 38 16.6	+0.3
TWD				S	Sg	23 38 19.6	+0.7
TEGC	Jichi Village	0.23	215	P	Pg	23 38 18.3	+1.5
TEGC				S	Sg	23 38 23.2	+3.4
ESL	Shilin	0.24	250	⇓iP	Pg	23 38 16.6	-0.5
ESL				S	Sg	23 38 19.1	-1.2
EHY	Hungye	0.51	220	P	Pg	23 38 22.4	-0.1
ENA	Nanau	0.53	6	⇑iP	Pg	23 38 23.2	+0.3
ENA				S	Sg	23 38 30.6	+0.6
TWT	Tachien	0.58	308	eP	Pg	23 38 22.9	-1.0
NNS	Nan Shan	0.61	333	⇑P	Pg	23 38 24.2	-0.3
NNS				S	Sg	23 38 32.2	-0.5
SMLT	Sun Moon Lake	0.71	269	P	Pg	23 38 25.9	-0.7
SMLT				S	Sg	23 38 34.5	-1.6
TWC	Suao	0.73	12	P	Pg	23 38 27.1	+0.3
TWC				S	Sg	23 38 38.1	+1.7
ENTT	Nioudou	0.75	352	⇑iP	Pg	23 38 27.2	0.0
ENTT				S	Sg	23 38 38.3	+1.1
TYC	Yuchr	0.75	271	⇓iP	Pg	23 38 26.5	-0.9
TYC				S	Sg	23 38 35.3	-2.1
YUS	Yu-Shan	0.78	239	P	Pg	23 38 27.9	0.0
YUS				S	Sg	23 38 38.9	+0.6
TWE	Neicheng	0.82	359	⇑iP	Pg	23 38 28.7	0.0
TWE				S	Sg	23 38 40.5	+0.9
NSK	Sanguang	0.83	339	⇑iP	Pg	23 38 28.7	-0.2
NSK				S	Sg	23 38 39.4	-0.6
CHKT	Chengkung	0.84	200	eP	Pg	23 38 29.3	+0.2
ALS	Alishan	0.89	245	eP	Pg	23 38 29.5	-0.5
ALS				S	Sg	23 38 41.0	-0.9
WNT	Mingjian	0.91	269	eP	Pg	23 38 30.9	+0.4
WNT				S	Sg	23 38 43.2	+0.5
ELDTW	Lidau	0.93	221	eP	Pg	23 38 29.9	-1.0
TWQ1	Liyutan	0.94	299	eP	Pg	23 38 31.4	+0.3
TWQ1				S	Sg	23 38 43.1	-0.6
TCU	Taichung	0.95	285	eP	Pb	23 38 31.6	+0.3
TCU				S	Sg	23 38 45.0	+1.0
NSTT	Nanjuang	0.96	320	eP	Pb	23 38 30.9	-0.5
NSTT				S	Sg	23 38 42.5	-1.7
CHN5	Tsauling	0.97	252	P	Pb	23 38 31.5	-0.1
CHN5				S	Sg	23 38 46.0	+1.5
NSY	Sanyi	0.99	302	eP	Pb	23 38 32.9	+0.9
NSY				S	Sg	23 38 45.8	+0.6
WGK	Gukeng	1.05	259	eP	Pb	23 38 32.9	-0.1
WGK				S	Sb	23 38 48.3	+1.3
TWA	Mucha	1.08	355	eP	Pb	23 38 33.4	-0.2
TWB1	Santiao Chiao	1.14	14	eP	Pb	23 38 34.2	-0.4
TWB1				S	Sb	23 38 49.5	-0.4
TAP1	Taipei	1.15	353	eP	Pb	23 38 34.4	-0.3
TAP1				S	Sb	23 38 49.2	-0.8
NCU	National Centr	1.16	337	eP	Pb	23 38 34.1	-0.8
CHN2	Minshiung	1.16	252	eP	Pb	23 38 35.6	+0.7
WTP	Ta-pu	1.17	237	⇑iP	Pb	23 38 35.3	+0.2
WTP				S	Sb	23 38 52.1	+1.3
NWF	Wu-fen Shan	1.17	4	P	Pb	23 38 35.7	+0.6
TWG	Pinlang	1.21	208	eP	Pb	23 38 34.3	-1.4
TWS1	Kuangyinshan	1.22	349	eP	Pb	23 38 36.7	+0.7
TWS1				S	Sb	23 38 55.0	+2.8
TWK	Hsinying	1.26	240	eP	Pb	23 38 36.5	-0.1
TWK				S	Sb	23 38 54.0	+0.7
CHN1	Nanshi	1.27	236	eP	Pb	23 38 36.5	-0.3
CHN1				S	Sb	23 38 54.5	+0.9
SGST	Jiashian	1.29	231	eP	Pb	23 38 37.0	-0.2
SGST				S	Sb	23 38 54.9	+0.7
YOJ	Yonaguni jima	1.34	65	P	Pb	23 38 38.0	0.0
YOJ				eS	Sb	23 38 55.9	+0.3
TWY	Chenhua	1.38	357	eP	Pb	23 38 38.3	-0.3
SSD	Sandimen	1.50	220	eP	Pn	23 38 40.1	-0.4
SSD				S	Sb	23 39 00.9	+0.8
TWM1	Shoushan	1.57	228	eP	Pn	23 38 41.4	-0.2
EAST	Anshuo	1.69	207	eP	Pn	23 38 43.4	+0.2
PCYT	Pengchaiyu	1.76	12	eP	Pn	23 38 43.3	-1.0
SCZT	Fangliau	1.80	213	eP	Pn	23 38 45.0	+0.1
SCZT				S	Sn	23 39 08.8	-0.1
IRIF	Iriomote-Funau	1.92	76	P	Pn	23 38 47.6	+1.0
IRIF				eS	Sn	23 39 11.3	-0.5
HATJ	Hateruma jima	1.95	85	eS	Sn	23 39 11.8	-0.7
PNG	Penghu	1.98	261	eP	Pn	23 38 43.5	-3.8
PNG				S	Sn	23 39 09.7	-3.4
JKRS	Kuro-shima	2.15	80	P	Pn	23 38 50.8	+0.9
JKRS				eS	Sn	23 39 17.8	+0.1
JIJ	Ishigaki jima	2.30	78	P	Pn	23 38 52.4	+0.4
JIJ				eS	Sn	23 39 20.8	-0.5
JTJ	Tarama	2.85	74	eS	Sn	23 39 33.9	-1.6

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*STR **28** 23:40:02.9±0.2,49.33N×6.82E,h1^{km}±1^{km},Ml3.1,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*BNS **28** 23:40:03.7±0.5,49.35N×6.74E,h1^{km},ML2.8*

*BGR **28** 23:40:03.0±0.3,49.37N×6.85E,h1^{km},ML3.0/7,Error ellipse: s-maj=3.3km s-min=2.2km az=41.0*

*PRU **28** 23:40:03.7,49.34N×6.90E*

*CSEM **28** 23:40:03.1±0.0,49.31N×6.82E,h2^{km},ML3.4/25,Error ellipse: s-maj=0.8km s-min=0.7km az=160.0*

*LEDBW **28** 23:40:03.1±0.3,49.32N×6.84E,h1^{km},ML2.9,Error ellipse: s-maj=8.0km s-min=4.0km az=101.0*

*LDG **28** 23:40:03.1±0.1,49.32N×6.82E,h1^{km},Md3.3/2,Ml3.4/28, Error ellipse: s-maj=1.1km s-min=1.0km az=103.0, Suspected Mining induced.*

*NEIC **28** 23:40:03.0,49.32N×6.84E,h1^{km},ML3.4(LDG), ML2.9(LEDBW),ML3.1(STR),ML3.1(VIE),ML2.9(SZGRF), After LEDBW.*

NEIC Probably mining induced.

ISC 28 23:40:00.4±0.2,**49.32N**±0.01×**6.81E**±0.02,**n116,** σ**1**^{s}**.34**/237,**7C-4D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.42	23	⇓eP	Pg	23 40 10.9	+2.1
RUP				Sg	Sg	23 40 17.0	+2.6
WLF	Walferdange	0.55	309	ePg	Pg	23 40 13.8	+2.3
	SNR=40						
WLF				eSg	Sg	23 40 19.5	+0.7
	SNR=5.1						
WLF	Walferdange	0.55	309	⇓eP	Pg	23 40 13.9	+2.4
WLF	Walferdange	0.55	309	⇓eP	Pg	23 40 13.9	+2.4
LANF	Langenberg	0.73	117	Pg	Pg	23 40 16.6	+1.5
LANF	Langenberg	0.73	117	⇑ePg	Pg	23 40 16.7	+1.6
ABH	Alteburg	0.74	40	⇑ePg	Pg	23 40 16.5	+1.2
KTD	Kalmit	0.83	89	Pg	Pg	23 40 19.0	+2.0
KTD	Kalmit	0.83	89	Pg	Pg	23 40 18.3	+1.3
CDF	Champ du Feu	0.95	161	ePg	Pg	23 40 20.7	+1.2
CDF				ePn	Pn	23 40 21.8	+0.9
CDF				eSg	Sg	23 40 32.8	+0.6
	342nm,0.2s						
STR	Strasbourg	0.96	139	Pg	Pg	23 40 20.9	+1.2
WLS	Welschbruch	0.97	158	Pg	Pg	23 40 22.0	+2.2
WLS				Sg	Sg	23 40 36.1	+3.3
WLS	Welschbruch	0.97	158	Pg	Pg	23 40 22.4	+2.6
ECH	Echery	1.12	168	Pg	Pg	23 40 24.1	+1.2
ECH				Sg	Sg	23 40 40.0	+2.1
ECH	Echery	1.12	168	P	Pb	23 40 24.6	+2.2
THEF	They Montfort	1.22	207	⇓iPn	Pn	23 40 25.9	+1.2
THEF	They Montfort	1.22	207	Pg	Pg	23 40 25.7	+0.9
THEF				Sg	Sg	23 40 42.5	+1.5
SWS	Schriesheim	1.25	81	Pg	Pg	23 40 25.6	+0.3
SWS				Sg	Sg	23 40 42.3	+0.4
LIBD	Limburg	1.28	156	P*	Pb	23 40 28.0	+3.0
LIBD				S*	Sb	23 40 45.7	+3.8
STB	Steinbach	1.28	1	ePg	Pg	23 40 26.7	+0.7
STB				eSg	Sg	23 40 43.5	+0.5
	193nm,0.8s						
TOD	Tromm	1.33	77	Pg	Pg	23 40 27.7	+0.7
TOD				i Sg	Sg	23 40 46.2	+1.4
TOD	Tromm	1.33	77	Pn	Pn	23 40 26.4	+0.1
TOD	Tromm	1.33	77	Pg	Pg	23 40 27.7	+0.7
TOD				Sg	Sg	23 40 46.1	+1.3
HAU	Haudompre	1.35	193	ePn	Pn	23 40 27.2	+0.7
HAU				ePg	Pg	23 40 28.3	+1.0
HAU				eSg	Sg	23 40 45.5	+0.2
	238nm,0.3s						
KLL	Kalltalsperre	1.37	347	ePg	Pg	23 40 27.3	-0.5
MEM	Membach	1.40	338	P	Pb	23 40 27.9	+0.8
MEM				S	Sb	23 40 45.8	+0.5
TNS	Taunus Mts	1.40	49	ePn	Pn	23 40 27.4	+0.2
	SNR=19						
TNS				ePg	Pg	23 40 28.5	+0.2
	SNR=29						
TNS				eSg	Sg	23 40 46.3	-0.6
	SNR=3.8						
TNS	Taunus Mts	1.40	49	ePn	Pn	23 40 27.5	+0.3
TNS				eSg	Sg	23 40 47.7	+0.8
BFO	Black Forest	1.41	134	ePn	Pn	23 40 28.3	+1.0
	SNR=6.4						
BFO				ePg	Pg	23 40 29.8	+1.3
	SNR=41						
BFO				eSg	Sg	23 40 48.2	+0.9
	SNR=8.0						
BFO	Black Forest	1.41	134	ePn	Pn	23 40 28.2	+0.9
BFO				eSg	Sg	23 40 48.0	+0.7
MEZF	Maizieres J’vi	1.42	236	ePn	Pn	23 40 28.5	+1.0
	baz=53						
MEZF				ePg	Pg	23 40 29.7	+1.0
	baz=53						
MEZF				eSn	Sn	23 40 46.5	-0.6
	68nm,0.3s						
MEZF	Maizieres J’vi	1.42	236	ePg	Pg	23 40 29.7	+1.0
MEZF				eSn	Sn	23 40 46.5	-0.6
	34nm,0.3s						
LBG	Lerchenberg	1.46	116	Pg	Pg	23 40 30.5	+0.9
LBG				Sg	Sg	23 40 49.1	+0.1
MOF	Molkenrain	1.48	172	Pn	Pn	23 40 30.2	+1.8
MOF				Pg	Pg	23 40 31.3	+1.3
MOF				Sg	Sg	23 40 51.2	+1.5
MOF	Molkenrain	1.48	172	Pg	Pg	23 40 31.4	+1.4
MOF				Sg	Sg	23 40 51.3	+1.6
MOF	Molkenrain	1.48	172	Pg	Pg	23 40 31.3	+1.3
MOF				Sg	Sg	23 40 51.2	+1.5
HINF	Hinteralfeld	1.50	179	ePn	Pn	23 40 29.2	+0.5
HINF				ePg	Pg	23 40 31.0	+0.6
HINF				eSn	Sn	23 40 48.4	-0.8
HINF				eSg	Sg	23 40 50.4	0.0
	273nm,0.2s						
GIVF	Givet	1.51	302	ePn	Pn	23 40 30.3	+1.5
GIVF				eSn	Sn	23 40 48.9	-0.6
	74nm,0.3s						
KIZ	Kirchzarten	1.55	151	Pg	Pg	23 40 32.1	+0.8
KIZ				Sg	Sg	23 40 52.1	+0.2
HGN	Heimansgroeve	1.56	339	ePn	Pn	23 40 30.4	+0.9
	baz=160						
HGN				ePg	Pg	23 40 32.2	+0.7
HGN				eSn	Sn	23 40 50.0	-0.7
HGN				eSg	Sg	23 40 52.6	+0.3
HGN				eRg		23 41 15.0	
HGN	Heimansgroeve	1.56	339	ePn	Pn	23 40 30.2	+0.8
	SNR=5.0						
HGN				ePg	Pg	23 40 31.9	+0.4
	SNR=12						
HGN				eSg	Sg	23 40 51.5	-0.7
	SNR=4.3						
HGN	Heimansgroeve	1.56	339	ePg	Pg	23 40 32.2	+0.7
HGN				eSn	Sn	23 40 50.0	-0.7
HGN				eSg	Sg	23 40 52.6	+0.3
SFTF	Sexfontaines	1.62	227	ePn	Pn	23 40 31.5	+1.2
	baz=44						
SFTF				eSg	Sg	23 40 54.3	+0.1
	113nm,0.4s						
DOU	Dourbes	1.64	299	P	Pn	23 40 32.0	+1.4
DOU				S	Sb	23 40 52.7	+0.3
FELD	Feldberg	1.64	151	Pn	Pn	23 40 31.7	+1.0
FELD				Pg	Pg	23 40 34.1	+0.9
FELD	Feldberg	1.64	151	Pg	Pg	23 40 34.2	+1.0
FELD				Sg	Sg	23 40 55.8	+0.7
STU	Stuttgart	1.66	108	ePn	Pn	23 40 32.1	+1.1
	SNR=22						
STU				ePg	Pg	23 40 34.1	+0.5
	SNR=4.0						
STU				eSg	Sg	23 40 55.7	0.0
	SNR=2.3						
STU	Stuttgart	1.66	108	ePg	Pg	23 40 33.9	+0.3
STU				eSg	Sg	23 40 54.1	-1.6
BNS	Bensberg	1.67	8	ePg	Pg	23 40 31.7	-2.0
BNS				eSg	Sg	23 40 52.3	-3.6
	173nm,0.4s						
SPAK	Spaichingen	1.79	132	Pg	Pg	23 40 37.0	+0.9
SIND	Sindeldorf	1.83	88	Pn	Pn	23 40 33.4	0.0
BAIF	Baives	1.85	295	ePn	Pn	23 40 34.9	+1.3
BAIF				ePg	Pg	23 40 37.4	+0.1
BAIF				eSn	Sn	23 40 56.3	-1.7
BAIF				eSg	Sg	23 41 01.4	-0.5
	54nm,0.4s						
BUCH	Bad Urach	1.89	116	Pn	Pn	23 40 36.3	+2.0
BBS	Basel-Blauen	1.91	166	Pn	Pn	23 40 35.7	+1.2
LOMF	Lomont	1.97	180	Pg	Pg	23 40 40.3	+0.6
GUT	Gutenstein	1.97	128	Pn	Pn	23 40 36.5	+1.1
GUT				Sg	Sg	23 41 04.9	-1.1
BUG	Bochum--Univer	2.15	8	eSg	Sg	23 41 08.6	-3.3
	SNR=3.7						
SISB	Singen-Sch Ber	2.17	138	S*	Sb	23 41 12.2	+4.4
HDH	Heidenheim	2.35	107	Pg	Pg	23 40 46.7	-0.7
HDH				Sg	Sg	23 41 17.3	-1.5
WTSB	Winterswijk	2.65	360	ePn	Pn	23 40 46.1	+0.9
WTSB				eSn	Sn	23 41 19.6	+1.1
WTSB	Winterswijk	2.65	360	ePn	Pn	23 40 45.4	+0.2
WTSB				eSg	Sg	23 41 25.4	-3.3
	SNR=3.0						
UBR	Uberruh	2.73	125	Pn	Pn	23 40 48.7	+2.4
UBR				S*	Sb	23 41 30.0	+5.7
CABF	La Chapelle	2.75	190	ePn	Pn	23 40 47.0	+0.4
CABF				eSg	Sg	23 41 30.0	-2.0
	59nm,0.5s						
LOR	Lormes	2.84	225	ePn	Pn	23 40 47.8	-0.1
	baz=43						
LOR				eSn	Sn	23 41 21.0	-2.3
LOR				eSg	Sg	23 41 33.0	-2.1
	57nm,0.4s						
DAVA	Damuels	2.88	134	⇑iPN	Pn	23 40 50.1	+1.6
DAVA				i PG	Pg	23 40 58.3	+0.3
DAVA				i SN	Sn	23 41 23.7	-0.7
DAVA				i SG	Sg	23 41 35.6	-0.8
	32nm,0.6s						
GRF	Grafenberg Arr	2.90	81	eSg	Sg	23 41 34.1	-2.8
IBBN	Ibbenburen	3.06	11	eSg	Sg	23 41 37.9	-4.2
	SNR=2.4						
SSF	Saint Saulge	3.16	226	ePn	Pn	23 40 51.9	-0.5
SSF				eSn	Sn	23 41 28.0	-3.3
SSF				eSg	Sg	23 41 41.5	-4.1
	19nm,0.4s						
FUR	Furstenfeldbru	3.17	110	eSg	Sg	23 41 44.7	-1.3
SMF	Signal de Mont	3.33	218	ePn	Pn	23 40 54.1	-0.8
SMF				eSn	Sn	23 41 31.0	-4.8
SMF				eSg	Sg	23 41 47.1	-4.3
	25nm,0.3s						
MOX	Moxa	3.37	65	ePn	Pn	23 40 56.5	+1.1
	SNR=3.4						
MOX				ePg	Pg	23 41 05.2	-2.6
	SNR=2.1						
MOX				eSg	Sg	23 41 50.9	-1.9
MOX	Moxa	3.37	65	ePg	Pg	23 41 05.1	-2.7
MOX				eSg	Sg	23 41 50.9	-1.9
CLZ	Clausthal	3.40	41	ePn	Pn	23 40 55.4	-0.4
CLZ				eSg	Sg	23 41 48.8	-4.8
	SNR=1.6						
HYF	Humbligny	3.46	235	ePn	Pn	23 40 56.6	0.0
HYF				eSg	Sg	23 41 51.5	-4.0
SQTA	Sankt Quirin	3.61	124	⇑iPN	Pn	23 40 59.7	+0.9
SQTA				i PG	Pg	23 41 11.8	-0.7
SQTA				i SN	Sn	23 41 41.0	-1.7
SQTA				i SG	Sg	23 41 57.1	-3.5
	11nm,0.4s						
NEUB	Neuenburg	3.71	57	eSg	Sg	23 41 58.7	-5.1
	SNR=1.3						
WERD	Werda	3.73	70	ePn	Pn	23 41 00.4	-0.1
WATA	Walderalm	3.75	120	⇑iPN	Pn	23 41 01.7	+1.0
WATA				i SN	Sn	23 41 44.3	-1.9
WATA				i SG	Sg	23 42 03.1	-2.0
	5.7nm,0.3s						
NKC	Novy Kostel	3.77	74	ePG	Pg	23 41 09.2	-6.4
NKC				ex	x	23 41 13.3	
NKC				eSG	Sg	23 42 02.4	-3.4
	18nm,0.4s						
NKC	Novy Kostel	3.77	74	ePg	Pg	23 41 09.2	-6.4
NKC				Sg	Sg	23 42 02.4	-3.4
	18nm,0.4s						
LPL	La Plagne	3.80	181	ePn	Pn	23 41 02.2	+0.7
LPL				eSn	Sn	23 41 42.9	-4.7
LPL				eSg	Sg	23 42 01.3	-5.7
	13nm,0.6s						
LPL	La Plagne	3.80	181	ePn	Pn	23 41 02.2	+0.7
LPL				eSg	Sg	23 42 01.3	-5.7
	6.5nm,0.6s						
TANN	Tannenbergstha	3.82	71	ePg	Pg	23 41 13.8	-2.8
	SNR=4.5						
TANN				eSg	Sg	23 42 02.8	-4.7
	SNR=3.7						
LPG	La Plagne	3.82	181	ePn	Pn	23 41 01.9	+0.1
LPG				ePg	Pg	23 41 16.0	-0.7
LPG				eSn	Sn	23 41 44.2	-3.9
LPG				eSg	Sg	23 42 03.4	-4.2
	21nm,0.7s						
WTTA	Wattenberg	3.82	121	⇑iPN	Pn	23 41 02.6	+0.8
WTTA				i PG	Pg	23 41 15.7	-1.0
WTTA				i SN	Sn	23 41 45.8	-2.3
WTTA				i SG	Sg	23 42 05.2	-2.4
	4.2nm,0.3s						
BGF	Bois d’Agland	3.84	225	ePn	Pn	23 41 00.9	-1.1
BGF				eSn	Sn	23 41 44.2	-4.3
	83nm,0.4s						
WET	Wettzell	3.98	90	ePn	Pn	23 41 03.6	-0.4
WET				eSn	Sn	23 41 47.4	-4.7
	SNR=1.9						
WET				eSg	Sg	23 42 08.5	-4.4
	SNR=3.5						
TCF	Toulx Ste Croi	4.33	227	ePn	Pn	23 41 08.1	-1.0
TCF				eSn	Sn	23 41 56.4	-4.7
TCF				eSg	Sg	23 42 19.2	-5.5
	8.4nm,0.3s						
KHC	Kasperske Hory	4.44	90	ePn	Pn	23 41 10.6	0.0
KHC				e		23 41 28.8	
KHC				e		23 41 58.0	
KHC				eSn	Sn	23 42 00.3	-3.5
KHC				eSg	Sg	23 42 22.8	-5.4
KHC	Kasperske Hory	4.44	90	ePN	Pn	23 41 10.6	0.0
KHC				ex	x	23 41 28.8	
KHC				x	x	23 41 58.0	
KHC				eSN	Sn	23 42 00.3	-3.5
KHC				eSG	Sg	23 42 22.8	-5.4
	12nm,0.9s						
KHC	Kasperske Hory	4.44	90	ePn	Pn	23 41 10.6	0.0
KHC				eSn	Sn	23 42 00.3	-3.5
KHC				Sg	Sg	23 42 22.8	-5.4
	12nm,0.9s						
CLL	Collm	4.44	61	ePg	Pg	23 41 27.0	-2.1
CLL				eSg	Sg	23 42 22.6	-5.6
	SNR=1.4						
CLL	Collm	4.44	61	ePg	Pg	23 41 27.0	-2.1
CLL				eSg	Sg	23 42 24.0	-4.3

ORIF	Oris-en-Rattie	4.45	189	ePn	Pn	23 41 09.4	-1.3
ORIF				ePg	Pg	23 41 25.0	-4.2
ORIF				eSg	Sg	23 42 22.2	-6.2
	11nm,0.4s						
GEC2	GERESS Array S	4.55	93	ePn	Pn	23 41 12.1	-0.1
GEC2				eSn	Sn	23 42 00.0	-6.6
	SNR=3.7						
GEC2				eSg	Sg	23 42 26.5	-5.5
	SNR=2.0						
MBDF	Montbardon	4.59	180	ePn	Pn	23 41 13.0	+0.3
MBDF				eSg	Sg	23 42 26.7	-6.6
	5.5nm,0.4s						
VIVF	Saint-Julien-l	4.69	199	ePn	Pn	23 41 13.6	-0.6
VIVF				ePg	Pg	23 41 30.0	-4.1
VIVF				eSn	Sn	23 42 04.8	-5.4
VIVF				eSg	Sg	23 42 29.5	-7.2
	6.4nm,0.3s						
FLN	La Foliniere	4.83	266	ePn	Pn	23 41 15.9	-0.2
	baz=88						
FLN				eSn	Sn	23 42 08.1	-5.5
	18nm,0.4s						
BRG	Berggiesshubel	4.85	69	Pg	Pg	23 41 32.5	-4.7
BRG				Sg	Sg	23 42 37.3	-4.5
BRG	Berggiesshubel	4.85	69	Pg	Pg	23 41 32.5	-4.7
BRG				Sg	Sg	23 42 37.3	-4.5
PRU	Pruhonice	5.07	79	ePN	Pn	23 41 19.9	+0.4
PRU				eSG	Sg	23 42 42.2	-6.9
GRR	Gorron	5.15	263	ePn	Pn	23 41 19.8	-0.8
GRR				ePg	Pg	23 41 39.0	-4.2
GRR				eSn	Sn	23 42 15.5	-6.1
	8.0nm,0.3s						
PVCC	Panska Ves	5.16	73	eSG	Sg	23 42 45.3	-6.8
MOA	Molln	5.16	104	⇑iPN	Pn	23 41 20.9	+0.1
MOA				i SN	Sn	23 42 19.0	-3.0
RJF	Les Rejaudoux	5.39	224	ePn	Pn	23 41 21.0	-3.0
MFF	Saint Martin d	5.40	242	ePn	Pn	23 41 22.0	-2.2
MFF				eSn	Sn	23 42 20.7	-7.4
	4.3nm,0.4s						
SMRF	Simiane la Rot	5.41	190	eSn	Sn	23 42 20.7	-7.5
	2.4nm,0.5s						
CAF	Calviac	5.46	218	ePn	Pn	23 41 22.9	-2.1
CAF				eSn	Sn	23 42 23.2	-6.2
	3.5nm,0.4s						
SBF	Sospel	5.47	175	eSn	Sn	23 42 23.4	-6.4
	7.7nm,0.5s						
LASF	Ste Croix	5.62	202	ePn	Pn	23 41 25.0	-2.3
LASF				eSg	Sg	23 42 59.3	-8.3
	9.5nm,0.5s						
FRF	La Foret Royal	5.76	181	ePn	Pn	23 41 27.8	-1.4
FRF				eSn	Sn	23 42 30.0	-7.0
	2.2nm,0.3s						
LFF	La Frestale	6.03	226	ePn	Pn	23 41 30.1	-2.9
DPC	Dobruska-Polom	6.24	77	eSG	Sg	23 43 20.6	-7.6
SGMF	Saint Gilles	6.28	264	ePn	Pn	23 41 35.0	-1.6
ROSF	Rostrenen	6.73	265	ePn	Pn	23 41 41.0	-1.9
QUIF	Quistinic	6.76	262	ePn	Pn	23 41 41.4	-2.0

IDC 29 23:59:56.4±1.4, 0.15N×97.41E, mb3.9/8, mb1 4.0/9, mb1mx3.9/17, mbtmp3.9/9, ML4.3/1, Error ellipse: s-maj=52.2km s-min=25.9km az=50.0

ISC 29 00:00:00.5±1.1, 0.3N±0.2×97.6E±0.2, h33^{km}, n9, σ0^{s}77/9, mb3.8/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	18.10	4	Pn	P	00 04 11.2	-0.1
	0.3nm,0.3s,baz=194,slow=11,SNR=4.6						
WRA	Warramunga Arr	41.26	121	P	P	00 07 44.2	-0.2
	0.5nm,0.4s,mb3.5,baz=303,slow=8.9,SNR=3.2						
SONM	Songino Array	47.97	8	P	P	00 08 38.4	+0.4
	0.7nm,0.5s,mb4.0,baz=189,slow=11,SNR=7.7						
SONM				PcP	PcP	00 10 04.3	-2.0
	0.2nm,0.7s,baz=270,slow=1.2,SNR=3.7						
MKAR	Makanchi Array	48.20	346	P	P	00 08 39.8	-0.1
	0.9nm,0.7s,mb3.9,baz=158,slow=8.0,SNR=8.5						
ZAL	Zalesovo	54.50	351	P	P	00 09 26.4	-0.8
	1.4nm,0.3s,mb4.3,baz=288,slow=4.2,SNR=7.7						
BRTR	Keskin Array B	69.98	313	P	P	00 11 09.9	-0.9
	0.7nm,0.7s,mb3.7,baz=135,slow=7.3,SNR=6.4						
FINES	FINESS Array B	80.96	333	P	P	00 12 12.3	-0.7
	1.5nm,1.0s,mb3.9,baz=37,slow=19,SNR=4.0						
ARCES	ARCESS Array B	83.50	340	P	P	00 12 27.4	+1.5
	0.4nm,0.6s,mb3.7,baz=63,slow=2.7,SNR=3.6						
GERES	GERESS Array B	85.72	319	P	P	00 12 38.5	+1.0
	0.2nm,0.8s,mb3.4,baz=90,slow=2.7,SNR=4.2						

MAN 29 00:27:37.1, 17.49N×119.53E, h12^{km}, mb4.1, ML3.0, MS2.7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	Dolores	1.14	82	eP	Pb	00 27 57.4	-0.8
BOLP	Bolinao	1.17	162	eP	Pb	00 27 57.4	-1.3
APYP	Conner	1.67	77	eP	Pn	00 28 05.6	-0.9
APYP				eS	Sn	00 28 23.9	-4.0
SCZP	Santa Cruz	1.75	168	eP	Pn	00 28 07.5	+0.1
CVP	Callao Caves	2.19	84	eP	Pn	00 28 13.0	-0.9
CVP				eS	Sn	00 28 48.0	+6.8
BALP	Baler	2.62	131	eP	Pn	00 28 18.6	-1.4

JMA 29 00:31:00.4±0.3, 23.46N×122.06E, h21^{km}, M2.7

TAP 29 00:31:00.5, 23.54N×121.87E, h17^{km}, ML3.2, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.39	48	P	Pn	00 31 23.9	-1.4
YOJ				eS	Sb	00 31 41.3	-1.6
HATJ	Hateruma jima	1.84	73	eS	Sn	00 31 50.6	-4.2
IRIF	Iriomote-Funau	1.88	65	P	Pn	00 31 30.7	-1.5
IRIF				eS	Sn	00 31 52.7	-2.9
JKRS	Kuro-shima	2.08	70	P	Pn	00 31 33.6	-1.5
JKRS				eS	Sn	00 31 56.6	-4.2
JIJ	Ishigaki jima	2.23	68	P	Pn	00 31 35.2	-2.2
JIJ				eS	Sn	00 32 00.7	-4.1
JTJ	Tarama	2.81	66	eS	Sn	00 32 16.1	-3.3

SSS 29 00:40:55.5, 13.02N×88.94W, h48^{km}, MD3.4, ML3.6

CASC 29 00:40:55.9±1.5, 13.01N×88.94W, h34^{km}±14^{km}, MD3.8, ML3.6, 4C-5D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNVI	San Vicente	0.61	10	eP	P	00 41 08.4	+0.5
SNVI				eS	S	00 41 18.4	+1.7
LFRS	El Faro	0.62	349	⇓eP	P	00 41 08.3	+0.2
LCBS	La Ceiba	0.65	357	⇓iP	P	00 41 08.6	+0.1
LCBS				eS	S	00 41 18.7	+1.0
SNET	Serv Nac Est T	0.73	337	eP	P	00 41 09.5	-0.2
SNET				eS	S	00 41 20.5	+0.6
SNET				i		00 41 21.7	
	comp=Z,2µm,0.2s						
LBRS	Las Brisas	0.73	352	eP	P	00 41 10.1	+0.3
LBRS				eS	S	00 41 20.6	+0.8
LFU	La Fuente	0.76	347	⇓eP	P	00 41 10.4	+0.3
VSM	San Miguel	0.77	57	⇓eP	P	00 41 10.5	+0.1
VSM				eS	S	00 41 22.6	+1.7
BOQS	Boqueron	0.79	336	⇓eP	P	00 41 10.9	+0.3
BOQS				eS	S	00 41 22.6	+1.1
BLLM	Bellamira	0.81	58	eP	P	00 41 10.5	-0.3
BLLM				eS	S	00 41 22.9	+1.0
CAHU	Cacacuatique	1.04	43	⇑eP	P	00 41 14.1	0.0
SBLS	San Blas	1.06	321	eP	P	00 41 14.7	+0.3
SBLS				eS	S	00 41 29.5	+1.3
SNJE	San Jose	1.07	323	⇑eP	P	00 41 14.9	+0.3
SNJE				eS	S	00 41 29.6	+1.1
CNCH	Conchagua	1.11	76	eP	P	00 41 14.4	-0.8
CNCH				eS	S	00 41 30.2	+0.7
RTR	El Retiro	1.12	322	⇑eP	P	00 41 15.7	+0.4
RTR				eS	S	00 41 31.0	+1.3
RBDL	Robledal	1.32	327	⇑eP	P	00 41 18.1	0.0
RBDL				eS	S	00 41 35.4	+0.7
TEL3	Telica 3	2.09	102	eP	P	00 41 29.1	-0.1
TELN	Telica	2.10	101	eP	P	00 41 31.2	+1.9
MIRN	Miramar	2.25	104	eP	P	00 41 29.2	-2.3

CSEM 29 01:17:08.3±1.7, 34.51N×4.14W, h27^{km}±10^{km}, MD3.1, Error ellipse: s-maj=66.1km s-min=36.5km az=81.0

CNRM 29 01:17:08.2, 34.65N×4.03W, h30^{km}, MD3.1

MDD 29 01:17:10.4±0.7, 34.48N×4.55W, mb2.6/4, Error ellipse: s-maj=7.6km s-min=4.5km az=67.0, PRXIMO

ISC 29 01:17:10.6±1.2, 34.50N±0.05×4.4W±0.1, h19^{km}±15^{km}, n7, σ0^{s}94/12, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TZK	Tazeka	0.45	155	i P	Pb	01 17 19.0	-0.8
TZK				i S	Sb	01 17 26.5	+0.4
MIF	Mishlifen	1.28	212	i P	Pn	01 17 32.5	-1.2
MIF				i S	Sb	01 17 51.0	+1.1
CZD	Col de Zad	1.55	200	i P	Pn	01 17 37.0	-0.6
CZD				i S	Sn	01 17 58.0	+0.7
EMIJ	Mijas	2.08	352	Pn	Pn	01 17 44.8	-0.4
	0.1nm,0.1s,SNR=7.9						
EMIJ				Sn	Sn	01 18 11.9	+1.2
	3.4nm,0.4s,SNR=7.9						
EQES	Quesada	3.47	18	Pn	Pn	01 18 06.8	+1.9
	0.1nm,0.1s,SNR=7.9						
EQES				Sn	Sn	01 18 45.5	-0.4
	0.0nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	3.73	331	Pn	Pn	01 18 07.8	-0.9
	0.2nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.73	335	Pn	Pn	01 18 22.1	-0.8
	0.1nm,0.1s,SNR=7.9						

NEIC 29 01:21:35.0±0.9, 2.73N×96.05E, h30^{km}, mb4.0/2, Error ellipse: s-maj=23.6km s-min=15.7km az=50.0

IDC 29 01:21:43.7±14.0, 3.01N×96.45E, h96^{km}±122^{km}, mb3.7/6, mb1 3.8/7, mb1mx3.5/18, mbtmp4.0/7, ML4.2/1, MS3.1/1, Ms1 3.3/1, ms1mx3.0/13, Error ellipse: s-maj=109.4km s-min=24.7km az=55.0

ISC 29 01:21:34.1±1.0, 2.8N±0.1×96.1E±0.1, h33^{km}, n12, σ1^{s}04/10, mb4.0/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.18	61	eP	P	01 22 50.7	-0.7
CMAR	Chiang Mai Arr	15.82	10	P	P	01 25 18.1	+2.0
	0.3nm,0.3s,baz=199,slow=11,SNR=4.5						
CMAR				LR	LR	01 31 51.2	
	comp=Z,74nm,20.8s,baz=185,slow=39						
WRA	Warramunga Arr	43.82	123	P	P	01 29 38.8	-0.3
	0.7nm,0.5s,mb3.6,baz=302,slow=9.1,SNR=4.8						
WRAB	Tennant Creek	43.83	123	P	P	01 29 39.9	+0.8
	2.2nm,0.7s,mb4.0						
MKAR	Makanchi Array	45.44	347	P	P	01 29 51.8	+0.1
	2.5nm,0.3s,mb4.5,baz=161,slow=9.0,SNR=39						
SONM	Songino Array	45.74	10	P	P	01 29 53.3	-0.9
	0.9nm,0.5s,mb4.0,baz=192,slow=9.7,SNR=6.6						
BVAR	Borovoye Array	54.39	341	P	P	01 30 59.3	-0.8
	0.6nm,0.4s,mb3.9,baz=158,slow=8.0,SNR=5.9						
ZRNK	Zerenda	54.78	340	P	P	01 31 01.0	-1.9
	0.6nm,0.4s,mb4.0						
FINES	FINESS Array B	78.08	333	P	P	01 33 32.0	+0.9
	1.9nm,1.0s,mb4.0,baz=209,slow=20,SNR=5.8						
ARCES	ARCESS Array B	80.67	340	P	P	01 33 45.8	+0.8
	1.1nm,0.8s,mb3.9,baz=90,slow=4.9,SNR=4.7						
TXAR	Lajitas Array	142.87	29	PKP	PKPdf	01 41 04.6	-0.4
	0.1nm,0.3s,baz=296,slow=2.0,SNR=3.8						
TXAR	Lajitas Array	142.87	29	PKP	PKPdf	01 41 04.6	-0.4

ATH 29 01:36:15.5, 39.19N×23.64E, h46^{km}±2^{km}, MD2.9/6, ML3.2

THE 29 01:36:15.5, 39.19N×23.88E, h13^{km}

NEIC 29 01:36:15.5, 39.20N×23.65E, h43^{km}, MD2.8(ATH), After ATH.

CSEM 29 01:36:15.0±0.1, 39.16N×23.84E, h15^{km}, ML3.1, Error ellipse: s-maj=3.4km s-min=1.8km az=83.0

ISC 29 01:36:15.1±0.5, 39.20N±0.02×23.88E±0.05, h19^{km}±5^{km}, n21, σ1^{s}11/32, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOS	Alonnisos	0.03	181	ePg	Pb	01 36 17.7	-0.7
AOS				eSg	Sb	01 36 20.1	-0.7
NEO	Neokhori	0.52	282	eP	Pb	01 36 25.2	-0.2
NEO				eS	Sb	01 36 32.3	-0.1
XOR	Xorichti	0.56	287	ePg	Pb	01 36 26.4	+0.4
XOR				eSg	Sb	01 36 33.9	+0.4
PAIG	Paliouri	0.74	348	ePg	Pb	01 36 29.8	+0.7
PAIG				eSg	Sb	01 36 41.1	+2.4
LKR	Lokris	0.88	232	eP	Pb	01 36 30.5	-1.0
LKR				eS	Sb	01 36 40.7	-2.1
MPAR	Parnis Oros	1.05	186	eP	Pb	01 36 35.0	+0.5
OUR	Ouranopolis	1.13	4	ePg	Pb	01 36 35.8	0.0
PTL	Penteli	1.15	181	eP	Pb	01 36 37.5	+1.4
PTL				eS	Sb	01 36 52.0	+1.4
PLG	Polygyros	1.22	344	eP	Pb	01 36 36.4	-0.8
PLG				eS	Sb	01 36 51.8	-0.8
AGG	Agios Georgios	1.22	262	ePg	Pn	01 36 37.0	-0.2
AGG				eSg	Sb	01 36 54.6	+2.0
AGG	Agios Georgios	1.22	262	ePg	Pn	01 36 37.0	-0.2
AGG				eSg	Sb	01 36 54.6	+2.0
LIA	Limnos Island	1.22	55	eP	Pb	01 36 39.6	+2.3
ATH	Athens Observa	1.23	186	eP	Pn	01 36 37.1	-0.3
ATH				eS	Sb	01 36 53.4	+0.4
MGER	Gerania Oros	1.31	202	eP	Pn	01 36 37.5	-1.0
MGER	Gerania Oros	1.31	202	eP	Pn	01 36 38.5	0.0
NSAL	Nisos Salamina	1.33	194	eP	Pn	01 36 38.0	-0.9
LIT	Litokhoron	1.40	310	ePg	Pn	01 36 39.4	-0.4
LIT				eSg	Sb	01 36 59.4	+1.6
SOH	Sokhos	1.67	346	ePb	Pb	01 36 43.6	-1.3
SRS	Serrai	1.93	354	ePb	Pb	01 36 47.0	-2.3
SRS	Serrai	1.93	354	ePb	Pb	01 36 47.0	-2.3
NVR	Nevrokopi	2.15	360	eP	Pn	01 36 50.2	-0.3

IDC 29 01:45:52.0±1.3, 4.40S×153.05E, mb4.0/3, mb1 4.3/3, mb1mx3.9/13, mbtmp4.0/3, Error ellipse: s-maj=57.2km s-min=32.8km az=125.0

ISC 29 01:45:55.0±2.1, 4.5S±0.4×153.1E±0.5, h33^{km}, n7, σ1^{s}54/5, mb4.0/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	21.99	247	eP	P	01 50 46.5	-1.6
	13nm,0.5s,mb4.6						
WB2	Warramunga Arr	23.87	228	eP	P	01 51 06.6	0.0
WRA	Warramunga Arr	23.88	228	P	P	01 51 07.8	+1.1
	5.1nm,0.3s,mb4.4,baz=50,slow=9.9,SNR=15						
MKAR	Makanchi Array	80.30	319	P	P	01 58 05.7	+1.3
	0.7nm,0.5s,mb3.8,baz=117,slow=5.4,SNR=6.6						
ILAR	Eielson Array	81.76	22	P	P	01 58 10.8	-0.8
	0.2nm,0.6s,mb3.2,baz=252,slow=5.7,SNR=4.2						
GERES	GERESS Array B	123.95	329	PKP	PKPdf	02 04 52.3	+2.1
	0.2nm,0.3s,baz=63,slow=4.4,SNR=5.2						
BDFB	Brasilia	151.06	134	PKPbc	PKPdf	02 05 48.0	+8.2
	1.5nm,0.5s,baz=216,slow=3.7,SNR=4.6						

CSEM 29 02:02:43.3±1.3, 34.49N×4.21W, h30^{km}, MD3.2, Error ellipse: s-maj=27.8km s-min=24.2km az=15.0

CNRM 29 02:02:43.3, 34.61N×4.16W, h30^{km}, MD3.2

MDD 29 02:02:45.0±0.6, 34.40N×4.58W, mb2.5/5, Error ellipse: s-maj=7.0km s-min=4.2km az=64.0, PRXIMO

ISC 29 02:02:44.3±0.5, 34.47N±0.02×4.55W±0.06, h10^{km}, n11, σ1^{s}22/21, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TZK	Tazeka	0.48	142	i P	Pg	02 02 53.0	-1.1
TZK				i S	Sg	02 03 00.0	-0.7
IFR	Ifrane	1.07	207	P	Pb	02 03 06.0	+1.6
IFR				S	Sb	02 03 23.0	+4.8
MIF	Mishlifen	1.20	208	i P	Pb	02 03 06.0	-0.7
MIF				i S	Sb	02 03 24.0	+1.9
CZD	Col de Zad	1.49	196	i P	Pn	02 03 11.0	-0.3
CZD				i S	Sb	02 03 31.0	+0.5
EMIJ	Mijas	2.10	355	Pn	Pn	02 03 18.7	-1.2
	SNR=7.9						
EMIJ				Sn	Sn	02 03 46.3	-0.1
	0.7nm,0.2s,SNR=7.9						
ZFT	Errachidia	2.43	176	eP	Pn	02 03 23.0	-1.8
ZFT				i S	Sn	02 03 51.0	-3.9
EBER	Berja	2.77	29	Pn	Pn	02 03 29.7	+0.1
	0.8nm,0.3s,SNR=7.9						
EBER				Sn	Sn	02 04 04.9	+1.4
	3.1nm,0.3s,SNR=7.9						
EQES	Quesada	3.53	19	Pn	Pn	02 03 41.7	+1.3
	0.1nm,0.2s,SNR=7.9						
EQES				Sn	Sn	02 04 23.4	+0.7
	0.3nm,0.3s,SNR=7.9						
EADA	Adamuz	3.69	360	Pn	Pn	02 03 44.3	+1.6
	0.0nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	3.71	333	Pn	Pn	02 03 44.1	+1.1
	0.0nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	02 04 26.2	-1.1
	0.3nm,0.3s,SNR=7.9						
EBAD	Badajoz	4.71	336	Pn	Pn	02 03 56.1	-1.1
	0.4nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	02 04 50.5	-2.1
	0.4nm,0.6s,SNR=7.9						

MOS 29 02:18:50.3±2.8, 42.74N×47.07E, h23^{km}, mb3.6/1, 1C, Error ellipse: s-maj=26.7km s-min=14.9km az=8.1, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNCR	Uncukul	0.20	263	⇑iPG	Pb	02 18 56.8	+1.0
UNCR				eS	Sb	02 19 00.8	+1.3
DBC	Dubki	0.33	328	i PG	Pb	02 18 58.8	+1.2
DBC				i S	Sb	02 19 05.0	+2.4
XNZR	Khunzakh	0.33	234	i PG	Pb	02 18 59.0	+1.3
XNZR				i S	Sb	02 19 06.0	+3.3
ARNR	Ardon	2.10	283	ePN	Pn	02 19 30.6	+5.9
ARNR				eS	Sn	02 19 54.0	+3.6
ZEI	Tsey	2.34	272	ePN	Pn	02 19 29.4	+1.2

NEIC 29 02:22:29.5, 31.18S×68.82W, h150^{km}, MD3.3(GUC), After GUC.

GUC 29 02:22:29.5±0.6, 31.18S×68.82W, h150^{km}, MD3.3, ML3.7, 2C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	Combarbala	1.87	270	eP	P	02 23 03.8	+0.4
CMCH				i S	S	02 23 29.5	-0.1
CMCH				AMP		02 23 31.7	
	comp=E,534nm,0.8s						
JACH	Jahuel	2.12	225	⇓iP	P	02 23 07.1	+0.6
JACH				i S	S	02 23 35.0	+0.1
FCH	Farellones	2.48	210	eP	P	02 23 11.8	+0.9
PACH	Papudo	2.61	238	eP	P	02 23 11.4	-1.2
PACH				i S	S	02 23 44.3	-1.1
PCH	Pirque	2.83	210	eP	P	02 23 15.6	+0.3
TACH	Talagante	3.05	215	i P	P	02 23 17.5	-0.7
CHCH	Chadas Angostu	3.15	209	⇑iP	P	02 23 19.5	-0.1
CACH	El Canelo	3.29	207	⇑iP	P	02 23 21.6	+0.2

NEIC 29 02:50:12.9, 38.94N×21.63E, h12^{km}, MD3.2(ATH), After ATH.

ATH 29 02:50:13.0, 38.93N×21.62E, h11^{km}±2^{km}, MD3.2/6

CSEM 29 02:50:13.5±0.1, 38.97N×21.62E, h10^{km}, MD3.2, Error ellipse: s-maj=2.0km s-min=1.4km az=18.0

THE 29 02:50:13.5, 39.02N×21.64E, h1^{km}, ML2.9

ISC 29 02:50:12.7±0.5, 38.97N±0.03×21.62E±0.03, h10^{km}, n21, σ1^{s}25/32, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.15	109	ePg	Pg	02 50 16.8	+0.5
EVR				eSg	Sg	02 50 20.0	+1.3
AGG	Agios Georgios	0.56	84	ePg	Pg	02 50 24.2	+0.3
AGG				eSg	Sg	02 50 31.7	+0.2
LKD	Levkas	0.80	251	ePg	Pg	02 50 28.7	-0.1
MEV	Metsovon	0.87	340	ePg	Pg	02 50 28.3	-1.9
MEV				eSg	Sg	02 50 41.4	-0.5
JAN	Janina	0.91	319	ePG	Pg	02 50 30.2	-0.8
JAN				eSB	Sb	02 50 43.8	+1.7
LKR	Lokris	1.12	106	ePn	Pn	02 50 34.1	-0.3
LKR				eSb	Sb	02 50 48.3	+0.1
VLS	Valsamata	1.13	226	ePB	Pb	02 50 34.2	+0.3
IGT	Igoumenitsa	1.15	300	ePg	Pg	02 50 35.1	-0.6
XOR	Xorichti	1.28	71	ePg	Pg	02 50 37.1	-1.3
XOR				eSg	Sg	02 50 55.2	-0.4
NEO	Neokhori	1.29	74	ePG	Pg	02 50 37.4	-1.2
NEO				eSB	Sb	02 50 54.9	+1.8
LIT	Litokhoron	1.32	30	ePg	Pg	02 50 37.3	-1.8
LIT				eSg	Sg	02 50 55.6	-1.1
KZN	Kozani	1.34	5	ePg	Pg	02 50 38.2	-1.4
KZN				eSb	Sb	02 50 56.8	+2.1
KEK	Kerkira	1.60	298	ePB	Pb	02 50 44.0	+2.1
KEK				eSB	Sb	02 51 05.3	+3.2
FNA	Florina	1.82	354	ePb	Pb	02 50 45.3	-0.5
PLG	Polygyros	1.99	44	ePN	Pn	02 50 49.1	+2.3
PLG				eSN	Sn	02 51 14.7	+2.7
GRG	Griva	2.08	17	ePn	Pn	02 50 47.4	-0.7
OUR	Ouranopolis	2.28	52	ePn	Pn	02 50 51.0	0.0
SOH	Sokhos	2.28	35	ePn	Pn	02 50 51.2	+0.2
SOH	Sokhos	2.28	35	ePn	Pn	02 50 51.2	+0.2
VLI	Veliai	2.47	155	ePg	Pg	02 50 59.5	-2.6
SRS	Serrai	2.63	35	ePn	Pn	02 50 55.7	-0.3

BJI 29 02:50:10.0, 37.97S×178.96W, h30^{km}, mB5.3, mb5.0, Msz4.1

NEIC 29 02:50:11.8, 38.01S×179.01W, h33^{km}, ML4.7(WEL), After WEL.

WEL 29 02:50:28.2±0.4, 38.41S×179.31E, h12^{km}, ML4.4/14, Error ellipse: s-maj=3.7km s-min=1.5km az=90.0

IDC 29 02:50:28.4±1.5, 38.54S×179.09E, mb4.2/2, mb1 4.4/3, mb1mx4.0/13, mbtmp4.2/3, ML3.7/1, MS3.8/1, Ms1 3.8/1, ms1mx3.0/17, Error ellipse: s-maj=56.5km s-min=30.6km az=168.0

ISC 29 02:50:27.6±1.0, 38.60S±0.03×179.22E±0.09, h12^{km}, n58, σ1^{s}29/61, mb4.1/2, 6C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	0.92	304	⇑P*	Pb	02 50 45.0	+0.1
PUZ				S*	Sb	02 50 56.7	-0.2
MXZ	Matakaoa Point	1.26	325	⇑P*	Pb	02 50 49.0	-1.7
MXZ				S*	Sb	02 51 04.8	-1.9
KNZ	Kokohu	1.28	250	P	Pb	02 50 53.5	+2.3
KNZ	Kokohu	1.28	250	PN	Pn	02 50 53.2	+1.8
MWZ	Matawai	1.36	280	P	Pb	02 50 52.7	+0.3
MWZ	Matawai	1.36	280	⇑PN	Pn	02 50 52.7	+0.3
URZ	Urewera	1.69	281	Pn	Pn	02 50 58.1	+0.9
	27nm,0.3s,baz=104,slow=7.3,SNR=128						
URZ	Urewera	1.69	281	P	Pn	02 50 57.5	+0.3
URZ	Urewera	1.69	281	PN	Pn	02 50 57.1	-0.1
BKZ	Black Stump Fm	2.21	254	P	Pn	02 51 06.3	+1.7
BKZ	Black Stump Fm	2.21	254	PN	Pn	02 51 06.2	+1.7
MOVZ	Moawhango	2.82	252	P	Pn	02 51 14.9	+1.5
MOVZ	Moawhango	2.82	252	PN	Pn	02 51 14.7	+1.3
TUVZ	Tukino	2.86	255	PN	Pn	02 51 15.4	+1.4
NGZ	Ngauruhoe	2.89	257	P	Pn	02 51 15.5	+1.2
NGZ	Ngauruhoe	2.89	257	PN	Pn	02 51 15.4	+1.1
TSZ	Takapari Road	2.92	239	P	Pn	02 51 15.6	+0.8
TSZ	Takapari Road	2.92	239	PN	Pn	02 51 15.5	+0.7
TSZ				SN	Sn	02 51 51.8	+1.6
CNZ	Chateau	2.93	257	PN	Pn	02 51 16.3	+1.4
DRZ	Dome Shelter	2.93	255	ePN	Pn	02 51 15.9	+1.0
FWVZ	Far West T-bar	2.94	256	eP	Pn	02 51 16.3	+1.3
FWVZ	Far West T-bar	2.94	256	PN	Pn	02 51 16.2	+1.2
BFZ	Birch Farm	3.10	227	P	Pn	02 51 17.4	+0.1
BFZ	Birch Farm	3.10	227	PN	Pn	02 51 17.3	0.0
BFZ				SN	Sn	02 51 56.7	+2.0
MRZ	Mangatainoka R	3.49	233	P	Pn	02 51 23.1	+0.3
MRZ	Mangatainoka R	3.49	233	PN	Pn	02 51 23.0	+0.2
MRZ				SN	Sn	02 52 04.9	+0.4
MTW	Mount Morrison	3.84	227	P	Pn	02 51 26.8	-1.0
MTW	Mount Morrison	3.84	227	PN	Pn	02 51 26.6	-1.2
MTW				SN	Sn	02 52 13.2	-0.2
TRWZ	Traveller	3.90	223	ePN	Pn	02 51 27.3	-1.4
KIW	Kapiti Island	4.02	234	P	Pn	02 51 30.6	+0.2
KIW	Kapiti Island	4.02	234	ePN	Pn	02 51 30.4	0.0
PAWZ	Paruwai Farm	4.03	225	ePN	Pn	02 51 28.8	-1.7
PAWZ				SN	Sn	02 52 17.7	-0.5
MSWZ	Moikau Station	4.15	226	SN	Sn	02 52 20.2	-1.1
SNZO	South Karori	4.41	231	SN	Sn	02 52 26.2	-1.5
TCW	Tory Channel	4.62	234	P	Pn	02 51 37.7	-1.1
TCW	Tory Channel	4.62	234	ePN	Pn	02 51 38.1	-0.7
TCW				SN	Sn	02 52 31.3	-1.7
DUWZ	D’Urville Isla	4.65	240	ePN	Pn	02 51 38.8	-0.4
KHZ	Kahutara	5.77	227	eP	Pn	02 51 53.5	-1.7
KHZ	Kahutara	5.77	227	PN	Pn	02 51 53.5	-1.7

THZ	Tophouse	5.78	235	*e*P	Pn	02 51 53.9	-1.4
THZ	Tophouse	5.78	235	*e*PN	Pn	02 51 53.1	-2.2
THZ				SN	Sn	02 53 01.2	-1.1
MQZ	McQueen's Vall	7.12	222	SN	Sn	02 53 29.3	-6.4
RPZ	Rata Peaks	8.01	228	Pn	Pn	02 52 24.2	-2.4
	1.1nm,0.3s,baz=88,slow=3.9,SNR=4.8						
RPZ				Sn	Sn	02 53 50.8	-7.1
	5.0nm,0.3s,baz=5.0,slow=20,SNR=16						
DZM	Mont Dzumac	19.79	323	LR	LR	03 01 17.8	
	comp=Z,240nm,19.2s,baz=197,slow=33						
STKA	Stephens Creek	31.30	271	P	P	02 56 50.0	+0.3
	2.3nm,0.7s,mb4.1,baz=96,slow=9.2,SNR=6.9						
WRA	Warramunga Arr	42.86	283	P	P	02 58 26.4	-1.1
	2.4nm,0.7s,mb4.0,baz=124,slow=7.3,SNR=12						
VNA3	Neumayer Olymp	70.28	177	⇑*i*	P	03 01 45.3	+3.2
VNA3	Neumayer Olymp	70.28	177	*e*	P	03 01 50.9	+8.8
VNA2	Neumayer--Watz	70.68	178	⇑*i*	P	03 01 49.1	+4.6
VNA2	Neumayer--Watz	70.68	178	*e*	P	03 01 55.6	+11
VNA1	Neumayer--Stat	70.93	177	⇑*i*	P	03 01 48.3	+2.3
VNA1	Neumayer--Stat	70.93	177	*e*	P	03 01 54.3	+8.3
KEV	Kevo	145.46	343	*e*p	PKPbc	03 10 06.1	+1.2
ARCES	ARCESS Array B	145.96	344	PKPbc	PKPbc	03 10 08.2	+2.0
	7.1nm,0.7s,baz=45,slow=1.7,SNR=21						
EIL	Elat	149.27	264	PKPbc	PKPdf	03 10 19.2	+4.1
	1.6nm,0.7s,baz=21,slow=21,SNR=4.7						
KAF	Kangasniemi	151.20	334	*e*p	PKPdf	03 10 21.2	+4.2
FINES	FINESS Array B	151.73	333	PKPbc	PKPdf	03 10 23.1	+5.3
	1.7nm,0.8s,baz=45,slow=8.1,SNR=6.4						
BRTR	Keskin Array B	153.38	283	PKPbc	PKPdf	03 10 28.4	+7.5
	1.5nm,0.8s,baz=153,slow=5.5,SNR=7.6						

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*NEIC **29** 02:52:07.7±0.9, 30.75N×137.74E, h480^{km}±12^{km}, mb4.2/1, Error ellipse: s-maj=22.5km s-min=15.4km az=77.0*

*IDC **29** 02:52:07.8±0.7, 30.71N×137.75E, h481^{km}±13^{km}, mb3.1/8, mb1 3.2/13, mb1mx3.0/26, mbtmp4.0/13, Error ellipse: s-maj=25.9km s-min=10.9km az=69.0*

*JMA **29** 02:52:08.7±0.3, 31.07N×138.26E, h510^{km}, M3.9*

ISC 29 02:52:06.7±0.5**, 30.84N**±0.06×**137.9E**±0.1**, h493**^{km}±8^{km}**, n33, σ1^{s}18**/50**, mb3.5**/8**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	2.77	34	P	P	02 53 17.9	+1.7
	46nm,0.3s,baz=64,slow=21,SNR=34						
JHJ				S	S	02 54 16.0	+4.8
	8.8nm,0.3s,baz=73,slow=24,SNR=3.8						
JHJ2	Mitsune	2.77	35	P	P	02 53 17.9	+1.6
JIZS	Izushimoda	3.95	11	P	P	02 53 26.3	+1.4
JIM2	Oshima 3	4.07	18	P	P	02 53 26.1	+0.2
JNY	Yasuok	4.51	359	P	P	02 53 31.7	+2.0
JNY				S	S	02 54 38.0	+2.6
BSO3	Boso 3	4.51	28	P	P	02 53 29.5	-0.2
BSO3				S	S	02 54 35.2	-0.2
JOD2	Odawara 2	4.52	12	P	P	02 53 30.6	+0.8
JOD2				S	S	02 54 37.6	+2.1
BSO1	Boso 1	4.59	33	P	P	02 53 30.6	+0.2
BSO1				S	S	02 54 35.2	-1.5
BSO4	Boso 4	4.61	25	P	P	02 53 30.8	+0.2
BSO4				S	S	02 54 37.7	+0.8
JYN	Shimob	4.67	6	P	P	02 53 32.8	+1.6
JWT	Wachi	4.91	335	P	P	02 53 33.6	+0.3
JWT				S	S	02 54 40.7	-1.2
JHU	Hanno	5.12	12	P	P	02 53 35.5	+0.2
JHU				S	S	02 54 42.9	-2.5
JRY	Ryogami san	5.23	9	P	P	02 53 37.2	+0.9
JRY				S	S	02 54 46.4	-0.7
CBIJ	Chichi jima	5.27	134	P	P	02 53 36.0	-0.6
	5.3nm,0.3s,baz=276,slow=22,SNR=7.7						
CBIJ				S	S	02 54 46.6	-1.2
	14nm,0.3s,baz=278,slow=24,SNR=8.5						
MJAR	Matsushiro Arr	5.69	2	P	P	02 53 41.1	+0.4
	1.8nm,0.3s,baz=182,slow=11,SNR=11						
MJAR				S	S	02 54 54.1	-0.9
	0.9nm,0.3s,baz=166,slow=31,SNR=8.5						
MAJO	Matsushiro	5.69	2	*e*P	P	02 53 40.2	-0.5
MAT	Matsushiro	5.69	2	*e*P	P	02 53 41.0	+0.3
	11nm,0.5s						
MAT				*e*S	S	02 54 53.0	-2.1
MAT	Matsushiro	5.69	2	P	P	02 53 41.0	+0.3
MAT				S	S	02 54 53.3	-1.8
MAT	Matsushiro	5.69	2	P	P	02 53 41.2	+0.5
MAT				S	S	02 54 54.2	-0.9
JYT	Yasato	5.70	19	P	P	02 53 40.3	-0.5
JAG	Ashikaga	5.71	12	P	P	02 53 40.4	-0.5
JAG				S	S	02 54 53.1	-2.3
JHO	Hitachi	6.16	20	P	P	02 53 45.2	-0.1
JHO				S	S	02 55 02.3	-1.0
JNU	Nakatsue	6.41	293	P	P	02 53 46.4	-1.4
	4.3nm,0.3s,baz=77,slow=5.6,SNR=16						
JFK	Kawauchi	6.95	20	P	P	02 53 54.0	+0.8
JFK				S	S	02 55 16.5	-1.2
ASAJ	Asahikawa	13.76	14	P	P	02 55 07.5	+2.9
	1.1nm,0.3s,baz=211,slow=12,SNR=3.0						
SONM	Songino Array	29.44	314	P	P	02 57 33.0	+2.2
	0.7nm,0.9s,mb3.1,baz=108,slow=9.1,SNR=3.1						
CMAR	Chiang Mai Arr	37.33	260	P	P	02 58 36.0	-1.5
	0.8nm,0.3s,mb3.6,baz=49,slow=6.4,SNR=4.6						
MKAR	Makanchi Array	45.24	307	P	P	02 59 39.5	-0.8
	0.3nm,0.4s,mb3.0,baz=100,slow=8.8,SNR=3.7						
FITZ	Fitzroy Crossi	50.07	195	P	P	03 00 16.8	-0.5
	5.2nm,0.8s,mb3.9,baz=14,slow=8.3,SNR=5.8						
WRA	Warramunga Arr	50.61	184	P	P	03 00 21.1	-0.2
	1.2nm,0.3s,mb3.7,baz=0.1,slow=7.6,SNR=4.8						
BVAR	Borovoye Array	52.77	315	P	P	03 00 35.5	-1.1
	0.4nm,0.3s,mb3.2,baz=98,slow=10,SNR=4.0						
STKA	Stephens Creek	62.47	176	P	P	03 01 42.8	-0.1
	1.0nm,0.5s,mb3.5,baz=333,slow=11,SNR=3.2						
ARCES	ARCESS Array B	68.77	340	P	P	03 02 22.7	+1.1
	1.9nm,0.8s,mb3.7,baz=72,slow=7.7,SNR=5.5						

IDC 29 02:57:42.6±18.0**, 16.29S**×**175.69W, h271**^{km}±162^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/15**, mbtmp4.1**/3**, Error ellipse: s-maj=133.0km s-min=52.4km az=135.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	41.69	240	P	P	03 05 05.7	-1.1
	1.4nm,0.5s,baz=94,slow=12,SNR=5.4						
WB2	Warramunga Arr	47.49	258	*e*P	P	03 05 50.4	-2.4
WRA	Warramunga Arr	47.50	258	P	P	03 05 50.8	-2.1
	2.2nm,0.4s,baz=93,slow=6.4,SNR=14						
ILAR	Eielson Array	83.75	12	P	P	03 09 41.2	-0.9
	0.5nm,0.5s,baz=218,slow=5.4,SNR=7.4						
ARCES	ARCESS Array B	125.16	351	PKP	PKPdf	03 16 09.3	-1.2
	1.5nm,0.8s,baz=27,slow=2.0,SNR=4.7						
BRTR	Keskin Array B	145.40	318	PKPbc	PKPbc	03 16 48.9	-0.4
	0.9nm,0.5s,baz=113,slow=4.2,SNR=8.3						

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*INMG **29** 03:11:29.0±0.7, 36.58N×9.52W, h10^{km}, ML1.6, Error ellipse: s-maj=5.5km s-min=3.4km az=61.0*

MDD 29 03:11:28.5±2.2**, 36.65N**×**9.44W, mb2.6**/3**, Error ellipse: s-maj=19.2km s-min=13.3km az=42.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTEO	Sao Teotonio	1.06	32	*e*P	Pb	03 11 49.5	+0.2
PTEO				*e*S	Sb	03 12 05.0	+1.5
	5.1nm,0.2s						
PTEO	Sao Teotonio	1.06	32	Pn	Pn	03 11 49.5	-0.9
PTEO				Sn	Sn	03 12 05.0	-1.0
	2.5nm,0.2s						
PBEJ	Beja	1.85	42	*e*Pn	Pn	03 12 00.3	-1.5
PBEJ				*e*Sn	Sn	03 12 24.2	-2.1
	1.2nm,0.1s						
PBEJ	Beja	1.85	42	Pn	Pn	03 12 00.3	-1.5
PBEJ				Sn	Sn	03 12 24.2	-2.1
	0.6nm,0.1s						
PLOU	Loures	2.24	6	*e*Pn	Pn	03 12 05.2	-2.1
PLOU				*e*Sn	Sn	03 12 33.0	-3.1
	5.6nm,0.2s						
PLOU	Loures	2.24	6	Pn	Pn	03 12 05.2	-2.1
PLOU				Sn	Sn	03 12 33.0	-3.1
	2.8nm,0.2s						
EMIN	Mina Concepcio	2.47	62	Pn	Pn	03 12 09.2	-1.4
	0.1nm,0.1s,SNR=4.0						
EMIN				Sn	Sn	03 12 38.5	-3.4
	0.5nm,0.1s,SNR=7.9						
EBAD	Badajoz	2.84	42	Pn	Pn	03 12 13.6	-2.4
	0.2nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	03 12 47.6	-3.8
	1.5nm,0.3s,SNR=4.8						
ESPR	Espera	2.88	85	Sn	Sn	03 12 47.6	-4.8
	3.3nm,0.2s,SNR=7.9						
PTOM	Tomar	3.07	15	*e*Pn	Pn	03 12 16.6	-2.5
PTOM				*e*Sn	Sn	03 12 52.4	-4.7
	2.6nm,0.1s						
PTOM	Tomar	3.07	15	Pn	Pn	03 12 16.6	-2.5
PTOM				Sn	Sn	03 12 52.4	-4.7
	1.3nm,0.1s						
PCBR	Castelo Branco	3.54	25	*e*Pn	Pn	03 12 23.4	-2.4
PCBR				*e*Sn	Sn	03 13 04.6	-4.3
	0.5nm,0.1s						
PCBR	Castelo Branco	3.54	25	Pn	Pn	03 12 23.4	-2.4
PCBR				Sn	Sn	03 13 04.6	-4.3
	0.2nm,0.1s						
EADA	Adamuz	4.15	67	Pn	Pn	03 12 32.0	-2.6
	0.0nm,0.0s,SNR=7.9						
EADA				Sn	Sn	03 13 17.1	-7.5
	0.7nm,0.2s,SNR=7.9						
PVIS	Viseu	4.23	16	*e*Pn	Pn	03 12 32.6	-3.1
PVIS				*e*Sn	Sn	03 13 20.3	-6.2
	1.3nm,0.1s						
PVIS	Viseu	4.23	16	Pn	Pn	03 12 32.6	-3.1
PVIS				Sn	Sn	03 13 20.3	-6.2
	0.6nm,0.1s						
PVRL	Vila Real	4.81	16	*e*Sn	Sn	03 13 33.9	-7.2
	2.0nm,0.1s						
PVRL	Vila Real	4.81	16	Sn	Sn	03 13 33.9	-7.2
	1.0nm,0.1s						
ELOB	Lobios	5.32	11	Sn	Sn	03 13 45.4	-8.5
	0.4nm,0.1s,SNR=7.9						

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*IDC **29** 03:40:41.7±2.1, 2.54N×95.57E, mb4.0/5, mb1 4.1/6, mb1mx3.8/18, mbtmp4.0/6, ML4.3/1, Error ellipse: s-maj=80.2km s-min=26.6km az=56.0*

*NEIC **29** 03:40:46.3±1.0, 2.52N×95.69E, h30^{km}, mb4.4/4, Error ellipse: s-maj=21.2km s-min=13.3km az=210.0*

ISC 29 03:40:44.4±1.3**, 2.5N**±0.2×**95.7E**±0.1**, h30**^{km}**, n14, σ0^{s}96**/14**, mb4.3**/9**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.65	61	*e*P	Pn	03 42 08.1	-0.6
CMAR	Chiang Mai Arr	16.15	11	Pn	P	03 44 32.4	+1.2
	0.4nm,0.3s,baz=199,slow=11,SNR=9.7						
PKI	Pulchoki	26.78	339	*e*P	P	03 46 25.5	+1.6
GUN	Gumba	26.93	341	*e*P	P	03 46 25.8	+0.5
	16nm,0.6s,mb4.7						
KKN	Kakani	27.03	339	*e*P	P	03 46 27.5	+1.3
	14nm,0.7s,mb4.6						
GKN	Gorkha	27.45	338	*e*P	P	03 46 29.8	-0.2
	4.4nm,0.3s,mb4.4						
KOLN	Koldanda	27.64	336	*e*P	P	03 46 31.9	+0.1
	12nm,0.8s,mb4.6						
WRA	Warramunga Arr	44.00	122	P	P	03 48 52.4	+1.0
	0.9nm,0.9s,mb3.5,baz=301,slow=9.2,SNR=3.5						
MKAR	Makanchi Array	45.62	347	P	P	03 49 03.5	-0.4
	2.2nm,0.5s,mb4.3,baz=158,slow=8.6,SNR=16						
SONM	Songino Array	46.07	10	P	P	03 49 06.9	-0.7
	0.8nm,0.4s,mb4.0,baz=190,slow=8.3,SNR=6.8						
BVAR	Borovoye Array	54.52	342	P	P	03 50 11.2	-0.7
	1.4nm,0.6s,mb4.2,baz=146,slow=10,SNR=8.6						
BRVK	Borovoye	54.58	341	P	P	03 50 10.5	-1.9
ZRNK	Zerenda	54.91	341	*e*P	P	03 50 13.5	-1.2
ARCES	ARCESS Array B	80.79	340	P	P	03 52 56.3	-0.1
	1.6nm,0.8s,mb4.0,baz=90,slow=6.1,SNR=4.4						

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*IDC **29** 04:19:24.9±1.8, 51.32N×178.50E, h42^{km}±8^{km}, mb3.3/5, mb1 3.7/5, mb1mx3.4/23, mbtmp3.5/5, Error ellipse: s-maj=49.6km s-min=25.8km az=11.0*

*NEIC **29** 04:19:28.1±1.6, 51.49N×178.88E, h60^{km}±9^{km}, ML3.3(AEIC), Error ellipse: s-maj=45.3km s-min=9.6km az=187.0*

ISC 29 04:19:27.1±1.8**, 51.4N**±0.3×**178.96E**±0.10**, h63**^{km}±11^{km}**, h42**^{km}±1.2^{km}**:pP-P, n13, σ0^{s}76**/15**, mb3.6**/5**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	2.40	80	P	P	04 20 05.3	+0.4
KIKV	Kanaga Island	2.45	78	P	P	04 20 06.0	+0.3
ADAG	Mount Adagdak	2.82	77	P	P	04 20 10.4	-0.4
GSMY	Great Sitkin M	3.16	77	P	P	04 20 15.7	0.0
GSTR	Great Sitkin T	3.17	76	P	P	04 20 16.0	+0.3
SMY	Shemya	3.28	296	P	P	04 20 16.8	-0.6
SMY				S	S	04 20 55.9	+0.6
ATKA	Atka Island	4.32	77	P	P	04 20 31.6	-0.4
ATKA				S	S	04 21 21.1	-0.3
ILAR	Eielson Array	22.10	40	P	P	04 24 18.3	+0.3
	0.3nm,0.5s,mb3.0,baz=242,slow=8.3,SNR=7.4						
ILAR				pP		04 24 30.6	
	0.4nm,0.7s,baz=246,slow=11,SNR=4.3						
NVAR	Mina Array Bea	44.94	81	P	P	04 27 39.1	+2.0
	0.5nm,0.6s,mb3.5,baz=300,slow=7.3,SNR=4.4						
NVAR				pP	pP	04 27 50.3	-2.9
	0.5nm,0.6s,baz=306,slow=7.1,SNR=4.0						
BW06	Boulder Array	47.63	71	P	P	04 27 58.0	-0.3
PDAR	Pinedale Array	47.63	71	P	P	04 27 57.9	-0.5
	0.5nm,0.5s,mb3.8,baz=342,slow=2.0,SNR=6.2						
PDAR				pP	pP	04 28 09.8	-4.7
	1.0nm,0.7s,baz=324,slow=4.4,SNR=6.6						
MKAR	Makanchi Array	58.91	307	P	P	04 29 18.1	-3.4
	0.5nm,0.4s,mb3.9,baz=37,slow=7.2,SNR=5.1						
TXAR	Lajitas Array	60.03	80	P	P	04 29 29.4	-0.1
	0.5nm,0.5s,mb3.8,baz=305,slow=5.2,SNR=16						
TXAR				pP	pP	04 29 41.9	-4.4
	0.5nm,0.5s,baz=300,slow=4.9,SNR=7.3						

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*LDG **29** 04:21:32.1±0.4, 13.15S×167.84E, h10^{km}, Mb5.1/2, Error ellipse: s-maj=60.4km s-min=21.7km az=93.0*

*CRAAG **29** 04:21:33.3, 14.04S×167.51E, Mb5.4*

*ORF **29** 04:21:36.6, 16.00S×162.85E, h30^{km}, mb5.8*

*MOS **29** 04:21:46.8±1.1, 13.87S×167.11E, h135^{km}, mb5.0/28, Error ellipse: s-maj=8.9km s-min=8.3km az=98.4*

*HRVD **29** 04:21:49.4±0.2, 13.83S×166.98E, h163^{km}±1^{km}, MW5.2/73, Centroid moment Tensor Solution. LP body waves: s47,c72;Mantle waves: s73,c131; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.60±.02; $M_{\theta\theta}$-0.05±.02; $M_{\phi\phi}$-0.55±.02; $M_{r\theta}$0.10±.02; $M_{\theta\phi}$0.40±.02; $M_{\phi r}$-0.55±.02; Best double couple: M_0.893×10^{17} NP1: ϕ_s314°, δ28°, λ63°. NP2: ϕ_s164°, δ65°, λ104°. Principal axes: T .829, Plg67°, Azm100°; N .129, Plg12°, Azm339°; P -.958, Plg19°, Azm244°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **29** 04:21:49.4±0.1, 13.88S×167.18E, mb5.0/51 Error ellipse: s-maj=7.0km s-min=5.7km az=128.0*

*IDC **29** 04:21:49.6±0.7, 13.89S×167.14E, h151^{km}±4^{km}, mb4.6/20, mb1 4.7/22, mb1mx4.7/23, mbtmp5.0/22, MS3.9/13, Ms1 3.9/13, ms1mx3.8/29, Error ellipse: s-maj=11.6km s-min=9.8km az=91.0*

*BJI **29** 04:21:52.6, 13.30S×166.92E, h164^{km}, mB5.0, mb5.0*

ISC 29 04:21:48.5±0.2**, 13.92S**±0.03×**167.13E**±0.04**, h156**^{km}**, h156**^{km}±1.2^{km}**:pP-P, n479, σ0^{s}86**/177**, mb4.9**/74**, 37C-24D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.13	184	*e*P	P	04 23 46.7	+2.2
DZM				*e*S	S	04 25 14.5	-0.7
DZM	Mont Dzumac	8.13	184	P	P	04 23 47.0	+2.5
	4.7nm,0.3s,baz=40,slow=19,SNR=46						
DZM				S	S	04 25 18.0	+2.9
	baz=316,slow=22,SNR=3.5						
DZM				LR	LR	04 26 25.8	
	comp=Z,1μm,18.9s,baz=11,slow=34						
DZM	Mont Dzumac	8.13	184	*e*P	P	04 23 46.7	+2.2
DZM				*e*S	S	04 25 14.5	-0.7
NOUC	Port Laguerre	8.17	185	*e*P	P	04 23 47.4	+2.3
NOUC				*e*S	S	04 25 14.9	-1.2
NOUC	Port Laguerre	8.17	185	*e*P	P	04 23 47.4	+2.3
NOUC				*e*S	S	04 25 14.9	-1.2
HNR	Honiara	8.33	302	*e*P	P	04 23 49.6	+2.5
HNR				S	S	04 25 22.9	+3.1
HNR				pmax	pmax		
	comp=Z,367nm,0.6s						
HNR	Honiara	8.33	302	P	P	04 23 49.1	+2.0
	comp=Z,25nm,0.3s,baz=55,slow=4.0,SNR=3.5						
HNR				S	S	04 25 22.4	+2.6
	baz=156,slow=21,SNR=2.5						
HNR	Honiara	8.33	302	*e*P	P	04 23 49.6	+2.5
	comp=Z,367nm,0.6s						
HNR				S	S	04 25 22.9	+3.1
PMG	Port Moresby	20.06	281	*e*P	P	04 26 11.1	-0.4
PMG				pmax	pmax		
	comp=Z,136nm,1.0s						
PMG	Port Moresby	20.06	281	P	P	04 26 12.3	+0.8
	comp=Z,107nm,0.9s,baz=104,slow=5.6,SNR=28						
PMG				ScP		04 33 43.7	
	comp=Z,6.3nm,0.6s,baz=206,slow=15,SNR=3.8						
PMG	Port Moresby	20.06	281	*e*P	P	04 26 11.1	-0.5
	comp=Z,136nm,1.0s						
AFI	Afiamalu	20.48	93	*e*P	P	04 26 15.4	-0.4
AFI				pmax	pmax		
	comp=Z,323nm,1.4s						
AFI	Afiamalu	20.48	93	*e*P	P	04 26 15.4	-0.3
	comp=Z,323nm,1.4s						
CTA	Charters Tower	20.87	250	P	P	04 26 20.9	+1.3
	comp=Z,81nm,0.6s,baz=78,slow=12,SNR=52						
CTA				ScP		04 33 45.6	
	comp=Z,7.7nm,0.7s,baz=328,slow=2.2,SNR=3.9						
CTAO	Charters Tower	20.87	250	*e*P	P	04 26 20.5	+0.9
CTAO				pmax	pmax		
	comp=Z,85nm,0.6s						
CTAO	Charters Tower	20.87	250	*e*P	P	04 26 20.5	+0.9
	comp=Z,85nm,0.6s						
URZ	Urewera	25.81	162	LR	LR	04 35 20.7	
	comp=Z,200nm,21.1s,baz=173,slow=31						
CNB	Canberra Magne	26.64	214	*e*P	P	04 27 15.5	+1.0
	comp=Z,35nm,0.7s,mb5.1						
STKA	Stephens Creek	29.41	228	⇓*i*P	P	04 27 40.1	+0.5
	comp=Z,54nm,0.5s,mb5.5						
STKA	Stephens Creek	29.41	228	P	P	04 27 39.9	+0.4
	comp=Z,94nm,0.7s,mb5.7,baz=46,slow=7.9,SNR=226						
STKA				PcP	PcP	04 30 41.1	-0.4
	comp=Z,7.5nm,0.7s,baz=37,slow=3.9,SNR=3.3						
STKA				ScP		04 34 09.2	
	comp=Z,5.4nm,0.7s,baz=84,slow=5.0,SNR=7.9						
STKA				LR	LR	04 37 11.1	
	comp=Z,318nm,21.8s,baz=46,slow=31						
RPZ	Rata Peaks	29.88	174	P	P	04 27 43.3	-0.3
	comp=Z,15nm,0.8s,mb4.8,baz=156,slow=5.4,SNR=5.7						
RPZ				LR	LR	04 37 26.8	
	comp=Z,303nm,20.5s,baz=1.8,slow=31						
TOO	Toolangi	30.42	215	⇓*i*P	P	04 27 49.0	+0.6
	comp=Z,25nm,0.7s,mb5.1						
TOO	Toolangi	30.42	215	⇓*i*P	P	04 27 49.0	+0.6
TOO				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.0						
WB2	Warramunga Arr	31.88	255	⇓*i*P	P	04 27 59.8	-1.5
WB2				*e*S	S	04 32 55.5	-3.8
WB2				*i* SCP		04 34 17.8	
WRAB	Tennant Creek	31.88	255	*d i*P	P	04 27 59.8	-1.5
WRAB	Tennant Creek	31.88	255	*e*P	P	04 27 59.5	-1.8
	comp=Z,36nm,0.8s,mb5.2						
WRA	Warramunga Arr	31.89	255	P	P	04 27 59.2	-2.2
	comp=Z,31nm,0.7s,mb5.1,baz=84,slow=8.7,SNR=42						
WRA				PcP	PcP	04 30 48.0	-0.2
	comp=Z,2.2nm,0.8s,baz=80,slow=3.2,SNR=5.7						
WRA				S	S	04 32 56.7	-2.8
	comp=Z,6.5nm,1.2s,baz=87,slow=14,SNR=5.5						
WRA				ScP		04 34 18.1	
	comp=Z,7.3nm,1.0s,baz=81,slow=3.7,SNR=17						
KAKA	Kakadu	33.76	268	⇓*i*P	P	04 28 17.2	-0.2
	comp=Z,76nm,0.6s,mb5.6						
FORT	Forrest	39.59	238	⇓*i*P	P	04 29 06.4	+0.2
	comp=Z,130nm,0.6s,mb5.7						
FITZ	Fitzroy Crossi	40.03	258	⇓*i*P	P	04 29 09.9	-0.1
	comp=Z,15nm,0.4s,mb5.0						
MBWA	Marble Bar	45.63	254	P	P	04 29 55.4	+0.1
	comp=Z,62nm,0.8s,mb5.3						
CBIJ	Chichi jima	47.42	329	LR	LR	04 48 05.8	
	comp=Z,92nm,19.5s,baz=184,slow=33						
KLBR	Kellerberrin	48.38	240	⇓*i*P	P	04 30 15.6	-1.0
	comp=Z,18nm,0.5s,mb5.0						
NWAO	Narrogin (SRO)	49.05	238	*e*P	P	04 30 20.8	-0.9
NWAO				pmax	pmax		
	comp=Z,54nm,1.0s						
NWAO	Narrogin (SRO)	49.05	238	*e*P	P	04 30 20.8	-0.9
	comp=Z,54nm,1.0s,mb5.1						
MUN	Mundaring	49.74	240	⇓*i*P	P	04 30 26.4	-0.6
	comp=Z,25nm,0.8s,mb4.9						
MUN	Mundaring	49.74	240	⇓*i*P	P	04 30 26.4	-0.6
MUN				pmax	pmax		
	comp=Z,25nm,0.8s,mb4.9						
HKL	Haleakala	49.79	47	*e*P	P	04 30 27.6	+0.1
JOW	Kunigami	55.36	317	P	P	04 31 08.1	-0.7
	comp=Z,47nm,0.8s,mb5.3,baz=155,slow=6.4,SNR=8.9						
MJAR	Matsushiro Arr	57.13	332	P	P	04 31 19.9	-1.2
	comp=Z,13nm,0.7s,mb4.9,baz=171,slow=8.9,SNR=27						
MAJO	Matsushiro	57.13	332	*e*P	P	04 31 19.6	-1.5
MAJO				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.0						
MAJO	Matsushiro	57.13	332	*e*P	P	04 31 19.6	-1.5
	comp=Z,14nm,0.6s,mb5.0						
MAT	Matsushiro	57.13	332	*e*P	P	04 31 20.0	-1.1
MAT				pmax	pmax		
	comp=Z,15nm,0.5s,mb5.1						
MAT	Matsushiro	57.13	332	*e*P	P	04 31 20.0	-1.1
	comp=Z,16nm,0.5s,mb5.1						
MAT	Matsushiro	57.13	332	P	P	04 31 19.8	-1.3
JNU	Nakatsue	58.19	324	P	P	04 31 27.6	-1.0
	comp=Z,27nm,0.7s,mb5.2,baz=69,slow=7.5,SNR=13						
YHNB	Yeheng	58.85	310	*e*P	P	04 31 31.8	-1.5
ASAJ	Asahikawa	61.94	340	P	P	04 31 53.1	-0.9
	comp=Z,14nm,0.7s,mb4.9,baz=233,slow=14,SNR=5.1						
ASAJ				LR	LR	04 57 17.9	
	comp=Z,66nm,18.6s,baz=358,slow=34						
SSE	Sheshan	62.84	316	P	P	04 32 01.0	+0.8
SSE				AP	pP	04 32 38.5	+1.3
SSE				XP	sP	04 32 56.5	+2.3
SSE				S	S	04 40 18.5	+3.3
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,120nm,12.0s						
SSE				LR	LR		
	comp=N,50nm,18.2s						
SSE				LR	LR		
	comp=E,40nm,18.4s						
SSE				LR	LR		
	comp=Z,100nm,18.9s						
SSE	Sheshan	62.84	316	P	P	04 32 00.9	+0.7
	comp=Z,22nm,0.7s,mb5.1						
SSE				pP	pP	04 32 38.6	+1.4
SSE				sP	sP	04 32 56.4	+2.2
SSE				S	S	04 40 18.4	+3.2
SSE				sS		04 41 24.6	
SSE				ScS	ScS	04 41 37.2	+3.8
SSE				LR	LR		
	comp=Z,100nm,18.9s						
KS15	Wonju Array Si	63.01	326	*e*P	P	04 32 00.7	-0.5
VNDA	Vanda	63.66	181	*e*P	P	04 32 04.1	-0.7
VNDA				*e**PP	pP	04 32 41.2	-0.8
VNDA				pmax	pmax		
	comp=Z,36nm,1.9s						
VNDA	Vanda	63.66	181	P	P	04 32 04.3	-0.5
	comp=Z,3.0nm,0.7s,mb4.3,baz=1.1,slow=6.9,SNR=18						
VNDA				pP	pP	04 32 41.1	-0.9
	comp=Z,2.3nm,0.7s,baz=1.7,slow=8.1,SNR=3.3						
VNDA	Vanda	63.66	181	*e*P	P	04 32 04.1	-0.8
	comp=Z,36nm,1.9s,mb4.9						
VNDA				*e*pP	pP	04 32 41.2	-0.8
SBA	Scott Base	63.94	180	*e*P	P	04 32 07.1	+0.5
SBA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
SBA	Scott Base	63.94	180	*e*P	P	04 32 07.1	+0.5
	comp=Z,9.7nm,0.8s,mb4.7						
CASY	Casey	64.22	202	⇑*i*P	P	04 32 07.9	-0.7
YSS	Yuzh-Sakhalins	64.42	342	*e*P	P	04 32 10.7	+0.5
YSS				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.5						
YSS	Yuzh-Sakhalins	64.42	342	*e*P	P	04 32 09.8	-0.4
	comp=Z,83nm,1.1s,mb5.5						
NJ2	Nanjing	65.00	316	*e*P	P	04 32 14.0	-0.3
NJ2				PP	PP	04 34 42.0	+1.2
NJ2				S	S	04 40 43.0	+1.1
NJ2				XS		04 41 42.0	
NJ2				AMB	AMB		
	comp=Z,660nm,6.2s						
NJ2				LR	LR		
	comp=N,710nm,12.4s						
NJ2				LR	LR		
	comp=E,250nm,15.5s						
NJ2				LR	LR		

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           comp=Z,280nm,15.9s
WHN   Wuhan              67.30 312  eP     P        04 32 28.3 -0.6
GSTR  Great Sitkin T     67.34  11  eP     P        04 32 27.8 -1.0
MDJ   Mudanjiang         67.51 332   P     P        04 32 30.3 +0.4
MDJ                                  AP    pP       04 33 07.8 +0.4
MDJ                                  XP    sP       04 33 26.3 +1.9
MDJ                                  PP    PP       04 35 04.0 +2.2
MDJ                                  S     S        04 41 15.0 +3.1
MDJ                                  SCS   ScS      04 42 12.0 +2.9
MDJ                                  AMB   AMB
           comp=Z,20nm,1.2s,mb4.7
MDJ                                  AMB   AMB
           comp=Z,130nm,8.0s
MDJ   Mudanjiang         67.51 332  eP     P        04 32 29.3 -0.5
           comp=Z,23nm,0.9s,mb4.9
CN2   Changchun          68.89 329  eP     P        04 32 38.5 +0.1
CN2                                 eAP    pP       04 33 14.3 -1.7
CN2                                 eS     S        04 41 29.3 +1.1
CN2                                  AMB   AMB
           comp=Z,50nm,0.8s,mb5.3
CN2                                  AMB   AMB
           comp=Z,100nm,3.0s
ENH   Enshi              70.75 309  eP     P        04 32 49.0 -0.9
           comp=Z,52nm,0.9s,mb5.3
GYA   Guiyang            71.14 304⇑iP     P        04 32 52.8 +0.5
GYA                                  AP    pP       04 33 31.5 +1.3
GYA                                  XP    sP       04 33 49.0 +1.9
GYA                                  PP    PP       04 35 34.0 +0.5
GYA                                  S     S        04 41 54.3 -0.4
GYA                                  SKS   SKS      04 42 33.5 -2.0
GYA                                  AMB   AMB
           comp=Z,20nm,0.7s,mb5.0
GYA                                  AMB   AMB
           comp=Z,110nm,3.8s
GYA                                  LR    LR
           comp=N,360nm,18.2s
GYA                                  LR    LR
           comp=E,430nm,17.6s
GYA                                  LR    LR
           comp=Z,510nm,18.0s
XAN   Xi'an              73.04 312   P     P        04 33 03.5 +0.1
XAN                                  AMB   AMB
           comp=Z,30nm,0.8s,mb5.1
KMI   Kunming            73.76 302   P     P        04 33 09.3 +1.5
KMI                                  PCP   PcP      04 33 20.0 -2.8
KMI                                  AP    pP       04 33 47.3 +1.3
KMI                                  PP    PP       04 35 59.0 +3.4
KMI                                  PPP   PPP      04 37 44.5 +3.5
KMI                                  AMB   AMB
           comp=Z,20nm,1.0s,mb4.8
KMI   Kunming            73.76 302   P     P        04 33 09.3 +1.5
KMI                                                 04 33 19.9
KMI                                  *PP   pP       04 33 47.3 +1.3
KMI                                                 04 35 59.1
KMI                                  PPP   PPP      04 37 44.6 +3.6
KMI                                  pmax  pmax
           comp=Z,27nm,1.0s,mb4.9
KMI   Kunming            73.76 302   P     P        04 33 09.3 +1.5
           comp=Z,27nm,1.0s,mb4.9
KMI                                  PcP   PcP      04 33 19.9 -2.9
KMI                                  pP    pP       04 33 47.3 +1.3
KMI                                  PP    PP       04 35 59.1 +3.5
KMI                                  PPP   PPP      04 37 44.6 +3.6
MA2   Magadan            74.43 351c iP     P        04 33 10.4 -0.5
MA2                                  pmax  pmax
           comp=Z,30nm,0.9s,mb5.0
MA2   Magadan            74.43 351  eP     P        04 33 10.2 -0.7
           comp=Z,32nm,0.8s,mb5.1
CMAR  Chiang Mai Arr     74.50 294   P     P        04 33 13.3 +1.2
           comp=Z,15nm,0.8s,mb4.8,baz=123,slow=4.3,SNR=46
CMAR                                 pP    pP       04 33 50.5 +0.2
           comp=Z,2.3nm,0.5s,baz=128,slow=5.1,SNR=1.9
HHC   Hu-ho-hao-te       74.88 320  eP     P        04 33 14.8 +0.9
HHC                                  AP    pP       04 33 52.0 -0.2
HHC                                  XP    sP       04 34 11.5 +2.4
HHC                                  PP    PP       04 36 01.5 -3.6
HHC                                  S     S        04 42 27.0 -9.5
HHC                                  SKS   SKS      04 43 01.5 -1.3
HHC                                  XS             04 43 39.8
HHC                                  AMB   AMB
           comp=Z,30nm,0.7s,mb5.0
HHC                                  AMB   AMB
           comp=Z,70nm,4.4s
HHC                                  LR    LR
           comp=N,170nm,20.2s
HHC                                  LR    LR
           comp=E,290nm,15.5s
HHC                                  LR    LR
           comp=Z,120nm,17.6s
HIA   Hailar             75.52 330  eP     P        04 33 17.1 -0.2
HIA                                  pmax  pmax
           comp=Z,53nm,1.4s
HIA   Hailar             75.52 330  eP     P        04 33 17.1 -0.2
           comp=Z,53nm,1.4s,mb5.0
BTO   Baotou             75.73 319  eP     P        04 33 19.3 +0.7
QSPA  South Pole Qui     76.10 180⇑iP     P        04 33 20.3 +0.3
           comp=Z,30nm,1.2s,mb4.8
LZH   Lanzhou            77.68 312 ⇑P     P        04 33 31.3 +1.7
LZH                                  AP    pP       04 34 10.0 +1.8
LZH                                  XP    sP       04 34 25.5 +0.4
LZH                                  PP    PP       04 36 31.5 +3.2
LZH                                  S     S        04 43 09.3 +2.4
LZH                                  XS             04 44 17.5
LZH                                  AMB   AMB
           comp=Z,70nm,1.0s,mb5.2
LZH                                  AMB   AMB
           comp=Z,290nm,5.5s
LZH   Lanzhou            77.68 312 ⇑P     P        04 33 31.2 +1.6
LZH                                  *PP   pP       04 34 10.0 +1.8
LZH                                                 04 36 31.5
LZH                                  S     S        04 43 09.2 +2.3
LZH                                  SS    SS       04 48 16.0 +3.1
LZH                                  pmax  pmax
           comp=Z,76nm,1.0s,mb5.3
LZH   Lanzhou            77.68 312 ⇑P     P        04 33 31.2 +1.6
           comp=Z,76nm,1.0s,mb5.3
LZH                                  pP    pP       04 34 10.0 +1.8
LZH                                  sP    sP       04 34 25.5 +0.4
LZH                                  PP    PP       04 36 31.5 +3.2
LZH                                  S     S        04 43 09.2 +2.3
LZH                                  sS             04 44 17.5
LZH                                  SS    SS       04 48 16.0 +3.1
CLNS  Chul'man           78.73 338  eP     P        04 33 34.0 -0.9
CLNS                                 pmax  pmax
           comp=Z,36nm,1.0s,mb5.0
CLNS                                 pmax  pmax
           comp=N,18nm,1.1s
CLNS                                 pmax  pmax
           comp=E,8.0nm,1.0s
CLNS                                 pmax  pmax
           comp=N,13nm,0.7s
CLNS                                 pmax  pmax
           comp=Z,5.0nm,0.6s,mb4.3
CLNS                                 pmax  pmax
           comp=E,4.0nm,0.5s
CIT   Chita              80.31 330  eP     P        04 33 44.2 +0.7
CIT                                 e      pP       04 34 22.4 +0.2
CIT                                  pmax  pmax
           comp=Z,97nm,1.5s,mb5.2
YAK   Yakutsk            81.22 343  eP     P        04 33 48.0 -0.1
YAK                                  pmax  pmax
           comp=Z,266nm,1.3s,mb5.7
YAK   Yakutsk            81.22 343  eP     P        04 33 48.0  0.0
           comp=Z,266nm,1.3s,mb5.7
ULN   Ulaanbaatar        81.41 324  eP     P        04 33 50.3 +1.0
ULN                                 e*PP   pP       04 34 28.4 +0.2
ULN                                  pmax  pmax
           comp=Z,15nm,0.8s,mb4.7
ULN   Ulaanbaatar        81.41 324  eP     P        04 33 50.3 +1.0
           comp=Z,15nm,0.8s,mb4.7
ULN                                 epP    pP       04 34 28.4 +0.2
TNA   Tin City           81.44  10  eP     P        04 33 49.7 +0.6
           comp=Z,23nm,1.5s,mb4.6
SLKM  Skilak Lake        81.63  20  eP     P        04 33 50.1 -0.1
BILL  Bilibino           81.74 360  eP     P        04 33 50.3 -0.4
BILL                                 pmax  pmax
           comp=Z,80nm,0.8s,mb5.4
BILL  Bilibino           81.74 360  eP     P        04 33 50.3 -0.4
           comp=Z,80nm,0.8s,mb5.4
SONM  Songino Array      81.77 324   P     P        04 33 51.8 +0.6
           comp=Z,5.1nm,0.7s,mb4.3,baz=147,slow=6.2,SNR=25
SONM                                 pP    pP       04 34 29.1 -1.0
           comp=Z,2.3nm,1.0s,baz=117,slow=6.4,SNR=1.7
SONM                                 LR    LR       05 09 56.1
           comp=Z,95nm,18.2s,baz=70,slow=35
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GTA   Gaotai             82.01 314 ⇑P     P        04 33 54.0 +1.4
GTA                                  AP    pP       04 34 33.0 +1.5
GTA                                  XP    sP       04 34 51.3 +2.7
GTA                                  PP    PP       04 37 06.3 +2.1
GTA                                  PPP   PPP      04 38 58.5 +1.3
GTA                                  S     S        04 43 54.3 +2.3
GTA                                  SKS   SKS      04 43 55.5 +1.9
GTA                                  XS             04 45 03.5
GTA                                  AMB   AMB
           comp=Z,10.0nm,1.3s,mb4.3
GTA                                  AMB   AMB
           comp=Z,80nm,6.5s
GTA                                  LR    LR
           comp=N,70nm,15.3s
GTA                                  LR    LR
           comp=E,90nm,18.0s
GTA                                  LR    LR
           comp=Z,100nm,19.1s
MAW   Mawson             82.58 202  eP     P        04 33 55.4 +0.4
           comp=Z,5.1nm,0.6s,mb4.4
MAW   Mawson             82.58 202  eP     P        04 33 55.4 +0.4
MAW                                  pmax  pmax
           comp=Z,5.0nm,0.6s
MAW   Mawson             82.58 202   P     P        04 33 55.6 +0.6
           comp=Z,5.7nm,0.6s,mb4.5,baz=113,slow=6.7,SNR=38
MAW                                  LR    LR       05 04 07.6
           comp=Z,111nm,20.1s,baz=252,slow=31
SHL   Shillong           83.06 298  eP     P        04 33 58.0 -0.3
SML   Sawmill            83.21  20  eP     P        04 33 58.0 -0.3
BOD   Bodaibo            83.69 334  eP     P        04 33 54.2 -6.5
BOD                                  pmax  pmax
           comp=Z,19nm,1.6s,mb4.6
ZAK   Zakamensk          84.81 325⇓eP     P        04 34 06.2 -0.3
ZAK                                 e      pP       04 34 45.4 -0.3
ZAK                                  pmax  pmax
           comp=Z,13nm,1.5s,mb4.4
ZAK                                  pmax  pmax
           comp=Z,5.0nm,1.3s,mb4.1
IMA   Indian Mountai     84.91  15  eP     P        04 34 07.0 +0.4
IMA                                  pmax  pmax
           comp=Z,181nm,1.6s,mb5.5
IMA   Indian Mountai     84.91  15  eP     P        04 34 07.0 +0.4
           comp=Z,181nm,1.6s,mb5.5
LSA   Lhasa              85.02 302   P     P        04 34 09.5 +1.5
LSA                                  AMB   AMB
           comp=Z,10.0nm,0.8s,mb4.6
LSA   Lhasa              85.02 302  eP     P        04 34 09.9 +1.9
LSA                                  pmax  pmax
           comp=Z,8.0nm,0.6s,mb4.6
LSA   Lhasa              85.02 302  eP     P        04 34 09.9 +1.9
           comp=Z,7.9nm,0.6s,mb4.6
TLY   Talaya             85.25 326  eP     P        04 34 09.0 +0.4
TLY                                  pmax  pmax
           comp=Z,14nm,0.8s,mb4.7
TLY   Talaya             85.25 326  eP     P        04 34 09.0 +0.3
           comp=Z,14nm,0.8s,mb4.7
ILAR  Eielson Array      85.81  18   P     P        04 34 09.8 -1.2
           comp=Z,7.5nm,0.7s,mb4.6,baz=236,slow=5.4,SNR=77
ILAR                                 pP    pP       04 34 48.6 -1.7
           comp=Z,3.2nm,0.6s,baz=232,slow=6.4,SNR=2.5
ILAR                                 LR    LR       05 05 56.5
           comp=Z,58nm,19.9s,baz=4.6,slow=31
OMM   Old Mammoth Mi     86.06  50  eP     P        04 34 13.6 +0.7
MTUM  Tungsten Hills     86.28  50  eP     P        04 34 14.7 +0.7
DAC   Darwin (Calif)     86.65  52  eP     P        04 34 15.9 +0.1
DAC                                  pmax  pmax
           comp=Z,8.0nm,1.2s,mb4.4
DAC   Darwin (Calif)     86.65  52  eP     P        04 34 15.9 +0.1
           comp=Z,8.3nm,1.2s,mb4.4
DAC                                 epP    pP       04 34 58.1 +3.0
NVAR  Mina Array Bea     86.85  49   P     P        04 34 16.8  0.0
           comp=Z,3.6nm,0.8s,mb4.2,baz=221,slow=6.1,SNR=24
NVAR                                 LR    LR       05 10 37.4
           comp=Z,58nm,18.1s,baz=335,slow=34
NVAR  Mina Array Bea     86.85  49   P     P        04 34 16.8  0.0
NVAR                                 LR    LR       05 10 37.4
MNV   Mina               86.96  49  eP     P        04 34 17.0 -0.3
MNV                                  pmax  pmax
           comp=Z,7.0nm,1.0s,mb4.5
MNV   Mina               86.96  49  eP     P        04 34 17.0 -0.3
           comp=Z,7.1nm,1.0s,mb4.5
LDFC  Landfair           88.17  53  eP     P        04 34 23.0 -0.1
NEN   Nelson             88.55  53  eP     P        04 34 24.7 -0.2
NEN                                 ePP    PP       04 37 57.2 -0.5
GUN   Gumba              88.89 299  eP     P        04 34 27.5 +0.8
           comp=Z,33nm,0.8s,mb5.3
TIXI  Tiksi              89.16 349⇑eP     P        04 34 26.6 -0.3
PKI   Pulchoki           89.19 299  eP     P        04 34 28.0 -0.1
           comp=Z,42nm,1.0s,mb5.3
PKI   Pulchoki           89.19 299  eP     P        04 34 28.0 -0.1
PKI                                  pmax  pmax
           comp=Z,21nm,1.0s,mb5.0
KKN   Kakani             89.36 299  eP     P        04 34 29.0 +0.1
           comp=Z,32nm,0.9s,mb5.3
KKN   Kakani             89.36 299  eP     P        04 34 29.0 +0.1
KKN                                  pmax  pmax
           comp=Z,16nm,0.9s,mb5.0
SYO   Syowa Base         89.44 197 ⇓P     P        04 34 27.2 -1.1
DMN   Daman              89.46 298  eP     P        04 34 29.6 +0.2
           comp=Z,50nm,0.9s,mb5.5
BMO   Blue Mountains     89.77  44  eP     P        04 34 30.3 -0.1
BMO                                  pmax  pmax
           comp=Z,9.0nm,1.0s,mb4.7
BMO   Blue Mountains     89.77  44  eP     P        04 34 30.2 -0.2
           comp=Z,9.4nm,1.0s,mb4.7
ELK   Elko               89.86  48  eP     P        04 34 30.8 -0.1
ELK                                  pmax  pmax
           comp=Z,9.0nm,1.0s
ELK   Elko               89.86  48  eP     P        04 34 30.8 -0.1
           comp=Z,8.7nm,1.0s,mb4.6
GKN   Gorkha             89.97 299  eP     P        04 34 31.3 -0.5
           comp=Z,24nm,0.8s,mb5.2
ARUT  Antelope Range     90.28  51  eP     P        04 34 33.9 +0.9
KOLN  Koldanda           90.79 298  eP     P        04 34 35.5 -0.1
           comp=Z,12nm,0.9s,mb4.9
TUC   Tucson             90.80  57  eP     P        04 34 36.0 +0.4
TUC                                  pmax  pmax
           comp=Z,16nm,1.3s,mb4.9
TUC   Tucson             90.80  57  eP     P        04 34 36.0 +0.4
           comp=Z,16nm,1.3s,mb4.9
TUC                                 epP    pP       04 35 18.5 +3.2
NEW   Newport            91.04  40  eP     P        04 34 36.2 -0.1
NEW                                  pmax  pmax
           comp=Z,5.0nm,1.0s
NEW   Newport            91.04  40  eP     P        04 34 36.2 -0.1
           comp=Z,4.7nm,1.0s,mb4.5
HLID  Hailey             91.32  45  eP     P        04 34 37.6 -0.1
           comp=Z,3.7nm,1.0s,mb4.4
MVU   Marysvale          91.41  51  eP     P        04 34 39.2 +0.9
           comp=Z,7.5nm,1.0s,mb4.7
MSU   Marysvale          91.44  51  eP     P        04 34 39.4 +1.0
WMQ   Urumqi             92.06 315  eP     P        04 34 41.5 +0.4
WMQ                                  AP    pP       04 35 22.3 +1.5
WMQ                                  XP    sP       04 35 39.3 +1.4
WMQ                                  AMB   AMB
           comp=Z,10.0nm,1.0s,mb4.8
WMQ                                  AMB   AMB
           comp=Z,120nm,4.2s
WMQ                                  LR    LR
           comp=N,60nm,20.0s
WMQ                                  LR    LR
           comp=Z,50nm,20.0s
CHMT  Chamberlain Mo     93.10  42  eP     P        04 34 46.1 +0.3
PV10  Paradox Valley     93.78  52  eP     P        04 34 49.4 +0.3
BOZ   Bozeman (W)        93.83  44  eP     P        04 34 48.9 -0.2
BOZ                                  pmax  pmax
           comp=Z,3.0nm,1.2s,mb4.3
BOZ   Bozeman (W)        93.83  44  eP     P        04 34 48.9 -0.2
           comp=Z,3.5nm,1.2s,mb4.4
SNAA  Sanae              94.34 183  e      P        04 34 51.7 +0.8
SNAA  Sanae              94.34 183  e      P        04 34 55.2 +4.3
SNAA  Sanae              94.34 183  e      pP       04 35 29.4 -1.2
SNAA  Sanae              94.34 183  e      sP       04 35 46.9 -0.7
SNAA  Sanae              94.34 183⇑iP     P        04 34 50.4 -0.5
SNAA                                e      pP       04 35 29.4 -1.2
SNAA  Sanae              94.34 183c iP     P        04 34 50.5 -0.4
SNAA  Sanae              94.34 183⇑iP     P        04 34 50.4 -0.5
SNAA                                e               04 34 51.7
SNAA                                e               04 34 55.2
SNAA                                e      pP       04 35 29.4 -1.2
SNAA                                e               04 35 46.9
BW06  Boulder Array      94.50  47  eP     P        04 34 51.8 -0.5
           comp=Z,0.7nm,0.6s,mb4.1
PDAR  Pinedale Array     94.50  47   P     P        04 34 52.2 -0.1
           comp=Z,0.6nm,0.6s,mb4.0,baz=210,slow=3.6,SNR=5.3
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PDAR                                 PP    PP       04 38 42.1 -2.1
           comp=Z,0.5nm,0.9s,baz=243,slow=3.3,SNR=3.8
PDAR                                 LR    LR       05 11 24.4
           comp=Z,44nm,18.5s,baz=158,slow=32
ANMO  Albuquerque        94.96  55⇓eP     P        04 34 54.9 +0.3
ANMO  Albuquerque        94.96  55  eP     P        04 34 54.8 +0.2
           comp=Z,3.4nm,1.1s,mb4.5
VNA3  Neumayer Olymp     95.02 181  e      P        04 34 54.5 +0.5
VNA3  Neumayer Olymp     95.02 181  e      P        04 34 57.8 +3.8
VNA3  Neumayer Olymp     95.02 181  e      pP       04 35 33.4 -0.3
VNA3  Neumayer Olymp     95.02 181  e      sP       04 35 50.6 -0.1
VNA3  Neumayer Olymp     95.02 181⇑iP     P        04 34 53.5 -0.5
VNA3                                e               04 34 54.5
VNA3                                e               04 34 57.8
VNA3                                e      pP       04 35 33.4 -0.3
VNA3                                e               04 35 50.6
VNA2  Neumayer--Watz     95.28 182  e      P        04 34 56.0 +0.8
VNA2  Neumayer--Watz     95.28 182  e      P        04 34 59.5 +4.3
VNA2  Neumayer--Watz     95.28 182  e      pP       04 35 35.7 +0.8
VNA2  Neumayer--Watz     95.28 182  e      sP       04 35 54.2 +2.3
VNA2  Neumayer--Watz     95.28 182⇑iP     P        04 34 55.1 -0.1
VNA2                                e               04 34 56.0
VNA2                                e               04 34 59.5
VNA2                                e      pP       04 35 35.7 +0.8
VNA2                                e               04 35 54.2
VNA1  Neumayer--Stat     95.58 182  e      P        04 35 01.3 +4.8
VNA1  Neumayer--Stat     95.58 182  e      pP       04 35 35.4 -0.8
VNA1  Neumayer--Stat     95.58 182  e      sP       04 35 52.3 -0.9
VNA1  Neumayer--Stat     95.58 182   P     P        04 34 56.4 -0.1
VNA1                                e               04 35 01.3
VNA1                                e      pP       04 35 35.4 -0.8
VNA1                                e               04 35 52.3
TXAR  Lajitas Array      96.02  61   P     P        04 34 59.5 +0.1
           comp=Z,0.9nm,0.7s,mb4.2,baz=228,slow=5.0,SNR=14
TXAR                                 PP    PP       04 38 54.9 -1.1
           comp=Z,2.7nm,1.1s,baz=248,slow=6.7,SNR=13
TXAR                                 PKKPbc         04 51 47.6
           comp=Z,0.4nm,0.7s,baz=72,slow=4.0,SNR=5.9
MKAR  Makanchi Array     96.53 316   P     P        04 35 01.6 +0.3
           comp=Z,8.5nm,0.7s,mb5.2,baz=96,slow=6.4,SNR=58
MKAR                                 PKiKP          04 39 38.0
           comp=Z,1.3nm,0.5s,baz=204,slow=0.9,SNR=9.9
ZAL   Zalesovo           96.67 324   P     P        04 35 01.3 -0.5
           comp=Z,3.3nm,0.6s,mb4.8,baz=357,slow=5.0,SNR=15
ZAL                                  LR    LR       05 15 24.2
           comp=Z,73nm,21.0s,baz=125,slow=33
YKA   Yellowknife Ar     96.90  27   P     P        04 35 01.4 -1.2
           comp=Z,1.2nm,0.6s,mb4.4,baz=253,slow=4.5,SNR=11
YKA                                  LR    LR       05 15 31.7
           comp=Z,36nm,18.5s,baz=265,slow=33
ZRNK  Zerenda           105.86 321  ePKiKP          04 39 54.7
ARU   Arti              111.75 325  i PKIKP PKPdf   04 40 05.2 +1.0
ARU                                 e               04 40 52.1
DAG   Danmarks Havn     117.07   1⇑iP     PKPdf    04 40 14.7 +0.4
           comp=Z,4.0nm,0.6s
LPAZ  La Paz            117.70 117   PKP   PKPdf    04 40 19.1 +2.4
           comp=Z,0.5nm,0.5s,baz=5.2,slow=25,SNR=4.5
LPAZ                                 PKKPbc         04 50 40.6
           comp=Z,0.6nm,0.3s,baz=180,slow=7.3,SNR=5.5
APA   Apatity           118.58 342⇑iPKIKP PKPdf    04 40 18.6 +1.2
APA                                  pmax  pmax
           comp=Z,18nm,1.0s
KEV   Kevo              118.91 345  ep     PKPdf    04 40 18.3 +0.3
ARCES ARCESS Array B    119.44 345   PKP   PKPdf    04 40 19.9 +1.0
           comp=Z,23nm,0.7s,baz=62,slow=1.5,SNR=110
ARCES                                PKKPbc         04 50 32.7
           comp=Z,1.1nm,0.5s,baz=225,slow=1.7,SNR=11
ARCES ARCESS Array B    119.44 345   PKP   PKPdf    04 40 19.9 +1.0
ARCES                                PKKPbc         04 50 32.7
ARE0  ARCESS Array S    119.44 345  ePKPdf PKPdf    04 40 19.7 +0.8
HASS  Wahat al Ahsa'    120.43 291   P     PKPdf    04 40 23.7 +1.7
SCHQ  Schefferville     121.70  33   PKKPbc         04 50 26.0
           comp=Z,1.0nm,0.6s,baz=154,slow=9.2,SNR=4.1
SCO   Scoresbysund      123.19   4  i P    PKPdf    04 40 27.9 +1.7
           comp=Z,8.2nm,0.8s
ZEI   Tsey              123.61 312  ePKIKP PKPdf    04 40 27.3 -0.4
GOF   Gofitskoye        123.67 315  ePKIKP PKPdf    04 40 24.0 -3.8
GOF                                  pmax  pmax
           comp=Z,20nm,1.4s
BOSA  Boshof            123.89 221   PKP   PKPdf    04 40 30.5 +1.9
           comp=Z,4.6nm,0.6s,baz=81,slow=3.5,SNR=16
BOSA  Boshof            123.89 221  ePKPdf PKPdf    04 40 30.1 +1.4
OBN   Obninsk           123.95 328c iPKIKP PKPdf    04 40 29.2 +1.1
OBN                                 e               04 42 14.0
OBN                                 e               04 47 11.6
OBN                                  pmax  pmax
           comp=Z,26nm,0.7s
OBN   Obninsk           123.95 328⇑iPKP   PKPdf    04 40 29.2 +1.1
KIV   Kislovodsk        124.19 314  ePKIKP PKPdf    04 40 30.5 +1.7
KIV                                  pmax  pmax
           comp=N,5.0nm,0.9s
KIV                                  pmax  pmax
           comp=E,5.0nm,0.9s
KIV                                  pmax  pmax
           comp=Z,12nm,0.9s
KAF   Kangasniemi       124.40 339  ep     PKPdf    04 40 28.9 +0.1
MZLS  Mizel             124.49 290   P     PKPdf    04 40 32.3 +2.4
FINES FINESS Array B    124.93 338   PKP   PKPdf    04 40 30.9 +1.2
           comp=Z,7.0nm,0.5s,baz=45,slow=2.2,SNR=51
SAML  Samuel            125.15 112  ePKPdf PKPdf    04 40 31.5 +0.1
TATS  Tathlith          125.94 284   P     PKPdf    04 40 35.2 +2.4
ARSS  Ar Rass           126.27 292   P     PKPdf    04 40 35.3 +2.0
SOC   Sochi             126.36 314  ePKIKP PKPdf    04 40 24.1 -8.9
BLJS  Baljurashi        127.72 284   P     PKPdf    04 40 39.5 +3.2
MALT  Malatya           128.69 308  ePKIKP PKPdf    04 40 39.5 +1.8
NB2   NORSAR Subarra129.81 345   PKPdf PKPdf    04 40 40.1 +1.0
           comp=Z,16nm,1.2s,baz=31,slow=1.9
NB2   NORSAR Subarra129.81 345   PKPd  PKPdf    04 40 40.1 +1.0
           baz=31,slow=1.9
NOA   NORSAR Array B    129.81 345   PKP   PKPdf    04 40 40.0 +0.8
           comp=Z,8.0nm,0.7s,baz=33,slow=2.0,SNR=32
NOA                                  SKPbc          04 43 49.6
           comp=Z,3.1nm,0.7s,baz=32,slow=3.1,SNR=15
NOA   NORSAR Array B    129.81 345   PKP   PKPdf    04 40 40.0 +0.8
NOA                                  SKPbc          04 43 49.6
HFS   Hagfors           129.91 343   PKP   PKPdf    04 40 39.6 +0.3
           comp=Z,7.9nm,0.7s,baz=117,slow=3.3,SNR=12
HFS                                  SKPbc          04 43 49.7
           comp=Z,7.2nm,0.8s,baz=72,slow=4.7,SNR=8.1
AKASG Malin Array Be    129.99 326   PKP   PKPdf    04 40 40.8 +1.0
           comp=Z,3.2nm,0.6s,baz=41,slow=1.4,SNR=15
AKASG                                SKPbc          04 43 50.5
           comp=Z,2.2nm,0.6s,baz=43,slow=4.4,SNR=9.5
LSZ   Lusaka            130.09 236  ePKPdf PKPdf    04 40 42.4 +1.5
LSZ                                 eSKP            04 43 52.1
SUW   Suwalki           131.02 333  ePKP   PKPdf    04 40 43.9 +2.3
ASF   Jabal al Asfar    131.19 301   PKP   PKPdf    04 40 44.6 +2.1
           comp=Z,5.0nm,0.7s,baz=22,slow=3.1,SNR=7.7
ASF                                  SKPbc          04 43 55.9
           comp=Z,15nm,1.0s,baz=335,slow=2.3,SNR=19
BR131 Keskin Array S    131.88 311  ePKPdf PKPdf    04 40 44.6 +1.0
BR131                               eSKP            04 43 53.5
BRTR  Keskin Array B    131.88 311   PKP   PKPdf    04 40 44.6 +1.0
           comp=Z,2.2nm,0.5s,baz=137,slow=3.9,SNR=13
BRTR                                 SKPbc          04 43 57.6
           comp=Z,6.7nm,0.6s,baz=89,slow=3.7,SNR=23
EIL   Elat              133.25 298   PKP   PKPdf    04 40 48.0 +1.4
           comp=Z,3.9nm,0.5s,baz=140,slow=3.5,SNR=5.8
EIL   Elat              133.25 298  ePKPdf PKPdf    04 40 48.5 +2.0
EIL                                 eSKPab          04 44 03.5
TAYS  Tayyib Ism        133.48 296   P     PKPdf    04 40 50.2 +3.2
TIRR  Tirgusor          133.58 319 ⇓P     PKPdf    04 40 49.0 +2.3
BURAR Bucovina Array    133.88 325 ⇓P     PKPdf    04 40 50.8 +3.7
BURAR Bucovina Array    133.88 325 ⇓P     PKPdf    04 40 50.8 +3.7
KWP   Kalwaria          134.04 328  ePKP   PKPdf    04 40 49.5 +2.1
BDFB  Brasilia          134.50 129   PKP   PKPdf    04 40 52.0 +2.8
           comp=Z,1.7nm,0.7s,baz=252,slow=5.7,SNR=3.1
BDFB                                 SKPbc          04 44 05.6
           comp=Z,1.5nm,0.7s,baz=278,slow=5.0,SNR=3.4
MLR   Muntele Rosu      134.59 322   PKP   PKPdf    04 40 49.5 +0.9
           comp=Z,3.6nm,0.6s,baz=16,slow=4.1,SNR=6.6
MLR   Muntele Rosu      134.59 322 ⇓P     PKPdf    04 40 51.3 +2.7
MLR   Muntele Rosu      134.59 322 ⇓P     PKPdf    04 40 51.3 +2.7
KOLS  Kolonicke sedl    134.69 328  ePKP   PKPdf    04 40 50.0 +1.3
OJC   Ojcow             135.10 331  ePKP   PKPdf    04 40 50.9 +1.5
CRVS  Cervenica-Dubn    135.13 328  ePKP   PKPdf    04 40 53.6 +4.1
NIE   Niedzica          135.38 329  ePKP   PKPdf    04 40 52.1 +2.2
KECS  Kecovo            135.90 328  ePKP   PKPdf    04 40 52.4 +1.5
OKC   Ostrava-Krasne    136.14 331  ePKPdf PKPdf    04 40 53.3 +2.1
OKC                                 eSKP            04 44 12.4
KSP   Ksiaz             136.26 333  ePKIKP PKPdf    04 40 54.0 +2.6
KSP   Ksiaz             136.26 333  ePKP   PKPdf    04 40 54.2 +2.8
MORC  Moravsky Berou    136.46 332  ePKIKP PKPdf    04 40 53.2 +1.4
PSZ   Piszkesteto       136.56 328  ePKIKP PKPdf    04 40 53.8 +1.7
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DPC	Dobruska-Polom	136.60	333	*e*PKPpre		04 40 43.4	
DPC				*e*PKP	PKPdf	04 40 54.4	+2.3
DPC				*e*PP	PP	04 43 38.8	-0.1
DPC				*e*SKP		04 44 14.0	
UPC	Upice	136.62	333	*e*PKPpre		04 40 43.5	
UPC				*e*PKP	PKPdf	04 40 54.1	+2.0
UPC				*e*SKP		04 44 14.0	
VYHS	Vyhne	136.72	329	*e*PKP	PKPdf	04 40 54.1	+1.8
BRG	Berggiesshubel	137.22	335	*i* PKP	PKPdf	04 40 55.0	+1.8
BRG				*i*		04 40 57.3	
BRG				*i* SKP		04 44 15.6	
PVCC	Panska Ves	137.23	334	*e*PKPdf	PKPdf	04 40 55.4	+2.2
CLL	Collm	137.26	336	*i* PKP	PKPdf	04 40 55.0	+1.7
CLL				*i* SKP		04 44 15.0	
CLL				*i* PKS	PKS	04 44 29.9	+1.6
CLL	Collm	137.26	336	*i* PKIKP	PKPdf	04 40 55.0	+1.7
	comp=Z,logA/T=1.4						
CLL				*e*PP	PP	04 43 41.0	-2.0
CLL				*i*		04 44 15.0	
CLL				*i* PKS	PKS	04 44 29.9	+1.6
PRU	Pruhonice	137.64	334	*e*PKPdf	PKPdf	04 40 55.4	+1.4
PRU				*e*SKP		04 44 16.6	
ZST	Bratislava	137.77	330	*e*PKP	PKPdf	04 40 56.0	+1.7
EKA	Eskdalemuir Ar	137.99	352	PKhKP		04 40 45.8	
	comp=Z,1.0nm,0.4s,baz=12,slow=3.0,SNR=6.8						
EKA				PKP	PKPdf	04 40 54.5	0.0
	comp=Z,2.0nm,0.5s,baz=357,slow=1.7,SNR=8.2						
EKA				SKPbc		04 44 16.7	
	comp=Z,6.2nm,1.0s,slow=2.5,SNR=9.1						
EKA	Eskdalemuir Ar	137.99	352	PKP	PKPdf	04 40 54.5	0.0
EKA				SKPbc		04 44 16.7	
NKC	Novy Kostel	138.32	336	*e*PKPdf	PKPdf	04 40 59.0	+3.7
MOX	Moxa	138.33	337	*e*P	PKPdf	04 40 59.0	+3.7
	comp=Z,logA/T=1.2						
KHC	Kasperske Hory	138.70	334	⇑*i*PKP	PKPdf	04 40 57.8	+1.8
KHC	Kasperske Hory	138.70	334	*e*PKPpre		04 40 49.7	
KHC				*e*PKPdf	PKPdf	04 40 57.6	+1.6
KHC				*e*PP	PP	04 43 50.2	-2.1
KHC				*e*SKP		04 44 19.1	
GERES	GERESS Array B	138.87	333	PKhKP		04 40 49.5	
	comp=Z,1.1nm,0.6s,baz=45,slow=1.9,SNR=9.5						
GERES				PKP	PKPdf	04 40 58.6	+2.3
	comp=Z,6.9nm,0.7s,baz=90,slow=1.3,SNR=22						
GERES				SKPbc		04 44 20.2	
	comp=Z,4.0nm,0.7s,baz=32,slow=2.5,SNR=22						
GERES	GERESS Array B	138.87	333	PKP	PKPdf	04 40 58.6	+2.3
GERES				SKPbc		04 44 20.2	
WTSB	Winterswijk	138.90	342	*e*P	PKPdf	04 40 51.3	-5.0
	comp=Z,32nm,0.4s						
ARSA	Arzberg	139.19	330	⇑*i*P	PKPdf	04 40 58.9	+2.0
SKO	Skopje	139.23	320	*e*PKP	PKPdf	04 40 50.0	-7.2
GRA1	Grafenberg Arr	139.24	336	*e*PKPdf	PKPdf	04 40 58.1	+1.2
GRF	Grafenberg Arr	139.24	336	*e*PKIKP	PKPdf	04 40 58.1	+1.2
MOA	Molln	139.35	332	⇑*i*P	PKPdf	04 40 53.1	-4.1
MOA	Molln	139.35	332	⇑*i*P	PKPdf	04 41 01.2	+4.0
MOA	Molln	139.35	332	⇑*i*P	PKPdf	04 41 01.2	+4.0
BBLS	Bajina Basta -	139.36	324	⇓*i*P	PKPdf	04 40 59.0	+1.7
PERS	Pernice	139.82	330	*i* PKPdf	PKPdf	04 40 55.9	-2.2
PERS				*i* PKPbc	PKPdf	04 41 01.6	+3.5
IDI	Anoyia	139.95	309	PKP	PKPdf	04 41 02.1	+3.5
	comp=Z,10.0nm,0.6s,baz=107,slow=6.8,SNR=7.9						
OBKA	Obir	140.19	330	⇓*i*P	PKPdf	04 40 52.8	-6.0
OBKA	Obir	140.19	330	⇑*i*P	PKPdf	04 41 00.2	+1.4
OBKA	Obir	140.19	330	⇑*i*P	PKPdf	04 41 00.2	+1.4
KBA	Koelnbreinsper	140.34	332	⇓*i*P	PKPdf	04 40 54.4	-4.6
KBA	Koelnbreinsper	140.34	332	⇑*i*P	PKPdf	04 41 00.8	+1.8
KBA	Koelnbreinsper	140.34	332	⇑*i*P	PKPdf	04 41 00.8	+1.8
DLF	Lyons Farm	140.40	354	*e*P	PKPdf	04 40 51.0	-7.9
DCN	Croghan	140.42	355	*e*P	PKPdf	04 40 54.0	-5.0
ABH	Alteburg	140.44	339	PKP	PKPdf	04 41 00.9	+1.8
LJU	Ljubljana	140.53	330	*i* PKPbc	PKPdf	04 41 01.8	+2.4
LJU				*i*		04 41 03.8	
VISS	Visnje	140.55	329	*i* PKPbc	PKPdf	04 41 00.7	+1.3
BOJS	Bojanci	140.55	329	*e*PKPdf	PKPdf	04 40 54.9	-4.5
BOJS				*e*PKPbc	PKPdf	04 41 01.1	+1.6
BOJS				*e*		04 41 04.0	
BOJS				*e*PKPab	PKPdf	04 41 14.2	+15
RUP	Ruppelstein	140.76	340	PKIKP	PKPdf	04 41 01.6	+1.9
VOY	Vojsko	140.85	330	*e*PKPdf	PKPdf	04 40 54.3	-5.7
VOY				*e*		04 41 03.5	
WATA	Walderalm	140.94	333	⇑*i*P	PKPdf	04 40 59.7	-0.4
WATA	Walderalm	140.94	333	⇑*i*P	PKPdf	04 41 04.5	+4.4
WATA	Walderalm	140.94	333	⇑*i*P	PKPdf	04 41 04.5	+4.4
WTTA	Wattenberg	140.97	333	⇓*i*P	PKPdf	04 40 56.7	-3.4
WTTA	Wattenberg	140.97	333	⇑*i*P	PKPdf	04 41 02.6	+2.5
WTTA	Wattenberg	140.97	333	⇑*i*P	PKPdf	04 41 02.6	+2.5
SEST	Monte Rota	141.10	332	PKP	PKPdf	04 41 05.6	+5.2
SQTA	Sankt Quirin	141.19	334	⇑*i*P	PKPdf	04 40 58.2	-2.3
SQTA	Sankt Quirin	141.19	334	⇑*i*P	PKPdf	04 41 02.9	+2.4
SQTA	Sankt Quirin	141.19	334	⇑*i*P	PKPdf	04 41 02.9	+2.4
DAVA	Damuels	141.69	335	⇓*i*P	PKPdf	04 40 56.6	-4.8
DAVA	Damuels	141.69	335	⇑*i*P	PKPdf	04 41 02.7	+1.3
DAVA	Damuels	141.69	335	⇑*i*P	PKPdf	04 41 02.7	+1.3
WLS	Welschbruch	141.75	338	PKP	PKPdf	04 40 57.5	-3.9
CDF	Champ du Feu	141.78	338	*e*PKP1	PKPdf	04 40 57.2	-4.3
	comp=Z,21nm,0.8s						
ECH	Echery	141.99	338	PKP	PKPdf	04 40 58.8	-3.0
FUORN	Ofenpass	142.06	334	PKP	PKPdf	04 40 59.9	-2.1
DAVOX	Davos	142.10	334	PKhKP		04 41 00.4	
	comp=Z,12nm,0.5s,baz=233,slow=4.2,SNR=26						
DAVOX				SKPbc		04 44 28.9	
	comp=Z,7.3nm,0.7s,baz=56,slow=0.6,SNR=7.0						
DAVOX	Davos	142.10	334	PKP	PKPdf	04 41 00.0	-2.1
BRMO	Bormio	142.13	334	PKP	PKPdf	04 41 00.0	-2.1
THEF	They Montfort	142.39	339	PKP	PKPdf	04 41 00.4	-2.1
HINF	Hinteralfeld	142.43	338	*e*PKP1	PKPdf	04 40 59.3	-3.3
HAU	Haudompre	142.45	339	*e*PKP1	PKPdf	04 40 59.5	-3.1
	comp=Z,31nm,0.9s						
BBS	Basel-Blauen	142.49	337	PKIKP	PKPdf	04 41 00.4	-2.3
LOMF	Lomont	142.84	338	PKP	PKPdf	04 41 02.0	-1.3
LTRZ	Laterza	142.87	321	PKP	PKPdf	04 41 02.6	-1.0
RGNG	Rignano Grg	142.93	324	PKP	PKPdf	04 41 02.2	-1.5
FSSB	Fossombrone	143.08	328	PKP	PKPdf	04 41 03.8	-0.1
CING	Cingoli	143.09	328	PKP	PKPdf	04 41 03.4	-0.5
MUGIO	Muggio	143.13	334	PKP	PKPdf	04 41 02.0	-1.9
ARV	Arcevia	143.14	328	PKP	PKPdf	04 41 03.4	-0.6
VAI	Varese	143.29	334	PKIKP	PKPdf	04 41 03.0	-1.1
SFI	Santa Sofia	143.39	330	PKIKP	PKPdf	04 41 04.2	-0.2
TERO	Teramo	143.40	326	PKP	PKPdf	04 41 03.5	-0.9
ORI	Oriolo Calabro	143.42	321	PKIKP	PKPdf	04 41 04.5	0.0
MMK	Mattmark	143.47	335	PKIKP	PKPdf	04 41 04.6	+0.2
PGD	Poggio Sodo	143.48	330	PKIKP	PKPdf	04 41 04.9	+0.4
ZCCA	Zocca	143.48	331	PKP	PKPdf	04 41 05.5	+1.0
VMG	Vicchio	143.50	330	PKP	PKPdf	04 41 04.9	+0.4
NRCA	Norcia	143.51	327	PKP	PKPdf	04 41 04.0	-0.6
MCGN	Macugnaga	143.54	335	PKP	PKPdf	04 41 05.0	+0.5
CRE	Caprese Michel	143.55	329	PKIKP	PKPdf	04 41 04.5	-0.1
FNVD	Fontana Vidola	143.55	330	PKP	PKPdf	04 41 04.8	+0.2
MRLC	Muro Lucano	143.57	323	PKP	PKPdf	04 41 04.7	-0.1
ASS	Assisi	143.59	328	PKIKP	PKPdf	04 41 03.8	-0.9
CII	Carovilli	143.62	325	PKP	PKPdf	04 41 05.0	+0.2
GSCL	Gusciola	143.67	331	PKP	PKPdf	04 41 05.1	+0.3
DIX	Grande Dixence	143.67	336	PKIKP	PKPdf	04 41 05.3	+0.5
AQU	L'Aquila	143.69	326	*e*PKIKP	PKPdf	04 41 05.4	+0.5
ERBM	Eremo	143.69	331	PKP	PKPdf	04 41 05.4	+0.5
SLCN	Sala Consilina	143.71	322	PKP	PKPdf	04 41 05.3	+0.3
RNI2	Rionero Sannit	143.72	325	PKP	PKPdf	04 41 05.7	+0.7
CABF	La Chapelle	143.73	338	*e*PKP1	PKPbc	04 41 04.6	+0.8
TIP	Timpagrande	143.75	319	PKP	PKPdf	04 41 05.3	+0.2
CSSN	Cassano Irpino	143.77	323	PKP	PKPdf	04 41 05.0	-0.1
FLN	La Foliniere	143.78	346	*e*PKP1	PKPbc	04 41 03.6	-0.3
	comp=Z,37nm,0.5s						
SGO	Sicignano	143.80	322	PKIKP	PKPdf	04 41 04.8	-0.4
GRAM		143.80	332	P	PKPbc	04 41 04.8	+0.7
ORX	Oropa	143.81	335	PKIKP	PKPdf	04 41 04.2	-0.8
ORO	Oropa	143.81	335	PKIKP	PKPdf	04 41 04.5	-0.5
BOB	Bobbio (Coli)	143.87	333	PKIKP	PKPdf	04 41 05.3	+0.2
BDI	Bagni Di Lucca	143.88	331	PKIKP	PKPdf	04 41 04.6	-0.6
SARO	Sassorosso	143.88	331	P	PKPbc	04 41 04.5	+0.1
FIAM	Fiamignano	143.91	326	PKP	PKPdf	04 41 05.2	-0.1
MGR	Morigerati	143.91	322	PKP	PKPdf	04 41 03.9	-1.5
PTQR	Pietraquaria	143.92	326	PKP	PKPdf	04 41 05.6	+0.3
LOR	Lormes	143.94	341	*e*PKP1	PKPbc	04 41 04.7	+0.3
BACM		143.96	332	P	PKPbc	04 41 05.7	+1.1
CODM		143.98	332	P	PKPbc	04 41 05.0	+0.3
CSNT	Castellina Chi	143.98	330	PKP	PKPdf	04 41 04.4	-1.0
TRAV		144.00	335	P	PKPbc	04 41 04.6	-0.1
VINC	Vinca	144.03	331	P	PKPbc	04 41 05.6	+0.9
MAIM		144.04	331	P	PKPbc	04 41 04.3	-0.5
MNS	Montasola	144.06	327	PKIKP	PKPdf	04 41 05.1	-0.5
PII	Pisa	144.17	331	PKIKP	PKPdf	04 41 05.3	-0.4
GRI	Girifalco	144.17	319	PKIKP	PKPdf	04 41 07.0	+1.1
CERT	Cerreto	144.20	326	PKP	PKPdf	04 41 05.5	-0.3
GRR	Gorron	144.22	346	*e*PKP1	PKPbc	04 41 05.5	+0.3
	comp=Z,47nm,0.5s						
SSF	Saint Saulge	144.23	341	*e*PKP1	PKPbc	04 41 06.2	+0.9
	comp=Z,146nm,1.0s						
MTCE	Montecelio	144.28	327	PKP	PKPdf	04 41 05.6	-0.4
LSD	Ceresole Reale	144.28	336	PKIKP	PKPdf	04 41 07.1	+1.2
HYF	Humbligny	144.32	342	*e*PKP1	PKPbc	04 41 06.4	+0.9
GRFL	Gerfalco	144.38	329	PKP	PKPdf	04 41 06.3	+0.2
LPL	La Plagne	144.40	336	*e*PKP1	PKPbc	04 41 07.1	+1.3
	comp=Z,40nm,0.6s						
LPG	La Plagne	144.41	336	*e*PKP1	PKPbc	04 41 07.2	+1.4
	comp=Z,49nm,0.5s						
PCP	Pian Castagno	144.44	333	PKIKP	PKPdf	04 41 06.2	0.0
SMF	Signal de Mont	144.49	340	*e*PKP1	PKPbc	04 41 06.7	+0.7
	comp=Z,107nm,0.9s						
RSP	Reno Superiore	144.49	335	PKIKP	PKPdf	04 41 06.8	+0.5
MA9	Marino	144.50	326	PKP	PKPdf	04 41 06.9	+0.5
TOLF	Tolfa	144.64	327	PKP	PKPdf	04 41 07.6	+1.0
FENE	Fenestrelle	144.67	335	P	PKPbc	04 41 07.9	+1.3
SGMF	Saint Gilles	144.72	348	*e*PKP1	PKPbc	04 41 07.2	+0.6
	comp=Z,449nm,0.9s						
BHB	Bricherasio	144.74	335	P	PKPdf	04 41 06.4	-0.4
ROSF	Rostrenen	144.78	349	*e*PKP1	PKPbc	04 41 07.4	+0.7
	comp=Z,158nm,0.7s						
BNI	Bardonecchia	144.81	336	PKIKP	PKPdf	04 41 08.8	+2.0
MAON	Monte Argentar	144.83	328	PKP	PKPdf	04 41 08.1	+1.1
SOI	Samo	144.84	318	PKIKP	PKPdf	04 41 08.7	+1.6
FIN	Finale Ligure	144.85	333	PKIKP	PKPdf	04 41 07.6	+0.7
RRL	Cesana Torines	144.88	335	PKIKP	PKPdf	04 41 08.9	+1.9
BGF	Bois d'Agland	144.89	341	*e*PKP1	PKPbc	04 41 08.1	+1.0
	comp=Z,179nm,0.7s						
GDM	Grand'Maison	144.90	336	PKP	PKPdf	04 41 09.0	+2.0
ROB	Roburent	144.93	334	PKIKP	PKPdf	04 41 07.8	+0.7
SCLL	Scilla	144.95	319	PKP	PKPdf	04 41 07.7	+0.4
GRN	Grenoble	145.01	337	PKP	PKPdf	04 41 09.8	+2.6
DOI	San Damiano	145.03	335	PKIKP	PKPdf	04 41 07.0	-0.2
MBDF	Montbardon	145.04	335	*e*PKP1	PKPbc	04 41 08.7	+1.1
	comp=Z,83nm,0.6s						
MTTG	Motta San Giov	145.11	319	PKP	PKPdf	04 41 09.2	+1.6
MONE	Monesi	145.15	334	P	PKPdf	04 41 08.7	+1.2
PLDF	La Plantade	145.15	340	PKP	PKPdf	04 41 10.2	+2.8
QUIF	Quistinic	145.16	349	*e*PKP1	PKPbc	04 41 08.5	+0.7
	comp=Z,129nm,0.6s						
ENR	Entracque	145.18	334	PKP2	PKPab	04 41 07.5	-2.4
STV2	Anna di Valdie	145.20	334	P	PKPdf	04 41 07.7	+0.2
STV	Sta Anna Valdi	145.20	334	PKP2	PKPab	04 41 07.6	-2.4
SURF	Saint Ours	145.22	335	PKP	PKPdf	04 41 09.9	+2.3
IMI	Imperia	145.23	333	PKP	PKPdf	04 41 09.3	+1.7
ORIF	Oris-en-Rattie	145.24	336	*e*PKP1	PKPbc	04 41 09.7	+1.6
	comp=Z,229nm,0.8s						
AGO	Saint Agoulin	145.24	340	PKP	PKPdf	04 41 10.4	+2.8
SAOF	Saorge	145.31	334	PKP	PKPdf	04 41 09.6	+1.8
SLNA	Salina	145.32	320	PKP	PKPdf	04 41 09.3	+1.4
TCF	Toulx Ste Croi	145.33	342	*e*PKP1	PKPbc	04 41 09.7	+1.5
	comp=Z,256nm,1.2s						
NEGI	Negi	145.36	333	P	PKPdf	04 41 09.3	+1.5
AUTN	L'Aution	145.36	334	PKP	PKPdf	04 41 10.6	+2.8
TOUF	Mont Tournerai	145.42	334	PKP	PKPdf	04 41 10.3	+2.4
SBF	Sospel	145.46	334	*e*PKP1	PKPbc	04 41 09.7	+1.0
	comp=Z,326nm,0.9s						
PYM	Petit Puy Mans	145.55	340	PKP	PKPdf	04 41 11.4	+3.3
MVIF	Mont Vial	145.56	334	PKP	PKPdf	04 41 10.6	+2.4
REVF	Revere	145.59	334	PKP	PKPdf	04 41 10.4	+2.2
MFF	Saint Martin d	145.71	344	*e*PKP1	PKPbc	04 41 10.6	+1.4
	comp=Z,102nm,0.7s						
VIVF	Saint-Julien-l	145.75	338	*e*PKP1	PKPbc	04 41 11.2	+1.9
	comp=Z,142nm,1.0s						
CALN	Calern	145.79	334	PKP	PKPdf	04 41 11.2	+2.6
PGF	Pioggiola	145.79	331	*e*PKP1	PKPbc	04 41 11.0	+1.5
	comp=Z,203nm,0.8s						
STOF	St-Etienne Org	145.99	335	PKP	PKPdf	04 41 12.1	+3.2
FRF	La Foret Royal	146.04	334	*e*PKP1	PKPbc	04 41 11.6	+1.5
	comp=Z,160nm,0.5s						
SMRF	Simiane la Rot	146.14	336	*e*PKP1	PKPbc	04 41 12.5	+2.2
	comp=Z,123nm,0.7s						
VILF	Villemus	146.19	336	PKP	PKPdf	04 41 13.0	+3.8
VAE	Valguarnera	146.24	319	PKPbc	PKPbc	04 41 15.5	+4.8
	comp=Z,6.2nm,0.4s,baz=117,slow=2.3,SNR=2.4						
TAVF	Tavernes	146.24	335	PKP	PKPdf	04 41 12.8	+3.5
LMR	La Mourre	146.29	334	*e*PKP1	PKPbc	04 41 12.3	+1.6
	comp=Z,186nm,0.7s						
RJF	Les Rejaudoux	146.42	342	*e*PKP1	PKPbc	04 41 13.0	+2.1
	comp=Z,172nm,1.2s						
PRAF	Pradon	146.45	336	PKP	PKPdf	04 41 14.0	+4.4
PUYF	Puyloubier	146.46	335	PKP	PKPdf	04 41 13.5	+3.9
TREF	Trevaresse	146.51	336	PKP	PKPdf	04 41 14.0	+4.3
CAF	Calviac	146.59	341	*e*PKP1	PKPbc	04 41 13.7	+2.4
	comp=Z,114nm,1.1s						
BERF	Bertagne	146.65	335	PKP	PKPdf	04 41 14.2	+4.2
GELF	Grande-Etoile	146.69	335	PKP	PKPdf	04 41 14.4	+4.4
LASF	Ste Croix	146.72	338	*e*PKP1	PKPbc	04 41 14.0	+2.3
	comp=Z,153nm,0.8s						
LFF	La Frestale	146.99	342	*e*PKP1	PKPbc	04 41 14.5	+2.2
	comp=Z,90nm,0.5s						
DGI	Dorgali Grotta	147.15	327	PKP	PKPdf	04 41 15.1	+4.2
MTLF	Montolieu	147.94	339	*e*PKP1	PKPdf	04 41 17.4	+5.3
	comp=Z,172nm,0.8s						
LRDF	Laroque-de-Fa	148.18	338	PKP	PKPdf	04 41 18.4	+5.9
LPEF	Le Peyrat	148.39	339	PKP	PKPdf	04 41 18.9	+6.0
SJAF	Saint Jean de	148.45	337	PKP	PKPdf	04 41 18.4	+5.4
EJON	La Jonquera	148.48	337	PKP	PKPdf	04 41 18.6	+5.6
FILF	Fillols	148.50	338	PKP	PKPdf	04 41 19.1	+6.0
MLS	Moulis	148.66	340	PKP	PKPdf	04 41 19.3	+6.0
SALF	Salau	148.81	340	PKP	PKPdf	04 41 19.2	+5.7
VALF	Valcebollere	148.84	338	PKP	PKPdf	04 41 20.2	+6.6
EPF	Esparros	148.84	341	*e*PKP1	PKPdf	04 41 19.4	+5.8
	comp=Z,19nm,0.5s						
MELF	Melles	148.85	340	PKP	PKPdf	04 41 20.0	+6.4
REYF	Montagne du Re	149.03	342	PKP	PKPdf	04 41 20.4	+6.5
RESF	Ens	149.04	341	PKP	PKPdf	04 41 21.5	+7.6
VIEF	Viey	149.07	341	PKP	PKPdf	04 41 21.2	+7.2
OSSF	Osses	149.11	343	PKP	PKPdf	04 41 20.0	+6.0
SJPF	Ste Jean	149.23	343	*e*PKP1	PKPdf	04 41 20.8	+6.6
	comp=Z,38nm,0.6s						
LARF	Larrau	149.23	343	PKP	PKPdf	04 41 21.4	+7.2
ETSF	Etsaut	149.23	342	*e*PKP1	PKPdf	04 41 21.1	+6.9
	comp=Z,83nm,0.8s						
EMIR	Miracle	149.44	339	PKP	PKPdf	04 41 20.4	+5.9
EBR	Ebro Roquetas	150.77	339	*e*PKPDF	PKPdf	04 41 24.5	+7.9
CMAH	Djebel Manchou	151.00	325	P	PKPdf	04 41 20.0	+2.9
CAEH	'Ain El Ouahch	151.21	326	P	PKPdf	04 41 20.0	+2.6
ABSA	Djebel Ababsia	151.22	324	P	PKPdf	04 41 20.0	+2.6
CKFL	Kef-Lekhel	151.56	325	P	PKPdf	04 41 20.5	+2.6
CASM	Ain Smara	151.78	325	P	PKPdf	04 41 21.0	+2.8
DFRA	Djebel Bou Aff	151.91	327	P	PKPdf	04 41 22.0	+3.6
CTEI	Djebel Teioual	151.97	325	P	PKPdf	04 41 25.0	+6.5
PVRL	Vila Real	152.38	352	*e*PKPdf	PKPdf	04 41 20.4	+1.5
PVRL	Vila Real	152.38	352	*e*PKPbc	PKPdf	04 41 28.2	+9.3
PVRL	Vila Real	152.38	352	*e*PKPab	PKPab	04 41 38.9	-0.2
SET	Setif	152.42	327	P	PKPdf	04 41 22.0	+2.8
CKHR	Kef el Ahmar	152.50	326	P	PKPdf	04 41 26.0	+6.7
PVIS	Viseu	152.95	352	*e*PKPbc	PKPdf	04 41 29.2	+9.4
PVIS	Viseu	152.95	352	*e*PKPab	PKPab	04 41 41.6	+0.1
ESDC	Sonseca Array	153.18	345	PKP	PKPdf	04 41 22.0	+1.9
	comp=Z,1.2nm,0.8s,baz=357,slow=2.3,SNR=6.2						
ESDC				PKPbc	PKPdf	04 41 30.1	+10
	comp=Z,7.8nm,0.7s,baz=11,slow=3.0,SNR=30						
ESDC				PKPab	PKPab	04 41 42.4	-0.1
	comp=Z,3.8nm,0.6s,baz=8.8,slow=3.9,SNR=9.8						
ESLA	Sonseca Array	153.18	345	*e*PKPbc	PKPdf	04 41 29.7	+10
ESLA				*e*PKPab	PKPab	04 41 42.3	-0.2
MTE	Manteigas	153.21	351	*e*PKPdf	PKPdf	04 41 22.2	+2.1
MTE	Manteigas	153.21	351	*e*PKPbc	PKPdf	04 41 29.9	+10
MTE	Manteigas	153.21	351	*e*PKPab	PKPab	04 41 42.2	-0.4
MTE	Manteigas	153.21	351	*e*PKPdf	PKPdf	04 41 22.1	+1.9
MTE				*e*PKPbc	PKPdf	04 41 30.0	+10
MTE				*e*PKPab	PKPab	04 41 42.5	-0.1
PCBR	Castelo Branco	153.75	351	*e*PKPdf	PKPdf	04 41 22.9	+2.0
PCBR	Castelo Branco	153.75	351	*e*PKPbc	PKPdf	04 41 30.9	+10
PCBR	Castelo Branco	153.75	351	*e*PKPab	PKPab	04 41 44.4	-0.5
PTOM	Tomar	154.10	352	*e*PKPdf	PKPdf	04 41 23.7	+2.3
PTOM	Tomar	154.10	352	*e*PKPbc	PKPdf	04 41 31.9	+11
PTOM	Tomar	154.10	352	*e*PKPab	PKPab	04 41 45.5	-0.9
EBAD	Badajoz	154.73	349	PKP	PKPdf	04 41 24.1	+1.8
EVO	Evora	155.11	351	*e*PKP2	PKPab	04 41 50.6	-0.1
	comp=Z,68nm,1.4s						
PBEJ	Beja	155.58	350	*e*PKPdf	PKPdf	04 41 26.1	+2.7
PBEJ	Beja	155.58	350	*e*PKPab	PKPab	04 41 53.1	+0.4
PTEO	Sao Teotonio	156.18	352	*e*PKPab	PKPab	04 41 55.5	+0.2
ESPR	Espera	156.30	346	PKP	PKPdf	04 41 29.3	+5.0
DBIC	Dimbokro	169.32	228	PKP	PKPdf	04 41 38.8	+1.2
	comp=Z,2.9nm,0.7s,baz=232,slow=2.3,SNR=12						
DBIC	Dimbokro	169.32	228	*e*PKPdf	PKPdf	04 41 38.6	+1.0

IDC 29 04:39:23.2±8.3**, 1.98N**×**96.51E, mb4.0**/5**, mb1 4.2**/5**, mb1mx3.8**/18**, mbtmp4.0**/5**, Error ellipse: s-maj=194.4km s-min=83.2km az=136.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	46.33	347	P	P	04 47 51.0	-1.6
	2.3nm,0.8s,baz=172,slow=8.3,SNR=13						
SONM	Songino Array	46.47	9	P	P	04 47 51.9	-1.9
	0.5nm,0.4s,baz=180,slow=7.2,SNR=3.9						
ZAL	Zalesovo	52.68	351	P	P	04 48 39.4	-2.1
	4.2nm,0.5s,baz=318,slow=6.7,SNR=13						
BVAR	Borovoye Array	55.29	341	P	P	04 48 57.8	-2.9
	1.3nm,0.7s,baz=135,slow=8.4,SNR=9.0						
GERES	GERESS Array B	83.78	319	P	P	04 51 54.7	-1.0
	0.2nm,0.3s,baz=63,slow=2.2,SNR=3.9						

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*IDC **29** 04:39:47.6±1.0, 3.68N×126.95E, mb4.4/8, mb1 4.5/8, mb1mx4.2/19, mbtmp4.4/8, Error ellipse: s-maj=65.8km s-min=16.1km az=68.0*

*NEIC **29** 04:39:48.9±9.9, 3.67N×126.99E, h10^{km}±63^{km}, mb4.6/3, Error ellipse: s-maj=31.2km s-min=7.8km az=71.0*

*BJI **29** 04:39:48.0, 3.08N×126.20E, h26^{km}, mb4.6*

ISC 29 04:39:47.3±0.6**, 3.7N**±0.1×**126.9E**±0.3**, h10**^{km}**, n18, σ0^{s}77**/18**, mb4.4**/10**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YHNB	Yeheng	21.54	346	*e*P	P	04 44 37.8	-1.1
FITZ	Fitzroy Crossi	21.67	183	*e*P	P	04 44 40.2	0.0
	5.1nm,0.2s,mb4.6						
FITZ	Fitzroy Crossi	21.67	183	P	P	04 44 40.3	0.0
	6.3nm,0.5s,mb4.3,baz=11,slow=10,SNR=14						
WRAB	Tennant Creek	24.58	163	*e*P	P	04 45 08.5	-0.3
	19nm,0.6s,mb4.8						
WRA	Warramunga Arr	24.58	163	P	P	04 45 08.9	0.0
	10nm,0.6s,mb4.5,baz=343,slow=10,SNR=31						
WB2	Warramunga Arr	24.59	163	*e*P	P	04 45 08.8	-0.1
CMAR	Chiang Mai Arr	31.03	300	P	P	04 46 08.3	+0.6
	1.2nm,0.6s,mb3.9,baz=101,slow=7.3,SNR=5.4						
ENH	Enshi	31.16	330	P	P	04 46 09.3	+0.7
XAN	Xi'an	34.54	333	P	P	04 46 37.0	-1.1
STKA	Stephens Creek	38.02	159	P	P	04 47 07.9	+0.4
	6.4nm,0.5s,mb4.6,baz=338,slow=9.3,SNR=15						
HIA	Hailar	45.84	353	*e*P	P	04 48 12.1	+0.8
ULN	Ulaanbaatar	47.22	342	*e*P	P	04 48 22.4	+0.2
	2.5nm,0.6s,mb4.3						
SONM	Songino Array	47.40	341	P	P	04 48 25.1	+1.4
	1.5nm,0.4s,mb4.2,baz=149,slow=7.2,SNR=6.1						
MKAR	Makanchi Array	57.69	325	P	P	04 49 39.6	-0.8
	3.4nm,0.5s,mb4.6,baz=122,slow=8.3,SNR=18						
BVAR	Borovoye Array	67.45	327	P	P	04 50 45.0	-0.3
	2.5nm,0.8s,mb4.3,baz=127,slow=7.4,SNR=10						
BRVK	Borovoye	67.53	327	P	P	04 50 49.4	+3.6
ZRNK	Zerenda	68.18	326	*e*P	P	04 50 48.9	-1.0
ARCES	ARCESS Array B	90.56	340	P	P	04 52 50.8	+0.3
	1.6nm,0.6s,mb4.5,baz=68,slow=6.5,SNR=6.6						

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*IDC **29** 05:14:56.2±1.4, 5.57S×146.80E, mb3.8/3, mb1 4.2/4, mb1mx3.9/13, mbtmp3.9/4, ML4.2/1, Error ellipse: s-maj=65.2km s-min=28.1km az=105.0*

*NEIC **29** 05:15:07.3±3.5, 5.67S×146.51E, h86^{km}±35^{km}, mb4.7/4, Error ellipse: s-maj=37.5km s-min=20.1km az=133.0*

ISC 29 05:15:06.2±3.9**, 5.8S**±0.2×**146.5E**±0.2**, h90**^{km}±38^{km}**, n12, σ0^{s}88**/12**, mb4.2**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.69	170	*e*P	P	05 16 02.2	0.0
CTAO	Charters Tower	14.25	181	*e*P	P	05 18 28.4	+3.4
	1.9nm,0.5s						
WRAB	Tennant Creek	18.39	219	*e*P	P	05 19 15.0	-1.6
	5.2nm,0.5s						
WB2	Warramunga Arr	18.40	219	*e*P	P	05 19 16.4	-0.3
WRA	Warramunga Arr	18.41	219	P	P	05 19 16.7	-0.1
	0.8nm,0.3s,baz=40,slow=12,SNR=22						
FITZ	Fitzroy Crossi	23.78	237	*e*P	P	05 20 12.9	+1.4
	65nm,0.6s,mb5.1						
STKA	Stephens Creek	26.39	189	P	P	05 20 36.5	+0.4
	0.8nm,0.4s,mb3.5,baz=315,slow=15,SNR=3.7						
STKA	Stephens Creek	26.39	189	*e*P	P	05 20 35.8	-0.3
STKA				P		05 20 36.5	
MBWA	Marble Bar	30.13	237	*e*P	P	05 21 10.0	+0.2
	4.9nm,0.6s,mb4.3						
KLBR	Kellerberrin	37.22	223	*e*P	P	05 22 10.4	-0.3
	25nm,1.3s,mb5.0						
MKAR	Makanchi Array	77.00	321	P	P	05 26 51.3	+0.5
	0.2nm,0.3s,mb3.3,baz=104,slow=5.9,SNR=3.1						
ILAR	Eielson Array	85.45	23	P	P	05 27 34.1	-0.6
	1.2nm,0.6s,mb4.0,baz=253,slow=4.9,SNR=13						

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*NEIC **29** 05:52:05.8, 40.07S×175.02E, h15^{km}, ML3.9(WEL), After WEL.*

NEIC Felt at Wanganui.

WEL 29 05:52:05.6±0.1**, 40.08S**×**174.99E, h12**^{km}**, ML3.9**/35**, 5C-1D, Error ellipse: s-maj=1.5km s-min=0.6km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	Wanganui	0.32	360	⇑P*	Pb	05 52 13.0	+0.3
WAZ				S*	Sb	05 52 17.8	+0.3
MRZ	Mangatainoka R	0.74	142	P	Pb	05 52 19.9	0.0
MRZ				S	Sb	05 52 29.8	+0.2
MRZ	Mangatainoka R	0.74	142	⇑P*	Pb	05 52 19.9	0.0
MRZ				S*	Sb	05 52 29.6	-0.1
TSZ	Takapari Road	0.75	89	P	Pb	05 52 19.8	-0.2
TSZ				S	Sb	05 52 29.7	-0.2
TSZ	Takapari Road	0.75	89	⇓P*	Pb	05 52 19.8	-0.2
TSZ				S*	Sb	05 52 29.6	-0.3
KIW	Kapiti Island	0.79	184	P	Pb	05 52 19.8	-0.9
KIW	Kapiti Island	0.79	184	⇑P*	Pb	05 52 19.8	-0.9
MTVZ	Mangateitei	0.79	29	P*	Pb	05 52 19.9	-0.7
PKVZ	Pokaka	0.83	20	P*	Pb	05 52 20.7	-0.8
PKVZ				S*	Sb	05 52 33.0	+0.6
WNVZ	Wahianoa	0.89	32	P	Pb	05 52 21.7	-0.7
WNVZ	Wahianoa	0.89	32	P*	Pb	05 52 21.6	-0.8
TRVZ	Turoa	0.89	29	⇑P*	Pb	05 52 21.6	-0.8
MOVZ	Moawhango	0.89	42	P	Pb	05 52 21.3	-1.2
MOVZ	Moawhango	0.89	42	P*	Pb	05 52 21.3	-1.2
MOVZ				S*	Sb	05 52 32.6	-1.5
RAEZ	Rainy Point	0.91	330	P*	Pb	05 52 23.8	+1.0
DRZ	Dome Shelter	0.92	29	P	Pb	05 52 22.3	-0.6
DRZ	Dome Shelter	0.92	29	P*	Pb	05 52 22.1	-0.9
FWVZ	Far West T-bar	0.93	28	P	Pb	05 52 22.3	-0.8
FWVZ	Far West T-bar	0.93	28	P*	Pb	05 52 22.1	-1.0
TUVZ	Tukino	0.96	33	P*	Pb	05 52 23.0	-0.6
VRZ	Vera Road	0.97	349	P	Pb	05 52 23.8	0.0
VRZ	Vera Road	0.97	349	P*	Pb	05 52 23.7	-0.1
WPVZ	Whakapapa	0.97	27	P	Pb	05 52 23.0	-0.9
WPVZ	Whakapapa	0.97	27	P*	Pb	05 52 23.0	-0.8
CNZ	Chateau	0.98	26	P	Pb	05 52 23.2	-0.8
CNZ	Chateau	0.98	26	P*	Pb	05 52 23.0	-1.0
NGZ	Ngauruhoe	1.02	28	P	Pb	05 52 23.8	-0.8
NGZ	Ngauruhoe	1.02	28	P*	Pb	05 52 23.5	-1.2
CAW	Cannon Point	1.03	177	P	Pb	05 52 24.6	-0.3
CAW	Cannon Point	1.03	177	⇑P*	Pb	05 52 24.5	-0.3
OTVZ	Oturere	1.05	30	P*	Pb	05 52 24.5	-0.7
NEZ	North Egmont	1.06	319	P	Pb	05 52 26.8	+1.5
NEZ	North Egmont	1.06	319	P*	Pb	05 52 26.5	+1.1
TWVZ	Taurewa	1.06	19	P	Pb	05 52 24.3	-1.1
TWVZ	Taurewa	1.06	19	*e*P*	Pb	05 52 24.1	-1.3
WTVZ	West Tongariro	1.07	26	P	Pb	05 52 24.5	-1.0
WTVZ	West Tongariro	1.07	26	P*	Pb	05 52 24.5	-0.9
DUWZ	D'Urville Isla	1.09	228	P*	Pb	05 52 25.0	-0.8
NRZ	Ngariki Road	1.10	312	P	Pb	05 52 26.7	+0.7
NRZ	Ngariki Road	1.10	312	P*	Pb	05 52 26.2	+0.1
BFZ	Birch Farm	1.14	122	*e*P	Pb	05 52 27.1	+0.5
BFZ	Birch Farm	1.14	122	*e*P*	Pb	05 52 27.0	+0.3
MTW	Mount Morrison	1.15	160	P	Pb	05 52 27.2	+0.3
MTW	Mount Morrison	1.15	160	P*	Pb	05 52 27.0	+0.1
MRW	Makara Radio	1.17	191	P	Pb	05 52 26.6	-0.7
MRW	Makara Radio	1.17	191	P*	Pb	05 52 26.4	-0.9
PKE	Pukeiti	1.17	318	P	Pb	05 52 28.2	+0.9

PKE	Pukeiti	1.17	318	*e*P*	Pb	05 52 27.8	+0.6
WEL	Wellington	1.22	188	P	Pb	05 52 27.5	-0.6
WEL	Wellington	1.22	188	P*	Pb	05 52 27.3	-0.7
KATZ	Kakaramea	1.23	27	P	Pb	05 52 27.4	-0.9
KATZ	Kakaramea	1.23	27	P*	Pb	05 52 27.1	-1.1
SNZO	South Karori	1.25	190	P	Pb	05 52 27.9	-0.7
SNZO	South Karori	1.25	190	P*	Pb	05 52 27.8	-0.8
TCW	Tory Channel	1.26	205	P	Pb	05 52 27.4	-1.3
TCW	Tory Channel	1.26	205	P*	Pb	05 52 27.3	-1.4
BHW	Baring Head	1.33	184	P	Pb	05 52 29.6	-0.4
BHW	Baring Head	1.33	184	PN	Pn	05 52 29.5	-0.5
PAWZ	Paruwai Farm	1.34	166	PN	Pn	05 52 29.3	-0.9
MSWZ	Moikau Station	1.35	172	P	Pn	05 52 29.8	-0.5
MSWZ	Moikau Station	1.35	172	PN	Pn	05 52 29.6	-0.7
RATZ	Rangitukua	1.35	27	P	Pn	05 52 30.1	-0.2
RATZ	Rangitukua	1.35	27	PN	Pn	05 52 29.5	-0.8
TRWZ	Traveller	1.42	158	*e*PN	Pn	05 52 31.1	-0.3
WATZ	Wairara	1.48	23	P	Pn	05 52 32.3	+0.1
WATZ	Wairara	1.48	23	*e*PN	Pn	05 52 31.8	-0.4
HIZ	Hauiti	1.56	356	*e*P	Pn	05 52 32.8	-0.6
HIZ	Hauiti	1.56	356	PN	Pn	05 52 32.6	-0.8
TUWZ	Tuamarina	1.57	210	*e*PN	Pn	05 52 32.1	-1.3
NNZ	Nelson	1.67	227	P	Pn	05 52 34.3	-0.6
NNZ	Nelson	1.67	227	*e*PN	Pn	05 52 33.6	-1.3
CMWZ	Cape Campbell	1.77	199	P	Pn	05 52 36.7	+0.4
CMWZ	Cape Campbell	1.77	199	*e*PN	Pn	05 52 36.8	+0.5
BSWZ	Blackbirch Sta	1.84	207	P	Pn	05 52 37.3	0.0
BSWZ	Blackbirch Sta	1.84	207	*e*PN	Pn	05 52 37.2	-0.1
QRZ	Quartz Range	2.02	247	*e*P	Pn	05 52 39.0	-0.9
QRZ	Quartz Range	2.02	247	*e*PN	Pn	05 52 38.9	-1.0
THZ	Tophouse	2.31	222	P	Pn	05 52 43.7	-0.3
THZ	Tophouse	2.31	222	*e*PN	Pn	05 52 43.5	-0.5
TOZ	Tahuroa Road	2.38	10	*e*P	Pn	05 52 47.1	+2.1
TOZ	Tahuroa Road	2.38	10	*e*PN	Pn	05 52 46.5	+1.5
URZ	Urewera	2.45	43	*e*P	Pn	05 52 45.5	-0.6
URZ	Urewera	2.45	43	*e*PN	Pn	05 52 44.2	-1.9
KHZ	Kahutara	2.58	205	P	Pn	05 52 46.7	-1.2
KHZ	Kahutara	2.58	205	PN	Pn	05 52 46.7	-1.2
MWZ	Matawai	2.63	49	P	Pn	05 52 48.0	-0.6
MWZ	Matawai	2.63	49	*e*PN	Pn	05 52 47.7	-0.9
DSZ	Denniston Nort	2.93	234	*e*P	Pn	05 52 52.1	-0.8
DSZ	Denniston Nort	2.93	234	*e*PN	Pn	05 52 51.9	-1.1
LTZ	Lake Taylor	3.39	216	*e*P	Pn	05 52 57.6	-1.8
LTZ	Lake Taylor	3.39	216	*e*PN	Pn	05 52 57.5	-1.9
MQZ	McQueen's Vall	4.02	205	*e*P	Pn	05 53 04.2	-4.2
MQZ	McQueen's Vall	4.02	205	*e*PN	Pn	05 53 03.8	-4.6

IDC 29 06:13:11.3±3.3**, 22.48S**×**109.10W, mb3.8**/3**, mb1 4.2**/3**, mb1mx3.7**/16**, mbtmp3.8**/3**, MS3.4**/1**, Ms1 3.5**/1**, ms1mx2.8**/20**, Error ellipse: s-maj=424.3km s-min=79.5km az=90.0, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	39.05	88	LR	LR	06 34 12.6	
	comp=Z,49nm,18.2s,baz=124,slow=32						
NVAR	Mina Array Bea	61.20	352	P	P	06 23 28.4	-1.9
	0.6nm,0.6s,baz=176,slow=8.6,SNR=7.2						
PDAR	Pinedale Array	64.92	360	P	P	06 23 53.2	-1.6
	0.4nm,0.7s,baz=166,slow=6.1,SNR=4.0						
YKA	Yellowknife Ar	84.79	357	P	P	06 25 46.1	-2.3
	0.8nm,0.8s,baz=172,slow=5.3,SNR=5.9						
MKAR	Makanchi Array	154.05	342	PKP	PKPdf	06 33 05.7	-0.7
	0.4nm,0.7s,baz=27,slow=3.2,SNR=3.5						
MKAR				PKPbc	PKPdf	06 33 12.4	+6.0
	0.1nm,0.3s,baz=34,slow=4.0,SNR=2.7						

*BJI **29** 06:28:14.9, 1.60S×99.70E, h34^{km}, mb5.0*

*NEIC **29** 06:28:16.0±0.3, 1.62S×99.67E, mb4.8/2, Error ellipse: s-maj=14.2km s-min=7.6km az=61.0*

*IDC **29** 06:28:16.1±0.6, 1.68S×99.55E, h32^{km}±3^{km}, mb4.2/12, mb1 4.3/12, mb1mx4.2/15, mbtmp4.4/12, MS3.9/2, Ms1 3.9/2, ms1mx3.3/19, Error ellipse: s-maj=26.0km s-min=12.8km az=57.0*

ISC 29 06:28:14.4±0.5**, 1.61S**±0.09×**99.7E**±0.1**, h34**^{km}**, h34**^{km}±1.2^{km}**:pP-P, n32,** σ**0**^{s}**89**/29**, mb4.5**/15**, MS4.0**/2**, 2C-4D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.92	8	*e*P	P	06 29 56.0	0.0
CMAR	Chiang Mai Arr	19.95	358	P	P	06 32 43.7	-2.8
	2.6nm,0.6s,baz=187,slow=9.9,SNR=12						
FITZ	Fitzroy Crossi	30.26	124	P	P	06 34 24.5	-0.2
	18nm,1.1s,mb4.7,baz=333,slow=9.4,SNR=5.2						
LSA	Lhasa	32.19	346	*e*P	P	06 34 43.8	+2.1
LSA	Lhasa	32.19	346	P	P	06 34 41.4	-0.2
	6.9nm,0.6s,mb4.7						
WRA	Warramunga Arr	38.43	121	P	P	06 35 35.0	+0.2
	5.2nm,0.5s,mb4.5,baz=302,slow=9.1,SNR=42						
WRA				pP	pP	06 35 45.4	+0.7
	3.3nm,0.5s,baz=303,slow=9.0,SNR=7.9						
WRAB	Tennant Creek	38.44	121	*e*P	P	06 35 34.1	-0.7
	11nm,0.6s,mb4.8						
WB2	Warramunga Arr	38.44	121	*e*P	P	06 35 35.0	+0.1
WMQ	Urumqi	46.49	348	*e*P	P	06 36 41.0	+0.7
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CTA	Charters Tower	49.02	115	LR	LR	07 00 10.7	
	comp=Z,154nm,19.9s,MS4.0,baz=48,slow=39						
SONM	Songino Array	49.59	6	P	P	06 37 04.8	+0.5
	comp=Z,0.5nm,0.3s,mb4.0,baz=180,slow=9.9,SNR=5.2						
SONM				pP	pP	06 37 15.8	+1.5
	comp=Z,3.3nm,0.8s,baz=180,slow=8.6,SNR=8.4						
SONM				PcP	PcP	06 38 26.5	+0.6
	comp=Z,1.3nm,0.7s,baz=180,slow=4.3,SNR=2.8						
STKA	Stephens Creek	49.62	132	P	P	06 37 04.7	-0.1
	comp=Z,2.4nm,0.4s,mb4.5,baz=308,slow=7.7,SNR=6.9						
STKA				pP	pP	06 37 15.7	+0.9
	comp=Z,1.9nm,0.4s,baz=308,slow=8.8,SNR=2.8						
STKA	Stephens Creek	49.62	132	*e*P	P	06 37 05.2	+0.4
STKA				pP	pP	06 37 15.7	+0.9
MKAR	Makanchi Array	50.58	345	P	P	06 37 11.8	-0.1
	comp=Z,5.5nm,0.7s,mb4.6,baz=148,slow=8.0,SNR=71						
MKAR				pP	pP	06 37 21.6	-0.4
	comp=Z,4.1nm,0.6s,baz=153,slow=8.1,SNR=11						
ZAL	Zalesovo	56.73	350	P	P	06 37 56.5	-0.7
	comp=Z,5.9nm,0.5s,mb4.9,baz=311,slow=7.3,SNR=5.1						
ZAL				pP	pP	06 38 06.6	-0.8
	comp=Z,6.3nm,0.3s,baz=295,slow=5.4,SNR=3.0						
ZAL	Zalesovo	56.73	350	P	P	06 37 56.5	-0.7
ZAL				pP	pP	06 38 06.6	-0.9
MAW	Mawson	70.59	194	P	P	06 39 28.6	+0.7
	comp=Z,3.7nm,0.9s,mb4.3,baz=353,slow=5.3,SNR=8.3						
BRTR	Keskin Array B	72.85	312	P	P	06 39 40.0	-2.0
	comp=Z,1.9nm,0.7s,mb4.1,baz=128,slow=6.2,SNR=6.3						
BRTR				pP	pP	06 39 50.6	-1.8
	comp=Z,1.3nm,0.6s,baz=130,slow=9.5,SNR=3.4						
BOSA	Boshof	75.60	241	P	P	06 39 57.1	-1.0
	comp=Z,3.7nm,1.1s,mb4.2,baz=286,slow=6.9,SNR=3.1						
BOSA				LR	LR	07 06 03.6	
	comp=Z,66nm,19.7s,MS3.9,baz=44,slow=30						
TIRR	Tirgusor	77.88	316	⇓P	P	06 40 09.7	-0.8
TIRR	Tirgusor	77.88	316	⇓P	P	06 40 09.7	-0.9
MLR	Muntele Rosu	79.83	317	⇓P	P	06 40 21.5	+0.3
MLR	Muntele Rosu	79.83	317	⇓P	P	06 40 21.5	+0.3
BURAR	Bucovina Array	80.78	319	⇑P	P	06 40 27.1	+0.9
BURAR	Bucovina Array	80.78	319	⇑P	P	06 40 27.1	+0.9
FINES	FINESS Array B	83.64	332	P	P	06 40 41.0	+0.4
	comp=Z,2.2nm,0.7s,mb4.4,baz=108,slow=6.0,SNR=10						
FINES				pP	pP	06 40 50.7	-0.6
	comp=Z,1.0nm,0.5s,baz=90,slow=3.8,SNR=2.2						
FINES	FINESS Array B	83.64	332	P	P	06 40 41.0	+0.4
FINES				pP	pP	06 40 50.7	-0.6
KAF	Kangasniemi	83.71	333	*e*p	P	06 40 40.9	0.0
ARCES	ARCESS Array B	86.01	340	P	P	06 40 53.5	+1.2
	comp=Z,3.2nm,0.8s,mb4.6,baz=90,slow=4.9,SNR=8.2						
ARCES				pP	pP	06 41 04.2	+1.3
	comp=Z,1.4nm,0.8s,baz=68,slow=6.5,SNR=1.7						
GERES	GERESS Array B	88.57	319	P	P	06 41 05.9	+0.9
	comp=Z,0.5nm,0.2s,mb4.5,baz=76,slow=5.5,SNR=4.8						
GERES				pP	pP	06 41 15.9	0.0
	comp=Z,0.4nm,0.2s,baz=90,slow=5.3,SNR=2.1						
CPUP	Villa Florida	144.47	217	PKP	PKPdf	06 47 49.1	+1.0
	comp=Z,9.8nm,0.7s,baz=173,slow=2.5,SNR=38						
CPUP				pPKP		06 47 59.1	
	comp=Z,5.9nm,0.8s,baz=133,slow=4.1,SNR=9.3						
TXAR	Lajitas Array	144.56	37	PKP	PKPdf	06 47 49.9	+1.7
	comp=Z,3.1nm,0.6s,baz=275,slow=1.1,SNR=49						

*NEIC **29** 06:40:04.4, 33.16S×72.19W, h27^{km}, ML2.9(GUC), After GUC.*

GUC 29 06:40:04.4±0.6**, 33.16S**×**72.19W, h27**^{km}±10^{km}**, MD3.8, ML2.9, 2C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.48	74	⇓*i*P	Pb	06 40 14.1	-0.2
IHA				*i* S	Sb	06 40 21.4	+0.3
LCCH	Las Cruces	0.61	122	⇑*i*P	Pb	06 40 16.1	-0.4
LCCH				*i* S	Sb	06 40 24.8	+0.1
PACH	Papudo	0.89	46	*i* P	Pb	06 40 20.8	-0.3
ROCH	El Roble	1.01	80	*i* P	Pn	06 40 22.0	-0.9
ROCH				*i* S	Sb	06 40 36.5	+0.5
TACH	Talagante	1.16	116	*e*P	Pn	06 40 24.9	-0.1
TACH				*i* S	Sn	06 40 40.3	+0.1
STL	Santa Lucia	1.33	103	*i* P	Pn	06 40 27.0	-0.4
STL				*i* S	Sn	06 40 44.8	+0.4
ANTU	Antumapu	1.37	108	*e*P	Pn	06 40 28.3	+0.3
ANTU				*i* S	Sn	06 40 46.1	+0.8
ANTU				AMP		06 40 53.0	
	comp=E,306nm,0.4s						
DSCH	Colegio Aleman	1.38	100	*e*P	Pn	06 40 28.6	+0.4
DSCH				*i* S	Sn	06 40 46.5	+0.8
DSCH				AMP		06 40 52.4	
	comp=N,416nm,0.3s						
CLCH	Cerro Calan	1.41	100	*e*P	Pn	06 40 29.1	+0.5
CLCH				*i* S	Sn	06 40 47.6	+1.3
CLCH				AMP		06 40 52.5	
	comp=N,349nm,0.4s						
JACH	Jahuel	1.43	71	*e*P	Pn	06 40 29.0	+0.1
JACH				*i* S	Sn	06 40 47.6	+0.8
FSR	Penalolen	1.43	103	⇑*i*P	Pn	06 40 29.8	+0.9
FSR				*i* S	Sn	06 40 48.7	+1.7
PCH	Pirque	1.48	109	*i* P	Pn	06 40 29.8	+0.2
FCH	Farellones	1.60	97	*e*P	Pn	06 40 32.5	+1.1
CACH	El Canelo	1.64	126	*e*P	Pn	06 40 33.4	+1.5
SFDO	San Fernando	1.75	146	*e*P	Pn	06 40 34.0	+0.4

*NEIC **29** 06:52:01.7±2.9, 1.20N×122.17E, h44^{km}±27^{km}, mb4.2/1, Error ellipse: s-maj=59.9km s-min=8.6km az=64.0*

*IDC **29** 06:52:02.5±7.6, 1.15N×122.07E, h49^{km}±76^{km}, mb3.8/7, mb1 4.1/8, mb1mx3.9/18, mbtmp4.2/8, Error ellipse: s-maj=106.7km s-min=17.0km az=66.0*

ISC 29 06:52:00.9±4.3**, 1.1N**±0.2×**121.9E**±0.5**, h54**^{km}±40^{km}**, n13,** σ**0**^{s}**33**/13**, mb4.0**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	7.53	311	*e*P	P	06 53 50.5	0.0
FITZ	Fitzroy Crossi	19.44	169	*e*P	P	06 56 25.8	0.0
	12nm,0.8s						
FITZ	Fitzroy Crossi	19.44	169	P	P	06 56 25.5	-0.3
	1.2nm,0.3s,baz=6.6,slow=7.2,SNR=10						
WRA	Warramunga Arr	24.20	150	P	P	06 57 14.0	+0.3
	3.6nm,0.8s,mb3.9,baz=328,slow=10,SNR=11						
WRA				PcP	PcP	07 00 54.8	+0.3
	0.3nm,0.5s,baz=328,slow=1.9,SNR=7.5						
WB2	Warramunga Arr	24.21	150	*e*P	P	06 57 13.3	-0.4
STKA	Stephens Creek	37.73	152	P	P	06 59 13.6	+0.3
	4.1nm,0.8s,mb4.2,baz=330,slow=9.3,SNR=9.3						
STKA	Stephens Creek	37.73	152	P	P	06 59 13.6	+0.3
SONM	Songino Array	48.45	346	P	P	07 00 40.0	+0.1
	0.5nm,0.4s,mb3.9,baz=153,slow=8.3,SNR=5.0						
MKAR	Makanchi Array	57.12	329	P	P	07 01 44.7	+0.4
	0.8nm,0.4s,mb4.1,baz=126,slow=8.5,SNR=11						
MKAR	Makanchi Array	57.12	329	P	P	07 01 44.7	+0.4
ZAL	Zalesovo	60.87	336	P	P	07 02 09.5	-0.7
	1.4nm,0.4s,mb4.4,baz=87,slow=8.4,SNR=3.4						
BVAR	Borovoye Array	66.99	329	P	P	07 02 50.3	+0.1
	0.7nm,0.7s,mb3.8,baz=129,slow=9.5,SNR=6.4						
VNDA	Vanda	81.49	172	P	P	07 04 13.5	0.0
	1.0nm,0.6s,mb4.0,baz=353,slow=5.1,SNR=3.7						

*BJI **29** 08:02:58.9, 37.26N×98.47E, h13^{km}, mB4.2, mb4.4, ML4.1, Ms3.9, Msz3.3*

*IDC **29** 08:02:58.5±1.6, 37.24N×98.52E, mb3.6/2, mb1 3.8/5, mb1mx3.6/21, mbtmp3.6/5, ML3.6/3, MS3.1/1, Ms1 3.3/1, ms1mx2.8/23, Error ellipse: s-maj=43.2km s-min=24.6km az=57.0*

ISC 29 08:02:56.4±2.0**, 37.30N**±0.07×**98.43E**±0.08**, h1**^{km}±10^{km}**, n8,** σ**1**^{s}**00**/13**, mb3.7**/2**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	Gaotai	2.37	27	P	Pn	08 03 41.8	+4.9
GTA				PG	Pg	08 03 43.5	-0.2
GTA				S	Sn	08 04 12.5	+5.5
GTA				SG	Sg	08 04 15.0	-0.3
GTA				Smax			
	comp=N,430nm,0.5s						
GTA				Smax			
	comp=E,370nm,0.4s						
GTA				LR	LR		
	comp=N,910nm,4.2s						
GTA				LR	LR		
	comp=E,1µm,5.7s						
GTA				LR	LR		
	comp=Z,240nm,6.1s						
SONM	Songino Array	12.04	27	Pn	P	08 05 52.8	+0.7
	comp=Z,0.5nm,0.3s,baz=210,slow=15,SNR=6.6						
SONM				Sn	S	08 08 08.4	+0.2
	comp=Z,0.1nm,0.3s,baz=207,slow=36,SNR=2.2						
MKAR	Makanchi Array	15.26	313	Pn	P	08 06 32.3	-2.3
	comp=Z,0.2nm,0.3s,baz=118,slow=14,SNR=5.8						
MKAR				Sn	S	08 09 15.2	-10
	comp=Z,0.1nm,0.3s,baz=122,slow=23,SNR=5.9						
NJ2	Nanjing	17.59	101	*e*P	P	08 07 05.5	+1.2
NJ2				AP		08 07 13.3	
NJ2				XP		08 07 17.0	
NJ2				PP	PP	08 07 19.8	+0.9
NJ2				PPP	PPP	08 07 28.3	+0.9
NJ2				S	S	08 10 18.0	-1.0
NJ2				XS		08 10 30.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,110nm,9.5s						
NJ2				LR	LR		
	comp=N,230nm,12.0s						
NJ2				LR	LR		
	comp=E,160nm,9.4s						
NJ2				LR	LR		
	comp=Z,100nm,11.1s						
CMAR	Chiang Mai Arr	18.78	178	LR	LR	08 15 00.4	
	comp=Z,56nm,20.3s,baz=195,slow=39						
ZAL	Zalesovo	19.12	335	Pn	P	08 07 23.1	+0.2
	comp=Z,0.4nm,0.3s,baz=332,slow=11,SNR=18						
BVAR	Borovoye Array	25.04	318	P	P	08 08 24.7	+1.5
	comp=Z,0.5nm,0.5s,mb3.5,baz=111,slow=12,SNR=2.8						
WRA	Warramunga Arr	66.23	143	P	P	08 13 47.9	-0.4
	comp=Z,0.5nm,0.7s,mb3.9,baz=343,slow=6.7,SNR=4.6						

IDC 29 08:06:55.4±2.0**, 13.28N**×**93.36E, mb3.8**/2**, mb1 3.9**/3**, mb1mx3.6**/18**, mbtmp3.6**/3**, Error ellipse: s-maj=64.0km s-min=29.9km az=68.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.44	45	Pn	Pn	08 08 44.1	-3.7
	0.2nm,0.3s,baz=240,slow=14,SNR=4.3						
MKAR	Makanchi Array	34.68	347	P	P	08 13 46.9	-1.9
	0.6nm,0.7s,baz=166,slow=10.0,SNR=5.4						
WRA	Warramunga Arr	52.11	129	P	P	08 16 08.3	-1.5
	0.6nm,0.4s,baz=303,slow=9.7,SNR=18						
WRA				PcP	PcP	08 17 18.7	-3.2
	0.3nm,0.5s,baz=318,slow=3.1,SNR=6.1						

*NEIC **29** 08:20:48.0±4.5, 18.99S×69.21W, h10^{km}±30^{km}, mb3.8/1, Error ellipse: s-maj=15.8km s-min=10.5km az=70.0*

*IDC **29** 08:20:52.1±3.0, 19.02S×69.04W, h40^{km}±28^{km}, mb3.6/5, mb1 3.9/8, mb1mx3.7/19, mbtmp3.7/8, ML3.9/2, MS3.2/4, Ms1 3.2/4, ms1mx2.9/24, Error ellipse: s-maj=31.1km s-min=21.5km az=86.0*

ISC 29 08:20:50.0±1.3**, 19.05S**±0.08×**69.06W**±0.09**, h42**^{km}±15^{km}**, n16,** σ**1**^{s}**15**/14**, mb3.8**/6**, MS3.0**/3**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.89	18	Pn	P	08 21 36.0	+1.3
	9.4nm,0.3s,baz=189,slow=14,SNR=107						
LPAZ				LR	LR	08 23 01.1	
	comp=Z,441nm,19.3s,baz=322,slow=45						
ARE	Arequipa	3.46	318	*e*P	P	08 21 39.0	-3.8
ARE				*e*S	S	08 22 23.0	-0.1
SIV	San Ignacio	8.21	69	Pn	P	08 22 49.1	-0.2
	0.2nm,0.3s,baz=261,slow=12,SNR=13						
CFAA	Coronel Fontan	12.52	177	Pn	P	08 23 48.2	0.0
	0.0nm,0.3s,baz=2.2,slow=14,SNR=3.5						
CPUP	Villa Florida	13.02	126	Pn	P	08 23 54.2	-0.7
	0.2nm,0.3s,baz=345,slow=2.1,SNR=4.9						
BDFB	Brasilia	20.38	84	LR	LR	08 32 58.2	
	comp=Z,27nm,20.5s,MS2.6,baz=78,slow=36						
OTAV	Otavalo	21.27	333	*e*P	P	08 25 33.9	-1.1
	3.4nm,0.8s,mb3.7						
PLCA	Paso Flores	21.64	183	P	P	08 25 39.4	+0.8
	3.9nm,0.8s,mb3.9,baz=358,slow=11,SNR=10.0						
PLCA				LR	LR	08 34 09.4	
	comp=Z,72nm,20.2s,MS3.1,baz=359,slow=37						
PLCA	Paso Flores	21.64	183	P	P	08 25 39.4	+0.8
PLCA				LR	LR	08 34 09.4	
SDV	Santo Domingo	27.80	357	LR	LR	08 38 23.7	
	comp=Z,80nm,20.0s,MS3.3,baz=237,slow=38						
TXAR	Lajitas Array	58.55	324	P	P	08 30 43.0	-2.0
	0.4nm,0.8s,mb3.5,baz=153,slow=5.6,SNR=5.0						
DBIC	Dimbokro	68.20	74	P	P	08 31 47.9	-0.8
	1.2nm,0.6s,mb4.1,baz=223,slow=5.9,SNR=3.2						
NVAR	Mina Array Bea	73.49	322	P	P	08 32 21.3	+1.1
	0.8nm,0.8s,mb3.7,baz=128,slow=7.3,SNR=4.4						
YKA	Yellowknife Ar	88.84	341	P	P	08 33 42.4	+2.0
	0.3nm,0.3s,mb4.1,baz=139,slow=5.0,SNR=4.2						
YKA	Yellowknife Ar	88.84	341	P	P	08 33 42.4	+2.0
SONM	Songino Array	151.05	6	PKPbc	PKPdf	08 40 42.2	+10
	0.8nm,0.5s,baz=341,slow=1.3,SNR=5.5						

*NEIC **29** 08:56:52.8±1.7, 6.32S×147.33E, h66^{km}±14^{km}, mb4.4/5, Error ellipse: s-maj=14.2km s-min=12.3km az=217.0*

*IDC **29** 08:56:53.6±3.4, 6.35S×147.48E, h77^{km}±29^{km}, mb3.9/6, mb1 4.1/9, mb1mx3.9/16, mbtmp4.2/9, MS3.4/5, Ms1 3.4/5, ms1mx3.1/27, Error ellipse: s-maj=37.5km s-min=23.3km az=93.0*

ISC 29 08:56:51.5±2.7**, 6.3S**±0.1×**147.3E**±0.1**, h69**^{km}±22^{km}**, n20,** σ**0**^{s}**85**/18**, mb4.1**/7**, 1C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.09	182	P	P	08 57 38.6	-0.6
	21nm,0.3s,baz=9.5,slow=5.0,SNR=75						
PMG				S	S	08 58 15.8	+0.8
	35nm,0.3s,baz=26,slow=21,SNR=12						
PMG				LR	LR	08 58 51.4	
	comp=Z,208nm,19.8s,baz=356,slow=39						
CTA	Charters Tower	13.74	184	P	P	09 00 05.0	+0.3
	0.5nm,0.3s,baz=11,slow=15,SNR=10						
CTA				LR	LR	09 04 35.5	
	comp=Z,53nm,21.8s,baz=232,slow=34						
CTAO	Charters Tower	13.74	184	*e*P	P	09 00 04.5	-0.2
KAKA	Kakadu	15.95	245	*e*P	P	09 00 33.7	+0.6
	9.4nm,0.5s						
WRAB	Tennant Creek	18.47	222	*e*P	P	09 01 03.5	-0.9
	7.6nm,0.5s						
WB2	Warramunga Arr	18.48	222	*e*P	P	09 01 03.6	-0.8
WRA	Warramunga Arr	18.49	222	P	P	09 01 03.6	-0.9
	0.8nm,0.3s,baz=52,slow=11,SNR=41						
FITZ	Fitzroy Crossi	24.14	239	*e*P	P	09 02 04.3	+2.0
	31nm,0.8s,mb4.7						
FITZ	Fitzroy Crossi	24.14	239	P	P	09 02 04.3	+2.0
	29nm,0.5s,mb4.9,baz=58,slow=4.1,SNR=68						
FITZ				LR	LR	09 13 13.3	
	comp=Z,205nm,18.5s,baz=277,slow=40						
ARMA	Armidale	24.34	171	*e*P	P	09 02 04.9	+0.7
STKA	Stephens Creek	26.00	191	*e*P	P	09 02 19.3	-0.5
	2.4nm,0.5s,mb3.9						
STKA	Stephens Creek	26.00	191	P	P	09 02 19.6	-0.1
	2.9nm,0.5s,mb3.9,baz=356,slow=8.9,SNR=14						
JNU	Nakatsue	42.18	339	LR	LR	09 20 23.2	
	comp=Z,57nm,18.4s,baz=266,slow=33						
SONM	Songino Array	64.79	331	P	P	09 07 25.5	+0.3
	0.8nm,0.7s,mb3.7,baz=146,slow=8.9,SNR=5.0						
VNDA	Vanda	71.60	177	P	P	09 08 05.7	-1.2
	1.5nm,0.6s,mb4.0,baz=355,slow=5.8,SNR=6.2						
MAW	Mawson	82.08	203	P	P	09 09 04.9	-0.6
	1.5nm,0.7s,mb3.9,baz=332,slow=1.9,SNR=4.2						
QSPA	South Pole Qui	83.67	180	⇑*i*P	P	09 09 14.4	+1.1
	7.7nm,0.4s,mb4.9						
ILAR	Eielson Array	85.65	23	P	P	09 09 23.4	0.0
	0.3nm,0.6s,mb3.4,baz=253,slow=5.0,SNR=7.2						
YKA	Yellowknife Ar	99.31	28	LR	LR	09 49 50.3	
	comp=Z,30nm,21.5s,baz=80,slow=32						
SAML	Samuel	146.07	116	*e*PKPdf	PKPdf	09 16 25.5	+1.7

IDC 29 09:05:02.7±1.8**, 1.94N**×**127.72E, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.9**/15**, mbtmp4.2**/3**, Error ellipse: s-maj=146.9km s-min=23.8km az=65.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.70	164	P	P	09 10 06.3	-1.2
	4.3nm,0.4s,baz=343,slow=11,SNR=58						
WB2	Warramunga Arr	22.70	164	*e*P	P	09 10 06.2	-1.3
STKA	Stephens Creek	36.12	160	*e*P	P	09 12 06.0	-2.6
	1.9nm,0.5s						
STKA	Stephens Creek	36.12	160	P	P	09 12 06.3	-2.3
	2.4nm,0.5s,baz=337,slow=7.3,SNR=10						
MKAR	Makanchi Array	59.58	325	P	P	09 15 08.4	-2.2
	0.8nm,0.4s,baz=122,slow=8.1,SNR=11						

*IDC **29** 09:12:43.6±1.7, 35.26N×70.04E, mb4.2/5, mb1 4.3/7, mb1mx3.9/22, mbtmp4.1/7, ML3.3/1, Error ellipse: s-maj=41.7km s-min=31.7km az=69.0*

*NEIC **29** 09:12:45.3±1.0, 35.33N×70.01E, h10^{km}, mb4.1/3, Error ellipse: s-maj=19.0km s-min=17.2km az=104.0*

*NNC **29** 09:13:05.5±6.6, 36.47N×69.76E, h122^{km}±73^{km}, mpv4.3, Error ellipse: s-maj=53.0km s-min=41.6km az=31.0*

*MOS **29** 09:13:11.7±0.9, 36.93N×69.92E, h160^{km}, mb3.9/1, Error ellipse: s-maj=31.5km s-min=9.8km az=84.6*

ISC 29 09:13:00.6±0.6**, 36.08N**±0.03×**70.09E**±0.09**, h121**^{km}±10^{km}**, n50,** σ**1**^{s}**18**/59**, mb4.1**/4**, 9C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.70	146	⇓P	P	09 13 45.4	+1.5
CEP				S	S	09 14 18.0	+1.4
THW	Thamme Wali	3.55	157	⇑P	P	09 13 55.3	+0.1
CHCP	Chirah Chowk	3.56	132	⇑P	P	09 13 57.2	+1.9
SBDP	Sheikh Budin	3.82	171	P	P	09 13 58.6	-0.2
DRP	Derazinda	4.33	179	P	P	09 14 06.2	+0.5
SARP	Sargodha	4.67	152	P	P	09 14 09.6	-0.7
THN	Thein Dam	5.91	126	*e*x	P	09 14 27.2	+0.2
THN				*e*SB	S	09 15 32.6	-1.4
AML	Almayashu	6.66	24	P	P	09 14 37.6	+0.3
	SNR=71						
KK31	Karatay Array	7.02	3	⇑P	P	09 14 41.1	-1.2
	4.3nm,0.3s,baz=194,slow=19,SNR=84						
KK31				⇓S	S	09 15 56.9	-4.1
	12nm,0.4s						
KKAR	Karatay Array	7.02	3	*e*PN	P	09 14 41.0	-1.2
KKAR				S	S	09 15 56.2	-4.8
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BHK	Bhakra	7.03	130	*e*SB	S	09 16 01.0	-0.2
UCH	Uchtor	7.03	28	P	P	09 14 42.8	+0.4
	SNR=60						
KZA	Kyzart	7.21	32	P	P	09 14 44.9	+0.2
	SNR=68						
SDNR	Sundarnagar	7.33	127	*e*PB	P	09 14 40.0	-6.3
SDNR				*e*x	S	09 16 03.0	-5.4
AAK	Ala-Archa	7.38	26	P	P	09 14 47.5	+0.4
	SNR=26						
AAK	Ala-Archa	7.38	26	⇑P	P	09 14 47.2	+0.1
	comp=Z,21nm,0.5s						
AAK				⇓S	S	09 16 06.9	-2.8
	comp=Z,29nm,1.0s						
AAK	Ala-Archa	7.38	26	PN	P	09 14 47.1	0.0
AAK				S	S	09 16 06.6	-3.1
AAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KBK	Karagaybulak	7.57	28	P	P	09 14 50.8	+1.2
	SNR=7.0						
SMLA	Simla	7.70	128	*i* PB	P	09 14 46.7	-4.6
SMLA				*i* x	x	09 16 09.2	
CHMS	Chumysh	7.79	26	P	P	09 14 52.8	+0.2

	SNR=20						
ULHL	Ulahol	7.79	36	P	P	09 14 54.8	+2.2
	SNR=18						
USP	Ospenovka	7.94	24	P	P	09 14 55.0	+0.4
	SNR=6.7						
TKM2	Tokmak 2	8.05	30	P	P	09 14 56.2	+0.1
	SNR=17						
KHET	Khetri	9.34	147	ex	x	09 16 49.4	
KHET				AML	AML	09 16 54.0	
	comp=E,32nm,0.4s						
KHET				AML	AML	09 16 54.4	
	comp=N,26nm,0.2s						
NDI	New Delhi	9.52	139	ePB	P	09 15 13.7	-2.1
NDI				ex	x	09 16 53.5	
KUDL	Kundal	9.59	144	ex	P	09 15 15.4	-1.3
KUDL				ex	x	09 16 52.7	
SONA	Sohna	9.80	141	ex	P	09 15 16.3	-3.1
SONA				ex	S	09 17 01.1	-6.9
SONA				AML	AML	09 17 05.6	
	comp=N,39nm,0.5s						
SONA				AML	AML	09 17 05.8	
	comp=E,66nm,0.2s						
MK31	Makanchi Array	14.06	37	⇑P	P	09 16 15.9	+0.6
	comp=E,1.5nm,0.6s,baz=230,slow=13,SNR=4.0						
MKAR	Makanchi Array	14.06	37	eP	P	09 16 15.9	+0.6
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	14.06	37	Pn	P	09 16 13.8	-1.5
	comp=Z,0.1nm,0.3s,baz=231,slow=16,SNR=5.0						
AB31	Akbulak array	15.11	334	⇓P	P	09 16 27.1	-1.6
	comp=Z,1.6nm,0.4s,baz=149,slow=12,SNR=71						
AB31				⇑S	S	09 19 03.2	-10
	comp=Z,2.2nm,0.6s						
AB31	Akbulak array	15.11	334	eP	P	09 16 27.0	-1.7
AB31				eS	S	09 19 01.1	-12
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
VOSK	Vostochnaya	16.65	2	⇑P	P	09 16 47.5	-0.3
	comp=Z,5.8nm,1.1s						
VOSK	Vostochnaya	16.65	2	P	P	09 16 47.5	-0.3
VOSK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ZRNK	Zerenda	16.89	358	⇑P	P	09 16 50.8	+0.1
	comp=Z,1.6nm,0.5s						
ZRNK	Zerenda	16.89	358	eP	P	09 16 49.8	-0.9
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ZRNK	Zerenda	16.89	358	eP	P	09 16 49.8	-0.9
	comp=Z,3.6nm,0.5s						
BVA0	Borovoye Array	16.94	1	⇓P	P	09 16 50.7	-0.7
	comp=Z,0.8nm,1.1s,baz=167,slow=11,SNR=22						
BVA0	Borovoye Array	16.94	1	P	P	09 16 50.3	-1.1
BVAR	Borovoye Array	16.94	1	P	P	09 16 51.3	-0.1
	comp=Z,1.0nm,0.3s,baz=167,slow=11,SNR=15						
ZAL	Zalesovo	20.59	25	P	P	09 17 31.9	+0.4
	comp=Z,7.7nm,0.4s,baz=249,slow=6.4,SNR=16						
NVS	Novosibirsk	20.84	22	i P	P	09 17 36.0	+2.0
ARCES	ARCESS Array B	41.25	338	P	P	09 20 36.5	+1.6
	comp=Z,0.9nm,0.5s,mb3.9,baz=113,slow=9.2,SNR=11						
CLNS	Chul'man	41.72	42	eP	P	09 20 29.7	-9.0
NB2	NORSAR Subarra	44.27	323	P	P	09 20 59.4	+0.1
	comp=Z,1.9nm,0.9s,mb3.8,baz=98,slow=7.9						
NB2	NORSAR Subarra	44.27	323	P	P	09 20 59.4	+0.1
NB2				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
NOA	NORSAR Array B	44.27	323	P	P	09 20 59.3	-0.1
	comp=Z,0.4nm,0.5s,mb3.4,baz=98,slow=8.0,SNR=3.8						
INK	Inuvik	74.44	9	P	P	09 24 28.1	+1.6
	comp=Z,1.1nm,0.6s,mb3.8,baz=60,slow=2.9,SNR=9.3						
STKA	Stephens Creek	95.14	126	⇑iP	P	09 26 06.4	-4.8
	comp=Z,3.0nm,0.6s,mb4.9						
STKA	Stephens Creek	95.14	126	P	P	09 26 06.4	-4.8
	comp=Z,3.4nm,0.5s,mb5.0,baz=318,slow=11,SNR=18						

JMA 29 09:21:17.1±0.3**, 31.74N×142.87E, M3.6, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAG	Ashikaga	5.46	330	P	Pn	09 22 41.9	+0.1
JMK	Ichinoseki	7.32	350	P	Pn	09 23 08.1	+0.2
JMK				S	Sn	09 24 31.7	-1.0

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*IDC **29** 09:52:31.2±0.6, 26.89S×176.14W, mb4.4/15, mb1 4.6/16, mb1mx4.6/18, mbtmp4.4/16, MS3.8/11, Ms1 3.8/11, ms1mx3.7/20, Error ellipse: s-maj=24.4km s-min=16.0km az=135.0*

*NEIC **29** 09:52:36.8±1.5, 26.97S×176.18W, h38^{km}±13^{km}, mb4.6/7, Error ellipse: s-maj=9.2km s-min=8.1km az=132.0*

ISC 29 09:52:36.7±2.4**, 26.92S**±0.10×**176.2W**±0.1**, h48**^{km}±21^{km}**, n64, σ1^{s}.02**/45**, mb4.4**/22**, MS3.9**/9**, 5C-2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.75	212	Pn	P	09 53 18.3	-1.1
	169nm,0.3s,baz=252,slow=22,SNR=13						
RAO				Sn	S	09 53 54.1	+2.4
	297nm,0.3s,baz=73,slow=22,SNR=7.5						
RAO				LR	LR	09 54 07.6	
	comp=Z,417nm,21.3s,baz=85,slow=34						
DZM	Mont Dzumac	16.48	283	LR	LR	10 01 12.8	
	comp=Z,332nm,21.4s,baz=236,slow=32						
TBI	Tubuai	24.49	88	eLR	LR	10 03 07.3	
	528nm,30.8s,baz=252						
PPT	Papeete	26.33	75	eLR	LR	10 03 54.0	
	500nm,28.0s,baz=235						
PPT	Papeete	26.33	75	LR	LR	10 05 34.3	
	comp=Z,212nm,18.9s,MS3.7,baz=254,slow=30						
HNR	Honiara	28.45	303	LR	LR	10 07 47.1	
	comp=Z,127nm,19.7s,MS3.5,baz=338,slow=32						
CTA	Charters Tower	34.96	273	P	P	09 59 27.0	+0.6
	5.1nm,0.7s,mb4.6,baz=104,slow=11,SNR=4.2						
CTA				LR	LR	10 11 50.0	
	comp=Z,142nm,19.7s,MS3.7,baz=274,slow=33						
CTAO	Charters Tower	34.96	273	eP	P	09 59 26.1	-0.3
STKA	Stephens Creek	36.90	252	P	P	09 59 43.5	+0.8
	1.8nm,0.9s,mb3.9,baz=333,slow=14,SNR=2.3						
STKA				LR	LR	10 13 09.5	
	comp=Z,233nm,20.2s,MS4.0,baz=22,slow=34						
STKA	Stephens Creek	36.90	252	eP	P	09 59 41.6	-1.0
STKA				LR	LR	10 13 09.5	
RKT	Rikitea	37.47	93	eLR	LR	10 09 07.1	
	278nm,32.0s,baz=245						
TAOE	Nuku Hiva Isla	38.57	69	eLQ		10 08 30.0	
	520nm,25.0s						
TAOE				eLR	LR	10 09 29.7	
	647nm,28.2s,baz=228						
PMG	Port Moresby	38.70	290	LR	LR	10 12 01.3	
	comp=Z,204nm,21.9s,MS3.9,baz=84,slow=30						
WB2	Warramunga Arr	45.63	268	eP	P	10 00 53.3	-1.2
WRA	Warramunga Arr	45.64	268	P	P	10 00 53.3	-1.3
	8.0nm,0.8s,mb4.7,baz=106,slow=7.7,SNR=29						
VNDA	Vanda	51.70	186	P	P	10 01 39.1	-1.5
	3.2nm,1.1s,mb4.2,baz=4.3,slow=5.7,SNR=4.3						
CASY	Casey	58.93	207	eP	P	10 02 31.6	-1.4
QSPA	South Pole Qui	63.18	180	⇓iP	P	10 03 01.5	-0.1
	23nm,0.9s,mb5.3						
MAW	Mawson	76.09	200	P	P	10 04 21.3	+0.8
	4.2nm,0.9s,mb4.4,baz=111,slow=7.3,SNR=8.1						
MJAR	Matsushiro Arr	76.31	324	P	P	10 04 22.1	-0.3
	3.4nm,0.8s,mb4.3,baz=166,slow=6.1,SNR=8.2						
SYO	Syowa Base	80.84	192	⇑P	P	10 04 44.0	-2.4
SYO	Syowa Base	80.84	192	⇓P	P	10 04 53.8	+7.4
SNAA	Sanae	81.57	178	⇑i	P	10 04 49.2	-1.0
SNAA	Sanae	81.57	178	e	P	10 04 53.0	+2.8
SNAA	Sanae	81.57	178	e	P	10 04 58.9	+8.7
VNA3	Neumayer Olymp	81.65	176	⇑i	P	10 04 49.4	-1.3
VNA3	Neumayer Olymp	81.65	176	e	P	10 04 53.4	+2.7
VNA3	Neumayer Olymp	81.65	176	e	P	10 04 59.3	+8.6
VNA2	Neumayer--Watz	82.11	176	⇑i	P	10 04 52.3	-0.7
VNA2	Neumayer--Watz	82.11	176	e	P	10 04 56.4	+3.4
VNA2	Neumayer--Watz	82.11	176	e	P	10 05 02.3	+9.3
VNA1	Neumayer--Stat	82.33	176	⇑i	P	10 04 53.7	-0.5
VNA1	Neumayer--Stat	82.33	176	e	P	10 04 57.9	+3.7
VNA1	Neumayer--Stat	82.33	176	e	P	10 05 03.4	+9.2
PLCA	Paso Flores	83.73	133	P	P	10 05 01.9	0.0
	2.6nm,1.0s,mb4.3,baz=321,slow=1.5,SNR=4.0						
PLCA				LR	LR	10 37 32.5	
	comp=Z,49nm,18.7s,MS3.9,baz=101,slow=32						
YBH	Yreka Blue Hor	84.34	37	P	P	10 05 05.2	+0.3
	5.4nm,1.0s,mb4.6,baz=188,slow=8.5,SNR=5.3						
NVAR	Mina Array Bea	84.64	42	P	P	10 05 06.9	+0.4
	2.6nm,0.9s,mb4.3,baz=206,slow=6.1,SNR=12						
NVAR				LR	LR	10 38 26.6	
	comp=Z,43nm,18.6s,MS3.9,baz=135,slow=33						
TUC	Tucson	85.73	51	eP	P	10 05 12.6	+0.6
	2.0nm,0.8s,mb4.4						
MOD	Modoc	85.78	38	eP	P	10 05 11.2	-0.8
	2.4nm,0.8s,mb4.5						
TXAR	Lajitas Array	89.20	56	P	P	10 05 29.3	+0.4
	1.6nm,1.0s,mb4.3,baz=209,slow=6.5,SNR=13						
HLID	Hailey	90.16	40	P	P	10 05 33.4	+0.3
	3.0nm,1.2s,mb4.5						
ANMO	Albuquerque	90.19	50	P	P	10 05 33.7	+0.3
	0.7nm,0.4s,mb4.3,baz=206,slow=6.4,SNR=4.0						
ANMO	Albuquerque	90.19	50	P	P	10 05 33.7	+0.3
ENH	Enshi	90.94	304	eP	P	10 05 39.2	+2.2
NEW	Newport	91.65	35	P	P	10 05 39.6	-0.2
	0.3nm,0.3s,mb4.1,baz=204,slow=5.8,SNR=4.2						
MCMT	McKenzie Canyo	91.83	40	eP	P	10 05 41.1	+0.4
SNOW	Snow King Moun	92.23	42	eP	P	10 05 42.9	+0.3
	4.5nm,1.1s,mb4.7						
PDAR	Pinedale Array	92.55	43	P	P	10 05 44.1	+0.1
	0.8nm,1.0s,mb4.1,baz=225,slow=4.2,SNR=5.5						
PDAR				LR	LR	10 43 35.8	
	comp=Z,59nm,18.8s,MS4.1,baz=82,slow=33						
BOZ	Bozeman (W)	93.00	39	eP	P	10 05 46.2	+0.1
	3.0nm,1.0s,mb4.7						
CMAR	Chiang Mai Arr	93.73	289	P	P	10 05 51.5	+1.5
	1.3nm,0.8s,mb4.4,baz=144,slow=2.4,SNR=7.2						
ILAR	Eielson Array	94.21	12	P	P	10 05 50.8	-0.3
	1.5nm,1.0s,mb4.4,baz=224,slow=5.5,SNR=10						
RSSD	Black Hills	96.66	44	eP	P	10 06 02.0	-0.7
	3.8nm,1.2s,mb4.7						
LPAZ	La Paz	98.11	113	LR	LR	10 42 36.0	
	comp=Z,41nm,18.4s,MS4.0,baz=90,slow=31						
MKAR	Makanchi Array	116.69	311	PKP	PKPdf	10 11 16.2	+0.6
	0.6nm,0.8s,baz=90,slow=1.2,SNR=5.7						
MKAR	Makanchi Array	116.69	311	PKP	PKPdf	10 11 16.2	+0.6
BOSA	Boshof	121.06	202	PKP	PKPdf	10 11 26.2	+1.6
	3.7nm,1.0s,baz=47,slow=3.0,SNR=3.9						
BOSA	Boshof	121.06	202	PKP	PKPdf	10 11 26.2	+1.6
BVAR	Borovoye Array	124.95	317	PKP	PKPdf	10 11 32.2	+0.8
	2.1nm,0.9s,baz=117,slow=3.3,SNR=10						
ZRNK	Zerenda	125.79	317	ePKPdf	PKPdf	10 11 34.0	+1.0
NB2	NORSAR Subarra	145.52	354	PKPabc	PKPdf	10 12 10.0	+1.1
	27nm,1.1s,baz=13,slow=3.5						
NOA	NORSAR Array B	145.52	354	PKPbc	PKPbc	10 12 10.3	+0.8
	12nm,1.0s,baz=11,slow=2.4,SNR=17						
NAO01	NORSAR Array S	145.74	354	ePKPdf	PKPdf	10 12 10.9	+1.6
AKASG	Malin Array Be	149.34	328	PKPbc	PKPdf	10 12 21.2	+5.7
	2.7nm,0.7s,baz=39,slow=3.3,SNR=14						
BRTR	Keskin Array B	152.09	305	PKPbc	PKPdf	10 12 28.3	+8.3
	1.0nm,0.7s,baz=180,slow=3.7,SNR=6.7						

IDC 29 10:11:55.8±2.2**, 12.10N×89.96E, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.5**/20**, mbtmp3.5**/4**, ML3.8**/1**, MS3.1**/1**, Ms1 3.3**/1**, ms1mx3.0**/15**, Error ellipse: s-maj=66.7km s-min=29.7km az=56.0, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.72	53	Pn	P	10 14 32.2	-1.6
	0.2nm,0.3s,baz=231,slow=13,SNR=4.1						
CMAR				LR	LR	10 18 20.0	
	comp=Z,95nm,18.2s,baz=190,slow=36						
MKAR	Makanchi Array	35.18	351	P	P	10 18 52.5	-1.0
	0.5nm,0.5s,baz=170,slow=9.6,SNR=4.8						
BVAR	Borovoye Array	43.73	343	P	P	10 20 01.3	-3.0
	0.6nm,0.6s,baz=135,slow=6.1,SNR=4.5						
WRA	Warramunga Arr	54.05	126	P	P	10 21 22.2	-2.4
	0.5nm,0.8s,baz=323,slow=8.6,SNR=5.3						

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*SOF **29** 10:19:01.6, 41.95N×24.15E, h20^{km}, MD2.8*

*CSEM **29** 10:19:01.7±0.2, 42.05N×24.11E, h5^{km}, MD2.8, Error ellipse: s-maj=3.5km s-min=2.6km az=58.0*

*ATH **29** 10:19:02.2, 41.98N×24.11E, h16^{km}±5^{km}, MD3.4/4*

*THE **29** 10:19:02.9, 41.97N×24.12E, h4^{km}, ML3.3*

ISC 29 10:19:01.7±0.5**, 41.99N**±0.03×**24.12E**±0.05**, h10**^{km}**, n19, σ1^{s}.07**/23**, 1C-1D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLD	Plovdiv	0.45	75	i Pg	Pg	10 19 12.5	+1.6
MMB	Musomiste	0.50	216	i Pg	Pg	10 19 12.2	+0.4
RZN	Rozhen	0.54	124	i Pg	Pg	10 19 12.5	-0.2
PGB	Panagyurishte	0.56	4	i Pg	Pg	10 19 14.0	+1.0
NVR	Nevrokopi	0.67	197	⇑iPN	Pn	10 19 14.8	-2.1
KKB	Krupnik	0.78	261	i Pg	Pg	10 19 18.2	+0.8
VTS	Vitosha	0.90	312	i Pg	Pg	10 19 20.0	+0.2
SRS	Serrai	0.96	204	ePg	Pg	10 19 20.4	-0.6
SRS				eSg	Sg	10 19 34.4	+0.6
KDZ	Kurdzhali	1.03	109	i Pg	Pg	10 19 20.5	-1.9
SOH	Sokhos	1.30	206	ePg	Pg	10 19 26.5	-1.2
SOH				eSg	Sg	10 19 45.1	0.0
RDO	Rodhopi	1.36	128	⇓iPN	Pn	10 19 27.8	+1.0
RDO				eSN	Sn	10 19 46.4	+1.4
PVL	Pavlikeni	1.52	36	i Pg	Pg	10 19 30.0	-2.1
OUR	Ouranopolis	1.66	184	ePb	Pb	10 19 31.7	-0.2
PLG	Polygyros	1.69	198	ePN	Pn	10 19 33.0	+1.4
ALN	Alexandroupoli	1.82	126	ePb	Pb	10 19 34.3	-0.4
ALN				eSb	Sb	10 19 58.2	+0.8
SZH	Strazhica	1.85	46	i Pg	Pg	10 19 38.5	-0.2
PAIG	Paliouri	2.09	189	ePn	Pn	10 19 37.6	+0.3
LIA	Limnos Island	2.24	159	ePB	Pb	10 19 40.1	-1.8
XOR	Xorichti	2.71	195	ePn	Pn	10 19 46.5	+0.3

IDC 29 10:50:32.3±2.6**, 1.52N×97.11E, mb3.9**/5**, mb1 4.0**/6**, mb1mx3.8**/19**, mbtmp3.8**/6**, ML3.7**/1**, Error ellipse: s-maj=97.2km s-min=25.9km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.93	6	Pn	P	10 54 31.7	-0.6
	0.1nm,0.3s,baz=198,slow=11,SNR=6.6						
WRA	Warramunga Arr	42.28	122	P	P	10 58 27.9	-1.7
	0.2nm,0.4s,baz=303,slow=9.1,SNR=4.5						
SONM	Songino Array	46.83	9	P	P	10 59 03.9	-1.8
	3.1nm,0.9s,baz=194,slow=7.9,SNR=8.8						
MKAR	Makanchi Array	46.91	346	P	P	10 59 04.8	-1.7
	2.3nm,0.7s,baz=153,slow=8.1,SNR=16						
ZAL	Zalesovo	53.22	351	P	P	10 59 52.2	-2.4
	0.9nm,0.4s,baz=304,slow=5.7,SNR=2.9						
BVAR	Borovoye Array	55.92	341	P	P	11 00 11.5	-2.9
	0.6nm,0.6s,baz=157,slow=11,SNR=4.0						

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*CSEM **29** 11:16:39.0±0.7, 38.64N×29.11W, h4^{km}±4^{km}, ML2.3, Error ellipse: s-maj=7.5km s-min=6.0km az=53.0, After PDA*

*PDA **29** 11:16:39.0±0.7, 38.64N×29.11W, h4^{km}±4^{km}, MD3.3, ML2.3, Error ellipse: s-maj=7.5km s-min=6.0km az=53.0*

SVSA 29 11:16:39.0±0.7**, 38.64N×29.11W, h4**^{km}±4^{km}**, MD3.3, ML2.3, Error ellipse: s-maj=7.5km s-min=6.0km az=53.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	Caldeira	0.32	100	i P	Pg	11 16 44.9	-0.6
CALA				eS	Sg	11 16 49.3	-0.5
CALA	Caldeira	0.32	100	eS	Sg	11 16 49.3	-0.5
HOR	Horta	0.39	106	eP	Pg	11 16 45.7	-1.1
HOR				eS	Sg	11 16 51.2	-0.9
PICO	Pico	0.55	104	i P	Pg	11 16 48.8	-1.2
PICO				eS	Sg	11 16 55.8	-1.6
PICO	Pico	0.55	104	eS	Sg	11 16 55.8	-1.6
PMAN	Manadas	0.80	90	eS	Sg	11 17 01.6	-4.0
	38nm,0.2s						
PMAN	Manadas	0.80	90	eS	Sg	11 17 01.6	-4.0
	38nm,0.2s						
PGRA	Graciosa	0.96	66	eS	Sb	11 17 05.9	-4.8
	28nm,0.3s						

JMA 29 11:35:31.0±0.4**, 30.38N×142.87E, M3.5, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	6.50	343	P	Pn	11 37 10.6	+0.3
JHO				S	Sn	11 38 26.3	+0.1
JRY	Ryogami san	6.53	330	P	Pn	11 37 11.2	+0.5
JAG	Ashikaga	6.67	336	P	Pn	11 37 13.2	+0.5

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*NEIC **29** 11:58:33.5, 16.18N×97.58W, h13^{km}, MD3.9(MEX), After MEX.*

MEX 29 11:58:33.2±0.8**, 16.18N×97.58W, h11**^{km}±10^{km}**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.57	292	i P	Pb	11 58 42.8	-1.9
PNIG				i S	Sg	11 58 51.2	-1.2
VHO	Vista Hermosa	1.20	42	i P	Pb	11 58 52.1	-3.4
VHO				i S	Sb	11 59 07.4	-3.5
VHO	Vista Hermosa	1.20	42	i P	Pb	11 58 52.1	-3.4
VHO				i S	Sb	11 59 07.0	-3.9
OXX	Oaxaca	1.21	42	i P	Pb	11 58 52.8	-2.9
OXX				i S	Sb	11 59 07.5	-3.8
HUIG	Huatulco	1.47	106	i P	Pn	11 58 56.6	-3.2
HUIG				i S	Sb	11 59 14.0	-4.7
ACX	Acapulco	2.35	287	eP	Pn	11 59 15.0	+2.6
CMIG	Matias Romero	2.73	70	i P	Pn	11 59 12.9	-5.0
CMIG				i S	Sn	11 59 45.9	-5.4
IISM	Ciudad Serdan	2.80	4	eP	Pn	11 59 15.0	-3.8
PLIG	Platanillo	2.87	320	i P	Pn	11 59 18.4	-1.4
PLIG				i S	Sn	11 59 51.5	-3.2
PLIG	Platanillo	2.87	320	i P	Pn	11 59 17.5	-2.3
PLIG				i S	Sn	11 59 51.5	-3.2
PPM	Popocatepetl	3.04	341	i P	Pn	11 59 22.0	-0.3
PPM				i S	Sn	11 59 54.5	-4.6
PPM	Popocatepetl	3.04	341	i P	Pn	11 59 17.6	-4.7
PPM				eP		11 59 25.0	
PPM				i S	Sn	11 59 54.7	-4.3

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*NIED **29** 12:18:00, 28.30N×129.50E, h41^{km}, Mw4.0 Best double couple: M$_0$9.55×10^{14} NP1:φ$_s$251°, δ66°, λ-150°. NP2: φ$_s$148°, δ63°, λ-27°.*

JMA 29 12:18:33.8±0.1**, 28.27N×129.51E, h35**^{km}±1^{km}**, M3.5, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAM	Amami Oshima	0.16	31	P	P	12 18 40.2	0.0
JAM				S	S	12 18 44.5	-0.2
JZK	Kikaishima	0.41	84	P	P	12 18 42.8	-0.3
JZK				S	S	12 18 50.1	+0.4
JTK	Tokunoshima	0.69	226	P	P	12 18 46.9	-0.2
JTK				eS	S	12 18 56.2	-0.5
JNN	Nakanoshima	1.60	11	P	P	12 19 00.6	+0.5
JNN				eS	S	12 19 21.2	+1.5
JOW	Kunigami	1.80	218	P	P	12 19 03.5	+0.5
JOW				eS	S	12 19 26.1	+1.2
JIH	Iheya	1.84	228	P	P	12 19 04.5	+1.0
JIH				S	S	12 19 27.4	+1.6
JKC	Kuchinoerabu	2.27	15	P	P	12 19 11.0	+1.4
JKC				S	S	12 19 37.7	+1.1
JAGN	Aguni-jima	2.62	231	P	P	12 19 15.0	+0.3
JAGN				eS	S	12 19 46.7	+1.1
JJT2	Tamagusuku 2	2.64	217	P	P	12 19 14.9	-0.1
JTN	Tanegashima 3	2.70	28	P	P	12 19 16.6	+0.8
JTN				eS	S	12 19 48.7	+1.1
JKE	Kume jima 2	3.10	232	P	P	12 19 21.7	+0.2
JKE				eS	S	12 19 58.2	+0.3

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*CNRM **29** 13:52:36.2, 35.79N×3.36W, h22^{km}, MD3.3*

*CSEM **29** 13:52:37.6±0.1, 35.63N×3.46W, h35^{km}, mb3.4/12, Error ellipse: s-maj=4.3km s-min=2.9km az=89.0*

*NEIC **29** 13:52:38.4, 35.77N×3.47W, MG3.4(MDD), After MDD.*

*SFS **29** 13:52:38.0, 35.77N×3.47W*

*MDD **29** 13:52:38.1±0.3, 35.75N×3.48W, mbLg2.8/7, Error ellipse: s-maj=2.6km s-min=2.1km az=85.0, PRXIMO*

ISC 29 13:52:36.4±0.4**, 35.74N**±0.02×**3.51W**±0.03**, h9**^{km}±3^{km}**, n52, σ1^{s}.31**/87**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EALB	Alboran	0.43	62	P	Pg	13 52 45.7	+0.5
EALB				S	Sg	13 52 50.8	-0.4
EALB	Alboran	0.43	62	Pg	Pg	13 52 45.7	+0.5
	191nm,0.2s,SNR=139						
EALB				Lg		13 52 50.8	
	969nm,0.1s						
MPAL	Palemas	0.62	215	i P	Pg	13 52 50.0	+1.1
MPAL				i S	Sg	13 52 59.0	+1.7
EMEL	Melilla	0.62	134	Pg	Pg	13 52 50.0	+1.0
	564nm,0.1s,SNR=16						
EMEL				Lg		13 52 57.7	
	5µm,0.2s,SNR=26						
EMLI	Melilla	0.63	134	P	Pg	13 52 50.0	+0.9
	564nm,0.1s,SNR=16						
EMLI				S	Sg	13 52 57.7	+0.2
	5µm,0.2s,SNR=26						
MELI	Melilla	0.64	133	Pg	Pg	13 52 50.2	+0.8
MELI				Lg		13 52 58.1	
MELI	Melilla	0.64	133	i P	Pg	13 52 50.2	+0.9
MELI				eS	Sg	13 52 58.1	+0.1
TOU	Touzarine	0.80	195	i P	Pb	13 52 52.0	0.0
TOU				i S	Sb	13 53 03.0	+0.4
ZAI	Zaio	0.98	141	i S	Sb	13 53 05.0	-3.1
EGUA	Guajares	1.10	358	P	Pb	13 52 57.1	0.0
EGUA				S	Sb	13 53 10.8	-0.5
EGUA	Guajares	1.10	358	Pg	Pg	13 52 57.5	-0.9
	8.4nm,0.2s,SNR=7.9						
EGUA				Lg		13 53 10.8	
	16nm,0.3s,SNR=7.9						
EBER	Berja	1.26	23	P	Pb	13 53 00.2	+0.3
EBER				S	Sb	13 53 16.4	+0.3
EBER	Berja	1.26	23	Pg	Pg	13 53 00.2	-1.4
	57nm,0.4s,SNR=14						
EBER				Lg		13 53 16.4	
	96nm,0.4s,SNR=6.0						
EBER	Berja	1.26	23	P	Pb	13 53 00.2	+0.3
	57nm,0.4s,SNR=14						
EBER				S	Sb	13 53 16.4	+0.3
	96nm,0.4s,SNR=6.0						
ERON	Agron	1.30	349	Pg	Pg	13 53 00.7	-1.8
	9.8nm,0.2s,SNR=8.6						
ERON				Lg		13 53 19.0	
	22nm,0.3s,SNR=7.0						
ERON	Agron	1.30	349	P	Pb	13 53 00.7	+0.1
	9.8nm,0.2s,SNR=8.6						
ERON				S	Sb	13 53 19.0	+1.7
	22nm,0.3s,SNR=7.0						
EMIJ	Mijas	1.32	309	P	Pb	13 53 01.0	+0.1
EMIJ				S	Sb	13 53 18.1	+0.4
EMIJ	Mijas	1.32	309	Pg	Pg	13 53 01.3	-1.4
	6.3nm,0.2s,SNR=6.5						
EMIJ				Lg		13 53 18.1	
	77nm,0.3s,SNR=5.1						
EMIJ	Mijas	1.32	309	P	Pb	13 53 01.0	+0.1
	6.3nm,0.2s,SNR=6.5						
EMIJ				S	Sb	13 53 18.1	+0.4
	77nm,0.3s,SNR=5.1						
ELOJ	Sierra Loja	1.50	340	Pg	Pg	13 53 05.8	-0.6
	12nm,0.4s,SNR=6.6						
ELOJ				Lg		13 53 25.2	
	11nm,0.4s						
ELOJ	Sierra Loja	1.50	340	P	Pn	13 53 05.8	+2.1
	12nm,0.4s,SNR=6.6						
ELOJ				S	Sb	13 53 25.2	+2.1
	11nm,0.4s						
DKH	Dar Kharkhour	1.53	261	eP	Pn	13 53 02.0	-2.1
DKH				i S	Sb	13 53 22.0	-1.9
ECOG	Cogollos-Vega	1.54	358	Pg	Pg	13 53 05.6	-1.6
	22nm,0.2s,SNR=10						
ECOG				Sn	Sn	13 53 25.1	+0.6
	12nm,0.2s,SNR=4.0						
REAL	Reales	1.57	299	eS	Sb	13 53 24.0	-1.0
ENIJ	Nijar	1.62	40	Pn	Pn	13 53 06.8	+1.5
	22nm,0.3s,SNR=4.9						
ENIJ				Sn	Sn	13 53 26.8	+0.3
	19nm,0.2s						
TZK	Tazeka	1.73	199	i P	Pn	13 53 06.0	-1.0
TZK				i S	Sn	13 53 28.0	-1.4
ELUQ	Luque	1.92	342	Pg	Pg	13 53 12.9	-1.9
	8.6nm,0.3s,SNR=4.8						
ELUQ				Sn	Sn	13 53 35.8	+1.7
	11nm,0.2s,SNR=7.7						
ELUQ	Luque	1.92	342	S	Sn	13 53 35.8	+1.7
	11nm,0.2s,SNR=7.7						
LIJA	Lijar	1.93	308	Pn	Pn	13 53 14.2	+4.5
LIJA				Sn	Sn	13 53 37.0	+2.7
LIJA	Lijar	1.93	308	eS	Sn	13 53 37.0	+2.7

EQES	**Quesada**	**2.09**	**9**	Pn	**Pn**	**13 53 13.7**	**+1.6**
	7.0nm,0.1s,SNR=32						
EQES				Sn	**Sn**	**13 53 37.7**	**-0.7**
	18nm,0.2s,SNR=4.6						
EQES	**Quesada**	**2.09**	**9**	P	**Pn**	**13 53 13.7**	**+1.6**
	7.0nm,0.1s,SNR=32						
EQES				S	**Sn**	**13 53 37.8**	**-0.7**
EHUE	**Huescar**	**2.20**	**19**	Pn	**Pn**	**13 53 15.0**	**+1.3**
	2.0nm,0.3s,SNR=4.0						
ESPR	**Espera**	**2.21**	**301**	Pn	**Pn**	**13 53 19.8**	**+6.0**
	2.0nm,0.2s,SNR=5.0						
ESPR				Sn	**Sn**	**13 53 43.5**	**+2.0**
	14nm,0.3s,SNR=7.9						
ESPR	**Espera**	**2.21**	**301**	S	**Sn**	**13 53 43.5**	**+2.1**
	14nm,0.3s,SNR=7.9						
EBAN	**Banos Encina**	**2.43**	**355**	Pn	**Pn**	**13 53 19.0**	**+2.0**
	3.4nm,0.2s,SNR=7.9						
EBAN				Sn	**Sn**	**13 53 47.8**	**+0.7**
	5.7nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.57**	**341**	Pn	**Pn**	**13 53 19.9**	**+0.9**
	8.1nm,0.3s,SNR=15						
EADA				Sn	**Sn**	**13 53 50.6**	**-0.1**
	10nm,0.2s,SNR=6.6						
EADA	**Adamuz**	**2.57**	**341**	P	**Pn**	**13 53 19.9**	**+0.9**
	8.1nm,0.3s,SNR=15						
EADA				S	**Sn**	**13 53 50.6**	**-0.1**
	10nm,0.2s,SNR=6.6						
EMUR	**La Murta**	**2.78**	**40**	Sn	**Sn**	**13 53 53.4**	**-2.5**
	14nm,0.4s,SNR=4.0						
EMUR	**La Murta**	**2.78**	**40**	S	**Sn**	**13 53 53.4**	**-2.5**
	14nm,0.4s,SNR=4.0						
ECAB	**El Cabril**	**2.79**	**327**	Pn	**Pn**	**13 53 23.2**	**+1.1**
	2.1nm,0.2s,SNR=9.0						
ECAB				Sn	**Sn**	**13 53 54.7**	**-1.6**
	7.6nm,0.5s						
ECAB	**El Cabril**	**2.79**	**327**	P	**Pn**	**13 53 23.2**	**+1.1**
	2.1nm,0.2s,SNR=9.0						
ECAB				S	**Sn**	**13 53 54.7**	**-1.6**
	7.6nm,0.5s						
CZD	**Col de Zad**	**2.98**	**206**	*e*P	**Pn**	**13 53 22.0**	**-2.8**
CZD				*i* S	**Sn**	**13 53 55.5**	**-5.5**
EVIA	**Vianos**	**3.01**	**15**	Pn	**Pn**	**13 53 26.7**	**+1.6**
	12nm,0.4s,SNR=7.2						
EVIA				Sn	**Sn**	**13 54 00.1**	**-1.5**
	7.9nm,0.4s,SNR=4.0						
EMIN	**Mina Concepcio**	**3.25**	**310**	Pn	**Pn**	**13 53 29.1**	**+0.5**
	1.2nm,0.2s,SNR=7.9						
EMIN				Sn	**Sn**	**13 54 07.2**	**-0.7**
	2.5nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.25**	**310**	P	**Pn**	**13 53 29.1**	**+0.5**
	1.2nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**13 54 07.2**	**-0.7**
	2.5nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.30**	**28**	Pn	**Pn**	**13 53 29.5**	**+0.2**
	3.5nm,0.2s,SNR=8.2						
ETOB				Sn	**Sn**	**13 54 07.5**	**-1.6**
	5.8nm,0.4s						
ETOB	**Tobarra**	**3.30**	**28**	P	**Pn**	**13 53 29.5**	**+0.2**
	3.5nm,0.2s,SNR=8.2						
ETOB				S	**Sn**	**13 54 07.5**	**-1.6**
	5.8nm,0.4s						
EBAD	**Badajoz**	**4.11**	**318**	Pn	**Pn**	**13 53 41.5**	**+0.6**
	0.7nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**13 54 27.5**	**-2.2**
	7.2nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.11**	**318**	P	**Pn**	**13 53 41.5**	**+0.6**
EBAD				S	**Sn**	**13 54 27.5**	**-2.2**
EIBI	**Ibiza**	**5.07**	**48**	Pn	**Pn**	**13 53 52.0**	**-2.4**
	1.0nm,0.1s,SNR=7.9						
EIBI				Sn	**Sn**	**13 54 44.7**	**-9.1**
	3.3nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**5.07**	**48**	P	**Pn**	**13 53 52.0**	**-2.4**

NEIC ***29*** *14:11:27.2±0.8, 17.86S×178.15E, h526^{km}±9^{km}, mb4.7/21, Error ellipse: s-maj=9.0km s-min=7.8km az=144.0*

IDC ***29*** *14:11:29.5±1.6, 17.98S×178.08E, h549^{km}±17^{km}, mb3.8/17, mb1 3.9/18, mb1mx3.9/21, mbtmp4.7/18, Error ellipse: s-maj=13.5km s-min=9.9km az=99.0*

BJI ***29*** *14:11:31.1, 17.03S×177.62E, h530^{km}, mB4.6, mb4.6*

ISC 29 14:11:27.5±0.4**, 17.94S**±0.06×**178.02E**±0.08**, h535^{km}, h535^{km}**±8.3^{km}**:pP-P, n178,** σ**1^{s}08**/68**, mb4.4**/35**, 21C-18D, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**10.60**	**69**	⇑*e*P	**P**	**14 13 48.0**	**-4.4**
	42nm,0.6s						
DZM	**Mont Dzumac**	**11.63**	**247**	*e*P	**P**	**14 14 04.6**	**+1.8**
DZM	**Mont Dzumac**	**11.63**	**247**	P	**P**	**14 14 04.5**	**+1.7**
	4.2nm,0.3s,baz=75,slow=20,SNR=26						
DZM	**Mont Dzumac**	**11.63**	**247**	*e*P	**P**	**14 14 04.6**	**+1.8**
NOUC	**Port Laguerre**	**11.76**	**247**	*e*P	**P**	**14 14 05.8**	**+1.6**
NOUC	**Port Laguerre**	**11.76**	**247**	*e*P	**P**	**14 14 05.8**	**+1.6**
HNR	**Honiara**	**19.48**	**293**	P	**P**	**14 15 21.7**	**+1.4**
URZ	**Urewera**	**20.26**	**182**	P	**P**	**14 15 26.9**	**-0.6**
	9.1nm,0.6s,baz=271,slow=6.3,SNR=5.6						
URZ				S	**S**	**14 18 38.4**	**-2.1**
	9.8nm,0.5s,baz=198,slow=21,SNR=8.6						
RPZ	**Rata Peaks**	**26.36**	**191**	P	**P**	**14 16 21.8**	**-0.6**
	9.7nm,0.8s,mb4.5,baz=356,slow=15,SNR=4.5						
ARMA	**Armidale**	**27.02**	**238**	*e*P	**P**	**14 16 29.7**	**+1.4**
ARMA				*i* pP		14 17 21.5	
CTA	**Charters Tower**	**30.09**	**261**	⇓*i*P	**P**	**14 16 55.6**	**+0.6**
	27nm,0.7s,mb4.9						
CTA				*i* pP		14 17 47.1	
CTA	**Charters Tower**	**30.09**	**261**	P	**P**	**14 16 55.7**	**+0.7**
	40nm,0.7s,mb5.0,baz=88,slow=10,SNR=50						
CTAO	**Charters Tower**	**30.09**	**261**	*e*P	**P**	**14 16 55.3**	**+0.3**
	35nm,0.7s,mb5.0						
PMG	**Port Moresby**	**31.12**	**282**	P	**P**	**14 17 04.6**	**+0.7**
	13nm,0.7s,mb4.6,baz=94,slow=5.6,SNR=12						
PMG	**Port Moresby**	**31.12**	**282**	⇑*e*P	**P**	**14 17 03.8**	**-0.1**
	44nm,1.3s,mb4.8						
TOO	**Toolangi**	**34.55**	**229**	⇓*i*P	**P**	**14 17 33.6**	**+1.1**
	6.0nm,0.5s,mb4.4						
TOO				*e*pP		14 18 25.0	
STKA	**Stephens Creek**	**35.65**	**240**	⇓*i*P	**P**	**14 17 43.0**	**+1.3**
	14nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**35.65**	**240**	P	**P**	**14 17 43.1**	**+1.4**
	17nm,0.5s,mb4.8,baz=89,slow=9.8,SNR=61						
STKA				S	**S**	**14 22 40.1**	**-1.3**
	1.1nm,0.8s,baz=143,slow=20,SNR=2.9						
WB2	**Warramunga Arr**	**41.27**	**260**	⇓*i*P	**P**	**14 18 26.4**	**-1.0**
WB2				*e*S	**S**	**14 23 58.8**	**-4.9**
WRAB	**Tennant Creek**	**41.27**	**260**	*e*P	**P**	**14 18 26.0**	**-1.3**
	21nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**41.28**	**260**	P	**P**	**14 18 26.6**	**-0.9**
	5.7nm,0.4s,mb4.5,baz=92,slow=8.5,SNR=165						
WRA				PcP	PcP	14 20 12.3	-1.7
	3.3nm,0.6s,baz=87,slow=3.7,SNR=8.1						
WRA				S	**S**	**14 23 58.1**	**-5.7**
	2.5nm,1.0s,baz=90,slow=14,SNR=5.9						
KAKA	**Kakadu**	**44.18**	**270**	⇓*i*P	**P**	**14 18 49.8**	**-0.7**
	24nm,0.6s,mb4.9						
FORT	**Forrest**	**46.92**	**244**	*e*P	**P**	**14 19 10.3**	**-1.1**
	25nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**49.67**	**261**	⇓*i*P	**P**	**14 19 31.5**	**-0.7**
	9.0nm,0.9s,mb4.2						
MBWA	**Marble Bar**	**54.77**	**256**	*e*P	**P**	**14 20 07.3**	**-1.5**
	15nm,0.8s,mb4.3						
MUN	**Mundaring**	**57.08**	**243**	*e*P	**P**	**14 20 23.6**	**-1.0**
	10nm,0.5s,mb4.3						
VNDA	**Vanda**	**60.15**	**184**	P	**P**	**14 20 44.9**	**+0.3**
	2.9nm,0.5s,mb3.8,baz=8.7,slow=6.8,SNR=6.0						
VNDA	**Vanda**	**60.15**	**184**	*e*P	**P**	**14 20 44.8**	**+0.2**
	3.3nm,0.6s,mb3.8						
CASY	**Casey**	**64.69**	**204**	*e*P	**P**	**14 21 13.1**	**-0.9**
JOW	**Kunigami**	**65.66**	**312**	P	**P**	**14 21 20.1**	**-0.6**
	6.4nm,0.4s,mb4.5,baz=294,slow=11,SNR=6.0						
MJAR	**Matsushiro Arr**	**65.96**	**326**	P	**P**	**14 21 21.2**	**-1.1**
	13nm,0.7s,mb4.5,baz=163,slow=6.7,SNR=24						
MAT	**Matsushiro**	**65.96**	**326**	*e*P	**P**	**14 21 21.0**	**-1.4**
	10nm,0.7s,mb4.5						
MAT	**Matsushiro**	**65.96**	**326**	P	**P**	**14 21 21.2**	**-1.2**
KSM	**Kuching**	**69.32**	**279**	*e*P	**P**	**14 21 43.0**	**-0.3**
ASAJ	**Asahikawa**	**69.74**	**334**	P	**P**	**14 21 45.4**	**+0.2**
	9.2nm,0.7s,mb4.4,baz=97,slow=23,SNR=5.5						
QSPA	**South Pole Qui**	**72.11**	**180**	⇓*i*P	**P**	**14 21 59.1**	**+0.6**
	26nm,0.6s,mb4.8						
SSE	**Sheshan**	**73.18**	**311**	P	**P**	**14 22 05.5**	**+0.1**
SSE				AP	pP	14 23 55.0	-3.8
SSE				XP	sP	14 24 49.0	-4.2
SSE				S	S	14 30 53.5	+3.4
SSE				AMB	AMB		
	comp=Z,140nm,1.2s,mb5.3						
SSE				AMB	AMB		
	comp=Z,100nm,12.0s						
SSE	**Sheshan**	**73.18**	**311**	P	**P**	**14 22 05.4**	**0.0**
	comp=Z,146nm,1.2s,mb5.3						
SSE				pP	pP	14 23 55.0	-3.8
SSE				sP	sP	14 24 49.1	-4.1
SSE				S	S	14 30 53.5	+3.4
SSE				sS		14 34 09.4	
SSE				LR	LR		
	comp=Z,50nm,17.8s						
NJ2	**Nanjing**	**75.37**	**311**	*e*P	**P**	**14 22 15.8**	**-1.8**
NJ2				AP	pP	14 24 11.5	-0.4
NJ2				XP	sP	14 25 04.0	-2.0
NJ2				PP	PP	14 25 17.3	+0.7
NJ2				S	S	14 31 12.0	-1.8
NJ2				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,150nm,5.8s						
MDJ	**Mudanjiang**	**76.30**	**327**	P	**P**	**14 22 22.5**	**+0.1**
MDJ				PCP	PcP	14 22 31.5	-0.7
MDJ				AP	pP	14 24 10.3	-6.7
MDJ				XP	sP	14 25 04.3	-6.9
MDJ				SCS	ScS	14 31 48.3	+2.3
MDJ				XS		14 34 34.3	
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,30nm,4.2s						
MDJ	**Mudanjiang**	**76.30**	**327**	*e*P	**P**	**14 22 23.1**	**+0.7**
	comp=Z,2.6nm,0.6s,mb3.8						
CN2	**Changchun**	**78.01**	**324**	*e*P	**P**	**14 22 32.3**	**+0.6**
CN2				*e*AP	pP	14 24 25.3	-1.6
CN2				*e*S	S	14 31 42.5	+1.1
CN2				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.7						
CN2				AMB	AMB		
	comp=Z,100nm,3.0s						
ENH	**Enshi**	**81.50**	**306**	*e*P	**P**	**14 22 50.1**	**0.0**
	comp=Z,32nm,1.1s,mb4.7						
NVAR	**Mina Array Bea**	**81.83**	**45**	P	**P**	**14 22 52.3**	**+0.7**
	comp=Z,0.4nm,0.5s,mb3.1,baz=204,slow=5.2,SNR=7.0						
NVAR				pP	pP	14 24 52.1	+4.0
	comp=Z,0.8nm,0.8s,baz=225,slow=7.7,SNR=3.3						
GYA	**Guiyang**	**82.12**	**301**	⇑*i*P	**P**	**14 22 52.0**	**-1.3**
GYA				AP	pP	14 24 49.5	-0.4
GYA				XP	sP	14 25 43.3	-0.3
GYA				PP	PP	14 26 12.0	0.0
GYA				S	S	14 32 23.3	-0.2
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
GYA				AMB	AMB		
	comp=Z,90nm,2.8s,mb4.7						
MAW	**Mawson**	**82.66**	**200**	P	**P**	**14 22 56.1**	**+0.9**
	comp=Z,14nm,0.6s,mb4.7,baz=124,slow=6.9,SNR=71						
XAN	**Xi'an**	**83.60**	**309**	P	**P**	**14 23 01.5**	**+0.8**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
KMI	**Kunming**	**84.84**	**298**	P	**P**	**14 23 08.0**	**+1.1**
KMI				PP	PP	14 26 35.0	+1.4
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
KMI	**Kunming**	**84.84**	**298**	P	**P**	**14 23 08.0**	**+1.1**
	comp=Z,16nm,0.9s,mb4.5						
KMI				PP	PP	14 26 35.0	+1.4
CM31	**Chiang Mai Arr**	**85.71**	**291**	*e*P	**P**	**14 23 12.4**	**+1.2**
	comp=Z,13nm,1.0s,mb4.5						
CMAR	**Chiang Mai Arr**	**85.71**	**291**	P	**P**	**14 23 12.0**	**+0.8**
	comp=Z,6.7nm,0.9s,mb4.3,baz=126,slow=2.9,SNR=27						
ILAR	**Eielson Array**	**86.72**	**14**	P	**P**	**14 23 13.1**	**-1.8**
	comp=Z,2.2nm,0.7s,mb3.9,baz=238,slow=5.5,SNR=22						
LZH	**Lanzhou**	**88.24**	**309**	*e*P	**P**	**14 23 24.5**	**+1.7**
LZH				AP	pP	14 25 19.0	-2.2
LZH				XP	sP	14 26 11.8	-2.4
LZH				PP	PP	14 27 04.0	+2.8
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,220nm,5.3s						
LZH	**Lanzhou**	**88.24**	**309**	*e*P	**P**	**14 23 24.5**	**+1.7**
	comp=Z,25nm,1.0s,mb4.9						
LZH				pP	pP	14 25 19.1	-2.1
LZH				sP	sP	14 26 11.8	-2.4
LZH				PP	PP	14 27 04.0	+2.8
LZH				LR	LR		
	comp=Z,970nm,15.3s						
SYO	**Syowa Base**	**88.34**	**194**	⇑P	**P**	**14 23 21.0**	**-1.5**
TXAR	**Lajitas Array**	**88.90**	**59**	P	**P**	**14 23 27.0**	**+1.0**
	comp=Z,1.4nm,0.8s,mb3.9,baz=225,slow=5.3,SNR=7.7						
TXAR				pP	pP	14 25 28.6	+4.0
	comp=Z,0.3nm,0.4s,baz=214,slow=3.3,SNR=2.3						
PDAR	**Pinedale Array**	**89.74**	**45**	P	**P**	**14 23 29.4**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.5,baz=222,slow=1.6,SNR=5.9						
SNAA	**Sanae**	**90.61**	**180**	⇓*i*P	**P**	**14 23 32.5**	**-0.4**
SNAA	**Sanae**	**90.61**	**180**	⇑*i*	**P**	**14 23 33.3**	**+0.4**
VNA3	**Neumayer Olymp**	**90.89**	**178**	⇓*i*P	**P**	**14 23 35.4**	**+1.2**
VNA3	**Neumayer Olymp**	**90.89**	**178**		**P**	**14 23 37.1**	**+2.9**
VNA2	**Neumayer--Watz**	**91.28**	**178**	⇓*i*P	**P**	**14 23 37.4**	**+1.4**
VNA2	**Neumayer--Watz**	**91.28**	**178**	⇑*i*	**P**	**14 23 39.4**	**+3.4**
SONM	**Songino Array**	**91.38**	**320**	P	**P**	**14 23 36.6**	**-0.4**
	comp=Z,1.8nm,0.6s,mb4.2,baz=137,slow=4.3,SNR=11						
WMQ	**Urumqi**	**102.43**	**312**	*e*P	Pdif	14 24 26.8	-0.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.2s						
MKAR	**Makanchi Array**	**106.73**	**314**	PKiKP		14 28 51.0	
	comp=Z,0.7nm,0.5s,baz=63,slow=2.7,SNR=9.2						
BVAR	**Borovoye Array**	**114.72**	**321**	PKP	PKPdf	14 29 06.6	0.0
	comp=Z,2.4nm,0.4s,baz=140,slow=2.0,SNR=18						
ZRNK	**Zerenda**	**115.56**	**321**	*e*P	PKPdf	14 29 07.8	-0.4
KEV	**Kevo**	**125.23**	**348**	*e*p	PKPdf	14 29 25.4	-1.1
ARCES	**ARCESS Array B**	**125.71**	**348**	PKP	PKPdf	14 29 27.6	+0.1
	comp=Z,4.5nm,0.6s,baz=75,slow=2.8,SNR=37						
BOSA	**Boshof**	**126.75**	**210**	PKP	PKPdf	14 29 31.1	+0.5
	comp=Z,2.2nm,0.7s,baz=158,slow=8.9,SNR=4.2						
KAF	**Kangasniemi**	**131.64**	**343**	*e*p	PKPdf	14 29 38.4	-0.5
FINES	**FINESS Array B**	**132.24**	**342**	PKP	PKPdf	14 29 40.0	-0.1
	comp=Z,1.0nm,0.5s,baz=38,slow=1.7,SNR=7.0						
FINES				SKPbc		14 32 17.0	
	comp=Z,1.0nm,0.5s,baz=74,slow=3.7,SNR=5.0						
NB2	**NORSAR Subarra**	**135.94**	**351**	PKPdf	PKPdf	14 29 46.4	-0.5
	comp=Z,0.2nm,0.3s,baz=14,slow=1.8						
NOA	**NORSAR Array B**	**135.94**	**351**	PKP	PKPdf	14 29 46.4	-0.5
	comp=Z,0.7nm,0.6s,baz=14,slow=3.7,SNR=4.8						
ASF	**Jabal al Asfar**	**142.26**	**300**	PKhKP		14 29 56.9	
	comp=Z,6.8nm,0.8s,baz=343,slow=1.9,SNR=6.5						
BR131	**Keskin Array S**	**142.35**	**313**	*e*PKPpre		14 29 56.9	
BRTR	**Keskin Array B**	**142.35**	**313**	PKhKP		14 29 56.5	
	comp=Z,2.4nm,0.5s,SNR=16						
KWP	**Kalwaria**	**142.66**	**333**	*e*PKP	PKPdf	14 29 57.4	-1.8
KWP	**Kalwaria**	**142.66**	**333**	*e*PKP	PKPdf	14 29 57.4	-1.8
MBAR	**Mbarara**	**142.91**	**244**	*e*PKPdf	PKPdf	14 29 59.9	-0.8
BURAR	**Bucovina Array**	**142.97**	**329**	⇑P	PKPdf	14 29 59.5	-0.3
BURAR	**Bucovina Array**	**142.97**	**329**	⇑P	PKPdf	14 29 59.5	-0.3
TIRR	**Tirgusor**	**143.30**	**323**	⇑P	PKPbc	14 30 00.2	+0.9
TIRR	**Tirgusor**	**143.30**	**323**	⇑P	PKPbc	14 30 00.2	+0.9
VRI	**Vrincioaia**	**143.37**	**326**	⇓P	PKPbc	14 29 59.3	-0.2
VRI	**Vrincioaia**	**143.37**	**326**	⇓P	PKPbc	14 29 59.3	-0.2
KOLS	**Kolonicke sedl**	**143.38**	**333**	*i* PKP	PKPdf	14 30 00.3	-0.1
OJC	**Ojcow**	**143.38**	**336**	*e*PKP	PKPdf	14 29 59.8	-0.6
JMQS	**Jabal Moqyreh**	**143.74**	**295**	P	PKPbc	14 30 02.7	+1.6
CRVS	**Cervenica-Dubn**	**143.75**	**334**	*e*PKP	PKPdf	14 30 01.8	+0.8
NIE	**Niedzica**	**143.81**	**335**	⇓*e*PKP	PKPdf	14 30 01.9	+0.8
MLR	**Muntele Rosu**	**144.03**	**326**	⇑P	PKPbc	14 30 02.1	+0.6
MLR	**Muntele Rosu**	**144.03**	**326**	⇑P	PKPbc	14 30 02.1	+0.6
KSP	**Ksiaz**	**144.09**	**340**	*e*PKP	PKPdf	14 30 02.5	+0.9
KSP	**Ksiaz**	**144.09**	**340**	*e*PKP	PKPdf	14 30 02.7	+1.1
OKC	**Ostrava-Krasne**	**144.30**	**338**	*e*PKP	PKPdf	14 30 03.0	+1.0
OKC				*e*		15 00 58.3	
OKC	**Ostrava-Krasne**	**144.30**	**338**	⇑*e*PKPB	PKPbc	14 30 03.0	+0.9
OKC				*e*SKSSKS		15 00 58.3	
JMOS	**Jabal al Moall**	**144.35**	**295**	P	PKPdf	14 30 04.3	+1.6
CSS	**Prodhromos**	**144.36**	**305**	*e*PKPdf	PKPdf	14 30 03.1	+0.5
AYUS	**'Aynunah**	**144.37**	**293**	P	PKPdf	14 30 04.3	+1.4
EIL	**Elat**	**144.40**	**296**	PKP	PKPdf	14 30 04.0	+1.2
	comp=Z,6.7nm,0.7s,baz=256,slow=2.5,SNR=7.6						
EIL	**Elat**	**144.40**	**296**	*e*PKPdf	PKPdf	14 30 03.7	+0.9
UPC	**Upice**	**144.47**	**340**	*e*PKP	PKPdf	14 30 03.8	+1.5
UPC	**Upice**	**144.47**	**340**	⇑*e*PKPB	PKPbc	14 30 03.8	+1.3
KECS	**Kecovo**	**144.48**	**334**	*i* PKP	PKPdf	14 30 03.7	+1.3
DPC	**Dobruska-Polom**	**144.50**	**340**	*e*PKP	PKPdf	14 30 04.0	+1.7
DPC				*e*		15 00 53.5	
DPC	**Dobruska-Polom**	**144.50**	**340**	⇑*e*PKPB	PKPbc	14 30 04.0	+1.4
DPC				*e*x	x	15 00 53.5	
HAQS	**Haql**	**144.53**	**295**	P	PKPdf	14 30 04.8	+1.7
VOIR		**144.54**	**327**	⇓P	PKPdf	14 30 04.6	+2.0
VOIR		**144.54**	**327**	⇓P	PKPdf	14 30 04.6	+2.0
CLL	**Collm**	**144.65**	**344**	⇓*i*PKIKP	PKPdf	14 30 03.9	+1.3
	comp=Z,logA/T=1.8						
TAYS	**Tayyib Ism**	**144.66**	**294**	P	PKPdf	14 30 05.0	+1.6
BRG	**Berggiesshubel**	**144.78**	**342**	*i* PKP	PKPdf	14 30 04.5	+1.6
CLZ	**Clausthal**	**144.79**	**347**	*e*PKPbc	PKPbc	14 30 04.4	+1.0
PVCC	**Panska Ves**	**144.90**	**342**	*e*PKP	PKPdf	14 30 05.1	+2.1
PVCC	**Panska Ves**	**144.90**	**342**	⇑*e*PKPB	PKPbc	14 30 05.1	+1.4
VYHS	**Vyhne**	**145.14**	**336**	*i* PKP	PKPdf	14 30 05.7	+2.2
PSZ	**Piszkesteto**	**145.17**	**334**	*e*PKPdf	PKPdf	14 30 05.2	+1.6
ISP	**Isparta**	**145.36**	**312**	*e*PKPbc	PKPbc	14 30 05.5	+0.1
PRU	**Pruhonice**	**145.38**	**341**	*e*PKP	PKPdf	14 30 06.2	+2.3
PRU				*e*		15 01 19.6	
PRU	**Pruhonice**	**145.38**	**341**	⇑*e*PKPB	PKPbc	14 30 06.2	+1.2
PRU				*e*x	x	15 01 19.6	
MOX	**Moxa**	**145.61**	**345**	*e*PKP	PKPdf	14 30 05.3	+1.0
MOX	**Moxa**	**145.61**	**345**	*i* P	PKPdf	14 30 05.3	+1.0
SMOL	**Smolenice**	**145.66**	**337**	*e*PKP	PKPdf	14 30 07.1	+2.7
NKC	**Novy Kostel**	**145.77**	**343**	*e*PKP	PKPdf	14 30 07.5	+2.9
NKC	**Novy Kostel**	**145.77**	**343**	⇑*e*PKPB	PKPbc	14 30 07.5	+1.5
ZST	**Bratislava**	**146.05**	**337**	*e*PKP	PKPdf	14 30 07.2	+2.1
KHC	**Kasperske Hory**	**146.44**	**341**	*e*PKP	PKPdf	14 30 09.4	+3.7
KHC				*e*		15 01 49.9	
KHC	**Kasperske Hory**	**146.44**	**341**	⇑*e*PKPB	PKPbc	14 30 09.4	+1.8
KHC				*e*x	x	15 01 49.9	
GRA1	**Grafenberg Arr**	**146.59**	**344**	*e*PKPbc	PKPbc	14 30 09.5	+1.6
GRF	**Grafenberg Arr**	**146.59**	**344**	*e*PKP	PKPdf	14 30 09.5	+3.6
WET	**Wettzell**	**146.63**	**342**	*e*PKPbc	PKPbc	14 30 09.5	+1.5
GEC2	**GERESS Array S**	**146.65**	**341**	*e*PKPbc	PKPbc	14 30 09.6	+1.5
GERES	**GERESS Array B**	**146.65**	**341**	PKPbc	PKPbc	14 30 09.8	+1.7
	comp=Z,11nm,0.5s,baz=27,slow=3.0,SNR=81						
TNS	**Taunus Mts**	**146.73**	**348**	*e*PKPbc	PKPbc	14 30 09.9	+1.7
GIVF	**Givet**	**147.46**	**352**	*e*PKP1	PKPdf	14 30 11.7	+4.4
	comp=Z,21nm,0.6s						
BAIF	**Baives**	**147.58**	**353**	*e*PKP1	PKPdf	14 30 12.2	+4.7
	comp=Z,19nm,0.6s						
FUR	**Furstenfeldbru**	**147.97**	**343**	*e*PKPbc	PKPdf	14 30 13.4	+5.2
PERS	**Pernice**	**148.09**	**337**	*e*PKPbc	PKPdf	14 30 12.9	+4.5
BFO	**Black Forest**	**148.55**	**347**	*e*PKPbc	PKPdf	14 30 14.2	+5.1
WATA	**Walderalm**	**148.64**	**342**	⇑*i*P	PKPdf	14 30 14.5	+5.2
CDF	**Champ du Feu**	**148.69**	**348**	*e*PKP1	PKPdf	14 30 14.9	+5.6
	comp=Z,28nm,0.7s						
WTTA	**Wattenberg**	**148.69**	**342**	⇑*i*P	PKPdf	14 30 15.0	+5.7
SKO	**Skopje**	**148.81**	**325**	*i* PKP	PKPdf	14 30 15.0	+5.3
SKO				*i*		14 30 22.4	
LJU	**Ljubljana**	**148.81**	**338**	*e*PKPbc	PKPdf	14 30 15.1	+5.5
SQTA	**Sankt Quirin**	**148.85**	**343**	⇓*i*P	PKPdf	14 30 15.3	+5.7
VISS	**Visnje**	**148.90**	**337**	*i* PKPbc	PKPdf	14 30 15.2	+5.5
BOJS	**Bojanci**	**149.00**	**336**	*e*PKPdf	PKPdf	14 30 10.4	+0.5
BOJS				*i* PKPbc	PKPdf	14 30 15.6	+5.7
VOY	**Vojsko**	**149.05**	**338**	*e*PKPdf	PKPdf	14 30 10.2	+0.2
VOY				*e*PKPbc	PKPdf	14 30 15.2	+5.2
DAVA	**Damuels**	**149.15**	**344**	⇓*i*P	PKPdf	14 30 15.9	+5.8
FLN	**La Foliniere**	**149.24**	**358**	*e*PKP1	PKPdf	14 30 15.9	+5.7
	comp=Z,21nm,0.5s						
HAU	**Haudompre**	**149.25**	**349**	*e*PKP1	PKPdf	14 30 16.1	+5.9
	comp=Z,14nm,0.6s						
HINF	**Hinteralfeld**	**149.34**	**348**	*e*PKP1	PKPdf	14 30 16.2	+5.8
GRR	**Gorron**	**149.62**	**359**	*e*PKP1	PKPdf	14 30 17.0	+6.2
	comp=Z,22nm,0.3s						
DAVOX	**Davos**	**149.62**	**344**	PKPbc	PKPdf	14 30 17.5	+6.7
	comp=Z,34nm,0.6s,baz=253,slow=1.6,SNR=31						
ROSF	**Rostrenen**	**149.67**	**2**	*e*PKP1	PKPdf	14 30 16.5	+5.6
SGMF	**Saint Gilles**	**149.76**	**1**	*e*PKP1	PKPdf	14 30 17.0	+6.0
QUIF	**Quistinic**	**150.09**	**2**	*e*PKP1	PKPdf	14 30 17.5	+6.0
LOR	**Lormes**	**150.36**	**352**	*e*PKP1	PKPdf	14 30 18.9	+6.9
	comp=Z,53nm,0.8s						
SSF	**Saint Saulge**	**150.61**	**352**	*e*PKP1	PKPdf	14 30 19.5	+7.1
	comp=Z,37nm,0.5s						
CABF	**La Chapelle**	**150.64**	**349**	*e*PKP1	PKPdf	14 30 20.0	+7.6
	comp=Z,25nm,0.6s						
SMF	**Signal de Mont**	**150.98**	**352**	*e*PKP1	PKPdf	14 30 19.9	+7.0
BGF	**Bois d'Agland**	**151.19**	**353**	*e*PKP1	PKPdf	14 30 20.6	+7.4
	comp=Z,23nm,0.7s						
MFF	**Saint Martin d**	**151.38**	**357**	*e*PKP1	PKPdf	14 30 21.1	+7.6
	comp=Z,29nm,0.6s						
TCF	**Toulx Ste Croi**	**151.52**	**354**	*e*PKP1	PKPdf	14 30 21.4	+7.7
	comp=Z,14nm,0.6s						
LPL	**La Plagne**	**151.56**	**347**	*e*PKP1	PKPdf	14 30 22.3	+8.5
LPG	**La Plagne**	**151.58**	**347**	*e*PKP1	PKPdf	14 30 22.4	+8.6
BNI	**Bardonecchia**	**152.02**	**347**	*e*PKPbc	PKPdf	14 30 23.1	+8.7
MBDF	**Montbardon**	**152.31**	**347**	*e*PKP1	PKPdf	14 30 23.4	+8.6
	comp=Z,14nm,0.7s						
ORIF	**Oris-en-Rattie**	**152.31**	**348**	*e*PKP1	PKPdf	14 30 23.4	+8.6
	comp=Z,19nm,0.6s						
RJF	**Les Rejaudoux**	**152.56**	**355**	*e*PKP1	PKPdf	14 30 23.7	+8.5
	comp=Z,17nm,0.8s						
VIVF	**Saint-Julien-l**	**152.59**	**350**	*e*PKP1	PKPdf	14 30 24.0	+8.8
	comp=Z,8.6nm,0.7s						
CAF	**Calviac**	**152.88**	**354**	*e*PKP1	PKPdf	14 30 24.6	+9.0
SBF	**Sospel**	**152.97**	**345**	*e*PKP1	PKPdf	14 30 25.8	+10
LFF	**La Frestale**	**152.99**	**356**	*e*PKP1	PKPdf	14 30 24.7	+8.9
PGF	**Pioggiola**	**153.75**	**341**	*e*PKP1	PKPdf	14 30 26.0	+9.1
MTLF	**Montolieu**	**154.43**	**353**	*e*PKP1	PKPdf	14 30 29.5	+12

NEIC ***29*** *14:12:16.8±1.1, 17.79S×178.32E, h525^{km}±14^{km}, mb4.8/1, Error ellipse: s-maj=15.1km s-min=9.5km az=141.0*

IDC ***29*** *14:12:19.2±3.2, 17.94S×178.34E, h552^{km}±38^{km}, mb3.6/12, mb1 3.8/12, mb1mx3.7/18, mbtmp4.5/12, Error ellipse: s-maj=20.0km s-min=13.1km az=94.0*

ISC 29 14:12:15.5±1.6**, 17.8S**±0.1×**178.3E**±0.1**, h518^{km}**±20^{km}**, n27,** σ**0^{s}97**/23**, mb4.1**/12**, 2C-2D, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**10.31**	**69**	P	**P**	**14 14 37.8**	**+0.3**
URZ	**Urewera**	**20.41**	**183**	P	**P**	**14 16 17.4**	**-0.3**
	2.9nm,0.3s,baz=156,slow=20,SNR=2.4						
URZ				S	**S**	**14 19 29.6**	**-3.0**
	10.0nm,0.8s,baz=319,slow=20,SNR=2.2						
RPZ	**Rata Peaks**	**26.55**	**192**	P	**P**	**14 17 11.2**	**-1.9**
	13nm,0.8s,mb4.6,slow=20,SNR=3.6						
CTA	**Charters Tower**	**30.36**	**261**	P	**P**	**14 17 47.0**	**+0.6**
	30nm,0.7s,mb4.9,baz=91,slow=10,SNR=13						
CTA	**Charters Tower**	**30.36**	**261**	P	**P**	**14 17 47.0**	**+0.6**
CTAO	**Charters Tower**	**30.36**	**261**	⇑*e*P	**P**	**14 17 46.2**	**-0.2**
CNB	**Canberra Magne**	**31.04**	**230**	*e*P	**P**	**14 17 53.0**	**+1.0**
	40nm,1.5s,mb4.7						
STKA	**Stephens Creek**	**35.94**	**240**	P	**P**	**14 18 34.4**	**+1.2**
	28nm,0.8s,mb4.8,baz=40,slow=6.2,SNR=13						
STKA	**Stephens Creek**	**35.94**	**240**	⇑*e*P	**P**	**14 18 33.9**	**+0.7**
STKA	**Stephens Creek**	**35.94**	**240**	*e*pP	**P**	**14 18 34.3**	**+1.1**
WRA	**Warramunga Arr**	**41.55**	**260**	P	**P**	**14 19 17.9**	**-1.0**
	3.2nm,0.7s,mb4.0,baz=88,slow=6.8,SNR=6.1						
MJAR	**Matsushiro Arr**	**65.99**	**325**	P	**P**	**14 22 11.2**	**-0.8**
	3.8nm,0.9s,mb4.0,baz=164,slow=7.2,SNR=4.2						
NVAR	**Mina Array Bea**	**81.56**	**45**	P	**P**	**14 23 40.4**	**+0.6**
	1.8nm,0.7s,mb3.6,baz=228,slow=9.5,SNR=12						
NVAR	**Mina Array Bea**	**81.56**	**45**	P	**P**	**14 23 40.4**	**+0.6**
MAW	**Mawson**	**82.88**	**200**	P	**P**	**14 23 46.7**	**+0.8**
	4.5nm,0.6s,mb4.2,baz=128,slow=5.8,SNR=9.2						
ILAR	**Eielson Array**	**86.52**	**14**	P	**P**	**14 24 02.5**	**-1.1**
	1.1nm,0.7s,mb3.6,baz=239,slow=5.7,SNR=5.9						
ANMO	**Albuquerque**	**88.51**	**53**	P	**P**	**14 24 12.3**	**-1.4**
	0.9nm,0.6s,mb3.8,baz=295,slow=6.5,SNR=3.1						
TXAR	**Lajitas Array**	**88.61**	**59**	P	**P**	**14 24 15.4**	**+1.1**
	2.1nm,0.8s,mb4.0,baz=228,slow=5.0,SNR=10						
PDAR	**Pinedale Array**	**89.46**	**45**	P	**P**	**14 24 18.1**	**+0.1**
	0.5nm,0.6s,mb3.5,baz=220,slow=0.9,SNR=5.2						
SNAA	**Sanae**	**90.75**	**180**	⇓*i*	**P**	**14 24 22.7**	**-0.5**
VNA3	**Neumayer Olymp**	**91.02**	**177**	⇓*i*	**P**	**14 24 25.4**	**+1.0**
VNA2	**Neumayer--Watz**	**91.42**	**178**		**P**	**14 24 27.2**	**+0.9**
ARCES	**ARCESS Array B**	**125.62**	**349**	PKP	PKPdf	14 30 17.0	0.0
	1.0nm,0.5s,baz=18,slow=3.8,SNR=4.5						
ARCES	**ARCESS Array B**	**125.62**	**349**	PKP	PKPdf	14 30 17.0	0.0
FINES	**FINESS Array B**	**132.18**	**342**	SKPbc		14 33 06.5	
	1.6nm,0.8s,baz=90,slow=1.9,SNR=3.4						
CLL	**Collm**	**144.58**	**344**	*e*PKIKP	PKPdf	14 30 54.0	+1.8
GERES	**GERESS Array B**	**146.60**	**341**	PKPbc	PKPbc	14 30 59.4	+1.7
	1.3nm,0.5s,baz=27,slow=2.9,SNR=3.9						

NIED ***29*** *14:18:00, 34.40N×129.30E, h8^{km}, Mw4.2 Best double couple: M$_0$1.96×10^{15} NP1:ϕ_s9°, δ67°, λ114°. NP2:ϕ_s140°, δ33°, λ46°.*

IDC ***29*** *14:18:02.2±0.8, 34.30N×129.15E, mb4.0/9, mb1 4.2/10, mb1mx4.0/23, mbtmp4.0/10, ML2.9/1, MS3.4/5, Ms1 3.4/5, ms1mx3.1/26, Error ellipse: s-maj=31.0km s-min=15.3km az=43.0*

JMA ***29*** *14:18:03.7, 34.43N×129.28E, h17^{km}±1^{km}, M4.6*

JMA Felt II J1.
*NEIC **29** 14:18:04.8±5.0, 34.35N×129.23E, h15^{km}±32^{km}, mb4.5/5, Error ellipse: s-maj=18.7km s-min=9.5km az=46.0*
*BJI **29** 14:18:04.4, 34.43N×129.10E, h10^{km}, mB4.4, mb4.1, Ms4.1, Msz3.9*
*KMA **29** 14:18:05.3, 34.50N×129.05E, ML4.0*
*MOS **29** 14:18:05.1±1.7, 34.33N×129.27E, h33^{km}, mb4.7/5, Error ellipse: s-maj=27.9km s-min=17.2km az=40.8*
ISC 29 14:18:02.9±0.9**, 34.38N**±0.03×**129.21E**±0.05**, h10**^{km}±6^{km}**, n48, σ0^{s}94**/52**, mb4.2**/13**, MS3.6**/5**, 4D, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTU	**Tsushima**	**0.21**	**46**	⇓P	**Pg**	**14 18 07.7**	**+0.2**
JTU				S	**Sg**	**14 18 10.2**	**-0.4**
JII	**Iki**	**0.72**	**143**	⇓P	**Pb**	**14 18 17.6**	**+0.5**
JII				S	**Sb**	**14 18 26.9**	**+0.2**
KSBUS	**Busan**	**0.87**	**355**	P	**Pb**	**14 18 19.7**	**+0.1**
KSBUS				S	**Sb**	**14 18 31.1**	**-0.1**
KSULS	**Ulsan**	**1.18**	**4**	P	**Pb**	**14 18 25.2**	**+0.3**
KSULS				S	**Sb**	**14 18 40.9**	**+0.9**
KSDAG	**Daegu**	**1.41**	**350**	P	**Pn**	**14 18 28.8**	**+0.1**
KSDAG				S	**Sb**	**14 18 47.4**	**+0.6**
JNU	**Nakatsue**	**1.87**	**132**	Pn	**Pn**	**14 18 35.1**	**-0.1**
	90nm,0.3s,baz=316,slow=10,SNR=256						
JNU				Sn	**Sn**	**14 19 01.1**	**+2.1**
	113nm,0.3s,baz=137,slow=33,SNR=11						
KSKWJ	**Gwangju**	**1.99**	**294**	P	**Pn**	**14 18 37.4**	**+0.5**
KSCPN	**Chupungnyeong**	**2.09**	**332**	P	**Pn**	**14 18 38.8**	**+0.4**
KSJEU	**Jeongeup**	**2.18**	**301**	P	**Pn**	**14 18 39.7**	**-0.1**
KSCHO	**Jeonju**	**2.22**	**311**	P	**Pn**	**14 18 39.9**	**-0.3**
KSULJ	**Uljin**	**2.33**	**4**	P	**Pn**	**14 18 41.4**	**-0.4**
KSMOP	**Mokpo**	**2.38**	**281**	P	**Pn**	**14 18 42.9**	**+0.4**
KSJJU	**Jeju**	**2.41**	**248**	P	**Pn**	**14 18 44.0**	**+1.0**
KSKUS	**Gunsan**	**2.54**	**311**	P	**Pn**	**14 18 45.1**	**+0.2**
KSCHJ	**Chungju**	**2.69**	**338**	P	**Pn**	**14 18 47.1**	**+0.2**
KS15	**Wonju Array Si**	**3.24**	**341**	*e*P	**Pn**	**14 18 53.9**	**-1.0**
INCN	**Inchon**	**3.74**	**327**	*e*P	**Pn**	**14 19 00.5**	**-1.4**
MJAR	**Matsushiro Arr**	**7.65**	**71**	Pn	**Pn**	**14 19 56.7**	**-0.4**
	0.2nm,0.3s,baz=253,slow=13,SNR=4.2						
ASAJ	**Asahikawa**	**14.20**	**43**	LR	LR	14 26 05.1	
	comp=Z,58nm,18.7s,baz=177,slow=34						
HIA	**Hailar**	**16.45**	**338**	P	**P**	**14 21 57.9**	**+2.7**
HIA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HIA	**Hailar**	**16.45**	**338**	P	**P**	**14 21 57.9**	**+2.7**
	comp=Z,2.0nm,0.4s						
XAN	**Xi'an**	**16.79**	**275**	P	**P**	**14 22 04.0**	**+4.4**
LZH	**Lanzhou**	**20.78**	**282**	*e*P	**P**	**14 22 48.0**	**+1.5**
LZH				AMB	AMB		
	comp=Z,40nm,1.5s						
LZH	**Lanzhou**	**20.78**	**282**	*e*P	**P**	**14 22 48.0**	**+1.5**
LZH				*PP		14 23 04.9	
LZH				*SP		14 23 10.8	
LZH				pmax	pmax		
	comp=Z,47nm,1.5s						
LZH	**Lanzhou**	**20.78**	**282**	*e*P	**P**	**14 22 48.0**	**+1.5**
	comp=Z,47nm,1.5s						
LZH				pP		14 23 04.9	
LZH				sP		14 23 10.8	
ULN	**Ulaanbaatar**	**21.36**	**316**	*e*P	**P**	**14 22 52.7**	**+0.4**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb3.9						
ULN	**Ulaanbaatar**	**21.36**	**316**	*e*P	**P**	**14 22 52.7**	**+0.4**
	comp=Z,7.1nm,1.1s,mb3.9						
CD2	**Chengdu**	**21.69**	**268**	*e*P	**P**	**14 22 56.0**	**+0.2**
SONM	**Songino Array**	**21.72**	**315**	P	**P**	**14 22 56.3**	**+0.3**
	comp=Z,4.1nm,0.9s,mb3.8,baz=126,slow=11,SNR=26						
SONM				LR	LR	14 31 01.6	
	comp=Z,44nm,18.7s,MS2.9,baz=76,slow=36						
GTA	**Gaotai**	**23.99**	**291**	*e*P	**P**	**14 23 19.8**	**+1.5**
GTA				AP		14 23 25.3	
GTA				XP		14 23 28.5	
GTA				AMB	AMB		
	comp=Z,70nm,4.6s						
GTA				LR	LR		
	comp=N,250nm,16.4s,MS3.9						
GTA				LR	LR		
	comp=E,180nm,12.2s,MS3.9						
GTA				LR	LR		
	comp=Z,240nm,12.2s,MS3.9						
ZAK	**Zakamensk**	**24.77**	**318**	*e*P	**P**	**14 23 26.0**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.0						
ZAL	**Zalesovo**	**36.62**	**316**	P	**P**	**14 25 10.0**	**-0.9**
	comp=Z,2.8nm,0.2s,mb4.7,baz=214,slow=4.2,SNR=5.3						
ZAL				LR	LR	14 41 39.8	
	comp=Z,93nm,18.8s,MS3.6,baz=181,slow=39						
MKAR	**Makanchi Array**	**37.20**	**304**	P	**P**	**14 25 15.1**	**-0.8**
	comp=Z,0.7nm,0.7s,mb3.6,baz=90,slow=12,SNR=5.5						
MKAR	**Makanchi Array**	**37.20**	**304**	P	**P**	**14 25 15.1**	**-0.8**
BVAR	**Borovoye Array**	**45.05**	**313**	P	**P**	**14 26 20.0**	**-0.3**
	comp=Z,3.8nm,0.7s,mb4.3,baz=90,slow=10,SNR=23						
ZRNK	**Zerenda**	**45.88**	**313**	*e*P	**P**	**14 26 26.4**	**-0.5**
ZRNK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
ZRNK	**Zerenda**	**45.88**	**313**	*e*P	**P**	**14 26 26.4**	**-0.5**
	comp=Z,12nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**54.23**	**174**	P	**P**	**14 27 29.1**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0						
WRAB	**Tennant Creek**	**54.23**	**174**	P	**P**	**14 27 29.1**	**-2.1**
	comp=Z,25nm,1.2s,mb5.0						
WRA	**Warramunga Arr**	**54.24**	**174**	P	**P**	**14 27 29.4**	**-1.8**
	comp=Z,4.5nm,0.9s,mb4.4,baz=351,slow=8.2,SNR=15						
FINES	**FINESS Array B**	**66.26**	**329**	P	**P**	**14 28 51.1**	**-1.8**
	comp=Z,0.4nm,0.4s,mb3.8,baz=45,slow=2.0,SNR=6.3						
FINES				LR	LR	15 00 42.4	
	comp=Z,36nm,18.6s,MS3.6,baz=54,slow=39						
STKA	**Stephens Creek**	**66.92**	**169**	*e*P	**P**	**14 28 57.7**	**+0.1**
YKA	**Yellowknife Ar**	**70.83**	**26**	P	**P**	**14 29 21.8**	**+0.6**
	comp=Z,1.1nm,0.8s,mb3.9,baz=316,slow=7.2,SNR=4.0						
HFS	**Hagfors**	**72.05**	**332**	LR	LR	15 05 56.2	
	comp=Z,48nm,18.0s,MS3.8,baz=152,slow=40						
NOA	**NORSAR Array B**	**72.42**	**333**	P	**P**	**14 29 28.9**	**-1.8**
	comp=Z,1.2nm,0.8s,mb3.9,baz=49,slow=5.9,SNR=4.1						
MOA	**Molln**	**79.60**	**322**	⇓*i*P	**P**	**14 30 11.5**	**0.0**
KBA	**Koelnbreinsper**	**80.58**	**321**	⇓*i*P	**P**	**14 30 13.4**	**-3.3**
PDAR	**Pinedale Array**	**86.31**	**39**	P	**P**	**14 30 46.6**	**+0.6**
	comp=Z,0.6nm,0.8s,mb3.9,baz=270,slow=3.0,SNR=5.0						

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*NIED **29** 14:24:00, 33.60N×132.10E, h56^{km}, Mw3.7 Best double couple: $M_0$3.53×10^{14} NP1:ϕ_s349°, δ78°, λ-101°. NP2: ϕ_s213°, δ16°, λ-47°.*
*JMA **29** 14:24:09.8, 33.58N×132.08E, h57^{km}, M3.5*
JMA Felt I J1.
ISC 29 14:24:09.0±1.3**, 33.60N**±0.05×**132.10E**±0.06**, h64**^{km}±10^{km}**, n9, σ0^{s}58**/17**, 4C-3D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNA	**Nagahama**	**0.32**	**97**	⇓P	**P**	**14 24 19.8**	**+0.1**
JNA				S	**S**	**14 24 27.2**	**-0.5**
JKI	**Kunimi**	**0.44**	**274**	⇑P	**P**	**14 24 20.8**	**0.0**
JKI				S	**S**	**14 24 28.9**	**-0.5**
JKD	**Kudamatsu**	**0.49**	**338**	⇓P	**P**	**14 24 21.5**	**+0.3**
JKD				S	**S**	**14 24 30.0**	**-0.2**
UWA2	**Uwa jima 2**	**0.58**	**131**	⇓P	**P**	**14 24 22.4**	**+0.1**
UWA2				S	**S**	**14 24 31.8**	**-0.2**
JHM	**Kurahashi**	**0.65**	**34**	⇑P	**P**	**14 24 23.5**	**+0.5**
JHM				S	**S**	**14 24 33.7**	**+0.3**
JET	**Tanbara**	**0.81**	**77**	⇑P	**P**	**14 24 25.5**	**+0.5**
JET				*e*S	**S**	**14 24 37.3**	**+0.4**
JKU	**Kubokawa**	**0.86**	**109**	⇑P	**P**	**14 24 25.7**	**+0.2**
JKU				S	**S**	**14 24 38.0**	**+0.2**
JTO	**Tosashimizu**	**0.94**	**141**	*e*S	**S**	**14 24 39.7**	**-0.1**
MAT	**Matsushiro**	**5.81**	**58**	P	**P**	**14 25 34.9**	**+0.5**
MAT				*e*S	**S**	**14 26 38.1**	**-2.4**

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*HLW **29** 14:30:08.9, 34.97N×24.77E, h33^{km}, Mb3.4*
*IDC **29** 14:30:09.8±2.8, 34.54N×24.82E, mb3.3/1, mb1 3.7/4, mb1mx3.4/24, mbtmp3.5/4, ML4.0/2, Error ellipse: s-maj=46.6km s-min=14.4km az=78.0*
*ATH **29** 14:30:12.8, 34.67N×24.70E, h20^{km}±2^{km}, MD3.6/9*
*CSEM **29** 14:30:12.0±0.1, 34.59N×24.70E, h30^{km}, MD3.6, Error ellipse: s-maj=2.6km s-min=1.8km az=65.0*
*NEIC **29** 14:30:12.8, 34.67N×24.70E, h20^{km}, MD3.6(ATH), After ATH.*
ISC 29 14:30:09.4±1.2**, 34.54N**±0.03×**24.76E**±0.05**, h9**^{km}±9^{km}**, n31, σ1^{s}43**/38**, mb3.3**/1**, 7C-1D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.63**	**299**	*e*PN	**Pn**	**14 30 23.5**	**-0.6**
IDI	**Anoyia**	**0.75**	**8**	Pg	**Pg**	**14 30 24.7**	**+0.2**
	168nm,0.3s,baz=195,slow=17,SNR=445						
IDI				Lg		14 30 34.3	
	306nm,0.3s,baz=308,slow=19,SNR=45						
XRY	**Khrisi**	**0.84**	**66**	*e*PN	**Pn**	**14 30 28.7**	**+1.5**
XRY				*e*SN	**Sn**	**14 30 40.9**	**+1.2**
VAM	**Vamos**	**0.98**	**332**	*e*PN	**Pn**	**14 30 29.3**	**+0.2**
VAM				*e*SN	**Sn**	**14 30 41.0**	**-2.1**
NPS	**Neapolis**	**1.01**	**44**	*e*PN	**Pn**	**14 30 31.8**	**+2.3**
NPS				*e*SN	**Sn**	**14 30 44.0**	**+0.1**
SANT	**Santorini**	**1.91**	**17**	*e*P	**Pn**	**14 30 43.0**	**+0.5**
SANT	**Santorini**	**1.91**	**17**	*e*P	**Pn**	**14 30 43.0**	**+0.5**
KARP	**Karpathos**	**2.21**	**62**	*e*PB	**Pb**	**14 30 49.9**	**+0.7**
KYTH	**Kithira**	**2.23**	**322**	*e*PB	**Pb**	**14 30 49.0**	**-0.5**
APE	**Apeiranthos**	**2.60**	**14**	*e*PN	**Pn**	**14 30 54.5**	**+2.2**
VLI	**Veliai**	**2.63**	**326**	*e*PB	**Pb**	**14 30 55.2**	**-1.1**
SLUM		**3.06**	**173**	⇑P	**Pn**	**14 31 00.7**	**+1.7**
SLUM				S	**Sn**	**14 31 38.6**	**+2.5**
ITM	**Ithomi**	**3.50**	**320**	*e*PN	**Pn**	**14 31 08.3**	**+3.3**
HMAT	**Matruh**	**3.96**	**150**	⇓P	**Pn**	**14 31 13.1**	**+1.4**
SWA2		**5.32**	**173**	⇑P	**Pn**	**14 31 31.9**	**+1.0**
SWA1		**5.32**	**171**	⇑P	**Pn**	**14 31 32.4**	**+1.4**
SWA1				S	**Sn**	**14 32 33.0**	**-0.2**
SWA1		**5.32**	**171**	P	**Pn**	**14 31 32.3**	**+1.3**
SWA1				S	**Sn**	**14 32 33.0**	**-0.2**
HBRG	**Burj al 'Arab**	**5.83**	**131**	⇑P	**Pn**	**14 31 37.4**	**-0.8**
HFRF	**Wahat Farafira**	**7.98**	**157**	P	**Pn**	**14 32 07.9**	**-0.3**
AMAG	**Maghara**	**8.12**	**116**	P	**P**	**14 32 07.6**	**-2.7**
SUZ		**8.29**	**122**	⇑P	**P**	**14 32 10.7**	**-2.0**
ZAF		**8.45**	**126**	P	**P**	**14 32 13.1**	**-1.7**
ZNM		**8.61**	**125**	⇑P	**P**	**14 32 15.3**	**-1.7**
BRTR	**Keskin Array B**	**8.78**	**51**	Pn	**P**	**14 32 19.3**	**-0.1**
	0.1nm,0.3s,baz=230,slow=11,SNR=2.3						
BRTR	**Keskin Array B**	**8.78**	**51**	Pn	**P**	**14 32 19.4**	**0.0**
HNKL	**Nakhl**	**9.06**	**118**	⇑P	**P**	**14 32 21.2**	**-2.1**
EIL	**Elat**	**9.91**	**117**	Pn	**P**	**14 32 32.6**	**-2.5**
	0.8nm,0.3s,baz=280,slow=20,SNR=12						
EIL				Sn	**Sn**	**14 34 18.5**	**-9.1**
	0.9nm,0.3s,baz=61,slow=19,SNR=3.3						
EIL	**Elat**	**9.91**	**117**	Sn	**Sn**	**14 34 18.5**	**-9.1**
AKASG	**Malin Array Be**	**16.48**	**10**	Pn	**P**	**14 34 00.7**	**-1.4**
	0.8nm,0.3s,baz=200,slow=11,SNR=5.0						
GERES	**GERESS Array B**	**16.48**	**333**	Pn	**P**	**14 34 03.8**	**+1.6**
	baz=144,slow=13,SNR=5.9						
MKAR	**Makanchi Array**	**44.39**	**56**	P	**P**	**14 38 21.1**	**-0.6**
	0.2nm,0.3s,mb3.3,baz=267,slow=8.3,SNR=4.2						

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*PGC **29** 14:37:14.1, 46.66N×120.61W, h10^{km}, ML3.1/22, MD3.5(SEA), Near Yakima, Washington.*
*PNSN **29** 14:37:14.1, 46.66N×120.61W, h10^{km}, MD3.5, Fault plane solution: NP1:ϕ_s160°, δ70°, NP2:ϕ_s7°, δ22°, Principal axes: T Plg64°, Azm54°; P Plg24°, Azm258°;*
*NEIC **29** 14:37:14.1, 46.66N×120.61W, h10^{km}, MD3.5(SEA), After SEA.*
ISC 29 14:37:13.3±0.2**, 46.74N**±0.02×**120.60W**±0.03**, h10**^{km}**, n95, σ1^{s}48**/110**, 9C-18D, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAC	**Naches**	**0.16**	**267**	⇓P	**Pg**	**14 37 18.5**	**+1.6**
EBG	**Ellensburg**	**0.17**	**7**	⇓P	**Pg**	**14 37 19.9**	**+2.8**
MXC	**Moxie City**	**0.27**	**128**	⇓P	**Pg**	**14 37 19.1**	**+0.1**
TBM	**Table Mountain**	**0.43**	**360**	⇑P	**Pg**	**14 37 24.6**	**+2.6**
TWW	**Teanaway**	**0.44**	**335**	P	**Pg**	**14 37 24.6**	**+2.4**
BRVW	**Black Rock Val**	**0.49**	**122**	⇓P	**Pg**	**14 37 22.0**	**-1.3**
BVW	**Beverly**	**0.49**	**82**	⇓P	**Pg**	**14 37 24.5**	**+1.1**
LTY	**Liberty**	**0.52**	**354**	⇑P	**Pg**	**14 37 25.6**	**+1.8**
MDW	**Midway**	**0.59**	**103**	⇓P	**Pb**	**14 37 25.6**	**+0.3**
BENWA	**Benson Ranch**	**0.65**	**110**	⇓P	**Pb**	**14 37 26.3**	**+0.1**
WPW	**White Pass**	**0.66**	**266**	⇑P	**Pb**	**14 37 26.4**	**0.0**
GBB	**Gable Butte**	**0.68**	**101**	⇓P	**Pb**	**14 37 27.3**	**+0.5**
SNIWA	**Snively Ranch**	**0.70**	**113**	⇓P	**Pb**	**14 37 27.3**	**+0.1**
WAH2	**Wahluke Slope**	**0.71**	**89**	P	**Pb**	**14 37 28.2**	**+0.9**
RSW	**Rattlesnake Hi**	**0.78**	**116**	⇓P	**Pb**	**14 37 28.6**	**+0.1**
FHE	**Frenchman Hill**	**0.78**	**74**	P	**Pb**	**14 37 30.0**	**+1.4**
RCM	**Mount Rainier-**	**0.79**	**277**	P	**Pb**	**14 37 29.3**	**+0.7**
GBL	**Gable Mountain**	**0.80**	**100**	P	**Pb**	**14 37 29.5**	**+0.7**
GL2	**New Goldendale**	**0.80**	**191**	P	**Pb**	**14 37 27.1**	**-1.8**
LOCW	**Locke Island**	**0.80**	**91**	⇑P	**Pb**	**14 37 29.9**	**+1.0**
PRW	**Prosser**	**0.82**	**130**	⇓P	**Pb**	**14 37 29.0**	**-0.3**
CRF	**Corfu**	**0.83**	**84**	P	**Pb**	**14 37 30.4**	**+1.0**
MJ2	**May Junction 2**	**0.87**	**102**	P	**Pb**	**14 37 30.8**	**+0.7**
ETW	**Entiat**	**0.88**	**12**	⇓P	**Pb**	**14 37 32.0**	**+1.8**
H2OWA	**Water**	**0.88**	**113**	⇓P	**Pb**	**14 37 30.4**	**+0.1**
ASR	**Mount Adams--S**	**0.91**	**230**	⇓P	**Pb**	**14 37 30.6**	**-0.1**
REDWA	**Red Mountain**	**0.92**	**119**	⇓P	**Pb**	**14 37 30.7**	**-0.1**
EPH	**Ephrata**	**0.92**	**48**	P	**Pb**	**14 37 32.5**	**+1.7**
OT3	**Othello 3**	**0.94**	**94**	P	**Pb**	**14 37 32.2**	**+0.9**
WIW	**Wooded Island**	**0.96**	**109**	P	**Pb**	**14 37 32.0**	**+0.4**
RVC	**Mount Rainier-**	**0.96**	**282**	P	**Pb**	**14 37 32.8**	**+1.1**
WRD	**Warden**	**1.00**	**86**	⇑P	**Pb**	**14 37 33.6**	**+1.3**
SLFW	**Sugar Loaf**	**1.02**	**3**	⇓P	**Pb**	**14 37 34.4**	**+1.8**
PATW	**Paterson**	**1.04**	**146**	P	**Pb**	**14 37 32.4**	**-0.6**
WTV	**Waterville**	**1.05**	**24**	⇑P	**Pb**	**14 37 35.3**	**+2.1**
GULW	**Guler Mountain**	**1.07**	**221**	P	**Pb**	**14 37 33.3**	**-0.2**
RMW	**Rattlesnake Mo**	**1.09**	**311**	P	**Pb**	**14 37 35.2**	**+1.4**
ET3	**Eltopia**	**1.16**	**98**	P	**Pb**	**14 37 35.2**	**+0.3**
LMW	**Ladd Mountain**	**1.17**	**267**	P	**Pb**	**14 37 36.6**	**+1.5**
SOSW	**Source of Smit**	**1.18**	**245**	P	**Pb**	**14 37 35.4**	**+0.1**
CDFW	**Cedar Flats**	**1.18**	**238**	P	**Pb**	**14 37 35.2**	**-0.2**
TDL	**Tradedollar La**	**1.19**	**251**	P	**Pb**	**14 37 35.4**	**-0.1**
VGB	**Gordon Butte**	**1.23**	**186**	⇓P	**Pb**	**14 37 34.8**	**-1.5**
HTW	**Haystack Looko**	**1.33**	**323**	P	**Pb**	**14 37 39.8**	**+1.9**
FL2	**Flat Top 2**	**1.33**	**246**	P	**Pb**	**14 37 37.8**	**-0.1**
NLW	**Nelson Butte**	**1.35**	**7**	P	**Pb**	**14 37 39.6**	**+1.4**
DHW2	**Dyer Hill 2**	**1.36**	**24**	P	**Pb**	**14 37 39.5**	**+1.0**
JBO	**Jordan Butte**	**1.39**	**157**	P	**Pn**	**14 37 37.3**	**-1.5**
LVP	**Lakeview Peak**	**1.42**	**242**	P	**Pn**	**14 37 39.1**	**-0.2**
OD2	**Odessa Site #2**	**1.44**	**63**	⇑P	**Pn**	**14 37 39.9**	**+0.3**
LCW	**Lucas Creek**	**1.45**	**268**	P	**Pn**	**14 37 40.6**	**+0.8**
VFP	**Flag Point**	**1.55**	**203**	P	**Pn**	**14 37 40.2**	**-1.0**
VTHM	**Trough**	**1.56**	**179**	P	**Pn**	**14 37 40.3**	**-1.1**
VLMM	**Larch Mountain**	**1.57**	**220**	P	**Pn**	**14 37 41.2**	**-0.2**
JCW	**Jim Creek**	**1.71**	**329**	⇑P	**Pn**	**14 37 45.6**	**+2.1**
CPW	**Capitol Peak**	**1.76**	**278**	P	**Pn**	**14 37 45.9**	**+1.8**
CROR	**Criterion Ridg**	**1.78**	**189**	⇓P	**Pn**	**14 37 43.5**	**-1.0**
RPW	**Rockport**	**1.81**	**340**	P	**Pn**	**14 37 48.1**	**+3.2**
LNOR	**Lincton Mounta**	**1.82**	**118**	P	**Pn**	**14 37 45.4**	**+0.3**
DPW	**Davenport**	**1.98**	**54**	⇑P	**Pn**	**14 37 47.8**	**+0.5**
VGZ	**Gonzales**	**2.49**	**313**	Pg	**Pg**	**14 37 58.9**	**-4.2**
VGZ				Sg	**Sg**	**14 38 30.1**	**-6.2**
VGZ				Trac		14 38 35.9	
	comp=Z,24nm,0.4s						
VDB	**Vedder Mountai**	**2.50**	**337**	P	**Pn**	**14 37 57.1**	**+2.4**
VDB				Pg	**Pg**	**14 38 00.3**	**-3.0**
VDB				Sg	**Sg**	**14 38 33.0**	**-3.6**
VDB				Trac		14 38 37.0	
	comp=Z,28nm,0.4s						
OCWA	**Octopus Mounta**	**2.64**	**294**	*e*Pn	**Pn**	**14 37 57.3**	**+0.6**
PNT	**Penticton**	**2.66**	**14**	P	**Pn**	**14 37 58.0**	**+1.0**
PNT				Pg	**Pg**	**14 38 05.4**	**-1.0**
PNT				Sg	**Sg**	**14 38 39.2**	**-2.6**
PNT				Trac		14 38 49.6	
	comp=Z,170nm,0.5s						
SNB	**Saturna Island**	**2.67**	**320**	P	**Pn**	**14 37 58.9**	**+1.6**
SNB				Sg	**Sg**	**14 38 35.9**	**-6.5**
SNB				Trac		14 38 41.5	
	comp=Z,58nm,0.8s						
HOPB	**Hope**	**2.70**	**349**	Pg	**Pg**	**14 38 04.1**	**-3.2**
HOPB				Sg	**Sg**	**14 38 40.4**	**-3.0**
HOPB				Trac		14 38 41.3	
	comp=Z,96nm,0.5s						
PGC	**Sidney**	**2.71**	**316**	*e*Pn	**Pn**	**14 37 59.5**	**+1.7**
PGC	**Sidney**	**2.71**	**316**	Pg	**Pg**	**14 38 00.5**	**-7.0**
PGC				Sg	**Sg**	**14 38 35.9**	**-7.8**
PGC				Trac		14 38 41.3	
	comp=Z,37nm,0.6s						
NEW	**Newport**	**2.80**	**56**	*e*P	**Pn**	**14 37 58.5**	**-0.6**
HNB	**Haney**	**2.86**	**333**	P	**Pn**	**14 38 02.0**	**+2.1**
HNB				Sg	**Sg**	**14 38 40.9**	**-7.7**
HNB				Trac		14 38 44.0	
	comp=Z,38nm,0.5s						
LZB	**Mount Lazard**	**2.87**	**312**	P	**Pn**	**14 38 01.2**	**+1.1**
LZB				Trac		14 38 49.2	
	comp=Z,6.1nm,0.6s						
GOBB	**Galiano Island**	**2.95**	**319**	P	**Pn**	**14 37 59.8**	**-1.4**
GOBB				Sg	**Sg**	**14 38 44.4**	**-7.3**
GOBB				Trac		14 38 51.5	
	comp=Z,14nm,0.4s						
BMO	**Blue Mountains**	**2.98**	**128**	*e*Pn	**Pn**	**14 38 00.1**	**-1.5**
PFB	**Port Renfrew**	**3.18**	**307**	Pg	**Pg**	**14 38 10.1**	**-6.7**
BIB	**Bowen Island**	**3.22**	**327**	P	**Pn**	**14 38 07.4**	**+2.3**
BIB				Trac		14 38 55.1	
	comp=Z,8.0nm,0.4s						
NLLB	**Nanaimo Lost L**	**3.37**	**319**	Pg	**Pg**	**14 38 15.6**	**-5.0**
NLLB				Trac		14 39 07.2	
	comp=Z,13nm,0.5s						
WPB	**Watts Point**	**3.40**	**330**	Pg	**Pg**	**14 38 16.2**	**-5.0**
WPB				Sg	**Sg**	**14 38 58.4**	**-8.1**
WPB				Trac		14 39 05.0	
	comp=Z,27nm,0.6s						
MGB	**Mount Grey**	**3.56**	**311**	Pg	**Pg**	**14 38 15.3**	**-9.1**
MGB				Sg	**Sg**	**14 39 02.3**	**-10**
MGB				Trac		14 39 10.3	
	comp=Z,9.0nm,0.4s						
SHB	**Sechelt**	**3.60**	**324**	Trac		14 39 12.8	
	comp=Z,23nm,0.5s						
SHB	**Sechelt**	**3.60**	**324**	Sg	**Sg**	**14 39 03.7**	**-10**
WSLR	**Whistler**	**3.72**	**336**	Trac		14 39 33.5	
	comp=Z,19nm,0.6s						
TXB	**Texada**	**3.91**	**320**	Pg	**Pg**	**14 38 23.3**	**-8.2**
TXB				Sg	**Sg**	**14 39 13.7**	**-10**
TXB				Trac		14 39 24.9	
	comp=Z,49nm,1.0s						
LLLB	**Lillooet**	**3.96**	**348**	P	**Pn**	**14 38 19.0**	**+3.4**
LLLB				Sg	**Sg**	**14 39 18.0**	**-7.2**
LLLB				Trac		14 39 22.3	
	comp=Z,13nm,0.5s						
OZB	**Mount Ozzard**	**3.97**	**306**	Trac		14 39 22.9	
	comp=Z,9.0nm,0.6s						
OZB	**Mount Ozzard**	**3.97**	**306**	Sg	**Sg**	**14 39 14.7**	**-11**
BTB	**Buttle Lake**	**4.28**	**311**	Sg	**Sg**	**14 39 26.8**	**-9.0**
BTB				Trac		14 39 40.2	
	comp=Z,8.0nm,0.4s						
WVOR	**Wild Horse Val**	**4.53**	**161**	Pn	**Pn**	**14 38 22.6**	**-1.1**
SLEB	**Sale Mountain**	**4.71**	**19**	P	**Pn**	**14 38 27.8**	**+1.5**
SLEB				Sn	**Sn**	**14 39 20.9**	**-0.8**
SLEB				Sg	**Sg**	**14 39 44.7**	**-5.6**
SLEB				Trac		14 39 48.5	
	comp=Z,35nm,0.6s						
DOWB	**Downie Slide**	**4.97**	**15**	Sg	**Sg**	**14 39 51.0**	**-7.8**
CHMT	**Chamberlain Mo**	**5.04**	**85**	*e*Pn	**Pn**	**14 38 29.1**	**-1.8**
WALA	**Waterton Lakes**	**5.06**	**60**	P	**Pn**	**14 38 30.9**	**-0.1**
WALA				Sn	**Sn**	**14 39 27.4**	**-2.9**
WALA				Sg	**Sg**	**14 39 53.5**	**-8.2**
WALA				Trac		14 40 07.2	
	comp=Z,23nm,0.6s						
NCRB	**Newcastle Ridg**	**5.15**	**317**	Sg	**Sg**	**14 39 55.8**	**-9.0**
NCRB				Trac		14 40 05.9	
	comp=Z,3.0nm,0.5s						
MNB	**Mounoet Dainar**	**5.65**	**14**	Sg	**Sg**	**14 40 11.1**	**-10**
MCMT	**McKenzie Canyo**	**5.75**	**107**	Pn	**Pn**	**14 38 39.2**	**-1.6**
BOZ	**Bozeman (W)**	**6.32**	**97**	*e*Pn	**Pn**	**14 38 46.3**	**-2.7**

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*NEIC **29** 14:50:31.2, 19.15N×65.46W, h76^{km}, MD3.5(RSPR), After RSPR.*
RSPR 29 14:50:31.2, 19.15N×65.46W, h76^{km}±10^{km}**, MD3.5**/9**, MD3.5**/9**, 8C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	**Canovanas**	**0.95**	**203**	⇑*e*P	P	14 50 48.1	-1.5
CBYP				*e*S	S	14 51 02.5	-0.9
MTP	**Monte Pirata**	**1.05**	**185**	⇑*e*P	P	14 50 50.7	-0.2
MTP				*e*S	S	14 51 04.6	-1.0
CPD	**Cerro la Pandu**	**1.18**	**201**	⇑*e*P	P	14 50 51.9	-0.7
CPD				*e*S	S	14 51 07.4	-1.2
SJG	**San Juan**	**1.22**	**212**	⇑*e*P	P	14 50 51.9	-1.1
SJG	**San Juan**	**1.22**	**212**	⇑*e*P	P	14 50 51.9	-1.1
SJG				*e*S	S	14 51 08.6	-0.8
PORP	**Portuguez**	**1.55**	**226**	⇑*e*P	P	14 50 56.8	-0.8
PORP				*e*S	S	14 51 16.4	-0.7
ICM	**Isla Caja Muer**	**1.60**	**219**	⇑*e*P	P	14 50 57.4	-0.8
ICM				*e*S	S	14 51 16.7	-1.4
LSP	**Las Mesas**	**1.81**	**238**	⇑*e*P	P	14 50 59.6	-1.5
LSP				*e*S	S	14 51 22.8	-0.3
CRPR	**Cabo Rojo, PR**	**1.93**	**234**	⇓*e*P	P	14 51 01.2	-1.5
CRPR				*e*S	S	14 51 24.9	-0.8

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*IDC **29** 15:04:40.8±1.8, 64.07N×28.81E, mb1 2.7/3, mb1mx2.7/21, mbtmp2.6/3, ML2.4/3, Error ellipse: s-maj=30.6km s-min=8.6km az=99.0*
*HEL **29** 15:04:41.9±0.4, 64.14N×27.94E, ML1.5, Explosion*
ISC 29 15:04:40.1±1.1**, 64.23N**±0.03×**28.0E**±0.2**, n8, σ1^{s}06**/16**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KJN	**Kajaani**	**0.18**	**218**	*e*P	**Pg**	**15 04 43.6**	**-0.1**
KJN				*e*S	**Sg**	**15 04 46.0**	**-0.1**
OUL	**Oulu**	**1.24**	**315**	*e*P	**Pb**	**15 05 05.5**	**+1.5**
OUL				*e*S	**Sb**	**15 05 21.0**	**+0.5**
SUF	**Sumiainen**	**1.72**	**209**	*e*P	**Pn**	**15 05 10.6**	**-0.9**
SUF				*e*S	**Sb**	**15 05 32.3**	**-2.2**
KAF	**Kangasniemi**	**2.25**	**200**	*e*P	**Pn**	**15 05 19.2**	**+0.1**
KAF				*e*SG	**Sg**	**15 05 48.2**	**-6.9**
KAF				MSG		15 05 49.4	
	comp=Z,2.0nm,0.2s						
KEF	**Keuruu**	**2.50**	**216**	*e*P	**Pn**	**15 05 23.7**	**+1.0**
KEF				*e*SG	**Sg**	**15 05 55.9**	**-7.4**
FINES	**FINESS Array B**	**2.93**	**198**	Pn	**Pn**	**15 05 29.6**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=21,slow=15,SNR=7.5						
FINES				Sn	**Sn**	**15 06 06.3**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=24,slow=25,SNR=15						
ARCES	**ARCESS Array B**	**5.42**	**351**	Pn	**Pn**	**15 06 04.3**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=164,slow=15,SNR=17						
ARCES				Pg	**Pg**	**15 06 19.2**	**-9.0**
	comp=Z,0.2nm,0.3s,baz=167,slow=16,SNR=4.9						
ARCES				Sn	**Sn**	**15 07 06.0**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=172,slow=24,SNR=5.0						
ARCES				Lg		15 07 37.9	
	comp=Z,0.3nm,0.3s,baz=169,slow=25,SNR=8.2						
NOA	**NORSAR Array B**	**8.35**	**255**	Pn	**P**	**15 06 44.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=174,slow=8.5,SNR=2.2						

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*JMA **29** 15:05:03.7±0.1, 34.45N×136.06E, h391^{km}±2^{km}, M3.4*
*NEIC **29** 15:05:03.5±0.4, 34.37N×136.17E, h393^{km}±4^{km}, mb3.9/2, Error ellipse: s-maj=11.4km s-min=8.0km az=114.0*
*IDC **29** 15:05:03.9±0.6, 34.45N×136.11E, h392^{km}±9^{km}, mb3.1/9, mb1 3.2/14, mb1mx3.1/27, mbtmp4.0/14, Error ellipse: s-maj=18.0km s-min=11.9km az=78.0*
ISC 29 15:05:02.8±0.4**, 34.42N**±0.06×**136.08E**±0.07**, h395**^{km}±3^{km}**, n38, σ0^{s}59**/53**, mb3.5**/11**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSUJ	**Tsu 2**	**0.41**	**44**	P	**P**	**15 05 52.6**	**+0.5**
TSUJ				S	**S**	**15 06 30.4**	**-0.5**
JWY	**Kouya**	**0.45**	**244**	P	**P**	**15 05 52.8**	**+0.6**
JWY				S	**S**	**15 06 30.4**	**-0.6**
JIE	**Ise**	**0.52**	**93**	P	**P**	**15 05 52.9**	**+0.6**
JIE				S	**S**	**15 06 31.1**	**-0.1**
JWZ	**Kozaga**	**0.94**	**199**	P	**P**	**15 05 53.6**	**+0.2**
JWZ				*e*S	**S**	**15 06 33.2**	**+0.1**
JWT	**Wachi**	**1.02**	**327**	P	**P**	**15 05 53.9**	**+0.2**
JWT				S	**S**	**15 06 32.7**	**-0.9**
JGM	**Miyama**	**1.38**	**22**	P	**P**	**15 05 55.7**	**+0.4**
JGM				S	**S**	**15 06 36.6**	**+0.2**
JAI	**Aioi**	**1.49**	**246**	P	**P**	**15 05 56.1**	**+0.3**
JAI				S	**S**	**15 06 36.5**	**-0.8**
JKG	**Kaga**	**1.86**	**6**	P	**P**	**15 05 57.9**	**0.0**
JKG				S	**S**	**15 06 40.5**	**-0.5**
JMN	**Monobe**	**1.95**	**250**	P	**P**	**15 05 58.8**	**+0.4**
JYN	**Shimob**	**2.29**	**61**	P	**P**	**15 06 00.6**	**-0.1**
JHS	**Saijyo**	**2.51**	**284**	P	**P**	**15 06 02.6**	**+0.4**
JOD2	**Odawara 2**	**2.62**	**70**	P	**P**	**15 06 03.6**	**+0.6**
MAJO	**Matsushiro**	**2.74**	**39**	*e*P	**P**	**15 06 03.7**	**-0.2**
MAT	**Matsushiro**	**2.74**	**39**	*e*P	**P**	**15 06 04.0**	**+0.1**
MAT				*e*S	**S**	**15 06 51.0**	**-1.0**
MAT	**Matsushiro**	**2.74**	**39**	P	**P**	**15 06 03.8**	**-0.1**
MAT				S	**S**	**15 06 51.0**	**-1.0**
MAT	**Matsushiro**	**2.74**	**39**	P	**P**	**15 06 03.8**	**-0.1**
MAT				*e*S	**S**	**15 06 51.6**	**-0.4**
MJAR	**Matsushiro Arr**	**2.74**	**39**	P	**P**	**15 06 04.0**	**+0.1**
	11nm,0.3s,baz=213,slow=9.1,SNR=119						

MJAR				S	S	15 06 51.5	-0.5
	0.6nm,0.3s,baz=238,slow=33,SNR=6.8						
JIM2	Oshima 3	2.78	83	P	P	15 06 04.3	0.0
JRY	Ryogami san	2.81	55	P	P	15 06 04.5	+0.1
JRY				*e*S	S	15 06 54.0	+1.1
JHJ	Hachijo jima 2	3.35	112	P	P	15 06 09.6	+0.5
	19nm,0.3s,baz=112,slow=9.7,SNR=17						
JHJ				S	S	15 07 05.3	+4.3
	12nm,0.3s,baz=56,slow=23,SNR=6.7						
JHJ2	Mitsune	3.38	112	P	P	15 06 09.7	+0.4
JNU	Nakatsue	4.52	255	P	P	15 06 20.7	+0.5
	3.0nm,0.3s,baz=63,slow=11,SNR=20						
CBIJ	Chichi jima	8.99	143	P	P	15 07 05.3	-4.7
	8.6nm,0.3s,baz=259,slow=20,SNR=7.5						
CBIJ				S	S	15 08 43.5	-7.0
	26nm,0.3s,baz=293,slow=22,SNR=13						
JOW	Kunigami	10.11	224	P	P	15 07 23.2	+0.1
	1.0nm,0.3s,baz=69,slow=9.2,SNR=4.8						
ASAJ	Asahikawa	10.92	26	P	P	15 07 31.6	-1.1
	0.8nm,0.3s,baz=322,slow=17,SNR=5.1						
ENH	Enshi	22.82	267	*e*P	P	15 09 34.2	-0.3
	7.3nm,0.6s,mb4.3						
SONM	Songino Array	25.88	310	P	P	15 10 03.2	+1.2
	1.7nm,0.9s,mb3.5,baz=121,slow=7.2,SNR=8.0						
CMAR	Chiang Mai Arr	36.62	254	P	P	15 11 34.9	+0.2
	0.3nm,0.5s,mb2.9,baz=48,slow=6.6,SNR=5.5						
MKAR	Makanchi Array	41.89	304	P	P	15 12 18.1	+0.7
	1.4nm,0.6s,mb3.5,baz=88,slow=11,SNR=13						
BVAR	Borovoye Array	49.16	313	P	P	15 13 13.6	-0.4
	0.7nm,0.3s,mb3.5,baz=110,slow=8.1,SNR=8.5						
ZRNK	Zerenda	50.00	313	*e*P	P	15 13 19.9	-0.4
	1.2nm,0.4s,mb3.6						
WB2	Warramunga Arr	54.08	182	*e*P	P	15 13 49.2	-1.5
WRA	Warramunga Arr	54.08	182	P	P	15 13 49.2	-1.4
	0.8nm,0.3s,mb3.5,slow=7.6,SNR=61						
ARCES	ARCESS Array B	64.88	339	P	P	15 15 02.2	-0.2
	1.8nm,0.7s,mb3.8,baz=67,slow=9.2,SNR=4.5						
ARCES	ARCESS Array B	64.88	339	P	P	15 15 02.2	-0.2
FINES	FINESS Array B	69.05	331	P	P	15 15 28.1	-0.1
	0.2nm,0.4s,mb3.1,baz=53,slow=6.9,SNR=3.5						
BRTR	Keskin Array B	77.24	309	P	P	15 16 16.2	+0.4
	0.8nm,0.7s,mb3.4,baz=117,slow=5.5,SNR=4.2						
GERES	GERESS Array B	82.53	326	P	P	15 16 43.8	+0.5
	0.4nm,0.5s,mb3.5,baz=45,slow=7.5,SNR=4.2						

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*IDC **29** 15:29:38.7±8.2, 5.80S×128.75E, h281^{km}±88^{km}, mb3.3/2, mb1 3.7/4, mb1mx3.2/14, mbtmp4.3/4, Error ellipse: s-maj=71.5km s-min=28.3km az=58.0*

ISC 29 15:29:36.4±2.1, **5.7S**±0.1×**129.0E**±0.2, **h274**^{km}±23^{km}, **n7**, σ**1**^{s}**12**/12, **mb3.4**/2, **1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	7.75	154	*e*P	P	15 31 29.6	+2.1
	9.9nm,0.6s						
KAKA				*e*S	S	15 32 52.1	-2.5
FITZ	Fitzroy Crossi	12.73	194	*e*P	P	15 32 28.3	-1.2
	11nm,0.7s						
FITZ				*e*S	S	15 34 46.1	-0.3
FITZ	Fitzroy Crossi	12.73	194	P	P	15 32 28.2	-1.3
	2.5nm,0.3s,baz=24,slow=8.2,SNR=23						
FITZ				S	S	15 34 48.2	+1.8
	0.6nm,0.3s,baz=162,slow=17,SNR=3.2						
WRA	Warramunga Arr	15.08	160	P	P	15 32 58.4	+0.2
	1.4nm,0.3s,baz=340,slow=11,SNR=90						
WRA				S	S	15 35 38.7	+0.4
	0.4nm,0.3s,baz=343,slow=21,SNR=9.3						
WB2	Warramunga Arr	15.08	160	⇓*i*P	P	15 32 58.5	+0.3
WB2				*i* S	S	15 35 37.9	-0.5
STKA	Stephens Creek	28.59	157	P	P	15 35 10.1	+0.3
	5.6nm,1.1s,mb3.9,baz=315,slow=11,SNR=4.7						
MKAR	Makanchi Array	66.59	327	P	P	15 39 58.6	-0.6
	0.1nm,0.4s,mb2.9,baz=111,slow=12,SNR=3.5						

WEL 29 15:30:25.9±1.1, **34.88S**×**178.34E, h33**^{km}, **ML3.8**/3, **Error ellipse: s-maj=17.8km s-min=7.1km az=90.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.68	181	*e*PN	Pn	15 31 06.9	-0.8
MXZ				SN	Sn	15 31 36.3	-3.1
MWZ	Matawai	3.51	191	PN	Pn	15 31 17.3	-2.2
MWZ				SN	Sn	15 31 56.9	-3.5
URZ	Urewera	3.52	196	PN	Pn	15 31 17.9	-1.8
URZ				SN	Sn	15 31 58.4	-2.1

IDC 29 16:20:02.1±4.3, **7.85N**×**91.98E, mb3.6**/4, **mb1 3.8**/4, **mb1mx3.6**/19, **mbtmp3.6**/4, **Error ellipse: s-maj=163.3km s-min=25.7km az=63.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	39.68	350	P	P	16 27 35.8	-1.8
	0.3nm,0.7s,baz=174,slow=7.7,SNR=4.6						
SONM	Songino Array	41.69	15	P	P	16 27 52.6	-1.5
	0.4nm,0.7s,baz=202,slow=7.8,SNR=3.6						
FITZ	Fitzroy Crossi	42.06	128	P	P	16 27 56.2	-1.4
	5.6nm,1.0s,baz=195,slow=6.7,SNR=4.0						
WRA	Warramunga Arr	50.01	124	P	P	16 28 58.4	-2.3
	0.4nm,0.6s,baz=302,slow=9.2,SNR=9.8						

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*NEIC **29** 16:25:56.0, 18.92N×95.82W, h16^{km}, MD3.9(MEX), After MEX.*

MEX 29 16:25:56.2±1.2, **18.92N**×**95.83W, h16**^{km}±12^{km}, **MD3.9, Veracruz**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVV	El Vigia	0.65	136	*i* P	Pb	16 26 07.5	-1.1
EVV				*i* S	Sb	16 26 14.0	-3.2
LVIG	Laguna Verde	0.97	325	*e*P	Pb	16 26 10.8	-3.4
LVIG				*e*S	Sb	16 26 22.8	-3.8
IISM	Ciudad Serdan	1.47	273	*i* P	Pn	16 26 18.8	-3.4
IISM				*i* S	Sb	16 26 35.5	-5.5
OXX	Oaxaca	2.02	205	*i* P	Pn	16 26 26.8	-3.3
OXX				*i* S	Sn	16 26 49.5	-5.7
CMIG	Matias Romero	2.03	154	*i* P	Pn	16 26 26.2	-4.0
CMIG				*e*S	Sn	16 26 48.3	-7.1
VHO	Vista Hermosa	2.03	205	*e*P	Pn	16 26 26.9	-3.4
VHO				*e*S	Sn	16 26 49.8	-5.8
PPM	Popocatepetl	2.66	274	*e*P	Pn	16 26 37.7	-1.5
PPM				*i* P		16 26 38.0	
PPM				*e*S	Sn	16 27 06.3	-5.0

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*IDC **29** 16:59:15.6±1.5, 9.50N×125.58E, mb3.7/3, mb1 3.9/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=95.1km s-min=32.6km az=68.0*

*MAN **29** 16:59:16.5, 9.29N×125.48E, h2^{km}, mb4.7, ML3.5, MS3.5*

ISC 29 16:59:17.0±0.7, **9.30N**±0.03×**125.55E**±0.06, **h14**^{km}±6^{km}, **n20**, σ**1**^{s}**11**/27, **mb3.6**/3, **4C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.33	167	*e*P	Pg	16 59 23.1	-0.9
BUTP				*e*S	Sg	16 59 29.1	+0.3
SCPH	Surigao	0.49	353	⇓*e*P	Pg	16 59 26.6	-0.4
SCPH				*i* S	Sg	16 59 34.4	+0.7
MSLP	Maasin	1.07	321	*e*P	Pb	16 59 35.0	-1.8
CGP	Cagayan de Oro	1.19	225	⇑*e*P	Pb	16 59 38.2	-0.6
CGP				*i* S	Sb	16 59 55.3	+1.5
BUKP	Musuan	1.49	199	*e*P	Pn	16 59 43.6	+0.1
TBP	Tagbilaran	1.71	283	*e*P	Pn	16 59 45.9	-0.7
LLP	Lapu-Lapu	1.86	303	⇑*i*P	Pn	16 59 48.2	-0.6
LLP				*i* S	Sn	17 00 12.0	-0.2
PLP	Palo	1.94	343	⇑*e*P	Pn	16 59 51.0	+1.0
PLP				*e*S	Sn	17 00 19.2	+4.9
DCPH	Dipolog City	2.28	252	*e*P	Pn	16 59 54.6	-0.3
DCPH				*i* S	Sn	17 00 20.1	-2.8
SNPH	Sibulan	2.28	271	⇑*e*P	Pn	16 59 55.4	+0.5
SNPH				*i* S	Sn	17 00 24.6	+1.6
BESP	Borongan	2.29	357	*e*P	Pn	16 59 55.4	+0.3
MATI	Mati	2.44	163	*e*P	Pn	16 59 57.7	+0.6
PAGZ	Pagadian	2.58	236	*e*P	Pn	16 59 59.5	+0.3
GUIM	Jordan	3.20	295	*e*P	Pn	17 00 06.5	-1.5
IPIL	Ipil	3.30	243	*e*P	Pn	17 00 10.2	+0.8
CNP	Catarman	3.31	345	*e*P	Pn	17 00 10.8	+1.2
PVCP	Virac	4.49	342	*e*P	Pn	17 00 28.9	+2.6
WRA	Warramunga Arr	30.32	163	P	P	17 05 30.7	+0.1
	0.3nm,0.6s,mb3.2,baz=345,slow=9.6,SNR=3.9						
MKAR	Makanchi Array	52.37	324	P	P	17 08 28.3	-2.6
	0.3nm,0.6s,mb3.4,baz=113,slow=7.6,SNR=5.7						
YKA	Yellowknife Ar	94.93	24	P	P	17 12 38.8	-1.1
	0.4nm,0.5s,mb4.1,baz=312,slow=4.5,SNR=3.8						

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*NEIC **29** 17:10:08.0±0.9, 20.25S×68.98W, h102^{km}±9^{km}, mb4.1/9, Error ellipse: s-maj=11.4km s-min=8.3km az=89.0*

*IDC **29** 17:10:09.6±1.9, 20.20S×68.91W, h119^{km}±16^{km}, mb4.0/10, mb1 4.2/13, mb1mx4.0/19, mbtmp4.4/13, Error ellipse: s-maj=21.0km s-min=13.0km az=75.0*

ISC 29 17:10:05.2±0.8, **20.19S**±0.05×**68.99W**±0.07, **h89**^{km}±9^{km}, **n38**, σ**1**^{s}**06**/36, **mb4.2**/14, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANCH	Antofagasta	3.72	201	*e*P	P	17 11 00.2	-1.5
LPAZ	La Paz	3.96	12	P	P	17 11 09.8	+4.8
	11nm,0.3s,baz=194,slow=7.7,SNR=102						
LPAZ				S	S	17 11 56.9	+6.3
	3.3nm,0.3s,baz=221,slow=5.4,SNR=4.7						
LPAZ	La Paz	3.96	12	P	P	17 11 09.8	+4.8
LPAZ				S	S	17 11 56.9	+6.3
ARE	Arequipa	4.40	327	*e*P	P	17 11 10.0	-1.1
ARE				*i* S	S	17 12 02.7	+1.2
SIV	San Ignacio	8.61	62	P	P	17 12 09.3	+0.6
	8.8nm,0.3s,baz=254,slow=12,SNR=314						
NNA	Nana	11.11	316	*e*P	P	17 12 42.3	-0.2
CFAA	Coronel Fontan	11.39	177	P	P	17 12 46.9	+0.6
	0.1nm,0.3s,baz=4.8,slow=12,SNR=3.3						
CPUP	Villa Florida	12.34	122	P	P	17 13 00.6	+1.6
	0.6nm,0.3s,baz=324,slow=12,SNR=31						
SAML	Samuel	12.50	27	*e*P	P	17 13 00.7	-0.5
	3.0nm,0.6s						
TRQA	Tornquist	18.82	163	*e*P	P	17 14 19.6	-0.7
BDFB	Brasilia	20.46	81	P	P	17 14 38.0	+0.2
	7.1nm,0.4s,baz=275,slow=11,SNR=13						
BAO	Brasilia Array	20.48	81	P	P	17 14 38.0	0.0
PLCA	Paso Flores	20.52	183	P	P	17 14 39.2	+0.9
	4.5nm,0.7s,baz=0.3,slow=11,SNR=13						
PLCA	Paso Flores	20.52	183	*e*P	P	17 14 39.6	+1.2
	10nm,1.1s						
OTAV	Otavalo	22.31	334	*e*P	P	17 14 59.6	+3.3
	10nm,1.0s,mb4.1						
SDV	Santo Domingo	28.93	357	P	P	17 15 56.3	-2.0
	2.0nm,0.3s,mb4.2,baz=7.5,slow=20,SNR=4.2						
SDV	Santo Domingo	28.93	357	P	P	17 15 56.1	-2.2
	2.9nm,0.5s,mb4.2						
TXAR	Lajitas Array	59.52	325	P	P	17 20 00.5	-1.1
	0.6nm,0.5s,mb3.9,baz=150,slow=8.4,SNR=9.1						
TXAR	Lajitas Array	59.52	325	P	P	17 20 00.5	-1.1
DBIC	Dimbokro	68.44	74	P	P	17 20 57.8	-2.3
	7.0nm,0.9s,mb4.5,baz=232,slow=6.5,SNR=17						
NEN	Nelson	70.50	322	*e*P	P	17 21 13.1	+0.8
MSU	Marysvale	71.06	325	*e*P	P	17 21 16.8	+1.1
MVU	Marysvale	71.07	325	*e*P	P	17 21 16.8	+1.1
	5.9nm,1.0s,mb4.4						
PDAR	Pinedale Array	72.94	330	P	P	17 21 26.4	-0.3
	0.8nm,0.8s,mb3.6,baz=112,slow=5.0,SNR=5.0						
HWUT	Hardware Ranch	73.03	328	P	P	17 21 27.1	-0.1
	3.6nm,0.9s,mb4.2						
ULM	Lac du Bonnet	74.05	342	P	P	17 21 32.1	-0.9
	4.7nm,0.6s,mb4.4,baz=162,slow=5.6,SNR=4.3						
RRI2	Red Ridge	74.22	329	*e*P	P	17 21 34.5	+0.3
	7.2nm,1.0s,mb4.4						
NVAR	Mina Array Bea	74.42	322	P	P	17 21 34.6	-0.9
	1.5nm,0.9s,mb3.7,baz=153,slow=6.0,SNR=8.8						
SCHQ	Schefferville	74.73	1	P	P	17 21 36.0	-0.9
	3.6nm,0.8s,mb4.1,baz=192,slow=3.4,SNR=4.0						
HLID	Hailey	75.90	328	*e*P	P	17 21 45.1	+1.3
	2.9nm,1.0s,mb4.0						
BMO	Blue Mountains	78.28	327	*e*P	P	17 21 57.7	+0.8
	2.4nm,1.0s,mb3.9						
YKA	Yellowknife Ar	89.93	341	P	P	17 22 55.1	0.0
	4.6nm,0.7s,mb4.7,baz=134,slow=4.8,SNR=29						
YKA				pP	pP	17 23 32.3	+13
	0.8nm,0.5s,baz=132,slow=5.0,SNR=2.4						
YKA	Yellowknife Ar	89.93	341	P	P	17 22 55.1	0.0
YKA				pP	pP	17 23 32.3	+13
WRA	Warramunga Arr	134.04	211	PKP	PKPdf	17 29 14.1	+1.0
	0.5nm,0.6s,baz=160,slow=1.9,SNR=5.9						
ZAL	Zalesovo	140.80	24	PKP	PKPdf	17 29 26.2	+1.8
	0.7nm,0.3s,baz=116,slow=8.5,SNR=3.5						
MKAR	Makanchi Array	144.61	35	PKP	PKPdf	17 29 32.3	+1.1
	1.2nm,0.7s,baz=308,slow=3.2,SNR=15						
MJAR	Matsushiro Arr	151.19	310	PKPbc	PKPdf	17 29 49.1	+6.8
	2.4nm,0.8s,baz=118,slow=1.4,SNR=7.1						
SONM	Songino Array	152.17	7	PKP	PKPdf	17 29 45.3	+2.0
	0.1nm,0.4s,slow=1.4,SNR=3.9						
SONM				PKPbc	PKPdf	17 29 52.5	+9.2
	2.2nm,0.8s,baz=319,slow=1.2,SNR=15						
SONM				PKPab	PKPab	17 30 02.4	0.0
	0.3nm,0.6s,baz=324,slow=3.5,SNR=4.6						

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*NEIC **29** 17:21:44.6±0.5, 15.41S×69.98W, h228^{km}±5^{km}, mb3.8/4, Error ellipse: s-maj=9.3km s-min=6.8km az=222.0*

*IDC **29** 17:21:45.0±1.0, 15.36S×69.91W, h233^{km}±9^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.6/20, mbtmp4.3/9, Error ellipse: s-maj=20.6km s-min=15.6km az=58.0*

ISC 29 17:21:44.0±0.6, **15.45S**±0.08×**70.00W**±0.08, **h241**^{km}±6^{km}, **n29**, σ**0**^{s}**92**/26, **mb4.0**/11, **1C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	1.75	235	⇑*i*P	P	17 22 22.4	-1.4
ARE				*i*		17 25 11.8	
LPAZ	La Paz	1.98	115	P	P	17 22 27.4	+1.5
	12nm,0.3s,baz=283,slow=6.7,SNR=253						
LPAZ				S	S	17 22 58.8	+0.5
	20nm,0.3s,baz=195,slow=24,SNR=39						
LPAZ	La Paz	1.98	115	⇓*i*P	P	17 22 27.2	+1.4
LPAZ				S	S	17 22 58.8	+0.5
NNA	Nana	7.48	297	P	P	17 23 32.0	+0.6
SIV	San Ignacio	8.62	95	P	P	17 23 45.3	-0.5
	0.2nm,0.3s,baz=276,slow=14,SNR=5.9						
SAML	Samuel	9.28	47	*e*P	P	17 23 53.5	-0.8
	1.8nm,0.5s						
CPUP	Villa Florida	16.03	135	P	P	17 25 17.7	-0.4
	0.4nm,0.3s,baz=324,slow=10.0,SNR=7.9						
CPUP	Villa Florida	16.03	135	*e*P	P	17 25 17.6	-0.6
CFAA	Coronel Fontan	16.17	175	P	P	17 25 19.6	-0.1
	0.2nm,0.3s,baz=350,slow=12,SNR=9.7						
OTAV	Otavalo	17.68	331	P	P	17 25 35.5	-0.8
BDFB	Brasilia	21.18	93	P	P	17 26 12.1	+0.6
	3.1nm,0.6s,mb4.0,baz=261,slow=13,SNR=4.8						
TRQA	Tornquist	23.61	164	*e*P	P	17 26 34.3	-0.4
PLCA	Paso Flores	25.20	181	P	P	17 26 49.6	+0.3
	2.7nm,0.6s,mb4.0,baz=359,slow=11,SNR=13						
TXAR	Lajitas Array	55.12	324	P	P	17 30 52.3	-1.2
	0.3nm,0.7s,mb2.9,baz=108,slow=4.0,SNR=3.6						
RSSD	Black Hills	66.92	334	*e*P	P	17 32 13.1	+0.7
	2.6nm,0.9s,mb3.9						
DBIC	Dimbokro	68.16	76	P	P	17 32 19.5	-1.1
	4.0nm,0.3s,mb4.5,baz=241,slow=5.9,SNR=19						
DBIC	Dimbokro	68.16	76	P	P	17 32 19.5	-1.1
PDAR	Pinedale Array	68.38	330	P	P	17 32 21.9	+0.4
	1.2nm,0.5s,mb3.8,baz=124,slow=8.7,SNR=15						
ULM	Lac du Bonnet	69.26	343	P	P	17 32 25.1	-1.6
	6.8nm,0.4s,mb4.7,baz=145,slow=6.2,SNR=7.9						
RRI2	Red Ridge	69.67	329	*e*P	P	17 32 30.4	+1.0
	7.2nm,0.7s,mb4.4						
BMO	Blue Mountains	73.79	327	*e*P	P	17 32 54.6	+0.8
	0.9nm,0.6s,mb3.6						
YKA	Yellowknife Ar	85.16	341	P	P	17 33 54.2	+0.3
	1.4nm,0.5s,mb4.0,baz=134,slow=4.9,SNR=11						
YKA	Yellowknife Ar	85.16	341	P	P	17 33 54.2	+0.3
DLBC	Dease Lake	88.38	333	P	P	17 34 11.3	+1.9
	1.7nm,0.4s,mb4.2,baz=143,slow=4.5,SNR=5.2						
ZAL	Zalesovo	136.83	22	PKP	PKPdf	17 40 39.6	+1.8
	1.6nm,0.5s,baz=157,slow=3.7,SNR=8.5						
WRA	Warramunga Arr	137.46	215	PKP	PKPdf	17 40 42.2	+2.4
	0.5nm,0.3s,baz=138,slow=1.6,SNR=22						
MKAR	Makanchi Array	141.16	31	PKP	PKPdf	17 40 48.5	+2.7
	0.2nm,0.2s,baz=243,slow=3.2,SNR=3.6						
MJAR	Matsushiro Arr	147.27	315	PKPbc	PKPdf	17 41 01.7	+5.0
	0.5nm,0.4s,baz=207,slow=2.8,SNR=4.7						
SONM	Songino Array	147.57	5	PKPbc	PKPdf	17 41 02.4	+5.7
	1.9nm,0.8s,baz=323,slow=1.9,SNR=14						

ISC 29 17:23:07.2±0.7, **38.98N**±0.05×**33.58E**±0.05, **h10**^{km}, **n8**, σ**1**^{s}**20**/14, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAMT	Kaman	0.40	15	*i* PG	Pg	17 23 13.9	-1.5
KAMT				*i* SG	Sg	17 23 21.0	+0.2
CDAG	Cicekdag	0.89	44	*i* P	Pb	17 23 22.7	-1.5
CDAG				*i* S	Sb	17 23 35.4	-0.5
AVNT	Avonos	1.01	101	*i* P	Pb	17 23 25.0	-1.5
AVNT				*i* S	Sb	17 23 41.2	+1.6
KDHN	Kadinhani	1.24	248	*i* P	Pb	17 23 28.9	-1.4
KDHN				*i* S	Sb	17 23 46.5	+0.4
KIZT	Kizilcal	1.33	266	PN	Pn	17 23 32.6	+0.7
CORM	Corum	1.44	34	*e*PN	Pn	17 23 34.2	+0.7
ELDT	Eldivan	1.51	356	*i* P	Pn	17 23 35.2	+0.8
ELDT				*i* S	Sb	17 23 58.6	+4.6
CTKT	Corum	1.88	29	*i* P	Pn	17 23 41.7	+1.9
CTKT				*i* S	Sn	17 24 10.4	+6.6

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*IDC **29** 17:42:10.4±3.4, 54.09N×156.55W, mb3.8/5, mb1 4.0/8, mb1mx3.7/25, mbtmp3.8/8, ML3.9/3, MS3.2/2, Ms1 3.2/2, ms1mx2.7/36, Error ellipse: s-maj=81.1km s-min=28.3km az=149.0*

*NEIC **29** 17:42:19.5±2.3, 54.97N×157.47W, h20^{km}±14^{km}, ML3.6(AEIC), Error ellipse: s-maj=20.4km s-min=3.1km az=151.0*

ISC 29 17:42:17.0±2.0, **54.9N**±0.1×**157.3W**±0.1, **h22**^{km}±15^{km}, **n33**, σ**0**^{s}**74**/32, **mb3.8**/5, **MS3.1**/2, **1C, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDPT	Sand Point	1.86	285	P	Pn	17 42 48.0	-0.2
SDPT				S	Sn	17 43 10.7	-0.5
DOL	Dolgoi Island	2.62	277	P	Pn	17 42 58.9	-0.1
DTNA	Dutton South F	2.84	277	P	Pn	17 43 02.2	0.0
DT1	Dutton Round H	2.86	276	P	Pn	17 43 02.2	-0.2
BALA	Baldy Mountain	3.15	277	P	Pn	17 43 06.8	+0.3
CAHL	Cahill	3.35	19	P	Pn	17 43 10.9	+1.6
MGLS	Mageik LS	3.49	18	P	Pn	17 43 12.3	+0.9
FALS	False Pass	3.52	272	P	Pn	17 43 11.7	-0.1
KDAK	Kodiak Island	3.91	41	P	Pn	17 43 18.8	+1.5
SSLW	Shishaldin Wes	3.93	271	P	Pn	17 43 17.7	+0.1
WESE	West Dahl East	4.23	267	P	Pn	17 43 22.2	+0.2
WFAR	Faris Peak	4.33	268	P	Pn	17 43 23.5	+0.1
UNV	Unalaska Valle	5.46	263	P	Pn	17 43 39.9	+0.5
MTBL	Makushin Table	5.54	264	P	Pn	17 43 39.6	-0.8
BRLK	Bradley Lake	5.99	33	P	Pn	17 43 46.7	-0.1
RSO	Redoubt South	6.09	22	*e*P	Pn	17 43 48.8	+0.7
SVW2	Sparrevohn	6.28	8	P	Pn	17 43 50.2	-0.6
RC01	Rabbit Creek A	7.39	30	P	Pn	17 44 05.6	-0.8
HIN	Hinchinbrook I	8.00	42	P	Pn	17 44 14.0	-0.9
EYAK	Cordova Ski Ar	8.38	43	P	P	17 44 19.2	-1.1
SCM	Sheep Creek Mo	8.70	33	P	P	17 44 22.9	-1.8
ILAR	Eielson Array	11.18	24	Pn	P	17 44 53.9	-4.7
	0.2nm,0.3s,baz=216,slow=12,SNR=4.9						
DLBC	Dease Lake	15.37	66	Pn	P	17 45 46.1	-7.9
	0.2nm,0.3s,baz=6.7,slow=20,SNR=6.4						
INK	Inuvik	17.39	30	P	P	17 46 20.5	+0.9
	0.7nm,0.3s,baz=234,slow=8.4,SNR=16						
NEW	Newport	25.57	88	LR	LR	17 56 39.9	
	comp=Z,44nm,20.7s,MS3.0,baz=90,slow=35						
YBH	Yreka Blue Hor	26.22	106	LR	LR	17 55 54.5	
	comp=Z,78nm,19.3s,MS3.3,baz=330,slow=32						
SONM	Songino Array	55.89	306	P	P	17 51 55.0	-0.1
	0.4nm,0.9s,mb3.5,baz=42,slow=7.1,SNR=4.1						
FINES	FINESS Array B	63.96	358	P	P	17 52 49.9	-0.1
	0.7nm,0.6s,mb3.9,slow=4.2,SNR=3.8						
FINES	FINESS Array B	63.96	358	P	P	17 52 49.9	-0.1
BVAR	Borovoye Array	65.42	331	P	P	17 52 59.8	+0.2
	1.2nm,0.8s,mb4.0,baz=37,slow=7.2,SNR=5.8						
MKAR	Makanchi Array	66.89	320	P	P	17 53 08.8	-0.4
	0.2nm,0.3s,mb3.6,baz=45,slow=8.6,SNR=4.1						
LSR	Lussari	78.70	6	⇑*i*Pg	P	17 54 18.0	-0.5
CMAR	Chiang Mai Arr	82.71	292	P	P	17 54 41.5	+1.2
	1.2nm,0.8s,mb4.0,baz=20,slow=4.8,SNR=8.5						

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*IDC **29** 17:50:42.0±0.9, 31.14N×49.70E, mb4.0/17, mb1 4.1/20, mb1mx4.0/27, mbtmp4.0/20, ML3.9/3, MS3.5/2, Ms1 3.5/2, ms1mx2.9/23, Error ellipse: s-maj=20.2km s-min=14.4km az=174.0*

*THR **29** 17:50:42.4±0.9, 30.93N×49.64E, h15^{km}, ML4.2*

*MOS **29** 17:50:44.6±1.2, 31.02N×49.72E, h33^{km}, mb4.8/5, Error ellipse: s-maj=13.1km s-min=8.7km az=106.6*

*BJI **29** 17:50:45.4, 31.20N×49.70E, h35^{km}, mB4.9, mb4.8*

*TEH **29** 17:50:46.3, 30.98N×49.60E, h23^{km}, Mn3.9*

*CSEM **29** 17:50:47.4±0.1, 31.14N×49.68E, h61^{km}, mb4.3/6, Error ellipse: s-maj=2.4km s-min=1.4km az=135.0*

*NEIC **29** 17:50:48.4±2.7, 31.16N×49.75E, h47^{km}±26^{km}, mb4.8/5, Error ellipse: s-maj=12.8km s-min=7.9km az=185.0*

*ZUR_RM **29** 17:50:48, 31.16N×49.75E, h21^{km}, Mw4.5/6, Moment Tensor Solution. s6 Moment tensor: Scale 10^{15}Nm; M$_{rr}$7.80; M$_{\theta\theta}$-2.74; M$_{\phi\phi}$-5.05; M$_{r\theta}$-0.01; M$_{\theta\phi}$1.77; M$_{\phi r}$-1.80; Best double couple: M$_{0}$7.12×10^{15} NP1:ϕ_s157°, δ52°, λ96°. NP2:ϕ_s327°, δ39°, λ82°. Principal axes: T 8.05, Plg82°, Azm99°; N -1.86, Plg5°, Azm333°; P -6.19, Plg7°, Azm243°;*

*OMAN **29** 17:50:54.2±0.4, 29.75N×49.24E, h53^{km} Error ellipse: s-maj=30.0km s-min=11.4km az=17.0*

ISC 29 17:50:46.8±0.4, **31.09N**±0.03×**49.76E**±0.03, **h52**^{km}±4^{km}, **n105**, σ**1**^{s}**17**/108, **mb4.2**/27, **MS3.5**/3, **2C-10D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGAR	Garneh	2.37	60	Pn	P	17 51 24.7	+0.5
KBD	Kabd	2.62	224	*e*P	P	17 51 28.0	+0.3
KBD				*e*S	S	17 51 59.7	+1.3
IKLH	Kalahroud	2.70	34	Pn	P	17 51 30.7	+1.8
SHI	Shiraz	2.78	121	Pn	P	17 51 30.2	+0.2
IZEF	Zefreh	2.83	50	Pn	P	17 51 31.5	+0.9
NAY	Al-Naaiem	2.85	231	*e*P	P	17 51 31.3	+0.3
NAY				*e*S	S	17 52 05.2	+0.9
RDF	Al-Radifah	2.89	222	*e*P	P	17 51 32.5	+1.0
RDF				*e*S	S	17 52 07.2	+2.0
NASN	Na'in	3.10	56	*e*PN	P	17 51 35.8	+1.4
IPAR	Pars	3.10	113	Pn	P	17 51 34.7	+0.2
IMOK	Mook	3.27	128	Pn	P	17 51 36.3	-0.6
ISAD	Sadrabad	3.45	75	Pn	P	17 51 41.3	+1.9
ASAO	Ashtian	3.45	4	*e*PN	P	17 51 40.8	+1.4
IKOM	Komasi	3.61	329	Pn	P	17 51 40.9	-0.8
IQOM	Qom	3.90	16	Pn	P	17 51 43.6	-2.1
GHIR	Ghir-Karzin	3.96	134	*e*PN	P	17 51 44.8	-1.9
GHIR				AML	AML	17 53 01.7	
	comp=N,376nm,0.5s						
ICHK	Chekchek	4.12	73	Pn	P	17 51 50.3	+1.4
IVIS	Veys	4.21	325	Pn	P	17 51 48.9	-1.2
IVRN	Varamin	4.23	22	Lg		17 53 03.4	
IVRN	Varamin	4.23	22	Pn	P	17 51 50.4	0.0
IRAZ	Razeghan	4.30	2	Pn	P	17 52 06.6	+15
SNGE	Sanandaj	4.47	334	*e*PN	P	17 51 53.2	-0.6
ILIN	Laeen	4.48	329	Pn	P	17 51 53.2	-0.8
IDHR	Dehrash	4.58	323	Pn	P	17 51 53.8	-1.6
IDMV	Damavand	4.86	22	Pn	P	17 51 59.4	+0.1
DAMV	Damavand	4.89	22	*e*PN	P	17 51 59.6	0.0
THKV	Tehran--Karaj	4.90	11	*e*PN	P	17 52 00.0	+0.2
IBAF	Bafgh	4.99	83	Pn	P	17 52 01.3	+0.2
ILAS	Lasjerd	5.05	31	Pn	P	17 51 58.0	-3.9
IFIR	Firoozkooh	5.18	28	Pn	P	17 52 04.1	+0.4
IFIR				Sn	S	17 53 02.1	-0.9
ISHM	Shahmirzad	5.55	31	Pn	P	17 52 09.1	+0.3
KRBR	Kerman	6.14	99	*e*PN	P	17 52 16.3	-0.8
KRBR				AML	AML	17 53 56.3	
	comp=N,54nm,0.5s						
BNDS	Bandar-Abbas	6.70	122	*e*PN	P	17 52 22.0	-3.0
BANOM	Banah	7.72	130	⇓P	P	17 52 35.6	-3.5
	SNR=6.1						
BANOM				⇓S	S	17 53 58.1	-7.9
ASHO	Ashiyiah	8.47	137	P	P	17 52 46.5	-3.0
	SNR=34						
ASHO				⇑S	S	17 54 16.4	-8.3
BSY	Bisya	10.63	140	P	P	17 53 14.8	-4.4
	SNR=24						
BSYO	Bisya	10.67	140	P	P	17 53 14.8	-4.8
	SNR=24						
SMDO	Samad	10.88	135	P	P	17 53 19.9	-2.6
	SNR=14						
ASF	Jabal al Asfar	11.02	279	Pn	P	17 53 18.5	-5.8
	comp=N,0.9nm,0.3s,baz=306,slow=1.1,SNR=4.4						
ASF				Sn	S	17 55 24.9	-2.2

	comp=N,0.7nm,0.3s,baz=156,slow=20,SNR=3.9						
ASF				Lg		17 56 44.4	
	comp=N,0.4nm,0.3s,baz=182,slow=21,SNR=3.0						
JMDO	**Jabal Madar**	**11.44**	**137**	P	**P**	**17 53 27.6**	**-2.5**
	SNR=8.5						
JMDO	**Jabal Madar**	**11.44**	**137**	P	**P**	**17 53 27.5**	**-2.6**
	SNR=8.5						
EIL	**Elat**	**12.87**	**267**	Pn	**P**	**17 53 43.8**	**-5.3**
	comp=N,0.7nm,0.3s,baz=22,slow=18,SNR=5.3						
EIL				Lg		17 57 41.0	
	baz=62,slow=34,SNR=2.4						
EIL	**Elat**	**12.87**	**267**	Pn	**P**	**17 53 43.8**	**-5.3**
EIL				Lg		17 57 41.0	
WHFO	**Wadi Hawf**	**13.61**	**164**	⇓P	**P**	**17 53 54.9**	**-4.1**
KIV	**Kislovodsk**	**14.01**	**338**	*e*P	**P**	**17 54 06.1**	**+2.1**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=N,41nm,20.0s						
KIV				MLR	MLR		
	comp=E,87nm,20.0s						
KIV				MLR	MLR		
	comp=Z,98nm,20.0s						
KIV	**Kislovodsk**	**14.01**	**338**	*e*P	**P**	**17 54 06.2**	**+2.2**
KIV	**Kislovodsk**	**14.01**	**338**	*e*P	**P**	**17 54 06.1**	**+2.1**
	comp=Z,7.0nm,1.0s						
BR131	**Keskin Array S**	**15.70**	**308**	P	**P**	**17 54 22.5**	**-3.4**
	comp=Z,1.5nm,0.6s						
BRTR	**Keskin Array B**	**15.70**	**308**	Pn	**P**	**17 54 25.1**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=132,slow=17,SNR=2.8						
IDI	**Anoyia**	**21.21**	**288**	P	**P**	**17 55 30.3**	**+0.2**
	comp=Z,12nm,0.7s,mb4.4,baz=62,slow=7.6,SNR=10.0						
TIRR	**Tirgusor**	**21.43**	**314**	⇓P		17 55 48.8	
FRU	**Bishkek**	**22.97**	**52**	*e*P		17 56 02.0	
MLR	**Muntele Rosu**	**23.46**	**314**	P	**P**	**17 55 53.8**	**+1.6**
MLR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MLR				MLR	MLR		
	comp=Z,65nm,18.0s						
MLR	**Muntele Rosu**	**23.46**	**314**	P	**P**	**17 55 53.8**	**+1.6**
	comp=Z,3.5nm,0.6s,mb4.0,baz=123,slow=2.7,SNR=7.4						
MLR				LR	LR	18 07 43.8	
	comp=Z,65nm,18.0s,MS3.1,baz=181,slow=44						
MLR	**Muntele Rosu**	**23.46**	**314**	⇓P	**P**	**17 55 56.0**	**+3.8**
MLR	**Muntele Rosu**	**23.46**	**314**	⇓P	**P**	**17 55 56.0**	**+3.8**
VOIR		**23.99**	**314**	⇑P	**P**	**17 55 59.4**	**+2.1**
AKASG	**Malin Array Be**	**24.84**	**328**	P	**P**	**17 56 05.0**	**-0.6**
	comp=Z,0.4nm,0.3s,mb3.4,baz=131,slow=7.6,SNR=6.4						
AKASG	**Malin Array Be**	**24.84**	**328**	P	**P**	**17 56 05.0**	**-0.6**
BURAR	**Bucovina Array**	**24.99**	**318**	⇓P	**P**	**17 56 07.1**	**+0.1**
BURAR	**Bucovina Array**	**24.99**	**318**	⇓P	**P**	**17 56 07.1**	**+0.1**
OBN	**Obninsk**	**25.78**	**342**	⇓*i*P	**P**	**17 56 15.0**	**+0.7**
OBN				*e*		17 56 54.7	
OBN				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.6						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.4						
OBN	**Obninsk**	**25.78**	**342**	P	**P**	**17 56 13.4**	**-0.9**
OBN	**Obninsk**	**25.78**	**342**	P	**P**	**17 56 13.4**	**-0.9**
ZRNK	**Zerenda**	**25.95**	**27**	*e*P	**P**	**17 56 16.1**	**+0.2**
ZRNK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.5						
ZRNK	**Zerenda**	**25.95**	**27**	*e*P	**P**	**17 56 16.1**	**+0.2**
	comp=Z,8.6nm,0.6s,mb4.5						
ZRNK	**Zerenda**	**25.95**	**27**	*e*P	**P**	**17 56 16.1**	**+0.2**
	comp=Z,8.6nm,0.6s,mb4.5						
DRGR		**26.06**	**315**	⇓P	**P**	**17 56 17.6**	**+0.6**
ARU	**Arti**	**26.07**	**11**	*e*P	**P**	**17 56 16.7**	**-0.3**
BVAR	**Borovoye Array**	**26.56**	**28**	P	**P**	**17 56 21.6**	**+0.1**
	comp=Z,1.2nm,0.7s,mb3.5,baz=225,slow=8.4,SNR=9.3						
MKAR	**Makanchi Array**	**29.50**	**49**	P	**P**	**17 56 48.5**	**+0.3**
	comp=Z,0.4nm,0.3s,mb3.6,baz=252,slow=8.0,SNR=18						
MKAR	**Makanchi Array**	**29.50**	**49**	P	**P**	**17 56 48.5**	**+0.3**
GERES	**GERESS Array B**	**32.44**	**314**	P	**P**	**17 57 13.4**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.6,baz=162,slow=4.2,SNR=3.7						
ZAL	**Zalesovo**	**33.93**	**37**	P	**P**	**17 57 26.4**	**-0.4**
	comp=Z,1.1nm,0.3s,mb4.3,baz=198,slow=22,SNR=4.6						
FINES	**FINESS Array B**	**34.09**	**340**	P	**P**	**17 57 26.8**	**-1.4**
	comp=Z,0.8nm,0.4s,mb4.0,baz=152,slow=8.1,SNR=16						
KAF	**Kangasniemi**	**34.56**	**341**	*e*p	**P**	**17 57 30.0**	**-2.1**
LSA	**Lhasa**	**35.58**	**81**	*e*P	**P**	**17 57 41.8**	**+0.6**
LSA				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
LSA	**Lhasa**	**35.58**	**81**	*e*P	**P**	**17 57 41.8**	**+0.5**
	comp=Z,16nm,0.8s,mb5.0						
LSA	**Lhasa**	**35.58**	**81**	*e*P	**P**	**17 57 41.8**	**+0.6**
	comp=Z,16nm,0.8s,mb5.0						
HFS	**Hagfors**	**37.63**	**331**	P	**P**	**17 57 56.9**	**-1.2**
	comp=Z,2.1nm,0.8s,mb3.9,baz=135,slow=8.2,SNR=7.0						
NOA	**NORSAR Array B**	**39.15**	**331**	P	**P**	**17 58 10.1**	**-0.7**
	comp=Z,0.6nm,0.8s,mb3.4,baz=202,slow=5.2,SNR=2.7						
ARCES	**ARCESS Array B**	**40.88**	**347**	P	**P**	**17 58 24.7**	**-0.3**
	comp=Z,1.3nm,0.8s,mb3.6,baz=158,slow=6.5,SNR=4.0						
ARCES	**ARCESS Array B**	**40.88**	**347**	P	**P**	**17 58 24.7**	**-0.3**
GTA	**Gaotai**	**41.27**	**64**	*e*P	**P**	**17 58 30.5**	**+2.0**
GTA				AP	pP	17 58 37.3	-4.9
GTA				XP	sP	17 58 40.5	-7.9
GTA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
ZAK	**Zakamensk**	**43.84**	**48**	*e*P	**P**	**17 58 50.8**	**+1.5**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.5						
ZAK	**Zakamensk**	**43.84**	**48**	*e*P	**P**	**17 58 50.8**	**+1.5**
	comp=Z,1.0nm,1.1s,mb3.5						
SONM	**Songino Array**	**45.77**	**52**	P	**P**	**17 59 05.8**	**+1.1**
	comp=Z,1.1nm,0.6s,mb4.0,baz=267,slow=8.2,SNR=10						
CMAR	**Chiang Mai Arr**	**46.05**	**94**	P	**P**	**17 59 07.7**	**+0.2**
	comp=Z,2.0nm,0.9s,mb4.0,baz=296,slow=8.0,SNR=9.6						
ULN	**Ulaanbaatar**	**46.21**	**52**	*e*P	**P**	**17 59 09.7**	**+1.4**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**46.21**	**52**	*e*P	**P**	**17 59 09.7**	**+1.5**
	comp=Z,3.8nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**46.21**	**52**	*e*P	**P**	**17 59 09.7**	**+1.4**
	comp=Z,3.8nm,0.9s,mb4.3						
KMI	**Kunming**	**46.75**	**84**	P	**P**	**17 59 12.8**	**0.0**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
KMI	**Kunming**	**46.75**	**84**	P	**P**	**17 59 12.8**	**0.0**
KMI				*PP	pP	17 59 18.3	-8.4
KMI				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
KMI	**Kunming**	**46.75**	**84**	P	**P**	**17 59 12.8**	**0.0**
	comp=Z,12nm,0.8s,mb4.9						
KMI				pP	pP	17 59 18.3	-8.4
XAN	**Xi'an**	**49.34**	**70**	P	**P**	**17 59 33.5**	**+0.6**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
ENH	**Enshi**	**50.81**	**75**	*e*P	**P**	**17 59 43.2**	**-1.0**
HIA	**Hailar**	**54.51**	**49**	*e*P	**P**	**18 00 11.7**	**+0.3**
MATP	**Matopo**	**55.14**	**204**	P	**P**	**18 00 16.8**	**+0.4**
	comp=Z,6.1nm,1.0s,mb4.6,baz=17,slow=6.9,SNR=6.8						
MATP	**Matopo**	**55.14**	**204**	P	**P**	**18 00 16.8**	**+0.4**
DBIC	**Dimbokro**	**56.45**	**256**	P	**P**	**18 00 25.4**	**-0.4**
	comp=Z,3.1nm,0.9s,mb4.3,baz=3.6,slow=9.0,SNR=3.0						
YAK	**Yakutsk**	**58.40**	**33**	*i* P	**P**	**18 00 38.3**	**-0.7**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
SCHQ	**Schefferville**	**78.64**	**328**	P	**P**	**18 02 45.1**	**+0.6**
	comp=Z,2.6nm,0.7s,mb4.3,baz=114,slow=4.1,SNR=3.6						
IMA	**Indian Mountai**	**81.48**	**9**	*e*P	**P**	**18 03 00.0**	**+0.6**
IMA				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
IMA	**Indian Mountai**	**81.48**	**9**	*e*P	**P**	**18 03 00.0**	**+0.6**
	comp=Z,18nm,0.9s,mb5.0						
ILAR	**Eielson Array**	**83.57**	**7**	P	**P**	**18 03 10.3**	**+0.3**
	comp=Z,1.0nm,0.8s,mb4.0,baz=338,slow=6.5,SNR=6.3						
ULM	**Lac du Bonnet**	**93.48**	**339**	LR	LR	18 47 26.4	
	comp=Z,42nm,19.3s,MS3.9,baz=332,slow=36						

NEIC ***29*** *17:51:34.8±1.9, 51.45N×16.17E, h5^{km}, ML3.0(VIE), Error ellipse: s-maj=19.0km s-min=7.0km az=204.0*

PRU ***29*** *17:51:36.2, 51.40N×16.15E*

CSEM ***29*** *17:51:36.2±0.2, 51.41N×16.18E, h1^{km}±1^{km}, ML2.9/4, Error ellipse: s-maj=2.8km s-min=1.4km az=8.0*

IPEC ***29*** *17:51:37.0±0.2, 51.38N×16.16E, h6^{km}±1^{km}, ML1.7/2, Error ellipse: s-maj=1.4km s-min=0.7km az=14.0*

WAR 29 17:51:35.9, 51.45N×16.17E, h1^{km}, ML2.7, 2C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.61**	**173**	⇑*i*Pg	Pg	17 51 47.1	-1.0
KSP				*e*Sg	Sg	17 51 55.1	-1.2
KSP	**Ksiaz**	**0.61**	**173**	*i* PG	Pg	17 51 47.1	-1.0
KSP				*e*SG	Sg	17 51 55.1	-1.2
KSP	**Ksiaz**	**0.61**	**173**	*e*Pg	Pg	17 51 47.1	-1.0
KSP				*e*Sg	Sg	17 51 55.1	-1.2
UPC	**Upice**	**0.95**	**186**	*e*PG	Pg	17 51 53.4	-1.4
UPC	**Upice**	**0.95**	**186**	*e*Pg	Pg	17 51 53.2	-1.6
DPC	**Dobruska-Polom**	**1.11**	**175**	*e*PG	Pg	17 51 56.1	-1.9
DPC				*e*SG	Sg	17 52 10.5	-2.2
	31nm,0.5s						
PVCC	**Panska Ves**	**1.37**	**228**	*e*PG	Pg	17 52 01.3	-1.9
PVCC	**Panska Ves**	**1.37**	**228**	*e*Pn	Pn	17 52 01.6	-0.6
BRG	**Berggiesshubel**	**1.52**	**248**	Pg	Pg	17 52 04.5	-1.7
BRG				Sg	Sg	17 52 24.4	-2.0
BRG	**Berggiesshubel**	**1.52**	**248**	*e*Pn	Pn	17 52 03.4	-0.8
BRG	**Berggiesshubel**	**1.52**	**248**	Pg	Pg	17 52 04.5	-1.6
BRG				*e*Sg	Sg	17 52 23.8	-2.5
PRU	**Pruhonice**	**1.79**	**216**	*e*PG	Pg	17 52 08.0	-3.7
PRU				*e*SG	Sg	17 52 31.8	-3.7
	12nm,0.2s						
PRU	**Pruhonice**	**1.79**	**216**	*e*Pn	Pn	17 52 07.8	-0.4
PRU	**Pruhonice**	**1.79**	**216**	*e*Pg	Pg	17 52 08.0	-3.7
PRU				*e*Sg	Sg	17 52 31.6	-3.9
MORC	**Moravsky Berou**	**1.89**	**152**	*e*P	Pn	17 52 07.5	-2.1
MORC	**Moravsky Berou**	**1.89**	**152**	*e*Pn	Pn	17 52 08.0	-1.6
MORC				*e*Sg	Sg	17 52 33.8	-5.0
	5.7nm,0.2s						
CLL	**Collm**	**1.99**	**267**	*e*PG	Pg	17 52 12.0	-3.6
CLL				*i* SG	Sg	17 52 39.4	-2.7
OKC	**Ostrava-Krasne**	**2.05**	**141**	*e*PG	Pg	17 52 13.3	-3.5
OKC				*e*SG	Sg	17 52 40.9	-3.2
	19nm,0.6s						
VRAC	**Vranov**	**2.16**	**173**	*e*Pn	Pn	17 52 13.0	-0.5
VRAC				*e*Sg	Sg	17 52 42.1	-5.8
	4.3nm,0.2s						
KRUC	**Moravsky**	**2.40**	**176**	*e*Pn	Pn	17 52 16.3	-0.6
OJC	**Ojcow**	**2.61**	**117**	*e*PG	Pg	17 52 24.0	-4.0
OJC				*e*SG	Sg	17 52 59.0	-3.8
OJC	**Ojcow**	**2.61**	**117**	*e*Pg	Pg	17 52 25.1	-2.9
OJC				*e*Sg	Sg	17 52 58.2	-4.6
NKC	**Novy Kostel**	**2.65**	**244**	*e*PG	Pg	17 52 25.4	-3.5
NKC				*e*SG	Sg	17 52 59.6	-4.7
	18nm,0.3s						
NKC	**Novy Kostel**	**2.65**	**244**	Pg	Pg	17 52 25.4	-3.5
NKC				*e*Sg	Sg	17 52 59.4	-4.9
KHC	**Kasperske Hory**	**2.85**	**217**	*e*PN	Pn	17 52 21.0	-2.4
KHC				*e*PG	Pg	17 52 27.6	-5.3
KHC				*e*SN	Sn	17 52 56.5	-2.4
KHC				*e*SG	Sg	17 53 04.9	-6.0
	3.9nm,0.2s						
MOA	**Molln**	**3.81**	**200**	⇑*i*PN	Pn	17 52 35.2	-1.8
MOA				*i* SG	Sg	17 53 37.2	-5.5
	7.8nm,0.5s						

NEIC ***29*** *18:03:03.5±0.5, 51.48N×16.18E, h5^{km}, ML3.1(VIE), ML2.9(SZGRF), Error ellipse: s-maj=6.6km s-min=5.0km az=218.0*

WAR ***29*** *18:03:04.8, 51.45N×16.12E, h1^{km}, ML2.9, Mining Induced*

PRU ***29*** *18:03:04.8, 51.42N×16.11E*

IPEC ***29*** *18:03:04.7±0.2, 51.43N×16.17E, h8^{km}±1^{km}, ML2.2/3, Error ellipse: s-maj=1.2km s-min=0.6km az=31.0*

IDC ***29*** *18:03:05.3±0.8, 51.56N×15.58E, mb1 3.3/6, mb1mx3.2/23, mbtmp3.2/6, ML3.1/6, Error ellipse: s-maj=17.9km s-min=7.8km az=114.0*

CSEM ***29*** *18:03:05.4±0.1, 51.38N×16.12E, h0^{km}, ML3.2/7, Error ellipse: s-maj=2.3km s-min=1.3km az=16.0*

ISC 29 18:03:03.1±0.4**, 51.37N**±0.02×**16.08E**±0.03**, n50,** σ**1^{s}25**/96**, 2C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.54**	**165**	⇓*i*Pg	**Pg**	**18 03 16.0**	**+2.1**
KSP				*e*Sg	**Sg**	**18 03 23.2**	**+2.0**
KSP	**Ksiaz**	**0.54**	**165**	*i* PG	**Pg**	**18 03 16.0**	**+2.1**
KSP				*e*SG	**Sg**	**18 03 23.0**	**+1.8**
KSP	**Ksiaz**	**0.54**	**165**	*e*Pg	**Pg**	**18 03 16.0**	**+2.1**
KSP				*e*Sg	**Sg**	**18 03 23.7**	**+2.5**
KSP	**Ksiaz**	**0.54**	**165**	*e*Pg	**Pg**	**18 03 15.9**	**+2.0**
KSP				*e*Sg	**Sg**	**18 03 23.2**	**+2.0**
UPC	**Upice**	**0.86**	**183**	*e*PG	**Pg**	**18 03 22.1**	**+1.8**
UPC	**Upice**	**0.86**	**183**	*e*Pg	**Pg**	**18 03 22.0**	**+1.7**
DPC	**Dobruska-Polom**	**1.03**	**171**	*e*PG	**Pg**	**18 03 24.8**	**+1.1**
DPC				*e*SG	**Sg**	**18 03 39.1**	**+1.7**
	52nm,0.2s						
DPC	**Dobruska-Polom**	**1.03**	**171**	*e*Pg	**Pg**	**18 03 24.8**	**+1.1**
DPC				*e*Sg	**Sg**	**18 03 38.8**	**+1.4**
PVCC	**Panska Ves**	**1.27**	**229**	*e*PG	**Pg**	**18 03 29.4**	**+0.9**
PVCC	**Panska Ves**	**1.27**	**229**	Pg	**Pg**	**18 03 29.4**	**+0.9**
PVCC				*e*Sg	**Sg**	**18 03 47.8**	**+2.4**
BRG	**Berggiesshubel**	**1.43**	**251**	Pn	**Pn**	**18 03 30.8**	**+0.4**
BRG				Pg	**Pg**	**18 03 32.4**	**+0.7**
BRG				Sg	**Sg**	**18 03 52.4**	**+1.5**
BRG	**Berggiesshubel**	**1.43**	**251**	Pn	**Pn**	**18 03 30.8**	**+0.4**
BRG	**Berggiesshubel**	**1.43**	**251**	Pg	**Pg**	**18 03 32.4**	**+0.7**
BRG				*e*Sg	**Sg**	**18 03 51.8**	**+1.0**
PRU	**Pruhonice**	**1.69**	**216**	*e*PN	**Pn**	**18 03 34.6**	**+0.5**
PRU				*e*PG	**Pg**	**18 03 36.5**	**-0.4**
PRU				*e*x	x	18 03 41.0	
PRU				*e*x	x	18 03 54.1	
PRU				*e*SG	**Sg**	**18 04 00.5**	**+1.1**
	18nm,0.2s						
RUE	**Ruedersdorf**	**1.81**	**309**	*e*P	**Pn**	**18 03 36.9**	**+1.2**
RUE				*e*Sg	**Sg**	**18 04 01.7**	**-1.5**
MORC	**Moravsky Berou**	**1.85**	**149**	*e*P	**Pn**	**18 03 36.8**	**+0.5**
MORC	**Moravsky Berou**	**1.85**	**149**	*e*Pn	**Pn**	**18 03 37.0**	**+0.7**
MORC				*e*Sg	**Sg**	**18 04 03.6**	**-0.9**
	22nm,0.3s						
RAC	**Raciborz**	**1.86**	**133**	*e*P	**Pn**	**18 03 40.0**	**+3.5**
RAC				*e*S	**Sn**	**18 04 04.0**	**+3.0**
CLL	**Collm**	**1.93**	**269**	*i* Pn	**Pn**	**18 03 37.1**	**-0.4**
CLL				*i* Pg	**Pg**	**18 03 40.6**	**-1.0**
CLL				*e*Sg	**Sg**	**18 04 07.0**	**-0.3**
CLL	**Collm**	**1.93**	**269**	*i* PN	**Pn**	**18 03 37.1**	**-0.4**
CLL				*i* PG	**Pg**	**18 03 40.6**	**-1.0**
CLL				*i*		18 03 44.7	
CLL				*e*		18 03 55.0	
CLL				*e*SG	**Sg**	**18 04 07.0**	**-0.3**
OKC	**Ostrava-Krasne**	**2.02**	**138**	*e*PN	**Pn**	**18 03 39.1**	**+0.3**
OKC				*e*PG	**Pg**	**18 03 41.9**	**-1.5**
OKC				*e*SG	**Sg**	**18 04 08.6**	**-1.8**
	32nm,0.6s						
VRAC	**Vranov**	**2.09**	**171**	*e*Pn	**Pn**	**18 03 41.2**	**+1.5**
VRAC				*e*Sg	**Sg**	**18 04 12.0**	**-0.6**
	12nm,0.3s						
KRUC	**Moravsky**	**2.32**	**175**	*e*Pn	**Pn**	**18 03 44.9**	**+1.9**
KRUC	**Moravsky**	**2.32**	**175**	*e*Pg	**Pg**	**18 03 47.9**	**-1.4**
KRUC				*e*Sg	**Sg**	**18 04 19.6**	**-0.6**
	11nm,0.3s						
NKC	**Novy Kostel**	**2.57**	**245**	*e*PN	**Pn**	**18 03 47.3**	**+0.7**
NKC				*e*PG	**Pg**	**18 03 53.5**	**-0.8**
NKC				*e*SG	**Sg**	**18 04 28.3**	**-0.3**
	27nm,0.2s						
OJC	**Ojcow**	**2.63**	**115**	*e*PN	**Pn**	**18 03 45.0**	**-2.4**
OJC				*e*PG	**Pg**	**18 03 55.0**	**-0.5**
OJC				*e*SG	**Sg**	**18 04 29.0**	**-1.5**
OJC	**Ojcow**	**2.63**	**115**	*e*Pg	**Pg**	**18 03 54.7**	**-0.8**
OJC				*e*Sg	**Sg**	**18 04 29.4**	**-1.1**
KHC	**Kasperske Hory**	**2.75**	**217**	*e*PN	**Pn**	**18 03 50.1**	**+0.8**
KHC				*e*PG	**Pg**	**18 03 56.2**	**-1.9**
KHC				*e*SN	**Sn**	**18 04 23.4**	**-0.4**
KHC				*e*SG	**Sg**	**18 04 33.5**	**-1.3**
	12nm,0.4s						
KHC	**Kasperske Hory**	**2.75**	**217**	*e*Pn	**Pn**	**18 03 49.8**	**+0.5**
MOX	**Moxa**	**2.91**	**257**	*e*Pn	**Pn**	**18 03 52.3**	**+0.8**
MOX				*e*Pg	**Pg**	**18 03 59.9**	**-1.3**
MOX				*e*Sg	**Sg**	**18 04 39.8**	**-0.2**
MOX	**Moxa**	**2.91**	**257**	*i* P	**Pn**	**18 03 52.3**	**+0.8**
MOX				Pg	**Pg**	**18 04 00.0**	**-1.2**
MOX				Sg	**Sg**	**18 04 40.0**	**0.0**
MOX	**Moxa**	**2.91**	**257**	*e*Pg	**Pg**	**18 03 59.9**	**-1.3**
MOX				*e*Sg	**Sg**	**18 04 38.1**	**-1.9**
GEC2	**GERESS Array S**	**2.95**	**212**	*e*Pn	**Pn**	**18 03 53.3**	**+1.2**
GEC2				*e*Sg	**Sg**	**18 04 40.9**	**-0.5**
GERES	**GERESS Array B**	**2.95**	**212**	Pn	**Pn**	**18 03 53.3**	**+1.2**
	0.8nm,0.3s,baz=27,slow=13,SNR=20						
GERES				Pg	**Pg**	**18 03 59.5**	**-2.5**
	4.5nm,0.3s,baz=30,slow=17,SNR=54						
GERES				Sn	**Sn**	**18 04 29.0**	**+0.2**
	1.8nm,0.3s,baz=22,slow=22,SNR=6.8						
GERES				Lg		18 04 38.9	
	2.6nm,0.3s,baz=34,slow=26,SNR=5.6						
GERES	**GERESS Array B**	**2.95**	**212**	Pg	**Pg**	**18 03 59.5**	**-2.5**
WET	**Wettzell**	**3.03**	**224**	*e*Pn	**Pn**	**18 03 54.1**	**+0.9**
NIE	**Niedzica**	**3.34**	**124**	*e*P	**Pn**	**18 04 05.7**	**+8.1**
NIE				*e*S	**Sn**	**18 04 50.9**	**+12**
GRA1	**Grafenberg Arr**	**3.52**	**243**	*e*Pn	**Pn**	**18 04 00.8**	**+0.6**
GRA1				*e*Sg	**Sg**	**18 04 58.0**	**-2.4**
GRF	**Grafenberg Arr**	**3.52**	**243**	*e*Pn	**Pn**	**18 04 00.8**	**+0.6**
GRF				*e*Sg	**Sg**	**18 04 58.0**	**-2.4**
CLZ	**Clausthal**	**3.59**	**280**	*e*Pn	**Pn**	**18 04 01.5**	**+0.4**
MOA	**Molln**	**3.71**	**199**	⇑*i*PN	**Pn**	**18 04 03.6**	**+0.7**
MOA				*i* SG	**Sg**	**18 05 05.6**	**-1.1**
	7.4nm,0.4s						
KECS	**Kecovo**	**4.05**	**134**	*e*PG	**Pg**	**18 04 21.0**	**-3.0**
ARSA	**Arzberg**	**4.14**	**185**	⇑*i*PN	**Pn**	**18 04 08.4**	**-0.5**
ARSA				*i* SG	**Sg**	**18 05 17.9**	**-2.9**
	9.7nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.25**	**123**	*e*PN	**Pn**	**18 04 10.5**	**-0.1**
CRVS				*e*SG	**Sg**	**18 05 24.4**	**-0.2**
KBA	**Koelnbreinsper**	**4.65**	**204**	⇓*i*PN	**Pn**	**18 04 17.0**	**+0.8**
KBA				*i* SG	**Sg**	**18 05 36.9**	**-1.0**
	5.8nm,0.5s						
AKASG	**Malin Array Be**	**8.32**	**89**	Pn	**P**	**18 05 08.0**	**+0.2**
	0.8nm,0.3s,baz=276,slow=12,SNR=5.4						
HFS	**Hagfors**	**8.89**	**352**	Pn	**P**	**18 05 09.6**	**-6.1**
	0.1nm,0.3s,baz=168,slow=14,SNR=5.8						
FINES	**FINESS Array B**	**11.50**	**25**	Pn	**P**	**18 05 45.1**	**-6.3**
	0.2nm,0.3s,baz=214,slow=12,SNR=8.0						
EKA	**Eskdalemuir Ar**	**12.15**	**297**	Pn	**P**	**18 05 55.9**	**-4.4**
	0.1nm,0.3s,baz=98,slow=14,SNR=2.7						
ARCES	**ARCESS Array B**	**18.77**	**10**	Pn	**P**	**18 07 18.4**	**-7.0**
	0.2nm,0.3s,baz=195,slow=14,SNR=6.9						

IDC ***29*** *18:03:50.1±8.3, 20.58S×177.73W, h554^{km}±95^{km}, mb3.1/5, mb1 3.4/5, mb1mx3.1/15, mbtmp4.0/5, Error ellipse: s-maj=128.8km s-min=38.8km az=159.0*

ISC 29 18:03:45.8±2.2**, 20.2S**±0.8×**177.9W**±0.5**, h500^{km}, n10,** σ**0^{s}87**/5**, mb3.5**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.99**	**244**	P	**P**	**18 10 21.8**	**+0.5**
	1.2nm,0.6s,mb3.5,baz=92,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**44.72**	**262**	P	**P**	**18 11 14.7**	**-0.7**
	1.0nm,0.3s,mb3.7,baz=97,slow=7.4,SNR=22						
FITZ	**Fitzroy Crossi**	**53.15**	**262**	P	**P**	**18 12 17.9**	**-0.4**
	2.1nm,0.6s,mb3.6,baz=354,slow=20,SNR=5.6						
NVAR	**Mina Array Bea**	**80.76**	**43**	P	**P**	**18 15 07.3**	**-0.3**
	0.4nm,0.5s,mb3.2,baz=215,slow=3.8,SNR=3.5						
CMAR	**Chiang Mai Arr**	**90.09**	**290**	P	**P**	**18 15 54.2**	**+1.0**
	0.8nm,0.7s,mb3.6,baz=70,slow=2.9,SNR=5.7						
MKAR	**Makanchi Array**	**111.06**	**313**	PKiKP		18 21 21.1	
	0.2nm,0.6s,baz=101,slow=0.3,SNR=3.6						
ARCES	**ARCESS Array B**	**128.65**	**350**	PKP	PKPdf	18 21 54.4	-0.6
	1.1nm,0.8s,baz=72,slow=3.8,SNR=3.7						
FINES	**FINESS Array B**	**135.52**	**344**	PKP	PKPdf	18 22 09.2	+1.2
	0.5nm,0.5s,baz=90,slow=1.9,SNR=3.7						
AKASG	**Malin Array Be**	**142.80**	**331**	PKP	PKPdf	18 22 18.6	-2.7
	1.0nm,0.4s,baz=43,slow=4.6,SNR=12						
GERES	**GERESS Array B**	**149.95**	**345**	PKPbc	PKPdf	18 22 39.0	+5.8
	0.7nm,0.8s,baz=45,slow=3.8,SNR=4.2						

NEIC ***29*** *18:09:08.4±0.3, 57.64N×142.81W, h10^{km}, mb3.9/1, ML4.0(PMR), ML3.9(AEIC), Error ellipse: s-maj=5.3km s-min=3.0km az=191.0*

IDC ***29*** *18:09:08.7±1.2, 57.75N×142.53W, mb3.4/5, mb1 3.7/10, mb1mx3.6/26, mbtmp3.5/10, ML3.6/5, MS2.9/2, Ms1 2.9/2, ms1mx2.5/18, Error ellipse: s-maj=21.8km s-min=13.5km az=36.0*

PGC ***29*** *18:09:09.1, 57.47N×142.54W, h10^{km}, MLSn3.8/7, Gulf of Alaska.*

ISC 29 18:09:04.0±0.3**, 57.44N**±0.04×**142.69W**±0.05**, h10^{km}, n77,** σ**0^{s}97**/88**, mb3.3**/6**, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YKU2	**Yakutat**	**2.62**	**36**	P	**Pn**	**18 09 49.0**	**+1.9**
MID	**Middleton Isla**	**2.77**	**318**	P	**Pn**	**18 09 49.7**	**+0.5**
PNL	**Peninsula**	**2.83**	**36**	P	**Pn**	**18 09 51.9**	**+1.8**
PNL				S	**Sn**	**18 10 21.9**	**-2.6**
YAH	**Yahtse**	**2.97**	**9**	P	**Pn**	**18 09 54.0**	**+1.8**
TGL	**Tana Glacier**	**3.33**	**359**	P	**Pn**	**18 09 57.4**	**+0.2**
EYAK	**Cordova Ski Ar**	**3.50**	**334**	P	**Pn**	**18 09 59.9**	**+0.3**
HIN	**Hinchinbrook I**	**3.56**	**328**	P	**Pn**	**18 10 01.1**	**+0.6**
CTGM	**Chitina Glacie**	**3.60**	**11**	P	**Pn**	**18 10 02.6**	**+1.5**
BALM	**Baldy**	**3.61**	**3**	P	**Pn**	**18 10 02.4**	**+1.1**
SIT	**Sitka**	**4.02**	**92**	*e*P	**Pn**	**18 10 05.9**	**-1.2**
DIV	**Divide**	**4.02**	**338**	P	**Pn**	**18 10 07.3**	**+0.2**
GLB	**Gilahina Butte**	**4.05**	**352**	P	**Pn**	**18 10 08.1**	**+0.6**
VLZ	**Valdez**	**4.14**	**335**	P	**Pn**	**18 10 08.6**	**-0.2**
HYT	**Haines Junctio**	**4.32**	**36**	Pn	**Pn**	**18 10 13.3**	**+2.0**
HYT				Sn	**Sn**	**18 11 00.3**	**-2.1**
	comp=Z,25nm,0.4s						
HYT				Trac		18 11 00.8	
	comp=Z,25nm,0.4s						
BESE	**Bessie Mountai**	**4.32**	**71**	P	**Pn**	**18 10 12.6**	**+1.3**
SEW	**Seward**	**4.42**	**310**	P	**Pn**	**18 10 12.3**	**-0.4**
MPA	**Moose Pass**	**4.61**	**314**	P	**Pn**	**18 10 15.0**	**-0.4**
BRLK	**Bradley Lake**	**4.88**	**302**	P	**Pn**	**18 10 19.1**	**-0.1**
CNPM	**China Poot**	**4.95**	**299**	P	**Pn**	**18 10 20.4**	**+0.2**
SLKM	**Skilak Lake**	**4.96**	**311**	P	**Pn**	**18 10 20.5**	**+0.1**
SCM	**Sheep Creek Mo**	**4.99**	**334**	P	**Pn**	**18 10 21.0**	**+0.1**
RC01	**Rabbit Creek A**	**5.14**	**318**	P	**Pn**	**18 10 22.3**	**-0.7**
XLV	**Seldovia**	**5.15**	**297**	P	**Pn**	**18 10 23.0**	**-0.1**
WHY	**Whitehorse**	**5.17**	**48**	P	**Pn**	**18 10 24.9**	**+1.6**
WHY	**Whitehorse**	**5.17**	**48**	Pn	**Pn**	**18 10 24.9**	**+1.6**
WHY				Sn	**Sn**	**18 11 19.7**	**-4.0**
WHY				Trac		18 11 21.9	
	comp=Z,103nm,0.6s						
SML	**Sawmill**	**5.23**	**329**	P	**Pn**	**18 10 24.5**	**+0.3**
PMR	**Palmer**	**5.30**	**325**	P	**Pn**	**18 10 24.8**	**-0.4**
KDAK	**Kodiak Island**	**5.33**	**278**	P	**Pn**	**18 10 26.4**	**+0.8**
VOGL	**Vogel Lake**	**5.34**	**315**	P	**Pn**	**18 10 26.3**	**+0.5**
FIB	**Fire Island**	**5.35**	**317**	*e*P	**Pn**	**18 10 26.2**	**+0.3**
GHO	**Glory Hole Cre**	**5.37**	**327**	P	**Pn**	**18 10 26.5**	**+0.3**
PWA	**Palmer West**	**5.58**	**322**	P	**Pn**	**18 10 29.1**	**-0.1**
CRAG	**Craig**	**5.66**	**106**	*e*P	**Pn**	**18 10 29.8**	**-0.5**
RDT	**Redoubt**	**5.92**	**306**	P	**Pn**	**18 10 34.0**	**+0.1**
OPT	**Oil Point**	**5.95**	**296**	P	**Pn**	**18 10 34.8**	**+0.5**
AGU	**Augustine-Summ**	**5.96**	**293**	P	**Pn**	**18 10 35.1**	**+0.5**
IVE	**Iliamna Volcan**	**5.96**	**300**	P	**Pn**	**18 10 34.3**	**-0.3**
IVS	**Iliamna South**	**5.99**	**300**	P	**Pn**	**18 10 34.8**	**-0.2**
RSO	**Redoubt South**	**6.02**	**304**	*e*P	**Pn**	**18 10 35.5**	**+0.1**
ILW	**Iliamna West**	**6.04**	**300**	P	**Pn**	**18 10 35.5**	**0.0**
SPU	**Mount Spurr**	**6.08**	**312**	P	**Pn**	**18 10 36.2**	**-0.1**
CKL	**Chakachamna La**	**6.21**	**311**	P	**Pn**	**18 10 38.0**	**+0.1**
MCNL	**McNeil River**	**6.38**	**291**	P	**Pn**	**18 10 40.5**	**0.0**
NDB	**Naden**	**6.53**	**118**	Pn	**Pn**	**18 10 42.2**	**-0.3**
NDB				Sn	**Sn**	**18 11 53.0**	**-4.7**
	comp=Z,13nm,0.2s						
NDB				Trac		18 12 05.5	
	comp=Z,13nm,0.2s						
KAHC	**Katmai Hardscr**	**6.65**	**286**	P	**Pn**	**18 10 44.7**	**+0.4**
CAHL	**Cahill**	**6.78**	**280**	P	**Pn**	**18 10 45.9**	**-0.2**
DLBC	**Dease Lake**	**6.82**	**76**	Pn	**Pn**	**18 10 48.9**	**+2.3**
	1.9nm,0.3s,baz=261,slow=9.2,SNR=14						
DLBC				Sn	**Sn**	**18 12 01.0**	**-4.1**
	2.4nm,0.3s,baz=28,slow=25,SNR=7.0						
DLBC	**Dease Lake**	**6.82**	**76**	P	**Pn**	**18 10 46.2**	**-0.4**
DLBC	**Dease Lake**	**6.82**	**76**	Pn	**Pn**	**18 10 47.5**	**+0.9**
DLBC				Sn	**Sn**	**18 12 00.6**	**-4.5**
DLBC				Trac		18 12 26.7	
	comp=Z,8.0nm,0.4s						
KJL	**Kejulik**	**6.92**	**281**	P	**Pn**	**18 10 47.4**	**-0.7**
VIB	**Van Inlet**	**7.15**	**122**	Pn	**Pn**	**18 10 50.9**	**-0.4**
VIB				Sn	**Sn**	**18 12 06.7**	**-6.6**
VIB				Trac		18 12 11.9	
	comp=Z,13nm,0.3s						
KTH	**Kantishna Hill**	**7.35**	**330**	P	**Pn**	**18 10 52.7**	**-1.4**
MOBC	**Moresby Island**	**7.48**	**120**	Pn	**Pn**	**18 10 55.7**	**-0.2**
MOBC				Sn	**Sn**	**18 12 16.1**	**-5.6**
MOBC				Trac		18 12 22.5	
	comp=Z,5.0nm,0.2s						
SVW2	**Sparrevohn**	**7.55**	**304**	P	**Pn**	**18 10 55.9**	**-1.0**
ILAR	**Eielson Array**	**7.63**	**346**	Pn	**Pn**	**18 10 56.6**	**-1.4**
	0.2nm,0.3s,baz=165,slow=14,SNR=6.6						
ILAR				Sn	**Sn**	**18 12 17.5**	**-7.9**
	0.4nm,0.3s,baz=167,slow=22,SNR=4.8						
RUBB	**Prince Rupert**	**7.66**	**109**	Pn	**Pn**	**18 10 57.1**	**-1.3**

RUBB				Sn	Sn	18 12 19.2	-6.9
RUBB				Trac		18 12 32.2	
	comp=Z,13nm,0.6s						
BNB	Barry Inlet	7.95	123	Pn	Pn	18 11 02.3	-0.2
BNB				Sn	Sn	18 12 27.4	-6.1
	comp=Z,63nm,0.2s						
BNB				Trac		18 12 35.2	
	comp=Z,63nm,0.2s						
TT01	Tatalina	8.60	315	P	P	18 11 09.8	-1.7
TTA	Tatalina	8.61	315	*e*P	P	18 11 10.9	-0.7
BBB	Bella Bella	9.92	116	Pn	P	18 11 29.3	-0.3
	0.8nm,0.3s,baz=147,slow=21,SNR=9.4						
BBB				LR	LR	18 14 57.5	
	comp=Z,63nm,21.1s,baz=314,slow=35						
BBB	Bella Bella	9.92	116	Pn	P	18 11 28.4	-1.2
IM3	Indian Mountai	10.03	333	P	P	18 11 29.7	-1.3
BM3	Burnt Mountain	10.05	356	P	P	18 11 30.8	-0.6
IMA	Indian Mountai	10.08	334	*e*P	P	18 11 30.4	-1.3
HOLB	Holberg	10.93	122	Pn	P	18 11 44.1	+0.8
MAYB	Maynard	11.53	121	Pn	P	18 11 51.6	0.0
INK	Inuvik	11.66	17	Pn	P	18 11 52.5	-0.8
	0.1nm,0.3s,baz=218,slow=14,SNR=3.3						
INK				LR	LR	18 16 05.0	
	comp=Z,57nm,19.7s,baz=97,slow=37						
INK	Inuvik	11.66	17	Pn	P	18 11 54.5	+1.2
YKA	Yellowknife Ar	14.87	58	Pn	P	18 12 35.7	0.0
	0.1nm,0.3s,baz=264,slow=13,SNR=2.6						
YKA	Yellowknife Ar	14.87	58	Pn	P	18 12 35.7	0.0
NEW	Newport	17.87	110	P	P	18 13 19.7	+5.7
	0.2nm,0.3s,baz=342,slow=7.6,SNR=4.8						
HLID	Hailey	22.51	116	*e*P	P	18 14 09.8	+5.0
	5.4nm,1.3s,mb3.8						
ELK	Elko	24.29	122	P	P	18 14 29.0	+6.8
	0.2nm,0.3s,mb3.0,baz=284,slow=8.0,SNR=4.6						
NVAR	Mina Array Bea	24.84	129	P	P	18 14 32.9	+5.3
	0.5nm,0.6s,mb3.2,baz=335,slow=9.1,SNR=4.4						
PDAR	Pinedale Array	25.50	111	P	P	18 14 38.6	+4.9
	0.4nm,0.7s,mb3.0,baz=309,slow=9.5,SNR=4.0						
SONM	Songino Array	60.56	314	P	P	18 19 20.0	+3.6
	0.4nm,0.6s,mb3.8,baz=51,slow=7.9,SNR=3.5						
MKAR	Makanchi Array	69.61	329	P	P	18 20 17.6	+2.8
	0.2nm,0.7s,mb3.2,baz=30,slow=6.2,SNR=2.7						

GUC 29 18:20:01.5±0.6,28.19S×70.37W,h61^{km}±14^{km},ML3.7,1C, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	Vallenar	0.51	222	*e*P	P	18 20 14.3	+0.5
VACH				*i* S	S	18 20 23.3	+0.5
CPCH	Copiapo	0.83	1	⇑*i*P	P	18 20 17.8	+0.2
CPCH				*i* S	S	18 20 30.1	+0.6
CPCH				AMP		18 20 31.0	
	comp=N,35µm,0.1s						
LCO	Las Campanas	0.87	200	*e*P	P	18 20 18.6	+0.6
LCO				*i* S	S	18 20 32.0	+1.7
LCO				AMP		18 20 33.2	
	comp=E,1µm,0.2s						
TLL	Tololo Astrono	2.00	191	*e*P	P	18 20 34.1	+0.4
TLL				*i* S	S	18 20 59.2	+1.7
TLL				AMP		18 21 00.9	
	comp=N,384nm,0.4s						
CPN1	Cerro Paranal	3.55	359	*e*P	P	18 20 55.5	-0.1
CPN1				*i* S	S	18 21 29.8	-6.8

IDC 29 18:23:43.5±13.0,36.15N×70.80E,h99^{km}±112^{km},mb3.4/6, mb1 3.5/8,mb1mx3.3/21,mbtmp3.7/8,ML3.7/2,Error ellipse: s-maj=68.7km s-min=22.1km az=27.0

MOS 29 18:23:58.8±1.2,36.77N×71.10E,h247^{km},mb3.6/1,Error ellipse: s-maj=26.6km s-min=14.9km az=107.9

NEIC 29 18:23:59.2±2.8,36.61N×70.94E,h238^{km}±31^{km},mb4.2/4, Error ellipse: s-maj=27.2km s-min=9.0km az=57.0

NNC 29 18:24:02.4±4.7,37.12N×71.17E,h213^{km}±30^{km},mpv4.1, Error ellipse: s-maj=50.1km s-min=19.2km az=38.0

ISC 29 18:23:54.9±0.4,36.56N±0.03×71.16E±0.07,h221^{km}±7^{km}, n52,σ1^{s}24/62,mb3.4/5,9C-5D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.80	167	⇓P	P	18 24 45.5	+1.6
CHCP	Chirah Chowk	3.37	149	P	P	18 24 52.4	+1.9
THW	Thamme Wali	3.79	172	⇑P	P	18 24 56.8	+1.3
SBDP	Sheikh Budin	4.26	184	⇑P	P	18 25 01.4	+0.2
SARP	Sargodha	4.79	164	⇑P	P	18 25 08.8	+0.9
SARP				S	S	18 26 03.0	-1.6
DRP	Derazinda	4.87	190	⇑P	P	18 25 09.5	+0.7
THN	Thein Dam	5.58	136	*e*P	P	18 25 18.8	+1.0
THN				*e*S	S	18 26 22.9	+0.6
AML	Almayashu	5.90	19	P	P	18 25 22.1	+0.1
	SNR=118						
UCH	Uchtor	6.23	24	P	P	18 25 26.8	+0.6
	SNR=81						
KZA	Kyzart	6.36	29	P	P	18 25 28.0	+0.2
	SNR=22						
KK31	Karatay Array	6.56	356	⇓P	P	18 25 29.4	-0.9
	5.5nm,0.4s,baz=181,slow=12,SNR=135						
KK31				⇑S	S	18 26 39.5	-5.3
	17nm,0.7s						
AAK	Ala-Archa	6.59	22	P	P	18 25 30.9	+0.1
	SNR=17						
AAK	Ala-Archa	6.59	22	⇓P	P	18 25 31.2	+0.4
	10nm,0.3s						
AAK				⇑S	S	18 26 44.2	-1.4
	14nm,0.7s						
KBK	Karagaybulak	6.76	25	P	P	18 25 33.7	+0.8
	SNR=6.0						
ULHL	Ulahol	6.91	33	P	P	18 25 35.7	+0.8
	SNR=12						
SDNR	Sundarnagar	6.98	135	*e*P	P	18 25 35.4	-0.4
SDNR				*e*S	S	18 26 52.4	-2.2
CHMS	Chumysh	7.00	22	P	P	18 25 36.6	+0.5
	SNR=6.2						
USP	Ospenovka	7.18	20	P	P	18 25 37.6	-0.7
	SNR=8.8						
TKM2	Tokmak 2	7.22	27	P	P	18 25 39.4	+0.6
	SNR=37						
SMLA	Simla	7.37	136	*i* P	P	18 25 38.5	-2.3
SMLA				*i* S	S	18 26 59.3	-4.3
KLP	Kalpa	7.73	128	AML	AML	18 28 02.5	
	comp=N,53nm,0.5s						
KLP				AML	AML	18 28 07.0	
	comp=E,74nm,0.5s						
KKR	Kurukshetra	8.11	143	*e*x	S	18 27 28.4	+7.7
KHET	Khetri	9.33	154	*e*P	P	18 26 06.0	-0.1
KHET				*e*x	S	18 27 46.7	-2.0
KALG	Kalgarh	9.49	136	*e*x	x	18 27 26.9	
KALG				*e*x	x	18 27 28.1	
AYAN	Aya Nagar	9.50	146	*e*S	S	18 27 51.3	-1.3
KUDL	Kundal	9.52	150	*e*P	P	18 26 08.7	+0.1
KUDL				*e*S	S	18 27 50.0	-3.2
ASOR	Ausora	9.57	143	*e*x	x	18 26 23.7	
SONA	Sohna	9.68	147	*e*P	P	18 26 09.1	-1.4
SONA				*e*S	S	18 27 53.0	-3.8
SONA				AML	AML	18 27 56.0	
	comp=N,23nm,0.3s						
SONA				AML	AML	18 27 59.5	
	comp=E,29nm,0.5s						
MK31	Makanchi Array	13.17	36	⇓P	P	18 26 55.1	+0.4
	comp=E,0.4nm,0.5s,baz=212,slow=13,SNR=10						
MKAR	Makanchi Array	13.17	36	P	P	18 26 53.0	-1.7
	comp=E,0.2nm,0.3s,baz=208,slow=12,SNR=11						
KOLN	Koldanda	13.70	126	*e*P	P	18 27 04.2	+2.9
KOLN				*e*S	S	18 29 27.1	-1.5
GKN	Gorkha	14.23	123	*e*P	P	18 27 11.8	+3.9
	comp=E,20nm,0.6s						
GKN				*e*S	S	18 29 41.6	+1.1
DMN	Daman	14.80	123	*e*P	P	18 27 18.9	+4.0
	comp=E,14nm,0.7s						
KKN	Kakani	14.80	122	*e*P	P	18 27 19.9	+5.0
	comp=E,13nm,0.6s						
KKN	Kakani	14.80	122	*e*P	P	18 27 19.9	+5.0
KKN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PKI	Pulchoki	15.03	123	*e*P	P	18 27 23.2	+5.5
AB31	Akbulak array	15.09	331	P	P	18 27 16.6	-1.8
	comp=Z,2.0nm,0.5s,baz=132,slow=12,SNR=44						
AB31				⇑S	S	18 29 58.3	-1.4
	comp=Z,3.5nm,1.1s,baz=144,slow=22,SNR=5.2						
GUN	Gumba	15.14	121	*e*P	P	18 27 25.4	+6.3
VOSK	Vostochnaya	16.16	360	⇑P	P	18 27 30.6	-0.7
	comp=Z,2.2nm,0.7s						
ZRNK	Zerenda	16.46	355	⇑P	P	18 27 35.0	+0.2
	comp=Z,1.2nm,0.8s						
ZRNK	Zerenda	16.46	355	*e*P	P	18 27 34.7	-0.1
BVA0	Borovoye Array	16.48	358	⇓P	P	18 27 33.5	-1.4
	comp=Z,0.3nm,0.9s,baz=159,slow=14,SNR=12						
BVAR	Borovoye Array	16.48	358	P	P	18 27 34.4	-0.6
	comp=Z,0.5nm,0.3s,baz=162,slow=15,SNR=10						
BVAR				S	S	18 30 36.9	+6.6
	comp=Z,0.1nm,0.3s,baz=170,slow=17,SNR=4.2						
ZAL	Zalesovo	19.79	24	P	P	18 28 11.4	+1.7
	comp=Z,1.1nm,0.3s						
SONM	Songino Array	28.20	55	P	P	18 29 31.5	+2.6
	comp=Z,0.3nm,0.6s,mb3.1,baz=270,slow=7.2,SNR=2.8						
FINES	FINESS Array B	37.51	326	P	P	18 30 49.2	+0.4
	comp=Z,0.8nm,0.4s,mb3.6,baz=122,slow=9.2,SNR=12						
FINES	FINESS Array B	37.51	326	P	P	18 30 49.2	+0.4
ARCES	ARCESS Array B	41.14	338	P	P	18 31 19.4	+0.8
	comp=Z,1.1nm,0.6s,mb3.5,baz=117,slow=8.1,SNR=9.1						
NB2	NORSAR Subarra	44.41	323	P	P	18 31 45.0	+0.1
	comp=Z,1.0nm,0.5s,mb3.4,baz=94,slow=7.4						
NB2	NORSAR Subarra	44.41	323	P	P	18 31 45.0	+0.1
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
NOA	NORSAR Array B	44.41	323	P	P	18 31 44.8	-0.1
	comp=Z,1.3nm,0.6s,mb3.4,baz=96,slow=7.8,SNR=6.8						
WRA	Warramunga Arr	81.92	122	P	P	18 35 51.8	+0.6
	comp=Z,0.4nm,0.6s,mb3.2,baz=323,slow=5.0,SNR=6.8						

WEL 29 18:28:27.5±0.2,38.36S×175.92E,h148^{km}±2^{km},ML3.9/14, 2C,Error ellipse: s-maj=2.2km s-min=1.9km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWVZ	Taurewa	0.81	208	PN	P	18 28 50.6	-0.3
NGZ	Ngauruhoe	0.86	197	PN	P	18 28 51.3	+0.1
CNZ	Chateau	0.89	199	PN	P	18 28 51.4	0.0
BKZ	Black Stump Fm	0.93	151	⇑PN	P	18 28 51.7	0.0
BKZ				SN	S	18 29 09.6	-0.7
TUVZ	Tukino	0.94	193	PN	P	18 28 51.9	+0.1
TUVZ				SN	S	18 29 10.8	+0.4
URZ	Urewera	0.94	85	PN	P	18 28 51.4	-0.4
URZ				SN	S	18 29 09.7	-0.7
FWVZ	Far West T-bar	0.94	198	PN	P	18 28 51.9	0.0
TRVZ	Turoa	0.99	197	PN	P	18 28 52.3	+0.2
WNVZ	Wahianoa	1.00	194	PN	P	18 28 52.3	0.0
WNVZ				SN	S	18 29 11.2	-0.1
PKVZ	Pokaka	1.03	205	PN	P	18 28 52.4	-0.2
MOVZ	Moawhango	1.06	187	PN	P	18 28 52.4	-0.4
MOVZ				SN	S	18 29 11.0	-1.2
MTVZ	Mangateitei	1.09	199	PN	P	18 28 53.0	-0.1
MTVZ				SN	S	18 29 12.9	+0.2
VRZ	Vera Road	1.19	229	PN	P	18 28 53.8	-0.3
MWZ	Matawai	1.27	90	PN	P	18 28 54.5	-0.3
KNZ	Kokohu	1.53	116	PN	P	18 28 57.7	+0.1
WAZ	Wanganui	1.58	207	PN	P	18 28 57.3	-0.7
NEZ	North Egmont	1.69	237	PN	P	18 28 59.1	-0.2
TSZ	Takapari Road	1.70	179	⇑PN	P	18 28 58.6	-0.8
PWZ	Pawanui	1.82	157	PN	P	18 29 00.3	-0.6
PUZ	Puketiti	1.86	82	PN	P	18 29 01.1	-0.2
MXZ	Matakaoa Point	2.05	68	PN	P	18 29 03.5	+0.1
MRZ	Mangatainoka R	2.32	186	PN	P	18 29 04.5	-2.3
MRZ				SN	S	18 29 31.9	-5.0
BFZ	Birch Farm	2.34	174	PN	P	18 29 05.2	-1.9
KIW	Kapiti Island	2.62	197	PN	P	18 29 07.7	-3.0
MTW	Mount Morrison	2.82	186	PN	P	18 29 09.9	-3.3
CAW	Cannon Point	2.83	193	PN	P	18 29 10.2	-3.1
DUWZ	D'Urville Isla	2.89	212	PN	P	18 29 11.0	-3.1
MRW	Makara Radio	3.02	198	PN	P	18 29 12.3	-3.5
MRW				SN	S	18 29 46.8	-5.9
TRWZ	Traveller	3.04	183	PN	P	18 29 13.0	-3.2
PAWZ	Paruwai Farm	3.05	187	PN	P	18 29 12.5	-3.6
SNZO	South Karori	3.10	197	PN	P	18 29 13.0	-3.8
MSWZ	Moikau Station	3.10	189	PN	P	18 29 13.2	-3.6
TCW	Tory Channel	3.12	203	PN	P	18 29 13.5	-3.6
TUWZ	Tuamarina	3.43	206	PN	P	18 29 17.1	-4.0
QRZ	Quartz Range	3.60	226	PN	P	18 29 18.7	-4.6
BSWZ	Blackbirch Sta	3.70	204	*e*PN	P	18 29 20.4	-4.3
THZ	Tophouse	4.12	213	*e*PN	P	18 29 25.8	-4.3
DSZ	Denniston Nort	4.63	222	*e*PN	P	18 29 31.9	-5.0

CSEM 29 18:38:37.4±0.1,35.94N×31.22E,h80^{km},Mw3.0,Error ellipse: s-maj=1.6km s-min=1.6km az=32.0

ISK 29 18:38:38.0,35.93N×31.36E,h24^{km},MD3.4

HLW 29 18:38:38.9,35.85N×31.11E,h14^{km},Mb3.3

NIC 29 18:38:39.6±0.4,36.33N×31.67E,h41^{km},ML3.5,MW3.0

ISC 29 18:38:39.0±0.4,35.88N±0.03×31.25E±0.03,h84^{km}±13^{km}, n34,σ1^{s}18/48,2C-1D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTB	Antalya	1.13	335	*i* PN	P	18 38 57.9	-2.2
ALFC	Alevga	1.31	123	P	P	18 39 02.3	-0.2
	14nm,0.2s						
ALFC				S	S	18 39 20.4	+0.4
PPCY	Paphos	1.33	138	P	P	18 39 05.1	+2.3
AKAS	Kas	1.38	285	*i* P	P	18 39 03.6	+0.2
AKAS				*i* S	S	18 39 20.9	-0.6
ELL	Elmali	1.39	309	PN	P	18 39 03.5	-0.1
HDMB	Hadim	1.47	42	PN	P	18 39 02.4	-2.2
HDMB				SN	S	18 39 20.2	-3.3
LEF	Lefka	1.53	119	PN	P	18 39 03.9	-1.5
ERMK	Ermenek	1.54	60	*i* P	P	18 39 04.7	-0.8
ERMK				*i* S	S	18 39 24.4	-0.7
BCK	Bucak	1.67	342	PN	P	18 39 06.1	-1.1
SZAC	Souni-Zanaja	1.74	129	P	P	18 39 09.8	+1.7
MAMC	Mammari	1.75	113	P	P	18 39 07.3	-0.9
FETY	Fethiye	1.91	294	*e*PN	P	18 39 11.4	+1.1
GOLH	Golhisar	1.92	315	*i* P	P	18 39 12.3	+1.8
GOLH				*i* S	S	18 39 35.9	+2.2
CSS	Prodhromos	1.93	118	P	P	18 39 09.8	-0.7
	2.2nm,0.4s						
CSS				S	S	18 39 34.2	+0.4
ISP	Isparta	2.05	343	*e*PN	P	18 39 10.9	-1.4
TKTP	Tekketepe	2.29	341	*i* P	P	18 39 16.2	+0.6
TKTP				*i* S	S	18 39 43.9	+1.3
MEST	Erdemli	2.44	72	*i* P	P	18 39 18.5	+0.8
MEST				*i* S	S	18 39 48.4	+1.8
DNZL	Cakiroluk	2.53	316	*i* P	P	18 39 21.6	+2.6
DNZL				*i* S	S	18 39 55.6	+6.8
DENT	Denizli	2.59	317	*e*PN	P	18 39 20.3	+0.6
YER	Yerkesik	2.70	299	*e*PN	P	18 39 22.8	+1.4
KDHN	Kadinhani	2.73	14	*i* P	P	18 39 20.9	-0.8
KDHN				*i* S	S	18 39 52.2	-1.5
KIZT	Kizilcal	3.04	9	*e*PN	P	18 39 25.7	-0.4
BDRM	Kayabasi	3.29	292	*i* P	P	18 39 35.8	+6.2
BDRM				*i* S	S	18 40 02.6	-5.1
MANT	Manisa	3.38	321	*i* P	P	18 39 30.1	-0.7
BODT	Bodrum	3.39	292	*e*PN	P	18 39 31.1	+0.2
ESKT	Eskisehir	3.65	355	*e*PN	P	18 39 34.1	-0.4
ESKT	Eskisehir	3.65	355	*i* P	P	18 39 34.1	-0.5
COBT	Iskenderun	4.10	80	*i* P	P	18 39 41.9	+1.3
COBT				*i* S	S	18 40 28.5	+0.8
AMAG	Maghara	5.47	162	⇓P	P	18 39 59.9	+0.4
HMAT	Matruh	5.90	217	P	P	18 40 04.4	-1.0
SLUM		6.67	231	P	P	18 40 14.8	-1.3
SLUM				S	S	18 41 25.1	-6.1
SWA1		8.08	217	P	P	18 40 34.6	-0.9
SWA1				S	S	18 41 59.4	-6.6
SWA2		8.22	218	⇑P	P	18 40 36.7	-0.8
HFRF	Wahat Farafira	9.05	197	⇑P	P	18 40 48.9	+0.1

IDC 29 19:01:13.2±0.7,52.86S×10.05E,mb4.4/11,mb1 4.5/12, mb1mx4.4/16,mbtmp4.4/12,ML4.5/1,MS3.9/11,Ms1 3.8/11, ms1mx3.8/20,Error ellipse: s-maj=20.1km s-min=18.2km az=90.0

NEIC 29 19:01:14.7±0.3,52.87S×10.06E,h10^{km},mb4.6/2,Error ellipse: s-maj=11.5km s-min=7.5km az=100.0

ISC 29 19:01:13.1±0.6,52.87S±0.08×10.0E±0.2,h10^{km},n34, σ1^{s}05/29,mb4.4/13,MS3.9/10,16C,Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	19.66	198	⇑*i*	P	19 05 43.8	-0.7
VNA1	Neumayer--Stat	19.66	198	⇑*i*	P	19 05 46.6	+2.1
VNA1	Neumayer--Stat	19.66	198	⇑*i*	P	19 05 54.3	+10
SNAA	Sanae	19.70	192	⇑*i*	P	19 05 43.2	-1.8
SNAA	Sanae	19.70	192	⇑*i*	P	19 05 46.6	+1.6
SNAA	Sanae	19.70	192	⇑*i*	P	19 05 52.5	+7.5
SNAA	Sanae	19.70	192	⇑*i*	P	19 06 04.1	+19
SNAA	Sanae	19.70	192	P	P	19 05 43.4	-1.7
	1.5nm,0.3s,baz=24,slow=9.9,SNR=84						
SNAA				LR	LR	19 11 35.8	
	comp=Z,154nm,20.5s,baz=23,slow=32						
SNAA	Sanae	19.70	192	⇑*i*P	P	19 05 43.2	-1.8
SNAA				⇑*i*P		19 05 46.6	
SNAA				⇑*i*P		19 05 52.5	
VNA2	Neumayer--Watz	19.73	197	⇑*i*	P	19 05 44.4	-1.0
VNA2	Neumayer--Watz	19.73	197	⇑*i*	P	19 05 47.9	+2.5
VNA2	Neumayer--Watz	19.73	197	⇑*i*	P	19 05 55.5	+10
VNA3	Neumayer Olymp	20.41	198	⇑*i*	P	19 05 52.3	-0.3
VNA3	Neumayer Olymp	20.41	198	⇑*i*	P	19 05 55.8	+3.2
VNA3	Neumayer Olymp	20.41	198	⇑*i*	P	19 06 00.6	+8.0
SUR	Sutherland	21.93	25	P	P	19 06 08.5	+0.1
	14nm,1.0s,mb4.3,baz=193,slow=8.9,SNR=3.1						
SUR				LR	LR	19 12 34.1	
	comp=Z,271nm,20.2s,MS3.6,baz=162,slow=31						
SUR	Sutherland	21.93	25	P	P	19 06 08.4	+0.1
SUR				LR	LR	19 12 34.1	
BOSA	Boshof	26.74	31	P	P	19 06 54.4	-0.2
	1.6nm,0.6s,mb3.7,baz=224,slow=11,SNR=3.6						
BOSA				LR	LR	19 15 32.1	
	comp=Z,296nm,19.8s,MS3.9,baz=221,slow=32						
MAW	Mawson	28.99	141	P	P	19 07 13.9	-0.5
	2.3nm,0.8s,mb4.0,baz=280,slow=13,SNR=5.0						
MAW				LR	LR	19 17 13.2	
	comp=Z,101nm,18.6s,MS3.5,baz=140,slow=33						
QSPA	South Pole Qui	37.37	180	*e*P	P	19 08 26.3	-0.8
	15nm,1.2s,mb4.7						
VNDA	Vanda	48.70	172	P	P	19 09 58.5	-0.3
	9.6nm,0.7s,mb4.9,baz=230,slow=6.8,SNR=22						
VNDA				LR	LR	19 29 51.8	
	comp=Z,224nm,18.9s,MS4.2,baz=201,slow=35						
PLCA	Paso Flores	53.65	249	P	P	19 10 36.0	-0.6
	3.0nm,0.9s,mb4.2,baz=128,slow=7.4,SNR=8.1						
PLCA				LR	LR	19 29 45.7	
	comp=Z,99nm,19.6s,MS3.9,baz=160,slow=32						
CPUP	Villa Florida	55.89	271	P	P	19 10 52.9	-0.4
	3.0nm,0.8s,mb4.3,baz=128,slow=4.7,SNR=7.0						
CPUP				LR	LR	19 30 42.1	
	comp=Z,52nm,20.3s,MS3.6,baz=9.4,slow=32						
KMBO	Kilima Mbogo	56.34	33	LR	LR	19 34 17.5	
	comp=Z,193nm,18.7s,MS4.2,baz=256,slow=35						
BDFB	Brasilia	58.49	287	P	P	19 11 12.2	+0.5
	2.2nm,0.5s,mb4.4,baz=80,slow=5.8,SNR=3.9						
BDFB				LR	LR	19 30 56.2	
	comp=Z,47nm,18.8s,MS3.6,baz=170,slow=30						
CFAA	Coronel Fontan	58.64	258	P	P	19 11 11.6	-1.0
	0.3nm,0.5s,mb3.6,baz=130,slow=4.2,SNR=6.7						
DBIC	Dimbokro	60.64	343	P	P	19 11 25.6	-0.9
	10nm,0.7s,mb5.1,baz=144,slow=9.4,SNR=20						
LPAZ	La Paz	70.02	269	P	P	19 12 28.9	+1.9
	6.4nm,0.8s,mb4.6,baz=145,slow=6.2,SNR=20						
LPAZ				LR	LR	19 40 30.9	
	comp=Z,51nm,19.9s,MS3.8,baz=253,slow=34						
SAML	Samuel	72.76	278	*e*P	P	19 12 43.7	+0.2
	4.3nm,0.9s,mb4.4						
SAML				*e*		19 12 51.1	
RPZ	Rata Peaks	82.42	166	LR	LR	19 46 01.1	
	comp=Z,218nm,19.4s,MS4.5,baz=190,slow=33						
STKA	Stephens Creek	85.68	140	P	P	19 13 54.9	+1.9
	2.9nm,0.8s,mb4.6,baz=180,slow=2.9,SNR=5.8						
MKAR	Makanchi Array	116.83	47	PKP	PKPdf	19 19 57.5	-2.8
	0.5nm,0.7s,baz=188,slow=0.8,SNR=5.8						
SONM	Songino Array	129.30	60	PKP	PKPdf	19 20 21.7	-2.6
	0.3nm,0.7s,baz=180,slow=2.5,SNR=4.1						
YKA	Yellowknife Ar	149.78	311	PKPbc	PKPdf	19 21 02.8	+2.7
	3.6nm,0.8s,baz=92,slow=2.5,SNR=11						

NNC 29 19:29:04.2±10.0,36.75N×69.37E,h141^{km}±83^{km},mpv3.9, 2C-1D,Error ellipse: s-maj=106.4km s-min=79.3km az=45.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.40	8	P	P	19 30 36.1	-1.1
	3.8nm,0.3s,baz=193,slow=13,SNR=105						
KK31				⇑S	S	19 31 48.7	-0.8
	4.5nm,0.5s						
SMLA	Simla	8.57	129	*i* P	P	19 30 48.1	-18
SMLA				*i* S	S	19 32 12.7	-29
MK31	Makanchi Array	13.89	40	⇑P	P	19 32 15.1	-0.8
	0.9nm,0.7s,baz=218,slow=15,SNR=4.1						
VOSK	Vostochnaya	16.01	4	P	P	19 32 39.0	-3.3
ZRNK	Zerenda	16.20	359	⇓P	P	19 32 44.0	-0.8
	0.9nm,0.5s						

IDC 29 19:35:32.3±0.6,1.08N×97.40E,mb4.5/17,mb1 4.7/18, mb1mx4.6/23,mbtmp4.6/18,ML5.1/1,MS4.2/13,Ms1 4.2/13, ms1mx4.1/22,Error ellipse: s-maj=19.6km s-min=14.5km az=60.0

MOS 29 19:35:34.0±1.1,0.91N×97.42E,h33^{km},mb5.1/16, MS4.4/7,Error ellipse: s-maj=25.0km s-min=10.4km az=91.7

BJI 29 19:35:36.9,1.09N×97.56E,h44^{km},mB5.1,mb5.0,Ms4.7, Msz4.6

NEIC 29 19:35:38.4±1.6,1.07N×97.48E,h45^{km}±14^{km},mb4.8/23, Error ellipse: s-maj=10.3km s-min=6.1km az=49.0

NEIC Felt [IV] at Gunungsitoli.

ISC 29 19:35:37.4±1.1,1.08N±0.05×97.48E±0.05,h51^{km}±9^{km}, h29^{km}±2.5^{km}:pP-P,n129,σ0^{s}98/121,mb4.8/58,MS4.4/33, 16C-3D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	4.96	45	P	P	19 36 51.8	+0.5
KULM	Kulim	5.25	37	⇑*i*P	P	19 36 55.0	-0.2
KGM	Kluang	5.91	81	P	P	19 37 05.8	+1.3
SNG	Songkhla	6.82	27	P	P	19 37 15.0	-2.3
	400nm,1.0s						
KSM	Kuching	12.83	88	*e*P	P	19 38 40.9	+1.4
KKTK	Khon Kaen	16.05	19	P	P	19 39 24.0	+2.7
CM31	Chiang Mai Arr	17.33	5	*e*P	P	19 39 35.8	-1.6
	30nm,0.6s						
CMAR	Chiang Mai Arr	17.33	5	P	P	19 39 35.9	-1.5
	2.5nm,0.3s,baz=195,slow=11,SNR=50						
CMAR				LR	LR	19 46 05.3	
	comp=Z,635nm,21.2s,baz=195,slow=36						
KKM	Kota Kinabalu	19.33	75	*e*P	P	19 40 01.5	+0.1
KKM	Kota Kinabalu	19.33	75	P	P	19 40 03.4	+2.0
TSM	Tawau	20.62	81	P	P	19 40 15.0	0.0
QIZ	Qiongzhong	21.57	33	P	P	19 40 24.5	-0.1
QIZ				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.4						
QIZ				LR	LR		
	comp=N,860nm,14.4s						
QIZ				LR	LR		
	comp=Z,700nm,13.3s,MS4.2						
QIZ	Qiongzhong	21.57	33	*e*P	P	19 40 23.5	-1.1
KMI	Kunming	24.44	12	P	P	19 40 54.8	+2.0
KMI				AMB	AMB		
	comp=Z,50nm,1.3s,mb4.8						
KMI				LR	LR		
	comp=N,1µm,13.6s,MS4.7						
KMI				LR	LR		
	comp=E,1µm,13.6s,MS4.7						
KMI				LR	LR		
	comp=Z,2µm,14.5s,MS4.7						
KMI	Kunming	24.44	12	*e*P	P	19 40 54.7	+1.9
KMI				S	PcP	19 44 29.7	-2.2
KMI				pmax	pmax		
	comp=Z,53nm,1.3s,mb4.8						
KMI	Kunming	24.44	12	P	P	19 40 54.7	+1.9
	comp=Z,53nm,1.3s,mb4.8						
KMI				S	PcP	19 44 29.7	-2.2
KMI				LR	LR		
	comp=Z,2µm,14.5s,MS4.7						
HYB	Hyderabad	24.70	312	*i* P	P	19 41 05.0	+10
SHL	Shillong	24.94	348	⇑*i*P	P	19 40 57.5	-0.1
GYA	Guiyang	26.74	19	⇑*i*P	P	19 41 14.0	-0.3
GYA				AP	pP	19 41 23.8	-3.4
GYA				XP	sP	19 41 27.5	-6.0
GYA				PP	PP	19 42 03.3	+3.1
GYA				S	S	19 45 43.5	-0.9
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
GYA				AMB	AMB		
	comp=Z,110nm,2.8s,mb4.9						
GYA				LR	LR		
	comp=N,910nm,14.2s,MS4.6						

GYA				LR	LR		
	comp=E,920nm,15.9s,MS4.6						
GYA				LR	LR		
	comp=Z,890nm,12.3s,MS4.5						
PKI	**Pulchoki**	**28.77**	**337**	*e*P	**P**	**19 41 33.1**	**+0.4**
GUN	**Gumba**	**28.90**	**338**	*e*P	**P**	**19 41 34.5**	**+0.7**
	comp=Z,78nm,0.7s,mb5.6						
DMN	**Daman**	**28.93**	**337**	*e*P	**P**	**19 41 34.3**	**+0.3**
	comp=Z,26nm,0.7s,mb5.0						
KKN	**Kakani**	**29.02**	**337**	*e*P	**P**	**19 41 34.8**	**-0.1**
	comp=Z,36nm,0.7s,mb5.2						
LSA	**Lhasa**	**29.10**	**349**	P	**P**	**19 41 36.8**	**+1.3**
LSA				AP	pP	19 41 45.3	-3.3
LSA				XP	sP	19 41 49.3	-5.6
LSA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
LSA				AMB	AMB		
	comp=Z,80nm,5.0s						
LSA				LR	LR		
	comp=N,240nm,24.2s,MS4.0						
LSA				LR	LR		
	comp=E,440nm,24.2s,MS4.0						
LSA				LR	LR		
	comp=Z,520nm,20.6s,MS4.1						
LSA	**Lhasa**	**29.10**	**349**	*e*P	**P**	**19 41 36.2**	**+0.7**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.8						
LSA	**Lhasa**	**29.10**	**349**	*e*P	**P**	**19 41 36.2**	**+0.6**
	comp=Z,9.0nm,0.5s,mb4.8						
GKN	**Gorkha**	**29.46**	**336**	*e*P	**P**	**19 41 38.9**	**+0.1**
	comp=Z,46nm,0.9s,mb5.2						
KOLN	**Koldanda**	**29.69**	**335**	*e*P	**P**	**19 41 41.2**	**+0.4**
	comp=Z,30nm,0.8s,mb5.1						
CD2	**Chengdu**	**30.26**	**11**	*e*P	**P**	**19 41 45.0**	**-0.9**
ENH	**Enshi**	**31.20**	**20**	*e*P	**P**	**19 41 52.8**	**-1.3**
	comp=Z,37nm,0.8s,mb5.3						
LGTI	**Lohaghat**	**32.65**	**331**	*e*P	**P**	**19 42 07.5**	**+0.7**
WHN	**Wuhan**	**33.40**	**27**	P	**P**	**19 42 13.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**33.63**	**126**	*e*P	**P**	**19 42 14.1**	**-1.3**
	comp=Z,17nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	**33.63**	**126**	P	**P**	**19 42 14.2**	**-1.2**
	comp=Z,7.3nm,0.5s,mb4.8,baz=355,slow=18,SNR=18						
XAN	**Xi’an**	**34.50**	**17**	P	**P**	**19 42 21.3**	**-1.4**
XAN				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
XAN				LR	LR		
	comp=N,520nm,14.3s,MS4.5						
XAN				LR	LR		
	comp=E,440nm,12.8s,MS4.5						
XAN				LR	LR		
	comp=Z,910nm,13.5s,MS4.7						
LZH	**Lanzhou**	**35.33**	**9**	⇑P	**P**	**19 42 30.0**	**+0.1**
LZH				AP	pP	19 42 37.5	-5.8
LZH				XP	sP	19 42 42.3	-7.4
LZH				AMB	AMB		
	comp=Z,50nm,1.6s,mb5.2						
LZH				AMB	AMB		
	comp=Z,210nm,4.0s						
LZH				LR	LR		
	comp=E,1µm,14.3s						
LZH				LR	LR		
	comp=Z,2µm,16.0s,MS4.9						
LZH	**Lanzhou**	**35.33**	**9**	⇑P	**P**	**19 42 29.9**	**0.0**
	comp=Z,56nm,1.6s,mb5.2						
LZH				pP	pP	19 42 37.4	-5.9
LZH				sP	sP	19 42 42.3	-7.4
LZH				LR	LR		
	comp=Z,2µm,16.0s,MS4.9						
NJ2	**Nanjing**	**36.83**	**31**	*e*P	**P**	**19 42 43.0**	**+0.5**
NJ2				AP	pP	19 42 52.5	-3.5
NJ2				XP	sP	19 42 55.5	-6.8
NJ2				PP	PP	19 44 09.3	+0.3
NJ2				S	**S**	**19 48 28.0**	**+5.4**
NJ2				XS		19 48 45.0	
NJ2				AMB	AMB		
	comp=Z,130nm,5.8s						
NJ2				LR	LR		
	comp=N,750nm,12.4s,MS4.7						
NJ2				LR	LR		
	comp=E,420nm,17.0s,MS4.7						
NJ2				LR	LR		
	comp=Z,2µm,16.2s,MS5.0						
KAKA	**Kakadu**	**37.30**	**113**	*e*P	**P**	**19 42 45.1**	**-1.5**
	comp=Z,12nm,0.8s,mb4.8						
SSE	**Sheshan**	**37.35**	**35**	P	**P**	**19 42 46.3**	**-0.6**
SSE				AP	pP	19 42 55.0	-5.4
SSE				XP	sP	19 42 59.0	-7.7
SSE				S	**S**	**19 48 35.8**	**+5.1**
SSE				XS		19 48 51.0	
SSE				SCS	ScS	19 52 56.3	+2.4
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.2						
SSE				AMB	AMB		
	comp=Z,70nm,5.2s						
SSE				LR	LR		
	comp=N,160nm,14.5s,MS4.1						
SSE				LR	LR		
	comp=E,180nm,14.6s,MS4.1						
SSE				LR	LR		
	comp=Z,360nm,14.0s,MS4.3						
SSE	**Sheshan**	**37.35**	**35**	P	**P**	**19 42 46.2**	**-0.7**
	comp=Z,35nm,0.8s,mb5.2						
SSE				pP	pP	19 42 55.1	-5.3
SSE				sP	sP	19 42 58.9	-7.8
SSE				S	**S**	**19 48 35.8**	**+5.1**
SSE				sS		19 48 51.0	
SSE				SS	SS	19 51 21.8	+17
SSE				ScS	ScS	19 52 56.3	+2.4
SSE				LR	LR		
	comp=Z,370nm,14.0s,MS4.3						
GTA	**Gaotai**	**38.21**	**3**	⇑*i*P	**P**	**19 42 54.5**	**+0.5**
GTA				AP	pP	19 43 03.3	-4.2
GTA				XP	sP	19 43 07.0	-6.8
GTA				PP	PP	19 44 26.5	+1.2
GTA				PCP	PcP	19 45 09.5	+1.3
GTA				S	**S**	**19 48 46.0**	**+2.4**
GTA				XS		19 49 02.0	
GTA				SS	SS	19 51 25.5	+1.3
GTA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
GTA				AMB	AMB		
	comp=Z,160nm,4.6s						
GTA				LR	LR		
	comp=N,380nm,15.7s,MS4.4						
GTA				LR	LR		
	comp=E,280nm,16.4s,MS4.4						
GTA				LR	LR		
	comp=Z,330nm,16.4s,MS4.2						
JOW	**Kunigami**	**39.12**	**46**	P	**P**	**19 43 03.0**	**+1.3**
	comp=Z,33nm,0.6s,mb5.2,baz=241,slow=8.9,SNR=18						
BTO	**Baotou**	**40.96**	**15**	*e*P	**P**	**19 43 17.0**	**+0.2**
HHC	**Hu-ho-hao-te**	**41.60**	**16**	*e*P	**P**	**19 43 21.3**	**-0.7**
HHC				AP	pP	19 43 29.3	-6.3
HHC				XP	sP	19 43 34.0	-7.8
HHC				S	**S**	**19 49 33.3**	**-1.0**
HHC				XS		19 49 51.0	
HHC				SCS	ScS	19 53 20.5	+1.9
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
HHC				AMB	AMB		
	comp=Z,180nm,11.6s						
HHC				LR	LR		
	comp=N,930nm,16.2s,MS4.8						
HHC				LR	LR		
	comp=E,650nm,16.7s,MS4.8						
HHC				LR	LR		
	comp=Z,800nm,18.0s,MS4.6						
WRA	**Warramunga Arr**	**41.73**	**122**	P	**P**	**19 43 23.2**	**-0.2**
	comp=Z,4.7nm,0.5s,mb4.4,baz=301,slow=9.0,SNR=61						
WRAB	**Tennant Creek**	**41.74**	**122**	*i* P	**P**	**19 43 21.6**	**-1.9**
WRAB	**Tennant Creek**	**41.74**	**122**	*e*P	**P**	**19 43 22.8**	**-0.6**
	comp=Z,16nm,0.8s,mb4.7						
WB2	**Warramunga Arr**	**41.74**	**122**	⇓*i*P	**P**	**19 43 23.5**	**0.0**
WMQ	**Urumqi**	**43.44**	**350**	P	**P**	**19 43 38.3**	**+1.2**
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,210nm,6.0s						
WMQ				LR	LR		
	comp=N,210nm,22.4s,MS4.2						
WMQ				LR	LR		
	comp=E,250nm,24.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,200nm,24.0s,MS3.9						
DL2	**Dalian**	**43.66**	**28**	P	**P**	**19 43 40.0**	**+1.1**
DL2				*e*S	**S**	**19 50 11.0**	**+6.5**
DL2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.3						
DL2				LR	LR		
	comp=N,160nm,13.9s,MS4.3						
DL2				LR	LR		
	comp=E,220nm,15.5s,MS4.3						
DL2				LR	LR		
	comp=Z,270nm,13.6s,MS4.3						
JNU	**Nakatsue**	**44.71**	**41**	P	**P**	**19 43 48.5**	**+1.0**
	comp=Z,19nm,1.1s,mb4.8,baz=212,slow=15,SNR=4.9						
KS15	**Wonju Array Si**	**45.76**	**34**	*e*P	**P**	**19 43 56.1**	**+0.3**
UCH	**Uchtor**	**45.88**	**336**	P	**P**	**19 43 57.9**	**+1.3**
	SNR=12						
TKM2	**Tokmak 2**	**46.04**	**338**	P	**P**	**19 43 58.8**	**+0.9**
	SNR=8.3						
AML	**Almayashu**	**46.13**	**335**	P	**P**	**19 43 59.8**	**+1.2**
	SNR=8.1						
USP	**Ospenovka**	**46.76**	**337**	P	**P**	**19 44 04.2**	**+0.7**
	SNR=14						
SNY	**Shenyang**	**46.89**	**27**	⇑P	**P**	**19 44 04.8**	**+0.2**
SNY				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
SNY				LR	LR		
	comp=N,290nm,15.3s,MS4.7						
SNY				LR	LR		
	comp=E,470nm,13.9s,MS4.7						
SNY				LR	LR		
	comp=Z,680nm,15.1s,MS4.7						
SONM	**Songino Array**	**47.21**	**8**	P	**P**	**19 44 07.8**	**+0.8**
	comp=Z,6.1nm,0.5s,mb4.8,baz=189,slow=9.8,SNR=61						
SONM				PcP	PcP	19 45 38.6	+0.4
	comp=Z,3.6nm,0.6s,baz=191,slow=4.1,SNR=6.7						
ULN	**Ulaanbaatar**	**47.34**	**9**	*c* *i*P	**P**	**19 44 08.6**	**+0.5**
ULN	**Ulaanbaatar**	**47.34**	**9**	*e*P	**P**	**19 44 08.4**	**+0.4**
	comp=Z,7.1nm,0.9s,mb4.6						
MKAR	**Makanchi Array**	**47.43**	**346**	P	**P**	**19 44 08.9**	**+0.2**
	comp=Z,15nm,0.7s,mb5.0,baz=158,slow=7.8,SNR=209						
MKAR				LR	LR	20 08 03.1	
	comp=Z,227nm,21.1s,MS4.1,baz=171,slow=41						
CN2	**Changchun**	**49.29**	**27**	*e*P	**P**	**19 44 23.3**	**+0.1**
CN2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.4						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,800nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=E,500nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=Z,700nm,16.0s,MS4.8						
ZAK	**Zakamensk**	**49.37**	**5**	*e*P	**P**	**19 44 23.9**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
TLY	**Talaya**	**50.69**	**5**	*e*P	**P**	**19 44 34.6**	**+0.7**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
TLY				MLR	MLR		
	comp=Z,614nm,18.0s,MS4.7						
IRK	**Irkutsk**	**51.30**	**5**	*e*P	**P**	**19 44 37.2**	**-1.3**
IRK				pmax	pmax		
	comp=Z,25nm,1.7s,mb4.9						
MAT	**Matsushiro**	**51.59**	**42**	*e*P	**P**	**19 44 40.0**	**-0.9**
MAT	**Matsushiro**	**51.59**	**42**	P	**P**	**19 44 40.1**	**-0.8**
MJAR	**Matsushiro Arr**	**51.59**	**42**	P	**P**	**19 44 40.6**	**-0.3**
	comp=Z,4.0nm,0.9s,mb4.4,baz=232,slow=7.8,SNR=9.2						
MJAR				LR	LR	20 10 11.3	
	comp=Z,156nm,18.1s,MS4.1,baz=245,slow=40						
HIA	**Hailar**	**51.67**	**18**	*e*P	**P**	**19 44 41.2**	**0.0**
	comp=Z,50nm,1.4s,mb5.2						
MDJ	**Mudanjiang**	**51.84**	**29**	P	**P**	**19 44 43.5**	**+0.9**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,110nm,4.0s						
MDJ				LR	LR		
	comp=N,210nm,19.6s,MS4.2						
MDJ				LR	LR		
	comp=E,90nm,18.8s,MS4.2						
MDJ				LR	LR		
	comp=Z,320nm,16.3s,MS4.4						
MDJ	**Mudanjiang**	**51.84**	**29**	*e*P	**P**	**19 44 41.3**	**-1.3**
	comp=Z,18nm,1.1s,mb4.9						
CTA	**Charters Tower**	**52.20**	**117**	LR	LR	20 10 06.3	
	comp=Z,292nm,20.5s,MS4.3,baz=286,slow=40						
CIT	**Chita**	**52.53**	**12**	*e*P	**P**	**19 44 48.8**	**+1.1**
CIT				pmax	pmax		
	comp=Z,60nm,1.6s,mb5.3						
STKA	**Stephens Creek**	**53.06**	**132**	*e*P	**P**	**19 44 52.3**	**+0.3**
	comp=Z,3.9nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**53.06**	**132**	P	**P**	**19 44 52.6**	**+0.7**
	comp=Z,9.3nm,1.0s,mb4.7,baz=303,slow=9.3,SNR=14						
STKA				LR	LR	20 10 02.9	
	comp=Z,435nm,20.1s,MS4.5,baz=119,slow=39						
ZAL	**Zalesovo**	**53.72**	**351**	P	**P**	**19 44 56.2**	**-0.3**
	comp=Z,20nm,0.5s,mb5.3,baz=310,slow=5.5,SNR=74						
ZAL	**Zalesovo**	**53.72**	**351**	P	**P**	**19 44 56.2**	**-0.3**
ZRNK	**Zerenda**	**56.86**	**340**	*e*P	**P**	**19 45 17.9**	**-1.3**
BOD	**Bodaibo**	**58.08**	**10**	*e*P	**P**	**19 45 26.3**	**-1.4**
BOD				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
YSS	**Yuzh-Sakhalins**	**60.29**	**34**	*e*P	**P**	**19 45 43.0**	**-0.2**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
SVE	**Sverdlovsk**	**62.91**	**338**	*e*P	**P**	**19 46 00.0**	**-0.6**
SVE				*e*	pP	19 46 16.0	+1.1
SVE				*e*		19 46 35.2	
SVE				*e*		19 48 20.0	
SVE				MLR	MLR		
	comp=N,200nm,14.0s,MS4.6						
SVE				MLR	MLR		
	comp=E,200nm,14.0s,MS4.6						
SVE				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.6						
ARU	**Arti**	**63.41**	**337**	⇑*i*P	**P**	**19 46 01.9**	**-2.0**
ARU				*e*		19 46 35.8	
ARU				*e*		19 48 18.6	
ARU				*e*S	**S**	**19 54 32.1**	**+1.1**
ARU				*e*SS	SS	19 58 35.0	-5.3
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
KIV	**Kislovodsk**	**64.58**	**319**	*e*P	**P**	**19 46 11.2**	**-0.5**
KIV				pmax	pmax		
	comp=N,4.0nm,1.0s						
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
YAK	**Yakutsk**	**65.46**	**16**	*c* *i*P	**P**	**19 46 16.5**	**-0.6**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				MLR	MLR		
	comp=Z,261nm,12.0s,MS4.7						
YAK				MLR	MLR		
	comp=N,254nm,15.0s,MS4.7						
YAK				MLR	MLR		
	comp=E,149nm,12.0s,MS4.7						
YAK	**Yakutsk**	**65.46**	**16**	*e*P	**P**	**19 46 16.1**	**-1.0**
	comp=E,31nm,1.1s,mb5.2						
EIL	**Elat**	**65.76**	**302**	*e*P	**P**	**19 46 17.2**	**-2.4**
	comp=E,6.3nm,1.1s,mb4.6						
SOC	**Sochi**	**66.40**	**318**	*e*P	**P**	**19 46 23.6**	**+0.2**
SOC				*e*		19 46 49.0	
SOC				*e*		19 48 56.0	
SOC				*e*S	S	19 55 06.4	-1.6
SOC				*e*		19 56 16.4	
SOC				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.1						
SOC				pmax	pmax		
	comp=N,27nm,1.2s						
SOC				pmax	pmax		
	comp=E,13nm,1.2s						
SOC				MLR	MLR		
	comp=Z,179nm,23.0s,MS4.2						
SOC				MLR	MLR		
	comp=N,89nm,25.0s,MS4.1						
SOC				MLR	MLR		
	comp=E,108nm,25.0s,MS4.1						
BRTR	**Keskin Array B**	**69.40**	**312**	P	**P**	**19 46 41.5**	**-0.6**
	comp=E,0.5nm,0.4s,mb3.8,baz=127,slow=6.2,SNR=3.6						
MATP	**Matopo**	**70.74**	**248**	P	**P**	**19 46 51.0**	**+0.4**
	comp=E,1.2nm,0.7s,mb3.9,baz=101,slow=8.4,SNR=4.7						
MA2	**Magadan**	**71.32**	**26**	*i* P	**P**	**19 46 53.7**	**+0.3**
MA2				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
MA2	**Magadan**	**71.32**	**26**	*e*P	**P**	**19 46 54.0**	**+0.5**
	comp=Z,6.2nm,0.6s,mb4.7						
PET	**Petropavlovsk**	**72.18**	**34**	*e*P	**P**	**19 47 02.7**	**+4.1**
PET				*e*		19 56 23.1	
PET				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.3						
PET				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.1						
MAW	**Mawson**	**72.66**	**193**	P	**P**	**19 47 02.4**	**+1.2**
	comp=Z,1.1nm,0.6s,mb3.9,baz=20,slow=6.7,SNR=5.0						
MAW				LR	LR	20 15 41.4	
	comp=Z,171nm,19.2s,MS4.3,baz=246,slow=33						
OBN	**Obninsk**	**72.87**	**328**	*c* *i*P	**P**	**19 47 01.9**	**-0.8**
OBN				*e*SS	SS	20 01 01.6	-5.5
OBN				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.1						
TIXI	**Tiksi**	**73.26**	**10**	*e*P	**P**	**19 47 02.6**	**-2.1**
TIXI				*e*S	S	19 56 22.1	-5.8
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
SEY	**Seymchan**	**73.77**	**23**	*e*P	**P**	**19 47 08.4**	**+0.6**
SEY				pmax	pmax		
	comp=N,3.0nm,1.0s						
SEY				pmax	pmax		
	comp=E,5.0nm,1.0s						
SEY				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
BOSA	**Boshof**	**74.96**	**240**	LR	LR	20 18 10.5	
	comp=Z,151nm,19.0s,MS4.3,baz=45,slow=34						
AKASG	**Malin Array Be**	**75.53**	**322**	P	**P**	**19 47 17.0**	**-1.2**
	comp=Z,1.0nm,0.5s,mb4.0,baz=84,slow=5.1,SNR=11						
VRI	**Vrincioaia**	**75.90**	**317**	⇑P	pP	19 47 32.0	-3.0
MLR	**Muntele Rosu**	**76.35**	**317**	⇓P	**P**	**19 47 23.2**	**+0.3**
MLR	**Muntele Rosu**	**76.35**	**317**	⇓P	**P**	**19 47 23.2**	**+0.2**
BURAR	**Bucovina Array**	**77.30**	**319**	⇑P	**P**	**19 47 29.4**	**+1.2**
BURAR	**Bucovina Array**	**77.30**	**319**	⇑P	**P**	**19 47 29.5**	**+1.2**
DRGR		**78.81**	**317**	⇑P	**P**	**19 47 37.2**	**+0.6**
DRGR		**78.81**	**317**	⇑P	**P**	**19 47 37.2**	**+0.6**
RPZ	**Rata Peaks**	**78.92**	**135**	LR	LR	20 21 32.2	
	comp=Z,331nm,20.0s,MS4.7,baz=187,slow=35						
FINES	**FINESS Array B**	**80.24**	**332**	P	**P**	**19 47 44.1**	**+0.2**
	comp=Z,2.2nm,0.7s,mb4.2,baz=90,slow=9.5,SNR=8.0						
FINES				LR	LR	20 26 21.3	
	comp=Z,100nm,21.3s,MS4.1,baz=117,slow=38						
KAF	**Kangasniemi**	**80.32**	**333**	*e*p	**P**	**19 47 43.0**	**-1.4**
	comp=Z,4.6nm,0.9s,mb4.4,baz=121,slow=5.4						
KAF	**Kangasniemi**	**80.32**	**333**	*e*P	**P**	**19 47 43.0**	**-1.4**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
OKC	**Ostrava-Krasne**	**82.30**	**320**	AMS	AMS	20 30 40.0	
	comp=Z,100nm,19.8s						
KEV	**Kevo**	**82.31**	**341**	*e*p	pP	19 48 05.1	-4.4
	comp=Z,4.9nm,0.8s						
URZ	**Urewera**	**82.52**	**129**	LR	LR	20 26 08.3	
	comp=Z,229nm,19.5s,MS4.5,baz=193,slow=37						
ARCES	**ARCESS Array B**	**82.75**	**340**	P	**P**	**19 47 57.3**	**+0.4**
	comp=Z,3.3nm,0.8s,mb4.4,baz=106,slow=5.8,SNR=14						
ARCES				LR	LR	20 28 59.7	
	comp=Z,178nm,21.4s,MS4.4,baz=68,slow=39						
ARE0	**ARCESS Array S**	**82.75**	**340**	P	**P**	**19 47 56.2**	**-0.6**
DPC	**Dobruska-Polom**	**83.53**	**320**	AMS	AMS	20 31 30.0	
	comp=Z,100nm,21.9s						
PRU	**Pruhonice**	**84.63**	**320**	AMS	AMS	20 32 10.0	
	comp=Z,100nm,31.6s						
PVCC	**Panska Ves**	**84.66**	**320**	AMS	AMS	20 34 20.0	
	comp=Z,100nm,19.2s						
GERES	**GERESS Array B**	**85.09**	**319**	P	**P**	**19 48 10.3**	**+1.2**
	comp=Z,2.0nm,0.9s,mb4.3,baz=104,slow=5.5,SNR=14						
KHC	**Kasperske Hory**	**85.19**	**319**	*e*P	**P**	**19 48 09.5**	**-0.1**
KHC				AMS	AMS	20 32 20.0	
	comp=Z,100nm,10.7s						
RAO	**Raoul Island**	**85.81**	**119**	LR	LR	20 31 01.7	
	comp=Z,149nm,18.5s,MS4.4,baz=285,slow=39						
NKC	**Novy Kostel**	**85.99**	**320**	AMS	AMS	20 34 00.0	
	comp=Z,100nm,21.6s						
NB2	**NORSAR Subarra**	**87.25**	**331**	P	**P**	**19 48 19.6**	**+0.2**
	comp=Z,3.0nm,0.8s,mb4.6,baz=96,slow=4.6						
NB2	**NORSAR Subarra**	**87.25**	**331**	P	**P**	**19 48 19.6**	**+0.2**
	comp=Z,3.0nm,0.8s,mb4.6						
NOA	**NORSAR Array B**	**87.25**	**331**	P	**P**	**19 48 20.1**	**+0.8**
	comp=Z,2.3nm,0.8s,mb4.5,baz=95,slow=4.9,SNR=9.8						
NOA				LR	LR	20 34 39.7	
	comp=Z,74nm,18.2s,MS4.1,baz=90,slow=41						
TXAR	**Lajitas Array**	**143.63**	**32**	PKP	PKPdf	19 55 07.7	+0.5
	comp=Z,0.6nm,0.6s,baz=243,slow=2.8,SNR=5.5						
TXAR	**Lajitas Array**	**143.63**	**32**	PKP	PKPdf	19 55 07.7	+0.5
CPUP	**Villa Florida**	**145.10**	**222**	PKPbc	PKPbc	19 55 12.4	+2.1
	comp=Z,1.2nm,0.7s,baz=148,slow=5.0,SNR=4.5						
LRAL	**Lakeview Retre**	**145.81**	**7**	*e*P	PKPdf	19 55 12.7	+1.7
LRAL				*e*pP		19 55 21.4	

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*IDC **29** 19:47:44.5±1.2, 26.62S×176.36W, mb4.2/5, mb1 4.5/6, mb1mx4.1/15, mbtmp4.2/6, MS3.9/5, Ms1 3.9/5, ms1mx3.4/29, Error ellipse: s-maj=42.0km s-min=23.8km az=132.0*

*NEIC **29** 19:47:45.8±0.7, 26.61S×176.37W, h10^{km}, mb4.7/2, Error ellipse: s-maj=20.3km s-min=14.5km az=118.0*

ISC 29 19:47:47.7±1.0**, 26.53S**±0.09×**176.4W**±0.2**, h33^{km}, n24, σ1^{s}03**/11**, mb4.3**/7**, MS4.3**/4**, 1C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.01**	**206**	Pn	**Pn**	**19 48 33.3**	**-1.1**
	82nm,0.3s,baz=112,slow=23,SNR=13						
RAO				LR	LR	19 49 08.2	
	comp=Z,584nm,18.2s,baz=223,slow=28						
RAO				Sn	**Sn**	**19 49 10.9**	**+1.2**
	119nm,0.3s,baz=88,slow=23,SNR=6.4						
DZM	**Mont Dzumac**	**16.23**	**282**	LR	LR	19 56 41.8	
	comp=Z,224nm,19.6s,baz=172,slow=33						
TBI	**Tubuai**	**24.64**	**88**	*e*LR	LR	19 58 41.3	
	165nm,33.2s						
PPT	**Papeete**	**26.39**	**76**	*e*LR	LR	19 59 28.0	
	205nm,30.2s						
PPT	**Papeete**	**26.39**	**76**	LR	LR	20 00 28.8	
	comp=Z,136nm,19.7s,MS3.5,baz=252,slow=29						
CTA	**Charters Tower**	**34.78**	**273**	P	**P**	**19 54 36.6**	**-0.8**
	5.7nm,1.1s,mb4.4,baz=106,slow=9.7,SNR=3.0						
RKT	**Rikitea**	**37.66**	**94**	*e*LR	LR	20 04 58.8	
	73nm,25.8s						
PMG	**Port Moresby**	**38.42**	**289**	LR	LR	20 06 13.4	
	comp=Z,366nm,20.0s,MS4.2,baz=25,slow=29						
WB2	**Warramunga Arr**	**45.49**	**268**	*e*P	**P**	**19 56 06.5**	**+0.5**
WRAB	**Tennant Creek**	**45.49**	**268**	*e*P	**P**	**19 56 05.3**	**-0.7**
	4.7nm,0.7s,mb4.4						
WRA	**Warramunga Arr**	**45.50**	**268**	P	**P**	**19 56 05.2**	**-0.8**
	1.3nm,0.3s,mb4.2,baz=103,slow=8.6,SNR=45						
QSPA	**South Pole Qui**	**63.56**	**180**	⇑*i*P	**P**	**19 58 15.9**	**-0.9**
	6.3nm,0.9s,mb4.7						
JOW	**Kunigami**	**75.15**	**311**	LR	LR	20 24 45.1	
	comp=Z,1µm,21.9s,MS5.2,baz=119,slow=30						
MJAR	**Matsushiro Arr**	**75.91**	**324**	P	**P**	**19 59 33.8**	**+1.0**
	2.6nm,0.8s,mb4.2,baz=162,slow=5.7,SNR=7.5						
NVAR	**Mina Array Bea**	**84.46**	**42**	P	**P**	**20 00 18.7**	**+0.2**
	0.4nm,0.6s,mb3.7,baz=225,slow=6.4,SNR=3.2						
NVAR	**Mina Array Bea**	**84.46**	**42**	P	**P**	**20 00 18.7**	**+0.2**
CMAR	**Chiang Mai Arr**	**93.46**	**289**	P	**P**	**20 01 04.6**	**+2.9**
	1.0nm,0.9s,mb4.3,baz=147,slow=3.6,SNR=5.7						
INK	**Inuvik**	**99.70**	**15**	LR	LR	20 39 33.2	
	comp=Z,143nm,19.5s,MS4.5,baz=39,slow=31						
MKAR	**Makanchi Array**	**116.31**	**311**	PKP	PKPdf	20 06 28.8	+1.0
	0.3nm,0.8s,baz=90,slow=2.4,SNR=4.6						
NB2	**NORSAR Subarra**	**145.11**	**354**	PKPabc	PKPdf	20 07 22.7	+1.5
	1.1nm,0.8s,baz=13,slow=3.8						
NB2	**NORSAR Subarra**	**145.11**	**354**	PKPab	PKPab	20 07 22.7	0.0
NOA	**NORSAR Array B**	**145.11**	**354**	PKPbc	PKPbc	20 07 22.8	+1.3
	2.6nm,0.9s,baz=14,slow=2.4,SNR=7.2						
AKASG	**Malin Array Be**	**148.92**	**328**	PKPbc	PKPdf	20 07 33.5	+5.7
	0.1nm,0.3s,baz=37,slow=3.1,SNR=5.4						
BRTR	**Keskin Array B**	**151.74**	**305**	PKPbc	PKPdf	20 07 41.2	+8.8
	0.3nm,0.3s,baz=27,slow=3.2,SNR=3.0						
BRTR				PKPab	PKPab	20 07 51.9	+1.8
	0.8nm,0.6s,baz=113,slow=4.1,SNR=4.4						

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*IDC **29** 20:14:26.9±1.6, 43.71N×105.42W, mb4.0/1, mb1 3.8/5, mb1mx3.5/24, mbtmp3.5/5, ML2.7/3, Error ellipse: s-maj=47.6km s-min=8.3km az=149.0*

*NEIC **29** 20:14:27.7±0.5, 43.69N×105.16W, ML3.2, Error ellipse: s-maj=8.4km s-min=5.1km az=142.0, Suspected Mining*

explosion.
NEIC 75 km [45 miles] SSE of Gillette.
ISC 29 20:14:25.9±0.6**,43.69N**±0.06×**105.15W**±0.08**,n33,** σ**1^{s}32**/33**,mb4.1**/1**,Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.91	62	eP	Pg	20 14 46.2	+2.1
PHWY	Pilot Hill	2.40	185	eP	Pn	20 15 07.3	+0.3
RWWY	Rawlins	2.51	218	eP	Pn	20 15 11.1	+2.4
LAO	LASA Array	3.09	346	eP	Pn	20 15 13.7	-3.1
BW06	Boulder Array	3.35	255	eP	Pn	20 15 20.9	+0.3
PDAR	Pinedale Array	3.35	255	Pn	Pn	20 15 21.1	+0.6
	6.3nm,0.3s,baz=73,slow=15,SNR=73						
PDAR				Lg		20 16 06.8	
	13nm,0.3s,baz=72,slow=31,SNR=11						
LKWY	Lake	3.88	285	eP	Pn	20 15 30.1	+2.0
ISCO	Idaho Springs	3.91	185	eP	Pn	20 15 30.4	+2.0
LOHW	Long Hollow	3.96	271	eP	Pn	20 15 29.9	+0.7
MOOW	Moose Ponds	4.05	273	eP	Pn	20 15 32.2	+1.7
SNOW	Snow King Moun	4.08	269	eP	Pn	20 15 37.0	+6.1
REDW	Red Top Meadow	4.16	267	eP	Pn	20 15 34.0	+2.0
YFT	Old Faithful	4.17	282	P	Pn	20 15 36.0	+3.9
TPAW	Teton Pass	4.22	269	eP	Pn	20 15 33.0	+0.2
RRI2	Red Ridge	4.50	268	eP	Pn	20 15 37.0	+0.2
QLMT	Earthquake Lak	4.65	286	eP	Pn	20 15 48.8	+10
DGMT	Dagmar	4.82	8	eP	Pn	20 15 41.7	+0.2
HWUT	Hardware Ranch	5.17	248	eP	Pn	20 15 45.5	-0.9
	12nm,0.4s						
TCUT	Toone Canyon	5.30	243	eP	Pn	20 15 47.7	-0.5
DAU	Daniels Canyon	5.60	236	eP	Pn	20 15 52.3	-0.2
MCMT	McKenzie Canyo	5.64	284	eP	Pn	20 16 06.6	+14
SPUT	South Promonto	5.90	249	eP	Pn	20 15 55.7	-0.9
HVU	Hansel Valley	5.93	254	eP	Pn	20 15 56.3	-0.8
SRU	San Rafael	6.10	223	eP	Pn	20 15 58.5	-1.0
TMUT	Trail Mountain	6.32	228	eP	Pn	20 16 02.5	-0.1
BGU	Big Grassy Mou	6.46	247	eP	Pn	20 16 02.9	-1.7
MSU	Marysvale	7.41	228	eP	Pn	20 16 17.3	-0.6
MVU	Marysvale	7.43	228	eP	Pn	20 16 17.6	-0.7
	2.1nm,0.6s						
ELK	Elko	8.04	252	Pn	P	20 16 24.2	-2.6
	0.1nm,0.3s,baz=70,slow=15,SNR=3.4						
ULM	Lac du Bonnet	9.12	41	Pn	P	20 16 39.7	-2.1
	0.8nm,0.3s,baz=215,slow=12,SNR=3.8						
ULM				Lg		20 19 13.7	
	0.6nm,0.3s,baz=139,slow=19,SNR=2.1						
ULM	Lac du Bonnet	9.12	41	Pn	P	20 16 39.7	-2.1
ULM				Lg		20 19 13.7	
NVAR	Mina Array Bea	11.23	247	Pn	P	20 17 10.2	-0.5
	0.1nm,0.3s,baz=65,slow=13,SNR=3.1						
ARCES	ARCESS Array B	61.44	18	P	P	20 24 43.6	-2.1
	0.9nm,0.5s,mb4.1,baz=338,slow=6.5,SNR=10.0						

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*IDC **29** 20:18:11.3±0.6,21.24N×120.05E,mb4.0/18,mb1 4.2/19, mb1mx4.2/23,mbtmp4.1/19,ML3.3/1,MS3.9/13,Ms1 3.9/13, ms1mx3.8/21,Error ellipse: s-maj=20.2km s-min=15.2km az=72.0*
*TAP **29** 20:18:13.8,21.39N×120.22E,h77^{km}±1^{km},ML4.5*
*NEIC **29** 20:18:14.4±0.3,21.22N×120.11E,mb4.7/20,MS4.3/2, Error ellipse: s-maj=8.0km s-min=6.3km az=132.0*
*JMA **29** 20:18:15.1±0.4,21.30N×120.38E,h158^{km},M3.6*
*MAN **29** 20:18:15.8,21.03N×120.31E,h14^{km},mb5.0,ML4.0, MS4.1*
*BJI **29** 20:18:15.0,21.51N×119.97E,h16^{km},mB4.7,mb4.3, ML4.0,Ms4.7,Msz4.4*
*MOS **29** 20:18:16.4±0.8,21.62N×119.85E,h33^{km},mb4.4/5,Error ellipse: s-maj=22.5km s-min=14.0km az=112.6*
ISC 29 20:18:12.6±1.3**,21.28N**±0.03×**120.24E**±0.03**,h24**^{km}±10^{km}**, h25**^{km}±1.6^{km}**:pP-P,n112,**σ**1^{s}20**/116**,mb4.4**/43**,MS4.1**/23**, 5C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	1.81	117	eP	Pn	20 18 43.7	+0.8
NACB	Ninganchiao	3.15	23	eP	Pn	20 19 01.5	-0.3
APYP	Conner	3.52	164	eP	Pn	20 19 06.9	-0.3
YHNB	Yeheng	3.54	17	eP	Pn	20 19 07.4	0.0
ABRA	Dolores	3.63	173	eP	Pn	20 19 08.6	-0.3
CVP	Callao Caves	3.85	157	eP	Pn	20 19 13.0	+1.0
CVP				eS	Sn	20 19 56.0	-1.0
TATO	Taipei	3.86	17	eP	Pn	20 19 15.4	+3.4
QZH	Quanzhou	3.95	338	eP	Pn	20 19 10.5	-2.8
QZH				Smax			
	comp=N,350nm,1.0s						
QZH				Smax			
	comp=E,340nm,0.9s						
QZH				LR	LR		
	comp=N,5µm,8.4s						
QZH				LR	LR		
	comp=E,6µm,9.0s						
QZH				LR	LR		
	comp=Z,6µm,8.0s						
YOJ	Yonaguni jima	4.07	38	P	Pn	20 19 15.9	+0.8
YOJ				eS	Sn	20 20 02.9	+0.3
HATJ	Hateruma jima	4.30	49	P	Pn	20 19 18.3	0.0
HATJ				S	Sn	20 20 07.8	-0.6
IRIF	Iriomote-Funau	4.43	46	P	Pn	20 19 20.3	+0.1
IRIF				S	Sn	20 20 11.1	-0.6
CAUP	Cauayan	4.56	161	eP	Pn	20 19 24.5	+2.5
JKRS	Kuro-shima	4.56	49	P	Pn	20 19 22.6	+0.6
JKRS				S	Sn	20 20 14.0	-0.9
JIJ	Ishigaki jima	4.74	49	P	Pn	20 19 24.1	-0.4
JIJ				S	Sn	20 20 17.2	-2.1
JTJ	Tarama	5.30	50	P	Pn	20 19 32.0	-0.5
JTJ				S	Sn	20 20 31.6	-2.0
BALP	Baler	5.65	167	eP	Pn	20 19 38.3	+1.0
JMJ	Miyako jima 2	5.84	52	eS	Sn	20 20 44.2	-2.8
GZH	Guangzhou	6.64	287	P	Pn	20 19 45.5	-5.8
GZH				S	Sn	20 20 56.0	-11
GZH				Smax			
	comp=N,170nm,0.8s						
GZH				Smax			
	comp=E,160nm,0.9s						
JOW	Kunigami	9.19	51	Pn	P	20 20 28.2	+1.3
	comp=E,0.7nm,0.3s,baz=273,slow=17,SNR=3.6						
BUSP	Coron	9.22	180	eP	P	20 20 26.2	-1.1
QIZ	Qiongzhong	10.02	259	P	P	20 20 35.5	-2.8
QIZ				LR	LR		
	comp=N,1µm,11.5s						
QIZ				LR	LR		
	comp=E,2µm,11.5s						
QIZ				LR	LR		
	comp=Z,3µm,11.5s						
QIZ	Qiongzhong	10.02	259	eP	P	20 20 35.5	-2.9
	comp=Z,38nm,0.9s						
GYA	Guiyang	13.45	295	⇑iP	P	20 21 24.0	-0.5
GYA				S	S	20 23 57.0	+2.8
GYA				AMB	AMB		
	comp=Z,20nm,1.2s						
GYA				AMB	AMB		
	comp=Z,310nm,8.6s						
GYA				LR	LR		
	comp=N,1µm,9.3s						
GYA				LR	LR		
	comp=E,980nm,10.8s						
GYA				LR	LR		
	comp=Z,1µm,10.4s						
JNU	Nakatsue	15.11	36	Pn	P	20 21 51.5	+5.0
	comp=Z,0.3nm,0.3s,baz=142,slow=32,SNR=2.4						
TIA	Tai'an	15.13	350	eP	P	20 21 48.0	+1.4
XAN	Xi'an	16.18	324	P	P	20 21 59.8	-0.3
XAN				LR	LR		
	comp=N,1µm,10.2s						
XAN				LR	LR		
	comp=E,670nm,10.2s						
XAN				LR	LR		
	comp=Z,1µm,11.9s						
KMI	Kunming	16.54	287	P	P	20 22 08.8	+4.1
KMI				LR	LR		
	comp=N,1µm,10.0s						
KMI				LR	LR		
	comp=E,650nm,10.5s						
KMI				LR	LR		
	comp=Z,600nm,10.9s						
KMI	Kunming	16.54	287	P	P	20 22 08.8	+4.1
	comp=Z,8.0nm,1.4s						
KMI				S	S	20 25 23.6	+17
CD2	Chengdu	17.62	306	eP	P	20 22 21.0	+2.7
CMAR	Chiang Mai Arr	20.22	266	P	P	20 22 47.8	-1.1
	comp=Z,2.9nm,0.8s,baz=80,slow=9.1,SNR=13						
CMAR				LR	LR	20 31 19.8	
	comp=Z,576nm,18.2s,MS4.0,baz=80,slow=39						
LZH	Lanzhou	20.56	319	⇑P	P	20 22 53.3	+1.0
LZH				AP		20 22 59.8	
LZH				XP		20 23 03.8	
LZH				AMB	AMB		
	comp=Z,60nm,1.3s						
LZH				AMB	AMB		
	comp=Z,270nm,4.8s						
LZH				LR	LR		
	comp=N,2µm,9.5s						
LZH				LR	LR		
	comp=Z,2µm,9.9s						
LZH	Lanzhou	20.56	319	⇑P	P	20 22 53.3	+1.0
	comp=Z,61nm,1.3s						
LZH				pP		20 22 59.8	
LZH				sP		20 23 03.7	
LZH				PP	PP	20 23 18.0	+4.4
LZH				S	S	20 26 46.1	+10
LZH				sS		20 26 55.5	
LZH				SS	SS	20 27 22.0	+15
CBIJ	Chichi jima	20.83	70	LR	LR	20 29 34.4	
	comp=Z,273nm,21.4s,MS3.6,baz=239,slow=32						
HHC	Hu-ho-hao-te	20.86	341	eP	P	20 22 56.5	+1.2
HHC				AP		20 23 00.3	
HHC				XP		20 23 02.5	
HHC				SS	SS	20 27 13.5	-0.3
HHC				AMB	AMB		
	comp=Z,10.0nm,0.4s						
HHC				LR	LR		
	comp=N,1µm,12.2s,MS4.5						
HHC				LR	LR		
	comp=E,790nm,15.7s,MS4.5						
HHC				LR	LR		
	comp=Z,830nm,13.5s,MS4.3						
JHJ	Hachijo jima 2	20.97	52	LR	LR	20 31 59.1	
	comp=Z,235nm,18.0s,MS3.6,baz=257,slow=39						
MAJO	Matsushiro	21.82	42	eP	P	20 23 06.3	+1.2
	comp=Z,12nm,0.8s,mb4.4						
MAT	Matsushiro	21.82	42	P	P	20 23 06.0	+0.9
	comp=Z,11nm,0.8s,mb4.3						
MAT	Matsushiro	21.82	42	P	P	20 23 05.7	+0.6
MJAR	Matsushiro Arr	21.83	42	P	P	20 23 07.3	+2.2
	comp=Z,6.7nm,0.8s,mb4.1,baz=236,slow=9.5,SNR=19						
MJAR				LR	LR	20 33 21.9	
	comp=Z,181nm,18.4s,MS3.5,baz=225,slow=41						
KSM	Kuching	21.93	207	eP	P	20 23 05.3	-1.1
CN2	Changchun	22.88	10	eP	P	20 23 15.5	0.0
CN2				eAP		20 23 24.0	
CN2				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.0						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,1µm,13.0s,MS4.5						
CN2				LR	LR		
	comp=E,700nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=Z,800nm,14.0s,MS4.3						
MDJ	Mudanjiang	24.53	16	P	P	20 23 34.0	+2.5
MDJ				AP		20 23 40.5	
MDJ				S	S	20 27 54.8	+7.0
MDJ				SCP		20 30 53.8	
MDJ				SCS	ScS	20 34 36.5	+3.5
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,120nm,7.1s						
MDJ				LR	LR		
	comp=N,160nm,20.8s,MS3.9						
MDJ				LR	LR		
	comp=E,340nm,19.9s,MS3.9						
MDJ				LR	LR		
	comp=Z,220nm,13.2s						
MDJ	Mudanjiang	24.53	16	eP	P	20 23 32.7	+1.1
	comp=Z,12nm,0.9s,mb4.4						
MDJ				epP		20 23 39.8	
GTA	Gaotai	25.15	320	eP	P	20 23 38.3	+0.8
GTA				AP	pP	20 23 44.3	-0.2
GTA				XP	sP	20 23 47.0	-0.7
GTA				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.1						
GTA				AMB	AMB		
	comp=Z,100nm,3.8s						
GTA				LR	LR		
	comp=N,530nm,10.7s						
GTA				LR	LR		
	comp=E,550nm,9.9s						
GTA				LR	LR		
	comp=Z,780nm,11.5s,MS4.5						
SHL	Shillong	26.34	285	i P	P	20 23 48.5	-0.3
LSA	Lhasa	27.51	294	eP	P	20 24 03.0	+3.6
LSA	Lhasa	27.51	294	eP	P	20 23 59.6	+0.3
	comp=Z,11nm,1.0s,mb4.4						
ULN	Ulaanbaatar	28.58	341	eP	P	20 24 08.5	-0.4
	comp=Z,3.9nm,0.9s,mb4.1						
SONM	Songino Array	28.75	340	P	P	20 24 10.7	+0.3
	comp=Z,1.2nm,0.9s,mb3.6,baz=166,slow=10,SNR=6.4						
ASAJ	Asahikawa	29.37	34	LR	LR	20 37 29.8	
	comp=Z,134nm,20.1s,MS3.6,baz=226,slow=39						
GUN	Gumba	31.86	289	eP	P	20 24 37.0	-1.2
ZAK	Zakamensk	31.98	339	eP	P	20 24 39.0	0.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.8						
PKI	Pulchoki	32.25	288	eP	P	20 24 39.8	-1.8
KKN	Kakani	32.38	289	eP	P	20 24 40.9	-1.8
	comp=Z,17nm,0.9s,mb4.9						
DMN	Daman	32.52	288	eP	P	20 24 41.5	-2.5
	comp=Z,50nm,1.4s,mb5.3						
GKN	Gorkha	32.96	289	eP	P	20 24 46.0	-1.8
	comp=Z,25nm,1.1s,mb5.1						
TLY	Talaya	32.99	341	eP	P	20 24 45.3	-2.5
TLY				e		20 31 51.4	
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
TLY				MLR	MLR		
	comp=Z,256nm,13.0s,MS4.1						
KOLN	Koldanda	33.87	288	eP	P	20 24 54.2	-1.4
	comp=Z,23nm,1.0s,mb5.1						
KAKA	Kakadu	35.84	159	eP	P	20 25 12.0	-0.6
	comp=Z,12nm,0.9s,mb4.8						
FITZ	Fitzroy Crossi	39.49	172	P	P	20 25 43.2	0.0
	comp=Z,3.1nm,0.9s,mb4.1,baz=155,slow=19,SNR=2.3						
MKAR	Makanchi Array	39.88	319	P	P	20 25 45.8	-0.4
	comp=Z,1.3nm,0.6s,mb3.9,baz=113,slow=9.2,SNR=16						
MKAR				LR	LR	20 42 32.2	
	comp=Z,91nm,18.4s,MS3.6,baz=250,slow=37						
YAK	Yakutsk	41.25	7	eP	P	20 25 58.0	+0.8
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.3						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				MLR	MLR		
	comp=Z,192nm,12.0s,MS4.2						
YAK				MLR	MLR		
	comp=N,188nm,13.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,152nm,12.0s,MS4.3						
YAK	Yakutsk	41.25	7	eP	P	20 25 56.8	-0.4
	comp=E,14nm,0.6s,mb4.8						
ZAL	Zalesovo	42.25	329	LR	LR	20 43 24.6	
	comp=E,138nm,19.5s,MS3.9,baz=336,slow=36						
WRAB	Tennant Creek	43.22	160	eP	P	20 26 10.8	-3.1
	comp=E,38nm,1.2s,mb5.0						
WRA	Warramunga Arr	43.22	160	P	P	20 26 14.0	+0.1
	comp=E,1.7nm,0.5s,mb4.0,baz=343,slow=9.0,SNR=24						
WB2	Warramunga Arr	43.23	160	eP	P	20 26 13.9	-0.1
BVAR	Borovoye Array	49.40	323	P	P	20 27 01.6	-0.7
	comp=E,0.7nm,0.6s,mb3.9,baz=106,slow=11,SNR=4.4						
HNR	Honiara	49.52	124	LR	LR	20 44 21.8	
	comp=E,57nm,19.5s,MS3.6,baz=154,slow=32						
ZRNK	Zerenda	50.17	322	eP	P	20 27 05.7	-2.5
ZRNK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
ZRNK	Zerenda	50.17	322	eP	P	20 27 05.7	-2.5
	comp=Z,3.9nm,1.0s,mb4.4						
TIXI	Tiksi	50.64	4	eP	P	20 27 08.0	-3.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,313nm,15.0s,MS4.5						
FX1	Attu Island--F	51.12	38	LR	LR	20 48 50.0	
	comp=Z,2.5nm,20.5s,baz=81,slow=36						
BILL	Bilibino	54.70	19c	iP	P	20 27 42.6	+0.7
BILL				pmax	pmax		
	comp=Z,13µm,1.2s						
BILL	Bilibino	54.70	19	eP	P	20 27 42.0	+0.2
	comp=Z,20nm,1.1s,mb5.0						
SVE	Sverdlovsk	55.89	325	eP	P	20 27 49.7	-0.9
SVE				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.9						
SVE				MLR	MLR		
	comp=N,100nm,12.0s,MS4.5						
SVE				MLR	MLR		
	comp=E,200nm,12.0s,MS4.5						
SVE				MLR	MLR		
	comp=Z,200nm,12.0s,MS4.4						
STKA	Stephens Creek	56.67	158	eP	P	20 27 56.7	+0.1
	comp=Z,2.1nm,0.4s,mb4.5						
STKA	Stephens Creek	56.67	158	P	P	20 27 56.9	+0.2
	comp=Z,1.4nm,0.6s,mb4.2,baz=360,slow=5.5,SNR=5.5						
ARU	Arti	56.92	324	eP	P	20 27 57.1	-1.0
KIV	Kislovodsk	66.75	310	eP	P	20 29 04.5	+0.3
KIV				pmax	pmax		
	comp=N,9.0nm,1.2s						
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
KIV				MLR	MLR		
	comp=N,67nm,19.0s,MS3.9						
KIV				MLR	MLR		
	comp=E,39nm,19.0s,MS3.9						
KIV				MLR	MLR		
	comp=Z,55nm,19.0s,MS3.8						
APA	Apatity	69.34	336	⇑iP	P	20 29 18.8	-1.1
APA				i	pP	20 29 28.0	+0.6
APA				pmax	pmax		
	comp=Z,54nm,1.6s,mb5.2						
APA				MLR	MLR		
	comp=Z,500nm,14.0s,MS4.9						
ARCES	ARCESS Array B	71.90	338	P	P	20 29 36.3	+0.9
	comp=Z,3.8nm,0.8s,mb4.3,baz=72,slow=7.7,SNR=5.2						
ILAR	Eielson Array	72.19	27	P	P	20 29 38.5	+1.3
	comp=Z,1.6nm,0.7s,mb4.1,baz=267,slow=5.2,SNR=22						
KAF	Kangasniemi	73.24	331	epkp	P	20 29 42.3	-1.1
FINES	FINESS Array B	73.51	330	P	P	20 29 44.0	-1.0
	comp=Z,0.9nm,0.5s,mb4.0,baz=34,slow=6.9,SNR=6.8						
FINES				LR	LR	21 02 44.7	
	comp=Z,91nm,18.1s,MS4.1,baz=65,slow=36						
FINES	FINESS Array B	73.51	330	P	P	20 29 44.0	-1.0
FINES				LR	LR	21 02 44.7	
BRTR	Keskin Array B	74.20	307	P	P	20 29 50.0	+0.6
	comp=Z,0.2nm,0.3s,mb3.5,baz=63,slow=6.4,SNR=3.3						
AKASG	Malin Array Be	74.46	319	P	P	20 29 50.4	-0.3
	comp=Z,0.2nm,0.3s,mb3.6,baz=64,slow=5.4,SNR=6.9						
INK	Inuvik	76.24	22	P	P	20 30 03.2	+2.8
	comp=Z,3.7nm,0.9s,mb4.3,baz=283,slow=7.8,SNR=4.7						
INK	Inuvik	76.24	22	P	P	20 30 03.2	+2.8
NB2	NORSAR Subarra	80.38	332	P	P	20 30 23.6	+0.4
	comp=Z,1.0nm,0.6s,mb3.9,baz=62,slow=5.3						
NOA	NORSAR Array B	80.38	332	P	P	20 30 22.7	-0.5
	comp=Z,1.6nm,1.0s,mb3.9,baz=64,slow=5.0,SNR=3.6						
NOA				LR	LR	21 10 25.3	
	comp=Z,114nm,18.1s,MS4.3,baz=45,slow=39						
CLL	Collm	83.84	323	P	P	20 30 42.3	+0.9
CLL				i *PP	pP	20 30 50.4	+1.3
KMBO	Kilima Mbogo	83.87	266	P	P	20 30 44.3	+1.9
	comp=Z,3.3nm,1.0s,mb4.4,baz=58,slow=4.9,SNR=7.0						
KMBO				LR	LR	21 06 25.3	
	comp=Z,89nm,18.1s,MS4.2,baz=94,slow=35						
GERES	GERESS Array B	84.52	320	P	P	20 30 46.3	+1.5
	comp=Z,1.2nm,0.8s,mb4.1,baz=90,slow=4.0,SNR=12						
GERES				LR	LR	21 10 08.3	
	comp=Z,67nm,18.6s,MS4.1,baz=200,slow=37						
MOX	Moxa	84.92	323	eP	P	20 30 48.0	+1.2
MOX				pP	pP	20 30 56.0	+1.5
YKA	Yellowknife Ar	85.98	22	P	P	20 30 54.5	+2.7
	comp=Z,1.1nm,0.7s,mb4.2,baz=313,slow=4.6,SNR=5.2						
YKA	Yellowknife Ar	85.98	22	P	P	20 30 54.5	+2.7
CABF	La Chapelle	90.10	321	eP	P	20 31 12.4	+0.5
LPG	La Plagne	90.29	320	eP	P	20 31 14.0	+1.2
	comp=Z,20nm,1.1s,mb5.0						
LPL	La Plagne	90.29	320	eP	P	20 31 14.0	+1.2
	comp=Z,9.8nm,1.0s,mb4.8						
PGF	Pioggiola	90.38	316	eP	P	20 31 13.6	+0.3
	comp=Z,24nm,0.9s,mb5.2						
MBDF	Montbardon	90.67	319	eP	P	20 31 14.6	0.0
	comp=Z,14nm,1.0s,mb5.0						
LOR	Lormes	91.04	322	eP	P	20 31 16.3	+0.1
LOR				eR			
	comp=Z,86nm,18.2s						
ORIF	Oris-en-Rattie	91.11	320	eP	P	20 31 17.3	+0.7
ORIF				eR			
	comp=Z,110nm,20.2s						
FRF	La Foret Royal	91.36	318	eP	P	20 31 18.3	+0.5
LMR	La Mourre	91.56	318	eP	P	20 31 19.5	+0.8
VIVF	Saint-Julien-l	91.87	320	eP	P	20 31 20.3	+0.2
BGF	Bois d'Agland	92.01	322	eP	P	20 31 21.2	+0.5
FLN	La Foliniere	92.57	325	eP	P	20 31 22.3	-0.9
FLN				eR			
	comp=Z,112nm,21.5s						
PPT	Papeete	96.38	106	LR	LR	21 10 35.8	
	comp=Z,94nm,20.9s,MS4.2,baz=320,slow=33						
EVO	Evora	103.24	321	eP	Pdif	20 32 12.4	+0.6
	comp=Z,16nm,1.1s						
EVO				eR			
	comp=Z,72nm,19.2s						

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*NEIC **29** 21:04:39.5,47.32N×3.84W,h17^{km},ML2.5(LDG),After LDG.*
*LDG **29** 21:04:39.5±0.1,47.32N×3.84W,h17^{km},Md2.4/2,Ml2.5/9, Error ellipse: s-maj=2.8km s-min=1.4km az=67.0*
*CSEM **29** 21:04:39.5±0.2,47.32N×3.83W,h17^{km}±1^{km},ML2.5/9, Error ellipse: s-maj=3.3km s-min=1.5km az=70.0*
ISC 29 21:04:39.0±2.0**,47.49N**±0.08×**4.3W**±0.2**,h17**^{km}**,n9,** σ**1^{s}41**/26**,France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUIF	Quistinic	0.85	59	ePn	Pn	21 04 53.5	-2.6
QUIF				ePg	Pb	21 04 54.6	-0.3
QUIF				eSg	Sb	21 05 03.9	-1.9
	22nm,0.2s						
ROSF	Rostrenen	1.07	37	ePn	Pn	21 04 58.7	-0.6
ROSF				ePg	Pb	21 04 59.9	+1.2
ROSF				eSg	Sb	21 05 14.2	+2.0
	7.0nm,0.2s						
SGMF	Saint Gilles	1.37	55	ePn	Pn	21 05 01.0	-2.6
SGMF				ePg	Pn	21 05 03.3	-0.3
SGMF				eSg	Sb	21 05 20.5	-0.5
	9.6nm,0.2s						
GRR	Gorron	2.45	67	ePn	Pn	21 05 14.2	-4.8
GRR				ePg	Pn	21 05 21.1	+2.1
GRR				eSg	Sn	21 05 49.7	+0.9
	4.8nm,0.2s						
FLN	La Foliniere	2.83	62	ePn	Pn	21 05 20.1	-4.3
FLN				ePg	Pn	21 05 29.4	+5.0
FLN				eSn	Sn	21 05 50.4	-8.0
FLN				eSg	Sn	21 06 03.6	+5.2
	4.1nm,0.2s						
MFF	Saint Martin d	2.94	106	ePn	Pn	21 05 19.5	-6.5
MFF				ePg	Pn	21 05 28.2	+2.2
MFF				eSg	Sn	21 06 01.7	+0.4
	2.9nm,0.2s						
LFF	La Frestale	4.30	125	ePn	Pn	21 05 37.9	-7.4
LFF				eSg	Sn	21 06 44.9	+9.2
	2.6nm,0.3s						
TCF	Toulx Ste Croi	4.59	103	ePg	Pn	21 05 58.6	+9.2
TCF				eSn	Sn	21 06 28.4	-15
TCF				eSg	Sn	21 06 53.1	+10
	1.5nm,0.4s						
BGF	Bois d'Agland	4.94	98	ePn	Pn	21 05 47.0	-7.4
BGF				eSg	Sn	21 07 05.5	+14
	2.7nm,0.3s						

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*INET **29** 21:19:02.1,13.10N×87.67W,h199^{km},ML3.6*
*SSS **29** 21:19:12.5,13.04N×87.61W,h185^{km},MD4.4*
CASC 29 21:19:11.1±2.8**,13.14N×87.25W,h162**^{km}±15^{km}**,MD4.1, ML3.3,7C-7D,Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.59	284	⇑eP	P	21 19 37.7	+3.1
SOMN	Somoto	0.68	65	eP	P	21 19 33.6	-1.4
SOMN				eS	S	21 19 55.4	+1.9
TEL3	Telica 3	0.69	145	eP	P	21 19 34.5	-0.6
TEL3				eS	S	21 19 52.1	-1.5
CNGN	Cerro Negro	0.83	140	eS	S	21 19 54.8	-0.3
MIRN	Miramar	0.87	143	⇓eP	P	21 19 33.2	-2.9
MIRN				eS	S	21 19 57.3	+1.8
BLLM	Bellamira	1.01	288	⇓eP	P	21 19 39.5	+2.3
CAHU	Cacacuatique	1.13	304	⇑eP	P	21 19 41.1	+2.8

PYTN	**Playitas**	**1.30**	**117**	⇓*e*P	P	21 19 38.8	-1.1
MGAN	**Managua**	**1.39**	**135**	*e*S	S	21 20 05.1	+1.5
MGAN				*i*		21 20 06.5	
	comp=E,305nm,0.2s						
LCBS	**La Ceiba**	**1.76**	**287**	⇑*e*P	P	21 19 45.0	+0.4
LFRS	**El Faro**	**1.83**	**285**	⇑*e*P	P	21 19 45.7	+0.4
LFRS				*e*S	S	21 20 12.3	+0.5
LBRS	**Las Brisas**	**1.85**	**289**	⇓*e*P	P	21 19 46.5	+1.0
LFU	**La Fuente**	**1.92**	**289**	⇑*e*P	P	21 19 47.9	+1.7
BOQS	**Boqueron**	**2.06**	**287**	⇓*e*P	P	21 19 48.5	+0.5
BOQS				*e*S	S	21 20 17.2	+0.7
SNJE	**San Jose**	**2.41**	**288**	⇓*e*P	P	21 19 52.3	+0.1
MTO2	**Montecristo 2**	**2.41**	**302**	*e*P	P	21 19 53.3	+1.1
SBLS	**San Blas**	**2.41**	**287**	⇑*e*P	P	21 19 52.3	0.0
SBLS				*e*S	S	21 20 23.9	0.0
RTR	**El Retiro**	**2.45**	**288**	⇑*e*P	P	21 19 52.9	+0.2
RBDL	**Robledal**	**2.56**	**293**	⇓*e*P	P	21 19 54.2	+0.1

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*IDC **29** 21:25:40.4±2.3,43.49N×105.17W,mb1 3.6/3,mb1mx3.3/23,mbtmp3.3/3,ML3.3/3,Error ellipse: s-maj=57.8km s-min=9.6km az=153.0*

*NEIC **29** 21:25:43.8±0.5,44.06N×105.31W,ML3.1,Error ellipse: s-maj=8.4km s-min=5.7km az=144.0,Suspected Mining explosion.*

NEIC 30 km [15 miles] SSE of Gillette.

ISC 29 21:25:42.3±0.6,**44.09N**±0.06×**105.33W**±0.07,**n27,σ1^{s}30**/28,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.93**	**88**	*e*P	**Pg**	**21 26 01.2**	**+0.3**
LAO	**LASA Array**	**2.68**	**347**	*e*P	**Pn**	**21 26 29.1**	**+1.7**
RWWY	**Rawlins**	**2.77**	**211**	*e*P	**Pn**	**21 26 30.2**	**+1.5**
PHWY	**Pilot Hill**	**2.79**	**182**	*e*P	**Pn**	**21 26 29.4**	**+0.4**
BW06	**Boulder Array**	**3.35**	**248**	*e*P	**Pn**	**21 26 37.9**	**+0.8**
PDAR	**Pinedale Array**	**3.35**	**248**	Pn	**Pn**	**21 26 36.0**	**-1.0**
	2.9nm,0.3s,baz=63,slow=17,SNR=62						
PDAR				Pg	**Pg**	**21 26 42.7**	**-6.5**
	6.6nm,0.3s,baz=69,slow=19,SNR=86						
PDAR				Lg		21 27 23.7	
	6.5nm,0.3s,baz=65,slow=31,SNR=14						
LOHW	**Long Hollow**	**3.85**	**265**	*e*P	**Pn**	**21 26 47.5**	**+3.5**
MOOW	**Moose Ponds**	**3.93**	**267**	P	**Pn**	**21 26 52.4**	**+7.1**
SNOW	**Snow King Moun**	**3.98**	**263**	P	**Pn**	**21 26 53.0**	**+7.1**
IMW	**Indian Meadow**	**4.05**	**269**	*e*P	**Pn**	**21 26 47.1**	**+0.1**
REDW	**Red Top Meadow**	**4.07**	**262**	*e*P	**Pn**	**21 26 49.2**	**+2.0**
TPAW	**Teton Pass**	**4.12**	**264**	P	**Pn**	**21 26 49.9**	**+2.0**
RRI2	**Red Ridge**	**4.41**	**262**	*e*P	**Pn**	**21 26 52.3**	**+0.3**
AHID	**Auburn Hatcher**	**4.41**	**255**	P	**Pn**	**21 26 52.5**	**+0.4**
DGMT	**Dagmar**	**4.45**	**10**	*e*P	**Pn**	**21 26 53.5**	**+0.8**
BOZ	**Bozeman (W)**	**4.75**	**291**	*e*P	**Pn**	**21 26 55.3**	**-1.5**
HWUT	**Hardware Ranch**	**5.21**	**244**	*e*P	**Pn**	**21 27 02.9**	**-0.5**
	8.0nm,0.4s						
HRY	**Holter Researc**	**5.28**	**302**	*e*P	**Pn**	**21 27 03.9**	**-0.5**
TCUT	**Toone Canyon**	**5.38**	**239**	*e*P	**Pn**	**21 27 04.5**	**-1.3**
DAU	**Daniels Canyon**	**5.73**	**232**	*e*P	**Pn**	**21 27 11.3**	**+0.6**
HVU	**Hansel Valley**	**5.93**	**250**	P	**Pn**	**21 27 08.5**	**-5.1**
SPUT	**South Promonto**	**5.94**	**245**	*e*P	**Pn**	**21 27 12.3**	**-1.3**
CHMT	**Chamberlain Mo**	**6.25**	**300**	*e*P	**Pn**	**21 27 14.8**	**-3.2**
SRU	**San Rafael**	**6.32**	**220**	*e*P	**Pn**	**21 27 18.0**	**-1.0**
ULM	**Lac du Bonnet**	**8.91**	**43**	Pn	**P**	**21 27 53.2**	**-2.0**
	0.8nm,0.3s,baz=236,slow=11,SNR=4.4						
ULM				Lg		21 30 27.1	
	0.3nm,0.3s,baz=105,slow=22,SNR=2.3						
ULM	**Lac du Bonnet**	**8.91**	**43**	Pn	**P**	**21 27 53.2**	**-2.0**
ULM				Lg		21 30 27.1	
NVAR	**Mina Array Bea**	**11.28**	**244**	Pn	**P**	**21 28 24.9**	**-2.9**
	0.1nm,0.3s,baz=63,slow=12,SNR=2.8						

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*IDC **29** 21:28:12.6±8.1,19.15N×145.19E,h410^{km}±76^{km},mb3.5/9,mb1 3.5/10,mb1mx3.3/23,mbtmp4.3/10,Error ellipse: s-maj=80.2km s-min=12.0km az=77.0*

*NEIC **29** 21:28:13.1±6.0,19.11N×145.03E,h410^{km}±56^{km},mb4.0/2,Error ellipse: s-maj=74.0km s-min=8.4km az=77.0*

ISC 29 21:28:11.1±1.2,**19.1N**±0.1×**145.2E**±0.3,**h410^{km},n15,σ0^{s}43**/15,**mb3.8**/10,**2C,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	**Kunigami**	**17.32**	**299**	P	**P**	**21 31 48.9**	**0.0**
	0.8nm,0.3s,baz=118,slow=25,SNR=4.2						
WRAB	**Tennant Creek**	**40.25**	**196**	*e*P	**P**	**21 35 11.9**	**+0.1**
	6.4nm,0.6s,mb4.1						
WB2	**Warramunga Arr**	**40.26**	**196**	⇑*i*P	**P**	**21 35 12.0**	**+0.1**
WRA	**Warramunga Arr**	**40.27**	**196**	P	**P**	**21 35 12.2**	**+0.3**
	2.4nm,0.4s,mb3.9,baz=14,slow=8.7,SNR=46						
FITZ	**Fitzroy Crossi**	**41.69**	**209**	⇑*i*P	**P**	**21 35 23.1**	**-0.3**
	8.3nm,1.4s,mb3.9						
FITZ	**Fitzroy Crossi**	**41.69**	**209**	P	**P**	**21 35 23.3**	**-0.1**
	3.2nm,0.3s,mb4.1,baz=29,slow=10,SNR=23						
SONM	**Songino Array**	**42.48**	**321**	P	**P**	**21 35 30.1**	**+0.7**
	1.5nm,0.5s,mb3.6,baz=136,slow=8.6,SNR=11						
STKA	**Stephens Creek**	**50.84**	**184**	P	**P**	**21 36 33.8**	**-0.3**
	1.2nm,0.9s,mb3.1,baz=326,slow=15,SNR=3.2						
ZAL	**Zalesovo**	**57.37**	**322**	P	**P**	**21 37 19.7**	**-0.6**
	0.6nm,0.3s,mb3.4,baz=311,slow=2.5,SNR=4.2						
MKAR	**Makanchi Array**	**57.79**	**314**	P	**P**	**21 37 23.2**	**-0.1**
	1.4nm,0.7s,mb3.4,baz=91,slow=8.8,SNR=15						
MKAR				PcP	PcP	21 38 10.1	-0.6
	0.3nm,0.3s,baz=80,slow=4.4,SNR=5.6						
MKAR	**Makanchi Array**	**57.79**	**314**	P	**P**	**21 37 23.2**	**-0.1**
MKAR				PcP	PcP	21 38 10.1	-0.6
BVAR	**Borovoye Array**	**65.81**	**320**	P	**P**	**21 38 15.7**	**+0.1**
	5.6nm,0.5s,mb4.5,baz=98,slow=7.4,SNR=47						
ZRNK	**Zerenda**	**66.65**	**320**	*e*P	**P**	**21 38 20.5**	**-0.3**
ARCES	**ARCESS Array B**	**81.92**	**342**	P	**P**	**21 39 47.6**	**+0.8**
	1.7nm,0.7s,mb3.9,baz=87,slow=9.6,SNR=8.3						
FINES	**FINESS Array B**	**86.27**	**335**	P	**P**	**21 40 07.7**	**-0.7**
	0.6nm,0.4s,mb3.6,baz=61,slow=6.6,SNR=7.8						

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*IDC **29** 21:32:51.0±31.0,37.68N×70.83E,mb3.8/3,mb1 3.7/4,mb1mx3.4/22,mbtmp3.6/4,ML2.7/1,Error ellipse: s-maj=570.9km s-min=34.7km az=164.0*

*NNC **29** 21:32:58.5±13.0,38.34N×70.65E,h8^{km}±16^{km},mpv3.1,Error ellipse: s-maj=95.4km s-min=51.9km az=161.0*

ISC 29 21:32:54.0±1.6,**38.0N**±0.1×**70.6E**±0.2,**h10^{km},n9,σ1^{s}01**/12,**mb3.6**/3,**2C-1D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.05**	**359**	Pn	**Pn**	**21 34 12.8**	**+1.1**
	1.1nm,0.4s,baz=185,slow=13,SNR=47						
KK31				⇓Pg	**Pg**	**21 34 25.1**	**-10**
	1.2nm,0.3s						
KK31				⇑Sn	**Sn**	**21 35 10.7**	**-0.2**
	2.4nm,0.3s						
KK31				⇑Lg		21 35 32.6	
	9.4nm,0.6s						
AAK	**Ala-Archa**	**5.46**	**32**	Pn	**Pn**	**21 34 19.3**	**+1.9**
AAK				Sn	**Sn**	**21 35 20.8**	**-0.3**
	4.3nm,0.7s						
AAK				Lg		21 35 42.3	
	13nm,1.0s						
MKAR	**Makanchi Array**	**12.27**	**41**	Pn	**P**	**21 35 50.1**	**-1.6**
	0.1nm,0.3s,baz=239,slow=8.4,SNR=3.8						
AB31	**Akbulak array**	**13.60**	**329**	Pn	**P**	**21 36 05.6**	**-3.6**
	0.3nm,0.3s,baz=134,slow=11,SNR=10						
FINES	**FINESS Array B**	**36.04**	**325**	P	**P**	**21 39 57.2**	**+0.1**
	0.5nm,0.3s,mb3.9,baz=115,slow=8.3,SNR=9.4						
KAF	**Kangasniemi**	**36.17**	**326**	*e*p	**P**	**21 39 58.3**	**+0.1**
ARCES	**ARCESS Array B**	**39.60**	**337**	P	**P**	**21 40 26.8**	**-0.1**
	0.9nm,0.5s,mb3.7,baz=100,slow=7.4,SNR=8.7						
NB2	**NORSAR Subarra**	**42.97**	**322**	P	**P**	**21 40 54.4**	**-0.1**
	0.1nm,0.6s,mb2.7,baz=95,slow=8.6						
NOA	**NORSAR Array B**	**42.97**	**322**	P	**P**	**21 40 54.5**	**-0.1**
	0.5nm,0.5s,mb3.5,baz=95,slow=8.1,SNR=3.4						

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*IDC **29** 21:34:16.8±4.8,54.70N×157.56W,h30^{km}±6^{km},mb3.7/7,mb1 3.9/9,mb1mx3.7/24,mbtmp3.9/9,ML4.1/2,MS3.2/3,Ms1 3.2/3,ms1mx2.6/30,Error ellipse: s-maj=115.9km s-min=28.0km az=144.0*

*NEIC **29** 21:34:17.7±1.1,54.99N×157.53W,ML3.8(AEIC),Error ellipse: s-maj=24.0km s-min=3.7km az=153.0*

ISC 29 21:34:14.6±1.1,**54.9N**±0.1×**157.3W**±0.1,**h32^{km}, h32^{km}**±1.9^{km}**:pP-P,n34,σ1^{s}02**/34,**mb4.0**/7,**MS3.2**/1,**South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**1.88**	**287**	P	**Pn**	**21 34 44.7**	**-0.4**
SDPT				S	**Sn**	**21 35 08.4**	**+0.4**
DOL	**Dolgoi Island**	**2.63**	**278**	P	**Pn**	**21 34 55.7**	**-0.2**
HAG	**Hague Volcano**	**2.67**	**282**	P	**Pn**	**21 34 56.3**	**-0.2**
BLHA	**Black Hill**	**2.84**	**289**	P	**Pn**	**21 34 58.5**	**-0.4**
DTNA	**Dutton South F**	**2.85**	**278**	P	**Pn**	**21 34 59.0**	**-0.1**
DT1	**Dutton Round H**	**2.87**	**277**	P	**Pn**	**21 34 59.1**	**-0.2**
BALA	**Baldy Mountain**	**3.16**	**278**	P	**Pn**	**21 35 03.4**	**-0.1**
CAHL	**Cahill**	**3.40**	**18**	P	**Pn**	**21 35 07.7**	**+0.9**
FALS	**False Pass**	**3.52**	**273**	P	**Pn**	**21 35 08.4**	**-0.2**
KDAK	**Kodiak Island**	**3.95**	**40**	P	**Pn**	**21 35 15.7**	**+1.1**
WESN	**West Dahl Nort**	**4.22**	**269**	P	**Pn**	**21 35 18.5**	**0.0**
WESE	**West Dahl East**	**4.24**	**268**	P	**Pn**	**21 35 18.7**	**0.0**
WFAR	**Faris Peak**	**4.34**	**269**	P	**Pn**	**21 35 20.1**	**0.0**
MTBL	**Makushin Table**	**5.54**	**265**	P	**Pn**	**21 35 36.4**	**-0.6**
MSW	**Makushin Switc**	**5.61**	**264**	P	**Pn**	**21 35 37.2**	**-0.8**
ILW	**Iliamna West**	**5.69**	**22**	P	**Pn**	**21 35 39.3**	**+0.1**
BRLK	**Bradley Lake**	**6.03**	**33**	P	**Pn**	**21 35 43.3**	**-0.8**
RSO	**Redoubt South**	**6.13**	**22**	*e*P	**Pn**	**21 35 46.8**	**+1.3**
HIN	**Hinchinbrook I**	**8.03**	**42**	P	**P**	**21 36 10.5**	**-1.6**
EYAK	**Cordova Ski Ar**	**8.42**	**43**	P	**P**	**21 36 15.8**	**-1.6**
SCM	**Sheep Creek Mo**	**8.74**	**33**	P	**P**	**21 36 19.7**	**-2.3**
ILAR	**Eielson Array**	**11.23**	**24**	Pn	**P**	**21 36 53.5**	**-2.5**
	0.2nm,0.3s,baz=222,slow=13,SNR=6.5						
ILAR				LR	LR	21 41 22.2	
	comp=Z,66nm,20.3s,baz=352,slow=37						
INK	**Inuvik**	**17.43**	**30**	P	**P**	**21 38 19.0**	**+2.3**
	0.9nm,0.3s,baz=224,slow=9.6,SNR=8.9						
INK				LR	LR	21 45 41.1	
	comp=Z,82nm,19.5s,baz=342,slow=39						
YBH	**Yreka Blue Hor**	**26.20**	**106**	LR	LR	21 47 50.2	
	comp=Z,74nm,19.7s,MS3.2,baz=334,slow=31						
SONM	**Songino Array**	**55.93**	**306**	P	**P**	**21 43 51.6**	**+0.1**
	1.1nm,0.8s,mb3.9,baz=39,slow=7.9,SNR=5.3						
KAF	**Kangasniemi**	**63.34**	**358**	*e*p	**P**	**21 44 42.3**	**0.0**
FINES	**FINESS Array B**	**64.02**	**358**	P	**P**	**21 44 46.9**	**+0.3**
	1.2nm,0.6s,mb4.1,slow=7.6,SNR=8.6						
FINES				pP	pP	21 44 56.8	+0.3
	0.6nm,0.5s,baz=18,slow=6.0,SNR=1.7						
BVAR	**Borovoye Array**	**65.47**	**331**	P	**P**	**21 44 56.9**	**+0.8**
	1.4nm,0.8s,mb4.1,baz=45,slow=6.3,SNR=8.3						
BVAR				pP	pP	21 45 05.7	-0.3
	0.9nm,0.8s,baz=18,slow=4.7,SNR=2.9						
MKAR	**Makanchi Array**	**66.93**	**320**	P	**P**	**21 45 05.3**	**-0.3**
	0.3nm,0.5s,mb3.6,baz=45,slow=6.9,SNR=5.4						
MKAR				pP	pP	21 45 16.1	+0.7
	0.3nm,0.7s,baz=40,slow=8.0,SNR=3.4						
MKAR	**Makanchi Array**	**66.93**	**320**	P	**P**	**21 45 05.3**	**-0.3**
MKAR				pP	pP	21 45 16.1	+0.7
AKASG	**Malin Array Be**	**74.67**	**356**	P	**P**	**21 45 53.0**	**+0.9**
	0.6nm,0.4s,mb3.8,baz=6.5,slow=5.5,SNR=5.1						
AKASG	**Malin Array Be**	**74.67**	**356**	P	**P**	**21 45 53.0**	**+0.9**
CMAR	**Chiang Mai Arr**	**82.74**	**292**	P	**P**	**21 46 38.2**	**+1.6**
	1.6nm,0.7s,mb4.2,baz=14,slow=5.3,SNR=10						
BRTR	**Keskin Array B**	**85.33**	**352**	P	**P**	**21 46 51.8**	**+2.6**
	0.7nm,0.6s,mb4.0,baz=18,slow=2.6,SNR=4.7						

IDC 29 21:38:12.7±1.6,**8.14N**×**91.49E,mb3.9**/6,**mb1 3.9**/7,**mb1mx3.7**/20,**mbtmp3.8**/7,**ML3.7**/1,**Error ellipse: s-maj=59.5km s-min=21.5km az=64.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.55**	**34**	Pn	P	21 41 12.6	-2.9
	0.1nm,0.3s,baz=235,slow=14,SNR=6.7						
MKAR	**Makanchi Array**	**39.31**	**350**	P	P	21 45 43.5	-1.6
	0.4nm,0.4s,baz=169,slow=9.1,SNR=9.8						
SONM	**Songino Array**	**41.53**	**15**	P	P	21 46 01.7	-1.7
	1.1nm,0.7s,baz=188,slow=8.7,SNR=6.0						
ZAL	**Zalesovo**	**45.98**	**354**	P	P	21 46 37.8	-1.5
	0.8nm,0.9s,baz=150,slow=5.4,SNR=4.7						
WRA	**Warramunga Arr**	**50.57**	**124**	P	P	21 47 12.7	-2.7
	0.6nm,0.4s,baz=302,slow=9.5,SNR=7.2						
STKA	**Stephens Creek**	**62.20**	**132**	P	P	21 48 37.0	-1.6
	1.7nm,0.7s,baz=321,slow=20,SNR=5.6						
FINES	**FINESS Array B**	**71.26**	**333**	P	P	21 49 33.1	-2.5
	0.6nm,0.6s,baz=117,slow=4.3,SNR=3.4						

IDC 29 21:52:33.3±1.5,**23.13S**×**111.73W,mb3.7**/3,**mb1 4.1**/3,**mb1mx3.8**/16,**mbtmp3.7**/3,**MS3.5**/9,**Ms1 3.5**/9,**ms1mx3.3**/20,**Error ellipse: s-maj=61.6km s-min=40.0km az=16.0,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**38.70**	**127**	LR	LR	22 12 15.6	
	comp=Z,52nm,20.3s,baz=153,slow=30						
LPAZ	**La Paz**	**41.49**	**89**	P	P	22 00 23.2	-0.7
	0.7nm,0.5s,baz=243,slow=5.0,SNR=5.3						
LPAZ				LR	LR	22 13 17.3	
	comp=Z,90nm,20.3s,baz=271,slow=30						
JTS	**JuntasAbangare**	**42.31**	**41**	LR	LR	22 13 04.0	
	comp=Z,35nm,18.2s,baz=247,slow=29						
CPUP	**Villa Florida**	**49.22**	**105**	LR	LR	22 17 47.7	
	comp=Z,41nm,18.1s,baz=286,slow=31						
TXAR	**Lajitas Array**	**52.73**	**9**	LR	LR	22 19 44.9	
	comp=Z,42nm,19.3s,baz=220,slow=31						
ANMO	**Albuquerque**	**57.97**	**5**	LR	LR	22 22 45.8	
	comp=Z,60nm,19.5s,slow=31						
BDFB	**Brasilia**	**60.17**	**95**	LR	LR	22 26 25.7	
	comp=Z,43nm,18.9s,baz=208,slow=34						
YBH	**Yreka Blue Hor**	**65.33**	**351**	LR	LR	22 23 29.7	
	comp=Z,25nm,20.4s,baz=225,slow=28						
PDAR	**Pinedale Array**	**65.59**	**2**	P	P	22 03 19.4	-1.7
	0.5nm,0.7s,baz=180,slow=6.3,SNR=3.6						
YKA	**Yellowknife Ar**	**85.35**	**359**	P	P	22 05 12.8	-0.3
	0.4nm,0.6s,baz=180,slow=4.2,SNR=4.3						
YKA				LR	LR	22 39 26.2	
	comp=Z,34nm,18.5s,baz=250,slow=33						
BRTR	**Keskin Array B**	**146.39**	**52**	PKPbc	PKPbc	22 12 15.6	-0.6
	0.2nm,0.4s,baz=270,slow=4.3,SNR=2.7						
ZAL	**Zalesovo**	**146.80**	**342**	PKPbc	PKPbc	22 12 15.3	-1.3
	1.2nm,0.3s,baz=100,slow=6.2,SNR=3.1						
CMAR	**Chiang Mai Arr**	**150.98**	**267**	PKPbc	PKPdf	22 12 29.9	+5.1
	2.3nm,1.0s,baz=89,slow=0.6,SNR=7.5						
MKAR	**Makanchi Array**	**153.82**	**338**	PKPbc	PKPdf	22 12 32.2	+4.3
	0.4nm,0.9s,baz=27,slow=2.7,SNR=4.2						

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*NEIC **29** 21:56:33.3,37.21N×3.68W,MN2.1(MDD),After MDD.*
NEIC Felt [II] at Atarfe.

*CSEM **29** 21:56:33.7±0.1,37.19N×3.74W,h2^{km},ML2.5/3,Error ellipse: s-maj=2.4km s-min=2.0km az=164.0*

*SFS **29** 21:56:33.0,37.21N×3.68W*

MDD 29 21:56:33.3±0.1,**37.21N**×**3.68W,mbLg2.1**/20,**1C,Error ellipse: s-maj=1.8km s-min=1.0km az=138.0,PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECOG	**Cogollos-Vega**	**0.12**	**53**	⇑Pg	Pg	21 56 35.2	-0.4
	82nm,0.1s,SNR=18						
ECOG				Lg		21 56 37.6	
	235nm,0.2s,SNR=7.9						
ERON	**Agron**	**0.21**	**208**	Pg	Pg	21 56 37.1	-0.4
ERON				Lg		21 56 40.9	
ERON	**Agron**	**0.21**	**208**	Pg	Pg	21 56 37.1	-0.4
	15nm,0.1s,SNR=48						
ERON				Lg		21 56 40.8	
	136nm,0.1s						
ELOJ	**Sierra Loja**	**0.38**	**261**	Pg	Pg	21 56 39.9	-1.0
ELOJ				Lg		21 56 46.2	
ELOJ	**Sierra Loja**	**0.38**	**261**	Pg	Pg	21 56 39.9	-1.0
	16nm,0.2s,SNR=17						
ELOJ				Lg		21 56 45.9	
	33nm,0.1s						
EGUA	**Guajares**	**0.39**	**166**	Pg	Pg	21 56 40.9	-0.1
	3.5nm,0.1s,SNR=7.9						
EGUA				Lg		21 56 46.7	
	15nm,0.1s,SNR=7.9						
ELUQ	**Luque**	**0.58**	**307**	Pg	Pg	21 56 44.6	-0.3
ELUQ				Lg		21 56 54.0	
ELUQ	**Luque**	**0.58**	**307**	Pg	Pg	21 56 44.6	-0.3
	16nm,0.2s,SNR=26						
ELUQ				Lg		21 56 52.9	
	22nm,0.2s						
EBER	**Berja**	**0.71**	**116**	Pg	Pg	21 56 47.0	-0.4
	0.0nm,0.1s,SNR=14						
EBER				Lg		21 56 55.6	
	24nm,0.2s						
EBER	**Berja**	**0.71**	**116**	Pg	Pg	21 56 47.0	-0.4
	SNR=14						
EQES	**Quesada**	**0.77**	**39**	Pg	Pg	21 56 48.0	-0.6
	1.5nm,0.1s,SNR=45						
EQES				Lg		21 56 59.8	
	20nm,0.1s						
EQES	**Quesada**	**0.77**	**39**	Pg	Pg	21 56 48.0	-0.6
	1.5nm,0.1s,SNR=45						
EBAN	**Banos Encina**	**0.96**	**355**	Pg	Pg	21 56 51.6	-0.8
	13nm,0.1s,SNR=58						
EBAN				Lg		21 57 06.2	
	7.0nm,0.2s						
EHUE	**Huescar**	**1.06**	**55**	Pg	Pg	21 56 53.9	-0.4
	4.3nm,0.2s,SNR=7.9						
EHUE				Lg		21 57 08.0	
	10.0nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**1.08**	**234**	Pg	Pg	21 56 52.9	-2.0
	1.0nm,0.1s,SNR=18						
EMIJ				Lg		21 57 07.4	
	25nm,0.3s						
EADA	**Adamuz**	**1.19**	**324**	Pg	Pg	21 56 54.9	-2.2
	5.3nm,0.1s,SNR=81						
EADA				Lg		21 57 10.6	
	17nm,0.1s,SNR=10.0						
EADA	**Adamuz**	**1.19**	**324**	Pg	Pg	21 56 54.9	-2.2
	5.3nm,0.1s,SNR=81						
ENIJ	**Nijar**	**1.20**	**101**	Pg	Pg	21 56 56.7	-0.6
	2.4nm,0.4s,SNR=7.9						
ENIJ				Lg		21 57 11.1	
	5.7nm,0.2s,SNR=7.9						
LIJA	**Lijar**	**1.41**	**258**	*i* P	Pb	21 57 00.0	-0.2
LIJA				*e*S	Sb	21 57 22.0	+3.4
EVIA	**Vianos**	**1.71**	**33**	Pn	Pn	21 57 04.0	-0.4
EVIA				Lg		21 57 27.2	
EVIA	**Vianos**	**1.71**	**33**	Pn	Pn	21 57 02.3	-2.1
	1.2nm,0.1s,SNR=7.9						
EVIA				Pg	Pg	21 57 04.4	-3.0
	0.4nm,0.6s,SNR=7.9						
EVIA				Lg		21 57 27.2	
	14nm,0.4s,SNR=7.9						
EVIA	**Vianos**	**1.71**	**33**	Pn	Pn	21 57 04.0	-0.5
	1.2nm,0.1s,SNR=7.9						
ESPR	**Espera**	**1.77**	**260**	Pn	Pn	21 57 05.1	-0.3
	0.8nm,0.1s,SNR=7.9						
ESPR				Lg		21 57 33.3	
	9.8nm,0.2s,SNR=7.9						
ESPR	**Espera**	**1.77**	**260**	Pn	Pn	21 57 05.1	-0.3
	0.8nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**2.04**	**71**	Pn	Pn	21 57 09.4	+0.2
	0.0nm,0.1s,SNR=6.2						
EMUR				Lg		21 57 37.6	
	6.6nm,0.4s,SNR=7.9						
EMUR	**La Murta**	**2.04**	**71**	Pn	Pn	21 57 09.4	+0.1
	SNR=6.2						
ETOB	**Tobarra**	**2.21**	**49**	Pn	Pn	21 57 10.5	-1.2
	1.1nm,0.2s,SNR=7.9						
ETOB				Lg		21 57 43.6	
	5.4nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.44**	**284**	Pn	Pn	21 57 12.4	-2.6
	0.1nm,0.1s,SNR=6.7						
EMIN				Sn	Sn	21 57 41.4	-4.6
	1.5nm,0.4s,SNR=7.9						
EMIN				Lg		21 57 49.9	
	2.5nm,0.2s,SNR=7.1						
EMIN	**Mina Concepcio**	**2.44**	**284**	Pn	Pn	21 57 12.4	-2.6
	0.1nm,0.1s,SNR=6.7						
EMIN				Sn	Sn	21 57 41.4	-4.6
	1.5nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**2.47**	**355**	Pn	Pn	21 57 13.7	-1.7
	SNR=7.9						
ESDC				Pg	Pg	21 57 20.0	-2.6
	0.2nm,0.1s,baz=174,slow=16,SNR=7.9						
ESDC				Lg		21 57 49.0	
	7.3nm,0.4s,baz=177,slow=29,SNR=7.9						
ESDC	**Sonseca Array**	**2.47**	**355**	Pn	Pn	21 57 13.7	-1.7
	SNR=7.9						
ESDC	**Sonseca Array**	**2.47**	**355**	Pg	Pg	21 57 20.0	-2.6
	0.2nm,0.1s,baz=174,SNR=7.9						
EGRO	**El Granado**	**3.04**	**277**	Pn	Pn	21 57 20.8	-2.9
	0.9nm,0.1s,SNR=5.7						
EGRO				Sn	Sn	21 57 55.8	-5.5
	1.1nm,0.1s,SNR=7.9						
EGRO				Lg		21 58 12.2	
	2.7nm,0.2s						
EGRO	**El Granado**	**3.04**	**277**	Pn	Pn	21 57 20.8	-2.8
	0.9nm,0.1s,SNR=5.7						
EGRO				Sn	Sn	21 57 55.8	-5.5
	1.1nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.05**	**301**	Pn	Pn	21 57 20.4	-3.4
	0.1nm,0.1s,SNR=7.9						
EBAD				Pg	Pg	21 57 29.1	-5.1
	0.6nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	21 57 58.2	-3.3
	2.2nm,0.2s,SNR=4.0						
EBAD				Lg		21 58 10.7	
	6.2nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.05**	**301**	Pn	Pn	21 57 20.4	-3.3
	0.1nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.05**	**301**	Pg	Pg	21 57 29.1	-5.1
	0.6nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	21 57 58.2	-3.3
	2.2nm,0.2s,SNR=4.0						
EBEN	**Beniarda**	**3.11**	**60**	Pn	Pn	21 57 22.8	-1.8
	SNR=7.9						
EBEN				Sn	Sn	21 57 59.4	-3.7
	SNR=7.9						
ECHE	**Chera**	**3.19**	**41**	Pn	Pn	21 57 23.7	-2.1
	0.4nm,0.2s,SNR=7.9						
ECHE				Pg	Pg	21 57 33.6	-3.5
	1.4nm,0.3s,SNR=7.9						
ECHE				Lg		21 58 14.1	
	3.1nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**4.03**	**38**	Lg		21 58 40.9	
	2.7nm,0.4s,SNR=7.9						

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*IDC **29** 22:24:03.0±1.1,2.19N×96.00E,mb4.4/10,mb1 4.5/11,mb1mx4.2/21,mbtmp4.4/11,ML3.9/1,Error ellipse: s-maj=49.5km s-min=16.2km az=54.0*

*BJI **29** 22:24:05.2,2.20N×96.20E,h35^{km},mB4.9,mb4.8,Ms4.1,Msz3.9*

*NEIC **29** 22:24:07.8±0.4,2.25N×96.17E,h30^{km},mb4.6/7,Error ellipse: s-maj=11.4km s-min=5.2km az=48.0*

ISC 29 22:24:05.9±0.6,**2.28N**±0.09×**96.21E**±0.10,**h30^{km},n31,σ0^{s}83**/31,**mb4.5**/21,**MS4.0**/1,**1C,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.34**	**56**	*e*P	**Pn**	**22 25 25.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**16.30**	**9**	Pn	**P**	**22 27 56.4**	**+1.9**
	0.2nm,0.3s,baz=200,slow=11,SNR=24						
KKM	**Kota Kinabalu**	**20.30**	**79**	*e*P	**P**	**22 28 41.9**	**-0.5**
SHL	**Shillong**	**23.52**	**350**	*e*P	**P**	**22 29 11.5**	**-3.1**
GYA	**Guiyang**	**26.05**	**22**	⇑*i*P	**P**	**22 29 39.3**	**+0.6**
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.8						
PKI	**Pulchoki**	**27.19**	**339**	*e*P	**P**	**22 29 49.3**	**+0.2**
GUN	**Gumba**	**27.33**	**340**	*e*P	**P**	**22 29 51.2**	**+0.8**
	comp=Z,32nm,0.7s,mb5.0						
DMN	**Daman**	**27.33**	**338**	*e*P	**P**	**22 29 51.3**	**+0.8**
	comp=Z,22nm,1.0s,mb4.6						
KKN	**Kakani**	**27.43**	**339**	*e*P	**P**	**22 29 51.8**	**+0.4**
	comp=Z,28nm,0.9s,mb4.8						
LSA	**Lhasa**	**27.69**	**350**	P	**P**	**22 29 54.3**	**+0.6**
LSA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
LSA	**Lhasa**	**27.69**	**350**	*e*P	**P**	**22 29 54.0**	**+0.3**
	comp=Z,14nm,1.3s,mb4.4						
GKN	**Gorkha**	**27.87**	**338**	*e*P	**P**	**22 29 55.6**	**+0.3**
	comp=Z,20nm,0.7s,mb4.8						
KOLN	**Koldanda**	**28.07**	**336**	*e*P	**P**	**22 29 56.8**	**-0.3**
	comp=Z,24nm,0.9s,mb4.8						
XAN	**Xi’an**	**33.75**	**19**	P	**P**	**22 30 44.8**	**-2.4**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**35.36**	**126**	P	**P**	**22 31 00.7**	**-0.5**
	comp=Z,12nm,0.9s,mb4.9,baz=233,slow=3.8,SNR=8.1						
GTA	**Gaotai**	**37.10**	**5**	*e*P	**P**	**22 31 15.3**	**-0.3**
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
KAKA	**Kakadu**	**38.93**	**113**	*e*P	**P**	**22 31 31.1**	**-0.1**
	comp=Z,10nm,0.6s,mb4.7						
HHC	**Hu-ho-hao-te**	**40.82**	**18**	*e*P	**P**	**22 31 47.0**	**+0.4**
HHC				AP	pP	22 31 51.5	-4.1
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
HHC				AMB	AMB		

	comp=Z,80nm,4.6s						
HHC				LR	LR		
	comp=N,210nm,14.3s,MS4.2						
HHC				LR	LR		
	comp=E,190nm,17.8s,MS4.2						
HHC				LR	LR		
	comp=Z,100nm,14.7s,MS3.8						
WRA	Warramunga Arr	43.45	122	P	P	22 32 08.8	+0.5
	comp=Z,1.6nm,0.4s,mb4.1,baz=302,slow=9.1,SNR=29						
WRAB	Tennant Creek	43.45	122	*e*P	P	22 32 08.5	+0.1
WB2	Warramunga Arr	43.45	122	*e*P	P	22 32 08.8	+0.4
MKAR	Makanchi Array	45.96	347	P	P	22 32 28.2	+0.1
	comp=Z,5.4nm,0.5s,mb4.7,baz=159,slow=8.3,SNR=81						
SONM	Songino Array	46.22	9	P	P	22 32 30.5	+0.3
	comp=Z,5.5nm,0.5s,mb4.7,baz=190,slow=9.5,SNR=34						
ZAL	Zalesovo	52.34	352	P	P	22 33 16.7	-0.5
	comp=Z,5.9nm,0.5s,mb4.8,baz=310,slow=5.1,SNR=20						
STKA	Stephens Creek	54.81	132	P	P	22 33 37.0	+1.2
	comp=Z,1.6nm,0.6s,mb4.3,baz=334,slow=15,SNR=4.1						
STKA	Stephens Creek	54.81	132	P	P	22 33 36.2	+0.4
BVAR	Borovoye Array	54.91	341	P	P	22 33 35.3	-1.0
	comp=Z,2.7nm,0.7s,mb4.4,baz=145,slow=8.5,SNR=23						
ZRNK	Zerenda	55.30	340	*e*P	P	22 33 38.1	-1.0
	comp=Z,72nm,0.6s						
BRTR	Keskin Array B	67.66	312	P	P	22 35 01.6	-1.0
	comp=Z,0.2nm,0.3s,mb3.6,baz=135,slow=10,SNR=3.1						
FINES	FINESS Array B	78.59	333	P	P	22 36 06.1	-0.1
	comp=Z,1.4nm,0.7s,mb4.0,baz=45,slow=5.4,SNR=6.3						
ARCES	ARCESS Array B	81.19	340	P	P	22 36 20.8	+0.8
	comp=Z,1.2nm,0.5s,mb4.1,baz=97,slow=5.4,SNR=17						

IDC 29 22:24:45.5±9.7**, 1.86N×96.24E, mb4.4**/4**, mb1 4.4**/5**, mb1mx3.9**/20**, mbtmp4.3**/5**, ML4.2**/1**, MS3.3**/4**, Ms1 3.4**/4**, ms1mx3.2**/25**, Error ellipse: s-maj=195.3km s-min=97.5km az=148.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.70	9	Pn	P	22 28 41.1	-1.6
	0.3nm,0.3s,baz=198,slow=11,SNR=7.0						
CMAR				LR	LR	22 34 21.5	
	comp=Z,166nm,20.0s,baz=189,slow=34						
MKAR	Makanchi Array	46.37	347	P	P	22 33 13.6	-1.9
	5.5nm,0.7s,baz=164,slow=8.2,SNR=8.9						
MKAR				LR	LR	22 57 10.4	
	comp=Z,67nm,18.2s,baz=272,slow=42						
SONM	Songino Array	46.63	9	P	P	22 33 15.7	-1.7
	3.0nm,0.5s,baz=192,slow=9.2,SNR=7.7						
ZAL	Zalesovo	52.75	352	P	P	22 34 02.0	-2.4
	3.1nm,0.5s,baz=299,slow=7.6,SNR=6.3						
BVAR	Borovoye Array	55.31	341	P	P	22 34 20.7	-2.5
	1.4nm,0.8s,baz=141,slow=9.2,SNR=4.4						
EIL	Elat	64.29	302	LR	LR	23 03 14.4	
	comp=Z,47nm,18.1s,baz=294,slow=36						
FX1	Attu Island--F	80.63	37	LR	LR	23 13 56.1	
	comp=Z,2.4nm,18.6s,baz=263,slow=37						

IDC ***29*** *22:54:29.8±0.8, 0.98N×97.30E, mb4.4/16, mb1 4.6/17, mb1mx4.4/23, mbtmp4.5/17, ML4.9/1, MS3.8/5, Ms1 3.8/5, ms1mx3.5/18, Error ellipse: s-maj=29.8km s-min=15.5km az=47.0*

BJI ***29*** *22:54:30.0, 0.74N×97.57E, h28^{km}, mB4.8, mb4.8, Ms4.0, Msz3.9*

NEIC ***29*** *22:54:35.4±2.0, 1.04N×97.41E, h36^{km}±16^{km}, mb4.6/13, Error ellipse: s-maj=14.4km s-min=6.1km az=47.0*

ISC 29 22:54:34.8±2.4**, 1.08N**±0.10×**97.45E**±0.10**, h45^{km}**±19^{km}**, n63, σ0^{s}88**/59**, mb4.7**/33**, MS3.8**/6**, 2C-6D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	4.99	46	P	P	22 55 49.9	+0.7
KULM	Kulim	5.27	37	*e*P	P	22 55 52.8	-0.2
KGM	Kluang	5.95	81	P	P	22 56 03.4	+0.9
CMAR	Chiang Mai Arr	17.34	5	P	P	22 58 34.1	-1.1
	1.5nm,0.3s,baz=195,slow=11,SNR=66						
CMAR				LR	LR	23 06 12.2	
	comp=Z,384nm,18.7s,baz=195,slow=40						
KKM	Kota Kinabalu	19.37	75	*e*P	P	22 58 59.0	-0.7
KKM	Kota Kinabalu	19.37	75	P	P	22 59 01.5	+1.8
TSM	Tawau	20.65	81	P	P	22 59 12.8	-0.6
KMI	Kunming	24.45	12	P	P	22 59 52.0	+1.2
KMI				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.5						
KMI				LR	LR		
	comp=N,390nm,12.4s,MS4.2						
KMI				LR	LR		
	comp=E,260nm,12.9s,MS4.2						
KMI				LR	LR		
	comp=Z,430nm,13.8s,MS4.1						
KMI	Kunming	24.45	12	P	P	22 59 52.0	+1.2
	comp=Z,20nm,1.1s,mb4.5						
KMI				S	S	23 04 19.3	+14
KMI				LR	LR		
	comp=Z,430nm,13.8s,MS4.1						
PKI	Pulchoki	28.76	337	*e*P	P	23 00 30.0	-0.6
	comp=Z,24nm,1.0s,mb4.9						
GUN	Gumba	28.89	338	*e*P	P	23 00 31.0	-0.7
	comp=Z,34nm,0.7s,mb5.2						
DMN	Daman	28.91	337	*e*P	P	23 00 31.9	-0.1
	comp=Z,28nm,0.9s,mb5.0						
KKN	Kakani	29.01	337	*e*P	P	23 00 31.8	-1.0
	comp=Z,17nm,0.8s,mb4.9						
LSA	Lhasa	29.09	349	P	P	23 00 35.3	+1.8
LSA	Lhasa	29.09	349	*e*P	P	23 00 35.0	+1.5
	comp=Z,11nm,0.8s,mb4.6						
GKN	Gorkha	29.45	337	*e*P	P	23 00 35.6	-1.1
	comp=Z,39nm,0.4s,mb5.5						
KOLN	Koldanda	29.67	335	*e*P	P	23 00 39.1	+0.4
	comp=Z,23nm,0.7s,mb5.0						
ENH	Enshi	31.21	20	*e*P	P	23 00 50.7	-1.6
	comp=Z,16nm,0.8s,mb4.9						
FITZ	Fitzroy Crossi	33.66	126	P	P	23 01 12.7	-1.0
	comp=Z,7.2nm,0.8s,mb4.7,baz=304,slow=3.4,SNR=7.3						
XAN	Xi'an	34.51	17	P	P	23 01 19.8	-1.1
XAN				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
GTA	Gaotai	38.21	3	*e*P	P	23 01 52.8	+0.7
GTA				AP	pP	23 02 03.0	-1.4
GTA				XP	sP	23 02 06.3	-3.7
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
JOW	Kunigami	39.15	46	P	P	23 02 00.4	+0.4
	comp=Z,21nm,0.6s,mb5.0,baz=256,slow=8.5,SNR=15						
HHC	Hu-ho-hao-te	41.61	16	*e*P	P	23 02 16.3	-3.9
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
HHC				AMB	AMB		
	comp=Z,110nm,7.6s						
WRA	Warramunga Arr	41.76	122	P	P	23 02 21.4	-0.3
	comp=Z,1.6nm,0.4s,mb4.0,baz=302,slow=9.0,SNR=24						
WRAB	Tennant Creek	41.77	122	*e*P	P	23 02 21.2	-0.6
WB2	Warramunga Arr	41.77	122	*e*P	P	23 02 21.4	-0.4
WMQ	Urumqi	43.44	350	P	P	23 02 36.5	+1.3
WMQ				AP	pP	23 02 41.5	-6.1
WMQ				XP	sP	23 02 43.5	-10
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,110nm,4.0s						
WMQ				LR	LR		
	comp=N,70nm,20.0s						
WMQ				LR	LR		
	comp=Z,60nm,18.0s,MS3.5						
KS15	Wonju Array Si	45.78	34	*e*P	P	23 02 54.5	+0.4
SONM	Songino Array	47.22	8	P	P	23 03 05.8	+0.6
	comp=Z,4.4nm,0.6s,mb4.6,baz=190,slow=9.3,SNR=33						
SONM				PcP	PcP	23 04 36.9	+0.5
	comp=Z,3.0nm,0.8s,baz=195,slow=3.9,SNR=7.2						
ULN	Ulaanbaatar	47.34	9	*e*P	P	23 03 05.5	-0.7
	comp=Z,3.4nm,0.8s,mb4.3						
MKAR	Makanchi Array	47.42	346	P	P	23 03 07.0	+0.3
	comp=Z,13nm,0.7s,mb5.0,baz=158,slow=7.7,SNR=112						
CN2	Changchun	49.30	27	*e*P	P	23 03 21.3	-0.1
CN2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
MJAR	Matsushiro Arr	51.62	42	P	P	23 03 39.6	+0.5
	comp=Z,0.6nm,0.4s,mb3.9,baz=221,slow=7.6,SNR=7.3						
HIA	Hailar	51.68	18	*e*P	P	23 03 39.3	-0.1
CTA	Charters Tower	52.23	117	LR	LR	23 26 52.0	
	comp=Z,91nm,21.3s,MS3.8,baz=244,slow=37						
STKA	Stephens Creek	53.09	132	*e*P	P	23 03 50.6	+0.4
	comp=Z,4.1nm,0.6s,mb4.5						
STKA	Stephens Creek	53.09	132	P	P	23 03 50.5	+0.3
	comp=Z,3.2nm,0.6s,mb4.4,baz=320,slow=8.6,SNR=5.2						
ZAL	Zalesovo	53.71	351	P	P	23 03 54.2	-0.3
	comp=Z,11nm,0.5s,mb5.0,baz=306,slow=5.5,SNR=41						
ZAL	Zalesovo	53.71	351	P	P	23 03 54.2	-0.3
BVAR	Borovoye Array	56.45	341	P	P	23 04 13.3	-1.0
	comp=Z,7.1nm,0.7s,mb4.8,baz=142,slow=8.8,SNR=40						
ZRNK	Zerenda	56.85	340	*e*P	P	23 04 15.9	-1.4
	comp=Z,58nm,0.6s,mb5.8						
KMBO	Kilima Mbogo	60.23	268	LR	LR	23 25 37.3	
	comp=Z,58nm,19.1s,MS3.7,baz=107,slow=31						
BRTR	Keskin Array B	69.38	312	P	P	23 05 39.5	-0.6
	comp=Z,0.9nm,0.8s,mb3.8,baz=129,slow=7.9,SNR=6.1						
AKASG	Malin Array Be	75.50	322	P	P	23 06 14.7	-1.5
	comp=Z,1.8nm,0.7s,mb4.1,baz=89,slow=4.8,SNR=12						
VRI	Vrincioaia	75.88	317	⇓P	P	23 06 19.1	+0.7
VRI	Vrincioaia	75.88	317	⇓P	P	23 06 19.1	+0.7
MLR	Muntele Rosu	76.33	317	⇓P	P	23 06 21.6	+0.6
MLR	Muntele Rosu	76.33	317	⇓P	P	23 06 21.6	+0.6
BURAR	Bucovina Array	77.28	319	⇓P	P	23 06 27.6	+1.3
BURAR	Bucovina Array	77.28	319	⇓P	P	23 06 27.5	+1.2
DRGR		78.79	317	⇑P	P	23 06 35.4	+0.8
DRGR		78.79	317	⇑P	P	23 06 35.4	+0.8
FINES	FINESS Array B	80.22	332	P	P	23 06 42.0	0.0
	comp=Z,1.3nm,0.7s,mb4.0,baz=124,slow=6.9,SNR=5.4						
KAF	Kangasniemi	80.30	333	*e*p	P	23 06 41.2	-1.3
ARCES	ARCESS Array B	82.73	340	P	P	23 06 55.5	+0.5
	comp=Z,3.4nm,0.9s,mb4.4,baz=90,slow=3.6,SNR=6.4						
ARCES				LR	LR	23 47 57.5	
	comp=Z,62nm,19.9s,MS4.0,baz=87,slow=39						
GERES	GERESS Array B	85.07	319	P	P	23 07 08.5	+1.4
	comp=Z,1.9nm,0.8s,mb4.3,baz=90,slow=5.3,SNR=12						
GERES				LR	LR	23 45 46.1	
	comp=Z,25nm,18.4s,MS3.6,baz=38,slow=36						
HFS	Hagfors	85.95	330	P	P	23 07 12.1	+0.9
	comp=Z,2.0nm,1.1s,mb4.3,baz=270,slow=3.0,SNR=4.1						
NB2	NORSAR Subarra	87.23	331	P	P	23 07 17.8	+0.4
	comp=Z,1.7nm,0.7s,mb4.4,baz=94,slow=4.8						
NOA	NORSAR Array B	87.23	331	P	P	23 07 18.2	+0.8
	comp=Z,1.9nm,0.8s,mb4.4,baz=95,slow=4.9,SNR=8.4						
LPG	La Plagne	89.73	315	*e*P	P	23 07 30.7	+1.0
	comp=Z,9.3nm,0.9s,mb4.8						
TXAR	Lajitas Array	143.64	32	PKP	PKPdf	23 14 06.3	+0.9
	comp=Z,0.3nm,0.4s,slow=1.3,SNR=4.7						
TXAR	Lajitas Array	143.64	32	PKP	PKPdf	23 14 06.3	+0.9
CPUP	Villa Florida	145.08	222	PKP	PKPdf	23 14 17.5	+9.4
	comp=Z,5.0nm,0.9s,baz=161,slow=3.7,SNR=11						

IDC ***29*** *22:56:56.6±43.0, 35.57N×73.23E, mb3.8/4, mb1 3.9/4, mb1mx3.5/21, mbtmp3.8/4, Error ellipse: s-maj=793.0km s-min=188.3km az=147.0*

NNC ***29*** *22:57:40.2±12.0, 38.08N×72.06E, h223^{km}±178^{km}, mpv3.5, Error ellipse: s-maj=157.1km s-min=91.0km az=26.0*

ISC 29 22:57:37.3±3.1**, 37.9N**±0.2×**72.1E**±0.2**, h212^{km}**±25^{km}**, n8, σ0^{s}78**/11**, mb3.4**/4**, 4C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.08	20	⇑P	P	22 58 53.3	-0.5
	4.9nm,0.6s,baz=183,slow=25						
AAK				⇑S	S	22 59 53.7	+0.6
	6.8nm,0.6s,baz=183,slow=25						
KK31	Karatay Array	5.36	347	⇑P	P	22 58 56.9	-0.3
	3.4nm,0.5s,baz=24,slow=58,SNR=75						
KK31				⇓S	S	22 59 58.6	-0.8
	5.6nm,0.3s,baz=161,slow=20,SNR=20						
AB31	Akbulak array	14.37	326	P	P	23 00 54.4	+2.3
	0.9nm,0.5s,baz=183,slow=25,SNR=17						
AB31				⇑S	S	23 03 26.3	0.0
	2.7nm,0.7s,baz=183,slow=25						
FINES	FINESS Array B	36.85	325	P	P	23 04 26.4	-0.1
	1.9nm,1.0s,mb3.6,baz=124,slow=10.0,SNR=4.7						
ARCES	ARCESS Array B	40.22	337	P	P	23 04 54.5	+0.3
	1.8nm,1.0s,mb3.5,baz=115,slow=7.5,SNR=9.2						
HFS	Hagfors	42.54	321	P	P	23 05 12.6	-0.5
	0.9nm,0.5s,mb3.5,baz=108,slow=9.4,SNR=6.5						
NB2	NORSAR Subarra	43.82	322	P	P	23 05 22.8	-0.6
	0.4nm,0.5s,mb3.0,baz=94,slow=7.4						
NOA	NORSAR Array B	43.82	322	P	P	23 05 22.9	-0.5
	0.7nm,0.5s,mb3.2,baz=94,slow=7.6,SNR=4.1						

MEX 29 22:58:18.0±0.9**, 16.60N×94.20W, h123^{km}**±14^{km}**, MD3.7, 1C, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.82	307	*i* P	P	22 58 37.2	-1.6
CMIG				*i* S	S	22 58 52.4	-2.1
CCIG	Comitan	2.00	99	*i* P	P	22 58 50.5	-1.6
CCIG				*i* S	S	22 59 16.2	-1.6
HUIG	Huatulco	2.02	246	⇑*i*P	P	22 58 49.5	-2.7
HUIG				*i* S	S	22 59 16.7	-1.4
OXX	Oaxaca	2.47	282	*i* P	P	22 58 58.0	-0.2
OXX				*i* S	S	22 59 27.0	-1.6
VHO	Vista Hermosa	2.48	281	*i* P	P	22 58 57.3	-1.0
VHO				*i* S	S	22 59 26.4	-2.4

NDI 29 22:58:55.5±6.0**, 32.53N×81.06E, h30^{km}, ML2.6, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDNR	Sundarnagar	3.62	255	*e*S	Sn	23 00 31.0	-2.2
THN	Thein Dam	4.51	270	*e*P	Pn	22 59 59.6	-4.1
	61nm,0.2s						
AYAN	Aya Nagar	5.27	221	*e*S	Sn	23 01 06.8	-8.1
SONA	Sohna	5.48	220	*e*x	x	23 00 43.3	
SONA				AML	AML	23 01 43.6	
	comp=E,7.5nm,0.3s						
SONA				AML	AML	23 01 43.7	
	comp=N,7.8nm,0.0s						
KUDL	Kundal	5.89	223	*e*P	Pn	23 00 22.9	-0.2
KUDL				*e*x	x	23 01 12.6	
KHET	Khetri	6.35	227	*e*x	x	23 00 36.7	
KHET				*e*S	Sn	23 01 32.2	-10
KHET				AML	AML	23 01 35.3	
	comp=E,6.8nm,0.4s						
KHET				AML	AML	23 01 36.3	
	comp=N,4.8nm,0.8s						
JASL	Jaisalmer	10.44	240	*e*x	x	23 01 17.6	

IDC ***29*** *22:59:25.2±2.2, 52.94N×169.15W, mb4.0/7, mb1 4.3/8, mb1mx3.9/25, mbtmp4.0/8, ML3.7/1, MS3.1/3, Ms1 3.2/3, ms1mx2.7/25, Error ellipse: s-maj=40.5km s-min=31.3km az=46.0*

NEIC ***29*** *22:59:26.9, 53.17N×168.56W, h5^{km}, ML3.8(AEIC), After AEIC.*

ISC 29 22:59:27.7±0.7**, 53.24N**±0.07×**168.64W**±0.09**, h14^{km}**±6^{km}**, n28, σ0^{s}67**/28**, mb4.0**/7**, MS3.0**/2**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKO	Nikolski	0.30	206	P	Pg	22 59 34.0	-0.2
NIKO				S	Sg	22 59 39.0	+0.4
OKCE	Okmok Cone E	0.34	57	P	Pg	22 59 34.9	-0.1
OKCD	Okmok Cone D	0.37	59	P	Pg	22 59 35.6	+0.1
OKER	East Rim	0.41	59	P	Pb	22 59 36.4	+0.1
OKFG	Magazine Ridge	0.47	69	P	Pb	22 59 36.7	-0.5
OKFG				S	Sb	22 59 43.5	-0.1
MNAT	Makushin Natee	1.33	60	P	Pb	22 59 51.4	-0.5
MTBL	Makushin Table	1.38	57	P	Pn	22 59 52.5	-0.1
UNV	Unalaska Valle	1.41	64	P	Pn	22 59 52.4	-0.7
AKGG	Akutan Green G	1.84	58	P	Pn	22 59 59.5	+0.3
AKLV	Akutan Long Va	1.84	59	P	Pn	22 59 58.1	-1.2
AKUT	Akutan	1.92	61	P	Pn	23 00 00.5	0.0
AKA	Akutan	1.93	61	P	Pn	23 00 00.7	+0.3
WESE	West Dahl East	2.70	61	P	Pn	23 00 11.3	-0.2
WESN	West Dahl Nort	2.74	59	P	Pn	23 00 12.2	0.0
SPIA	Saint Paul Isl	4.05	348	P	Pn	23 00 31.2	+0.5
GSTR	Great Sitkin T	4.66	259	P	Pn	23 00 38.5	-0.9
IMA	Indian Mountai	14.85	24	P	P	23 02 58.5	-0.2
	32nm,1.1s						
ILAR	Eielson Array	15.98	35	Pn	P	23 03 15.1	+1.7
	0.1nm,0.3s,baz=229,slow=12,SNR=9.3						
ILAR				LR	LR	23 09 53.2	
	comp=Z,59nm,20.2s,baz=359,slow=38						
DLBC	Dease Lake	22.06	61	P	P	23 04 27.4	+3.9
	12nm,0.8s,mb4.3,baz=273,slow=11,SNR=22						
DLBC				LR	LR	23 11 16.7	
	comp=Z,50nm,21.8s,MS2.9,baz=144,slow=32						
INK	Inuvik	22.37	34	P	P	23 04 27.3	+0.8
	7.1nm,0.8s,mb4.2,baz=249,slow=9.5,SNR=6.6						
INK				LR	LR	23 13 58.0	
	comp=Z,69nm,18.1s,MS3.1,baz=241,slow=38						
YKA	Yellowknife Ar	29.34	50	PcP	PcP	23 08 37.5	-0.7
	0.2nm,0.4s,baz=284,slow=3.0,SNR=3.8						
NEW	Newport	32.38	78	P	P	23 05 58.7	+0.1
	1.8nm,0.5s,mb4.1,baz=321,slow=7.9,SNR=3.9						
NEW	Newport	32.38	78	P	P	23 05 58.7	+0.1
NVAR	Mina Array Bea	37.25	93	P	P	23 06 42.1	+1.7
	0.8nm,0.8s,mb3.6,baz=310,slow=5.9,SNR=5.4						
PDAR	Pinedale Array	39.81	81	P	P	23 07 01.3	-0.5
	0.7nm,0.6s,mb3.5,baz=304,slow=5.3,SNR=6.8						
TXAR	Lajitas Array	52.30	90	P	P	23 08 40.6	-0.1
	1.4nm,0.7s,mb4.0,baz=297,slow=5.6,SNR=7.3						
FINES	FINESS Array B	65.06	352	P	P	23 10 08.2	-0.8
	1.2nm,0.9s,mb3.9,slow=7.6,SNR=3.8						
MATP	Matopo	144.68	331	PKP	PKPdf	23 19 04.7	-2.6
	0.7nm,0.4s,baz=297,slow=2.4,SNR=4.6						

ATH ***29*** *23:00:00.9, 38.10N×20.28E, h12^{km}±4^{km}, MD3.3/8*

NEIC ***29*** *23:00:01.4, 38.13N×20.32E, h14^{km}, MD3.3(ATH), After ATH.*

CSEM ***29*** *23:00:02.8±0.3, 38.18N×20.33E, h2^{km}, MD3.3, Error ellipse: s-maj=5.8km s-min=2.5km az=59.0*

THE ***29*** *23:00:03.6, 38.21N×20.38E, h1^{km}, ML2.9*

ISC 29 23:00:01.2±1.2**, 38.17N**±0.05×**20.26E**±0.08**, h10^{km}, n15, σ1^{s}15**/20**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.26	88	*e*Pg	Pg	23 00 06.1	-0.6
VLS				*e*Sg	Sg	23 00 09.5	-0.9
LKD	Levkas	0.62	30	*e*Pg	Pg	23 00 13.8	0.0
LKD				*e*Sg	Sg	23 00 21.6	-0.5
RLS	Riolos of Patr	0.96	96	*e*PB	Pb	23 00 19.0	-0.4
RLS				*e*SB	Sb	23 00 31.9	-0.1
IGT	Igoumenitsa	1.36	2	*e*Pg	Pg	23 00 27.8	-0.7
EVR	Evrytania	1.43	58	*e*Pb	Pb	23 00 28.3	+0.8
EVR				*e*Sb	Sb	23 00 47.2	+1.6
JAN	Janina	1.56	17	*e*PB	Pb	23 00 32.0	+2.3
KEK	Kerkira	1.58	347	*e*PG	Pg	23 00 31.2	-1.7
ITM	Ithomi	1.65	126	*e*PB	Pb	23 00 31.3	0.0
ITM				*e*SB	Sb	23 00 53.3	+1.3
MEV	Metsovon	1.78	25	*e*Pb	Pb	23 00 34.4	+0.9
AGG	Agios Georgios	1.83	62	*e*Pb	Pb	23 00 34.3	-0.1
LKR	Lokris	2.21	77	*e*PB	Pb	23 00 38.3	-2.5
NEO	Neokhori	2.58	63	*e*PB	Pb	23 00 44.8	-2.4
FNA	Florina	2.75	18	*e*Pn	Pn	23 00 47.6	+1.4
AOS	Alonnisos	3.01	69	*e*Pn	Pn	23 00 50.1	+0.3
GRG	Griva	3.24	30	*e*Pn	Pn	23 00 53.7	+0.5

HLW ***29*** *23:20:29.3, 34.86N×24.02E, h33^{km}, Mb3.3*

IDC ***29*** *23:20:29.7±19.0, 35.42N×24.38E, mb3.8/2, mb1 3.8/3, mb1mx3.4/23, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=378.4km s-min=42.4km az=31.0*

NEIC ***29*** *23:20:30.1, 34.75N×23.77E, h27^{km}, MD3.5(ATH), After ATH.*

CSEM ***29*** *23:20:30.1±0.2, 34.72N×24.14E, h55^{km}±4^{km}, MD3.5, Error ellipse: s-maj=6.9km s-min=5.4km az=66.0*

ATH ***29*** *23:20:31.1, 34.83N×23.84E, h28^{km}±1^{km}, MD3.5/6*

ISC 29 23:20:29.8±0.6**, 34.66N**±0.04×**24.1E**±0.1**, h33^{km}, n24, σ0^{s}93**/28**, mb3.7**/2**, 7C-3D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.18	357	*i* PB	Pb	23 20 37.5	+1.4
VAM	Vamos	0.75	6	*e*PN	Pn	23 20 44.3	+0.2
VAM				*e*SN	Sn	23 20 54.3	0.0
VAM	Vamos	0.75	6	*e*Pn	Pn	23 20 44.3	+0.2
VAM				*e*Sn	Sn	23 20 56.3	+2.0
XRY	Khrisi	1.33	80	*e*PN	Pn	23 20 58.2	+5.8
NPS	Neapolis	1.38	64	*e*PN	Pn	23 20 59.0	+5.9
KYTH	Kithira	1.84	332	*e*PN	Pn	23 20 59.5	-0.1
VLI	Veliai	2.26	336	*e*PN	Pn	23 21 05.4	-0.3
KARP	Karpathos	2.66	70	*e*PN	Pn	23 21 16.3	+4.9
SLUM		3.29	163	⇓P	P	23 21 21.5	+1.2
HMAT	Matruh	4.36	144	⇑P	P	23 21 36.3	+0.9
DABA	Dabaa	5.06	135	⇓P	P	23 21 45.5	+0.1
SWA2		5.52	168	⇑P	P	23 21 52.1	+0.4
SWA1		5.55	165	⇑P	P	23 21 52.9	+0.7
SWA1				S	S	23 22 53.9	-1.8
GLL	Jalalah	8.20	126	⇑P	P	23 22 29.7	+0.4
HFRF	Wahat Farafira	8.31	153	⇓P	P	23 22 30.7	-0.1
AMAG	Maghara	8.66	115	⇑P	P	23 22 34.6	-1.1
SUZ		8.82	121	P	P	23 22 37.7	-0.1
HNKL	Nakhl	9.60	117	P	P	23 22 48.3	-0.4
HNKL				S	S	23 24 30.4	-6.2
HDK1	Dakhla	10.18	152	⇑P	P	23 22 57.5	+0.8
HKAT	Jabal Katrina	10.42	123	⇑P	P	23 22 59.6	-0.3
HDK2	Wahat Dakhilah	11.13	156	P	P	23 23 10.1	+0.3
GERES	GERESS Array B	16.14	335	Pn	P	23 24 13.3	-2.1
	0.1nm,0.3s,baz=158,slow=14,SNR=4.2						
FINES	FINESS Array B	26.83	2	P	P	23 26 02.9	-5.9
	1.5nm,0.9s,mb3.5,baz=180,slow=9.5,SNR=3.6						
MKAR	Makanchi Array	44.78	56	P	P	23 28 40.5	-1.4
	0.8nm,0.4s,mb3.9,baz=271,slow=7.6,SNR=11						

CSEM ***29*** *23:33:35.9±0.1, 39.15N×22.36E, ML2.8, Error ellipse: s-maj=3.1km s-min=2.1km az=176.0*

ATH ***29*** *23:33:36.2, 39.11N×22.36E, h19^{km}±4^{km}, MD3.3/5*

THE ***29*** *23:33:36.0, 39.14N×22.38E, h3^{km}, ML2.8*

NEIC ***29*** *23:33:36.1, 39.20N×22.32E, h12^{km}, MD3.3(ATH), After ATH.*

ISC 29 23:33:35.3±0.6**, 39.17N**±0.04×**22.37E**±0.03**, h6^{km}**±6^{km}**, n16, σ1^{s}15**/23**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGG	Agios Georgios	0.15	192	*e*Pg	Pg	23 33 38.3	-0.2
EVR	Evrytania	0.51	240	*e*PB	Pb	23 33 45.2	-1.0
EVR				*e*SB	Sb	23 33 53.1	-0.4
XOR	Xorichti	0.67	73	*e*Pg	Pg	23 33 49.1	+0.4
XOR				*e*Sg	Sg	23 33 58.0	+0.4
NEO	Neokhori	0.68	78	*e*PB	Pb	23 33 49.2	+0.1
NEO				*e*SN	Sn	23 34 00.5	-1.5
LKR	Lokris	0.71	136	*e*Pb	Pb	23 33 49.4	-0.4
LKR				*e*Sb	Sb	23 34 01.9	+2.3
LIT	Litokhoron	0.94	6	*e*Pg	Pg	23 33 54.0	0.0
LIT				*e*Sg	Sg	23 34 08.4	+1.9
MEV	Metsovon	1.08	305	*e*Pg	Pg	23 33 55.9	-1.0
MEV				*e*Sg	Sg	23 34 12.8	+1.6
AOS	Alonnisos	1.17	89	*e*Pg	Pg	23 33 57.7	-1.1
AOS				*e*Sg	Sg	23 34 15.5	+1.1
PAIG	Paliouri	1.26	53	*e*Pg	Pg	23 33 59.1	-1.5
IGT	Igoumenitsa	1.62	284	*e*Pb	Pb	23 34 05.3	0.0
LSK	Leskovik	1.68	306	*e*Pg	Pg	23 34 06.9	-2.0
OUR	Ouranopolis	1.70	46	*e*Pb	Pb	23 34 05.7	-1.0
VLS	Valsamata	1.71	235	*e*PN	Pn	23 34 08.1	+2.2
FNA	Florina	1.79	335	*e*Pb	Pb	23 34 07.5	-0.6
KEK	Kerkira	2.06	286	*e*PN	Pn	23 34 12.2	+1.2
SRS	Serrai	2.16	25	*e*Pn	Pn	23 34 12.8	+0.4

IDC 29 23:51:17.8±1.6**, 16.93N×147.55E, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.6**/20**, mbtmp3.8**/3**, Error ellipse: s-maj=60.9km s-min=29.8km az=99.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	38.87	200	P	P	23 58 45.0	-1.8
	1.3nm,0.6s,baz=22,slow=8.8,SNR=6.7						
SONM	Songino Array	45.62	322	P	P	23 59 40.0	-1.7
	0.3nm,0.5s,baz=135,slow=8.2,SNR=3.3						
ILAR	Eielson Array	64.46	26	P	P	00 01 55.9	-2.2
	0.5nm,0.5s,baz=256,slow=5.9,SNR=4.3						

NEIC ***30*** *00:06:53.5±0.9, 24.09S×66.87W, h177^{km}±9^{km}, mb4.3/9, Error ellipse: s-maj=12.3km s-min=7.3km az=92.0*

IDC ***30*** *00:06:54.2±1.8, 24.08S×66.79W, h180^{km}±17^{km}, mb3.4/6, mb1 3.7/12, mb1mx3.6/20, mbtmp4.1/12, Error ellipse: s-maj=20.8km s-min=14.3km az=95.0*

ISC 30 00:06:52.5±0.9**, 24.11S**±0.05×**66.88W**±0.09**, h181^{km}**±10^{km}**, n35, σ1^{s}07**/36**, mb4.0**/11**, 3C, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	7.56	189	P	P	00 08 41.3	+0.3

	0.7nm,0.3s,baz=4.3,slow=12,SNR=34						
CFAA				S	S	00 10 01.1	-4.4
	0.7nm,0.3s,baz=241,slow=20,SNR=9.6						
LPAZ	La Paz	7.87	351	P	P	00 08 47.0	+2.0
	5.9nm,0.3s,baz=153,slow=9.9,SNR=115						
LPAZ				S	S	00 10 12.2	-0.5
	baz=323,slow=19,SNR=2.1						
LPAZ	La Paz	7.87	351	ePn	P	00 08 46.3	+1.3
LPAZ				S	S	00 10 12.2	-0.5
CPUP	Villa Florida	8.93	106	P	P	00 08 59.8	+0.9
	0.1nm,0.3s,baz=292,slow=13,SNR=5.6						
CPUP	Villa Florida	8.93	106	P	P	00 08 59.8	+0.9
CPUP				eP		00 09 00.4	
SIV	San Ignacio	9.75	35	P	P	00 09 09.4	-0.2
	2.5nm,0.3s,baz=224,slow=13,SNR=51						
SIV				S	S	00 10 57.1	+0.2
	baz=222,slow=16,SNR=4.4						
TRQA	Tornquist	14.52	164	eP	P	00 10 08.8	-1.8
	7.5nm,0.8s						
SAML	Samuel	15.48	14	eP	P	00 10 22.3	-0.5
	14nm,0.8s						
PLCA	Paso Flores	16.86	190	P	P	00 10 39.1	-0.3
	0.1nm,0.3s,baz=11,slow=11,SNR=8.3						
PLCA	Paso Flores	16.86	190	eP	P	00 10 38.7	-0.7
	6.3nm,0.7s						
BDFB	Brasilia	19.63	68	P	P	00 11 08.8	-0.3
	3.0nm,0.3s,baz=247,slow=11,SNR=90						
BAO	Brasilia Array	19.65	68	P	P	00 11 08.5	-0.9
CAM4	Nova Friburgo	22.41	90	eP	P	00 11 37.1	+0.4
CAM4				i		00 11 37.9	
CAM4				i		00 11 40.1	
CAM4				i		00 11 45.5	
CAM4				i		00 12 07.6	
CAM4				i		00 35 33.8	
CAM4				i		00 35 59.8	
JTS	JuntasAbangare	38.48	331	eP	P	00 13 57.1	-1.7
	22nm,1.2s,mb4.7						
BBSR	BB Station	56.20	2	eP	P	00 16 18.8	+2.9
	9.7nm,0.8s,mb4.7						
VNA3	Neumayer Olymp	57.02	161	e	P	00 16 23.4	+2.2
VNA3	Neumayer Olymp	57.02	161	e	P	00 16 26.9	+5.7
VNA3	Neumayer Olymp	57.02	161	⇑iP	P	00 16 22.0	+0.8
VNA3				e		00 16 23.4	
VNA3				e		00 16 26.9	
VNA2	Neumayer--Watz	57.58	160	e	P	00 16 27.7	+2.5
VNA2	Neumayer--Watz	57.58	160	e	P	00 16 31.4	+6.2
VNA2	Neumayer--Watz	57.58	160	⇑iP	P	00 16 26.1	+0.9
VNA2				e		00 16 27.7	
VNA2				e		00 16 31.4	
SNAA	Sanae	59.21	161	⇑i	P	00 16 36.9	+0.4
SNAA	Sanae	59.21	161	P	P	00 16 35.6	-0.9
	0.4nm,0.5s,mb3.5,baz=309,slow=6.5,SNR=5.2						
SNAA	Sanae	59.21	161	eP	P	00 16 34.9	-1.6
	3.6nm,1.0s,mb4.2						
TXAR	Lajitas Array	63.83	324	P	P	00 17 07.6	-0.3
	0.3nm,0.6s,mb3.3,baz=153,slow=8.1,SNR=3.1						
QSPA	South Pole Qui	66.10	180	eP	P	00 17 22.4	+0.7
	5.8nm,0.5s,mb4.7						
DBIC	Dimbokro	67.73	71	P	P	00 17 31.1	-1.9
	1.3nm,0.7s,mb3.8,baz=170,slow=10,SNR=4.6						
PDAR	Pinedale Array	77.29	329	P	P	00 18 29.1	+0.6
	0.2nm,0.5s,mb3.0,baz=153,slow=6.0,SNR=2.8						
BOSA	Boshof	80.59	117	P	P	00 18 46.8	+0.2
	1.9nm,0.9s,mb3.7,baz=156,slow=18,SNR=4.1						
MAW	Mawson	81.30	163	P	P	00 18 50.8	+1.3
	2.8nm,0.7s,mb4.0,baz=245,slow=6.9,SNR=7.3						
LBTB	Lobatse	82.25	114	P	P	00 18 55.2	0.0
	1.8nm,0.6s,mb3.9						
CASY	Casey	89.88	179	P	P	00 19 30.9	-0.5
	2.9nm,0.8s,mb4.3						
WRA	Warramunga Arr	131.58	207	PKP	PKPdf	00 25 46.6	+2.2
	0.5nm,0.5s,baz=162,slow=2.6,SNR=3.7						
MKAR	Makanchi Array	146.54	40	PKPbc	PKPbc	00 26 13.3	+1.3
	0.8nm,0.8s,baz=297,slow=2.7,SNR=5.5						
MKAR	Makanchi Array	146.54	40	PKPbc	PKPbc	00 26 13.3	+1.3

MAN 30 00:18:19.1, 7.36N×123.49E, h25^{km}, mb4.3, ML3.1, MS2.9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAGZ	Pagadian	0.49	347	eP	Pb	00 18 29.9	+0.7
PAGZ				eS	Sb	00 18 39.5	+3.4
IPIL	Ipil	1.01	295	eP	Pn	00 18 37.5	-0.3
IPIL				eS	Sb	00 18 51.7	+1.1
DCPH	Dipolog City	1.22	353	⇑eP	Pn	00 18 41.7	+0.8
CGP	Cagayan de Oro	1.61	48	⇓iP	Pn	00 18 46.0	-0.4
BUKP	Musuan	1.64	72	eP	Pn	00 18 46.2	-0.7

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*JMA **30** 00:24:51.5±0.1, 36.53N×140.89E, h50^{km}±1^{km}, M3.6*
JMA Felt I J1.
*NIED **30** 00:25:00, 36.50N×140.90E, h56^{km}, Mw3.6 Best double couple: $M_0$2.67×10^{14} NP1:ϕ_s221°, δ62°, λ-96°. NP2:ϕ_s54°, δ28°, λ-78°.*
ISC 30 00:24:51.4±1.5**, 36.54N**±0.06×**140.94E**±0.09**, h43^{km}**±13^{km}**, n10, σ0^{s}52**/20**, 2C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.30	283	⇓P	P	00 25 00.5	+0.6
JHO				eS	S	00 25 06.3	+0.4
ONAJ	Iwakimizuishiy	0.57	349	⇓P	P	00 25 03.3	+0.2
ONAJ				eS	S	00 25 11.4	-0.2
JYT	Yasato	0.68	243	⇓P	P	00 25 04.4	-0.1
JYT				S	S	00 25 13.4	-0.8
JFK	Kawauchi	0.83	357	⇑P	P	00 25 06.4	-0.2
JFK				eS	S	00 25 17.2	-0.7
JFT	Otama	1.09	334	⇑P	P	00 25 11.0	+0.7
JFT				eS	S	00 25 24.7	+0.2
JAG	Ashikaga	1.20	265	⇓P	P	00 25 11.7	-0.2
JAG				eS	S	00 25 26.1	-1.2
JFY	Yanaizu	1.31	312	P	P	00 25 13.8	+0.2
JFY				eS	S	00 25 30.3	+0.1
JMM	Marumori	1.33	355	P	P	00 25 13.9	0.0
JMM				eS	S	00 25 30.2	-0.4
JKT	Katashina	1.38	280	P	P	00 25 14.8	+0.3
JKT				eS	S	00 25 31.6	-0.2
MAT	Matsushiro	2.20	271	P	P	00 25 26.6	+0.4
MAT				S	S	00 25 53.4	+1.1

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*BJI **30** 00:34:42.2, 51.60N×173.90W, h48^{km}, mb4.5*
*NEIC **30** 00:34:43.3±0.4, 51.64N×173.93W, mb4.3/12, Error ellipse: s-maj=11.9km s-min=3.7km az=182.0*
*IDC **30** 00:34:43.9±0.7, 51.73N×173.89W, h49^{km}±5^{km}, mb3.8/19, mb1 4.0/20, mb1mx3.9/27, mbtmp4.0/20, MS3.5/8, Ms1 3.5/8, ms1mx3.2/39, Error ellipse: s-maj=24.1km s-min=12.2km az=177.0*
*MOS **30** 00:34:44.2±1.0, 51.88N×173.79W, h64^{km}, mb4.4/7, Error ellipse: s-maj=14.5km s-min=11.7km az=76.8*
ISC 30 00:34:42.6±0.7**, 51.67N**±0.09×**173.89W**±0.05**, h53^{km}**±5^{km}**, h48^{km}**±1.3^{km}**:pP-P, n94, σ1^{s}01**/91**, mb4.2**/34**, MS3.5**/7**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.57	340	P	P	00 34 54.8	-0.1
ATKA				S	S	00 35 04.8	+1.0
GSMY	Great Sitkin M	1.40	286	P	P	00 35 05.7	-0.6
GSTR	Great Sitkin T	1.41	288	P	P	00 35 06.2	-0.2
GSTD	Great Sitkin T	1.45	286	P	P	00 35 06.5	-0.5
GSTD				S	S	00 35 25.2	+0.1
GSSP	Great Sitkin S	1.48	288	P	P	00 35 06.8	-0.6
ADAG	Mount Adagdak	1.71	281	P	P	00 35 10.4	-0.2
KINC	Kanaga Island	2.03	279	P	P	00 35 14.9	-0.1
KIWB	Kanaga Island	2.04	276	eP	P	00 35 14.5	-0.6
KIKV	Kanaga Island	2.05	277	P	P	00 35 15.2	-0.2
KIMD	Kanaga Island	2.08	274	P	P	00 35 14.9	-0.9
NIKO	Nikolski	3.35	65	eP	P	00 35 31.4	-2.5
OKCE	Okmok Cone E	3.91	61	P	P	00 35 44.0	+2.3
OKCD	Okmok Cone D	3.94	61	P	P	00 35 44.2	+2.1
MNAT	Makushin Natee	4.90	60	P	P	00 35 57.2	+1.6
FX1	Attu Island--F	8.04	284	P	P	00 36 41.2	+2.0
FX1				pmax	pmax		
	comp=Z,3.0nm,0.3s						
FX1	Attu Island--F	8.04	284	P	P	00 36 41.2	+2.0
	comp=Z,3.1nm,0.3s,baz=291,slow=19,SNR=16						
FX1	Attu Island--F	8.04	284	P	P	00 36 37.4	-1.8
BILL	Bilibino	19.04	337	eP	P	00 39 02.7	+0.2
BILL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BILL	Bilibino	19.04	337	eP	P	00 39 02.7	+0.2
	comp=Z,6.8nm,0.8s						
ILAR	Eielson Array	19.14	36	P	P	00 39 00.7	-3.0
	comp=Z,1.5nm,0.3s,baz=231,slow=8.6,SNR=33						
ILAR				LR	LR	00 47 07.1	
	comp=Z,118nm,18.1s,baz=359,slow=39						
INK	Inuvik	25.48	34	P	P	00 40 06.4	-0.4
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
INK	Inuvik	25.48	34	P	P	00 40 06.4	-0.4
	comp=Z,3.2nm,0.8s,mb3.9,baz=244,slow=11,SNR=3.6						
INK	Inuvik	25.48	34	eP	P	00 40 05.2	-1.6
DLBC	Dease Lake	25.63	57	P	P	00 40 09.9	+1.6
	comp=Z,3.3nm,0.5s,mb4.1,baz=245,slow=11,SNR=8.3						
DLBC				LR	LR	00 49 28.1	
	comp=Z,68nm,18.3s,MS3.2,baz=52,slow=34						
YKA	Yellowknife Ar	32.79	47	P	P	00 41 10.5	-1.8
	comp=Z,1.1nm,0.9s,mb3.8,baz=275,slow=10.0,SNR=7.3						
YKA				PcP	PcP	00 43 56.2	-0.3
	comp=Z,0.4nm,0.6s,baz=282,slow=2.7,SNR=3.8						
YKA				LR	LR	00 56 20.6	
	comp=Z,96nm,19.0s,MS3.5,baz=280,slow=40						
YKA	Yellowknife Ar	32.79	47	P	P	00 41 10.6	-1.8
YKA				PcP	PcP	00 43 56.2	-0.3
YKA				LR	LR	00 56 20.6	
YBH	Yreka Blue Hor	35.80	86	LR	LR	00 53 39.9	
	comp=Z,33nm,18.4s,MS3.1,baz=320,slow=32						
NEW	Newport	35.89	72	P	P	00 41 39.2	+0.2
	comp=Z,1.5nm,0.5s,mb4.2,baz=263,slow=4.5,SNR=4.2						
NEW				pP	pP	00 41 52.3	-0.6
	comp=Z,4.4nm,0.6s,baz=294,slow=8.0,SNR=5.5						
NEW				LR	LR	00 56 18.9	
	comp=Z,53nm,18.5s,MS3.3,baz=321,slow=36						
NEW	Newport	35.89	72	P	P	00 41 39.2	+0.1
NEW				pP	pP	00 41 52.3	-0.6
NEW				LR	LR	00 56 18.9	
EDM	Edmonton	35.97	63	eP	P	00 41 39.2	-0.5
WVOR	Wild Horse Val	37.93	82	P	P	00 41 56.7	+0.5
MSO	Missoula	38.47	73	eP	P	00 41 59.5	-1.1
	comp=Z,1.4nm,0.6s,mb3.9						
HLID	Hailey	39.89	78	eP	P	00 42 12.5	0.0
MCMT	McKenzie Canyo	40.16	75	eP	P	00 42 14.8	+0.2
BOZ	Bozeman (W)	40.45	73	eP	P	00 42 17.0	-0.1
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
BOZ	Bozeman (W)	40.45	73	eP	P	00 42 17.0	-0.1
	comp=Z,5.0nm,0.6s,mb4.4						
NVAR	Mina Array Bea	40.47	87	P	P	00 42 18.8	+1.4
	comp=Z,0.4nm,0.7s,mb3.3,baz=291,slow=7.7,SNR=4.0						
NVAR				pP	pP	00 42 31.2	-0.2
	comp=Z,1.7nm,0.8s,baz=305,slow=7.1,SNR=7.6						
NVAR	Mina Array Bea	40.47	87	P	P	00 42 18.8	+1.4
NVAR				pP	pP	00 42 31.2	-0.2
ELK	Elko	40.98	82	P	P	00 42 21.6	0.0
FFC	Flin Flon	41.45	56	eP	P	00 42 23.9	-1.3
FFC				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
FFC	Flin Flon	41.45	56	eP	P	00 42 23.9	-1.4
	comp=Z,4.1nm,0.6s,mb4.2						
IMW	Indian Meadow	41.81	75	P	P	00 42 28.9	+0.7
	comp=Z,3.2nm,0.9s,mb4.0						
RRI2	Red Ridge	41.89	76	eP	P	00 42 28.9	0.0
	comp=Z,6.9nm,0.8s,mb4.3						
HWUT	Hardware Ranch	42.73	78	eP	P	00 42 36.7	+0.9
	comp=Z,2.3nm,0.8s,mb4.0						
HWUT				epP	pP	00 42 49.0	-0.9
PDAR	Pinedale Array	43.28	75	P	P	00 42 40.2	-0.1
	comp=Z,1.5nm,0.5s,mb4.0,baz=308,slow=4.0,SNR=17						
PDAR				pP	pP	00 42 54.2	-0.1
	comp=Z,6.9nm,0.6s,baz=326,slow=5.3,SNR=22						
DAU	Daniels Canyon	43.63	79	P	P	00 42 43.1	0.0
NEN	Nelson	44.37	87	P	P	00 42 48.5	-0.6
RSSD	Black Hills	45.79	71	P	P	00 43 00.1	-0.3
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
RSSD	Black Hills	45.79	71	P	P	00 43 00.1	-0.3
	comp=Z,3.1nm,0.6s,mb4.4						
PV10	Paradox Valley	46.23	80	P	P	00 43 03.2	-0.7
PV01	Paradox Valley	46.67	80	eP	P	00 43 06.9	-0.5
ULM	Lac du Bonnet	46.93	59	P	P	00 43 08.6	-0.6
	comp=Z,1.6nm,0.4s,mb4.3,baz=278,slow=7.1,SNR=4.2						
RW3	Ridgway	47.14	79	P	P	00 43 11.4	+0.3
RW3				e*PP	pP	00 43 24.1	-1.1
SDCO	Great Sand Dun	48.79	78	P	P	00 43 23.9	0.0
ULN	Ulaanbaatar	48.85	299	eP	P	00 43 25.1	+0.9
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ULN	Ulaanbaatar	48.85	299	eP	P	00 43 25.1	+0.9
	comp=Z,1.8nm,0.8s,mb4.2						
SONM	Songino Array	49.23	299	P	P	00 43 27.4	+0.3
	comp=Z,1.9nm,0.6s,mb4.3,baz=47,slow=7.7,SNR=12						
ZAK	Zakamensk	49.40	303	eP	P	00 43 27.3	-1.1
ZAK				e		00 44 50.2	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
ANMO	Albuquerque	50.02	82	P	P	00 43 33.6	+0.2
ANMO	Albuquerque	50.02	82	LR	LR	01 05 42.8	
	comp=Z,49nm,18.0s,MS3.5,slow=37						
MNTX	Cornudas Mount	52.87	84	eP	P	00 43 55.1	+0.1
	comp=Z,2.2nm,0.8s,mb4.1						
MNTX				epP	pP	00 44 07.4	-2.0
WMOK	Wichita Mounta	54.86	77	eP	P	00 44 08.7	-0.8
WMOK				e*PP	pP	00 44 21.3	-2.7
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
WMOK	Wichita Mounta	54.86	77	eP	P	00 44 08.7	-0.9
	comp=Z,3.4nm,0.8s,mb4.4						
WMOK				epP	pP	00 44 21.3	-2.7
TXAR	Lajitas Array	55.57	85	P	P	00 44 12.7	-2.1
	comp=Z,0.8nm,0.8s,mb3.8,baz=305,slow=6.1,SNR=6.2						
TXAR				pP	pP	00 44 27.1	-2.2
	comp=Z,2.0nm,0.8s,baz=296,slow=5.2,SNR=14						
SCHQ	Schefferville	57.83	41	P	P	00 44 29.4	-1.0
	comp=Z,1.6nm,0.6s,mb4.3,baz=310,slow=11,SNR=3.9						
SCHQ				pP	pP	00 44 43.3	-1.7
	comp=Z,2.7nm,0.9s,baz=108,slow=2.3,SNR=2.7						
SCHQ	Schefferville	57.83	41	P	P	00 44 29.4	-1.0
SCHQ				pP	pP	00 44 43.3	-1.7
GTA	Gaotai	58.27	295	eP	P	00 44 33.3	-0.4
ARCES	ARCESS Array B	58.28	352	P	P	00 44 32.7	-0.7
	comp=Z,1.3nm,0.7s,mb4.1,baz=31,slow=7.1,SNR=7.4						
ARCES				PcP	PcP	00 45 23.6	-0.3
	comp=Z,2.4nm,0.6s,baz=22,slow=4.9,SNR=9.4						
ARCES				LR	LR	01 08 45.5	
	comp=Z,52nm,19.8s,MS3.6,baz=320,slow=35						
ARCES	ARCESS Array B	58.28	352	P	P	00 44 32.7	-0.7
ARCES				PcP	PcP	00 45 23.6	-0.3
ARCES				LR	LR	01 08 45.5	
MKAR	Makanchi Array	62.21	311	P	P	00 44 59.0	-1.5
	comp=Z,0.8nm,0.5s,mb4.1,baz=51,slow=7.8,SNR=12						
BVAR	Borovoye Array	62.60	322	P	P	00 45 02.4	-0.6
	comp=Z,1.9nm,0.6s,mb4.4,baz=52,slow=7.3,SNR=16						
BVAR				PcP	PcP	00 45 41.4	+0.1
	comp=Z,2.9nm,0.7s,baz=54,slow=3.4,SNR=9.4						
ZRNK	Zerenda	63.18	323	eP	P	00 45 05.5	-1.4
FINES	FINESS Array B	66.11	350	P	P	00 45 24.7	-0.9
	comp=Z,0.9nm,0.7s,mb3.9,baz=18,slow=6.0,SNR=4.8						
FINES				PcP	PcP	00 45 55.2	-0.3
	comp=Z,1.1nm,0.7s,baz=45,slow=5.4,SNR=3.6						
FINES	FINESS Array B	66.11	350	P	P	00 45 24.7	-0.9
FINES				PcP	PcP	00 45 55.2	-0.3
NB2	NORSAR Subarra	67.57	357	P	P	00 45 34.4	-0.3
	comp=Z,0.5nm,0.6s,mb3.7,baz=1.0,slow=6.2						
NOA	NORSAR Array B	67.57	357	P	P	00 45 34.2	-0.5
	comp=Z,0.6nm,0.7s,mb3.7,baz=3.7,slow=6.3,SNR=3.9						
LSA	Lhasa	70.19	293	eP	P	00 45 53.2	+1.7
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
LSA	Lhasa	70.19	293	eP	P	00 45 53.2	+1.7
	comp=Z,6.8nm,0.6s,mb4.8						
CMAR	Chiang Mai Arr	74.01	280	P	P	00 46 15.0	+0.7
	comp=Z,2.2nm,0.7s,mb4.2,baz=25,slow=7.1,SNR=9.2						
GUN	Gumba	74.55	295	eP	P	00 46 18.8	+1.6
	comp=Z,33nm,0.5s						
KKN	Kakani	74.98	296	eP	P	00 46 21.0	+1.3
	comp=Z,18nm,0.6s,mb5.2						
PKI	Pulchoki	75.08	295	eP	P	00 46 21.6	+1.4
	comp=Z,16nm,0.8s,mb5.0						
GKN	Gorkha	75.17	296	eP	P	00 46 21.8	+1.0
	comp=Z,27nm,0.6s						
DMN	Daman	75.22	296	eP	P	00 46 22.7	+1.7
DZM	Mont Dzumac	75.42	199	LR	LR	01 18 40.4	
	comp=Z,73nm,18.4s,MS4.0,baz=35,slow=35						
KOLN	Koldanda	75.93	297	eP	P	00 46 26.2	+1.1
	comp=Z,22nm,0.9s,mb5.1						
AKASG	Malin Array Be	76.14	345	P	P	00 46 25.0	-0.8
	comp=Z,1.1nm,0.4s,mb4.2,baz=17,slow=6.0,SNR=7.2						
BRG	Berggiesshubel	77.62	355	i Pg	P	00 46 35.0	+0.9
BRG	Berggiesshubel	77.62	355	P	P	00 46 35.0	+0.9
BRG				e		00 46 59.6	
GERES	GERESS Array B	79.65	355	P	P	00 46 45.4	+0.1
	comp=Z,0.9nm,0.7s,mb3.8,baz=342,slow=4.2,SNR=6.9						
BR131	Keskin Array S	85.86	339	P	P	00 47 18.6	+1.4
BRTR	Keskin Array B	85.86	339	P	P	00 47 18.8	+1.6
	comp=Z,1.4nm,0.8s,mb4.2,baz=27,slow=2.8,SNR=9.3						
MAW	Mawson	148.59	218	PKPbc	PKPdf	00 54 23.1	+4.9
	comp=Z,2.1nm,0.7s,baz=151,slow=1.7,SNR=6.9						
MAW				pPKPbc		00 54 37.6	
	comp=Z,5.7nm,0.7s,baz=120,slow=3.3,SNR=13						
BOSA	Boshof	152.88	321	PKPbc	PKPdf	00 54 34.6	+8.8
	comp=Z,1.2nm,0.5s,baz=116,slow=19,SNR=4.0						

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*NEIC **30** 01:01:31.0±0.4, 18.52N×145.73E, mb4.4/9, Error ellipse: s-maj=15.1km s-min=7.8km az=84.0*
*BJI **30** 01:01:31.0, 18.50N×145.70E, h193^{km}, mB4.7, mb4.4*
*IDC **30** 01:01:31.1±0.8, 18.54N×145.63E, h194^{km}±7^{km}, mb3.8/13, mb1 3.9/14, mb1mx3.8/24, mbtmp4.2/14, Error ellipse: s-maj=18.1km s-min=10.8km az=94.0*
ISC 30 01:01:29.7±0.5**, 18.52N**±0.05×**145.8E**±0.1**, h194^{km}, h194^{km}**±2.1^{km}**:pP-P, n36, σ1^{s}28**/35**, mb4.0**/19**, 1D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARN	Sarigan	1.81	181	⇓iP	P	01 02 08.1	+1.9
SAPN	Saipan	3.29	181	eP	P	01 02 24.1	+1.1
SAPN				eS	S	01 03 04.6	+0.4
GUMO	Guam	4.98	190	ePn	P	01 02 46.1	+1.7
JOW	Kunigami	18.15	300	P	P	01 05 30.7	+0.7
	1.7nm,0.3s,baz=142,slow=13,SNR=11						
MJAR	Matsushiro Arr	19.16	341	P	P	01 05 37.8	-2.6
	0.5nm,0.3s,baz=170,slow=9.9,SNR=8.8						
MAJO	Matsushiro	19.16	341	P	P	01 05 42.4	+2.1
	10nm,0.7s						
YHNB	Yeheng	23.50	289	eP	P	01 06 23.4	+0.1
PMG	Port Moresby	27.78	177	P	P	01 07 01.7	-1.1
	4.9nm,0.4s,mb4.5,baz=162,slow=2.7,SNR=3.5						
MDJ	Mudanjiang	29.34	336	P	P	01 07 17.3	+0.8
MDJ				AMB	AMB		
	comp=Z,60nm,3.6s						
CN2	Changchun	30.47	330	eP	P	01 07 28.8	+2.4
KAKA	Kakadu	33.71	204	eP	P	01 07 53.7	-1.0
	comp=Z,9.7nm,0.6s,mb4.5						
ENH	Enshi	34.94	297	P	P	01 08 09.7	+4.7
	comp=Z,4.8nm,0.5s,mb4.3						
CTA	Charters Tower	38.37	179	P	P	01 08 33.3	-0.5
	comp=Z,1.8nm,0.4s,mb4.0,baz=6.4,slow=6.7,SNR=3.9						
WRAB	Tennant Creek	39.83	197	eP	P	01 08 46.4	+0.6
	comp=Z,22nm,0.8s,mb4.6						
WB2	Warramunga Arr	39.84	197	eP	P	01 08 45.8	-0.1
WRA	Warramunga Arr	39.84	197	P	P	01 08 45.7	-0.2
	comp=Z,21nm,0.9s,mb4.6,baz=16,slow=8.9,SNR=49						
FITZ	Fitzroy Crossi	41.44	210	eP	P	01 08 59.1	+0.1
	comp=Z,23nm,0.8s,mb4.7						
FITZ	Fitzroy Crossi	41.44	210	P	P	01 08 59.1	+0.2
	comp=Z,30nm,0.7s,mb4.8,baz=20,slow=7.6,SNR=42						
SONM	Songino Array	43.34	321	P	P	01 09 13.1	-1.0
	comp=Z,1.0nm,0.7s,mb3.3,baz=187,slow=10.0,SNR=3.9						
CMAR	Chiang Mai Arr	44.34	278	P	P	01 09 22.0	-0.5
	comp=Z,0.8nm,0.4s,mb3.5,baz=68,slow=6.8,SNR=4.4						
DZM	Mont Dzumac	45.11	153	P	P	01 09 27.4	-1.2
	comp=Z,7.2nm,0.6s,mb4.2,baz=12,slow=12,SNR=7.4						
MBWA	Marble Bar	46.98	214	eP	P	01 09 42.6	-0.6
	comp=Z,5.9nm,0.6s,mb4.1						
STKA	Stephens Creek	50.27	185	P	P	01 10 06.2	-2.0
	comp=Z,2.1nm,0.6s,mb3.7,baz=5.2,slow=7.9,SNR=3.3						
STKA	Stephens Creek	50.27	185	P	P	01 10 05.8	-2.5
BILL	Bilibino	51.18	10	eP	P	01 10 14.9	+0.3
	comp=Z,5.4nm,0.8s,mb4.0						
WMQ	Urumqi	54.50	311	eP	P	01 10 41.3	+1.9
NWAO	Narrogin (SRO)	57.99	208	P	P	01 11 00.7	-3.6
MKAR	Makanchi Array	58.66	314	P	P	01 11 06.8	-1.9
	comp=Z,0.4nm,0.5s,mb3.3,baz=87,slow=7.5,SNR=3.2						
ILAR	Eielson Array	63.76	26	P	P	01 11 41.9	-0.8
	comp=Z,1.8nm,0.7s,mb3.8,baz=261,slow=5.3,SNR=16						
ZRNK	Zerenda	67.51	320	P	P	01 12 05.8	-0.9
	comp=Z,4.2nm,1.3s,mb3.9						
YKA	Yellowknife Ar	78.10	28	P	P	01 13 08.7	+0.4
	comp=Z,0.1nm,0.3s,mb2.9,baz=290,slow=5.4,SNR=4.6						
YKA				pP	pP	01 13 55.3	-0.1
	comp=Z,0.7nm,0.6s,baz=289,slow=5.6,SNR=5.0						
YKA	Yellowknife Ar	78.10	28	P	P	01 13 08.7	+0.4
YKA				pP	pP	01 13 55.3	-0.1
NVAR	Mina Array Bea	83.17	52	P	P	01 13 38.0	+2.5
	comp=Z,1.1nm,0.7s,mb3.7,baz=264,slow=4.0,SNR=8.5						
NVAR				pP	pP	01 14 25.1	+2.0
	comp=Z,3.2nm,0.7s,baz=270,slow=5.4,SNR=11						
FINES	FINESS Array B	87.09	335	P	P	01 13 52.6	-1.6
	comp=Z,0.5nm,0.6s,mb3.5,baz=53,slow=9.5,SNR=5.3						
FINES				pP	pP	01 14 41.6	-0.6
	comp=Z,0.7nm,0.7s,baz=72,slow=6.0,SNR=1.5						
CFAA	Coronel Fontan	146.67	120	PKPbc	PKPbc	01 20 50.6	+2.1
	comp=Z,0.3nm,0.5s,baz=270,slow=11,SNR=4.8						
LPAZ	La Paz	147.57	91	PKPbc	PKPdf	01 20 55.5	+6.8
	comp=Z,3.0nm,0.9s,baz=253,slow=2.9,SNR=14						

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*ATH **30** 01:03:31.0, 37.68N×26.80E, h22^{km}±1^{km}, MD3.5/5*
*NEIC **30** 01:03:31.0, 37.68N×26.80E, h22^{km}, MD3.5(ATH), After ATH.*
*CSEM **30** 01:03:31.0±0.1, 37.81N×26.70E, h12^{km}, MD3.5, Error ellipse: s-maj=2.6km s-min=1.8km az=92.0*
*ISK **30** 01:03:33.3, 37.83N×26.74E, h32^{km}, MD3.5*
ISC 30 01:03:31.6±0.8**, 37.78N**±0.02×**26.70E**±0.04**, h8^{km}**±5^{km}**, n41, σ1^{s}02**/54**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.13	124	ePB	Pb	01 03 35.4	-0.4
SMG				eSB	Sb	01 03 37.3	-1.2
URLA	Izmir	0.58	352	i P	Pg	01 03 43.9	+0.6
URLA				i S	Sg	01 03 52.4	+1.2
IZM	Izmir	0.76	36	i PG	Pg	01 03 46.6	-0.2
IZM				i SG	Sg	01 03 56.6	-0.3
KDAG	Bornova	0.77	36	i P	Pb	01 03 46.5	-0.2
KDAG				i S	Sb	01 03 57.3	+0.4
BODT	Bodrum	0.87	146	i PG	Pg	01 03 49.7	+0.8
BDRM	Kayabasi	0.93	140	i P	Pb	01 03 51.1	+1.6
BDRM				i S	Sb	01 04 02.7	+1.0
AYDN	Tasoluk	0.94	97	i P	Pb	01 03 49.6	-0.1
AYDN				i S	Sb	01 04 03.0	+0.9
MLSB	Milas	0.98	119	PG	Pg	01 03 50.4	-0.8
APE	Apeiranthos	1.17	233	PN	Pn	01 03 54.2	0.0
APE	Apeiranthos	1.17	233	ePN	Pn	01 03 53.7	-0.5
APE				eSN	Sn	01 04 10.1	-0.3
AKS	Akhisar	1.40	38	PN	Pn	01 03 57.0	-0.5
YER	Yerkesik	1.41	117	PN	Pn	01 03 57.9	+0.2
PRK	Paraskevi	1.50	347	ePN	Pn	01 03 59.8	+0.9
PRK				eSN	Sn	01 04 21.8	+3.0
MANT	Manisa	1.63	64	i P	Pn	01 04 02.9	+2.2
MANT				i S	Sb	01 04 22.6	+0.6
DALT	Dalyan (Mudla)	1.84	123	ePN	Pn	01 04 03.7	-0.1
DENT	Denizli	1.85	90	ePN	Pn	01 04 02.9	-1.0
DNZL	Cakiroluk	1.86	92	i P	Pn	01 04 04.1	0.0
DNZL				i S	Sn	01 04 34.6	+6.6
ARG	Arkhangelos	1.93	143	ePN	Pn	01 04 03.1	-2.0
EZN	Ezine	2.06	352	ePN	Pn	01 04 06.7	-0.3
BALB	Balikesir	2.07	26	ePN	Pn	01 04 05.9	-1.2
FETY	Fethiye	2.22	120	ePN	Pn	01 04 09.1	-0.1
BTOK	Tokmak	2.23	27	i P	Pg	01 04 25.9	+10
CANB	Canakkale	2.25	7	ePN	Pn	01 04 09.4	-0.2
GOLH	Golhisar	2.34	103	i P	Pn	01 04 11.7	+0.8
GOLH				i S	Sg	01 04 50.9	+1.5
DST	Dursunbey	2.37	39	ePN	Pn	01 04 10.8	-0.5
LIA	Limnos Island	2.42	331	ePN	Pn	01 04 13.6	+1.5
GDZ	Gediz	2.54	58	i P	Pn	01 04 21.6	+7.7
GDZ				i S	Sg	01 04 51.9	-4.4
BNT	Bandirma	2.74	20	ePN	Pn	01 04 15.6	-1.1
ELL	Elmali	2.76	111	ePN	Pn	01 04 16.5	-0.4
AKAS	Kas	2.79	123	i P	Pn	01 04 20.3	+2.9
AKAS				i S	Sg	01 04 59.0	-5.5
ORLT	Orhaneli	2.84	36	ePN	Pn	01 04 17.0	-1.0
TKTP	Tekketepe	2.87	84	i P	Pn	01 04 18.7	+0.2
MRMT	Marmara Adasi	2.90	14	ePN	Pn	01 04 17.7	-1.3

ALT	**Altintas**	**2.96**	**64**	*e*PN	**Pn**	**01 04 19.3**	**-0.5**
ULDT	**Uludag**	**3.03**	**38**	*i* P	**Pn**	**01 04 29.3**	**+8.6**
YLV	**Yalova**	**3.47**	**36**	*e*PN	**Pn**	**01 04 26.7**	**-0.3**
ESKT	**Eskisehir**	**3.68**	**61**	*e*PN	**Pn**	**01 04 29.7**	**-0.3**
ESKT	**Eskisehir**	**3.68**	**61**	*i* P	**Pg**	**01 04 41.3**	**-3.8**
HRT	**Hereke**	**3.81**	**36**	*e*PN	**Pn**	**01 04 31.3**	**-0.5**
HENT	**Hendek**	**4.45**	**46**	*i* P	**Pg**	**01 04 57.3**	**-3.2**
SGKT	**Sivrigoynuk**	**5.01**	**55**	*i* P	**Pg**	**01 05 02.5**	**-9.0**

GUC 30 01:17:34.0±0.6**, 34.94S**×**70.61W, h3^{km}, MD3.5, ML2.3, 1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CICH	**Cipreses**	**0.64**	**14**	⇓*i*P	Pg	01 17 46.9	0.0
CICH				*i* S	Sg	01 17 57.0	+1.6
CACH	**El Canelo**	**0.82**	**0**	*i* P	Pg	01 17 49.9	-0.6
CACH				*i* S	Sg	01 18 02.6	+1.1
CHCH	**Chadas Angostu**	**1.01**	**358**	*i* P	Pb	01 17 53.5	-0.3
CHCH				*i* S	Sb	01 18 07.9	+0.7
LMEL	**Las Melosas**	**1.14**	**17**	*e*P	Pb	01 17 55.8	-0.3
LMEL				*i* S	Sb	01 18 12.3	+1.2
LMEL				AMP		01 18 12.8	
	comp=N,150nm,0.3s						

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*BJI **30** 01:19:18.0, 36.70N×1.60W, h8^{km}, mB5.0, mb4.9*

*MOS **30** 01:19:21.2±0.9, 36.81N×1.45W, h10^{km}, mb5.1/4, Error ellipse: s-maj=7.8km s-min=4.0km az=80.6*

*IDC **30** 01:19:21.8±1.2, 36.77N×1.65W, mb3.7/5, mb1 3.9/8, mb1mx3.6/29, mbtmp3.6/8, ML3.8/3, MS2.8/1, Ms1 2.9/1, ms1mx2.4/33, Error ellipse: s-maj=26.6km s-min=22.7km az=69.0*

*NEIC **30** 01:19:22.9, 36.69N×1.57W, h5^{km}, mb4.6/4, MN3.8(MDD), After MDD.*

NEIC Felt [IV] at Carboneras, Garrucha, Huercal-Overa, San Jose, Sorbas, Turre and Vera; [II] at Aguilas, Almeria and Mazarron, Spain.

*ZUR_RM **30** 01:19:22, 36.69N×1.57W, h6^{km}, Mw3.8/4, Moment Tensor Solution. s4 Moment tensor: Scale 10^{14}Nm; M$_{rr}$4.12; M$_{\theta\theta}$-3.01; M$_{\phi\phi}$-1.11; M$_{r\theta}$-1.23; M$_{\theta\phi}$-2.94; M$_{\phi r}$-2.76; Best double couple: M$_0$5.58×10^{14} NP1:ϕ_s216°, δ62°, λ70°. NP2:ϕ_s74°, δ34°, λ123°. Principal axes: T 5.303, Plg67°, Azm89°; N .557, Plg17°, Azm226°; P -5.86, Plg15°, Azm321°;*

*MDD **30** 01:19:23.0±0.4, 36.65N×1.54W, h11^{km}, mbLg3.7/31 Error ellipse: s-maj=4.6km s-min=2.6km az=135.0, PRXIMO*

MDD EMS: II GUILAS N A.

*CSEM **30** 01:19:22.2±0.1, 36.63N×1.55W, h10^{km}, mb4.1/3, ML4.0/17, Error ellipse: s-maj=1.1km s-min=1.1km az=148.0*

*INMG **30** 01:19:23.8±1.3, 36.71N×1.60W, h14^{km}±3^{km}, ML3.7, Error ellipse: s-maj=2.5km s-min=2.4km az=108.0*

*SFS **30** 01:19:23.0, 36.60N×1.50W, h8^{km}*

*CRAAG **30** 01:19:24.0, 36.71N×1.60W, Mb3.8*

*LDG **30** 01:19:24.4±0.2, 36.67N×1.59W, h10^{km}, Md4.4/1, Ml3.8/13, Error ellipse: s-maj=3.8km s-min=1.9km az=160.0*

*CNRM **30** 01:19:27.0, 36.32N×1.38W, h30^{km}, MD4.1*

*STR **30** 01:19:36.5±0.2, 37.64N×1.58W, h10^{km}±1^{km}, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 30 01:19:20.8±0.2**, 36.79N**±0.01×**1.67W**±0.02**, h10**^{km}**, n238, σ1ṣ51**/379**, mb4.4**/12**, 9C-3D, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENIJ	**Nijar**	**0.47**	**293**	⇓P	**Sg**	**01 19 34.8**	**-1.9**
ENIJ	**Nijar**	**0.47**	**293**	⇓Pg	**Sg**	**01 19 34.7**	**-2.0**
	SNR=18						
CART	**Cartagena**	**0.96**	**33**	*e*Pg	**Pg**	**01 19 40.5**	**+0.5**
CART				*e*Sg	**Sg**	**01 19 51.8**	**-1.0**
CART	**Cartagena**	**0.96**	**33**	⇑Pg	**Pg**	**01 19 40.6**	**+0.6**
CART				Lg		01 19 52.2	
CART	**Cartagena**	**0.96**	**33**	*e*Pg	**Pg**	**01 19 40.5**	**+0.5**
CART				*e*Sg	**Sg**	**01 19 51.8**	**-1.0**
EBER	**Berja**	**0.99**	**277**	Pg	**Pg**	**01 19 42.6**	**+2.1**
EBER				Lg		01 19 56.1	
EBER	**Berja**	**0.99**	**277**	⇑Pg	**Pg**	**01 19 42.6**	**+2.1**
	1μm,0.2s,SNR=18						
EBER				Lg		01 19 57.3	
	11μm,0.3s,SNR=48						
EBER	**Berja**	**0.99**	**277**	Pg	**Pg**	**01 19 42.6**	**+2.1**
	1μm,0.2s,SNR=18						
EMUR	**La Murta**	**1.11**	**18**	Pg	**Pg**	**01 19 43.8**	**+0.8**
EMUR				Lg		01 20 00.5	
EMUR	**La Murta**	**1.11**	**18**	⇑Pg	**Pg**	**01 19 43.8**	**+0.8**
	437nm,0.2s,SNR=18						
EMUR				Lg		01 20 00.1	
	2μm,0.4s,SNR=5.0						
EMUR	**La Murta**	**1.11**	**18**	Pg	**Pg**	**01 19 43.8**	**+0.9**
	437nm,0.2s,SNR=18						
EHUE	**Huescar**	**1.27**	**325**	Pg	**Pg**	**01 19 47.6**	**+1.5**
	58nm,0.2s,SNR=78						
EHUE				Lg		01 20 07.8	
	175nm,0.2s,SNR=17						
EHUE	**Huescar**	**1.27**	**325**	Pg	**Pg**	**01 19 47.6**	**+1.5**
	58nm,0.2s,SNR=78						
EHUE				S	**Sb**	**01 20 08.9**	**+8.5**
USTO	**Oran**	**1.39**	**139**	P	**Pn**	**01 19 46.0**	**-0.2**
EALB	**Alboran**	**1.39**	**233**	Pn	**Pn**	**01 19 46.7**	**+0.4**
EALB				Lg		01 20 06.5	
EALB	**Alboran**	**1.39**	**233**	Pg	**Pg**	**01 19 46.7**	**-1.9**
	161nm,0.3s,SNR=7.9						
EALB				Lg		01 20 07.6	
	444nm,0.3s,SNR=4.0						
EALB	**Alboran**	**1.39**	**233**	Pg	**Pg**	**01 19 46.7**	**-1.9**
	161nm,0.3s,SNR=7.9						
EQES	**Quesada**	**1.51**	**313**	⇓Pn	**Pn**	**01 19 51.8**	**+3.8**
	179nm,0.2s,SNR=18						
EQES				Lg		01 20 14.7	
	626nm,0.3s,SNR=11						
EQES	**Quesada**	**1.51**	**313**	Pg	**Pg**	**01 19 51.8**	**+0.8**
	179nm,0.2s,SNR=920						
EGUA	**Guajares**	**1.52**	**272**	Pn	**Pn**	**01 19 50.2**	**+2.0**
	45nm,0.2s,SNR=7.9						
EGUA				Pg	**Pg**	**01 19 51.9**	**+0.7**
	SNR=7.9						
EGUA				Lg		01 20 13.1	
	158nm,0.4s,SNR=7.9						
EGUA	**Guajares**	**1.52**	**272**	Pg	**Pg**	**01 19 50.0**	**-1.2**
	45nm,0.2s,SNR=7.9						
EGUA				S	**Sb**	**01 20 13.1**	**+5.2**
ODZI	**Dziouia**	**1.54**	**167**	P	**Pn**	**01 19 49.0**	**+0.6**
OLHC	**Oulhaca**	**1.55**	**172**	P	**Pn**	**01 19 49.0**	**+0.5**
ECOG	**Cogollos-Vega**	**1.60**	**288**	Pn	**Pn**	**01 19 52.5**	**+3.2**
	103nm,0.2s,SNR=102						
ECOG				Lg		01 20 16.8	
	344nm,0.2s,SNR=12						
ECOG	**Cogollos-Vega**	**1.60**	**288**	Pg	**Pg**	**01 19 52.7**	**0.0**
	103nm,0.2s,SNR=102						
ECOG				S	**Sb**	**01 20 16.0**	**+5.9**
OTSS	**Djebel Tessala**	**1.66**	**155**	P	**Pn**	**01 19 49.0**	**-1.2**
ERON	**Agron**	**1.73**	**278**	Pn	**Pn**	**01 19 54.0**	**+2.9**
ERON				Sn	**Sn**	**01 20 16.2**	**+2.7**
ERON	**Agron**	**1.73**	**278**	Pn	**Pn**	**01 19 52.9**	**+1.7**
	93nm,0.2s,SNR=7.9						
ERON				Sn	**Sn**	**01 20 16.2**	**+2.7**
	37nm,0.2s,SNR=7.9						
ERON	**Agron**	**1.73**	**278**	Pn	**Pn**	**01 19 54.0**	**+2.8**
	93nm,0.2s,SNR=7.9						
ERON				Sn	**Sn**	**01 20 16.2**	**+2.7**
	37nm,0.2s,SNR=7.9						
MELI	**Melilla**	**1.81**	**215**	⇑Pg	**Pn**	**01 19 52.9**	**+0.6**
MELI				Sn	**Sn**	**01 20 13.8**	**-1.7**
MELI	**Melilla**	**1.81**	**215**	*i* P	**Pn**	**01 19 52.9**	**+0.6**
MELI				*i* S	**Sn**	**01 20 13.8**	**-1.7**
EMLI	**Melilla**	**1.81**	**215**	Pn	**Pn**	**01 19 53.1**	**+0.8**
	86nm,0.1s,SNR=9.7						
EMLI				Sn	**Sn**	**01 20 14.9**	**-0.6**
	1μm,0.3s,SNR=4.6						
EMEL	**Melilla**	**1.81**	**216**	Pn	**Pn**	**01 19 53.1**	**+0.8**
	86nm,0.1s,SNR=9.7						
EMEL				Sn	**Sn**	**01 20 14.9**	**-0.7**
	1μm,0.3s,SNR=4.6						
ETOB	**Tobarra**	**1.86**	**3**	⇑Pn	**Pn**	**01 19 55.8**	**+2.8**
	272nm,0.1s,SNR=18						
ETOB				Sn	**Sn**	**01 20 18.9**	**+2.2**
	614nm,0.2s,SNR=11						
ETOB	**Tobarra**	**1.86**	**3**	Pn	**Pn**	**01 19 55.8**	**+2.8**
	272nm,0.1s,SNR=18						
ETOB				Sn	**Sn**	**01 20 18.9**	**+2.2**
	614nm,0.2s,SNR=11						
ODJA	**Bouhanifia**	**1.90**	**139**	P	**Pn**	**01 19 51.0**	**-2.6**
EVIA	**Vianos**	**1.96**	**341**	Pn	**Pn**	**01 19 57.6**	**+3.1**
EVIA				Sn	**Sn**	**01 20 23.0**	**+3.6**
EVIA	**Vianos**	**1.96**	**341**	⇑Pn	**Pn**	**01 19 57.6**	**+3.1**
	244nm,0.3s,SNR=18						
EVIA				Sn	**Sn**	**01 20 23.0**	**+3.6**
	187nm,0.1s,SNR=10						
OKGL	**Djebel Kef Gue**	**2.01**	**111**	P	**Pn**	**01 19 56.0**	**+0.9**
ZAI	**Zaio**	**2.01**	**206**	Pn	**Pn**	**01 19 53.5**	**-1.7**
ZAI				Sn	**Sn**	**01 20 14.0**	**-6.7**
ZAI	**Zaio**	**2.01**	**206**	*i* P	**Pn**	**01 19 53.5**	**-1.7**
OJBR	**Djebel Berber**	**2.02**	**126**	P	**Pn**	**01 19 55.0**	**-0.3**
ELOJ	**Sierra Loja**	**2.02**	**281**	Pn	**Pn**	**01 19 59.2**	**+3.9**
	71nm,0.2s,SNR=54						
ELOJ				Lg		01 20 30.8	
	234nm,0.6s,SNR=8.4						
ELOJ	**Sierra Loja**	**2.02**	**281**	Pn	**Pn**	**01 19 59.2**	**+3.8**
	71nm,0.2s,SNR=54						
ELOJ				S	**Sn**	**01 20 30.8**	**+10**
EBAN	**Banos Encina**	**2.18**	**310**	P	**Pn**	**01 20 00.7**	**+3.2**
EBAN						01 20 37.4	
EBAN	**Banos Encina**	**2.18**	**310**	⇑Pn	**Pn**	**01 20 00.7**	**+3.1**
	42nm,0.2s,SNR=18						
EBAN				Pg	**Pg**	**01 20 06.4**	**+2.2**
	288nm,0.3s,SNR=7.9						
EBAN				Lg		01 20 35.9	
	452nm,0.4s,SNR=15						
EBEN	**Beniarda**	**2.23**	**30**	Pn	**Pn**	**01 19 59.3**	**+0.9**
	14nm,0.1s,SNR=49						
EBEN				Sn	**Sn**	**01 20 27.6**	**+1.5**
	127nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.23**	**30**	Pn	**Pn**	**01 19 59.3**	**+1.0**
	14nm,0.1s,SNR=49						
EBEN				Sn	**Sn**	**01 20 27.6**	**+1.5**
	127nm,0.3s,SNR=7.9						
EANR	**’Ain N’Sour**	**2.38**	**110**	P	**Pn**	**01 20 00.0**	**-0.5**
MPAL	**Palemas**	**2.42**	**230**	*i* P	**Pn**	**01 20 03.0**	**+2.0**
MPAL				*i* S	**Sn**	**01 20 28.5**	**-2.4**
TOU	**Touzarine**	**2.49**	**224**	*i* P	**Pn**	**01 20 03.5**	**+1.5**
TOU				*i* S	**Sn**	**01 20 30.0**	**-2.7**
ECHF	**Ech Chlef**	**2.50**	**104**	P	**Pn**	**01 20 08.0**	**+5.8**
EMIJ	**Mijas**	**2.51**	**266**	Pn	**Pn**	**01 20 02.0**	**-0.3**
EMIJ				Sn	**Sn**	**01 20 34.2**	**+1.0**
EMIJ	**Mijas**	**2.51**	**266**	Pn	**Pn**	**01 20 02.0**	**-0.2**
	8.6nm,0.1s,SNR=7.9						
EMIJ				Pg	**Pg**	**01 20 08.9**	**-1.9**
	15nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**2.51**	**266**	Pg	**Pg**	**01 20 08.9**	**-1.9**
	15nm,0.2s,SNR=7.9						
EMIJ				Sn	**Sn**	**01 20 34.2**	**+1.0**
ECHA	**Ech Chlef**	**2.53**	**104**	P	**Pn**	**01 20 08.0**	**+5.4**
EBNR	**Beni Rached**	**2.62**	**100**	P	**Pn**	**01 20 09.0**	**+5.1**
EADA	**Adamuz**	**2.69**	**302**	Pn	**Pn**	**01 20 07.2**	**+2.2**
EADA				Sn	**Sn**	**01 20 39.7**	**+1.7**
EADA	**Adamuz**	**2.69**	**302**	⇑Pn	**Pn**	**01 20 07.2**	**+2.2**
	32nm,0.2s,SNR=18						
EADA				Pg	**Pg**	**01 20 16.0**	**+1.5**
	99nm,0.3s,SNR=7.9						
EADA				Sn	**Sn**	**01 20 39.7**	**+1.7**
	79nm,0.2s,SNR=8.6						
EADA				Lg		01 20 52.9	
	419nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.69**	**302**	Pn	**Pn**	**01 20 07.2**	**+2.2**
	32nm,0.2s,SNR=18						
EADA	**Adamuz**	**2.69**	**302**	Pg	**Pg**	**01 20 16.0**	**+1.4**
	99nm,0.3s,SNR=7.9						
EADA				Sn	**Sn**	**01 20 39.7**	**+1.7**
	79nm,0.2s,SNR=8.6						
ETRT	**Tiaret**	**2.78**	**119**	P	**Pn**	**01 20 06.0**	**-0.1**
ECHE	**Chera**	**2.85**	**11**	Pn	**Pn**	**01 20 08.8**	**+1.5**
ECHE				Sn	**Sn**	**01 20 42.3**	**+0.3**
ECHE	**Chera**	**2.85**	**11**	Pn	**Pn**	**01 20 08.8**	**+1.5**
	7.4nm,0.2s,SNR=26						
ECHE				Pg	**Pg**	**01 20 15.5**	**-2.2**
	28nm,0.4s,SNR=7.9						
ECHE				Sn	**Sn**	**01 20 42.3**	**+0.3**
	0.0nm,0.4s,SNR=4.9						
ECHE				Lg		01 20 55.9	
	40nm,0.3s,SNR=7.9						
ECHE	**Chera**	**2.85**	**11**	Pg	**Pg**	**01 20 15.5**	**-2.2**
	28nm,0.4s,SNR=7.9						
ECHE				Sn	**Sn**	**01 20 42.3**	**+0.3**
	SNR=4.9						
REAL	**Reales**	**2.86**	**265**	Pn	**Pn**	**01 20 06.0**	**-1.4**
REAL				Sn	**Sn**	**01 20 34.0**	**-8.3**
REAL	**Reales**	**2.86**	**265**	*e*P	**Pn**	**01 20 06.0**	**-1.4**
LIJA	**Lijar**	**3.00**	**273**	Pn	**Pn**	**01 20 12.2**	**+2.9**
LIJA				Sn	**Sn**	**01 20 55.0**	**+9.3**
LIJA	**Lijar**	**3.00**	**273**	*i* P	**Pn**	**01 20 12.2**	**+2.9**
LIJA				*e*S	**Sn**	**01 20 55.0**	**+9.3**
ALJ	**Aljibe**	**3.21**	**267**	*e*P	**Pn**	**01 20 15.0**	**+2.7**
ALJ				*e*S	**Sn**	**01 20 52.0**	**+0.9**
DKH	**Dar Kharkhour**	**3.26**	**248**	*i* P	**Pn**	**01 20 16.0**	**+3.0**
DKH				*i* S	**Sn**	**01 20 52.0**	**-0.2**
EIBI	**Ibiza**	**3.27**	**46**	Pn	**Pn**	**01 20 13.6**	**+0.5**
EIBI				Sn	**Sn**	**01 20 50.2**	**-2.2**
EIBI	**Ibiza**	**3.27**	**46**	Pn	**Pn**	**01 20 13.6**	**+0.5**
	22nm,0.2s,SNR=80						
EIBI				Sn	**Sn**	**01 20 48.2**	**-4.3**
	12nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**3.27**	**46**	Pn	**Pn**	**01 20 13.6**	**+0.5**
	22nm,0.2s,SNR=80						
EIBI				Sn	**Sn**	**01 20 50.2**	**-2.2**
ESPR	**Espera**	**3.36**	**273**	Pn	**Pn**	**01 20 17.8**	**+3.4**
	2.8nm,0.2s,SNR=11						
ESPR				Pg	**Pg**	**01 20 25.4**	**-2.5**
	22nm,0.4s,SNR=7.9						
ESPR				Lg		01 21 11.7	
	245nm,1.7s,SNR=7.9						
ESPR	**Espera**	**3.36**	**273**	Pn	**Pn**	**01 20 17.8**	**+3.3**
	2.8nm,0.2s,SNR=11						
ESPR	**Espera**	**3.36**	**273**	Pg	**Pg**	**01 20 25.4**	**-2.5**
	22nm,0.4s,SNR=7.9						
TZK	**Tazeka**	**3.39**	**218**	Pn	**Pn**	**01 20 14.0**	**-0.8**
TZK				Sn	**Sn**	**01 20 47.5**	**-8.0**
TZK	**Tazeka**	**3.39**	**218**	*i* P	**Pn**	**01 20 14.0**	**-0.8**
ESDC	**Sonseca Array**	**3.40**	**329**	Pn	**Pn**	**01 20 16.6**	**+1.6**
	22nm,0.3s,baz=147,slow=13,SNR=164						
ESDC				Pg	**Pg**	**01 20 29.6**	**+0.9**
	28nm,0.3s,baz=144,slow=17,SNR=26						
ESDC				Sn	**Sn**	**01 20 54.4**	**-1.5**
	42nm,0.3s,baz=143,slow=20,SNR=6.7						
ESDC				Lg		01 21 10.6	
	101nm,0.3s,baz=140,slow=31,SNR=11						
ESDC	**Sonseca Array**	**3.40**	**329**	Pn	**Pn**	**01 20 16.8**	**+1.8**
ESDC				Sn	**Sn**	**01 20 55.8**	**-0.1**
ESDC				Lg		01 21 14.4	
ESDC	**Sonseca Array**	**3.40**	**329**	⇑Pn	**Pn**	**01 20 16.6**	**+1.6**
	64nm,0.1s,baz=147,slow=13,SNR=18						
ESDC				Pg	**Pg**	**01 20 28.1**	**-0.6**
	82nm,0.4s,baz=144,slow=18,SNR=7.9						
ESDC				Sn	**Sn**	**01 20 55.8**	**-0.1**
	19nm,0.1s,baz=144,slow=23,SNR=7.9						
ESDC				Lg		01 21 14.4	
	baz=142,slow=29,SNR=7.9						
ESDC	**Sonseca Array**	**3.40**	**329**	Pg	**Pg**	**01 20 28.1**	**-0.6**
	82nm,0.4s,slow=18,SNR=7.9						
ESDC				Sn	**Sn**	**01 20 55.8**	**-0.1**
	19nm,0.1s,slow=23,SNR=7.9						
ESLA	**Sonseca Array**	**3.40**	**329**	*e*P	**Pn**	**01 20 16.4**	**+1.4**
ESLA	**Sonseca Array**	**3.40**	**329**	*e*P	**Pn**	**01 20 16.4**	**+1.4**
GIBL	**Gibalbin**	**3.45**	**272**	*e*P	**Pn**	**01 20 20.0**	**+4.3**
EMOS	**Mosqueruela**	**3.69**	**14**	Pn	**Pn**	**01 20 20.7**	**+1.6**
EMOS				Sn	**Sn**	**01 21 03.4**	**+0.2**
EMOS	**Mosqueruela**	**3.69**	**14**	Pn	**Pn**	**01 20 20.7**	**+1.6**
	9.4nm,0.1s,SNR=107						
EMOS				Pg	**Pg**	**01 20 31.8**	**-2.7**
	9.8nm,0.2s,SNR=7.9						
EMOS				Sn	**Sn**	**01 21 03.4**	**+0.2**
	0.7nm,0.3s,SNR=7.9						
EMOS				Lg		01 21 22.1	
	73nm,0.8s,SNR=7.9						
EMOS	**Mosqueruela**	**3.69**	**14**	Pn	**Pn**	**01 20 20.7**	**+1.6**
	9.4nm,0.1s,SNR=107						
EMOS	**Mosqueruela**	**3.69**	**14**	Pg	**Pg**	**01 20 31.8**	**-2.7**
	9.8nm,0.2s,SNR=7.9						
EMOS				Sn	**Sn**	**01 21 03.4**	**+0.2**
	0.7nm,0.3s,SNR=7.9						
EMHD	**Djebel Mahouad**	**3.77**	**98**	P	**Pn**	**01 20 23.0**	**+2.8**
ABA	**Alger-Bouzarea**	**3.77**	**88**	P	**Pn**	**01 20 20.0**	**-0.3**
EMIN	**Mina Concepcio**	**4.11**	**285**	Pn	**Pn**	**01 20 25.8**	**+0.7**
EMIN				Sn	**Sn**	**01 21 14.0**	**+0.2**
EMIN				Lg		01 21 39.2	
EMIN	**Mina Concepcio**	**4.11**	**285**	Pn	**Pn**	**01 20 26.1**	**+1.0**
	5.6nm,0.1s,SNR=81						
EMIN				Sn	**Sn**	**01 21 14.0**	**+0.2**
	7.2nm,0.3s,SNR=7.9						
EMIN				Lg		01 21 35.1	
	33nm,0.4s,SNR=7.5						
EMIN	**Mina Concepcio**	**4.11**	**285**	Pn	**Pn**	**01 20 26.1**	**+1.0**
	5.6nm,0.1s,SNR=81						
EMIN				Sn	**Sn**	**01 21 14.0**	**+0.2**
	7.2nm,0.3s,SNR=7.9						
EBR	**Ebro Roquetas**	**4.37**	**22**	*e*PN	**Pn**	**01 20 30.0**	**+1.3**
EBR				*e*SN	**Sn**	**01 21 20.2**	**-0.1**
MIF	**Mishlifen**	**4.46**	**222**	Pn	**Pn**	**01 20 29.0**	**-1.0**
MIF				Sn	**Sn**	**01 21 16.0**	**-6.6**
MIF	**Mishlifen**	**4.46**	**222**	*e*P	**Pn**	**01 20 29.0**	**-1.0**
ETOS	**Mallorca**	**4.61**	**48**	Pn	**Pn**	**01 20 32.6**	**+0.4**
ETOS				Sn	**Sn**	**01 21 23.5**	**-3.1**
ETOS	**Mallorca**	**4.61**	**48**	Pn	**Pn**	**01 20 32.6**	**+0.4**
	22nm,0.3s,SNR=25						
ETOS				Sn	**Sn**	**01 21 22.6**	**-4.0**
	8.7nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**4.61**	**48**	Pn	**Pn**	**01 20 32.6**	**+0.4**
	22nm,0.3s,SNR=25						
ETOS				Sn	**Sn**	**01 21 23.5**	**-3.1**
CZD	**Col de Zad**	**4.66**	**218**	Pn	**Pn**	**01 20 32.0**	**-0.9**
CZD				Sn	**Sn**	**01 21 20.0**	**-7.7**
CZD	**Col de Zad**	**4.66**	**218**	*e*P	**Pn**	**01 20 32.0**	**-0.9**
EBAD	**Badajoz**	**4.67**	**297**	Pn	**Pn**	**01 20 33.8**	**+0.8**
EBAD				Sn	**Sn**	**01 21 27.2**	**-0.7**
EBAD				Lg		01 21 56.8	
EBAD	**Badajoz**	**4.67**	**297**	Pn	**Pn**	**01 20 33.8**	**+0.8**
	8.4nm,0.2s,SNR=67						
EBAD				Sn	**Sn**	**01 21 27.2**	**-0.7**
	5.4nm,0.2s,SNR=7.9						
EBAD				Lg		01 21 55.7	
	178nm,0.5s,SNR=5.4						
EBAD	**Badajoz**	**4.67**	**297**	Pn	**Pn**	**01 20 33.8**	**+0.8**
	8.4nm,0.2s,SNR=67						
EBAD	**Badajoz**	**4.67**	**297**	Pg	**Pg**	**01 20 51.5**	**-2.5**
	17nm,0.3s,SNR=4.0						
EBAD				Sn	**Sn**	**01 21 27.2**	**-0.8**
	5.4nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**4.71**	**281**	Pn	**Pn**	**01 20 34.0**	**+0.4**
EGRO				Sn	**Sn**	**01 21 27.7**	**-1.2**
EGRO	**El Granado**	**4.71**	**281**	Pn	**Pn**	**01 20 34.0**	**+0.4**
	3.6nm,0.1s,SNR=19						
EGRO				Pg	**Pg**	**01 20 48.5**	**-6.2**
	15nm,0.2s,SNR=7.9						
EGRO				Sn	**Sn**	**01 21 27.7**	**-1.2**
	2.1nm,0.4s,SNR=7.9						
EGRO				Lg		01 21 54.6	
	86nm,0.8s,SNR=7.9						
EGRO	**El Granado**	**4.71**	**281**	Pn	**Pn**	**01 20 34.0**	**+0.5**
	3.6nm,0.1s,SNR=19						
EGRO	**El Granado**	**4.71**	**281**	Pg	**Pg**	**01 20 48.5**	**-6.2**
	15nm,0.2s,SNR=7.9						
EGRO				Sn	**Sn**	**01 21 27.7**	**-1.2**
	2.1nm,0.4s,SNR=7.9						
ESAC	**San Caprasio**	**5.02**	**10**	Pn	**Pn**	**01 20 40.0**	**+2.1**
	38nm,0.3s,SNR=24						
ESAC				Sn	**Sn**	**01 21 36.0**	**-0.6**
	24nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**5.02**	**10**	Pn	**Pn**	**01 20 40.0**	**+2.1**
	38nm,0.3s,SNR=24						
ESAC				Sn	**Sn**	**01 21 36.0**	**-0.7**
	24nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.04**	**24**	Pn	**Pn**	**01 20 38.9**	**+0.7**
	12nm,0.3s,SNR=41						
EPOB				Sn	**Sn**	**01 21 33.8**	**-3.4**
	0.2nm,0.4s,SNR=7.9						
EPOB	**Poblet**	**5.04**	**24**	Pn	**Pn**	**01 20 38.9**	**+0.7**
	12nm,0.3s,SNR=41						
EPOB				Sn	**Sn**	**01 21 33.8**	**-3.4**
	0.2nm,0.4s,SNR=7.9						
PBEJ	**Beja**	**5.09**	**286**	*e*Pn	**Pn**	**01 20 39.7**	**+0.7**
PBEJ				*e*Sn	**Sn**	**01 21 36.8**	**-1.7**
PBEJ				*e*Sg	**Sg**	**01 22 05.2**	**-5.0**
	32nm,0.7s						
PBEJ	**Beja**	**5.09**	**286**	*e*Pn	**Pn**	**01 20 39.7**	**+0.7**
PBEJ				*e*Sn	**Sn**	**01 21 36.8**	**-1.7**
PBEJ				*e*Sg	**Sg**	**01 22 05.2**	**-5.0**
	32nm,0.7s						
ZFT	**Errachidia**	**5.23**	**206**	Pn	**Pn**	**01 20 38.0**	**-3.0**
ZFT				Sn	**Sn**	**01 21 32.0**	**-10**
ZFT	**Errachidia**	**5.23**	**206**	*i* P	**Pn**	**01 20 38.0**	**-3.0**
EVO	**Evora**	**5.33**	**291**	*e*Pn	**Pn**	**01 20 43.8**	**+1.5**
EVO				*e*Sn	**Sn**	**01 21 43.3**	**-1.2**
EVO				*e*Sg	**Sg**	**01 22 17.3**	**-0.9**
	274nm,0.7s						
PCBR	**Castelo Branco**	**5.49**	**305**	*e*Pn	**Pn**	**01 20 45.5**	**+0.8**
PCBR				*e*Sn	**Sn**	**01 21 46.6**	**-2.1**
PCBR				*e*Sg	**Sg**	**01 22 19.9**	**-3.7**
	82nm,0.6s						
PCBR	**Castelo Branco**	**5.49**	**305**	Pn	**Pn**	**01 20 45.5**	**+0.8**
PCBR				Sn	**Sn**	**01 21 46.6**	**-2.1**
PCBR				Lg		01 22 19.9	
	41nm,0.6s						
MOE	**Montemor**	**5.58**	**290**	*e*Pn	**Pn**	**01 20 46.7**	**+0.8**
MOE				*e*Sn	**Sn**	**01 21 49.1**	**-1.7**
EGRA	**Graus**	**5.62**	**15**	Pn	**Pn**	**01 20 48.8**	**+2.4**
	4.6nm,0.4s,SNR=6.1						
EGRA				Pg	**Pg**	**01 21 03.1**	**-10**
	11nm,0.6s,SNR=7.9						
EMIR	**Miracle**	**5.69**	**25**	Pn	**Pn**	**01 20 49.1**	**+1.7**
EMIR				Sn	**Sn**	**01 21 49.8**	**-3.7**
EMIR	**Miracle**	**5.69**	**25**	Pn	**Pn**	**01 20 49.1**	**+1.7**
	2.0nm,0.1s,SNR=11						
EMIR				Pg	**Pg**	**01 21 06.6**	**-7.7**
	5.5nm,0.2s,SNR=7.9						
EMIR				Sn	**Sn**	**01 21 49.8**	**-3.7**
	SNR=7.9						
EMIR	**Miracle**	**5.69**	**25**	Pn	**Pn**	**01 20 49.1**	**+1.7**
	2.0nm,0.1s,SNR=11						
EMIR	**Miracle**	**5.69**	**25**	Pg	**Pg**	**01 21 06.6**	**-7.7**
	5.5nm,0.2s,SNR=7.9						
EMIR				Sn	**Sn**	**01 21 49.8**	**-3.7**
	SNR=7.9						
PTEO	**Sao Teotonio**	**5.69**	**280**	*e*Pn	**Pn**	**01 20 47.8**	**+0.4**
PTEO				*e*Sn	**Sn**	**01 21 51.5**	**-2.0**
PTEO				*e*Sg	**Sg**	**01 22 26.9**	**-3.2**
	60nm,0.6s						
PTEO	**Sao Teotonio**	**5.69**	**280**	Pn	**Pn**	**01 20 47.8**	**+0.4**
PTEO				Sn	**Sn**	**01 21 51.5**	**-2.0**
PTEO				Lg		01 22 26.9	
	30nm,0.6s						
PTEO	**Sao Teotonio**	**5.69**	**280**	*e*Pn	**Pn**	**01 20 47.8**	**+0.4**
PTEO				*e*Sg	**Sg**	**01 22 26.9**	**-3.2**
	60nm,0.6s						
MTE	**Manteigas**	**5.85**	**310**	*e*Pn	**Pn**	**01 20 50.8**	**+1.1**
MTE				*e*Sn	**Sn**	**01 21 57.8**	**+0.2**
MTE				*e*Sg	**Sg**	**01 22 30.0**	**-5.5**
	89nm,0.7s						
MTE	**Manteigas**	**5.85**	**310**	*e*P	**Pn**	**01 20 50.1**	**+0.4**
	20nm,0.6s						
MTE	**Manteigas**	**5.85**	**310**	Pn	**Pn**	**01 20 50.8**	**+1.1**
MTE				Sn	**Sn**	**01 21 57.8**	**+0.2**
MTE				Lg		01 22 30.0	
	44nm,0.7s						
ECRI	**Cripan**	**5.85**	**354**	Pn	**Pn**	**01 20 52.1**	**+2.4**
ECRI				Sn	**Sn**	**01 21 53.9**	**-3.8**
ECRI				Lg		01 22 32.6	
ECRI	**Cripan**	**5.85**	**354**	Pn	**Pn**	**01 20 52.1**	**+2.4**
	37nm,0.2s,SNR=7.9						
ECRI				Sn	**Sn**	**01 21 53.9**	**-3.8**
	SNR=4.0						
ECRI				Lg		01 22 29.7	
	17nm,1.0s,SNR=7.9						
PTOM	**Tomar**	**6.02**	**300**	*e*Pn	**Pn**	**01 20 52.8**	**+0.8**
PTOM				*e*Sn	**Sn**	**01 21 59.5**	**-2.3**
PTOM				*e*Sg	**Sg**	**01 22 36.0**	**-5.1**
	137nm,0.5s						
PTOM	**Tomar**	**6.02**	**300**	Pn	**Pn**	**01 20 52.8**	**+0.8**
PTOM				Sn	**Sn**	**01 21 59.5**	**-2.3**
PTOM				Lg		01 22 36.0	
	68nm,0.5s						
EBIE	**Bielsa**	**6.05**	**13**	Pn	**Pn**	**01 20 54.4**	**+1.8**
EBIE				Sn	**Sn**	**01 21 58.6**	**-4.1**
EBIE	**Bielsa**	**6.05**	**13**	Pn	**Pn**	**01 20 54.4**	**+1.8**
	3.2nm,0.1s,SNR=27						
EBIE				Pg	**Pg**	**01 21 07.8**	**-14**
	15nm,0.7s,SNR=7.9						
EBIE				Sn	**Sn**	**01 21 58.7**	**-4.1**
	SNR=7.9						
EBIE	**Bielsa**	**6.05**	**13**	Pn	**Pn**	**01 20 54.4**	**+1.8**
	3.2nm,0.1s,SNR=27						

EBIE	Bielsa	6.05	13	Pg	Pg	01 21 15.5	-6.1
	15nm,0.7s,SNR=7.9						
ETSF	Etsaut	6.16	8	ePn	Pn	01 20 55.7	+1.6
ETSF				eSn	Sn	01 22 01.0	-4.5
	11nm,0.4s						
RESF	Ens	6.21	14	P	Pn	01 20 56.1	+1.3
RESF				S	Sn	01 22 03.0	-3.6
VIEF	Viey	6.23	12	P	Pn	01 20 56.5	+1.5
VIEF				S	Sn	01 22 03.5	-3.5
PVIS	Viseu	6.25	311	ePn	Pn	01 20 56.3	+0.9
PVIS				eSn	Sn	01 22 05.0	-2.6
PVIS				eSg	Sg	01 22 43.5	-5.4
	52nm,0.5s						
PVIS	Viseu	6.25	311	Pn	Pn	01 20 56.3	+0.9
PVIS				Sn	Sn	01 22 05.0	-2.6
PVIS				Lg		01 22 43.5	
	26nm,0.5s						
LARF	Larrau	6.27	5	P	Pn	01 20 57.1	+1.5
PLOU	Loures	6.28	292	ePn	Pn	01 20 56.8	+1.0
PLOU				eSn	Sn	01 22 06.2	-2.3
PLOU				eSg	Sg	01 22 43.2	-6.8
	85nm,0.8s						
PLOU	Loures	6.28	292	Pn	Pn	01 20 56.8	+1.0
PLOU				Sn	Sn	01 22 06.2	-2.3
PLOU				Lg		01 22 43.2	
	42nm,0.8s						
SJPF	Ste Jean	6.33	3	ePn	Pn	01 20 58.1	+1.7
SJPF				eSn	Sn	01 22 04.3	-5.3
	14nm,0.5s						
REYF	Montagne du Re	6.35	8	P	Pn	01 20 58.3	+1.5
REYF				S	Sn	01 22 06.2	-4.0
SALF	Salau	6.36	19	P	Pn	01 20 59.2	+2.3
MELF	Melles	6.36	16	P	Pn	01 20 58.3	+1.4
EPF	Esparros	6.42	13	ePn	Pn	01 20 59.3	+1.5
EPF				eSn	Sn	01 22 07.0	-5.0
	34nm,0.4s						
EALK	Alkurruntz	6.43	1	Pn	Pn	01 21 00.0	+2.2
	62nm,0.5s,SNR=57						
EALK				Sn	Sn	01 22 09.3	-2.8
	SNR=7.9						
ORDF	Ordiarp	6.44	5	P	Pn	01 20 59.7	+1.6
OSSF	Osses	6.47	3	P	Pn	01 20 59.8	+1.4
OSSF				S	Sn	01 22 11.1	-2.0
ECAL	Calabor	6.47	324	Pn	Pn	01 20 59.8	+1.3
ECAL				Sn	Sn	01 22 10.8	-2.4
ECAL				Lg		01 22 55.8	
ECAL	Calabor	6.47	324	Pn	Pn	01 20 59.3	+0.8
	11nm,0.3s,SNR=16						
ECAL				Sn	Sn	01 22 10.8	-2.4
	SNR=7.9						
ECAL				Lg		01 22 51.9	
	312nm,1.5s,SNR=7.1						
ECAL	Calabor	6.47	324	Pn	Pn	01 20 59.8	+1.3
ECAL				Sn	Sn	01 22 10.8	-2.4
	SNR=7.9						
PVRL	Vila Real	6.50	315	ePn	Pn	01 20 59.6	+0.7
PVRL				eSn	Sn	01 22 10.0	-3.9
PVRL				eSg	Sg	01 22 50.8	-6.4
	49nm,0.5s						
PVRL	Vila Real	6.50	315	Pn	Pn	01 20 59.6	+0.7
PVRL				Sn	Sn	01 22 10.0	-3.9
PVRL				Lg		01 22 50.8	
	24nm,0.5s						
ELAN	Lanestosa	6.58	349	Pn	Pn	01 21 01.3	+1.3
	10nm,0.2s,SNR=66						
ELAN				Sn	Sn	01 22 10.7	-5.1
	SNR=7.9						
ELAN				Lg		01 22 53.5	
	63nm,0.7s,SNR=7.9						
ELAN	Lanestosa	6.58	349	Pn	Pn	01 21 01.3	+1.3
	10nm,0.2s,SNR=66						
EJON	La Jonquera	6.66	30	Pn	Pn	01 21 00.8	-0.3
	SNR=7.9						
EJON				Sn	Sn	01 22 12.6	-5.2
	SNR=7.9						
EARI	Arriondas	7.05	338	Pn	Pn	01 21 07.6	+1.0
EARI				Sn	Sn	01 22 23.6	-4.1
EARI	Arriondas	7.05	338	Pn	Pn	01 21 07.6	+1.0
	19nm,0.4s,SNR=117						
EARI				Sn	Sn	01 22 20.1	-7.5
	SNR=7.9						
EARI				Lg		01 23 08.4	
	78nm,0.8s,SNR=7.9						
EARI	Arriondas	7.05	338	Pn	Pn	01 21 07.6	+1.0
	19nm,0.4s,SNR=117						
ELOB	Lobios	7.09	318	Pn	Pn	01 21 07.7	+0.5
ELOB				Sn	Sn	01 22 24.0	-4.6
ELOB				Lg		01 23 13.3	
ELOB	Lobios	7.09	318	Pn	Pn	01 21 07.7	+0.5
	4.5nm,0.2s,SNR=18						
ELOB				Sn	Sn	01 22 24.0	-4.6
	SNR=7.9						
ELOB				Lg		01 23 11.7	
	158nm,1.1s,SNR=5.1						
ELOB	Lobios	7.09	318	Pn	Pn	01 21 07.7	+0.5
	4.5nm,0.2s,SNR=18						
MTLF	Montolieu	7.19	23	ePn	Pn	01 21 07.7	-0.9
MTLF				eSn	Sn	01 22 25.0	-6.2
	16nm,0.5s						
EZAM	Zamans	7.63	317	Pn	Pn	01 21 14.8	+0.1
	1.4nm,0.2s,SNR=7.9						
EZAM				Sn	Sn	01 22 37.8	-4.3
	SNR=7.9						
EZAM				Lg		01 23 33.0	
	77nm,1.0s,SNR=7.9						
EPON	Pontenova	7.77	329	Pn	Pn	01 21 17.8	+1.1
	6.2nm,0.3s,SNR=16						
EPON				Sn	Sn	01 22 40.9	-4.7
	SNR=7.9						
EPON				Lg		01 23 28.9	
	32nm,0.6s,SNR=7.9						
EPON	Pontenova	7.77	329	Pn	Pn	01 21 17.8	+1.2
STS	Santiago	8.07	321	Lg		01 23 40.6	
	SNR=7.9						
LFF	La Frestale	8.35	12	ePn	P	01 21 24.6	-0.1
LFF				eSn	Sn	01 22 53.1	-6.9
	7.8nm,0.4s						
LASF	Ste Croix	8.41	28	ePn	P	01 21 26.1	+0.5
CAF	Calviac	8.61	18	ePn	P	01 21 28.3	0.0
CAF				eSn	Sn	01 22 59.1	-7.4
	2.9nm,0.3s						
RJF	Les Rejaudoux	8.84	15	ePn	P	01 21 30.4	-1.2
RJF				eSn	Sn	01 23 04.6	-7.7
	3.7nm,0.4s						
LMR	La Mourre	9.05	41	ePn	P	01 21 33.4	-1.1
LMR				eSn	Sn	01 23 08.5	-9.1
	8.8nm,0.4s						
SMRF	Simiane la Rot	9.06	35	ePn	P	01 21 33.6	-1.0
FRF	La Foret Royal	9.28	41	ePn	P	01 21 36.3	-1.4
FRF				eSn	Sn	01 23 14.7	-8.6
	11nm,0.6s						
VIVF	Saint-Julien-l	9.38	29	ePn	P	01 21 37.8	-1.2
MFF	Saint Martin d	9.87	6	ePn	P	01 21 44.5	-1.3
SBF	Sospel	9.91	42	ePn	P	01 21 44.2	-2.1
TCF	Toulx Ste Croi	9.93	16	ePn	P	01 21 45.8	-0.7
ORIF	Oris-en-Rattie	9.93	33	ePn	P	01 21 44.3	-2.2
PGF	Pioggiola	10.03	52	ePn	P	01 21 46.6	-1.4
MBDF	Montbardon	10.19	36	ePn	P	01 21 48.2	-1.9
BGF	Bois d’Agland	10.33	18	ePn	P	01 21 50.4	-1.6
SMF	Signal de Mont	10.67	21	ePn	P	01 21 55.7	-1.0
LPG	La Plagne	10.77	33	ePn	P	01 21 56.1	-1.9
LPL	La Plagne	10.77	33	ePn	P	01 21 55.8	-2.3
HYF	Humbligny	10.95	16	ePn	P	01 22 00.3	-0.2
SSF	Saint Saulge	10.96	19	ePn	P	01 22 00.1	-0.6
QUIF	Quistinic	11.18	355	ePn	P	01 22 03.6	0.0
QUIF				eSn	S	01 24 01.1	-8.6
	4.3nm,0.4s						
SGMF	Saint Gilles	11.48	357	ePn	P	01 22 07.3	-0.5
SGMF				eSn	S	01 24 07.4	-10
	1.8nm,0.3s						
ROSF	Rostrenen	11.60	355	ePn	P	01 22 09.0	-0.4
ROSF				eSn	S	01 24 10.9	-9.2
	3.0nm,0.3s						
GRR	Gorron	11.61	3	ePn	P	01 22 07.5	-2.0
FLN	La Foliniere	12.00	4	ePn	P	01 22 13.6	-1.2
	baz=186						
AQU	L’Aquila	12.88	60	eP	P	01 22 24.3	-2.3
AQU				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AQU	L’Aquila	12.88	60	eP	P	01 22 24.3	-2.3
	comp=Z,5.8nm,0.4s						
GERES	GERESS Array B	16.46	38	Pn	P	01 23 15.0	+1.7
	comp=Z,0.1nm,0.3s,baz=210,slow=16,SNR=2.5						
GERES				Sn	S	01 26 12.7	-3.0
	comp=Z,0.6nm,0.3s,baz=247,slow=17,SNR=5.2						
EKA	Eskdalemuir Ar	18.58	357	P	P	01 23 41.0	+1.3
	comp=Z,0.1nm,0.3s,baz=177,slow=13,SNR=3.0						
EKA	Eskdalemuir Ar	18.58	357	P	P	01 23 41.0	+1.3
KWP	Kalwaria	21.80	46	eP	P	01 24 16.7	+2.0
KWP				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
KWP	Kalwaria	21.80	46	eP	P	01 24 16.7	+2.0
	comp=Z,2.3nm,0.6s,mb3.8						
KWP	Kalwaria	21.80	46	eP	P	01 24 16.7	+2.0
	comp=Z,2.3nm,0.6s,mb3.8						
NOA	NORSAR Array B	25.61	15	LR	LR	01 34 55.7	
	comp=Z,20nm,18.4s,baz=205,slow=36						
GNI	Garni	36.17	70	eP	P	01 26 23.5	-1.7
GNI				pmax	pmax		
	comp=Z,13nm,0.6s						
GNI	Garni	36.17	70	eP	P	01 26 23.5	-1.7
	comp=Z,13nm,0.6s,mb5.0						
MBAR	Mbarara	47.81	134	eP	P	01 28 00.6	0.0
ZRNK	Zerenda	50.54	48	eP	P	01 28 21.6	+0.6
ZRNK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
ZRNK	Zerenda	50.54	48	eP	P	01 28 21.6	+0.5
	comp=Z,2.1nm,0.8s,mb4.1						
ZRNK	Zerenda	50.54	48	eP	P	01 28 21.5	+0.5
	comp=Z,2.1nm,0.8s,mb4.1						
SJG	San Juan	59.13	270	P	P	01 29 17.6	-6.4
SJG				pmax	pmax		
	comp=Z,39nm,1.4s						
SJG	San Juan	59.13	270	P	P	01 29 17.6	-6.4
	comp=Z,39nm,1.4s,mb5.2						
MKAR	Makanchi Array	60.58	52	P	P	01 29 33.9	+0.4
	comp=Z,1.4nm,0.8s,mb4.1,baz=281,slow=6.2,SNR=7.1						
WMQ	Urumqi	65.30	53	eP	P	01 30 05.5	+0.6
WMQ				AP	pP	01 30 09.5	+1.5
WMQ				XP	sP	01 30 11.5	+2.4
WMQ				AMB	AMB		
	comp=Z,10.0nm,4.6s						
YKA	Yellowknife Ar	67.49	332	P	P	01 30 19.4	+0.9
	comp=Z,1.0nm,0.6s,mb4.0,baz=57,slow=6.2,SNR=8.2						
YKA	Yellowknife Ar	67.49	332	P	P	01 30 19.4	+0.9
SIV	San Ignacio	76.72	238	P	P	01 31 15.4	+1.2
	comp=Z,0.5nm,0.6s,mb3.6,baz=100,slow=6.1,SNR=5.3						
PDAR	Pinedale Array	77.19	314	P	P	01 31 17.5	+1.2
	comp=Z,0.4nm,0.6s,mb3.5,baz=27,slow=6.6,SNR=4.5						
LZH	Lanzhou	79.88	52	eP	P	01 31 30.3	-0.8
LZH				AP	pP	01 31 33.3	-1.0
LZH				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
LZH	Lanzhou	79.88	52	eP	P	01 31 30.2	-0.9
LZH				*PP	pP	01 31 33.2	-1.1
LZH				*SP	sP	01 31 34.8	-0.6
LZH				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
LZH	Lanzhou	79.88	52	eP	P	01 31 30.2	-0.9
	comp=Z,13nm,1.2s,mb4.7						
LZH				pP	pP	01 31 33.2	-1.1
LZH				sP	sP	01 31 34.8	-0.6
LZH	Lanzhou	79.88	52	pP	pP	01 31 33.2	-1.1
TXAR	Lajitas Array	81.67	300	P	P	01 31 42.2	+1.5
	comp=Z,0.1nm,0.5s,baz=31,slow=5.3,SNR=3.3						
KMI	Kunming	85.95	62	P	P	01 32 02.0	-0.5
KMI	Kunming	85.95	62	P	P	01 32 01.9	-0.6
KMI				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.5						
KMI	Kunming	85.95	62	P	P	01 32 01.9	-0.6
	comp=Z,4.0nm,1.2s,mb4.5						
CN2	Changchun	86.53	35	eP	P	01 32 04.0	-1.0
CN2				eS	S	01 42 37.0	-2.7
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.2						
MDJ	Mudanjiang	87.75	32	P	P	01 32 07.8	-3.0
MDJ				AMB	AMB		
	comp=Z,50nm,4.5s						
NJ2	Nanjing	91.80	47	eP	P	01 32 31.0	+0.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
SSE	Sheshan	93.85	46	P	P	01 32 38.0	-1.6
SSE				AMB	AMB		
	comp=Z,20nm,0.7s						
SSE				AMB	AMB		
	comp=Z,30nm,4.5s						
SSE	Sheshan	93.85	46	P	P	01 32 38.1	-1.5
	comp=Z,24nm,0.7s						

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*GEN **30** 01:23:05.2, 46.02N×6.32E, h31^{km}, ML0.2*
*NEIC **30** 01:23:08.1, 45.86N×7.09E, h2^{km}, ML2.9(LDG), ML2.6(STR), ML2.3(GEN), After LDG.*
*CSEM **30** 01:23:08.1±0.1, 45.86N×7.09E, h2^{km}, ML2.8/11, Error ellipse: s-maj=1.8km s-min=0.8km az=95.0, After LDG*
LDG 30 01:23:08.1±0.1**, 45.86N×7.09E, h2**^{km}**, Ml2.9**/12**, Error ellipse: s-maj=1.8km s-min=0.8km az=95.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EMV	Vieux Emosson	0.24	326	P	Pg	01 23 12.3	-0.6
LSD	Ceresole Reale	0.41	174	P	Pg	01 23 20.6	+4.3
LSD				S	Sg	01 23 31.0	+9.3
LSD	Ceresole Reale	0.41	174	P	Pg	01 23 20.6	+4.3
LSD				S	Sg	01 23 31.0	+9.3
LPL	La Plagne	0.43	216	ePg	Pg	01 23 16.5	-0.2
LPL				eSg	Sg	01 23 22.3	-0.1
LPG	La Plagne	0.44	213	ePg	Pg	01 23 16.9	+0.1
LPG				eSg	Sg	01 23 22.7	0.0
TRAV		0.58	127	P	Pg	01 23 23.9	+4.2
TRAV				S	Sg	01 23 37.0	+10
TRAV		0.58	127	P	Pg	01 23 23.9	+4.3
TRAV				S	Sg	01 23 37.0	+10
ORX	Oropa	0.66	110	P	Pg	01 23 25.3	+3.9
ORX				S	Sg	01 23 39.3	+9.1
ORX	Oropa	0.66	110	P	Pg	01 23 25.3	+3.9
ORX				S	Sg	01 23 39.3	+9.1
RSP	Reno Superiore	0.72	171	P	Pg	01 23 23.7	+1.2
RSP				S	Sg	01 23 36.2	+4.1
RSP	Reno Superiore	0.72	171	P	Pg	01 23 23.7	+1.2
RRL	Cesana Torines	0.97	193	P	Pb	01 23 25.9	-1.4
RRL				S	Sb	01 23 40.2	-0.1
CABF	La Chapelle	1.02	317	ePg	Pg	01 23 27.3	-1.2
CABF				eSg	Sg	01 23 41.0	-1.1
	154nm,0.8s						
BHB	Bricherasio	1.03	173	P	Pb	01 23 27.3	-1.0
BHB				S	Sb	01 23 42.2	+0.1
MBDF	Montbardon	1.16	191	ePg	Pg	01 23 30.0	-1.2
MBDF				eSg	Sg	01 23 44.6	-2.1
	30nm,0.5s						
ORIF	Oris-en-Rattie	1.27	223	ePg	Pg	01 23 32.0	-1.5
ORIF				eSg	Sg	01 23 48.6	-1.9
	75nm,0.6s						
ENR	Entracque	1.65	172	P	Pn	01 23 35.5	-2.8
ROB	Roburent	1.66	160	P	Pn	01 23 37.0	-1.4
ROB	Roburent	1.66	160	P	Pn	01 23 37.0	-1.5
FIN	Finale Ligure	1.83	154	P	Pn	01 23 39.3	-1.6
FIN	Finale Ligure	1.83	154	P	Pn	01 23 39.3	-1.6
MONE	Monesi	1.84	165	P	Pn	01 23 38.5	-2.6
HINF	Hinteralfeld	1.96	355	ePn	Pn	01 23 40.6	-2.1
HINF				eSn	Sn	01 24 04.3	-3.9
	34nm,0.7s						
HINF	Hinteralfeld	1.96	355	ePn	Pn	01 23 40.6	-2.1
HINF				eSn	Sn	01 24 04.3	-3.9
VIVF	Saint-Julien-l	1.98	240	eSg	Sg	01 24 10.2	-3.9
	44nm,0.7s						
IMI	Imperia	2.03	164	P	Pn	01 23 41.3	-2.5
NEGI	Negi	2.06	168	P	Pn	01 23 41.1	-3.0
HAU	Haudompre	2.20	347	eSg	Sg	01 24 17.5	-3.9
	14nm,0.3s						
FRF	La Foret Royal	2.33	188	ePg	Pg	01 23 57.4	+2.9
FRF				eSg	Sg	01 24 27.5	+2.0
	18nm,0.6s						
SMF	Signal de Mont	2.39	290	ePn	Pn	01 23 46.3	-2.5
SMF				ePg	Pg	01 23 52.6	-3.2
SMF				eSg	Sg	01 24 23.0	-4.6
	12nm,0.4s						
SMF	Signal de Mont	2.39	290	ePn	Pn	01 23 46.3	-2.5
SMF				ePg	Pg	01 23 52.6	-3.2
SMF				eSg	Sg	01 24 23.0	-4.6
SMF	Signal de Mont	2.39	290	ePg	Pg	01 23 52.6	-3.2
SMF				eSg	Sg	01 24 23.0	-4.6
	6.2nm,0.4s						
CDF	Champ du Feu	2.55	3	ePn	Pn	01 23 48.7	-2.5
CDF				eSg	Sg	01 24 27.5	-5.6
	5.6nm,0.3s						
CDF	Champ du Feu	2.55	3	ePn	Pn	01 23 48.7	-2.5
CDF				eSg	Sg	01 24 27.5	-5.6
SFTF	Sexfontaines	2.73	330	eSg	Sg	01 24 33.9	-5.1
	27nm,0.6s						
SSF	Saint Saulge	2.75	297	eSg	Sg	01 24 34.1	-5.7
	3.2nm,0.5s						
MEZF	Maizieres J’vi	2.98	333	ePn	Pn	01 23 54.9	-2.4
MEZF				eSg	Sg	01 24 41.9	-5.5
	26nm,0.6s						
MEZF	Maizieres J’vi	2.98	333	ePn	Pn	01 23 54.9	-2.4
MEZF				eSg	Sg	01 24 41.9	-5.5
BGF	Bois d’Agland	3.03	285	ePn	Pn	01 23 54.5	-3.5
CAF	Calviac	3.66	257	ePn	Pn	01 24 03.7	-3.3
BAIF	Baives	4.62	336	ePn	Pn	01 24 16.9	-3.7

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*CSEM **30** 01:23:14.1±0.1, 45.84N×7.11E, h8^{km}, ML2.8/16, Error ellipse: s-maj=2.4km s-min=1.5km az=90.0*
*STR **30** 01:23:17.6±0.9, 45.84N×7.31E, h10^{km}±1^{km}, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LDG 30 01:23:14.2±0.1**, 45.87N×7.07E, h2**^{km}**, Md2.5**/1**, Ml2.8**/18**, 1C-2D, Error ellipse: s-maj=1.8km s-min=0.9km az=95.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LPL	La Plagne	0.42	214	ePg	Pg	01 23 22.6	0.0
LPL				eSg	Sg	01 23 28.3	0.0
	150nm,0.8s						
LPL	La Plagne	0.42	214	ePg	Pg	01 23 22.6	0.0
LPL				eSg	Sg	01 23 28.3	0.0
	75nm,0.8s						
LPG	La Plagne	0.43	212	ePg	Pg	01 23 22.9	+0.1
LPG				eSg	Sg	01 23 28.6	0.0
	80nm,0.5s						
LPG	La Plagne	0.43	212	ePg	Pg	01 23 22.9	+0.1
LPG				eSg	Sg	01 23 28.6	0.0
	40nm,0.5s						
GDM	Grand’Maison	0.94	226	P	Pb	01 23 37.8	+4.9
CABF	La Chapelle	1.01	318	ePg	Pg	01 23 33.4	-1.0
CABF				eSg	Sg	01 23 47.3	-0.6
	154nm,0.8s						
CABF	La Chapelle	1.01	318	ePg	Pg	01 23 33.4	-1.0
CABF				eSg	Sg	01 23 47.3	-0.6
	77nm,0.8s						
GRN	Grenoble	1.12	237	P	Pb	01 23 38.6	+2.6
MBDF	Montbardon	1.16	191	ePg	Pg	01 23 36.2	-1.1
MBDF				eSg	Sg	01 23 50.7	-2.1
	111nm,0.7s						
MBDF	Montbardon	1.16	191	ePg	Pg	01 23 36.2	-1.1
MBDF				eSg	Sg	01 23 50.7	-2.1
	56nm,0.7s						
ORIF	Oris-en-Rattie	1.27	222	ePg	Pg	01 23 38.2	-1.3
ORIF				eSg	Sg	01 23 54.9	-1.4
	75nm,0.6s						
ORIF	Oris-en-Rattie	1.27	222	ePg	Pg	01 23 38.2	-1.3
ORIF				eSg	Sg	01 23 54.9	-1.4
	37nm,0.6s						
DOI	San Damiano	1.37	175	P	Pb	01 23 42.7	+2.5
MUGIO	Muggio	1.38	87	P	Pb	01 23 44.3	+4.0
BBS	Basel-Blauen	1.63	11	P	Pn	01 23 44.9	+0.8
BBS				S	Sb	01 24 07.3	+1.7
HINF	Hinteralfeld	1.96	356	ePn	Pn	01 23 46.7	-2.1
HINF				eSn	Sn	01 24 10.6	-3.6
	23nm,0.5s						
HINF	Hinteralfeld	1.96	356	ePn	Pn	01 23 46.7	-2.1
HINF				eSn	Sn	01 24 10.6	-3.6
	11nm,0.5s						
HINF	Hinteralfeld	1.96	356	ePn	Pn	01 23 46.7	-2.1
HINF				eSn	Sn	01 24 10.6	-3.6
VIVF	Saint-Julien-l	1.97	240	ePg	Pg	01 23 51.2	-2.3
VIVF				eSg	Sg	01 24 16.2	-3.6
	33nm,0.6s						
MOF	Molkenrain	1.99	1	P	Pn	01 23 50.7	+1.5
SBF	Sospel	2.02	173	ePn	Pn	01 23 47.4	-2.2
SBF				eSn	Sn	01 24 11.3	-4.5
	66nm,0.7s						
FELD	Feldberg	2.11	17	P	Pn	01 23 53.4	+2.4
FELD				S	Sn	01 24 22.1	+4.0
SMRF	Simiane la Rot	2.17	210	ePn	Pn	01 23 49.7	-2.1
SMRF				eSg	Sg	01 24 22.2	-4.2
	8.4nm,0.6s						
HAU	Haudompre	2.20	347	ePn	Pn	01 23 50.1	-2.1
HAU				eSg	Sg	01 24 23.5	-3.9
	14nm,0.3s						
FUORN	Ofenpass	2.34	70	P	Pn	01 23 54.4	+0.1
SMF	Signal de Mont	2.37	290	ePn	Pn	01 23 52.5	-2.2
SMF				ePg	Pg	01 23 58.4	-3.2
SMF				eSg	Sg	01 24 28.9	-4.3
	13nm,0.4s						
SMF	Signal de Mont	2.37	290	ePn	Pn	01 23 52.5	-2.2
SMF	Signal de Mont	2.37	290	ePn	Pn	01 23 52.5	-2.2
SMF				ePg	Pg	01 23 58.4	-3.2
SMF				eSg	Sg	01 24 28.9	-4.3
DAVA	Damuels	2.40	53	⇓iP	Pn	01 23 54.4	-0.7
THEF	They Montfort	2.48	343	P	Pn	01 23 59.8	+3.6
THEF				S	Sn	01 24 33.2	+5.8
CDF	Champ du Feu	2.55	3	ePn	Pn	01 23 54.3	-3.0
CDF				eSg	Sg	01 24 33.6	-5.6
	6.3nm,0.4s						
CDF	Champ du Feu	2.55	3	ePn	Pn	01 23 54.3	-3.0
CDF				eSg	Sg	01 24 33.6	-5.6
	3.2nm,0.4s						
CDF	Champ du Feu	2.55	3	ePn	Pn	01 23 54.3	-3.0
CDF				eSg	Sg	01 24 33.6	-5.6
LMR	La Mourre	2.56	189	ePg	Pg	01 24 01.5	-3.9
LMR				eSg	Sg	01 24 34.9	-4.6
	6.0nm,0.5s						
LOR	Lormes	2.62	303	ePn	Pn	01 23 55.8	-2.5
LOR				ePg	Pg	01 24 02.8	-3.8
LOR				eSg	Sg	01 24 36.0	-5.5
	12nm,0.5s						
SFTF	Sexfontaines	2.72	330	eSg	Sg	01 24 40.0	-4.8
	27nm,0.6s						
SFTF	Sexfontaines	2.72	330	eSg	Sg	01 24 40.0	-4.8
	13nm,0.6s						
SSF	Saint Saulge	2.74	297	ePn	Pn	01 23 57.3	-2.7
SSF				eSg	Sg	01 24 40.0	-5.4
	3.1nm,0.5s						
LASF	Ste Croix	2.90	233	eSg	Sg	01 24 45.5	-5.2
	11nm,0.6s						
MEZF	Maizieres J’vi	2.98	333	ePn	Pn	01 24 00.6	-2.7
MEZF				eSg	Sg	01 24 48.2	-5.1
	26nm,0.6s						
MEZF	Maizieres J’vi	2.98	333	ePn	Pn	01 24 00.6	-2.7
MEZF				eSg	Sg	01 24 48.2	-5.1
	13nm,0.6s						
MEZF	Maizieres J’vi	2.98	333	ePn	Pn	01 24 00.6	-2.7
MEZF				eSg	Sg	01 24 48.2	-5.1
BGF	Bois d’Agland	3.01	285	ePn	Pn	01 24 00.5	-3.4
BGF	Bois d’Agland	3.01	285	ePn	Pn	01 24 00.5	-3.4
BGF	Bois d’Agland	3.01	285	ePn	Pn	01 24 00.5	-3.4
SQTA	Sankt Quirin	3.16	63	⇓iP	Pn	01 24 04.0	-2.0
HYF	Humbligny	3.36	296	ePn	Pn	01 24 05.6	-3.2
HYF				ePg	Pg	01 24 16.0	-5.4
WTTA	Wattenberg	3.45	64	⇑iP	Pn	01 24 12.3	+2.3
CAF	Calviac	3.65	257	ePn	Pn	01 24 10.0	-2.9
CAF	Calviac	3.65	257	ePn	Pn	01 24 10.0	-2.9
CAF	Calviac	3.65	257	ePn	Pn	01 24 10.0	-2.9
BAIF	Baives	4.62	336	ePn	Pn	01 24 23.1	-3.5
BAIF	Baives	4.62	336	ePn	Pn	01 24 23.1	-3.5
BAIF	Baives	4.62	336	ePn	Pn	01 24 23.1	-3.5
KHC	Kasperske Hory	5.49	51	eSG	Sg	01 26 13.4	-3.5

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*NEIC **30** 01:24:17.6, 45.87N×7.09E, h2^{km}, ML2.9(LDG), ML2.5(STR), ML2.3(GEN), After LDG.*
LDG 30 01:24:17.6±0.1**, 45.87N×7.09E, h2**^{km}**, Ml2.9**/4**, Error ellipse: s-maj=1.5km s-min=0.6km az=101.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LPL	La Plagne	0.43	215	ePg	Pg	01 24 26.0	-0.1
LPL				eSg	Sg	01 24 31.7	-0.1
	25nm,0.4s						
LPL	La Plagne	0.43	215	eSg	Sg	01 24 31.7	-0.1
	13nm,0.4s						
LPG	La Plagne	0.44	213	ePg	Pg	01 24 26.2	-0.1
LPG				eSg	Sg	01 24 32.0	-0.1
	18nm,0.4s						
LPG	La Plagne	0.44	213	eSg	Sg	01 24 32.0	-0.1
	9.2nm,0.4s						
CABF	La Chapelle	1.02	317	ePg	Pg	01 24 36.8	-1.1

CABF				*e*Sg	Sg	01 24 50.1	-1.4
	77nm,0.4s						
MBDF	**Montbardon**	**1.16**	**191**	*e*Pg	Pg	01 24 39.4	-1.4
MBDF				*e*Sg	Sg	01 24 54.4	-1.8
	26nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.27**	**222**	*e*Pg	Pg	01 24 41.4	-1.6
ORIF				*e*Sg	Sg	01 24 58.0	-2.0
	42nm,0.4s						
HINF	**Hinteralfeld**	**1.96**	**355**	*e*Pn	Pn	01 24 49.9	-2.3
VIVF	**Saint-Julien-l**	**1.98**	**240**	*e*Pn	Pn	01 24 50.4	-2.1
VIVF				*e*Sg	Sg	01 25 19.8	-3.6
	7.3nm,0.3s						
VIVF	**Saint-Julien-l**	**1.98**	**240**	*e*Pn	Pn	01 24 50.4	-2.1
VIVF				*e*Sg	Sg	01 25 19.8	-3.6
HAU	**Haudompre**	**2.20**	**347**	*e*Pn	Pn	01 24 53.3	-2.3
CDF	**Champ du Feu**	**2.55**	**3**	*e*Pn	Pn	01 24 58.5	-2.2
MEZF	**Maizieres J'vi**	**2.98**	**333**	*e*Pn	Pn	01 25 04.1	-2.7
CAF	**Calviac**	**3.66**	**257**	*e*Pn	Pn	01 25 13.2	-3.2
RJF	**Les Rejaudoux**	**3.95**	**264**	*e*Pn	Pn	01 25 17.2	-3.4
KHC	**Kasperske Hory**	**5.48**	**51**	*e*x	x	01 26 26.0	
KHC				*e*SG	Sg	01 27 24.3	+4.3
CLL	**Collm**	**6.71**	**34**	*e*SG	Sg	01 28 04.0	+3.0

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*GEN **30** 01:24:23.6, 46.04N×6.81E, h3^{km}, ML0.2*
*CSEM **30** 01:24:28.2±0.1, 45.84N×7.13E, h10^{km}, ML3.1/21, Error ellipse: s-maj=2.7km s-min=1.8km az=85.0*
*STR **30** 01:24:31.3±0.6, 45.87N×7.20E, h10^{km}±1^{km}, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
LDG 30 01:24:28.1±0.0**, 45.87N×7.10E, h2^{km}, Md2.7**/2**, Ml3.1**/23**, Error ellipse: s-maj=1.0km s-min=0.5km az=99.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSD	**Ceresole Reale**	**0.41**	**175**	P	Pg	01 24 35.7	-0.6
LSD				S	Sg	01 24 43.8	+2.0
LSD	**Ceresole Reale**	**0.41**	**175**	P	Pg	01 24 35.7	-0.6
LSD	**Ceresole Reale**	**0.41**	**175**	S	Sg	01 24 43.8	+2.0
LPL	**La Plagne**	**0.43**	**217**	*e*Pg	Pg	01 24 36.7	-0.1
LPL				*e*Sg	Sg	01 24 42.4	-0.2
	184nm,0.6s						
LPG	**La Plagne**	**0.44**	**214**	*e*Pg	Pg	01 24 37.1	+0.2
LPG				*e*Sg	Sg	01 24 42.8	0.0
	332nm,0.7s						
TRAV		**0.57**	**128**	P	Pg	01 24 39.3	-0.3
TRAV				S	Sg	01 24 50.3	+3.1
TRAV		**0.57**	**128**	P	Pg	01 24 39.3	-0.3
TRAV				S	Sg	01 24 50.3	+3.1
ORX	**Oropa**	**0.66**	**110**	P	Pg	01 24 40.8	-0.5
ORX				S	Sg	01 24 52.7	+2.6
ORX	**Oropa**	**0.66**	**110**	P	Pg	01 24 40.8	-0.5
ORX				S	Sg	01 24 52.7	+2.6
RSP	**Reno Superiore**	**0.72**	**171**	P	Pg	01 24 41.8	-0.7
RSP				S	Sg	01 24 53.7	+1.5
RSP	**Reno Superiore**	**0.72**	**171**	P	Pg	01 24 41.8	-0.7
RSP				S	Sg	01 24 53.7	+1.5
GDM	**Grand'Maison**	**0.96**	**227**	P	Pb	01 24 50.5	+3.4
RRL	**Cesana Torines**	**0.97**	**193**	P	Pb	01 24 44.5	-2.8
RRL				S	Sb	01 24 58.9	-1.5
RRL	**Cesana Torines**	**0.97**	**193**	P	Pb	01 24 44.5	-2.8
RRL				S	Sb	01 24 58.9	-1.5
CABF	**La Chapelle**	**1.02**	**317**	*e*Pg	Pg	01 24 47.5	-1.1
CABF				*e*Sg	Sg	01 25 00.9	-1.3
	86nm,0.4s						
BHB	**Bricherasio**	**1.03**	**174**	P	Pb	01 24 46.2	-2.1
BHB				S	Sb	01 25 01.6	-0.5
BHB	**Bricherasio**	**1.03**	**174**	P	Pb	01 24 46.2	-2.1
BHB				S	Sb	01 25 01.6	-0.5
GRN	**Grenoble**	**1.14**	**237**	P	Pb	01 24 52.7	+2.5
MBDF	**Montbardon**	**1.16**	**192**	*e*Pg	Pg	01 24 50.1	-1.2
MBDF				*e*Sg	Sg	01 25 05.2	-1.6
	140nm,0.6s						
ORIF	**Oris-en-Rattie**	**1.28**	**223**	*e*Pg	Pg	01 24 52.3	-1.3
ORIF				*e*Sg	Sg	01 25 08.9	-1.8
	179nm,0.7s						
SURF	**Saint Ours**	**1.40**	**188**	P	Pb	01 24 56.2	+1.6
LOMF	**Lomont**	**1.50**	**353**	P	Pn	01 24 55.8	-0.3
LOMF				S	Sb	01 25 18.3	+2.6
BBS	**Basel-Blauen**	**1.62**	**10**	P	Pn	01 24 57.7	-0.2
STV	**Sta Anna Valdi**	**1.63**	**174**	P	Pn	01 24 55.0	-3.0
STV	**Sta Anna Valdi**	**1.63**	**174**	P	Pn	01 24 55.0	-3.0
ROB	**Roburent**	**1.66**	**161**	P	Pn	01 24 55.5	-2.9
ROB				S	Sb	01 25 17.3	-3.2
ROB	**Roburent**	**1.66**	**161**	P	Pn	01 24 55.5	-3.0
ROB				S	Sb	01 25 17.3	-3.2
FIN	**Finale Ligure**	**1.83**	**154**	P	Pn	01 24 57.4	-3.5
FIN	**Finale Ligure**	**1.83**	**154**	P	Pn	01 24 57.4	-3.5
HINF	**Hinteralfeld**	**1.96**	**355**	*e*Pn	Pn	01 25 00.8	-1.9
HINF				*e*Pg	Pg	01 25 04.5	-2.7
HINF				*e*Sn	Sn	01 25 24.6	-3.6
	58nm,0.5s						
HINF	**Hinteralfeld**	**1.96**	**355**	*e*Pg	Pg	01 25 04.5	-2.7
HINF				*e*Sn	Sn	01 25 24.6	-3.6
	29nm,0.5s						
HINF	**Hinteralfeld**	**1.96**	**355**	*e*Pg	Pg	01 25 04.5	-2.7
HINF				*e*Sn	Sn	01 25 24.6	-3.6
MOF	**Molkenrain**	**1.99**	**1**	P	Pn	01 25 05.1	+2.0
MOF				S	Sn	01 25 32.4	+3.5
VIVF	**Saint-Julien-l**	**1.99**	**240**	*e*Pn	Pn	01 25 01.2	-1.9
VIVF				*e*P		01 25 03.1	
VIVF				*e*Pg	Pg	01 25 05.0	-2.8
VIVF				*e*Sg	Sg	01 25 30.5	-3.7
	77nm,0.6s						
VIVF	**Saint-Julien-l**	**1.99**	**240**	*e*P	Pn	01 25 03.1	0.0
VIVF	**Saint-Julien-l**	**1.99**	**240**	*e*Pg	Pg	01 25 05.0	-2.8
VIVF				*e*Sg	Sg	01 25 30.5	-3.7
	39nm,0.6s						
VIVF	**Saint-Julien-l**	**1.99**	**240**	*e*Pg	Pg	01 25 05.0	-2.8
SBF	**Sospel**	**2.02**	**173**	*e*Sn	Sn	01 25 26.2	-3.4
	141nm,0.9s						
IMI	**Imperia**	**2.03**	**164**	P	Pn	01 24 59.8	-3.9
IMI	**Imperia**	**2.03**	**164**	P	Pn	01 24 59.8	-4.0
FELD	**Feldberg**	**2.10**	**17**	P	Pn	01 25 07.1	+2.3
FELD				S	Sn	01 25 35.1	+3.2
SMRF	**Simiane la Rot**	**2.18**	**210**	*e*Pn	Pn	01 25 03.4	-2.4
SMRF				*e*Sn	Sn	01 25 29.1	-4.6
SMRF				*e*Sg	Sg	01 25 37.0	-3.6
	58nm,0.9s						
HAU	**Haudompre**	**2.20**	**347**	*e*Pn	Pn	01 25 04.1	-2.1
HAU				*e*Sn	Sn	01 25 30.4	-4.0
HAU				*e*Sg	Sg	01 25 37.9	-3.5
	43nm,0.5s						
HAU	**Haudompre**	**2.20**	**347**	*e*Sn	Sn	01 25 30.4	-4.0
FRF	**La Foret Royal**	**2.33**	**188**	*e*Pn	Pn	01 25 05.5	-2.5
FRF				*e*Pg	Pg	01 25 11.4	-3.2
FRF				*e*Sn	Sn	01 25 32.8	-4.7
	49nm,0.8s						
FRF	**La Foret Royal**	**2.33**	**188**	*e*Pg	Pg	01 25 11.4	-3.2
FRF				*e*Sn	Sn	01 25 32.8	-4.7
	25nm,0.8s						
SMF	**Signal de Mont**	**2.39**	**290**	*e*Pn	Pn	01 25 06.6	-2.3
SMF				*e*Pg	Pg	01 25 12.5	-3.3
SMF				*e*Sn	Sn	01 25 34.7	-4.5
SMF				*e*Sg	Sg	01 25 43.2	-4.5
	45nm,0.6s						
SMF	**Signal de Mont**	**2.39**	**290**	*e*Pg	Pg	01 25 12.5	-3.3
SMF				*e*Sn	Sn	01 25 34.7	-4.5
SMF				*e*Sg	Sg	01 25 43.2	-4.5
	22nm,0.6s						
CDF	**Champ du Feu**	**2.55**	**3**	*e*Pn	Pn	01 25 08.9	-2.3
CDF				*e*Sg	Sg	01 25 48.2	-4.8
	20nm,0.5s						
CDF	**Champ du Feu**	**2.55**	**3**	*e*Sg	Sg	01 25 48.2	-4.8
LMR	**La Mourre**	**2.57**	**190**	*e*Pn	Pn	01 25 07.8	-3.6
LMR				*e*Sg	Sg	01 25 48.8	-4.7
	35nm,0.8s						
LOR	**Lormes**	**2.64**	**303**	*e*Pn	Pn	01 25 09.7	-2.7
LOR				*e*Pg	Pg	01 25 17.1	-3.7
LOR				*e*Sg	Sg	01 25 50.8	-5.2
	25nm,0.4s						
LOR	**Lormes**	**2.64**	**303**	*e*Pg	Pg	01 25 17.1	-3.7
LOR				*e*Sg	Sg	01 25 50.8	-5.2
	13nm,0.4s						
SFTF	**Sexfontaines**	**2.73**	**330**	*e*Pn	Pn	01 25 11.3	-2.5
SFTF				*e*Pg	Pg	01 25 18.5	-4.1
SFTF				*e*Sn	Sn	01 25 42.9	-4.9
SFTF				*e*Sg	Sg	01 25 54.0	-5.1
	40nm,0.5s						
SFTF	**Sexfontaines**	**2.73**	**330**	*e*Pg	Pg	01 25 18.5	-4.1
SFTF				*e*Sn	Sn	01 25 42.9	-4.9
SFTF				*e*Sg	Sg	01 25 54.0	-5.1
	20nm,0.5s						
SSF	**Saint Saulge**	**2.76**	**297**	*e*Pn	Pn	01 25 11.1	-3.0
SSF				*e*Pg	Pg	01 25 19.2	-3.9
SSF				*e*Sg	Sg	01 25 54.1	-5.8
	9.8nm,0.4s						
SSF	**Saint Saulge**	**2.76**	**297**	*e*Pg	Pg	01 25 19.2	-3.9
SSF				*e*Sg	Sg	01 25 54.1	-5.8
	4.9nm,0.4s						
LASF	**Ste Croix**	**2.92**	**233**	*e*Sn	Sn	01 25 47.3	-5.2
LASF				*e*Sg	Sg	01 26 01.7	-3.5
	30nm,0.8s						
MEZF	**Maizieres J'vi**	**2.98**	**333**	*e*Pn	Pn	01 25 14.8	-2.6
MEZF				*e*Sg	Sg	01 26 01.9	-5.6
	63nm,0.8s						
MEZF	**Maizieres J'vi**	**2.98**	**333**	*e*Sg	Sg	01 26 01.9	-5.6
BGF	**Bois d'Agland**	**3.03**	**285**	*e*Pn	Pn	01 25 15.4	-2.6
BGF				*e*Sg	Sg	01 26 03.5	-5.6
	24nm,0.4s						
HYF	**Humbligny**	**3.38**	**296**	*e*Pn	Pn	01 25 20.0	-3.0
TCF	**Toulx Ste Croi**	**3.43**	**279**	*e*Pn	Pn	01 25 20.8	-2.9
TCF				*e*Sn	Sn	01 25 59.8	-5.7
TCF				*e*Sg	Sg	01 26 15.6	-6.7
	21nm,0.8s						
CAF	**Calviac**	**3.67**	**257**	*e*Pn	Pn	01 25 23.9	-3.2
CAF				*e*Sg	Sg	01 26 23.6	-6.7
	30nm,1.0s						
CAF	**Calviac**	**3.67**	**257**	*e*Sg	Sg	01 26 23.6	-6.7
RJF	**Les Rejaudoux**	**3.96**	**264**	*e*Pn	Pn	01 25 27.9	-3.3
RJF				*e*Sg	Sg	01 26 31.4	-8.5
	20nm,0.8s						
RJF	**Les Rejaudoux**	**3.96**	**264**	*e*Sg	Sg	01 26 31.4	-8.5
MTLF	**Montolieu**	**4.30**	**236**	*e*P	Pn	01 25 36.0	-0.1
DOU	**Dourbes**	**4.55**	**339**	P	Pn	01 25 37.4	-2.3
BAIF	**Baives**	**4.62**	**336**	*e*Pn	Pn	01 25 37.1	-3.5
MEM	**Membach**	**4.80**	**352**	P	Pn	01 25 38.8	-4.4
MFF	**Saint Martin d**	**5.08**	**281**	*e*Pn	Pn	01 25 43.0	-4.1
FLN	**La Foliniere**	**5.91**	**302**	*e*Pn	Pn	01 25 54.5	-4.4
GRR	**Gorron**	**5.99**	**298**	*e*Pn	Pn	01 25 55.4	-4.5

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*NEIC **30** 01:28:07.0, 17.48N×61.58W, h18^{km}, MD3.7(TRN), After TRN.*
*RSPR **30** 01:28:08.6, 18.76N×61.41W, h25^{km}±62^{km}, MD4.2/4, MD4.2/4*
TRN 30 01:28:05.1, 17.50N×61.48W, h19^{km}, M3.6(FDF)**, 4C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPB	**Codrington**	**0.35**	**293**	⇓*i*P	Pb	01 28 14.6	+2.0
CPB				*e*S	Sb	01 28 20.6	+2.8
BPA	**Boggy Peak**	**0.57**	**218**	*e*P	Pb	01 28 18.8	+2.4
BPA				*e*S	Sb	01 28 28.1	+4.1
SEG	**Port Louis**	**1.09**	**181**	*e*P	Pb	01 28 26.3	+1.2
SEG				*e*S	Sb	01 28 42.5	+3.6
SKTB	**Turtle Beach**	**1.12**	**255**	*e*P	Pb	01 28 28.5	+2.9
SKTB				*e*S	Sb	01 28 44.1	+4.4
SKI	**Saint Kitts**	**1.21**	**262**	*e*P	Pn	01 28 30.2	+3.1
SKI				*e*S	Sb	01 28 45.9	+3.5
DEG	**La Desirade**	**1.25**	**161**	*e*P	Pn	01 28 28.3	+0.7
DEG				*e*S	Sb	01 28 46.7	+3.3
SKDB	**Saint Kitts 2**	**1.27**	**266**	*e*P	Pn	01 28 29.7	+1.7
SKDB				*e*S	Sb	01 28 46.6	+2.5
BCG	**Bois Riant Cap**	**1.41**	**185**	*e*P	Pn	01 28 31.6	+1.5
DOG	**Dongo Capester**	**1.47**	**185**	*e*P	Pn	01 28 32.4	+1.7
SCG	**Saint Claude**	**1.48**	**187**	*e*P	Pn	01 28 32.8	+1.9
SCG				*e*S	Sn	01 28 52.6	+2.8
MGG	**Marie-Galante**	**1.58**	**174**	⇓*e*P	Pn	01 28 34.0	+1.5
BBL	**Barber's Block**	**1.96**	**180**	*e*P	Pn	01 28 40.1	+2.3
STVI	**Saint Thomas**	**3.42**	**285**	*e*P	Pn	01 28 57.9	-0.8
STVI				*e*S	Sn	01 29 36.6	-2.4
STVI	**Saint Thomas**	**3.42**	**285**	⇑*e*P	Pn	01 28 57.9	-0.8
STVI				*e*S	Sn	01 29 36.6	-2.4
MTP	**Monte Pirata**	**3.92**	**279**	*e*P	Pn	01 29 06.3	+0.5
MTP				*e*S	Sn	01 29 50.6	-1.3
MTP	**Monte Pirata**	**3.92**	**279**	⇑*e*P	Pn	01 29 06.3	+0.5
MTP				*e*S	Sn	01 29 50.6	-1.3
HUMP	**Col San Antoni**	**4.21**	**279**	*e*P	Pn	01 29 10.1	+0.3
HUMP				*e*S	Sn	01 29 59.7	+0.6
HUMP	**Col San Antoni**	**4.21**	**279**	⇑*e*P	Pn	01 29 10.1	+0.3
HUMP				*e*S	Sn	01 29 59.7	+0.6
CBYP	**Canovanas**	**4.23**	**281**	*e*P	Pn	01 29 10.8	+0.6
CBYP				*e*S	Sn	01 29 59.7	-0.1
CBYP	**Canovanas**	**4.23**	**281**	⇑*e*P	Pn	01 29 10.8	+0.6
CBYP				*e*S	Sn	01 29 59.2	-0.5

IDC 30 01:42:22.8±10.0**, 1.75N×96.00E, mb4.0**/4**, mb1 4.2**/5**, mb1mx3.8**/20**, mbtmp4.1**/5**, Error ellipse: s-maj=204.6km s-min=97.2km az=146.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.85**	**10**	Pn	P	01 46 20.2	-1.6
	0.7nm,0.3s,baz=199,slow=10,SNR=7.7						
MKAR	**Makanchi Array**	**46.43**	**347**	P	P	01 50 51.3	-1.8
	1.9nm,0.5s,baz=159,slow=7.9,SNR=17						
SONM	**Songino Array**	**46.78**	**10**	P	P	01 50 54.1	-1.7
	1.1nm,0.7s,baz=189,slow=9.0,SNR=4.0						
ZAL	**Zalesovo**	**52.83**	**352**	P	P	01 51 39.7	-2.5
	1.4nm,0.5s,baz=50,slow=5.5,SNR=5.1						
BVAR	**Borovoye Array**	**55.35**	**341**	P	P	01 51 58.2	-2.5
	0.9nm,0.6s,baz=145,slow=8.8,SNR=6.9						

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*IDC **30** 01:49:30.1±1.1, 48.75S×126.46E, mb3.9/5, mb1 4.1/6, mb1mx4.0/13, mbtmp4.0/6, ML2.3/1, MS3.9/7, Ms1 3.9/7, ms1mx3.5/22, Error ellipse: s-maj=48.5km s-min=20.1km az=107.0*
*NEIC **30** 01:49:31.5±0.4, 48.72S×126.53E, h10^{km}, mb4.6/2, Error ellipse: s-maj=21.2km s-min=9.3km az=104.0*
ISC 30 01:49:29.5±0.7**, 48.73S**±0.09×**126.6E**±0.3**, h10^{km}, (h6^{km}±.9^{km}:pP-P), n34, σ1^{s}10**/25**, mb4.1**/4**, MS3.9**/6**, 3C, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**17.27**	**333**	P	**P**	**01 53 32.2**	**0.0**
	0.6nm,0.3s,baz=166,slow=10,SNR=4.5						
NWAO				LR	LR	01 58 44.8	
	comp=Z,470nm,18.4s,baz=319,slow=32						
CASY	**Casey**	**19.48**	**200**	*e*P	**P**	**01 53 57.4**	**-1.6**
	12nm,0.9s						
STKA	**Stephens Creek**	**20.30**	**39**	P	**P**	**01 54 09.2**	**+1.2**
	1.1nm,0.4s,baz=187,slow=8.1,SNR=4.9						
STKA	**Stephens Creek**	**20.30**	**39**	P	**P**	**01 54 07.6**	**-0.5**
WRA	**Warramunga Arr**	**29.39**	**15**	P	**P**	**01 55 33.7**	**-1.3**
	1.4nm,1.1s,mb3.6,baz=191,slow=8.4,SNR=3.6						
FITZ	**Fitzroy Crossi**	**30.56**	**358**	LR	LR	02 07 32.7	
	comp=Z,324nm,19.4s,MS4.0,baz=263,slow=35						
VNDA	**Vanda**	**31.89**	**166**	LR	LR	02 07 52.8	
	comp=Z,233nm,18.3s,MS3.9,baz=331,slow=35						
MAW	**Mawson**	**36.43**	**215**	P	**P**	**01 56 35.4**	**-0.3**
	1.8nm,0.7s,mb4.1,baz=91,slow=8.7,SNR=6.2						
MAW				LR	LR	02 08 57.5	
	comp=Z,73nm,18.6s,MS3.5,baz=243,slow=32						
HNR	**Honiara**	**48.12**	**47**	LR	LR	02 15 21.5	
	comp=Z,91nm,18.9s,MS3.8,baz=119,slow=32						
SNAA	**Sanae**	**54.70**	**197**	⇑*i*	**P**	**01 59 00.8**	**+0.4**
SNAA	**Sanae**	**54.70**	**197**	*e*	**P**	**01 59 02.2**	**+1.8**
SNAA	**Sanae**	**54.70**	**197**	*e*	**P**	**01 59 08.1**	**+7.7**
SNAA	**Sanae**	**54.70**	**197**	*e*	**P**	**01 59 14.4**	**+14**
SNAA	**Sanae**	**54.70**	**197**	P	**P**	**01 58 59.7**	**-0.7**
	2.6nm,0.9s,mb4.2,baz=138,slow=9.2,SNR=12						
SNAA	**Sanae**	**54.70**	**197**	*e*P	**P**	**01 58 59.5**	**-0.9**
	19nm,1.0s,mb5.1						
SNAA				*e*	pP	01 59 02.2	-1.2
SNAA				*e*		01 59 08.1	
SNAA				*e*		01 59 14.4	
VNA2	**Neumayer--Watz**	**56.18**	**197**	*e*	**P**	**01 59 13.0**	**+1.9**
VNA2	**Neumayer--Watz**	**56.18**	**197**	*e*	**P**	**01 59 18.9**	**+7.8**
VNA2	**Neumayer--Watz**	**56.18**	**197**	*e*	**P**	**01 59 25.4**	**+14**
VNA2	**Neumayer--Watz**	**56.18**	**197**	⇑*i*P	**P**	**01 59 11.3**	**+0.2**
VNA2				*e*	pP	01 59 13.0	-1.2
VNA2				*e*		01 59 18.9	
VNA2				*e*		01 59 25.4	
VNA3	**Neumayer Olymp**	**56.33**	**196**	*e*	**P**	**01 59 13.8**	**+1.6**
VNA3	**Neumayer Olymp**	**56.33**	**196**	*e*	**P**	**01 59 19.7**	**+7.5**
VNA3	**Neumayer Olymp**	**56.33**	**196**	*e*	**P**	**01 59 26.1**	**+14**
VNA3	**Neumayer Olymp**	**56.33**	**196**	⇑*i*P	**P**	**01 59 12.2**	**0.0**
VNA3				*e*	pP	01 59 13.8	-1.5
VNA3				*e*		01 59 19.7	
VNA3				*e*		01 59 26.1	
VNA1	**Neumayer--Stat**	**56.57**	**196**	*e*	**P**	**01 59 16.2**	**+2.3**
VNA1	**Neumayer--Stat**	**56.57**	**196**	*e*	**P**	**01 59 22.4**	**+8.5**
VNA1	**Neumayer--Stat**	**56.57**	**196**	*e*	**P**	**01 59 28.5**	**+15**
VNA1	**Neumayer--Stat**	**56.57**	**196**	P	**P**	**01 59 14.7**	**+0.8**
VNA1				*e*	pP	01 59 16.2	-0.8
VNA1				*e*		01 59 22.4	
VNA1				*e*		01 59 28.5	
CMAR	**Chiang Mai Arr**	**71.28**	**332**	P	**P**	**02 00 51.9**	**+0.8**
	0.5nm,0.3s,mb3.9,baz=170,slow=5.5,SNR=3.5						
CMAR				LR	LR	02 30 45.6	
	comp=Z,118nm,18.8s,MS4.2,baz=192,slow=35						
PLCA	**Paso Flores**	**89.64**	**167**	LR	LR	02 38 16.6	
	comp=Z,41nm,19.5s,MS3.9,baz=180,slow=33						
NVAR	**Mina Array Bea**	**133.21**	**77**	PKP	PKPdf	02 08 49.1	+0.8
	0.5nm,0.7s,baz=214,slow=5.3,SNR=4.1						
YKA	**Yellowknife Ar**	**144.28**	**44**	PKP	PKPdf	02 09 05.5	-1.9
	2.2nm,0.8s,baz=274,slow=3.4,SNR=20						
RSSD	**Black Hills**	**145.34**	**78**	*e*PKPdf	PKPdf	02 09 08.9	-0.9
FFC	**Flin Flon**	**149.84**	**60**	*e*PKPdf	PKPdf	02 09 16.1	-0.8
FFC				*e*PKPbc	PKPdf	02 09 21.4	+4.6
PLAL	**Pickwick Lake**	**151.04**	**105**	*e*PKPbc	PKPdf	02 09 23.8	+4.5

IDC 30 01:50:36.8±2.9**, 0.87N×96.38E, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.5**/19**, mbtmp3.6**/4**, ML4.5**/1**, Error ellipse: s-maj=113.6km s-min=27.7km az=56.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**17.66**	**8**	P	P	01 54 45.4	-0.6
	0.6nm,0.3s,baz=198,slow=9.6,SNR=4.1						
WRA	**Warramunga Arr**	**42.56**	**121**	P	P	01 58 34.6	-1.7
	0.5nm,0.8s,baz=302,slow=9.1,SNR=3.6						
MKAR	**Makanchi Array**	**47.37**	**347**	P	P	01 59 12.9	-1.6
	0.5nm,0.5s,baz=162,slow=9.0,SNR=6.6						
BVAR	**Borovoye Array**	**56.30**	**341**	P	P	02 00 18.5	-3.0
	0.5nm,0.6s,baz=143,slow=7.4,SNR=4.3						

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*IDC **30** 02:02:15.8±0.9, 2.60S×139.38E, mb4.4/7, mb1 4.6/8, mb1mx4.4/14, mbtmp4.4/8, MS3.6/2, Ms1 3.6/2, ms1mx3.0/23, Error ellipse: s-maj=45.7km s-min=19.0km az=87.0*
*NEIC **30** 02:02:17.9±6.7, 2.61S×139.20E, h14^{km}±41^{km}, mb4.5/8, Error ellipse: s-maj=17.1km s-min=15.5km az=214.0*
ISC 30 02:02:19.3±0.6**, 2.72S**±0.08×**139.2E**±0.1**, h33^{km}, n27, σ0^{s}96**/29**, mb4.5**/11**, MS3.2**/1**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**10.32**	**130**	Pn	**P**	**02 04 47.3**	**-0.9**
	0.9nm,0.3s,baz=48,slow=9.2,SNR=3.1						
PMG	**Port Moresby**	**10.32**	**130**	Pn	**P**	**02 04 47.4**	**-0.9**
PMG				*e*P		02 04 54.3	
KAKA	**Kakadu**	**11.98**	**214**	*e*P	**P**	**02 05 10.9**	**+0.1**
	42nm,0.7s						
GUMO	**Guam**	**17.15**	**19**	P	**P**	**02 06 13.3**	**-4.8**
	33nm,0.8s						
WRAB	**Tennant Creek**	**17.75**	**195**	*e*P	**P**	**02 06 24.7**	**-1.0**
	28nm,0.8s						
WRAB				*e*S	**S**	**02 09 20.1**	**-20**
WB2	**Warramunga Arr**	**17.76**	**195**	*e*P	**P**	**02 06 25.3**	**-0.5**
WB2				*e*S	**S**	**02 09 34.6**	**-5.6**
WRA	**Warramunga Arr**	**17.77**	**195**	P	**P**	**02 06 25.1**	**-0.8**
	1.6nm,0.3s,baz=18,slow=12,SNR=27						
WRA				S	**S**	**02 09 32.6**	**-7.7**
	0.2nm,0.3s,baz=16,slow=22,SNR=3.9						
CTA	**Charters Tower**	**18.58**	**159**	LR	LR	02 14 26.1	
	comp=Z,311nm,19.6s,baz=352,slow=39						
CTAO	**Charters Tower**	**18.58**	**159**	P	**P**	**02 06 40.3**	**+4.3**
	13nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.27**	**220**	*e*P	**P**	**02 06 55.4**	**+0.5**
	12nm,0.7s						
FITZ				*e*S	**S**	**02 10 35.5**	**0.0**
FITZ	**Fitzroy Crossi**	**20.27**	**220**	P	**P**	**02 06 54.9**	**-0.1**
	3.3nm,0.3s,baz=19,slow=8.6,SNR=5.9						
FITZ				S	**S**	**02 10 33.2**	**-2.3**
	16nm,0.9s,baz=328,slow=18,SNR=3.0						
MBWA	**Marble Bar**	**26.38**	**224**	*e*P	**P**	**02 07 56.3**	**+1.5**
	10nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**29.09**	**176**	*e*P	**P**	**02 08 20.1**	**+0.9**
	2.1nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**29.09**	**176**	P	**P**	**02 08 19.6**	**+0.4**
	3.0nm,0.6s,mb4.2,baz=6.9,slow=9.7,SNR=11						
STKA	**Stephens Creek**	**29.09**	**176**	*e*P	**P**	**02 08 19.2**	**+0.1**
KSM	**Kuching**	**29.20**	**278**	P	**P**	**02 08 17.0**	**-3.4**
JOW	**Kunigami**	**31.22**	**341**	LR	LR	02 18 18.5	
	comp=Z,51nm,19.6s,MS3.2,baz=226,slow=31						
TAU	**Tasmania Unive**	**40.66**	**171**	P	**P**	**02 09 58.5**	**+0.3**
	9.3nm,0.8s,mb4.5						
CASY	**Casey**	**66.57**	**192**	*e*P	**P**	**02 13 07.6**	**-0.4**
	8.0nm,0.9s,mb4.8						
MKAR	**Makanchi Array**	**70.11**	**322**	P	**P**	**02 13 30.6**	**+0.3**
	0.9nm,0.5s,mb4.0,baz=105,slow=8.1,SNR=14						
VNDA	**Vanda**	**75.72**	**175**	P	**P**	**02 14 04.2**	**+1.2**
	9.0nm,0.7s,mb4.8,baz=328,slow=6.6,SNR=19						
BVAR	**Borovoye Array**	**79.61**	**325**	P	**P**	**02 14 25.1**	**+0.3**
	1.7nm,0.6s,mb4.2,baz=118,slow=6.8,SNR=16						
ZRNK	**Zerenda**	**80.38**	**325**	*e*P	**P**	**02 14 28.1**	**-0.9**
	1.7nm,0.7s,mb4.1						
MAW	**Mawson**	**82.30**	**202**	P	**P**	**02 14 39.8**	**+1.0**
	2.1nm,0.6s,mb4.2,baz=75,slow=7.5,SNR=12						
ILAR	**Eielson Array**	**85.63**	**24**	P	**P**	**02 14 54.6**	**-0.9**
	3.6nm,0.9s,mb4.6,baz=259,slow=4.8,SNR=23						
QSPA	**South Pole Qui**	**87.22**	**180**	*e*P	**P**	**02 15 04.5**	**+1.4**
	6.4nm,0.1s,mb5.8						
DBIC	**Dimbokro**	**143.99**	**278**	PKP	PKPdf	02 21 52.5	-0.1
	2.2nm,0.5s,baz=359,slow=7.3,SNR=6.3						

MEX 30 02:03:38.8±0.3**, 16.36N×97.91W, h4^{km}±7^{km}, MD3.5, 1D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.21**	**278**	⇓*i*P	Pg	02 03 42.7	-0.4
PNIG				*i* S	Sg	02 03 45.8	-0.2
VHO	**Vista Hermosa**	**1.33**	**58**	*i* P	Pb	02 04 00.5	-3.5
VHO				*i* S	Sb	02 04 17.6	-3.7
OXX	**Oaxaca**	**1.34**	**58**	*i* P	Pb	02 04 01.0	-3.2
OXX				*i* S	Sb	02 04 17.0	-4.6
ACX	**Acapulco**	**1.99**	**285**	*e*P	Pn	02 04 10.0	-3.6
ACX				*i* S	Sn	02 04 34.0	-5.3
PPM	**Popocatepetl**	**2.78**	**346**	*e*P	Pn	02 04 25.0	+0.1

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*NEIC **30** 02:06:48.7±1.2, 20.08S×68.93W, h108^{km}±14^{km}, mb3.8/1, Error ellipse: s-maj=17.6km s-min=11.7km az=46.0*
*IDC **30** 02:06:49.5±2.9, 20.01S×68.86W, h118^{km}±29^{km}, mb3.4/3, mb1 3.6/6, mb1mx3.4/18, mbtmp3.9/6, Error ellipse: s-maj=36.7km s-min=19.2km az=75.0, Incorrectly calculated travel-time residual on T phase at H03N*
ISC 30 02:06:47.6±1.6**, 20.08S**±0.10×**68.9W**±0.1**, h112^{km}±18^{km}, n8, σ0^{s}80**/10**, mb3.9**/2**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.84**	**11**	P	**P**	**02 07 48.0**	**+2.1**
	2.5nm,0.3s,baz=193,slow=8.0,SNR=58						
LPAZ				S	**S**	**02 08 30.3**	**-0.2**
	0.6nm,0.3s,baz=66,slow=19,SNR=2.2						
ARE	**Arequipa**	**4.35**	**325**	*e*P	**P**	**02 07 52.0**	**-0.9**
ARE				*e*S	**S**	**02 08 38.0**	**-4.9**
SIV	**San Ignacio**	**8.49**	**63**	P	**P**	**02 08 48.6**	**-0.5**
	2.6nm,0.3s,baz=256,slow=11,SNR=80						
CPUP	**Villa Florida**	**12.33**	**122**	P	**P**	**02 09 40.4**	**0.0**
	0.1nm,0.3s,baz=324,slow=16,SNR=6.5						
BDFB	**Brasilia**	**20.37**	**81**	P	**P**	**02 11 17.1**	**-0.3**
	1.1nm,0.4s,baz=250,slow=11,SNR=3.4						
PLCA	**Paso Flores**	**20.64**	**184**	P	**P**	**02 11 20.1**	**+0.2**
	1.3nm,0.5s,baz=6.4,slow=11,SNR=4.1						
HLID	**Hailey**	**75.84**	**328**	P	**P**	**02 18 23.7**	**+0.5**
	1.6nm,1.1s,mb3.7						
YKA	**Yellowknife Ar**	**89.85**	**341**	P	**P**	**02 19 34.1**	**-0.3**
	1.2nm,0.8s,mb4.1,baz=134,slow=4.6,SNR=9.6						

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*IDC **30** 02:22:52.3±12.0, 35.39N×77.54E, mb3.9/2, mb1 3.8/4, mb1mx3.4/21, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=215.9km s-min=62.0km az=139.0*

NNC ***30*** *02:23:18.0±10.0, 37.08N×76.96E, h79^{km}±137^{km}, mpv3.0, Error ellipse: s-maj=129.9km s-min=52.4km az=18.0*

ISC 30 02:23:13.5±3.5**, 37.0N**±0.3×**76.9E**±0.2**, h33**^{km}**, n7, σ1**^{s}**02**/8**, mb3.8**/2**, 2D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**7.83**	**323**	P	**P**	**02 25 08.4**	**+0.5**
	0.2nm,0.2s,baz=127,slow=12,SNR=18						
KK31				S	**S**	**02 26 35.9**	**-0.4**
	1.9nm,0.5s,baz=138,slow=21,SNR=14						
MK31	**Makanchi Array**	**10.59**	**21**	⇓P	**P**	**02 25 45.6**	**-0.4**
	0.3nm,0.3s,baz=201,slow=12,SNR=15						
MKAR	**Makanchi Array**	**10.59**	**21**	Pn	**P**	**02 25 46.0**	**-0.1**
	0.6nm,0.3s,baz=193,slow=11,SNR=17						
BVAR	**Borovoye Array**	**16.68**	**346**	P	**P**	**02 27 07.4**	**+1.4**
	0.1nm,0.3s,baz=146,slow=10,SNR=2.6						
AB31	**Akbulak array**	**17.38**	**320**	⇓P	**P**	**02 27 14.6**	**-0.3**
	1.0nm,0.7s,baz=119,slow=14,SNR=11						
FINES	**FINESS Array B**	**39.79**	**324**	P	**P**	**02 30 40.0**	**-4.7**
	0.6nm,0.3s,mb3.8,baz=112,slow=9.5,SNR=13						
ARCES	**ARCESS Array B**	**42.57**	**336**	P	**P**	**02 31 02.7**	**-4.7**
	1.3nm,0.8s,mb3.7,baz=111,slow=7.5,SNR=13						

MDD ***30*** *02:30:14.9±0.2, 35.73N×3.52W, mbLg3.0/7, Error ellipse: s-maj=2.2km s-min=1.8km az=150.0, PRXIMO*

CSEM ***30*** *02:30:14.9±0.1, 35.61N×3.49W, h35^{km}, MD3.8, Error ellipse: s-maj=2.4km s-min=2.0km az=102.0*

INMG ***30*** *02:30:15.6±1.2, 35.75N×3.48W, ML2.6, Error ellipse: s-maj=3.4km s-min=2.4km az=42.0*

CNRM ***30*** *02:30:15.2, 35.64N×3.41W, h22^{km}, MD3.8*

SFS ***30*** *02:30:15.0, 35.75N×3.51W*

NEIC ***30*** *02:30:15.4, 35.75N×3.50W, ML3.4(LDG), MN2.7(MDD), After MDD.*

LDG ***30*** *02:30:16.7±0.3, 35.72N×3.33W, h10^{km}, Ml3.4/1, Error ellipse: s-maj=7.2km s-min=2.4km az=176.0*

ISC 30 02:30:13.3±0.3**, 35.72N**±0.02×**3.52W**±0.02**, h10**^{km}**, n78, σ1**^{s}**37**/132**, 3C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EALB	**Alboran**	**0.45**	**61**	⇑P	**Pg**	**02 30 23.0**	**+0.5**
EALB				S	**Sg**	**02 30 29.0**	**+0.3**
EALB	**Alboran**	**0.45**	**61**	⇑Pg	**Pg**	**02 30 23.0**	**+0.5**
	123nm,0.1s,SNR=18						
EALB				Lg		02 30 29.0	
	877nm,0.1s,SNR=24						
MPAL	**Palemas**	**0.60**	**215**	*i* P	**Pg**	**02 30 26.0**	**+0.6**
MPAL				*i* S	**Sg**	**02 30 35.0**	**+1.5**
EMEL	**Melilla**	**0.62**	**132**	Pg	**Pg**	**02 30 27.1**	**+1.2**
	694nm,0.1s,SNR=101						
EMEL				Lg		02 30 35.1	
	2μm,0.1s						
EMLI	**Melilla**	**0.63**	**132**	P	**Pb**	**02 30 27.1**	**+1.2**
	694nm,0.1s,SNR=101						
EMLI				S	**Sg**	**02 30 35.1**	**+0.7**
	2μm,0.1s						
MELI	**Melilla**	**0.64**	**131**	⇑Pg	**Pg**	**02 30 27.5**	**+1.3**
MELI				Lg		02 30 35.6	
MELI	**Melilla**	**0.64**	**131**	*i* P	**Pg**	**02 30 27.5**	**+1.3**
MELI				*i* S	**Sg**	**02 30 35.6**	**+0.8**
TOU	**Touzarine**	**0.78**	**194**	*i* P	**Pb**	**02 30 29.0**	**+0.5**
TOU				*i* S	**Sb**	**02 30 39.0**	**+0.2**
ZAI	**Zaio**	**0.98**	**139**	*i* P	**Pb**	**02 30 30.0**	**-1.9**
ZAI				*i* S	**Sb**	**02 30 41.0**	**-3.7**
EGUA	**Guajares**	**1.11**	**358**	Pg	**Pg**	**02 30 34.6**	**-1.0**
	9.1nm,0.2s,SNR=7.9						
EGUA				Lg		02 30 48.6	
	17nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.28**	**23**	P	**Pb**	**02 30 37.9**	**+0.8**
EBER				S	**Sb**	**02 30 52.5**	**-0.9**
EBER	**Berja**	**1.28**	**23**	Pg	**Pg**	**02 30 37.6**	**-1.3**
	6.0nm,0.1s,SNR=18						
EBER				Lg		02 30 54.2	
	109nm,0.2s,SNR=8.2						
EBER	**Berja**	**1.28**	**23**	P	**Pb**	**02 30 37.9**	**+0.8**
	6.0nm,0.1s,SNR=18						
ERON	**Agron**	**1.32**	**350**	P	**Pb**	**02 30 37.7**	**0.0**
ERON				S	**Sb**	**02 30 54.0**	**-0.5**
ERON	**Agron**	**1.32**	**350**	Pg	**Pb**	**02 30 37.7**	**0.0**
	3.9nm,0.2s,SNR=12						
ERON				Lg		02 30 55.5	
	44nm,0.3s,SNR=8.4						
EMIJ	**Mijas**	**1.32**	**310**	Pg	**Pg**	**02 30 38.4**	**-1.2**
	4.6nm,0.1s,SNR=70						
EMIJ				Lg		02 30 55.5	
	83nm,0.2s,SNR=14						
EMIJ	**Mijas**	**1.32**	**310**	P	**Pb**	**02 30 38.4**	**+0.7**
	4.6nm,0.1s,SNR=70						
EMIJ				S	**Sb**	**02 30 55.5**	**+1.0**
	83nm,0.2s,SNR=14						
ELOJ	**Sierra Loja**	**1.51**	**341**	P	**Pn**	**02 30 42.3**	**+1.7**
ELOJ				S	**Sb**	**02 31 04.5**	**+4.3**
ELOJ	**Sierra Loja**	**1.51**	**341**	Pn	**Pn**	**02 30 42.3**	**+1.7**
	2.9nm,0.4s,SNR=12						
ELOJ				Lg		02 31 03.8	
	32nm,0.3s,SNR=4.0						
DKH	**Dar Kharkhour**	**1.52**	**262**	*i* P	**Pn**	**02 30 40.5**	**-0.1**
DKH				*i* S	**Sb**	**02 30 58.0**	**-2.2**
ECOG	**Cogollos-Vega**	**1.56**	**359**	Pn	**Pn**	**02 30 42.7**	**+1.4**
	6.7nm,0.2s,SNR=21						
ECOG				Sn	**Sn**	**02 31 03.0**	**+1.4**
	24nm,0.2s,SNR=6.7						
REAL	**Reales**	**1.56**	**300**	*i* P	**Pn**	**02 30 42.0**	**+0.7**
REAL				*i* S	**Sb**	**02 31 01.0**	**-0.6**
MDAL	**Dalia**	**1.60**	**277**	*i* P	**Pn**	**02 30 43.0**	**+1.1**
MDAL				*i* S	**Sn**	**02 31 02.0**	**-0.7**
ENIJ	**Nijar**	**1.64**	**40**	Pn	**Pn**	**02 30 40.8**	**-1.6**
	2.7nm,0.2s,SNR=15						
ENIJ				Sn	**Sn**	**02 31 05.1**	**+1.3**
	70nm,0.5s,SNR=5.0						
TZK	**Tazeka**	**1.71**	**199**	*i* P	**Pn**	**02 30 43.0**	**-0.5**
TZK				*i* S	**Sn**	**02 31 02.0**	**-3.6**
ALJ	**Aljibe**	**1.90**	**296**	Pg	**Pg**	**02 30 51.0**	**-0.3**
ALJ				Sn	**Sn**	**02 31 18.0**	**+7.6**
LIJA	**Lijar**	**1.93**	**309**	Pn	**Pn**	**02 30 51.0**	**+4.5**
LIJA				Sn	**Sn**	**02 31 18.0**	**+7.0**
TSY	**Tnine Yamani**	**2.02**	**261**	*e*P	**Pn**	**02 30 48.0**	**+0.1**
TSY				*i* S	**Sn**	**02 31 13.0**	**-0.5**
EQES	**Quesada**	**2.11**	**10**	Pn	**Pn**	**02 30 51.0**	**+1.9**
	6.5nm,0.1s,SNR=108						
EQES				Sn	**Sn**	**02 31 16.0**	**+0.4**
	23nm,0.2s,SNR=4.0						
EQES	**Quesada**	**2.11**	**10**	P	**Pn**	**02 30 51.0**	**+1.8**
	6.5nm,0.1s,SNR=108						
EQES				S	**Sn**	**02 31 16.0**	**+0.3**
	23nm,0.2s,SNR=4.0						
ESPR	**Espera**	**2.21**	**302**	Pn	**Pn**	**02 30 53.8**	**+3.2**
	5.9nm,0.4s,SNR=7.3						
ESPR				Sn	**Sn**	**02 31 20.0**	**+1.9**
	SNR=7.9						
EHUE	**Huescar**	**2.22**	**19**	Pn	**Pn**	**02 30 52.8**	**+2.0**
	3.9nm,0.2s,SNR=13						
EHUE				Sn	**Sn**	**02 31 20.5**	**+2.0**
	8.4nm,0.2s						
EBAN	**Banos Encina**	**2.45**	**355**	Pn	**Pn**	**02 30 55.1**	**+1.1**
	0.9nm,0.2s,SNR=7.9						
EBAN				Sn	**Sn**	**02 31 25.1**	**+0.8**
	18nm,0.5s,SNR=7.9						
EADA	**Adamuz**	**2.59**	**341**	Pn	**Pn**	**02 30 57.1**	**+1.2**
	0.7nm,0.1s,SNR=15						
EADA				Sn	**Sn**	**02 31 27.4**	**-0.3**
	11nm,0.3s						
EADA	**Adamuz**	**2.59**	**341**	P	**Pn**	**02 30 57.1**	**+1.1**
	0.7nm,0.1s,SNR=15						
EADA				S	**Sn**	**02 31 27.4**	**-0.3**
	11nm,0.3s						
MIF	**Mishlifen**	**2.70**	**212**	*i* P	**Pn**	**02 30 57.0**	**-0.6**
MIF				*i* S	**Sn**	**02 31 26.0**	**-4.6**
EMUR	**La Murta**	**2.80**	**40**	Pn	**Pn**	**02 31 00.0**	**+1.0**
	2.9nm,0.2s,SNR=8.2						
EMUR				Sn	**Sn**	**02 31 28.3**	**-4.9**
	14nm,0.4s,SNR=5.4						
EMUR	**La Murta**	**2.80**	**40**	P	**Pn**	**02 31 00.0**	**+1.0**
	2.9nm,0.2s,SNR=8.2						
CZD	**Col de Zad**	**2.96**	**206**	*e*P	**Pn**	**02 31 00.0**	**-1.3**
CZD				*i* S	**Sn**	**02 31 33.0**	**-4.2**
EVIA	**Vianos**	**3.03**	**15**	Pg	**Pg**	**02 31 10.3**	**-3.4**
	46nm,0.6s,SNR=15						
EMIN	**Mina Concepcio**	**3.25**	**310**	Pn	**Pn**	**02 31 06.2**	**+0.8**
	1.4nm,0.1s,SNR=16						
EMIN				Sn	**Sn**	**02 31 44.9**	**+0.2**
	2.1nm,0.4s						
EMIN	**Mina Concepcio**	**3.25**	**310**	P	**Pn**	**02 31 06.2**	**+0.8**
	1.4nm,0.1s,SNR=16						
EMIN				S	**Sn**	**02 31 44.9**	**+0.3**
	2.1nm,0.4s						
ETOB	**Tobarra**	**3.32**	**28**	P	**Pn**	**02 31 06.8**	**+0.5**
ETOB				S	**Sn**	**02 31 44.5**	**-1.8**
ETOB	**Tobarra**	**3.32**	**28**	Pn	**Pn**	**02 31 06.8**	**+0.5**
	4.7nm,0.3s,SNR=21						
ETOB				Sn	**Sn**	**02 31 44.5**	**-1.8**
	2.3nm,0.3s,SNR=4.0						
ETOB	**Tobarra**	**3.32**	**28**	P	**Pn**	**02 31 06.8**	**+0.4**
	4.7nm,0.3s,SNR=21						
ETOB				S	**Sn**	**02 31 44.5**	**-1.8**
	2.3nm,0.3s,SNR=4.0						
EGRO	**El Granado**	**3.67**	**301**	Pn	**Pn**	**02 31 12.5**	**+1.2**
	1.7nm,0.1s,SNR=15						
EGRO				Sn	**Sn**	**02 31 54.1**	**-1.0**
	6.8nm,0.3s						
EGRO	**El Granado**	**3.67**	**301**	P	**Pn**	**02 31 12.5**	**+1.2**
EGRO				S	**Sn**	**02 31 54.1**	**-1.0**
ZFT	**Errachidia**	**3.74**	**191**	*e*P	**Pn**	**02 31 09.0**	**-3.4**
ZFT				*e*S	**Sn**	**02 31 48.0**	**-8.9**
ESDC	**Sonseca Array**	**3.96**	**355**	Pn	**Pn**	**02 31 16.4**	**+0.9**
	0.9nm,0.2s,baz=176,slow=12,SNR=17						
ESDC	**Sonseca Array**	**3.96**	**355**	P	**Pn**	**02 31 16.4**	**+0.9**
EBAD	**Badajoz**	**4.12**	**318**	P	**Pn**	**02 31 18.9**	**+1.1**
EBAD				S	**Sn**	**02 32 01.4**	**-5.1**
EBAD	**Badajoz**	**4.12**	**318**	Pn	**Pn**	**02 31 18.9**	**+1.1**
	0.5nm,0.1s,SNR=25						
EBAD				Sn	**Sn**	**02 32 04.6**	**-1.9**
	11nm,0.2s						
EBAD	**Badajoz**	**4.12**	**318**	P	**Pn**	**02 31 18.9**	**+1.2**
PBEJ	**Beja**	**4.17**	**305**	*e*Pn	**Pn**	**02 31 19.7**	**+1.1**
PBEJ				*e*Sn	**Sn**	**02 32 07.4**	**-0.6**
	7.5nm,0.6s						
PBEJ	**Beja**	**4.17**	**305**	Pn	**Pn**	**02 31 19.7**	**+1.1**
PBEJ				Sn	**Sn**	**02 32 07.4**	**-0.6**
	3.8nm,0.6s						
EVO	**Evora**	**4.56**	**309**	*e*Pn	**Pn**	**02 31 25.9**	**+1.9**
EVO				*e*Sn	**Sn**	**02 32 16.6**	**-1.0**
	22nm,0.5s						
PTEO	**Sao Teotonio**	**4.56**	**295**	*e*Pn	**Pn**	**02 31 25.7**	**+1.6**
PTEO				*e*Sn	**Sn**	**02 32 17.6**	**-0.2**
	17nm,0.7s						
PTEO	**Sao Teotonio**	**4.56**	**295**	Pn	**Pn**	**02 31 25.7**	**+1.6**
PTEO				Sn	**Sn**	**02 32 17.6**	**-0.2**
	8.3nm,0.7s						
EIBI	**Ibiza**	**5.09**	**48**	P	**Pn**	**02 31 30.5**	**-1.0**
EIBI				S	**Sn**	**02 32 23.6**	**-7.5**
EIBI	**Ibiza**	**5.09**	**48**	Pn	**Pn**	**02 31 30.5**	**-1.0**
	0.4nm,0.1s,SNR=7.9						
EIBI				Sn	**Sn**	**02 32 24.3**	**-6.8**
	3.0nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**5.09**	**48**	P	**Pn**	**02 31 30.5**	**-1.0**
PCBR	**Castelo Branco**	**5.17**	**324**	*e*Pn	**Pn**	**02 31 33.4**	**+0.7**
PCBR				*e*Sn	**Sn**	**02 32 30.0**	**-3.1**
PTOM	**Tomar**	**5.49**	**317**	*e*Pn	**Pn**	**02 31 38.0**	**+0.8**
PTOM				*e*Sn	**Sn**	**02 32 38.8**	**-2.4**
	6.4nm,0.4s						
PTOM	**Tomar**	**5.49**	**317**	Pn	**Pn**	**02 31 38.0**	**+0.8**
PTOM				Sn	**Sn**	**02 32 38.8**	**-2.4**
	3.2nm,0.4s						
MTE	**Manteigas**	**5.65**	**327**	*e*Pn	**Pn**	**02 31 39.7**	**+0.3**
MTE				*e*Sn	**Sn**	**02 32 44.7**	**-0.4**
PVIS	**Viseu**	**6.06**	**327**	*e*Pn	**Pn**	**02 31 45.6**	**+0.4**
PVIS				*e*Sn	**Sn**	**02 32 51.6**	**-3.8**
	4.3nm,0.8s						
PVIS	**Viseu**	**6.06**	**327**	Pn	**Pn**	**02 31 45.6**	**+0.4**
PVIS				Sn	**Sn**	**02 32 51.6**	**-3.8**
	2.2nm,0.8s						
PVRL	**Vila Real**	**6.45**	**331**	*e*Pn	**Pn**	**02 31 51.4**	**+0.7**
PVRL				*e*Sn	**Sn**	**02 33 01.1**	**-4.0**
ECAL	**Calabor**	**6.70**	**339**	Pn	**Pn**	**02 31 53.2**	**-1.0**
	SNR=7.9						
ECAL				Sn	**Sn**	**02 33 05.3**	**-6.1**
	SNR=7.9						
ETSF	**Etsaut**	**7.53**	**17**	*e*Pn	**Pn**	**02 32 04.0**	**-1.8**
SJPF	**Ste Jean**	**7.59**	**13**	*e*Pn	**Pn**	**02 32 05.1**	**-1.7**
EPF	**Esparros**	**7.89**	**21**	*e*Pn	**Pn**	**02 32 08.3**	**-2.6**
MTLF	**Montolieu**	**8.81**	**28**	*e*Pn	**P**	**02 32 20.6**	**-3.0**
LFF	**La Frestale**	**9.77**	**18**	*e*Pn	**P**	**02 32 34.1**	**-2.8**
CAF	**Calviac**	**10.13**	**23**	*e*Pn	**P**	**02 32 39.0**	**-2.9**
LMR	**La Mourre**	**10.85**	**42**	*e*Pn	**P**	**02 32 47.6**	**-4.1**
BGF	**Bois d’Agland**	**11.84**	**22**	*e*Pn	**P**	**02 33 01.7**	**-3.5**
PGF	**Pioggiola**	**11.87**	**51**	*e*Pn	**P**	**02 33 02.6**	**-3.0**

IDC 30 02:35:28.9±1.0**, 6.83S**×**105.91E, mb4.1**/6**, mb1 4.2**/6**, mb1mx3.9**/19**, mbtmp4.1**/6**, Error ellipse: s-maj=45.9km s-min=20.4km az=52.0, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.25**	**122**	*e*P	P	02 40 28.4	-0.7
	8.9nm,1.2s						
FITZ	**Fitzroy Crossi**	**22.25**	**122**	P	P	02 40 28.1	-1.0
	8.7nm,0.7s,baz=333,slow=4.5,SNR=7.5						
WRA	**Warramunga Arr**	**30.50**	**118**	P	P	02 41 43.8	-2.3
	2.1nm,0.7s,baz=297,slow=10,SNR=9.3						
WB2	**Warramunga Arr**	**30.52**	**118**	*e*P	P	02 41 44.8	-1.4
STKA	**Stephens Creek**	**41.56**	**132**	P	P	02 43 18.4	-1.6
	1.7nm,0.4s,baz=321,slow=7.1,SNR=7.5						
MKAR	**Makanchi Array**	**57.36**	**341**	P	P	02 45 19.2	-2.1
	0.5nm,0.5s,baz=162,slow=7.7,SNR=4.1						
BVAR	**Borovoye Array**	**66.79**	**338**	P	P	02 46 22.2	-2.2
	1.1nm,0.6s,baz=141,slow=7.5,SNR=8.7						
MAW	**Mawson**	**67.22**	**196**	P	P	02 46 24.1	-2.7
	1.6nm,1.0s,slow=4.0,SNR=4.6						
TXAR	**Lajitas Array**	**144.25**	**48**	PKP	PKPdf	02 55 07.3	-2.0
	0.6nm,0.7s,baz=309,slow=1.2,SNR=8.0						

BJI ***30*** *02:41:56.0, 31.10N×49.60E, h10^{km}, mb4.9*

IDC ***30*** *02:41:57.0±0.7, 31.16N×49.66E, mb3.9/18, mb1 4.0/21, mb1mx4.0/28, mbtmp3.9/21, ML3.9/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/24, Error ellipse: s-maj=17.5km s-min=15.1km az=138.0*

THR ***30*** *02:41:57.3±0.9, 30.88N×49.61E, h15^{km}, ML3.8*

OMAN ***30*** *02:41:58.5, 31.19N×49.95E, h4^{km}, Error ellipse: s-maj=123.7km s-min=16.6km az=323.0*

MOS ***30*** *02:42:00.2±0.8, 31.16N×49.54E, h33^{km}, mb4.4/9, Error ellipse: s-maj=12.6km s-min=8.2km az=96.7*

TEH ***30*** *02:42:02.5, 31.12N×49.76E, h10^{km}, Mn3.9*

CSEM ***30*** *02:42:02.8±0.1, 31.13N×49.70E, h62^{km}, mb4.1/7, Error ellipse: s-maj=2.0km s-min=1.4km az=132.0*

NEIC ***30*** *02:42:02.5, 31.12N×49.76E, h10^{km}, mb4.2/7, ML3.8(THR), MN3.9(TEH), After TEH.*

ISC 30 02:42:01.7±0.4**, 31.02N**±0.03×**49.78E**±0.04**, h51**^{km}±5^{km}**, n116, σ1**^{s}**31**/123**, mb4.1**/28**, 8C-6D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGAR	**Garneh**	**2.40**	**59**	Pn	**P**	**02 42 41.2**	**+1.7**
MIB	**Mutribah**	**2.43**	**241**	*e*P	**P**	**02 42 41.1**	**+1.2**
KBD	**Kabd**	**2.57**	**225**	*e*P	**P**	**02 42 44.1**	**+2.2**
KBD				*e*S	**S**	**02 43 16.8**	**+4.7**
SHI	**Shiraz**	**2.73**	**119**	Pn	**P**	**02 42 50.1**	**+5.9**
IKLH	**Kalahroud**	**2.76**	**33**	Pn	**P**	**02 42 45.6**	**+1.0**
RDF	**Al-Radifah**	**2.84**	**223**	*e*P	**P**	**02 42 47.7**	**+2.0**
RDF				*e*S	**S**	**02 43 23.0**	**+4.1**
IZEF	**Zefreh**	**2.87**	**48**	Pn	**P**	**02 42 47.1**	**+1.0**
IPAR	**Pars**	**3.06**	**112**	Pn	**P**	**02 42 50.4**	**+1.6**
NASN	**Na’in**	**3.13**	**55**	*e*Pn	**P**	**02 42 51.0**	**+1.2**
NASN	**Na’in**	**3.13**	**55**	*e*PN	**P**	**02 42 51.5**	**+1.6**
IMOK	**Mook**	**3.21**	**127**	Pn	**P**	**02 42 54.2**	**+3.2**
ASAO	**Ashtian**	**3.53**	**3**	*e*PN	**P**	**02 42 56.4**	**+1.0**
ASAO				AML	AML	02 44 02.1	
	comp=N,130nm,0.5s						
ASAO	**Ashtian**	**3.53**	**3**	*e*Pn	**P**	**02 42 56.0**	**+0.6**
IKOM	**Komasi**	**3.69**	**329**	Pn	**P**	**02 42 57.5**	**-0.1**
IQOM	**Qom**	**3.97**	**16**	Pn	**P**	**02 43 01.1**	**-0.5**
ICHK	**Chekchek**	**4.13**	**72**	Pn	**P**	**02 43 05.1**	**+1.1**
IMEH	**Mehriz**	**4.16**	**84**	Pn	**P**	**02 43 05.1**	**+0.8**
IVIS	**Veys**	**4.28**	**326**	Pn	**P**	**02 43 05.8**	**-0.2**
IVRN	**Varamin**	**4.29**	**22**	Pn	**P**	**02 43 06.1**	**-0.1**
IVRN				Sn	**S**	**02 43 52.7**	**-2.9**
IRAZ	**Razeghan**	**4.38**	**2**	Pn	**P**	**02 43 18.2**	**+11**
SNGE	**Sanandaj**	**4.55**	**334**	*e*Pn	**P**	**02 43 08.0**	**-1.8**
SNGE	**Sanandaj**	**4.55**	**334**	*e*PN	**P**	**02 43 08.8**	**-1.0**
SNGE				AML	AML	02 44 28.9	
	comp=N,82nm,0.5s						
ILIN	**Laeen**	**4.55**	**329**	Pn	**P**	**02 43 08.7**	**-1.2**
IDHR	**Dehrash**	**4.65**	**323**	Pn	**P**	**02 43 11.3**	**0.0**
IDMV	**Damavand**	**4.93**	**22**	Pn	**P**	**02 43 14.3**	**-0.8**
DAMV	**Damavand**	**4.96**	**21**	*e*Pn	**P**	**02 43 15.0**	**-0.5**
DAMV	**Damavand**	**4.96**	**21**	*e*PN	**P**	**02 43 15.3**	**-0.2**
DAMV				AML	AML	02 44 50.3	
	comp=N,41nm,0.8s						
THKV	**Tehran--Karaj**	**4.97**	**10**	*e*PN	**P**	**02 43 15.6**	**-0.2**
THKV	**Tehran--Karaj**	**4.97**	**10**	*e*Pn	**P**	**02 43 15.0**	**-0.8**
IBAF	**Bafgh**	**4.99**	**82**	Pn	**P**	**02 43 16.7**	**+0.7**
ILAS	**Lasjerd**	**5.11**	**31**	Pn	**P**	**02 43 17.6**	**0.0**
IFIR	**Firoozkooh**	**5.24**	**28**	Pn	**P**	**02 43 19.7**	**+0.2**
IFIR				Sn	**S**	**02 44 15.7**	**-3.7**
ISHM	**Shahmirzad**	**5.61**	**31**	Pn	**P**	**02 43 24.3**	**-0.3**
IANJ	**Anjiloo**	**5.63**	**37**	Pn	**P**	**02 43 23.7**	**-1.2**
KRBR	**Kerman**	**6.11**	**98**	*e*Pn	**P**	**02 43 31.0**	**-0.6**
KRBR	**Kerman**	**6.11**	**98**	*e*PN	**P**	**02 43 31.4**	**-0.2**
KRBR				AML	AML	02 44 46.6	
	comp=N,46nm,0.4s						
BNDS	**Bandar-Abbas**	**6.65**	**121**	*e*Pn	**P**	**02 43 37.0**	**-2.2**
BNDS	**Bandar-Abbas**	**6.65**	**121**	*e*PN	**P**	**02 43 37.5**	**-1.7**
BANOM	**Banah**	**7.66**	**130**	P	**P**	**02 43 50.7**	**-2.5**
	SNR=35						
BANOM				⇓S	**S**	**02 45 13.9**	**-5.5**
ASHO	**Ashiyiah**	**8.40**	**137**	P	**P**	**02 44 02.2**	**-1.3**
	SNR=24						
ASHO				⇓S	**S**	**02 45 32.3**	**-5.7**
BSY	**Bisya**	**10.57**	**139**	⇓P	**P**	**02 44 30.6**	**-2.6**
	SNR=17						
BSYO	**Bisya**	**10.60**	**139**	P	**P**	**02 44 30.6**	**-3.1**
	SNR=17						
SMDO	**Samad**	**10.82**	**135**	P	**P**	**02 44 36.3**	**-0.3**
	SNR=12						
ASF	**Jabal al Asfar**	**11.04**	**279**	Pn	**P**	**02 44 34.1**	**-5.6**
	comp=N,1.7nm,0.3s,baz=140,slow=4.5,SNR=7.3						
ASF				Sn	**S**	**02 46 30.4**	**-12**
	comp=N,0.5nm,0.3s,baz=12,slow=16,SNR=2.4						
ASF				Lg		02 47 59.9	
	comp=N,0.3nm,0.3s,baz=186,slow=20,SNR=3.0						
ASF				LR	LR	02 48 47.4	
	comp=N,62nm,20.6s,baz=309,slow=38						
JMDO	**Jabal Madar**	**11.38**	**137**	⇓P	**P**	**02 44 42.7**	**-1.5**
MALT	**Malatya**	**11.84**	**311**	*e*P	**P**	**02 44 46.1**	**-4.2**
EIL	**Elat**	**12.88**	**268**	Pn	**P**	**02 44 59.3**	**-4.9**
	comp=N,0.5nm,0.3s,baz=54,slow=5.4,SNR=5.4						
EIL				Lg		02 49 08.8	
	comp=N,0.6nm,0.3s,baz=256,slow=41,SNR=3.2						
EIL	**Elat**	**12.88**	**268**	*e*P	**P**	**02 44 58.1**	**-6.1**
	comp=N,9.1nm,0.8s						
WHFO	**Wadi Hawf**	**13.53**	**164**	⇑P	**P**	**02 45 10.6**	**-2.3**
ABTO	**Aybut**	**13.97**	**166**	⇑P	**P**	**02 45 16.5**	**-2.1**
CSS	**Prodhromos**	**14.35**	**290**	P	**P**	**02 45 25.4**	**+1.9**
	comp=N,13nm,0.9s						
CSS	**Prodhromos**	**14.35**	**290**	P	**P**	**02 45 25.4**	**+1.9**
	comp=N,13nm,0.9s						
BR131	**Keskin Array S**	**15.76**	**308**	*e*P	**P**	**02 45 46.7**	**+5.1**
	comp=N,2.1nm,0.7s						
BRTR	**Keskin Array B**	**15.76**	**308**	Pn	**P**	**02 45 37.9**	**-3.7**
	comp=N,0.1nm,0.3s,baz=132,slow=14,SNR=3.3						
SGKT	**Sivrigoynuk**	**17.23**	**308**	*i* P	**P**	**02 45 50.9**	**-9.2**
ULDT	**Uludag**	**19.07**	**304**	*i* P	**P**	**02 46 25.4**	**+2.9**
AB31	**Akbulak array**	**19.77**	**20**	*e*P	**P**	**02 46 29.6**	**-0.6**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AB31	**Akbulak array**	**19.77**	**20**	*e*P	**P**	**02 46 29.6**	**-0.6**
	comp=Z,3.0nm,0.6s						
KKAR	**Karatay Array**	**20.42**	**48**	*i* P	**P**	**02 46 39.0**	**+2.0**
IDI	**Anoyia**	**21.25**	**288**	P	**P**	**02 46 44.7**	**-0.8**
	comp=Z,7.7nm,0.6s,mb4.2,baz=212,slow=20,SNR=14						
AAK	**Ala-Archa**	**22.85**	**53**	P	**P**	**02 47 10.1**	**+8.8**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
VRI	**Vrincioaia**	**23.25**	**316**	⇑P	**P**	**02 47 17.3**	**+12**
MLR	**Muntele Rosu**	**23.53**	**315**	P	**P**	**02 47 11.2**	**+3.3**
	comp=Z,6.1nm,0.8s,mb4.1,baz=101,slow=5.2,SNR=9.1						
MLR	**Muntele Rosu**	**23.53**	**315**	⇑P	**P**	**02 47 10.8**	**+3.0**
MLR	**Muntele Rosu**	**23.53**	**315**	⇑P	**P**	**02 47 10.8**	**+3.0**
VOIR		**24.05**	**314**	⇑P	**P**	**02 47 18.1**	**+5.2**
VOIR		**24.05**	**314**	⇑P	**P**	**02 47 18.1**	**+5.2**
AKASG	**Malin Array Be**	**24.92**	**328**	P	**P**	**02 47 20.1**	**-1.2**
	comp=Z,0.2nm,0.3s,mb3.2,baz=125,slow=7.4,SNR=5.8						
BURAR	**Bucovina Array**	**25.06**	**318**	⇓P	**P**	**02 47 23.5**	**+0.9**
BURAR	**Bucovina Array**	**25.06**	**318**	⇓P	**P**	**02 47 23.5**	**+0.9**
ZRNK	**Zerenda**	**26.01**	**27**	*e*P	**P**	**02 47 31.1**	**-0.4**
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
DRGR		**26.13**	**315**	⇑P	**P**	**02 47 33.3**	**+0.7**
BVA0	**Borovoye Array**	**26.62**	**28**	*i* P	**P**	**02 47 37.2**	**+0.1**
BVAR	**Borovoye Array**	**26.62**	**28**	P	**P**	**02 47 36.7**	**-0.4**
	comp=Z,1.2nm,0.5s,mb3.6,baz=225,slow=6.3,SNR=9.6						
VOSK	**Vostochnaya**	**26.64**	**29**	P	**P**	**02 47 36.8**	**-0.5**
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
VOSK	**Vostochnaya**	**26.64**	**29**	P	**P**	**02 47 36.8**	**-0.5**
	comp=Z,2.0nm,0.9s,mb3.6						
KWP	**Kalwaria**	**27.55**	**320**	P	**P**	**02 47 42.6**	**-3.0**
KWP				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
KWP	**Kalwaria**	**27.55**	**320**	P	**P**	**02 47 42.6**	**-3.0**
	comp=Z,2.7nm,0.7s,mb4.0						
KWP	**Kalwaria**	**27.55**	**320**	P	**P**	**02 47 42.6**	**-3.0**
	comp=Z,2.7nm,0.7s,mb4.0						
TIP	**Timpagrande**	**28.10**	**296**	*e*P	**P**	**02 47 52.3**	**+1.5**
TIP	**Timpagrande**	**28.10**	**296**	*e*P	**P**	**02 47 52.3**	**+1.6**
PSZ	**Piszkesteto**	**28.34**	**315**	P	**P**	**02 47 42.0**	**-11**
MKAR	**Makanchi Array**	**29.55**	**48**	P	**P**	**02 48 04.2**	**+0.7**
	comp=Z,1.7nm,0.9s,mb3.8,baz=239,slow=8.5,SNR=7.4						
MORC	**Moravsky Berou**	**30.55**	**317**	P	**P**	**02 48 09.6**	**-2.8**
MORC				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.1						
MORC	**Moravsky Berou**	**30.55**	**317**	P	**P**	**02 48 09.6**	**-2.8**
	comp=Z,4.0nm,1.2s,mb4.1						
GERES	**GERESS Array B**	**32.51**	**314**	P	**P**	**02 48 28.8**	**-0.7**
	comp=Z,0.6nm,0.8s,mb3.5,baz=120,slow=7.9,SNR=3.5						
ZAL	**Zalesovo**	**33.98**	**37**	P	**P**	**02 48 42.5**	**+0.2**
	comp=Z,0.8nm,0.4s,mb4.0,baz=214,slow=15,SNR=2.7						
FINES	**FINESS Array B**	**34.17**	**340**	P	**P**	**02 48 41.4**	**-2.4**
	comp=Z,0.8nm,0.4s,mb4.0,baz=153,slow=8.5,SNR=20						
FINES	**FINESS Array B**	**34.17**	**340**	P	**P**	**02 48 41.4**	**-2.4**
HFS	**Hagfors**	**37.71**	**331**	P	**P**	**02 49 12.2**	**-1.5**
	comp=Z,1.4nm,0.6s,mb3.9,baz=124,slow=11,SNR=7.6						
NB2	**NORSAR Subarra**	**39.23**	**331**	P	**P**	**02 49 25.3**	**-1.1**
	comp=Z,0.7nm,0.8s,mb3.4,baz=128,slow=7.9						
NOA	**NORSAR Array B**	**39.23**	**331**	P	**P**	**02 49 24.9**	**-1.4**
	comp=Z,0.2nm,0.3s,mb3.3,baz=119,slow=8.9,SNR=2.7						
ARCES	**ARCESS Array B**	**40.95**	**347**	P	**P**	**02 49 39.5**	**-1.0**
	comp=Z,1.7nm,0.9s,mb3.7,baz=150,slow=9.3,SNR=7.2						
GTA	**Gaotai**	**41.29**	**64**	*e*P	**P**	**02 49 46.5**	**+2.9**
GTA				AP	pP	02 49 50.5	-6.7
GTA				XP	sP	02 49 53.3	-10
GTA				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
SONM	**Songino Array**	**45.80**	**52**	P	**P**	**02 50 21.2**	**+1.2**
	comp=Z,1.2nm,0.5s,mb4.0,baz=271,slow=8.0,SNR=4.3						
CMAR	**Chiang Mai Arr**	**46.04**	**94**	P	**P**	**02 50 22.6**	**+0.3**
	comp=Z,1.0nm,0.3s,mb4.2,baz=301,slow=8.5,SNR=5.7						
ULN	**Ulaanbaatar**	**46.24**	**52**	*e*P	**P**	**02 50 24.7**	**+1.2**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
ULN	**Ulaanbaatar**	**46.24**	**52**	*e*P	**P**	**02 50 24.7**	**+1.1**
	comp=Z,1.3nm,0.4s,mb4.2						
ULN	**Ulaanbaatar**	**46.24**	**52**	*e*P	**P**	**02 50 24.7**	**+1.2**
	comp=Z,1.3nm,0.4s,mb4.2						
KMI	**Kunming**	**46.74**	**83**	P	**P**	**02 50 29.0**	**+1.2**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
KMI	**Kunming**	**46.74**	**83**	P	**P**	**02 50 29.0**	**+1.2**
	comp=Z,15nm,0.7s,mb5.0						
XAN	**Xi’an**	**49.36**	**70**	P	**P**	**02 50 49.0**	**+1.0**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
MATP	**Matopo**	**55.08**	**205**	P	**P**	**02 51 31.6**	**+0.6**
	comp=Z,3.1nm,0.8s,mb4.4,baz=75,slow=6.3,SNR=5.0						
DBIC	**Dimbokro**	**56.44**	**256**	P	**P**	**02 51 41.0**	**+0.2**
	comp=Z,4.7nm,1.0s,mb4.5,baz=70,slow=11,SNR=4.5						
DBIC	**Dimbokro**	**56.44**	**256**	P	**P**	**02 51 41.0**	**+0.1**
LBTB	**Lobatse**	**60.33**	**205**	P	**P**	**02 52 09.0**	**+1.2**
	comp=Z,3.1nm,0.6s,mb4.5,baz=53,slow=13,SNR=4.1						
LBTB	**Lobatse**	**60.33**	**205**	P	**P**	**02 52 09.0**	**+1.2**
YHNB	**Yeheng**	**62.65**	**76**	*e*P	**P**	**02 52 24.7**	**+1.2**
YHNB	**Yeheng**	**62.65**	**76**	*e*P	**P**	**02 52 24.7**	**+1.2**
BOSA	**Boshof**	**63.73**	**204**	P	**P**	**02 52 31.4**	**+0.8**
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
BOSA	**Boshof**	**63.73**	**204**	P	**P**	**02 52 30.9**	**+0.3**
	comp=Z,1.7nm,0.7s,mb4.2,baz=59,slow=5.9,SNR=3.1						
BOSA	**Boshof**	**63.73**	**204**	P	**P**	**02 52 31.4**	**+0.8**

	comp=Z,5.0nm,0.9s,mb4.5						
BOSA	Boshof	63.73	204	P	P	02 52 31.4	+0.8
	comp=Z,4.9nm,0.9s,mb4.5						
ILAR	Eielson Array	83.64	7	P	P	02 54 25.3	-0.1
	comp=Z,0.9nm,0.7s,mb4.0,baz=329,slow=3.9,SNR=8.0						
YKA	Yellowknife Ar	85.98	353	P	P	02 54 36.8	-0.2
	comp=Z,0.2nm,0.3s,mb3.9,baz=2.0,slow=5.3,SNR=4.7						
YKA	Yellowknife Ar	85.98	353	P	P	02 54 36.9	-0.1

SKHL 30 02:48:13.3±0.2, 51.97N×138.82E, h12^{km}±3^{km}, mb3.7/4, 1C, Primorye

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NKL	Nikolayevsk	1.64	43	⇑*i*Pg	Pg	02 48 42.6	-3.5
NKL				AMB	AMB	02 48 44.3	
	50nm,0.3s						
NKL				AMB	AMB	02 48 44.3	
	90nm,0.3s						
NKL				AMB	AMB	02 48 44.3	
	110nm,0.2s						
NKL				*e*Sg	Sg	02 49 03.8	-4.2
NKL				A		02 49 05.0	
	220nm,0.5s						
NKL				A		02 49 05.0	
	270nm,0.5s						
GRNR	Gornyy	1.93	232	*e*Pn	Pn	02 48 46.4	+0.1
GRNR				*e*Pg	Pg	02 48 47.9	-3.9
GRNR				AMB	AMB	02 48 48.0	
	27nm,0.5s						
GRNR				*e*Sn	Sn	02 49 10.8	+0.2
GRNR				*e*Sg	Sg	02 49 12.9	-4.6
GRNR				A		02 49 13.1	
	86nm,0.5s						
TYV	Tymovskoe	2.65	113	*e*Pg	Pg	02 49 01.0	-5.2
TYV				sPg		02 49 06.0	
TYV				AMB	AMB	02 49 12.7	
	9.0nm,0.7s						
TYV				*e*Sg	Sg	02 49 36.0	-5.4
TYV				A		02 49 43.2	
	74nm,1.0s						
TYV				A		02 49 43.2	
	17nm,0.6s						
EKMR	Ekimchan	3.75	289	*e*Pg	Pg	02 49 22.1	-6.1
EKMR				AMB	AMB	02 49 25.5	
	4.0nm,0.6s						
EKMR				AMB	AMB	02 49 25.5	
	3.0nm,0.6s						
EKMR				AMB	AMB	02 49 25.5	
	5.0nm,0.6s						
EKMR				sPg		02 49 28.4	
EKMR				*e*Sg	Sg	02 50 09.2	-9.0
EKMR				A		02 50 11.5	
	76nm,0.6s						
EKMR				A		02 50 11.5	
	38nm,0.6s						
KLR	Kul'dur	5.27	241	*e*rx	rx	02 50 14.0	
KLR				*e*rx	rx	02 51 06.7	
BMKR	Bomnak	6.58	299	*e*rx	rx	02 50 17.9	
BMKR				*e*Sg	Sg	02 51 39.0	-13
BMKR				A		02 51 48.8	
	11nm,0.8s						
YASR	Yasnyy	6.73	286	*e*Pg	Pg	02 50 14.8	-13
YASR				*e*Sg	Sg	02 51 43.0	-14
YASR				A		02 51 53.2	
	20nm,0.7s						
YASR				A		02 51 53.2	
	5.0nm,0.7s						
TEY	Ternei	7.09	193	*e*Sg	Sg	02 51 56.0	-13

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*IDC **30** 02:57:41.3±3.5, 5.77S×147.58E, h91^{km}±34^{km}, mb3.9/5, mb1 4.1/8, mb1mx3.9/17, mbtmp4.3/8, Error ellipse: s-maj=29.0km s-min=23.5km az=87.0*

*NEIC **30** 02:57:42.6±1.6, 5.75S×147.63E, h104^{km}±16^{km}, mb4.5/5, Error ellipse: s-maj=13.5km s-min=11.5km az=106.0*

ISC 30 02:57:41.5±1.7, 5.80S±0.09×147.6E±0.1, h107^{km}±17^{km}, n18, σ0^{s}63/22, mb4.0/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.61	187	P	P	02 58 37.3	+0.7
	32nm,0.3s,baz=355,slow=6.9,SNR=86						
PMG				S	S	02 59 17.0	-1.7
	27nm,0.3s,baz=30,slow=20,SNR=6.0						
PMG	Port Moresby	3.61	187	P	P	02 58 37.4	+0.7
PMG				*e*		02 58 42.6	
PMG				*e*Sn	S	02 59 14.1	-4.6
PMG				S	S	02 59 17.0	-1.7
CTA	Charters Tower	14.27	185	*e*P	P	03 01 03.7	+4.0
	3.7nm,0.6s						
CTA	Charters Tower	14.27	185	P	P	03 01 00.2	+0.5
	0.5nm,0.3s,baz=7.6,slow=10,SNR=7.2						
CTAO	Charters Tower	14.27	185	*e*P	P	03 01 03.5	+3.8
	6.5nm,0.7s						
KAKA	Kakadu	16.45	244	*e*P	P	03 01 27.7	+0.4
	16nm,0.6s						
WRAB	Tennant Creek	19.06	221	*e*P	P	03 01 58.3	+0.3
	16nm,0.9s						
WB2	Warramunga Arr	19.07	221	*e*P	P	03 01 58.5	+0.4
WRA	Warramunga Arr	19.08	221	P	P	03 01 57.8	-0.4
	1.3nm,0.3s,baz=43,slow=11,SNR=60						
WRA				S	S	03 05 23.4	0.0
	0.2nm,0.3s,baz=39,slow=22,SNR=3.8						
DZM	Mont Dzumac	24.37	133	P	P	03 02 51.4	+0.4
	6.3nm,0.7s,mb4.1,baz=335,slow=17,SNR=5.3						
FITZ	Fitzroy Crossi	24.68	238	*e*P	P	03 02 54.6	+0.7
	30nm,0.8s,mb4.8						
FITZ	Fitzroy Crossi	24.68	238	P	P	03 02 54.5	+0.5
	38nm,0.8s,mb4.9,baz=47,slow=5.4,SNR=43						
STKA	Stephens Creek	26.55	191	P	P	03 03 11.0	-0.2
	0.8nm,0.4s,mb3.6,baz=4.4,slow=9.8,SNR=3.8						
STKA	Stephens Creek	26.55	191	P	P	03 03 11.0	-0.2
MBWA	Marble Bar	31.02	238	*e*P	P	03 03 50.9	-0.4
MJAR	Matsushiro Arr	43.02	349	P	P	03 05 31.7	-0.4
	2.1nm,0.8s,mb3.9,baz=172,slow=9.0,SNR=7.5						
MAJO	Matsushiro	43.02	349	*e*P	P	03 05 32.4	+0.3
	8.8nm,0.9s,mb4.5						
MKAR	Makanchi Array	77.72	320	P	P	03 09 27.1	-1.0
	0.3nm,0.4s,mb3.4,baz=106,slow=7.8,SNR=4.1						

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*CRAAG **30** 02:58:52.8, 35.58N×3.47W, Mb3.6*

*MDD **30** 02:58:52.9±0.2, 35.72N×3.53W, mbLg3.2/6, Error ellipse: s-maj=2.2km s-min=2.0km az=74.0, PRXIMO*

*INMG **30** 02:58:53.8±1.3, 35.75N×3.49W, ML2.8, Error ellipse: s-maj=3.9km s-min=2.5km az=45.0*

*CSEM **30** 02:58:53.0±0.1, 35.61N×3.48W, h35^{km}, MD3.8, Error ellipse: s-maj=2.1km s-min=1.6km az=69.0*

*SFS **30** 02:58:53.0, 35.76N×3.49W*

*CNRM **30** 02:58:53.8, 35.63N×3.46W, h19^{km}, MD3.8*

*NEIC **30** 02:58:53.8, 35.77N×3.48W, MN2.7(MDD), After MDD.*

*LDG **30** 02:58:54.9±0.3, 35.73N×3.33W, h10^{km}, Ml3.5/1, Error ellipse: s-maj=6.7km s-min=2.4km az=177.0*

ISC 30 02:58:51.7±0.2, 35.70N±0.01×3.53W±0.02, h10^{km}, n109, σ1^{s}43/178, 2C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALB	Alboran	0.47	59	⇑P	Pg	02 59 01.2	0.0
EALB				S	Sg	02 59 06.6	-0.9
EALB	Alboran	0.47	59	⇑Pg	Pg	02 59 01.2	0.0
	SNR=18						
EALB				Lg		02 59 06.6	
	2µm,0.3s						
MPAL	Palemas	0.58	216	*i* P	Pg	02 59 04.0	+0.6
MPAL				*i* S	Sg	02 59 12.0	+0.8
EMEL	Melilla	0.61	130	Pg	Pg	02 59 05.5	+1.4
	530nm,0.1s,SNR=70						
EMEL				Lg		02 59 13.6	
	831nm,0.1s,SNR=28						
EMLI	Melilla	0.61	130	P	Pb	02 59 05.5	+1.4
	530nm,0.1s,SNR=70						
EMLI				S	Sg	02 59 13.6	+1.2
	831nm,0.1s,SNR=28						
MELI	Melilla	0.63	130	Pg	Pg	02 59 05.7	+1.3
MELI				Lg		02 59 13.3	
MELI	Melilla	0.63	130	*i* P	Pb	02 59 05.7	+1.4
MELI				*i* S	Sg	02 59 13.3	+0.5
TOU	Touzarine	0.76	194	*i* P	Pb	02 59 07.0	+0.5
TOU				*i* S	Sb	02 59 16.0	-0.6
ZAI	Zaio	0.97	138	*i* P	Pb	02 59 09.0	-1.1
ZAI				*i* S	Sb	02 59 21.0	-1.7
EGUA	Guajares	1.14	358	Pg	Pg	02 59 12.7	-1.7
	5.1nm,0.2s,SNR=7.9						
EGUA				Lg		02 59 27.1	
	SNR=7.9						
EBER	Berja	1.30	23	P	Pb	02 59 15.2	-0.6
EBER				S	Sb	02 59 31.3	-1.2
EBER	Berja	1.30	23	Pg	Pg	02 59 15.5	-2.3
	11nm,0.2s,SNR=29						
EBER				Lg		02 59 33.4	
	463nm,0.5s,SNR=4.0						
EBER	Berja	1.30	23	P	Pb	02 59 15.2	-0.7
	11nm,0.2s,SNR=29						
EBER				S	Sb	02 59 31.3	-1.2
	463nm,0.5s,SNR=4.0						
EMIJ	Mijas	1.33	311	Pg	Pg	02 59 16.5	-1.8
	38nm,0.2s,SNR=65						
EMIJ				Lg		02 59 33.9	
	154nm,0.3s,SNR=10						
EMIJ	Mijas	1.33	311	P	Pb	02 59 16.5	+0.2
	38nm,0.2s,SNR=65						
EMIJ				S	Sb	02 59 33.9	+0.7
	154nm,0.3s,SNR=10						
ERON	Agron	1.34	350	P	Pb	02 59 15.7	-0.7
ERON				S	Sb	02 59 35.0	+1.5
ERON	Agron	1.34	350	Pg	Pg	02 59 16.0	-2.5
	8.4nm,0.2s,SNR=11						
ERON				Lg		02 59 35.0	
	96nm,0.4s,SNR=9.5						
ERON	Agron	1.34	350	P	Pb	02 59 15.7	-0.7
	8.4nm,0.2s,SNR=11						
ERON				S	Sb	02 59 35.0	+1.5
	96nm,0.4s,SNR=9.5						
DKH	Dar Kharkhour	1.51	263	*i* P	Pn	02 59 18.5	-0.5
DKH				*i* S	Sb	02 59 37.5	-0.9
ELOJ	Sierra Loja	1.53	341	Pg	Pn	02 59 20.7	+1.4
	2.2nm,0.2s,SNR=23						
ELOJ				Lg		02 59 41.2	
	90nm,0.6s,SNR=14						
ELOJ	Sierra Loja	1.53	341	P	Pn	02 59 20.7	+1.4
	2.2nm,0.2s,SNR=23						
ELOJ				S	Sb	02 59 41.2	+2.0
	90nm,0.6s,SNR=14						
REAL	Reales	1.57	300	*i* P	Pn	02 59 20.0	+0.1
REAL				*i* S	Sb	02 59 40.0	-0.3
ECOG	Cogollos-Vega	1.58	359	Pn	Pn	02 59 20.6	+0.7
	6.3nm,0.2s,SNR=64						
ECOG				Sn	Sn	02 59 40.7	+0.2
	SNR=7.9						
MDAL	Dalia	1.60	278	*i* P	Pn	02 59 21.0	+0.7
MDAL				*i* S	Sb	02 59 40.0	-1.1
ENIJ	Nijar	1.66	40	Pn	Pn	02 59 19.0	-2.1
	13nm,0.4s,SNR=8.3						
TZK	Tazeka	1.69	199	*i* P	Pn	02 59 21.0	-0.6
TZK				*i* S	Sn	02 59 41.0	-2.4
OLHC	Oulhaca	1.78	104	P	Pn	02 59 26.0	+3.2
ALJ	Aljibe	1.91	296	*i* P	Pn	02 59 28.5	+3.8
ALJ				*i* S	Sn	02 59 51.0	+2.0
ODZI	Dziouia	1.92	102	P	Pn	02 59 27.0	+2.2
LIJA	Lijar	1.94	309	Pn	Pn	02 59 28.2	+3.2
LIJA				Sn	Sn	02 59 52.0	+2.3
LIJA	Lijar	1.94	309	*i* P	Pn	02 59 28.2	+3.1
LIJA				*e*S	Sn	02 59 52.0	+2.3
TSY	Tnine Yamani	2.02	261	*e*P	Pn	02 59 26.5	+0.3
TSY				*e*S	Sn	02 59 52.0	+0.3
EQES	Quesada	2.13	10	P	Pn	02 59 29.3	+1.4
EQES				S	Sn	02 59 56.8	+2.1
EQES	Quesada	2.13	10	Pn	Pn	02 59 29.3	+1.4
	3.6nm,0.1s,SNR=70						
EQES				Sn	Sn	02 59 54.6	0.0
	174nm,0.4s,SNR=5.0						
EQES	Quesada	2.13	10	P	Pn	02 59 29.3	+1.4
	3.6nm,0.1s,SNR=70						
EQES				S	Sn	02 59 56.8	+2.1
	174nm,0.4s,SNR=5.0						
ESPR	Espera	2.22	303	P	Pn	02 59 31.9	+2.9
ESPR				S	Sn	02 59 59.0	+2.2
ESPR	Espera	2.22	303	Pn	Pn	02 59 31.9	+2.9
	7.0nm,0.3s,SNR=14						
ESPR				Sn	Sn	02 59 57.8	+1.0
	18nm,0.7s,SNR=5.1						
ESPR	Espera	2.22	303	P	Pn	02 59 31.9	+2.8
	7.0nm,0.3s,SNR=14						
ESPR				S	Sn	02 59 59.0	+2.2
	18nm,0.7s,SNR=5.1						
EHUE	Huescar	2.24	19	P	Pn	02 59 31.0	+1.6
EHUE				S	Sn	02 59 59.9	+2.5
EHUE	Huescar	2.24	19	Pn	Pn	02 59 31.0	+1.6
	2.9nm,0.2s,SNR=8.3						
EHUE				Sn	Sn	02 59 58.0	+0.6
	2.9nm,0.2s,SNR=6.3						
EHUE	Huescar	2.24	19	P	Pn	02 59 31.0	+1.5
	2.9nm,0.2s,SNR=8.3						
EHUE				S	Sn	02 59 59.9	+2.5
	2.9nm,0.2s,SNR=6.3						
EBAN	Banos Encina	2.47	355	P	Pn	02 59 34.7	+2.0
EBAN				S	Sn	03 00 05.2	+1.9
EBAN	Banos Encina	2.47	355	Pn	Pn	02 59 34.7	+2.0
	1.6nm,0.2s,SNR=7.9						
EBAN				Sn	Sn	03 00 03.1	-0.1
	SNR=7.9						
EBAN	Banos Encina	2.47	355	P	Pn	02 59 34.7	+2.0
	1.6nm,0.2s,SNR=7.9						
EBAN				S	Sn	03 00 05.2	+1.9
	SNR=7.9						
EADA	Adamuz	2.61	341	P	Pn	02 59 35.6	+0.9
EADA				S	Sn	03 00 10.3	+3.6
EADA	Adamuz	2.61	341	Pn	Pn	02 59 35.6	+0.9
	9.9nm,0.3s,SNR=17						
EADA				Sn	Sn	03 00 08.4	+1.8
	48nm,0.4s,SNR=5.0						
EADA	Adamuz	2.61	341	P	Pn	02 59 35.6	+1.0
	9.9nm,0.3s,SNR=17						
MIF	Mishlifen	2.68	212	*i* P	Pn	02 59 34.0	-1.7
MIF				*i* S	Sn	03 00 03.0	-5.5
EMUR	La Murta	2.82	40	P	Pn	02 59 36.1	-1.6
EMUR				S	Sn	03 00 06.4	-5.7
EMUR	La Murta	2.82	40	Pn	Pn	02 59 36.1	-1.6
	3.9nm,0.3s,SNR=7.9						
EMUR				Sn	Sn	03 00 11.1	-1.0
	1.6nm,0.8s,SNR=7.9						
EMUR	La Murta	2.82	40	P	Pn	02 59 36.1	-1.6
	3.9nm,0.3s,SNR=7.9						
CZD	Col de Zad	2.94	206	*i* P	Pn	02 59 38.0	-1.4
CZD				*i* S	Sn	03 00 09.0	-6.1
EVIA	Vianos	3.05	15	Pn	Pn	02 59 47.8	+6.9
	41nm,0.4s,SNR=7.9						
EVIA				Sn	Sn	03 00 17.1	-0.8
	22nm,0.5s,SNR=7.9						
EVIA	Vianos	3.05	15	S	Sn	03 00 17.1	-0.8
	22nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	3.26	310	Pn	Pn	02 59 44.6	+0.6
	1.9nm,0.2s,SNR=22						
EMIN				Sn	Sn	03 00 22.3	-1.1
	3.6nm,0.3s,SNR=5.0						
EMIN	Mina Concepcio	3.26	310	P	Pn	02 59 44.6	+0.6
	1.9nm,0.2s,SNR=22						
EMIN				S	Sn	03 00 22.3	-1.0
	3.6nm,0.3s,SNR=5.0						
ETOB	Tobarra	3.34	28	Pn	Pn	02 59 45.3	+0.2
	12nm,0.2s,SNR=21						
ETOB				Sn	Sn	03 00 22.5	-2.8
	SNR=7.9						
ETOB	Tobarra	3.34	28	P	Pn	02 59 45.3	+0.2
	12nm,0.2s,SNR=21						
EGRO	El Granado	3.67	301	Pn	Pn	02 59 50.2	+0.4
	1.1nm,0.3s,SNR=13						
EGRO				Sn	Sn	03 00 32.2	-1.5
	12nm,0.6s,SNR=5.0						
EGRO	El Granado	3.67	301	P	Pn	02 59 50.2	+0.4
	1.1nm,0.3s,SNR=13						
EGRO				S	Sn	03 00 32.2	-1.5
	12nm,0.6s,SNR=5.0						
ZFT	Errachidia	3.72	191	*e*P	Pn	02 59 49.0	-1.4
ZFT				*i* S	Sn	03 00 30.5	-4.3
EANR	'Ain N'Sour	3.77	85	P	Pn	03 00 04.0	+13
ETRT	Tiaret	3.95	93	P	Pn	03 00 05.0	+11
ESDC	Sonseca Array	3.99	355	Pn	Pn	02 59 54.3	+0.1
	0.2nm,0.1s,baz=177,slow=12,SNR=19						
ESDC	Sonseca Array	3.99	355	P	Pn	02 59 54.3	0.0
	0.2nm,0.1s,slow=12,SNR=19						
ESLA	Sonseca Array	3.99	355	*e*Pn	Pn	02 59 55.0	+0.7
ESLA	Sonseca Array	3.99	355	*e*Pn	Pn	02 59 55.0	+0.7
EBEN	Beniarda	3.99	40	Pn	Pn	02 59 55.8	+1.4
	1.9nm,0.5s,SNR=7.9						
EBEN				Sn	Sn	03 00 38.6	-3.2
	SNR=7.9						
EBEN	Beniarda	3.99	40	P	Pn	02 59 55.8	+1.4
	1.9nm,0.5s,SNR=7.9						
ECHA	Ech Chlef	4.00	82	P	Pn	03 00 06.0	+12
EBAD	Badajoz	4.13	319	Pn	Pn	02 59 57.1	+0.8
	0.4nm,0.2s,SNR=12						
EBAD				Sn	Sn	03 00 43.6	-1.6
	9.3nm,0.3s,SNR=4.5						
EBAD	Badajoz	4.13	319	P	Pn	02 59 57.1	+0.8
	0.4nm,0.2s,SNR=12						
EBAD				S	Sn	03 00 43.7	-1.6
	9.3nm,0.3s,SNR=4.5						
EBNR	Beni Rached	4.14	80	P	Pn	03 00 07.5	+11
PBEJ	Beja	4.18	305	*e*Pn	Pn	02 59 57.6	+0.5
PBEJ				*e*Sn	Sn	03 00 45.3	-1.4
	12nm,0.7s						
PBEJ	Beja	4.18	305	*e*Pn	Pn	02 59 57.6	+0.5
PBEJ				*e*Sn	Sn	03 00 45.3	-1.4
	12nm,0.7s						
ECHE	Chera	4.39	27	Pn	Pn	02 59 59.8	-0.2
	0.6nm,0.6s,SNR=4.0						
EVO	Evora	4.57	310	*e*Pn	Pn	03 00 04.3	+1.8
EVO				*e*Sn	Sn	03 00 54.0	-2.3
	21nm,0.4s						
PTEO	Sao Teotonio	4.57	295	*e*Pn	Pn	03 00 03.8	+1.2
PTEO				*e*Sn	Sn	03 00 55.5	-0.9
	24nm,0.4s						
PTEO	Sao Teotonio	4.57	295	Pn	Pn	03 00 03.8	+1.2
PTEO				Sn	Sn	03 00 55.5	-0.9
	12nm,0.4s						
EIBI	Ibiza	5.11	48	P	Pn	03 00 08.3	-1.9
EIBI				S	Sn	03 01 02.8	-7.2
EIBI	Ibiza	5.11	48	Pn	Pn	03 00 08.3	-1.9
	1.5nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	03 01 04.1	-5.8
	1.9nm,0.7s,SNR=7.9						
EIBI	Ibiza	5.11	48	P	Pn	03 00 08.3	-1.9
	1.5nm,0.2s,SNR=7.9						
PCBR	Castelo Branco	5.19	324	*e*Pn	Pn	03 00 11.2	-0.1
PCBR				*e*Sn	Sn	03 01 07.0	-4.9
	8.1nm,0.5s						
PCBR	Castelo Branco	5.19	324	*e*Pn	Pn	03 00 11.2	-0.1
PCBR				*e*Sn	Sn	03 01 07.0	-4.9
	8.1nm,0.5s						
EMOS	Mosqueruela	5.25	26	P	Pn	03 00 14.5	+2.4
EMOS	Mosqueruela	5.25	26	Pn	Pn	03 00 10.7	-1.4
	0.4nm,0.7s,SNR=7.9						
EMOS	Mosqueruela	5.25	26	P	Pn	03 00 14.5	+2.4
EMHD	Djebel Mahouad	5.28	83	P	Pn	03 00 14.0	+1.4
PTOM	Tomar	5.51	317	*e*Pn	Pn	03 00 15.9	+0.1
PTOM				*e*Sn	Sn	03 01 16.2	-3.8
	12nm,0.6s						
PTOM	Tomar	5.51	317	Pn	Pn	03 00 15.9	+0.1
PTOM				Sn	Sn	03 01 16.2	-3.8
	5.9nm,0.6s						
MTE	Manteigas	5.67	327	*e*Pn	Pn	03 00 18.8	+0.8
MTE				*e*Sn	Sn	03 01 21.0	-2.9
	18nm,0.5s						
MTE	Manteigas	5.67	327	Pn	Pn	03 00 18.8	+0.8
MTE				Sn	Sn	03 01 21.0	-2.9
	8.9nm,0.5s						
PVIS	Viseu	6.08	327	*e*Pn	Pn	03 00 24.0	+0.2
PVIS				*e*Sn	Sn	03 01 29.9	-4.3
	7.1nm,0.6s						
PVIS	Viseu	6.08	327	Pn	Pn	03 00 24.0	+0.2
PVIS				Sn	Sn	03 01 29.9	-4.3
	3.5nm,0.6s						
ETOS	Mallorca	6.46	49	Pn	Pn	03 00 26.6	-2.7
	0.8nm,0.2s,SNR=7.9						
ETOS	Mallorca	6.46	49	P	Pn	03 00 26.6	-2.7
PVRL	Vila Real	6.47	331	*e*Pn	Pn	03 00 29.6	+0.3
PVRL				*e*Sn	Sn	03 01 38.5	-5.5
	7.1nm,0.5s						
PVRL	Vila Real	6.47	331	Pn	Pn	03 00 29.6	+0.3
PVRL				Sn	Sn	03 01 38.5	-5.5
	3.5nm,0.5s						
ECAL	Calabor	6.72	339	Pn	Pn	03 00 33.7	+0.8
	2.7nm,0.3s,SNR=7.9						
ECAL				Sn	Sn	03 01 44.8	-5.5
	1.8nm,0.3s,SNR=7.9						
ECAL	Calabor	6.72	339	P	Pn	03 00 33.8	+0.9
ELOB	Lobios	7.11	331	Pn	Pn	03 00 35.9	-2.4
	1.3nm,0.5s,SNR=7.9						
ELOB				Sn	Sn	03 01 51.8	-8.1
	0.9nm,0.6s,SNR=7.9						
ETSF	Etsaut	7.55	17	*e*Pn	Pn	03 00 41.7	-2.9
SJPF	Ste Jean	7.62	13	*e*Pn	Pn	03 00 42.9	-2.6
EALK	Alkurruntz	7.67	11	Pn	Pn	03 00 45.8	-0.5
	2.8nm,0.4s,SNR=7.9						
EALK				Sn	Sn	03 02 06.0	-8.2
	3.3nm,0.6s,SNR=7.9						
EARI	Arriondas	7.71	351	P	Pn	03 00 48.6	+1.9
EARI	Arriondas	7.71	351	P	Pn	03 00 48.6	+1.9
EPF	Esparros	7.91	21	*e*Pn	Pn	03 00 46.8	-2.8
LFF	La Frestale	9.79	18	*e*Pn	P	03 01 11.7	-3.9
PGF	Pioggiola	11.89	51	*e*Pn	P	03 01 39.6	-4.6

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*ATH **30** 03:01:32.4, 34.19N×26.58E, h18^{km}±2^{km}, MD3.7/5*

*NEIC **30** 03:01:32.7, 34.21N×26.61E, h12^{km}, MD3.7(ATH), After ATH.*

*CSEM **30** 03:01:34.9±0.1, 34.28N×26.71E, h40^{km}, MD3.7, Error ellipse: s-maj=3.1km s-min=2.6km az=89.0*

*HLW **30** 03:01:35.2, 34.37N×26.67E, h19^{km}, Mb3.2*

*IDC **30** 03:01:42.5±3.4, 34.93N×26.51E, h64^{km}±28^{km}, mb3.3/3, mb1 3.2/6, mb1mx3.1/23, mbtmp3.3/6, ML3.4/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/23, Error ellipse: s-maj=61.9km s-min=28.3km az=179.0*

ISC 30 03:01:35.3±0.3, 34.26N±0.03×26.61E±0.05, h69^{km}±9^{km}, n39, σ0^{s}95/43, mb3.5/3, 8C-3D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.97	309	*e*PN	P	03 01 51.1	-2.6
XRY				*e*SN	S	03 02 05.5	-1.9
NPS	Neapolis	1.29	321	*e*PN	P	03 01 57.5	-0.5
NPS				*e*SN	S	03 02 15.5	+0.7
KARP	Karpathos	1.36	19	*e*PN	P	03 01 59.6	+0.6
IDI	Anoyia	1.75	306	P	P	03 02 05.3	+1.1
	3.1nm,0.3s,baz=82,slow=17,SNR=32						
VAM	Vamos	2.29	301	*e*PN	P	03 02 12.5	+0.8
VAM	Vamos	2.29	301	*e*Pn	P	03 02 14.0	+2.3
ARG	Arkhangelos	2.31	32	*e*PB	P	03 02 13.0	+1.0
SLUM		3.00	203	⇑P	P	03 02 22.1	+0.4
SLUM				S	S	03 02 57.0	+0.4
AKAS	Kas	3.15	50	*i* P	P	03 02 24.6	+0.9
HMAT	Matruh	3.18	172	⇑P	P	03 02 25.3	+1.1
HMAT				S	S	03 03 00.9	-0.2
GOLH	Golhisar	3.82	38	*i* P	P	03 02 33.8	+0.7
DNZL	Cakiroluk	3.95	29	*i* P	P	03 02 34.8	-0.2
SWA1		5.04	189	⇓P	P	03 02 50.9	+0.8
SWA1				S	S	03 03 45.8	-1.8
SWA2		5.10	191	⇓P	P	03 02 51.6	+0.7
KOT	Kottamia	6.18	133	P	P	03 03 05.3	-0.7
HSAF	As Saff	6.25	136	P	P	03 03 06.6	-0.3
GLL	Jalalah	6.37	136	P	P	03 03 09.0	+0.5
MEST	Erdemli	6.58	67	*i* P	P	03 03 12.5	+1.0
AMAG	Maghara	6.64	121	⇓P	P	03 03 11.4	-1.0
HRSH	Kfar Ka'horesh	6.84	117	⇑P	P	03 03 14.1	-1.0
RSH		6.84	117	P	P	03 03 14.1	-1.1
ZNM		7.22	131	⇑P	P	03 03 20.2	-0.2
HFRF	Wahat Farafira	7.24	168	⇑P	P	03 03 20.6	0.0
HFRF	Wahat Farafira	7.24	168	P	P	03 03 20.6	0.0
HNKL	Nakhl	7.60	123	P	P	03 03 24.6	-1.0
BRTR	Keskin Array B	7.83	44	P	P	03 03 28.4	-0.4
	0.1nm,0.3s,baz=217,slow=12,SNR=5.6						
ASUT		8.05	147	P	P	03 03 32.2	+0.3
HDK1	Dakhla	9.02	164	⇑P	P	03 03 45.7	+0.7
AKRG	Al Kharijah	9.35	158	P	P	03 03 49.8	+0.2
GTR	Jabal at Tayr	9.37	158	⇑P	P	03 03 50.0	+0.3
GTR	Jabal at Tayr	9.37	158	P	P	03 03 50.0	+0.2
HDK2	Wahat Dakhilah	10.11	168	⇑P	P	03 04 00.8	+0.8
AKASG	Malin Array Be	16.54	6	P	P	03 05 21.0	-3.0
	0.2nm,0.3s,baz=193,slow=11,SNR=2.8						
AKASG	Malin Array Be	16.54	6	P	P	03 05 21.0	-3.0
GERES	GERESS Array B	17.45	331	P	P	03 05 35.1	-0.3
	0.1nm,0.3s,baz=153,slow=11,SNR=2.7						
HFS	Hagfors	27.23	346	LR	LR	03 18 04.4	
	comp=Z,24nm,20.3s,baz=279,slow=37						
NOA	NORSAR Array B	28.58	344	P	P	03 07 25.9	-0.8
	0.4nm,0.8s,mb3.1,baz=148,slow=9.1,SNR=2.4						
ARCES	ARCESS Array B	35.33	359	P	P	03 08 25.6	+0.1
	0.6nm,0.5s,mb3.7,baz=172,slow=8.6,SNR=7.4						
MKAR	Makanchi Array	43.28	56	P	P	03 09 35.2	+3.6

0.7nm,0.6s,mb3.6,baz=271,slow=6.8,SNR=6.3

MAN 30 03:35:34.0,10.41N×121.97E,h16^{km},mb3.9,ML2.7, MS2.3,1C-1D,Panay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAP	**Anini-y**	**0.02**	**292**	⇓*e*P	Pb	03 35 37.3	+0.4
AAP				*e*S	Sb	03 35 41.4	+2.5
GUIM	**Jordan**	**0.65**	**71**	*e*P	Pb	03 35 46.7	+0.3
GUIM				*e*S	Sb	03 35 59.2	+4.2
CUYO	**Cuyo Island**	**1.03**	**295**	*e*P	Pb	03 35 53.6	+0.6
CUYO				*e*S	Sb	03 36 08.1	+2.0
RCP	**Roxas**	**1.37**	**34**	⇑*e*P	Pn	03 36 20.5	+22

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*NEIC **30** 03:36:11.3±1.6,51.47N×16.13E,h5^{km},ML2.7(VIE),Error ellipse: s-maj=17.6km s-min=6.2km az=215.0*
*CSEM **30** 03:36:11.7±0.2,51.45N×16.13E,h2^{km},ML2.9/8,Error ellipse: s-maj=3.6km s-min=1.8km az=23.0*
*WAR **30** 03:36:12.3,51.46N×16.13E,h1^{km},ML2.8,Mining Induced*
*IPEC **30** 03:36:12.5±0.4,51.41N×16.55E,ML2.0/4,Error ellipse: s-maj=2.9km s-min=2.1km az=101.0*
*PRU **30** 03:36:12.6,51.40N×16.16E*

ISC 30 03:36:10.0±0.7**,51.41N**±0.04×**16.14E**±0.04**,n26,**σ**1**$\overset{s}{.}$**25**/52**, 1C-2D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.57**	**170**	⇓*i*Pg	**Pg**	**03 36 23.7**	**+2.2**
KSP				*i*		03 36 24.8	
KSP				*e*Sg	**Sg**	**03 36 31.1**	**+2.0**
KSP	**Ksiaz**	**0.57**	**170**	*i* PG	**Pg**	**03 36 23.7**	**+2.2**
KSP				*e*SG	**Sg**	**03 36 31.7**	**+2.6**
KSP	**Ksiaz**	**0.57**	**170**	*e*Pg	**Pg**	**03 36 23.7**	**+2.2**
KSP				*e*Sg	**Sg**	**03 36 31.2**	**+2.1**
KSP	**Ksiaz**	**0.57**	**170**	⇓*i*Pg	**Pg**	**03 36 23.7**	**+2.2**
KSP				*e*Sg	**Sg**	**03 36 30.7**	**+1.6**
UPC	**Upice**	**0.90**	**185**	*e*PG	**Pg**	**03 36 29.8**	**+1.7**
DPC	**Dobruska-Polom**	**1.06**	**174**	*e*PG	**Pg**	**03 36 32.5**	**+1.2**
DPC				*e*SG	**Sg**	**03 36 47.4**	**+1.9**
	10nm,0.2s						
PVCC	**Panska Ves**	**1.33**	**229**	*e*PG	**Pg**	**03 36 37.2**	**+0.7**
BRG	**Berggiesshubel**	**1.48**	**250**	Pn	**Pn**	**03 36 39.4**	**+1.4**
BRG				Pg	**Pg**	**03 36 40.2**	**+0.6**
BRG				Sg	**Sg**	**03 36 60.0**	**+0.6**
BRG	**Berggiesshubel**	**1.48**	**250**	Pn	**Pn**	**03 36 39.4**	**+1.4**
BRG	**Berggiesshubel**	**1.48**	**250**	Pg	**Pg**	**03 36 40.2**	**+0.6**
PRU	**Pruhonice**	**1.75**	**216**	*e*PN	**Pn**	**03 36 42.7**	**+0.9**
PRU				*e*PG	**Pg**	**03 36 44.5**	**-0.4**
PRU				*e*x	x	03 36 48.9	
PRU				*e*x	x	03 37 01.8	
PRU				*e*SG	**Sg**	**03 37 09.6**	**+1.5**
	16nm,0.4s						
MORC	**Moravsky Berou**	**1.86**	**151**	*e*Pn	**Pn**	**03 36 44.4**	**+0.9**
MORC				*e*Sn	**Sn**	**03 37 07.4**	**-0.6**
MORC	**Moravsky Berou**	**1.86**	**151**	*e*Pn	**Pn**	**03 36 44.4**	**+1.0**
MORC				*e*Sg	**Sg**	**03 37 07.1**	**-4.9**
MORC				*e*Sn	**Sn**	**03 37 07.4**	**-0.6**
CLL	**Collm**	**1.97**	**268**	*e*PN	**Pn**	**03 36 45.0**	**0.0**
CLL				*i* PG	**Pg**	**03 36 48.5**	**-0.8**
CLL				*i*		03 36 52.2	
CLL				*e*SG	**Sg**	**03 37 15.0**	**-0.5**
CLL	**Collm**	**1.97**	**268**	*i* Pg	**Pg**	**03 36 48.5**	**-0.8**
OKC	**Ostrava-Krasne**	**2.03**	**140**	*e*PG	**Pg**	**03 36 49.9**	**-0.6**
OKC				*e*SG	**Sg**	**03 37 16.8**	**-0.7**
	13nm,0.5s						
VRAC	**Vranov**	**2.12**	**172**	*e*Pn	**Pn**	**03 36 49.4**	**+2.2**
VRAC				*e*Sg	**Sg**	**03 37 18.2**	**-2.4**
	9.0nm,0.4s						
KRUC	**Moravsky**	**2.35**	**176**	*e*Pg	**Pg**	**03 36 55.3**	**-1.7**
KRUC				*e*Sg	**Sg**	**03 37 26.6**	**-1.8**
	7.2nm,0.5s						
OJC	**Ojcow**	**2.61**	**116**	*e*PG	**Pg**	**03 37 01.0**	**-1.1**
OJC				*e*SG	**Sg**	**03 37 38.0**	**+1.1**
OJC	**Ojcow**	**2.61**	**116**	*e*Pg	**Pg**	**03 37 01.2**	**-0.9**
OJC				*e*Sg	**Sg**	**03 37 37.8**	**+0.9**
NKC	**Novy Kostel**	**2.62**	**245**	*e*PN	**Pn**	**03 36 54.9**	**+0.6**
NKC				*e*PG	**Pg**	**03 37 01.3**	**-1.0**
NKC				*e*SG	**Sg**	**03 37 37.4**	**+0.2**
	14nm,0.3s						
KHC	**Kasperske Hory**	**2.81**	**217**	*e*PN	**Pn**	**03 36 58.2**	**+1.2**
KHC				*e*PG	**Pg**	**03 37 04.0**	**-2.1**
KHC				*e*SN	**Sn**	**03 37 31.8**	**-0.3**
KHC				*e*SG	**Sg**	**03 37 43.3**	**-0.2**
	3.5nm,0.3s						
MOX	**Moxa**	**2.96**	**257**	*e*Pg	**Pg**	**03 37 07.5**	**-1.5**
MOX				*e*Sg	**Sg**	**03 37 47.8**	**-0.6**
VYHS	**Vyhne**	**3.40**	**148**	*e*PG	**Pg**	**03 37 16.9**	**-0.9**
MOA	**Molln**	**3.76**	**200**	⇑*i*PN	**Pn**	**03 37 10.4**	**-0.2**
MOA				*i* SG	**Sg**	**03 38 13.3**	**-2.0**
	2.4nm,0.4s						
KECS	**Kecovo**	**4.05**	**135**	*e*PG	**Pg**	**03 37 29.0**	**-2.0**

WEL 30 03:54:59.1±0.3**,36.05S×179.29E,h194**^{km}±3^{km}**,ML3.5**/3**, Error ellipse: s-maj=12.9km s-min=8.3km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.71**	**207**	PN	P	03 55 34.4	-0.2
MXZ				SN	S	03 56 01.3	-0.7
MXZ				SN	S	03 56 02.3	+0.3
URZ	**Urewera**	**2.81**	**218**	*e*PN	P	03 55 46.6	-0.2
URZ				SN	S	03 56 24.1	+0.6
MRZ	**Mangatainoka R**	**5.45**	**211**	SN	S	03 57 22.2	-0.5
KIW	**Kapiti Island**	**5.91**	**214**	SN	S	03 57 33.3	0.0
TCW	**Tory Channel**	**6.48**	**216**	SN	S	03 57 46.7	0.0
NNZ	**Nelson**	**6.93**	**220**	SN	S	03 57 57.2	-0.1
MQZ	**McQueen's Vall**	**9.19**	**212**	SN	S	03 58 47.8	-2.4

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*NIED **30** 04:39:00,42.90N×145.50E,h32^{km},Mw4.1 Best double couple: $M_0$1.4×10^{15} NP1:ϕ_s26°,δ64°,λ69°. NP2:ϕ_s246°, δ33°,λ126°.*
*NEIC **30** 04:39:37.3±4.9,42.94N×145.50E,h5^{km}±31^{km},mb5.0/9, MW4.0(NIED),Error ellipse: s-maj=11.5km s-min=9.2km az=126.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.
*MOS **30** 04:39:39.2±1.3,42.74N×145.54E,h41^{km},mb4.6/9,Error ellipse: s-maj=12.0km s-min=8.5km az=95.0*
*SKHL **30** 04:39:41.7±1.3,43.00N×145.48E,h40^{km}±7^{km},mb4.8/2*
*BJI **30** 04:39:41.2,42.98N×145.52E,h57^{km},mB5.1,mb4.6, Ms4.6,Msz4.4*
*JMA **30** 04:39:42.1±0.1,42.89N×145.48E,h44^{km}±1^{km},M4.1*
JMA Felt I J1.
*IDC **30** 04:39:43.7±2.9,42.90N×145.41E,h52^{km}±26^{km},mb3.9/15, mb1 4.1/17,mb1mx4.0/24,mbtmp4.2/17,ML4.3/2,MS3.3/5, Ms1 3.3/5,ms1mx2.9/27,Error ellipse: s-maj=30.0km s-min=17.3km az=170.0*

ISC 30 04:39:41.0±0.6**,42.87N**±0.05×**145.46E**±0.05**,h48**^{km}±4^{km}**, n71,**σ**1**$\overset{s}{.}$**12**/84**,mb4.3**/26**,MS3.7**/4**,1C-7D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.54**	**22**	⇑P	**P**	**04 39 53.1**	**+0.4**
NEM2				S	**S**	**04 40 00.7**	**-0.3**
JAK	**Akkeshi**	**0.58**	**283**	⇓P	**P**	**04 39 54.2**	**+1.0**
JAK				S	**S**	**04 40 03.1**	**+1.1**
JNK	**Nakash**	**0.90**	**323**	⇓P	**P**	**04 39 58.2**	**+0.7**
JNK				S	**S**	**04 40 09.1**	**-0.6**
JRA	**Rausu**	**1.10**	**347**	⇓P	**P**	**04 40 01.0**	**+0.7**
JRA				S	**S**	**04 40 15.1**	**+0.5**
JOB	**Onbets**	**1.20**	**272**	⇓P	**P**	**04 40 02.6**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**1.20**	**14**	PN	**P**	**04 40 00.5**	**-1.2**
YUK				*i* S	**S**	**04 40 15.7**	**-1.5**
YUK				pmax	pmax		
	comp=Z,910nm,0.3s						
YUK				pmax	pmax		
	comp=N,460nm,0.4s						
YUK				pmax	pmax		
	comp=E,270nm,0.3s						
YUK				pmax	pmax		
	comp=Z,2μm,0.8s						
YUK				smax			
	comp=N,7μm,0.8s						
YUK				smax			
	comp=E,16μm,0.8s						
YUK				smax			
	comp=N,11μm,0.5s						
YUK				smax			
	comp=E,12μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**1.20**	**14**	*e*P	**P**	**04 40 00.5**	**-1.2**
YUK				AMB	AMB	04 40 02.5	
	comp=E,460nm,0.3s						
YUK				AMB	AMB	04 40 02.5	
	comp=E,270nm,0.3s						
YUK				AMB	AMB	04 40 02.5	
	comp=E,910nm,0.3s						
YUK				AMB	AMB	04 40 04.2	
	comp=E,2μm,1.0s						
YUK				*i* S	**S**	**04 40 15.7**	**-1.5**
YUK				A		04 40 21.0	
	comp=E,11μm,0.6s						
YUK				A		04 40 21.0	
	comp=E,12μm,0.6s						
JAR	**Ashorobuto**	**1.31**	**290**	⇓P	**P**	**04 40 04.3**	**+0.8**
JCH	**Churui**	**1.57**	**261**	⇓P	**P**	**04 40 07.3**	**+0.3**
JTKR	**Abashiri--Toko**	**1.58**	**315**	⇓P	**P**	**04 40 08.5**	**+1.3**
ASAJ	**Asahikawa**	**2.43**	**302**	PN	**P**	**04 40 21.0**	**+1.8**
ASAJ				S	**S**	**04 40 53.8**	**+5.9**
ASAJ				pmax	pmax		
	comp=Z,79nm,0.3s						
ASAJ				smax			
	comp=E,19nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,500nm,18.4s						
ASAJ	**Asahikawa**	**2.43**	**302**	P	**P**	**04 40 21.0**	**+1.8**
	comp=Z,79nm,0.3s,baz=120,slow=9.3,SNR=73						
ASAJ				S	**S**	**04 40 53.8**	**+5.9**
	comp=Z,18nm,0.3s,baz=18,slow=28,SNR=6.0						
ASAJ				LR	LR	04 41 33.9	
	comp=Z,500nm,18.4s,baz=358,slow=46						
KUR	**Kuril'sk**	**2.93**	**35**	*e*P	**P**	**04 40 26.0**	**-0.3**
KUR				AMB	AMB	04 40 28.3	
	comp=Z,70nm,0.5s						
KUR				*i* S	**S**	**04 40 59.0**	**-1.6**
KUR				A		04 41 03.0	
	comp=Z,350nm,0.9s						
KUR				A		04 41 03.0	
	comp=Z,210nm,0.9s						
MJAR	**Matsushiro Arr**	**8.43**	**224**	P	**P**	**04 41 41.4**	**-1.9**
	comp=Z,1.3nm,0.3s,baz=31,slow=13,SNR=12						
MJAR				LR	LR	04 44 49.9	
	comp=Z,78nm,21.3s,baz=40,slow=36						
MAJO	**Matsushiro**	**8.43**	**224**	*e*PN	**P**	**04 41 40.8**	**-2.5**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAJO	**Matsushiro**	**8.43**	**224**	*e*Pn	**P**	**04 41 40.8**	**-2.5**
	comp=Z,10nm,0.6s						
MAT	**Matsushiro**	**8.43**	**224**	*e*PN	**P**	**04 41 41.0**	**-2.3**
MAT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MAT	**Matsushiro**	**8.43**	**224**	*e*P	**P**	**04 41 41.0**	**-2.3**
	comp=Z,8.9nm,0.7s						
MAT	**Matsushiro**	**8.43**	**224**	P	**P**	**04 41 41.3**	**-2.0**
KLR	**Kul'dur**	**11.45**	**308**	*e*PN	**P**	**04 42 24.8**	**+0.3**
MDJ	**Mudanjiang**	**11.62**	**284**	P	**P**	**04 42 24.8**	**-1.9**
MDJ				S	**S**	**04 44 34.0**	**-1.9**
MDJ				PCP	PcP	04 48 13.0	-1.3
MDJ				SCP		04 51 41.5	
MDJ				PCS		04 51 47.8	
MDJ				SCS	ScS	04 55 17.3	+1.2
MDJ				AMB	AMB		
	comp=Z,70nm,5.6s						
CN2	**Changchun**	**14.60**	**281**	*e*P	**P**	**04 43 06.3**	**+0.2**
CN2				*e*AP		04 43 16.3	
CN2				*e*XP		04 43 25.3	
CN2				*e*S	**S**	**04 45 46.0**	**-1.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,1μm,13.0s						
CN2				LR	LR		
	comp=E,1μm,13.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
JNU	**Nakatsue**	**15.04**	**235**	LR	LR	04 48 48.8	
	comp=Z,101nm,21.6s,baz=336,slow=36						
ULN	**Ulaanbaatar**	**27.25**	**294**	*e*P	**P**	**04 45 23.0**	**+0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
ULN	**Ulaanbaatar**	**27.25**	**294**	*e*P	**P**	**04 45 23.0**	**+0.6**
	comp=Z,1.7nm,0.5s,mb3.8						
SONM	**Songino Array**	**27.69**	**294**	P	**P**	**04 45 27.0**	**+0.6**
	comp=Z,3.3nm,0.6s,mb4.2,baz=80,slow=7.8,SNR=13						
ZAK	**Zakamensk**	**29.60**	**299**	*e*P	**P**	**04 45 43.1**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.7						
KMI	**Kunming**	**39.12**	**257**	P	**P**	**04 47 02.5**	**-2.9**
KMI				AP	pP	04 47 20.0	+1.7
KMI				XP	sP	04 47 26.0	+1.9
KMI				S	**S**	**04 53 01.5**	**0.0**
KMI	**Kunming**	**39.12**	**257**	P	**P**	**04 47 02.5**	**-2.9**
KMI				*PP	pP	04 47 19.9	+1.6
KMI				S	**S**	**04 53 01.4**	**-0.1**
KMI				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.0						
KMI				MLR	MLR		
	comp=Z,40nm,16.3s,MS3.3						
KMI	**Kunming**	**39.12**	**257**	P	**P**	**04 47 02.5**	**-2.9**
	comp=Z,4.0nm,1.3s,mb4.0						
KMI				pP	pP	04 47 19.9	+1.6
KMI				sP	sP	04 47 26.0	+1.9
KMI				S	**S**	**04 53 01.4**	**-0.1**
KMI				LR	LR		
	comp=Z,40nm,16.3s,MS3.3						
IMA	**Indian Mountai**	**40.10**	**34**	*e*P	**P**	**04 47 14.2**	**+1.1**
IMA				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
IMA	**Indian Mountai**	**40.10**	**34**	*e*P	**P**	**04 47 14.2**	**+1.2**
	comp=Z,18nm,0.8s,mb4.8						
ZAL	**Zalesovo**	**40.57**	**308**	P	**P**	**04 47 17.5**	**+0.4**
	comp=Z,1.4nm,0.3s,mb4.0,baz=40,slow=4.6,SNR=3.4						
WMQ	**Urumqi**	**41.28**	**292**	*e*P	**P**	**04 47 22.5**	**-0.5**
WMQ				AP	pP	04 47 37.8	+1.8
WMQ				XP	sP	04 47 45.0	+3.2
WMQ				AMB	AMB		
	comp=Z,50nm,4.2s						
WMQ				LR	LR		
	comp=Z,630nm,21.8s,MS4.4						
ILAR	**Eielson Array**	**42.92**	**36**	P	**P**	**04 47 36.6**	**+0.5**
	comp=Z,1.1nm,0.7s,mb3.7,baz=262,slow=6.9,SNR=17						
MKAR	**Makanchi Array**	**43.91**	**298**	*e*P	**P**	**04 47 44.8**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**43.91**	**298**	P	**P**	**04 47 44.9**	**+0.5**
	comp=Z,2.6nm,0.5s,mb4.2,baz=82,slow=9.4,SNR=28						
MKAR				LR	LR	05 07 39.0	
	comp=Z,35nm,18.2s,MS3.3,baz=197,slow=38						
CMAR	**Chiang Mai Arr**	**46.09**	**253**	P	**P**	**04 48 02.9**	**+0.7**
	comp=Z,0.9nm,0.4s,mb4.1,baz=45,slow=7.5,SNR=4.5						
INK	**Inuvik**	**47.78**	**30**	*e*P	**P**	**04 48 13.5**	**-1.4**
INK	**Inuvik**	**47.78**	**30**	P	**P**	**04 48 15.3**	**+0.4**
	comp=Z,1.7nm,0.5s,mb4.3,baz=299,slow=2.5,SNR=9.6						
VOSK	**Vostochnaya**	**48.88**	**309**	P	**P**	**04 48 23.2**	**-0.3**
VOSK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.3						
BVA0	**Borovoye Array**	**49.11**	**309**	P	**P**	**04 48 25.3**	**0.0**
ZRNK	**Zerenda**	**49.92**	**310**	*e*P	**P**	**04 48 30.8**	**-0.8**
ZRNK				pmax	pmax		
	comp=Z,69nm,0.6s						
ZRNK	**Zerenda**	**49.92**	**310**	*e*P	**P**	**04 48 30.8**	**-0.8**
	comp=Z,69nm,0.6s						
PMG	**Port Moresby**	**52.04**	**178**	P	**P**	**04 48 43.3**	**-4.8**
KKAR	**Karatay Array**	**53.04**	**298**	*i* P	**P**	**04 48 54.9**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
KULM	**Kulim**	**54.45**	**240**	*e*P	**P**	**04 49 07.5**	**+1.6**
RES	**Resolute Bay**	**56.16**	**16**	*e*P	**P**	**04 49 16.1**	**-1.5**
RES				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
RES	**Resolute Bay**	**56.16**	**16**	*e*P	**P**	**04 49 16.1**	**-1.4**
	comp=Z,9.8nm,0.8s,mb4.9						
AB31	**Akbulak array**	**56.65**	**309**	*i* P	**P**	**04 49 20.9**	**-0.5**
ARCES	**ARCESS Array B**	**59.64**	**339**	P	**P**	**04 49 41.2**	**-0.8**
	comp=Z,1.6nm,0.7s,mb4.2,baz=45,slow=8.6,SNR=6.5						
ARCES	**ARCESS Array B**	**59.64**	**339**	P	**P**	**04 49 41.2**	**-0.8**
CTAO	**Charters Tower**	**62.64**	**179**	P	**P**	**04 50 01.0**	**-1.9**
SUMG	**Summit**	**64.83**	**1**	*e*P	**P**	**04 50 16.3**	**-0.1**
	comp=Z,4.5nm,0.8s,mb4.5						
FINES	**FINESS Array B**	**65.10**	**333**	P	**P**	**04 50 17.8**	**-0.4**
	comp=Z,6.8nm,0.5s,mb4.9,baz=43,slow=8.1,SNR=67						
MBWA	**Marble Bar**	**67.98**	**206**	*e*P	**P**	**04 50 39.6**	**+2.4**
	comp=Z,27nm,0.8s,mb5.3						
NVAR	**Mina Array Bea**	**69.09**	**57**	P	**P**	**04 50 45.5**	**+1.7**
	comp=Z,0.5nm,0.7s,mb3.6,baz=311,slow=4.6,SNR=5.3						
NVAR	**Mina Array Bea**	**69.09**	**57**	P	**P**	**04 50 45.5**	**+1.7**
KIV	**Kislovodsk**	**69.43**	**311**	*e*P	**P**	**04 50 43.1**	**-2.7**
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
KIV				pmax	pmax		
	comp=N,9.0nm,1.2s						
KIV				pmax	pmax		
	comp=E,2.0nm,0.8s						
KIV	**Kislovodsk**	**69.43**	**311**	*e*P	**P**	**04 50 46.6**	**+0.9**
	comp=E,13nm,0.8s,mb4.9						
NB2	**NORSAR Subarra**	**69.97**	**338**	P	**P**	**04 50 48.7**	**-0.1**
	comp=E,4.5nm,0.6s,mb4.6,baz=33,slow=6.2						
NB2	**NORSAR Subarra**	**69.97**	**338**	P	**P**	**04 50 48.7**	**-0.1**
NB2				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
NOA	**NORSAR Array B**	**69.97**	**338**	P	**P**	**04 50 48.5**	**-0.3**
	comp=Z,4.7nm,0.7s,mb4.5,baz=35,slow=6.1,SNR=24						
PDAR	**Pinedale Array**	**71.42**	**49**	P	**P**	**04 50 58.4**	**+0.6**
	comp=Z,0.4nm,0.5s,mb3.6,baz=270,slow=0.9,SNR=4.5						
AKASG	**Malin Array Be**	**71.55**	**323**	P	**P**	**04 50 58.1**	**-0.3**
	comp=Z,3.0nm,0.4s,mb4.6,baz=41,slow=6.0,SNR=26						
BRTR	**Keskin Array B**	**77.25**	**313**	P	**P**	**04 51 32.8**	**+1.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=61,slow=5.1,SNR=4.7						
CLL	**Collm**	**77.52**	**332**	P	**P**	**04 51 34.0**	**+1.2**
GERES	**GERESS Array B**	**79.32**	**330**	P	**P**	**04 51 43.7**	**+1.0**
	comp=Z,0.6nm,0.6s,mb3.7,SNR=4.6						
GERES				LR	LR	05 30 30.8	
	comp=Z,35nm,18.8s,MS3.7,baz=20,slow=38						
NWAO	**Narrogin (SRO)**	**79.74**	**204**	*e*P	**P**	**04 51 46.2**	**+0.8**
NWAO				pmax	pmax		
	comp=Z,40nm,1.2s						
NWAO	**Narrogin (SRO)**	**79.74**	**204**	*e*P	**P**	**04 51 46.2**	**+0.8**
	comp=Z,40nm,1.2s,mb5.2						
TXAR	**Lajitas Array**	**84.17**	**55**	P	**P**	**04 52 09.8**	**+1.5**
	comp=Z,0.4nm,0.7s,mb3.6,baz=296,slow=4.6,SNR=6.8						

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*CNRM **30** 05:22:24.1,35.85N×3.39W,h30^{km},MD3.5*
*INMG **30** 05:22:26.6±1.0,35.76N×3.48W,ML2.6,Error ellipse: s-maj=2.9km s-min=1.9km az=54.0*
*NEIC **30** 05:22:26.5,35.77N×3.48W,MN2.8(MDD),After MDD.*
*SFS **30** 05:22:26.0,35.70N×3.40W*
*MDD **30** 05:22:26.3±0.2,35.75N×3.49W,mbLg3.0/8,Error ellipse: s-maj=2.1km s-min=1.8km az=159.0,PRXIMO*
*CSEM **30** 05:22:26.0±0.1,35.64N×3.45W,h35^{km},MD3.5,Error ellipse: s-maj=4.0km s-min=2.3km az=71.0*

ISC 30 05:22:24.8±0.4**,35.75N**±0.02×**3.51W**±0.03**,h9**^{km}±4^{km}**,n66,** σ**1**$\overset{s}{.}$**30**/106**,4C,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EALB	**Alboran**	**0.43**	**64**	⇑P	**Pg**	**05 22 33.9**	**+0.4**
EALB				S	**Sg**	**05 22 39.6**	**+0.4**
EALB	**Alboran**	**0.43**	**64**	⇑Pg	**Pg**	**05 22 33.9**	**+0.4**
	445nm,0.1s,SNR=18						
EALB				Lg		05 22 39.6	
	2μm,0.2s,SNR=23						
MPAL	**Palemas**	**0.64**	**214**	*i* P	**Pg**	**05 22 37.0**	**-0.6**
MPAL				*i* S	**Sg**	**05 22 47.5**	**+1.4**
EMEL	**Melilla**	**0.64**	**135**	⇑Pg	**Pg**	**05 22 38.1**	**+0.4**
	2μm,0.1s,SNR=18						
EMEL				Lg		05 22 46.3	
	5μm,0.2s,SNR=22						
EMLI	**Melilla**	**0.64**	**135**	P	**Pg**	**05 22 38.1**	**+0.4**
	2μm,0.1s,SNR=18						
EMLI				S	**Sg**	**05 22 46.3**	**-0.1**
	5μm,0.2s,SNR=22						
MELI	**Melilla**	**0.66**	**134**	⇑Pg	**Pg**	**05 22 38.3**	**+0.3**
MELI				Lg		05 22 43.4	
MELI	**Melilla**	**0.66**	**134**	*i* P	**Pb**	**05 22 38.3**	**+0.3**
MELI				*i* S	**Sg**	**05 22 43.4**	**-3.4**
TOU	**Touzarine**	**0.81**	**194**	*i* P	**Pb**	**05 22 40.0**	**-0.7**
TOU				*i* S	**Sb**	**05 22 52.0**	**+0.5**
ZAI	**Zaio**	**1.00**	**141**	Pg	**Pb**	**05 22 41.0**	**-2.9**
ZAI				Lg		05 22 54.0	
ZAI	**Zaio**	**1.00**	**141**	*i* P	**Pb**	**05 22 41.0**	**-2.9**
EGUA	**Guajares**	**1.08**	**358**	Pg	**Pg**	**05 22 45.4**	**-1.0**
	11nm,0.1s,SNR=7.9						
EGUA				Lg		05 22 59.0	
	25nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.25**	**24**	P	**Pb**	**05 22 47.8**	**-0.3**
EBER				S	**Sb**	**05 23 04.5**	**+0.4**
EBER	**Berja**	**1.25**	**24**	Pg	**Pg**	**05 22 48.9**	**-0.8**
	12nm,0.2s,SNR=27						
EBER				Lg		05 23 04.5	
	206nm,0.3s,SNR=8.4						
EBER	**Berja**	**1.25**	**24**	P	**Pb**	**05 22 47.8**	**-0.2**
	12nm,0.2s,SNR=27						
EBER				S	**Sb**	**05 23 04.5**	**+0.4**
	206nm,0.3s,SNR=8.4						
ERON	**Agron**	**1.28**	**349**	Pg	**Pg**	**05 22 48.8**	**-1.7**
	14nm,0.2s,SNR=12						
ERON				Lg		05 23 07.9	
	104nm,0.4s,SNR=8.8						
ERON	**Agron**	**1.28**	**349**	P	**Pb**	**05 22 48.8**	**+0.1**
	14nm,0.2s,SNR=12						
ERON				S	**Sb**	**05 23 07.9**	**+2.8**
	104nm,0.4s,SNR=8.8						
EMIJ	**Mijas**	**1.30**	**309**	Pg	**Pg**	**05 22 49.3**	**-1.5**
	33nm,0.3s,SNR=29						
EMIJ				Lg		05 23 06.8	
	279nm,0.5s,SNR=12						
EMIJ	**Mijas**	**1.30**	**309**	P	**Pb**	**05 22 49.3**	**+0.3**
	33nm,0.3s,SNR=29						
EMIJ				S	**Sb**	**05 23 06.8**	**+1.1**
	279nm,0.5s,SNR=12						
ELOJ	**Sierra Loja**	**1.48**	**340**	Pg	**Pg**	**05 22 53.5**	**-0.9**
	9.5nm,0.3s,SNR=9.6						
ELOJ				Lg		05 23 13.1	
	53nm,0.4s,SNR=8.6						
ELOJ	**Sierra Loja**	**1.48**	**340**	P	**Pn**	**05 22 53.5**	**+1.7**
	9.5nm,0.3s,SNR=9.6						
ELOJ				S	**Sb**	**05 23 13.1**	**+2.1**
	53nm,0.4s,SNR=8.6						
ECOG	**Cogollos-Vega**	**1.52**	**358**	Pg	**Pg**	**05 22 53.4**	**-1.8**
	34nm,0.3s,SNR=12						
ECOG				Lg		05 23 14.5	
	32nm,0.3s,SNR=8.0						
REAL	**Reales**	**1.56**	**298**	Pn	**Pn**	**05 22 53.0**	**+0.2**
REAL				Sn	**Sn**	**05 23 12.0**	**-1.3**
REAL	**Reales**	**1.56**	**298**	*i* P	**Pn**	**05 22 53.0**	**+0.2**
ENIJ	**Nijar**	**1.61**	**41**	Pn	**Pn**	**05 22 51.8**	**-1.8**
	50nm,0.3s,SNR=8.9						
EJIF	**Jimena Fronter**	**1.73**	**294**	Pn	**Pn**	**05 22 56.6**	**+1.2**
	9.2nm,0.3s,SNR=7.9						
EJIF				Sn	**Sn**	**05 23 20.8**	**+3.0**
	29nm,0.4s,SNR=7.9						
TZK	**Tazeka**	**1.75**	**199**	*i* P	**Pn**	**05 22 54.0**	**-1.6**
ALJ	**Aljibe**	**1.90**	**295**	Pg	**Pg**	**05 23 02.0**	**-0.7**
ALJ				Lg		05 23 28.0	
LIJA	**Lijar**	**1.91**	**307**	*i* P	**Pn**	**05 23 02.0**	**+4.1**
EQES	**Quesada**	**2.08**	**10**	P	**Pn**	**05 23 02.1**	**+1.9**
EQES				S	**Sn**	**05 23 26.8**	**+0.3**
EQES	**Quesada**	**2.08**	**10**	Pn	**Pn**	**05 23 02.1**	**+1.9**
	25nm,0.2s,SNR=22						
EQES				Sn	**Sn**	**05 23 26.8**	**+0.3**
	149nm,0.5s,SNR=5.1						
EQES	**Quesada**	**2.08**	**10**	P	**Pn**	**05 23 02.1**	**+1.9**
	25nm,0.2s,SNR=22						
EQES				S	**Sn**	**05 23 26.8**	**+0.3**
	149nm,0.5s,SNR=5.1						
EHUE	**Huescar**	**2.18**	**19**	Pn	**Pn**	**05 23 03.7**	**+1.9**
	8.7nm,0.2s,SNR=8.2						
ESPR	**Espera**	**2.20**	**301**	P	**Pn**	**05 23 04.4**	**+2.4**
ESPR				S	**Sn**	**05 23 33.2**	**+3.6**
ESPR	**Espera**	**2.20**	**301**	Pn	**Pn**	**05 23 04.4**	**+2.4**
	2.8nm,0.2s,SNR=4.6						
ESPR				Sn	**Sn**	**05 23 30.4**	**+0.8**
	48nm,0.5s,SNR=5.1						
ESPR	**Espera**	**2.20**	**301**	P	**Pn**	**05 23 04.4**	**+2.4**
	2.8nm,0.2s,SNR=4.6						
EBAN	**Banos Encina**	**2.42**	**355**	Pn	**Pn**	**05 23 08.2**	**+3.1**
	4.6nm,0.2s,SNR=7.3						
EADA	**Adamuz**	**2.56**	**341**	Pn	**Pn**	**05 23 08.4**	**+1.2**
	5.3nm,0.3s,SNR=14						
EADA				Sn	**Sn**	**05 23 39.3**	**+0.6**
	18nm,0.2s,SNR=5.1						

EADA	**Adamuz**	**2.56**	**341**	P	**Pn**	**05 23 08.4**	**+1.3**
	5.3nm,0.3s,SNR=14						
EADA				S	**Sn**	**05 23 39.3**	**+0.6**
	18nm,0.2s,SNR=5.1						
EMUR	**La Murta**	**2.77**	**40**	P	**Pn**	**05 23 12.9**	**+2.8**
EMUR				S	**Sn**	**05 23 39.4**	**-4.6**
EMUR	**La Murta**	**2.77**	**40**	Pn	**Pn**	**05 23 10.1**	**-0.1**
	9.2nm,0.3s,SNR=4.7						
EMUR				Sn	**Sn**	**05 23 39.4**	**-4.6**
	31nm,0.5s						
ECAB	**El Cabril**	**2.78**	**327**	Pn	**Pn**	**05 23 11.5**	**+1.2**
	5.6nm,0.3s,SNR=11						
ECAB				Sn	**Sn**	**05 23 44.4**	**+0.1**
	37nm,0.5s,SNR=7.9						
ECAB	**El Cabril**	**2.78**	**327**	P	**Pn**	**05 23 11.5**	**+1.2**
	5.6nm,0.3s,SNR=11						
ECAB				S	**Sn**	**05 23 44.4**	**+0.1**
	37nm,0.5s,SNR=7.9						
EVIA	**Vianos**	**2.99**	**15**	Pn	**Pn**	**05 23 17.1**	**+3.8**
	30nm,0.4s,SNR=19						
EVIA				Sn	**Sn**	**05 23 48.8**	**-0.8**
	86nm,0.8s,SNR=7.9						
EVIA	**Vianos**	**2.99**	**15**	S	**Sn**	**05 23 48.8**	**-0.9**
	86nm,0.8s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.24**	**309**	Pn	**Pn**	**05 23 17.3**	**+0.4**
	1.9nm,0.1s,SNR=24						
EMIN				Sn	**Sn**	**05 23 55.2**	**-0.8**
	7.9nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.24**	**309**	P	**Pn**	**05 23 17.3**	**+0.5**
	1.9nm,0.1s,SNR=24						
EMIN				S	**Sn**	**05 23 55.2**	**-0.8**
	7.9nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**3.28**	**28**	Pn	**Pn**	**05 23 18.1**	**+0.6**
	18nm,0.5s,SNR=14						
ETOB				Sn	**Sn**	**05 23 55.5**	**-1.6**
	SNR=7.9						
ETOB	**Tobarra**	**3.28**	**28**	P	**Pn**	**05 23 18.1**	**+0.6**
EGRO	**El Granado**	**3.66**	**300**	Pn	**Pn**	**05 23 23.5**	**+0.7**
	4.3nm,0.1s,SNR=7.5						
EGRO				Sn	**Sn**	**05 24 04.8**	**-1.7**
	11nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**3.66**	**300**	P	**Pn**	**05 23 23.5**	**+0.7**
EGRO				S	**Sn**	**05 24 04.8**	**-1.7**
ESDC	**Sonseca Array**	**3.93**	**355**	Pn	**Pn**	**05 23 27.4**	**+0.7**
	1.0nm,0.2s,baz=176,slow=12,SNR=4.0						
ESDC	**Sonseca Array**	**3.93**	**355**	P	**Pn**	**05 23 27.4**	**+0.7**
EBAD	**Badajoz**	**4.10**	**318**	P	**Pn**	**05 23 29.9**	**+0.8**
EBAD				S	**Sn**	**05 24 13.1**	**-4.6**
EBAD	**Badajoz**	**4.10**	**318**	Pn	**Pn**	**05 23 29.9**	**+0.8**
	2.2nm,0.2s,SNR=8.8						
EBAD				Sn	**Sn**	**05 24 15.2**	**-2.5**
	13nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.10**	**318**	P	**Pn**	**05 23 29.9**	**+0.9**
PBEJ	**Beja**	**4.16**	**304**	*e*Pn	**Pn**	**05 23 30.9**	**+0.9**
PBEJ				*e*Sn	**Sn**	**05 24 18.1**	**-1.3**
PTEO	**Sao Teotonio**	**4.56**	**295**	*e*Pn	**Pn**	**05 23 36.2**	**+0.6**
PTEO				*e*Sn	**Sn**	**05 24 27.6**	**-1.8**
	16nm,0.8s						
PTEO	**Sao Teotonio**	**4.56**	**295**	Pn	**Pn**	**05 23 36.2**	**+0.6**
PTEO				Sn	**Sn**	**05 24 27.6**	**-1.8**
	8.1nm,0.8s						
EIBI	**Ibiza**	**5.06**	**48**	P	**Pn**	**05 23 41.2**	**-1.5**
EIBI				S	**Sn**	**05 24 35.5**	**-6.6**
EIBI	**Ibiza**	**5.06**	**48**	Pn	**Pn**	**05 23 41.2**	**-1.5**
	1.5nm,0.1s,SNR=7.9						
EIBI				Sn	**Sn**	**05 24 36.8**	**-5.2**
	3.1nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**5.06**	**48**	P	**Pn**	**05 23 41.2**	**-1.5**
PCBR	**Castelo Branco**	**5.15**	**324**	*e*Pn	**Pn**	**05 23 44.9**	**+1.0**
PCBR				*e*Sn	**Sn**	**05 24 41.3**	**-3.0**
PTOM	**Tomar**	**5.47**	**316**	*e*Pn	**Pn**	**05 23 48.6**	**0.0**
PTOM				*e*Sn	**Sn**	**05 24 49.8**	**-2.7**
MTE	**Manteigas**	**5.62**	**327**	*e*Sn	**Sn**	**05 24 54.0**	**-2.2**
PVRL	**Vila Real**	**6.42**	**330**	*e*Pn	**Pn**	**05 24 02.1**	**+0.2**
PVRL				*e*Sn	**Sn**	**05 25 11.1**	**-5.1**
	3.5nm,0.1s						
PVRL	**Vila Real**	**6.42**	**330**	Pn	**Pn**	**05 24 02.1**	**+0.2**
PVRL				Sn	**Sn**	**05 25 11.1**	**-5.1**
	1.8nm,0.1s						

JMA 30 05:34:38.2±0.2, 24.72N×122.27E, h28^{km}±2^{km}, M3.1

TAP 30 05:34:39.6, 24.58N×122.34E, h5^{km}±1^{km}, ML3.0, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.62**	**101**	P	Pg	05 34 51.7	-0.4
YOJ				S	Sg	05 35 01.6	+1.2
IRIF	**Iriomote-Funau**	**1.29**	**101**	P	Pb	05 35 02.1	-1.9
IRIF				*e*S	Sb	05 35 19.2	-1.6
HATJ	**Hateruma jima**	**1.43**	**111**	P	Pn	05 35 04.6	-1.8
HATJ				S	Sb	05 35 23.2	-1.8
JKRS	**Kuro-shima**	**1.56**	**102**	P	Pn	05 35 06.3	-1.9
JKRS				*e*S	Sb	05 35 26.0	-2.6
JIJ	**Ishigaki jima**	**1.66**	**97**	P	Pn	05 35 07.1	-2.5
JIJ				S	Sb	05 35 27.7	-3.7
JTJ	**Tarama**	**2.15**	**88**	P	Pn	05 35 14.8	-1.8
JTJ				*e*S	Sn	05 35 40.8	-3.2

IDC 30 05:36:55.1±1.7, 24.30S×67.08W, h157^{km}±20^{km}, mb1 3.3/3, mb1mx3.1/16, mbtmp3.8/3, Error ellipse: s-maj=37.0km s-min=14.4km az=98.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**7.35**	**188**	P	P	05 38 41.7	+0.9
	0.0nm,0.3s,baz=12,slow=14,SNR=21						
CFAA				S	S	05 40 00.2	-3.0
	0.1nm,0.3s,baz=112,slow=23,SNR=7.4						
LPAZ	**La Paz**	**8.03**	**353**	P	P	05 38 51.0	+1.1
	1.4nm,0.3s,baz=165,slow=8.8,SNR=51						
LPAZ				S	S	05 40 18.5	-0.9
	0.1nm,0.3s,baz=315,slow=20,SNR=5.0						
SIV	**San Ignacio**	**10.00**	**35**	P	P	05 39 14.1	-1.8
	0.1nm,0.3s,baz=218,slow=13,SNR=6.5						
BDFB	**Brasilia**	**19.86**	**68**	P	P	05 41 14.9	-1.2
	0.3nm,0.3s,baz=253,slow=12,SNR=4.9						
WRA	**Warramunga Arr**	**131.33**	**207**	PKP	PKPdf	05 55 49.5	0.0
	0.1nm,0.3s,baz=155,slow=1.9,SNR=6.1						
MKAR	**Makanchi Array**	**146.80**	**40**	PKPbc	PKPbc	05 56 17.4	-0.7
	0.4nm,0.6s,baz=284,slow=2.3,SNR=6.0						

GUC 30 05:55:06.1±0.7, 29.19S×68.69W, h135^{km}, ML3.9, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**1.77**	**275**	*e*P	P	05 55 38.7	+0.8
LCO				*i* S	S	05 56 02.9	+0.6
LCO				AMP		05 56 05.0	
	comp=E,477nm,0.7s						
VACH	**Vallenar**	**1.91**	**288**	*e*P	P	05 55 39.5	-0.2
VACH				*i* S	S	05 56 05.3	0.0
VACH				AMP		05 56 09.4	
	comp=E,2µm,0.1s						
TLL	**Tololo Astrono**	**2.08**	**241**	*e*P	P	05 55 42.6	+0.9
TLL				*i* S	S	05 56 10.7	+1.7
TLL				AMP		05 56 12.8	
	comp=E,344nm,0.8s						
CPCH	**Copiapo**	**2.34**	**321**	*e*P	P	05 55 43.2	-1.9
CPCH				*i* S	S	05 56 12.8	-1.9
CPCH				AMP		05 56 16.1	
	comp=N,1µm,0.1s						
CMCH	**Combarbala**	**2.81**	**225**	*e*P	P	05 55 50.9	-0.4
CMCH				*i* S	S	05 56 25.6	-0.1
CMCH				AMP		05 56 27.0	
	comp=E,347nm,0.5s						

BJI 30 05:57:59.9, 8.06N×94.27E, h30^{km}, mB4.9, mb4.3, Ms4.5, Msz4.1

IDC 30 05:57:59.6±0.9, 8.08N×93.94E, h22^{km}±3^{km}, mb3.8/9, mb1 4.0/10, mb1mx3.8/19, mbtmp3.9/10, ML4.4/1, MS3.7/9, Ms1 3.7/9, ms1mx3.4/38, Error ellipse: s-maj=41.5km s-min=18.0km az=47.0

NEIC 30 05:58:00.3±0.5, 8.08N×94.06E, h30^{km}, mb4.5/9, Error ellipse: s-maj=11.6km s-min=7.0km az=45.0

ISC 30 05:57:58.5±0.6, 8.13N±0.07×94.16E±0.07, h26^{km}, h26^{km}±1.5^{km}:pP-P, n43, σ1^{s}07/39, mb4.2/18, MS3.8/8, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**7.04**	**113**	*e*Pn	**Pn**	**05 59 42.1**	**-0.5**
KULM				*e*Sn	**Sn**	**06 00 57.5**	**-5.0**
CM31	**Chiang Mai Arr**	**11.27**	**24**	P	**P**	**06 00 40.2**	**-1.0**
CMAR	**Chiang Mai Arr**	**11.27**	**24**	Pn	**P**	**06 00 41.0**	**-0.2**
	0.8nm,0.3s,baz=209,slow=13,SNR=16						
CMAR				LR	LR	06 05 11.9	
	comp=Z,178nm,18.8s,baz=200,slow=38						
PALK	**Pallekele**	**13.36**	**267**	P	**P**	**06 01 11.3**	**+2.1**
SHL	**Shillong**	**17.47**	**353**	*e*P	**P**	**06 02 01.0**	**-1.2**
KMI	**Kunming**	**18.78**	**25**	P	**P**	**06 02 21.8**	**+3.5**
KMI				AP		06 02 27.0	
KMI				XP		06 02 32.3	
KMI				S	**S**	**06 05 44.5**	**+1.1**
KMI				LR	LR		
	comp=Z,90nm,17.5s						
KMI	**Kunming**	**18.78**	**25**	P	**P**	**06 02 21.7**	**+3.4**
	comp=Z,8.0nm,0.8s						
KMI				pP		06 02 27.0	
KMI				sP		06 02 32.2	
KMI				S	**S**	**06 05 44.5**	**+1.1**
PKI	**Pulchoki**	**21.03**	**338**	*e*P	**P**	**06 02 42.7**	**-0.2**
	comp=Z,28nm,0.6s,mb4.8						
GUN	**Gumba**	**21.17**	**339**	*e*P	**P**	**06 02 44.5**	**+0.2**
	comp=Z,36nm,0.7s,mb4.8						
DMN	**Daman**	**21.18**	**337**	*e*P	**P**	**06 02 43.9**	**-0.5**
	comp=Z,23nm,0.5s,mb4.7						
KKN	**Kakani**	**21.28**	**338**	*e*P	**P**	**06 02 44.9**	**-0.5**
LSA	**Lhasa**	**21.64**	**353**	P	**P**	**06 02 49.1**	**+0.1**
	comp=Z,22nm,0.7s,mb4.7						
GKN	**Gorkha**	**21.72**	**337**	*e*P	**P**	**06 02 49.9**	**+0.1**
	comp=Z,85nm,0.7s,mb5.3						
KOLN	**Koldanda**	**21.94**	**334**	*e*P	**P**	**06 02 52.0**	**0.0**
	comp=Z,49nm,0.8s,mb5.0						
LGTI	**Lohaghat**	**24.91**	**330**	*e*P	**P**	**06 03 22.5**	**+1.4**
ENH	**Enshi**	**26.29**	**31**	P	**P**	**06 03 41.3**	**+7.3**
WMQ	**Urumqi**	**36.00**	**352**	*e*P	**P**	**06 05 00.0**	**+0.6**
WMQ				AP	pP	06 05 09.5	+2.4
WMQ				XP	sP	06 05 13.5	+3.1
AAK	**Ala-Archa**	**38.48**	**336**	*e*P	**P**	**06 05 20.0**	**-0.2**
	comp=Z,5.1nm,0.9s,mb4.2						
MKAR	**Makanchi Array**	**39.84**	**347**	P	**P**	**06 05 30.9**	**-0.6**
	comp=Z,1.4nm,0.7s,mb3.8,baz=163,slow=7.4,SNR=11						
MKAR				pP	pP	06 05 38.2	-1.1
	comp=Z,4.2nm,0.7s,baz=165,slow=8.3,SNR=24						
MKAR	**Makanchi Array**	**39.84**	**347**	P	**P**	**06 05 30.9**	**-0.6**
MKAR				pP	pP	06 05 38.2	-1.1
CN2	**Changchun**	**44.80**	**32**	*e*P	**P**	**06 06 13.5**	**+1.4**
CN2				*e*S	**S**	**06 12 47.8**	**+0.7**
ZAL	**Zalesovo**	**46.30**	**352**	pP	pP	06 06 30.8	-0.8
	comp=Z,5.0nm,0.3s,baz=307,slow=4.9,SNR=3.8						
ZAL				LR	LR	06 30 14.8	
	comp=Z,43nm,19.6s,MS3.4,baz=114,slow=42						
MDJ	**Mudanjiang**	**47.58**	**34**	P	**P**	**06 06 32.5**	**-1.6**
MDJ				AMB	AMB		
	comp=Z,30nm,3.3s						
WRA	**Warramunga Arr**	**48.39**	**126**	P	**P**	**06 06 41.1**	**+0.4**
	comp=Z,1.3nm,0.6s,mb4.1,baz=305,slow=8.5,SNR=12						
WRA				pP	pP	06 06 48.4	-0.2
	comp=Z,1.6nm,0.6s,baz=306,slow=8.6,SNR=7.5						
BVAR	**Borovoye Array**	**48.75**	**341**	P	**P**	**06 06 44.8**	**+1.8**
	comp=Z,0.9nm,0.8s,mb3.9,baz=153,slow=6.4,SNR=2.7						
MJAR	**Matsushiro Arr**	**48.98**	**48**	LR	LR	06 28 22.5	
	comp=Z,62nm,18.3s,MS3.6,baz=245,slow=37						
ZRNK	**Zerenda**	**49.15**	**340**	*e*P	**P**	**06 06 44.9**	**-1.2**
	comp=Z,2.6nm,0.9s,mb4.3						
BRTR	**Keskin Array B**	**62.28**	**311**	P	**P**	**06 08 19.0**	**-1.9**
	comp=Z,0.9nm,0.6s,mb4.1,baz=119,slow=7.6,SNR=4.9						
BRTR				pP	pP	06 08 27.1	-1.8
	comp=Z,1.5nm,0.7s,baz=117,slow=5.5,SNR=5.1						
AKASG	**Malin Array Be**	**67.97**	**322**	P	**P**	**06 08 55.2**	**-2.2**
	comp=Z,0.3nm,0.3s,mb3.8,baz=86,slow=5.8,SNR=4.1						
AKASG	**Malin Array Be**	**67.97**	**322**	P	**P**	**06 08 55.2**	**-2.2**
FINES	**FINESS Array B**	**72.49**	**332**	P	**P**	**06 09 24.3**	**-0.4**
	comp=Z,0.6nm,0.6s,mb3.7,baz=76,slow=5.7,SNR=3.2						
FINES				sP	sP	06 09 33.5	-2.2
	comp=Z,1.9nm,0.7s,baz=135,slow=2.7,SNR=3.3						
FINES	**FINESS Array B**	**72.49**	**332**	P	**P**	**06 09 24.3**	**-0.4**
FINES				sP	sP	06 09 33.5	-2.2
ARCES	**ARCESS Array B**	**75.03**	**340**	P	**P**	**06 09 39.4**	**0.0**
	comp=Z,2.0nm,0.9s,mb4.0,baz=80,slow=7.4,SNR=5.2						
ARCES				LR	LR	06 45 21.2	
	comp=Z,91nm,19.3s,MS4.1,baz=91,slow=38						
GERES	**GERESS Array B**	**77.65**	**318**	P	**P**	**06 09 54.4**	**0.0**
	comp=Z,0.6nm,0.3s,mb4.1,baz=100,slow=8.1,SNR=7.1						
HFS	**Hagfors**	**78.24**	**330**	LR	LR	06 50 34.6	
	comp=Z,45nm,18.0s,MS3.8,baz=40,slow=40						
NB2	**NORSAR Subarra**	**79.52**	**331**	P	**P**	**06 10 04.1**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=92,slow=5.6						
NOA	**NORSAR Array B**	**79.52**	**331**	P	**P**	**06 10 04.2**	**-0.2**
	comp=Z,0.2nm,0.5s,mb3.3,baz=128,slow=4.3,SNR=2.9						
NOA				pP	pP	06 10 11.8	-0.7
	comp=Z,1.2nm,0.7s,baz=93,slow=5.6,SNR=6.6						
NOA				LR	LR	06 51 36.4	
	comp=Z,34nm,18.0s,MS3.7,baz=80,slow=40						
DAVOX	**Davos**	**80.22**	**316**	LR	LR	06 49 38.7	
	comp=Z,32nm,20.0s,MS3.7,baz=81,slow=39						
JMIC	**Jan Mayen**	**86.47**	**341**	LR	LR	06 51 15.9	
	comp=Z,30nm,19.3s,MS3.7,baz=76,slow=37						
VNDA	**Vanda**	**93.18**	**168**	LR	LR	06 46 52.4	
	comp=Z,61nm,19.1s,MS4.1,baz=162,slow=32						
ILAR	**Eielson Array**	**94.50**	**22**	P	**P**	**06 11 19.6**	**+2.1**
	comp=Z,0.4nm,0.9s,mb3.8,baz=270,slow=3.6,SNR=3.4						
PLCA	**Paso Flores**	**144.80**	**200**	pPKP		06 17 43.7	
	comp=Z,4.7nm,0.8s,baz=154,slow=2.9,SNR=10						
CPUP	**Villa Florida**	**147.43**	**233**	pPKPbc		06 17 50.5	
	comp=Z,3.2nm,0.8s,baz=126,slow=3.4,SNR=8.0						

CSEM 30 06:09:34.8±0.3, 38.64N×29.06W, MD2.9, Error ellipse: s-maj=9.9km s-min=3.3km az=6.0, After PDA

PDA 30 06:09:34.8±0.6, 38.64N×29.06W, MD2.9, Error ellipse: s-maj=22.6km s-min=8.3km az=14.0

SVSA 30 06:09:34.8±0.6, 38.64N×29.06W, MD2.9, Error ellipse: s-maj=22.6km s-min=8.3km az=14.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**0.29**	**101**	*e*P	Pg	06 09 40.2	-0.4
CALA				*e*S	Sg	06 09 44.5	+0.1
HOR	**Horta**	**0.36**	**108**	*e*P	Pg	06 09 41.4	-0.5
HOR				*e*S	Sg	06 09 46.3	-0.4
PICO	**Pico**	**0.52**	**105**	*e*P	Pg	06 09 44.4	-0.7
PICO				*e*S	Sg	06 09 51.6	-0.4

BJI 30 06:36:27.4, 1.08N×97.38E, h26^{km}, mB4.2, mb4.7, Ms3.5, Msz3.3

MOS 30 06:36:32.2±0.7, 1.56N×97.06E, h33^{km}, mb4.5/10, Error ellipse: s-maj=21.0km s-min=9.7km az=103.1

NEIC 30 06:36:33.7±0.4, 1.60N×97.05E, mb4.5/8, Error ellipse: s-maj=10.1km s-min=7.1km az=65.0

IDC 30 06:36:33.4±0.8, 1.53N×96.96E, h27^{km}±4^{km}, mb4.1/14, mb1 4.2/15, mb1mx4.1/21, mbtmp4.2/15, ML4.5/1, MS3.6/3, Ms1 3.7/3, ms1mx3.3/22, Error ellipse: s-maj=35.4km s-min=12.6km az=52.0

ISC 30 06:36:31.4±0.5, 1.61N±0.07×97.04E±0.08, h26^{km}, h26^{km}±2.2^{km}:pP-P, n47, σ0^{s}86/46, mb4.3/30, MS3.6/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.13**	**44**	*e*Pn	**Pn**	**06 37 49.1**	**+0.3**
KSM	**Kuching**	**13.27**	**90**	P	**P**	**06 39 44.1**	**+3.2**
CMAR	**Chiang Mai Arr**	**16.85**	**6**	Pn	**P**	**06 40 27.2**	**-0.2**
	0.6nm,0.3s,baz=197,slow=12,SNR=12						
CMAR				LR	LR	06 47 31.2	
	comp=Z,166nm,18.8s,baz=185,slow=39						
QIZ	**Qiongzhong**	**21.38**	**35**	P	**P**	**06 41 18.3**	**-1.1**
	21nm,1.8s,mb4.2						
KMI	**Kunming**	**24.02**	**13**	P	**P**	**06 41 46.5**	**+1.0**
KMI				LR	LR		
	comp=Z,110nm,17.4s,MS3.4						
KMI	**Kunming**	**24.02**	**13**	P	**P**	**06 41 46.4**	**+0.9**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
KMI				MLR	MLR		
	comp=Z,120nm,17.4s,MS3.4						
KMI	**Kunming**	**24.02**	**13**	P	**P**	**06 41 46.4**	**+0.9**
	comp=Z,8.0nm,1.0s,mb4.1						
KMI				LR	LR		
	comp=Z,120nm,17.4s,MS3.4						
SHL	**Shillong**	**24.33**	**349**	*e*P	**P**	**06 41 48.0**	**-0.5**
ENH	**Enshi**	**30.86**	**21**	*e*P	**P**	**06 42 46.2**	**-1.8**
	comp=Z,6.8nm,0.6s,mb4.7						
MBWA	**Marble Bar**	**31.70**	**137**	P	**P**	**06 42 56.3**	**+0.8**
	comp=Z,24nm,1.4s,mb4.8						
WHN	**Wuhan**	**33.13**	**28**	*e*P	**P**	**06 43 07.8**	**-0.1**
XAN	**Xi'an**	**34.12**	**18**	P	**P**	**06 43 15.5**	**-1.0**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**34.30**	**126**	P	**P**	**06 43 18.0**	**-0.2**
	comp=Z,9.2nm,0.9s,mb4.7,baz=295,slow=2.3,SNR=5.0						
GTA	**Gaotai**	**37.71**	**4**	*e*P	**P**	**06 43 48.0**	**+1.2**
GTA				AP	pP	06 43 52.3	-2.1
GTA				XP	sP	06 43 55.0	-2.7
NWAO	**Narrogin (SRO)**	**39.29**	**153**	LR	LR	07 00 00.8	
	comp=Z,132nm,21.4s,MS3.7,baz=16,slow=36						
WRA	**Warramunga Arr**	**42.39**	**122**	P	**P**	**06 44 25.2**	**-0.6**
	comp=Z,1.2nm,0.5s,mb3.8,baz=302,slow=9.2,SNR=17						
WRA				pP	pP	06 44 33.8	+0.3
	comp=Z,2.3nm,0.5s,baz=303,slow=9.1,SNR=9.6						
WRA				PcP	PcP	06 46 18.6	-0.9
	comp=Z,0.4nm,0.7s,baz=311,slow=2.7,SNR=5.1						
WRAB	**Tennant Creek**	**42.39**	**122**	*e*P	**P**	**06 44 25.5**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.6						
WRAB	**Tennant Creek**	**42.39**	**122**	*e*P	**P**	**06 44 25.5**	**-0.4**
	comp=Z,21nm,1.3s,mb4.6						
AAK	**Ala-Archa**	**45.56**	**337**	*e*P	**P**	**06 44 52.0**	**+0.8**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
AAK	**Ala-Archa**	**45.56**	**337**	*e*P	**P**	**06 44 52.0**	**+0.9**
	comp=Z,5.1nm,1.2s,mb4.3						
SONM	**Songino Array**	**46.75**	**9**	P	**P**	**06 45 01.2**	**+0.7**
	comp=Z,8.0nm,0.7s,mb4.8,baz=189,slow=8.7,SNR=18						
MKAR	**Makanchi Array**	**46.81**	**346**	P	**P**	**06 45 01.9**	**+1.0**
	comp=Z,14nm,0.8s,mb4.9,baz=160,slow=8.1,SNR=115						
MKAR				pP	pP	06 45 10.2	+1.5
	comp=Z,8.4nm,0.9s,baz=161,slow=8.0,SNR=11						
ULN	**Ulaanbaatar**	**46.89**	**9**	*e*P	**P**	**06 45 02.2**	**+0.7**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ULN	**Ulaanbaatar**	**46.89**	**9**	*e*P	**P**	**06 45 02.2**	**+0.7**
	comp=Z,4.2nm,0.6s,mb4.5						
KKAR	**Karatay Array**	**47.62**	**334**	*i* P	**P**	**06 45 08.6**	**+1.2**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
ZAK	**Zakamensk**	**48.88**	**5**	*e*P	**P**	**06 45 17.7**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
TLY	**Talaya**	**50.20**	**5**	*e*P	**P**	**06 45 28.1**	**+0.9**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
TLY	**Talaya**	**50.20**	**5**	*e*P	**P**	**06 45 28.1**	**+0.9**
	comp=Z,4.5nm,0.8s,mb4.5						
MJAR	**Matsushiro Arr**	**51.50**	**43**	P	**P**	**06 45 36.7**	**-0.6**
	comp=Z,1.0nm,0.3s,mb4.2,baz=216,slow=5.9,SNR=5.0						
MJAR				LR	LR	07 10 03.5	
	comp=Z,53nm,18.5s,MS3.6,baz=55,slow=39						
ZAL	**Zalesovo**	**53.12**	**351**	P	**P**	**06 45 49.2**	**0.0**
	comp=Z,4.9nm,0.5s,mb4.7,baz=285,slow=6.0,SNR=29						
ZAL	**Zalesovo**	**53.12**	**351**	P	**P**	**06 45 49.2**	**0.0**
STKA	**Stephens Creek**	**53.75**	**132**	P	**P**	**06 45 54.8**	**+0.7**
	comp=Z,3.7nm,0.9s,mb4.3,baz=338,slow=8.4,SNR=6.8						
STKA				pP	pP	06 46 02.3	+0.4
	comp=Z,1.8nm,0.5s,baz=335,slow=7.2,SNR=4.1						
STKA	**Stephens Creek**	**53.75**	**132**	*e*P	**P**	**06 45 53.9**	**-0.2**
STKA				*e*pP	pP	06 46 03.2	+1.3
NVS	**Novosibirsk**	**54.25**	**350**	*i* P	**P**	**06 45 56.3**	**-1.1**
NVS				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
NVS				pmax	pmax		
	comp=N,8.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.2s						
VOSK	**Vostochnaya**	**55.37**	**341**	P	**P**	**06 46 05.1**	**-0.5**
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**55.81**	**341**	P	**P**	**06 46 08.5**	**-0.3**
	comp=Z,2.2nm,0.6s,mb4.4,baz=146,slow=11,SNR=12						
ZRNK	**Zerenda**	**56.22**	**340**	P	**P**	**06 46 11.3**	**-0.4**
ZRNK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
AB31	**Akbulak array**	**57.08**	**332**	*i* P	**P**	**06 46 17.5**	**-0.5**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
YAK	**Yakutsk**	**65.08**	**16**	*e*P	**P**	**06 47 10.0**	**-1.9**
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
BRTR	**Keskin Array B**	**68.72**	**312**	P	**P**	**06 47 34.5**	**-0.8**
	comp=E,1.0nm,0.7s,mb3.9,baz=129,slow=7.9,SNR=5.1						
LBTB	**Lobatse**	**73.92**	**244**	P	**P**	**06 48 06.2**	**-0.6**
AKASG	**Malin Array Be**	**74.84**	**322**	P	**P**	**06 48 11.3**	**-0.3**
	comp=E,1.0nm,0.5s,mb4.0,baz=96,slow=4.4,SNR=5.8						
AKASG				pP	pP	06 48 18.8	-0.8
	comp=E,1.8nm,0.7s,baz=90,slow=5.0,SNR=4.0						
AKASG	**Malin Array Be**	**74.84**	**322**	P	**P**	**06 48 11.3**	**-0.3**
AKASG				pP	pP	06 48 18.8	-0.8
FINES	**FINESS Array B**	**79.56**	**332**	P	**P**	**06 48 37.8**	**+0.2**
	comp=E,1.3nm,0.8s,mb3.9,baz=150,slow=11,SNR=4.3						
ARCES	**ARCESS Array B**	**82.10**	**340**	P	**P**	**06 48 51.8**	**+1.0**
	comp=E,1.2nm,0.6s,mb4.0,baz=104,slow=5.0,SNR=9.1						
ARCES				pP	pP	06 49 01.1	+2.1
	comp=E,1.0nm,0.5s,baz=94,slow=4.9,SNR=2.5						
GERES	**GERESS Array B**	**84.40**	**319**	P	**P**	**06 49 03.4**	**+0.3**
	comp=E,0.3nm,0.4s,mb3.8,baz=108,slow=4.2,SNR=3.6						
NOA	**NORSAR Array B**	**86.57**	**331**	P	**P**	**06 49 14.4**	**+0.8**
	comp=E,0.9nm,0.8s,mb4.0,baz=98,slow=5.2,SNR=2.9						

NEIC 30 07:04:49.7, 35.25S×179.12E, h236^{km}, MG4.8(WEL), After WEL.

WEL 30 07:04:50.6±0.5, 35.24S×179.08E, h218^{km}±6^{km}, ML4.7/14, Error ellipse: s-maj=16.9km s-min=6.9km az=90.0

IDC 30 07:04:56.3±2.5, 35.76S×178.76E, h263^{km}±29^{km}, mb3.4/2, mb1 3.8/4, mb1mx3.4/14, mbtmp4.1/4, Error ellipse: s-maj=52.7km s-min=31.1km az=160.0

ISC 30 07:04:51.5±1.1, 35.8S±0.1×179.3E±0.2, h279^{km}±8^{km}, n84, σ0^{s}86/98, mb3.5/2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.97**	**204**	*e*P	**P**	**07 05 34.8**	**-1.6**
MXZ	**Matakaoa Point**	**1.97**	**204**	PN	**P**	**07 05 34.6**	**-1.8**
MXZ				SN	**S**	**07 06 08.4**	**-3.0**
PUZ	**Puketiti**	**2.45**	**200**	P	**P**	**07 05 40.7**	**-0.1**
PUZ				S	**S**	**07 06 20.5**	**+1.3**
PUZ	**Puketiti**	**2.45**	**200**	PN	**P**	**07 05 40.6**	**-0.2**
PUZ				SN	**S**	**07 06 19.6**	**+0.4**
MWZ	**Matawai**	**2.94**	**209**	*e*P	**P**	**07 05 46.0**	**+0.4**
MWZ	**Matawai**	**2.94**	**209**	PN	**P**	**07 05 45.7**	**+0.1**
MWZ				SN	**S**	**07 06 28.2**	**+0.5**
URZ	**Urewera**	**3.06**	**215**	P	**P**	**07 05 46.4**	**-0.4**
	9.0nm,0.3s,baz=243,slow=1.9,SNR=38						
URZ				S	**S**	**07 06 29.4**	**-0.4**
	39nm,0.3s,baz=33,slow=1.4,SNR=8.2						
URZ	**Urewera**	**3.06**	**215**	*e*P	**P**	**07 05 46.2**	**-0.6**
URZ	**Urewera**	**3.06**	**215**	PN	**P**	**07 05 45.9**	**-1.0**
URZ				SN	**S**	**07 06 28.8**	**-1.1**
KNZ	**Kokohu**	**3.50**	**202**	*e*P	**P**	**07 05 52.5**	**+0.8**
KNZ	**Kokohu**	**3.50**	**202**	PN	**P**	**07 05 52.2**	**+0.6**
BKZ	**Black Stump Fm**	**4.07**	**213**	P	**P**	**07 05 58.4**	**+0.4**
BKZ	**Black Stump Fm**	**4.07**	**213**	PN	**P**	**07 05 58.2**	**+0.2**
BKZ				SN	**S**	**07 06 51.3**	**+1.4**
KATZ	**Kakaramea**	**4.32**	**221**	P	**P**	**07 06 02.0**	**+1.2**
KATZ	**Kakaramea**	**4.32**	**221**	*e*PN	**P**	**07 06 01.8**	**+1.1**
KRVZ	**Karewarewa**	**4.43**	**220**	*e*PN	**P**	**07 06 02.5**	**+0.4**
KRVZ				SN	**S**	**07 07 00.9**	**+3.6**
OTVZ	**Oturere**	**4.47**	**220**	PN	**P**	**07 06 02.8**	**+0.2**
NGZ	**Ngauruhoe**	**4.51**	**220**	P	**P**	**07 06 03.4**	**+0.4**
NGZ	**Ngauruhoe**	**4.51**	**220**	PN	**P**	**07 06 03.3**	**+0.3**
NGZ				*e*PN	**P**	**07 06 03.7**	**+0.6**
TUVZ	**Tukino**	**4.55**	**219**	P	**P**	**07 06 04.2**	**+0.7**
TUVZ	**Tukino**	**4.55**	**219**	PN	**P**	**07 06 03.7**	**+0.1**
CNZ	**Chateau**	**4.56**	**220**	P	**P**	**07 06 04.8**	**+1.2**
CNZ	**Chateau**	**4.56**	**220**	PN	**P**	**07 06 04.5**	**+0.9**
WPVZ	**Whakapapa**	**4.56**	**220**	*e*PN	**P**	**07 06 04.5**	**+0.8**
FWVZ	**Far West T-bar**	**4.60**	**220**	P	**P**	**07 06 04.8**	**+0.8**
FWVZ	**Far West T-bar**	**4.60**	**220**	PN	**P**	**07 06 04.4**	**+0.4**
MOVZ	**Moawhango**	**4.61**	**217**	P	**P**	**07 06 03.8**	**-0.4**
MOVZ	**Moawhango**	**4.61**	**217**	*e*PN	**P**	**07 06 03.7**	**-0.5**
WNVZ	**Wahianoa**	**4.63**	**219**	P	**P**	**07 06 05.0**	**+0.6**

WNVZ	Wahianoa	4.63	219	*e*PN	P	07 06 04.4	+0.1
TRVZ	Turoa	4.63	219	PN	P	07 06 05.4	+1.0
PWZ	Pawanui	4.68	204	P	P	07 06 05.8	+0.8
PWZ				S	S	07 07 06.9	+4.5
PWZ	Pawanui	4.68	204	PN	P	07 06 05.5	+0.5
PWZ				SN	S	07 07 05.9	+3.5
MTVZ	Mangateitei	4.74	219	PN	P	07 06 05.4	-0.3
TSZ	Takapari Road	5.04	211	P	P	07 06 09.5	+0.2
TSZ	Takapari Road	5.04	211	PN	P	07 06 09.2	-0.1
WAZ	Wanganui	5.26	220	*e*P	P	07 06 13.0	+1.1
WAZ	Wanganui	5.26	220	*e*PN	P	07 06 12.4	+0.5
BFZ	Birch Farm	5.47	205	*e*PN	P	07 06 15.3	+0.9
MRZ	Mangatainoka R	5.71	210	PN	P	07 06 16.9	-0.4
KIW	Kapiti Island	6.16	213	PN	P	07 06 22.3	-0.5
MTW	Mount Morrison	6.16	208	P	P	07 06 23.1	+0.2
MTW	Mount Morrison	6.16	208	PN	P	07 06 23.0	+0.1
CAW	Cannon Point	6.29	211	P	P	07 06 24.4	-0.1
CAW	Cannon Point	6.29	211	PN	P	07 06 24.3	-0.1
TRWZ	Traveller	6.30	206	PN	P	07 06 25.1	+0.5
PAWZ	Paruwai Farm	6.38	207	*e*PN	P	07 06 25.6	+0.1
MSWZ	Moikau Station	6.48	208	P	P	07 06 27.0	+0.2
MSWZ	Moikau Station	6.48	208	*e*PN	P	07 06 26.6	-0.2
MRW	Makara Radio	6.55	212	P	P	07 06 27.5	-0.1
MRW	Makara Radio	6.55	212	*e*PN	P	07 06 27.0	-0.7
WEL	Wellington	6.56	212	P	P	07 06 28.4	+0.6
WEL	Wellington	6.56	212	*e*PN	P	07 06 28.1	+0.2
DUWZ	D'Urville Isla	6.58	219	*e*PN	P	07 06 27.0	-1.0
SNZO	South Karori	6.61	212	P	P	07 06 27.8	-0.6
SNZO	South Karori	6.61	212	PN	P	07 06 27.5	-0.9
TCW	Tory Channel	6.72	215	PN	P	07 06 28.9	-1.0
TUWZ	Tuamarina	7.05	215	PN	P	07 06 32.9	-1.0
BSWZ	Blackbirch Sta	7.31	214	P	P	07 06 36.9	-0.1
BSWZ	Blackbirch Sta	7.31	214	*e*PN	P	07 06 36.7	-0.4
QRZ	Quartz Range	7.35	225	*e*P	P	07 06 35.8	-1.8
QRZ	Quartz Range	7.35	225	*e*PN	P	07 06 36.1	-1.5
THZ	Tophouse	7.81	218	*e*P	P	07 06 42.8	-0.5
THZ	Tophouse	7.81	218	PN	P	07 06 42.5	-0.8
KHZ	Kahutara	8.02	212	*e*P	P	07 06 45.9	0.0
KHZ	Kahutara	8.02	212	PN	P	07 06 45.6	-0.3
DSZ	Denniston Nort	8.37	222	P	P	07 06 49.2	-1.2
DSZ	Denniston Nort	8.37	222	*e*PN	P	07 06 48.2	-2.2
LTZ	Lake Taylor	8.88	216	PN	P	07 06 55.7	-1.0
MQZ	McQueen's Vall	9.45	211	PN	P	07 07 03.2	-0.5
RPZ	Rata Peaks	10.17	216	P	P	07 07 12.9	+0.2
	3.3nm,0.3s,baz=15,slow=3.8,SNR=20						
RPZ				S	S	07 09 04.2	+0.2
	3.3nm,0.3s,baz=12,slow=22,SNR=10						
RPZ	Rata Peaks	10.17	216	*e*P	P	07 07 12.9	+0.2
RPZ	Rata Peaks	10.17	216	PN	P	07 07 12.6	-0.1
RPZ				SN	S	07 09 03.9	-0.1
FOZ	Fox Glacier	10.76	221	*e*P	P	07 07 18.9	-1.1
FOZ	Fox Glacier	10.76	221	PN	P	07 07 18.8	-1.2
LBZ	Lake Benmore	11.09	216	*e*P	P	07 07 24.7	+0.6
LBZ	Lake Benmore	11.09	216	PN	P	07 07 24.6	+0.5
ODZ	Otahua Downs	11.38	213	*e*P	P	07 07 29.7	+1.9
ODZ	Otahua Downs	11.38	213	PN	P	07 07 29.2	+1.4
ODZ				SN	S	07 09 35.2	+4.0
JCZ	Jackson Bay	11.60	221	*e*P	P	07 07 30.3	-0.2
JCZ	Jackson Bay	11.60	221	PN	P	07 07 30.2	-0.2
JCZ				SN	S	07 09 35.3	-0.7
WRA	Warramunga Arr	42.41	280	P	P	07 12 21.9	+1.2
	1.0nm,0.5s,mb3.3,baz=118,slow=7.7,SNR=12						
NVAR	Mina Array Bea	93.67	44	P	P	07 17 45.0	+7.6
	0.3nm,0.4s,mb3.7,baz=221,slow=8.3,SNR=4.6						
FINES	FINESS Array B	149.24	335	PKPbc	PKPdf	07 24 11.5	+10
	0.5nm,0.5s,baz=63,slow=3.1,SNR=6.5						

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*NEIC **30** 07:07:31.6, 34.41S×70.36W, h129^{km}, MD3.6(GUC), After GUC.*

*GUC **30** 07:07:31.6±0.6, 34.41S×70.36W, h129^{km}±2^{km}, MD3.6, ML3.1*

ISC 30 07:07:32.5±0.7, **34.39S**±0.06×**70.4W**±0.1, **h127**^{km}±5^{km}, **n21**, σ**0^{s}53**/38, **4C-8D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACH	El Canelo	0.30	333	⇑*i*P	P	07 07 50.1	-0.3
CACH				*i* S	S	07 08 04.3	+0.2
CHCH	Chadas Angostu	0.49	338	⇓*i*P	P	07 07 50.9	-0.5
CHCH				*i* S	S	07 08 05.6	0.0
SFDO	San Fernando	0.53	245	⇓*i*P	P	07 07 51.5	-0.1
SFDO				*i* S	S	07 08 06.3	+0.2
SJCH	San Jose de Ma	0.75	5	*e*P	P	07 07 52.6	-0.5
SJCH				*i* S	S	07 08 08.5	-0.3
SJCH				AMP		07 08 09.5	
	comp=N,452nm,0.5s						
PCH	Pirque	0.77	355	⇓*i*P	P	07 07 53.1	-0.2
PCH				*i* S	S	07 08 09.0	-0.1
ANTU	Antumapu	0.83	348	*e*P	P	07 07 53.5	-0.3
ANTU				*i* S	S	07 08 10.6	+0.5
ANTU				AMP		07 08 11.6	
	comp=N,727nm,0.2s						
TACH	Talagante	0.84	330	⇓*i*P	P	07 07 53.8	-0.1
TACH				*i* S	S	07 08 10.4	+0.2
FSR	Penalolen	0.91	355	*e*P	P	07 07 54.1	-0.4
FSR				*i* S	S	07 08 11.4	+0.1
FSR				AMP		07 08 12.6	
	comp=N,448nm,0.1s						
LNV	Longovilo	0.92	298	⇑*i*P	P	07 07 54.6	0.0
LNV				*i* S	S	07 08 11.1	-0.2
STL	Santa Lucia	0.97	350	*e*P	P	07 07 53.8	-1.2
STL				*i* S	S	07 08 11.7	-0.5
PUEX	Pudahuel	0.98	344	*e*P	P	07 07 55.9	+0.7
PUEX				*i* S	S	07 08 13.8	+1.3
CLCH	Cerro Calan	0.99	355	⇑*i*P	P	07 07 55.1	-0.2
CLCH				*i* S	S	07 08 12.7	0.0
CLCH				AMP		07 08 15.3	
	comp=E,566nm,0.4s						
DSCH	Colegio Aleman	0.99	353	*e*P	P	07 07 55.2	-0.2
DSCH				*i* S	S	07 08 12.8	+0.2
DSCH				AMP		07 08 17.6	
	comp=N,470nm,0.1s						
FCH	Farellones	1.07	6	⇑*i*P	P	07 07 55.9	-0.2
FCH				*i* S	S	07 08 15.1	+1.2
LCCH	Las Cruces	1.31	314	⇓*i*P	P	07 07 58.6	-0.2
ROCH	El Roble	1.49	341	*e*P	P	07 08 00.5	-0.3
IHA	Instituto Hidr	1.69	323	*e*P	P	07 08 03.2	+0.2
IHA				*i* S	S	07 08 26.7	+0.4
JACH	Jahuel	1.71	355	⇓*i*P	P	07 08 02.9	-0.3
JACH				*i* S	S	07 08 26.6	-0.1
PACH	Papudo	2.03	335	⇓*i*P	P	07 08 06.8	-0.3
PACH				*i* S	S	07 08 33.4	0.0
VNA3	Neumayer Olymp	48.50	158		P	07 16 05.6	+1.9
VNA2	Neumayer--Watz	49.14	157	⇓*i*P	P	07 16 08.2	-0.4

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*WEL **30** 07:20:37.4±0.7, 45.23S×166.48E, h5^{km}, ML5.1/24, Error ellipse: s-maj=6.8km s-min=3.0km az=90.0*

WEL Felt from Otago to Southland, maximum reported intensity MM 4.

*IDC **30** 07:20:37.0±0.6, 45.17S×166.80E, mb4.6/9, mb1 4.7/11, mb1mx4.7/15, mbtmp4.6/11, ML4.8/2, MS3.9/8, Ms1 3.9/8, ms1mx3.6/23, Error ellipse: s-maj=21.0km s-min=19.0km az=31.0*

*NEIC **30** 07:20:39.1, 45.32S×166.37E, h33^{km}, mb4.7/12, ML5.3(WEL), After WEL.*

NEIC Felt on the South Island.

*BJI **30** 07:20:41.7, 45.30S×166.40E, h33^{km}, mb5.2*

ISC 30 07:20:39.5±0.3, **44.96S**±0.04×**166.61E**±0.04, **h33**^{km}, **(h28**^{km}±1.9^{km}**:pP-P), n128,** σ**1^{s}27**/103, **mb4.7**/16, **MS3.9**/7, **3C-10D, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLZ	Mavora Lakes	1.17	110	P	P	07 20 58.4	-1.2
MLZ				S	S	07 21 14.7	0.0
MLZ	Mavora Lakes	1.17	110	⇓P*	Pb	07 20 58.5	-2.7
WKZ	Wanaka	1.72	86	P	P	07 21 09.5	+2.0
WKZ				*e*S	S	07 21 33.4	+5.0
WKZ	Wanaka	1.72	86	PN	Pn	07 21 09.4	+1.8
WKZ				SN	Sn	07 21 33.4	+4.8
JCZ	Jackson Bay	1.77	61	P	P	07 21 10.0	+1.7
JCZ				S	S	07 21 37.1	+7.2
JCZ	Jackson Bay	1.77	61	PN	Pn	07 21 09.9	+1.5
JCZ				SN	Sn	07 21 36.6	+6.5
EAZ	Earnscleugh	1.93	99	⇓P	P	07 21 11.5	+1.0
EAZ				*e*S	S	07 21 36.4	+2.5
EAZ	Earnscleugh	1.93	99	⇓PN	Pn	07 21 11.5	+0.8
EAZ				SN	Sn	07 21 36.4	+2.3
TUZ	Tuapeka	2.35	116	⇓*e*P	P	07 21 15.9	-0.6
TUZ	Tuapeka	2.35	116	⇓PN	Pn	07 21 15.9	-0.8
TUZ				SN	Sn	07 21 43.6	-1.1
LBZ	Lake Benmore	2.61	79	P	P	07 21 21.7	+1.4
LBZ	Lake Benmore	2.61	79	PN	Pn	07 21 21.5	+1.0
FOZ	Fox Glacier	2.62	59	*e*P	P	07 21 21.6	+1.3
FOZ	Fox Glacier	2.62	59	*e*PN	Pn	07 21 21.4	+0.9
ODZ	Otahua Downs	2.86	93	⇑P	P	07 21 23.9	0.0
ODZ	Otahua Downs	2.86	93	⇓PN	Pn	07 21 23.9	-0.1
RPZ	Rata Peaks	3.42	70	Pn	Pn	07 21 32.3	+0.4
	310nm,0.3s,baz=234,slow=5.4,SNR=305						
RPZ				Sn	Sn	07 22 16.0	+4.1
	239nm,0.3s,baz=124,slow=22,SNR=8.5						
RPZ				Lg		07 22 29.4	
	151nm,0.3s,baz=51,slow=20,SNR=9.9						
RPZ				LR	LR	07 22 44.1	
	comp=Z,1µm,19.0s,baz=236,slow=38						
RPZ	Rata Peaks	3.42	70	⇑*e*P	P	07 21 32.2	+0.4
RPZ	Rata Peaks	3.42	70	PN	Pn	07 21 32.2	+0.3
WVZ	Waitaha Valley	3.52	59	*e*P	P	07 21 32.6	-0.6
MQZ	McQueen's Vall	4.51	76	P	P	07 21 46.6	-0.7
MQZ	McQueen's Vall	4.51	76	PN	Pn	07 21 46.5	-0.9
LTZ	Lake Taylor	4.63	64	*e*P	P	07 21 47.9	-1.1
LTZ	Lake Taylor	4.63	64	PN	Pn	07 21 47.9	-1.3
DSZ	Denniston Nort	4.96	52	*e*P	P	07 21 52.6	-1.1
DSZ	Denniston Nort	4.96	52	PN	Pn	07 21 52.4	-1.4
THZ	Tophouse	5.59	57	*e*P	P	07 22 01.8	-0.7
THZ	Tophouse	5.59	57	PN	Pn	07 22 01.1	-1.5
KHZ	Kahutara	5.63	66	*e*P	P	07 22 03.7	+0.7
KHZ	Kahutara	5.63	66	PN	Pn	07 22 03.6	+0.4
QRZ	Quartz Range	6.00	49	P	P	07 22 07.3	-0.8
QRZ	Quartz Range	6.00	49	PN	Pn	07 22 07.3	-1.1
NNZ	Nelson	6.21	55	*e*P	P	07 22 11.0	-0.2
NNZ	Nelson	6.21	55	PN	Pn	07 22 09.8	-1.6
TUWZ	Tuamarina	6.42	59	PN	Pn	07 22 14.8	+0.5
TCW	Tory Channel	6.75	59	P	P	07 22 19.6	+0.9
TCW	Tory Channel	6.75	59	PN	Pn	07 22 19.0	+0.1
DUWZ	D'Urville Isla	6.79	55	PN	Pn	07 22 19.0	-0.5
SNZO	South Karori	6.95	61	*e*P	P	07 22 23.1	+1.4
SNZO	South Karori	6.95	61	*e*PN	Pn	07 22 22.9	+1.0
CAW	Cannon Point	7.29	61	P	P	07 22 26.2	-0.2
CAW	Cannon Point	7.29	61	PN	Pn	07 22 26.2	-0.3
KIW	Kapiti Island	7.34	59	P	P	07 22 27.9	+0.9
KIW	Kapiti Island	7.34	59	PN	Pn	07 22 25.8	-1.5
NWEZ	Newall Road	7.83	46	P	P	07 22 36.4	+2.5
MRZ	Mangatainoka R	7.87	60	*e*P	P	07 22 32.8	-1.6
MRZ	Mangatainoka R	7.87	60	*e*PN	Pn	07 22 32.7	-1.9
NEZ	North Egmont	7.95	47	P	P	07 22 34.4	-1.1
PKE	Pukeiti	7.95	46	P	P	07 22 34.7	-0.8
PKE	Pukeiti	7.95	46	*e*PN	Pn	07 22 34.3	-1.4
WAZ	Wanganui	8.09	53	*e*P	P	07 22 39.0	+1.5
WAZ	Wanganui	8.09	53	PN	P	07 22 36.9	-0.6
RAEZ	Rainy Point	8.10	48	P	P	07 22 37.6	+0.1
RAEZ	Rainy Point	8.10	48	*e*PN	P	07 22 37.3	-0.2
VRZ	Vera Road	8.41	49	*e*P	P	07 22 41.8	-0.1
VRZ	Vera Road	8.41	49	PN	P	07 22 41.1	-0.8
HIZ	Hauiti	8.91	47	*e*P	P	07 22 47.8	-1.1
URZ	Urewera	10.32	53	Pn	P	07 23 07.9	-0.4
	2.2nm,0.3s,baz=267,slow=4.9,SNR=13						
URZ				Sn	S	07 24 55.5	-8.4
	1.5nm,0.3s,baz=341,slow=6.0,SNR=3.5						
TAU	Tasmania Unive	14.05	272	*e*P	P	07 23 54.8	-3.4
	39nm,0.8s						
TAU				*e*S	S	07 26 15.8	-18
TOO	Toolangi	17.48	288	*e*P	P	07 24 45.5	+3.4
	15nm,0.6s						
TOO				*e*S	S	07 27 47.9	-5.7
DZM	Mont Dzumac	22.83	360	P	P	07 25 45.6	+4.9
	19nm,1.0s,mb4.5,baz=180,slow=6.7,SNR=4.0						
STKA	Stephens Creek	23.44	295	*e*P	P	07 25 51.6	+5.1
	10nm,0.9s,mb4.2						
STKA	Stephens Creek	23.44	295	P	P	07 25 50.9	+4.4
	4.8nm,0.7s,mb4.1,baz=114,slow=11,SNR=9.5						
STKA				LR	LR	07 34 30.6	
	comp=Z,280nm,20.0s,MS3.7,baz=295,slow=35						
CTA	Charters Tower	29.99	319	P	P	07 26 50.7	+3.5
	4.9nm,0.8s,mb4.3,baz=145,slow=10.0,SNR=5.8						
CTA				LR	LR	07 38 09.7	
	comp=Z,166nm,18.7s,MS3.7,baz=34,slow=35						
CTA	Charters Tower	29.99	319	P	P	07 26 50.7	+3.5
CTA				LR	LR	07 38 09.7	
CTAO	Charters Tower	29.99	319	*e*P	P	07 26 50.0	+2.8
	5.8nm,0.7s,mb4.4						
VNDA	Vanda	32.73	182	LR	LR	07 38 10.6	
	comp=Z,273nm,19.0s,MS4.0,baz=346,slow=32						
VNDA	Vanda	32.73	182	P	P	07 27 11.0	+0.3
	4.1nm,1.0s,mb4.3						
HNR	Honiara	35.86	349	LR	LR	07 40 43.8	
	comp=Z,249nm,19.0s,MS4.0,baz=159,slow=33						
CASY	Casey	36.45	214	*e*P	P	07 27 42.9	+0.2
WB2	Warramunga Arr	36.52	302	*e*P	P	07 27 45.2	+1.4
WRA	Warramunga Arr	36.53	302	P	P	07 27 45.4	+1.5
	8.0nm,0.9s,mb4.6,baz=137,slow=8.1,SNR=41						
WRA				PcP	PcP	07 30 08.2	+0.8
	3.5nm,0.8s,baz=138,slow=2.8,SNR=8.5						
WRAB	Tennant Creek	36.53	302	*e*P	P	07 27 45.1	+1.2
	45nm,1.2s,mb5.2						
WRAB				*e*PcP	PcP	07 30 07.3	0.0
PMG	Port Moresby	39.20	329	LR	LR	07 42 01.6	
	comp=Z,124nm,18.8s,MS3.8,baz=176,slow=33						
FITZ	Fitzroy Crossi	43.34	295	P	P	07 28 42.3	+2.1
	13nm,0.9s,mb4.7,baz=179,slow=11,SNR=12						
FITZ				PcP	PcP	07 30 29.9	+0.8
	16nm,1.1s,baz=180,slow=7.4,SNR=4.0						
MBWA	Marble Bar	45.12	286	P	P	07 28 53.1	-1.3
	32nm,1.3s,mb5.0						
QSPA	South Pole Qui	45.17	180	⇑*i*P	P	07 28 55.0	+0.9
	15nm,0.8s,mb4.9						
MAW	Mawson	54.14	207	*e*P	P	07 30 03.1	+0.1
	5.1nm,1.0s,mb4.4						
MAW	Mawson	54.14	207	P	P	07 30 02.9	-0.2
	7.7nm,1.1s,mb4.6,baz=124,slow=8.2,SNR=12						
MAW				PcP	PcP	07 31 07.6	+0.2
	4.4nm,0.9s,baz=102,slow=6.0,SNR=5.1						
MAW				LR	LR	07 49 28.6	
	comp=Z,115nm,19.2s,MS4.0,baz=258,slow=32						
SYO	Syowa Base	59.81	199	⇓X	P	07 30 41.0	-2.3
SYO	Syowa Base	59.81	199	⇓pP	pP	07 30 48.0	-5.4
SYO	Syowa Base	59.81	199	⇓PcP	PcP	07 31 27.2	-2.2
SNAA	Sanae	63.44	184	*e*	P	07 31 06.9	-0.7
SNAA	Sanae	63.44	184	*e*	pP	07 31 16.2	-1.7
SNAA	Sanae	63.44	184	*e*P	P	07 31 06.5	-1.1
	16nm,0.9s,mb5.2						
SNAA				*e*	pP	07 31 16.2	-1.7
SNAA				*e*		07 31 32.0	
VNA3	Neumayer Olymp	64.08	181	*e*	P	07 31 10.7	-0.9
VNA3	Neumayer Olymp	64.08	181	*e*	pP	07 31 20.2	-1.7
VNA2	Neumayer--Watz	64.35	182	*e*	P	07 31 13.1	-0.3
VNA2	Neumayer--Watz	64.35	182	*e*	pP	07 31 22.4	-1.3
VNA2	Neumayer--Watz	64.35	182	*e*	P	07 31 13.1	-0.3
VNA2				*e*	pP	07 31 22.4	-1.3
PLCA	Paso Flores	80.49	140	P	P	07 32 50.6	+1.2
	2.0nm,0.8s,mb4.1,baz=210,slow=6.4,SNR=5.3						
PLCA	Paso Flores	80.49	140	*e*P	P	07 32 50.0	+0.6
	14nm,1.5s,mb4.7						
MJAR	Matsushiro Arr	85.10	337	P	P	07 33 15.9	+2.9
	0.7nm,0.3s,mb4.3,baz=180,slow=7.0,SNR=5.8						
MAJO	Matsushiro	85.10	337	P	P	07 33 14.0	+1.0
	9.8nm,1.1s,mb4.8						
TRQA	Tornquist	86.47	144	*e*P	P	07 33 17.2	-2.5
	8.2nm,1.1s,mb4.9						
CMAR	Chiang Mai Arr	88.02	299	P	P	07 33 31.1	+3.5
	5.8nm,0.9s,mb4.8,baz=148,slow=3.4,SNR=21						
CMAR				LR	LR	08 12 52.1	
	comp=Z,71nm,18.6s,MS4.1,baz=200,slow=36						
WHN	Wuhan	88.92	317	P	P	07 33 35.5	+3.8
WHN				AP	pP	07 33 44.0	+1.7
KS15	Wonju Array Si	89.17	330	*e*P	P	07 33 32.0	-0.7
ENH	Enshi	91.13	313	P	P	07 33 44.5	+2.4
ILAR	Eielson Array	115.27	20	PKP	PKPdf	07 39 18.1	+1.3
	0.9nm,0.7s,baz=214,slow=6.5,SNR=12						
ILAR				PKKPbc		07 49 52.1	
	0.4nm,0.7s,baz=358,slow=3.3,SNR=8.3						
MKAR	Makanchi Array	117.61	310	PKP	PKPdf	07 39 23.0	+1.4
	0.8nm,0.8s,baz=90,slow=2.4,SNR=7.1						
MKAR				PKKPbc		07 49 44.8	
	0.3nm,0.6s,baz=333,slow=2.7,SNR=5.2						
MKAR	Makanchi Array	117.61	310	PKP	PKPdf	07 39 23.0	+1.4
MKAR				PKKPbc		07 49 44.8	
INK	Inuvik	121.42	22	PKP	PKPdf	07 39 29.9	+1.4
	3.2nm,0.8s,baz=228,slow=1.8,SNR=11						
YKA	Yellowknife Ar	124.03	33	PKP	PKPdf	07 39 34.8	+1.1
	0.8nm,0.7s,baz=260,slow=1.4,SNR=8.2						
YKA	Yellowknife Ar	124.03	33	PKP	PKPdf	07 39 34.8	+1.1
BVAR	Borovoye Array	127.42	311	PKP	PKPdf	07 39 42.6	+2.2
	0.6nm,0.5s,baz=117,slow=3.3,SNR=8.1						
DBIC	Dimbokro	141.14	194	PKhKP		07 40 00.4	
	1.9nm,0.4s,baz=137,slow=6.0,SNR=6.5						
DBIC				PKP	PKPdf	07 40 09.3	+2.4
	5.0nm,0.7s,baz=180,slow=4.2,SNR=5.0						
DBIC	Dimbokro	141.14	194	PKP	PKPdf	07 40 09.3	+2.4
AVNT	Avonos	143.98	277	*i* P	PKPbc	07 40 11.9	+1.7
CDAG	Cicekdag	144.68	278	*i* P	PKPbc	07 40 13.6	+1.4
CTKT	Corum	144.79	280	*i* P	PKPbc	07 40 15.1	+2.6
BOYT	Boyabat	145.02	282	*i* P	PKPdf	07 40 15.9	+3.1
BRTR	Keskin Array B	145.24	278	PKPbc	PKPbc	07 40 16.4	+2.7
	27nm,0.8s,baz=146,slow=4.5,SNR=104						
BR131	Keskin Array S	145.24	278	*e*PKPdf	PKPdf	07 40 16.1	+2.9
BALT	Daday	146.12	281	*i* P	PKPdf	07 40 19.5	+4.8
SGKT	Sivrigoynuk	146.69	279	*i* P	PKPdf	07 40 20.0	+4.3
TKTP	Tekketepe	146.86	274	*i* P	PKPdf	07 40 21.3	+5.2
ESKT	Eskisehir	147.12	276	*i* P	PKPdf	07 40 21.4	+5.0
DAG	Danmarks Havn	148.01	2	⇓*i*P	PKPdf	07 40 21.8	+5.0
	3.0nm,0.8s						
ARCES	ARCESS Array B	148.60	335	PKPbc	PKPdf	07 40 24.8	+6.9
	5.3nm,0.5s,baz=71,slow=3.8,SNR=61						
BTOK	Tokmak	149.20	275	*i* P	PKPdf	07 40 27.1	+7.3
SUMG	Summit	149.91	15	*e*PKPdf	PKPdf	07 40 23.0	+3.1
SUMG				*e*PKPbc	PKPdf	07 40 28.0	+8.1
AKASG	Malin Array Be	151.13	297	PKPbc	PKPdf	07 40 31.2	+8.8
	8.5nm,0.7s,baz=77,slow=2.5,SNR=37						
FINES	FINESS Array B	151.76	320	PKPbc	PKPdf	07 40 32.4	+9.4
	7.0nm,0.6s,baz=89,slow=3.6,SNR=36						
FINES				PKPab	PKPab	07 40 42.2	+1.6
	2.7nm,0.5s,baz=63,slow=4.3,SNR=6.4						
NB2	NORSAR Subarra	158.34	327	PKPabc	PKPab	07 41 09.6	+1.0
	1.0nm,0.7s,baz=27,slow=2.3						
NOA	NORSAR Array B	158.34	327	PKPab	PKPab	07 41 09.3	+0.7
	2.0nm,0.8s,baz=57,slow=4.5,SNR=7.9						
GERES	GERESS Array B	161.13	292	PKPab	PKPab	07 41 22.6	+1.6
	0.5nm,0.4s,baz=135,slow=3.8,SNR=7.5						
ESDC	Sonseca Array	171.25	236	PKP	PKPdf	07 40 46.8	+3.2
	0.2nm,0.2s,baz=158,slow=1.3,SNR=4.9						
ESDC				PKPab	PKPab	07 42 07.1	+1.5
	1.4nm,0.6s,baz=123,slow=5.2,SNR=8.0						

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*BJI **30** 07:26:12.6, 1.00N×97.10E, h22^{km}, mb4.7*

*NEIC **30** 07:26:14.7±0.7, 0.99N×97.11E, mb4.5/3, Error ellipse: s-maj=17.7km s-min=11.6km az=74.0*

*IDC **30** 07:26:15.1±1.8, 1.07N×97.22E, h21^{km}±5^{km}, mb3.9/7, mb1 4.0/8, mb1mx3.8/20, mbtmp4.0/8, ML4.2/1, MS3.3/1, Ms1 3.5/1, ms1mx3.0/24, Error ellipse: s-maj=79.9km s-min=17.0km az=56.0*

ISC 30 07:26:12.4±0.7, **0.98N**±0.09×**97.1E**±0.1, **h20**^{km}, **h20**^{km}±2.0^{km}**:pP-P, n16,** σ**0^{s}93**/16, **mb4.2**/10, **MS3.4**/1, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.55	39	*e*P	Pn	07 27 35.6	-0.5
KULM				*e*pP		07 27 41.5	
CMAR	Chiang Mai Arr	17.46	6	P	P	07 30 15.1	-1.6
	0.3nm,0.3s,baz=196,slow=10,SNR=10						
CMAR				LR	LR	07 36 53.9	
	comp=Z,100nm,19.4s,baz=185,slow=37						
KMI	Kunming	24.61	12	P	P	07 31 35.3	+2.4
KMI				AP		07 31 42.0	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
KMI	Kunming	24.61	12	P	P	07 31 35.3	+2.4
	comp=Z,14nm,1.0s,mb4.5						
KMI				pP		07 31 41.9	
KMI				LR	LR		
	comp=Z,90nm,16.1s,MS3.4						
ENH	Enshi	31.41	21	P	P	07 32 30.7	-4.0
	comp=Z,7.3nm,0.6s,mb4.7						
GTA	Gaotai	38.33	3	*e*P	P	07 33 34.3	+0.6
GTA				AP	pP	07 33 38.3	-1.5
GTA				XP	sP	07 33 41.0	-1.3
WRA	Warramunga Arr	42.00	122	P	P	07 34 04.5	+0.2
	comp=Z,1.0nm,0.7s,mb3.5,baz=304,slow=9.2,SNR=8.0						
WRA				pP	pP	07 34 11.4	+1.0
	comp=Z,0.8nm,0.6s,baz=303,slow=9.0,SNR=3.3						
WRAB	Tennant Creek	42.00	122	P	P	07 34 04.2	-0.2
	comp=Z,8.8nm,1.0s,mb4.3						
SONM	Songino Array	47.36	8	P	P	07 34 47.2	+0.2
	comp=Z,1.1nm,0.6s,mb4.0,baz=190,slow=9.9,SNR=3.8						
MKAR	Makanchi Array	47.43	346	P	P	07 34 48.0	+0.4
	comp=Z,2.3nm,0.8s,mb4.2,baz=162,slow=7.9,SNR=21						
MKAR				pP	pP	07 34 54.8	+1.1
	comp=Z,1.4nm,0.5s,baz=161,slow=7.9,SNR=12						
STKA	Stephens Creek	53.28	132	P	P	07 35 32.4	0.0
	comp=Z,1.2nm,0.6s,mb4.0,baz=270,slow=5.1,SNR=3.4						
STKA	Stephens Creek	53.28	132	P	P	07 35 32.4	0.0
ZAL	Zalesovo	53.75	351	P	P	07 35 35.3	-0.2
	comp=Z,1.7nm,0.4s,mb4.4,baz=318,slow=4.4,SNR=6.7						
BVAR	Borovoye Array	56.42	341	P	P	07 35 54.1	-0.9
	comp=Z,0.8nm,0.7s,mb3.9,baz=135,slow=8.4,SNR=7.6						
BVAR				pP	pP	07 36 00.6	-0.6
	comp=Z,1.2nm,0.6s,baz=135,slow=8.4,SNR=6.3						
LBTB	Lobatse	73.71	244	P	P	07 37 46.7	-0.7
ARCES	ARCESS Array B	82.71	340	P	P	07 38 37.0	+1.2
	comp=Z,2.1nm,0.9s,mb4.2,baz=72,slow=3.8,SNR=5.3						

IDC 30 07:32:12.4±2.9, **7.98N**×**91.28E, mb3.6**/2, **mb1 3.8**/3, **mb1mx3.5**/20, **mbtmp3.6**/3, **Error ellipse: s-maj=86.7km s-min=32.1km az=65.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.81	35	Pn	P	07 35 15.8	-2.8
	baz=235,slow=14,SNR=5.4						
MKAR	Makanchi Array	39.44	350	P	P	07 39 44.0	-1.9
	0.6nm,0.6s,baz=167,slow=8.6,SNR=3.8						
WRA	Warramunga Arr	50.65	124	P	P	07 41 13.9	-1.9
	0.3nm,0.4s,baz=301,slow=9.7,SNR=53						

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*IDC **30** 07:37:57.7±1.2, 44.46N×129.90W, mb3.8/12, mb1 4.0/18, mb1mx4.0/30, mbtmp3.8/18, ML3.6/5, MS3.9/11, Ms1 3.9/11, ms1mx3.7/23, Error ellipse: s-maj=29.5km s-min=12.3km az=38.0*

*BJI **30** 07:37:58.2, 44.60N×129.80W, h10^{km}, mB5.1, mb4.8, Ms4.4, Msz4.2*

*NEIC **30** 07:38:00.8±0.4, 44.56N×129.75W, h10^{km}, mb4.2/13, Error ellipse: s-maj=6.3km s-min=3.6km az=42.0*

ISC 30 07:37:59.1±0.4, **44.55N**±0.04×**129.73W**±0.05, **h10**^{km}, **n109,** σ**0^{s}96**/108, **mb4.2**/18, **MS3.6**/5, **Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RNO	Roman Nose	4.35	96	P	Pn	07 39 05.6	-1.2
MPOR	Mary's Peak	4.42	88	P	Pn	07 39 06.6	-1.2
KMOR	Kings Mountain	4.55	74	P	Pn	07 39 08.2	-1.4
NLO	Nicolai Mounta	4.69	69	P	Pn	07 39 11.6	0.0
ON2	Olympics--Nort	4.77	59	P	Pn	07 39 12.9	+0.2
WISH	Wishkah	4.89	56	P	Pn	07 39 14.8	+0.3
BMW	Boistfort Moun	4.96	65	P	Pn	07 39 15.0	-0.4
OSR	Olympics--Salm	4.98	52	P	Pn	07 39 15.9	+0.1
OOW	Octopus West	5.00	48	P	Pn	07 39 16.3	+0.4
OCWA	Octopus Mounta	5.01	48	*e*P	Pn	07 39 15.1	-1.0
	59nm,0.5s						
OTR	Olympics--Tyee	5.13	45	P	Pn	07 39 18.4	+0.5
SSOR	Sweet Springs	5.19	84	P	Pn	07 39 18.6	-0.1
CPW	Capitol Peak	5.21	60	P	Pn	07 39 18.7	-0.2
BROR	Big Rock Looko	5.22	91	P	Pn	07 39 18.8	-0.4
OBC	Olympics--Boni	5.24	46	P	Pn	07 39 19.5	+0.1
SMW	South Mountain	5.24	56	P	Pn	07 39 19.3	-0.2
HUMO	Hull Mountain	5.29	109	*e*P	Pn	07 39 19.3	-0.8
LVP	Lakeview Peak	5.38	71	P	Pn	07 39 21.0	-0.4
IRO	Indian Ridge	5.39	93	P	Pn	07 39 21.2	-0.4
FL2	Flat Top 2	5.45	70	P	Pn	07 39 22.3	0.0
FRIS	Frissel Point	5.48	91	P	Pn	07 39 22.2	-0.5
HUOR	Husband	5.67	92	P	Pn	07 39 25.3	-0.2
YBH	Yreka Blue Hor	5.86	116	Pn	Pn	07 39 29.0	+0.9
	0.5nm,0.3s,baz=269,slow=6.4,SNR=13						
YBH				LR	LR	07 41 00.3	
	comp=Z,81nm,19.7s,baz=303,slow=31						
YBH	Yreka Blue Hor	5.86	116	*e*P	Pn	07 39 29.2	+1.1
	8.2nm,0.8s						
VFP	Flag Point	5.92	80	P	Pn	07 39 29.4	+0.4
RVC	Mount Rainier-	5.93	64	P	Pn	07 39 29.6	+0.4
ASR	Mount Adams--S	5.95	72	P	Pn	07 39 29.5	0.0
PGC	Sidney	5.96	44	*e*P	Pn	07 39 28.6	-0.9

	95nm,0.6s						
RMW	Rattlesnake Mo	6.24	59	P	Pn	07 39 33.6	+0.1
CMW	Cultus Mountai	6.52	51	P	Pn	07 39 38.1	+0.6
BBB	Bella Bella	7.71	7	Pn	Pn	07 39 55.9	+1.7
	0.5nm,0.3s,baz=194,slow=11,SNR=4.4						
BBB				LR	LR	07 42 04.0	
	comp=Z,373nm,18.5s,baz=189,slow=32						
WVOR	Wild Horse Val	8.34	101	eP	P	07 40 02.9	0.0
BMO	Blue Mountains	8.86	84	eP	P	07 40 08.0	-2.1
WCN	Washoe City	9.10	122	eP	P	07 40 14.0	+0.6
NEW	Newport	9.46	62	Pn	P	07 40 16.7	-1.8
	0.7nm,0.3s,baz=248,slow=10,SNR=8.5						
NEW				LR	LR	07 43 50.5	
	comp=Z,1μm,20.3s,baz=252,slow=37						
NEW	Newport	9.46	62	eP	P	07 40 16.2	-2.3
CMB	Columbia Colle	9.58	130	eP	P	07 40 18.9	-1.2
NVAR	Mina Array Bea	10.53	122	Pn	P	07 40 32.2	-0.8
	0.1nm,0.3s,baz=299,slow=11,SNR=13						
NVAR				LR	LR	07 44 20.5	
	comp=Z,428nm,18.2s,baz=190,slow=36						
MNV	Mina	10.61	121	eP	P	07 40 34.8	+0.6
HLID	Hailey	11.07	90	eP	P	07 40 38.7	-1.8
MSO	Missoula	11.28	73	eP	P	07 40 40.7	-2.6
ELK	Elko	11.33	105	Pn	P	07 40 45.2	+1.2
	0.1nm,0.3s,baz=291,slow=7.6,SNR=22						
ELK				LR	LR	07 45 04.3	
	comp=Z,490nm,20.0s,baz=288,slow=37						
ELK	Elko	11.33	105	eP	P	07 40 44.6	+0.6
HRY	Holter Researc	12.71	74	eP	P	07 40 59.9	-2.7
BGU	Big Grassy Mou	12.80	101	eP	P	07 41 03.8	0.0
BOZ	Bozeman (W)	12.84	79	eP	P	07 41 04.2	-0.2
RRI2	Red Ridge	13.32	89	eP	P	07 41 10.7	0.0
YFT	Old Faithful	13.49	84	P	P	07 41 14.4	+1.5
IMW	Indian Meadow	13.49	86	eP	P	07 41 14.6	+1.5
TPAW	Teton Pass	13.56	88	P	P	07 41 14.4	+0.6
HWUT	Hardware Ranch	13.60	96	eP	P	07 41 15.1	+0.8
REDW	Red Top Meadow	13.65	88	P	P	07 41 16.1	+1.0
MOOW	Moose Ponds	13.66	87	eP	P	07 41 15.8	+0.7
SNOW	Snow King Moun	13.70	88	eP	P	07 41 16.0	+0.3
LOHW	Long Hollow	13.78	87	P	P	07 41 15.9	-0.8
EDM	Edmonton	13.80	45	eP	P	07 41 16.5	-0.4
DLBC	Dease Lake	13.90	359	Pn	P	07 41 18.9	+0.7
	0.2nm,0.3s,baz=177,slow=13,SNR=6.3						
DLBC				LR	LR	07 46 06.0	
	comp=Z,907nm,19.8s,baz=178,slow=35						
DLBC	Dease Lake	13.90	359	eP	P	07 41 18.9	+0.7
ARUT	Antelope Range	14.00	113	eP	P	07 41 20.9	+1.4
DAU	Daniels Canyon	14.24	100	P	P	07 41 25.6	+2.8
NEN	Nelson	14.43	123	eP	P	07 41 25.2	-0.1
MVU	Marysvale	14.44	109	eP	P	07 41 26.3	+0.9
	12nm,1.3s						
MSU	Marysvale	14.46	109	eP	P	07 41 26.8	+1.2
LDFC	Landfair	14.67	125	eP	P	07 41 29.6	+1.1
BW06	Boulder Array	14.71	90	P	P	07 41 28.6	-0.3
	3.6nm,1.2s						
PDAR	Pinedale Array	14.71	90	Pn	P	07 41 33.2	+4.3
	baz=270,slow=9.0,SNR=5.8						
PDAR				LR	LR	07 47 13.9	
	comp=Z,911nm,18.6s,baz=312,slow=38						
SRU	San Rafael	15.30	104	eP	P	07 41 38.1	+1.4
RWWY	Rawlins	16.68	92	eP	P	07 41 55.0	+0.7
	13nm,1.1s						
DGMT	Dagmar	17.97	68	eP	P	07 42 12.2	+1.7
	26nm,0.9s						
PHWY	Pilot Hill	18.05	92	eP	P	07 42 11.8	+0.3
RSSD	Black Hills	18.37	82	eP	P	07 42 16.1	+0.6
	4.6nm,1.0s						
ISCO	Idaho Springs	18.47	96	eP	P	07 42 17.0	+0.3
	5.8nm,0.8s						
TUC	Tucson	19.17	123	eP	P	07 42 24.7	-0.5
	14nm,1.5s						
SDCO	Great Sand Dun	19.43	102	eP	P	07 42 28.0	-0.2
	7.0nm,1.1s						
YKA	Yellowknife Ar	20.00	21	P	P	07 42 34.7	+0.4
	1.9nm,0.8s,baz=210,slow=11,SNR=11						
YKA	Yellowknife Ar	20.00	21	P	P	07 42 34.7	+0.3
YKW3	Yellowknife Ar	20.05	21	eP	P	07 42 34.8	-0.1
SLKM	Skilak Lake	20.12	330	eP	P	07 42 35.8	+0.2
ANMO	Albuquerque	20.24	110	P	P	07 42 36.2	-0.9
	2.3nm,0.9s,baz=311,slow=11,SNR=7.9						
ANMO				LR	LR	07 49 48.8	
	comp=Z,142nm,20.5s,MS3.3,slow=35						
ANMO	Albuquerque	20.24	110	eP	P	07 42 36.3	-0.8
	6.3nm,1.2s						
PMR	Palmer	20.52	333	eP	P	07 42 40.0	+0.1
PWA	Palmer West	20.81	332	eP	P	07 42 42.1	-0.7
SPU	Mount Spurr	21.24	329	eP	P	07 42 48.5	+1.3
ILAR	Eielson Array	22.41	341	P	P	07 42 59.1	+0.2
	1.9nm,0.9s,mb3.5,baz=151,slow=8.0,SNR=20						
ILAR				LR	LR	07 50 14.4	
	comp=Z,406nm,21.1s,MS3.8,baz=170,slow=33						
SVW2	Sparrevohn	22.53	326	eP	P	07 43 02.2	+2.2
MNTX	Cornudas Mount	22.95	116	eP	P	07 43 04.8	+0.3
	120nm,2.8s,mb4.8						
ULM	Lac du Bonnet	23.47	64	P	P	07 43 09.4	+0.1
	4.2nm,1.0s,mb3.8,baz=271,slow=12,SNR=2.6						
ULM				LR	LR	07 52 19.2	
	comp=Z,374nm,19.8s,MS3.9,baz=260,slow=36						
AMTX	Amarillo	23.54	105	eP	P	07 43 10.2	0.0
	10nm,0.9s,mb4.3						
INK	Inuvik	23.90	357	P	P	07 43 13.8	+0.6
	2.4nm,0.9s,mb3.6,baz=173,slow=12,SNR=5.0						
INK	Inuvik	23.90	357	eP	P	07 43 13.4	+0.2
	6.7nm,1.2s,mb4.0						
IMA	Indian Mountai	25.19	337	eP	P	07 43 26.1	+0.3
TXAR	Lajitas Array	25.63	118	P	P	07 43 29.6	-0.7
	1.5nm,0.9s,mb3.5,baz=309,slow=8.0,SNR=9.4						
TXAR				LR	LR	07 54 10.6	
	comp=Z,80nm,22.0s,MS3.2,baz=340,slow=38						
WMOK	Wichita Mounta	25.63	102	eP	P	07 43 29.6	-0.6
	8.9nm,0.9s,mb4.3						
OXF	Oxford	32.38	94	eP	P	07 44 30.3	-0.6
	30nm,1.1s,mb5.0						
SUMG	Summit	48.56	24	P	P	07 46 44.3	+0.5
ARCES	ARCESS Array B	64.78	9	LR	LR	08 17 07.1	
	comp=Z,79nm,18.8s,MS3.9,baz=44,slow=36						
MDJ	Mudanjiang	66.75	310	P	P	07 48 49.0	-3.3
MDJ				AMB	AMB		
	comp=Z,80nm,3.7s						
CN2	Changchun	69.53	312	eP	P	07 49 09.8	+0.2
CN2				eS	S	07 58 14.5	-1.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NB2	NORSAR Subarra	70.09	19	P	P	07 49 12.3	-0.5
	comp=Z,2.6nm,1.0s,mb4.1,baz=330,slow=6.2						
NOA	NORSAR Array B	70.09	19	P	P	07 49 11.7	-1.1
	comp=Z,1.5nm,0.9s,mb3.9,baz=333,slow=6.0,SNR=4.2						
TLY	Talaya	73.65	329	eP	P	07 49 33.1	-0.9
	comp=Z,4.0nm,0.9s,mb4.3						
SONM	Songino Array	75.63	325	P	P	07 49 43.7	-1.9
	comp=Z,0.8nm,0.3s,mb4.1,baz=45,slow=5.2,SNR=5.5						
ZAL	Zalesovo	77.55	340	P	P	07 49 53.8	-2.4
	comp=Z,1.0nm,0.3s,mb4.2,baz=106,slow=7.4,SNR=2.9						
SSE	Sheshan	80.86	305	P	P	07 50 14.0	-0.6
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,50nm,4.6s						
BVAR	Borovoye Array	81.28	348	P	P	07 50 15.8	-0.5
	comp=Z,1.5nm,0.9s,mb3.9,baz=63,slow=3.3,SNR=5.5						
AKASG	Malin Array Be	83.38	13	P	P	07 50 28.6	+1.3
	comp=Z,0.2nm,0.3s,mb3.6,baz=335,slow=4.2,SNR=3.7						
MKAR	Makanchi Array	84.75	339	P	P	07 50 34.4	+0.3
	comp=Z,0.1nm,0.6s,mb3.1,baz=104,slow=5.9,SNR=2.1						
WMQ	Urumqi	85.91	334	eP	P	07 50 41.5	+1.5
WMQ				AP	pP	07 50 45.5	+2.3
WMQ				XP	sP	07 50 47.5	+3.3
LZH	Lanzhou	86.21	319	eP	P	07 50 39.5	-2.2
LZH				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.9						

IDC 30 07:39:02.8±1.8**, 44.60N**×**129.88W, mb3.9**/4**, mb1 4.0**/8**, mb1mx3.8**/25**, mbtmp3.8**/8**, ML3.4**/4**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.4**/25**, Error ellipse: s-maj=54.3km s-min=20.0km az=32.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YBH	Yreka Blue Hor	5.97	116	Pn	Pn	07 40 35.0	+0.4
	0.1nm,0.3s,baz=314,slow=14,SNR=4.8						
NVAR	Mina Array Bea	10.64	121	Pn	P	07 41 38.9	-0.6
	0.0nm,0.3s,baz=301,slow=10,SNR=3.6						
ELK	Elko	11.44	105	Pn	P	07 41 50.0	-0.5
	0.1nm,0.3s,baz=299,slow=19,SNR=3.6						
PDAR	Pinedale Array	14.82	90	Pn	P	07 42 36.3	+1.0
	0.1nm,0.3s,baz=283,slow=12,SNR=2.6						
ANMO	Albuquerque	20.36	110	P	P	07 43 41.5	-2.0
	3.0nm,1.0s,baz=290,slow=11,SNR=4.0						
ULM	Lac du Bonnet	23.55	64	P	P	07 44 16.2	+1.0
	5.6nm,0.8s,baz=285,slow=9.2,SNR=3.5						
TXAR	Lajitas Array	25.75	117	P	P	07 44 34.3	-2.3
	1.9nm,0.8s,baz=296,slow=8.0,SNR=6.2						
ROSC	El Rosal	62.51	112	LR	LR	08 17 29.6	
	comp=Z,45nm,20.1s,baz=212,slow=37						
SONM	Songino Array	75.53	325	P	P	07 50 48.9	-1.4
	0.5nm,0.3s,baz=45,slow=6.1,SNR=2.6						

KRSC 30 07:41:35.8±0.3**, 53.70N**×**160.97E, h32**^{km}±6^{km}**, ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.83	224	i P	Pn	07 41 50.9	-0.4
SPN				i S	Sn	07 42 01.9	-0.6
KII	Karymskiy	0.96	291	i P	Pn	07 41 53.2	0.0
KII				i S	Sn	07 42 05.9	0.0
MKZ	Mys Kozlova	0.97	27	i P	Pn	07 41 52.7	-0.6
MKZ				eS	Sn	07 42 05.1	-0.9
NLC	Nalytchevo	1.11	242	eP	Pn	07 41 55.1	-0.2
NLC				eS	Sn	07 42 09.3	-0.3
SDLR	Sedlovina	1.32	252	i P	Pn	07 41 58.6	+0.3
SMAR	Somma	1.37	252	i P	Pn	07 41 59.3	+0.3
UGLR	Uglovaya	1.38	250	i P	Pn	07 41 59.5	+0.4
AVH	Avacha	1.40	253	i P	Pn	07 42 00.1	+0.6
AVH				eS	Sn	07 42 18.0	+0.9
KOK	Koryaka	1.45	255	i P	Pn	07 42 00.6	+0.4
PET	Petropavlovsk	1.54	245	i P	Pn	07 42 01.6	0.0
PET				i S	Sn	07 42 20.5	-0.2
TUMR	Tumrok	1.66	343	eP	Pn	07 42 04.0	+0.8
TUMR				eS	Sn	07 42 24.6	+1.1
GNL	Ganaly	1.80	271	i P	Pn	07 42 05.9	+0.7
GNL				eS	Sn	07 42 28.1	+0.9
RUS	Russkaya	1.95	230	eP	Pn	07 42 08.1	+0.7
RUS				eS	Sn	07 42 31.9	+0.9
GRL	Gorelyy	2.09	238	eP	Pn	07 42 09.8	+0.4
GRL				eS	Sn	07 42 34.8	+0.3
KMNR	Kamenistaya	2.10	349	eP	Pn	07 42 10.5	+0.9
KMNR				eS	Sn	07 42 35.8	+0.9
KPT	Kopyto	2.31	350	eP	Pn	07 42 14.1	+1.6
KPT				eS	Sn	07 42 41.4	+1.2
APC	Apacha	2.42	253	eP	Pn	07 42 15.2	+1.2
APC				eS	Sn	07 42 44.3	+1.5
KOZ	Kozyrevsk	2.45	345	eP	Pn	07 42 14.1	-0.4
KOZ				eS	Sn	07 42 41.7	-1.9
ESO	Esso	2.59	330	i P	Pn	07 42 16.7	+0.2
ESO				i S	Sn	07 42 46.6	-0.6
ESO				Smax			
	30nm,0.6s						
KLY	Klyuchi	2.62	356	eP	Pn	07 42 17.5	+0.5
KLY				eS	Sn	07 42 48.1	0.0
SRDR	Sredinnyy	2.72	345	eP	Pn	07 42 19.2	+0.8
SRDR				eS	Sn	07 42 50.9	+0.4
KBTR	Krutoberegovo	2.73	22	i P	Pn	07 42 18.7	+0.2
KBTR				eS	Sn	07 42 50.5	-0.3
BKI	Bering	3.29	61	i S	Sn	07 42 59.6	-5.2
PAU	Pauzhetka	3.38	230	eP	Pn	07 42 29.5	+1.8

*NEIC **30** 07:43:32.1, 15.73N×61.50W, h32^{km}, MD3.5(TRN), After TRN.*

TRN 30 07:43:31.1, 15.81N×**61.48W, h20**^{km}**, MD3.6, Md2.9**(FDF)**, 4D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGG	Marie-Galante	0.19	54	eP	Pb	07 43 39.2	+3.1
DOG	Dongo Capester	0.26	328	⇓eP	Pb	07 43 38.8	+1.6
BBL	Barber's Block	0.28	179	⇓eP	Pb	07 43 39.4	+1.9
BBL				eS	Sb	07 43 44.1	+2.3
SCG	Saint Claude	0.30	318	⇓iP	Pb	07 43 39.0	+1.3
BCG	Bois Riant Cap	0.31	333	eP	Pb	07 43 39.5	+1.6
MDN	Morne-Daniel	0.49	171	eP	Pb	07 43 43.4	+2.4
MDN				eS	Sb	07 43 50.2	+2.5
DBCT	Belle View Cho	0.55	167	eP	Pb	07 43 44.6	+2.6
DBCT				eS	Sb	07 43 52.8	+3.4
SEG	Port Louis	0.59	357	⇓eP	Pb	07 43 44.9	+2.2
SEG				eS	Sb	07 43 53.2	+2.7
DEG	La Desirade	0.64	38	eP	Pb	07 43 46.1	+2.6
DEG				eS	Sb	07 43 55.6	+3.6
FDF	Fort de France	1.11	164	eP	Pb	07 43 53.2	+1.7
FDF				eS	Sb	07 44 08.9	+3.3
CRM	Caravelle	1.18	153	eP	Pb	07 43 54.6	+1.9
CRM				eS	Sb	07 44 10.9	+3.4
BPA	Boggy Peak	1.28	343	eP	Pn	07 43 56.8	+2.6
BPA				eS	Sb	07 44 13.2	+2.6
BIM	Bigot	1.34	163	eP	Pn	07 43 57.1	+2.0
MVM	Montagne Vaucl	1.37	156	eP	Pn	07 43 57.4	+2.0
MVM				eS	Sb	07 44 16.1	+3.2
CPB	Codrington	1.85	350	eP	Pn	07 44 04.6	+2.3
CPB				eS	Sn	07 44 24.8	-0.5

*IDC **30** 07:47:53.7±0.6, 6.71S×130.72E, mb4.4/11, mb1 4.6/13, mb1mx4.5/16, mbtmp4.5/13, ML4.8/2, Error ellipse: s-maj=32.8km s-min=13.9km az=77.0*

*NEIC **30** 07:47:58.4±2.5, 6.78S×130.54E, h28^{km}±18^{km}, mb4.7/21, Error ellipse: s-maj=10.8km s-min=6.0km az=63.0*

ISC 30 07:47:54.9±3.6**, 6.78S**±0.06×**130.66E**±0.10**, h21**^{km}±26^{km}**, n52,** σ**0**^{s}**85**/51**, mb4.7**/27**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	6.15	164	eP	Pn	07 49 31.4	+4.3
	52nm,0.3s						
KAKA				eS	Sn	07 50 36.7	-0.9
FITZ	Fitzroy Crossi	12.28	203	Pn	P	07 50 51.1	-0.6
	8.7nm,0.3s,baz=17,slow=8.1,SNR=104						
FITZ				Sn	S	07 52 57.2	-12
	11nm,0.3s,baz=184,slow=15,SNR=11						
WRAB	Tennant Creek	13.56	165	eP	P	07 51 08.1	-0.8
WRAB				eS	S	07 53 19.6	-20
WRA	Warramunga Arr	13.57	165	Pn	P	07 51 08.0	-1.0
	2.7nm,0.3s,baz=345,slow=13,SNR=73						
WRA				Sn	S	07 53 29.5	-11
	7.8nm,0.3s,baz=346,slow=21,SNR=19						
WB2	Warramunga Arr	13.57	165	eP	P	07 51 08.3	-0.7
WB2				eS	S	07 53 29.8	-10
PMG	Port Moresby	16.54	100	eP	P	07 51 53.8	+6.2
	24nm,1.0s						
MBWA	Marble Bar	17.79	215	eP	P	07 52 03.3	+0.1
	43nm,0.9s						
KKM	Kota Kinabalu	19.23	311	eP	P	07 52 22.8	+1.9
CTA	Charters Tower	20.10	133	P	P	07 52 33.4	+3.0
	9.4nm,1.1s,baz=325,slow=14,SNR=6.9						
CTAO	Charters Tower	20.10	133	eP	P	07 52 32.6	+2.2
	11nm,0.9s						
KSM	Kuching	21.90	291	eP	P	07 52 48.7	-0.1
FORT	Forrest	24.00	186	eP	P	07 53 12.0	+2.6
	9.4nm,0.6s,mb4.4						
STKA	Stephens Creek	26.98	159	eP	P	07 53 38.6	+1.2
	2.1nm,0.6s,mb3.8						
STKA	Stephens Creek	26.98	159	P	P	07 53 38.3	+0.9
	2.8nm,0.5s,mb4.0,baz=315,slow=8.1,SNR=20						
STKA	Stephens Creek	26.98	159	eP	P	07 53 37.8	+0.4
KLBR	Kellerberrin	27.48	204	eP	P	07 53 42.9	+1.0
NWAO	Narrogin (SRO)	28.86	204	P	P	07 53 54.8	+0.4
	11nm,0.8s,mb4.6,baz=35,slow=7.0,SNR=5.7						
NWAO	Narrogin (SRO)	28.86	204	eP	P	07 53 54.9	+0.6
	3.2nm,0.5s,mb4.3						
YHNB	Yeheng	32.54	344	P	P	07 54 26.8	-0.1
QIZ	Qiongzhong	32.84	322	P	P	07 54 23.4	-6.2
	17nm,1.1s,mb4.9						
CMAR	Chiang Mai Arr	40.09	309	P	P	07 55 31.9	+0.9
	3.2nm,0.6s,mb4.2,baz=140,slow=7.9,SNR=16						
MJAR	Matsushiro Arr	43.66	9	P	P	07 56 00.5	+0.3
	1.0nm,0.3s,mb4.0,baz=194,slow=9.7,SNR=5.5						
MJAR	Matsushiro Arr	43.66	9	P	P	07 56 00.5	+0.3
LSA	Lhasa	52.49	316	P	P	07 57 08.3	-0.7
	7.3nm,0.7s,mb4.7						
GUN	Gumba	55.30	311	eP	P	07 57 29.2	-0.5
	40nm,0.7s,mb5.6						
PKI	Pulchoki	55.48	310	eP	P	07 57 30.3	-0.7
	13nm,0.6s,mb5.1						
KKN	Kakani	55.69	310	eP	P	07 57 31.6	-0.9
	19nm,0.7s,mb5.2						
DMN	Daman	55.73	310	eP	P	07 57 32.1	-0.7
	15nm,0.7s,mb5.1						
GKN	Gorkha	56.29	310	eP	P	07 57 36.2	-0.6
	31nm,0.7s,mb5.5						
KOLN	Koldanda	56.96	309	eP	P	07 57 41.0	-0.7
	30nm,0.9s,mb5.3						
ULN	Ulaanbaatar	58.26	342	eP	P	07 57 51.3	+0.9
	12nm,0.7s,mb5.0						
SONM	Songino Array	58.44	341	P	P	07 57 52.1	+0.4
	3.7nm,0.7s,mb4.6,baz=153,slow=5.5,SNR=9.2						
TLY	Talaya	62.67	341	P	P	07 58 20.0	-0.5
	3.9nm,0.8s,mb4.6						
MA2	Magadan	68.05	11	P	P	07 58 55.6	+0.6
	6.2nm,0.8s,mb4.7						
MKAR	Makanchi Array	68.40	326	P	P	07 58 57.4	0.0
	5.9nm,0.6s,mb4.8,baz=119,slow=8.0,SNR=97						
YAK	Yakutsk	68.60	360	P	P	07 58 57.9	-0.5
	43nm,1.0s,mb5.3						
AAK	Ala-Archa	70.79	320	eP	P	07 59 12.3	+0.1
	6.9nm,1.1s,mb4.5						
ZAL	Zalesovo	71.67	333	P	P	07 59 16.5	-0.7
	1.5nm,0.3s,mb4.3,baz=296,slow=3.8,SNR=8.6						
VNDA	Vanda	72.59	173	P	P	07 59 22.2	-0.1
	2.0nm,0.8s,mb4.1,baz=302,slow=6.8,SNR=3.6						
VNDA	Vanda	72.59	173	P	P	07 59 22.2	0.0
	3.2nm,1.0s,mb4.2						
MAW	Mawson	75.40	202	P	P	07 59 39.1	+0.4
	1.8nm,0.6s,mb4.2,baz=71,slow=5.5,SNR=8.1						
BVAR	Borovoye Array	78.22	328	P	P	07 59 54.7	0.0
	3.5nm,0.9s,mb4.3,baz=135,slow=6.3,SNR=16						
QSPA	South Pole Qui	83.20	180	eP	P	08 00 20.8	+0.2
	5.2nm,0.8s,mb4.6						
ARU	Arti	85.86	328	P	P	08 00 29.4	-4.9
ILAR	Eielson Array	92.86	25	P	P	08 01 06.0	-1.2
	0.5nm,0.8s,mb4.0,baz=253,slow=4.7,SNR=5.6						
SNAA	Sanae	96.03	193	P	P	08 01 22.3	+0.6
	3.4nm,1.2s,mb4.7						
TXAR	Lajitas Array	124.25	59	PKP	PKPdf	08 06 54.3	-3.0
	0.3nm,0.7s,baz=333,slow=2.8,SNR=4.1						
CPUP	Villa Florida	146.19	167	PKPbc	PKPbc	08 07 36.2	+1.5
	4.2nm,0.9s,baz=219,slow=5.6,SNR=10						
CPUP	Villa Florida	146.19	167	PKPbc	PKPbc	08 07 36.2	+1.5
LPAZ	La Paz	150.49	141	PKP	PKPdf	08 07 43.9	-1.1
	1.6nm,0.8s,baz=248,slow=14,SNR=3.6						
LPAZ				PKPbc	PKPdf	08 07 49.5	+4.6
	3.6nm,0.6s,baz=68,slow=1.1,SNR=18						
LPAZ	La Paz	150.49	141	ePKPdf	PKPdf	08 07 43.6	-1.3
LPAZ				ePKPbc	PKPdf	08 07 49.3	+4.4
SIV	San Ignacio	154.57	153	PKPab	PKPab	08 08 12.3	+0.2
	0.8nm,0.8s,baz=174,slow=6.1,SNR=5.4						

IDC 30 08:09:31.0±10.0**, 7.84N**×**91.07E, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/19**, mbtmp3.7**/3**, Error ellipse: s-maj=469.0km s-min=29.2km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	39.53	351	P	P	08 17 03.3	-2.0
	0.7nm,0.5s,baz=151,slow=7.4,SNR=5.4						
ZAL	Zalesovo	46.24	355	P	P	08 17 57.8	-1.8
	1.1nm,0.3s,baz=357,slow=2.5,SNR=3.1						
WRA	Warramunga Arr	50.75	124	P	P	08 18 33.2	-2.0
	0.3nm,0.4s,baz=301,slow=9.5,SNR=9.9						

*NAO **30** 08:11:26.1±2.4, 67.30N×9.61E, ML2.3*

*BER **30** 08:11:26.6±8.9, 67.25N×9.21E, h0^{km}±34^{km}, MD2.6, ML2.0, ML2.3(NAO)*

ISC 30 08:11:24.4±1.4**, 67.24N**±0.05×**9.2E**±0.2**, h10**^{km}**, n11,** σ**1**^{s}**30**/21**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STOK	Stokkvaagen	1.77	119	eP	Pn	08 11 57.4	+1.9
STOK				eS	Sn	08 12 18.4	+0.3
STOK				AML	AML	08 12 19.7	
	comp=Z,33nm,0.4s						
MELSS	Ber_school_2	1.82	100	eP	Pn	08 11 57.5	+1.3
MELSS				eS	Sn	08 12 18.7	-0.8
LOF	Lofoten	1.90	60	eP	Pn	08 11 57.4	+0.2
LOF				eS	Sn	08 12 18.6	-2.7
LOF				AML	AML	08 12 33.3	
	comp=Z,11nm,0.3s						
MOR8	Moi Rana	2.35	115	eP	Pn	08 12 06.6	+2.9
MOR8				eS	Sn	08 12 35.5	+2.6
MOR8				AML	AML	08 12 38.9	
	comp=Z,40nm,0.2s						
RORSS	Ber_school_1	2.52	160	eP	Pn	08 12 07.2	+1.1
RORSS				eS	Sn	08 12 36.3	-0.9
NSS	Namsos	2.95	156	eP	Pn	08 12 13.1	+0.8
NSS				eS	Sn	08 12 46.4	-1.7
NSS				AML	AML	08 12 49.5	
	comp=Z,23nm,0.2s						
MOL	Molde	4.74	189	eS	Sn	08 13 27.2	-6.1
MOL				AML	AML	08 13 28.9	
	comp=Z,2.9nm,0.5s						
NB2	NORSAR Subarra	6.28	171	Pn	Pn	08 12 59.5	0.0
	baz=340,slow=10						
NB2				Sn	Sn	08 14 11.2	-1.0
	baz=282,slow=11						
ARA0	ARCESS Array S	6.45	62	Pn	Pn	08 13 00.7	-1.2
	baz=241,slow=14						
ARA0				Sn	Sn	08 14 09.6	-6.8
	baz=249,slow=22						
HFS	Hagfors	7.40	162	Pn	Pn	08 13 14.5	-0.8
	baz=352,slow=14						
HFS				Sn	Sn	08 14 32.8	-7.4
	baz=353,slow=28						
HFS				Lg		08 15 12.5	
FIA0	FINESS Array S	9.33	120	Pn	P	08 13 42.1	+0.2
	baz=336,slow=14						
FIA0				Sn	Sn	08 15 21.1	-7.0
	baz=321,slow=22						
FIA0				Lg		08 16 12.8	
	baz=315,slow=28						

IDC 30 08:27:20.5±0.8**, 6.77N**×**72.96W, h163**^{km}±12^{km}**, mb3.3**/2**, mb1 3.6**/4**, mb1mx3.2**/22**, mbtmp3.9**/4**, Error ellipse: s-maj=43.4km s-min=7.5km az=132.0, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.34	216	P	P	08 28 01.5	+0.7
	98nm,0.3s,baz=97,slow=16,SNR=462						
ROSC				S	S	08 28 32.3	+0.5
	92nm,0.3s,baz=73,slow=19,SNR=15						
SDV	Santo Domingo	3.12	47	P	P	08 28 11.1	+0.5
	11nm,0.3s,baz=244,slow=11,SNR=118						
SDV				S	S	08 28 48.5	-0.5
	56nm,0.3s,baz=70,slow=21,SNR=46						
TXAR	Lajitas Array	36.62	312	P	P	08 34 10.8	-2.0
	0.3nm,0.6s,baz=122,slow=8.5,SNR=5.3						
SCHQ	Schefferville	48.18	5	P	P	08 35 45.2	-0.9
	2.5nm,1.0s,baz=190,slow=6.1,SNR=3.6						
WRA	Warramunga Arr	150.45	241	PKPbc	PKPdf	08 46 53.1	+5.1
	0.3nm,0.4s,baz=107,slow=2.5,SNR=19						

*NEIC **30** 08:31:10.7±0.5, 40.50N×106.88W, ML3.2, Error ellipse: s-maj=6.5km s-min=5.4km az=135.0, Suspected Mining explosion.*

NEIC NEAR Steamboat Springs.

*IDC **30** 08:31:11.8±1.6, 40.46N×107.08W, mb3.2/1, mb1 3.3/4, mb1mx3.2/24, mbtmp2.9/4, ML2.7/3, Error ellipse: s-maj=24.5km s-min=10.0km az=65.0*

ISC 30 08:31:09.6±0.5**, 40.50N**±0.04×**106.94W**±0.05**, n41,** σ**1**^{s}**04**/42**, mb3.2**/1**, Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RWWY	Rawlins	1.20	350	ePg	Pg	08 31 34.0	+0.4
ISCO	Idaho Springs	1.24	124	ePg	Pg	08 31 33.1	-1.3
PHWY	Pilot Hill	1.38	54	ePg	Pg	08 31 37.6	+0.4
PDAR	Pinedale Array	2.99	320	Pn	Pn	08 32 00.0	+0.8
	2.5nm,0.3s,baz=132,slow=15,SNR=88						
PDAR				Pg	Pg	08 32 08.4	-0.9
	5.0nm,0.3s,baz=133,slow=17,SNR=39						
PDAR				Lg		08 32 44.6	
	2.9nm,0.3s,baz=140,slow=33,SNR=8.9						
SRU	San Rafael	3.09	244	ePn	Pn	08 32 00.5	-0.1
DAU	Daniels Canyon	3.29	270	ePn	Pn	08 32 04.1	+0.7
JLU	Jordanelle	3.44	273	ePn	Pn	08 32 07.5	+2.0

TCUT	Toone Canyon	3.44	282	*e*Pn	Pn	08 32 06.5	+0.9
TMUT	Trail Mountain	3.50	251	*e*Pn	Pn	08 32 06.7	+0.3
MPU	Maple Canyon	3.62	264	*e*Pn	Pn	08 32 08.4	+0.3
CTU	Camp Tracy	3.67	275	*e*Pn	Pn	08 32 12.4	+3.6
HWUT	Hardware Ranch	3.67	289	*e*Pn	Pn	08 32 09.0	+0.3
AHID	Auburn Hatcher	3.85	307	*e*Pn	Pn	08 32 12.4	+1.1
NOQ	North Oquirrh	3.94	274	Pn	Pn	08 32 10.7	-2.0
NLU	North Lily Min	3.97	264	*e*Pn	Pn	08 32 15.3	+2.2
REDW	Red Top Meadow	4.08	316	*e*Pn	Pn	08 32 14.4	-0.3
SNOW	Snow King Moun	4.10	317	*e*Pn	Pn	08 32 08.5	-6.5
LOHW	Long Hollow	4.13	320	*e*Pn	Pn	08 32 15.5	+0.1
RSSD	Black Hills	4.21	30	*e*Pn	Pn	08 32 18.3	+1.8
TPAW	Teton Pass	4.22	316	*e*Pn	Pn	08 32 16.6	-0.1
SPUT	South Promonto	4.25	283	*e*Pn	Pn	08 32 16.3	-0.7
MOOW	Moose Ponds	4.30	320	*e*Pn	Pn	08 32 17.5	-0.4
RRI2	Red Ridge	4.33	312	*e*Pn	Pn	08 32 17.8	-0.4
IMW	Indian Meadow	4.51	320	*e*Pn	Pn	08 32 20.1	-0.6
MSU	Marysvale	4.51	246	*e*Pn	Pn	08 32 20.5	-0.3
MVU	Marysvale	4.54	246	*e*Pn	Pn	08 32 20.9	-0.3
HVU	Hansel Valley	4.58	288	*e*Pn	Pn	08 32 20.8	-1.0
BGU	Big Grassy Mou	4.64	277	*e*Pn	Pn	08 32 21.6	-1.1
YMR	Madison River	5.11	326	*e*Pn	Pn	08 32 31.0	+1.7
ANMO	Albuquerque	5.56	176	Pg	Pg	08 32 51.7	-8.9
	baz=7.0,slow=15,SNR=10						
ARUT	Antelope Range	5.73	244	*e*Pn	Pn	08 32 37.8	-0.3
CBKS	Cedar Bluff	5.81	105	*e*Pn	Pn	08 32 39.7	+0.5
	21nm,0.6s						
MCMT	McKenzie Canyo	6.13	317	*e*Pn	Pn	08 32 42.4	-1.3
BOZ	Bozeman (W)	6.18	328	*e*Pn	Pn	08 32 43.0	-1.3
	3.2nm,0.7s						
LAO	LASA Array	6.20	5	*e*Pn	Pn	08 32 42.5	-2.2
	8.3nm,0.7s						
ELK	Elko	6.32	275	Pn	Pn	08 32 47.0	+0.7
	0.1nm,0.3s,baz=81,slow=13,SNR=3.4						
HLID	Hailey	6.35	301	*e*Pn	Pn	08 32 48.1	+1.4
	2.6nm,0.7s						
NVAR	Mina Array Bea	9.03	260	Pn	P	08 33 24.6	+0.4
	0.1nm,0.3s,baz=76,slow=11,SNR=3.2						
WCN	Washoe City	9.92	267	*e*Pn	P	08 33 34.5	-2.0
	5.5nm,0.9s						
TXAR	Lajitas Array	11.46	165	Pn	P	08 33 57.9	+0.2
	0.0nm,0.3s,baz=352,slow=13,SNR=4.7						
ILAR	Eielson Array	33.38	330	P	P	08 37 51.4	+0.1
	0.2nm,0.7s,mb3.2,baz=135,slow=8.9,SNR=4.8						

TRN 30 08:42:50.7,15.83N×61.48W,h22^{km},MD3.6,M2.9(FDF), **2C-6D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGG	Marie-Galante	0.17	61	⇑*e*P	Pb	08 42 58.5	+2.7
DOG	Dongo Capester	0.24	326	⇓*e*P	Pb	08 42 58.0	+1.4
SCG	Saint Claude	0.28	315	⇓*e*P	Pb	08 42 58.2	+1.0
BCG	Bois Riant Cap	0.29	331	*e*P	Pb	08 42 58.8	+1.4
BBL	Barber's Block	0.30	179	⇓*e*P	Pb	08 42 58.8	+1.2
SEG	Port Louis	0.57	357	⇓*e*P	Pb	08 43 04.1	+2.2
SEG				*e*S	Sb	08 43 12.3	+2.7
DEG	La Desirade	0.62	40	*e*P	Pb	08 43 05.4	+2.5
DEG				*e*S	Sb	08 43 14.7	+3.6
FDF	Fort de France	1.14	164	*e*P	Pn	08 43 12.5	+1.1
FDF				*e*S	Sb	08 43 28.2	+2.3
CRM	Caravelle	1.20	153	⇓*e*P	Pn	08 43 13.9	+1.6
CRM				*e*S	Sb	08 43 30.1	+2.3
BPA	Boggy Peak	1.26	343	*e*P	Pn	08 43 15.0	+1.8
BPA				*e*S	Sb	08 43 31.7	+2.2
BIM	Bigot	1.36	163	*e*P	Pn	08 43 16.1	+1.4
BIM				*e*S	Sn	08 43 35.0	+2.8
MVM	Montagne Vaucl	1.39	156	⇓*e*P	Pn	08 43 16.8	+1.8
MVM				*e*S	Sn	08 43 35.2	+2.5
CPB	Codrington	1.83	349	⇑*i*P	Pn	08 43 23.2	+1.9
CPB				*e*S	Sn	08 43 47.3	+3.3
SKI	Saint Kitts	1.92	321	*e*P	Pn	08 43 28.2	+5.6
SKI				*e*S	Sn	08 43 53.7	+7.4

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*NEIC **30** 09:03:24.2±0.3,24.28S×68.88W,mb4.3/18,MD4.3(GUC), Error ellipse: s-maj=9.3km s-min=6.3km az=77.0*

*GUC **30** 09:03:24.0±0.9,24.33S×69.10W,h83^{km}±71^{km},MD4.3, ML4.5*

*IDC **30** 09:03:24.8±0.6,24.28S×68.89W,h92^{km}±5^{km},mb3.7/6, mb1 4.0/9,mb1mx3.9/14,mbtmp4.1/9,MS3.3/2,Ms1 3.2/2, ms1mx2.8/24,Error ellipse: s-maj=29.1km s-min=15.2km az=78.0,Incorrectly calculated travel-time residual on T phase at H03N*

ISC 30 09:03:22.7±0.3,**24.36S**±0.03×**68.98W**±0.05,**h91^{km}, h91^{km}**±1.6^{km}**:pP-P,n63,**σ**1^{s}28**/56,**mb4.2**/20,**7C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPN1	Cerro Paranal	1.32	258	⇑*i*P	P	09 03 46.9	+0.2
CPN1				*i* S	S	09 04 04.5	-0.1
CPN1				AMP		09 04 08.5	
	comp=E,13μm,0.5s						
ANCH	Antofagasta	1.47	297	⇓*i*P	P	09 03 48.4	-0.2
ANCH				*i* S	S	09 04 05.9	-1.8
CRCH	Chaqaral	2.47	217	⇓*e*P	P	09 04 02.3	+0.3
CRCH				*i* S	S	09 04 32.3	+1.1
CPCH	Copiapo	3.23	202	⇑*i*P	P	09 04 10.9	-1.5
CPCH				*i* S	S	09 04 49.1	-0.8
LCO	Las Campanas	4.88	198	*e*P	P	09 04 33.2	-1.9
LCO				*i* S	S	09 05 28.8	-2.0
CFAA	Coronel Fontan	7.24	175	P	P	09 05 07.5	-0.2
	comp=E,0.9nm,0.3s,baz=350,slow=13,SNR=121						
CFAA				S	S	09 06 27.4	-1.6
	comp=E,0.4nm,0.3s,baz=245,slow=19,SNR=3.2						
CFAA	Coronel Fontan	7.24	175	P	P	09 05 07.5	-0.2
CFAA				S	S	09 06 27.4	-1.6
LPAZ	La Paz	8.07	6	P	P	09 05 18.9	-0.1
	comp=E,3.5nm,0.3s,baz=198,slow=7.1,SNR=56						
LPAZ	La Paz	8.07	6	*e*P	P	09 05 18.7	-0.2
	comp=E,20nm,0.7s						
MDZ	Mendoza	8.49	179	*e*P	P	09 05 30.4	+5.8
CPUP	Villa Florida	10.72	103	P	P	09 05 54.0	-0.8
SIV	San Ignacio	11.15	43	P	P	09 05 57.2	-3.4
	comp=E,8.2nm,0.3s,baz=238,slow=12,SNR=90						
TRQA	Tornquist	14.90	158	*e*P	P	09 06 50.6	+1.1
	comp=E,30nm,0.7s						
TRQA				*e*		09 07 25.6	
SAML	Samuel	16.30	21	*e*P	P	09 07 03.2	-4.2
	comp=E,5.6nm,0.8s						
PLCA	Paso Flores	16.38	184	P	P	09 07 09.1	+0.9
	comp=E,0.2nm,0.3s,baz=6.4,slow=15,SNR=7.0						
PLCA	Paso Flores	16.38	184	P	P	09 07 09.1	+0.9
BDFB	Brasilia	21.51	70	P	P	09 08 04.1	-1.5
	comp=E,6.6nm,0.6s,mb4.1,baz=257,slow=9.1,SNR=9.7						
BDFB				LR	LR	09 17 14.6	
	comp=E,37nm,18.1s,baz=259,slow=39						
BAO	Brasilia Array	21.53	70	P	P	09 08 04.5	-1.3
OTAV	Otavalo	26.12	338	P	P	09 08 49.9	-0.2
	comp=E,14nm,1.3s,mb4.2						
OTAV				*e*		09 09 21.0	
USHA	Ushuaia	30.43	179	LR	LR	09 24 08.3	
	comp=E,94nm,18.4s,baz=28,slow=41						
VNA3	Neumayer Olymp	57.40	161	⇑*i*P	P	09 13 04.4	+0.8
VNA3				*e*	pP	09 13 32.0	+5.6
VNA1	Neumayer--Stat	57.63	160	⇑*i*P	P	09 13 06.3	+1.1
VNA1				*e*	pP	09 13 33.1	+5.1
VNA2	Neumayer--Watz	57.99	160	⇑*i*P	P	09 13 08.6	+0.9
VNA2				*e*	pP	09 13 36.1	+5.5
SNAA	Sanae	59.61	160	⇑*i*	P	09 13 19.5	+0.6
SNAA	Sanae	59.61	160	P	P	09 13 18.8	-0.1
	comp=E,1.8nm,0.9s,mb4.1,baz=303,slow=5.4,SNR=13						
SNAA	Sanae	59.61	160	*e*P	P	09 13 18.6	-0.3
	comp=E,5.2nm,0.8s,mb4.6						
SNAA				*e*pP	pP	09 13 42.6	+0.7
SWET	Sewanee	61.39	344	*e*P	P	09 13 28.9	-2.5
SWET				*e*pP	pP	09 13 52.5	-2.1
WVT	Waverly	62.75	343	*e*P	P	09 13 37.9	-2.6
WVT				*e*pP	pP	09 14 01.1	-2.6
WVT				*e*sP	sP	09 14 12.1	-1.9
TXAR	Lajitas Array	62.94	326	P	P	09 13 41.6	-0.3
	comp=E,0.3nm,0.7s,mb3.4,baz=151,slow=9.3,SNR=3.4						
TXAR				pP	pP	09 14 04.5	-0.6
	comp=E,0.9nm,0.8s,baz=154,slow=7.3,SNR=5.3						
FVM	French Village	65.21	341	P	P	09 13 53.9	-2.6
FVM				*e*pP	pP	09 14 18.0	-1.9
CCM	Cathedral Cave	65.51	341	*e*P	P	09 13 56.9	-1.7
CCM				*e*pP	pP	09 14 20.1	-1.8
QSPA	South Pole Qui	65.84	180	*e*P	P	09 14 01.0	+1.0
	comp=E,15nm,0.5s,mb5.1						
QSPA				*e*pP	pP	09 14 27.1	+3.7
QSPA				*e*		09 14 34.7	
ANMO	Albuquerque	68.86	328	*e*P	P	09 14 19.3	-0.2
	comp=E,5.3nm,1.1s,mb4.3						
ANMO				*e*pP	pP	09 14 42.4	-0.8
TUC	Tucson	69.05	323	P	P	09 14 21.2	+0.4
	comp=E,3.4nm,1.1s,mb4.1						
TUC				*e*pP	pP	09 14 44.4	0.0
TUC				*e*sP	sP	09 14 54.7	+0.6
SDCO	Great Sand Dun	70.67	330	*e*P	P	09 14 32.4	+1.9
	comp=E,4.4nm,0.9s,mb4.3						
SDCO				*e*pP	pP	09 14 54.5	+0.2
ISCO	Idaho Springs	72.40	331	*e*pP	pP	09 15 05.1	+0.5
	comp=E,1.8nm,0.8s						
SYO	Syowa Base	73.86	159	⇑P	P	09 14 48.5	-0.2
VNDA	Vanda	74.03	190	P	P	09 14 51.5	+1.9
	comp=E,3.7nm,1.0s,mb4.1						
MSU	Marysvale	74.50	326	*e*P	P	09 14 53.1	0.0
MSU				*e*pP	pP	09 15 17.7	+0.7
RSSD	Black Hills	75.34	335	P	P	09 14 57.4	-0.3
	comp=E,1.9nm,0.8s,mb3.9						
RSSD				*e*pP	pP	09 15 21.4	-0.2
PDAR	Pinedale Array	76.55	330	P	P	09 15 03.9	-0.7
	comp=E,0.3nm,0.5s,mb3.3,baz=140,slow=7.0,SNR=2.9						
PDAR				pP	pP	09 15 28.8	+0.2
	comp=E,0.5nm,0.6s,baz=131,slow=8.3,SNR=3.3						
HWUT	Hardware Ranch	76.57	329	*e*P	P	09 15 06.3	+1.6
	comp=E,2.8nm,0.9s,mb4.0						
HWUT				*e*pP	pP	09 15 28.1	-0.7
SNOW	Snow King Moun	77.64	330	*e*P	P	09 15 12.2	+1.6
	comp=E,6.0nm,0.9s,mb4.3						
SNOW				*e*pP	pP	09 15 34.7	0.0
NVAR	Mina Array Bea	77.70	322	pP	pP	09 15 35.8	+0.6
	comp=E,0.5nm,0.6s,baz=153,slow=4.0,SNR=3.8						
ELK	Elko	77.74	326	*e*P	P	09 15 11.9	+0.7
	comp=E,2.1nm,0.9s,mb3.9						
ELK				*e*pP	pP	09 15 35.1	-0.1
MOOW	Moose Ponds	77.86	330	P	P	09 15 14.8	+3.0
	comp=E,4.7nm,1.4s,mb4.0						
MOOW				*e*pP	pP	09 15 36.1	+0.2
ULM	Lac du Bonnet	78.02	343	pP	pP	09 15 36.0	-0.6
	comp=E,3.0nm,0.4s,baz=148,slow=7.6,SNR=3.3						
IMW	Indian Meadow	78.06	330	P	P	09 15 12.9	0.0
	comp=E,6.0nm,1.1s,mb4.2						
IMW				*e*pP	pP	09 15 36.8	-0.2
SCHQ	Schefferville	78.89	1	pP	pP	09 15 40.6	-0.7
	comp=E,2.1nm,0.7s,baz=185,slow=9.3,SNR=2.6						
SCHQ	Schefferville	78.89	1	*e*pP	pP	09 15 40.3	-1.1
	comp=E,2.4nm,0.6s						
HLID	Hailey	79.42	328	*e*P	P	09 15 22.1	+1.8
	comp=E,5.9nm,1.1s,mb4.3						
HLID				*e*pP	pP	09 15 45.5	+1.0
MCMT	McKenzie Canyo	79.65	330	*e*P	P	09 15 23.3	+1.7
MCMT				*e*pP	pP	09 15 46.8	+1.1
MAW	Mawson	81.62	163	P	P	09 15 33.3	+1.8
	comp=E,8.0nm,0.5s,mb4.8,baz=213,slow=6.1,SNR=14						
MAW				sP	sP	09 16 07.2	+1.3
	comp=E,4.7nm,0.9s,baz=222,slow=5.4,SNR=4.0						
BOSA	Boshof	82.17	118	pP	pP	09 16 01.1	+1.6
	comp=E,0.9nm,0.4s,baz=225,slow=4.3,SNR=1.5						
EDM	Edmonton	86.32	335	*e*pP	pP	09 16 19.1	-0.7
CASY	Casey	89.64	180	P	P	09 16 12.1	+1.2
	comp=E,2.2nm,0.7s,mb4.4						
YKA	Yellowknife Ar	93.85	341	P	P	09 16 31.1	+0.8
	comp=E,0.6nm,0.5s,mb4.2,baz=132,slow=5.5,SNR=6.6						
YKA				pP	pP	09 16 55.1	-0.1
	comp=E,0.8nm,0.6s,baz=139,slow=4.7,SNR=5.3						
WRA	Warramunga Arr	130.45	209	PKP	PKPdf	09 22 25.5	+2.1
	comp=E,1.0nm,0.4s,baz=155,slow=1.7,SNR=41						
WRA				pPKP		09 22 50.9	
	comp=E,0.6nm,0.4s,baz=155,slow=1.9,SNR=4.9						
WRA				sPKP		09 23 00.7	
	comp=E,0.8nm,0.5s,baz=158,slow=1.7,SNR=11						
ZRNK	Zerenda	137.44	37	*e*pPKPdf		09 23 00.8	
ZAL	Zalesovo	144.55	27	PKP	PKPdf	09 22 49.4	+1.5
	comp=E,1.6nm,0.3s,baz=127,slow=6.8,SNR=5.4						
ZAL				pPKP		09 23 14.4	
	comp=E,6.7nm,0.3s,baz=3.1,slow=15,SNR=5.1						
ZAL				sPKP		09 23 24.3	
	comp=E,3.1nm,0.3s,baz=286,slow=2.1,SNR=4.6						
AAK	Ala-Archa	144.85	50	*e*PKPdf	PKPdf	09 22 50.9	+2.0
AAK				*e*pPKPdf		09 23 15.4	
MKAR	Makanchi Array	147.94	38	PKPbc	PKPdf	09 22 59.4	+5.5
	comp=E,1.1nm,0.6s,baz=333,slow=2.7,SNR=9.9						
MKAR				pPKPbc		09 23 24.4	
	comp=E,5.9nm,0.6s,baz=309,slow=2.8,SNR=25						
SONM	Songino Array	156.29	8	pPKPab		09 24 01.6	
	comp=E,0.7nm,0.6s,baz=342,slow=3.9,SNR=4.0						

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*MDD **30** 09:03:28.0±0.3,35.76N×3.52W,mbLg2.6/6,Error ellipse: s-maj=2.9km s-min=2.1km az=145.0,PRXIMO*

*CSEM **30** 09:03:27.6±0.1,35.63N×3.48W,h35^{km},MD3.1,Error ellipse: s-maj=2.3km s-min=1.6km az=80.0*

*CNRM **30** 09:03:30.1,35.55N×3.39W,h20^{km},MD3.1*

ISC 30 09:03:25.9±0.5,**35.74N**±0.03×**3.57W**±0.04,**h2**^{km}±6^{km}**,n26,**σ**1^{s}12**/41,**1C-1D,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALB	Alboran	0.48	65	⇑Pg	Pg	09 03 35.8	+0.4
	149nm,0.1s,SNR=18						
EALB				Lg		09 03 41.9	
	405nm,0.1s,SNR=19						
MPAL	Palemas	0.59	211	*i* P	Pg	09 03 40.0	+2.2
MPAL				*i* S	Sg	09 03 49.0	+3.3
EMEL	Melilla	0.66	131	⇓Pg	Pg	09 03 39.9	+0.8
	389nm,0.1s,SNR=18						
EMEL				Lg		09 03 48.4	
	2μm,0.2s,SNR=9.2						
EMLI	Melilla	0.67	131	P	Pg	09 03 39.9	+0.7
	389nm,0.1s,SNR=18						
EMLI				S	Sg	09 03 48.4	+0.3
	2μm,0.2s,SNR=9.2						
TOU	Touzarine	0.79	191	*i* P	Pg	09 03 42.0	+0.4
TOU				*i* S	Sg	09 03 50.0	-2.1
ZAI	Zaio	1.02	138	*i* P	Pb	09 03 44.0	-1.9
ZAI				*i* S	Sb	09 03 55.0	-4.5
EGUA	Guajares	1.09	0	Pg	Pg	09 03 47.2	-0.5
	3.7nm,0.1s,SNR=7.9						
EMIJ	Mijas	1.28	311	Pg	Pg	09 03 51.4	0.0
	3.0nm,0.1s,SNR=6.0						
EMIJ				Lg		09 04 08.4	
	16nm,0.2s,SNR=6.8						
EMIJ	Mijas	1.28	311	P	Pb	09 03 51.4	+1.1
	3.0nm,0.1s,SNR=6.0						
EMIJ				S	Sb	09 04 08.4	+1.3
	16nm,0.2s,SNR=6.8						
EBER	Berja	1.28	25	Pg	Pg	09 03 50.9	-0.5
	16nm,0.3s,SNR=11						
EBER				Lg		09 04 08.0	
	80nm,0.6s,SNR=12						
EBER	Berja	1.28	25	P	Pb	09 03 50.9	+0.5
	16nm,0.3s,SNR=11						
EBER				S	Sb	09 04 08.0	+0.8
	80nm,0.6s,SNR=12						
ERON	Agron	1.29	352	Pg	Pg	09 03 50.7	-1.0
	7.9nm,0.2s,SNR=4.7						
ERON				Lg		09 04 08.4	
	9.9nm,0.3s						
ERON	Agron	1.29	352	P	Pb	09 03 50.7	+0.1
	7.9nm,0.2s,SNR=4.7						
ERON				S	Sb	09 04 08.4	+0.9
	9.9nm,0.3s						
ELOJ	Sierra Loja	1.48	342	Pg	Pg	09 03 54.4	-1.1
	2.1nm,0.1s,SNR=7.9						
ELOJ				Lg		09 04 13.6	
	2.5nm,0.1s,SNR=7.9						
ECOG	Cogollos-Vega	1.54	0	Pg	Pg	09 03 54.3	-2.3
	1.1nm,0.1s,SNR=4.0						
TZK	Tazeka	1.72	197	*i* P	Pn	09 03 56.0	-1.0
TZK				*i* S	Sn	09 04 15.0	-4.9
EQES	Quesada	2.10	11	Pn	Pn	09 04 03.8	+1.3
	3.3nm,0.1s,SNR=21						
EQES				Sn	Sn	09 04 29.2	-0.4
	7.8nm,0.2s,SNR=5.1						
EQES	Quesada	2.10	11	P	Pn	09 04 03.8	+1.3
	3.3nm,0.1s,SNR=21						
EQES				S	Sn	09 04 29.2	-0.3
	7.8nm,0.2s,SNR=5.1						
ECAB	El Cabril	2.77	328	Pn	Pn	09 04 13.0	+1.0
	0.1nm,0.1s,SNR=4.0						
ECAB				Sn	Sn	09 04 45.6	-0.8
	0.1nm,0.1s,SNR=4.0						
ECAB	El Cabril	2.77	328	P	Pn	09 04 13.0	+1.0
	0.1nm,0.1s,SNR=4.0						
ECAB				S	Sn	09 04 45.7	-0.7
	0.1nm,0.1s,SNR=4.0						
EMIN	Mina Concepcio	3.21	310	Pn	Pn	09 04 18.9	+0.6
	0.6nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	09 04 57.2	-0.5
	1.1nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.21	310	P	Pn	09 04 18.9	+0.5
	0.6nm,0.1s,SNR=7.9						
EMIN				S	Sn	09 04 57.2	-0.5
	1.1nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.32	28	Pn	Pn	09 04 19.6	-0.2
	1.8nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.32	28	P	Pn	09 04 19.6	-0.3
	1.8nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.08	319	Pn	Pn	09 04 30.4	-0.2
	0.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	09 05 16.5	-3.1
	0.8nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.08	319	P	Pn	09 04 30.4	-0.3
	0.5nm,0.1s,SNR=7.9						

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*NIED **30** 09:06:00,37.20N×138.80E,h5^{km},Mw3.2 Best double couple: $M_0$7.31×10^{13} NP1:ϕ_s0°,δ48°,λ82°. NP2:ϕ_s192°, δ43°,λ98°.*

JMA 30 09:05:58.8,37.22N×138.84E,h10^{km}±1^{km}**,M3.1,Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHK	Hiroka	0.14	79	P	Pg	09 06 02.1	-0.1
JHK				S	Sg	09 06 04.9	+0.4
JIZZ	Izumozaki	0.33	342	P	Pg	09 06 05.9	+0.3
JIZZ				S	Sg	09 06 11.9	+1.8
JKT	Katashina	0.56	144	P	Pg	09 06 09.5	-0.6
JKT				S	Sg	09 06 17.4	-0.2
JGK	Kuni	0.68	194	P	Pb	09 06 11.7	-0.5
JNS	Sasagawa	0.71	32	P	Pb	09 06 11.9	-0.9
JNS				S	Sb	09 06 21.4	-0.9
JFY	Yanaizu	0.71	75	P	Pb	09 06 12.3	-0.6
JFY				S	Sb	09 06 21.9	-0.6
MAT	Matsushiro	0.84	217	P	Pb	09 06 14.0	-1.1
MAT				S	Sb	09 06 25.0	-1.3
MAT	Matsushiro	0.84	217	P	Pb	09 06 14.1	-1.0
MAT				S	Sb	09 06 25.0	-1.3
JAG	Ashikaga	0.93	148	P	Pb	09 06 16.5	-0.1
JAG				S	Sb	09 06 28.8	0.0
JSD	Sado	0.94	331	P	Pb	09 06 15.1	-1.6
JSD				S	Sb	09 06 27.4	-1.5

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*NEIC **30** 09:06:43.0,17.78N×68.61W,h23^{km},MD3.6(RSPR), After RSPR.*

RSPR 30 09:06:43.0,17.78N×68.61W,h23^{km}±23^{km}**,MD3.6**/8,**MD3.6**/8,**6C-2D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STDO	Santo Domingo	1.42	298	⇑*e*P	Pn	09 07 04.5	-3.2
STDO				*e*S	Sn	09 07 22.4	-3.4
CRPR	Cabo Rojo, PR	1.45	81	⇓*i*P	Pn	09 07 05.5	-2.6
MGP	Maguayo	1.47	81	⇑*i*P	Pn	09 07 05.8	-2.7
MGP				*e*S	Sn	09 07 23.5	-3.6
LSP	Las Mesas	1.51	74	⇓*e*P	Pn	09 07 06.7	-2.3
LSP				*e*S	Sn	09 07 25.5	-2.6
LRS	Lares	1.76	73	⇑*e*P	Pn	09 07 10.2	-2.4
LRS				*e*S	Sn	09 07 31.1	-3.4
HUMP	Col San Antoni	2.66	82	⇑*e*P	Pn	09 07 23.0	-2.4
HUMP				*e*S	Sn	09 07 53.6	-3.7
CBYP	Canovanas	2.67	79	⇑*e*P	Pn	09 07 22.8	-2.8
CBYP				*e*S	Sn	09 07 52.9	-4.7
MTP	Monte Pirata	2.93	83	⇑*e*P	Pn	09 07 26.1	-3.2
MTP				*e*S	Sn	09 07 59.7	-4.5
TBVI	Tortola	3.86	80	⇑*e*P	Pn	09 07 39.2	-3.3
TBVI				*e*S	Sn	09 08 22.4	-5.3

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*IDC **30** 09:32:55.9±7.2,22.33S×177.19W,mb4.2/3,mb1 4.3/3, mb1mx3.9/14,mbtmp4.2/3,Error ellipse: s-maj=180.6km s-min=54.6km az=30.0*

ISC 30 09:33:07.3±5.2,**23.6S**±0.7×**178.0W**±0.7,**h33**^{km}**,n9,**σ**1^{s}09**/9,**mb4.5**/7,**2C-3D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.29	269	⇓*i*P	P	09 39 47.0	+2.9
	3.8nm,0.3s,mb4.8						
STKA	Stephens Creek	36.51	248	⇓*i*P	P	09 40 12.4	+0.9
	1.2nm,0.6s,mb3.9						
STKA	Stephens Creek	36.51	248	P	P	09 40 12.4	+0.9
	1.0nm,0.3s,mb4.1,baz=90,slow=11,SNR=12						
WB2	Warramunga Arr	44.23	265	⇑*i*P	P	09 41 15.3	-0.1
WRA	Warramunga Arr	44.24	265	P	P	09 41 15.2	-0.3
	2.9nm,0.3s,mb4.4,baz=99,slow=8.2,SNR=22						
KAKA	Kakadu	48.09	274	⇑*i*P	P	09 41 45.9	-0.2
	2.7nm,0.3s,mb4.8						
FORT	Forrest	48.11	249	*e*P	P	09 41 44.0	-2.0
	10.0nm,1.0s,mb4.8						
FITZ	Fitzroy Crossi	52.66	265	⇓*i*P	P	09 42 20.3	-0.5
	6.8nm,0.8s,mb4.6						
MAW	Mawson	78.64	200	P	P	09 45 07.4	+0.4
	0.8nm,0.4s,mb4.0,baz=117,slow=5.9,SNR=5.5						

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*IDC **30** 09:54:16.5±2.2,1.20N×97.23E,mb4.0/6,mb1 4.1/7, mb1mx3.8/20,mbtmp4.0/7,ML4.0/1,MS3.4/1,Ms1 3.6/1, ms1mx2.9/29,Error ellipse: s-maj=95.3km s-min=20.3km az=59.0*

*NEIC **30** 09:54:21.6±0.8,1.18N×97.21E,h35^{km},mb4.3/3,Error ellipse: s-maj=21.4km s-min=10.0km az=68.0*

ISC 30 09:54:19.3±1.1,**1.2N**±0.1×**97.2E**±0.2,**h33**^{km}**,n11,**σ**0^{s}66**/11,**mb4.0**/9,**MS3.5**/1,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.37	40	*e*Pn	Pn	09 55 39.0	-0.3
CMAR	Chiang Mai Arr	17.27	6	P	P	09 58 18.7	-0.9
	0.2nm,0.3s,baz=199,slow=10,SNR=8.8						
CMAR				LR	LR	10 06 27.3	
	comp=Z,113nm,18.0s,baz=200,slow=42						
KMI	Kunming	24.42	12	P	P	09 59 37.7	+1.5
	14nm,1.4s,mb4.2						
KMI				LR	LR		
	comp=Z,120nm,14.6s,MS3.5						
WRA	Warramunga Arr	42.04	122	P	P	10 02 09.9	+0.2
	comp=Z,1.2nm,0.6s,mb3.7,baz=300,slow=9.1,SNR=19						
WRAB	Tennant Creek	42.05	122	*e*P	P	10 02 09.8	-0.1
	comp=Z,5.8nm,0.8s,mb4.3						
SONM	Songino Array	47.17	8	P	P	10 02 50.3	-0.2
	comp=Z,1.6nm,0.8s,mb4.0,baz=198,slow=7.8,SNR=5.2						
MKAR	Makanchi Array	47.27	346	P	P	10 02 51.9	+0.5
	comp=Z,1.4nm,0.5s,mb4.1,baz=162,slow=8.7,SNR=17						
ULN	Ulaanbaatar	47.30	9	P	P	10 02 52.3	+0.7
	comp=Z,3.0nm,1.1s,mb4.1						
STKA	Stephens Creek	53.35	132	P	P	10 03 37.7	-0.2
	comp=Z,0.4nm,0.4s,mb3.7,baz=281,slow=6.5,SNR=2.8						
ZAL	Zalesovo	53.58	351	P	P	10 03 39.0	-0.3
	comp=Z,2.0nm,0.5s,mb4.3,baz=280,slow=5.9,SNR=12						
BVAR	Borovoye Array	56.27	341	P	P	10 03 58.1	-0.8
	comp=Z,1.3nm,0.7s,mb4.1,baz=153,slow=6.4,SNR=4.4						

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*NEIC **30** 09:57:19.5,38.55N×13.35E,h19^{km},ML2.7(ROM),After ROM.*

*CSEM **30** 09:57:19.1±0.2,38.57N×13.38E,h20^{km},ML3.7/1,Error ellipse: s-maj=4.6km s-min=2.4km az=29.0*

ROM 30 09:57:19.5±0.2,**38.55N×13.35E,h19**^{km}±4^{km}**,Md3.1**/2, **Ml2.7**/2,**2D,Error ellipse: s-maj=4.3km s-min=2.4km az=150.0,Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USI	Ustica	0.21	319	⇓*i*Pg	Pb	09 57 24.8	+0.1
GIB	Gibilmanna	0.77	136	Pg	Pb	09 57 34.7	+0.6
GIB				Sg	Sb	09 57 47.2	+3.1
	356nm,0.4s						
CSLB	Castelbuono	0.82	138	Pg	Pb	09 57 35.8	+0.8
PLLN	Pollina	0.83	132	⇓*i*Pg	Pb	09 57 36.0	+0.9
MMGO	Monte Magaggia	0.94	199	Pg	Pb	09 57 38.1	+1.2
	25nm,0.2s						
LVI	Isola Levanzo	0.98	235	Pg	Pb	09 57 39.0	+1.4
VPL	Vulcano Piano	1.29	97	Pg	Pn	09 57 45.5	+2.8
	95nm,0.9s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMME	Mongiuffi-Meli	1.62	112	Pg	Pn	09 57 48.8	+1.4

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*NEIC **30** 10:14:33.0, 17.05N×95.16W, h116^{km}, MD3.8(MEX), After MEX.*

MEX 30 10:14:33.0±0.6**, 17.10N×95.18W, h117^{km}±7^{km}, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.28	91	eP	P	10 14 47.9	-1.7
CMIG				iS	S	10 14 60.0	-2.1
OXX	Oaxaca	1.48	270	iP	P	10 14 59.2	-1.2
OXX				iS	S	10 15 20.2	-1.0
OXX	Oaxaca	1.48	270	iP	P	10 14 59.2	-1.2
OXX				iS	S	10 15 19.0	-2.2
VHO	Vista Hermosa	1.49	269	eP	P	10 14 59.0	-1.5
VHO				iS	S	10 15 19.8	-1.5
HUIG	Huatulco	1.59	214	iP	P	10 14 59.4	-2.4
HUIG				iS	S	10 15 21.9	-1.6
CCIG	Comitan	3.02	105	iP	P	10 15 19.4	-1.0
CCIG				iS	S	10 15 54.9	-1.4

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*NIED **30** 10:29:00, 27.90N×142.20E, h20^{km}, Mw4.2 Best double couple: $M_0$1.96×10^{15} NP1:ϕ_s156°, δ64°, λ65°. NP2:ϕ_s22°, δ36°, λ131°.*

*MOS **30** 10:29:46.9±1.1, 27.91N×142.25E, h38^{km}, mb4.4/6, Error ellipse: s-maj=20.9km s-min=9.1km az=108.9*

*BJI **30** 10:29:47.4, 27.79N×142.17E, h38^{km}, mB5.0, mb4.7, Ms4.9, Msz4.1*

*NEIC **30** 10:29:49.3±1.3, 27.89N×142.29E, h43^{km}±11^{km}, mb4.7/13, MW4.1(NIED), Error ellipse: s-maj=11.7km s-min=7.2km az=109.0*

*IDC **30** 10:29:49.7±1.1, 27.91N×142.29E, h43^{km}±12^{km}, mb3.9/15, mb1 4.1/17, mb1mx4.0/25, mbtmp4.1/17, ML4.2/2, MS3.1/4, Ms1 3.1/4, ms1mx2.9/34, Error ellipse: s-maj=20.2km s-min=12.0km az=84.0*

ISC 30 10:29:48.3±0.8**, 27.96N**±0.04×**142.14E**±0.09**, h47^{km}**±7^{km}**, n64, σ1^{s}05**/64**, mb4.3**/28**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	0.86	177	P	P	10 30 05.0	+0.9
	177nm,0.3s,baz=6.4,slow=6.9,SNR=243						
CBIJ				S	S	10 30 16.5	+0.6
	1μm,0.3s,baz=283,slow=22,SNR=79						
JHJ	Hachijo jima 2	5.53	339	P	P	10 31 10.3	+0.2
	12nm,0.3s,baz=68,slow=17,SNR=10						
JHJ				S	S	10 32 10.1	-3.3
	64nm,0.3s,baz=68,slow=22,SNR=9.9						
MJAR	Matsushiro Arr	9.18	340	P	P	10 32 00.8	-0.1
	3.6nm,0.3s,baz=169,slow=12,SNR=30						
MJAR				S	S	10 33 39.9	-4.1
	1.4nm,0.3s,baz=105,slow=7.9,SNR=4.4						
MJAR				LR	LR	10 35 25.9	
	comp=Z,58nm,20.9s,baz=200,slow=36						
MAJO	Matsushiro	9.18	340	P	P	10 32 00.0	-1.0
MAJO				pmax	pmax		
	comp=Z,16nm,0.4s						
MAJO	Matsushiro	9.18	340	Pn	P	10 32 00.0	-1.0
	comp=Z,16nm,0.4s						
MAT	Matsushiro	9.18	340	eP	P	10 32 01.0	0.0
MAT				eS	S	10 33 37.0	-7.1
MAT				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MAT	Matsushiro	9.18	340	eP	P	10 32 01.0	0.0
	comp=Z,9.9nm,0.5s						
MAT				eS	S	10 33 37.0	-7.1
MAT	Matsushiro	9.18	340	P	P	10 32 01.0	0.0
MAT				S	S	10 33 36.9	-7.2
JNU	Nakatsue	10.99	301	LR	LR	10 36 19.6	
	comp=Z,110nm,21.7s,baz=232,slow=35						
JOW	Kunigami	12.37	268	LR	LR	10 36 55.7	
	comp=Z,122nm,20.8s,baz=64,slow=34						
ASAJ	Asahikawa	16.13	1	LR	LR	10 39 24.6	
	comp=Z,70nm,19.8s,baz=167,slow=36						
YHNB	Yeheng	18.90	265	P	P	10 34 08.3	+0.6
CD2	Chengdu	33.45	284	P	P	10 36 25.8	+0.8
SONM	Songino Array	34.07	315	P	P	10 36 31.8	+1.6
	comp=Z,0.8nm,0.5s,mb3.9,baz=117,slow=8.3,SNR=5.0						
ZAK	Zakamensk	36.94	318	eP	P	10 36 56.4	+1.9
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.5						
PMG	Port Moresby	37.46	172	eP	P	10 37 07.0	+7.8
	comp=Z,14nm,0.9s,mb4.8						
WRAB	Tennant Creek	48.20	190	eP	P	10 38 25.0	-1.4
WRAB				pmax	pmax		
	comp=Z,27nm,0.6s						
WRAB	Tennant Creek	48.20	190	eP	P	10 38 25.0	-1.4
	comp=Z,27nm,0.6s						
WB2	Warramunga Arr	48.21	190	eP	P	10 38 25.2	-1.2
WRA	Warramunga Arr	48.21	190	P	P	10 38 25.2	-1.2
	comp=Z,17nm,0.6s,mb5.2,baz=17,slow=9.0,SNR=194						
FITZ	Fitzroy Crossi	48.50	201	eP	P	10 38 28.3	-0.4
	comp=Z,3.6nm,0.3s,mb4.9						
FITZ	Fitzroy Crossi	48.50	201	P	P	10 38 28.4	-0.3
	comp=Z,4.4nm,0.3s,mb5.0,baz=19,slow=9.5,SNR=21						
MKAR	Makanchi Array	49.90	309	P	P	10 38 39.4	+0.2
	comp=Z,0.3nm,0.3s,mb3.8,baz=84,slow=12,SNR=5.4						
MKAR				PcP	PcP	10 39 59.5	+0.3
	comp=Z,1.8nm,0.6s,baz=83,slow=5.9,SNR=11						
MKAR	Makanchi Array	49.90	309	P	P	10 38 39.4	+0.2
MKAR				PcP	PcP	10 39 59.5	+0.3
MBWA	Marble Bar	53.42	206	eP	P	10 39 04.7	-1.2
ILAR	Eielson Array	56.98	29	P	P	10 39 29.6	-1.5
	comp=Z,1.0nm,0.9s,mb3.9,baz=264,slow=5.8,SNR=9.0						
VOSK	Vostochnaya	57.05	317	P	P	10 39 31.9	+0.1
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
BVA0	Borovoye Array	57.39	317	P	P	10 39 35.1	+0.9
BVAR	Borovoye Array	57.39	317	P	P	10 39 35.1	+0.9
	comp=Z,2.9nm,0.5s,mb4.6,baz=88,slow=6.2,SNR=20						
ZRNK	Zerenda	58.23	317	P	P	10 39 40.6	+0.6
ZRNK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
ZRNK	Zerenda	58.23	317	eP	P	10 39 40.1	+0.1
	comp=Z,3.3nm,0.8s,mb4.4						
KKAR	Karatay Array	58.55	305	P	P	10 39 42.4	0.0
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
FORT	Forrest	59.93	194	eP	P	10 39 51.0	-1.2
	comp=Z,10nm,0.5s,mb5.1						
INK	Inuvik	62.27	25	eP	P	10 40 06.8	-0.6
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	Inuvik	62.27	25	P	P	10 40 07.0	-0.3
	comp=Z,0.9nm,0.3s,mb4.3,baz=277,slow=7.3,SNR=7.2						
INK	Inuvik	62.27	25	eP	P	10 40 06.8	-0.6
	comp=Z,4.3nm,0.9s,mb4.6						
KLBR	Kellerberrin	63.61	203	eP	P	10 40 15.2	-1.7
	comp=Z,49nm,1.6s,mb5.3						
ARU	Arti	63.72	322	eP	P	10 40 17.8	+0.7
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
ARU	Arti	63.72	322	eP	P	10 40 17.8	+0.7
	comp=Z,8.4nm,0.7s,mb4.9						
AB31	Akbulak array	64.47	314	iP	P	10 40 22.7	+0.6
AB31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
DLBC	Dease Lake	65.53	35	P	P	10 40 28.5	-0.2
YKA	Yellowknife Ar	71.41	28	P	P	10 41 04.6	-0.4
	comp=Z,0.8nm,0.8s,mb3.7,baz=293,slow=5.7,SNR=6.8						
YKA	Yellowknife Ar	71.41	28	P	P	10 41 04.6	-0.4
ARCES	ARCESS Array B	72.72	341	P	P	10 41 12.1	-0.6
	comp=Z,1.1nm,0.7s,mb3.9,baz=68,slow=6.5,SNR=4.8						
NEW	Newport	76.30	43	P	P	10 41 31.1	-2.7
NEW				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NEW	Newport	76.30	43	P	P	10 41 33.4	-0.4
	comp=Z,0.5nm,0.3s,mb3.9,baz=291,slow=12,SNR=3.6						
NEW	Newport	76.30	43	P	P	10 41 31.1	-2.7
	comp=Z,1.3nm,0.7s,mb4.0						
FINES	FINESS Array B	77.16	334	P	P	10 41 39.1	+0.8
	comp=Z,1.5nm,0.4s,mb4.3,baz=67,slow=4.9,SNR=18						
SUMG	Summit	79.74	0	P	P	10 41 50.5	-1.8
	comp=Z,6.0nm,0.9s,mb4.5						
NVAR	Mina Array Bea	80.02	52	P	P	10 41 55.1	+0.6
	comp=Z,0.8nm,0.6s,mb3.8,baz=284,slow=7.3,SNR=8.1						
PPT	Papeete	80.08	116	eLQ		10 41 33.7	
	comp=Z,669nm,24.2s						
PPT				eLR	LR	10 42 39.1	
	comp=Z,827nm,28.0s,baz=243						
HLID	Hailey	80.17	46	eP	P	10 41 56.0	+0.8
	comp=Z,1.7nm,1.0s,mb3.9						
TPNV	Topopah Spring	82.15	52	P	P	10 42 06.5	+0.8
	comp=Z,0.2nm,0.7s						
IMW	Indian Meadow	82.18	44	eP	P	10 42 07.1	+1.4
	comp=Z,3.1nm,0.8s,mb4.3						
NB2	NORSAR Subarra	82.80	338	P	P	10 42 08.7	+0.2
	comp=Z,0.4nm,0.5s,mb3.7,baz=41,slow=5.3						
NOA	NORSAR Array B	82.80	338	P	P	10 42 08.4	-0.1
	comp=Z,1.0nm,0.7s,mb4.0,baz=43,slow=4.9,SNR=5.0						
HWUT	Hardware Ranch	82.97	46	eP	P	10 42 10.3	+0.5
PDAR	Pinedale Array	83.63	45	P	P	10 42 13.7	+0.6
	comp=Z,0.4nm,0.5s,mb3.8,baz=290,slow=2.1,SNR=7.1						
SRU	San Rafael	84.95	48	eP	P	10 42 20.2	+0.4
BR131	Keskin Array S	85.39	313	P	P	10 42 20.2	-1.8
	comp=Z,2.3nm,0.6s,mb4.5						
BRTR	Keskin Array B	85.39	313	P	P	10 42 23.5	+1.5
	comp=Z,2.9nm,0.7s,mb4.5,baz=98,slow=4.4,SNR=13						
TXAR	Lajitas Array	95.12	53	P	P	10 43 09.2	+1.4
	comp=Z,0.8nm,0.7s,mb4.2,baz=313,slow=2.6,SNR=14						
LPAZ	La Paz	149.73	74	PKPbc	PKPdf	10 49 36.0	+7.2
	comp=Z,1.4nm,0.8s,baz=317,slow=4.0,SNR=6.7						
PLCA	Paso Flores	150.33	124	PKPbc	PKPdf	10 49 35.4	+6.3
	comp=Z,2.4nm,0.9s,baz=136,slow=0.9,SNR=4.6						

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*IDC **30** 10:31:19.8±0.7, 26.70S×176.20W, mb4.3/12, mb1 4.6/13, mb1mx4.5/17, mbtmp4.3/13, MS3.9/11, Ms1 3.9/11, ms1mx3.8/18, Error ellipse: s-maj=27.2km s-min=18.4km az=143.0*

*NEIC **30** 10:31:24.9±0.4, 26.82S×176.20W, h35^{km}, mb4.8/10, Error ellipse: s-maj=14.9km s-min=10.7km az=138.0*

ISC 30 10:31:23.7±0.5**, 26.67S**±0.08×**176.3W**±0.1**, h33^{km}, n50, σ1^{s}14**/32**, mb4.5**/19**, MS4.0**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.96	209	Pn	Pn	10 32 06.9	-2.6
	146nm,0.3s,baz=80,slow=23,SNR=17						
RAO				Sn	Sn	10 32 46.1	+1.9
	216nm,0.3s,baz=51,slow=23,SNR=6.1						
RAO				LR	LR	10 33 05.3	
	comp=Z,738nm,18.2s,baz=72,slow=36						
RAO	Raoul Island	2.96	209	ePn	Pn	10 32 06.4	-3.1
RAO				eSn	Sn	10 32 45.5	+1.3
AFI	Afiamalu	13.38	19	P	P	10 34 27.7	-5.9
AFI				eS	S	10 36 42.6	-20
RAR	Rarotonga	16.02	74	P	P	10 34 58.7	-10
	51nm,1.1s						
DZM	Mont Dzumac	16.40	283	LR	LR	10 40 14.4	
	comp=Z,610nm,21.6s,baz=40,slow=32						
RPZ	Rata Peaks	19.87	208	LR	LR	10 42 37.0	
	comp=Z,385nm,20.2s,baz=195,slow=34						
TBI	Tubuai	24.50	88	eLQ		10 40 43.5	
	433nm,26.0s						
TBI				eLR	LR	10 41 51.9	
	757nm,29.5s,baz=260						
PPT	Papeete	26.29	75	LR	LR	10 44 40.7	
	comp=Z,92nm,20.1s,MS3.3,baz=254,slow=30						
HNR	Honiara	28.29	303	LR	LR	10 46 48.2	
	comp=Z,59nm,21.1s,MS3.2,baz=277,slow=33						
TAU	Tasmania Unive	33.70	232	eP	P	10 38 09.5	+5.7
	15nm,1.0s,mb4.9						
CTA	Charters Tower	34.93	273	P	P	10 38 15.2	+0.7
	6.3nm,0.9s,mb4.5,baz=102,slow=13,SNR=3.8						
CTAO	Charters Tower	34.93	273	eP	P	10 38 15.2	+0.6
	7.6nm,0.9s,mb4.6						
RKT	Rikitea	37.51	94	eLR	LR	10 47 50.9	
	440nm,29.5s,baz=275						
TAOE	Nuku Hiva Isla	38.50	69	eLR	LR	10 48 13.7	
	1μm,31.7s						
WRAB	Tennant Creek	45.62	268	eP	P	10 39 44.3	+1.3
	20nm,0.9s,mb5.0						
WRA	Warramunga Arr	45.63	268	P	P	10 39 41.5	-1.5
	11nm,0.8s,mb4.9,baz=106,slow=7.8,SNR=22						
VNDA	Vanda	51.95	186	LR	LR	10 58 43.6	
	comp=Z,96nm,18.3s,MS3.9,baz=116,slow=32						
FITZ	Fitzroy Crossi	54.01	266	P	P	10 40 46.7	-0.5
	9.4nm,0.9s,mb4.7,baz=143,slow=10,SNR=3.4						
MBWA	Marble Bar	58.24	261	P	P	10 41 16.2	-1.2
	13nm,1.2s,mb4.8						
CASY	Casey	59.14	207	eP	P	10 41 19.9	-3.2
	14nm,0.9s,mb5.0						
QSPA	South Pole Qui	63.43	180	eP	P	10 41 49.9	-2.0
	8.5nm,1.0s,mb4.8						
PMSA	Palmer Station	75.03	156	P	P	10 42 55.1	-8.0
MJAR	Matsushiro Arr	76.10	324	P	P	10 43 09.6	-0.2
	2.4nm,0.7s,mb4.2,baz=165,slow=7.1,SNR=7.6						
MJAR				LR	LR	11 09 39.2	
	comp=Z,100nm,20.4s,MS4.1,baz=200,slow=30						
MAJO	Matsushiro	76.10	324	P	P	10 43 08.4	-1.5
MAW	Mawson	76.32	200	P	P	10 43 10.7	+0.2
	1.3nm,0.8s,mb3.9,baz=117,slow=9.0,SNR=3.7						
PLCA	Paso Flores	83.92	133	P	P	10 43 52.7	+1.1
	1.3nm,1.0s,mb4.0,baz=286,slow=7.4,SNR=3.6						
PLCA				LR	LR	11 16 04.6	
	comp=Z,131nm,18.4s,MS4.3,baz=83,slow=32						
PLCA	Paso Flores	83.92	133	P	P	10 43 52.7	+1.1
PLCA				LR	LR	11 16 04.6	
NVAR	Mina Array Bea	84.47	42	P	P	10 43 54.9	+0.5
	2.0nm,1.0s,mb4.2,baz=205,slow=7.2,SNR=8.9						
NVAR				LR	LR	11 16 53.5	
	comp=Z,202nm,18.0s,MS4.5,baz=165,slow=32						
TXAR	Lajitas Array	89.08	56	P	P	10 44 16.2	-0.9
	1.1nm,1.0s,mb4.1,baz=211,slow=7.3,SNR=6.7						
ANMO	Albuquerque	90.05	50	P	P	10 44 21.9	+0.4
	0.8nm,0.9s,mb4.0,baz=211,slow=4.7,SNR=3.6						
ANMO	Albuquerque	90.05	50	eP	P	10 44 22.0	+0.5
	2.6nm,1.2s,mb4.4						
MA2	Magadan	90.13	344	P	P	10 44 22.4	+1.2
	5.2nm,0.9s,mb4.9						
MCMT	McKenzie Canyo	91.65	40	eP	P	10 44 29.0	+0.3
PDAR	Pinedale Array	92.38	43	P	P	10 44 32.3	+0.2
	0.2nm,0.5s,mb3.7,baz=243,slow=3.3,SNR=3.7						
PDAR				LR	LR	11 24 39.8	
	comp=Z,121nm,18.0s,MS4.4,baz=346,slow=35						
KMI	Kunming	93.53	296	P	P	10 44 38.6	+0.8
	6.0nm,1.2s,mb4.9						
KMI				LR	LR		
	comp=Z,60nm,15.0s,MS4.2						
CMAR	Chiang Mai Arr	93.63	289	P	P	10 44 39.8	+1.4
	comp=Z,1.7nm,0.6s,mb4.7,baz=138,slow=3.5,SNR=10						
ILAR	Eielson Array	93.97	12	P	P	10 44 38.9	+0.1
	comp=Z,0.8nm,0.8s,mb4.2,baz=214,slow=5.7,SNR=7.8						
LPAZ	La Paz	98.23	113	LR	LR	11 19 33.0	
	comp=Z,33nm,18.2s,MS3.9,baz=48,slow=30						
MKAR	Makanchi Array	116.51	311	PKP	PKPdf	10 50 04.7	+0.6
	comp=Z,0.8nm,0.7s,baz=90,slow=1.4,SNR=8.9						
MKAR	Makanchi Array	116.51	311	PKP	PKPdf	10 50 04.7	+0.6
BVAR	Borovoye Array	124.75	318	PKP	PKPdf	10 50 21.8	+1.9
	comp=Z,1.5nm,0.8s,baz=90,slow=3.0,SNR=10						
ZRNK	Zerenda	125.59	317	ePKPdf	PKPdf	10 50 21.7	+0.2
ARCES	ARCESS Array B	135.25	349	PKP	PKPdf	10 50 41.5	+2.2
	comp=Z,2.7nm,0.9s,baz=297,slow=2.7,SNR=4.7						
NB2	NORSAR Subarra	145.27	354	PKPabc	PKPdf	10 50 57.3	0.0
	comp=Z,0.7nm,0.8s,baz=18,slow=3.7						
NOA	NORSAR Array B	145.27	354	PKPbc	PKPbc	10 50 57.2	-0.6
	comp=Z,8.3nm,0.9s,baz=9.0,slow=2.4,SNR=20						
NOA	NORSAR Array B	145.27	354	PKPbc	PKPbc	10 50 57.2	-0.6
NAO01	NORSAR Array S	145.49	354	ePKPdf	PKPdf	10 50 59.0	+1.2
AKASG	Malin Array Be	149.11	328	PKPbc	PKPdf	10 51 08.2	+4.2
	comp=Z,2.4nm,0.6s,baz=37,slow=2.9,SNR=19						
BRTR	Keskin Array B	151.93	305	PKPbc	PKPdf	10 51 15.7	+7.0
	comp=Z,1.9nm,0.9s,baz=146,slow=4.5,SNR=8.9						
BRTR				PKPab	PKPab	10 51 28.0	+1.2
	comp=Z,1.0nm,0.6s,baz=63,slow=2.8,SNR=5.1						
GERES	GERESS Array B	156.54	343	PKPab	PKPab	10 51 46.7	+0.7
	comp=Z,0.5nm,0.6s,baz=45,slow=1.9,SNR=4.3						

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*NEIC **30** 10:32:02.9±1.2, 19.98S×69.17W, h108^{km}±15^{km}, mb4.2/4, Error ellipse: s-maj=17.9km s-min=11.9km az=73.0*

*IDC **30** 10:32:04.5±2.2, 19.97S×69.03W, h122^{km}±24^{km}, mb3.2/4, mb1 3.3/8, mb1mx3.3/19, mbtmp3.5/8, MS3.8/1, Ms1 3.8/1, ms1mx2.5/8, Error ellipse: s-maj=32.0km s-min=15.1km az=82.0, Incorrectly calculated travel-time residual on T phase at H03N*

ISC 30 10:31:59.7±1.4**, 20.04S**±0.08×**69.29W**±0.10**, h94^{km}**±17^{km}**, n16, σ1^{s}14**/19**, mb3.9**/4**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.89	17	P	P	10 33 03.4	+4.9
	1.7nm,0.3s,baz=213,slow=12,SNR=43						
LPAZ				S	S	10 33 45.4	+2.1
	0.7nm,0.3s,baz=228,slow=8.0,SNR=4.7						
LPAZ	La Paz	3.89	17	ePn	P	10 33 03.0	+4.4
LPAZ				S	S	10 33 45.4	+2.1
ARE	Arequipa	4.13	329	eP	P	10 33 02.0	+0.2
ARE				eS	S	10 33 47.0	-2.3
SIV	San Ignacio	8.79	64	P	P	10 34 04.7	-0.9
	0.3nm,0.3s,baz=242,slow=12,SNR=7.4						
CFAA	Coronel Fontan	11.55	176	P	P	10 34 46.5	+3.7
	0.0nm,0.3s,baz=354,slow=10,SNR=3.8						
CFAA				S	S	10 36 41.9	-8.5
	0.1nm,0.3s,baz=246,slow=17,SNR=5.4						
CPUP	Villa Florida	12.65	122	P	P	10 34 56.9	-0.4
	0.1nm,0.3s,baz=315,slow=11,SNR=5.3						
CPUP	Villa Florida	12.65	122	eP	P	10 34 56.6	-0.8
	1.8nm,0.8s						
TRQA	Tornquist	19.04	162	eP	P	10 36 16.5	-0.4
	15nm,1.0s						
PLCA	Paso Flores	20.65	183	P	P	10 36 35.4	+1.6
	1.8nm,0.8s,baz=1.1,slow=13,SNR=5.9						
BDFB	Brasilia	20.71	81	P	P	10 36 33.6	-0.9
	1.1nm,0.3s,baz=250,slow=3.2,SNR=3.2						
JTS	JuntasAbangare	33.86	332	LR	LR	10 52 32.1	
	comp=Z,184nm,21.2s,baz=231,slow=36						
TXAR	Lajitas Array	59.23	325	P	P	10 41 53.3	-0.4
	0.1nm,0.5s,mb3.1,baz=149,slow=10,SNR=3.9						
SNAA	Sanae	63.77	161	P	P	10 42 22.7	-0.8
	3.9nm,1.2s,mb4.1						
QSPA	South Pole Qui	70.14	180	P	P	10 43 04.4	+0.9
	4.0nm,0.9s,mb4.2						
YKA	Yellowknife Ar	89.70	341	P	P	10 44 48.5	+0.5
	0.4nm,0.4s,mb3.9,baz=134,slow=4.8,SNR=8.9						
YKA	Yellowknife Ar	89.70	341	P	P	10 44 48.5	+0.5

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*NEIC **30** 11:10:12.6, 38.58N×13.38E, h20^{km}, ML2.9(ROM), After ROM.*

*CSEM **30** 11:10:12.6±0.2, 38.58N×13.38E, h20^{km}, ML4.1/1, Error ellipse: s-maj=4.3km s-min=2.7km az=9.0, After ROM*

ROM 30 11:10:12.6±0.2**, 38.58N×13.38E, h20^{km}**±8^{km}**, Md3.0**/2**, Ml2.9**/2**, 1D, Error ellipse: s-maj=6.7km s-min=4.9km az=121.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USI	Ustica	0.21	309	⇓iPg	Pb	11 10 18.5	+0.6
USI				Sg	Sb	11 10 22.4	+1.0
GIB	Gibilmanna	0.77	139	Pg	Pb	11 10 28.5	+1.3
GIB				Sg	Sb	11 10 40.6	+3.3
	681nm,0.4s						
ERC	Erice	0.83	230	Pg	Pb	11 10 28.8	+0.7
	474nm,0.6s						
PLLN	Pollina	0.83	134	Pg	Pb	11 10 29.4	+1.1
MMGO	Monte Magaggia	0.97	200	Pg	Pb	11 10 31.7	+1.2
	39nm,0.3s						
LVI	Isola Levanzo	1.01	235	Pg	Pb	11 10 32.4	+1.1
SLNA	Salina	1.14	90	Pg	Pb	11 10 33.5	+0.1
	148nm,0.4s						
VPL	Vulcano Piano	1.27	98	Pg	Pn	11 10 37.1	+1.7
	120nm,0.5s						
MMME	Mongiuffi-Meli	1.60	113	Pg	Pn	11 10 42.5	+2.3

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*IGQ **30** 11:27:35.3, 1.76S×77.82W, h205^{km}±5^{km}, mb4.6, Error ellipse: s-maj=3.8km s-min=2.2km az=40.2*

*NEIC **30** 11:27:38.7±0.1, 1.62S×77.55W, mb4.5/66, MD4.5(IGQ), Error ellipse: s-maj=5.3km s-min=3.2km az=56.0*

*BJI **30** 11:27:39.4, 1.60S×77.60W, h175^{km}*

*IDC **30** 11:27:39.0±0.5, 1.58S×77.52W, h177^{km}±4^{km}, mb4.1/29, mb1 4.3/31, mb1mx4.3/33, mbtmp4.6/31, MS3.3/2, Ms1 3.3/2, ms1mx2.7/33, Error ellipse: s-maj=14.1km s-min=7.3km az=62.0*

ISC 30 11:27:37.3±0.2**, 1.64S**±0.04×**77.57W**±0.04**, h174^{km}, h174^{km}**±1.0^{km}**:pP-P, n217, σ1^{s}00**/182**, mb4.4**/81**, 9C-21D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULBA	Ulba	0.85	283	⇑P	P	11 28 04.3	+0.7
RUN5	Runtun	0.88	285	⇑P	P	11 28 04.3	+0.6
JUIV	Juive	0.92	284	⇑P	P	11 28 04.6	+0.6
CUSU	Cusua	0.93	282	⇑P	P	11 28 04.8	+0.8
PISA	Pisayambo	1.00	306	⇓P	P	11 28 06.1	+1.6
IGUA	Igualata	1.07	278	⇑P	P	11 28 05.7	+0.5
TAMB	Tambo	1.23	320	⇓P	P	11 28 08.1	+1.5
VC1	Cotopaxi 1	1.29	320	⇓P	P	11 28 08.7	+1.5
CAMI	Rancho Maria	1.34	316	⇓P	P	11 28 09.2	+1.7
ECOPE	Copete-Rev Vol	1.53	358	⇓P	P	11 28 11.4	+2.0
LAV3	Lava3-Reventad	1.54	358	⇓P	P	11 28 11.5	+2.0
CONE	Cono NE Rev Vo	1.56	357	⇑P	P	11 28 11.8	+2.1
CAYR	Refugio Cayamb	1.70	345	⇓P	P	11 28 13.6	+2.4
CAYA	Cayambe	1.75	346	⇓P	P	11 28 14.2	+2.5
JUA2	San Juan 2	1.75	324	⇓P	P	11 28 12.9	+1.2
GGP	Refugio Guagua	1.78	325	⇓P	P	11 28 13.3	+1.3
TERV	Terraza Guagua	1.79	325	⇓P	P	11 28 13.4	+1.4
PINO	Pino	1.80	325	⇓P	P	11 28 13.6	+1.4
YANA	Yana	1.81	327	⇓P	P	11 28 13.6	+1.3
OTAV	Otavalo	2.06	335	eP	P	11 28 16.0	+1.0
COTA	Cotacachi	2.11	339	⇓P	P	11 28 17.6	+2.1
ECEN	Cerro Negro	2.48	351	⇓P	P	11 28 22.4	+2.5
HOJA	Cerro de Hojas	3.03	281	⇑P	P	11 28 23.2	-3.4
LORE	San Lorenzo	3.18	336	⇓P	P	11 28 28.5	0.0
LORE				S	S	11 29 05.7	-2.3
ROSC	El Rosal	7.22	27	P	P	11 29 25.2	+4.0
	4.5nm,0.3s,baz=269,slow=19,SNR=9.2						
NNA	Nana	10.30	176	eP	P	11 30 00.2	-1.5
	46nm,0.9s						
NNA				eSn	S	11 31 43.4	-11
SDV	Santo Domingo	12.54	33	P	P	11 30 32.1	+1.5
	4.4nm,0.3s,baz=245,slow=11,SNR=51						
SDV	Santo Domingo	12.54	33	eP	P	11 30 30.7	0.0
	52nm,0.7s						
PAYG	Puerto Ayora	12.74	274	eP	P	11 30 35.1	+1.8
	155nm,1.4s						
JTS	JuntasAbangare	13.95	328	LR	LR	11 35 18.2	
	comp=Z,164nm,18.1s,baz=337,slow=33						
ARE	Arequipa	15.90	158	eP	P	11 31 16.0	+3.1
SAML	Samuel	16.05	117	eP	P	11 31 12.6	-2.2
	1.2nm,0.3s						
LPAZ	La Paz	17.27	148	P	P	11 31 30.6	+1.2
	1.3nm,0.3s,baz=328,slow=10,SNR=40						
LPAZ	La Paz	17.27	148	eP	P	11 31 30.2	+0.7
	14nm,0.8s						
SIV	San Ignacio	21.63	132	P	P	11 32 16.0	+1.6
	6.7nm,0.6s,mb4.2,baz=307,slow=10,SNR=40						
SJG	San Juan	22.62	29	P	P	11 32 23.9	-0.3
	15nm,0.5s,mb4.7,baz=193,slow=15,SNR=5.6						
SJG	San Juan	22.62	29	eP	P	11 32 23.8	-0.4
	19nm,0.6s,mb4.7						
CFAA	Coronel Fontan	31.08	164	P	P	11 33 40.9	-0.4
	0.9nm,0.5s,mb3.8,baz=344,slow=8.1,SNR=19						
CFAA	Coronel Fontan	31.08	164	P	P	11 33 40.9	-0.4
CPUP	Villa Florida	31.33	143	P	P	11 33 42.1	-1.5
	2.1nm,0.6s,mb4.1,baz=346,slow=12,SNR=9.8						
CPUP	Villa Florida	31.33	143	eP	P	11 33 41.7	-1.9
	4.1nm,0.8s,mb4.2						
BDFB	Brasilia	32.29	117	P	P	11 33 52.1	+0.1
	9.4nm,0.5s,mb4.8,baz=290,slow=9.6,SNR=16						
HBF	Harts Bluff	34.49	356	P	P	11 34 10.9	+0.2
COW	Cow Castle Cre	34.96	355	eP	P	11 34 14.6	0.0
SWET	Sewanee	37.49	349	eP	P	11 34 34.3	-1.6
TZTN	Tazewell	38.40	352	eP	P	11 34 42.4	-1.0
BLA	Blacksburg	38.75	356	eP	P	11 34 46.6	+0.3
	31nm,1.0s,mb4.9						
WVT	Waverly	38.78	347	eP	P	11 34 43.8	-2.8
	2.4nm,0.5s,mb4.1						
ELN	Prospectdale	38.79	356	eP	P	11 34 47.0	+0.3
TRQA	Tornquist	38.97	160	eP	P	11 34 47.0	-1.0
	5.6nm,0.9s,mb4.2						
PLCA	Paso Flores	39.43	172	P	P	11 34 52.2	+0.3
	18nm,0.8s,mb4.8,baz=344,slow=9.9,SNR=38						
PLCA				PcP	PcP	11 36 56.3	-0.6
	2.0nm,0.8s,baz=331,slow=3.5,SNR=4.6						
PLCA	Paso Flores	39.43	172	eP	P	11 34 51.9	+0.1
	39nm,1.2s,mb4.9						
PLCA				epP	pP	11 35 23.4	-6.3
LTX	Lajitas	39.65	323	eP	P	11 34 54.0	+0.2
	6.1nm,0.9s,mb4.2						
TXAR	Lajitas Array	39.65	323	P	P	11 34 54.5	+0.7
	2.1nm,0.5s,mb4.0,baz=147,slow=8.6,SNR=38						
TXAR				PcP	PcP	11 36 57.5	-0.3
	1.9nm,0.7s,baz=151,slow=6.4,SNR=10						
TXAR				ScP		11 40 30.6	
	0.4nm,0.6s,baz=151,slow=7.0,SNR=5.1						
TXAR				LR	LR	11 51 54.6	
	comp=Z,28nm,19.7s,baz=160,slow=37						
WMOK	Wichita Mounta	41.30	333	eP	P	11 35 06.0	-1.2

	12nm,1.2s,mb4.4						
WMOK				ePcP	PcP	11 36 59.8	-3.2
CCM	Cathedral Cave	41.47	344	eP	P	11 35 06.6	-2.0
	6.3nm,0.7s,mb4.3						
RCBR	Riachuelo	41.78	97	eP	P	11 35 11.1	-0.4
MNTX	Cornudas Mount	42.37	324	eP	P	11 35 15.6	-0.6
	7.1nm,0.9s,mb4.3						
AMTX	Amarillo	42.78	330	eP	P	11 35 19.4	-0.1
	12nm,0.8s,mb4.6						
AMTX				ePcP	PcP	11 37 07.4	-0.6
BINY	Binghamton	43.66	2	eP	P	11 35 26.6	+0.2
	19nm,0.8s,mb4.8						
BINY				epP	pP	11 36 00.7	-4.0
KSU1	Kansas State U	44.16	339	P	P	11 35 29.1	-1.2
CBKS	Cedar Bluff	45.13	335	eP	P	11 35 38.1	0.0
	22nm,0.7s,mb4.9						
ANMO	Albuquerque	45.35	326	P	P	11 35 40.8	+0.8
	21nm,0.6s,mb4.9,baz=141,slow=8.7,SNR=91						
ANMO				pP	pP	11 36 19.8	+1.3
	5.9nm,0.9s,baz=152,slow=8.2,SNR=3.7						
ANMO	Albuquerque	45.35	326	eP	P	11 35 40.4	+0.4
	19nm,0.6s,mb4.9						
ANMO				epP	pP	11 36 19.4	+1.0
NCB	Newcomb	45.51	3	eP	P	11 35 40.6	-0.4
	11nm,0.6s,mb4.7						
NCB				pP	pP	11 36 19.3	-0.3
TUC	Tucson	46.13	320	eP	P	11 35 46.0	0.0
	8.8nm,0.7s,mb4.5						
TUC				epP	pP	11 36 25.4	+0.7
SADO	Sadowa	46.23	358	P	P	11 35 45.3	-1.4
	11nm,0.7s,mb4.6,baz=209,slow=6.5,SNR=12						
FRNY	Flat Rock	46.41	4	eP	P	11 35 47.2	-0.8
SDCO	Great Sand Dun	46.94	329	eP	P	11 35 52.5	+0.2
	16nm,0.7s,mb4.8						
SDCO				epP	pP	11 36 32.5	+1.4
ISCO	Idaho Springs	48.58	331	eP	P	11 36 04.6	-0.4
	1.9nm,0.6s,mb3.9						
ISCO				epP	pP	11 36 43.0	-1.1
ISCO				ePcP	PcP	11 37 27.9	-0.4
PHWY	Pilot Hill	49.69	332	eP	P	11 36 13.5	+0.1
SRU	San Rafael	50.60	327	eP	P	11 36 20.0	-0.4
LDFC	Landfair	50.67	320	eP	P	11 36 21.9	+0.9
NEN	Nelson	50.85	321	eP	P	11 36 22.2	-0.1
MSU	Marysvale	51.11	325	eP	P	11 36 24.8	+0.6
MSU				epP	pP	11 37 04.6	+1.0
MSU				ePcP	PcP	11 37 36.8	-0.7
MSU				ePP	PP	11 38 22.1	-1.0
MSU				eScP		11 41 17.8	
MVU	Marysvale	51.12	325	eP	P	11 36 24.7	+0.4
	5.9nm,1.0s,mb4.2						
MVU				epP	pP	11 37 05.1	+1.4
MVU				ePcP	PcP	11 37 37.4	-0.2
MVU				ePP	PP	11 38 22.2	-1.1
RSSD	Black Hills	51.34	336	eP	P	11 36 26.1	+0.3
	6.6nm,1.0s,mb4.2						
RSSD				epP	pP	11 37 04.6	-0.7
DAU	Daniels Canyon	51.92	327	eP	P	11 36 30.2	0.0
JLU	Jordanelle	52.16	327	eP	P	11 36 32.0	0.0
TCUT	Toone Canyon	52.51	328	eP	P	11 36 34.7	+0.1
PDAR	Pinedale Array	52.76	331	P	P	11 36 35.9	-0.6
	1.7nm,0.6s,mb3.9,baz=122,slow=8.6,SNR=19						
PDAR				pP	pP	11 37 16.2	+0.1
	0.6nm,0.7s,baz=102,slow=8.3,SNR=2.2						
PDAR				PcP	PcP	11 37 42.5	-1.2
	1.3nm,0.5s,baz=129,slow=6.5,SNR=9.0						
HWUT	Hardware Ranch	52.94	328	eP	P	11 36 37.0	-0.8
	5.8nm,0.5s,mb4.6						
HWUT				ePcP	PcP	11 37 43.2	-1.0
SPUT	South Promonto	53.20	327	eP	P	11 36 39.1	-0.6
SPUT				epP	pP	11 37 18.5	-0.9
BGU	Big Grassy Mou	53.24	327	eP	P	11 36 39.9	-0.2
AHID	Auburn Hatcher	53.53	330	eP	P	11 36 41.1	-1.0
	13nm,1.2s,mb4.5						
USHA	Ushuaia	53.54	173	P	P	11 36 41.7	-0.3
	13nm,0.8s,mb4.7,baz=305,slow=5.3,SNR=4.6						
HVU	Hansel Valley	53.70	328	eP	P	11 36 42.6	-0.8
TPH	Tonopah	53.85	321	eP	P	11 36 41.5	-3.0
	11nm,1.2s,mb4.5						
SNOW	Snow King Moun	53.87	330	eP	P	11 36 44.2	-0.3
	7.2nm,0.9s,mb4.4						
LOHW	Long Hollow	53.90	331	eP	P	11 36 43.6	-1.3
	15nm,1.3s,mb4.6						
TPAW	Teton Pass	53.98	330	eP	P	11 36 44.4	-1.0
	4.5nm,0.9s,mb4.2						
ULM	Lac du Bonnet	54.02	346	P	P	11 36 43.3	-2.3
	4.0nm,0.5s,mb4.5,baz=155,slow=8.4,SNR=6.8						
RRI2	Red Ridge	54.06	330	eP	P	11 36 45.4	-0.6
	11nm,0.8s,mb4.6						
MOOW	Moose Ponds	54.07	331	eP	P	11 36 45.0	-1.1
	4.0nm,0.9s,mb4.2						
MOOW				epP	pP	11 37 24.4	-1.4
MOOW				ePcP	PcP	11 37 46.1	-2.5
IMW	Indian Meadow	54.28	331	eP	P	11 36 46.7	-0.8
	3.4nm,0.6s,mb4.2						
IMW				epP	pP	11 37 27.4	+0.1
IMW				ePcP	PcP	11 37 46.8	-2.6
ELK	Elko	54.36	325	P	P	11 36 47.8	-0.4
	1.2nm,0.4s,mb4.0,baz=136,slow=9.3,SNR=9.9						
ELK				ScP		11 41 31.1	
	1.1nm,0.6s,baz=144,slow=5.4,SNR=7.3						
ELK	Elko	54.36	325	eP	P	11 36 48.0	-0.2
	1.4nm,0.6s,mb3.9						
OMM	Old Mammoth Mi	54.70	320	eP	P	11 36 50.4	-0.3
NVAR	Mina Array Bea	54.74	321	P	P	11 36 50.8	-0.2
	2.2nm,0.5s,mb4.2,baz=130,slow=7.0,SNR=35						
NVAR				pP	pP	11 37 31.9	+1.1
	2.3nm,0.9s,baz=124,slow=8.3,SNR=4.0						
NVAR				PcP	PcP	11 37 51.0	-0.3
	1.9nm,0.7s,baz=121,slow=5.8,SNR=6.2						
NVAR	Mina Array Bea	54.74	321	P	P	11 36 50.8	-0.2
NVAR				pP	pP	11 37 31.9	+1.1
NVAR				PcP	PcP	11 37 51.0	-0.3
QLMT	Earthquake Lak	55.20	331	eP	P	11 36 54.8	+0.5
HLID	Hailey	55.81	328	eP	P	11 36 57.9	-0.7
	2.1nm,0.5s,mb4.2						
HLID				epP	pP	11 37 38.5	-0.1
CMB	Columbia Colle	55.84	320	eP	P	11 36 58.0	-0.8
	6.0nm,1.0s,mb4.4						
MCMT	McKenzie Canyo	55.90	330	eP	P	11 36 59.5	+0.3
BOZ	Bozeman (W)	55.90	332	eP	P	11 36 58.0	-1.3
	8.3nm,1.2s,mb4.4						
BOZ				epP	pP	11 37 39.1	-0.1
WCN	Washoe City	56.17	321	eP	P	11 37 00.6	-0.6
	6.9nm,1.1s,mb4.4						
HRY	Holter Researc	56.78	332	eP	P	11 37 04.8	-0.7
BEKR	Beckwourth	56.88	321	eP	P	11 37 05.7	-0.5
	8.7nm,0.9s,mb4.6						
SCHQ	Schefferville	56.98	7	P	P	11 37 04.9	-1.8
	6.7nm,0.9s,mb4.5,baz=184,slow=8.3,SNR=5.1						
SCHQ	Schefferville	56.98	7	eP	P	11 37 03.1	-3.5
	25nm,1.3s,mb4.9						
WVOR	Wild Horse Val	57.40	325	eP	P	11 37 09.0	-0.8
	17nm,1.1s,mb4.8						
MSO	Missoula	57.86	331	eP	P	11 37 12.1	-0.9
	5.6nm,1.3s,mb4.2						
BMO	Blue Mountains	58.21	328	eP	P	11 37 14.1	-1.4
	1.8nm,1.0s,mb3.9						
YBH	Yreka Blue Hor	59.41	322	P	P	11 37 21.7	-2.1
	2.0nm,0.5s,mb4.2,baz=116,slow=4.4,SNR=8.6						
YBH				pP	pP	11 38 03.6	-0.7
	2.4nm,0.8s,baz=74,slow=6.8,SNR=2.2						
NEW	Newport	60.41	331	P	P	11 37 29.3	-1.1
	3.4nm,0.6s,mb4.4,baz=134,slow=6.2,SNR=8.0						
NEW	Newport	60.41	331	eP	P	11 37 29.3	-1.1
	2.3nm,0.6s,mb4.2						
NEW				epP	pP	11 38 08.8	-2.4
EDM	Edmonton	62.30	337	eP	P	11 37 40.4	-2.7
PMSA	Palmer Station	63.75	174	eP	P	11 37 52.2	-0.3
	16nm,0.9s,mb4.8						
YKA	Yellowknife Ar	69.80	343	P	P	11 38 29.1	-1.3
	1.4nm,0.6s,mb3.9,baz=138,slow=5.9,SNR=18						
YKA				pP	pP	11 39 11.2	-0.9
	0.8nm,0.8s,baz=135,slow=5.4,SNR=2.2						
YKA	Yellowknife Ar	69.80	343	P	P	11 38 29.1	-1.3
YKA				pP	pP	11 39 11.2	-0.9
DLBC	Dease Lake	72.77	334	P	P	11 38 48.3	+0.1
	3.2nm,0.7s,mb4.2,baz=145,slow=5.6,SNR=11						
DLBC	Dease Lake	72.77	334	eP	P	11 38 48.2	0.0
DBIC	Dimbokro	73.04	83	P	P	11 38 50.0	-0.6
	7.5nm,0.4s,mb4.8,baz=257,slow=4.9,SNR=27						
DBIC				pP	pP	11 39 33.0	+0.2
	8.7nm,1.0s,baz=260,slow=4.7,SNR=2.4						
DBIC	Dimbokro	73.04	83	eP	P	11 38 49.8	-0.8
	77nm,1.4s,mb5.2						
SUMG	Summit	78.08	11	eP	P	11 39 18.0	+0.1
	24nm,0.6s,mb5.0						
INK	Inuvik	79.53	342	P	P	11 39 26.0	+0.2
	4.8nm,0.7s,mb4.3,baz=129,slow=8.4,SNR=13						
INK	Inuvik	79.53	342	eP	P	11 39 25.4	-0.4
	15nm,1.2s,mb4.5						
INK				pP	pP	11 40 05.1	-3.5
SJPF	Ste Jean	81.18	46	eP	P	11 39 35.5	+0.5
SJPF				epP	pP	11 40 18.6	+0.6
SGMF	Saint Gilles	81.28	41	eP	P	11 39 35.4	-0.1
	12nm,0.8s,mb4.3						
VNA3	Neumayer Olymp	81.45	162	e	P	11 39 42.5	+6.6
VNA3	Neumayer Olymp	81.45	162	e	pP	11 40 15.6	-3.3
VNA3	Neumayer Olymp	81.45	162	e	sP	11 40 35.7	-1.9
VNA3	Neumayer Olymp	81.45	162	⇓iP	P	11 39 36.3	+0.4
VNA3				e		11 39 42.5	
VNA3				e	pP	11 40 15.6	-3.3
VNA3				e		11 40 35.7	
ETSF	Etsaut	81.62	46	eP	P	11 39 37.8	+0.5
VNA1	Neumayer--Stat	81.69	162	e	P	11 39 44.4	+7.3
VNA1	Neumayer--Stat	81.69	162	⇓iP	P	11 39 37.9	+0.8
VNA1				e		11 39 44.4	
VNA2	Neumayer--Watz	82.05	162	e	P	11 39 44.2	+5.2
VNA2	Neumayer--Watz	82.05	162	e	pP	11 40 22.0	0.0
VNA2	Neumayer--Watz	82.05	162	e	sP	11 40 41.1	+0.4
VNA2	Neumayer--Watz	82.05	162	⇓iP	P	11 39 39.3	+0.3
VNA2				e		11 39 44.2	
VNA2				e	pP	11 40 22.0	0.0
VNA2				e		11 40 41.1	
EPF	Esparros	82.29	46	eP	P	11 39 41.2	+0.4
GRR	Gorron	82.42	41	eP	P	11 39 41.2	-0.1
	18nm,0.9s,mb4.4						
GRR				epP	pP	11 40 24.3	-0.1
EKA	Eskdalemuir Ar	82.53	34	P	P	11 39 41.0	-0.7
	1.3nm,0.5s,mb4.0,baz=243,slow=2.4,SNR=7.6						
MFF	Saint Martin d	82.57	43	eP	P	11 39 41.6	-0.5
	22nm,0.9s,mb4.6						
MFF				epP	pP	11 40 25.3	+0.1
FLN	La Foliniere	82.74	41	eP	P	11 39 43.1	+0.2
ILAR	Eielson Array	82.78	336	P	P	11 39 42.4	-0.5
	4.2nm,0.7s,mb4.3,baz=126,slow=3.8,SNR=36						
ILAR				pP	pP	11 40 25.1	-0.9
	1.3nm,0.9s,baz=110,slow=3.4,SNR=2.8						
LFF	La Frestale	82.89	44	eP	P	11 39 43.9	+0.1
RJF	Les Rejaudoux	83.49	44	eP	P	11 39 46.9	+0.1
	22nm,1.0s,mb4.5						
SNAA	Sanae	83.67	162	e	P	11 39 52.8	+5.6
SNAA	Sanae	83.67	162	e	pP	11 40 30.6	+0.2
SNAA	Sanae	83.67	162	e	sP	11 40 48.2	-0.9
SNAA	Sanae	83.67	162	⇓iP	P	11 39 47.2	0.0
SNAA				e		11 39 52.8	
SNAA				e	pP	11 40 30.6	+0.2
SNAA				e		11 40 48.2	
MTLF	Montolieu	83.70	46	eP	P	11 39 47.9	-0.1
	20nm,0.9s,mb4.5						
MTLF				epP	pP	11 40 31.1	-0.1
CAF	Calviac	83.82	45	eP	P	11 39 48.7	+0.2
CAF				epP	pP	11 40 32.0	+0.3
TCF	Toulx Ste Croi	84.12	43	⇑iP	P	11 39 49.9	-0.1
	11nm,0.7s,mb4.4						
BGF	Bois d'Agland	84.60	43	eP	P	11 39 52.4	+0.1
BGF				epP	pP	11 40 35.7	+0.1
DAG	Danmarks Havn	84.77	11	⇑iP	P	11 39 52.6	0.0
	4.0nm,0.6s,mb4.3						
LASF	Ste Croix	84.97	46	eP	P	11 39 54.9	+0.6
	15nm,0.9s,mb4.4						
SSF	Saint Saulge	85.11	43	eP	P	11 39 54.4	-0.5
SSF				epP	pP	11 40 38.0	-0.3
SMF	Signal de Mont	85.29	43	eP	P	11 39 55.5	-0.3
	9.6nm,0.7s,mb4.3						
SMF				epP	pP	11 40 39.0	-0.1
LOR	Lormes	85.38	43	eP	P	11 39 55.8	-0.4
LOR				epP	pP	11 40 39.3	-0.3
SVW2	Sparrevohn	85.64	332	eP	P	11 39 56.7	-0.5
VIVF	Saint-Julien-l	85.65	45	eP	P	11 39 58.2	+0.6
IMA	Indian Mountai	85.88	337	eP	P	11 39 57.8	-0.4
BAIF	Baives	85.97	40	eP	P	11 39 59.1	+0.1
SMRF	Simiane la Rot	86.19	46	eP	P	11 40 01.9	+1.6
MEZF	Maizieres J'vi	86.33	41	eP	P	11 40 00.9	+0.1
GIVF	Givet	86.37	40	eP	P	11 40 01.4	+0.5
	20nm,0.6s,mb4.7						
ORIF	Oris-en-Rattie	86.51	45	eP	P	11 40 02.5	+0.7
CABF	La Chapelle	86.82	43	eP	P	11 40 03.3	+0.1
	6.8nm,0.6s,mb4.3						
MBDF	Montbardon	87.12	45	eP	P	11 40 05.6	+0.9
LPL	La Plagne	87.16	44	eP	P	11 40 05.6	+0.7
SBF	Sospel	87.52	46	eP	P	11 40 06.4	-0.2
	26nm,0.8s,mb4.8						
CDF	Champ du Feu	87.79	42	eP	P	11 40 07.8	0.0
	18nm,0.8s,mb4.7						
QSPA	South Pole Qui	88.42	180	⇓iP	P	11 40 11.6	+1.5
	32nm,0.9s,mb5.2						
PGF	Pioggiola	88.57	48	eP	P	11 40 12.1	+0.5
	26nm,1.0s,mb4.8						
DAVOX	Davos	89.44	43	P	P	11 40 16.5	+0.9
	8.0nm,0.7s,mb4.8,baz=286,slow=7.2,SNR=7.7						
NB2	NORSAR Subarra	90.84	29	P	P	11 40 21.9	+0.1
	0.7nm,0.7s,mb3.8,baz=269,slow=4.6						
NOA	NORSAR Array B	90.84	29	P	P	11 40 22.2	+0.5
	1.3nm,0.8s,mb4.0,baz=269,slow=4.7,SNR=4.4						
GERES	GERESS Array B	92.07	41	P	P	11 40 27.7	-0.1
	1.0nm,0.6s,mb4.0,baz=297,slow=3.0,SNR=5.1						
BRG	Berggiesshubel	92.22	39	eP	P	11 40 29.4	+0.9
	8.8nm,1.1s,mb4.7						
TSUM	Tsumeb	94.34	109	eP	P	11 40 40.5	+1.7
	6.4nm,1.2s,mb4.6						
VNDA	Vanda	94.75	191	P	P	11 40 40.2	+0.7
	2.7nm,0.7s,mb4.6,baz=105,slow=4.5,SNR=7.6						
VNDA	Vanda	94.75	191	eP	P	11 40 39.9	+0.4
	4.1nm,0.8s,mb4.7						
ARCES	ARCESS Array B	96.10	20	P	P	11 40 45.2	-0.5
	1.6nm,0.6s,mb4.6,baz=268,slow=3.7,SNR=18						
ARCES	ARCESS Array B	96.10	20	P	P	11 40 45.2	-0.5
FINES	FINESS Array B	97.95	28	P	P	11 40 53.9	-0.3
	1.0nm,0.7s,mb4.4,baz=282,slow=4.9,SNR=3.5						
ZAL	Zalesovo	125.89	13	PKP	PKPdf	11 46 19.1	+0.6
	1.7nm,0.4s,baz=219,slow=1.4,SNR=6.7						
ZAL				pPKP		11 47 05.8	
	1.1nm,0.3s,baz=158,slow=3.6,SNR=1.3						
STKA	Stephens Creek	130.12	225	PKP	PKPdf	11 46 27.9	+0.6
	4.1nm,0.8s,baz=108,slow=1.6,SNR=8.2						
MDJ	Mudanjiang	130.93	334	PKP	PKPdf	11 46 28.5	+0.1
MKAR	Makanchi Array	131.72	18	PKP	PKPdf	11 46 30.7	+0.9
	0.7nm,0.4s,baz=315,slow=2.0,SNR=18						
MKAR				pPKP		11 47 16.2	
	0.2nm,0.5s,baz=321,slow=2.3,SNR=1.6						
CTA	Charters Tower	131.92	241	PKP	PKPdf	11 46 31.8	+0.9
	4.1nm,0.5s,baz=112,slow=2.7,SNR=10						
CN2	Changchun	133.30	337	ePKP	PKPdf	11 46 34.5	+1.6
SONM	Songino Array	133.86	356	PKP	PKPdf	11 46 35.4	+1.6
	1.0nm,0.5s,baz=349,slow=1.6,SNR=6.1						
WMQ	Urumqi	136.01	15	ePKP	PKPdf	11 46 40.0	+2.1
WMQ				LR	LR		
	comp=N,110nm,20.4s						
WMQ				LR	LR		
	comp=Z,100nm,20.2s						
WB2	Warramunga Arr	142.04	234	eP	PKPdf	11 46 44.6	-4.8
WRA	Warramunga Arr	142.05	234	PKhKP		11 46 44.9	
	comp=Z,5.0nm,0.6s,baz=117,slow=2.9,SNR=66						
WRA				PKP	PKPdf	11 46 49.6	+0.1
	comp=Z,4.7nm,0.7s,baz=121,slow=2.4,SNR=19						
WRA	Warramunga Arr	142.05	234	PKP	PKPdf	11 46 44.9	-4.6
WRA				PKP	PKPdf	11 46 49.6	+0.2
KLBR	Kellerberrin	143.88	203	eP	PKPbc	11 46 51.1	-0.4
	comp=Z,26nm,0.6s						
MUN	Mundaring	144.10	200	eP	PKPbc	11 46 52.2	+0.1
	comp=Z,41nm,0.6s						
JOW	Kunigami	144.75	318	PKP	PKPdf	11 46 54.5	+0.5
	comp=Z,28nm,0.6s,baz=326,slow=1.4,SNR=18						
LZH	Lanzhou	145.70	358	ePKP	PKPdf	11 46 57.8	+2.5
LZH				XPKP		11 48 05.5	
LZH	Lanzhou	145.70	358	ePKP	PKPdf	11 46 57.7	+2.4
LZH				pPKP		11 47 48.4	
LZH				sPKP		11 48 05.5	
NJ2	Nanjing	146.02	335	ePKP	PKPdf	11 46 57.0	+1.0
KAKA	Kakadu	146.97	244	eP	PKPdf	11 46 59.0	+1.0
	comp=Z,32nm,0.6s						
XAN	Xi'an	147.20	350	PKP	PKPdf	11 47 01.5	+3.6
KOLN	Koldanda	148.38	33	eP	PKPdf	11 47 04.9	+4.9
	comp=Z,31nm,1.0s						
GKN	Gorkha	148.75	31	eP	PKPdf	11 47 06.7	+6.1
	comp=Z,31nm,0.6s						
KKN	Kakani	149.25	31	eP	PKPdf	11 47 07.7	+6.3
	comp=Z,22nm,0.5s						
DMN	Daman	149.31	31	eP	PKPdf	11 47 07.6	+6.1
	comp=Z,17nm,0.4s						
GUN	Gumba	149.46	30	eP	PKPdf	11 47 09.0	+7.3
	comp=Z,25nm,0.4s						
PKI	Pulchoki	149.50	31	eP	PKPdf	11 47 08.0	+6.2
	comp=Z,10nm,0.5s						
FITZ	Fitzroy Crossi	149.88	228	eP	PKPdf	11 47 04.0	+1.4
	comp=Z,30nm,0.6s						
FITZ	Fitzroy Crossi	149.88	228	PKP	PKPdf	11 47 04.1	+1.5
	comp=Z,26nm,0.6s,baz=103,slow=2.8,SNR=5.2						
FITZ				PKPbc	PKPdf	11 47 08.5	+6.0
	comp=Z,26nm,0.6s,baz=173,slow=3.7,SNR=35						
FITZ				PKPab	PKPab	11 47 15.4	-0.6
	comp=Z,39nm,0.6s,baz=172,slow=3.8,SNR=26						
ENH	Enshi	150.75	347	P	PKPdf	11 47 05.0	+1.5
HYB	Hyderabad	151.78	55	i PKP	PKPdf	11 47 23.0	+18
CMAR	Chiang Mai Arr	162.94	11	PKPab	PKPab	11 48 10.2	-1.5
	comp=Z,1.8nm,0.8s,baz=335,slow=5.9,SNR=8.2						

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*NEIC **30** 11:29:27.4,16.84N×94.96W,h107^{km},MD4.0(MEX),After MEX.*

MEX 30 11:29:27.2±1.2,**16.84N×94.94W,h108**^{km}±10^{km},**MD4.0, 1C-1D,Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.26	11	⇓iP	P	11 29 41.2	-1.5
CMIG				i S	S	11 29 52.3	-1.9
TUIG	Tuzandepetl	1.29	22	i P	P	11 29 52.8	+1.0
TUIG				i S	S	11 30 07.8	-2.4
TUIG	Tuzandepetl	1.29	22	eP	P	11 29 52.7	+1.0
TUIG				i S	S	11 30 07.8	-2.4
HUIG	Huatulco	1.55	227	i P	P	11 29 51.9	-3.0
HUIG				i S	S	11 30 13.8	-1.9
EVV	El Vigia	1.66	346	eP	P	11 29 53.5	-2.7
EVV				i S	S	11 30 17.0	-0.9
OXX	Oaxaca	1.73	278	i P	P	11 29 56.6	-0.5
OXX				i S	S	11 30 18.3	-1.2
VHO	Vista Hermosa	1.73	278	⇑iP	P	11 29 56.1	-1.1
VHO				i S	S	11 30 18.2	-1.5
CCIG	Comitan	2.74	101	i P	P	11 30 09.6	-1.0
CCIG				i S	S	11 30 42.7	-0.6
IISM	Ciudad Serdan	3.16	313	eP	P	11 30 15.0	-1.2
PPM	Popocatepetl	4.15	303	i P	P	11 30 28.9	-0.8
PPM				i S	S	11 31 12.4	-5.2
PPM	Popocatepetl	4.15	303	eP	P	11 30 28.0	-1.8
PPM				i P		11 30 28.9	
PPM				i S	S	11 31 12.4	-5.2
ACX	Acapulco	4.77	271	eP	P	11 30 35.0	-3.1

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*JMA **30** 12:15:09.8±0.1,39.55N×138.53E,h37^{km}±3^{km},M3.6*

ISC 30 12:15:10.1±1.2,**39.55N**±0.05×**138.52E**±0.09,**h44**^{km}±39^{km}, **n14,σ0^{s}42**/22,**Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTB	Tobi-shima	0.88	113	P	P	12 15 25.8	-0.3
JOG2	Oga 2	1.05	69	P	P	12 15 28.4	-0.1
JOG2				eS	S	12 15 42.3	+0.1
JAW	Awa shima	1.23	152	P	P	12 15 30.8	-0.3
JYW	Yuwa	1.30	90	P	P	12 15 32.2	-0.1
JYW				eS	S	12 15 49.1	+0.3
JYA	Atsumi	1.33	135	P	P	12 15 32.2	-0.4
JYA				eS	S	12 15 49.3	-0.1
JSD	Sado	1.52	188	P	P	12 15 35.6	+0.3
JSD				eS	S	12 15 53.9	-0.2
JIW	Iwasaki	1.55	47	P	P	12 15 35.5	-0.2
JIW				eS	S	12 15 54.8	0.0
JYK	Kaneyama	1.56	113	P	P	12 15 35.7	-0.2
JAH	Hinai	1.75	68	P	P	12 15 38.9	+0.4
JYS	Shirataka	1.79	137	P	P	12 15 39.5	+0.4
JYS				eS	S	12 16 01.7	+1.0
JNS	Sasagawa	1.83	160	eS	S	12 16 01.7	-0.1
JOM	Ohasama	2.15	91	P	P	12 15 44.3	+0.1
JOM				eS	S	12 16 09.2	-0.5
JMK	Ichinoseki	2.18	105	P	P	12 15 44.2	-0.4
MAT	Matsushiro	3.01	185	P	P	12 15 57.5	+1.0
MAT				S	S	12 16 30.8	-0.8

IDC 30 12:19:10.4±2.6,**1.82N×96.31E,mb3.7**/5,**mb1 3.9**/6, **mb1mx3.6**/20,**mbtmp3.7**/6,**ML3.7**/1,**Error ellipse: s-maj=93.3km s-min=28.2km az=57.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.73	9	Pn	P	12 23 07.3	-0.6
	0.1nm,0.3s,baz=195,slow=11,SNR=7.8						
WRA	Warramunga Arr	43.12	122	P	P	12 27 12.8	-1.7
	0.7nm,0.6s,baz=300,slow=9.2,SNR=4.7						
MKAR	Makanchi Array	46.43	347	P	P	12 27 38.9	-1.8
	0.7nm,0.5s,baz=180,slow=8.5,SNR=6.1						
SONM	Songino Array	46.66	9	P	P	12 27 40.6	-1.8
	0.4nm,0.3s,baz=184,slow=11,SNR=2.2						
ZAL	Zalesovo	52.80	351	P	P	12 28 27.1	-2.5
	1.0nm,0.4s,baz=305,slow=6.2,SNR=3.6						
BVAR	Borovoye Array	55.37	341	P	P	12 28 45.9	-2.6
	0.2nm,0.3s,baz=130,slow=11,SNR=3.2						

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*ATH **30** 12:41:23.6,36.57N×25.63E,h17^{km}±1^{km},MD3.6/15, ML3.6*

*NEIC **30** 12:41:23.6,36.57N×25.63E,h17^{km},ML3.6(ATH),After ATH.*

*ISK **30** 12:41:25.2,36.70N×25.74E,h3^{km},MD3.3*

*CSEM **30** 12:41:25.2±0.1,36.53N×25.68E,h17^{km}±1^{km},ML3.6, Error ellipse: s-maj=2.2km s-min=1.8km az=174.0*

*THE **30** 12:41:25.6,36.58N×25.61E,h10^{km}*

*HLW **30** 12:41:27.0,36.56N×25.70E,h33^{km},Mb3.4*

ISC 30 12:41:25.1±0.4,**36.53N**±0.03×**25.60E**±0.04,**h20**^{km}±4^{km}, **n39,σ1^{s}22**/56,**5C,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THR4	Thira Island,	0.18	247	ePg	Pb	12 41 30.4	+0.5
SANT	Santorini	0.20	216	ePg	Pb	12 41 30.4	+0.2
SANT				eSg	Sb	12 41 34.5	+1.0
SANT	Santorini	0.20	216	ePg	Pb	12 41 30.4	+0.2
SANT				eSg	Sb	12 41 34.5	+0.9
THR1	Thera Island	0.20	216	ePg	Pb	12 41 30.7	+0.5
THR1				eSg	Sb	12 41 35.0	+1.4
THR3	Thira Island,	0.20	234	ePg	Pb	12 41 30.9	+0.6
THR5	Thira Island,	0.23	241	ePg	Pb	12 41 30.9	+0.2
APE	Apeiranthos	0.54	354	PG	Pb	12 41 33.6	-2.2
APE				SG	Sb	12 41 40.2	-2.9
APE	Apeiranthos	0.54	354	ePN	Pn	12 41 33.8	-3.8
APE				eSN	Sn	12 41 40.8	-5.3
APE	Apeiranthos	0.54	354	ePn	Pn	12 41 33.8	-3.8
APE				eSg	Sb	12 41 40.2	-2.9
APE				eSn	Sn	12 41 40.8	-5.3
NISR	Nisiros	1.23	86	ePN	Pn	12 41 47.0	-0.4
NPS	Neapolis	1.26	180	ePN	Pn	12 41 48.2	+0.3
NPS				eSN	Sn	12 42 05.5	+1.1
BODT	Bodrum	1.47	68	PN	Pn	12 41 50.8	-0.1
BODT				SN	Sn	12 42 09.7	0.0
SMG	Samos	1.54	40	ePN	Pn	12 41 51.9	+0.1
SMG				eSN	Sn	12 42 12.4	+1.1
BDRM	Kayabasi	1.57	70	i P	Pn	12 41 53.4	+1.1
BDRM				i S	Sn	12 42 13.7	+1.5
VAM	Vamos	1.59	226	ePN	Pn	12 41 53.3	+0.7
VAM				eSN	Sn	12 42 16.4	+3.6
KARP	Karpathos	1.60	127	ePN	Pn	12 41 52.7	0.0
XRY	Khrisi	1.65	177	ePN	Pn	12 41 54.7	+1.3
URLA	Izmir	1.99	23	i P	Pn	12 42 00.2	+1.9
URLA				i S	Sn	12 42 28.1	+5.2
ARG	Arkhangelos	2.06	98	ePB	Pb	12 41 59.0	-2.7
ATH	Athens Observa	2.08	314	ePN	Pn	12 42 00.5	+0.9
ATH	Athens Observa	2.08	314	ePn	Pn	12 42 01.3	+1.7
KYTH	Kithira	2.08	264	ePB	Pb	12 42 00.0	-2.1
VLI	Veliai	2.15	276	ePB	Pb	12 42 00.8	-2.4
BLCB	Balcova	2.18	31	ePN	Pn	12 42 00.3	-0.7
YER	Yerkesik	2.23	74	ePN	Pn	12 42 02.7	+0.9
IZM	Izmir	2.29	35	ePN	Pn	12 42 02.4	-0.1
KDAG	Bornova	2.29	35	i P	Pn	12 42 06.1	+3.5
KDAG				i S	Sn	12 42 36.5	+5.9
MGER	Gerania Oros	2.37	309	ePN	Pn	12 42 05.0	+1.3
LKR	Lokris	2.96	316	ePN	Pn	12 42 12.1	0.0
ITM	Ithomi	3.02	284	ePB	Pb	12 42 14.5	-3.5
NEO	Neokhori	3.35	327	ePN	Pn	12 42 17.7	0.0
AGG	Agios Georgios	3.59	315	ePn	Pn	12 42 21.5	+0.4
EVR	Evrytania	3.84	310	ePN	Pn	12 42 24.5	-0.1

SLUM		**5.04**	**184**	⇑P	**Pn**	**12 42 40.7**	**-0.8**
SLUM				S	**Sn**	**12 43 35.2**	**-4.7**
HMAT	**Matruh**	**5.56**	**167**	⇑P	**Pn**	**12 42 48.1**	**-0.9**
HMAT				S	**Sn**	**12 43 47.4**	**-5.8**
SWA1		**7.25**	**179**	P	**Pn**	**12 43 11.6**	**-1.1**
SWA1				S	**Sn**	**12 44 27.6**	**-7.7**
SWA2		**7.27**	**181**	⇑P	**Pn**	**12 43 11.8**	**-1.1**
AMAG	**Maghara**	**8.64**	**131**	⇑P	**P**	**12 43 30.0**	**-2.2**
SUZ		**9.01**	**136**	⇑P	**P**	**12 43 35.1**	**-2.1**

MAN 30 12:48:39.8, 11.27N×124.54E, h1^{km}, mb3.9, ML2.7, MS2.3, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.94**	**69**	*e*P	Pg	12 48 57.6	-1.0
BESP				*e*S	Sg	12 49 10.6	-0.5
LLP	**Lapu-Lapu**	**1.10**	**211**	*e*P	Pb	12 49 02.7	+1.3
LLP				*i* S	Sb	12 49 15.3	-0.7
MSLP	**Maasin**	**1.17**	**165**	*e*P	Pb	12 49 03.1	+0.7
CNP	**Catarman**	**1.24**	**5**	*e*P	Pb	12 49 03.9	+0.1
CNP				*e*S	Sb	12 49 22.7	+2.5
GUIM	**Jordan**	**2.02**	**252**	*e*P	Pn	12 49 15.5	+0.1
GUIM				*e*S	Sn	12 49 45.4	+3.7

*IDC **30** 13:31:57.5±1.2, 3.62S×135.76E, mb4.0/4, mb1 4.3/6, mb1mx4.0/13, mbtmp4.1/6, ML4.2/2, MS3.1/2, Ms1 3.1/2, ms1mx2.9/23, Error ellipse: s-maj=54.0km s-min=23.7km az=84.0*

*NEIC **30** 13:32:02.1±2.9, 3.73S×135.74E, h36^{km}±29^{km}, mb4.2/4, Error ellipse: s-maj=24.2km s-min=18.4km az=144.0*

ISC 30 13:32:00.6±0.7**, 3.76S**±0.07×**135.7E**±0.1**, h33^{km}, n21, σ1^{s}27**/24**, mb4.0**/5**, 1C, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**9.45**	**200**	⇑*i*P	**P**	**13 34 18.1**	**+0.7**
	22nm,0.3s						
KAKA				*e*S	**S**	**13 36 03.2**	**-0.4**
PMG	**Port Moresby**	**12.71**	**117**	Pn	**P**	**13 35 03.2**	**+1.2**
	0.5nm,0.3s,baz=298,slow=15,SNR=2.9						
PMG				LR	LR	13 40 28.3	
	comp=Z,46nm,20.3s,baz=284,slow=40						
PMG	**Port Moresby**	**12.71**	**117**	P	**P**	**13 34 59.8**	**-2.2**
PMG				LR	LR	13 40 28.3	
WRAB	**Tennant Creek**	**16.12**	**184**	*e*P	**P**	**13 35 45.8**	**-0.7**
	22nm,0.6s						
WRAB				*e*		13 35 52.9	
WRAB				*e*S	**S**	**13 38 35.9**	**-8.1**
WB2	**Warramunga Arr**	**16.13**	**184**	*e*P	**P**	**13 35 45.7**	**-0.9**
WB2				*i*		13 35 53.3	
WB2				*e*S	**S**	**13 38 36.1**	**-8.0**
WRA	**Warramunga Arr**	**16.13**	**184**	Pn	**P**	**13 35 45.8**	**-0.8**
	0.6nm,0.3s,baz=3.2,slow=13,SNR=24						
WRA				Sn	**S**	**13 38 36.8**	**-7.4**
	0.4nm,0.3s,baz=13,slow=22,SNR=4.1						
FITZ	**Fitzroy Crossi**	**17.31**	**214**	*e*P	**P**	**13 36 01.8**	**+0.4**
	5.8nm,0.4s						
FITZ				*e*S	**S**	**13 39 04.5**	**-6.6**
FITZ	**Fitzroy Crossi**	**17.31**	**214**	P	**P**	**13 36 01.2**	**-0.2**
	1.8nm,0.3s,baz=21,slow=9.8,SNR=20						
FITZ				S	**S**	**13 39 04.1**	**-7.0**
	1.6nm,0.3s,baz=172,slow=11,SNR=6.9						
CTA	**Charters Tower**	**19.23**	**148**	*e*P	**P**	**13 36 28.8**	**+3.9**
	4.9nm,0.7s						
CTA	**Charters Tower**	**19.23**	**148**	P	**P**	**13 36 28.6**	**+3.6**
	0.6nm,0.3s,baz=327,slow=12,SNR=8.0						
CTA				LR	LR	13 44 45.1	
	comp=Z,118nm,19.9s,baz=31,slow=40						
MBWA	**Marble Bar**	**23.22**	**221**	*e*P	**P**	**13 37 08.2**	**+2.3**
	15nm,1.1s,mb4.3						
STKA	**Stephens Creek**	**28.52**	**169**	*e*P	**P**	**13 37 57.4**	**+2.1**
	3.2nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**28.52**	**169**	P	**P**	**13 37 57.1**	**+1.7**
	4.0nm,0.9s,mb4.2,baz=17,slow=7.9,SNR=7.4						
KULM	**Kulim**	**36.12**	**284**	*e*P	**P**	**13 39 00.1**	**-1.7**
TLY	**Talaya**	**61.59**	**338**	*e*P	**P**	**13 42 09.1**	**-8.0**
MKAR	**Makanchi Array**	**68.80**	**324**	P	**P**	**13 43 03.3**	**-0.3**
	0.8nm,0.5s,mb3.9,baz=109,slow=8.5,SNR=6.5						
BVAR	**Borovoye Array**	**78.45**	**326**	P	**P**	**13 44 01.5**	**+1.7**
	1.0nm,0.8s,mb3.8,baz=108,slow=4.7,SNR=4.8						
ILAR	**Eielson Array**	**88.05**	**25**	P	**P**	**13 44 47.5**	**-0.9**
	0.3nm,0.4s,mb3.9,baz=258,slow=4.1,SNR=5.3						
SNAA	**Sanae**	**100.06**	**192**	*e*P	P	13 45 42.0	-1.6
ARCES	**ARCESS Array B**	**100.48**	**340**	P	P	13 45 44.7	-0.8
	0.9nm,0.7s,baz=90,slow=6.1,SNR=5.9						
ARCES	**ARCESS Array B**	**100.48**	**340**	P	P	13 45 44.7	-0.9

*NEIC **30** 13:33:54.2, 32.56S×70.71W, h81^{km}, MD3.7(GUC), After GUC.*

GUC 30 13:33:54.2±0.5**, 32.56S×70.71W, h81^{km}**±2^{km}**, MD3.7, ML3.2, 4C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**0.15**	**141**	⇓*i*P	P	13 34 06.4	+0.5
JACH				*i* S	S	13 34 15.4	+0.7
ROCH	**El Roble**	**0.48**	**212**	⇑*i*P	P	13 34 08.4	+0.5
ROCH				*i* S	S	13 34 19.5	+1.2
PEL	**Peldehue**	**0.58**	**178**	*e*P	P	13 34 09.0	0.0
PEL				*i* S	S	13 34 20.2	+0.4
PACH	**Papudo**	**0.61**	**272**	⇓*i*P	P	13 34 09.6	+0.3
PACH				*i* S	S	13 34 20.8	+0.4
FCH	**Farellones**	**0.84**	**155**	⇓*i*P	P	13 34 12.6	+0.9
FCH				*i* S	S	13 34 26.5	+1.7
DSCH	**Colegio Aleman**	**0.84**	**172**	*i* P	P	13 34 12.0	+0.3
DSCH				*i* S	S	13 34 25.5	+0.7
DSCH				AMP		13 34 26.9	
	comp=E,2μm,0.2s						
CLCH	**Cerro Calan**	**0.84**	**170**	⇓*e*P	P	13 34 11.9	+0.2
CLCH				*i* S	S	13 34 25.2	+0.4
CLCH				AMP		13 34 26.3	
	comp=N,620nm,0.1s						
STL	**Santa Lucia**	**0.88**	**176**	*i* P	P	13 34 11.4	-0.6
STL				*i* S	S	13 34 25.1	-0.3
ANTU	**Antumapu**	**1.01**	**176**	*e*P	P	13 34 13.6	0.0
ANTU				*i* S	S	13 34 28.6	+0.4
ANTU				AMP		13 34 29.4	
	comp=N,627nm,0.1s						
PCH	**Pirque**	**1.07**	**171**	*e*P	P	13 34 14.5	+0.2
PCH				*i* S	S	13 34 30.3	+0.7
TACH	**Talagante**	**1.11**	**190**	⇑*i*P	P	13 34 14.8	0.0
TACH				*i* S	S	13 34 30.3	0.0
SJCH	**San Jose de Ma**	**1.12**	**165**	*i* P	P	13 34 15.1	+0.1
SJCH				*i* S	S	13 34 30.9	+0.4
SJCH				AMP		13 34 31.9	
	comp=N,914nm,0.2s						
LCCH	**Las Cruces**	**1.16**	**218**	*e*P	P	13 34 15.9	+0.3
LMEL	**Las Melosas**	**1.35**	**162**	*e*P	P	13 34 18.7	+0.6
LMEL				*i* S	S	13 34 37.6	+1.7
LMEL				AMP		13 34 39.0	
	comp=N,1μm,0.1s						
CHCH	**Chadas Angostu**	**1.37**	**178**	⇑*i*P	P	13 34 18.1	-0.3
CHCH				*i* S	S	13 34 36.6	+0.4
LNV	**Longovilo**	**1.51**	**203**	*i* P	P	13 34 19.9	-0.3
CACH	**El Canelo**	**1.55**	**177**	⇑*i*P	P	13 34 21.4	+0.6
SFDO	**San Fernando**	**2.06**	**187**	*e*P	P	13 34 27.3	-0.2
TLL	**Tololo Astrono**	**2.39**	**358**	*e*P	P	13 34 32.4	+0.3
TLL				*i* S	S	13 35 01.1	+0.8
TLL				AMP		13 35 11.2	
	comp=N,154nm,0.5s						

*NEIC **30** 13:40:57.2±3.6, 6.71N×94.66E, h222^{km}±30^{km}, mb3.6/1, Error ellipse: s-maj=46.2km s-min=13.8km az=60.0*

*IDC **30** 13:41:03.7±7.7, 7.00N×94.92E, h278^{km}±73^{km}, mb3.2/6, mb1 3.3/7, mb1mx3.1/19, mbtmp3.9/7, Error ellipse: s-maj=56.9km s-min=18.6km az=54.0*

ISC 30 13:40:57.2±3.7**, 6.7N**±0.2×**94.7E**±0.3**, h238^{km}**±31^{km}**, n12, σ1^{s}09**/12**, mb3.5**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.05**	**103**	*e*P	**P**	**13 42 24.6**	**-1.8**
CM31	**Chiang Mai Arr**	**12.36**	**19**	*e*P	**P**	**13 43 48.1**	**+1.5**
CMAR	**Chiang Mai Arr**	**12.36**	**19**	P	**P**	**13 43 47.9**	**+1.3**
	0.4nm,0.3s,baz=212,slow=11,SNR=21						
KSM	**Kuching**	**16.38**	**108**	P	**P**	**13 44 35.6**	**-0.1**
MKAR	**Makanchi Array**	**41.33**	**347**	P	**P**	**13 48 20.2**	**-1.1**
	0.4nm,0.4s,mb3.2,baz=161,slow=7.4,SNR=5.5						
SONM	**Songino Array**	**42.16**	**12**	P	**P**	**13 48 26.8**	**-1.2**
	0.8nm,0.3s,mb3.6,baz=190,slow=9.8,SNR=7.8						
ULN	**Ulaanbaatar**	**42.32**	**12**	*e*P	**P**	**13 48 27.9**	**-1.4**
	1.6nm,0.7s,mb3.6						
WRA	**Warramunga Arr**	**47.12**	**125**	P	**P**	**13 49 08.6**	**+1.0**
	0.4nm,0.4s,mb3.1,baz=304,slow=8.9,SNR=10						
WRAB	**Tennant Creek**	**47.12**	**125**	P	**P**	**13 49 08.8**	**+1.1**
BRTR	**Keskin Array B**	**63.62**	**311**	P	**P**	**13 51 05.5**	**+0.4**
	1.1nm,0.6s,mb3.7,baz=130,slow=6.7,SNR=4.8						
FINES	**FINESS Array B**	**74.00**	**332**	P	**P**	**13 52 07.8**	**-0.4**
	0.7nm,0.4s,mb3.7,baz=108,slow=6.2,SNR=13						
ARCES	**ARCESS Array B**	**76.54**	**340**	P	**P**	**13 52 22.9**	**+0.5**
	1.0nm,0.8s,mb3.5,baz=101,slow=6.2,SNR=4.1						

*ORF **30** 13:48:15.5, 16.15S×166.28E, h30^{km}, mb5.7*

*MOS **30** 13:48:25.5±0.9, 10.80S×162.32E, h33^{km}, mb5.8/53, MS5.3/20, Error ellipse: s-maj=8.5km s-min=6.7km az=78.1*

*HRVD **30** 13:48:27.4±0.1, 10.90S×162.57E, h20^{km}, MW5.6/78, Centroid moment Tensor Solution. LP body waves: s75,c171;Mantle waves: s78,c233; Half duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.07±.04; $M_{\theta\theta}$2.86±.03; $M_{\phi\phi}$0.20±.03; $M_{r\theta}$-1.27±.08; $M_{\theta\phi}$0.60±.03; $M_{\phi r}$-0.86±.08; Best double couple: $M_0$3.395×10^{17} NP1: ϕ_s266°, δ33°, λ-75°. NP2:ϕ_s68°, δ58°, λ-100°. Principal axes: T 3.314, Plg13°, Azm165°; N .162, Plg8°, Azm74°; P -3.477, Plg75°, Azm311°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*CRAAG **30** 13:48:27.9, 10.52S×161.69E, Mb5.8*

*NEIC **30** 13:48:27.4±0.8, 10.93S×162.40E, h45^{km}±6^{km}, mb5.6/73, MS5.4/12, MW5.5, Error ellipse: s-maj=4.7km s-min=3.9km az=145.0, Moment Tensor Solution. s33 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.52; $M_{\theta\theta}$1.38; $M_{\phi\phi}$0.14; $M_{r\theta}$-2.04; $M_{\theta\phi}$0.32; $M_{\phi r}$0.50; Best double couple: $M_0$2.6×10^{17} NP1: ϕ_s243°, δ20°, λ-123°. NP2:ϕ_s98°, δ73°, λ-78°. Principal axes: T 2.43, Plg27°, Azm178°; N .26, Plg11°, Azm274°; P -2.69, Plg60°, Azm24°;*

*IDC **30** 13:48:29.4±2.1, 10.93S×162.45E, h65^{km}±17^{km}, mb4.9/23, mb1 5.1/26, mb1mx5.1/27, mbtmp5.2/26, MS5.1/20, Ms1 5.1/20, ms1mx5.1/21 Error ellipse: s-maj=13.6km s-min=10.6km az=124.0*

*BJI **30** 13:48:30.0, 10.57S×162.15E, h65^{km}, mB5.6, mb5.2, Ms5.3, Msz5.1*

ISC 30 13:48:27.8±0.2**, 10.87S**±0.04×**162.27E**±0.03**, h59^{km}, h59^{km}**±3.3^{km}**:pP-P, n565, σ0^{s}90**/309**, mb5.5**/105**, MS5.2**/54**, 20C-42D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.70**	**302**	P	**P**	**13 49 11.7**	**+1.9**
	912nm,0.3s,baz=174,slow=3.2,SNR=238						
HNR				S	**S**	**13 49 48.1**	**+6.7**
	1μm,0.3s,baz=355,slow=22,SNR=3.7						
HNR	**Honiara**	**2.70**	**302**	*e*Pn	**P**	**13 49 11.4**	**+1.5**
HNR				*e*Sn	**S**	**13 49 46.5**	**+5.2**
NOUC	**Port Laguerre**	**11.82**	**161**	*e*P	**P**	**13 51 10.9**	**-5.0**
DZM	**Mont Dzumac**	**11.84**	**161**	*e*P	**P**	**13 51 10.4**	**-5.7**
DZM	**Mont Dzumac**	**11.84**	**161**	P	**P**	**13 51 11.5**	**-4.7**
	8.7nm,0.3s,baz=350,slow=22,SNR=95						
DZM				S	**S**	**13 53 17.3**	**-10**
	2.1nm,0.3s,baz=62,slow=23,SNR=2.2						
DZM				LR	LR	13 55 07.8	
	comp=Z,12μm,18.6s,baz=316,slow=34						
PMG	**Port Moresby**	**14.95**	**274**	*e*P	**P**	**13 52 01.6**	**+4.4**
PMG				pmax	pmax		
	comp=Z,323nm,1.1s						
PMG	**Port Moresby**	**14.95**	**274**	P	**P**	**13 51 59.8**	**+2.6**
	baz=59,slow=5.2,SNR=9.4						
PMG	**Port Moresby**	**14.95**	**274**	*e*P	**P**	**13 52 01.6**	**+4.4**
	comp=Z,323nm,1.1s						
CTA	**Charters Tower**	**17.94**	**237**	*e*P	**P**	**13 52 37.0**	**+2.1**
	comp=Z,115nm,0.6s						
CTA				*e*S	**S**	**13 55 57.6**	**+7.7**
CTA	**Charters Tower**	**17.94**	**237**	*e*P	**P**	**13 52 37.0**	**+2.1**
CTA				*e*S	**S**	**13 55 57.6**	**+7.7**
CTA				pmax	pmax		
	comp=Z,115nm,0.6s						
CTA	**Charters Tower**	**17.94**	**237**	P	**P**	**13 52 37.2**	**+2.3**
	comp=Z,4.9nm,0.3s,baz=65,slow=13,SNR=39						
CTAO	**Charters Tower**	**17.94**	**237**	*e*P	**P**	**13 52 36.5**	**+1.6**
CTAO				pmax	pmax		
	comp=Z,155nm,0.7s						
CTAO	**Charters Tower**	**17.94**	**237**	*e*P	**P**	**13 52 36.5**	**+1.6**
	comp=Z,155nm,0.7s						
KWAJ	**Kwajalein Atol**	**20.25**	**15**	*e*P	**P**	**13 53 00.8**	**-0.1**
	comp=Z,5μm,1.7s						
ARMA	**Armidale**	**21.83**	**205**	⇓*i*P	**P**	**13 53 17.9**	**+1.1**
AFI	**Afiamalu**	**25.52**	**99**	*e*P	**P**	**13 53 48.6**	**-4.2**
	comp=Z,398nm,1.1s,mb5.9						
RAO	**Raoul Island**	**26.02**	**138**	LR	LR	14 02 26.2	
	comp=Z,6μm,18.9s,MS5.1,baz=189,slow=32						
STKA	**Stephens Creek**	**28.32**	**219**	*e*P	**P**	**13 54 17.5**	**-0.8**
	comp=Z,20nm,0.6s,mb4.9						
STKA				*e*S	**S**	**13 59 01.9**	**+3.0**
STKA	**Stephens Creek**	**28.32**	**219**	P	**P**	**13 54 17.4**	**-0.8**
	comp=Z,14nm,0.8s,mb4.6,baz=20,slow=8.4,SNR=26						
STKA				PcP	PcP	13 57 29.6	-0.6
	comp=Z,11nm,0.9s,baz=39,slow=5.4,SNR=2.8						
STKA				LR	LR	14 04 55.0	
	comp=Z,7μm,20.5s,MS5.3,baz=38,slow=35						
WRAB	**Tennant Creek**	**28.35**	**248**	*d i*P	**P**	**13 54 18.0**	**-0.6**
WRAB	**Tennant Creek**	**28.35**	**248**	*e*P	**P**	**13 54 17.8**	**-0.8**
	comp=Z,334nm,1.4s,mb5.8						
WB2	**Warramunga Arr**	**28.35**	**248**	⇓*i*P	**P**	**13 54 18.2**	**-0.5**
WB2				*e*S	**S**	**13 59 11.6**	**+12**
WRA	**Warramunga Arr**	**28.36**	**248**	P	**P**	**13 54 18.3**	**-0.4**
	comp=Z,37nm,0.9s,mb5.0,baz=78,slow=8.8,SNR=189						
WRA				PcP	PcP	13 57 29.2	-1.2
	comp=Z,15nm,0.8s,baz=73,slow=2.2,SNR=7.8						
WRA				S	**S**	**13 59 04.4**	**+4.7**
	comp=Z,4.9nm,0.9s,baz=79,slow=15,SNR=3.1						
KAKA	**Kakadu**	**29.25**	**263**	⇓*i*P	**P**	**13 54 26.2**	**-0.5**
	comp=Z,86nm,0.6s,mb5.7						
GUMO	**Guam**	**29.81**	**324**	*e*P	**P**	**13 54 31.2**	**-0.5**
GUMO				pmax	pmax		
	comp=Z,164nm,1.1s,mb5.7						
GUMO	**Guam**	**29.81**	**324**	*e*P	**P**	**13 54 31.2**	**-0.5**
	comp=Z,164nm,1.1s,mb5.7						
URZ	**Urewera**	**30.34**	**156**	LR	LR	14 05 24.4	
	comp=Z,4μm,18.2s,MS5.1,baz=180,slow=34						
TOO	**Toolangi**	**30.57**	**207**	⇑*i*P	**P**	**13 54 38.4**	**+0.2**
	comp=Z,34nm,0.7s,mb5.3						
TOO	**Toolangi**	**30.57**	**207**	⇑*i*P	**P**	**13 54 38.4**	**+0.2**
TOO				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.3						
RPZ	**Rata Peaks**	**33.60**	**168**	P	**P**	**13 55 02.8**	**-1.8**
	comp=Z,26nm,0.8s,mb5.2,baz=2.0,slow=1.0,SNR=11						
RPZ	**Rata Peaks**	**33.60**	**168**	PN	**P**	**13 55 03.3**	**-1.3**
TAU	**Tasmania Unive**	**34.48**	**200**	*e*P	**P**	**13 55 12.5**	**+0.4**
TAU				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.5						
TAU	**Tasmania Unive**	**34.48**	**200**	*e*P	**P**	**13 55 12.5**	**+0.4**
	comp=Z,80nm,1.2s,mb5.5						
FITZ	**Fitzroy Crossi**	**36.14**	**254**	⇓*i*P	**P**	**13 55 26.1**	**-0.4**
	comp=Z,289nm,0.8s,mb6.3						
FITZ	**Fitzroy Crossi**	**36.14**	**254**	P	**P**	**13 55 26.1**	**-0.4**
	comp=Z,366nm,0.8s,mb6.4,baz=78,slow=4.2,SNR=272						
FITZ				LR	LR	14 09 27.1	
	comp=Z,6μm,18.1s,MS5.4,baz=86,slow=35						
FORT	**Forrest**	**37.39**	**233**	*e*P	**P**	**13 55 37.0**	**+0.1**
	comp=Z,95nm,0.9s,mb5.6						
FORT				*i*		13 55 43.1	
BUKP	**Musuan**	**41.45**	**295**	*e*P	**P**	**13 56 10.9**	**+0.2**
MBWA	**Marble Bar**	**42.03**	**250**	*e*P	**P**	**13 56 15.8**	**+0.3**
	comp=Z,155nm,0.8s,mb5.7						
CBIJ	**Chichi jima**	**42.48**	**333**	P	**P**	**13 56 16.9**	**-2.1**
	comp=Z,146nm,0.7s,mb5.7,baz=153,slow=6.8,SNR=6.5						
KLBR	**Kellerberrin**	**45.94**	**236**	⇓*i*P	**P**	**13 56 46.3**	**-0.6**
	comp=Z,143nm,1.1s,mb5.8						
KLBR				*e*		13 56 52.3	
NWAO	**Narrogin (SRO)**	**46.76**	**235**	*e*P	**P**	**13 56 52.9**	**-0.4**
NWAO				pmax	pmax		
	comp=Z,289nm,1.4s						
NWAO	**Narrogin (SRO)**	**46.76**	**235**	P	**P**	**13 56 52.7**	**-0.5**
	comp=Z,76nm,1.0s,mb5.6,baz=70,slow=8.6,SNR=12						
NWAO				LR	LR	14 16 40.6	
	comp=Z,5μm,18.4s,MS5.5,baz=80,slow=36						
NWAO	**Narrogin (SRO)**	**46.76**	**235**	*e*P	**P**	**13 56 52.9**	**-0.3**
	comp=Z,289nm,1.4s,mb6.0						
SJMP	**San Jose**	**46.98**	**298**	*e*P	**P**	**13 56 54.7**	**-0.6**
PPT	**Papeete**	**47.05**	**104**	*e*P	**P**	**13 56 38.6**	**-17**
PPT				*e*PP	PP	13 58 00.7	-46
	comp=Z,150nm,23.8s						
PPT				*e*S	**S**	**14 03 26.0**	**-16**
	comp=Z,898nm,27.2s						
PPT				*e*LQ		14 07 59.1	
	comp=Z,3μm,23.5s						
PPT				*e*LR	LR	14 09 43.5	
	comp=Z,755nm,20.5s,baz=283						
PPT	**Papeete**	**47.05**	**104**	LR	LR	14 12 59.4	
	comp=Z,974nm,18.5s,MS4.8,baz=272,slow=31						
MUN	**Mundaring**	**47.32**	**236**	*e*P	**P**	**13 56 57.9**	**+0.2**
	comp=Z,80nm,1.0s,mb5.6						
MUN				*i*		13 57 03.8	
MUN	**Mundaring**	**47.32**	**236**	*e*P	**P**	**13 56 57.9**	**+0.2**
MUN				*i*		13 57 03.8	
MUN				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.6						
TBI	**Tubuai**	**47.56**	**112**	*e*P	**P**	**13 56 45.5**	**-14**
TBI				*e*PP	PP	13 58 08.7	-42
	comp=Z,124nm,31.2s						
TBI				*e*S	**S**	**14 03 38.4**	**-11**
	comp=Z,1μm,27.8s						
TBI				*e*LQ		14 07 02.4	
	comp=Z,815nm,30.8s						
TBI				*e*LR	LR	14 09 52.2	
	comp=Z,902nm,25.8s,baz=284						
BATP	**Bataraza**	**48.37**	**292**	*e*P	**P**	**13 57 06.2**	**+0.1**
CAUP	**Cauayan**	**48.61**	**304**	*e*P	**P**	**13 57 08.9**	**+1.0**
KKM	**Kota Kinabalu**	**48.83**	**288**	*e*P	**P**	**13 57 09.6**	**-0.1**
KIP	**Kipapa**	**50.50**	**50**	*e*P	**P**	**13 57 19.5**	**-2.9**
KIP				pmax	pmax		
	comp=Z,197nm,1.4s,mb5.8						
KIP	**Kipapa**	**50.50**	**50**	*e*P	**P**	**13 57 19.5**	**-2.9**
	comp=Z,198nm,1.4s,mb5.8						
POHA	**Pohakuloa**	**51.50**	**54**	*e*P	**P**	**13 57 28.3**	**-1.7**
	comp=Z,1μm,1.4s						
MJAR	**Matsushiro Arr**	**52.32**	**335**	P	**P**	**13 57 35.1**	**-0.8**
	comp=Z,11nm,0.7s,mb4.9,baz=171,slow=8.6,SNR=28						
MJAR				LR	LR	14 19 11.3	
	comp=Z,1μm,18.4s,MS4.9,baz=155,slow=35						
MAJO	**Matsushiro**	**52.32**	**335**	*e*P	**P**	**13 57 35.3**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,145nm,1.3s,mb5.8						
MAJO	**Matsushiro**	**52.32**	**335**	*e*P	**P**	**13 57 35.3**	**-0.6**
	comp=Z,145nm,1.3s,mb5.8						
MAT	**Matsushiro**	**52.32**	**335**	*e*P	**P**	**13 57 35.0**	**-0.9**
MAT				*e*S	**S**	**14 04 55.0**	**-0.3**
MAT				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.4						
MAT				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.0						
MAT	**Matsushiro**	**52.32**	**335**	*e*P	**P**	**13 57 35.0**	**-0.9**
	comp=Z,64nm,1.3s,mb5.4						
MAT				*e*S	**S**	**14 04 55.0**	**-0.3**
MAT				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
MAT	**Matsushiro**	**52.32**	**335**	P	**P**	**13 57 35.3**	**-0.6**
MAT				S	**S**	**14 04 55.0**	**-0.3**
NACB	**Ninganchiao**	**52.83**	**312**	*e*P	**P**	**13 57 37.6**	**-2.4**
KSM	**Kuching**	**53.11**	**280**	*e*P	**P**	**13 57 40.2**	**-2.0**
YHNB	**Yeheng**	**53.29**	**312**	*e*P	**P**	**13 57 43.3**	**0.0**
QZH	**Quanzhou**	**55.50**	**310**	*i* PR	**P**	**13 57 59.8**	**+0.3**
QZH				LR	LR		
	comp=N,1μm,13.7s,MS5.3						
QZH				LR	LR		
	comp=E,2μm,18.0s,MS5.3						
QZH				LR	LR		
	comp=Z,2μm,18.7s,MS5.2						
YUK	**Yuzh-Kuril'sk**	**56.64**	**346**	*e*P	**P**	**13 58 03.0**	**-4.4**
YUK				*e*		13 59 05.0	
YUK				*e*S	**S**	**14 05 52.0**	**-1.2**
YUK				*e*PS	PS	14 06 04.0	-10
YUK				*e*		14 07 52.0	
YUK				pmax	pmax		
	comp=Z,2μm,2.0s						
YUK				smax			
	comp=E,2μm,2.0s						
TAOE	**Nuku Hiva Isla**	**56.70**	**93**	*e*LR	LR	14 13 59.7	
	comp=E,5μm,30.6s						
SSE	**Sheshan**	**57.39**	**318**	P	**P**	**13 58 12.5**	**-0.4**
SSE				AP	pP	13 58 30.8	+2.1
SSE				XP	sP	13 58 38.5	+3.0
SSE				PP	PP	14 00 20.5	-1.7
SSE				S	**S**	**14 06 05.0**	**+1.7**
SSE				XS		14 06 36.0	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,360nm,8.3s						
SSE				LR	LR		
	comp=N,670nm,17.9s,MS4.9						
SSE				LR	LR		
	comp=E,590nm,17.9s,MS4.9						
SSE				LR	LR		
	comp=Z,1μm,18.5s,MS5.0						
SSE	**Sheshan**	**57.39**	**318**	P	**P**	**13 58 12.5**	**-0.4**
	comp=Z,34nm,0.7s,mb5.5						
SSE				pP	pP	13 58 30.7	+2.0
SSE				sP	sP	13 58 38.6	+3.1
SSE				PP	PP	14 00 20.6	-1.6
SSE				S	**S**	**14 06 05.1**	**+1.8**
SSE				sS		14 06 36.1	
SSE				SS	SS	14 09 56.5	+1.6
SSE				LR	LR		
	comp=Z,1μm,18.5s,MS5.0						
DRV	**Dumont d'Urvil**	**57.73**	**190**	P	**P**	**13 58 21.0**	**+6.3**
DRV				S	**S**	**14 06 13.0**	**+5.8**
DRV				SS	SS	14 10 02.0	+2.2
DRV				L		14 12 00.0	
DRV				R		14 16 00.0	
KS15	**Wonju Array Si**	**57.87**	**328**	*e*P	**P**	**13 58 15.1**	**-1.0**
INCN	**Inchon**	**58.56**	**327**	*e*P	**P**	**13 58 21.4**	**+0.5**
	comp=Z,386nm,1.7s,mb6.2						
NJ2	**Nanjing**	**59.54**	**317**	*e*P	**P**	**13 58 28.0**	**+0.3**
NJ2				AP	pP	13 58 43.0	-0.6
NJ2				XP	sP	13 58 49.5	-0.9
NJ2				PCP	PcP	13 59 15.5	+1.1
NJ2				AMB	AMB		
	comp=Z,130nm,1.5s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,430nm,9.6s						
NJ2				LR	LR		
	comp=N,2μm,18.4s,MS5.4						
NJ2				LR	LR		
	comp=E,1μm,22.2s,MS5.4						
NJ2				LR	LR		
	comp=Z,1μm,18.2s,MS5.0						
QIZ	**Qiongzhong**	**59.61**	**300**	P	**P**	**13 58 29.0**	**+0.6**
QIZ				AP	pP	13 58 45.5	+1.2
QIZ				S	**S**	**14 06 33.3**	**+1.0**
QIZ				AMB	AMB		
	comp=Z,330nm,12.1s						
QIZ				LR	LR		
	comp=N,300nm,18.7s,MS4.8						
QIZ				LR	LR		
	comp=E,560nm,18.7s,MS4.8						
QIZ				LR	LR		
	comp=Z,970nm,22.0s,MS4.9						
YSS	**Yuzh-Sakhalins**	**60.15**	**345**	κ *i*P	**P**	**13 58 32.0**	**+0.3**
YSS				*e*	pP	13 58 44.0	-3.6
YSS				*e*		14 00 42.0	
YSS				*e*S	**S**	**14 06 47.0**	**+8.1**
YSS				*e*		14 06 52.0	
YSS				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.7						
YSS				pmax	pmax		
	comp=N,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**60.15**	**345**	*e*P	**P**	**13 58 32.2**	**+0.5**
	comp=N,48nm,0.8s,mb5.6						
RKT	**Rikitea**	**60.85**	**110**	*e*P	P	13 58 14.0	-23
RKT				*e*S	**S**	**14 06 40.9**	**-7.3**
	comp=N,719nm,28.0s						
RKT				*e*SS	SS	14 10 34.6	-15
	comp=N,512nm,28.2s						
RKT				*e*LQ		14 13 48.6	
	comp=N,2μm,32.2s						
RKT				*e*LR	LR	14 15 57.1	
	comp=N,2μm,23.8s,baz=282						
SKR	**Severo-Kuril's**	**61.52**	**356**	*e*P	**P**	**13 58 37.4**	**-3.6**
SKR				*e*		13 59 21.0	
SKR				MLR	MLR		
	comp=N,3μm,16.0s,MS5.7						
SKR				MLR	MLR		
	comp=E,3μm,16.0s,MS5.7						

SKR				MLR	MLR		
	comp=Z,3μm,16.0s,MS5.5						
WHN	**Wuhan**	**61.76**	**313**	*e*P	**P**	**13 58 42.5**	**-0.3**
WHN				LR	LR		
	comp=N,2μm,17.5s,MS5.5						
WHN				LR	LR		
	comp=E,2μm,20.5s,MS5.5						
WHN				LR	LR		
	comp=Z,2μm,20.5s,MS5.3						
DL2	**Dalian**	**62.33**	**325**	P	**P**	**13 58 44.8**	**-1.8**
DL2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.6						
DL2				AMB	AMB		
	comp=Z,290nm,6.4s						
DL2				LR	LR		
	comp=N,470nm,16.9s,MS4.8						
DL2				LR	LR		
	comp=E,490nm,21.0s,MS4.8						
DL2				LR	LR		
	comp=Z,870nm,21.8s,MS4.9						
MDJ	**Mudanjiang**	**62.65**	**334**	P	**P**	**13 58 49.0**	**+0.4**
MDJ				AP	pP	13 59 05.0	+0.4
MDJ				XP	sP	13 59 12.0	+0.6
MDJ				PCP	PcP	13 59 26.5	-0.2
MDJ				PP	PP	14 01 08.0	-0.7
MDJ				S	**S**	**14 07 13.3**	**+2.6**
MDJ				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,530nm,8.1s						
MDJ				LR	LR		
	comp=N,710nm,21.1s,MS5.0						
MDJ				LR	LR		
	comp=E,800nm,18.1s,MS5.0						
MDJ				LR	LR		
	comp=Z,880nm,24.1s						
MDJ	**Mudanjiang**	**62.65**	**334**	*e*P	**P**	**13 58 48.9**	**+0.3**
	comp=Z,106nm,1.2s,mb5.8						
TIA	**Tai’an**	**63.25**	**320**	*e*P	**P**	**13 58 51.3**	**-1.4**
SNY	**Shenyang**	**63.35**	**328**	PR		13 58 52.5	
SNY				SS	SS	14 11 30.0	+1.3
SNY				AMB	AMB		
	comp=Z,460nm,7.8s						
SNY				LR	LR		
	comp=N,990nm,15.7s						
SNY				LR	LR		
	comp=Z,2μm,17.9s,MS5.2						
KULM	**Kulim**	**63.40**	**282**	*e*P	**P**	**13 58 52.0**	**-2.0**
PET	**Petropavlovsk**	**63.71**	**358**	*e*P	**P**	**13 58 55.2**	**-0.3**
PET				*e*S	**S**	**14 07 29.5**	**+5.7**
PET				*e*PPS	PPS	14 08 05.2	+4.0
PET				*e*SS	SS	14 11 41.7	+7.7
PET				pmax	pmax		
	comp=Z,96nm,1.1s,mb5.7						
PET				pmax	pmax		
	comp=Z,400nm,14.1s						
PET				pmax	pmax		
	comp=N,200nm,12.4s						
PET				smax			
	comp=N,300nm,13.1s						
PET				smax			
	comp=E,300nm,23.1s						
PET	**Petropavlovsk**	**63.71**	**358**	*e*P	**P**	**13 58 54.9**	**-0.6**
	comp=E,134nm,1.3s,mb5.8						
CN2	**Changchun**	**63.89**	**331**	*e*P	**P**	**13 58 57.5**	**+0.7**
CN2				*e*AP	pP	13 59 17.0	+4.1
CN2				*e*XP	sP	13 59 25.5	+6.0
CN2				*e*S	**S**	**14 07 26.8**	**+0.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,1μm,19.0s,MS5.3						
CN2				LR	LR		
	comp=E,1μm,19.0s,MS5.3						
CN2				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
SNG	**Songkhla**	**63.93**	**284**	P	**P**	**13 58 56.5**	**-1.0**
FX1	**Attu Island--F**	**64.18**	**7**	P	**P**	**13 58 58.0**	**-0.4**
	comp=Z,88nm,0.7s,mb5.9,baz=158,slow=5.0,SNR=16						
FX1				LR	LR	14 22 48.6	
	comp=Z,90nm,19.1s,baz=215,slow=32						
FX1	**Attu Island--F**	**64.18**	**7**	*e*P	**P**	**13 58 58.6**	**+0.2**
KKTK	**Khon Kaen**	**64.72**	**294**	P	**P**	**13 59 02.0**	**-0.6**
	comp=Z,340nm,0.6s,mb6.5						
ENH	**Enshi**	**65.16**	**311**	*e*P	**P**	**13 59 03.0**	**-2.4**
	comp=Z,126nm,1.4s,mb5.8						
CASY	**Casey**	**65.33**	**200**	⇓*i*P	**P**	**13 59 04.8**	**-0.9**
CASY				*e*		13 59 10.8	
GSTR	**Great Sitkin T**	**65.43**	**15**	*e*P	**P**	**13 59 05.8**	**-0.8**
GYA	**Guiyang**	**65.52**	**306**	⇓*i*P	**P**	**13 59 09.5**	**+1.9**
GYA				AP	pP	13 59 25.3	+1.5
GYA				XP	sP	13 59 32.5	+2.2
GYA				PP	PP	14 01 36.0	+1.5
GYA				S	S	14 07 46.3	-0.2
GYA				XS		14 08 13.8	
GYA				SS	SS	14 12 01.5	-1.1
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
GYA				AMB	AMB		
	comp=Z,550nm,7.5s						
GYA				LR	LR		
	comp=N,610nm,20.1s,MS5.1						
GYA				LR	LR		
	comp=E,880nm,18.3s,MS5.1						
GYA				LR	LR		
	comp=Z,820nm,21.3s,MS4.9						
KLR	**Kul’dur**	**65.59**	**339**	⇑*i*P	**P**	**13 59 05.7**	**-2.0**
KLR				*e*S	S	14 07 46.0	-0.9
KLR				pmax	pmax		
	comp=N,54nm,2.0s						
KLR				pmax	pmax		
	comp=E,45nm,2.0s						
KLR				pmax	pmax		
	comp=Z,100nm,2.0s,mb5.5						
KLR				smax			
	comp=N,900nm,13.0s						
KLR				smax			
	comp=E,500nm,13.0s						
VNDA	**Vanda**	**66.64**	**180**	*e*P	**P**	**13 59 13.5**	**-0.4**
VNDA				pmax	pmax		
	comp=Z,94nm,1.4s						
VNDA	**Vanda**	**66.64**	**180**	P	**P**	**13 59 13.0**	**-0.9**
	comp=Z,27nm,0.9s,mb5.2,baz=346,slow=6.8,SNR=40						
VNDA				LR	LR	14 25 02.8	
	comp=Z,1μm,18.5s,MS5.2,baz=27,slow=33						
VNDA	**Vanda**	**66.64**	**180**	*e*P	**P**	**13 59 13.5**	**-0.4**
	comp=Z,94nm,1.4s,mb5.6						
NST	**Nakhon Sawan**	**66.93**	**292**	P	**P**	**13 59 14.3**	**-2.4**
SBA	**Scott Base**	**67.01**	**179**	*e*P	**P**	**13 59 15.8**	**-0.5**
SBA				pmax	pmax		
	comp=Z,339nm,2.0s,mb6.0						
SBA	**Scott Base**	**67.01**	**179**	*e*P	**P**	**13 59 15.8**	**-0.5**
	comp=Z,339nm,2.0s,mb6.0						
TIY	**Taiyuan**	**67.15**	**319**	PR		13 59 18.0	
TIY				LR	LR		
	comp=E,1μm,18.0s						
XAN	**Xi’an**	**67.51**	**314**	P	**P**	**13 59 19.0**	**-1.1**
XAN				S	S	14 08 10.3	-0.1
XAN				SS	SS	14 12 30.3	-3.0
XAN				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
XAN				LR	LR		
	comp=N,430nm,19.5s,MS4.9						
XAN				LR	LR		
	comp=E,570nm,20.7s,MS4.9						
XAN				LR	LR		
	comp=Z,1μm,18.4s,MS5.2						
KMI	**Kunming**	**68.14**	**303**	P	**P**	**13 59 23.5**	**-0.6**
KMI				PCP	PcP	13 59 55.0	+5.2
KMI				PP	PP	14 01 51.0	-6.1
KMI				PPP	PPP	14 03 25.0	-9.3
KMI				S	S	14 08 16.3	-1.8
KMI				SKS	SKS	14 09 16.5	+3.2
KMI				SS	SS	14 12 40.3	-2.7
KMI				SSS	SSS	14 15 33.3	-10
KMI				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.7						
KMI				AMB	AMB		
	comp=Z,290nm,4.9s						
KMI				LR	LR		
	comp=N,600nm,17.9s,MS5.2						
KMI				LR	LR		
	comp=E,960nm,14.9s,MS5.2						
KMI				LR	LR		
	comp=Z,1μm,17.9s,MS5.1						
KMI	**Kunming**	**68.14**	**303**	P	**P**	**13 59 24.9**	**+0.8**
KMI	**Kunming**	**68.14**	**303**	P	**P**	**13 59 23.4**	**-0.7**
KMI				*PP	pP	13 59 31.3	-9.1
KMI				*SP	sP	13 59 35.6	-11
KMI						13 59 54.9	
KMI						14 01 51.0	
KMI				S	S	14 08 16.3	-1.8
KMI						14 09 16.6	
KMI				SS	SS	14 12 40.3	-2.7
KMI				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.9						
KMI				MLR	MLR		
	comp=Z,1μm,17.9s,MS5.1						
KMI	**Kunming**	**68.14**	**303**	P	**P**	**13 59 23.4**	**-0.7**
	comp=Z,19nm,1.4s,mb4.9						
KMI				pP	pP	13 59 31.3	-9.1
KMI				sP	sP	13 59 35.6	-11
KMI				PcP	PcP	13 59 54.9	+5.1
KMI				PP	PP	14 01 51.0	-6.1
KMI				PPP	PPP	14 03 24.9	-9.4
KMI				S	S	14 08 16.3	-1.8
KMI				sS		14 08 27.0	
KMI				PS	PS	14 08 36.9	-14
KMI				SKS	SKS	14 09 16.6	+3.3
KMI				SS	SS	14 12 40.3	-2.7
KMI				SSS	SSS	14 15 33.2	-10
KMI				LR	LR		
	comp=Z,1μm,17.9s,MS5.1						
CM31	**Chiang Mai Arr**	**68.93**	**295**	*e*P	**P**	**13 59 29.2**	**+0.1**
	comp=Z,15nm,0.9s,mb4.9						
CMAR	**Chiang Mai Arr**	**68.93**	**295**	P	**P**	**13 59 28.6**	**-0.5**
	comp=Z,8.0nm,1.0s,mb4.6,baz=115,slow=4.6,SNR=32						
CMAR				PKPPKP		14 27 34.9	
	comp=Z,2.4nm,1.0s,baz=289,slow=4.3,SNR=8.3						
HHC	**Hu-ho-hao-te**	**69.52**	**321**	*e*P	**P**	**13 59 33.0**	**+0.6**
HHC				S	S	14 08 38.0	+3.7
HHC				AMB	AMB		
	comp=Z,40nm,2.2s,mb5.0						
HHC				AMB	AMB		
	comp=Z,480nm,6.3s						
HHC				LR	LR		
	comp=N,590nm,16.2s,MS5.2						
HHC				LR	LR		
	comp=E,900nm,16.7s,MS5.2						
HHC				LR	LR		
	comp=Z,1μm,17.7s,MS5.2						
CD2	**Chengdu**	**69.81**	**309**	⇑*i*P	**P**	**13 59 35.0**	**+0.7**
CD2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.5						
AKUT	**Akutan**	**70.18**	**19**	*e*P	**P**	**13 59 35.0**	**-1.2**
BTO	**Baotou**	**70.34**	**320**	*e*P	**P**	**13 59 37.0**	**-0.4**
HIA	**Hailar**	**70.57**	**332**	*e*P	**P**	**13 59 38.7**	**+0.1**
HIA				*e*		13 59 46.2	
HIA				pmax	pmax		
	comp=Z,160nm,1.0s						
HIA	**Hailar**	**70.57**	**332**	*e*P	**P**	**13 59 38.7**	**+0.1**
	comp=Z,160nm,1.0s,mb5.9						
HIA				*e*		13 59 46.2	
MA2	**Magadan**	**70.81**	**354**	*d* *i*P	**P**	**13 59 39.2**	**-0.7**
MA2				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.5						
MA2	**Magadan**	**70.81**	**354**	*e*P	**P**	**13 59 39.1**	**-0.8**
	comp=Z,56nm,0.9s,mb5.5						
MIR	**Mirnyy**	**71.89**	**203**	*d* *i*P	**P**	**13 59 46.0**	**-0.2**
MIR				*i*		13 59 57.0	
MIR				*e*S	S	14 09 07.0	+5.8
MIR				pmax	pmax		
	comp=Z,222nm,1.6s,mb5.8						
MIR				pmax	pmax		
	comp=Z,707nm,2.4s,mb6.2						
MIR				pmax	pmax		
	comp=E,404nm,2.4s						
MIR				smax			
	comp=E,700nm,4.8s						
MIR				MLR	MLR		
	comp=N,500nm,16.0s,MS5.0						
MIR				MLR	MLR		
	comp=E,500nm,16.0s,MS5.0						
MIR				MLR	MLR		
	comp=Z,790nm,16.0s,MS5.1						
LZH	**Lanzhou**	**72.14**	**314**	⇓P	**P**	**13 59 49.5**	**+1.3**
LZH				AP	pP	14 00 11.0	+6.4
LZH				PP	PP	14 02 33.0	+2.2
LZH				S	S	14 09 06.0	+1.4
LZH				SS	SS	14 13 45.0	+0.3
LZH				AMB	AMB		
	comp=Z,130nm,1.5s,mb5.6						
LZH				AMB	AMB		
	comp=Z,550nm,4.1s						
LZH				LR	LR		
	comp=E,2μm,16.9s						
LZH				LR	LR		
	comp=Z,2μm,19.2s,MS5.5						
LZH	**Lanzhou**	**72.14**	**314**	⇓P	**P**	**13 59 49.5**	**+1.3**
LZH				*PP	pP	14 00 11.0	+6.4
LZH						14 02 33.0	
LZH				S	S	14 09 06.1	+1.5
LZH				*SS		14 09 45.0	
LZH				SS	SS	14 13 45.0	+0.3
LZH				pmax	pmax		
	comp=Z,139nm,1.5s,mb5.7						
LZH				MLR	MLR		
	comp=Z,2μm,19.2s,MS5.5						
LZH	**Lanzhou**	**72.14**	**314**	⇓P	**P**	**13 59 49.5**	**+1.3**
	comp=Z,139nm,1.5s,mb5.7						
LZH				pP	pP	14 00 11.0	+6.4
LZH				sP	sP	14 00 20.0	+9.1
LZH				PP	PP	14 02 33.0	+2.2
LZH				S	S	14 09 06.1	+1.5
LZH				sS		14 09 45.0	
LZH				SS	SS	14 13 45.0	+0.3
LZH				LR	LR		
	comp=Z,2μm,19.2s,MS5.5						
SEY	**Seymchan**	**73.97**	**355**	*i* P	**P**	**13 59 58.9**	**+0.4**
SEY					pP	14 00 17.6	+2.7
SEY				*e*		14 02 43.9	
SEY				*e*PPP	PPP	14 04 30.2	-0.7
SEY				*e*S	S	14 09 28.1	+3.4
SEY						14 10 13.7	
SEY				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.4						
SEY				smax			
	comp=N,600nm,19.6s						
SEY				smax			
	comp=E,200nm,18.5s						
SEY				MLR	MLR		
	comp=Z,2μm,17.0s,MS5.4						
SEY				MLR	MLR		
	comp=N,1μm,18.0s						
CLNS	**Chul’man**	**74.19**	**340**	⇓*i*P	**P**	**14 00 01.3**	**+1.4**
CLNS				*e*	pP	14 00 13.9	-2.4
CLNS				*e*S	S	14 09 32.9	+5.7
CLNS				*e*		14 10 03.9	
CLNS				*e*PS	PS	14 10 07.9	-1.9
CLNS				pmax	pmax		
	comp=Z,68nm,0.8s,mb5.6						
CLNS				pmax	pmax		
	comp=N,42nm,1.0s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,12nm,0.9s						
CLNS				smax			
	comp=N,476nm,11.5s						
CLNS				smax			
	comp=Z,771nm,27.4s						
CLNS				smax			
	comp=E,160nm,17.8s						
CIT	**Chita**	**75.33**	**331**	⇓*i*P	**P**	**14 00 07.7**	**+1.2**
CIT				*e*		14 00 14.6	
CIT				pmax	pmax		
	comp=Z,277nm,2.1s,mb5.8						
ULN	**Ulaanbaatar**	**76.18**	**325**	*e*P	**P**	**14 00 12.9**	**+1.4**
ULN				pmax	pmax		
	comp=Z,244nm,1.2s,mb6.0						
ULN	**Ulaanbaatar**	**76.18**	**325**	*e*P	**P**	**14 00 12.9**	**+1.4**
	comp=Z,244nm,1.2s,mb6.0						
GTA	**Gaotai**	**76.50**	**315**	*e*P	**P**	**14 00 14.8**	**+1.4**
GTA				AP	pP	14 00 33.3	+3.4
GTA				XP	sP	14 00 39.5	+3.1
GTA				PP	PP	14 03 11.5	+4.1
GTA				S	S	14 09 59.0	+5.8
GTA				SKS	SKS	14 10 16.8	+2.2
GTA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GTA				AMB	AMB		
	comp=Z,700nm,6.5s						
GTA				LR	LR		
	comp=N,350nm,20.6s,MS5.0						
GTA				LR	LR		
	comp=E,680nm,17.2s,MS5.0						
GTA				LR	LR		
	comp=Z,670nm,16.8s,MS5.0						
SONM	**Songino Array**	**76.53**	**325**	P	**P**	**14 00 14.1**	**+0.6**
	comp=Z,48nm,0.7s,mb5.5,baz=139,slow=6.1,SNR=74						
SONM				PKPPKP		14 27 24.3	
	comp=Z,0.1nm,0.3s,baz=90,slow=1.4,SNR=2.1						
SONM				LR	LR	14 33 57.9	
	comp=Z,1μm,19.9s,MS5.2,baz=113,slow=36						
YAK	**Yakutsk**	**77.00**	**345**	*d* *i*P	**P**	**14 00 16.2**	**+0.4**
YAK				*e*S	S	14 10 05.6	+7.5
YAK				pmax	pmax		
	comp=Z,78nm,0.9s,mb5.6						
YAK				pmax	pmax		
	comp=N,16nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
YAK				smax			
	comp=N,17nm,2.9s						
YAK				smax			
	comp=E,9.0nm,4.6s						
YAK	**Yakutsk**	**77.00**	**345**	*e*P	**P**	**14 00 16.0**	**+0.2**
	comp=E,132nm,0.8s,mb5.9						
SHL	**Shillong**	**77.44**	**299**	⇓*i*P	**P**	**14 00 19.0**	**0.0**
BILL	**Bilibino**	**78.75**	**2**	*d* *i*P	**P**	**14 00 25.7**	**+0.4**
BILL				*i*		14 00 34.1	
BILL				*i*		14 03 22.7	
BILL				*e*PS	PS	14 10 43.2	-25
BILL				pmax	pmax		
	comp=Z,262nm,1.2s,mb6.0						
BILL	**Bilibino**	**78.75**	**2**	*e*P	**P**	**14 00 25.5**	**+0.2**
BOD	**Bodaibo**	**78.95**	**336**	*e*P	**P**	**14 00 26.5**	**-0.1**
BOD				pmax	pmax		
	comp=Z,60nm,1.6s,mb5.3						
SVW2	**Sparrevohn**	**79.04**	**19**	*e*P	**P**	**14 00 27.4**	**+0.4**
QSPA	**South Pole Qui**	**79.13**	**180**	⇓*i*P	**P**	**14 00 26.9**	**-0.3**
	comp=Z,186nm,1.2s,mb5.9						
LSA	**Lhasa**	**79.39**	**303**	P	**P**	**14 00 31.5**	**+1.9**
LSA	**Lhasa**	**79.39**	**303**	*e*P	**P**	**14 00 30.9**	**+1.3**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**79.39**	**303**	*e*P	**P**	**14 00 30.9**	**+1.3**
	comp=Z,5.4nm,0.8s,mb4.5						
RSO	**Redoubt South**	**79.53**	**21**	*e*P	**P**	**14 00 28.1**	**-1.6**
ZAK	**Zakamensk**	**79.62**	**326**	*e*P	**P**	**14 00 30.1**	**-0.3**
ZAK				*e*		14 03 29.6	
ZAK				pmax	pmax		
	comp=Z,59nm,1.1s,mb5.4						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.8s						
IRK	**Irkutsk**	**80.08**	**328**	*e*P	**P**	**14 00 32.6**	**-0.2**
IRK				pmax	pmax		
	comp=Z,171nm,1.7s,mb5.7						
TLY	**Talaya**	**80.11**	**327**	*e*P	**P**	**14 00 33.4**	**+0.4**
TLY				*e*		14 00 42.4	
TLY				*e*PPP	PPP	14 05 25.1	-3.3
TLY				*e*S	S	14 10 33.3	+1.9
TLY				*e*		14 10 44.6	
TLY				*e*PS	PS	14 11 25.1	+0.5
TLY				*e*SS	SS	14 15 47.3	+1.8
TLY				pmax	pmax		
	comp=Z,55nm,1.6s,mb5.2						
TLY	**Talaya**	**80.11**	**327**	*e*P	**P**	**14 00 33.7**	**+0.7**
	comp=Z,269nm,1.5s,mb6.0						
TTA	**Tatalina**	**80.28**	**18**	*e*P	**P**	**14 00 34.4**	**+0.8**
SPU	**Mount Spurr**	**80.29**	**21**	*e*P	**P**	**14 00 33.6**	**-0.2**
SLKM	**Skilak Lake**	**80.47**	**22**	P	**P**	**14 00 35.1**	**+0.4**
SLKM	**Skilak Lake**	**80.47**	**22**	*e*P	**P**	**14 00 34.6**	**-0.1**
PWA	**Palmer West**	**81.37**	**21**	*e*P	**P**	**14 00 39.0**	**-0.4**
PMR	**Palmer**	**81.59**	**21**	*e*P	**P**	**14 00 40.4**	**-0.2**
PALK	**Pallekele**	**83.15**	**279**	*e*P	**P**	**14 00 50.2**	**+0.7**
GUN	**Gumba**	**83.26**	**300**	*e*P	**P**	**14 00 51.0**	**+1.1**
IMA	**Indian Mountai**	**83.28**	**17**	*e*P	**P**	**14 00 50.2**	**+1.1**
PKI	**Pulchoki**	**83.57**	**300**	*e*P	**P**	**14 00 51.7**	**+0.2**
	comp=Z,312nm,1.6s,mb6.2						
PKI	**Pulchoki**	**83.57**	**300**	*e*P	**P**	**14 00 51.7**	**+0.2**
PKI				pmax	pmax		
	comp=Z,156nm,1.6s,mb5.9						
MAW	**Mawson**	**83.60**	**202**	⇓*i*P	**P**	**14 00 51.2**	**+0.5**
	comp=Z,36nm,1.1s,mb5.4						
MAW	**Mawson**	**83.60**	**202**	⇓*i*P	**P**	**14 00 51.2**	**+0.5**
MAW				pmax	pmax		
	comp=Z,36nm,1.1s						
MAW	**Mawson**	**83.60**	**202**	P	**P**	**14 00 50.4**	**-0.3**
	comp=Z,39nm,1.0s,mb5.5,baz=100,slow=6.5,SNR=60						
MAW				PKKPbc		14 19 08.9	
	comp=Z,1.0nm,0.6s,baz=331,slow=5.6,SNR=6.2						
MAW				LR	LR	14 34 47.3	
	comp=Z,553nm,18.3s,MS5.0,baz=86,slow=33						
KKN	**Kakani**	**83.74**	**300**	*e*P	**P**	**14 00 52.6**	**+0.2**
	comp=Z,349nm,1.8s,mb6.2						
KKN	**Kakani**	**83.74**	**300**	*e*P	**P**	**14 00 52.6**	**+0.2**
KKN				pmax	pmax		
	comp=Z,174nm,1.8s,mb5.9						
DMN	**Daman**	**83.84**	**300**	*e*P	**P**	**14 00 53.3**	**+0.4**
	comp=Z,205nm,1.2s,mb6.1						
GKN	**Gorkha**	**84.35**	**300**	*e*P	**P**	**14 00 53.7**	**-1.7**
	comp=Z,314nm,1.5s,mb6.2						
ILAR	**Eielson Array**	**84.46**	**20**	P	**P**	**14 00 54.1**	**-0.9**
	comp=Z,16nm,0.8s,mb5.2,baz=236,slow=5.7,SNR=105						
ILAR				PKKPbc		14 19 05.7	
	comp=Z,1.2nm,0.8s,baz=360,slow=3.0,SNR=11						
ILAR				PKPPKP		14 27 02.3	
	comp=Z,0.2nm,0.4s,baz=117,slow=2.0,SNR=4.0						
ILAR				LR	LR	14 35 24.1	
	comp=Z,1μm,19.3s,MS5.3,baz=78,slow=33						
KOLN	**Koldanda**	**85.17**	**299**	*e*P	**P**	**14 00 54.3**	**-5.2**
KHMM	**Horse Mountain**	**85.22**	**47**	*e*P	**P**	**14 01 00.3**	**+0.8**
TIXI	**Tiksi**	**85.29**	**350**	*i* P	**P**	**14 00 59.8**	**+0.7**
SAO	**San Andreas Ge**	**85.67**	**51**	P	**P**	**14 01 01.7**	**-0.1**
SAO				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.6						
SAO	**San Andreas Ge**	**85.67**	**51**	*e*P	**P**	**14 01 01.6**	**-0.2**
	comp=Z,54nm,1.3s,mb5.6						
LRV	**Little Rabbit**	**85.91**	**52**	*e*P	**P**	**14 01 02.8**	**-0.1**
WDC	**Whiskeytown Da**	**85.99**	**48**	P	**P**	**14 01 03.9**	**+0.7**
WDC				pmax	pmax		
	comp=Z,49nm,1.3s,mb5.6						
WDC	**Whiskeytown Da**	**85.99**	**48**	*e*P	**P**	**14 01 02.3**	**-0.9**
	comp=Z,49nm,1.3s,mb5.6						
YBH	**Yreka Blue Hor**	**86.22**	**46**	P	**P**	**14 01 04.9**	**+0.6**
YBH				pmax	pmax		
	comp=Z,49nm,1.2s						
YBH	**Yreka Blue Hor**	**86.22**	**46**	P	**P**	**14 01 04.4**	**0.0**
	comp=Z,32nm,1.0s,mb5.5,baz=197,slow=2.4,SNR=24						
YBH				LR	LR	14 35 52.0	
	comp=Z,1μm,18.6s,MS5.4,baz=184,slow=33						
YBH	**Yreka Blue Hor**	**86.22**	**46**	*e*P	**P**	**14 01 04.8**	**+0.4**
	comp=Z,49nm,1.2s,mb5.6						
MPOR	**Mary’s Peak**	**86.52**	**44**	P	**P**	**14 01 06.5**	**+0.8**
WMQ	**Urumqi**	**86.57**	**316**	P	**P**	**14 01 06.8**	**+0.8**
WMQ				AP	pP	14 01 23.5	+0.7
WMQ				XP	sP	14 01 30.5	+1.5
WMQ				PP	PP	14 04 31.3	+1.0
WMQ				SKS	SKS	14 11 25.3	+0.7
WMQ				S	S	14 11 37.0	+0.8
WMQ				SS	SS	14 17 22.0	+0.9
WMQ				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,530nm,4.8s						
WMQ				LR	LR		
	comp=N,540nm,22.0s,MS5.0						
WMQ				LR	LR		
	comp=E,430nm,21.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,510nm,20.0s,MS4.9						
BUOR	**Burton Butte**	**86.72**	**46**	P	**P**	**14 01 07.2**	**+0.5**
CMB	**Columbia Colle**	**86.84**	**50**	*e*P	**P**	**14 01 06.9**	**-0.6**
CMB				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.5						
CMB	**Columbia Colle**	**86.84**	**50**	*e*P	**P**	**14 01 06.9**	**-0.6**
	comp=Z,32nm,1.1s,mb5.5						
LBCM	**Butte Creek Ri**	**86.93**	**48**	P	**P**	**14 01 08.0**	**+0.2**
HBO	**Huckleberry Mo**	**87.15**	**45**	P	**P**	**14 01 09.1**	**+0.3**

OOW	**Octopus West**	87.15	40	P	P	14 01 10.1	+1.4
OCWA	**Octopus Mounta**	87.16	40	*e*P	P	14 01 10.1	+1.4
	comp=Z,44nm,0.9s,mb5.7						
OSR	**Olympics--Salm**	87.22	41	P	P	14 01 10.2	+1.2
BEKR	**Beckwourth**	87.38	49	*e*P	P	14 01 10.0	0.0
	comp=Z,34nm,1.3s,mb5.4						
FRIS	**Frissel Point**	87.41	44	P	P	14 01 10.4	+0.4
MWC	**Mount Wilson**	87.64	55	*e*P	P	14 01 11.3	-0.1
WCN	**Washoe City**	87.67	49	P	P	14 01 12.5	+1.1
WCN				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.4						
WCN	**Washoe City**	87.67	49	*e*P	P	14 01 12.2	+0.8
	comp=Z,23nm,1.0s,mb5.3						
OMM	**Old Mammoth Mi**	87.79	51	*e*P	P	14 01 12.3	+0.2
DLBC	**Dease Lake**	87.89	29	P	P	14 01 11.7	-0.3
	comp=Z,9.8nm,1.0s,mb5.0,baz=234,slow=6.5,SNR=11						
DLBC	**Dease Lake**	87.89	29	*e*P	P	14 01 11.8	-0.2
DLBC				*e*PP	PP	14 04 36.8	-4.2
MTUM	**Tungsten Hills**	88.05	52	*e*P	P	14 01 13.2	-0.1
PAHR	**Pah Rah Range**	88.06	49	*e*P	P	14 01 13.7	+0.4
MCW	**Mount Constitu**	88.32	40	P	P	14 01 14.6	+0.3
BAR	**Barrett**	88.39	56	*e*P	P	14 01 14.5	-0.5
CROR	**Criterion Ridg**	88.40	44	P	P	14 01 15.1	+0.3
DGAR	**Diego Garcia**	88.45	263	P	P	14 01 16.7	+1.0
DAC	**Darwin (Calif)**	88.53	53	P	P	14 01 15.8	+0.2
DAC				pmax	pmax		
	comp=Z,64nm,1.4s,mb5.8						
DAC	**Darwin (Calif)**	88.53	53	*e*P	P	14 01 15.3	-0.3
	comp=Z,64nm,1.4s,mb5.8						
NVAR	**Mina Array Bea**	88.53	51	P	P	14 01 15.3	-0.2
	comp=Z,11nm,0.8s,mb5.3,baz=224,slow=5.7,SNR=86						
NVAR				PKKPbc		14 18 57.3	
	comp=Z,0.6nm,0.7s,baz=89,slow=3.4,SNR=4.5						
NVAR				PKPPKP		14 27 01.7	
	comp=Z,0.5nm,0.8s,baz=127,slow=4.5,SNR=3.4						
NVAR				LR	LR	14 36 44.9	
	comp=Z,1µm,18.5s,MS5.4,baz=260,slow=33						
NVAR	**Mina Array Bea**	88.53	51	P	P	14 01 15.3	-0.2
NVAR				PKKPbc		14 18 57.3	
NVAR				P'P'		14 27 01.7	
NVAR				LR	LR	14 36 45.0	
MNV	**Mina**	88.64	51	*e*P	P	14 01 15.9	-0.2
MNV				*e*		14 04 47.9	
MNV				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.6						
MNV	**Mina**	88.64	51	*e*P	P	14 01 15.9	-0.2
	comp=Z,38nm,1.1s,mb5.6						
MNV				*e*PP	PP	14 04 47.9	+0.4
PFO	**Pinyon Flat Ob**	88.79	56	P	P	14 01 17.0	+0.1
PFO				pmax	pmax		
	comp=Z,36nm,1.4s,mb5.5						
PFO	**Pinyon Flat Ob**	88.79	56	*e*P	P	14 01 16.5	-0.3
	comp=Z,36nm,1.4s,mb5.5						
TPH	**Tonopah**	89.26	51	P	P	14 01 19.2	+0.2
TPH				pmax	pmax		
	comp=Z,44nm,1.5s,mb5.6						
TPH	**Tonopah**	89.26	51	*e*P	P	14 01 18.5	-0.5
	comp=Z,44nm,1.5s,mb5.6						
WVOR	**Wild Horse Val**	89.33	47	P	P	14 01 19.8	+0.6
WVOR				pmax	pmax		
	comp=Z,110nm,1.4s,mb6.0						
WVOR	**Wild Horse Val**	89.33	47	*e*P	P	14 01 19.4	+0.2
	comp=Z,115nm,1.4s,mb6.0						
BMN	**Battle Mountai**	89.85	49	P	P	14 01 22.7	+1.0
BMN				pmax	pmax		
	comp=Z,65nm,1.3s,mb5.8						
BMN	**Battle Mountai**	89.85	49	*e*P	P	14 01 22.1	+0.4
	comp=Z,65nm,1.3s,mb5.8						
LDFC	**Landfair**	90.21	54	*e*P	P	14 01 23.6	0.0
LDFC				*e*PP	PP	14 05 01.6	+1.5
NEN	**Nelson**	90.55	54	*e*P	P	14 01 25.5	+0.4
NEN				*e*PP	PP	14 04 56.8	-6.0
TRCR	**Troy Canyon**	90.58	51	*e*P	P	14 01 25.1	-0.1
TRCR				*e*PP	PP	14 04 57.6	-5.4
INK	**Inuvik**	90.86	20	P	P	14 01 26.0	+0.2
INK				pmax	pmax		
	comp=Z,17nm,1.0s						
INK	**Inuvik**	90.86	20	P	P	14 01 25.6	-0.2
	comp=Z,14nm,1.0s,mb5.2,baz=207,slow=8.2,SNR=12						
INK	**Inuvik**	90.86	20	*e*P	P	14 01 24.2	-1.6
	comp=Z,17nm,1.0s,mb5.3						
INK				*e*PP	PP	14 04 59.1	-5.3
BMO	**Blue Mountains**	90.88	45	*e*P	P	14 01 26.3	-0.1
BMO				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.7						
BMO	**Blue Mountains**	90.88	45	*e*P	P	14 01 26.3	-0.1
	comp=Z,49nm,1.2s,mb5.7						
SYO	**Syowa Base**	90.94	198	⇓P	P	14 01 23.8	-2.3
MKAR	**Makanchi Array**	91.07	317	*i* P	P	14 01 27.6	+0.3
MKAR				pmax	pmax		
	comp=Z,478nm,2.1s						
MKAR	**Makanchi Array**	91.07	317	P	P	14 01 27.1	-0.2
	comp=Z,8.1nm,0.7s,mb5.2,baz=102,slow=5.6,SNR=33						
MKAR				PKiKP		14 06 20.0	
	comp=Z,2.1nm,0.8s,baz=135,slow=1.7,SNR=3.8						
MKAR				PKKP	PKKP	14 18 45.1	+8.5
	comp=Z,0.3nm,0.7s,baz=284,slow=1.7,SNR=3.1						
MKAR				LR	LR	14 42 33.6	
	comp=Z,509nm,20.1s,MS5.0,baz=140,slow=36						
ELK	**Elko**	91.39	49	P	P	14 01 29.4	+0.5
ELK				pmax	pmax		
	comp=Z,45nm,1.1s						
ELK	**Elko**	91.39	49	LR	LR	14 36 04.7	
	comp=Z,646nm,19.5s,MS5.1,baz=231,slow=31						
ELK	**Elko**	91.39	49	*e*P	P	14 01 29.0	+0.1
	comp=Z,45nm,1.1s,mb5.7						
NEW	**Newport**	91.85	41	P	P	14 01 30.9	+0.1
NEW				pmax	pmax		
	comp=Z,30nm,0.9s						
NEW	**Newport**	91.85	41	P	P	14 01 30.8	-0.1
	comp=Z,27nm,0.8s,mb5.6,baz=241,slow=4.3,SNR=33						
NEW				LR	LR	14 34 12.6	
	comp=Z,361nm,21.4s,MS4.8,baz=250,slow=30						
NEW	**Newport**	91.85	41	*e*P	P	14 01 30.4	-0.4
	comp=Z,30nm,0.9s,mb5.6						
NVS	**Novosibirsk**	92.56	325	⇓*i*P	P	14 01 33.0	-0.9
NVS				pmax	pmax		
	comp=Z,199nm,2.5s,mb6.1						
NVS				pmax	pmax		
	comp=N,27nm,1.8s						
NVS				pmax	pmax		
	comp=E,70nm,2.0s						
HLID	**Hailey**	92.61	46	*e*P	P	14 01 34.7	+0.2
	comp=E,32nm,1.2s,mb5.6						
BGU	**Big Grassy Mou**	93.06	49	*e*P	P	14 01 36.4	-0.2
TUC	**Tucson**	93.17	58	P	P	14 01 38.1	+0.8
TUC				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
TUC	**Tucson**	93.17	58	*e*P	P	14 01 37.7	+0.4
	comp=Z,6.7nm,1.0s,mb5.0						
MVU	**Marysvale**	93.20	52	*e*P	P	14 01 38.1	+0.8
	comp=Z,30nm,1.5s,mb5.5						
MSU	**Marysvale**	93.23	52	P	P	14 01 38.9	+1.5
MSU	**Marysvale**	93.23	52	*e*P	P	14 01 38.4	+1.0
HVU	**Hansel Valley**	93.42	48	P	P	14 01 39.3	+1.1
HVU	**Hansel Valley**	93.42	48	*e*P	P	14 01 38.6	+0.4
HVU				*e*	pP	14 01 53.3	-1.9
SPUT	**South Promonto**	93.57	49	*e*P	P	14 01 38.5	-0.3
MPU	**Maple Canyon**	93.93	50	*e*P	P	14 01 41.2	+0.7
MCMT	**McKenzie Canyo**	93.97	45	*e*P	P	14 01 41.6	+1.0
CTU	**Camp Tracy**	93.97	49	*e*P	P	14 01 41.2	+0.5
CTU				*e*	pP	14 01 55.3	-2.4
KSH	**Kashi**	93.99	309	*e*P	P	14 01 41.0	+0.2
KSH				*e*AP	pP	14 01 58.3	+0.5
KSH				*e*XP	sP	14 02 04.3	+0.5
KSH				*e*PP	PP	14 05 30.3	0.0
KSH				*e*PPP	PPP	14 07 33.0	-0.7
KSH				*e*SKS	SKS	14 12 09.5	+0.6
KSH				*e*S	S	14 12 43.0	-0.3
KSH				*e*XS		14 13 12.0	
KSH				*e*PS	PS	14 14 11.0	-0.1
KSH				*e*SS	SS	14 19 08.0	-0.2
KSH				AMB	AMB		
	comp=Z,290nm,5.2s						
KSH				LR	LR		
	comp=N,460nm,6.0s						
KSH				LR	LR		
	comp=E,680nm,10.4s						
CHMT	**Chamberlain Mo**	94.10	43	*e*P	P	14 01 40.6	-0.5
CHMT				*e*PP	PP	14 05 22.4	-8.4
JLU	**Jordanelle**	94.18	50	*e*P	P	14 01 42.2	+0.6
HWUT	**Hardware Ranch**	94.28	49	*e*P	P	14 01 41.6	-0.4
	comp=E,7.6nm,0.9s,mb5.1						
DAU	**Daniels Canyon**	94.29	50	P	P	14 01 43.2	+1.1
DAU	**Daniels Canyon**	94.29	50	*e*P	P	14 01 42.7	+0.6
TCUT	**Toone Canyon**	94.31	49	*e*P	P	14 01 42.6	+0.4
RRI2	**Red Ridge**	94.77	47	*e*P	P	14 01 45.1	+0.9
	comp=E,23nm,1.5s,mb5.4						
QLMT	**Earthquake Lak**	94.96	45	*e*P	P	14 01 46.2	+1.1
BOZ	**Bozeman (W)**	94.97	45	P	P	14 01 45.6	+0.5
BOZ				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.4						
BOZ	**Bozeman (W)**	94.97	45	*e*P	P	14 01 45.5	+0.3
	comp=Z,15nm,0.9s,mb5.4						
HRY	**Holter Researc**	95.02	44	*e*P	P	14 01 45.4	0.0
HRY				*e*		14 02 08.5	
IMW	**Indian Meadow**	95.14	46	*e*P	P	14 01 46.4	+0.5
	comp=Z,20nm,1.5s,mb5.3						
MOOW	**Moose Ponds**	95.26	47	*e*P	P	14 01 45.8	-0.7
	comp=Z,17nm,1.7s,mb5.2						
EDM	**Edmonton**	95.27	37	P	P	14 01 46.4	+0.1
EDM	**Edmonton**	95.27	37	*e*P	P	14 01 45.9	-0.4
LOHW	**Long Hollow**	95.33	47	*e*P	P	14 01 45.7	-1.1
	comp=Z,6.1nm,1.2s,mb4.9						
FRU	**Bishkek**	95.58	312	P	P	14 01 49.0	+1.0
AAK	**Ala-Archa**	95.64	312	P	P	14 01 49.7	+1.5
AAK	**Ala-Archa**	95.64	312	*e*P	P	14 01 47.9	-0.3
PDAR	**Pinedale Array**	95.95	48	P	P	14 01 48.8	-0.8
	comp=Z,4.7nm,0.9s,mb4.9,baz=270,slow=1.5,SNR=27						
PDAR				PKKPbc		14 18 35.9	
	comp=Z,0.8nm,0.7s,baz=72,slow=4.7,SNR=6.8						
PDAR				LR	LR	14 42 03.5	
	comp=Z,778nm,18.6s,MS5.2,baz=289,slow=34						
PDAR	**Pinedale Array**	95.95	48	P	P	14 01 48.8	-0.8
PDAR				LR	LR	14 42 03.5	
MAIT	**Maitri**	96.12	189	*e*P	P	14 01 50.1	+0.4
YKA	**Yellowknife Ar**	96.39	28	P	P	14 01 50.3	-0.8
	comp=Z,14nm,0.8s,mb5.5,baz=256,slow=4.6,SNR=90						
YKA				LR	LR	14 41 29.7	
	comp=Z,1µm,18.6s,MS5.5,baz=250,slow=33						
YKW3	**Yellowknife Ar**	96.40	28	*e*P	P	14 01 49.8	-1.4
SNAA	**Sanae**	97.05	185	⇓*i*P	P	14 01 53.8	-0.2
SNAA	**Sanae**	97.05	185	⇑*i*	P	14 01 55.7	+1.7
SNAA	**Sanae**	97.05	185	⇑*i*	P	14 02 11.7	+18
SNAA	**Sanae**	97.05	185	P	P	14 01 53.7	-0.3
	comp=Z,12nm,0.9s,mb5.3,baz=164,slow=3.3,SNR=36						
ANMO	**Albuquerque**	97.16	56	⇓*e*P	P	14 01 54.8	-0.6
ANMO	**Albuquerque**	97.16	56	P	P	14 01 54.1	-1.2
	comp=Z,2.6nm,0.9s,mb4.6,baz=240,slow=5.7,SNR=5.7						
MNTX	**Cornudas Mount**	97.60	59	*e*P	P	14 01 56.6	-0.8
	comp=Z,3.4nm,1.0s,mb4.8						
VNA3	**Neumayer Olymp**	97.90	183	⇓*i*P	P	14 01 57.6	-0.2
VNA3	**Neumayer Olymp**	97.90	183	⇑*i*	P	14 02 00.4	+2.6
VNA3	**Neumayer Olymp**	97.90	183	⇑*i*	P	14 02 17.3	+19
VNA3	**Neumayer Olymp**	97.90	183	⇑*i*P	P	14 02 00.4	+2.6
VNA2	**Neumayer--Watz**	98.09	183	⇓*i*P	P	14 01 58.9	+0.2
VNA2	**Neumayer--Watz**	98.09	183		P	14 02 01.1	+2.4
VNA2	**Neumayer--Watz**	98.09	183	⇑*i*	P	14 02 08.6	+10
VNA2	**Neumayer--Watz**	98.09	183	⇑*i*	P	14 02 17.5	+19
VNA1	**Neumayer--Stat**	98.42	183	⇑*i*P	P	14 02 01.0	+0.8
VNA1	**Neumayer--Stat**	98.42	183		P	14 02 02.5	+2.3
TXAR	**Lajitas Array**	98.75	62	P	P	14 02 01.4	-1.3
	comp=Z,1.0nm,0.7s,mb4.5,baz=233,slow=6.3,SNR=7.3						
TXAR				PP	PP	14 06 01.0	-5.7
	comp=Z,1.0nm,0.9s,baz=230,slow=9.8,SNR=4.9						
TXAR				PKKPbc		14 18 30.9	
	comp=Z,1.1nm,0.8s,baz=91,slow=3.7,SNR=7.6						
TXAR				LR	LR	14 37 23.3	
	comp=Z,666nm,21.6s,MS5.1,baz=300,slow=30						
TXAR	**Lajitas Array**	98.75	62	P	P	14 02 01.4	-1.3
TXAR				PP	PP	14 06 01.0	-5.7
TXAR				PKKPbc		14 18 30.9	
TXAR				LR	LR	14 37 23.2	
LAO	**LASA Array**	98.84	44	*e*P	P	14 02 03.1	+0.5
	comp=Z,34nm,1.1s,mb5.8						
VOSK	**Vostochnaya**	99.33	322	*i* P	P	14 02 04.1	-0.7
BVA0	**Borovoye Array**	99.72	322	*i* P	P	14 02 05.9	-0.6
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.7						
BVAR	**Borovoye Array**	99.72	322	P	P	14 02 05.4	-1.1
	comp=Z,3.2nm,0.7s,mb4.8,baz=135,slow=4.2,SNR=12						
BVAR				PKiKP		14 06 35.5	
	comp=Z,2.5nm,0.8s,slow=1.5,SNR=3.9						
BVAR				PKKPbc		14 18 27.0	
	comp=Z,0.5nm,0.7s,baz=243,slow=3.3,SNR=4.2						
BRVK	**Borovoye**	99.78	322	P	P	14 02 07.8	+1.0
RSSD	**Black Hills**	100.11	47	P	P	14 02 08.3	-0.2
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.3s						
RSSD	**Black Hills**	100.11	47	*e*Pdif	P	14 02 07.4	-1.1
	comp=Z,10nm,1.3s						
DGMT	**Dagmar**	100.38	42	*e*Pdif	P	14 02 09.6	0.0
	comp=Z,27nm,0.9s						
ZRNK	**Zerenda**	100.55	322	*e*P	P	14 02 09.1	-1.1
ZRNK				pmax	pmax		
	comp=Z,33nm,1.8s						
ZRNK	**Zerenda**	100.55	322	*e*Pdif	P	14 02 09.1	-1.2
	comp=Z,33nm,1.8s						
SVE	**Sverdlovsk**	105.39	326	*e*P	Pdif	14 02 28.0	-3.6
SVE				*e*		14 06 54.0	
SVE				*e*		14 16 16.0	
SVE				*e*		14 17 04.0	
SVE				MLR	MLR		
	comp=N,300nm,17.0s,MS5.4						
SVE				MLR	MLR		
	comp=E,900nm,17.0s,MS5.4						
SVE				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.4						
ARU	**Arti**	106.56	326	⇓*i*P	Pdif	14 02 35.9	-0.9
ARU	**Arti**	106.56	326	*e*PKPdf		14 06 47.5	
KBS	**Kingsbay**	110.41	354	*e*PP	PP	14 07 30.0	-3.4
KBS				*e*		14 17 04.4	
KBS				*e*SS	SS	14 22 56.9	+3.2
KBS				AMS	AMS	14 50 44.1	
	comp=Z,393nm,20.0s,MS5.0						
DAG	**Danmarks Havn**	114.11	0	⇓*e*PKIKP	PKPdf	14 07 00.4	+0.4
DAG	**Danmarks Havn**	114.11	0	⇓*i*P	PKPdf	14 07 00.4	+0.4
	comp=Z,3.4nm,0.7s						
APA	**Apatity**	114.18	341	⇑*i*PKIKP	PKPdf	14 06 55.6	-4.6
APA				*e*		14 07 59.0	
APA				*e*		14 17 34.0	
APA				*e*		14 18 50.0	
APA				*e*SS	SS	14 23 45.0	+1.3
APA				pmax	pmax		
	comp=Z,22nm,1.2s						
ARCES	**ARCESS Array B**	115.28	345	PKP	PKPdf	14 07 03.2	+0.9
	comp=Z,11nm,0.8s,baz=87,slow=1.5,SNR=36						
ARCES				PKKPbc		14 17 37.1	
	comp=Z,3.7nm,0.8s,baz=207,slow=5.4,SNR=11						
CFAA	**Coronel Fontan**	115.81	133	PKP	PKPdf	14 07 04.5	+0.2
	comp=Z,0.1nm,0.3s,baz=289,slow=3.1,SNR=4.4						
CFAA				PP	PP	14 08 03.8	-9.3
	comp=Z,0.8nm,1.1s,baz=216,slow=6.8,SNR=5.6						
TRO	**Tromso**	116.83	346	*e*PP	PP	14 08 12.2	-7.2
TRO				*e*		14 18 02.6	
TRO				AMS	AMS	14 56 38.3	
	comp=Z,467nm,22.0s,MS5.1						
SUMG	**Summit**	117.09	7	*e*PKPdf	PKPdf	14 07 06.1	+0.3
SUMG				*e*PP	PP	14 08 10.3	-11
GNI	**Garni**	117.92	310	PKP	PKPdf	14 07 09.9	+1.8
	comp=Z,2.6nm,0.3s,baz=210,slow=23,SNR=4.6						
ZEI	**Tsey**	118.06	313	*e*PKIKP	PKPdf	14 07 08.3	0.0
GOF	**Gofitskoye**	118.18	315	*e*PKIKP	PKPdf	14 07 09.0	+0.5
KIV	**Kislovodsk**	118.67	314	*i* PKIKP	PKPdf	14 07 10.5	+1.0
KIV				*e*		14 08 30.5	
KIV				*e*SS	SS	14 24 47.6	+5.1
KIV				pmax	pmax		
	comp=N,6.0nm,1.2s						
KIV				pmax	pmax		
	comp=E,4.0nm,1.2s						
KIV				pmax	pmax		
	comp=Z,15nm,1.2s						
KIV	**Kislovodsk**	118.67	314	*e*PKPdf	PKPdf	14 07 11.1	+1.6
OBN	**Obninsk**	118.86	328	⇓*i*PKIKP	PKPdf	14 07 10.6	+1.0
OBN				*e*		14 08 33.5	
OBN				pmax	pmax		
	comp=Z,20nm,0.8s						
OBN	**Obninsk**	118.86	328	*e*PKPdf	PKPdf	14 07 10.9	+1.3
JMIC	**Jan Mayen**	119.65	357	*e*PP	PP	14 08 29.1	-9.4
JMIC				AMS	AMS	14 59 00.6	
	comp=Z,229nm,20.2s,MS4.8						
FINES	**FINESS Array B**	120.33	337	PKP	PKPdf	14 07 12.8	+0.4
	comp=Z,11nm,0.8s,baz=124,slow=6.9,SNR=31						
FINES				PKKPbc		14 17 19.8	
	comp=Z,2.6nm,1.0s,baz=90,slow=9.5,SNR=4.1						
TATS	**Tathlith**	120.56	286	P	PKPdf	14 07 16.5	+2.7
SOC	**Sochi**	120.85	314	*i* PKIKP	PKPdf	14 07 13.1	-0.7
SOC				*e*		14 08 41.8	
SOC				pmax	pmax		
	comp=N,10.0nm,0.9s						
SOC				pmax	pmax		
	comp=Z,25nm,0.9s						
SOC				MLR	MLR		
	comp=N,402nm,22.0s,MS5.2						
SOC				MLR	MLR		
	comp=Z,772nm,22.0s,MS5.3						
SOC				MLR	MLR		
	comp=E,448nm,21.0s,MS5.2						
SCHQ	**Schefferville**	121.66	31	PKP	PKPdf	14 07 15.2	+0.2
	comp=E,4.5nm,0.8s,baz=154,slow=0.8,SNR=5.1						
SCHQ				PKKPbc		14 17 15.8	
	comp=E,3.4nm,0.7s,baz=122,slow=3.7,SNR=5.7						
HILS	**Ha'il**	121.92	295	P	PKPdf	14 07 18.5	+2.3
ANN	**Anapa**	122.08	316	*i* PKIKP	PKPdf	14 07 13.9	-2.2
ANN				*i*		14 14 06.9	
ANN				pmax	pmax		
	comp=Z,42nm,1.2s						
BLJS	**Baljurashi**	122.34	287	P	PKPdf	14 07 19.8	+2.7
BOSA	**Boshof**	122.86	226	PKIKP	PKPdf	14 07 19.3	+1.3
BOSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BOSA	**Boshof**	122.86	226	PKP	PKPdf	14 07 19.2	+1.2
	comp=Z,8.6nm,0.7s,baz=116,slow=3.4,SNR=18						
BOSA	**Boshof**	122.86	226	*e*PKPdf	PKPdf	14 07 19.1	+1.1
MALT	**Malatya**	123.09	309	PKIKP	PKPdf	14 07 20.6	+2.4
MALT	**Malatya**	123.09	309	*e*PKPdf	PKPdf	14 07 20.4	+2.1
LPAZ	**La Paz**	123.30	118	PKP	PKPdf	14 07 20.7	+1.6
	comp=Z,2.9nm,0.7s,baz=329,slow=2.4,SNR=14						
LPAZ				PP	PP	14 08 58.5	-6.4
	comp=Z,1.3nm,0.7s,baz=251,slow=8.3,SNR=4.0						
LPAZ	**La Paz**	123.30	118	*e*PKPdf	PKPdf	14 07 20.7	+1.6
LPAZ				*e*PP	PP	14 08 57.0	-8.0
SUR	**Sutherland**	123.39	219	PKP	PKPdf	14 07 20.5	+1.5
	comp=Z,14nm,1.0s,baz=97,slow=5.6,SNR=3.7						
SUR	**Sutherland**	123.39	219	*e*PKPdf	PKPdf	14 07 20.3	+1.3
ROSC	**El Rosal**	123.68	91	PKP	PKPdf	14 07 20.5	+0.6
	comp=Z,6.5nm,0.6s,baz=81,slow=20,SNR=3.9						
KMBO	**Kilima Mbogo**	124.05	261	PKP	PKPdf	14 07 22.5	+1.9
	comp=Z,0.8nm,0.5s,baz=220,slow=23,SNR=4.8						
KMBO	**Kilima Mbogo**	124.05	261	PKP	PKPdf	14 07 22.5	+1.9
SIM	**Simferopol'**	124.25	318	*e*PKIKP	PKPdf	14 07 19.2	-1.1
SIM						14 09 06.0	
SIM				*e*PS	PS	14 19 07.0	+2.2
SIM				pmax	pmax		
	comp=Z,20nm,0.8s						
LBTB	**Lobatse**	124.72	229	PKIKP	PKPdf	14 07 22.6	+0.8
LBTB				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LBTB	**Lobatse**	124.72	229	PKP	PKPdf	14 07 22.6	+0.8
	comp=Z,6.8nm,0.7s,baz=144,slow=4.6,SNR=7.2						
LBTB	**Lobatse**	124.72	229	*e*PKPdf	PKPdf	14 07 16.9	-4.9
LBTB				PKP	PKPdf	14 07 22.6	+0.8
AKASG	**Malin Array Be**	124.82	326	PKP	PKPdf	14 07 21.7	+0.5
	comp=Z,17nm,0.8s,baz=60,slow=2.3,SNR=70						
AKASG				PP	PP	14 09 04.7	-9.2
	comp=Z,0.3nm,0.4s,baz=76,slow=37,SNR=2.5						
AKASG				PKKPbc		14 17 01.9	
	comp=Z,0.2nm,0.2s,baz=248,slow=4.2,SNR=4.8						
MATP	**Matopo**	124.92	236	PKP	PKPdf	14 07 22.6	+0.4
	comp=Z,7.4nm,0.8s,baz=74,slow=2.5,SNR=8.2						
QURS	**Qurayyt al Mil**	125.33	301	P	PKPdf	14 07 26.1	+3.3
HFS	**Hagfors**	125.57	341	PKP	PKPdf	14 07 22.4	0.0
	comp=Z,17nm,0.8s,baz=90,slow=1.4,SNR=9.4						
NB2	**NORSAR Subarra**	125.59	343	PKPdf	PKPdf	14 07 23.2	+0.8
	comp=Z,22nm,0.9s,baz=34,slow=1.9						
NB2	**NORSAR Subarra**	125.59	343	PKPd		14 07 23.2	
	baz=34,slow=1.9						
NOA	**NORSAR Array B**	125.59	343	PKP	PKPdf	14 07 22.4	0.0
	comp=Z,13nm,0.9s,baz=34,slow=2.0,SNR=42						
NOA				PKKPbc		14 17 00.0	
	comp=Z,2.7nm,0.8s,baz=216,slow=4.1,SNR=8.2						
NAO01	**NORSAR Array S**	125.84	343	*e*PKPdf	PKPdf	14 07 23.9	+1.0
UMJS	**Umm Lajj**	126.10	293	P	PKPdf	14 07 26.6	+2.3
SUW	**Suwalki**	126.11	331	*e*PKP	PKPdf	14 07 25.3	+1.7
SUW				*e*		14 07 31.4	
BR131	**Keskin Array S**	126.31	312	*e*PKPdf	PKPdf	14 07 25.4	+1.0
BRTR	**Keskin Array B**	126.31	312	PKP	PKPdf	14 07 24.9	+0.4
	comp=Z,6.2nm,1.0s,baz=117,slow=2.8,SNR=28						
TBKS	**Tabuk**	126.46	297	P	PKPdf	14 07 27.7	+2.7
CPUP	**Villa Florida**	126.63	135	PKP	PKPdf	14 07 25.6	+0.2
	comp=Z,8.5nm,0.8s,baz=249,slow=3.2,SNR=20						
CPUP	**Villa Florida**	126.63	135	*e*PKPdf	PKPdf	14 07 26.1	+0.7
CPUP				*e*		14 07 45.7	
KIS	**Kishinev**	126.80	322	*e*PKIKP	PKPdf	14 07 25.0	-0.1
KIS				*e*		14 09 33.0	
JMQS	**Jabal Moqyreh**	126.95	298	P	PKPdf	14 07 28.6	+2.7
JMOS	**Jabal al Moall**	127.57	298	P	PKPdf	14 07 29.7	+2.5
EIL	**Elat**	127.63	299	*e*PKPdf	PKPdf	14 07 28.9	+1.7
BER	**Bergen**	127.70	346	*e*PP	PP	14 09 29.8	-2.9
BER				AMS	AMS	15 03 58.6	
	comp=Z,414nm,20.2s,MS5.1						
HAQS	**Haql**	127.75	298	P	PKPdf	14 07 30.0	+2.5
TAYS	**Tayyib Ism**	127.88	298	P	PKPdf	14 07 30.2	+2.4
SDV	**Santo Domingo**	127.89	87	PKP	PKPdf	14 07 27.9	-0.2
	comp=Z,25nm,0.8s,baz=237,slow=5.7,SNR=6.0						
SDV	**Santo Domingo**	127.89	87	*e*PKPdf	PKPdf	14 07 28.8	+0.6
SDV				*e*		14 07 48.3	
CFR	**Carcaliu**	128.04	320	⇑P	PKPdf	14 07 29.9	+2.3
LVV	**L'vov**	128.12	327	*e*PKIKP	PKPdf	14 07 29.0	+1.4
LVV				*e*		14 09 32.6	
LVV				*e*PPP	PPP	14 12 27.6	+6.3
LVV				*e*		14 19 38.6	
LVV				MLR	MLR		
	comp=N,530nm,21.0s,MS5.5						
LVV				MLR	MLR		
	comp=E,770nm,21.0s,MS5.5						
LVV				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.5						
TIRR	**Tirgusor**	128.18	319	⇓P	PKPdf	14 07 30.1	+2.2
HARR	**Harsova**	128.39	319	⇓P	PKPdf	14 07 30.4	+2.1
BURAR	**Bucovina Array**	128.64	324	⇓P	PKPdf	14 07 31.3	+2.6
BURAR	**Bucovina Array**	128.64	324	⇓P	PKPdf	14 07 31.3	+2.6
KWP	**Kalwaria**	128.94	327	*e*PKP	PKPdf	14 07 31.2	+2.0
KWP				*e*		14 07 37.4	
MLR	**Muntele Rosu**	129.26	321	⇑P	PKPdf	14 07 32.1	+2.2
SIV	**San Ignacio**	129.48	121	PKP	PKPdf	14 07 31.2	+0.1
	comp=Z,4.9nm,0.9s,baz=231,slow=3.3,SNR=18						
KOLS	**Kolonicke sedl**	129.57	327	*e*PKP	PKPdf	14 07 32.9	+2.5
SNX	**Sinaia**	129.60	321	PKIKP	PKPdf	14 07 32.7	+2.1
CRVS	**Cervenica-Dubn**	130.03	327	*e*	PKPdf	14 07 36.0	+4.7
CRVS				*e*PKSpB		14 10 57.1	
OJC	**Ojcow**	130.09	329	*e*PKP	PKPdf	14 07 32.6	+1.2
OJC				*e*PP	PP	14 09 44.9	-3.8
DRGR		130.53	324	⇑P	PKPdf	14 07 34.1	+1.8
SAML	**Samuel**	130.68	112	*e*PKPdf	PKPdf	14 07 33.6	+0.1
KECS	**Kecovo**	130.79	327	*e*PKP	PKPdf	14 07 34.0	+1.2
OKC	**Ostrava-Krasne**	131.16	330	*e*PKPDF	PKPdf	14 07 36.4	+3.0
OKC				*e*PP	PP	14 09 50.4	-5.5
OKC				*e*PKS	PKS	14 11 01.6	-7.2
OKC				AMS	AMS	15 07 50.0	
	comp=Z,600nm,19.7s						
RUE	**Ruedersdorf**	131.33	335	*e*PKPdf	PKPdf	14 07 34.9	+1.2
KSP	**Ksiaz**	131.38	332	*e*PKIKP	PKPdf	14 07 35.3	+1.5
KSP				*e*PPS	PPS	14 21 45.0	-1.6
KSP				MLR	MLR		
	comp=Z,2µm,22.6s,MS5.7						
KSP	**Ksiaz**	131.38	332	*e*PKP	PKPdf	14 07 35.3	+1.5
KSP				*e*PP	PP	14 09 48.0	-9.2
KSP				*e*PPS	PPS	14 21 45.0	-1.6
KSP				LR	LR		
	comp=Z,2µm,22.6s,MS5.7						
KSP	**Ksiaz**	131.38	332	*e*PKP	PKPdf	14 07 35.7	+1.9
KSP				*e*		14 07 42.2	
PSZ	**Piszkesteto**	131.45	327	PKIKP	PKPdf	14 07 36.3	+2.3
PSZ	**Piszkesteto**	131.45	327	*e*PKPdf	PKPdf	14 07 35.1	+1.1
PSZ	**Piszkesteto**	131.45	327	⇑*i*PKP/D	PKPdf	14 07 35.9	+1.9
MORC	**Moravsky Berou**	131.49	330	PKIKP	PKPdf	14 07 35.9	+1.8
MORC	**Moravsky Berou**	131.49	330	*e*PKPdf	PKPdf	14 07 35.2	+1.2
VYHS	**Vyhne**	131.66	328	*e*PKP	PKPdf	14 07 35.7	+1.3
VYHS				*e*PP	PP	14 09 57.9	-1.1
VYHS				*e*		14 11 02.7	
DPC	**Dobruska-Polom**	131.70	331	*e*PKIKP	PKPdf	14 07 36.7	+2.3
DPC				*e*		14 09 54.3	
DPC				*e*SS	SS	14 27 33.2	+6.6
DPC				MLR	MLR		
	comp=Z,1µm,21.7s,MS5.5						
DPC	**Dobruska-Polom**	131.70	331	*e*PKPDF	PKPdf	14 07 36.7	+2.3
DPC				*e*PP	PP	14 09 54.3	-4.9
DPC				*e*PKS	PKS	14 11 03.2	-6.6
DPC				*e*SS	SS	14 27 33.2	+6.6
DPC				AMS	AMS	15 05 10.0	
	comp=Z,1µm,21.7s						
UPC	**Upice**	131.74	332	*e*PKPDF	PKPdf	14 07 36.3	+1.8

PVCC	**Panska Ves**	**132.39**	**333**	*e*PKIKP	PKPdf	14 07 37.8	+2.1
PVCC				*e*		14 10 00.0	
PVCC				MLR	MLR		
	comp=Z,1µm,21.4s,MS5.6						
PVCC	**Panska Ves**	**132.39**	**333**	*e*PKPDF	PKPdf	14 07 37.8	+2.1
PVCC				*e*pPKP		14 07 59.3	
PVCC				*e*PP	PP	14 10 00.0	-3.3
PVCC				*e*PKS	PKS	14 11 07.3	-3.8
PVCC				AMS	AMS	15 06 50.0	
	comp=Z,1µm,21.4s						
VTS	**Vitosha**	**132.40**	**319**	PKIKP	PKPdf	14 07 38.0	+2.0
BRG	**Berggiesshubel**	**132.42**	**333**	*e*PKIKP	PKPdf	14 07 37.6	+1.8
BRG				*e*		14 07 46.1	
BRG				*e*		14 10 01.8	
BRG				SS	SS	14 27 38.0	+2.5
BRG				MLR	MLR		
	comp=Z,680nm,22.1s,MS5.3						
BRG	**Berggiesshubel**	**132.42**	**333**	*e*PKP	PKPdf	14 07 37.6	+1.8
BRG				*e*		14 07 46.1	
BRG				*i* pPKP		14 07 59.6	
BRG				*e*PP	PP	14 10 01.8	-1.7
BRG				*i*		14 11 10.0	
BRG				SS	SS	14 27 38.0	+2.5
BRG				LR	LR		
	comp=Z,680nm,22.1s,MS5.3						
CLL	**Collm**	**132.52**	**334**	⇓*i*PKIKP	PKPdf	14 07 37.4	+1.4
CLL				MLR	MLR		
	comp=Z,1µm,19.2s,MS5.6						
CLL	**Collm**	**132.52**	**334**	⇓*i*PKP	PKPdf	14 07 37.4	+1.4
CLL				*i* pPKP		14 07 58.9	
CLL				*e*PKS	PKS	14 11 05.0	-6.3
CLL				LR	LR		
	comp=Z,1µm,19.2s,MS5.6						
CLL	**Collm**	**132.52**	**334**	⇓*i*PKIKP	PKPdf	14 07 37.4	+1.4
	comp=Z,logA/T=1.3						
CLL				*e*		14 07 44.0	
CLL				*i*		14 07 58.9	
CLL				*i* PP	PP	14 10 00.6	-3.4
CLL				*e**PPP		14 10 22.0	
CLL				*e*PKS	PKS	14 11 05.0	-6.3
CLL				*e*PPS	PPS	14 21 49.0	-8.9
CLL				*e*SS	SS	14 27 39.0	+2.4
CLL				*e*		14 28 57.0	
SJG	**San Juan**	**132.68**	**75**	PKP	PKPdf	14 07 37.7	+0.6
	comp=Z,31nm,0.2s						
ZST	**Bratislava**	**132.74**	**329**	*e*PKP	PKPdf	14 07 38.9	+2.4
ZST				*e*PP	PP	14 10 03.6	-1.8
PRU	**Pruhonice**	**132.78**	**332**	*e*PKIKP	PKPdf	14 07 38.3	+1.8
PRU				*e*		14 10 01.1	
PRU				MLR	MLR		
	comp=Z,1µm,20.2s,MS5.6						
PRU	**Pruhonice**	**132.78**	**332**	*e*PKPDF	PKPdf	14 07 38.3	+1.8
PRU				*e*pPKP		14 07 59.8	
PRU				*e*PP	PP	14 10 01.1	-4.5
PRU				*e*PKS	PKS	14 11 08.1	-3.7
PRU				*e*x	x	14 27 53.0	
PRU				AMS	AMS	15 07 30.0	
	comp=Z,1µm,20.2s						
SANT	**Santorini**	**133.52**	**310**	*e*PKPpre		14 07 32.3	
NKC	**Novy Kostel**	**133.55**	**334**	*e*PKIKP	PKPdf	14 07 39.9	+2.0
NKC				*e*		14 10 04.8	
NKC	**Novy Kostel**	**133.55**	**334**	*e*PKPDF	PKPdf	14 07 39.9	+2.0
NKC				*e*pPKP		14 08 01.7	
NKC				*e*PP	PP	14 10 04.8	-5.9
NKC				*e*PKS	PKS	14 11 10.2	-3.0
NKC				*e*x	x	14 28 02.7	
NKC				AMS	AMS	15 09 40.0	
	comp=Z,800nm,19.3s						
MOX	**Moxa**	**133.60**	**334**	*e*PKIKP	PKPdf	14 07 39.3	+1.3
MOX				MLR	MLR		
	comp=Z,700nm,22.0s,MS5.3						
MOX	**Moxa**	**133.60**	**334**	*i* P	PKPdf	14 07 39.3	+1.3
	comp=Z,logA/T=1.1						
MOX				PP	PP	14 10 08.0	-3.1
MOX				SS	SS	14 28 00.0	+10
MOX				L		15 10 01.0	
DIVS	**Divcibare**	**133.61**	**322**	*e*P	PKPdf	14 07 37.8	-0.5
KHC	**Kasperske Hory**	**133.83**	**332**	*e*PKIKP	PKPdf	14 07 40.3	+1.8
KHC				*e*		14 10 10.1	
KHC				*e*SS	SS	14 27 54.3	+2.0
KHC				MLR	MLR		
	comp=Z,1µm,20.3s,MS5.6						
KHC	**Kasperske Hory**	**133.83**	**332**	*e*PKPDF	PKPdf	14 07 40.3	+1.8
KHC				*e*pPKP		14 08 01.4	
KHC				*e*PP	PP	14 10 10.1	-2.6
KHC				*e*PKS	PKS	14 11 11.2	-2.5
KHC				*e*SS	SS	14 27 54.3	+2.0
KHC				AMS	AMS	15 07 40.0	
	comp=Z,1µm,20.3s						
SKO	**Skopje**	**133.85**	**319**	*i* PKP	PKPdf	14 07 40.0	+1.3
SKO				*i* PKS	PKS	14 11 08.2	-5.8
GERES	**GERESS Array B**	**133.97**	**331**	PKhKP		14 07 29.3	
	comp=Z,0.5nm,0.2s,baz=45,slow=3.8,SNR=8.2						
GERES				PKP	PKPdf	14 07 39.8	+1.0
	comp=Z,6.5nm,0.7s,baz=90,slow=1.3,SNR=32						
BBLS	**Bajina Basta -**	**134.09**	**323**	⇑*i*P	PKPdf	14 07 40.1	+1.0
TSUM	**Tsumeb**	**134.13**	**230**	*e*PKPpre		14 07 30.8	
MOA	**Molln**	**134.39**	**330**	⇑*i*P	PKPdf	14 07 41.2	+1.6
GRA1	**Grafenberg Arr**	**134.48**	**334**	*e*PKPdf	PKPdf	14 07 40.9	+1.2
GRA1				*e*PP	PP	14 10 14.3	-2.4
GRF	**Grafenberg Arr**	**134.48**	**334**	*e*PKIKP	PKPdf	14 07 40.9	+1.2
GRF				*e*		14 10 14.3	
GROS	**Grobnik**	**134.70**	**328**	*e*PKPdf	PKPdf	14 07 34.2	-5.9
GROS				*e*PKPbc	PKPdf	14 07 41.1	+1.0
KBA	**Koelnbreinsper**	**135.38**	**330**	⇓*i*P	PKPdf	14 07 41.8	+0.4
BOJS	**Bojanci**	**135.45**	**327**	*e*PKPdf	PKPdf	14 07 35.7	-5.9
BOJS				*e*PKPbc	PKPdf	14 07 43.2	+1.7
BOJS				*e*		14 08 03.4	
VISS	**Visnje**	**135.48**	**328**	*e*PKPbc	PKPdf	14 07 43.1	+1.5
LJU	**Ljubljana**	**135.48**	**328**	*e*PKPbc	PKPdf	14 07 43.1	+1.5
TOD	**Tromm**	**135.56**	**335**	PKIKP	PKPdf	14 07 43.0	+1.4
LHO	**Holmfirth**	**135.57**	**347**	*e*P	PKPdf	14 07 42.1	+0.6
VOY	**Vojsko**	**135.82**	**328**	*e*PKPbc	PKPdf	14 07 43.8	+1.6
ABH	**Alteburg**	**135.84**	**337**	PKP	PKPdf	14 07 43.9	+1.8
STU	**Stuttgart**	**136.04**	**334**	*e*PKIKP	PKPdf	14 07 42.7	+0.2
KWE	**Weaver Farm**	**136.06**	**346**	*e*P	PKPdf	14 07 44.1	+1.7
WTTA	**Wattenberg**	**136.07**	**331**	⇓*i*P	PKPdf	14 07 44.2	+1.6
RUP	**Ruppelstein**	**136.18**	**337**	PKIKP	PKPdf	14 07 44.5	+1.8
SQTA	**Sankt Quirin**	**136.31**	**331**	⇑*i*P	PKPdf	14 07 44.9	+1.8
LANF	**Langenberg**	**136.46**	**336**	PKP	PKPdf	14 07 44.9	+1.6
GIVF	**Givet**	**136.68**	**339**	*e*PKIKP	PKPdf	14 07 37.6	-6.1
	comp=Z,80nm,1.0s						
BAIF	**Baives**	**136.93**	**339**	*e*PKIKP	PKPdf	14 07 38.1	-6.0
	comp=Z,38nm,1.0s						
WLS	**Welschbruch**	**137.09**	**335**	PKP	PKPdf	14 07 45.8	+1.3
CDF	**Champ du Feu**	**137.12**	**336**	*e*PKIKP	PKPdf	14 07 38.4	-6.1
	comp=Z,19nm,1.0s						
FELD	**Feldberg**	**137.24**	**334**	PKP	PKPdf	14 07 46.0	+1.2
ECH	**Echery**	**137.33**	**335**	PKP	PKPdf	14 07 46.0	+1.1
HINF	**Hinteralfeld**	**137.77**	**335**	*e*PKIKP	PKPdf	14 07 39.6	-6.1
	comp=Z,38nm,1.0s						
HAU	**Haudompre**	**137.82**	**336**	*e*PKIKP	PKPdf	14 07 39.9	-5.9
	comp=Z,24nm,0.7s						
HAU				*e*R			
	comp=Z,703nm,21.8s						
MEZF	**Maizieres J’vi**	**137.92**	**337**	*e*PKIKP	PKPdf	14 07 40.4	-5.6
LOMF	**Lomont**	**138.15**	**335**	PKP	PKPdf	14 07 48.2	+1.7
TIP	**Timpagrande**	**138.35**	**319**	*e*PKPdf	PKPdf	14 07 48.4	+1.3
CABF	**La Chapelle**	**139.04**	**335**	*e*PKIKP	PKPdf	14 07 42.9	-5.2
	comp=Z,66nm,1.0s						
LOR	**Lormes**	**139.40**	**337**	*e*PKIKP	PKPdf	14 07 43.1	-5.6
	comp=Z,39nm,1.1s						
LOR				*e*R			
	comp=Z,984nm,23.0s						
FLN	**La Foliniere**	**139.57**	**342**	*e*PKIKP	PKPdf	14 07 43.3	-5.7
	comp=Z,47nm,0.9s						
FLN				*e*R			
	comp=Z,729nm,22.0s						
LPL	**La Plagne**	**139.63**	**333**	*e*PKIKP	PKPdf	14 07 44.2	-5.0
	comp=Z,24nm,0.8s						
LPG	**La Plagne**	**139.63**	**333**	*e*PKIKP	PKPdf	14 07 44.3	-4.9
	comp=Z,44nm,0.9s						
SSF	**Saint Saulge**	**139.70**	**337**	*e*PKIKP	PKPdf	14 07 43.8	-5.5
	comp=Z,48nm,1.1s						
SMF	**Signal de Mont**	**139.92**	**337**	*e*PKIKP	PKPdf	14 07 44.0	-5.7
	comp=Z,22nm,0.9s						
GRR	**Gorron**	**140.02**	**342**	*e*PKIKP	PKPdf	14 07 43.9	-5.9
BDFB	**Brasilia**	**140.09**	**131**	PKP	PKPdf	14 07 50.9	+0.2
	comp=Z,10nm,0.8s,baz=182,slow=2.9,SNR=8.9						
BAO	**Brasilia Array**	**140.11**	**131**	PKPdf	PKPdf	14 07 43.0	-7.8
MBDF	**Montbardon**	**140.22**	**332**	*e*PKIKP	PKPdf	14 07 45.8	-4.5
	comp=Z,22nm,0.9s						
BGF	**Bois d’Agland**	**140.37**	**338**	*e*PKIKP	PKPdf	14 07 45.3	-5.2
ORIF	**Oris-en-Rattie**	**140.47**	**333**	*e*PKIKP	PKPdf	14 07 45.4	-5.3
	comp=Z,28nm,0.9s						
ORIF				*e*R			
	comp=Z,635nm,21.5s						
PLDF	**La Plantade**	**140.56**	**336**	PKP	PKPdf	14 07 47.4	-3.5
SBF	**Sospel**	**140.57**	**331**	*e*PKIKP	PKPdf	14 07 45.6	-5.4
SGMF	**Saint Gilles**	**140.62**	**344**	*e*PKIKP	PKPdf	14 07 44.5	-6.4
	comp=Z,26nm,0.9s						
ROSF	**Rostrenen**	**140.73**	**345**	*e*PKIKP	PKPdf	14 07 44.5	-6.6
	comp=Z,75nm,1.2s						
PGF	**Pioggiola**	**140.76**	**328**	*e*PKIKP	PKPdf	14 07 46.1	-5.2
	comp=Z,45nm,0.8s						
TCF	**Toulx Ste Croi**	**140.83**	**338**	*e*PKIKP	PKPdf	14 07 46.2	-5.1
	comp=Z,36nm,1.0s						
VIVF	**Saint-Julien-l**	**141.04**	**334**	*e*PKIKP	PKPdf	14 07 46.7	-5.1
	comp=Z,59nm,1.3s						
QUIF	**Quistinic**	**141.09**	**344**	*e*PKIKP	PKPdf	14 07 45.4	-6.3
FRF	**La Foret Royal**	**141.18**	**331**	*e*PKIKP	PKPdf	14 07 46.4	-5.6
	comp=Z,32nm,0.9s						
SMRF	**Simiane la Rot**	**141.35**	**333**	*e*PKIKP	PKPdf	14 07 46.3	-6.0
	comp=Z,50nm,1.0s						
MFF	**Saint Martin d**	**141.38**	**341**	*e*PKIKP	PKPdf	14 07 46.2	-6.1
	comp=Z,30nm,0.9s						
LMR	**La Mourre**	**141.41**	**331**	*e*PKIKP	PKPdf	14 07 47.1	-5.3
	comp=Z,85nm,1.2s						
PUYF	**Puyloubier**	**141.64**	**332**	PKP	PKPdf	14 07 52.9	+0.1
PRAF	**Pradon**	**141.66**	**333**	PKP	PKPdf	14 07 53.6	+0.7
RJF	**Les Rejaudoux**	**141.93**	**338**	*e*PKIKP	PKPdf	14 07 47.3	-5.9
RJF				*e*R			
	comp=Z,677nm,21.5s						
LASF	**Ste Croix**	**142.02**	**334**	*e*PKIKP	PKPdf	14 07 48.1	-5.3
	comp=Z,36nm,0.9s						
CAF	**Calviac**	**142.04**	**337**	*e*PKIKP	PKPdf	14 07 47.8	-5.7
	comp=Z,33nm,1.0s						
LFF	**La Frestale**	**142.52**	**338**	*e*PKIKP	PKPdf	14 07 48.3	-6.0
	comp=Z,62nm,1.0s						
MTLF	**Montolieu**	**143.30**	**335**	*e*PKIKP	PKPdf	14 07 49.8	-5.8
	comp=Z,89nm,1.1s						
LRDF	**Laroque-de-Fa**	**143.50**	**335**	PKP	PKPdf	14 07 55.6	-0.4
SJAF	**Saint Jean de**	**143.72**	**334**	PKP	PKPdf	14 07 55.3	-1.1
EJON	**La Jonquera**	**143.75**	**334**	PKP	PKPdf	14 07 55.8	-0.7
LPEF	**Le Peyrat**	**143.75**	**335**	PKP	PKPdf	14 07 56.2	-0.2
FILF	**Fillols**	**143.80**	**334**	PKP	PKPdf	14 07 56.6	+0.1
MLS	**Moulis**	**144.07**	**336**	PKP	PKPdf	14 07 57.1	+0.1
VALF	**Valcebollere**	**144.16**	**335**	PKP	PKPdf	14 07 58.0	+0.8
SALF	**Salau**	**144.20**	**336**	PKP	PKPdf	14 07 57.2	0.0
MELF	**Melles**	**144.28**	**336**	PKP	PKPdf	14 07 57.7	+0.3
EPF	**Esparros**	**144.31**	**337**	*e*PKIKP	PKPdf	14 07 51.8	-5.6
	comp=Z,72nm,1.1s						
RESF	**Ens**	**144.50**	**337**	PKP	PKPdf	14 07 59.8	+2.0
REYF	**Montagne du Re**	**144.55**	**338**	PKP	PKPdf	14 07 58.8	+1.0
VIEF	**Viey**	**144.55**	**337**	PKP	PKPdf	14 07 59.6	+1.7
EBIE	**Bielsa**	**144.68**	**337**	PKP	PKPdf	14 08 00.2	+2.1
ETSF	**Etsaut**	**144.76**	**338**	*e*PKIKP	PKPdf	14 07 52.1	-6.1
	comp=Z,271nm,1.0s						
EMIR	**Miracle**	**144.77**	**335**	PKP	PKPdf	14 07 59.7	+1.4
LARF	**Larrau**	**144.79**	**339**	PKP	PKPdf	14 07 59.8	+1.5
SJPF	**Ste Jean**	**144.81**	**339**	*e*PKIKP	PKPdf	14 07 52.7	-5.6
	comp=Z,181nm,1.3s						
EALK	**Alkurruntz**	**144.82**	**339**	PKP	PKPdf	14 07 59.9	+1.6
EGRA	**Graus**	**145.03**	**336**	PKP	PKPdf	14 08 01.2	+2.5
EPOB	**Poblet**	**145.42**	**335**	PKP	PKPdf	14 08 01.6	+2.2
ELAN	**Lanestosa**	**145.44**	**341**	PKP	PKPdf	14 08 01.9	+2.5
ECRI	**Cripan**	**145.70**	**340**	PKP2	PKPab	14 08 03.3	+0.5
ESAC	**San Caprasio**	**145.74**	**337**	PKP	PKPdf	14 08 03.0	+3.1
CMAH	**Djebel Manchou**	**145.75**	**323**	P	PKPdf	14 08 02.5	+2.4
EARI	**Arriondas**	**145.90**	**344**	PKP	PKPdf	14 08 02.9	+2.7
ETOS	**Mallorca**	**145.93**	**331**	PKP	PKPdf	14 08 03.9	+3.6
ABSA	**Djebel Ababsia**	**145.95**	**322**	P	PKPdf	14 08 04.0	+3.5
CAEH	**’Ain El Ouahch**	**145.98**	**323**	P	PKPdf	14 08 05.0	+4.5
ERTA	**Horta de San J**	**146.06**	**335**	PKP	PKPdf	14 08 03.2	+2.7
CKFL	**Kef-Lekhel**	**146.32**	**323**	P	PKPdf	14 08 04.0	+2.9
EPON	**Pontenova**	**146.38**	**346**	PKP	PKPdf	14 08 04.4	+3.4
CASM	**Ain Smara**	**146.55**	**323**	P	PKPdf	14 08 04.0	+2.5
DFRA	**Djebel Bou Aff**	**146.71**	**324**	P	PKPdf	14 08 05.0	+3.2
CTEI	**Djebel Teioual**	**146.73**	**323**	P	PKPdf	14 08 04.0	+2.2
EMOS	**Mosqueruela**	**146.89**	**335**	PKP	PKPdf	14 08 07.1	+5.1
STS	**Santiago**	**147.11**	**348**	PKP2	PKPab	14 08 06.9	-1.4
EMAZ	**Mazaricos**	**147.14**	**348**	PKP	PKPdf	14 08 06.5	+4.2
SET	**Setif**	**147.23**	**324**	P	PKPdf	14 08 05.0	+2.4
CMER	**Merouana**	**147.34**	**323**	P	PKPdf	14 08 08.0	+5.2
ECAL	**Calabor**	**147.58**	**345**	PKP	PKPdf	14 08 07.8	+4.8
ECHE	**Chera**	**147.75**	**335**	PKP2	PKPab	14 08 08.9	-2.0
EZAM	**Zamans**	**147.85**	**347**	PKP2	PKPab	14 08 12.6	+1.4
ELOB	**Lobios**	**147.98**	**346**	PKP	PKPdf	14 08 09.4	+5.8
EBEN	**Beniarda**	**148.17**	**333**	PKP	PKPdf	14 08 10.3	+6.2
PVRL	**Vila Real**	**148.46**	**345**	*e*PKPbc	PKPdf	14 08 10.2	+5.8
EMHD	**Djebel Mahouad**	**148.59**	**327**	P	PKPdf	14 08 11.5	+6.7
ETOB	**Tobarra**	**148.79**	**335**	PKP	PKPdf	14 08 11.4	+6.3
ESDC	**Sonseca Array**	**148.81**	**339**	PKP	PKPdf	14 08 05.4	+0.3
	comp=Z,0.3nm,0.3s,slow=2.6,SNR=8.8						
ESDC				PKPbc	PKPdf	14 08 10.9	+5.9
	comp=Z,12nm,0.8s,baz=13,slow=3.9,SNR=9.2						
ESDC	**Sonseca Array**	**148.81**	**339**	PKP	PKPdf	14 08 05.4	+0.3
ESDC				PKPbc	PKPdf	14 08 10.9	+5.9
ESDC				PKP	PKPdf	14 08 11.2	+6.1
ESLA	**Sonseca Array**	**148.81**	**339**	*e*PKPdf	PKPdf	14 08 06.8	+1.7
ESLA				*e*PKPbc	PKPdf	14 08 11.1	+6.0
PVIS	**Viseu**	**149.03**	**345**	*e*PKPbc	PKPdf	14 08 11.6	+6.2
PVIS	**Viseu**	**149.03**	**345**	*e*PKPab	PKPab	14 08 17.4	+1.4
MTE	**Manteigas**	**149.24**	**345**	*e*PKPdf	PKPdf	14 08 07.9	+2.2
MTE	**Manteigas**	**149.24**	**345**	*e*PKPbc	PKPdf	14 08 12.3	+6.6
MTE	**Manteigas**	**149.24**	**345**	*e*PKPab	PKPab	14 08 17.9	+1.0
MTE	**Manteigas**	**149.24**	**345**	*e*PKPdf	PKPdf	14 08 07.5	+1.7
MTE				*e*PKPbc	PKPdf	14 08 12.3	+6.6
EMUR	**La Murta**	**149.33**	**334**	PKP	PKPdf	14 08 12.2	+6.2
CART	**Cartagena**	**149.44**	**333**	*e*PKPbc	PKPdf	14 08 11.8	+5.7
ECHF	**Ech Chlef**	**149.47**	**329**	P	PKPdf	14 08 13.0	+6.7
EANR	**’Ain N’Sour**	**149.75**	**329**	P	PKPdf	14 08 13.5	+6.8
EHUE	**Huescar**	**149.92**	**336**	PKP2	PKPab	14 08 14.4	-5.4
ETRT	**Tiaret**	**150.08**	**328**	P	PKPdf	14 08 15.0	+7.8
EBAN	**Banos Encina**	**150.08**	**338**	PKIKP	PKPdf	14 08 14.6	+7.4
EQES	**Quesada**	**150.12**	**336**	PKP	PKPdf	14 08 14.6	+7.3
EADA	**Adamuz**	**150.37**	**339**	PKP	PKPdf	14 08 15.4	+7.8
ENIJ	**Nijar**	**150.48**	**334**	PKIKP	PKPdf	14 08 15.2	+7.4
EBAD	**Badajoz**	**150.62**	**343**	PKP	PKPdf	14 08 15.5	+7.5
ECAB	**El Cabril**	**150.75**	**340**	PKP	PKPdf	14 08 16.3	+8.2
EBER	**Berja**	**150.83**	**335**	P	PKPdf	14 08 12.5	+4.2
EBER				PKP	PKPdf	14 08 17.0	+8.7
PLOU	**Loures**	**151.07**	**346**	*e*PKPbc	PKPdf	14 08 16.5	+7.9
ERON	**Agron**	**151.09**	**337**	PKP	PKPdf	14 08 16.2	+7.5
EVO	**Evora**	**151.11**	**344**	*e*PKP1	PKPdf	14 08 09.1	+0.4
	comp=Z,186nm,1.1s						
EVO				*e*R			
	comp=Z,957nm,21.2s						
ELOJ	**Sierra Loja**	**151.12**	**337**	PKIKP	PKPdf	14 08 16.6	+7.9
EGUA	**Guajares**	**151.16**	**336**	PKIKP	PKPdf	14 08 16.5	+7.7
EMIN	**Mina Concepcio**	**151.43**	**341**	PKP	PKPdf	14 08 17.9	+8.7
PBEJ	**Beja**	**151.55**	**344**	*e*PKPdf	PKPdf	14 08 11.2	+1.9
PBEJ	**Beja**	**151.55**	**344**	*e*PKPbc	PKPdf	14 08 17.7	+8.4
PBEJ	**Beja**	**151.55**	**344**	*e*PKPab	PKPab	14 08 26.6	0.0
PBEJ	**Beja**	**151.55**	**344**	*e*PP	PP	14 12 01.7	+2.9
EALB	**Alboran**	**151.71**	**334**	PKP	PKPdf	14 08 18.1	+8.5
EMIJ	**Mijas**	**151.86**	**337**	PKP	PKPdf	14 08 20.4	+10
EGRO	**El Granado**	**151.90**	**343**	PKP	PKPdf	14 08 18.5	+8.6
ESPR	**Espera**	**151.98**	**339**	PKP	PKPdf	14 08 19.6	+10
DBIC	**Dimbokro**	**166.61**	**253**	PKP	PKPdf	14 08 28.4	+1.0
	comp=Z,15nm,0.9s,baz=118,slow=3.5,SNR=9.0						

IDC ***30*** *13:52:23.9±1.0, 32.61S×57.19E, mb3.9/6, mb1 4.2/7, mb1mx4.0/21, mbtmp4.1/7, MS3.7/5, Ms1 3.7/5, ms1mx3.6/26, Error ellipse: s-maj=38.7km s-min=22.4km az=96.0*

ISC 30 13:52:23.6±0.7**, 32.7S**±0.1×**57.2E**±0.2**, h10^{km}, n13, $\sigma 0^{s}60$**/9**, mb3.9**/6**, MS3.6**/5**, 1C, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.70**	**325**	Pn	**P**	**13 56 19.6**	**+0.3**
	10nm,0.3s,baz=128,slow=13,SNR=91						
OPO				Sn	**S**	**13 59 10.4**	**-14**
	3.2nm,0.3s,baz=238,slow=14,SNR=8.1						
BOSA	**Boshof**	**27.75**	**270**	LR	LR	14 06 34.4	
	comp=Z,128nm,21.8s,MS3.5,baz=286,slow=31						
MATP	**Matopo**	**28.36**	**288**	LR	LR	14 08 31.7	
	comp=Z,172nm,18.5s,MS3.7,baz=118,slow=34						
LBTB	**Lobatse**	**28.67**	**277**	LR	LR	14 07 37.3	
	comp=Z,81nm,18.2s,MS3.4,baz=127,slow=32						
MAW	**Mawson**	**35.12**	**176**	P	**P**	**13 59 19.3**	**+0.4**
	0.9nm,0.3s,mb4.2,baz=326,slow=11,SNR=6.7						
KMBO	**Kilima Mbogo**	**36.58**	**325**	LR	LR	14 12 24.5	
	comp=Z,96nm,18.6s,MS3.6,baz=94,slow=33						
SYO	**Syowa Base**	**37.74**	**190**	⇑P	**P**	**13 59 40.2**	**-0.7**
TSUM	**Tsumeb**	**37.87**	**281**	LR	LR	14 13 40.6	
	comp=Z,222nm,19.6s,MS4.0,baz=320,slow=34						
SNAA	**Sanae**	**50.00**	**201**	P	**P**	**14 01 19.7**	**+0.2**
	1.3nm,0.7s,mb4.0,baz=93,slow=6.8,SNR=19						
CMAR	**Chiang Mai Arr**	**64.62**	**44**	P	**P**	**14 03 02.9**	**-0.9**
	1.5nm,0.7s,mb4.1,baz=233,slow=6.3,SNR=6.3						
WRA	**Warramunga Arr**	**68.95**	**101**	P	**P**	**14 03 31.9**	**+0.7**
	0.6nm,0.6s,mb3.7,baz=236,slow=5.0,SNR=3.5						
BRTR	**Keskin Array B**	**75.28**	**341**	P	**P**	**14 04 08.0**	**-0.6**
	0.5nm,0.7s,mb3.5,baz=149,slow=8.4,SNR=3.4						
BVAR	**Borovoye Array**	**86.11**	**8**	P	**P**	**14 05 06.2**	**+0.7**
	0.7nm,0.5s,mb4.2,baz=180,slow=4.3,SNR=4.2						

WEL 30 13:53:31.0±0.4**, 36.70S×179.10W, h33^{km}, ML3.8**/8**, Error ellipse: s-maj=4.7km s-min=4.1km az=0.0, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.25**	**247**	PN	Pn	13 54 05.1	-1.6
MXZ				SN	Sn	13 54 30.5	-3.1
PUZ	**Puketiti**	**2.51**	**236**	*e*PN	Pn	13 54 09.2	-1.3
PUZ				SN	Sn	13 54 37.5	-2.8
PUZ				SN	Sn	13 54 37.8	-2.5
MWZ	**Matawai**	**3.14**	**238**	*e*PN	Pn	13 54 17.3	-2.1
MWZ				SN	Sn	13 54 52.5	-3.6
URZ	**Urewera**	**3.40**	**242**	PN	Pn	13 54 21.4	-1.6
URZ				SN	Sn	13 54 59.1	-3.5
URZ				SN	Sn	13 54 59.5	-3.1
KNZ	**Kokohu**	**3.45**	**227**	*e*PN	Pn	13 54 21.4	-2.4
KUZ	**Kuaotunu**	**4.16**	**268**	*e*PN	Pn	13 54 32.0	-2.0
KUZ				SN	Sn	13 55 16.3	-5.9
BKZ	**Black Stump Fm**	**4.27**	**233**	PN	Pn	13 54 32.2	-3.2
BKZ				SN	Sn	13 55 17.8	-6.9
TSZ	**Takapari Road**	**5.13**	**228**	*e*PN	Pn	13 54 44.2	-3.5
MRZ	**Mangatainoka R**	**5.74**	**225**	*e*PN	Pn	13 54 50.0	-6.3
MRZ				SN	Sn	13 55 51.7	-10
TCW	**Tory Channel**	**6.85**	**227**	SN	Sn	13 56 20.7	-8.8
NNZ	**Nelson**	**7.39**	**230**	SN	Sn	13 56 33.0	-10
KHZ	**Kahutara**	**8.05**	**223**	SN	Sn	13 56 46.5	-13
MQZ	**McQueen’s Vall**	**9.42**	**219**	SN	Sn	13 57 18.6	-15

MOS 30 13:57:47.0±2.5**, 51.20N×98.40E, h14^{km}, mb4.3**/1**, Error ellipse: s-maj=37.0km s-min=19.8km az=142.3, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORL	**Orlik**	**1.60**	**33**	*e*PN	Pn	13 58 15.2	+0.1
ORL				*e*		13 58 38.0	
ORL				pmax	pmax		
	comp=Z,47nm,0.2s						
ORL				smax			
	comp=N,246nm,0.8s						
ARS	**Arshan**	**2.61**	**72**	*e*PN	Pn	13 58 30.4	+0.8
ARS				*e*		13 59 09.5	
ARS				pmax	pmax		
	comp=Z,22nm,0.1s						
ARS				smax			
	comp=E,351nm,0.3s						
TLY	**Talaya**	**3.32**	**80**	*e*PN	Pn	13 58 45.7	+6.1
TLY				*e*		13 59 29.8	
TLY				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TLY				smax			
	comp=N,83nm,0.8s						
IRK	**Irkutsk**	**3.80**	**72**	*e*PN	Pn	13 58 57.7	+11
IRK				*e*		13 59 44.0	
IRK				pmax	pmax		
	comp=Z,72nm,0.1s						
IRK				smax			
	comp=N,320nm,0.7s						
TRG	**Tyrgan**	**5.16**	**69**	*e*PN	Pn	13 59 04.0	-1.7
TRG				*e*		13 59 19.0	
TRG				*e*S	Sn	14 00 03.0	-2.6
TRG				*e*		14 00 25.9	
TRG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TRG				smax			
	comp=E,115nm,1.6s						
OGRR	**Ongureny**	**6.13**	**63**	*e*PN	Pn	13 59 17.9	-1.6
OGRR				*e*		13 59 37.2	
OGRR				*e*		14 00 57.2	
OGRR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
OGRR				smax			
	comp=E,65nm,1.6s						

ISK ***30*** *14:01:54.6, 37.84N×26.69E, h24^{km}, MD3.0*
ATH ***30*** *14:01:55.7, 37.80N×26.81E, h13^{km}±5^{km}, MD3.1/3*
CSEM ***30*** *14:01:55.8±0.1, 37.80N×26.94E, h5^{km}, MD3.0, Error ellipse: s-maj=3.5km s-min=2.2km az=108.0*

ISC 30 14:01:55.2±0.6**, 37.78N**±0.02×**26.74E**±0.04**, h8^{km}**±4^{km}**, n16, $\sigma 1^{s}17$**/27**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	**Samos**	**0.11**	**134**	*e*PG	**Pg**	**14 01 58.4**	**+0.5**
SMG				*e*SG	**Sg**	**14 02 00.9**	**+1.2**
URLA	**Izmir**	**0.59**	**349**	*i* P	**Pg**	**14 02 06.3**	**-0.7**
URLA				*i* S	**Sg**	**14 02 15.6**	**+0.6**
BLCB	**Balcova**	**0.65**	**22**	PG	**Pg**	**14 02 07.5**	**-0.7**
BLCB				SG	**Sg**	**14 02 16.4**	**-0.5**
IZM	**Izmir**	**0.74**	**34**	PG	**Pg**	**14 02 09.3**	**-0.8**
KDAG	**Bornova**	**0.74**	**34**	*i* P	**Pb**	**14 02 09.5**	**-0.5**
KDAG				*i* S	**Sg**	**14 02 19.5**	**-0.7**
BODT	**Bodrum**	**0.85**	**148**	PG	**Pg**	**14 02 11.8**	**-0.5**
BDRM	**Kayabasi**	**0.91**	**142**	*i* P	**Pb**	**14 02 13.5**	**+0.7**
BDRM				*i* S	**Sb**	**14 02 25.4**	**+0.6**
AYDN	**Tasoluk**	**0.91**	**97**	*i* P	**Pb**	**14 02 12.2**	**-0.7**
AYDN				*i* S	**Sb**	**14 02 25.3**	**+0.4**
MLSB	**Milas**	**0.96**	**120**	PG	**Pg**	**14 02 13.5**	**-1.0**
APE	**Apeiranthos**	**1.20**	**234**	PN	**Pn**	**14 02 16.3**	**-1.9**
APE				SN	**Sn**	**14 02 32.7**	**-2.0**
APE	**Apeiranthos**	**1.20**	**234**	*e*Pb	**Pb**	**14 02 19.5**	**+1.8**
AKS	**Akhisar**	**1.38**	**37**	PN	**Pn**	**14 02 18.6**	**-2.3**
YER	**Yerkesik**	**1.39**	**117**	PN	**Pn**	**14 02 20.4**	**-0.6**
YER				SN	**Sn**	**14 02 38.9**	**-0.7**
PRK	**Paraskevi**	**1.50**	**346**	*e*PB	**Pb**	**14 02 24.2**	**+1.2**
PRK				*e*SB	**Sb**	**14 02 44.5**	**+2.4**
MANT	**Manisa**	**1.60**	**63**	*i* P	**Pn**	**14 02 25.3**	**+1.4**
MANT				*i* S	**Sb**	**14 02 44.9**	**+0.1**
DNZL	**Cakiroluk**	**1.83**	**92**	*i* P	**Pn**	**14 02 29.8**	**+2.5**
DNZL				*i* S	**Sn**	**14 02 55.9**	**+5.0**

NEIC ***30*** *14:11:08.5, 16.21N×97.61W, h30^{km}, MD3.8(MEX), After MEX.*

MEX 30 14:11:07.4±0.8**, 16.22N×97.67W, h55^{km}**±17^{km}**, MD3.9, 1C, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.47**	**291**	⇑*i*P	P	14 11 17.4	-1.3
PNIG				*i* S	S	14 11 25.2	-1.7
VHO	**Vista Hermosa**	**1.23**	**47**	*i* P	P	14 11 27.1	-1.7
VHO				*i* S	S	14 11 41.9	-2.7
OXX	**Oaxaca**	**1.25**	**47**	*i* P	P	14 11 27.5	-1.4
OXX				*i* S	S	14 11 43.0	-1.9
HUIG	**Huatulco**	**1.57**	**106**	*e*P	P	14 11 32.6	-0.9
HUIG				*i* S	S	14 11 51.6	-1.2
HUIG	**Huatulco**	**1.57**	**106**	*e*P	P	14 11 32.6	-0.9
HUIG				*i* S	S	14 11 49.6	-3.2
ACX	**Acapulco**	**2.25**	**287**	*i* P	P	14 11 47.0	+4.0
ACX	**Acapulco**	**2.25**	**287**	*i* P	P	14 11 41.0	-2.0
ACX				*i* S	S	14 12 06.0	-3.6
IISM	**Ciudad Serdan**	**2.77**	**6**	*e*P	P	14 11 55.0	+4.6
PLIG	**Platanillo**	**2.78**	**321**	*i* P	P	14 11 50.1	-0.4
PLIG				*i* S	S	14 12 24.4	+1.4
PLIG	**Platanillo**	**2.78**	**321**	*i* P	P	14 11 49.4	-1.2
PLIG				*i* S	S	14 12 21.4	-1.6
CMIG	**Matias Romero**	**2.81**	**72**	*e*P	P	14 11 47.0	-3.9
CMIG				*i* S	S	14 12 20.6	-3.2
YAIG	**Yautepec**	**2.94**	**333**	*e*P	P	14 11 58.2	+5.2
YAIG				*i* S	S	14 12 35.6	+8.4
YAIG	**Yautepec**	**2.94**	**333**	*e*P	P	14 11 54.8	+1.9
YAIG				*i* S	S	14 12 27.5	+0.2
PPM	**Popocatepetl**	**2.97**	**342**	*e*P	P	14 11 58.2	+4.8

PPM				*i*S	S	14 12 35.2	+7.2
PPM	**Popocatepetl**	**2.97**	**342**	*e*P	P	14 11 56.2	+2.9
PPM				*i*S	S	14 12 29.9	+1.9
LVIG	**Laguna Verde**	**3.68**	**19**	*i*P	P	14 11 52.2	-11
LVIG				*i*S	S	14 12 57.4	+12
LVIG	**Laguna Verde**	**3.68**	**19**	*i*P	P	14 12 02.1	-1.2
LVIG				*i*S	S	14 12 44.6	-1.2
PLAL	**Pickwick Lake**	**20.57**	**23**	*e*P	P	14 15 48.3	+4.3
	22nm,0.9s						
WVT	**Waverly**	**21.68**	**22**	*e*P	P	14 15 56.3	+1.1
	13nm,0.8s						
NAO01	**NORSAR Array S**	**84.70**	**28**	*e*P	P	14 23 35.0	-1.3
	4.1nm,0.6s						

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*NEIC **30** 14:13:46.0,38.92S×142.28E,ML3.5(AUST),After AUST.*

AUST 30 14:13:46.4,39.18S×142.13E,h32^{km},ML3.5,Bass Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARPS	**Mount Arapiles**	**2.42**	**354**	*e*P	Pn	14 14 25.4	+0.9
ARPS				*e*S	Sn	14 14 52.9	-0.4
	254nm,0.3s						
TOO	**Toolangi**	**3.09**	**60**	*e*P	Pn	14 14 34.8	+0.7
TOO				*e*S	Sn	14 15 09.0	-1.4
	8.8nm,0.4s						
STKA	**Stephens Creek**	**7.30**	**356**	*e*P	Pn	14 15 32.8	-0.8
STKA				*e*S	Sn	14 16 48.8	-7.3
	11nm,0.3s						
STKA	**Stephens Creek**	**7.30**	**356**	*e*P	Pn	14 15 32.8	-0.8
	11nm,0.3s						
STKA				*e*S	Sn	14 16 48.8	-7.3
BBOO	**Buckleboo**	**8.03**	**320**	*e*P	P	14 15 43.0	-0.8
BBOO				*e*S	Sn	14 17 07.1	-7.4
	7.0nm,0.3s						
BBOO	**Buckleboo**	**8.03**	**320**	*e*P	P	14 15 43.0	-0.8
	7.0nm,0.3s						
BBOO				*e*S	Sn	14 17 07.1	-7.4
CMSA	**Cobar Meteorol**	**8.16**	**22**	*e*P	P	14 15 45.4	-0.1

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*NEIC **30** 14:25:11.0,31.78S×70.29W,h107^{km},MD3.6(GUC),After GUC.*

GUC 30 14:25:11.0±0.5,31.78S×70.29W,h107^{km}±5^{km},MD3.6, ML3.3,1C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.94**	**196**	⇓*i*P	P	14 25 31.8	+0.3
JACH				*i*S	S	14 25 47.7	+0.7
PACH	**Papudo**	**1.23**	**232**	⇑*i*P	P	14 25 35.0	+0.1
PACH				*i*S	S	14 25 53.1	+0.3
ROCH	**El Roble**	**1.34**	**207**	⇓*i*P	P	14 25 36.5	+0.3
ROCH				*i*S	S	14 25 55.4	+0.4
FCH	**Farellones**	**1.55**	**180**	⇓*i*P	P	14 25 39.3	+0.6
FCH				*i*S	S	14 26 00.8	+1.5
CLCH	**Cerro Calan**	**1.63**	**187**	*e*P	P	14 25 42.5	+2.8
CLCH				*i*S	S	14 26 01.4	+0.3
CLCH				AMP		14 26 09.2	
	comp=E,397nm,0.5s						
MDZ	**Mendoza**	**1.65**	**133**	*e*P	P	14 25 38.4	-1.5
MDZ				*i*S	S	14 26 00.4	-1.0
TLL	**Tololo Astrono**	**1.66**	**345**	*e*P	P	14 25 40.5	+0.5
TLL				*i*S	S	14 26 02.8	+1.0
TLL				AMP		14 26 06.4	
	comp=N,428nm,0.7s						
PCH	**Pirque**	**1.85**	**186**	*i*P	P	14 25 42.4	0.0
PCH				*i*S	S	14 26 06.2	+0.4
TACH	**Talagante**	**1.95**	**196**	*e*P	P	14 25 41.3	-2.3
TACH				*i*S	S	14 26 08.0	0.0
LCCH	**Las Cruces**	**2.01**	**212**	*e*P	P	14 25 44.4	-0.1
CHCH	**Chadas Angostu**	**2.17**	**188**	*e*P	P	14 25 46.6	-0.1
CHCH				*i*S	S	14 26 13.7	+0.3

MAN 30 14:29:21.1,10.24N×122.10E,h1^{km},mb4.0,ML2.8,MS2.4, 2C,Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.62**	**51**	*e*P	Pg	14 29 32.5	-0.9
GUIM				*e*S	Sg	14 29 40.7	-0.9
CUYO	**Cuyo Island**	**1.22**	**300**	*e*P	Pb	14 29 45.1	+0.4
CUYO				*e*S	Sb	14 30 02.4	+1.5
SNPH	**Sibulan**	**1.43**	**128**	⇑*i*P	Pn	14 29 48.3	+0.1
SNPH				*i*S	Sb	14 30 10.3	+3.4
RCP	**Roxas**	**1.46**	**26**	⇑*e*P	Pn	14 30 08.5	+20
IPIL	**Ipil**	**2.48**	**169**	*e*P	Pn	14 30 03.4	+0.2
IPIL				*e*S	Sn	14 30 31.6	-3.0
PAGZ	**Pagadian**	**2.69**	**152**	*e*P	Pn	14 30 06.8	+0.5
ENPP	**El Nido**	**2.80**	**290**	*e*P	Pn	14 30 07.9	+0.1
ENPP				*e*S	Sn	14 30 39.5	-3.1

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*BJI **30** 14:41:01.3,25.50N×141.83E,h38^{km},mB5.0,mb4.6, Ms4.5,Msz4.5*

*MOS **30** 14:41:05.3±1.7,25.59N×141.13E,h44^{km},mb4.8/17,Error ellipse: s-maj=13.8km s-min=9.0km az=104.6*

*IDC **30** 14:41:05.4±5.1,25.63N×141.13E,h33^{km}±38^{km},mb4.1/14, mb1 4.3/14,mb1mx4.3/15,mbtmp4.3/14,MS3.7/2, Ms1 3.7/2,ms1mx3.5/20,Error ellipse: s-maj=21.1km s-min=14.5km az=92.0*

*NEIC **30** 14:41:08.1±4.6,25.54N×141.10E,h53^{km}±41^{km},mb4.7/27, Error ellipse: s-maj=12.8km s-min=10.2km az=92.0*

ISC 30 14:41:04.6±0.3,25.55N±0.06×141.17E±0.06,h33^{km}, (h21^{km}±8.4^{km}:pP-P),n95,σ1^{s}39/92,mb4.5/45,MS4.2/4, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.79**	**30**	Pn	**Pn**	**14 41 31.8**	**-1.9**
	401nm,0.3s,baz=106,slow=3.4,SNR=81						
CBIJ				Sn	**Sn**	**14 41 54.4**	**-1.1**
	224nm,0.3s,baz=301,slow=23,SNR=14						
JNU	**Nakatsue**	**11.72**	**312**	LR	LR	14 47 07.4	
	comp=Z,281nm,19.1s,baz=5.7,slow=31						
KS15	**Wonju Array Si**	**16.38**	**320**	*e*P	**P**	**14 44 59.0**	**+5.5**
ASAJ	**Asahikawa**	**18.56**	**3**	P	**P**	**14 45 21.4**	**+0.6**
	0.3nm,0.3s,baz=238,slow=9.5,SNR=3.5						
YSS	**Yuzh-Sakhalins**	**21.39**	**3**	P	**P**	**14 45 50.1**	**-1.3**
YSS				pmax	pmax		
	comp=Z,65nm,1.6s,mb4.7						
YSS	**Yuzh-Sakhalins**	**21.39**	**3**	P	**P**	**14 45 50.1**	**-1.3**
	comp=Z,65nm,1.6s,mb4.7						
TIA	**Tai'an**	**23.15**	**303**	*e*P	**P**	**14 46 11.3**	**+2.3**
TIA				AMB	AMB		
	comp=Z,30nm,1.6s,mb4.5						
WHN	**Wuhan**	**24.16**	**288**	*e*P	**P**	**14 46 22.5**	**+3.7**
ENH	**Enshi**	**28.34**	**287**	P	**P**	**14 46 53.1**	**-4.6**
	comp=Z,28nm,1.5s,mb4.7						
HHC	**Hu-ho-hao-te**	**28.92**	**309**	*e*P	**P**	**14 47 05.5**	**+2.8**
HHC				AP	pP	14 47 09.8	-2.5
HHC				AMB	AMB		
	comp=Z,270nm,11.6s						
HHC				LR	LR		
	comp=N,560nm,16.7s,MS4.3						
HHC				LR	LR		
	comp=E,310nm,15.5s,MS4.3						
HHC				LR	LR		
	comp=Z,650nm,16.1s,MS4.3						
XAN	**Xi'an**	**29.14**	**295**	P	**P**	**14 47 05.0**	**+0.2**
CD2	**Chengdu**	**33.28**	**288**	P	**P**	**14 47 42.5**	**+1.2**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb5.1						
LZH	**Lanzhou**	**33.55**	**297**	*e*P	**P**	**14 47 45.0**	**+1.5**
LZH				AP	pP	14 47 54.0	+0.8
LZH				XP	sP	14 47 58.0	+0.5
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,90nm,4.0s						
LZH				LR	LR		
	comp=E,440nm,13.8s						
LZH				LR	LR		
	comp=Z,760nm,15.0s,MS4.5						
LZH	**Lanzhou**	**33.55**	**297**	*e*P	**P**	**14 47 45.0**	**+1.5**
LZH				*SP	sP	14 47 58.0	+0.5
LZH				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.0						
LZH				MLR	MLR		
	comp=Z,760nm,15.0s,MS4.5						
LZH	**Lanzhou**	**33.55**	**297**	*e*P	**P**	**14 47 45.0**	**+1.5**
	comp=Z,28nm,1.5s,mb5.0						
LZH				pP	pP	14 47 54.1	+0.9
LZH				sP	sP	14 47 58.0	+0.5
LZH				LR	LR		
	comp=Z,760nm,15.0s,MS4.5						
KMI	**Kunming**	**34.66**	**278**	P	**P**	**14 47 55.0**	**+1.9**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
KMI	**Kunming**	**34.66**	**278**	P	**P**	**14 47 55.1**	**+2.0**
	comp=Z,12nm,1.2s,mb4.7						
MA2	**Magadan**	**34.66**	**9**	P	**P**	**14 47 48.8**	**-4.0**
MA2				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
MA2	**Magadan**	**34.66**	**9**	P	**P**	**14 47 48.8**	**-4.0**
	comp=Z,12nm,1.3s,mb4.7						
ULN	**Ulaanbaatar**	**34.84**	**319**	*e*P	**P**	**14 47 55.4**	**+0.9**
ULN				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
ULN	**Ulaanbaatar**	**34.84**	**319**	*e*P	**P**	**14 47 55.4**	**+0.9**
	comp=Z,14nm,1.0s,mb4.8						
SONM	**Songino Array**	**35.22**	**318**	P	**P**	**14 47 57.6**	**-0.2**
	comp=Z,2.1nm,0.5s,mb4.3,baz=129,slow=7.9,SNR=18						
SONM				LR	LR	15 01 48.7	
	comp=Z,157nm,18.3s,MS3.8,baz=78,slow=35						
GTA	**Gaotai**	**37.20**	**302**	*e*P	**P**	**14 48 15.8**	**+1.3**
GTA				AP	pP	14 48 23.8	-0.5
GTA				XP	sP	14 48 27.3	-1.2
GTA				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.5						
GTA				AMB	AMB		
	comp=Z,150nm,5.4s						
GTA				LR	LR		
	comp=N,180nm,13.4s,MS4.2						
GTA				LR	LR		
	comp=E,270nm,18.0s,MS4.2						
GTA				LR	LR		
	comp=Z,200nm,16.0s,MS4.0						
ZAK	**Zakamensk**	**38.19**	**321**	*e*P	**P**	**14 48 22.7**	**0.0**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.2						
TLY	**Talaya**	**38.58**	**323**	P	**P**	**14 48 22.9**	**-3.0**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
TLY	**Talaya**	**38.58**	**323**	P	**P**	**14 48 22.9**	**-3.0**
	comp=Z,4.7nm,1.1s,mb4.1						
CM31	**Chiang Mai Arr**	**39.66**	**268**	P	**P**	**14 48 34.9**	**-0.3**
	comp=Z,8.4nm,1.2s,mb4.3						
CMAR	**Chiang Mai Arr**	**39.66**	**268**	P	**P**	**14 48 36.8**	**+1.7**
	comp=Z,0.8nm,0.6s,mb3.6,baz=66,slow=7.5,SNR=7.1						
LSA	**Lhasa**	**44.24**	**287**	*e*P	**P**	**14 49 11.1**	**-1.6**
LSA				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.7						
LSA	**Lhasa**	**44.24**	**287**	*e*P	**P**	**14 49 11.1**	**-1.6**
	comp=Z,21nm,1.3s,mb4.7						
BILL	**Bilibino**	**45.16**	**13**	*e*P	**P**	**14 49 19.4**	**-0.1**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.3						
BILL	**Bilibino**	**45.16**	**13**	*e*P	**P**	**14 49 18.9**	**-0.7**
	comp=Z,19nm,1.6s,mb4.7						
CTA	**Charters Tower**	**45.63**	**173**	P	**P**	**14 49 24.9**	**+0.9**
	comp=Z,6.1nm,1.0s,mb4.5,baz=16,slow=10,SNR=4.9						
CTAO	**Charters Tower**	**45.63**	**173**	P	**P**	**14 49 21.1**	**-2.9**
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
CTAO	**Charters Tower**	**45.63**	**173**	P	**P**	**14 49 21.1**	**-3.0**
	comp=Z,7.7nm,0.9s,mb4.6						
WRAB	**Tennant Creek**	**45.70**	**189**	*e*P	**P**	**14 49 23.1**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,81nm,0.9s						
WRAB	**Tennant Creek**	**45.70**	**189**	*e*P	**P**	**14 49 23.1**	**-1.5**
	comp=Z,81nm,0.9s						
WB2	**Warramunga Arr**	**45.70**	**189**	*e*P	**P**	**14 49 23.1**	**-1.5**
WRA	**Warramunga Arr**	**45.71**	**189**	P	**P**	**14 49 23.2**	**-1.4**
	comp=Z,43nm,0.9s,mb5.4,baz=8.9,slow=8.6,SNR=89						
MKAR	**Makanchi Array**	**50.77**	**311**	P	**P**	**14 50 03.2**	**-0.2**
	comp=Z,3.4nm,0.9s,mb4.3,baz=90,slow=9.7,SNR=23						
NVS	**Novosibirsk**	**51.15**	**321**	*e*P	**P**	**14 50 04.6**	**-1.6**
AAK	**Ala-Archa**	**56.40**	**306**	*e*P	**P**	**14 50 43.8**	**-1.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
AAK	**Ala-Archa**	**56.40**	**306**	*e*P	**P**	**14 50 43.8**	**-1.3**
	comp=Z,5.3nm,0.9s,mb4.6						
NDI	**New Delhi**	**56.40**	**289**	*e*x	**P**	**14 50 46.0**	**+0.7**
STKA	**Stephens Creek**	**57.11**	**180**	*e*P	**P**	**14 50 48.4**	**-1.9**
	comp=Z,6.7nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**57.11**	**180**	P	**P**	**14 50 48.8**	**-1.6**
	comp=Z,9.1nm,0.9s,mb4.8,baz=344,slow=7.2,SNR=10						
ZRNK	**Zerenda**	**59.41**	**318**	*e*P	**P**	**14 51 04.2**	**-1.9**
ZRNK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
ZRNK	**Zerenda**	**59.41**	**318**	*e*P	**P**	**14 51 04.2**	**-1.9**
	comp=Z,7.5nm,1.2s,mb4.6						
ILAR	**Eielson Array**	**59.50**	**28**	P	**P**	**14 51 04.8**	**-1.8**
	comp=Z,3.8nm,1.0s,mb4.4,baz=261,slow=5.7,SNR=31						
INK	**Inuvik**	**64.81**	**24**	*e*P	**P**	**14 51 40.9**	**-0.9**
INK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
INK	**Inuvik**	**64.81**	**24**	*e*P	**P**	**14 51 40.9**	**-0.9**
	comp=Z,5.2nm,1.0s,mb4.5						
ARU	**Arti**	**65.09**	**323**	*e*P	**P**	**14 51 41.4**	**-2.4**
ARU	**Arti**	**65.09**	**323**	*e*P	**P**	**14 51 41.4**	**-2.4**
DLBC	**Dease Lake**	**67.99**	**35**	*e*P	**P**	**14 52 01.9**	**-0.2**
YKA	**Yellowknife Ar**	**73.93**	**28**	P	**P**	**14 52 37.3**	**-0.5**
	comp=Z,4.0nm,0.9s,mb4.4,baz=293,slow=5.7,SNR=19						
YKA	**Yellowknife Ar**	**73.93**	**28**	P	**P**	**14 52 37.3**	**-0.5**
ARCES	**ARCESS Array B**	**74.69**	**341**	P	**P**	**14 52 40.8**	**-1.4**
	comp=Z,1.6nm,0.8s,mb4.0,baz=63,slow=8.1,SNR=6.5						
EDM	**Edmonton**	**78.59**	**36**	*e*P	**P**	**14 53 04.4**	**+0.1**
NEW	**Newport**	**78.66**	**42**	*e*P	**P**	**14 53 05.5**	**+0.7**
NEW				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NEW	**Newport**	**78.66**	**42**	*e*P	**P**	**14 53 05.5**	**+0.7**
	comp=Z,7.7nm,0.9s,mb4.6						
FINES	**FINESS Array B**	**78.92**	**334**	P	**P**	**14 53 03.5**	**-2.5**
	comp=Z,2.6nm,0.5s,mb4.4,baz=71,slow=5.7,SNR=30						
BMO	**Blue Mountains**	**80.03**	**45**	*e*P	**P**	**14 53 13.3**	**+1.0**
	comp=Z,12nm,1.4s,mb4.6						
CMB	**Columbia Colle**	**80.88**	**52**	*e*P	**P**	**14 53 18.1**	**+1.1**
CMB				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
CMB	**Columbia Colle**	**80.88**	**52**	*e*P	**P**	**14 53 18.1**	**+1.1**
	comp=Z,11nm,1.3s,mb4.6						
CHMT	**Chamberlain Mo**	**81.60**	**42**	*e*P	**P**	**14 53 20.3**	**-0.3**
NVAR	**Mina Array Bea**	**82.19**	**51**	P	**P**	**14 53 24.4**	**+0.6**
	comp=Z,1.4nm,0.8s,mb3.9,baz=290,slow=3.6,SNR=9.3						
HLID	**Hailey**	**82.47**	**45**	*e*P	**P**	**14 53 26.6**	**+1.5**
	comp=Z,2.5nm,1.0s,mb4.1						
HRY	**Holter Researc**	**82.56**	**42**	*e*P	**P**	**14 53 26.0**	**+0.5**
AKASG	**Malin Array Be**	**83.32**	**324**	P	**P**	**14 53 27.3**	**-1.9**
	comp=Z,0.3nm,0.4s,mb3.7,baz=46,slow=5.7,SNR=8.4						
FFC	**Flin Flon**	**83.53**	**31**	*e*P	**P**	**14 53 29.7**	**-0.5**
FFC				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
FFC	**Flin Flon**	**83.53**	**31**	*e*P	**P**	**14 53 29.7**	**-0.5**
	comp=Z,9.4nm,1.0s,mb4.9						
QLMT	**Earthquake Lak**	**83.73**	**43**	*e*P	**P**	**14 53 33.3**	**+1.8**
YFT	**Old Faithful**	**84.29**	**43**	*e*P	**P**	**14 53 38.3**	**+4.0**
IMW	**Indian Meadow**	**84.50**	**44**	*e*P	**P**	**14 53 37.8**	**+2.4**
	comp=Z,11nm,0.9s,mb5.0						
RRI2	**Red Ridge**	**84.54**	**44**	*e*P	**P**	**14 53 36.8**	**+1.1**
	comp=Z,7.0nm,0.8s,mb4.8						
NB2	**NORSAR Subarra**	**84.70**	**338**	P	**P**	**14 53 33.7**	**-2.3**
	comp=Z,1.8nm,0.7s,mb4.3,baz=44,slow=5.0						
NOA	**NORSAR Array B**	**84.70**	**338**	P	**P**	**14 53 33.7**	**-2.3**
	comp=Z,1.5nm,0.8s,mb4.2,baz=46,slow=4.8,SNR=4.7						
NOA	**NORSAR Array B**	**84.70**	**338**	P	**P**	**14 53 33.7**	**-2.3**
MOOW	**Moose Ponds**	**84.70**	**44**	*e*P	**P**	**14 53 37.2**	**+0.8**
	comp=Z,3.8nm,1.0s,mb4.5						
LOHW	**Long Hollow**	**84.86**	**44**	*e*P	**P**	**14 53 38.3**	**+1.1**
	comp=Z,7.7nm,1.1s,mb4.8						
HWUT	**Hardware Ranch**	**85.25**	**46**	*e*P	**P**	**14 53 40.3**	**+1.1**
	comp=Z,7.9nm,1.0s,mb4.8						
NEN	**Nelson**	**85.92**	**52**	*e*P	**P**	**14 53 41.7**	**-1.0**
PDAR	**Pinedale Array**	**85.95**	**44**	P	**P**	**14 53 42.9**	**+0.3**
	comp=Z,2.7nm,1.0s,mb4.5,baz=270,slow=3.0,SNR=14						
LDFC	**Landfair**	**86.00**	**53**	*e*P	**P**	**14 53 44.5**	**+1.5**
DAU	**Daniels Canyon**	**86.06**	**47**	*e*P	**P**	**14 53 44.0**	**+0.8**
BRTR	**Keskin Array B**	**86.38**	**313**	P	**P**	**14 53 47.1**	**+2.4**
	comp=Z,0.5nm,0.5s,mb4.0,baz=45,slow=1.7,SNR=4.3						
MSU	**Marysvale**	**86.39**	**49**	*e*P	**P**	**14 53 46.4**	**+1.5**
ANMO	**Albuquerque**	**92.17**	**49**	P	**P**	**14 54 13.9**	**+1.6**
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ANMO	**Albuquerque**	**92.17**	**49**	P	**P**	**14 54 13.8**	**+1.6**
	comp=Z,3.2nm,1.1s,mb4.6						
GERES	**GERESS Array B**	**92.35**	**328**	P	**P**	**14 54 10.8**	**-2.0**
	comp=Z,0.2nm,0.3s,mb4.0,baz=63,slow=6.0,SNR=4.7						
TXAR	**Lajitas Array**	**97.25**	**53**	P	**P**	**14 54 36.5**	**+0.9**
	comp=Z,0.2nm,0.4s,mb3.9,baz=315,slow=3.5,SNR=3.6						
TXAR	**Lajitas Array**	**97.25**	**53**	P	**P**	**14 54 36.5**	**+0.8**
PLCA	**Paso Flores**	**149.63**	**128**	PKPbc	PKPdf	15 00 50.3	+4.2
	comp=Z,6.0nm,1.1s,baz=110,slow=0.7,SNR=5.2						
LPAZ	**La Paz**	**151.18**	**77**	PKPbc	PKPdf	15 00 56.7	+7.6
	comp=Z,2.9nm,0.9s,baz=4.2,slow=2.6,SNR=10.0						
SAML	**Samuel**	**151.56**	**59**	*e*PKPdf	PKPdf	15 00 52.0	+2.1

MAN 30 14:54:28.5,9.57N×122.97E,h143^{km},mb3.9,ML2.6, MS2.3,1C-1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.35**	**130**	⇓*i*P	P	14 54 49.6	+0.8
SNPH				*i*S	S	14 55 05.6	+1.2
DCPH	**Dipolog City**	**1.05**	**159**	⇑*i*P	P	14 54 53.7	+0.5
DCPH				*i*S	S	14 55 11.6	-0.7
GUIM	**Jordan**	**1.12**	**340**	*e*P	P	14 54 53.7	-0.2
GUIM				*e*S	S	14 55 12.3	-1.1
PAGZ	**Pagadian**	**1.76**	**167**	*e*P	P	14 55 01.5	+0.8
PAGZ				*e*S	S	14 55 24.5	-1.0
IPIL	**Ipil**	**1.81**	**193**	*e*P	P	14 55 01.4	+0.1
IPIL				*e*S	S	14 55 19.9	-6.7
CUYO	**Cuyo Island**	**2.31**	**304**	*e*P	P	14 55 07.0	-0.3
CUYO				*e*S	S	14 55 37.8	+0.7
SJMP	**San Jose**	**3.40**	**328**	*e*P	P	14 55 22.0	+0.5
SJMP				*e*S	S	14 56 00.0	-2.1

IDC 30 15:20:59.4±10.0,19.93S×68.79W,h134^{km}±64^{km}, mb3.8/1,mb1 3.7/3,mb1mx3.3/16,mbtmp3.9/3,MS2.8/1, Ms1 2.9/1,ms1mx2.5/21,Error ellipse: s-maj=127.1km s-min=37.1km az=10.0,Incorrectly calculated travel-time residual on T phase at H03N,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.68**	**10**	P	P	15 21 55.6	-0.3
	2.7nm,0.3s,baz=202,slow=7.8,SNR=50						
LPAZ				LR	LR	15 22 50.9	
	comp=Z,122nm,18.7s,baz=260,slow=30						
SIV	**San Ignacio**	**8.32**	**63**	P	P	15 22 57.3	-1.0
	0.6nm,0.3s,baz=261,slow=12,SNR=19						
SIV				S	S	15 24 30.3	-0.7
	0.1nm,0.3s,baz=164,slow=21,SNR=2.7						
YKA	**Yellowknife Ar**	**89.75**	**341**	P	P	15 33 42.2	-1.1
	1.0nm,0.6s,baz=134,slow=4.1,SNR=7.5						
MKAR	**Makanchi Array**	**144.29**	**35**	PKP	PKPdf	15 40 18.6	-0.8
	0.3nm,0.6s,baz=302,slow=3.1,SNR=5.7						

JMA 30 15:39:38.6±0.2,43.55N×147.70E,h18^{km},M4.0,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.44**	**263**	P	Pn	15 40 04.3	+0.3
NEM2				*e*S	Sb	15 40 22.8	+0.4
JRA	**Rausu**	**1.91**	**283**	P	Pn	15 40 10.8	+0.1
JRA				*e*S	Sn	15 40 34.5	0.0
JNK	**Nakash**	**2.17**	**272**	P	Pn	15 40 14.2	-0.3
JNK				*e*S	Sn	15 40 40.8	-0.3
JAK	**Akkeshi**	**2.26**	**257**	P	Pn	15 40 15.8	0.0
JAK				*e*S	Sn	15 40 43.2	-0.3
JTKR	**Abashiri--Toko**	**2.78**	**280**	P	Pn	15 40 23.6	+0.4
JTKR				*e*S	Sn	15 40 58.0	+1.4
JAR	**Ashorobuto**	**2.88**	**266**	P	Pn	15 40 24.8	+0.2
JAR				*e*S	Sn	15 40 58.8	-0.2
JOB	**Onbets**	**2.90**	**258**	P	Pn	15 40 25.0	+0.1
JOB				*e*S	Sn	15 40 59.5	-0.1
JMP	**Maruseppu**	**3.18**	**280**	P	Pn	15 40 29.1	+0.3
JCH	**Churui**	**3.31**	**255**	P	Pn	15 40 30.3	-0.5
JCH				*e*S	Sn	15 41 08.7	-1.4
JFR	**Furan**	**3.74**	**266**	P	Pn	15 40 37.6	+0.7
JFR				*e*S	Sn	15 41 21.3	+0.3
JNBK	**Urakawa-nobuka**	**3.85**	**252**	P	Pn	15 40 37.7	-0.7
JNBK				*e*S	Sn	15 41 22.0	-1.7
JEW	**Eniwo**	**4.62**	**263**	P	Pn	15 40 49.1	-0.3

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*NEIC **30** 15:49:27.6±0.8,17.44S×178.75W,h540^{km}±12^{km},mb4.3/7, Error ellipse: s-maj=36.3km s-min=8.8km az=152.0*

*IDC **30** 15:49:30.4±5.7,17.29S×178.94W,h566^{km}±72^{km},mb3.3/7, mb1 3.6/8,mb1mx3.4/14,mbtmp4.3/8,Error ellipse: s-maj=73.6km s-min=26.8km az=156.0*

ISC 30 15:49:26.8±1.3,17.4S±0.3×178.8W±0.2,h539^{km}±19^{km}, n20,σ0^{s}80/19,mb4.0/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.61**	**64**	*e*P	**P**	**15 51 20.6**	**-0.6**
DZM	**Mont Dzumac**	**14.64**	**249**	P	**P**	**15 52 34.6**	**+1.9**
	0.5nm,0.3s,baz=118,slow=22,SNR=4.0						
CTA	**Charters Tower**	**33.16**	**260**	*e*P	**P**	**15 55 21.1**	**+1.0**
	5.7nm,1.5s,mb3.9						
CTA	**Charters Tower**	**33.16**	**260**	P	**P**	**15 55 21.0**	**+0.9**
	6.0nm,0.9s,mb4.1,baz=98,slow=11,SNR=3.8						
CTAO	**Charters Tower**	**33.16**	**260**	*e*P	**P**	**15 55 20.8**	**+0.7**
	12nm,1.1s,mb4.3						
CNB	**Canberra Magne**	**33.43**	**232**	*e*P	**P**	**15 55 22.1**	**-0.2**
	95nm,1.6s,mb5.1						
TOO	**Toolangi**	**37.19**	**230**	*e*P	**P**	**15 55 53.0**	**-0.3**
	5.1nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**38.54**	**241**	*e*P	**P**	**15 56 04.6**	**+0.3**
	5.2nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**15 56 04.7**	**+0.3**
	4.6nm,0.4s,mb4.3,baz=94,slow=9.5,SNR=39						
WB2	**Warramunga Arr**	**44.34**	**259**	*e*P	**P**	**15 56 49.7**	**-1.0**
WRAB	**Tennant Creek**	**44.34**	**259**	P	**P**	**15 56 50.3**	**-0.5**
	4.7nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**44.35**	**259**	P	**P**	**15 56 50.0**	**-0.9**
	1.7nm,0.5s,mb3.8,baz=93,slow=6.8,SNR=59						
KAKA	**Kakadu**	**47.22**	**269**	*e*P	**P**	**15 57 13.4**	**+0.5**
	3.5nm,0.7s,mb4.0						
MBWA	**Marble Bar**	**57.83**	**256**	*e*P	**P**	**15 58 27.9**	**-1.1**
NVAR	**Mina Array Bea**	**79.33**	**44**	P	**P**	**16 00 38.7**	**+0.9**
	1.1nm,0.7s,mb3.3,baz=227,slow=9.8,SNR=7.9						
NVAR	**Mina Array Bea**	**79.33**	**44**	P	**P**	**16 00 38.7**	**+0.9**
ILAR	**Eielson Array**	**85.50**	**13**	P	**P**	**16 01 07.7**	**-0.5**
	0.6nm,0.4s,mb3.5,baz=219,slow=4.9,SNR=7.1						
TXAR	**Lajitas Array**	**86.05**	**58**	P	**P**	**16 01 12.3**	**+0.7**
	1.1nm,0.6s,mb3.6,baz=212,slow=5.8,SNR=8.4						
PDAR	**Pinedale Array**	**87.26**	**44**	P	**P**	**16 01 17.1**	**+0.2**
	0.9nm,0.6s,mb3.6,baz=221,slow=3.4,SNR=9.7						
GERES	**GERESS Array B**	**147.04**	**345**	PKPbc	PKPdf	16 08 09.2	+3.6
	1.2nm,0.5s,baz=26,slow=3.4,SNR=10.0						

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*JMA **30** 15:56:57.8±0.2,24.08N×121.92E,h56^{km},M3.4*

*TAP **30** 15:56:57.7,24.06N×121.89E,h28^{km},ML3.9*

TAP Felt I J at Chiawan, I J at Hualien, II J at Nanau, I J at Nanshan, I J at Nioudou.

ISC 30 15:56:56.8±0.3,23.99N±0.02×121.98E±0.02,h21^{km}±4^{km}, n70,σ0^{s}88/111,5C-13D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.34**	**268**	⇓*i*P	**Pb**	**15 57 04.9**	**+0.7**
HWA				S	**Sb**	**15 57 10.7**	**+1.4**
TWD	**Chiawan**	**0.36**	**284**	⇑*i*P	**Pb**	**15 57 04.4**	**-0.1**
TWD				S	**Sb**	**15 57 09.6**	**-0.2**
EHP	**Heping Village**	**0.39**	**325**	P	**Pb**	**15 57 04.8**	**-0.1**
EHP				S	**Sb**	**15 57 10.6**	**+0.1**
ESF	**Shoufeng Towns**	**0.45**	**255**	*e*P	**Pb**	**15 57 06.2**	**+0.2**
ESF				S	**Sb**	**15 57 13.5**	**+1.2**
ENA	**Nanau**	**0.49**	**333**	⇑*i*P	**Pb**	**15 57 06.4**	**-0.2**
ENA				S	**Sb**	**15 57 13.1**	**-0.2**
TEGC	**Jichi Village**	**0.49**	**235**	*e*P	**Pb**	**15 57 07.6**	**+0.9**
ESL	**Shilin**	**0.53**	**251**	⇓*i*P	**Pb**	**15 57 07.4**	**0.0**
ESL				S	**Sb**	**15 57 14.7**	**+0.1**
TWC	**Suao**	**0.63**	**349**	⇓*i*P	**Pb**	**15 57 09.2**	**+0.2**
TWC				S	**Sb**	**15 57 17.8**	**+0.5**
NNS	**Nan Shan**	**0.71**	**309**	⇑*i*P	**Pb**	**15 57 09.8**	**-0.7**
NNS				S	**Sb**	**15 57 19.0**	**-0.7**
ENTT	**Nioudou**	**0.75**	**330**	⇑*i*P	**Pb**	**15 57 10.4**	**-0.6**
ENTT				S	**Sb**	**15 57 20.1**	**-0.6**
EHY	**Hungye**	**0.77**	**231**	⇓*i*P	**Pb**	**15 57 11.1**	**-0.4**
TWE	**Neicheng**	**0.78**	**339**	⇑*i*P	**Pb**	**15 57 11.3**	**-0.3**
TWE				S	**Sb**	**15 57 21.8**	**+0.1**

TWT	Tachien	0.78	290	eP	Pb	15 57 11.4	-0.2
TWT				S	Sb	15 57 21.4	-0.3
ILA	Ilan	0.80	345	eP	Pb	15 57 12.2	+0.3
ILA				S	Sb	15 57 23.7	+1.4
SMLT	Sun Moon Lake	0.99	264	⇓iP	Pb	15 57 14.8	-0.4
SMLT				S	Sb	15 57 27.4	-0.5
TWB1	Santiao Chiao	1.01	0	eP	Pb	15 57 15.6	+0.1
TWB1				S	Sb	15 57 29.3	+0.9
TYC	Yuchr	1.03	265	⇓iP	Pb	15 57 15.3	-0.6
TWA	Mucha	1.05	340	eP	Pb	15 57 16.4	+0.3
TWA				S	Sb	15 57 29.2	-0.3
YOJ	Yonaguni jima	1.05	63	P	Pb	15 57 16.8	+0.6
YOJ				eS	Sb	15 57 30.7	+1.2
CHKT	Chengkung	1.05	213	eP	Pb	15 57 14.9	-1.3
CHKT				S	Sb	15 57 27.6	-1.9
YUS	Yu-Shan	1.07	242	⇓iP	Pb	15 57 16.6	+0.1
YUS				S	Sb	15 57 28.3	-1.7
NSTT	Nanjuang	1.10	306	eP	Pb	15 57 16.5	-0.4
NSTT				S	Sb	15 57 29.4	-1.4
TAP1	Taipei	1.12	338	eP	Pb	15 57 16.9	-0.5
TAP	Taipei	1.13	338	eP	Pb	15 57 17.2	-0.3
TWQ1	Liyutan	1.16	288	⇓iP	Pb	15 57 18.2	+0.2
TWQ1				S	Sb	15 57 32.4	-0.3
ALS	Alishan	1.18	246	⇓iP	Pn	15 57 18.4	+0.1
ALS				S	Sb	15 57 35.3	+2.1
ELDTW	Lidau	1.19	228	⇓iP	Pn	15 57 17.2	-1.3
NSY	Sanyi	1.19	291	P	Pn	15 57 18.6	+0.1
NSY				S	Sb	15 57 33.6	0.0
WNT	Mingjian	1.19	265	eP	Pn	15 57 18.8	+0.2
WNT				S	Sb	15 57 35.1	+1.5
TCU	Taichung	1.20	278	⇓P	Pn	15 57 19.1	+0.4
TCU				S	Sb	15 57 34.8	+0.8
NCU	National Centr	1.21	324	eP	Pn	15 57 18.8	0.0
NCU				S	Sb	15 57 34.0	-0.2
TWS1	Kuangyinshan	1.22	335	eP	Pn	15 57 18.4	-0.5
TWS1				S	Sb	15 57 34.2	-0.1
HSN	Hsinchu	1.23	311	eP	Pn	15 57 19.1	+0.1
HSN				S	Sb	15 57 34.0	-0.6
CHN5	Tsauling	1.26	252	⇓iP	Pn	15 57 19.7	+0.3
TWY	Chenhua	1.32	345	eP	Pn	15 57 20.3	-0.1
WGK	Gukeng	1.33	257	eP	Pn	15 57 20.8	+0.3
CHN4	Tsaushan	1.42	244	eP	Pn	15 57 22.3	+0.4
CHN4				S	Sn	15 57 41.4	+1.4
TWG	Pinlang	1.43	216	eP	Pn	15 57 20.2	-1.8
TTN	Taitung	1.45	212	eP	Pn	15 57 21.2	-1.0
CHN2	Minshiung	1.45	252	eP	Pn	15 57 23.2	+0.9
CHN2				S	Sn	15 57 44.1	+3.2
WTP	Ta-pu	1.46	240	⇓iP	Pn	15 57 22.7	+0.4
CHY	Chiayi	1.51	251	eP	Pn	15 57 23.3	+0.2
CHY				S	Sn	15 57 43.8	+1.5
TWK	Hsinying	1.55	243	P	Pn	15 57 24.0	+0.4
CHN1	Nanshi	1.56	239	eP	Pn	15 57 24.2	+0.5
WTCT	Ta-ch'eng	1.56	266	eP	Pn	15 57 23.9	+0.1
WTCT				S	Sn	15 57 44.2	+0.6
SGST	Jiashian	1.57	235	eP	Pn	15 57 24.3	+0.4
SGST				S	Sn	15 57 46.4	+2.6
PCYT	Pengchaiyu	1.63	3	eP	Pn	15 57 24.8	0.0
IRIF	Iriomote-Funau	1.63	78	P	Pn	15 57 25.1	+0.3
IRIF				eS	Sn	15 57 45.8	+0.4
HATJ	Hateruma jima	1.67	87	P	Pn	15 57 26.0	+0.7
HATJ				eS	Sn	15 57 46.8	+0.5
ECL	Taimali	1.68	214	eP	Pn	15 57 23.6	-1.8
CHN8	Yiju	1.75	249	eP	Pn	15 57 26.2	-0.2
TWM1	Shoushan	1.84	231	eP	Pn	15 57 28.2	+0.4
JKRS	Kuro-shima	1.87	82	P	Pn	15 57 29.0	+0.8
JKRS				eS	Sn	15 57 52.6	+1.2
EAST	Anshuo	1.91	213	eP	Pn	15 57 27.3	-1.5
JIJ	Ishigaki jima	2.01	79	P	Pn	15 57 30.2	0.0
JIJ				eS	Sn	15 57 54.0	-0.9
SCZT	Fangliau	2.04	218	eP	Pn	15 57 31.7	+1.0
WDGT	Dungji	2.25	252	eP	Pn	15 57 32.7	-1.0
PNG	Penghu	2.26	260	eP	Pn	15 57 32.6	-1.3
PNG				S	Sn	15 57 59.1	-2.3
HEN	Hengchun	2.29	210	eP	Pn	15 57 35.5	+1.3
TSEB	Hengchuen, Pin	2.31	206	eP	Pn	15 57 35.0	+0.5
TWK1	Hengchun	2.31	208	eP	Pn	15 57 32.3	-2.2
JTJ	Tarama	2.56	75	P	Pn	15 57 38.1	-0.1
JTJ				eS	Sn	15 58 08.9	-0.2
JMJ	Miyako jima 2	3.13	74	P	Pn	15 57 46.4	+0.2
JMJ				eS	Sn	15 58 23.1	-0.2
JOGS	Gusukube	3.21	76	P	Pn	15 57 47.9	+0.5
JOGS				eS	Sn	15 58 26.2	+0.7
KNM	Kinmen	3.27	278	eP	Pn	15 57 47.5	-0.6
JKE	Kume jima 2	4.94	61	P	Pn	15 58 10.4	-1.4
JKE				eS	Sn	15 59 07.8	-1.2
JOW	Kunigami	6.35	62	P	Pn	15 58 28.5	-3.3
JTK	Tokunoshima	7.33	57	P	Pn	15 58 41.6	-3.9
JAM	Amami Oshima	8.14	56	P	P	15 58 52.3	-4.5
JMZ	Minamidaito 2	8.58	76	P	P	15 58 56.4	-6.6

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*IDC **30** 15:58:54.6±0.9, 36.94N×69.93E, mb4.0/12, mb1 4.2/16, mb1mx4.1/22, mbtmp4.0/16, ML3.9/3, MS3.1/3, Ms1 3.1/3, ms1mx2.9/23, Error ellipse: s-maj=21.2km s-min=15.5km az=18.0*

*NNC **30** 15:58:55.6±5.2, 37.22N×69.56E, mpv4.3, Error ellipse: s-maj=53.5km s-min=38.3km az=85.0*

*NEIC **30** 15:58:57.2±0.4, 36.79N×70.06E, h25^{km}, mb4.3/12, Error ellipse: s-maj=10.3km s-min=5.9km az=208.0*

*MOS **30** 15:58:59.0±1.4, 37.23N×69.83E, h33^{km}, mb4.3/11, Error ellipse: s-maj=10.5km s-min=6.3km az=95.5*

*BJI **30** 15:59:01.0, 37.51N×70.02E, h15^{km}, mb4.2, ML4.2*

ISC 30 15:58:56.2±1.5**, 36.90N**±0.03×**69.88E**±0.05**, h26**^{km}±12^{km}**, n92, σ1§35**/98**, mb4.0**/22**, MS3.3**/5**, 11C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.48	151	P	Pn	15 59 55.9	+5.8
CEP				S	Sn	16 00 43.0	+12
CHCP	Chirah Chowk	4.25	138	P	Pn	16 00 06.6	+5.6
THW	Thamme Wali	4.37	159	P	Pn	16 00 07.5	+4.8
SBDP	Sheikh Budin	4.65	170	P	Pn	16 00 09.8	+3.2
DRP	Derazinda	5.14	177	P	Pn	16 00 19.4	+5.7
AML	Almayashu	6.00	28	P	Pn	16 00 26.9	+1.2
	SNR=78						
KK31	Karatay Array	6.22	4	⇑Pn	Pn	16 00 27.7	-1.2
	11nm,0.7s,slow=0.1,SNR=101						
KK31				⇑Sn	Sn	16 01 39.4	-0.5
	5.1nm,0.3s						
KK31				⇑Lg		16 02 09.7	
	13nm,0.5s						
KKAR	Karatay Array	6.22	4	PN	Pn	16 00 27.6	-1.2
KKAR						16 01 39.3	
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KKAR				smax			
	comp=Z,3.0nm,0.3s						
UCH	Uchtor	6.41	32	P	Pn	16 00 32.4	+0.8
	SNR=31						
THN	Thein Dam	6.55	131	eP	Pn	16 00 34.6	+1.1
THN				ex	x	16 02 26.2	
KZA	Kyzart	6.63	37	P	Pn	16 00 35.3	+0.7
	SNR=19						
AAK	Ala-Archa	6.74	30	P	Pn	16 00 37.1	+0.9
	SNR=21						
AAK	Ala-Archa	6.74	30	⇑Pn	Pn	16 00 37.2	+1.0
	comp=Z,18nm,0.5s						
AAK				⇑Sn	Sn	16 01 52.5	-0.4
	comp=Z,26nm,0.6s						
AAK				Lg		16 02 34.9	
	comp=Z,39nm,0.9s						
AAK	Ala-Archa	6.74	30	PN	Pn	16 00 37.2	+1.0
AAK						16 01 52.4	
AAK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
AAK				smax			
	comp=Z,16nm,0.6s						
AAK	Ala-Archa	6.74	30	ePn	Pn	16 00 34.9	-1.3
	comp=Z,29nm,0.4s						
KBK	Karagaybulak	6.95	33	P	Pn	16 00 40.0	+0.9
	SNR=18						
FRU	Bishkek	6.96	30	i PN	Pn	16 00 40.0	+0.8
FRU				eS	Sn	16 02 00.0	+1.7
FRU				pmax	pmax		
	comp=Z,80nm,1.3s						
FRU				smax			
	comp=E,90nm,1.9s						
FRU				pmax	pmax		
	comp=E,270nm,1.9s						
CHMS	Chumysh	7.15	30	P	Pn	16 00 42.1	+0.2
	SNR=33						
ULHL	Ulahol	7.26	41	P	Pn	16 00 44.4	+1.0
	SNR=7.3						
USP	Ospenovka	7.28	28	P	Pn	16 00 43.5	-0.2
	SNR=8.9						
TKM2	Tokmak 2	7.45	34	P	Pn	16 00 46.1	+0.1
	SNR=42						
BHK	Bhakra	7.69	133	ex	x	16 01 25.0	
SDNR	Sundarnagar	7.96	130	ex	Pn	16 00 57.0	+3.8
SMLA	Simla	8.34	131	i P	P	16 00 56.8	-1.7
SMLA				i x	x	16 02 36.5	
KKR	Kurukshetra	9.02	138	eP	P	16 01 02.1	-5.8
DDI	Dehra Dun	9.45	132	ex	x	16 01 30.0	
KHET	Khetri	10.11	149	eP	P	16 01 22.4	-0.6
KHET				AMb	AMB	16 01 23.8	
	comp=Z,9.8nm,0.8s						
KHET				ex	S	16 03 13.4	-3.2
NDI	New Delhi	10.25	141	ex	x	16 01 40.3	
NDI				ex	S	16 03 17.0	-2.9
KUDL	Kundal	10.35	146	eP	P	16 01 26.6	+0.4
KUDL				AMb	AMB	16 01 30.0	
	comp=Z,11nm,1.2s						
KUDL				ex	S	16 03 20.7	-1.8
AYAN	Aya Nagar	10.37	142	eP	P	16 01 26.6	+0.2
AYAN				AMb	AMB	16 01 29.7	
	comp=Z,1.5nm,0.7s						
SONA	Sohna	10.54	143	eP	P	16 01 28.9	+0.1
SONA				AMb	AMB	16 01 35.0	
	comp=Z,9.8nm,0.7s						
SONA				ex	S	16 03 24.4	-2.6
AGRA	Agra	11.81	142	ex	x	16 03 15.8	
MK31	Makanchi Array	13.52	39	⇑Pn	P	16 02 07.2	-1.6
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	13.52	39	Pn	P	16 02 06.6	-2.2
	comp=Z,0.2nm,0.3s,baz=226,slow=13,SNR=13						
AB31	Akbulak array	14.31	333	⇑P	P	16 02 14.3	-4.8
	comp=Z,5.0nm,0.6s						
AB31	Akbulak array	14.31	333	P	P	16 02 14.3	-4.9
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GKN	Gorkha	15.27	121	eP	P	16 02 29.4	-2.5
	comp=Z,48nm,0.5s						
DMN	Daman	15.84	121	eP	P	16 02 35.1	-4.1
VOSK	Vostochnaya	15.85	2	⇑P	P	16 02 34.9	-4.1
	comp=Z,4.1nm,0.7s						
VOSK	Vostochnaya	15.85	2	P	P	16 02 34.9	-4.2
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKN	Kakani	15.85	121	eP	P	16 02 36.8	-2.5
	comp=Z,52nm,0.5s						
KKN	Kakani	15.85	121	eP	P	16 02 36.8	-2.5
KKN				pmax	pmax		
	comp=Z,26nm,0.5s						
ZRNK	Zerenda	16.07	358	P	P	16 02 37.7	-4.2
ZRNK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PKI	Pulchoki	16.07	121	eP	P	16 02 38.3	-3.9
	comp=Z,28nm,0.5s						
PKI	Pulchoki	16.07	121	eP	P	16 02 38.3	-3.9
PKI				pmax	pmax		
	comp=Z,14nm,0.5s						
BVA0	Borovoye Array	16.13	1	⇑P	P	16 02 39.0	-3.7
	comp=Z,0.6nm,0.7s						
BVAR	Borovoye Array	16.13	1	Pn	P	16 02 38.6	-4.2
	comp=Z,0.3nm,0.3s,baz=164,slow=11,SNR=17						
BRVK	Borovoye	16.16	1	P	P	16 02 56.8	+14
GUN	Gumba	16.19	119	eP	P	16 02 41.5	-2.2
	comp=Z,40nm,0.6s						
LSA	Lhasa	19.15	106	eP	P	16 03 22.5	+2.2
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LSA	Lhasa	19.15	106	eP	P	16 03 22.5	+2.2
	comp=Z,6.0nm,0.6s						
GNI	Garni	19.92	287	P	P	16 03 28.7	-0.1
	comp=Z,0.8nm,0.3s,baz=352,slow=16,SNR=2.2						
GNI				LR	LR	16 12 24.0	
	comp=Z,46nm,18.4s,baz=271,slow=41						
ZAL	Zalesovo	19.93	27	P	P	16 03 26.9	-2.0
	comp=Z,1.8nm,0.3s,baz=246,slow=9.4,SNR=17						
NVS	Novosibirsk	20.15	23	eP	P	16 03 27.2	-3.9
ZEI	Tsey	20.76	294	eP	P	16 03 38.8	+1.3
ZEI				i *PP		16 03 53.8	
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SVE	Sverdlovsk	20.88	346	eP	P	16 03 36.8	-1.9
SVE				MLR	MLR		
	comp=N,100nm,10.0s,MS3.6						
SVE				MLR	MLR		
	comp=E,100nm,10.0s,MS3.6						
SVE				MLR	MLR		
	comp=Z,200nm,10.0s,MS3.8						
ARU	Arti	20.98	342	⇑iP	P	16 03 37.9	-1.8
ARU				e		16 03 57.4	
ARU				ePPP	PPP	16 04 06.6	-5.0
ARU				eS	S	16 07 26.1	-1.1
ARU				eSS	SS	16 07 47.1	-13
ARU				pmax	pmax		
	comp=Z,12nm,0.9s						
ARU	Arti	20.98	342	eP	P	16 03 39.3	-0.4
	comp=Z,12nm,0.8s						
KIV	Kislovodsk	21.81	297	eP	P	16 03 47.8	-0.4
KIV				eS	S	16 07 42.5	-0.3
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.1						
KIV				pmax	pmax		
	comp=N,4.0nm,0.9s						
KIV				pmax	pmax		
	comp=E,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,68nm,15.0s,MS3.2						
KIV				MLR	MLR		
	comp=N,47nm,19.0s,MS3.0						
KIV				MLR	MLR		
	comp=E,41nm,19.0s,MS3.0						
KIV	Kislovodsk	21.81	297	P	P	16 03 45.9	-2.3
	comp=E,8.9nm,0.8s,mb4.2						
GTA	Gaotai	23.62	75	eP	P	16 04 07.5	+1.5
GTA				AP		16 04 13.0	
GTA				XP		16 04 16.0	
MALT	Malatya	24.90	283	P	P	16 04 20.0	+1.6
MALT				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
MALT	Malatya	24.90	283	P	P	16 04 20.0	+1.6
	comp=Z,5.8nm,1.0s,mb4.1						
ZAK	Zakamensk	27.42	50	eP	P	16 04 42.8	+1.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						
TLY	Talaya	28.03	47	P	P	16 04 51.9	+4.9
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
TLY	Talaya	28.03	47	P	P	16 04 51.9	+4.9
	comp=Z,1.9nm,0.8s,mb3.8						
BR131	Keskin Array S	28.46	287	eP	P	16 04 52.1	+1.0
	comp=Z,3.8nm,1.0s,mb4.0						
BRTR	Keskin Array B	28.46	287	P	P	16 04 52.9	+1.8
	comp=Z,2.0nm,0.6s,mb3.9,baz=100,slow=8.3,SNR=13						
BRTR				PcP	PcP	16 08 02.6	-0.4
	comp=Z,1.2nm,0.9s,baz=180,slow=2.5,SNR=6.3						
SONM	Songino Array	28.86	56	P	P	16 04 54.5	0.0
	comp=Z,0.4nm,0.3s,mb3.6,baz=260,slow=7.5,SNR=6.4						
OBN	Obninsk	29.05	319	eP	P	16 04 54.3	-2.0
OBN				i *PP	pP	16 05 10.8	+6.8
OBN				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.0						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.5						
ULN	Ulaanbaatar	29.30	56	eP	P	16 04 58.5	0.0
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
ULN	Ulaanbaatar	29.30	56	eP	P	16 04 58.5	0.0
	comp=Z,2.3nm,0.8s,mb4.0						
KMI	Kunming	30.36	103	P	P	16 05 16.3	+8.1
CMAR	Chiang Mai Arr	31.43	118	P	P	16 05 19.5	+1.8
	comp=Z,1.7nm,0.6s,mb4.0,baz=292,slow=8.2,SNR=12						
AKASG	Malin Array Be	32.00	309	P	P	16 05 21.4	-1.0
	comp=Z,1.5nm,0.5s,mb4.1,baz=83,slow=7.2,SNR=9.1						
FINES	FINESS Array B	36.66	326	P	P	16 06 02.5	+0.3
	comp=Z,1.0nm,0.5s,mb3.9,baz=119,slow=10.0,SNR=10						
FINES				LR	LR	16 22 36.2	
	comp=Z,23nm,20.8s,MS2.9,baz=323,slow=39						
NJ2	Nanjing	40.31	82	eP	P	16 06 35.0	+2.0
NJ2				PP	PP	16 08 11.8	+2.5
NJ2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
ARCES	ARCESS Array B	40.44	338	P	P	16 06 33.7	0.0
	comp=Z,3.9nm,0.7s,mb4.2,baz=111,slow=8.1,SNR=15						
BRG	Berggiesshubel	41.67	308	eP	P	16 06 46.3	+2.3
BRG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
BRG	Berggiesshubel	41.67	308	eP	P	16 06 46.3	+2.4
	comp=Z,3.9nm,0.7s,mb4.2						
GERES	GERESS Array B	41.97	305	P	P	16 06 47.3	+0.9
	comp=Z,0.2nm,0.3s,mb3.2,slow=4.0,SNR=3.6						
KHC	Kasperske Hory	42.02	305	i P	P	16 06 46.0	-0.9
NB2	NORSAR Subarra	43.53	323	P	P	16 06 58.9	0.0
	comp=Z,4.7nm,0.8s,mb4.3,baz=96,slow=7.9						
NOA	NORSAR Array B	43.53	323	P	P	16 06 58.5	-0.5
	comp=Z,2.8nm,0.6s,mb4.2,baz=97,slow=8.1,SNR=18						
NOA				LR	LR	16 26 59.0	
	comp=Z,25nm,20.7s,MS3.1,baz=255,slow=39						
NOA	NORSAR Array B	43.53	323	P	P	16 06 58.5	-0.5
NOA				LR	LR	16 26 59.0	
YAK	Yakutsk	44.17	36	⇓iP	P	16 07 02.5	-1.7
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
TIXI	Tiksi	45.75	22	⇑iP	P	16 07 16.7	+0.1
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
INK	Inuvik	73.66	9	P	P	16 10 29.5	+0.9
	comp=Z,1.6nm,0.7s,mb4.1,baz=56,slow=6.3,SNR=4.2						
INK	Inuvik	73.66	9	P	P	16 10 29.5	+0.9
ILAR	Eielson Array	74.64	15	P	P	16 10 35.1	+0.7
	comp=Z,0.8nm,1.0s,mb3.6,baz=314,slow=5.2,SNR=5.7						
YKA	Yellowknife Ar	80.89	2	P	P	16 11 09.9	+1.0
	comp=Z,1.1nm,0.6s,mb3.9,baz=350,slow=5.7,SNR=9.8						
WRA	Warramunga Arr	82.96	121	P	P	16 11 20.1	-0.5
	comp=Z,2.1nm,0.8s,mb4.2,baz=307,slow=8.0,SNR=30						

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*CSEM **30** 16:02:04.1±0.3, 27.80N×15.45W, h2^{km}, mb3.2/3, Error ellipse: s-maj=19.6km s-min=7.0km az=170.0, After MDD*

MDD 30 16:02:04.2±1.3**, 27.83N×15.46W, h24**^{km}±6^{km}**, mb4.7**/2**, mbLg2.3**/4**, 1C, Error ellipse: s-maj=18.7km s-min=7.6km az=5.0, PRXIMO TT_MODEL: CANARY, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOSO	Osorio	0.25	340	⇑P	Pb	16 02 10.2	-0.2
	SNR=18						
EOSO				S	Sb	16 02 14.7	0.0
	354nm,0.3s,SNR=18						
CCAN	Las Canadas	1.09	291	P	Pn	16 02 22.6	-1.5
	3.1nm,0.2s,SNR=11						
CCAN				S	Sb	16 02 35.9	-2.1
	4.9nm,0.2s						
CRAJ	Montana Rajada	1.10	293	S	Sb	16 02 38.7	+0.5
	88nm,0.3s,SNR=7.9						
CFTV	Fuerteventura	1.34	64	P	Pn	16 02 26.7	-1.0
	1.7nm,0.1s,SNR=6.7						
CFTV				S	Sn	16 02 42.5	-2.5
EGOM	La Gomera	1.58	282	S	Sn	16 02 49.5	-1.5
	13nm,0.2s,SNR=7.9						

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*BJI **30** 16:02:30.4, 7.60N×91.96E, h35^{km}, mB4.9, mb4.8, Ms4.5, Msz4.2*

*MOS **30** 16:02:32.2±1.0, 7.85N×92.00E, h33^{km}, mb5.0/31, Error ellipse: s-maj=12.0km s-min=6.5km az=103.0*

*IDC **30** 16:02:32.5±0.7, 7.74N×91.85E, h22^{km}±3^{km}, mb4.3/17, mb1 4.4/18, mb1mx4.3/23, mbtmp4.4/18, ML4.2/1, MS4.1/11, Ms1 4.1/11, ms1mx4.1/16, Error ellipse: s-maj=17.8km s-min=13.8km az=48.0*

*HRVD **30** 16:02:33.1±0.5, 7.79N×91.88E, h12^{km}, MW4.8/56, Centroid moment Tensor Solution. LP body waves: s12,c14;Mantle waves: s56,c98; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.00±.08; $M_{\theta\theta}$-1.26±.07; $M_{\phi\phi}$1.25±.08; $M_{r\theta}$-0.68±.22; $M_{\theta\phi}$-1.47±.06; $M_{\phi r}$-1.16±.22; Best double couple: $M_0$2.346×10^{16} NP1:ϕ_s112°,δ56°, λ-177°. NP2:ϕ_s20°,δ88°,λ-34°. Principal axes: T 2.233, Plg22°, Azm71°; N .22, Plg56°, Azm197°; P -2.46, Plg25°, Azm331°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **30** 16:02:33.1±0.3, 7.74N×91.96E, h30^{km}, mb4.9/26 Error ellipse: s-maj=8.2km s-min=5.8km az=221.0*

ISC 30 16:02:31.0±0.4**, 7.70N**±0.05×**91.94E**±0.04**, h28**^{km}**, h28**^{km}±1.5^{km}**:pP-P, n135, σ1§17**/152**, mb4.8**/60**, MS4.2**/31**, 9C-2D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	Songkhla	8.62	93	P	P	16 04 39.0	+2.0
KULM	Kulim	8.98	105	ePn	P	16 04 40.5	-1.5
NNT	Nongplab	9.08	57	P	P	16 04 45.0	+1.6
PALK	Pallekele	11.15	269	eP	P	16 05 07.5	-4.4
	69nm,0.8s						
PALK				eS	S	16 06 58.1	-18
NST	Nakhon Sawan	11.28	45	P	P	16 05 10.2	-3.4
CM31	Chiang Mai Arr	12.68	32	P	P	16 05 25.6	-6.9
	7.5nm,0.4s						
CMAR	Chiang Mai Arr	12.68	32	Pn	P	16 05 29.9	-2.5
	0.4nm,0.3s,baz=234,slow=16,SNR=10						
CMAR				LR	LR	16 10 35.7	
	comp=Z,443nm,21.1s,baz=215,slow=38						
HYB	Hyderabad	16.24	308	eP	P	16 06 21.0	+2.0
HYB				eS	S	16 09 11.0	-6.8
HYB	Hyderabad	16.24	308	i P	P	16 06 20.0	+1.0
HYB				eS	S	16 09 18.5	+0.7
IMP	Imphal	17.10	6	eP	P	16 06 32.0	+2.2
BLSP	Bilaspur	17.18	328	eP	P	16 06 28.7	-2.2
BLSP				eS	S	16 09 18.9	-21
SHL	Shillong	17.77	360	eP	P	16 06 38.0	-0.2
SHL				eS	S	16 09 39.0	-14
LATR	Latur	18.36	307	eP	P	16 06 46.0	+0.3
LATR				eS	S	16 09 50.0	-16
KSM	Kuching	19.32	108	eP	P	16 06 54.8	-2.3
KMI	Kunming	20.17	30	P	P	16 07 05.8	-0.4
KMI				AP		16 07 15.5	
KMI				XP		16 07 21.3	
KMI				PP	PP	16 07 29.0	+2.9
KMI				PPP	PPP	16 07 37.8	+2.7
KMI				S	S	16 10 52.0	+6.1
KMI				AMB	AMB		
	comp=Z,30nm,1.3s						
KMI				AMB	AMB		
	comp=Z,150nm,4.8s						
KMI				LR	LR		
	comp=N,440nm,18.7s,MS3.9						
KMI				LR	LR		
	comp=E,360nm,20.4s,MS3.9						
KMI				LR	LR		
	comp=Z,370nm,23.8s,MS3.7						
KMI	Kunming	20.17	30	P	P	16 07 05.8	-0.4
KMI				*PP		16 07 15.5	
KMI				*SP		16 07 21.2	
KMI						16 07 29.1	
KMI				S	S	16 10 51.9	+6.0
KMI				*SS		16 11 09.5	
KMI				SS	SS	16 11 25.8	+11
KMI				pmax	pmax		
	comp=Z,39nm,1.3s						
KMI	Kunming	20.17	30	P	P	16 07 05.8	-0.4
	comp=Z,39nm,1.3s						
KMI				pP		16 07 15.5	
KMI				sP		16 07 21.2	
KMI				PP	PP	16 07 29.1	+3.0
KMI				PPP	PPP	16 07 37.7	+2.6
KMI				S	S	16 10 51.9	+6.0
KMI				sS		16 11 09.5	
KMI				SS	SS	16 11 25.8	+11
KMI				SSS	SSS	16 11 41.8	+13
PKI	Pulchoki	20.71	343	eP	P	16 07 11.2	-0.6
	comp=Z,247nm,1.1s						
PKI	Pulchoki	20.71	343	eP	P	16 07 11.2	-0.6
PKI				pmax	pmax		
	comp=Z,124nm,1.1s						
QIZ	Qiongzhong	20.72	55	P	P	16 07 12.3	+0.3
QIZ				eS	S	16 11 00.0	+3.0
QIZ				AMB	AMB		
	comp=Z,40nm,1.2s						
QIZ				AMB	AMB		
	comp=Z,200nm,9.3s						
QIZ				LR	LR		
	comp=N,630nm,13.3s,MS4.2						
QIZ				LR	LR		
	comp=E,440nm,14.4s,MS4.2						
QIZ				LR	LR		

	comp=Z,410nm,25.2s						
QIZ	**Qiongzhong**	**20.72**	**55**	*e*P	**P**	**16 07 11.3**	**-0.7**
	comp=Z,102nm,1.2s						
DMN	**Daman**	**20.84**	**343**	*e*P	**P**	**16 07 12.6**	**-0.5**
	comp=Z,219nm,1.1s						
GUN	**Gumba**	**20.91**	**345**	*e*P	**P**	**16 07 13.2**	**-0.6**
	comp=Z,149nm,0.7s						
KKN	**Kakani**	**20.95**	**343**	*e*P	**P**	**16 07 13.5**	**-0.8**
	comp=Z,160nm,1.3s						
KKN	**Kakani**	**20.95**	**343**	*e*P	**P**	**16 07 13.5**	**-0.8**
KKN				pmax	pmax		
	comp=Z,80nm,1.3s						
GKN	**Gorkha**	**21.34**	**342**	*e*P	**P**	**16 07 17.9**	**-0.4**
	comp=Z,143nm,0.9s,mb5.3						
KOLN	**Koldanda**	**21.47**	**339**	*e*P	**P**	**16 07 19.3**	**-0.2**
	comp=Z,169nm,0.8s,mb5.4						
LSA	**Lhasa**	**21.90**	**358**	P	**P**	**16 07 27.0**	**+3.2**
LSA				S	**S**	**16 11 25.0**	**+5.9**
LSA				AMB	AMB		
	comp=Z,40nm,0.9s,mb4.8						
LSA				LR	LR		
	comp=N,210nm,18.3s,MS4.0						
LSA				LR	LR		
	comp=E,460nm,17.1s,MS4.0						
LSA				LR	LR		
	comp=Z,650nm,24.0s						
LSA	**Lhasa**	**21.90**	**358**	*e*P	**P**	**16 07 25.7**	**+1.9**
LSA				pmax	pmax		
	comp=Z,73nm,0.9s,mb5.1						
LSA	**Lhasa**	**21.90**	**358**	*e*P	**P**	**16 07 25.7**	**+1.9**
	comp=Z,73nm,0.9s,mb5.1						
GYA	**Guiyang**	**23.33**	**35**⇑	*i*P	**P**	**16 07 37.8**	**-0.2**
GYA				AP		16 07 47.0	
GYA				XP		16 07 50.8	
GYA				PP	PP	16 08 09.3	-0.2
GYA				S	**S**	**16 11 45.0**	**+0.1**
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,200nm,4.8s						
GYA				LR	LR		
	comp=N,490nm,16.5s,MS4.2						
GYA				LR	LR		
	comp=E,340nm,13.8s,MS4.2						
GYA				LR	LR		
	comp=Z,710nm,16.2s,MS4.2						
KKM	**Kota Kinabalu**	**24.16**	**92**	P	**P**	**16 07 47.1**	**+1.0**
LGTI	**Lohaghat**	**24.27**	**335**	*e*x	**P**	**16 07 49.3**	**+2.1**
NDI	**New Delhi**	**25.07**	**328**	*e*x	**P**	**16 07 54.0**	**-0.8**
CD2	**Chengdu**	**25.60**	**24**	P	**P**	**16 07 58.8**	**-1.0**
CD2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.0						
DDI	**Dehra Dun**	**26.00**	**332**	*e*x	**P**	**16 08 04.0**	**+0.5**
ENH	**Enshi**	**27.84**	**34**	*e*P	**P**	**16 08 18.1**	**-2.2**
	comp=Z,26nm,1.1s,mb4.8						
LZH	**Lanzhou**	**30.28**	**19**	*e*P	**P**	**16 08 42.0**	**-0.1**
LZH				AP	pP	16 08 50.0	-0.5
LZH				XP	sP	16 08 54.0	-0.2
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,170nm,4.0s						
LZH				LR	LR		
	comp=N,810nm,15.5s						
LZH				LR	LR		
	comp=Z,860nm,16.0s,MS4.5						
LZH	**Lanzhou**	**30.28**	**19**	*e*P	**P**	**16 08 42.0**	**-0.1**
	comp=Z,37nm,1.3s,mb5.0						
LZH				pP	pP	16 08 50.0	-0.5
LZH				sP	sP	16 08 54.0	-0.2
XAN	**Xi’an**	**30.54**	**29**	P	**P**	**16 08 41.8**	**-2.7**
XAN				LG1		16 16 55.8	
XAN				LG2		16 17 37.0	
XAN				LR	LR		
	comp=N,250nm,15.8s,MS4.1						
XAN				LR	LR		
	comp=E,240nm,15.1s,MS4.1						
XAN				LR	LR		
	comp=Z,540nm,15.3s,MS4.3						
QZH	**Quanzhou**	**30.69**	**53**⇑	*i*P	**P**	**16 08 45.8**	**-0.1**
QZH				S	**S**	**16 13 50.0**	**+4.4**
QZH				AMB	AMB		
	comp=Z,70nm,0.7s,mb5.6						
QZH				LR	LR		
	comp=N,530nm,12.0s						
QZH				LR	LR		
	comp=E,2µm,21.7s						
QZH				LR	LR		
	comp=Z,1µm,16.6s,MS4.6						
GTA	**Gaotai**	**32.36**	**11**	⇑P	**P**	**16 09 00.5**	**+0.2**
GTA				AP	pP	16 09 09.3	+0.6
GTA				XP	sP	16 09 13.0	+0.6
GTA				PP	PP	16 10 11.3	+2.9
GTA				S	**S**	**16 14 14.5**	**+3.0**
GTA				XS		16 14 28.0	
GTA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.2						
GTA				AMB	AMB		
	comp=Z,100nm,5.0s						
GTA				LR	LR		
	comp=N,140nm,18.7s,MS3.9						
GTA				LR	LR		
	comp=E,150nm,17.6s,MS3.9						
GTA				LR	LR		
	comp=Z,170nm,19.5s,MS3.8						
KSH	**Kashi**	**34.77**	**338**	*e*P	**P**	**16 09 17.3**	**-4.0**
KSH				*e*AP	pP	16 09 29.0	-0.7
KSH				*e*XP	sP	16 09 35.0	+1.7
KSH				*e*PP	PP	16 10 34.0	-4.8
KSH				*e*PPP	PPP	16 10 52.8	-4.0
KSH				*e*PCP	PcP	16 11 55.5	+0.9
KSH				*e*S	**S**	**16 14 40.5**	**-8.4**
KSH				SCS	ScS	16 19 34.5	-4.1
KSH				AMB	AMB		
	comp=Z,220nm,4.6s						
KSH				LR	LR		
	comp=N,450nm,7.2s						
KSH				LR	LR		
	comp=E,770nm,13.0s						
NJ2	**Nanjing**	**34.84**	**42**	*e*P	**P**	**16 09 22.0**	**+0.1**
NJ2				AP	pP	16 09 31.0	+0.6
NJ2				XP	sP	16 09 35.3	+1.3
NJ2				PP	PP	16 10 42.0	+2.2
NJ2				PPP	PPP	16 11 01.0	+3.2
NJ2				S	**S**	**16 14 51.0**	**+0.9**
NJ2				XS		16 15 04.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,120nm,7.2s						
NJ2				LR	LR		
	comp=N,460nm,18.8s,MS4.5						
NJ2				LR	LR		
	comp=E,520nm,16.8s,MS4.5						
NJ2				LR	LR		
	comp=Z,210nm,11.2s						
SSE	**Sheshan**	**35.88**	**46**	P	**P**	**16 09 30.5**	**-0.3**
SSE				XP	sP	16 09 43.5	+0.7
SSE				PP	PP	16 10 52.5	0.0
SSE				S	**S**	**16 15 07.3**	**+1.1**
SSE				XS		16 15 22.3	
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,80nm,6.7s						
SSE				LR	LR		
	comp=N,120nm,20.5s,MS3.7						
SSE				LR	LR		
	comp=E,80nm,20.5s,MS3.7						
SSE				LR	LR		
	comp=Z,140nm,19.7s,MS3.7						
SSE	**Sheshan**	**35.88**	**46**	P	**P**	**16 09 30.4**	**-0.4**
	comp=Z,26nm,0.8s,mb5.2						
SSE				sP	sP	16 09 43.4	+0.6
SSE				PP	PP	16 10 52.5	0.0
SSE				S	**S**	**16 15 07.3**	**+1.1**
SSE				sS		16 15 22.3	
SSE				SS	SS	16 17 45.1	+17
WMQ	**Urumqi**	**36.17**	**355**	*e*P	**P**	**16 09 33.3**	**+0.2**
WMQ				AP	pP	16 09 43.0	+1.5
WMQ				XP	sP	16 09 47.0	+1.9
WMQ				PP	PP	16 10 56.8	+0.8
WMQ				PPP	PPP	16 11 16.8	+0.8
WMQ				PCP	PcP	16 11 58.3	-0.3
WMQ				*e*S	**S**	**16 15 11.0**	**+0.5**
WMQ				SS	SS	16 17 36.3	+1.5
WMQ				SCS	ScS	16 19 45.3	-0.8
WMQ				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,120nm,4.2s						
WMQ				LR	LR		
	comp=N,1µm,22.4s,MS5.1						
WMQ				LR	LR		
	comp=E,3µm,24.0s,MS5.1						
WMQ				LR	LR		
	comp=Z,2µm,22.0s,MS4.9						
KZA	**Kyzart**	**37.29**	**339**	P	**P**	**16 09 43.5**	**+1.0**
	SNR=8.5						
UCH	**Uchtor**	**37.68**	**339**	P	**P**	**16 09 46.8**	**+1.1**
	SNR=18						
AML	**Almayashu**	**37.90**	**338**	P	**P**	**16 09 49.0**	**+1.4**
	SNR=46						
KBK	**Karagaybulak**	**37.90**	**339**	P	**P**	**16 09 49.1**	**+1.5**
	SNR=14						
TKM2	**Tokmak 2**	**37.91**	**340**	P	**P**	**16 09 49.5**	**+1.8**
	SNR=7.4						
AAK	**Ala-Archa**	**38.04**	**339**	P	**P**	**16 09 50.5**	**+1.7**
	SNR=9.2						
AAK	**Ala-Archa**	**38.04**	**339**	P	**P**	**16 09 50.2**	**+1.4**
AAK				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.0						
USP	**Ospenovka**	**38.59**	**339**	P	**P**	**16 09 54.1**	**+0.6**
	SNR=14						
JOW	**Kunigami**	**39.36**	**57**	P	**P**	**16 10 01.8**	**+1.8**
	comp=Z,6.2nm,0.6s,mb4.5,baz=256,slow=22,SNR=4.8						
MKAR	**Makanchi Array**	**39.82**	**350**	P	**P**	**16 10 03.4**	**-0.2**
	comp=Z,3.6nm,0.5s,mb4.3,baz=169,slow=8.9,SNR=50						
MKAR				pP	pP	16 10 11.2	-1.0
	comp=Z,11nm,0.9s,baz=166,slow=7.5,SNR=17						
MKAR				PcP	PcP	16 12 09.4	-0.4
	comp=Z,1.2nm,0.8s,baz=171,slow=4.1,SNR=2.9						
MKAR				LR	LR	16 28 01.7	
	comp=Z,249nm,21.6s,MS4.0,baz=174,slow=38						
MKAR	**Makanchi Array**	**39.82**	**350**	P	**P**	**16 10 03.4**	**-0.2**
MKAR				pP	pP	16 10 11.2	-1.0
MKAR				PcP	PcP	16 12 09.4	-0.4
KKAR	**Karatay Array**	**39.98**	**335**	*i* P	**P**	**16 10 04.9**	**0.0**
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
SONM	**Songino Array**	**41.84**	**15**	P	**P**	**16 10 20.4**	**+0.2**
	comp=Z,13nm,0.7s,mb4.7,baz=195,slow=9.3,SNR=85						
SONM				pP	pP	16 10 28.6	-0.1
	comp=Z,9.9nm,0.7s,baz=198,slow=8.5,SNR=16						
SONM				PcP	PcP	16 12 17.3	+0.9
	comp=Z,1.3nm,0.8s,baz=201,slow=3.3,SNR=2.7						
SONM				LR	LR	16 30 14.3	
	comp=Z,314nm,21.2s,MS4.2,baz=26,slow=40						
FITZ	**Fitzroy Crossi**	**42.00**	**128**	P	**P**	**16 10 22.5**	**+0.6**
	comp=Z,8.7nm,0.8s,mb4.5,baz=187,slow=1.1,SNR=11						
ULN	**Ulaanbaatar**	**42.04**	**15**	*e*P	**P**	**16 10 21.8**	**0.0**
ULN				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.5						
ULN	**Ulaanbaatar**	**42.04**	**15**	*e*P	**P**	**16 10 21.8**	**0.0**
	comp=Z,14nm,1.1s,mb4.5						
ZAK	**Zakamensk**	**43.59**	**11**	*e*P	**P**	**16 10 34.7**	**+0.3**
ZAK				*e*		16 12 18.5	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.9						
TLY	**Talaya**	**44.90**	**10**	*e*P	**P**	**16 10 45.7**	**+0.7**
TLY				*e*S	**S**	**16 17 37.1**	**+17**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
TLY				MLR	MLR		
	comp=Z,91nm,17.0s,MS3.8						
CN2	**Changchun**	**46.36**	**34**	*e*P	**P**	**16 10 57.8**	**+1.2**
CN2				*e*XP	sP	16 11 11.5	+2.8
CN2				*e*S	**S**	**16 17 43.5**	**+2.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,700nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=E,500nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=Z,300nm,15.0s,MS4.4						
ZAL	**Zalesovo**	**46.47**	**354**	P	**P**	**16 10 57.8**	**+0.5**
	comp=Z,3.1nm,0.4s,mb4.6,baz=292,slow=6.7,SNR=16						
ZAL				LR	LR	16 33 40.8	
	comp=Z,250nm,21.6s,MS4.1,baz=292,slow=40						
NVS	**Novosibirsk**	**47.53**	**353**⇑	*i*P	**P**	**16 11 04.4**	**-1.3**
NVS				*e*S	**S**	**16 17 48.5**	**-9.3**
NVS				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
NVS				pmax	pmax		
	comp=N,17nm,1.4s						
NVS				pmax	pmax		
	comp=E,12nm,1.4s						
NVS				smax			
	comp=N,15nm,1.9s						
NVS				smax			
	comp=E,15nm,1.7s						
HIA	**Hailar**	**47.56**	**24**	*e*P	**P**	**16 11 05.4**	**-0.7**
HIA				pmax	pmax		
	comp=Z,11nm,1.0s						
HIA	**Hailar**	**47.56**	**24**	*e*P	**P**	**16 11 05.4**	**-0.7**
	comp=Z,11nm,1.0s,mb4.8						
VOSK	**Vostochnaya**	**48.04**	**343**	P	**P**	**16 11 08.6**	**-1.2**
VOSK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
BVA0	**Borovoye Array**	**48.48**	**343**	*i* P	**P**	**16 11 12.6**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
BVAR	**Borovoye Array**	**48.48**	**343**	P	**P**	**16 11 12.6**	**-0.6**
	comp=Z,8.8nm,1.0s,mb4.8,baz=143,slow=7.4,SNR=25						
BVAR				pP	pP	16 11 20.2	-1.6
	comp=Z,12nm,0.9s,baz=154,slow=9.4,SNR=17						
ZRNK	**Zerenda**	**48.83**	**342**	P	**P**	**16 11 13.2**	**-2.7**
ZRNK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
MDJ	**Mudanjiang**	**49.19**	**35**	P	**P**	**16 11 14.5**	**-4.3**
MDJ				AP	pP	16 11 23.5	-3.9
MDJ				XP	sP	16 11 28.0	-2.8
MDJ				PP	PP	16 13 07.5	-5.3
MDJ				S	**S**	**16 18 22.3**	**+0.9**
MDJ				SCS	ScS	16 21 01.8	-3.9
MDJ				AMB	AMB		
	comp=Z,10.0nm,2.0s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,60nm,4.5s						
MDJ				LR	LR		
	comp=N,70nm,32.2s,MS3.6						
MDJ				LR	LR		
	comp=E,70nm,35.3s,MS3.6						
MDJ				LR	LR		
	comp=Z,70nm,36.9s,MS3.4						
AB31	**Akbulak array**	**49.36**	**333**	*i* P	**P**	**16 11 19.5**	**-0.5**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
WRA	**Warramunga Arr**	**49.95**	**124**	P	**P**	**16 11 25.0**	**+0.1**
	comp=Z,3.9nm,0.8s,mb4.5,baz=305,slow=8.3,SNR=31						
WRA	**Warramunga Arr**	**49.95**	**124**	P	**P**	**16 11 25.0**	**+0.1**
WRAB	**Tennant Creek**	**49.96**	**124**	*i* P	**P**	**16 11 28.0**	**+3.0**
WRAB	**Tennant Creek**	**49.96**	**124**	P	**P**	**16 11 24.4**	**-0.6**
	comp=Z,14nm,0.9s,mb5.0						
WB2	**Warramunga Arr**	**49.96**	**124**	*e*P	**P**	**16 11 20.0**	**-5.0**
BOD	**Bodaibo**	**52.85**	**15**	*e*P	**P**	**16 11 45.3**	**-1.0**
BOD				*e*	pP	16 11 54.0	-1.0
BOD				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
BOD				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
GNI	**Garni**	**53.01**	**315**	P	**P**	**16 11 48.7**	**+0.9**
	comp=Z,4.4nm,0.5s,mb4.7,baz=169,slow=20,SNR=3.8						
SVE	**Sverdlovsk**	**54.78**	**340**	*e*P	**P**	**16 12 00.0**	**-0.5**
SVE				*e*S	**S**	**16 19 38.0**	**+0.4**
SVE				*e*		16 21 44.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
SVE				MLR	MLR		
	comp=N,200nm,15.0s,MS4.5						
SVE				MLR	MLR		
	comp=E,200nm,15.0s,MS4.5						
SVE				MLR	MLR		
	comp=Z,400nm,15.0s,MS4.6						
ARU	**Arti**	**55.22**	**338**⇑	*i*P	**P**	**16 12 03.4**	**-0.3**
ARU				*e*		16 13 05.6	
ARU				*e*		16 14 10.3	
ARU				*e*S	**S**	**16 19 45.2**	**+1.7**
ARU				*e*SS	SS	16 23 29.4	+1.8
ARU				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
ARU				MLR	MLR		
	comp=Z,300nm,19.0s,MS4.4						
ARU				MLR	MLR		
	comp=N,100nm,20.0s,MS4.3						
ARU				MLR	MLR		
	comp=E,200nm,18.0s,MS4.3						
ARU	**Arti**	**55.22**	**338**	*e*P	**P**	**16 12 01.6**	**-2.2**
	comp=E,28nm,1.1s,mb5.2						
KMBO	**Kilima Mbogo**	**55.23**	**263**	P	**P**	**16 12 05.5**	**+1.1**
	comp=E,5.4nm,0.9s,mb4.6,baz=53,slow=8.5,SNR=8.9						
KMBO				LR	LR	16 30 56.4	
	comp=E,255nm,22.0s,MS4.3,baz=95,slow=31						
CLNS	**Chul’man**	**55.37**	**21**	*e*P	**P**	**16 12 03.7**	**-1.1**
CLNS				pmax	pmax		
	comp=N,6.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
CLNS				pmax	pmax		
	comp=E,11nm,1.3s						
CLNS				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.5						
CLNS				MLR	MLR		
	comp=N,200nm,14.0s,MS4.3						
CLNS				MLR	MLR		
	comp=E,100nm,17.0s,MS4.3						
KIV	**Kislovodsk**	**56.00**	**319**	*e*P	**P**	**16 12 08.8**	**-0.7**
KIV				pmax	pmax		
	comp=N,6.0nm,1.0s						
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
KIV				pmax	pmax		
	comp=E,5.0nm,0.8s						
KIV				MLR	MLR		
	comp=N,48nm,18.0s,MS3.9						
KIV				MLR	MLR		
	comp=E,80nm,18.0s,MS3.9						
KIV				MLR	MLR		
	comp=Z,103nm,18.0s,MS4.0						
MALT	**Malatya**	**56.92**	**311**	P	**P**	**16 12 11.6**	**-4.6**
MALT				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
MALT	**Malatya**	**56.92**	**311**	P	**P**	**16 12 11.6**	**-4.6**
	comp=Z,5.0nm,0.9s,mb4.5						
ASAJ	**Asahikawa**	**56.98**	**42**	P	**P**	**16 12 17.8**	**+1.1**
	comp=Z,12nm,1.2s,mb4.8,baz=235,slow=9.5,SNR=3.0						
EIL	**Elat**	**57.62**	**300**	P	**P**	**16 12 16.9**	**-4.4**
	comp=Z,3.4nm,0.6s,mb4.5						
EIL				*e*pP	pP	16 12 29.1	-0.9
SOKR	**Solikamsk**	**58.19**	**340**⇓	*i*P	**P**	**16 12 24.6**	**-0.2**
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
YSS	**Yuzh-Sakhalins**	**58.27**	**39**	*i* P	**P**	**16 12 24.6**	**-1.0**
ANN	**Anapa**	**59.79**	**318**	*e*P	**P**	**16 12 47.0**	**+11**
ANN				*e*S	S	16 21 06.7	+23
ANN				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
YAK	**Yakutsk**	**60.87**	**19***c*	*i*P	**P**	**16 12 41.7**	**-1.5**
YAK				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.5						
YAK				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.3						
YAK	**Yakutsk**	**60.87**	**19**	*e*P	**P**	**16 12 41.6**	**-1.6**
	comp=Z,26nm,0.9s,mb5.4						
BRTR	**Keskin Array B**	**60.90**	**311**	P	**P**	**16 12 42.4**	**-1.4**
	comp=Z,1.6nm,0.7s,mb4.2,baz=121,slow=7.1,SNR=9.9						
BRTR				pP	pP	16 12 49.7	-2.9
	comp=Z,2.3nm,0.7s,baz=123,slow=7.8,SNR=8.9						
STKA	**Stephens Creek**	**61.58**	**132**	*e*P	**P**	**16 12 49.3**	**+0.8**
	comp=Z,4.0nm,1.0s,mb4.5						
STKA	**Stephens Creek**	**61.58**	**132**	P	**P**	**16 12 48.8**	**+0.3**
	comp=Z,1.8nm,0.5s,mb4.5,baz=325,slow=11,SNR=8.2						
OBN	**Obninsk**	**64.37**	**328***c*	*e*P	**P**	**16 13 05.7**	**-0.9**
OBN				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.4						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.4						
AKASG	**Malin Array Be**	**66.94**	**322**	P	**P**	**16 13 21.1**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=83,slow=5.0,SNR=3.8						
TIXI	**Tiksi**	**67.84**	**12***c*	*i*P	**P**	**16 13 27.3**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
MA2	**Magadan**	**67.94**	**28***c*	*i*P	**P**	**16 13 28.3**	**-1.0**
MA2				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
MA2	**Magadan**	**67.94**	**28**	*e*P	**P**	**16 13 28.0**	**-1.3**
	comp=Z,12nm,1.0s,mb4.9						
APA	**Apatity**	**71.25**	**340**⇓	*e*P	**P**	**16 13 57.7**	**+8.2**
APA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
APA				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.9						
FINES	**FINESS Array B**	**71.85**	**333**	P	**P**	**16 13 51.9**	**-1.3**
	comp=Z,2.3nm,0.7s,mb4.2,baz=101,slow=9.7,SNR=7.8						
FINES				LR	LR	16 49 51.1	
	comp=Z,101nm,19.2s,MS4.1,baz=159,slow=40						
BOSA	**Boshof**	**73.65**	**237**	P	**P**	**16 14 05.2**	**+0.8**
	comp=Z,3.9nm,0.9s,mb4.3,baz=79,slow=12,SNR=3.2						
BOSA				LR	LR	16 40 29.2	
	comp=Z,187nm,20.7s,MS4.4,baz=54,slow=31						
ARCES	**ARCESS Array B**	**74.70**	**340**	P	**P**	**16 14 09.2**	**-0.3**
	comp=Z,2.1nm,0.7s,mb4.2,baz=104,slow=5.0,SNR=9.7						
ARCES				LR	LR	16 48 51.8	
	comp=Z,223nm,20.7s,MS4.4,baz=117,slow=37						
GROS	**Grobnik**	**75.12**	**316**	*e*P	**P**	**16 14 12.4**	**-0.1**
BOJS	**Bojanci**	**75.22**	**315**	*i* P	**P**	**16 14 14.2**	**+1.1**
VISS	**Visnje**	**75.53**	**315**	*e*P	pP	16 14 22.9	-0.9
ROBS	**Robic**	**76.48**	**316**	*e*P	pP	16 14 26.9	-2.2
BRG	**Berggiesshubel**	**76.49**	**320**	*e*P	**P**	**16 14 23.4**	**+3.2**
BRG				*e*		16 14 35.9	
BRG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRG	**Berggiesshubel**	**76.49**	**320**	*e*P	**P**	**16 14 23.4**	**+3.3**
	comp=Z,2.2nm,0.6s,mb4.3						
BRG				*e*		16 14 35.9	
GERES	**GERESS Array B**	**76.50**	**318**	P	**P**	**16 14 20.7**	**+0.4**
	comp=Z,1.5nm,0.7s,mb4.0,baz=90,slow=6.7,SNR=9.6						
GERES				pP	pP	16 14 27.6	-1.6
	comp=Z,2.8nm,0.8s,baz=90,slow=5.3,SNR=8.4						
GERES				LR	LR	16 48 07.6	
	comp=Z,52nm,20.8s,MS3.8,baz=7.4,slow=36						
KHC	**Kasperske Hory**	**76.60**	**319**	*e*P	**P**	**16 14 22.7**	**+1.9**
BILL	**Bilibino**	**77.06**	**22**	*e*P	**P**	**16 14 22.6**	**-0.4**
BILL	**Bilibino**	**77.06**	**22**	*e*P	**P**	**16 14 22.6**	**-0.4**
CLL	**Collm**	**77.12**	**321**	*e*P	pP	16 14 31.0	-1.6
CLL	**Collm**	**77.12**	**321**	*e**PP	pP	16 14 31.0	-1.6
CLL				*e*PS	PS	16 24 54.0	+1.8
CLL				*e*SSS	SSS	16 32 42.0	+16
GRA1	**Grafenberg Arr**	**78.17**	**319**	*e*P	**P**	**16 14 30.6**	**+1.2**
	comp=Z,7.0nm,1.5s,mb4.4						
GRF	**Grafenberg Arr**	**78.17**	**319**	*e*P	**P**	**16 14 30.6**	**+1.2**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.4						
GRF	**Grafenberg Arr**	**78.17**	**319**	*e*P	**P**	**16 14 30.6**	**+1.2**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.4						
GRF	**Grafenberg Arr**	**78.17**	**319**	*e*P	**P**	**16 14 30.6**	**+1.2**
	comp=Z,7.0nm,1.5s,mb4.4						
NB2	**NORSAR Subarra**	**78.81**	**331**	P	**P**	**16 14 31.7**	**-1.0**
	comp=Z,1.9nm,0.7s,mb4.1,baz=92,slow=5.0						
NB2	**NORSAR Subarra**	**78.81**	**331**	P	**P**	**16 14 31.7**	**-1.0**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
NOA	**NORSAR Array B**	**78.81**	**331**	P	**P**	**16 14 32.0**	**-0.7**
	comp=Z,1.0nm,0.7s,mb3.9,baz=93,slow=5.8,SNR=5.4						
NOA				pP	pP	16 14 39.1	-2.6
	comp=Z,1.8nm,0.8s,baz=94,slow=5.6,SNR=6.5						
NOA				LR	LR	16 52 54.7	
	comp=Z,145nm,21.1s,MS4.3,baz=100,slow=38						
LPG	**La Plagne**	**81.19**	**315**	*e*P	**P**	**16 14 45.8**	**0.0**
	comp=Z,9.9nm,0.7s,mb4.5						
LPG	**La Plagne**	**81.19**	**315**	*e*P	**P**	**16 14 45.8**	**0.0**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
DBIC	**Dimbokro**	**95.80**	**278**	LR	LR	16 58 15.9	
	comp=Z,131nm,18.1s,MS4.5,baz=73,slow=35						
NVAR	**Mina Array Bea**	**126.17**	**29**	PKP	PKPdf	16 21 34.6	-1.8
	comp=Z,0.2nm,0.5s,baz=5.2,slow=2.2,SNR=4.3						
CPUP	**Villa Florida**	**145.41**	**234**	*e*PKIKP	PKPdf	16 22 07.7	-4.4
CPUP	**Villa Florida**	**145.41**	**234**	PKPbc	PKPbc	16 22 09.2	+1.6
	comp=Z,3.0nm,0.8s,baz=120,slow=5.1,SNR=9.3						

OTT 30 16:03:07.8±0.3,52.77N×67.27W,MN3.1/6,Blast, Mount Wright, Qc Mining explosion.,Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**2.09**	**7**	PN	Pn	16 03 43.2	-1.2
SCHQ				SN	Sn	16 04 12.8	+1.4
SCHQ				Trac		16 04 16.2	
	comp=Z,26nm,0.1s						
SMQ	**Clarke City**	**2.57**	**172**	PN	Pn	16 03 49.8	-1.6
SMQ				SN	Sn	16 04 24.3	+0.4
SMQ				Trac		16 04 35.5	
	comp=Z,20nm,0.2s						
YOSQ	**Ashton Mining**	**2.99**	**274**	PN	Pn	16 03 55.2	-2.2
YOSQ				SG	Sg	16 04 39.4	-8.0
YOSQ				Trac		16 04 43.5	
	comp=Z,56nm,0.2s						
ICQ	**Pointe Anglais**	**3.25**	**180**	PN	Pn	16 03 59.9	-1.2
ICQ				SN	Sn	16 04 38.7	-2.3
ICQ				Trac		16 04 51.3	
	comp=Z,6.4nm,0.1s						
GSQ	**Grosses Roches**	**3.86**	**178**	PN	Pn	16 04 08.2	-1.6
GSQ				SN	Sn	16 04 53.9	-2.6
LG4Q	**La Grande 4**	**4.19**	**285**	PN	Pn	16 04 12.7	-1.8
LG4Q				PG	Pg	16 04 21.2	-10
LG4Q				SN	Sn	16 05 02.6	-2.3
LG4Q				LG		16 05 15.9	
LG4Q				Trac		16 05 20.3	
	comp=Z,8.1nm,0.2s						
LMQ	**La Malbaie**	**5.58**	**202**	PN	Pn	16 04 31.2	-2.8
LMQ				SN	Sn	16 05 33.7	-6.2
WEMQ	**Wemindji, Queb**	**6.48**	**277**	PN	Pn	16 04 43.6	-3.2
WEMQ				SN	Sn	16 05 52.8	-10
WEMQ				Trac		16 06 37.9	
	comp=Z,6.3nm,0.2s						
DRLN	**Deer Lake**	**7.09**	**116**	PN	Pn	16 04 52.0	-3.4
DRLN				SN	Sn	16 06 10.5	-7.2
VLDQ	**Val d'Or**	**7.99**	**238**	PN	Pn	16 05 05.8	-2.3
MALO	**McAlpine Lake**	**8.28**	**256**	PN	P	16 05 06.7	-5.3
MALO				SN	Sn	16 06 36.5	-11
VIMO	**Victor Mine**	**9.98**	**277**	PN	P	16 05 29.5	-5.9
SILO	**Sutton Inlier**	**10.62**	**286**	PN	P	16 05 37.8	-6.3

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*ATH **30** 16:08:12.9,34.34N×25.70E,h30^{km},MD3.6/4*
*NEIC **30** 16:08:12.9,34.34N×25.70E,h30^{km},MD3.6(ATH),After ATH.*
*CSEM **30** 16:08:12.6±0.2,34.22N×25.71E,h25^{km},ML3.2,Error ellipse: s-maj=12.8km s-min=5.8km az=82.0*
*HLW **30** 16:08:13.1,34.36N×25.79E,h33^{km},Mb3.2*
ISC 30 16:08:12.9±0.9,34.20N±0.08×25.7E±0.1,h34^{km}±57^{km}, n11,σ0^{s}97/13,5C-1D,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.67**	**358**	*e*PN	**P**	**16 08 24.2**	**-1.6**
NPS	**Neapolis**	**1.06**	**355**	*e*PN	**P**	**16 08 30.5**	**-0.9**
VAM	**Vamos**	**1.74**	**314**	*e*PN	**P**	**16 08 41.7**	**+0.6**
KARP	**Karpathos**	**1.79**	**41**	*e*PN	**P**	**16 08 42.5**	**+0.7**
SLUM		**2.74**	**189**	⇓P	**P**	**16 08 56.9**	**+1.4**
HMAT	**Matruh**	**3.31**	**159**	⇑P	**P**	**16 09 04.8**	**+1.3**
HMAT				S	**S**	**16 09 42.3**	**+0.1**
DABA	**Dabaa**	**3.84**	**145**	⇑P	**P**	**16 09 11.4**	**+0.2**
SWA1		**4.92**	**180**	⇑P	**P**	**16 09 26.8**	**+0.3**
SWA1				S	**S**	**16 10 21.0**	**-2.1**
SWA2		**4.95**	**183**	⇑P	**P**	**16 09 27.0**	**+0.1**
HBRG	**Burj al 'Arab**	**5.02**	**135**	⇑P	**P**	**16 09 27.4**	**-0.5**
HFRF	**Wahat Farafira**	**7.38**	**162**	P	**P**	**16 09 59.9**	**-1.0**

MAN 30 16:16:38.6,19.07N×121.23E,h17^{km},mb4.2,ML3.0, MS2.8,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**1.13**	**137**	*e*P	Pb	16 16 58.6	-0.8
SGCP				*e*S	Sb	16 17 15.7	+2.0
APYP	**Conner**	**1.21**	**179**	*e*P	Pb	16 16 59.5	-1.1
APYP				*e*S	Sb	16 17 17.2	+1.4
CVP	**Callao Caves**	**1.48**	**157**	*i* P	Pn	16 17 05.0	+0.3
CVP				*e*S	Sb	16 17 25.0	+1.4
ABRA	**Dolores**	**1.50**	**199**	*e*P	Pn	16 17 03.4	-1.7
ABRA				*e*S	Sn	16 17 25.0	+0.7
BBP	**Basco**	**1.53**	**27**	*e*P	Pn	16 17 04.9	-0.5
BBP				*e*S	Sn	16 17 18.9	-6.0
CAUP	**Cauayan**	**2.19**	**165**	*e*P	Pn	16 17 14.1	-0.8
CAUP				*e*S	Sn	16 17 48.3	+6.4

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*CSEM **30** 16:33:13.3±0.2,35.58N×3.51W,h40^{km},MD3.0,Error ellipse: s-maj=5.1km s-min=3.8km az=72.0*
*MDD **30** 16:33:14.0±0.3,35.74N×3.52W,mbLg2.4/5,Error ellipse: s-maj=3.3km s-min=2.1km az=135.0,PRXIMO*
*CNRM **30** 16:33:15.3,35.61N×3.45W,h30^{km},MD3.0*
ISC 30 16:33:12.5±0.5,35.72N±0.03×3.57W±0.04,h7^{km}±5^{km},n18, σ1^{s}35/29,2C-1D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALB	**Alboran**	**0.49**	**63**	⇑Pg	**Pg**	**16 33 22.0**	**-0.3**
	64nm,0.4s,SNR=18						
EALB				Lg		16 33 28.2	
	372nm,0.1s,SNR=28						
MPAL	**Palemas**	**0.58**	**212**	*i* P	**Pg**	**16 33 26.0**	**+1.9**
MPAL				*i* S	**Sg**	**16 33 33.0**	**+1.1**
EMEL	**Melilla**	**0.65**	**130**	⇓Pg	**Pg**	**16 33 26.1**	**+0.5**
	119nm,0.2s,SNR=18						
EMEL				Lg		16 33 34.5	
	1µm,0.2s,SNR=7.9						
EMLI	**Melilla**	**0.66**	**129**	P	**Pg**	**16 33 26.1**	**+0.4**
	119nm,0.2s,SNR=18						
EMLI				S	**Sg**	**16 33 34.5**	**0.0**
	1µm,0.2s,SNR=7.9						
TOU	**Touzarine**	**0.77**	**191**	*i* P	**Pb**	**16 33 29.0**	**+1.1**
TOU				*i* S	**Sb**	**16 33 37.0**	**-1.3**
ZAI	**Zaio**	**1.01**	**138**	*i* P	**Pb**	**16 33 30.0**	**-1.9**
ZAI				*i* S	**Sb**	**16 33 41.0**	**-4.2**
EGUA	**Guajares**	**1.11**	**0**	⇑Pg	**Pg**	**16 33 33.7**	**-1.0**
	SNR=18						
EGUA				Lg		16 33 47.3	
	0.9nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**1.29**	**311**	Pg	**Pg**	**16 33 37.8**	**-0.4**
	1.6nm,1.1s,SNR=7.9						
EMIJ				Lg		16 33 54.8	
	9.0nm,0.2s,SNR=5.2						
EMIJ	**Mijas**	**1.29**	**311**	P	**Pb**	**16 33 37.8**	**+1.1**
	SNR=7.9						
EMIJ				S	**Sb**	**16 33 54.8**	**+1.5**
	9.0nm,0.2s,SNR=5.2						
EBER	**Berja**	**1.30**	**25**	Pg	**Pg**	**16 33 38.3**	**-0.1**
	13nm,0.3s,SNR=4.0						
EBER				Lg		16 33 54.9	
	19nm,0.3s,SNR=6.2						
EBER	**Berja**	**1.30**	**25**	P	**Pb**	**16 33 38.3**	**+1.4**
	13nm,0.3s,SNR=4.0						
EBER				S	**Sb**	**16 33 54.9**	**+1.3**
	19nm,0.3s,SNR=6.2						
ERON	**Agron**	**1.31**	**352**	Pg	**Pg**	**16 33 36.8**	**-1.8**
	3.1nm,0.2s,SNR=4.0						
TZK	**Tazeka**	**1.70**	**197**	*i* P	**Pn**	**16 33 40.0**	**-2.9**
TZK				*i* S	**Sn**	**16 34 00.0**	**-5.2**
EQES	**Quesada**	**2.12**	**11**	Pn	**Pn**	**16 33 50.5**	**+1.6**
	1.6nm,0.5s,SNR=7.9						
EQES				Sn	**Sn**	**16 34 16.7**	**+1.0**
	3.5nm,0.2s,SNR=7.9						
EQES	**Quesada**	**2.12**	**11**	P	**Pn**	**16 33 50.5**	**+1.7**
	SNR=7.9						
EQES				S	**Sn**	**16 34 16.7**	**+1.0**
	3.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.57**	**342**	Pn	**Pn**	**16 33 59.8**	**+4.4**
	3.7nm,0.4s,SNR=11						
EADA				Sn	**Sn**	**16 34 26.3**	**-0.9**
	SNR=7.9						
EADA	**Adamuz**	**2.57**	**342**	S	**Sn**	**16 34 26.3**	**-0.9**
	SNR=7.9						
ECAB	**El Cabril**	**2.78**	**328**	Pg	**Pg**	**16 34 05.8**	**-2.1**
	SNR=7.9						
ECAB				S	**Sn**	**16 34 30.6**	**-1.8**
	SNR=7.9						

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*IDC **30** 16:49:10.1±1.2,11.83N×125.49E,mb4.0/7,mb1 4.1/7, mb1mx3.9/18,mbtmp4.0/7,MS3.1/1,Ms1 3.1/1, ms1mx2.7/24,Error ellipse: s-maj=105.1km s-min=17.2km az=71.0*
*MAN **30** 16:49:15.9,11.92N×125.42E,h53^{km},mb4.7,ML3.6, MS3.6*
ISC 30 16:49:16.4±0.6,11.91N±0.03×125.36E±0.06,h60^{km}±5^{km}, n31,σ1^{s}21/44,mb4.0/7,2D,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.32**	**166**	*e*P	**P**	**16 49 26.1**	**-0.7**
BESP				*e*S	**S**	**16 49 32.7**	**-1.7**
PLP	**Palo**	**0.83**	**207**	⇓*e*P	**P**	**16 49 31.7**	**-0.7**
PLP				*i* S	**S**	**16 49 46.8**	**+2.4**
CNP	**Catarman**	**0.90**	**311**	*e*P	**P**	**16 49 33.8**	**+0.4**
CNP				*e*S	**S**	**16 49 46.5**	**+0.4**
MSLP	**Maasin**	**1.83**	**196**	*e*P	**P**	**16 49 47.5**	**+1.3**
MSLP				*e*S	**S**	**16 50 10.0**	**+1.8**
PVCP	**Virac**	**2.04**	**325**	*e*P	**P**	**16 49 50.0**	**+0.8**
PVCP				*e*S	**S**	**16 50 20.2**	**+6.8**
LLP	**Lapu-Lapu**	**2.09**	**221**	⇓*e*P	**P**	**16 49 49.5**	**-0.4**
LLP				*e*S	**S**	**16 50 12.8**	**-1.9**
SCPH	**Surigao**	**2.12**	**176**	*i* P	**P**	**16 49 51.4**	**+1.1**
SCPH				*e*S	**S**	**16 50 06.1**	**-9.2**
TBP	**Tagbilaran**	**2.65**	**214**	*e*P	**P**	**16 49 47.1**	**-11**
TBP				*i* S	**S**	**16 50 24.0**	**-4.8**
BUTP	**Butuan**	**2.94**	**175**	*e*P	**P**	**16 50 03.6**	**+1.7**
BUTP				*e*S	**S**	**16 50 47.6**	**+12**
AUQP	**San Andres**	**2.97**	**298**	*e*P	**P**	**16 50 04.2**	**+1.9**
GUIM	**Jordan**	**3.00**	**245**	*e*P	**P**	**16 50 02.6**	**-0.1**
GUIM				*e*S	**S**	**16 50 37.3**	**-0.4**
OTRP	**Odiongan**	**3.29**	**278**	*e*P	**P**	**16 50 06.9**	**0.0**
BOAC	**Boac**	**3.76**	**295**	*e*P	**P**	**16 50 13.3**	**0.0**
BUKP	**Musuan**	**4.02**	**184**	*e*P	**P**	**16 50 17.0**	**0.0**
BUKP				*e*S	**S**	**16 51 08.6**	**+5.4**
SJMP	**San Jose**	**4.18**	**278**	*e*P	**P**	**16 50 20.2**	**+0.9**
POLP	**Polilio Island**	**4.35**	**310**	*e*P	**P**	**16 50 22.3**	**+0.6**
PAGZ	**Pagadian**	**4.48**	**206**	*e*P	**P**	**16 50 24.4**	**+0.8**
IPIL	**Ipil**	**4.93**	**214**	*e*P	**P**	**16 50 29.1**	**-0.7**
IPIL				*e*S	**S**	**16 51 25.2**	**-1.0**
BUSP	**Coron**	**5.05**	**272**	*e*P	**P**	**16 50 31.2**	**-0.2**
BALP	**Baler**	**5.29**	**316**	*e*P	**P**	**16 50 31.9**	**-2.8**
BALP				*e*S	**S**	**16 51 24.9**	**-10**
CAUP	**Cauayan**	**6.06**	**326**	*e*P	**P**	**16 50 45.6**	**+0.2**
APYP	**Conner**	**7.13**	**327**	*e*P	**P**	**16 50 58.2**	**-2.2**
APYP				*e*S	**S**	**16 52 17.9**	**-2.9**
ABRA	**Dolores**	**7.26**	**322**	*e*P	**P**	**16 51 01.8**	**-0.5**
CBIJ	**Chichi jima**	**21.86**	**44**	LR	LR	17 01 19.6	
	comp=Z,44nm,18.2s,baz=360,slow=33						
FITZ	**Fitzroy Crossi**	**29.82**	**179**	P	**P**	**16 55 18.4**	**-1.9**
	2.5nm,0.9s,mb4.0,baz=3.4,slow=17,SNR=2.4						
WRA	**Warramunga Arr**	**32.86**	**164**	P	**P**	**16 55 44.3**	**-2.7**
	0.5nm,0.8s,mb3.5,baz=346,slow=9.3,SNR=2.9						
SONM	**Songino Array**	**39.18**	**340**	P	**P**	**16 56 41.4**	**+1.4**
	0.7nm,0.4s,mb3.7,baz=156,slow=9.8,SNR=7.6						
STKA	**Stephens Creek**	**46.23**	**161**	P	**P**	**16 57 37.0**	**-0.6**
	3.2nm,1.1s,mb4.2,baz=343,slow=9.1,SNR=3.7						
MKAR	**Makanchi Array**	**50.19**	**322**	P	**P**	**16 58 09.0**	**+0.8**
	1.7nm,0.8s,mb4.1,baz=121,slow=8.3,SNR=22						
BVAR	**Borovoye Array**	**59.81**	**325**	P	**P**	**16 59 17.9**	**+0.1**
	1.0nm,0.6s,mb4.0,baz=129,slow=9.2,SNR=11						
ARCES	**ARCESS Array B**	**82.35**	**340**	P	**P**	**17 01 33.8**	**+1.0**
	2.3nm,0.7s,mb4.2,baz=82,slow=6.7,SNR=18						

ISC 30 16:55:45.1±1.0,38.83N±0.08×40.03E±0.08,h10^{km},n7, σ1^{s}16/12,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.50**	**277**	PG	**Pg**	**16 55 55.7**	**+0.4**
PTK				SG	**Sg**	**16 56 03.7**	**+1.6**
ELZG	**Elazig**	**0.89**	**248**	*i* P	**Pb**	**16 56 01.9**	**-0.3**
ELZG				*i* S	**Sb**	**16 56 17.1**	**+3.4**
BEST	**Besiri**	**1.35**	**134**	*i* P	**Pb**	**16 56 11.0**	**+0.9**
BEST				*i* S	**Sb**	**16 56 28.5**	**+1.2**
MALT	**Malatya**	**1.36**	**248**	*e*PN	**Pn**	**16 56 08.1**	**-2.1**
KELT	**Kelkit**	**1.45**	**336**	*i* P	**Pn**	**16 56 10.1**	**-1.3**
KELT				*i* S	**Sb**	**16 56 36.9**	**+6.9**
MARD	**Mardin**	**1.63**	**159**	*i* P	**Pn**	**16 56 14.2**	**+0.1**
MARD				*i* S	**Sb**	**16 56 34.4**	**-0.9**
URFA	**Urfa**	**1.69**	**215**	*e*PN	**Pn**	**16 56 14.3**	**-0.5**

ISC 30 17:01:24.6±1.0,39.05N±0.05×35.62E±0.08,h10^{km},n6, σ1^{s}19/10,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.27**	**139**	*i* PG	**Pg**	**17 01 30.3**	**+0.1**
YOZ	**Yozgat**	**0.63**	**338**	PG	**Pg**	**17 01 35.7**	**-1.6**
YOZ				SG	**Sg**	**17 01 44.4**	**-1.3**
AVNT	**Avonos**	**0.66**	**246**	*i* P	**Pb**	**17 01 36.6**	**-1.0**
AVNT				*i* S	**Sb**	**17 01 46.9**	**+0.4**
CDAG	**Cicekdag**	**1.12**	**301**	*i* P	**Pb**	**17 01 45.0**	**-0.7**
CDAG				*i* S	**Sb**	**17 02 00.8**	**+0.7**
CORM	**Corum**	**1.36**	**326**	PN	**Pn**	**17 01 49.8**	**+0.1**
CTKT	**Corum**	**1.69**	**338**	*i* P	**Pn**	**17 01 56.2**	**+1.8**
CTKT				*i* S	**Sn**	**17 02 19.1**	**+2.8**

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*IDC **30** 17:07:57.8±1.7,52.44N×31.78W,mb3.7/9,mb1 3.9/10, mb1mx3.7/25,mbtmp3.7/10,ML3.9/1,MS3.2/6,Ms1 3.2/6, ms1mx2.9/36,Error ellipse: s-maj=59.4km s-min=17.5km az=2.0*
*NEIC **30** 17:07:59.1±1.0,52.35N×31.83W,h10^{km},mb4.3/4,Error ellipse: s-maj=34.3km s-min=8.4km az=179.0*
*CSEM **30** 17:08:00.9±0.2,52.49N×31.90W,h33^{km},mb4.3/4,Error ellipse: s-maj=16.9km s-min=4.4km az=178.0*
ISC 30 17:07:57.3±1.3,52.3N±0.3×31.9W±0.1,h10^{km},n26, σ0^{s}74/20,mb3.9/12,MS3.1/6,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**17.16**	**69**	P	**P**	**17 11 59.2**	**+0.8**
	0.2nm,0.3s,baz=265,slow=9.6,SNR=10						
SCHQ	**Schefferville**	**20.77**	**291**	P	**P**	**17 12 40.5**	**-0.1**
	2.1nm,0.7s,baz=86,slow=15,SNR=3.6						
SCHQ	**Schefferville**	**20.77**	**291**	P	**P**	**17 12 40.5**	**-0.1**
KONO	**Kongsberg**	**23.98**	**56**	P	**P**	**17 13 13.7**	**+1.4**
	8.3nm,1.1s,mb4.1						
KONO	**Kongsberg**	**23.98**	**56**	P	**P**	**17 13 13.6**	**+1.3**
	8.3nm,1.1s,mb4.1						
NOA	**NORSAR Array B**	**24.79**	**52**	LR	LR	17 21 20.7	
	comp=Z,18nm,18.4s,MS2.6,baz=290,slow=32						
HFS	**Hagfors**	**26.03**	**55**	LR	LR	17 22 13.6	
	comp=Z,32nm,19.2s,MS2.9,baz=177,slow=33						
GERES	**GERESS Array B**	**28.78**	**79**	P	**P**	**17 13 55.6**	**-1.3**
	0.6nm,0.7s,mb3.4,baz=301,slow=7.8,SNR=5.3						
GERES				LR	LR	17 25 15.6	
	comp=Z,29nm,19.4s,MS2.9,baz=32,slow=36						
FINES	**FINESS Array B**	**31.91**	**50**	LR	LR	17 24 59.7	
	comp=Z,28nm,18.6s,MS3.0,baz=340,slow=32						
YKA	**Yellowknife Ar**	**42.66**	**317**	P	**P**	**17 15 55.0**	**0.0**
	0.4nm,0.6s,mb3.4,baz=65,slow=8.8,SNR=5.1						
YKA	**Yellowknife Ar**	**42.66**	**317**	P	**P**	**17 15 55.0**	**0.0**
BRTR	**Keskin Array B**	**45.67**	**79**	P	**P**	**17 16 20.4**	**+0.8**
	1.3nm,0.5s,mb4.1,baz=307,slow=6.2,SNR=7.4						
ARU	**Arti**	**49.16**	**47**	P	**P**	**17 16 45.6**	**-1.2**
	7.3nm,1.3s,mb4.5						
ARU	**Arti**	**49.16**	**47**	P	**P**	**17 16 45.6**	**-1.1**
	7.3nm,1.3s,mb4.5						
PDAR	**Pinedale Array**	**50.90**	**292**	P	**P**	**17 17 00.0**	**-0.2**
	0.7nm,0.5s,mb3.9,baz=72,slow=7.5,SNR=8.7						
DLBC	**Dease Lake**	**51.26**	**318**	LR	LR	17 37 26.6	
	comp=Z,63nm,18.3s,MS3.7,baz=114,slow=34						
HWUT	**Hardware Ranch**	**52.79**	**292**	*e*P	**P**	**17 17 14.6**	**0.0**
	3.9nm,0.8s,mb4.4						
HWUT	**Hardware Ranch**	**52.79**	**292**	*e*P	**P**	**17 17 14.6**	**+0.1**
	3.9nm,0.8s,mb4.4						
ILAR	**Eielson Array**	**52.97**	**331**	P	**P**	**17 17 15.8**	**+0.3**
	0.5nm,0.8s,mb3.5,baz=45,slow=5.9,SNR=5.6						
SDV	**Santo Domingo**	**53.56**	**230**	LR	LR	17 34 48.8	
	comp=Z,48nm,19.8s,MS3.5,baz=296,slow=30						
ZRNK	**Zerenda**	**56.04**	**46**	*e*P	**P**	**17 17 38.3**	**+0.2**
	2.0nm,1.0s,mb4.1						
ZRNK	**Zerenda**	**56.04**	**46**	*e*P	**P**	**17 17 38.3**	**+0.2**
	2.0nm,1.0s,mb4.1						
TXAR	**Lajitas Array**	**56.48**	**276**	P	**P**	**17 17 42.2**	**+0.6**
	0.2nm,0.5s,mb3.4,baz=40,slow=7.0,SNR=4.0						
MKAR	**Makanchi Array**	**66.35**	**43**	P	**P**	**17 18 46.8**	**-1.1**
	0.7nm,0.5s,mb3.9,baz=326,slow=5.5,SNR=12						
SONM	**Songino Array**	**74.04**	**28**	P	**P**	**17 19 34.2**	**-0.2**
	0.5nm,0.7s,mb3.5,baz=333,slow=8.3,SNR=5.3						
WRA	**Warramunga Arr**	**145.93**	**24**	PKPbc	PKPbc	17 27 37.8	+0.6
	0.6nm,0.8s,baz=346,slow=4.1,SNR=6.7						

IDC 30 17:15:42.0±3.6,1.94N×96.52E,mb3.3/3,mb1 3.5/4, mb1mx3.4/18,mbtmp3.3/4,ML3.4/1,MS3.5/1,Ms1 3.5/1, ms1mx3.0/12,Error ellipse: s-maj=123.5km s-min=28.3km az=61.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.59**	**8**	Pn	P	17 19 37.5	-0.2
	0.1nm,0.3s,baz=199,slow=11,SNR=5.5						
WRA	**Warramunga Arr**	**43.00**	**122**	P	P	17 23 43.3	-1.8
	0.2nm,0.6s,baz=303,slow=8.9,SNR=3.3						
MKAR	**Makanchi Array**	**46.37**	**347**	P	P	17 24 09.7	-2.1
	0.3nm,0.5s,baz=160,slow=9.1,SNR=6.8						
SONM	**Songino Array**	**46.51**	**9**	P	P	17 24 11.0	-1.9
	0.2nm,0.4s,baz=191,slow=7.3,SNR=3.5						
SONM				LR	LR	17 45 12.0	
	comp=Z,61nm,20.1s,baz=72,slow=38						

MAN 30 17:20:12.6,19.16N×121.18E,h1^{km},mb4.6,ML3.4,MS3.3, 1C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**1.23**	**138**	*e*P	Pb	17 20 36.4	0.0
SGCP				*e*S	Sb	17 20 53.2	+0.6
APYP	**Conner**	**1.30**	**177**	*e*P	Pb	17 20 36.9	-0.5
APYP				*e*S	Sb	17 20 54.3	-0.2
BBP	**Basco**	**1.47**	**30**	*e*P	Pn	17 20 39.7	-0.6
BBP				*e*S	Sb	17 20 58.3	-1.3
ABRA	**Dolores**	**1.57**	**196**	*e*P	Pn	17 20 40.5	-1.3
ABRA				*e*S	Sb	17 20 59.4	-3.0
CVP	**Callao Caves**	**1.58**	**157**	⇑*e*P	Pn	17 20 41.5	-0.3
CVP				*e*S	Sb	17 21 01.0	-1.6
CAUP	**Cauayan**	**2.29**	**164**	*e*P	Pn	17 20 54.2	+2.1
BALP	**Baler**	**3.42**	**174**	*e*P	Pn	17 21 05.9	-2.3
BALP				*e*S	Sn	17 21 50.6	+0.6

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*NEIC **30** 17:25:31.8,16.44N×95.83W,h58^{km},MD4.0(MEX),After MEX.*
MEX 30 17:25:32.3±0.6,16.44N×95.83W,h52^{km}±15^{km},MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.72**	**202**	*i* P	P	17 25 44.7	-1.8
HUIG				*i* S	S	17 25 54.9	-2.0
HUIG	**Huatulco**	**0.72**	**202**	*i* P	P	17 25 44.7	-1.8
HUIG				*i* S	S	17 25 54.9	-2.0
OXX	**Oaxaca**	**1.07**	**307**	*i* P	P	17 25 50.0	-1.3
OXX				*i* S	S	17 26 02.5	-2.9
VHO	**Vista Hermosa**	**1.07**	**306**	*i* P	P	17 25 49.5	-1.8
VHO				*i* S	S	17 26 03.2	-2.2
CMIG	**Matias Romero**	**1.11**	**54**	*i* P	P	17 25 49.7	-2.1
CMIG				*i* S	S	17 26 04.1	-2.2
IISM	**Ciudad Serdan**	**2.93**	**330**	*e*P	P	17 26 17.0	-0.6
CCIG	**Comitan**	**3.54**	**92**	*i* P	P	17 26 24.2	-2.0
CCIG				*i* S	S	17 27 04.6	-2.7
PPM	**Popocatepetl**	**3.73**	**315**	*i* P	P	17 26 27.8	-1.1
PPM				*i* S	S	17 27 09.5	-2.6
ACX	**Acapulco**	**3.94**	**277**	*e*P	P	17 26 28.0	-3.9

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*NEIC **30** 17:32:36.1,37.49S×177.27E,h92^{km},ML4.2(WEL),After WEL.*
WEL 30 17:32:35.6±0.1,37.47S×177.25E,h96^{km}±1^{km},ML4.3/19, 1C-3D,Error ellipse: s-maj=0.8km s-min=0.7km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.08**	**220**	P	P	17 32 51.0	+1.9
MARZ	**Manawahe**	**0.69**	**221**	P	P	17 32 52.6	-0.2
MARZ	**Manawahe**	**0.69**	**221**	P*	P	17 32 52.5	-0.2
EDRZ	**Edgecumbe**	**0.76**	**212**	P	P	17 32 53.4	0.0
EDRZ	**Edgecumbe**	**0.76**	**212**	P*	P	17 32 53.2	-0.2
URZ	**Urewera**	**0.80**	**188**	P	P	17 32 53.3	-0.5
URZ	**Urewera**	**0.80**	**188**	⇓P*	P	17 32 53.3	-0.5
URZ				S*	S	17 33 06.8	-0.5
MYRZ	**Mayor Island**	**0.83**	**283**	P*	P	17 32 54.0	-0.1
TGRZ	**Tauranga**	**0.83**	**251**	P	P	17 32 54.0	-0.1
TGRZ	**Tauranga**	**0.83**	**251**	⇓P*	P	17 32 54.0	-0.2
MXZ	**Matakaoa Point**	**0.84**	**97**	P	P	17 32 54.1	-0.2
MXZ				S	S	17 33 08.1	-0.1
MXZ	**Matakaoa Point**	**0.84**	**97**	P*	P	17 32 54.0	-0.3
LIRZ	**Lichensteins R**	**0.87**	**232**	P	P	17 32 54.7	+0.1
LIRZ	**Lichensteins R**	**0.87**	**232**	P*	P	17 32 54.5	-0.1
MWZ	**Matawai**	**0.89**	**166**	P	P	17 32 54.5	-0.3
MWZ	**Matawai**	**0.89**	**166**	⇓P*	P	17 32 54.4	-0.4
MWZ				S*	S	17 33 09.0	-0.1
TAZ	**Tarawera**	**0.96**	**217**	P	P	17 32 55.8	+0.2
TAZ	**Tarawera**	**0.96**	**217**	P*	P	17 32 55.6	+0.1
PUZ	**Puketiti**	**1.00**	**127**	P	P	17 32 55.7	-0.3
PUZ	**Puketiti**	**1.00**	**127**	⇑PN	P	17 32 55.7	-0.3
PUZ				SN	S	17 33 11.0	-0.3
UTU	**Utuhina**	**1.10**	**230**	P	P	17 32 57.7	+0.6
UTU	**Utuhina**	**1.10**	**230**	P*	P	17 32 57.6	+0.5
PATZ	**Paeroa**	**1.20**	**220**	P	P	17 32 58.6	+0.1
PATZ	**Paeroa**	**1.20**	**220**	P*	P	17 32 58.4	-0.1
KUZ	**Kuaotunu**	**1.42**	**300**	*e*P	P	17 33 00.6	-0.5
KUZ	**Kuaotunu**	**1.42**	**300**	PN	P	17 33 00.4	-0.6
WHTZ	**Whakaora**	**1.57**	**220**	P	P	17 33 03.3	+0.3
WHTZ	**Whakaora**	**1.57**	**220**	P*	P	17 33 03.2	+0.2
KNZ	**Kokohu**	**1.58**	**168**	*e*P	P	17 33 06.3	+3.2
KNZ	**Kokohu**	**1.58**	**168**	*e*PN	P	17 33 02.0	-1.2
KNZ				SN	S	17 33 23.1	-0.4
HATZ	**Hinemaiaia**	**1.69**	**212**	P	P	17 33 04.1	-0.4
HATZ	**Hinemaiaia**	**1.69**	**212**	P*	P	17 33 04.0	-0.4
HATZ				S*	S	17 33 27.2	+1.4
WATZ	**Wairara**	**1.72**	**224**	P	P	17 33 04.9	0.0
WATZ	**Wairara**	**1.72**	**224**	P*	P	17 33 04.8	0.0
BKZ	**Black Stump Fm**	**1.80**	**199**	P	P	17 33 05.2	-0.7
BKZ	**Black Stump Fm**	**1.80**	**199**	P*	P	17 33 05.0	-0.8
RATZ	**Rangitukua**	**1.82**	**219**	P	P	17 33 06.2	+0.1
RATZ	**Rangitukua**	**1.82**	**219**	PN	P	17 33 06.2	0.0
RITZ	**Rihia Road**	**1.86**	**216**	P	P	17 33 07.3	+0.6
RITZ	**Rihia Road**	**1.86**	**216**	*e*PN	P	17 33 06.6	-0.1
KATZ	**Kakaramea**	**1.94**	**219**	P	P	17 33 07.7	0.0
KRVZ	**Karewarewa**	**2.06**	**217**	PN	P	17 33 09.5	+0.2
WTVZ	**West Tongariro**	**2.10**	**218**	P	P	17 33 09.9	0.0
WTVZ	**West Tongariro**	**2.10**	**218**	PN	P	17 33 09.6	-0.3
OTVZ	**Oturere**	**2.10**	**216**	PN	P	17 33 10.0	+0.1
NGZ	**Ngauruhoe**	**2.14**	**217**	P	P	17 33 10.7	+0.2
NGZ	**Ngauruhoe**	**2.14**	**217**	PN	P	17 33 10.6	+0.1
TWVZ	**Taurewa**	**2.14**	**221**	P	P	17 33 10.5	0.0
TWVZ	**Taurewa**	**2.14**	**221**	PN	P	17 33 10.5	0.0
HIZ	**Hauiti**	**2.16**	**240**	PN	P	17 33 10.9	+0.2
CNZ	**Chateau**	**2.19**	**217**	P	P	17 33 11.3	+0.2
CNZ	**Chateau**	**2.19**	**217**	PN	P	17 33 11.1	0.0
WPVZ	**Whakapapa**	**2.19**	**217**	P	P	17 33 11.3	+0.2
WPVZ	**Whakapapa**	**2.19**	**217**	PN	P	17 33 11.2	+0.1
TUVZ	**Tukino**	**2.19**	**214**	P	P	17 33 11.0	-0.2
TUVZ	**Tukino**	**2.19**	**214**	PN	P	17 33 10.9	-0.2
FWVZ	**Far West T-bar**	**2.23**	**216**	P	P	17 33 11.7	0.0
FWVZ	**Far West T-bar**	**2.23**	**216**	PN	P	17 33 11.7	0.0
DRZ	**Dome Shelter**	**2.24**	**216**	P	P	17 33 12.1	+0.3
DRZ	**Dome Shelter**	**2.24**	**216**	*e*PN	P	17 33 11.0	-0.8
MOVZ	**Moawhango**	**2.27**	**211**	P	P	17 33 11.1	-1.1
MOVZ	**Moawhango**	**2.27**	**211**	PN	P	17 33 11.1	-1.1
TRVZ	**Turoa**	**2.27**	**216**	PN	P	17 33 12.1	-0.1
WNVZ	**Wahianoa**	**2.27**	**214**	P	P	17 33 11.8	-0.4
WNVZ	**Wahianoa**	**2.27**	**214**	PN	P	17 33 11.7	-0.5
PKVZ	**Pokaka**	**2.35**	**219**	PN	P	17 33 13.2	-0.2
MTVZ	**Mangateitei**	**2.37**	**216**	PN	P	17 33 13.0	-0.6
VRZ	**Vera Road**	**2.56**	**229**	P	P	17 33 16.4	+0.1
VRZ	**Vera Road**	**2.56**	**229**	PN	P	17 33 16.3	0.0
PWZ	**Pawanui**	**2.57**	**187**	P	P	17 33 13.6	-2.8
PWZ	**Pawanui**	**2.57**	**187**	PN	P	17 33 13.5	-3.0
PWZ				SN	S	17 33 43.9	-3.0
TSZ	**Takapari Road**	**2.78**	**201**	P	P	17 33 16.2	-3.0
TSZ	**Takapari Road**	**2.78**	**201**	PN	P	17 33 16.0	-3.2
RAEZ	**Rainy Point**	**2.89**	**230**	P	P	17 33 21.5	+0.7
RAEZ	**Rainy Point**	**2.89**	**230**	PN	P	17 33 21.5	+0.7

WAZ	**Wanganui**	**2.89**	**217**	P	P	17 33 19.9	-0.9
WAZ	**Wanganui**	**2.89**	**217**	PN	P	17 33 19.8	-1.0
NEZ	**North Egmont**	**3.06**	**233**	P	P	17 33 24.3	+1.1
NEZ	**North Egmont**	**3.06**	**233**	PN	P	17 33 23.8	+0.7
PKE	**Pukeiti**	**3.09**	**235**	P	P	17 33 23.9	+0.3
PKE	**Pukeiti**	**3.09**	**235**	*e*PN	P	17 33 24.5	+1.0
NRZ	**Ngariki Road**	**3.21**	**233**	P	P	17 33 26.3	+1.2
BFZ	**Birch Farm**	**3.30**	**193**	*e*P	P	17 33 22.4	-4.0
BFZ	**Birch Farm**	**3.30**	**193**	PN	P	17 33 22.4	-4.1
MRZ	**Mangatainoka R**	**3.44**	**202**	*e*P	P	17 33 24.2	-4.2
MRZ	**Mangatainoka R**	**3.44**	**202**	PN	P	17 33 24.0	-4.4
KIW	**Kapiti Island**	**3.85**	**208**	P	P	17 33 29.8	-4.1
KIW	**Kapiti Island**	**3.85**	**208**	PN	P	17 33 29.5	-4.4
MTW	**Mount Morrison**	**3.93**	**200**	P	P	17 33 30.2	-4.8
MTW	**Mount Morrison**	**3.93**	**200**	PN	P	17 33 29.9	-5.1
CAW	**Cannon Point**	**4.01**	**204**	P	P	17 33 31.2	-4.9
CAW	**Cannon Point**	**4.01**	**204**	PN	P	17 33 31.0	-5.1
TRWZ	**Traveller**	**4.11**	**197**	PN	P	17 33 32.4	-5.1
PAWZ	**Paruwai Farm**	**4.16**	**199**	PN	P	17 33 32.6	-5.6
DUWZ	**D'Urville Isla**	**4.22**	**217**	*e*PN	P	17 33 34.7	-4.3
MSWZ	**Moikau Station**	**4.23**	**201**	P	P	17 33 34.1	-5.1
MSWZ	**Moikau Station**	**4.23**	**201**	*e*PN	P	17 33 33.9	-5.4
MRW	**Makara Radio**	**4.24**	**207**	P	P	17 33 34.5	-4.9
MRW	**Makara Radio**	**4.24**	**207**	*e*PN	P	17 33 34.2	-5.2
WEL	**Wellington**	**4.27**	**206**	P	P	17 33 34.8	-4.9
WEL	**Wellington**	**4.27**	**206**	*e*PN	P	17 33 34.7	-5.0
SNZO	**South Karori**	**4.31**	**206**	P	P	17 33 34.9	-5.4
SNZO	**South Karori**	**4.31**	**206**	*e*PN	P	17 33 34.5	-5.8
BHW	**Baring Head**	**4.34**	**204**	P	P	17 33 35.4	-5.3
BHW	**Baring Head**	**4.34**	**204**	*e*PN	P	17 33 35.4	-5.4
TCW	**Tory Channel**	**4.39**	**211**	P	P	17 33 36.6	-4.8
TCW	**Tory Channel**	**4.39**	**211**	*e*PN	P	17 33 36.0	-5.4
TUWZ	**Tuamarina**	**4.71**	**212**	*e*PN	P	17 33 40.0	-5.7
THZ	**Tophouse**	**5.45**	**217**	*e*P	P	17 33 50.5	-5.2
THZ	**Tophouse**	**5.45**	**217**	PN	P	17 33 50.4	-5.3
KHZ	**Kahutara**	**5.71**	**209**	*e*P	P	17 33 53.4	-5.9
KHZ	**Kahutara**	**5.71**	**209**	*e*PN	P	17 33 53.1	-6.2
LTZ	**Lake Taylor**	**6.54**	**214**	*e*P	P	17 34 03.6	-7.2
LTZ	**Lake Taylor**	**6.54**	**214**	*e*PN	P	17 34 03.0	-7.8
MQZ	**McQueen's Vall**	**7.14**	**208**	*e*P	P	17 34 10.9	-8.3
MQZ	**McQueen's Vall**	**7.14**	**208**	*e*PN	P	17 34 10.5	-8.7
ODZ	**Otahua Downs**	**9.05**	**211**	*e*P	P	17 34 37.3	-7.8
ODZ	**Otahua Downs**	**9.05**	**211**	*e*PN	P	17 34 36.9	-8.2

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*BJI **30** 17:42:18.5, 3.40S×129.91E, h30^{km}, mB4.7, mb4.5, Ms4.4, Msz4.4*

*IDC **30** 17:42:19.2±0.8, 3.23S×129.54E, mb4.3/8, mb1 4.5/9, mb1mx4.3/15, mbtmp4.4/9, ML4.6/2, MS3.7/4, Ms1 3.7/4, ms1mx3.1/25, Error ellipse: s-maj=44.6km s-min=14.8km az=66.0*

*NEIC **30** 17:42:20.0±0.4, 3.14S×129.74E, h10^{km}, mb4.6/15, Error ellipse: s-maj=13.9km s-min=6.5km az=71.0*

ISC 30 17:42:18.0±0.4**, 3.16S**±0.05×**129.8E**±0.1**, h10^{km}, n41, σ0^{s}92**/37**, mb4.4**/19**, MS3.9**/5**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**9.85**	**165**	*e*P	**P**	**17 44 42.1**	**-0.7**
	20nm,0.6s						
FITZ	**Fitzroy Crossi**	**15.40**	**195**	Pn	**P**	**17 45 58.0**	**+0.8**
	2.3nm,0.3s,baz=13,slow=12,SNR=33						
KKM	**Kota Kinabalu**	**16.35**	**304**	P	**P**	**17 46 08.2**	**-1.3**
WRAB	**Tennant Creek**	**17.26**	**165**	*e*P	**P**	**17 46 20.3**	**-0.5**
	168nm,1.5s						
WRA	**Warramunga Arr**	**17.27**	**165**	P	**P**	**17 46 20.7**	**-0.2**
	2.0nm,0.3s,baz=344,slow=12,SNR=44						
WRA				S	**S**	**17 49 32.5**	**+0.9**
	0.3nm,0.3s,baz=355,slow=21,SNR=3.9						
WB2	**Warramunga Arr**	**17.27**	**165**	*e*P	**P**	**17 46 20.3**	**-0.7**
KSM	**Kuching**	**20.02**	**283**	*e*P	**P**	**17 46 54.7**	**+0.7**
MBWA	**Marble Bar**	**20.40**	**208**	*e*P	**P**	**17 46 57.4**	**-0.6**
	30nm,1.0s						
CTA	**Charters Tower**	**23.26**	**138**	*e*P	**P**	**17 47 30.6**	**+3.8**
	18nm,0.9s,mb4.5						
CTA	**Charters Tower**	**23.26**	**138**	P	**P**	**17 47 30.6**	**+3.8**
	16nm,0.9s,mb4.4,baz=308,slow=11,SNR=11						
CTAO	**Charters Tower**	**23.26**	**138**	*e*P	**P**	**17 47 29.8**	**+3.0**
	31nm,1.0s,mb4.7						
JOW	**Kunigami**	**29.85**	**357**	LR	LR	17 59 12.1	
	comp=Z,103nm,20.4s,MS3.5,baz=74,slow=34						
KULM	**Kulim**	**30.30**	**286**	P	**P**	**17 48 29.0**	**-3.0**
STKA	**Stephens Creek**	**30.65**	**160**	*e*P	**P**	**17 48 36.0**	**+1.1**
	4.9nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**30.65**	**160**	P	**P**	**17 48 35.8**	**+0.8**
	3.7nm,0.5s,mb4.4,baz=335,slow=9.1,SNR=15						
NWAO	**Narrogin (SRO)**	**31.87**	**200**	P	**P**	**17 48 44.6**	**-1.1**
	10.0nm,0.9s,mb4.6,baz=220,slow=8.9,SNR=4.1						
CMAR	**Chiang Mai Arr**	**37.21**	**306**	P	**P**	**17 49 31.6**	**+0.1**
	3.8nm,1.0s,mb4.2,baz=144,slow=7.8,SNR=17						
MAJO	**Matsushiro**	**40.26**	**11**	*e*P	**P**	**17 49 55.7**	**-1.2**
	12nm,1.0s,mb4.6						
MAT	**Matsushiro**	**40.26**	**11**	*e*P	**P**	**17 49 55.0**	**-1.9**
	6.7nm,0.8s,mb4.4						
MAT	**Matsushiro**	**40.26**	**11**	P	**P**	**17 49 54.8**	**-2.1**
XAN	**Xi'an**	**41.90**	**334**	P	**P**	**17 50 12.0**	**+1.6**
XAN				LR	LR		
	comp=N,220nm,16.6s,MS4.2						
XAN				LR	LR		
	comp=E,150nm,14.6s,MS4.2						
XAN				LR	LR		
	comp=Z,410nm,16.6s,MS4.4						
LZH	**Lanzhou**	**45.96**	**330**	*e*P	**P**	**17 50 43.5**	**+0.3**
LZH				AP	pP	17 50 51.5	+5.3
LZH				XP	sP	17 50 55.8	+8.4
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
LZH	**Lanzhou**	**45.96**	**330**	*e*P	**P**	**17 50 43.5**	**+0.3**
	comp=Z,20nm,1.2s,mb4.9						
LZH				pP	pP	17 50 51.5	+5.3
LZH				sP	sP	17 50 55.7	+8.3
ASAJ	**Asahikawa**	**48.44**	**12**	LR	LR	18 11 07.5	
	comp=Z,58nm,18.8s,MS3.6,baz=355,slow=36						
LSA	**Lhasa**	**49.34**	**314**	P	**P**	**17 51 11.3**	**+1.6**
	comp=Z,2.8nm,0.7s,mb4.4						
GTA	**Gaotai**	**50.55**	**330**	*e*P	**P**	**17 51 19.3**	**+0.5**
GTA				AP	pP	17 51 24.0	+2.2
GTA				XP	sP	17 51 26.8	+3.8
ULN	**Ulaanbaatar**	**54.57**	**341**	*e*P	**P**	**17 51 49.1**	**+0.4**
	comp=Z,2.4nm,0.6s,mb4.4						
SONM	**Songino Array**	**54.76**	**341**	P	**P**	**17 51 50.5**	**+0.4**
	comp=Z,1.7nm,0.6s,mb4.3,baz=153,slow=7.3,SNR=18						
TLY	**Talaya**	**58.98**	**341**	P	**P**	**17 52 19.9**	**-0.2**
	comp=Z,2.0nm,0.7s,mb4.3						
MA2	**Magadan**	**64.69**	**12**	P	**P**	**17 52 58.8**	**+0.5**
	comp=Z,5.9nm,1.0s,mb4.6						
MKAR	**Makanchi Array**	**64.93**	**326**	P	**P**	**17 53 00.2**	**+0.1**
	comp=Z,2.1nm,0.7s,mb4.3,baz=114,slow=9.0,SNR=20						
YAK	**Yakutsk**	**65.00**	**360**	*e*P	**P**	**17 53 00.5**	**+0.3**
	comp=Z,21nm,0.8s,mb5.2						
ZAL	**Zalesovo**	**68.08**	**333**	P	**P**	**17 53 20.2**	**+0.3**
	comp=Z,1.5nm,0.7s,mb4.1,baz=354,slow=7.4,SNR=12						
ZRNK	**Zerenda**	**75.44**	**327**	*e*P	**P**	**17 54 03.6**	**-0.3**
	comp=Z,7.9nm,1.1s,mb4.6						
VNDA	**Vanda**	**76.26**	**173**	P	**P**	**17 54 08.1**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=315,slow=2.9,SNR=3.0						
VNDA	**Vanda**	**76.26**	**173**	P	**P**	**17 54 08.1**	**-0.1**
PPT	**Papeete**	**80.12**	**107**	LR	LR	18 27 02.0	
	comp=Z,71nm,18.6s,MS4.0,baz=245,slow=33						
ARU	**Arti**	**82.36**	**328**	*e*P	**P**	**17 54 41.6**	**+0.2**
	comp=Z,8.4nm,1.1s,mb4.6						
ILAR	**Eielson Array**	**89.98**	**25**	P	**P**	**17 55 18.1**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.9,baz=287,slow=4.7,SNR=4.6						
INK	**Inuvik**	**95.39**	**22**	LR	LR	18 37 38.8	
	comp=Z,38nm,18.1s,MS3.9,baz=4.3,slow=35						
CPUP	**Villa Florida**	**149.89**	**167**	PKPbc	PKPdf	18 02 12.2	+4.7
	comp=Z,1.6nm,0.5s,baz=167,slow=3.7,SNR=6.1						

JMA 30 17:51:13.4±0.2**, 25.05N**×**123.04E, h141^{km}**±3^{km}**, M3.6, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.59**	**183**	P	P	17 51 34.2	-0.5
YOJ				*e*S	S	17 51 50.9	-0.1
IRIF	**Iriomote-Funau**	**0.95**	**138**	P	P	17 51 36.8	-0.3
IRIF				S	S	17 51 54.6	-0.7
JKRS	**Kuro-shima**	**1.20**	**132**	P	P	17 51 39.5	0.0
JKRS				S	S	17 51 59.2	-0.3
HATJ	**Hateruma jima**	**1.21**	**145**	P	P	17 51 39.6	0.0
HATJ				*e*S	S	17 51 58.8	-0.9
JIJ	**Ishigaki jima**	**1.21**	**124**	P	P	17 51 39.2	-0.4
JIJ				*e*S	S	17 51 58.4	-1.4
JTJ	**Tarama**	**1.56**	**105**	P	P	17 51 43.2	-0.2
JTJ				*e*S	S	17 52 06.2	-0.1
JMJ	**Miyako jima 2**	**2.06**	**96**	P	P	17 51 49.1	0.0
JMJ				*e*S	S	17 52 15.9	-0.5
JOGS	**Gusukube**	**2.17**	**97**	P	P	17 51 50.6	+0.1
JOGS				S	S	17 52 18.3	-0.5
JKE	**Kume jima 2**	**3.61**	**69**	P	P	17 52 08.0	-1.2
JKE				*e*S	S	17 52 50.4	-1.5
JAGN	**Aguni-jima**	**4.08**	**67**	P	P	17 52 12.9	-2.6
JAGN				S	S	17 53 01.3	-1.8
JJT2	**Tamagusuku 2**	**4.39**	**75**	P	P	17 52 17.7	-1.8
JIH	**Iheya**	**4.85**	**65**	P	P	17 52 22.7	-3.0
JOW	**Kunigami**	**5.04**	**68**	P	P	17 52 24.8	-3.3
JTK	**Tokunoshima**	**5.96**	**62**	P	P	17 52 36.4	-4.0
JAM	**Amami Oshima**	**6.76**	**59**	P	P	17 52 46.2	-5.0
JMZ	**Minamidaito 2**	**7.43**	**82**	P	P	17 52 55.5	-4.8
JMZ				*e*S	S	17 54 12.1	-11

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*JMA **30** 18:08:34.2±0.3, 23.97N×121.65E, h17^{km}, M2.6*

*TAP **30** 18:08:35.4, 24.30N×121.62E, h24^{km}, ML3.6*

TAP Felt IV J at Nanau, II J at Chiawan, II J at Nanshan, II J at Hualien, I J at Nioudou, I J at Suao, II J at Shilin.

ISC 30 18:08:35.9±0.2**, 24.29N**±0.01×**121.69E**±0.02**, h20^{km}**±2^{km}**, n56, σ0^{s}86**/90**, 8C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.05**	**68**	P	**Pb**	**18 08 39.9**	**+0.3**
EHP				S	**Sb**	**18 08 43.1**	**+1.1**
ENA	**Nanau**	**0.14**	**19**	⇓*i*P	**Pb**	**18 08 40.6**	**+0.2**
ENA				S	**Sb**	**18 08 43.9**	**+0.4**
TWD	**Chiawan**	**0.23**	**202**	⇓*i*P	**Pb**	**18 08 41.1**	**-0.4**
TWD				S	**Sb**	**18 08 45.5**	**+0.2**
HWA	**Hwalien**	**0.32**	**194**	⇓*i*P	**Pb**	**18 08 42.9**	**0.0**
HWA				S	**Sb**	**18 08 48.7**	**+0.9**
NNS	**Nan Shan**	**0.32**	**297**	⇑*i*P	**Pb**	**18 08 42.1**	**-0.9**
NNS				S	**Sb**	**18 08 46.5**	**-1.3**
TWC	**Suao**	**0.35**	**25**	⇑*i*P	**Pb**	**18 08 43.5**	**+0.1**
TWC				S	**Sb**	**18 08 48.9**	**+0.4**
ENTT	**Nioudou**	**0.36**	**342**	⇑*i*P	**Pb**	**18 08 43.1**	**-0.6**
ENTT				S	**Sb**	**18 08 48.4**	**-0.5**
TWE	**Neicheng**	**0.43**	**357**	⇑*i*P	**Pb**	**18 08 44.4**	**-0.3**
TWE				S	**Sb**	**18 08 50.4**	**-0.3**
ESF	**Shoufeng Towns**	**0.45**	**202**	P	**Pb**	**18 08 44.5**	**-0.6**
ESF				S	**Sb**	**18 08 51.0**	**-0.3**
TWT	**Tachien**	**0.47**	**266**	P	**Pb**	**18 08 44.9**	**-0.5**
TWT				S	**Sb**	**18 08 50.9**	**-1.0**
ILA	**Ilan**	**0.48**	**6**	*e*P	**Pb**	**18 08 44.8**	**-0.7**
ILA				S	**Sb**	**18 08 52.7**	**+0.6**
ESL	**Shilin**	**0.53**	**206**	⇑P	**Pb**	**18 08 45.0**	**-1.4**
ESL				S	**Sb**	**18 08 52.7**	**-0.9**
TWA	**Mucha**	**0.69**	**352**	*e*P	**Pb**	**18 08 48.8**	**-0.4**
TWA				S	**Sb**	**18 08 58.5**	**+0.2**
NSTT	**Nanjuang**	**0.71**	**299**	⇑*i*P	**Pb**	**18 08 48.9**	**-0.6**
NSTT				S	**Sb**	**18 08 57.6**	**-1.2**
TAP1	**Taipei**	**0.76**	**349**	P	**Pb**	**18 08 50.4**	**+0.1**
TAP1				S	**Sb**	**18 09 00.3**	**+0.2**
TAP	**Taipei**	**0.76**	**347**	*e*P	**Pb**	**18 08 50.3**	**0.0**
TAP				S	**Sb**	**18 09 00.3**	**0.0**
TWB1	**Santiao Chiao**	**0.77**	**21**	⇓P	**Pb**	**18 08 50.0**	**-0.4**
TWB1				S	**Sb**	**18 09 00.3**	**0.0**
NCU	**National Centr**	**0.82**	**326**	*e*P	**Pb**	**18 08 51.0**	**-0.3**
NCU				S	**Sb**	**18 09 02.7**	**+0.9**
SMLT	**Sun Moon Lake**	**0.83**	**241**	⇑P	**Pb**	**18 08 50.9**	**-0.6**
HSN	**Hsinchu**	**0.83**	**308**	*e*P	**Pb**	**18 08 51.4**	**-0.1**
HSN				S	**Sb**	**18 09 03.2**	**+1.0**
TWQ1	**Liyutan**	**0.84**	**274**	⇑*i*P	**Pb**	**18 08 51.5**	**-0.1**
TWQ1				S	**Sb**	**18 09 02.2**	**-0.3**
TWS1	**Kuangyinshan**	**0.84**	**343**	P	**Pb**	**18 08 52.0**	**+0.2**
TWS1				S	**Sb**	**18 09 04.0**	**+1.4**
EHY	**Hungye**	**0.85**	**203**	*e*P	**Pb**	**18 08 50.0**	**-1.9**
TYC	**Yuchr**	**0.85**	**243**	*e*P	**Pb**	**18 08 51.1**	**-0.8**
NSY	**Sanyi**	**0.86**	**279**	P	**Pb**	**18 08 52.1**	**+0.2**
NSY				S	**Sb**	**18 09 03.3**	**+0.4**
TCU	**Taichung**	**0.94**	**261**	*e*P	**Pb**	**18 08 54.1**	**+0.7**
TCU				S	**Sb**	**18 09 06.5**	**+1.2**
TWY	**Chenhua**	**0.98**	**355**	*e*P	**Pb**	**18 08 54.2**	**+0.1**
TWY				S	**Sb**	**18 09 06.3**	**-0.3**
WNT	**Mingjian**	**1.01**	**246**	*e*P	**Pb**	**18 08 55.0**	**+0.5**
WNT				S	**Sb**	**18 09 09.8**	**+2.5**
YUS	**Yu-Shan**	**1.04**	**220**	*e*P	**Pb**	**18 08 54.3**	**-0.9**
ALS	**Alishan**	**1.12**	**226**	*e*P	**Pb**	**18 08 56.2**	**-0.3**
CHN5	**Tsauling**	**1.15**	**233**	*e*P	**Pb**	**18 08 57.0**	**0.0**
CHN5				S	**Sb**	**18 09 13.0**	**+1.4**
WGK	**Gukeng**	**1.19**	**240**	*e*P	**Pn**	**18 08 57.9**	**+0.2**
WGK				S	**Sb**	**18 09 14.2**	**+1.4**
YOJ	**Yonaguni jima**	**1.22**	**82**	P	**Pn**	**18 08 58.1**	**+0.1**
YOJ				*e*S	**Sb**	**18 09 15.4**	**+2.0**
CHKT	**Chengkung**	**1.22**	**194**	*e*P	**Pn**	**18 08 55.9**	**-2.1**
ELDTW	**Lidau**	**1.26**	**209**	*e*P	**Pn**	**18 08 55.7**	**-2.9**
CHN2	**Minshiung**	**1.34**	**236**	*e*P	**Pn**	**18 09 00.3**	**+0.6**
WTCT	**Ta-ch'eng**	**1.35**	**252**	*e*P	**Pn**	**18 08 59.5**	**-0.4**
CHN4	**Tsaushan**	**1.37**	**227**	*e*P	**Pn**	**18 09 01.1**	**+0.9**
CHN4				S	**Sn**	**18 09 19.8**	**+1.9**
PCYT	**Pengchaiyu**	**1.38**	**15**	*e*P	**Pn**	**18 08 59.5**	**-0.7**
CHY	**Chiayi**	**1.40**	**236**	*e*P	**Pn**	**18 09 01.6**	**+0.9**
WTP	**Ta-pu**	**1.43**	**224**	*e*P	**Pn**	**18 09 00.4**	**-0.6**
WTP				S	**Sn**	**18 09 21.5**	**+2.1**
TWK	**Hsinying**	**1.50**	**227**	*e*P	**Pn**	**18 09 02.6**	**+0.6**
CHN1	**Nanshi**	**1.53**	**224**	*e*P	**Pn**	**18 09 03.0**	**+0.6**
CHN1				S	**Sn**	**18 09 23.3**	**+1.4**
TWG	**Pinlang**	**1.57**	**201**	*e*P	**Pn**	**18 09 01.9**	**-1.1**
SGST	**Jiashian**	**1.57**	**220**	*e*P	**Pn**	**18 09 03.0**	**-0.1**
CHN8	**Yiju**	**1.65**	**236**	*e*P	**Pn**	**18 09 04.6**	**+0.5**
ECL	**Taimali**	**1.82**	**202**	*e*P	**Pn**	**18 09 05.6**	**-0.9**
IRIF	**Iriomote-Funau**	**1.86**	**88**	P	**Pn**	**18 09 06.7**	**-0.5**
IRIF				*e*S	**Sn**	**18 09 30.4**	**+0.1**
HATJ	**Hateruma jima**	**1.95**	**96**	*e*S	**Sn**	**18 09 32.5**	**0.0**
EAST	**Anshuo**	**2.05**	**202**	*e*P	**Pn**	**18 09 10.0**	**+0.1**
PNG	**Penghu**	**2.08**	**250**	*e*P	**Pn**	**18 09 08.3**	**-2.0**
JKRS	**Kuro-shima**	**2.12**	**91**	P	**Pn**	**18 09 10.8**	**-0.1**
JKRS				*e*S	**Sn**	**18 09 37.5**	**+0.7**
WDGT	**Dungji**	**2.12**	**242**	*e*P	**Pn**	**18 09 10.4**	**-0.5**
JIJ	**Ishigaki jima**	**2.24**	**88**	P	**Pn**	**18 09 12.1**	**-0.5**
JIJ				*e*S	**Sn**	**18 09 39.4**	**-0.5**
JTJ	**Tarama**	**2.77**	**82**	*e*S	**Sn**	**18 09 54.6**	**+1.3**
JOGS	**Gusukube**	**3.42**	**81**	*e*S	**Sn**	**18 10 09.5**	**-0.3**

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*BJI **30** 18:09:45.7, 3.91N×115.34E, h24^{km}, mB4.6, mb4.2, Ms4.1, Msz3.8*

*IDC **30** 18:09:45.0±0.6, 4.36N×115.60E, mb4.2/15, mb1 4.3/15, mb1mx4.2/20, mbtmp4.2/15, MS3.8/12, Ms1 3.8/12, ms1mx3.7/24, Error ellipse: s-maj=39.0km s-min=13.3km az=58.0*

*NEIC **30** 18:09:48.7±0.3, 4.33N×115.62E, mb4.5/22, Error ellipse: s-maj=10.9km s-min=6.8km az=68.0*

NEIC Felt in Brunei.

ISC 30 18:09:48.3±0.3**, 4.31N**±0.05×**115.61E**±0.08**, h33^{km}, n60, σ1^{s}24**/57**, mb4.4**/33**, MS3.8**/14**, 1C-4D, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**1.82**	**19**	*e*Pn	**Pn**	**18 10 18.2**	**+0.3**
KKM	**Kota Kinabalu**	**1.82**	**19**	P	**P**	**18 10 18.3**	**+0.6**
TSM	**Tawau**	**2.25**	**90**	P	**P**	**18 10 28.2**	**+4.3**
KSM	**Kuching**	**6.00**	**242**	*e*Pn	**Pn**	**18 11 14.3**	**-2.9**
KULM	**Kulim**	**14.94**	**274**	P	**P**	**18 13 11.6**	**-7.4**
YHNB	**Yeheng**	**20.99**	**15**	P	**P**	**18 14 30.0**	**-1.3**
CM31	**Chiang Mai Arr**	**21.52**	**312**	*e*P	**P**	**18 14 37.1**	**+0.5**
	30nm,1.1s,mb4.6						
CMAR	**Chiang Mai Arr**	**21.52**	**312**	P	**P**	**18 14 36.0**	**-0.7**
	3.9nm,0.8s,mb3.9,baz=139,slow=9.0,SNR=21						
CMAR				LR	LR	18 23 43.7	
	comp=Z,619nm,18.1s,MS4.0,baz=130,slow=39						
KMI	**Kunming**	**24.11**	**330**	P	**P**	**18 15 03.5**	**+1.3**
KMI				AP		18 15 10.8	
KMI				XP		18 15 13.3	
KMI				AMB	AMB		
	comp=Z,70nm,4.4s						
KMI				LR	LR		
	comp=N,210nm,16.3s						
KMI				LR	LR		
	comp=E,190nm,9.6s						
KMI				LR	LR		
	comp=Z,180nm,14.4s,MS3.7						
KMI	**Kunming**	**24.11**	**330**	P	**P**	**18 15 03.6**	**+1.4**
	comp=Z,8.0nm,0.8s,mb4.2						
KMI				pP		18 15 10.7	
KMI				sP		18 15 13.2	
KMI				PP	PP	18 15 48.0	+11
KMI				S	**S**	**18 19 34.2**	**+19**
KMI				sS		18 19 49.5	
KMI				SS	SS	18 20 54.7	+47
KMI				LR	LR		
	comp=Z,180nm,14.4s,MS3.7						
FITZ	**Fitzroy Crossi**	**24.37**	**156**	*e*P	**P**	**18 15 06.1**	**+1.4**
	comp=Z,7.4nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**24.37**	**156**	P	**P**	**18 15 05.8**	**+1.1**
	comp=Z,6.5nm,0.6s,mb4.2,baz=345,slow=6.9,SNR=5.1						
FITZ				LR	LR	18 25 45.6	
	comp=Z,166nm,21.7s,MS3.5,baz=289,slow=39						
MBWA	**Marble Bar**	**25.63**	**171**	*e*P	**P**	**18 15 18.6**	**+1.8**
	comp=Z,17nm,1.1s,mb4.5						
WRA	**Warramunga Arr**	**30.33**	**143**	P	**P**	**18 15 58.2**	**-1.1**
	comp=Z,2.0nm,0.6s,mb4.0,baz=214,slow=10,SNR=69						
WRA				PcP	PcP	18 18 57.8	-1.2
	comp=Z,0.3nm,0.4s,baz=328,slow=2.5,SNR=4.9						
WRAB	**Tennant Creek**	**30.33**	**143**	*e*P	**P**	**18 15 57.3**	**-1.9**
	comp=Z,9.8nm,0.8s,mb4.6						
WB2	**Warramunga Arr**	**30.33**	**143**	*e*P	**P**	**18 15 58.6**	**-0.7**
LZH	**Lanzhou**	**33.43**	**343**	*e*P	**P**	**18 16 31.0**	**+4.7**
LZH				AP	pP	18 16 38.0	+2.0
LZH				XP	sP	18 16 40.5	+0.2
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
LZH	**Lanzhou**	**33.43**	**343**	*e*P	**P**	**18 16 30.9**	**+4.6**
	comp=Z,13nm,1.0s,mb4.8						
LZH				pP	pP	18 16 38.0	+2.0
LZH				sP	sP	18 16 40.6	+0.3
LSA	**Lhasa**	**34.25**	**320**	*e*P	**P**	**18 16 34.8**	**+1.4**
	comp=Z,3.1nm,0.8s,mb4.3						
GTA	**Gaotai**	**37.76**	**340**	*e*P	**P**	**18 17 04.0**	**+1.0**
GTA				AP	pP	18 17 09.5	-3.3
GTA				XP	sP	18 17 12.3	-4.7
GTA				PP	PP	18 18 37.8	+5.2
GTA				S	**S**	**18 23 03.5**	**+12**
GTA				XS		18 23 11.8	
GTA				AMB	AMB		
	comp=Z,80nm,5.0s						
GTA				LR	LR		
	comp=N,130nm,18.7s,MS3.9						
GTA				LR	LR		
	comp=E,120nm,15.3s,MS3.9						
GTA				LR	LR		
	comp=Z,120nm,17.2s,MS3.8						
MAJO	**Matsushiro**	**38.22**	**30**	P	**P**	**18 17 04.3**	**-2.6**
	comp=Z,5.6nm,1.0s,mb4.2						
CTA	**Charters Tower**	**38.66**	**130**	P	**P**	**18 17 12.2**	**+1.5**
	comp=Z,6.3nm,1.0s,mb4.3,baz=6.3,slow=14,SNR=3.5						
CTA				LR	LR	18 34 31.2	
	comp=Z,123nm,20.7s,MS3.7,baz=105,slow=38						
CTAO	**Charters Tower**	**38.66**	**130**	*e*P	**P**	**18 17 08.1**	**-2.6**
	comp=Z,11nm,1.1s,mb4.5						
STKA	**Stephens Creek**	**43.66**	**147**	*e*P	**P**	**18 17 51.9**	**0.0**
	comp=Z,2.6nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**43.66**	**147**	P	**P**	**18 17 52.0**	**+0.1**
	comp=Z,2.8nm,0.4s,mb4.3,baz=325,slow=8.0,SNR=12						
STKA				LR	LR	18 38 26.4	
	comp=Z,171nm,18.1s,MS4.0,baz=28,slow=39						
ULN	**Ulaanbaatar**	**44.01**	**352**	P	**P**	**18 17 52.9**	**-1.6**
	comp=Z,3.4nm,1.1s,mb4.0						
SONM	**Songino Array**	**44.08**	**351**	P	**P**	**18 17 54.3**	**-0.7**
	comp=Z,0.9nm,0.7s,mb3.6,baz=180,slow=8.3,SNR=6.7						
SONM				LR	LR	18 37 45.5	
	comp=Z,96nm,18.2s,MS3.8,baz=75,slow=38						
TLY	**Talaya**	**48.26**	**350**	P	**P**	**18 18 25.6**	**-2.4**
	comp=Z,2.7nm,1.0s,mb4.2						
YSS	**Yuzh-Sakhalins**	**48.53**	**25**	*e*P	**P**	**18 18 30.8**	**+0.7**
	comp=Z,29nm,1.3s,mb5.2						
MKAR	**Makanchi Array**	**51.19**	**331**	P	**P**	**18 18 50.3**	**-0.2**
	comp=Z,1.6nm,0.4s,mb4.3,baz=126,slow=8.1,SNR=40						
MKAR				LR	LR	18 42 59.2	
	comp=Z,49nm,20.5s,MS3.5,baz=268,slow=39						
AAK	**Ala-Archa**	**52.79**	**322**	P	**P**	**18 19 01.5**	**-1.0**
	comp=Z,3.7nm,0.6s,mb4.5						
ZAL	**Zalesovo**	**55.49**	**338**	P	**P**	**18 19 22.3**	**+0.1**
	comp=Z,1.1nm,0.3s,mb4.3,baz=360,slow=3.2,SNR=4.2						
ZAL				LR	LR	18 44 59.0	
	comp=Z,69nm,21.3s,MS3.7,baz=104,slow=38						
ZAL	**Zalesovo**	**55.49**	**338**	P	**P**	**18 19 22.3**	**+0.1**
ZAL				LR	LR	18 44 59.0	
BVAR	**Borovoye Array**	**61.07**	**331**	P	**P**	**18 20 00.3**	**-1.0**
	comp=Z,3.3nm,0.7s,mb4.6,baz=116,slow=10,SNR=11						
MA2	**Magadan**	**61.37**	**20**	*e*P	**P**	**18 20 03.9**	**+0.7**
	comp=Z,4.2nm,0.7s,mb4.7						
ZRNK	**Zerenda**	**61.71**	**330**	*e*P	**P**	**18 20 04.5**	**-1.0**
	comp=Z,5.4nm,0.9s,mb4.7						
ARU	**Arti**	**68.69**	**330**	*e*P	**P**	**18 20 49.2**	**-1.3**
	comp=Z,3.7nm,0.8s,mb4.4						
CASY	**Casey**	**70.51**	**182**	P	**P**	**18 21 01.0**	**-0.4**
	comp=Z,3.0nm,0.8s,mb4.3						
BILL	**Bilibino**	**72.12**	**18**	P	**P**	**18 21 11.3**	**+0.3**
	comp=Z,5.7nm,1.0s,mb4.5						
ATD	**Arta Tunnel**	**72.28**	**281**	LR	LR	18 52 45.0	
	comp=Z,43nm,18.9s,MS3.7,baz=355,slow=36						
MALT	**Malatya**	**77.28**	**308**	*e*P	**P**	**18 21 44.0**	**+2.6**
KMBO	**Kilima Mbogo**	**78.48**	**268**	P	**P**	**18 21 49.7**	**+1.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=63,slow=20,SNR=3.4						
KMBO	**Kilima Mbogo**	**78.48**	**268**	P	**P**	**18 21 49.7**	**+1.2**
EIL	**Elat**	**79.77**	**299**	*e*P	**P**	**18 21 56.0**	**+0.8**
	comp=Z,11nm,1.2s,mb4.7						
MAW	**Mawson**	**80.65**	**198**	P	**P**	**18 21 59.7**	**+0.6**
	comp=Z,1.5nm,0.6s,mb4.1,baz=24,slow=4.8,SNR=7.3						
BR131	**Keskin Array S**	**81.09**	**309**	*e*P	**P**	**18 22 02.4**	**+0.5**
	comp=Z,3.5nm,0.8s,mb4.3						
BRTR	**Keskin Array B**	**81.09**	**309**	P	**P**	**18 22 02.1**	**+0.1**
	comp=Z,2.4nm,0.7s,mb4.2,baz=119,slow=6.2,SNR=11						
AKASG	**Malin Array Be**	**84.40**	**320**	P	**P**	**18 22 18.1**	**-0.5**
	comp=Z,1.0nm,0.5s,mb4.2,baz=74,slow=5.1,SNR=8.8						
FINES	**FINESS Array B**	**86.02**	**331**	P	**P**	**18 22 27.4**	**+0.9**
	comp=Z,1.1nm,0.7s,mb4.2,baz=135,slow=16,SNR=3.2						
FINES				LR	LR	19 06 42.1	
	comp=Z,58nm,20.9s,MS4.0,baz=157,slow=40						
ARCES	**ARCESS Array B**	**86.03**	**339**	P	**P**	**18 22 25.9**	**-0.4**
	comp=Z,0.6nm,0.5s,mb4.0,baz=72,slow=5.7,SNR=4.8						
ARCES				LR	LR	19 04 10.8	
	comp=Z,73nm,19.6s,MS4.1,baz=123,slow=38						
VRI	**Vrincioaia**	**86.16**	**316**	⇓P	**P**	**18 22 33.5**	**+6.0**
VRI	**Vrincioaia**	**86.16**	**316**	⇓P	**P**	**18 22 33.5**	**+6.0**
IMA	**Indian Mountai**	**86.38**	**24**	*e*P	**P**	**18 22 30.2**	**+2.1**
	comp=Z,21nm,1.0s,mb5.3						
MLR	**Muntele Rosu**	**86.72**	**315**	⇓P	**P**	**18 22 33.7**	**+3.5**
MLR	**Muntele Rosu**	**86.72**	**315**	⇓P	**P**	**18 22 33.7**	**+3.4**
BURAR	**Bucovina Array**	**87.12**	**317**	⇑P	**P**	**18 22 38.3**	**+6.2**
BOSA	**Boshof**	**92.35**	**242**	LR	LR	19 05 03.4	
	comp=Z,72nm,18.0s,MS4.2,baz=48,slow=36						
GERES	**GERESS Array B**	**94.58**	**320**	LR	LR	19 11 39.0	
	comp=Z,38nm,19.2s,MS3.9,baz=162,slow=39						
PDAR	**Pinedale Array**	**117.85**	**36**	PKP	PKPdf	18 28 33.2	+1.6
	comp=Z,0.6nm,0.5s,baz=337,slow=1.3,SNR=8.6						
TXAR	**Lajitas Array**	**129.62**	**46**	PKP	PKPdf	18 28 57.7	+2.8
	comp=Z,0.4nm,0.4s,baz=270,slow=1.3,SNR=5.2						

MAN 30 18:28:41.3, 7.01N×123.75E, h1^{km}, mb4.1, ML2.9, MS2.5, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.90**	**337**	*e*P	Pg	18 28 59.1	-0.2
PAGZ				*e*S	Sg	18 29 09.6	-1.8
IPIL	**Ipil**	**1.40**	**304**	*e*P	Pb	18 29 07.4	-0.4
IPIL				*e*S	Sb	18 29 24.4	-1.6
BUKP	**Musuan**	**1.56**	**57**	*e*P	Pn	18 29 10.2	-0.2
BUKP				*e*S	Sb	18 29 27.8	-3.2
DCPH	**Dipolog City**	**1.61**	**346**	⇑*e*P	Pn	18 29 09.9	-1.1
ZMPH	**Zamboanga City**	**1.67**	**268**	⇑*i*P	Pn	18 29 11.5	-0.3
ZMPH				*i* S	Sb	18 29 31.9	-2.1
CGP	**Cagayan de Oro**	**1.71**	**33**	⇓*e*P	Pn	18 29 12.2	-0.2
CGP				*e*S	Sb	18 29 33.2	-2.0
MATI	**Mati**	**2.50**	**91**	*e*P	Pn	18 29 23.1	-0.6
MATI				*e*S	Sn	18 29 51.6	-3.6

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*IDC **30** 18:43:06.8±1.7, 7.64N×91.80E, mb3.6/5, mb1 3.7/6, mb1mx3.6/20, mbtmp3.6/6, ML3.2/1, Error ellipse: s-maj=51.1km s-min=29.8km az=56.0*

*NEIC **30** 18:43:10.1±0.8, 7.49N×91.75E, h30^{km}, mb4.2/3, Error ellipse: s-maj=16.8km s-min=12.1km az=196.0*

ISC 30 18:43:06.8±1.1**, 7.2N**±0.2×**91.7E**±0.1**, h30^{km}, n11, σ0^{s}99**/12**, mb3.8**/8**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	9.10	102	eP	P	18 45 18.8	-0.4
PALK	Pallekele	10.91	271	ePn	P	18 45 43.4	-0.9
PALK				eSn	S	18 47 33.2	-13
CMAR	Chiang Mai Arr	13.19	32	Pn	P	18 46 10.9	-3.9
	0.0nm,0.3s,baz=228,slow=15,SNR=4.1						
LSA	Lhasa	22.35	359	eP	P	18 48 04.5	+0.6
	4.3nm,0.7s,mb4.0						
AAK	Ala-Archa	38.39	339	eP	P	18 50 28.0	+0.7
	10nm,1.8s,mb4.2						
MKAR	Makanchi Array	40.23	350	P	P	18 50 42.0	-0.5
	0.7nm,0.7s,mb3.5,baz=167,slow=8.5,SNR=10.0						
SONM	Songino Array	42.35	15	P	P	18 50 59.1	-0.8
	0.8nm,0.8s,mb3.4,baz=201,slow=6.6,SNR=6.3						
BVAR	Borovoye Array	48.85	343	P	P	18 51 51.3	-0.2
	0.8nm,0.6s,mb4.0,baz=142,slow=8.5,SNR=9.5						
ZRNK	Zerenda	49.20	342	eP	P	18 51 53.6	-0.6
	1.8nm,0.6s,mb4.3						
WRA	Warramunga Arr	49.89	124	P	P	18 52 03.4	+3.4
	0.4nm,0.7s,mb3.5,baz=309,slow=7.7,SNR=3.9						
GERES	GERESS Array B	76.69	318	P	P	18 54 58.9	+2.0
	0.3nm,0.5s,mb3.5,baz=117,slow=4.4,SNR=5.4						

IDC 30 18:50:26.0±1.6**, 2.96S**×**130.15E, mb4.3**/3**, mb1 4.3**/5**, mb1mx3.9**/16**, mbtmp4.2**/5**, ML4.1**/2**, Error ellipse: s-maj=110.4km s-min=23.1km az=70.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	15.69	196	eP	P	18 54 07.2	-3.0
	4.6nm,0.5s						
FITZ	Fitzroy Crossi	15.69	196	Pn	P	18 54 07.0	-3.2
	0.8nm,0.3s,baz=21,slow=9.8,SNR=8.0						
WRA	Warramunga Arr	17.37	167	P	P	18 54 28.4	-3.2
	0.5nm,0.3s,baz=354,slow=12,SNR=16						
WB2	Warramunga Arr	17.37	167	eP	P	18 54 28.8	-2.8
STKA	Stephens Creek	30.72	161	P	P	18 56 43.6	-1.4
	1.4nm,0.5s,baz=338,slow=7.8,SNR=7.2						
MKAR	Makanchi Array	64.97	326	P	P	19 01 07.7	-2.2
	6.6nm,0.3s,baz=126,slow=5.5,SNR=2.3						
BVAR	Borovoye Array	74.75	327	P	P	19 02 07.9	-1.7
	0.6nm,0.7s,baz=135,slow=6.3,SNR=5.9						

NEIC ***30*** *19:03:50.7, 15.60N×98.55W, h14^{km}, MD3.7(MEX), After MEX.*

MEX 30 19:03:53.2±0.9**, 15.86N**×**98.69W, h28^{km}**±22^{km}**, MD3.7, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.76	46	i P	Pb	19 04 05.1	-2.6
PNIG				i S	Sb	19 04 15.7	-2.0
PNIG	Pinotepa	0.76	46	i P	Pb	19 04 05.1	-2.6
PNIG				i S	Sb	19 04 15.5	-2.1
ACX	Acapulco	1.55	311	i P	Pn	19 04 18.0	-1.3
ACX				i S	Sn	19 04 34.0	-4.7
ACX	Acapulco	1.55	311	i P	Pn	19 04 17.5	-1.8
ACX				i S	Sn	19 04 34.0	-4.7
VHO	Vista Hermosa	2.23	57	i P	Pn	19 04 24.7	-4.5
VHO				i S	Sn	19 04 51.8	-4.3
VHO	Vista Hermosa	2.23	57	i P	Pn	19 04 26.8	-2.4
VHO				i S	Sn	19 04 52.1	-4.0
OXX	Oaxaca	2.24	57	i P	Pn	19 04 32.0	+2.7
OXX	Oaxaca	2.24	57	i P	Pn	19 04 28.0	-1.3
OXX				i S	Sn	19 05 02.0	+5.6
PLIG	Platanillo	2.64	343	i P	Pn	19 04 35.1	+0.2
PLIG				i S	Sn	19 05 08.5	+2.2
PLIG	Platanillo	2.64	343	eP	Pn	19 04 31.9	-3.0
PLIG				i S	Sn	19 05 01.6	-4.7

NEIC ***30*** *19:44:48.8, 41.89N×20.41E, h7^{km}, ML3.5(PDG), After PDG.*
PDG ***30*** *19:44:48.8±0.2, 41.89N×20.41E, h7^{km}*
TIR ***30*** *19:44:50.3, 41.96N×20.25E, h19^{km}, Ml2.8*
CSEM ***30*** *19:44:50.1, 41.99N×20.34E, h2^{km}, mb6.0*
BEO ***30*** *19:44:51.5±0.7, 41.90N×20.34E, h8^{km}±1^{km}*
THE ***30*** *19:44:55.3, 41.73N×20.61E, h10^{km}, ML3.5*

ISC 30 19:44:49.9±0.3**, 41.91N**±0.01×**20.37E**±0.02**, h0^{km}**±2^{km}**, n108, σ1^{s}18**/163**, 22C-12D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKS	Kukesi	0.17	11	i Pg	Pg	19 44 54.9	+1.6
KKS				i Sg	Sg	19 44 57.0	+1.4
KKS	Kukesi	0.17	11	ePg	Pg	19 44 54.9	+1.6
KKS				i Sg	Sg	19 44 57.0	+1.4
PUK	Puka	0.38	291	i Pg	Pg	19 44 57.1	-0.4
PUK				i Sg	Sg	19 45 03.0	+0.4
PUK	Puka	0.38	291	ePg	Pg	19 44 57.1	-0.4
BCI	Bajram Curri	0.51	334	i Pg	Pg	19 45 00.3	+0.2
BCI				i Sg	Sg	19 45 11.7	+4.8
BCI	Bajram Curri	0.51	334	ePg	Pg	19 45 00.3	+0.2
QSH	Qafa e Shtames	0.52	222	i Pg	Pg	19 45 01.5	+1.2
QSH				i Sg	Sg	19 45 07.5	+0.2
QSH	Qafa e Shtames	0.52	222	ePg	Pg	19 45 01.5	+1.2
SDA	Shkodra	0.67	283	i Pg	Pg	19 45 03.3	+0.1
SDA				i Sg	Sg	19 45 14.0	+1.9
SDA	Shkodra	0.67	283	ePg	Pg	19 45 03.3	+0.1
SDA				i Sg	Sg	19 45 14.0	+1.9
TIR	Tirane	0.68	214	ePg	Pg	19 45 03.0	-0.5
TIR				i Sg	Sg	19 45 12.0	-0.5
PVY	Plav	0.75	337	⇑iPg	Pg	19 45 03.4	-1.5
PVY				eSg	Sg	19 45 15.8	+1.0
SKO	Skopje	0.80	85	⇑iPg	Pg	19 45 06.2	+0.3
SKO				i		19 45 09.3	
SKO				i Sg	Sg	19 45 19.0	+2.4
SKO				Lg		19 45 20.0	
SKO	Skopje	0.80	85	⇑iPg	Pg	19 45 06.2	+0.3
	comp=Z,0.2nm,0.4s						
SKO				i		19 45 09.3	
	comp=Z,0.2nm,0.4s						
SKO				i Sg	Sg	19 45 19.0	+2.4
SKO				i		19 45 19.9	
SKO				Lg		19 45 20.0	
	comp=Z,0.5nm,0.4s						
SKO	Skopje	0.80	85	⇑iPg	Pg	19 45 06.2	+0.3
SKO				i Sg	Sg	19 45 19.0	+2.4
ULC	Ulcinj	0.84	274	⇓iPg	Pg	19 45 05.1	-1.6
ULC				eSg	Sg	19 45 18.8	+1.0
OHR	Ohrid	0.86	158	⇑iPg	Pg	19 45 07.0	-0.1
OHR				i Sg	Sg	19 45 20.2	+1.6
TTG	Podgorica	0.97	303	⇑iPg	Pg	19 45 06.7	-2.8
TTG				eSg	Sg	19 45 23.6	+1.2
TTG	Podgorica	0.97	303	⇑iPg	Pg	19 45 06.7	-2.7
TTG				eSg	Sg	19 45 23.6	+1.2
IVA	Berane	1.02	340	⇑iPg	Pg	19 45 08.7	-1.7
IVA				eSg	Sg	19 45 25.6	+1.5
BUM	Brajici-Budva	1.16	290	⇓iPg	Pg	19 45 10.8	-2.4
BUM				eSg	Sg	19 45 30.2	+1.5
KBN	Korca	1.32	166	i Pg	Pg	19 45 16.8	+0.5
KBN				i Sg	Sg	19 45 37.6	+3.6
KBN	Korca	1.32	166	ePg	Pg	19 45 16.8	+0.5
KBN				i Sg	Sg	19 45 37.6	+3.6
FNA	Florina	1.36	146	ePg	Pg	19 45 15.7	-1.3
FNA				eSg	Sg	19 45 32.2	-2.9
NKY	Niksic	1.36	312	⇓iPg	Pg	19 45 14.1	-3.0
NKY				eSg	Sg	19 45 37.1	+1.9
HCY	Herceg Novi	1.49	292	⇑iPg	Pg	19 45 16.3	-3.5
HCY				eSg	Sg	19 45 40.6	+1.0
KPJ	Monastery St.	1.51	78	⇓iPn	Pn	19 45 19.2	+0.8
KPJ				i		19 45 22.4	
PLE	Pljevlja	1.59	333	⇑iPn	Pn	19 45 18.8	-0.7
PLE				eSn	Sn	19 45 42.5	+1.5
NVSS	Nova Varos 2	1.67	343	⇑iPg	Pg	19 45 20.5	-2.8
NVSS				Sg	Sg	19 45 42.6	-3.0
BRY	Bratogost	1.68	307	ePn	Pn	19 45 20.1	-0.6
BRY				eSn	Sn	19 45 45.1	+1.9
UPM	Unac-Piva	1.68	321	⇓iPn	Pn	19 45 20.5	-0.3
UPM				eSn	Sn	19 45 45.2	+1.8
TREB	Trebinje	1.70	299	Pn	Pn	19 45 21.7	+0.6
VAY	Valandovo	1.75	109	⇑iPn	Pn	19 45 22.8	+1.0
VAY				i		19 45 24.8	
VAY				i Sn	Sn	19 45 45.7	+0.6
VAY				i		19 45 46.3	
VAY	Valandovo	1.75	109	⇑iPn	Pn	19 45 22.8	+1.0
VAY				i Sn	Sn	19 45 45.7	+0.6
LSK	Leskovik	1.77	174	i Pg	Pg	19 45 24.0	-1.2
LSK				i Sg	Sg	19 45 52.5	+3.8
LSK	Leskovik	1.77	174	ePg	Pg	19 45 24.0	-1.2
LSK				i Sg	Sg	19 45 52.5	+3.8
GRG	Griva	1.80	121	ePg	Pg	19 45 23.8	-2.1
GRG				eSg	Sg	19 45 45.8	-4.1
GRUS	Gruza	2.00	7	⇑iPn	Pn	19 45 26.1	+0.9
GRUS				Sn	Sn	19 45 54.1	+2.8
GRUS	Gruza	2.00	7	Pn	Pn	19 45 26.1	+0.8
KNT	Kendrikon	2.04	111	ePb	Pb	19 45 27.0	-0.6
KNT				eSb	Sb	19 45 51.9	-1.6
BBLS	Bajina Basta -	2.08	341	⇑iPn	Pn	19 45 26.4	-0.1
BBLS				Sn	Sn	19 45 55.5	+2.0
BBLS	Bajina Basta -	2.08	341	Pn	Pn	19 45 26.5	0.0
BBLS				Sn	Sn	19 45 55.5	+2.0
STON	Ston	2.20	297	i Pn	Pn	19 45 29.3	+1.1
STON				i Sn	Sn	19 45 56.5	0.0
STON				i Sg	Sg	19 46 01.4	-1.7
STON	Ston	2.20	297	i Pn	Pn	19 45 29.2	+1.0
STON				i Sn	Sn	19 45 56.5	0.0
STON				i Sg	Sg	19 46 01.4	-1.8
DIVS	Divcibare	2.21	353	⇓iPn	Pn	19 45 22.3	-6.0
DIVS				Sn	Sn	19 45 52.5	-4.2
BOLS	Boljevac	2.25	31	⇑iPn	Pn	19 45 32.2	+3.3
BOLS				Sn	Sn	19 45 56.9	-0.8
LCI	Lecce	2.32	228	Pn	Pn	19 45 29.7	-0.2
THE	Thessaloniki	2.33	122	ePn	Pn	19 45 31.2	+1.0
IGT	Igoumenitsa	2.37	181	ePn	Pn	19 45 32.9	+2.2
LIT	Litokhoron	2.42	138	ePn	Pn	19 45 32.3	+1.0
PE1	Pezze di Greco	2.48	245	ePn	Pn	19 45 32.1	-0.1
SOH	Sokhos	2.50	115	ePn	Pn	19 45 33.2	+0.8
SOH				eSn	Sn	19 46 03.0	-1.0
SOH	Sokhos	2.50	115	ePn	Pn	19 45 33.2	+0.8
SOH				eSn	Sn	19 46 03.0	-1.0
SRS	Serrai	2.55	107	ePn	Pn	19 45 33.9	+0.7
BEO	Belgrade	2.91	1	⇑iPn	Pn	19 45 40.8	+2.4
BEO				Sn	Sn	19 46 15.8	+1.2
SG1	Sgolgore (BA)	2.98	250	ePn	Pn	19 45 40.2	+0.9
LTRZ	Laterza	2.98	245	Pn	Pn	19 45 39.1	-0.2
PAIG	Paliouri	3.19	127	ePn	Pn	19 45 42.9	+0.5
AGG	Agios Georgios	3.25	152	ePn	Pn	19 45 44.2	+1.0
XOR	Xorichti	3.33	139	ePn	Pn	19 45 44.7	+0.5
RGNG	Rignano Grg	3.58	268	Pn	Pn	19 45 48.2	+0.3
MRLC	Muro Lucano	3.85	254	Pn	Pn	19 45 52.3	+0.6
SLCN	Sala Consilina	3.88	249	Pn	Pn	19 45 51.8	-0.4
SGO	Sicignano	4.05	252	Pn	Pn	19 45 53.8	-0.7
MGR	Morigerati	4.05	246	Pn	Pn	19 45 54.5	-0.1
CSSN	Cassano Irpino	4.16	257	Pn	Pn	19 45 54.0	-2.1
RHK3	Tenkes	4.26	340	eP	Pn	19 45 56.8	-0.8
ALN	Alexandroupoli	4.39	101	ePn	Pn	19 45 59.6	+0.3
SGG	Gregorio Mates	4.52	265	Pn	Pn	19 46 02.4	+1.2
CII	Carovilli	4.54	270	Pn	Pn	19 46 02.6	+1.1
RFI	Roccamonfina	4.83	265	Pn	Pn	19 46 06.4	+0.8
PKS9	Tamasi	4.91	343	eP	Pn	19 46 05.4	-1.4
SOI	Samo	5.07	222	Pn	Pn	19 46 06.8	-2.2
TERO	Teramo	5.07	280	Pn	Pn	19 46 08.4	-0.7
	comp=Z,35nm,0.4s						
PKS8	Sarbogard	5.12	347	⇓eP	Pn	19 46 08.4	-1.3
DRGR		5.16	18	⇑P	Pg	19 46 30.2	-2.8
BOJS	Bojanci	5.16	316	i Pn	Pn	19 46 11.0	+0.6
PTQR	Pietraquaria	5.20	274	Pn	Pn	19 46 11.5	+0.7
AQU	L'Aquila	5.20	277	Pn	Pn	19 46 10.6	-0.3
	comp=Z,37nm,0.9s						
MLR	Muntele Rosu	5.40	47	⇓P	Pn	19 46 19.4	+5.7
FIAM	Fiamignano	5.41	276	Pn	Pn	19 46 13.8	0.0
	comp=Z,46nm,0.7s						
NRCA	Norcia	5.45	282	Pn	Pn	19 46 13.6	-0.8
VISS	Visnje	5.58	316	ePn	Pn	19 46 16.8	+0.6
ARV	Arcevia	5.70	289	Pn	Pn	19 46 17.0	-0.9
	comp=Z,3.7nm,0.3s						
MNS	Montasola	5.74	277	Pn	Pn	19 46 18.2	-0.2
	comp=Z,12nm,0.5s						
ASS	Assisi	5.82	284	Pn	Pn	19 46 18.8	-0.8
	comp=Z,5.8nm,0.4s						
FSSB	Fossombrone	5.86	290	Pn	Pn	19 46 19.6	-0.6
MURB	Monte Urbino	5.95	286	Pn	Pn	19 46 21.8	+0.4
	comp=Z,49nm,0.7s						
PSZ	Piszkesteto	6.02	357	ePn	Pn	19 46 21.0	-1.4
	comp=Z,4.6nm,0.6s						
PSZ				eSn	Sn	19 47 27.0	-6.0
PSZ	Piszkesteto	6.02	357	⇓ePn	Pn	19 46 21.3	-1.1
PSZ				eSn	Sn	19 47 26.9	-6.1
PSZ	Piszkesteto	6.02	357	ePn	Pn	19 46 21.0	-1.4
	comp=Z,4.6nm,0.6s						
PSZ				eSn	Sn	19 47 27.0	-6.0
JAVS	Javornik	6.05	313	i Pn	Pn	19 46 22.9	0.0
OBKA	Obir	6.21	320	⇑iPN	Pn	19 46 25.6	+0.4
OBKA				i SN	Sn	19 47 36.9	-1.0
VOY	Vojsko	6.23	314	ePn	Pn	19 46 25.4	0.0
VOY				eSn	Sn	19 47 36.7	-1.6
ARSA	Arzberg	6.36	329	⇑iPN	Pn	19 46 26.7	-0.6
ARSA				i SN	Sn	19 47 41.1	-0.5
CRE	Caprese Michel	6.43	288	Pn	Pn	19 46 29.8	+1.6
	comp=Z,9.5nm,0.6s						
KECS	Kecovo	6.58	1	ePN	Pn	19 46 29.2	-1.1
KECS				e		19 47 43.1	
BURAR	Bucovina Array	6.67	30	⇓P	Pn	19 46 30.0	-1.5
BURAR	Bucovina Array	6.67	30	⇓P	Pn	19 46 30.0	-1.5
VYHS	Vyhne	6.67	351	ePN	Pn	19 46 30.8	-0.9
VYHS				e		19 47 47.9	
PTCC	Patocco-Chiusa	6.76	314	Pn	Pn	19 46 32.3	-0.5
CRVS	Cervenica-Dubn	7.04	6	ePN	Pn	19 46 35.8	-0.9
FVI	Forni Avoltri	7.18	313	Pn	Pn	19 46 38.1	-0.7
	comp=Z,4.1nm,0.5s						
KBA	Koelnbreinsper	7.21	318	⇑iPN	Pn	19 46 38.9	-0.2
KBA				i SN	Sn	19 48 02.4	-0.3
MOA	Molln	7.35	326	⇓iPN	Pn	19 46 40.6	-0.6
MOA				i SN	Sn	19 48 05.7	-0.6
CTI	Castel Tesino	7.53	306	Pn	Pn	19 46 42.0	-1.6
	comp=Z,1.9nm,0.3s						
WTTA	Wattenberg	8.21	314	⇑iPN	P	19 46 53.2	0.0
WTTA				i SN	Sn	19 48 27.4	-0.5
KHC	Kasperske Hory	8.65	329	ePN	P	19 46 59.3	0.0
KHC				eSN	Sn	19 48 33.8	-5.0

IDC 30 20:05:49.7±4.5**, 2.85N**×**97.12E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.4**/17**, mbtmp3.6**/3**, Error ellipse: s-maj=255.0km s-min=29.8km az=52.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	42.99	123	P	P	20 13 51.0	-1.7
	0.2nm,0.3s,baz=302,slow=9.1,SNR=9.6						
MKAR	Makanchi Array	45.63	346	P	P	20 14 12.0	-1.7
	0.2nm,0.5s,baz=158,slow=8.1,SNR=4.5						
ARCES	ARCESS Array B	80.97	340	P	P	20 18 05.7	-1.6
	0.9nm,0.7s,baz=108,slow=5.7,SNR=4.1						

NEIC ***30*** *20:25:50.2, 31.50S×68.19W, h6^{km}, ML3.8(GUC), After GUC.*
NEIC Felt [III] at San Juan.

GUC 30 20:25:50.2±0.8**, 31.50S**×**68.19W, h6^{km}**±7^{km}**, MD3.9, ML3.8, 4C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDZ	Mendoza	1.49	202	eP	Pn	20 26 17.2	-0.5
MDZ				i S	Sb	20 26 33.1	-3.9
JACH	Jahuel	2.36	239	eP	Pn	20 26 31.1	+1.0
JACH				i S	Sn	20 27 01.2	+1.5
CMCH	Combarbala	2.43	277	⇑iP	Pn	20 26 32.0	+0.9
CMCH				i S	Sn	20 27 03.0	+1.6
CMCH				AMP		20 27 08.4	
	comp=N,1μm,0.6s						
FCH	Farellones	2.55	224	i P	Pn	20 26 33.9	+1.1
FCH				i S	Sn	20 27 06.8	+2.3
FCH				AMP		20 27 08.9	
	comp=N,249nm,0.2s						
ILCH	Illapel	2.55	266	AMP		20 27 09.5	
	comp=N,380nm,0.2s						
TLL	Tololo Astrono	2.61	300	⇑iP	Pn	20 26 37.9	+4.2
TLL				i S	Sn	20 27 11.5	+5.4
TLL				AMP		20 27 13.4	
	comp=N,817nm,0.5s						
CLCH	Cerro Calan	2.75	226	i P	Pn	20 26 38.2	+2.6
CLCH				i S	Sn	20 27 13.1	+3.7
CLCH				AMP		20 27 15.9	
	comp=N,322nm,0.5s						
ROCH	El Roble	2.81	238	i P	Pn	20 26 36.8	+0.3
ROCH				i S	Sn	20 27 13.1	+2.0
PACH	Papudo	2.95	249	i P	Pn	20 26 38.7	+0.2
PACH				i S	Sn	20 27 15.5	+0.9
TACH	Talagante	3.17	226	⇑iP	Pn	20 26 41.6	+0.1
TACH				i S	Sn	20 27 20.5	+0.4
CHCH	Chadas Angostu	3.20	220	i P	Pn	20 26 42.4	+0.3
CHCH				i S	Sn	20 27 21.7	+0.8
LCCH	Las Cruces	3.47	234	i P	Pn	20 26 45.4	-0.5
LCCH				i S	Sn	20 27 28.3	+0.4
SFDO	San Fernando	3.91	217	⇑iP	Pn	20 26 51.5	-0.7
SFDO				i S	Sn	20 27 38.9	-0.1

MEX 30 20:37:32.8±0.7**, 16.98N**×**101.64W, h20^{km}**±87^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	1.32	87	eP	Pn	20 37 53.4	-3.0
CAIG				i S	Sb	20 38 08.4	-4.9
ACX	Acapulco	1.66	94	eP	Pn	20 37 57.0	-4.2
ACX				i S	Sn	20 38 19.0	-3.0
PLIG	Platanillo	2.48	55	eP	Pn	20 38 09.7	-3.2
PLIG				i S	Sn	20 38 38.7	-4.2

IDC 30 21:17:35.8±2.5**, 12.71N**×**92.12E, mb3.3**/3**, mb1 3.4**/4**, mb1mx3.3**/19**, mbtmp3.2**/4**, ML3.3**/1**, Error ellipse: s-maj=64.2km s-min=31.1km az=66.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	8.71	48	Pn	P	21 19 43.5	-2.5
	0.1nm,0.3s,baz=240,slow=14,SNR=2.8						
MKAR	Makanchi Array	34.97	348	P	P	21 24 30.1	-1.5
	0.2nm,0.6s,baz=169,slow=7.3,SNR=3.6						
MKAR				pP	pP	21 24 39.3	+7.6
	0.4nm,0.6s,baz=166,slow=10.0,SNR=5.4						
SONM	Songino Array	36.99	16	P	P	21 24 46.5	-2.3
	0.2nm,0.5s,baz=204,slow=9.4,SNR=3.5						
WRA	Warramunga Arr	52.72	127	P	P	21 26 52.5	-2.3
	0.3nm,0.4s,baz=303,slow=8.8,SNR=4.1						

IDC ***30*** *21:26:30.4±0.4, 8.59N×82.61W, mb5.1/27, mb1 5.3/28, mb1mx5.3/28, mbtmp5.1/28, ML5.3/1, MS5.6/21, Ms1 5.6/21, ms1mx5.5/26, Error ellipse: s-maj=18.8km s-min=10.5km az=53.0*
MOS ***30*** *21:26:34.8±1.1, 8.58N×82.79W, h33^{km}, mb5.4/60, MS5.6/51, Error ellipse: s-maj=5.7km s-min=4.4km az=98.1*
CASC ***30*** *21:26:35.2±2.6, 8.40N×82.83W, h13^{km}±8^{km}, MD5.0, MW5.7, mb5.3(NEIC)*
HRVD ***30*** *21:26:36.0±0.1, 8.43N×82.82W, h26^{km}, MW5.9/81, Centroid moment Tensor Solution. LP body waves: s75,c180;Mantle waves: s81,c286; Half duration: 2^{s}2 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.79±.01; M$_{\theta\theta}$-0.30±.01; M$_{\phi\phi}$-0.49±.01; M$_{r\theta}$0.31±.01; M$_{\theta\phi}$0.51±.00; M$_{\phi r}$-0.10±.01; Best double couple: M$_{0}$.918×10^{18} NP1: φ$_{s}$334°, δ38°, λ111°. NP2:φ$_{s}$128°, δ55°, λ74°. Principal axes: T .874, Plg74°, Azm353°; N .087, Plg13°, Azm137°; P -.961, Plg9°, Azm229°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
NEIC ***30*** *21:26:36.0±0.1, 8.45N×82.87W, mb5.3/141, MS5.6/126, MW5.8 Error ellipse: s-maj=4.5km s-min=2.7km az=215.0, Moment Tensor Solution. s44 Moment tensor: Scale 10^{17} Nm; M$_{rr}$6.22; M$_{\theta\theta}$-3.11; M$_{\phi\phi}$-3.11; M$_{r\theta}$1.33; M$_{\theta\phi}$3.34; M$_{\phi r}$0.56; Best double couple: M$_{0}$6.5×10^{17} NP1:φ$_{s}$327°, δ44°, λ107°. NP2:φ$_{s}$123°, δ49°, λ74°. Principal axes: T 6.53, Plg78°, Azm326°; N -.05, Plg12°, Azm134°; P -6.48, Plg3°, Azm224°;*
NEIC Eight houses damaged at Puerto Armuelles, Panama. Felt [V] at Boquete and David, Panama. Felt at Bocas del Toro and Panama City, Panama. Felt at Calle Blancos, Curridabat, Escazu, San Antonio, San Francisco, San Jose, San Juan, San Marcos, San Rafael, San Pedro, San Vito and Santa Ana, Costa Rica.
BJI ***30*** *21:26:36.0, 8.40N×82.90W, h36^{km}, mB5.7, Ms6.1, Msz5.9*

ISC 30 21:26:34.4±0.2**, 8.44N**±0.03×**82.85W**±0.02**, h36^{km}, h36^{km}**±2.0^{km}**:pP-P, n737, σ1^{s}18**/582**, mb5.2**/173**, MS5.6**/161**, 160C-35D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVTC	San Vito de Co	0.36	342	eP	P	21 26 42.2	-1.0
ACR	Cerro Adams	0.38	304	⇑iP	P	21 26 41.1	-2.3
ACR	Cerro Adams	0.38	304	⇑iP	P	21 26 41.0	-2.4
ACR				eS	S	21 26 49.9	+0.1
BRU2	Volcan	0.39	24	⇓iP	P	21 26 43.6	+0.1
BRU2	Volcan	0.39	24	⇓iP	P	21 26 43.5	0.0
BRU2				eS	S	21 26 51.6	+1.7
DVD	David	0.39	90	eP	P	21 26 44.0	+0.4
DVD	David	0.39	90	eP	P	21 26 43.0	-0.6
BRU	Baru	0.46	38	⇑eP	P	21 26 46.6	+2.1
CTCR	Cotoan	0.46	11	⇓iP	P	21 26 43.8	-0.7
PTP1	Petroterminal	0.48	119	⇑iP	P	21 26 41.8	-3.0
PTP1				eS	S	21 26 46.5	-5.5
BUS	Buena Vista	1.43	321	⇓iP	P	21 26 58.0	-0.3
URSC	Urasca	1.66	327	⇓eP	P	21 27 01.6	0.0
SJS	Escuela Geolog	1.91	321	⇓iP	P	21 27 06.0	+0.9
SJS				eS	S	21 27 33.5	+5.4
SJS	Escuela Geolog	1.91	321	eP	P	21 27 05.9	+0.8
SJS				⇑iP		21 27 06.0	
SJS				eS	S	21 27 33.8	+5.6
PRS1	Puriscal	2.11	317	⇑eP	P	21 27 07.4	-0.6
TRTC	Tortuguero	2.29	338	⇑iP	P	21 27 11.0	+0.4
CAO	Cobano	2.56	300	⇑iP	P	21 27 13.2	-1.2
AZU	Azuero	2.63	104	⇑eP	P	21 27 19.5	+4.1
FORC	Fortuna	2.70	319	eP	P	21 27 18.9	+2.4
FORC	Fortuna	2.70	319	eP	P	21 27 18.2	+1.7
FORC				eS	S	21 27 53.0	+4.7
JTS	JuntasAbangare	2.77	312	P	P	21 27 17.5	0.0
JTS						21 27 53.2	
JTS				pmax	pmax		
	comp=Z,421nm,0.3s						
JTS				MLR	MLR		
	comp=Z,85μm,19.1s						
JTS	JuntasAbangare	2.77	312	Pn	P	21 27 17.5	-0.1
	comp=Z,421nm,0.3s,baz=124,slow=5.5,SNR=180						
JTS				Sn	S	21 27 53.2	+3.1
	comp=Z,1μm,0.3s,baz=335,slow=22,SNR=6.4						
JTS				LR	LR	21 28 29.6	
	comp=Z,85μm,19.1s,baz=152,slow=42						
JTS	JuntasAbangare	2.77	312	eP	P	21 27 17.3	-0.2
PINA	Piqa, Costa Ab	2.87	73	⇑iP	P	21 27 19.6	+0.7
AZU2	Pedas	2.94	108	⇓iP	P	21 27 21.7	+1.9
AZU2				eS	S	21 27 58.1	+3.9
AZU2	Pedas	2.94	108	⇓iP	P	21 27 21.7	+1.9
AZU2				eS	S	21 27 56.5	+2.2
ZANG	Zanguenga, Cho	2.99	80	⇑iP	P	21 27 21.6	+1.0
VCR	Vista de Mar	3.22	302	eP	P	21 27 24.2	+0.4
ACLA	Agua Clara, Si	3.24	73	eP	P	21 27 24.7	+0.6
UPA	Univ. de Panam	3.32	80	⇓iP	P	21 27 28.9	+3.7
UPA	Univ. de Panam	3.32	80	⇓eP	P	21 27 27.0	+1.7
CONN	Concepcion	4.14	319	⇓eP	P	21 27 39.3	+2.4
APON	Apoyo	4.69	318	⇓eP	P	21 27 47.5	+2.8
MASN	Masaya	4.80	318	eP	P	21 27 48.1	+1.9
TICN	Ticuantepe	4.88	317	⇑eP	P	21 27 50.2	+2.8
CRUN	El Crucero	4.89	316	⇓eP	P	21 27 50.9	+3.3
WILN	Americas 2	4.95	319	⇑eP	P	21 27 50.8	+2.5
XAVN	Gruta Xavier	5.03	317	⇑eP	P	21 27 52.3	+2.8
APYN	Apoyeque	5.11	318	⇑eP	P	21 27 53.4	+2.8
PYTN	Playitas	5.15	323	⇓eP	P	21 27 52.9	+1.6
MOMJ	Momotombo	5.36	318	⇑eP	P	21 27 56.9	+2.8
MIRN	Miramar	5.50	317	⇑eP	P	21 27 58.1	+2.0
CNGN	Cerro Negro	5.53	317	⇑eP	P	21 27 59.3	+2.8
LEON	Leon	5.61	315	⇓eP	P	21 27 59.8	+2.2
TEL3	Telica 3	5.68	317	⇓eP	P	21 28 00.8	+2.2
CRIN	San Cristobal	5.92	316	⇑eP	P	21 28 04.1	+2.2
CNCH	Conchagua	6.86	315	eP	P	21 28 24.9	+10
CNCH				eS	S	21 29 42.4	+9.4
BLLM	Bellamira	7.26	314	eP	P	21 28 32.0	+11
BLLM				eS	S	21 29 54.5	+12
VSM	San Miguel	7.28	313	eP	P	21 28 31.3	+10
VSM				eS	S	21 29 55.5	+12
SNVI	San Vicente	7.81	312	eP	P	21 28 40.0	+12
SNVI				eS	S	21 30 08.9	+12
LCBS	La Ceiba	7.94	311	eP	P	21 28 39.2	+8.9

LCBS				*e*S	**S**	**21 30 10.5**	**+11**
LFRS	**El Faro**	**7.98**	**311**	*e*P	**P**	**21 28 40.0**	**+9.2**
LFRS				*e*S	**S**	**21 30 12.4**	**+12**
LBRS	**Las Brisas**	**8.04**	**311**	*e*P	**P**	**21 28 41.8**	**+10**
LBRS				*e*S	**S**	**21 30 14.0**	**+12**
BOQS	**Boqueron**	**8.22**	**310**	*e*P	**P**	**21 28 43.7**	**+10**
BOQS				*e*S	**S**	**21 30 19.3**	**+13**
SBLS	**San Blas**	**8.54**	**310**	*e*P	**P**	**21 28 48.4**	**+10**
SBLS				*e*S	**S**	**21 30 27.1**	**+12**
SNJE	**San Jose**	**8.55**	**310**	*e*P	**P**	**21 28 48.5**	**+10**
SNJE				*e*S	**S**	**21 30 26.8**	**+12**
RTR	**El Retiro**	**8.60**	**310**	*e*P	**P**	**21 28 49.0**	**+10**
RTR				*e*S	**S**	**21 30 27.6**	**+11**
RBDL	**Robledal**	**8.76**	**311**	*e*P	**P**	**21 28 50.6**	**+9.0**
RBDL				*e*S	**S**	**21 30 30.0**	**+10**
ROSC	**El Rosal**	**9.18**	**112**	Pn	**P**	**21 28 48.1**	**+0.7**
	comp=Z,5.1nm,0.3s,baz=280,slow=2.4,SNR=72						
ROSC				Sn	**S**	**21 30 33.2**	**+2.6**
	baz=72,slow=21,SNR=2.4						
ROSC				LR	LR	21 31 60.0	
	comp=Z,32µm,20.0s,baz=336,slow=36						
OTAV	**Otavalo**	**9.25**	**152**	⇓*e*P	**P**	**21 28 48.0**	**-0.4**
	comp=Z,391nm,1.3s						
OTAV	**Otavalo**	**9.25**	**152**	⇓*e*P	**P**	**21 28 48.1**	**-0.3**
OCAC	**Ocana**	**9.43**	**91**	⇓*i*P	**P**	**21 28 50.1**	**-0.7**
RUSC	**La Rusia**	**10.01**	**104**	⇓*i*P	**P**	**21 29 02.0**	**+3.0**
PCJ	**Portland Cotta**	**10.78**	**30**	⇓*e*P	**P**	**21 29 08.7**	**-0.8**
CVJ	**Coleyville**	**11.02**	**27**	⇑*e*P	**P**	**21 29 11.5**	**-1.2**
MBJ	**Montego Bay**	**11.03**	**26**	⇑*e*P	**P**	**21 29 12.1**	**-0.8**
STH	**Stony Hill**	**11.24**	**31**	⇑*e*P	**P**	**21 29 14.9**	**-0.8**
YHJ	**Yallahs**	**11.25**	**33**	⇓*e*P	**P**	**21 29 15.6**	**-0.2**
BBJ	**Bamboo Saint A**	**11.28**	**28**	⇓*e*P	**P**	**21 29 15.8**	**-0.4**
GWJ	**Greenwich**	**11.28**	**31**	⇓*e*P	**P**	**21 29 15.6**	**-0.7**
BNJ	**Bonny Gate**	**11.37**	**30**	⇓*e*P	**P**	**21 29 17.3**	**-0.2**
PAYG	**Puerto Ayora**	**11.70**	**220**	Pn	**P**	**21 29 22.9**	**+0.9**
PAYG	**Puerto Ayora**	**11.70**	**220**	*e*P	**P**	**21 29 20.0**	**-2.0**
	comp=Z,4µm,2.5s						
GUVC	**San Jose del G**	**11.73**	**119**	⇑*i*P	**P**	**21 29 22.8**	**+0.3**
CCIG	**Comitan**	**11.96**	**312**	*i* P	**P**	**21 29 23.6**	**-1.9**
SDV	**Santo Domingo**	**12.09**	**87**	Pn	**P**	**21 29 23.7**	**-3.5**
	comp=Z,5.3nm,0.3s,baz=306,slow=7.9,SNR=14						
SDV				Sn	**S**	**21 31 44.8**	**+3.1**
	comp=Z,12nm,0.3s,baz=238,slow=18,SNR=3.2						
CMIG	**Matias Romero**	**14.54**	**307**	*i* P	**P**	**21 29 53.4**	**-6.4**
TUIG	**Tuzandepetl**	**14.75**	**311**	*i* P	**P**	**21 30 10.4**	**+7.9**
HUIG	**Huatulco**	**14.87**	**301**	*e*P	**P**	**21 30 02.3**	**-1.7**
VHO	**Vista Hermosa**	**16.02**	**304**	*i* P	**P**	**21 30 16.6**	**-2.3**
LVIG	**Laguna Verde**	**17.28**	**312**	*i* P	**P**	**21 30 30.9**	**-3.7**
PPM	**Popocatepetl**	**18.60**	**306**	*e*P	**P**	**21 30 53.0**	**+1.9**
YAIG	**Yautepec**	**18.84**	**305**	*i* P	**P**	**21 30 54.8**	**+0.7**
SJG	**San Juan**	**18.87**	**58**	*e*P	**P**	**21 30 54.5**	**+0.2**
SJG				pmax	pmax		
	comp=Z,600nm,0.7s						
SJG	**San Juan**	**18.87**	**58**	P	**P**	**21 30 52.9**	**-1.4**
	comp=Z,23nm,0.3s,baz=258,slow=7.3,SNR=51						
SJG				LR	LR	21 37 40.6	
	comp=Z,19µm,19.4s,baz=249,slow=36						
SJG	**San Juan**	**18.87**	**58**	⇓*e*P	**P**	**21 30 50.8**	**-3.5**
	comp=Z,596nm,0.7s						
IIO	**Organos**	**18.96**	**307**	*i* P	**P**	**21 30 56.8**	**+1.4**
PLIG	**Platanillo**	**18.96**	**303**	*i* P	**P**	**21 30 54.3**	**-1.2**
CHVM	**Chichinautzin**	**19.02**	**305**	*e*P	**P**	**21 31 01.5**	**+5.3**
MDVM	**Presa Madin**	**19.34**	**306**	*i* P	**P**	**21 31 02.6**	**+2.9**
IIC	**Rita Coyotepec**	**19.47**	**307**	*i* P	**P**	**21 31 01.1**	**-0.1**
DWPF	**Disney**	**19.61**	**4**	⇑*e*P	**P**	**21 31 02.9**	**+0.2**
	comp=Z,304nm,1.1s						
MOIG	**Morelia**	**20.98**	**304**	*i* P	**P**	**21 31 14.7**	**-2.4**
NNA	**Nana**	**21.15**	**164**	⇑*e*P	**P**	**21 31 17.9**	**-0.9**
	comp=Z,351nm,1.2s,mb5.6						
GRW	**Mount Saint Ca**	**21.17**	**78**	*e*P	**P**	**21 31 19.1**	**+0.1**
TPP	**Pointe-a-Pierr**	**21.19**	**83**	*e*P	**P**	**21 31 20.0**	**+0.8**
TRN	**Trinidad (W)**	**21.26**	**82**	*e*P	**P**	**21 31 19.1**	**-0.8**
TRN	**Trinidad (W)**	**21.26**	**82**	*e*	**S**	**21 35 12.7**	**+3.6**
TBH	**Brigand Hill**	**21.58**	**83**	*e*P	**P**	**21 31 24.1**	**+1.0**
FDF	**Fort de France**	**22.15**	**72**	⇓*e*P	**P**	**21 31 29.5**	**+0.8**
BIM	**Bigot**	**22.17**	**72**	⇓*e*P	**P**	**21 31 29.8**	**+0.8**
SEG	**Port Louis**	**22.28**	**67**	*e*P	**P**	**21 31 31.6**	**+1.6**
MGG	**Marie-Galante**	**22.31**	**68**	*e*P	**P**	**21 31 31.5**	**+1.2**
MVM	**Montagne Vaucl**	**22.34**	**72**	*e*P	**P**	**21 31 32.2**	**+1.5**
CRM	**Caravelle**	**22.37**	**72**	*e*P	**P**	**21 31 32.4**	**+1.4**
DEG	**La Desirade**	**22.66**	**68**	*e*P	**P**	**21 31 35.5**	**+1.5**
RGRS	**Roger Stewart**	**24.47**	**5**	*e*P	**P**	**21 31 52.2**	**+0.7**
HBF	**Harts Bluff**	**24.48**	**5**	*e*P	**P**	**21 31 53.4**	**+1.9**
CSU	**Charleston Sou**	**24.56**	**6**	*e*P	**P**	**21 31 54.5**	**+2.1**
NHSC	**New Hope**	**24.67**	**5**	⇑*e*P	**P**	**21 31 54.0**	**+0.6**
	comp=Z,437nm,1.0s,mb5.9						
NHSC				LR	LR		
	comp=Z,22µm,20.0s,MS5.7						
TWB	**Tillmans-White**	**24.69**	**6**	*e*P	**P**	**21 31 55.1**	**+1.6**
LRAL	**Lakeview Retre**	**24.77**	**352**	⇑*e*P	**P**	**21 31 55.0**	**+0.6**
	comp=Z,622nm,1.0s,mb6.1						
LRAL				LR	LR		
	comp=Z,10µm,22.0s,MS5.3						
COW	**Cow Castle Cre**	**24.90**	**4**	*e*P	**P**	**21 31 56.6**	**+1.0**
COW				*e*PcP	PcP	21 35 31.1	-0.6
NATX	**Nacogdoches**	**25.68**	**336**	⇑*e*P	**P**	**21 32 02.5**	**-0.4**
	comp=Z,143nm,0.9s,mb5.5						
NATX				LR	LR		
	comp=Z,8µm,22.0s,MS5.2						
JSC	**Jenkinsville**	**25.76**	**3**	*e*P	**P**	**21 32 03.7**	**0.0**
JSC				*e*		21 35 32.9	
SAML	**Samuel**	**26.12**	**131**	⇑*e*P	**P**	**21 32 04.6**	**-2.6**
	comp=Z,192nm,1.3s,mb5.5						
SAML				*e*PcP	PcP	21 35 33.3	-1.2
SAML				LR	LR		
	comp=Z,9µm,21.0s,MS5.3						
MYNC	**Murphy**	**26.54**	**358**	PFAKE		21 32 20.0	+9.1
MYNC				LR	LR		
	comp=Z,21µm,20.0s,MS5.7						
OXF	**Oxford**	**26.64**	**348**	*e*P	**P**	**21 32 11.1**	**-0.7**
OXF				pmax	pmax		
	comp=Z,300nm,1.0s,mb5.8						
OXF				MLR	MLR		
	comp=Z,9µm,19.0s,MS5.3						
OXF	**Oxford**	**26.64**	**348**	⇑*e*P	**P**	**21 32 10.3**	**-1.5**
	comp=Z,297nm,1.0s,mb5.8						
OXF				LR	LR		
	comp=Z,9µm,19.0s,MS5.3						
SWET	**Sewanee**	**26.80**	**354**	⇑*i*P	**P**	**21 32 12.5**	**-0.8**
SWET				*e*PcP	PcP	21 35 35.2	-0.7
PLAL	**Pickwick Lake**	**26.85**	**350**	⇑*e*P	**P**	**21 32 12.4**	**-1.3**
	comp=Z,173nm,1.3s,mb5.4						
PLAL				*e*PcP	PcP	21 35 34.9	-1.1
PLAL				LR	LR		
	comp=Z,8µm,22.0s,MS5.2						
MAIG	**Mazatlaan**	**26.95**	**306**	*i* P	**P**	**21 32 15.7**	**+1.0**
ARE	**Arequipa**	**27.17**	**156**	*e*P	**P**	**21 32 18.0**	**+1.1**
UALR	**University of**	**27.62**	**343**	⇑*i*P	**P**	**21 32 19.1**	**-1.7**
	comp=Z,213nm,1.0s,mb5.7						
UALR				*e*PcP	PcP	21 35 38.0	+0.1
HBAR	**Harrisburg**	**27.92**	**346**	*e*P	**P**	**21 32 22.5**	**-1.0**
WVT	**Waverly**	**27.94**	**351**	⇑*i*P	**P**	**21 32 21.9**	**-1.7**
WVT				*e*		21 35 37.4	
WVT				pmax	pmax		
	comp=Z,120nm,0.8s,mb5.6						
WVT	**Waverly**	**27.94**	**351**	⇑*i*P	**P**	**21 32 21.9**	**-1.7**
	comp=Z,120nm,0.8s,mb5.6						
WVT				*e*PcP	PcP	21 35 37.4	-1.2
HALT	**Halls**	**27.98**	**349**	*e*P	**P**	**21 32 22.3**	**-1.7**
TZTN	**Tazewell**	**27.98**	**359**	⇑*e*P	**P**	**21 32 23.2**	**-0.9**
GNAR	**Gosnell**	**28.17**	**348**	*e*P	**P**	**21 32 25.1**	**-0.6**
UTMT	**University of**	**28.31**	**350**	*e*P	**P**	**21 32 26.9**	**0.0**
	comp=Z,489nm,0.9s,mb6.1						
GLAT	**Glass**	**28.32**	**349**	*e*P	**P**	**21 32 25.9**	**-1.2**
LTX	**Lajitas**	**28.54**	**319**	P	**P**	**21 32 30.0**	**+0.9**
LTX				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.7						
LTX				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.1						
LTX	**Lajitas**	**28.54**	**319**	P	**P**	**21 32 25.8**	**-3.3**
	comp=Z,16nm,1.1s,mb4.7						
LTX				*e*ScP		21 35 39.9	
LTX				LR	LR		
	comp=Z,5µm,20.0s,MS5.1						
TXAR	**Lajitas Array**	**28.54**	**319**	P	**P**	**21 32 29.6**	**+0.5**
	comp=Z,4.0nm,0.7s,mb4.2,baz=153,slow=5.6,SNR=21						
TXAR				PcP	PcP	21 35 40.1	-0.1
	comp=Z,14nm,0.8s,baz=154,slow=5.7,SNR=14						
TXAR				ScP		21 39 21.9	
	comp=Z,3.0nm,1.0s,baz=143,slow=6.3,SNR=6.1						
TXAR				LR	LR	21 45 36.5	
	comp=Z,4µm,20.8s,MS5.0,baz=170,slow=40						
LPAZ	**La Paz**	**28.56**	**149**	P	**P**	**21 32 29.0**	**-0.4**
LPAZ						21 35 41.4	
LPAZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPAZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LPAZ				MLR	MLR		
	comp=Z,10µm,18.7s						
LPAZ	**La Paz**	**28.56**	**149**	P	**P**	**21 32 29.0**	**-0.4**
	comp=Z,9.7nm,0.8s,mb4.6,baz=341,slow=10,SNR=30						
LPAZ				PcP	PcP	21 35 41.4	+1.0
	comp=Z,5.0nm,0.9s,baz=354,slow=9.9,SNR=3.8						
LPAZ				LR	LR	21 45 42.1	
	comp=Z,10µm,18.7s,MS5.5,baz=46,slow=40						
LPAZ	**La Paz**	**28.56**	**149**	⇑*i*P	**P**	**21 32 28.9**	**-0.5**
	comp=Z,22nm,1.0s,mb4.8						
LPAZ				LR	LR		
	comp=Z,9µm,22.0s,MS5.3						
ELN	**Prospectdale**	**28.72**	**3**	*e*P	**P**	**21 32 31.5**	**+0.9**
ELN				*e*PcP	PcP	21 35 40.0	-0.6
BLA	**Blacksburg**	**28.73**	**4**	*e*P	**P**	**21 32 31.0**	**+0.3**
BLA				*e*		21 35 40.3	
BLA				pmax	pmax		
	comp=Z,110nm,0.9s,mb5.6						
BLA				MLR	MLR		
	comp=Z,18µm,20.0s,MS5.7						
BLA	**Blacksburg**	**28.73**	**4**	⇑*i*P	**P**	**21 32 30.1**	**-0.5**
	comp=Z,112nm,0.9s,mb5.6						
BLA				*e*PcP	PcP	21 35 40.2	-0.4
BLA				LR	LR		
	comp=Z,18µm,20.0s,MS5.7						
PARMO	**Parma**	**28.79**	**348**	⇑*e*P	**P**	**21 32 30.1**	**-1.1**
FWV	**Forest Hill**	**29.07**	**3**	*e*P	**P**	**21 32 34.1**	**+0.4**
FWV				*e*PcP	PcP	21 35 40.9	-0.6
BBSR	**BB Station**	**29.17**	**33**	⇑*e*P	**P**	**21 32 34.1**	**-0.5**
	comp=Z,52nm,1.3s,mb5.1						
BBSR				LR	LR		
	comp=Z,12µm,21.0s,MS5.5						
WMOK	**Wichita Mounta**	**29.98**	**333**	*e*P	**P**	**21 32 39.9**	**-2.0**
WMOK				*e*		21 35 42.8	
WMOK				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.0						
WMOK				MLR	MLR		
	comp=Z,5µm,22.0s,MS5.1						
WMOK	**Wichita Mounta**	**29.98**	**333**	⇑*i*P	**P**	**21 32 39.0**	**-2.9**
	comp=Z,35nm,1.0s,mb5.0						
WMOK				*e*PcP	PcP	21 35 42.8	-1.0
WMOK				LR	LR		
	comp=Z,5µm,22.0s,MS5.1						
CBN	**Corbin**	**30.04**	**9**	PFAKE		21 32 50.0	+7.6
CBN				LR	LR		
	comp=Z,56µm,20.0s,MS6.2						
FVM	**French Village**	**30.20**	**348**	⇑*i*P	**P**	**21 32 41.9**	**-1.9**
FVM				pmax	pmax		
	comp=Z,147nm,1.0s,mb5.7						
FVM	**French Village**	**30.20**	**348**	⇑*i*P	**P**	**21 32 41.9**	**-1.9**
	comp=Z,147nm,1.0s,mb5.7						
CCM	**Cathedral Cave**	**30.45**	**347**	*e*P	**P**	**21 32 43.5**	**-2.5**
CCM				*e*		21 35 43.9	
CCM				pmax	pmax		
	comp=Z,260nm,0.9s,mb6.0						
CCM				MLR	MLR		
	comp=Z,2µm,19.0s,MS4.7						
CCM	**Cathedral Cave**	**30.45**	**347**	⇑*e*P	**P**	**21 32 43.4**	**-2.5**
	comp=Z,263nm,0.8s,mb6.0						
CCM				*e*PcP	PcP	21 35 43.9	-1.1
CCM				LR	LR		
	comp=Z,2µm,19.0s,MS4.7						
LPIG	**La Paz**	**30.52**	**304**	*i* P	**P**	**21 32 47.4**	**+0.6**
BLO	**Bloomington**	**30.78**	**354**	*e*P	**P**	**21 32 47.2**	**-1.7**
BLO				*e*		21 35 44.9	
BLO				pmax	pmax		
	comp=Z,280nm,0.9s,mb6.1						
BLO	**Bloomington**	**30.78**	**354**	⇑*e*P	**P**	**21 32 47.3**	**-1.6**
	comp=Z,275nm,0.9s,mb6.1						
BLO				*e*PcP	PcP	21 35 44.9	-0.9
SLM	**Saint Louis**	**30.79**	**349**	*e*P	**P**	**21 32 47.7**	**-1.3**
SLM				*e*		21 35 44.9	
SLM				pmax	pmax		
	comp=Z,440nm,0.9s						
SLM	**Saint Louis**	**30.79**	**349**	*e*P	**P**	**21 32 47.7**	**-1.4**
	comp=Z,440nm,0.9s						
SLM				*e*PcP	PcP	21 35 44.9	-1.0
MNTX	**Cornudas Mount**	**31.22**	**321**	*e*P	**P**	**21 32 50.7**	**-2.2**
	comp=Z,25nm,0.9s,mb5.0						
MNTX				*e*PcP	PcP	21 35 46.2	-0.9
MNTX				LR	LR		
	comp=Z,3µm,21.0s,MS5.0						
SDMD	**Soldier's Deli**	**31.30**	**9**	⇑*e*P	**P**	**21 32 52.8**	**-0.8**
SDMD				*e*PcP	PcP	21 35 45.2	-1.9
AMTX	**Amarillo**	**31.48**	**329**	*e*P	**P**	**21 32 52.6**	**-2.6**
	comp=Z,35nm,1.1s,mb5.1						
AMTX				*e*PcP	PcP	21 35 47.7	-0.1
AMTX				LR	LR		
	comp=Z,9µm,22.0s,MS5.4						
KSU1	**Kansas State U**	**32.94**	**340**	⇑*i*P	**P**	**21 33 05.5**	**-2.3**
KSU1				*e*PcP	PcP	21 35 49.8	-1.8
BRNJ	**Basking Ridge**	**32.95**	**12**	*e*P	**P**	**21 33 07.9**	**0.0**
ALLY	**Alegheny Colle**	**33.16**	**4**	*e*P	**P**	**21 33 08.7**	**-1.0**
ALLY				*e*PcP	PcP	21 35 50.3	-1.9
PAL	**Palisades**	**33.39**	**12**	⇑*i*P	**P**	**21 33 11.1**	**-0.6**
PAL				*e*		21 33 25.7	
PAL				*e*		21 35 50.2	
PAL				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.3						
PAL	**Palisades**	**33.39**	**12**	⇑*i*P	**P**	**21 33 11.1**	**-0.6**
	comp=Z,48nm,1.3s,mb5.3						
PAL				*e*		21 33 25.7	
PAL				*e*PcP	PcP	21 35 50.2	-2.7
LVC	**Limon Verde**	**33.74**	**156**	*e*P	**P**	**21 33 15.3**	**+0.3**
	comp=Z,93nm,1.3s,mb5.6						
LVC				*e*	pP	21 33 27.9	+2.6
LVC				*e*PcP	PcP	21 35 54.6	+0.6
ANMO	**Albuquerque**	**34.13**	**324**	P	**P**	**21 33 17.6**	**-0.5**
ANMO	**Albuquerque**	**34.13**	**324**	*e*P	**P**	**21 33 18.8**	**+0.7**
ANMO				*e*		21 35 54.9	
ANMO				pmax	pmax		
	comp=Z,20nm,0.9s						
ANMO				MLR	MLR		
	comp=Z,3µm,21.0s						
ANMO	**Albuquerque**	**34.13**	**324**	P	**P**	**21 33 17.4**	**-0.7**
	comp=Z,19nm,0.9s,mb5.0,baz=150,slow=9.0,SNR=27						
ANMO				PcP	PcP	21 35 55.7	+0.7
	comp=Z,11nm,0.9s,baz=154,slow=5.1,SNR=6.6						
ANMO	**Albuquerque**	**34.13**	**324**	⇑*e*P	**P**	**21 33 17.4**	**-0.7**
	comp=Z,20nm,0.9s,mb5.0						
ANMO				*e*PcP	PcP	21 35 54.9	-0.1
ANMO				LR	LR		
	comp=Z,3µm,21.0s,MS5.0						
BINY	**Binghamton**	**34.16**	**9**	*e*P	**P**	**21 33 17.7**	**-0.6**
	comp=Z,99nm,1.4s,mb5.5						
BINY				*e*PcP	PcP	21 35 54.6	-0.4
BINY				LR	LR		
	comp=Z,25µm,20.0s,MS5.9						
GENY	**Geneseo**	**34.48**	**7**	*e*P	**P**	**21 33 19.9**	**-1.1**
GENY				*e*PcP	PcP	21 35 54.6	-1.3
TUC	**Tucson**	**35.15**	**316**	*e*P	**P**	**21 33 27.6**	**+0.7**
TUC				*e*		21 35 58.6	
TUC				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3						
TUC				MLR	MLR		
	comp=Z,7µm,21.0s,MS5.4						
TUC	**Tucson**	**35.15**	**316**	⇑*e*P	**P**	**21 33 27.3**	**+0.4**
	comp=Z,41nm,1.0s,mb5.3						
TUC				*e*PcP	PcP	21 35 58.6	+0.7
TUC				LR	LR		
	comp=Z,7µm,21.0s,MS5.4						
WES	**Weston**	**35.30**	**15**	PFAKE		21 33 40.0	+12
WES				LR	LR		
	comp=Z,11µm,22.0s,MS5.6						
HRV	**Harvard--Oak R**	**35.36**	**14**	*e*P	**P**	**21 33 28.6**	**0.0**
HRV				*e*		21 35 57.6	
HRV				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
HRV				MLR	MLR		
	comp=Z,10µm,22.0s,MS5.5						
HRV	**Harvard--Oak R**	**35.36**	**14**	*e*P	**P**	**21 33 28.1**	**-0.5**
	comp=Z,26nm,1.1s,mb5.1						
HRV				*e*PcP	PcP	21 35 57.6	-0.9
HRV				LR	LR		
	comp=Z,10µm,22.0s,MS5.5						
SDCO	**Great Sand Dun**	**35.65**	**328**	⇑*e*P	**P**	**21 33 30.6**	**-0.5**
	comp=Z,108nm,1.4s,mb5.6						
SDCO				LR	LR		
	comp=Z,10µm,22.0s,MS5.5						
ACCN	**Adirondack Com**	**35.73**	**11**	⇑*e*P	**P**	**21 33 31.2**	**-0.4**
ACCN				*e*PcP	PcP	21 35 58.4	-1.1
NCB	**Newcomb**	**36.19**	**11**	*e*P	**P**	**21 33 34.4**	**-1.2**
	comp=Z,55nm,1.4s,mb5.3						
NCB				*e*PcP	PcP	21 36 00.3	-0.6
NCB				LR	LR		
	comp=Z,16µm,21.0s,MS5.8						
FFD	**Franklin Falls**	**36.24**	**14**	*e*P	**P**	**21 33 32.1**	**-4.0**
	comp=Z,34nm,0.9s,mb5.3						
FFD				*e*PcP	PcP	21 35 56.7	-4.4
HNH	**Hanover**	**36.32**	**13**	*e*P	**P**	**21 33 36.8**	**+0.1**
	comp=Z,4.1nm,1.0s,mb4.3						
HNH				*e*PcP	PcP	21 36 01.7	+0.4
SADO	**Sadowa**	**36.34**	**4**	P	**P**	**21 33 34.5**	**-2.3**
	comp=Z,26nm,0.8s,mb5.2,baz=197,slow=8.7,SNR=18						
SADO				PcP	PcP	21 36 00.4	-0.9
	comp=Z,18nm,0.8s,baz=243,slow=3.9,SNR=4.6						
SADO				LR	LR	21 48 32.1	
	comp=Z,11µm,20.3s,MS5.6,baz=196,slow=36						
MSNY	**Massena**	**37.07**	**9**	*e*P	**P**	**21 33 42.6**	**-0.4**
MSNY				*e*PcP	PcP	21 36 01.9	-1.7
FRNY	**Flat Rock**	**37.14**	**11**	⇑*e*P	**P**	**21 33 42.4**	**-1.1**
FRNY				*e*PcP	PcP	21 36 02.6	-1.2
ISCO	**Idaho Springs**	**37.27**	**331**	*e*P	**P**	**21 33 45.2**	**+0.4**
ISCO				*e*		21 36 04.4	
ISCO				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.9						
ISCO				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.3						
ISCO	**Idaho Springs**	**37.27**	**331**	⇑*e*P	**P**	**21 33 44.5**	**-0.2**
	comp=Z,15nm,0.7s,mb4.9						
ISCO				*e*PcP	PcP	21 36 04.4	+0.2
ISCO				LR	LR		
	comp=Z,5µm,21.0s,MS5.3						
WVL	**Waterville**	**37.77**	**15**	PFAKE		21 34 00.0	+11
WVL				LR	LR		
	comp=Z,45µm,19.0s,MS6.3						
PHWY	**Pilot Hill**	**38.38**	**332**	⇑*e*P	**P**	**21 33 53.3**	**-0.6**
PHWY				*e*PcP	PcP	21 36 07.9	+0.3
SRU	**San Rafael**	**39.36**	**325**	⇑*e*P	**P**	**21 34 02.0**	**-0.1**
SRU				*e*		21 36 10.7	
RWWY	**Rawlins**	**39.50**	**331**	⇑*e*P	**P**	**21 34 03.2**	**-0.1**
	comp=Z,81nm,0.9s,mb5.5						
RWWY				*e*PcP	PcP	21 36 08.5	-2.7
BAR	**Barrett**	**39.51**	**312**	⇑*e*P	**P**	**21 34 04.5**	**+1.1**
BAR				*e*PcP	PcP	21 36 11.5	+0.2
LDFC	**Landfair**	**39.69**	**317**	⇑*e*P	**P**	**21 34 06.9**	**+2.0**
LDFC				*e*PcP	PcP	21 36 11.9	+0.1
NEN	**Nelson**	**39.83**	**318**	*e*P	**P**	**21 34 07.2**	**+1.1**
NEN				*e*PcP	PcP	21 36 13.0	+0.7
PFO	**Pinyon Flat Ob**	**39.83**	**314**	*e*P	**P**	**21 34 07.8**	**+1.7**
PFO				*e*		21 36 13.1	
PFO				pmax	pmax		
	comp=Z,77nm,1.0s,mb5.4						
PFO				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.8						
PFO	**Pinyon Flat Ob**	**39.83**	**314**	⇑*e*P	**P**	**21 34 07.2**	**+1.1**
	comp=Z,78nm,0.9s,mb5.4						
PFO				*e*PcP	PcP	21 36 13.1	+0.8
PFO				LR	LR		
	comp=Z,1µm,19.0s,MS4.8						
TMUT	**Trail Mountain**	**39.87**	**325**	*e*P	**P**	**21 34 06.4**	**+0.1**
TMUT				*e*PcP	PcP	21 36 13.2	+0.8
MSU	**Marysvale**	**39.91**	**323**	*e*P	**P**	**21 34 07.2**	**+0.5**
MSU				*e*		21 36 13.6	
MSU				*e*		21 40 02.2	
MVU	**Marysvale**	**39.92**	**323**	⇑*e*P	**P**	**21 34 07.5**	**+0.7**
	comp=Z,32nm,1.1s,mb5.0						
MVU				*e*PcP	PcP	21 36 12.9	+0.4
MVU				LR	LR		
	comp=Z,5µm,20.0s,MS5.3						
RSSD	**Black Hills**	**40.05**	**336**	*e*P	**P**	**21 34 07.7**	**-0.1**
RSSD				*e*		21 36 12.4	
RSSD				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.2						
RSSD				MLR	MLR		
	comp=Z,1µm,21.0s,MS4.7						
RSSD	**Black Hills**	**40.05**	**336**	⇑*e*P	**P**	**21 34 07.4**	**-0.4**
	comp=Z,56nm,0.9s,mb5.3						
RSSD				*e*PcP	PcP	21 36 12.4	-0.4
RSSD				LR	LR		
	comp=Z,1µm,21.0s,MS4.7						
TLL	**Tololo Astrono**	**40.09**	**164**	*i* P	**P**	**21 34 09.3**	**+1.0**
PQI	**Presque Isle**	**40.16**	**16**	PFAKE		21 34 20.0	+11
PQI				LR	LR		
	comp=Z,51µm,19.0s,MS6.4						
ARUT	**Antelope Range**	**40.21**	**321**	*e*P	**P**	**21 34 11.6**	**+2.4**
JATB	**Jatai**	**40.54**	**130**	⇓*e*P	**P**	**21 34 08.6**	**-3.5**
JATB				*i*		21 34 11.0	
JATB				*i*	pP	21 34 19.1	-3.6
JATB				*e*		21 35 51.1	
JATB				*i*		21 36 04.5	
MPU	**Maple Canyon**	**40.60**	**325**	⇑*e*P	**P**	**21 34 12.2**	**-0.2**
MPU				*e*PcP	PcP	21 36 14.7	0.0
DAU	**Daniels Canyon**	**40.66**	**326**	*e*P	**P**	**21 34 13.2**	**+0.3**
DAU				*e*		21 36 15.0	
NLU	**North Lily Min**	**40.81**	**325**	⇑*e*P	**P**	**21 34 14.4**	**+0.3**
NLU				*e*PcP	PcP	21 36 15.5	+0.2
JLU	**Jordanelle**	**40.90**	**326**	⇑*e*P	**P**	**21 34 14.7**	**-0.2**
JLU				*e*PcP	PcP	21 36 16.9	+1.2
CTU	**Camp Tracy**	**41.13**	**326**	⇑*e*P	**P**	**21 34 16.6**	**-0.1**
CTU				*e*PcP	PcP	21 36 17.1	+0.8
TCUT	**Toone Canyon**	**41.23**	**327**	⇑*e*P	**P**	**21 34 17.7**	**+0.1**
TCUT				*e*PcP	PcP	21 36 17.2	+0.5
MWC	**Mount Wilson**	**41.29**	**314**	⇑*e*P	**P**	**21 34 19.4**	**+1.2**
NOQ	**North Oquirrh**	**41.30**	**326**	⇑*e*P	**P**	**21 34 17.6**	**-0.6**
NOQ				*e*PcP	PcP	21 36 17.2	+0.2
BW06	**Boulder Array**	**41.46**	**330**	PFAKE		21 34 30.0	+11
BW06				LR	LR		
	comp=Z,5µm,22.0s,MS5.3						
PDAR	**Pinedale Array**	**41.46**	**330**	P	**P**	**21 34 18.5**	**-1.0**
	comp=Z,16nm,0.6s,mb4.9,baz=135,slow=8.4,SNR=113						
PDAR				PcP	PcP	21 36 17.8	+0.3
	comp=Z,16nm,0.9s,baz=126,slow=4.4,SNR=9.1						
PDAR				LR	LR	21 54 54.3	
	comp=Z,4µm,21.8s,MS5.2,baz=130,slow=41						
HWUT	**Hardware Ranch**	**41.66**	**327**	⇑*e*P	**P**	**21 34 20.5**	**-0.6**
	comp=Z,116nm,1.0s,mb5.5						
HWUT				*e*PcP	PcP	21 36 18.5	+0.3
HWUT				LR	LR		
	comp=Z,7µm,20.0s,MS5.5						
TRCR	**Troy Canyon**	**41.89**	**320**	*e*P	**P**	**21 34 23.5**	**+0.4**
TRCR				*e*PcP	PcP	21 36 19.8	+0.8
SPUT	**South Promonto**	**41.93**	**326**	⇑*e*P	**P**	**21 34 23.2**	**-0.2**
SPUT				*e*PcP	PcP	21 36 19.7	+0.7
BDFB	**Brasilia**	**41.99**	**125**	P	**P**	**21 34 22.8**	**-1.4**
	comp=Z,27nm,0.9s,mb4.9,baz=296,slow=9.5,SNR=28						
BDFB				LR	LR	21 52 49.5	
	comp=Z,14µm,18.1s,MS5.9,baz=314,slow=38						
BGU	**Big Grassy Mou**	**42.00**	**325**	⇑*e*P	**P**	**21 34 23.8**	**-0.2**
BGU				*e*PcP	PcP	21 36 19.9	+0.6
BAO	**Brasilia Array**	**42.00**	**125**	P	**P**	**21 34 23.5**	**-0.8**
DAC	**Darwin (Calif)**	**42.03**	**317**	*e*P	**P**	**21 34 24.9**	**+0.6**
DAC				*e*		21 36 20.5	
DAC				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.0						
DAC				MLR	MLR		
	comp=Z,6µm,19.0s,MS5.5						
DAC	**Darwin (Calif)**	**42.03**	**317**	⇑*e*P	**P**	**21 34 25.0**	**+0.7**
	comp=Z,43nm,1.0s,mb5.0						
DAC				*e*PcP	PcP	21 36 20.5	+1.0
DAC				LR	LR		
	comp=Z,6µm,19.0s,MS5.5						
AHID	**Auburn Hatcher**	**42.23**	**329**	⇑*e*P	**P**	**21 34 25.0**	**-0.9**
	comp=Z,152nm,1.5s,mb5.4						
AHID				*e*PcP	PcP	21 36 20.0	-0.1
AHID				LR	LR		
	comp=Z,7µm,22.0s,MS5.5						
HVU	**Hansel Valley**	**42.43**	**326**	*e*P	**P**	**21 34 28.2**	**+0.7**
HVU				*e*		21 36 20.8	
CPUP	**Villa Florida**	**42.53**	**145**	*e*P	**P**	**21 34 26.0**	**-2.5**
CPUP				pmax	pmax		
	comp=Z,280nm,2.3s						
CPUP				MLR	MLR		
	comp=Z,6µm,20.0s						
CPUP	**Villa Florida**	**42.53**	**145**	PcP	PcP	21 36 20.9	-0.4
	comp=Z,5.5nm,0.6s,baz=315,slow=5.7,SNR=3.9						
CPUP				LR	LR	21 54 52.8	
	comp=Z,6µm,18.4s,MS5.5,baz=336,slow=40						
CPUP	**Villa Florida**	**42.53**	**145**	⇑*e*P	**P**	**21 34 26.1**	**-2.4**
	comp=Z,279nm,2.3s,mb5.6						
CPUP				LR	LR		
	comp=Z,6µm,20.0s,MS5.5						
REDW	**Red Top Meadow**	**42.54**	**330**	⇑*e*P	**P**	**21 34 27.4**	**-1.0**
	comp=Z,280nm,1.3s,mb5.8						
SNOW	**Snow King Moun**	**42.56**	**330**	⇑*e*P	**P**	**21 34 27.9**	**-0.6**

	comp=Z,97nm,0.7s,mb5.6						
LOHW	**Long Hollow**	**42.60**	**330⇑**	*e*P	**P**	**21 34 28.1**	**-0.8**
	comp=Z,57nm,0.9s,mb5.3						
LOHW				*e*PcP	PcP	21 36 21.1	-0.1
TPAW	**Teton Pass**	**42.68**	**330⇑**	*e*P	**P**	**21 34 28.8**	**-0.8**
	comp=Z,73nm,0.9s,mb5.4						
TPAW				*e*PcP	PcP	21 36 22.4	+0.8
RRI2	**Red Ridge**	**42.77**	**329⇑**	*e*P	**P**	**21 34 29.4**	**-0.9**
	comp=Z,68nm,0.7s,mb5.5						
RRI2				*e*PcP	PcP	21 36 22.8	+1.0
MOOW	**Moose Ponds**	**42.77**	**330⇑**	*e*P	**P**	**21 34 29.4**	**-0.8**
	comp=Z,56nm,0.9s,mb5.3						
MOOW				*e*PcP	PcP	21 36 21.1	-0.7
TPH	**Tonopah**	**42.78**	**319**	*e*P	**P**	**21 34 31.8**	**+1.4**
TPH				*e*		21 36 23.0	
TPH				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.5						
TPH				MLR	MLR		
	comp=Z,8µm,19.0s,MS5.7						
TPH	**Tonopah**	**42.78**	**319⇑**	*e*P	**P**	**21 34 31.1**	**+0.7**
	comp=Z,100nm,1.1s,mb5.5						
TPH				*e*PcP	PcP	21 36 23.0	+1.1
TPH				LR	LR		
	comp=Z,8µm,19.0s,MS5.7						
IMW	**Indian Meadow**	**42.97**	**330⇑**	*e*P	**P**	**21 34 31.2**	**-0.7**
	comp=Z,60nm,0.8s,mb5.4						
IMW				*e*PcP	PcP	21 36 21.5	-1.0
LAO	**LASA Array**	**43.04**	**336⇑**	*e*P	**P**	**21 34 30.9**	**-1.5**
	comp=Z,141nm,1.0s,mb5.7						
LAO				*e*PcP	PcP	21 36 22.5	-0.1
LAO				LR	LR		
	comp=Z,5µm,19.0s,MS5.4						
ULM	**Lac du Bonnet**	**43.07**	**348**	P	**P**	**21 34 30.1**	**-2.5**
	comp=Z,209nm,0.8s,mb5.9,baz=158,slow=7.8,SNR=99						
ULM				PcP	PcP	21 36 22.1	-0.6
	comp=Z,61nm,0.9s,baz=140,slow=4.0,SNR=6.5						
ULM				LR	LR	21 54 01.8	
	comp=Z,5µm,19.5s,MS5.4,baz=280,slow=38						
ELK	**Elko**	**43.15**	**323⇑**	*e*P	**P**	**21 34 33.5**	**+0.1**
ELK				*e*		21 36 24.3	
ELK				pmax	pmax		
	comp=Z,42nm,1.0s						
ELK				MLR	MLR		
	comp=Z,5µm,19.0s						
ELK	**Elko**	**43.15**	**323**	P	**P**	**21 34 33.6**	**+0.2**
	comp=Z,25nm,0.8s,mb5.0,baz=123,slow=5.2,SNR=87						
ELK				PcP	PcP	21 36 24.0	+0.9
	comp=Z,35nm,0.9s,baz=158,slow=1.8,SNR=13						
ELK	**Elko**	**43.15**	**323⇑**	*e*P	**P**	**21 34 33.5**	**0.0**
	comp=Z,42nm,1.0s,mb5.1						
ELK				*e*PcP	PcP	21 36 24.3	+1.2
ELK				LR	LR		
	comp=Z,5µm,19.0s,MS5.5						
LKWY	**Lake**	**43.20**	**331**	PFAKE		21 34 50.0	+16
LKWY				LR	LR		
	comp=Z,8µm,20.0s,MS5.6						
FCH	**Farellones**	**43.22**	**165**	*i* P	**P**	**21 34 35.0**	**+1.0**
MTUM	**Tungsten Hills**	**43.27**	**317**	*e*P	**P**	**21 34 35.5**	**+1.1**
MTUM				*e*PcP	PcP	21 36 24.5	+0.9
YFT	**Old Faithful**	**43.33**	**331⇑**	*e*P	**P**	**21 34 35.3**	**+0.5**
YFT				*e*PcP	PcP	21 36 25.7	+2.0
YNR	**Norris Junctio**	**43.45**	**331⇑**	*e*P	**P**	**21 34 35.6**	**-0.1**
YMR	**Madison River**	**43.55**	**331⇑**	*e*P	**P**	**21 34 36.5**	**-0.1**
YMR				*e*PcP	PcP	21 36 25.7	+1.3
MNV	**Mina**	**43.59**	**319**	*e*P	**P**	**21 34 37.9**	**+0.9**
MNV				*e*		21 36 25.7	
MNV				pmax	pmax		
	comp=Z,74nm,1.1s,mb5.3						
MNV				MLR	MLR		
	comp=Z,7µm,20.0s,MS5.5						
MNV	**Mina**	**43.59**	**319⇑**	*e*P	**P**	**21 34 37.7**	**+0.8**
	comp=Z,74nm,1.1s,mb5.3						
MNV				*e*PcP	PcP	21 36 25.7	+1.0
MNV				LR	LR		
	comp=Z,7µm,20.0s,MS5.5						
NVAR	**Mina Array Bea**	**43.68**	**319**	P	**P**	**21 34 38.8**	**+1.0**
	comp=Z,28nm,0.7s,mb5.1,baz=116,slow=5.5,SNR=115						
NVAR				PcP	PcP	21 36 25.8	+0.8
	comp=Z,14nm,0.8s,baz=136,slow=4.7,SNR=7.1						
NVAR				LR	LR	21 56 27.0	
	comp=Z,6µm,19.4s,MS5.5,baz=125,slow=41						
RPN	**Rapa Nui**	**43.69**	**215**	PFAKE		21 34 50.0	+12
RPN				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
OMM	**Old Mammoth Mi**	**43.70**	**317⇑**	*e*P	**P**	**21 34 38.9**	**+1.1**
OMM				*e*PcP	PcP	21 36 25.3	+0.2
DGMT	**Dagmar**	**43.78**	**340⇑**	*e*P	**P**	**21 34 37.0**	**-1.3**
	comp=Z,175nm,0.8s,mb5.8						
DGMT				*e*PcP	PcP	21 36 25.7	+0.6
DGMT				LR	LR		
	comp=Z,5µm,21.0s,MS5.4						
QLMT	**Earthquake Lak**	**43.90**	**331**	*e*P	**P**	**21 34 39.9**	**+0.5**
BMN	**Battle Mountai**	**44.15**	**322**	*e*P	**P**	**21 34 41.8**	**+0.3**
BMN				pmax	pmax		
	comp=Z,130nm,0.8s,mb5.7						
BMN				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.4						
BMN	**Battle Mountai**	**44.15**	**322⇑**	*e*P	**P**	**21 34 41.9**	**+0.4**
	comp=Z,130nm,0.8s,mb5.7						
BMN				LR	LR		
	comp=Z,5µm,19.0s,MS5.4						
LRV	**Little Rabbit**	**44.48**	**315**	*e*P	**P**	**21 34 45.8**	**+1.6**
HLID	**Hailey**	**44.53**	**327⇑**	*e*P	**P**	**21 34 44.0**	**-0.4**
	comp=Z,48nm,0.9s,mb5.3						
HLID				*e*PcP	PcP	21 36 29.0	+1.2
HLID				LR	LR		
	comp=Z,5µm,20.0s,MS5.5						
BOZ	**Bozeman (W)**	**44.59**	**331**	*e*P	**P**	**21 34 44.1**	**-0.8**
BOZ				*e*		21 36 25.4	
BOZ				pmax	pmax		
	comp=Z,180nm,1.2s,mb5.8						
BOZ				MLR	MLR		
	comp=Z,6µm,22.0s,MS5.5						
BOZ	**Bozeman (W)**	**44.59**	**331⇑**	*e*P	**P**	**21 34 44.2**	**-0.7**
	comp=Z,181nm,1.2s,mb5.8						
BOZ				*e*PcP	PcP	21 36 25.4	-2.5
BOZ				LR	LR		
	comp=Z,6µm,22.0s,MS5.5						
MCMT	**McKenzie Canyo**	**44.59**	**330**	*e*P	**P**	**21 34 45.2**	**+0.2**
CMB	**Columbia Colle**	**44.85**	**317⇑**	*e*P	**P**	**21 34 47.2**	**+0.1**
CMB				*e*		21 36 29.7	
CMB				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.2						
CMB				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.1						
CMB	**Columbia Colle**	**44.85**	**317⇑**	*e*P	**P**	**21 34 47.2**	**0.0**
	comp=Z,48nm,1.1s,mb5.2						
CMB				*e*PcP	PcP	21 36 29.7	+0.7
CMB				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
SAO	**San Andreas Ge**	**44.95**	**315⇑**	*e*P	**P**	**21 34 48.3**	**+0.4**
SAO				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.1						
SAO				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.3						
SAO	**San Andreas Ge**	**44.95**	**315⇑**	*e*P	**P**	**21 34 48.3**	**+0.4**
	comp=Z,28nm,0.8s,mb5.1						
SAO				LR	LR		
	comp=Z,3µm,19.0s,MS5.3						
PAHR	**Pah Rah Range**	**45.09**	**320**	*e*P	**P**	**21 34 49.6**	**+0.6**
	comp=Z,56nm,1.4s,mb5.2						
WCN	**Washoe City**	**45.11**	**319⇑**	*e*P	**P**	**21 34 49.7**	**+0.5**
WCN				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.2						
WCN	**Washoe City**	**45.11**	**319⇑**	*e*P	**P**	**21 34 49.7**	**+0.5**
	comp=Z,49nm,1.1s,mb5.2						
HRY	**Holter Researc**	**45.47**	**332**	*e*P	**P**	**21 34 51.1**	**-0.9**
BEKR	**Beckwourth**	**45.81**	**319⇑**	*e*P	**P**	**21 34 54.5**	**-0.2**
	comp=Z,36nm,1.0s,mb5.2						
SAC	**San Andreas**	**46.02**	**315**	*e*P	**P**	**21 34 58.5**	**+2.0**
WVOR	**Wild Horse Val**	**46.20**	**323**	*e*P	**P**	**21 34 57.1**	**-0.7**
WVOR				*e*		21 36 35.3	
WVOR				pmax	pmax		
	comp=Z,120nm,0.8s,mb5.9						
WVOR				MLR	MLR		
	comp=Z,6µm,22.0s,MS5.5						
WVOR	**Wild Horse Val**	**46.20**	**323⇑**	*i*P	**P**	**21 34 57.2**	**-0.6**
	comp=Z,116nm,0.8s,mb5.9						
WVOR				*e*PcP	PcP	21 36 35.3	+1.7
WVOR				LR	LR		
	comp=Z,6µm,22.0s,MS5.5						
CHMT	**Chamberlain Mo**	**46.28**	**331**	*e*P	**P**	**21 34 57.2**	**-1.2**
CHMT				*e*PcP	PcP	21 36 35.0	+1.2
MSO	**Missoula**	**46.55**	**331⇑**	*i*P	**P**	**21 34 59.5**	**-1.0**
	comp=Z,46nm,1.0s,mb5.4						
MSO				*e*PcP	PcP	21 36 35.3	+0.6
MSO				LR	LR		
	comp=Z,3µm,21.0s,MS5.2						
NSHM	**Saint Helena R**	**46.61**	**316**	*e*P	**P**	**21 35 02.7**	**+1.7**
NSHM				*e*PcP	PcP	21 36 36.4	+1.4
BMO	**Blue Mountains**	**46.95**	**327⇑**	*e*P	**P**	**21 35 01.7**	**-1.9**
	comp=Z,37nm,1.0s,mb5.3						
BMO				*e*PcP	PcP	21 36 36.6	+0.5
BMO				LR	LR		
	comp=Z,6µm,19.0s,MS5.6						
HOPS	**Hopland**	**47.16**	**317**	PFAKE		21 35 20.0	+15
HOPS				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
LTIM	**Timbered Crate**	**47.24**	**320**	P	**P**	**21 35 06.9**	**+0.9**
WDC	**Whiskeytown Da**	**47.60**	**319**	*e*P	**P**	**21 35 07.2**	**-1.6**
WDC				*e*		21 36 37.8	
WDC				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
WDC				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.2						
WDC	**Whiskeytown Da**	**47.60**	**319**	*e*P	**P**	**21 35 06.3**	**-2.5**
	comp=Z,21nm,1.0s,mb5.1						
WDC				*e*PcP	PcP	21 36 37.8	-0.8
WDC				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
SCHQ	**Schefferville**	**48.00**	**12**	P	**P**	**21 35 09.6**	**-2.2**
	comp=Z,46nm,0.9s,mb5.5,baz=196,slow=5.9,SNR=54						
SCHQ				PcP	PcP	21 36 38.4	-1.5
	comp=Z,18nm,0.8s,baz=261,slow=2.3,SNR=5.3						
SCHQ				LR	LR	21 56 04.5	
	comp=Z,8µm,18.9s,MS5.7,baz=205,slow=37						
YBH	**Yreka Blue Hor**	**48.31**	**320**	*e*P	**P**	**21 35 13.5**	**-0.9**
YBH				*e*		21 36 40.8	
YBH				pmax	pmax		
	comp=Z,28nm,1.0s						
YBH				MLR	MLR		
	comp=Z,4µm,21.0s						
YBH	**Yreka Blue Hor**	**48.31**	**320**	P	**P**	**21 35 12.1**	**-2.3**
	comp=Z,30nm,0.9s,mb5.3,baz=127,slow=4.1,SNR=32						
YBH				PcP	PcP	21 36 41.3	+0.2
	comp=Z,15nm,0.8s,baz=100,slow=2.5,SNR=6.9						
YBH	**Yreka Blue Hor**	**48.31**	**320**	*e*P	**P**	**21 35 13.5**	**-0.8**
	comp=Z,28nm,1.0s,mb5.2						
YBH				*e*PcP	PcP	21 36 40.8	-0.3
YBH				LR	LR		
	comp=Z,4µm,21.0s,MS5.4						
KHMM	**Horse Mountain**	**48.53**	**319**	*e*P	**P**	**21 35 15.4**	**-0.6**
KHMM				*e*PcP	PcP	21 36 42.3	+0.4
FFC	**Flin Flon**	**48.63**	**345⇑**	*e*P	**P**	**21 35 14.8**	**-1.8**
FFC				*e*		21 36 41.5	
FFC				pmax	pmax		
	comp=Z,94nm,1.0s,mb5.8						
FFC	**Flin Flon**	**48.63**	**345⇑**	*e*P	**P**	**21 35 14.8**	**-1.8**
	comp=Z,94nm,1.0s,mb5.8						
FFC				*e*PcP	PcP	21 36 41.5	-0.6
RCBR	**Riachuelo**	**48.91**	**105**	*e*P	**P**	**21 35 18.0**	**-1.3**
	comp=Z,78nm,1.4s,mb5.5						
RCBR				LR	LR		
	comp=Z,6µm,19.0s,MS5.6						
KRMB	**Red Mountain**	**48.97**	**319**	*e*P	**P**	**21 35 21.0**	**+1.5**
REDWA	**Red Mountain**	**49.02**	**327**	P	**P**	**21 35 19.8**	**+0.1**
CROR	**Criterion Ridg**	**49.09**	**325**	P	**P**	**21 35 22.3**	**+2.0**
NEW	**Newport**	**49.10**	**330**	*e*P	**P**	**21 35 18.7**	**-1.6**
NEW				*e*		21 36 43.2	
NEW				pmax	pmax		
	comp=Z,54nm,1.0s						
NEW				MLR	MLR		
	comp=Z,6µm,21.0s						
NEW	**Newport**	**49.10**	**330**	P	**P**	**21 35 18.4**	**-1.9**
	comp=Z,43nm,1.0s,mb5.5,baz=139,slow=6.5,SNR=35						
NEW	**Newport**	**49.10**	**330⇑**	*e*P	**P**	**21 35 18.6**	**-1.8**
	comp=Z,54nm,1.0s,mb5.5						
NEW				*e*PcP	PcP	21 36 43.2	-0.7
NEW				LR	LR		
	comp=Z,5µm,21.0s,MS5.5						
LPA	**La Plata**	**49.13**	**153*c***	*e*P	**P**	**21 35 20.0**	**-0.8**
LPA				*e*pP	pP	21 35 27.0	-4.4
LPA				*e*S	**S**	**21 42 24.0**	**+1.7**
LPA				*e*pS		21 42 33.0	
	comp=Z,6µm,18.0s						
KBO	**Bosley Butte**	**49.53**	**320**	*e*P	**P**	**21 35 23.8**	**0.0**
KEBM	**Edson Butte**	**49.93**	**320⇑**	*e*P	**P**	**21 35 26.4**	**-0.4**
WTV	**Waterville**	**50.17**	**328**	P	**P**	**21 35 28.0**	**-0.6**
TRQA	**Tornquist**	**50.19**	**159**	*e*P	**P**	**21 35 27.1**	**-1.8**
	comp=Z,97nm,1.5s,mb5.6						
TRQA				*e*PcP	PcP	21 36 45.1	-2.9
TRQA				LR	LR		
	comp=Z,5µm,20.0s,MS5.5						
COR	**Corvallis**	**50.22**	**323**	P	**P**	**21 35 28.9**	**-0.1**
COR				pmax	pmax		
	comp=Z,130nm,1.4s,mb5.8						
COR	**Corvallis**	**50.22**	**323**	*e*P	**P**	**21 35 28.2**	**-0.7**
	comp=Z,45nm,0.8s,mb5.5						
COR				*e*PcP	PcP	21 36 47.9	0.0
PLCA	**Paso Flores**	**50.22**	**168**	*e*P	**P**	**21 35 26.8**	**-2.3**
PLCA				pmax	pmax		
	comp=Z,110nm,1.6s						
PLCA				MLR	MLR		
	comp=Z,2µm,22.0s						
PLCA	**Paso Flores**	**50.22**	**168**	P	**P**	**21 35 28.1**	**-1.0**
	comp=Z,13nm,0.6s,mb5.1,baz=338,slow=8.5,SNR=25						
PLCA	**Paso Flores**	**50.22**	**168⇑**	*e*P	**P**	**21 35 27.8**	**-1.3**
	comp=Z,108nm,1.6s,mb5.6						
PLCA				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
EDM	**Edmonton**	**51.02**	**337⇑**	*e*P	**P**	**21 35 33.0**	**-1.9**
EDM				*e*		21 36 50.1	
PNT	**Penticton**	**51.03**	**330**	P	**P**	**21 35 34.4**	**-0.7**
OCWA	**Octopus Mounta**	**52.49**	**326⇑**	*e*P	**P**	**21 35 46.5**	**+0.4**
	comp=Z,51nm,1.0s,mb5.4						
OCWA				*e*PcP	PcP	21 36 56.3	0.0
OCWA				LR	LR		
	comp=Z,6µm,20.0s,MS5.6						
PGC	**Sidney**	**52.61**	**327**	*e*P	**P**	**21 35 43.8**	**-3.1**
	comp=Z,181nm,1.5s,mb5.8						
PTCN	**Pitcairn Islan**	**56.80**	**233**	PFAKE		21 36 30.0	+12
PTCN				LR	LR		
	comp=Z,8µm,19.0s,MS5.8						
BBB	**Bella Bella**	**57.07**	**329**	P	**P**	**21 36 19.2**	**-0.2**
	comp=Z,40nm,0.8s,mb5.5,baz=110,slow=5.8,SNR=15						
YKA	**Yellowknife Ar**	**58.69**	**343**	P	**P**	**21 36 28.0**	**-2.6**
	comp=Z,44nm,0.9s,mb5.5,baz=134,slow=7.2,SNR=104						
YKA				PcP	PcP	21 37 19.7	-0.2
	comp=Z,18nm,0.7s,baz=140,slow=4.2,SNR=9.8						
YKA				LR	LR	22 05 54.9	
	comp=Z,5µm,18.0s,MS5.7,baz=140,slow=40						
YKW3	**Yellowknife Ar**	**58.74**	**343⇑**	*i*P	**P**	**21 36 28.4**	**-2.5**
YKW3				*e*PcP	PcP	21 37 19.8	-0.4
CMLA	**Cha da Macela**	**59.19**	**51**	PFAKE		21 36 50.0	+16
CMLA				LR	LR		
	comp=Z,655nm,19.0s,MS4.8						
NRS	**Narsarsuaq**	**59.44**	**20**	*i* P	**P**	**21 36 34.4**	**-1.4**
NRS				*e*		21 45 30.1	
TAOE	**Nuku Hiva Isla**	**59.61**	**255**	*e*P	**P**	**21 36 22.0**	**-16**
TAOE				*e*PP	PP	21 38 43.7	-7.4
	comp=Z,501nm,26.3s						
TAOE				*e*S	**S**	**21 44 44.4**	**+0.9**
	comp=Z,5µm,28.6s						
TAOE				*e*SS	SS	21 48 27.6	-13
	comp=Z,5µm,28.1s						
TAOE				*e*LQ		21 51 38.9	
	comp=Z,21µm,31.7s						
TAOE				*e*LR	LR	21 53 48.5	
	comp=Z,10µm,24.5s,baz=70						
RKT	**Rikitea**	**59.85**	**237**	*e*P	**P**	**21 36 28.7**	**-10**
RKT				*e*PP	PP	21 39 49.2	+56
	comp=Z,478nm,31.8s						
RKT				*e*S	**S**	**21 44 54.2**	**+7.7**
	comp=Z,4µm,29.8s						
RKT				*e*SS	SS	21 48 34.4	-10
	comp=Z,790nm,27.8s						
RKT				*e*LR	LR	21 54 50.8	
	comp=Z,11µm,23.0s,baz=56						
DLBC	**Dease Lake**	**61.47**	**334**	P	**P**	**21 36 49.1**	**-0.5**
	comp=Z,23nm,0.8s,mb5.4,baz=133,slow=5.8,SNR=31						
DLBC				PcP	PcP	21 37 32.8	+1.7
	comp=Z,14nm,0.8s,baz=157,slow=3.4,SNR=5.5						
DLBC	**Dease Lake**	**61.47**	**334⇑**	*e*P	**P**	**21 36 48.9**	**-0.7**
DLBC				*e*PcP	PcP	21 37 32.4	+1.3
SFJD	**Kangerlussuaq**	**62.42**	**14**	*e*P	**P**	**21 36 52.7**	**-3.2**
SFJD				*e*		21 37 08.8	
SFJD	**Kangerlussuaq**	**62.42**	**14**	*e*P	**P**	**21 36 51.1**	**-4.8**
SFJD				*e*		21 37 08.8	
SIT	**Sitka**	**63.17**	**331**	PFAKE		21 37 10.0	+9.0
SIT				LR	LR		
	comp=Z,5µm,20.0s,MS5.7						
RES	**Resolute Bay**	**66.57**	**357⇑**	*e*P	**P**	**21 37 19.7**	**-2.9**
RES				pmax	pmax		
	comp=Z,166nm,0.9s,mb6.1						
RES	**Resolute Bay**	**66.57**	**357⇑**	*e*P	**P**	**21 37 19.7**	**-2.9**
	comp=Z,166nm,0.9s,mb6.1						
INK	**Inuvik**	**68.38**	**342⇑**	*e*P	**P**	**21 37 33.2**	**-0.9**
INK				pmax	pmax		
	comp=Z,110nm,1.0s						
INK	**Inuvik**	**68.38**	**342**	P	**P**	**21 37 33.2**	**-0.9**
	comp=Z,75nm,0.9s,mb5.7,baz=120,slow=7.2,SNR=62						
INK	**Inuvik**	**68.38**	**342⇑**	*e*P	**P**	**21 37 33.2**	**-0.9**
	comp=Z,110nm,1.0s,mb5.8						
SUMG	**Summit**	**69.39**	**13⇑**	*e*P	**P**	**21 37 38.4**	**-1.9**
	comp=Z,221nm,0.8s,mb6.1						
EYAK	**Cordova Ski Ar**	**69.55**	**332⇑**	*e*P	**P**	**21 37 41.3**	**-0.1**
DIV	**Divide**	**69.76**	**333⇑**	*e*P	**P**	**21 37 42.1**	**-0.5**
	comp=Z,116nm,1.1s,mb5.7						
DIV				LR	LR		
	comp=Z,12µm,19.0s,MS6.2						
THY	**Trims Highway**	**70.55**	**335⇑**	*e*P	**P**	**21 37 46.9**	**-0.6**
PPT	**Papeete**	**70.78**	**248**	*e*P	**P**	**21 37 36.0**	**-14**
PPT				*e*PP	PP	21 40 23.4	-5.4
	comp=Z,245nm,24.0s						
PPT				*e*S	S	21 46 51.6	-8.9
	comp=Z,3µm,28.2s						
PPT				*e*SS	SS	21 51 34.1	-0.9
	comp=Z,2µm,28.0s						
PPT				*e*LQ		21 56 31.6	
	comp=Z,2µm,26.2s						
PPT				*e*LR	LR	21 59 25.9	
	comp=Z,3µm,22.5s,baz=54						
PPT	**Papeete**	**70.78**	**248**	LR	LR	22 01 24.1	
	comp=Z,4µm,18.5s,MS5.7,baz=62,slow=30						
POHA	**Pohakuloa**	**70.95**	**288**	PFAKE		21 38 00.0	+9.4
POHA				LR	LR		
	comp=Z,20µm,21.0s,MS6.4						
SML	**Sawmill**	**71.14**	**333**	*e*P	**P**	**21 37 50.2**	**-0.9**
SML	**Sawmill**	**71.14**	**333⇑**	*e*P	**P**	**21 37 50.4**	**-0.7**
ILAR	**Eielson Array**	**71.50**	**336**	P	**P**	**21 37 52.3**	**-0.8**
	comp=Z,46nm,0.9s,mb5.4,baz=118,slow=3.2,SNR=190						
ILAR				PP	PP	21 40 28.4	-5.5
	comp=Z,8.2nm,1.0s,baz=118,slow=5.0,SNR=6.1						
ILAR				LR	LR	22 15 16.0	
	comp=Z,3µm,19.9s,MS5.5,baz=125,slow=41						
SLKM	**Skilak Lake**	**71.64**	**331**	*e*P	**P**	**21 37 54.5**	**+0.5**
FIB	**Fire Island**	**71.80**	**332**	*e*P	**P**	**21 37 55.8**	**+0.8**
FIB				MLR	MLR		
	comp=Z,4µm,21.0s,MS5.6						
FIB	**Fire Island**	**71.80**	**332**	*e*P	**P**	**21 37 55.2**	**+0.3**
FIB				LR	LR		
	comp=Z,4µm,21.0s,MS5.6						
PLOU	**Loures**	**72.07**	**52**	*e*P	**P**	**21 37 56.6**	**-0.3**
	comp=Z,63nm,1.4s,mb5.3						
PTEO	**Sao Teotonio**	**72.33**	**53**	*e*P	**P**	**21 37 58.9**	**+0.4**
	comp=Z,89nm,1.2s,mb5.6						
TBI	**Tubuai**	**72.33**	**242**	*e*P	**P**	**21 37 48.8**	**-10**
TBI				*e*PP	PP	21 40 47.2	+5.6
	comp=Z,247nm,28.0s						
TBI				*e*S	S	21 47 21.3	+3.0
	comp=Z,3µm,30.8s						
TBI				*e*SS	SS	21 51 59.1	+0.4
	comp=Z,939nm,42.2s						
TBI				*e*LQ		21 57 43.9	
	comp=Z,915nm,22.5s						
TBI				*e*LR	LR	22 00 14.3	
	comp=Z,3µm,23.5s,baz=71						
EMAZ	**Mazaricos**	**72.50**	**48**	P	**P**	**21 37 59.7**	**+0.3**
	comp=Z,3.3nm,0.7s,mb4.4						
SCO	**Scoresbysund**	**72.60**	**18**	*i* P	**P**	**21 37 58.7**	**-0.8**
SCO				*i* S	S	21 47 19.3	-1.2
SCO				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
SCO	**Scoresbysund**	**72.60**	**18**	*i* P	**P**	**21 37 58.7**	**-0.8**
	comp=Z,21nm,0.8s,mb5.1						
SCO				*i* S	S	21 47 19.3	-1.2
EZAM	**Zamans**	**72.64**	**49**	P	**P**	**21 38 00.7**	**+0.4**
EZAM				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.4						
EZAM	**Zamans**	**72.64**	**49**	P	**P**	**21 38 00.7**	**+0.4**
	comp=Z,33nm,0.7s,mb5.4						
SPU	**Mount Spurr**	**72.68**	**332**	*e*P	**P**	**21 37 59.4**	**-0.8**
PTOM	**Tomar**	**72.69**	**51**	*e*P	**P**	**21 38 01.0**	**+0.3**
	comp=Z,27nm,1.4s,mb5.0						
STS	**Santiago**	**72.80**	**48**	P	**P**	**21 38 02.6**	**+1.3**
STS				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
STS	**Santiago**	**72.80**	**48**	P	**P**	**21 38 02.6**	**+1.3**
	comp=Z,2.5nm,0.4s,mb4.5						
RSO	**Redoubt South**	**72.84**	**331**	*e*P	**P**	**21 38 01.7**	**+0.6**
EVO	**Evora**	**72.94**	**52**	*e*P	**P**	**21 38 01.5**	**-0.7**
	comp=Z,46nm,0.7s,mb5.2						
EVO				*e*R			
	comp=Z,6µm,22.5s						
PBEJ	**Beja**	**73.03**	**53**	*e*P	**P**	**21 38 02.3**	**-0.5**
	comp=Z,20nm,2.0s,mb4.7						
PVIS	**Viseu**	**73.14**	**50**	*e*P	**P**	**21 38 03.4**	**0.0**
	comp=Z,21nm,1.4s,mb4.9						
KIP	**Kipapa**	**73.20**	**290**	PFAKE		21 38 20.0	+16
KIP				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
EGRO	**El Granado**	**73.31**	**53**	P	**P**	**21 38 05.6**	**+1.1**
	comp=Z,1.9nm,0.6s,mb4.2						
PVRL	**Vila Real**	**73.31**	**50**	*e*P	**P**	**21 38 04.2**	**-0.2**
MTE	**Manteigas**	**73.39**	**50**	*e*P	**P**	**21 38 05.2**	**+0.3**
	comp=Z,34nm,1.2s,mb5.2						
MTE				*e*S	S	21 47 33.7	+3.6
MTE				*e*SS	SS	21 51 43.2	-32
MTE				*e*LQ		21 58 02.6	
MTE				*e*LR	LR	22 01 02.7	
	comp=Z,4µm,19.9s						
PCBR	**Castelo Branco**	**73.42**	**51**	*e*P	**P**	**21 38 05.1**	**+0.1**
	comp=Z,21nm,1.0s,mb5.0						
EBAD	**Badajoz**	**73.73**	**52**	P	**P**	**21 38 07.0**	**+0.2**
	comp=Z,0.6nm,0.4s						
ERUA	**La Rua**	**73.81**	**48**	P	**P**	**21 38 07.7**	**+0.5**
ERUA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
ERUA	**La Rua**	**73.81**	**48**	P	**P**	**21 38 07.7**	**+0.5**
	comp=Z,1.8nm,0.5s,mb4.3						
EPON	**Pontenova**	**73.86**	**47**	P	**P**	**21 38 08.6**	**+1.2**
	comp=Z,3.1nm,0.4s,mb4.6						
EMIN	**Mina Concepcio**	**73.96**	**53**	P	**P**	**21 38 09.0**	**+0.8**
	comp=Z,1.3nm,0.6s						
ECAL	**Calabor**	**74.08**	**49**	P	**P**	**21 38 09.9**	**+1.1**
	comp=Z,0.9nm,0.4s						
SVW2	**Sparrevohn**	**74.33**	**331**	*e*P	**P**	**21 38 08.1**	**-1.7**
PMSA	**Palmer Station**	**74.36**	**172**	*e*P	**P**	**21 38 08.8**	**-1.2**
	comp=Z,13nm,1.0s,mb4.8						
PMSA				LR	LR		
	comp=Z,1µm,22.0s,MS5.2						
ESPR	**Espera**	**74.59**	**54**	P	**P**	**21 38 13.2**	**+1.4**
	comp=Z,1.7nm,0.7s,mb4.1						
IMA	**Indian Mountai**	**74.60**	**336**	*e*P	**P**	**21 38 10.7**	**-0.6**
IMA				pmax	pmax		
	comp=Z,240nm,1.0s,mb6.1						
IMA	**Indian Mountai**	**74.60**	**336**	*e*P	**P**	**21 38 10.8**	**-0.5**
DCN	**Croghan**	**74.66**	**37**	*e*P	**P**	**21 38 11.0**	**-0.9**
TTA	**Tatalina**	**74.89**	**333**	*e*P	**P**	**21 38 12.6**	**-0.4**
DLF	**Lyons Farm**	**75.10**	**37**	*e*P	**P**	**21 38 13.0**	**-1.4**
EARI	**Arriondas**	**75.27**	**48**	P	**P**	**21 38 16.7**	**+1.1**
	comp=Z,2.3nm,0.7s,mb4.2						
EADA	**Adamuz**	**75.63**	**53**	P	**P**	**21 38 18.3**	**+0.5**
	comp=Z,1.7nm,0.6s,mb4.2						
ELUQ	**Luque**	**75.87**	**53**	P	**P**	**21 38 20.9**	**+1.7**
	comp=Z,0.3nm,0.1s,mb4.2						
ELOJ	**Sierra Loja**	**75.96**	**54**	P	**P**	**21 38 21.0**	**+1.3**
ELOJ				pmax	pmax		
	comp=Z,1.0nm,0.2s,mb4.4						
ELOJ	**Sierra Loja**	**75.96**	**54**	P	**P**	**21 38 21.0**	**+1.3**
	comp=Z,1.1nm,0.2s,mb4.4						
DAG	**Danmarks Havn**	**76.05**	**12⇓**	*i*P	**P**	**21 38 16.9**	**-2.6**
DAG				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.3						
DAG				MLR	MLR		
	comp=Z,7µm,21.0s,MS6.0						
DAG	**Danmarks Havn**	**76.05**	**12**	*i* Pdu		21 38 16.9	
	comp=Z,35nm,0.8s						
DAG				LR	LR		
	comp=Z,7µm,21.0s,MS6.0						
DAG	**Danmarks Havn**	**76.05**	**12*j***	*i*P	**P**	**21 38 16.9**	**-2.6**
	comp=Z,35nm,0.8s,mb5.3						
	comp=Z,7µm,21.0s						
SDPT	**Sand Point**	**76.07**	**325**	*e*P	**P**	**21 38 20.5**	**+0.6**
ESDC	**Sonseca Array**	**76.12**	**51**	P	**P**	**21 38 19.4**	**-1.2**
	comp=Z,12nm,0.6s,mb5.0,baz=276,slow=5.4,SNR=59						
ESDC	**Sonseca Array**	**76.12**	**51**	P	**P**	**21 38 20.6**	**+0.1**
	comp=Z,6.5nm,0.6s,mb4.7						

ESLA	**Sonseca Array**	**76.12**	**51⇑**	*e*P	**P**	**21 38 19.5**	**-1.0**
	comp=Z,30nm,1.4s,mb5.0						
ESLA				*e*		21 38 34.3	
ESLA				LR	LR		
	comp=Z,21µm,20.0s,MS6.5						
ELAN	**Lanestosa**	**76.57**	**48**	P	**P**	**21 38 23.6**	**+0.6**
	comp=Z,2.4nm,0.5s,mb4.4						
EQES	**Quesada**	**76.82**	**53**	P	**P**	**21 38 25.6**	**+1.0**
	comp=Z,2.9nm,0.5s,mb4.5						
ROSF	**Rostrenen**	**76.82**	**42**	*e*P	**P**	**21 38 24.3**	**0.0**
EALB	**Alboran**	**76.87**	**55**	P	**P**	**21 38 26.6**	**+1.7**
	comp=Z,9.5nm,0.4s,mb5.1						
QUIF	**Quistinic**	**76.88**	**43**	*e*P	**P**	**21 38 24.9**	**+0.2**
	comp=Z,18nm,0.7s,mb4.8						
QUIF	**Quistinic**	**76.88**	**43**	*e*P	**P**	**21 38 24.9**	**+0.2**
QUIF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
EBER	**Berja**	**76.97**	**54**	P	**P**	**21 38 27.2**	**+1.7**
	comp=Z,1.1nm,0.3s,mb4.3						
JMIC	**Jan Mayen**	**76.98**	**19**	*e*P	**P**	**21 38 21.7**	**-3.1**
JMIC				*e*S	S	21 48 07.0	-2.0
JMIC				AMS	AMS	22 08 22.0	
	comp=Z,2µm,21.4s,MS5.3						
EHUE	**Huescar**	**77.20**	**53**	P	**P**	**21 38 27.7**	**+1.0**
EHUE				pmax	pmax		
	comp=Z,1.0nm,0.2s,mb4.4						
EHUE	**Huescar**	**77.20**	**53**	P	**P**	**21 38 27.7**	**+1.0**
	comp=Z,0.7nm,0.2s,mb4.2						
ESK	**Eskdalemuir**	**77.22**	**35**	*e*P	**P**	**21 38 24.9**	**-1.5**
ESK				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
ESK				MLR	MLR		
	comp=Z,810nm,20.0s,MS5.0						
ESK	**Eskdalemuir**	**77.22**	**35**	*e*P	**P**	**21 38 24.9**	**-1.5**
	comp=Z,26nm,1.1s,mb5.1						
ESK				LR	LR		
	comp=Z,810nm,20.0s,MS5.0						
DBIC	**Dimbokro**	**77.22**	**85**	P	**P**	**21 38 26.7**	**-0.5**
DBIC	**Dimbokro**	**77.22**	**85**	P	**P**	**21 38 26.8**	**-0.5**
DBIC				pmax	pmax		
	comp=Z,96nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,2µm,20.0s						
DBIC	**Dimbokro**	**77.22**	**85**	P	**P**	**21 38 26.8**	**-0.5**
	comp=Z,96nm,0.8s,mb5.8,baz=268,slow=5.4,SNR=73						
DBIC				LR	LR	22 10 26.9	
	comp=Z,2µm,20.0s,MS5.5,baz=256,slow=34						
DBIC	**Dimbokro**	**77.22**	**85⇑**	*e*P	**P**	**21 38 26.7**	**-0.6**
	comp=Z,120nm,0.9s,mb5.8						
EVIA	**Vianos**	**77.26**	**52**	P	**P**	**21 38 27.7**	**+0.7**
EVIA				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
EVIA	**Vianos**	**77.26**	**52**	P	**P**	**21 38 27.7**	**+0.7**
	comp=Z,0.5nm,0.3s						
SGMF	**Saint Gilles**	**77.29**	**42**	*e*P	**P**	**21 38 27.0**	**0.0**
ENIJ	**Nijar**	**77.52**	**54**	P	**P**	**21 38 29.0**	**+0.5**
ENIJ				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
ENIJ	**Nijar**	**77.52**	**54**	P	**P**	**21 38 29.0**	**+0.5**
	comp=Z,3.2nm,0.4s,mb4.6						
ETOB	**Tobarra**	**78.00**	**52**	P	**P**	**21 38 32.4**	**+1.3**
	comp=Z,1.9nm,0.6s,mb4.2						
SJPF	**Ste Jean**	**78.18**	**48**	*e*P	**P**	**21 38 33.0**	**+1.0**
	comp=Z,32nm,0.8s,mb5.0						
SJPF	**Ste Jean**	**78.18**	**48**	*e*P	**P**	**21 38 33.0**	**+1.0**
SJPF				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
GRR	**Gorron**	**78.43**	**42**	*e*P	**P**	**21 38 33.3**	**+0.1**
	comp=Z,31nm,0.8s,mb5.0						
GRR	**Gorron**	**78.43**	**42**	*e*P	**P**	**21 38 33.3**	**+0.1**
GRR				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
ECHE	**Chera**	**78.43**	**51**	P	**P**	**21 38 35.0**	**+1.6**
ECHE				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
ECHE	**Chera**	**78.43**	**51**	P	**P**	**21 38 35.0**	**+1.5**
	comp=Z,0.5nm,0.3s						
ETSF	**Etsaut**	**78.67**	**48**	*e*P	**P**	**21 38 35.6**	**+0.9**
	comp=Z,7.0nm,0.7s,mb4.4						
ETSF	**Etsaut**	**78.67**	**48**	*e*P	**P**	**21 38 35.6**	**+0.9**
ETSF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
FLN	**La Foliniere**	**78.68**	**42**	*e*P	**P**	**21 38 34.8**	**+0.2**
	comp=Z,18nm,0.7s,mb4.8						
FLN				*e*R			
	comp=Z,12µm,21.8s						
FLN	**La Foliniere**	**78.68**	**42**	*e*P	**P**	**21 38 34.8**	**+0.2**
FLN				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
FLN				MLR	MLR		
	comp=Z,12µm,21.8s,MS6.2						
ESAC	**San Caprasio**	**78.76**	**49**	P	**P**	**21 38 36.8**	**+1.6**
	comp=Z,8.7nm,0.5s,mb4.9						
EMOS	**Mosqueruela**	**78.79**	**51**	P	**P**	**21 38 37.1**	**+1.7**
	comp=Z,1.8nm,0.5s,mb4.3						
MFF	**Saint Martin d**	**78.92**	**44**	*e*P	**P**	**21 38 36.1**	**+0.2**
	comp=Z,22nm,0.7s,mb4.9						
MFF	**Saint Martin d**	**78.92**	**44**	*e*P	**P**	**21 38 36.1**	**+0.2**
MFF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
EBEN	**Beniarda**	**79.04**	**52**	P	**P**	**21 38 37.1**	**+0.3**
	comp=Z,0.3nm,0.2s						
EBIE	**Bielsa**	**79.19**	**48**	P	**P**	**21 38 37.8**	**+0.3**
	comp=Z,1.4nm,0.6s,mb4.1						
EPF	**Esparros**	**79.33**	**48**	*e*P	**P**	**21 38 39.2**	**+0.9**
	comp=Z,16nm,0.8s,mb4.7						
EPF	**Esparros**	**79.33**	**48**	*e*P	**P**	**21 38 39.2**	**+0.9**
EPF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
EGRA	**Graus**	**79.34**	**49**	P	**P**	**21 38 39.9**	**+1.5**
	comp=Z,2.5nm,0.5s,mb4.4						
ERTA	**Horta de San J**	**79.39**	**50**	P	**P**	**21 38 39.2**	**+0.6**
	comp=Z,1.0nm,0.4s,mb4.1						
UNV	**Unalaska Valle**	**79.50**	**323⇑**	*e*P	**P**	**21 38 38.7**	**-0.2**
	comp=Z,273nm,0.8s,mb6.2						
UNV				LR	LR		
	comp=Z,4µm,21.0s,MS5.7						
EBR	**Ebro Roquetas**	**79.52**	**50**	*e*PCP	PcP	21 38 45.2	-2.3
LFF	**La Frestale**	**79.57**	**46**	*e*P	**P**	**21 38 39.8**	**+0.3**
	comp=Z,37nm,1.1s,mb4.9						
LFF	**La Frestale**	**79.57**	**46**	*e*P	**P**	**21 38 39.8**	**+0.3**
LFF				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
RJF	**Les Rejaudoux**	**80.11**	**45**	*e*P	**P**	**21 38 42.6**	**+0.2**
RJF				*e*R			
	comp=Z,7µm,21.5s						
EMIR	**Miracle**	**80.25**	**49**	P	**P**	**21 38 44.1**	**+0.9**
	comp=Z,1.1nm,0.3s,mb4.3						
TNA	**Tin City**	**80.33**	**335⇑**	*e*P	**P**	**21 38 43.1**	**-0.1**
	comp=Z,95nm,1.3s,mb5.6						
TNA				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
CAF	**Calviac**	**80.51**	**46**	*e*P	**P**	**21 38 44.9**	**+0.4**
	comp=Z,11nm,0.9s,mb4.5						
CAF	**Calviac**	**80.51**	**46**	*e*P	**P**	**21 38 44.9**	**+0.4**
CAF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
TCF	**Toulx Ste Croi**	**80.55**	**44**	*e*P	**P**	**21 38 44.7**	**-0.1**
	comp=Z,6.7nm,0.7s,mb4.4						
TCF	**Toulx Ste Croi**	**80.55**	**44**	*e*P	**P**	**21 38 44.7**	**-0.1**
TCF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
MTLF	**Montolieu**	**80.69**	**47**	*e*P	**P**	**21 38 46.0**	**+0.5**
HYF	**Humbligny**	**80.81**	**43**	*e*P	**P**	**21 38 46.3**	**+0.2**
BGF	**Bois d’Agland**	**80.98**	**44**	*e*P	**P**	**21 38 47.0**	**0.0**
	comp=Z,18nm,0.8s,mb4.8						
BGF	**Bois d’Agland**	**80.98**	**44**	*e*P	**P**	**21 38 47.0**	**0.0**
BGF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
EJON	**La Jonquera**	**81.23**	**48**	P	**P**	**21 38 49.2**	**+0.8**
	comp=Z,0.8nm,0.5s						
SSF	**Saint Saulge**	**81.41**	**44**	*e*P	**P**	**21 38 48.9**	**-0.3**
SSF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
SSF	**Saint Saulge**	**81.41**	**44**	*e*P	**P**	**21 38 48.9**	**-0.3**
	comp=Z,3.4nm,0.8s,mb4.3						
LOR	**Lormes**	**81.64**	**43**	*e*P	**P**	**21 38 50.1**	**-0.3**
LOR				*e*R			
	comp=Z,7µm,21.5s						
SMF	**Signal de Mont**	**81.66**	**44**	*e*P	**P**	**21 38 50.3**	**-0.2**
	comp=Z,7.9nm,0.8s,mb4.4						
SMF	**Signal de Mont**	**81.66**	**44**	*e*P	**P**	**21 38 50.3**	**-0.2**
SMF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BAIF	**Baives**	**81.71**	**41**	*e*P	**P**	**21 38 50.8**	**+0.1**
BER	**Bergen**	**81.83**	**30**	*e*P	**P**	**21 38 49.4**	**-1.7**
BER				AMS	AMS	22 12 45.3	
	comp=Z,4µm,19.8s,MS5.8						
LASF	**Ste Croix**	**81.83**	**47**	*e*P	**P**	**21 38 52.4**	**+0.9**
GIVF	**Givet**	**82.10**	**41**	*e*P	**P**	**21 38 53.0**	**+0.3**
MEZF	**Maizieres J’vi**	**82.36**	**42**	*e*P	**P**	**21 38 54.2**	**+0.1**
VIVF	**Saint-Julien-l**	**82.36**	**46**	*e*P	**P**	**21 38 55.3**	**+1.1**
	comp=Z,26nm,0.9s,mb4.9						
VIVF	**Saint-Julien-l**	**82.36**	**46**	*e*P	**P**	**21 38 55.3**	**+1.1**
VIVF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
KBS	**Kingsbay**	**82.70**	**11**	PFAKE		21 39 10.0	+15
KBS				LR	LR		
	comp=Z,8µm,21.0s,MS6.0						
KBS	**Kingsbay**	**82.70**	**11⇑**	*i*P	**P**	**21 38 54.1**	**-1.2**
KBS				*e*SKSa		21 49 12.6	
KBS				AMS	AMS	22 14 32.5	
	comp=Z,7µm,22.0s,MS6.0						
CABF	**La Chapelle**	**83.21**	**44**	*e*P	**P**	**21 38 58.8**	**+0.3**
ORIF	**Oris-en-Rattie**	**83.21**	**46**	*e*P	**P**	**21 38 59.5**	**+1.0**
ORIF				*e*R			
	comp=Z,4µm,20.2s						
HAU	**Haudompre**	**83.26**	**43**	*e*P	**P**	**21 38 58.8**	**+0.1**
HAU				*e*R			
	comp=Z,7µm,23.0s						
HINF	**Hinteralfeld**	**83.62**	**43**	*e*P	**P**	**21 39 00.5**	**0.0**
HSP	**Hornsund**	**83.72**	**13**	*e*P	**P**	**21 38 59.5**	**-1.0**
LMR	**La Mourre**	**83.81**	**47**	*e*P	**P**	**21 39 02.0**	**+0.4**
CDF	**Champ du Feu**	**83.84**	**42**	*e*P	**P**	**21 39 01.9**	**+0.2**
	comp=Z,11nm,0.9s,mb4.7						
CDF	**Champ du Feu**	**83.84**	**42**	*e*P	**P**	**21 39 01.9**	**+0.2**
CDF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
MBDF	**Montbardon**	**83.86**	**46**	*e*P	**P**	**21 39 02.9**	**+1.0**
	comp=Z,19nm,0.9s,mb4.9						
MBDF	**Montbardon**	**83.86**	**46**	*e*P	**P**	**21 39 02.9**	**+1.0**
MBDF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
FRF	**La Foret Royal**	**83.89**	**47**	*e*P	**P**	**21 39 02.5**	**+0.5**
KONO	**Kongsberg**	**84.02**	**31**	PFAKE		21 39 10.0	+7.7
KONO				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
MUD	**Monsted U’grnd**	**84.15**	**34⇑**	*i*P	**P**	**21 39 02.2**	**-0.8**
MUD				*i* S	S	21 49 27.0	+3.2
MUD				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.1						
MUD	**Monsted U’grnd**	**84.15**	**34⇑**	*i*P	**P**	**21 39 02.2**	**-0.8**
	comp=Z,19nm,1.2s,mb5.1						
MUD				*i* S	S	21 49 27.0	+3.2
MUD				*i*		21 55 17.1	
MUD	**Monsted U’grnd**	**84.15**	**34**	*i* S	S	21 49 27.0	+3.2
MUD				*i*		21 55 17.1	
	comp=Z,3µm,19.0s						
TNS	**Taunus Mts**	**84.41**	**40**	*e*P	**P**	**21 39 02.8**	**-1.7**
TNS				*e*S	S	21 49 27.6	+1.1
TNS				pmax	pmax		
	comp=Z,52nm,2.2s,mb5.3						
TNS	**Taunus Mts**	**84.41**	**40**	*e*P	**P**	**21 39 02.8**	**-1.7**
	comp=Z,52nm,2.2s,mb5.3						
TNS				*e*S	S	21 49 27.6	+1.1
SBF	**Sospel**	**84.43**	**47**	*e*P	**P**	**21 39 05.1**	**+0.4**
	comp=Z,128nm,1.3s,mb5.6						
SBF	**Sospel**	**84.43**	**47**	*e*P	**P**	**21 39 05.1**	**+0.4**
SBF				pmax	pmax		
	comp=Z,64nm,1.3s,mb5.6						
NAO01	**NORSAR Array S**	**84.52**	**29**	*e*P	**P**	**21 39 02.8**	**-1.9**
	comp=Z,3.7nm,0.7s,mb4.6						
NAO01				*e*		21 39 28.9	
NAO01				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
NSS	**Namsos**	**84.52**	**26⇑**	*i*P	**P**	**21 39 02.4**	**-2.3**
NSS				AMS	AMS	22 11 24.0	
	comp=Z,3µm,20.8s,MS5.6						
BFO	**Black Forest**	**84.55**	**42**	*e*P	**P**	**21 39 02.8**	**-2.4**
BFO				*e*S	S	21 49 26.3	-1.6
BFO				pmax	pmax		
	comp=Z,448nm,4.8s						
BFO	**Black Forest**	**84.55**	**42**	*e*P	**P**	**21 39 02.8**	**-2.4**
	comp=Z,448nm,4.8s						
BFO				*e*S	S	21 49 26.3	-1.6
NB2	**NORSAR Subarra**	**84.65**	**29**	P	**P**	**21 39 05.3**	**-0.1**
	comp=Z,84nm,1.7s,mb5.6,baz=280,slow=4.8						
NB2	**NORSAR Subarra**	**84.65**	**29**	P	**P**	**21 39 05.3**	**-0.1**
NB2				pmax	pmax		
	comp=Z,85nm,1.7s,mb5.6						
NB2	**NORSAR Subarra**	**84.65**	**29**	P	**P**	**21 39 05.3**	**-0.1**
	baz=280,slow=5.1						
NOA	**NORSAR Array B**	**84.65**	**29**	P	**P**	**21 39 04.5**	**-0.9**
	comp=Z,7.0nm,0.8s,mb4.8,baz=277,slow=4.8,SNR=28						
BSEG	**Bad Segeberg**	**85.11**	**36**	*e*P	**P**	**21 39 06.3**	**-1.6**
BSEG				*e*S	S	21 49 30.6	-2.7
GSTR	**Great Sitkin T**	**85.38**	**322**	*e*P	**P**	**21 39 11.3**	**+2.0**
CLZ	**Clausthal**	**85.42**	**38**	*e*P	**P**	**21 39 08.5**	**-1.0**
CLZ				pmax	pmax		
	comp=Z,92nm,2.4s,mb5.5						
CLZ	**Clausthal**	**85.42**	**38**	*e*P	**P**	**21 39 08.5**	**-1.0**
	comp=Z,92nm,2.4s,mb5.5						
DAVA	**Damuels**	**85.72**	**43⇑**	*i*P	**P**	**21 39 10.8**	**-0.2**
	comp=Z,404nm,3.9s						
PGF	**Pioggiola**	**85.72**	**48**	*e*P	**P**	**21 39 11.7**	**+0.5**
	comp=Z,72nm,1.2s,mb5.5						
PGF	**Pioggiola**	**85.72**	**48**	*e*P	**P**	**21 39 11.7**	**+0.5**
PGF				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.5						
DAVOX	**Davos**	**85.78**	**43**	P	**P**	**21 39 11.7**	**+0.3**
	comp=Z,9.5nm,0.9s,mb5.0,baz=264,slow=7.7,SNR=4.3						
HFS	**Hagfors**	**86.00**	**30**	P	**P**	**21 39 11.5**	**-0.6**
	comp=Z,11nm,0.6s,mb5.2,baz=270,slow=1.5,SNR=33						
COP	**Copenhagen**	**86.07**	**34⇑**	*i*P	**P**	**21 39 12.2**	**-0.3**
COP				*i* S	S	21 49 45.9	+3.4
COP				*i*		21 55 27.5	
COP				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.2						
COP				MLR	MLR		
	comp=Z,710nm,19.0s,MS5.1						
COP	**Copenhagen**	**86.07**	**34⇑**	*i*P	**P**	**21 39 12.2**	**-0.3**
	comp=Z,12nm,0.9s,mb5.1						
COP				*i* S	S	21 49 45.9	+3.4
COP				*i*		21 55 27.5	
COP				LR	LR		
	comp=Z,710nm,19.0s,MS5.1						
COP	**Copenhagen**	**86.07**	**34⇑**	*i*P	**P**	**21 39 12.2**	**-0.3**
	comp=Z,12nm,0.9s,mb5.1						
COP	**Copenhagen**	**86.07**	**34**	*i* S	S	21 49 45.9	+3.4
COP				*i*		21 55 27.5	
	comp=Z,710nm,19.0s						
TRO	**Tromso**	**86.22**	**20⇑**	*i*P	**P**	**21 39 11.0**	**-2.0**
TRO				*e*SKSa		21 49 33.9	
TRO				AMS	AMS	22 17 05.4	
	comp=Z,2µm,19.8s,MS5.5						
GRA1	**Grafenberg Arr**	**86.26**	**40**	*e*P	**P**	**21 39 12.3**	**-1.3**
	comp=Z,69nm,2.4s,mb5.5						
GRA1				LR	LR		
	comp=Z,11µm,21.6s,MS6.2						
GRF	**Grafenberg Arr**	**86.26**	**40**	*e*P	**P**	**21 39 12.3**	**-1.3**
GRF				pmax	pmax		
	comp=Z,69nm,2.4s,mb5.5						
GRF				MLR	MLR		
	comp=Z,11µm,21.6s,MS6.2						
GRF	**Grafenberg Arr**	**86.26**	**40**	*e*P	**P**	**21 39 12.3**	**-1.3**
GRF				pmax	pmax		
	comp=Z,69nm,2.4s,mb5.5						
GRF				MLR	MLR		
	comp=Z,11µm,21.6s,MS6.2						
GRF	**Grafenberg Arr**	**86.26**	**40**	*e*P	**P**	**21 39 12.3**	**-1.3**
	comp=Z,69nm,2.4s,mb5.5						
GRF				LR	LR		
	comp=Z,11µm,21.6s,MS6.2						
MOX	**Moxa**	**86.36**	**39**	*e*P	**P**	**21 39 15.8**	**+1.7**
MOX				pmax	pmax		
	comp=Z,51nm,2.1s,mb5.4						
MOX				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.9						
MOX	**Moxa**	**86.36**	**39**	*e*P	**P**	**21 39 15.8**	**+1.7**
	comp=Z,51nm,2.1s,mb5.4						
MOX				LR	LR		
	comp=Z,5µm,21.0s,MS5.9						
MOX	**Moxa**	**86.36**	**39**	*i* P	**P**	**21 39 15.8**	**+1.7**
	comp=Z,logA/T=1.4,mb5.4						
MOX				S	S	21 49 38.0	-7.5
MOX				L		22 12 40.0	
FUR	**Furstenfeldbru**	**86.52**	**42**	*e*P	**P**	**21 39 14.6**	**-0.3**
NKC	**Novy Kostel**	**86.96**	**40**	*e*P	**P**	**21 39 18.5**	**+1.5**
NKC				*e*pP	pP	21 39 30.2	+1.8
NKC				*e*PP	PP	21 42 46.2	+3.4
NKC				*e*SKS	SKS	21 49 47.0	+8.4
NKC				*e*x	x	21 55 54.5	
NKC				AMS	AMS	22 12 10.0	
	comp=Z,8µm,21.0s						
CLL	**Collm**	**87.12**	**39**	*i* P	**P**	**21 39 18.4**	**+0.6**
CLL				*i* *PP	pP	21 39 28.1	-1.1
CLL				*e*		21 49 41.0	
CLL				*e*S	S	21 49 55.0	+2.3
CLL				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.2						
CLL				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.7						
CLL	**Collm**	**87.12**	**39**	*i* P	**P**	**21 39 18.4**	**+0.6**
	comp=Z,15nm,1.0s,mb5.2						
CLL				*i* pP	pP	21 39 28.1	-1.1
CLL				*e*SKS	SKS	21 49 41.0	+1.4
CLL				*e*S	S	21 49 55.0	+2.3
CLL				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
CLL	**Collm**	**87.12**	**39**	P	**P**	**21 39 18.4**	**+0.6**
	comp=Z,logA/T=1.2,mb5.2						
CLL				*i* *PP	pP	21 39 28.1	-1.1
CLL				*e*		21 39 40.0	
CLL				*e*PP	PP	21 42 44.0	-0.1
CLL				*e*		21 49 41.0	
CLL				*e*S	S	21 49 55.0	+2.3
CLL				*e**SS		21 50 08.0	
CLL				*e*PS	PS	21 50 53.0	-6.7
CLL				*e*		21 52 35.0	
CLL				*e*SS	SS	21 55 36.0	-3.7
CLL				*e*SSS	SSS	21 59 18.0	+7.1
CLL				*e*		22 02 08.0	
WET	**Wettzell**	**87.41**	**41**	*e*P	**P**	**21 39 18.1**	**-1.2**
WET				pmax	pmax		
	comp=Z,37nm,1.8s,mb5.3						
WET	**Wettzell**	**87.41**	**41**	*e*P	**P**	**21 39 18.1**	**-1.2**
	comp=Z,37nm,1.8s,mb5.3						
BRG	**Berggiesshubel**	**87.78**	**39**	*e*P	**P**	**21 39 22.9**	**+1.9**
BRG						21 42 44.0	
BRG				S	S	21 49 57.0	-2.0
BRG				pmax	pmax		
	comp=Z,16nm,1.2s,mb5.1						
BRG				MLR	MLR		
	comp=Z,4µm,21.9s,MS5.8						
BRG	**Berggiesshubel**	**87.78**	**39**	*e*P	**P**	**21 39 22.9**	**+1.9**
	comp=Z,16nm,1.2s,mb5.1						
BRG				*e*		21 39 42.9	
BRG				PP	PP	21 42 44.0	-5.4
BRG				SKS	SKS	21 49 14.0	-30
BRG				S	S	21 49 57.0	-2.0
BRG				SS	SS	21 55 38.0	-12
BRG				LR	LR		
	comp=Z,4µm,21.9s,MS5.8						
KHC	**Kasperske Hory**	**87.87**	**41**	*e*P	**P**	**21 39 21.8**	**+0.4**
KHC				*e**PP	pP	21 39 34.5	+1.7
KHC				*e*S	S	21 50 05.1	+5.3
KHC				MLR	MLR		
	comp=Z,8µm,21.8s,MS6.1						
KHC	**Kasperske Hory**	**87.87**	**41**	*e*P	**P**	**21 39 21.8**	**+0.4**
KHC				*e*pP	pP	21 39 34.5	+1.7
KHC				*e*x	x	21 43 01.8	
KHC				*e*S	S	21 50 05.1	+5.3
KHC				*e*SS	SS	21 55 58.4	+7.5
KHC				AMS	AMS	22 12 10.0	
	comp=Z,8µm,21.8s						
GEC2	**GERESS Array S**	**88.00**	**41**	*e*P	**P**	**21 39 20.8**	**-1.3**
GEC2				pmax	pmax		
	comp=Z,16nm,1.4s,mb5.1						
GEC2	**GERESS Array S**	**88.00**	**41**	*e*P	**P**	**21 39 20.8**	**-1.3**
	comp=Z,16nm,1.4s,mb5.1						
GERES	**GERESS Array B**	**88.00**	**41**	P	**P**	**21 39 20.7**	**-1.4**
	comp=Z,1.7nm,0.8s,mb4.3,baz=270,slow=2.7,SNR=15						
GERES				LR	LR	22 12 53.6	
	comp=Z,7µm,21.8s,MS6.0,baz=274,slow=32						
KBA	**Koelnbreinsper**	**88.08**	**43⇓**	*i*P	**P**	**21 39 21.8**	**-0.7**
	comp=Z,346nm,4.2s						
KBA	**Koelnbreinsper**	**88.08**	**43⇓**	*i*P	**P**	**21 39 21.8**	**-0.7**
KBA				pmax	pmax		
	comp=Z,346nm,4.2s						
PVCC	**Panska Ves**	**88.24**	**39**	*e*P	**P**	**21 39 24.8**	**+1.6**
PVCC				*e**PP	pP	21 39 36.3	+1.7
PVCC				*e*S	S	21 50 03.5	+0.3
PVCC				MLR	MLR		
	comp=Z,5µm,21.3s,MS5.9						
PVCC	**Panska Ves**	**88.24**	**39**	*e*P	**P**	**21 39 24.8**	**+1.6**
PVCC				*e*pP	pP	21 39 36.3	+1.7
PVCC				*e*x	x	21 43 04.5	
PVCC				*e*S	S	21 50 03.5	+0.3
PVCC				*e*x	x	21 56 12.4	
PVCC				AMS	AMS	22 13 10.0	
	comp=Z,5µm,21.3s						
PRA	**Prague**	**88.24**	**40**	AMS	AMS	22 13 00.0	
PRU	**Pruhonice**	**88.33**	**40**	*e*P	**P**	**21 39 23.7**	**+0.1**
PRU				*e**PP	pP	21 39 36.6	+1.6
PRU				*e*S	S	21 50 05.4	+1.3
PRU				MLR	MLR		
	comp=Z,9µm,21.7s,MS6.2						
PRU	**Pruhonice**	**88.33**	**40**	*e*P	**P**	**21 39 23.7**	**+0.1**
PRU				*e*pP	pP	21 39 36.6	+1.6
PRU				*e*x	x	21 43 08.9	
PRU				*e*S	S	21 50 05.4	+1.3
PRU				*e*x	x	21 56 10.6	
PRU				AMS	AMS	22 12 40.0	
	comp=Z,9µm,21.7s						
ROBS	**Robic**	**88.34**	**44**	*e*P	**P**	**21 39 22.7**	**-1.1**
ARCES	**ARCESS Array B**	**88.46**	**20**	P	**P**	**21 39 21.6**	**-2.2**
	comp=Z,5.4nm,0.6s,mb5.0,baz=274,slow=3.4,SNR=38						
ARCES				LR	LR	22 18 22.9	
	comp=Z,2µm,19.8s,MS5.6,baz=296,slow=35						
ARE0	**ARCESS Array S**	**88.46**	**20**	*e*P	**P**	**21 39 22.2**	**-1.5**
MOA	**Molln**	**88.56**	**42⇑**	*i*P	**P**	**21 39 22.8**	**-1.9**
	comp=Z,403nm,4.3s						
KEV	**Kevo**	**88.87**	**19**	PFAKE		21 39 40.0	+14
KEV				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
LJU	**Ljubljana**	**89.08**	**44**	*e*P	**P**	**21 39 27.0**	**-0.3**
LJU				*e*	pP	21 39 36.6	-2.1
LJU				*e*S	S	21 49 55.0	-16
UPC	**Upice**	**89.15**	**39**	*e*P	**P**	**21 39 29.4**	**+1.9**
UPC				*e*pP	pP	21 39 40.8	+1.9
KSP	**Ksiaz**	**89.25**	**39**	*e*P	**P**	**21 39 27.3**	**-0.7**
KSP				*e*	pP	21 39 41.3	+1.9
KSP				*e*		21 42 56.5	
KSP				*e*		21 49 51.5	
KSP				*e*S	S	21 50 09.0	-3.6
KSP				MLR	MLR		
	comp=Z,5µm,19.6s,MS6.0						
KSP	**Ksiaz**	**89.25**	**39**	*e*P	**P**	**21 39 27.3**	**-0.7**
KSP				*e*PP	pP	21 39 41.3	+1.9
KSP				*e*PP	PP	21 42 56.5	-4.6
KSP				*e*SKS	SKS	21 49 51.5	-1.4
KSP				*e*S	S	21 50 09.0	-3.6
KSP				*e*SS	SS	21 55 59.0	-12
KSP				LR	LR		
	comp=Z,5µm,19.6s,MS6.0						
DPC	**Dobruska-Polom**	**89.37**	**39**	*e*P	**P**	**21 39 30.5**	**+1.9**
DPC				*e*S	S	21 50 00.6	-13
DPC				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.9						
DPC	**Dobruska-Polom**	**89.37**	**39**	*e*P	**P**	**21 39 30.5**	**+1.9**
DPC				*e*x	x	21 43 15.4	
DPC				*e*SKS	SKS	21 50 00.6	+6.9
DPC				*e*x	x	21 56 28.8	
DPC				AMS	AMS	22 13 50.0	
	comp=Z,5µm,21.0s						
BOJS	**Bojanci**	**89.68**	**44**	*e*P	**P**	**21 39 29.9**	**-0.3**
BOJS				*e*	pP	21 39 39.4	-2.2
BOJS				*e*S		21 49 59.2	
BOJS				*e*SKSac	S	21 50 15.2	-1.5
BOJS				*e*		21 51 37.2	
BOJS				*e*SS	SS	21 56 42.1	+25
BILL	**Bilibino**	**89.86**	**339*c***	*i*P	**P**	**21 39 31.0**	**+0.5**
BILL				*e*		21 50 12.7	
BILL				*i* PS	PS	21 51 25.7	-5.6
BILL				*e*SS	SS	21 56 19.2	-0.2
BILL				pmax	pmax		
	comp=Z,167nm,1.2s,mb6.2						
BILL	**Bilibino**	**89.86**	**339⇑**	*e*P	**P**	**21 39 30.7**	**+0.3**
	comp=Z,104nm,0.8s,mb6.2						
BILL				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
MIDW	**Midway**	**90.02**	**298**	PFAKE		21 39 40.0	+7.9
MIDW				LR	LR		
	comp=Z,912nm,19.0s,MS5.2						
MORC	**Moravsky Berou**	**90.27**	**40**	*e*P	**P**	**21 39 32.6**	**-0.2**

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MORC                                  pmax      pmax
       comp=Z,15nm,1.5s,mb5.1
MORC   Moravsky Berou    90.27  40    eP        P         21 39 32.6  -0.2
       comp=Z,15nm,1.5s,mb5.1
ZST    Bratislava        90.35  41    eP        P         21 39 31.4  -1.8
ZST                                   eS        S         21 50 13.2  -9.5
ZST                                   eSS       SS        21 56 19.2  -7.6
SMOL   Smolenice         90.49  41    eP        P         21 39 34.8  +1.0
RAC    Raciborz          90.61  39    eP        P         21 39 34.5  +0.1
RAC                                   MLR       MLR
       comp=Z,7µm,22.1s,MS6.0
OKC    Ostrava-Krasne    90.64  39    eP        P         21 39 33.9  -0.6
OKC                                   e*PP      pP        21 39 45.5  -0.5
OKC                                   eS        S         21 50 08.5   -17
OKC    Ostrava-Krasne    90.64  39    eP        P         21 39 33.9  -0.6
OKC                                   epP       pP        21 39 45.5  -0.5
OKC                                   ePP       PP        21 43 24.3   +12
OKC                                   eSKS      SKS       21 50 08.5  +7.2
OKC                                   ex        x         21 56 49.1
OKC                                   AMS       AMS       22 14 20.0
       comp=Z,7µm,21.2s
VAE    Valguarnera       90.64  52    LR        LR        22 19 14.4
       comp=Z,4µm,18.2s,MS5.9,baz=103,slow=35
SMY    Shemya            91.16 324    PFAKE               21 39 50.0   +13
SMY                                   LR        LR
       comp=Z,2µm,20.0s,MS5.6
VYHS   Vyhne             91.40  41    eP        P         21 39 37.9  -0.2
VYHS                                  eS        S         21 50 10.9   -21
VYHS                                  eSS       SS        21 56 49.1  +7.6
VYHS   Vyhne             91.40  41    eP        P         21 39 37.9  -0.2
VYHS                                  eS        S         21 50 10.9   -21
VYHS                                  eSP       SP        21 52 04.2   +19
VYHS                                  eSS       SS        21 56 49.1  +7.6
FINES  FINESS Array B    91.51  27    P         P         21 39 35.9  -2.4
       comp=Z,3.7nm,0.9s,mb4.7,baz=270,slow=1.9,SNR=10
FINES                                 LR        LR        22 15 33.5
       comp=Z,3µm,21.4s,MS5.6,baz=292,slow=32
OJC    Ojcow             91.57  39⇑iP           P         21 39 37.7  -1.2
OJC                                   MLR       MLR
       comp=Z,5µm,23.0s,MS5.9
OJC    Ojcow             91.57  39⇑iP           P         21 39 37.7  -1.2
OJC                                   eS        S         21 50 22.5   -11
OJC                                   LR        LR
       comp=Z,5µm,23.0s,MS5.9
WAR    Warsaw            91.77  37    eP        P         21 39 39.0  -0.7
WAR                                   e                   21 39 53.6
WAR                                   e                   21 50 12.6
WAR                                   eSP       SP        21 51 50.5  +1.4
WAR                                   ePS       PS        21 51 57.4  +3.0
WAR                                   MLR       MLR
       comp=Z,7µm,19.4s,MS6.1
WAR    Warsaw            91.77  37    eP        P         21 39 39.0  -0.7
WAR                                   ePP       pP        21 39 53.6  +2.4
WAR                                   eSKS      SKS       21 50 12.6  +4.9
WAR                                   eSP       SP        21 51 50.5  +1.4
WAR                                   ePS       PS        21 51 57.4  +3.0
WAR                                   eSS       SS        21 57 06.9   +20
WAR                                   LR        LR
       comp=Z,7µm,19.4s,MS6.1
APA    Apatity           91.91  20⇑eP           P         21 39 39.0  -1.0
APA                                   i                   21 43 20.0
APA                                   e                   21 50 11.0
APA                                   eS        S         21 50 40.0  +4.0
APA                                   i PS      PS        21 51 55.0  -0.8
APA                                   pmax      pmax
       comp=Z,500nm,15.0s
APA                                   MLR       MLR
       comp=Z,1µm,17.0s,MS5.4
LVZ    Lovozero          92.17  20ceP           P         21 39 34.6  -6.6
LVZ                                   i                   21 43 17.3
LVZ                                   e                   21 50 14.9
LVZ                                   eSP       SP        21 51 53.8  +0.4
LVZ                                   ePS       PS        21 51 55.2  -3.6
LVZ                                   MLR       MLR
       comp=Z,2µm,20.0s,MS5.6
LVZ                                   MLR       MLR
       comp=N,719nm,15.0s,MS5.5
LVZ                                   MLR       MLR
       comp=E,1µm,17.0s,MS5.5
PSZ    Piszkesteto       92.23  41⇑i            P         21 39 43.8  +1.9
SUW    Suwalki           92.50  35    eP        P         21 39 43.8  +0.8
SUW                                   ePP       pP        21 39 55.0  +0.5
SUW                                   ePP       PP        21 43 28.7  +1.7
SUW                                   eSKS      SKS       21 50 14.7  +2.9
SUW                                   eS        S         21 50 42.6  +1.1
SUW                                   ePS       PS        21 51 56.6  -6.0
SUW                                   eSP       SP        21 51 57.8  +0.6
SUW                                   eSS       SS        21 57 13.8   +17
VNA3   Neumayer Olymp    92.60 162⇑iP           P         21 39 43.5  +0.4
VNA3   Neumayer Olymp    92.60 162              P         21 39 44.4  +1.3
VNA3   Neumayer Olymp    92.60 162              pP        21 39 55.8  +1.2
VNA3   Neumayer Olymp    92.60 162              sP        21 40 00.5  +2.2
VNA1   Neumayer--Stat    92.86 161⇑iP           P         21 39 45.0  +0.7
VNA1   Neumayer--Stat    92.86 161              sP        21 40 02.3  +2.8
CRVS   Cervenica-Dubn    92.97  40    eP        P         21 39 49.9  +4.6
CRVS                                  eS                  21 50 16.0
CRVS                                  ePS       PS        21 52 09.8  +1.8
CRVS                                  eSS       SS        21 57 18.1   +14
VNA2   Neumayer--Watz    93.21 161⇑iP           P         21 39 46.3  +0.4
VNA2   Neumayer--Watz    93.21 161⇑i            pP        21 39 59.8  +2.4
VNA2   Neumayer--Watz    93.21 161              sP        21 40 04.1  +3.0
KOLS   Kolonicke sedl    93.47  40    eP        pP        21 40 00.8  +1.7
KOLS   Kolonicke sedl    93.47  40    epP       pP        21 40 00.8  +1.7
KWP    Kalwaria          93.54  39    eP        P         21 39 49.1  +1.2
KWP                                   e         pP        21 39 59.6  +0.3
KWP                                   e                   21 50 19.7
KWP                                   eSP       SP        21 52 10.2  +1.4
KWP                                   ePS       PS        21 52 19.4  +5.2
PUL    Pulkovo           94.08  28ceP           P         21 39 44.2  -5.9
PUL                                   e                   21 43 40.4
LVV    L'vov             94.30  38    eP        P         21 39 52.6  +1.3
LVV                                   e                   21 43 44.2
LVV                                   e                   21 50 22.2
LVV                                   ePS       PS        21 52 20.2  -2.4
LVV                                   MLR       MLR
       comp=Z,3µm,21.0s,MS5.8
LVV                                   MLR       MLR
       comp=N,920nm,23.0s,MS5.7
LVV                                   MLR       MLR
       comp=E,3µm,21.0s,MS5.7
SNAA   Sanae             94.82 162⇑iP           P         21 39 53.2   0.0
SNAA   Sanae             94.82 162              pP        21 40 05.6  +0.9
SNAA   Sanae             94.82 162              sP        21 40 10.5  +2.1
SNAA   Sanae             94.82 162    eP        P         21 39 52.1  -1.1
SNAA                                  pmax      pmax
       comp=Z,11nm,1.1s
MLR    Muntele Rosu      96.92  42    LR        LR        22 21 31.4
       comp=Z,4µm,19.7s,MS5.9,baz=281,slow=34
AKASG  Malin Array Be    97.12  36    P         P         21 40 03.1  -1.0
       comp=Z,0.6nm,0.7s,mb4.2,baz=288,slow=2.7,SNR=4.6
TIXI   Tiksi             97.37 350    eP        P         21 40 00.2  -4.6
TIXI                                  e                   21 51 17.0
TIXI                                  ePS       PS        21 52 43.0   -12
TIXI                                  eSS       SS        21 58 05.1  -0.5
TIXI                                  pmax      pmax
       comp=N,12nm,0.8s
TIXI                                  pmax      pmax
       comp=E,7.0nm,0.8s
TIXI                                  pmax      pmax
       comp=Z,44nm,0.8s,mb5.9
TIXI                                  pmax      pmax
       comp=Z,69nm,1.0s,mb6.0
TIXI                                  MLR       MLR
       comp=Z,3µm,19.0s,MS5.8
TIXI   Tiksi             97.37 350⇑iP           P         21 40 05.0  +0.2
TIXI                                  LR        LR
       comp=Z,3µm,20.0s,MS5.8
SEY    Seymchan          97.38 338    eP        P         21 40 06.6  +1.6
SEY                                   e                   21 46 17.0
SEY                                   e                   21 58 03.8
SEY                                   pmax      pmax
       comp=N,3.0nm,0.7s
SEY                                   pmax      pmax
       comp=E,3.0nm,0.7s
SEY                                   pmax      pmax
       comp=Z,7.0nm,0.7s,mb5.2
KIS    Kishinev          98.26  40    eP        P         21 40 06.0  -3.4
KIS                                   e         pP        21 40 18.0  -2.8
KIS                                   e                   21 44 08.0
KIS                                   e                   21 50 44.0
KIS                                   eS        S         21 51 28.0  -2.8
KIS                                   ePS       PS        21 53 00.0  -4.6
KIS                                   MLR       MLR
       comp=N,2µm,20.0s,MS6.0
KIS                                   MLR       MLR
       comp=E,4µm,20.0s,MS6.0
KIS                                   MLR       MLR
       comp=Z,6µm,20.0s,MS6.1
KIS                                   MLR       MLR
       comp=Z,6µm,20.0s
QSPA   South Pole Qui    98.43 180    eP        P         21 40 10.9  +1.5
       comp=Z,32nm,1.5s,mb5.6
QSPA                                  LR        LR
       comp=Z,2µm,22.0s,MS5.5
OBN    Obninsk           99.20  30⇑eP           P         21 40 13.0  -0.4
OBN                                   i         pP        21 40 22.6  -2.3
OBN                                   e                   21 44 13.0
OBN                                   i                   21 50 49.6
OBN                                   i PS      PS        21 53 13.4  -0.9
OBN                                   i SS      SS        21 58 39.5  +8.0
OBN                                   pmax      pmax
       comp=Z,10.0nm,1.2s,mb5.2
OBN                                   MLR       MLR
       comp=Z,3µm,20.0s,MS5.8
OBN    Obninsk           99.20  30    PFAKE               21 40 20.0  +6.6
OBN                                   LR        LR
       comp=Z,798nm,19.0s,MS5.2
PET    Petropavlovsk     99.73 327    eP        P         21 40 21.4  +5.5
PET                                   e                   21 44 24.7
PET                                   pmax      pmax
       comp=Z,300nm,16.3s
PET                                   pmax      pmax
       comp=Z,500nm,20.8s
PET    Petropavlovsk     99.73 327    PFAKE               21 40 30.0   +14
PET                                   LR        LR
       comp=Z,2µm,20.0s,MS5.6
MA2    Magadan           99.97 335    eP        P         21 40 17.5  +0.6
MA2                                   pmax      pmax
       comp=Z,15nm,0.9s,mb5.4
MA2                                   MLR       MLR
       comp=Z,2µm,20.0s,MS5.6
MA2    Magadan           99.97 335    ePdif     P         21 40 17.5  +0.7
       comp=Z,15nm,0.9s,mb5.4
MA2                                   LR        LR
       comp=Z,2µm,20.0s,MS5.6
SBA    Scott Base       102.45 192    PFAKE               21 40 40.0   +12
SBA                                   LR        LR
       comp=Z,2µm,20.0s,MS5.6
SIM    Simferopol'      102.47  40    eP        Pdif      21 40 30.2  +1.8
SIM                                   e                   21 44 41.0
SIM                                   ePPP      PPP       21 46 50.0  -6.1
SIM                                   e                   21 51 06.0
SIM                                   i PS      PS        21 53 47.0  -1.6
SIM                                   eSS       SS        21 59 21.0  +3.4
SIM                                   pmax      pmax
       comp=Z,130nm,18.2s
SIM                                   pmax      pmax
       comp=Z,120nm,11.1s
SIM                                   MLR       MLR
       comp=Z,3µm,19.0s,MS5.8
BR131  Keskin Array S   104.33  45    PFAKE               21 40 50.0   +13
BR131                                 LR        LR
       comp=Z,1µm,21.0s,MS5.3
BRTR   Keskin Array B   104.33  45    PKiKP               21 44 53.8
       comp=Z,1.6nm,0.9s,baz=180,slow=1.2,SNR=5.5
BRTR                                  PKKPbc              21 56 24.1
       comp=Z,0.5nm,0.7s,baz=135,slow=5.2,SNR=3.6
SNZO   South Karori     104.86 230    PFAKE               21 40 50.0   +11
SNZO                                  LR        LR
       comp=Z,4µm,19.0s,MS6.0
YAK    Yakutsk          105.35 345    PFAKE               21 45 10.0
YAK                                   LR        LR
       comp=Z,2µm,20.0s,MS5.7
SUR    Sutherland       105.98 121    PFAKE               21 45 10.0
SUR                                   LR        LR
       comp=Z,626nm,22.0s,MS5.1
WAKE   Wake Island      106.22 293    PFAKE               21 45 10.0
WAKE                                  LR        LR
       comp=Z,2µm,19.0s,MS5.6
KWAJ   Kwajalein Atol   107.75 282    PFAKE               21 45 10.0
KWAJ                                  LR        LR
       comp=Z,555nm,20.0s,MS5.1
ARU    Arti             107.96  21    PFAKE               21 45 10.0
ARU                                   LR        LR
       comp=Z,853nm,22.0s,MS5.3
KIV    Kislovodsk       108.33  38    PFAKE               21 45 10.0
KIV                                   LR        LR
       comp=Z,662nm,21.0s,MS5.2
ASF    Jabal al Asfar   109.82  52    PKiKP               21 45 04.8
       comp=Z,0.8nm,0.3s,baz=278,slow=3.3,SNR=4.6
BOSA   Boshof           109.86 117    PKiKP               21 45 04.2
       comp=Z,4.6nm,0.7s,baz=298,slow=0.4,SNR=11
BOSA   Boshof           109.86 117    PKPdf               21 45 04.2
BOSA                                  LR        LR
       comp=Z,3µm,20.0s,MS5.9
LBTB   Lobatse          110.20 113    PFAKE               21 45 20.0   +17
LBTB                                  LR        LR
       comp=Z,3µm,19.0s,MS5.9
YSS    Yuzh-Sakhalins   111.59 328    ePKIKP    PKPdf     21 45 07.6  +2.4
YSS                                   MLR       MLR
       comp=Z,3µm,20.0s,MS5.8
MATP   Matopo           112.85 109    PKiKP               21 45 10.1
       comp=Z,3.7nm,0.6s,baz=212,slow=3.1,SNR=18
MBAR   Mbarara          113.41  87    PFAKE               21 45 20.0   +10
MBAR                                  LR        LR
       comp=Z,557nm,20.0s,MS5.2
AB31   Akbulak array    113.96  26    i PKIKP   PKPdf     21 45 10.8  +1.1
AB31                                  pmax      pmax
       comp=Z,10.0nm,0.8s
ZRNK   Zerenda          114.31  18    PKIKP     PKPdf     21 45 10.5  +0.1
ZRNK                                  pmax      pmax
       comp=Z,5.0nm,0.7s
ZRNK   Zerenda          114.31  18    i PKP     PKPdf     21 45 10.6  +0.2
BVA0   Borovoye Array   114.67  17    i PKIKP   PKPdf     21 45 12.6  +1.5
BVA0                                  pmax      pmax
       comp=Z,1.0nm,0.9s
DRV    Dumont d'Urvil   115.00 197    Pdif      Pdif      21 41 36.0   +13
DRV    Dumont d'Urvil   115.00 197    PP        PP        21 46 13.0  -2.8
DRV                                   SP        SP        21 55 44.0  -2.5
VOSK   Vostochnaya      115.11  17    i PKIKP   PKPdf     21 45 12.6  +0.7
HILS   Ha'il            115.68  54    P         PKPdf     21 45 15.8  +2.2
NVS    Novosibirsk      115.88   9    ePKIKP    PKPdf     21 45 13.5  +0.1
MAW    Mawson           116.61 166    PKP       PKPdf     21 45 15.4  +1.0
       comp=Z,1.7nm,0.7s,baz=240,slow=6.1,SNR=4.7
MAW                                   PKKPbc              21 55 43.5
       comp=Z,4.3nm,0.8s,baz=338,slow=4.2,SNR=10
ZAL    Zalesovo         116.99   8    PKP       PKPdf     21 45 16.2  +0.8
       comp=Z,5.1nm,0.6s,baz=94,slow=4.7,SNR=32
ZAL                                   PP        PP        21 46 24.1  -5.9
       comp=Z,3.3nm,0.8s,baz=121,slow=7.1,SNR=6.5
ARSS   Ar Rass          117.49  55    P         PKPdf     21 45 19.3  +2.2
MDJ    Mudanjiang       119.62 334    PDIF      Pdif      21 41 43.3  -0.6
MDJ                                   PKS       PKS       21 48 57.3  +0.7
MDJ                                   SS        SS        22 03 03.0  -3.1
MDJ                                   PP        PP
       comp=Z,490nm,13.4s
MDJ                                   LR        LR
       comp=N,910nm,31.5s,MS5.6
MDJ                                   LR        LR
       comp=E,2µm,31.5s,MS5.6
MDJ                                   LR        LR
       comp=Z,2µm,18.9s
TLY    Talaya           119.86 355    i PKIKP   PKPdf     21 45 22.5  +1.3
TLY                                   ePS       PS        21 56 27.8  -7.1
TLY                                   pmax      pmax
       comp=Z,4.0nm,1.0s
TLY                                   MLR       MLR
       comp=Z,2µm,22.0s,MS5.8
KMBO   Kilima Mbogo     119.93  86    PKP       PKPdf     21 45 25.0  +2.8
       comp=Z,1.8nm,0.9s,baz=49,slow=7.3,SNR=5.7
KMBO   Kilima Mbogo     119.93  86    PKP       PKPdf     21 45 25.0  +2.8
KAMS   Al Khamasin      120.93  60    P         PKPdf     21 45 25.9  +2.0
MAJO   Matsushiro       120.95 322    ePKIKP    PKPdf     21 45 24.5  +0.8
MAJO                                  MLR       MLR
       comp=Z,1µm,20.0s,MS5.5
MAT    Matsushiro       120.95 322    ePKP      PKPdf     21 45 24.0  +0.3
MAT                                   LR        LR
       comp=Z,1µm,20.0s,MS5.5
MAT    Matsushiro       120.95 322    PKP       PKPdf     21 45 23.6  -0.1
DJNS   Zahran al Janu   121.03  64    P         PKPdf     21 45 27.3  +3.1
ZAK    Zakamensk        121.18 355⇑iPKIKP       PKPdf     21 45 24.0  +0.3
ZAK                                   pmax      pmax
       comp=Z,3.0nm,0.8s
ZAK                                   pmax      pmax
       comp=Z,7.0nm,1.2s
CASY   Casey            121.51 186    PKPdf     PKPdf     21 45 24.6  +0.6
CASY                                  LR        LR
       comp=Z,3µm,20.0s,MS5.9
CN2    Changchun        122.02 336    ePKP      PKPdf     21 45 26.3  +0.8
CN2                                   XPKP                21 45 40.5
CN2                                   SKS       SKS       21 52 33.0   +12
CN2                                   PP        PP
       comp=Z,300nm,8.0s
CN2                                   LR        LR
       comp=N,800nm,17.0s,MS5.9
CN2                                   LR        LR
       comp=E,2µm,17.0s,MS5.9
CN2                                   LR        LR
       comp=Z,2µm,17.0s,MS5.9
KKAR   Karatay Array    123.26  23    i PKIKP   PKPdf     21 45 28.3  +0.3
KKAR                                  pmax      pmax
       comp=Z,4.0nm,0.8s
ULN    Ulaanbaatar      123.26 352    ePKIKP    PKPdf     21 45 29.3  +1.4
ULN                                   e                   21 47 07.8
ULN                                   MLR       MLR
       comp=Z,2µm,20.0s,MS5.8
ULN    Ulaanbaatar      123.26 352⇑ePKPdf       PKPdf     21 45 28.7  +0.8
ULN                                   ePP       PP        21 47 07.8  -5.2
ULN                                   LR        LR
       comp=Z,2µm,20.0s,MS5.8
SONM   Songino Array    123.38 353    PKP       PKPdf     21 45 28.5  +0.4
       comp=Z,16nm,0.7s,baz=336,slow=1.0,SNR=86
SONM                                  PP        PP        21 47 09.0  -4.8
       comp=Z,12nm,1.1s,slow=6.2,SNR=9.2
SONM                                  PKKPbc              21 55 18.2
       comp=Z,1.5nm,0.9s,baz=214,slow=4.5,SNR=7.1
MKAR   Makanchi Array   123.44  12    PKP       PKPdf     21 45 28.0  -0.2
       comp=Z,9.7nm,0.8s,baz=343,slow=1.8,SNR=71
MKAR   Makanchi Array   123.44  12    PKP       PKPdf     21 45 28.0  -0.2
USP    Ospenovka        124.57  20    P         PKPdf     21 45 31.5  +1.0
       SNR=45
CHMS   Chumysh          124.89  20    P         PKPdf     21 45 33.1  +2.0
       SNR=10
FRU    Bishkek          124.99  20    ePKIKP    PKPdf     21 45 34.0  +2.7
FRU                                   MLR       MLR
       comp=N,2µm,21.0s
FRU                                   MLR       MLR
       comp=Z,2µm,21.0s,MS5.9
AAK    Ala-Archa        125.12  20    P         PKPdf     21 45 34.0  +2.5
       SNR=9.7
AAK    Ala-Archa        125.12  20    PKIKP     PKPdf     21 45 33.8  +2.2
AAK                                   pmax      pmax
       comp=Z,25nm,1.1s
AAK    Ala-Archa        125.12  20    ePKPdf    PKPdf     21 45 32.3  +0.8
TKM2   Tokmak 2         125.24  19    P         PKPdf     21 45 32.7  +0.9
       SNR=17
KBK    Karagaybulak     125.26  20    P         PKPdf     21 45 34.2  +2.3
       SNR=8.0
AML    Almayashu        125.29  21    P         PKPdf     21 45 33.6  +1.8
       SNR=48
UCH    Uchtor           125.49  21    P         PKPdf     21 45 34.7  +2.4
       SNR=50
KZA    Kyzart           125.88  20    P         PKPdf     21 45 36.0  +3.0
       SNR=14
ULHL   Ulahol           126.06  19    P         PKPdf     21 45 35.3  +2.0
       SNR=26
INCN   Inchon           126.64 331    PFAKE               21 45 50.0   +15
INCN                                  LR        LR
       comp=Z,2µm,19.0s,MS5.8
WMQ    Urumqi           127.28   9    ePKP      PKPdf     21 45 37.3  +1.6
WMQ                                   PP        PP        21 47 42.0  +2.6
WMQ                                   PP        PP
       comp=Z,270nm,10.0s
WMQ                                   LR        LR
       comp=N,4µm,22.6s,MS6.1
WMQ                                   LR        LR
       comp=E,2µm,21.6s,MS6.1
WMQ                                   LR        LR
       comp=Z,5µm,21.6s,MS6.2
BANOM  Banah            127.63  48    P         PKPdf     21 45 38.1  +1.2
       SNR=9.1
TOO    Toolangi         127.67 229    eP        PKPdf     21 45 38.3  +1.7
       comp=Z,8.0nm,0.7s
DL2    Dalian           127.69 336    PKP       PKPdf     21 45 38.0  +1.4
DL2                                   PP        PP
       comp=Z,400nm,9.2s
DL2                                   LR        LR
       comp=N,790nm,19.0s,MS5.5
DL2                                   LR        LR
       comp=E,560nm,20.6s,MS5.5
DL2                                   LR        LR
       comp=Z,1µm,21.4s,MS5.5
GUMO   Guam             127.82 294    PFAKE               21 45 50.0   +13
GUMO                                  LR        LR
       comp=Z,621nm,19.0s,MS5.3
ASHO   Ashiyiah         128.15  49 ⇓P           PKPdf     21 45 39.0  +1.1
KSH    Kashi            128.40  21    PKP       PKPdf     21 45 40.3  +2.3
KSH                                   PKS       PKS       21 49 15.8  +2.2
KSH                                   SKS       SKS       21 52 46.0  +5.4
KSH                                   PP        PP
       comp=Z,470nm,5.6s
KSH                                   LR        LR
       comp=N,4µm,21.2s
KSH                                   LR        LR
       comp=E,2µm,13.8s
ABTO   Aybut            129.65  59    P         PKPdf     21 45 42.8  +1.9
       SNR=11
HOQ    Hoqain           129.71  50 ⇓P           PKPdf     21 45 41.6  +0.7
       SNR=12
WHFO   Wadi Hawf        129.79  58    P         PKPdf     21 45 42.5  +1.4
       SNR=8.2
BSY    Bisya            130.10  51    P         PKPdf     21 45 42.0  +0.4
       SNR=22
BIDO   Bidbid           130.36  49    P         PKPdf     21 45 43.4  +1.3
       SNR=16
SMDO   Samad            130.57  50    P         PKPdf     21 45 44.0  +1.4
       SNR=18
CTA    Charters Tower   131.19 251    PKP       PKPdf     21 45 44.7  +0.9
       comp=E,4.7nm,0.7s,baz=47,slow=3.3,SNR=5.3
CTA    Charters Tower   131.19 251    PKP       PKPdf     21 45 44.7  +0.9
CTAO   Charters Tower   131.19 251    PFAKE               21 46 00.0   +16
CTAO                                  LR        LR
       comp=Z,2µm,20.0s,MS5.7
GTA    Gaotai           132.33 357    PKP       PKPdf     21 45 46.3  +0.8
GTA                                   XPKP                21 46 04.3
GTA                                   PKS       PKS       21 49 20.8   0.0
GTA                                   SKS       SKS       21 52 51.0  +0.4
GTA                                   PP        PP
       comp=Z,760nm,13.0s
GTA                                   LR        LR
       comp=N,3µm,20.3s,MS6.1
GTA                                   LR        LR
       comp=E,2µm,22.9s,MS6.1
GTA                                   LR        LR
       comp=Z,4µm,20.2s,MS6.1
STKA   Stephens Creek   132.65 234    eP        PKPdf     21 45 47.4  +1.1
       comp=Z,5.7nm,0.8s
STKA   Stephens Creek   132.65 234    PKP       PKPdf     21 45 47.4  +1.1
       comp=Z,6.7nm,0.7s,baz=132,slow=3.6,SNR=12
SSE    Sheshan          134.44 331    PKP       PKPdf     21 45 51.8  +2.1
SSE                                   PP        PP        21 48 27.8  +1.5
SSE                                   PP        PP
       comp=Z,420nm,13.6s
SSE                                   LR        LR
       comp=N,450nm,28.8s,MS5.5
SSE                                   LR        LR
       comp=E,1µm,28.8s,MS5.5
SSE                                   LR        LR
       comp=Z,1µm,20.3s
SSE    Sheshan          134.44 331    PKP       PKPdf     21 45 51.7  +2.0
SSE                                   PP        PP        21 48 27.8  +1.5
SSE                                   SS        SS        22 06 12.1  +0.8
SSE                                   LR        LR
       comp=Z,1µm,20.3s,MS5.7
NJ2    Nanjing          134.71 334    ePKP      PKPdf     21 45 51.8  +1.7
NJ2                                   XPKP                21 46 06.5
NJ2                                   PP        PP        21 48 26.0  -2.0
NJ2                                   PKS       PKS       21 49 23.0  -2.4
NJ2                                   PP        PP
       comp=Z,660nm,10.6s
NJ2                                   LR        LR
       comp=N,3µm,22.2s,MS6.0
NJ2                                   LR        LR
       comp=E,1µm,24.0s,MS6.0
NJ2                                   LR        LR
       comp=Z,340nm,18.4s
LZH    Lanzhou          135.27 352    ePKIKP    PKPdf     21 45 45.2  -5.8
LZH                                                       21 48 24.0
LZH                                   SS        SS        22 06 14.0  -7.0
LZH                                   MLR       MLR
       comp=Z,5µm,19.6s,MS6.2
LZH    Lanzhou          135.27 352    ePKP      PKPdf     21 45 45.2  -5.8
LZH                                   sPKP                21 46 04.5
LZH                                   PP        PP        21 48 24.0  -7.2
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LZH				PKS	PKS	21 49 21.3	-5.0
LZH				SKKS		21 55 11.0	
LZH				SS	SS	22 06 14.0	-7.0
LZH				LR	LR		
	comp=Z,5µm,19.6s,MS6.2						
WHN	**Wuhan**	**137.87**	**338**	*e*PKP	PKPdf	21 45 57.5	+1.6
TATO	**Taipei**	**139.19**	**325**	PFAKE		21 46 10.0	+12
TATO				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
ENH	**Enshi**	**139.73**	**343**	*e*PKPpre		21 45 51.7	
ENH				*e*PKPdf	PKPdf	21 46 00.2	+0.9
CD2	**Chengdu**	**140.37**	**351**	⇑*i*PKP	PKPdf	21 46 02.5	+2.1
QZH	**Quanzhou**	**140.79**	**328**	PKP	PKPdf	21 45 59.0	-2.4
QZH				XPKP		21 46 12.5	
QZH				LR	LR		
	comp=N,4µm,23.5s,MS6.2						
QZH				LR	LR		
	comp=E,3µm,19.6s,MS6.2						
QZH				LR	LR		
	comp=Z,3µm,17.4s,MS6.2						
LSA	**Lhasa**	**141.65**	**8**	PKP	PKPdf	21 46 05.8	+3.0
LSA	**Lhasa**	**141.65**	**8**	*e*PKPpre		21 45 58.5	
LSA				*e*PKPdf	PKPdf	21 46 05.4	+2.6
LSA				*e*PP	PP	21 49 01.0	-10
KOLN	**Koldanda**	**141.69**	**20**	*e*P	PKPdf	21 45 57.7	-5.2
	comp=Z,76nm,1.1s						
GKN	**Gorkha**	**141.81**	**18**	*e*P	PKPdf	21 45 59.1	-4.0
	comp=Z,132nm,0.8s						
KKN	**Kakani**	**142.20**	**17**	*e*P	PKPdf	21 46 00.2	-3.6
	comp=Z,74nm,0.7s						
GUN	**Gumba**	**142.26**	**16**	*e*P	PKPdf	21 46 00.8	-3.1
	comp=Z,176nm,0.8s						
WB2	**Warramunga Arr**	**142.26**	**248**	*e*P	PKPdf	21 46 00.7	-3.4
WRAB	**Tennant Creek**	**142.26**	**248**	*e*PKHKP		21 46 00.8	
WRAB				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.7						
WRA	**Warramunga Arr**	**142.27**	**248**	PKhKP		21 46 00.5	
	comp=Z,18nm,0.8s,baz=102,slow=2.8,SNR=96						
WRA				PKP	PKPdf	21 46 05.9	+1.8
	comp=Z,18nm,0.8s,baz=100,slow=2.7,SNR=29						
DMN	**Daman**	**142.32**	**18**	*e*P	PKPdf	21 46 00.2	-3.8
	comp=Z,96nm,0.8s						
PKI	**Pulchoki**	**142.44**	**17**	*e*P	PKPdf	21 46 00.3	-3.9
	comp=Z,64nm,0.8s						
GYA	**Guiyang**	**144.10**	**345**	⇑*i*PKP	PKPdf	21 46 05.5	-1.6
GYA				APKP		21 46 19.8	
GYA				XPKP		21 46 25.5	
GYA				PKS	PKS	21 49 40.0	-1.7
GYA				PP	PP		
	comp=Z,230nm,7.4s						
GYA				LR	LR		
	comp=N,1µm,22.8s,MS5.8						
GYA				LR	LR		
	comp=E,880nm,21.0s,MS5.8						
GYA				LR	LR		
	comp=Z,1µm,25.5s,MS5.6						
APYP	**Conner**	**144.66**	**318**	*e*P	PKPbc	21 46 08.7	+0.5
GZH	**Guangzhou**	**144.89**	**333**	PKP	PKPdf	21 46 07.0	-1.6
CAUP	**Cauayan**	**144.91**	**316**	*e*P	PKPdf	21 46 10.7	+2.0
KAKA	**Kakadu**	**145.07**	**260**	*e*P	PKPdf	21 46 09.7	+0.6
	comp=Z,126nm,0.9s						
ABRA	**Dolores**	**145.16**	**318**	*e*P	PKPdf	21 46 10.1	+1.0
PVCP	**Virac**	**145.39**	**309**	*e*P	PKPdf	21 46 11.3	+1.6
BALP	**Baler**	**145.91**	**315**	*e*P	PKPdf	21 46 12.9	+2.4
BCPH	**Baguio City Da**	**146.15**	**317**	⇑*e*P	PKPdf	21 46 12.6	+1.7
KMI	**Kunming**	**146.20**	**351**	PKP	PKPdf	21 46 11.8	+1.0
KMI				APKP		21 46 25.5	
KMI				XPKP		21 46 31.3	
KMI				PP	PP	21 49 35.0	-3.1
KMI				PPP	PPP	21 52 50.5	-4.1
KMI				SKKS		21 56 19.0	
KMI				PP	PP		
	comp=Z,300nm,12.0s						
KMI				LR	LR		
	comp=N,2µm,21.5s,MS6.0						
KMI				LR	LR		
	comp=E,2µm,21.5s,MS6.0						
KMI				LR	LR		
	comp=Z,2µm,17.9s,MS6.0						
KMI	**Kunming**	**146.20**	**351**	PKPdf	PKPdf	21 46 11.6	+0.8
KMI	**Kunming**	**146.20**	**351**	PKIKP	PKPdf	21 46 11.8	+1.0
KMI						21 46 25.6	
KMI						21 49 35.0	
KMI				PPP	PPP	21 52 50.6	-4.0
KMI				SSS	SSS	22 13 50.5	-9.0
KMI				MLR	MLR		
	comp=Z,2µm,17.9s,MS6.0						
KMI	**Kunming**	**146.20**	**351**	PKP	PKPdf	21 46 11.8	+1.0
KMI				pPKP		21 46 25.6	
KMI				sPKP		21 46 31.3	
KMI				PP	PP	21 49 35.0	-3.1
KMI				PPP	PPP	21 52 50.6	-4.0
KMI				SKKS		21 56 19.0	
KMI				SS	SS	22 08 14.5	-14
KMI				SSS	SSS	22 13 50.5	-9.0
KMI				LR	LR		
	comp=Z,2µm,17.9s,MS6.0						
BLSP	**Bilaspur**	**146.24**	**26**	*e*P	PKPdf	21 46 11.2	+0.3
BOLP	**Bolinao**	**146.60**	**318**	*e*P	PKPdf	21 46 02.9	-8.8
BUTP	**Butuan**	**146.78**	**301**	*e*P	PKPdf	21 46 15.0	+2.9
SCZP	**Santa Cruz**	**147.03**	**317**	*e*P	PKPdf	21 46 14.9	+2.5
BUKP	**Musuan**	**147.81**	**299**	*e*P	PKPdf	21 46 16.6	+2.9
SJMP	**San Jose**	**148.40**	**311**	*e*P	PKPdf	21 46 17.1	+2.5
HYB	**Hyderabad**	**148.41**	**36**	*e*PKIKP	PKPdf	21 46 16.5	+2.0
HYB				*e*		21 46 19.5	
HYB	**Hyderabad**	**148.41**	**36**	*i* PKP	PKPdf	21 46 16.5	+2.0
	comp=Z,70nm,1.0s						
HYB				*e*		21 46 23.5	
NWAO	**Narrogin (SRO)**	**149.35**	**215**	PKP	PKPdf	21 46 17.6	+1.9
	comp=Z,38nm,0.8s,baz=198,slow=3.1,SNR=7.3						
NWAO				PKPbc	PKPdf	21 46 21.9	+6.2
	comp=Z,35nm,0.8s,baz=110,slow=6.2,SNR=16						
NWAO	**Narrogin (SRO)**	**149.35**	**215**	PKP	PKPdf	21 46 17.6	+1.9
NWAO				PKPbc	PKPdf	21 46 21.9	+6.2
NWAO				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
BUSP	**Coron**	**149.38**	**311**	*e*P	PKPdf	21 46 19.6	+3.5
QIZ	**Qiongzhong**	**149.97**	**335**	*e*PKPbc	PKPdf	21 46 22.2	+5.2
KLBR	**Kellerberrin**	**150.03**	**217**	*e*P	PKPdf	21 46 21.6	+4.8
	comp=Z,41nm,0.9s						
ENPP	**El Nido**	**150.47**	**311**	*e*P	PKPdf	21 46 25.1	+7.1
MUN	**Mundaring**	**150.64**	**214**	*e*P	PKPdf	21 46 19.8	+2.1
	comp=Z,56nm,1.0s						
FITZ	**Fitzroy Crossi**	**150.70**	**248**	*e*P	PKPdf	21 46 20.0	+1.9
	comp=Z,87nm,0.9s						
FITZ	**Fitzroy Crossi**	**150.70**	**248**	PKP	PKPdf	21 46 19.7	+1.6
	comp=Z,27nm,0.9s,baz=173,slow=2.1,SNR=12						
FITZ				PKPbc	PKPdf	21 46 25.0	+6.9
	comp=Z,57nm,0.8s,baz=162,slow=1.7,SNR=13						
CM31	**Chiang Mai Arr**	**153.22**	**356**	*e*PKPdf	PKPdf	21 46 22.9	+1.1
CM31				*e*PKPbc	PKPdf	21 46 30.4	+8.6
CM31				LR	LR		
	comp=Z,2µm,21.0s,MS6.0						
CMAR	**Chiang Mai Arr**	**153.22**	**356**	PKP	PKPdf	21 46 23.0	+1.2
	comp=Z,32nm,0.9s,baz=294,slow=2.2,SNR=142						
CMAR				PKPbc	PKPdf	21 46 30.8	+9.0
	comp=Z,56nm,0.8s,baz=324,slow=3.1,SNR=54						
CMAR				PKPab	PKPab	21 46 41.9	-1.7
	comp=Z,25nm,0.8s,baz=334,slow=4.5,SNR=9.2						
BATP	**Bataraza**	**153.24**	**309**	*e*P	PKPdf	21 46 33.2	+11
KKTK	**Khon Kaen**	**154.75**	**347**	PN	PKPdf	21 46 27.0	+3.1
KKTK				PG	PKPdf	21 46 35.0	+11
KKTK				SG	PKPab	21 46 50.0	0.0
MBWA	**Marble Bar**	**154.82**	**237**	*e*PKPdf	PKPdf	21 46 20.9	-3.0
MBWA				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
DGAR	**Diego Garcia**	**155.52**	**89**	PFAKE		21 46 40.0	+15
DGAR				LR	LR		
	comp=Z,389nm,20.0s,MS5.2						
NST	**Nakhon Sawan**	**155.86**	**353**	P	PKPdf	21 46 28.1	+2.8
PALK	**Pallekele**	**157.36**	**47**	PFAKE		21 46 40.0	+12
PALK				LR	LR		
	comp=Z,462nm,21.0s,MS5.3						
KSM	**Kuching**	**163.60**	**306**	*e*P	PKPab	21 47 28.4	0.0
SNG	**Songkhla**	**164.11**	**347**	P	PKPab	21 47 29.0	-1.5
	comp=Z,164nm,1.0s						
KULM	**Kulim**	**165.92**	**346**	*e*PKPdf	PKPdf	21 46 37.0	+0.5
KULM				*e*PKPab	PKPab	21 47 37.3	-1.1

*ATH **30** 21:34:53.7, 37.80N×26.78E, h20^{km}±1^{km}, MD4.0/18, ML3.8*
*ISK **30** 21:34:53.6, 37.80N×26.69E, h13^{km}, MD3.8, ML3.9*
*THE **30** 21:34:53.5, 37.79N×26.93E, h10^{km}, ML4.2*
*NEIC **30** 21:34:53.8, 37.80N×26.78E, h19^{km}, ML3.8(ATH), After ATH.*
*CSEM **30** 21:34:54.9±0.0, 37.80N×26.83E, h15^{km}, ML3.8, Error ellipse: s-maj=1.1km s-min=1.0km az=8.0*
*IDC **30** 21:34:59.1±4.2, 37.52N×26.94E, h38^{km}±53^{km}, mb3.1/2, mb1 3.4/6, mb1mx3.3/24, mbtmp3.4/6, ML3.2/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/15, Error ellipse: s-maj=40.4km s-min=24.6km az=157.0*
*HLW **30** 21:35:04.6, 37.19N×27.31E, h33^{km}, Mb3.1*
ISC 30 21:34:53.6±0.5**, 37.78N**±0.02×**26.74E**±0.02**, h7**^{km}±4^{km}**, n128,** σ**1^{s}11**/161**, mb3.2**/2**, 12C-2D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.11**	**132**	*e*PB	**Pb**	**21 34 58.0**	**+0.4**
SMG				*e*SB	**Sb**	**21 35 00.3**	**+0.2**
URLA	**Izmir**	**0.59**	**349**	*i* P	**Pg**	**21 35 05.8**	**+0.4**
URLA				*i* S	**Sg**	**21 35 14.8**	**+1.5**
BLCB	**Balcova**	**0.65**	**22**	*i* PG	**Pg**	**21 35 06.9**	**+0.3**
IZM	**Izmir**	**0.74**	**34**	*i* PG	**Pg**	**21 35 08.3**	**-0.2**
IZM				*i* SG	**Sg**	**21 35 19.6**	**+1.2**
KDAG	**Bornova**	**0.75**	**34**	*i* P	**Pg**	**21 35 08.5**	**-0.1**
KDAG				*i* S	**Sg**	**21 35 19.2**	**+0.6**
BODT	**Bodrum**	**0.85**	**147**	*i* PG	**Pg**	**21 35 11.3**	**+0.7**
BDRM	**Kayabasi**	**0.91**	**141**	*i* P	**Pb**	**21 35 12.4**	**+1.1**
BDRM				*i* S	**Sb**	**21 35 24.7**	**+1.2**
AYDN	**Tasoluk**	**0.92**	**97**	*i* P	**Pb**	**21 35 11.7**	**+0.3**
AYDN				*i* S	**Sb**	**21 35 25.0**	**+1.4**
MLSB	**Milas**	**0.96**	**120**	PG	**Pg**	**21 35 12.7**	**-0.1**
APE	**Apeiranthos**	**1.19**	**234**	PN	**Pn**	**21 35 16.1**	**-0.6**
APE	**Apeiranthos**	**1.19**	**234**	*e*PN	**Pn**	**21 35 17.0**	**+0.3**
APE				*e*SN	**Sn**	**21 35 34.7**	**+1.4**
NISR	**Nisiros**	**1.21**	**165**	*e*Pn	**Pn**	**21 35 18.0**	**+1.1**
AKS	**Akhisar**	**1.39**	**37**	PN	**Pn**	**21 35 19.9**	**+0.4**
YER	**Yerkesik**	**1.39**	**117**	PN	**Pn**	**21 35 19.7**	**+0.2**
PRK	**Paraskevi**	**1.51**	**346**	*e*PN	**Pn**	**21 35 21.2**	**0.0**
PRK				*e*SN	**Sn**	**21 35 42.6**	**+1.3**
AYVA	**Ayvalik**	**1.53**	**359**	*i* P	**Pn**	**21 35 21.0**	**-0.4**
AYVA				*i* S	**Sb**	**21 35 44.0**	**+2.7**
MANT	**Manisa**	**1.60**	**63**	*i* P	**Pn**	**21 35 22.6**	**+0.1**
MANT				*i* S	**Sb**	**21 35 43.1**	**-0.4**
THR3	**Thira Island,**	**1.74**	**218**	*e*Pb	**Pb**	**21 35 25.6**	**+0.2**
SANT	**Santorini**	**1.74**	**216**	*e*Pn	**Pn**	**21 35 24.1**	**-0.4**
SANT				*e*Sn	**Sn**	**21 35 48.4**	**+1.3**
SANT	**Santorini**	**1.74**	**216**	*e*Pn	**Pn**	**21 35 24.0**	**-0.5**
SANT				*e*Sn	**Sn**	**21 35 48.4**	**+1.3**
THR1	**Thera Island**	**1.74**	**216**	*e*Pb	**Pb**	**21 35 24.6**	**-0.9**
THR1				*e*Sb	**Sb**	**21 35 50.1**	**+2.6**
DENT	**Denizli**	**1.82**	**90**	PN	**Pn**	**21 35 26.0**	**+0.3**
DALT	**Dalyan (Mudla)**	**1.82**	**123**	PN	**Pn**	**21 35 26.5**	**+0.8**
DNZL	**Cakiroluk**	**1.83**	**92**	*i* P	**Pn**	**21 35 26.2**	**+0.3**
DNZL				*i* S	**Sn**	**21 35 54.0**	**+4.4**
ARG	**Arkhangelos**	**1.92**	**144**	*e*PN	**Pn**	**21 35 27.6**	**+0.5**
BALB	**Balikesir**	**2.06**	**25**	PN	**Pn**	**21 35 29.4**	**+0.3**
EZN	**Ezine**	**2.07**	**351**	PN	**Pn**	**21 35 28.4**	**-0.8**
FETY	**Fethiye**	**2.20**	**121**	PN	**Pn**	**21 35 31.1**	**+0.1**
BTOK	**Tokmak**	**2.22**	**27**	*i* P	**Pn**	**21 35 31.3**	**-0.2**
BTOK				*i* S	**Sn**	**21 36 06.2**	**+6.7**
CANB	**Canakkale**	**2.25**	**6**	PN	**Pn**	**21 35 31.2**	**-0.6**
KARP	**Karpathos**	**2.25**	**171**	*e*PB	**Pb**	**21 35 31.7**	**-2.6**
KHL	**Karahalli**	**2.27**	**75**	*e*PN	**Pn**	**21 35 31.9**	**-0.2**
PTL	**Penteli**	**2.29**	**278**	*e*PN	**Pn**	**21 35 32.5**	**+0.2**
GOLH	**Golhisar**	**2.31**	**103**	*i* P	**Pn**	**21 35 34.0**	**+1.3**
GOLH				*i* S	**Sg**	**21 36 13.9**	**+3.3**
DST	**Dursunbey**	**2.35**	**39**	*e*PN	**Pn**	**21 35 33.2**	**0.0**
ATH	**Athens Observa**	**2.40**	**275**	*e*PN	**Pn**	**21 35 34.7**	**+0.8**
MPAR	**Parnis Oros**	**2.40**	**280**	*e*PB	**Pb**	**21 35 35.0**	**-1.8**
LIA	**Limnos Island**	**2.44**	**331**	*e*PN	**Pn**	**21 35 34.5**	**0.0**
GDZ	**Gediz**	**2.52**	**58**	*i* P	**Pn**	**21 35 39.0**	**+3.3**
GDZ				*i* S	**Sn**	**21 36 14.8**	**+7.7**
NAIG	**Nisos Aigina**	**2.57**	**270**	*e*PN	**Pn**	**21 35 36.5**	**+0.1**
LPK	**Lapseki**	**2.59**	**0**	*e*PN	**Pn**	**21 35 36.5**	**-0.2**
NSAL	**Nisos Salamina**	**2.59**	**274**	*e*PN	**Pn**	**21 35 37.0**	**+0.3**
NPS	**Neapolis**	**2.67**	**200**	*e*PN	**Pn**	**21 35 38.1**	**+0.3**
BNT	**Bandirma**	**2.73**	**19**	*e*PN	**Pn**	**21 35 38.2**	**-0.5**
ELL	**Elmali**	**2.73**	**111**	*e*PN	**Pn**	**21 35 38.9**	**+0.2**
MGER	**Gerania Oros**	**2.76**	**275**	*e*PN	**Pn**	**21 35 39.0**	**-0.1**
AKAS	**Kas**	**2.77**	**123**	*i* P	**Pn**	**21 35 41.3**	**+2.1**
AKAS				*i* S	**Sg**	**21 36 28.2**	**+2.4**
KCT	**Karacabey**	**2.78**	**26**	*e*PN	**Pn**	**21 35 38.8**	**-0.7**
ORLT	**Orhaneli**	**2.82**	**36**	*e*PN	**Pn**	**21 35 40.0**	**0.0**
TKTP	**Tekketepe**	**2.85**	**84**	*i* P	**Pn**	**21 35 40.2**	**-0.1**
TKTP				*i* S	**Sg**	**21 36 29.9**	**+1.6**
MRMT	**Marmara Adasi**	**2.90**	**13**	*e*PN	**Pn**	**21 35 40.2**	**-0.9**
IDI	**Anoyia**	**2.90**	**211**	Pn	**Pn**	**21 35 40.3**	**-0.8**
	1.3nm,0.3s,baz=34,slow=13,SNR=19						
IDI				Sn	**Sn**	**21 36 15.2**	**-1.4**
	4.8nm,0.3s,baz=352,slow=16,SNR=5.5						
IDI				Lg		21 36 28.8	
	8.0nm,0.3s,baz=284,slow=14,SNR=4.2						
ALT	**Altintas**	**2.94**	**63**	*e*PN	**Pn**	**21 35 41.7**	**0.0**
ISP	**Isparta**	**2.99**	**88**	*e*PN	**Pn**	**21 35 41.9**	**-0.5**
ISP	**Isparta**	**2.99**	**88**	*e*Pn	**Pn**	**21 35 42.2**	**-0.2**
ISP	**Isparta**	**2.99**	**88**	*e*Pn	**Pn**	**21 35 42.2**	**-0.2**
ULDT	**Uludag**	**3.01**	**38**	*i* P	**Pn**	**21 35 46.9**	**+4.2**
ULDT				*i* S	**Sn**	**21 36 26.6**	**+7.2**
XRY	**Khrisi**	**3.02**	**196**	*e*PB	**Pb**	**21 35 44.5**	**-2.9**
MFT	**Murefte**	**3.03**	**8**	*e*PN	**Pn**	**21 35 42.8**	**-0.2**
LKR	**Lokris**	**3.07**	**288**	*e*PN	**Pn**	**21 35 44.1**	**+0.6**
BCK	**Bucak**	**3.08**	**95**	*e*PN	**Pn**	**21 35 44.3**	**+0.7**
NEO	**Neokhori**	**3.15**	**300**	*e*PN	**Pn**	**21 35 44.8**	**+0.2**
ALN	**Alexandroupoli**	**3.16**	**350**	*e*Pn	**Pn**	**21 35 43.9**	**-0.9**
XOR	**Xorichti**	**3.20**	**301**	*e*Pn	**Pn**	**21 35 45.4**	**+0.1**
PAIG	**Paliouri**	**3.21**	**313**	*e*Pn	**Pn**	**21 35 46.0**	**+0.6**
VLI	**Veliai**	**3.21**	**252**	*e*PN	**Pn**	**21 35 46.4**	**+0.9**
ANTB	**Antalya**	**3.24**	**105**	*e*PN	**Pn**	**21 35 46.5**	**+0.5**
OUR	**Ouranopolis**	**3.33**	**321**	*e*Pn	**Pn**	**21 35 47.4**	**+0.2**
YLV	**Yalova**	**3.46**	**36**	*e*PN	**Pn**	**21 35 49.0**	**0.0**
RDO	**Rodhopi**	**3.49**	**345**	*e*PN	**Pn**	**21 35 49.2**	**-0.2**
CTT	**Catalca**	**3.61**	**21**	*e*PN	**Pn**	**21 35 50.9**	**-0.3**
GVD	**Gavdhos**	**3.63**	**217**	P	**Pn**	**21 35 50.1**	**-1.4**
GVD	**Gavdhos**	**3.63**	**217**	P	**Pn**	**21 35 50.1**	**-1.4**
ESKT	**Eskisehir**	**3.66**	**60**	*e*PN	**Pn**	**21 35 51.9**	**0.0**
ESKT	**Eskisehir**	**3.66**	**60**	*i* P	**Pg**	**21 36 02.6**	**-4.1**
ESKT				*i* S	**Sg**	**21 36 50.2**	**-5.2**
AGG	**Agios Georgios**	**3.68**	**291**	*e*Pn	**Pn**	**21 35 52.9**	**+0.7**
AGG	**Agios Georgios**	**3.68**	**291**	*e*Pn	**Pn**	**21 35 52.8**	**+0.7**
ISK	**Istanbul-Kandi**	**3.74**	**28**	*e*PN	**Pn**	**21 35 53.0**	**-0.1**
GPA	**Golpazari**	**3.74**	**47**	*e*PN	**Pn**	**21 35 53.0**	**-0.1**
HRT	**Hereke**	**3.79**	**36**	*e*PN	**Pn**	**21 35 53.6**	**-0.2**
ITM	**Ithomi**	**3.87**	**263**	*e*PN	**Pn**	**21 35 56.5**	**+1.6**
EVR	**Evrytania**	**4.04**	**288**	*e*Pn	**Pn**	**21 35 59.0**	**+1.8**
EDRB	**Edirne**	**4.06**	**0**	*e*PN	**Pn**	**21 35 57.4**	**-0.2**
SRS	**Serrai**	**4.12**	**325**	*e*Pn	**Pn**	**21 35 58.1**	**-0.4**
KIZT	**Kizilcal**	**4.19**	**73**	*e*PN	**Pn**	**21 35 59.8**	**+0.3**
NVR	**Nevrokopi**	**4.20**	**329**	*e*PN	**Pn**	**21 35 59.2**	**-0.4**
HENT	**Hendek**	**4.43**	**45**	*i* P	**Pg**	**21 36 17.8**	**-4.3**
HENT				*i* S	**Sg**	**21 37 14.9**	**-6.3**
GRG	**Griva**	**4.62**	**315**	*e*Pn	**Pn**	**21 36 06.1**	**+0.6**
HDMB	**Hadim**	**4.65**	**98**	*e*PN	**Pn**	**21 36 06.3**	**+0.3**
SGKT	**Sivrigoynuk**	**4.99**	**54**	*i* P	**Pg**	**21 36 28.5**	**-4.7**
SGKT				*i* S	**Sg**	**21 37 37.2**	**-2.4**
ANTO	**Ankara**	**5.17**	**64**	*e*PN	**Pn**	**21 36 13.5**	**+0.2**
BR131	**Keskin Array S**	**5.74**	**68**	*e*Pn	**Pn**	**21 36 19.7**	**-1.6**
	6.9nm,0.6s						
BRTR	**Keskin Array B**	**5.74**	**68**	Pn	**Pn**	**21 36 20.7**	**-0.6**
	0.4nm,0.3s,baz=246,slow=14,SNR=10.0						
BRTR				Pg	**Pg**	**21 36 43.1**	**-4.9**
	0.3nm,0.3s,baz=241,slow=16,SNR=9.5						
BRTR				Lg		21 38 02.9	
	baz=114,slow=27,SNR=3.0						
BRTR	**Keskin Array B**	**5.74**	**68**	Pg	**Pg**	**21 36 43.2**	**-4.9**
ELDT	**Eldivan**	**5.86**	**60**	*i* P	**Pg**	**21 36 52.6**	**+2.0**
ELDT				*i* S	**Sg**	**21 38 05.8**	**-3.0**
ELDT	**Eldivan**	**5.86**	**60**	*i* P	**Pg**	**21 36 45.8**	**-4.8**
ELDT				*i* S	**Sg**	**21 38 05.8**	**-3.0**
CSS	**Prodhromos**	**6.02**	**116**	*e*Pn	**Pn**	**21 36 21.6**	**-3.6**
CSS				*e*Sn	**Sn**	**21 37 22.9**	**-12**
CSS	**Prodhromos**	**6.02**	**116**	*e*Pn	**Pn**	**21 36 21.6**	**-3.7**
BALT	**Daday**	**6.35**	**52**	*i* P	**Pg**	**21 36 52.6**	**-7.8**
BALT				*i* S	**Sg**	**21 38 17.4**	**-7.7**
HMAT	**Matruh**	**6.68**	**177**	⇑P	**Pn**	**21 36 33.3**	**-1.3**
TIRR	**Tirgusor**	**6.79**	**10**	⇑P	**Pn**	**21 36 34.3**	**-1.8**
TIRR	**Tirgusor**	**6.79**	**10**	⇑P	**Pn**	**21 36 34.3**	**-1.9**
HARR	**Harsova**	**6.96**	**7**	⇑P	**Pn**	**21 36 36.6**	**-2.0**
HARR	**Harsova**	**6.96**	**7**	⇑P	**Pn**	**21 36 36.6**	**-2.0**
BOYT	**Boyabat**	**7.28**	**58**	*i* P	**Pg**	**21 37 08.7**	**-10**
BOYT				*i* S	**Sg**	**21 38 44.0**	**-12**
CFR	**Carcaliu**	**7.46**	**8**	⇓P	**Pn**	**21 36 43.2**	**-2.5**
CFR	**Carcaliu**	**7.46**	**8**	⇓P	**Pn**	**21 36 43.2**	**-2.4**
MLR	**Muntele Rosu**	**7.73**	**356**	Pn	**Pn**	**21 36 48.4**	**-0.9**
	0.2nm,0.3s,baz=185,slow=12,SNR=3.1						
MLR	**Muntele Rosu**	**7.73**	**356**	Pn	**Pn**	**21 36 48.4**	**-0.9**
MLR	**Muntele Rosu**	**7.73**	**356**	⇑P	**Pn**	**21 36 53.6**	**+4.3**
TIP	**Timpagrande**	**7.95**	**283**	*e*Pn	**Pn**	**21 36 46.7**	**-5.7**
SWA1		**8.54**	**186**	⇑P	**P**	**21 36 59.3**	**-1.3**
SWA2		**8.58**	**188**	⇑P	**P**	**21 37 00.1**	**-1.1**
AMAG	**Maghara**	**8.91**	**141**	⇑P	**P**	**21 37 01.9**	**-3.9**
AMAG				S	**Sn**	**21 38 27.4**	**-20**
HRSH	**Kfar Ka'horesh**	**8.92**	**138**	P	**P**	**21 37 02.4**	**-3.5**
SUZ		**9.40**	**146**	P	**P**	**21 37 08.4**	**-4.1**
SUZ				S	**Sn**	**21 38 39.6**	**-20**
HNKL	**Nakhl**	**9.88**	**140**	⇑P	**P**	**21 37 14.7**	**-4.4**
HNKL				S	Sn	21 38 50.2	-21
ASF	**Jabal al Asfar**	**10.04**	**121**	Pn	**P**	**21 37 17.0**	**-4.3**
	0.3nm,0.3s,baz=63,slow=6.0,SNR=3.1						
EIL	**Elat**	**10.59**	**137**	Pn	**P**	**21 37 24.8**	**-4.1**
	0.2nm,0.3s,baz=332,slow=15,SNR=3.9						
EIL				Sn	**S**	**21 39 16.9**	**-12**
	0.5nm,0.3s,baz=112,slow=28,SNR=4.0						
EIL	**Elat**	**10.59**	**137**	*e*P	**P**	**21 37 21.2**	**-7.6**
EIL				*e*S	**S**	**21 39 14.0**	**-15**
HKAT	**Jabal Katrina**	**11.05**	**145**	⇑P	**P**	**21 37 31.8**	**-3.4**
ASUT		**11.12**	**157**	⇑P	**P**	**21 37 32.4**	**-3.8**
TR1		**11.47**	**146**	P	**P**	**21 37 36.8**	**-4.2**
GERES	**GERESS Array B**	**14.55**	**324**	LR	LR	21 44 39.2	
	comp=Z,127nm,18.6s,baz=251,slow=39						
KONO	**Kongsberg**	**24.49**	**339**	P	**P**	**21 40 13.4**	**-0.8**
KONO	**Kongsberg**	**24.49**	**339**	P	**P**	**21 40 13.4**	**-0.8**
NOA	**NORSAR Array B**	**25.24**	**342**	P	**P**	**21 40 24.2**	**+2.8**
	0.7nm,0.7s,mb3.3,baz=154,slow=9.9,SNR=3.4						
MKAR	**Makanchi Array**	**41.31**	**59**	P	**P**	**21 42 40.6**	**-0.6**
	0.4nm,0.7s,mb3.1,baz=281,slow=6.2,SNR=5.2						

*ATH **30** 21:39:11.3, 37.78N×26.69E, h10^{km}, MD3.3/3*
*ISK **30** 21:39:11.0, 37.83N×26.67E, h30^{km}, MD3.4*
*CSEM **30** 21:39:11.2±0.1, 37.83N×26.81E, h20^{km}, MD3.4, Error ellipse: s-maj=3.9km s-min=2.4km az=86.0*
ISC 30 21:39:10.7±0.5**, 37.80N**±0.03×**26.74E**±0.05**, h10**^{km}**, n27,** σ**0^{s}92**/37**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.12**	**141**	*e*PG	**Pg**	**21 39 14.5**	**+0.8**
URLA	**Izmir**	**0.57**	**349**	*i* P	**Pg**	**21 39 21.6**	**-0.6**
URLA				*i* S	**Sg**	**21 39 31.0**	**+1.1**
BLCB	**Balcova**	**0.63**	**22**	*i* PG	**Pg**	**21 39 23.1**	**-0.3**
IZM	**Izmir**	**0.72**	**35**	PG	**Pg**	**21 39 25.0**	**-0.3**
KDAG	**Bornova**	**0.73**	**35**	*i* P	**Pb**	**21 39 24.6**	**-0.4**
KDAG				*i* S	**Sb**	**21 39 34.8**	**0.0**
BODT	**Bodrum**	**0.87**	**148**	PG	**Pg**	**21 39 27.8**	**-0.3**
BODT				SG	**Sg**	**21 39 40.8**	**+1.0**
AYDN	**Tasoluk**	**0.92**	**99**	*i* P	**Pb**	**21 39 27.7**	**-0.5**
AYDN				*i* S	**Sb**	**21 39 40.5**	**+0.3**
BDRM	**Kayabasi**	**0.93**	**142**	*i* P	**Pb**	**21 39 29.6**	**+1.2**
BDRM				*i* S	**Sb**	**21 39 40.5**	**0.0**
MLSB	**Milas**	**0.97**	**121**	PG	**Pg**	**21 39 29.6**	**-0.5**
APE	**Apeiranthos**	**1.21**	**233**	PN	**Pn**	**21 39 32.1**	**-1.6**
APE	**Apeiranthos**	**1.21**	**233**	*e*Pb	**Pb**	**21 39 33.5**	**+0.3**
AKS	**Akhisar**	**1.37**	**38**	PN	**Pn**	**21 39 35.5**	**-0.4**
YER	**Yerkesik**	**1.40**	**118**	PN	**Pn**	**21 39 35.8**	**-0.6**
PRK	**Paraskevi**	**1.49**	**346**	*e*PB	**Pb**	**21 39 39.5**	**+1.5**
AYVA	**Ayvalik**	**1.50**	**359**	*i* P	**Pn**	**21 39 39.3**	**+1.5**
AYVA				*i* S	**Sb**	**21 40 01.2**	**+3.9**
MANT	**Manisa**	**1.59**	**64**	*i* P	**Pn**	**21 39 40.6**	**+1.5**
MANT				*i* S	**Sb**	**21 39 59.6**	**-0.2**
DENT	**Denizli**	**1.82**	**91**	*e*PN	**Pn**	**21 39 42.1**	**-0.3**
DNZL	**Cakiroluk**	**1.83**	**93**	*i* P	**Pn**	**21 39 42.3**	**-0.2**
DNZL				*i* S	**Sn**	**21 40 10.1**	**+4.0**
BALB	**Balikesir**	**2.04**	**26**	*e*PN	**Pn**	**21 39 44.5**	**-1.1**
BTOK	**Tokmak**	**2.20**	**27**	*i* P	**Pn**	**21 39 50.6**	**+2.7**
BTOK				*i* S	**Sn**	**21 40 20.0**	**+4.6**
FETY	**Fethiye**	**2.21**	**121**	*e*PN	**Pn**	**21 39 47.8**	**-0.1**
CANB	**Canakkale**	**2.23**	**6**	*e*PN	**Pn**	**21 39 47.2**	**-1.0**
DST	**Dursunbey**	**2.33**	**39**	*e*PN	**Pn**	**21 39 49.2**	**-0.5**
BNT	**Bandirma**	**2.71**	**19**	*e*PN	**Pn**	**21 39 53.8**	**-1.3**
ELL	**Elmali**	**2.74**	**112**	*e*PN	**Pn**	**21 39 55.2**	**-0.3**
ORLT	**Orhaneli**	**2.80**	**36**	*e*PN	**Pn**	**21 39 55.7**	**-0.7**
ULDT	**Uludag**	**2.99**	**38**	*i* P	**Pn**	**21 40 06.3**	**+7.2**
ULDT				*i* S	**Sn**	**21 40 41.8**	**+6.4**

*ATH **30** 21:43:35.6, 37.76N×26.72E, h12^{km}±6^{km}, MD3.1/3*
*ISK **30** 21:43:35.3, 37.85N×26.69E, h30^{km}, MD3.1*
*CSEM **30** 21:43:35.7±0.1, 37.81N×26.82E, h15^{km}, MD3.1, Error ellipse: s-maj=3.5km s-min=2.1km az=101.0*
ISC 30 21:43:35.2±0.6**, 37.80N**±0.03×**26.72E**±0.05**, h11**^{km}±4^{km}**, n16,** σ**0^{s}96**/25**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.13**	**133**	*e*PG	**Pg**	**21 43 38.8**	**+0.3**
SMG				*e*SG	**Sg**	**21 43 40.7**	**0.0**
URLA	**Izmir**	**0.57**	**350**	*i* P	**Pg**	**21 43 46.7**	**0.0**
URLA				*i* S	**Sg**	**21 43 55.9**	**+1.5**
BLCB	**Balcova**	**0.64**	**24**	*i* PG	**Pg**	**21 43 47.8**	**-0.3**
IZM	**Izmir**	**0.74**	**36**	*i* PG	**Pg**	**21 43 49.7**	**-0.3**
IZM				SG	**Sg**	**21 44 00.0**	**0.0**
KDAG	**Bornova**	**0.74**	**36**	*i* P	**Pb**	**21 43 49.1**	**-0.5**
KDAG				*i* S	**Sb**	**21 43 59.6**	**+0.1**
BODT	**Bodrum**	**0.88**	**147**	PG	**Pg**	**21 43 52.4**	**-0.4**
AYDN	**Tasoluk**	**0.93**	**98**	*i* P	**Pb**	**21 43 52.6**	**-0.3**
AYDN				*i* S	**Sb**	**21 44 05.6**	**+0.5**
BDRM	**Kayabasi**	**0.94**	**141**	*i* P	**Pb**	**21 43 55.5**	**+2.6**
BDRM				*i* S	**Sb**	**21 44 05.3**	**+0.2**
MLSB	**Milas**	**0.98**	**120**	PG	**Pg**	**21 43 54.2**	**-0.7**
APE	**Apeiranthos**	**1.19**	**233**	*e*PN	**Pn**	**21 43 56.7**	**-1.1**
APE	**Apeiranthos**	**1.19**	**233**	*e*Pb	**Pb**	**21 43 57.9**	**+0.6**
AKS	**Akhisar**	**1.38**	**38**	*e*PN	**Pn**	**21 43 59.1**	**-1.4**
YER	**Yerkesik**	**1.41**	**118**	*e*PN	**Pn**	**21 44 00.2**	**-0.8**
PRK	**Paraskevi**	**1.49**	**347**	*e*PG	**Pg**	**21 44 04.0**	**-0.9**
PRK				*e*SB	**Sb**	**21 44 25.1**	**+4.0**
MANT	**Manisa**	**1.61**	**64**	*i* P	**Pn**	**21 44 05.6**	**+1.8**
MANT				*i* S	**Sn**	**21 44 23.9**	**-0.7**
DNZL	**Cakiroluk**	**1.85**	**93**	*i* P	**Pn**	**21 44 10.8**	**+3.5**
DNZL				*i* S	**Sn**	**21 44 37.5**	**+6.7**

*UCR **30** 21:47:19.0, 8.60N×82.83W, h1^{km}, MD3.6*
*UPA **30** 21:47:20.4, 8.41N×82.74W, h55^{km}, MW4.2*
CASC 30 21:47:22.5±3.1**, 8.47N**×**82.90W, h12**^{km}±17^{km}**, MD3.6, MW4.0, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.33**	**304**	*e*P	Pg	21 47 28.5	-0.8
ACR				*e*S	Sg	21 47 35.0	+1.1
BRU2	**Volcan**	**0.38**	**32**	*e*P	Pg	21 47 31.4	+1.0
BRU2				*e*S	Sg	21 47 39.3	+3.6
DVD	**David**	**0.44**	**94**	*e*P	Pg	21 47 32.6	+1.0
PTP1	**Petroterminal**	**0.53**	**119**	*e*P	Pb	21 47 29.2	-4.0
URSC	**Urasca**	**1.61**	**327**	*e*P	Pn	21 47 49.9	-1.2
URSC				*e*S	Sn	21 48 12.1	+0.1
PRS1	**Puriscal**	**2.06**	**317**	*e*P	Pn	21 47 55.7	-1.7
PRS1				*e*S	Sn	21 48 24.5	+1.3

*CSEM **30** 22:13:01.3±0.1, 34.30N×26.08E, h10^{km}, ML3.3, Error ellipse: s-maj=2.9km s-min=1.9km az=53.0*
*ATH **30** 22:13:02.9, 34.21N×25.71E, h22^{km}±1^{km}, MD3.5/4*
*NEIC **30** 22:13:02.9, 34.21N×25.71E, h22^{km}, MD3.5(ATH), After ATH.*
*HLW **30** 22:13:02.4, 34.53N×25.87E, h33^{km}, Mb3.3*
ISC 30 22:13:01.7±2.5**, 34.29N**±0.05×**26.0E**±0.1**, h10**^{km}±18^{km}**, n13,** σ**0^{s}76**/16**, 5C-1D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	**Khrisi**	**0.65**	**334**	*e*PN	**Pn**	**22 13 16.0**	**-0.7**
NPS	**Neapolis**	**1.04**	**340**	*e*PN	**Pn**	**22 13 22.9**	**+0.7**
NPS				*e*SN	**Sn**	**22 13 37.2**	**+0.4**
KARP	**Karpathos**	**1.56**	**36**	*e*PN	**Pn**	**22 13 34.7**	**+5.0**
VAM	**Vamos**	**1.88**	**307**	*e*PN	**Pn**	**22 13 33.8**	**-0.5**
SLUM		**2.87**	**194**	⇑P	**Pn**	**22 13 48.6**	**+0.2**
HMAT	**Matruh**	**3.30**	**164**	⇑P	**Pn**	**22 13 56.0**	**+1.4**
HMAT				S	**Sn**	**22 14 34.6**	**+0.2**
DABA	**Dabaa**	**3.77**	**149**	⇑P	**Pn**	**22 14 02.3**	**+1.0**
SWA1		**5.01**	**183**	⇓P	**Pn**	**22 14 18.8**	**-0.1**

SWA2		5.05	186	⇑P	Pn	22 14 19.3	-0.1
SWA2				S	Sn	22 15 14.6	-3.9
AMAG	**Maghara**	7.06	119	P	Pn	22 14 47.5	-0.2
SUZ		7.27	126	P	Pn	22 14 49.9	-0.7
HFRF	**Wahat Farafira**	7.38	164	P	Pn	22 14 51.6	-0.5
HNKL	**Nakhl**	8.01	121	⇑P	P	22 15 00.5	-0.5

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*NEIC **30** 22:14:52.6, 37.73N×26.86E, h20^{km}, MD3.4(ATH), After ATH.*
*CSEM **30** 22:14:52.7±0.1, 37.81N×26.78E, h15^{km}, MD3.4, Error ellipse: s-maj=2.7km s-min=1.4km az=83.0*
*ATH **30** 22:14:53.3, 37.78N×26.81E, h16^{km}±1^{km}, MD3.4/3*
*ISK **30** 22:14:53.5, 37.81N×26.74E, h29^{km}, MD3.4*
ISC 30 22:14:53.3±0.5**, 37.81N**±0.03×**26.83E**±0.05**, h12**^{km}±4^{km}**, n25, σ0ˢ65**/34**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	**Samos**	0.10	175	*e*Pg	Pg	22 14 56.4	+0.1
SMG				*e*Sg	Sg	22 14 58.6	+0.3
SMG	**Samos**	0.10	175	*e*PB	Pb	22 14 56.5	-0.2
SMG				*e*SB	Sb	22 14 58.7	-0.2
SMG	**Samos**	0.10	175	*e*PB	Pg	22 14 56.4	+0.1
SMG				*e*SB	Sb	22 14 58.7	-0.2
BLCB	**Balcova**	0.60	16	*i* PG	Pg	22 15 05.6	+0.1
IZM	**Izmir**	0.68	30	*i* PG	Pg	22 15 07.2	+0.1
BODT	**Bodrum**	0.84	153	PG	Pg	22 15 09.5	-0.7
BODT				SG	Sg	22 15 22.2	+0.7
MLSB	**Milas**	0.91	124	PG	Pg	22 15 11.6	-0.1
APE	**Apeiranthos**	1.27	235	PN	Pn	22 15 14.9	-2.0
APE	**Apeiranthos**	1.27	235	*e*Pn	Pn	22 15 15.5	-1.4
APE				*e*Sb	Sb	22 15 33.0	+0.3
APE				*e*Sn	Sn	22 15 34.2	+0.3
APE	**Apeiranthos**	1.27	235	*e*PN	Pn	22 15 17.0	+0.1
APE				*e*SN	Sn	22 15 34.2	+0.3
APE	**Apeiranthos**	1.27	235	*e*Pn	Pn	22 15 15.6	-1.3
APE				*e*Sn	Sn	22 15 34.2	+0.3
AKS	**Akhisar**	1.32	36	*e*PN	Pn	22 15 17.2	-0.4
YER	**Yerkesik**	1.34	120	PN	Pn	22 15 18.3	+0.4
PRK	**Paraskevi**	1.50	343	*e*PN	Pn	22 15 21.8	+1.7
PRK				*e*SN	Sn	22 15 42.8	+3.1
PRK	**Paraskevi**	1.50	343	*e*PN	Pn	22 15 21.9	+1.8
DENT	**Denizli**	1.75	91	*e*PN	Pn	22 15 24.0	+0.3
BALB	**Balikesir**	2.00	24	*e*PN	Pn	22 15 27.3	-0.1
EZN	**Ezine**	2.05	349	*e*PN	Pn	22 15 27.4	-0.7
CANB	**Canakkale**	2.21	5	*e*PN	Pn	22 15 29.9	-0.5
DST	**Dursunbey**	2.28	38	*e*PN	Pn	22 15 31.3	0.0
LIA	**Limnos Island**	2.45	329	*e*PB	Pb	22 15 36.0	-0.8
BNT	**Bandirma**	2.68	18	*e*PN	Pn	22 15 36.9	-0.2
ORLT	**Orhaneli**	2.75	35	*e*PN	Pn	22 15 38.1	0.0
MRMT	**Marmara Adasi**	2.85	12	*e*PN	Pn	22 15 39.3	-0.2
YLV	**Yalova**	3.39	35	*e*PN	Pn	22 15 47.1	-0.1

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*ATH **30** 22:50:40.5, 37.74N×26.83E, h18^{km}, MD3.1/3*
*ISK **30** 22:50:40.6, 37.86N×26.72E, h28^{km}, MD3.2*
*CSEM **30** 22:50:40.0±0.2, 37.82N×26.74E, h19^{km}±1^{km}, MD3.2, Error ellipse: s-maj=4.5km s-min=2.4km az=99.0*
ISC 30 22:50:40.6±0.5**, 37.79N**±0.02×**26.77E**±0.05**, h10**^{km}**, n20, σ1ˢ12**/31**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	**Samos**	0.10	146	*e*PB	Pb	22 50 43.9	-0.3
SMG				*e*SB	Sb	22 50 45.8	-0.7
URLA	**Izmir**	0.58	347	*i* P	Pg	22 50 51.5	-0.8
URLA				*i* S	Sg	22 51 00.2	-0.1
BLCB	**Balcova**	0.63	20	PG	Pg	22 50 52.9	-0.4
IZM	**Izmir**	0.72	33	PG	Pg	22 50 54.6	-0.5
IZM				SG	Sg	22 51 04.9	+0.1
KDAG	**Bornova**	0.73	33	*i* P	Pb	22 50 54.3	-0.6
KDAG				*i* S	Sb	22 51 04.3	-0.4
BODT	**Bodrum**	0.85	149	PG	Pg	22 50 57.5	-0.2
AYDN	**Tasoluk**	0.89	98	*i* P	Pb	22 50 57.4	-0.3
AYDN				*i* S	Sb	22 51 09.8	+0.3
BDRM	**Kayabasi**	0.91	143	*i* P	Pb	22 50 59.1	+1.1
BDRM				*i* S	Sb	22 51 10.8	+1.0
MLSB	**Milas**	0.94	121	PG	Pg	22 50 59.3	-0.3
APE	**Apeiranthos**	1.22	234	*e*PN	Pn	22 51 02.4	-1.4
APE	**Apeiranthos**	1.22	234	*e*Pb	Pb	22 51 03.8	+0.4
AKS	**Akhisar**	1.36	37	*e*PN	Pn	22 51 04.3	-1.5
YER	**Yerkesik**	1.37	118	*e*PN	Pn	22 51 05.9	0.0
PRK	**Paraskevi**	1.50	345	*e*Pb	Pb	22 51 09.5	+1.3
PRK				*e*Sb	Sb	22 51 29.3	+2.1
AYVA	**Ayvalik**	1.52	358	*i* P	Pn	22 51 07.8	-0.1
AYVA				*i* S	Sb	22 51 30.7	+3.2
MANT	**Manisa**	1.57	63	*i* P	Pn	22 51 11.3	+2.4
MANT				*i* S	Sb	22 51 28.9	-0.4
DNZL	**Cakiroluk**	1.81	93	*i* P	Pn	22 51 15.2	+3.0
DNZL				*i* S	Sn	22 51 39.0	+3.6
BALB	**Balikesir**	2.04	25	*e*PN	Pn	22 51 13.7	-1.8
DST	**Dursunbey**	2.32	38	*e*PN	Pn	22 51 18.1	-1.4
ULDT	**Uludag**	2.99	37	*i* P	Pn	22 51 36.3	+7.3
ULDT				*i* S	Sn	22 52 12.9	+7.7

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*ATH **30** 23:11:40.4, 37.71N×26.84E, h23^{km}±5^{km}, MD3.2/3*
*CSEM **30** 23:11:41.4±0.1, 37.82N×26.76E, h16^{km}, MD3.2, Error ellipse: s-maj=2.3km s-min=1.4km az=95.0*
*ISK **30** 23:11:42.0, 37.84N×26.69E, h29^{km}, MD3.4*
ISC 30 23:11:41.1±0.7**, 37.78N**±0.02×**26.72E**±0.04**, h5**^{km}±5^{km}**, n25, σ1ˢ07**/38**, 1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	**Samos**	0.12	128	⇑*i*PB	Pb	23 11 45.1	-0.3
SMG				*e*SB	Sb	23 11 47.0	-1.2
URLA	**Izmir**	0.59	350	*i* P	Pg	23 11 52.9	+0.1
URLA				*i* S	Sg	23 12 02.0	+1.3
BLCB	**Balcova**	0.66	23	PG	Pg	23 11 53.9	-0.3
IZM	**Izmir**	0.75	35	PG	Pg	23 11 55.8	-0.3
KDAG	**Bornova**	0.76	35	*i* P	Pg	23 11 55.8	-0.5
KDAG				*i* S	Sg	23 12 05.9	-0.4
BODT	**Bodrum**	0.86	147	PG	Pg	23 11 58.9	+0.7
BODT				SG	Sg	23 12 11.7	+2.0
BDRM	**Kayabasi**	0.92	141	*i* P	Pb	23 11 59.9	+0.8
BDRM				*i* S	Sb	23 12 11.8	+0.4
AYDN	**Tasoluk**	0.93	97	*i* P	Pb	23 11 58.6	-0.6
AYDN				*i* S	Sb	23 12 12.7	+1.0
MLSB	**Milas**	0.97	120	PG	Pg	23 12 00.6	+0.1
APE	**Apeiranthos**	1.18	233	PN	Pn	23 12 03.4	-0.8
APE	**Apeiranthos**	1.18	233	*e*PN	Pn	23 12 04.1	-0.1
APE				*e*SN	Sn	23 12 20.7	-0.2
AKS	**Akhisar**	1.39	38	PN	Pn	23 12 06.3	-0.9
YER	**Yerkesik**	1.40	117	PN	Pn	23 12 06.9	-0.5
PRK	**Paraskevi**	1.50	347	*e*PB	Pb	23 12 08.7	-0.4
PRK				*e*SN	Sn	23 12 30.6	+1.6
AYVA	**Ayvalik**	1.53	359	*i* P	Pn	23 12 10.2	+1.1
AYVA				*i* S	Sb	23 12 31.7	+2.6
MANT	**Manisa**	1.61	63	*i* P	Pn	23 12 12.0	+1.6
MANT				*i* S	Sb	23 12 31.4	-0.2
DENT	**Denizli**	1.83	90	*e*PN	Pn	23 12 12.8	-0.7
DNZL	**Cakiroluk**	1.85	92	*i* P	Pn	23 12 13.3	-0.4
DNZL				*i* S	Sn	23 12 40.8	+3.1
BALB	**Balikesir**	2.07	26	*e*PN	Pn	23 12 15.3	-1.6
FETY	**Fethiye**	2.21	120	*e*PN	Pn	23 12 18.4	-0.5
BTOK	**Tokmak**	2.23	27	*i* P	Pn	23 12 24.3	+5.1
BTOK				*i* S	Sn	23 12 51.4	+3.9
CANB	**Canakkale**	2.25	7	*e*PN	Pn	23 12 17.7	-1.8
DST	**Dursunbey**	2.36	39	*e*PN	Pn	23 12 19.9	-1.1
ORLT	**Orhaneli**	2.83	36	*e*PN	Pn	23 12 26.3	-1.5
ULDT	**Uludag**	3.02	38	*i* P	Pn	23 12 36.3	+5.9
ULDT				*i* S	Sn	23 13 12.8	+5.3

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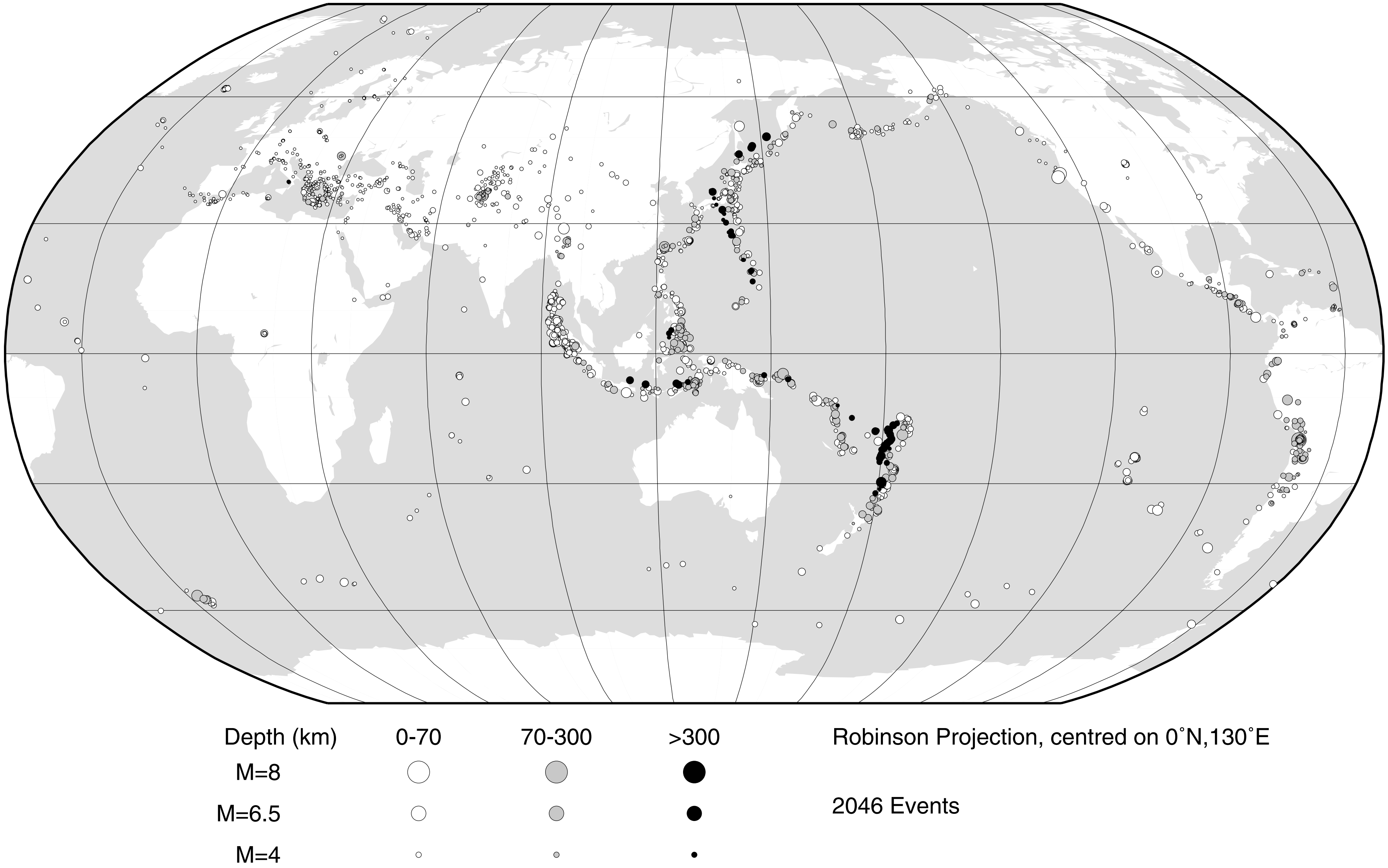
*IDC **30** 23:20:11.7±2.4, 4.84N×128.56E, mb3.6/3, mb1 3.7/3, mb1mx3.5/17, mbtmp3.5/3, Error ellipse: s-maj=173.7km s-min=28.9km az=66.0*
ISC 30 23:20:19.3±1.6**, 3.7N**±0.2×**125.7E**±0.4**, h33**^{km}**, n8, σ0ˢ85**/8**, mb4.2**/6**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	21.68	180	*e*P	P	23 25 13.9	+4.7
	3.7nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	24.98	161	P	P	23 25 40.3	-1.4
	0.6nm,0.4s,mb3.5,baz=347,slow=10,SNR=14						
WB2	**Warramunga Arr**	24.98	161	*e*P	P	23 25 43.1	+1.4
FORT	**Forrest**	34.37	176	*e*P	P	23 27 05.7	+0.2
	11nm,0.5s,mb5.0						
KLBR	**Kellerberrin**	35.92	192	*e*P	P	23 27 18.3	-0.4
	32nm,1.3s,mb5.1						
MUN	**Mundaring**	36.63	194	*e*P	P	23 27 24.9	+0.2
STKA	**Stephens Creek**	38.47	158	P	P	23 27 35.5	-4.6
	2.3nm,0.8s,mb4.0,baz=338,slow=11,SNR=3.1						
MKAR	**Makanchi Array**	57.01	326	P	P	23 30 04.3	0.0
	0.2nm,0.6s,mb3.3,baz=137,slow=7.3,SNR=3.5						

NEIC 30 23:34:48.8±7.8**, 41.24N**×**126.03W, h10**^{km}**, mb3.4**/1**, Error ellipse: s-maj=86.3km s-min=20.3km az=59.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRMB	**Red Mountain**	1.62	79	*e*P	Pn	23 35 14.6	-3.1
KBO	**Bosley Butte**	1.66	54	*e*P	Pn	23 35 16.7	-1.6
YBH	**Yreka Blue Hor**	2.54	78	*e*P	Pn	23 35 30.5	-0.3
LAMM	**Antelope Mount**	2.58	81	P	Pn	23 35 31.7	+0.2
HUMO	**Hull Mountain**	2.67	58	P	Pn	23 35 31.4	-1.2
DBO	**Dodson Butte**	2.80	47	P	Pn	23 35 33.2	-1.3
LHEM	**Herd Peak**	2.89	81	P	Pn	23 35 36.1	+0.3
BBOR	**Butler Butte**	2.99	55	P	Pn	23 35 36.5	-0.7
BUOR	**Burton Butte**	3.01	69	P	Pn	23 35 38.2	+0.6
HSO	**Harness Mounta**	3.16	43	P	Pn	23 35 38.1	-1.5
HBO	**Huckleberry Mo**	3.78	45	P	Pn	23 35 47.7	-0.8
IRO	**Indian Ridge**	3.92	44	P	Pn	23 35 49.7	-0.8
FRIS	**Frissel Point**	4.15	43	P	Pn	23 35 52.9	-0.8
WIFE	**Three Sisters-**	4.20	46	P	Pn	23 35 53.2	-1.2
BMO	**Blue Mountains**	7.34	58	*e*P	Pn	23 36 37.0	-1.8
FFC	**Flin Flon**	20.87	42	P	P	23 39 30.8	-2.4
	1.4nm,0.7s						

ISC Computed Locations for June 2005



Robinson Projection, centred on 0˚N,130˚E

2046 Events